

ADAMS COUNTY ROAD STANDARDS

June 19, 2003

ADAMS COUNTY PUBLIC WORKS
210 W. Alder
Ritzville, WA 99169

(509) 659-3276

RESOLUTION NO. R-60-03

ORDER OF BOARD OF COUNTY COMMISSIONERS
ADAMS COUNTY, WASHINGTON

IN THE MATTER OF ADOPTING ADAMS COUNTY ROAD STANDARDS

WHEREAS, road standards provide minimum standards for design elements and thereby provide for consistency in design and construction of road projects; and,

WHEREAS, numerous community workshops were held to receive input on the standards; and,

WHEREAS, public hearings were held on June 9, 2003, in Ritzville and June 11, 2003, in Othello, to provide opportunity for additional comments;

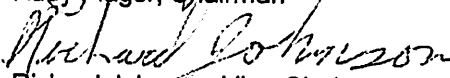
THEREFORE BE IT RESOLVED that the document "Adams County Road Standards" dated June 19, 2003, is hereby adopted as policy within the Adams County Public Works Department; and,

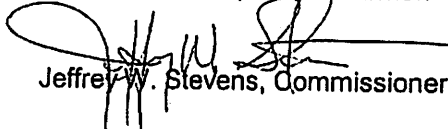
BE IT FURTHER RESOLVED that the Adams County Code is amended accordingly with all references to road standards being overwritten with reference to the "Adams County Road Standards Policy".

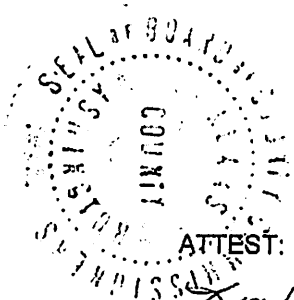
DATED this 7th day of July, 2003.

BOARD OF COUNTY COMMISSIONERS
ADAMS COUNTY, WASHINGTON


Rudy Plager, Chairman


Richard Johnson, Vice-Chairman


Jeffrey W. Stevens, Commissioner



ATTEST:


Linda Reimer, MMC
Clerk of the Board

6/19/03

ADAMS COUNTY ROAD STANDARDS

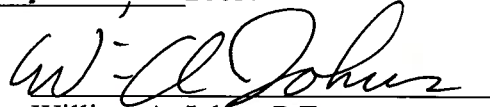
INTRODUCTION

The purpose of this publication of Road Standards is to provide minimum standards for the design elements. The standards provide for consistency in design and construction of road projects.

This publication cannot provide for all situations. It is intended to help but not to substitute for competent work by design professionals. Engineers and surveyors should bring the best of skills from their respective disciplines to each project.

The Road Standards do not unreasonably limit any innovative or creative effort that could result in better quality, cost savings, or both. The County Engineer will judge designs that depart from the Road Standards on the likelihood that such designs will produce cost savings and comparable results.

This manual of design standards is authorized by the Board of Commissioners by Resolution and was approved on July 7th, 2003.



William A. Johns, P.E.
County Engineer



Todd O'Brien, P.E.
Public Works Director

1.00 GENERAL CONSIDERATIONS

1.01 APPLICABILITY

These Standards shall apply to all new construction of public and private roads in Adams County. The Standards are applicable to both public and private work on roads within Adams County. In case of any ambiguity or dispute over interpretation of the provisions of these Road Standards, the decision of the County Engineer shall be final. Prior to the issuance of a building permit, a lot, parcel, or tract of land shall have access by a driveway, private road, or public road.

1.02 DEFINITIONS

1. “Clear Zone” is used to designate the unobstructed area provided beyond the edge of the traveled way for the recovery of errant vehicles.
2. “County Engineer” is the Adams County Engineer, having authorities specified in RCW36.75.050 and 36.80, or an authorized representative.
3. “Cul-de-sac” is a short street having one end opened to traffic and ending with a vehicle turnaround, either permanent or temporary.
4. “Driveway” shall mean private driveways that provide primary vehicular access from a public or private road up to three lots.
5. “Driveway Approach” shall mean any area, construction or facility between the public or private roadway and private property to provide access for vehicles from the roadway to serve up to two lots, tracts, or parcels, except as provided herein.
6. “Engineer” shall mean Professional Engineer licensed by the State of Washington.
7. “Established County Road” shall mean a road that has been accepted by Adams County for maintenance with public funds.
8. “Established Grade” shall mean the profile and cross-sections approved by the County Engineer.
9. “Level of Service” (LOS) is a qualitative measure of traffic flow. Six levels are defined as “A” through “F” with “A” being the best operating conditions and “F” being the worst.
10. “Private Road” or “Lane” shall mean privately owned vehicular access route serving more than one lot, parcel, or tract which does not have frontage on a public road right-of-way. Adams County does not maintain private lanes.
11. “Project” shall mean the design and construction of infrastructure associated with land development activities.
12. “New Construction” shall mean the construction of a new roadway or structure on a new alignment. It also means the upgrading of an existing roadway or structure by the addition of one or more continuous traffic lanes.

13. "Public Road" where used in these standards, shall mean an established County road.
14. "Record Drawings" or "As Builts", shall mean the plan set, which is certified to contain a true and accurate representation of the actual field, conditions for the project during construction, or upon completion of construction.
15. "Road" and "Street" will be considered interchangeable terms in these Standards.
16. "Roadways" shall mean the portions of a street, including shoulders but excepting concrete gutters, designed or ordinarily used for vehicular travel.
17. "Standards" shall mean the requirements contained in the Adams County Road Standards.
18. "Sponsor" means a person who undertakes to create a division of land.
19. "Sponsor Engineer"

Design phase – The Design Engineer who directly prepared plans and calculations, or who directly supervises the preparation of project plans and calculations. The Design Engineer seals, signs and dates the plans and calculations, certifies that they meet the required standards, and approves the plans for construction. Also known as the "Engineer of Record", the Design Engineer may also act in capacity of the Construction Engineer.

Construction phase - The Construction Engineer who directly inspects, or who directly supervises the inspection of the construction of a project to ensure compliance to the plans and standards specifications. The Construction Engineer maintains and certifies the Record Drawings. The Construction Engineer may have also acted in the capacity of the Design Engineer.

20. "Surveyor" shall mean a Professional Land Surveyor licensed by the State of Washington.
21. "Traffic Barrier" shall mean a barrier oriented parallel or nearly parallel to the roadway. The purpose of these devices is to contain or redirect errant vehicles from hazards within the clear zone.
22. "Traffic Impact Study" shall mean a report that documents a study of traffic conditions before and after construction of a proposed development. It addresses any deficiencies in the transportation system, either current or after development, and proposes recommended mitigation to correct those deficiencies.
23. "Traveled way" is comprised of the through traffic lanes. It is the portions of street designed or ordinarily used for vehicular travel excluding shoulders, medians, bicycle lanes, or exclusive turn lanes.

1.03 RESPONSIBILITY TO PROVIDE

All development shall include provisions for construction or improvement of roads according to these Standards. The Sponsor's Engineer shall consider the following guidelines in planning transportation systems.

1. Adequate vehicular access should be provided to all parcels of land
2. Local access roads should be designed to minimize through traffic movements and excessive speeds.
3. Street patterns and names should be logical, consistent and understandable to satisfy the needs of emergency and delivery vehicles.
4. Traffic generators within the project should be considered and the street system designed appropriately.
5. The Sponsor's Engineer should consider bordering arterial routes and should provide design continuity.
6. No direct residential lot access shall be allowed to urban principal and minor arterials.
7. When a subdivision has the cumulative effect of creating a total number of lots, parcels, or tracts served by an access road equal to or greater than the number of units shown in the following table, the Sponsor shall provide an additional access road into the development to serve fire district vehicles. The location of the additional access road shall have the concurrence of the fire district. If the location and layout of the development, in the opinion of the fire district authorities, causes a concern for safety, an additional access road may be required regardless of the values shown in the following table.

Setting	Units
Apartments/Attached Housing*	20
Single Family Residential	10

*Privately owned access roads may be closed with a gate. No locking gates will be allowed without approval of the fire district.

8. The Sponsor's Engineer shall consider ease of maintenance when designing public and private roads.

1.04 REFERENCES

These Standards are intended to be consistent with the following references, as amended:

1. City and County Design Standards for the Construction of Urban and Rural Arterial and Collectors adopted February 10, 1994 per RCW 35.78.030 and RCW 43.32.020.
2. Adams County Subdivision Ordinance Resolution No. 80-0424.
3. Washington State Local Agency Guidelines.
4. "A Policy on Geometric Design of Highways and Streets" published by the

- American Association of Highway and Transportation Officials (AASHTO).
5. "Highway Capacity Manual" (Special Report 209) published by the Transportation Research Board, National Research Council.
 6. "Roadside Design Guide" published by the American Association of Highway and Transportation Officials (AASHTO).
 7. Adams County Comprehensive Plan.
 8. Adams County Zone Code
 9. WSDOT Design Manual

1.05 Not Used

1.06 STATE SPECIFICATIONS AND PLANS

Except where stated in these Standards, design and construction shall conform to the current editions of the following Washington State Department of Transportation publications, as adopted by Adams County.

1. Standard Specifications for Road and Bridge Construction. It will be referred to as the "Standard Specifications."
2. Standard Plans for Road and Bridge Construction.

1.08 DEVIATIONS AND REVIEW OF DECISION

1. Deviations from these Standards may be granted by the County Engineer in writing upon written evidence from the Project Sponsor that the proposed deviation does not conflict with or modify a condition of approval and,
2. Deviations are based upon sound engineering principals, and
3. Deviations meet requirements for safety, function, appearance, and maintainability.

Desired deviations must be approved before road plans are accepted for development. Deviations must be approved before commercial building permits are issued. The County Engineer may apply conditions to the approval of design deviations. The conditions may not have been required in the preliminary plat approval.

1.09 Not Used

1.10 COMPLIANCE REVIEW

In the event an Engineer or Surveyor submits plans, calculations, or record drawings that are not in compliance with these Standards, the County Engineer may refer the case to the Director of Public Works for consideration.

Decisions of the Director of Public Works may be appealed to the Board of County Commissioners. Failure to comply with these Standards will be cause for withholding or withdrawing approval of permits, plats, forfeiture or bond, and/or other penalties as provided by law.

1.11 ROADWAY TYPES

The roadway types and widths of County roads are shown in Table 3.01 and in the Standard Plan sheets entitled “Adams County Design Templates”.

1.12 ROADWAY CLASSIFICATIONS

1. RURAL ARTERIAL SYSTEM

- A. Major Collector Arterial- Class 07, These routes (1) serve County seats on arterial routes, larger towns not directly served by the higher systems, and other important traffic generators, such as consolidated schools, shipping points, County parks, important mining and agricultural areas: (2) link these places with nearby larger towns or cities, or with routes of higher classification; and (3) serve the more important intracounty travel corridors.
- B. Minor Collector Arterial-Class 08, These routes should (1) be spaced at intervals consistent with population density to accumulate traffic from local routes and bring all developed areas within reasonable distance of collector roads, (2) provide service to remaining smaller communities, and (3) link the locally important traffic generators with surrounding areas.

2. ACCESS ROADS CLASS 09

Access roads allow direct access to abutting land and connections to the higher order systems. They offer the lowest level of mobility. Access roads should be signed to discharge service to through-traffic movement.

- A. Industrial/Commercial Access -These local access roads abut manufacturing facilities, stores, dense multiple family dwellings, commercial sources, office and professional buildings.
- B. Residential/Farm Access -Theses local access roads provide access by through roads, loops roads and cul-de-suc roads to homes and farms connecting to a collector arterial or other residential or farm access streets.
- C. Primitive Roads- Primitive roads are existing, rural, low –volume, (under 100 ADT), unpaved, access roads and are designated as such by a sign at all places where the primitive road portion begins or connects with a highway or road other than a primitive road. This classification is for signage only and does not affect the level of maintenance.
- D. Field Access Roads- These summer roads are not fully maintained roads. Maintenance occurs as needed, on an irregular basis within systems-wide

priorities, only during the summer months. Snow removal is not performed on these roads. Field access roads are usually not constructed to regular design standards and do not have warning nor regulatory traffic signs.

- E. Long Plat Roads – These roads provide access within a long plat (more than 4 lots) and are paved with a 2 shot class “A” Bituminus surface treatment. These roads may be a public road or private lane however, the standards are the same for either.

- F. Short Plat Roads- These roads provide access within a short plat (less than 5 lots). They may be gravel or paved. If the road connects to a paved road then the short plat road must at least be paved to the right away line. If it is connected to a gravel road then it may be graveled. These roads may be a public road or private lane however the standards are the same for either.

1.13 20 AC EXEMPTION ACCESS LANES

These private lanes are meant to provide access to parcels created under the 20 acre plat exemption. The adjoining landowners are fully responsible for all maintenance. The County will perform no maintenance.

1.14 Not Used

1.15 Not Used

1.16 FIRE ACCESS LANE

These private lanes are meant only to provide an all weather emergency secondary access. They are not owned or maintained by the County but rather by the landowners served by the lane.

1.17 PRIVATE LANE (Private Road)

Private lanes are owned and maintained by the landowners served by the lane. The purpose and standards are the same as Public Road classification.

1.18 ROAD NAMES

The Sponsor may suggest road and lane names within a development as long as they do not line up with an existing County Road. Road Names will be reviewed by the Planning Director and modified as necessary to conform to regulations. All roads located outside of incorporated areas shall be called Roads except:

1. A dead-end road or cul-de-sac under 200’ when not an extension of an existing roads or a continuation of any future road shall be called a Court.

2. A private road or driveway with two residents shall be called a lane.

1.19 Not Used

1.20 LEVEL OF SERVICE

The County Engineer has established acceptable Levels of Service (LOS" B") for traffic at Adams County intersections. Levels of Service are used in determining the impacts on the road system by land development proposals.

1.21-1.39 Not Used

1.40 SEVERABILITY

If any part of the Adams County Road Standards as established by ordinance shall be found invalid, all other parts shall remain in effect.

3.00 NEW CONSTRUCTION DESIGN STANDARDS

3.01 COUNTY ARTERIAL ROADS

Standards for construction of new arterial roads and reconstruction of existing arterial roads within Adams County shall follow the criteria shown on Tables 3.01 Arterial Street Design Standards and Table 3.02. "A Policy on Geometric Design of Highways and Streets" (AASHTO) shall govern all design elements not shown in these standards.

3.02 COUNTY ACCESS ROADS AND LANES

Standards for construction of new access roads, lanes and reconstruction of existing access roads and lanes within Adams County shall follow the criteria shown on Table 3.01 New Construction-Minimum Road Design Elements and Table 3.02 "A Policy on Geometric Design of Highways and Streets" (AASHTO) shall govern all design elements not shown in these standards.

303 Not Used

3.04 INTERSECTIONS

The minimum return radius at intersections on an arterial road shall be twenty five feet. Private curbed roads 24 feet or narrower shall have return radii of 25 feet. The minimum return radius at all other intersections shall be twenty feet. Larger radii may be required where truck traffic is a significant factor. Where trucks are a significant factor, the County Engineer shall decide the size of the return radii.

