

Design Standards Letter

Letter Number: P-1998-04

Letter Date: 07/14/1998

Effective Date: 10/01/1998

Section/Plan No.: P203.40F, P203.41F, P502.10F, P604.05C, P607.20F, P901.02, P901.30A, P203.20E, P203.21E, P203.62A, P203.63A, P203.64A, P203.65A, P502.00Q, P504.00C, P606.22N, P606.40B, P607.11C, P609.00I, P609.40H, P616.10V, P617.00AA, P619.10A, P703.24F, P703.25G, P703.51H, P703.56F, P703.71E, P703.73E, P731.10N, P732.00M, P732.10D, P806.10A, P901.00A, P901.01X, P901.80B, P902.10L, P902.15G, P902.40L, P902.50I, P902.70F, P902.80, P903.03AR, P903.05E, P903.06E, P903.07E, P903.08D, P903.10V, P903.12Q, P903.60U, P614.11, P625.00, P626.00, P203.75A, PM203.40F, PM203.41F, PM502.10F, PM604.05C, PM607.20F, PM608.00E, PM901.02, PM901.30A, PM203.20E, PM203.21E, PM203.62A, PM203.63A, PM203.64A, PM203.65A, PM504.00C, PM604.10B, PM604.11B, PM604.12B, PM604.13B, PM604.14B, PM604.15B, PM606.22N, PM606.40B, PM607.11C, PM609.00I, PM609.40H, PM616.10V, PM617.00AA, PM619.10A, PM702.01F, PM702.02C, PM703.60C, PM706.35E, PM731.10N, PM732.00M, PM732.10D, PM806.10A, PM901.00S, PM901.01X, PM901.80B, PM902.10L, PM902.15G, PM902.40L, PM902.50I, PM902.70F, PM902.80C, PM903.03AR, PM903.05E, PM903.06E, PM903.07E, PM903.08D, PM903.10V, PM903.12Q, PM903.60U, PM614.11, PM625.00, PM626.00, PM703.10, PM703.11, PM703.12, PM703.13, PM703.14, PM703.15, PM703.37, PM703.38, PM703.40, PM703.41, PM703.42, PM703.43, PM703.44, PM703.45, PM703.80, PM703.81, PM703.82, PM703.83, PM703.84, PM703.85, PM203.75A, PM703.20A, PM703.21A, PM703.22, PM703.23A, PM703.24A, PM703.25, PM703.35, PM703.36, PM703.50, PM703.51, PM703.52, PM703.53, PM703.54, PM703.55, PM703.70, PM703.71, PM703.72, PM703.73, PM703.74, PM703.75

Subject: Revised, New and Deleted Standard Plans (English and Metric)

Body

The following is a listing of errata corrections as well as revised, new and deleted English and Metric standard plans with a brief description of each. These changes are effective with the October, 1998 bid opening.

Although not individually listed, the revision series letter of each Metric standard plan has been changed to reflect the same letter as its English equivalent. This change was previously referred to in Standard Plans Letter No. 3, 1997.

ENGLISH ERRATA CORRECTIONS

203.40F TYPICAL DETAILS-RAMPS FOR INTERCHANGES (OTHER THAN 6:1 FORESLOPE)

Length of return taper for "off" ramps corrected from 360' to 300'.

203.41F TYPICAL DETAILS-RAMPS FOR INTERCHANGES (6:1 FORESLOPE)

Length of return taper for "off" ramps corrected from 300' to 240'.

502.10F DOWEL SUPPORTING UNITS

Dowel lubricating detail clarified.

604.05C PIPE CULVERT HEADWALLS - TYPE S

Culvert flowline corrected to be flush with that of headwall.

607.20F WOVEN WIRE FENCE

General note pertaining to AASHTO fence (design number) removed per Design Committee recommendations.

901.02 CABLE, CONDUIT AND TRENCHING

Aligned trench location detail and added conduit labels to location behind guardrail detail.

901.30A BASE MOUNTED CONTROL STATION

All reference letters shown in drawing also shown in list of materials.

