

MATERIALS ACCEPTANCE REQUIREMENTS

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
401.03G End Section Gate for Culverts	VI	-	-	-	See Standard Plans for Sizes.
403.03A3 Sewer Traps	VI				
404 Precast Concrete End Rings	VI	-	-	-	
502.02 Asphalt, Release Agents	VI				
NOTE: Must be approved by the project engineer. No fuel or oil based agents.					
502-SP Protective Polymer Coating For HMA Pavement at Snowmobile Trail Crossing	See Remark	None	-	-	See Special Provision.
603.03B2 Adhesive Systems for Grouting Dowel Bars and Tie Bars for Full-Depth Concrete Pavement Repairs	QPL	-	-	-	Must be a Qualified Product.
NOTE: Use for grouting to existing concrete in the same direction of traffic in the same lane as the repair. For grouting lane ties (deformed bars positioned transverse to the direction of traffic located between traffic lanes) select from Adhesive Anchor Systems (for Structural Anchors and Lane Ties).					
603.03B12 Bond Breaker Tape	VI	-	-	-	
702.02A Standard Mortars and Grouts	VI	-	-	-	
702.02B Non-Shrinking Mortar and Grout, Type H-1(Non-Metallic) Pre Mixed	QPL	-	-	-	Must be a Qualified Product.
702.02C Admixture for Expansive Grout, Type E-1	Gen Cert	-	-	-	
NOTE: Certification to include manufacturers recommended dosage per sack of cement. Include all General Certification documentation and sample of the cement with which it is being used with CV samples.					
703 Prepackaged Hydraulic Fast Set Mortar	QPL	-	-	-	Must be a Qualified Product.
704 Steel Sheet Piling	VI	-	-	-	
706.03K.4-SP Expansion Joint Devices for Bridges	See Remark	-	-	-	Approved devices are in Special Provision. Contractor must supply list of those used and provide shop drawings.
706.03S Penetrating Water Repellent (Protective Coating for Concrete)	QPL	-	-	-	Must be a Qualified Product (706.03S).

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707.02 Bushings for Pins and Link Plates	QPL	-	-	-	Must be a Qualified Product (707.02).
708.03A Prestressed Concrete Bridge Beams	Fabrication Inspection	-	-	-	QA Manual Section D8.
710.03D Waterproofing Shotcrete	VI	-	-	-	
712.03A1c Abrasive, Low Dusting					See Section 715.02.
712.03D Epoxy Mastic	VI	-	-	-	
712.03J Adhesive Anchor Systems for Structural Anchors and Lane Ties	QPL	-	-	-	Must be a Qualified Product (712.03J).
712.03K Structure Expansion Anchors (Mechanical Expansion Anchors)	QPL See Remark	-	-	-	Must be a Qualified Product (712.03K). Pull-out testing is required per QA Manual Sec. D6.
712.03L Mechanical Reinforcement Splicing, Other Types of Splices, Swaged	Test QPL	1 per project 1 per project	5 splices 2 splices	-	See Note. Must be a Qualified Product (712.03L).
NOTE: The contractor must make test splices, witnessed by the Engineer, on the smallest and largest bar sizes that are to be spliced. Test splice consists of 2 pieces of reinforcing bar joined by the coupler with a minimum of 12 inches of bar exposed on each end of the coupler.					
712.03X Grout Under Masonry Plates	VI	-	-	-	
712.03Y Embedded Galvanic Anodes	QPL See Remark	-	-	-	Must be a Qualified Product. See SP for Construction Process.
713.02B Sealant for Perimeter of Beam Repairs	QPL	-	-	-	Must be a Qualified Product (713.02B).
715.02 Coating Systems for New Hanger Assemblies	QPL See Remark	-	-	-	Must be a Qualified Product (915.01).
715.02 Abrasive, Low Dusting	QPL	-	-	-	Must be a Qualified Product (715.02).
716.02 Abrasive, Low Dusting					See Section 715.02.
803.02 Pipe Railing for Steps (Galvanized)	VI	-	-	-	

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803.02-SP Detectable Warning Surfaces	QPL	-	-	-	Must be a Qualified Product.
804.01 Glare Screen	VI	-	-	-	Included in Concrete Spec.
808.03B Temporary Fence Materials	VI	-	-	-	
811.03D1 Waterborn, Liquid Pavement Marking Materials	QPL	-	-	-	Must be a Qualified Product. QA Manual Section F1.
811.03D2 Regular (Solvent), Liquid Pavement Marking Materials	QPL	-	-	-	Must be a Qualified Product. QA Manual Section F1.
811.03D3 Epoxy, Liquid Pavement Marking Materials	QPL	-	-	-	Must be a Qualified Product. QA Manual Section F1.
811.03D3 Polyurea, Liquid Pavement Marking Materials	QPL				Must be a Qualified Product. QA Manual Section F1.
811.03D4 Thermoplastic, Liquid Pavement Marking Materials	QPL	-	-	-	Must be a Qualified Product. QA Manual Section F1.
811.03D5 Cold Plastic Tape, Permanent (Long Line, Legends and Crosswalks)	QPL	-	-	-	Must be a Qualified Product. QA Manual Section F1.
811.03D6 Thermoplastic, Sprayable, Liquid Pavement Marking Materials	QPL	-	-	-	Must be a Qualified Product. QA Manual Section F1.
901 Cement	Appr Mfr *	See Remark	10 lb	45 ton	See Special Instructions, Test Data Certification to C&T.
901.06 Ground Granular Blast- Furnace Slag (GGBFS)	Appr Mfr * With Cement Sample	See Remark for Cement	10 lb		See Special Instructions for Cement and Fly Ash note. Test Data Certification to C&T
901.07 Fly Ash, Pozzolanic Admixtures for Concrete	Appr Mfr * With Cement Sample	-	10 lb	-	Test Data Certification to C&T. See Note.
NOTE: The fly ash sample is to be accompanied by a sample of the cement with which it is being used. MDOT-furnished plastic-lined cement sample bags will hold 4540 g when FULL.					
902 Coarse Aggregates	See Remark	See Remark	60 lb	100 ton	See Special Instructions
902 Dense-Graded Aggregates	See Remark	See Remark	60 lb	500 ton	See Special Instructions

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
902 Open-Graded Aggregates	See Remark	See Remark	60 lb	100 ton	See Special Instructions
902 Granular Material Class I	See Remark	See Remark	60 lb	100 ton	See Special Instructions
902 Granular Material Class II (Subbase) and Class IIA	See Remark	See Remark	60 lb	500 cyd	See Special Instructions
902 Class II (Abutment B. F.)	See Remark	See Remark	60 lb	100 cyd	See Special Instructions
902 Granular Material Class III	See Remark	See Remark	60 lb	500 cyd	See Special Instructions
902 Granular Material Class IIIA	See Remark	See Remark	25 lb	100 cyd	See Special Instructions
902 Fine Aggregate	See Remark	See Remark	25 lb	100 ton	See Special Instructions
902 Mineral Filler for HMA Mixtures	Appr Mfr * See Remark	1 per project	1 qt	10 ton	Refer to Asphalt Binder Procedures Manual, General Certification to C&T.
903.01 Air Entraining Admixtures	QPL	-	-	-	Must be a Qualified Product (903.01).
903.02 Concrete Accelerators 1. Calcium Chloride 2. All Others	VI QPL	-	-	-	For calcium chloride note the chemical composition. Other accelerators must be Qualified Products (903.02).
903.03 Water Reducing and Water Reducing Retarding Admixtures for Concrete	QPL	-	-	-	Must be a Qualified Product (903.03).
903.04 Latex Admixture for Concrete	Appr Mfr *	1 per lot	1 qt		General Certification to C&T.
903.05 Membrane Curing Compound	Test Data Cert	1 per lot or batch	1 qt	200 gal	
NOTE: Curing compounds must not be used after ONE year from manufacture. Date of manufacture must be clearly printed on the outside of containers.					
903.06B Interim Curing (Linseed Oil Based)	Test Data Cert	1 per lot or batch	1 qt	50 gal	See Note for 903.05 above.

