

California High Speed Rail Authority

Ag Equipment Transport & Movement Impacts

“Will the high speed rail system adversely affect the transport & movement of agricultural equipment over public roads”

Agricultural Working Group White Paper

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BACKGROUND

The California High Speed Rail Authority (CHSRA) proposes to establish a new railway in the San Joaquin Valley (Valley). The new rail route is proposed to be constructed either on existing farmland or adjacent to, where such land lies between urban and commercial parcels in the Valley. The production of agricultural products and commodities, in the San Joaquin Valley, depends on the safe, dependable and efficient transport and movement of agricultural production equipment on public roads [freeways, highways, local roadways]. The alignment of the new railway will intersect with many public roads, which are currently used for transport and movement of agricultural equipment. Some of these intersects may not allow for the transport of agricultural equipment through the railway corridor.

The CHSRA has created a “technical” agricultural working group to assist the CHSRA in responding to the more technically oriented questions and concerns that have been asked regarding impacts to agriculture resulting from activities during the construction phase and the daily operation of the High Speed Train. The agricultural working group membership is comprised of members in possession of technical expertise in various categories of agriculture activities and infrastructure.

Various alignment sections of the High-Speed Train divide existing parcels. When a parcel is split and movement is restricted the owner’s compensation for that impact is handled through the Right of Way process for valuation of severance damages, including consideration of cost to cure mitigation.

ISSUE

Questions and concerns will arise regarding the future impact and effect the proposed rail route will have on current routes and methods of transporting and moving agricultural equipment through the high speed rail corridor.

DISCUSSION

The production of the many diverse agricultural product and commodities, inherent to the San Joaquin Valley, requires the use of equipment which is configured in many different widths, lengths, and weights. All such equipment, whether self-propelled [tractors, harvesting equipment, etc.] or pull-type or mounted equipment [disc harrows, cultivators, sprayers, land-leveling, etc.], must at times be driven or hauled on public roadways [Interstate Highways or Freeways, State Highways, County & Local Roads].

State and Local width, weight and load restrictions apply to equipment being transported on trailers. These restrictions are influenced by roadway dimensions, overpass height, bridge weight limitations and overpass/underpass roadway width. The legal maximum load width for equipment being hauled on a trailer is 12 feet and up to 14 feet on certain County approved roads. If the load is over 14 feet in width, the County must be contacted for a permit.

In agricultural areas with low traffic volumes, farm equipment operators are given significant width latitude in crossing or moving along public road corridors as long as care is exceeded in terms of

weather, visibility, width, height, or speed to avoid unsafe conditions or damage to the public facility. See Vehicle Code Section 36600. There are many different agricultural equipment transport width configurations found in the San Joaquin Valley. Agricultural implements are configured as non-folding or folding when transported. The average transport width of a non-folding implement ranges from 6 feet to 21 feet. The average transport width of a folding implement ranges from 10 feet to 18 feet.

Turning radius and turn around rows in general agricultural practices with most equipment would need 35 feet. Under certain circumstances, it is possible that wider widths may be needed and will be dealt with on a case by case basis.

Load height restrictions are based on the clearance height of bridges and overpasses which are located along State and Local roadways. Agricultural equipment transport heights vary. Most agricultural tractor transport heights average from 7 feet to 12 feet 5 inches. Harvesting equipment, such as Cotton Pickers, Forage Harvesters and Grain Combines may have transport heights up to 12 feet 9 inches. The overall height of the load, when hauling such equipment on a trailer, is determined by the adding the height of the vehicle being hauled to the deck height of the trailer being utilized for transport. Trailer deck height varies from 2 feet to 2.5 feet. Therefore, overall expected load heights may reach 15 feet to 16 feet.

In most instances, there are no weight restrictions on loads up to 80,000 pounds (Lbs.), which includes the combined weight of the equipment being hauled and the vehicle and trailer being used for transport. For loads over 80,000 Lbs., the County or State must be contacted for an approved route. Agricultural Equipment, including implements, tractors and harvesting equipment have approximate operating weights ranging from 2,000 Lbs. to 65,000 Lbs.

Most self-propelled agricultural equipment [tractors, harvesting equipment, etc.] include power train/drive trains which allow them to safely negotiate over and under crossings with slope gradients up to 6 percent. Road transport speed for most such vehicles varies from 15 miles per hour (MPH) to 30 MPH. Higher slope gradients of over and under crossings may result in reduced travel speed for most self-propelled agricultural equipment.

CONCLUSION

In order to accommodate the movement of agricultural equipment through the high speed rail corridor, over and under crossings must be designed and constructed with consideration given to the width, height, weight, sight-distance, and travel speed capabilities of such equipment. The location of high speed rail over and under crossings will also be important, with close consideration being given to acceptable distances between such crossings.

Generally over or under crossing with a travel width of 40 feet would adequately accommodate ag equipment movement and public traffic.

The vertical profile of private over or undercrossings need to accommodate clearances for long loads such that “high-centering” or reduced height situations would not occur.

In some instances, the location of the high speed rail corridor may divide a farmer's existing field or fields, making transport of machinery between fields and related farm locations difficult. This may be particularly relevant to operations between a dairy and its adjoining fields.

It is recommended the effects of severance on equipment movement be considered during the Right of Way process for determining property values.

In addition the process should include, as appropriate, working with agricultural property owners to attempt to resolve or mitigate, partial acquisitions that result in the division of farmlands. Such resolutions could include consideration toward reasonably spaced overcrossings or under crossings and may include the construction of private grade-separated equipment crossings to allow stock and farm equipment continued access to bisected land holdings. Where necessary, CHSRA could consider purchasing an easement so that private crossings may be made available to additional property owners as is prudent.

The appropriate spacing is dependent upon the type of operation, growing patterns and the methods utilized including: style of equipment, type of crop grown and animal operations.