

MATERIAL OVERSIGHT LIST

Material Testing and Research Branch
Highways Division, Hawaii Department of Transportation

As of 9/30/10

All construction field offices shall utilize this list when filling out the Material Sample Card that will be sent to HWY-L or the District Labs for material acceptance. List is based on the 2005 Hawaii Standard Specification and Bridge Construction

Section	Description		Office
203	EXCAVATION AND EMBANKMENT		
	203.02	Cut Subgrade, Embankment Fills & Import Borrow	LG
	203.03	Excavated Material (Planting Soil)	LG
	203.03 (B)(1)	Selected Material (Planting Soil)	LG
	203.03 (D)	Excavated Material (Subgrade Preparation)	LG
204	EXCAVATION AND BACKFILL FOR MISCELLANEOUS FACILITIES		
	204.02	Structure Backfill Material	LG
	204.02	Trench Backfill Material	LG
	204.02	Geotextiles for Underdrain Applications	LG
	204.02	Cullet and Cullet-Made Materials	LG
	204.02	Controlled Low Strength Material (CLSM)	LS
	204.02	Plastic Marking Tape	LR
205	EXCAVATION AND BACKFILL FOR BRIDGE AND RETAINING STRUCTURES		
	205.02	Filter Material	LG
	205.02	Structure Backfill Material	LG
	205.02	Cullet and Cullet-Made Materials	LG
206	EXCAVATION AND BACKFILL FOR DRAINAGE STRUCTURES		
	206.02	Structure Backfill Material	LG
	206.02	Trench Backfill Material	LG
	206.02	Cullet and Cullet-Made Materials	LG
	206.02	Controlled Low Strength Material (CLSM)	LS
207	DITCH AND CHANNEL EXCAVATION		
	207.02	Cut Subgrade	LG
209	TEMPORARY WATER POLLUTION, DUST, AND EROSION CONTROL		
	209.02	Slope Drains	LR
	209.02	Mulches	LR
	209.02	Grass	LR
	209.02	Fertilizer and Soil Conditioners	LR
	209.02	Hydro-mulching	LR
	209.02	Silt Fences	LG
	209.02	Berms	LR

Section	Description		Office
301	HOT MIX ASPHALT BASE COURSE		
	301.02	Asphalt Cement	LB
	301.02	Aggregate for Hot Mix Asphalt Base Course	LB
	301.02	Filler	LB
304	AGGREGATE BASE COURSE		
	304.02	Aggregate for Untreated Base	LG
305	AGGREGATE SUBBASE COURSE		
	305.02	Aggregate for Subbase	LG
306	UNTREATED PERMEABLE BASE COURSE		
	306.02	Coarse Aggregate / Filler	LG
312	HOT MIX GLASSPHALT BASE COURSE		
	312.02	Asphalt Cement	LB
	312.02	Aggregate for Hot Mix Asphalt Base Course	LB
	312.02	Filler	LB
	312.02	Cullet and Cullet-Aggregate Mixtures on Construction Materials	LB
	312.02	Cullet Materials for Roadways	LB
313	PERMEABLE SEPARATOR		
	313.02	Geotextiles for Permeable Separator Applications	LG
314	CONTROLLED LOW STRENGTH MATERIAL (CLSM) FOR UTILITIES AND STRUCTURES		
	314.02	Portland Cement	LS
	314.02	Fine Aggregate for Concrete - PCC	LS
	314.02	Mix Design - PCC	LS
	314.02	CLSM Specimens	LS
401	HOT MIX ASPHALT (HMA) PAVEMENT		LB
	401.02	Asphalt Cement	LB
	401.02	Emulsified Asphalt	LB
	401.02	Aggregate for Hot Mix Asphalt Pavement	LB
	401.02	Filler	LB
404	SLURRY SEAL		
	404.02	Emulsified Asphalt	LB
	404.02	Aggregate for Slurry Seal	LB
	404.02	Filler	LB
407	TACK COAT		
	407.02	Emulsified Asphalt	LB
411	PORTLAND CEMENT CONCRETE PAVEMENT (PCCP)		
	411.02	Portland Cement Concrete (PCC)	LS
	411.02	Mix Design - PCC	LS
	411.02	Joint Filler	LS
	411.02	Joint Sealer	LS
	411.02	Reinforcing Steel	LS
	411.02	Curing Materials	LS
	411.03	Dowels	LS

Section	Description		Office
	411	Concrete Mixtures - Specimens	LS
	411	Concrete Cores	LS
412	PAVING FABRIC		
	412.02	Asphalt Cement	LB
	412.02	Geotextiles for Paving Applications	LG
414	RECONSTRUCTION OF WEAKENED PAVEMENT AREAS		
	414.02	Hot Mix Glassphalt Base Course	LB
	414	Aggregate UTB / Subbase	LG
	414	Subgrade	LG
501	STEEL STRUCTURES		
	501.02	Red Primer Paint	LS
	501.02	Zinc Paints and Primers	LS
	501.02	Bearing Devices and Related Materials	LS
	501.02	Zinc Coating	LS
	501.02	Structural Steel	LS
	501.02	Welded Stud Shear Connector	LS
	501.02	Steel Forgings and Steel Shaftings	LS
	501.02	Steel Castings	LS
	501.02	Gray Iron Castings	LS
	501.02	Malleable Iron Castings	LS
	501.02	Standard Fasteners	LS
	501.02	High Strength Bolts and Studs	LS
502	TIMBER STRUCTURE		
	502.03	Cuts and Abrasions	LR
	502.03	Roofing Pitch (Line 61)	LR
	502.03	Creosote Oil (Line 60)	LR
	502.03	Roofing Pitch (Line 65)	LR
	502.03	Concentrated Salt Preservative (Line 67)	LR
	502.03	Bolt Holes	LR
	502.03	Creosote Plugs (Line 72)	LR
	502.03	Untreated Timber	LR
	502.03	Coat according to AWA Standard M4 (Line 80-81)	LR
	502.03	Treated Piles	LR
	502.03	Sheet of No. 12 Gage Zinc (Line109)	LR
	502.03	Waterproofing Cotton Fabric (Line 117)	LR
	502.03	Zinc-Coated Wire (Line 122)	LR
	502.03	Untreated Piles	LR
	502.03	Cotton Duck (Line 132)	LR
503	CONCRETE STRUCTURES		
	503.02	Portland Cement Concrete (PCC)	LS
	503.02	Reinforcing Steel	LS
	503.02	Joint Filler	LS