REVISED ENGLISH STANDARD PLANS

203.20E SUPERELEVATION SPIRALS AND WIDENING (UNDIVIDED HIGHWAYS)

Definition of superelevation runoff and method of developing superelevation revised to more closely comply with the AASHTO Green Book.

203.21E SUPERELEVATION SPIRALS AND WIDENING (DIVIDED HIGHWAYS)

Definition of superelevation runoff revised to more closely comply with the AASHTO Green Book.

203.62A DRIVEWAY TYPE II

Optional paved strip at the end of the radius taper made mandatory on both sides of the driveway.

203.63A DRIVEWAY TYPE III

Optional paved strip at the end of the radius taper made mandatory on both sides of the driveway.

203.64A DRIVEWAY TYPE IV

Optional paved strip at the end of the radius taper made mandatory on both sides of the driveway.

203.65A DRIVEWAY TYPE IV

Optional paved strip at the end of the radius taper made mandatory on both sides of the driveway.

502.00Q CONCRETE PAVEMENT AND BASE APPURTENANCES

Sheet 2 of 2

No. 3 rebars on a 6" x 12" spacing allowed as a substitute for wire mesh.

504.00C CONCRETE APPROACH PAVEMENT

Sheet 1 of 2

Joint details for skewed pavements revised to accommodate suitable joints on larger skews. No. 3 rebars on a 6" x 12" spacing allowed as a substitute for wire mesh.

Sheet 2 of 2

Concrete sill incorporated into expansion joint between approach pavement and standard roadway pavement.

606.22N BRIDGE ANCHOR SECTION (SAFETY BARRIER CURB ON BRIDGE)

Sheet 1 of 2

Formerly 1 of 1. Details including post length and spacing as well as dimensions of structural steel tubing blocks added. The new bridge anchor section is expected to decrease the complications of hand forming the safety barrier curb end post.

Sheet 2 of 2

Details shown for fabrication of the connector plate between the Type E guardrail and the concrete safety barrier curb.

606.40B GUARD CABLE - ONE STRAND

Title of drawing changed in order to more closely comply with the AASHTO Roadside Design Guide.

607.11C CHAIN LINK FENCE FOR RETAINING WALLS

Revised general notes to include chain-link fence pay item with retaining walls.

609.00I CONCRETE CURB - CURB AND GUTTER - GUTTER

Added general note requiring a minimum 4" Type 5 aggregate to be placed under all curb and gutter sections.

609.40H DRAIN BASIN, SHOULDER PAVING AND FILL SLOPE AT BRIDGE ENDS

25:1 taper added to transition from roadway width to bridge width per FHWA requirement.

616.10V TRAFFIC CONTROL DEVICES

Sheet 1 of 4

Diagrams of portable sign mounts and moveable barricade supports removed and replaced with notes pertaining to NCHRP 350 compliance.

Sheet 2 of 4

Speed limit assembly notes revised and titled. Minimum mounting height of speed limit assembly changed to 6' minimum. Flashing arrow panel requirement notes revised. General notes revised.

Sheet 3 of 4

Added general note pertaining to use of lower speed limit to comply with local ordinance.

Sheet 4 of 4

Signs updated. Sign codes revised to comply with MUTCD naming convention. Footnotes and sign diagrams added to provide guidance for layout of each sign.

617.00AA CONCRETE TRAFFIC BARRIER

Sheet 1 of 3

Revised general notes to allow omission of doweling permanent installations when a minimum 3" resurface is placed abutting both barrier faces.

619.10A PAVEMENT EDGE TREATMENT

Revised low shoulder and open trench signing, as well as condition, signing and treatment notes. Revised and added new sign legend.

703.24F CONCRETE BOX CULVERTS, SKEW DATA

Revised headwall ends to be flush with exterior walls.

703.25G CONCRETE BOX CULVERTS, SKEW DATA (FLARED WINGS)

Revised headwall ends to be flush with exterior walls. Corrected equation for calculating "d" dimension.

703.51H CONCRETE DOUBLE BOX STRUCTURE - SKEWED

Revised headwall ends to be flush with exterior walls.

703.56F CONCRETE DOUBLE BOX STRUCTURE - SKEWED (FLARED WINGS)

Revised headwall ends to be flush with exterior walls.

