

APPENDIX A: LAND USE AND DEVELOPMENT CODE BARRIERS MATRIX

CITY OF VANCOUVER COMPILED CASE STUDY FEEDBACK

#	Specific Code Section	Code Language	Discussion of Issue	Does design meet the conceptual intent of the code? Does it meet the technical intent?	Under what conditions or circumstances does the design meet the code intent?	Potential solutions to addressing code obstacles: Short term & longer term solutions
1	VMC Table 20.945.070-2 Parking and loading	Multiple family developments require 1.5 parking spaces per dwelling unit.	No exemptions for parking spaces apply. Additionally the lot dimensions would not allow for adequate room for required parking and maneuvering dimensions.	Yes and No	<ul style="list-style-type: none"> Code allows off-site parking within 300 feet. Possible joint use parking within 300 feet. On street parking through transit overlay district provisions. 25% reduction in parking through transit overlay district provisions. 	Code change to allow reduction in parking.
2	VMC 14.08.035 Connection required. VMC 14.08.015 Sewer availability.	Each residential or commercial water customer either within or without the city shall connect his or her premises to a city sewer if a city sewer is available thereto, as defined in VMC 14.08.015. (Ord. M-1956 § 6, 1979).	There is no exemption to connection when sewer available to the site.	Yes and No	Code change to allow alternatives as approved by the public works director.	Code change to allow alternatives as approved by the public works director.
3	VMC 14.04.230 Sanitary sewer service--User charges.	Sewer charges for each single family or multifamily residential customer shall be based upon that customer's water usage.	Even though not connected to sewer residents will be charged for sewer service.	No	N/A	Possible code revision to allow credit for not connecting to the City sewer system.
4	VMC 14.25.350 Small residential projects. VMC 14.25.350 Small residential projects.	Treatment and Runoff Control Requirements. (1) As an alternative to meeting all the water quality treatment and quantity control requirements specified in Sections 14.25.210 and 14.25.220, small residential projects can utilize the following methods for treating and controlling stormwater runoff: (A) Use of roof downspout systems for residential structures; (B) Use of one of the standard BMPs listed in Section 14.25.210(b) for treating runoff other than the runoff from roofs.	Cistern does not meet technical code requirement for small residential development stormwater treatment.	No		Possible pilot project or code amendment to allow rain water capture and reuse.
5	VMC 20.740.140 C Wetland performance standards	Development activities shall protect the functions of the wetlands and wetland buffers on the site.	Grey water drip system may contain damaging chemicals that would be discharged into the wetland and buffers.	No	Remove grey water system from wetland buffer.	None identified.
6	VMC 16.04.160 Water supply and hydrants (IFC 508)	Private fireflow adequacy not acceptable.	Public safety codes not made to trust private maintenance and fluctuating water supply variables.	No	A public system for fire protection must be provided.	None identified.

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7	VMC 16.04.150 Fire Apparatus Access (IFC 503)	20 feet of paved width required for access	The parking area has pinch points that restrict required access width.	No	<ul style="list-style-type: none"> Redesign parking area. 	None identified.
8	VMC 16.04.150 Fire Apparatus Access (IFC 503):	Required dimensions for fire apparatus turnaround.	The parking area turnaround does not meet the local required dimensions	No	<ul style="list-style-type: none"> Redesign to meet local requirements 	None identified.
9	VMC 20.410.030 Uses.	Vehicle fuel sales are prohibited.	We do not want a commercial destination in a purely residential zone. Further permits and review may be required by DOE and SWCAA.	<p>Trip reduction is a comprehensive plan policy in the City.</p> <p>I don't have enough information on building department or outside agency requirements to determine.</p>	May be allowed if no public commercial sales are involved with the fueling station.	On site private distribution only no public sales.
10	VMC 16.04.150 Fire Apparatus Access (IFC 503):	Provide information showing proposed paving can meet weight requirements for emergency apparatus.	No information provided on whether the pervious concrete can withstand the weight of emergency vehicles	Yes and No	Provide pervious pavement data.	Redesign interior pedestrian way to meet emergency access standards. Combination of permeable pavement and Grass-crete
	VMC 20.430.030	Vancouver does not allow manufactured homes, agricultural or most industrial uses in the MX district.	The Vancouver MX is written broadly to cover changes from other zoning districts to the MX district. The intent of the Vancouver MX is more density and FAR driven that is why AG uses are out.	Yes and No		Code changes to allow certain uses that may benefit sustainable development like smaller agricultural uses and artisan bakeries.
12	VMC 14	N/A	The MBR system discharge may adversely affect concrete sewer lines. Pipe lining may be necessary.			

