



Skid Loader Bituminous Screed

Project Number 2012-03

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Problem Murray County was disappointed with the quality of its bituminous patching over large areas. Often, the patches had poor ride quality and uneven lane thickness. In addition, maintenance crews had to move large quantities of bituminous mix by hand when working on large patches. The county needed a better way to handle large, lane-width patching operations that would also improve the resulting ride quality.

Solution The county built a wide-screed skid loader attachment to bridge the patch over a wider area. The screed slides on hydraulically maneuverable skids that can be raised or lowered depending on the desired thickness of the patching material.

Procedure The screed attachment is used after the hot mix has been placed in the area to be patched. Murray County uses the attachment to level the patch area—first by making a few passes back and forth to rough out the bituminous mix and then completing a final pass to leave the area just high enough to compact. To achieve the desired thickness for each side of the screed attachment, separate operators independently control the hydraulic skids. The skid loader operator maintains the proper angle for the attachment as well as speed and direction

Results Original findings indicated that the skids were too short to adequately support the weight of the screed, making it difficult to push. The county retrofitted the original skids with truck bumpers, resulting in longer, ski-like skids that carried the load more effectively. The new design prevented the screed from sinking into loose gravel or scuffing the warm, recently placed hot mix.

Overall, Murray County's patching quality improved greatly after the initial learning curve for screed attachment operation. The amount of needed physical labor has also been greatly reduced. The county has been able to place larger patches more effectively, and the resulting ride quality has improved.

Approximate Cost \$6,340

OPERA Funding \$4,000

Implementation Murray County used the screed attachment effectively for a few large patches in the fall of 2012, and it expects proficiency to increase with additional time and use.

Status Complete

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