

## Significant revisions of the 2012 M Standards for the 2019 M Standards

2019 M-Standards	Significant revisions
M-203-1 – Approach Roads	Notes were revised in the “Typical Section for Approach (Access) Road” detail that describes how far back to pave from the roadway edge of pavement for HMA approach roads in different situations.
M-208-1 - Temporary Erosion Control	A complete redrawing of the sheets to bring the standard up to date with best water quality practices.
M-216-1 – Soil Retention Covering (new)	Added to correspond with the CDOT Standard Special Provision 216, Soil Retention Covering. Drawing details were modified to reflect standard installation requirements and practices. An earth anchor option was added to the Turf Reinforcement Mats (TRMs) Slope Application for use on steeper slopes, adverse soil and higher hydraulic stress applications.
M-412-1 Concrete Pavement Joints	Changed the Tie Bar spacing from 30” to 36”. The 14 foot concrete slabs were changed to 13 foot concrete slabs. The Doweled Transverse Contraction Joints and Transverse Construction Joints were changed to Transverse Contraction and Construction Joints.
M-601-1 - Single Concrete Box Culvert (Cast-In-Place)	The standard title changed to specified that it is Cast-In-Place. Updated the table to the latest LRFD requirements.
M-601-2 - Double Concrete Box Culvert (Cast-In-Place)	The standard title changed to specified that it is Cast-In-Place. Updated the table to the latest LRFD requirements.
M-601-3 - Triple Concrete Box Culvert (Cast-In-Place)	The standard title changed to specified that it is Cast-In-Place. Updated the table to the latest LRFD requirements.

M-603-1 - Metal Pipe	An Aluminized Steel Pipe was added and details and tables were added and updated for consistency with other pipe M Standards.
M-603-2 - Reinforced Concrete Pipe	A minimum cover of 1 foot was established and details and tables were added and updated for consistency with other pipe M Standards.
M-603-3 - Precast Concrete Box Culvert	A general note added to specify that this is a precast CBC and not a cast-in-place CBC.
M-603-4 - Corrugated Polyethylene Pipe (AASHTO M294) and Polypropylene Pipe (AASHTO M330)	A Polypropylene Pipe was added and the details and tables were updated for consistency with other pipe M Standards.
M-603-5 - Polyvinyl Chloride (PVC) Pipe (AASHTO M304)	The details and tables were updated for consistency with other pipe M Standards.
M-603-6 - Steel Reinforced Polyethylene Ribbed Pipe (AASHTO MP 20) (new)	Added to allow for Steel Reinforced Polyethylene Ribbed Pipes (30" to 60" in diameter) for use as drainage culverts on projects.
M-603-10 - Concrete and Metal End Sections	General Note 13 was added for the option that reinforced concrete pipe end sections may be made with synthetic fibers instead of steel.
M-603-12 - Traversable End Sections and Safety Grates (new)	To allow vehicles to traverse end sections and grates for metal and concrete drainage pipes without their wheels being snagged.
M-606-1 - Midwest Guardrail System (MGS) Type 3 W-Beam 31 Inches (new)	Raised the height of Type 3 W-Beam guardrail from 28" to 31". Replaced the obsolete M-606-1 - Guardrail Type 3 W-Beam standard.
D-606-2 - Midwest Guardrail System (MGS) Type 3 W-Beam 31 Inches without Blocks (new)	Developed for locations where using the 12 inch offset blocks would cause problems with alignment, narrow shoulders, and steep slopes.
M-606-1 - Guardrail Type 3 W-Beam	It was deleted.
M-606-13 - Guardrail Type 7 F-Shape Barrier	Revised to be consistent with the current 31" M-606-1 MGS M Standard.
M-606-15 - Guardrail Type 9 Single Slope Barrier (new)	Added to have a permanent concrete barrier that is compliant with the latest MASH requirements.

M-607-4 - Deer Fence, Gates, and Ramps	Added wildlife game ramps. Revised general notes and added details to be consistent with the US Fish and Wildlife deer fences and ramps requirements.
M-608-1 – Curb Ramps	It was completely revised. The turning spaces are now included in the Pay Area. The general notes have been greatly revised to add significant guidance and to remove inconsistencies with PROWAG manual. Added CDOT’s standard practice regarding construction tolerances. More curb ramps details have been added to show different curb ramp types out in the field.
M-609-1 - Curbs, Gutters, and Sidewalks	The spacing of tie bars was increased to 3 feet.
M-611-2 – Deer Guard (new)	The was added to have a Deer Guard M Standard.