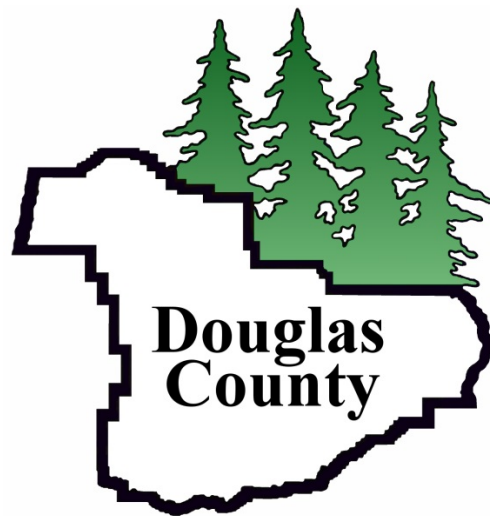


Douglas County  
Public Works Department



**SPECIFICATIONS FOR  
RIGHT-OF-WAY ACTIVITIES**

Revised August 3, 2016

### **TRAFFIC CONTROL**

Permittee shall provide and maintain traffic control measures according to the approved traffic control plan. Traffic control plans for work operations lasting three days or less shall conform to the latest version of the "Oregon Temporary Traffic Control Handbook for Operations of 3 Days or Less". All other traffic control plans shall conform to the latest version of the "Manual of Uniform Traffic Control Devices" (MUTCD). No work shall begin until all required traffic control measures have been implemented. This permit may be cancelled for failure to implement or correct traffic control measures according to the approved traffic control plan.

### **PROTECTION OF EXISTING FACILITIES**

The permittee shall protect all existing facilities including, but not limited to; asphalt, concrete, pipe, or guardrail throughout the project. Any damage that occurs to existing facilities during work shall be repaired or replaced at no cost to the County.

Permittee, at Permittee's expense, shall have a Professional Land Surveyor, registered in the State of Oregon, reestablish any survey monument moved, destroyed, damaged, or altered while working within County right of way.

### **ENVIRONMENTAL PROTECTION**

The permittee shall provide an erosion and sediment control plan (ESCP) designed in accordance with the Oregon Department of Transportation Erosion Control Field Manual. A copy of the ODOT Erosion Control Field Manual can be found at ODOT's website. The ESCP must be approved by Douglas County Public Works; no work may begin prior to proper installation of the best management practices (BMPs) outlined in the approved ESCP. All BMPs must be properly maintained in accordance with the approved ESCP through the entirety of the project. This permit may be cancelled for failure to implement or correct erosion and sediment control measures according to the approved ESCP.

No condition of this permit releases the permittee from any responsibility or requirement under any environmental or other law. The permittee is required to comply with all additional Laws imposed by any agency or governmental unit having authority to enforce the Endangered Species Act (ESA) and other Laws.

The permittee is responsible for noise control throughout the entirety of the project, and must comply with ORS 467, OAR 340-035 and other applicable laws. The permittee;

- May not perform construction within 3,000 feet of an occupied dwelling on Sundays, legal holidays, or between the hours of 10:00 pm and 6:00 am on other days without specific approval from the agency.
- Must use equipment complying with pertinent equipment noise standards of the EPA

If a specific noise impact complaint occurs during the construction of the project, Douglas County may require, at the permittee's expense, additional noise mitigation measures.

The permittee must comply with the Migratory Bird Treaty Act (16 U.S.C 703-712). If a migratory bird nest is encountered that contains eggs or dependent young, stop all actions that may disrupt the nest and contact Douglas County Public Works. Do not resume work that may disrupt nesting until receiving approval from Douglas County Public Works.

The permittee is required to comply with the following:

- Clean Water Act Section 404 (33 U.S.C 1344); Federal Rivers and Harbors Act of 1899, Section 10 (33 U.S.C. 403 et seq.).
- ORS 196.800 to ORS 196.990 (Oregon Removal-Fill law).
- ORS 390.805 to ORS 390.925 (Oregon Removal and Filling in Scenic Waterways law).
- All other applicable laws governing preservation of wetland resources
- National Historic Preservation Act (NHPA) of 1966, section 106, codified in 36 CFR Part 800 (Protection of Historic Properties)
- ORS 97.740 to ORS 97.760, ORS 97.990(5), and ORS 97.990(6) (Indian Graves and Protected Objects).
- ORS 359.905 to ORS 358.955 (Archaeological Objects and Sites).
- ORS 390.235 to ORS 390.240 (Archaeological Sites and Historical Material).

