OahuMPO Policy Board

August 27, 2019

I. Call to order by Chair

II. Introductions/Roll Call

III. July 30, 2019 Meeting Minutes

IV. Reports

A. Executive Director

B. Technical Advisory Committee

C. Citizen Advisory Committee

V. Old Business

None

VI. New Business

A. Oahu Regional Transportation Plan (ORTP) 2045 Draft Vision and Goals

THE PATH FORWARD FOR O'AHU

KE ALA I MUA

O'AHU REGIONAL TRANSPORTATION PLAN 2045

Oahu Regional Transportation Plan (ORTP) 2045
Phase 1 Public Involvement Overview & Draft Vision and Goals

Policy Board
August 27, 2019

PRESENTATION

1. Public Involvement Results
2. Feedback from ORTP Working Group & TAC
3. Draft Vision & Goals

THE PATH FORWARD FOR O'AHU
KE ALA I MUA O'AHU
O'AHU REGIONAL TRANSPORTATION PLAN 2045
OahuMPO

PHASE 1
VISION & GOALS

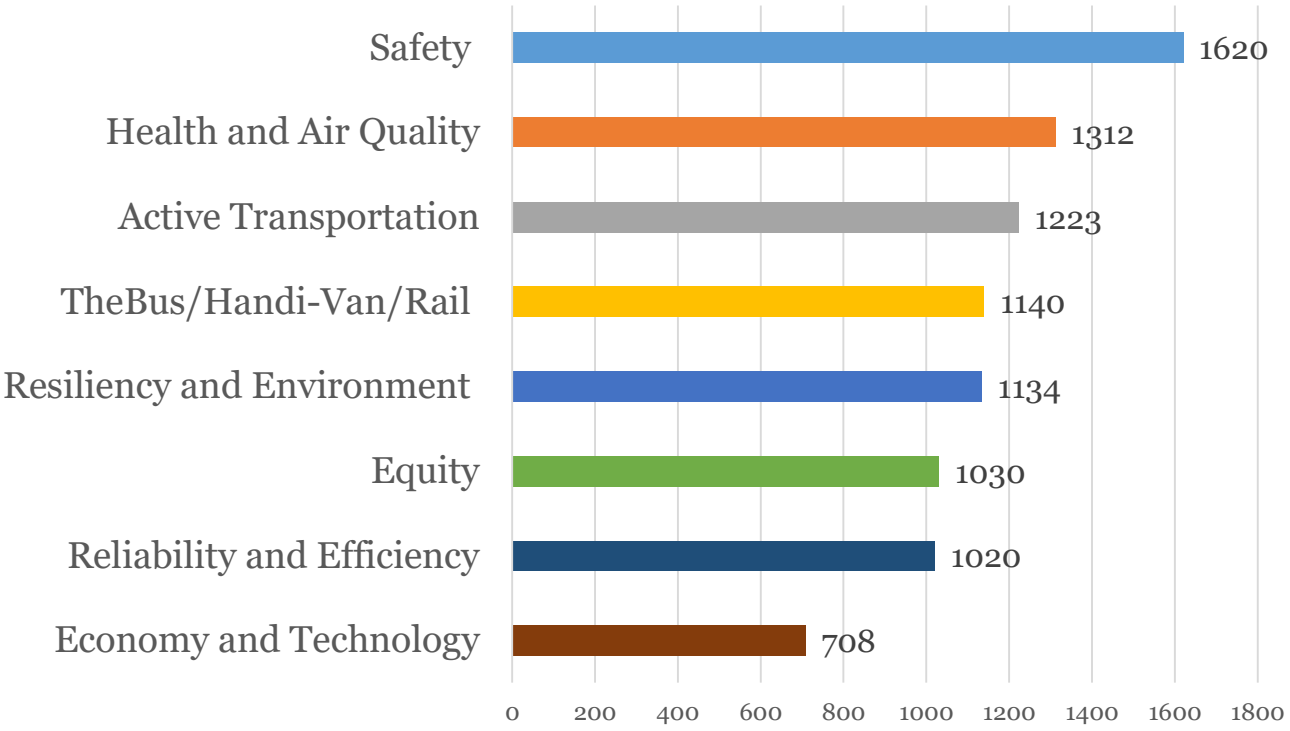
Public Involvement Results

INFORMATION & OUTREACH BOOTHS

INFORMATION & OUTREACH BOOTH – RESULTS

3,063 participants

Which Transportation Goals Should We Prioritize Through 2045?



