



Home of the Tualatin River National Wildlife Refuge

Planning Commission Meeting Packet

FOR

**February 23, 2016
Work Session at 7 PM**

**Sherwood City Hall
22560 SW Pine Street
Sherwood, Oregon**



**City of Sherwood
PLANNING COMMISSION
Sherwood City Hall
22560 SW Pine Street
Sherwood, OR 97140
February 23, 2016
7:00 PM Planning Commission Meeting**

Agenda

1. Call to Order

2. Consent Agenda

- a. January 12, 2016 Planning Commission Minutes approval
- b. January 26, 2016 Planning Commission Minutes approval

3. Council Liaison Announcements (Councilor Robinson)

4. Staff Announcements (Brad Kilby)

5. Community Comments

6. New business

a. Public Hearing – SUB 15-01 Mandel Farms Subdivision (Brad Kilby)

The Planning Commission will hold a public hearing for the Mandel Farms Subdivision. The applicant is requesting approval for an 86-lot subdivision for single-family dwellings on a 22.35 acre site comprised of two tax lots divided by SW Copper Terrace.

7. Planning Commissioner Announcements

8. Adjourn

City of Sherwood, Oregon
Planning Commission Meeting
January 12, 2016

Planning Commissioners Present:

Chair Jean Simson
Vice Chair Russell Griffin
Commissioner Chris Flores
Commissioner Alan Pearson
Commissioner Rob Rettig
Commissioner Lisa Walker

Staff Present:

Tom Pessemier, Assistant City Manager (work session)
Julia Hajduk, Community Development Director
Bob Galati (regular meeting)
Brad Kilby, Planning Manager
Connie Randall, Associate Planner (regular meeting)
Kirsten Allen, Planning Dept. Program Coordinator

Planning Commission Members Absent:

Commissioner Michael Meyer

Council Members Present:

None

Work Session

1. Industrial Land Use Districts Development Code Discussion

Julia Hajduk, Community Development Director began the meeting at 5:30 pm, provided a memorandum dated January 7, 2016, survey results from online and direct mail surveys, and copies of the Industrial Uses and Similar Uses sections of the Sherwood Zoning and Development Code with comparable code sections from Hillsboro, Tualatin, Tigard, Wilsonville, and the Oregon Model Code (see record, Exhibits 1-3).

Planning Commissioners, Industrial land owners or representatives, and staff split up into three table groups. Groups were asked to answer three questions about industrial land usage in Sherwood and the Tonquin Employment Area (TEA):

1. What would you like to see?
2. What would you not like to see?
3. Regarding what you do not want, what are the main reasons/concerns?

Commissioners were asked to contribute what was learned in the discussion. The following comments were received:

- Utilize the Oregon Shovel Ready Program to get developers in the Industrial Use zone.
- Conditional Use Permits (CUP) make development difficult; reduce the CUP process.
- Other allowed use should be warehouse
- Prohibit adverse impacts that leave industrial uses such as noise, smoke, odor and light.
- TEA land is constrained; create exceptions for constrained land.
- Consider Industrial Use Standards. Should they apply to the entire development or only development along frontage roads?
- Flexibility is key.
- Be cognizant that Sherwood industrial land is not as attractive to industry because of transportation constraints and distance to I-5.

- Streamline and reduce costs for smaller businesses to locate in Sherwood.
- Is it what's inside the building or what the building looks like that matters?
- Provide infrastructure incentives.
- Rethink the employee oriented intent
- Do not limit support services like vehicle repair
- Look at goals for industrial instead of rules; make conditions clear.
- Allowed uses should be general, prohibited uses should be specific, conditional uses in between
- Utilize existing restrictions from Clean Water Services, Environmental Protection Agency, Department of Environmental Quality, etc. Remove those and outdated restrictions.
- Allow for "other" uses such as future industrial uses not yet thought of.
- Find incentive programs available
- Remember industrial land is shielded from residential areas.
- Desired uses include local industries, warehousing, food processing, motor vehicle repair, beverage distribution, research and development.

Ms. Hajduk thanked participants and explained the next steps would be to hold a work session about proposed draft language with the Planning Commission on January 26 or February 9, 2016 with a goal to have a public hearing on new language on April 12, 2016.

The Planning Commission called recess at 6:51 pm to convene to the regular meeting.

Regular Meeting

1. Call to Order/Roll Call

Chair Jean Simson reconvened the meeting at 7:09 pm.

She moved to the consent agenda and asked for comments or a motion.

2. Consent Agenda

- a. December 8, 2015 Planning Commission Minutes approval

Motion: From Commissioner Alan Pearson to approve the Consent Agenda, Seconded by Vice Chair Russell Griffin. All present Planning Commissioners voted in favor (Commissioner Michael Meyer was absent).

3. Council Liaison Announcements

None.

4. Staff Announcements

Brad Kilby, Planning Manager, reported the City Council approved the Mandel Property Zone Change and Plan Amendment, a three acre Neighborhood Commercial property to Medium Density Residential Low on January 5th. He reported that Council also discussed placing an outright ban on marijuana related uses for the November 2016 general election and placing a 3% local tax on the sale of marijuana. Mr. Kilby explained that the 3% tax was in case the ban failed; if both pass revenue cannot be collected. He noted that medical and recreational marijuana was separated as there was a strong belief by some of the city councilors that recreational marijuana use should be treated differently than medical marijuana use. The first reading for the ban will be on January 19, 2016 with the second reading February 2, 2016. Mr. Kilby commented that Measure 91 had passed and the police chief said he

recognized that whether Sherwood allows retail sales, growing, processing or manufacturing it will occur outside of Sherwood and he would like to have the resources available to help enforce the law for people breaking it. Mr. Kilby stated there was an approved medical marijuana distribution location on Tualatin Sherwood Road that had not opened, but would be grandfathered in and not affected by any ban.

Mr. Kilby explained that as of January 1, 2016 the Oregon Liquor Control Commission had started to send growers to jurisdictions to sign a Land Use Compatibility Statement (LUCS) that confirm they are allowed uses. Planning staff had signed one LUCS for the recreational growing in the industrial zone. He reported that at this time the City did not have any regulations in place and marijuana could be grown in industrial zones, but if a ban was passed or imposed before that person received a license from the state, they would not be able to grow there recreationally. It is currently a medical marijuana growing facility.

Mr. Kilby concluded by saying the public hearing was about the Sherwood West Preliminary Concept Plan and with Planning Commission's recommendation would go to the February 2, 2016 City Council hearing on the same matter (Note: the public hearing for the Sherwood West Preliminary Concept Plan was moved to a tentative date of February 16, 2016).

Chair Simson noted the late start of the meeting and said it was due to a public work session regarding Industrial Zone Uses and added an agenda item after the public hearing to discuss the work session and provide feedback to staff.

5. Community Comments

Kurt Kristensen, Sherwood resident said he lived on the east side of Sherwood and was on the other side of 99W near Edy Road and Terrapin the previous weekend where he saw three humongously ugly developments going up in the middle of a single family housing area. He said he had occasion to listen to a lot of residents that wondered how building permits were issued for the buildings. Mr. Kristensen stated they looked ugly and inappropriate on the long narrow lot and compared the building design to the Cannery Row Apartments design with a limited number of garage space underneath and two floors up on top. He commented that there would not be sufficient parking spaces for the number of people living there and what seemed to offend the residents more than anything was that the placement and zoning for those three huge buildings seemed inappropriate and odd because the entire neighborhood was single family housing. Mr. Kristensen encouraged the Planning Commission to take a look at what happened over there as people are very upset about it. He also encouraged the Planning Commission not to allow this kind of inappropriate infill in the future.

Chair Simson responded that she was not familiar with the project as it did not come before the Commission and suggested staff could obtain information and get back to Mr. Kristensen.

Brad Kilby answered that the property was zoned High Density Residential and there was a lot of other land in the area as well along Edy Road zoned for multi-family. He explained that even though it may not be developed that way today, large lot single family homes could ultimately develop to multi-family. Mr. Kilby said the development was 14 unit side by side townhomes; considered multi-family because they were on a single lot.

Commissioner Walker asked if it was similar to the townhomes along Sunset Blvd in the Woodhaven subdivision and if it was one building with 14 units. Mr. Kilby responded that it was three buildings with 14 units total and acknowledged that it was an odd shaped lot adjacent to an existing single family neighborhood. Commissioner Walker questioned that there were other lots nearby that are also zoned

High Density Residential and a staff level decision because it was a permitted use. Mr. Kilby responded that it was a decision approved in 2009 during the recession that did not expire due to a resolution from Council allowing extensions to land use decisions (see Sherwood Zoning and Development Code 16.90.030). Julia Hajduk added that it went through the site plan process with the Hearings Officer.

Chair Simson summarized that the property spoken of by Mr. Kristensen was zoned High Density Residential and neighboring property could redevelop in the same type of development.

With no other comments, Chair Simson closed the community comments and moved to the public hearing.

6. New business

a. Public Hearing – PA 16-01 Sherwood West Preliminary Concept Plan

Chair Simson began the public hearing by reading the public hearing statement stating the Planning Commission would make a recommendation to the City Council. She said the hearing was legislative so ex parte contact did not apply. Chair Simson asked for the staff report.

Brad Kilby, Planning Manager informed the Commission that the action before them would not end in a formally adopted plan. He noted that there were several people representing the applicant; He said he, Connie Randall, and Bob Galati were staff representing the City and introduced Kirstin Greene and Anais Mathez from Cogan Owens Green (consultants), Martin Mr. Glastra Van Loon from SERA Architects (urban design), Lorelei Juntunen and Beth Goodman from EconNorthwest (economist, HNA, phasing program, funding options), Kevin Timmins and Jason Liam from Otak (graphic information systems support/mapping), John VanStaveren from Pacific Habitat Services (natural resources review) and Chris Maciejewski from DKS Associates (traffic consultant). Mr. Kilby said there were also representatives of the Sherwood West Community Advisory Committee present; Tony Bevel, Rick Pannell, Ida Wilks, Diann Matthews, Patrick Franco and Chair Jean Simson (Planning Commission Representative).

Mr. Kilby began a presentation for the Sherwood West Preliminary Concept Plan (see record, Exhibit 4) beginning with a map of the Sherwood West urban reserve area. He said the area was west of Elwert Road, south of Scholls Sherwood Road, west of Roy Rogers Road and north of Hwy 99W and Chapman Road; the furthest eastern boundary was Eastview Parkway.

Mr. Kilby explained that the plan document was intended to be tool for the community to rely on in future discussions related to growth and expansion in Sherwood and because it was not being adopted the plan was purposely set up as a tool with fluid options. For example there are two transportation alternatives for the extension of Elwert Road north of Edy Road. Mr. Kilby said the plan was not intended to be a hard and fast decision today, because the decisions would not be made until the land was brought in to the Urban Growth Boundary (UGB) and a refinement plan completed for the area.

Mr. Kilby explained that Urban Reserves were lands that Metro had put in place around the existing UGB areas for future expansion over the next fifty years. He noted that the Sherwood West area was one of a host of rural reserves in the metro area, but Sherwood was the first to plan for an Urban Reserve area outside of the Urban Growth Boundary. He explained that areas known as Rural Reserves were areas that would not change designation regarding expansion by Metro for the next fifty years.

Mr. Kilby stated that Sherwood West was about 1,291 acres; a big addition to the city boundaries, but Sherwood would still be relatively small with the area brought in to the city. He said the plan document was a Metro funded document and explained that the plan document contained:

- Executive Summary,
- Outline of the planning process,
- Discussion of the history and growth of Sherwood
- Discussion of how the baseline for the project was achieved,
- The Concept plan
- Existing conditions and challenges involved with growing in the area
- Necessary improvements to support urban levels of growth
- Phasing and funding strategy plans to inform on cost of improvements
- Next steps and recommendations
- Appendices; background information collected throughout the effort

Mr. Kilby stated the overall plan attributes derived through the public process were the most pressing issues to be considered in the concept plan. They included compact “ten minute” neighborhoods, protection of resources, access to nature and trails, schools and neighborhood scale serving retail. He said there were two potential school locations identified as a place to begin the conversation; chosen to geographically spread the school district around for prospective neighborhoods. Mr. Kilby acknowledged a rezone of the Mandel property from commercial to residential and stated retail properties would be much smaller than the three acre Mandel property and would be geared toward serving the immediate needs of the neighborhood.

Mr. Kilby emphasized that the planning for the Sherwood West area was done through a Metro funded grant that was requested because Sherwood was running out of land for residential development. He said a Housing Needs Analysis (HNA) was conducted by EconNorthwest to gather the data on existing housing needs for a future comprehensive plan update. He reported the HNA was in draft form with raw data and the policy decisions associated with the data had yet to be made, however, from the raw data we know that Sherwood had experienced annual growth rates between 3-8% since 1990. Metro said that Sherwood would grow at 0.7%. Mr. Kilby explained that the area considered for the inventory encompassed all lands within the existing urban growth boundary which included the Brookman Road area. Mr. Kilby indicated that annexation of the Brookman Road area had been difficult and said the question was where to grow from here. He reminded the Commission that Sherwood was consistently ranked as one of the top small towns in America; a safe place to live, with good schools, people like living out here and there was no reason to believe that there would not be a continued demand for people to relocate to Sherwood. He said there would likely be a strong and continued demand for additional land. Mr. Kilby cautioned that without expansion the city would begin to see more infill projects, requests to rezone, and neighborhoods transforming to higher densities through accessory dwelling units.

Mr. Kilby turned the table over to the consultants.

Kirstin Greene, managing principle with Cogan Owens Greene stated that she took the social contract in Oregon regarding community engagement and land use planning very seriously and said it was more than state mandated, but a relationship between citizen’s and their government about how the

communities will grow. She said the public involvement for the Sherwood West Preliminary Concept Plan was both unique and deep and she appreciated Community Advisory Committee member attendance and hoped they would speak about how they felt about their involvement. Ms. Greene commented that the Sherwood West Preliminary Concept Plan was unique with respect to it being a preliminary concept plan before an area is added to the Urban Growth Boundary. She commended staff for taking on the challenge seriously by inviting and meeting with most of the property owners in the study area. She said the public involvement plan was created with the CAC and was intended to have

- Consistent messages to encourage understanding of the benefits of a concept planning
- Frequent and effective community engagement; achieved with several hundred community members involved throughout the process
- Participation over time increase; staff and the consultant team piloted new techniques including online engagement
- Community concerns were identified and addressed throughout the process

Ms. Greene stated as consultant she considered the plan a co-creation with the Community Advisory Committee and the Technical Advisory Committee members and it could not have been done without them. She displayed a broad list of fifteen community engagement activities conducted over the course of the eighteen months outside of the Community Advisory and Technical Advisory Committee meetings that took place.

Ms. Green showed the vision statement of the plan and said consultants were struck with the quality of Sherwood as a community. They knew they could only help create a plan that would complement and build on the City's existing form and character. She told the Planning Commission that they would see throughout the plan that it was understood development would need to contribute to the overall fiscal health of the community.

Ms. Green stated the goals for the overall plan were met or exceeded as measured by the evaluation criteria. The design included the community attributes that Sherwood residents highly valued, as mentioned by Mr. Kilby; access to nature, recreational opportunities, transportation choice, development that recognizes Sherwood's heritage and implementation that is pragmatic.

Ms. Green congratulated the City on being the first community in this region to take on urban reserve planning and offered that the experiment had ended up very well. She indicated Mr. Glastra Van Loon would summarize the draft plan and Ms. Randall would talk about implementation and strategies once the area was brought into the Urban Growth Boundary.

Martin Glastra Van Loon, urban designer with Sera Architects of Portland highlighted some of the analyses and lessons learned from the citizens' and technical committee's input throughout the process. He said they became the building blocks for the plan and he sensed that they really resonated with a lot of folks in town. He said it was a two part analysis; Sherwood's growth over time and the land forms on which the city grew.

Mr. Glastra Van Loon said in the last 130 or so years the City of Sherwood had evolved dynamically from a small town with horses and carriages, to changes resulting from the train and automobiles coming to town. He stated in 1895 Sherwood was platted with nine blocks in what is now historic Old Town Sherwood along Railroad Street. If we fast forward 130 years Sherwood had a population of

about 19,000 and a much broader, wider ranging city spread out over the landscape. He said most residents were very content with the quality of life that existed and a “small town feel” was a term consultants heard all the time throughout the process. Mr. Glastra Van Loon noted that there were physical reasons behind Sherwood’s growth; the total footprint of the town looked large, but it breaks down into smaller components of neighborhood scale. He explained that walkable neighborhoods became one of our leading principles of the planning process and said Sherwood today contained ten or eleven distinct walkable areas. He defined walkable as having a radius of about a quarter mile or a five to ten minute walk from the center of the circle to the edge and said it seemed to coincide with a lot of Sherwood’s existing neighborhoods. Mr. Glastra Van Loon showed that all Sherwood’s neighborhoods fit in a circle with a radius of about a mile and when the Sherwood West planning area was added it could add another five or six of those walkable districts or neighborhoods that would still fit inside a 1.5 mile radius circle. He said a 1.5 radius was still small scale and gave a sense of neighborhood scale to the town as whole.

Mr. Glastra Van Loon explained that another component that became important to the planning was the land form pattern that the city grew into. He said the team coined the term as “nestled in the landscape” and showed a United States Geological Survey map from the 1950s of early Sherwood with downtown Sherwood area and railroad spur. He pointed out contour lines where the city was settled along the edge of the Tualatin River floodplain and the hills that go up towards the southeast; a varied landscape with a lot of quality. Mr. Glastra Van Loon showed the Chehalem Mountains to the west, Parrett Mountain to the south, Tonquin Scablands to the east and the Tualatin River to the north and said these land forms had a real impact on the Sherwood experience: The Chehalem Mountains were always in the backdrop in the higher elevations with Newberg on the other side; The Tonquin scablands were flat areas from the late ice ages and a threshold in the landscape that must be crossed to and from Tualatin; and Parrett Mountain was toward the south and hemmed in the town on the southern end. Mr. Glastra Van Loon expressed that the landscape was wide open on the north end of town with the Tualatin River floodplain and said this was important, because it told about the settling of Sherwood and about the compartmentalization of those walkable neighborhoods.

Mr. Glastra Van Loon stated that another signature character of Sherwood was the creek system. He said he thought Sherwood was deliberately settled on Cedar Creek for the access to water, drinking and raising crops and as it grew it butted up towards Rock Creek to the east in the Tonquin Scablands and Chicken Creek towards the west. He noted that Cedar Creek was a big part of the community; where Stella Olsen Park was located with summer events and connections to the trail system and neighborhoods along this beautiful natural resource. He commented that Cedar Creek also gave a real moment that was like a portal in the landscape in the form of a green tunnel embracing travelers from Newberg. He said he did not think a lot of people realized how integral the creek system was to the quality of life in Sherwood. Mr. Glastra Van Loon showed several pictures: Rock Creek in the scablands, a creek coming off of Parrett Mountain feeding into the Tualatin River, Chicken Creek, Elwert Road and Roy Rogers Road. He repeated that Sherwood was nestled into the landscapes of hills, valleys, canyons and creeks and summarized that this meant that anyone who lived or worked in one of the walkable neighborhoods was only a five or ten minute walk from a fantastic natural resource that had a regional reach and he thought it really was a unique quality for the community. Mr. Glastra Van Loon stated that this resonated with a lot of folks in the community and Sherwood should build on that.

Mr. Glastra Van Loon said that engage landscape that is not flat towards in the Sherwood West area, but rolling hills cut up by Chicken Creek and a branch of Cedar Creek, named Goose Creek, that crosses underneath 99W. He explained that this divided the study area into sub-districts for future potential neighborhoods that would build on those qualities of being a short walk from a natural resource. He showed areas labeled North, Far west, West, and Southwest and an aerial map of the area with the hills, rivers and the cities of Tigard, Tualatin, and Wilsonville.

Mr. Glastra Van Loon said the planning process with the community, stakeholders and Technical Advisory Committee developed three alternative concepts early on that tested different ideas and locations for different land uses, then the City solicited input and tested the different ideas ending in a preferred plan.

He described the different sub-districts beginning at the northern end.

The NORTH quadrant is a large piece of land that could comfortably hold one of the walkable neighborhoods. It is hemmed in by Chicken Creek on the south, Roy Rogers on the east side and Scholls Sherwood and Labeau Road on the west. There is a power line corridor cutting diagonally through the northeast corner of the land which has been used that as a delineation between the neighborhoods and a sports and recreation location. Several different uses were tried in this area, with a general consensus that a sports and recreation facility would work well to serve both Sherwood and regional neighbors that come to play Sherwood teams with easy access off of Roy Rogers Road.

The neighborhood is organized around the school similar to other parts of Sherwood with the school in the heart of the neighborhood, a neighborhood park and an extension of a linear park that runs through the neighborhood and hooks up with Chicken Creek and the trail system nearby. A trail system (represented by green dots on any of the maps) connected into planned and existing trails in Sherwood. East of the school was a small mixed use commercial node to serve the neighborhood. It could be a deli, coffee shop; something very small that allowed people some services without using a car to go into the bigger shops for every little errand. The housing would be more intense around the school. On the west across Elwert Road there are more hills and a park that could be connected to the trail system.

The WEST quadrant is directly adjacent to existing neighborhoods east of Elwert Road and seems to be one of the most easily accessible areas to grow into. It handles the intersection of Edy Road and Elwert Road which was discussed extensively during the process. A version of the roadway configuration shows a re-alignment of Edy Road and Elwert Road to cross Chicken Creek at its narrowest point, removing the existing crossing. The idea is to save money and resources with the re-alignment and allow traffic to flow through, but divert it enough to discourage truck traffic. This idea will have to be corroborated later on with further study.

There is a second school location in the heart of the West quadrant with a slightly larger mixed use node south of the school. Between those two components there is a neighborhood park and trail system connecting the two. Housing intensities increase in these areas and towards the west there is a distinct hill labeled *hillside residential* where the housing intensity decreases because of topography and existing residences. There is also a park on the ridge just south of Kruger Road near the existing water reservoir where a second reservoir may be added. A park similar to Snyder Park on the east side of town was added on top of the hill where you can look out over the community. There is an additional

mixed use node to serve local neighborhoods across from Handley Street that would also serve existing residents east of Elwert Road.

In the alternate option for the intersection of Edy and Elwert Roads instead of going straight across the alternative Elwert Road bends to the west with a roundabout to the extension of Edy Road, crossing Chicken Creek at its narrowest spot to another roundabout on to Edy Road to the west or to Elwert Road to the east. Development would require the existing alignment of Edy and Elwert intersection to be brought up to urban standards and the impact of that needs to be compared with the impact of the alternative to make a well informed decision at the time of development.

The FAR WEST quadrant has residential potential as well as the potential for a nature park in the upper left corner. There is already some land set aside for a nature preserve; a pristine and steep area with a lot of creek branches. Around that area there is an opportunity for a small residential neighborhood and more hillside residential south of Edy Road. In the pocket surrounded by creeks and branches of creeks is a small hillside residential neighborhood.

The SOUTHWEST quadrant is south of the west quadrant and north of Chapman Road. There is a steep hillside on the west side that shows a roadway parallel to 99W up to Edy Road in a north/south direction. This new route would divide the steeper land from the flatter land that is more developable. There is opportunity for a residential neighborhood, a small neighborhood park and an area for a gateway district. The gateway district is a result of a strong interest in the community to capitalize on Sherwood's location adjacent to or "at the gate" of wine country. This may be an area for a visitor's center, welcoming center, lodging, or tasting rooms to take advantage of the economic driver.

Mr. Glastra Van Loon turned the time to Connie Randall, Associate Planner.

Ms. Randall explained that the phasing and funding strategy was a high level, 50,000 foot view, or preliminary. She said the strategies were described in detail in Section 7 of the planning document and that the intent of this part of the Sherwood West Preliminary Concept Plan was to identify the big ticket infrastructure needs and options for meeting those needs. She indicated that these options would then be studied in depth and vetted through a public process during a refinement planning process as areas were brought in to the Urban Growth Boundary. She asked the Planning Commission to keep in mind that projected households and densities used to estimate the costs for infrastructure improvements were not definite. Instead there is a high level magnitude of order on what those infrastructure needs and costs could be for comparison and to lay a foundation for refinement plans as areas are brought into the Urban Growth Boundary.

Ms. Randall indicated that development in Sherwood West would require significant infrastructure investments to bring rural roads up to urban standards, to cross creeks and other natural habitat areas, and to address topography challenges for storm water drainage, water and sewer provision. She said the community identified a desire and a need to preserve resource lands and sensitive habitats as well as to provide parks, trails and recreational opportunities. She stated there was also a recognized need to ensure that future school district needs were adequately planned for.

