California Transportation Asset Management Plan

TAMP Overview State & Federal Requirements

April 22, 2021

Michael B. Johnson
State Asset Management Engineer
Caltrans, HQ Asset Management

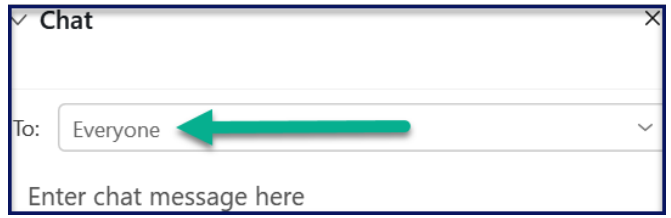
Agenda

1:00 P.M.	Welcome, Review of Agenda and Workshop Quick Guide
1:15 P.M.	Results of TAMP Listening Sessions
1:20 P.M.	TAMP Background and Condition Metrics
1:45 P.M.	Where is the NHS in California
2:15 P.M.	TAMP Fundamentals
2:45 P.M.	Action Items & Next Steps
2:55 P.M.	Closing Remarks for Workshop
3:00 P.M.	Informal Time for Additional Questions

Workshop Quick-Guide

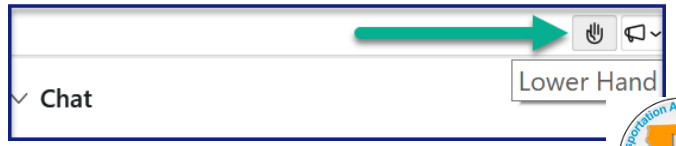
- When joining the workshop, if you clicked on the new "Join by browser" **you will not have sound**. You will need to re-join the webinar by clicking on "Join Now"

- The workshop will be recorded and posted on the Caltrans Asset Management webpage
- Use the Chat to "Everyone" feature to submit questions. We will respond to questions during the workshop as well as a Q&A at the end of the presentation

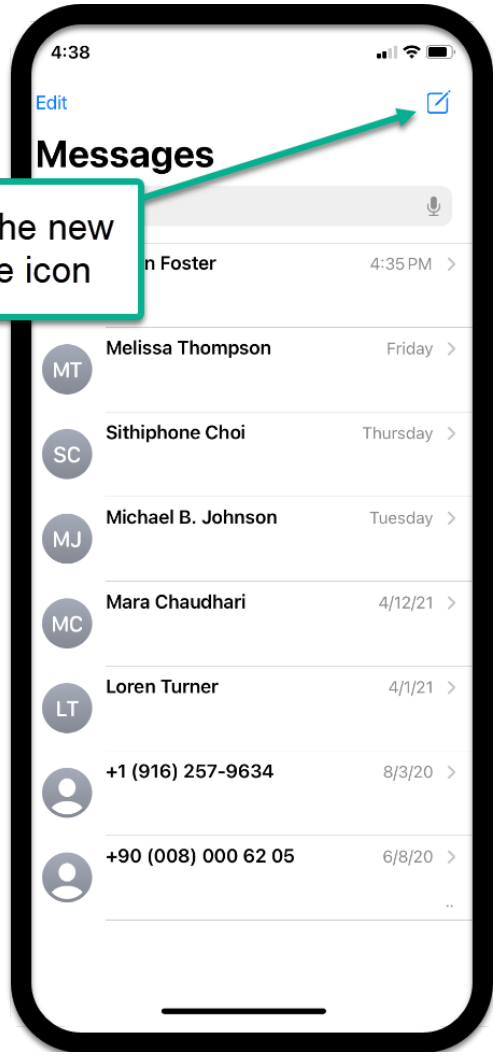


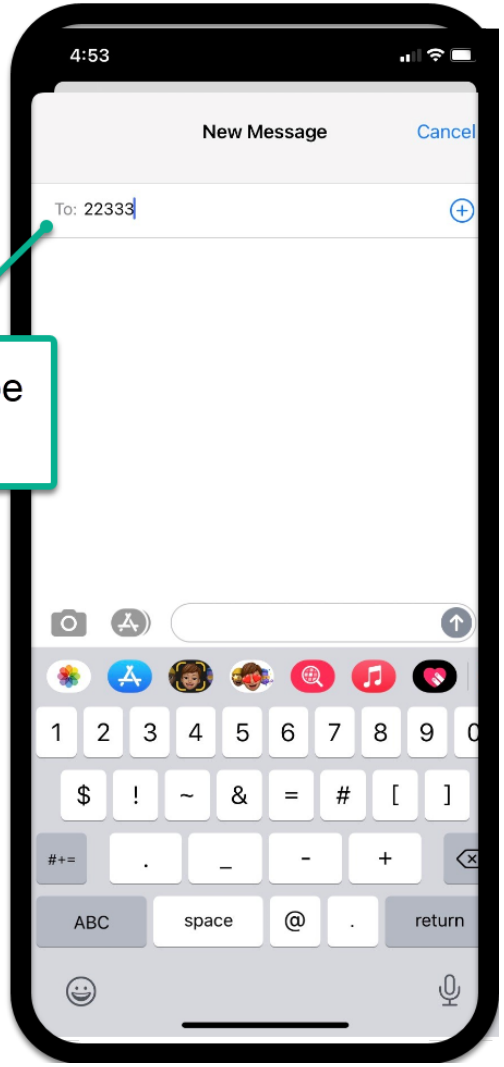
- Use the "Raise Hand" feature if you would like to communicate with Host. Click the hand again to "Lower Hand"

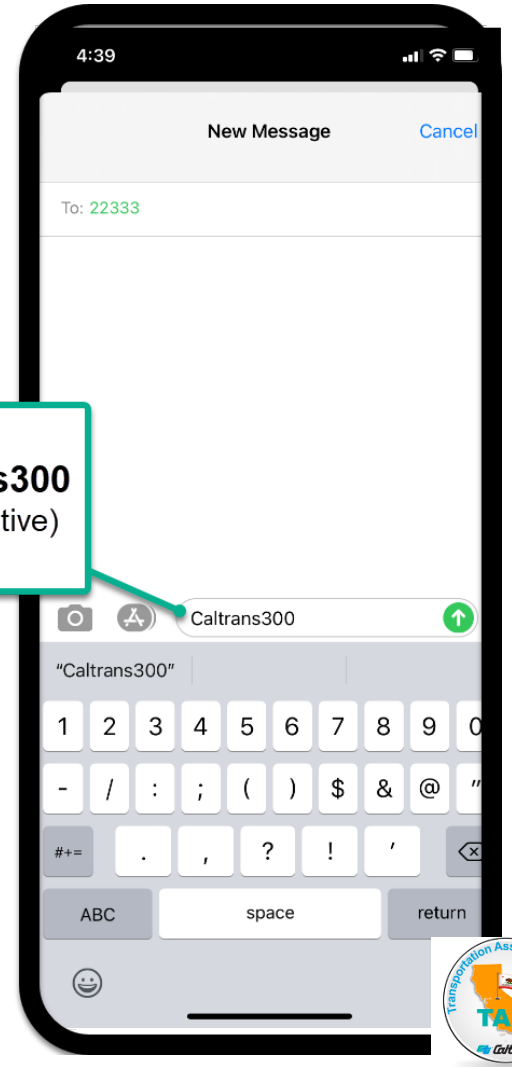
- If you need technical assistance with the workshop or have questions later, you can submit questions via email to: CT-TAM@dot.ca.gov



Poll Instructions







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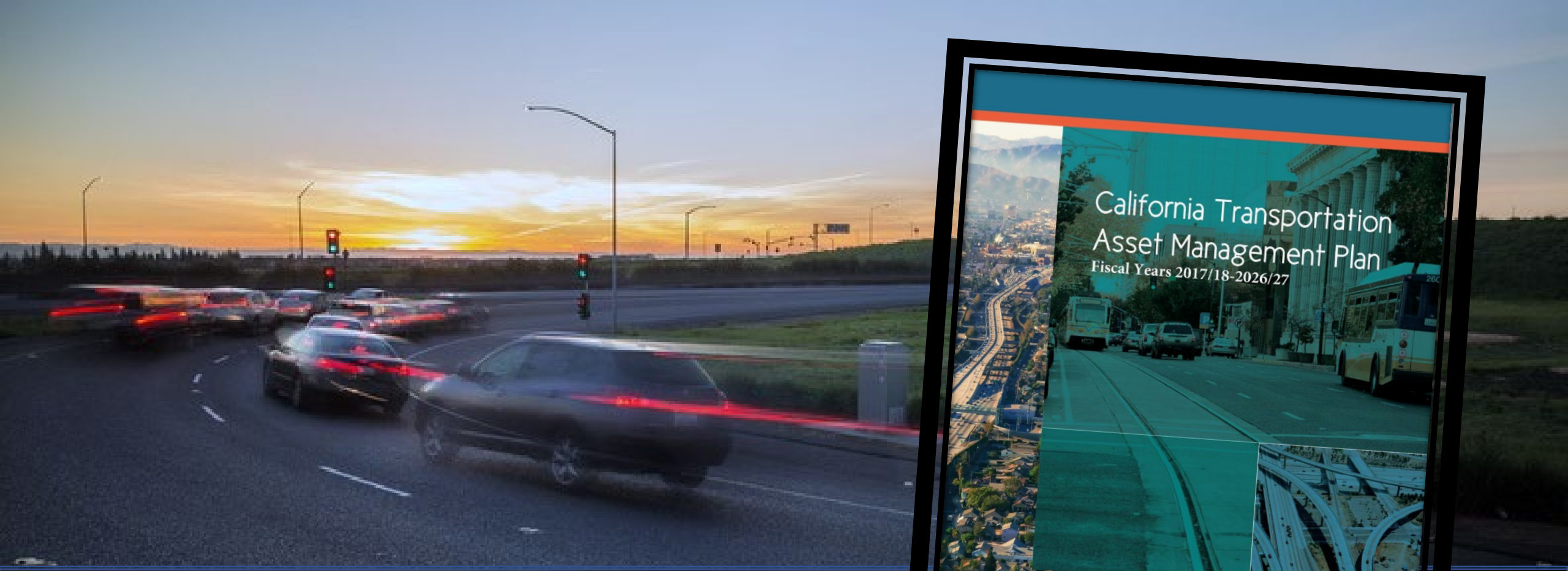
TAMP Listening Sessions

- 10 listening sessions were held with select MPO/RTPA/City/County staff
- Results helped Caltrans understand more about current practice of asset management and any gaps that should be addressed
  - Impressed that some cities and counties have good programs in place consistent with asset management principles
  - MPOs do not feel that their role is to evaluate project portfolios for progress
  - Risk Management is in early stages of development
- Learned that more communication and education needed on TAMP which we plan to do as part of this update and in future implementation efforts



TAMP Background

Michael B. Johnson
Statewide Asset Management Engineer
HQ Office of Asset Management, Caltrans

Check 1:20

TAMP Purpose

- Maximize investments by managing the life-cycle of transportation assets strategically to minimize costs

- Meet state and federal TAMP Requirements
  - State: (California Government Code section (14526) modified by Senate Bill 486)
  - Federal: (23 U.S.C. 119(e)(1), MAP-21 § 1106)

Background (Federal Law – MAP-21/FAST Act)

- Federal Regulation (MAP-21/FAST Act) requires the development of a Transportation Asset Management Plan (TAMP) with National Performance Measures for pavement and bridges

- The TAMP shall include the entire National Highway System (NHS)

- The TAMP Requires the implementation of Performance Management which requires performance targets to be set using the National Measures

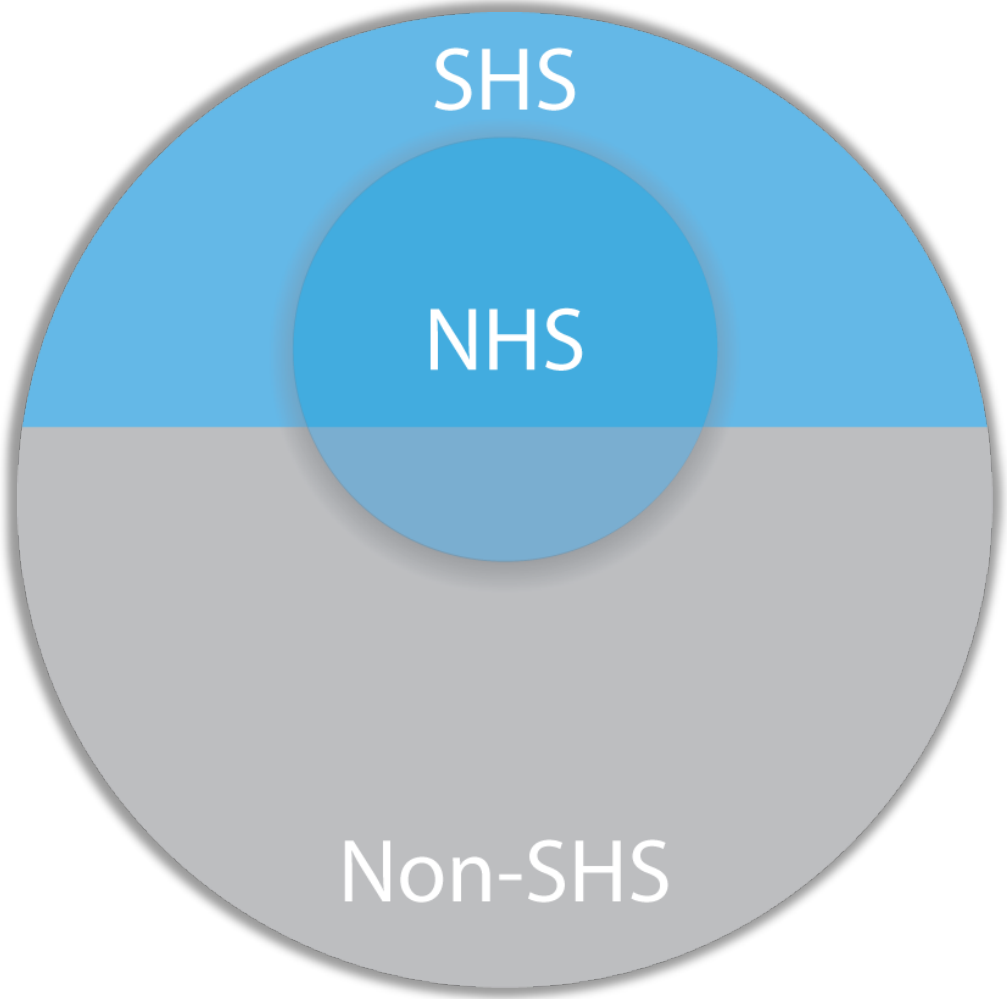
Background (California Government Code SB 486)

- Government Code requires a “robust asset management plan” to guide the selection of projects in the SHOPP
- The Asset Management Plan shall be consistent with Federal Law
- Performance measures and targets are approved by the CTC
- Projects shall be limited to maintenance, safety, operation, and rehabilitation of state highways and bridges that do not add a new traffic lane to the system

Keep in Mind for the TAMP

- Sets performance targets for condition of NHS pavement and bridges over a 10-Year time period
- Targets are set for the entire NHS regardless of owner.
- NHS is owned by both Caltrans and local cities and counties
- MPOs are recognized in federal asset management law
- Caltrans and MPOs have established agreements specific to asset management in support of federal requirements
  - Data Collection/Sharing

Assets in the California TAMP



SHS - State owned and managed
NHS - Federally designated and State and locally owned and managed
Non-SHS - Locally owned and managed (off the SHS)

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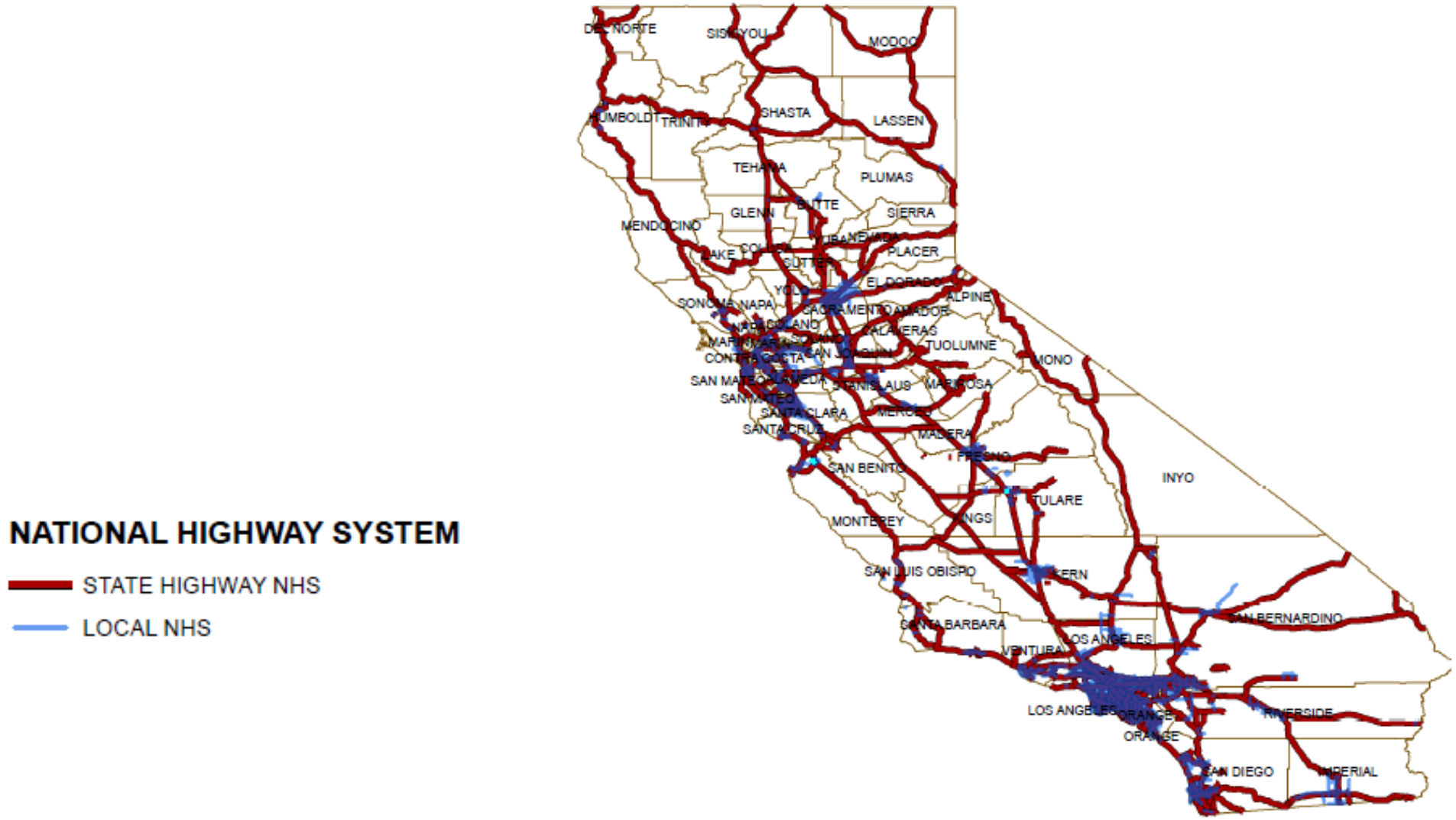
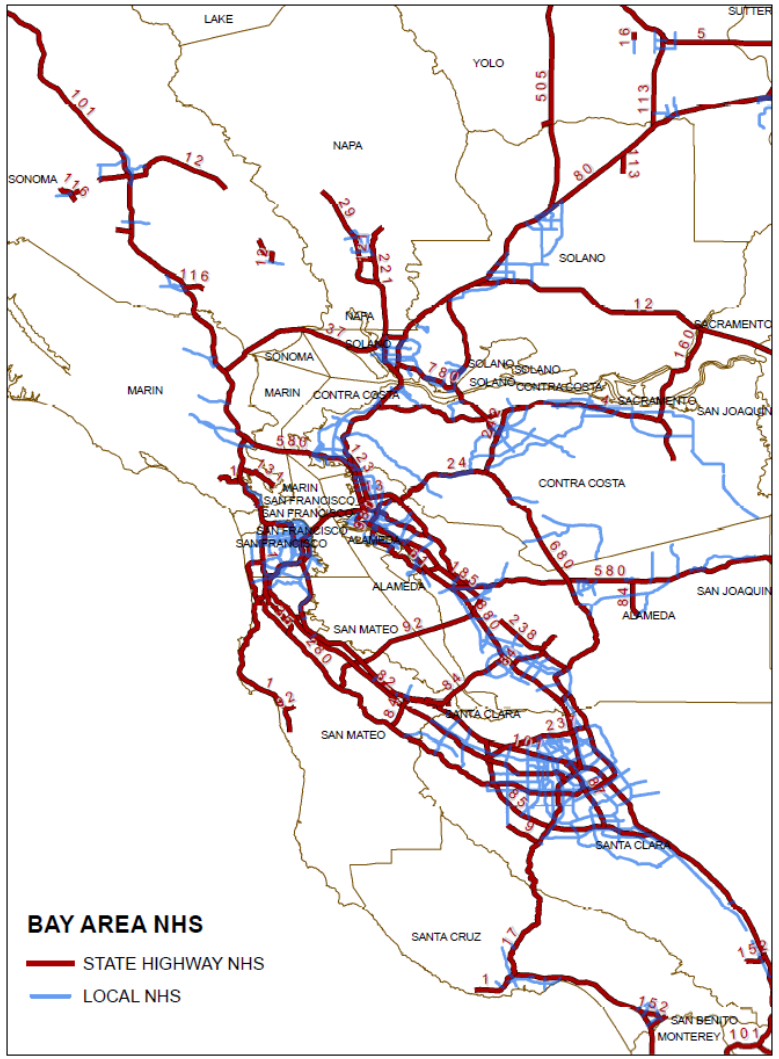
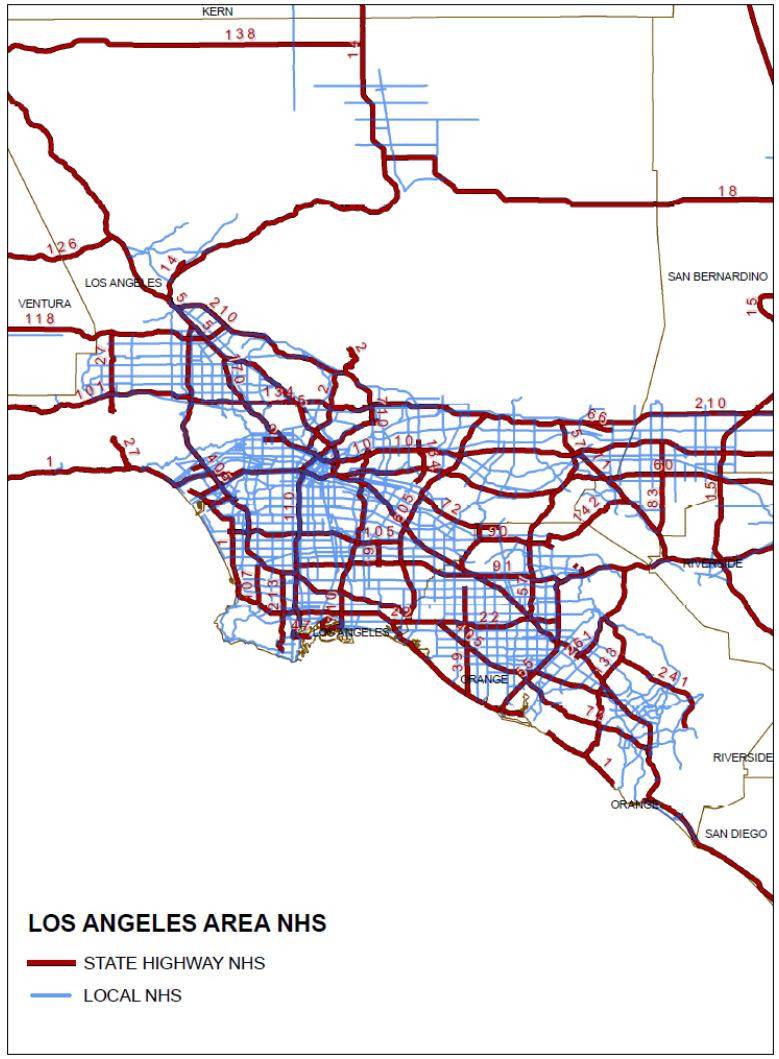
California NHS



