

RENEWABLE ENERGY PROJECT DEVELOPMENT POLICY



**Morrow County
Public Works Department**

365 West Highway 74
P.O. Box 428
Lexington, Oregon 97839
Phone: (541) 989-9500
Fax: (541) 989-8352

DATE: September 7, 2010

PUBLIC WORKS POLICY: RENEWABLE ENERGY PROJECT (REP) DEVELOPMENT:

This Public Works Policy is in regard to REP road impacts and mitigation or upgrades that may be required.

Public Works will require that prior to any development of any REP, or related aggregate site, that affects, or may cause an effect on any Morrow County Road, a meeting with Public Works Staff, Planning Department Staff and the REP developer will be required. Prior to or during this meeting, each developer will be furnished a copy of the Morrow County Transportation System Plan.

At the meeting with the developer, and PRIOR to any construction work, the following issues will be addressed:

- All Morrow County Roads that will be used shall be identified at this meeting. This will include any major haul routes for heavy loads and over length loads, construction equipment routes and general access routes to the REP. Necessary upgrades to these routes will be identified at this time and recommendations as to how these will be addressed, repaired or upgraded will be heard at this time.
- Public Works may want to know the anticipated traffic numbers. This would refer not only to trucks, but also construction worker transportation and any other support traffic involved. A clear vision of road plans and design, as well as a map of all possible County Road routes to be used may be required. These will be reviewed by both Public Works Staff and our engineer.
- It will be expected that the location of any and all aggregate sites be shown. The location of any transmission lines that are anticipated to cross or be sited along any Morrow County Roads or Right Of Ways must be identified. This will be an engineered design for these utilities to be reviewed by Public Works Staff and our engineer. Transmission lines will need to be able to be placed within an Right Of Way in such a manner as not to create a traffic hazard. This includes maintaining a minimum of 15 feet of clear zone from the edge of pavement.
- All signage, as well as traffic control devices, will follow the Minimum Traffic Control Device handbook standards in all cases including, but not limited to, approach roads. A traffic control plan showing all sites that will require traffic control due to an increased volume of traffic, including but not limited to truck and equipment/materials transport will be required. This plan will be reviewed by both Public Works Staff and our engineer.
- All Morrow County Roads and Bridges are subject to ODOT legal load standards and weight limits. Records of all loads shall be provided when requested by Morrow County Public Works. This may require the need for scales at the aggregate production site of origin. Anticipated hours of operation on County roads will need to be shown. The developer needs the ability to install and record accurate traffic counts for the project truck traffic as required by Morrow County Public Works. Morrow County may request the Department of Weights and Measures to locate jump scales at locations that may be questionable.

Appendix C
Roadway Standards

ROADWAY STANDARDS

INTRODUCTION

The following roadway standards were developed in conjunction with the Morrow County Public Works Department and follow the design standards set by the American Association of State Highway and Transportation Officials (AASHTO) and the Oregon Department of Transportation (ODOT). Enclosed are eight road standards that reflect the differing design and capacity needs within the County. Generally, roadways of a lower number represent a higher design standard.

- Rural Arterial I
- Rural Arterial II
- Rural Collector I
- Rural Collector II
- Rural Collector III
- Rural Access I
- Rural Access II
- Rural Gravel

RURAL ARTERIAL

Rural arterials are design for roadways where higher traffic volumes are common or along major truck corridors. This standard of road is characterized by long-wearing asphalt concrete pavement over a base of 10 to 18 inches of aggregate. Travel lanes for this standards are 12-foot wide and a minimum of 3 feet of shoulder is provided on each side of the roadway.

RURAL COLLECTOR

Rural collectors represent a second-level standard for road construction. Like rural arterials, rural collectors are paved using two to three inches of asphalt concrete, but provide only eight to nine inches of base aggregate. Travel lanes are still 12-foot wide, but shoulders can be narrow as one foot.

