

ADDENDUM 1: PERFORMANCE MEASURES AND TARGETS

The Federal Rule 23 CFR 490 requires states and Metropolitan Planning Organizations (MPOs) to establish targets for five highway safety performance measures applicable to all public roads. The five performance measures are: number of fatalities, number of serious injuries, fatality rate, serious injury rate and number of non-motorized fatalities and serious injuries. While states must establish statewide targets, MPOs can establish targets by either agreeing to plan and program projects so that they contribute toward the accomplishment of the relevant State DOT target for that performance measure or committing to a quantifiable target for that performance measure for their metropolitan planning area. In Chapter 9 of this document, safety data and narrative are included. This addendum supersedes any discussion regarding the performance measures and targets. It also includes more recent data.

Statewide Highway Safety Targets

Both Ohio and West Virginia have established statewide calendar year (CY) 2018 highway safety targets. Belomar Regional Council and Interstate Planning Commission has adopted Ohio's statewide highway safety targets for Belmont County and West Virginia's statewide targets for Ohio and Marshall Counties. These were adopted by resolution on February 22, 2018. Belomar will plan and program projects so they contribute towards the accomplishment of ODOT and WVDOT's CY2018 highway safety targets for the performance measures.

ODOT's CY18 highway safety Targets are based on the following baseline data:

- Number of Fatalities < 1,072
- Number of Serious Injuries < 9,216
- Fatality Rate per 100 MVMT* < 0.92
- Serious Injury Rate per 100 MVMT* < 8.17
- Number of Non-Motorized Fatalities & Non-Motorized Serious Injuries < 856

In accordance with federal legislation, Ohio used five-year rolling averages to calculate historic crash trends and identify CY2018 statewide reduction targets. After reviewing historical crash trends, external factors, and through consultation with Ohio's MPOs and RTPOs, Ohio adopted targets based on a 1 percent annual reduction for 2018 across all five measures.

ODOT CY2018 Highway Safety Targets

- Number of Fatalities < 1,051
- Number of Serious Injuries < 9,033
- Fatality Rate per 100 MVMT* < 0.91
- Serious Injury Rate per 100 MVMT* < 8.01
- Number of Non-Motorized Fatalities & Non-Motorized Serious Injuries < 840

While ODOT and its partners agree that "Zero Deaths" is the only acceptable goal, states must recognize that reaching that goal will require time and significant effort by many different partners – including the public. The 2018-2021 STIP shows an estimated \$288 million or 261 safety-related projects currently programmed to aid in meeting the safety targets. Belomar has also made significant contribution of suballocated STP funds for safety projects in Belmont County.

WVDOT CY2018 Highway Safety Targets

WVDOT targets are shown in the following table:

WVDOT STATE TARGETS	2013 - 2017	2014 - 2018
1) Base fatalities average for 2005 - 2009 = 390.2 Target five-year average number of fatalities	288.8	281.6
2) Base injuries average for 2009 - 2013 = 1,999.8 Target five-year average number of injuries	1,397.2	1,341.0
3) Base fatality rate per hundred million vehicle miles traveled 2005 - 2009 = 1.980 Target fatality rate per hundred million vehicle miles traveled	1.458	1.370
4) Base injury rate per million hundred vehicle miles traveled 2009 - 2013 = 10.602 Target injury rate per hundred million vehicle miles traveled	6.797	6.327
5) Base number of non-motorized fatalities 2005 - 2009 = 22.2 Target number of non-motorized fatalities	22.5	21.6
6) Base number of non-motorized serious injuries 2009 - 2013 - 93.4 Target number of non-motorized serious injuries	75.2	72.5

West Virginia Highway Safety plan has adopted zero fatalities as a long-term goal with an interim goal of reducing fatalities by one-half by 2030. To achieve the 2030 fatalities goal, an annual reduction of approximately 3.2 percent is necessary.

Belomar will plan and program safety projects for the locations identified by WVDOT with MPO input. Projects will be programmed based on WVDOT schedule.