NHS – Bay Area & Los Angeles Area





System	Asset Classes				
	Pavement	Bridge	Drainage	TMS	Supplementary Assets
NHS Federal Requirements	✓	✓			
SHS State Requirements	✓	✓	✓	✓	✓

TAMP Condition Metrics

Michael B. Johnson
Statewide Asset Management Engineer
HQ Office of Asset Management, Caltrans

Check 1:30

MAP-21/FAST Pavement Performance Measures

- Good/fair/poor measure determined based on 4 metrics
  - If all are good the combined measure is good
  - If ≥2 metrics are poor the combined measure is poor
- Need to report conditions and targets for % good and poor for Interstate and non-Interstate NHS
- Rule sets an additional goal of ≤5% poor for Interstates (currently 1.9%)

23 U.S.C. 119(e)(1), MAP-21 § 1106 - Subpart C (490.300s)

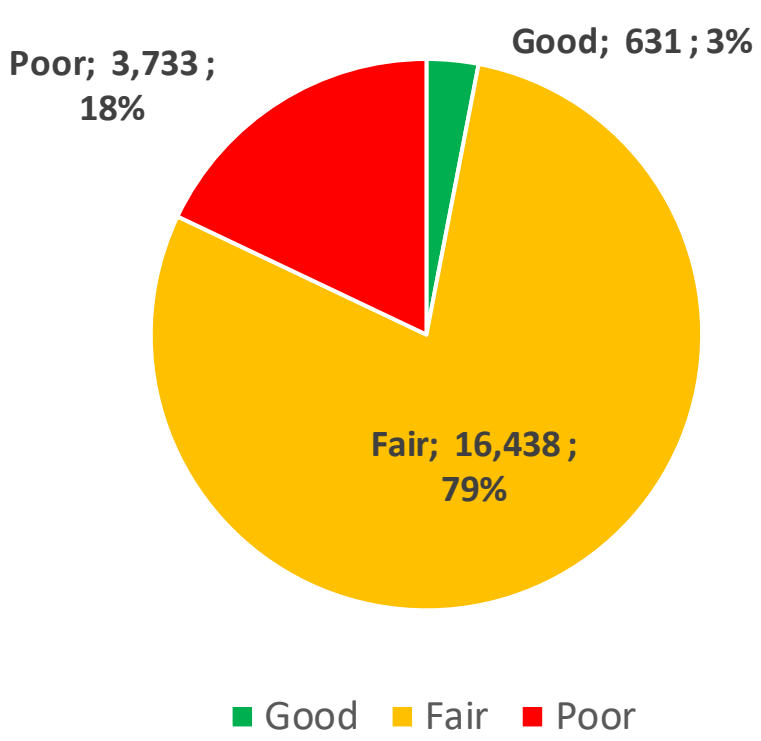
HPMS Field Manual:
https://www.fhwa.dot.gov/policyinformation/hpms.cfm

NHS Pavement Condition Thresholds

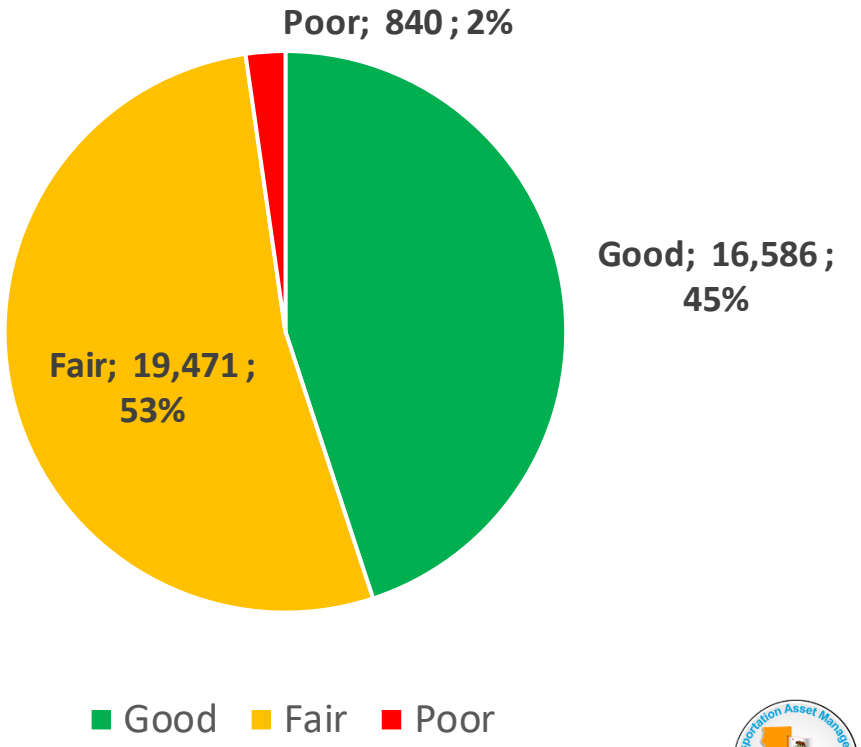
Condition Thresholds			
Metric	**Good**	**Fair**	**Poor**
IRI (inches/mile)	**<95**	**95-170**	**>170**
Cracking (%)			
- Asphalt	<5	5-20	>20
- Jointed Concrete	<5	5-15	>15
- Continuously Reinforced Concrete	<5	5-10	>10
Rutting (inches)	**<0.20**	**0.20-0.40**	**>0.40**
Faulting (inches)	**<0.10**	**0.10-0.15**	**>0.15**

2019 Performance Measures
Local vs State NHS Pavement

Local
Lane Miles (LM) of Pavement
36% of Total NHS



State
Lane Miles (LM) of Pavement
64% of Total NHS



MAP-21/FAST Bridge Performance Measures

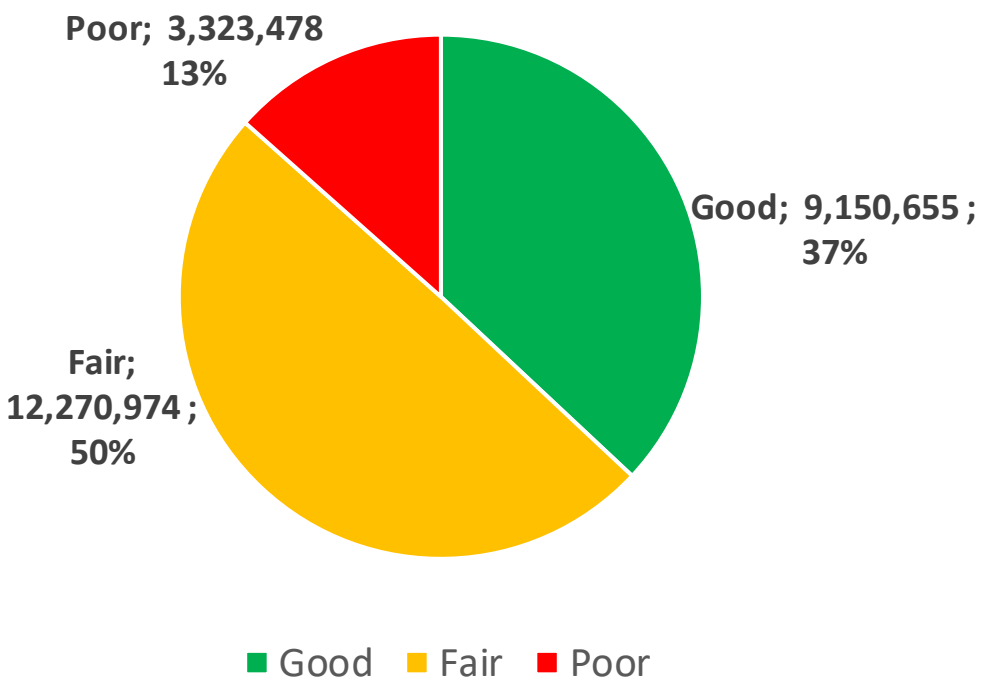
- Good/Fair/Poor measure based on NBI ratings
  - Use minimum of deck, superstructure, and substructure
  - Report conditions and targets for % good and poor for NHS bridges
- Additional goal of ≤10% of the NHS bridge deck area structurally deficient (currently 6.2%)

23 U.S.C. 119(e)(1), MAP-21 § 1106 - Subpart D (490.400s)
NBI Coding Manual: https://www.fhwa.dot.gov/bridge/mtguide.pdf

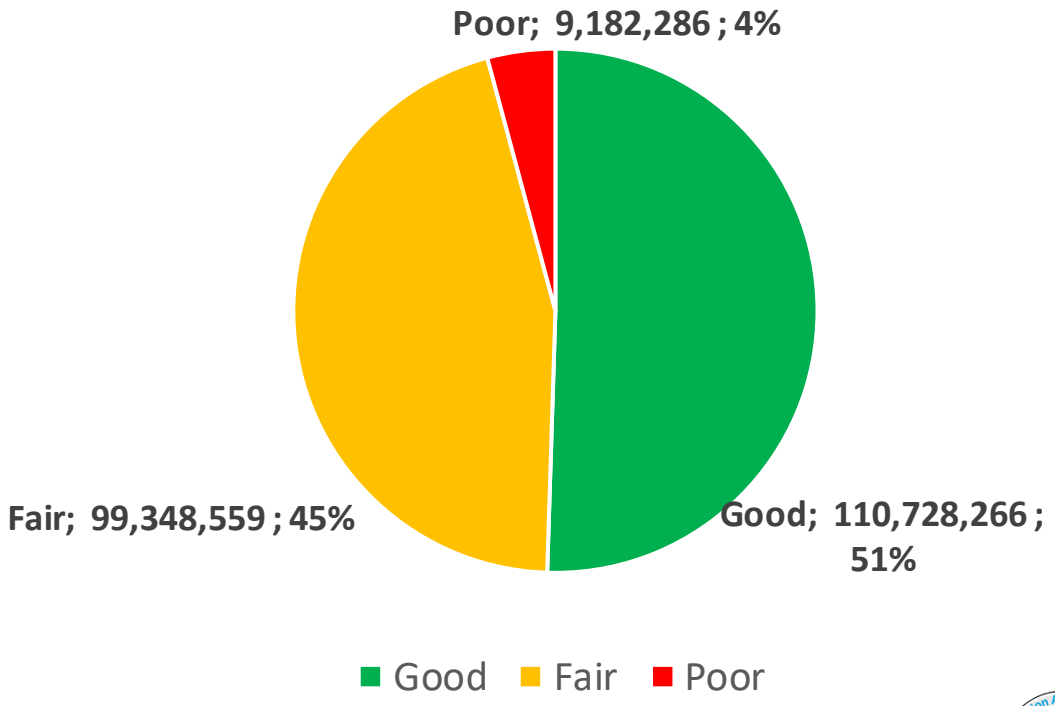
NBI Rating Scale *(from 0 – 9)*		9 8 7 Good	6 5 Fair	4 3 2 1 0 Poor
Bridge	Deck *(Item 58)*	≥7	5 or 6	≤4
	Superstructure *(Item 59)*	≥ 7	5 or 6	≤ 4
	Substructure *(Item 60)*	≥ 7	5 or 6	≤ 4
	Culvert *(Item 62)*	≥ 7	5 or 6	≤ 4

2019 Performance Measures
Local vs State NHS Bridges

Local
NBI Bridge Deck Area (SQFT)
10% of Total NHS



State
NBI Bridge Deck Area (SQFT)
90% of Total NHS



In Summary

- TAMP is required to cover entire NHS
- Must include pavement and bridges
- Must use national condition/performance metrics
- Must set performance targets regardless of owner
- May be extended beyond minimum requirements by the State

Where is the NHS in California

A County Perspective

Yolanda Alcantar, Public Works Manager

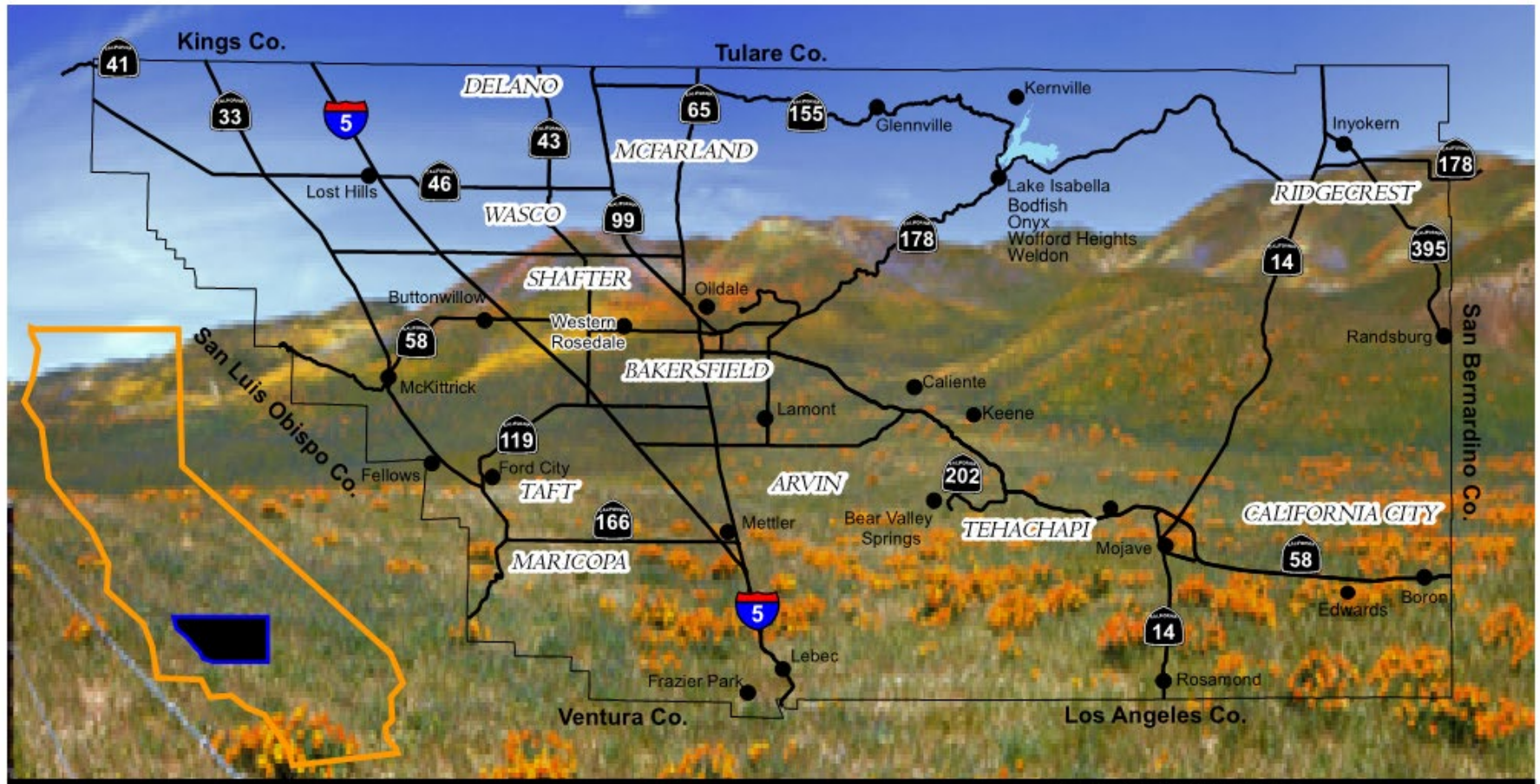
Kern County Public Works Department

Check 1:45

KERN COUNTY
Interactive Webmap
TAMP Status

Yolanda Alcantar,
Public Works Manager

Kern County Public Works
Advanced Planning Division
2700 M Street, Suite 400
Bakersfield, CA 93301
(661) 862-5292



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KERN COUNTY

CALIFORNIA

Kern County Facts:

Kern County Population is 873,000+

2040 projection is 1,444,100

2nd largest county in CA (8,200 square mi.)

