BROCHURE # 67
FIRE CODE REQUIREMENTS FOR DEVELOPMENT

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I. INTRODUCTION: THE APPLICATION OF FIRE CODE REQUIREMENTS IN LAND USE REVIEW.

Fire code requirements are identified in review of land use applications at the preliminary and final review stages. Preliminary land use review consists principally of general fire code requirements to help determine a property's suitability for a use, and to identify appropriate fire protection site requirements to ensure construction is consistent with community standards. The final approval process is to ensure that the specific or final designs comply with the applicable code. Specific fire protection features for buildings other than those required for site improvement will be established at the time of building permit application.

All land use reviews will be performed using the codes in effect at the time of application or final approval using the current edition of the International Fire Code as amended by the State of Washington WAC-51-50 and Kitsap County Code Chapter 14. Land use application review is not a complete review of the project and generally covers requirements related to land use site improvements such as fire apparatus access design, required fire flow, and other fire protection measure that run with the land rather than the building.

Fire protection issues that can sometimes affect the feasibility of a site-specific proposal are often identified during preliminary land use review. For instance, the existing water supply available for firefighting purposes may be inadequate or access for fire apparatus may be deficient or compromised. Providing required fire protection or an approved alternative in certain situations can be expensive and the earlier the requirements are identified the better for the applicants to make decisions.

Fire protection features including those for access and water supply are determined based on the use, occupancy and size of the proposed building(s). Fire protection features also include fire sprinkler systems, fire alarm systems, smoke control systems, standpipes, additional fire resistive construction or systems designed for specific operations such as cooking or spray painting. Requirements for many of these features are applied at the time of building construction but many – such as vehicle access, building footprints and the provision of water supplies for fire sprinklers are established at preliminary and final land use approval. Generally, roads providing fire apparatus access are required for all commercial construction and for any road serving more than two single family residences. The specific requirements for fire apparatus, with illustrations, have been included in this document. Access for fire apparatus must be included on the site plan – offsite conditions as well as internal circulation within the boundaries of the application for preliminary and final approval.

Water supplies for firefighting purposes is required for all residential land division and commercial uses exceeding 3,600 square feet. Fire sprinklers are required for any commercial construction in excess of 10,000 square feet and may be required for residential or commercial applications where access is inadequate or where water supplies for firefighting purposes are absent or deficient. Other site-specific conditions may require the addition of fire sprinkler systems. The locations of water mains supplying fire flow (together with the sizes of those mains) together with fire hydrant locations must be identified on application site.

If a fire protection system is to be installed a separate fire code permit is required for automatic fire sprinkler systems, fire standpipe systems, underground fire protection supply, fire alarm system, and certain other fire protection features and uses.

II. SITE & BUILDING ACCESS REQUIREMENTS

1. Fire Apparatus Access Roads. In accordance with Kitsap County Code Section 14.04.730 and Kitsap County Road Standards, approved fire apparatus access roads shall be constructed prior to and maintained during and after construction for all structures (except where the road serves no more than two single family residences)-

   a. More than one fire apparatus access road may be required when determined by the Fire Code Official and local Fire Chief that access by a single road might be impaired by vehicle congestion, terrain, climatic conditions, or other factors that could limit access. Subdivisions with 100 or more homes (1,000 ADT) will require an additional access road separated by a space not less than one-half the distance of the greatest diagonal of the property of project area.

   b. Fire apparatus access roads, including bridges, elevated surfaces and culverts, shall be designed and maintained to support the weight of fire apparatus (minimum 60,000-pound single axle) and able provided with a surface to provide all-weather driving capabilities. Written verification from a professional civil engineer (or structural engineer for bridges and culverts) engineer registered and licensed by the State of Washington shall be sent to the Fire Code Official stating the road meets these imposed weight requirements and that with prescribed maintenance will provide all weather driving capability. Fire districts have different weight requirements for single family and other types of construction and uses – particularly where aerial fire apparatus (ladder trucks) are deployed that may exceed the 60,000-pound single axle minimum requirement. Districts may also require that signs be places on roads, bridges and culverts providing fire apparatus access for any structure regardless of its use. Applicants are encouraged to contact their local fire district for maximum weight carrying capabilities and for signage requirements prior to applying.

   c. Fire apparatus access roads shall have a minimum unobstructed width of 20 feet and a minimum unobstructed vertical clearance of 13 feet 6 inches.

   d. Access roads shall be extended to within 150 feet of all parts of all exterior walls on all buildings or portions of buildings and to within 15 feet of all onsite hydrants. The 150-foot distance is measured by an approved route around the exterior of the building starting from apparatus access points. The distance may be increased when the building is protected throughout by an automatic sprinkler system. (See Figure 1)