All intersections shall be designed at right angles to the intersecting road, where possible. If a right angle is not possible, the skew angle shall not vary more than 15 degrees from a right angle. At four legged intersections, opposite legs shall lie on a straight alignment

NEW CONSTRUCTION - MINIMUM ROAD DESIGN ELEMENTS 6/19/03

		Class 9							
		Class 8		Class 9					
	Class 7	Minor Rural Collector Arterial	Public Road Paved	Public Road Gravel	Long Plat more than four lots	Short Plat less than five lots	20 Acre Exemption	Fire Access subdivisions only	Field Access
ROW	80 feet	75 feet	60 feet	60 feet	60 feet	60 feet	60 feet	40 feet	40 feet
Surfacing	12 inch crushed 2shot BST (Design)	12 inch crushed 2shot BST (Design)	12 inch crushed 2shot BST	6 inch crushed residential under 150 ADT 12 inch crushed commercial	6 inch Crushed 2shot BST OR 6 inch crushed 2shot BST	6 inch crushed OR 6 inch crushed 2shot BST	4 inch crushed OR 4 inch pit run plus 2 inch crushed	4 inch crushed OR 4 inch pit run plus 2 inch crushed	Summer Access Only 4 inch crushed
Surface Width	30 feet	30 feet	30 feet	30 feet	30 feet	30 feet	24 feet	20 feet	16 feet
Minimum Radius	WSDOT	WSDOT	WSDOT	WSDOT	WSDOT	WSDOT	100 feet	100 feet	100 feet
Maximum Grade	WSDOT	WSDOT	WSDOT	WSDOT	WSDOT	WSDOT	8%	8%	10%
Cul D Sac	N/A	N/A	80'surface 100' ROW	80'surface 100' ROW	80'surface 100'ROW	80'surface 100'ROW	80'surface 100'ROW	80'surface 100'ROW	none

1. All roads require a 2 % crown
2. If unsuitable material is found in the subbase of any road additional material is required
3. Minimum radii depend on topography, sight distance and road width at the curve.
4. Class 7 and 8 roads are all public. Long and short plat roads are public or private. 20 acre exemption lanes and fire access lanes are private. Field access roads are public
5. Two ACP may substitute for BST
6. Pit run must be approved by the County Engineer
7. A variance to the above standards may be submitted utilizing the form in appendix D

Inspect by private engineer or Cnty Eng

TABLE 3.01

where possible. The minimum distance between intersections on a County road shall be as shown in Appendix A. Distances are measured from the centerline of the intersecting road to the centerline of the next intersecting road. The cross slope of the higher priority roadway shall be extended through the intersections. The grade of the crossroad shall be adjusted to meet the cross slope of the higher priority roadway. The road approach area is where vehicles store while waiting to enter an intersection, and shall be designed with a nearly flat grade. For public or private roads, the road approach area at a stop-controlled intersection (i.e. stop sign, yield sign) shall have a downgrade approaching the intersection of no greater than 2.0 percent. An upgrade approaching the intersection shall be no steeper than 4%. The minimum length of the road approach as measured from the edge of the traveled way is to be in accordance with Table 3.02. For any road classification not listed in Table 3.02, the County Engineer may require a traffic analysis to determine the road approach length.

Average Daily Traffic (ADT) of Higher Priority Road	Minimum Road Approach Length (2% Maximum Downgrade and 4% maximum upgrade)	
	Local Access Streets & Private Roads (1)	Collector Arterial (2)
ADT < 1000	25FT	50FT
1000 < ADT < 5,000	50FT	75FT

TABLE 3.02

3.05-3.06 Not Used

3.07 SLOPES

Embankment slopes constructed with native soil or imported soil shall not be steeper than in inclination of 2:1 for slopes that are 10 feet or greater in height measured vertically from the slope toe to the crest. Embankment slopes less than 10 feet high may be constructed at inclinations not steeper than 1.5:1 provided proper fill placement and compaction criteria, and erosion control are called for in the contract documents. Steeper embankment slopes for any embankment height, including mechanically stabilized earth

slopes, may be permitted by the County provided the Sponsor's Engineer can demonstrate that the factor of safety against slope instability (global and internal) is not less than 1.3, and that erosion potential of the slopes will be properly mitigated during construction.

Cut slopes in competent native soils shall not be steeper than an inclination of 1.5:1 unless a license engineer qualified in soils testing and analysis, prepares and signs a report. Erosion mitigation shall be included in the contract documents.

The Sponsor's Engineer shall provide a space between the catch point of the slope and the right of way line on shouldered roads with side slope of 3:1 or steeper. This space provides for utility poles, fences, etc. The minimum distance of this space shall be five feet.

The Terrain or design features of a road may require slope, wall or drainage easements beyond the right of way line. The County Engineer shall require easements or acquisition of right of way. Guardrail may be required.

3.08 RIGHT OF WAY

The road right of way width shall be as shown on table 3.02. Wider right of way may be required to contain the road prism and within the Othello planning area.

3.09 CONNECTIONS OF STATE HIGHWAYS AND NEW COUNTY ROADS

The Sponsor shall prepare and submit to the County Engineer a design proposal, acceptable to the Washington Department of Transportation (W.S.D.O.T.), of the proposed state highway-county road intersection. W.S.D.O.T. approval of the proposed design must be received before the filing of the final plat. Improvements to the state highway are the responsibility of the Sponsor. The Sponsor may either construct the improvements or furnish to the County Engineer a bond to cover the cost of such improvements. The County Engineer and W.S.D.O.T. will decide the amount of the bond.

3.10-3.11 Not Used

3.12 STANDARD ROAD AND TRAFFIC CONTROL SIGNING

The Sponsor shall be responsible for the installation of all permanent traffic control devices, such as, signs, striping and marking. He/she shall submit a signing and striping plan for approval. The plan shall show the types and locations of all traffic control devices, such as, signs, stripes, marking and delineators to be installed on public right-of-way. Traffic control devices shall conform with the Manual on Uniform Traffic Control Devices. If the permanent traffic control devices are not installed in a timely manner the Sponsor shall be given a 30 day notice after which time the County will furnish and install the devices and bill the Sponsor based on the actual cost for labor, equipment

rental, and materials. If the absence of critical safety devices such as stop signs is causing a present endangerment to the traveling public, the County will immediately furnish and install the devices and bill the Sponsor for the work.

3.13 Not Used

3.14 TRAFFIC BARRIERS

Traffic barriers shall be provided as specified in the Washington State Department of Highways Design Manual. A roadway cross section shall be submitted to assure proper barrier location. The barrier shall conform to Washington State Department of Transportation Standard Plans for guardrail and concrete barrier.

3.15 CLEAR ZONE

The term “clear zone” is used to designate the unobstructed area provided beyond the edge of the traveled way on public road for the recovery of errant vehicles.

1. On shouldered roads, rigid objects shall be placed no closer to the traveled way than clear zone distance derived by using tables and the methods described in the current edition of the Roadside Design Guide, AASHTO. Within the clear zone, all hazards shall be protected by traffic barrier.

3.16 ROAD SURFACING REQUIREMENTS

The road requirements are as shown on table 3.01. Paving may be class “A” plant mix or a class “A” bituminous surface treatment (B.S.T.). The B.S.T. shall consist of no less than two applications of oil. The gravel thickness shall be designed according to good engineering practices considering the quality of the underlying soil. The design method shall be subject to approval by the County Engineer. In no case shall the gravel thickness be less than as shown in table 3.01. A crushed rock surfacing may be used in some cases as shown in table 3.01. Table 3.01 represents minimums. Soil conditions may require additional base and/or wearing courses.

3.17 CUL-DE-SAC

Dead-end public roads shall have a cul-de-sac constructed at the end. Cul-de-sacs are shown on the Standard Plan sheet intitled “Cul-de-Sac Public Roads”. Cul-de-sacs shall have a minimum surfacing radius of 40 feet.

3.18-3.21 Not Used

3.22 PRIVATE ROADS

A private road is a privately owned vehicular access route serving lots, parcels or tracts which do not have frontage on a public road right of way. Private roads must meet the same standards as public roads. The traveled way of a private road shall be designated as a fire lane under the Uniform Fire Code, as amended. Adams County will not perform an in-depth review of private road plans, inspect the construction of private roads, or maintain private roads. The intersection with a County Road will be reviewed and inspected. All private roads shall be called lanes. Private roads may be permitted when:

1. The road is within a subdivision approved according to the Adams County subdivision code.
2. A title notice has been approved and recorded with the County that provides for maintenance of the private roads and associated parking areas by the owners in the development, and
 - A. Provision is made for the road to be open for emergency and public vehicle use.
 - B. The title notice shall include language indicating that the county is not responsible for maintenance of the private road, and
 - C. The private roads will not obstruct public road circulation.

Private road design plans, drainage studies, drainage plans and appropriated calculations shall be submitted by the Sponsor to the County Engineer prior to construction of the road. All submittals shall bear a certification by the Sponsor's Design Engineer that they were prepared in conformance with and meet the requirements of these Design Standards and all other applicable laws and regulations. The Sponsor shall submit record drawings of private road and drainage improvement construction to the County Engineer. All record drawing submittals shall bear certification by the Sponsor's Construction Engineer that construction was performed in conformance with these standards, and the submitted plans.

Adams County does not furnish, install, or maintain signs for private roads including stop signs except for street name signs for private roadways intersecting public roads. The owner may install their own signs in accordance with the MUTCD, but must have approval from the County Engineer when installing signs at intersections with public roads. Prior to installing signs at the private road intersecting with public road, an approach permit shall be obtained. The Sponsor may contract with Adams County for providing and installing signs.

3.23 FIRE ACCESS LANES

Privately owned fire access lanes may be constructed to provide secondary access to urban, residential lots. A roadway surface must be twenty feet wide, paved, and must be located within a minimum of 30 foot wide easement or private right-of-way. The

easement shall connect to a public or private road at each end. The intersection of an easement with a public road shall conform to County Standards. Prior to final plat approval, the developer must provide an agreement for the maintenance of the private fire access lane. Fire access lane design shall conform to the design standards as shown on table 3.01.

3.24 DRIVEWAY APPROACHES

1. GENERAL

- A. Driveways provide primary vehicular access from a roadway up to three lots.
- B. Every driveway approach must provide access to an off road parking area located on private property. The driveway shall be of sufficient length so a vehicle in the driveway does not project into the road right of way.
- C. Driveways in industrial, commercial, multiple family, church, or any like use shall be constructed to allow vehicles to exit without backing out onto a County road or private lanes. Driveways serving single family residential lots shall be constructed to allow vehicles to exit without backing out on to a County arterial.
- D. Driveway approaches shall be constructed to avoid interference with existing drainage inlets, culverts, road lighting standards, utility poles, traffic regulating devices, fire hydrants or other public facilities. The applicant shall bear the cost of relocating any such public facility. The agency holding authority for the particular structure shall decide how the facility will be relocated.
- E. The total width of all driveway approaches on a road for any ownership shall not exceed 50% of the frontage of that ownership along the road and shall not be more than two in number.
- F. The owner of a driveway approach that has been abandoned, or for any reason has become unnecessary, shall replace it with a standard road section.
- G. In single ownerships, if the total width of existing driveway approaches on a road is over 50% of the frontage of the ownership on the road, or any driveway approaches are wider than 40 feet, such existing driveways shall be made to conform to this chapter's provisions in the following events
 - 1. Any alteration, widening, relocation, or repair of existing driveway in ownership.
 - 2. Any construction of additional approaches in the ownership.

2. NON-RESIDENTIAL DRIVEWAY APPROACHES

- A. The Sponsor shall install any necessary storm drainage improvements directed by County Engineer.
- B. The driveway approaches shall be of asphalt concrete pavement from the existing roadway surface to the property line. If the existing roadway is not paved the driveway approaches shall be 6" crushed surface top course

to the property line.

- C. Driveway approaches shall not restrict or impound drainage flow in the road gutter line. For shouldered roads with ditches, storm drainage shall be passed under a driveway by a culvert pipe. The size of the culvert shall be as approved by the County Engineer. A diameter of fifteen inches (15") shall be the minimum size culvert allowed.

3. DRIVEWAY APPROACH DESIGN

- A. Driveway approach grades within right of way shall not exceed 8% (a rise or decent of 8 feet in 100 feet) in the urban area, or 2% (a rate of rise or decent of 2 feet in 100 feet) in rural areas. Driveway grades shall not exceed ten percent within ten feet of a county road right of way.
- B. Drainage from private driveways that connect to a public road shall be controlled to prevent runoff water from entering onto the public roadway.
- C. No driveway approach shall be constructed to within Appendix A distances of a cross road.
- D. The spacing between driveway approaches shall be as shown in Appendix A
- E. No Driveway approach shall be located closer than fifteen feet from property line.

4.00 Not Used

5.00 PROJECT APPLICATION AND CERTIFICATION

5.01 APPLICATION PROCEDURE

The application and certification procedure for public and private road construction as prescribed by the County Engineer shall generally include, in sequence, the following items:

1. conduct pre-submittal meetings with the County Engineer and reach concurrence on the design parameters and drainage concept.
2. if needed, conduct a joint site visit by the Sponsor's design engineer and the County Engineer,
3. submit and receive approval of any design deviations,
4. Submittal, certification and approval of the plans and calculations by the Sponsor's Design Engineer,
5. cursory check of the submittal and acceptance of the plans and calculations by the County Engineer,
6. construction and inspection by the Sponsor's Construction Engineer,
7. final inspection by the Sponsor's Construction Engineer,
8. submittal of certification and record drawings by the Sponsor's Construction Engineer. Submittal requirements and procedures shall be as prescribed by the County Engineer.

The Sponsor's Engineer shall schedule a pre-submittal meeting with the County Engineer. The purpose of the pre-submittal meeting is to identify the major design parameters prior to design, review the general design concepts proposed by the Sponsor's Engineer, and reach concurrence on design concepts and design parameters. Additional pre-submittal meetings may be needed as determined by the County Engineer. A joint site visit may be required to reach agreement.

Proposed design deviations shall be applied for and approved prior to submittal of final road and drainage plans. The design deviation application shall be submitted in a format prescribed by the County Engineer (Appendix D). The Sponsor shall acquire acceptance of the plans and calculations from the County before the start of construction and before recording the plat.

The Sponsor's Surveyor shall comply with procedures for perpetuation of survey monuments in accordance with "Land Survey Standards" section of this manual.

The County Engineer relies upon the certification and approval of the road and drainage plans and calculations by the Sponsor's Engineer for approval of the plat.

The County Engineer's acceptance of the plans shall not relieve the Sponsor or the Sponsor's Design Engineer from any liability related to portions of the design which are not in conformance with these Standards or do not follow good engineering practice.

The plans, basin maps and calculations shall be signed, sealed and dated by the Sponsor's Design Engineer. The cover sheet of the plan set and the cover sheet of all the calculations shall bear the certification, which reads:

"The design improvements shown in this set of plans and calculations conform to the applicable editions of the Adams County Road Standards. The Adams County Engineer has approved all design deviations. I approve these plans for construction".

The Sponsor shall reimburse the County for all costs incurred for pre-submittal meetings, submittal reviews, site-visits, and any other work associated with a developer's project. Costs shall be assessed as outlined on the latest fee schedule adopted by the Board of County Commissioners, and in accordance with the Fee Agreement signed by the Sponsor. (Appendix E)

For each construction phase of public road improvement the Project Sponsor's Engineer shall provide construction inspection which complies with the requirements of Section 9.04 and upon completing the construction inspection shall provide "Record Drawing" which comply with the requirements of Section 9.10 of these Standards. Adams County Personnel may be contracted with, to perform inspections.