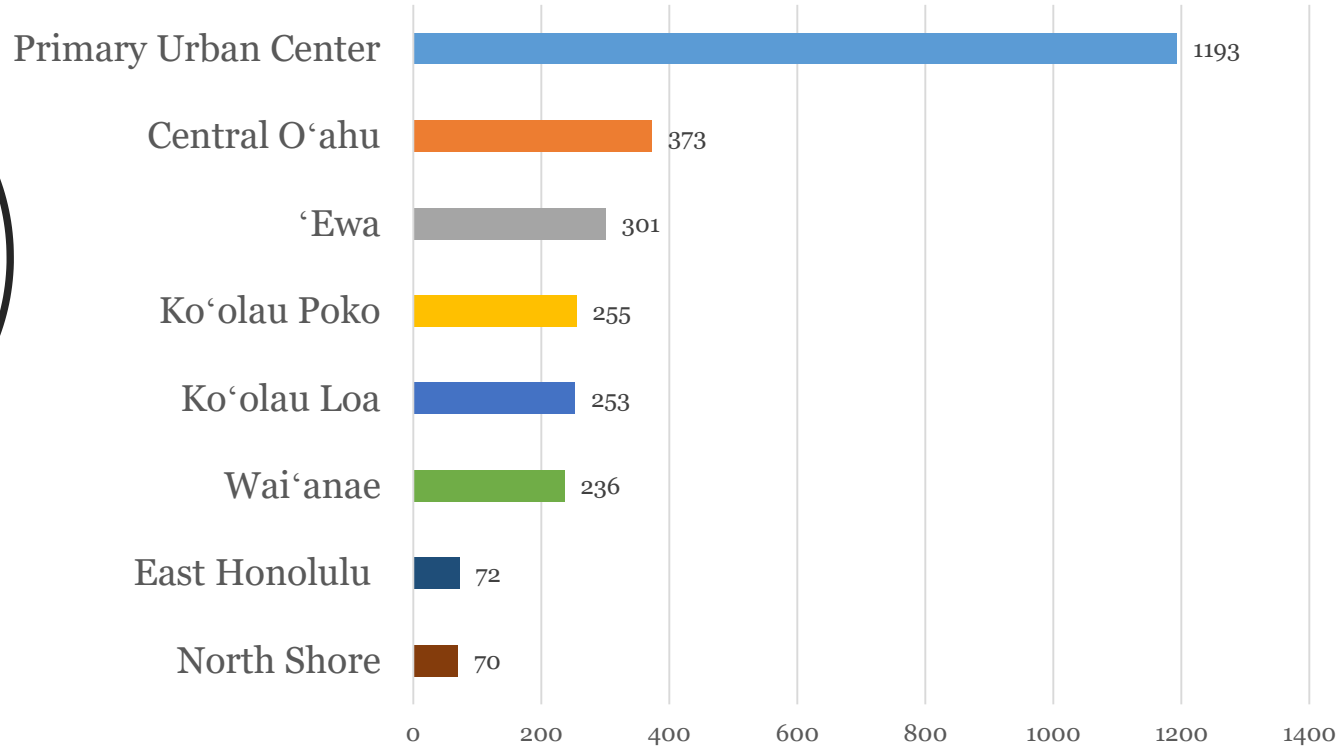
THE PATH FORWARD FOR O'AHU
KE ALA I MUA O'AHU
O'AHU REGIONAL TRANSPORTATION PLAN 2045