Ms. Randall referred to the two options for the Edy Road and Elwert Road alignment and commented that how this intersection was improved would affect how the adjacent lands were developed in the phasing of development. She explained that the project team had evaluated phasing and costs for City

controlled hard infrastructure such as the roads, sewer, water, storm water, site preparation, traffic elements, and right of way acquisition. Ms. Randall noted that through the public process the areas had been identified on these maps and were revised from a 1, 2, 3, 4 designation to an A, B, C, D designation to convey that the areas represented groups of infrastructure improvements needed to be completed rather than the sequence of when improvements would happen. She said the A, B, C designation did indicate some sequence, in the sense, given the current environment with respects to regulation, and market conditions, community preferences, and it appeared that areas A and B could be developed easier and more cost effectively than C and D. She noted that it was clear in the plan that there was a preference that areas A, B, and C develop before D, E, and F; and that areas E and F be looked to be last as the topography in those areas posed the most challenges to delivering services and actually getting infrastructure to them.

Ms. Randall explained that in general, area A had good development potential as it was relatively flat, adjacent to existing city development and contained City owned land that could be leveraged for development. She said it also included a roundabout at the Elwert Road and Kruger Road intersection that was already planned and funded and was not part of Sherwood West Preliminary Concept Plan, but the City could capitalize on that if development occurred in the area. She disclosed that development of the Areas A and B would rely on a temporary sanitary sewer pump station until a new sewer trunk was extended through the Brookman Area, across 99W and up through area B and said it was important to note that Clean Water Services (CWS) has expressed concern over pump stations, especially temporary ones, however they do exist in the region, and could be a viable option in this particular application. Ms. Randall said if this alternative was not viable at refinement planning with more in depth studies, the planned sewer trunk could be developed in the initial phase through Brookman and across 99W to serve areas A and B, concurrently if needed. She said staff believed that requirement was less costly then starting in another area such as C.

Ms. Randall informed that development in the north area required crossing Chicken Creek and expensive transportation improvements to the Edy Road and Elwert Road alignment which was why it was recommended that areas A and B develop before area C. She said several variables could affect the need for land and the order in which it was needed. She said Area C was the proposed home to two significant features; a school facility and a sports and recreation area and the desire for those types of development could cause the City to look at area C ahead of areas A and B. She reminded the Commission that this was all a high level best guess of when development would happen.

Ms. Randall explained that new infrastructure required to develop land in Sherwood West would require a mix of new and existing funding sources. She said that, as much as possible, the City tried to have development pay for itself and sought to maximize the revenue from existing sources such as Transportation Development Tax, System Development Charges, Major Streets Transportation Improvements Program, and the Metropolitan Transportation Improvement Program, but there will likely be a gap between the amount of revenue generated from these sources and the cost of the public improvements. Ms. Randall called this a “funding gap” and noted that staff had identified in the plan new tools that could be looked at once the actual amount of the funding gap was determined. She said consultants had done some initial look at a variety of tools and highlighted a few, but she would not go into depth, because there was no need to use any of them until it was clear what the needs were.

Ms. Randall indicated the purpose of the public hearing was to seek a recommendation for City Council to accept the plan for future use as a tool and in terms of development it was a fifty year look. She

showed a chart of the development process for the area over the next fifty years and commented that the City was at the preliminary concept plan stage and before development could happen Metro needed to decide to expand the Urban Growth Boundary, which typically happened every six years, that Metro will look at the boundaries again in three years to see if there is a need. She explained that Metro decided there was not a need to expand the Urban Growth Boundary regionally recently, and if Metro decided that the boundary did need expanded there would be an additional year long process to determine which of all the regional Urban Reserve areas was the place to expand. Ms. Randall reported that Metro would have to decide that expansion should take place in Sherwood and said the City had the ability to lobby for what it considered appropriate so one of the reasons for creating the Sherwood West Preliminary Concept Plan was to be ahead of curve and to be able to inform Metro that the City had done some study on what was appropriate for our community including which areas were appropriate or not appropriate to come in to the city. She said the City had an understanding of the cost to serve those areas and the obligations it would take on if the area was brought into our Urban Growth Boundary.

Regarding phasing, Ms. Randall explained that it examined groups of infrastructure that needed to happen and not necessarily that all of area A would come in at one time or maybe areas A and B could come in at the same time. The phasing looked at those areas and the ties to infrastructure improvements that needed to happen depending on the need.

Ms. Randall recounted that if Metro decided to expand in Sherwood, the refinement planning would take place next and refinement planning would be a public process similar to the Sherwood West process, but with more detail. The specific area that has been brought in to the Urban Growth Boundary would be looked at and that in depth details regarding infrastructure needs, the cost for financing, densities and intensities on types of use and appropriate zoning would be applied in that area at a property level decision. She said this process typically takes one and a half to three years from inception to adoption and once an adopted concept plan was in place, then annexation was required. Ms. Randall commented that annexations in Sherwood required voter approval, plus it would require property owners that want to come in to make a petition to the City to be put on the ballot before an annexation vote. This process takes typically six or more months. Ms. Randall noted that the Brookman area was brought into the Urban Growth Boundary in 2002 and was without a passed annexation request in 2016.

Ms. Randall explained that successful annexation requests would typically take another eight to twelve months to get through land use applications and public hearings to actually apply the zoning. She said public improvement construction happened before building permits to build homes or businesses were issued; all the road improvements and utility extensions had to happen before they can build any structures. That usually takes another six to twelve months depending on how complicated the improvements are. Ms. Randall noted that once public improvements were done the residential home and retail commercial construction could take place over the next three to twelve months or more. She concluded that the fastest Sherwood could get through to completed buildings, if everything was aligned and the city had funding available at the first minute would be about ten years. It may very well be longer.

Brad Kilby said that before beginning public testimony he would like members of the Community Advisory Committee to say a few words about their experience, lessons learned or their thoughts about the plan. He indicated he had written testimony; one from a single property owner and one from

attorney, John Rankin, who represented several property owners in the area (see record, Exhibits 5, 6). Mr. Kilby asked the Commission to consider when reading the testimonies that the concept plan was not set in stone, the area will still need refinement planning to address concerns expressed such as the Edy Road and Elwert Road alignments and those decisions were not being made by the Planning Commission or the City Council at this time. He said they were in the plan as options on purpose so the community could have a discussion about them when they come in to the City whether the improvements made economic sense and if they were willing to compensate the affected property owners.

The following comments are from the Sherwood West Preliminary Concept Plan Community Advisory Committee members.

Tony Bevel indicated he had lived in Sherwood since 1998 and his area of town had expanded and grown. He commented that it had a been a great experience to be on the committee and he thought everyone had a good heart in the planning, had contributed, had a lot to give and wanted to do what was right. He noted that they focused a lot on the Edy Road and Elwert Road alignment and the roundabout that may be fifty years down the road, but that traffic was a problem now. Mr. Bevel commented that Edy, Kruger, and Chapman Roads were problems now and although he knew it was not within the scope of the project to deal with it, the city could get a foot forward and see what could be done in the early stages to move Sherwood West forward. He said if he had his wish of wishes he would wish that the City did not have to think about adding on to Sherwood, because it is a great town. He acknowledged that Sherwood was going to grow and this was a good first step. He suggested addressing the Edy, Kruger, and Chapman Roads problems now.

Rick Pannell said he was a resident in the Far West area of the study area and he thought the process was productive. He agreed with Mr. Bevel that there was a lot of great discourse that came from all involved and it was really hard to wrap his head around a lot of it, because it was at such a high level of planning. He commented that maps were put together and estimates were made on something that from the very beginning was described as “what we see when we jump out of an airplane”. Mr. Pannell said when the committee started looking at some of the maps it began to become real, but the time frames were very far out. He remarked that it would shock him if the plan did not change quite a bit between now and whenever it was implemented, said people talked about transportation quite a bit and it was obvious it was on their minds. He disclosed that he traveled through Edy and Elwert Roads every day, and to the Y all the time because his kids swim, and it was clearly a challenge that was only peripherally addressed with the plan. Mr. Pannell commented that when talking about moving the intersection he did not know which option would be cheaper. Mr. Pannell said the one thing he took away from the whole experience was that there were a lot of attributes of Sherwood that everyone really liked; small town feel, farms in the vicinity, access to nature. In his opinion even though we have these great natural features that surround and protect the city they were not unwavering and without proper management or dedication of the people that live here they will disappear; wetlands would be filled in or hills built to the top so Sherwood will end up looking like Tualatin or the border to Tigard. He stated it would take dedication by the City and its representatives to protect those things that are important.

Ida Wilks said she lived on the northeast corner of Elwert and Edy Roads and it was an interesting spot as Chicken Creek runs through her lower pasture. She reported she has seen a lot of change and when we moved to the area fifty-four years ago her kids could ride horses up to Jess Mason’s Country

Store at Six Corners where there was hitching post. Ms. Wilks said Sherwood was a wonderful place to raise a family and her preference was to go for Option 2 because her driveway was on Elwert Road, but Mr. Glastra Van Loon did not agree with her. On the other hand, she did not know if Mr. Glastra Van Loon had looked at the very large and expensive homes that were being built on Edy Road. She said her other observation was along the east side Elwert Road where developments had sidewalks and bike paths and this would continue to happen as long as people built on the road. Ms. Wilks stated it was important to build in a way to make it safe for people.

Diann Matthews said she also lived on the corner of Elwert and Edy Roads and was part of the Mandel family that had a long history in Sherwood, but not the part that recently received a zone change. She said she grew up with an extended family and Ms. Wilks' children. Ms. Matthews commented that she liked the process that was done, thought it was a great process and to be proactive. She said there were a lot of things learned from it and it was good for the whole community to be visionary. Ms. Matthews pointed out that there were two options, not a preferred option; one to redirect Elwert Road and one to keep it the way it is. She personally preferred to keep Elwert Road the way it was and thought roads running straight, in a grid fashion, moved traffic more effectively, like in the City of Portland. She commented on newer communities like Tualatin, Beaverton, and Tigard that use cul-de-sacs and road re-routing to make them look scenic, but that traffic did not flow that well and traffic was a problem out here. Ms. Matthews said Sherwood was a bedroom community, people are coming and going out of the community, and plans needed to be cognizant of traffic times getting back and forth to work. She expressed that the integrity of her property would be affected if Elwert Road was re-routed.

Mr. Franco chose not to comment saying other members of the committee had covered his.

Brad Kilby, Planning Manager returned said it concluded the presentation. He offered to answer questions from the Commission. No questions were received.

Chair Simson asked for public testimony.

Kurt Kristensen, Sherwood resident, said he lived on the east side of Sherwood, but every day for the last fifteen years he had driven down Sunset Blvd and crossed 99W. He said 99W was hard to cross and coming back in the evening he could not go that way because traffic was backed up three miles. Mr. Kristensen said development had already impacted his transportation system and he was afraid that Sherwood would lose all of the attributes that we like about it. He expressed concern about the funding gaps and said he did not think the Plan would pay for itself by a long shot. He said he thought that water, sewer and school taxes would hit residents like a ten ton truck coming full on. Mr. Kristensen commented on Sherwood voters rejecting the Brookman expansion and he felt that overall a different look at this whole approach was missing. He said it was clear that voters and residents in Sherwood were not in agreement with Washington County or Metro officials about expansion and how it would play out was above his pay grade. Mr. Kristensen suggested that it would be worthwhile long term to look at Corvallis's model of purchasing green space surrounding the city in order to prevent the kind of growth that this plan was proposing.

Mr. Kristensen said he wanted to introduce a new concept to this kind of deliberation called a cost benefit analysis. He stated that before becoming a middle school teacher he spent a quarter of a century as a project manager and always found it beneficial to have a cost benefit analysis whenever grandiose plans were proposed. Mr. Kristensen suggested that as the Planning Commission and City

Council moved forward with PA 16-01 and setting the stage for adding 1,291 acres to the City of Sherwood over the next fifty years it would be prudent to look at a few details and assumptions: current residents have voted down the third annexation proposal for Brookman spending a lot of funds and time for the annexation proposals, in the last ten years the Planning Commission and Department had similarly adopted the Southeast Sherwood Master Plan to add about 50 acres to the City's boundaries on his side of the city and, to date, the city, resident voters, and DEQ had yet to reach an affordable and prudent manner to satisfy neighbors and city residents that the area could be cleaned up, contaminated soil removed, and responsible integration of trails, roads, and utility systems built out in a manner that was cost effective to the city and safe for residents following the recommendations from the yearlong hearings.

Mr. Kristensen said the Sherwood West planning idea proposed to add 1,291 acres and to his thinking that amounted to another thirty thousand residents over the next fifty years and it boggled his mind to think about what that would do to all of the city's attributes. He reported that he had lived in Sherwood for more than fifteen years and watched it grow from about three or four thousand to nineteen thousand and he was not sure that his quality of living had improved. Mr. Kristensen said in general he thought the city planning department had done a great job representing developers and perhaps not so great a job of representing the rest of us. He suggested that it would seem prudent to take a look at a cost-benefit analysis for the Plan and commented that when he got a proposal for another issue from Washington County the proposal indicated how much additional cost per thousand of assessed valuation the proposal would cost him. He commented on funding gaps and uncertainties and said that the Water Master Plan was in the hole with such big numbers that none can comprehend it. Mr. Kristensen suggested the Planning Commission refer the plan back to the Planning Department and to ask Council to have an outside firm audit the proposal to put firm numbers that can be understood how it would impact his bottom line. He said when he retired he would not like to be surprised by another couple of thousand dollars in annual takes. Mr. Kristensen turned in additional written testimony (see record, Exhibit 7).

Bob Schlichting had turned in a request to speak form but was unable to stay at the meeting to comment. Chair Simson offered that he still had an opportunity to testify at City Council level.

Staff was asked not submit rebuttal testimony. Chair Simson called for a recess in order to read the written testimony at 8:31pm and reconvened at 8:41pm. She noted that the Community Advisory Committee members testified as representatives of the applicant and provided input on the process. She said the record was kept open for anybody left in the audience that would like to testify with a personal opinion.

Tony Bevel, Sherwood resident said that when he first applied to be appointed to the CAC committee he thought he would have a chance to build Utopia and that is kind of what it was like. He said the plan was something that would take a fifty year process and would be refined many times. Mr. Bevel wished Sherwood would not grow, but like it or not Sherwood was going to. He said he lived in Sherwood, he loved it and probably everyone in the room would like to have it stay the same. Mr. Bevel commented that this was an opportunity to step in the right direction and even if it might be totally wrong at least it began the process.

Chair Simson closed the public hearing for deliberation. She said one of the most telling moments for her, as a member of the committee, was when she saw Mr. Glastra Van Loon's face as he explained

what made Sherwood special; when he discovered that it was the way Sherwood was nestled within the topography that Sherwood had grown. She commented on the moment coming from Newberg, through that tunnel of greenery and when coming home from the beach she knew she was almost home when she hit that spot or when coming from Hillsboro and past Al's Garden Center and the open green spaces, and how every time when she is almost she home passed a piece of natural area. Chair Simson said Sherwood was protected and surrounded by those areas and she thought, just as the citizen comments received, that this was part of Sherwood that had to be protected and to ensure it was well defined in the plan. She pointed out that portions of the original language that explained this had been removed from the preliminary draft as seen by the Community Advisory Committee. She said the changes were on pages 31-34 that included words like *define the unique identity of Sherwood by walkable neighborhoods nestled in creeks hillsides and valleys* and asked for stronger language indicating the need to protect Sherwood's character and walkable neighborhoods. Chair Simson wanted it restated for people in the future, so they knew that wide creek corridors, buffer zones and making the gateway entrance to Sherwood, to make you feel like you are entering someplace other than just going from Tigard to Tualatin or where Portland to Gresham, because there was no distinction, were important. Chair Simson offered that what made Sherwood unique was that it was nestled in nature and was important to protect; that Sherwood was distinct because of its natural space. She asked if she should reopen the public testimony in order to request that the applicant to go back and revisit the landform analysis and identity pages to make the language stronger starting on page 28.

Mr. Kilby replied that the hearing could be reopened and a motion made to forward the draft along with the stronger language. Chair Simson asked for an explanation of the transportation and land use law restrictions in the urban growth boundary. Mr. Kilby responded that the consultant would need to answer.

Chair Simson said they would reopen the hearing and asked for an explanation of what it meant in the plan on page 21 where it said "*Oregon land use restricts the options available to include only new or expanded travel facilities within the urban growth boundary*".

Ms. Greene replied that she believed the statement was intended to show that in order to focus new transportation options within the UGB, it would require a goal exception for a new travel facility outside of the UGB, because in order to cross farmland the state requires a goal exception to prove why it would be a better location than any other place within an existing UGB. She offered to fix the phrasing in the plan. Mr. Kilby noted that the Sherwood West area would have to be brought into the UGB before any of the transportation improvements could be brought to urban standards.

Chair Simson noted testimony received about transportation concerns and asked if the Commission wanted to include any additional input for the City Council and her thought was that the plan captured the essence of the citizen input. She related that the two options at the Edy and Elwert Road intersection were equally viable and until more refinement planning was completed it was unknown which option would work better. Chair Simson said she trusted consultants to incorporate the Planning Commission's comments into the draft document directly to the City Council and asked for any other comments from commission members.

Vice Chair Griffin stated that the Rankin letter expressed concern about the stated lower cost of the single crossing option compared to the cost of keeping the road straight and forcing it up to urban standard. He said the letter indicated there was no evidence in the report that it would cost less and

asked how Option 1 was decided to be less expensive than Option 2, as well as if the roundabouts would restrict truck traffic and have a calming effect going north/south.

Chair Simson directed the Commission to page 37 of the Plan that discussed the transportation options for the interception of Edy and Elwert Road and to Appendix 8, the Transportation Options Alternative Analysis Report.

Bob Galati, City Engineer came forward and reported that he did a rough cost estimate and looked for magnitude factors of difference; not just hundreds of thousands, but millions or tens of millions of dollars in difference. He said he tried to base the analysis on what was done with the Transportation System Plan Update and the Implementation Plan which took all the construction projects and applied construction estimates to them. Mr. Galati explained that he took those values and used the same process described in the implementation plan to estimate the cost at a high level of review. He said relative to the other projects Options 1 and Option 2 were very expensive and when dealing with realigning the road either vertically or horizontally it will be expensive no matter what. He explained there were some assumptions based on what was known for the environmental impacts of upgrading the intersection, how much mitigation would be offset (the cost of land that had to be purchased to expand wetlands and mitigate), future mitigation from the County, CWS or the EPA (experience says they will increase). He said that in fifty years there will likely be a larger mitigation requirement for the impacts to environmental resources.

Mr. Galati reported that an estimate for each of the phases was received that included a range of costs for improvements. For Area C (see Figure 10.1 and 10.2), Option 1 was estimated as \$65-80 million, and Option 2 was \$80-95 million inclusive of everything; engineering, design, construction and contingency costs. Mr. Galati reminded the Commission that the estimates were taken at a hundred thousand foot level and the range of numbers was the magnitude of the cost overall. He acknowledged that a \$70 million project was expensive, yes, but the difference from \$70 million to \$80 million was significant. He said he could drive it down and make exact calculations, but thought it was better to indicate that, based on the assumptions, on a scale of magnitude one project was more expensive.

Commissioner Walker commented that the objection in the testimony was that one option was considered preferred, instead having the choice of two options with costs that may not be the only consideration to make a preferred plan.

Mr. Galati agreed and said in the future both options would be evaluated from a design standpoint, because the impacts were unknown and interim development may result in other constraints. He maintained it was a great idea to keep both options open and viable and said the rational mind wants to know the thought process that gave cost estimates. In the future, there will be an analysis in much finer detail that will give cost estimates based on construction costs and values at the time. He added that the improvements would need to occur when Area C develops and not until Area C had the pressure to develop. After a discussion staff was directed to add the detailed cost estimates to Appendix 8. Mr. Galati clarified that the detailed cost estimate was not a range and the range [by others] included a 15% swivel for contingencies.

Vice Chair Griffin commented that Metro granted money for the study and asked about not doing anything with the Plan. Ms. Hajduk responded that the Planning Commission did not have to move forward, but the point was to accept the Plan as a tool to help inform the City, not to adopt the Plan.

She said if the City chose not to accept the Plan, the City would not be informed when dialog with Metro happened in the future.

Brad Kilby noted that the work was already done and asked if there was any harm in accepting the information. He said the City was not making any decisions on anybody's land, and the plan was left as broad as possible. Zoning had not been assigned, options were based on cost estimates at a very high level and the plan was developed with the community over fourteen months spending \$221,000 of Metro's money and some of our own to get the process done.

Vice Chair Griffin referred to Mr. Kristensen's comment about Sherwood's growth and said he wanted to get onto the record that the city needed to at least plan for growth and if the voters continue to say no, at least there would be a plan in place.

Ms. Hajduk reported that the planning process for the Sherwood West Preliminary Concept Plan had been amazing, she was thrilled to see so many Community Advisory Committee members present, and the public involvement had been marvelous, but this planning process was different from anything that Sherwood or the region has ever done, because it was a pre-concept plan and the city started the process with "We don't want Metro to bring something into the UGB and tell us what it is going to be. We want to identify what our community wants" and that is exactly what the process has done. She said the plan would help at the staff level and the political level when Metro considers Urban Growth Boundary expansions. The Plan would allow the City to tell Metro that we have gone through this wonderful process with involvement and buy in and this was what our community has said. She said the Planning Commission and City Council could choose to do nothing, but it negated what has been done.

Vice Chair Griffin commented about development complaints from citizens and acknowledged Sherwood's recognition as a great place to live. He said he wanted the people to understand that the city was not in a rush to add 1300 acres to the city, but if we don't plan then someone else will plan it for us.

Chair Simson added that if we don't plan and don't have a place to grow, people will still want to come to Sherwood and instead of people having a place to build there will be redevelopment in the form of infill, accessory dwelling units, and townhouses. She said Sherwood was a place that people wanted to move to and those who lived in Sherwood in the late seventies wanted it to stay a small town, but people who moved here a year ago did so because it was a small town with good planning in place. She said Sherwood has grown so much, but it was still a small town that looks good and by planning for it correctly Sherwood could continue to be a good place to live.

Chair Simson compared the annexation of Area 59 with the Brookman area. She said Metro had dictated that Brookman would come into the city looking a certain way, whereas the community had reached out to Metro with the need to build a school resulting in Edy Ridge Elementary and Laurel Ridge Middle Schools and the area was working well. She said the community agreed with the new schools and the community surrounding them and it felt like the Sherwood West area could come in to the city as managed growth instead of forced development.

Regarding the preferred alternative language for the transportation options, Chair Simson suggested a change to clarify that the preferred alternative had two transportation options.

Commissioner Alan Pearson stated that he was one of the newer residents of Sherwood as a three year resident and even though Sherwood went from 3,000 to 19,000 residents it kept its small town feel by having identifiable neighborhoods. He commented on the different neighborhood signs he sees and said when he ran for City Council last year, he made a point to talk to as many people as he could asking their concerns. He explained that one lady had complained that her neighborhood did not have a sign identifying her neighborhood and what made Sherwood unique was that it was a town of neighborhoods. Commissioner Pearson remarked that Sherwood could continue to grow and still be a town of neighborhoods. He said Sherwood was a small town of 20,000 people and was going to be a small town of 50,000 as long as we were a town of neighborhoods and that was what The Sherwood West Preliminary Concept Plan was with five or six neighborhoods already identified.

Commissioner Pearson said he was reminded of the Chinese proverb that *a journey of a thousand miles begins with the first step* and pointed out that the pre-concept plan was the first step to something fifty years down the road. He said the Commission was not committing to anything, but committing to think about it, to look at it, to continue to do what Sherwood does better than any other place he has lived in his life; involving the citizens of the town in how it grew and developed. He said a town that does not grow and develop dies and growth can either be up, down or sideways. Commissioner Pearson said nobody wanted to see the town die, but everyone wanted to see it continue to grow and prosper and be not the eighth, but the best place in the nation to live.

Commissioner Pearson remarked that the plan was not even etched in silly putty, but it was a start, and if we don't start we are never going to go anywhere. There would be no progress or continuing to be the best place to live. He acknowledged that there were things about it he did not like and things the people on the Community Advisory Committee that worked together for months did not like, but they compromised, talked about it, thought about it and will continue to think about it, refine it, and change it because nothing stays the same. He commented that when the situation on the ground changed, the plan would change and advised not to get lost in the detail at this point because we are nowhere near detail. This is just an overall concept to think about; to let Metro know we are thinking about it and planning for it.

Commissioner Pearson complimented persons involved with the making of the plan for their time, expertise, energy and said they should be proud of themselves as they were not recognized properly. He said the Commission should send the plan on to City Council.

With no other comments the following motion was received.

Motion: From Vice Chair Russell Griffin that PA 16-01 Sherwood West Preliminary Concept Plan be forwarded to the Sherwood City Council with a recommendation of approval with changes discussed. Seconded by Commissioner Chris Flores. All present Planning Commissioners voted in favor (Commissioner Meyer, was absent).

7. Discuss Industrial Use work session

Chair Simson explained that five commissioners attended the work session. She indicated that Julia Hajduk would be drafting language based on feedback from the work session and provided an opportunity for the Commission to provide input regarding what was learned. Discussion followed with Ms. Hajduk indicating she would use the existing code language as a general base and word-smith it to be a more general. Ms. Hajduk said her sense was that the Planning Commission was leaning to

more general code language than she had thought and cautioned that the work session involved property owners, brokers and developers and asserted that the community's values and needs should also be protected.