The general format, number of copies, and application processes shall be as follows:

5.02 GENERAL FORMING FOR ROAD PLANS

The general format, number of copies and application process shall be as follows:

1. PRIVATE DESIGN: Original sheets shall be good quality reproducible, ink on maylor.
 - A. All plan sheets shall be in size 24 inches x 36 inches.
 - B. First and subsequent applications shall contain two sets of prints of road plans, typical cross sections, profiles, and detail sheets. A drainage plan and drainage calculation shall also be submitted as required in Section 2 of the Drainage Guidelines.
A print of the proposed final plat map shall be submitted before plan approval reflecting changes from the preliminary plat map. Upon the return of plans for correction, the Sponsor's Engineer shall show the date of these changes. The colors of red and yellow are reserved for County Comments.
 - C. The first application shall contain a letter signed and sealed by the Sponsor's Surveyor that a thorough search has been made for survey monuments. He/she shall indicated that all found monuments are properly referenced in accordance with current applicable state laws. A copy of references shall be filed in the County Engineer's Office.
 - D. The final application shall contain the original and two sets of blue line prints of corrected road plans, profiles, typical cross sections, detail sheets, and drainage plans and calculations. If the Sponsor or his engineer desires the County to return an approval set of reproducible plans, the Sponsor should also submit a set of sepia plans. Upon the County Engineer's acceptance of the final application, the County Engineer will retain the original, using it to make copies for public inspection and distribution as required. The approval of construction plans shall expire two years from the approval date shown on the plans. It may be extended for an additional two years at the option of the County Engineer. Before the extension of approval, the Sponsor's Engineer shall revise the plans to reflect current standards.

2. COUNTY DESIGN:

Procedures for county design shall be as required for coordination and for approval by funding authorities. Survey monuments shall be perpetuated in accordance with the "Land Survey Standards" sections of this manual.

5.03 DRAFTING STANDARDS

The plans shall be readable and use common standards

5.04 PLAN

Plans may be comprised of more than one set of project drawings each depicting separate items of work. Plans shall include the following:

1. The first sheet of the plans shall include a project title, vicinity map, an index of plan sheets, the engineer's certification statement, and signature block containing approval signatures of both Project Sponsors and his engineer.

2. Road alignments with 100' stationing, reading from left to right, and stationing at point of curve, tangent, and intersections, with appropriate ties to existing road surveys and stationing, section corners, quarter corners, and the horizontal control net established by the County Engineer. Stations shall increase from west to east and from south to north.
3. Sections, township, and range.
4. Bearings on the road centerline, keyed to an associated plat map.
5. Curve data including radius, delta, arc length, and semi-tangent length, on all road centerlines and curb returns.
6. Right of way lines, width for proposed road, intersecting roads and existing road improvements with dimensions.
7. All topographic features within right of way limits or future right of way limits and sufficient area beyond to resolve questions of setback, slope drainage, access onto abutting property, and road continuations.
8. All existing utilities.
9. All proposed water and sewer utilities that will be designed and constructed.
10. Identification of all roads and adjoining subdivisions.
11. A Traffic Control Signing Plan (See Section 3.12)
12. Existing and proposed drainage features, showing direction of flow, size, and kind of drainage channel, pipe, and structure.
13. Minimum Scale 1" = 50'. However, 1" = 100' shall be optional for development of lots one acre or larger. Details for clarification may be shown on a convenient scale.
14. A north arrow.
15. As a minimum, one new control monument shall be at each end of new road and intermediate monuments as required.
16. Project beginning and ending designation with stations.
17. All title blocks to include:
 - A. The project name
 - B. County Project Number
 - C. Sheet Number
 - D. Road Name

E. Road limits

18. All found and referenced survey monuments.
19. Section and lot lines
20. Standard symbols as shown on Standard Plan entitled Symbols.
21. Beginning, middle, and ending elevations of curb returns.
22. Other data necessary for the specific project.

5.05 Not Used

5.06 PROFILES ELEMENTS

Profiles elements shall include the following:

1. Original ground line at 100' stations and at significant ground breaks and topographic features based on field measurement to within 0.1' on unpaved surface and 0.01' on paved surface.
2. A final road and storm drain profile. The stationing shall be the same as the horizontal plan, reading from left to right. It shall include stationing of points of curve, tangent, length, and point of intersection of vertical curves, with elevations to 0.01'.
3. Profiles for shouldered roads shall show the centerline only.
4. On a grid of numbered lines, a continuous profile shall be shown for both existing and proposed improvements.
5. Grade and vertical curve data, on all profiles.
6. The datum used on all benchmarks must refer to established control when available.

5.07 Not Used

5.08 TYPICAL CROSS SECTION

Typical cross sections shall include the following:

1. The dimensions of traffic lanes, shoulders, swales, depths, planting strips, easements, and right of ways, etc.

2. The cross slope of all elements such as, the pavement, ditches, swales, planting, strips, etc.
3. Dimensions of structural section material layers.
4. Retaining wall where required.
5. A separate full width roadway typical section for each road or portion of the road that differs significantly. Station limits shall be shown.
6. All other data necessary for a specific project

5.09 Not Used

5.10 DRAINAGE PLAN

A drainage plan is required by Adams County. A private developer may submit the drainage plan integrally with the road plan and profile, if space permits. Otherwise, he/she shall submit it on separate plan and data sheets.

6.00 LAND SURVEY STANDARDS

6.01 REGULATIONS

1. Surveys shall conform to all applicable state and local regulations.
2. Prior to any construction within County right-of-way, a surveyor shall conduct a thorough search for all survey monuments. Any found monuments shall be referenced in accordance with current applicable state laws. A copy of the references shall be filed in the office of the County Engineer.

6.02 MONUMENTATION

1. The responsible surveyor shall set permanent monuments with his/her registration number as follows:
 - A. For placing new or replacement section corners, quarter corners, closing corners, witness corners, and meander points that have been disturbed or destroyed, the minimum acceptable monument is a $\frac{3}{4}$ inch inside diameter iron pipe or a #4 steel reinforcing rod 24 inches in length. The monument shall be marked in conformance with state law and regulations. Any of these corners in paved roads shall be covered by a Adams County standard cast iron monument case. Monument cases are shown on the Adams County Standard Plan sheet entitled "Monument Case and Cover".
 - B. For placing or replacement of disturbed road centerline angle points, curve points, and road intersection points, the minimum acceptable monument is a $\frac{1}{2}$ inch inside diameter iron pipe or a #4 steel reinforcing rod, 18 inches in

length. On principal arterials, monument cases and covers shall be set to protect the monuments. All monuments in other paved roads shall be set flush with the road surface. The monument shall be marked in conformance with state law and regulations.

- C. For placing new or replacement of all permanent monuments not covered above, the minimum acceptable monument is a ½ inch inside diameter iron pipe or #4 steel reinforcing rod, 18 inches in length. The monument shall be marked in conformance with state law and regulations.
- D. If it is impossible to set the above monument, the County Engineer may approve an alternative monument.

- 2. Each monument set according to 6.02 1A through 6.02 1D shall have at least three reference points. The reference points may consist of, in order of preference, cross on curbs, bearing trees, property corners or alternate approved by County Engineer.

6.03 HORIZONTAL CONTROL NET

A horizontal control net established by the Adams County Engineer shall be the mapping base for all surveys lying within its boundaries. All surveys done within this net shall conform to the degree of accuracy required under applicable State laws with adequate supplemental information as required by the County Engineer to ensure accuracy.

6.04 TEMPORARY BENCHMARK

The surveyor shall provide a temporary benchmark along the roadway every one thousand feet. These temporary bench marks shall be based on a datum plane approved by the County Engineer. The surveyor shall submit field notes or sealed statement insuring work according to third order accuracy. Please refer to Washington State Department of Transportation Standards.

7.00-7.03 Not Used

7.04 RETAINING WALLS AND OTHER STRUCTURES

Analysis and design of retaining walls and other structures constructed within the County right-of-way and/or maintained by Adams County shall conform to the requirements of the current edition of the “Standard Specifications for Highway Bridges”, AASHTO. Plans and structural computations shall be submitted for approval of the County Engineer before construction begins. Mortarless concrete block retaining walls shall be designed and constructed in accordance with National Concrete Masonry Association Technical Report 127 (NCMA TR127).

8.00 UTILITIES

8.01 FRANCHISING POLICY

Utilities to be located within the County road right-of-way shall be constructed according to current franchise and permit procedure and according to these standards in their use of the right of way, utilities shall be given consideration only after the requirements of the road are met. These requirements are to provide safe, efficient and convenient passage for motor vehicles, pedestrians, and other traffic.

8.02 STANDARD UTILITIES LOCATIONS

Utilities within the right of way on new roads shall be located as shown on Standard Plan entitled Utility Locations. The locations shown on the standard plan shall be used on existing roadways where topography, utilities, or storm drains do not conflict. Where existing utilities or storm drains are in place, new utilities shall conform to these Standards as nearly as practical and yet be compatible with the existing installations.

Exceptions may be approved when necessary to meet the special requirements of overhead utilities when right of way space is limited in planned unit developments, manufactured home parks, multifamily developments and commercial developments.

1. Notwithstanding other provisions, underground systems shall be placed at least five feet away from road centerline and where they will not otherwise disturb existing survey monuments.
2. Underground utilities that can use a joint trench shall have the option of occupying any other utility company's standard location if that company is a participant in the joint trench installation.
3. Any utility company may use another utility company's standard location provided they obtain approval from that company. A copy of the approval shall be furnished to the County Engineer.

8.03 Not Used

8.04 SCHEDULING OF UTILITIES INSTALLATION, RELOCATION AND INSPECTION

When possible, utilities, including service crossings, shall be installed or relocated before the start of road construction. If planned road cuts and fills are large or if the location of road elements cannot be clearly shown in advance, the utility company will coordinate the relocation of utilities with the contractor before construction. Otherwise, such utilities and connections shall be installed or relocated after the subgrade has been completed but before surfacing has been placed.

As a matter of policy, Adams County discourages utility trenching or transverse cuts in County roads. Cutting or trenching roads that have been reconstructed within the previous five years will not be permitted unless it can be shown that alternatives are not

feasible. Possible alternatives are boring, jacking, relocating outside the paved area, or installing the utility just before reconstruction or overlay of the road.

In instances where trenching or cutting is permitted, pavement patching shall include:

1. cutting the existing pavement
2. removal of existing pavement
3. preparation and compaction of subgrade
4. placement and compaction of aggregate base material
5. application of tack coat and construction of the asphaltic concrete pavement "patch"

This work shall conform to the applicable sections of the Washington State Department of Transportation Standard Specifications. On arterial roads, the utility company may be required to backfill the trench in paved roads with Portland cement concrete to within 0.10 feet to finish grade. This requirement may be applied on all paved roads during cool or inclement weather.

Monumentation: The contractor, according to the "Land Survey Standards" section of these standards, shall protect existing survey monumentation.

9.00 PERMITS AND INSPECTION

9.01 APPLICATION

Any party desiring to construct on county right-of-way, including connecting a road or driveway to a county road, shall first obtain a permit by filing a written application with the County Engineer. Such application shall be made on a Adams County form provided for that purpose, and shall include:

1. The name and address of the applicant
2. The name and address of the owner of the property abutting the road and where work is proposed.
3. The exact location of the proposed work, giving the road address or legal of the property involved.
4. A detailed plan or sketch accurately showing:
 - A. The dimensions of the abutting property.
 - B. The dimensions and locations of existing or proposed driveways.
 - C. Utility poles.
 - D. Hydrants.
 - E. Road light Standards
 - F. Trees within the limits of the frontage of said property.
 - G. Other pertinent features.
5. The plan shall also show the location of buildings, loading platforms, and off-road parking facilities being served or to be served by such driveways.

6. The County Engineer may require, at his discretion, the filing of any other information when he feels such information is necessary to properly enforce provisions of this section.
7. The County Engineer will not approve a plan nor issue a permit where it appears that the proposed work conflicts with the provision of this standard or any other ordinance or resolution of Adams County; nor shall issuance of a permit be construed as a waiver of the Zoning Ordinance or other ordinance requirements concerning the plan.

9.02 BASIS FOR CONTROL OF THE WORK

Work shall be done to the satisfaction of the County Engineer and according to approved plans (Sections 5.00). This includes work done in the existing, proposed, or future public right of way. It applies to work by a private project sponsor, or by a county contractor. It is emphasized that no work may be started until such plans are approved. The County Engineer shall approve any revision to the plans before the proposed revision is constructed.

The County Engineer shall have authority to enforce the Standards just as other referenced or pertinent specifications. He/she will appoint engineers, assistants, and inspectors as necessary to control and inspect the work and they will exercise such authority as the County Engineer may delegate.

1. PERMIT REQUIRED

No person, firm or corporation shall commence work or permit any other person, firm, or corporation to commence work on the construction, alteration, repair, removal, cutting and/or paving of any road, alley or other public place in Adams County without first obtaining a written permit and approved plans from the County Engineer.

The Sponsor shall be responsible for the County costs incurred for inspection. The costs shall be assessed as outlined on the latest fee schedule adopted by the Board of County Commissioner's.

2. TRAFFIC CONTROL DURING CONSTRUCTION

Before commencing work on the project, the Sponsor shall prepare a signing plan according to the MUTCD. As work progresses, the Sponsor shall revise the signing plan to conform to changing conditions. The Sponsor shall provide flagmen to control traffic during the project. He/she shall also provide the flagmen's protective apparel, barricades, lights, standard signs, cones, and other devices for the protection of the public and maintenance of traffic through the project.

9.03 Not Used

9.04 ROAD CONSTRUCTION INSPECTION

The Sponsor's Engineer or a designated representative or Adams County may perform inspections on all road construction generated by a land use action.

9.05 Not Used

9.06 CONSTRUCTION INSPECTION NOTIFICATION AND RECORDS

The Sponsor's Engineer shall be responsible to ensure that construction of roads and appurtenances is according to county accepted project plans, County General Provisions, the Standard Specifications, and applicable portions of the WSDOT Construction Manual. County forces may make random visits to public road construction sites, as deemed necessary. Random visits are to ensure a quality construction inspection process and do not express or imply approval or disapproval of the contractor's work. The County Engineer shall have access to all construction inspection records and reports.

The Sponsor's Engineer shall submit all construction change orders that propose changes to the accepted plans or specifications to the County Engineer for his review and approval. The County Engineer will use a fast-track system for change order approvals when the progress of construction makes it infeasible to wait for formal approval.

If, in the opinion of the County Engineer, the Sponsor's Engineer fails to satisfactorily perform the proper inspection, testing, and record-keeping duties, the County may take action as provided for in Section 1.10 "Compliance Review".

Prior to scheduling a final inspection with Adams County, the Sponsor's Engineer shall:

1. Submit all construction records to the County Engineer. This shall include but not be limited to, Daily Inspector's Reports, correspondence, manufacturer's certifications, material test reports, and Record Drawings as required in Section 9.10.
2. Ensure that all previously identified project deficiencies have been corrected.
The Sponsor's Engineer shall schedule a final inspection meeting between the

Sponsor's Engineer and the County Engineer prior to establishment of the road by Adams County. Deficiencies found shall be corrected by the Sponsor prior to road acceptance. At the time of establishment of the roads by the Board of County Commissioners, the County will assume responsibility for road maintenance and operation. The County will then release the Sponsor's Engineer from responsibility with regards to construction inspection.

9.07-9.08 Not Used

9.09 COUNTY FORCES AND COUNTY CONTRACT ROAD INSPECTION

During construction, the Sponsor's Surveyor and/or Construction Engineer shall record any changes to the plans.

All substantive differences shall be noted on the approved final road and drainage plans and shall be labeled Record Drawings. The following statement shall be lettered on the Record Drawings and stamped and signed by the Sponsor's Surveyor and/or Construction Engineer certifying the Record Drawings: "I have reviewed the construction and to my knowledge find it to be in substantial conformance with the approved certified plans and Standard Specifications except as noted."

When changes to the design are necessary, the Sponsor shall be responsible for obtaining approval of plan changes from the Sponsor's Design Engineer. The Sponsor shall forward a copy of the approved plan changes, and any related calculations, to the County Engineer.

