Α

Blvd

ВМР

Boulevard

Best Management Practice

Aluminum Arch Culvert

Annual Average Daily Traffic

AAC

AADT

#### GENERAL NOTES

1 ABBREVIATIONS SHOULD BE UPPER AND LOWE	FR CASE
LETTERS EXCEPT WHERE ALL UPPER CASE L	ETTERS
ARE REQUIRED.	
Const Jt = Construction Joint	

AADT	Annual Average Daily Traffic	DIVIE	best Management Fractice	CIVIE	Corrugated Metal Fipe		
ABC	Aggregate Base Course	BNSF	Burlington Northern & Santa Fe Railroad	CMU	Concrete Masonry Unit	2. ACRONYMS SHALL  CBC = Concre	BE ALL UPPER CASE LETTERS.
Abut	Abutment	Bott	Bottom	COC	Certificate of Compliance	CBC = Concre	te Box Cuivert
ACM	Asbestos Containing Materials	BP	Bearing Pressure	Col	Column	3. ABBREVIATIONS S	SHALL BE USED ONLY WHEN THE WORDS
ADA	Americans with Disabilities Act	Brg	Bearing	Comp	Composite	FACTORS, SUCH A	LETELY SPELLED OUT DUE TO MULTIPLE IS A LACK OF SPACE ON THE SHEET.
ADT	Average Daily Traffic	Bk Sta	Back Station	Conc	Concrete		
ΑE	Architect-Engineer, Architecture, Engineering	ВТ	Beginning of Transition	Conn	Connection		
AEC	Architecture, Engineering and Construction	Btwn	Between	Const	Construction	Deg,°F,	Degrees (Thermal) - Degrees Fahrenheit,
AGA	American Gas Association			Const Jt	Construction Joint	°C,	Degrees Celsius
Alt	Alternate			Cont	Continuous	Dgn	Design or MicroStation Drawing
API	American Petroleum Institute	(	C )	Corr	Corrugated	DH	Design Height or qty calculations
APL	Approved Products List			CPE	Corrugated Polyethylene Pipe	DHV	Design Hour Volume
Approx	Approximate	ą	Centerline	CPG	Concrete Prestressed Girder (Precast)	DHW	Design High Water
APWA	American Public Works Association	C&G	Curb and Gutter	CPGC	Concrete Prestressed Girder Continuous (Precast)		Ductile Iron
AQCC	Air Quality Control Commission	CA	Concrete Arch	CPT	Corrugated Polyethylene Tubing	Dia	Diameter
ARE	Additional Requested Element	CAC	Concrete Arch Culvert	CR	County Road	DNR	Department of Natural Resources
	(Design/Build Terminology)	CAD	Computer Aided Design, Computer Aided Drafting	CRF	Concrete Rigid Frame	DOW	Division of Wildlife (Colorado)
AREMA	American Railway Engineering & Maintenance-of-Way Association	CADD	Computer Aided Design and Drafting	CS	Curve to Spiral, Commercial Standard,	DRCOG	
AHSTA	Ahead Station	CBC	Concrete Box Culvert		Concrete Slab		Denver Regional Council of Governments  Division of Transportation Development (CDOT)
		CBG	Concrete Box Girder	CSC	Concrete Slab Continuous	DTD DTM	Digital Terrain Model
