



ODOT Updates

2023

OKLAHOMA
Transportation

Chief Engineer – Brian Taylor, PE



- Began with ODOT in 1990
- Served as Traffic Engineer and Maintenance Engineer in District 2 from 1996 to 2013
- District 4 Engineer from 2013 to 2019
- Oversaw the I-235/I-44 interchange and the completion of the I-40 Crosstown

Daniel Nguyen, MBA, PE, PMP



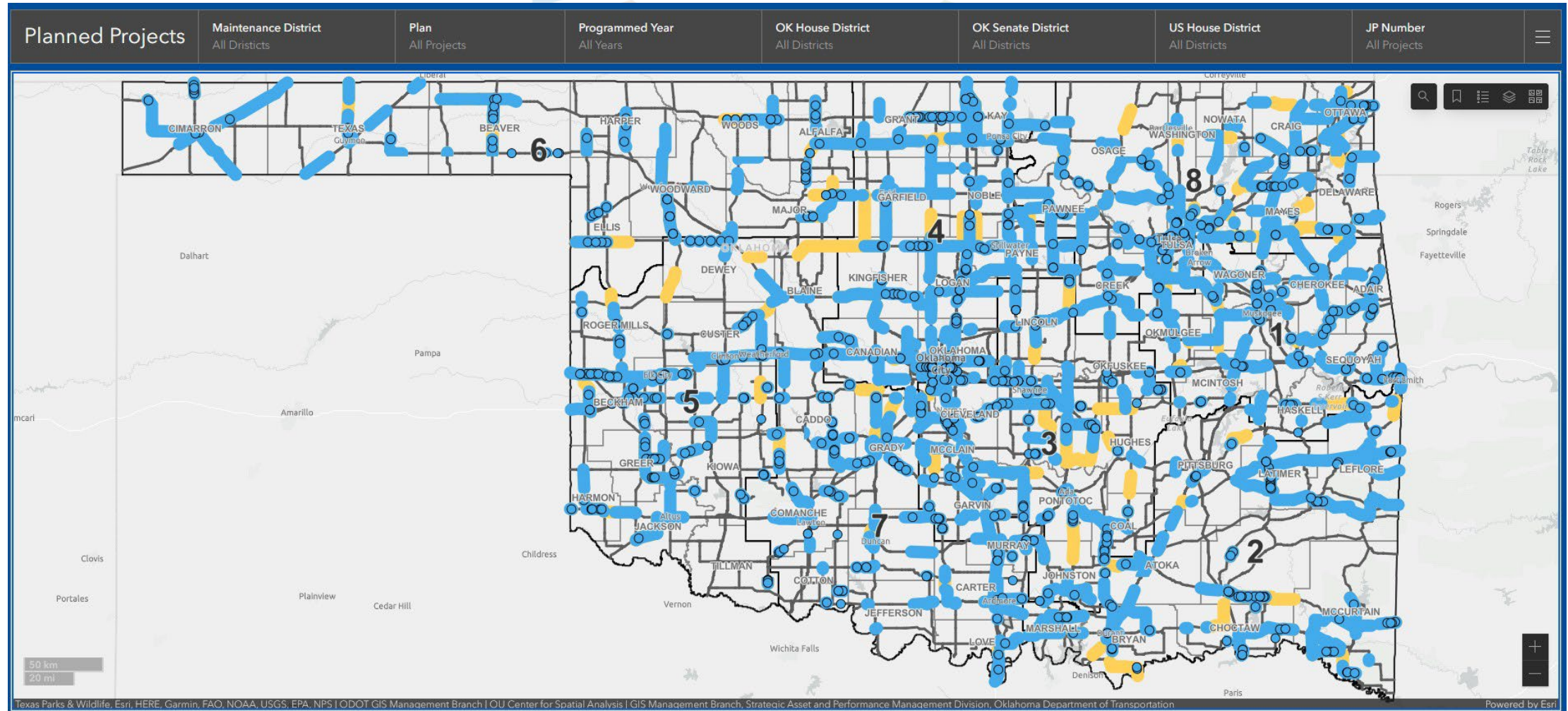
- 16 Years at ODOT
- Division Engineer for Project Management Division
- Responsible for 8 Year Construction Work Plan and Asset Preservation Plan
- Simultaneously developing over 1,000 construction projects

ODOT Updates

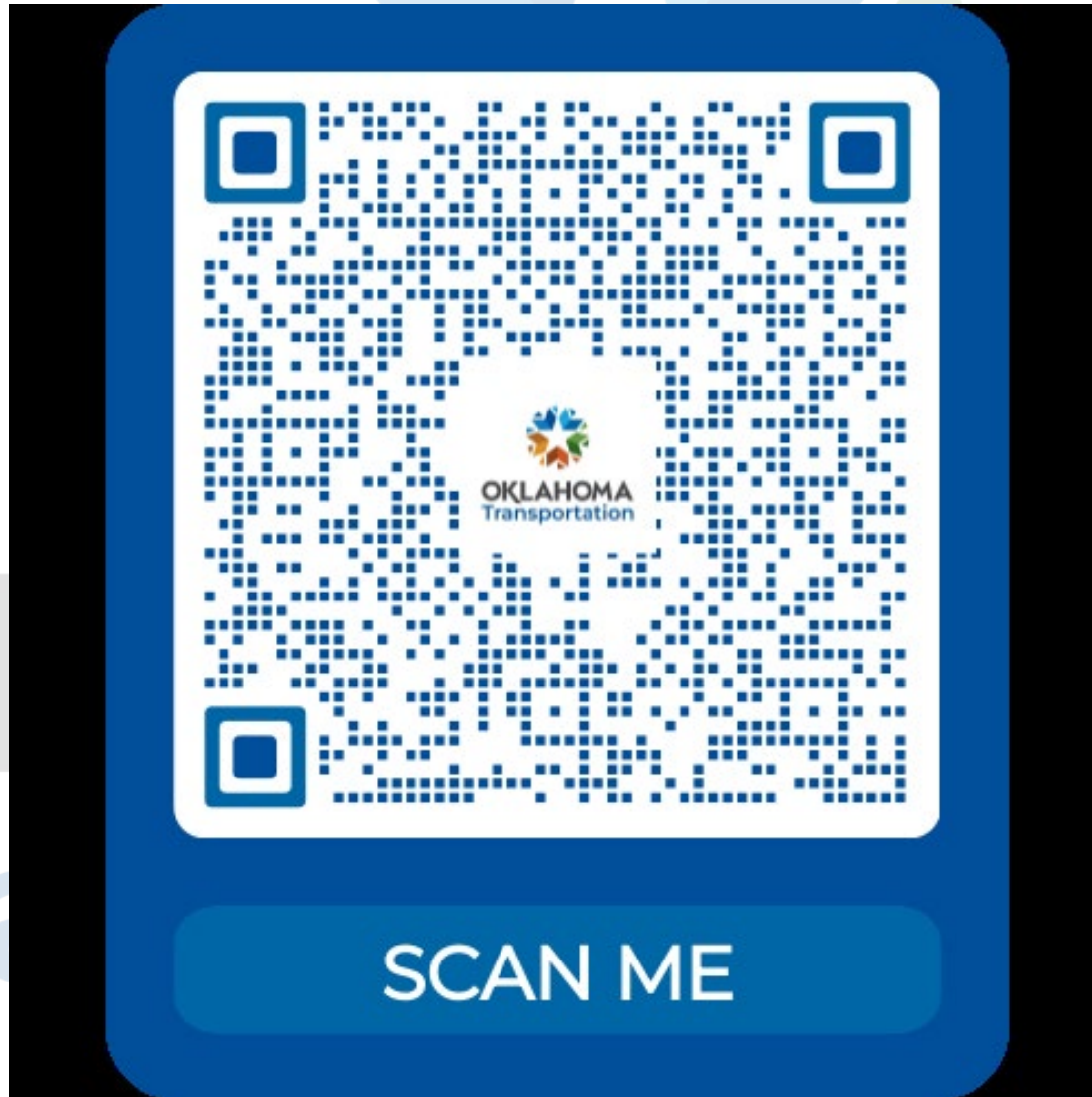
- New Technology
- Investment Focus
- Project Updates



