

BOARD OF COUNTY COMMISSIONERS
COUNTY OF KITTITAS
STATE OF WASHINGTON

ORDINANCE

NO. 2004-13

ADOPTING KITTITAS COUNTY ROAD STANDARDS AND
AMENDING CHAPTER 12 OF THE KITTITAS COUNTY CODE

- WHEREAS:** The Kittitas County Code does not adequately provide standards for road construction, and
- WHEREAS:** A Citizens Advisory Committee has actively participated, debated and created road standards that
Reflect the types of roads required for the safe and economical growth of Kittitas County
- WHEREAS:** The Roads Standards were presented before the Planning Commission in numerous Public Hearings to consider amending the Road Standards. The Planning Commission did vote 6-0 to pass on the road standards with a recommendation of Approval
- WHEREAS:** The Board of County Commissioners did conduct a series of Public Meetings to review and modify the road standards from January 2004 through February 2004.
- WHEREAS:** The Board of County Commissioners did approve a Draft Version of the Road Standards on 16 March and directed staff to conduct the appropriate SEPA review and notification to the Department of Community Trade and Economic Development (CTED). Actions required under SEPA were completed on 2 April 2004. CTED 60 Day notice period ended on 15 May 2004, and
- WHEREAS:** The Board of Kittitas County Commissioners did hold public hearings to hear public testimony regarding adopting new Kittitas County Road Standards on 20 April 2004 and 7 May 2004, and
- WHEREAS:** The Board of County Commissioners directed staff to make changes in the ordinance as reflected in the Public testimony and to create the enabling ordinance, and

WHEREAS: Testimony was created concerning the implementation and vesting of this new ordinance. The Board would allow all applications currently under going the approval process the option of being reviewed under the current road standards or being reviewed under the road standards approved as of the date of this ordinance.

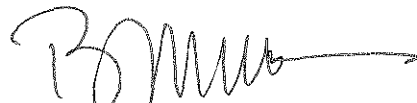
NOW, THEREFORE BE IT ORDAINED That the Board of County Commissioners after due deliberation and in the best interest of the public, does hereby approve amending the Kittitas County Code as follows, and

BE IT FURTHER ORDAINED That the Board of County Commissioners after due deliberation and in the best interest of the public, does hereby approve that any development application currently under review by Kittitas County, and not having final approval, will have 30 days from the date of this ordinance to present a written request to the Department of Public Works to request the development be reviewed using the roads standards in effect at the time of application or that the application be reviewed under the roads standards that are in effect as of the date of this ordinance. If no written request is received the application will be reviewed based upon County Code in effect at the time of application.

ADOPTED this 1st day of June, 2004

**BOARD OF COUNTY COMMISSIONERS
KITITAS COUNTY, WASHINGTON**


Perry D. Huston, Chair


Bruce Coe, Vice Chair


Max A. Golladay, Commissioner



ATTEST


Clerk of the Board

**Title 12
Roads and Bridges**

Chapters

- 12.01 General Information**
- 12.02 Definitions and Abbreviations**
- 12.03 Roadway Classification**
- 12.04 Countywide Road Districts**
- 12.05 Driveway and Accesses**
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Chapter 1 - GENERAL INFORMATION

12.01.010 Purpose

Kittitas County has adopted these Road Standards to:

1. Set forth specific and consistent road design elements for developers and other private parties constructing or modifying road or right-of-way facilities which require County approvals; and
2. Establish uniform criteria to guide the County's own construction of new County roads or reconstruction of existing roads; and
3. These standards are intended to support Kittitas County's goals for achieving affordable housing, providing adequate facilities for development in an efficient manner and to balance these goals with the general safety and mobility needs of the traveling public.

In adopting the Road Standards, the County has sought to encourage standardization of road design elements where necessary for consistency and to assure, so far as practical, that the motoring, bicycling, equestrian and pedestrian public safety needs are met. Considerations include safety, convenience, pleasant appearance, proper drainage and economical maintenance. The County's permitting and licensing activities require the adoption of specific, identifiable standards to guide private individuals and entities in the administrative process of securing the necessary County approval. The County must have needed flexibility to carry out its general duty to provide streets, roads and highways for the diverse and changing needs of the traveling public. Accordingly, these standards are not intended to represent the legal standard by which the County's duty to the traveling public is to be measured.

The Standards cannot provide for all situations. They are intended to assist but not to substitute for competent work by design professionals. It is expected that land surveyors, engineers and architects will bring to each project the best of skills from their respective disciplines. These Standards are also not intended to limit unreasonably any innovative or creative effort, which could result in better quality, better cost savings, or both. Any proposed departure from the Standards will be judged, however, on the likelihood that such variance will produce a compensating or comparable result.

In order to remain current with technological changes and public needs, these standards are subject to revisions. This manual is printed in a format that can be easily updated. This edition will be current at the time of issuance; however, it is incumbent for the holder to keep the manual current with revisions to the standards.

12.01.020 Scope

This title is not a textbook or a substitute for engineering knowledge, experience, or judgment. It is intended to aid in deciding those factors needed to intelligently plan, design, construct, upgrade, and maintain land use development roads in the County.

The requirements contained in this title apply to all new construction, improvements to existing roads, or other work done on, over, or under any land use development road, or other roads within the County.

Requirements of the title shall be enforced in the same manner as other Kittitas County Codes, including injunctions resulting in work stoppage or suit may be commenced for damages resulting to the roads or rights-of-way of the County due to noncompliance.

12.01.030 Applicability.

This title shall apply to all land within the unincorporated areas of the County except where superseded by other governmental jurisdiction.

These Standards shall apply to all newly constructed roads and right-of-way facilities required by development approvals within Kittitas County. Any Land-use application on file with the County prior to the date of adoption of these standards shall be vested under the standards applicable at the time of application. In the event of conflict with the current subdivision code, Kittitas County Code Chapters 16 and 17, these Standards shall control. These standards do not apply to state or federal roads. If roads are required to be built to public standards and are inspected and certified as such, the County will accept these roads onto the County system for continued maintenance, subject to limitations as addressed in KCC 12.01.180.

The Standards may apply to modifications of roadway features of existing facilities which are within the scope of reconstruction or capital improvement projects when so required by Kittitas County or to the extent they are expressly referred to in project plans and specifications. The Standards are not intended to apply to "resurfacing, restoration and rehabilitation (3R)" projects as those terms are defined in the Local Agency Guidelines, WSDOT, as amended; however, the Director may at his discretion consider the Standards as optional goals for 3R projects.

The Standards shall not apply to new or planned utility facilities and emergency or non-emergency replacement of existing utility structures within Kittitas County right-of-way. Every new utility facility and all planned, non-emergency replacement of existing utility structures within Kittitas County right-of-way shall be governed by the most current version of the Manual on Accommodating Utilities in Kittitas County Rights-of-Way.

12.01.040 Amendments and Remissions

The standards may be amended as required. The Board of County Commissioners (BOCC), following the recommendations of the Director of Public

Works and Planning Commission, may consider revisions and/or amendments to this title. The revisions will be adopted by resolution following a public hearing.

One year from the date of acceptance the Planning Commission and the Board of County Commissioners shall hold public hearings, and annually there after for the purpose of reviewing the Standards and receive public comment regarding any issues that have developed from the adoption of these standards.

12.01.050 Enforcement and Responsibility

It shall be the duty of the Board of County Commissioners, acting through the Director of Public Works or his/her designee, to enforce the provisions of this title.

12.01.060 Review and Approval

The County will review all land-use applications for general compliance with the Specific Roadway Standards. An approval by the County does not relieve the owner, owner's engineer, or developer from final responsibility of insuring that the calculations, plans, specifications, construction, and as-built drawings are in compliance with this title as stated in the owner's engineer's certification provided in accordance with 12.08.020.

12.01.070 Interpretation

In the interpretation and application of the provisions of this title, the following shall govern:

- A. In its interpretation and application, the provisions shall be regarded as the minimum requirements for the protection of the public health, safety, comfort, morals, convenience, prosperity, and welfare of the residents of the County.
- B. Whenever a provision of this title or any provision in any law, ordinance, resolution, rule, or regulation of any kind, contain any restrictions covering any of the same subject matter, whichever standards are more restrictive or impose higher standards or requirements shall govern.
- C. The standards in this title shall not modify or alter any road construction plans, which have been filed with and accepted by the County prior to the effective date of this title. This exception shall be subject to the conditions and limitations under which the Engineer accepted said plans.

Any ambiguities in the interpretation of material contained in this title shall be resolved through the appeals process.

12.01.080 Relationship to Other Standards

Since the County is the approval authority for land use changes, this title, which stipulates certain minimum conditions for land use changes, shall apply. If special districts impose more stringent standards, this difference is not considered a conflict; the more stringent standard shall apply. If the State or Federal Government imposes more stringent standards, criteria, or requirements, these shall be incorporated into this document after the due process and public hearing(s) required to modify this title.

12.01.090 Responsibility to Provide Roadway Improvements.

- A. Any parcel creation, which will impact the service level, safety or operational efficiency of abutting or serving roadways or is required by other County Code or ordinance to improve such roadways shall improve those roadways in accordance with these Standards. The extent of the off-site improvements to roads serving a development shall be based on an assessment by the County of the impacts of the proposed land development. The assessment will be based on factors including, but not limited to, functional classification, primitive road designation, single access to development, safety and level of service.
- B. Any parcel creation abutting and impacting existing roads shall improve the frontage of those roads in accordance with these standards. The extent of improvements shall be based on the assessment by the County of the impacts of the proposed land development stated in Section A. above. Short plats within the UGA creating only one additional lot to a tax lot with an existing dwelling unit are exempt from providing urban type street improvements but are subject to shoulder improvements providing these improvements are consistent with surrounding roads and do not present a safety problem.
- C. Any land development or parcel creation that contains internal roads shall construct or improve those roadways to these Standards.
- D. It is the County's practice that it will not allow subdivisions to be recorded unless there exists a recorded continuous public or private access to the subdivision. Nor will the County accept a road for maintenance until the road is directly connected to a County or other publicly maintained road.
- E. All public road improvement and development projects within an UGA shall include pedestrian access as a part of the design in accordance with the appropriate City's standard, provided a pre-annexation agreement between the applicant and the appropriate City has been entered into and requires the same.
- F. All road improvements planned or specified in any adopted Growth Management plan of the County shall be planned and constructed in accordance with these Standards.

12.01.100 General References.

The Standards implement and are intended to be consistent with:

- A. Kittitas County Code, as amended
- B. Kittitas County Comprehensive Plan, current edition.
- C. Kittitas County Transportation Plan, when adopted.
- D. Adopted Community Plans.
- E. Kittitas County Non-Motorized Transportation Plan, when adopted.
- F. Kittitas County Capital Improvement Program, as amended.
- G. Kittitas County Growth Management Program
- H. Kittitas County Manual on Accommodating Utilities within the Right-of-way

12.01.110 Primary Design and Construction Reference Documents.

Except where these Standards provide otherwise, design detail, construction materials and workmanship shall be in accordance with the following publications produced separately by the Washington State Department of Transportation (WSDOT), or jointly by WSDOT and American Association of State Highway and Transportation OFFICIALS (AASHTO).

- A. WSDOT Standard Specifications for Road, Bridge and Municipal Construction, current edition as amended. These will be referred to as the "WSDOT Standard Specifications."
- B. The WSDOT Standard Plans for Road and Bridge Construction, to be referred to as the "WSDOT Standard Plans", Current edition as amended.
- C. WSDOT Design Manual, current edition as amended.

12.01.120 Other Specifications.

Other specifications include the following, which shall be applicable when pertinent, when specifically cited in the Standards, or when required by State or Federal funding authority:

- A. Local Agency Guidelines, WSDOT, as amended.
- B. Guidelines for Urban Arterial Program, WSDOT, as amended.
- C. Design criteria of federal agencies including the Federal Housing Administration, Department of Housing and Urban Development, and the Federal Highway Administration, Department of Transportation.
- D. A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials (AASHTO), current edition.

- E. Standard Specifications for Highway Bridges, adopted by the American Association of State Highway and Transportation Officials (AASHTO), current edition.
- F. U. S. Department of Transportation Manual on Uniform Traffic Control Devices, as amended and approved by Washington State Department of Transportation, abbreviated as the "MUTCD" current edition.
- G. Guide for the Development of Bicycle Facilities, adopted by AASHTO, current edition.
- H. City and County Design Standards for the Construction of Urban and Rural Arterials and Collectors in Washington State, current edition.
- I. Guidelines for the Geometric Design of Very Low-Volume Local Roads (ADT<400), adopted by the American Association of State Highway and Transportation Officials (AASHTO), current edition.

12.01.130 Variances (Departures from the Standards) and Appeals.

Variances from these Standards may be granted by the Road Variance Committee, comprised of the Public Works Director, Director of Community Development Services, Fire Marshall, or designees, and three citizens appointed by the BOCC, upon evidence that such variances are in the public interest, and that requirements for safety, function, fire protection, appearance and maintainability based upon sound engineering judgment are fully met. Variances from the standards in this title will be considered on a case-by-case basis. If the developer, contractor, utility responsible to the County for improvements desires to design and construct such improvements in variances to these standards, such variance(s) shall be identified in a written attachment to the initial submittal of construction plans or Subdivision Application. The variance request(s) shall consist of:

- A. Identification of the standard provision to be waived or varied.
- B. Identification of the alternative design or construction standards to be adhered to.
- C. A thorough justification of the variance request including impact on capital and maintenance requirements and cost.
- D. Request may be prepared by the applicant or professional civil engineer licensed to practice in Washington or professional land surveyor licensed to practice in Washington.

If, upon review and denial of the variance by the Road Variance Committee, the developer may appeal to the Board of County Commissioners (BOCC).

The developer shall make appeal to the BOCC within 15 days from receipt of denial from the Director of Public Works. All notices and appeals shall be in writing.

12.01.140 Authority of the Public Works Director

The Director of Public Works or his designee shall have the authority, on behalf of the County, to ascertain that all design and construction is equal to or exceeds the minimum requirements set forth in these standards.

12.01.150 Cost Estimates and Construction Bonds

Failure to comply with these Standards may result in denial of plan or development permit approval, revocation of prior approvals, or legal action for forfeiture of performance guarantee.

