

**ORDINANCE NO. 2007-5**  
**BOUNDARY COUNTY ROAD STANDARDS**

AN ORDINANCE OF BOUNDARY COUNTY, IDAHO, SETTING FORTH ITS AUTHORITY BY PROVIDING FOR THE AMENDMENT AND ADOPTION OF THE ROAD STANDARDS MANUAL DATED JANUARY 2007, ALLOWING FURTHER AMENDMENTS TO THE ROAD STANDARDS MANUAL TO BE AMENDED BY RESOLUTION; ESTABLISHING DEFINITIONS; PROVIDING FOR UTILITY CONSTRUCTION PERMITS AND STANDARDS; PROVIDING FOR APPROACH PERMITS AND STANDARDS; PROVIDING STANDARDS FOR NEW ROAD CONSTRUCTION; AND PROVIDING STANDARDS FOR MAILBOXES AND NEWSPAPER DELIVERY BOXES.

**WHEREAS**, Boundary County Commissioners desire to establish certain standards for roads prior to their adoption into the Boundary County transportation system; and

**WHEREAS**, Title 40, Chapter 6, Idaho Code, establishes authority granting the Board of Boundary County Commissioners to develop policies regarding highway matters within Boundary County; and

**WHEREAS**, The Board of Boundary County Commissioners desire to allow further amendments of the Road Standards Manual to be amended by resolution; and

**WHEREAS**, Boundary County Commissioners did hold public hearing on February 26, 2007; and

**NOW, THEREFORE, BE IT ORDAINED** by the Board of Boundary County Commissioners of Boundary County, Idaho, that the attached Boundary County Road Standards Manual be adopted as an Ordinance of Boundary County; and further

That the provisions of this Ordinance are hereby declared individually severable; Should any provision of this Ordinance be declared invalid by a Court of competent jurisdiction, such declaration shall not affect the validity of the remaining provisions; and further

That the provisions of this Ordinance may in the future be amended by resolution; and further

That this Ordinance shall be in full force and effect upon its passage and publication in one (1) issue of the Bonners Ferry Herald Newspaper.

Regularly passed and approved, done this 26 day of February, 2007.

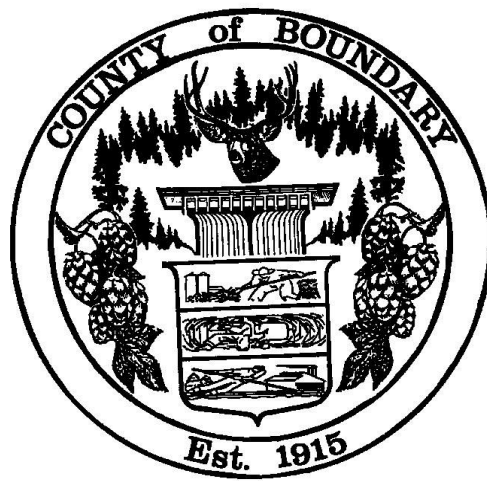
s/ \_\_\_\_\_  
RON SMITH, CHAIRMAN

s/ \_\_\_\_\_  
DAN DINNING, COMMISSIONER

s/ \_\_\_\_\_  
WALT KIRBY, COMMISSIONER

Attest: \_\_\_\_\_  
Michelle Rohrwasser  
Clerk of the Board of County Commissioners

# BOUNDARY COUNTY ROAD STANDARDS MANUAL



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## **PREFACE**

It is the purpose of this manual to identify and define standards for construction of new roads proposed for dedication to and maintenance by Boundary County. Also included in this manual are construction standards for new or existing private road and driveway approaches, which enter upon or already exist within right of ways owned by Boundary County or onto roads maintained by Boundary County, but not within dedicated rights of way, and for the construction and maintenance of utilities within County owned rights of ways or other roadways maintained by Boundary County but not necessarily within dedicated rights of way.

New roads constructed in accordance with these standards may be recommended for inclusion into the Boundary County road system and upon a finding of public need by the Boundary County Commissioners under 40-202 Idaho Code may be accepted for maintenance by Boundary County. Nothing in these standards shall be binding upon Boundary County in the routine maintenance, construction or re-construction of its road system. It is recognized that many roads already existing in the system cannot, for various reasons be reasonably brought up to these standards. Rather, it is the intention of this manual and it's related ordinance(s) to ensure that, in accordance with Boundary County's Comprehensive Plan, Boundary County highways continue to provide high levels of service at the lowest possible cost to the public.

## **SECTION 1: DEFINITIONS**

Approach. As used in this manual, the term “approach” shall mean any vehicular entrance upon a County right-of-way, other than a “driveway”.

County. The term “County” refers in all instances to Boundary County, Idaho.

County Right-of-Way or right-of-way. As used in this manual, the term “County right-of-way” or “right-of-way” shall mean any road right-of-way owned by Boundary County or proposed for dedication to Boundary County or roads maintained by Boundary County, but not within dedicated rights of way.

Driveway. As used in this manual, the term “driveway” shall mean a vehicular entrance upon a County right-of-way or a County maintained roadway which provides access to a four-plex or smaller multi-family dwelling or two or fewer single-family residences.

New road. As used in the manual, the term “new road” shall mean any road built for dedication as a public road within the Boundary County Road System. It shall not be deemed to include existing public roads within the Boundary County Highway System, nor road construction or reconstruction undertaken by Boundary County.

Road Superintendent. As used in this manual, the term “Road Superintendent” shall refer to the Boundary County Road and Bridge Superintendent.

Slope. The angle of incline expressed as a percentage which, is derived by dividing the measured height from base to top, by the horizontal distance from base to top.

Project engineer. As used in this manual, the term “project engineer” shall mean a Registered Professional Engineer, licensed in the State of Idaho and who is retained to design, construct or supervise the construction of a new road.

Road surface, roadway. As used in this manual, the terms “road surface” and “roadway” shall mean the travelway and the road shoulders on each side.

Travelway. That portion of a County right-of-way, which has been improved for the movement of vehicles, exclusive of shoulders.

## **SECTION 2: UTILITY CONSTRUCTION PERMITS AND STANDARDS**

### 2.1 APPLICABILITY

- A. Prior to the start of construction of public or private utility projects within Boundary County rights-of-way, the applicant or utility shall obtain a permit for such use from the Boundary County Road and Bridge Department. The permit shall be applied for and granted in the name of the utility, not an individual, unless the utility is a privately owned utility. The fee for a Utility Construction Permit is set by Resolution of the Boundary County Board of Commissioners.
- B. This standard hereby adopts ISPWC (Idaho Standards for Public Works Construction) trenching standards (Division 300) in its entirety.
- C. A Utilities permit is required whenever any trenching/boring or pole/pedestal placement is necessary within County rights-of-way or onto roads maintained by Boundary County, even if a permit has been granted for previous work in the same location. The approved permit must be on-site any time work is proceeding. Other work such as brushing that requires traffic control (signs, flaggers, etc.) requires notifying the Boundary County Road and Bridge Department 48 hours prior to commencing work. In the event of an emergency, the permittee must immediately notify Boundary County Sheriff's Office at 267-3151 and Boundary County Road and Bridge Department at 267-3838.

### 2.2 GENERAL

- A. Not all County maintained roads exist within a County-owned right-of-way, some are prescriptive only. The county, by issuance of the permit, makes no representation as to existence, location or width of right-of-way. It is the Grantees responsibility to determine these items. Though a permit is required on all rights-of-way and publicly maintained roads (deeded or prescriptive), the Grantee is responsible to notify any affected property owners and obtain whatever private easements are necessary. If there is a question whether the work is within the public right-of-way, a permit shall be required, or the utility shall provide evidence to the Boundary County Road and Bridge Department to verify that the work is occurring on private property.
- B. Utility installations shall be located to minimize the need for later adjustment, to accommodate future roadway improvements and to provide service access to such installation with minimum interference to roadway traffic. Utility companies shall make specific inquiries as to long-range county road improvement plans in order to minimize both utility customer and road user inconvenience should further road improvements (on existing or new alignment) require adjustment or relocating of the utility. The County reserves the right to require the Grantee to change the location or to remove any structure,

structures, lines or pipes authorized by this permit at any time in order for the County to perform any needed work on or in the right-of-way, said change or removal to be made at the sole expense of the Grantee or their successors or assigns.