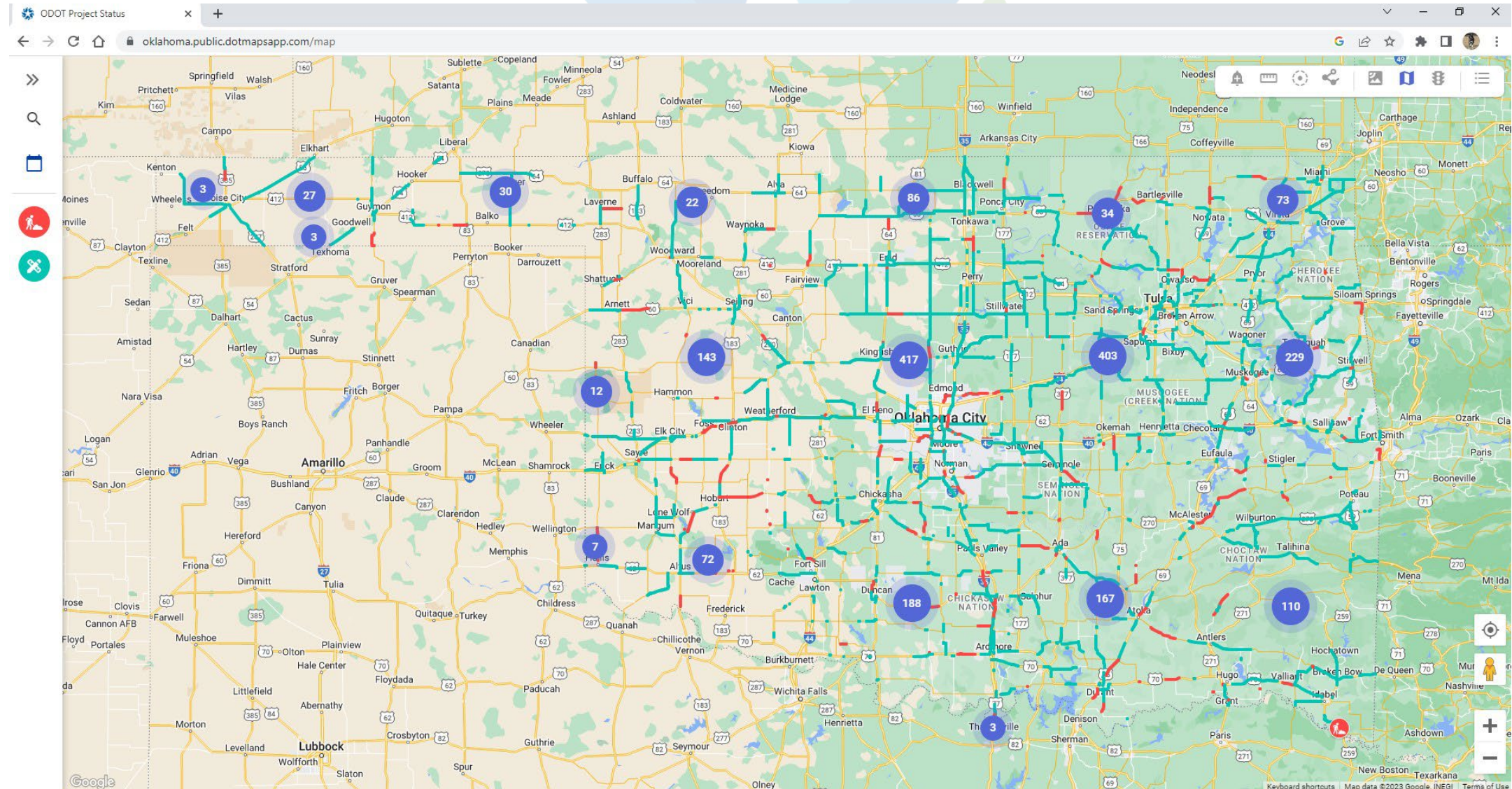
Work Plan Dashboards



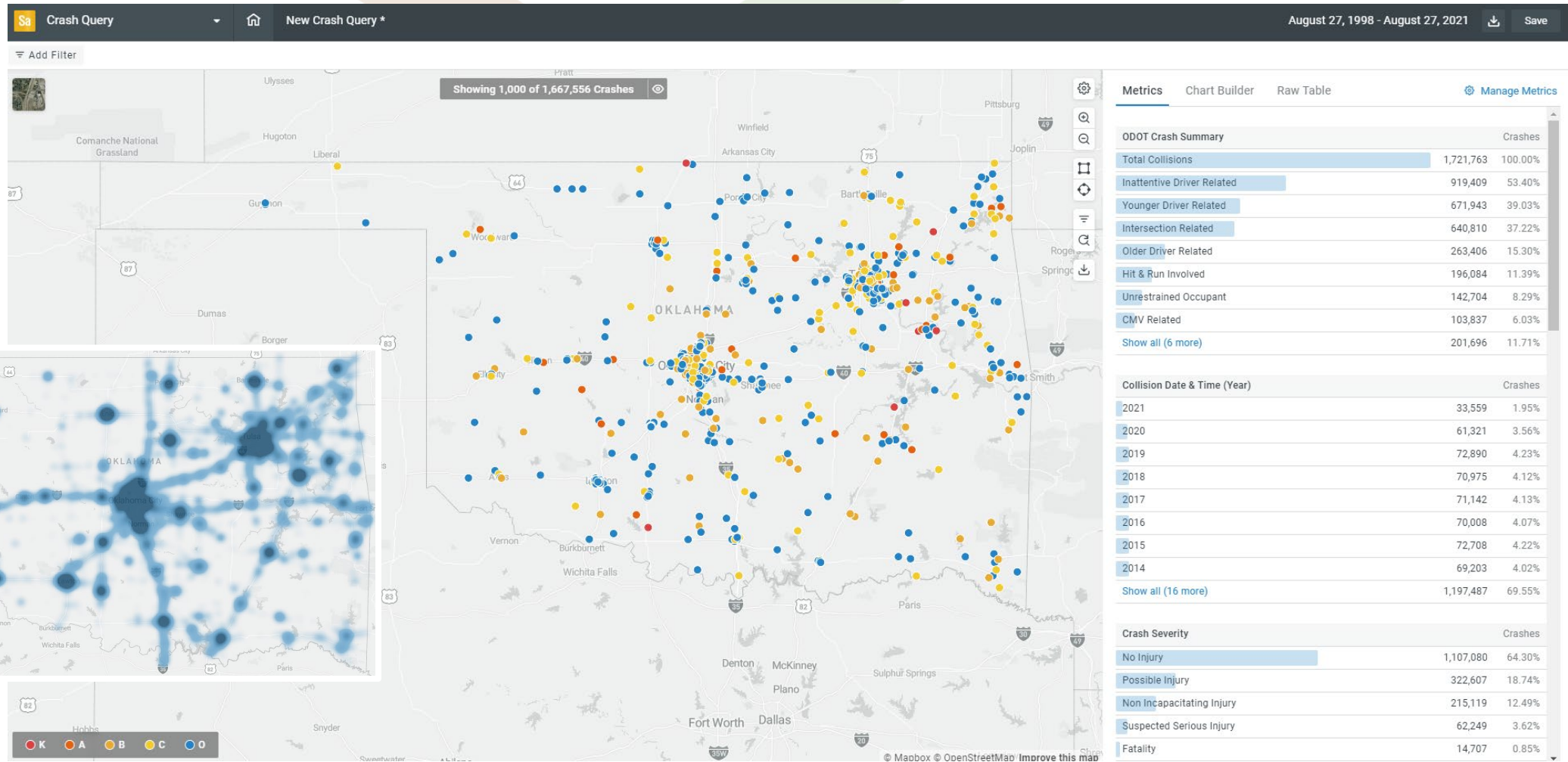
Work Plan Dashboards



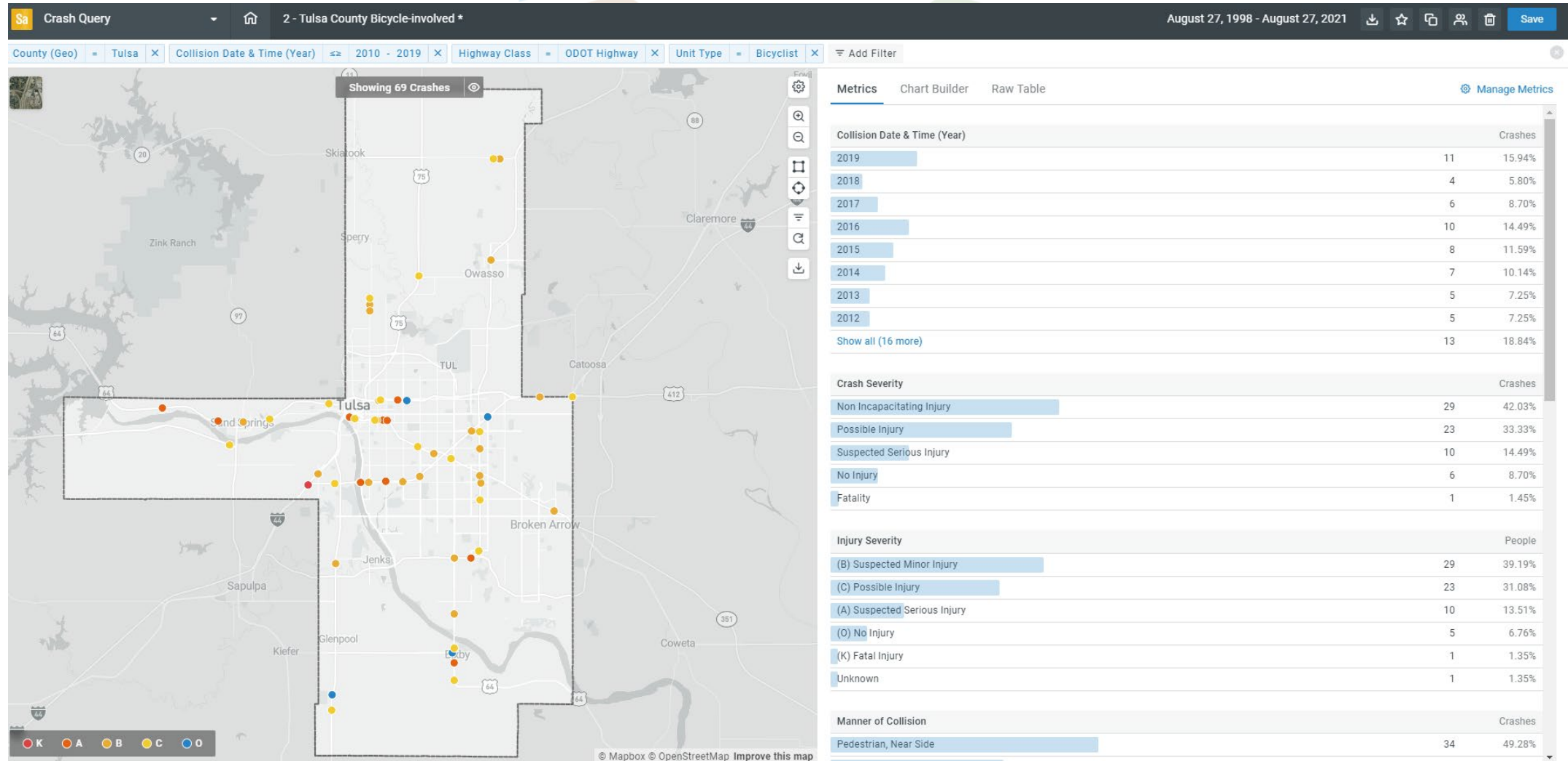
Public Status Website



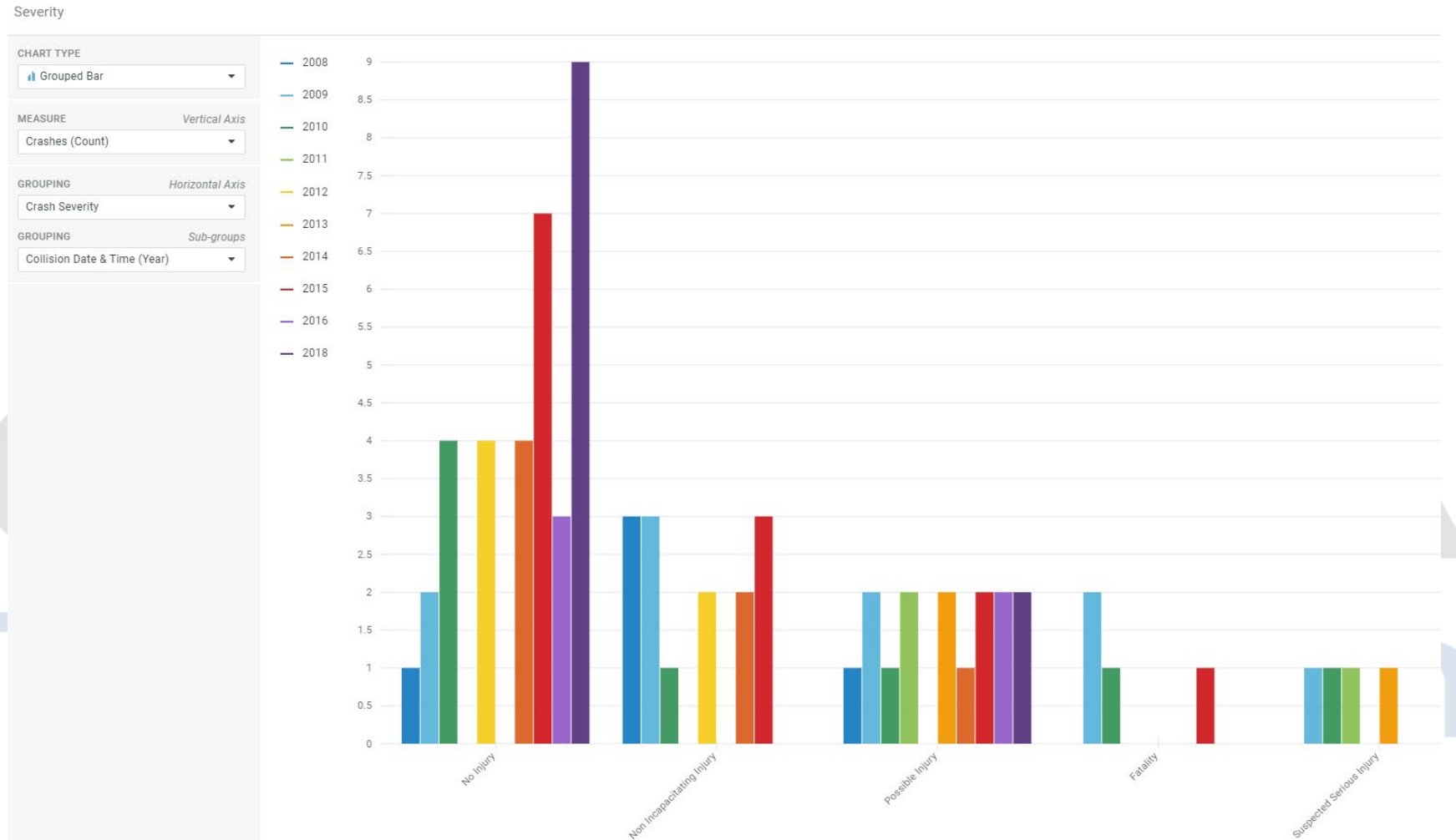
NUMETRIC Crash Query Software



CRASH QUERY – Specific type of vehicle crashes



SAFETY ANALYSIS – Before and after improvements



Maintenance Quality Assurance (MQA)

- Provide the information needed for budget decisions
- Offer a transparent way to allocate funds
- Quantify resource gaps
- Assist in prioritizing work backlog
- Communicate the impact of not doing something
- Provide an approach for setting and achieving asset performance goals

**Provide data
driven
support for
maintenance
funding**

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MQA Sampling

- Nevada DOT Example

Performance Measure

MAP Task Name:	Paint Striping				
MMS Task Number:	141.04.01				
MMS Task Name:	Paint Stripe and Solid Line				
Indicator:	Traffic line has noticeable wear with loss of visibility or paint, or is obliterated.				
Outcome Measure:	Linear feet of striping with noticeable wear exceeding 50% of original visual and retro reflective effectiveness. Skip lines are considered solid lines for measurement purposes.				
Outcome Unit:	% Deficient: $(100 * \text{Deficient LINFT of Striping} / \text{Total LINFT of Striping})$				
Outcome Thresholds:	Level of Service				
	A	B	C	D	F
	0-15.0%	15.1-30.0%	30.1-42.5%	42.6-50.0%	>50.0%