10.00 BONDING

10.01 PERFORMANCE BONDS

A private sponsor of a project shall post a surety with the County Engineer to guarantee the construction in an amount equal to 110% of the County Engineer's estimate of all public roads, and private road improvements, including but not limited to the roadway, drainage improvements, utility work within County right-of-way, monumentation, and construction inspection costs. The bond shall conform to the following:

1. The surety shall be of a form approved by the Adams County Prosecuting Attorney's Office.
2. The term of the surety shall be for two years when it may be extended for an additional two years at the option of the County Engineer. The County Engineer will then calculate a new amount.
3. At the discretion of the County Engineer, a cash surety may be reduced with satisfactory progress on the project. The surety shall not be reduced below \$20,000 or 20% of the original surety amount whichever is greater.
4. A performance bond will not be required if the improvements are constructed according to these standards prior to final plat approval.
5. The County will release a performance bond when all of the following conditions have been met:
 - A. The sponsor's Construction Engineer submits the required certification that the project has been constructed in substantial conformance with the certified construction plans and specifications.
 - B. The Sponsor submits "Record Drawings" and project records of all road and drainage improvements constructed by his project.
 - C. The Sponsor has paid all costs incurred by the County in full.
 - D. All monuments have been reset and referenced by a surveyor.
 - E. (Public Roads only) A warranty bond is received by the County as specified in Section 10.02 of these standards.
 - F. (Public Roads only) The roads have been established by resolution of the Board of County Commissioners.

If the Sponsor fails to construct the required improvements within the time limit allowed in Section 5.02 1D, the County Engineer shall use the surety to make the required improvements. In addition, he may request a moratorium on building permits until the required work is completed.

10.02 WARRANTY BONDS

The sponsor of a private development shall post a warranty surety for improvements within County right-of-way with the County Engineer before:

1. the establishment of any permitted road(s) by the Board of County Commissioners; and
2. the acceptance of drainage construction by the County Engineer; and
3. the release of the performance bond. The bond shall conform to the following:
 - A. The surety be in effect for two years from the date of establishment of the road(s) by the Board of County Commissioners.
 - B. The warranty surety shall be for an amount of 20% of the County Engineer's estimate of the construction costs or \$10,000, whichever amount is greater. The County Engineer, at his/her discretion, may reduce the warranty bond amount for projects valued at less than \$20,000. For approved, non-standard facilities, the County Engineer may require additional bonding up to 100% of the cost of the non-standard facility.
 - C. The warranty surety shall guarantee against defects in road construction, utility work performed within the County right-of-way, and/or drainage facilities as determined by the County Engineer.
 - D. The release of this surety for improvements within public right-of-way shall take place two years from the date of the establishment of the roads by the Board of County Commissioners. Thirty days prior to expiration of the warranty bond, the Sponsor shall retain a professional engineer to inspect the improvements. Any deficiencies noted must be repaired prior to the bond release. If the inspection is not conducted and the deficiencies are not repaired, the warranty bond shall be renewed by the Project Sponsor until the inspection is conducted and needed repair work is completed.

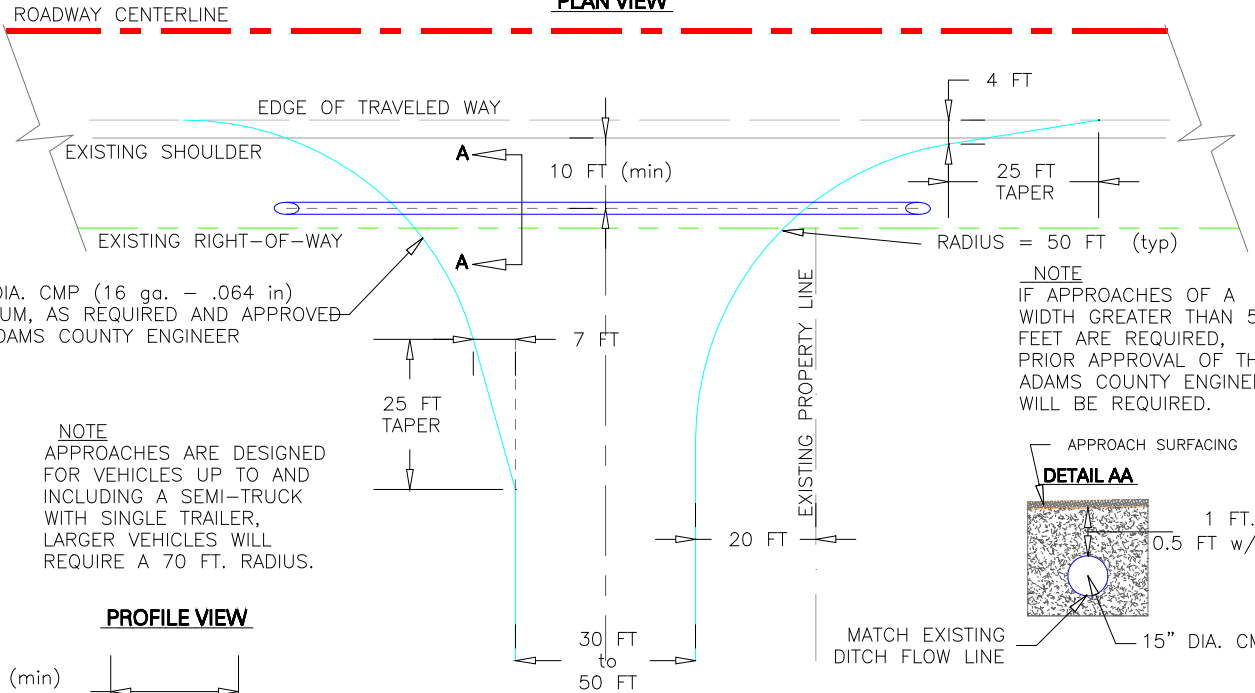
Permit Bonds

A surety, commensurate with the extent of work to be done, shall be posted with the County Engineer before the issuance of a permit to work within public roads.

STANDARD PLANS

ADAMS COUNTY ROAD DESIGN TEMPLATES COMMERCIAL APPROACH

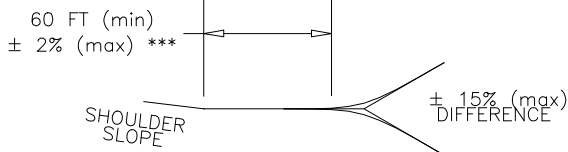
PLAN VIEW



15" DIA. CMP (16 ga. - .064 in) MINIMUM, AS REQUIRED AND APPROVED BY ADAMS COUNTY ENGINEER

NOTE
APPROACHES ARE DESIGNED FOR VEHICLES UP TO AND INCLUDING A SEMI-TRUCK WITH SINGLE TRAILER, LARGER VEHICLES WILL REQUIRE A 70 FT. RADIUS.

PROFILE VIEW



VERTICAL CURVES NOT TO EXCEED A 3 1/4 INCH HUMP OR A 2 INCH DEPRESSION IN A 10 FOOT CHORD.

WHEN TRAVELED LANES ARE BITUMINOUS, A BITUMINOUS SURFACING OF A SIMILAR TYPE WILL BE USED ON APPROACHES, PAVING TO THE RIGHT-OF-WAY LINE.

*** ± 4% (max) DIFFERENCE FROM SHOULDER SLOPES.

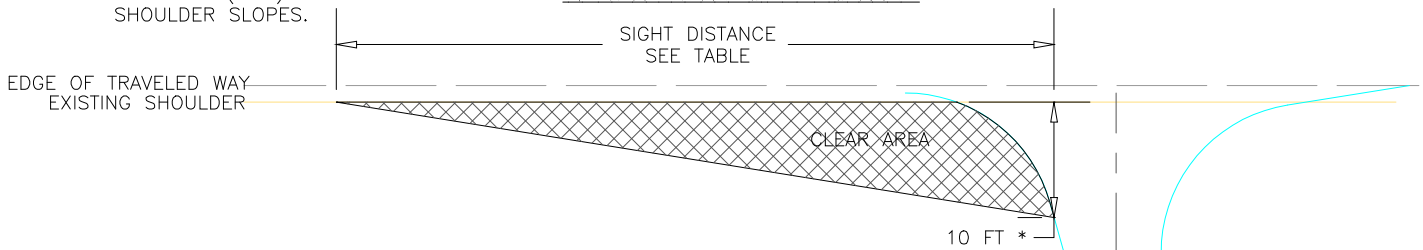
NOTES:

SIGHT DISTANCE SHALL BE DETERMINED FROM THE TABLE BELOW, IN BOTH DIRECTIONS ONTO THE COUNTY ROADWAY, AND 3.75 FT ABOVE THE SURFACE OF THE APPROACH.

ADEQUATE DRAINAGE SHALL BE PROVIDED SO AS TO PREVENT PONDING IN THE COUNTY ROADWAY DITCH.

THE ANGLE OF THE APPROACH SHALL NOT VARY FROM THE PERPENDICULAR MORE THAN 25 PERCENT ± .

ROAD APPROACH SIGHT DISTANCE



* NOT TO EXCEED 18 FT FROM EDGE OF TRAVELED WAY

POSTED SPEED LIMIT (mph)	25	30	35	40	50	60
SIGHT DISTANCE	150	200	270	330	480	640

NOTE:

ONLY ONE COMMERCIAL ENTITY ALLOWED PER APPROACH PERMIT WITHOUT PRIOR APPROVAL OF ADAMS COUNTY ENGINEER.

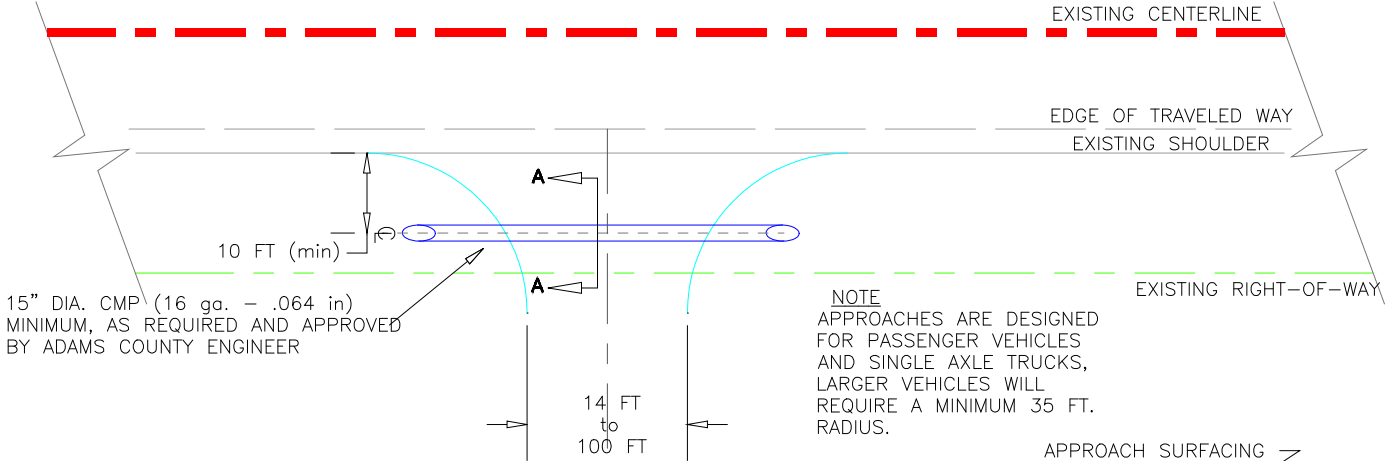
ADAMS COUNTY ROAD DESIGN TEMPLATE COMMERCIAL APPROACH

ADAMS COUNTY
PUBLIC WORKS DEPT
210 W. ALDER
RITZVILLE, WA

DESIGNED:	<u>DRAWING NUMBER</u>	DETAIL No.
DRAWN : PAV	COMAPPR	AC-01
CHECKED:	<u>DATE</u>	
APPROVED: WAJ	DEC, 2001	

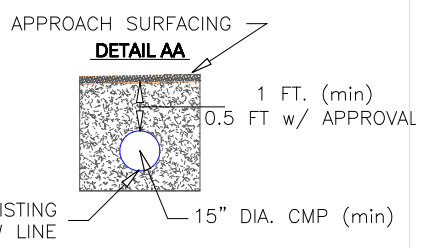
ADAMS COUNTY ROAD DESIGN TEPLATES NON-COMMERCIAL APPROACH

PLAN VIEW

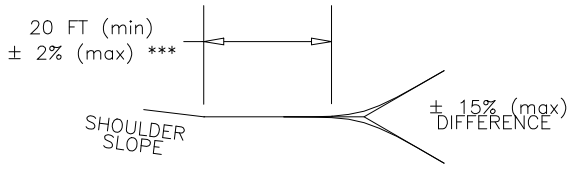


NOTE
APPROACHES ARE DESIGNED FOR PASSENGER VEHICLES AND SINGLE AXLE TRUCKS, LARGER VEHICLES WILL REQUIRE A MINIMUM 35 FT. RADIUS.

NOTE
IF APPROACHES OVER 25 FT. IN WIDTH ARE REQUIRED, PRIOR APPROVAL FROM THE ADAMS COUNTY ENGINEER SHALL BE REQUIRED.



PROFILE VIEW



VERTICAL CURVES NOT TO EXCEED A 3 1/4 INCH HUMP OR A 2 INCH DEPRESSION IN A 10 FOOT CHORD.

WHEN TRAVELED LANES ARE BITUMINOUS, A BITUMINOUS SURFACING OF A SIMILAR TYPE WILL BE USED ON APPROACHES, PAVING TO THE RIGHT-OF-WAY.

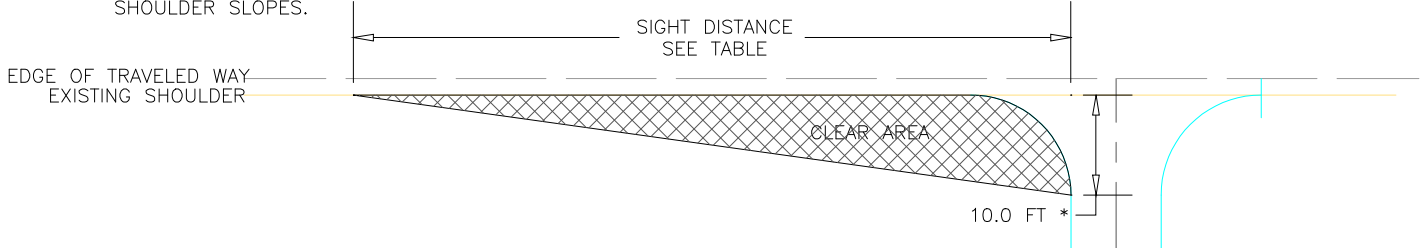
*** ± 4% (max) DIFFERENCE FROM SHOULDER SLOPES.

NOTES:
SIGHT DISTANCE SHALL BE DETERMINED FROM THE TABLE BELOW, IN BOTH DIRECTIONS ONTO THE COUNTY ROADWAY, AND 3.75 FT ABOVE THE SURFACE OF THE APPROACH.

ADEQUATE DRAINAGE SHALL BE PROVIDED SO AS TO PREVENT PONDING IN THE COUNTY ROADWAY DITCH.

THE ANGLE OF THE APPROACH SHALL NOT VARY FROM THE PERPENDICULAR MORE THAN 25 PERCENT ± .

ROAD APPROACH SIGHT DISTANCE



* NOT TO EXCEED 18 FT FROM EDGE OF TRAVELED WAY

POSTED SPEED LIMIT (mph)	25	30	35	40	50	60
SIGHT DISTANCE	150	180	230	280	380	510

NOTE:
ONLY ONE NON-COMMERCIAL ENTITY ALLOWED PER APPROACH PERMIT WITHOUT PRIOR APPROVAL OF ADAMS COUNTY ENGINEER.