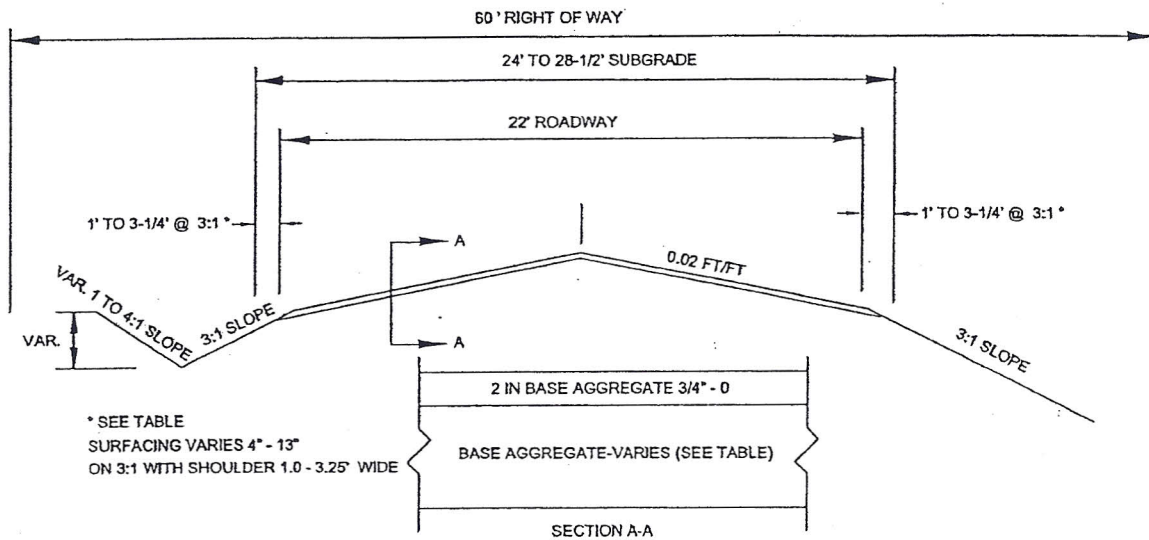
RURAL ACCESS

Rural access roads are lighter duty roads designed mainly for lower travel volumes and fewer truck trips. Rural Access I roads still use asphalt concrete paving, whereas Rural Access II

roads are designed to be unpaved gravel roadways. Base aggregate is only eight inches for this road standard. Travel lanes are specified at nine feet with one-foot shoulders on each side.

RURAL GRAVEL

Gravel roads serve a wide range of needs in Morrow County, and there are gravel roads that serve as higher-classification facilities. The Rural Gravel classification provides a range of cross-sections to accommodate varying needs.



RURAL GRAVEL

(GRAVEL ROAD FOR MULTIPLE FUNCTIONAL CLASSIFICATIONS)

ROADBED SOIL	TRAFFIC LEVEL	AGGREGATE BASE
VERY GOOD	HIGH (ADT > 100)	9 IN
	MEDIUM (ADT 50 - 100)	7 IN
	LOW (ADT < 50)	4 IN
GOOD	HIGH (ADT > 100)	11 IN
	MEDIUM (ADT 50 - 100)	9 IN
	LOW (ADT < 50)	5 IN
FAIR	HIGH (ADT > 100)	13 IN
	MEDIUM (ADT 50 - 100)	10 IN
	LOW (ADT < 50)	5 IN
POOR	HIGH (ADT > 100)	NOT RECOMMENDED
	MEDIUM (ADT 50 - 100)	15 IN
	LOW (ADT < 50)	9 IN
VERY POOR	HIGH (ADT > 100)	NOT RECOMMENDED
	MEDIUM (ADT 50 - 100)	NOT RECOMMENDED
	LOW (ADT < 50)	8 IN

- ASPHALT CONCRETE (AC) PAVEMENT SHALL BE STANDARD DUTY, CLASS B PER ODOT STANDARD SPECIFICATIONS 00745.
- BASE AGGREGATE SHALL MEET THE REQUIREMENTS OF ODOT STANDARD SPECIFICATIONS 02630
- ALTERNATIVE PAVEMENT SECTIONS MAY BE PROPOSED BASED ON A SOILS INVESTIGATION AND PAVEMENT DESIGN BY A LICENSED ENGINEER. ALL CHANGES SHALL BE APPROVED BY THE COUNTY ROAD ENGINEER.
- DITCH SECTIONS SHALL BE APPROPRIATE TO ACCOMMODATE MAXIMUM STORMWATER FLOW PER ODOT STANDARD SPECIFICATIONS 00745.
- RIGHT-OF-WAY (R/W) SHOWN IS MINIMUM. ADD'L R/W OR EASEMENT MAY BE REQUIRED FOR CONSTRUCTION IN SLOPED AREAS.

