

Colorado Department of Transportation DESIGN DATA Page 1 of 2	Orig.Date: 01/23/2020
	Rev.Date:
	Revision #: 0
	Region #: 02
Status <input type="checkbox"/> Preliminary <input checked="" type="checkbox"/> Final <input type="checkbox"/> Revised	

Submitted by PM: DALTONS	Approved by Program Engineer:
Date: 05/11/2021	
Revised By:	
Date:	

Project Code # (SA#): 23559	STIP#: SR25216
Project #: FBR R200-267	
PE Project Code: 23559	
Project Description: R2B2 (REGION 2 BRIDGE BUNDLE)(NON-GRANT)	
County: 071,089 041,093,119 071	
Municipality: Timpas	
System Code: 2 NHS Non-Interstate	
Oversight By: PoDi/State Administered	
Planned length: 70	Type of Terrain: R Rolling
Geographic Location: VARIOUS LOCATIONS ON SH 350, SH 239 AND US 24	

Remarks:

1 Safety/Operations/ITS Considerations <input type="checkbox"/> Variance in Minimum Design Standards Required <input type="checkbox"/> Justification Attached <input type="checkbox"/> Bridge <input type="checkbox"/> Request to be Submitted <input type="checkbox"/> See Remarks	Project Under: Other AASHTO, BRIDGE ENTERPRISE	2 Right of Way Yes/No Est # ROW &/or Perm. Easement Required: Relocation Required: Temporary Easement Required: Changes in Access: Changes to Connecting Roads	3 Utilities (list names of known utility companies) Century Link,San Isabel Electric,SEColorado Power Associ.,City of Trinidad,CDOT,SouthparkTele.,IntermtnRuralElect,Xcel,ColoNatGs
	<input type="checkbox"/> Safety project, not all standards addressed		
	TSM&O Eval Completion Date: 08/11/2020 Guardrail meets current standards:		
	Comments:		

4 Railroad Crossings	Railroad(s): NA	Crossing Number(s):	Recommendations:
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5 Environmental	Type: P CE Programmatic	Approved on:	Project Code # Cleared Under: 23558	Project # Cleared Under: FBR R200-266
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Comments: 240 MBTA SPEC REQ'D, 250 SPEC REQ'D, WETLAND DELINEATIONS FOR EACH STRUCTURE WERE CLEARED BETWEEN 12/8/2020 AND 01/11/2021

Use Columns A, B, C, D, E and F to identify facility described below

	A 350A	B 024A	C 239A	D	E	F
6 Traffic						
Current Year: ADT	700	25000	400			
2019 DHV	77	2625	44			
DHV% Trucks	10.5%	3.6%	3.4%			
Future Year: ADT	985	29125	435			
2041 DHV	108	3058	48			
Facility Location	<input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Other	<input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Other	<input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Other	<input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Other	<input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Other	<input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Other

	A 350A	B 024A	C 239A	D	E	F	
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7 Roadway Classification							8 Major Structure(s):
Route	350A	024A	239A				O-19-D, M-21-I, I-13-H, I-17-X, P-19-G_MINOR
Reference Point (Begin)	10.000	228.000	1.000				
Reference Point (End)	57.000	296.000	2.000				
Functional Classification	4	4	4				
Facility type	U	U	U				
Access Control Classification	R	R	R				

9 Design Criteria

Controlling Design Criteria: When Design Speed ≥ 50 mph on roadways part of the National Highway System (when Design Speed < 50 mph, the only two controlling criteria are Design Speed and Design Loading Structural Capacity). Elements requiring a variance are identified with an * & detailed in CDOT Form #464.

Design Criteria Description	Proposed_A	Standard_A	Proposed_B	Standard_B	Proposed_C	Standard_C	Proposed_D	Standard_D	Proposed_E	Standard_E	Proposed_F	Standard_F	Design Criteria Reference and Notes
1. Design Speed (mph)	75	75	75,55	75,55	45								
2. Lane Width (ft)	12	12	12	12	11	11							AASHTO GDHS 2018, Table 7-3, pg. 7-7
3. Shoulder Widths													
- Inside Shoulder Width (ft)													
- Outside Shoulder Width (ft)	6	6	8	8	6	6							AASHTO GDHS 2018, Table 7-3, pg. 7-7
4. Horizontal Curve Radius (min) (ft)	2210	2210	2210,960	2210,960	587	587							AASHTO GDHS 2018, Table 3-7, pg. 3-34
5. Superelevation Rate (e) (%)													
- Maximum Superelevation Rate (emax) (%)	8	8	8	8	8	8							CDOT Roadway Design Guide 2018, Section 3.2.3.2, pg. 3-22
6. Stopping Sight Distance (SSD) (min) (ft)													
- Horizontal SSD													
- Intersection Sight Distance													
- SSD Level Road	820	820	820,495	820,495	360	360							AASHTO GDHS 2018, Table 3-1, pg. 3-4
- SSD Downgrade													
- SSD Upgrade													
7. Grade (max) (%)	4	4		4,5	<5	5							CDOT Roadway Design Guide 2018, Table 3-4, pg. 3-31
8. Cross Slope (Xslope) (%)	2	2	2,2	2,2	2	2							AASHTO GDHS 2018, Section 3.3.3.1, pg. 3-31
9. Vertical Clearance (min) (ft)													
- Roadway Structure													
- Sign & Pedestrian Structures													
- Railroad Structure													
- Overhead Utility													
10 Design Loading Structural Capacity													

Additional Horizontal Alignment and Vertical Alignment Design Criteria (Elements requiring a Design Decision Letter are identified with an *.)

Posted Speed (mph)	65		65,45		35								
Δ without Horizontal Curve (max) (dms)													
Clear Zone on Tangent (min) (ft)	18	18	28,22	28,22	10	10							AASHTO Roadside Design Guide 2011, Table 3-2
Clear Zone on Curve (min) (ft)	23	23	34,33	34,33	14	14							AASHTO Roadside Design Guide 2011, Table 3-2
Deceleration Length (level) (min) (ft)													
Acceleration Length (level) (min) (ft)													
Redirect Taper Ratio													
Lane Drop Taper Ratio													
Transition Taper Ratio (Accel/Decel)													
Vertical Curve Length (min) (ft)	300	300	300,300	300,300	300	300							CDOT Roadway Design Guide 2018, Section 3.3.4, pg. 3-33
Grade Break without Vertical Curve (max) (%)	0.2	0.2	0.2,0.2	0.2,0.2	0.2	0.2							CDOT Roadway Design Guide 2018, Section 3.3.4, pg. 3-33
Crest Vertical Curve (K) (min)	312	312	312,114	312,114	61	61							CDOT Roadway Design Guide 2018, Table 3-1, pg. 3-2
Sag Vertical Curve (K) (min)	206	206	206,115	206,115	79	79							CDOT Roadway Design Guide 2018, Table 3-1, pg. 3-2
Algebraic Difference (Xslope) (max) (%)													

Additional Typical Section Design Criteria (Elements requiring a Design Decision Letter are identified with an *.)

Design Vehicle	WB-67	WB-67	WB-67	WB-67	WB-67	WB-67							
# Lanes each direction (auxiliary)													
Median Width (ft)													
Median Type													
Side Slope Distance ("Zslope") (ft)	8	8	8,8	8,8	8	8							CDOT Roadway Design Guide 2018, Table 4-2, pg. 4-13, Fig 5, pg. 4-9
Sidewalk Width (ft)													
Bike Lane Width (ft)													
Curb & Gutter Type													