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
903.06C Insulating Blanket	Test Data Cert	-	-	10 sheets	
903.06D Polystyrene Insulation	Test Data Cert	-	-	-	
904.03A Asphalt Binder for HMA Mixtures	Appr Mfr *	1 per day's production of mix	1 pint	5 ton per day or 27 tons per project	
<p>See Current List of Asphalt Binders at Construction and Technology Web Page. Instructions to C&T web page: From MDOT home page (michigan.gov/mdot), click on about MDOT (left side), then click on Highway Delivery, and then click Construction and Technology. The Approved Asphalt Binder Suppliers List is under Resources & Publications. Actual Construction and Technology web page address: www.michigan.gov/mdot/0,1607,7-151-9623_26663_27303---,00.html</p>					
904.03B Liquid Asphalt (MC)	Test or Tested Stock	1 per batch	See Remark		1 gal from the top and 1 gal from the bottom of tank.
904.03B Liquid Asphalt (RC-250)	Test or Tested Stock	1 per batch	2 qt	5 gal	
904.03C Emulsified Asphalt	Appr Mfr *	1 per batch	See Remark	1000 gal	1 gal from the top and 1 gal from the bottom of the tank. Submit sample in plastic or glass containers only.
904.03D Overband Crackfill	QPL	-	-	-	
904.03E Polyester Fibers for Overband Crackfill	Gen Cert	-	-	-	
905.03 Bar Reinforcement (Uncoated)	Appr Mfr *	1 per project per mfr	See Remark	500 lb	2 pcs. One 24 in. min. & one 36 in. min. Second piece must be 48 in. min. for #9, #10, #11 bars. Test Data Cert to C&T.
905.03 Bar Reinforcement (Epoxy Coated Spiral) 1. Bar 2. Epoxy Coating Companies 3. Epoxy Coating Material	Appr Mfr * Appr Mfr * QPL	1 per project per mfr	See Note	500 lb	Test Data Cert to C&T. Test Data Cert to C&T. (905.03C1)
<p>NOTE: Sample ID to include name of epoxy coating company, epoxy resin trade name and lot number, bar manufacturer and heat number. Sample size, 3 pieces, 1 of which is 24 in. min. and 2 of 36 in. min. A third piece shall be 48 in. min. for #9, #10, and #11 bars.</p>					
905.03C Bar Reinforcement (Epoxy Coated) 1. Bar 2. Epoxy Coating Companies 3. Epoxy Coating Material	Appr Mfr * Appr Mfr * QPL	1 per project per mfr	See Note	500 lb	Test Data Cert to C&T. Test Data Cert to C&T. (905.03C1)
<p>NOTE: Sample ID to include name of epoxy coating company, epoxy resin trade name and lot number, bar manufacturer and heat number. Sample size, 3 pieces, 1 of which is 24 in. min. and 2 of 36 in. min. A third piece shall be 48 in. min. for #9, #10, and #11 bars.</p>					

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
905.03D Bar Chairs and Wire Ties for Epoxy Coated Steel Reinforcement	VI	-	-	-	
905.06 Welded Steel Wire Reinforcement (Mesh)	Appr Mfr *	1 per project per mfr	See Remark	500 syd	Test Data Cert to C&T. See Note.
NOTE: One piece, full width of fabric with two transverse wires. Longitudinal wires must extend 6 in. to 8 in. either side of transverse wires. Sampling not required when larger wire is less than 0.13 in. (w1.5) in dia. Include on sample ID the size that the wires are supposed to be. Sample may be folded or cut into approx. 3 ft. sections. If cut, pieces should be wired together and identified.					
905.07 Strand for Prestressed Concrete	Appr Mfr *	1 per heat	2 pcs each 80 in long		Obtain sample 5 ft from end of reel. Test Data Cert to C&T.
905.08 Tendons for Post Tensioning of Box Beams - Prestressing Strand	Appr Mfr * See Remark	1 per heat	2 pcs each 80 in long		Sampling and testing may be waived if strand from same reel is tested for beam fabrication. Test Data Cert to C&T. Obtain sample at least 5 ft from end of reel.
905.08 Tendons for Post Tensioning of Box Beams - Bar	Test	1 per heat per project	15 in		Test Data Cert must be attached to Sample Identification form for lab testing.
906 Structural Steel	Fabrication Inspection	-	-	-	QA Manual Section D-10.
906.05 Foundation Piles: H Piling, Steel Shells and Pile Points	Test Data Cert	-	-	-	
906.05 Pile Cutoffs	Gen Cert	-	-	-	
906.06 High Strength Steel Bolts	Test	1 per dia per length per heat per project	3 each bolts, nuts & washers		Bolt, nut and washer Test Data Cert must identify the manufacturer and must be attached to the Sample ID.
906.08 Shear Developers (Studs)	QPL or Test Data Cert See Remark	-	-	-	(906.08) Other stud shear developers may be used provided the supplier certifies that the studs meet the requirements of AWS D1.5-96, all section 7.
907.03 Woven Wire Fencing Materials A. Woven Wire B. Barbed Wire C. Smooth Line Wire	VI	1 per project per mfr	Full width of roll 5 ft 6 ft 4 ft		

