

U.S. DEPARTMENT OF TRANSPORTATION    FEDERAL HIGHWAY ADMINISTRATION    CALIFORNIA DIVISION OFFICE			
<b>RECORD OF <u>BLANKET</u> PRIOR APPROVAL FOR MAJOR CONTRACT CHANGE ORDER</b>			
PROJECT NO. Statewide	CCO NO. Various	CONTRACT NO. Any Federally Funded Project	DIST-CO-RTE-PM Various
REQUESTED BY Chuck Suszko		<input type="checkbox"/> CALTRANS HQ <input type="checkbox"/> RE / DISTRICT	DATE 1/12/16
PROPOSED CHANGE: Producing asphalt binder blending charts to determine the maximum percentage of reclaimed asphalt pavement (RAP) that may be used in hot mix asphalt. The virgin asphalt binder used on the project and recovered RAP binder must be true graded for high, intermediate, and low critical temperatures under ASSHTO T 313 and AASHTO T 315. Preparing blending calculation sheets and blending charts based on the 7th edition of the MS-2 Asphalt Mix Design Methods by the Asphalt Institute. The blending charts will show the allowable range of RAP Pavement Binder Ratios (RPBR) that may be used based on the projects specified virgin binder quality characteristics requirements and the test results from true grading the virgin and recovered binder from RAP. The maximum allowable percentage of RAP will be calculated based on the lowest maximum RPBR shown on the blending charts.  There should be no increase in contract time as a result of this change order.  A separate change order will be require to address required changes to the authorized hot mix asphalt job mix formula (JMF) based on RAP Pavement Binder Ratio exceeding the new maximum limits.			
REASON FOR CHANGE: On October 20, 2014 FHWA issued a memorandum titled "Recycled Materials in Asphalt Pavement" alerting State DOT's of potential premature pavement failures. The memorandum states "Recently there have been an increasing number of state highway agencies reporting pre-mature cracking in relatively new asphalt pavements. A similarity in many of these pavements is the high content of recycled asphalt binder."  Asphalt binder replacement (ABR) is a term used for the asphalt from either RAP and/or recycled asphalt shingles (RAS) used to replace a portion of the total asphalt binder in new pavements. RAP is commonly used to replace from 15 to 25 percent of the total virgin aggregate in hot mix asphalt. There have been increased concerns with the use of recycled materials in pavements because of how the ABR effects the combined asphalt binder properties and therefore HMA performance. Based on the percentage of ABR, varying degrees of stiffness can be experienced by the in-service pavements. Increased stiffness can have a positive impact on performance by preventing rutting and may reduce cracking potential due to less pavement deflection under loads. However, increased stiffness can also have a negative impact on performance with increased cracking in low temperatures or thin pavement sections. This change order is being implemented to prevent potential premature asphalt pavement failures in California due to increased asphalt binder stiffness caused by RAP.			
TIME EXTENSIONS <input checked="" type="checkbox"/> NONE    _____ DAY <input type="checkbox"/> DEFERRED		ACTIVITY ON CRITICAL PATH AFFECTED BY CCO (IF TIME EXTENSION) N/A	
ESTIMATE OF COST: \$ <u>Varies</u> <input checked="" type="checkbox"/> INCREASE <input type="checkbox"/> DECREASE		CCO: METHOD OF PAYMENT <input type="checkbox"/> CONTRACT ITEMS <input type="checkbox"/> ADJUSTMENT OF COMPENSATION <input type="checkbox"/> AGREED PRICE <input checked="" type="checkbox"/> EXTRA WORK AT FORCE ACCOUNT	
THE WORK COVERED BY THE PROPOSED REVISION AS DESCRIBED ABOVE IS APPROVED SUBJECT TO SUBMISSION OF SUPPORTING DOCUMENTATION INCLUDING COST EVALUATION AND JUSTIFICATION OF TIME EXTENSIONS.			
OTHER CONDITIONS: _____			
PRIOR APPROVAL TO PROCEED GRANTED BY:  STEPHEN M PYBURN <small>Digitally signed by STEPHEN M PYBURN DN: cn=US, o=U.S. Government, ou=DOT Headquarters, ou=FHWAO, cn=STEPHEN M PYBURN Date: 2016.02.17 14:56:06 -08'00'</small>			DATE OF AUTHORIZATION  2/17/2016