703.71E CONCRETE TRIPLE BOX STRUCTURE - SKEWED

Revised headwall ends to be flush with exterior walls.

703.73E CONCRETE TRIPLE BOX STRUCTURE - SKEWED (FLARED WINGS)

Revised headwall ends to be flush with exterior walls.

731.10N PRECAST DROP INLETS

Sheet 2 of 4

Replaced typical 11" pavement thickness with a variable table to more accurately reflect new pavement design.

732.00M FLARED END SECTION

Added reinforcement and dimensional data for 33", 72", 78" and 84" flared end sections. Revised data for 36", 42", 48", 54" and 66" sizes.

732.10D SAFETY SLOPE END SECTION

Added dimensional data for 10:1 end sections, deleted "b" dimension, and clarified safety bar requirement and installation details.

806.10A TEMPORARY EROSION CONTROL MEASURES

Sheet 2 of 5

Added Note requiring wooden stakes to be driven flush with the top of the bale, for straw bale ditch checks.

901.00S POLES AND APPURTENANCES-30'

Sheet 1 of 2

Replaced shoe base with base plate.

Sheet 2 of 2

Added note allowing drive holes in the screw anchor foundation.

901.01X POLES AND APPURTENANCES-45'

Sheet 1 of 3

Replaced shoe base with base plate. Clarified "design no." column in pole data table.

Sheet 2 of 3

Moved anchor bolt and galvanizing specifications to general notes.

Sheet 3 of 3

Added note allowing drive holes in the screw anchor foundation. Revised thickness of base plate to 1-1/4". All references to pole height changed to design number.

901.80B POWER SUPPLY ASSEMBLY

Wiring diagram revised to provide separate power legs from the meter for lighting and signals. Signal label detail revised for 240 volt service. All reference letters shown in drawing also shown in list of materials.

902.10L CONTROLLERS AND CONDUIT LOCATIONS

Removed details for Type D controller cabinet. Added details for double controller cabinet. Removed conduit depths from cabinet details since they appear in more detail on conduit location details. Corrected vertical dimensions of Type EV cabinet.

902.15G POWER SUPPLY ASSEMBLY

Wiring diagram revised to provide separate power legs from the meter for lighting and signals. Signal label detail revised for 240 volt service. All reference letters shown in drawing also shown in list of materials.

902.40L TUBULAR STEEL POSTS

Sheet 1 of 2

Revised signal arm to accommodate four signal heads. Added note clarifying sign mounting. Deleted general note concerning structural welding code.

902.50I DETECTORS

Added note requiring a separate conduit to be installed between the loop slot and the first

pull box. Revised conduit sizes and clarified conduit slot details.

902.70F SPAN WIRE DETAILS

Sheet 1 of 2

Revised legend note 17 to specify a NEMA Type 4 junction box.

902.80 TRAFFIC SIGNAL SYMBOLS

Added symbols for Type 1 and Type 2 concrete double pull boxes. Added headings to commission furnished signs table.

903.03AR SIGN MOUNTING DETAILS

Revised exit number panel mounting detail to more closely comply with the MUTCD.

903.05E TUBULAR SPAN SUPPORT - TYPE S - ONE TUBE

Removed all references to external sign lighting per Maintenance and Traffic Divisions.

903.06E TUBULAR SPAN SUPPORT - TYPE S - TWO TUBE

Removed all references to external sign lighting per Maintenance and Traffic Divisions.

903.07E TUBULAR CANTILEVER SUPPORTS - TYPE C

Removed all references to external sign lighting per Maintenance and Traffic Divisions.

903.08D TUBULAR BUTTERFLY SUPPORTS - TYPE B

Removed all references to external sign lighting per Maintenance and Traffic Divisions.

903.10V SIGN TRUSSES - OVERHEAD ALUMINUM

Sheet 1 of 6

Formerly sheet 1 of 8. Revised vertical sign clearance resulting from removal of external lighting equipment and catwalk. **Sheet 4 of 6**

Formerly 4 of 8. Deleted standard specification number from general note pertaining to grounding structures.