11 incorporated cities, 48 Census-designated places

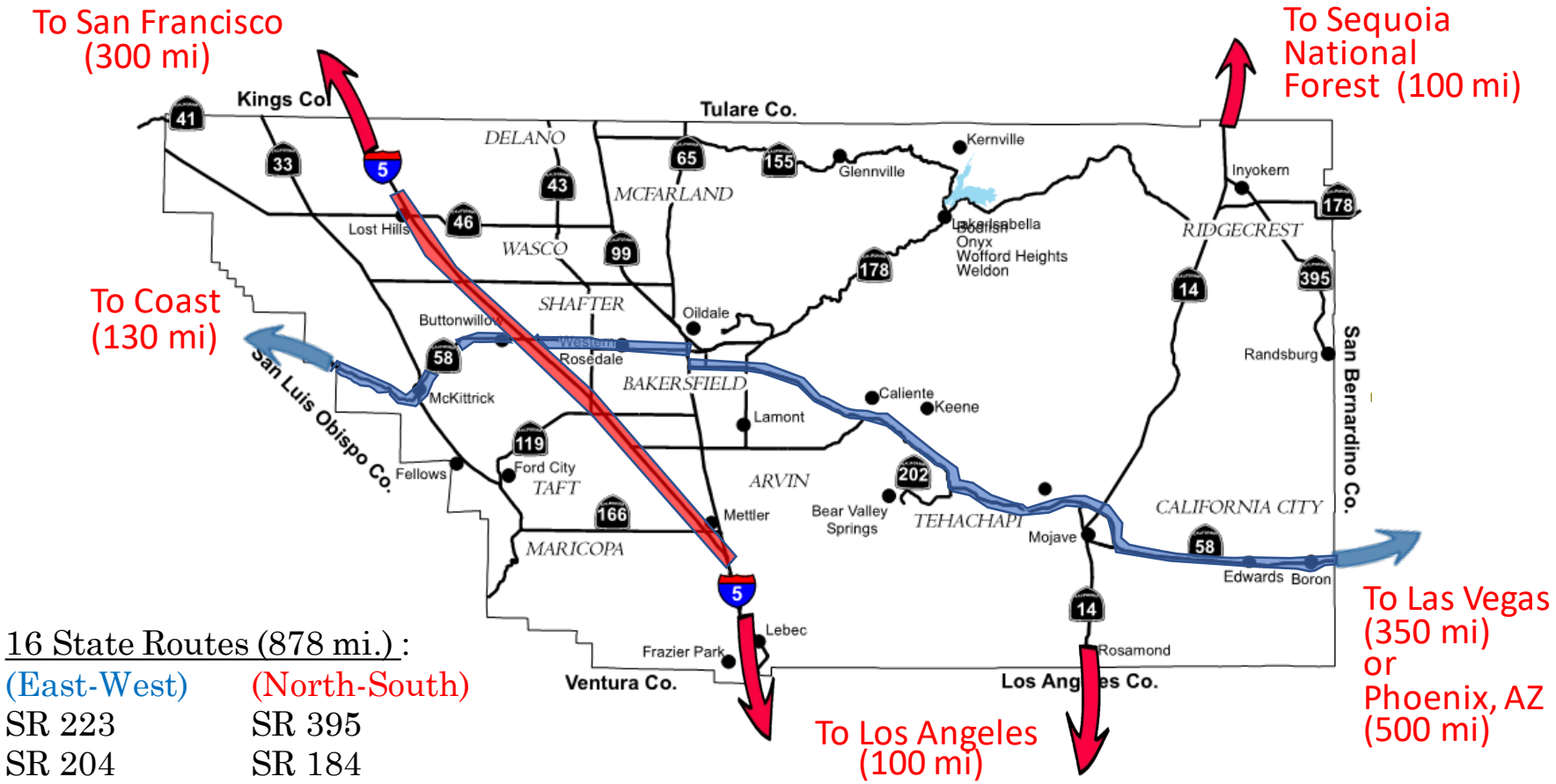
3,300 miles of maintained highways

50.3% Hispanic population

70% residents are overweight

Among top 3 most polluted counties for ozone, $PM^{2.5}$ & PM^{10}

CALTRANS HIGHWAYS



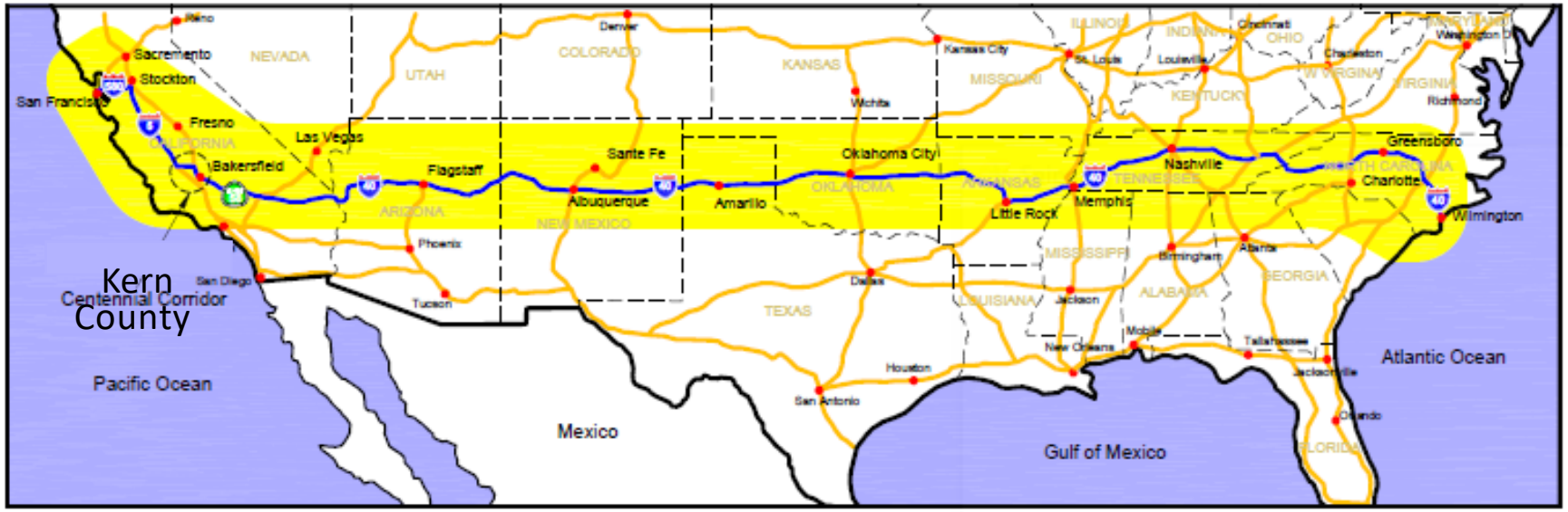
16 State Routes (878 mi.) :

(East-West)	(North-South)
SR 223	SR 395
SR 204	SR 184
SR 202	SR 99
SR 178	SR 65
SR 166	SR 43
SR 155	SR 33
SR 119	SR 14
SR 58	
SR 46	

CALIFORNIA CONNECTIVITY

NATIONAL CONNECTIVITY

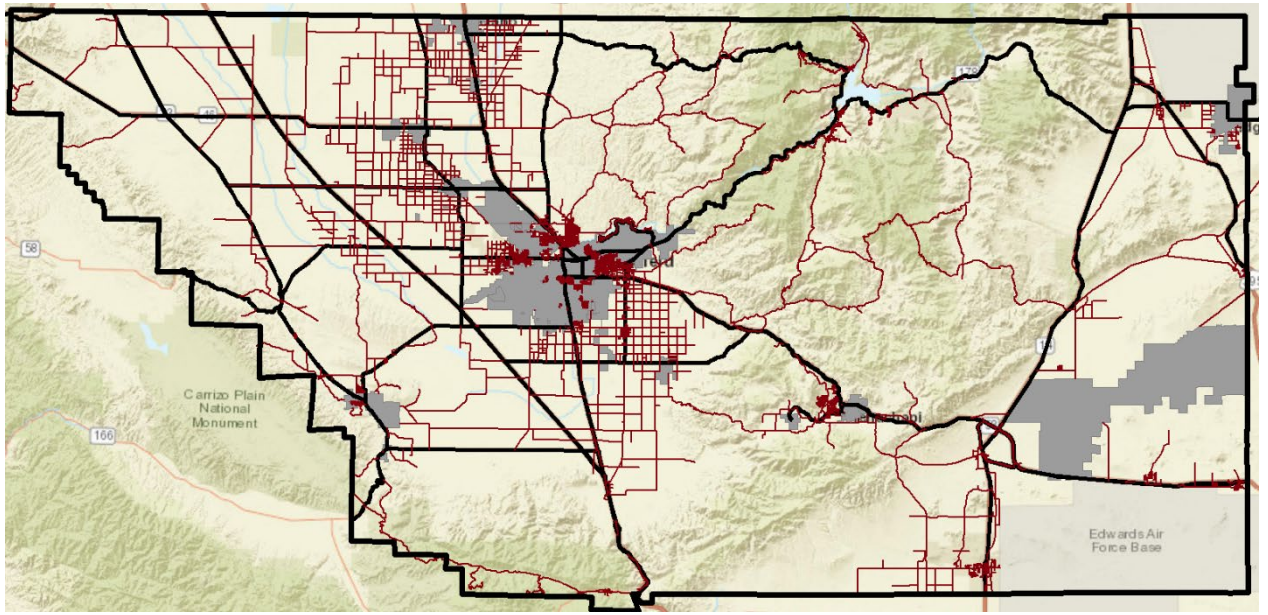
Interstate 40



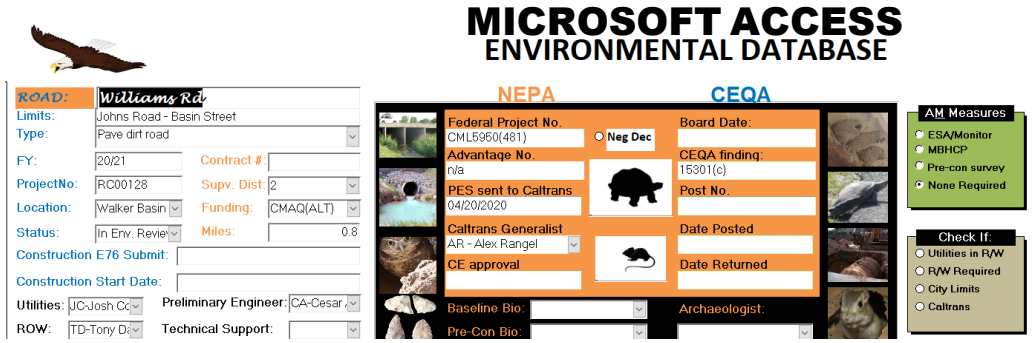
SOUTH - Bakersfield to Port of Los Angles, approx. 140 miles

NORTH - Bakersfield to Port of Oakland, approx. 300 miles

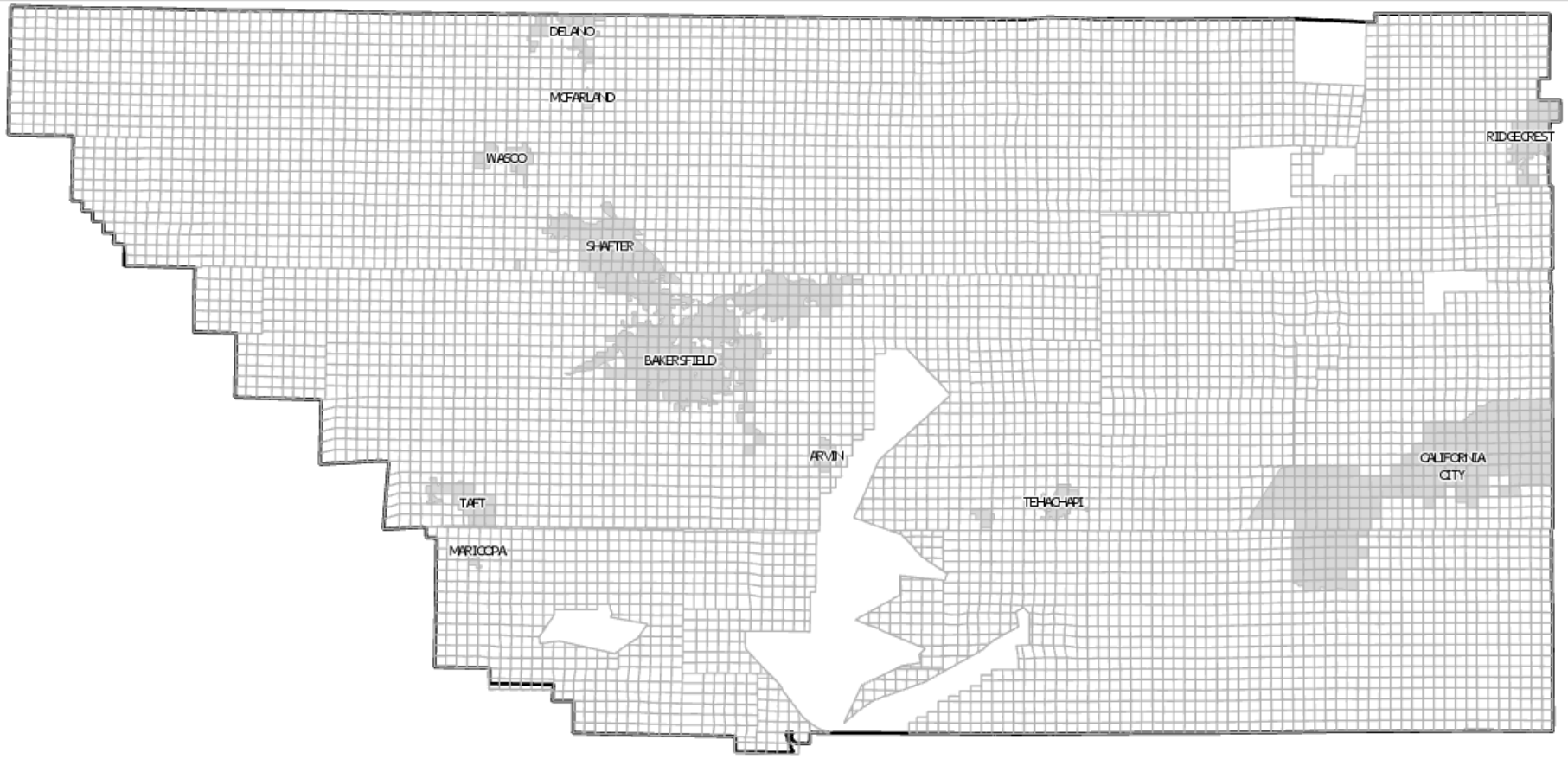
Maintenance Responsibility



- 3,300 Miles of Public Roads
- 144 Bridges
- 143 Traffic Signals
- 41 miles of Class I Bike Paths

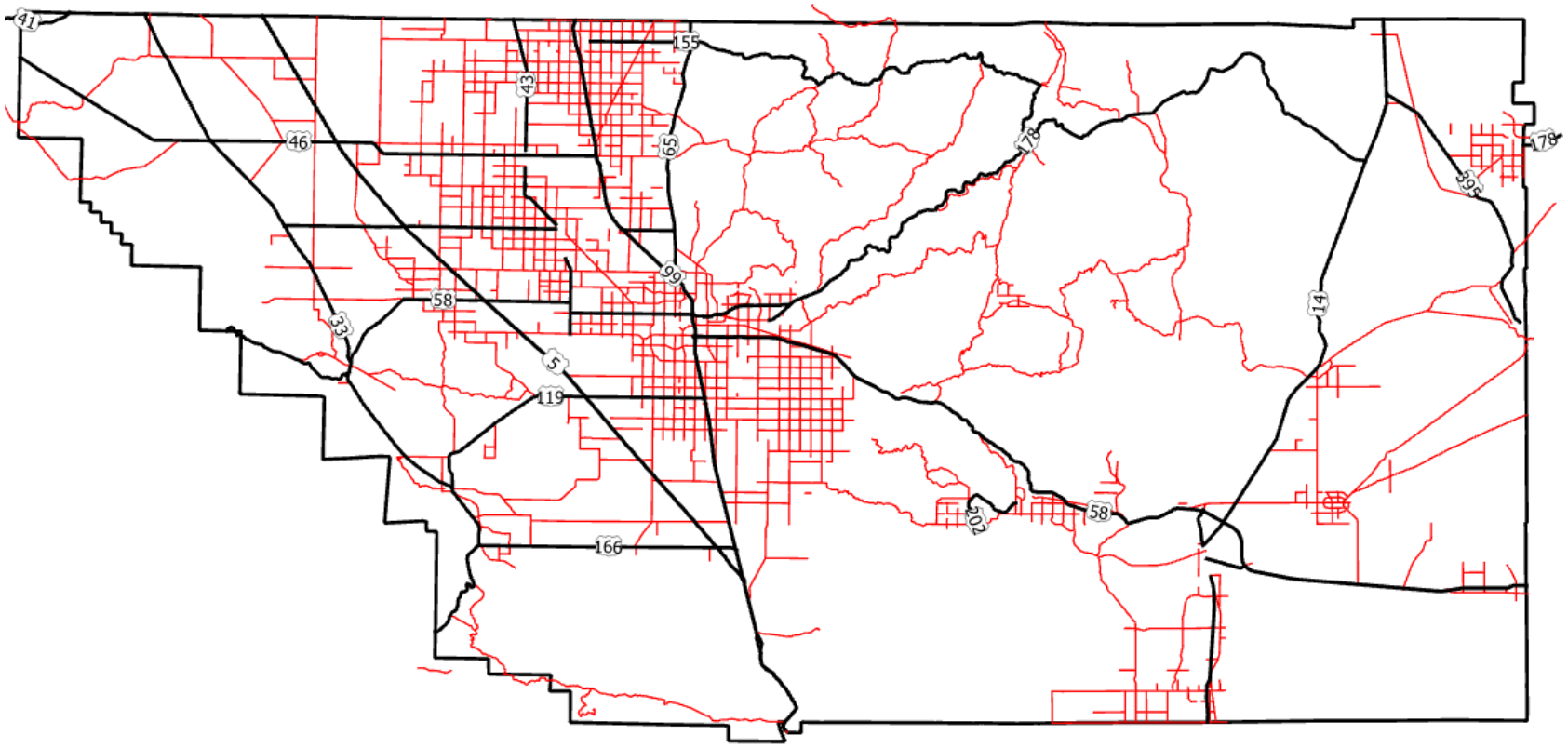


7,800 Sections in Kern County



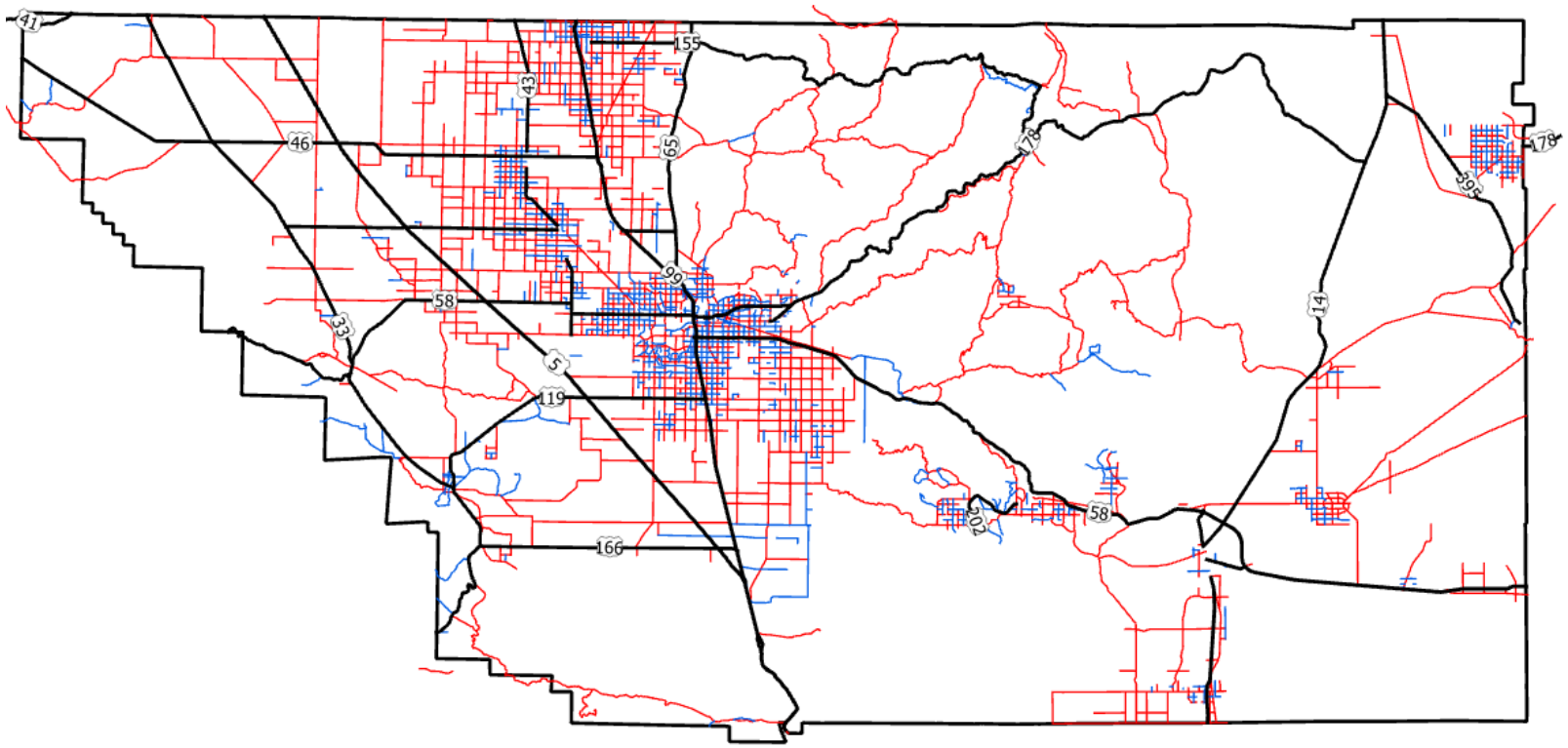
1) Mapping for Environmental Review
2) Needed to know project proximity to:
   - Landfills
   - Water Resources
   - Railroads
   - Hazardous materials
   - Floodplain
   - Farmlands
   - Zoning
   - General Plan Designation
   - Functional classification