- C. If the Grantee does not complete the work to the County's specifications, the County may fix the deficiencies and bill the Grantee. The County reserves the right to refuse the issuance of a permit if previous projects have not been completed to the County's satisfaction or required conditions have not been met.

### 2.3 DESIGN DRAWINGS

- A. Prior to the start of construction, the applicant or utility shall submit design drawings showing the location of any poles, lines, piping, culverts or any structure or facility located or to be located within the County right-of-way. Work shall not begin until the design drawings have been approved in writing. The drawings shall indicate these locations with respect to the road surface, shoulders and ditches, the right-of-way line, bridges, culverts, drainage structures, driveways, road intersections and any other road improvement structure within the right-of-way. The drawings must be approved by the Boundary County Road and Bridge Department before a permit is issued. The drawings shall at a minimum contain the following:
  - 1. Project name and number
  - 2. North Arrow
  - 3. Scale
  - 4. Distance of installation from shoulder of road (minimum 10' unless specifically approved due to site characteristics)
  - 5. Distance or installation from right-of-way (maximum of 5' unless specifically approved due to site characteristics)
  - 6. Depth of installation (from bottom of ditch)
  - 7. Section drawings of any road crossings or joint trenches (road crossings shall be approximately 90 °)
  - 8. Compaction requirements (in accordance with latest edition of ISPWC)
  - 9. Location of all valves, hydrants, services, pedestals, poles, etc.
  - 10. Above ground markings and locator tape or wire
  - 11. Traffic control plan or signs
- B. As-built drawings showing accurate locations of all elements of the project are to be submitted to the Boundary County Road and Bridge Department within 45 days of completion of the project and will be maintained in the road files.
- C. All construction shall proceed in compliance with the standards set forth in this section, the latest edition of the ISPWC, the terms of the construction permit and the approved design drawings submitted. Depending on the complexity of the project, the Road and Bridge Department may, at its discretion, require that design drawings bear the stamp of a licensed engineer.



## 2.4 STANDARDS FOR UTILITY PLACEMENT AND CONSTRUCTION

- A. Utility lines shall be installed under the road surface using techniques which do not require a cut through the road surface, such as tunneling, burrowing or driven pipe. It is County policy that unless site characteristics prohibit, all utility crossings on roads with a hard surface shall be accomplished in a manner that will not disturb the surfacing.
- B. Utility line crossings of a road should be as near a right angle (normal) to the road centerline as practicable.
- C. Longitudinal installation should be located as near as practicable to the right-of-way line and on uniform line and grade. With exception to utility line crossings, no utilities shall be installed under the roadway.
- D. Spoils shall be cast away from the roadway whenever practicable. The roadway must be swept or otherwise cleaned at the end of each working day. All trenches left open at the end of the day shall have barricades in accordance with the latest edition of the MUTCD (Manual on Uniform Traffic Control Devices). A maximum of 50 feet of open trench will be allowed at the end of the working day.
- E. If, in the determination of the Boundary County Road & Bridge Department or the project engineer, weather conditions prohibit proper installation, work shall be stopped.
- F. Where utility cables, water lines, and sewer lines cross a road or right-of-way such cables and lines shall be encased in a conduit or secondary encasement extending two (2) feet beyond the ditch line or to the edge of any fill within the right-of-way.

## 2.5 ABOVE GROUND UTILITIES

- A. Power poles and other above ground utility objects should be placed outside of the defined clear zone areas. They shall utilize a breakaway design to the greatest extent possible. Installation of power poles and other above ground utility objects will not be permitted in sidewalks, or pedestrian/bicycle pathways.
- B. Location of poles shall be compatible with driveways, intersections and other roadway features (i.e., they shall not interfere with sight distance, roadway signing, traffic signals, culverts etc.) Where possible, utilities shall share facilities so that a minimum number of poles are needed.
- C. Whenever practicable, relocation of poles or obstacles shall be made away from the existing roadway. Costs of relocating poles or obstacles to achieve these standards are the responsibility of the developer whose project necessitates compliance with these Standards. This is not intended to prevent the developer from making financial arrangements with an appropriate utility or other owner of the obstacle to accomplish removal of the pole or obstacle.

## 2.6 RESTORATION REQUIREMENTS

- A. Existing drainage ditches, culverts, etc., shall be kept clean at all times and temporary diversion of any drainage system will not be permitted without the consent of the Boundary County Road and Bridge Department. Any drainage culvert, catch basin, manhole, or other drainage structures disturbed by excavation shall be replaced with new material or repaired to the satisfaction of the Boundary County Road and Bridge Department. Temporary erosion/sedimentation control measures shall be employed to protect adjacent property and storm drain facilities in accordance with Best Management Practices.
- B. Any disturbance of the travel surface, shoulders, ditches drainage or traffic control devices shall be repaired and restored to its prior condition or better. If trenches or pavement settling should occur within two (2) years of the installation of the utility, repairs shall be made by the applicant or utility as directed by the Boundary County Road and Bridge Department and at no cost to the County. If the applicant fails to make the necessary repairs, the County may initiate the repair and bill the applicant or utility to make the necessary repairs. No new construction permits within county rights-of-way will be issued to the applicant or utility until such claim has been settled.
- C. Upon completion of construction of the lines and facilities, all rubbish and debris shall be immediately removed and the roadway and the roadside shall be left neat and presentable to the satisfaction of the County.
- D. All areas within the County right-of-way which have been disturbed or denuded of vegetation shall be reseeded in accordance to ISPWC standards as soon as possible after utility construction is completed to the satisfaction of the Boundary County Road and Bridge.

## 2.7 PUBLIC SAFETY

- A. No construction work shall be started on utility placement until the Boundary County Road and Bridge Department has given notice to the applicant or utility to proceed. The Boundary County Sheriff's Office shall be notified by the applicant or utility of the date(s) and time(s) of full or partial road closures associated with the utility placement to allow for any rerouting of emergency vehicles that may be necessary. The applicant or utility shall publish a notice of any full road closures in a locally distributed newspaper at least two (2) weeks in advance of the closure, stating the date and location of the closure, and the estimated duration of the closure. The applicant or utility shall also post sign on the road where a full closure is to occur at least two (2) weeks prior to the closure notifying the traveling public of the dates, times and duration of the closures. Alternative forms of public notification may be considered on local access dead end roads. These alternatives shall be approved by the Boundary County Road and Bridge Department at least two (2) weeks prior to the closure.
- B. If, in the opinion of the Boundary County Road and Bridge Department, weather conditions deteriorate to the point where the traveled roadways are unsafe for the public

or detrimental to the restoration of the roadway, excavation shall cease immediately and cleanup shall be promptly accomplished.

- C. During construction, work barricades, lights and other traffic control devices shall be erected and maintained as may as necessary to conform to the Manual on Uniform Traffic Control Devices and in accordance with the approved traffic control plan.
- D. Equipment parking and materials storage shall be as far from the road surface as feasible in a location approved by the Boundary County Road and Bridge Department. Equipment or materials left overnight within thirty (30) feet of the road surface shall be marked and/ or protected, so as not to constitute a hazard to the traveling public. This section shall not be construed to authorize trespassing upon private lands adjacent to County roads or rights-of-way for the purpose of construction, equipment parking or materials storage.
- E. Any equipment used on a project in Boundary County must be cleaned prior to entering Boundary County to ensure that no noxious weeds are brought into the County.