NOT TO SCALE
JUNE 2005

SHEET 5 OF 5

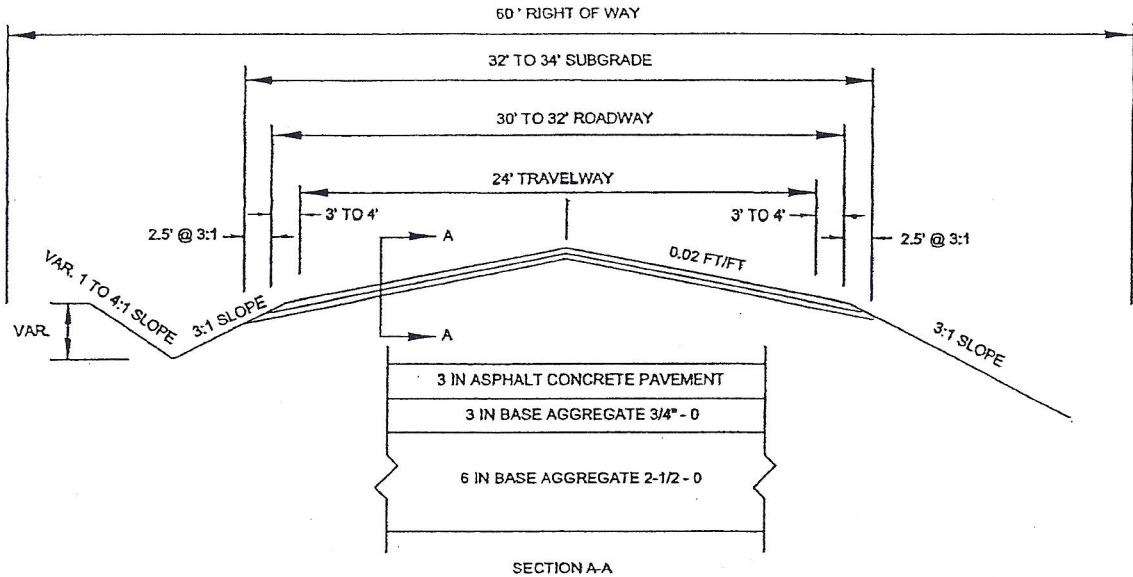


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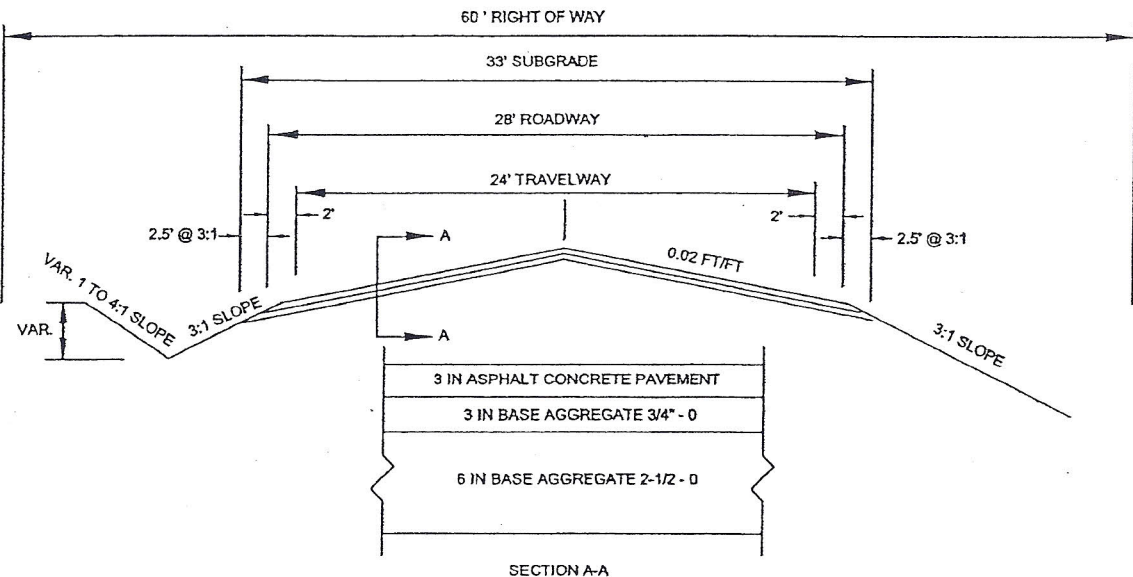
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MORROW COUNTY
ROAD STANDARDS
TYPICAL SECTIONS

