

CHAPTER V
ROAD & BRIDGE STANDARDS & SPECIFICATIONS

SECTION 1. Introduction

- a. Purpose and intent: The Park County Road and Bridge Standards and Specifications, hereinafter referred to as "Road Standards," established a uniform road development policy throughout Park County. ~~and provide a clear statement of the procedures for road and bridge construction, acceptance, and maintenance.~~

The purpose and intent of these policies and procedures Standards is to provide safe and attractive travel corridors; efficient traffic flow; efficient effective maintenance; and to protect the public investment in the infrastructure.

Procedures are outlined in these regulations Standards for the design, construction and acceptance of roads and bridges within Park County. ~~The reader is advised that~~ The County may accept County other rights-of-way and roads; however, that does not constitute an acceptance of maintenance responsibilities. Acceptance of maintenance responsibilities is at the sole discretion of the Board of County Commissioners.

~~In many instances, roads in older subdivisions in Park County are substandard because they were built prior to the County having an adequate system for enforcing road design and construction standards. Most of these roads are too steep or too narrow for the County to maintain.~~

~~It is the intent that these standards and specifications apply to all roads within the County which are either dedicated a County roads or dedicated to the public, provide access to public lands, through roads used by the public, or subdivision roads. Except as otherwise provided for in the Park County Development Standards and Regulations, these Standards apply to all roads within the County that are properly established County roads, roads constructed or to be constructed within established County rights-of-way and those roads accessing any division of land created under the Wyoming Real Estate Subdivision Act W.S. §18-5-301 through 316.~~

~~Developers of private roads and driveways are encouraged to conform to these standards and specifications.~~

- b. Authority: The State of Wyoming, by W. S. §24-1-104, "Management and Control of County Roads," authorizes the Board of County Commissioners to administer the County road system including, but not limited to, maintenance, layout, establishment, alterations, vacations, property acquisition, and traffic regulations.

W.S. §18-2-101, "General Powers" and §18-3-504, "Powers and Duties" authorizes the Board of County Commissioners to manage the business and concerns of the County in the exercise of its corporate or administrative powers.

W. S. §24-3-101, et seq. outlines the authority and procedures to be followed in the establishment, vacation, or alteration of County highways. These regulations Standards are considered minimum and are not intended to replace or to conflict with this nor any other federal or state law or regulation. Should there be a conflict, the more stringent law, regulation or statute shall apply. Wyoming Statute W.S. § 18-5-306 (a)(vii) provides for a county's authority over subdivision roads, and W.S. § 18-5-201. et seq. provides for a county's authority over the use and occupancy of lands.

W.S. § 35-10-401 provides that public highways, including county road rights-of-way, shall not be obstructed, and provides for criminal penalties. W.S. §§ 6-6-301 through 307, prohibits unlawful conduct within governmental facilities, including land under the control of a governmental body. W.S. §§ 24-6-101 through 111, provide counties with additional authority over access issues related to public highways.

The County Engineer and the Road and Bridge Foremen have been delegated authority by the Board of County Commissioners to enforce road construction these Standards, issue Rights-of-Way permits, hereinafter referred to as "ROW Permit(s)," review plans, and conduct inspections. The County Engineer and/or a Road and Bridge Foreman may designate a designee as appropriate to enforce these Standards.

- c. **Types of Roads:** Roads contained in the County-wide circulation system are classified based on the functional use and traffic volumes. Ownership of the road rights-of-way and who has responsibility for maintenance is determined in accordance with state statutes, and is controlled by the Board of County Commissioners. Establishment of the road rights-of-way does not guarantee the road is eligible for or maintained by the County.

~~Prior to the adoption of these standards, the County had no uniform enforcement of road design and construction requirements, which explains the wide variation in the quality of road construction and the frequent need for corrective work. One of the reasons for adopting and enforcing these standards is to prevent mistakes made in the past with road construction, and to reduce future maintenance responsibilities of the County.~~

Examples of road types are as follows:

- (1) County owned and maintained roads: Under this category, the Park County, through the Board of County Commissioners, in accordance with State Statute has accepted the road rights-of-way and has assumed responsibility for the road maintenance.
- (2) County owned roads, but maintained by others: In certain cases, private property owners using County owned roads for access desire a higher level of service than the County provides. In such cases, the County and property owners may reach an agreement assigning maintenance responsibilities to the property owners.

In other cases, County owned roads may be maintained by an adjacent town. Such arrangements have been made when it makes more sense for the town to maintain a portion of a County road because of its location and its connection to town streets in exchange for the County maintaining sections of outlying town roads.

- (3) County road rights-of-way not maintained by County: In some instances the County has accepted road rights-of-way but does not **routinely** maintain the roadway. These rights-of-way are available for the use of the public or reserved for the future needs of the County.
- (4) Privately owned and maintained roads: This category includes all roads where the adjacent property owners retain ownership of the road rights-of-way either through a deed, easement, or covenants, and they **generally** hold responsibility for its maintenance. **Included are subdivision roads, whether private or available for public travel.**

Current road **functional** classifications include Primary (**Arterial**), Secondary (**Collector**), Residential, Local Access, and Recreational. Definitions of each category are contained in Chapter V, Section 2.b. of these **Standards and regulations**.

- d. **Road Numbering:** All County roads within Park County are assigned a County road name or number which **are is** used for identification purposes to help speed emergency access by fire and ambulance, and to assist in locating utilities ~~by the power and telephone companies~~. County road names or numbers do not necessarily mean the roads are **established as County roads or are** maintained by the County.
- e. **Application of Standards:** All new road and bridge construction, and any upgrading of the existing roads or bridges, commencing after the effective date of these **Standards** shall adhere to these ~~Road and Bridge Standards~~ unless an administrative relief is granted in accordance with Chapter V, Section 7, et seq. of these ~~Standards and regulations~~.
- f. **Upgrading of existing County roads:**
 - (1) Upgrading needed to accommodate new development: Where new development is proposed along existing County roads, the developer's proposal, **if required by the County Engineer**, shall include an analysis of the projected traffic volumes and impacts, along with information on existing road widths, curves, intersections, and drainage. This information shall be reviewed by the County Engineer and recommendations shall be made as to what improvements are necessary to accommodate the ultimate traffic to be generated by the new development.

If requested by the County Engineer, a traffic impact study in accordance with accepted traffic engineering standards shall be submitted by the developer.

These **Standards** establish maximum traffic volumes for certain classifications of roadways as stated in Table ~~3-4~~ **5-1**. If a proposed development will cause these maximum limits to be exceeded on the adjacent roads ~~providing access between the development and the State Highway System~~, the developer shall, **subject to "Upgrading existing**

roads” (h)(1)(a)(ii), be responsible for the cost of improving the affected roads to a classification where the maximum limit is not exceeded (See Chapter III, Section 2.C.(4) of these Standards and regulations for methods of payment). In calculating whether the maximum limits will be exceeded, the projected cumulative traffic volume based on surrounding land uses and approved zoning at ultimate development shall be used, not just counts of existing traffic levels. Refer to Section 7. Administrative Relief from Design and Construction Standards.

| Table 3-1 5-1 DESIGN CAPACITY FOR CLASSES OF ROADWAYS | |
|---|-----------|
| CLASSIFICATION | ADT |
| Primary (Arterial) | >700 |
| Secondary (Collector) | 100 - 700 |
| Residential | ≥99 |
| Local Access | <99 |
| Recreational | N/A |

- (2) Upgrading requested by property owners: Upgrading existing substandard roads within a subdivision shall be at the expense of the property owners served by such roads. Upon request of the property owners, the County may assist in the formation of a Local Improvement District as provided by W.S. §18-12-101 et. al. seq.

Completion of the improvements does not in itself constitute acceptance by the County for maintenance.

- g. Construction of new roads:
 - (1) New roads to be built by developers: Where new roads are proposed to be built by a developer, the developer’s proposal shall include an analysis of the projected traffic volumes, information on topography, drainage, and extent of cuts and fills, along with construction plans and specifications. The road design and construction specifications shall be reviewed and approved by the County Engineer in conjunction with the preliminary plat, or if no plat is required, prior to commencement of construction. The total cost of roads required to serve new development shall be borne by the developer. It shall be the developer’s obligation to obtain all necessary rights-of-way, permits, agreements, and easements in a form satisfactory to the Board of County Commissioners prior to approval of construction plans.
 - ~~(2) New roads to be built by the County: Roads to be built by the County shall adhere to the road design and construction standards contained in these regulations. Plans and specifications, if required for new County roads to be built by the County, shall be reviewed and approved by the County Engineer prior to commencement of construction.~~
- h. Upgrading existing roads:
 - (1) Design Standards: Any and all publicly traveled roads, whether public or private, requiring upgrading or improvement shall be built in accordance with these Road Standards.
 - (a) Serving new developments:

- (i) Requirement for upgrading: Existing County roads serving a new development or an area proposed for either platting or re-platting after the effective date of these ~~regulations~~ **Standards** shall be upgraded to the ~~Road~~-Standards when one (1) or more of the following conditions occur:
 - (A) existing roads which do not meet these ~~se~~ **Road Standards** for the classification are improved or modified~~;~~;
 - (B) existing roads meet local access standards, but the projected ADT will exceed one hundred (100), thus requiring paving of the roads~~;~~; and /or
 - (C) existing roads meet local access standards, but the projected ADT exceeds the maximum for local access, thus requiring improvement to secondary road status.
 - (ii) Payment of costs: The developer shall be responsible for all costs incurred to upgrade existing County roads **unless approved otherwise by the Board of County Commissioners.**
 - i. **Permits for road and bridge construction:** Prior to the commencement of construction ~~of any road, bridge, or within the County rights-of-way~~ **of any road, bridge, structure or facility**, the project proponent ~~must~~ **shall** obtain approval of construction plans and have obtained a County ROW Permit from the County Engineer in accordance with Chapter V, Section 4, et seq., of these **Standards and regulations**. County projects are exempt from obtaining ROW Permits, but are not exempt from complying with these **Standards**.
 - j. **Establishment, vacation or alteration of County roads:** Any party wishing to initiate a road or easement (establishment, vacation, or alteration) ~~must apply to the County Engineer. The application must conform to the statutory requirements of W.S. §24-3-101, et seq. At a minimum, the application must include a complete and accurate legal description with all necessary exhibits, signatures of all adjacent landowners affected by the vacation, and signoffs from utilities.~~

SECTION 2. Road and Bridge Design Criteria.

- a. **Purpose and intent:** This section sets forth specific standards for roadway and bridge design in Park County, and is intended for use by design engineers and developers. These **Standards** establish criteria for roadways in the County to be used by the traveling public, to assure their health, safety and welfare, and to assure that County resources and funds will not need to be expended to later rectify inadequately designed and constructed facilities.

The basis for the design ~~standards~~ used in these ~~regulations~~ **Standards** ~~are~~ **is** AASHTO, A Policy on the Geometric Design of Highways and Streets; and the Wyoming Transportation Department, hereinafter referred to as WyDOT, Design Guide for County Roads. **The basis for construction used in these Standards is the WPWSS (Wyoming Public Works Standard Specifications).**

All applicable specifications of agencies or organizations listed in Appendix D 24 are made a portion of these Standards and Specifications by reference, and shall be the latest edition or revised thereof. **It is recognized guidelines and standards within various agencies and organizations identified in Appendix 24 may identify options or alternatives to these Standards. These options or alternatives may be incorporated into designs provided they are approved in advance by and at the sole discretion of the County Engineer.**

~~All equipment and~~ **Materials, including, but not limited to, culverts, signs and conduits,** shall be new unless approved by the **County Engineer.**

- b. **Road classification:** County roads are classified according to functional classifications. Functional classifications shall be established by the County Engineer and the Road and Bridge Foremen. The County Engineer will determine which classification applies to any given road. Criteria used to design roadways are based on their functional classification and traffic volume.

For planning purposes, Park County uses the following functional **classifications** ~~categories in classifying roads.~~

- (1) **Primary roads (arterial):** ~~Primary roads serve as a collector of traffic.~~ They provide a means of intra-county travel. Primary roads should provide for relatively high overall travel speeds with minimum interference to through movements. Typically the average daily traffic (ADT) is greater than seven hundred (700) vehicles per day (VPD).

Examples:

- ~~Road 2AB in the Cody area, through the industrial area~~
- ~~Road 6WX, Southfork Road, east of Andy Martin Hill~~
- ~~Avenue E in the Powell area~~

- (2) **Secondary roads (collector):** Secondary roads serve as collectors of traffic from residential and recreational areas to the primary road system. ~~Collectors~~ **Secondary roads** provide a link between local roads and arterial, and allow for the movement of through traffic in neighborhoods. ~~Collectors~~ **Secondary roads** should be designed so they do not disrupt the activities and land uses they serve. Secondary roads should provide for relatively high overall travel speeds. In addition, access to ~~collectors~~ **secondary roads** should be designed so as to minimize interruption of traffic flows. Typically the ADT is greater than one hundred (100) VPD but less than seven hundred (700) **VPD.**

Examples:

- ~~Road 6QS, Lower Southfork Road in the Cody area~~
- ~~Road 11 and Road 12 in the Powell area~~
- ~~Wood River Road in the Meeteetse area~~

- (3) **Residential roads:** ~~Residential and subdivision~~ roads are primarily for the use of local residents within the neighborhood and for providing access to the secondary and primary road system. This type of road is for use by property owners, the general public, and service vehicles such as trash trucks, delivery trucks, and snowplows. Typically the ADT is greater than ninety-nine (99) VPD.

Examples:

- ~~Seven Mountain Road~~
- ~~Winninger Subdivision~~
- ~~Road 19~~
- ~~Riverview Subdivision~~

(4) Local access roads: Generally, local access roads provide access to private property such as farm, ranch, or sparsely populated residential areas. Typically the ADT is less than ninety-nine (99) VPD.

Examples

- ~~Road 6RT~~
- ~~Lane 17 west of Road 20~~

(5) Recreational roads: Recreational roads provide access to few, if any, year round residents.

c. Road design:

(1) Future planning: Prior to the design of a new road, projections of future development and densities, estimates of future traffic volumes, and appropriate classifications and design speeds ~~must~~ shall be determined if required by the County Engineer. The road classification determines the geometric cross section and maximum sustained grades, while the design speed determines minimum or maximum standards for elements of alignment such as stopping and passing sight distances, radii of curvature, tangent lengths, and superelevation transition lengths.

(a) Design period: roadway design ~~will~~ shall be based on the projected needs twenty (20) years after construction.

(b) Projected development: Projections of development over the design period ~~will~~ shall be based on ~~the County Comprehensive Plan and applicable Municipal Master Plans in effect, and on zoning, existing land use, proximity to developed areas, historic growth, and other factors,~~ such as County or Municipal development plans which can be expected to influence development.

(c) Projected traffic volumes: Table ~~3-2~~ 5-2 illustrates traffic generated for various types of development. For example, residential property generates an ADT county of ten (10) trips per living unit. These per unit ADT counts are applied to the projected development to generate estimates of the design year traffic volumes. When per unit ADT counts are not listed for a type of development, or an ADT has not been established for a particular category or location by the County Engineer, the design engineer shall use an acceptable reference approved by the County Engineer such as the ITE "Trip Generation Handbook," current edition. ~~the Transportation and Traffic Engineering Handbook, or other acceptable reference,~~ to obtain the appropriate ADT count.

(d) Access to subdivisions shall be from ~~streets~~ roads constructed within dedicated public rights-of-way, private road rights-of-way, or recorded perpetual easements. Two (2) points of access into the subdivision shall be provided if the proposed subdivision contains twenty (20) or more lots.

- (e) Road rights-of-way shall be provided from the proposed subdivision roads or streets to adjacent or adjoining lands if such easements or rights-of-way would improve access to the potentially developable lands **or potentially landlocked lands** and would facilitate the development of a coordinated road system ~~with a developing~~ **within the** area.
- (f) ~~Streets~~ **Roads** shall be designed and aligned to join with planned or existing ~~streets~~ **roads**.

| Table 3-2 5-2 PER UNIT AVERAGE DAILY TRAFFIC | | |
|--|----------------------|--|
| TYPE | UNIT | PER UNIT ADT |
| Residential Density | Per dwelling unit | 10.0 |
| Condominium/Townhouse | Per dwelling unit | 7.0 |
| Mobile Home Park | Per mobile home | 7.0 5.0 |
| Hotel | Per room | 40.5 9.0 |
| Restaurant | Per 1,000 S.F. gross | 164.0 90.0 |
| Commercial | Per 1,000 S.F. gross | 115.0 |
| Office | Per 1,000 S.F. gross | 12.3 11.0 |
| Campground | Per space | 6.6 7.0 |
| RV Park | Per space | 6.6 7.0 |
| Super Market | Per 1,000 S.F. gross | 125.0 102.0 |
| Other uses as referenced in the Park County Development Standards and Regulations, Table 2.1, Schedule of Uses | | Per Unit ADTs shall be approved by the County Engineer |

- (2) General design elements:
 - (a) Design capacities: Table ~~3-1~~ **5-1** presents the range of ADT's anticipated for ~~each type of road~~ **classes of roadways**. If traffic volumes on a particular road exceed the range specified for its functional ~~category~~ **classification**, the road shall be reclassified to the appropriate category. However, roads may carry lower volumes than stated for their functional ~~category~~ **classification** without being reclassified. In such cases, the function of the road rather than traffic volumes will determine design requirements. All road classifications must be approved by the County Engineer.
 - (b) Design speed: The selection of design speed is influenced principally **by** the character of terrain, traffic volumes, and appropriate range of design speeds for each road classification.
 - (c) Surfacing requirements: All ~~public~~ roads serving areas or subdivision roads ~~with projected densities of two (2) units per acre or greater, or expected to carry a traffic volume of one hundred (100) ADT or greater~~ **must shall** be paved. Other roads may have a gravel or paved surface. ~~Within subdivision, individual road segments with projected ADT of less than 100 may have either a gravel or paved surface. Other roads may have a gravel or paved surface.~~

- (d) Right-of-Way: The minimum right-of-way widths required for each road classification are specified in Table 3-3 5-3. Additional rights-of-way ~~shall~~ **may** be ~~provided~~ **required** for drainage improvements, cuts or fills, intersections, curb returns, snow storage, and other road appurtenances.
 - (e) One-Way roads: One-way roads will not be allowed for the following reasons:
 - (i) Property owners at the far end of a one-way loop road tend to take short cuts and drive the wrong way to reach their properties, thus increasing the chances for accidents;
 - (ii) Emergency vehicles must, in certain cases, take a more circuitous route to reach their destinations;
 - (iii) One-way roads can cause confusion for people not familiar with the area; and
 - (iv) In winter, snow plowing often reduces the driving surfaces of roads because snow accumulates along the edges. On one-way roads, this reduction may pose a serious safety problem because it hampers access for emergency vehicles and limits the area available for their operation.
- (3) Specific design elements:
- (a) Alignment: The major considerations in alignment design are safety, grade, profile, road width, design speed, sight distance, topography, drainage, and the maneuverability, braking, and performance of heavy duty vehicles. Alignment should provide for safe and continuous operation at a uniform design speed. In mountainous areas, consideration should be given to locating the road so that a southern exposure will be obtained wherever possible to avoid drifting of snow. Road layout should bear a logical relationship to existing or platted roads in adjacent properties and to the principles of good engineering practice.
 - (i) Horizontal alignment:
 - (A) Stopping **sight** ~~site~~ distance: Horizontal alignment must provide at least the minimum stopping distance of the design speed at all points. This includes visibility at intersections as well as around curves and roadside encroachments. The minimum stopping sight distance is the distance required by the driver of a vehicle traveling at the design speed to bring the vehicle to a stop after an object on the road becomes visible. Stopping sight distance is calculated in accordance with the following formula, or Table 3-5 5-5, whichever is greater:

$$D = 1.47Vt + \frac{V^2}{30(f + G)}$$

V= speed in MPH

t= reaction time (2.5 seconds)

G=grade, in percent

f=coefficient of sliding friction with f equaling the following factors based on design speed of roadway, from Table 3-4 5-4.

Where an object off the pavement restricts ~~site~~ sight distance, the minimum radius of curvature is determined by the stopping sight distance, but in no case will it be less than as specified in Table 3-6 5-5.

