

APWA
Washington

DIVERSITY
Expedition

2018
Fall

October 3 - 5 *Wenatchee Convention Center*
2018 **WASHINGTON**

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DIVERSITY
Expedition

2018
Fall


Tacoma – LRSP Lessons Learned

Justin Belk, PE – Transportation Engineer, City of Tacoma
jbelk@ci.tacoma.wa.us




DIVERSITY Expedition Brief Overview

- Background and Context
- Safety Needs – First Glance
- Data Decisions and Consequences
- Project Development
- Public Involvement
- Other Considerations




DIVERSITY Expedition Background and Context




Tacoma Transportation Master Plan


- Vision Zero concurrence
 - Previous Comprehensive Plans
 - TMP Policy 2.3 • Create a safer street environment that reduces intermodal crashes involving bicyclists, pedestrians, and motor vehicles by at least 10% from 2015 rates by 2020 and work to meet Washington State’s Target Zero goal of eliminating fatal and serious injuries by 2030.
- HSIP Program – spot vs. systemic



SAFE ROUTES
to School
TACOMA, WA




Tacoma Environmental Action Plan



Safety Needs – First Glance

- 334 fatal and serious injury crashes
- Contributing circumstances by driver
 - Inattention, speeding, under influence
- By pedestrian and cyclist involved
 - Failure to yield/disregard signal/x-walks



Data Decisions/Consequences

- Analyze Data
 - Crashes, Environmental/Geospacial
- GIS Information

DESIRED MEASURE	IDEAL DATA	ACTUAL DATA
Roadway intensity	ADTs/traffic volume	Speed/classification
Ped/bike exposure	Ped/bike counts	Bike facilities/land use
Area characteristics	Density/ped QOS	Zoning/lighting spacing
Intersection type	Traffic control devices	Signalization/spacing

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Determining Risk Factors

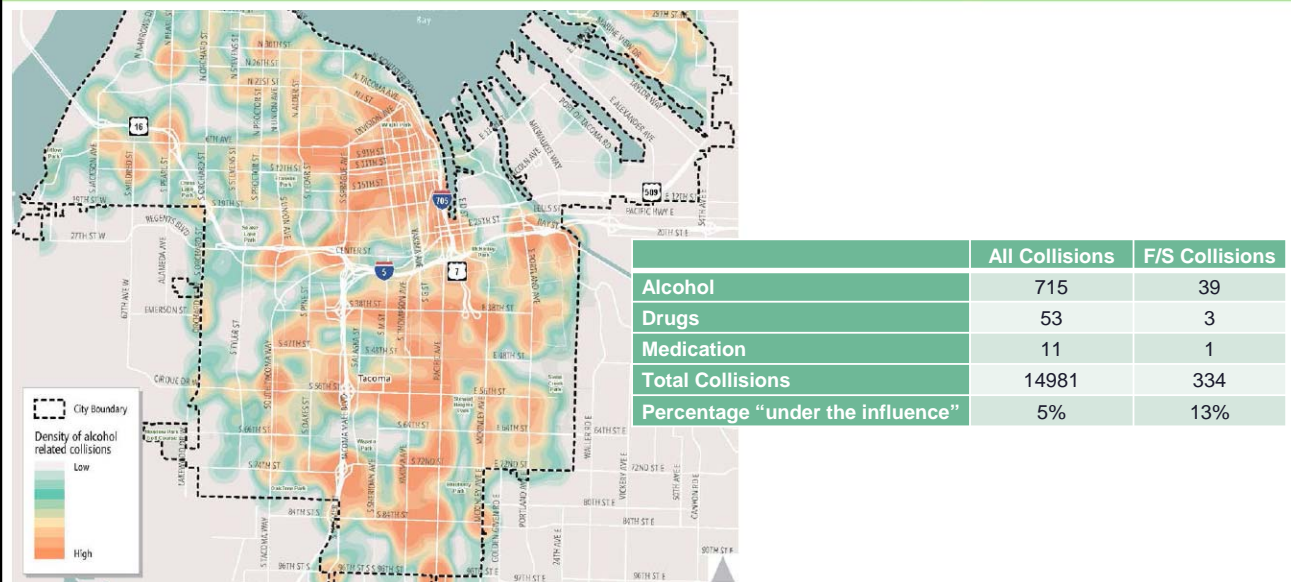
- Joining collision data to GIS data
- Frequency for severe and bike/ped
- Multiple variables cross-referenced
- Data Normalized