- A. CONSTRUCTION PERFORMANCE GUARANTEES:** In lieu of the completion of any required improvements prior to approval of a final plat, short plat or other land-use action, the Director may accept a performance guarantee in an amount and with satisfactory surety and conditions providing for and securing to Kittitas County the actual design, construction and installation of such improvements within a period specified by the Director. The Director will enforce the guarantee through appropriate legal and equitable remedies. If a surety bond is provided, the amount of the bond shall equal one hundred and thirty-five (135%) of the estimated design and construction cost. When a letter of escrow or cash is used, the amount covered shall be for one hundred percent (115%) of the estimated construction cost as reviewed and concurred by the Public Works Director

The amount of the financial guarantee may be reduced during construction proportionally to the amount of work completed, as said work is approved by the Public Works Director.

Occupancy Permits will not be issued until road construction is completed to the subject dwelling or structure and approved by the County or a licensed professional engineer.

- B. MAINTENANCE PERFORMANCE GUARANTEES:** The successful performance of public improvements shall be guaranteed for a period of not less than two years from the date of acceptance or Final Construction Approval (which ever is last). The amount of the maintenance guarantee shall be ten percent (10%) of the construction cost and the form of the maintenance financial guarantee shall be approved by the Public Works Director. Maintenance guarantees will not be required when the required performance guarantee is \$1,000.00 or less.

12.01.160 Public Road System

- A. General**

The Washington Revised Code (RCW 36.75.010) defines public roads as every highway or part thereof, outside the limits of incorporated cities and towns which has not been designated as a state highway or roads over private lands that have been dedicated to the public deed and accepted

by the Board of County Commissioners, so long as no vacation of the road has occurred.

Public roads may or may not be maintained by the County. Kittitas County maintains only those roads, which the BOCC, by written resolution, has agreed to maintain.

The State statutes have vested Kittitas County with powers, if they so choose, to maintain, lay out, alter, add, delete, acquire property, and regulate traffic on the public roads under its jurisdiction.

12.01.170 New County Roads

A. General

New roads may be added to the County Road System by resolution passed by the Board of County Commissioners. Sources of new roads are additions, realignments, relinquished State Highways and Forest Service roads, subdivision and other development. Ordinarily, before a new road becomes a part of the County Road System, it passes through seven steps: planning, design, right-of-way acquisition or dedication, construction, inspection, possible acceptance through resolution and warranty period.

The initial approval of subdivision road construction by the Engineer is for purposes of releasing the applicant's Development collateral and not for purposes of acceptance by the County for maintenance. The applicant shall construct all roads proposed in any development to the required standard with no liability or obligation for such construction or maintenance by the County.

The County will generally bring a road onto the county road maintenance system if the new road has a potential ADT greater than 400 and is a through road, either to another county road or looped back at the appropriate spacing. The County will not normally consider taking on subdivision internal roads or Cul-De-Sacs. Provided, however, the County shall determine which roads, if any, are intended to be added onto the County road system at the planning or preliminary approval stage of a proposed development. Any roads not intended to be added onto the County road system shall be privately developed and maintained in accordance with Kittitas County Road Standards for Private Roads

B. Planning Standards

Prior to the design of a new road, the functional classification, terrain classification, and the design speed must be determined. The functional classification and terrain classification are defined in KCC12.03.040. The design speeds are addressed under KCC12.04.

The road systems of proposed new developments must correspond to the definitions given previously. If the developer's engineers have any questions in regard to the classification type of a particular road or roads within a proposed development, they should contact the Engineer for clarification.

Situations may arise in which both the County, Forest Service, State and city or town or other agency become involved in the review of a given development. The following procedure shall then apply:

1. The conditions of the Inter-Governmental Agreements (IGAs) between the County and the incorporated area shall be complied with.
2. The County shall refer development plans to other involved agencies for review and comment.
3. The other agencies shall be responsible for the issuance of access and utility permits and inspections of their respective utilities.
4. The County shall be responsible for the issuance of permits and inspections of all road construction and for installation or modification of utilities, which occur within the rights-of-way of the County Road System. The County Engineering Department should be contacted for additional information.
5. Other agencies shall be responsible for the issuance of permits and inspections of all road construction and for installation or modification of utilities, which occur within the rights-of-way of the Agencies Road System. The other agencies should be contacted for additional information.

C. Design Standards

The design standards, which have been established in this title generally, represent minimum values. The sources for these standards include applicable standards established by the American Association of State Highway and Transportation Officials (AASHTO) and by Washington Department of Transportation (WSDOT). Every effort has been made in this title to provide consistent, accepted, and established standards to follow which will result in a safe and efficient road system at a reasonable cost to construct and maintain, while at the same time minimizing adverse environmental impacts.

In addition to the specific design standards found throughout other parts of this title, the following general design principals shall be adhered to insofar as practicable:

1. Layout of lots and blocks should provide desirable settings for structures by making use of natural contours and maintaining existing

views, affording privacy for the residents and protection from adverse noise and vehicular traffic. Natural features and vegetation of the area should be preserved where practical. The resulting road system must, however, provide for the safe and efficient movement of people and goods and also allow for proper construction and maintenance practices to occur.

2. Tree masses and large individual trees should be preserved. The system of roadways, sidewalks, bicycle and equestrian trails, and the lot layout should be designed to take advantage of visual qualities of the area.
3. In high-density development particularly, pedestrian ways, bike paths, and equestrian trails should be separated from roadways used by vehicular traffic. Sidewalks should be designed to provide all residential building sites with direct access to all neighborhood facilities, including schools and school collection points, parks and playgrounds, churches and shopping areas.
4. Roads should be located with appropriate regard for topography, creeks, wooded areas, and other natural features, which would enhance attractive development.
5. Roads should not be located so as to closely parallel streams or be subject to flooding. There should be a vegetated strip to trap soil carried by runoff between the toe of fill and the channel thalweg (a line running along the main course of the stream).
6. In mountainous terrain, it may be preferable to provide more right-of-way than the minimum required to construct the road itself. The road will be permitted to wind around within the right-of-way to reduce cuts and unnecessary scarring, provided minimum standards are met. This higher standard right-of-way will permit improvements of the alignment as traffic warrants.
7. Existing roads, including roads in subdivisions having preliminary plat approval in adjoining properties, shall be continued at equal or greater width and in similar alignments by roads proposed in the subdivision, unless variations are approved.
8. Roads within subdivisions should be designed as a system of circulation routes so that the use of local roads by through traffic will be discouraged.
9. Roads shall intersect as nearly at right angles as possible. Written approval from the Engineer shall be required if an intersection is proposed that would deviate more than 10 degrees from perpendicular.

10. When a tract is divided into lots 200% or larger, on average, than the underlying zoning, such lots or parcels shall be arranged to permit the logical location and opening of future streets or roads.

D. Construction and Testing Standards

Specific construction specifications, both for materials and workmanship, and testing requirements, are found in 12.04. The construction specifications used in work on the County Road System generally comply with the WSDOT Standard Specifications for Road and Bridge Construction in force at the time of construction.

E. Construction Warranty and Collateral

The developer shall guarantee all portions of construction work done in the right-of-way in accordance with KCC 12.01.150

CHAPTER 2 - DEFINITIONS AND ABBREVIATIONS

12.02.010 Abbreviations

Where the following words, phrases, or abbreviations appear in these specifications they shall have the following meanings:

- AASHTO - American Association of State Highway and Transportation Officials
- ADA - Americans with Disabilities Act
- ADT – Average Dailey Traffic
- ASTM - American Society of Testing Materials
- BOCC - Board of County Commissioners of Kittitas County, Washington
- WSDOT - Washington Department of Transportation
- DA - Development Agreement
- DHV - Design Hourly Volume
- DOJ - Department of Justice
- DPW - Kittitas County Department of Public Works
- EEOC - Equal Employment Opportunity Commission
- FHWA - Federal Highway Administration
- GMA – Growth Management Act
- IGA - Inter-Governmental Agreement
- KCC – Kittitas County Code
- SWMEA – Storm Water Manual for Eastern Washington
- MUTCD - Manual on Uniform Traffic Control Devices
- ROW - Right-of-Way
- RCW – Revised Code of Washington
- UGA - Urban Growth Area
- UGN – Urban Growth Node

- USGS - United States Geologic Survey

12.02.020 Definitions

- ACCESS - That portion of the driveway private road extending from the County Road or street edge to the edge of Right-of-Way.
- "ADT" Average Daily Traffic - The general unit of measure for traffic defined as the total volume during the given time period (in whole days) greater than one day and less than one year, divided by the number of days in that time period.
- ALLEY - A thoroughfare or right-of-way, usually narrower than a street, which provides access to the rear boundary of two or more residential properties and is not intended for general traffic circulation.
- "AS-BUILT" or RECORD DRAWINGS - Set of original plans, with information superimposed upon them, showing any additions, deletions, changes, etc.
- AUXILIARY LANE- The portion of the roadway adjoining the traveled way for parking, turning or other purposes supplementary to through-traffic movement.
- AVERAGE LOT SIZE – The total number of acres divided by the total number of existing and proposed lots to be served by a private road.
- BULB - Round area for vehicle turnaround typically located at the end of a cul-de-sac street.
- CENTER LINE – the line, marked or unmarked, parallel to and equidistant from the sides of a two-way traffic roadway of a highway except where otherwise indicated by painted lines or markers.
- CITY - Any incorporated area within Kittitas County, Washington.
- CONSTRUCTION PLANS - Detailed and working plans including plan and profile, details, notes and any other information necessary for complete construction of the required improvements.
- CONSULTANT - A person, partnership, or corporation duly registered as a professional engineer, according to Washington statutes, who is hired by the landowner or developer and is empowered to act as his agent.
- CONTRACTOR - A person, partnership or corporation performing work within the public right-of-way in Kittitas County.
- CORNER SIGHT TRIANGLES – Specified areas along intersection approach legs and across their included corners shall be clear of obstructions that might block a driver's view of potentially conflicting vehicles. The length of the legs and object height. The leg distances and object heights are in accordance with current AASHTO standards.

- COUNTY - County of Kittitas, State of Washington.
- COUNTY ENGINEER - The Director of Public Works, Kittitas County, Washington, or his authorized representative, acting on behalf of the Director or the County.
- COUNTY ROAD – Every highway or part thereof, outside the limits of incorporated cities and towns and which has not been designated as a state highway, that has been accepted by resolution by the BOCC.
- CUL-DE-SAC - Short Street having one end open to traffic and the other temporarily or permanently terminated by a vehicle turnaround.
- DAYS - Calendar days, not normal working days unless stipulated as working days.
- DESIGN HOURLY VOLUME - On the average rural road is $\pm 15\%$ of ADT; for the average urban road is $\pm 10\%$ of ADT.
- DESIGN SPEED - A speed determined for design and correlation of the physical features of a street that influence vehicle operation; the maximum safe speed maintainable on a specified section of street when conditions permit design features to govern.
- DIRECTOR or DIRECTOR OF PUBLIC WORKS – The director of the Kittitas County Public Works and County Engineer.
- DEVELOPER - The person or persons legally responsible for the construction of streets within a specific subdivision or planned unit development.
- DRIVEWAY – No more than two privately maintained residential, commercial, agricultural or industrial properties access point.
- ENGINEER – The Director of Public Works can be the County Engineer, having authorities specified in RCW 36.75.080 and RCW 36.80 or his/her authorized representative.
- EYEBROW - A bulb or semi-circular extension of a curb on one side of a street or at an ell intersection to provide more frontages for adding more lots.
- FLAG LOT - A strip of land having a width narrower than that of the lot or parcel to be served and is designed for providing access to that lot or parcel.
- HIGHWAY – Every way, lane, road, street, boulevard, and every way or place in the State of Washington open as a matter of right to public vehicular travel both inside and outside the limits of incorporated cities and towns.
- INSPECTOR - An authorized representative of the Engineer assigned to make inspections for contract performance, standards, and contract compliance.

- MAY - A permissive condition. No requirement for design or application is intended.
- MEDIAN RADII - The minimum radius for curbing when used for street medians; measured to flowline.
- OFF-SYSTEM ROAD – A road or right-of-way dedicated or used by the public but not maintained by Kittitas County.
- ON-SYSTEM ROAD – A road or right-of-way dedicated or used by the public and maintained by Kittitas County.
- OWNER'S ENGINEER - A registered engineer (State of Washington) acting for the Owner or Developer.
- PRIVATE ROAD – Every way or place in private ownership and used for travel of vehicles and utilities by owner or those having expressed or implied permission from the owner, but not by other persons.
- RIGHT-OF-WAY – Land, property or property interest, usually in a strip, acquired for or devoted to transportation purposes.
- ROAD OR STREET - A general term denoting a public or private way for purposes of vehicular travel and utilities, including the entire area within the right-of-way (includes alleyways).
- SHALL - A mandatory condition. Where certain requirements in the design or application use the word "shall", it is mandatory that these requirements be met.
- SHOULD - Where the word "should" is used, it is considered to be advisable usage, recommended but not mandatory.
- SPECIAL DISTRICT – Shall mean any recognized district within Kittitas County that may have some level of jurisdiction over some aspect of a development. Possibly but not limited to Irrigation Districts, Water Districts, and Fire Districts.
- STOPPING SIGHT DISTANCE - Shall mean that distance measured from the driver's eye, 3.5 feet above the pavement to the top of an object 2.0 feet high on the pavement anywhere on the road as defined in AASHTO.
- STREET OR ROAD WIDTH - That distance measured from curbface to curbface across a street or edge of traveled way.
- SUBSTANTIAL COMPLETION - The date at which construction is sufficiently complete in accordance with the construction plans for the use in which it was intended.

- **UTILITY** - A company or individual providing public service such as gas, electric power, irrigation, telephone, telegraph, water, sewer or cable television, whether or not such company is privately owned or owned by a governmental entity.
- **TRAVELED WAY** – That part of the roadway made for vehicular traffic excluding shoulders and auxiliary lanes.

12.02030 Definition of Road Functional Classification

All roads are divided into the following functional categories for planning purposes. Typical sections showing geometric and structural features are found in Chapter 4.

- **ARTERIALS (MAJOR & MINOR)** - An arterial is a continuous access controlled road for through traffic with crossings at grade.
- **COLLECTORS (MAJOR & MINOR)** – A collector is a vicinity-wide continuous road for through traffic local roads to arterials.
- **LOCAL ROADS** – A local access road provides direct access from abutting properties to other roads.