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1	CCC 40.210.020(D) - Purpose of Rural Cluster Development	The purpose of this section is to provide for small lot residential development in the rural zoning districts (R-5, R-10 and R-20) which maintains rural character, maintains and conserves larger remainder parcels, protects and/or enhances sensitive environmental and wildlife habitat areas, and minimizes impacts to necessary public services. These goals are achieved by allowing the placement of homes on a small portion of the property while maintaining the majority of the site in a remainder parcel.	Cluster developments generally occur on those parcels where environmentally sensitive areas limit potential development under standard rural residential design criteria. It is also intended to promote and protect open space and resource (farm and forest) activity on the larger remainder parcel. Environmentally sensitive areas are those lands classified as habitat areas, any wetland category and associated buffers, landside hazard areas, lands subject to the Shoreline Management Act, and lands within a designated 100-year flood plain.	No, there are no environmentally sensitive areas identified on this parcel. In addition, intent of the County's cluster development is to retain the rural character to the maximum extent possible.		
2	Live Work Units	The County code does not include provisions for this type of dwelling unit.	The definition for a Live Work Unit included in the Refinement Plan indicates the work space can be used for retail use. The County does allow use of a property for a home business provided certain standards are satisfied. However, retail sales are specifically precluded.			
3	Table 40.340.010-4 - Minimum Required Parking Spaces AND CCC 40.340.010(4)(a) - Location of Parking Facilities	For multi-family developments containing 4 or more dwelling units - 1½ space/dwelling unit is required. For 1, 2, and 3-unit family dwellings - 2 spaces/dwelling unit are required. Single-family and duplex parking may be tandem. Off-street parking spaces shall be located on the same lot as the dwelling.	Not enough parking provided.	No	The review authority may allow parking credits established through a neighborhood parking plan to meet the number of required spaces. The number of credits for an individual parcel is established in the approved parking plan in accordance with guidelines in CCC 40.340.030(B).	Project site needs to be in a highly urbanized area with ready access to transit providing service to not only Clark County but the Portland metro area.
4	Table 40.220.020-3 - Minimum Setbacks	Front - 20 feet; Street Side - 10 feet; Interior Side - 10 feet; Rear - 20 feet; 8-foot separation between buildings on site;	Generally, cisterns and pumps are located underground. If they are located above ground, however, they must comply with setback and height limitations of the zone. In addition, if the cistern is not physically connected to the duplex, there must be an 8-foot separation.	Not enough information to determine.		
5	CCC 40.350.030(4)(b)(2) - Driveways	Driveways shall have a minimum width of twelve (12) feet of clear unobstructed all weather driving surface and an overhead clearance of thirteen (13) feet, six (6) inches.	Provide an unobstructed vertical clearance of not less than 13.5 feet, with an all-weather driving surface and capable of supporting the imposed loads of fire apparatus.			

