

18.0 MAINTENANCE DURING CONSTRUCTION

This Section 18 includes the requirements for the maintenance during construction Work for the US 550/160 Connection South Design Build Project (Project). This Work shall be completed in accordance with the Contract Documents.

18.1 Maintenance Administration

18.1.1. Responsibilities for Maintenance

The responsibility for performing maintenance of the Highway within the Project limits shall be the Contractor's responsibility except for the Activities listed in Section 18.1.4 or otherwise specified in an Intergovernmental Agreement (IGA) and shall conform to Sections 104.04, 105.19, 105.20, and 107.17 of the Colorado Department of Transportation (CDOT) *Standard Specifications for Road and Bridge Construction*, and as described herein.

Americans with Disabilities Act (ADA) compliant pathways with an all-weather surface shall be provided and maintained at all times by the Contractor, if applicable. The requirements herein define those maintenance Work responsibilities that shall be performed by the Contractor and those that will remain the responsibility of CDOT. All Work shall conform to the CDOT *Highway Maintenance Levels of Service Manual*.

18.1.1.1 Initiation of Contractor Maintenance Responsibilities

The Contractor shall commence maintenance responsibilities beginning upon first mobilization for any Work on the Project through Final Acceptance, including any and all Project suspensions for weather and/or seasonal shut downs.

18.1.1.2 Termination of Contractor Maintenance Responsibilities

All responsibilities assigned to the Contractor shall remain as defined until Final Acceptance.

18.1.2. Maintenance Level of Service Plan

The Contractor shall develop and submit to CDOT a Maintenance Level of Service (MLOS) plan for Approval. The MLOS plan shall define the Contractor's complete strategy for the implementation, coordination, scheduling, and monitoring of maintenance Activities during the Project. The MLOS plan shall conform to the CDOT *Highway Maintenance Levels of Service Manual* and be updated, at a minimum every 6 months or sooner if needed, to reflect changes in the Contractor's construction Activities. The MLOS plan shall also address the following components:

1. Maintenance Condition Survey

Every 6 months, the Contractor shall perform a detailed survey of maintenance conditions for the Highway and any Roadway provided for construction phasing until all of the Contractor's maintenance responsibilities are complete (Final Acceptance). The results of the survey shall be documented by the Contractor and submitted to CDOT for Acceptance.

2. Monthly Maintenance Progress Report

Monthly maintenance progress reports shall be required for the full term of the Contractor's maintenance responsibilities. These reports shall include all maintenance Activities performed, the monitored maintenance condition of existing facilities, identification of any deficiencies from minimum standards, and an action plan for correcting the deficiencies. Monthly maintenance

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progress reports shall be submitted to CDOT with the monthly invoice submittal for Review, as required in Book 2, Section 2.

The MLOS Plan shall be submitted to CDOT for Approval at least 21 Days prior to the Second Notice to Proceed (NTP2).

18.1.3. Maintenance Responsibilities of the Contractor

Except as specifically assigned to CDOT in Section 18.1.4, the Contractor shall perform all required maintenance Activities for all Roadways within the Project limits, including, but not limited to:

1. Patching and repair of existing pavements and detour pavements.
2. Patching and repair of all existing Structures included as a part of the Project.
3. Repair of Shoulder drop-offs.
4. Replacement and repair of existing HMA Shoulders.
5. Snow and ice removal for lanes closed to traffic and behind all temporary barrier.
6. Snow and ice removal from public trails within the Project limits, if applicable.
7. Compliance to ADA requirements for all-weather surfaces of all pathways and accesses at all times.
8. Maintenance of delineators, temporary and permanent signs, and pavement markings.
9. Drainage maintenance.
10. HMA overlays of existing pavements and Structures utilized as detours or as a part of the Contractor's MOT plans.
11. Replacement of damaged guardrail, Bridge rail, and barriers.
12. Repair of impact attenuators.
13. Vegetation control in conformance with Local Agency ordinances.
14. Litter control.
15. Graffiti removal (graffiti shall be removed within 24 hours of notification and surface shall be the same color as the original with no resulting damage to the surface).
16. Activities described in Exhibit 18-A, Maintenance Performance Specifications (During Construction).
17. Debris removal responsive to providing the minimum lane requirements in Book 2, Section 16.
18. Sweeping as required by CDOT *Standard Specifications for Road and Bridge Construction*.

The Contractor shall meet vehicle weight limits for all trucks hauling material over the Roadway. CDOT may request certified truck weights for any trucks hauling Material over the Roadway at any time. The Contractor shall pay a price reduction fee of \$500 for the first failed weight and shall increase the price fee by \$500 for each subsequent failed weight.

Snow removal operations in the lanes closed to traffic and behind all temporary barriers shall be done in a way to avoid placing snow back into open lanes to traffic. Snow shall be removed far enough from the edge of travel lane that runoff from melting snow does not enter into the travel lanes.