Pedestrian was using road lighting										Pedestrian was using road lighting												
Location	KSI Ped Collisions			Nightsime Dark-No Store			Dark-Street Lig			Dark-Street Lights			Other			Not State			Unknown			
	Daylight	Dusk	Dawn	Daylight	Dusk	Dawn	Daylight	Dusk	Dawn	Daylight	Dusk	Dawn	Daylight	Dusk	Dawn	Daylight	Dusk	Dawn	Daylight	Dusk	Dawn	
Marked X walk	8	1	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unmarked X walk	4	1	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sidewalk	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walkway	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Roadway	11	0	0	0	0	27	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shoulder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
	16										445											

Pedestrian was using road lighting						Pedestrian was using road lighting						Pedestrian was using road lighting																
Location	KSI Ped Collisions			Resident/ Commarc			Mixed Use			Industrial			Unknown			Location	Resident/ Commarc			Mixed Use			Industrial			Unknown		
	Resident/ Commarc	Mixed Use	Industrial	Unknown	Resident/ Commarc	Mixed Use	Industrial	Unknown	Resident/ Commarc	Mixed Use	Industrial	Unknown	Resident/ Commarc	Mixed Use	Industrial		Unknown	Resident/ Commarc	Mixed Use	Industrial	Unknown	Resident/ Commarc	Mixed Use	Industrial	Unknown			
Marked X walk	3	8	7	1	0	45	49	63	16	0	0.6383	9.0909	10.9383	1.0101	0.6383	9.0909	10.9383	1.0101	0.6383	9.0909	10.9383	1.0101	0.6383	9.0909	10.9383	1.0101		
Unmarked X walk	6	3	2	1	0	39	21	21	4	0	0.4609	2.5961	2.5961	0.3253	0.4609	2.5961	2.5961	0.3253	0.4609	2.5961	2.5961	0.3253	0.4609	2.5961	2.5961	0.3253		
Sidewalk	0	1	2	1	0	4	8	9	1	0	0.05674	1.45423	1.08827	0.06313	0.05674	1.45423	1.08827	0.06313	0.05674	1.45423	1.08827	0.06313	0.05674	1.45423	1.08827	0.06313		
Walkway	0	0	0	0	0	0	0	2	0	0	0	0	0.24184	0	0	0	0.24184	0	0	0	0	0.24184	0	0	0	0.24184		
Roadway	8	11	14	3	0	44	41	48	6	2	0.42411	7.60668	9.35209	0.50505	0.42411	7.60668	9.35209	0.50505	0.42411	7.60668	9.35209	0.50505	0.42411	7.60668	9.35209	0.50505		
Shoulder	0	0	1	0	0	3	0	2	0	0	0.04255	0	0.24184	0	0.04255	0	0.24184	0	0.04255	0	0.24184	0	0.04255	0	0.24184	0		