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6	CCC 40.370.010(C) – Connection to Public Sewer	Inside UGAs, connection to public sewer is required as a condition of building permit issuance for any new structure unless certain exceptions apply, then a sewer waiver can be granted.	Connection to public sewer is required unless a sewer waiver can be granted.	No		Any change to this requirement needs to be coordinated with sanitary sewer service purveyors – City of Vancouver and Clark Regional Wastewater District.
7	CCC 40.370.010(B) – Definition of Public Sewer	“Public Sewer” means extension of a public sewer system operated by a public entity, or where such extension is impractical, connection to an alternative public sewer system operated by the designated public sewer purveyor. One of the following must apply in order for a sewer waiver to be granted: 1. The new structure is an alteration, expansion or replacement of an existing structure which will not entail a material increase in sewage effluent production. 2. The new structure lawfully incorporates no on-site sewage system. 3. The new structure is for single-family detached residential use, or a non-residential use, generating a projected effluent flow of not more than seven hundred (700) gallons per acre per day, if: a. Such use does not generate hazardous/dangerous waste, as defined by applicable federal, state or local law; and b. Extension of public sewer is impractical based upon the following criteria: (1) Public sewer would have to be extended more than three hundred (300) feet; or (2) Necessary permission cannot be obtained from intervening landowner(s); or (3) Intervening property contains natural or manmade obstructions, such as deep canyons, elevation changes, and solid rock impediments, which make public sewer extension prohibitively expensive or undesirable; and c. A covenant to the county surveyor or purveyor is recorded which commits the current future property owner(s) to connect to public sewer within twelve (12) months of sewer becoming available. The covenant shall also contain a provision that commits the current future property owner(s) to participate in a future local improvement district if this is the method used to extend sewer.	The project does not qualify for a sewer waiver.	No		
8	CCC 24.17.010(2) – On-site Septic Systems	Inside UGAs, connection to public sewer is required as a condition of building permit issuance for any new structure unless one (1) of the following exceptions applies: a. The new structure is an alteration, expansion or replacement of an existing structure which will not entail a material increase in sewage effluent production. b. The new structure lawfully incorporates no on-site sewage system. c. The new structure is for single-family detached residential use, or a non-residential use, generating a projected effluent flow of not more than seven hundred (700) gallons per acre per day, if: (1) Such use does not generate hazardous/dangerous waste, as defined by applicable federal, state or local law; and (2) Extension of public sewer is impractical according to Section 40.370.010 (see #9 above); and (3) A covenant to the county surveyor or purveyor is recorded which commits the current and future property owner(s) to connect to public sewer within twelve (12) months of sewer becoming available. The covenant shall also contain a provision that commits the current and future property owner(s) to participate in a future local improvement district if this is the method used to extend sewer.	A septic permit cannot be issued by Public Health unless a sewer waiver is granted by Community Development. If a waiver was issued by Community Development, Public Health would have concerns of the small lot size. The lot must be big enough to support both an initial and reserve drainfields. The proposal indicates only 12 inches of soil vertical separation. Treatment level ‘A’ is required with only 12 inches of vertical separation.	No-11 small lots on septic systems pose a public health concern. Treatment level A septic systems require electric pumps, alarms, filters, disinfection and etc. which maybe less sustainable than connecting to the sanitary sewer. Yes for compost toilets.		

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9	CCC 40.370.020(C)(2) – Connection to Public Water	In areas located inside urban growth boundaries, where the public agency purveyor is willing and able to provide safe and reliable service, connection to public water is required as a condition of building permit issuance for all new residential uses of less than four (4) units when public water is within 750 feet of the lot.	Connection to public water system is required. Any changes to this requirement will need to be coordinated with those agencies providing water service – City of Vancouver and Clark Public Utilities.	No		Code changes to this requirement will need to be coordinated with those agencies providing water service – City of Vancouver and Clark Public Utilities.
10	CCC 40.370.020(A) – Definition of Public Water System	“Public Water System” means a potable water supply system operated by a designated public agency including a city, town or Clark Public Utilities.				
11	CCC 40.370.020(C)(2)(a) – (2)(c) – Conditions Required for Not Connecting to Water	The responsible official may conclude that public water is not available to the developer with reasonable economy and efficiency, within 750 feet of the lot, based on the following considerations: a. Permission cannot be obtained from intervening property; b. Intervening property contains natural or manmade obstructions which make extension extraordinarily expensive, such as a deep canyon, solid rock or reconstruction of a road or sidewalk; c. Intervening changes in elevation make adequate service to the property extraordinarily expensive.	Based on available information, it does not appear that any of these conditions apply to these projects.			Code changes to this requirement will need to be coordinated with those agencies providing water service – City of Vancouver and Clark Public Utilities.
12	RCW 19.27.097 <i>At this time Public Health does have a local ordinance for wells and onsite drinking water systems. However, RCW 19.27.097 requires that applicants for a building permit for a building necessitating drinking water shall provide evidence of an adequate and safe supply for the intended use of the building.</i>	Public Health would conduct a Water Adequacy Verification Evaluation (WAVE) on the proposed water system ONLY if Community Development issued a connection to public water waiver. Washington State Department of Health requires rainwater harvesting systems to be designed with adequate storage and equipped with filtration and disinfection (UV or Chlorine). The proposed filter is approved for swimming pool applications. The proposed filter must meet ANSI or NSF drinking water standards for 1-micron filtration.	Public Health would need a waiver from Community Development before a WAVE could be reviewed and completed.	Yes if a waiver was issued by Community Development.		
13	CCC 40.350.030(B)(5) – Frontage Roads/Improvement	Right of way dedication and frontage improvements - “a partial-width road shall be established and constructed to the applicable right-of-way or easement and improvement standards set out in Section 40.350.030 to that portion of a frontage public or private road which abuts a parcel being developed as a condition of development approval.”	Right-of-ways for the frontage roads have been dedicated and frontage improvements have been performed in accordance with the jurisdiction's transportation standards.	Yes, the design meets the conceptual intent of the code. No, it does not meet the technical intent.	Depending on the classifications of the frontage roads, generally Clark County standards require larger pavement section.	Clark County transportation standards allow narrower pavement sections for roads serving local traffic. Narrower roads may be allowed if justified through traffic analysis.