Table 3-3 5-3 SUMMARY MINIMUM OF ROAD DESIGN ELEMENTS

| DESIGN ELEMENT | PRIMARY | SECONDARY | RESIDENTIAL | LOCAL ACCESS | RECREATIONAL |
|--|------------------|------------------|------------------|------------------|------------------|
| Right-of-Way(min)(ft) | 80 | 80 60 | 60 | 60 | 60 40 |
| Minimum Recommended Design Speed (mph) | 60 65 | 60 | 40 | 40 | 40 30 |
| Number of Lanes | 2-4 | 2 | 2 | 2 | 2 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 10 |
| Shoulders (ft) | 6 | 4 | 2 | 2 NA | 2 NA |
| Maximum Sustained Grade | 6% | 6% | 6% | 8% | 10% |
| Bridge Width (min)(ft) | 36 | 32 | 24 | 24 | 24 |
| Design Loading | HS20-44 | HS20-44 | HS20-44 | HS20-44 | HS20-44 |
| Return Radius (ft) | 35 | 30 | 25 | 20 | 20 |
| Typical Speed Limit | 55 65 | 55 | 30 | 30 | 30 |
| Cross Slope w/o Super Elevations (%) | 4 (max) | 4 (max) | 4 (max) | 2 (min) | 2 (min) |
| Max. Super Elevation (%) | 4 | 4 | 4 | 4 | 4 |
| Minimum Road Grade (%) | 1 0.5 | 1 0.5 | 1 0.5 | 1 0.5 | 1 0.5 |
| Maximum Road Grade (%) | 6 | 6 | 6 | 6 | 8 |
| Maximum Grade at Intersection | 2% for 400' | 2% for 300' | 4% for 150' | 4% for 100' | 4% for 100' |
| Minimum Pavement Sections: Full Depth HBP HMA Composite (HBP HMA /Crushed Gravel) | 8" N/A | 6" 3"/8" | 6" 3"/6" | 6" NA/6" | N/A N/A |

NOTE: Variations may be approved by County Engineer based on generally accepted engineering practices, references and standards.

| Table 3-4 5-4 SIDE FRICTION FACTORS | |
|-------------------------------------|-------------------------------------|
| DESIGN SPEED (MPH) | f (DESIGN CRITERIA: SNOW PACKED) |
| 20-40 | 0.24 |
| 40-50 | 0.22 |
| 50-60 | 0.21 |
| 60-70 | 0.20 |

Offset clearance to achieve stopping sight distance on horizontal curves shall be in accordance with current AASHTO Policy. The centerline of the inside lane is used, with the offset distance measured from the centerline to of the inside lane to the obstruction.

- (B) Passing sight distance: Passing sight distance is the minimum sight distance that must be available to enable the driver of a vehicle to pass another safely and comfortably without interfering with oncoming traffic traveling at the design speed. Two-lane roads should provide adequate passing zones. Required passing sight distance for given design speeds is stated in Table 3-5 5-5.
- (C) Curvature: Table 3-6 5-6 specifies the minimum centerline radius of curvature for specific design speeds. This table is based on speed alone and does not take into consideration sight distance factors. Every effort should be made to exceed the minimum values.

Consistency in design speed and curve radius should be used to avoid surprising the driver. Where changes in the design speed are necessary, the design speed between approach tangents and curves will not change by more than ten (10) MPH. Under no condition will a low speed curve be introduced at the end of a long tangent where high approach speeds are anticipated. Compound curves should be avoided. Reversing curves without an intervening tangent will not be permitted where design speeds exceed twenty-five (25) MPH. The minimum lengths of such tangents are specified in Table 3-6 5-6. Broken-back curves are to be avoided.

- (D) Curb returns: Minimum curb returns or pavement rounding radii at intersection corners are as follows:

| <u>ROAD CLASS</u> | <u>CURB RETURN RADIUS</u> |
|--------------------|---------------------------|
| Primary road | 35 Feet |
| Secondary Road | 30 Feet |
| Residential Street | 25 Feet |
| Local Access | 20 Feet |

Additional right-of-way may be required to provide a minimum clear distance for fifteen (15) feet between the curb or edge of pavement and the right-of-way limit.

- (E) Intersections: The minimum distance between intersections for various road classifications is as follows:

| <u>ROAD CLASS</u> | <u>DISTANCE</u> |
|--------------------|-----------------|
| Primary Road | 1,300 Feet |
| Secondary Road | 600 Feet |
| Residential Street | 300 Feet |
| Local Access | 150 Feet |

Distance is measured from the inside edge of each right-of-way.

| Table 3-5 5-5 MINIMUM STOPPING AND PASSING SIGHT DISTANCE | | |
|---|--------------------------------|-------------------------------|
| DESIGN SPEED (MPH) | STOPPING SIGHT DISTANCE (Feet) | PASSING SIGHT DISTANCE (Feet) |
| 15 | 125 | 700 |
| 20 | 125 | 800 |
| 25 | 150 | 900 |
| 30 | 200 | 1,100 |
| 35 | 250 | 1,300 |
| 40 | 325 | 1,500 |
| 45 | 400 | 1,650 |
| 50 | 475 | 1,800 |
| 55 | 550 | 1,950 |

- (ii) Vertical alignment:
 - (A) Minimum and maximum grades: Minimum and maximum sustained grades shall be as listed in Table ~~3-3~~ 5-3 except as provided in Item (B) below.

The minimum and maximum design grade should be used infrequently rather than as a value to be used in most cases.

- (B) Exceptions to maximum grades: A local access or low volume road may have sections with a maximum grade of ten (10) percent, provided all of the following conditions are met:
 - (I) The section shall be no longer than five hundred (500) feet;
 - (II) The section shall have a horizontal radius of fifteen hundred (1,500) feet or greater;
 - (III) Grades shall not exceed six (6) percent for five hundred (500) feet on either end of the section;
 - (IV) Curves with a horizontal radius of less than six hundred (600) feet shall not be within five hundred (500) feet on either end of the section; and
 - (V) Land on each side of the section must be designated permanent open space.

| Table 3-6 5-6 MINIMUM RADIUS OF CURVATURE | | |
|--|---------------------------------|--------------------------------|
| DESIGN SPEED (MPH) | MINIMUM CURVATURE RADIUS (Feet) | MINIMUM TANGENT LENGTHS (Feet) |
| 15 | 100 | 50 |
| 20 | 150 | 75 |
| 25 | 225 | 100 |
| 30 | 300 | 150 |
| 35 | 450 | 200 |
| 40 | 600 | 250 |
| 45 | 775 | 250 |
| 50 | 950 | 250 |
| 55 | 1,200 | 250 |

- (C) Vertical curves: Vertical curves must be designed to provide adequate stopping and passing sight distance, headlight distance, driver comfort, and good drainage.

Minimum lengths of crest vertical curves are controlled by stopping sight distance requirements. The minimum length for sag and crest vertical curves shall be determined by current AASHTO criteria.

Vertical curves that are long and flat may develop poor drainage and should therefore be avoided.

Vertical curves are not required where the algebraic difference in grade is less than two-tenths (0.2) percent ($A < 0.2$).

- (D) ~~Site~~ Sight Distance: The grade line must meet sight distance requirements for the design speed.
- (iii) Switchbacks: A switchback is defined as a curve with a delta greater than one hundred twenty (120) degrees and a radius less than one hundred (100) feet.
 - (A) Use of switchbacks: Switchbacks will not be allowed on primary or secondary roadways. On residential, local access, low volume, or primitive roadways when other alternatives may cause significant adverse impacts, the use of switchbacks may be allowed on a case-by-case basis with approval from the County Engineer.
 - (B) Minimum standards: Switchbacks shall be designed for speeds of not more than ten (10) to fifteen (15) MPH. Maximum centerline grades within twenty-five (25) feet of a switchback curve and throughout the curve shall not exceed four (4) percent. Curve widening shall be in accordance with Chapter V, Section 2.c(3)(b)(vii) of these Standards and regulations. Minimum centerline radius of the curve will be fifty (50) feet. Adequate area for snow storage ~~must~~ shall be provided.
- (iv) Alignment coordination: When vertical and horizontal curves are superimposed, the superelevation may cause distortion in the outer pavement edges. Where this may be the case, edge of pavement profiles shall be plotted and smooth curves introduced to remove any irregularities. Sharp horizontal curves should not be introduced at or near a pronounced summit or sag.
- (b) Geometric cross sections:
 - (i) Typical sections: A typical cross section for each road classification is shown in on Figures 3-1 through 3-5 5-1.

- (ii) Travel lane width: The minimum travel lane widths **are provided in Table 5-3.** ~~is twelve (12) feet (see Table 3-3).~~
- (iii) Crown slope: On undivided roads in tangent alignment, the high point of the crown will be centered on the pavement and the pavement sloped toward the edges on a uniform grade. In mountainous terrain, unpaved roads will be sloped toward the cut side of the road on a three (3) percent slope to alleviate surface erosions. On divided multi-lane roads on tangent alignment, each travel way will have a uniform cross slope with the high point at the edge nearest the median.
- (iv) Superelevation: To account for snow and ice conditions which occur frequently in Park County, the maximum superelevation will be limited to four (4) percent (see ~~Table 3-3~~ **5-3**). The axis of rotation of undivided roadways is usually the centerline. For curves following long, level tangents, the axis of rotation may be taken at the inside edge of the pavement, with approval from the County Engineer.
- (v) Superelevation transition: Superelevation transition is the progression of the roadway from the normal crown section to a fully superelevated section. To meet the requirements of safety and comfort, the length required to effect the transition should be adequate for the likely travel speeds. Suggested minimum tangent lengths are given in ~~Table 3-6~~ **5-6**. It is recommended that sixty (60) percent to eighty (80) percent of the superelevation runoff be on the tangent.
- (vi) Spiral curves: Where the alignment includes spiral curves, superelevation is applied entirely on the easement curve.
- (vii) Curve widening: Curves will be widened on the inside radius in accordance with the current AASHTO criteria.
- (viii) Cul-de-sacs ~~streets~~; turnarounds: Using ~~cul-de-sacs streets~~ should be avoided. Where ~~cul-de-sacs streets~~ are the only alternative, turnarounds shall be provided. An alternative to the bulb type turnaround is the use of a hammerhead turnaround. Hammerhead turnarounds will only be allowed when, in the opinion of the County Engineer and ~~the Road & Bridge Foreman~~, a standard cul-de-sac is not practical. ~~Figures 3-9 through 3-10~~ **5-2 through 5-4** illustrate acceptable cul-de-sac and hammerhead configurations. **Other configurations may be approved by the County Engineer.** Whenever possible, roadway systems shall provide at least two (2) access points to lots platted for development.

The maximum length of roads ending in turnarounds shall be one thousand (1,000) feet. Adequate snow storage shall be provided to keep turnarounds clear. Dead end roads which do not have turnarounds are not allowed.

(c) Structural sections: Structural sections shall be designated for all new roads, driveways, or roads being upgraded due to increased traffic. Pavement designs shall be in accordance with currently acceptable design procedures and must be approved by the County Engineer. Approved procedures include, but are not limited to, ~~WyDOT~~ WYPWSS, AASHTO, and the Asphalt Institute. In any case, the minimum pavement thicknesses listed in Table ~~3-3-5-3~~ must be adhered to.

(d) Side Slopes: Any slope designed steeper than four-to-one (4:1) shall be certified for stability by a registered engineer qualified in soils analysis. Where heavy snowfall is expected, flatter slopes in cuts on the southern side of the roadway should be used to provide maximum exposure to the sun. Flatter slopes should be used wherever possible to reduce erosion, to decrease maintenance costs, to facilitate plant growth, and to provide the safer operations.

Transition slopes shall be provided between adjoining cuts and fills, and shall be designed for pleasing appearance. Where cut or fill slopes intersect the original ground surface, the cross section shall be rounded to blend the slope into the natural ground surface.

Note: Table 5-9 Maximum Permissible Velocities has been moved and now follows Chapter V, Section 2.(3)(e)(i)(D).

Where the side slopes of the original ground approach one and one-half-to-one (1.5:1), the embankment shall be contained with a suitable retaining wall to avoid long fill slopes. Side slopes in rock will be based on the stability of the formation.

Benching of side slopes should be used sparingly and only where justified by sound engineering reasons, including the following:

- (i) To stabilize material where benching is more economical than flattening;
- (ii) To intercept drainage in long and deep cuts, and/or
- (iii) To intercept and store loose material.

(e) Drainage:

(i) General: The primary objective of drainage design is protection of the County roads and property while minimizing the possible flood damage to surrounding properties and structures. Water flowing in a roadside

ditch shall be diverted away from the road as quickly as possible. It should be emphasized that good drainage is one of the most important factors in road design. It preserves the appearance as well as the level of service of the road while minimizing maintenance costs. **Design Events shall be one (1) hour duration, twenty-five (25) year frequency.**

~~In no case shall water travel in a roadside ditch for a distance greater than eight hundred (800) feet or have a flow greater than five (5) cubic feet per second with the occurrence of a twenty-five (25) year frequency storm.~~

Culverts under all roads shall be designed to accommodate a twenty-five (25) year frequency storm runoff utilizing the maximum available head. The maximum available head shall be determined by the uppermost ponding elevation chosen to prevent flood damage to upstream properties.

Inlets and other facilities draining the road surface shall accommodate the twenty-five (25) year frequency storm runoff. All roads shall remain free of ponding. At least one (1) travel lane shall remain open during a one hundred (100) year design storm.

All drainage installations shall be designed to permit free, unobstructed passage of debris and silt or provide for their deflection and/or collection at a point upstream that will not create an expensive maintenance problem. Settlement basins shall be provided when a silting problem exists downstream. Modification of natural channels or transferring runoff from one basin to another is not permitted except where no reasonable alternative exists and where the proposal has been reviewed and approved by the County Engineer.

A recurring problem on Park County roads is ice build-up in winter. Drainage design shall anticipate areas of potential ice build-up. Additional design considerations may be required in these areas.

The developer/contractor is responsible for obtaining and complying with all applicable local, state, and federal permits.

- (ii)(A) Storm runoff estimates: The following methods may be used for estimating peak flows:
 - (I) Runoff from stream flow records;

- (II) HEC-1 Computer Program from the Corp of Engineers;
- (III) "Streamflows in Wyoming", H.W. Lowman, U.S. Geological Survey, Water Resources Investigation Report 88-4045;
- (IV) The Rational Method, as follows:

$$Q = CIA$$

Where

Q = runoff in cubic feet/second

C = coefficient of runoff (see Table 3-7 5-7)

I = average intensity of rainfall in inch/hour for a duration of the time of concentration

A = drainage area in acres

The rational method should be used only on areas of less than ten (10) acres; or

- (V) Tabular method as per Technical Release MO55 from the Engineering Division of the U.S. Department of Agriculture; or
- (VI) SCS Method; or
- (VII) Other methods, if approved by County Engineer

| Table 3-7 5-7 CO-EFFICIENT OF RUNOFF | |
|---|---------------------|
| TYPE OF SERVICE | VALUE OF C=RAINFALL |
| Roofs | 0.97 |
| <u>Pavements</u> | |
| Concrete or Asphalt | 0.97 |
| Gravel, from clean loose to clayey and compact | 0.60 |
| <u>Earth Surfaces</u> | |
| Sand, from uniform grain size, no fines, to well graded, Some clay or silt: | |
| Bare | 0.60 |
| Light Vegetation | 0.45 |
| Dense Vegetation | 0.35 |
| Clay, from course sandy or silty, to pure colloidal clays | |
| Bare | 0.70 |
| Light Vegetation | 0.50 |
| Dense Vegetation | 0.40 |

(iii)(B) Culverts: Culverts shall be located at each natural draw or water course as conditions warrant to prevent excessive accumulation of flow in roadside ditches or along the toe of slopes. Draws and water courses shall be cleared of debris for a distance of one hundred (100) feet upstream from all culvert inlets.

Inverts at the inlet shall be slightly elevated above the normal flow line in steep or natural draws to avoid plugging by debris. Inlets shall not be elevated in those instances where ponding or accumulation of backwater ~~curves~~ would be objectionable (stagnation, irrigation ditches, etc.).

The culvert shall slope downward in the direction of natural flow and be designed to be self-cleaning ~~whenever possible~~. The outlet shall be designed not to discharge on unprotected fills or unstable material, or at adverse angles to streams or open channels. Head-wall(s), rip-rap, or other **approved** means of protection are required at inlets **and/or** outlets where erosion might occur.

Velocities of flow in culverts shall be calculated using acceptable design charts or formulas. Where the Manning Equation is used, the following "n" values will apply (see Table ~~3-8~~ **5-8**)

Reinforced Concrete Pipe (**RCP**) shall be used for all installations which cross a County road **or are within a County right-of-way**; ~~unless alternate materials are approved by the County Engineer.~~

Corrugated metal pipe (CMP) may be used for driveway crossings. ~~Steel Pipe shall be asphalt coated, or where soils are corrosive or other conditions exist that may corrode steel. Where CMP or steel pipe is allowed, additional precautions to prevent corrosion and/or erosion may be required. Aluminum or other pipe materials are not permissible for road crossings.~~

Alternative materials, including PVC, HDPE, etc., may be approved by the County Engineer provided supporting documentation and

justification addresses load analysis, corrosion protection, erosion/abrasive resistance and soil characteristics such as ph. Plastic type pipe will not be allowed where there exists a reasonable expectation of vegetation burning.

Minimum diameter for round pipe shall be eighteen (18) inches. ~~The minimum rise of Arch pipes openings, at a minimum, and box culverts shall be twelve (12) inches equivalent to an~~ **eighteen (18) inch round pipe.**

| Table 3-8 5-8 MANNING EQUATION OF "n" VALUES | |
|--|-----------------------------|
| MATERIAL | MANNING EQUATION "n" VALUES |
| Corrugated Steel Pipe | 0.027 |
| Reinforced Concrete Pipe | 0.013 |
| Concrete | 0.013 to 0.020 |
| Asphalt | 0.016 |

When a battery of pipes is used, a clear spacing of one-half (½) the pipe diameter (one (1) foot minimum, four (4) foot maximum) must be provided between pipes. Maximum and minimum cover, pipe metal gauge, and strength classification shall be as specified on culverts.

Manholes shall be used for cleanouts. Cleanout access shall be provided at least every two hundred (200) feet for pipes twenty-four (24) inches in diameter or less, and at least every four hundred (400) feet for larger pipes. Cleanout access shall also be provided at each angle point and at each change in grade.

- (iv)(C) Open channels and ditches: Channels and ditches shall be designed to avoid roadside safety hazards. The minimum flowline slope shall be one (1.0) percent. Maximum slopes shall be controlled by the maximum permissible velocities given in Table 3-9 5-9.

Manning's equation shall be used to estimate velocities.

$$V = 1.486 \frac{R - S^{1/2}}{n}$$

where

V=velocity of flow in channel in feet per second

n=roughness coefficient (Table 3-9 5-9)

R=hydraulic radius in feet per foot

Where the channel is comprised of a combination of the materials given in Table 3-9 5-9, the maximum permissible velocity elected should prevent undue scouring of the finer materials.

(v)(D) Subsurface drainage: Subgrades subject to poor drainage, underground seepage or a high water table shall be adequately drained for roadbed stabilization. Drains shall be installed to prevent the high ground water level from coming within four (4) feet of the roadway pavement. Perforated pipe shall be used to carry away collected water. **Other drainage systems may be approved by the County Engineer.** French drains which contain no pipe are unacceptable.

| Table 3-9 5-9 MAXIMUM PERMISSIBLE VELOCITIES | | |
|--|-----|-------------------|
| CHANNEL MATERIAL | "n" | VELOCITY (ft/sec) |
| Lines or well established grass | .05 | 5 |
| Bunched grasses with exposed soil | .04 | 3 |
| Fine sand or silt | .02 | 1 |
| All other bare soils | .03 | 2 |

(ii) Subdivision Drainage Facilities:

(A) ~~Rate of Runoff:~~ Runoff from a project site after construction shall not exceed the level of runoff which occurred prior to construction. Any runoff in excess of pre-construction levels shall be detained on-site and infiltrated or evaporated. The entire drainage area upstream from the project site up to a minimum of two hundred (200) acres shall be considered when determining runoff quantities, whether or not the two hundred (200) acre area is part of the project site. ~~Any of the following methods may be used for estimating peak runoff flows:~~

1. ~~Runoff from stream flow records~~

- ~~2. Tabular method as per Technical Release MO55 from the Engineering Division of the U.S. Department of Agriculture~~
- ~~3. HEC 1 Computer Program from the U. S. Army Corps of Engineers~~
- ~~4. SCS Method~~
- ~~5. The Rational Method for small basins~~
- ~~6. Other methods as approved by the County Engineer~~

- (B) ~~General:~~ The applicant shall prepare a drainage plan and report addressing the historic and developed flows from the proposed development. The report and drainage plans shall, at a minimum, provide a written graphical representation of the project pre and post development. At a minimum, the drainage plan and report shall address the following:
- (I) Historic vs. developed flows for the **one hundred (100) year and twenty-five (25) year events.**
 - (II) ~~All~~ **Developed** flows must be shown going to a defined drainage capable of handling the developed flows **on site.**
 - (III) Irrigation flows must be considered separately from stormwater flows.
 - (IV) All calculations used in the report, including detention/retention requirements, control structure requirements, all hydrology, and hydraulics, pipe, ditch and conveyance calculations.
 - (V) Topography (historic and developed) of the proposed development and the drainage basin. ~~The entire drainage area upstream from the project site to a minimum of two hundred (200) acres shall be considered when determining runoff quantities, whether or not the two hundred (200) acre area is part of the project site or not.~~
 - (VI) Construction plans showing all necessary information for the construction and maintenance of the facilities required to implement the drainage plan improvements.

