

CHAPTER 1

101 GENERAL

101.1 Title

These regulations shall be known as the *Josephine County Public Works Design and Construction Standards and Specifications*, may be cited as such, and will be referred to herein as “this standard”.

101.2 Purpose

The purpose of this standard is as provided in ORS 92.097.

ORS 92.097 is not a part of this code, but is reproduced here for the reader’s convenience.

92.097 Employment of private licensed engineer by private developer; government standards and fees. (1) No city, county or special district shall prohibit the employment by a developer of a licensed engineer to design or supervise the installation of the improvements of streets, water and sewer lines or other public improvements that are to be installed in conjunction with the development of land using private funds.

(2) When design or supervision of installation of improvements is performed by a licensed engineer under subsection (1) of this section, the city, county or special district may elect to establish standards for such improvements, review and approve plans and specifications and inspect the installation of improvements. The city, county or special district may collect a fee for inspection and any other service provided in an amount not to exceed the actual cost of performing the inspection or other services provided.

This standard is intended to be a guideline for designers and developers in preparing plans, and for County staff in reviewing plans, and for constructing county or public roads, and other public facilities. All construction and reconstruction of county roads and public roads shall be in accordance with the specifications contained herein and with the current version of the Oregon State Department of Transportation (ODOT) specifications. The ODOT current specifications are entitled “Standard Specifications for Highway Construction. In the event of conflict Josephine County Standards and specifications shall prevail. In some locations, due to existing development or unusual topography, conformance to these standards may impose an unusual hardship. In such locations, the County Engineer may approve modifications to the standards, or a variance from the standard, as allowed by law. The procedure for applying for the modification or variance is outlined in section 104.

101.3 Amendment of Standards

The Public Works Director is authorized to revise or amend these standards and specifications, from time to time as deemed necessary, in accordance with prevailing industry standard best management practices, as well as prevailing professional design manuals, handbooks, publications, and standards, to assure adequate and proper public works facilities for Josephine County.

Any such revisions or amendments that have a significant cost impact on the construction of public improvements, and are not otherwise done to meet required professional engineering practices and standards, may be reviewed and approved by an administrative action of the Board, after holding a public hearing.

102 DESIGN PROFESSIONAL

This standard shall not supersede any ruling or standard adopted by the Oregon State Board of Examiners for Engineering and Land Surveying. It shall be the responsibility of the design professional to ensure that they work within their area of expertise. All design professionals shall certify that the construction matches the design (see section 105.6). Should unknown variables be encountered, such as springs, seeps, sand lenses, and buried hazardous material, the design professional shall document what was encountered and what mitigation was performed under their supervision.

Designs submitted shall be stamped by a registered design professional, licensed to practice in the State of Oregon.

Any work which requires a professional service or creative work requiring engineering education, training and experience; and the application of special knowledge of the mathematical, physical, and engineering sciences to such professional services or creative work as consultation, investigation, testimony, evaluation, planning, design, and services during construction, manufacture or fabrication for the purpose of ensuring compliance with specifications and design, in connection with any public or private utilities, structures, buildings, machines, equipment, processes, works, or projects, will require the seal of a registered professional engineer. The County has determined that the following items are typical items which will require an engineer's seal:

- Proposed floodway or floodplain modification
- Changes in the ground surface more than four (4) feet vertically
- Any changes in the ground surface in moderate to highly erosive soils
- Storm analysis
- Culvert sizing

- Erosion control plans
- Traffic studies
- Sight distance study
- Barriers and barricades
- Structures (bridges, retaining walls, etc)

Registered surveyors licensed to practice in the State of Oregon will be permitted to stamp plans for line and grade, as allowed by the Oregon State Board of Examiners for Engineering and Land Surveying (OSBEELS).

When two (2) or more professional stamps are on plans and/or reports, the two (2) professionals shall affix their stamps and signatures to the single plan/report in such a way that identifies the work that each performed, and for which each takes responsibility.

Plan approval by the County does not relieve the design professional of errors and omissions.

103 PRECEDENCE OF DOCUMENTS

If there is a conflict between approval documents (once approved), the document highest in precedence shall control. The precedence shall be (in the order listed highest to lowest):

- Oregon Revised Statutes
- Oregon Administrative Rules
- Permits from other agencies or jurisdictions, as may be required by law
- Land use conditions
- Josephine County Public Works Design and Construction Standards and Specifications
- Oregon Department of Transportation (ODOT) Standards/American Public Works Association
- Manual on Uniform Traffic Control Devices
- American Association of State Highway and Transportation Officials (AASHTO) Bridge design Specifications
- AASHTO Roadside Design Guide
- ODOT Bridge Manual
- ODOT Drainage Manual
- Plans and details prepared by the design engineer

104 DESIGN MODIFICATION PROCESS

This modification process shall not modify land use conditions, as those conditions must be modified under the Planning Director's authority and process. The modification, if approved, is for project specific use. Approval of a request shall not constitute a precedent.