If cultural resources are encountered on the project site or in material sources; immediately discontinue operations, or move to another area of the project site or material source, protect the cultural resources from disturbance and contact Douglas County Public Works. Work may not resume in the cultural resource area until approved by Douglas County Public Works.

### **EARTHWORK**

Unless otherwise specified, the permittee must dispose of materials classed as waste materials outside and beyond the limits of the Project and Douglas County controlled property. Do not dispose of materials on wetlands, or within 300 feet of rivers or streams.

- Unsuitable materials encountered in excavations shall be classed as waste material.
- Excess materials, quantities of excavated materials greater than required to construct embankments and do all filling and backfilling, shall be classed as waste material.

Remove and dispose of abandoned pipes and miscellaneous matter encountered in the work unless otherwise specified.

Use only tamping foot rollers with a weight of at least 15 tons, with each tamping foot protruding from the drum at least 4 inches. Use only vibratory rollers having a smooth drum, exerting a dynamic force of at least 30,000 pounds per impact and operating at a frequency of at least 1,000 vibrations per minute. Limit roller speed to 1 1/2 mph.

Permittee must use methods in making roadbed excavations that; will not shatter or loosen excavation slopes, avoid overbreaks, and leaves slopes accurately and smoothly trimmed. As far as practical, excavate materials without previous loosening and in limited layers or thickness to avoid breaking the material back of the established slope line. Remove all loose, detached, broken or otherwise unstable material. Remove all exposed roots, debris and stones more than 3 inches in size which are loose or could become loosened.

Break up, roughen, or scarify the ground surface if the slope is 1V:5H, or less, to positively bond embankment materials with the existing ground. Benching is allowed as a supplement. If slopes are greater than 1V:5H benching is required. When benching is used;

- The bottom bench must be at least 10 feet wide.
- Each succeeding bench shall penetrate the slope at least 3 feet horizontally beyond the vertical side of the previous bench, and be wide enough to operate, place and compaction, equipment.
- Each bent and embankment layer shall be flatter than 1V:10H.
- The benching, placing and compaction operation shall be performed simultaneously from the bottom up,

Do not construct embankments or fillings when the embankment material, the foundation or the embankment on which it would be placed is frozen, not stable or not compacted. Place embankments and all fillings in nearly horizontal layers not more than 8 inches thick, unless otherwise stated. Compact each layer separately.

### **TRENCH EXCAVATION, BEDDING, AND BACKFILL**

All trench backfill shall be compacted with a mechanical device meeting the requirements described in the "Backfilling" subsection of Section 00405 of the Standard Specifications described in condition "B" above. This compaction requirement shall also include the top surface of a utility that was "plowed in".

If approved, when a utility installation involves open cutting of the roadway surface, the work shall conform to the requirements described in "Surface Removal", subsection of Section 00405 and the "Trench Resurfacing" Section 00495 of the Standard Specifications described in condition "B" above.

### **BORING AND JACKING**

Jack or bore all conduit, casings, pipe or sleeves to the required line and grade. Perform all excavation entirely within the jacking head. Should loss of surrounding material occur during the jacking or boring operation, backpack or grout the voids before the completion of the shift. Fill or backpack all voids with grout or granular material as approved.

## **PIPE AND APPURTENANCE**

### **Concrete Appurtenances**

Permittee may only use Commercial Grade Concrete (CGC) mixtures with uniform composition and consistency, and that unless otherwise shown or specified, has the following characteristics:

- Entrained air- 4.0 to 7.0 percent
- Slump – 5 inches or less
- Compressive Strength – Minimum 3000 psi at 28 days
- Temperature – minimum 50°F to maximum 90°F

CGC mixers must conform to ASTM C 685. Permittee must receive approval from Douglas County before using field mixers for concrete sidewalks, concrete driveways, and other flat concrete surfaces.

When placing CGC use best common practices to avoid segregation. Vibrate and spade to achieve a dense homogeneous concrete, free of voids and rock pockets. Place within 90 minutes after batching and mixing. If the air temperature is below 35°F do not place CGC without approval from Douglas County Public Works. Cure CGC by covering with wet burlap, canvas, sand or other acceptable material, and keep moist for a minimum of 7 calendar days.