OahuMPO

ORTP Phase 1 Public Involvement – Zip Codes

INFORMATION & OUTREACH BOOTH – RESULTS

43 Events



THE PATH FORWARD FOR O'AHU
KE ALA I MUA O'AHU
O'AHU REGIONAL TRANSPORTATION PLAN 2045

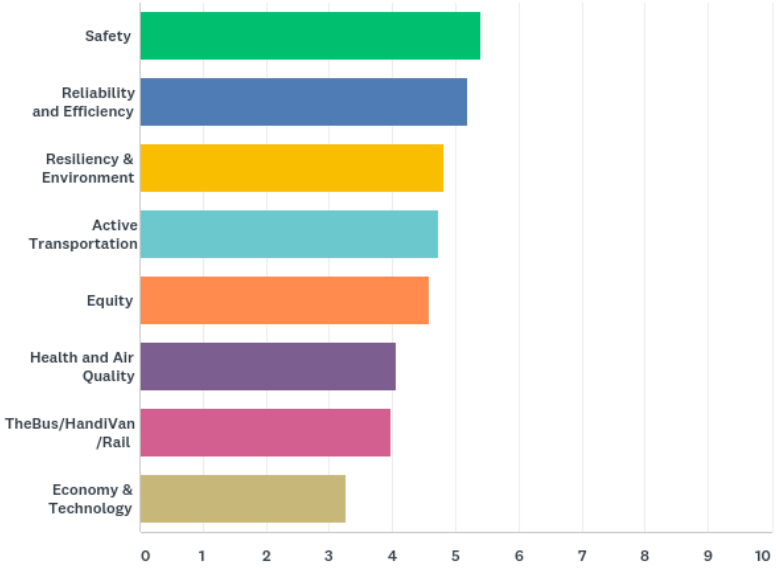
Oahu MPO

ONLINE SURVEY

ONLINE SURVEY – RESULTS (GOALS)

226 participants

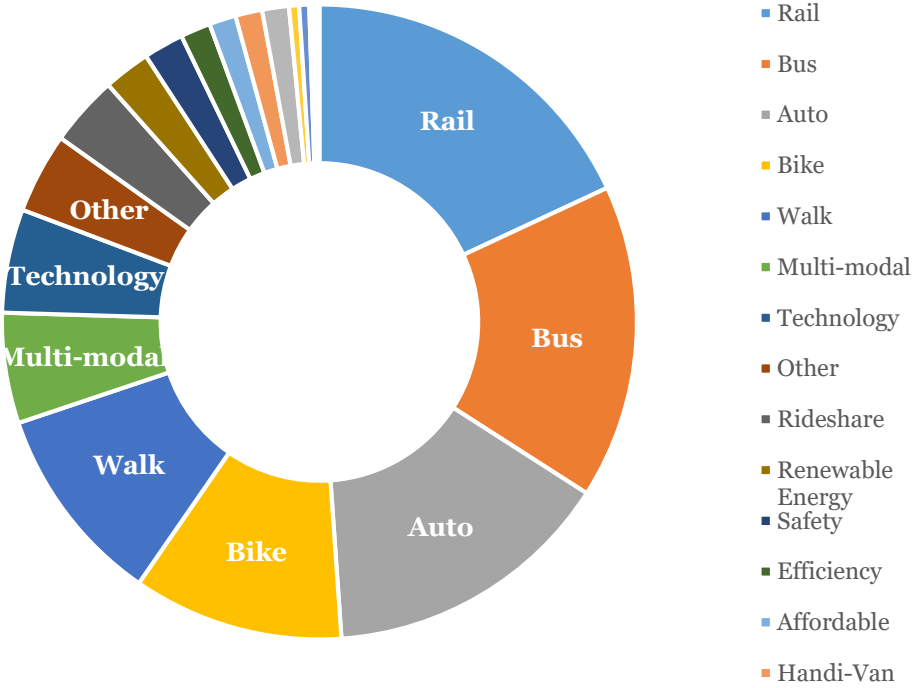
Q1 Which transportation goals should we prioritize through 2045?(1 is most important)



ONLINE SURVEY

How Do You Envision Getting Around Oahu In 2045?