Sheet 5 of 6

Formerly 5 of 8. Deleted standard specification number from general note pertaining to grounding structures.

Sheet 6 of 6

Formerly 6 of 8. Revised detail for mounting exit number panel on overhead guide sign to more closely comply with the MUTCD. Removed all references to external catwalks per Maintenance and Traffic Divisions. Imported pertinent details from former sheet 7 of 8. Former sheets 7 of 8 and 8 of 8 deleted.

903.12Q SIGN TRUSSES - BUTTERFLY AND CANTILEVER - STEEL

Sheet 1 of 5

Formerly sheet 1 of 7. Revised vertical sign clearance resulting from removal of external lighting equipment and catwalk. **Sheet 3 of 5**

Formerly 3 of 7. Deleted standard specification number from general note pertaining to grounding structures.

Sheet 4 of 5

Formerly 4 of 7. Deleted standard specification number from general note pertaining to grounding structures.

Sheet 5 of 5

Formerly 5 of 7. Revised detail for mounting exit number panel on overhead guide sign to more closely comply with the MUTCD. Removed all references to external catwalks per Maintenance and Traffic Divisions. Imported pertinent details from former sheet 6 of 7. Former sheets 6 of 7 and 7 of 7 deleted.

903.60U SIGN TRUSSES - OVERHEAD STEEL

Sheet 1 of 5

Formerly sheet 1 of 7. Revised vertical sign clearance resulting from removal of external lighting equipment and catwalk. **Sheet 3 of 5**

Formerly 3 of 7. Deleted standard specification number from general note pertaining to grounding structures.

Sheet 4 of 5

Formerly 4 of 7. Deleted standard specification number from general note pertaining to grounding structures.

Sheet 5 of 5

Formerly 5 of 7. Revised detail for mounting exit number panel on overhead guide sign to more closely comply with the MUTCD. Removed all references to external catwalks per Maintenance and Traffic Divisions. Imported pertinent details from former sheet 6 of 7. Former sheets 6 of 7 and 7 of 7 deleted.

NEW ENGLISH STANDARD PLANS

614.11 BICYCLE SAFE (CURVED VANE) GRATES

625.00 HOLE PATTERN FOR PAVEMENT SLAB STABILIZATION

626.00 RUMBLE STRIPS

Formerly 203.75A.

DELETED ENGLISH STANDARD PLANS

203.75A RUMBLE STRIPS

Drawing renumbered as 626.00.

METRIC ERRATA CORRECTIONS

M203.40F TYPICAL DETAILS-RAMPS FOR INTERCHANGES (OTHER THAN 6:1 FORESLOPE)

Length of return taper for "off" ramps corrected from 108 m to 90m.

M203.41F TYPICAL DETAILS-RAMPS FOR INTERCHANGES (6:1 FORESLOPE)

Length of return taper for "off" ramps corrected from 90 m to 72 m.

M502.10F DOWEL SUPPORTING UNITS

Dowel lubricating detail clarified.

M604.05C PIPE CULVERT HEADWALLS - TYPE S

Culvert flowline corrected to be flush with that of headwall.

M607.20F WOVEN WIRE FENCE

General note pertaining to AASHTO fence (design number) removed per Design Committee recommendations.

M608.00E PAVED APPROACHES

Sheet 1 of 2

Gutter width in section a-a corrected to 675 mm.

M901.02 CABLE, CONDUIT AND TRENCHING

Aligned trench location detail and added conduit labels to location behind guardrail detail.

M901.30A BASE MOUNTED CONTROL STATION

All reference letters shown in drawing also shown in list of materials.

REVISED METRIC STANDARD PLANS

M203.20E SUPERELEVATION SPIRALS AND WIDENING (UNDIVIDED HIGHWAYS)

Definition of superelevation runoff and method of developing superelevation revised to more closely comply with the AASHTO Green Book.

M203.21E SUPERELEVATION SPIRALS AND WIDENING (DIVIDED HIGHWAYS)

Definition of superelevation runoff revised to more closely comply with the AASHTO Green Book.

M203.62A DRIVEWAY TYPE II

Optional paved strip at the end of the radius taper made mandatory on both sides of the driveway.