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Influence vs. Fatal/Serious



DIVERSITY Expedition Land Use and Classification

- Crashes Per Square Mile within Mixed Use

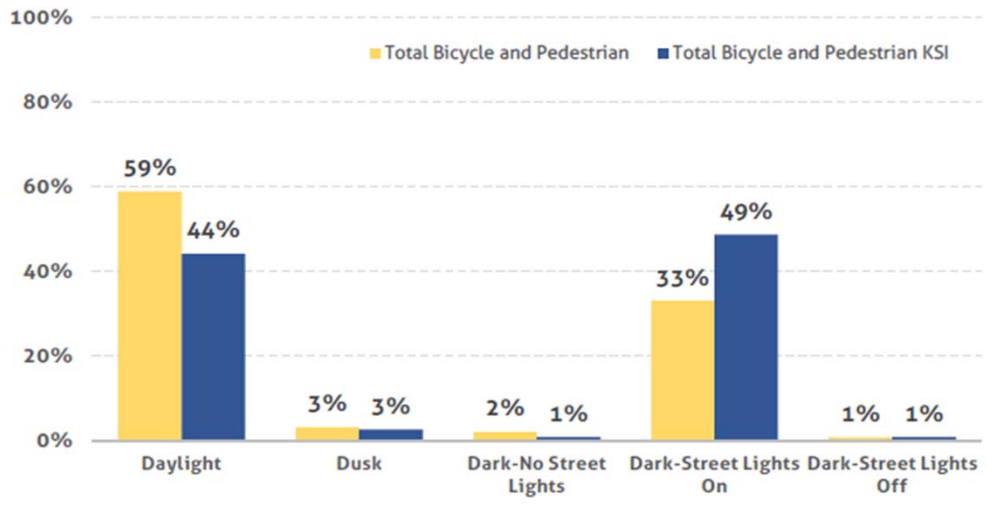
	Total Collisions per sq. mi.	All F/S per sq. mi.
Mixed Use Center	561.06	14.38
Regional Growth Center	959.14	18.83
Neither	254.89	5.68
Citywide Average	303.25	6.76

- Crashes Per Roadway Classification

Road Classification	F/S Collisions	Percentage of F/S Collisions	Total miles of roadway	F/S Collisions per mile
Local	71	21%	2044.0	0.03
Collector	55	16%	336.0	0.16
Minor Arterial	54	16%	93.4	0.58
Principal Arterial	154	46%	397.7	0.39

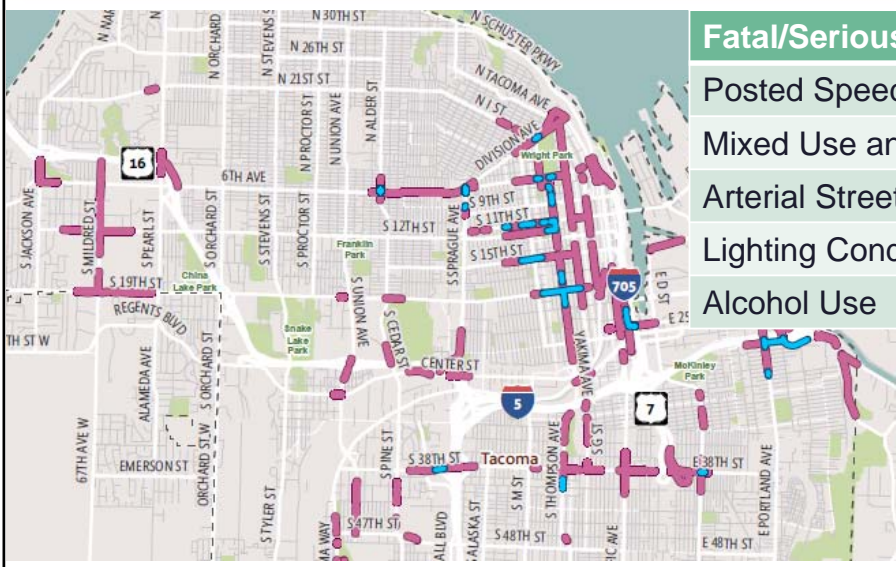
DIVERSITY Expedition Lighting Conditions Bike/Ped