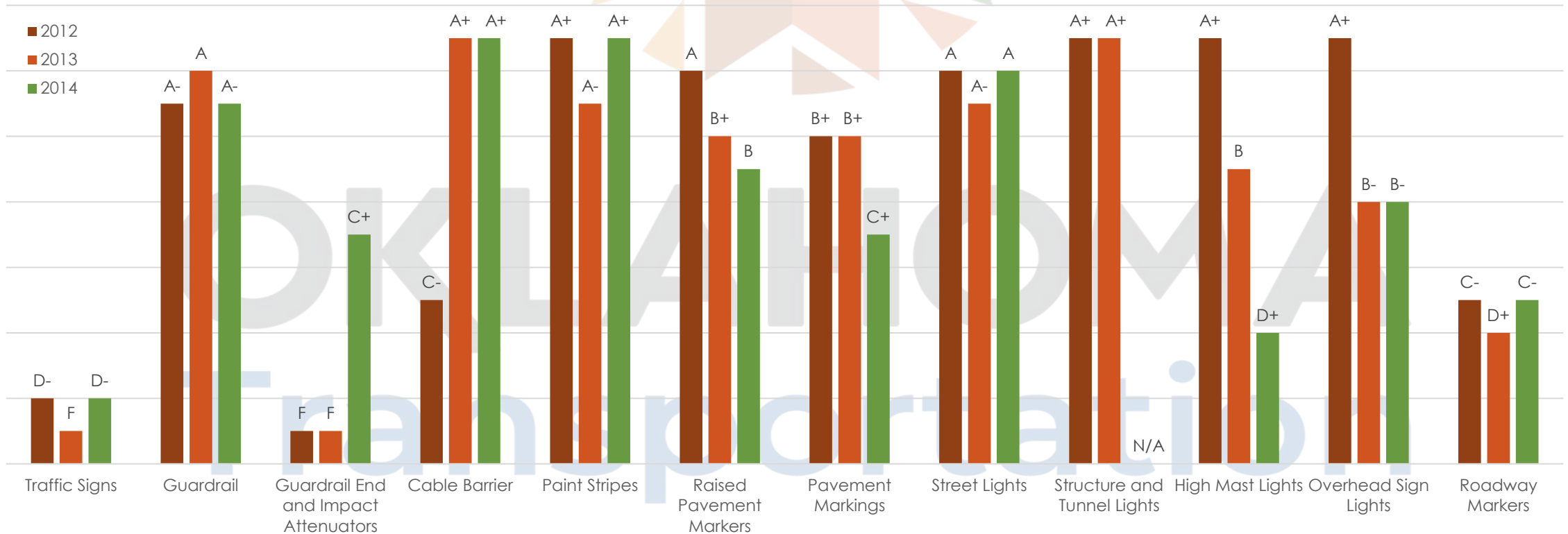


Level of Service

Example LOS Trend Analysis Graph

- Nevada DOT Example

Group 141: Traffic Services LOS Trends



Annual Maintenance Expenditure

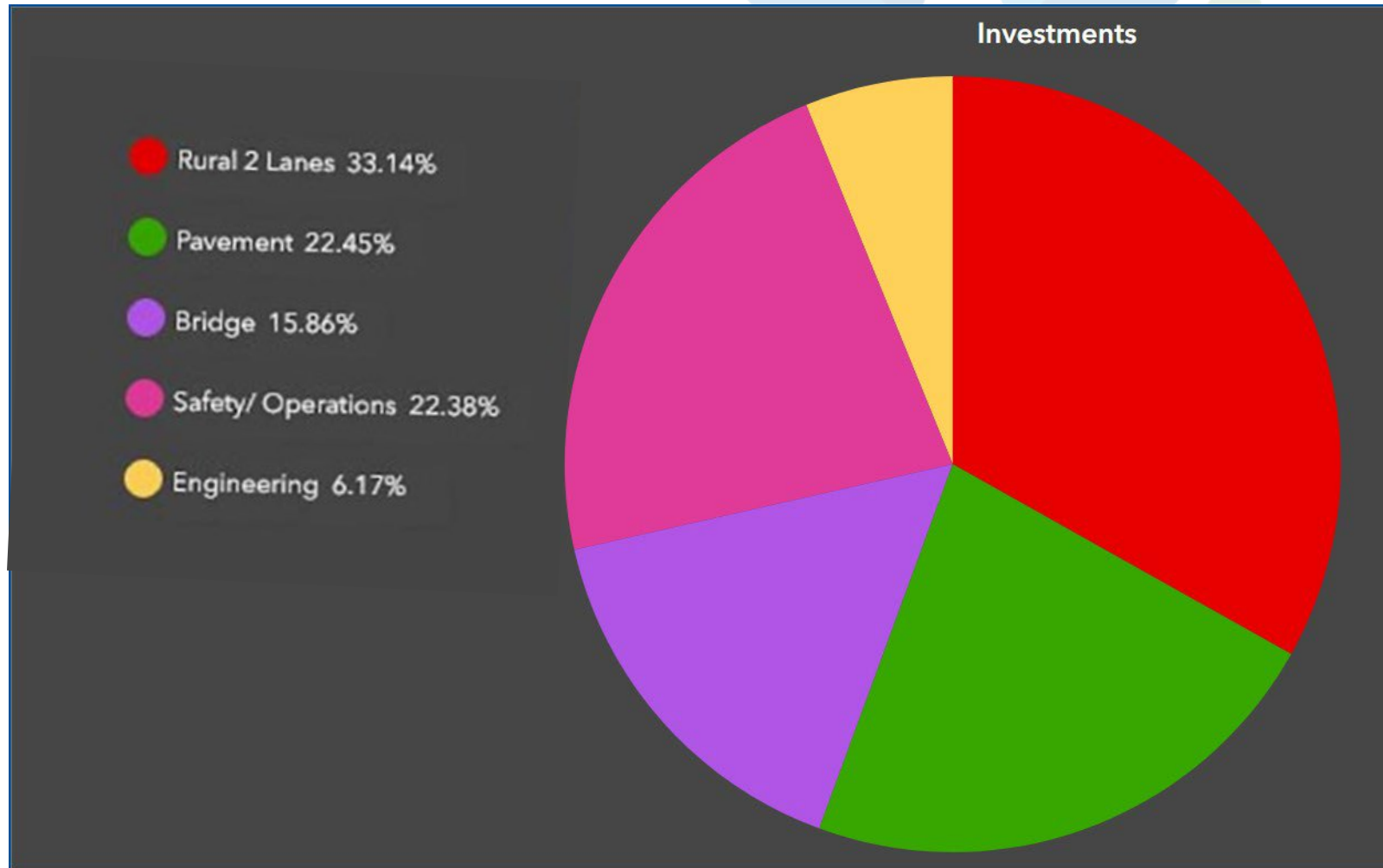
► Annual Expenditure FY 2019-2021

ASSET/ACTIVITY EXPENDITURE	AVERAGE SPEND PER YEAR (\$M, 2019-2021)	ASSET/ACTIVITY EXPENDITURE (%)	PERCENTAGE OF TOTAL EXPENDITURE
PAVEMENT	41.96	38.0	66.2%
MOWING	16.31	14.8	
SNOW & ICE	14.83	13.4	
TRASH/CLEAN UP	5.80	5.3	80.1%
SIGN	5.12	4.6	
EROSION	4.39	4.0	
EQUIPMENT/ PARTS/ MAINTENANCE (1)	3.90	3.5	95.4%
BRIDGE	3.37	3.1	
TRAFFIC MARKING	2.94	2.7	
DRAINAGE	2.23	2.0	
CABLE BARRIER	2.22	2.0	
GUARDRAIL	2.21	2.0	
EMERGENCY/ NATURAL DISASTER (1)	1.87	1.7	
TRAFFIC SERVICES	1.33	1.2	
DELINEATOR POST	0.79	0.7	
ATTENUATORS	0.69	0.6	
FENCE	0.24	0.2	