12.02.040 Terrain Classification

- For the purposes of this manual, the terrain in Kittitas County is divided into three categories:
- **FLAT** - highway sight distances, as governed by both horizontal and vertical restrictions, are generally long or can be made to be so without construction difficulty or major expense. The slope of existing terrain is from 0% to and including 5%.
- **ROLLING TERRAIN** - natural slopes consistently rise above and fall below the road or street grade, and occasional steep slopes offer some restriction to normal horizontal and vertical roadway alignment. The slope of the existing terrain is from 5% to and including 15%.
- **MOUNTAINOUS TERRAIN** - longitudinal and transverse changes in the elevation of the ground with respect to the road or street are abrupt, and benching and side hill excavation is frequently needed to obtain acceptable horizontal and vertical alignment. The slope of the existing terrain exceeds 15%.

Terrain classification pertains to the general character of the specific route corridor. Roads in valleys or passes of mountainous areas that have all the characteristics of roads traversing flat or rolling terrain should be classified as flat or rolling. In rolling terrain, trucks reduce their speeds below those of passenger cars on some sections of roadway. Mountainous terrain is

responsible for some truck operation at crawl speeds. In cases where the terrain classification is in question, the Director shall make the final decision.

CHAPTER 3- ROADWAY CLASSIFICATION

12.03.010 Road Classifications.

County roads or streets are classified functionally as indicated in the following Sections 12.03. Function is the controlling element for classification and shall govern right-of-way, road width and road geometrics. Other given elements such as access, arterial spacing, and average daily traffic count, (ADT) are typical.

12.03.020 Classification Definitions.

A. Rural Major Collector (Class 07)

1. Serves county seat that is not on an arterial route, larger towns not directly served by the higher systems, and other traffic generators of equivalent intracounty importance, such as consolidated schools, shipping points, county parks, and important mining and agricultural areas;
2. Link these places with nearby larger towns or cities, or with routes of higher classification; and
3. Serve the more important intracounty travel corridors.

B. Rural Minor Collector (Class 08).

1. Should be spaced at intervals consistent with population density to accumulate traffic from local roads and bring all developed areas within reasonable distances of collector roads.
2. Should provide service to the remaining smaller communities; and
3. Should link the locally important traffic generators with rural users.

C. Rural Local Access (Class 09).

Road, which provides direct access to adjoining properties within a neighborhood. These constitute all rural mileage not classified as principal arterial, minor arterial, major collector, or minor collector mileage.

D. Rural Primitive Roads (Class 00).

1. Roads, which are not classified as part of the county primary system,
2. Roads which have a gravel or earth driving surface, and
3. Roads, which have an average annual daily traffic volume of one hundred or fewer vehicles.

County roads listed in Section 12.20.030 as primitive roads will be marked with signs at all places where the primitive road section begins or connects with a highway or other than a primitive road. No county design or signing or maintenance standards or requirements, other than the placement of primitive road signs, will apply.

E. Urban Principal Arterial (Class 14).

Route serving the major centers of activity of urbanized areas, the highest traffic volume

corridors, and the longest trip desires and carries a high proportion of the total urban area travel on a minimum of mileage.

F. Urban Minor Arterial (Class 16).

Route interconnects with and augments the urban principal arterial system. It accommodates trips of moderate length at a somewhat lower level of travel mobility than principal arterials do. More emphasis is placed on land access. It provides intercommunity continuity but ideally does not penetrate identifiable neighborhoods.

G. Urban Collector (Class 17).

Route providing both land access and traffic circulation within residential neighborhoods and commercial and industrial areas. It may penetrate residential neighborhoods, distributing trips from the arterials through the area to their ultimate destination.

H. Urban Local Access (Class 19).

Route providing primarily direct access to abutting lands and connects to the higher-level systems. It offers the lowest level of mobility. Service to through-traffic movement usually is deliberately discouraged.

12.03.030 Roadways by Classification.

A. Rural Major Collector (Class 07).

The Rural Major Collector Road System (Class 07) shall be comprised of the following roads:

Road Name	From	To
Bender Road	Reecer Creek Road	Airport Road
Brick Mill Road	Wilson Creek Road	No. 81 Road
Brondt Road	Manastash Road	Brown Road
Brown Road	Umptanum Road	Hanson Road
Bullfrog Road	I-90 (exit 80)	SR 903
Canyon Road	Ellensburg C.L.	Thrall Road
Cleman Road	Kittitas C.L.	Thrall Road
Cove Road	Manastash Road	South Thorp Highway
Dry Creek Road	Reecer Creek Road	SR 97
Dry Creek Road Connection	Cascade Way	Faust Road
Faust Road	SR 97	Dry Creek Road
First Street, West	Cle Elum C.L.	I-90
Game Farm Road	Cascade Canal	Wilson Creek Road
Hanson Road	South Thorp Highway	Cove Road
Kittitas Highway	Ellensburg C.L.	Kittitas C.L.
Look Road	Sanders Road	Bowers Road extension
Manastash Road	Umptanum Road	Cove Road
No. 6 Road	Thrall Road	Vantage Highway
No. 81 Road	Clerf Road	Brick Mill Road
Reecer Creek Road	Dry Creek Road	Bowers Road extension
South Cle Elum Road	Cle Elum C.L.	South Cle Elum C.L.
Thorp Highway, North/South	I-90 (Exit 106 West E-Burg)	SR 10
Thrall Road	No. 6 Road	Upper Badger Pocket Road
Tjossem Road	Canyon Road	Cleman Road
Umptanum Road	I-90 overcrossing	Manastash Road

Road Name	From	To
Vantage Highway	Fields Road	No. 81 Road
Wilson Creek Road	Cascade Canal	Brick Mill Road

B. Rural Minor Collector (Class 08).

The Rural Minor Collector Road System (Class 08) shall be comprised of the following roads:

Road Name	From	To
Airport Road (Cle Elum)	SR 970	Masterson Road
Alford Road	Look Road	Wilson Creek Road
Badger Pocket Road	Clemans Road	Carroll Road
Boylston Road	Prater Road	Stevens Road
Brick Mill Road	Venture Road	No. 81 Road
Brick Mill Road	Look Road	Wilson Creek Road
Cabin Creek Road	I-90 ramps	end of road
Carroll Road	Badger Pocket Road	Prater Road
Charlton Road	Wilson Creek Road	Naneum Road
Denmark Road	Thrall Road	Fourth Parallel Road
Emerson Road	Sorenson Road	Thrall Road
Fairview Road	Vantage Hwy	Brick Mill Road
Ferguson Road, South	Tjossem Road	Sorenson Road
Fourth Parallel Road	Denmark Road	Ross Road
Fox Road	Vantage Highway	Lyons Road
Golf Course Road	Westside Road	Nelson Siding Road
Hamilton Road	Sorenson Road	Upper Badger Pocket Road
Hungry Junction Road	SR 97	Look Road
Huntzinger Road	I-90 (Exit 136 at Vantage)	end of road
Kachess Lake Road	I-90 ramps	end of road
Killmore Road	Robinson Canyon Road	South Thorp Highway
Liberty Road	SR 97	end of road
Look Road	Bowers Road extension	Alford Road
Lower Green Canyon Road	Smithson Road	Reecer Creek Road
Lower Peoh Point Road	South Cle Elum C.L.	Watson Cut-Off Road
Lyons Road	Wilson Creek Road	Fox Road
Manastash Road	Cove Road	end of road
Masterson Road	Airport Road (Cle Elum)	Red Bridge Road
Middle Fork Teanaway Rd	Teanaway Road	end of road
Mohar Road	Upper Peoh Point Road	Westside Road
Naneum Road	Vantage Highway	end of road
Nelson Siding Road	Golf Course Road	I-90 (Exit 74)
North Fork Teanaway Road	Middle Fork Teanaway Road	end of road
Parke Creek Road	Kittitas C.L.	Vantage Highway
Prater Road	Parke Creek Road	Sorenson Road
Reecer Creek Road	Bowers Road extension	end of road
Robinson Canyon Road	South Thorp Highway	Killmore Road
Salmon La Sac Road	End of SR 903	end of road (Salmon La Sac Campground)
Smithson Road	SR 97	Reecer Creek Road
Stevens Road	Boylston Road	Parke Creek Road
Taneum Road, East/West	North Thorp Highway	end of road
Teanaway Road	SR 970	North Fork Teanaway Road
Thorp Cemetery Road	South Thorp Highway	West Taneum Road
Thorp Prairie Road	East Taneum Road	I-90 overpass at Indian John
Thrall Road	Upper Badger Pocket Road	Hamilton Road
Umptanum Road	Manastash Road	Yakima County Line
Upper Badger Pocket Road	Thrall Road	Silica Road

Road Name	From	To
Upper Peoh Point Road	I-90 overpass at Indian John	Lower Peoh Point Road
Vantage Highway	No. 81 Road	I-90 (Exit 136 at Vantage)
Venture Road	Lyons Road	Brick Mill Road
Watson Cut-Off Road	Upper Peoh Point Road	Lower Peoh Point Road
West Fork Teanaway Road	Middle Fork Teanaway Rd	end of road
Westside Road	South Cle Elum C.L.	Golf Course Road
Wilson Creek Road	Brick Mill Road	Charlton Road
Zrebiec Road	Westside Road	end of road

C. Rural Local Access (Class 09).

The Rural Local Access Road System (Class 09) is comprised of all rural county road system mileage not classified as principal arterial, minor arterial, major collector, minor collector, or primitive road mileage.

D. Primitive Road System (Class 00).

The Rural Primitive Road System (Class 00) shall be comprised of the following roads:

Road Name	From	To
Bohannon Road, South	Upper Badger Pocket Road	end of road
Borland Road	Upper Badger Pocket Road	end of road
Boylston Road	Stevens Road	end of road
Camp Illahee Road	West Fork Teanaway Road	end of road
Colockum Road	Gage Road	Chelan County
Doris Road	Huntzinger Road	end of road
Durr Road	Umptanum Road	end of road
Emerick Road	Hidden Valley Road	end of road
Fowler Creek Road	Westside Road	end of road
Godawa Lane	Lower Peoh Point Road	end of road
Graham Road	Mohar Road	end of road
Hart Road	Taylor Road	end of road
Hartman Road	Swauk Prairie Road	end of road
Hayward Road	Bettas Road	Hwy 10
Hidden Valley Road	SR 970	end of road
Koffman Road	Parke Creek Road	end of road
Lambert Road	Taylor Road	end of road
Micheletto Road	Swauk Prairie Road	end of road
Nelson Dairy Road	Roslyn C.L.	Fanhouse Road
Pasco Road	Fowler Creek Road	end of road
Passmore Road	SR 97	end of road
Perry Road	Orchard Road	end of road
Smithson Road	Robbins Road	end of road
Strande Road	Manastash Road	end of road
Taylor Road	Lambert Road	Hwy 10
Taylor Road Connection	Taylor Road	Hwy 10
Thorp Depot Road	Goodwin Road	end of road
Upper Green Canyon Rd	Reecer Creek Road	end of road
Wade Road	Gladmar Road	end of road
White Road	Airport Road (Cle Elum)	end of road
Wilson Creek Road	Charlton Road	end of road

E. Urban Principal Arterial (Class 14).

The Urban Principal Arterial Street System (Class 14) shall be comprised of the following streets:

Road Name	From	To
Cascade Way	Reecer Creek Bridge	Ellensburg C.L.
Vantage Highway	Ellensburg C.L.	Pfenning Road

F. Urban Minor Arterial (Class 16).

The Urban Minor Arterial Street System (Class 16) shall be comprised of the following streets:

Road Name	From	To
Airport Road	Ellensburg C.L.	Bowers Road
Anderson Road	Umptanum Road	Ellensburg C.L.
Dry Creek Road	Ellensburg C.L.	Reecer Creek Road
Game Farm Road	Brick Road	Cascade Canal
Pfenning Road	Game Farm Road	Capitol Avenue
Reecer Creek Road (proposed)	Cascade Way	Dry Creek Road
Umptanum Road	South Main Street	I-90 underpass
Vantage Highway	Pfenning Road	Fields Road
Willow Street	Mountain View Avenue	Ellensburg C.L.
Wilson Creek Road	Vantage Highway	Cascade Canal

G. Urban Collector (Class 17).

The Urban Collector Street System (Class 17) shall be comprised of the following streets:

Road Name	From	To
Berry Road	Ellensburg C.L.	Tjossem Road
Bowers Road	Airport Road	end of road
Bowers Road (proposed)	Reecer Creek Road	Airport Road
Brick Road	Ellensburg C.L.	Sanders Road
Bull Road	I-90 underpass	Kittitas Highway
Helena Street	Ellensburg C.L.	end of road
Helena Street (proposed)	end of road	Reecer Creek Road
Idaho Street	Water Street	end of road
Sanders Road	Airport Road	Brick Road
Umptanum Road	Ellensburg C. L.	I-90 underpass
Water Street	Ellensburg C.L.	Ellensburg C.L.
Water Street	Ellensburg C. L.	Idaho Street

H. Urban Local Access (Class 19).

The Urban Local Access Street System (Class 19) shall be comprised of all urban area county road system mileage not classified as principal arterial, minor arterial, or Collector Street.

CHAPTER 4 – COUNTY ROAD DESIGN CRITERIA

12.04.010 Scope

The purpose of this chapter is to present Kittitas County criteria for the design of public roads and streets for acceptance onto the County Road System. It is to be used by developers and their engineers in the design of county roads for which approval by the Kittitas Department of Public Works is required.

12.04.020 General

Minimum Standards - The provisions stipulated in this section are general in nature and shall be considered as applicable to all parts of these specifications, including any supplements and revisions. All road construction within the public right-of-way shall be designed by or under the direct supervision of a registered professional engineer, licensed to practice in the State of Washington. All drawings and support data submitted to the County for approval must bear his/her seal and signature. The design criteria, as presented, are intended to aid in preparation of plans and specifications, and shall be considered as minimum standards.

As with any design criteria, occasions may arise where the minimum standards are either inappropriate or cannot be justified economically. In these cases a variance to these criteria shall be considered. Variance requests shall follow the procedures outlined in Kittitas County Road Standards.

12.04.030 Design Requirements

- A. Road Surfacing Requirements shall be in accordance with Table 4-1 through 4-4 and Washington Department of Transportation Pavement Guide, Volume 1 – Pavement Policy, as amended.
- B. Design Speed – The minimum design speed for all roads shall be 25 MPH. Design speeds shall be based upon WSDOT and AASHTO standards for Local Access, Collector and Arterial Roads.
- C. Intersections
 - 1. Location - Location of new arterial and collector streets shall generally be in accordance with the general guidelines reflected in table 4-1.
 - 2. Tangent – All new intersections will have a minimum straight tangent length prior to beginning any curves in accordance with Tables 4-1.