Figure 6: Collisions by Lighting Category



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Fatal/Serious Priorities



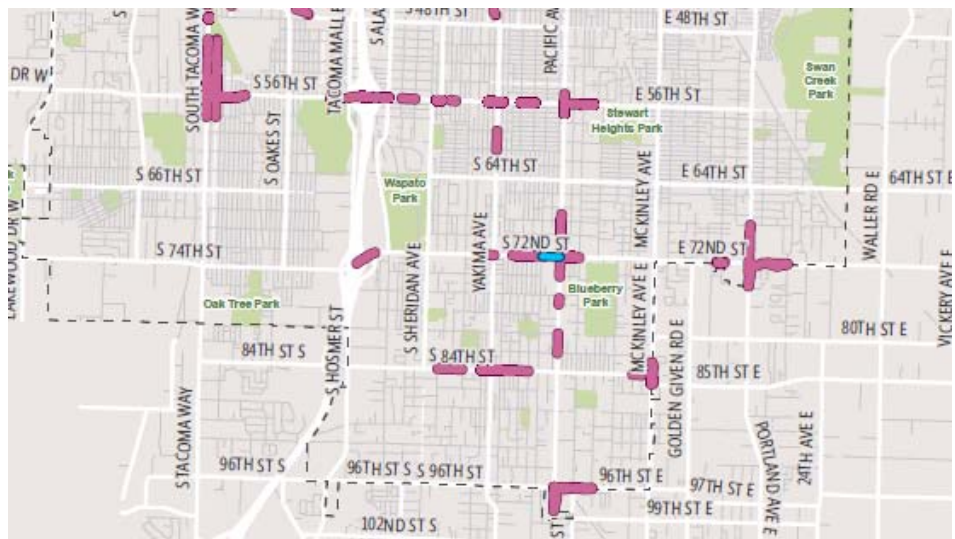
Fatal/Serious Collision Factors

- Posted Speed Limit – 30 MPH+
- Mixed Use and Regional Growth Center
- Arterial Street Classification
- Lighting Conditions
- Alcohol Use

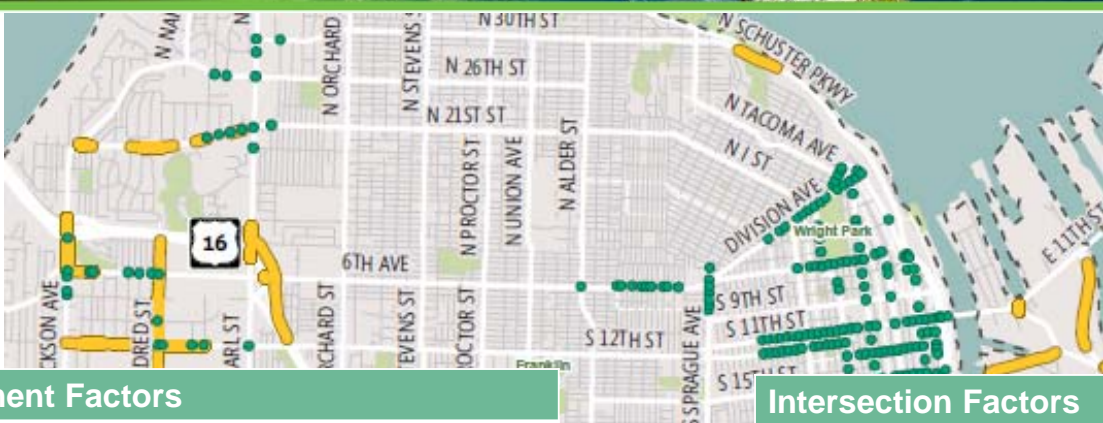
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Fatal/Serious Priorities