TRAFFIC CONTROL	0.18	0.2	
OTHER CONTRACT MAINTENANCE	0.07	0.1	

Additional Technological Initiatives

- Converting to 3D Modeling for project design
- Exploring further SUE integration to avoid utilities
- Virtual Public Involvement

ODOT's Investment Focus



Two Lane Rural Highways

- Largest Investment in 8 Year CWP
- Rural crashes have highest % of fatality crashes in Oklahoma



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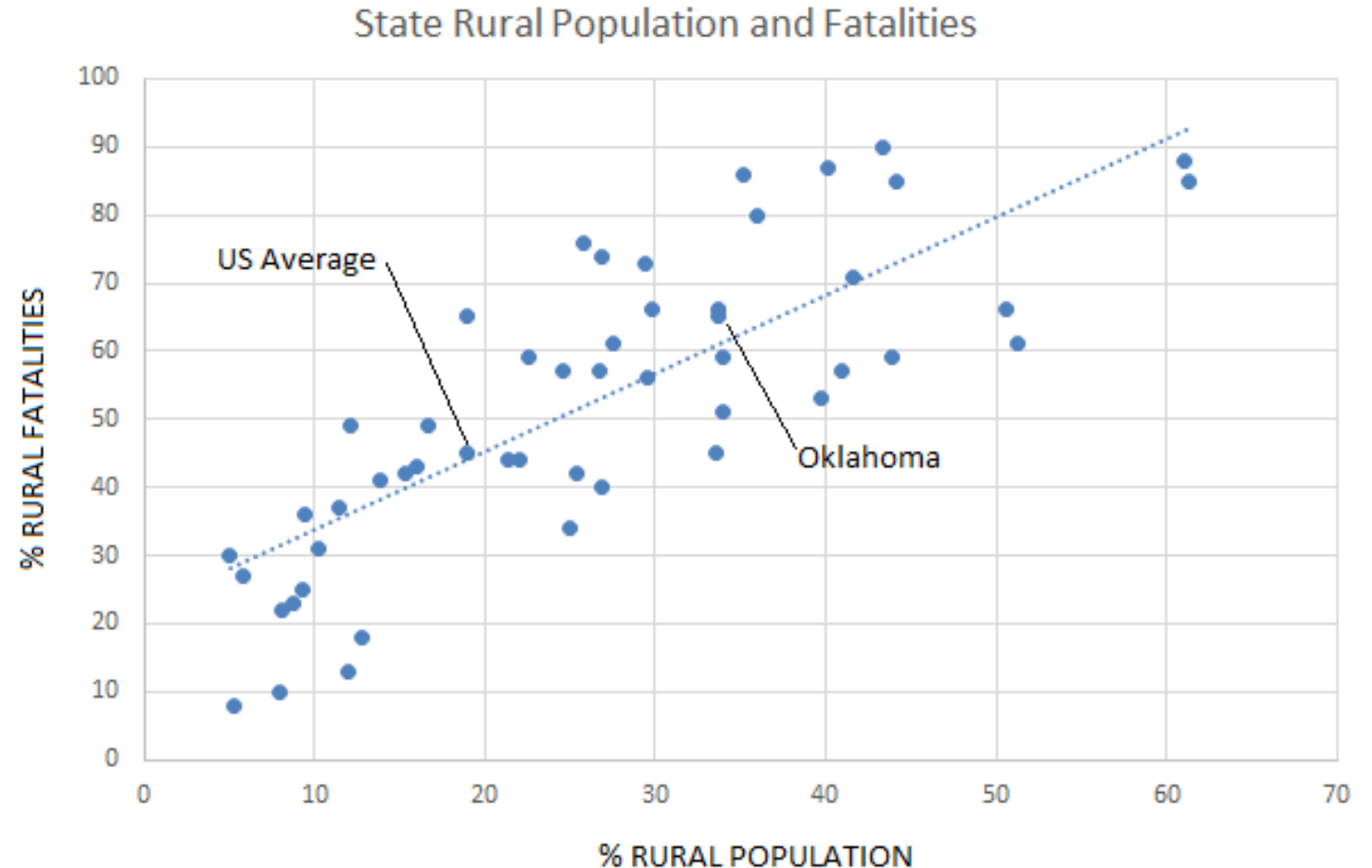
Oklahoma Comparison

Oklahoma

- 34% Rural population
- 65% of fatality crashes

National

- 19% Rural population
- 45% of fatality crashes



Two Lane Rural Highways

- Largest Investment in 8 Year CWP
- Rural crashes have highest % of fatality crashes in Oklahoma
- ODOT has closed two TIFIA loans with US DOT to advance \$85M in projects