- (C) Design of Drainage Improvements: Drainage improvements shall be designed and constructed in accordance with current professional standards. In addition, the following design requirements may be required to be met and documented.
- (I) Detention and retention: Detention systems shall be designed to store the difference between the developed volume and the historic volume of runoff during the twenty-five (25) year event. Discharge from the detention system will be at twenty-five (25) year historic rates. Retention systems shall be designed to store the entire twenty-five (25) year twenty-four (24) hour event from the developed site.
 - (II) Culvert Sizing: Culverts shall be sized to handle the anticipated quantity and debris flows anticipated for the drainage. Consideration should be given to erosion, scour, and the flow velocity **and** ~~as well as~~ the culvert capacity and maintenance. Head-wall(s), wing-wall(s), **and/or** flared end sections may be required. ~~Culverts shall be designed per Culvert Section above.~~
 - (III) Ditch and Open Channel Sizing: Ditches shall be sized to handle the anticipated quantity and debris flows anticipated for the drainage. Consideration should be given to erosion, scour, and the flow velocity ~~as well as~~ **and** the ditch **capacity and maintenance**. ~~Ditches and open channels shall be designed per ditches and open channel section above.~~
 - (IV) Gravel Trenches: Gravel trenches shall be designed to store the entire volume in excess of historic rates of runoff, and to allow this runoff to percolate into the soil. In designing gravel trenches, the assumption shall be made that gravel has twenty percent (20%) priority. The percolation rate of the soil shall not be slower than sixty (60) minutes per inch.
 - (V) Facility capacity and maintenance.
 - (VI) Storm Flow Routing: As required to a defined and acceptable drainage way.

(VII) Other Methods: Other methods for controlling runoff may be used **approved** or required **by the County Engineer**.

(A) Required Improvements: Approval of any final plat shall include the requirement that drainage improvements be constructed in accordance with these ~~regulations~~ **Standards**. The improvements shall be included as part of the subdivision improvement agreement and the **any** financial guarantee.

(B) Responsibility: All drainage detention, retention, filtration, **and facilities including, but not limited to, culverts** or evaporation areas are the responsibility of, and shall be maintained by, the subdivision **and/or the** Homeowner's Association.

Note: This section has been relocated to Chapter V, Section 2.c(3)(d)

~~(d) Side Slopes: Any slope designed steeper than four to one (4:1) shall be certified for stability by a registered Engineer qualified in soils analysis. Where heavy snowfall is expected, flatter slopes in cuts on the southern side of the roadway should be used to provide maximum exposure to the sun. Flatter slopes should be used wherever possible to reduce erosion, to decrease maintenance costs, to facilitate plant growth, and to provide the safer operations.~~

~~Transition slopes shall be provided between adjoining cuts and fills, and shall be designed for pleasing appearance. Where cut or fill slopes intersect the original ground surface, the cross section shall be rounded to blend the slope into the natural ground surface.~~

| Table 3-9 MAXIMUM PERMISSIBLE VELOCITIES | | |
|--|-----|-------------------|
| CHANNEL MATERIAL | "n" | VELOCITY (ft/sec) |
| Lines or well established grass | .05 | 5 |
| Bunched grasses with exposed soil | .04 | 3 |
| Fine sand or silt | .02 | 1 |
| All other bare soils | .03 | 2 |

~~Where the side slopes of the original ground approach one and one half to one (1.5:1), the embankment shall be contained with a suitable retaining wall to avoid long fill slopes. Side slopes in rock will be based on the stability of the formation.~~

~~Benching of side slopes should be used sparingly and only where justified by sound engineering reasons, including the following:~~

- ~~• To stabilize material where benching is more economical than flattening~~
- ~~• To intercept drainage in log and deep cuts~~
- ~~• To intercept and store loose material~~

- (4) Payment of costs for road construction:
- (a) Developer responsibility: Any and all costs of new road construction in new developments are the responsibility of the developer. The developer is also responsible for the design, rights-of-way acquisition, and construction of the new roads, whether public or private, according to these Road Standards.
 - (b) Payback agreements: During the approval process for a proposed development, the developer may be required to construct a new road or to make improvements to an existing road which also benefits future developments. The Board of County Commissioners may establish a plan of compensation to the original developer whereby subsequent beneficiaries pay a fair share for the use of approval for future benefiting developments. The Board of County Commissioners shall determine the equitable distribution of benefits and costs.
- d. Bridge design:
- (1) Design standards for bridges: Bridges shall conform to AASHTO Standard Specifications for Highway Bridges, latest edition. The design loading requirements shall conform, **at a minimum**, to AASHTO HS20-44 specifications. **Plans and a design report shall be prepared by a qualified Wyoming licensed** structural engineer and shall be submitted to the County Engineer for review and approval prior to construction. Clear deck width, at a minimum, must accommodate the full width of the travel lanes of approach roads, as indicated in Table ~~3-3~~ **5-3**.
- The waterway area shall accommodate a one hundred (100) year frequency storm, unless otherwise specified by the County Engineer. Where flood studies from the U.S. Army Corps of Engineers or the Federal Emergency Management Agency are available, bridges shall be designed to accommodate the "Standard Project Flood". A minimum of ~~one and one half (1½)~~ **two (2)** foot of freeboard is required. Additional freeboard shall be required when debris laden flows are anticipated.
- (2) Payment of bridge construction costs: If the design of the roadway serving a new development requires construction of new bridges or upgrading of existing bridges, the developer shall be required to pay the cost of such construction. Where construction of a bridge benefits future developments, or cures a safety hazard affecting more than the proposed development, the Board of County Commissioners may establish a plan of compensation to the original developer whereby other beneficiaries pay a fair share for use of the bridge.
- e. Traffic safety:
- (1) Traffic control devices: All signs, striping, markers, delineators, signals, and other traffic control devices ~~must~~ **shall** conform to the requirements of the Manual on Uniform Traffic Control Devices, latest edition, hereinafter referred to as the MUTCD, published by the U.S. Department of Transportation, Federal Highway Administration. In new developments, all required street sign names, speed limit signs, stop signs, and other traffic control devices shall be paid for by the developer, and installed by the

County ~~unless otherwise approved by the County Engineer~~. Non-standard signs or other traffic control devices are subject to rigid control; and approval by the County Engineer shall be obtained for their use. All signing and striping plans shall be submitted to the County Engineer for approval.

- (2) ~~Signs within subdivisions, except for road name signs, are to be maintained by the developer or homeowners.~~
- (3) Sight distance triangle:

- (a) Determining dimensions and location of sight distance triangles: For safety and visibility purposes, a sight distance triangle shall be maintained at street intersections and where driveways intersect streets. The distances along the legs of the sight distance triangle shall be measured from the corner or intersection point along the rights-of-way lines or along the edge of the driving surface for driveways as shown in Figure ~~3-11~~ **5-11**. Where a road right-of-way is wider than normal or varies in width because it has been expanded to include cut and fill slopes or drainage improvements, the line along which the legs of the sight distance triangle are measured shall be parallel to the roadway at normal right-of-way width for the type of road under consideration.

No landscape materials, earth berm, signs, structures, or other visual obstructions shall be allowed between two and one-half (2½) feet and six (6) feet above the surface within the sight triangle. This regulation is not intended to prohibit the planting of trees or retention of existing trees in the sight distance triangle, if they are pruned so branches are higher than six (6) feet. ~~Installation of traffic control signs or signals and streetlights are exempt from this regulation.~~

- (b) Incorporating requirements for sight distance triangles into subdivision design: Developers shall incorporate the requirement for maintenance of a sight distance triangle at street intersections and intersections of driveways with streets in the design of subdivisions submitted for County review after the effective date of ~~these Standards~~ **this regulation**. ~~Particular attention shall be given to the size and shape of corner lots.~~

- (c) Enforcing requirement when ~~Land Use Certificates~~ **Building/Zoning Permits** are issued.

- (i) Where a ~~Land Use Certificate~~ **Building/Zoning Permit** is filed for property which is unplatted or was platted prior to the effective date of these ~~regulations~~ **Standards**, no ~~Land Use Certificate~~ **Building/Zoning Permit** shall be issued for a structure which interferes with maintenance of a sight distance triangle unless application of the requirement would result in peculiar and exceptional practical difficulties to, or exceptional and undue hardship upon, the individual proposing development of the property. The County Engineer shall have authority to

waive the requirement for maintenance of a sight distance triangle for such property only when an administrative relief does not create or compound a safety problem or concern.

(ii) Where an Application for ~~Land Use Certificate~~ **Building/Zoning Permit** is filed for property which was platted or re-platted after the effective date of ~~this regulation~~ **these Standards**, no ~~Land Use Certificate~~ **Building/Zoning Permit** shall be issued for any structure which would interfere with the maintenance of a sight distance triangle required by ~~this regulation~~ **these Standards**.

(d) Property owners shall be responsible for maintaining sight **distance** triangles free of visual obstructions for the portion of a triangle which falls within the boundaries of their property. When the County Engineer receives a complaint concerning visual obstructions at a particular intersection **or other locations**, the County Engineer shall be responsible for inspecting the intersection and for taking the following measures:

(i) ~~Determining~~ **whether** the visual obstruction is on public property, **then** requesting the appropriate jurisdiction remove the obstruction; ~~If the jurisdiction~~ **obstruction is in** the County **right-of-way**, ~~requesting assistance from the County Road and Bridge Department, if needed, and supervising~~ **may removal** of the obstruction; ~~and~~.

(ii) If the visual obstruction is on private property, notifying the property owner of the requirement that visual obstructions must be removed within thirty (30) days except as follows:

(A) The obstruction is a permanent structure which was ~~built~~ **built** prior to the effective date of ~~this regulation~~ **these Standards**, as long as it does not create a hazardous conditions; or

(B) Where the obstruction is caused by the natural or historic topography of the property and not by earthwork undertaken by the current property owner or his immediate predecessors, the property owner shall not be required to regrade his property in order to remove the obstruction.

If the property owner does not comply within thirty (30) days, further enforcement action shall be taken as provided in Chapter V, Section 8, ~~et seq.~~, of these **Standards and regulations**.

f. **Driveways and parking areas:**

(1) Requirement for ~~R.O.W.~~ **ROW** permit: Whenever a property owner, developer, contractor, or other individual proposes to connect a driveway or parking area to a public roadway, they must obtain a ~~R.O.W.~~ **ROW**

Permit from the County Engineer prior to commencing construction. The submittal requirements and procedure for obtaining R.O.W. ROW Permits are stated in Chapter V, Section 4, ~~et seq.~~, of these Standards and regulations.

- (2) Standards for driveway design: A driveway is defined as an access for vehicles providing a connection from a public or private roadway to either individual parcels, residences, or to a parking area serving multiple residences; commercial businesses; recreational, institutional or industrial land uses; or a combination of land uses. An access way serving a ranch or farm and any associated residence, regardless of length, shall be considered a driveway, and shall meet only such standards as are necessary for public health and safety. Maintenance of driveways, including but not limited to culverts, drainages, and surfacing shall be the responsibility of the property owner.

These This Standards shall only apply to that portion of the residential driveway that is within two hundred (200) feet of the centerline of the public roadway.

Access to uses, including multiple residences, commercial businesses, recreational, institution, industrial or a combination of land uses, shall conform to Table 5-10 and these Standards.

The actual location, width and construction requirements are dependent on the use of the driveway(s), including circular and/or multiple accesses and will be reviewed and approved by the County Engineer during the ROW Permit process.

- (a) Location of driveways relative to intersections: Driveways shall be placed so the following minimum distances are maintained to any street intersection, including a T-intersection on the opposite side of the street from a property where a driveway is proposed.
- (i) Where the driveway connects to a local access or low volume road, a minimum distance of fifty (50) feet from curve return to curve return shall be maintained.
 - (ii) Where a driveway connects to a collector or larger road, a minimum distance consisting of the left turn stacking distance plus twenty (20) feet as measured from curve return to curve return shall be maintained. The left turn stacking distance shall be determined by the County Engineer based on available data from an acceptable traffic study.
- (b) Spacing of driveways: Driveway openings shall be separated by at least thirty (30) feet as measured from curve return to curve return, or else shall be combined. More spacing may be required for traffic safety and proper traffic operation.
- (c) Shared driveways: Developers or property owners proposing the use of shared driveways shall record an easement defining the

location of the driveway and either a covenant or deed restriction requiring construction of the driveway at the location.

- (d) Driveway widths: The dimensions of driveway widths, openings, and ~~radius~~ radii shall be as shown in Table 3-10 5-10.

| TYPE OF SERVICE | MINIMUM DRIVEWAY | RETURN RADIUS MAXIMUM |
|---|------------------|-----------------------|
| Commercial/Other | 20 feet | * |
| Field Entrance | 10 feet | 10 feet |
| Residential Individual Residence a. serving 1 unit or less b. serving more than 2 units | 10 feet | 10 feet |
| Single Family Duplex or Multiple Residences | 18 feet | 10 feet |
| Multi-family | 18 feet | 10 feet |

* To be determined at time of site plan review

Note: Actual driveway widths shall be provided on ROW Permit and shall be approved by County Engineer or designee prior to construction.

- (e) Driveway grades: Driveways shall have a maximum grade of eight (8) percent, and shall provide a reasonable transition in terms of grade between the driveway and the roadway it joins over a distance of not less than twenty-five (25) feet. For single family residences and duplexes located on lots having difficult terrain, driveway grades may exceed eight (8) percent as long as a parking area adjacent to the roadway is provided and approved by the County Engineer.
- (f) Vehicle turnarounds: All driveways exiting onto roadways with average daily counts greater than five hundred (500) VPD shall be designed with a vehicle turnaround to avoid vehicles having to back onto the roadway when exiting.
- (g) Surfacing of driveways: Driveways serving single family residences or serving duplexes, where the road providing access to the duplexes is not paved, may be either graveled or paved. Where a driveway is to be graveled, the surface shall be constructed of six (6) inches of crushed road base compacted to ninety-five (95) percent standard proctor. Where a driveway is to be paved, the surface shall be constructed with a minimum of six (6) inches of compacted crushed road base compacted to ninety-five (95) percent and two (2) inches of asphalt. Driveways serving multi-family residences or commercial uses must shall be designed in accordance with Chapter V, Section 2.f.(2)(c) and Chapter V, Section 2.f.(2)(d) Section 2 of these Standards and regulations.
- (h) Provisions for drainage: Driveway design shall make adequate provision for drainage and prevention of erosion. All driveways

shall have **minimum** eighteen (18) inch diameter culverts to handle roadside drainage unless otherwise approved by the County Engineer.

(i) **Minimum site sight distance:** Driveway shall be designed and located to provide a minimum sight distance clear of all obstructions, natural or man-made, for at least two hundred (200) feet in either direction on local access roads and four hundred (400) feet on collector roads. **See Figure 5-11.**

(j) **Driveway Access Approach to Public Road:** Driveways shall be constructed to access perpendicularly to the public road. If perpendicular access to the public road is not feasible, then a request for waiver of the perpendicular requirement shall be submitted in writing to the County Engineer for review and approval.

(3) Standards for parking areas

(a) **Parking area grades:** Parking areas shall have a maximum grade of four (4) percent, and a minimum grade of (1) percent to facilitate drainage.

(b) **Surfacing of parking areas:** All parking areas shall be constructed with a minimum of six (6) inches of crushed road base compacted to ninety-five (95) percent standard proctor. Paving of two (2) inches of asphalt will generally be required when fifteen (15) or more parking spots are established for commercial or industrial facilities. Due to the frequency of use and specific function, the design and construction of parking lots comprised of fifteen (15) or more parking spaces shall be approved by the County Engineer. ~~Paving is not required for parking areas and drives serving single family units, or for duplexes where the road providing access is not paved. Parking areas and drives for all other development must be paved with a minimum of six (6) inches of road base compacted to ninety five (95) percent standard proctor and two (2) inches of asphalt. Paved parking areas shall be designed in accordance with Chapter V, Section 2.f.(3)(c) of these Standards and regulations.~~

(c) **Provision for drainage in parking areas:** Parking area design shall make adequate provision for drainage and prevention of erosion.

(d) **Placement of parking areas on fill:** If a parking area is to be placed on fill, the fill used shall be suitable material as specified by a registered geotechnical engineer. The fill shall be compacted to ninety-five (95) percent standard proctor with slopes at no more than three-to-one (3:1) and protected to prevent erosion from snow storage. Parking areas on fill may be designed using retaining walls as an alternative in accordance with the County's Zoning Regulations, and approved by the County Engineer.

g. **Landscaping:** Whenever roadway or bridge construction results in earth disturbance, revegetation and reforestation is required and shall be completed during the first planting season after construction. Native or similar horticultural material shall be used. All areas disturbed by construction operations not

otherwise covered by structures or pavement must be seeded, fertilized, mulched, planted and otherwise treated to provide an established stand of vegetation in accordance with WYDOT WPWSS Standards. Cut and fill slopes must be treated to prevent erosion. Areas not disturbed by construction shall be left in their present vegetative state, except the thinning of trees may be required.

SECTION 3: Road and Bridge Construction Specifications

a. Purpose and intent: This section sets forth specific standards for roadway and bridge construction in Park County, and is intended for use by developers, property owners, contractors, utilities, and others engaging in construction of new roads, upgrading of existing roads, building of bridges and other construction activities within the County road rights-of-way.

~~b. Note: This section moved to Chapter 5, Section 4. Closing of streets and roads:~~

~~(1) Notice and operation of road closure: Written authorization is required prior to any road closure. All requests for road closure must be submitted to the County Engineer at least forty eight (48) hours prior to the anticipated need for the closure. At a minimum, the following information shall be submitted with the request for closure:~~

- ~~• A traffic control plan following the requirements of the MUTCD, to include a detour plan or plan to maintain access for local residents;~~
- ~~• Reason and expected time frame for the closure; and~~
- ~~• List of names and phone numbers of responsible persons~~

~~Except in an emergency, contractors may close streets only after obtaining approval from the County Engineer, and notification of the Park County Sheriff's Department and the appropriate fire district.~~

~~The contractor shall furnish, erect, and maintain at their own expense, necessary barricades, suitable and sufficient flashers, and construction signs. Contractors shall also provide a sufficient number of certified flagmen and take necessary precautions for the protection of the work and safety of the public around their construction operations.~~

b. Construction of roads:

(1) Permits required for road construction: Whenever road construction within County Road rights-of-way results in earth disturbance, the individual responsible for the construction must obtain an approved for a R.O.W. ROW Permit from the County Engineer's office prior to commencing construction. The submittal requirements and procedure for obtaining R.O.W. ROW Permits are stated in Chapter V, Section 4, et seq, of these Standards and regulations.

(2) Construction testing: Quality control supervision of the construction shall be done by the developer's engineer a qualified geotechnical consultant at no expense to the County. The County Engineer shall be permitted access to the construction site at all times to make spot checks of quality control. Any additional testing or corrective work deemed necessary shall

be done within the time determined by the County Engineer at no expense to Park County.

- (a) Sampling of materials: Samples for preliminary approval or production control may be submitted by the producer to the ~~developer's engineer geotechnical consultant~~. The ~~developer's engineer geotechnical consultant~~ shall use an appropriate ASTM or AASHTO procedure to determine the acceptability or rejection of the sample.
 - (b) Periodic inspection during construction: The County Engineer ~~shall~~ **may** conduct periodic inspections during construction to assure compliance with approved construction plans. The County Engineer may establish specific checkpoints when inspections must be conducted and approvals granted before construction is continued. The contractor or developer ~~must~~ **shall** contact the County Engineer twenty-four (24) hours in advance of any required inspections.
 - (c) Final inspection: Upon completion of construction and prior to County approval of the completed work, copies of the "As-Built" plans, concrete cylinder test reports, compaction test reports, and other test data shall be delivered to the County Engineer. In addition, a certification shall be given by the developer's engineer that construction has been completed in conformance with the approved **construction plans** ~~lines, grades, and standards and specifications~~. The County Engineer may conduct an inspection to determine if the construction meets County Standards ~~and specifications~~. If the inspection discloses any work, in whole or in part, as unsatisfactory, the County Engineer shall give the developer's engineer the necessary instructions for correction, and the contractor shall comply with and execute such instructions. At the discretion of the County Engineer, the County may withhold the granting of future ~~Land Use Certificates~~ **Building/Zoning Permits** or ~~R.O.W.~~ **ROW** Permits until such time corrective work is completed.
- (3) Site preparation:
- (a) Utilities protection: The developer or contractor shall at all times take proper precautions to assure the protection of utilities, service lines, or other public or private installations, and shall be responsible for the repair of any damage. The developer or contractor shall notify ~~the One-Call of Wyoming utility companies~~ **not less than a minimum of two (2) full business days** ~~forty-eight (48) hours~~ before excavation begins so the utility company can locate the services. **Refer to W.S. §37-12-301 thru 305.**
 - (b) **Clearing and grubbing**: All large rocks, brush debris, structures, and all other unsuitable material shall be cleared to a depth of at least twelve (12) inches below subgrade or as ~~directed~~ **approved** by the County Engineer and replaced with suitable material. Locating suitable disposal sites shall be the responsibility of the contractor or developer, subject to County approval. Trees,

except those designated to be saved, and all stumps shall be removed to a depth of at least eighteen (18) inches below the finished subgrade elevation. All trees designated to be saved shall be protected during clearing and subsequent construction operations. Suitable material removed from the excavation may be used in so far as practical, in the formation of embankments, backfilling, and for other such purposes.