230 PARTICIPANTS



THE PATH FORWARD FOR O'AHU
KE ALA I MUA
O'AHU REGIONAL TRANSPORTATION PLAN 2045

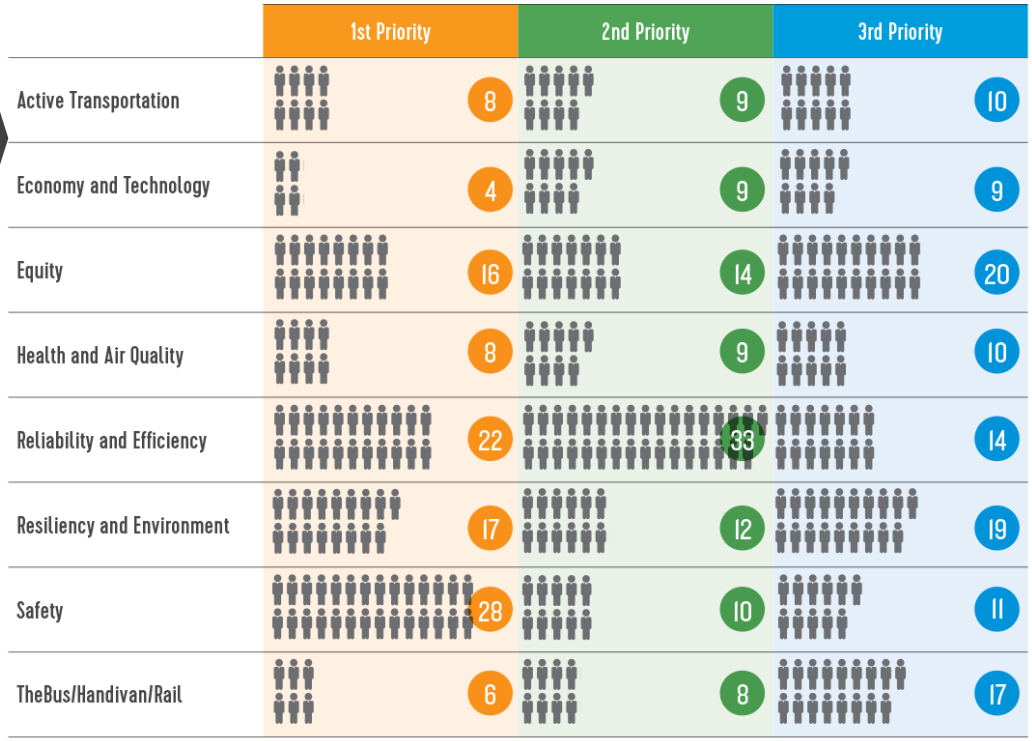
OahuMPO

FOCUS GROUPS

FOCUS GROUP TOP 3 GOALS

Identify your top 3 transportation priorities. Prioritize them and share why these are priorities for you.

120 participants



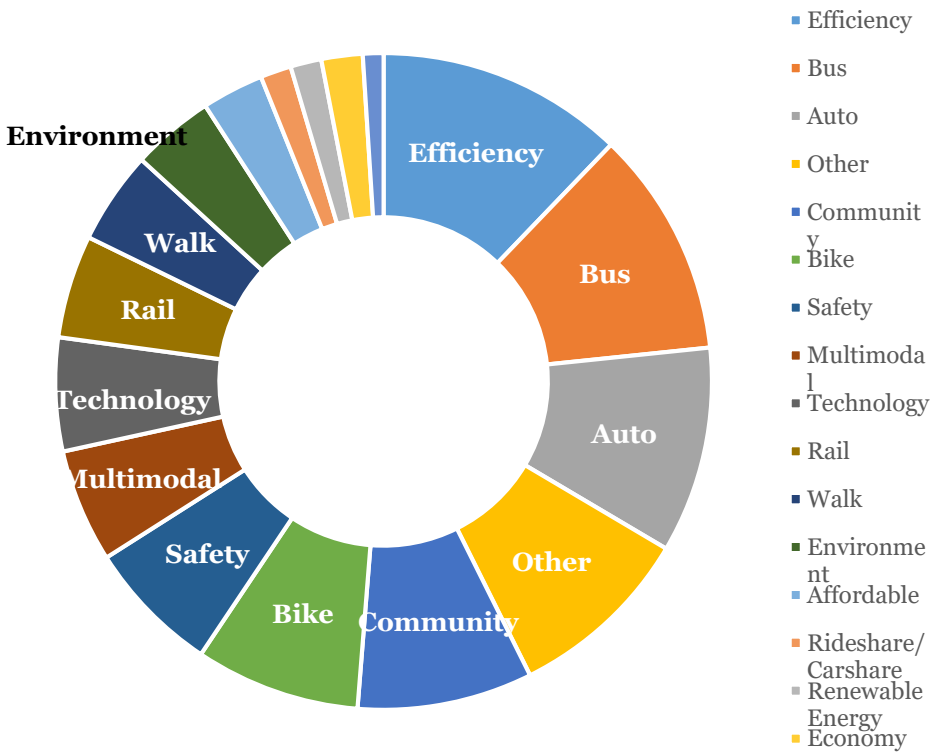
THE PATH FORWARD FOR O'AHU
KE ALA I MUA
O'AHU REGIONAL TRANSPORTATION PLAN 2045

OahuMPO

FOCUS GROUPS

How Do You Envision Getting Around Oahu In 2045?