**SECTION 3:  
APPROACH PERMITS AND STANDARDS  
(DRIVEWAYS AND ROAD APPROACHES)**

**3.1 APPLICABILITY**

- A. A permit shall be required for construction of all new approaches to County Roads, and for existing approaches thereto which are altered in any way. The permits are to be issued by the Road and Bridge Superintendent of Boundary County. Applications shall be accompanied by a drawing showing the design and location of the approach and any culverts, traffic control devices or other structures associated with the approach construction. A vicinity map shall accompany the application showing the location of the County right-of-way, and the travel way for a distance of four hundred (400) feet in each direction from the new access. Other intersections, approaches and driveways shall be shown upon the vicinity map. From the date of receipt of a complete permit application, an initial inspection will be made by Boundary County Road and Bridge within 15 business days. Construction shall not begin until the permit has been issued.
- B. This Standard hereby adopts all requirements and instructions on the approach permit.
- C. It is the applicant's responsibility to contact "One-Call" prior to the start of construction at 1-800-626-4950.
- D. For the purposes of this Section, the term "approach" shall be used to mean all entrances and intersections for three or more residences or any commercial or industrial access including temporary or permanent logging roads. The term "driveway" shall be used to mean an entrance for two or less residences.
- E. The standards within this section shall be applicable to that portion of new entrances located within a County right-of-way, or entering upon a County maintained road.
- F. Any changes in the type of surfacing or use shall require a permit.

**3.2 GENERAL**

- A. Access to State Highways is regulated by the Idaho Transportation Department (ITD). The property owner is responsible to coordinate with ITD for satisfactory completion of any requirements.
- B. Boundary County reserves the right to restrict access onto County roads. In new subdivisions, the developer may be required to provide joint access to lots with frontage

of less than 300 feet. Corner lots will be required to access on the roadway with the lowest classification and as close as practicable to the property line most distant from the intersection. All construction of accesses shall conform with the standards within this Section and with the terms of the permit issued.

- C. Accesses shall be designed so that backing maneuvers from or onto a public road will not occur.
- D. A traffic impact study may be required for multi family residences, commercial or industrial accesses. The costs of the study shall be the responsibility of the applicant.

### 3.3 STANDARDS

That portion of any new access within a County right-of-way or entering onto county maintained roadways shall comply with the following standards:

- A. The location, design and configuration of the access shall conform to the specifications and dimensions shown on Figures 3.1 – 3.3.
- B. No new access on collectors or arterial roads shall be located within three hundred and thirty (330) feet of an existing access, or the intersection of two public road rights-of-way. On local roads, no new access should be located within two hundred (200) feet from any existing access or the intersection of two public road rights-of-way.
- C. New accesses shall intersect the roadway at an angle of between eighty (80) and ninety (90) degrees, and as close to ninety (90) degrees as possible.
- D. Proper precautions shall be taken to provide and maintain adequate drainage of County roads. Any interference to drainage to the County road caused by applicant or his agents will be corrected by Boundary County at the expense of the applicant or permittee. Culverts under new accesses and located within a County right-of-way shall have a minimum diameter of twelve (12) inches and shall be galvanized metal. Culverts shall be located and sized so as to form a continuation of the existing roadside drainage system and shall extend beyond the toe of any fill placed in association with the access. An engineering study may be required to size the culvert at the discretion of the Boundary County Road and Bridge Department. The cost of the study shall be at the expense of the applicant.
- E. Reasonable effort shall be made to ensure all new approaches slope downward from the roadway. On a new driveway approach, the slope of the driveway from the shoulder of the County road shall be no greater than four percent (4%) negative grade and no less than two percent (2%) negative grade for a minimum distance of 15 feet from the County road shoulder. On a new road approach, the slope of the roadway from the County road shall be no greater than four percent (4%) negative and two percent (2%) negative grade for a minimum distance of 50 feet from the existing edge of the County road pavement. The approach shall be designed as to prevent surface water runoff from reaching the County road way.

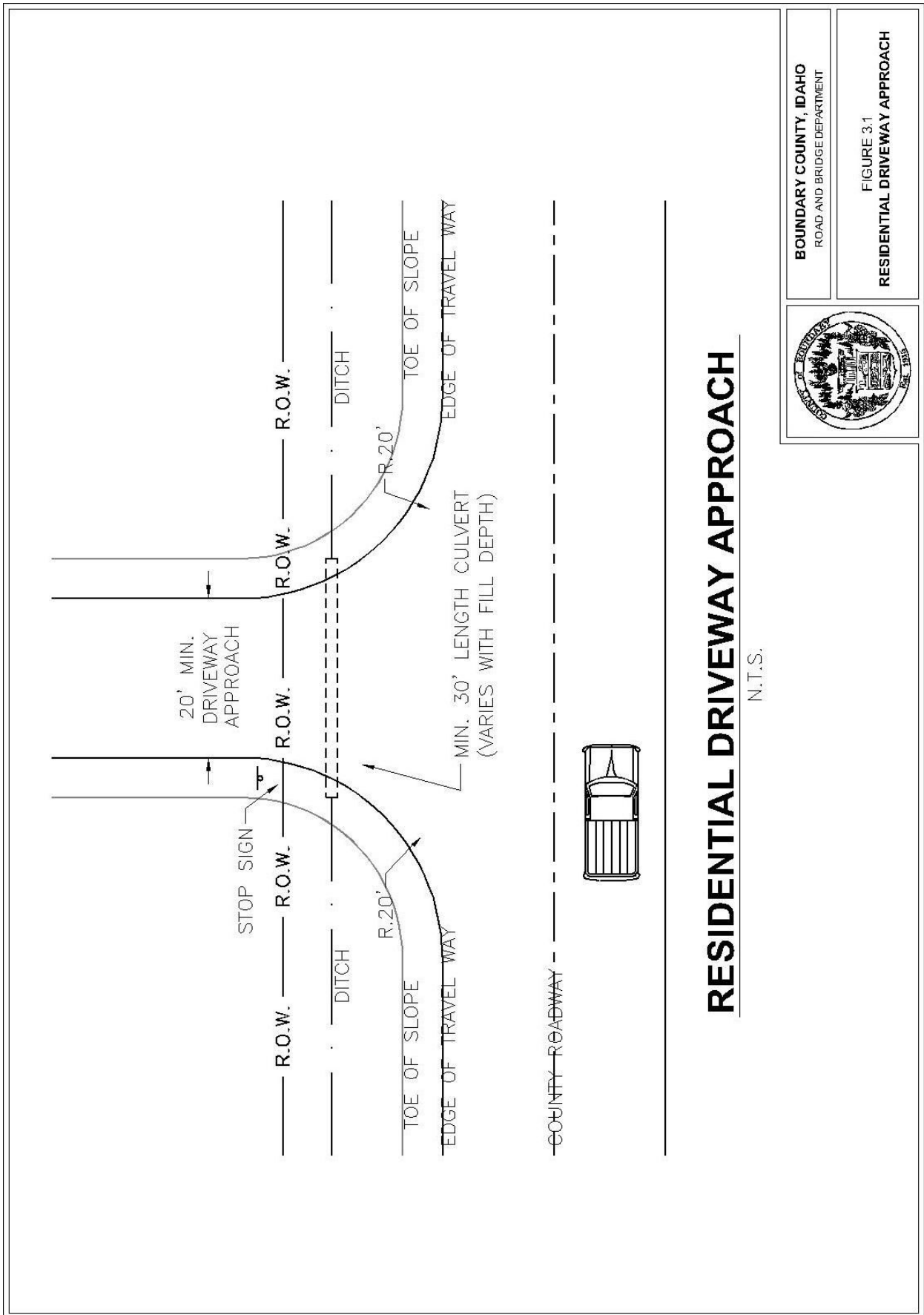
- F. The minimum sight distance for new approaches entering arterial, collector or local access roads shall be a minimum of three hundred (300) feet and a minimum sight triangle of 40 feet. Permittee shall be required to perform necessary brush removal to maintain sight distance. See Figure 3.4 for clarification.
- G. During construction of approaches, such barricades, signs, and other traffic control devices shall be erected and maintained in conformance with the latest edition of the Manual on Uniform Traffic Control Devices and in accordance with the approved traffic control plan.
- H. The provisions of this Manual shall not affect accesses or approaches in existence at the time of adoption of this Manual, but any alteration of such accesses shall conform fully with the provisions established herein. The provisions established herein shall likewise not necessarily preclude establishing a new access or approach to any lot or parcel lawfully created prior to the date of adoption of this manual. Such new approaches will be examined by Road and Bridge on a case-by-case basis, and variances from the strict standards herein may be granted when doing so does not create hazard.