Chair Simson commented that it would be easier to get rid of the chart of permitted and conditioned uses making those uses more general and create a grid of prohibited uses. The prohibited uses in the grid would enable the Commission to address what the citizens' concerns were. She said the Employment Industrial (EI) areas were remote with no adjacent residents so what was prohibited in Light Industrial (LI) might not be prohibited in Employment Industrial, but in general, manufacturing, warehousing, and distribution should be allowed in all industrial areas as there was not a lot of difference between the three industrial zones.

Vice Chair Griffin commented that throwing everything out was maybe not the preferred method, but he felt that the chart was too detailed. He said he was told that the EPA, ODOT, and DEQ had laws in place, because almost everything produces a byproduct or waste and all of it was usually handled. He said he would love to see state of the art research and technology in Sherwood or some other unique thing, because the code was not limited. He said maybe Sherwood did not want to be drone manufacturers, but drones are toys so under the current code we could have those. Vice Chair Griffin suggested taking a fresh look at the code; maybe not like Hillsboro's four or five categories, or Tualatin's decision heavy process, but the Sherwood way. He said his table group indicated people came to Sherwood to look at the land and after researching the code decided a two year process was too long so they chose someplace else. He said he felt like the code was a little antiquated and could be a little more general while defining only those drastic items that Sherwood did not want and maintaining the look and feel of Sherwood.

Chair Simson asked for more information on the Oregon Shovel Ready Program run by the state that enabled industrial properties to develop. She understood that because Sherwood had so many uses that are conditional it was a red flag and properties were not eligible for the program or if they were it was so cumbersome they choose not to do it.

Julia said she would make sure Tom Pessemier was available to help keep in mind the employment aspect for the Tonquin Employment Area (TEA) and if Sherwood ultimately decided to allow warehouses or distribution, she wanted to remember the reason why they were initially limited.

Chair Simson commented that warehousing in Sherwood would not be warehousing like a distribution center in Clackamas, because Sherwood does not have transportation access and thought it would be on a smaller scale. She said she worked in a warehouse environment that had a lot of employees, because it is small scale. She said Sherwood should not exclude warehousing from the industrial area.

Ms. Hajduk said the next work sessions would be for the Planning Commission to reach a comfortable level to be able to recommend a Department of Land Conservation and Development (DLCD) notice followed by additional meetings and a public hearing. She mentioned that the Oregon Shovel Ready Program did not *allow* development to occur, but is a sign for developers looking to build where they can know size, land uses, infrastructure, costs, to indicate the sites are shovel ready. She acknowledged that the conditional uses added uncertainty that may be a factor. Discussion followed including the possibility of including restaurants limited in size and retail in retail businesses.

Planning Commissioner Announcements

None.

8. Adjourn

Chair Simson adjourned the meeting at 7:58 pm.

Submitted by:

Kirsten Allen, Planning Department Program Coordinator

Approval Date: _____

City of Sherwood, Oregon
Planning Commission Meeting
January 26, 2016

Planning Commissioners Present:

Chair Jean Simson
Vice Chair Russell Griffin
Commissioner Chris Flores
Commissioner Alan Pearson
Commissioner Lisa Walker

Staff Present:

Tom Pessemier, Assistant City Manager
Julia Hajduk, Community Development Director
Brad Kilby, Planning Manager
Michelle Miller, Senior Planner
Kirsten Allen, Planning Dept. Program Coordinator

Planning Commission Members Absent:

Commissioner Michael Meyer
Commissioner Rob Rettig

Council Members Present:

Councilor Sally Robinson

Work Session

1. Call to Order

Chair Jean Simson convened the meeting at 6:15 pm and asked for announcements.

2. Council Liaison Announcements

Councilor Sally Robinson established that the City Council had voted to send a ban on recreational marijuana to the voters in the November 2016 general election because a majority of the voters in Sherwood had voted against legalizing recreational marijuana. She said if the ban failed there was also a 3% marijuana sales tax on the ballot.

3. Staff Announcements

Brad Kilby, Planning Manager, reported the Associate Planner Connie Randall had accepted a permanent position with the City of Wilsonville and announced the following schedule:

- Industrial Uses code changes work session on February 9, 2016,
- renowned public speaker Joe Minicozzi on February 10, 2016 at the Beaverton Library
- Smart Growth Conference on February 11-12, 2016. Two Planning Commissioners invited to attend
- Sherwood West Preliminary Concept Plan public hearing with City Council on February 16, 2016
- Mandel Subdivision for 86 lots public hearing with Planning Commission on February 23, 2016

Mr. Kilby noted some success had been reached by the Planning Department by the use of Facebook and Twitter social media. (Facebook: City of Sherwood, Oregon Government/ Twitter: @CitySherwood).

4. Recreational Marijuana

Michelle Miller, Senior Planner gave a presentation (see record, Exhibit 1) and said the code amendments for recreational marijuana were expected to be in place by November 2016. She included a brief history of Oregon Measure 91 and said OLCC had developed rules for recreational marijuana. Ms. Miller reminded the Commission that time, place and manner regulations could be adopted by the city and discussed the work plan and timeline of moving the legislation forward. The Commission indicated they wanted feedback from City Council and asked for a joint work session with the Police Advisory Board.

5. Industrial Land Use Districts Development Code

Julia Hajduk, Community Development Director, reviewed the Public work session held on January 12, 2016 and explained that code language changes were based on feedback received at the meeting. She went over many of the sections that had been amended. Tom Pessemier, Assistant City Manager gave input from an economic development outlook and briefly discussed the State of Oregon “shovel-ready” program. Discussion followed with an emphasis on establishing language that would clarify permitted uses and allow development in the constrained land found in the Employment Industrial zone.

6. Adjourn

Chair Simson adjourned the meeting at 8:25 pm.

Submitted by:

Kirsten Allen, Planning Department Program Coordinator

Approval Date: _____

CITY OF SHERWOOD
Staff Report
Mandel Farms Subdivision (SUB 15-01)

February 15, 2016

Planning Department

Pre-App. Meeting: July 6, 2015
App. Submitted: October 20, 2015
App. Complete: January 8, 2016
120-Day Deadline: May 7, 2016



Brad Kilby, Planning Manager

Proposal: The applicant is requesting preliminary subdivision approval for an 86-lot subdivision for single-family dwellings on a 22.35 acre site comprised of two tax lots divided by SW Copper Terrace.

I. BACKGROUND

- A. Applicant:
Venture Properties
4230 Galewood Street, Suite 100
Lake Oswego, OR 97034
Contact: Kelly Ritz
- Owner:
2007 Mandel Family Trust
David Mandel and Randy Kieling
13990 SW Hall Blvd
Tigard, OR 97223
- B. Location: Washington County Tax Map 2S130CB00250 and 2S130CB00251. The property is located at the southeast corner of the intersection of SW Elwert and SW Edy roads at 21340 SW Elwert Road.
- C. Parcel Size: The subject property is approximately 22.35 gross acres.
- D. Existing Development and Site Characteristics: The subject site is in active farming with nursery stock and field crops and has an existing single-family residence and associated outbuilding and is part of a larger undeveloped parcel that is in active farm use with nursery stock and field crops. The site is bisected by a perennial tributary to Chicken Creek bisects from south to north in an arched manner on the west side of the property. The site is also bisected by SW Copper Terrace which created a smaller 1.19 acre parcel at the northeast corner of the site. The land has a gently sloping topography with high points in the northeast, southeast and southwest corners. The site is bounded by SW Edy Road on the north, SW Elwert Road on the west, and by the perennial tributary and associated vegetated corridor on the north and south, and extends 130 feet east.
- E. Site History: The site was brought into the Urban Growth Boundary by Metro in 2002 as part of Area 59. The Area 59 Concept Plan, adopted by the City Council in 2007, applied a mix of land use designations on the parcel, including Medium Density Residential Low (MDRL), Medium Density Residential High (MDRH), and Neighborhood Commercial (NC). Additionally, the waterway that bisects the property is identified as Open Space and/or Natural Area. The implementing codes were adopted at the same time as the concept plan. The City Council approved a request to rezone the 3-acre NC zoned portion to MDRL on January 5, 2016.

- F. Zoning Classification and Comprehensive Plan Designation: The existing zone for 12.54 acres of the site is Medium Density Residential Low (MDRL) and Medium Density Residential High (MDRH) for 5.82 acres. Per section 16.12, the purpose of the MDRL zone is to provide for single-family and two-family housing, manufactured housing and other related uses with a density of 5.6 to 8 dwelling units per acre and the purpose of the MDRH zone is to provide for a variety of medium density housing and related uses at a density of 5.5 to 11 dwelling units per acre. Approximately 4 acres have an Open Space designation, to reflect the desire to preserve the natural area and habitat of the Chicken Creek tributary that bisects the property.
- G. Adjacent Zoning and Land Use: The properties north and west of the subject site are located in Washington County, outside the City's Urban Growth Boundary, and are zoned Exclusive Agriculture and Forest (AF-20), which is intended to provide an exclusive farm use zone within the County which recognizes that certain lands therein may be marginal, and Agriculture and Forest (AF-10), the purpose of which is to promote agricultural and forest uses on small parcels in the rural area, while recognizing the need to retain the character and economic viability of agricultural and forest lands, as well as recognizing that existing parcelization and diverse ownerships and uses exist within the farm and forest area. The land is largely undeveloped with the exception of a few rural residences and is vacant or utilized for agricultural purposes. The properties south and east of the site are located within the City limits and are zoned MDRL, MDRH, and Institutional and Public (IP). The Daybreak single-family subdivision has been developed immediately south of the site. The Laurel Ridge Middle School campus has been developed east of the site, on the east side of Copper Terrace Road. A 5.09 acre lot zoned MDRL is located adjacent to the northeast portion of the site. This parcel is developed with a residential home and associated out buildings with much of the land in active farm use.
- H. Review Type: The subdivision requires a Type IV review and decision made by the Planning Commission per Section 16.72.010.A.4 of the Sherwood Zoning and Community Development Code (SZCDC). An appeal would be heard by the Sherwood City Council.
- I. Public Notice and Hearing: Public notice of the application was provided in accordance with Section 16.72.020 of the SZCDC. Notice of the application was posted in five locations throughout the City on January 27, 2016. Notice was mailed to property owners within 1,000 feet of the site and posted on the property on January 29, 2016. Notice was published in The Times on February 4, 2016 and again on February 18, 2016.
- J. Review Criteria: Review of the application is based on the following chapters and applicable sections of the SZCDC, §16.12 (Residential Land Uses), §16.58 (Clear Vision and Fence), §16.60 (Yard Requirements), §16.72 (Procedures for Processing Development Permits), §16.94 (Off-Street Parking), §16.106 (Transportation Facilities); §16.110 (Sanitary Sewers); §16.112 (Water Supply); §16.114 (Storm Water); §16.116 (Fire Protection); §16.118 (Public and Private Utilities), §16.120 (Subdivisions), §16.128 (Land Division Design Standards), §16.142 (Parks, Trees and Open Space), §16.144 (Wetland, Habitat, and Natural Areas); and §16.156 (Energy Conservation).

II. PUBLIC COMMENTS

Public notice was posted in five locations throughout the City on January 27, 2016 and mailed to property owners within 1,000 feet of the site and posted on the property on January 29, 2016. Staff has not received any public comments as of the date of this report.

III. AGENCY COMMENTS

Staff sent e-notice to affected agencies on January 21, 2016. The following is a summary of the comments received. Copies of full comments are included in the record unless otherwise noted.

Sherwood Engineering Department: Craig Christensen, PE with the City Engineering Division provided written comments dated February 15, 2016 that have been incorporated throughout this report. Mr. Christensen's comments are attached to this report as Exhibit B.

Clean Water Services: Jackie Sue Humphreys, of Clean Water Services provided comments dated February 3, 2016 on the proposal that require a Storm Water Connection Permit Authorization. Their comments are attached to this report as Exhibit C.

Tualatin Valley Fire and Rescue: Tualatin Valley Fire and Rescue provided comments listing the minimum requirements for fire protection. Their comments have been incorporated into the record, and the applicant will be required to satisfy their minimum standards for fire protection in designing and constructing the subdivision. Their comments are attached to this report as Exhibit D.

Washington County Engineering: Naomi Vogel, Associate Planner with Washington County provided comments dated February 8, 2016. Ms. Vogels comments have been incorporated into this report where appropriate, and are attached to this report as Exhibit E.

Portland General Electric, Pride Disposal, Bonneville Power Administration, Kinder Morgan Energy, ODOT, METRO, NW Natural Gas, Sherwood School District, Tri-Met, U.S. Fish and Wildlife Services, and Washington County were all provided with an opportunity to comment, but provided no comments as of the date of this staff report.

IV. PRELIMINARY PLAT- REQUIRED FINDINGS (SECTION 16.120)

16.120.030 - Approval Procedure-Preliminary Plat

A. Approval Authority

1. The approving authority for preliminary and final plats of subdivisions shall be in accordance with Section 16.72.010 of this Code.
 - a. A subdivision application for 4-10 lots will follow a Type II review process.
 - b. A subdivision application for 11-50 lots will follow a Type III review process.
 - c. A subdivision application for over 50 lots will follow a Type IV review process.
2. Approval of subdivisions is required in accordance with this Code before a plat for any such subdivision may be filed or recorded with County. Appeals to a decision may be filed pursuant to Chapter 16.76.

B. Phased Development

1. **The Approval Authority may approve a time schedule for developing a subdivision in phases, but in no case shall the actual construction time period for any phase be greater than two years without reapplying for a preliminary plat.**
2. **The criteria for approving a phased subdivision review proposal are:**
 - a. **The public facilities shall be scheduled to be constructed in conjunction with or prior to each phase to ensure provision of public facilities prior to building occupancy;**
 - b. **The development and occupancy of any phase shall not be dependent on the use of temporary public facilities:**
 - (1) **For purposes of this subsection, a temporary public facility is an interim facility not constructed to the applicable City or district standard; and**
 - (2) **The phased development shall not result in requiring the City or other property owners to construct public facilities that were required as a part of the approval of the preliminary plat.**
3. **The application for phased development approval shall be reviewed concurrently with the preliminary plat application and the decision may be appealed in the same manner as the preliminary plat.**

ANALYSIS: The proposed development is a subdivision for 86 single-family lots. The code requires that it be reviewed as a type IV application. In addition, the applicant is proposing to four phases over a six year period. Sheet P04 illustrates the proposed phasing of the development. A discussion of the phasing plan can be found on page 41 of the applicant's narrative.

FINDING: The application is for 86 single-family lots and is therefore subject to a Type IV application process. The application is being processed as a Type IV application consistent with this process. The applicant is also proposing to phase the subdivision over a period of six years, meaning that the construction of each phase must not exceed two years. The applicant is not proposing any temporary or interim facilities, and is not asking that the City construct any facilities on its behalf. Given the current real estate market and high demand for housing, it is feasible for the developer to satisfy the requirements for a phased development. These criteria are satisfied.

16.120.040 - Approval Criteria: Preliminary Plat

- A. **Streets and roads conform to plats approved for adjoining properties as to widths, alignments, grades, and other standards, unless the City determines that the public interest is served by modifying streets or road patterns.**

FINDING: As proposed, the development is provided with sewer, water, stromwater, access, and can feasibly be served by franchise utilities. The only street that has been stubbed to this site is SW Yorkshire Way from the south. All other internal streets are newly proposed and have been designed to acceptable public standards. The applicant has requested modifications that have been considered and approved by the County Engineer and the City Engineer in order to allow the most efficient development of this property as zoned. A thorough discussion of how these services are provided have been reviewed and evaluated by Washington County, the City of Sherwood Public Works

Department, and the City Engineer to ensure that they will function as proposed. The analysis and discussion of these services can be found in Division VI (Public Infrastructure) below. As discussed and conditioned throughout the report, the proposed development can be in.

B. Streets and roads held for private use are clearly indicated on the plat and all reservations or restrictions relating to such private roads and streets are set forth thereon.

FINDING: All streets within and adjacent to the proposed development are public. The applicant also proposes a public alley to serve proposed lots 76-78 at staff's recommendation early in their design. The code requires access to more than two lots to be public. In this particular instance, the applicant has proposed a public alley to overcome this requirement. After discussing this particular issue with the Public Works department, who would be required to maintain the proposed alley, and the City Engineer who reviews and analyzes access to public streets, they are requesting that the public alley be constructed to a public standard, but maintained as a private alley. Because of the location of proposed lot 78 at the intersection of SW Elwert Road and the newly proposed SW 'C' Terrace, any location of a driveway could be problematic unless access is provided off of the proposed alley. For these reasons, the City is requesting that the Planning Commission require this proposed public alley to be private, and limit access to lot 78 from that alley.

CONDITION: The proposed public alley off of SW 'C' Terrace shall be constructed to a public standard, but be maintained as private by the homeowners association for the Mandel Farms subdivision. Any future access to proposed lots 76-78 shall be provided via the private alley off of SW 'C' Terrace. There shall be no access to any of the lots within the subdivision from SW Elwert Road.

C. The plat complies with applicable zoning district standards and design standards in Division II, and all provisions of Divisions IV, VI, VIII and IX. The subdivision complies with Chapter 16.128 (Land Division Design Standards).

FINDING: Where applicable, this standard is or can be met as discussed in Divisions IV (Planning Procedures), VI (Public Infrastructure) and VIII (Environmental Resources) of this report. Section IX (Historic Resources) is not addressed as it is not applicable.

D. Adequate water, sanitary sewer, and other public facilities exist to support the use of land proposed in the plat.

FINDING: As discussed, analyzed, and conditioned in Division VI (Public Infrastructure) of this report there are adequate services to support the proposed subdivision. This standard is met.

E. Development of additional, contiguous property under the same ownership can be accomplished in accordance with this Code.

FINDING: There is no additional, contiguous property under the same ownership. This standard is not applicable.

F. Adjoining land can either be developed independently or is provided access that will allow development in accordance with this Code.

FINDING: The 5.09-acre lot property adjacent to the northeast portion of the site will have the opportunity to develop independently with access from SW Edy Road or SW Nursery Way. This standard is met.

G. Tree and woodland inventories have been submitted and approved as per Section 16.142.060.

FINDING: As discussed in Division VIII (Environmental Resources) below, a tree and woodland inventory was submitted. This standard can be met as conditioned in Division VIII (Environmental Resources) below.

H. The plat clearly shows the proposed lot numbers, setbacks, dedications and easements.

ANALYSIS: The proposed subdivision plat clearly illustrates the proposed lot numbers, setbacks, dedications and easements.

FINDING: This standard is satisfied.

I. A minimum of five percent (5%) open space has been provided per § 16.44.B.8 (Townhome- Standards) or §16.142.020 (Parks, Open Spaces and Trees-Single-Family Residential Subdivisions), if applicable.

FINDING: The standard requires that a minimum of 5% of the net buildable site (after exclusion of public right-of-way and environmentally constrained areas) shall be maintained as "open space". Open space must include usable areas such as public parks, swimming and wading pools, grass areas for picnics and recreational play, walking paths, and other like space. Required yards or setbacks, required visual corridors, required sensitive areas and buffers, and any area required to meet a standard found elsewhere in the code may not be used to calculate open space. As proposed, the applicant is proposing to provide open space within proposed Tracts 'A', 'B', 'D', 'F', and 'H'. The total area of these tracts is 48,029 SF, which represents approximately 8.6% of the net developable area for the site. A more comprehensive discussion of open space is detailed under 16.142 later in this report. This standard is met.

V. APPLICABLE CODE PROVISIONS

A. Division II - Land Use and Development

The applicable provisions of Division II include: 16.12 (Medium Density Residential Low, Medium Density Residential High); 16.58 (Visual Clearance); and 16.60 (Yard Requirements) Compliance with the standards in these sections is discussed below:

16.12.010 Purpose and Density Requirements

Zoning district description

C. Medium Density Residential Low (MDRL)

The MDRL zoning district provides for single-family and two family

housing, manufactured housing, and other related uses with a density of 5.6 to 8 dwelling units per acre.

D. Medium Density Residential High (MDRH)

The MDRH zoning district provides for single-family and two family housing, manufactured housing, multi-family housing and other related uses with a density of 5.5 to 11 dwelling units per acre.

ANALYSIS: The gross site area is 22.35 acres. After street right-of-way, wetlands and vegetated corridor dedications, the net acreage is 12.81 acres. The proposed density for this subdivision is 6.71 dwelling units per acre which falls within the allowable range for the MDRL and MDRH zones.

FINDING: This standard is met.

16.12.020 Allowed Residential Land Uses

Single Family Attached or Detached Dwellings

ANALYSIS: The applicant is proposing an 86-lot subdivision for detached, single family dwellings which is a permitted use in both the MDRL and MDRH zones.

FINDING: This standard is met.

16.12.030 Residential Land Use Development Standards

16.12.030.A Generally

No lot area, setback, yard, landscaped area, open space, off-street parking or loading area, or other site dimension or requirement, existing on, or after, the effective date of this Code shall be reduced below the minimum required by this Code. Nor shall the conveyance of any portion of a lot, for other than a public use or right-of-way, leave a lot or structure on the remainder of said lot with less than minimum Code dimensions, area, setbacks or other requirements, except as permitted by Chapter 16.84. (Variances and Adjustments)

16.12.030.B Development Standards

Except as modified under Chapter 16.68 (Infill Development), Section 16.144.030 (Wetland, Habitat and Natural Areas), Chapter 16.44 (Townhomes), or as otherwise provided, required minimum lot areas, dimensions and setbacks shall be provided in the following table.

16.12.030.C Lot Dimensions

| | MDRL | MDRH |
|--|---------|---------|
| Minimum Lot area (in sq. ft.); Single-Family Detached: | 5,000 | 5,000 |
| Minimum Lot width at front property line: | 25 feet | 25 feet |
| Minimum Lot width at building line; Single-Family: | 50 feet | 50 feet |
| Lot Depth: | 80 feet | 80 feet |

FINDING: The lot dimension criterion are the same for both the MDRL and MDRH zones. The preliminary subdivision plat proposes 86 lots ranging in size from 5,000 square feet to 8,846 square feet, meeting or exceeding the minimum lot size criteria (Exhibit A, Sheet P04). As proposed, all 68 lots meet the minimum width at the front property line of 25 feet, with lot widths ranging from 27.38 feet (Lot 24) to 96.68 feet (Lot 19). All lots meet or exceed the minimum 50-foot width at the building line and 80-foot depth requirements, ranging in width from 50 feet to 80 feet and in depth from 80.6 to 153 feet.

FINDING: These standards are met.

16.12.030.C Setbacks

| | MDRL | MDRH |
|--|---------|---------|
| Front yard: | 14 feet | 14 feet |
| Face of garage | 20 feet | 20 feet |
| Interior side yard; Single-Family Detached: | 5 feet | 5 feet |
| Corner lot side yard; Single Family or Two Family: | 15 feet | 15 feet |
| Rear yard: | 20 feet | 20 feet |

ANALYSIS: Building plans are not included with the proposal. However, the building envelopes shown on the Preliminary Building Setbacks Plan (Exhibit A, Sheet P05) demonstrate that lots are large enough for structures to meet the setbacks. As proposed, it appears that these standards can be met. The actual building envelopes will be reviewed when the lots are individually reviewed prior to issuance of building permits.

FINDING: These standards can be met as conditioned below.

CONDITION: Prior to issuance of building permits, submit plot plans showing that the structures meet minimum front, face of garage, rear, side, and corner side yard setback requirements.

16.12.030.C. Height

| | MDRL | MDRH |
|---------------------------|-----------------|-------------------|
| Maximum Height (in feet): | 30 or 2 stories | 35 or 2.5 stories |

ANALYSIS: At this time it is unclear how tall the homes will be. The actual height of the homes will be reviewed when the lots are individually reviewed prior to issuance of building permits.

FINDING: This standard can be met as conditioned below.

CONDITION: Prior to issuance of building permits submit plot plans showing that the height of the dwellings do not exceed two (2) stories or thirty feet, whichever is less, in the MDRL zoned areas and 2.5 stories or 35 feet, whichever is less, in the MDRH zoned areas.

16.58.010 Clear Vision Areas

- A. A clear vision area shall be maintained on the corners of all property at the intersection of two (2) streets, intersection of a street with a railroad, or intersection of a street with an alley or private driveway.
- B. A clear vision area shall consist of a triangular area, two (2) sides of which are lot lines measured from the corner intersection of the street lot lines for a distance specified in this regulation; or, where the lot lines have rounded corners, the lot lines extended in a straight line to a point of intersection, and so measured, and the third side of which is a line across the corner of the lot joining the non-intersecting ends of the other two (2) sides.
- C. A clear vision area shall contain no planting, sight obscuring fence, wall, structure, or temporary or permanent obstruction exceeding two and one-half (2 1/2) feet in height, measured from the top of the curb, or where no curb exists, from the established street center line grade, except that trees exceeding this height may be located in this area, provided all branches and foliage are removed to the height of seven (7) feet above the ground on the sidewalk side and ten (10) feet on the street side.