120 Responses



THE PATH FORWARD FOR O'AHU
KE ALA I MUA
O'AHU REGIONAL TRANSPORTATION PLAN 2045

OahuMPO

OVERALL PUBLIC INVOLVEMENT RESULTS

OVERALL TOP 3 GOALS

	Dot Exercise (Top 3 Goals)	Survey	Focus Groups
1	Safety	Safety	Safety
2	Health and Air Quality	Reliability and Efficiency	Reliability and Efficiency
3	Active Transportation	Resiliency and Environment	Equity
4	TheBus/Handi-Van/Rail	Active Transportation	Resiliency and Environment
5	Resiliency and Environment	Equity	Active Transportation
6	Equity	Health and Air Quality	Health and Air Quality
7	Reliability and Efficiency	TheBus/Handi-Van/Rail	TheBus/Handi-Van/Rail
8	Economy and Technology	Economy and Technology	Economy and Technology

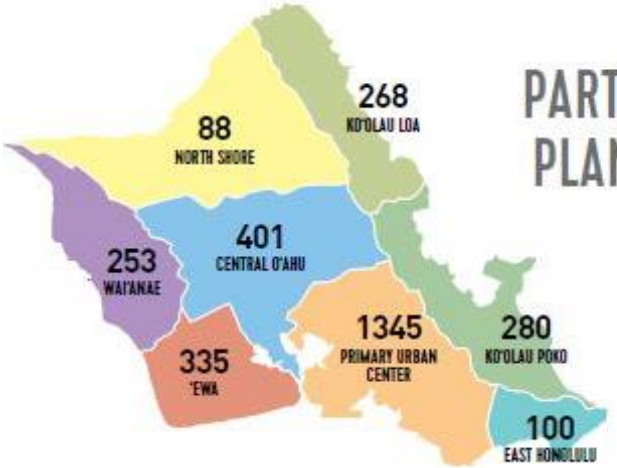
OVERALL PUBLIC INVOLVEMENT RESULTS

3,409 TOTAL PARTICIPANTS

TRANSPORTATION GOALS

- SAFETY: 1,784
- HEALTH & AIR QUALITY: 1,408
- ACTIVE TRANSPORTION: 1,336
- RESILIENCY & ENVIRONMENT: 1,277
- THEBUS / HANDI-VAN / RAIL: 1,236
- RELIABILITY & EFFICIENCY: 1,205
- EQUITY: 1,172
- ECONOMY & TECHNOLOGY: 770

PARTICIPANTS BY PLANNING AREA



WORKING GROUP

WORKING GROUP

- Partners from FHWA, DPP, DTS, HART, and HDOT
- Draft vision and goals discussion on June 3, 2019
- Discussion points (Vision):
  - Include the plan's theme in vision and goals
- Discussion points (Goals):
  - Group wanted to include equity as a separate goal
  - How do we measure equity?

TECHNICAL ADVISORY COMMITTEE

TECHNICAL ADVISORY COMMITTEE

- Partners in attendance from DTS, HDOT, DPP, HART, DBEDT, OP, and FHWA
- Draft vision and goals discussion on July 12, 2019
- Discussion points (Vision):
  - Safety should be first in the vision
  - Make the vision people-centric
  - Highlight "choices" – people can choose their mode
  - Simplify the vision and think about the lay person
  - The vision should be short
  - Put the vision in present tense
- Discussion points (Goals):
  - Make the goals people-centric
  - Make each goal no longer than one short sentence

CITIZEN ADVISORY COMMITTEE

CITIZEN ADVISORY COMMITTEE

- Members represent Neighborhood Boards and community organizations
- Draft vision and goals discussion on August 21, 2019
- Overall Comment: great appreciation for the level of effort and outreach activities held in all areas of the island
- Comments from CAC (Vision):
  - Positive comments about the draft Vision
  - Questions about combining rail with TheBus/HandiVan
- Comments from CAC (Goals):
  - Comments about renewable energy and the challenges ahead with gas-powered vehicles (What do we do with the old vehicles?)

DRAFT VISION & GOALS

DRAFT VISION

In 2045, O‘ahu’s *path forward* is multimodal and safe. All people on O‘ahu can reach their destinations through a variety of transportation choices, which are reliable, equitable, healthy, environmentally sustainable, and resilient in the face of climate change.

DRAFT GOALS

SAFE	People are safe and secure while traveling, eliminating fatalities and serious injuries.
MULTIMODAL	People can choose to travel by walking, biking, taking transit, or driving, depending on their needs for each trip.
RESILIENT	People travel a transportation system prepared for sea level rise and extreme weather events.
MAINTAINED	People travel on well-maintained roads, bridges, and pathways.
RELIABLE	People experience a consistent travel time to reach their jobs, schools, services, and goods.
EQUITABLE	People in historically marginalized communities do not experience transportation related disparities.
SUSTAINABLE	People travel using renewable sources of energy, including human power.

