

**MASS Updates**  
DIV 85 - Traffic Control

Comment	Response
<p>If I might make the suggestion, all the he/his/him's are a bit out of control. Flipping through Division 10 really makes one wonder how much of the MASS has been copied and pasted since the 80's rather than being kept current.</p> <p>I saw the "Working Titles" disclaimer, but I can't imagine it would take more than an hour or two to find-and-replace all the he/his/him's with they/their/them/"the Contractor"/whatever.</p>	<p>Instances in Div 85 have been revised.</p>
<p>Which Miscellaneous sections can be moved to other MASS divisions?</p>	<p>Sections 70.09, 70.10, 70.11, 70.12, 70.14, 70.15, 70.16, 70.17, 70.21 added to new Div 85</p>
<p>Create new Division 85 titled <b>"TRAFFIC CONTROL, SIGNS AND MARKINGS, AND TRAFFIC CALMING DEVICES"</b></p>	<p>Created new division 85 titled "TRAFFIC CONTROL DEVICES".</p>
<p>Section 40.07: Move this section to Division 85</p>	<p>Moved section 40.07 to Division 85 and renumbered 85.11</p>
<p>Section 40.07: Change title of the section to <b>"PERMANENT ASPHALT <del>SPEED HUMPS</del> VERTICAL TRAFFIC CALMING DEVICES"</b></p>	<p>Coordinated and changed section 85.11 title to "PERMANENT VERTICAL TRAFFIC CALMING DEVICES"</p>
<p>Section 40.07: Change all references to 'asphalt speed hump(s)' to 'asphalt vertical traffic calming devices'</p>	<p>Coordinated and changed all references except of pay items.</p>
<p>Move Section 70.09 and renumber</p>	<p>Moved section 70.09 to Division 85 and renumbered 85.02</p>
<p>Add to Article 70.09 <b>RESET PARKING METERS</b> the following: <u>"If any part of the Contractor's project impacts on-street parking in the Central Business District (the boundaries of which are defined in the Anchorage Municipal Code) from Monday through Saturday, the Contractor must apply for a Parking Meter Hood Contract from EasyPark (or Successor entity). Proof of parking meter rental agreement must be provided to the Traffic Engineer prior to issuance of an approved TCP."</u></p>	<p>Coordinated with MOA, added to section 85.05 traffic maintenance Article 5.2 Traffic Control Plan in lieu of Reset Parking Meters.</p>
<p>Move Section 7.10: Add new Article to require that removal of any portion of a crosswalk marking requires removal of the entire marking, in kind (MMA to MMA, paint to paint, depth/application to depth/application), across the entire width of the roadway</p>	<p>Moved section 70.10 to Division 85 and renumbered 85.03</p>
<p>Section 70.10: Anti-Skid Aggregate for MMA (example special provision provided).</p>	<p>Added Anti-Skid Aggregate language to section 85.03</p>

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<p>Replace this section (70.10.3.I) with the following: The Contractor will provide the necessary pavement marking control points at 50 foot intervals and all changes of direction or changes in basic configuration. These points shall be used in preliminary spotting of lines before striping is commenced. The Contractor shall be responsible for preliminary spotting of pavement markings and must obtain approval from the Engineer before work on permanent pavement markings may begin. Examples of pavement markings subject to spotting include, but are not limited to, longitudinal lines, crosswalks, stop bars, symbols, and letters.</p>	<p>Replaced section 70.10.3.I and renumbered 85.03.3.H</p>
<p>Section 70.10, Article 10.3.L:  <u>Depth of Inlay Slot:</u> this paragraph has more to do with tolerance and measurement than construction. Consider taking this entire paragraph and using it in place of the existing language in 10.3.K.7.  <u>Add the following:</u> Install markings in the same work shift as the grooving operation. Markings will be measured flush with the pavement surface, unless otherwise approved by the Project Inspector and Traffic Engineer.</p>	<p>Revised Section 70.10.3.L and renumbered 85.03.3.I</p>
<p>Section 70.10, Article 10.5: Add a pay item for paint/MMA on curb nose. Having it incidental to the concrete work in Section 30.02, Article 2.4 is stupid. The painting/striping and concrete work is performed by two different subcontractors. Contractors usually forget it's incidental, don't get a price from their striping subs, and the striping subs don't perform the work because they didn't bid on it. Getting the striping sub to show up on your job in the first place is almost a miracle, let alone getting them back to perform missed work.</p>	<p>Added "Curb Nose Markings" Pay Item to section 85.03</p>
<p>Move Section 70.11: Revise Article 11.2 to read "...permanent installation for Type XI reflective sheetings..." at "Materials" and "B. Sheet Reflective Materials" and "C. (final paragraph).</p>	<p>Moved section 70.11 to Division 85 and renumbered 85.04</p>
<p>Section 70.11: Sight distance clearing limits, may include detail.</p>	<p>Coordinated and determined that this will be handled on a case-by-case basis as a project special provision and addressed in future DCM revisions.</p>