PROJECT
MORROW COUNTY TSP
UPDATE
OR04.055.T01

PREPARED FOR
ODOT/MORROW COUNTY



RURAL COLLECTOR I



RURAL COLLECTOR II

1. ASPHALT CONCRETE (AC) PAVEMENT SHALL BE STANDARD DUTY, CLASS B PER ODOT STANDARD SPECIFICATIONS 00745.
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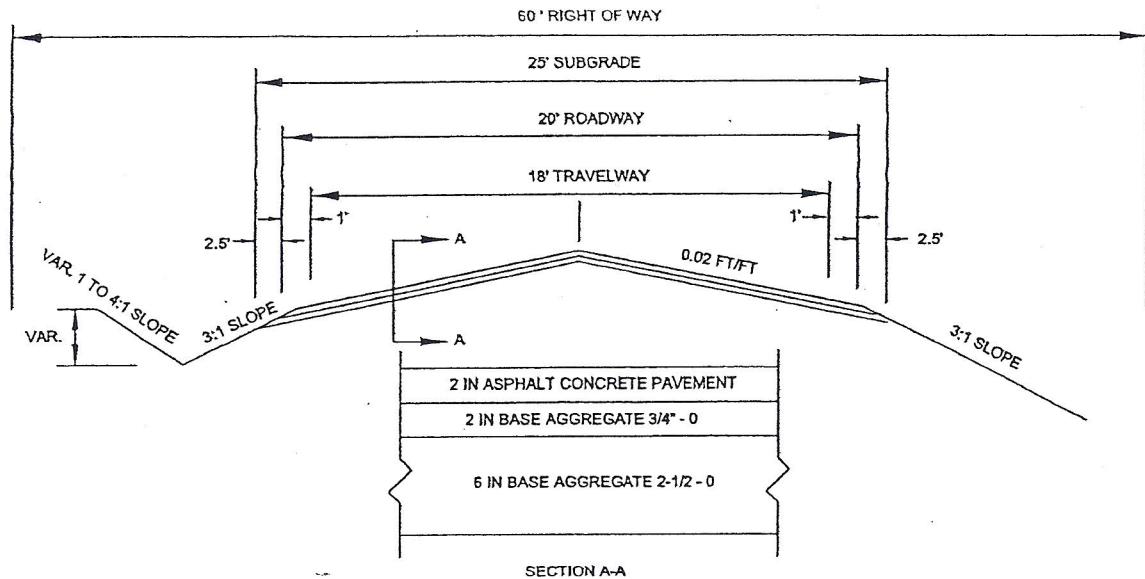


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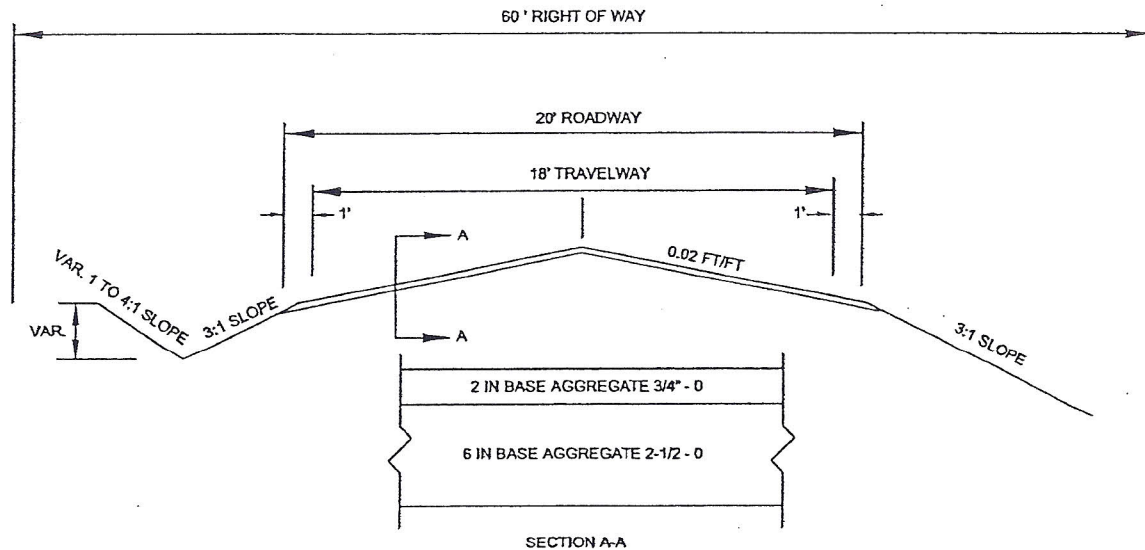
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MORROW COUNTY
ROAD STANDARDS
TYPICAL SECTIONS

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MORROW COUNTY TSP
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OR04.055.T01