The following requirements shall govern clear vision areas:

- 1. In all zones, the minimum distance shall be twenty (20) feet.
- 2. In all zones, the minimum distance from corner curb to any driveway shall be twenty-five (25) feet.
- 3. Where no setbacks are required, buildings may be constructed within the clear vision area.

ANALYSIS: The Preliminary Building Setback Plan (Attachment A, Sheet P05) shows proposed building envelopes that show that the proposed development can comply with this standard. Clear vision areas will be verified at the time of plot plan review prior to issuance of building permits.

The Preliminary Street Tree and Open Space Plan (Attachment A, Sheet P21) appears to include proposed street trees at the intersection of SW 'C' Terrace and SW Elwert Road and SW Yorkshire Way and SW Copper Terrace that could interfere with the Clear Vision areas.

FINDING: As proposed, this standard is not met, but can be met as conditioned below.

CONDITION: Prior to approval of the Final Plat, submit a revised tree plan demonstrating compliance with the Clear Vision requirements of Section 16.16.58.

16.60 Yard Requirements

16.60.010 Through Lots

On a through lot the front yard requirements of the zone in which such a lot is located shall apply to the street frontage where the lot receives vehicle access, except where access is from an alley, the front yard requirements shall apply to the street opposite the alley.

ANALYSIS: The applicant has proposed a number of through lots, lots 12-14, 55-64, and 76-86. All through lots will take access from a new internal street, with the exception of lots 76-78 which will be accessed from a new internal alley. The applicant's narrative acknowledges that the front yard setback for lots 76-78 will be

measured from SW Elwert Road, while the remaining lots will front onto the new proposed internal street, consistent with this standard.

FINDING: Generally, this standard is met, but, within the narrative, the applicant indicates that the front setback will be measured from Elwert; however, within Plan sheet P05 the front setbacks are shown from proposed public alley. The front setback for these three lots are required to be measured from SW Elwert pursuant to this standard; therefore, the following condition is warranted.

CONDITION: The front yard setbacks for lots 76-78 shall be measured from SW Elwert Road pursuant to section 16.60.010.

16.60.020 - Corner Lots

On a corner lot, or a reversed corner lot of a block oblong in shape, the short street side may be used as the front of the lot provided:

- A. The front yard setback shall not be less than twenty-five (25) feet; except where otherwise allowed by the applicable zoning district and subject to vision clearance requirements.**
- B. The side yard requirements on the long street side shall conform to the front yard requirement of the zone in which the building is located.**

ANALYSIS: As proposed, lots 1, 8, 11, 12, 18, 20, 21, 27, 48, 53, 54, 64, 69, 70, 78, and 79 are corner lots. The MDRL and MDRH zones require a 14-foot front yard and 15-foot street side yard setback, which supersedes these standards. The applicant's Preliminary Building Setback Plan (Attachment A, Sheet P05) demonstrates that the front and street side yard setbacks required by the MDRL and MDRH zones in Section 16.12.030 can be met.

FINDING: These standards are not applicable as they are superseded by the standards of Section 16.12.030.

16.60.030 - Yards

- A. Except for landscaping, every part of a required yard (also referred to as minimum setback) shall be open and unobstructed from its lowest point to the sky, except that architectural features such as awnings, fire escapes, open stairways, chimneys, or accessory structures permitted in accordance with Chapter 16.50 (Accessory Structures) may be permitted when so placed as not to obstruct light and ventilation.**
- B. Where a side or rear yard is not required, and a primary structure is not erected directly on the property line, a primary structure must be set back at least three (3) feet.**

ANALYSIS: No structures are proposed at this time. Compliance with yard requirements will be verified prior to issuance of building permits.

FINDING: This criteria is not applicable.

16.60.040 - Lot Sizes and Dimensions

- A. If a lot or parcel, or the aggregate of contiguous lots or parcels, recorded or platted prior to the effective date of this Code, has an area or dimension which does not meet the requirements of this Code, the lot or**

aggregate lots may be put to a use permitted outright, subject to the other requirements of the zone in which the property is located.

B. Exceptions

1. Residential uses are limited to a single-family dwelling, or to the number of dwelling units consistent with the density requirements of the zone. However, a dwelling cannot be built on a lot with less area than thirty-two hundred (3,200) square feet, except as provided in Chapter 16.68.
2. Yard requirements of the underlying zone may be modified for infill developments as provided in Chapter 16.68 (Infill Development).

ANALYSIS: As proposed, all lots meet the minimum size and dimension requirements of the MDRL and MDRH zones.

FINDING: This standard is not applicable.

B. Division III – Administrative Procedures

16.72.010.A. Generally

Except for Final Development Plans for Planned Unit Developments, which are reviewed per Section 16.40.030, all quasi-judicial development permit applications and legislative land use actions shall be classified as one of the following:

16.72.010.A.4 Type IV

16.72.010.A.4.f. Subdivisions – over 50 lots

ANALYSIS: Section 16.72.010.A.4.f requires that applications for subdivisions over 50 lots be reviewed as a Type IV project which is subject to consideration by the by the Planning Commission. Appeals are heard by the Sherwood City Council. These are not actual approval criteria, but rather directions to staff on how to process the application.

FINDING: The application has been processed as a Type IV land use application. All procedures have been followed consistent with this Chapter.

C. Division V – Community Design

The applicable provision of Division V include Section 16.94.020.A (Off-Street Parking Standards).

16.94.020 Off-Street Parking Standards

16.94.020.A Generally

Where square feet are specified, the area measured shall be the gross building floor area primary to the functioning of the proposed use. Where employees are specified, persons counted shall be those working on the premises, including proprietors, during the largest shift at peak season. Fractional space requirements shall be counted as a whole space. The Review Authority may determine alternate off-street parking and loading requirements for a use not specifically listed in this Section based upon the requirements of comparable uses.

Minimum and Maximum Parking Standards

(Metro spaces are based on 1 per 1,000 sq. ft. of gross leasable area)

| | Minimum Parking Standard | Maximum Permitted Parking Zone A ¹ | Maximum Permitted Parking Zone B ² |
|--|--------------------------|---|---|
| Single, two-family and manufactured home on lot ³ | 1 per dwelling unit | None | None |

³ If the street on which the house has direct access is less than twenty-eight (28) feet wide, two (2) off-street parking spaces are required per single-family residential unit. (includes single-family detached or attached, two-family dwelling or a manufactured home on an individual lot) If the abutting street is twenty-eight (28) feet or wider, one (1) standard (9 ft. x 20 ft.) parking space is required.

ANALYSIS: Building plans and plot plans are not included in the application. The applicant’s narrative does not address this standard. However, the Preliminary Building Setback Plan (Attachment A, Sheet P05) demonstrates that each lot is at least 25 feet wide at the front property line and can accommodate a building setback of 20 feet, which is adequate in size for a driveway to park at least one vehicle.

FINDING: This standard is not met, but can be met as conditioned below.

CONDITION: Prior to issuance of a building permit, submit plot plans showing the provision of one (1) off-street parking space per dwelling unit.

16.96.020. Minimum Residential Standards

16.96.020.A. Driveways

- 1. Single-Family: One (1) driveway improved with hard surface pavement with a minimum width of ten (10) feet, not to exceed a grade of 14%. Permeable surfaces and planting strips between driveway ramps are encouraged in order to reduce stormwater runoff.**

ANALYSIS: It appears that each lot will be able to meet this standard when each lot is reviewed for building permits.

FINDING: This standard applies citywide and will be verified prior to issuance of building permits.

D. Division VI - Public Infrastructure

The applicable provision of Division VI include: 16.106 (Transportation Facilities); 16.110 (Sanitary Sewers); 16.112 (Water Supply); 16.114 (Storm Water); 16.116 (Fire Protection); and 16.118 (Public and Private Utilities).

16.106 Transportation Facilities

16.106.020 Required Improvements

A. Generally

Except as otherwise provided, all developments containing or abutting an existing or proposed street, that is either unimproved or substandard in right-of-way width or improvement, shall dedicate the necessary right-of-way prior to the issuance of building permits and/or complete acceptable improvements prior to issuance of occupancy permits. The following figure provides the depiction of the functional classification of the street network as found in the Transportation System Plan, Figure 8-1.

ANALYSIS: The applicant is proposing four new local streets and an extension of SW Yorkshire Way to the north from the Daybreak Subdivision. The proposed development is surrounded on three sides, by three existing public streets. The applicant has indicated within the narrative and on the plan sets that they are willing to dedicate the right-of-way necessary to bring the streets up to current standards consistent with discussions that have occurred between the City Engineer, the County Engineer, and the applicant's engineer. In addition to the required dedication, the applicant is required to construct street improvements including street lighting, street signs, pavement markings, etc.

The local streets that will be constructed with the development are proposed to be 52-foot wide consistent with the standard residential street within the City's Transportation system Plan (TSP). Copper Terrace is designated as a neighborhood street. The minimum dimensions for this street is a 64-foot right-of-way. The applicant is proposing to provide an 11-foot wide dedication along the sites frontage to bring the right-of-way width up to City standard. In addition to the dedication, the developer will be required to construct street widening improvements along the west side of SW Copper Terrace along the length of the property to match improvements on east side of street (19 feet centerline to face of curb with 5-foot wide landscape strip and 8-foot wide sidewalk. Bulb-outs shall be 13 feet from centerline to face of curb with 11-foot wide landscape strip and 8-foot wide sidewalk.

SW Edy Road and SW Elwert Roads are County roads. According to the comments received from the County, SW Elwert Road is designated an "Enhanced Major Street Bikeway" and an Arterial (3 lanes). The applicant will be required to ensure that there is 45 feet of right-of-way from the centerline of SW Elwert Road along the site's frontage. The applicant is proposing to dedicate additional 15-feet of right-of-way along SW Elwert as required. SW Edy Road is designated a "Major Street Bikeway" and a Collector (3 lanes). The applicant is required to ensure that the street along the site's frontage is provided with 37 feet from the centerline of SW Edy Road. As proposed, the applicant is proposing to dedicate an additional 10-feet of right-of-way along the south side of SW Edy Road. With this amount of dedication, it appears that the right-of-way along SW Edy Road will be deficient per the County standards. Finally, corner radius at both street connections the County roads, (SW Copper Terrace and SW 'C' Terrace are required to meet County standards.

FINDING: As discussed in the analysis above, the applicant has proposed to provide dedications for all public streets within and adjacent to the development. All of the proposed dedications appear to meet the City and County standards except for the proposed dedication along SW Edy Road. In order to ensure that all streets within and adjacent to the proposed subdivision meet this standard, the following conditions are warranted.

CONDITION: Prior to final plat approval, the developer shall dedicate a 64-foot full width right-of-way section along the site's frontage for SW Copper Terrace. The dedication can be provided on the final plat.

CONDITION: Prior to final plat approval, the following shall be represented on the plat and recorded with Washington County:

- a) Dedication of additional right-of-way to provide for 45 feet from the centerline of SW Elwert Road.
- b) Dedication of additional right-of-way to provide for 37 feet from the centerline of SW Edy Road.
- c) Dedication of additional right-of-way to provide adequate corner radius at all intersections with County-maintained roads.
- d) Provision of a non-access reservation along SW Edy Road and SW Elwert Road frontages with the exception of the two public street connections approved as part of this development review.

B. Existing Streets

Except as otherwise provided, when a development abuts an existing street, the improvements requirement shall apply to that portion of the street right-of-way located between the centerline of the right-of-way and the property line of the lot proposed for development. In no event shall a required street improvement for an existing street exceed a pavement width of thirty (30) feet.

ANALYSIS: Prior to making an application to the City, the applicant, the City Engineer, and the County Engineer discussed the improvements that would be required to accommodate the proposed subdivision based upon the respective Transportation System Plans, and the forecasted trips within the development. The applicant's plans and narrative indicate a willingness to make the half-street improvements along all property frontages consistent with Washington County Standards (for SW Edy and SW Elwert Roads) and the City's design standards for all internal rights-of-way and along the site's frontage with SW Copper Terrace. Because of the extensive and comprehensive intersection improvements needed at the intersection of SW Elwert and SW Edy Roads, the applicant has proposed, and the City and County Engineers have agreed that the dedications along the entire frontage are required, but that full improvements would not be proportional to the impacts of this development. This agreement does not relieve the applicant of the requirement to pay their fair share towards the future improvement of the intersection. The County has asked that the applicant pay a fee in lieu of the street improvements along the SW Edy and Elwert frontages that are adjacent to the vegetated corridor.

FINDING: The applicant has proposed to construct half-street improvements along the sites frontage with SW Copper Terrace and partially along the site's frontages with SW Edy and SW Elwert Roads consistent with Washington County Standards and the City's design standards. To the extent reasonable and proportionate to the impacts of the proposed subdivision, the applicant is required to contribute their fair share towards future improvements to the intersection of SW Edy and SW Elwert Roads. To ensure that this standard is satisfied, the following conditions are warranted.

CONDITION: Prior to final plat approval, the applicant shall construct street widening improvements along west side of SW Copper Terrace (Neighborhood Street) along the length of the property to match improvements on the east side of the street (19 feet centerline to face of curb with 5-foot wide landscape strip and 8-foot wide

sidewalk. Bulb-outs shall be 13 feet from centerline to face of curb with 11-foot wide landscape strip and 8-foot wide sidewalk.

CONDITION: Prior to the issuance of any building permits for each phase, the required improvements for that phase must be completed and accepted by the City Engineering Department.

CONDITION: All city street infrastructure shall meet City of Sherwood standards and be reviewed and approved by the Sherwood Engineering Department prior to issuance of an Engineering Compliance Agreement.

CONDITION: SW Elwert Road and SW Edy Road are county streets. All county street infrastructure shall meet Washington County standards and be reviewed and approved by the Washington County Transportation Department prior to issuance of an Engineering Compliance Agreement.

CONDITION: Prior to the approval of public improvement plans, obtain a Washington County Facility Permit that includes a financial assurance for the construction of the Public Improvements listed in condition I.A.5 of the letter from Washington County dated February 8, 2016 and attached as exhibit E. to this report.

CONDITION: Provide an engineer's cost estimate and pay a fee in-lieu of constructing the remaining half-street improvement along the frontage of SW Elwert Road and SW Edy Road to Washington County.

A. Generally

The location, width and grade of streets shall be considered in their relation to existing and planned streets, topographical conditions, and proposed land uses. The proposed street system shall provide adequate, convenient and safe traffic and pedestrian circulation, and intersection angles, grades, tangents, and curves shall be adequate for expected traffic volumes. Street alignments shall be consistent with solar access requirements as per Chapter 16.156, and topographical considerations.

B. Street Connectivity and Future Street Systems

1. **Future Street Systems.** The arrangement of public streets shall provide for the continuation and establishment of future street systems as shown on the Local Street Connectivity Map contained in the adopted Transportation System Plan (Figure 16).
2. **Connectivity Map Required.** New residential, commercial, and mixed use development involving the construction of new streets shall be submitted with a site plan that implements, responds to and expands on the Local Street Connectivity map contained in the TSP.
 - a. A project is deemed to be consistent with the Local Street Connectivity map when it provides a street connection in the general vicinity of the connection(s) shown on the map, or where such connection is not practicable due to topography or other physical constraints; it shall provide an alternate connection approved by the decision-maker.

- b. Where a developer does not control all of the land that is necessary to complete a planned street connection, the development shall provide for as much of the designated connection as practicable and not prevent the street from continuing in the future.
- c. Where a development is disproportionately impacted by a required street connection, or it provides more than its proportionate share of street improvements along property line (i.e., by building more than 3/4 width street), the developer shall be entitled to System Development charge credits, as determined by the City Engineer.
- d. Driveways that are more than 24 feet in width shall align with existing streets or planned streets as shown in the Local Street Connectivity Map in the adopted Transportation System Plan (Figure 17), except where prevented by topography, rail lines, freeways, pre-existing development, or leases, easements, or covenants.

ANALYSIS: The TSP shows a proposed local street connection between SW Copper Terrace and SW Elwert Road, however, it was never expected that a single development would incur the cost of bridging the natural resource that bisects the site. The cost of this improvement, if borne by the development, would not be proportionate to the impacts created by the development on the system. Spanning the natural area would be impractical and according to a cost estimate from the City Engineer in the rezone of a portion of the site cost approximately \$2,000,000 for a 700 foot vehicular connection. It was further determined by the City Engineer that a full street connection between SW Copper Terrace and SW Elwert Road would be more practical south of the Daybreak Subdivision as opposed to this location. For these purposes, it was determined that the local street connection across the natural area would not be made for vehicular traffic. However, as discussed below, the applicant would be required to provide a pedestrian connection to satisfy the minimum block length requirements. The applicant's proposal also includes the extension of SW Yorkshire Way from the Daybreak subdivision south of this site consistent with local street connectivity requirements.

FINDING: As discussed in the analysis above, the standard is satisfied to the extent practical by the proposed development.

- 3. **Block Length.** For new streets except arterials, block length shall not exceed 530 feet. The length of blocks adjacent to arterials shall not exceed 1,800 feet.
- 4. Where streets must cross water features identified in Title 3 of the Urban Growth Management Functional Plan (UGMFP), provide crossings at an average spacing of 800 to 1,200 feet, unless habitat quality or length of crossing prevents a full street connection.
- 5. Where full street connections over water features identified in Title 3 of the UGMFP cannot be constructed in centers, main streets and station communities (including direct connections from adjacent neighborhoods), or spacing of full street crossings exceeds 1,200 feet, provide bicycle and pedestrian crossings at an average spacing of 530 feet, unless exceptional habitat quality or length of crossing prevents a connection.

6. **Pedestrian and Bicycle Connectivity. Paved bike and pedestrian accessways consistent with cross section standards in Figure 8-6 of the TSP shall be provided on public easements or right- of-way when full street connections are not possible, with spacing between connections of no more than 300 feet. Multi-use paths shall be built according to the Pedestrian and Bike Master Plans in the adopted TSP.**
7. **Exceptions. Streets, bike, and pedestrian connections need not be constructed when any of the following conditions exists:**
 - a. **Physical or topographic conditions make a street or accessway connection impracticable. Such conditions include but are not limited to freeways, railroads, steep slopes, wetlands or other bodies of water where a connection could not reasonably be provided.**
 - b. **Buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or**
 - c. **Where streets or accessways would violate provisions of leases, easements, covenants, restrictions or other agreements existing as of May 1, 1995, which preclude a required street or accessway connection.**

ANALYSIS: The site is bisected by a natural resource, and as discussed above, a full street connection would be too expensive to construct. The cost of the construction would not be proportionate to the impacts of the proposed development and there is a more practical alternative to make the same street connection south of the Daybreak subdivision as larger and underdeveloped properties are redeveloped. Consistent with the provisions above, the applicant is proposing to construct a pedestrian and bicycle bridge.

FINDING: The proposed development is adjacent to SW Elwert Road, a designated arterial within both the City and County TSP's. The site is also adjacent to SW Edy Road, a designated collector street. In both instances, full street connections are limited by site distance and access standards. Finally, the site is bisected by a major drainage way that is identified as a Title 3 resource in the Metro Urban Growth Management Functional Plan. The combination of these factors makes it impractical to construct a development that meets a traditional residential block pattern. For these reasons, and as discussed in the analysis above, the applicant has provided a block pattern that is the most practical for this location and acceptable under the standards above.

C. Underground Utilities

All public and private underground utilities, including sanitary sewers and storm water drains, shall be constructed prior to the surfacing of streets. Stubs for service connections shall be long enough to avoid disturbing the street improvements when service connections are made.

ANALYSIS: The applicant has indicated within the narrative that all public and private utilities will be constructed prior to the surfacing of any streets within the development.

FINDING: The applicant has indicated that all public and private utilities will be constructed underground consistent with this provision. Therefore, this criterion is satisfied.

D. Additional Setbacks

Generally additional setbacks apply when the width of a street right-of-way abutting a development is less than the standard width under the functional classifications in Section VI of the Community Development Plan. Additional setbacks are intended to provide unobstructed area for future street right-of-way dedication and improvements, in conformance with Section VI. Additional setbacks shall be measured at right angles from the centerline of the street.

ANALYSIS: This provision applies to any street that would be substandard. As discussed earlier in this report, the applicant has proposed to dedicate right-of-way for streets adjacent to and within the development that would negate the need for these additional setbacks.

FINDING: The proposed development provides enough new right-of-way dedication to ensure that none of the abutting streets are less than the standard widths prescribed by the respective City and County TSP's; therefore, there is no need to apply any special or additional setbacks that this criterion calls for. This standard is not applicable to the proposed development.

16.106.040.K Traffic Controls

- 1. An application for a proposed residential development that will generate more than an estimated 200 average daily vehicle trips (ADT) must include a traffic impact analysis to determine the number and types of traffic controls necessary to accommodate anticipated traffic flows.**

ANALYSIS: The applicant has provided a traffic impact study by Michael Ard, PE, of Lancaster Engineering, a licensed and professional engineer, that indicates the proposed 86-lot single-family subdivision would generate an estimated 818 average daily trips based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition*. The study shows that the proposed subdivision is projected to generate a net increase of 65 trips during the morning peak hour and 86 trips during the evening peak hour.

FINDING: Both the County and City Engineering departments have reviewed the traffic study, analyzed the results on the existing system, and provided comments and conditions to ensure that the traffic generated by the proposal is mitigated as called for in their respective TSP. The Engineering comments have been incorporated throughout this report, and where warranted, conditions have been imposed. Please see Exhibits B and E. This standard is satisfied.

16.106.040.M Vehicular Access Management

All developments shall have legal access to a public road. Access onto public streets shall be permitted upon demonstration of compliance with the provisions of adopted street standards in the Engineering Design Manual.

- 2. Roadway Access**

No use will be permitted to have direct access to a street or road except as specified below. Access spacing shall be measured No use will be permitted to have direct access to a street or road except as specified

below. Access spacing shall be measured from existing or approved accesses on either side of a street or road. The lowest functional classification street available to the legal lot, including alleys within a public easement, shall take precedence for new access points.

- d. **Arterials and Highway 99W - Points of ingress or egress to and from Highway 99W and arterials designated on the Transportation Plan Map, attached as Figure 17 of the TSP, Volume 1, shall be limited as follows:**
 - (1) **Single and two-family uses and manufactured homes on individual residential lots developed after the effective date of this Code shall not be granted permanent driveway ingress or egress from Highway 99W or arterials. If alternative public access is not available at the time of development, provisions shall be made for temporary access which shall be discontinued upon the availability of alternative access.**
 - (2) **Other private ingress or egress from Highway 99W and arterial roadways shall be minimized. Where alternatives to Highway 99W or arterials exist or are proposed, any new or altered uses developed after the effective date of this Code shall be required to use the alternative ingress and egress. Alternatives include shared or crossover access agreement between properties, consolidated access points, or frontage or backage roads. When alternatives do not exist, access shall comply with the following standards:**
 - (a) **Access to Highway 99W shall be consistent with ODOT standards and policies per OAR 734, Division 51, as follows: Direct access to an arterial or principal arterial will be permitted provided that Point 'A' of such access is more than six hundred (600) feet from any intersection Point 'A' or other access to that arterial (Point 'C').**
 - (b) **The access to Highway 99W will be considered temporary until an alternative access to public right-of-ways is created. When the alternative access is available the temporary access to Highway 99W shall be closed.**
 - (3) **All site plans for new development submitted to the City for approval after the effective date of this Code shall show ingress and egress from existing or planned local, neighborhood route or collector streets, including frontage or backage roads, consistent with the Transportation Plan Map and Chapter 6 of the Community Development Plan.**
3. **Exceptions to Access Criteria for City-Owned Streets**
 - a. **Alternate points of access may be allowed if an access management plan which maintains the classified function and integrity of the applicable facility is submitted to and approved by the City Engineer as the access management plan must be included as part of the land use submittal or an application for modification as described in Section 16.106.020.E (Transportation Facilities Modifications).**
 - b. **Access in the Old Town (OT) Overlay Zone**

Access points in the OT Overlay Zone shown in an adopted plan such as the Transportation System Plan, are not subject to the access spacing standards and do not need a variance. However, the applicant shall submit a partial access management plan for

approval by the City Engineer. The approved plan shall be implemented as a condition of development approval.

ANALYSIS: The proposed subdivision is not adjacent to Highway 99W or located within the Old Town Overlay zone, so those standards do not apply to this development. The development is located adjacent to SW Elwert Road, a designated arterial, SW Edy Road, a designated collector, and SW Copper Terrace, a designated neighborhood route. Both the City and County Engineering divisions have reviewed and commented on the proposed access. According to their comments, tracts and lots adjacent to SW Elwert Road or SW Edy road shall not have direct access to those roads with the exception of the Tract containing the public treatment facilities which may have a maintenance access onto SW Elwert Road. Further, the County has indicated that the proposed access (SW 'C' Terrace) to SW Elwert Road does not meet the access standards. However, the applicant has submitted a request for an exception to the spacing standard for the proposed access. Based on the analysis included in the Traffic Impact Analysis and Design Exception request, the proposed public street connection has been approved by Washington County Engineer. His approval letter and the associated comments have been attached to this report as Exhibit E. Before the County will permit access to SW Edy Road and SW Elwert Road, the applicant will be required to provide certification from a registered professional engineer that adequate sight distance exists in both directions (or can be obtained pursuant to specific improvements) prior to commencing onsite construction activities. (Note: Sight distance measurements should account for ROW dedication.)

