**April 1, 2026**

# Notice

The Standard Special Provision (SSP) on the following page(s) revise or modify CDOT's *Standard Specifications for Road and Bridge Construction*. The Construction Engineering Services Branch has reviewed, approved, and issued it. Use as written without change. Do not use modified versions of it on CDOT construction projects. Do not use the following special provision on CDOT projects in a manner other than specified in the instructions without approval by CDOT's Standards and Specifications Unit. The instructions for use appear below.

Other agencies using the *Standard Specifications for Road and Bridge Construction* to administer construction projects may use this special provision appropriately and at their own risk.

**Instructions for use on CDOT construction projects:**
Use the following standard special provision on all projects having earthwork disturbances that will be stabilized with vegetation.

# Section 207
# Subsoil and Topsoil

**Section 207 of the Standard Specifications is deleted for this project and replaced with the following:**

## Description

**207.01** The work consists of salvaging onsite and wetland topsoil, stockpiling, maintaining, and placing topsoil. Subsoil preparation, as specified, occurs on areas to be vegetated and precedes all topsoil placement, soil amendment, seeding, and mulching activities. Topsoil (Imported) requires testing and certifications from the Contractor. This also consists of required meetings and administrative activities to control the work.

## Materials

**207.02 Definitions.**

**Excessively Wet Soil.** Soil is considered excessively wet when a handful of soil squeezed together forms a ball, and when poked with a finger, does not fall apart easily, or when squeezed together, water droplets appear.

**Duff Layer.** The organic surface layer on topsoil that is composed of plant material, twigs, leaves, and needles, and may contain decayed plant material (duff).

**Subsoil.** Subsoil is the layer of soil under the topsoil layer. Like topsoil, it is composed of a variable mixture of small particles such as sand, silt, and clay, but lacks organic matter and soil organisms.

**Subsoil Preparation.** Scarification and ripping, using specialized equipment, is performed on compacted subsoils before replacing the topsoil to increase pore space and improve soil structure for plant growth and infiltration of stormwater.

**Topsoil Stockpiles**. Topsoil placed in piles or moved into uncompacted berms for temporary storage during construction.

**Topsoil (Wetland).** Existing, native topsoil that is within delineated wetlands and includes any existing vegetation and plant matter, including roots, rhizomes, and seeds.

**207.03 Materials General**

*(a) Topsoil (Onsite).* Existing native topsoil, collected from within the LDA. This layer has a defined soil structure and contains decayed organic matter. Salvage, stockpile, and reuse Topsoil (Onsite) for areas receiving landscape stabilization. Salvage Topsoil (Onsite) from areas with higher organic content that will support vegetation establishment. Topsoil (Onsite) shall not be salvaged where 20 percent

or more of vegetative cover consists of weed species as listed in the current State of Colorado Noxious Weed List and County weed lists.

*(b) Topsoil (Imported).* Is a naturally occurring or commercially produced topsoil obtained from a source outside the project's Limits of Disturbed Area (LDA). Topsoil (Imported) shall be provided if Topsoil (Onsite) cannot be reused as shown on the plans or when material is determined to be insufficient quantity, as determined by the Project Engineer.

Topsoil (Imported) shall be free of the following:

- Majority of subsoils
- Coarse sand and gravel, unless approved by the Project Engineer
- Stiff clay, hard clods, or hardpan soils
- Trash, litter, or refuse
- Invasive or noxious weeds or seeds

**Table 207-1**
**Physical Properties of Topsoil (Imported)**

| Property | Range | Test Methods |
|---|---|---|
| pH (s.u.) | 5.6 to 8.3 | ASA Mono. #9, Part 2, Method 10-3.2, or TMECC 04.11-A |
| Electrical Conductivity (EC) (mmhos/cm or ds/m) | < 2 | ASA Mono. #9, Part 2, Method 10-3.3 |
| SAR (s.u.) | ≤ 10 | ASA Mono. #9, Part 2, Method 10-3.4 |
| OM % | <7 | Methods of Soil Analysis, Part 3, Method 34 |
| Nitrate ($NO_3$-n, ppm) | < 20 | Methods of Soil Analysis, Part 3. Chemical Methods. Ch. 38 Nitrogen – Inorganic Forms |
| Potassium (K) (ppm) | > 60 | ASA Mono. #9, Part 2, Method 13-3.5 |
| Phosphorus (P) (ppm) | ≤ 13.0 | ASA Mono. #9, Part 2, Method 24-5.4, or other as required based on soil pH |

Notes: **SAR** = Sodium adsorption ratio; **OM** = Organic Matter; **s.u.** = standard unit; **ppm** = parts per million; **mmhos/cm** = millimhos per centimeter; **dS/m** = decisiemens per meter

**Table 207-2**
**Textural Class Analysis**

| Texture Class Diameter Range | % Of Total Weight | Average % |
|---|---|---|
| Silt (0.002 - 0.05 mm) | 15 to 40 | 27.5 |
| Clay (<0.002 mm) | 15 to 30 | 22.5 |