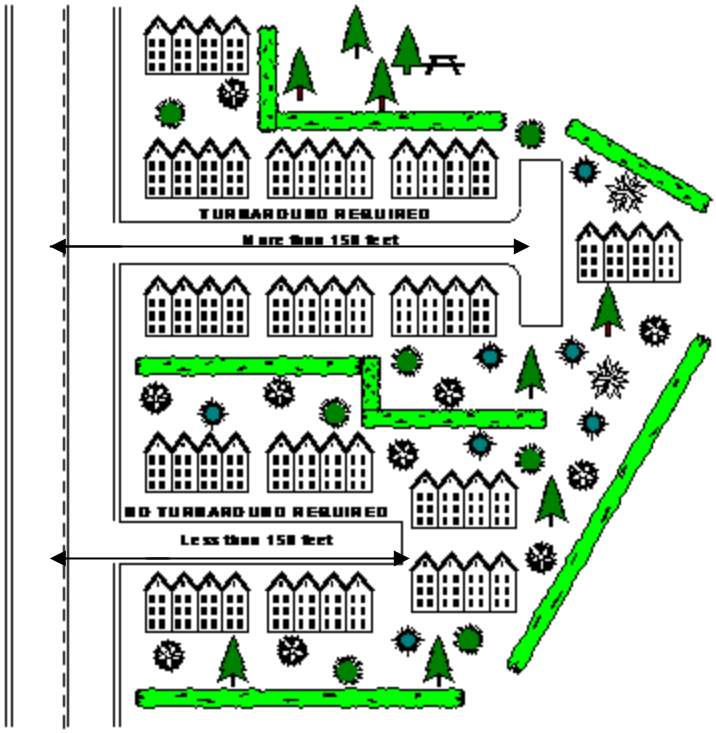
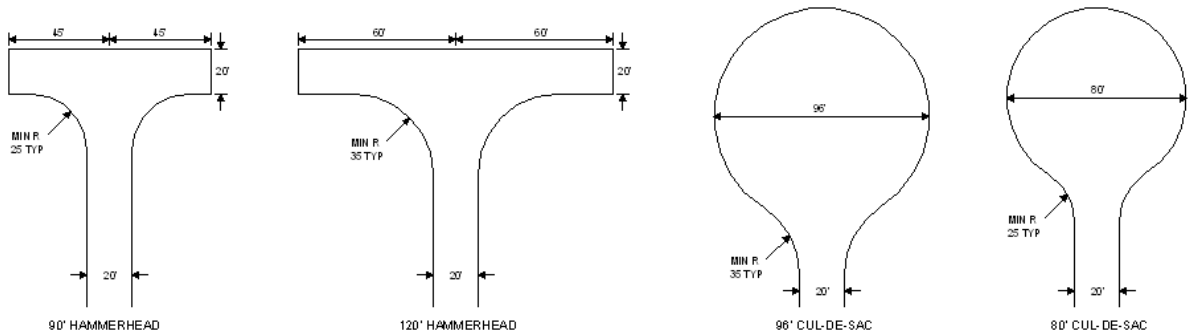


Figure 1.

e. Dead-end fire apparatus access roads exceeding 150 feet in length shall be provided with an approved turn around. (Figure 2).

f. A minimum of 35 foot inside turn radius for commercial or industrial sites and 25 foot inside turn radius for single-family residential sites shall be provided. Minimum turning radiuses shall be as shown in Figure 2.



Residential **Commercial** **Commercial** **Residential**

Figure 2

g. The grade of any access road shall not exceed 12%. All buildings, commercial or residential, on site must be fully sprinklered if the grade exceeds 12% and must be approved by the Fire Code Official and the local Fire District. (See Figure 3.)

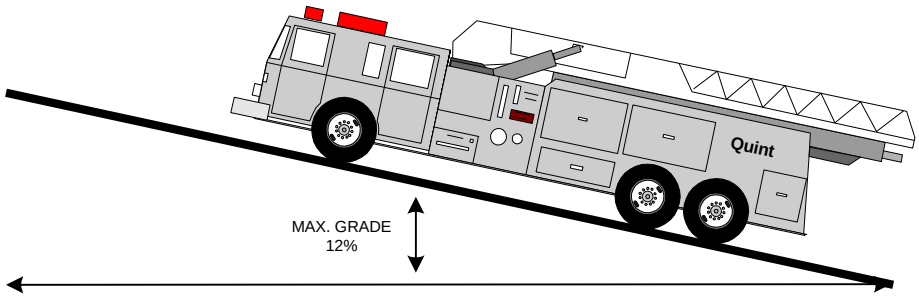
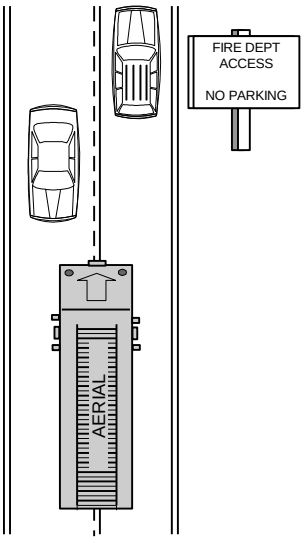


Figure 3.

h. Chapter 17 (Zoning) of the Kitsap County Code also limits the height of certain buildings in certain zones and for certain uses. Land use applications must reflect these zoning-imposed height restrictions. Additionally, certain fire districts have adopted resolutions applicable to buildings constructed over 35 feet in height. Applicants are encouraged to contact the applicable fire district for any other height-based requirements.

i. Temporary access roads may be approved on a case by case basis. Temporary access roads shall be constructed in accordance with Appendix A of this document.