### 3.4 RESTORATION REQUIREMENTS

- A. Existing drainage ditches, culverts, etc., shall be kept clean at all times and temporary diversion of any drainage system will not be permitted without the consent of the Boundary County Road and Bridge Department. Any drainage culvert, catch basin, manhole or other drainage structures disturbed by excavation shall be replaced with new material or repaired to the satisfaction of the Boundary County Road and Bridge Department. Temporary erosion/sedimentation control measures shall be employed to protect adjacent property and storm drain facilities in accordance with Best Management Practices.
- B. Any disturbance of the travel surface, shoulders, ditches drainage or traffic control devices shall be repaired and restored to its prior condition or better. If surface or pavement settling should occur within one (1) year of the installation of the approach, repairs shall be made by the applicant as directed by the Boundary County Road and Bridge Department and at no cost to the county. If the applicant fails to make the necessary repairs, the County may initiate the repair and bill the applicant. No new permits within County rights-of-way will be issued to the applicant until such claim has been settled.
- C. Upon completion of construction of the approach, all rubbish and debris shall be immediately removed and the roadway and the roadside shall be left neat and presentable to the satisfaction of the County.
- D. All areas within the County right-of-way which have been disturbed or denuded of vegetation shall be reseeded, in accordance to ISPWC standards, as soon as possible after construction is completed to the satisfaction of the Boundary County Road and Bridge Department.

### 3.5 PENALTY (As Amended Dec. 22, 2008, Resolution 2009-12)

- A. Any person who violates any of the provisions of the Ordinance and this Road Standards Manual shall be guilty of a misdemeanor and shall be punishable by imprisonment in a county jail not exceeding six months, or by a fine not exceeding \$300.00, or by both fine and imprisonment. The county may also initiate a civil proceeding instead of, or in addition to, the criminal penalty.
- B. A separate violation shall be deemed to have occurred for each construction, placement, installation, enlargement or extension, or structure subject to the parameters of this manual.
- C. If an access onto a county road is created or altered in violation of this manual, such access will be posted with a warning notice of violation. A letter will be mailed to the landowner at the time of posting giving the landowner ten (10) days from the date of posting to secure an approved application or to correct the encroachment. Failure to do so authorizes Boundary County to remove the access five days after the notice is complete, to correct any harm caused therefrom, to take such further action as authorized pursuant to Idaho Code section 40-2319, and/or to proceed criminally against the landowner. Boundary County shall also be entitled to a lien against the real property for any expense it incurs as a result of the failure of the landowner to comply with this manual.