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
907.03 D. Steel Posts	VI	1 per project per mfr	See Remark	See Remark	See Special Instructions.
NOTE: An alternative zinc/clear coat system will be allowed for pipe sections only. This alternative coating system shall comply with subsection 907.03D of the Standard Specifications for Construction.					
907.03 E. Treated Wood Posts					See Section 912.08.
907.03 F. Gates G. Fence Fittings and Hardware	VI	-	-	-	
907.04 Steel Chain Link Fence Materials A. Fabric	Test or Tested Stock	See Remark	5 ft full width of roll	250 ft	1 per height and/or mesh size, per project and 1 per mfr per project.
907.04 B. Tension Wire	Gen Cert	1 per project per mfr	5 ft	500 ft	
907.04 C. Post for Fence and Gates (Steel)	Gen Cert	1 per project per mfr	See Remark	See Remark	See Special Instructions.
NOTE: An alternative zinc/clear coat system will be allowed for pipe sections only. This alternative coating system shall comply with subsection 907.03D of the Standard Specifications for Construction.					
907.04 D. Gates E. Fence Fitting and Hardware	VI	-	-	-	
907.04 F. Top Rail (Horz. Rail)	Test	1 per project per mfr See Remark	5 ft	250 ft	Weigh 5 rails to determine the average weight per ft and include the weight info on Sample ID.
NOTE: An alternative zinc/clear coat system will be allowed for pipe sections only. This alternative coating system shall comply with subsection 907.03D of the Standard Specifications for Construction.					
907.04 G. Post for Chain Link Pedestrian Fence (Structure Fencing)	Test	1 per project per mfr See Remark	5 ft straight piece	25 post	Weigh 5 posts to determine the average weight per ft and include the weight info on Sample ID.
NOTE: An alternative zinc/clear coat system will be allowed for pipe sections only. This alternative coating system shall comply with subsection 907.03D of the Standard Specifications for Construction.					
907.04 H. Rail for Braces for Chain Link Pedestrian Fence	Test	1 per project and 1 per mfr	5 ft	250 ft	Weigh 5 rails to determine the average weight per ft and include the weight info on Sample ID.
NOTE: An alternative zinc/clear coat system will be allowed for pipe sections only. This alternative coating system shall comply with subsection 907.03D of the Standard Specifications for Construction.					
907.05 High Tensile Wire Fence A. Wire	Test	1 per project per mfr	6 ft	250 ft	

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
907.05 B. Treated Wood Posts for High Tensile Wire Fence	Appr Mfr * or Tested Stock	Each charge	22 cores	25 posts	See Note, General Cert to C&T.
NOTE: All post must be treated except Northern White Cedar. General Certification document required for Northern White Cedar in lieu of approved manufacturer.					
907.05 C. Hardware	VI	-	-	-	
907.06 Protective Fence	VI	-	-	-	
908 Castings, Manhole 908.03 Malleable Iron 908.04 Steel 908.05 Gray Iron	VI	-	-	-	Requires "Buy America Certification" from the manufacturer.
908.05 Alternate, Adjustable Gray Iron Castings for Manholes, Drainage Structures, and Covers	QPL	-	-	-	
908.07 Sheet Lead	Gen Cert	-	-	25 sft	
908.08 Sheet Copper	Test	1 per consignment	13 in square or equivalent area	25 sft	May be accepted in field if weight requirements can be documented.
908.09 Aluminum Bridge Railing	See Note	-	-	-	
NOTE: Test Data Certification, requires a mill certification and a visual inspection of the material. The project engineer is to arrange for this inspection which should include dimensional and thorough visual checks on all material especially for blowholes on posts and caps.					
908.09 Cast Aluminum Alloy Posts	Test Data Cert	-	-	-	
908.10A Tubing, Steel Railing (Galvanized) Base Plate and Post Elements	Test or Tested Stock See Remark	1 per heat per project	1 base plate, 1 post min 15 in length		Test Data Cert document must be attached to the sample ID. Test report to P.E.
908.10B Rail Elements (Tube)	Test or Tested Stock See Remark	1 per heat per project	48 in long, galv		Chemical analysis must include silicon. Test Data Cert document must be attached to the sample ID. Test report to P.E.
908.10C Hardware (Anchor Studs)	Test	1 per heat per diameter per project	A bolt, nut, washer, coupling and base plate, if applicable		
908.11 Hardware for Timber Construction	VI	-	-	-	

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908.12A Guardrail, Steel Beam Elements, End Sections	Appr Mfr *	1 per project per mfr	1 piece at least 3 ft length	125 ft	Including Anchorage, Bridge, Shoes, Departing End Terminals. Test Data Cert to C&T.
908.12A Guardrail Approach Terminals	Appr Mfr *	-	-	-	Test Data Cert to C&T.
908.12 B. Hardware C. Steel Sleeves, Soil Plates, Bearing Plates, Backup Plates	VI	-	-	-	Item supplied by guardrail supplier.
908.12 Wire Rope	Gen Cert	-	-	-	
908.13 Steel Posts for Beam Guardrail	Appr Mfr *	1 per 1000 posts or fraction thereof	1 post	25 posts	Test Data Cert to C&T.
908.14 Reflective Washers	VI See Remark	-	-	-	Inspect galvanizing, dimensions and type of sheeting.
908.15 Anchor Bolts, Anchor Studs, Anchor Rods and Anchor Base Plates	Test **See Remark	1 per heat per diameter per project	1 bolt, nut, washer, coupling and base plate if applicable	-	Non MDOT Standard Plan Bolts require Shop Drawings along with the Test Data Cert document. ** For cantilever foundations: 1 per heat per dia per foundation, max 3 per project.
909.01 Adjusting Rings for Manholes and Drainage Castings, (Alternative Materials and Recycled Rubber)	QPL	-	-	-	
909.03 Watertight Joint Systems	QPL	-	-	-	
909.03 Gasket, Compression (O-Rings)	VI	-	-	-	Part of Watertight Joint System.
909.04A Reinforced Concrete Pipe	Appr Mfr *	1 percent of number of pcs of each size	See Remark	5 pieces of 42 in or smaller	See Special Instructions. General Cert to C&T.
909.04B Reinforced Concrete Elliptical Pipe	Appr Mfr *	1 percent of number of pcs of each size	See Remark	5 pieces of 42 in or smaller	See Special Instructions. General Cert to C&T.
909.04C Non-Reinforced Concrete Pipe	Appr Mfr *	See Remark	See Remark	10 pcs	See Special Instructions. General Cert to C&T.

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909.04D Precast Concrete Box Sections	Appr Mfr *	-	-	-	General Cert to C&T. Box = 4 sided.
909.04E Precast Concrete End Section for Culverts and Sewers	Appr Mfr *	1 percent of number of pcs	Full size units	10 pcs	Strength test by coring or cylinders, VI dimensions and conditions. Test for air content. Test Data Cert to C&T.
909.04G Precast Concrete Three-Sided or Arch Culverts	Appr Mfr See Remark	-	-	-	For span lengths up to 12 ft, General Cert to C&T. Spans from 12-20 ft, QA inspection may be required. Spans greater than 20 ft. require QA inspection.
909.05A Corrugated Steel Pipe	Appr Mfr *		See Remark		See Special Instructions. General Cert to C&T.
909.05A Gasket, External Rubber Type	VI	1 per lot or shipment	18 in length full width of gasket		Part of Watertight Joint System.
909.05A1 Corrugated Steel Sheets (Galvanized)	Gen Cert	See Remark	See Remark		See Special Instructions.
909.05A Polymer Coated, Galvanized Corrugated Steel Pipe	QPL	-	-	-	Coating must be from Qualified Products List (909.05-SP).
909.05A4 Coupling Bands	Gen Cert	-	-	5 pcs	
909.05B Corrugated Aluminum Alloy Sheet	Gen Cert	See Remark	See Remark	25 sheets	See Special Instructions.
909.05B Corrugated Aluminum Alloy Pipe	Gen Cert	1 per 1000 ft	See Remark	250 ft	Sample Size: A 6 in by 3 in (minimum) section cut from the end of the pipe avoiding the seams. Do not damage coating.
909.05C Steel End Section	Gen Cert	-	-	4 pcs	
909.05D 1. Steel Pipe (Jacked-in- Place)	VI	-	-	-	
909.05D 2. Casing, Steel Pipe	VI				
909.06A Class B Bury (CPE) Class B (CPE & CPVC)	QPL	-	-	-	Must be a Qualified Product.