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Any items (debris) of value discovered by the Contractor in the Highway shall be held by the Contractor no longer than 30 Days in consideration of claim by the original owner. This includes temporary advertisement signs. If the original owner does not claim these items within 30 Days, the Contractor shall then relinquish the items (debris) of value to CDOT's maintenance staff for storage, and the Contractor may dispose of all advertising material at its discretion.

If repair of infrastructure or removal of items illegally dumped on any ROW or Easement is required, the Contractor shall perform such services within 3 Days from the date discovered or reported.

18.1.4. Maintenance Responsibilities of CDOT

CDOT will perform the following maintenance Activities:

1. Inspection of existing Structures.
2. Patching and repair of all existing Structures excluded from the Project.
3. Snow and ice control for all lanes open to traffic on US 550 and US 160 prior to and during a snow event.

18.1.5. Limits of Maintenance Responsibilities

The longitudinal limits of the Contractor's maintenance responsibilities on the Project shall conform to the Project limits, including all portions of the Work.

The lateral limits shall be the ROW and intersecting Roadways within the Project Site. Any other areas disturbed by Contractor Activities outside of these limits shall be the sole maintenance responsibility of the Contractor.

18.1.6. Excluded Areas

There are no excluded areas within the Project limits.

18.1.7. Payment for Maintenance during Construction

Progress payments for maintenance during construction shall be according to Book 2, Section 2.

18.2 Performance Specifications

In performance of maintenance on the Project, the Contractor shall comply with the CDOT *Highway Maintenance Levels of Service Manual*. Specifically, the Contractor shall adhere to the requirements for data collection and measurement for equating level of service (LOS) on the Highway and incorporate these requirements into its performance of all maintenance Work according to the MLOS Plan.

A minimum of LOS D shall be maintained within the Project limits through the duration of the Project, per the CDOT *Highway Maintenance Levels of Service Manual*.

18.3 Right-of-Way Construction Requirements

18.3.1. Risk of Loss, Obligation to Maintain and Repair

The Contractor shall comply with requirements in Book 2, Section 8 and shall maintain improvements included in the Project and provide reasonable safety and security measures to preserve any ROW or Easements (temporary or permanent). The Contractor shall conduct regular Site inspections and prevent,

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minimize, or correct problems, such as vandalism, trespassing, rodent infestation, weed control (in accordance with any Local Agency ordinances), illegal dumping or disposal of rubble, and other debris on all areas of the Project that are under the Contractor’s maintenance responsibility.

18.4 Deliverables

The Contractor shall submit the following to CDOT for Review, Acceptance, or Approval:

Table 18-1 Deliverables

Deliverable	Review, Acceptance or Approval	Schedule
Maintenance Level of Service Plan	Approval	At least 21 Days prior to NTP2, then update every 6 months or sooner if needed
Maintenance condition surveys	Acceptance	Concurrent with the Maintenance Level of Service Plan update
Monthly Maintenance Progress Reports	Review	Concurrent with each monthly Invoice submittal

18.5 Exhibits

Exhibit 18-A Maintenance Performance Specifications (During Construction)

Exhibit 18-A – Maintenance Performance Specifications (During Construction)

The following is a list of Activities from CDOT's *Highway Maintenance Levels of Service Manual* for which the Contractor shall be responsible during construction.

Maintenance Program Area: Roadway Surface (150)

Survey Item	CDOT Activities Number
Patching/Minor Surface Repair	152
Patching-Machine, Overlay and Leveling	154
Blading – Existing Unpaved Surface/Shoulder	162
Building / Restoring Unpaved Surface/Shoulder	163
Base Stabilization and Repair	164

Maintenance Program Area: Roadside Facilities (200)

Survey Item	CDOT Activities Number
Drainage Structures Clean, Repair or Replace	202
Maintenance of Ditches and Streambeds	206
Slope Repair	210
Fence, Gate Cleaning & Maintenance	216
Litter Barrel and Trash Cleanup	218
Sweeping – Machine	220
Sweeping – Hand	222

Maintenance Program Area: Roadside Appearance (250)

Survey Item	CDOT Activities Number
Vegetation Control – Dry Land	252
Vegetation Control – Bluegrass	253
Vegetation Control – Hand Mowing, Weeding	254
Vegetation Control – Herbicide & Pesticide App	256
Vegetation Control – Irrigation	258
Tree Planting, Removal, Trimming	260

Maintenance Program Area: Traffic Services (300)

Survey Item	CDOT Activities Number
Traffic Signs	302, 303
Delineators, Mile Markers	304
Metal Guardrail	306
Concrete Guardrail	307
Pavement Striping, Pavement Markings	308, 310
Roadway, Sign Lighting	312

Maintenance Program Area: Structure Maintenance (350)

Survey Item	CDOT Activities Number
Bridge Decks	353
Bridge Superstructure	354
Bridge / Structure Painting	355
Bridge Curbs, Railings	356
Bridge Structure Bearings	357
Bridge Substructure	358
Bridge Approaches, Slopes	360
Bridge Deck Expansion Devices	364

Maintenance Program Area: Snow and Ice Control (400)

Survey Item	CDOT Activities Number
Snow Removal (Lanes Closed to Traffic)	402
Ice Control – Drainage Related	403