CLAIMS:

1. A method for video decoding in a decoder, comprising:

decoding, from a coded video bitstream, a first syntax element signaled at a first coding level, the first syntax element indicating a maximum number of merge motion vector prediction (MVP) candidates, the first coding level being higher than a picture parameter set (PPS) level;

determining the maximum number of merge MVP candidates based on the first syntax element; and

reconstructing coding blocks associated with the first coding level based at least on the maximum number of merge MVP candidates;

the method further comprising:

decoding, from the coded video bitstream and based on a condition being satisfied, a second syntax element signaled at a second coding level, the second syntax element indicating a maximum number of merge candidates for one of a geometric merge mode, a subblock-based merge mode, and an intra block copy (IBC) merge mode;

wherein in response to that the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the geometric merge mode:

the maximum number of merge candidates is a maximum number of geometric merge mode merge candidates;

the second syntax element indicates the maximum number of geometric merge mode merge candidates; and

the method further includes determining the maximum number of geometric merge mode merge candidates based on the second syntax element;

in response to that the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the subblock-based merge mode:

the maximum number of merge candidates is a maximum number of subblock-based merge MVP candidates;

the second syntax element indicates the maximum number of subblock-based merge MVP candidates; and

the method further includes determining the maximum number of subblock-based merge MVP candidates based on the second syntax element;

in response to that the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the IBC merge mode:

the maximum number of merge candidates is a maximum number of IBC merge block vector prediction (BVP) candidates;

the second syntax element indicates the maximum number of IBC merge BVP candidates; and

the method further includes determining the maximum number of IBC merge BVP candidates based on the second syntax element.

2. The method of claim 1, wherein the first coding level is a sequence level and the first syntax element is signaled in a sequence parameter set (SPS).

3. The method of claim 1, wherein

the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the geometric merge mode;

the condition is the geometric merge mode being enabled at the second coding level and the maximum number of merge MVP candidates being larger than or equal to 3.

4. The method of claim 1, wherein

the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the subblock-based merge mode;

the condition is an affine mode being enabled at the second coding level.

5. The method of claim 1, wherein

the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the IBC merge mode;

the condition is the IBC merge mode being enabled at the second coding level.

6. The method of claim 1, wherein the first coding level and the second coding level are a sequence level.

7. The method of claim 4, wherein the second syntax element is modified at a coding level that is lower than the second coding level.

8. The method of claim 7, wherein the first coding level and the second coding level are a sequence level, and the coding level that is lower than the second coding level is a picture level.

9. An apparatus for video decoding, comprising processing circuitry configured to:

decode, from a coded video bitstream, a first syntax element signaled at a first coding level, the first syntax element indicating a maximum number of merge motion vector prediction (MVP) candidates, the first coding level being higher than a picture parameter set (PPS) level;

determine the maximum number of merge MVP candidates based on the first syntax element; and

reconstruct coding blocks associated with the first coding level based at least on the maximum number of merge MVP candidates;

wherein the processing circuitry is further configured to:

decode, from the coded video bitstream and based on a condition being satisfied, a second syntax element signaled at a second coding level, the second syntax element indicating a maximum number of merge candidates for one of a geometric merge mode, a subblock-based merge mode, and an intra block copy (IBC) merge mode;

wherein in response to that the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the geometric merge mode:

the maximum number of merge candidates is a maximum number of geometric merge mode merge candidates;

the second syntax element indicates the maximum number of geometric merge mode merge candidates; and

the method further includes determining the maximum number of geometric merge mode merge candidates based on the second syntax element;

in response to that the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the subblock-based merge mode:

the maximum number of merge candidates is a maximum number of subblock-based merge MVP candidates;

the second syntax element indicates the maximum number of subblock-based merge MVP candidates; and

the method further includes determining the maximum number of subblock-based merge MVP candidates based on the second syntax element;

in response to that the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the IBC merge mode:

the maximum number of merge candidates is a maximum number of IBC merge block vector prediction (BVP) candidates;

the second syntax element indicates the maximum number of IBC merge BVP candidates; and

the method further includes determining the maximum number of IBC merge BVP candidates based on the second syntax element.

10. The apparatus of claim 9, wherein the first coding level is a sequence level and the first syntax element is signaled in a sequence parameter set (SPS).

11. The apparatus of claim 9, wherein

the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the geometric merge mode;

the condition is the geometric merge mode being enabled at the second coding level and the maximum number of merge MVP candidates being larger than or equal to 3.

12. The apparatus of claim 9, wherein

the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the subblock-based merge mode;

the condition is an affine mode being enabled at the second coding level.

13. The apparatus of claim 9, wherein

the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the IBC merge mode;

the condition is the IBC merge mode being enabled at the second coding level.

14. The apparatus of claim 9, wherein the first coding level and the second coding level are a sequence level.

15. The apparatus of claim 12, wherein the second syntax element is modified at a coding level that is lower than the second coding level.

16. A non-transitory computer-readable medium storing instructions which when executed by a computer for video decoding cause the computer to perform:

decoding, from a coded video bitstream, a first syntax element signaled at a first coding level, the first syntax element indicating a maximum number of merge motion vector prediction (MVP) candidates, the first coding level being higher than a picture parameter set (PPS) level;

determining the maximum number of merge MVP candidates based on the first syntax element; and

reconstructing coding blocks associated with the first coding level based at least on the maximum number of merge MVP candidates;

decoding, from the coded video bitstream and based on a condition being satisfied, a second syntax element signaled at a second coding level, the second syntax element indicating a maximum number of merge candidates for one of a geometric merge mode, a subblock-based merge mode, and an intra block copy (IBC) merge mode;

wherein in response to that the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the geometric merge mode:

the maximum number of merge candidates is a maximum number of geometric merge mode merge candidates;

the second syntax element indicates the maximum number of geometric merge mode merge candidates; and

the method further includes determining the maximum number of geometric merge mode merge candidates based on the second syntax element;

in response to that the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the subblock-based merge mode:

the maximum number of merge candidates is a maximum number of subblock-based merge MVP candidates;

the second syntax element indicates the maximum number of subblock-based merge MVP candidates; and

the method further includes determining the maximum number of subblock-based merge MVP candidates based on the second syntax element;

in response to that the one of the geometric merge mode, the subblock-based merge mode, and the IBC merge mode is the IBC merge mode:

the maximum number of merge candidates is a maximum number of IBC merge block vector prediction (BVP) candidates;

the second syntax element indicates the maximum number of IBC merge BVP candidates; and

the method further includes determining the maximum number of IBC merge BVP candidates based on the second syntax element.