NOTE: Watertight Joint Systems (909.03) must be approved prior.

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909.06A Corrugated Polyethylene Pipe (CPE), (Smooth Lined Type S or Corrugated Type C)	Test or Tested Stock if ≥12 in. dia	≥12 in. dia 1 per 1000 ft straight lengths	See Remark	12 in. dia and over, 100 ft	Over 12 in. dia- one 10 ft length and one 6 ft length plus coupling. See Special Instructions.
909.06B 1. Corrugated Polyvinyl Chloride (PVC) Pipe (Smooth Lined Type S or Corrugated Type C)	Test	≥12 in. dia 1 per 1000 ft straight lengths	See Remark	12 in. dia and over, 100 ft	Over 12 in. dia- one 10 ft and one 6 ft. length plus coupling.
909.06B 2. Smooth Polyvinyl Chloride Pipe for Sanitary Sewer Pipe	Test	1 per 6000 ft	1 piece, 5 ft in length	600 ft	If bell and spigot joint, sample from bell end.
909.06B 3. Corrugated Polyvinyl Chloride (PVC) Pipe (Smooth Lined Type S) for Sanitary Sewer Pipe	Test	1 per 1000 ft	See Remark	12 in. dia and over, 100 ft	Over 12 in. dia - one 10 ft length and one 6 ft length plus coupling.
909.07 Pipe for Underdrains 1. Corrugated Steel Pipe	Appr Mfr *	See Remark	See Remark		See Special Instructions for 909.05A, Test Data Cert to C&T.
909.07 Pipe for Underdrains 2. Corrugated Aluminum Alloy Pipe	Gen Cert	1 for 1000 ft	6 in x 3 in	250 ft	
909.07A Pipe for Underdrains 3. Smooth Plastic Pipe (Outlet Pipe)	Test	1 per 2500 ft or fraction thereof	5 ft length	250 ft	
909.07B Pipe for Underdrains 4. Corrugated Plastic Tubing (Perforated and Non-Perforated) (Wrapped and Non-Wrapped)	Appr Mfr * 4-, 6-, or 8- in dia	1 per 5000 ft sample from coils	See Remark	250 ft	Sample Size, one 10 ft length plus coupling. For perforated tubing wrapped in fabric, tie fabric securely in place before cutting sample.
909.07 Pipe for Underdrains 5. Porous Concrete Pipe	VI	-	-	-	
909.07 Pipe for Underdrains 6. Perforated Concrete Pipe	VI	-	-	-	
909.07 Pipe for Underdrains 7. Perforated Clay Pipe	VI	-	-	-	
909.07C Outlet Endings (For Underdrains)	VI	-	-	-	
909.08A Bridge Decks Downspouts 1. Polyethylene (PE) Plastic Pipe	VI				

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909.08B Other Downspouts 1. Corrugated Steel Pipe	Appr Mfr *	See Remark	See Remark		See Spec. 909.07 Corrugated Steel Pipe. Test Data Cert to C&T.
909.08B Other Downspouts 2. Corrugated Aluminum Alloy Pipe	Gen Cert	1 per 1000 ft	6 in x 3 in	250 ft	
909.08B Other Downspouts 3. Corrugated or Smooth Lined Corrugated Polyethylene Pipe	Test or Tested Stock	See Remark	See Remark	<12 in. dia up to 250 ft >12 in. dia up to 100 ft	See Spec. 909.06A.
909.08C Bridge Deck Drain Extensions (Polyethylene)	Gen Cert	-	-	-	
909.09 Cold Applied Pipe Joint Sealer (Mastic)	Test	1 per shipment from a single container	1 qt	10 gal	
909.10 Drainage Marker Post	See Delineator Posts	-	-	-	
910.03A Geotextiles 1. Blankets	Test Data Cert	See Remark	See Remark	See Remark	See Special Instruction 910.03.
910.03A Knitted Sock Pipe Wrap	See Remark	-	-	-	See 909.07 Certified with Corrugated Plastic Tubing.
910.03B Liner for Rip-Rap	Test Data Cert	See Remark	See Remark	See Remark	See Special Instruction 910.03.
910.03B Liner for Heavy Rip-Rap	Test Data Cert	See Remark	See Remark	See Remark	See Special Instruction 910.03.
910.03C Separator/Stabilization Geotextile	Test Data Cert	See Remark	See Remark	See Remark	See Special Instruction 910.03.
910.03D Geogrids	Test	1 per type per project	1 pc 6 ft long full roll width	-	Sample must be <u>rolled</u> not folded.
910.04 Silt Fence Geotextile	QPL	-	-	-	Must be a Qualified Product.
910.05A Prefabricated Drainage System	Appr Mfr *	1 per 10,000 ft or less	1 pc 6 ft long plus 3 syd filter- wrap	-	Test Data Cert must be attached to sample ID Form.
910.05B Wall Drain	Test	1 per 1000 ft or less	1 pc 6 ft long plus 3 syd filter-wrap	100 sft	

MATERIALS ACCEPTANCE REQUIREMENTS

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
911 Water	Test See Remark	1 per source	1 qt		Water approved for drinking by the Michigan Dept of Public Health may be used without sampling and testing.
912.06 Structural Timber and Lumber	Appr Mfr *	Each Charge	22 cores See Remark		48 cores if treatment is creosote. General Cert to C&T.
912.07 Timber Piles	VI	-	-	-	
912.08 Treated Wood Fence Posts	Appr Mfr * or Tested Stock	Each Charge	22 cores	25 posts	See Note below. Cedar post need not be treated. General Cert to C&T.
NOTE: All post must be treated except Northern White Cedar. General Certification document required for Northern White Cedar in lieu of approved manufacturer.					
912.08B Guide Posts, Guard and Mail Box Posts	Appr Mfr *	Each Charge	22 cores	25 posts	Cedar post need not be treated. General Cert to C&T.
NOTE: All post must be treated except Northern White Cedar. General Certification document required for Northern White Cedar in lieu of approved manufacturer.					
912.09 Wood Guardrail Post and Blocks (Dimension Sawed)	Appr Mfr * or Tested Stock	Each Charge	22 cores		Cedar post need not be treated. General Cert to C&T.
NOTE: All post must be treated except Northern White Cedar. General Certification document required for Northern White Cedar in lieu of approved manufacturer.					
912.09Q Recycled Plastic or Rubber Guardrail Offset Blocks	QPL	-	-	-	Must be a Qualified Product. May only be used on Steel Posts (912.09Q).
912.10 Timber for Rustic Construction	Gen Cert	-	-	-	
913.03 Clay and Sand Lime Brick and Block	Test	1 per 250,000 or fraction thereof	6 pcs	1000 pcs	
913.03B Concrete Brick	Appr Mfr *	See Remark	6 pcs	1000 pcs	1 from each 10,000 bricks or fraction thereof; 2 from lots more than 10,000 to 100,000; 3 from each lot over 100,000. General Cert to C&T.
913.05 Concrete Block	Appr Mfr *	See Remark	4 pcs	1000 pcs	One from lot of 10,000 or fraction thereof; 2 from lots more than 10,000. General Cert to C&T.