M203.63A DRIVEWAY TYPE III

Optional paved strip at the end of the radius taper made mandatory on both sides of the driveway.

M203.64A DRIVEWAY TYPE IV

Optional paved strip at the end of the radius taper made mandatory on both sides of the driveway.

M203.65A DRIVEWAY TYPE IV

Optional paved strip at the end of the radius taper made mandatory on both sides of the

driveway.

M504.00C CONCRETE APPROACH PAVEMENT

Sheet 1 of 2

Joint details for skewed pavements revised to accommodate suitable joints on larger skews. No. 10 rebars on a 150 mm x 300 mm spacing allowed as a substitute for wire mesh.

Sheet 2 of 2

Concrete sill incorporated into expansion joint between approach pavement and standard roadway pavement.

M604.10B PIPE CULVERT HEADWALL WITH ENERGY DISSIPATER - 450 mm PIPE.

Soft converted reinforcing steel sizes.

M604.11B PIPE CULVERT HEADWALL WITH ENERGY DISSIPATER - 600 mm PIPE.

Soft converted reinforcing steel sizes.

M604.12B PIPE CULVERT HEADWALL WITH ENERGY DISSIPATER - 750 mm PIPE.

Soft converted reinforcing steel sizes.

M604.13B PIPE CULVERT HEADWALL WITH ENERGY DISSIPATER - 900 mm PIPE.

Soft converted reinforcing steel sizes.

M604.14B PIPE CULVERT HEADWALL WITH ENERGY DISSIPATER - 1050 mm PIPE.

Soft converted reinforcing steel sizes.

M604.15B PIPE CULVERT HEADWALL WITH ENERGY DISSIPATER - 1200 mm PIPE.

Soft converted reinforcing steel sizes.

M606.22N BRIDGE ANCHOR SECTION (SAFETY BARRIER CURB ON BRIDGE)

Sheet 1 of 2

Formerly 1 of 1. Details including post length and spacing as well as dimensions of structural steel tubing blocks added. The new bridge anchor section is expected to decrease the complications of hand forming the safety barrier curb end post.

Sheet 2 of 2

Details shown for fabrication of the connector plate between the Type E guardrail and the concrete safety barrier curb.

M606.40B GUARD CABLE - ONE STRAND

Title of drawing changed in order to more closely comply with the AASHTO Roadside Design Guide.

M607.11C CHAIN LINK FENCE FOR RETAINING WALLS

Revised general notes to include chain-link fence pay item with retaining walls.

M609.00I CONCRETE CURB - CURB AND GUTTER - GUTTER

Added general note requiring a minimum 100 mm Type 5 aggregate to be placed under all curb and gutter sections.

M609.40H DRAIN BASIN, SHOULDER PAVING AND FILL SLOPE AT BRIDGE ENDS

25:1 taper added to transition from roadway width to bridge width per FHWA requirement.

M616.10V TRAFFIC CONTROL DEVICES

Sheet 1 of 4

Diagrams of portable sign mounts and moveable barricade supports removed and replaced with notes pertaining to NCHRP 350 compliance.

Sheet 2 of 4

Speed limit assembly notes revised and titled. Minimum mounting height of speed limit assembly changed to 1.8 m minimum. Flashing arrow panel requirement notes revised. General notes revised.

Sheet 3 of 4

Added general note pertaining to use of lower speed limit to comply with local ordinance.

Sheet 4 of 4

Signs updated. Sign codes revised to comply with MUTCD naming convention. Footnotes and sign diagrams added to provide guidance for layout of each sign.

M617.00AA CONCRETE TRAFFIC BARRIER

Sheet 1 of 3

Revised general notes to allow omission of doweling permanent installations when a minimum 75 mm resurface is placed abutting both barrier faces.

M619.10A PAVEMENT EDGE TREATMENT

Revised low shoulder and open trench signing, as well as condition, signing and treatment notes. Revised and added new sign legend.

M702.01F 400 mm CONCRETE PILES

Soft converted reinforcing steel sizes.

M702.02C CAST-IN-PLACE CONCRETE PILES

Soft converted reinforcing steel sizes.