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14	WAC 246-290 - Group A Public Water Systems	Community water system - by definition, a Group A system serves 15 or more residential connections or 25 or more people per day for 60 or more days per year.	As described below, rainwater is considered a surface water source. Both Group A and Group B water systems using surface water sources must meet the requirements of WAC 246-290 Part 6 for us to consider them adequate. The treatment, monitoring, record keeping and certification requirements for surface water systems make surface water treatment for these small systems unfeasible in almost all circumstances.	Not as submitted	The micron filter may do a good job, but there are numerous complications with the regulations (state and federal) as they stand today, including: 1. Washington State DOH does not approve point of use treatment systems 2. Surface water systems require a certified operator 3. Surface water systems must have continuous turbidity and chlorine residual monitoring Chlorination is mandatory for surface water systems	
15	CCC 40.380.040(B)(4)(b) - Standard BMPs CCC 40.380.040(B)(9) - Experimental BMPs	Acceptable standard treatment BMPs may, depending upon circumstances and site characteristics, include the following from the BMP manual (Chapters III-3, III-4, and III-6): (1) R1.05 - WQ Infiltration basin; (2) R1.10 - WQ Infiltration trench; (3) R1.15 - Roof downspout system; (4) RD.09 - Constructed wetland; (5) RD.06 - Wet pond with marsh; (6) RD.05 - Wet pond without marsh; (7) RB.05 - Biofiltration swale; (8) RB.10 - Vegetative filter strip; (9) RE.05 - Sand filtration basin; (10) RF.10 - Sand filtration trench; (11) Cartridge filters using compost, perlite, and geolite. Experimental BMPs. a. Experimental best management practices are those which have not been fully tested and evaluated by the county or the Washington Department of Ecology and are not included as accepted practices in this code or the BMP Manual. Experimental BMPs that are adequately tested and proven effective shall be incorporated into this section as standard or accepted BMPs in the future. b. Experimental BMPs may be allowed if all the following conditions are met: (1) The experimental BMP usage is part of a Washington Department of Ecology or Clark County research project; (2) Monitoring of the effluent quality produced by the BMP, as well as influent quality, will be conducted for at least two (2) years; (3) Results of the research will be published; (4) Financing is available to construct the BMP, conduct the testing and publish the results. c. The responsible official may approve use of alternative water quantity and/or water quality treatment devices that are acceptable for projects meeting the eligibility requirements of Section 40.260.110 with evidence from the applicant that water quality, water quantity control, and maintainability are not affected.	The project proposes to manage a large portion of the stormwater runoff by utilizing rain gardens, pervious pavement, and cisterns. The current code references the Puget Sound Stormwater Manual (1992) as the BMP Manual. In accordance with the county current stormwater code stormwater control via rain gardens and pervious pavements are not accepted outright. Furthermore, no credits are given for utilizing compost amended soils. However, these methods used for this project may be accepted as experimental BMPs pursuant to CCC 40.380.040(B)(4)(b)(9).	Water quality and quantity control methods used for this project may be accepted as experimental BMPs pursuant to CCC 40.380.040(B)(4)(b)(9).	The county is planning to update and adopt a new stormwater ordinance which references the DOE 2005 Stormwater Management Manual for Western Washington. Once the new ordinance is in effect, the BMPs used for this project would be accepted outright as standard BMPs.	The stormwater control methods utilized for this project can be used on an experimental basis. Most of the control methods used will be accepted outright upon adoption of the new stormwater code.