MATERIALS ACCEPTANCE REQUIREMENTS

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
913.06 Precast Reinforced Concrete Units for Drainage Structures	Appr Mfr *	1 percent per size	See Remark	10 pcs total	Submit QA cylinder test results and core samples. Submit sample 1-3 sq.in. from wall of unit if absorption is required. General Cert to C&T.
913.07 Precast Concrete Bases, for Drainage Structures	Appr Mfr *	5 percent of total		10 pcs total	General Cert to C&T.
913.08 Structural Tile	Test	1 per proj.	6 tiles	1000 tiles	
913.09 Slope Pavement Blocks	Appr Mfr *	1 per 25,000	6 blocks	1000 pcs	General Cert to C&T.
914.03 Bituminized Fiber Joint Filler	Appr Mfr *	1 per 1000 sft or fraction thereof	2 ft See Remark	150 sft	Sample for structure to be at least 5 in. wide. ¼ in. filler need not be sampled. General Cert to C&T.
914.03B Recycled Rubber Joint Filler	QPL	-	-	-	Must be a Qualified Product.
914.04A Hot-Poured Joint Sealant	Test or Tested Stock	1 per batch from a single container	5 lb.	100 lb	Do not submit melted samples.
914.04B Backer Rod for Use with Hot- Poured Joint Sealant	VI	-	-	-	
914.04C Neoprene Joint Seals	Appr Mfr * or Tested Stock	1 per size per lot	See Remark	100 ft	See Special Instructions. General Cert to C&T.
914.04D Lubricant Adhesive for Neoprene Joint Seals	Gen Cert	-	-	-	
914.05 Epoxy Binder, For Joint Spall Repair	Test or Tested Stock	1 per lot or batch number	See Remark	5 gal	See Special Instructions.
914.06 Epoxy Resin Adhesive and Temporary Seal (Crack Injection)	QPL	-	-	-	Must be a Qualified Product (914.06).
914.07 Transverse Pavement Joints 1. Dowel Bars 2. Epoxy Coating Companies	Appr Mfr * Appr Mfr *	1 per project per mfr	1 bar	240 bars	Test Data Cert to C&T. Coating must be a Qualified Product (905.03c).
914.07A Transverse Pavement Joints 3. Epoxy Coating Material	QPL	1 per project per mfr	1 bar	240 bars	Test Data Cert to C&T. Coating must be a Qualified Product (905.03c).

MATERIALS ACCEPTANCE REQUIREMENTS

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
914.07 Dowel Bar Expansion Caps	VI	-	-	-	Caps must conform to Standard Plan R-40 Series.
914.07 Load Transfer Assemblies; Dowel Baskets 1. Bars (Dowel) 2. Epoxy Coating 3. Epoxy Coating Company 4. Bond Release	Appr Mfr * Appr Mfr * QPL Appr Mfr * QPL	1 per 3000 assemblies or fraction thereof	Full size unit	20 assemblies	Coating must be a Qualified Product (905.03c). See Special Instructions.
914.07A Bond Release; Coatings for Dowel Bars 1. Bituminous Material 2. Alternate Bond Release Agents	Gen Cert QPL	-	-	20 gal max	Must be a Qualified Product or meet Standard Spec 914.07A.
914.08 End-of-Pour Joint Devices; Hook Bolts	VI	-	-	-	See Section 914.09C.
914.08 Deformed Bars 1. Bars 2. Epoxy Coating	Appr Mfr * QPL	1 per project per mfr		500 lb	Test Data Cert to C&T. Epoxy Coating must be Qualified Product (905.03C).
914.09 Straight and Bent Tie Bars for Longitudinal Pavement Joints (Lane Ties) 1. Bars 2. Epoxy Coating	Appr Mfr * QPL	1 per project per mfr	See Remark	500 lb	Test Data Cert to C&T. 1 pc 24 in. and 2 pcs 36 in. Coating must be a Qualified Product (905.03C). See Note.
NOTE: Epoxy Coating must be a Qualified Product. Sample ID to include name of Coater, Bar manufacturer, Resin manufacturer, and Resin trade name.					
914.09C Hook Bolts	VI	-	-	-	
914.10 Bolts for Structure Expansion Anchors	Test	1 per 5000 pcs or fraction thereof	1 bolt	250 units	
914.11 Prefformed Waterproofing Membrane and Joint Waterproofing Membrane	QPL See Remark	-	-	-	Must be a Qualified Product (710.02). Do not use on Treated Wood Materials.
914.12 Elastomeric Bearing Pads	Test Data Cert See Remark	-	-	-	Show Test Result for Shear Modulus, ASTM D4014.
915 Coating Systems for Steel Structures, Hanger Assemblies and End Diaphragms	QPL	-	-	-	Must be a Qualified Product (915.01).
916.01A Cobblestone	VI	-	-	-	

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
916.01C Riprap	VI	-	-	-	
916.02 Silt Fence 1. Fabricated Fence 2. Fabric	Appr Mfr * QPL	See Remark	See Remark	500 ft	General Certification to C&T 1 sample for the first 3000 ft or fraction thereof; 1 sample for each additional 10,000 ft or fraction thereof; 1 piece 8 ft long by full fence height include 2 attached posts and lath. As per 910.04 of Standard Specifications, fabric must be from the Qualified Product List (910.04).
NOTE: Sample to include identifying markings of fabricator. Indicate on sample ID description of markings. Note where markings were found.					
917.03 Nursery Stock	VI	-	-	-	
917.04 Tree Wrapping Material	VI	-	-	-	
917.05 Balling Material	VI	-	-	-	
917.06A Wire for Bracing and Guying	VI	-	-	-	
917.06B Hose for Bracing and Guying	VI	-	-	-	
917.06C Stakes for Bracing and Guying	VI	-	-	-	
917.08 Compost	VI				
917.10 Chemical Fertilizer for Grass Seed	VI See Remark	-	-	-	Provide the bag label, showing the guaranteed analysis.
917.12 Seeding Mixtures Seed Varieties	Appr Mfr * QPL	1 per lot per shipment	¼ lb	100 lbs	General Cert to C&T. Varieties of seed must be Qualified Product (917.12). See Special Instructions.
917.13 Sod	VI	-	-	-	
917.13A Pegs for Sodding	VI	-	-	-	
917.14 Mulching Materials for Nursery Stock	VI	-	-	-	Only shredded bark, wood chips not allowed.
917.15B High Velocity Mulch Blankets and Standard Mulch Blanket	QPL	-	-	-	Must be a Qualified Product (917.15B). High velocity - netting 2 sides. Standard - netting 1 side.