ARA	Asphalt Rejuvenating Agent  American Seamental Bridge Institute	CBGC	Concrete Box Girder Continuous	CSG	Concrete Slab & Girder (Poured in Place)		3
ASBI	y y	CBGCP	Concrete Box Girder Continuous Prestressed	CSGC	Concrete Slab & Girder Continuous	Dwg	AutoCAD Drawing
ASD	Allowable Stress Design	CBGP	Concrete Box Girder Prestressed		(Poured in Place)		
ASOP	American Society of Photogrammetry	CBGS	Concrete Box Girder Segmented	CSGCP	Concrete Slab & Girder Continuous Prestressed (Poured in Place)		E
ASR	Alkali Silica Reactivity	CBR	California Bearing Ratio	CSGP	Concrete Slab & Girder Prestressed		
ASSE	American Society of Sanitary Engineering, American Society of Safety Engineers	CCR	Code of Colorado Regulations, as amended	CSGF	(Poured in Place)		Exempli Gratia (For Example)
Asst	Assistant	CDTPG	Concrete Double-Tee Prestressed Girder	Csk	Countersunk	e.g. EA	Environmental Assessment
ATB	Asphalt Treated Base	CE	Construction Engineering	CSL	Cross Hole Sonic Logging	EATB	Emulsified Asphalt Treated Base
АТМ	Active Traffic Management	CF	Cubic Feet	CSP	Corrugated Steel Pipe or Concrete Slab Prestress		
AUTS	Actual Ultimate Tensile Strength	CFS	Cubic Feet per Second	CSPC	Concrete Slab Prestressed Continuous	EF EF	Eastbound Each Face
		CG	Center of Gravity	СТВ	Cement Treated Base	Elev	Elevation
		CHP	Colorado Highway Patrol	CTR	Certified Test Reports		Engineer
	В	CI	Cast Iron or Concrete on Rolled I-Beam	Ctr	Center	Engr EPA	Environmental Protection Agency
		CIC	Concrete on Rolled I-Beam Continuous	CY	Cubic Yards	EPA EPDM	- ·
Bk to Bk	Back to Back	CICK	Concrete on Rolled I-Beam Continuous	CZ	Clear Zone	EPUM	Ethylene Propylene Diene Monomer-class rubber
BEI	By EqualIncrements	0.7.01.4.5	& Composite			Eq	Equal
ВМ	Bench mark	CICKP	Concrete on Rolled I-Beam Continuous & Composite Prestressed			ESAL	Equivalent Single Axle Load
BPF	Blows per Foot	CIK	Concrete on Rolled I-Beam Composite		D )	Est	Estimate
BAFO	Best and FinalOffer	CIKP	Concrete on Rolled I-Beam Composite			ET	Ending of Transition
Вы	Barrels	52111	Prestressed	D	Degree of Curvature, or Density	EVT	Event Point (InRoads Terminology)
BC	Bolt Circle	CIP	Cast-in-Place or Cost in Place	DB	Design Build	EW	Each Way
Beg	Begin	CIR	Cold In-Place Recycling	DAS	Deformed Anchor Stud	E	Expansion Bearing
Bk	Back	Clr	Clear	dB	decibels	Exc	Excavation
Bldg	Building	cm	Centimeters	DBA	Deformed Bar Anchor	Exp Jt	Expansion Joint
5		014		DPI	Daubla	<u>- '</u>	