Section	Description		Office
	503.02	Joint Sealer	LS
	503.02	Flashing Compound	LB
	503.02	Waterproofing	LB
	503.02	Dowels	LS
	503.02	Curing Materials	LS
	503.02	Admixtures	LS
	503.02	Bearing Devices and Related Materials	LS
	503.02	Abrasive Coating	LS
	503.02	Mix Design - PCC	LS
	503	Concrete Mixtures - Specimens	LS
504	PRESTRESSED CONCRETE MEMBERS		
	504.02	Portland Cement Concrete (PCC)	LS
	504.02	Reinforcing Steel	LS
	504.02	Prestressing Steel	LS
	504.02	Admixtures	LS
	504.02	Water	LS
	504.02	Grout	LS
	504.02	Mix Design - PCC	LS
	504.02	Concrete Mixtures - Specimens	LS
505	PILING		
	505.02	Portland Cement Concrete Piles	LS
	505.02	Steel Piles	LS
	505.02	Steel Shell	LS
506	BEARING AND EXPANSION PLATES		
	506.02	Bronze and Stainless Steel Bearing and Expansion Plate	LS
507	RAILINGS		
	507.02	Portland Cement Concrete (PCC)	LS
	507.02	Reinforcing Steel	LS
	507.02	Concrete Mixtures - Specimens	LS
	507.02	Aluminum Bridge Railing	LS
	507.02	Steel Bridge Railing	LS
	507.02	Steel Pipe for Railing	LS
	507.02	Aluminum	LS
	507.02	Contacts with Dissimilar Materials	LS
508	CEMENT RUBBLE MASONRY		
	508.02	Portland Cement Concrete (PCC)	LS
	508	Concrete Mixtures - Specimens	LS
	508.02	Portland Cement - Mortar	LS
	508.02	Fine Aggregate - Mortar	LS
	508.02	Water	LS
	508.02	Stones	LG

Section	Description		Office
511	DRILLED SHAFTS		
	511.02	Portland Cement Concrete (PCC)	LS
	511	Concrete Mixtures - Specimens	LS
	511.02	Reinforcing Steel	LS
	511.02	Casing	LS
	511.02	Portland Cement - Grout	LS
	511.02	Crosshole Sonic Log (CSL) Test Access Tube	LG
	511.02	Water	LS
	511.02	Concrete Cores	LS
601	STRUCTURAL CONCRETE		
	601.02	Portland Cement	LS
	601.02	Aggregates, Fine & Coarse	LS
	601.02	Admixtures	LS
	601.02	Water	LS
602	REINFORCING STEEL		
	602.02	Reinforcing Steel	LS
	602	Reinforcing Steel; Wire Mesh Reinforcing	LS
	602	Bar Splicers	LS
603	CULVERTS AND STORM DRAINS		
	603.02	Portland Cement Concrete (PCC)	LS
	603.02	Mix Design - PCC	LS
	603	Concrete Mixtures - Specimens	LS
	603.02	Reinforcing Steel	LS
	603.02	Joint Filler for Pipe	LS
	603.02	Joint Mortar for Pipe	LS
	603.02	Flexible Watertight Gasket	LS
	603.02	Reinforced Concrete Pipe (RCP)	LS
	603.02	High Density Polyethylene Pipe	LS
	603.02	Corrugated Metal Pipe and Pipe Arch	LS
	603.02	Bituminous Coated Corrugated Metal Pipe and Pipe Arch	LS
	603.02	Structural Aluminum Plate for Pipe, Pipe Arch	LS
	603.02	Structural Steel Plate Pipe, Pipe Arch and Arch	LS
	603.02	Spiral Rib Metal Pipe	LS
	603.02	Spiral Rib Metal Coupling Band	LS
	603.02	Asphalt Paint - Protective Coating	LB
	603.02	Curing Materials	LS
	603.02	Excavation and Backfill	LG
	603.02	Bed Course Material for Crushed Rock Cradle	LG
	603.02	Structure Backfill Material	LG
	603.02	Trench Backfill Material	LG
	603.02	Cullet Materials for Utility Structures	LG
	603.02	Cullet Materials for Drainage Systems	LG

Section	Description		Office
604	MANHOLES, INLETS AND CATCH BASINS		
	604.02	Portland Cement Concrete (PCC)	LS
	604	Mix Design - PCC	LS
	604	Concrete Mixtures - Specimens	LS
	604.02	Reinforcing Steel	LS
	604.02	Portland Cement - Mortar	LS
	604.02	Fine Aggregate - Mortar	LS
	604.02	Water	LS
	604.02	Clay or Shale Brick	LS
	604.02	Concrete Brick	LS
	604.02	Joint Filler	LS
	604.02	Non-Shrink Grout	LS
	604.02	Frames, Grates, Covers and Ladder Rungs	LS
	604.02	Curing Materials	LS
	604.02	Asphalt	LB
	604.02	Asphalt Filler	LB
	604.02	Excavation and Backfill	LG
	604.02	Structure Backfill Material	LG
	604.02	Trench Backfill Material	LG
	604.02	Cullet Materials for Drainage Systems	LG
605	UNDERDRAINS		
	605.02	Portland Cement Concrete (PCC)	LS
	605	Mix Design - PCC	LS
	605	Concrete Mixtures - Specimens	LS
	605.02	Grouted Rubble Paving	LS
	605.02	Reinforcing Steel	LS
	605.02	Zinc Coating	LS
	605.02	Untreated Permeable Base Course	LG
	605.02	Perforated Plastic Pipe	LG
	605.02	Geotextiles for Underdrain Applications	LG
606	GUARDRAIL		
	606.02	Portland Cement Concrete (PCC)	LS
	606	Mix Design - PCC	LS
	606	Concrete Mixtures - Specimens	LS
	606.02	Reinforcing Steel	LS
	606.02	Joint Filler	LS
	606.02	Wire Rope and Wire Cable	LS
	606.02	Metal Meam Rails, End Sections, Terminal Conn.	LS
	606.02	Guardrail Posts	LS
	606.02	Guardrail Hardware	LS
	606	Excavation	LG
	606	Aggregate Base	LG