Residential streets should be designed to direct traffic to collector streets and adequately provide for circulation and movement within the subdivision.

3. Intersections on Arterial Streets – The design shall be in accordance with WSDOT Roadway Design Manual (latest edition), hereinafter referred to as the “Design Manual” and Table 4-5.
 4. Separation of Intersections shall be in accordance with WSDOT access spacing design criteria
- E. Vertical Alignment - Connection with existing streets shall be smooth transitions and existing grades shall be shown for at least 150 ft on all sides of the connection. The grade and ground lines of all streets that dead-end, except cul-de sacs, shall be continued for 500 ft beyond the proposed construction, unless that property is under different ownership. The grade and ground lines of all arterials shall be designed to continue 1000 ft beyond the end of proposed construction unless that property is under different ownership. Vertical alignment designs shall be in accordance with the applicable WSDOT or AASHTO design manual
- F. Sight Triangle Standards shall be in accordance applicable WSDOT or ASSHTO design manuals.
- G. Street Projections into Future Adjoining Subdivisions within same ownership.
1. The location of projected streets shall allow for the proper projection of the storm sewer and sanitary sewer system into adjacent natural drainage areas.
 2. Stub Street: Where a street is indicated to dead end into an adjacent unplatted area, the developer shall provide written approval from the adjacent landowner to discharge his storm drainage from the street onto the adjacent land if such drainage does, in fact, occur.
 3. Stub streets shall end at the property line with a cul-de-sac unless the Engineer recommends otherwise.
 4. Type III barricades shall be permanently installed at the end of all stub streets that do not end in a cul-de-sac.

12.4.40 Design Criteria within an Urban Growth Area

- A. Roads alignments proposed within an Urban Growth Area shall conform and support the road system or grid for the affected city.
- B. Roads constructed for the purpose of serving urban densities shall comply with the road standards of the affected city if there is an agreed pre-annexation agreement for city services.
- C. Roads constructed for the purpose of serving urban densities, without a pre-annexation agreement shall comply with the applicable WSDOT or AASHTO Guidelines for urban roads.
- D. Roads constructed for the purpose of initially serving rural densities shall comply with County Standards. Setbacks shall meet future urban right of way requirements.
- E. All roads within an Urban Growth Area shall be hard surfaced.
- F. Counties and cities shall create an inter-local agreement stipulating the road standards within the Urban Growth areas.

12.04.050 Soils Investigation

Shall be investigated and tested in accordance with applicable WSDOT or AASTO Design Manuals. The County Engineer may require additional soils investigation based upon specific site conditions

Table 4-1 LOCAL ACCESS RURAL DESIGN STANDARDS <400 ADT

Design Speed	Local Access				
	<40 MPH			>40 MPH - 50 MPH	
Right-of-Way	60';20' for 0-2 lots			60	
	Roadway			Roadway	
	Width	ROW Width		Width	ROW Width
0-2 Lots	12	20		12	20
3-15 Lots	24	60		26	60
16-25 Lots	24	60		26	60
26-40 Lots	24	60		26	60
> 40 Lots	26	60		26	60

Design Criteria in accordance with applicable WSDOT or AASHTO Design Manuals

**Table 4-2
Local Access Road Surfacing Requirements**

Lots Served	Easement Right-of-Way	Surface Width	Surface Material	Material Depth
3 to 15	60	24	BST/ACP	See Table 4-3 and 4-4
16-25	60	24	BST/ACP	See Table 4-3 and 4-4
26-40	60	24	BST/ACP	See Table 4-3 and 4-4
>40	60	26	BST/ACP	See Table 4-3 and 4-4

**Table 4-3
BST Surfacing and Structural Requirements**

Lots < 5 Acres	Subgrade Condition	Structural Number	Crushed Stone Depth	BST Surface Class A
3 Lots - 14 Lots	Poor	2	13.5 inches	3/4 inch nominal
	Average	1.5	9.5 inches	3/4 inch nominal
	Good	1.1	6.5 inches	3/4 inch nominal
15 Lots - 25 Lots	Poor	2.53	17.5 inches	3/4 inch nominal
	Average	1.93	13 inches	3/4 inch nominal
	Good	1.45	11 inches	3/4 inch nominal
26 Lots - 40 Lots	Poor	2.95	21 inches	3/4 inch nominal
	Average	2.25	15 inches	3/4 inch nominal
	Good	1.71	12 inches	3/4 inch nominal
> 40 Lots	Poor	3.31	24 inches	3/4 inch nominal
	Average	2.25	18 inches	3/4 inch nominal
	Good	1.93	13 inches	3/4 inch nominal

BST Class A is a Bituminous Surface Treatment Class A as defined in WSDOT specifications 5-02.1(1)

ACP should be used on grades exceeding 10%

Subgrade Conditions	Poor	Mr = 5000 psi	A4, A5, A6, A7
	Average	Mr = 10000 psi	A2
	Good	Mr = 20000 psi	A1, A3

Design Assumes the area is well drained and not susceptible to frost

Crushed Stone Depth may be reduced based upon on site soils investigation Soils investigation

**Table 4-4
ACP Surfacing and Structural Requirements**

Lots < 5 Acres	Subgrade Condition	Structural Number	ACP Surface	Crushed Stone Depth
3 Lots - 14 Lots	Poor	2.01	2.5	7
	Average	1.88	2.5	6
	Good	1.62	2.5	4
15 Lots - 25 Lots	Poor	2.53	2.5	11
	Average	2.27	2.5	9
	Good	2.27	2.5	9
26 Lots - 40 Lots	Poor	2.81	3	11.5
	Average	2.36	3	8
	Good	2.36	3	8
> 40 Lots	See Note			

Subgrade Conditions	Poor	Mr =5000 psi	AASHTO SOIL	A4, A5, A6, A7
	Average	Mr =10000 psi	AASHTO SOIL	A2
	Good	Mr= 20000 psi	AASHTO SOIL	A1, A3

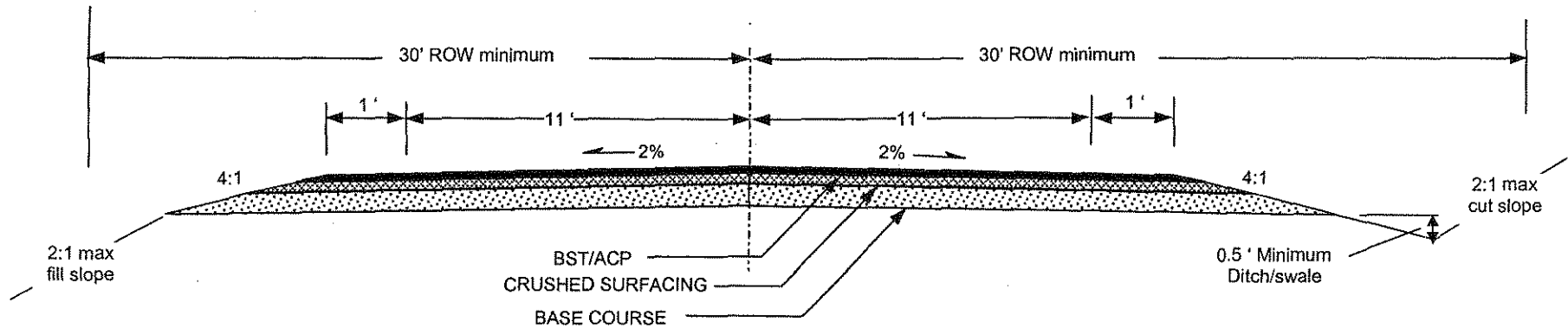
Design Assumes the area is well drained and not suseptable to frost

Crushed Stone Depth may be reduced based upon on site soils investigation Soils investigation

Design for greater than 40 lots shall be in accordance with WSDOT Pavement Guide, Volume 1, as amended.

RURAL COUNTY ROADWAY DESIGN STANDARDS

ROADWAY CLASSIFICATION: LOCAL ACCESS
AVERAGE DAILY TRAFFIC (ADT): <400



* BST Class A may be used in place of ACP
however, total surface depth may not be less
than 12 inches.

LocalAccessUnder400.doc

KITTITAS COUNTY
DEPARTMENT OF
PUBLIC WORKS

REVISIONS	DATE

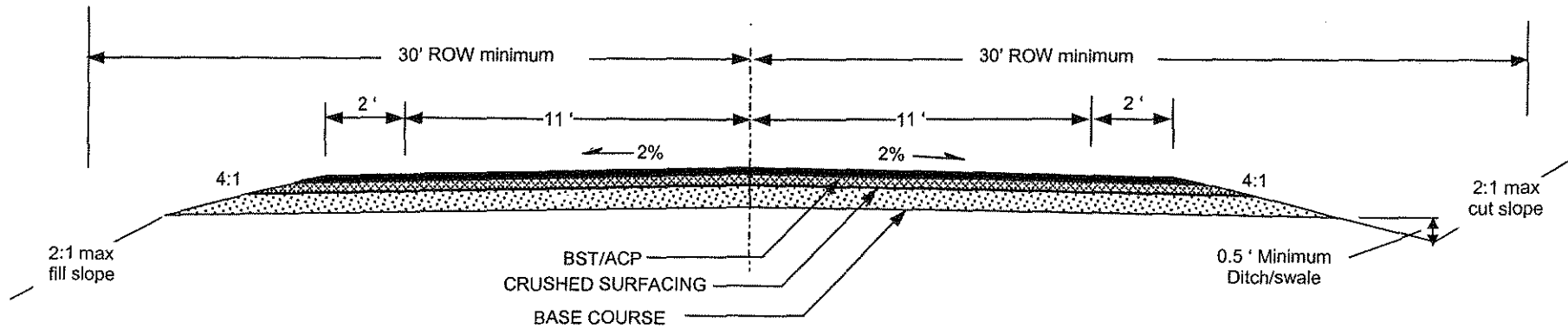
ROADWAY
STANDARDS

RURAL LOCAL ACCESS
ROADWAY SECTION
ADT < 400
FIGURE 4 - 1

12/1/03

RURAL AREA PUBLIC ROADWAY DESIGN STANDARDS

ROADWAY CLASSIFICATION: LOCAL ACCESS/COLLECTOR
AVERAGE DAILY TRAFFIC (ADT): OVER 400 BUT LESS THAN 750



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KITTITAS COUNTY
DEPARTMENT OF
PUBLIC WORKS

REVISIONS	DATE

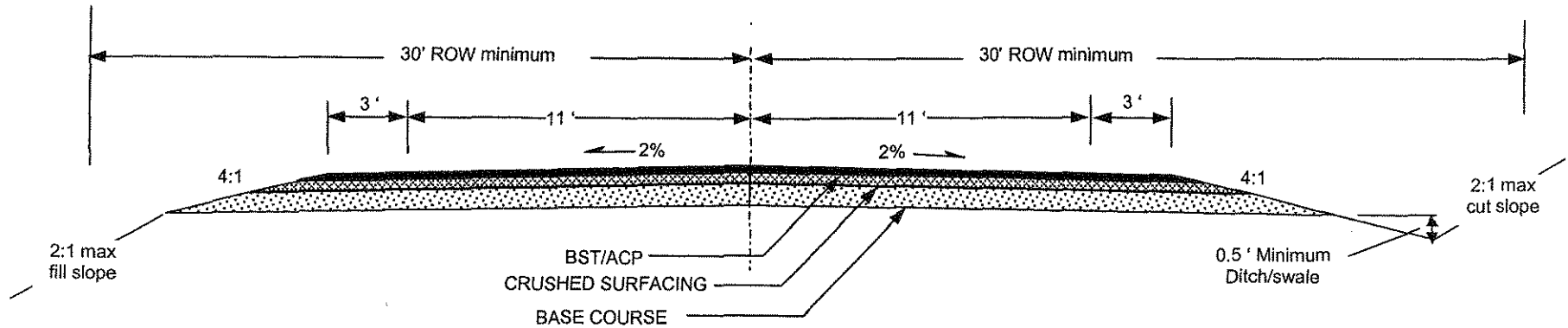
ROADWAY
STANDARDS

RURAL LOCAL ACCESS
ROADWAY SECTION
ADT > 400 < 750
FIGURE 4 - 2

12/1/03

RURAL AREA PUBLIC ROADWAY DESIGN STANDARDS

ROADWAY CLASSIFICATION: LOCAL ACCESS/COLLECTOR
AVERAGE DAILY TRAFFIC (ADT): OVER 750



LocalAccessUnder400.doc

KITTITAS COUNTY
DEPARTMENT OF
PUBLIC WORKS

REVISIONS	DATE

ROADWAY
STANDARDS

RURAL LOCAL ACCESS
ROADWAY SECTION
ADT >750
FIGURE 4 - 3

12/1/03

CHAPTER 5 DRIVEWAYS AND ACCESSES

12.05.010 Authority

Pursuant to RCW 36.75.130, Local governments are authorized to regulate vehicular access to and from any public highway under their respective jurisdiction from or to property adjoining a public highway.

12.05.020 Purpose

It is the purpose of this section to provide the procedures and standards necessary to protect the public health, safety, and welfare, to maintain smooth traffic flow, to maintain highway right-of-way drainage, and to protect the functional level of the public highways while meeting state, regional, local, and private transportation needs and interests.

12.05.030 Implementation

1. No person shall construct any access providing direct movement to or from any Kittitas County maintained highway from or to property adjoining the highway without an access permit issued by the Kittitas County Department of Public Works, hereinafter call the "Department".
2. Access permit shall be issued only in compliance with the section. In no event shall an access be allowed or permitted if it is detrimental to the public health, welfare, and safety.
3. Vehicular access to or from property adjoining a Kittitas County road shall be provided to the general street system, unless such access has been acquired by a public authority. Police, fire, ambulance, and other emergency stations shall have a right to direct access to County roads. Direct access from a subdivision to the highway shall be permitted only if the proposed access meets the purpose and requirements of this section.
4. Lots that access State Routes, Forest Service Roads, or access Railroad easements will require separate access permits from those agencies. The County can not grant access to roads or easements it does not control

12.05.040 Obtaining a Permit

1. Persons wishing to apply for direct access to a County highway should contact the Kittitas County Department of Public Works. The Department may require any of the following items, when relevant to the evaluation of an access:
 - a. Highway and driveway plan and profile

- b. Complete drainage plan of the site that impacts the road right-of-way
 - c. Map and letters detailing utility locations before and after development in and along the highway
 - d. A subdivision zoning or development plan
 - e. Property map indicating other access and abutting public roads and streets, and
 - f. Proposed access design.
 - g. See standard drawing.
2. Upon receiving the request for access, the Department shall use this section for evaluation of the request. The Department shall work cooperatively with the applicant and attempt to resolve all difficulties prior to taking final action on the request. The Department shall act upon the request within 15 days by transmittal of a completed permit or of a denied request.
3. A completed access permit shall conform to all sections of this section. Before denying an access request, the Department shall discuss the reasons for the denial with the applicant and attempt to resolve the reasons for the denial. Where the access design standards are not entirely applicable, the Department shall consider site specific and local conditions. Any appeal by the applicant because of denial of an access permit shall be according to the Kittitas County Public Works Division Appeals Procedures.
4. If the Department approves the request, a permit shall be prepared and transmitted to the applicant for signature. After receiving a signed permit and any required fee payment, the Department shall mark the permit paid, sign the permit and return a copy to the applicant. If the applicant does not agree to all the terms and conditions of the permit, the permit shall be deemed denied.