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Section 70.11, Article 11.2 & 11.2.B: Revise type IX reflective sheeting to type XI reflective sheeting.	Changed type IX to type XI in section 85.04
Section 70.11, Article 11.2: Confirm concrete section reference remains viable with update.	All section and detail references outside of this section will need to be confirmed with update.
Section 70.11, Article 11.2 Materials: The concrete specs in division 30 are being updated in MASS. This section calls for Class B-3 concrete mix to be used for sign foundations. I don't know if Class B-3 mix will exist in the new revision.	Coordinated and confirmed Class B-3 Concrete will still remain in M.A.S.S. and can still be used for sign foundations.
<u>Section 70.11, Article 11.2A, Replace Paragraphs 4, 5, 6, and 7 with the following:</u> Use single piece sign panels for all signs 72 inches or less in the horizontal direction. For larger signs, assemble multiple piece sign panels with vertical seams only. Horizontal seams are only permitted when the height of the panel exceeds 72 inches.	Updated section 70.11.2.A and renumbered 85.04.2.A
Section 70.11, Article 11.2.B: <u>Replace Paragraph 8 with the following:</u> Use single piece reflective sheeting on sign panels 48 inches or less in height or width. For larger signs, butt splicing of reflective sheeting is permitted except that splices are not permitted within two inches of the edge of the sign panel.	Updated section 70.11.2.B and renumbered 85.04.2.B
Section 70.11, Article 11.2.C: Add Anchorage Traffic Manual Addendum to list.	Updated section 70.11.2.C and renumbered 85.04.2.C.
Section 70.11, Article 11.2.D: <u>Revise the first paragraph to the following:</u> All rectangular signs, over forty-eight inches (48") measured along the horizontal axis, and all diamond shape signs with a long edge forty-eight inches (48") or larger shall be framed unless otherwise specified.  <u>Add a new first sentence to the last paragraph:</u> Use framing members made from aluminum alloy 6061-T6.	Updated section 70.11.2.D and renumbered 85.04.2.D

