



Florida Department of Transportation

RICK SCOTT
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

RACHEL D. CONE
INTERIM SECRETARY

M E M O R A N D U M

DATE: June 1, 2017

TO: Rudy Powell, Director, Office of Maintenance; Mike Sprayberry, State Administrator for Maintenance Contracts; Scott Foltz, General Counsel's Office; Greg Davis, State Estimates Office, Maintenance Distribution List

CC: Dan Hurtado, State Specifications Engineer; Stefanie Maxwell, Manager, Program Management Office

FROM: Frances Thomas, Specifications Development Coordinator

SUBJECT: Proposed Specification: SS5770000 Reworking Shoulders

Attached for your review and comments is a copy of the subject proposed specification.

The changes are proposed by Melody Joyner in District 1 to update the Maintenance Supplemental Specification to current standards.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and may be entered on-line, sent to Mail Station 75, or by email to Frances Thomas at frances.thomas@dot.state.fl.us .

Comments received after **June 30, 2015** may not be considered. Your input is encouraged.

Attachment

577 REWORKING SHOULDERS, SLOPES AND ROADSIDE DITCHES.
(REV ~~11-16-09~~4-27-17) (~~7-17~~)

The following is a new Section added after Section 571:

SECTION 577
REWORKING SHOULDERS, SLOPES AND ROADSIDE DITCHES

577-1 Description.

Perform shoulder preparation (*restoring non-paved shoulders, slopes and roadside ditches*), ~~sodding, fertilizing, and watering as specified in this Section. The work includes repairing non-paved shoulders, slopes, and roadside ditches~~ by adding suitable materials, removing excess materials, and restoring the roadside to the desired typical section for proper drainage, protection of pavement edge, and to provide a safe recovery area.

577-2 Materials.

Meet the following requirements:

- Sod.....981-3
- Fertilizer.....Section 982
- Water.....Section 983

577-3 Equipment.

Provide equipment that may include pulver mixer and rotovators with shovel-like cultivators, of a type that will mix the additional shoulder material with the existing turf to the required depth and which will leave the shoulder in a non-compacted condition.

577-4 Construction Methods.

577-4.1 General: Coordinate with the utility companies for the location of all underground utilities prior to beginning work ~~where~~ digging or grading work ~~is required~~.

577-4.2 Sequence of Construction: Proceed with the several operations involved in the work in the following sequence: blade shoulders if necessary, add and spread borrow material, and mix borrow material with the underlying turf ~~and compact~~. *Leave in a roughened and loose condition*. ~~Apply sod, fertilizer and water as specified~~. Do not use any equipment that will damage the pavement or turf areas *beyond the work limits*.

577-4.3 Preparation of Shoulder to be Reworked: Blade the existing shoulder as necessary to achieve a reasonable uniform plane. Blade turf which has grown over the edge of existing pavement from the pavement's *edge* for a width of not more than 18 inches from the pavement's edge. Disc the existing shoulders prior to placing additional material.

~~If the~~*Use* existing materials (high spots) within the project limits ~~are if~~ suitable for use as fill material for low areas, ~~then it shall be used~~ prior to using borrow materials.- Stockpile excess materials resulting from the reworking procedure in areas designated by the Engineer.

Provide and maintain all measures required for the prevention, control, and abatement of dust, erosion, and water pollution. Prevention, control, and abatement of dust, erosion, and water pollution ~~shall will~~ be incidental to the work being performed and will not be paid separately, unless specific pay items and quantities are established in this Contract. ~~The specific~~*Use* erosion control methods and materials ~~to be used during this contract shall be~~

~~approved by the Engineer, but shall not be less than specified in Section 102-104 and Design Standard Index 104 of the Standard Index.~~

577-4.4 Additional Material: Add and spread, borrow material to conform to the desired shoulder configuration. Do not place this added material on the shoulders earlier than seven calendar days before beginning mixing operations in that area. Placement of material to be added ~~shall~~**must** not inhibit visibility to the traveling public and may be placed on the back slope along the Right of Way line or as directed by the Engineer.

Borrow material required to bring turf shoulders to proper grade may be available from stockpiled areas as specified in ~~Subarticle~~ 577-4.3.