Note: Analysis method ASA Mono. #9, Part 1, Method 15-5

## Construction Requirements

### 207.04 Submittals

*(a) Method Statement*. The Contractor shall submit a method statement 10 days before the Environmental Pre-construction Conference, including the equipment and how they will perform the following:

- topsoil stockpile location(s) including delineating Contractor's proposed topsoil locations on plan sheet(s)
- maintenance and erosion control of stockpiles
- wetland topsoil stockpiling, maintenance, and watering
- subsoil preparation method, including rod penetrometer use
- topsoil placement
- removal of clods, sticks, stones, debris, concrete, and asphalt for placed topsoil
- noxious weed treatment plan for topsoil stockpiles and LDA (State of Colorado and County A and B Noxious Weed Lists)

The Contractor shall include topsoil stockpiling, subsoil preparation, and topsoil placement tasks in the Baseline Schedule.

*(b) Topsoil (Imported)*

1. The Contractor shall submit a Certificate of Compliance (COC) from the commercial supplier for approval per Section 106 before import, which verifies that the source material has been managed per the State of Colorado Noxious Weed Act 35-5.5-115.
2. The Contractor shall submit a Certified Test Report (CTR), dated within 1 year of delivery to the project site, for approval before import, per Section 106. The report shall include a complete Nutrient Analysis for Table 207-1 Physical Properties of Topsoil (Imported), and Table 207-1 Textural Class Analysis for imported topsoil from non-commercial sources, and contain no more than 5 percent rock greater than 3 inches. If the Topsoil (Imported) nutrient analysis is deficient, the material will be rejected.

**207.05 Site Pre-vegetation Conference.** The Site Pre-vegetation Conference shall occur before the initial subsoil preparation. The Site Pre-vegetation conference shall be attended by the Project Engineer, the Region permanent stabilization subject matter expert, the Contractor's Superintendent, the Contractor's Foreman, and other Contractor's supervisor staff overseeing the subsoil preparation and topsoil application work.

**207.06 Topsoil (Onsite) Stripping.** Excessively wet or frozen topsoil shall not be moved. Exceptions to these requirements may be approved by the Project Engineer. Topsoil within the LDA shall be salvaged before any ground disturbing activities, and topsoil shall be stockpiled at approved locations. Native vegetation, including duff, shall be collected as part of the salvaging of topsoil, unless specified in the plans or by the Project Engineer to be removed and hauled off-site. All trash and debris shall be removed before moving topsoil for stockpiling, per Section 208.

**207.07 Delivery, Storage, and Handling**. Topsoil shall not be delivered or placed in excessively wet or frozen conditions. The topsoil stockpiles shall be placed within the LDA unless otherwise approved by the Project Engineer. Topsoil stockpiles shall not be compacted. Topsoil stockpiles placed along the perimeter require a control measure. Stockpile topsoil in a manner to facilitate measurement, to not obstruct natural drainage, and to minimize sediment transport.

All topsoil stockpiles scheduled to remain in place for 14 or more days shall receive temporary stabilization per Section 208. Topsoil shall not be dumped or stored within 15 feet of structures, utilities, walkways, pavements, inlets, environmentally sensitive areas, and tree and shrub driplines within or outside the LDA.

Each topsoil stockpile shall be identified using white pin flags marked legibly with "TOPSOIL". For stockpiles larger than 100 cubic yards or linear stockpiles, pin flags shall be placed at a maximum spacing of every 40 feet.

*(a) Topsoil (Onsite).* Stockpiles shall be treated with herbicide when the Section 217 pay item is included in the plans, per Section 217, or as directed by the Project Engineer.

*(b) Topsoil (Imported).* Import shall not begin until the material has been approved. Topsoil (Imported) shall not be stockpiled on site for longer than 30 days and shall receive temporary stabilization if in place for 14 or more days.

*(c) Topsoil (Wetland).* Wetland topsoil shall be excavated from the project site to a depth of 12 inches or at the locations and depths as shown on the plans. Differing soil depths may be approved by the Project Engineer in coordination with the Region Wetland Specialist or as noted in the plans. Stockpiling wetland topsoil shall not exceed 3 months (not including a winter shutdown) prior to re-application or as shown on plans. Stockpiles shall be kept moist during hot and dry weather from an approved water source, as defined in Section 101.

**207.08 Subsoil Preparation.** The Contractor shall allow excessively wet subsoils to dry as necessary before beginning subsoil preparation. The Contractor shall fracture the soil uniformly to a depth of 14 inches, or as shown in the plans, without lifting or furrowing the surface excessively. If multiple passes are needed to achieve depth, there shall be a minimum overlap of 12 inches between passes to ensure consistent subsoil preparation. All construction debris and trash shall be removed before and following ripping activities.

Subsoil preparation shall be performed in all areas to be vegetated as called out in the plans. Subsoil preparation shall not be conducted on areas steeper than 3H:1V. Subsoil preparation is not required in utility trenches less than 15 feet wide.