South End



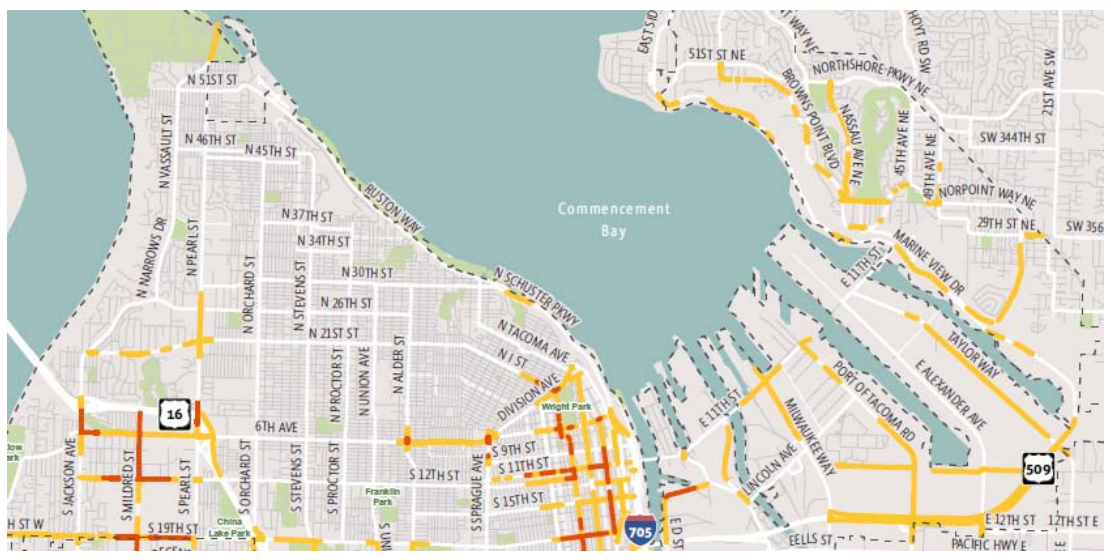
DIVERSITY Expedition Bike/Pedestrian Priorities



- Segment Factors**
- Intersection Density (Opportunity to cross)
 - Bicycle Facility Presence
 - Lighting Conditions

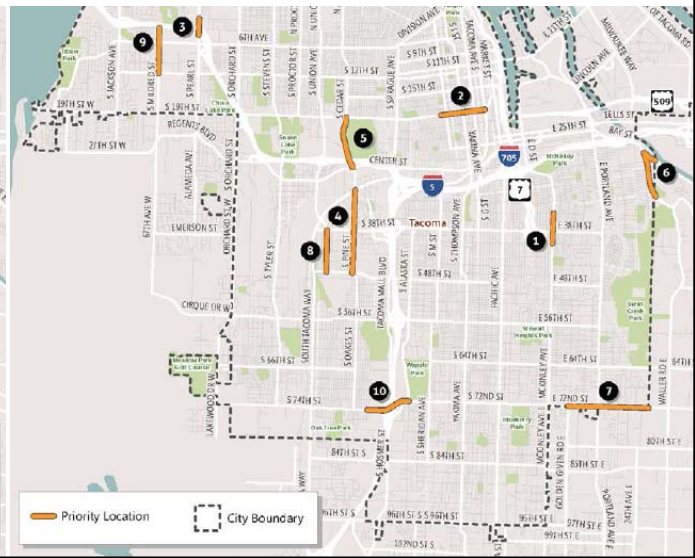
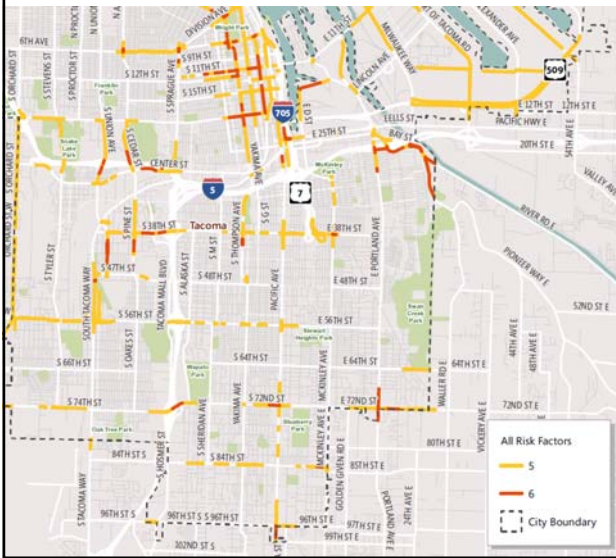
- Intersection Factors**
- Within Mixed Use/RGC
 - Along an arterial
 - Speeds from 25 to 35 MPH