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
917.15C5 Mulch Anchoring - Latex, Recycled Newsprint, Wood Fiber, Guar Gum, Other Tackifiers	QPL	-	-	-	Must be a Qualified Product (917.15C5).
917.16 Weed Control (Herbicides)	Test Data Cert	-	-	-	
918.01 Flexible Metal Conduit	VI	-	-	-	
918.01A Electrical Conduit, Rigid (Galvanized Steel)	Test or Tested Stock	See Remark	6 ft, include coupling, if applicable	400 ft	1 sample for 2500 ft or fraction thereof; 2 samples over 2500 to 10,000 ft; 1 sample for each additional 10,000 ft.
918.01B & C Electrical Conduit (Polyvinyl Chloride) Schedule 40 and 80	Gen Cert	See Remark	6 ft sample w/ bell end incl coupling	400 ft	1 sample for 2500 ft or fraction thereof; 2 samples over 2500 to 10,000 ft; 1 sample for each additional 10,000 ft.
918.01D Electrical Conduit (Polyethylene) Schedule 40 and 80	Gen Cert	See Remark	See Remark	400 ft	1 sample for 2500 ft or fraction thereof; 2 samples over 2500 to 10,000 ft; 1 sample for each additional 10,000 ft; 6 ft plus a separate section consisting of 2- 18 in. long pcs. connected by the joint.
918.01F Electrical Conduit (Rigid Fiberglass)	Gen Cert	See Remark	6 ft sample w/ bell end incl. coupling	400 ft	1 sample for 2500 ft or fraction thereof; 2 samples over 2500 to 10,000 ft; 1 sample for each additional 10,000 ft.
918.02 Grounding System	VI	-	-	-	
918.02C Grounding Rods	VI	-	-	-	
918.03 Electrical Cable	See Note	-	-	-	
NOTE: Suitability and compliance with specifications will be determined by the agency responsible for maintaining the system. This agency shall provide the project engineer with a memo or other appropriate form indicating that the inspection (including review of Test Data Cert) has been made and that the material is acceptable.					
918.06 Precast Concrete Handholes and Manholes for Electrical and Telephone Connections	Appr Mfr *	1 percent per size	-	10 pcs	General Cert to C&T.
918.06E Light Weight Composite Handholes	QPL	-	-	-	Must be a Qualified Product (918.06).
918.08 Light Standards	VI Test Data Cert	-	-	-	

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
918.08C Light Standards, Frangible Transformer Bases	QPL	-	-	-	
918.09 Luminaries	Gen Cert	-	-	-	
918.10A Tower Lighting Units	Fabrication Inspection	-	-	-	QA Manual Section D15.
918.11E Guy Wire	Test	1 per size	10 ft	-	
919 Steel Sleeves for Wood Posts	Gen Cert	-	-	-	
919.02 Signs (Permanent)	See Remark	-	-	-	See Joint Construction IM 1997-B and IM 1997-C. General Cert must be attached and inspected at project site.
919.02A1 Metal Sections (Extruded Aluminum)	Tested Stock See Remark	1 from each width in shipment	12 in. long and full width of section		A Test Data Cert must be attached to Sample ID form.
919.02A2 Plywood	See Remark	-	-	-	Grade mark on materials serves as certification.
919.02A3 Aluminum Sheet	Tested Stock See Remark	1 per lot or shipment	Min. of 12 in. square	100 sft	See C&T Instructional Memo 1997-B. Tested Stock, Test Data Cert must be included.
919.02B1 Reflective Sheeting	QPL See Remark	1 per run or lot	See Remark	1 roll, for less than 3 in. in width	Must be a Qualified Product (919.02B) 4 pcs each 12 in. square. For rolls less than 12 in. width, at least 7.5 ft.
919.02C Sign Hardware	Gen Cert See Remark	-	-	-	Identifying marks on items may serve as certification.
919.03A Delineators 1. Plastic Reflectors	Gen Cert	1 per shipment per color	21 pcs	25 pcs each color	
919.03B Delineators 2. Reflective Sheeting Reflectors	Gen Cert	1 per shipment per color	2 pcs each color	25 pcs each color	
919.03D Delineator Posts 1. Steel	Gen Cert	1 per project per mfr	1 post	80 post	
919.03D Delineator Posts 2. Plastic	QPL	-	-	-	Must be a Qualified Product (919.03D).

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
919.04 Steel, Galvanized Sign Posts	Test Data Cert	1 per project per mfr	See Remark	20 posts	Sample 30 in. length min. weigh 5 posts to determine weight per ft. Put on sample ID; posts for temporary signs may be painted.
919.05 Wood Sign Posts	Appr Mfr * or Tested Stock	Each charge	22 cores	20 posts	General Cert to C&T.
919.06 Break-Away Column Sign Supports	Fabrication Inspection See Remark	-	-	-	QA Manual Section D11 and Subsection 919.07 of Standard Specifications.
919.07 Sign Support Structures	Fabrication Inspection See Remark	-	-	-	QA Manual Section D11.
920.01B Glass Beads	Gen Cert	1 from each lot	2 lb	500 lbs	
920.01C Raised Pavement Markers	QPL	-	-	-	Must be a Qualified Product (920.01C).
921.02 Span Wire	Gen Cert	1 per size	6 ft		
921.03 Traffic Signals and Mounting Assemblies	See Note	-	-	-	
NOTE: Compliance with specifications will be determined by the agency responsible for maintaining the system. Agency must provide the project engineer with a memo or other appropriate form indicating that the inspection has been made and the material is acceptable.					
921.05 Traffic Signal Strain Poles	VI and Test Data Cert	-	-	-	
921.05A12 Strain Pole Band Clamps	Test	1 from each lot per project	1 clamp		Must be Tested.
921.08B Traffic Loop Sealant	Gen Cert	2 from each lot	Tubes		
922.02 Traffic Maintenance and Control Temp Signs, Reflective Sheeting	VI	-	-	-	
922.03 Traffic Maintenance and Control, A. Cones B. Drums	VI	-	-	-	
922.03D Traffic Maintenance and Control Type III Barricade, Reflective Sheeting	VI	-	-	-	

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
922.03E Traffic Maintenance and Control Temporary Concrete Barriers	Test Data Cert	Each project	-	-	Contractor testing and Cert Verification per MTM-716 & NCHRP 350. For JJ Easy Hook - Gen Cert - no testing required.
922.03E1 Barrier Reflector Markers Temporary and Permanent	VI	-	-	-	
922.04A Traffic Maintenance and Control Temporary Pavement Markings; Type R and NR Tape	QPL	-	-	-	Must be a Qualified Product (922.04).
922.04A Traffic Maintenance and Control Temporary Pavement Markings; Paint	QPL	-	-	-	Must be a Qualified Product.
922.04B Temporary Raised Pavement Markers	QPL	-	-	-	Must be a Qualified Product.
922.05 Traffic Maintenance and Control Lighted Arrows; Type B and C (Solar Assist)	QPL	-	-	-	Must be a Qualified Product.
922.05B Traffic Maintenance and Control Warning Flashers and Lights; Type A, B, C	VI See Remark	Each project	3 each type		Units submitted for test when required by project engineer will be returned to the contractor upon completion of testing.
922.05C Portable Changeable Message Signs	VI	-	-	-	Contractor to allow two week lead time for inspection.
922.07 Traffic Maintenance and Control Sign Paddles and Vests	VI See Remark	-	-	-	High visibility vest meeting MDOT work zone safety and mobility policy.
922.08A Traffic Maintenance and Control Dust Palliative 1. Calcium Chloride Solids	VI & Test Data Cert	1 per project	5 lb	5000 lb	
922.08A Traffic Maintenance and Control Dust Palliative 2. Calcium Chloride Solutions	VI & Test Data Cert	1 per project	1 qt	1000 gal	
Misc. #2 Cast Iron and Ductile Iron (Watermain and Culverts)	Gen Cert	-	-	250 ft	
Misc. #3 Clay Pipe	Gen Cert	See Remark	See Remark	10 pieces	See Special Instructions.