(4) Structural embankment construction: Embankment construction consists of constructing roadway embankments, including preparation of the areas upon which they are placed; constructing dikes within or outside the rights-of-way; placing and compacting of approved material within roadway areas where unsuitable material has been removed; and placing and compacting of embankment material in holes, pits and other depressions within the roadway area. Only approved materials shall be used in the construction of embankment and backfills.

(a) Benching: When an embankment is placed and compacted on slopes steeper than four-to-one (4:1), the roadway shall be continuously benched over those areas. A bench is required at vertical intervals of ten (10) feet maximum. Benching shall be well keyed and where practical, a minimum of eight (8) feet wide. Each horizontal cut shall begin at the intersection of the original ground and the vertical sides of the previous cuts. Material thus cut out shall be recompacted along with the new embankment material at the contractor's expense.

(b) Compaction: Minimum compaction shall be ninety-five (95) percent of the maximum dry density at \pm two (2) percent of the optimum moisture content as determined by ASTM D-698.

(c) Rip-rap: Where embankments encroach on stream channels or lakes, calculations of the flows or wave action shall be made and submitted to the County. Based on these calculations, the developer's engineer shall determine the appropriate size rip-rap, and this rip-rap shall be placed along the toe of the slope to protect the embankments against erosion from water action. Rip-rap shall be placed where the potential exists for erosion. The developer's engineer shall provide documentation supporting the size of rip-rap selected.

(d) Prohibited materials: Car bodies, waste concrete and asphalt waste products, organic, wet, frozen, or other unsuitable materials shall not be used for any structural embankment construction.

(5) Trench excavation: Trenches shall be excavated so that pipes can be laid straight at uniform grade, without dips or humps, between the terminal elevations shown on the drawings. ~~Wherever a trench passes through a fill or embankment, the fill or embankment material shall be placed compacted to an elevation twelve (12) inches above the top of the pipe before the trench is excavated.~~

(a) Trench widths: Trenches shall be excavated to a width which will provide adequate working space and side clearances for proper pipe installation, jointing, and embedment and compaction.

Minimum trench widths at or below an elevation six (6) inches above the top of installed pipe shall not be less than **outside diameter (OD)** plus twenty-four (24) inches. **All excavations to be in compliance with OSHA regulations.**

- (b) Excavation below pipe subgrade: Except where otherwise required, pipe trenches shall be excavated below the under-side of the pipe as shown in Figure 3-7 5-6 to provide for the installation of granular bedding material.
- (c) Bedding material: Approved bedding shall be used for all pipe installations or as specified on the plans.
- (d) Placement and compaction: Bedding material shall be spread, compacted, and the surface graded to provide a uniform and continuous support beneath the pipe at all points between bell holes or pipe joints.

After each pipe has been graded, aligned, and placed in final position on the bedding material and shoved home, sufficient pipe embedment material shall be deposited and compacted under and around each side of the pipe and back of the bell or end to hold the pipe in proper position and alignment during subsequent pipe jointing and embedment operations. Bedding material shall be deposited and compacted uniformly and simultaneously on each side of the pipe to prevent lateral displacement.

Approved bedding shall be compacted to a minimum of six (6) inches above the top of the pipe in all areas where compacted back fill is specified.

Whenever crushed rock is used as bedding for thirty-six (36) inch and larger pipe, the portion above the bottom of the pipe shall be vibrated with a mechanical vibratory compactor during placement to ensure that all spaces beneath the pipe are filled.

- (e) Backfill over concrete: All backfill over concrete shall conform to the following requirements.
 - (i) Initial Backfill: To aid curing, no more than eight (8) inches of loose backfill shall be placed over concrete after the concrete has reached its initial set.
 - (ii) Final backfill: Additional backfill shall not be placed over arch encasements or blocking until the concrete has been in place at least fourteen (14) days or until the concrete has reached eighty (80) percent of its ultimate **design** strength.
- (f) Compacted backfill: Compacted backfill ~~shall~~ **may** consist of job excavated material, finely divided and free from debris, organic material, cinders or other corrosive material, and stones larger than three (3) inches in greatest dimension. Masses of moist, stiff ~~clean~~ **clay** shall not be used. Job excavated materials shall be placed in uniform layers not exceeding eight (8) inches in

uncompacted thickness. The method of compaction and the equipment used shall be appropriate for the material to be compacted, and shall not transmit damaging shocks to the pipe. Job excavated material shall be compacted to ninety-five (95) percent of the maximum dry density at \pm two (2) percent of optimum moisture content as determined by ASTM D-698. Compacted backfill is required for the full depth and width of the trench above the bedding material within all rights-of-way and easements:

- ~~Beneath driveways, parking areas, road or other construction, or structures;~~
- ~~In driveway and parking area shoulders; and~~
- ~~Beneath fills or embankments.~~

- (6) Culverts for driveway crossings: This section covers corrugated metal pipe culverts used for driveway crossing.

Culvert sizing shall be in accordance with Chapter V, Section 2.c.(3)(~~d~~)(e) of these standards and regulations. ~~The minimum size allowed is eighteen (18) inch.~~ Corrugated metal pipe shall be furnished and installed with all jointing materials, accessories, and appurtenances as indicated on the drawings and as specified.

- (a) Material: Materials used for driveway crossings shall conform to the applicable ~~AASHTO provisions of the Standard Specifications for Highway Materials.~~ WPWSS for Storm Drains and Culverts.

- (i) Circular pipe: Corrugated metal pipe shall be ~~AASHTO M36-78 and~~ galvanized. ~~The~~ **and** corrugations may be annular or spiral with annular ends, as shown in Figure ~~3-8~~ **5-7**.
- (ii) Coupling bands: All field joints in corrugated metal pipe ~~will~~ **shall** be made with coupling bands, fabricated from the same material as the pipe. Coupling bands for field joints in corrugated metal pipe for all culverts shall be the pipe manufacturer's standard coupling band type.
- (iii) End sections: Flared metal end sections shall be provided on all culverts unless otherwise specified by the County Engineer. The end sections shall be fabricated from sixteen (16) gauge galvanized sheet metal for thirty (30) inch diameter and smaller pipe, fourteen (14) gauge for thirty-six (36) inch through forty-eight (48) inch, and twelve (12) gauge galvanized sheet metal for fifty-four (54) inch diameter and larger pipe. The end sections shall be provided with a rolled reinforced edge and a galvanized top finish plate.

- (b) Handling: Pipe, couplings, and accessories will be handled in a manner that will ensure installation in sound, undamaged condition. Equipment, tools, and methods used in unloading,

reloading, hauling, and laying pipe will be such that the pipe is not damaged.

(c) Cleaning: The interior of the pipe and any couplings shall be thoroughly cleaned of all foreign matter before being installed. Before jointing, all joint contact surfaces shall be wire-brushed, if necessary, wiped clean, and kept clean until jointing is completed.

(d) Installation:

(i) Installation requirements: Corrugated metal pipe shall be laid true to the grade required by the drawings, and shall be installed in accordance with the following requirements.

(A) Pipe: The pipe shall be installed in accordance with the details indicated on Figures 3-7 5-6 and 5-7 and the applicable portions of Chapter V, Section 3 of the excavation section. The pipe shall be protected from lateral displacement by means of an approved bedding material as specified for trench backfill. The minimum cover for corrugated metal pipe is twelve (12) inches.

(B) Couplings: Sections of the corrugated metal pipe shall be joined together using metal coupling bands, centered on the joint, with the pipe sections as close together as possible. Each coupling band shall be bolted in place and tightened sufficiently to ensure a tight joint and to form a continuous conduit capable of resisting all stresses.

(C) Flared end sections: The end sections shall be attached to the culvert by threaded rod and connecting lug.

(D) Rip-rap: If required, culverts shall have a rip-rap bed of ten (10) feet by ten (10) feet at the inlet and outlet for erosion control. The rip-rap shall consist of hard, dense, sound, rough fractured stone as nearly cubic as practical and a minimum $d_{50} = 18"$. Slab type stones and flaking rock shall not be used. Alternate rip-rap size may be approved by County Engineer provided developer's engineer provides supporting documentation or reference for a different size rip-rap.

(ii) Use of culverts at access point to roads: Driveways or road connections to a County road shall not be constructed in such a way as to impede the normal flow of drainage in roadside ditches, culverts, underdrains, bridges, or other drainage works, or to cause such drainage to flow onto or across the driving surface of a County road. In the event that such an impediment

results in damage to a County road, the Road and Bridge Department will remove the impediment and bill the property owner for the costs of repairs to the road, including labor, equipment, and materials.

In certain instances, a culvert may not be required by virtue of the topography. **This shall be determined during the ROW Permit process.** ~~In that event, a written waiver must be obtained from the County Engineer. Such a waiver does not constitute a waiver of the R.O.W. Permit, inspection of the access, or any other requirements of the access.~~

- (7) Borrow: In the event sufficient suitable fill material is not obtainable within the limits of the project to provide all the embankment required, the contractor shall furnish such additional fill material (borrow) to complete the designated embankment. Borrow shall be an acceptable type of embankment material **selected by** and ~~shall be~~ approved by the County Engineer **and developer's engineer** before being placed.
- (8) Sub-grade: The bottom of the excavation for the ~~pavement~~ **road section**, or top of the fill, shall be known as the ~~pavement~~ sub-grade and shall conform to the lines, grades, and cross sections shown on the approved plans.

Prior to the ~~street~~ **road** being excavated, all service cuts shall be tested to see if the backfill meets density requirements. If deficient, they shall be re-compacted and brought up to the density specified.

After excavation and embankment is completed and the sub-grade brought to final grade, it shall be rolled with a rubber-tire, sheep foot roller, or other compaction equipment as required to bring the sub-grade to the required density and stability. All soils shall be compacted to a minimum of ninety-five (95) percent of standard proctor maximum dry density as determined by ASTM D-698. The minimum moisture content shall not be less than two (2) percent below "Standard Optimum **Moisture.**" ~~Additional wetting may be required when the minimum water requirement is not sufficient to produce a stable condition in the sub-grade soil.~~

No ~~paving,~~ sub-base, or base shall be placed on soft, spongy, frozen, or unstable sub-grade which is considered unsuitable by the County Engineer.

Should the finished sub-grade not be compacted under the oversight of a developer's engineer, heavy construction equipment or loaded trucks (over 50,000 lbs. tandem) shall be driven over the finished sub-grade and deflections noted. Soft and yielding material and portions of the sub-grade which show deflection shall be scarified and re-rolled, or shall be removed and replaced with approved ~~course~~ sub-grade material, then placed and compacted as specified herein. Sub-grade shall not be approved for ~~base~~

~~course~~ **further road** construction until it is uniformly stable and unyielding. The County Engineer or designated representative shall be present to inspect the proof rolling operation.

(9) Sub-base construction, **as necessary by design**:

(a) Materials: Sub-base material shall be composed of granular material consisting essentially of sand, gravel, rock, slag, disintegrated granite, or a combination of such materials. The ~~course~~ **coarse** portions of the material shall be sound fragments of the crushed or uncrushed materials enumerated above. Supplied material shall be a well-graded mixture containing sufficient soil mortar, crushed dust, or other proper quality binding material which, when placed and compacted in the roadway structure, shall result in a firm, stable foundation. Material composed of uniform size particles, or which contains pockets of excessively fine or excessively coarse material, shall not be acceptable for use.

The material need not be crushed, but shall be graded within the following limits:

| Table 3-11 5-11 SIEVES | |
|-------------------------------|---------------------------|
| STANDARD SIZE OF SIEVE | % BY WEIGHT PASSING SIEVE |
| 2 ½" | 100% |
| 2" | 95% - 100% |
| No. 4 | 30% - 60% |
| No. 200 | 5% - 15% |
| Liquid Limit | 35% Maximum |
| Plasticity Index | 6% Maximum |

(b) General: The specifications presented in this subsection are performance oriented. The objective in setting forth these specifications is to achieve an acceptable quality of roadway structures. ~~All sources, mined or manufactured, must be annually approved by the County Engineer as having met the appropriate material performance specifications. This approval is a condition of using those material sources for public and private improvement construction.~~

(c) ~~Violations of approval conditions~~ **Random tests**: The County Engineer may order random tests of materials used in the County to verify compliance with material specifications. Any and all materials used to construct public and private improvements, that **is are** not ~~from~~ **from** a certified source, or ~~that is are~~ from a certified source and fails one (1) or more random material tests, shall be subject to complete removal. The extent of the material to be removed shall be at the discretion of the County Engineer.

(d) Use of materials not listed: Materials listed in this subsection and provided with a set of specifications are those deemed to be the primary structural materials commonly or typically used in public

and private improvements. ~~Ancillary public and private improvement materials, such as manufactured paints and coating, bonding agents, sealers, gaskets, insulating materials, etc., should be in compliance with WyDOT Material Specifications for the appropriate materials employed.~~ Alternative materials for construction may be proposed for use, except where expressly prohibited. Decisions on acceptability of alternative materials shall be made by the County Engineer.

- (e) Construction: The construction of sub-base shall consist of furnishing and placing approved sub-base material to form a stable foundation on which to construct **crushed** base course, in conformity with the lines, grades, and typical cross sections shown on the plans. In addition, sub-base material shall be used to replace unsuitable foundation materials at locations shown on the plans, or as directed by the County Engineer.

Each layer of material shall be placed and spread so that after compaction it shall conform to the width and crown of the typical cross sections. The wetting of sub-base layers shall be done with sprinkling equipment of a type which ensures uniform and controlled distribution of the water. All wetting shall be done by uniformly sprinkling each layer of material being placed with only that amount of water needed to obtain maximum density of the material.

Travel may be allowed over sub-base to assist in compaction of the material. Mixing and blading of the sub-base material on the ~~street~~ **road** shall be required if the material is spotty and non-uniform. However, blading shall be held to a minimum in order to avoid the floating of the heavier rock particles to the surface.

- (10) **Crushed road** base course:

- (a) **Crushed road** base course specifications: Placement of **crushed road** base material shall conform to the lines, grades, cross sections, and thickness shown on the approved plans. **Crushed road** base material shall conform to WyDOT **WPWSS** Grading "H" or "W" Specifications. Use of Grading "H" is preferred, when available. When placed and compacted, it shall result in a firm, dense, unyielding foundation.

- (b) Compaction of **crushed road** base course: **Crushed road** base material shall be deposited and spread without particle segregation in loose layers not to exceed eight (8) inches in depth or, when compacted, the layer shall have a thickness not to exceed six (6) inches. The material shall be compacted to at least ninety-five (95) percent of the maximum dry density as determined by ASTM D-698 and the moisture content must be no more than \pm two (2) percent of the optimum. Rolling equipment shall consist of one (1) or more of the following: rubber tired roller, ~~sheep foot roller,~~ or flat wheel steel roller.

Crushed road base course shall not be placed upon a soft, spongy, frozen sub-grade or sub-base.

- (c) ~~Wetting operations: concurrently with the wetting operations, the material shall be uniformly compacted by rolling. Rolling equipment shall consist of one (1) or more of the following: rubber tired roller, sheep foot roller, or flat wheel steel roller.~~ The wetting of sub-base layers shall be done with sprinkling equipment of a type which ensures uniform and controlled distribution of the water. All wetting shall be done by uniformly sprinkling each layer of material being placed with only that amount of water needed to obtain maximum density of the material.
- (11) Trenching, backfilling, and reconstruction of road surfaces: The method used in trenching for underground utilities and for backfilling trenches shall comply with the requirements of these Standards and the WPWSS requirements for Trench Excavation regulations. Jetting of backfill is not permitted within County rights-of-way.

Upon completion of installation, the roadway shall be repaired or reconstructed as required using the specifications contained in these regulations Standards for sub-base preparation, base course material thickness and compaction, and final surfacing so as to restore the roadway to current construction standards for that type of road.

- (a) Gravel roads: Suitable material excavated from trenches may be used for backfill, subject to approval of the County Engineer. At no time shall contaminated, wet, soggy, frozen or other unsuitable material be used as backfill. If proper backfill is not available at the site, suitable material shall be imported and unsuitable material removed from the site. Compacted backfill shall extend to the sub-grade of the road or to natural ground (see Figure 3-8).
- (b) Paved roads: Following approval by the County Engineer, all cuts made in asphalt or concrete surfacing shall be made mechanically, cutting a horizontal and vertical line, and shall be cut ten (10) twelve (12) inches wider than the edges of the trench or the damaged area. The final pavement cut shall not be made until immediately prior to patching. All excavations made in paved streets roads shall be completely restored as soon as possible, but in no case longer than thirty (30) days after backfill is completed

In the event weather conditions preclude restoration by a permanent hot bituminous mix asphalt pavement, temporary repairs may be made by tamping and rolling into place a cold mix asphalt. Such cold mix patches shall be removed and replaced by a permanent hot bituminous mix asphalt pavement as weather and availability of materials permit. Permanent hot mix patches shall be no less than four (4) inches in thickness, or not less than the thickness of the existing pavement, plus one (1) inch adjacent

to the excavation, whichever is thicker. Permanent patches shall be installed in accordance with Figure 3-6 5-5.

Damaged pavement shall be repaired by appropriate methods as approved by the County Engineer. In general, cracks shall be filled with an approved crack filler, and chip sealed. An overlay with pavement fabric, the full width of the paved surface, shall be required in those instances where, in the opinion of the County Engineer, the ride quality, safety, or appearance of the finished roadway has been impaired. Sub-grade failures caused by the permittee's operation of heavy equipment shall be rectified by reconstructing the **pavement** sub-grade layers, and replacing the sub-base, **crushed base**, and paving.

The County Engineer shall use the following criteria in evaluating the requirements of an overlay:

- (i) Four (4) or more cuts are made within a one thousand (1,000) foot section;
- (ii) There is no more than \pm three-eighths (3/8) inch deviation in the roadway surface in a ten (10) foot span; or
- (iii) Construction traffic has caused rutting, raveling, or shoving of the existing pavement surface.

d. Bituminous materials:

- (1) General: The intent of this section is to specify materials and methods to be used for the construction, overlaying, seal coating, and pavement rejuvenating of roads, parking lots, walks, and other miscellaneous work requiring the use of aggregates. The work covered shall include general requirements that are applicable to aggregate base course, **bituminous base** and pavements of the plant mix type, bituminous prime coat, bituminous tack coat, **bituminous chip seal coat**, rejuvenating applications, and asphalt concrete overlay.

All workmanship, and materials, and methods of preparation and construction shall be in accordance with specifications in these Road & Bridge Standards and **WPWSS requirements for Plant Mix Pavements** and in conformity with the lines, grades, depths, quantity requirements, and the typical cross section shown on the plans or as directed by the County Engineer.

~~The hot bituminous pavement shall consist of mineral aggregate, uniformly mixed with asphaltic cement, laid upon the prepared base to the final thickness shown on the plans. The mineral aggregate shall be one hundred (100) percent crushed gravel. All materials, methods of preparation and construction shall conform to WyDOT Specifications, Section 401.~~

- (2) **Hot mix plant asphalt** bituminous pavement: All pavement shall be hot **mix asphalt** bituminous pavement of the plant mix type unless otherwise approved in writing by the County Engineer. ~~The asphalt cement shall be~~

AC 10 or 20 penetration grade. The gradation of the mineral aggregate shall be Grading A (1 inch maximum) for new and reconstruction. Grading C (½ inch maximum) maybe used for overlay, or in special cases, as authorized in writing by the County Engineer.

All testing done throughout this construction period which is necessary to assure conformance of materials and workmanship to the specifications shall be at the developer's expense. Two (2) copies of all test reports shall be submitted directly to the County Engineer.

