

5360000 GUARDRAIL  
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

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John Fowler  
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Comments: (4-28-16)

Section 536-5.1 states that payment includes the full length of end treatments and connections to rigid barrier. I notice in Index 400 that there are small overhangs beyond the limits of guardrail measurement for both end treatments and rigid barrier connections. Consider saying something like, "Payment will include the full length of guardrail end treatments and rigid barrier connections as detailed in the Design Standards."

Response:

No change made. Both 536-5.1 and 536-6.1 state that measurement and payment will be in accordance with the Design Standards. We will consider this suggestion for inclusion in future revisions.

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Cheryl Hudson  
FDOT

Comments: (4-28-16)

I read 536 last, and it seems to me that it repeats stuff in 538 (resetting). I don't know enough about how projects are done, but if it is new guardrail then everything is included (by the payment paragraph-highlighted) if they are moving/resetting wouldn't that be 538?

Response: The description for 536-6.6 provides an explanation for what's included with guardrail removal. This only involves removing guardrail on a project (and not reusing and reconstructing it). Resetting guardrail in 538 is a different concept and the Pay Item involves relocating guardrail and reusing some of its components.

I also noticed that thrie-beam is not mentioned (except modified), just w-beam's.

Correct. Thrie-Beam is no longer an option.

I understand the removal costs for new, but not the connections. Rub rails etc that seem to be included in 536-6.1 for new installs, but that is not clear. Maybe the BOE would further clarify this but thought I'd mention it.

### 536-8-6 Basis of Payment.

**536-6.1 Guardrail:** Price and payment will be full compensation for all work specified under this Section, including furnishing and installing posts, panels, barrier delineators, and all other materials as defined in the Plans and the Design Standards. The price and payment will include any reduced post spacing, nested panels, shop-bent panels, trailing end transition connections (to rigid barrier), and CRT posts as segments as specified required in the Plans.

The type of guardrail specified will be that which comprises the basic guardrail run between end treatments and approach transition connections to rigid barrier (including, but not limited to, W-beam general, W-beam double face, W-beam low-

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speed, modified T-beam). For guardrail systems with direct connections between end treatments and approach transition connections to rigid barrier, the type of guardrail specified will be W-beam general for single faced guardrail applications or double faced W-beam for double face guardrail applications.

### 536-6.9 Payment Items: Payment will be made under:

Item No. 536- 1-	Guardrail - per foot.	Are these in addition the cost of the guard or is this for retrofitting
Item No. 536- 2	Guardrail with Shop Bent Panels	
Item No. 536- 5-	Rub Rail - per foot.	
Item No. 536- 6-	Pipe Rail - per foot.	
Item No. 536- 7-	Special Guardrail Post - each.	
Item No. 536- 8-	Bridge Anchorage Assembly/-Approach Transition Connection to Rigid Barrier - each.	538?
Item No. 536- 73-	Removal of Existing Guardrail - per foot.	
Item No. 536- 83-	Guardrail Post Replacement- each.	
Item No. 536- 85-	Guardrail End Treatment - each.	

This is a good point you make on 536-6.1. It explains what's included in 536-6.1, however I think that we might need an exclusionary statement of what is not included from the Standard and Spec. Essentially, all of the separate Pay Items in 536-6.2 through 536-6.8 are not included. The version you've reviewed is set up in the same way the currently published 536 has handled it in years past. However, as with most everything else in that older Spec, it needs improvement! Thanks for pointing this out. So far, most comments I've received are from concepts we've carried forward from the previous Spec.

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John Fowler  
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Comments: (4-28-16)

Section 536-6.9: It appears that the separate payments for various types of guardrail end anchorages are going away. Please consider when this spec is intended to be implemented. All ongoing plans will require updates of guardrail quantities, so please allow enough time for implementation.

Response: Any Pay Items being sunsetted, such as the "Concrete Barrier Wall Anchorage Assembly", will remain in place in the BOE for as long as needed to accommodate plans which use the previous Index 400 Design Standard.

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Sherry Valdes

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Comments: (5-4-16)

Under 536-5.1 - Method of Measurement, We need to stay away from the word "measured" when it comes to plan quantity. I suggest to say "the length of guardrail is calculated from end-to-end following ....". Calculated is from designer.

Response:

"Measured" and "calculated" are used interchangeably when it comes to plan quantity throughout the Specifications. No change made.

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D3 (via Barbara Strickland)

Comments: (5-4-16)

1. Section 536-5.1 states that payment includes the full length of end treatments and connections to rigid barrier. I notice in Index 400 that there are small overhangs beyond the limits of guardrail measurement for both end treatments and rigid barrier connections. Consider saying something like, "Payment will include the full length of guardrail end treatments and rigid barrier connections as detailed in the Design Standards."

Response:

2. Section 536-6.9: It appears that the separate payments for various types of guardrail end anchorages are going away. Please consider when this spec is intended to be implemented. All ongoing plans will require updates of guardrail quantities, so please allow enough time for implementation.

Response: Any Pay Items being sunsetted, such as the "Concrete Barrier Wall Anchorage Assembly", will remain in place in the BOE for as long as needed to accommodate plans which use the previous Index 400 Design Standard.

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D5 Construction Operations

Comments: (5-6-16)

536-3.3 Setting Posts: At end of the third paragraph add – Each post with hot bituminous mixture from FDOT approved source/plant and thoroughly temp or compact to the satisfaction of the engineer.

Response: Change made. Added reference to Section 339 to address FDOT approved plant

requirements.

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Maria Connolly  
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Comments: (6-2-16)

**Section 536-6 Basis of Payment**

**536-6.1 Guardrail:**

Recommending including “blocks” – Price and payment will be full compensation for all work specified under this Section, including furnishing and installing posts, panels, barrier delineators, **blocks**, and all other materials as defined in the Plans and the Design Standards.

**536-6.7 Guardrail Post Replacement:**

Recommend including “new hardware” – Price and payment will include all labor, materials, and equipment required for the removal and disposal of existing posts in areas provided by the Contractor. Price and payment will include the backfilling and compaction of existing holes and the post replacement with new posts **and new hardware**.

**Response:**

“Offset blocks” have been added to 536-6.1. 536-6.7 has been deleted as it is covered under the Maintenance Specification for Guardrail.

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