



# COLORADO

## Department of Transportation

Division of Project Support

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### MEMORANDUM

TO: REGION STAFF AND PROJECT SUPPORT UNITS  
FROM: NEIL LACEY, ACTING DIRECTOR OF PROJECT SUPPORT  
DATE: JANUARY 27, 2017  
SUBJECT: DIVISION OF PROJECT SUPPORT MEMO 2017-02 / SURFACE TREATMENT PROGRAM  
ESSENTIAL ITEMS

Policy Directive 1400.00 Surface Treatment Program establishes the Surface Treatment Program (STP) and requires that a funding level be established that will "...maintain the condition and drivability of Colorado roadways in the most efficient manner and to achieve the desired roadway surface condition objectives."

The purpose of the STP is to maintain the existing roadway surface, and as such items that do not affect surface condition of the existing network should not be funded with STP funds. All projects require some essential items of work to be included that do not directly affect the surface condition. These essential bid items will vary with each project, and will be documented and tracked.

The purpose of this memorandum is to request ratification of essential items related to the completion of projects funded through the STP. Essential Item costs are project related costs necessary to complete a surface treatment project, which are not associated with the pavement surface. The necessary inclusion of these costs reduce the available funds used to improve the surface condition and need to be accounted for in the Pavement Management Program's prediction models. STP funds need to be optimized to maintain the pavement surface and will not be used to fund enhancements or other project related costs, unless approved per the guidelines of this memorandum.

This Division of Project Support Memo replaces the previous *Chief Engineer Policy Memo #7- Analysis of Essential Items*, dated March 12, 2009. Essential Items will be reviewed every two years, by the Pavement Management Technical Committee (PMTTC). If revisions are required, the PMTTC will make recommendations and identify the potential impacts to STP project delivery. Previous policy changes that impact Policy Memo 7, include:

- Design Bulletin: *Safety Considerations on 3R Projects*, dated July 20, 2006
- Procedural Directive 605.1 - *ADA Accessibility Requirements in CDOT Transportation Projects*
- FHWA letter to CDOT Chief Engineer, dated July 23, 2013 - *Significant Changes to Federal Requirement to Provide ADA Curb Ramps*
- Division of Project Support Memo 2015-02 / *Surface Treatment Program Distribution for Regional Planning FY2017 to FY2020*

Inclusion of Essential Bid Items affects the Pavement Management Model projections of the future pavement surface condition. Projections of future pavement surface conditions are performed annually and require the following information:



- Essential Bid items required for STP projects (See Table 1)
- The unit costs of typical network and Region pavement treatments, adjusted to include costs for full width pavement.
- The approximate percentage, of total project costs, of all essential element items required for a typical project.
- The approximate percentage of total project costs for essential items specifically required for Bridge Elements, as well as for Traffic and Safety Elements.
- Preliminary and Construction Engineering percentages for STP projects
- Estimated Discount Rate and Annual Inflation Rate for STP projects
- STP Budget allocated and or projected in the Statewide Transportation Improvement Plan (STIP), and the estimated STP Budget growth rate (if actual budget numbers are not available).

Table 1- Essential Bid Items, identifies items not associated with the pavement surface that are eligible for funding with STP funds, and will be included in the Pavement Management Model projections.

**Table 1-Essential Bid Items**  
(Not associated with the pavement surface)

| Bid Item | Description                                       | Notes                                                                                                                                                                                                                                                                                                    |
|----------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 201      | Clearing and Grubbing                             | Only if STP approved for reconstruction.                                                                                                                                                                                                                                                                 |
| 202      | Removals                                          | Removal of those items essential to complete the pavement treatment .                                                                                                                                                                                                                                    |
| 203      | Excavation and Embankment                         | Only if STP approved for reconstruction.                                                                                                                                                                                                                                                                 |
| 203      | Equipment Hours                                   |                                                                                                                                                                                                                                                                                                          |
| 206      | Excavation and Backfill for Structures            | Related to drainage features and culverts that are compromising the pavement structure.                                                                                                                                                                                                                  |
| 207      | Topsoil                                           | Reconstruction related item. Not necessary for preventive maintenance activities that do not affect grade or that do not require work outside the pavement.                                                                                                                                              |
| 208      | Erosion Control                                   |                                                                                                                                                                                                                                                                                                          |
| 210      | Reset and Adjust Structures                       | Only for those items that need to be reset or adjusted due to removal as part of the project.                                                                                                                                                                                                            |
| 212      | Seeding Fertilizing, Soil Conditioner and Sodding | Reconstruction related item. Not necessary for preventive maintenance activities that do not affect grade or that do not require work outside the pavement.                                                                                                                                              |
| 213      | Mulching                                          | Reconstruction related item. Not necessary for preventive maintenance activities that do not affect grade or that do not require work outside the pavement.                                                                                                                                              |
| 216      | Soil Retention Covering                           | Reconstruction related item. Not necessary for preventive maintenance activities that do not affect grade or that do not require work outside the pavement.                                                                                                                                              |
| 304      | Aggregate Base Course                             |                                                                                                                                                                                                                                                                                                          |
| 515      | Waterproofing Membrane                            | Essential bridge element with concurrence by RME, provided alternative bridge asset funds are unavailable.                                                                                                                                                                                               |
| 516      | Dampproofing                                      | Essential bridge element with concurrence by RME, provided alternative bridge asset funds are unavailable.                                                                                                                                                                                               |
| 518      | Waterstops and Expansion Joints                   | Essential bridge element with concurrence by RME, provided alternative bridge asset funds are unavailable.                                                                                                                                                                                               |
| 603      | Culverts and Sewers                               | Essential only if damage to overlying pavement has already occurred or is imminent, and alternative funding sources are unavailable, as approved by the RME. For extensions of these items only, as needed to accommodate changes in the vertical or horizontal alignment as a result of reconstruction. |



