

# STATE OF COLORADO

## DEPARTMENT OF TRANSPORTATION

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FBR 0704-230  
PCN 19339  
I-70 over Havana Street Bridge Replacement

**DATE:** July 18, 2013

**TO:** Sherman Spear

**FROM:** Gustaf Bieber

**SUBJECT:** Arsenal Lead, Proposed Track Relocation, Concept Plan Review and Interstate 70 at Havana St, Bridge Replacement, 30 % Plan Submittal Pavement Design Recommendation

Dear Mr. Spear:

This letter is submitted to request Union Pacific Railroad (UPRR) review of two interrelated projects which both involve the Arsenal Industrial Lead. The Colorado Department of Transportation (CDOT) is designing a project to replace the existing structure on Interstate 70 (I-70) which spans not only the UPRR, Arsenal Industrial Lead but also Havana Street. I-70 currently handles approximately 193,000 cars / day. The current structure is on Colorado's Bridge Enterprise Program which was created to replace structurally deficient bridges statewide. At the same time as the I-70 and Havana St Bridge replacement project is progressing, CDOT is conducting the Environmental Impact Study (EIS) to improve capacity on I-70 along the corridor through Aurora and Denver. The I-70 East Corridor Improvements will include a new design of the on and off ramps for Havana Street exit. The new ramps will require a relocation of the Arsenal Industrial Lead to the west to avoid at-grade crossings at the base of the on and off ramps on the west side of Havana Street.

CDOT requests review and approval of the proposed Arsenal Industrial Lead Track Relocation and the I-70 Bridge Replacement 30% Plans simultaneously. CDOT also requests that UPRR and CDOT enter into a Memorandum of Understanding (MOU) covering the relocation of the Arsenal Industrial Lead. CDOT needs to obtain consensus with UPRR on the future track alignment so that the current bridge replacement project can be designed to fit the future I-70 East Corridor Improvement plans. If there is a misunderstanding with the UPRR concerning the new alignment of the Arsenal Industrial Lead there is the potential for redesign and reconstruction needed on the I-70 and Havana structure when the I-70 East Corridor project proceeds. The new structure will work for the existing UPRR alignment and for the proposed realignment of the Arsenal Industrial Lead along with eliminating the need for any new at-grade crossings.

CDOT's goal is to fully address issues concerning the Arsenal Industrial Lead at I-70 and Havana by signing an MOU covering the Concept Plan approval and terms of the future relocation at this time with the UPRR. By doing so, CDOT hopes to thereby prevent any future misunderstandings that will

cost CDOT, the Colorado taxpayers, and the Union Pacific money and inconvenience in the future as this important corridor is improved. Improving access and flow along I-70 is an important goal of CDOT's, and this can be accomplished without any new at-grade crossing of the railroad by relocating the Arsenal Industrial Lead to the west. Furthermore, reviewing and approving the relocation now will address the Concept Review for the later time when the I-70 East Corridor improvements have progressed to design.

#### **Arsenal Lead Track Relocation, Denver, CO:**

As previously mentioned, the relocation of the Arsenal Industrial Lead is being proposed by CDOT in order to accommodate a new on and off ramp system from I-70 to Havana St without requiring two new at-grade crossings. Since at-grade crossings are very undesirable, not only to CDOT, but also to UPRR, CDOT proposes to relocate the Arsenal Industrial Lead at CDOT's sole cost and expense when the I-70 East Corridor Improvements as described in the EIS are implemented.

The existing Arsenal Industrial Lead has an 11 degree curve in the area proposed for relocation. The Arsenal Industrial Lead is a dead ended track which handles one train per day, five days per week. The operating speed on the lead is 10 mph. Several different alignments were considered by CDOT. Please see attachment titled *UPRR Industrial Track Relocation under Proposed I-70 West of Havana Street, Alternative, 2, 3 and 4*. Alternative # 1 was already rejected by UPRR at an earlier date and is therefore not shown on this drawing. Alternative # 2 is two – 11 degree curves and Alternative # 4 is two – 9 degree, 30 minute curves. CDOT proposes Alternative # 3; the use of a two 10 degree curves since it does offer UPRR a smaller degree of curvature than currently exists, and it does not impact any adjacent property owners adversely. If the proposed alignment used a 9 degree 30 minute curve, the existing Arizona Tile building on the north end of the relocation would be negatively impacted.