### **Pipe, Manholes, Inlets, and Catch Basins**

Lay pipe with spigot ends in the direction of flow. The trench bottom shall form a continuous and uniform bearing and support for the pipe at every point between joints. Prevent excavated or other foreign material from getting into the pipe. Plug or close off pipes that are stubbed for future connection. Cut and install all pipe and fittings according to manufacturer's recommendations. All field joints shall:

- Provide equal or greater strength than the adjoining pipe
- Fit close and tight
- Provide a smooth and uniform interior surface
- Secure and hold adjoining sections to each other
- Fasten securely to adjoining structures and special sections.

Install tracer wire in all trenches for sanitary and storm sewers. Place the tracer wire directly over the pipe centerline and on top of the pipe zone material. Place a branch tracer wire over each pipe connected to the main sewer.

Precast manhole sections shall consist of circular sections in one of the following standard nominal inside diameters:

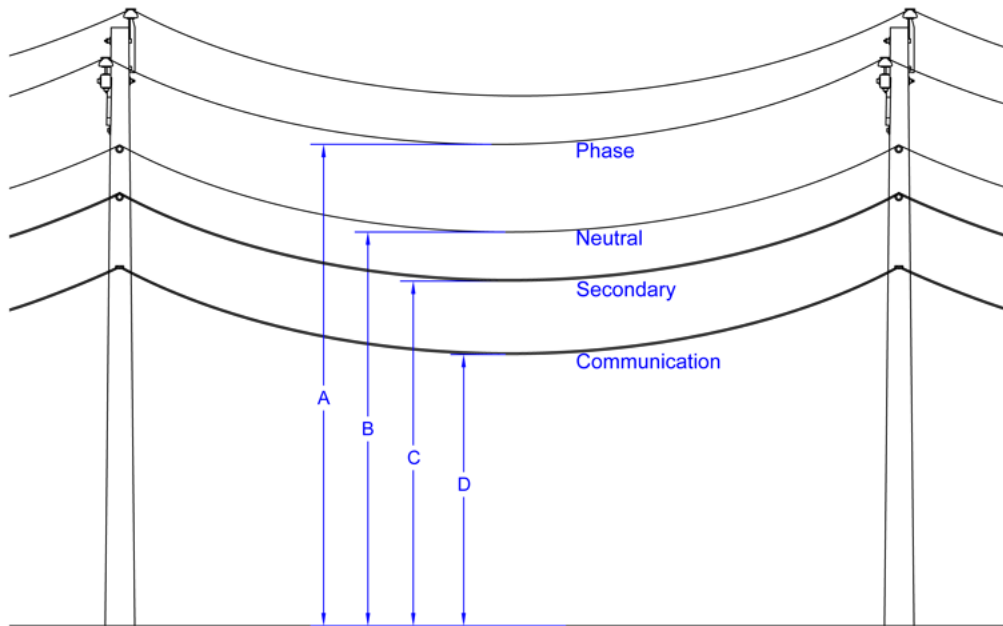
42 inch	54 inch	72 inch	96 inch	132 inch
48 inch	60 inch	84 inch	120 inch	144 inch

Heights of sections shall be multiples of 6 inches, except heights of manhole sections 72 inches through 96 inches in diameter shall be as required to fit site conditions.

Connect all pipe to manholes according to manufacturer's recommendations, set the connecting pipe through the full thickness of the wall flush with the inner face of the wall, ensure that pipe connections to the structure are completely watertight.

## **UTILITIES**

The top of a utility shall be a minimum of 30" below the road surface and/or the roadside ditch. A utility shall be installed below all culverts with less than 30" of cover, unless otherwise approved by the Public Works Department. All overhead utilities must meet the National Electrical Safety Code (NESC) rule 232 for vertical clearances of wires, conductors, cables, and equipment above ground, roadway, rail, or water surfaces. See the figure below for more details.



Item	Cable or Conductor	NESC Clearance	Comments
A	Phase	18.5 ft	Applies to phase wires 22kV and below. For voltages above 22kV phase-to-ground, see NESC Rules 232C and 232D.
B	Neutral	15.5 ft	Applies to neutrals meeting NESC Rule 230E1.
C	Secondary	16.0 ft	Applies to secondaries 750V or less meeting NESC Rule 230C2 or 230C3 (triplex, quadruplex, etc.).
D	Communication	15.5 ft	Applies to cable TV, phone, fiber optic cables, etc.

### **Notes:**

- Permitting entities such as state highway departments, and cities may require additional clearances.
- Clearances shown are required during the temperature and loading conditions detailed in NESC Rule 232A and must be maintained at the worst case clearances at 32°F with ice from the applicable loading zone, 120°F, or greater than 120°F if so designed. Since

the NESC requires the clearances to be maintained under specified conditions, a sag chart is required to know if clearance is meets the Code requirements.