Bridge Condition

- Oklahoma went from 49th to 5th in the Nation
- Of the 6,800 bridges, only 49 SD
- ODOT still has over 1,100 bridges that are at-risk of becoming SD or are over 80 years old

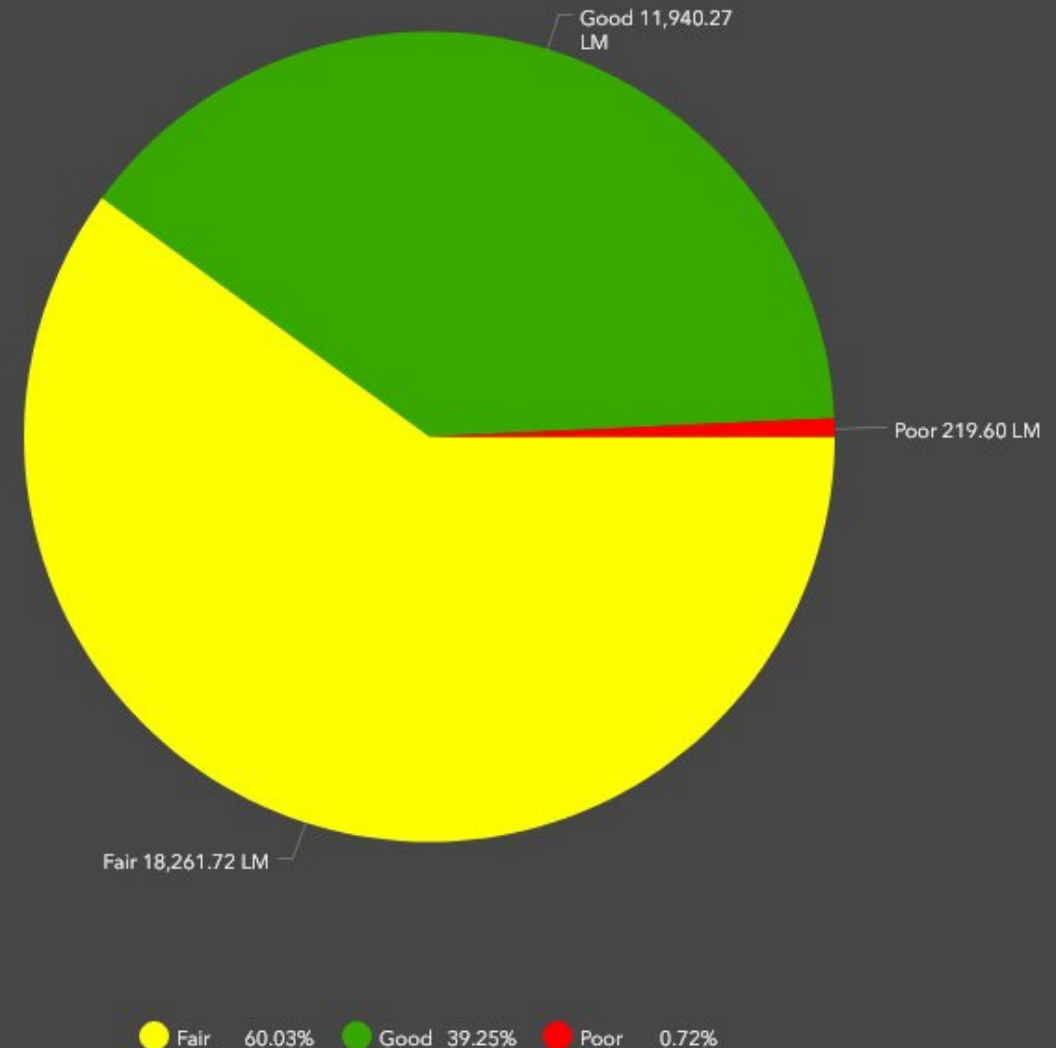


Pavement Condition

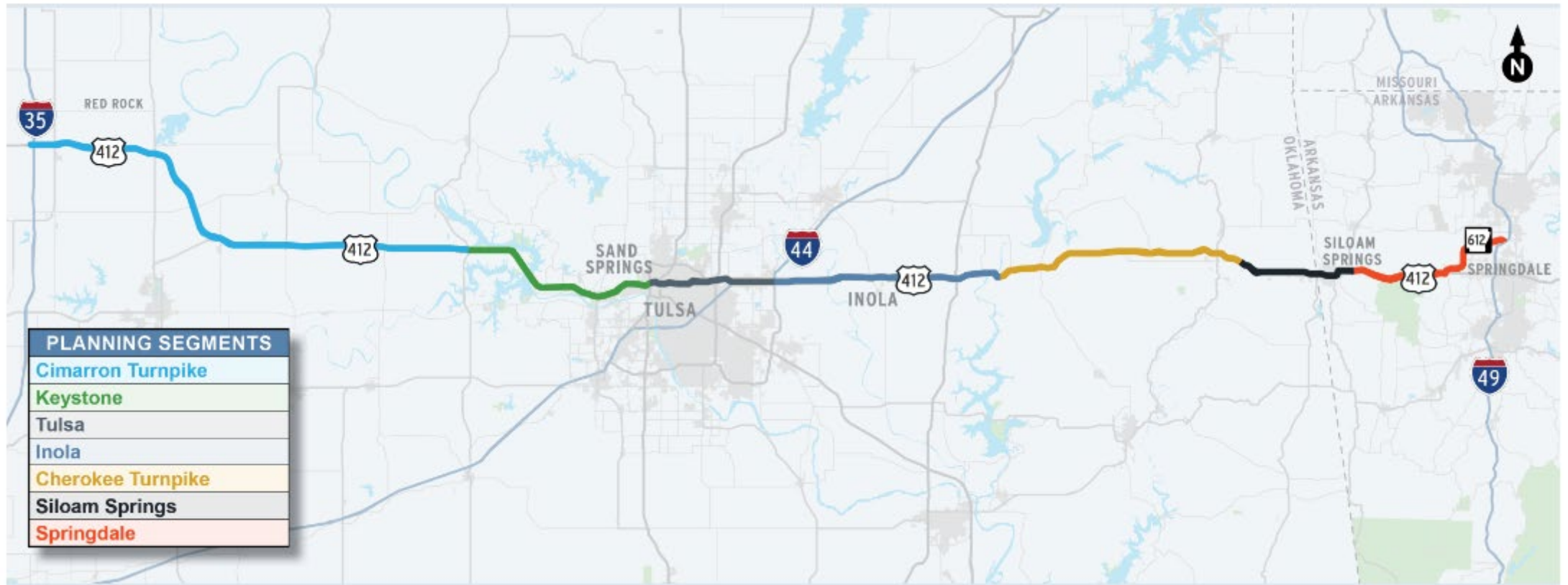
- Aiming to increase the % of good condition pavement by 10% every 4 years
- Constantly chasing degradation curve of pavement

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Year End Inventory
Federal Pavement Condition