CMAQ

CMP

Congestion Mitigation Air Quality

Corrugated MetalPipe

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BLM

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Corrugated Metal

СМ

## Colorado Department of Transportation



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DbI

Double

Project Development Branch

ACRONYMS AND
<b>ABBREVIATIONS</b>

Ext

Exterior

STANDARD PLAN NO.

M-100-2

Standard Sheet No. 1 of 4

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F Н F Fixed Bearing HAS Headed Anchor Stud JB Junction Box MFBM Thousand Foot Board Measure HA7MAT JPCP Jointed Plain Concrete Pavement Mfg Manufactured or Manufacturer Hazardous Materials FL Flow Line Method of Handling Traffic HC Horizontal Clearance Jt Joint MHT FAA Federal Aviation Administration HCL Horizontal Control Line Mi Mile FASB Foamed Asphalt Stabilized Base нсм Highway Capacity Manual Minimum FCM Fracture Critical Member Min Misc Miscellaneous FDR Full Depth Reclamation Hd Head HDPE High Density Polyethylene Millimeters Fed Federal mm Thousand Pounds HDPP High Density Polypropylene Kip MP Milepost FFMA Federal Emergency Management Agency KSF kips per square foot MPH Miles Per Hour FES Flared End Section Hex Hd Hexagonal Head HID KSI Kips per square inch Resilient Modulus High Intensity Discharge (Lamps)  $M_R$ FF Far Face or Front Face ΚW Kilowatt HIR Hot In-Place Recycling MR Modulus of Rupture Fig Figure Fin Finished HLMR Highload Multi-Rotational HMA Hot Mix Asphalt FΙ Floor Ν Horizontal Flg Flange Horiz HOV High-Occupancy Vehicle FΜ Factory Mutual ΗP L Length, Angle (steel) NAD North American Datum Horsepower FMM Field Materials Manual Lb Pounds NAVD North American Vertical Datum HPC High Performance Concrete FPM Feet Per Minute Lb/Ft pound per foot NB HS High Strength Northbound, Total Number of Blocks FPS Feet Per Second Lb/SY Pounds per square yard Recommended SuperPave™ Ηt Height  $N_{DES}$ FRA Federal Railroad Administration Gyratory Design Revolution Lb-Ft pound foot HW High Water Freq Frequency NDT Nondestructive Testing LCCA Life Cycle Cost Analysis Hwy Highway FRP Fiber Reinforced Polymer NECA National Electrical Contractors Association LED Light Emitting Diode FS Planned Finish Surface Hyd Hydraulic NEPA National Environmental Policy Act LEED Leadership in Energy Ft Feet and Environmental Design NESC National Electric Safety Code Ft Kip Foot Kips LF Linear Feet NF Near Face Ft Lb Foot Pounds LFD Load Factor Design NFPA National Fire Protection Association FTA Federal Transit Administration LL Liquid Limit NGS National Geodetic Survey ICEA Insulated Cable Engineers Association Ftg Footing LLDPE Linear Low-Density Polyethylene NGVD National Geodetic Vertical Datum of 1929 ID Inside Diameter FWD Falling Weight Deflectometer LRFD Load and Resistance Factor Design NHS National Highway System IMP Incident Management Plan LS Lump Sum or Length of Spiral NICET National Institute for Certification In. Kips Inch Kips of Engineering Technologies Left Lt G In. Lb. Inch Pounds NIP Nail in Place LTB Lime Treated Base Inches In. NMAS Nominal Maximum Aggregate Size LTDS Required Long Term Design Strength Gage or Gauge Ga Incl Included No Number Luminaire Lum Int Interior Gallons Gal Nom Nominal Inv Invert Galv Galvanized **NPDES** National Pollutant Discharge Elimination System IRI International Roughness Index Gd Guided expansion bearing NPT National Pipe Thread М ISO International Organization for Standards Gir, G NS Near Side ITAA GIS Geographical Information System Information Technology Association of America NTCIP National Transportation Communications Meters m ITS Intelligent Transportation System Girt Line GL for ITS Protocol MΑ Mobile Attenuator Gallons Per Minute IVHS GPM Intelligent Vehicle Highway System NTP Notice to Proceed Maint Maintenance GPS Global Positioning System NTS Not to Scale Minimum Average Roll Value MARV GRI Geosynthetic Research Institute Material Matl GRS Geosynthetic Reinforced Soil Max Maximum GSI Geosynthetic Institute MBTA Migratory Bird Treaty Act C---- 1-- E'l- I-(----1'--STANDARD PLAN NO. Colorado Department of Transportation

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ACRONYMS AND
<b>ABBREVIATIONS</b>

M-100-2Standard Sheet No. 2 of 4

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Q S ОС On Center Q Peak Discharge or Flow Volume SA Steel Arch OD SAC Outside Diameter QΑ Quality Assurance DGFC Open Grade Friction Course QC Quality Control San Sanitary DJT On-the-Job Trainee or On-the-Job Training QMP Quality Management Plan SB QML Qualified Manufacturers List Opp Hand Opposite Hand