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<p>Section 70.11, Article 11.3: Insert the following after the fifth paragraph: Attach a label to the back of all standard signs in the lower right corner. Make the label at least 15 square inches and show the year the sign was purchased from the manufacturer. Show the last two digits of the year in clear and bold numbers. Make the label from ASTM D4956 Type I or brighter retroreflective sheeting. Use background and legend colors meeting the following table.</p>	<p>Added paragraph to section 70.11.3 and renumbered 85.04.3</p>
<p>Section 70.11, Article 11.3 Construction: There is no cure time specified for concrete foundations before signs are installed. This could be a problem if signs are installed too soon and wind loads are present.</p>	<p>Added language to require post be plumb to the ground after foundation has cured to 70.11.3 and renumbered 85.4.3.</p>
<p>Section 70.11, Article 11.3: We may want to make incidental to the contract, minimal-to-moderate trimming of foliage that blocks the sight lines for new or renewed signage within the project. No trimming would of course take place without the authorization of the Engineer (Inspector). Without naming names, let's just say I would not be surprised to see a contractor tie back a shrub, install a new sign, then release the shrub to spring back, waiting for an extra.</p>	<p>See other related comments. Coordinated and determined pruning immediately around trees will be incidental to Section 85.04 the Standard Signs and clearing in advance of signs will be will be handled on a case-by-case basis as a project special provision.</p>
<p>Section 70.11, Article 11.3 Construction: Second paragraph states to dispose of excavated material along adjacent roadway. This leads to debris piles left behind in seeded areas. This should be changed to excavated material shall be hauled off-site.</p>	<p>Updated section 70.11.3 and renumbered 85.04.3.</p>
<p>Section 70.11, Article 11.3 Construction: Tree pruning to make signs visible should be added to this section in some capacity or reference MASS "Section 20.05 CLEARING". OR Clearing of signs should be added to MASS Section 20.05 CLEARING as item C. If pruning is added to Standard Signs, language should include... this work is incidental and to be done by an arborist in accordance with ANSI A300. Also, a sight triangle diagram could be added to the detail sections in the back, see below.</p>	<p>See other related comments. Coordinated and determined pruning immediately around trees will be incidental to Section 85.04 the Standard Signs and clearing in advance of signs will be will be handled on a case-by-case basis as a project special provision. Created detail 85-31</p>
<p>Section 70.11, Article 11.3.3: Add wording requiring replacement of existing signs in lieu of relocation (Last Sentence Page 20)</p>	<p>Coordinated with MOA. Replacement of existing signs to be relocated is paid under the Standard Sign and Salvage Sign pay items. Revised language to clarify and renumbered 85.04.3</p>

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Section 70.11, Article 11.4: Clarify that single panel double sided signs are paid as one panel.	Updated sign panel language in section 85.04 to reflect that payment is made per sign face.
Section 70.12, Revise Article 12.1 to read "The Contractor shall provide a TCP approved by the Traffic Engineer <u>or their designee...</u> "	Revised Article 12.1 and renumbered 85.05.1
Section 70.12, Article 12.2: Change first sentence of first paragraph to, "A TCP is a graphic/text plan that describes traffic control to be used for facilitation of road and pedestrian facility users (drivers, bicyclists, and pedestrians, which include people with disabilities) through a temporary traffic control zone or an incident area."	Updated Article 70.12.2 to 85.05.2 and revised the first sentence of the first paragraph to "A TCP is a graphic/text plan that describes traffic control to be used to assist road and non-motorized facility users (drivers, bicyclists, and pedestrians, which include people with disabilities) through a temporary traffic control zone or an incident area."
Section 70.12, Revise Article 12.2 to read a) "The Contractor shall submit a TCP for the project prepared and signed by a certified traffic control designer." b) "In addition, the Contractor shall provide and maintain a pedestrian traffic route through and/or around the Project..." c) "The route shall be established in a location within or near the Project limits..."	Revised Article 12.2 and renumbered 85.05.2
Section 70.12, Revise Article 12.3 to read "4-foot high construction orange safety fencing shall be required along the pedestrian route..."	Revised Article 12.3 and renumbered 85.05.3
Section 70.12, Revise Article 12.6 to read a) Remove 1) Anchorage Chamber of Commerce, and 2) Alaska Travel Industry Association, and 14) Volunteer Fire Departments. b) Revise 10) Anchorage <del>Pupil</del> Student Transportation. c) Add (and number appropriately) · Alaska Railroad (where applicable), and · Major Tour Operators	Revised Article 12.6 and renumbered 85.05.6