104.1 Submittal

Requests shall be submitted in writing by the Project Engineer to the County Engineer or designee. This written request shall state the desired modification(s), the reason(s) for the request(s), and a comparison between the specification(s), standard(s), and the modification(s).

Any request for modification of standards contained herein should be documented with reference to nationally accepted specifications and/or standards.

104.2 Criteria for Modification of Specification Standards

The County Engineer or designee may grant a modification to the adopted specifications or standards when the following condition is met:

- An equivalent alternative, which can accomplish the same design, is available, and does not compromise public safety or increase maintenance cost to the County.
- A change to a specification or standard is required to address a specific design or construction problem.

104.3 Review

The request to modify shall be reviewed by the County Engineer or designee, who shall consult the appropriate review authorities and make one of the following decisions:

- Approve as is
- Approve with changes
- Or deny with an explanation

105 PLAN REQUIREMENTS

105.1 Road and Street Construction Plan Check List

- A. Items required for submittal:
- Application form for road improvements and new road construction
 - Road construction plans - five (5) copies
 - Sight distance (along road and intersections)
 - Calculations - two (2) copies
 - Copy of land use decision
 - Studies (traffic, geotechnical, etc.) - two (2) copies
 - Signed and notarized "General Project Agreement" required from the owner/developer, if applicable
 - Submit copies of necessary permits or approvals (i.e., DEQ, NPDES, DSL, etc.)

105.2 General Requirements Applicable to Plan Submittal

- A. Oregon professional engineer or professional land surveyor stamp.
- B. Storm drainage calculations by an Oregon professional engineer for the pre and post construction value for the design storm event. Rainfall amounts shall be taken from the NOAA isopluvials for the twenty-five (25) year event. The ODOT Hydraulics Manual for Storm Sewer and Culvert Design shall be used as a design reference.
- C. Engineer, surveyor, or owner, will be responsible for obtaining approvals from other agencies, i.e. city, power, telephone, gas, cable T.V., or irrigation, prior to County authorizing construction to proceed.

105.3 Items to Check for Conformance with Standards

- A. "Recommended" values in the Road Standards Design Tables shall be used for design purposes. Use of the "Minimum" or "Maximum" values may be approved by Public Works for use only where exceptional or extraordinary physical conditions exist on a project that do not exist generally on other projects in the same category, which result from conditions beyond the owner's control.
- B. Stopping site distance -Vertical and horizontal for intersections and driveway approaches. A driveway approach location which meets AASHTO standards for sight distance shall be shown for each lot. The designer shall show the approaches to be constructed with the road.
- C. Passing site distance - Only for purpose of marking no-passing zone
- D. Turnouts at road intersection and required intervals for restricted residential road standards
- E. Maximum road or street grade
- F. Maximum cul-de-sac grade
- G. Intersections: Alignment and grade on proposed road or street off existing road or street

105.4 Plans

- A. Plan sheets
 - Cover sheet shall include project name in large letters across the top of the sheet; map and tax lot of the site; vicinity map showing at least one major existing intersection, name, phone number, and mailing address of

developer/owner and engineering firm; general notes, notice to excavators, index, and the signature block.

- Existing conditions plan
- Grading and erosion control plan
- Plan and profile
- Details

105.5 Items to be Shown or Specified on the Plans

- A. Title block
- Locate in lower right-hand corner of each sheet
 - Project title (subdivision, partition, etc.)
 - Project engineer/surveyor (name, address, telephone)
 - Project engineer/surveyor's stamp
 - Project owner/developer (name, address, telephone)
 - Project location (township, range, section, quarter)
 - Project description (street/road, sanitary sewer, water main, storm drain)
 - Street/road name
 - Drawn by _____, designed by _____, checked by _____
 - Date
 - Scale (horizontal and vertical)
 - Revisions block
 - Sheet _____ of _____
- B. North arrow
- C. RURAL: Basis for bearings
- D. RURAL: Basis for elevations (true elevation if benchmark is within ½ mile)
- E. Right-of-way survey monuments that shall be set as part of the project
- F. Right-of-way survey monuments found
- G. T.B.M.'s: Elevations, locations, and descriptions
- H. Right-of-way width on plan view
- I. Street width on plan view
- J. Tie to corner of record (section corner, quarter (¼) corner, one-sixteenth (1/16) corner) from proposed right-of-way
- K. Vicinity map