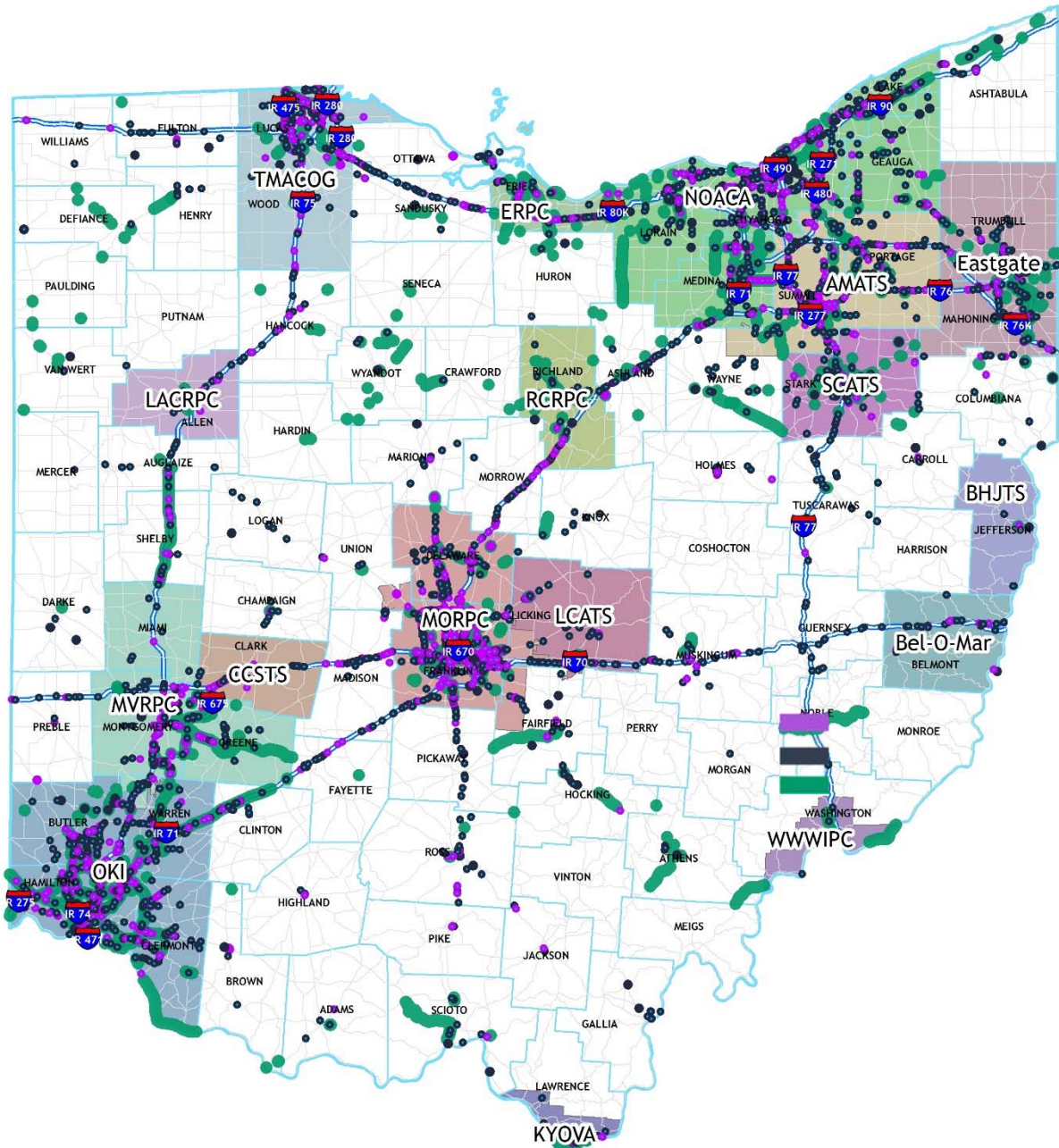
Belomar will participate in the preparation of a performance report. Performance report will include progress made towards achieving the safety targets of each state.

MPO Safety Target Selection Process

WVDOT and ODOT generally identify and program projects. The MPO incorporates these in the local Transportation Improvement Program through the policy board action. No state or federal funds are suballocated to MPOs with population under 200,000 in West Virginia. While in Ohio Congestion Mitigation and Air Quality (CMAQ) funds and Surface Transportation Block Grant (STBG) funds are suballocated based on population, these are not enough to undertake significant roadway improvements on a consistent basis.