FINDING: Because the subdivision is proposing revised access onto SW Edy Road from SW Copper Terrace, proposing a new street access to SW Elwert Road and new access points onto SW Copper Terrace, it is subject to access review and limitations imposed by both Washington County and the City of Sherwood. Although the new access points have been reviewed and preliminarily approved by these agencies, the following conditions are warranted to ensure that they meet each respective jurisdictions design standards for access.

CONDITION: Tracts and lots adjacent to SW Elwert Road or SW Edy road shall not have direct access to those roads with the exception of the Tract containing the public treatment facilities which may have a maintenance access onto SW Elwert Road.

CONDITION: Due to the proximity of Lot 1 to the SW Edy Road/SW Copper Terrace intersection, Lots 1 and 2 shall have joint driveway access.

CONDITION: Access for Lots 76-78 shall be via a private tract with a public utility easement over its entirety.

CONDITION: Preliminary certification of adequate sight distance for each access point to SW Edy Road and SW Elwert Road in accordance with County Code, prepared and stamped by a registered professional engineer, including (sight distance measurements should account for ROW dedication):

- a. A detailed list of improvements necessary to produce adequate intersection sight distance (refer to the following webpage for sight distance certification submittal requirements).

<http://www.co.washington.or.us/LUT/Divisions/CurrentPlanning/development-application-forms.cfm>

16.110 Sanitary Sewers

Sanitary sewers shall be installed to serve all new developments and shall connect to existing sanitary sewer mains. Sanitary Sewers shall be constructed, located, sized and installed at standards consistent 16.110.

ANALYSIS: The applicant is proposing to extend existing public sewer from SW Yorkshire Way and SW Copper Terrace. As proposed, the applicant would be providing an 8-inch service through the site with individual laterals to each lot.

FINDING: The code requires that sanitary sewer be extended through the development to serve future developable areas. The engineering division has provided comments that indicate the sanitary sewer will be required to be extended through the development to SW Elwert Road for the future development of properties to the west. The property to the east of the subject property, north of SW Nursery Way has sanitary sewer available from the east. Therefore, no sanitary sewer extension within SW Nursery way is required. The properties to the east of the subject property (Edy Ridge School) and south of the subject property (Daybreak Terrace Subdivision) are already developed with sanitary service. Therefore, no extension of the sanitary sewer is necessary for these properties. In order to ensure that the proposed sewer system meets the Sherwood construction and design standards the following conditions are warranted.

CONDITION: All public sanitary sewer outside of the public right-of-way/public property shall be located within a dedicated public easement.

CONDITION: All sanitary sewer infrastructure shall meet City of Sherwood standards and be reviewed and approved by the Sherwood Engineering Department prior to issuance of an Engineering Compliance Agreement.

16.112 Water Supply

Water lines and fire hydrants conforming to City and Fire District standards shall be installed to serve all building sites in a proposed development in compliance with 16.112.

ANALYSIS: As proposed, the developer would extend the water mains from existing mains located within both Elwert Road and SW Copper Terrace. The applicant proposes to provide water service from each of these lines to each individual lot. A water main exists within SW Copper Terrace and SW Nursery Way, therefore no water main extensions are required within these streets. The code requires that water mains be through the development to SW Elwert Road. A new 12-inch water main is proposed to be installed within SW Elwert Road from the new intersection southward connecting to an existing 12-inch water main.

FINDING: The proposed development can be served through the extension of existing lines in SW Copper Terrace and SW Elwert Road. Based on the results of water modeling by a consulting engineer to the City looping of the system may be required; therefore, the following conditions are warranted.

CONDITION: All water infrastructure shall meet City of Sherwood standards and be reviewed and approved by the Sherwood Water Department (Public Works Department) prior to issuance of an Engineering Compliance Agreement.

CONDITION: A water main shall be extended northward within SW Elwert Road from the new intersection to the north end of Tract 'I' for future development unless otherwise approved by the city.

CONDITION: A water main shall be extended westward within SW Edy Road from the SW Edy Road/SW Copper Terrace intersection to the west end of Tract 'D' for future development unless otherwise approved by the city.

16.114 Storm Water

Storm water facilities, including appropriate source control and conveyance facilities, shall be installed in new developments and shall connect to the existing downstream drainage system consistent with the Comprehensive Plan, the requirements of the Clean Water Services water quality regulations and section 16.114.

ANALYSIS: The applicant has provided storm sewer lines throughout the shall site, and is proposing to convey the new stormwater to two separate tracts. Tract 'A' is an existing stormwater facility that belongs to the City, and was conveyed with the intention of treating water from this site. Stormwater from the east side of the resource will be conveyed and treated within the City owned stormwater facility. Stormwater collected on the west side of the tributary to Chicken Creek will be conveyed to a new stormwater facility proposed to be constructed within proposed tract 'I'. The applicant is required to extend services to the west property edge for future development consistent with City design standards. There is existing storm sewer within SW Copper Terrace and SW Nursery Way, therefore no storm sewer extensions are required within these streets.

FINDING: The applicant has provided a preliminary stormwater report attached to the application as (exhibit L). As proposed, the applicant is proposing to convey and treat new stormwater in one of two tracts on the site. However, according to the City Engineering department, there are potential locations where it is not practical to convey stormwater for the development to one of the two tracts, and it will be necessary for the applicant to seek approval from the City of Sherwood Engineering Department and Clean Water Services of non-treatment options. (treating existing non-treated impervious area in-lieu, payment in lieu, etc.) is required. Therefore, the following conditions are warranted to ensure that stormwater from the new development is captured, conveyed, and appropriately treated consistent with City and CWS standards.

CONDITION: New water quality facilities shall be within a separate tract dedicated to the City of Sherwood.

CONDITION: The capacity of the existing storm sewer receiving runoff from the subject development shall be verified. If undersized, the existing storm sewer shall be upsized or detention shall be provided to accommodate the subject property.

CONDITION: The existing culvert beneath the SW Elwert Road/SW Edy Road intersection is near capacity. Runoff from the development shall not result in violation of the 1-foot minimum freeboard standard.

CONDITION: Public storm sewer outside of the public right-of-way/public property will be located within a dedicated public easement.

CONDITION: All storm sewer infrastructure shall meet City of Sherwood standards and be reviewed and approved by the Sherwood Engineering Department prior to issuance of an Engineering Compliance Agreement.

16.116.010 Fire Protection

When land is developed so that any commercial or industrial structure is further than 250 feet or any residential structure is further than 500 feet from an adequate water supply for fire protection, as determined by the Fire District, the developer shall provide fire protection facilities necessary to provide adequate water supply and fire safety. In addition capacity, fire flow, access to facilities and number of hydrants shall be consistent with 16.116.020 and fire district standards.

16.116.020 Standards

A. Capacity

All fire protection facilities shall be approved by and meet the specifications of the Fire District, and shall be sized, constructed, located, and installed consistent with this Code, Chapter 7 of the Community Development Plan, and other applicable City standards, in order to adequately protect life and property in the proposed development.

B. Fire Flow

Standards published by the Insurance Services Office, entitled "Guide for Determination of Required Fire Flows" shall determine the capacity of facilities required to furnish an adequate fire flow. Fire protection facilities shall be adequate to convey quantities of water, as determined by ISO standards, to any outlet in the system, at no less than twenty (20) pounds per square inch residual pressure. Water supply for fire protection purposes shall be restricted to that available from the City water system. The location of hydrants shall be taken into account in determining whether an adequate water supply exists.

C. Access to Facilities

Whenever any hydrant or other appurtenance for use by the Fire District is required by this Chapter, adequate ingress and egress shall be provided. Access shall be in the form of an improved, permanently maintained roadway or open paved area, or any combination thereof, designed, constructed, and at all times maintained, to be clear and unobstructed. Widths, height clearances, ingress and egress shall be adequate for District firefighting equipment. The Fire District, may further prohibit vehicular parking along private accessways in order to keep them clear and unobstructed, and cause notice to that effect to be posted.

D. Hydrants

Hydrants located along private, accessways shall either have curbs painted yellow or otherwise marked prohibiting parking for a distance of at least fifteen (15) feet in either direction, or where curbs do not exist, markings shall be painted on the pavement, or signs erected, or both, given notice that parking is prohibited for at least fifteen (15) feet in either direction.

ANALYSIS: The proposed development provides for water service, and Sheet P19 (Composite Utility Plan) shows the location of proposed fire hydrants to provide fire

protection for the development. John Wolff, Deputy Fire Marshal for Tualatin Valley Fire and Rescue (TVFR), provided comments via a letter dated February 5, 2016 and attached as exhibit D to this report. Generally, Mr. Wolff has indicated that the district is supportive of the proposed development, but has indicated that, because "SW "D" Lane exceeds the 150' maximum distance allowed from the fire apparatus access, the applicant will need to consider decreasing the distance or applying to provide an Alternate Material and Method in lieu of meeting this requirement. He suggests that the provision of residential automatic sprinklers may be a viable alternative or the provision of an additional fire hydrant near the corner of "C" Terrace and "D" Lane.

FINDING: The applicant has provided enough evidence within the record to suggest that meeting the standards for fire protection is feasible with the proposed development. However, the Fire Marshall from TVFR has indicated that some of the subdivision design, specifically, street lengths and widths, may require additional mitigation to ensure that they fire district can readily provide service. Therefore, the following condition is warranted.

CONDITION: Prior to the issuance of any building permits for the proposed subdivision, the applicant shall provide the Planning Department with a letter or e-mail from the TVFR District Fire Marshal that indicates that the concerns within his letter, attached as exhibit D to this report, have been addressed and mitigated to the districts satisfaction.

16.118.020 Public and Private Utilities Standard

- A. Installation of utilities shall be provided in public utility easements and shall be sized, constructed, located and installed consistent with this Code, Chapter 7 of the Community Development Code, and applicable utility company and City standards.**
- B. Public utility easements shall be a minimum of eight feet in width unless a reduced width is specifically exempted by the City Engineer.**
- C. Where necessary, in the judgment of the City Manager or his designee, to provide for orderly development of adjacent properties, public and franchise utilities shall be extended through the site to the edge of adjacent property (ies).**
- D. Franchise utility conduits shall be installed per the utility design and specification standards of the utility agency.**
- E. Public Telecommunication conduits and appurtenances shall be installed per the City of Sherwood telecommunication design standards.**
- F. Exceptions: Installation shall not be required if the development does not require any other street improvements. In those instances, the developer shall pay a fee in lieu that will finance installation when street or utility improvements in that location occur.**

ANALYSIS: The applicant has provided a preliminary utility plan, attached as sheet P19. The utility plan simply shows public water, sewer, and storm sewer. While the plan does not illustrate the location and placement of franchise utilities, the applicant does show a public utility easement along all street frontages, and indicates within the narrative that all public utilities will be placed underground prior to paving.

FINDING: The placement of utilities within the development is conducive to future extensions beyond this property, and the developer has illustrated an 8-foot public utility easement along the street frontages of all lots. The City Engineering division has

provided comments responding to the preliminary development plans provided by the applicant. Therefore, it is feasible for the proposed development to satisfy these standards provided the applicant complies with following conditions. Finally, this property is one of several properties within the area that benefitted from earlier construction of street improvements and utility extensions into the area as a result of the two new schools that were constructed on SW Copper Terrace. Sherwood Resolution 2014-073 requires that the property owner pays for an equitable share for public facilities that were constructed for the benefit of this subject property prior to development of the property.

CONDITION: Prior to final plat approval, the applicant shall provide construction plans that demonstrate compliance with City of Sherwood standards for review and approval by the Sherwood Engineering Department. The applicant will have met this condition with the issuance of an Engineering Compliance Agreement from the City of Sherwood.

CONDITION: Payment in full for improvements constructed by the Sherwood School District, In accordance with Sherwood Resolution 2014-073 and Sherwood Municipal Code section 13.24.100 must be received by the City prior to issuance of an Engineering Compliance Agreement.

E. Division VII – Land Divisions, Subdivisions, Partitions, Lot Line Adjustments and Modifications

The applicable provision of Division VII include: 16.120 (Subdivisions) which is addressed above in Section IV and 16.128 (Land Division Design Standards).

16.128.010 Blocks

A. Connectivity

1. Block Size

The length, width, and shape of blocks shall be designed to provide adequate building sites for the uses proposed, and for convenient access, circulation, traffic control and safety.

2. Block Length

Block length standards shall be in accordance with Section 16.108.040. Generally, blocks shall not exceed five-hundred thirty (530) feet in length, except blocks adjacent to principal arterial, which shall not exceed one thousand eight hundred (1,800) feet. The extension of streets and the formation of blocks shall conform to the Local Street Network map contained in the Transportation System Plan.

3. Pedestrian and Bicycle Connectivity. Paved bike and pedestrian accessways shall be provided on public easements or right-of-way consistent with Figure 7.401.

ANALYSIS: As indicated previously in this report, the site is bisected by a natural resource, and a full street connection would be too expensive to construct. The cost of the construction would not be proportionate to the impacts of the proposed development and there is a more practical alternative to make the same street connection south of the Daybreak subdivision as larger and underdeveloped properties are redeveloped. Consistent with the provisions above, the applicant is proposing to construct a pedestrian and bicycle bridge.

FINDING: A combination of factors including access controls, natural resources, and existing development makes it impractical to construct a development that meets a

traditional residential block pattern. For these reasons, and as discussed in the analysis above, the applicant has provided a block pattern that is the most practical for this location. This criterion is satisfied.

B. Utilities Easements for sewers, drainage, water mains, electric lines, or other utilities shall be dedicated or provided for by deed. Easements shall be a minimum of ten (10) feet in width and centered on rear or side lot lines; except for tie-back easements, which shall be six (6) feet wide by twenty (20) feet long on side lot lines at the change of direction.

FINDING: Utilities have been discussed more comprehensively earlier in this report. As proposed, and conditioned previously in this report, it is feasible for the applicant to satisfy this standard. To ensure that all easements are in place as required, the following condition is warranted.

CONDITION: Prior to the issuance of any building permits for any phase of the subdivision, all easements (public or private) associated with that phase of the development shall be recorded with the County prior to City approval of the public improvements.

C. Drainages

Where a subdivision is traversed by a watercourse, drainage way, channel or street, drainage easements or rights-of-way shall be provided conforming substantially to the alignment and size of the drainage.

ANALYSIS: The proposed subdivision is traversed by a tributary of Chicken Creek. Within the applicant's plan, the vegetated corridor is identified as Tracts E and G. While the applicant has identified the areas, they have not indicated how the tracts will be managed within the narrative or on the plans.

FINDING: The proposed development is traversed by a drainage way and associated watercourse subject to this provision. The applicant has set the area aside in proposed tracts E and G. The delineation of the area is supported by a natural resource assessment and a CWS service provider letter. To ensure that this standard is satisfied, the following condition is warranted.

CONDITION: The vegetated corridor shall be in a separate tract dedicated to the City of Sherwood. The vegetated corridor tract shall have a "Storm sewer, surface water, drainage and detention easement" dedicated to CWS over its entirety.

16.128.020 Pedestrian and Bicycle Ways

Pedestrian or bicycle ways may be required to connect cul-de-sacs, divide through an unusually long or oddly shaped block, or to otherwise provide adequate circulation.

ANALYSIS: There are a combination of factors within this development that have been discussed previously that do not allow for full vehicular access throughout the site; however, the applicant has proposed a network of trails and paths to connect the homes to the on-site open space including a multi-modal crossing of the drainage way.

FINDING: Because of the topography, surrounding development, and the large drainage way that bisects the parent parcel, the resulting development is within blocks that are unusually long and oddly shaped. The applicant is proposing a network of pedestrian and bikeways that satisfy this requirement. This criterion is met.

16.128.030 Lots

A. Size and Shape

Lot size, width, shape, and orientation shall be appropriate for the location and topography of the subdivision or partition, and shall comply with applicable zoning district requirements, with the following exception:

- 1. Lots in areas not served by public sewer or water supply shall conform to any special County Health Department standards.**

ANALYSIS: The proposed subdivision provides for 86 lots that either meet or exceed the minimum dimensional requirements of the underlying zone.

FINDING: As discussed previously in this report, this criterion is satisfied by the proposed development.

B. Access

All lots in a subdivision shall abut a public street, except as allowed for infill development under Chapter 16.68.

ANALYSIS: All lots within the development abut at least one of four existing streets or five new streets.

FINDING: This criterion is satisfied by the fact that all new lots will have frontage onto a public street.

C. Double Frontage

Double frontage and reversed frontage lots are prohibited except where essential to provide separation of residential development from railroads, traffic arteries, adjacent nonresidential uses, or to overcome specific topographical or orientation problems. A five (5) foot wide or greater easement for planting and screening may be required.

ANALYSIS: Proposed lots 11-14, 55-64, and 76-86 are considered double frontage lots; however, given that this is a single-family development surrounded on three sides by either an arterial, collector, or neighborhood road, and there is a large drainage way bisecting the site, the proposed layout is the most efficient manner in which to develop the property and maintain minimum prescribed densities.

FINDING: There are double frontage lots within the development, but given the shape of the site, surrounding streets pattern and an existing drainage way that breaks up the site, the proposed layout is an efficient layout. It would be difficult, if not impossible, for the applicant to eliminate the need for double frontage lots in a single family subdivision and satisfy all of the other standards. This criterion is satisfied.

D. Side lot lines shall, as far as practicable, run at right angles to the street upon which the lots face, except that on curved streets side lot lines shall be radial to the curve of the street.

ANALYSIS: The proposed subdivision provides side lot lines that, as far as practicable, run at right angles to the streets within the development.

FINDING: This criterion is satisfied.

E. Grading

Grading of building sites shall conform to the following standards, except when topography of physical conditions warrants special exceptions:

1. **Cut slopes shall not exceed one (1) and one-half (1 1/2) feet horizontally to one (1) foot vertically.**
2. **Fill slopes shall not exceed two (2) feet horizontally to one (1) foot vertically.**

FINDING: The applicant has provided a preliminary grading, erosion, and sediment control plan (Sheet P10). The plan does not appear to show any cut or fill slopes that exceed these standards, but there are a couple of locations where it is not clear that the standard is satisfied. Given the amount of land available, it is feasible that the developer could meet this standard with the construction of retaining walls. Further, City policy requires that prior to any grading, a permit shall be obtained from the Building Department for all grading on the private portion of the site. Given that the proposed grading plan is preliminary, the following conditions are warranted to ensure that the standard is satisfied.

CONDITION: Prior to the issuance of any building permits for the site, the applicant shall provide a final grading permit that demonstrates compliance this section.

CONDITION: Prior any on-site grading, an approved grading and erosion control plan is required. The applicant shall also a Storm Water Connection Permit from Clean Water Services (CWS).

CONDITION: Since the site disturbance will be in excess of 5 acres, the developer shall obtain a DEQ NPDES 1200-C permit from CWS prior to issuance of an Engineering Compliance Agreement.

E. Division VIII – Environmental Resources

16.142 Parks and Open Space

16.142.030 Single-Family or Duplex Residential Subdivisions

- A. **A minimum of five percent (5%) of the net buildable site (after exclusion of public right-of-way and environmentally constrained areas) shall be maintained as "open space". Open space must include usable areas such as public parks, swimming and wading pools, grass areas for picnics and recreational play, walking paths, and other like space. The following may not be used to calculate open space:**
 1. **Required yards or setbacks.**
 2. **Required visual corridors.**
 3. **Required sensitive areas and buffers.**
 4. **Any area required to meet a standard found elsewhere in this code.**
- B. **Enhanced streetscapes such as "boulevard treatments" in excess of the minimum public street requirements may count toward a maximum of 10,000 square feet of the open space requirement.**

1. **Example:** if a 52-foot-wide right-of-way [ROW] is required for a 1,000 foot-long street and a 62-foot wide ROW with 5-foot additional plantings/meandering pathway is provided on each side of the street, the additional 10-foot-wide area x 1,000 linear feet, or 10,000 square feet, counts toward the open space requirement.
- C. **The open space shall be conveyed in accordance with one of the following methods:**
 1. **By dedication to the City as public open space (if acceptable to the City). Open space proposed for dedication to the City must be acceptable to the City Manager or the Manager's designee with regard to the size, shape, location, improvement, environmental condition, and budgetary and maintenance abilities;**
 2. **By leasing or conveying title (including beneficial ownership) to a corporation, homeowners' association or other legal entity, with the City retaining the development rights to the open space. The terms of such lease or other instrument of conveyance must include provisions (e.g., maintenance, property tax payment, etc.) suitable to the City.**
- D. **The density of a single-family residential subdivision shall be calculated based on the net buildable site prior to exclusion of open space per this Section.**
 1. **Example:** a 40,000 square foot net buildable site would be required to maintain 2,000 square feet (5%) of open space but would calculate density based on 40,000 square feet.
- E. **If a proposed residential subdivision contains or is adjacent to a site identified as "parks" on the Acquisition Map of the Parks Master Plan (2006) or has been identified for acquisition by the Sherwood Parks and Recreation Board, establishment of open space shall occur in the designated areas if the subdivision contains the park site, or immediately adjacent to the parks site if the subdivision is adjacent to it.**
- F. **If the proposed residential subdivision does not contain or is not adjacent to a site identified on the Parks Master Plan map or otherwise identified for acquisition by the Parks and Recreation Board, the applicant may elect to convey off-site park/open space.**
- G. **This standard does not apply to a residential partition provided that a development may not use phasing or series partitions to avoid the minimum open space requirement. A partition of land that was part of an approved partition within the previous five (5) years shall be required to provide the minimum five percent (5%) open space in accordance with subsection (A) above.**
- H. **The value of the open space conveyed under Subsection (A) above may be eligible for Parks System Development Charges (SDCs) credits based on the methodology identified in the most current *Parks and Recreation System Development Charges Methodology Report*.**

ANALYSIS: The net developable area of the site is approximately 560,183 square feet after excluding the public right of way and environmentally constrained areas. A subdivision is required to include at least 5% of the remaining net developable site area for open space or in this case, 28,009 square feet of open space area. The applicant's proposal includes 48,029 square feet of open space in five tracts that are identified in the table below. (Tracts A, B, D, F and H).

| <u>Tract</u> | <u>Size</u> | <u>Description</u> |
|----------------|--|---|
| <u>Tract A</u> | 6,252 sq. ft. | Covered picnic area, benches and adjacent to SW Copper Terrace pedestrian access to |
| <u>Tract B</u> | 1987 sq. ft. | Pedestrian path between Lots 41 and 42 |
| <u>Tract D</u> | 5965 sq. ft. | Picnic area, bench and path Adjacent to lot 55, vegetated corridor/ Edy Rd. |
| <u>Tract F</u> | 2953 sq. ft. | Pedestrian bridge over vegetated corridor |
| <u>Tract H</u> | 30,872 sq. ft. | Pathway, bench, picnic table west side adjacent to the Vegetated corridor |
| Total | 48,029 sq. ft. 8.5 % of net dev. area | |

Tract A includes picnic shelter, tables, benches and a lawn play area and a pathway between lots 15 and 16 for pedestrian access between SW Yorkshire Way and Tract A. Ultimately, this helps to minimize the length of this block for improved pedestrian and bicycle circulation. This tract is close and visible to the schools and may serve as an opportunity to pick up and drop off children adjacent to the school crossing.

Tract B is the pedestrian access between lots 41 and 42 with direct access to the pedestrian bridge (Tract F). **Tract D** is another smaller open space area near lot 55 with a pedestrian pathway through the open space area to SW Edy Road. It is also adjacent to Tract D. **Tract F** is the pedestrian bridge that extends over the vegetated corridor.

Tract H is the largest open space area in the development and taken alone, satisfies minimum required area of open space for this development. It is located just west of the vegetated corridor and runs along the rim of the natural resource area between SW Elwert Road and SW D Lane. The applicant proposes a lawn, picnic tables, and a hard surface pathway that will connect the sidewalk along SW Elwert Road to SW Copper Terrace via a new pedestrian bridge spanning the vegetated corridor.

The applicant proposes several pedestrian pathways comprised of a mix of hard and soft surfaces throughout the development to connect the various "pocket" neighborhoods on the east and west sides that are divided by the vegetated corridor (Tracts E and G). The pedestrian bridge connects the open space tracts via the hard surface path along the west rim of the vegetated corridor and the soft surface path which extends north to Tract D and Edy Road. The soft surface trail, approximately 3 feet wide connects Tract D on the northern edge of the development south along the vegetated corridor toward the pedestrian bridge. (Tract F). These trails and pathways serve as connections around and through the neighborhood due in part to adjust for the lack of sidewalks on segments of SW Edy and Elwert around the development. To ensure pedestrian connectivity around the development, staff is recommending that public pedestrian access easements are added over all pathways and defined on the final plat. This will make the entire site accessible along the pathways for the public.

The applicant's program for the open space area does not include any active play elements or amenities. Staff is concerned that the applicant does not propose any play structures, active play courts or exercise equipment within the development, limiting the recreation opportunities available to this large development.