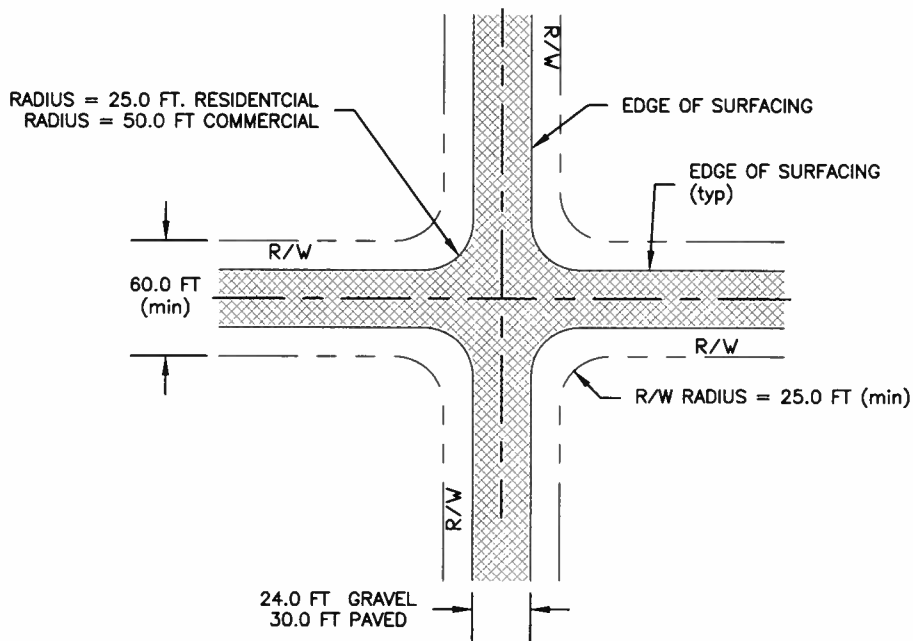
ADAMS COUNTY ROAD DESIGN TEMPLATE NON-COMMERCIAL APPROACH

ADAMS COUNTY
PUBLIC WORKS DEPT
210 W. ALDER
RITZVILLE, WA

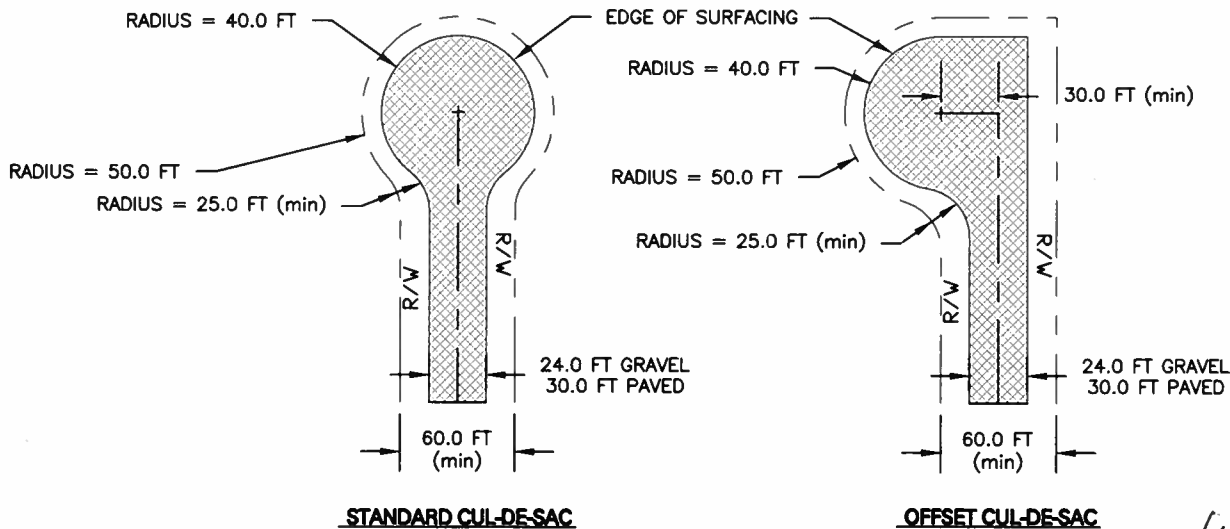
DESIGNED:	<u>DRAWING NUMBER</u>	DETAIL No.
DRAWN : PAV	AC-02	AC-02
CHECKED:	<u>DATE</u>	
APPROVED: WAJ	DEC, 2001	

**ADAMS COUNTY ROAD
DESIGN TEPLATES
CUL-DE-SAC and INTERSECTION**

INTERSECTION PLAN VIEW



CUL-DE-SAC PLAN VIEW

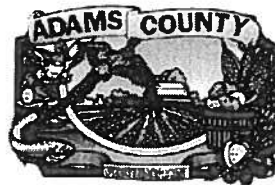


WJ
2/10/03

ISSUED: March 18, 2003
ADAMS COUNTY ENGINEER

ADAMS COUNTY ROAD DESIGN TEMPLATE
CUL-DE-SAC and INTERSECTION DETAILS

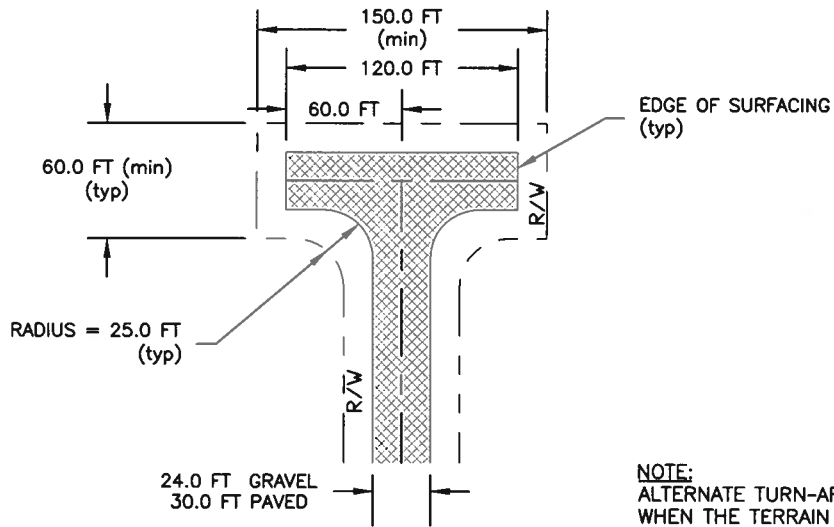
ADAMS COUNTY
PUBLIC WORKS DEPT
210 W. ALDER
RITZVILLE, WA



DESIGNED:	<u> DRAWING NUMBER </u>	DETAIL No.
DRAWN : PAV	AC-03	AC-03
CHECKED:	<u> DATE </u>	
APPROVED: WAJ	DEC, 2001	

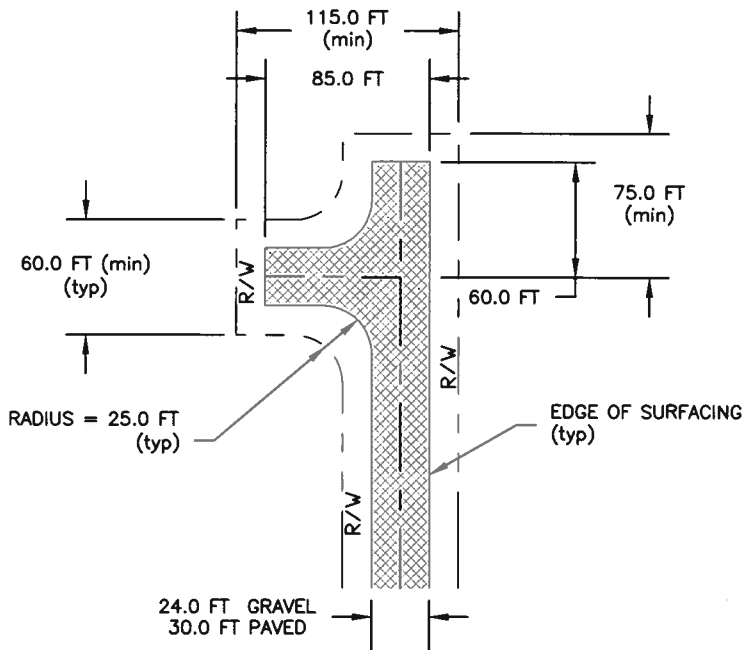
**ADAMS COUNTY ROAD
DESIGN TEPLATES
ALTERNATE TURN-AROUND**

HAMMERHEAD PLAN VIEW



NOTE:
ALTERNATE TURN-AROUNDS MAY BE USED
WHEN THE TERRAIN PRECLUDES THE USE OF
CUL-DE-SACS.

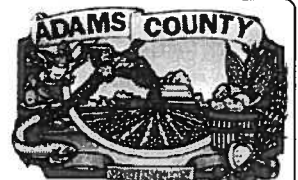
OFFSET PLAN VIEW



ADAMS COUNTY ENGINEER

**ADAMS COUNTY ROAD DESIGN TEMPLATE
ALTERNATE TURN-AROUND**

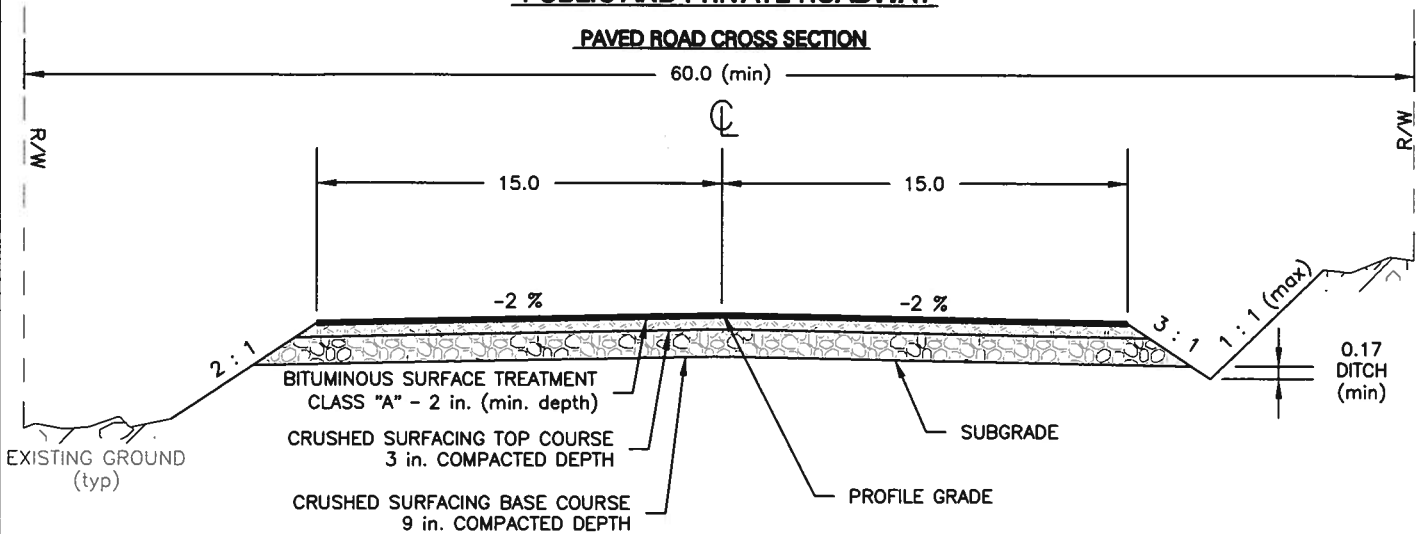
ADAMS COUNTY
PUBLIC WORKS DEPT
210 W. ALDER
RITZVILLE, WA



DESIGNED:	<u>DRAWING NUMBER</u>	DETAIL No.
DRAWN : PAV	AC-04	AC-04
CHECKED:	DATE	
APPROVED: WAJ	DEC, 2001	

**ADAMS COUNTY ROAD
DESIGN TEMPLATES
PUBLIC AND PRIVATE ROADWAY**

PAVED ROAD CROSS SECTION



NOTES

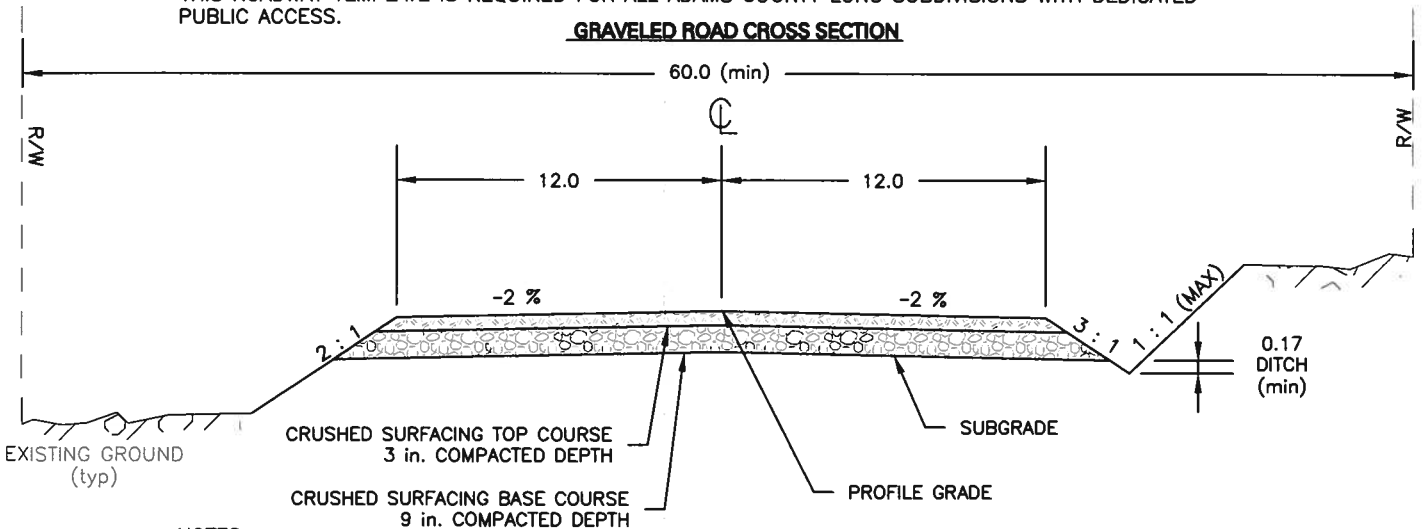
SURFACING DEPTHS INDICATED ARE MINIMUM REQUIREMENTS; SOIL CONDITIONS AND GRADES MAY REQUIRE INCREASED DEPTHS.

ALL ROADWAY CONSTRUCTION MUST CONFORM TO THE LATEST EDITION OF THE W.S.D.O.T. AND A.P.W.A. STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPLE CONSTRUCTION. FOR FURTHER SPECIFICATIONS AND DESIGN STANDARDS, REFER TO THE CURRENT EDITION OF THE WASHINGTON STATE DEPT. OF TRANSPORTATION DESIGN MANUAL OR THE AASHTO MANUAL.

ALL PAVED ROADWAYS SHALL HAVE A DESIGNED DRAINAGE SYSTEM.

THIS ROADWAY TEMPLATE IS REQUIRED FOR ALL ADAMS COUNTY LONG SUBDIVISIONS WITH DEDICATED PUBLIC ACCESS.

GRAVELED ROAD CROSS SECTION



NOTES

SURFACING DEPTHS INDICATED ARE MINIMUM REQUIREMENTS; SOIL CONDITIONS AND GRADES MAY REQUIRE INCREASED DEPTHS.