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Spec. No. and Material Name	Basis of Acceptance	Sample Frequency If Required	Sample Size	Maximum VI Quantity	Remarks (QPL Reference)
Misc. #5 Galvanized Slotted Drain Pipe	VI See Remark	-	-	-	MDOT approval of Design is required. Coating thickness checked at project site.
Misc. #7 ABS Pipe	Test	1 per 6000 ft	1 piece, 6 ft in length	600 ft	If bell and spigot joint, sample from bell end.
Misc. #8 Corrugated Galvanized Steel Structural Plated	Gen Cert	1 per 100 plates or fraction thereof	1 piece at least 3 in. by 3 in.	10 plates	
Misc. #9 Aluminum Alloy Structural Plates	Gen Cert	-	-	-	
Misc. #13 Pavement Warning Strips	VI	-	-	-	
Misc. #14 Bituminized Cotton Fabric and Fiberglass Fabric	Gen Cert	See Remark	1 piece full width of roll, min of 3 ft	5 rolls	1 per 100 rolls (50 sft per roll) or fraction thereof; for lots of more than 100 rolls - 1 sample plus 1 for each 500 rolls or fraction thereof. Do not sample from first 3-4 ft of roll.
Special Provision #1 Liner for Culverts A. Polyethylene Plastic Pipe	Gen Cert	-	-	-	
Special Provision #2 B. Reinforced Plastic Mortar Pipe	Gen Cert	-	-	-	
Special Provision #3 Railroad Ballast	Test	1 per 5000 ton	60 lb	500 tons	See UPTRAN Specifications for Trackwork.
Special Provision #6 Truck Mounted Attenuator	Gen Cert	-	-	-	See Special Provision in Contract.
Special Provision #7 Traffic Signal Mast Arm Pole and Mast Arm (Trunkline)	Fabrication Inspection	-	-	-	See QA Manual Section D-16.

***** See following pages for SPECIAL INSTRUCTIONS (Pages 43 - 47) *****

SPECIAL INSTRUCTIONS

901 Cement

Certification Verification Sampling Schedule - Per the following

<u>Quantity of Concrete to State Projects (per week)*</u>	<u>Frequency</u>
Less than 500 cyds	1 per 1000 cyd
500 cyds to 2000 cyds	1 every month
2000 cyds to 6000 cyds	1 every other week
Over 6000 cyds	1 per 12,000 cyd

The plastic lined cement sample bags furnished by the laboratory will hold 10 pounds when full.

*Quantity estimated and based upon work in area, season of the year, orders, past experiences, etc.

902 Non Pre-qualified Aggregates

Test the following aggregate classes for acceptance at least once per 1000 tons prior to incorporation in the work: Coarse, Dense-graded, Open-graded, and Fine aggregates, as well as Granular Material Class I.

Test Granular Material Class IIIA for acceptance at least once per 1000 cubic yards.

Test Granular Material Class II and IIA for acceptance at least once per 3000 cubic yards.

Test Granular Material Class II (Abutment Back Fill) for acceptance at least once per structure.

Test Granular Material Class III for acceptance at least once per 10,000 cubic yards.

Pre-qualified Aggregates

Quality Assurance tests will be conducted by Department personnel at the frequencies stated in Part 7 of the *Pre-Qualified Supplier Program*, found in Section C6 of the *Materials Quality Assurance Procedures Manual*.

Every Project Engineer will verify passing quality assurance tests by contacting the Region/Transportation Service Center's Material's Supervisor. Enter a telephone record memo or copy of the test report in the project file.

The statement on each delivery ticket required in Part 5.2 of the *Pre-Qualified Supplier Program*, Section C6, is to be provided by the supplier, and represents the results of quality control testing. This statement does not signify acceptance by MDOT.

907.03 Woven Wire Fencing Materials, Steel Posts

Size of Sample - 5 posts. If compliance with weight requirements can be accurately determined in the field by weighing 5 posts selected at random (with ground plates removed), only 1 post need be submitted for a sample. Include complete weight information on sample identification.

NOTE: An alternate zinc/clear coat system shall be applied for pipe sections only. This alternate coating system shall consist of 2 ounces/sq ft of zinc coating on all surfaces of the pipe according to ASTM A123. A clear acrylic coating having a minimum thickness of 7.6 microns shall be applied to the exterior surface after galvanizing.

907.04 Steel Chain Link Fence Materials, Posts for Fence and Gates (Steel)

Size of Sample - 5 posts. If compliance with weight requirements can be accurately determined in the field by weighing 5 posts selected at random (with ground plates removed), only one post need be submitted for a sample. Include complete weight information on sample identification.

Maximum for VI - Gate posts, 15 each; line posts, 25 each.

NOTE: An alternate zinc/clear coat system will be allowed for pipe sections only. This alternate coating system shall comply with subsection 907.03D of 2003 Standard Specifications for Construction.

909.04A Reinforced Concrete Pipe

909.04B

Size of Sample - Full size units for strength test. For absorption tests, 26-inch square to 81-inch square in area from the wall of each piece of pipe tested.

Number of Samples - One percent of the number of pieces of each size.

Reinforced concrete pipe 42-inch diameter and larger may be tested by coring. Size of core will be 4-inch nominal diameter (but not less than 3 ¼ inches actual). Up to 1 percent of the number of pieces of pipe for each size, but not less than 3 pieces, will be selected for coring. One core will be drilled and tested from each of these test pieces. Reinforcement will be inspected prior to incorporation in the pipe.

Requires manufacturer to provide "Buy America Certification" from the steel manufacturer.

909.04C Nonreinforced Concrete Pipe

Size of Sample - Same as reinforced concrete pipe.

Number of Samples - One percent of the number of pieces, but not less than 2 pieces of each size except that at the option of the department the following sampling schedule will apply for 4 inches through 24 inches in diameter sewer pipe for quantities of 500 or more:

Sampling Schedule - Per the following:

<u>Concrete Pipe</u>	<u>Number of Samples</u>
500 to 1,000 pieces	6
1,001 to 2,000 pieces	8
2,001 to 5,000 pieces	11
Over 5,000 pieces	2 samples per 1,000 or fraction thereof

909.05A Corrugated Steel Pipe

Size of Sample - A 6-inch by 3-inch (minimum) section cut from the pipe. The sample should be taken from the end of the pipe avoiding the seams. Care should be taken to assure the coating is not damaged during sampling.

Number of Samples - Per the following:

<u>Diameter of Pipe</u>	<u>Quantity Represented (maximum)</u>
12 inches or less	2500 ft
15 inches through 54 inches	1000 ft
60 inches and over	500 ft

Less than 5 percent of the quantity in the above table may be visually inspected.