The Mandel subdivision is not near a designated park within the Sherwood Parks Master Plan nor designated by the Parks Board. The applicant proposes that the development retain ownership and maintenance of the open space tracts by an established Home Owner's Association.

FINDING: Based on the above discussion, this standard can be met as conditioned below.

CONDITION: Prior to final plat approval, provide documentation, to be recorded with the plat, dedicating the tracts of open space to the Homeowner's Association.

CONDITION: Prior to final plat approval provide public pedestrian access easements over all soft and hard surface pathways throughout the subdivision.

16.142.040.A Visual Corridors

A. Corridors Required

New developments located outside of the Old Town Overlay with frontage on Highway 99W, or arterial or collector streets designated on Figure 8-1 of the Transportation System Plan shall be required to establish a landscaped visual corridor according to the following standards:

| | Category | Width |
|----|-----------|---------|
| 2. | Arterial | 15 feet |
| 3. | Collector | 10 feet |

In residential developments where fences are typically desired adjoining the above described major street the corridor may be placed in the road right-of-way between the property line and the sidewalk. In all other developments, the visual corridor shall be on private property adjacent to the right-of-way.

B. Landscape Materials

The required visual corridor areas shall be planted as specified by the review authority to provide a continuous visual and/or acoustical buffer between major streets and developed uses. Except as provided for above, fences and walls shall not be substituted for landscaping within the visual corridor. Uniformly planted, drought resistant street trees and ground cover, as specified in Section 16.142.060, shall be planted in the corridor by the developer. The improvements shall be included in the compliance agreement.

C. Establishment and Maintenance

Designated visual corridors shall be established as a portion of landscaping requirements pursuant to Chapter 16.92. To assure continuous maintenance of the visual corridors, the review authority may require that the development rights to the corridor areas be dedicated to the City or that restrictive covenants be recorded prior to the issuance of a building permit.

D. Required Yard

Visual corridors may be established in required yards, except that where the required visual corridor width exceeds the required yard width, the visual corridor requirement shall take precedence. In no case shall buildings be sited within the required visual corridor, with the exception of front porches on townhomes, as permitted in Section 16.44.010(E)(4)(c).

ANALYSIS:

The Mandel Subdivision is adjacent to SW Copper Terrace, SW Elwert and SW Edy Road. SW Elwert is designated as an arterial road which requires a 10 ft. visual corridor. SW Edy is a collector roadway, requiring a 15 ft. visual corridor. The applicant provides plans that shows the appropriate visual corridors widths along these streets (Applicant's Materials Sheet P21).

The applicant proposes a six foot visual corridor easement on SW Elwert and a ten foot visual corridor easement on SW Edy. The property owners may have fencing within the easement but cannot construct any structures.

The applicant identifies October Glory Maple trees to be planted in the visual corridor along both streets along with shrubs and ground cover. The applicant the planting, maintenance, and irrigation plans for this area. However, the applicant has not provided with enough specificity the other landscaping materials beside the trees. It appears that the applicant may be able to meet this criterion, but will need to provide a cross-section and landscape plan that illustrates the types of plantings to be used within the visual corridor.

FINDING: Based on the above discussion, the applicant does not fully comply with the standard, but can do so with the following conditions.

CONDITION: Prior to final plat approval provide plans that show the cross section and landscape plans including the specific planting materials to be installed within the visual corridors along SW Edy and SW Elwert Road.

CONDITION: Prior to final plat approval, provide plans that show the visual corridor easements along SW Edy and SW Elwert Road.

16.142.060 Street Trees

A. Installation of Street Trees on New or Redeveloped Property.

Trees are required to be planted to the following specifications along public streets abutting or within any new development or re-development. Planting of such trees shall be a condition of development approval. The City shall be subject to the same standards for any developments involving City-owned property, or when constructing or reconstructing City streets. After installing street trees, the property owner shall be responsible for maintaining the street trees on the owner's property or within the right-of-way adjacent to the owner's property.

1. **Location:** Trees shall be planted within the planter strip along a newly created or improved streets. In the event that a planter strip is not required or available, the trees shall be planted on private property within the front yard setback area or within public street right-of-way

- between front property lines and street curb lines or as required by the City.
2. **Size:** Trees shall have a minimum trunk diameter of two (2) caliper inches, which is measured six inches above the soil line, and a minimum height of six (6) feet when planted.
 3. **Types:** Developments shall include a variety of street trees. The trees planted shall be chosen from those listed in [16.142.080](#) of this Code.
 4. **Required Street Trees and Spacing:**
 - a. The minimum spacing is based on the maximum canopy spread identified in the recommended street tree list in [section 16.142.080](#) with the intent of providing a continuous canopy without openings between the trees. For example, if a tree has a canopy of forty (40) feet, the spacing between trees is forty (40) feet. If the tree is not on the list, the mature canopy width must be provided to the planning department by a certified arborist.
 - b. All new developments shall provide adequate tree planting along all public streets. The number and spacing of trees shall be determined based on the type of tree and the spacing standards described in a. above and considering driveways, street light locations and utility connections. Unless exempt per c. below, trees shall not be spaced more than forty (40) feet apart in any development.
 - c. A new development may exceed the forty-foot spacing requirement under section b. above, under the following circumstances:
 - (1) Installing the tree would interfere with existing utility lines and no substitute tree is appropriate for the site; or
 - (2) There is not adequate space in which to plant a street tree due to driveway or street light locations, vision clearance or utility connections, provided the driveways, street light or utilities could not be reasonably located elsewhere so as to accommodate adequate room for street trees; and
 - (3) The street trees are spaced as close as possible given the site limitations in (1) and (2) above.
 - (4) The location of street trees in an ODOT or Washington County right-of-way may require approval, respectively, by ODOT or Washington County and are subject to the relevant state or county standards.
 - (5) For arterial and collector streets, the City may require planted medians in lieu of paved twelve-foot wide center turning lanes, planted with trees to the specifications of this subsection.

ANALYSIS: The applicant propose Red Sunset Maples along SW A Lane, SW Edy and SW Elwert. This tree is not on the City's recommended street tree list. Over time, staff has received many requests for the removal of this type of street tree because of problems with the roots impacting the infrastructure and lifting sidewalks. Staff recommends that this tree be replaced with a more suitable type of tree.

The applicant proposes to remove 16 street trees to accommodate construction of the eight lots on the east side of SW Copper Terrace. The applicant proposes to replace and plant Chancellor Linden trees along the entirety of this roadway. The applicant proposes Raywood Ash along the remaining interior streets of the development. Because the

street tree removal is due to proposed subdivision development, a street tree removal permit is not necessary.

This is a preliminary plan, the type and number of trees could change as the site design is further refined. A revised plan is needed to ensure compliance with this criterion.

FINDING: Based on the above discussion, the applicant does not fully comply with the standard, but can do so with the following condition.

CONDITION: Prior to final plat approval, revise the tree and landscape plan that shows spacing in relation to the driveways and selection of suitable street trees.

16.142.070 Trees on Property Subject to Certain Land Use Applications

A. Generally

The purpose of this Section is to establish processes and standards which will minimize cutting or destruction of trees and woodlands within the City. This Section is intended to help protect the scenic beauty of the City; to retain a livable environment through the beneficial effect of trees on air pollution, heat and glare, sound, water quality, and surface water and erosion control; to encourage the retention and planting of tree species native to the Willamette Valley and Western Oregon; to provide an attractive visual contrast to the urban environment, and to sustain a wide variety and distribution of viable trees and woodlands in the community over time.

B. Applicability

All applications including a Type II - IV land use review, shall be required to preserve trees or woodlands, as defined by this Section to the maximum extent feasible within the context of the proposed land use plan and relative to other codes, policies, and standards of the City Comprehensive Plan.

C. Inventory

1. To assist the City in making its determinations on the retention of trees and woodlands, land use applications including Type II - IV development shall include a tree and woodland inventory and report. The report shall be prepared by a qualified professional and must contain the following information:
 - a. Tree size (in DBH and canopy area)
 - b. Tree species
 - c. The condition of the tree with notes as applicable explaining the assessment
 - d. The location of the tree on the site
 - e. The location of the tree relative to the planned improvements
 - f. Assessment of whether the tree must be removed to accommodate the development
 - g. Recommendations on measures that must be taken to preserve trees during the construction that are not proposed to be removed.
2. In addition to the general requirements of this Section, the tree and woodland inventory's mapping and report shall also include, but is not limited to, the specific information outlined in the appropriate land use application materials packet.
3. Definitions for the inventory purposes of this Section

- a. A tree is a living woody plant having a trunk diameter as specified below at Diameter at Breast Height (DBH). Trees planted for commercial agricultural purposes, and/or those subject to farm forest deferral, such as nut and fruit orchards and Christmas tree farms, are excluded from this definition and from regulation under this Section, as are any living woody plants under six (6) inches at DBH. All trees six (6) inches or greater shall be inventoried.
- b. A woodland is a biological community dominated by trees covering a land area of 20,000 square feet or greater at a density of at least fifty (50) trees per every 20,000 square feet with at least fifty percent (50%) of those trees of any species having a six (6) inches or greater at DBH. Woodlands planted for commercial agricultural purposes and/or subject to farm forest deferral, such as nut and fruit orchards and Christmas tree farms, are excluded from this definition, and from regulation under this Section.
- c. A large stature tree is over 20 feet tall and wide with a minimum trunk diameter of 30 inches at DBH.

D. Retention requirements

1. Trees may be considered for removal to accommodate the development including buildings, parking, walkways, grading etc., provided the development satisfies of D.2 or D.3, below.
2. Required Tree Canopy - Residential Developments (Single Family Attached, Single Family Detached and Two - Family)

Each net development site shall provide a variety of trees to achieve a minimum total tree canopy of 40 percent. The canopy percentage is based on the expected mature canopy of each tree by using the equation πr^2 to calculate the expected square footage of canopy for each tree. The expected mature canopy is counted for each tree regardless of an overlap of multiple tree canopies.

The canopy requirement can be achieved by retaining existing trees or planting new trees. Required street trees can be used toward the total on site canopy required to meet this standard. The expected mature canopy spread of the new trees will be counted toward the needed canopy cover. A certified arborist or other qualified professional shall provide the estimated tree canopy of the proposed trees to the planning department for review.

ANALYSIS: The applicant provided a tree inventory with this application showing that 52 trees are slated for removal. The applicant proposes to retain over 106 trees on the site, mostly within the natural resource area. The applicant indicates that the 52 trees need to be removed in order to develop the site and accommodate the right of way and building footprints proposed. Sixteen street trees will be replaced with seven street trees.

The applicant proposes to meet the 40% tree canopy requirement with a combination of new trees in the open space and the 2x credit for existing trees. As a result there will be a 59% tree canopy covering this subdivision. See sheets P06 and P07 for specific locations of the trees that are on site, and proposed to be removed. See sheet P22 for the tree canopy area calculations.

FINDING: Based on the above discussion, the applicant meets this criteria.

16.144 Wetland, Habitat, and Natural Areas

16.144.020 - Standards

- A. The applicant shall identify and describe the significance and functional value of wetlands on the site and protect those wetlands from adverse effects of the development. A facility complies with this standard if it complies with the criteria of subsections A.1.a and A.1.b, below:**
- 1. The facility will not reduce the area of wetlands on the site, and development will be separated from such wetlands by an area determined by the Clean Water Services Design and Construction Standards R&O 00-7 or its replacement provided Section 16.140.090 does not require more than the requested setback.**
 - a. A natural condition such as topography, soil, vegetation or other feature isolates the area of development from the wetland.**
 - b. Impact mitigation measures will be designed, implemented, and monitored to provide effective protection against harm to the wetland from sedimentation, erosion, loss of surface or ground water supply, or physical trespass.**
 - c. A lesser setback complies with federal and state permits, or standards that will apply to state and federal permits, if required.**
 - 2. If existing wetlands are proposed to be eliminated by the facility, the applicant shall demonstrate that the project can, and will develop or enhance an area of wetland on the site or in the same drainage basin that is at least equal to the area and functional value of wetlands eliminated.**
- B. The applicant shall provide appropriate plans and text that identify and describe the significance and functional value of natural features on the site (if identified in the Community Development Plan, Part 2) and protect those features from impacts of the development or mitigate adverse effects that will occur. A facility complies with this standard if:**
- 1. The site does not contain an endangered or threatened plant or animal species or a critical habitat for such species identified by Federal or State government (and does not contain significant natural features identified in the Community Development Plan, Part 2, Natural Resources and Recreation Plan).**
 - 2. The facility will comply with applicable requirements of the zone.**
 - 3. The applicant will excavate and store topsoil separate from subsurface soil, and shall replace the topsoil over disturbed areas of the site not covered by buildings or pavement or provide other appropriate medium for re-vegetation of those areas, such as yard debris compost.**
 - 4. The applicant will retain significant vegetation in areas that will not be covered by buildings or pavement or disturbed by excavation for the facility; will replant areas disturbed by the development and not covered by buildings or pavement with native species vegetation unless other vegetation is needed to buffer the facility; will protect disturbed areas and adjoining habitat from potential erosion until replanted vegetation is**

established; and will provide a plan or plans identifying each area and its proposed use.

5. Development associated with the facility will be set back from the edge of a significant natural area by an area determined by the Clean Water Services Design and Construction standards R&O 00-7 or its replacement, provided Section 16.140.090A does not require more than the requested setback. Lack of adverse effect can be demonstrated by showing the same sort of evidence as in subsection A.1 above.
- C. When the Regionally Significant Fish and Wildlife Habitat map indicates there are resources on the site or within 50 feet of the site, the applicant shall provide plans that show the location of resources on the property. If resources are determined to be located on the property, the plans shall show the value of environmentally sensitive areas using the methodologies described in Sections 1 and 2 below.

The Metro Regionally Significant Fish and Wildlife Habitat map shall be the basis for determining the location and value of environmentally sensitive habitat areas. In order to specify the exact locations on site, the following methodology shall be used to determine the appropriate boundaries and habitat values:

1. Verifying boundaries of inventoried riparian habitat. Locating habitat and determining its riparian habitat class is a four-step process:
 - a. Located the Water Feature that is the basis for identifying riparian habitat.
 1. Locate the top of bank of all streams, rivers, and open water within 200 feet of the property.
 2. Locate all flood areas within 100 feet of the property.
 3. Locate all wetlands within 150 feet of the property based on the Local Wetland Inventory map and on the Metro 2002 Wetland Inventory map (available from the Metro Data Resource Center, 600 NE Grand Ave., Portland, OR 97232). Identified wetlands shall be further delineated consistent with methods currently accepted by the Oregon Division of State Lands and the US Army Corps of Engineers.
- b. Identify the vegetative cover status of all areas on the property that are within 200 feet of the top of bank of streams, rivers, and open water, are wetlands or are within 150 feet of wetlands, and are flood areas or are within 100 feet of flood areas. Vegetative cover status shall be as identified on the Metro Vegetative Cover map. In the event of a discrepancy between the Metro Vegetative Cover map and the existing site conditions, document the actual vegetative cover based on the following definitions along with a 2002 aerial photograph of the property;
 1. Low structure vegetation or open soils — Areas that are part of a contiguous area one acre or larger of grass, meadow, crop-lands, or areas of open soils located within 300 feet of a surface stream (low structure vegetation areas may include areas of shrub vegetation less than one acre in size if they are contiguous with areas of grass, meadow, crop-lands, orchards, Christmas tree farms, holly farms, or

areas of open soils located within 300 feet of a surface stream and together form an area of one acre in size or larger).

2. **Woody vegetation** — Areas that are part of a contiguous area one acre or larger of shrub or open or scattered forest canopy (less than 60% crown-closure) located within 300 feet of a surface stream.
 3. **Forest canopy** — Areas that are part of a contiguous grove of trees of one acre or larger in area with approximately 60% or greater crown closure, irrespective of whether the entire grove is within 200 feet of the relevant water feature.
- c. **Determine whether the degree that the land slopes upward from all streams, rivers, and open water within 200 feet of the property is greater than or less than 25% (using the Clean Water Services Vegetated Corridor methodology); and**
 - d. **Identify the riparian habitat classes applicable to all areas on the property using Table 8-1.**
2. **Verifying boundaries of inventoried upland habitat. Upland habitat was identified based on the existence of contiguous patches of forest canopy, with limited canopy openings. The "forest canopy" designation is made based on analysis of aerial photographs, as part of determining the vegetative cover status of land within the region. Upland habitat shall be as identified on the HCA map. The perimeter of an area delineated as "forest canopy" on the Metro Vegetative Cover map may be adjusted to more precisely indicate the drip line of the trees within the canopied area.**

ANALYSIS: The applicant has attached a CWS service provider letter (see exhibit H to the applicant's packet) dated November 24, 2015. The overall condition of the vegetated corridor is primarily "degraded" but there are locations identified within the report that range from "good" to "moderate." The CWS service provider letter responds to the Natural Resource Assessment attached exhibit E to the applicant's packet by Lindsey Obermiller, a Natural Resource Specialist, and Stacey Reed, a Senior Wetland Scientist with AKS Engineering and Forestry.

As indicated in their assessment, the proposed development will result in permanent vegetated corridor encroachment for a pedestrian crossing, stormwater infrastructure, and retaining walls. The proposed encroachments will result in a total of 8,387 square feet, and are the minimum necessary to ensure that the development can satisfy other standards related to connectivity, the provision of utilities, and frontage improvements including sidewalks and street improvements. The proposed impacts represents approximately 3% of the overall area vegetated corridor, and less than .08% of the gross site. There are also temporary impacts totaling approximately 5,330 square feet associated with construction of the development. Within the assessment, the applicant's consultants have included a series of maps that identify wetlands and associated vegetated corridor, the condition of the corridor, and an identification of the impacts to the resource. The maps also show areas of mitigation and enhancement.

FINDING: The applicant has provided a natural resource assessment from two qualified individuals. Although the proposed development does not propose any impacts to the on-site wetlands, there are impacts to the vegetated corridor along the drainage way. Consistent with CWS requirements, the applicant has conducted a Tier 1 analysis of the natural resource and is proposing required mitigation. The conditions of mitigation are discussed in detail within attachment H, the CWS service provider letter. Given that there are impacts and required mitigation associated with the proposal, the following conditions are warranted.

CONDITION: Improvements to the vegetative corridor shall be constructed with the first phase of development to be constructed west of SW Copper Terrace (phase 2, 3 or 4).

CONDITION: Prior to final plat approval for any phase, the applicant shall provide the City Engineering department with a copy of the Storm Water Connection Permit from CWS.

CONDITION: The developer shall continually comply with the standards of Clean Water Services and the requirements of the Service Provider Letter 15-003302, dated November 24, 2015.

CONDITION: Prior to any on-site construction, the developer shall ensure that the vegetated corridor is clearly marked and delineated to ensure that there are no unauthorized encroachments by any contractors into the area for any reason.

16.144.030 - Exceptions to Standards

In order to protect environmentally sensitive areas that are not also governed by floodplain, wetland and Clean Water Services vegetated corridor regulations, the City allows flexibility of the specific standards in exchange for the specified amount of protection inventoried environmentally sensitive areas as defined in this code.

A. Process

The flexibility of standards is only applicable when reviewed and approved as part of a land use application and shall require no additional fee or permit provided criteria is addressed. In the absence of a land use application, review may be processed as a Type 1 administrative interpretation.

B. Standards modified

- 1. Lot size — Not withstanding density transfers permitted through Chapter 16.40, when a development contains inventoried regionally significant fish and wildlife habitats as defined in Section 16.144.020 above, lot sizes may be reduced up to ten percent (10%) below the minimum lot size of the zone when an equal amount of inventoried resource above and beyond that already required to be protected is held in a public or private open space tract or otherwise protected from further development.**

2. **Setbacks** — For residential zones, the setback may be reduced up to thirty percent (30%) for all setbacks except the garage setback provided the following criteria are satisfied:
 - a. The setback reduction must result in an equal or greater amount of significant fish and/or wildlife habitat protection. Protection shall be guaranteed with deed restrictions or public or private tracts.
 - b. In no case shall the setback reduction supersede building code and/or Tualatin Valley Fire and Rescue separation requirements.
 - c. In no case shall the setback be reduced to less than five feet unless otherwise provided for by the underlying zone.
3. **Density** — per Section 16.10.020 (Net Buildable Acre definition), properties with environmentally sensitive areas on site may opt to exclude the environmentally sensitive areas from the minimum density requirements provided the sensitive areas are protected via tract or restrictive easement. A proposal to remove said area from the density calculation must include: a delineation of the resource in accordance with Section 16.144.020C, the acreage being protected, and the net reduction below the normally required minimum for accurate reporting to Metro.
4. **Parking** — Per Section 16.94.020.B.6, 10-25% of the required parking spaces may be reduced in order to protect inventoried regionally significant fish and wildlife habitat areas, provided these resources are protected via deed restrictions or held in public or private tracts.
5. **Landscaping** — Per Section 16.92.030.B.6, exceptions may be granted to the landscaping standards in certain circumstances as outlined in that section.

STAFF ANALYSIS: The applicant is not proposing to vary any of the standards on site with the exception of a reduction in setbacks. Specifically, the applicant is proposing to reduce the rear yard setback for proposed lots 28-31, 36, 37, and 53. The proposed reductions are illustrated on sheet P05 of the applicant's submittal. The standard requires that flexibility in the reduction of any of these standards be off-set by the provision and protection of an amount of resource lands that are greater than or equal to the amount of reduction that is proposed. In this instance, the reduced setback area is approximately 2,034 square feet. The applicant is proposing to offset this impact by providing mitigation in the amount of approximately 2,155 square feet within proposed Tract 'C' which is located at the end of the hammerhead along SW 'A' Lane. The amount of mitigation is approximately 121 square feet more than the amount of impact.

FINDING: The applicant is proposing to modify the rear yard setbacks for lots 28-31, 36, 37, and 53. In exchange, the applicant is proposing to set aside tract 'C', the amount of mitigation would be greater than the reduced setback, and the reduced setback does not encroach into the vegetated corridor. These criteria are either not applicable, or in the case of the setback reduction, has been satisfied.

16.156.020 Energy Conservation

- A. **Building Orientation** - The maximum number of buildings feasible shall receive sunlight sufficient for using solar energy systems for space, water or industrial process heating or cooling. Buildings and vegetation shall be

sited with respect to each other and the topography of the site so that unobstructed sunlight reaches the south wall of the greatest possible number of buildings between the hours of 9:00 AM and 3:00 PM, Pacific Standard Time on December 21st.

- B. Wind - The cooling effects of prevailing summer breezes and shading vegetation shall be accounted for in site design. The extent solar access to adjacent sites is not impaired vegetation shall be used to moderate prevailing winter wind on the site.

FINDING: The existing development and street patterns determine the orientation of the buildings on the proposed lots. The proposed lots, and the majority of the existing residential lots surrounding the property are oriented in an east/west direction. This standard is met.

STAFF RECOMMENDATION

Based upon review of the applicant's submittal information, review of the code, and public and agency comments, staff finds that the proposed subdivision does not fully comply with the standards but can be conditioned, as follows, to comply. Therefore, staff recommends **approval of the Mandel Farms Subdivision application, SUB 15-01, subject to the following conditions.**

VI. CONDITIONS OF APPROVAL

A. General Conditions

1. Compliance with the Conditions of Approval is the responsibility of the developer or its successor in interest.
2. Development and construction on the site shall conform substantially to the preliminary plat development plans submitted by and dated January 8, 2016 except as modified in the conditions below, (and shall conform specifically to final construction plans reviewed and approved by the City Engineer, the Building Official, Clean Water Services, and Tualatin Valley Fire and Rescue, and Washington County). All plans shall comply with the applicable building, planning, engineering and fire protection codes of the City of Sherwood.
3. The developer is responsible for all costs associated with any remaining public facility improvements and shall assure the construction of all public streets and utilities within and adjacent to the plat as required by these conditions of approval, to the plans, standards, and specifications of the City of Sherwood. The developer shall also provide to the City financial guarantees for construction of all public streets and utilities within and adjacent to the plat, as required by the engineering compliance agreement.
4. **The approval for each phase is valid for a period of two (2) years from the date of the signed engineering compliance agreement for that phase. The final plat for the first phase shall be recorded within two years of the date of this decision.** Extensions may be granted by the City as afforded by the Sherwood Zoning and Community Development Code.

5. Placement of construction trailers or temporary storage containers on the subject property shall require a Temporary Use Permit per Section 16.86 of the SZCDC.
6. This approval does not negate the need to obtain permits, as appropriate from other local, state or federal agencies, even if not specifically required by this decision.
7. Retaining walls within public easements or the public right-of-way shall require engineering approval. Retaining walls located on private property that support a surcharge or are over four feet in height measured from the bottom of the footing will require a permit from the Building Department.