US-412 Interstate Designation



I-35 Between OKC and Texas

I-35 AADT LOS Breakdown from Texas State Line to I-40 with the Weekend Factor (Segment 1 and 2)																																			
			Segment 1															Segment 2																	
			AVC 28			AVC 125												AVC 502												AVC 88					
Location	State Line	US-77	North of Winstar	MM 10	MM 13	MM 19	N/O Osawah Rd.	SH-77	MM 28	MM 31	N/O SH 70/199	Ardmore North	MM 36	SH-53	EW 185	US-77	EW 180	North of Arbuckle	EW 176	MM 58	MM 61	MM 65	MM 68	MM 71	SH-19	Washita River	MM 78	MM 87	N/O County Rd 185	MM 89	Purcell/M 94				
Year/State ID	I-350028	I-350028	I-350029	I-350026	I-350020	I-350004	I-350038	I-350054	I-350052	I-350038	I-350067	I-350037	I-350056	I-350018	I-350017	I-350023	I-350022	I-350022	I-350024	I-350005	I-350059	I-350057	I-350047	I-350045	I-350024	I-350018	I-350014	I-350013	I-350012	I-350004	I-350078	I-350044			
Weekend	51694	51694	30200	29500	28700	32300	32600	32900	32000	37100	31400	35100	33000	32300	31600	38200	30900	30460	32000	33100	32500	30700	32100	34000	33900	32800	33800	32300	38500	41600	30900	34014	41600		
2022	60306	60306	35231	34087	33163	37323	37669	38016	36976	42869	36283	40558	38132	37387	36577	44217	35651	35257	37040	38133	37619	35535	36931	39117	39002	37736	38887	37736	44294	47861	35550	39133	47861		
2023	62115	62115	36288	35110	34158	38442	38799	39156	38085	44155	37371	41775	39275	37948	37126	44880	36186	35786	37596	38888	38183	36068	37485	39704	39587	38302	39470	38302	44959	48579	36004	39720	48579		
2024	63925	63925	37345	36132	35153	39562	39929	40297	39195	45441	38460	42992	40419	38509	37674	45543	36721	36315	38151	39463	38747	36601	38039	40291	40172	38868	40054	38868	45623	49297	36617	40307	49297		
2025	65734	65734	38402	37155	36148	40682	41080	41437	40304	46727	39548	44208	41563	39070	38223	46206	37255	36844	38707	40037	39312	37134	38593	40877	40757	39435	40637	39435	46287	50015	37150	40894	50015		
2026	67543	67543	39459	38178	37142	41801	42190	42578	41413	48013	40637	45425	42707	39630	38772	46869	37790	37373	39262	40612	39876	37667	39147	41464	41342	40001	41220	40001	46952	50732	37683	45481	50732		
2027	69352	69352	40516	39200	38137	42921	43320	43718	42522	49299	41725	46642	43851	40191	39520	47533	38325	37902	39818	41187	40440	38200	39701	42051	41927	40567	41803	40567	47616	51450	38217	42068	51450		
2028	71161	71161	41573	40223	39132	44041	44450	44859	43632	50585	42314	47858	44995	40752	39889	48196	38860	38431	40374	41761	41004	38733	40255	42638	42512	41133	42387	41133	48281	52168	38750	42655	52168		
2029	72971	72971	42630	41246	40127	45160	45580	45999	44741	51872	43902	47858	46139	41513	40418	48859	39394	38959	40929	42336	41569	39286	40809	43224	43097	41699	42970	41699	48945	52886	39283	43242	52886		
2030	74780	74780	43687	42268	41122	46280	46710	47140	45850	53158	44991	50292	47283	41874	40986	49522	39929	39488	41485	42911	41313	39799	41363	43811	43682	42265	43553	42265	49610	53604	39817	43829	53604		
2031	76589	76589	44744	43291	42117	47400	47840	48280	46960	54444	46079	51369	48427	42435	41515	50186	40464	40187	42040	43406	42957	40333	41917	44398	44031	42831	44137	42831	50274	54322	40250	44416	54322		
2032	78398	78398	45801	44313	43132	48519	48970	49421	48169	55730	47168	52725	49572	42995	42064	50999	40546	42396	44606	43262	40886	42471	44985	44852	43397	44720	43397	50928	55040	40883	45003	55040			
2033	80207	80207	46858	45338	44107	49899	50300	50841	49178	57668	48758	53742	50512	43586	42812	53312	41531	41075	43132	44435	43826	41599	43025	45512	45437	42963	43503	42963	51603	55758	41416	45590	55758		
2034	82016	82016	47915	46359	45101	50789	51280	51702	50287	58302	49344	55159	51839	44217	43161	52715	42068	41694	43707	45720	44700	43292	43579	46158	46022	46529	45887	46529	52767	56476	41950	46177	56476		
2035	83826	83826	48972	47381	46096	51878	52380	52842	51307	59588	50433	56378	53003	44678	43710	52839	42803	42133	44263	45784	44954	43465	44133	46745	46607	45095	46470	45095	52932	57194	43483	46794	57194		
2036	85635	85635	50028	48404	47091	52998	53490	53983	52506	60874	51521	57502	54247	45239	44258	53502	43138	42662	44818	46350	45929	42998	44687	47332	47192	45661	47063	45661	53596	57912	43016	47351	57912		
2037	87444	87444	51085	49427	48086	54118	54620	55123	53615	62160	52610	58809	55291	45799	44807	54165	44072	43390	46374	46934	46803	43531	45243	47918	47777	46227	47636	46227	54760	58629	43549	47938	58629		
2038	89253	89253	52142	50449	49081	55238	55753	56264	54724	63466	53698	60026	56455	46360	45355	56825	44207	43719	45930	47528	46647	44064	45795	46805	46362	46793	46362	48220	46793	54925	59347	44003	48525	59347	
2039	91062	91062	53199	51472	50076	56357	56883	57404	55814	64732	54787	61243	57579	46921	45904	55492	44742	44248	46445	48083	47212	44597	46148	49092	48947	47359	48801	47359	55589	60065	44618	49112	60065		
2040	92872	92872	54256	52494	51071	57477	58011	58545	56943	66018	55875	62458	58723	47482	46485	56155	45277	44777	47041	48558	47776	45130	46902	49679	49532	47925	49386	47925	56254	60783	44949	49699	60783		
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2042	96490	96490	56170	54540	53061	59716	60271	60826	59162	68590	58052	64893	61010	48803	47550	57481	46346	45835	48152	49807	48906	46196	48010	50852	50703	49057	50553	49057	57583	62219	46216	50873	62219		
2043	98299	98299	57427	55862	54055	60836	61401	61966	60271	69877	59141	66120	62154	49164	48099	58145	46881	46364	48708	50382	49469	46729	48564	51439	51288	49623	51136	49623	58247	62927	46749	51460	62927		
2044	100108	100108	58484	56585	55050	61956	62531	63106	61380	71163	60219	67326	63236	49725	48647	58808	47416	46892	49263	50957	50033	47262	49118	52026	51873	50189	51720	50189	58911	63655	47282	52047	63655		
2045	101918	101918	59541	57607	56045	63075	63641	64247	62489	72449	61313	68541	64442	50286	49196	59471	47951	47421	49819	51531	50597	47795	49672	52612	52458	50755	52303	50755	59576	64373	47815	52634	64373		
2046	103727	103727	60598	58630	57040	64195	64791	65387	63589	73735	62406	69780	65536	50847	49745	60134	48485	47950	50374	52106	51162	48328	50226	53199	53043	51322	52886	51322	60240	65091	48349	53221	65091		
2047	105536	105536	61655	59653	58015	65115	65921	66528	64708	75021	63495	70977	66730	51407	50293	60798	49020	48479	50930	52681	51726	48861	50780	53786	53628	51883	53469	51883	60905	65809	48882	53808	65809		
2048	107345	107345	62712	60675	59030	66434	67051	67668	65817	76307	64583	72193	67874	51966	50842	61461	49355	49008	51486	52255	52290	49394	51134	54373	54213	52454	54053	52454	61569	66527	49415	54395	66527		
2049	109154	109154	63769	61698	60025	67554	68183	68809	66927	77593	65672	73410	69018	52529	51391	62124	50090	49537	52041	53830	52854	49927	51888	54959	54798	53020	54636	53020	62231	67244	49948	54892	67244		
2050	110963	110963	64826	62721	61020	68674	69312	69948	68036	78879	66780	74627	70342	53090	51939	62787	50624	50066	52597	54405	53419	50460	52442	55546	553										