The Department **(will, will not)** provide fill material, when needed to bring turf shoulders to proper grade.

577-4.5 Mixing: Mix the additional shoulder material with the existing turf with a pulver mixer or rotovator mixer to a depth such that the upper 4 inches of the existing turf becomes uniformly mixed with the added material.

In those areas where the added borrow material exceeds ~~4~~**four** inches in depth, ~~the Engineer will not require~~ mixing of borrow material and turf **is not required**.


Immediately after the above operations, reshape the shoulder area to the required configuration ~~and leave in a roughened and loose condition, and lightly roll it.~~

Completed work will be to the line, grades, and slopes according to the particular roadway typical requirements for shoulders, slopes, and ditches. ~~Unless the established typical sections dictate or directed by the Engineer~~ **The** typical sections will be as follows:

<i>Drop Off from Edge of Pavement to Shoulder</i>	<i>1/2" to 1" maximum</i>
<i>Shoulders</i>	<i>3/4 " per foot</i>
<i>Front Slopes</i>	<i>1:4 to 1:6 (vertical to horizontal)</i>
<i>Ditch Bottom</i>	<i>Grade fro proper drainage</i>
<i>Back Slope</i>	<i>1:2 to 1:4 (vertical to horizontal)</i>

577-4.6 Paved Shoulder Blading and Removal of Excess Material: *Blade turf that has grown over the edge of existing pavement and from the pavement's edge for the width specified on the Work Document, or by the Engineer, not to exceed 24 inches. Blade the unpaved shoulder as necessary to achieve a uniform plane in relation to the paved shoulder and cross slope. Remove excess material that cannot be utilized elsewhere in locations specified on the Work Document.*

Drop off from edge of pavement to shoulder	1/2 inch to 1 inch maximum
Shoulders	3/4 inch per foot
Front Slopes	4:1 to 6:1 (horizontal to vertical)
Ditch Bottom	Grade for proper drainage
Back Slope	2:1 to 4:1 (horizontal to vertical)

~~**577-4.6 Fertilizing:** The Contractor will add fertilizer to the specified areas. The fertilizer will be placed at a rate of 265 pounds per acre of  (total nitrogen available phosphoric acid water soluble potash).~~

~~Provide 50% of the fertilizer's nitrogen from a slow release source.~~

~~The Engineer will not allow fertilizing operations when conditions prevent a uniform distribution of materials. Fertilizing operations will not be permitted when wind~~

~~velocities exceed 15 miles per hour. On steep slopes or other areas where machine spreading will damage slopes or machine spreading may not be practicable, the spreading may be accomplished by hand or other methods approved by the Engineer.~~

~~577-4.7 Maintenance: Rework shoulders when washouts exceed 3 inches in depth. No shoulder drop off shall exceed 2 inches deep within one foot of the pavement edge for a continuous 25 feet.~~

577-5 Method of Measurement.

577-5.1 General: The quantities to be paid for will be for the following items, completed and accepted.

1. The area, in square yards, ~~of~~ *for* reworking shoulders.
2. The area, in ~~square yards~~ *linear feet*, ~~of sod~~ *for paved shoulder blading and removal of excess material.*
- ~~3. The weight, in tons, of fertilizer.~~
- ~~4. The volume, in thousand gallons, of water.~~

~~577-5.2 Fertilizer: The weights of fertilizer will be determined by the number of sacks used. If bulk fertilizer is used, weight tickets showing gross weight, tare weight, and net weight will be furnished to the Engineer for every load distributed. Failure to provide weight tickets from Florida Department of Agriculture certified scales will result in no payment for those loads.~~

577-6 Basis of Payment.

Prices and payments ~~for reworking shoulders~~ *for reworking shoulders* will be full compensation for all of work and materials specified in this Section, including ~~any necessary blading to complete the work.~~ *any necessary blading to complete the work.* ~~all work and incidentals to complete the work.~~

Price and payment for blading paved shoulder will be full compensation for all work specified in this Section.

Prices and payments will be full compensation for all hauling; any re-handling that may be necessary to accomplish ~~final disposal;~~ the dressing of the shoulders, ditches, ~~and~~ slopes, ~~and final disposal of excess material; removal of trash, etc.~~

Payment will be made under the items specified in the Bid Price Proposal.