COUNTY ROAD NETWORK



Arterial Roads (2,000 miles)

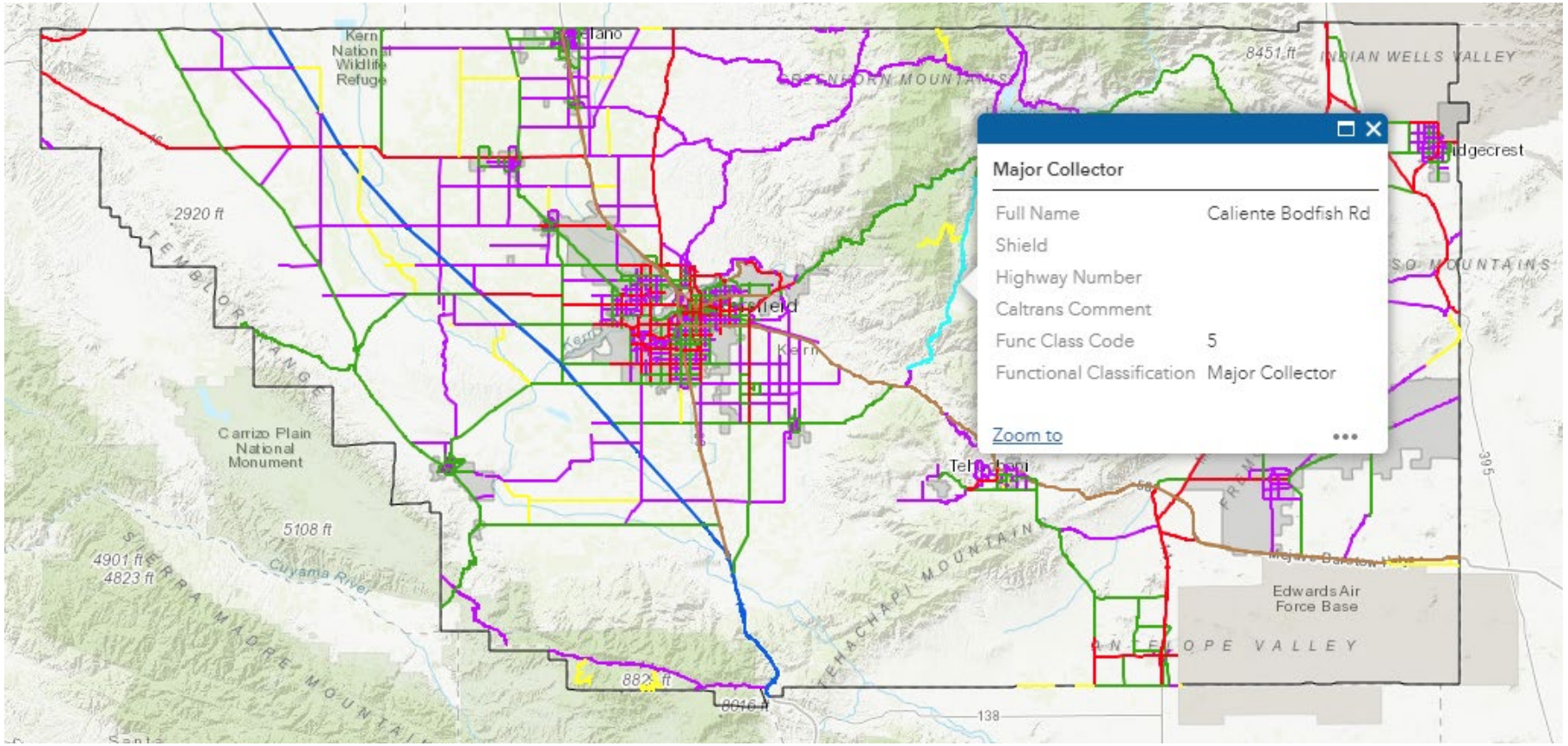
COUNTY ROAD NETWORK



Collector Roads (360 mi)

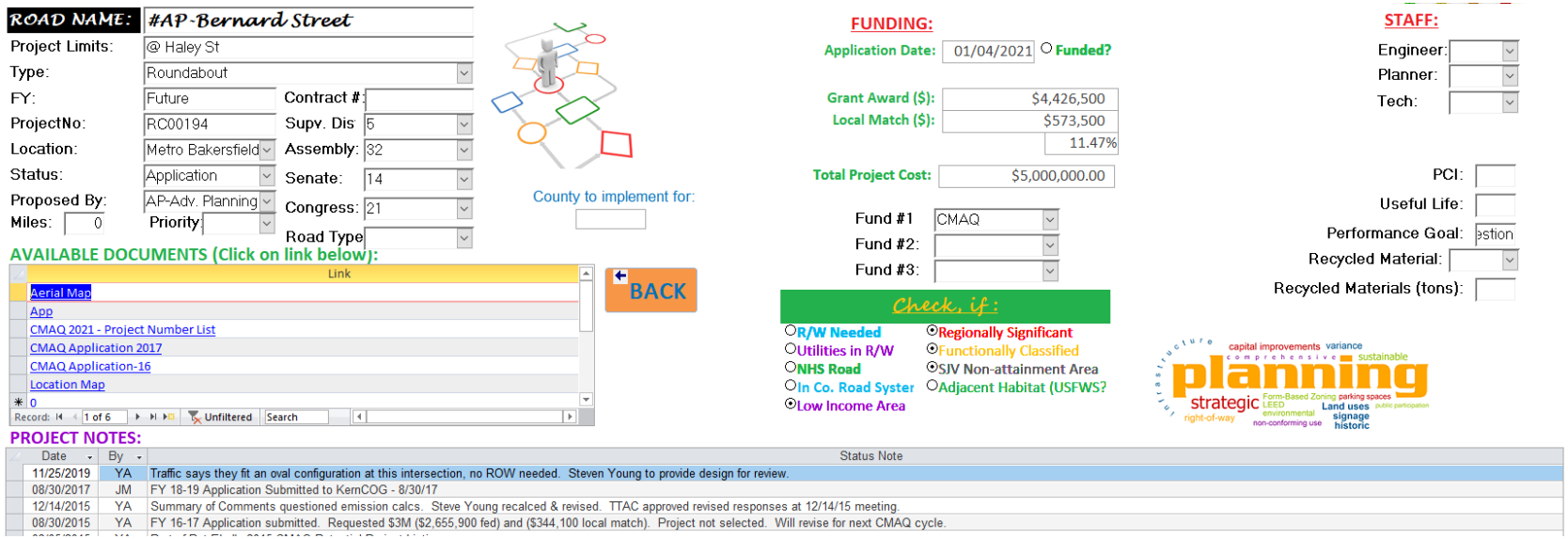
COUNTY ROAD NETWORK

Functional Classification



3,300 centerline miles of public roads

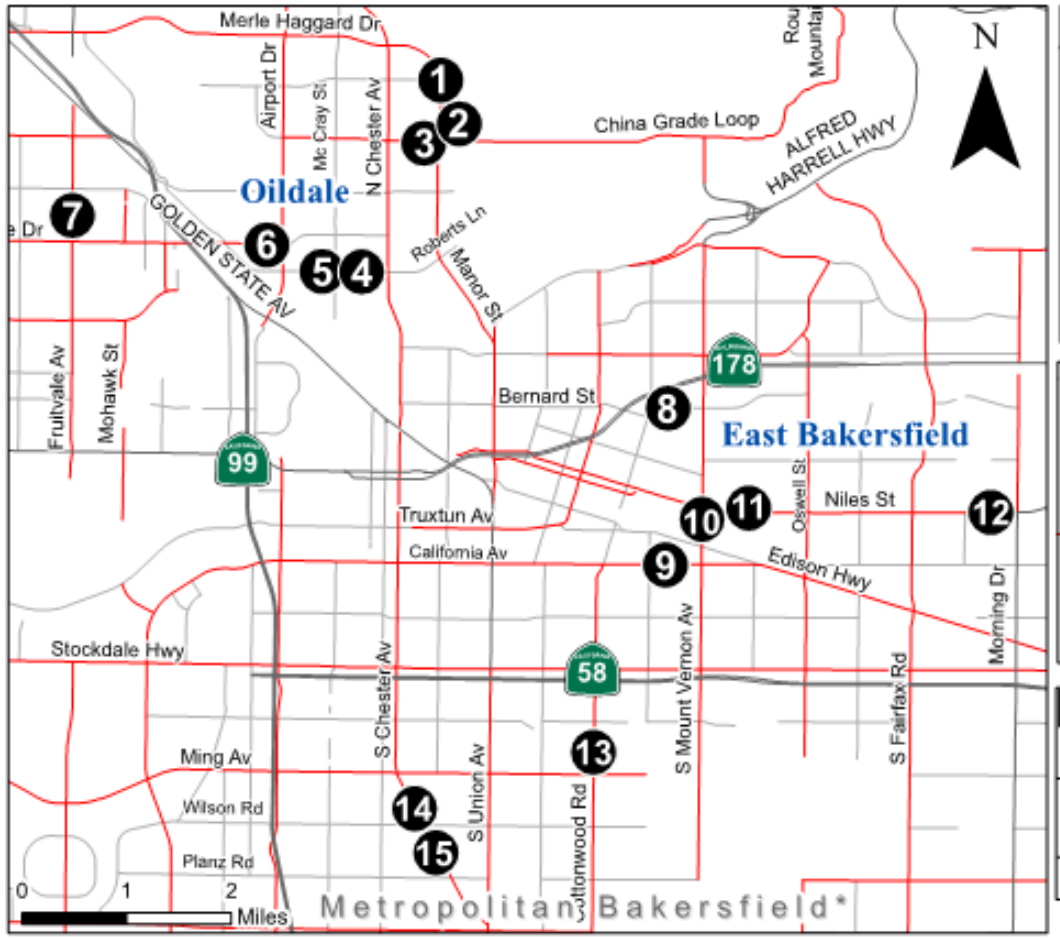
Advanced Planning

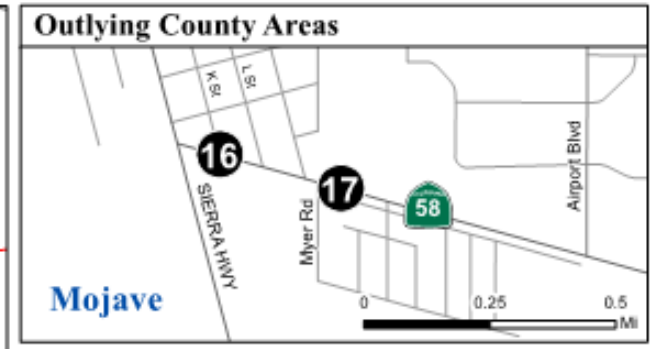


1) Needed to add grant function to my Access database
2) Get an accounting of our assets

COUNTYWIDE COLLISION MAP

Kern County Crosswalk Locations





Total Collisions Countywide

Type	Collisions	Injuries	Fatalities	Arterial Road
Bicyclists	15	14	0	10
Pedestrians	34	29	5	22
Total	**49**	**43**	**5**	**65%**

Oildale (Sheet A)

1. Manor St @ Day Ave
2. Manor St @ Sheridan Ave
3. China Grade Loop @ Barnett St
4. Roberts Ln @ Plymouth Ave
5. Roberts Ln @ Higgins Dr
6. Olive Dr @ Teakwood Dr
7. Fruitvale Ave @ Lucille Ave

East Bakersfield (Sheet B)

8. Bernard St @ Lynn St
9. California Ave @ Bates Ave
10. Mt Vernon Ave @ Monterey St
11. Niles St @ Camino Primavera
12. Niles St @ Park Dr
13. Cottonwood Rd @ Cheatham Ave
14. S Chester Ave @ S M St
15. S Chester Ave @ Dorian Dr

Mojave (Sheet C)

16. Business 58 @ K Street
17. Business 58 @ Myer Street

Rosamond (Sheet C)

18. Rosamond Blvd @ Eagle Way

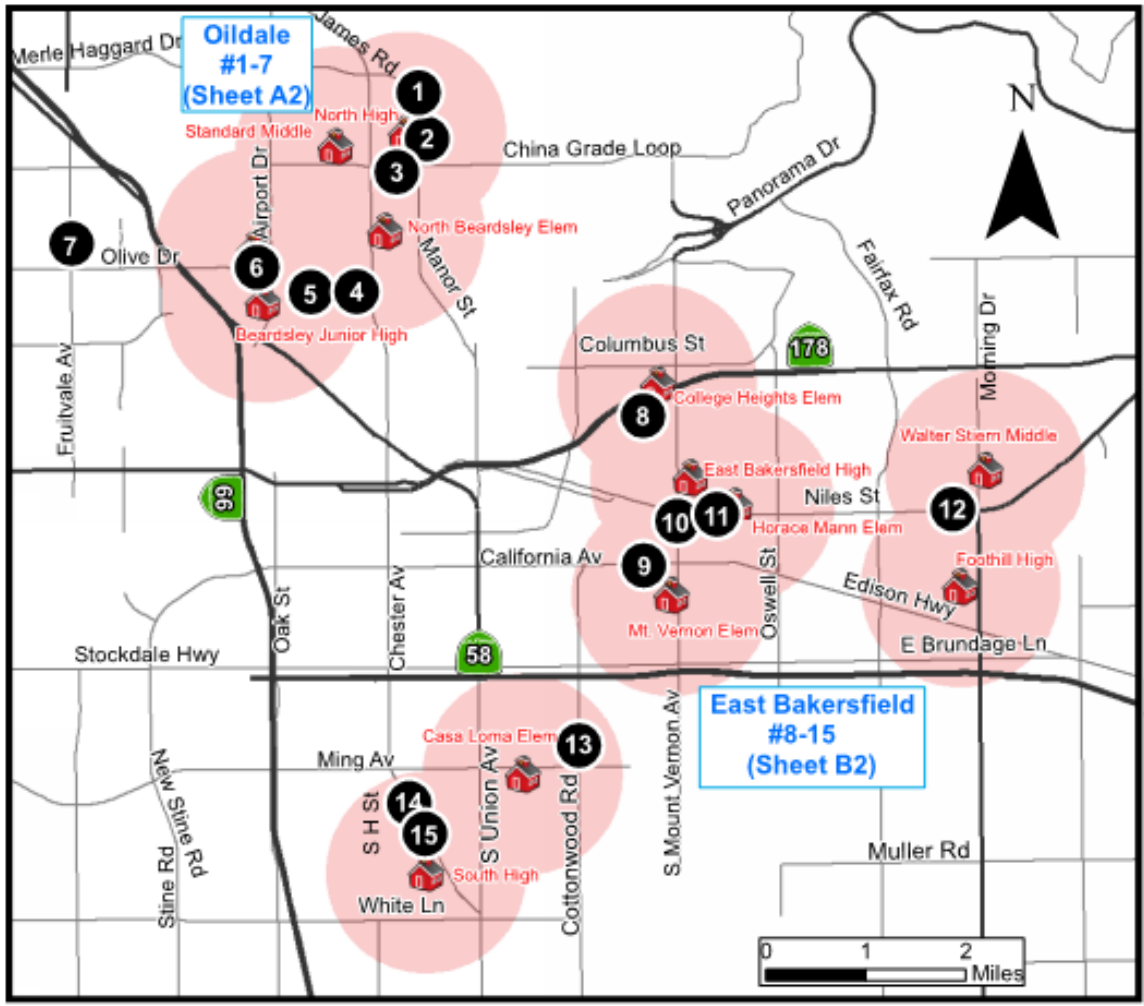
Crosswalk

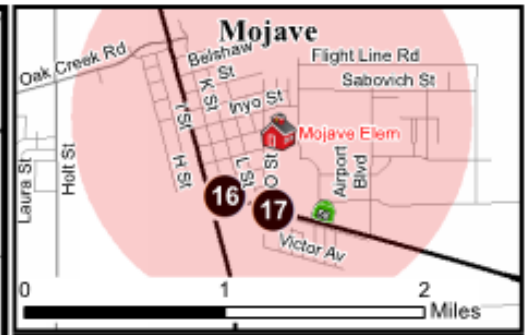
Arterial

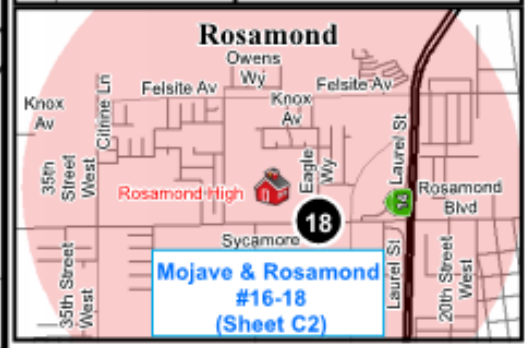
Collector

Identification of Disadvantaged Communities

Kern County - Safe Route to Schools







#	LOCATION	QUALIFICATION
1	Manor St & Day Ave	DAC - 76.87
2	Manor St & Sheridan Ave	DAC - 76.87
3	China Grade Loop & Barnett St	FRPM - (82%)
4	Roberts Ln & Plymouth Ave	DAC - 57.94
5	Roberts Ln & Higgins Dr	DAC - 57.94
6	Olive Dr & Teakwood Dr	DAC - 47.07
7	Fruitvale Ave & Lucille Ave	DAC - 42.08
8	Bernard St & Lynn St	FRPM - (97%)
9	California Ave & Bates Ave	FRPM - (96%)
10	Mt Vernon Ave & Monterey St	FRPM - (99%)
11	Niles St & Camino Primavera	FRPM - (97%)
12	Niles St & Park Dr	FRPM - (90%)
13	Cottonwood Rd & Cheatham Ave	FRPM - (96%)
14	S Chester Ave & S M St	FRPM - (95%)
15	S Chester Ave & Dorian Dr	FRPM - (95%)
16	Business 58 & K St	FRPM - (93%)
17	Business 58 & Myer Rd	FRPM - (93%)
18	Rosamond Blvd & Eagle Way	FRPM - (78%)