ALL ROADWAY CONSTRUCTION MUST CONFORM TO THE LATEST EDITION OF THE W.S.D.O.T. AND A.P.W.A. STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPLE CONSTRUCTION. FOR FURTHER SPECIFICATIONS AND DESIGN STANDARDS, REFER TO THE CURRENT EDITION OF THE WASHINGTON STATE DEPT. OF TRANSPORTATION DESIGN MANUAL OR THE AASHTO MANUAL.

THIS ROADWAY TEMPLATE IS REQUIRED FOR ALL ADAMS COUNTY SHORT SUBDIVISIONS AND 20 ACRE EXEMPTIONS WITH DEDICATED PUBLIC ACCESS.



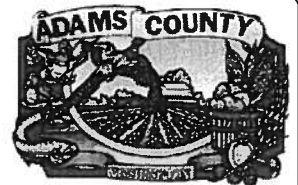
Expires March 18, 2003

ADAMS COUNTY ENGINEER

ADAMS COUNTY ROAD DESIGN TEMPLATES

PAVED AND GRAVELED SURFACED ROADWAY
PUBLIC AND PRIVATE ROADS

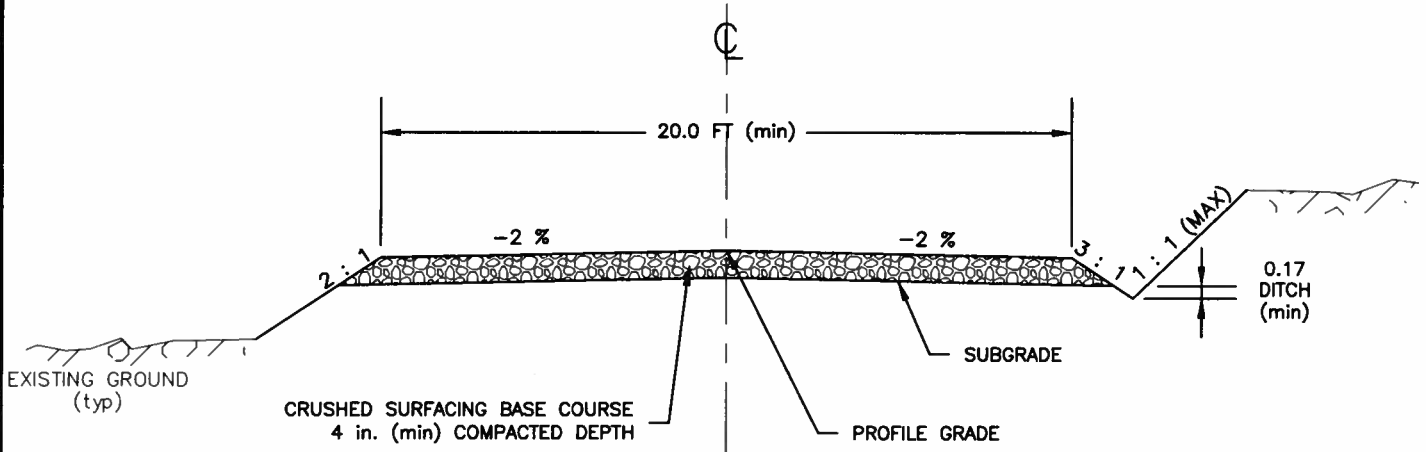
ADAMS COUNTY
PUBLIC WORKS DEPT
210 W. ALDER
RITZVILLE, WA



DESIGNED:	DRAWING NUMBER	DETAIL No.
DRAWN : PAV	AC-05	AC-05
CHECKED:	DATE	
APPROVED: WAJ	DECEMBER, 2001	

**ADAMS COUNTY ROAD
DESIGN TEMPLATES
FIRE AND FIELD ACCESS ROADWAY**

FIRE ACCESS ROAD CROSS SECTION



NOTES
SURFACING DEPTHS INDICATED ARE MINIMUM REQUIREMENTS; SOIL CONDITIONS AND GRADES MAY REQUIRE INCREASED DEPTHS. THE MINIMUM AMOUNT OF CRUSHED SURFACING MAY BE REDUCED AS INDICATED IN TABLE 3.01.

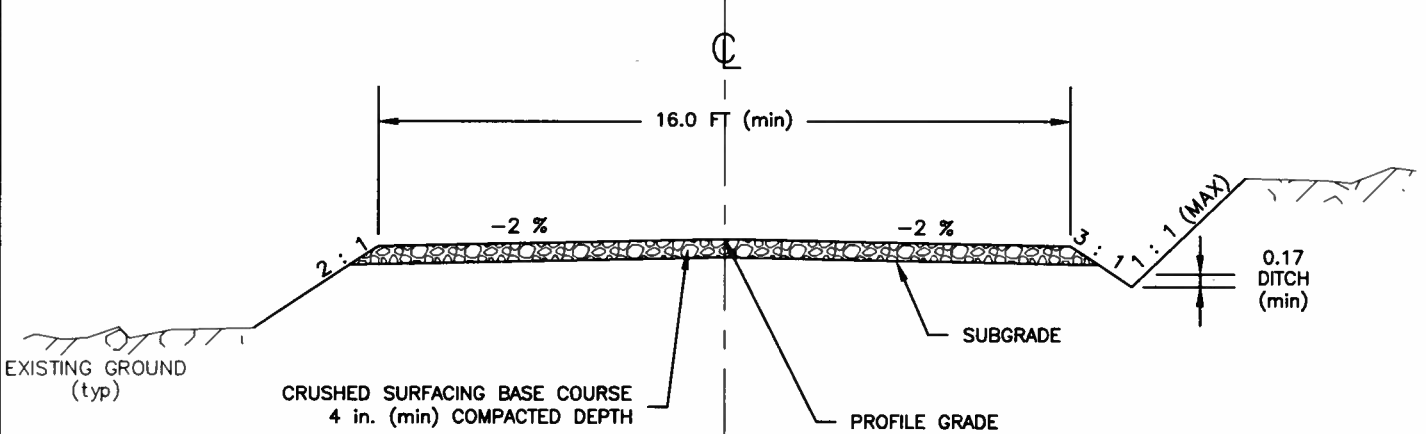
ALL CONSTRUCTION ACTIVITY MUST CONFORM TO THE LATEST EDITION OF THE W.S.D.O.T. AND A.P.W.A. STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION.

ANY CUL-DE-SAC OR TURN-AROUND MUST BE APPROVED BY AREA FIRE CHIEF.

THE ENTIRE ROADWAY MUST BE CONSTRUCTED AND APPROVED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

FIRE ACCESS ROADS WILL BE ALLOWED ONLY AS A SECOND ACCESS or when allowed by the FIRE DISTRICT.

FIELD ACCESS (public) ROAD CROSS SECTION



NOTES
SURFACING DEPTHS INDICATED ARE MINIMUM REQUIREMENTS; SOIL CONDITIONS AND GRADES MAY REQUIRE INCREASED DEPTHS.

ALL CONSTRUCTION ACTIVITY MUST CONFORM TO THE LATEST EDITION OF THE W.S.D.O.T. AND A.P.W.A. STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION.

SEASONAL MAINTENANCE ONLY THROUGH GROWING AND HARVESTING SEASONS. NO WINTER MAINTENANCE.

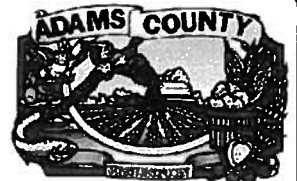
MAXIMUM 12 % GRADE, 50.0 FT MINIMUM HORIZONTAL CURVE RADIUS, NO WARNING SIGNS (PRIMITIVE ROAD) NO DWELLING ACCESS ALLOWED



March 18, 2003
ADAMS COUNTY ENGINEER

**ADAMS COUNTY ROAD DESIGN TEMPLATES
FIRE AND FIELD ACCESS ROADWAY**

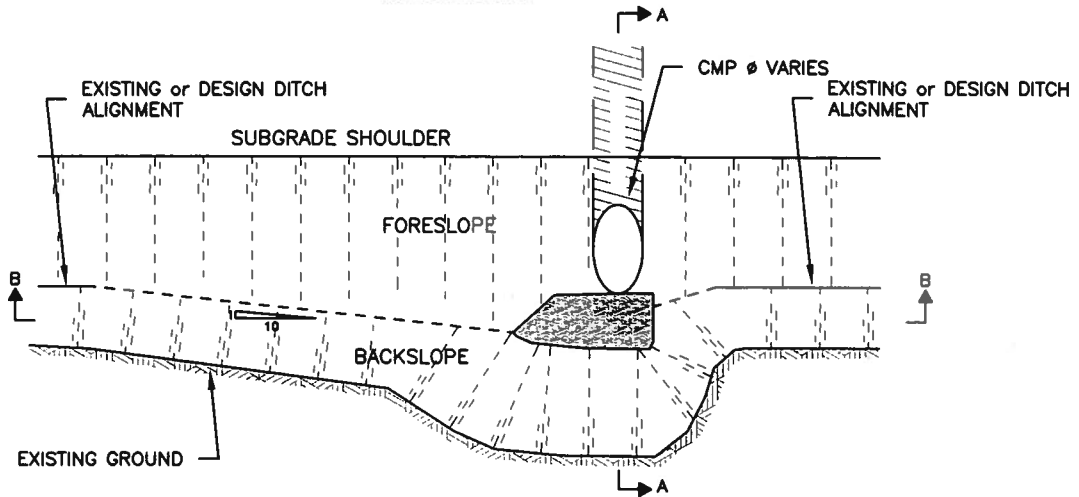
ADAMS COUNTY
PUBLIC WORKS DEPT
210 W. ALDER
RITZVILLE, WA



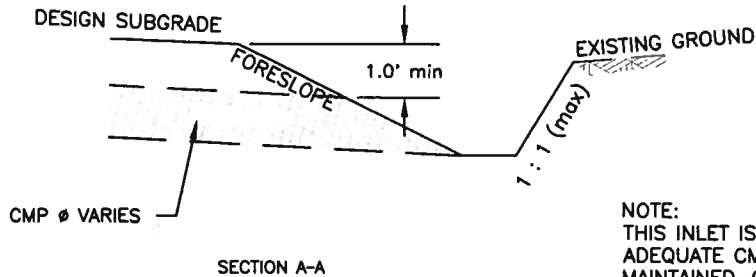
DESIGNED:	DRAWING NUMBER	DETAIL No.
DRAWN : PAV	AC-06	
CHECKED:	DATE	AC-06
APPROVED: WAJ	FEBRUARY, 2003	

**ADAMS COUNTY ROAD
DESIGN TEMPLATES
CULVERT INLET CATCH BASIN**

PLAN DETAIL

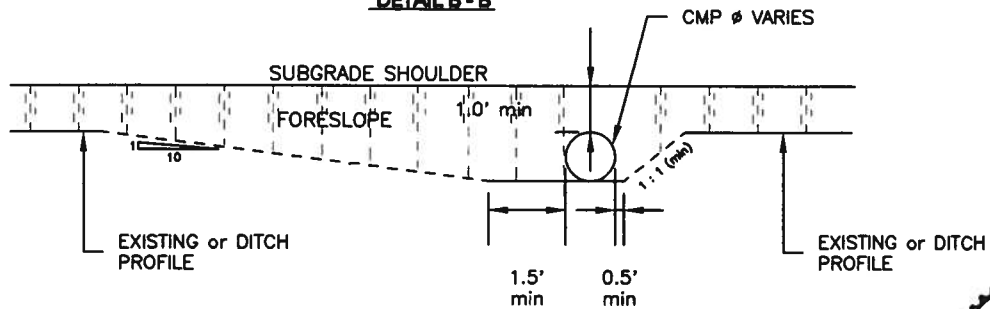


DETAIL A-A



NOTE:
THIS INLET IS TO UTILIZED ONLY IF
ADEQUATE CMP COVER CANNOT BE
MAINTAINED, OR AS DIRECTED BY
ADAMS COUNTY ENGINEER.

DETAIL B-B



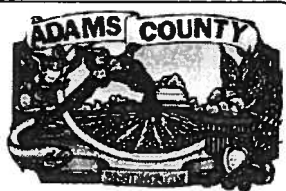
W
2/10/03



March 18, 2003
ADAMS COUNTY ENGINEER

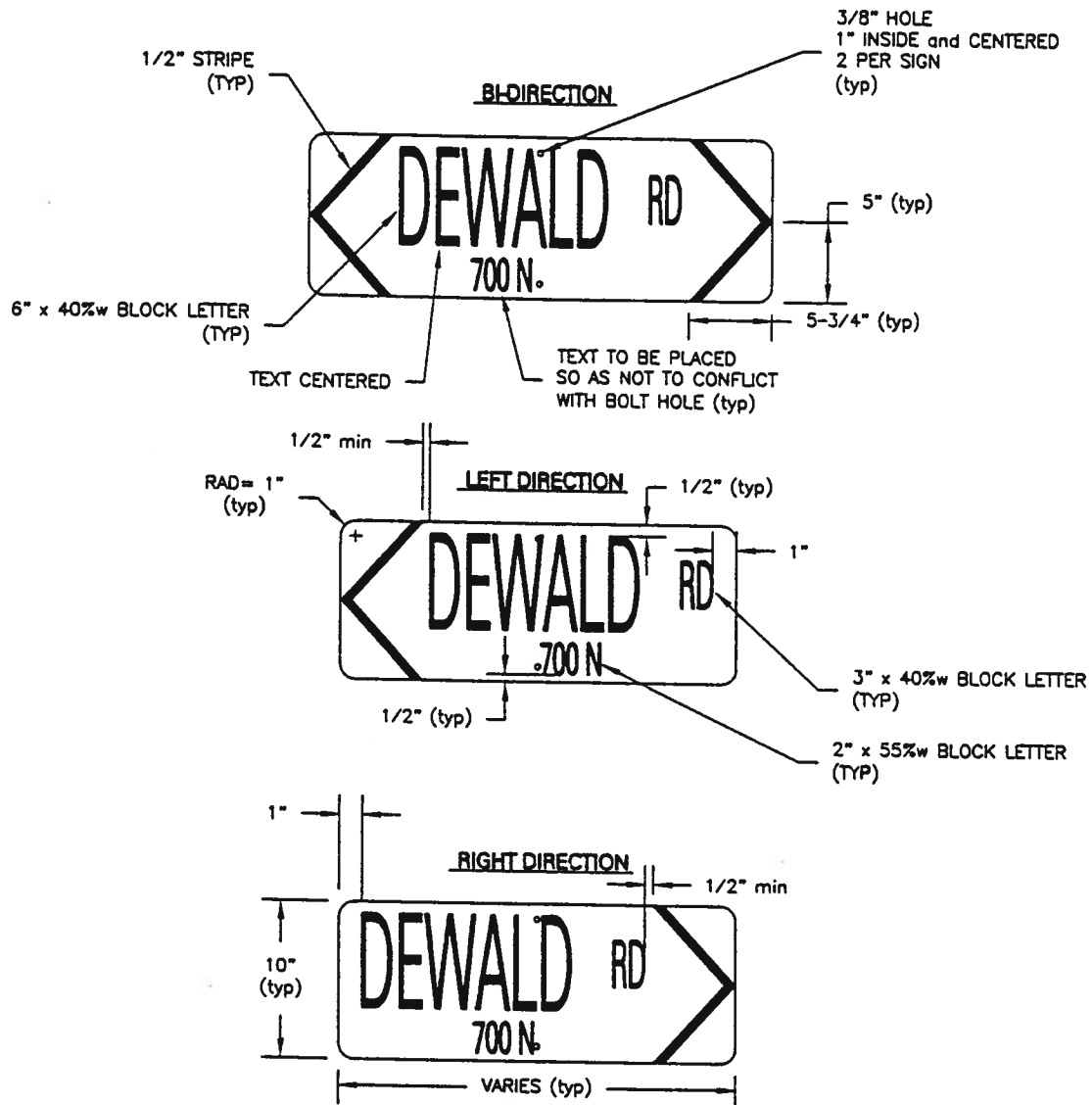
**ADAMS COUNTY ROAD DESIGN TEMPLATES
CULVERT INLET CATCH BASIN**

ADAMS COUNTY
PUBLIC WORKS DEPT
210 W. ALDER
RITZVILLE, WA




DESIGNED:	DRAWING NUMBER	FILE No.
DRAWN : PAV	C_BASIN	
CHECKED:	DATE	AC-07
APPROVED: WAJ	DECEMBER, 2001	

ROAD NAME SIGN



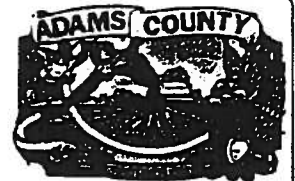
NOTE:
SIGNS TO BE ATTACHED TO POSTS WITH
3/8" BOLTS OR LAG BOLTS