M703.60C CONCRETE BOX STRUCTURE PIPE INLET

Soft converted reinforcing steel sizes.

M706.35E BAR SUPPORTS FOR CONCRETE REINFORCEMENT

Deleted concrete haunch and soft converted reinforcing steel sizes.

M731.10N PRECAST DROP INLETS

Sheet 2 of 4

Replaced typical 280 mm pavement thickness with a variable table to more accurately reflect new pavement design.

M732.00M FLARED END SECTION

Added reinforcement and dimensional data for 825 mm, 1800 mm, 1950 mm, and 2100 mm flared end sections. Revised data for 900 mm, 1050 mm, 1200 mm, 1350 mm and 1650 mm sizes.

M732.10D SAFETY SLOPE END SECTION

Added dimensional data for 1:10 end sections, deleted "b" dimension, and clarified safety bar requirement and installation details.

M806.10A TEMPORARY EROSION CONTROL MEASURES

Sheet 2 of 5

Added Note requiring wooden stakes to be driven flush with the top of the bale, for straw bale ditch checks.

M901.00S POLES AND APPURTENANCES - 9.0 m

Sheet 1 of 2

Replaced shoe base with base plate.

Sheet 2 of 2

Added note allowing drive holes in the screw anchor foundation.

M901.01X POLES AND APPURTENANCES - 13.5 m

Sheet 1 of 3

Replaced shoe base with base plate. Clarified "design no." column in pole data table.

Sheet 2 of 3

Moved anchor bolt and galvanizing specifications to general notes.

Sheet 3 of 3

Added note allowing drive holes in the screw anchor foundation. Revised thickness of base plate to 32 mm. All references to pole height changed to design no.

M901.80B POWER SUPPLY ASSEMBLY

Wiring diagram revised to provide separate power legs from the meter for lighting and signals. Signal label detail revised for 240 volt service. All reference letters shown in drawing also shown in list of materials.

M902.10L CONTROLLERS AND CONDUIT LOCATIONS

Removed details for Type D controller cabinet. Added details for double controller cabinet. Removed conduit depths from cabinet details since they appear in more detail on conduit location details. Corrected vertical dimensions of Type EV cabinet.

M902.15G POWER SUPPLY ASSEMBLY

Wiring diagram revised to provide separate power legs from the meter for lighting and signals. Signal label detail revised for 240 volt service. All reference letters shown in drawing also shown in list of materials.

M902.40L TUBULAR STEEL POSTS

Sheet 1 of 2

Revised signal arm to accommodate four signal heads. Added note clarifying sign mounting. Deleted general note concerning structural welding code.

M902.50I DETECTORS

Added note requiring a separate conduit to be installed between the loop slot and the first pull box. Revised conduit sizes and clarified conduit slot details.

M902.70F SPAN WIRE DETAILS

Sheet 1 of 2

Revised legend note 17 to specify a NEMA Type 4 junction box.

M902.80C TRAFFIC SIGNAL SYMBOLS

Added symbols for Type 1 and Type 2 concrete double pull boxes. Added headings to commission furnished signs table.

M903.03AR SIGN MOUNTING DETAILS

Revised exit number panel mounting detail to more closely comply with the MUTCD.

M903.05E TUBULAR SPAN SUPPORT - TYPE S - ONE TUBE

Removed all references to external sign lighting per Maintenance and Traffic Divisions.

M903.06E TUBULAR SPAN SUPPORT - TYPE S - TWO TUBE

Removed all references to external sign lighting per Maintenance and Traffic Divisions.

M903.07E TUBULAR CANTILEVER SUPPORTS - TYPE C

Removed all references to external sign lighting per Maintenance and Traffic Divisions.

M903.08D TUBULAR BUTTERFLY SUPPORTS - TYPE B

Removed all references to external sign lighting per Maintenance and Traffic Divisions.

M903.10V SIGN TRUSSES - OVERHEAD ALUMINUM

Sheet 1 of 6

Formerly sheet 1 of 8. Revised vertical sign clearance resulting from removal of external lighting equipment and catwalk. **Sheet 4 of 6**

Formerly 4 of 8. Deleted standard specification number from general note pertaining to grounding structures.