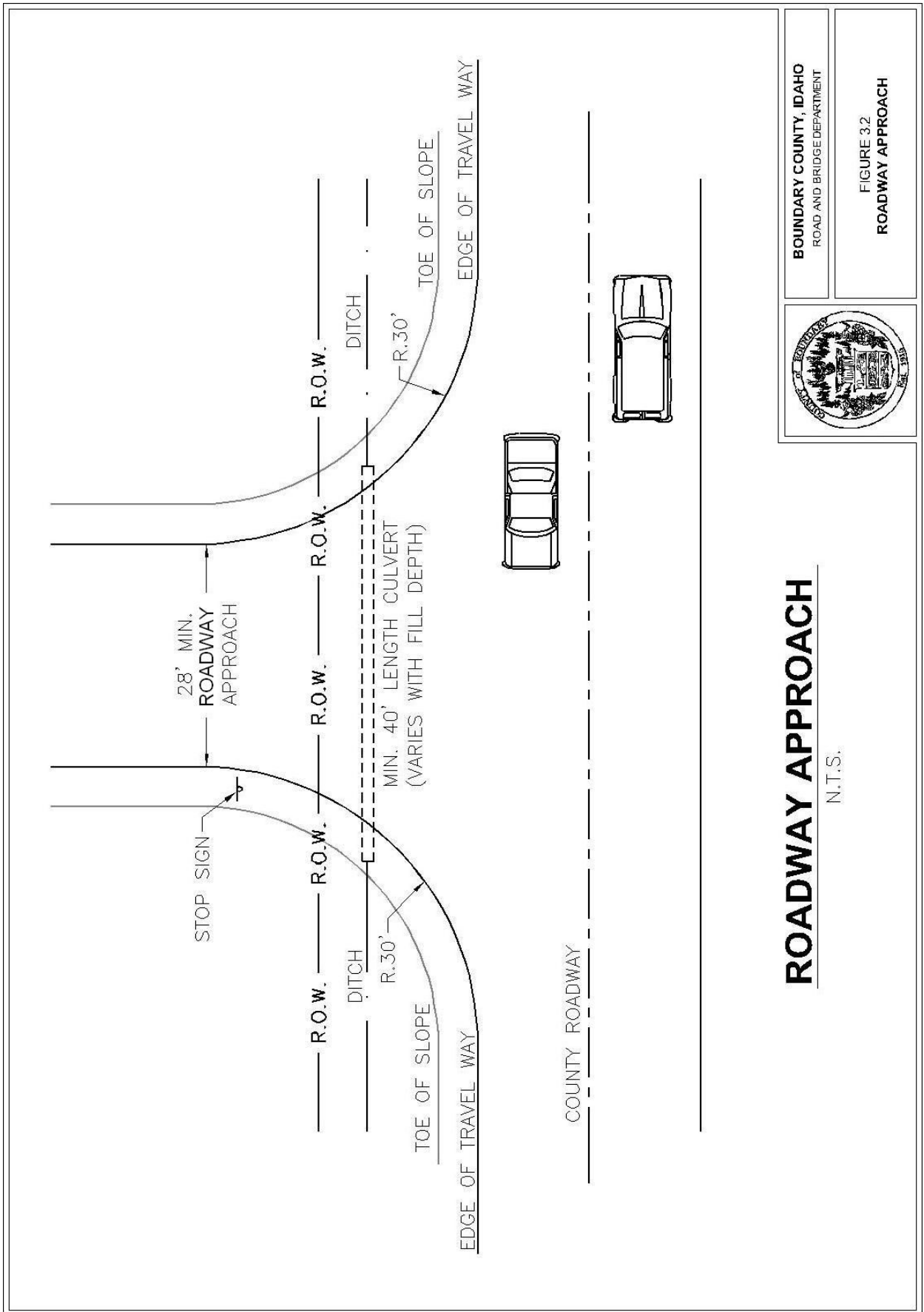


BOUNDARY COUNTY, IDAHO  
ROAD AND BRIDGE DEPARTMENT

FIGURE 3.1  
RESIDENTIAL DRIVEWAY APPROACH







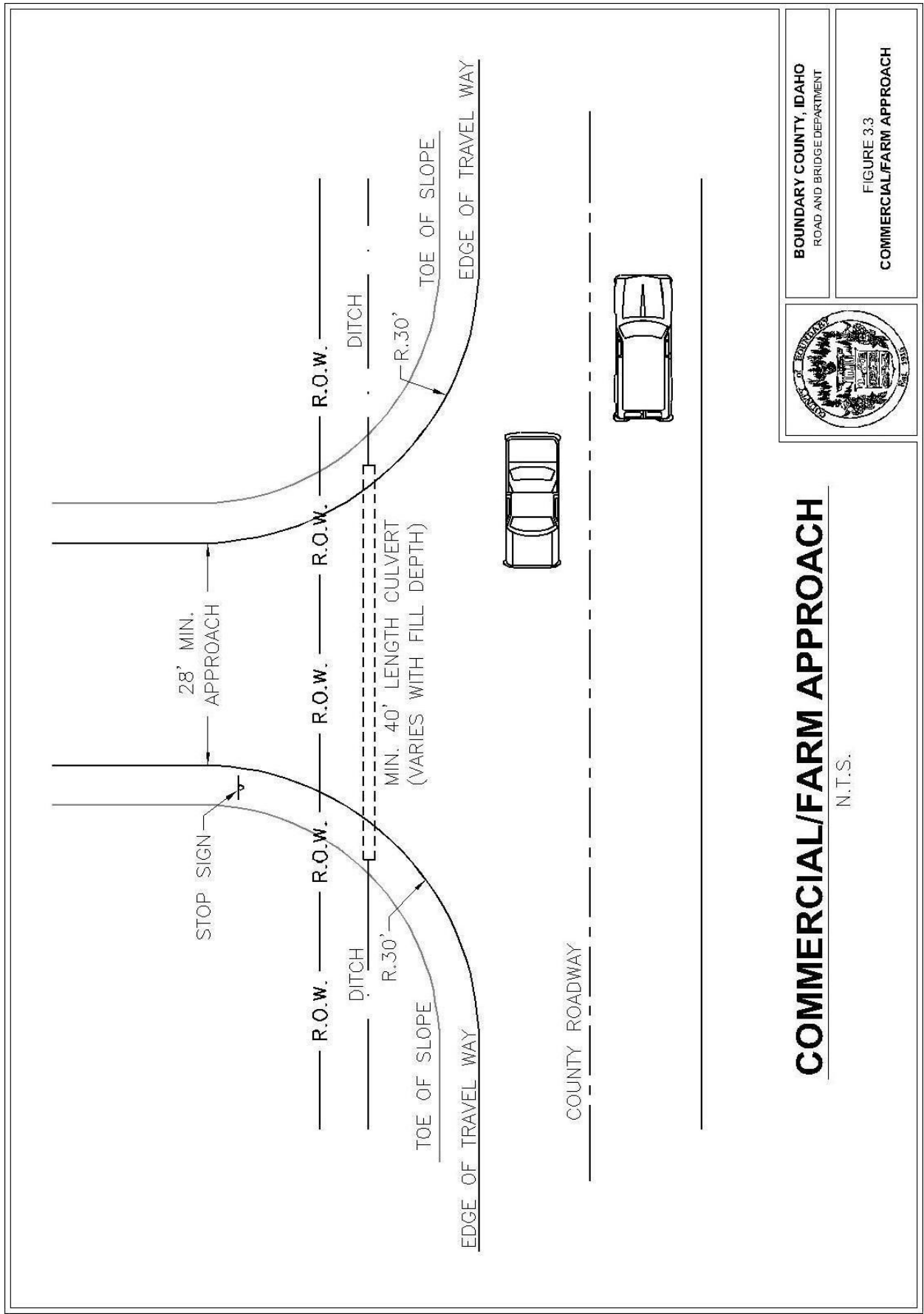
# ROADWAY APPROACH

N.T.S.



**BOUNDARY COUNTY, IDAHO**  
ROAD AND BRIDGE DEPARTMENT

FIGURE 3.2  
ROADWAY APPROACH



# COMMERCIAL/FARM APPROACH

N.T.S.



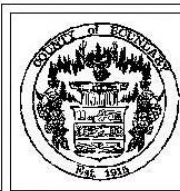
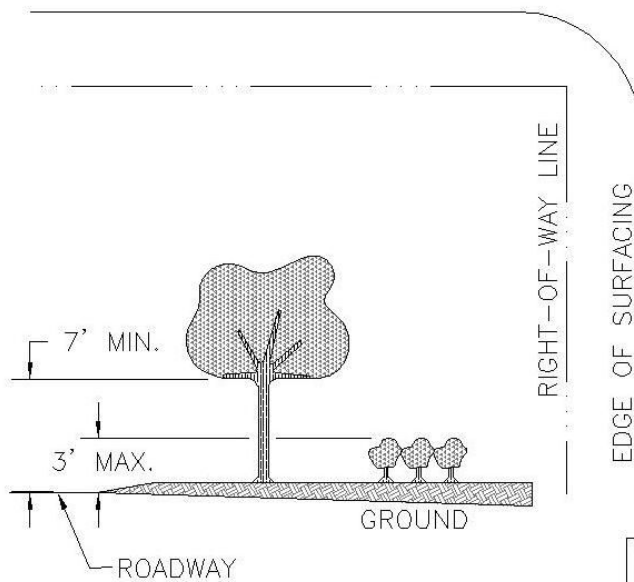
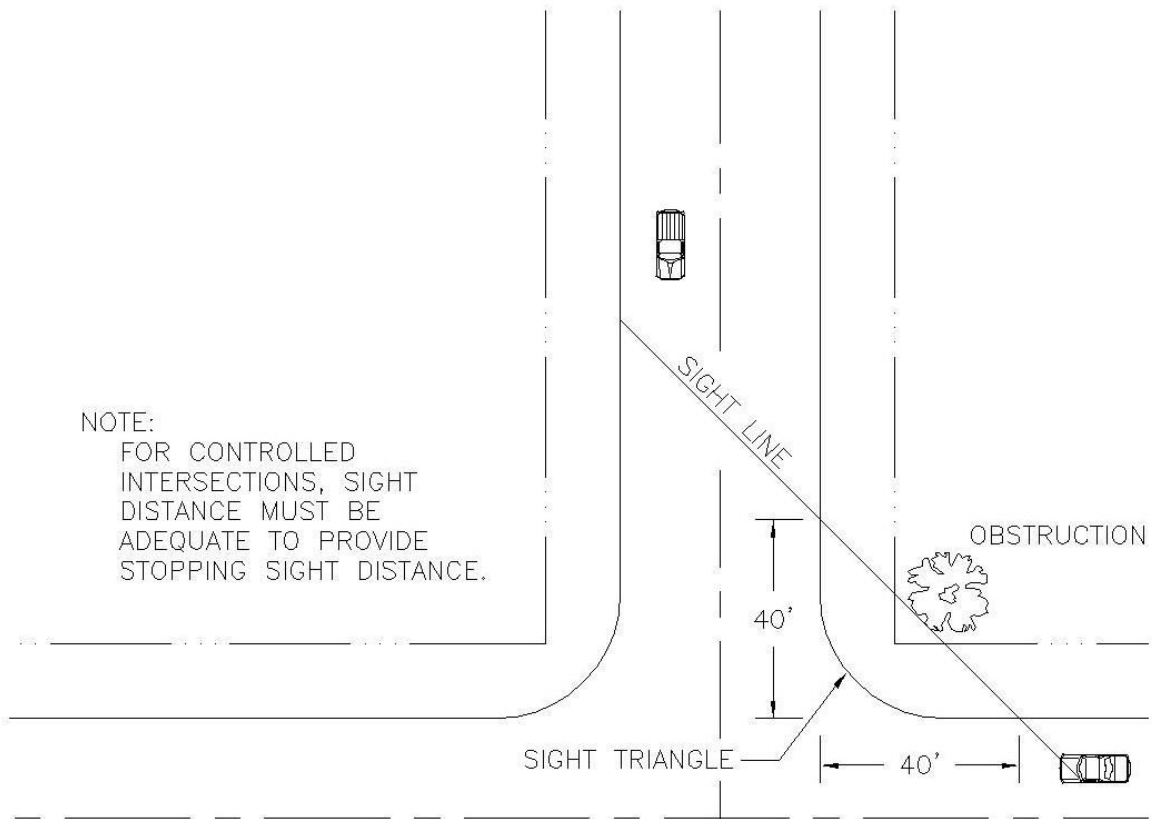
BOUNDARY COUNTY, IDAHO  
ROAD AND BRIDGE DEPARTMENT

FIGURE 3.3  
COMMERCIAL/FARM APPROACH

# SIGHT TRIANGLE AT INTERSECTIONS

N.T.S.