909.05A1 Corrugated Galvanized Steel Sheets

Size of Sample - One strip the full width of the sheet and 3 ½ inches in the direction of the length of the sheet. The strip may be cut from the end of the sheet for material coated in coils. If the sheets were individually coated after being cut to length, as indicated by heavy accumulations of zinc at one end, the sample strip shall be cut from the end opposite the heavy accumulation and after cutting 4 inches from the end of the sheet.

Number of Samples - Per the following:

<u>Diameter of Pipe</u>	<u>Length of Sheet</u>	<u>Quantity Represented (max)</u>
12 inches or less	44 inches or less	2500 ft
15 through 54 inches	50 to 175 inches, approx*	1000 ft
60 inches and over	190 inches and over*	500 ft

*Larger pipe may be made from combination of shorter sheets. Less than 5 percent of the quantity in the table above may be visually inspected.

NOTE: Normally each heat and thickness is to be sampled. Exception may be made where quantities are limited and/or mixtures of heat numbers are excessive.

909.05B Corrugated Aluminum Alloy Sheets

Size of Sample - A transverse strip full width of the sheet and at least 3 inches in length cut from the end of the sheet.

Number of Samples - A sample shall be taken from each of 3 different sheets for lots weighing 5 tons or less, from 4 sheets for lots weighing more than 5 tons and less than 10 tons, and from 5 sheets for lots weighing 10 tons or more.

Less than 25 sheets may be visually inspected.

909.06A Corrugated Polyethylene Pipe (Smooth Lined Type S or Corrugated)

Sampling Frequency - Straight Lengths, 12-inch diameter and over - 1 per 1000 ft

If the manufacturer has developed a history of five consecutive passing tests over the past two years for a given diameter of pipe (12 to 24-inch), at the discretion of the MDOT testing laboratory the sampling frequency may become 1 per 2500 ft for that diameter of pipe provided the stockpile consists of pipe manufactured with a single "Plant" and "Date" code. The Tested Stockpile sampling frequency of one sample per 1000 ft of pipe (12 to 36-inch) may be re-instituted if the manufacturer experiences three failing test results for a given diameter of pipe over a one year period. Up to date information on sampling frequency may be acquired from MDOT's Construction and Technology Division.

Size of Sample - Over 12-inch diameter - one 10-ft length and one 6-ft length plus coupling

Maximum for VI - 12-inch diameter and over - 100 ft

For perforated pipe wrapped in geotextile fabric, tie fabric securely in place on sample before cutting pipe sample. Do not disturb fabric after cutting.

Suppliers shall provide MDOT inspector with list of date codes on pipe in stockpile to be tested prior to sampling.

Each size pipe is a different material. Stockpile each pipe size separately.

Perforated Pipe

Twelve inches in diameter and above shall be tested for acceptance on a project-by-project basis when specified by Special Provision (No Tested Stock).

Soil tight sleeves shall be submitted with a pipe section 12 inches minimum length and gasket fully inserted into one end of the sleeve. A second gasket shall be supplied already installed on either the 10-ft specimen or on a separate specimen at least 12 inches in length, from the same stockpile.

Single Gasket Bell and Spigot Fused Coupling System - Couplers shall be submitted as attached part of 10-ft specimen and a second piece of the specimen, minimum of 12 inches in length, with gasket installed shall be included with the sample.

Each size pipe is a different material. Stockpile each pipe size separately.

For perforated pipe and tubing wrapped in geotextile fabric, tie fabric securely in place on sample before cutting pipe sample. Do not disturb fabric after cutting.

909.07 Corrugated Polyethylene Pipe (Tubing) (Perforated and Non-Perforated) (Wrapped and Non-Wrapped)

Sampling Frequency - From Coils - 1 per 5000 ft

Size of Sample - One 10-ft length plus coupling. For perforated tubing wrapped in geotextile fabric, tie fabric securely into place before cutting sample. Do not disturb fabric after cutting.

910.03 Geotextiles

Sampling Frequency - Obtain Certification Verification samples to represent the required quantity of geotextile according to the following schedule:

<u>Geotextile</u>	<u>First Sample</u>	<u>Additional Samples</u>
Blanket	360 to 1200 syd	7,500 syd or less
Liner for Riprap	360 to 1200 syd	5,000 syd or less
Separator/Stabilization	360 to 1200 syd	25,000 syd or less
Liner for Heavy Riprap	360 to 1200 syd	4,000 syd or less

Maximum for VI - 360 syd (3200 sq ft)

Size of Sample - Sample must be a minimum of 3 feet long by the full roll width, with a 3 syd minimum.

NOTE: Woven geotextile must be **rolled**, not folded, and shipped in a manner to prevent creases in the fabric.

914.04C Neoprene Joint Seal

Sample - Each sample to be a minimum of 1 yd (straight or loosely rolled - no kinks) (2 ft for bridge seals). Samples shall to be collected, randomly within each lot of production.

914.05 Epoxy Binder, For Joint Spall Repair

Normal Sampling Frequency - 1 per lot or batch number

Size of Sample - For material mixed at 1:1 ratio - 2 quart, 1 quart of each component: For material mixed at 2:1 ratio - 1/2 gallon of resin and 1 quart of curing agent. Material limited to shelf life of one year from date of manufacture. Material must be labeled with date of manufacture. MAY BE "TESTED STOCK" ITEM.

Maximum for VI - 5 gallons

914.07 Load Transfer Assemblies; Dowel Baskets

Sampling Frequency - 1 per 3000 assemblies

Size of Sample - One full assembly

Assemblies must meet the requirements of Standard Plan, R-40-G.

All shipments of load transfer assemblies will be accompanied by proper certification documentation.

- Certification from steel (dowel bar) manufacturer.
- Certification from epoxy coating company.
- Documentation on epoxy coating.
- Certification from assembly manufacturer.
- Documentation on bond release.

When shipment is made to a project, each bundle will bear a legible tag with the following information:

- Assembly manufacturer name and plant location.
- Control section/project number.
- Lot number or other identification that will also be shown on the accompanying certification.
- Supplier and/or contractor's name.

917.12 Grass Seed Sampling Information

Sample - For lots of 1 to 6 bags, sample each bag. For lots of more than 6 bags, sample 5 bags plus at least 10 percent of the bags in the lot. It is not necessary to sample more than 30 bags in any single lot.

NOTE: Samples are to be sent to Lansing Maintenance Division.

Acceptance by the Project Engineer is based on visual inspection of original, sewn-on bag tickets for verification of quantity and source of seed. The guaranteed analysis on the ticket will constitute the certification of this product by the Approved Manufacturer.

Misc. #3 Clay Pipe

Normal Sampling Frequency - One percent of the number of pieces, but not less than 2 pieces of each size except that at the option of the department the following sampling schedule will apply for 4-inch through 24-inch diameter sewer pipe for quantities of 500 or more:

Sampling Schedule - Per the following:

<u>Clay Pipe</u>	<u>Number of Samples</u>
500 to 1,000 pieces	6
1,001 to 2,000 pieces	8
2,001 to 5,000 pieces	11
Over 5,000 pieces	2 samples per 1,000 or fraction thereof

Size of Sample - Full size units for strength test. For absorption tests, 26 inches square to 82 inches square in area from the wall of each piece of pipe tested.

Maximum for VI - 10 pieces