B. Prior to issuance of grading or erosion control permits from the Building Department:

8. Obtain Building Department permits and approval for erosion control and grading on private property and Engineering Department permits and approval for all grading in the public right of way.
9. A demolition permit shall be obtained from the Sherwood Building Department prior to demolishing or moving any structures.
10. Submit a geotechnical report to the Building Department if required by the Building Official.
11. Prior to the issuance of any building permits for the site, the applicant shall provide a final grading permit that demonstrates compliance with this section.
12. Prior any on-site grading, an approved grading and erosion control plan is required. The applicant shall also a Storm Water Connection Permit from Clean Water Services (CWS).
13. Since the site disturbance will be in excess of 5 acres, the developer shall obtain a DEQ NPDES 1200-C permit from CWS prior to issuance of an Engineering Compliance Agreement.
14. Prior to any on-site construction, the developer shall ensure that the vegetated corridor is clearly marked and delineated to ensure that there are no unauthorized encroachments by any contractors into the area for any reason.

C. Prior to approval of the public improvement plans:

15. Submit engineering plans for all public improvements and/or connections to public utilities (water, sewer, storm water, and streets) to the Sherwood Engineering Department. The engineering plans shall conform to the design standards of the City of Engineering Design and Standard Details Manual and Clean Water Services (CWS) Design and Construction Standards Manual and other applicable requirements and standards.
16. All city street infrastructure shall meet City of Sherwood standards and be reviewed and approved by the Sherwood Engineering Department prior to issuance of an Engineering Compliance Agreement.

17. SW Elwert Road and SW Edy Road are county streets. All county street infrastructure shall meet Washington County standards and be reviewed and approved by the Washington County Transportation Department prior to issuance of an Engineering Compliance Agreement.
18. Prior to the approval of public improvement plans, obtain a Washington County Facility Permit that includes a financial assurance for the construction of the Public Improvements listed in condition I.A.5 of the letter from Washington County dated February 8, 2016 and attached as exhibit E. to this report.
19. Provide an engineer's cost estimate and pay a fee in-lieu of constructing the remaining half-street improvement along the frontage of SW Elwert Road and SW Edy Road to Washington County.
20. All public sanitary sewer outside of the public right-of-way/public property shall be located within a dedicated public easement.
21. All sanitary sewer infrastructure shall meet City of Sherwood standards and be reviewed and approved by the Sherwood Engineering Department prior to issuance of an Engineering Compliance Agreement.
22. All water infrastructure shall meet City of Sherwood standards and be reviewed and approved by the Sherwood Water Department (Public Works Department) prior to issuance of an Engineering Compliance Agreement.
23. The capacity of the existing storm sewer receiving runoff from the subject development shall be verified. If undersized, the existing storm sewer shall be upsized or detention shall be provided to accommodate the subject property.
24. The existing culvert beneath the SW Elwert Road/SW Edy Road intersection is near capacity. Runoff from the development shall not result in violation of the 1-foot minimum freeboard standard.
25. All storm sewer infrastructure shall meet City of Sherwood standards and be reviewed and approved by the Sherwood Engineering Department prior to issuance of an Engineering Compliance Agreement.
26. Payment in full for improvements constructed by the Sherwood School District, In accordance with Sherwood Resolution 2014-073 and Sherwood Municipal Code section 13.24.100 must be received by the City prior to issuance of an Engineering Compliance Agreement.

D. Prior to Approval of the Final Plat:

27. The submittal by the applicant for final plat review and approval shall include but not be limited to the following: a final plat application; final plat review fee; narrative identifying how the required conditions of approval have or will be met; three copies of the final plat; and any other materials required to demonstrate compliance with the conditions of approval.
28. The final plat shall show the following:

- a. The Community Development Director as the City's approving authority within the signature block of the final plat.
 - b. Show the required public right-of-way dedications.
 - c. Provide an 8-foot public utility easement (PUE) dedication adjacent and parallel to the dedicated right-of-way, noted above, for the length of the street right-of-way fronting the subject property.
27. Prior to approval of the Final Plat, submit verification of perpetual maintenance of the landscaped visual corridor.
28. Prior to approval of the Final Plat, submit a revised tree plan demonstrating compliance with the Clear Vision requirements of Section 16.16.58.
29. The proposed public alley off of SW 'C' Terrace shall be constructed to a public standard, but be maintained as private by the homeowners association for the Mandel Farms subdivision. Any future access to proposed lots 76-78 shall be provided via the private alley off of SW 'C' Terrace. There shall be no access to any of the lots within the subdivision from SW Elwert Road.
30. Prior to final plat approval, the developer shall dedicate a 64-foot full width right-of-way section along the site's frontage for SW Copper Terrace. The dedication can be provided on the final plat.
31. Prior to final plat approval, the following shall be represented on the plat and recorded with Washington County:
- a) Dedication of additional right-of-way to provide for 45 feet from the centerline of SW Elwert Road.
 - b) Dedication of additional right-of-way to provide for 37 feet from the centerline of SW Edy Road.
 - c) Dedication of additional right-of-way to provide adequate corner radius at all intersections with County-maintained roads.
 - d) Provision of a non-access reservation along SW Edy Road and SW Elwert Road frontages with the exception of the two public street connections approved as part of this development review.
32. Prior to final plat approval, the applicant shall construct street widening improvements along west side of SW Copper Terrace (Neighborhood Street) along the length of the property to match improvements on the east side of the street (19 feet centerline to face of curb with 5-foot wide landscape strip and 8-foot wide sidewalk. Bulb-outs shall be 13 feet from centerline to face of curb with 11-foot wide landscape strip and 8-foot wide sidewalk.
33. A water main shall be extended northward within SW Elwert Road from the new intersection to the north end of Tract 'I' for future development unless otherwise approved by the city.

34. A water main shall be extended westward within SW Edy Road from the SW Edy Road/SW Copper Terrace intersection to the west end of Tract 'D' for future development unless otherwise approved by the city.
 35. New water quality facilities shall be within a separate tract dedicated to the City of Sherwood.
 36. Public storm sewer outside of the public right-of-way/public property will be located within a dedicated public easement.
 37. Prior to final plat approval, the applicant shall provide construction plans that demonstrate compliance with City of Sherwood standards for review and approval by the Sherwood Engineering Department. The applicant will have met this condition with the issuance of an Engineering Compliance Agreement from the City of Sherwood.
 38. The vegetated corridor shall be in a separate tract dedicated to the City of Sherwood. The vegetated corridor tract shall have a "Storm sewer, surface water, drainage and detention easement" dedicated to CWS over its entirety.
 39. Improvements to the vegetative corridor shall be constructed with the first phase of development to be constructed west of SW Copper Terrace (phase 2, 3 or 4).
 40. Prior to final plat approval for any phase, the applicant shall provide the City Engineering department with a copy of the Storm Water Connection Permit from CWS.
 41. Prior to final plat approval, provide documentation, to be recorded with the plat, dedicating the tracts of open space to the Homeowner's Association.
 42. Prior to final plat approval provide public pedestrian access easements over all soft and hard surface pathways throughout the subdivision.
 43. Prior to final plat approval provide plans that show the cross section and landscape plans including the specific planting materials to be installed within the visual corridors along SW Edy and SW Elwert Road.
 44. Prior to final plat approval, provide plans that show the visual corridor easements along SW Edy and SW Elwert Road.
 45. Prior to final plat approval, revise the tree and landscape plan that shows spacing in relation to the driveways and selection of suitable street trees.
- E. Prior to Issuance of a Building Permit:**
46. Prior to issuance of any building permits, the public improvements must be complete and accepted by the City Engineer, and the final plat(s) must be recorded. An approval letter shall be issued from the Engineering Department, accepting all public improvements.
 47. Prior to issuance of building permits, submit plot plans showing that the structures meet minimum front, face of garage, rear, side, and corner sideyard setback requirements.

48. The front yard setbacks for lots 76-78 shall be measured from SW Elwert Road pursuant to section 16.60.010.
49. Prior to issuance of building permits submit plot plans showing that the height of the dwellings do not exceed two (2) stories or thirty feet, whichever is less, in the MDRL zoned areas and 2.5 stories or 35 feet, whichever is less, in the MDRH zoned areas.
50. Prior to issuance of a building permit, submit plot plans showing the provision of one (1) off-street parking spaces per dwelling unit.
51. Prior to issuance of building permits submit plot plans showing that the clear vision areas are unobstructed.
52. Prior to the issuance of any building permits for each phase, the required improvements for that phase must be completed and accepted by the City Engineering Department.
53. Tracts and lots adjacent to SW Elwert Road or SW Edy road shall not have direct access to those roads with the exception of the Tract containing the public treatment facilities which may have a maintenance access onto SW Elwert Road.
54. Due to the proximity of Lot 1 to the SW Edy Road/SW Copper Terrace intersection, Lots 1 and 2 shall have joint driveway access.
55. Access for Lots 76-78 shall be via a private tract with a public utility easement over its entirety.
56. Preliminary certification of adequate sight distance for each access point to SW Edy Road and SW Elwert Road in accordance with County Code, prepared and stamped by a registered professional engineer, including (sight distance measurements should account for ROW dedication):
 - a. A detailed list of improvements necessary to produce adequate intersection sight distance (refer to the following webpage for sight distance certification submittal requirements).
<http://www.co.washington.or.us/LUT/Divisions/CurrentPlanning/development-application-forms.cfm>
57. All existing and proposed lots shall obtain approval from the Engineering Department and connect to storm, sanitary sewer and water.
58. All agreements required as conditions of this approval must be signed and recorded.
59. Sherwood Broadband utilities shall be installed as per requirements set forth in City Ordinances 2005-017 and 2005-074.
60. Prior to issuance of building permits, all public and private utilities shall be underground unless the utility provider has determined that the lines are too large to place underground.
61. Prior to the issuance of any building permits for the proposed subdivision, the applicant shall provide the Planning Department with a letter or e-mail from the TVFR District Fire

Marshal that indicates that the concerns within his letter, attached as exhibit D to this report, have been addressed and mitigated to the districts satisfaction.

62. Prior to the issuance of any building permits for any phase of the subdivision, all easements (public or private) associated with that phase of the development shall be recorded with the County prior to City approval of the public improvements.

F. Prior to Final Occupancy:

63. All public improvements shall be completed, inspected and approved, as applicable, by the City, CWS, TVF&R and other applicable agencies.
64. Obtain a Finalled Washington County Facility Permit contingent upon the following:
 - a. The road improvements required in condition I.A.5 of the Washington County comments dated February 8, 2016
 - b. Submission of a final certification of adequate sight distance in accordance with County Code, prepared and stamped by a registered professional engineer.

G. On-going Conditions

65. All rain, storm, and other surface water runoff from roofs, exposed stairways, light wells, courts, courtyards, and exterior paved areas shall be disposed of in compliance with local ordinances and state rules and regulations, in a manner that will not increase runoff to adjacent properties. The approved points of disposal include storm sewer laterals to a public system or other storm sewer system as approved by the City Engineer.
66. Joint mailbox facilities shall be installed prior to the City signing the Letter of Acceptance for the development. Joint mailbox facilities must be installed per U.S. Postal Service's "*Developers' Guide to Centralized Box Units*". The Developer shall provide a signed copy of the U.S. Postal Services "*Mode of Delivery Agreement*". Submittal of this agreement shall be required prior to a pre-construction meeting taking place.
67. The developer shall coordinate location of garbage and recycling receptacles with Pride Disposal.
68. The continual operation of the property shall comply with the applicable requirements of the Sherwood Zoning and Community Development Code.
69. Decks, fences, sheds, building additions and other site improvements shall not be located within any public easement unless otherwise authorized in writing by the City Engineer.
70. The developer shall continually comply with the standards of Clean Water Services and the requirements of the Service Provider Letter 15-003302, dated November 24, 2015.
71. Dust shall be controlled within the development during construction and shall not be permitted to drift onto adjacent properties.
72. Noise shall be kept at the minimum level possible during construction. The developer shall agree to aggressively ensure that all vehicles working in the development shall

have adequate and fully functioning sound suppression devices installed and maintained at all times.

VII. Exhibits

- A. Applicant's submittal with narrative and supporting documents
- B. Letter from Engineering Department dated February 15, 2016
- C. Letter from CWS dated February 3, 2016
- D. Letter from TVF&R dated February 5, 2016
- E. Letter from Washington County dated February 8, 2016

Exhibit A

Exhibit A can be reviewed electronically at the following web address:

<http://www.sherwoodoregon.gov/planning/project/mandel-farms-subdivision>



Engineering Land Use Application Comments

To: Connie Randall, Associate Planner
From: Craig Christensen, P.E., Engineering Associate II
Project: (SUB 15-01) Mandel Farms
Date: February 15, 2016

Engineering staff has reviewed the information provided for the above cited project. Final construction plans will need to meet the standards established by the City of Sherwood and Clean Water Services (CWS), in addition to requirements established by other jurisdictional agencies providing land use comments. City of Sherwood Engineering Department comments are as follows:

Sanitary Sewer

Sanitary sewer shall be installed to accommodate project development and shall be extended through the development to SW Elwert Road for the future development of properties to the west.

The property to the east of the subject property, north of SW Nursery Way has sanitary sewer available from the east. Therefore, no sanitary sewer extension within SW Nursery way is required.

The properties to the east of the subject property (Edy Ridge School) and south of the subject property (Daybreak Terrace Subdivision) are already developed with sanitary service. Therefore, no extension of the sanitary sewer is necessary for these properties.

Public sanitary sewer outside of the public right-of-way/public property will be located within a dedicated public easement.

All sanitary sewer infrastructure shall meet City of Sherwood standards and be reviewed and approved by the Sherwood Engineering Department prior to issuance of an Engineering Compliance Agreement.

Water

Water mains shall be installed to accommodate project development and shall be extended through the development to SW Elwert Road. A new 12-inch water main shall

Project: Mandel Farms (SUB 15-01)
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be installed within SW Elwert Road from the new intersection southward connecting to an existing 12-inch water main. A water main shall be extended northward within SW Elwert Road from the new intersection to the north end of Tract 'I' unless otherwise approved by the city.

A water main shall be extended westward within SW Edy Road from the SW Edy Road/SW Copper Terrace intersection to the west end of Tract 'D' unless otherwise approved by the city.

Sizing and looping of water system may be required depending on comments and water modelling of the water system by city consultant engineer.

A water main exists within SW Copper Terrace and SW Nursery Way, therefore no water main extensions are required within these streets.

Full joint restraint of any part of the water system falling within an easement or tract is required.

Public water facilities outside of the public right-of-way/public property will be located within a dedicated public easement.

All water infrastructure shall meet City of Sherwood standards and be reviewed and approved by the Sherwood Water Department (Public Works Department) prior to issuance of an Engineering Compliance Agreement.

Storm Sewer

Storm sewer shall be installed to accommodate project development and shall be extended through the development to SW Elwert Road for the future development of the property to the west.

A storm sewer exists within SW Copper Terrace and SW Nursery Way, therefore no storm sewer extensions are required within these streets.

Water quality treatment is required meeting the approval of the City of Sherwood Engineering Department and Clean Water Services. Due to elevations, it may be impractical to treat all impervious areas. Approval from the City of Sherwood Engineering Department and Clean Water Services of non-treatment options (treating existing non-treated impervious area in lieu, payment in lieu, etc.) is required.

New water quality facilities shall be within a separate tract dedicated to the City of Sherwood.

The capacity of the existing storm sewer receiving runoff from the subject development shall be verified. If undersized, the existing storm sewer shall be upsized or detention shall be provided to accommodate the subject property.

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The existing culvert beneath the SW Elwert Road/SW Edy Road intersection is near capacity. Runoff from the development shall not result in violation of the 1-foot minimum freeboard standard.

Public storm sewer outside of the public right-of-way/public property will be located within a dedicated public easement.

All storm sewer infrastructure shall meet City of Sherwood standards and be reviewed and approved by the Sherwood Engineering Department prior to issuance of an Engineering Compliance Agreement.

Transportation

Construct street improvements and dedicate right-of-way to accommodate project development including street lighting, street signs, pavement markings, etc.

Construct street widening improvements along west side of SW Copper Terrace (Neighborhood Street) along the length of the property to match improvements on east side of street (19 feet centerline to face of curb with 5-foot wide landscape strip and 8-foot wide sidewalk. Bulb-outs shall be 13 feet from centerline to face of curb with 11-foot wide landscape strip and 8-foot wide sidewalk. Right-of-way for SW Copper Terrace to be dedicated to create a 64-foot full width right-of-way section.

Tracts and lots adjacent to SW Elwert Road or SW Edy road shall not have direct access to those roads with the exception of the Tract containing the public treatment facilities which may have a maintenance access onto SW Elwert Road.

Due to the proximity of Lot 1 to the SW Edy Road/SW Copper Terrace intersection, Lots 1 and 2 shall have joint driveway access.

Access for Lots 76-78 shall be via a private tract with a public utility easement over its entirety.

All city street infrastructure shall meet City of Sherwood standards and be reviewed and approved by the Sherwood Engineering Department prior to issuance of an Engineering Compliance Agreement.

Install street illumination at the SW Elwert Road/SW Edy Road intersection.

Sidewalks along SW Elwert Road and SW Edy Road shall have a width of 6 feet.

SW Elwert Road and SW Edy Road are county streets. All county street infrastructure shall meet Washington County standards and be reviewed and approved by the Washington County Transportation Department prior to issuance of an Engineering Compliance Agreement.

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SW Elwert Road and SW Edy Road shall be improved along the frontage of the subject property with the exception of the section fronting the vegetated corridor, around the SW Elwert Road/SW Edy Road intersection, unless otherwise conditioned by Washington County.

Grading and Erosion Control:

City policy requires that prior to any grading, a permit shall be obtained from the Building Department for all grading on the private portion of the site. In addition, an approved grading and erosion control plan is also required prior to any grading and to obtain a Storm Water Connection Permit from Clean Water Services (CWS).

Since the site disturbance will be in excess of 5 acres, the developer shall obtain a DEQ NPDES 1200-C permit from CWS prior to issuance of an Engineering Compliance Agreement.

Other Engineering Issues:

Sensitive lands (wetlands, waterways and vegetation corridors) shall meet the standards of Clean Water Services and the requirements of the Service Provider Letter.

The vegetated corridor shall be in a separate tract dedicated to the City of Sherwood. The vegetated corridor tract shall have a "Storm sewer, surface water, drainage and detention easement" dedicated to CWS over its entirety.

Improvements to the vegetative corridor shall be constructed with the first phase of development to be constructed west of SW Copper Terrace (phase 2, 3 or 4).

Storm Water Connection Permit Authorization is required from CWS.

All overhead utilities along the subject property frontage shall be relocated to underground unless otherwise approved by the City Engineer.

Improvements to the vegetative corridor and dedication of the vegetated corridor tract shall be constructed/dedicated with the first phase of development to be constructed west of SW Copper Terrace (phase 2, 3 or 4).

An arborist report shall be provided by the developer identifying any hazardous trees within the vegetated corridor. Any trees within the vegetated corridor that have been identified as hazardous shall be removed by the developer prior to City approval of the public improvements. All existing trees within the vegetative corridor shall be maintained by the developer for a period of 2-years after engineering approval of the vegetative corridor plantings. Any trees becoming a hazard within the 2-year maintenance period shall be removed by the developer prior to the release of the vegetative corridor maintenance bond.

Project: Mandel Farms (SUB 15-01)
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Any design features proposed that are not in compliance with City of Sherwood standards will require City Engineer approval.

An 8-foot wide public utility easement (PUE) is required adjacent to the right-of-way of all street frontages.

All easements (public or private) associated with the development shall be recorded with the County prior to City approval of the public improvements.

Developer shall obtain all required permits/approvals prior to issuance of an Engineering Compliance Agreement.

The proposed development has been submitted for approval for 4 phases. Phases 1-3 all have access to public utilities. Sanitary sewer and water for Phase 4 is being proposed to go through Phase 2. Therefore Phase 2 utilities shall be extended across the tributary for the future development of Phase 4 during Phase 2 construction.

A performance bond shall be executed prior to an Engineering Compliance Agreement for each platted phase of the subdivision. The developer shall have 2 years to construct the improvements associated with that phase unless an extension is granted. The 2-year construction period for the first phase shall begin with the signing of the Engineering Compliance Agreement. Subsequent phases shall have its 2-year construction period commencing once the public improvements for the previous phase have been approved by the city or when a new Engineering Compliance Agreement for the next phase has been executed, whichever comes first.

Maintenance bonds shall be provided for each phase being completed prior to final engineering approval of the public improvements for that particular phase.

Upon issuance of a Notice of Decision, a pre-design meeting between the Engineer of Record and the City of Sherwood Engineering Department shall be held.

Sherwood Broadband utilities shall be installed as per requirements set forth in City Ordinance 2005-017 and Resolution 2005-074.

Sherwood Resolution 2014-073 in accordance with Sherwood Municipal Code section 13.24.100 requires that the property owner pays for an equitable share for public facilities that were constructed for the benefit of this subject property prior to development of the property. Payment must be received by the City prior to issuance of an Engineering Compliance Agreement.

End of Engineering Land Use Review Comments.



MEMORANDUM

Date: February 3, 2016
To: Connie Randall, Associate Planner, City of Sherwood
From: Jackie Sue Humphreys, Clean Water Services (the District)
Subject: Mandel Farms Subdivision, SUB 15-01, 2S130CB00250, 00251

Please include the following comments when writing your conditions of approval:

PRIOR TO ANY WORK ON THE SITE AND PLAT RECORDING

A Clean Water Services (the District) Storm Water Connection Permit Authorization must be obtained prior to plat approval and recordation. Application for the District's Permit Authorization must be in accordance with the requirements of the Design and Construction Standards, Resolution and Order No. 07-20, (or current R&O in effect at time of Engineering plan submittal), and is to include:

- a. Detailed plans prepared in accordance with Chapter 2, Section 2.04.2.b-1.
- b. Detailed grading and erosion control plan. An Erosion Control Permit will be required. Area of Disturbance must be clearly identified on submitted construction plans. If site area and any offsite improvements required for this development exceed one-acre of disturbance, project will require a 1200-CN Erosion Control Permit. If site area and any offsite improvements required for this development exceed five-acres of disturbance, project will require a 1200-C Erosion Control Permit.
- c. Detailed plans showing each lot within the development having direct access by gravity to public storm and sanitary sewer.
- d. Provisions for water quality in accordance with the requirements of the above named design standards. Water Quality is required for all new development and redevelopment areas per R&O 07-20, Section 4.05.5, Table 4-1. Access shall be provided for maintenance of facility per R&O 07-20, Section 4.02.4.

Exhibit C

- e. If use of an existing offsite or regional Water Quality Facility is proposed, it must be clearly identified on plans, showing its location, condition, capacity to treat this site and, any additional improvements and/or upgrades that may be needed to utilize that facility.
- f. If private lot LIDA systems proposed, must comply with the current CWS Design and Construction Standards. A private maintenance agreement, for the proposed private lot LIDA systems, needs to be provided to the City for review and acceptance.
- g. Show all existing and proposed easements on plans. Any required storm sewer, sanitary sewer, and water quality related easements must be granted to the City.
- h. Site contains a "Sensitive Area." Applicant shall comply with the conditions as set forth in the Service Provider Letter No. 15-003302, dated November 24, 2015.
- i. Clean Water Services shall require an easement over the Vegetated Corridor conveying storm and surface water management to Clean Water Services that would prevent the owner of the Vegetated Corridor from activities and uses inconsistent with the purpose of the corridor and any easements therein.
- j. Detailed plans showing the sensitive area and corridor delineated, along with restoration and enhancement of the corridor.
- k. Prior to any activity within the sensitive area, the applicant shall gain authorization for the project from the Oregon Department of State Lands (DSL) and US Army Corps of Engineers (USACE). The applicant shall provide Clean Water Services or its designee (appropriate city) with copies of all DSL and USACE project authorization permits.
- l. Any proposed offsite construction activities will require an update or amendment to the current Service Provider Letter for this project.

CONCLUSION

This Land Use Review does not constitute the District's approval of storm or sanitary sewer compliance to the NPDES permit held by the District. The District, prior to issuance of any connection permits, must approve final construction plans and drainage calculations.



February 5, 2016

Connie Randall
City of Sherwood
22560 SW Pine St
Sherwood, Oregon
97140

Re:
Mandel Farms Subdivision SUB-15-01 2S130CB - 00250 and 00251 21340 SW Elwert Rd

Thank you for the opportunity to review the proposed site plan surrounding the above named development project. Tualatin Valley Fire & Rescue endorses this proposal predicated on the following criteria and conditions of approval:

FIRE APPARATUS ACCESS:

- FIRE APPARATUS ACCESS ROAD DISTANCE FROM BUILDINGS AND FACILITIES:** Access roads shall be within 150 feet of all portions of the exterior wall of the first story of the building as measured by an approved route around the exterior of the building or facility. An approved turnaround is required if the remaining distance to an approved intersecting roadway, as measured along the fire apparatus access road, is greater than 150 feet. (OFC 503.1.1) ***SW "D" Lane exceeds the 150' maximum distance allowed from the fire apparatus access. Decrease the distance or apply to provide an Alternate Material and Method in lieu of meeting this requirement. (*See # 3) Provision of residential automatic sprinklers may be a suggested viable alternative or the provision of an additional fire hydrant near the corner of "C" Terrace and "D" Lane.***
- DEAD END ROADS AND TURNAROUNDS:** Dead end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved turnaround. Diagrams of approved turnarounds are shown below: (OFC 503.2.5 & D103.1) ***SW "D" Lane exceeds the maximum 150' in length.***
- FIRE APPARATUS ACCESS ROAD EXCEPTION FOR AUTOMATIC SPRINKLER PROTECTION:** When buildings are completely protected with an approved automatic fire sprinkler system, the requirements for fire apparatus access may be modified as approved by the fire code official. (OFC 503.1.1) ***Note: If residential fire sprinklers are elected as an alternate means of protection and the system will be supported by a municipal water supply, please contact the local water purveyor for information surrounding water meter sizing.***
- AERIAL FIRE APPARATUS ROADS:** Buildings with a vertical distance between the grade plane and the highest roof surface that exceeds 30 feet in height shall be provided with a fire apparatus access road constructed for use by aerial apparatus with an unobstructed driving surface width of not less than 26 feet. For the purposes of this section, the highest roof surface shall be determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of the parapet walls, whichever is greater. Any portion of the building may be used for this measurement, provided that it is accessible to firefighters and is capable of supporting ground ladder placement.