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Section 70.12, Revise Article 12.6 (page 26) to read “The Contractor shall advertise the closure through the Municipality of Anchorage’s construction project and road closure website (www.anchorageroads.org) <del>and subscriber mailing list.</del> ”	Revised Article 12.6 and renumbered 85.05.6
Section 70.12, Revise Article 12.6 (page 27) to read “The published advertisement shall be displayed through the www.anchorageroads.org website <del>and subscriber mailing list.</del> The Contractor shall provide the Traffic <del>Department</del> <u>Engineer</u> with the Contractor’s name, effective dates <u>and times</u> of the closure, and detailed traffic information. The Traffic Department <del>will</del> <u>may</u> publish the information electronically on a weekly basis until the completion of the project.”	Revised Article 12.6 and renumbered 85.05.6
Section 70.12, Revise Article 12.9 (page 28) to read a) “The Contractor shall provide access through and around the project for emergency vehicles.” b) “Unless approved by the Traffic Engineer on the TCP, flagger(s) are required at all times when one-lane traffic is in effect.”	Revised Article 12.9 and renumbered 85.05.9
Section 70.13, Article 13.3C: Update contact information for padlocks.	Not applicable to Division 85
The larger projects tend to require a work plan that includes public notice by the contractor as stated in subsection ‘M’ as attached. Our smaller projects do not require this. I’d like to recommend that we create a special provision, for all projects, that requires this public notice by the contractor. We think it could go in section 70.12.6 Public Notice. (Example Work Plan Public Notice special provision provided)	Added public notice language in section 85.05
Section 70.17: Modify section to mailbox installation and add removal of mailboxes, installation of mailboxes, and cluster mailboxes pay items.	Coordinated and modified section 85.09 to include Relocate Cluster Mailbox and added detail 85-34
Move Section 70.21 “FLEXIBLE DELINEATORS”	Moved section 70.21 to Division 85 and renumbered 85.10

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<p><u>Section 70.21, Article 21.3</u> Revise the last two sentences in the first paragraph as follows: The Delineator shall consist of a corrosion-resistant drivable ground anchor and replaceable tubular composite post, <b>color as indicated in the plans</b>, with reflective sheeting for nighttime visibility. Minimum outside diameter of the post shall be 2", minimum height <b>42"</b>. Atypical to see 5' tall delineator on roadways projects, delineators that match the associated striping (yellow for median, white for shoulder) reinforces typical traffic control color familiarity.</p>	Updated section 70.21.3 and renumbered 85.10.3
<p>The only section of the MASS2015 regarding anchors is Division 80 Article 4.2 into concrete. The section discusses the types of rods into concrete and its installation. There is no section where Post installed anchors can be referenced under the MASS to develop a specification. Is there any sections that can be used as reference?</p>	Coordinated and determined this will be addressed in a different Division.
<p>(Create new Section for Permanent Radar Speed Signs?)</p>	Coordinated with MOA. Radar speed signs will be moved to Section 80
<p>The Traffic Safety Division supports creation of a M.A.S.S. Division 85 for our work product. Following are new details, amended details, and the movement of text from various other M.A.S.S. Divisions into this new Div. 85.</p>	Created new division 85
<p>Move Detail 40-3 "Standard Speed Hump" to Division 85 and revise to incorporate changes that reflect milling existing pavement (subject to caveat for new pavement) to a depth of 2" prior to installing new asphalt.</p>	Moved detail 40-3 to Division 85, changed detail to 85-35 Sinusoidal Speed Hump, and revised to reflect milling.
<p>Add new Details for Speed Cushion and Flat-Topped Speed Table to Division 85.</p>	Moved details 40-4, 5, and 6 to division 85 and renumbered to to 85-37, 38, and 39
<p>1. New Detail Vertical Traffic Calming Devices: a) Speed Hump b) Speed Cushion c) Speed Table d) Raised Concrete Crosswalk</p>	<p>Moved detail 40-3 to Division 85, changed detail to 85-36 Sinusoidal Speed Hump Moved details 40-4, 5, and 6 to division 85 and renamed to to 85-37, 38, and 39 Coordinating raised crosswalk with PM&amp;E</p>