Sheet 5 of 6

Formerly 5 of 8. Deleted standard specification number from general note pertaining to grounding structures.

Sheet 6 of 6

Formerly 6 of 8. Revised detail for mounting exit number panel on overhead guide sign to more closely comply with the MUTCD. Removed all references to external catwalks per Maintenance and Traffic divisions. Imported pertinent details from former sheet 7 of 8. Former sheets 7 of 8 and 8 of 8 deleted.

M903.12Q SIGN TRUSSES - BUTTERFLY AND CANTILEVER - STEEL

Sheet 1 of 5

Formerly sheet 1 of 7. Revised vertical sign clearance resulting from removal of external lighting equipment and catwalk. **Sheet 3 of 5**

Formerly 3 of 7. Deleted standard specification number from general note pertaining to grounding structures.

Sheet 4 of 5

Formerly 4 of 7. Deleted standard specification number from general note pertaining to grounding structures.

Sheet 5 of 5

Formerly 5 of 7. Revised detail for mounting exit number panel on overhead guide sign to more closely comply with the MUTCD. Removed all references to external catwalks per Maintenance and Traffic divisions. Imported pertinent details from former sheet 6 of 7. Former sheets 6 of 7 and 7 of 7 deleted.

M903.60U SIGN TRUSSES - OVERHEAD STEEL

Sheet 1 of 5

Formerly sheet 1 of 7. Revised vertical sign clearance resulting from removal of external lighting equipment and catwalk. **Sheet 3 of 5**

Formerly 3 of 7. Deleted standard specification number from general note pertaining to grounding structures.

Sheet 4 of 5

Formerly 4 of 7. Deleted standard specification number from general note pertaining to grounding structures.

Sheet 5 of 5

Formerly 5 of 7. Revised detail for mounting exit number panel on overhead guide sign to more closely comply with the MUTCD. Removed all references to external catwalks per Maintenance and Traffic divisions. Imported pertinent details from former sheet 6 of 7. Former sheets 6 of 7 and 7 of 7 deleted.

NEW METRIC STANDARD PLANS

M614.11 BICYCLE SAFE (CURVED VANE) GRATES

M625.00 HOLE PATTERN FOR PAVEMENT SLAB STABILIZATION

M626.00 RUMBLE STRIPS

Formerly M203.75A.

M703.10 CONCRETE SINGLE BOX STRUCTURE (STRAIGHT WINGS -SQUARE)

Formerly M703.20A. Deleted concrete haunch and analyzed box culvert as a rigid frame

structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.11 CONCRETE SINGLE BOX STRUCTURE (FLARED WINGS -SQUARE)

Formerly M703.21A. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.12 CONCRETE SINGLE BOX STRUCTURE (CUT SECTIONS)

Formerly M703.22. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.13 CONCRETE SINGLE BOX STRUCTURE (STRAIGHT WINGS - SKEWED) Formerly M703.23A. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.14 CONCRETE SINGLE BOX STRUCTURE (FLARED WINGS -SKEWED)

Formerly M703.24A. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.15 CONCRETE SINGLE BOX STRUCTURE (MEMBER SIZES AND REINFORCEMENT)

Formerly M703.25. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.37 CONCRETE BOX CULVERT (EXTERIOR WING REINFORCEMENT)

Formerly M703.35. Revised data in tables to reflect rigid frame design. Soft converted reinforcing steel sizes.

M703.38 CONCRETE BOX CULVERTS (CUTTING DETAILS)

Formerly M703.36. Deleted concrete haunch details.