Section	Description		Office
607	CHAIN LINK FENCES AND GATES		
	607.02	Portland Cement Concrete (PCC)	LS
	607	Mix Design - PCC	LS
	607	Concrete Mixtures - Specimens	LS
	607.02	Chain Link Fence Materials	LS
610	REINFORCED CONCRETE DRIVEWAYS		
	610.02	Portland Cement Concrete (PCC)	LS
	610	Mix Design - PCC	LS
	610	Concrete Mixtures - Specimens	LS
	610.03	Reinforcing Steel	LS
	610	Curing Materials	LS
	610	Excavation and Backfill	LG
	610	Aggregate Base	LG
611	HAND-LAID RIPRAP		
	611.02	Geotextile	LG
	611.02	Stones	LG
612	GROUTED RUBBLE PAVING		
	612.01	Grouted Rubble Paving	LS
	612.02	Portland Cement - Mortar	LS
	612.02	Fine Aggregate - Mortar	LS
	612.02	Water	LS
	612.02	Stones	LG
613	CENTERLINE AND REFERENCE SURVEY MONUMENTS		
	613.02	Portland Cement Concrete (PCC)	LS
		Mix Design - PCC	LS
	613.02	Concrete Mixtures - Specimens	LS
	613.02	Zinc-Coated Pipe and Pipe Fitting	LS
	613.02	Structural Steel	LS
614	STREET SURVEY MONUMENTS		
	614.02	Portland Cement Concrete (PCC)	LS
	614.02	Mix Design - PCC	LS
	614.02	Concrete Mixtures - Specimens	LS
	614.02	Gray Iron Castings	LS
	614.02	Zinc-Coated Cast Iron Frames and Covers	LS
	614.02	Zinc-Coated Standard Weight Pipe	LS
616	IRRIGATION SYSTEM		
	616.02	Portland Cement Concrete (PCC)	LS
	616	Mix Design - PCC	LS
	616	Concrete Mixtures - Specimens	LS
	616.02	Copper Service Pipe and Appurtenances	LS
	616.02	Frame and Cover	LS
	616.02	Zinc-Coated Pipe and Pipe Fitting	LS

Section	Description		Office
	616.02	PVC Pipe and Fittings	LR
	616.02	Pressure Irrigation Mains.	LR
	616.02	Laterals	LR
	616.02	Threaded Risers and Nipples	LR
	616.02	Other Risers and Fittings	LR
	616.02	Sleeves	LR
	616.02	Conduits	LR
	616.02	Drip Tubes and Fittings	LR
	616.02	Polyethylene Pipe	LR
	616.02	Drip Emitters	LR
	616.02	Barbed Insert Fittings	LR
	616.02	PVC Insert and Threaded Fittings	LR
	616.02	Line Flushing Valve	LR
	616.02	Pressure Regulating Valve	LR
	616.02	Disc Filter	LR
	616.02	Air and Vacuum Relief Valve	LR
	616.02	Stainless Steel Clamp	LR
	616.02	Sprinkler Heads	LR
	616.02	Springs for Sprinkler Risers	LR
	616.02	Valves	LR
	616.02	Pressure Regulator	LR
	616.02	Backflow Preventer	LR
	616.02	Valve Box and Cover	LR
	616.02	Pump, Motor, and Motor Controller	LR
	616.02	Switching Tensiometer	LR
	616.02	Rain Sensor Switch	LR
	616.02	Automatic Controller	LR
	616.02	Controller Enclosure	LR
	616.02	Master-Satellite Control System	LR
	616.02	Electrical Equipment and Materials	LR
	616.02	Cullet Materials for Drainage Systems	LG
	616	Excavation and Backfill	LG
617	PLANTING SOIL		
	617.02	Selected Material	LG
	617.02	Imported Planting Soil	LG
619	PLANTING		
	619.02	Plant Material	LR
	619.02	Hydro-Mulch	LR
	619.02	Herbicides	LR
	619.02	Decorative Boulders	LR
	619.02	Plastic Header	LR
	619.02	Tree Guard	LR

Section	Description		Office
	619.02	Root Control Barrier	LR
	619.02	Fertilizer	LR
	619.02	Mulch and Soil Amendments	LR
	619.02	Stakes	LR
	619.02	Hose and Wire Ties	LR
	619.02	Guy Wires	LR
	619.02	Turnbuckles	LR
	619.02	Markers	LR
	619.02	Weed-Blocking Geotextile	LR
620	DUST CONTROL		
	620.02	Geobinder	LR
	620.02	Surfactant	LR
622	ROADWAY AND SIGN LIGHTING SYSTEM		
	622.02	Portland Cement Concrete (PCC)	LS
	622	Mix Design - PCC	LS
	622	Concrete Mixtures - Specimens	LS
	622.02	Reinforcing Steel	LS
	622.02	Structural Steel Anchor Bolts (Line 44)	LS
	622.02	Structural Steel Plates (Line 44)	LS
	622.02	Exposed Anchor Bolts & Nuts (Line 45)	LS
	622.02	Exposed Washers (Line 46)	LS
	622.03	Pull Wire (Line 201)	LR
	622.03	Splicing Connector (Line 260)	LR
	622.03	Splice Insulation Thermoplastic Electrical Insulating Tape (Line 269)	LR
	622.03	Splice Insulation Synthetic oil-Resistant Rubber Tape (Line 273)	LR
	622.03	Splice Cover High-Grade Insulating Paint of Similar Material (Line 273)	LR
	622.03	Grounding Electrode	LR
	622	Excavation and Backfill	LG
623	TRAFFIC SIGNAL SYSTEM		
	623.02	Portland Cement Concrete (PCC)	LS
	623	Mix Design - PCC	LS
	623	Concrete Mixtures - Specimens	LS
	623.02	Reinforcing Steel	LS
	623.02	Structural Steel Anchor Bolts (Line 133)	LS
	623.02	Structural Steel Plates (Line 133)	LS
	623.02	Exposed Anchor Bolts (Line 134)	LS
	623.02	Exposed Washers (Line 135)	LS
	623.03	Pull Wire (Line 304)	LR
	623.03	Splicing Connector (Line 369)	LR