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Something that comes up on our Private Development warranty inspections are the differences in MH and monument depths (at grade) between storm, sewer and water structures and monuments. If we could get the depth to be consistent across all utilities it would make construction and inspections easier.	Coordinated with MOA. Details 70-4 & 70-5 will remain in section 70.
Add Section and Detail for sidewalk and trail counters. Traffic and HDL have been developing specification and can provide to PM&E.	Added section 85.12 Multi-Modal Counters and details 85-41 and 85-42
Revise Index as needed to move identified Details to new Division 85.	Revised index
Detail 70-8 Terminate the intersection guide skip (IGS) on the inside crosswalk bar.	Updated and moved detail to Division 85 and renumbered 85-2
Please move the following to Division 85, and amend Section and Detail number as needed: Detail 70-8 Move and revise to Detail 85-_ Detail 70-9 Move and revise to Detail 85-_ Detail 70-10 Move and revise to Detail 85-_ Detail 70-11 Move and revise to Detail 85-_ Detail 70-12 Move and revise to Detail 85-_	Moved details to Division 85 and renumbered 85-2, 3, 4, 5, and 6
Please move the following to Division 85, and amend Section and Detail number as needed: Detail 70-13 Move and make the following changes: a) Eliminate the "solid white" gore on the downstream gore point and replace with similar gore striping to what is provided on the upstream side. b) Provide a one-foot offset between the face of curb and the solid white lines to allow maintenance via MOA striper truck. c) Change stripe on RH side of the island to single 4" yellow stripe starting and ending at the midpoint of the bullnose of the island d) Change title to <b>"PASSING ON BOTH SIDES OF A RIGHT HAND SIDE OBSTRUCTION"</b>	Moved detail to Division 85 and renumbered 85-7 Updated detail striping Coordinated with MOA, provided 18" offset between face of curb and solid lines. Changed detail title
Detail 70-13 Remove solid white paint for the downstream gore and use white chevron markings similar to the upstream gore.	Updated and moved detail to Division 85 and renumbered 85-7
Detail 70-14 Include Stencils for yield shark teeth and lane drop stripes. Below are borrowed from DOT CR Traffic Detail.	Added stencils to detail and renumbered 85-8A/B



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Detail 70-14 Move and revise to match current MOA Traffic Engineering stencils	Moved detail to Division 85 and renumbered 85-8A, B Added current stencils
Detail 70-15. Move and revise to Detail 85-__	Moved detail to Division 85 and renumbered 85-11
New Detail (70-15). Provide internal use only railroad crossing marking per detail drawing made at our request of Glenda Radvansky	Coordinated with MOA and included additional dimensions to the "X" marking.
Create new Detail sheet for pending compact roundabout arrow markings (leave blank – except for title and detail number - for now and identify as “Pending”	Created new detail 85-16
<p>Details 70-16 through 70-19:  <u>Notes, include in curb return details as relevant.</u>            Continue lane “skip” striping through intersection            Where a striped shoulder is present, delete uttermost fog line at intersection or wrap to side street as applicable.            Match side street striping if present            Continue centerline striping for two-way-left-turn lanes or when there is no dedicated turn lanes.</p>	Updated and moved details to Division 85 and renumbered 85-12, 13, 14, and 15
<p>Detail 70-17 Move and revise to Detail 85-__ and made the following changes:            a) Delete reference to “12’ to 50’ MAXIMUM’ (for STOP sign location” and replace with “As determined by Traffic Engineer, Maximum 15’.”</p>	Updated, moved detail to Division 85 and renumbered 85-13
Detail 70-17: Revise maximum distance of location of stop sign to stop bar. Note 2 indicates as near to the stop bar as practical. Maximum distance should be no greater than 15 feet.	Coordinated distances and moved detail to Division 85 and renumbered 85-13
Detail 70-18: Delete Note 3. Replace with “As determined by Traffic Engineer” Detail 70-18. Move and revise to Detail 85-_. See comment above	Updated, moved detail to Division 85 and renumbered 85-14
Detail 70-19. Move and revise to Detail 85-__. See comment above	Updated, moved detail to Division 85 and renumbered 85-15
<p>Details 70-20 through 70-24:  <u>Note 6: Revise “all signs zees” to “all sign framing”</u></p>	Updated and moved details to Division 85 and renumbered 85-17, 18, 19, 20, and 21
Details 70-20 through 70-27. Move and revise to Details 85-__ through 85-__	Added details to Division 85