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ODOT/ MORROW COUNTY



RURAL ACCESS I



RURAL ACCESS II (Gravel Surface)

1. ASPHALT CONCRETE (AC) PAVEMENT SHALL BE STANDARD DUTY, CLASS B PER ODOT STANDARD SPECIFICATIONS 00745.
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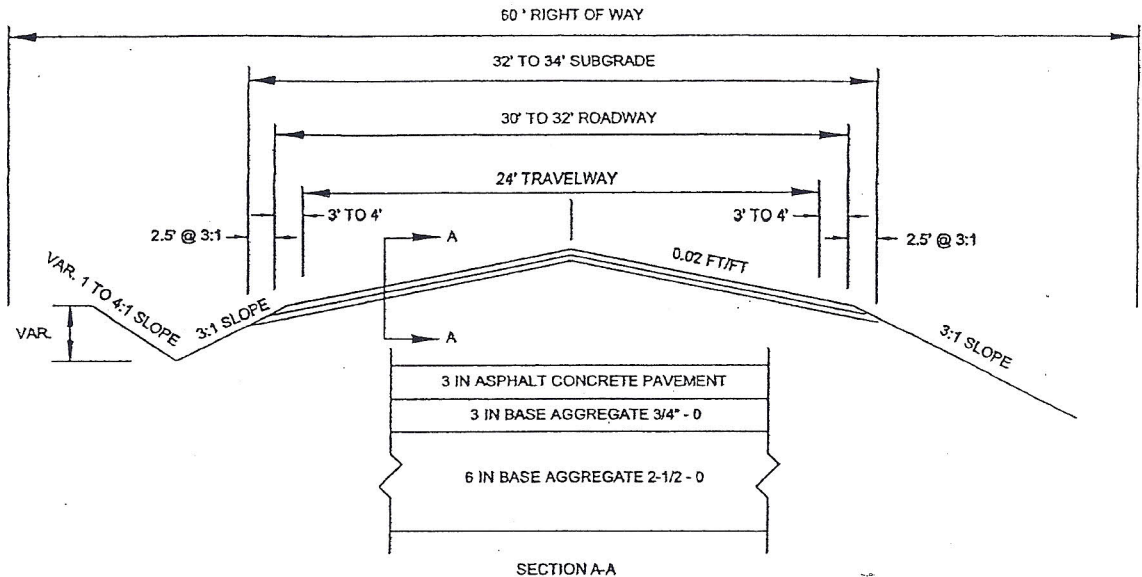
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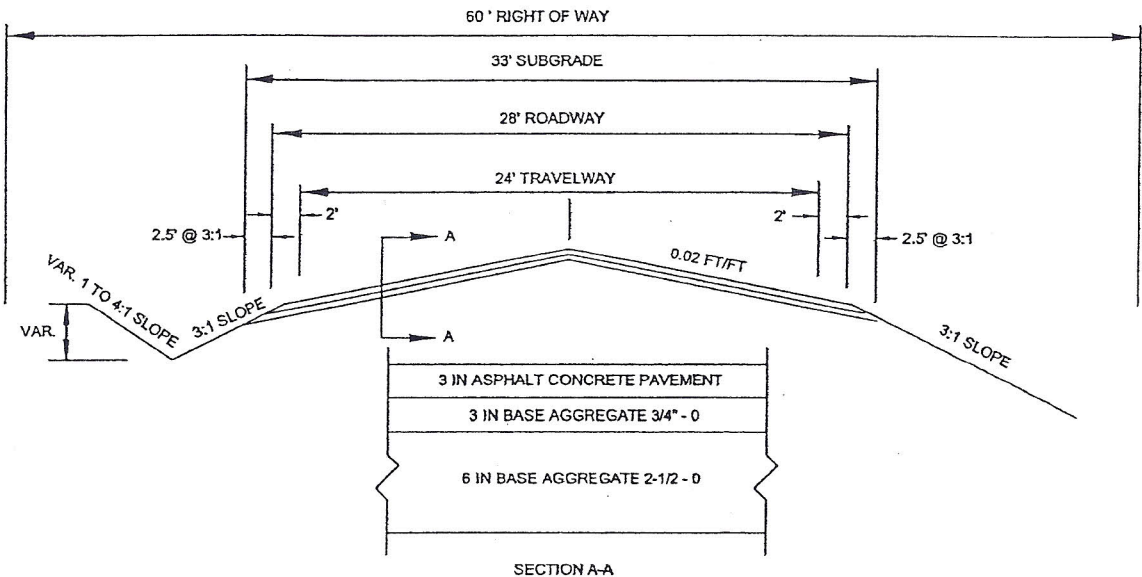
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ODOT/ MORROW COUNTY