2. Fire Lane Marking. When required by the Fire Code Official, fire apparatus access roads shall be posted with approved signs or marked as follows: All curbs shall be painted red on sides and top, and shall be labeled with 4-inch high white lettering with the words “NO PARKING -FIRE LANE”. In addition to fire apparatus access roads as described above, fire lanes requiring marking include:



   a. Fire apparatus access roads identified during the site plan review or site inspection.

   b. Any traffic aisle or roadway that passes in front of the fire department connection (FDC) to a sprinkler system or standpipe, for a distance of 15 feet on each side of the FDC.

   c. Any traffic aisle or roadway that passes in front of a fire hydrant not located within the public right-of-way, for a distance of 15 feet on each side of the hydrant.

3. Gates. Gates require co-approval by the Fire Code Official, local Fire District, and Kitsap County Public Work for a county-maintained road. If approved a gate shall provide a clear width of at least 20 feet when open. Gates may be chained and locked only if they are equipped with a Rapid Access padlock. Electric gates shall be provided with a Rapid Access key-operated switch. Authorization/ purchase forms may be obtained from the local Fire District. All gates that cross access roadways shall be signed “NO PARKING FIRE LANE.”

4. Rapid Access Key Box. A rapid access secured key box will be required for buildings with a fire alarm, fire sprinkler or other fire protection system because immediate access is necessary for lifesaving and

firefighting purposes. The owner or occupant will be required to provide keys to gain access to all portions of the building, including sprinkler-system control valves and fire alarm panels. The key box should be located adjacent to the main entrance or as approved by the local Fire District. An application for a key box must be obtained from the local Fire District (see Appendix B). Multiple key boxes may be required for large structures or facilities, depending on operational considerations. The local Fire District will identify the required model for the applicable structure.

III. FIRE FLOW AND HYDRANT REQUIREMENTS

Fire flow is the water supply available for firefighting and may be supplied from a public water source or an approved private source. Verification of fire flow is required before any construction permits may be approved.

1. Commercial Fire Flow. The fire-flow requirement for new buildings or existing buildings undergoing substantial remodel or renovation is determined by:
    a. Size of the building= Combined square footage **total fire area**, which is the total floor area of all floor levels within the exterior walls, and under the horizontal projections of the roof of a building, See Appendix C for the fire flow table.
    b. Type of construction
    c. Presence of fire protection systems.
2. Residential Fire Flow. The minimum fire-flow requirements for one- and two-family dwellings in subdivisions shall be 500 gallons per minute (gpm) at 20 psi for minimum of thirty (30) minutes. In areas where fire flow or water supply is inadequate or impractical, a residential fire suppression system can be substituted.
3. Reduction in Fire Flow. For buildings other than one- and two-family dwellings, a reduction of fire flow may be allowed when the building is protected throughout with an approved automatic sprinkler system designed and installed in accordance with National Fire Protection Association (NFPA) Standard 13, *Standard for the Installation of Sprinkler Systems* and monitored by an automatic fire alarm system installed in accordance with NFPA-72. However, the minimum fire flow shall be 1,500 gpm for a NFPA 13R system and 1,000 gpm for a NFPA 13 system.
4. Required Hydrants. On-site hydrants are required whenever any part of the structure is more than 400 feet from a hydrant on an approved fire apparatus access road. Existing fire hydrants on public streets may be considered if their location will not significantly impede or interfere with conducting emergency operations at the building.
5. Spacing and Location of Hydrants. The location of on-site hydrants is primarily determined by operational emergency response considerations.
    a. For one- and two-family dwellings in residential subdivisions, hydrants shall be spaced a maximum of 600 feet apart. In commercial and multi-family development, hydrants should be no more than 400 feet from each other, as measured along a normal vehicle route. Spacing may be increased to 600 feet when the building is protected throughout by an automatic fire sprinkler system.
    b. Where hydrants supply commercial or multi-family fire flows, a hydrant shall be placed between fifty (50) feet and one hundred fifty (150) feet from the protected building.
    c. For buildings with automatic sprinkler systems, one on-site hydrant should be located within approximately 50 feet of the fire department connection(s).
    d. Hydrants shall be no more than 15 feet from an approved Fire apparatus access road (see Figure 4).
    e. Required hydrant locations differing from these criteria may be approved when the location is judged beneficial or necessary for fire-suppression operations.

6. Water Systems. An approved water supply or alternative capable of supplying the required fire flow or fire protection shall be provided to premises upon which facilities, buildings or portions of buildings are constructed or moved into Kitsap County.

   a. Proof of fire flow availability from the water purveyor will be required to be submitted to the Fire Code Official before the building permit.

   b. Site plan in the SDAP application and the Building Permit application will be required to have water utility line placements, size of water lines, hydrant locations, water purveyor information, building construction type, and total floor area identified.

   c. The following conditions of approval apply for all water systems:

      1) Water systems shall be designed to supply the minimum fire flow by gravity or by pumping.