12.05.050 Construction of Access

1. The permit shall be deemed expired and null and void if the access is not under construction before the expiration of any time limits noted on the permit. When the permittee is unable to begin construction within the authorized time limits of the permit, he may request an extension from the Department. Any request for an extension must be submitted to the Department before the permit expires.
2. The expected dates of construction and use of the access shall be included on the request for an access. The permittee shall notify the Department at least 48 hours prior to any construction in highway right-of-way. The access shall be completed in an expeditious and safe manner and shall be finished within the time limits established on the permit.
3. The Department shall inspect the access during construction and upon completion of the access to ensure that all terms and conditions of the permit are met.
4. The construction of the access and its appurtenances as required by the terms and conditions of the permit shall be completed at the expense of the permittee.

5. It is the responsibility of the permittee to complete the construction of the access according to the terms and conditions of the permit. The Department may order a halt to any unauthorized construction or use.
6. Adequate construction signing, in conformance with the Manual on Uniform Traffic Control Devices for Streets and Highways, prepared by the U.S. Department of Transportation, Federal Highway Administration, is required at all times during access construction. This may include, but is not limited to, the use of signs, flashers, barricades and flaggers. The Department and its duly appointed agents and employees shall be held harmless against any action for personal injury or property damage sustained by reason of the exercise of the permit.
7. The hours of work on or immediately adjacent to the highway may be restricted due to peak hour traffic demands and other pertinent roadway operating restrictions.
8. A copy of the permit shall be available for review at the construction site. If necessary, minor changes and additions may be ordered by the Department to meet unanticipated site conditions.

12.05.060 Use of Access

1. Where, in the course of construction by any Kittitas County Department it is necessary to reconstruct, relocate, or bring into conformance with this section an existing access, that Department shall initiate the appropriate procedures and agreements.
2. It is the responsibility of the property owner to ensure that the use of the access to the property is not in violation of the section, permit terms and conditions. The terms and conditions of the permit are binding upon all assigns, successors-in-interest and heirs.
3. When there are changes in property use which result in changes in the type of access operation and the access is not in conformance with the section, the reconstruction, relocation, and conformance of the access to this section may be required.

12.05.070 Illegal Access to the County Road

The property owner shall be sent written notice of any illegal access location, or use. The Owner shall be given ten (10) days notification of pending actions, after which the Department may install barriers across or remove any access not conforming to the section.

12.05.080

A. Conditions for Approval of New Driveways:

1. Driveways directly giving access onto arterials and major collectors may be denied if alternate access is available.
2. All abandoned driveways shall be removed at the Owners cost.

3. Maintenance of driveway approaches shall be the responsibility of the owner whose property they serve. The County will not maintain accesses.
4. Maintenance of driveway culvert shall be the responsibility of the owner whose property they serve. Damaged or failing culverts must be replaced by the owner whose property they serve. If the culvert is in need of replacing the county may give the property owner 30 days notice to replace the culvert. After such time the County may replace the culvert and charge the owner the cost of the replacement. The County will not maintain accesses. The county may clear the culvert to allow water to pass.
5. For driveways crossing an open ditch to carry anticipated storm water flows, culverts shall be 15 inches in diameter or larger, with tapered ends. The culvert type, diameter and length shall be as required by the County and noted on the Access Permit. Approved materials for culverts are CMP and HDPE. Any other substitute requires the approval of the Director of Public Works.

Chapter 6 - STORM WATER MANAGEMENT STANDARDS AND GUIDELINES

12.06.010 Purpose.

Kittitas County has found that future storm water drainage problems may be reduced or avoided if future developers, both private and public, provide for storm and surface water drainage of their respective properties. Storm Water Management Standards and Guidelines are set forth to protect life and property from loss and damage by flooding, to protect streams, creeks, and lakes from pollution and excessive flows.

The following Storm Water Management Standards and Guidelines are intended to reduce and prevent adverse storm water impacts. They represent the minimum design standards for the construction of storm water facilities and stream channel improvements within Kittitas County. Compliance with these standards does not relieve the designer, owner or developer of the responsibility to apply conservative and sound professional judgment to protect the health, safety and welfare of the general public. Special site conditions and environmental constraints and considerations, and Federal and State regulations, may require a greater level of protection than would normally be required under these standards.

12.06.020 Definitions.

"Biofiltration": Vegetative devices used to reduce water velocity to filter out suspended solids and related pollutants.

"Detention Facilities": Water control structures or devices that restrict flow and provide temporary storage.

"Hydraulics": The physical science and technology of static and dynamic behavior of fluid such as water.

"Hydrology": The scientific study of the properties, distribution and affects of water with the atmosphere, earth surfaces and in soils and rocks.

"Infiltration": The passage of water through the soil surface and lower profile.

"Impervious Surfaces": Any surface which cannot be effectively penetrated by water such as asphalt, roof tops and compacted soils.

"One Hundred Year Discharge": The volume of water measured in cubic feet per second (CFS) released from a stream or structure from a 100 year storm event.

"Pollution Generating Impervious Surface (PGIS)": Development or redevelopment greater than 5,000 SF PGIS, regardless of phasing.

"Retention Facilities": Water control structures or devices that hold and store water.

"Storm water": Rain that flows off the surface of the land without entering the soil.

"Treatment Facilities" Control structures or devices that remove pollutants from stormwater.

"Twenty Four Hour Storm": A rain storm measured in terms of a 24 hour duration.

"Volume": Accumulated run off for a given storm event.

" 'X' Year Storm": A storm representing an intensity of magnitude that could recur as follows:

Storm	Average Recurrence During 100 Years
2-Year	50 times
10-Year	10 times
25-Year	4 times
50-Year	2 times
100- Year	1 time

12.06.030 When Storm Water Plan or Storm Water Review is Required.

All development proposals will be evaluated based on location, size, existing runoff conditions, topography and nearest downstream tributary. Storm water plans will be required for those development proposals which demonstrate a potential for significant storm water impacts. Specific review requirements will be addressed under Administrative Rules. Any construction practice that disturbs greater than 1 acre must apply for a DOE permit under the new NPDES rules.

12.06.040 When Plans Are Not Required.

The following development actions are exempted from a storm water review except in extreme circumstances where significant impacts are anticipated.

- A. Residential Building Permits
- B. Zoning Variances

Any appeal of the Director's determination of the applicability of drainage plan requirements shall be to the Board of Kittitas County Commissioners as provided in Section 12.01.030.

12.06.050 General Requirements.

All persons proposing land development and/or approvals as outlined in Section 12.01.030 shall provide a storm water plan for surface water flows entering, flowing within and leaving the subject property. The plan is to conform to the following standards and requirements:

- A. The Kittitas County Director of Public Works shall require plans for storm drainage and detention facilities to be prepared by a registered Civil Engineer currently licensed by the State of Washington and qualified by experience and education in the field of hydraulics, hydrology, or a closely related field. Storm water plans or revisions to any approved plan shall be reviewed and approved by the Public Works Department prior to any construction.
- B. On-site storm water improvements must be sufficient to mitigate impacts due to flooding, erosion, sedimentation or pollution.
- C. All drainage system elements must provide for adequate maintenance and accessibility at all times. Storm water facilities shall be designed to eliminate interference from underground utilities and from conditions which exceed design loads for any pipe or other structural element.
- D. The designer of any storm water element shall consider system reliability in terms of layout, specifications of materials and methods of installation.
- E. The impact of a system failure should be analyzed both in terms of on-site and off-site effects. The impacts may be to adjacent properties or to elements of the public drainage system or other private systems.
- F. No drainage originating inside of a building or structure shall be connected to the storm water or surface water systems.
- G. Developer shall meet all other applicable laws for water quality prior to discharge to any wetland, stream, or lake.
- H. Developers are encouraged to be innovative and give high priority to fish, wildlife, plant materials and related total resource management systems.

12.06.060 Basic Requirements.

- A. Discharge at Natural Location: All surface and storm water runoff from a proposed development that would construct new or modify existing drainage facilities should be discharged at the natural location and not be diverted onto or away from the adjacent downstream property. Diversions may be allowed if it corrects an existing problem and meets Federal and State regulations.
- B. Tributary Area Analysis: Proposed developments shall identify the upstream tributary drainage area and provide an analysis of the pre-existing drainage, discharge, volume and quality and an analysis of the impact of the proposal on the drainage system.

- C. Proposed projects must control the peak rate runoff to not exceed the pre-development peak rates for the site (existing condition). The methods of peak rate runoff control may include detention, retention and/or infiltration. On site bio-filtration or treatment facilities in combination with infiltration systems is the preferred method for management of on-site storm water and shall be considered before transporting storm water off-site.
- D. For all proposed developments requiring a drainage conveyance system, the conveyance system must be analyzed, designed and constructed to handle existing off-site tributary flows and on-site storm water flows caused by development of the project.
- E. Developments involving clearing and grading and that propose new or modification of existing drainage facilities should include an erosion/sedimentation control plan providing measures to prevent sediment-laden runoff and pollutants from leaving the site during construction. Erosion/sedimentation control may be achieved by structural control measures (sediment trap or pond, or oil/water separators), covers (mulch, sodding, plastic covering) and/or construction practices (filter fabric, quarry rock driveway pads).
- F. Maintenance and operation of all private storm water facilities is the responsibility of the property owner or a properly formed homeowners association and shall be done in compliance with Kittitas County maintenance standards.
- G. For the construction or modification of any storm water facility other than roadside ditches, the applicant shall be required to have a construction bond. The construction bond shall be posted prior to beginning construction. The bond shall be in an amount sufficient to cover the cost of work on or off the site.

12.06.070 Drafting Standards and Contents.

The storm water plan shall be prepared in conformance with Section. 12.10.080.

12.06.080 Design Criteria.

A. Runoff Control

- 1. Developments shall be designed and constructed to provide control of the quality, discharge, and volume of storm water runoff both during and after construction. Erosion and sedimentation control plans shall be submitted and approved by the Public Works Department prior to the beginning of any construction. Peak discharge control and detention facilities shall be provided in accordance with the Development Standards. Biofiltration, oil/grease separation devices or other pollution control mechanisms are to be installed prior to occupancy and relapse of any performance securities held by the County.

2. The on-site drainage system including conveyance, flow restriction, detention, pollution control, and emergency overflow elements must be properly designed and sized to handle runoff from the site and conveyance through the site. The design should be carefully analyzed for potential problems, flow impediments, construction or maintenance difficulties, and potential erosion or other property damage.

3. Allowable Release Rates

- a. The peak discharge rate from the road right-of-way or from the total subdivided property shall not exceed 0.2 cfs per acre for site of 5.00 acres or less.
- b. For sites with tributary basins greater than 5 acres or sites less than 5 acres in area which are deemed to have significant impacts due to runoff quantity shall be limited to the pre-development peak runoff for a "two-year" storm. Peak runoff rate shall be computed using the Soil Conservation Service TR-55 method, modified Santa Barbara Urban Hydrograph Method or other approved models.
- c. Storm water detention facilities shall be provided to store all surface water runoff in excess of the allowable peak discharge in accord with provisions for "detention facilities" of these standards up to the "100-year" discharge or meet the design criteria in Item 7 under Detention Facilities.

4. Oil Separation Devices:

Whenever paved parking or access roadway drains to an open waterway or stream, an oil/grease separation device shall be installed by the Developer. The device shall be constructed and installed consistent with current state of the art requirements. It shall be located at a point where it can be easily maintained and where it will intercept floating contaminants flowing off road surfaces, parking lots, and other sources of pollutants. Selection and sizing of oil separation device type shall be subject to approval of the Director of Public Works. The applicant should consider the use of vegetative or other natural filtration means. Effluent discharges from any oil removal treatment device to the storm sewer or surface water system shall be in compliance with State Department of Ecology regulations for discharge to storm drains or surface waters.

- a. Oil separators discharging to a storm water system or directly to a waterway require approval from the Department of Ecology.
- b. All storm water must enter the separator through an inlet pipe, unless the separator is an integral part of an approved catch basin.

- c. The property owner assumes full responsibility and liability for proper maintenance and operation of the oil separator, unless the separator is a part of a publicly-operated drainage system.
 - d. Access to the separator shall be maintained for inspection at all times.
 - e. Oil accumulation in the oil separator compartment shall not exceed three inches at any time.
 - f. Following oil removal the separator shall be backfilled with clean water to prevent oil carry-over to clear well.
 - g. Waste oil accumulations removed from the separator shall be disposed of in an acceptable manner and shall not be disposed or discharged to the ground water, storm drains, or streams.
 - h. Design of an oil separator facility shall be based upon flows from an approved detention system over the area contributory to the oil separator and provision of one hour retention time in the oil separator at that flow. In addition the oil separator must be designed with a depth to width ratio of between 0.3 and 0.5.
5. Erosion and Siltation Control:

In addition to catch basins, measures such as suggested in Section 6-E of these standards should be provided as necessary during and after construction to prevent erosion and to prevent silt from being carried off-site and/or into receiving bodies of water.

B. Detention Facilities

- 1. All storm water runoff originally from and/or drainage to any proposed development shall be controlled and/or conveyed in accordance with all County standards and policies and as described in these standards. When existing conditions make storm water detention impossible for a portion of a site, in lieu of providing detention for such an area, at the discretion of the Director of Public Works, compensatory storage volume and reduction of allowable release rates may be provided on another portion of the site. In no case shall the runoff from the total site exceed the allowable release rate.
- 2. When a direct discharge of "100 year" or greater capacity in conjunction with pollution control to a major receiving body such as Yakima, Teanaway and Columbia Rivers and Keechelus, Kachess and Cle Elum Lakes is provided said control or conveyance of storm water runoffs shall be shown on a drainage plan which shall be prepared by the developer's licensed engineer and shall be submitted for review and approval by the Washington State Department of Ecology.