SECTION A-A

RURAL COLLECTOR I



SECTION A-A

RURAL COLLECTOR II

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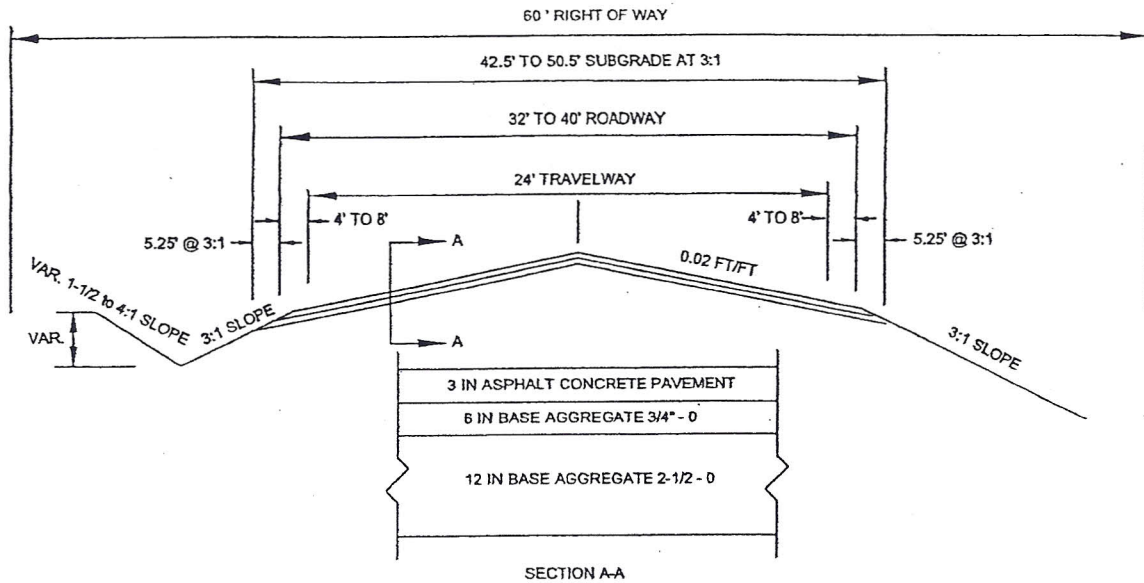


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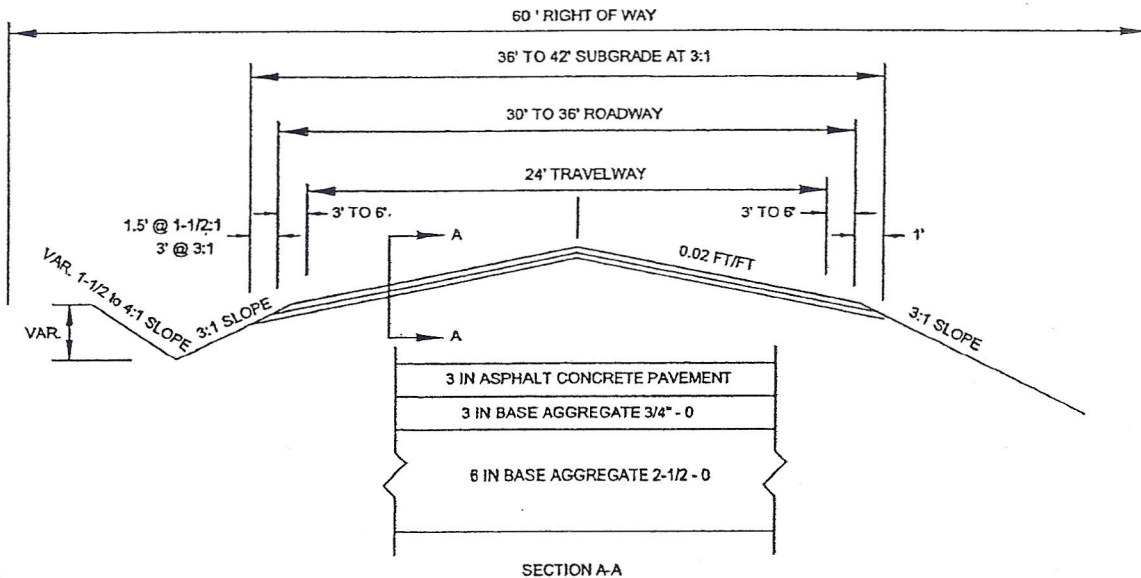
PROJECT TITLE:
MORROW COUNTY
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RURAL ARTERIAL I