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<p>Detail 70-27:  <u>Panel Mounting Height:</u> Replace “Expressway/Freeway” with “Posted Speed Limit &gt;= 50MPH”. Functional classifications can be unintuitive – unlikely to affect MOA installs. Only impact of this edit would be Tudor Curve and South chunk of C st having higher signs: they are 50MPH but not expressways.</p>	<p>Updated and moved detail to Division 85 and renumbered 85-24</p>
<p>Details 70-28 and 70-29 Change sign code from “D3-1D) to “D3-101”</p>	<p>Updated, moved details to Division 85 and renumbered 70-28, 30, and 32 to 85-25, 27, and 29</p>
<p>Detail 70-31:  <u>Post Embedment:</u> change “12” Max” to “12” Min”  <u>Note:</u> Add “Separate sign installations are not permitted within 7’ of each other”  <u>Bolts:</u> Swaps 3/8” bolts to 5/16” bolts for consistency with other details, current practice, and maintenance stock.</p>	<p>Updated and moved detail to Division 85 and renumbered 85-28</p>
<p>Detail 70-31: Modify post requirement to 2.5” PST post size on all signs.</p>	<p>Modified detail 85-28</p>
<p>Detail 70-31: Remove 2” post size if new Muni standard is 2.5”.</p>	<p>Updated post size in detail 85-28</p>
<p>Detail 70-31: Paint &amp; Sign has been moving in the direction of making all signs – regardless of sign surface area – set on a minimum 2.5” P.S.T.  There has been sufficient justification provided by the Foreman as to the benefit of doing so. Over time, it’ll reduce the need to maintain two sizes of P.S.T. at the Shop, and, the larger size would be more resistant to wind loads and damage from plowing operations.</p>	<p>Updated post size in detail 85-28</p>
<p>Detail 70-31 Move and delete table. And add the following notes  a) PERFORATED STEEL TUBES (P.S.T.)  b) 12 ga. - .105 Wall Thickness  c) Post size: 2 ½” X 2 ½” Embedment Depth 33” Concrete Depth 30”  d) Revise dimension of “From finished landscape grade to read “3” (min.) to 4” (max).  e) Change bolt diameter to ____ (Zak)</p>	<p>Updated and moved detail to Division 85 and renumbered 85-28  Coordinated with MOA, not changing bolt diameter</p>

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<p>Detail 70-33: <u>Add Notes:</u> 1. Use pole plate assemblies shown here to install signs on tapered mast arms and sign requiring framing on light poles. 2. For signs on mastarms install a minimum of two pole plates for each sign. Install an additional pole plate per 10 square feet of sign. 3. For signs on mastarms maintain minimum 18' underclearance from the vehicular travelled way <u>Sign Framing:</u> Modify appearance in detail to show windbeams, add a leader calling out the windbeam. <u>Plate Spacing:</u> Include a table for pole plate spacing similar to the following:</p>	<p>Updated and moved detail to Division 85 and renumbered 85-30</p>
<p>Detail 70-40: Cluster mailbox pad - Need to have a detail showing the thickness and rebar size with layout for the rebar.</p>	<p>Coordinated and determined this will be addressed in Division 30.</p>
<p>1. Add new Detail pages for the following, and insert at appropriate location following (revised location) Detail 70-13 a) Gapped crosswalk alignment (see Drawing from HDL labelled "Standard Layout for High Visibility Crosswalk With Gapped Walkway" b) Gapped crosswalk markings (see Drawing from HDL labelled "Standard Layout for Skewed High Visibility Crosswalk With Gapped Walkway" c) MMA/Paint matrix</p>	<p>Added details to Division 85 and renumbered 85-9 and 10. Coordinated with MOA and will not include MMA Paint matrix. Matrix may be included in future DCM updates.</p>
<p>Consider the inclusion of a new detail that clearly indicates how flexible delineators are including in roadway medians. The following are examples to 'borrow' from AKDOT CR standard detail</p>	<p>Added flexible delineator detail 85-34 to Division 85</p>
<p>Consider the inclusion of a new detail that clearly indicates all striping types and their applications. A rough example is below. Coordinate with Traffic Safety on details.</p>	<p>Coordinated with MOA and will not include this detail. May be included with future DCM update.</p>