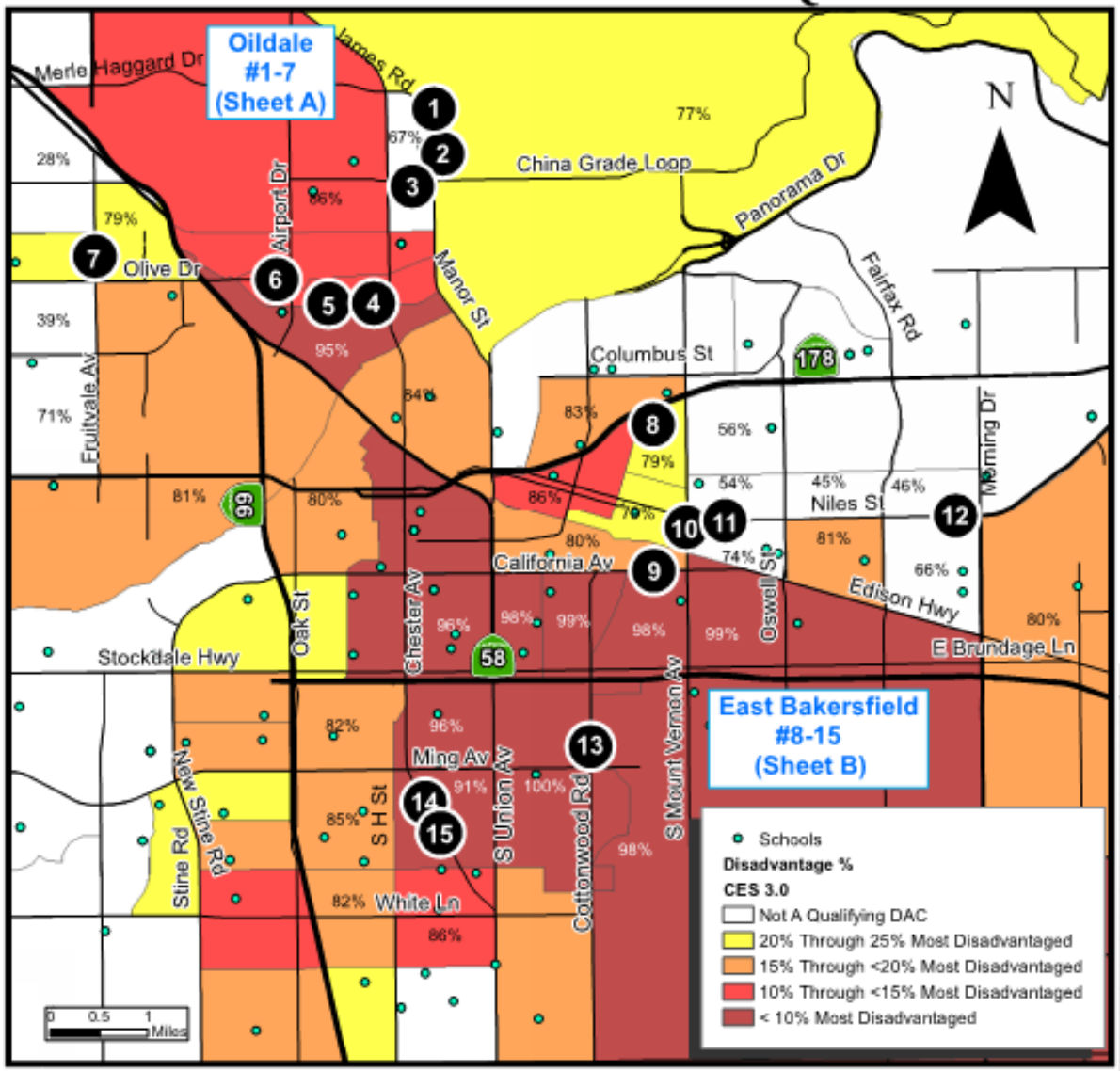
Uncontrolled Multi-Lane Crosswalk

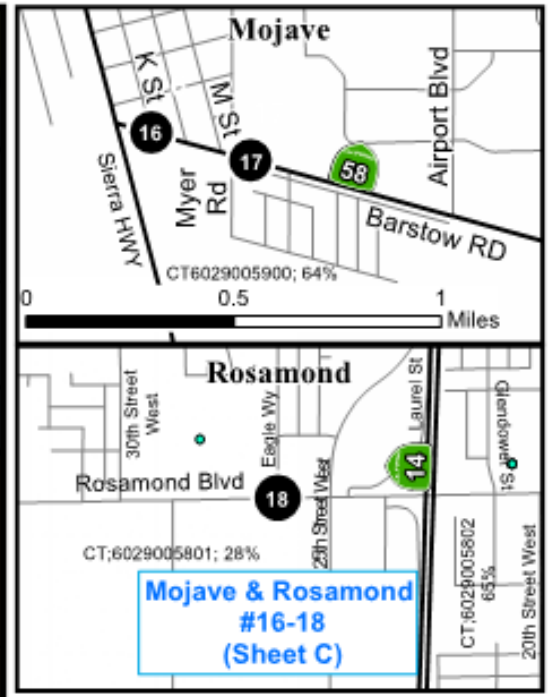
Schools

1 Mile School Radius

FRPM - Free or Reduced-Priced Meals

Kern County Disadvantaged Communities
100% Qualification





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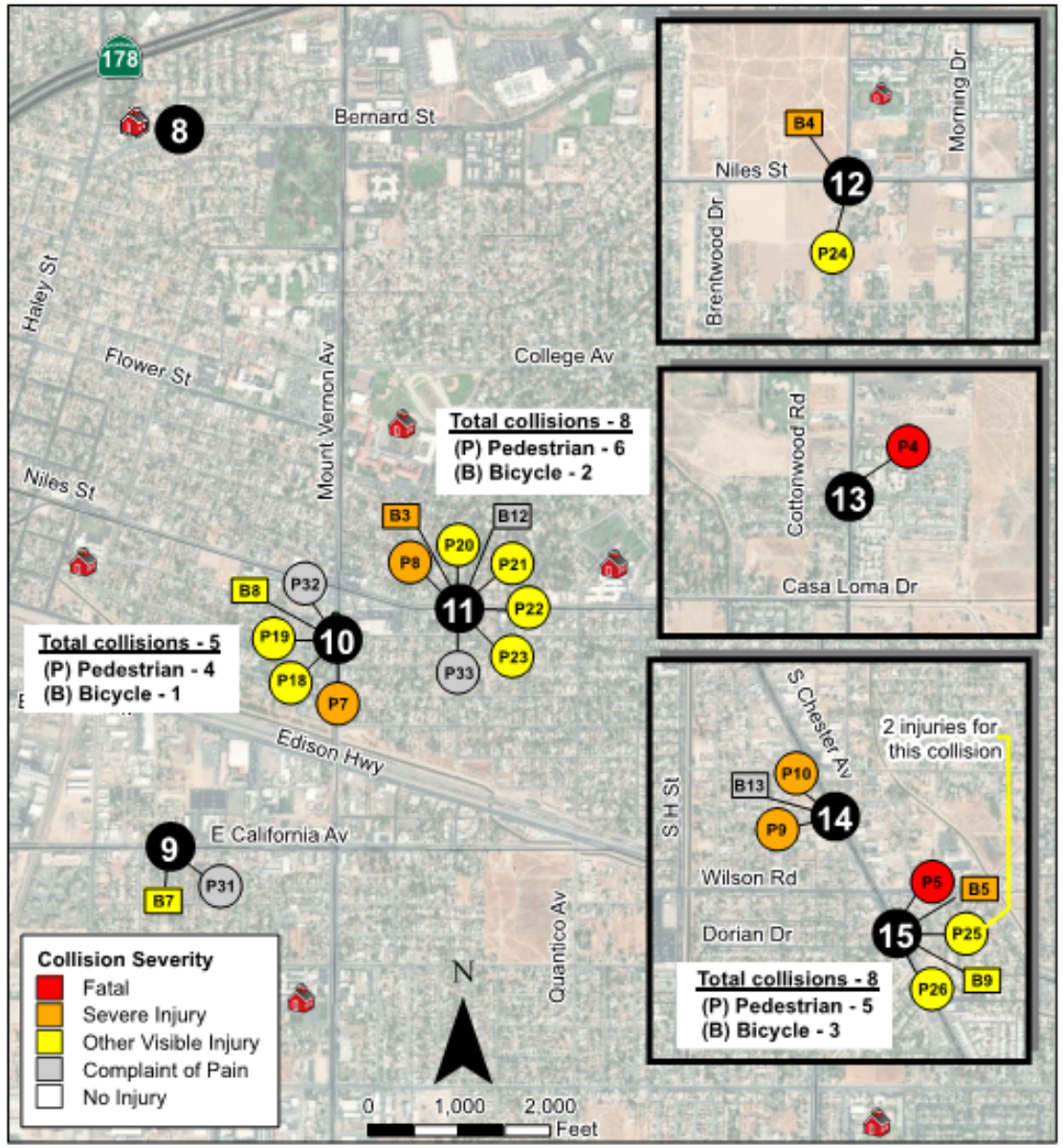
Uncontrolled Multi-Lane Crosswalk

Schools

FRPM - Free or Reduced-Priced Meals

East Bakersfield Collisions



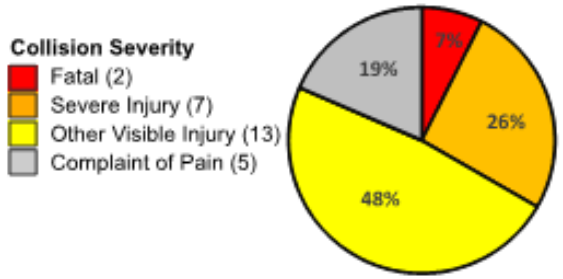
CROSSWALK LOCATIONS

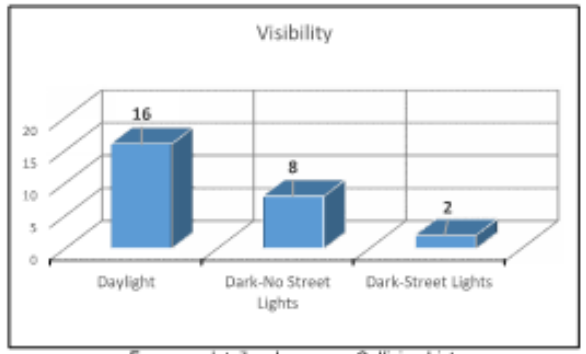
8. Bernard St & Lynn St
9. California Ave & Bates Ave
10. Mt Vernon Ave & Monterey St
11. Niles St & Camino Primavera
12. Niles St & Park Dr
13. Cottonwood Rd & Cheatham Ave
14. S Chester Ave & S M St
15. S Chester Ave & Dorian Dr

Influence Area (250 ft)

Total Collisions = 26

(P) Pedestrian = 18 Collisions
(B) Bicycle = 8 Collisions

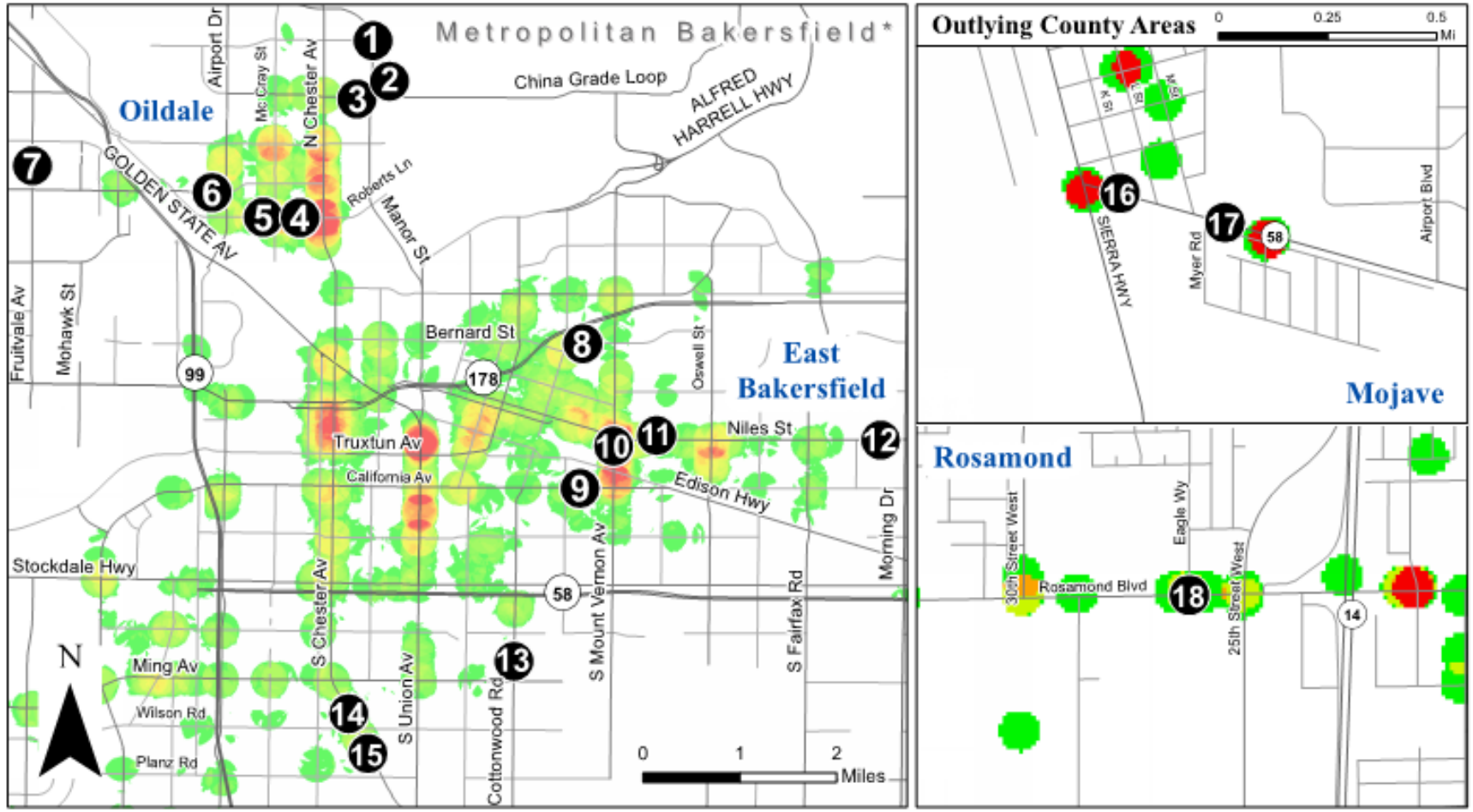




For more details, please see Collision List.

Question 3(A)(1)(a)

Pedestrian & Bicyclist Collision Heat Map



Less Dense

More Dense

Note: Heat map is based off of collision density

Oildale

1. Manor St @ Day Ave
2. Manor St @ Sheridan Ave
3. China Grade Loop @ Barnett St
4. Roberts Ln @ Plymouth Ave
5. Roberts Ln @ Higgins Dr
6. Olive Dr @ Teakwood Dr
7. Fruitvale Ave @ Lucille Ave

East Bakersfield

8. Bernard St @ Lynn St
9. California Ave @ Bates Ave
10. Mt Vernon Ave @ Monterey St
11. Niles St @ Camino Primavera
12. Niles St @ Park Dr
13. Cottonwood Rd @ Cheatham Ave
14. S Chester Ave @ S M St
15. S Chester Ave @ Dorian Dr

Mojave

16. Business 58 @ K Street
17. Business 58 @ Myer Street

Rosamond

18. Rosamond Blvd @ Eagle Way

Transportation Injury Mapping System (TIMS),
Safe Transportation Research and Education Center,
University of California, Berkeley. 2018

Advanced Planning

What else should we map?

LAMONT/ARVIN CONSTRUCTION PROJECTS

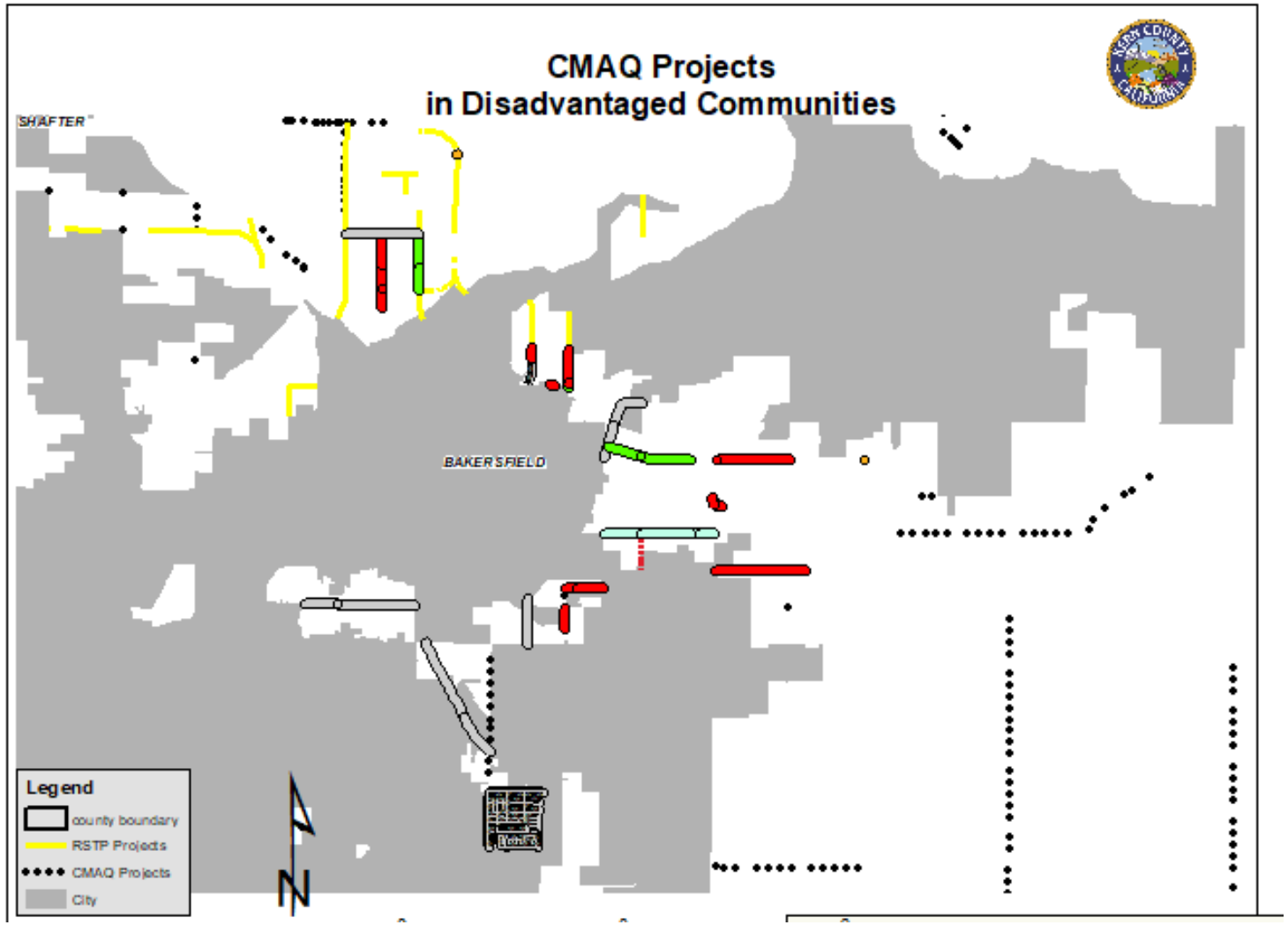
ROAD PROJECTS:

FY	RoadName	Limits	Project Type	Funding	Status	Cost
07/08	Various (Lamont)	Myrtle Ave (Phase I)	Pedestrian path	SR2S	Complete	$150,000
08/09	Comanche Rd	Edison Hwy - SR 58	Pave shoulder	CMAQ	Complete	$700,000
08/09	Various (Lamont)	Lamont (II)	Pedestrian path	TEA	Complete	$240,000
08/09	Wheeler Ridge Rd	Laval - David	Pave shoulder	CMAQ	Complete	$1,092,757
09/10	Wheeler Ridge Rd	David - SR 223	Pave shoulder	CMAQ	Complete	$1,350,000
09/10	Wheeler Ridge Rd	Herring - SR 223	Overlay	RSTP	Complete	$700,000
11/12	SR 184 Ped Path	Wharton - Mt View	Pedestrian path	TDA	Complete	$175,000
12/13	Various (Lamont)	Habecker/Hall	Pedestrian path	SR2S	Complete	$396,800
14/15	SR 184 Ped Path	DiGiorgio - Panama	Pedestrian path	TDA	Complete	$180,000
15/16	Buena Vista	Union - Sr 184	Pave shoulder	CMAQ	Complete	$1,250,000
15/16	Sycamore Rd	Vineland - Comanche	Pave shoulder	CMAQ	CMAQ	$589,826
16/17	Various (Lamont)	SR 184/Panama/ Habecker /DiGiorgio	Pedestrian path	ATP	In Design	$1,980,000
16/17	Edison Rd	SR 223 - SR 58	Pave shoulder	CMAQ	In Const.	$2,000,000
17/18	DiGiorgio Rd	SR 184 - Tejon Hwy	Overlay	RSTP	In Design	$1,200,000
18/19	Comanche	SR 184 - Tejon Hwy	Reconstruction	RSTP	In Design	$1,277,200
						$10,804,383

COMMUNITY DEVELOPMENT BLOCK GRANT PROJECTS:

33 Street and Drainage Improvements implemented by County Departments (summarized below) = $8,846,206

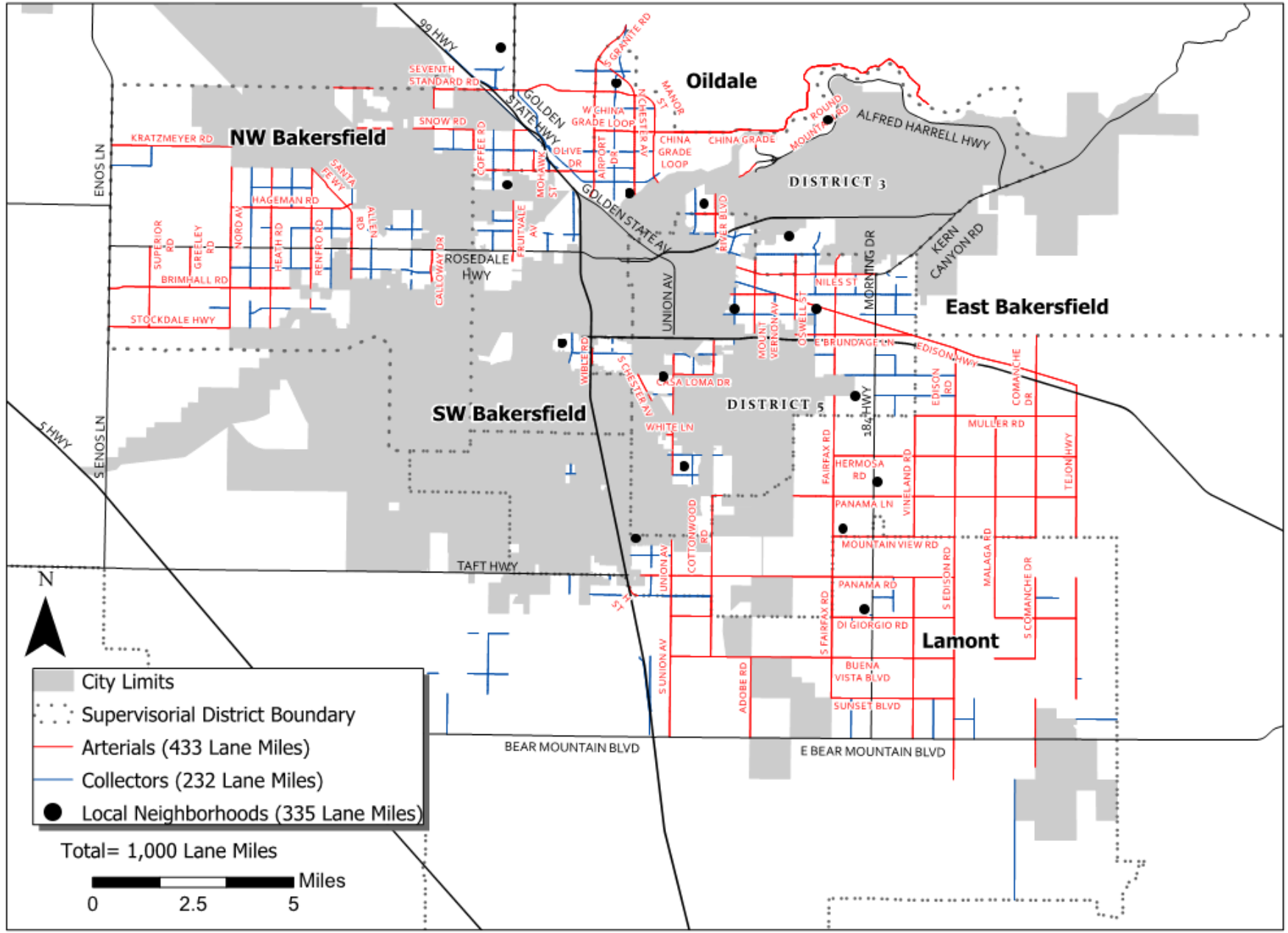
TOTAL INVESTMENT: $19,650,589



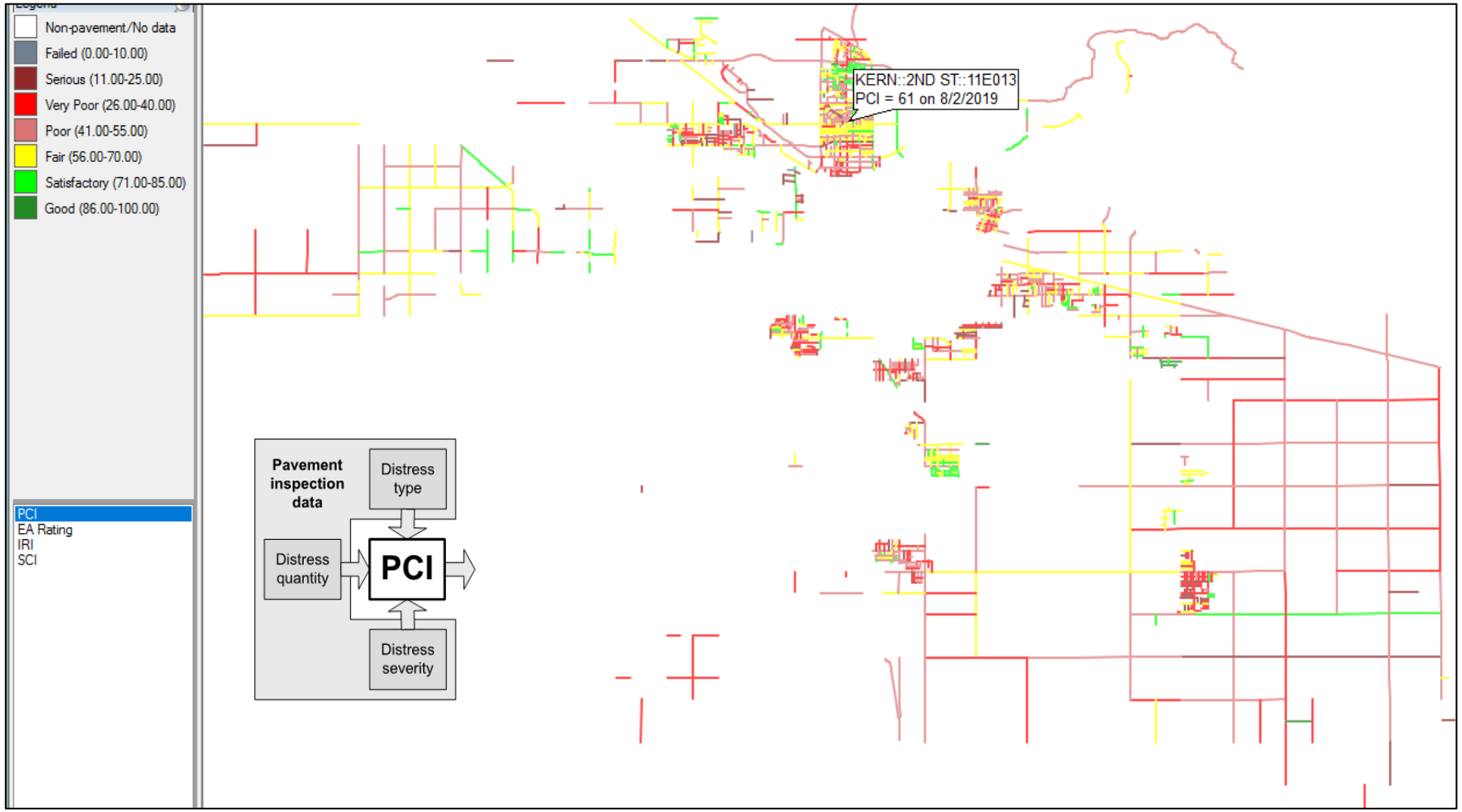
89 Emission Reduction Projects		
8 miles of interconnects		$1,590,200
22 miles of dirt roads	$	16,963,950
17 traffic signals	$	7,622,456
186 miles of dirt shoulders	$	47,401,451
	$	73,578,057

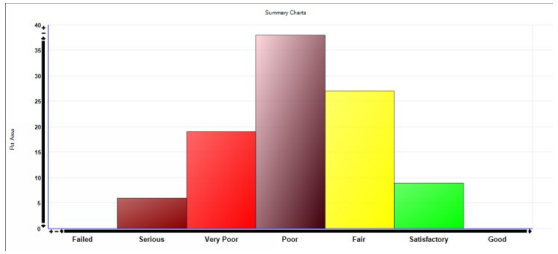
What does this have to do with the TAMP?

Road Rating Location Map - July 2019



Road Ratings



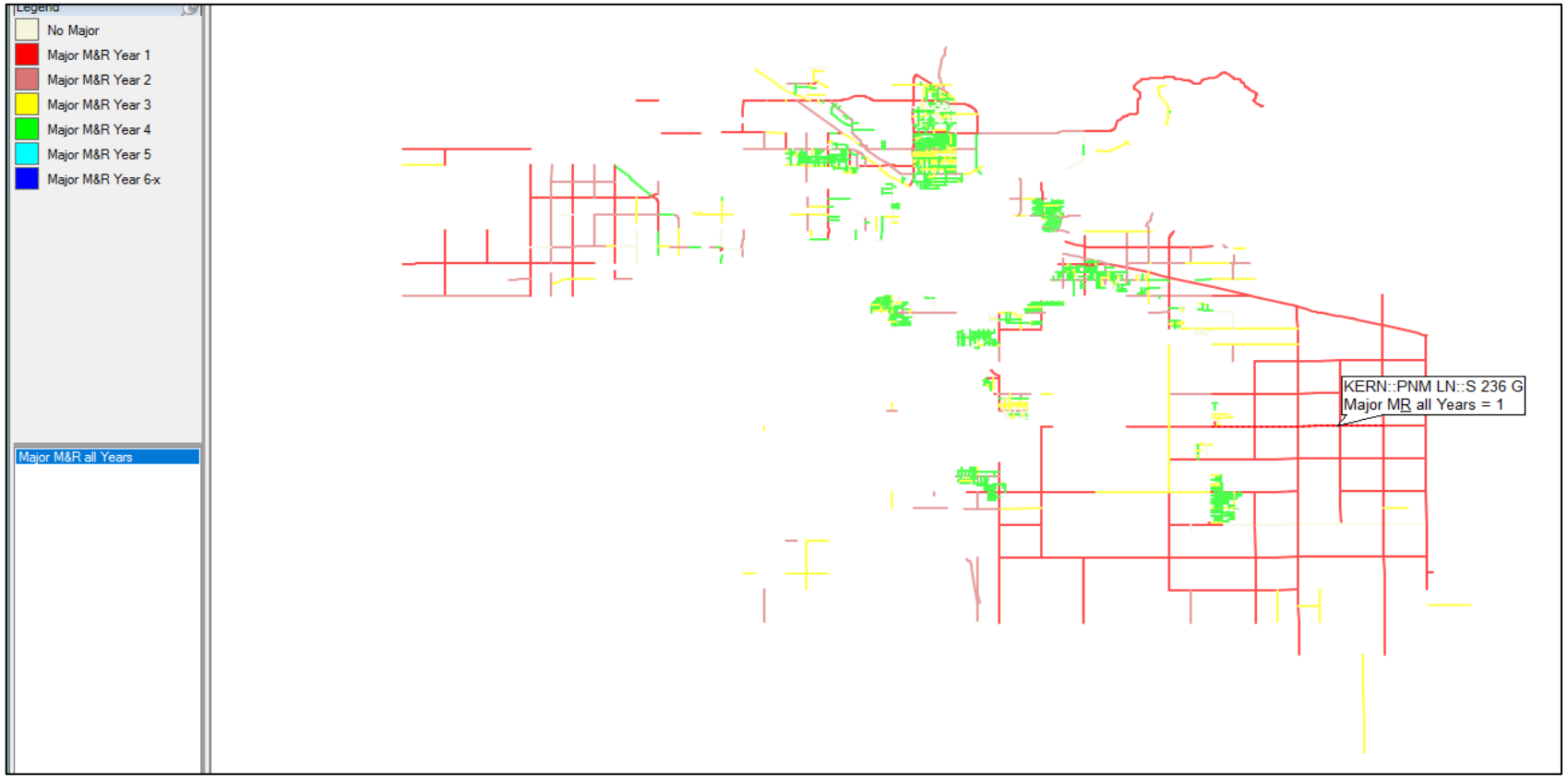


Average County Road Condition = Poor

Average PASER Ratings = 5.1

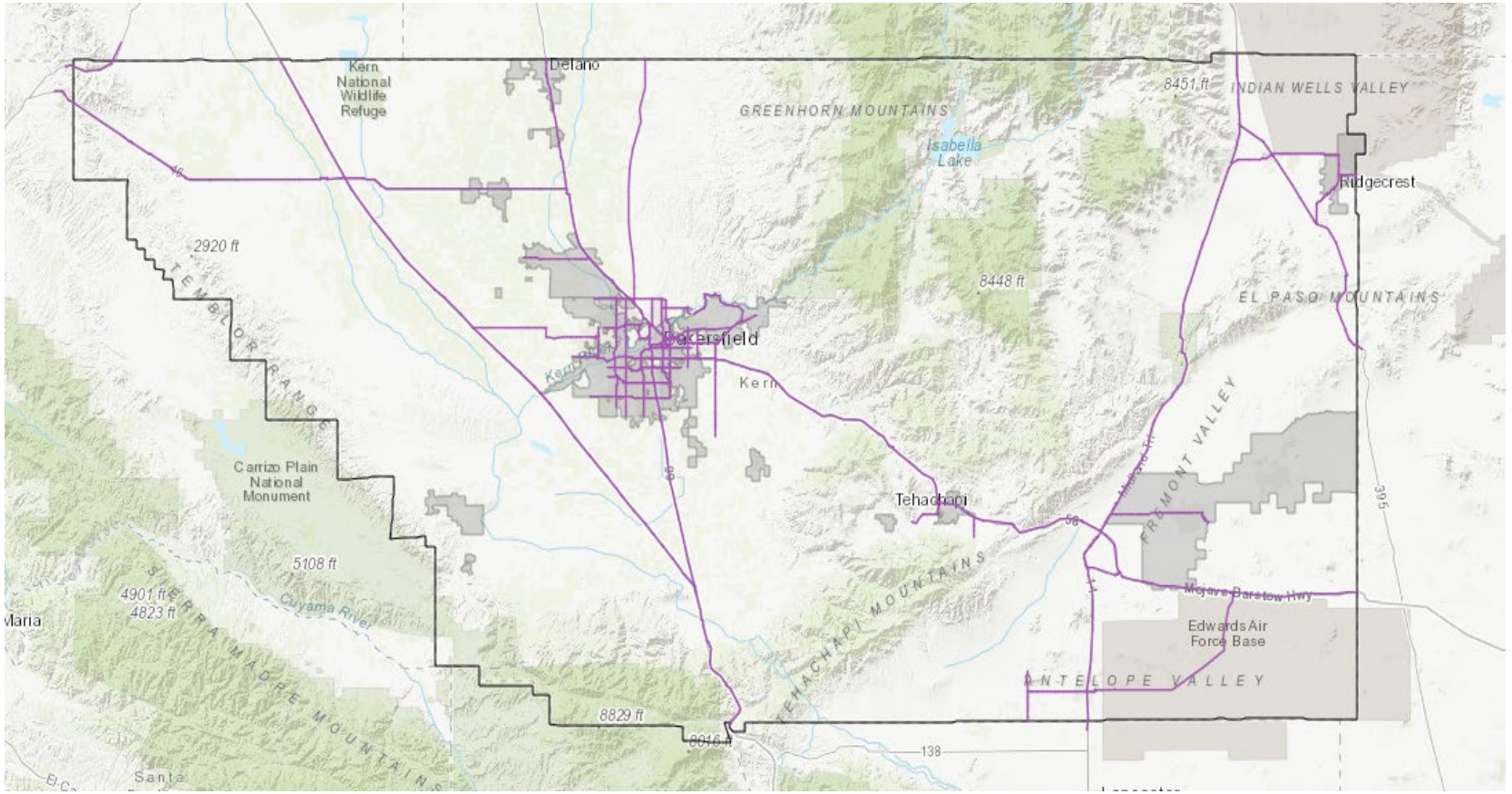
PAVER Recommended 5-Year Budget

(Approx. $55M/Year, assuming unlimited funds)



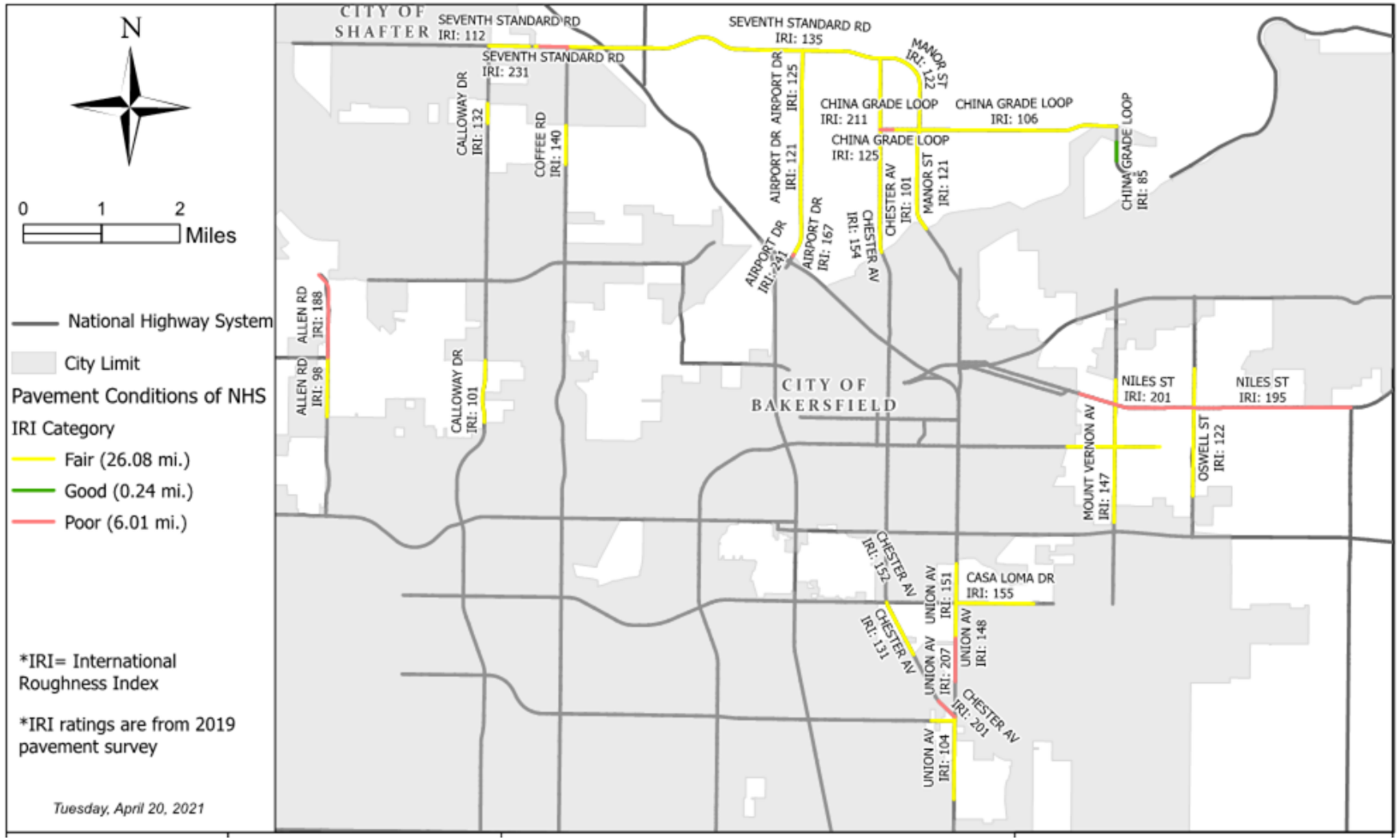
Type of work	Cost/Mile	Cost/SqFt
Full Reconstruction =$1,000,000/mile	$ 1,000,000.00	$ 6.31
Overlay = $250,000/mile	$ 250,000.00	$ 1.58
Slurry = $80,000/mile	$ 80,000.00	$ 0.51
Chip seal = $50,000/mile (for rural roads)	$ 50,000.00	$ 0.32
Fog seal = $30,000/mile (for preservation)	$ 30,000.00	$ 0.19
Crack Seal = $35,000/mile	$ 35,000.00	$ 0.22