3. The storm water detention requirement may be waived at the discretion of the Public Works Director if the volume of storage calculated for that development is less than 250 cubic-feet and if the site has no environmental, hydraulic, or hydrologic constraints which must be mitigated by providing storage.
4. Prior occupancy of any single phase of a phased development, storm drainage facilities should be completed and operational to provide runoff control, detention, and water quality treatment for the phase for which occupancy is requested.
5. Storm water detention systems shall be designed to maximize reliability, ease of maintenance, and water quality of runoff and shall minimize hazards to persons or property (both on-site and off-site), nuisance values, and risk of failure.
6. Sufficient detention storage capacity shall be provided to store the excess runoff from the developed site during a storm event having a probability of occurrence commonly known as the "100-year storm". A non-erosive overflow path shall be provided from each detention facility to protect adjacent property from damage.
7. Detention basin performance shall be such that discharge from the development area meets the following criteria:
 - a. 50% of the predevelopment two-year peak release rate for the two-year developed design storm.
 - b. The pre-developed 25-year peak release rate for the 25-year development design storm.
8. Sizing: In calculating the storage volume provided, "dead storage" in wet ponds shall be excluded, i.e., that volume of water which must be assumed to be present in the detention system at the commencement of the design storm. Any volume at a level below that of the outfall invert must be presumed to be dead storage, e.g. catchments.
9. Permanent pond surface area should equal 2% of the catchment area for residential and 3% of the catchment for commercial. Volume should be equal to the volume generated from two-thirds of the 2-year, 24-hour storm.
10. Controlled Overflow Requirements: All detention storage facilities should include a provision for control of overflows, and suitable data shall be provided to support the design. Under no circumstances should the overflow be overland to public right-of-way or over private property not included as part of the development without a recorded easement.

11. Site, Soil and Infiltration Data Requirements for Calculating Effective Infiltration Rates to Reduce Storage Requirements.

a. General Data Requirements:

- i. The proposed site should have favorable topography to preclude high runoff rates. Engineering calculations shall be included with any submittal to show that there will be no adverse impacts due to the reduced storage. Such adverse impacts may include but not be limited to, increased frequency of overflows.
- ii. A log of the soils and infiltration test data should be submitted to reveal site soil conditions and infiltration rates.
- iii. An adequate number of test holes should be located over the proposed site to substantiate representative conditions for the final layout of the development, and as a minimum condition, test holes shall be located in each area and at the elevation proposed for infiltration.
- iv. Groundwater depth, location, flow and general characteristics shall be considered.
- v. Impervious strata shall be at a depth greater than ~~two~~-three feet below the bottom of the proposed infiltration area.

b. Soil Data Requirement: A soil log may be required to describe soil type and depth along with a site map showing the location of each test hole. Classification may be in general terms such as loose sand, sandy silt, clay hardpan, rock, etc. or classification may be in specific terms as described by the U.S. Department of Agricultural. The soil log should include the depth to ground water table.

12.06.090 Review and Approval of Plan.

- A. The storm water plan and supporting calculations will be reviewed by the Public Works Department using the Department's construction plan review procedures in coordination with all other County land development and/or permit review procedures. The County's review and approval of the storm water plan shall not relieve the applicant, owner and/or designer of liability for errors or omissions in the design of storm drainage facilities.
- B. All storm water plans prepared in connection with any of the permits and/or approvals listed in Section 12.01.030 shall be submitted for review and approval to the Public Works Department.

- C. Any applicant or property owner proposing an action that may require a storm drainage plan may request a preliminary review of the proposal by the Director and a determination of the need for a drainage plan pursuant to Section 12.01.030.

12.06.100 Bonds and Liability Insurance.

- A. The construction of storm drainage facilities requires Financial Guarantees in accordance with Section 12.01.150

12.06.110 Standard Storm Water System Maintenance.

Maintenance of storm water facilities on private property shall be the responsibility of the owner(s), unless otherwise provided for under Section 12.06.120. This responsibility and the provision for maintenance shall be clearly stated on subdivision and short plat plans, property conveyance documents, and/or drainage improvement plans. In the event the owner(s) does not provide property maintenance and the Director of Public Works determines the storm water facility represents a public safety threat the Director will give 30-day notice to the owner(s) to correct the deficiencies. If the deficiencies are not corrected within 30-days the County may enter upon the property to perform the necessary maintenance at the owner(s) expense. This provision for access will be included as a provision of plat or plan approval.

12.06.120 County Assumption of Maintenance.

Upon petition of the Owner(s), Kittitas County with approval of the Kittitas County Board of Commissioners, may assume the maintenance of retention/detention facilities if all of the following conditions are met:

- A. All of the requirements of Section 12.08.;
- B. The facilities have been inspected and approved by the Public Works Director;
- C. All necessary easements entitling the County to properly maintain the facility have been conveyed to the County; and
- D. It is recommended by the Public Works Director that the assumption of maintenance would be in the best interests of the County.

12.06.130 Appeal Procedure.

In the event of a determination by the Director that storm water plans are required, the applicant shall have the right to have the determination reviewed by the Kittitas County Board of Commissioners or the owner may make corrective provisions to the project as necessary. Denial by the Board shall leave the owner with the choice of correcting the project as suggested by the County or appeal through the judicial process.

12.06.140 Variances.

Variances from these Storm water Standards and Guidelines may be requested by the applicant in accordance with Section 12.01.130.

12.06.150 Retroactivity Relating to County Maintenance of Subdivision Facilities.

Any owner who has constructed retention/detention facilities prior to the adoption of these storm water standards and guidelines may petition for the County to assume maintenance of the constructed facilities. If it is determined to be in the overall interest of the general public, the County, upon approval by the Kittitas County Board of Commissioners may assume the maintenance of the constructed facilities provided all of the following conditions are met:

- A. The owner shall demonstrate, to the Public Works Director's satisfaction, that approved plans and constructed facilities substantially comply with these storm water standards and guidelines,
- B. The owner shall provide as-built plans, prepared to County standards, for all constructed facilities, and
- C. The Director shall inspect the storm water facilities and approve and acknowledge that all conditions for accepting maintenance responsibility have been met.

CHAPTER 7 – BRIDGES AND MAJOR DRAINAGE STRUCTURES

12.07.010 Design Standards

- A. All culvert pipe, box culverts, and bridges, for which approval by the Kittitas County Public Works Department is required or which may ultimately be maintained by Kittitas County shall conform to:
- AASHTO Standard Specifications for Highway Bridges, latest edition and applicable interim versions.
 - AASHTO Design Guidelines for Low Volume Roads, latest edition and applicable interim versions.
 - WSDOT, Standard Specifications for Road and Bridge Construction, latest edition.
 - WSDOT, Bridge Design Manual, latest edition.
 - WSDOT, Bridge Detailing Manual, latest edition.
 - WSDOT, Design Manual, latest edition.
- B. Bridge clear width shall accommodate the full width of the traveled lanes and shoulders of approach roads. Bikeway and pedestrian walkways shall be provided where justified.
- C. All roadway structures must be designed in accordance with applicable WSDOT Design Manuals or AASHTO Design guidelines. All new bridges shall meet a minimum design load structural capacity of HS20-44.
- D. All box culverts and bridges shall have the year of construction permanently indentured on the downstream headwall face in legible numbers. The numbers shall be 3" high by 1-1/2" wide by approximately 3/8" deep in the headwall face.
- E. All box culvert and bridge designs shall be done by a registered professional engineer in the State of Washington.
- F. Foundation designs shall be based upon the recommendations of a qualified geo-technical engineer. These recommendations shall be documented in the geo-technical report.

Culvert and bridge waterway opening designs shall conform to the parameters of the applicable WSDOT Design Manual or AASHTO Design Guidelines

H. Bridges that function as a drive way must meet the uniform fire code of a 20 foot minimum width and support a 60,000 pound load.

7.1. 12.070.030 STRUCTURE INSPECTIONS

- A. It is the developer's responsibility to perform all materials testing required.
- B. The owner's structural engineer or his representative, familiar with assumptions inherent in the structure design, shall review the construction in sufficient detail to confirm that the construction is as specified.
- C. Inspection of construction shall be provided, as frequently as necessary to assure that the construction conforms to the plans and specifications. Inspection shall be by qualified technical personnel experienced in the inspection of similar structures. A written log or report of all work shall be furnished to the Engineer at completion of the structure.
- D. Testing of materials shall conform to the requirements of WSDOT Standard Specifications for Road and Bridge Construction, and WSDOT Field Materials Manual latest editions, and applicable interims.
- E. Land use applications that will increase the use of existing bridges shall provide all inspection and testing material to the Department of Public Works.
- F. Inspection of existing bridges shall be conducted by a licensed professional engineer familiar with bridge design, construction and load ratings. The engineer shall submit a report indicating the existing bridge meets the requirements set forth in these standards in regards to load, function, superstructure and abutments. Inspections conducted within 5 years do not need to be re-inspected unless there is obvious damage or deterioration to the sub-structure, superstructure or the approach.

CHAPTER 8 - SUBMITTAL REQUIREMENTS FOR CONSTRUCTION PLANS

12.08.010 General

The following documentation is required in conjunction with the submittal of construction plans for any public roadway or storm drainage improvement for which approval by the Kittitas County Engineering Department is required.

12.08.020 Certification

- A. All construction plans and drainage reports, soils reports and pavement designs shall be prepared by, or under the direction of, a professional engineer, registered in the State of Washington, and shall be reviewed for the minimum requirements set forth herein. The engineer should be aware that whenever unusual or serious problems are anticipated in conjunction with a proposed construction project, additional information and analysis beyond the minimum requirements of these specifications and criteria would be required.
- B. Construction plans submitted for review and comment shall be prepared by a professional engineer, registered in the State of Washington. The plans must include the following statement on the cover sheet:

These construction plans for (name of subdivision, development, or project) were prepared by me (or under my direct supervision) in accordance with the requirements of the Kittitas County Road Standards.

*Name of Engineer
Name of Firm
Date*

The statement shall be signed and stamped by the Registered Professional Engineer who prepared or directed preparation of the construction plans.

- C. Unless otherwise identified or noted, all construction plan submittals are assumed to comply with the provisions of this manual, Failure to follow prescribed procedures may result in return of submittals, additional review fees, or both.
- D. Kittitas County shall not be responsible for the accuracy and adequacy of the design or dimensions and elevations on the plans. Kittitas County, through the acceptance of the construction plan or drainage report, assumes no responsibility for the completeness and/or accuracy of the construction plan or drainage report. The cover sheet shall bear the following statement:

The engineer who has prepared these plans, by execution and/or seal hereof does hereby affirm responsibility to the County, as a beneficiary of said engineer's work, for any errors and omissions contained in these plans, and approval of these plans by the County Engineering Department shall not relieve the engineer who has prepared these plans of any such responsibility.

12.08.030 Submittal Procedure

Plans for proposed road and drainage construction shall be submitted to the Department of Public Works as follows:

- A. The first submittal shall consist of two complete sets of prints together with drainage calculations and other necessary supporting information, and shall be signed and stamped by the applicant's engineer. The applicant's engineer must be a registered Civil Engineer in the State of Washington. Review fees, when adopted and applicable, shall be paid by the applicant before review of the plans by the County commences.
- B. If corrections are required, the County will return a redlined print showing necessary corrections within 30 days of submittal.
- C. Subsequent submittals shall also contain two complete sets of plans and other supporting information, if corrected. When all corrections have been made to the County Engineer's satisfaction, the original Mylar set of plans will be signed and returned to the applicant's engineer.
- D. The applicant's engineer shall provide the County with a good quality reproducible Mylar and two complete sets of prints of the approved plans and one complete set of other supporting documentation. The applicant's engineer shall also provide a quantity take-off and engineer's cost estimate of proposed construction when the project is to be secured by some form of performance guarantee.
- E. Plans will be reviewed by the County according to the date they were submitted. Previously reviewed or approved plans submitted to the County for a revision will be considered a new submittal. Approved plans under construction will be considered a resubmittal and will be reviewed prior to new submittals.

12.08.040 Vicinity Map

- A. Minimum scale is 1"=1000' showing the location and name of all arterial roadways within one mile of the proposed construction, and all other roadways in the vicinity of the proposed construction. Shading shall indicate the project area. This map is required on the cover sheet or first sheet of all submittals, if no cover sheet has been used. The vicinity map shall show all arterial roadways and major drainage ways. Section, Township, and Range shall also be shown.
- B. Minimum size of vicinity map shall be 10" x 10".

12.08.050 Key Map

- A. Minimum scale is 1"=500' showing the location and name of all roadways within and adjacent to the proposed construction and all future roadways. Scale should be indicated. The key map should be oriented consistent with detail in the sheet, i.e. same north.

- B. The key map is to appear on every sheet showing proposed roadway, storm drainage or grading improvements. The roadway or area that the design pertains to will be shaded.

12.08.060 Title Block

A title block is required on every sheet and cover sheet submitted for review and acceptance. The subdivision name and filing number; Planned Development name (if applicable); the type of improvement; name, address, including zip code, and telephone number and name of the consulting engineer; name, address, including zip code, telephone number and name of the contact person at the developer; and sheet number (consecutive, beginning with the cover sheet) shall be included in the title block.

The title block shall be located in the extreme lower right hand corner, the right side margin, or along the bottom edge of the sheet.

12.08.070 Acceptance Block

- A. All roadway construction plans, storm sewer or other drainage improvement construction plans, and privately or publicly maintained storm water detention or retention facility construction plans must show the acceptance signature of the designated representative of the Kittitas County Engineering Department.
1. Plans for traffic control during construction must be accepted prior to issuing construction permits.
 2. Signing/Striping plans require acceptance prior to issuing construction permits.
 3. The acceptance block shall be located in the lower right hand quadrant of the cover sheet.
 4. Acceptance block shall be as follows:

"These plans have been reviewed by Kittitas County Department of Public Works and have been accepted for complying with the requirements of Kittitas County Road Standards."

Director of Public Works

Date

12.080.080 General Standards for Subdivision Final Construction plans

The following general standards shall be met for final construction plans.