Section	Description		Office
	623.03	Splice Insulation Thermoplastic Electrical Insulating Tape (Line 378)	LR
	623.03	Grounding Strap (Line 396)	LR
	623.03	Grounding Electrode (Line 407)	LR
	623	Excavation and Backfill	LG
624	WATER SYSTEM		
	624.02	Portland Cement Concrete (PCC)	LS
	624	Mix Design - PCC	LS
	624	Concrete Mixtures - Specimens	LS
	624.02	Reinforcing Steel	LS
	624.02	Concrete Cylinder Pipe	LS
	624.02	Ductile Iron Pipe, Fittings and Special Castings for Water System	LS
	624.02	Copper Service Laterals and Appurtenances'	LS
	624.02	Frame, Grates, Covers and Ladder Rungs	LS
	624.02	Asphalt	LB
	624.02	Cullet Materials for Utility Structures	LG
	624	Excavation and Backfill	LG
	624.02	Aggregate for Untreated Base	LG
	624.02	Structure Backfill Material	LG
	624.02	Trench Backfill Material	LG
625	SEWER SYSTEM		
	625.02	Portland Cement Concrete (PCC)	LS
	625	Mix Design - PCC	LS
	625	Concrete Mixtures - Specimens	LS
	625.02	Reinforcing Steel	LS
	625.02	Joint Mortar for Pipe	LS
	625.02	Jointing Compound for Sewers	LS
	625.02	RCP for Sewer System	LS
	625.02	Vitrified Clay Pipe (VCP) and Fittings for Sewer Pipe	LS
	625.02	PVC for Sewer System	LS
	625.02	Cast Iron Pipe and Pipe Fittings for Sewer System	LS
	625.02	Ductile Iron Pipe, Fittings and Special Castings for Water System	LS
	625.02	Cullet Materials for Utility Structures	LG
	625	Excavation and Backfill	LG
	625.02	Bedcourse Materials for Crushed Rock Cradle	LG
	625.02	Structure Backfill Material	LG
	625.02	Trench Backfill Material	LG
626	MANHOLES AND VALVE BOXES FOR WATER AND SEWER SYSTEMS		

Section	Description		Office
	626.02	Portland Cement Concrete (PCC)	LS
	626	Mix Design - PCC	LS
	626	Concrete Mixtures - Specimens	LS
	626.02	Reinforcing Steel	LS
	626.02	Masonry Units	LS
	626.02	Joint Filler	LS
	626.02	Mortar for Manhole	LS
	626.02	Non-Shrink Grout	LS
	626.02	Precast Concrete Unit	LR
	626.02	Frame, Grates, Covers and Ladder Rungs	LS
	626.02	Pipe Collar for Valve Box	LR
	626.02	Asphalt Filler	LB
	626.02	Asphalt	LB
	626.02	Cullet Materials for Utility Structures	LG
	626	Excavation and Backfill	LG
	626.02	Structure Backfill Material	LG
	626.02	Trench Backfill Material	LG
628	SHOTCRETE		
	628.02	Portland Cement Concrete (PCC)	LS
	628	Mix Design - PCC	LS
	628	Concrete Mixtures - Specimens	LS
	628.02	Reinforcing Steel; Wire Mesh Reinforcing	LS
629	PAVEMENT MARKINGS		
	629.02	Pavement Markers	LS
	629.02	Epoxy Adhesive for Pavement Markers	LS
	629.02	White and Yellow Traffic Paint	LB
	629.02	Adhesives for Pavement Markers	LB
	629.02	Preformed Pavement Marking Tape	LB
	629.02	Retroreflective Thermoplastic Compound Pavement Markings	LB
630	TRAFFIC CONTROL GUIDE SIGNS		
	630.02	Portland Cement Concrete (PCC)	LS
	630	Mix Design - PCC	LS
	630	Concrete Mixtures - Specimens	LS
	630.02	Reinforcing Steel	LS
	630.02	Zinc Paints and Primers	LS
631	TRAFFIC CONTROL REGULATORY, WARNING, AND MISCELLANEOUS SIGNS		
	631.02	Retroreflective Sheeting (Line 16)	LR
632	MARKERS		
	750.01(B)(1)	Sheet Aluminum	LR
	750.01(B)(2)	Extruded Aluminum Panels	LR
	750.01(B)(3)	Laminated Panels	LR
	750.01(C)(1)	Enamel	LR