When tested, the mixture shall conform to the following limits:

| Table 3-12 MIX DESIGN CRITERIA FOR ASPHALT CONCRETE | | |
|---|-------------------------------------|-----------------------|
| TEST | MARSHALL (50 blows) AASHTO T-245 | HVEEM AASHTO T-246 |
| Strength | 1500, Minimum | Rt 90, Minimum |
| Flow, 0.01" | 8-18 | ---- |
| VMA, (A Mix) | 14, Minimum | 14, Minimum |
| VMA, (C Mix) | 15, Minimum | 15, Minimum |
| Air Voids, Total Mix % | 3-6 | 3-6 |

Determination of the effect of water on the cohesion of the bituminous mixture shall be made in accordance with AASHTO T 165. Retained strength shall be a minimum of seventy five (75). The use of an "antistripping" admixture to improve the retained strength characteristics shall be permitted only by written permission of the County Engineer.

- (a) Hot bituminous **plant mix asphalt** pavement: This material shall consist of a mixture of aggregate, filler (if required) and asphalt cement. The aggregate mixture **The job mix formula or mix design** shall meet the grading requirements of **WyDOT 404 WPWSS for Aggregates, Plant Mix Pavements** and the job mix formula. Tests on the aggregates for cleanliness, abrasion loss, and fractured faces shall meet the requirements shown below. The job mix formula shall establish a single percent passing each sieve size, an optimum percent of asphalt cement to be added to the aggregate, and a recommended mix temperature when discharged at the plant.

| Table 3-13 MATERIAL SPECIFICATIONS FOR HOT BITUMINOUS PAVEMENT | | |
|--|------------------------------|-------------------------------------|
| SIEVE SIZE OR TEST PROCEDURE | PERCENT PASSING OR GRADING A | TEST REQUIREMENT E OR GRADING C MIX |
| 3/4 | 90-100 | 100 |
| 1/2 | 60-85 | 90-100 |
| 3/8 | -- | 60-85 |
| #4 | 40-60 | 40-60 |
| #8 | 25-45 | 25-45 |
| #30 | 10-30 | 10-30 |
| #200 | 2-7 | 2-7 |
| % Wear, AASHTO T-96 | 45, Maximum | 45, Maximum |
| 1 Crushed Face on #4 | 50, Minimum | 50, Minimum |
| Index of Retained Strength ASTM D-1075 | 75, Minimum | 75, Minimum |

(i) — Aggregates shall not contain clay balls, organic matter, or other deleterious substances.

(ii) — After the job mix formula is established, all mix furnished for the project shall conform to it within the following range of tolerances:

| Table 3-4 MIX TOLERANCES | |
|---------------------------|-------------------------|
| MAXIMUM SIZE | ± 0 PERCENTAGE POINTS |
| Passing No. 8 and larger | ± 7 percentage points |
| No. 8 to No. 100 | ± 5 percentage points |
| Passing No. 200 | ± 3 percentage points |
| Asphalt Content | ± 0.5 percentage points |
| Discharge Mix Temperature | ± 20° F |

(iii) — An additive may be used to meet the requirement for Index of Retained Strength, if necessary. Such additives may be hydrated lime, Type I Portland cement, or anti-stripping agents approved by WyDOT.

(iv) — A mix design, including the job mix formula, shall be submitted for review and approval a minimum of seven (7) days prior to placing mix on the project. The mix design shall be performed using either the Marshall or Hveem Procedures as outlined in the Asphalt Institute, Mix Design Methods for Asphalt Concrete (MS-2). Mix design parameters for each of the procedures are shown in Table 3-12.

(i) The job mix formula shall be submitted for review and approval a minimum of seven (7) days prior to placing mix on the project. The mix design shall be performed using either the Marshall or Hveem Procedures as

outlined in the Asphalt Institute, Mix Design Methods for Asphalt Concrete (MS-2), current edition.

- (ii) An additive may be used to meet the requirement for index of Retained Strength, if necessary. Such additives may be hydrated lime, Type I Portland cement or anti-stripping agent as identified in WYPWSS, Specifications for Plant Mix Pavement.
 - (iii) After the formula is established, all mix furnished shall conform to it within the following range of tolerances.
 - (b) All commercial testing and laboratory work necessary to establish the job mix formula and all testing necessary to assure conformance of materials and workmanship to the requirements of the specifications throughout the construction period shall be performed at the developer's expense. Two (2) copies of all test reports shall be submitted directly to the County Engineer.
- (3) Tack coat: When tack coat is specified on the approved plans or required by the County Engineer, all materials, application and construction shall be in accordance with the requirements of the ~~WyDOT Standard Specifications, Section 407~~ WPWSS requirements for Bituminous Materials and Tack Coats. Bituminous material shall be ~~CGS-I or CSS-1H emulsion, diluted by mixing one (1) gallon of CSS-I or CSS-1H emulsion with one (1) gallon of clean water, applied at the rate of 0.05 to 0.15 gallons per square yard.~~ The type of bituminous material, cover aggregate and rates of application shall be as shown on the approved construction plans.
- (4) Seal coat: When seal coat is required, all materials and construction shall be in accordance with the requirements of the ~~WyDOT Standard Specifications, Section 409~~ WPWSS requirements for Bituminous Materials and Seal Coats. The type of bituminous material, cover aggregate, and rates of application shall be as shown on the approved construction plans.
- (5) Grinding: Grinding shall consist of "milling", "grinding", or "cold planing" the existing pavement surface to establish a new surface profile and cross section in preparation for a bituminous overlay. After grinding, the surface shall have a grooved or ridged finish, uniform, and resistant to raveling or traffic displacement. This textured surface shall have grooves of one-fourth (1/4) inch plus or minus one-eighth (1/8) inch. The existing surface to be ground shall include bituminous pavement, concrete utility patches, and a very small amount of concrete pavement.

~~"Wedge cut" grinding shall consist of grinding the existing pavement surface a minimum of four (4) feet wide at the existing concrete gutter. The edge of the gutter end of the finished wedge cut shall be one (1) to two (2) inches below the edge of the existing concrete gutter. The centerline of street edge of the wedge cut shall be cut one eighth (1/8) inch. The depth of cut shall be determined by measuring to the top of the ridges by placing a five (5) foot straight edge perpendicular to the grooving pattern. "Full width" grinding shall consist of grinding the existing~~

~~pavement surface from edge of pavement to edge of pavement to a minimum depth of two (2) inches unless otherwise directed by the County Engineer.~~

Grinding around utility castings to the depth of cut ~~before and after encountering the castings~~ shall be included in the area of the pavement surface ground. The contractor may choose to remove the entire existing bituminous pavement around the castings where grinding is not completed, and replace it with bituminous surface course, placed and compacted in three (3) inch lifts. The contractor shall vertically cut the limits of the area to be patched, mechanically compact the existing base course, and prime the bottom and vertical edges before backfilling.

~~The grinding machine shall be a power operated, self-propelled machine, having a cutting drum with lacing patterns that shall attain a grooved surface and produce grinding chips of less than one (1) inch in size. The grinding machine shall be equipped with a pressurized watering system for dust control. The equipment shall be a type that has successfully performed similar work.~~

The contractor shall remove the cuttings immediately behind the grinding machine by belt loader end loader, power sweeper, and/or by hand. The removed material shall be disposed of as approved by the County Engineer.

The **grinding and** cleaning equipment shall be a type which shall efficiently remove all loosened material, load it into trucks for hauling and spreading, and utilize a watering system for dust control.

- e. Bituminous construction requirements:
 - (1) General conditions: Bituminous plant mix **pavement construction shall meet the WPWSS requirements for Plant Mix Pavements.** ~~be placed only on properly constructed and accepted layers that are free from water, snow and ice. The bituminous mixture shall be placed within the air temperature limitations as shown in Table 3-15 and only when weather conditions otherwise permit the pavement to be properly placed and finished.~~

| Table 3-15 PLACEMENT TEMPERATURE LIMITATIONS FOR ASPHALT PAVEMENT | |
|---|-----------------------------|
| COMPACTED THICKNESS | MINIMUM PLACEMENT AIR TEMP. |
| <u>Top Layer of Completed Pavement</u> | |
| — 1½" to 2½" | 50°F |
| — More than 2½" | 40°F |
| <u>Layers Below the Top Layer of Compacted Pavement</u> | |
| 1½" to 2" | 40°F |
| 2" to 3" | 40°F |
| 3¼" to 4" | 40°F |
| More than 4" | 40°F |

Note: Temperature must be rising.

Base or surface temperature shall not be less than the specified air temperature.

~~(2) — Pavement thickness: When asphaltic concrete pavement thicknesses in excess of three (3) compacted inches are called for, they shall be laid in separate courses of not less than one and one half (1½) inches nor more than three (3) inches. The thicknesses called for are finished thicknesses after compaction.~~

~~(3) — Joints: Longitudinal and transverse joints shall be well bonded and sealed. Joints shall be tacked where necessary to obtain this result. IN making the joint along any adjoining edges such as curb, gutter, or an adjoining pavement, and after the hot mixture has been placed by the finishing machine, just enough of the hot material shall be carried back to fill any space left open. The joint shall be properly set up with the back of a rake at proper height and level to receive the maximum compression under rolling.~~

~~Joints between old and new pavements or between successive days work shall result in a thorough and continuous bond between the old and new services. The edge of the previously laid course shall be cut back to its full depth to expose a fresh surface, after which the hot mixture shall be placed against it and raked to a property depth and grade. Hot smothers or tampers shall be used to heat the previously laid pavement (without burning it) to ensure a proper bond. Before placing mixture against them, contact surfaces or curbs, gutters, headers, manholes, etc., shall be tacked.~~

~~(4) — Irregularities: Immediately after the course is screened and before roller compaction is started, the surface shall be checked, and inequalities adjusted, all irregular accumulations from the screen removed by a rake or hoe, and all fat spots removed and replaced with satisfactory material. Irregularities in alignment and grade along the outside edge shall also be corrected by the addition or removal of mixture before the edge is rolled. Special attention shall be given to the straightening of each course immediately following the initial rolling.~~

~~(5) — Final compaction: Final compaction shall result in a course which is smooth and true to the established crown and grade. It shall have the average thickness specified and shall at no point vary more than one fourth (¼) inch from the thickness specified. Any mixture that becomes loose and broken, mixed with dirt, or in any way defective, shall be removed and replaced with fresh hot mixture, which shall be compacted to conform with the surrounding area. The surface of the finished pavement shall be free from depression exceeding one fourth (¼) inch in ten (10) feet as measured by a ten (10) foot straight edge measured in any direction or an automobile mounted recording profilometer.~~

~~(6) — Testing after final compaction: The asphalt concrete pavement shall at no point have a density less than ninety-three (93) percent of the maximum density possible to obtain a voidless pavement composed of the same material in like proportions. Field density determinations will be made in accordance with~~

~~AASHTO T-230 (Wyoming modified) or the use of properly calibrated nuclear density gauges.~~

- f. Roads built on unstable ground: Where conditions require that a road be constructed on unstable ground (i.e. soft, soggy, or otherwise unstable or unsuitable ground) a special geotechnical investigation and pavement design **may shall** be required by the County Engineer.

~~Should the applicant decline to have a geotechnical investigation and design completed, then the applicant may utilize other methods or materials, if approved by the County Engineer and the Road & Bridge Foreman, to stabilize the area and construct the roadway in accordance with these standards.~~

- g. As-built record drawings: Prior to granting construction acceptance, as-built drawings are required on all construction. As-built drawings **shall include revision blocks, as necessary, and** shall be signed and sealed by a **Wyoming Professional Engineer**. The as-built drawings ~~and elevations~~ will be field checked by the County Engineer.

Should the County Engineer determine that the as-built **drawings** do not correctly represent constructed field data, the as-built **drawings** will be returned for verification and correction.

As-built drawings shall include, but not be limited, to, the following information:

- (1) Plan:
- (a) Property and/or ~~rights~~-of-way lines, easement and/or tracts. Type and dimension of easement or tract clearly labeled: property lines and ~~rights~~-of-way lines dimensioned;
 - (b) Lots and blocks shown and numbered;
 - (c) All ~~concrete walks, curb and gutter, bike paths, cross paths,~~ drainage **facilities, including culverts, detention, retention areas, drainage channels and erosion controls** ~~channels, etc.,~~ to be shown;
 - (d) Survey lines and stations, based on centerline stationing. Stationing equated to flow-line at bubbles, cul-de-sacs, horizontal curves, and other departures from normal ~~street~~ **road** cross-section, and two hundred (200) feet from all intersections;
 - (e) **Road Streets** and **road street** names, ~~indicate~~ **including road street** width;
 - (f) Match-lines referring to next sheets of design;
 - (g) Station and elevation (flow-line) of all curb returns, horizontal P.C.'s, P.T.'s, etc., also the high or low point on all vertical curves;
 - (h) Directional flow arrows on each side of the ~~street~~ **road**;
 - (i) Curb return radius, existing and proposed;
 - (j) Complete horizontal curve data, radius, delta, length, tan, cord, cord bearing.
 - (k) Centerline stations of all intersecting ~~streets~~ **roads**;

- (l) Survey line ties to section corners and quarter corners;
 - (m) Handicap and mid-block ramp locations;
 - (n) All storm sewer laterals, mains, or trunk lines shall be tied to perpendicular off the centerline;
 - (o) Storm sewer manholes, numbered and stationed;
 - (p) Inlets numbered and stationed;
 - (q) Size, type of pipe, slope, and footage noted between all manholes, appurtenances, and inlets; and
 - (r) Benchmark description with elevations;
 - (s) Mailbox locations;
 - (t) Revegetation Plan; and
 - (u) Traffic control and sign plan.
- (2) Profile: Existing ground profile (dotted or dashed) and labeled;
- (a) All as-built elevations shall be centerline, flow-line, or invert of pipe; top pipe is acceptable for existing utilities;
 - (b) Centerline or flow-line stationing continuous for entire length of road street of project with centerline station of all intersectiong streets roads;
 - (c) Existing improvements in the profile shall include, but not be limited to, sidewalks, curbs, and gutters, with certified as-built grades and elevations;
 - (d) Existing and proposed utilities including, but not limited to, water, gas, telephone, storm sewer, sanitary sewer, irrigation ditches, electric, structures, cable, conduits, and under-drains where crossed with grades and elevations;
 - (e) Invert elevations at all stubs;
 - (f) Station and elevation of all horizontal P.C., P.T., etc., existing and proposed;
 - (g) Station and elevation of grade breaks, existing and proposed;
 - (h) As-built construction, including stations and elevations (vertical curves, with VPI, VPC, and VP high and low point, not the middle ordinate. Stations and elevations, sight distance, safe speed per the AASHTO recommendations);
 - (i) Curb return profiles;
 - (j) Storm sewer manholes numbered, stationed, rim elevations, and invert elevations (E., W., N., and S.) and dimensioned offset from centerline;
 - (k) Size, type of pipe, footage and slope (in Percent) of storm sewer between manholes and inlets; and
 - (l) Match-lines indicating references to next sheets.

- (3) Details: Details of special conditions and construction shall be **certified** as-built.
- h. **Landscaping installations:** Earth-cuts, embankment slopes and all other areas where the ground cover has been disturbed during the course of road construction shall be well revegetated and reforested equal to or better than conditions existing prior to construction. Landscaping material shall be installed in accordance with plans approved as part of any ~~grading~~ **ROW** permit **and/or approved construction plans**, and shall be fertilized, mulched, watered, and otherwise treated to provide an established stand of vegetation by the end of the first full growing season after completion of construction. ~~The individual responsible for road construction shall post a performance bond guaranteeing the revegetation and reforestation for at least two (2) full growing seasons following installation.~~ **All Landscaping shall conform to these Standards and the WPWSS requirements for Landscaping.**
- i. **Specification by reference:** All applicable specifications of agencies or organizations listed in Appendix ~~D~~ **24 are made a portion of these Standards and Specifications by reference, and shall be the latest edition or revision thereof.**

SECTION 4: Right-of-Way (R.O.W. ROW) Permits

- a. **Purpose and intent:** A ~~R.O.W.~~ **ROW** Permit shall be obtained whenever a developer, contractor, property owner, utility company, or other individual proposes to install utility lines or culverts **or do any work** in County road rights-of-way. ~~R.O.W.~~ **ROW** Permits are required to assure the method of installation meets the specifications in these **Standards regulations, provide for the safety of the public, follow generally accepted engineering practices** and adequate re-vegetation of disturbed areas outside the roadway is done. They are also intended to assure adequate reconstruction and/or repair of any damage caused to County roads or road rights-of-way.

Road cuts are discouraged by Park County on paved roadways. All paved roadways shall be bored unless a bore would create an unsafe or hazardous condition. If, after the contractor attempts a bore, and the bore is shown to be physically impossible using standard boring techniques, the County Engineer may allow an open cut. Open cuts will only be allowed when the County Engineer determines that a bore is impossible based on a field inspection of the bore location.

If an open cut is allowed, the contractor, at his own expense, shall meet the following minimum criteria:

- (1) Submit a Traffic Control Plan for approval;
- (2) Install and maintain all traffic control devices prior to the start of **and during** construction;
- (3) Work continuously to complete the work as expeditiously as possible;
- (4) Trench backfill shall be made with WPWSS Grading “W” crushed base compacted to ninety-five (95) percent Standard Proctor at \pm two (2) percent of optimum moisture in accordance with ASTM D-698, or with an approved lean concrete slurry. Compaction by flooding the trench ~~will~~ **shall** not be allowed; and

(5) Any other requirements deemed necessary by the County Engineer and the Road and Bridge Foreman.

- b. **Surety:** Before issuance of a ~~R.O.W.~~ **ROW** Permit, the County Engineer may require the applicant to post surety, in the form of a bond, letter of credit, cashier's check or other approved form, in an amount sufficient to complete the project or restore the construction area. The estimated costs shall be costs for the County to complete the project, including all legal and administrative costs.

Criteria to be used in determining whether a surety will be required may include, but is not limited to:

- (1) Estimated cost of the project. If the project's estimated costs are less than seven hundred fifty dollars (\$750.00), generally, a surety will not be required;
- (2) Location of the proposed work. If the work involves cutting or disturbing a paved roadway, a surety will **may** be required; and
- (3) Past experience with the contractor/developer.

Except for emergencies, if the work and installation are not completed as stated and in accordance with ~~the~~ **these** Standards and specifications determined by the County Engineer, the County shall give written notice of the defects to the permittee at least thirty (30) days prior to the expiration date of ~~the~~ **any** bond. The notice shall also state ~~that~~ the bond will be called unless satisfactory corrective work is done within twenty (20) days of the notice. If satisfactory corrective work is not done within the required time limit, the work shall be in default and the County shall call the bond. In an emergency, the contractor shall make modifications immediately to protect the health, safety, and welfare of the public.

To maintain a reasonable uniform road surface appearance, the County Engineer may require a chip seal over the area of disturbance plus ten (10) feet on either side. Should this be required and the contractor is unable to chip the area due to weather or other causes, the contractor may bond the work or a cost shall be determined by the County Engineer and invoiced to the contractor upon completion of the chip surfacing by the County.

- c. **Submittal requirements for ~~R.O.W.~~ ROW permits:** Applications for ~~R.O.W.~~ **ROW** Permits shall be submitted to the County Engineer for review and action. Approval shall be granted only if the proposed work meets the **purpose, intent and** specifications in these ~~regulations~~ **Standards**, and ~~the~~ **any** required fees ~~have~~ been paid.

Approval of a ~~R.O.W.~~ **ROW** Permit may be accompanied by any conditions deemed reasonable by the County Engineer to ~~ensure~~ **assure** protection of health, safety, and welfare of the public, the protection of public facilities, and compliance with these ~~regulations~~ **Standards**.

Applications for ~~R.O.W.~~ **ROW** Permits shall be submitted at least ~~three (3)~~ **four (4)** **business** days prior to planned commencement of construction for minor

installations, which may include, but not be limited to, mailbox and turnout installations, driveways and minor utility work. ~~and ten (10) to thirty (30)~~

Twenty (20) business days prior for major installations, which may include utility and irrigation installations and subdivision access(es), applications for ROW Permits shall be submitted.

ROW permits will not be issued more than sixty (60) business days in advance of any installation. Construction ~~cannot~~ shall not commence without an approved R.O.W. ROW Permit.

Consideration shall be given to how the proposed installation affects County road maintenance and improvement programs.

Approval shall be granted only if the proposed installation meets ~~the~~ these Standards and specifications in these regulations, the required fees paid, and surety posted, if required.

The R.O.W. ROW Permit must be signed by the County Engineer and ~~the~~ a Road and Bridge Foreman for approval.