I-35 Between OKC and Texas

I-35 AADT LOS Breakdown from Texas State Line to I-40 with the Weekend Factor (Segment 3 and 4)																													
		Segment 3						Segment 4										Segment 5						Segment 6					
		AVC 530						AVC 116										AVC 126						AVC 89					
		AVC 530						AVC 116										AVC 126						AVC 89					
Location	Year/Se ID	MM 96	MM 100	MM 104	MM 106	MM 108	MM 110	Canadian River	S/O Hwy 9	S/O Main	S/O Robinson	S/O Rock Creek	S/O Rock Creek	N/O Tecumseh	S/O Indian Hills	N/O Indian Hills	S/O 27 St.	27 St.	11 St.	N/O 2nd St.	N/O 12 St.	N/O 27 St.	S/O 89 St.	S/O 82 St.	64 St.	S/O 51 St.	S/O Grand Blvd	Oklahoma/North Canadian River	Oklahoma/North Canadian River
2022 No	Weekend	440046	440054	440031	440018	440020	440018	440020	440018	440017	440016	440045	440016	440018	440018	440018	440018	440018	440018	440018	440018	440018	440018	440018	440018	440018	440018	440018	440018
2022		57800	54300	54900	51630	54100	77000	64000	82100	82500	81300	82300	82300	81300	82300	81300	82300	81300	82300	81300	82300	81300	82300	81300	82300	81300	82300	81300	82300
2023		61106	62130	62877	59143	64210	77000	64200	82100	82500	81300	82300	82300	81300	82300	81300	82300	81300	82300	81300	82300	81300	82300	81300	82300	81300	82300	81300	82300
2024		67855	63745	64449	60621	65858	78079	65099	83548	83675	82578	83690	83690	82578	83690	82578	83690	82578	83690	82578	83690	82578	83690	82578	83690	82578	83690	82578	83690
2025		68506	65290	66021	62069	67464	79156	65998	84399	84610	83655	84610	83655	84610	83655	84610	83655	84610	83655	84610	83655	84610	83655	84610	83655	84610	83655	84610	83655
2026		71163	66854	67593	63578	69070	80234	66896	85548	85865	84775	85865	84775	85865	84775	85865	84775	85865	84775	85865	84775	85865	84775	85865	84775	85865	84775	85865	84775
2027		72816	68406	69165	65056	70676	81312	67795	86698	87120	86135	87120	86135	87120	86135	87120	86135	87120	86135	87120	86135	87120	86135	87120	86135	87120	86135	87120	86135
2028		74473	69964	70737	66535	72283	82390	68694	87947	88375	87391	88375	87391	88375	87391	88375	87391	88375	87391	88375	87391	88375	87391	88375	87391	88375	87391	88375	87391
2029		76128	71518	72300	68013	73889	83463	69593	88996	89428	88443	89428	88443	89428	88443	89428	88443	89428	88443	89428	88443	89428	88443	89428	88443	89428	88443	89428	88443
2030		77763	73073	73860	69492	75495	84546	70492	90146	90578	89593	90578	89593	90578	89593	90578	89593	90578	89593	90578	89593	90578	89593	90578	89593	90578	89593	90578	89593
2031		79436	74828	75615	70971	77102	85624	71590	91295	91727	90742	91727	90742	91727	90742	91727	90742	91727	90742	91727	90742	91727	90742	91727	90742	91727	90742	91727	90742
2032		81089	76182	77010	72449	78738	86762	72599	92049	92481	91496	92481	91496	92481	91496	92481	91496	92481	91496	92481	91496	92481	91496	92481	91496	92481	91496	92481	91496
2033		82746	77737	78566	73928	80141	87790	73188	92944	93376	92391	93376	92391	93376	92391	93376	92391	93376	92391	93376	92391	93376	92391	93376	92391	93376	92391	93376	92391
2034		84403	79292	80118	75426	81630	88826	74687	93692	94124	93139	94124	93139	94124	93139	94124	93139	94124	93139	94124	93139	94124	93139	94124	93139	94124	93139	94124	93139
2035		86056	80847	81676	76885	83087	89936	74896	94691	95123	94138	95123	94138	95123	94138	95123	94138	95123	94138	95123	94138	95123	94138	95123	94138	95123	94138	95123	94138
2036		87715	82401	83232	78363	84565	91016	75894	95392	95824	94839	95824	94839	95824	94839	95824	94839	95824	94839	95824	94839	95824	94839	95824	94839	95824	94839	95824	94839
2037		89374	83956	84787	79916	86118	92569	76783	96087	96519	95534	96519	95534	96519	95534	96519	95534	96519	95534	96519	95534	96519	95534	96519	95534	96519	95534	96519	95534
2038		91033	85611	86442	81573	87775	94226	77682	96786	97218	96233	97218	96233	97218	96233	97218	96233	97218	96233	97218	96233	97218	96233	97218	96233	97218	96233	97218	96233
2039		92691	87269	88100	83239	89441	95892	78581	96986	97418	96433	97418	96433	97418	96433	97418	96433	97418	96433	97418	96433	97418	96433	97418	96433	97418	96433	97418	96433
2040		94350	88928	89759	84898	91099	97550	79480	97580	98012	97027	98012	97027	98012	97027	98012	97027	98012	97027	98012	97027	98012	97027	98012	97027	98012	97027	98012	97027
2041		96009	90587	91418	86557	92759	99210	80378	98078	98510	97525	98510	97525	98510	97525	98510	97525	98510	97525	98510	97525	98510	97525	98510	97525	98510	97525	98510	97525
2042		97668	92246	93077	88216	94517	100000	81686	98578	99010	98025	99010	98025	99010	98025	99010	98025	99010	98025	99010	98025	99010	98025	99010	98025	99010	98025	99010	98025
2043		99327	93905	94736	89875	96176	102227	83345	99068	99500	98515	99500	98515	99500	98515	99500	98515	99500	98515	99500	98515	99500	98515	99500	98515	99500	98515	99500	98515
2044		100986	95564	96395	91534	97835	103278	85024	99568	99999	98515	99999	98515	99999	98515	99999	98515	99999	98515	99999	98515	99999	98515	99999	98515	99999	98515	99999	98515
2045		102645	97183	98014	93153	99454	104905	86794	99568	100000	99015	100000	99015	100000	99015	100000	99015	100000	99015	100000	99015	100000	99015	100000	99015	100000	99015	100000	99015
2046		104304	98761	99592	94730	100631	106082	88583	99568	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447
2047		105963	100320	101151	96259	101500	106951	89673	99568	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447
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2050		110940	105493	106324	101641	103090	109241	92500	99568	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447
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2054		117576	112017	112848	107965	109414	115127	96916	99568	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447
2055		119235	113657	114488	109584	111033	116788	98005	99568	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447	100432	99447
2056		120894	115308	116139	111646	113095	118546	99005	99568	100432	99447	100432	99447	100432	99447	100432	99447	10											