- A. All road and storm sewer construction must conform to the Kittitas County road and storm water standards current at the time of construction. Any construction occurring four years or more after the execution of the subdivision improvements agreement shall require reexamination of the plans by the Engineer who may require that they be made to conform to standards and specifications current at that time.
- B. The developer's contractor shall give the Kittitas County Engineering Department staff at least twenty-four hours advance notice before beginning road construction. Road paving or aggregate base course placement shall not start until the subgrade is proof roll inspected and compaction test results for the subgrade and any utility trenches are submitted and approved by the Engineer.
- C. The contractor shall obtain separate access or utility permits from the DPW before undertaking any construction work in the existing County right-of-way.
- D. All traffic control devices must conform to the Manual on Uniform Traffic Control Devices.
- E. Prior to release of collateral by Kittitas County the developer must present a statement from an engineer registered as a professional engineer in the State of Washington that the project has been completed in substantial compliance with approved plans and specifications and documenting that the engineer has made regular on-site inspections during the course of construction, and the field plans utilized were the same as those approved by Kittitas County. The engineer shall also state that quality control testing has been undertaken for the project, which testing demonstrates compliance with the plans and specifications approved by Kittitas County. The developer must also submit the following items prior to release of collateral:
1. "As-built" plans for the improvements must be submitted at the time the letter requesting collateral release is submitted. The "as-built" plans must be clearly labeled as such, and must be signed and dated by a registered professional engineer. They must show any deviations from the approved plans. Release of collateral will not occur if the Engineer determines deviations are present which have not received prior approval.
 2. A letter or letters of acceptance and responsibility for maintenance of the improvements by the appropriate utility company, special district, or town for all utilities and roads.
 3. A letter from the appropriate fire authority stating that fire hydrants are in place in accord with the approved plans. The letter shall also state that the fire hydrants are operational and provide the results of fire flow tests.
 4. For roads under consideration for adoption to the county road system: Quality control test results must be submitted for all phases of the project in accordance with Washington Department of Transportation's schedule for minimum materials sampling, testing, and inspection as found in the WSDOT Materials Manual. The Department of Public Works shall review and approve a proposed schedule of testing before commencement of construction.
- F. PHASED CONSTRUCTION

1. Engineer drawn plans must be submitted and approved by the county for the entire development.
2. The construction may be phased. Final approval of a phase will be granted once the road is constructed and inspected or the construction is bonded.
3. Phased construction must result in a safe and usable facility at the end of the current phase. Temporary road construction or safety features may be required until the next phase is completed.

12.08.100 Scale

Scales listed are minimum. More detailed scales may be required where necessary to clearly show details.

- A. Plan and profile plans: Horizontal 1"=50', Vertical 1"=5'.
- B. Master, preliminary, and final drainage plans; site plans, etc.: from 1"=50' to 1"=100'.

12.08.110 Date of Plans

The original date of the plans and any subsequent revisions must be shown in the title block.

12.08.120 Seal and Signature

The seal and signature of the owner's engineer, under whose supervision the plans were prepared, shall be located next to the Acceptance Block on each sheet.

12.08.130 Underground Utilities

The type, size, location and number of all underground utilities shall be shown. Field verified elevations and locations may be required on the construction plans for all underground utilities that will potentially affect the design or construction. It will be the responsibility of the contractor to verify the existence and location of all underground utilities along their route of work prior to commencing any new construction.

12.08.130 Private Improvements

- A. Private improvements such as roadways, driveways, utilities, etc. shall be clearly shown and labeled as such on each sheet of the construction plans. The note below shall appear on the cover sheet of the construction plans for private improvements:

Kittitas County shall not be responsible for the maintenance of roadway and appurtenant improvements, including storm drainage structures and pipes, for the following private roads: (list).

- B. When a request is made for the County to assume maintenance of any private improvement, it shall be the responsibility of the person(s) making the request to satisfactorily demonstrate that the private improvement is in fact constructed in accordance with the Kittitas County Roadway Standards.

- C. The County will review these requests under normal review procedures as outlined previously in these Roadway Standards.
- D. Generally, Kittitas County will not accept maintenance responsibilities for private or public road improvements associated with land development activities. In no case shall private improvements not constructed in accordance with the applicable design and construction standards and specifications be accepted for maintenance by Kittitas County.

12.08.140 Requirements for Road Plan and Profile Drawings

In addition to the requirements set forth elsewhere in these Road Standards, the following information shall be shown on all roadway plans submitted for review and approval.

- A. Plan View - The plan view shall include, but not be limited to, the following:
 - 1. Existing and proposed Property and/or R.O.W. lines, easements and/or tracts and/or irrigation ditch(s). Type and dimension of easement or tract is to be clearly labeled. Property lines and R.O.W. lines are to be dimensioned.
 - 2. Survey lines and stations shall normally be based on centerline of street; other profiles may be included but shall be referenced to centerline stationing. Stationing is to be equated to flowline stationing at cul-de-sacs.
 - 3. Roadways and roadway names.
 - 4. Existing utilities and structures, including, but not limited to:

Storm sewer & appurtenances, fence lines & gates, water lines & appurtenances, irrigation, ditches or swales, electric lines & appurtenances, curbs and gutters, sewer lines & appurtenances, pavement limits, telephone lines & appurtenances, bridges or culverts, CATV lines & appurtenances, guardrails, signs, gas lines & appurtenances, etc.
 - 5. Station and critical elevation (flowline, invert of pipe, etc.) of all existing and proposed utility or drainage structures. Location of utilities shall be dimensioned horizontally and vertically from roadway centerline profile grade.
 - 6. Storm drainage flow direction arrows, particularly at intersections and all high and low points.
 - 7. Match lines and consecutive sheet numbers, beginning with cover sheet.
 - 7. Station and elevation of all horizontal curves including PI, PC's, PT's, etc.; high or low point and PI of all vertical curves; existing and proposed, centerline bearings, distances, and complete curve data.

8. Curb return radii, existing and proposed. Stations and elevations of all curb returns; mid point elevations, flowline-flowline intersection elevations, and percent of grade from the P.C.R. to flowline-flowline intersections of all crosspans.
9. Mid-block handicap ramp locations at tee intersections.
10. Centerline stations of all non-single family residential driveways and all intersecting roadways.
11. Survey tie lines to section corners or quarter corners, consistent with that shown on the plat.
12. Typical roadway cross section for all roadways, existing or proposed, within and adjacent to the proposed development. These cross sections shall appear on the detail sheet, or if no detail sheet has been used, the first sheet of the submittal showing roadway design. They shall indicate type of roadway(s), profile grade design point (centerline, flow-line, top of curb, lip of gutter, etc.), roadway width, right-of-way, type of curb, gutter and walk, pavement cross slope, pavement thickness, and structural material components of the pavement, base and subbase, together with specifications for treatment of subgrade and installation of pavement structural members.
13. Construction plans for arterial improvements. Any roadway intersecting an arterial, or any collector intersection requiring signalized traffic control shall include construction and lane details for the new construction and existing facilities a minimum of 150 ft beyond the limits of construction.
14. Basis of plan view and profile elevations shall be the same, i.e. flowline and flowline, top of curb and top of curb, etc.

B. Profile

The profile shall include, but not be limited to, the following:

1. Original ground (dashed) and design grade (heavy, solid). Both grades are to be plainly labeled.
2. All design elevations shall be centerline, top of curb, lip of gutter, or flowline (preferred) for 6 in. vertical curb and gutter; or back of walk, or lip of gutter, or flowline (preferred) for combination curb, gutter and walk. The basis of record drawing information shall be the same as the design (both flowline or both top of curb, etc.).
3. Stationing continuous for the entire portion of the roadway shown in the plan view, with the centerline station of all non-single family driveways and all intersecting roadways clearly labeled.
4. All existing curbs, gutters, sidewalks and pavement adjacent to the proposed design. Basis for existing grades shall be as-built elevations at intervals not to exceed twenty-five (25) feet. Previously approved designs are not an acceptable means of establishing existing grades.

5. Existing and new utilities. Elevation and location of all utilities in the immediate vicinity of the construction shall be shown on the plans.
5. Station and elevation of all vertical grade breaks, existing (as-built) and proposed.
6. Distance and grade between VPI's.
7. Vertical curves, when necessary, with VPI, VPC, and VPT, high or low point (if applicable) stations and elevations. All vertical curves shall be labeled with length of curve (L) and $K=L/A$ where A is the algebraic difference in slopes, in percent.
8. Profiles for all curb returns (except medians).

C. Notes

In addition to other notes required in these Standards, the following notes shall appear on the cover sheet of all submittals containing roadway plans. If a cover sheet has not been used, they shall be put on the sheet of the plans containing roadway design criteria.

1. Inspection: Construction shall not begin until permits have been issued. If a Kittitas County Engineering Inspector is not available after proper notice of construction activity has been provided, the permittee may commence work in the Inspector's absence. However, Kittitas County reserves the right not to accept the improvement if subsequent testing reveals an improper installation.
2. Paving shall not start until the mix design is accepted by the Engineer.
3. All stationing is based on centerline of roadways unless otherwise noted.
4. All elevations are on USGS DATUM with date. Point monument shall be shown on construction location plans.
5. Except where otherwise provided for in these plans and specifications, the Washington Department of Transportation' Standard Specifications for Road and Bridge Construction, and the Washington Department of Transportation 'M & S Standards, latest edition, shall supply.
- 6.

12.08.150 Signing and Striping Plans

1. Because the County may maintain the traffic control devices on public rights-of-way, all traffic control devices shall be fabricated and installed in accordance with MUTCD.
2. Permanent signage and striping shall be complete and in place before any new roadway is opened to the public. Traffic signal installation and equipment shall conform to the Washington Department of Transportation Standards and Specifications. The Manual on Uniform Traffic Control Devices Signal Warrants shall be met for signal

installation. All subdivisions, road improvement projects, and/or commercial development must incorporate a separate signage and striping plan in accordance with the following criteria:

- a. Submittal - Separate signage and striping plans are to consist of an overall area map noting all specific use areas, such as schools, parks, recreation centers, library, commercial, industrial, etc. The pages following the area map are to be broken down into road segments, for notation of signage and striping details.
- b. Review Process - There are two steps the plans must undergo for review.
 1. The first step of review is a redline markup. Requirements will be marked where necessary and the plans returned to the owner's engineer.
 2. Second, the revised plans and the marked preliminary plans must be resubmitted for final review with a signature box included for the County Engineer. If the final submittal is acceptable, the Engineer will notify the owner's engineer to send the Mylar cover sheet of the plans for sign off.
 3. Final plans shall, in all cases, be included along with the road construction plans, utility construction plans, and a grading and drainage plan, and the plat or plot plan.
- c. General Provisions - Traffic control devices shall conform to the Federal Manual on Uniform Traffic Control Devices (MUTCD)
- d. Sign Warrants - Traffic control devices which are not warranted by MUTCD shall not be installed. When MUTCD guidelines are not applicable for a given case, a traffic engineering study by the owner's engineer will be required. This study will address the existing conditions, safety issues, and the applicable warrants.

12.03.160 Range Points/Property Monuments/Benchmarks

- A. All monuments delineating Right of Way boundaries of property or witness thereof shall be set in accordance with this section and all applicable State of Washington laws and regulations.
- B. Any "aliquot corner" (section corner, quarter corner, etc.), as described in the Public Land Survey System, shall be monumented per Washington State Statutes. If such a corner falls within concrete or asphalt, a range box (Kittitas County standards) shall be installed to protect and provide access to said corner.
- C. If so desired, the Developer may install range boxes in asphalt or concrete for property monuments, range points, benchmarks, etc., if the boxes comply with Kittitas County standards.

CHAPTER 9 – PUBLIC ROAD CONSTRUCTION CONTROL AND INSPECTION

12.09.010 Basis for Control of the Work.

- A. Work performed in the construction or improvement of County roads, future County Roads, whether by or for a private developer, by County forces, by County Contractor or by private contractor, shall be done in accordance with Standards and approved plans (Section 12.08). **IT IS EMPHASIZED THAT NO WORK MAY BE STARTED UNTIL SUCH PLANS ARE APPROVED.** Any revision to such plans shall be approved by the Director before being implemented.
- B. The Director will have authority to enforce the Standards as well as other referenced or pertinent specifications. He will appoint project engineers, assistants and inspectors as necessary to inspect work and they will exercise authority as the Director may delegate.
- C. Provisions of Section 1-05 of the WSDOT Standard Specifications shall apply, with the term "Engineer" therein construed to be the Director of Public Works as defined in Section 12.02 of these Standards.

12.09.020 Subdivision, Commercial and Right-of-Way Development Inspection.

On all road and drainage facility construction open to the public or maintained by the public, proposed or in progress for adoption onto the county road system, which relates to subdivision, commercial and right-of-way development, control and inspection will be done by the Department of Public Works. Unless otherwise instructed by the Director, construction events which require monitoring or inspection are identified as follows, with prior notification to the Department of Public Works office (**Telephone 962-7523**)

- A. Preconstruction Conference: Three working days prior notice. Conference must precede the beginning of construction and include contractor, designing engineer, utilities and other parties affected. Plan approvals and permits must be in hand prior to the conference.
- B. Clearing and Temporary Erosion/Sedimentation Control: One working day notice prior to initial site work involving drainage and installation of temporary water retention/detention and siltation control. Such work to be in accordance with the approved plans.
- C. Utility and Storm-Drainage Installation: One working day notice prior to trenching and placing of storm sewers.
- D. Utility and Storm-Drainage Backfill and Compaction: One working day notice before backfill and compaction of storm sewers
- E. Subgrade Completion: One working day notice at stage that underground utilities and roadway grading are complete, to include placement of gravel

base if required. Inspection to include compaction tests and certifications described in Section 12.08.

- F. Curb and Sidewalk Forming: One working day notice to verify proper forming and preparation prior to pouring concrete.
- G. Curb and Sidewalk Placement: One working day notice to check placement of concrete.
- H. Crushed Surfacing Placement: One working day notice to check placement and compaction of crushed surfacing base course and top course.
- I. Paving: Three working days notice in advance of paving with asphalt or Portland cement concrete.
- J. Structural: Three working days notice prior to each of critical stages such as placing foundation piling or footings, placement and assembly of major components, and completion of structure and approaches. Tests and certification requirements will be as directed by the Director.
- K. Final Inspection: Five working days prior to overall check of roadway or drainage project site, to include completion of paving and associated appurtenances and improvements, cleaning of drainage system and all necessary clean-up. Prior to approval of construction work, acceptance for maintenance and release of construction performance bonds, the developer/contractor shall pay any required fees, submit any required maintenance and defect financial guarantees, provide certification of monumentation and submit one photo mylar or ink-on-mylar set or sets of blue line final, corrected plans (as-built) reflecting all minor and design plan changes of the roadway and drainage systems. The Department of Public Works shall specify the number of blue line sets as warranted by the type of improvement. Mylars and blue line drawings shall not have any shading or adhesive addition in any areas. If original plans were completed on a CADD system, the developer/contractor shall submit, in addition to mylars, a copy of the CADD drawing files in DOS/DXF format.
- L. Final Maintenance Inspection: 30 days prior to the end of the maintenance period. Prior to release of the maintenance guarantee, there shall be successful completion of the maintenance period as described in Section, 12.01.150 repair of any failed facilities and the payment of any outstanding fees.