 2/10/03
 March 18, 2003
 ADAMS COUNTY ENGINEER

ADAMS COUNTY STANDARD DETAIL
ROAD NAME SIGN

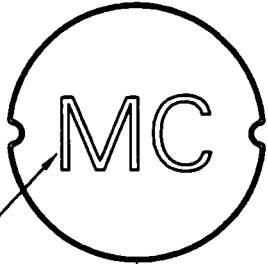
DESIGNED: PAV	<u>DRAWING NUMBER</u> AC-09	DETAIL No.
DRAWN: PAV	<u>DATE</u> FEB, 2002	<u>AC-09</u>
CHECKED: WAJ		
APPROVED: WAJ		

ADAMS COUNTY
PUBLIC WORKS DEPT
210 W. ALDER
RITZVILLE, WA

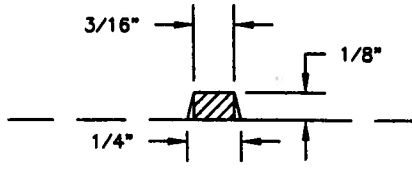


**ADAMS COUNTY ROAD
DESIGN TEMPLATES
MONUMENT CASE and COVER**

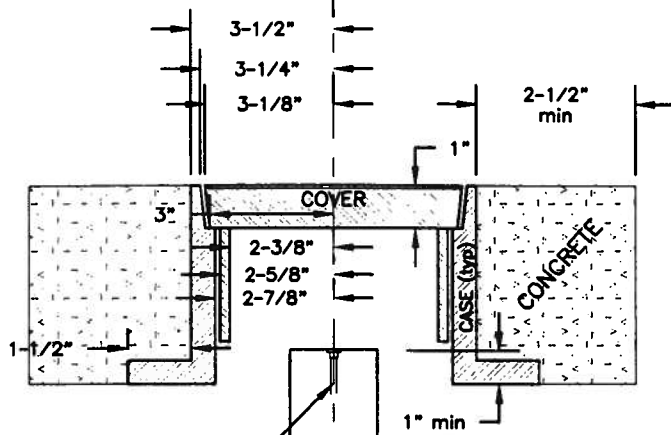
COVER PLAN VIEW



RAISED 1-1/2" LETTERS



LETTER SECTION



PIN AND CAP
AS SET BY SURVEYOR

MONUMENT
2"Ø x 2' min PLASTIC
OR METAL PIPE FILLED
WITH CONCRETE.

MONUMENT SECTION

NOTES

- 1.) THE CASTINGS SHALL BE GREY IRON CASTINGS, AASHTO DESIGNATION M-105, CLASS 30B. THE CASE AND COVER SHALL BE MACHINED SO AS TO HAVE CONTACT AROUND THE ENTIRE CIRCUMFERENCE AN FULL WIDTH OF THE BEARING SURFACE. CASE AN COVER SUBSTITUTIONS WILL BE PERMITTED WITH PRIOR APPROVAL OF ADAMS COUNTY ENGINEER.
- 2.) CONCRETE SHALL BE PLACED AROUND MONUMENT CASE. BITUMINOUS MATERIAL CAN BE SUBSTITUTED WITH PRIOR APPROVAL OF ADAMS COUNTY ENGINEER.

2/10/03

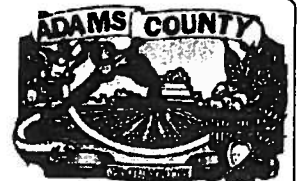
 EXPIRES March 18, 2003

 ADAMS COUNTY ENGINEER

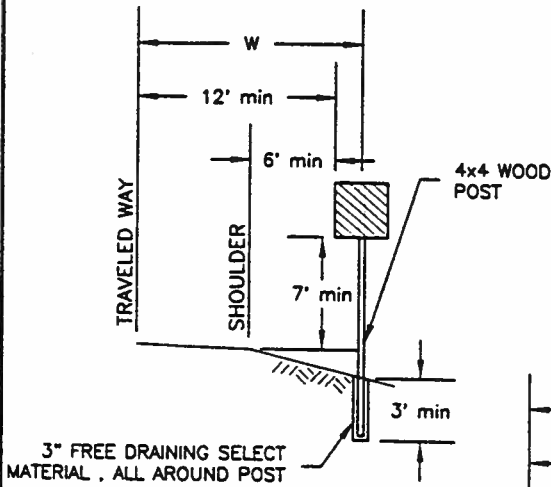
ADAMS COUNTY ROAD DESIGN TEMPLATE
MONUMENT CASE and COVER

DESIGNED:	<u>DRAWING NUMBER</u>	FILE No.
DRAWN : PAV	NCOMAPPR	
CHECKED:	<u>DATE</u>	AC-08
APPROVED: WAJ	DEC, 2001	

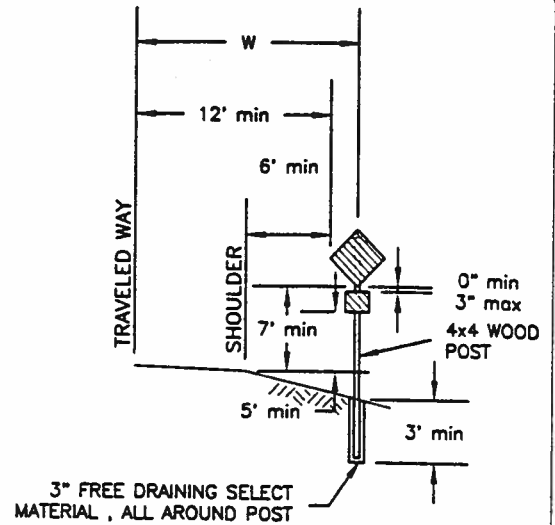
ADAMS COUNTY
PUBLIC WORKS DEPT
210 W. ALDER
RITZVILLE, WA



SIGN INSTALLATION

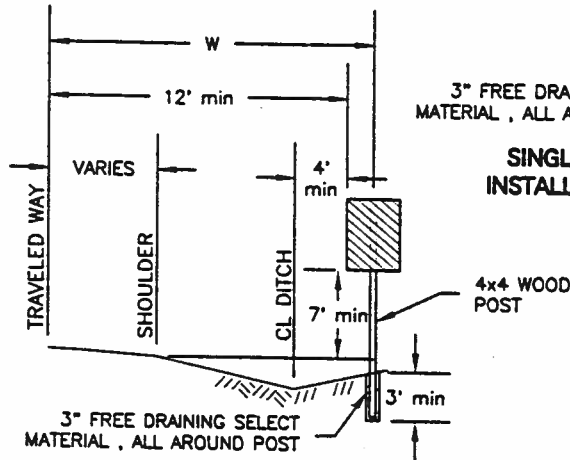


SINGLE SIGN INSTALLATION ON FILL SLOPES

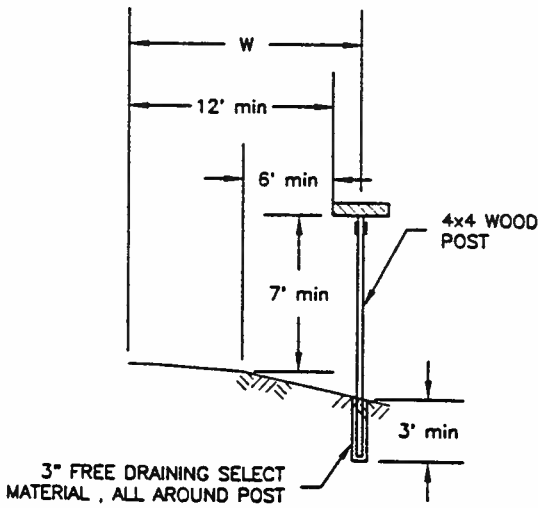


SINGLE SIGN WITH PLAQUE INSTALLATION ON FILL SLOPES

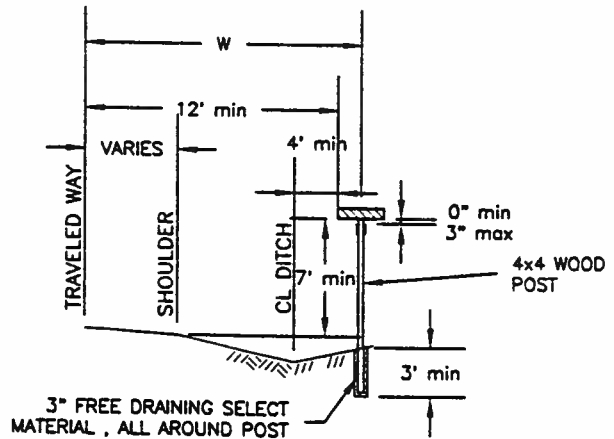
NOTE:
THE "W" DIMENSION AS SHOWN ON THIS SHEET IS SITE SPECIFIC AND A DETERMINATION BY ADAMS COUNTY ENGINEER WILL BE REQUIRED IN EACH CASE.



SINGLE SIGN INSTALLATION ON CUT SLOPES

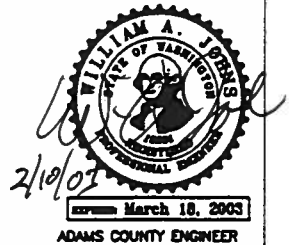


ROAD NAME SIGN INSTALLATION ON FILL SLOPES



ROAD NAME SIGN INSTALLATION ON CUT SLOPES

- NOTE:
1. SIGNS TO BE ATTACHED TO POSTS WITH 3/8" BOLTS OR LAG BOLTS.
 2. THE SIGN DESIGNS ARE FROM THE 1999 MUTCD MANUAL.



**ADAMS COUNTY STANDARD DETAIL
SIGN INSTALLATION**

DESIGNED: PAV	DRAWING NUMBER: AD-10	DETAIL No. AD-10
DRAWN: PAV	DATE: FEB. 2002	
CHECKED: WAJ		
APPROVED: WAJ		

ADAMS COUNTY
PUBLIC WORKS DEPT
210 W. ALDER
RITZVILLE, WA

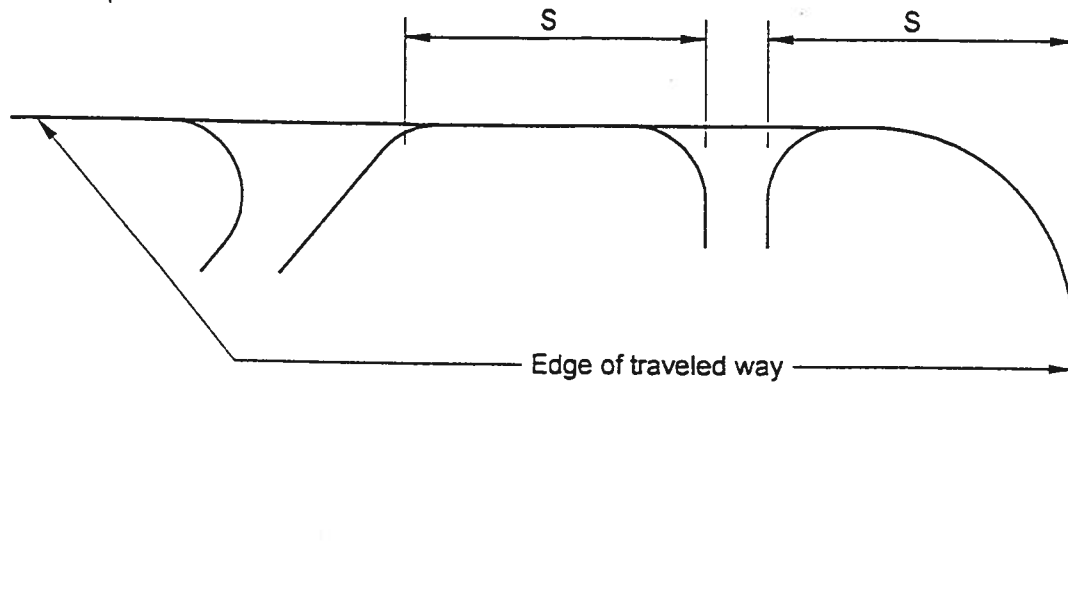


APPENDIX A

Approach Spacing and clearance from road corner.

These excerpts are from WSDOT standards and are provided for convenience in calculation the spacing of approaches (driveways) and roads or for the distance of the approach from a county road intersection. These standards may change without being changed in this appendix. The designer is responsible for using the most up to date WSDOT Design Manual. Their website is:

<http://www.wsdot.wa.gov/eesc/design/policy/DesignManual.htm>



Highway Access Management Class	1	2	3	4	5
S	1320 ft	660 ft	330 ft	250 ft	125 ft

Road Approach Spacing and Corner Clearance

Note:

For Road Approach Spacing, S is the distance between closest edge of the traveled way of the two road approaches, measured along the edge of the traveled way of the highway.

For corner clearance, S is measured from the closest edge of the traveled way of the crossroad to the closest edge of the traveled way of the road approach, measured along the edge of the traveled way of the highway.