National Highway System Roads



181 miles of NHS roads

National Highway System Roads (by IRI)



Fair - 81%
Good – 1%
Poor – 18%

IRI Summary

CLASS	Road Number	Road Name	From	To	Lanes	Length (ft.)	Length (mi.)	Width (ft.)	IRI	IRI Category
A	11E026	AIRPORT DR	NADINE LN	OLIVE DR	4	3280.8	0.62	32	166.7	Fair
A	S 216 F	CALIFORNIA AV	START	EDISON HWY	4	6243.05	1.18	64	133.4	Fair
A	S 224 F	CASA LOMA DR	UNION AV	COTTONWOOD RD	4	5230.12	0.99	60	155.1	Fair
A	S 230 F	WHITE LN	KENNY ST	UNION AV	4	1590.16	0.3	60	163.6	Fair
A	S 375 X	MOUNT VERNON AV	START	FLOWER ST	4	9578.83	1.81	48	147.1	Fair
A	S 379 X	OSWELL ST	ALLOWAY LN	COLLEGE AV	4	8567.22	1.62	48	122.2	Fair
A	S 196 E	SEVENTH STANDARD RD	CALLOWAY DR	RAYMOND ST	4	2734.09	0.52	54	112.4	Fair
A	S 196 F	SEVENTH STANDARD RD	COFFEE RD	CHESTER AV	4	21418.97	4.06	70	135	Fair
A	S 196 F	SEVENTH STANDARD RD	START	PADRON CT	4	329.42	0.06	54	130.7	Fair
A	S 200 F	CHINA GRADE LOOP	MANOR ST	CHINA GRADE LOOP	2	13337.48	2.53	40	105.9	Fair
A	S 200 F	CHINA GRADE LOOP	BARNETT ST	MANOR ST	4	798.48	0.15	70	139.4	Fair
A	S 200 F	CHINA GRADE LOOP	WATSON ST	BARNETT ST	4	320	0.06	70	129.9	Fair
A	S 200 F	CHINA GRADE LOOP	BEDFORD WAY	CHARLESTON DR	4	642.22	0.12	70	124.5	Fair
A	S 335 X	ALLEN RD	START	ROSEDALE HWY	6	3995.41	0.76	70	97.7	Fair
A	S 343 X	CALLOWAY DR	START	ROSEDALE HWY	4	4178.87	0.79	50	100.8	Fair
A	S 343 X	CALLOWAY DR	SNOW RD	END	2	1334.68	0.25	22	131.6	Fair
A	S 347 X	COFFEE RD	NORRIS RD	SNOW RD	2	2616.09	0.5	25	139.9	Fair
A	S 359 Y	AIRPORT DR	OLIVE DR	CHINA GRADE LOOP	4	5402.31	1.02	65	121	Fair
A	S 359 Y	AIRPORT DR	CHINA GRADE LOOP	SEVENTH STANDARD RD	2	5119.54	0.97	32	124.6	Fair
A	S 363 AX	CHESTER AV	WILSON RD	END	2	951.4	0.18	46	130.7	Fair
A	S 363 AX	CHESTER AV	WILSON RD	MING AVE	2	2931.85	0.56	46	152.1	Fair
A	S 363 AX	CHESTER AV	START	MC CORD AV	4	974.95	0.18	46	154.2	Fair
A	S 363 AX	CHESTER AV	MC CORD AV	MANOR ST	4	12069.3	2.29	46	101.3	Fair
A	S 365 X	MANOR ST	START	CHINA GRADE LOOP	4	6850.24	1.3	60	121	Fair
A	S 365 X	MANOR ST	CHINA GRADE LOOP	SEVENTH STANDARD RD	4	6679.31	1.27	52	121.7	Fair
A	S 367 V	UNION AV	FAIRVIEW RD	CHESTER AV	4	5553.35	1.05	44	103.9	Fair
A	S 367 V	UNION AV	ETHRUM AV	OLD YARD DR	4	71.08	0.01	44	148.1	Fair
A	S 367 X	UNION AV	OLD YARD RD	BELLE TERRACE TER	4	4921.6	0.93	44	150.7	Fair
						137,720.82(ft.)	**26.08 (mi.)**			
A	12E185	CHINA GRADE LOOP	N CHESTER AVE	BEDFORD WAY	4	867.61	0.16	70	210.5	Poor
A	S 196 E	SEVENTH STANDARD RD	PADRON CT	COFFEE RD	4	1841.6	0.35	54	230.7	Poor
A	S 214 F	NILES ST	DESCANSO ST	MORNING DR	4	11900.19	2.25	64	195.3	Poor
A	S 214 F	NILES ST	VIRGINIA ST	DESCANSO ST	4	6525.82	1.24	64	200.9	Poor
A	S 335 X	ALLEN RD	ROSEDALE HWY	HAGEMAN RD	5	5801.85	1.1	78	187.9	Poor
A	S 347 X	COFFEE RD	START	SEVENTH STANDARD RD	2	135.63	0.03	30	449	Poor
A	S 359 Y	AIRPORT DR	GOLDEN STATE AVE	NADINE LN	4	151.58	0.03	32	241.1	Poor
A	S 363 AX	CHESTER AV	START	UNION AV	4	1526.19	0.29	60	201	Poor
A	S 367 X	UNION AV	E PLANZ RD	ETHRUM AV	4	2932.33	0.56	44	207.1	Poor
						31,682.8(ft.)	**6.01 (mi.)**			
A	S 375 X	CHINA GRADE LOOP	CHINA GRADE LOOP	END	2	1283.17	0.24	26	85.2	Good
						1,283.17(ft.)	**0.24 (mi.)**			

Fair - 81%
Good – 1%
Poor – 18%

Notes:

IRI Category Scores

Poor: >170

Fair: 95-170

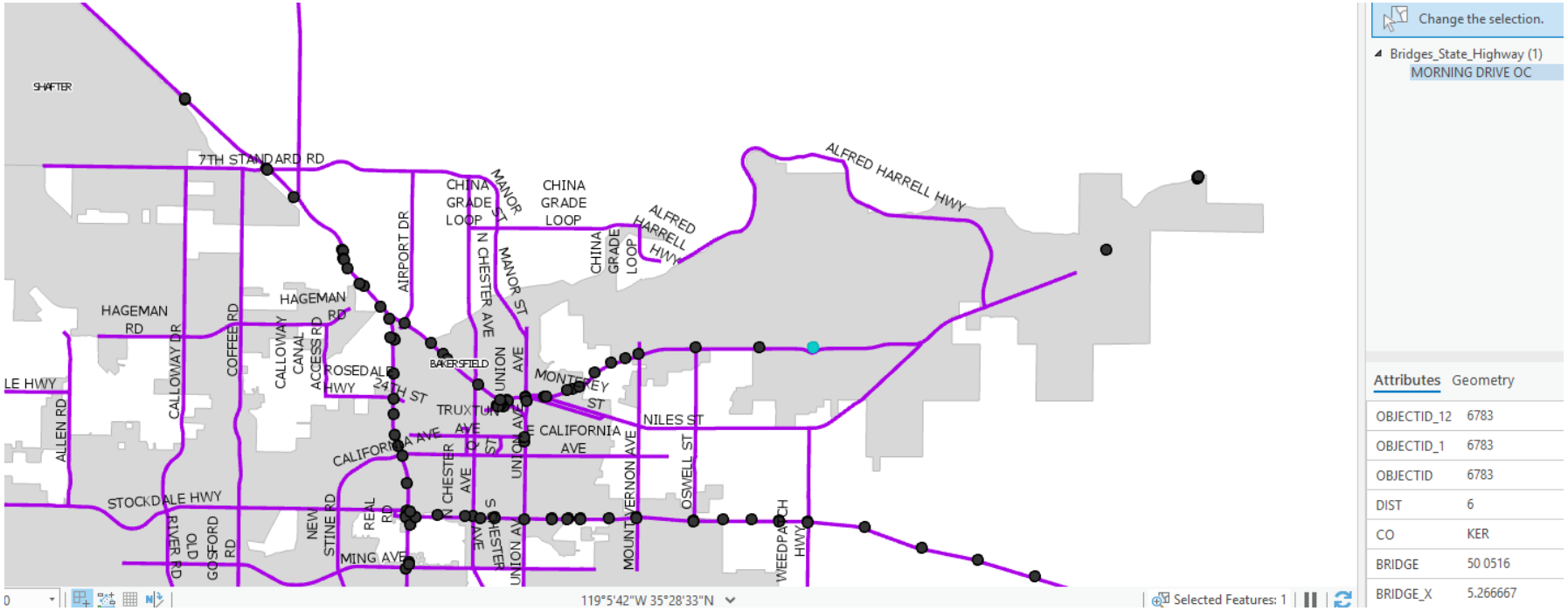
Good: <95

Sum:	170,687 (ft.)	32.33 (mi.)

- IRI Ratings are from 2019 survey
- Data belongs to Kern County maintained roads located primarily in the Metro Bakersfield area

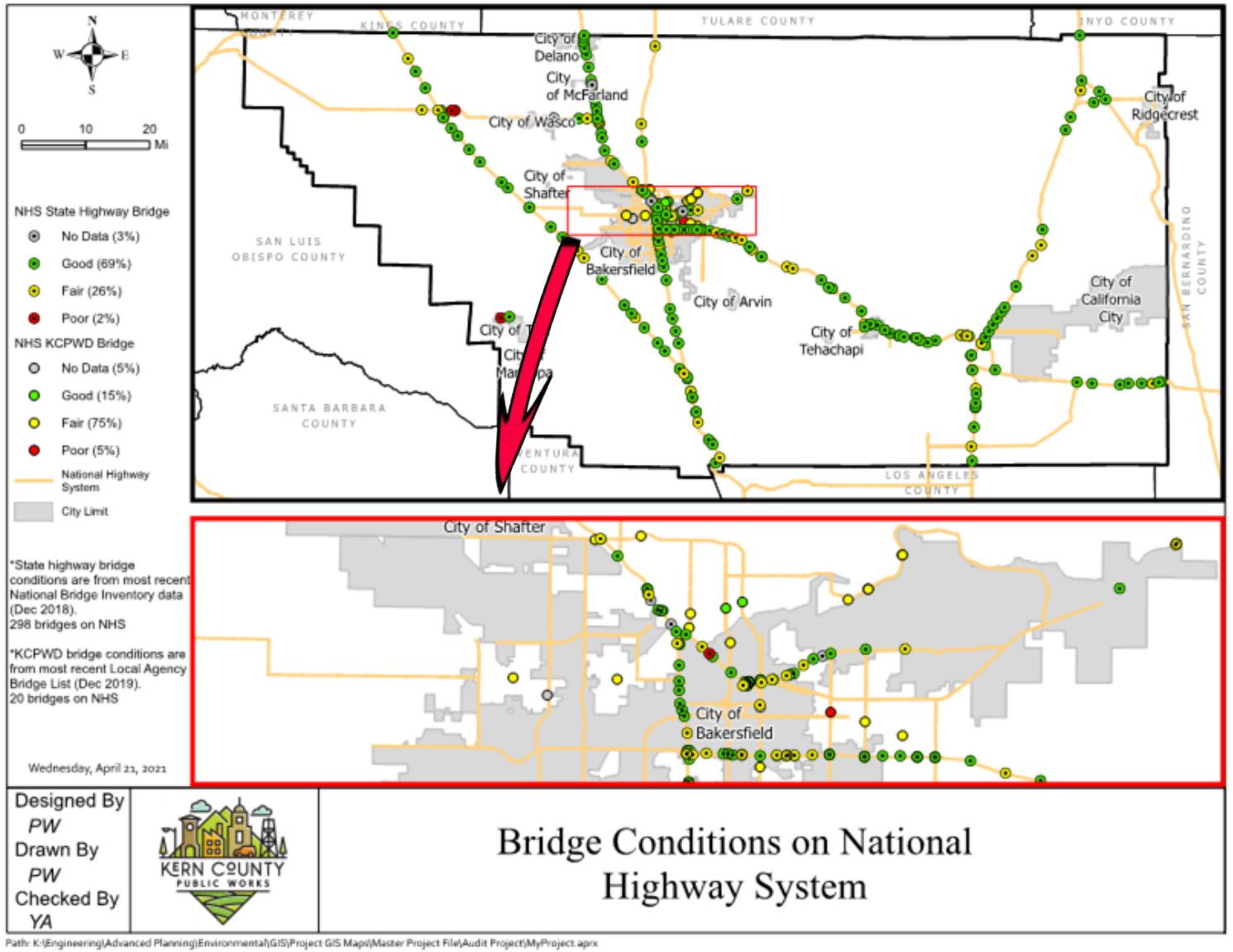
KERN COUNTY PUBLIC WORKS

National Highway System Bridges



357 Bridges
(on system)

National Highway System Roads



Path: K:\Engineering\Advanced Planning\Environmental\GIS\Project GIS Maps\Master Project File\Audit Project\MyProject.aprx

KERN COUNTY
Interactive Webmap

Where is the NHS in California
A Statewide Perspective

Zhenyu Zhu, HQ Office of Asset Management, Caltrans

Dawn Foster, TAMP Manager

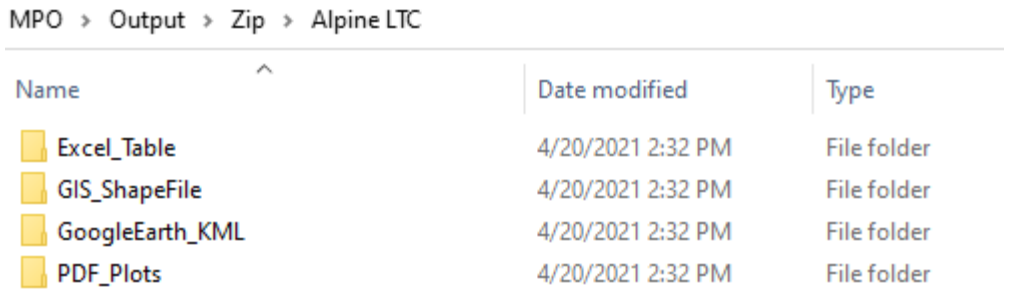
Check 2:00

Background GIS Statewide Analysis for local NHS

- Caltrans collects all pavement condition for the entire NHS based on federal performance metrics including the local NHS and submits to FHWA annually
- FHWA generated good/fair/poor for local NHS pavement and shared shapefiles and additional support to Caltrans for initial TAMP
- In 2020, Caltrans began effort to analyze good/fair/poor for local NHS pavement as part of Mid-Performance Period Reporting to FHWA
- For bridges, we already had the information readily available from our Caltrans Bridge Engineers
- For the 2022 TAMP development, a GIS statewide analysis of local NHS pavement and bridges was completed

NHS Inventory and Condition Data Package

- The data package includes:
  - Excel table (for each MPO/RTPA region, if applicable)
  - GIS shape file (for each MPO/RTPA region)
  - Google Earth KML file (for each MPO/RTPA region, if applicable)
  - PDF plot (for each county, Bridge and Pavement combined)
- The assets included in data package:
  - Bridge
  - Pavement

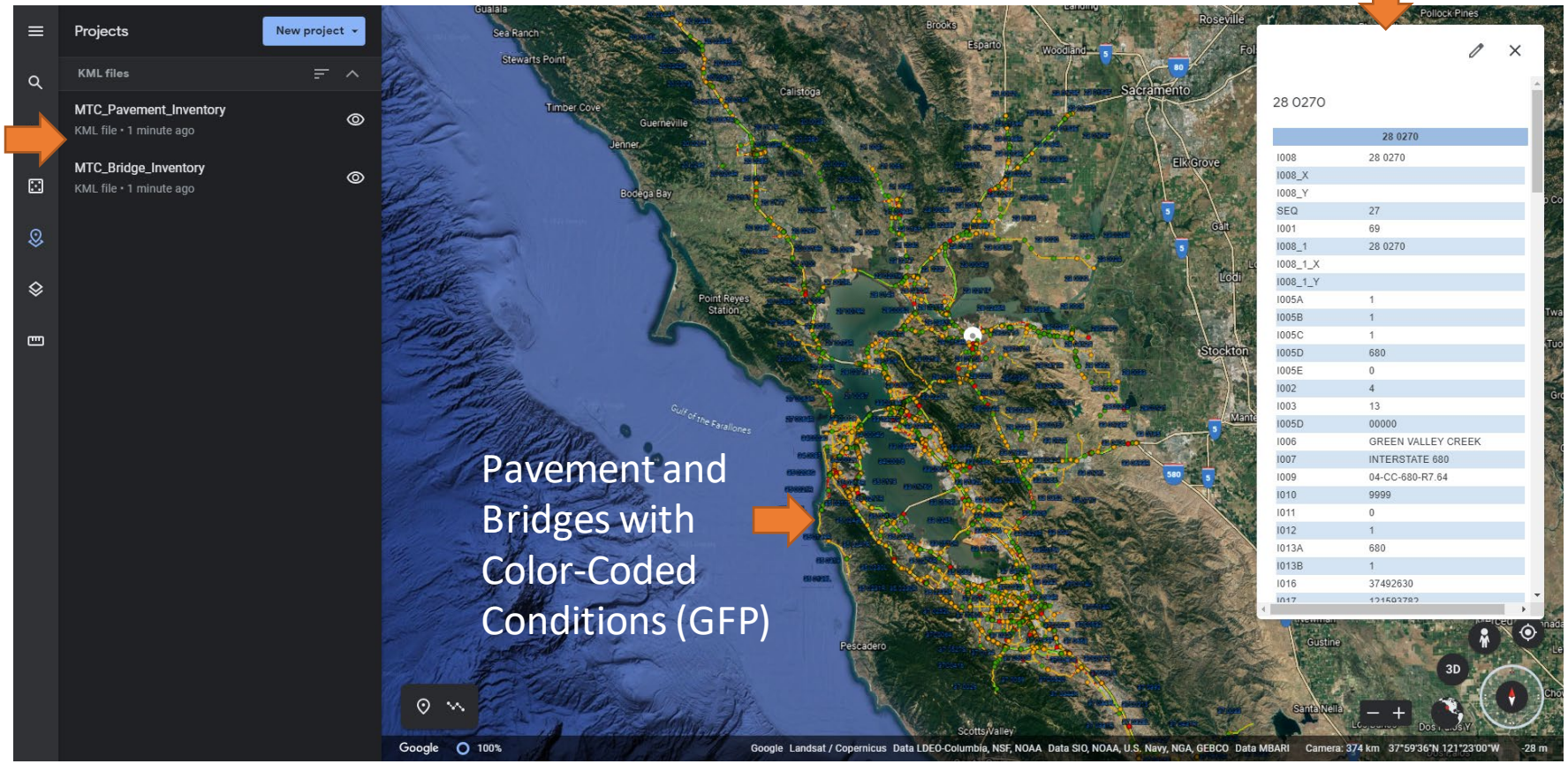


NHS Inventory and Condition GIS Data

- Screenshot of Google Earth

Details of Selected Item

List of Loaded KML



For Local NHS Pavement and Bridge Inventory/Condition

Please visit the 2022 TAMP Website:

https://dot.ca.gov/programs/asset-management/virtual-workshop-series-for-the-2022-tamp-update

Important Note: NHS inventory and condition data will be updated for the 2022 TAMP Target Setting Workshop based on latest submittal to FHWA and an email will be sent to you when this data is available.