Section	Description		Office
	750.01(C)(2)	Porcelain Enamel	LR
	750.01(C)(3)	Type I (Engineering Grade) ro Type II (Super Engineering Grade) Retroreflective Sheeting	LR
	750.01(C)(4)	Type III or IV Retroreflective Sheeting (High Intensity)	LR
	750.01(C)(5)	Hardened Aluminum-Backed Retroreflective Sheeting	LR
	750.01(C)(6)	Type IX Yellow Wide-Angle Prismatic Fluorescent Retroreflective Sheeting	LR
	750.01(C)(7)	Type IX Yellow-Green Wide-Angle Prismatic Fluorescent Retroreflective Sheeting	LR
	750.01(C)(8)	Type VII Fluorescent Orange Wide Angle Prismatic Retroreflective Sheeting	LR
	750.01(D)(1)	Aluminum Cut-Outs with Retroreflective Sheeting	LR
	750.01(D)(2)	Procelain Enamel Aluminum Cut-Outs with Acrylic Plastic Reflectors, Letters, Symbols and Borders	LR
	750.01(D)(3)	Hardened Aluminum-Backed Retroreflective Sheeting	LR
	750.01(E)	Retroreflective Sheeting Materials	LR
	750.02(A)	Pipe Posts	LR
	750.02(B)	Channel Posts	LR
	750.02(C)	Square Tube Posts	LR
	750.03(A)	Bolts	LR
	750.03(A)	Metal Washers	LR
	750.03(B)	Post clips for extruded aluminum sign panels	LR
	750.03(B)(1)	Aluminum Bolts	LR
	750.03(B)(2)	Aluminum Lock Nuts	LR
	750.03(B)(3)	Aluminum Washers	LR
	750.07(A)	Glass Sphere Reflector Marker	LR
	750.07(B)	Plastic Prismatic Reflector Marker	LR
	750.07(C)	Sheet Reflecting Material Marker	LR
	750.07(D)	Acrylic Resin Reflector Marker	LR
	750.08(B)	Type A Delineator	LR
	750.08(C)	Type B Delineator	LR
	750.08(D)	Reflectors	LR
	632.03(A)(1)	Metal Posts	LR
	632.03(A)(2)	Flexible Posts	LR
	632.03(B)(1)	Reflector Marker RM-1	LR
	632.03(B)(1)	Reflector Marker RM-2	LR
	632.03(B)(1)	Reflector Marker RM-3	LR
	632.03(B)(1)	Reflector Marker RM-5	LR
	632.03(B)(2)(a)	Type I Object Marker (OM1)	LR
	632.03(B)(2)(b)	Type I Object Marker (OM2)	LR
	632.03(B)(2)(c)	Type I Object Marker (OM3)	LR
	632.03(B)(2)(d)	End-of-Road Marker (OM4)	LR
633	FALSEWORK LIGHTING		
	633.02	Lampholder	LR

Section	Description		Office
	633.02	150-Watt (Minimum) Lamp	LR
	633.02	100-Watt (Minimum) Lamp	LR
634	PORTLAND CEMENT CONCRETE SIDEWALKS		
	634.02	Portland Cement Concrete (PCC)	LS
	634	Mix Design - PCC	LS
	634	Concrete Mixtures - Specimens	LS
	634.02	Reinforcing Steel; Wire Mesh Reinforcing	LS
	634.02	Joint Filler	LS
	634.02	Aggregate for Untreated Base	LG
635	HOT MIX ASPHALT (HMA) SIDEWALKS		
	635.02	HMA Pavement Mix No. V	LB
	635.02	Aggregate for Untreated Base	LG
637	SLOTTED DRAINS		
	637.02	Portland Cement Concrete (PCC)	LS
	637	Mix Design - PCC	LS
	637	Concrete Mixtures - Specimens	LS
	637.02	Corrugated Metal Pipe and Pipe Arch	LS
	637.02	Bituminous Coated Corrugated Metal Pipe and Pipe Arch	LS
	637.02	Cullet Materials for Utility Structures	LG
	637.02	Cullet Materials for Drainage Systems	LG
	637	Excavation and Backfill	LG
	637.02	Structure Backfill Material	LG
	637.02	Trench Backfill Material	LG
638	PORTLAND CEMENT CONCRETE CURB AND GUTTER		
	638.02	Portland Cement Concrete (PCC)	LS
	638	Mix Design - PCC	LS
	638	Concrete Mixtures - Specimens	LS
	638.02	Reinforcing Steel	LS
	638.02	Joint Filler	LS
	638.02	Joint Mortar for Pipe	LS
	638.02	Precast Concrete Curb, Gutter	LS
	638.02	Portland Cement Concrete Curb and Gutter	LS
	638.02	Asphalt Cement	LB
	638.02	Aggregate for Untreated Base	LG
639	ASPHALT CONCRETE CURB AND GUTTER		
	639.02	Asphalt Concrete Pavement Mix No. V	LB
	639.02	Emulsified Asphalt	LB
	639.02	Aggregate for Untreated Base	LG
640	LINED DRAINAGE DITCH AND CONCRETE SPILLWAYS		
	640.02	Portland Cement Concrete (PCC)	LS
	640	Mix Design - PCC	LS
	640	Concrete Mixtures - Specimens	LS

Section	Description		Office
	640.02	Reinforcing Steel	LS
	640.02	Curing Materials	LS
	640	Excavation and Backfill	LG
641	HYDRO-MULCH SEEDING		
	641.02	Seed	LR
	641.02	Fertilizer	LR
	641.02	Mulch	LR
	641.02	Soil and Mulch Tackifier	LR
644	REPAIRING OF EXISTING SPRINKLER SYSTEM		
	644.02	Replacement Parts (Line 13)	LR
	644.02	Replacement Sprinkler Heads (Line 16)	LR
645	WORK ZONE TRAFFIC CONTROL		
	645.02	Preformed Pavement Marking Tape	LB
	645.02	FHWA Approval Letter certifying Compliance with NCHRP Report 350 (Line 39)	LR
	645.02	Each Type of Category 1 Traffic Control Device (Line 45)	LR
	645.02	Traffic Control Devices (Line 50)	LR
	645.02	Protective Devices (Line 55)	LR
646	GEOCOMPOSITE DRAIN		
	646.02	Perforated Plastic Pipe	LG
	646.02	Geotextiles for Geocomposite Drain Applications	LG
	646	Excavation and Backfill	LG
647	FIBER OPTIC CABLE		LR
649	PRESSURE GROUT		
	649.02	Portland Cement	LS
	649.02	Portland Cement - Mortar	LS
	649.02	Fine Aggregate - Mortar	LS
	649.02	Water	LS
650	CURB RAMPS		
	650.02	Portland Cement Concrete (PCC)	LS
	650	Mix Design - PCC	LS
	650	Concrete Mixtures - Specimens	LS
	650.02	Reinforcing Steel	LS
	650.02	Welded Wire Fabric Reinforcement	LS
	650.02	Aggregate for Untreated Base	LG
	650.02	Joint Filler	LG
	650.03	Detectable Warnings (Line 28)	LR
653	CONCRETE CULVERT LINING		
	653.02	Portland Cement Concrete (PCC)	LS
	653	Mix Design - PCC	LS
	653	Concrete Mixtures - Specimens	LS
	653.02	Reinforcing Steel	LS