RURAL ARTERIAL II

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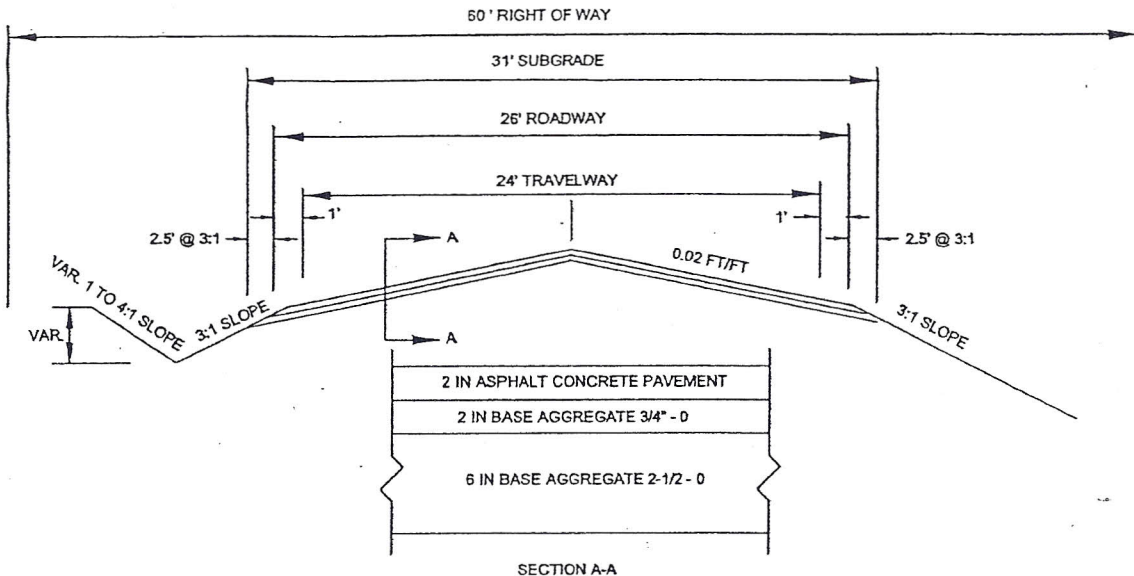
CIVIL
TRANSPORTATION
STRUCTURAL
LAND SURVEYING
JAMES R. TANKERSHINE OR
REGISTERED PROFESSIONAL ENGINEER
PHONE: 402.338.1111
FAX: 402.338.1111

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ROAD STANDARDS
TYPICAL SECTIONS

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RURAL COLLECTOR III

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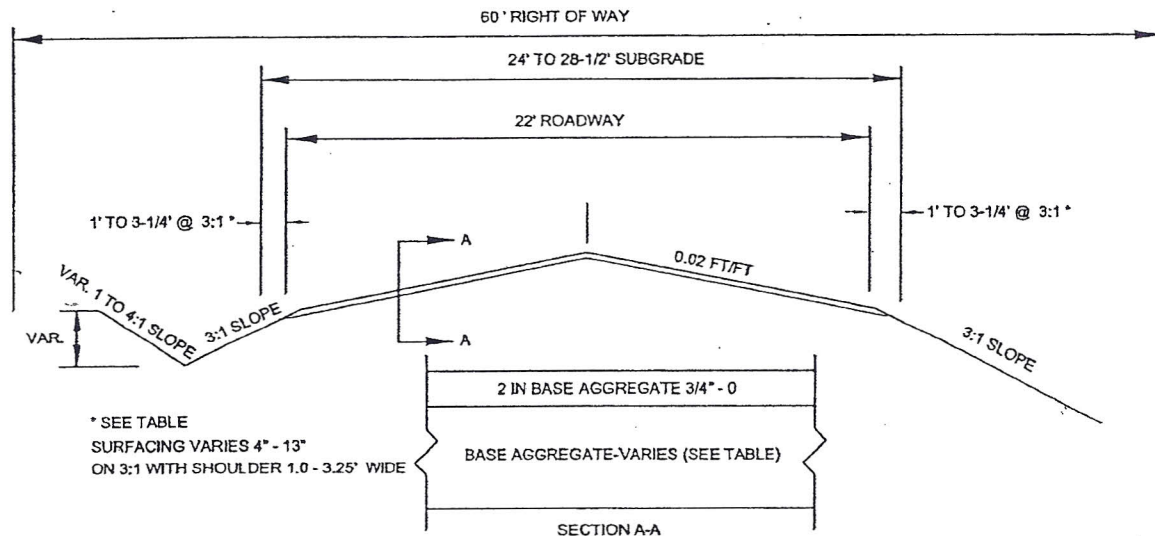
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LAND SURVEYING
JAMES R. C. TRANSPORTING, INC.
HILLSBORO, OREGON 97123
PHONE: 503-638-8800
FAX: 503-638-8830
www.ctsengineers.com