P

Ounces

ΟZ

PTFE

PTI

PUC

PVC

PVI Pvmt

PVT

	R
Point of Curve	RA
Portland Cement Association	RA
Concrete Box Culvert Precast	rac
Point of Compound Curve	RA
Portland Cement Concrete Pavement	RA
Pile Driving Analyzer	RC
Preliminary Engineering, or Professional Engineer or Permanent Easement	RC RC
Pedestrian	RC
Profile Grade or Performance Grade	Rd
Profile Grade Line	RE
Point of Intersection	Re
Plate	Re
Professional Land Surveyor	Re
Project Manager	Re
Plant Mix Bituminous Base	Re
Plant Mix Bituminous Pavement	Re
Plant Mix Seal Coat	RG
Point on Curve	RG
Point of Slope Selection	RL
Point on Tangent	RM
Personal Protective Equipment	rpr
Point of Reverse Curve	RS
Project or Projection	RS
Pounds per square foot	Rt
Pounds per square inch	RT
Point of Tangent	
	Portland Cement Association Concrete Box Culvert Precast Point of Compound Curve Portland Cement Concrete Pavement Pile Driving Analyzer Preliminary Engineering, or Professional Engineer or Permanent Easement Pedestrian Profile Grade or Performance Grade Profile Grade Line Point of Intersection Plate Professional Land Surveyor Project Manager Plant Mix Bituminous Base Plant Mix Bituminous Pavement Plant Mix Seal Coat Point on Curve Point of Slope Selection Point on Tangent Personal Protective Equipment Point of Reverse Curve Project or Projection Pounds per square foot Pounds per square inch

Radius Rubble Arch AC Rubble Arch Culvert ad radians AP. Reclaimed Asphalt Pavement AS Reclaimed Asphalt Shingles Reverse Crown CC Roller Compacted Concrete CP Reinforced Concrete Pipe CPC Reinforced Concrete Pipe Culvert dwy Roadway Resident Engineer or Railroad Easement Reference einf Reinforcing Remove or Removal em Replace epl eq Required Revised, Revision еv Riveted Plate Girder CC. Riveted Plate Girder Continuous Reinforcement Length ME Region Materials Engineer Revolutions Per Minute SC Rigid Steel Conduit SS Reinforced Soil Slope Right RTD Region Transportation Director or Regional Transportation District RWIS Road Weather Information System

Steel Arch Culvert Southbound SBA Small Business Administration SBG Steel Box Girder SBGC Steel Box Girder Continuous SC Spiral to Curve Sch Schedule SCS Spiral Curve Spiral SDG Steel Deck Girder SDGC Steel Deck Girder with Floor Beam System Steel Deck Girder Continuous SDGCK & Composite SDI Steel Decks Institute SDT Steel Deck Truss Sdwk Sidewalk Sect Section SF Square Feet SH State Highway Shldr Shoulder SHPO State Historic Preservation Office SHRP Strategic Highway Research Program Sht Sheet SIGN Overhead Sign SIGNB Overhead Sign-Butterfly SIGNC Overhead Sign-Cantilever SIGND Overhead Sign + Cantilever Sim Similar SIP Stay in Place SJI Steel Joists Institute SLT SteelLow Truss SMA Stone Matrix Asphalt SN Structural Number Spa Spaces or Spaced Specs Specifications SpG Specific Gravity Spl Splice Sa In Sauare Inches Sq Mi Square Miles Sq Square

SRW	Segmental Retaining Walls
SSE	Steel Stringer-Earth Filled
SSM	Steel Stringer-Metal Plank Deck
SSMC	Steel Stringer-Metal Plank Deck Continuous
SSPC	Society for Protective Coatings
SSS	Steel Stringer-Timber Deck
SSSC	Steel Stringer-Timber Deck Continuous
ST	Spiral to Tangent
St	Straight or Street
Sta	Station
Std	Standard
STG	Steel Thru Girder
Str	Structure, Structural
STT	Steel Thru Truss
SUSP	Suspension Bridge
SY	Square Yards
Sym	Symmetrical