The following information, including specific dimensions for lengths, widths and relative locations must be submitted with any application for a R.O.W. ROW Permit, unless specific items are waived by the County Engineer as unnecessary:

- (1) Fee as required by resolution of the Board of County Commissioners;
- (2) Completed permit form;
- (3) Permit submittal requirements:
 - (a) For minor installations, sketch plan showing the following:
 - (i) Location of all any excavations using dashed lines;
 - (ii) Location of road and road rights-of-way;
 - (iii) Location of any driveways;
 - (iv) Existing structures, if any; and
 - (v) Proposed structures, including any garages;
 - (b) For major installations, construction plans and specifications
 - (i) All required items as outlined for minor installations;
 - (ii) Evidence of legal access, easements, etc;
 - (iii) Construction schedule: As part of its approval of any permit, the County Engineer shall review and approve a construction schedule. The approved schedule shall not be changed after the permit is issued without the written consent of the County Engineer; and
 - (iiiiv) Traffic Control Plan, in conformance with the MUTCD.
- (4) Additional Access permit submittal requirements: In addition to the requirements listed above, the following shall may also be included

required in the permit application for an ~~R.O.W.~~ **ROW** Permit. At a minimum, a site plan showing the following information:

- (a) Well location, if any;
 - ~~(a) Existing structures if any;~~
 - (b) Septic system location, if any;
 - ~~(c) Location of all roads and road rights-of-way~~
 - ~~(d) Proposed structures, including any garages;~~
 - (c) Location of property lines¹;
 - (d) Location of required setbacks and their dimensions;
 - (e) Location of proposed driveways, **accesses** and their grades;
 - (f) **Parking areas**, Location of any parking area proposed in lieu of ~~meeting required driveway grades (applicable to single family and duplex units only, see Chapter V, Section 2.f. of these Standards and regulations);~~
 - ~~(g) Access point to County roadway;~~
 - (g) Location and size of drainage culverts, if applicable;
 - (h) Mailbox locations; ~~and~~
 - (i) Location and size of trees and shrubs within one hundred (100) feet of the proposed point of access; ~~and~~
 - (j) Surety covering the cost of reconstruction and/or repair of damage caused to County road or road rights-of-way²;
 - (k) Pre and post construction photos as required³; and**
 - (l) Revegetation plan.**
- d. **Supervision of right-of-way work:** The permittee shall at all times conduct work within County rights-of-way so as to avoid obstruction and hazard to the traveling public and in conformance with the approved Traffic Control Plan. Materials **and/or equipment** necessary for construction shall not be stored in the County rights-of-way at any time **unless approved in advance by the County Engineer**. The roadway and roadside area where work has been performed shall be thoroughly cleared of all debris and extraneous material, and shall be restored to a condition equal to or better than the original when construction is concluded.
- e. **Inspection and testing of work:** Adequate inspections to ~~ensure~~ **assure** compliance with ~~County regulations~~ **these Standards** are required. It is the responsibility of the permittee to contact the County Engineer at least three (3) **business** days in advance of **any** required inspections. In progress inspections of all elements of work will eliminate the need for extensive post testing. At least one (1) inspection at the conclusion of construction is required. In making this inspection, the County Engineer **or a Road and Bridge Foreman** shall check for compliance with these ~~Standards regulations~~ **Standards** and approved plans **and permits**, any damage to public facilities⁴, and for adequate cleanup of roadway surfaces and the ~~rights-of-way~~.

Any work or material which does not conform to these ~~regulations~~ **Standards**, pavement failures or broken asphalt, damaged signs or fencing⁵, and remaining

debris either in the roadway or adjacent property, or improper drainage shall be brought to the attention of the permittee. Any work in which untested or unaccepted materials are used shall be ordered removed and replaced at the permittee's expense. Any required corrective work shall be made at the permittee's expense and shall be done to the satisfaction of the County Engineer. If immediate corrections are not made, further construction shall be stopped.

In determining whether or not the work done by a permittee is acceptable, the County Engineer will consult with the Road and Bridge Department. If a determination is made that testing is required, the number and location of the tests shall be determined by the County Engineer. If the County Engineer determines testing by an independent lab is necessary, the cost of such testing shall be paid by the permittee.

- f. **Responsibility for rework:** The permittee shall be fully responsible for the maintenance and correction of any faulty construction, including unstable road cuts and chuck holes developed during the construction period and for a period of two (2) years following the final inspection of the ~~access~~ work. All deficiencies shall be resolved to the satisfaction of the County Engineer at the property owner's **and/or permittee's** expense. Failure to do so could be cause to deny acceptance, and denial of future permits.
- ~~p. g.~~ **Guarantee period for rights-of-way work:** The permittee shall be responsible for a period of two (2) years after completion of work for any maintenance or repair necessary to keep the roadway in an acceptable condition. ~~The County shall retain the permittee's bond or require the submittal of a warranty bond for the guarantee period to ensure any required~~
- ~~g. h.~~ **Construction specifications and schedule for work within the County rights-of-way:** All work undertaken within the County road rights-of-way shall conform to ~~the requirements contained in these~~ **Standards** ~~regulations~~, and to approved plans and specifications. In issuing a R.O.W. **ROW** Permit, the County Engineer shall also review, and if acceptable, approve a Construction Schedule and Traffic Control Plan. The approved construction plans, specifications, and schedule cannot be changed without the ~~written consent~~ **approval** of the County Engineer, except in emergency situations. ~~as provided as in Chapter V, Section 4.h. in these Standards and regulations.~~
- i. **Note: This section moved from Chapter 5, Section 3.b**
Closing of streets and roads:
(1) ~~Notice and operation of road closure: Written authorization is required prior to any road closure. All requests for road closure must be submitted to the County Engineer at least forty-eight (48) hours prior to the anticipated need for the closure. At a minimum, the following information shall be submitted with the request for closure:~~
- ~~• A traffic control plan following the requirements of the MUTCD, to include a detour plan or plan to maintain access for local residents;~~
 - ~~• Reason and expected time frame for the closure; and~~
 - ~~• List of names and phone numbers of responsible persons~~
- ~~Except in an emergency, contractors may close streets only after obtaining approval from the County Engineer, and notification of the Park County Sheriff's Department and the appropriate fire district.~~

~~The contractor shall furnish, erect, and maintain at their own expense, necessary barricades, suitable and sufficient flashers, and construction signs. Contractors shall also provide a sufficient number of certified flagmen and take necessary precautions for the protection of the work and safety of the public around their construction operations.~~

Road Closure Procedure: Road closures are not permitted unless justified on the basis of overall benefit to the general public. Requests for road closures shall be specified on the permit form submitted by the applicant, and no road closures shall be undertaken unless approved as part of the ROW Permit issued by the County Engineer. All requests for ANY road closure shall be submitted in written format (Temporary Road Closure Application) as outlined by event type further described below. Road closures are only permitted between the hours of 8:00 a.m. and 5:00 p.m. unless otherwise authorized by the County Engineer. At a minimum, the following information shall be submitted with the request for closure:

- (1) Simple Event Closure (Closure for non-complicated event – less than eight (8) hours in a single day):
 - (a) Temporary Road Closure Application to be submitted a minimum of ten (10) business days prior to the anticipated need for the closure;
 - (b) A completed ROW Permit Application;
 - (c) Traffic control plan conforming to the requirements of the MUTCD, to include a detour plan (if necessary) or plan to maintain access for local residents, school buses, postal delivery vehicles and all emergency services (including but not limited to Sheriff's Department, local Police Department(s), Fire Districts, Search & Rescue and Highway Patrol);
 - (d) Reason and time frame of the anticipated closure, including a sketch plan / diagram of work to be completed;
 - (e) List of names and phone numbers of responsible persons (at least two (2)); and
 - (f) Proof of Liability Insurance in the amount of one million dollars (\$1,000,000.00). A copy of liability insurance to be on file in Public Works Office.
- (2) Complex Event Closure (Closure for complicated event – more than 8 hours and/or multiple days):
 - (a) Temporary Road Closure Application to be submitted a minimum of twenty (20) business days prior to the anticipated need for the closure;
 - (b) All items as outlined in "Simple Event Closure"; and
 - (c) Detailed schedule of closure times and locations including when closure will be suspended each day during construction period (special conditions apply to overnight and weekend/holiday closures - closure of intersections must be avoided whenever possible and are not permitted for overnight or weekend/holiday closures).

Except in an emergency, contractors may only close roads after obtaining approval from the County Engineer. The extent, time of closure(s), location of closure(s) and frequency of closure(s) is at the discretion of the County Engineer.

The contractor shall furnish, erect and maintain at their own expense all necessary barricades, suitable and sufficient flashers, signs and any other items necessary to ensure safe road closure procedures. All traffic control devices shall conform to the MUTCD, current edition. Contractors shall also provide, when necessary and determined by the County Engineer, a sufficient number of certified flagmen and take necessary precautions for the protection of the work and safety of the public around their construction operations. Details shall be provided in the traffic control plan.

The contractor may be required to place notification of the pending closure in the news media and/or at appropriate locations along the route to be closed a minimum of five (5) business days prior to the initial road closure. The contractor shall be responsible for notifying any local residents of the closure. Park County shall notify all appropriate school districts, postal offices, utilities and emergency services including, but not limited to County Sheriff's Department, local police departments, fire districts, Search & Rescue and state highway patrol office.

The contractor is responsible for returning the road to a safe and passable condition prior to re-opening the road, including overnight and weekend/holiday openings. Permanent repairs shall be completed according to the requirements of the ROW Permit and these Standards. Should the closure need to be extended beyond the approved closure time, advance notification is required and must be approved by the County Engineer. Upon completion of the project and reopening of the road, the contractor is responsible for the prompt removal of all signs, barricades, etc. and notification to the County Engineer.

Road closures that extend beyond the permitted period and not previously approved by the County Engineer will be in violation of these Standards. It may also be reported to the Board of County Commissioners for review and appropriate additional actions.

- ~~h.~~ **j.** **Emergencies:** If a true emergency exists where time is not available to follow the procedures for obtaining a ~~R.O.W.~~ **ROW Permit**, or for making modifications to the approved plans, specifications, and schedule, a contractor may, **after receipt of approval by the County Engineer or a Road and Bridge Foreman**, proceed with the work. Within twenty-four (24) hours, the applicant shall submit an application for a ~~R.O.W.~~ **ROW Permit**.
- k.** **Expiration of Permits:** **ROW Permits are for work to be completed within twelve (12) months of requested start date, or a new ROW Permit must be obtained. All work authorized by each** ~~Every R.O.W.~~ **ROW Permit issued by the County Engineer under the provisions of these regulations Standards shall expire if the work authorized by such a permit is not substantially begun within six (6) months from the date of the permit, or If the construction of work authorized by the permit is suspended or abandoned for a period of six (6) months at any time after the work is begun, Before such work can be resumed, a new R.O.W.** **ROW Permit**

shall be ~~first obtained~~ required before such work can be resumed, or an extension may be allowed provided no changes **in the original approved plans and specifications** have been made or required by the County Engineer ~~in the original approved plans and specifications~~.

Any permittee holding an unexpired ~~R.O.W.~~ **ROW** Permit may apply for an extension of the time within which work may begin under the permit if the permittee ~~e~~ is unable to begin work within the time required by this section for good cause; and that the cause is acceptable to the County Engineer. ~~The County Engineer may extend the time for action by the permittee for a period not exceeding six (6) months upon written request by the permittee, showing that circumstances beyond the control of the permittee have prevented action from being taken.~~

Permits expire when the end of the approved construction schedule is reached; and must be renewed in advance to prevent the County from calling any bond or financial guarantee posted by the permittee.

j. l. ~~Posting of road-cut ROW Permits: Road-cut ROW Permits must~~ **shall** be posted **available** on the job site ~~so they are easily visible from the roadway.~~

~~k. Road closures during right of way work: Road closures to accommodate road cut work are not permitted unless justified on the basis of overall benefit to the general public. Requests for road closures shall be specified on the permit form submitted by the applicant, and no road closures shall be undertaken unless approved as part of the R.O.W. Permit issued by the County Engineer. When road closures have been approved, the permittee shall use the following procedures:~~

~~(1) — Submittal of plans and schedule for closures: At least five (5) days prior to actual closure, the permittee shall obtain approval from the County Engineer for a detailed traffic control plan. This plan shall conform to the requirements of WyDOT Standard Specifications, Section 623, and must be based on the current MUTCD requirements. In addition, at least three (3) days prior to actual closure, the permittee shall verify the schedule and location of road closures.~~

~~(2) — Notification of closures: At least five days (5) prior to actual closure, the permittee shall obtain approval, and notify the appropriate fire district, school district, affected property owners, utilities, and law enforcement agency of the exact location, date, and time traffic will be impeded.~~

~~(3) — Time of closures; detours: Road closures are only permitted between the hours of 7:30 a.m. and 5:30 p.m. unless otherwise authorized by the County Engineer. Where closures of more than one (1) day are approved, a suitable detour must be provided, and must be marked and signed to accommodate night traffic. All traffic control plans, signage, and procedures shall be in accordance with the current MUTCD and the approved traffic control plan.~~

l. m. ~~Protection of public safety and convenience: The permittee shall at all times conduct work to ensure the least possible obstruction and hazard to the traveling public. The permittee shall provide for the safety and convenience of the residents along roads where work is being done, and for the protection of persons and property at all times. Adequate warning signs, barricades, lighting, flags and other devices as specified in the MUTCD, and as approved by the County Engineer, shall be provided, maintained; and paid for by the permittee.~~ **Certified** flagmen

shall be posted to guide the traveling public where only one (1) traffic lane remains open, or through otherwise unsafe operations.

If, in the opinion of the County Engineer or Road and Bridge Foremen, an unsafe condition exists, or the contractor is not in conformance with the approved traffic control plan, the County Engineer may suspend ALL operations until the situation is corrected. If the contractor does not remedy the situation immediately, the County Engineer may correct the problem and bill the contractor for any expenses incurred.

- (1) Construction procedures for rights-of-way work: The permittee shall plan rights-of-way work so it does not create safety hazards or maintenance problems, render portions of rights-of-way unusable for future road improvement, or obstruct major floodways.
- (2) Compliance with safety standards: The permittee's operations shall conform to the applicable requirements established by the Federal Occupational Safety and Health Act (OSHA), and any other applicable laws or regulations.
- (3) Staging of installations: Staging of utility installations projects may be required by the County Engineer to produce the least disruption possible for the traveling public. A permit for any subsequent stages may not be issued until the prior stage has satisfactorily progressed or has been completed.

~~m. — Installation of utilities: All utilities shall be installed in accordance with the plans and specifications approved by the utility owner and the County Engineer. Where applicable, the plans for installation must bear the name, seal, and signature of a registered professional engineer responsible for their preparations. The alignment of all utilities within County Rights-of-way and major floodways is subject to approval by the County Engineer.~~

~~(a) — Underground utilities: All accesses to underground utilities from the road surface (e.g. manholes, vaults) shall be of heavy duty construction made of cast iron, capable of safely supporting anticipated maintenance equipment and vehicular traffic, and AASHTO HS-20 loading. No aluminum castings will be allowed. Concrete collars in conformance with the Standard Drawings are required.~~

~~Seep plugs shall be installed in trenches used for underground utilities at no less than five hundred (500) foot intervals if the possibility exists that the surrounding water table will be lowered, and this will have an adverse effect on surrounding wells and vegetation dependant on the water table elevation~~

~~All valves, manholes, vaults, or other appurtenant structures located within the County right-of-way shall be buried a minimum of twelve (12) inches, except in paved areas. In paved areas, these appurtenant structures shall conform to the finished grade of the road.~~

~~(b) — Aboveground utilities: All aboveground utilities shall be located and installed so as not to cause unnecessary obstruction to pedestrian~~

~~and vehicular traffic or damage to the utility itself. No pole or structure above ground shall be placed within a pedestrian walkway nor set closer than twelve (12) feet to the shoulder of any County road. A lesser distance, however, may be allowed if insufficient cleared right of way is available to meet this minimum distance. In no case will a pole be permitted within twelve (12) feet of the travel lane of a County road except light and traffic control poles with breakaway bases.~~

~~(c) — Utilities in major floodways: All utilities within or adjacent to major floodways shall comply with the Park County Floodplain Regulations, and other applicable floodplain regulations and shall be located and installed in a manner that will prevent objectionable damage such as land erosion, water pollution, or flood diversions.~~

~~n. — Inspection and testing of work: Adequate inspections ensure compliance with County requirements and are the basis for release of maintenance responsibility and/or for release of any bond. It is the responsibility of the permittee to contact the County Engineer one (1) day in advance of required inspections. In progress inspections of all elements of work will eliminate the need for extensive post testing. At least one (1) inspection at the conclusion of road work is required. In making this inspection, the County Engineer shall check for compliance with these regulations and approved plans, and also for adequate cleanup of roadway surfaces and the right of way.~~

~~Any work or material which does not conform to these regulations, pavement failures or broken asphalt, damaged signs or fencing, remaining debris either in the roadway or adjacent property, or improper drainage shall be brought to the attention of the permittee. Work in which untested or unaccepted materials are used shall be ordered removed and replaced at the permittee's expense. If immediate corrections are not made, further project construction shall be stopped.~~

~~In determining whether or not the work done by the permittee complies with these regulations, the County Engineer may consult with the Road and Bridge Foreman. If it is decided testing is required to ascertain compliance, the most recent standard methods of AASHTO or ASTM shall be used and conducted by an approved independent testing firm at the permittee's expense. Copies of test data shall be furnished to the County Engineer in a timely manner prior to release or approval.~~

~~o. — Responsibility for corrective work upon completion: The permittee shall be fully responsible for the maintenance and correction of any faulty construction, including unstable road cuts and chuckholes developed during the construction period. The roadway and roadside areas where work has been performed shall be thoroughly restored and cleared of all debris and extraneous material, and shall be resolved to the satisfaction of the County Engineer. Failure to do so could be cause for denial of future R.O.W. Permits, or call of the permittee's bond.~~

~~p. — Guarantee period for right of way work: The permittee shall be responsible for a period of two (2) years after completion of work for any maintenance or repair necessary to keep the roadway in an acceptable condition. The County shall retain the permittee's bond or require the submittal of a warranty bond for the guarantee period to ensure any required corrective work is done. The permittee may apply, in writing, to the County Engineer for release of a portion of his bonding commitment, and such release may be granted with approval of the County Engineer.~~

- f. n. ~~Right of way work~~ **ROW Permit work** suspension or revocation: The County Engineer ~~or Road and Bridge Foremen~~ may suspend or revoke any permit, in writing, issued under the provisions of these Standards and Specifications whenever the permit is issued in error or on the basis of incorrect information supplied by the applicant, or when the applicant is not in compliance with the permit conditions or a hazard is created which would pose a threat to the health, safety, and welfare of the public.

Should the ~~R.O.W.~~ **ROW** Permit be revoked or suspended, all work shall be suspended until a new permit or work under the revoked or suspended permit is authorized by the County Engineer. **The County Engineer may remove any hazard or work determined not to be in compliance with permit conditions. Any cost incurred by the County shall be billed to the applicant.**

SECTION 5. Road Acceptance and Maintenance Establishment

- a. **Road Establishment:** There are several subdivision roads and existing roads within Park County which are not County roads. In State Statute WS §24-3-101, et seq, there is a process to be followed to petition the County to establish a non-County road as a County road. The Board of County Commissioners may, at their sole discretion, grant or deny establishment of these roads. Any road petitioned shall be brought up to current County Standards prior to requesting the road be established as a County road.

- ~~a. Purpose and intent:~~ The purpose of this section is to outline the County's policy regarding road maintenance, including the responsibility of property owners. Maintenance of public roads is a major line item in the total Park County operating budget, accounting for approximately twenty (20) percent of total expenditures. The major components of the maintenance program are snow plowing and sanding, asphalt patching, overlays and replacement, grading of gravel roads, and maintenance of drainageways.

~~In order for maintenance to be done on an efficient basis, roads must be constructed to certain standards of geometric alignment, materials quality, and construction quality as described in these regulations.~~

~~Before the County will maintain roads build by developers or owned and maintained by private property owners, they must petition the Board of County Commissioners to accept the roads for maintenance. This section outlines the acceptance procedure and the conditions which must be met for approval and acceptance. The Board of County Commissioners may deny any petition, if they determine that County funds are insufficient, or if they determine that due to low traffic volume, the acceptance is not justified by the additional costs to the County.~~

- ~~b. Maintenance classifications:~~ The County classifies roads into different categories to describe the type of maintenance. These categories include: full, conditional, provisional, and no maintenance.