Section	Description		Office
	653.02	Welded Wire Fabric Reinforcement	LS
	653.02	Angle Iron	LS
	653.02	Epoxy	LS
	653.02	Emulsified Asphalt Coating	LB
	653	Aggregate for Untreated Base	LG
654	RESTRAINERS		
	654.02	Portland Cement Concrete (PCC)	LS
	654	Mix Design - PCC	LS
	654	Concrete Mixtures - Specimens	LS
	654.02	Reinforcing Steel	LS
	654.02	Epoxy-Resin Adhesive	LS
	654.02	Non-Shrink Grout	LS
	654.02	Sheathing	LS
	654.02	Corrosion-Inhibiting Grease	LS
	654.02	Structural Steel	LS
655	DUMPED RIPRAP		
	655.02	Geotextiles for Permeable Separator Applications	LG
	655.02	Stones	LG
	655	Excavation and Backfill	LG
656	DRILLING HOLES AND INSTALLING DOWEL REINFORCING BARS		
	656.02	Reinforcing Steel	LS
	656.02	Epoxy-Resin Adhesive	LS
	656.02	Epoxy Grout	LS
693	TERMINAL IMPACT ATTENUATOR		
	693.02	Portland Cement Concrete (PCC)	LS
	693	Mix Design - PCC	LS
	693	Concrete Mixtures - Specimens	LS
	693.02	Reinforcing Steel	LS
	693	Excavation and Backfill	LG
701	HYDRAULIC CEMENT		
	701.01	Portland Cement	LS
702	BITUMINOUS MATERIALS		
	702.01	Asphalt Cement	LB
	702.04	Emulsified Asphalt	LB
	702.07	Asphalt Filler	LB
703	AGGREGATES		
	703.01	Fine Aggregate for Concrete	LS
	703.03	Aggregate for Hot Mix Asphalt Base Course	LB
	703.04 (A)	Aggregate for Untreated Permeable Base - Coarse Aggregate	LG
	703.04 (B)	Aggregate for Untreated Permeable Base - Filler	LG
	703.06	Aggregate for Untreated Base	LG
	703.09	Aggregate for Hot Mix Asphalt Pavement	LB

Section	Description		Office
	703.11	Aggregate for Slurry Seal	LB
	703.15	Filler	LB
	703.17	Aggregate for Subbase	LG
	703.16	Bed Course Material for Crushed Rock Cradle	LG
	703.18	Filter	LG
	703.20	Structure Backfill Material	LG
	703.21	Trench Backfill Material	LG
	703.24	Granular Material for Embankment	LG
704	MASONRY UNITS		
	704.01	Clay or Shale Brick	LS
	704.02	Concrete Brick	LS
705	JOINT MATERIALS FOR CONCRETE STRUCTURES		
	705.01	Joint Filler	LS
	705.02	Joint Mortar for Pipe	LS
	705.03	Flexible Watertight Gasket	LS
	705.04	Joint Sealer	LS
	705.05	Flashing Compound	LB
	705.06	Waterproofing	LB
	705.08	Mortar for Manhole	LS
	705.11	Jointing Compound for Sewer Pipe	LS
706	CONCRETE, CLAY AND PLASTIC PIPE		
	706.02	RCP for Drainage System	LS
	706.08	Vitrified Clay Pipe (VCP) and Fittings for Sewer System	LS
	706.09	PVC Pipe for Sewer System	LS
	706.10	High Density Polyethylene Pipe	LS
	706.12	Perforated Plastic Pipe	LG
	706.14	Polyethylene Pipe	LR
	706.18	Concrete Cylinder Pipe	LS
707	METAL PIPE		
	707.01	Ductile Iron Pipe, Fittings and Special Castings for Water System	LS
	707.02	Corrugated Metal Pipe and Pipe Arch	LS
	707.03	Bituminous Coated Corrugated Metal Pipe and Pipe Arch	LS
	707.06	Structural Aluminum Plate for Pipe	LS
	707.08	Structural Steel Plate for Pipe, Pipe Arch and Arch	LS
	707.10	Zinc-Coated Steel Pipe	LS
	707.10	Blushing	LR
	707.10	Plugs	LR
	707.10	Caps	LR
	707.10	Couplings	LR
	707.10	Crosses	LR
	707.10	Elbows	LR

Section	Description		Office
	707.10	Tees	LR
	707.10	Reducers	LR
	707.10	Extension Sleeves	LR
	707.10	Unions	LR
	707.10	Nipples (Zinc-Coated Pipe & Fittings)	LR
	707.11	Copper Service Pipe	LS
	707.11	Fittings	LR
	707.11	Nipples (Copper Service Pipe and Appurtanences)	LR
	707.11	Corporation Stops	LR
	707.11	Stopcocks	LR
	707.11	Solder and Flux	LR
	707.11	Service Clamps	LR
	707.12	Spiral Rib Metal Pipe	LS
	707.13	Spiral Rib Coupling Band	LS
708	PAINTS		
	708.01	Red Primer Paint	LS
	708.02	Zinc Paints and Primers	LS
	708.05	Asphalt Paint	LB
709	REINFORCING STEEL, WIRE ROPE AND PRESTRESSING STEEL		
	709.01	Reinforcing Steel	LS
	709.01 (E)	Dowels	LS
	709.02	Wire Rope or Wire Cable	LS
	709.03	Prestressing Steel	LS
710	GUARDRAIL MATERIALS		
	710.04	Metal Beam Rails	LS
	710.07	Guardrail Posts	LS
	710.08	Guardrail Hardware	LS
	710.09	Aluminum Bridge Railing	LS
	710.10	Steel Bridge Railing	LS
	710.11	Steel Pipe Railing	LS
711	CONCRETE CURING MATERIALS AND ADMIXTURES		
	711.01	Curing Materials	LS
	711.03	Admixtures	LS
712	MISCELLANEOUS		
	712.01	Water	LS
	712.02	Epoxy-Resin Adhesive	LS
	712.04 (A)	Non-Shrink Grout	LS
	712.04 (B)	Epoxy Grout	LS
	712.05	Precast Concrete Curb, Gutter	LS
	712.06	Concrete Pull Box	LS
	712.07	Frames, Grates, Covers and Ladder Rungs	LS
	712.09	Bearing Devices and Related Materials	LS