Both states have been programming safety projects in the region. ODOT has prepared a map (included as Figure 1) showing 2018 – 2021 Safety Funded Projects vs. Safety Improvement Priority locations. This map includes several locations in Belmont County. Safety priority locations are selected based on the statewide selection criteria. These locations will be addressed as per ODOT schedule. Safety locations in West Virginia are also programmed as per WVDOT's schedule.

FIGURE I
2018-2021 Safety Funded Projects vs. Safety Improvement Priority (SIP) Locations



High Priority SIP Locations
 Low Cost Treatment SIP Locations
 2018-2021 Safety Funded Projects

Data as of 03/01/2018

Belomar has identified high hazard locations in the regions for over a decade. Locations are selected based on the local criteria. The previous crash data is included in Chapter 9 of this document and the selected locations are shown in Appendix B. While these are of interest locally, non-interstate locations seldom make the statewide locations list based on the statewide selection criteria. The systemwide crash data by county, showing the current conditions and performance of the system, can be found here and in Chapter 9 of this document. Single vehicle crashes, including the roadway departure crashes, continue to be the predominant crash type in the three counties. Roadway departure crashes are also the emphasis area in West Virginia Strategic Highway Safety Plan (SHSP) and Ohio SHSP.

Previously, Belomar used the crash data of three years for the analysis and selection of locations. This is changed to include five years data as per the TPM requirements. The five-year crash summaries are included as Figure II, Figure III and Figure IV. The statewide targets (as percentage) will be used to evaluate the local contribution in meeting the statewide targets. The annual MPO crash data analysis report and the list of selected locations will be provided to both states. Belomar also participates in the roadway safety planning related activities of the both states by attending meetings, conferences and through the MPO association.

Since the statewide high hazard locations are selected by ODOT and WVDOT and the MPO has no dedicated funding source for programming projects annually, Belomar has opted to support the statewide safety performance targets and projects to be programmed for meeting the targets.

Belomar will participate in the preparation of a performance report showing the progress made in achieving the targets. The annual performance report, new statewide safety targets and the rolling averages derived from the local five-year crash data will be reviewed for the annual safety target setting. Belomar will also support safety projects with suballocated funds in Belmont County.

FIGURE I

**Belmont County Crash Summary
2012 – 2016**

Time Of Day	2012	2013	2014	2015	2016	Total
6AM - 9AM	204	200	219	247	188	1058
9AM - 3PM	539	465	595	522	532	2653
3PM - 6PM	430	359	363	356	332	1840
6PM - 6AM	601	548	566	515	498	2728
TOTAL	1774	1572	1743	1640	1550	8279
Crash Type						
SINGLE VEHICLE	925	834	817	797	722	4095
REAR-END	344	282	353	365	330	1674
ANGLE	216	175	202	171	207	971
SIDESWIPE - PASSING	116	126	184	135	132	693
SIDESWIPE - MEETING	62	66	81	89	67	365
HEAD-ON	56	38	49	45	42	230
OTHER	55	51	57	38	50	251
TOTAL	1774	1572	1743	1640	1550	8279
Light Conditions						
DAYLIGHT	1136	972	1126	1072	1033	5339
DARK	554	531	546	493	455	2579
DAWN/DUSK	63	56	59	67	53	298
UNKNOWN	17	13	12	8	8	58
OTHER	4	0	0	0	1	5
TOTAL	1774	1572	1743	1640	1550	8279
Road Conditions						
DRY	1327	1107	1193	1188	1187	6002
WET	300	290	303	282	238	1413
SNOW/ICE	121	161	234	160	113	789
MUD, DIRT, GRAVEL, SAND	11	8	5	7	2	33
UNKNOWN	14	6	8	3	8	39
OTHER	1	0	0	0	2	3
TOTAL	1774	1572	1743	1640	1550	8279
Crash Severity						
PDO	1298	1178	1293	1241	1158	6168
INJURIES	675	544	629	550	534	2932
FATALITIES	10	11	6	10	4	41
TOTAL	1983	1733	1928	1801	1696	9141
Non Motorized Crashes						
FATALITIES	2	2	0	2	1	7
INJURIES	12	8	14	8	7	49
TOTAL	14	10	14	10	8	56

The injuries and fatalities fields now indicate number of injuries and fatalities as opposed to number of injury and fatality crashes.