      2) Where fire flow is supplied by pumping, the following additional design requirements are imposed.

         a. Minimum fire flow must be provided with the largest pump out of service.

         b. Provisions for system and component reliability in accordance with WAC 246-290-420 (Reliability and emergency response) and WAC 246-293-660 (Minimum standards for system reliability).

      3) Water main size shall be adequate to deliver required fire flow and to maintain the approved design pressure, but in no case, be less than 20 psi.

      4) Water system approvals are subject to review and acceptance of design criteria by the Fire Code Official.

IV. FIRE PROTECTION SYSTEM REQUIREMENTS

1. Automatic Fire Sprinkler Systems. A fire automatic sprinkler system is required for buildings greater than 10,000 square feet or when special operations require a sprinkler system such as wood working, nightclubs, restaurants, mini storage units, hotels and apartments, etc. Fire sprinkler systems may be required for buildings 10,000 square feet or less depending upon their usage and type of occupancy. A separate fire code permit is required to be approved and issued before installation of any portion of the system. The approved set of plans shall be on site at all times. An automatic Fire Alarm System is required to monitor the fire sprinkler system for activation and operational status.
2. Fire Sprinkler or Standpipe Underground Supply. If a fire suppression system or standpipe system is to be installed, a separate fire code permit is required for the underground supply for that system. The contractor installing the underground system must be Level U Certified and must be on site when the system is being installed and tested. The underground system must be inspected and approved prior to covering, must have a 200-pound hydro test for two hours, and have an approved flushing of the system. These requirements are separate from the water district and can not be approved by them.
3. Automatic Fire Alarm Systems. A total (complete), monitored automatic addressable fire alarm system is required for buildings greater than 4000 square feet or for special occupancies such as a daycare center with an occupant load greater than 50, storage or use of hazardous materials, etc. when an automatic fire sprinkler system is not installed. Automatic Fire Alarm Systems shall be designed, installed and maintained per the International Fire Code as amended by Kitsap County and NFPA 72. A separate fire code permit is required to be approved and issued before installation of any portion of the system. The plans must be stamped by a NICET 3 or Professional Engineer licensed designer with the appropriate experience. The approved set of plans shall be on site.

4. Emergency Responder Radio Coverage. New and existing building shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems. An evaluation of the building is required to be conducted prior to occupancy can be obtained.

5. Fire Code Permits. Separate Fire Code Permits may be required to maintain, store, use or handle materials, or to conduct processes, which produce conditions hazardous to life or property. Fire code permits are used as regulatory measure to ensure compliance with fire and building codes. The fire code permit is either based on the operation of a business, or the quantities of hazardous materials that are used or stored, or both. An inspection is conducted at periodic intervals to determine compliance with the appropriate regulations. If the business, operations or process requires a fire code permit, it shall not be permitted to be operated without a valid fire code permit being issued. If the condition changes, a new permit is required. Fire code permits are not transferable. Contact the Fire Code Official to determine if your particular operations, process or business requires a separate fire code permit. The building or property owner is responsible to ensure that all required permits are obtained and maintained for any business, operation or process conducted on their property.

V. CIVIL OR LANDSCAPE ARCHITECTURAL PLANS.

1. Landscaping. If the landscape plan suggests that proposed fire hydrants shown on the utility plan are obstructed by vegetation, changes in the landscape plan are required.
    a. Posts, fences, vehicles, vegetation growth, trash, storage and other materials or objects shall not be placed or kept near fire hydrants, fire department inlet connections, or fire protection control valves in a manner that would prevent such equipment from being immediately discernible or being accessed. The fire department shall not be deterred or hindered from gaining immediate access to or use of fire-protection equipment or hydrants. A 3-foot (radius) clear space shall be maintained around the circumference of fire hydrants (see Figure 4)
    b. A 6-foot-wide path leading directly to the hydrant may be provided with vegetation if maintained no higher than 4 inches and unobstructed vertical clearance of at least 13 feet 6 inches. Variations to this minimum clearance may be approved by the local fire department on a case by case basis.

