



## Soils Testing and Handling

The Central 70 Project implemented a robust pre-construction soil sampling program that was completed in 2018. This program allowed the Project team to efficiently manage soil during construction. After collecting and testing more than 2,100 samples throughout the project corridor, the sampling results and levels of constituents in the soil determined how it can be reused or if disposal was required, based on the categories below.

### Material Categories

- Green (unrestricted reuse) - soil is excavated and hauled throughout the Project and used as fill material. It is used in embankments, behind walls, and other locations where grading is occurring. If the green soil was from the top one foot of material west of Colorado Boulevard, it is only reused east of Colorado Boulevard. Green soil may also be used at various City and County of Denver projects with Denver's approval or by private developers.
- Yellow (restricted reuse) - soil is excavated and hauled east of Colorado Boulevard and used as backfill only in CDOT-approved locations. These locations have environmental covenants (EC) placed on them. These locations are thoroughly documented to show where the material is and are capped with clean fill material. Yellow soil that is not used in the EC areas is hauled to either the Tower Road landfill or Denver Arapahoe Disposal Site (DADS) landfill.
- Red (disposable) - soil is excavated and loaded directly into haul trucks to be disposed of at an approved landfill (Tower Road or DADS).

Material that may not have been sampled prior to construction (due to traffic restrictions or easements) is sampled according to the Project plans and categorized and handled in one of the above color categories. If this material is required to be stockpiled while KMP awaits test results, it is placed on plastic with appropriate best management practices (BMPs), such as silt fences or inlet bags around it.

### Mitigation Measures and Controls

- Survey crews verify that soils have been removed by collecting pre-excitation elevations and post-excitation elevations.
- Haul trucks are covered once loaded to prevent the soil from being blown around during transport.
- Vehicle tracking controls are installed at exit points to minimize tracking soils onto the road.
- Water is sprayed onto disturbed areas and stockpiles to minimize dust.
- Street sweeping is conducted to pick up any additional sediment not removed by the tracking pads.
- Inlet protections, or catch basins, and perimeter control measures are in place to filter stormwater prior to discharge into the storm sewer system.
- Loads of soil hauled to the landfill are tracked to verify where the soil is disposed.
- Monitoring technicians oversee excavation activities for any soils that may "look bad or smell bad," or for the presence of debris. They conduct field screening as necessary to advise crews on alternate handling methods if warranted (e.g. disposal vs. reuse or the need for additional sampling).