North Operating Center
20665 SW Blanton Street
Aloha, Oregon 97078
503-649-8577

Command & Business Operations Center
and Central Operating Center
11945 SW 70th Avenue
Tigard, Oregon 97223-9196
503-649-8577

South Operating Center
8445 SW Elligsen Road
Wilsonville, Oregon
97070-9641
503-649-8577

Training Center
12400 SW Tonquin Road
Sherwood, Oregon
97140-9734
503-259-1600

(OFC D105.1, D105.2) **Building elevations are not provided at this review. This condition is provided to advise the applicant of building height restrictions based on street widths.**

5. **AERIAL APPARATUS OPERATIONS:** At least one of the required aerial access routes shall be located within a minimum of 15 feet and a maximum of 30 feet from the building, and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial access road is positioned shall be approved by the fire code official. Overhead utility and power lines shall not be located over the aerial access road or between the aerial access road and the building. (D105.3, D105.4)
6. **FIRE APPARATUS ACCESS ROAD WIDTH AND VERTICAL CLEARANCE:** Fire apparatus access roads shall have an unobstructed driving surface width of not less than 20 feet (26 feet adjacent to fire hydrants (OFC D103.1)) and an unobstructed vertical clearance of not less than 13 feet 6 inches. The fire district will approve access roads of 12 feet for up to three dwelling units and accessory buildings. (OFC 503.2.1 & D103.1) **The fire district does not endorse the design concept wherein twenty feet of unobstructed roadway width is not provided.**
7. **NO PARKING SIGNS:** Where fire apparatus roadways are not of sufficient width to accommodate parked vehicles and 20 feet of unobstructed driving surface, "No Parking" signs shall be installed on one or both sides of the roadway and in turnarounds as needed. Signs shall read "NO PARKING - FIRE LANE" and shall be installed with a clear space above grade level of 7 feet. Signs shall be 12 inches wide by 18 inches high and shall have red letters on a white reflective background. (OFC D103.6)
8. **NO PARKING:** Parking on emergency access roads shall be as follows (OFC D103.6.1-2):
 1. 20-26 feet road width – no parking on either side of roadway
 2. 26-32 feet road width – parking is allowed on one side
 3. Greater than 32 feet road width – parking is not restricted
9. **PAINTED CURBS:** Where required, fire apparatus access roadway curbs shall be painted red (or as approved) and marked "NO PARKING FIRE LANE" at 25 foot intervals. Lettering shall have a stroke of not less than one inch wide by six inches high. Lettering shall be white on red background (or as approved). (OFC 503.3)
10. **FIRE APPARATUS ACCESS ROADS WITH FIRE HYDRANTS:** Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet and shall extend 20 feet before and after the point of the hydrant. (OFC D103.1)
11. **SURFACE AND LOAD CAPACITIES:** Fire apparatus access roads shall be of an all-weather surface that is easily distinguishable from the surrounding area and is capable of supporting not less than 12,500 pounds point load (wheel load) and 75,000 pounds live load (gross vehicle weight). Documentation from a registered engineer that the final construction is in accordance with approved plans or the requirements of the Fire Code may be requested. (OFC 503.2.3)
12. **ACCESS DURING CONSTRUCTION:** Approved fire apparatus access roadways shall be installed and operational prior to any combustible construction or storage of combustible materials on the site. Temporary address signage shall also be provided during construction. (OFC 3309 and 3310.1)
13. **TRAFFIC CALMING DEVICES:** Shall be prohibited on fire access routes unless approved by the Fire Code Official. (OFC 503.4.1).

FIREFIGHTING WATER SUPPLIES:

14. **MUNICIPAL FIREFIGHTING WATER SUPPLY EXCEPTIONS:** The requirements for firefighting water supplies may be modified as approved by the fire code official where any of the following apply: (OFC 507.5.1 Exceptions)
 1. Buildings are equipped throughout with an approved automatic fire sprinkler system (the approval of this alternate method of construction shall be accomplished in accordance with the provisions of ORS 455.610(5)).
 2. There are not more than three Group R-3 or Group U occupancies.

15. **SINGLE FAMILY DWELLINGS - REQUIRED FIRE FLOW:** The minimum available fire flow for one and two-family dwellings served by a municipal water supply shall be 1,000 gallons per minute. If the structure(s) is (are) 3,600 square feet or larger, the required fire flow shall be determined according to OFC Appendix B. (OFC B105.2)

16. **FIRE FLOW WATER AVAILABILITY:** Applicants shall provide documentation of a fire hydrant flow test or flow test modeling of water availability from the local water purveyor if the project includes a new structure or increase in the floor area of an existing structure. Tests shall be conducted from a fire hydrant within 400 feet for commercial projects, or 600 feet for residential development. Flow tests will be accepted if they were performed within 5 years as long as no adverse modifications have been made to the supply system. Water availability information may not be required to be submitted for every project. (OFC Appendix B)

17. **WATER SUPPLY DURING CONSTRUCTION:** Approved firefighting water supplies shall be installed and operational prior to any combustible construction or storage of combustible materials on the site. (OFC 3312.1)

FIRE HYDRANTS:

18. **PRIVATE FIRE HYDRANT IDENTIFICATION:** Private fire hydrants shall be painted red in color. Exception: Private fire hydrants within the City of Tualatin shall be yellow in color. (OFC 507)

19. **FIRE HYDRANT DISTANCE FROM AN ACCESS ROAD:** Fire hydrants shall be located not more than 15 feet from an approved fire apparatus access roadway unless approved by the fire code official. (OFC C102.1)

20. **REFLECTIVE HYDRANT MARKERS:** Fire hydrant locations shall be identified by the installation of blue reflective markers. They shall be located adjacent and to the side of the center line of the access roadway that the fire hydrant is located on. In the case that there is no center line, then assume a center line and place the reflectors accordingly. (OFC 507)

21. **PHYSICAL PROTECTION:** Where fire hydrants are subject to impact by a motor vehicle, guard posts, bollards or other approved means of protection shall be provided. (OFC 507.5.6 & OFC 312)

22. **CLEAR SPACE AROUND FIRE HYDRANTS:** A 3 foot clear space shall be provided around the circumference of fire hydrants. (OFC 507.5.5)

BUILDING ACCESS AND FIRE SERVICE FEATURES

23. **PREMISES IDENTIFICATION:** New and existing buildings shall have approved address numbers; building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting

the property, including monument signs. These numbers shall contrast with their background. Numbers shall be a minimum of 4 inches high with a minimum stroke width of 1/2 inch. (OFC 505.1)

Applicant may apply for use of alternate materials and methods (AM&M) in accordance with 2014 Oregon Fire Code (OFC), Section 104.9. A guideline for Alternate Materials & Methods requests is available.

If you have questions or need further clarification, please feel free to contact me at (503) 259-1504.

Sincerely,



John Wolff | Deputy Fire Marshal II

Tualatin Valley Fire & Rescue

Direct: 503-259-1504

Wolff.johnf@tvfr.com

www.tvfr.com

Cc: TVFR File



WASHINGTON COUNTY, OREGON

Department of Land Use and Transportation, Operations & Maintenance Division
1400 SW Walnut Street, MS 51, Hillsboro, Oregon 97123-5625
(503) 846-7623 · FAX: (503) 846-7620

February 8, 2016

Connie Randal
City of Sherwood
Planning Division
20 NW Washington
Sherwood, OR 97140

RE: **Mandel Subdivision (86-Lots)**
City File Number: **SUB 15-01**
County File Number: **CD-70/CP-70**
Tax Map and Lot(s) Number: **2S130CB-00250/00251**
Location: **SW Edy Road & SW Elwert Road**



Washington County Department of Land Use and Transportation has reviewed this development application for an 86-lot Subdivision and submits the following conditions required for access to SW Edy Road and SW Elwert Road, County-maintained road sections.

1. Direct access to a street classified an arterial must be from a collector or other arterial street and shall have a minimum access spacing of **600** feet, measured between access points on each side of the road as required by Resolution and Order 86-95 (R&O 86-95) and Washington County Road Standards.

Mandel Farms 86-lot Subdivision
City Casefile: SUB 15-01
Page 1 of 6

The proposed access (SW 'C' Terrace) to SW Elwert Road does not meet the access standards indicated above. The applicant has submitted a request for exception to the spacing standard noted above (October 12, 2015) for the proposed access. Based on the analysis included in the Traffic Impact Analysis and Design Exception request, the proposed public street connection has been approved by Washington County Engineer (see attached approval letter dated November 2, 2015).

2. Resolution and Order 86-95 requires a minimum sight distance (measured in feet) equal to ten times the vehicular speed of the road(s) at proposed access location(s). This requirement applies to sight distance in both directions at each access.

Before the County will permit access to SW Edy Road and SW Elwert Road, the applicant will be required to provide certification from a registered professional engineer that adequate sight distance exists in both directions (or can be obtained pursuant to specific improvements) prior to commencing onsite construction activities. (Note: Sight distance measurements should account for ROW dedication.)

3. Consistent with statewide pedestrian circulation/linkage goals of the Transportation Planning Rule and the County's R&O 86-95 (road safety requirements), the County normally requires sidewalk installation as a minimum road safety improvement along site frontage of all County-maintained roads. Sidewalks further establish future street profiles, demarcate County or City right-of-way, and address drainage issues. Sidewalk requirements are not generally waived, even when sidewalk is not currently present on neighboring properties. Rather, even non-contiguous sidewalk is considered to provide some measure of pedestrian refuge and ideally, makes possible eventual connection of sidewalks (as surrounding development takes place and is likewise conditioned to provide sidewalk). Additionally, the Washington County Road Design and Construction Standards require provision of adequate drainage along a site's frontage of a county road.

Construction of a half-street improvement (planter strip, sidewalk, curb, gutter & continuous illumination) to an A-4 County standard is required along the subject site's frontage of SW Elwert Road up to the end of Tract 'I'. Additionally, construction of a half-street improvement to a C-1 County standard along the frontage of SW Edy Road up to the end of Tract 'D' is required.

NOTE: For half street improvements, an applicant shall provide street lighting consistent with County engineering standards and procedures and the requirements of the electrical utility company providing service to the area. The applicant shall ensure the construction, maintenance and power costs of street light facilities through the annexation and petition for service to an existing County service district for lighting or other funding method approved by the County Engineer.

4. The statewide Transportation Planning Rule requires provision for adequate transportation facilities in order for development to occur. Accordingly, the County has classified roads and road segments within the County system based upon their function. The current Transportation Plan (regularly updated) contains adequate right-of-way, road

width and lane provision standards based upon each roadway's classification. Subject right of way is considered deficient if half-width of the existing right of way does not meet that determined necessary within the County's current transportation plan.

SW Elwert Road is designated an "Enhanced Major Street Bikeway" and an Arterial (3 lanes). The applicant shall dedicate 45 feet of right-of-way from the centerline of SW Elwert Road. SW Edy Road is designated a "Major Street Bikeway" and a Collector (3 lanes). The applicant shall dedicate 39 feet from the centerline of SW Edy Road. Additionally, corner radius at both street connections shall meet County standards.

NOTE: All private signage and improvements are required to be located outside of the dedicated ROW.

5. Washington County requires submittal of an Access Report when estimated daily trip generation of a project and existing traffic levels on the adjacent County road exceed given limits as determined by R&O 86-95.

Washington County Traffic engineering staff reviewed the Traffic Impact Analysis submitted for this development proposal as required by R&O 86-95. Based on the results included in the report, additional traffic mitigation on County-maintained roads is not warranted at this time.

6. ILLUMINATION- Resolution and Order No. 86-95 requires access points on collectors and arterials to be adequately illuminated. Additionally, intersections that are adjacent to a development site and serve as the primary route for traffic shall be adequately illuminated.

The applicant shall install a light at the intersection of SW Edy Road and SW Elwert Road, including continuous illumination as noted in I.A.5 (a & b).

REQUIRED CONDITIONS OF APPROVAL

Refer to the following link to access Washington County Road Design and Construction Standards:

<http://www.co.washington.or.us/LUT/Divisions/Engineering/ConsultantResources/road-design-standards.cfm>

I. PRIOR TO ISSUANCE OF A SITE DEVELOPMENT PERMIT BY THE CITY OF SHERWOOD, THE APPLICANT SHALL:

- A. Submit to **Washington County** Public Assurance Staff, 503-846-3843:
 1. Completed "Design Option" form.
 2. **\$7,500.00** Administration Deposit.

NOTE: The Administration Deposit is a cost-recovery account used to pay for County services provided to the developer, including plan review and approval, field inspections, as-built approval,

and project administration. The Administration Deposit amount noted above is an estimate of what it will cost to provide these services. If, during the course of the project, the Administration Deposit account is running low, additional funds will be requested to cover the estimated time left on the project (at then-current rates per the adopted Washington County Fee Schedule). If there are any unspent funds at project close out, they will be refunded to the applicant. Any point of contact with County staff can be a chargeable cost. If project plans are not complete or do not comply with County standards and codes, costs will be higher. There is a charge to cover the cost of every field inspection. Costs for enforcement actions will also be charged to the applicant.

3. A copy of the City's Land Use Approval including a copy of this letter, signed and dated.
4. Preliminary certification of adequate sight distance for each access point to SW Edy Road and SW Elwert Road in accordance with County Code, prepared and stamped by a registered professional engineer, including (sight distance measurements should account for ROW dedication):
 - a. A detailed list of improvements necessary to produce adequate intersection sight distance (refer to the following webpage for sight distance certification submittal requirements).

<http://www.co.washington.or.us/LUT/Divisions/CurrentPlanning/development-application-forms.cfm>
5. Three (3) sets of complete engineering plans for construction of the following public improvements, including a Geotech/Pavement report to support roadway sections:
 - a. Half-street improvement (including buffered bike lane) to an **A-4** County standard along the site's frontage of SW Edy Road. Note: Utilities and other infrastructure may be required to be relocated to construct public improvements.
 - b. Half-street improvement to a **C-1** (including buffered bike lane) County standard along the site's frontage of SW Elwert Road. Note: Utilities and other infrastructure may be required to be relocated to construct public improvements.
 - c. Public street connection to County standards on SW Elwert Road as approved by the Design Exception dated November 2, 2015 and SW Edy Road.
 - d. Improvements within the right-of-way as necessary to provide adequate intersection sight distance at each County access point from the development.
 - e. Closure of all existing driveways to SW Elwert Road and SW Edy Road to County standards.

- f. Construction access, including a traffic control plan (if needed) for SW Edy Road and SW Elwert Road. (Note: Approval is required prior to site development access).
- g. Stormwater Facility (Tract 'I') access to County standards.
- h. Continuous illumination on County-maintained roads ending at the outer edge of Tract 'D' and Tract 'I'.
- i. Illumination to County standards on the subject site's corner of the SW Elwert/SW Edy Road intersection.

B. Obtain a Washington County **Facility Permit** upon completion of the following:

- 1. Provide a financial assurance for the construction of the public improvements listed in conditions **I.A.5**.

NOTE: The Public Assurance staff (503-846-3843) will send the required forms to the applicant's representative **after** submittal and approval of items listed under **I.A.**

*The Facility Permit allows construction work within County rights-of-way and permits site access only after the developer first submits plans and obtains Washington County Engineering approval, obtains required grading and erosion control permits, and satisfies various other requirements of Washington County's Assurances Section including but not limited to execution of financial and contractual agreements. This process ensures that the developer accepts responsibility for construction of public improvements, and that improvements are closely monitored, inspected, and built to standard in a timely manner. **Access will only be permitted under the required Washington County Facility Permit, and only following submittal and County acceptance of all materials required under the facility permit process.***

- 2. Provide an Engineer's cost estimate and pay a fee in-lieu of constructing the remaining half-street improvement along the frontage of SW Elwert Road and SW Edy Road.

II. PRIOR TO FINAL PLAT APPROVAL OF THE SUBDIVISION BY THE CITY OF SHERWOOD AND WASHINGTON COUNTY:

A. The following shall be represented on the plat and recorded with Washington County:

- 1. Dedication of additional right-of-way to provide for **45 feet** from the centerline of SW Elwert Road.
- 2. Dedication of additional right-of-way to provide for **39 feet** from the centerline of SW Edy Road.
- 3. Dedication of additional right-of-way to provide adequate corner radius at all intersections with County-maintained roads.

4. Provision of a non-access reservation along SW Edy Road and SW Elwert Road frontages with the exception of the two public street connections approved as part of this development review.

III. PRIOR TO TEMPORARY OR FINAL OCCUPANCY OF A DWELLING:

Obtain a Finaled Washington County Facility Permit, contingent upon the following:

- A. The road improvements required in condition **I.A.5.** above shall be completed and accepted by Washington County.
- B. Upon completion of necessary improvements, submit **final** certification of adequate sight distance in accordance with County Code, prepared and stamped by a registered professional engineer.

Requirements identified within this letter are considered by the County to be minimum warranted improvements (and/or analyses) that are necessitated by the proposed development, therefore it is requested that they be conveyed to the applicant within the City's Approval document. Please send a copy of the subsequent Final City Notice of Decision and any appeal information to the County.

Thank you for the opportunity to comment. If you have any questions, please contact me at 503-846-7639.

Naomi Vogel
Associate Planner

Attachment: Washington County Access Spacing Standard Design Exception Approval (5 pages)

Cc: Rob Saxton P.E. - Road Engineering Services
Paul Seitz, Assurances Section
Transportation File



WASHINGTON COUNTY OREGON

Date Signed: 2 Nov 15

RE: Mandel Farm Subdivision—Sherwood Oregon (Access Spacing)

WASHINGTON COUNTY ROAD DESIGN AND CONSTRUCTION STANDARDS REQUEST FOR EXCEPTION

The following is in response to your October 12, 2015 request for exception to the county road standards, Section 220, Page 26, 220.020.2 Submittal Paragraph 2 Access Standards. (Exhibit "A" To Ordinance No. 738 February, 2011)

A subdivision access is proposed to create a new T-intersection between SW B Place and SW Elwert Road. This results in a direct access connection of a local street (SW B Place) to an arterial road (SW Elwert Road).

X Your request is approved as proposed.

Please be advised that all exceptions granted to the WASHINGTON COUNTY ROAD DESIGN AND CONSTRUCTION STANDARDS are considered unique and are not uniformly applicable.

This design exception is valid for 2 years from the date signed, or upon expiration of the WASHINGTON COUNTY ROAD DESIGN AND CONSTRUCTION STANDARDS (Exhibit "A" To Ordinance No. 738 February, 2011), whichever occurs first. Additionally, this exception is valid only with City of Sherwood land use approval.

Gary A. Stockhoff, PE
County Engineer

Reviewed By: Robert Saxton, PE, GE

Checked By: Russell Knoebel, PE

cc: Plan Review Project File w/attachment
Road Standards File w/attachment
Hayson, Wayne, MS-13 (email)
Marquardt, Ryan MS-13 w/attachment (email)
Vogel, Naomi MS-51 w/Attachment (email)

Department of Land Use & Transportation
Engineering and Construction Services • Engineering
1400 SW Walnut Street, MS 17, Hillsboro, OR 97123-5625
phone: 503-846-7900 • fax: 503-846-7910
www.co.washington.or.us/lut • lutengin@co.washington.or.us



October 12, 2015

Gary A. Stockhoff
County Engineer
Washington County
Department of Land Use & Transportation
1400 SW Walnut Street, Suite 212, MS 17A
Hillsboro, OR 97123

**RE: REQUEST FOR EXCEPTION – ACCESS SPACING
MANDEL FARM SUBDIVISION– SHERWOOD, OREGON**

The following is a request for exception according to Section 220 to roadway access standards outlined in Section 501-8.5 B(4) of the Washington County Community Development Code (WCCDC),

Describe Request

In order to fully develop the proposed Mandel Farm subdivision, a subdivision access is proposed to create a new T-intersection between SW B Place and SW Elwert Road. This results in a direct access connection of a local street (SW B Place) to an arterial road (SW Elwert Road). See attached exhibit A for additional detail regarding the proposed access connection point.

Reason

Due to the location of a sensitive land areas on the property (waters, wetlands and vegetated corridors), it is not logical and cost effective to construct a street across the unnamed tributary to Chicken Creek. The logical alternative is to construct a short local street which connects to SW Elwert Road.

Comparison

The WCCDC requires that “Direct access to arterial roads shall be from collector or other arterial streets.” A collector street cannot be created in order to provide a roadway access connection which meets WCCDC standards. Therefore, a local street-arterial connection is proposed versus a collector-arterial connection.

Documentation

Direct access to an arterial is allowed according to Section 501-8.5 B(4)(a) when “such access is more than six hundred (600) feet from any intersection...”. In this case, the access spacing is approximately 723 feet between the right-of-way lines of SW Edy Road and SW B Place. Therefore, the proposed local street connection access spacing meets and exceeds the requirements outlined in the WCCDC.

The attached exhibit outlines preliminary intersection sight distance measurements and access spacing standards which meet and exceed current standards according to Section 501-8.5 F of the WCCDC. Preliminary Intersection sight distance measurements indicate sight distance to the south is greater than 1000 feet and to the north is approximately 723 feet. These measured distances exceed the 450 feet required for the posted speed limit of SW Elwert Road (45 mph).

Public Safety

There are no anticipated impacts on public safety due to this proposal.

Performance

The proposed local street connection will be designed with intersection sight distance visibility which meets current AASHTO and Washington County standards.

Financial Effect

No financial effect.

Other Comments/Arguments

None

Exhibits of Data, Calculations, Drawings, Etc.

- Exhibit A, SW Elwert Preliminary Intersection Sight Distance & Access Spacing
- Preliminary Sight Distance Certification

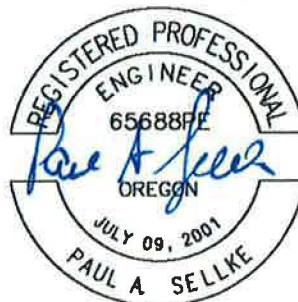
We appreciate your time and consideration of this request. If you have any questions regarding this letter or the Mandel Farm subdivision project in general, please do not hesitate to call or email with any questions.

Sincerely,

AKS ENGINEERING & FORESTRY, LLC

Paul A. Sellke, PE, GE, Project Engineer

Cc: Mimi Doukas (AKS)
Bob Galati, PE (City of Sherwood)



RENEWAL: JUNE 30, 2014

TUALATIN · VANCOUVER · SALEM-KEIZER



WWW.AKS-ENG.COM

12985 SW HERMAN RD., SUITE 100 · TUALATIN, OR 97062

P: (503) 563-6151 F: (503) 563-8152

October 12, 2015

Washington County Land Use and Transportation
Engineering Department
1400 SW Walnut Street
Hillsboro, OR 97123

**RE: PRELIMINARY SIGHT DISTANCE CERTIFICATION
MANDEL FARM SUBDIVISION
SHERWOOD, OREGON**

The proposed intersection with SW B Place is planned for this subdivision is located on SW Elwert Road, approximately 723 feet south of its intersection with SW Edy Road. The posted speed on SW Elwert Road is 45 mph which requires 450 feet of sight distance in both directions, in accordance with Code Section 501-8.5.F(4).

As required by Washington County Community Development Code Sections 501-8.5.F(3)(a) and 501-8.5.F(3)(b), the sight distance from the proposed realigned driveway access to NW Pihl Road was measured to be approximately 723 feet in the northern direction and greater than 1000 feet in the southern direction.

Measurements were based on an eye height of 3.5 feet and an object height of 3.5 feet above the road, and assumed to be 15 feet from the near edge of pavement to the front of a stopped vehicle. The above sight distance measurements are based on measurements taken at the near edge of pavement and require that fences, vegetation and trees are removed within the right-of-way.

In conclusion, I hereby certify that intersection sight distance is available at the proposed SW B Place access location for this subdivision. The preliminary sight distance certification conforms to the requirements as set forth in the Washington County Community Development Code, subject to the following improvements at the site:

- Fences, trees and vegetation to the south are removed to the north and south of the intersection.

Please feel free to contact me with any additional questions or comments.

Sincerely,
AKS ENGINEERING & FORESTRY, LLC

Paul A. Sellke, PE, GE
Project Engineer



RENEWAL: JUNE 30, 2014