NOTE:  
FOR CONTROLLED  
INTERSECTIONS, SIGHT  
DISTANCE MUST BE  
ADEQUATE TO PROVIDE  
STOPPING SIGHT DISTANCE.



**BOUNDARY COUNTY, IDAHO**  
ROAD AND BRIDGE DEPARTMENT

**FIGURE 34**  
**SIGHT TRIANGLE AT INTERSECTIONS**

## **SECTION 4:** **STANDARDS FOR NEW ROAD CONSTRUCTION**

### ***4.1 GENERAL REQUIREMENTS***

These standards are based upon the American Association of State Highway and Transportation Officials, (AASHTO) Policy on Geometric Design of Highways and Streets, current edition. Design criteria set forth by AASHTO shall serve as guidelines for the design of all new roads proposed for dedication to Boundary County.

### ***4.2 ROADWAY CLASSIFICATION***

All of Boundary County's roadways are functionally classified in accordance with Federal Highway Administration rules. These classifications determine, among other things, construction design parameters and other required geometry including minimum right of way widths. Road classification also plays a role in maintenance priorities and eligibility for Federal Highway funding. A map showing current classifications of Boundary County roads is on file at the Road and Bridge Department office. In most cases, new roads for dedication will be classified as local access roads.

### ***4.3 RIGHT OF WAY REQUIREMENTS***

All new roads proposed for dedication to Boundary County shall have a minimum right of way based on the classification of the roadway. Following are the classifications along with their respective minimum right-of-way widths.

<b>Roadway classification</b>	<b>Right-of-way</b>
<u>Arterial</u>	<u>80 feet</u>
<u>Major collector</u>	<u>60 feet</u>
<u>Minor collector</u>	<u>60 feet</u>
Local access road*	60 feet

\* In most cases, new roads proposed for dedication will be classified as local roads.

Additional right-of way width may be required to accommodate extreme cut or fill sections. Cul-de-sacs shall have a minimum radius of 70 feet of dedicated right-of-way.

All intersections of right-of-way lines at roadway intersections and at cul-de-sac bulbs shall have a minimum radius of twenty (20) feet. See Figure 4.1 for a "Typical Cul-de-Sac" detail.

### ***4.4 DESIGN CRITERIA***

*The following specific design criteria shall apply to all roads proposed for dedication to Boundary County. Also see Figure 4.2 for a “Typical Road Cross Section” detail.*

<b>Design Parameter</b>	<b>Arterial</b>	<b>Collector</b>	<b>Local Access</b>
<b><u>Vertical Grades</u></b>	Maximum 6%	Maximum 6%	Maximum 8%
<b>Horizontal Curvature *</b>	Minimum Radius 830 ft.	Minimum Radius 510 ft.	Minimum Radius 250 ft.
<b>Design Speed</b>	35-55 mph	35- 45 mph	25-35 mph
<b>Super Elevations</b>	Max 0.06 ft. per foot	Max 0.06 ft. per foot	Max 0.06 ft. per foot
<b>Min. Runoff Length **</b>	150 ft.	120 ft.	110 ft.
<b>Angles of Intersection</b>	80-90 degrees	80-90 degrees	70-90 degrees
<b>Width of Roadway</b>	34 ft.	30 ft.	28 ft.
<b>Width of Travelway</b>	28 ft.	26 ft.	24 ft.

\* Radius measured to centerline of roadway

\*\* From full super elevation to full crown section

Minimum stopping sight distance (driver eye level at 3.5 feet above road surface, object at 6” above road surface) shall be 250 ft. All vertical curves shall be designed to meet this criteria.

Radius of roadway edge at intersections shall be 30 ft.

Downgrade and upgrade approaches to existing County road or highway shall not exceed 2% for the last 25 feet of the approach, unless otherwise pre-approved.

Cut and fill slopes shall not exceed 2:1 (unless otherwise approved by the County)

Subgrade shall be established at 2-4% crown before placement of sub-base or base materials.

#### 4.5 ROAD STRUCTURE SCHEDULE

<b>CLASS OF ROADWAY</b>	<b>GEOTEXTILE REQUIRED</b>	<b>SUB-BASE (BALLAST)*</b>	<b>BASE*</b>	<b>ASPHALT SURFACING</b>	<b>TRAVELED WAY WIDTH</b>	<b>ROADWAY WIDTH</b>
ARTERIAL	X	12”	4”	2”	28’	34’

COLLECTOR	X	12"	4"	2"	26'	30'
LOCAL ACCESS	X	8"	4"	2"	24'	28'

\* Compacted Depth (add minimum 25% for compaction)

A geo-textile fabric (min. Amoco 2002 woven or equivalent) will be required in all cases, unless waived by the Road Superintendent.

#### ***4.6 DRAINAGE***

Culverts under new roads shall be 18" in diameter or of such size as is necessary to carry the discharge of a 50 year design storm, whichever is greater. Culverts under roadways shall have a minimum of 12" of cover and extend to the toe of any fill slopes.

Culverts under approach roads or driveways shall have a minimum diameter of 12 inches and a minimum length of 30 feet. Cover may be reduced to 6 inches on residential driveways.

All culverts installed in new roads or approaches shall be constructed of corrugated, galvanized steel .064 thickness.

Culverts or other drainage structures larger than 36 inches in diameter or being placed under extreme fills may require Engineered plans.

All necessary drainage easements for accommodating drainage structures shall be shown and recorded on the plans or the plat as a part of those plans or plat. Drainage easements necessary for draining storm water across private property shall be shown on the plans or plat and recorded with the County.

Bridge structures built for dedication to Boundary County shall be designed by a professional engineer registered in the state of Idaho, in accordance with AASHTO LRFD Bridge Design Specifications, latest edition.

The design vehicle for bridge design shall be a minimum HS-20 truck.

#### **4.7 SIGNAGE**

All required signs and markings shall be installed by the applicant prior to acceptance of the roadway by Boundary County unless approved otherwise by Boundary county.

All permanent and construction signage shall be in conformance with the Manual on Uniform Traffic Control Devices, (MUTCD), latest edition.

#### **4.8 GUARDRAIL OR BARRIER**

Boundary County reserves the right to determine the need for guardrail or other barrier structure under each separate circumstance. The type of guardrail to be installed shall be approved by Boundary County based on specifications prepared, at the applicant's expense, by an Idaho certified engineer, and be installed by the applicant prior to acceptance of the roadway by the County.

#### 4.9 CLEARING AND GRUBBING

Clearing and grubbing shall consist of the removal and disposal of all organic and other deleterious material from the public right of way. All material removed under clearing shall be disposed of out of the public right of way limits.

#### 4.10 SUBGRADE

The subgrade shall consist of the natural materials remaining after all topsoil and duff (organic material) have been removed and only good construction material (mineral soil) is remaining.

Unstable subgrade conditions shall be remedied by additional measures as required by the Road Superintendent and may include the following: 1) chemical stabilization, overexcavation and removal of unstable material, and 3) placement of additional subbase material.