Source: Ohio Department of Public Safety; Belmont County Data and ODOT's GCAT Belmont County Data

FIGURE II

**Ohio County Crash Summary
2012 - 2016**

Time Of Day	2012	2013	2014	2015	2016	Total
6AM - 9AM	87	81	77	57	54	356
9AM - 3PM	260	268	188	189	151	1056
3PM - 6PM	228	173	126	112	157	796
6PM - 6AM	222	194	137	154	137	844
TOTAL	797	716	528	512	499	3052
Crash Type						
SINGLE VEHICLE	269	235	194	157	173	1028
REAR-END	265	226	152	162	146	951
ANGLE	111	106	85	97	77	476
SIDESWIPE - PASSING	99	84	45	55	73	356
SIDESWIPE - MEETING	38	45	36	27	23	169
HEAD-ON	15	20	16	14	7	72
TOTAL	797	716	528	512	499	3052
Light Conditions						
DAYLIGHT	568	508	388	362	355	2181
DARK	199	175	123	137	124	758
DAWN/DUSK	26	30	15	11	19	101
OTHER	4	3	2	2	1	12
TOTAL	797	716	528	512	499	3052
Road Conditions						
DRY	636	511	359	337	369	2212
WET	107	120	95	98	80	500
SNOW/ICE	48	74	70	72	42	306
MUD, DIRT, GRAVEL, SAND	4	11	4	5	8	32
UNKNOWN	2	0	0	0	0	2
TOTAL	797	716	528	512	499	3052
Crash Severity						
PDO	582	529	399	389	372	2271
INJURIES	307	260	284	191	182	1224
FATALITIES	2	3	2	3	0	10
TOTAL	891	792	685	583	554	3505

The injuries and fatalities fields now indicate number of injuries and fatalities as opposed to number of injury and fatality crashes.

Source: West Virginia Department of Transportation; Ohio and Marshall County Data

FIGURE III

**Marshall County Crash Summary
2012 - 2016**

Time Of Day	2012	2013	2014	2015	2016	Total
6AM - 9AM	54	74	67	49	53	297
9AM - 3PM	116	121	122	78	88	525
3PM - 6PM	97	78	91	63	41	370
6PM - 6AM	123	139	125	95	81	563
TOTAL	390	412	405	285	263	1755
Crash Type						
SINGLE VEHICLE	212	241	221	165	161	1000
REAR-END	60	65	50	29	35	239
ANGLE	60	58	60	48	34	260
SIDESWIPE - PASSING	23	18	27	13	10	91
SIDESWIPE - MEETING	25	22	23	19	14	103
HEAD-ON	10	8	24	11	9	62
TOTAL	390	412	405	285	263	1755
Light Conditions						
DAYLIGHT	260	268	281	181	174	1164
DARK	108	125	111	91	80	515
DAWN/DUSK	21	19	13	13	8	74
UNKNOWN	0	0	0	0	0	0
OTHER	1	0	0	0	1	2
TOTAL	390	412	405	285	263	1755
Road Conditions						
DRY	276	255	251	173	170	1125
WET	71	84	61	51	48	315
SNOW/ICE	39	63	85	60	40	287
MUD, DIRT, GRAVEL, SAND	3	10	8	1	5	27
UNKNOWN	1	0	0	0	0	1
TOTAL	390	412	405	285	263	1755
Crash Severity						
PDO	269	288	289	191	187	1224
INJURIES	164	157	151	131	119	722
FATALITIES	3	2	1	5	1	12
TOTAL	436	447	441	327	307	1958

The injuries and fatalities fields now indicate number of injuries and fatalities as opposed to number of injury and fatality crashes.

Source: West Virginia Department of Transportation; Ohio and Marshall County Data