

General Notes: All Injury = Fatal, A, B & C

Orange = Special Condition CRF
Yellow = Not a traditional CRF value

Systemic or Hotspot	Countermeasure Number	Countermeasure	Crash Type	Injury, PDO or All	Service Life (Years)	Existing Intersection Traffic Control	Urban or Rural	CRF %	Range of CRF	Who's CRF?	CRF Justification	ADA Trigger
Hotspot	H25	Install Lighting at Intersection	Night	All Injury	20	Signal or Non Signal	Either	38	31 - 38%	HSM	1st	Likely
Hotspot	H26	Install Lighting on a Roadway Segment	Night	All Injury	20	None - Roadway	Either	28	17 - 29%	HSM	1st	
Intersection Systemic	I6	Install Adaptive Signal Timing of Urban Traffic Signals	All	All	10	Signal	Urban	17	17%	Estimation of the Safety Effects of an Adaptive Traffic Signal Control System (2015)	3rd	
Bike/Ped Systemic	BP1	Install Pedestrian Countdown Timer(s)	Pedestrian	All	20	Signal	Either	70	0 - 70%	Clearinghouse (not in HSM)	2nd	
Bike/Ped Systemic	BP2	Provide Intersection Lighting (Bike & Ped)	P & B Night	All Injury	20	Signal or Non Signal or None - Roadway	Either	42	42%	HSM	1st	Likely
Bike/Ped Systemic	BP3	Install Urban Leading Pedestrian or Bicycle Interval at Signalized Intersection	P & B	All	10	Signal	Urban	37	37 - 45%	Clearinghouse (not in HSM)	2nd	
Bike/Ped Systemic	BP4	Install No Pedestrian Phase Feature with Flashing Yellow Arrow	Pedestrian	All	20	Signal	Either	43	43%	Accident Analysis & Prevention (Chen)	3rd	
Bike/Ped Systemic	BP5	Install Urban Green Bike Lanes at Conflict Points	Bicycle	All	10	Signal or Non Signal or None - Roadway	Urban	39	39%	Clearinghouse (not in HSM) & ODOT ARTS Transition	3rd	
Bike/Ped Systemic	BP6	Install Bike Box at Conflict Points	Bicycle	All	10	Signal	Either	35	35%	2007 Desktop Reference	3rd	
Bike/Ped Systemic	BP7	Install Pedestrian Refuge Island	Pedestrian	All	20	Non Signal or None - Roadway	Either	31	26 - 31%	NCHRP 841	2nd	Likely
Bike/Ped Systemic	BP8	Install Rectangular Rapid Flashing Beacon (2-Lane Road)	Pedestrian	All	20	Non Signal or None - Roadway	Either	10	10 - 56%	ODOT Engineering Judgment	4th	
	BP9	Install Rectangular Rapid Flashing Beacon without Median (3-Lane or More Roadway)	Pedestrian	All	20	Non Signal or None - Roadway	Either	10	10 - 56%			
	BP10	Install Rectangular Rapid Flashing Beacon with Median (3-Lane or More Roadway)	Pedestrian	All	20	Non Signal or None - Roadway	Either	56	10 - 56%			
Bike/Ped Systemic	BP11	Install Continental Crosswalk Markings and Advance Pedestrian Warning Signs at Uncontrolled Locations	Pedestrian	All	10	Non Signal or None - Roadway	Either	15	15%	Low-Cost Safety Enhancements for Stop-Controlled and Signalized Intersections	3rd	
Bike/Ped Systemic	BP12	Install Curb Ramps and Extensions with a Marked Crosswalk and Pedestrian Warning Signs	Pedestrian	All	20	Non Signal or None - Roadway	Either	37	37%	2007 Desktop Reference	3rd	
Bike/Ped Systemic	BP13	Install Advance Pedestrian or Bicycle Warning Signs	P & B	All	10	Non Signal or None - Roadway	Either	5	5 - 15%	ODOT Systemic Worksheet / 2007 Desktop Reference	3rd	
Bike/Ped Systemic	BP14	Install Pedestrian Signal	P & B	All	20	Non Signal or None - Roadway	Either	55	15 - 69%	Caltrans / 2007 Desktop Reference	3rd	Likely
Bike/Ped Systemic	BP15	Install Pedestrian Hybrid Beacon	P & B	All	20	Non Signal or None - Roadway	Urban	55	55 - 69%	NCHRP 841	2nd	Likely
Bike/Ped Systemic	BP17	Install Bike Signal	Bicycle	All	20	Signal	Either	45	45%	MUTCD Interim Approval	3rd	
Bike/Ped Systemic	BP18	Install Bike Lanes	Bicycle	All	20	None - Roadway	Either	36	0 - 53%	Caltrans / 2007 Desktop Reference	3rd	
Bike/Ped Systemic	BP20	Install Buffered Bike Lanes	Bicycle	All injury	20	None - Roadway	Urban	47	N/A	ODOT Engineering Judgment	4th	