The prepared subgrade shall be crowned 2-4% and compacted by mechanical means.

Observation of the subgrade by the County is necessary prior to the placing of ballast or base materials. The County must have at least 24 hours notice prior to the need for observation. Notice shall be given so that observation can be made during the County's normal working hours and work week.

All construction of the subgrade shall be controlled by slope stakes or grade stakes placed by the project engineer or a licensed surveyor unless this requirement is waived in advance by the County.

#### 4.11 SUB-BASE (BALLAST)

Only approved crushed aggregate material which has a sand equivalent of not less than 30 and which meets the following gradations may be used in the ballast course.

<u>Sieve Size</u>	<u>Percent Passing</u>
4 inch	100
3 inch	98-100
2 inch	75-100
1 inch	40-80
#4	25-60
#200	5-12

The ballast material shall be placed in layers not to exceed 6" each in thickness and shall be compacted by mechanical means to at least ninety five percent of the AASHTO T-99 Proctor Density.



Observation of the ballast by the County is necessary prior to the placing of base materials. The County must have at least 24 hours notice prior to the need for observation. Notice shall be given so that observation can be made during the County's normal working hours and work week.

All culvert crossings shall be in place before the placement of ballast.

#### **4.12 BASE MATERIALS**

Only approved crushed aggregate material which has a sand equivalent of not less than 30 and which meets the following gradations may be used in the base course.

<u>Sieve Size</u>	<u>Percent Passing</u>
1 inch	100
3/4"	90-100
#4	40-65
#8	30-50
#200	3-10

The crushed aggregate material for the base course shall not show a loss of more than 35% under the Los Angeles Abrasion Test or an equivalent method.

Base course materials shall be placed in one or more layers to develop a compacted depth of 4" minimum. Material shall be placed in such a way as to minimize segregation of the aggregate, and shall be compacted by rolling to 95% of the AASHTO T-99 Proctor Density.

No portion of the completed base course shall be more than four-hundredths (.04) of a foot below the edge of a straight edge 10' in length laid parallel to and perpendicular to the centerline of the roadway.

Observation of the base material (in place) by the County is necessary prior to surfacing. The County must have at least 24 hours notice prior to the need for observation. Notice shall be given so that observation can be made during the County's normal working hours and work week.

#### **4.13 SURFACING**

Prior to acceptance into the Boundary County Road System, new roads shall be surfaced with a minimum of two inches of hot mix asphalt pavement to a minimum width of 24 feet. The type of asphalt materials and equipment used will be as specified or approved

by the County. A pavement shall be designed and placed in accordance with the 2004 or latest Idaho Transportation Department Standards for Highway Construction.

#### 4.14 REQUIRED SUBMITTALS - SPECIFICATIONS FOR DRAWINGS

The project engineer shall prepare Road and Right-of-Way drawings, and each sheet of the drawings shall bear the seal of such engineer. A licensed surveyor may prepare the right-of-way drawings, and each sheet of the drawings shall bear the seal of such surveyor.

Two (2) copies of the design drawings shall be submitted to the Boundary County Road & Bridge Department for review. All drawings shall include the following when applicable.

1. The first sheet of the plans shall include a project title, vicinity map, and index of plan sheets.
2. Road alignments with 50' 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 established by the Engineer. Stations shall increase from west to east and from south to north.
3. Section, 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 of for proposed road, intersecting roads, and existing road improvements with dimensions.
7. All topographic features (based on real elevations) 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.
12. Existing and proposed drainage features, showing direction of flow, size and kind of each drainage channel, pipe, and structure and other specified requirements in any county storm water management specifications.
13. Horizontal Scale : 1" = 50' and a Vertical Scale of 1" = 10'. However, 1" = 100' shall be optional for development of lots one acre or larger. Details for clarification may be shown on a convenient scale. A scale of 1" = 20' may be required for urban arterial streets where detail is sufficiently dense to cause a "cluttered" drawing at a smaller scale.
14. A north arrow.

15. As a minimum, one new control monument shall be set at each end of a new road. Intermediate monuments may be required in complex situations.
16. Project beginning and end designation with stations.
17. A title block to include:
  - a. The project name
  - b. County Project Number
  - c. Sheet number
  - d. Road names
  - e. Road limits
18. All found and referenced survey monuments
19. Section and lot lines
20. Other data necessary for the specific project.
21. Project construction detouring and traffic control requirements.

# REQUIRED INSPECTION & INFORMATION CHECKLIST

Check off when completed & submit to Boundary County Road and Bridge Department

PROJECT NAME: \_\_\_\_\_

ASSIGNED PLANNING DEPARTMENT NUMBER: \_\_\_\_\_

ASSIGNED PUBLIC WORKS PERMIT NUMBER: \_\_\_\_\_

## For all public roads:

- Provide road plans showing: location of road in relation to the ROW, plan and profile views, proposed travelway width, proposed roadway width, and proposed drainage
- Verify subgrade preparation
- Verify placement of the approved geotextile fabric, ballast and ¾” minus
- Verify the gradation of ¾” minus and ballast, submit sieve analysis
- Verify the section depth
- Submit Asphalt Mix Design
- Submit proctor tests of asphalt material
- Asphalt density tests are required for every lift at a minimum frequency of 300 linear feet, special attention shall be paid to curve returns, cul-de-sacs or sensitive areas. Base and Ballast compaction testing shall be as required by Boundary County
- Provide evidence that the roadway and appurtenances have been built in accordance with the submitted plans
- (Other requirements as per ISPWC- verified by engineer)

## CERTIFICATION OF COMPLETION/ACCEPTANCE:

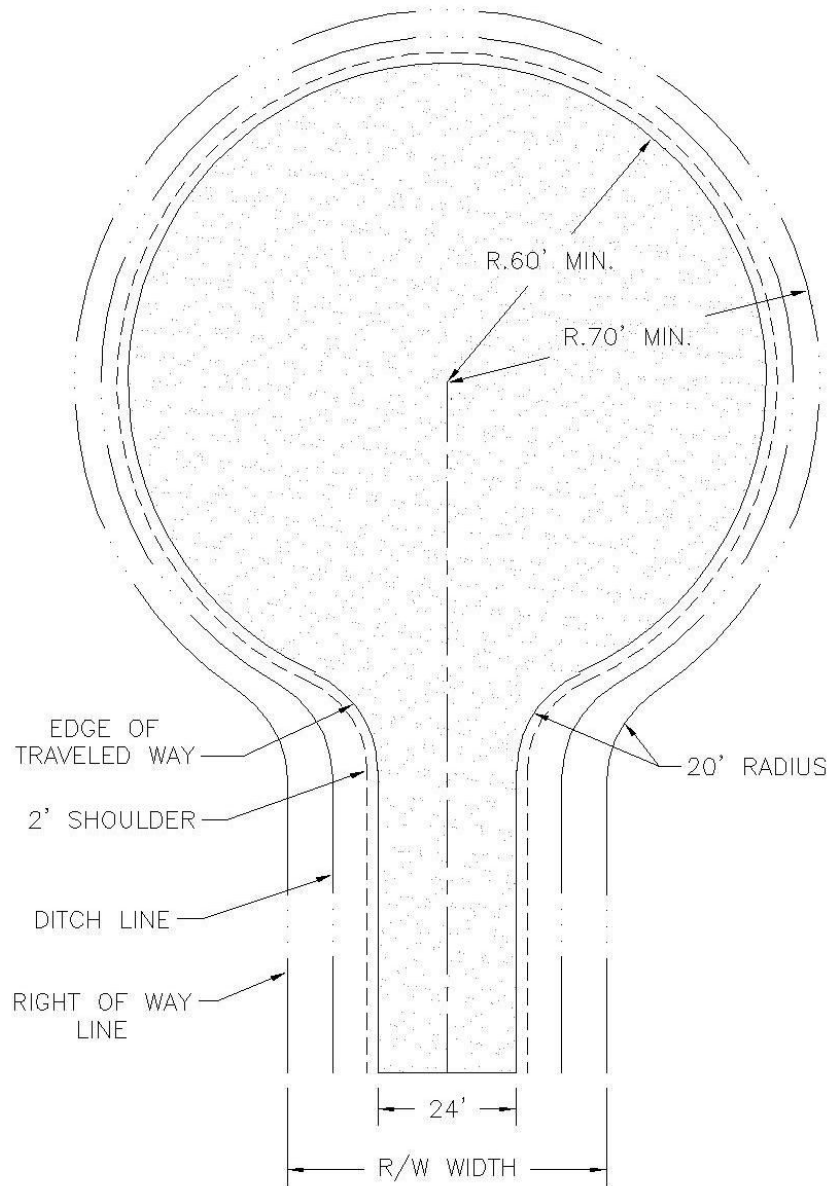
- I CERTIFY THE PROJECT IS COMPLETED IN GENERAL ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