VI. New Business

B. Public Participation Draft Plan Presentation

PUBLIC PARTICIPATION PLAN & a CAC Survey

A Presentation to the

OahuMPO Policy Board

August 27, 2019

Why a Public Participation Plan document?

A Federal requirement

The MPO shall develop and used a documented participation plan that defines a process for providing citizens….(stakeholders)…

The participation plan shall be developed by the MPO in consultation with all interested parties and, shall, at a minimum, describe explicit procedures, strategies, and desired outcomes for….

-23 CFR 450.316 -

PPP Development Procedures – Where we are at

- **First Draft PPP**

  a. TAC reviews and comments

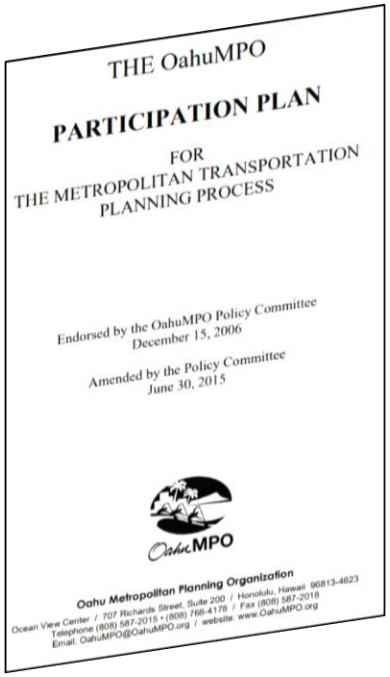
  b. Policy Board reviews and comments

- **Public Review Draft**
  - Agencies review and comment

- **Final Draft PPP**
  - TAC reviews and makes recommendation to the Policy Board
  - Policy Board considers approval

Source: http://www.oahumpo.org/wp-content/uploads/2016/03/PPP-Development-Procedures-FINAL-9-22-15.pdf

Why a PPP Update?



THE OahuMPO

PARTICIPATION PLAN

FOR
THE METROPOLITAN TRANSPORTATION
PLANNING PROCESS

Endorsed by the OahuMPO Policy Committee
December 15, 2006

Amended by the Policy Committee
June 30, 2015

OahuMPO

Oahu Metropolitan Planning Organization
Ocean View Center / 707 Richards Street, Suite 200 / Honolulu, Hawaii 96813-4623
Telephone (808) 587-2015 • (808) 768-4178 / Fax (808) 587-2018
Email: OahuMPO@OahuMPO.org / website: www.OahuMPO.org

AMEND IF:

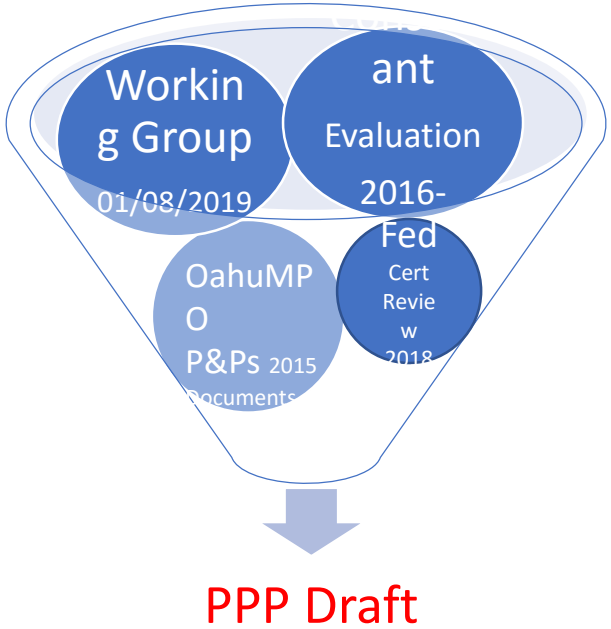
- Changing the objective and/or tasks of the process;
- Adding new process or procedure;
- Deleting a process or procedure.