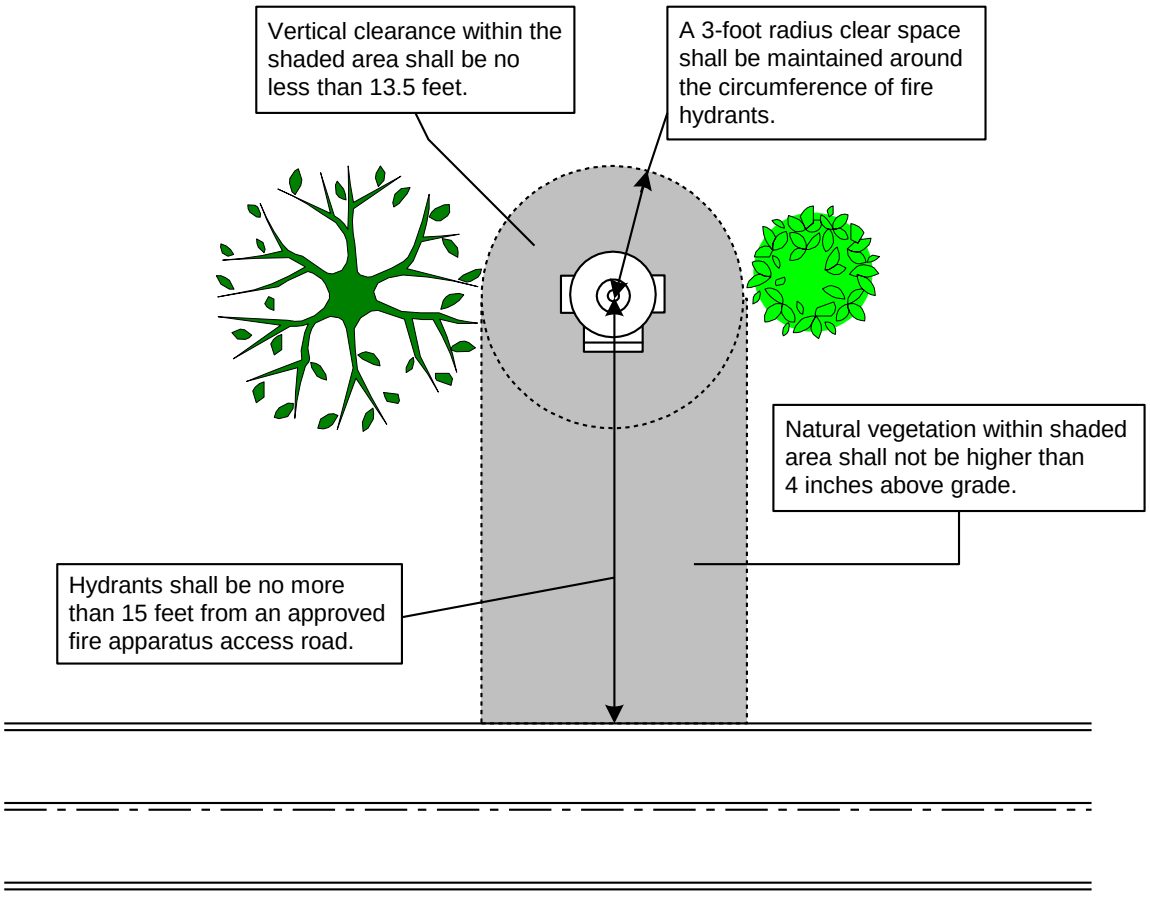
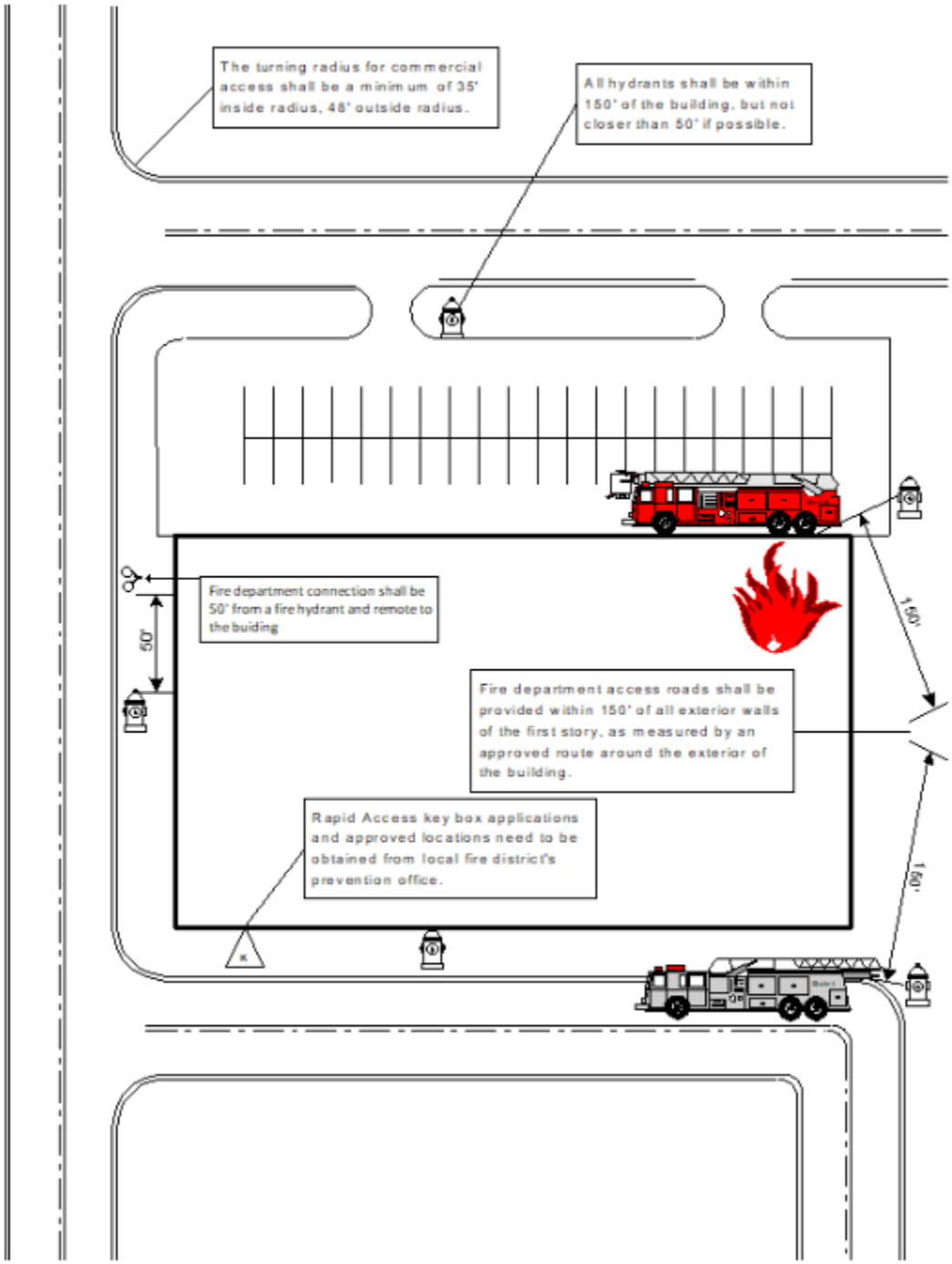