\_\_\_\_\_  
Project Engineer Signature

\_\_\_\_\_  
Date:

\_\_\_\_\_  
Seal

\_\_\_\_\_  
Project Engineer Name PRINTED



**TYPICAL CUL-DE-SAC  
(FOR LOCAL ACCESS ROAD)**

N.T.S.

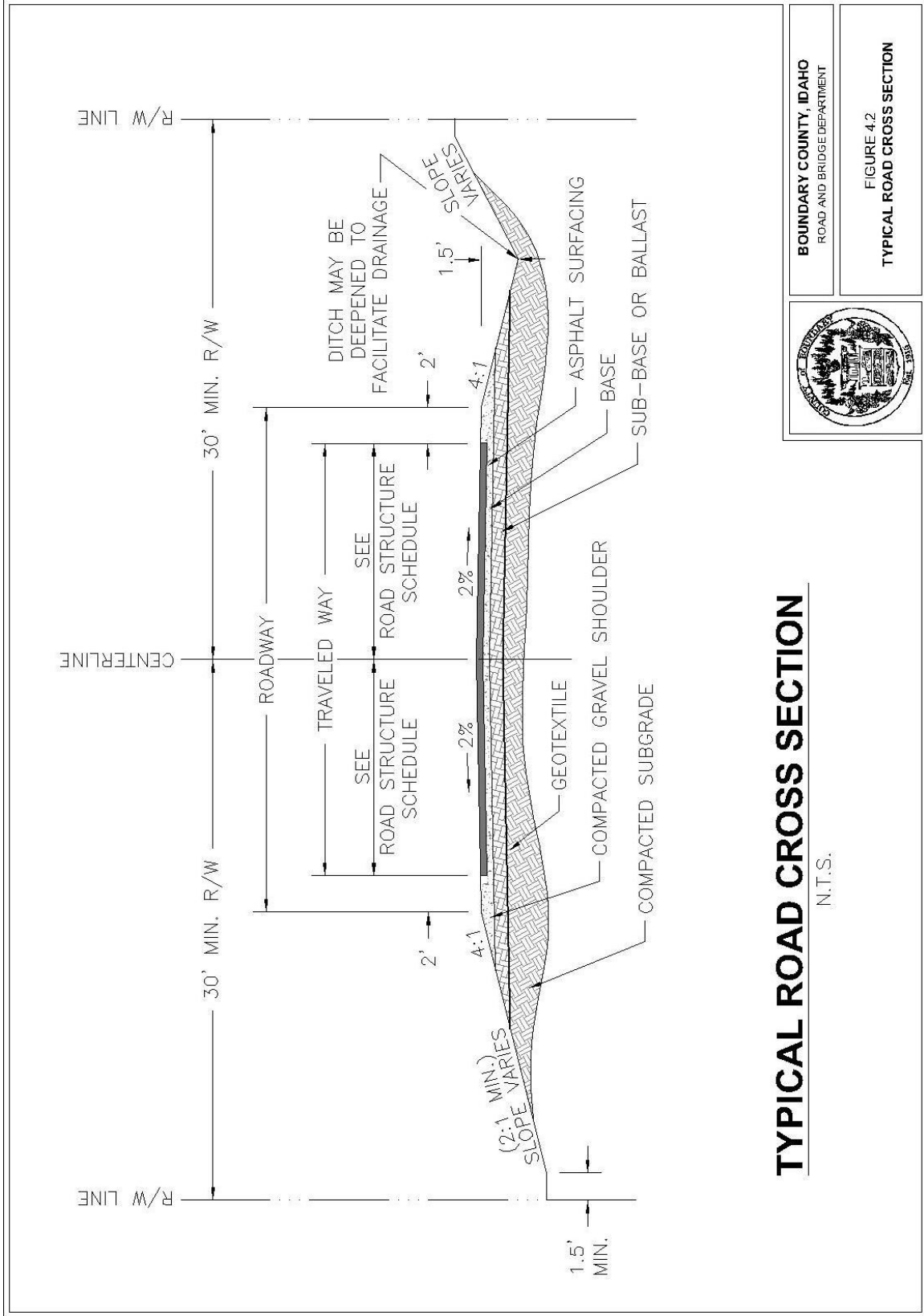
NOTE:  
ADEQUATE DRAINAGE  
OF THE SURFACE AND  
DITCH LINE IS REQUIRED.

IF CURBED SECTION  
USED, TOP BACK OF  
CURB SHOULD FOLLOW  
SHOULDER LINE SHOWN.



**BOUNDARY COUNTY, IDAHO**  
ROAD AND BRIDGE DEPARTMENT

**FIGURE 4.1**  
**TYPICAL CUL-DE-SAC**  
**(FOR LOCAL ACCESS ROAD)**



# TYPICAL ROAD CROSS SECTION

N.T.S.



BOUNDARY COUNTY, IDAHO  
ROAD AND BRIDGE DEPARTMENT

FIGURE 4.2  
TYPICAL ROAD CROSS SECTION

## **SECTION 5:**

### **MAILBOXES AND NEWSPAPER DELIVERY BOXES**

#### **5.1 APPLICABILITY**

All mailboxes and newspapers delivery boxes located within County rights-of-way shall conform to the standards set forth in this section.

#### **5.2 STANDARDS**

No mailbox or newspaper delivery box (hereafter referred to as mailbox) will be allowed within the County right-of-way if it interferes with the traveling public or the function, maintenance, or operation of the roadway system. The location and construction of mailboxes shall conform to the rules and regulation of the U.S. Postal Service and standards established in A Guide for Erecting Mailboxes on Highways, published by the American Association of State Highway and Transportation Officials, 1994, or the latest version.

#### **5.3 LOCATION**

- A. The roadside face of the box shall be offset the following distances:
  - Paved road - the width of the shoulder plus one foot.
  - Gravel road - one foot from the edge of the traveled portion on the roadway.
  - Curbed street - one foot from the face of the curb
- B. Where a mailbox is located at an intersection road it shall be placed a minimum of 100 feet beyond the center of the intersecting road in the direction of the delivery route. This distance should be increased to 200 feet when the average daily traffic on the intersecting road exceeds 400 vehicles per day.
- C. Where a mailbox is installed in the vicinity of an existing guardrail, whenever practical, it shall be placed behind the guardrail.
- D. Mailbox turnouts are encouraged on all new road construction and on reconstruction.

#### 5.4 REMOVAL AND LIABILITY

The owner, upon notification by the Department shall remove any new mailbox installation that is in violation of Section 5. Boundary County shall not be liable for damage to any mailbox that does not meet the requirements of Section 5, nor is it liable for any damage due to an installation being damaged by snow during snow removal operations.