Section	Description		Office
	712.09 (D)	Bronze and Stainless Steel Bearing and Expansion Plate	LS
	712.10	Zinc Coating	LS
	712.11	Abrasive Coating	LS
	712.12	Sheathing	LS
	712.13	Corrosion-Inhibiting Grease	LS
	712.22	Pipe Collar for Valve Box	LR
	712.23	Precast Concrete Meter and Valve Boxes and Covers	LR
	712.24	Valves and Appurtenances	LR
	712.24	Gate Valves	LR
	712.24	Butterfly Valves and Manual Operators	LR
	712.24	Tapping Valves and Sleeves	LR
	712.24	Ball Valves and Appurtenances	LR
	712.24	Air Relief Valves/Combination Air Valves and Appurtenances	LR
	712.24	Valve markers	LR
	712.25	Pipe Hangers, Lateral Bracings and Inserts	LR
	712.26	Hydrants and Appurtenances	LR
	712.27	Conduits	LR
	712.27	Liquid-Tight Flexible Metal Conduit Fittings	LR
	712.27	Rigid Steel Conduit PVC Coated	LR
	712.27	Duct Sealing Compound	LR
713	STRUCTURAL STEEL AND RELATED MATERIALS		
	713.01	Structural Steel	LS
	713.01	Carbon Structural Steel	LS
	713.01	High-Strength Low-Alloy Structural Steel	LS
	713.01	High-Strength Low-Alloy Structural Steel for Riveted or Bolted Construction	LS
	713.01	High-Strength Low-Alloy Structural Steel for Welding	LS
	713.02	Welded Stud Shear Connectors	LS
	713.07	Steel Forgings and Steel Shafting	LS
	713.08	Steel Castings	LS
	713.09	Gray Iron Castings	LS
	713.10	Malleable Iron Castings	LS
714	STRUCTURAL TIMBER AND RELATED MATERIALS		
	714.01	General, Douglas Fir or Redwood	LR
	714.02	Timber Preservatives	LR
	714.03	Hardware for Timber Structures (Machine Bolts, Drift Bolts, Dowels, Washers & Nails)	LR
715	ALUMINUM		
	715.01	Aluminum	LS
	715.02	Contacts with Dissimilar Materials	LS
716	GEOTEXTILES		
	716.02	Geotextiles for Permeable Separator Applications	LG

Section	Description		Office
	716.03	Geotextiles for Underdrain Applications	LG
	716.04	Geotextiles for Paving Applications	LG
	716.05	Geotextiles for Geocomposite Drain Applications	LG
	716.06	Geotextiles for Stabilization Applications	LG
	716.07	Geotextiles for Permanent Erosion Control Applications	LG
	716.08	Geotextiles for Temporary Silt Fence Applications	LG
717	CULLET AND CULLET-MADE MATERIALS		
	717.01	Cullet and Cullet-Aggregate Mixtures as Construction Materials	LG, LB
	717.02	Cullet Materials for Roadways	LB
	717.03	Cullet Materials for Utility Structures	LG
	717.04	Cullet Materials for Drainage Systems	LG
718	STEEL FASTENERS		
	718.01	Anchor Bolts, Anchor Bolt Nuts & Anchor Bolt Washers	LS
	718.02	High-Strength Bolts and Studs	LS
722	CHAIN LINK FENCE MATERIALS		
	722.01 (A)	Chain Link Fence Materials	LS
750	TRAFFIC CONTROL SIGN AND MARKER MATERIALS		
	750.01	Sheet Aluminum Panels	LR
	750.01	Extruded Aluminum Panels	LR
	750.01	Laminated Panels	LR
	750.01	Enamel	LR
	750.01	Porcelain Enamel	LR
	750.01	Type I (Engineering Grade) or Type II (Super Engineering Grade) Retroreflective Sheeting	LR
	750.01	Type III or IV Retroreflective Sheeting (High Intensity)	LR
	750.01	Hardened Aluminum-Backed Retroreflective Sheeting	LR
	750.01	Type IX Yellow Wide-Angle Prismatic Fluorescent Retroreflective Sheeting	LR
	750.01	Type IX Yellow-Green Wide-Angle prismatic Fluorescent Retroreflective Sheeting	LR
	750.01	Type VII Fluorescent orange Wide Angle prismatic Retroreflective Sheeting	LR
	750.01	Aluminum Cut-Outs with Retroreflective Sheeting	LR
	750.01	Porcelain Enamel Aluminum Cut-Outs with Acrylic Plastic Reflectors, Letters, Symbols and Borders	LR
	750.01	Retroreflective Sheeting Materials	LR
	750.02	Sign Posts	LR
	750.03	Bolts and Metal Washers	LR
	750.03	Aluminum Bolts, Aluminum Lock Nuts and Aluminum Washers	LR
	750.03	Post Clips for Extruded Aluminum Sign Panels	LR
	750.04	Ground Mounted Destination and Expressway Sign Supports	LR
	750.05	Tapered Posts and Cross Arms	LR
	750.05	Uniform Tubes, Posts, and Cross Arms	LR
	750.05	Base Plate	LR