M703.40 CONCRETE DOUBLE BOX STRUCTURE (STRAIGHT WINGS-SQUARE)

Formerly M703.50. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.41 CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS - SQUARE)

Formerly M703.51. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.42 CONCRETE DOUBLE BOX STRUCTURE (CUT SECTIONS)

Formerly M703.52. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.43 CONCRETE DOUBLE BOX STRUCTURE (STRAIGHT WINGS - SKEWED)

Formerly M703.53. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.44 CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS - SKEWED)

Formerly M703.54. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.45 CONCRETE DOUBLE BOX STRUCTURE (MEMBER SIZES AND REINFORCEMENT)

Formerly M703.55. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.80 CONCRETE TRIPLE BOX STRUCTURE (STRAIGHT WINGS - SQUARE)

Formerly M703.70. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.81 CONCRETE TRIPLE BOX STRUCTURE (FLARED WINGS - SQUARE)

Formerly M703.71. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.82 CONCRETE TRIPLE BOX STRUCTURE (CUT SECTION)

Formerly M703.72. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.83 CONCRETE TRIPLE BOX STRUCTURE (STRAIGHT WINGS - SKEWED)

Formerly M703.73. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.84 CONCRETE TRIPLE BOX STRUCTURE (FLARED WINGS - SKEWED)

Formerly M703.74. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

M703.85 CONCRETE TRIPLE BOX STRUCTURE (MEMBER SIZES AND REINFORCEMENT)

Formerly M703.75. Deleted concrete haunch and analyzed box culvert as a rigid frame structure. Soft converted reinforcing steel sizes. Revised headwall ends to be flush with exterior walls.

DELETED METRIC STANDARD PLANS

M203.75A RUMBLE STRIPS

Drawing renumbered M626.00.

M703.20A CONCRETE SINGLE BOX STRUCTURE (STRAIGHT WINGS - SQUARE)

Drawing renumbered M703.10.

M703.21A CONCRETE SINGLE BOX STRUCTURE (FLARED WINGS -SQUARE)

Drawing renumbered M703.11.

M703.22 CONCRETE SINGLE BOX STRUCTURE (CUT SECTIONS)

Drawing renumbered M703.12.

M703.23A CONCRETE SINGLE BOX STRUCTURE (STRAIGHT WINGS - SKEWED)

Drawing renumbered M703.13.

M703.24A CONCRETE SINGLE BOX STRUCTURE (FLARED WINGS -SKEWED)

Drawing renumbered M703.14.

M703.25 CONCRETE SINGLE BOX STRUCTURE (MEMBER SIZES AND REINFORCEMENT)

Drawing renumbered M703.15.

M703.35 CONCRETE BOX CULVERT (EXTERIOR WING REINFORCEMENT)

Drawing renumbered M703.37.

M703.36 CONCRETE BOX CULVERTS (CUTTING DETAILS)

Drawing renumbered M703.38

M703.50 CONCRETE DOUBLE BOX STRUCTURE (STRAIGHT WINGS-SQUARE)

Drawing renumbered M703.40.

M703.51 CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS - SQUARE)

Drawing renumbered M703.41.

M703.52 CONCRETE DOUBLE BOX STRUCTURE (CUT SECTIONS)

Drawing renumbered M703.42.

M703.53 CONCRETE DOUBLE BOX STRUCTURE (STRAIGHT WINGS - SKEWED)

Drawing renumbered M703.43.

M703.54 CONCRETE DOUBLE BOX STRUCTURE (FLARED WINGS - SKEWED)

Drawing renumbered M703.44.

M703.55 CONCRETE DOUBLE BOX STRUCTURE (MEMBER SIZES AND REINFORCEMENT)

Drawing renumbered M703.45.

M703.70 CONCRETE TRIPLE BOX STRUCTURE (STRAIGHT WINGS - SQUARE)

Drawing renumbered M703.80.

M703.71 CONCRETE TRIPLE BOX STRUCTURE (FLARED WINGS - SQUARE)

Drawing renumbered M703.81.

M703.72 CONCRETE TRIPLE BOX STRUCTURE (CUT SECTION)

Drawing renumbered M703.82.

M703.73 CONCRETE TRIPLE BOX STRUCTURE (STRAIGHT WINGS - SKEWED)

Drawing renumbered M703.83.

M703.74 CONCRETE TRIPLE BOX STRUCTURE (FLARED WINGS - SKEWED)

Drawing renumbered M703.84.

M703.75 CONCRETE TRIPLE BOX STRUCTURE (MEMBER SIZES AND REINFORCEMENT)

Drawing renumbered M703.85.

by/jj

Attachments