CLAIMS

What is claimed is:

1. A method for coding video data, comprising:

determining a mode with an illumination change;

determining that at least one coding tool for a block is enabled; and

performing a decoder-side motion vector refinement (DMVR) process based on the mode with the illumination change and based on the at least one coding tool for the block being enabled.

2. The method of claim 1, wherein the DMVR process comprises:

selecting, based on one or more of a coding unit (CU) size and the at least one coding tool for the block being enabled, between a sum of absolute differences (SAD) and a mean removed SAD (MRSAD).

3. The method of claim 1, wherein the DMVR process comprises:

selecting to use a mean removed SAD (MRSAD) based on a bi-prediction weight (BPW) weight index indicating non-equal weights.

4. The method of claim 1, wherein the at least one coding tool comprises any of:

a bi-prediction weight (BPW) tool, a local illumination compensation (LIC) tool, or a weighted prediction (WP) tool.

5. The method of claim 1, wherein the at least one coding tool comprises a bi-prediction weight (BPW) tool, and wherein the DMVR process comprises selecting to use bi-prediction average weighting based on the BPW tool being enabled.

6. The method of claim 1, wherein the at least one coding tool for the block being enabled is determined based on any of:

a bi-prediction weight (BPW) weight index indicating non-equal weights;

a local illumination compensation (LIC) being enabled or an LIC flag being true; or

a weighted prediction (WP) being enabled for the block.

7. The method of claim 1, further comprising:

extracting gradients in reference picture predictions; and

computing a sum of absolute differences (SAD) using the extracted gradients.

8. The method of claim 1, wherein a bi-directional optical flow (BDOF) tool is not applied based on the mode with the illumination change.

9. The method of claim 1, further comprising:

performing a DMVR adaptation based on a determination that a current coding unit (CU) size is smaller than or equal to a threshold.

10. The method of claim 1, further comprising:

performing a DMVR adaptation based on a determination that a current coding unit (CU) size is larger than or equal to a threshold.

11. The method of claim 1, further comprising applying a bi-prediction weighting with refined motion vector (MV).

12. The method of claim 1, further comprising deriving bi-prediction weighting parameters with the DMVR process.

13. An apparatus for coding video data, comprising:

at least one processor; and

memory storing instructions that, when executed by the at least one processor, cause the apparatus to:

determine a mode with an illumination change;

determine that at least one coding tool for a block is enabled; and

perform a decoder-side motion vector refinement (DMVR) process based on the mode with the illumination change and based on the at least one coding tool for the block being enabled.

14. The apparatus of claim 13, wherein the instructions further cause the apparatus to:

select, based on one or more of a coding unit (CU) size and the at least one coding tool for the block being enabled, between a sum of absolute differences (SAD) and a mean removed SAD (MRSAD).

15. The apparatus of claim 13, wherein the instructions further cause the apparatus to:

select to use a mean removed SAD (MRSAD) based on a bi-prediction weight (BPW) weight index indicating non-equal weights.

16. The apparatus of claim 13, wherein the at least one coding tool comprises any of:

a bi-prediction weight (BPW) tool, a local illumination compensation (LIC) tool, or a weighted prediction (WP) tool.

17. The apparatus of claim 13, wherein the at least one coding tool comprises a bi-prediction weight (BPW) tool, and wherein the instructions further cause the apparatus to:

select to use bi-prediction average weighting based on the BPW tool being enabled.

18. The apparatus of claim 13, wherein, when determining that the at least one coding tool for the block is enabled, the instructions further cause the apparatus to determine:

a bi-prediction weight (BPW) weight index indicating non-equal weights;

a local illumination compensation (LIC) being enabled or an LIC flag being true; or

a weighted prediction (WP) being enabled for the block.

19. The apparatus of claim 13, wherein the instructions further cause the apparatus to:

extract gradients in reference picture predictions; and

compute a sum of absolute differences (SAD) using the extracted gradients.

20. The apparatus of claim 13, wherein a bi-directional optical flow (BDOF) tool is not applied based on the mode with the illumination change.

21. The apparatus claim 13, wherein the instructions further cause the apparatus to:

perform a DMVR adaptation based on a determination that a current coding unit (CU) size is smaller than or equal to a threshold.

22. The apparatus of claim 13, wherein the instructions further cause the apparatus to:

perform a DMVR adaptation based on a determination that a current coding unit (CU) size is larger than or equal to a threshold.

23. The apparatus of claim 13, wherein the instructions further cause the apparatus to:

apply a bi-prediction weighting with refined motion vector (MV).

24. The apparatus of claim 13, wherein the instructions further cause the apparatus to:

derive bi-prediction weighting parameters with the DMVR process.