DIVERSITY Expedition Overlapping Priorities



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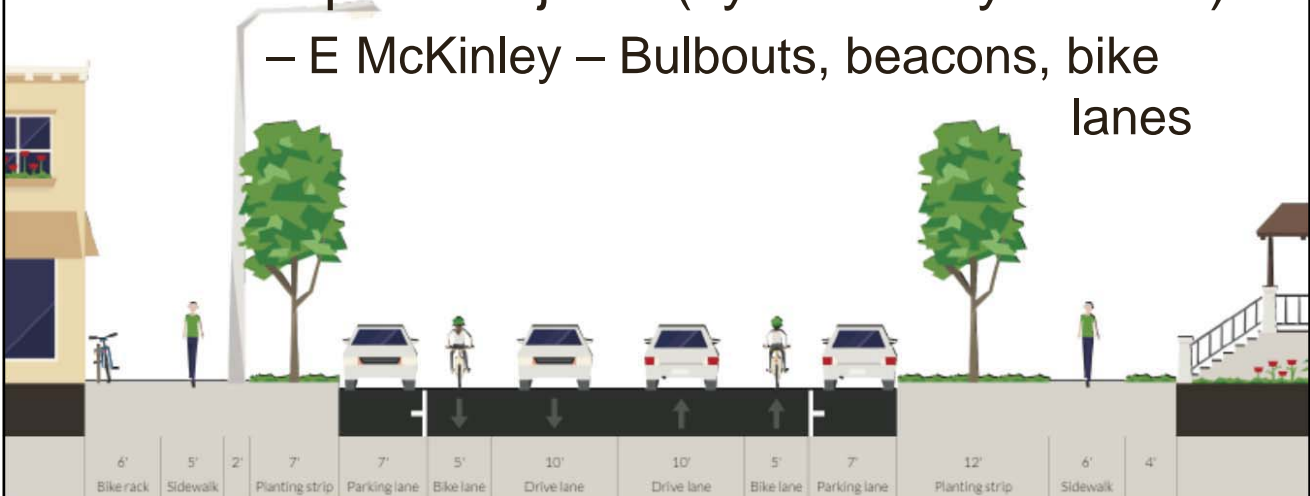
Project Development



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Project Types

- Capital Projects (systemically chosen)
 - E McKinley – Bulbouts, beacons, bike lanes



- Other capital projects not in grant application
- Data Projects
 - Counts – permanent stations or one-time efforts
 - Inventories – medians, islands, fixed objects
 - Inventories – sidewalks, crosswalks
- Other Citywide Projects – object markers

- Transportation Commission
- Bike/Pedestrian Technical Advisory Group
 - Takeaways
 - Systemic safety is new and different
 - LRSPs are just a step in the path to Vision Zero
 - 6-Es should/will be addressed in future efforts



Other Considerations

- Legal

– 23 U.S. Code § 409 & 23 U.S. Code § 148

- Equity

In Tacoma, between 2010 and 2014⁵

153



YOUTH HIT BY CARS WHILE WALKING

69



YOUTH HIT BY CARS WHILE BIKING

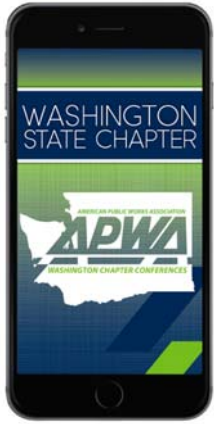
Students at low-income schools are **four times more likely** to walk to school, but lower-income communities tend to have less access to safe places to walk, bike, and skate.⁵



Thank You

Questions?

Justin Belk, PE
Transportation Engineer
City of Tacoma
jbelk@cityoftacoma.org
253-591-5404



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