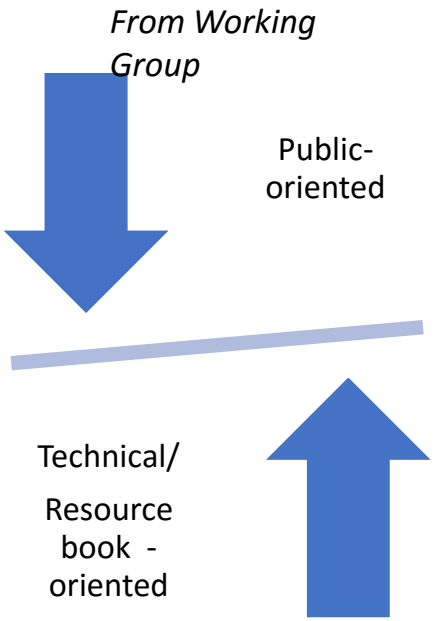
BASIS: PPP Development Procedures 9/21/15

Source: https://www.oahumpo.org/?wpfb_dl=1312

Towards a new PPP draft

What were taken into consideration





Emphases of new PPP draft document

- Inform how and at what points the public can participate
- Provide staff a broad set of information and resource references to customize PIPs

What is still needed to finalize public review draft:

- Major efinement (accuracy, grammar/spelling, graphic design/visuals)
- FHWA, FTA – comments
- TAC, PB comments

PPP Goals

Goal 1.
The public will be involved early and continuously in the decision-making process.

Goal 2.
All residents and mandated stakeholders will be given the opportunity to participate.

Goal 3.
The public will be provided with clear, timely, and accurate information for meaningful participation.

Goal 4.
Selected public participation techniques will match the purpose and used accordingly.

Goal 5.
Progress in achieving the above goals will be measured, and results reported.

Goal 6.
Outcomes of public participation will be communicated and managed in realistic and pragmatic ways.

PPP Document Draft Outline

- Introduction- Principles, Goals, Intent of Document
- OahuMPO
- How the public can get involved
- Key OahuMPO documents and public participation

More for the public

- Customizing Public Involvement Plan –information & resources
- Evaluation and reporting
- Plan update and submission
- Appendices

More internal

How to Get Involved

The OahuMPO plans to continue offering year-round opportunity for involvement by all – residents and various transportation stakeholders. The following are the main gateways to involvement opportunities.

III. How The Public Can Get Involved

CALL
OAHUMPO
OFFICE
(808) 587-2015
8:30 a.m. to 4:30 p.m.
Monday to Friday

WRITE
OAHUMPO
707 Richards St. #200
Honolulu, HI 96813

EMAIL
OAHUMPO
oahumpo@oahumpo.org

GO ONLINE
www.oahumpo.org
Visit the "Get Involved" menu or "Contact Us" page

FACEBOOK
www.facebook.com/OahuMetropolitan

COME TO AN EVENT
Watch out for announcements for transportation planning events, including some that are hosted by the OahuMPO for different plans or different targeted groups. Events are announced in different ways, including via public media.

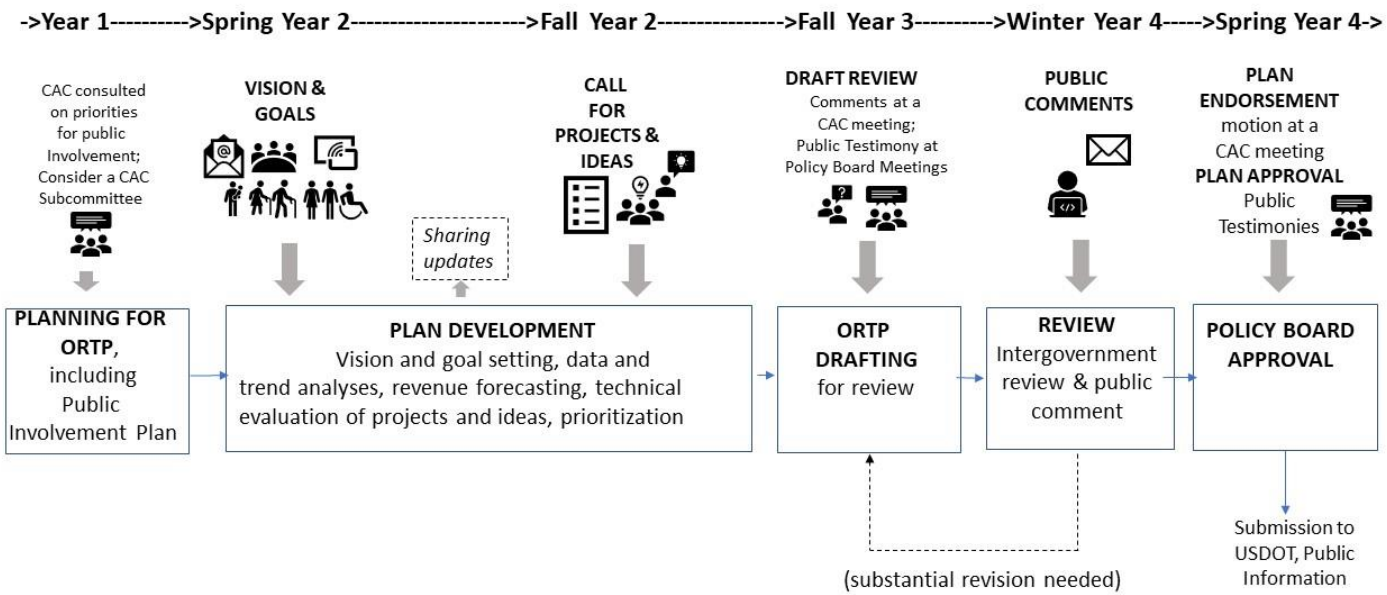
PARTICIPATE IN PERSON
Attend a meeting of the Policy Board, Technical Advisory Committee, and/or Citizen Advisory Committee. Provide timely public testimony.