Figure 4.

VI: COMMERCIAL DEVELOPMENT STANDARDS IN KITSAP COUNTY.



VII: APPENDIX A – STANDARD REQUIREMENTS FOR TEMPORARY ACCESS ROADS

1. The minimum road width allowed for temporary roads is 20’ unobstructed with 13’-6” vertical clearance maintained at all times.
2. The area of the proposed road shall be properly bladed and scarified.
3. The roadway shall then be rolled and compacted to achieve the proper moisture content for the soil conditions. Compaction shall be adequate to support the imposed weight of a 60,000-pound fire engine.
4. The temporary road shall be an all-weather surface of crushed rock, recycled asphalt or recycled concrete capable of supporting the imposed weight. The temporary road shall be compacted in such a manner to provide adequate drainage for the purpose of preventing any pooling of water on the road itself.
5. The roadway shall be designed so as to direct any drainage away from the road, which will allow for continued use during moisture situations.
6. At any time, the road base material becomes inadequate for fire apparatus use, the road shall be immediately restored to a condition acceptable to the local Fire District.
7. Temporary fire apparatus access roads differing from the requirements stated above are permitted in limited circumstances only during installation of utilities, or during construction of the foundations. Under all other circumstances, temporary access roads must be constructed prior to any other phases of construction. Prior to the building having the final inspection for occupancy, the permanent road shall be in place or the final road required by the County.
8. Should you have any questions, please contact the Fire Code Official.

VIII: APPENDIX B – KEY BOX APPLICATION AND INSTALLATION GUIDELINES.

To apply for Key Box equipment, contact your areas Fire District member.

District	Phone Number
Central Kitsap Fire & Rescue	(360) 447-3629
South Kitsap Fire & Rescue	(360) 871-2411
North Kitsap Fire & Rescue	(360) 297-3619
Poulsbo Fire	(360) 779-3997

Note:
It is the building or business owner's responsibility to notify the local fire department within 72 hours whenever keys are changes, updated, added or modified.

IX: APPENDIX C – MINIMUM REQUIREMENTS FIRE FLOW AND FLOW DURATION FOR BUILDINGS[3]

FIRE-FLOW CALCULATION AREA (square feet)[1]					FIRE FLOW (gallons per minute)[2]	FLOW DURATION (hours)
Type IA and IB [1]	Type IIA and IIIA[1]	Type IV and V-A [1]	Type IIB and IIIB [1]	Type V-B [1]		
0-5,000	0-5,000	0-5,000	0-5,000		1,500	
5,001-30,200	5,001-17,000	5,001-10,900	5,001-7,900	3,601-4,800	1,750	
30,201-38,700	17,001-21,800	10,901-12,900	7,901-9,800	4,801-6,200	2,000	
38,701-48,300	21,801-24,200	12,901-17,400	9,801-12,600	6,201-7,700	2,250	
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7,701-9,400	2,500	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9,401-11,300	2,750	
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,301-13,400	3,000	2
83,701-97,700	47,101-54,900	30,101-35,200	21,801-25,900	13,401-15,600	3,250	
97,701-112,700	54,901-63,400	35,201-40,600	25,901-29,300	15,601-18,000	3.500	
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,001-20,600	3,750	
128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4,000	
145,901-164,200	82,101-92,400	52,501-59,100	37,901-42,700	23,301-26,300	4,250	
164,201-183,400	92,401-103,100	59,101-66,000	42,701-47,700	26,301-29,300	4,500	
183,401-203,700	103,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4,750	
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5,000	
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5,250	
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5,500	
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,000	43,401-47,400	5,570	
295,901-Greater	166,501-Greater	106,501-115,800	77,001-83,700	47,401-51,500	6,000	