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RURAL GRAVEL

(GRAVEL ROAD FOR MULTIPLE FUNCTIONAL CLASSIFICATIONS)

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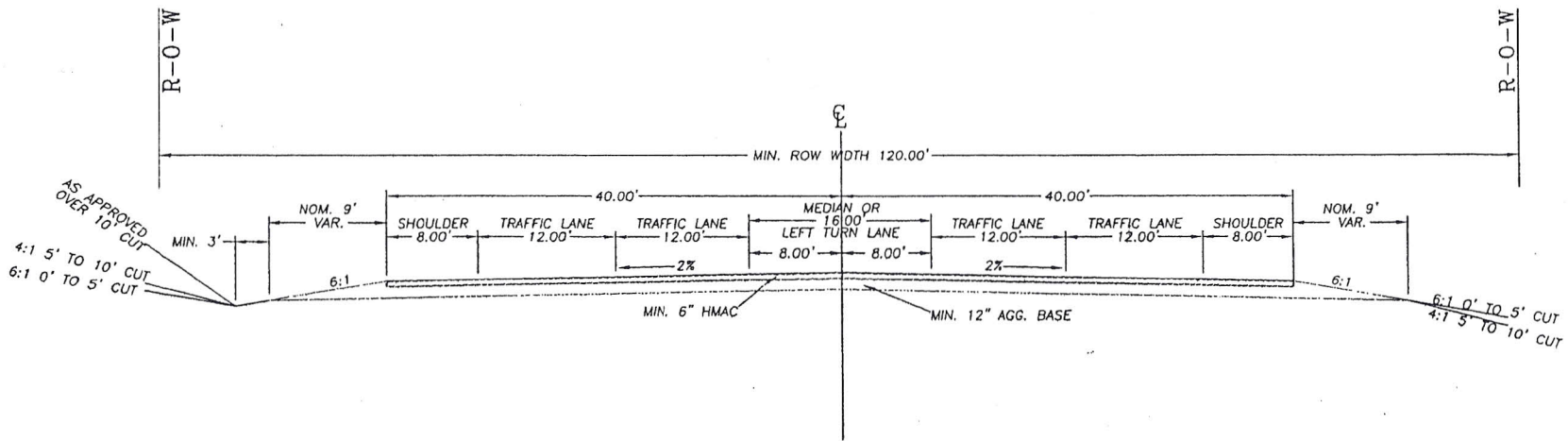
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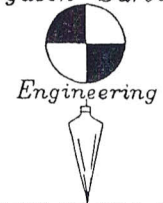
Morrow County
 Design Standard for High Volume Roadway (DHV over 700)
 SCALE 1"=10'



NOTES;

- 1) SURFACING SECTION (PAVEMENT - BASE COMBINATION) SHALL BE APPROVED BY THE MORROW COUNTY PUBLIC WORKS DEPARTMENT.
- 2) MAXIMUM GRADE 3%.
- 3) MAXIMUM 3' CURVE (NOMINAL 1900' RADIUS) STANDARD HIGHWAY SPIRALS OF APPROPRIATE LENGTHS SHALL BE USED
- 4) SUPER ELEVATION RATE AND APPLICATION SHALL BE APPROVED BY THE MORROW COUNTY PUBLIC WORKS DEPARTMENT.
- 5) INTERSECTION DESIGN SHALL CONFORM TO THE APPROPRIATE ODOT OR AASHTO STANDARDS, AND BE APPROVED BY THE MORROW COUNTY PUBLIC WORKS DEPARTMENT.
- 6) DRAINAGE DESIGN SHALL BE APPROVED BY THE MORROW COUNTY PUBLIC WORKS DEPARTMENT.
- 7) CONSTRUCTION SHALL CONFORM TO "2002 (OR CURRENT EDITION) OF "OREGON DEPARTMENT OF TRANSPORTATION, OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION".

Ferguson Surveying



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 FAX (541)932-4430
 EMAIL dfse@oretelco.net