- (1) ~~Full: This category includes roads where the right of way has been dedicated to the County, the road meets County design and construction standards, the Board of County Commissioners has accepted the right-of-way dedication and the road has passed any required probationary period. It also includes roads which may or may not meet current County design and construction standards, but which were dedicated to and accepted by the County for full maintenance before road standards were adopted or enforced. Full maintenance status assigns complete responsibility to the County for snow plowing, grading, resurfacing, ditch maintenance, and repair, as necessary. For snow plowing, priorities are assigned which reflect the use of the road and its relative importance to traffic flow.~~
- (2) ~~Conditional: Wherever roads are proposed for dedication to the County as County maintained roads, and the Board of County Commissioners accepts the request for dedication, this acceptance is considered conditional for a two (2) year probationary period, after all corrections are completed.~~

~~During the probationary period, all maintenance, repair, and snow plowing of the roadway is the responsibility of the property owners or developer seeking final acceptance from the County.~~

- (3) ~~Provisional: This category includes roads which do not meet current County standards with respect to widths, curves, or grades, but which are dedicated to and accepted by the County prior to adoption or enforcement of road standards. Such roads receive limited summer maintenance, but no winter maintenance because snow removal equipment is unable to maneuver on them. This maintenance level is low priority and is dependent on the availability of funds, manpower and equipment.~~
 - (4) ~~No Maintenance: This category includes private roads which are not maintained by the County under all but emergency circumstances.~~
- c. ~~Acceptance of maintenance for roads constructed prior to these regulations: Many of the subdivisions platted in the County prior to these standards remain undeveloped or only partially developed. Some of these subdivisions have extensive road systems which were not constructed to County standards. This section provides a procedure to evaluate these roads.~~
- (1) ~~Filing request for County acceptance: The property owners holding title to the majority of lots within the subdivision must petition the Board of County Commissioners to establish the proposed road as a County road in accordance with W.S. §24-3. In addition, the property owners may also request that the Board of County Commissioners accepts maintenance responsibility for the road.~~
 - (2) ~~Staff evaluation and recommendation: The County Engineer and the Road and Bridge Foreman shall inspect the roads to determine whether or not they meet the design criteria and construction in these regulations. It is the County's policy to accept only those roads which meet these requirements. If a road does not meet County standards, the property owners are responsible for improving the road to County standards, prior to requesting acceptance.~~

~~In reviewing a request for maintenance, at a minimum, the following factors will be considered:~~

- ~~(a) Is the roadway needed to provide services to the general public;~~
- ~~(b) Does the proposed access provide an access to public facilities or lands;~~
- ~~(c) How many full time residents utilize the roadway; and~~
- ~~(d) Any other factors deemed relevant to the evaluation of the request.~~

- ~~(3) Board of County Commissioner action on request; After the Board of County Commissioners receive the recommendation from the County Engineer and the Road and Bridge Foreman, they shall take action by Resolution to either grant or deny final acceptance of the road. For final acceptance to be granted, the property owners must dedicate all necessary road rights-of-way to the County.~~

- bd.** ~~Acceptance procedure for roads constructed by developers and proposed for acceptance by the County:~~ The **Park County Development Standards and Subdivision Regulations** require developers to construct roads necessary to serve approved subdivisions **and developments. These roads shall be built to County Standards.** The developer may propose to build either public or private roads, and the County may require that roads be offered for dedication to the public. ~~The county must accept an offer of dedication before it assumes ownership of the right-of-way and responsibility for maintenance.~~

~~Maintenance of roads built after the effective date of these regulations will only be performed if these roads have been dedicated and accepted by the County. The following procedure shall be used to determine whether or not the County will accept roads for maintenance built by developers after the effective date of these regulations.~~

- ~~(1) Design review: A developer who proposes to construct a road and dedicate it to the County as public road must obtain approval for the road design from the County Engineer prior to construction. The County Engineer shall determine the road classification, compliance with design criteria and construction in these regulations, and adequacy of right-of-way prior to granting approval of the road design.~~

~~All subdivision roads that have a projected ADT of one hundred (100) VPD at full development shall be paved.~~

- ~~(2) Inspections: At appropriate milestones during construction of the road, the developer shall request inspection by the Road & Bridge Foreman and the County Engineer. In order for the road to be accepted later, inspection must occur at the completion of each of these steps:~~
 - ~~(a) Rough grading;~~
 - ~~(b) Sub-grade preparations;~~
 - ~~(c) Placement of road base;~~
 - ~~(d) Paving (if applicable)~~
 - ~~(e) Construction of drainage improvements (including culverts for driveways, if applicable);~~
 - ~~(f) Placement of signs (if applicable); and~~

~~(g) — Steel and form inspection for concrete structures.~~

~~A final inspection shall be conducted after the completion of all improvements. Roads must comply with the design criteria and construction in these regulations, and with all approved plans. If the inspection discloses any work in whole or in part as unsatisfactory, the County Engineer shall notify the developer. If the County Engineer and the Road and Bridge Foreman discover any deficiencies or defects, a punch-list of all items needing corrections will be prepared and delivered to the developer. The developer shall correct all deficiencies on the punch-list and request a re-inspection.~~

- ~~(3) — Filing request for County acceptance: Developers seeking County acceptance for dedication and maintenance of roads must submit a letter to the County Engineer requesting the Board of County Commissioners' approval.~~
- ~~(4) — Staff evaluation and recommendation: The County Engineer shall determine if the road design was approved and construction inspected by the County, and if the road meets the requirements of these regulations. A recommendation on whether or not acceptance should be granted shall be forwarded to the Board of County Commissioners. In making this recommendation, the County Engineer will consult with the Road and Bridge Foreman. It is the County's policy to accept roads built by developers after the effective date of these regulations, only if they meet the requirements of these regulations and have received design approval and inspection during construction. The County Commissioners may determine to deny acceptance of maintenance in consideration of costs and traffic volume.~~
- ~~(5) — Board of County Commissioners' action on request: After the Board of County Commissioners have received the recommendation from the County Engineer and the Road and Bridge Foreman, they shall take action by Resolution to either grant or deny conditional acceptance of the road. For conditional acceptance to be granted, the developer must dedicate all necessary rights of way to the public, prior to the recommendation for approval.~~
- ~~(6) — Guarantee period after conditional acceptance: Under conditional acceptance, the developer is responsible for making repairs and correction failures for a period of two (2) years from the date conditional acceptance is granted, until final acceptance is granted.~~
- ~~(7) — Final acceptance: No earlier than twenty (20) months after the Board of County Commissioners grant conditional acceptance, the developer may request final acceptance of the road. The County Engineer and Road and Bridge Foreman are responsible for re-inspecting, and noting any defects or required repairs. The developer shall correct the defects, or the County, at its option, may do this work using the developer's performance bond. After all defects have been cured and repairs made, and twenty four (24) months have elapsed since conditional acceptance was granted, the developer may submit a letter to the County Engineer requesting the Board of County Commissioners grant final acceptance of the road. After~~

~~the Board of County commissioners have received the recommendation from the County Engineer and the Road and Bridge Foreman, they shall take action by resolution to either grant or deny final acceptance of the road.~~

~~If final acceptance is granted, the procedures outlined in W.S. §24-3 shall be initiated. Upon completion of the required procedures the road shall become listed as an official County road and become the County's ongoing responsibility for maintenance in accordance with current County policy.~~

~~It shall be the developer's/property owner's responsibility to request inspection and acceptance at the proper time.~~

~~e. Acceptance procedure for roads constructed through local improvement districts: One of the mechanisms available for upgrading existing private or public roads to County standards is the formation of a Local Improvement District. All roads either constructed or improved through a Local Improvement District shall meet all the requirements of these regulations including the acceptance procedure.~~

~~f. Providing for drainage: Culverts are required where driveways connect to roadway unless specifically exempted by the County Engineer and these regulations. It is the responsibility of the property owners to maintain their culverts free and clear of silt, mud, debris, and ice during times that flow occurs in the ditch.~~

~~Damage to a road caused by a blocked culvert or lack of a culvert is the responsibility of the property owner. If it becomes necessary for the County to undertake repairs, costs will be billed to the property owner by the County Engineer.~~

~~Water that flows out of driveways must be diverted to ditches. Damage to roadways caused by such water is similarly the responsibility of the owner and repair costs will be billed.~~

~~g. Keeping right of way clear: Storage of material in any road right of way is prohibited. Any material which is stored in the road right-of-way which impedes snow plowing or road maintenance, or which constitutes a hazard to the general public or will be removed by the County and the owner billed for the cost.~~

~~h. Repairing damage: Whenever a property owner, developer, contractor, or any other individual undertakes an activity which damages a County road or road right-of-way, the responsible party shall be responsible for restoring the road or right-of-way in conformance with these Standards. This requirement applies especially to damage caused by construction activities adjacent to a County road.~~

SECTION 6. Miscellaneous Policies

~~a. Snow removal policy: It is the County's policy to plow after an accumulation of at least four (4) inches of snow. Like sanding, such plowing is limited to normal weekday working hours except for times of severe weather conditions.~~

Snow removal operations will start early enough to allow for the necessary snow removal on the main school bus routes prior to the scheduled bus runs.

During major snow storms, snow removal operations will concentrate on keeping the main traveled roads arteries open during normal school/working hours. Driveway approaches and mail box pull-outs will may be plowed only after the road system has been plowed and clean up operations can commence. Driveway entrances are generally the responsibility of the property owner with possible exception to emergency situations.

Snow removal operations will not be conducted between the hours of 9:00 p.m. and 4:00 a.m. for any reason except a life threatening emergency. Snow removal operations follow utilize the following priority system (see Table 5-12):

| ROAD CLASSIFICATION | PRIORITY |
|---------------------|----------|
| Primary/Arterial | 1 |
| Secondary/Collector | 2 |
| Residential | 3 |
| Local Access | 4 |
| Recreational | 5 |

Exceptions to this priority system include school bus routes and emergency access requirements. It is the County’s policy to provide snow removal operation in a consistent and economical manner on County roads.

The County does not provide snow removal operation on private roads, except in emergency conditions.

The County may move a vehicle that causes an obstruction to a County road so the vehicle does not cause such obstruction. The County is not responsible for any damage caused to the vehicle.

b. Mailbox policy:

- (1) All mailbox installations shall require the approval of the U.S. Postal Service as to mailbox design, and the Postal Service, and County Engineer Road & Bridge as to pullout locations. All mailbox installations shall conform to the requirements shown on Figures 5-9 and 5-10. Any deviations from these requirements standards must shall be reviewed and approved by the County Engineer and the Postmaster.
- (2) Existing Mailboxes shall have pullouts constructed as a joint project of the box holder, Park County, and the U.S. Postal Service. All mailboxes and turnouts must be designed, constructed, and installed in conformance with all applicable sections of these Standards, including but not limited to requirements to obtain a R.O.W. ROW Permit, sight triangle and distance restrictions, and traffic safety requirements.
 - (a) Box holders may remove and replace their existing mailboxes and stands at their own expense, provided the design of their structure

is not deemed a safety hazard by the U.S. Postal Service or the County Engineer and the required ROW Permit is acquired. However, should scheduling prevent mailbox removal by its owner, Park County Road and Bridge crews will remove it at no charge to the box holder. The box holder will be responsible for replacement of the box in accordance with these Standards.

(b) When Park County has a road reconstruction, repair or upgrade project, the Road and Bridge Foremen will be responsible for pullout construction, notification of box holders, and scheduling of construction. This does not apply to subdivision mailboxes within the subdivision.

(c) Postal Service will be responsible for the delivery of notification,

(3) A mailbox damaged by the impact of plowed snow or ice shall be replaced or repaired by the mailbox owner and at the owner's expense. When a mailbox is hit by a plow and damaged, it will be replaced by the County.

c. Fence policy: Park County does not install or maintain fences along its rights-of-way. Should a property owner wish to install a fence along the County rights-of-way, the fence must be installed in accordance with these Road Standards. Maintenance of the fence shall be the responsibility of the property owner. Generally, fences are to be installed beyond the County rights-of-way. If a property owner requests fence to be installed within the County rights-of-way system, per W.S. §11-28-105, the Board of County Commissioners shall consider the request and recommendations of the County Engineer and/or Road and Bridge Foremen and may authorize the construction. The Board of County Commissioners shall be responsible for determination if owner or County shall be responsible for payment.

(1) Standards:

(a) All fences within County rights-of-way shall be installed in accordance with WYDOT Standard Specifications, Section 607. Any deviations from these WYDOT Standard Specifications must be reviewed and approved by the County Engineer and the Road & Bridge Foremen.

(b) All fences within County rights-of-way must shall be designed, constructed and installed in conformance with all applicable sections of the WYDOT Standard Specifications these Standards, including but not limited to, requirements to obtain a R.O.W. ROW Permit, sight triangle and distance restrictions, and traffic safety requirements.

d. Cattle guard policy: Park County maintains existing cattle guards on the County Road System. If a property owner requests a new cattle guard within the County road rights-of-way system, the Board of County Commissioners, per W.S. §11-28-105, shall consider the request and recommendations of the County Engineer and/or Road and Bridge Foremen and may authorize the installation. The Board of County Commissioners shall be responsible for determination if owner or County shall be responsible for payment. the request shall be reviewed by the County Engineer and the Road & Bridge Foreman. IF the installation is approved, the landowner shall be responsible for payment of all costs for materials, equipment,

~~and labor.~~ The property owner is responsible for all fencing to connect to the new cattle guard.

- (1) Standards:
 - (a) All cattle guard installations shall conform to the requirements shown on ~~Figures 3-12, Figure 3-12A, and Figure 3-13~~ **5-12, 5-13, 5-14 and 5-15**. Any deviations from these Standards must be reviewed and approved by the County Engineer and Road & Bridge Foreman.
 - (b) All cattle guard installations must be designed, constructed and installed in conformance with all applicable sections of these Standards, including but not limited to, requirements to obtain a ~~R.O.W.~~ **ROW** Permit and traffic safety requirements.

e. **Irrigation facility policy:** Park County recognizes the need and importance of irrigation facilities; ~~However, these facilities may create hazards or be detrimental to the purpose and function of the County road system. It is therefore the policy of Park County to locate irrigation facilities outside of County rights-of-way whenever possible.~~

- (1) **Irrigation facilities within County road rights-of-way:** Irrigation facilities which must be within the County rights-of-way shall be constructed to reduce impacts to the road system and eliminate hazards to the traveling public.

At a minimum, the following practices shall not be allowed within the County rights-of-way:

- (a) New **supply and** waste ditches;
- (b) New diversion structures; or
- (c) Open or unlined channels.

Park County will work cooperatively with irrigators to resolve conflicts with new and existing facilities.

- (2) **Irrigation facilities within subdivisions:** **Subdivision irrigation improvements shall conform to the requirements of the State Engineer's Office and any applicable irrigation district or ditch company. Construction Plans for all irrigation facilities required for the development shall be submitted with all other construction plans.**

f. **Utility company facilities:** **Park County recognizes the need and importance of public utility facilities to be placed within the County rights-of-way. These facilities may create hazards or be detrimental to the purpose and function of the County road system. It is therefore the policy of Park County to locate these facilities in accordance with the following standards.**

- (1) Standards: All utilities shall be installed in accordance with the plans and specifications approved by the utility owner and the County Engineer. Where applicable, the plans for installation must bear the name, seal, and signature of a registered **Wyoming** Professional **E**ngineer responsible for their preparations. The alignment of all utilities within County rights-of-way and major floodways is subject to approval by the County Engineer. **All**

alignments of utilities within special flood hazard areas must have a floodplain permit.

- (a) Underground utilities: All accesses to underground utilities from the road surface (e.g. manholes, vaults) shall be of heavy duty construction made of cast iron, capable of safely supporting anticipated maintenance equipment and vehicular traffic, and a minimum AASHTO HS-20 loading. No aluminum castings will be allowed. Concrete collars in conformance with the WPWSS standard drawings are required.

All valves, manholes, vaults, or other appurtenant structures located within the rights-of-way such that they do shall not interfere with the County's use of the rights-of-way and shall be buried a minimum of twelve (12) inches, except in paved areas. In paved areas, these appurtenant structures shall conform to the finished grade of the road.

Seep plugs shall be installed in trenches used for underground utilities at no less than five hundred (500) foot intervals if the possibility exists that the surrounding water table will be lowered, and this will have an adverse effect on surrounding wells and vegetation dependant on the water table elevation

All non-metallic facilities shall have tracer wire installed with the facility. Minimum wire shall be #12AWG, solid copper.

Park County accepts no responsibility for facilities that are not adequately marked or buried.

- (b) Aboveground utilities: All aboveground utilities shall be located and installed so as not to cause unnecessary obstruction to pedestrian and vehicular traffic or damage to the utility itself. No pole or structure above ground shall be placed within a pedestrian walkway nor set closer than twelve (12) feet to the shoulder of any County road. A lesser distance, however, may be allowed if insufficiently cleared right-of-way is available to meet this minimum distance. In no case will a pole, guy and/or anchor be permitted within twelve (12) feet of the shoulder travel lane of a County road except light and traffic control poles with breakaway bases. Overhead lines shall be permitted to sag under worst anticipated conditions no lower than eighteen (18) feet above the roadway and shall preferably be no closer than twenty-three (23) feet.
- (c) Utilities in major floodways: All utilities within or adjacent to major floodways shall comply with the Park County Floodplain Regulations, and other applicable floodplain regulations and shall be located and installed in a manner that will prevent

objectionable damage such as land erosion, water pollution, or flood diversions.

(1) Standards:

(a) Pole lines will be permitted within said rights of way provided that the poles are set within three (3) feet of the edge of the right of way line and all other provisions of the policy that apply are complied with. The three (3) foot limitation on poles shall also apply to guy wires and anchors. Overhead lines shall be permitted to sag under worst anticipated conditions no lower than eighteen (18) feet above the roadway and shall preferably be no closer than twenty three (23) feet.

(b) Underground utilities will be permitted within said right of way provided they are within ten (10) feet of the edge of the right of way line and all other provisions of these standards are complied with.

All non-metallic facilities shall have tracer wire installed with the facility. Minimum wire shall be #12AWG, solid copper.

All manholes, meter pits, valve boxes, and appurtenant facilities shall be located such that they do not interfere with the County's use of the right of way.

Park County accepts no responsibility for facilities that are not adequately marked or buried.

(c)(d) Any future alterations or modification of the facility within the existing right of way, required and requested by the County, shall be completed without delay and without cost to the County.

Changes affecting utilities: Future changes to County roads may require the relocation or removal of utility installations. For minor changes, the affected utility company shall complete the relocation or removal within thirty (30) days after notification by the County Engineer. For major utility relocation projects involving extensive design and securing of contracts or material orders, the affected utility company shall complete the relocation or removal within ninety (90) days, or a time frame as mutually agreed upon, with approval from the County Engineer of the final design. To avoid the necessity for such changes, utility companies are encouraged to locate their facilities consistent with future plans for County roadways. Any removal and/or relocation of utilities within the County rights-of-way shall be the expense of the Utility.

SECTION 6-210 DESIGN OF IRRIGATION IMPROVEMENTS

Irrigation improvements shall conform to the requirements of the State Engineers Office, and any applicable Irrigation or ditch company. A construction plans for all irrigations facilities required for the development shall be submitted with the other constructions plans.

~~(i) Method of Detention: The methods noted below may be used for controlling excess runoff from project sites. In all cases, provisions shall be made for routine maintenance and prevention of silt buildup.~~

~~(ii) Detention and Retention: Detention systems shall be designed to store the difference between the developed volume and the historic volume of runoff during the twenty-five (25) year event. Discharge from the detention system will be at twenty-five (25) year historic rates. Retention systems shall be designed to store the entire twenty-five (25) year twenty-four (24) hour event from the developed site.~~

~~(iii) Gravel Trenches: Gravel trenches shall be designed to store the entire volume in excess of historic rates of runoff, and to allow this runoff to percolate into the soil. In designing gravel trenches, the assumption shall be made that gravel has twenty percent (20%) porosity. The percolation rate of the soil shall not be slower than sixty (60) minutes per inch.~~

~~(iv) Other Methods: Other methods for controlling runoff may be used with the approval of the County Engineer.~~

~~(c) Design of Ditches: Ditches shall be designed and installed as required in the Chapter III of these standards and regulations.~~

~~(d) Design of Culverts: Culverts shall be designed and installed as required in the Chapter II of these standards and regulations.~~

- g. Survey ~~box~~ **monument** policy: Park County recognizes the need to allow access to survey monuments within County road rights-of-way. **In some cases** access to these monuments, ~~in some cases,~~ may cause damage to the road surface and become a maintenance problem and hazard to the public. It is therefore the desire of Park County to coordinate with the surveying community to provide the access, and to repair the pavement around the monuments.