FIRE-FLOW CALCULATION AREA (square feet)[1]					FIRE FLOW (gallons per minute)[2]	FLOW DURATION (hours)
Type IA and IB [1]	Type IIA and IIIA[1]	Type IV and V-A [1]	Type IIB and IIIB [1]	Type V-B [1]		
"	"	115,801-125,500	83,701-90,600	51,501-55,700	6,250	
"	"	125,501-135,500	90,601-97,900	55,701-60,200	6,500	
"	"	135,501-145,800	97,901-106,800	60,201-64,800	6,750	
"	"	145,801-156,700	106,801-113,200	64,801-69,600	7,000	
"	"	156,701-167,900	113,201-121,300	69,601-74,600	7,250	2
"	"	167,901-179,400	121,301-129,600	74,601-79,800	7,500	
"	"	179,401-191,400	129,601-138,300	79,801-85,100	7,750	
		191,401-Greater	138,301-Greater	85,101-Greater	8,000	

1. Types of construction are based on the International Building Code.
2. Measured at 20 psi (137.9 kPa). See Appendix B, Section 105 of the International Fire Code.
3. Fire flow for one-and two-family dwellings, when required, may be reduced by the fire code official when the building is provided with an approved automatic sprinkler system.

X: APPENDIX D – PROVISIONS FOR APPROVED FIRE PROTECTION IN AREAS WHERE FIRE FLOW IS INADEQUATE OR NOT AVAILABLE.

Scope: The following fire protection standards may apply to one and two-family residential dwellings. Any combination of fire protection credits listed in the table can be used in areas where fire flow is inadequate or not available. The total fire protection credits shall equal or exceed 500 gallons per minute (gpm).

Method	Fire Protection Credit
1.) Automatic Fire Sprinkler System **The installation of a residential fire sprinkler system throughout the living space.**	100% or 500 g.p.m. fire protection credit.
2.) An existing fire hydrant within 1000 feet (1,000') of structure which is capable of supplying 500 g.p.m. for 30 minutes and on an accessible road. **To find out where your closest hydrant is located and how much water is available contact your water department, they will be able to tell you how much fire flow is coming from the closest hydrant and were that hydrant is located. If you have the fire flow and it is within the 1000 feet, ask for a letter from the water department to provide to the Fire Marshal's Office.**	100% fire protection credit.
3.) NFPA 13D (partial system) Residential fire sprinkler system for target hazards (systems may use domestic water supply.) **The installation of a residential fire sprinkler system in the kitchen and/or attached garages. You can use the domestic water supply line to provide the water for this system.**	Kitchens = 50% or 250 g.p.m. credit. Garages = 25% OR 125 g.p.m. credit. 75% or 375 g.p.m. credit for protection of kitchen and attached garage.
4.) Automatic fire extinguishing system for protection of cooking appliances. **A fire extinguishing system over the cooking appliance can be two (2) sprinkler heads installed in the kitchen or the installation of the Guardian III Automatic Residential Fire Suppression System under the exhaust hood. The Guardian III is limited to electric ranges up to 42" wide x 24" deep or gas ranges 36" wide x 24" deep. If your**	25% or 125 g.p.m. fire protection credit.

appliance is larger, a commercial fire suppression system is needed.	
5.) An approved monitored fire alarm system. **The installation of a compliant fire alarm system that is monitored by a UL licensed monitoring company, provides heat detectors, smoke detectors and audio/visual notification throughout the residence and is approved by the Fire Marshal Office. A combination fire/burglar system can be installed provided the fire alarm overrides the burglar alarm.**	25% or 125 g.p.m. fire protection credit.
6.) Fire-rated sheetrock installed throughout structure and automatic door closure for attached garage. **Type X sheetrock, (5/8" thickness) installed on all walls and ceilings throughout the structure and an automatic door closure on the door from the living quarters to the attached garage.**	50% or 250 g.p.m. fire protection credit.
7.) Class (A) or (B) Non-Combustible Roof Covering. **Examples of Class A roofing materials include: Fiberglass reinforced asphalt shingles, tile, clay tile, concrete, brick, slate, metal roofing and fiber cement shingles. Class A materials generally need an underlayment of additional materials to give it the A rating.** **Examples of Class B roofing materials include: Pressure-treated shakes and shingles.** **The Class and description should be provided on the building plans.**	25% or 125 g.p.m. fire protection credit.
8.) Create defensible space within 30 feet (30') around the structure. Use of fire-resistant landscaping plants and vegetation. **A defensible space is an area where combustible material, including vegetation, has been treated, cleared or modified to slow the rate and intensity of an**	25% or 125 g.p.m. fire protection credit.