Areas where subsoil preparation has been completed shall be left in a roughened state until topsoil placement. Topsoil shall be placed within 14 days of subsoil preparation, or shall receive temporary stabilization, per Section 208.

Subsoil preparation is not required where aggregate base course or recycled asphalt is used as a shouldering technique, or where the aggregate base course extends into the immediate side slope to provide a stable roadside condition. The distance from the edge of the pavement to where subsoil preparation shall begin is as per plan.

Areas not accessible to heavy equipment shall be decompacted to a depth of 6 inches with a rototiller, appropriate equipment, or hand tools.

**207.09 Equipment, Calibration, and Verification.** Subsoil preparation equipment shall be able to fracture the soil uniformly without excessively lifting or furrowing the subsoil surface. Once subsoil preparation operations have been completed, the Contractor shall confirm subsoil preparation was achieved using the penetrometer, at a minimum of ten random locations per acre, as selected by the Project Engineer. If this depth cannot be achieved for 80 percent of the locations, the Contractor shall re-rip the area at no additional cost to the Department.

**207.10 Topsoil Placement and Distribution.** On areas to be vegetated, the Contractor shall place onsite or imported topsoil to a depth of 6 inches, or to the depth shown on the plans. Topsoil shall be placed in a method that does not recompact the subsoil. Topsoil should only be handled when it is dry enough to work without damaging the soil structure. Topsoil shall not be placed if the ground is extremely dry. Once Topsoil is placed, it shall be thoroughly moistened to prevent dust and erosion. Exceptions to these requirements may be approved by the Project Engineer. Remove clods, sticks, stones, debris, concrete, and asphalt more than 3 inches in any dimension from topsoil and remove from the project site.

*(a) Topsoil (Onsite).* The Contractor shall salvage and stockpile sufficient material to satisfy the revegetation needs of the project. Excess topsoil shall be used onsite in areas to be vegetated or as approved by the Project Engineer.

*(b) Topsoil (Imported).* Imported topsoil stockpiles shall be placed within seven days of mixing amendments.

*(c) Topsoil (Wetland).* Wetland topsoil shall only be placed within designated wetland areas as noted in the plans, or as approved by the Project Engineer in coordination with the Region Wetland Specialist.

When placed over riprap, wetland topsoil shall be placed at a minimum depth of 12 inches, or to the depth shown on the plans.

Wetland topsoil shall not be placed below the ordinary high-water mark except as otherwise specified in the plans.

**207.11 Avoiding Recompaction and Remedies.** Equipment and vehicle traffic on areas to be vegetated shall be limited to the equipment being utilized to place topsoil and any other equipment required for the revegetation work. Areas to be vegetated shall be kept free of trash and debris. After topsoil placement, the area shall be protected from erosion, per Section 208. No material shall be stored in this area. The Contractor shall remove topsoil that is contaminated by other materials during construction activities from the site, dispose of it at a licensed landfill, and replace it with imported topsoil at no additional cost to the Department. Any re-ripping that is necessary due to re-compaction as a result of construction activities is the responsibility of the Contractor.

**207.12 Timing of Stabilization**. Soil amendments, seeding, and landscape or permanent stabilization mulching, per Section 212, shall be accomplished within four working days of placing the topsoil. If landscape or permanent stabilization control measures cannot be implemented on placed topsoil within four working days, the Contractor shall complete temporary stabilization methods per Section 208, at no additional cost to the Department.

## Method of Measurement

**207.13** The quantity of Subsoil Preparation shall be measured by the actual volume of material decompacted, based on the measured area and depth designated in the Contract, or through another method approved by the Project Engineer.

The quantities of Topsoil (Onsite, Imported, and Wetland) shall be measured by the actual volume of material placed, based on the measured area and depth designated in the Contract, or through another method approved by the Project Engineer.

## Basis of Payment

**207.14** The accepted quantities measured will be paid for at the Contract unit price for each of the pay items listed below**.**

Payment will be made under:

| Pay Item | Pay Unit |
|---|---|
| Topsoil (Onsite) | Cubic Yard |
| Topsoil (Imported) | Cubic Yard |
| Topsoil (Wetland) | Cubic Yard |
| Subsoil Preparation | Square Yard |

The Site Pre-vegetation Conference will not be paid for separately but shall be included in the work.

Payment for Subsoil Preparation includes the rod penetrometer and associated verification testing and will not be measured and paid for separately but shall be included in the work.

Payment for Topsoil (Onsite) shall be full compensation for all work necessary to complete the item, including salvaging, stockpiling, stockpile maintenance (including trash and weed mitigation), and final placement of material. Removal of trash and debris prior to stockpiling will be measured and paid per Section 208.

Payment for Topsoil (Imported) work includes furnishing and transporting approved material, stockpiling, distributing, and placing. Topsoil (Imported) shall include all testing and analysis, and amendments to meet Tables 207-1 and 207-2, and will not be measured separately but shall be included in the work.

Topsoil (Wetland) moisture control will not be paid for separately but shall be included in the work.

Noxious and Invasive Weed Management shall be measured and paid for per Section 217.