- L. Property owner's names and assessor's map and tax lot numbers
- M. Curve data:
 - Construction centerline
 - Right-of-way centerline (if different than construction centerline)
 - Street intersection radii
 - Right-of-way intersection radii
- N. Cul-de-sac radius and returns: Finish surface and right-of-way
- O. Typical road sections:
 - State road classification
 - Subgrade specification
 - Base course specifications
 - Leveling course specifications
 - Surfacing specifications
 - Curb gutter and sidewalk specifications (if required)
 - Utility locations (i.e., power, gas, telephone, cable T.V., irrigation)
- P. Centerline profile, showing both existing ground and finished grade. Ditch line grades in areas not requiring curb and gutter, including profile and section of intercepting ditches. Submit cross sections at fifty (50) foot intervals, at critical sections, and as required by Public Works.
- Q. Erosion control measures and slope design consistent with a report submitted by a qualified professional engineer if: any cut or fill exceeds four (4) feet in height; grading on slopes of fifteen (15) percent or greater; or grading soils determined to be erosive by the County Engineer, i.e. granitic soils.
- R. Culverts and storm sewers:
 - Size
 - Material type and gauge or class of pipe
 - Coating, if applicable
 - Beveled ends on all crosspipes to match sideslope
 - Invert elevations
- S. Special drainage ditches, drainage structures, and bridges
- T. Erosion control specifications for ditches and road slopes
- U. Traffic regulatory and warning sign plan. Pavement marking plan showing pass/no pass zones, if required.

- V. Super elevation rate and runoff length shown along with horizontal curve data
- W. Notes, including "Josephine County General Project Requirements"
- X. Street plugs, shown if applicable
- Y. Road approach and driveway locations and details
- Z. Standard drawings and details
- AA. Agency approval block
- BB. Proposed utility locations (gas, power, phone, cable, etc.)

105.6 Items to be Submitted Prior to Final Completion

- A. "As Built" mylars with a signed and dated "Project Certification" on the front page, stating the following:
 - "I hereby certify that this project was constructed to the lines, grade, and section as shown on these plans, and that all materials and workmanship are in conformance with the plans and applicable specifications".
 - Electronic version of "As-Builts and electronic point file for ROW lot line intersection points.
 - Completed certification letter from design professional (appendix A)
- B. Written request for a final inspection

106 PRECONSTRUCTION MEETING

Prior to any work on site, which is governed by this standard, a preconstruction meeting shall be held with the following individuals attending:

- Owner or authorized representative
- Developer or authorized representative
- Engineer (and their field representative if different)
- Surveyor (and their field representative if different)
- Geotechnical Engineer (and their field representative if different)
- Traffic Engineer (and their field representative if different)
- Contractor (and their field representative if different)
- County staff
- Others as required

The preconstruction meeting shall be scheduled with the Public Works Inspector. Prior to scheduling the meeting, five (5) copies of the approved plans shall be submitted to the County. The design professional shall provide copies to the contractor prior to the preconstruction meeting.

Any change in personnel as listed at the preconstruction meeting shall be immediately relayed to the County Public Works Inspector, who shall determine if the change is significant enough to require a new meeting similar in scope to the preconstruction meeting. If the change is to any individual who is in responsible charge as defined by the ORS (engineer, surveyor, etc), then the project shall stop and a meeting with the County Engineer will be required.

107 CONSTRUCTION

107.1 Construction Inspection

The County Public Works Inspector shall be notified forty-eight (48) hours before the contractor begins any of the following phases of construction:

- Clearing and grubbing
- Erosion control
- Construction of subgrade
- Backfill of cross-culverts
- Backfill of pipe
- Placement of concrete
- Placement of base rock
- Placement of asphalt

Each phase of construction must be approved by the County before the next phase can begin. Inspection of the work by the County does not relieve the contractor of his responsibility to perform the work as required by the plans and specifications.

The design professional or his representative shall inspect the project during each of the construction phases listed above. These inspections shall be frequent enough to insure that construction is in compliance with his design.

107.2 Traffic Control

Traffic control during construction shall follow the standards set by ODOT and the MUTCD.

Flaggers shall wear an orange or strong yellow-green reflectorized, shirt, vest or jacket, and approved hat, and use a minimum 18 inch octagon stop/slow paddle, to assist with traffic control. (ODOT “Traffic Control or State Highway for Short Term Work Zones”.)

107.3 Maintenance of Improvements During Construction

The developer/contractor shall maintain the improvements until the project is accepted and brought into the County maintenance program (or acceptance of the improvements for non-maintained roads).

107.4 _Request for Final Inspection

A request for a final inspection by the County Engineer shall be required in writing by the design professional. The punch list generated will be valid for thirty (30) days, if the Public Works Inspector is not notified in writing within thirty (30) days that the items are completed; or if the inspection reveals that the items were not completed; or if there was substantial changes (manmade or natural erosion, slides, etc.); a new punch list may be generated by the County.