Road Approach Spacing and Corner Clearance
Figure 920-7

NCR PLANNING

NC REGION

- [Cameras & Passes](#)
- [Travel Information](#)
- [North Central Region](#)
- [Construction Projects](#)

PLANNING

- [NCR Planning Home](#)
- [Planning Staff](#)
- [Development Services](#)
- [Access Management](#)
- [Route Development](#)
- [Corridor Management Plans](#)
- [Regional Transportation Planning Organizations](#)
- [Metropolitan Planning Organization](#)
- [Washington's Transportation Plan](#)
- [Highway System Plan](#)
- [Alternative Transportation Modes](#)

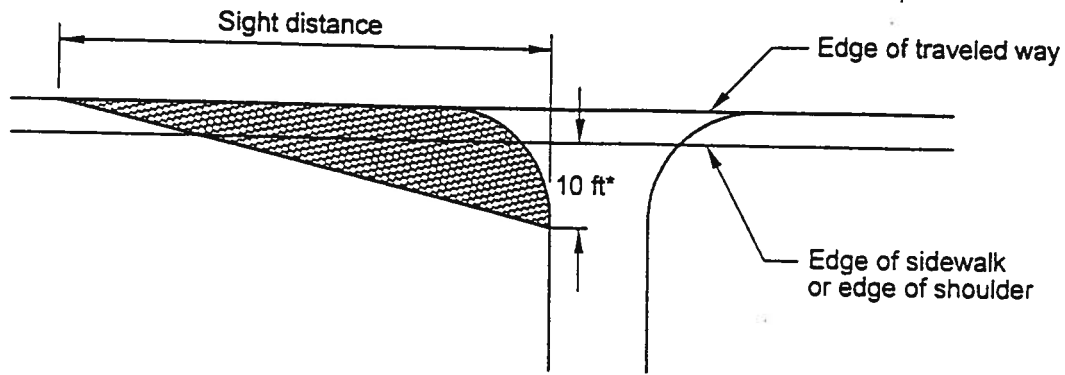
	Class	Speed Limits MPH	PLANNED distances between driveways (PRIVATE) or intersections (PUBLIC)	PERMITTED Distance	Non-conforming
	Class One	50 to 60	Private: None. Public: 1 mile.	Private: upgrades to preexisting or 1320 feet when there is no alternative. Public: 0.5 miles only when there is no alternative access.	Private: only when there is no alternative access. Public: less than 0.5 mile only when there is no alternative access.
	Class Two	Urban: 35 to 60 Rural: 45 to 60	Private: None. Public: 0.5 mile.	Private: upgrade to preexisting or permitted when there is no alternative, at 660 feet intervals. Public: less than 0.5 Mile when there is no alternative access.	Private: when access to a local street would cause operational or safety concerns or there is no alternative option. Public: between 0.5 mile and 660 feet (intervals).
	Class Three	Urban: 30 to 40 Rural: 45 to 60	Private and Public 0.5 mile.	Private: upgrade to preexisting, no more than one to a parcel under one ownership, or permitted when there is no alternative, 330 feet intervals. Public: less than 0.5 MILE when there is no alternative access.	Private and Public: when additional access connections would not adversely affect the safety and operation of the state highway or there is no alternative options.
				Private: 250 feet	

Class Four	Urban: 30 to 35 Rural: 35 to 45	Private and Public: 0.5 mile.	when no alternative options is available Public: 250 feet when no alternative options is available-- probably will need to be signalized.	Private: when no alternative option is available. Public: may require a licensed engineering analysis and signalization.
Class Five	25 to 35	Private: 125 feet. Public: 0.25 mile.	Private: 125 feet or one per ownership. Public: 125 feet when no alternative options is available-- probably will need to be signalized.	Private: 125 feet or one per ownership. Public: 125 feet when no alternative options is available-- probably will need to be signalized.

APPENDIX B

Approach sight distances

These excerpts are from WSDOT standards and are provided for convenience in calculation the sight distance required for approaches (driveways) to a county road. These standards may change without being changed in this appendix. The designer is responsible for using the most up to date WSDOT Design Manual. Their website is: <http://www.wsdot.wa.gov/eesc/design/policy/DesignManual.htm>



*Not to exceed 18 ft from the edge of traveled way.

Posted Speed Limit (mph)	25	30	35	40	50	60	70
Category I Road Approach	150	180	230	280	380	510	630
Category II Road Approach	150	200	270	330	480	640	860

Road Approach Sight Distance (ft)

These distances require an approaching vehicle to reduce speed or stop to prevent a collision.

Design Category III road approach sight distance as an intersection (see Chapter 910).

For road approaches where left turns are not allowed, a sight triangle need only be provided to the left, as shown.

For road approaches where left turns are allowed, provide a sight triangle to the right in addition to the one to the left. The sight distance to the right is measured along the center line of the roadway.

For additional information on calculating the sight triangle, see Chapter 910.

Road Approach Sight Distance

Figure 920-6

920.01	General
920.02	References
920.03	Definitions
920.04	Design Considerations
920.05	Road Approach Category
920.06	Road Approach Design Template
920.07	Sight Distance
920.08	Road Approach Spacing
920.09	Drainage Requirements
920.10	Procedures
920.11	Documentation

920.01 General

Every owner of property that abuts the state highway system where limited access rights have not been acquired has a right to reasonable access to the state highway system. The right of access to the state highway system may be restricted if reasonable access can be provided by way of another public road that abuts the property. General restrictions concerning road approaches are in RCWs, WACs, and amendments thereto. For considerations, requirements, and restrictions concerning road approaches on state highways where limited access rights have been acquired, see Chapters 1410 and 1420.

This chapter applies to road approaches on state highways in unincorporated areas. Road approaches on state highways within incorporated areas where limited access rights have not been acquired are the jurisdiction of the local agency, but conformance to these standards is encouraged.

920.02 References

Revised Code of Washington (RCW) 47.32.150, "Approach roads, other appurtenances — Permit"

Revised Code of Washington (RCW) 47.32.160, "Approach roads, other appurtenances — Rules — Construction, maintenance of approach roads"

Revised Code of Washington (RCW) 47.32.170, "Approach roads, other appurtenances — Removal of installations from right of way for default"

Revised Code of Washington (RCW) 47.50, "Highway Access Management"

Washington Administrative Code (WAC) 468-51, "Highway Access Management Access Permits — Administrative Process"

Washington Administrative Code (WAC) 468-52, "Highway Access Management — Access Control Classification System And Standards"

Washington Administrative Code (WAC) 468-58, "Limited Access Highways"

Right of Way Manual, M 26-01, WSDOT

Standard Plans for Road, Bridge, and Municipal Construction (Standard Plans), M 21-01, WSDOT

920.03 Definitions

authorized road approach A road approach or the replacement for a road approach that has been permitted or was open to use prior to July 1, 1990.

average weekday vehicle trip ends (AWDVTE) The estimated total of all trips entering plus all trips leaving a road approach on a weekday for the final stage of development of the property served by the road approach

conforming road approach A road approach that meets all current requirements for location, quantity, spacing, sight distance, and geometric elements

corner clearance The distance from an intersection at grade to the nearest road approach. The distance is measured from the closest edge of the traveled way of the crossroad to the closest edge of the traveled way of the road approach measured along the edge of the traveled way of the highway

intersection at grade The general area where a state highway or ramp terminal is met or crossed at a common grade or elevation by another state highway, a county road, or a city street

joint use approach A single approach that serves more than one property

nonconforming road approach A road approach that does not meet current requirements for location, quantity, spacing, sight distance, or geometric elements

permit The written approval issued by WSDOT authorizing construction, reconstruction, maintenance, or change of category of a road approach

road approach A connection providing private access to or from the state highway system

road approach connection category A category of road approach based on the estimated traffic generated

road approach design template The design geometric standards for a road approach based on the approach usage, types of vehicles that use the approach, and the traffic volume

road approach type The designation of road approaches on limited access facilities based on use of the property served

temporary road approach A road approach for a specific property use, conditioned to be open for a specific purpose and traffic volume for a specific period of time with the right of way to be restored to its original condition upon road approach closure

920.4 Design Considerations

When a highway project impacts existing road approaches, replace all conforming authorized road approaches. Evaluate existing nonconforming authorized road approaches for ways to bring them into conformance. Solutions may include relocation, combining with the road approach of the adjacent property as a joint use approach alteration, closure to the highway system, or addition of access to another public road.

When the evaluation determines that a nonconforming road approach cannot be made conforming and that closure of the road approach would leave the property without a reasonable means of access, issue a nonconforming access connection permit. Document the evaluation

that justifies the use of a nonconforming road approach and how it is nonconforming. List these nonconforming road approaches as Design Exceptions (DE).

New road approaches or upgrades to existing road approaches, requested by the property owner, may be included in the project at the expense of the property owner.

Design road approaches at transit facilities in accordance with Chapter 1060.

920.05 Road Approach Connection Category

Category I — minimum connection provides access for up to ten (10) dwelling units of single family residences, duplexes, or other small multifamily complexes; permanent agricultural or forest lands road approaches; the operation, maintenance, and repair of utilities; and road approaches serving other low volume traffic generators with an AWDVTE of 100 or less.

Category II — minor connection provides access to the state highway system for medium volume traffic generators with an AWDVTE of 1500 or less, that are not included in Category I.

Category III — major connection provides access to the state highway system for high volume traffic generators with an AWDVTE exceeding 1500.

Category IV — temporary connection provides access to the state highway system for a limited time.

920.06 Road Approach Design Template

The road approach design template is dependent upon the approach usage, types of vehicles that use the approach, and the traffic volume.

Figure 920-1 lists the road approach design templates, the approach usage, and the largest vehicle that Figures 920-3 through 5 provide for. When a larger design vehicle is required, use the turning path templates in Chapter 910, or from another source, to determine what adjustments to make.

APPENDIX C

Intersection sight distances

These excerpts are from WSDOT standards and are provided for convenience in calculation the sight distance required for road intersections with another road. These standards may change without being changed in this appendix. The designer is responsible for using the most up to date WSDOT Design Manual. Their website is: <http://www.wsdot.wa.gov/eesc/design/policy/DesignManual.htm>

When designing U-turn locations, use Figure 910-17 as a guide. Where the median is less than 40 ft wide and a large design vehicle is required, consider the use of a U-turn roadway.

Document the need for U-turn locations, the spacing used, and justify the selected design vehicle.

910.10 Sight Distance at Intersections

For traffic to move safely through intersections, drivers need to be able to see stop signs, traffic signals, and oncoming traffic in time to react accordingly.

Provide decision sight distance, where practical, in advance of stop signs, traffic signals, and roundabouts. See Chapter 650 for guidance.

The driver of a vehicle that is stopped, waiting to cross or enter a through roadway, needs obstruction-free sight triangles in order to see enough of the through roadway to safely complete all legal maneuvers before an approaching vehicle on the through roadway can reach the intersection. Use Figure 910-18a to determine minimum sight distance along the through roadway.

The sight triangle is determined as shown in Figure 910-18b. Within the sight triangle, lay back the cut slopes and remove, lower, or move hedges, trees, signs, utility poles, and anything else large enough to be a sight obstruction. Consider eliminating parking so sight distance is not obstructed.

The 18 ft from the edge of traveled way for the sight triangle in Figure 910-18b is for a vehicle 10 ft from the edge of traveled way. This is the minimum distance for the sight triangle. When the stop bar is placed more than 10 ft from the edge of traveled way, consider providing the sight triangle to a point 8 ft back of the stop bar.

Provide a clear sight triangle for a P vehicle at all intersections. In addition to this, provide a clear sight triangle for the SU vehicle for rural highway conditions. If there is significant combination truck traffic, use the WB-50 or WB-67 rather than the SU. In areas where SU or WB

vehicles are minimal, and right of way restrictions prohibit adequate sight triangle clearing, only the P vehicle need be considered.

At some intersections, the turning volume from a stop-controlled crossroad is significant enough to conflict with vehicles on the through roadway. Sight distances shown on Figure 910-6 are desirable at these intersections. This is the sight distance required for a P vehicle to turn left or right onto a two-lane highway and attain average running speed without being overtaken by an approaching vehicle going the same direction at the average running speed.

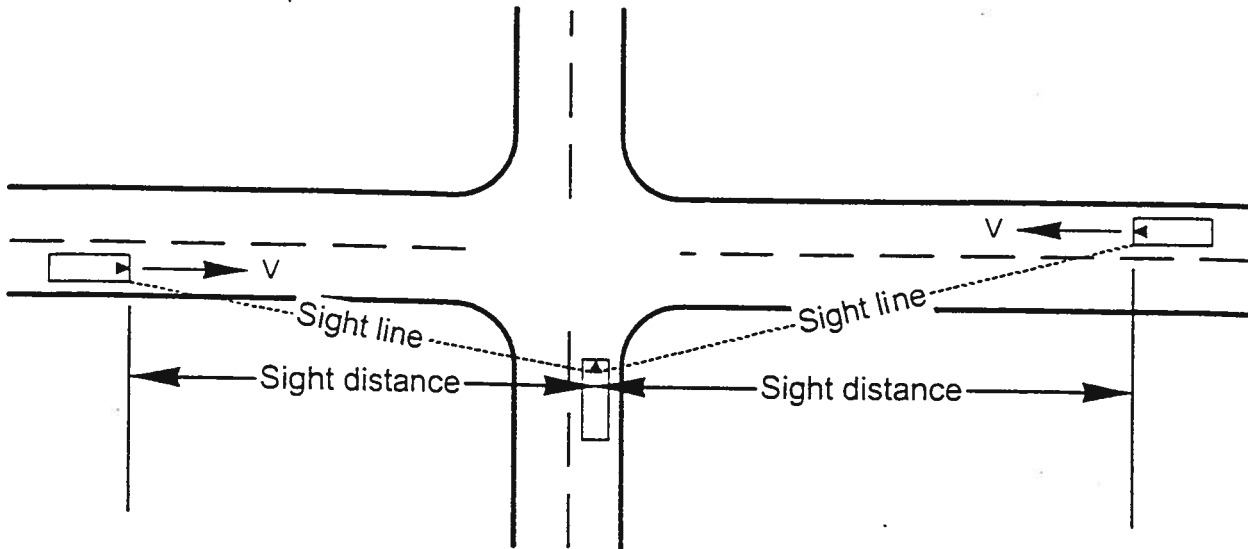
Design Speed (mph)	Sight Distance (ft)
25	300
30	380
35	480
40	590
45	730
50	860
60	1,150
70	1,560

Sight Distance for Turning Vehicles

Figure 910-6

Designs for movements that cross divided highways are influenced by the median widths. If the median is wide enough to store the design vehicle, sight distances are determined in two steps. The first step is for crossing from a stopped position to the median storage; the second step is for the movement, either across, or left into the through roadway.

Design ramp terminal sight distance as for at-grade intersections with a turning movement. An added element at ramp terminals is the grade separation structure. Figure 910-18b gives the sight distance considerations in the vicinity of a structure. In addition, when the crossroad is an undercrossing, check the sight distance under the structure graphically using a truck eye height of 6 ft and an object height of 1.5 ft.



$$SD = 1.47Vt_g$$

Where:

SD = Sight Distance (ft)

V = Design speed of the through roadway (mph)

t_g = Time gap for the minor roadway traffic to enter or cross the through roadway (s)

**Intersection Sight Distance Equation
Table 1**

Design Vehicle	Time Gap (t_g) in seconds
Passenger car (P)	9.5
Single unit trucks and buses (SU & BUS)	11.5
Combination trucks (WB-40, WB-50, & WB-67)	13.5

Note: Values are for a stopped vehicle to turn left or right onto a two-lane two-way roadway with no median and grades 3% or less. Includes 2 sec for perception/reaction time.

**Intersection Sight Distance
Gap Times (t_g)
Table 2**

Sight Distance for Grade Intersection With Stop Control

Figure 910-18a

The t_g values listed in Table 2 require the following adjustments:

Crossing maneuvers:

All vehicles subtract 1.0 s

Multilane roadways:

Left-turns, for each lane in excess of one to be crossed and for medians wider than 4 ft:

Passenger cars add 0.5 s
All trucks and buses add 0.7 s

Crossing maneuvers, for each lane in excess of two to be crossed and for medians wider than 4 ft:

Passenger cars add 0.5 s
All trucks and buses add 0.7 s

Note: Where medians are wide enough to store the design vehicle, determine the sight distance as two maneuvers.

Crossroad grade greater than 3%:

All movements upgrade, for each percent that exceeds 3%:

All vehicles add 0.2 s

APPENDIX "D"
ADAMS COUNTY PROPOSED DESIGN
DEVIATION FORM

Name of Plat _____

Location _____ Feet(North/South) of _____ Road

And _____ Feet(East/West) of _____ Road

Plat Sponsor _____ Address _____

Phone # _____ Email _____

Design Engineer _____ Address _____

Phone# _____ Email _____

Design Standard _____

Proposed Design Deviation

Justification _____

Approved _____

Not Approved _____

Design Engineer

Comments _____

County Engineer

APPENDIX E
ADAMS COUNTY FEE AGREEMENT

Name of Plat _____

I _____

Name of Sponsor

Agree to pay Adams County Department of Public Works at a rate of \$25.00 per lot for the proposed plat, road and drainage plans.

Plat Sponsor

Date _____

County Engineer

Date _____