TAMP Fundamentals & Next Steps

Dawn Foster, PE
TAMP Manager
California Department of Transportation (Caltrans)

Check 2:15

TAMP Fundamentals - Required Elements


NHS Pavement and Bridge Inventory & Condition


Financial Planning


Risk Management


Life Cycle Planning


Performance Targets & Gaps


Investment Strategies


Process Improvements

Financial Planning Requirements

- Identification of anticipated funding sources – Federal/State/Local
- Estimated cost of expected future work to implement the investment strategies of the asset management plan, by fiscal year and work type (initial construction, maintenance, preservation, rehabilitation, reconstruction)
- Estimated funding levels to address the costs of future work types, by fiscal year
- Asset valuation estimate for NHS pavements and bridges assets and the needed annual investment to maintain asset

TAMP Fundamentals - Required Elements

NHS Pavement and Bridge Inventory & Condition

Financial Planning

Risk Management

Life Cycle Planning

Performance Targets & Gaps

Investment Strategies

Process Improvements

TAMP Risk Management

- Identification of risks that can affect condition of NHS pavements and bridges and NHS performance, including risks associated with current and future environmental conditions
- Assessment of the identified risks in terms of the likelihood of their occurrence and their impact and consequence if they do occur
- Evaluation and prioritization of the identified risks
- Mitigation plan for addressing the top priority risks
- Approach for monitoring the top priority risks

Repeatedly Damaged Assets (23 CFR 667)

- Federal regulations require periodic evaluation of repeatedly damaged assets due to declared emergencies that includes analysis on alternatives to mitigate, partially or fully, the root cause of damage, costs, and duration of solution
- Documentation required in TAMP
- State Highway System analysis completed for initial TAMP
- Expand to local NHS for the 2022 TAMP

TAMP Fundamentals - Required Elements


NHS Pavement and Bridge Inventory & Condition


Financial Planning


Risk Management


Life Cycle Planning

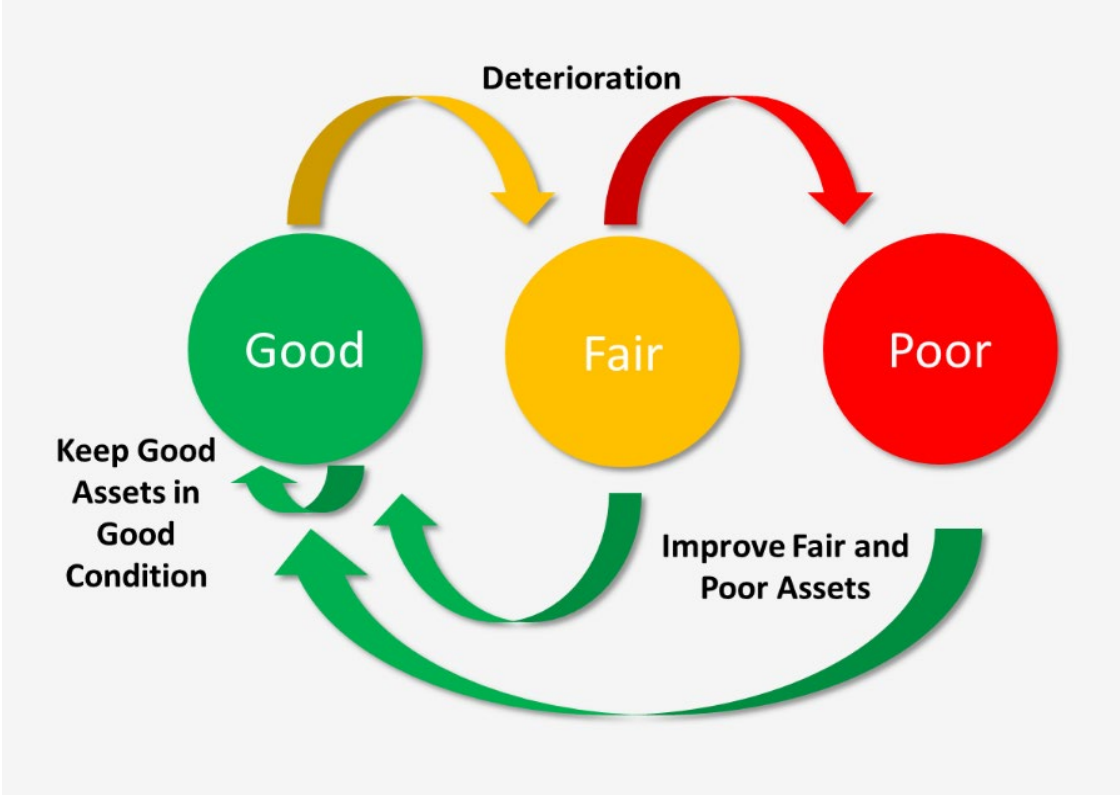

Performance Targets & Gaps


Investment Strategies


Process Improvements

TAMP Life Cycle Planning

- Identification of deterioration models
- Potential work **types (i.e., initial construction, maintenance, preservation, rehabilitation and reconstruction),** including treatment options and unit costs
- A strategy for minimizing life cycle costs and achieving performance targets
- Asset performance targets



TAMP Fundamentals - Required Elements


NHS Pavement and Bridge Inventory & Condition


Financial Planning


Risk Management


Life Cycle Planning


Performance Targets & Gaps


Investment Strategies

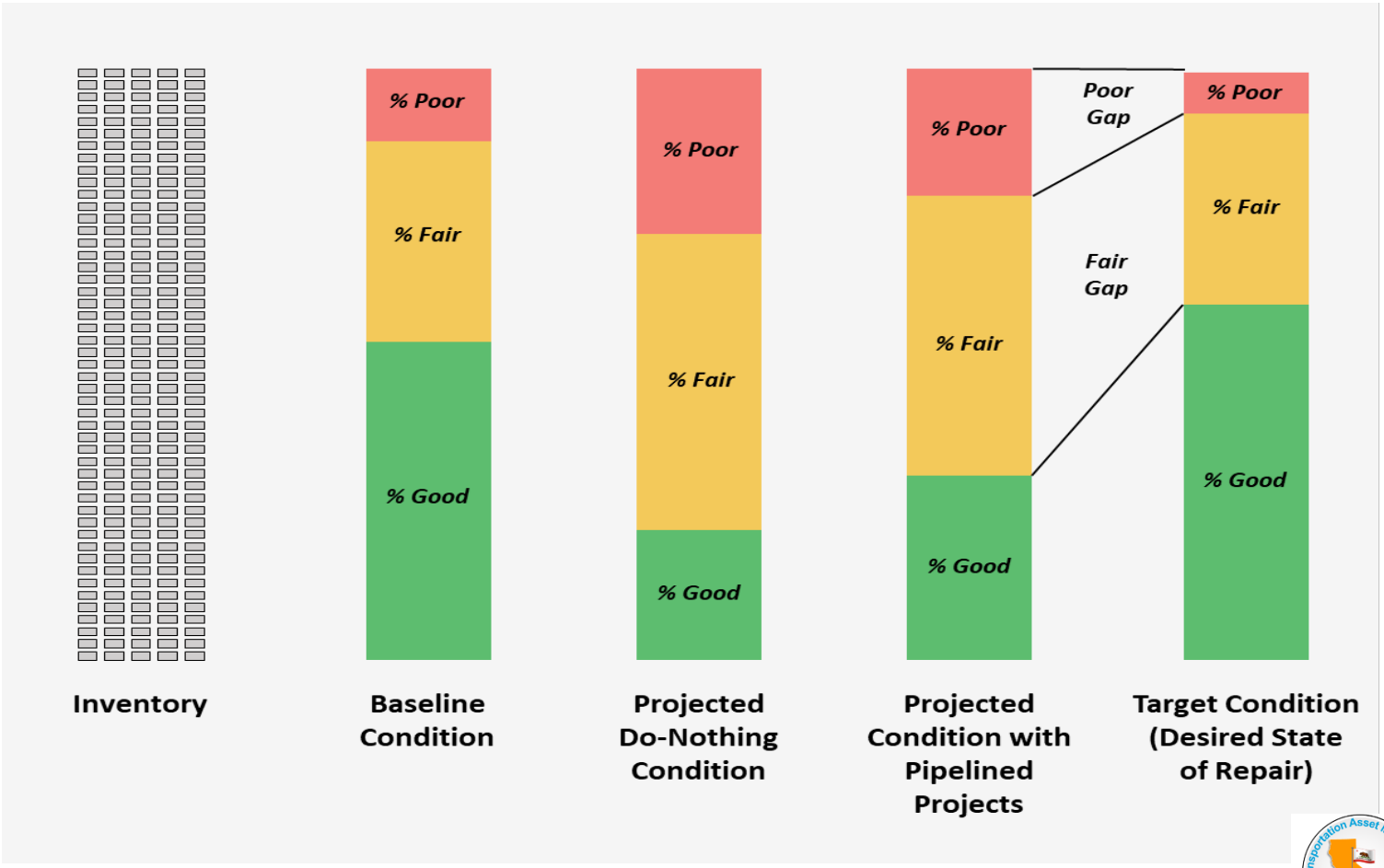

Process Improvements

TAMP Performance Targets

- Asset performance targets specify conditions California seeks to achieve and sustain over a 10-year period to support agency goals and objectives and meet federal requirements.
- California's targets reflect state priorities and will be used to guide strategic planning decisions.
- Desired State of Repair (DSOR) Targets may be updated for the 2022 TAMP
- Progress towards targets is evaluated by FHWA according to federal regulations
- If progress isn't made, investment strategies in TAMP are reviewed to determine what adjustments are needed

Performance Gap Analysis

- Baseline Condition is from latest Caltrans submittal to FHWA
- Project Do-Nothing Condition is from asset deterioration
- Projected Condition with Pipeline Projects is from all the construction work in the 5 federal work types programmed in the STIP/SHOPP/Local CIP/Maintenance Programs
- Target Condition is the Desired State of Repair (DSOR) at end of 10-year period
- Performance Gaps is the difference between Projected Condition and DSOR Target



TAMP Fundamentals - Required Elements

NHS Pavement and Bridge Inventory & Condition

Financial Planning

Risk Management

Life Cycle Planning

Performance Targets & Gaps

Investment Strategies

Process Improvements

Investment Strategies Process Requirements

- The process must describe how investment strategies are influenced, at a minimum, by:
  - Performance gap analysis
  - Life cycle planning
  - Risk management analysis
  - Anticipated available funding and estimated cost of future work

Initial TAMP Investment Strategies

For 2022 TAMP, we will revisit these strategies:

- Fix It First
- Leverage Investments
- Focus on Selected Asset Classes
- Sustainable Pavement Practices
- Complete Street Policies

TAMP Fundamentals - Required Elements

NHS Pavement and Bridge Inventory & Condition

Financial Planning

Risk Management

Life Cycle Planning

Performance Targets & Gaps

Investment Strategies

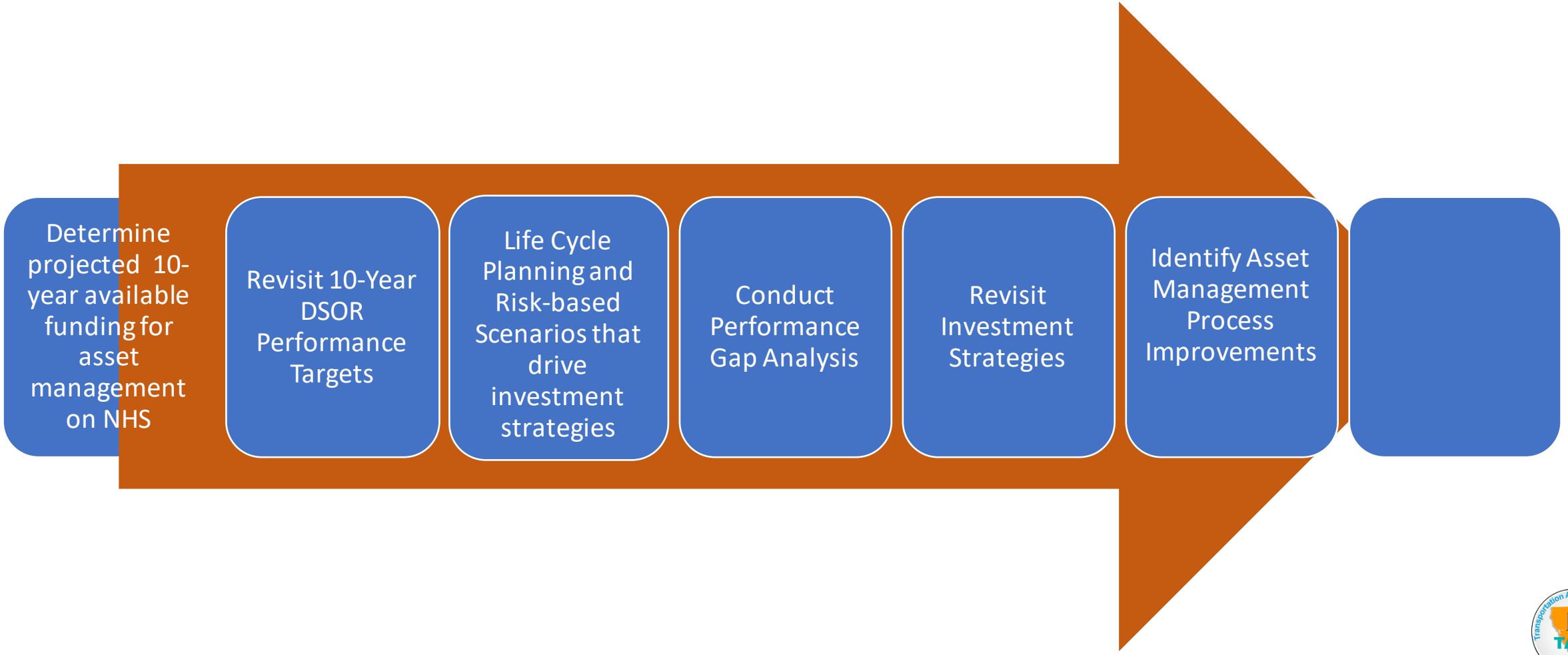
Process Improvements

Initial TAMP Process Improvements

For 2022 TAMP, we will revisit these improvements:

- Data and Tools
- Local, Regional and State Coordination
- Asset Modeling
- TAM Support for Broader Transportation Objectives
- Corridor View of TAM Investment Decisions
- Risk Mitigation
- TAM Communication

In Summary – Process Steps



Which area of asset management do you need the most help in understanding for implementing asset management within your organization?

NHS Pavement and Bridge Inventory and Condition

Financial Planning

Risk Management

Life Cycle Planning

Investment Strategies

Performance Targets and Gaps

Process Improvements

2022 TAMP Workshop Series

We are Here!

Kick-Off the 2022 TAMP (April)

TAMP Fundamentals Workshop #1 (April)

Financial Planning Workshop #2 (May)

Risk Management Workshop #3 (June)

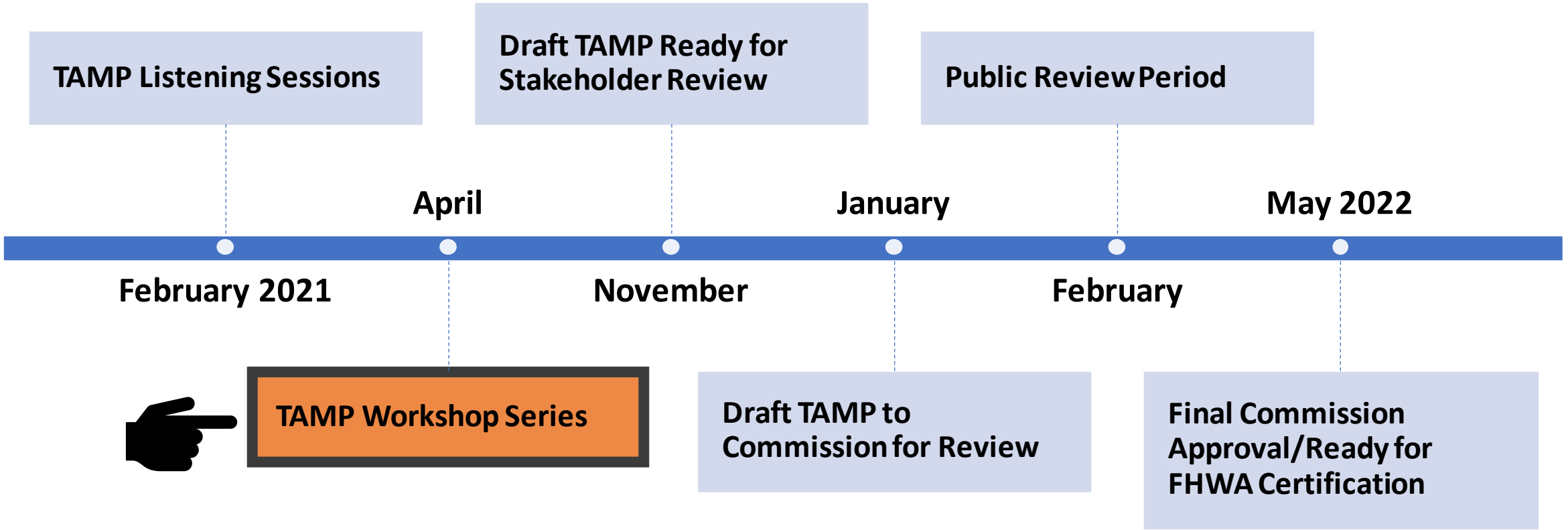
Investment Strategies Workshop #4 (July)

Revisiting Performance Targets Workshop #5 (August)

Process Improvements Workshop #6 (September)

Draft TAMP Completed (November/December)

2022 TAMP Schedule



Action Items

- Find your Local NHS Mapping information by Region on Caltrans Website: https://dot.ca.gov/programs/asset-management/virtual-workshop-series-for-the-2022-tamp-update

- Next Workshop– Financial Planning (Review Chapter 6, Revenue and Financial Projections of the Initial TAMP)

Closing Remarks

Michael B. Johnson
Statewide Asset Management Engineer
HQ Office of Asset Management, Caltrans

Check 2:55

Wrap Up and Thank You

- Importance of NHS to California
- Sharing Local NHS inventory and condition
- TAMP Overview and Requirements
- Future Workshops will expand upon each of the TAMP Elements

Thank you to all our speakers & workshop organizer

- Yolanda Alcantar – Kern County Public Works
- Zhenyu Zhu – Caltrans, HQ Office of Asset Management
- Mary Alice Morency – Caltrans, HQ Office of Asset Management

Please Join Us for Developing the 2022 TAMP

2022 TAMP Virtual Workshop #2
TAMP Financial Planning
Date: Thursday, May 24, 2021
Time: 9:00 AM – 11:00 AM

An Email from CT-TAM@dot.ca.gov will be sent to you shortly with further details!

Visit Caltrans new TAMP Webpage:

https://dot.ca.gov/programs/asset-management/california-transportation-asset-management-plan

Informal Question and Answer Session

- For those of you who have additional questions and time, Caltrans will continue to be available for 1-hour after each Workshop for an informal question and answer session

  - Provides more time to gather feedback from stakeholders
  - Provides opportunity for anyone to participate and talk
  - Provides 6 additional hours of collaboration

  - **Please stay connected to Webex for this additional opportunity!**