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16	2006 IFC 503.2.5 - Required Turn-arounds AND CCC 40.350.030(B)(12)(b) - Turnaround Design	Fire apparatus turnarounds are required and as indicated do not meet the requirements of the Road Standards.	No.	No.		
17	2006 IFC 503.1.1.5 - Fire Access Road	Fire apparatus access roads shall maintain an unobstructed width of not less than 20 feet to within 150 feet of all exterior points of all buildings. Access roads shall have an unobstructed vertical clearance of not less than 13.5 feet, with an all weather driving surface and capable of supporting the imposed loads of fire apparatus.	No.	No.		
18	2006 IFC 105.6.16 - Fuel Dispensing Permits		The Biodiesel fuel station will require permits and approval from the Fire Marshal.			
19	CCC 24.17 and WAC 246-272A WAC 246-272B	Onsite Septic Systems (OSS) Large Onsite Septic Systems (LOSS)	"Grey Water Systems" and sizing of Onsite Septic Systems (OSS)	No	The code requires each unit to be sized with a minimum of 2-bedrooms. For combined black and grey water system the sizing used is 120 gallons per bedroom. However, the RS&G's for Water Conserving On-Site Wastewater Treatment Systems allows design flows for greywater systems to be reduced by 37.5% for units with two bedrooms and 50% for units with 3 or more bedrooms from the minimum design flows for combined wastewater systems. The proposed grey water system indicates only 12" soil vertical separation in soil type 5. The LOSS Rule requires a minimum of 24" soil vertical separation. Therefore, this proposed LOSS would not meet the code to protect public health and environment.	Work with the Washington State Department of Health to change the LOSS requirements.

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20	CCC 24.17.010(2) - Onsite Septic Systems	<p>Inside UGAs, connection to public sewer is required as a condition of building permit issuance for any new structure unless one (1) of the following exceptions applies:</p> <ul style="list-style-type: none"> a. The new structure is an alteration, expansion or replacement of an existing structure which will not entail a material increase in sewage effluent production. b. The new structure lawfully incorporates no on-site sewage system. c. The new structure is for single-family detached residential use, or a non-residential use, generating a projected effluent flow of not more than seven hundred (700) gallons per acre per day, if: <ul style="list-style-type: none"> (1) Such use does not generate hazardous/dangerous waste, as defined by applicable federal, state or local law; and (2) Extension of public sewer is impractical according to Section 40.370.010; and (3) A covenant to the county surveyor or purveyor is recorded which commits the current and future property owner(s) to connect to public sewer within twelve (12) months of sewer becoming available. The covenant shall also contain a provision that commits the current and future property owner(s) to participate in a future local improvement district if this is the method used to extend sewer. 	<p>Discussion of Issue</p> <p>A septic permit cannot be issued by Public Health unless a sewer waiver is granted by Community Development.</p> <p>If a waiver was issued by Community Development, Public Health would have concerns of the small lot size. The lot must be big enough to support both an initial and reserve drainfields.</p>	No.		
21	WAC 246-290 - Group A Public Water Systems	Community water system - by definition, a Group A system serves 15 or more residential connections or 25 or more people per day for 60 or more days per year.	<p>As described below, rainwater is considered a surface water source. Both Group A and Group B water systems using surface water sources must meet the requirements of WAC 246-290 Part 6 for us to consider them adequate. The treatment, monitoring, record keeping and certification requirements for surface water systems make surface water treatment for these small systems unfeasible in almost all circumstances.</p> <p>The micron filter may do a good job, but there are numerous complications with the regulations (state and federal) as they stand today, including:</p> <ol style="list-style-type: none"> 4. Washington State DOH does not approve point of use treatment systems 5. Surface water systems require a certified operator 6. Surface water systems must have continuous turbidity and chlorine residual monitoring 7. Chlorination is mandatory for surface water systems 	Not as submitted		