advancing fire and to create a safer area for fire suppression operations to occur. **FEMA Technical Fact Sheet No. 4 Defensible Space, Home Builder's Guide to Construction in Wildfire Zones is available upon request or can be downloaded at https://www.fema.gov/media-library/assets/documents/15962**	
9.) Ignition-resistant construction in accordance with the International Urban Wildland Interface Code. **Chapter 5 Section 503-506 of the International Urban Wildland Interface Code lists the classes of Ignition Resistant Construction that can be applied to the structure. There are three (3) classes available to choose from however be aware that the class chosen for your residence also requires additional protection be provided for items such as eaves, vents, exterior doors, decks, etc. A copy of the code is available in our office for your review.**	25% or 125 g.p.m. fire flow credit
10.) Modified fire wall between an attached garage and the living spaces is installed with: Automatic door closure with solid core or 1-hour-rated door; Latched on all openings in ceiling of garage; Ceiling openings to be 22-inches by 36-inches minimum, to allow firefighter access; Fire-rated sheetrock, both sides of wall, from roof sheathing in attic to floor; penetrations sealed airtight. **Any living spaces above the garage cannot be included in the 25% square footage subtraction of the garage from the total dwelling size. If you have a living space above the garage a one-hour floor/ceiling assembly needs to be installed.**	25% or 125 g.p.m. fire flow credit. 25% of the square footage of the garage shall be subtracted from the total residential dwelling size to Determine need for fire flow or fire protection credits.

XI: APPENDIX D

Fire Hydrant Checklist

☐ 1. Where hydrants supply commercial or multi-family fire flows, at least one hydrant shall be placed between fifty feet (50') and one hundred fifty feet (150') from the protected building.

☐ 2. Where residential fire flow is required, fire hydrants shall be installed every six hundred feet (600'). Where commercial fire flow is required, fire hydrants shall be installed every four hundred feet (400'). Distance between hydrants may be increased to 600 feet when all the buildings are protected by an approved automatic sprinkler system.

☐ 3. Fire hydrants shall be clearly visible at all times and shall not be placed more than fifteen feet (15') from access roads.

☐ 4. Reflectorized standard blue hydrant identification markers shall be placed on the apparatus access to identify each hydrant. Markers shall be placed on the side nearest the hydrant 6 inches from the center line of the access roadway.

☐ 5. Fire hydrants shall have an auxiliary gate valve sufficient to permit repair or replacement without disruption of water service.

☐ 6. Fire hydrants shall have a minimum five-inch (5") main valve opening; two-two and one half inch (2-1/2 ") outlets and four and a one half inch (4-1/2") steamer/pumper port; a 5-inch (5") one-quarter quick connect Storz adapter; such outlets and ports shall have National Standard Threads or other connection devices consistent with local fire protection authority requirements. ☐ 7. Fire hydrants shall stand plumb and be set to finished grade; the center of the lowest outlet shall be no less than eighteen inches (18") and not more than twenty-eight inches (28") above grade.

☐ 8. Fire hydrants subject to possible vehicular damage shall be adequately protected with guard posts or curbs.

☐ 9. The fire hydrant steamer/pumper port shall face the fire apparatus access road or the most likely route of emergency approach.

☐ 10. Fire hydrants shall have a minimum of thirty-six inches (36") radius of clear area surrounding the outlets and control valves to permit the operation of a hydrant wrench.

XII: APPENDIX E

Site & Building Access Checklist

☐ 1. Fire apparatus access roads are a minimum of twenty feet (20') wide with vertical clearance of 13'6". Planters, medians, or landscape do not obstruct access road.

☐ 2. Fire apparatus access roads shall be designed and maintained to support a 60,000-pound fire apparatus and shall be provided with a surface as to provide all-weather driving capabilities.

☐ 3. Temporary fire apparatus access roads shall meet all requirements of Appendix A.

☐ 4. All roadways shall be posted with their street name in accordance with the County Address Ordinance.

☐ 5. Fire lanes are posted with approved signs or painted red and are stenciled NO PARKING FIRE LANE in accordance with the Kitsap County Building and Fire Code.

☐ 6. Dead end access roads exceeding 150 feet (150') in length shall be provided with an approved turnaround (see figure 2).

☐ 7. Minimum inside turning radius of 35 feet for commercial, multi-family, or industrial site.

☐ 8. Minimum inside turning radius of 25 foot for single-family residential access.

☐ 9. Grades of fire department access roads meet one or more of the following:

- Does not exceed 12%.
- Grades exceeding 12% requires buildings equipped with a fire suppression system

☐ 10. Bridges, culverts and elevated surfaces are designed to meet and maintained load limits of fire apparatus access roads of 60,000 pounds and shall have load limits posted with durable signs at both entrances. Contact local fire district for their specific requirements.

☐ 11. If fire apparatus roads have gates or barriers installed, has a rapid access device been installed per site and building access #3 in this document. (see Appendix B for contacts).

☐ 12. Fire apparatus access roads are within 150 feet of all exterior walls, as measured by an approved route around the building.

☐ 13. Fire apparatus access roads are provided within 15 feet of any fire hydrant.