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Pavement

Polytetrafluoroethylene

Post-Tensioning Institute

Public Utilities Commission

Poly Vinyl Chloride (pipe),

Point of Vertical Tangency

Point of Vertical Curve
Point of Vertical Intersection

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T&B	Top and Bottom	UG
T&E	Threatened & Endangered Species	UN
T	Tons	UN
TAS	Threaded Anchor Stud	UN
TBC	Timber Box Culvert	UN
TC	Tangent to Curve	UP
TCD	Traffic Control Devices	UP
TCP	Traffic Control Plan	US
TD	Timber Stringer (Untreated) Concrete Deck	US
TDH	Total Dynamic Head	US
Temp	Temporary or Temperature	US
Thd	Thread	US
THHN	Thermoplastic High Heat-resistant Nylon coated (Insulation designation for wire)	US Uti
THWN	Thermoplastic High Water-resistant Nylon coated (Insulation designation for wire)	UV
TIG	Tungsten Inert Gas (Welding)	
TLA	Timber Laminated Arch (Gluelam)	
TLS	Timber Laminated Stringer (Gluelam)	
TLT	Timber Low Truss	
TM	Timber Stringer (Untreated) Metal Deck	VC
TMP	Transportation Management Plan	VC
Tot	Total	Ve
TPI	Threads per Inch	Ve
TS	Tangent to Spiral, Timber Stringer	VF
	(Untreated) Timber Deck	VM
TSLAB	Timber Slab	VM
TTC	Timber Culvert	Vo
TTD	Timber Stringer-Concrete Deck	VP
TTM	Timber Stringer- Metal Deck	VP
TTS	Timber Stringer- Timber Deck	VF
TTT	Timber Thru Truss	
TUNC	Tunnel-Concrete Lined	

Tunnel-Thru Rock-No Lining

Typical

UG	Underground
UNC	Uniform National Coarse (screw thread)
UNCC	Utility Notification Center of Colorado
UNF	Uniform National Fine (screw thread)
UNO	Unless Noted Otherwise
UPRR	Union Pacific Railroad
UPS	Uninterruptible Power Supply
USACE	United States Army Corp of Engineers
USCS	Unified Soil Classification System
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	US Geological Survey
Util	Utility or Utilities
UV	Ultraviolet

# V

Vertical Curve

VCP	Vitrified Clay Pipe
Veh	Vehicle
Vert	Vertical
VFA	Voids Filled With Asphalt
VMA	Voids in the Mineral Aggregat
VMS	Variable Message Sign
Vol	Volume
VPC	Vertical Point of Curvature
VPI	Vertical Point of Intersection
VPT	Vertical Point of Tangency

### W

W/C	Water-Cement Ratio
WALL	Retaining Wall
WB	Westbound
WBS	Work Breakdown Structure
WF	Wide Flange (Steel section)
WG	Welded Girder
WGC	Welded Girder Continuous
WGCK	Welded Girder Continuous & Composite
WGCKP	Welded Girder Continuous, Composite Prestressed
WGK	Welded Girder Composite
WGKP	Welded Girder Composite Prestressed
WIMS	Weigh-In-Motion Station
WP	Work Point
WQCD	Water Quality Control Division (Colorado Department of Public Health and Environment)
WRI	Wire Reinforcement Institute
WS	Water Surface
WSN	Weighted Structural Number
Wt	Weight
WWF	Welded Wire Fabric, typically referred t very light gauge wire for crack control
WWR	Welded Wire Reinforcement

### SYMBOLS

400	#4 REBAR BENDING SHAPE
500	#5 REBAR BENDING SHAPE
600	#6 REBAR BENDING SHAPE
@	at
&	and
φø	Diameter
0,1,11	Degrees, Minutes, Seconds
, 11	Feet, inches
#	Number or Pound
(E)	Epoxy Coated Rebar
N	Non-Epoxy Coated Rebar
XX	Girder Label
°F	Fahrenheit
°C	Celsius
$\approx$	Approximate
#	Interstate Highway
#	US Highway
#	State Highway

Υd Yard

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