

TXDOT Railroad Grade Crossing Replanking Program

The State Railroad Grade Crossing Replanking Program was originally authorized by the Texas Legislature in 1979 to provide dedicated State Highway Funds for replacing worn-out grade crossings located on the state highway system. The Rail Division Rail Highway Section (RRD-RH) manages the program.

Annual Reauthorization. RRD-RH requests program reauthorization on an annual basis through the Transportation Planning and Programming Division's (TPP) annual authorization of bank balance allocation programs. The Texas Transportation Commission reauthorizes and approves the program by minute order.

Program Funding

The Replanking Program is managed as a bank balance allocation program. Bank balance allocation means that the commission authorizes the total amount of funding and the method of project selection. This provides flexibility within each program year to cancel and add projects to the program without commission action.

Program funds are used to reimburse the railroad force account portion of the projects. State force account work is financed out of the district's maintenance budget.

Eligible Crossings

Every railroad operating in Texas can participate in the Replanking Program.

Program funds can only be used on state highway system crossings where the state highway originally crossed the railroad. Grade crossings located on city streets and county roads and most spur track crossings cannot be replanked under this program. Spur tracks not eligible for the program are those that originally crossed an existing state highway. Eligible spur tracks are those that were originally crossed by the state highway.

TRF-RR selects projects for the Replanking Program on a statewide basis. Generally, each district is guaranteed funding for its two highest priority ranked projects. The other eligible projects are included in the program according to their priority rankings. The priority ranking is based on the project's estimated cost-per-vehicle.

Project Submission

Each year RRD-RH sends Railroad Grade Crossing Replanking Project Submission Forms (TXDOT Form 1876) to the districts.

The district completes **one form for each crossing submitted**, ranking them according to district priority. Crossings in the worst condition should be assigned highest priority rankings. RRD-RH strives (within funding limitations) to include each district's top two priority ranked submissions in the current year's program.

After receiving all project submissions from every district, RRD-RH ranks the projects in order of estimated cost per vehicle.

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Figuring Estimated Cost per Vehicle

The estimated cost per vehicle for a project is derived from the total estimated cost of the project. The total estimated cost of the project is obtained by multiplying the estimated cost of materials, labor, and other associated expenses per track foot times the width of the crossing. For the purposes of this calculation, "the width of the crossing" is the length of the track traversing the roadway plus 0.914 m (3 feet) beyond edge of the pavement or curb line on either side. The estimated cost per vehicle is the total estimated cost of the project divided by the average daily traffic (ADT) at the crossing.

If there are multiple tracks at the crossing, the total combined width across the roadway of **both** tracks is used to determine the total estimated cost of the project.

The formulas are:

$$\text{Total Project Cost} = \text{Cost per Track Foot} \times \text{Number of Tracks (Length of Tracks)}$$

$$\text{Cost per Vehicle} = \frac{\text{Total Project Cost}}{\text{ADT}}$$

EXAMPLE: Concrete replanking is proposed at a crossing with two tracks across the roadway. Each track is 40 feet long. The ADT is 1300 vehicles per day (VPD). The current cost of concrete replanking is \$457 per track foot.

$$\$457 \times 2(40) = \$36,560 \text{ Total Project Cost}$$

$$\frac{\$36,560}{1300 \text{ VPD}} = \$28.12 \text{ per Vehicle}$$

Project Selection

RRD pulls out each district's first and second priority ranked projects and calculates a total estimated cost for all the districts' top two priority submissions. This establishes a program subtotal. All of the other project submissions are then sorted in order of cost per vehicle. These projects are added to the statewide priority list, beginning with those having the lowest cost per vehicle, until the program funding amount is expended. RRD then furnishes a list of the selected projects to each district and railroad company.

Project Cancellation

If projects are canceled for any reason (RR abandoned tracks, RR already replanked crossing, crossing is a spur track, etc.) the district from which the project was canceled can recommend another project (of equal or lesser value). This replacement project is then chosen from the submitted projects that did not previously make the program within that district. If the district in question cannot replace the canceled project, then the funds for the canceled project are used on the next highest rated project statewide that did not originally make the program.