The track relocation would begin north of the existing at-grade crossing of 40<sup>th</sup> Ave. A breakdown of the curves is shown on the sheet titled *I-70 over Havana St, Design Build, Future UPRR Track Plan and Profile*. Although the new alignment will have greater horizontal curve length, this is offset by the lesser degree of curvature. The proposed alignment concurs with *UPRR Standards for Minimum Tangent Distance Between Curves* (STD DWG 018), *Preferred Layout Standards for Industrial Tracks* (Exhibit "A-3"), *Vertical Curve Design* (STD DWG 016) and *Standard Minimum Operating Clearances* (STD DWG 0038F).

Once the improvements described in the I-70 East EIS are implemented, the proposed relocated track will have three grade separated structures – one for the westbound on ramp, one for Mainline I-70 and a third for the eastbound off ramp. Each structure will meet or exceed the UPRR's minimum vertical clearance requirement of 23'-4", and will have adequate horizontal clearance per drawing STD DWG 0038F and not require inside guard rails per STD DWG 4000C. CDOT hereby offers a 36' wide easement instead of the existing 30' easement in place today so UPRR will retain the ability to construct a maintenance road or reconfigure the track inside of the easement. In drawing attached to the letter, CDOT shows the new alignment in the center of the 36' wide easement. CDOT is willing to commit in the MOU that the proposed structures will clear span the 36' easement. Since CDOT is offering a wider easement than UPRR has today, the track is a dead-end industrial lead and CDOT is offering an alignment with less curvature than the exiting track has, CDOT requests the proposed relocation be approved as is with no requirement for a future track or maintenance of way road under the three grade separations.

It can be seen on the proposed track relocation plan that CDOT does not maintain ownership of all the property needed to relocate the Arsenal Industrial Lead. In the MOU, CDOT is willing to commit to acquiring all the property needed for the proposed UPRR easement. The easement area outside of CDOT ownership will only be 30' as it exists today on the Arsenal Industrial Lead. I have included the existing easement documents for your use.

### **30% Bridge Plan, I-70 & Havana St Bridge Replacement, Denver, CO:**

The existing bridge is in need of replacement partially due to the condition of the bridge deck. In order to expedite and encourage innovation in the replacement of the existing structure, CDOT intends to use the Design / Build delivery method for this project. CDOT requests that UPRR and CDOT execute a Construction and Maintenance Agreement for the new structure once 30% Plans have been approved by UPRR. CDOT understands that no construction can begin on or above UPRR easement until 100% plans have been approved by UPRR. CDOT will have language in the C&M which covers this requirement. CDOT will submit an application to the Colorado PUC once 30% Plans have been approved by UPRR.

Being that the existing UPRR track alignment is on a 30' wide easement from CDOT and the City and County of Denver which cannot accommodate a future track or maintenance of way road, CDOT is not including a future track or maintenance of way road in the 30% Plan Submittal. The plans, as submitted, clear spans the existing 30' easement where the alignment is today and will remain until the I-70 East Corridor Construction progresses.

CDOT respectfully requests approval and/comments on both the proposed track relocation and the 30% Plan Submittal within 30 days to help progress this high priority project. CDOT has hired Kelly Abaray with Jacobs Engineering to act as a Railroad Liaison for this project. Please work directly with Ms. Abaray regarding track relocation, the drafting of an MOU and the 30% Plan Review.

Sincerely,



Gustaf Bieber

Resident Engineer

Colorado Department of Transportation

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CC Kelly Abaray, Jacobs Eng  
David Peterson  
Alice de Stigter

Attachments: Photo Log  
Track Relocation Submittal  
30% Plan Submittal  
CCD Easement  
CDOT Easement  
Letter History of Easement