~~(1) Standard: Surveyors needing to access a monument within a paved County road should notify the County Engineer of the location of the monument and the damage to the road surface and become a maintenance problem and hazard to the public. It is therefore the desire of Park County to coordinate with the surveying community to provide the access, and to repair the pavement around these monuments.~~

- h. Rural **road naming and** addressing policy

~~(1) Statutory authorization, findings of fact, purpose and objectives:~~

~~(a) Authorization: The Board of County Commissioners of Park County through the adoption of the Park County through the adoption of Park County Development Standards and Regulations has established regulations designed to promote the public health, safety, and general welfare of its citizenry. Pursuant to this authority, the Board of County Commissioners of Park County, Wyoming hereby adopts this rural addressing policy.~~

~~(b) Findings of Fact:~~

~~(i) On December 3, 1990, the official road naming procedure for County roads was adopted. Reference Commissioners' Record Book 10, Pages 268 and 269.~~

~~(ii) The following Wyoming Statutes are hereby incorporated by reference:~~

Statutes to be considered:
 18-5-201 24-1-104
 31-5-303 16-3-101

~~W.S. §18-3-504 County Officers, Power and Duties
 Generally
 W.S. §18-3-700-701 County Surveyors, Qualifications;
 appointments; duty as supervisor of roads
 W.S. §24-3- Article 2 Identification of Roads
 W.S. §31-5-108 Regulation of Traffic on Highways-
 Uniformity of provision throughout state; local
 modifications
 W.S. §31-5-112 Regulation of Traffic on Highways-
 Adoption of uniform system of traffic-controlled devices
 (iii) The provisions of the Manual of Uniform Traffic Control
 Devices (MUTCD), latest edition, are hereby incorporated
 by reference.~~

- (1)(c) Statement of Purpose: It is the purpose of these regulations **Standards** to promote the public health, safety, and general welfare, and to provide for a coordinated and uniform **road naming and** addressing system within Park County.:
- (a) To protect human life and health;
 - ~~(ii) To provide a uniform addressing system;~~
 - (b) To optimize the ~~repose~~ **response** for emergency services, such as fire, ambulance, rescue and relief efforts undertaken at the expense of the general public;
 - (c) ~~To apply~~ **To apply** to all addressing within the jurisdiction of Park County, including but not limited to, state, county, public and private roads and easements; **and**
 - (d) **The following Wyoming Statues are incorporated herein by reference: W.S. §§ 1-1-120; 18-2-101; 18-3-504; 18-5-201 through 208; 16-9-101 through 108; 24-1-104; 35-9-401 through 406.**

All residences on a single parcel of property shall submit an application for an address with the appropriate fee and shall have a County assigned address. Other facilities, such as barns, trailers, commercial structures and other facilities, may be required to be addressed.

- (2) Definitions. Unless specifically defined below, words or phrases used in these regulations **Standards** shall be interpreted so as to give them the meaning they have in common usage and to give these regulations **Standards** the most reasonable application. The following definitions are specific to this section.
- (a) **“County Road”**: A right-of-way established according to state statute within the jurisdiction of Park County.
 - (b) **“Public Road”**: A road right-of-way or easement dedicated or established for the use of the general public.
 - (c) **“Private Road”**: A roadway for the use of an individual or particular group of individuals.
 - (d) **“Subdivision Road”**: A road right-of-way or easement dedicated or established through the subdivision process.

- (e) **“State Highway”**: A right-of-way established according to statute by the State of Wyoming, under the jurisdiction of the State of Wyoming.
 - (f) **“City Street”**: A right-of-way established according to state statute and municipal code, under the jurisdiction of a town or city.
 - (g) **“Existing Address”**: A number assigned, recorded, and/or used by a resident which was issued by the County or fire district.
 - (h) **“New Address”**: An address number yet to be assigned and recorded by the County.
 - (i) **Residence**: A house or facility/establishment which may be any structure, such as a building, or temporary, such as a trailer, which is occupied/lived-in for some continuance of time on a parcel of property.
- (3). General Provisions:
- (a) A formal written procedure follows, as outlined in Sections D(4) (Application) and E(5) (Process) below.
 - (b) Land to which these regulations Standards apply. These regulations Standards shall apply to all areas within the jurisdiction of Park County.
 - (c) Basis for establishing. To provide for a uniform coordinated rural addressing system for Park County. Park County uses a mileage-based system for addressing, which means addresses are assigned from a known point, usually the beginning of the road. This method of addressing enables emergency services to locate a particular address.
 - ~~(d) Compliance. All addresses within Park County shall be assigned in full compliance with the terms of these and other applicable regulations.~~
 - ~~(de)~~ Designation of the addressing Coordinator responsibility. The Addressing Coordinator will be appointed by the Board of County Commissioners. Public Works Department, under the direction of the County Engineer, shall be responsible for the implementation of these Standards.
 - ~~(ef)~~ The duties and responsibilities of the Addressing Coordinator. Duties of the Addressing Coordinator shall include, but not be limited to, implementation and enforcement of these regulations Standards.
 - ~~(fg)~~ Address Review Committee. An Address Review Committee will be comprised, at a minimum, of members from the following agencies:

| | |
|---|------------------------------|
| Park County Engineer’s Office | Park County Sheriff’s Office |
| City of Cody | City of Powell |
| Town of Meeteetse | |
| Fire Districts, including: Clark, Cody, Powell and Meeteetse. | |
 - ~~(h) Abrogation and greater restrictions. These regulations are not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where these regulations and another regulation, easement, covenant, or deed~~

~~restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.~~

(g) Road name signs. It is neither the desire nor the intent of the County, through its addressing policy, to differentiate between public and private roads, nor to imply a right of ingress or egress. Generally, the following sign conventions will be followed:

(i) County Roads - Formally established County roads will be marked with a County Route Marker, MUTCD designation M1-6. **County road names or numbers do not necessarily mean the roads are established as County roads or are maintained by the County.**

(ii) Other **Named** Roads - Other **named** roads, public, private, subdivision, etc., will be marked with a Street Name Sign, MUTCD designation D3.

~~Requests for signs with additional wording such as "Private Road", "Private Drive" or other private signs will be denied by the County. This does not preclude the property owner, at his expense, from installing these signs on private property. Such signs must shall be installed outside of any County or public rights-of-way and may not be attached to the road name sign or signpost. installed by Park County. The applicant, at his expense, may place a "Private Road" Sign on the County signpost if the sign meets the requirements of the MUTCD and the applicant obtains R.O.W. permit.~~

(h) Interpretation. In the interpretation of these ~~regulations~~ **Standards**, all provisions shall be:

(i) Considered as minimum requirements;

(ii) Liberally construed in favor of the governing body; and

(iii) Deemed neither to limit nor repeal any other powers granted under state statute.

(i) Warning and disclaimer of liability. The degree of protection required by these ~~regulations~~ **Standards** is considered reasonable for regulatory purposes. These ~~regulations~~ **Standards** shall not create liability on the part of Park County, any officer or employee thereof for any damages that result from reliance on these ~~regulations~~ **Standards** or any administrative decision lawfully made thereunder.

(4) Application

(a) Application for an **a** address. ~~The applicant shall make a Request for an Address.~~ Application for an address shall be made on forms furnished by the **Public Works** Addressing Coordinator.

~~The form may include, but is not limited to:~~

~~(i) Name, address and phone number of person requesting an address.~~

~~(ii) Name, address and phone number of Property Owner~~

~~(iii) Legal Description of Property~~

~~(iv) Directions to the property~~

- (5) Process
- (a) Application review. Upon receipt of a Request for an Address form, the **Public Works** Addressing Coordinator will **review for the following**:
- ~~(i) Review all requests for address~~
 - (i) **Legal access;**
 - (A) **Proof of legal access may be required to be furnished by the applicant.**
 - ~~(iii) Verify Property ownership, as others may be affected by a new address.;~~
 - ~~(iii) Determine If address location is on a currently named road - proceed to Section (2)(5)(b) below.;~~ **and**
 - (iv) Determine If a private road name will be required - proceed to ~~Section (3)(5)(c) below.~~
- (b) New address location on a currently named road.
- (i) **Public Works** Addressing Coordinator ~~will~~ **shall** provide the applicant with an approved marker, and instruct the applicant to place the marker at the location of the proposed driveway.;
 - ~~(ii) The applicant will place the marker at the location of the proposed driveway.~~
 - (iii) **Public Works** Addressing Coordinator ~~will~~ **shall** field measure the distance from a known point to the marker placement and determine an address for the location **based on location of applicant placed marker.**
 - ~~(d) Proceed to Section (5) below~~
- (c) Address location on a road requiring a road name. A road ~~will~~ **shall** be named in the following cases.:
- (i) New address is the third address located on a particular access.;
 - (ii) Increased development is anticipated to be located on a particular access that may result in three **(3)** or more addresses off of a known road.;
 - (iii) Any road that in the opinion of any member of the Address Review Committee should have a new road name.;
 - and**
 - (iv) Once it is determined that a new road name is required, the following procedure ~~will~~ **shall** be followed:
 - (A) The **County** reviews the property ownership on ~~both sides and~~ adjacent properties ~~near~~ **to** the road in ~~questions~~ **question**.;
 - (B) The property owners are contacted, in writing and given the opportunity to nominate names for consideration.;
 - (C) Once submitted, the Address Review Committee reviews the nominations.;
 - (l) Any conflicts or perceived conflicts between proposed road names and

existing road names, which are already established in Park County, will not be allowed. All names not disqualified through the review process will be submitted to the landowners so they have a chance to vote.

(II) If the local landowners cannot agree, the County Engineer will assign a road name.

(D) Once a road name is accepted, all the affected landowners will be notified outlining the new road name and corresponding new addresses. A copy is sent to emergency services, utility companies, county offices, postal service, etc.; and

(E) The County sign technician is notified for installation of the new road sign and address markers.

(d) Modification of an existing address. If the **Public Works Addressing Coordinator**, or a member of the Address Review Committee, determines that a modification of an existing address is needed, the **Public Works Addressing Coordinator** will initiate a change following the procedures outlined in Sections (2b) and (3c) above.

(e) Assignment of road name(s) and address(es). Once the Applicant and the **Public Works Addressing Coordinator** have complied with the requirements of these regulations **Standards, Public Works Addressing Coordinator** will assign an address, and if required, a road name.

(f) Notification of address. Once a road name and an address are determined, the **Public Works Addressing Coordinator** will notify, in writing, the applicant and appropriate agencies.

(g) Correction of self-assigned address. When and an unauthorized address is discovered, the **Public Works Addressing Coordinator** shall notify the property owner of the violation and initiate the process in accordance with these regulations **Standards** to correct the address.

(5) **Minimum fees**

| | | |
|-----|---|--------------------------|
| (a) | Street name sign | \$ 150.00 |
| (b) | Address marker - new address | \$ 150.00 |
| (c) | Replacement marker - worn out naturally | \$ 0.00 |
| (d) | Replacement marker - other causes | \$ 50.00 |
| (e) | Correction of self-assigned address | \$ 250.00 |
| (f) | Failure to properly mark driveway | \$ 50.00 plus mileage |

(g) **Change by applicant of driveway location or address marker** \$ 150.00

(hg) Exceptions to Charges: **Exception to charges:**

(i) County or Agency required changes

(A)(ii) New Subdivisions, ~~prior to Plat recordation,~~ will obligate developers to pay for street name signs.

- (6) Enforcement
- (a) No address number(s) shall be released until all required County permits have been issued.
 - (b) No address number(s) shall be ~~release~~ released until all costs, including costs for re-inspection, have been received.
 - (c) ~~No address number(s) shall be released until all affected property owners file the certificate of acceptance agreeing on the newly assigned road name, unless the Board of County Commissioners assigns a road name.~~
- (7). ~~Appeals. All appeals shall be processed in accordance with Chapter 3, Section 9 of the park County Development Standards and Regulations.~~

e. ~~Drainage: SUBDIVISIONS~~

~~DIVISION 6-200 DRAINAGE~~

~~The applicant shall prepare a drainage plan and report addressing the historic and developed flows from the proposed development. The report and drainage plans shall at a minimum provide a written graphical representation of the project pre and post development. At a minimum, the Drainage Plan and Report shall address the following:~~

- ~~1. Historic vs. Developed flows for the 100-year and 25-year events~~
- ~~2. All flows must be shown going to a defined drainage capable of handling the developed flows.~~
- ~~3. Irrigation flows must be considered separately from stormwater flows~~
- ~~4. All calculations used in the report, including detention/retention requirements, control structure requirements, all hydrology, and hydraulics, pipe, ditch and conveyance calculations~~
- ~~5. Topography (historic and developed) of the proposed development and the drainage basin. The entire drainage area upstream from the project site to a minimum of two hundred (200) acres shall be considered when determining runoff quantities, whether or not the two hundred (200) acre area is part of the project site or not.~~
- ~~6. Construction plans showing all necessary information for the construction and maintenance of the facilities required to implement the drainage plan improvements~~

~~SECTION 6-205 RATE OF RUNOFF~~

~~Runoff from a project site after construction shall not exceed the level of runoff which occurred prior to construction. The entire drainage area upstream from the project site up to a minimum of two hundred (200) acres shall be considered when determining runoff quantities, whether or not the two hundred (200) acre area is part of the project site. Any of the following methods may be used for estimating peak runoff flows:~~

- ~~1. Runoff from stream flow records~~
- ~~2. Tabular method as per Technical Release MO55 from the Engineering Division of the U.S. Department of Agriculture~~
- ~~3. HEC-1 Computer Program from the U. S. Army Corps of Engineers~~
- ~~4. SCS Method~~
- ~~5. The Rational Method for small basins~~
- ~~6. Other methods as approved by the County Engineer~~

SECTION 6-210 DESIGN OF DRAINAGE IMPROVEMENTS

~~Drainage improvements shall be designed and constructed in accordance with current professional standards. In addition, the following design requirements may be required to be met and documented.~~

- ~~(a) Detention and retention: Detention systems shall be designed to store the difference between the developed volume and the historic volume of runoff during the twenty-five (25) year event. Discharge from the detention system will be at twenty-five (25) year historic rates. Retention systems shall be designed to store the entire twenty-five (25) year twenty-four (24) hour event from the developed site.~~
- ~~d. Culvert Sizing: Culverts shall be sized to handle the anticipated quantity and debris flows anticipated for the drainage. Consideration should be given to erosion, scour and the flow velocity as well as the culvert capacity and maintenance. Head wall, wing wall, flared end sections may be required.~~
- ~~e. Ditch Sizing: Ditches shall be sized to handle the anticipated quantity and debris flows anticipated for the drainage. Consideration should be given to erosion, scour and the flow velocity as well as the ditch.~~
- ~~f. capacity and maintenance.~~
- ~~g. Storm Flow Routing: As required to a defined and acceptable drainage way.~~
- ~~h. Other Methods: Other methods for controlling runoff may be used or required.~~
- ~~i. Required Improvements: Approval of any final plat shall include the requirement that drainage improvements be constructed in accordance with these regulations. The improvements shall be included as part of the subdivision improvement agreement and the financial guarantee.~~

SECTION 7. Administrative Relief from Design and Construction Standards: Whenever there are practical difficulties involved in carrying out the provisions of these Standards and Specifications, the County Engineer may approve a variance **Administrative Relief**. A variance **Relief** from the design criteria and construction specifications contained in these regulations **Standards** may be granted by the County Engineer under the following circumstances.

- a. ~~If, by reason of exceptional topographic or physical conditions or other extraordinary and exceptional situation or condition, the application of these regulations would result in peculiar and exceptional practical difficulties to, or exceptional and undue hardship upon an individual proposing to construct a road or bridge, provided the conditions in Chapter V, Section 7.c. of these standards and regulation are met. **The practical difficulties arising from application of these regulations are significant or create exceptional and undue hardship upon an applicant, provided the conditions of Section 7. d. below are met.**~~
- b. If an individual is proposing to construct a low volume or local access road and the application of these regulations **Standards** would result, in the opinion of the County Engineer, in excessive cut and fill slopes, visual scarring, or other environmental damage, **Administrative Relief** in road design standards may be granted if granting the **Administrative Relief** will result in lessened environmental

damage, and the conditions in Chapter V, Section 7.e d. of these Standards and regulations are met.

- c. If documentation is provided including, but not limited to, technical references from recognized professional organizations, or significant changes to standards adopted by reference in Appendix 24 offer options to these Standards, Relief may be granted by the County Engineer. Further, if it is determined at the sole discretion of the County Engineer the option is an improvement or viable alternative which maintains the same level of care and safety intended by these Standards, Administrative Relief may be granted.
- ed. Administrative Relief from the difficulties or hardships described in Chapter V, Sections 7. a and b. of these Standards and regulations may be granted provided Relief will not result in substantial detriment to public health, safety and welfare, or substantial impairment of the road design and construction standards. Prior to taking action, the County Engineer and the Road and Bridge Foremen shall review the request for an Administrative Relief and, if necessary, refer any request for Administrative Relief to the appropriate fire district, the Sheriff's Department, and other interested agencies for comment. The County Engineer shall make a determination on whether or not an Administrative Relief request should be granted.

In reviewing such requests, the County Engineer shall, at a minimum, consider the following:

- (1) The effect of using a lesser standard of public health and safety including the ability of emergency vehicles to gain access using roads built to a lesser standard;
- (2) The severity of the terrain crossed by the road alignment;
- (3) The availability of alternative alignments where the same or more stringent road standards could be met with the same or less environmental damage-;
- (4) The length of road segments which will be built to a lesser standard; and
- (5) ~~The amount of snowfall anticipated and degree of exposure of the road surface to the sun.~~ Future maintenance requirements, including, but not limited to, snow removal.

~~Costs may be included in the review of an administrative relief request, but will not be a primary factor for considering a request.~~ Costs may be included in the review of an Administrative Relief request, but shall not supersede public health, safety and welfare or substantial impairment of the road design and construction standards. If costs are considered, the County Engineer shall consider the initial and long term costs. The applicant shall provide all cost data requested by the County Engineer, as required, to provide a complete cost analysis.

If an applicant does not agree with the determination made by the County Engineer, the applicant may appeal the decision to the Board of County Commissioners.

SECTION 8. Enforcement of Design and Construction Standards

- a. **Organization and enforcement:** The County Engineer is authorized and directed to enforce all provisions of these Standards ~~and Specifications~~. The County Engineer may appoint the Road & Bridge Foremen ~~or employee~~, construction inspector, ~~or other related technical officer or inspector~~, or other employee to act as an authorized representative.

Whenever any work is being done contrary to the provisions of these Standards ~~and Specifications~~, the County Engineer may order the work stopped by a written notice which shall be served on any persons engaged in the doing or causing of such work to be done, and any such persons shall forthwith stop such work until authorized by the County Engineer to proceed.

~~It shall be unlawful for any person, firm, or corporation to construct, enlarge, alter, repair, move, improve, remove, excavate, convert, or demolish any public improvements or common facilities or permit the same to be done in violation of these Standards and Specifications. Contractors who violate these Standards and Specifications shall be subject to denial of future R.O.W. Permits.~~

- b. **Liability:** Park County, or its authorized representative, charged with the enforcement of these Standards ~~and Specifications~~, acting in good faith and without malice in the discharge of duties set forth herein shall not be rendered liable for any damage that may accrue to persons or property as a result of any act or by reason of any act or omission in the discharge of such duties.
- c. **Violations:** It shall be unlawful for any person, firm, or corporation to construct, enlarge, alter, repair, move, improve, remove, excavate, convert, or demolish any public improvements or common facilities or permit the same to be done in violation of these Standards ~~and Specifications~~. Contractors who violate these Standards ~~and Specifications~~ shall be subject to denial of future R.O.W. ROW Permits.

APPENDIX D 24

STANDARDS ADOPTED BY REFERENCE

| | |
|--------|--|
| AAN | American Association of Nurserymen |
| AASHTO | American Association of State Highway and Transportation Officials |
| ACI | American Concrete Institute |
| ACPA | American Concrete Pipe Association |
| AI | Asphalt Institute |
| AISC | American Institute of Steel Construction |
| ANSI | American National Standards Institute |
| APWA | American Public Works Association |
| ASA | American Standards Association |
| ASCE | American Society of Civil Engineers |
| ASLA | American Society of Landscape Architects |
| ASTM | American Society for Testing and Materials |
| ATTSA | American Traffic Safety Services Association |
| AWWA | American Water Works Association |
| AWSE | American Welding Society Code |
| CUHP | Colorado Urban Hydrograph Procedure |
| DIP | Ductile Iron Pipe |
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| IMSA | International Municipal Signal Association |
| ISO | Insurance Services Office |
| ITE | Institute of Transportation Engineers |
| MUTCD | Manual on Uniform Traffic Control Devices |
| NEC | National Electrical Code |
| NEMA | National Electrical Manufacturers Association |
| NOAA | National Oceanic and Atmosphere Administration |
| OSHA | Occupational Safety and Health Act |
| SCS | Soil Conservation Service |
| UL | Underwriters Laboratories, Inc. |
| USDA | United States Department of Agriculture |
| UD&FCD | Urban Drainage and Flood Control District |
| USGS | United States Geological Survey |
| WPWSS | Wyoming Public Works Standard Specifications |
| WYDOT | Wyoming Department of Transportation |

FIGURES 5-1 THROUGH 5-14