| Bid Item | Description                                                     | Notes                                                                                                                                                                                                                                                                                                                                                                     |
|----------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 605      | Subsurface Drains                                               |                                                                                                                                                                                                                                                                                                                                                                           |
| 606      | Guardrail                                                       | Provided that total cost of the item does not exceed 3.3% for the specific project. Essential to comply with the requirements of DPS Memo 2015-04: <i>Mash Tested 31-inch Guardrail Implementation Policy and Mash Implementation Dates</i> .                                                                                                                             |
| 608      | Curb ramps, Sidewalks,                                          | Item is essential if required to comply with Procedural Directive 605.1, FHWA letter to CDOT Chief Engineer, dated July 23, 2013, and Chief Engineer Memorandum: <i>ADA Title II Program Update</i> , dated September 12, 2016. ADA compliance work needed as a result of upcoming STP project can be completed under a separate project, still funded using STP dollars. |
| 609      | Curb and Gutter                                                 | Only essential if curb and gutter is damaged and maintenance of the item is CDOT responsibility (see CRS 43-2-135). Item is essential if required to comply with Procedural Directive 605.1, FHWA letter to CDOT Chief Engineer, dated July 23, 2013, and Chief Engineer Memorandum: <i>ADA Title II Program Update</i> , dated September 12, 2016.                       |
| 612      | Delineators and Reflectors                                      |                                                                                                                                                                                                                                                                                                                                                                           |
| 614      | Traffic Control Devices (Loop Detectors and Rumble Strips Only) | Loop Detectors and Rumble Strips are the only items in the 614 Traffic Control Devices Items that are considered essential elements for surface treatment.                                                                                                                                                                                                                |
| 620      | Field Facilities                                                |                                                                                                                                                                                                                                                                                                                                                                           |
| 621      | Detour Pavement                                                 |                                                                                                                                                                                                                                                                                                                                                                           |
| 624      | Drainage Pipe                                                   | Essential only if damage to overlying pavement has already occurred or is imminent, and alternative funding sources are unavailable, as approved by the RME. For extensions of these items only, as needed to accommodate changes in the vertical or horizontal alignment.                                                                                                |
| 625      | Construction Surveying                                          |                                                                                                                                                                                                                                                                                                                                                                           |
| 626      | Public Information Services                                     |                                                                                                                                                                                                                                                                                                                                                                           |
| 626      | Mobilization                                                    |                                                                                                                                                                                                                                                                                                                                                                           |
| 627      | Pavement Marking                                                |                                                                                                                                                                                                                                                                                                                                                                           |
| 629      | Survey Monumentation                                            |                                                                                                                                                                                                                                                                                                                                                                           |
| 630      | Construction Zone Traffic Control                               |                                                                                                                                                                                                                                                                                                                                                                           |
| FA       | ROW-Temporary Easements                                         | Temporary Easements and Construction Easements as needed to complete the essential project elements.                                                                                                                                                                                                                                                                      |
| FA       | ROW-Permanent Easements-ADA Ramp Compliance Only                | Item is essential if required to comply with Procedural Directive 605.1, dated July 30, 2012, and FHWA letter to CDOT Chief Engineer, dated July 23, 2013.                                                                                                                                                                                                                |
| FA       | Minor Contract Revisions                                        | The total cost of Minor Contract Revisions and all other project "contingency" force account items at time of advertisement should be limited to 5% of total project cost unless formally approved by the Region's Program Engineers                                                                                                                                      |



STP funds will not be utilized for items that are not directly related to the roadway surface other than as listed above in Table 1. Bid items that shall not be paid for with STP funding include:

- ROW
- Safety Enhancement items
- New guardrail or bridge rail (including transitions required as part of bridge rail upgrades)
- Bikeways, curb ramps, or sidewalk beyond the requirements of "ADA Accessibility Requirements in CDOT Transportation Projects"
- Detached bikeways (non-integral with the roadway)
- Cattle guards or guard posts
- Lights, permanent signs, signals, and barricades
- Slope flattening or pipe extensions not necessary to accomplish surface treatment
- Upgrading sizes of culverts due to hydraulic analysis
- Transportation Systems Management & Operations evaluation recommendations
- Widening and/or expansion of paved surfaces
- Specialty work for, or items associated with, the maintenance of structures (bridges and culverts)

Safety Surface Treatment funds are administered from the same central funding pool as the Surface Treatment funds. These funds have historically been approximately 3.3% of the total STP funds. STP Safety Surface Treatment funds are exempt from the Essential Item restrictions. Region staff will estimate and track the total safety treatment project costs on each project and will be allowed up to 3.3% of their total assigned regional planning budget to be utilized for safety treatment work on Surface Treatment Projects. See *Design Bulletin: Safety Considerations on 3R Projects*, dated July 20, 2006, for guidance on appropriate use of Surface Treatment funds for project related safety work.

In all cases, engineering judgment should be used to ensure proper use of STP funds. Use of STP funds for other project specific items may be considered on a case-by-case basis if approved by the Region Materials Engineer.

The Region Materials Engineer will document and provide justification for all project items funded with STP funds that are not included in *Table 1-Essential Bid Items*, and/or not directly associated with the pavement surface. Documentation and justifications will be recorded in the project file.

I concur

Joshua Laipply, P.E., Chief Engineer

Date

1/22/2017

cc: B. Schiebel  
RMEs  
FHWA  
RTDs  
PE3s