- See NESC Table 232-1 for footnotes that allow certain reductions depending on the nature of the surface under the line.

### **AGGREGATE BASE AND SHOULDERS**

Furnish aggregates of either 1" - 0 or 3/4" - 0. Use clean, hard, durable aggregates, reasonably well-graded from the maximum size to dust. Provide a firm surface on which aggregates are to be placed. Compact each layer of aggregate placed in shoulder and base areas. Continue the compactive effort until there is no reaction or yielding observed under the compaction equipment. If the required compacted depth of the aggregate exceeds 6 inches, construct it in two or more layers of nearly equal thickness. The maximum compacted thickness of any one layer of aggregate shall not exceed 6 inches. The finished surface and the surface of each underlying layer of the aggregate shall parallel the established grade and cross section for the finished surface within 1/2 inch. After construction of each layer and completion of base, maintain the layer to specified conditions and prevent or repair segregation, raveling, or rutting, until it is covered with a following layer or until all work is completed.

### **ASPHALT CONCRETE PAVEMENT**

Furnish commercial asphalt concrete pavement that is a well-graded, uniform, durable commercial mix. All new materials, or a combination of 70% new materials and 30% reclaimed materials (recycled asphalt pavement (RAP) or recycled asphalt shingles (RAS), may be used. Use PG 64-22 asphalt cement. Provide asphalt cement conforming to the requirement of ODOT's publication "Standard Specifications for Asphalt Materials". Copies of the publication are available from ODOT's website.

Place asphalt concrete structures of uniform width by either mechanical extrusion methods or between suitable forms. Other structures may be constructed without the use of forms unless otherwise directed. The Engineer may allow small or special pavers, spreader boxes, or blade graders for placing asphalt concrete. The Engineer may allow mixture to be placed by hand methods.

Compaction of the asphalt concrete to a specified density will not be required, regardless of thickness. Perform breakdown and intermediate rolling until the entire surface has been compacted with at least four coverages by the rollers. Perform additional coverages, as directed, to obtain finish rolling of the CACP. Along curbs and walls, on walks, irregular areas, and other areas not practically accessible to rollers, compact the mixture with small, self-propelled rollers, mechanical tampers, hot hand tampers, or hand rollers. On depressed areas a trench roller may be used, or cleated compression strips may be used under the roller to transmit compression to the depressed area.

### **SITE RESTORATION**

Any sight posts, signs, or mailboxes that are removed shall be replaced immediately in the original condition and location and the area around them will be restored to the original

condition.

Immediately before completing the earthwork:

- Blend the tops of cutbanks with the adjacent terrain.
- Trim and finish all roadbeds, ditches, waterway channels, and other excavations and embankments to the lines, grades, and cross sections established.
- Clean up debris and foreign matter of all kinds on the entire right-of-way area. Dispose of materials as directed.
- Finish the subgrade to be within a tolerance of plus or minus 3/4 inch and to be free of ruts, depressions and irregularities.
- In planting and seeding areas, remove all rocks, boulders, and vegetative matter.
- Remove all litter, debris and obstructions.
- Seed all disturbed areas

Any seed used on the project must:

- Have labeling that complies with Oregon Seed Law and Federal Seed Act.
- Have been tested within 18 months of the planting date.
- Not be sprouted, moldy, or showing evidence of having been wet or otherwise damaged.
- Be labeled as "Oregon Certified Seed"

Information about certified seed is available from County, Extension Offices, Oregon State University, and the Oregon Department of Agriculture.

### **MAILBOX SUPPORTS**

Mailbox supports must meet the following requirements:

- ASTM A 500, Grade B, and galvanized according to AASHTO M 111 (ASTM A 123)
- Tensile requirements of ASTM A 53, Grade B and galvanized with a minimum 0.9 ounces per square foot coating, as tested according to ASTM A 90, on exterior surface followed by a chromate conversion coating and a cross link polyurethane acrylic coating. A zinc base corrosive resistant interior coating shall also be applied.
- Wood posts must be 7'x6"x6" set a minimum of 24" depth
- Wood posts must be cedar or pressure treated fir
- Mailbox supports not meeting the above steel or wood requirements must receive approval from Douglas County Public Works prior to installation.
- Whenever feasible locate boxes so that carriers may leave the travel lane to serve the mail box.

Mailbox supports must be installed in accordance with The Douglas County Public Works Standard Drawings.