12.09.030 Penalties for Failure to Notify for Development Inspection.

Timely notification by the developer as noted is essential for the County to verify through inspection that the work meets the standard. Failure to notify in time may oblige the County to arrange appropriate sampling and testing after-the-fact, with certification, either by a qualified private engineer or by the County personnel. Costs of such testing and certification shall be borne by the developer. . If the

Engineer requires further sampling, testing or certification, further work on the development may be prohibited or limited until all directed tests have been completed and corrections made to the satisfaction of the Engineer. If necessary the County may take further legal actions.

12.09.040 Embankment Construction Control in Developments.

The provisions of Section 2-03 of the WSDOT Standard Specifications apply in all respects to development construction unless otherwise instructed by the Director. The following elements are cited for clarification and emphasis:

- A. **Embankment and Cut-Section Compaction:** Compaction of the top two feet of fill subgrade and the top six inches of cut subgrade shall meet a minimum 95% of maximum density in accordance with WSDOT Standard Specifications Section 2-03.3(14) C - Method B. Subgrade fill below the top two feet shall be compacted to 09% of maximum density.

- B. **Testing for Density:**
 - 1. Prior to placing any surfacing material on the roadway, it will be the responsibility of the developer or contractor to provide density test reports certified by a professional engineer registered in the State of Washington. Optimum moisture content and maximum density shall be determined by methods cited in Section 2-03.3(14)D of WSDOT Standard Specifications or by other tests approved by the Director. In fill sections a minimum of one test shall be taken every 1,000 cubic yards or fraction thereof and on each lift of embankment. In cut sections the interval shall be every 100 feet of roadway. For work to be accepted, tests must show consistent uniform density as required by the tests referenced above.

 - 2. In cases where tests do not meet the minimum standard, corrective action shall be taken such as adding water, aerating, replacing material or applying more compactive effort as directed by the developer's engineer. Retests shall show passing densities prior to placing the next lift of subgrade fill.

- C. **Finishing Subgrade**

After subgrade preparation has been completed, it shall be thoroughly checked by the developer or contractor using a level, string line, crown board or other means to determine that the subgrade conforms to the typical section or special plan conditions prior to placing any surfacing material.

12.09.050 Traffic Control in Development Construction.

A. Interim Traffic Control:

The developer's contractor shall be responsible for interim traffic control during construction on or along traveled County roadways. When roadway or drainage work is to be performed on County roadways that are open to traffic, the contractor will be required to submit a traffic control plan for approval by the Director prior to beginning the work. Traffic control shall follow the guidelines of Section 1-07.23 of the WSDOT Standard Specifications. All barricades, signs and flagging shall conform to the requirements of the MUTCD Manual. Signs must be legible and visible and should be removed at the end of each workday if not applicable after construction hours.

B. Temporary Road Closures and Detours:

When temporary road closures cannot be avoided the contractor shall post "To Be Closed" signs a minimum of five days prior to the closing. The types and locations of the signs shall be shown on a detour plan. A detour plan must be prepared and submitted to the Department of Public Works at least ten working days in advance of the proposed closure, and approved prior to closing any County roadway. In addition, the contractor must notify, in writing, local fire, school, law enforcement authorities, postal service and any other affected persons as directed by the Director at least five days prior to the closing.

C. Haul Routes: If the construction of a proposed development is determined by the Director to require special routing of large trucks or heavy construction equipment to prevent impacts to surrounding roads, residences or business, the contractor shall be required to develop and use an approved haul route.

When required, the haul route plan must be prepared and submitted to the Director and approved prior to beginning or continuing construction. The haul route plan shall address routing, hours of operation, signing, flagging and daily maintenance.

If the contractor's equipment or suppliers fail to use the designated haul route, the Director may prohibit or limit further work on the development until such time as the requirements of the haul route are complied with.

D. Haul Road Agreement: When identified as a need by the SEPA review process or by the Director, a haul road agreement shall be obtained by the Franchised Utility, Developer or Property Owner establishing restoration procedures to be performed upon completion of the haul operation.

12.09.060 County Forces and County Contract Road Inspection.

Road construction performed by County forces or by contract for the County will be inspected under supervision of the Director.

12.09.070 Call Before You Dig.

Developers and contractors are responsible for notification of utilities a minimum of 48 hours in advance of any construction in right-of-way or utility easements. The utility One-Call Center phone number **1-800-424-5555** should be prominently displayed at the work site.

Chapter 10 – FUTURE PROVISIONS

CHAPTER 11 – ROADSIDE FEATURES

12.11.010 Roadside Features – All roadside features shall be designed in accordance with applicable WSDOT Design Manuals or AASHTO Design Guidelines

12.11.020 Survey Monuments.

- A. All existing survey control monuments, which are disturbed, lost or destroyed during surveying or construction; shall be replaced by a land surveyor registered in the State Of Washington at the expense of the responsible developer.
- B. Survey control monuments shall be placed or replaced by a licensed land surveyor as shown on the approved construction plans in accordance with recognized good practice in land surveying, and in accordance with the approved details for survey monuments.
- C. Survey monuments are required at all road intersections, points of horizontal curvature (PC's), points of horizontal tangency (PT's), centers of cul-de-sacs and other appropriate locations as determined necessary by the County. Monuments at PC's and PT's may be eliminated and replaced with a monument at the Point of Intersection (PI), if the PI falls within the paved roadway surface.
- D. A signed and sealed statement from the developer's land surveyor that all monuments and corners indicated on the plat or construction plans have been set and are in good condition will be required before final acceptance of the road by the County.
- E. Record of the monumentation shall be made in accordance with the Survey Recording Act.

Chapter 12 – PRIVATE ROADS

12.12.010 General

Private roads shall meet the following conditions:

1. Private roads shall meet the minimum access requirements of Section 902 – FIRE DEPARTMENT ACCESS – of the Uniform Fire Code as adopted by the County, and
2. Shall be designed and constructed in conformance with AASHTO Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT< 400) 2001, as now exists or hereafter amended, and
3. Shall be inspected and certified by a licensed professional engineer for conformance with the above referenced standards. In the alternative, an applicant may request the private roadway to be inspected and subject to the approval of the Public Works Director, and
4. Permanently established by an easement or Right-of-way, providing legal access to each affected lot, dwelling unit, or business, and
5. Will not result in land locking of existing or proposed parcels, and
6. Maintained by the developer or legally responsible owner or homeowners' association or other legal entity made up of all benefited property owners, under the provisions of an acceptable and recorded "Private Road Maintenance Agreement", and
7. Clearly described on the face of the plat, short plat, or other development authorization and clearly signed at street location as a private street or road, for the maintenance of which Kittitas County is not responsible and a disclosure statement of the same is filed with the County Auditor, and
8. The following note shall be placed on the face of the plat, short plat, or other development authorization:

"Kittitas County will not accept private roads for maintenance as public streets or roads until such streets or roads are brought into conformance with current County Road Standards. This requirement will include the hard surface paving of any street or road surfaced originally with gravel."

12.12.020 PRIVATE STREET DESIGN CRITERIA

Private roads shall meet the design requirements of Table 12-1

Table 12-1
Private Road Minimum Design Standards

	Private Roads					
	Driveway		High-Density			Low Density
	Single	Joint-Use	0 - 5 Acres Average Lot Size			5.01 Acres and Larger Average Lot Size ⁽³⁾
Design Elements						
Number of Lots Served	1	2	3 -14	15 - 40	40+ ⁽²⁾	3 - 40+
Minimum Easement Width	0	20	40	60	60	60
Roadway Width	8	12	20	22	AASHTO	20
Graveled Shoulder Width	N/A	N/A	1	1	AASHTO	1
Minimum Centeline Radius (ft)	N/A	N/A	60	60	AASHTO	60
Surfacing Requirments ⁽⁴⁾	Gravel	Gravel	Gravel	BST/ACP	AASHTO	Gravel
Minimum Crushed Stone Depth	N/A	6"	6"	6"	AASHTO	6"
Maximum Grade % ⁽¹⁾						
Flat	N/A	N/A	8	8	8	
Rolling	N/A	N/A	12	12	12	
Mountainous	N/A	N/A	12*	12*	12*	12*
County Road Approach Permit	Req'd	Req'd	Req'd	Req'd	Req'd	Req'd
Stopping Site Distance	N/A	N/A	AASHTO	AASHTO	AASHTO	AASHTO
Entering Site Distance	N/A	N/A	AASHTO	AASHTO	AASHTO	AASHTO
Ditch Slope (inside slope)	Slopes steeper than 2:1 should only be used when achieving a 2:1 slope is impractical					

⁽¹⁾Grades in excess of 12% may be exceeded for short distances.

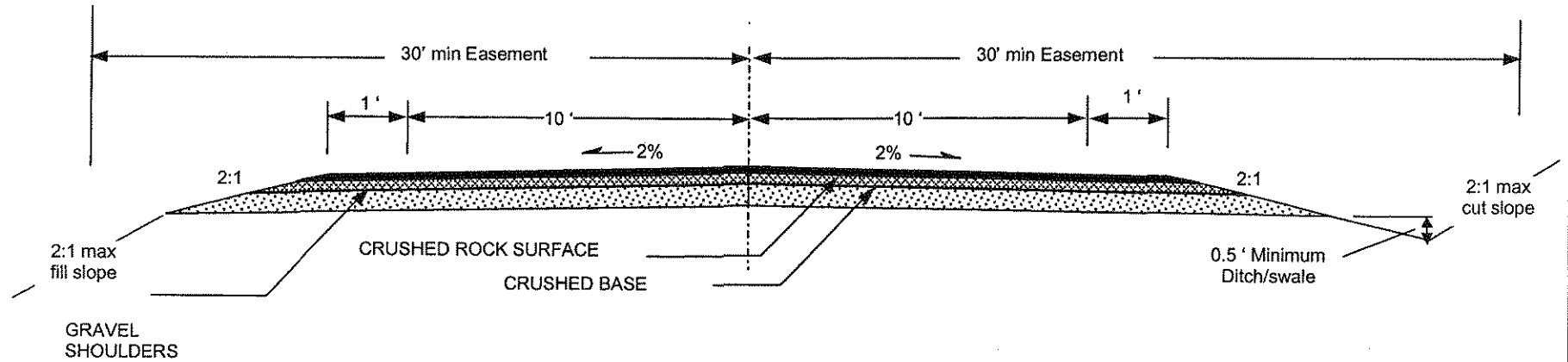
⁽²⁾Engineer design per AASHTO and/or WSDOT required for 40+ High-Density lots.

⁽³⁾Residual lots within a proposed development shall not be considered when computing average lot size

⁽⁴⁾All private roadways serving three or more lots shall achieve 95% compaction and shall be inspected and certified by a licensed engineer prior to sur

RURAL AREA PRIVATE ROADWAY DESIGN STANDARDS

ROADWAY CLASSIFICATION: PRIVATE ROAD LOCAL ACCESS
AVERAGE DAILY TRAFFIC (ADT): 21 TO 140 (3 TO 14 LOTS)



LocalAccessUnder400.doc

KITTITAS COUNTY
DEPARTMENT OF
PUBLIC WORKS

REVISIONS	DATE

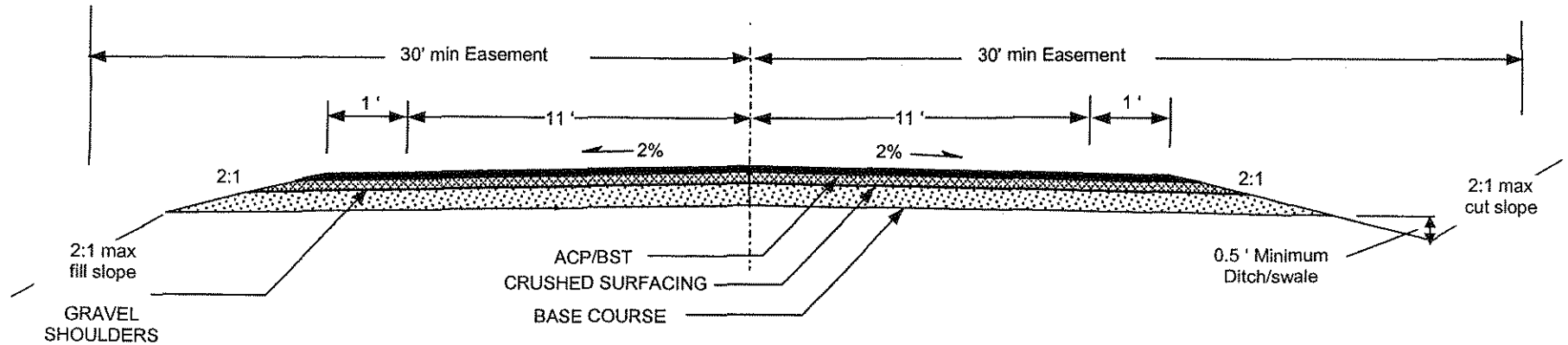
ROADWAY
STANDARDS

RURAL LOCAL ACCESS
ROADWAY SECTION
ADT 21 - 140
FIGURE 12 - 1

04/19/04

RURAL AREA PRIVATE ROADWAY DESIGN STANDARDS

ROADWAY CLASSIFICATION: PRIVATE ROAD LOCAL ACCESS
AVERAGE DAILY TRAFFIC (ADT): 141 TO 400 (15-40 LOTS)



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KITTITAS COUNTY
DEPARTMENT OF
PUBLIC WORKS

REVISIONS	DATE

ROADWAY
STANDARDS

RURAL LOCAL ACCESS
ROADWAY SECTION
ADT 141 - 400
FIGURE 12 - 2

04/19/04

CHAPTER 13 - DESIGN AND CONSTRUCTION STANDARDS FOR UTILITY

- A. Design and construction standards for utility shall be in accordance with The Manual for Accommodating Utilities