Section	Description		Office
	750.05	Structural Steel and Anchor Bolts	LR
	750.05	Fastenings	LR
	750.05	General	LR
	750.05	Truss Section	LR
	750.05	Frame	LR
	750.06	Expressway Sign Luminaire Brackets	LR
	750.06	Zinc-Coated Metal Primer	LR
	750.07	Reflector Marker	LR
	750.08	Type A Delineator	LR
	750.08	Type B Delineator	LR
	750.08	Reflectors	LR
	750.09	Delineator Tube	LR
	750.09	Delineator Base	LR
755	PAVEMENT MARKING MATERIALS		
	755.01	White and Yellow Traffic Paint	LB
	755.02	Pavement Markers	LS
	755.03	Adhesives for Pavement Markers	LS, LB
	755.04	Preformed Pavement Marking Tape	LB
	755.05	Retroreflective Thermoplastic Compound Pavement Markings	LB
760	ROADWAY AND SIGN LIGHTING SYSTEMS MATERIALS		
	760.01	Light Poles	LR
	760.02	Luminaire Mast Arms	LR
	760.03	luminaires for Roadway, Underpass, Sign and Pedestrian Stairways	LR
	760.04	Cables and Wires	LR
	760.04	Tags for Luminaire and Cable and Wire Identification	LR
	760.05	Hydraulically Indented Lugs for Disconnect and Protective Devices	LR
	760.05	Standard Connector Kit of Taps and Fuses for Disconnect and Protective Devices	LR
	760.05	Splicing Kit for Disconnect and Protective Devices	LR
	760.06	Waterproof Connectors for Roadway Lighting	LR
	760.06	Fuse for Disconnect and Protective Devices	LR
	760.07	Photoelectric Control	LR
770	TRAFFIC SIGNAL MATERIALS		
	770.01	Shaft for Type I Traffic Signal Standards	LR
	770.01	Shaft for Type II and Type III Traffic Signal Standards	LR
	770.01	Anchor Bolts for Type I Traffic Signal Standards	LR
	770.01	Tapered Mast Arm for Type II and Type III Traffic Signal Standards	LR
	770.02	Standard Traffic Signal Heads	LR
	770.02	Optical Units for Standard Traffic Signal Heads	LR
	770.02	Houseing for Standard Traffic Signal Heads	LR
	770.02	Directional Louvers for Standard Traffic Signal Heads	LR

Section	Description		Office
	770.02	Back Plates for Standard Traffic Signal Heads	LR
	770.02	Top of Pole Signal Head Mounting Assembly (Line 291)	LR
	770.02	Bracket Signal Head Mounting Assembly (Line 291)	LR
	770.02	Cantilever Signal Head Mounting Assembly (Line 291)	LR
	770.02	Under-Slung Signal Head Mounting Assembly (Line 291)	LR
	770.02	Mast Arm End Mounting Fittings (Line 299)	LR
	770.02	Cadium-Plated Setscrews for Slipfitter Assembly (Line 301)	LR
	770.02	1-1/2 Inch Pipe Coupling for Pipe Bracket Assembly (Line 303)	LR
	770.02	Lock Rings for Signal Faces (Line 306)	LR
	770.02	Fittings for Signal Faces (Line 307)	LR
	770.02	Stainless Steel Bands for Mast Arm Mounting Bracket (Line 322)	LR
	770.02	Programmed Visibility Traffic Signal Heads	LR
	770.03	Dual Indication Unit (Fiberoptics)	LR
	770.04	Messages for Pedestrian Signal	LR
	770.04	Message Module for Pedestrian Signal	LR
	770.04	Case for Pedestrian Signal	LR
	770.04	Door Frame for Pedestrian Signal	LR
	770.04	Z-Crate Visor for Pedestrian Signal	LR
	770.04	Transformer for Pedestrian Signal	LR
	770.04	Fused Switch for Pedestrian Signal	LR
	770.04	Painting for Pedestrian Signal	LR
	770.04	Pedestrian Signal Push Button with Integral Sign for Pedestrian Signal	LR
	770.05	Controller Assembly	LR
	770.05	Model 170E Controller Assembly	LR
	770.05	Model 332A Controller Cabinet	LR
	770.05	Model 170E Controller (Table)	LR
	770.05	Model 412D Prom Module (Table)	LR
	770.05	Model 400 Modem (Table)	LR
	770.05	332A Aluminum Cabinet (Table)	LR
	770.05	Model 200 Load Switches (Table)	LR
	770.05	Model 204 Flasher (Table)	LR
	770.05	Model 242 Isolators (Table)	LR
	770.05	Model FS/ST Isolator (Table)	LR
	770.05	Flash Transfer Relay (Table)	LR
	770.05	Model 210 Conflict Monitor (Table)	LR
	770.05	Model C/170 Detector Amplifiers (Non QPL) (Table)	LR
	770.05	Model M762 Preempt.Card (Non QPL) (Table)	LR
	770.05	Model UTS (Non QPL) (Table)	LR
	770.05	Model 752 Optical Preemption Module	LR
	770.05	Universal Time Standard (UTS) Module	LR

Section	Description		Office
	770.06	Type 1 - Signal-Loop Cable for Load Circuits from the Cabinet Loop to Field Pullboxes	LR
	770.06	Type 2 - Home-Run Cable Tie-In Loop Detector Stubs or Pedestrian Push Button to the Cabinet	LR
	770.06	Type 3 - Inter-Connect Cable Tie-In One Signalized Intersection to Another	LR
	770.06	Type 4 - Detector-Loop Cable for Installation into the Roadway Sawcut	LR
	770.06	Type 5 - Signal-Drop Cable from 3-Section, RYG Traffic Signal Heads and FDW-W (Pedestrian Signal Head) Dropped from Signal Head on Traffic Signal Standard to Pullbox for Splicing	LR
	770.06	Type 6 - Electrical Service Cable from Electrical Company Secondary Lines to Traffic Signal Meter to Controller Cabinet	LR
	770.06	Type 7 - Preemption Detector (Opticom) Cables	LR
	770.06	Ground Wire	LR
	770.06	Overhead Construction	LR
	770.07	Epoxy Sealer	LR
	770.08	Hot Applied Rubberized Sealant	LR
	770.09	High Performance Detector Loop Sealant	LR
	770.10	Approach-Only Microwave Vehicle Detector	LR
	770.11	Type 7 Cable for Preemption Detectors	LR
	770.11	M752 Optical Preemption Detector	LR
	770.11	Model 711 Preemption Detector	LR