Regular monthly meetings are scheduled as follows but are subject to change:

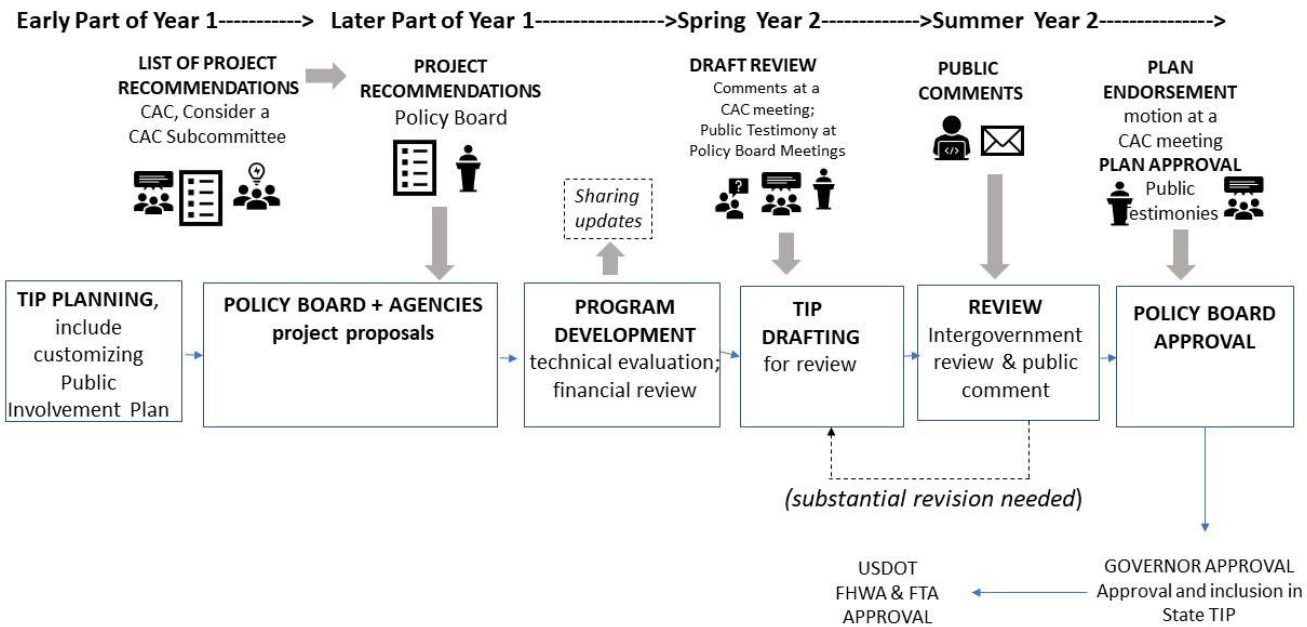
- Policy Board meetings - every Tuesday, 1 to 2 p.m.
- TAC meetings - every second Friday, 9 to 10 a.m.
- CAC meetings - every third Wednesday, 3 to 4 p.m.

JOIN THE MAILING LIST
Request to be on the mailing list and be notified of opportunities for public involvement.

ORTP – Public Participation

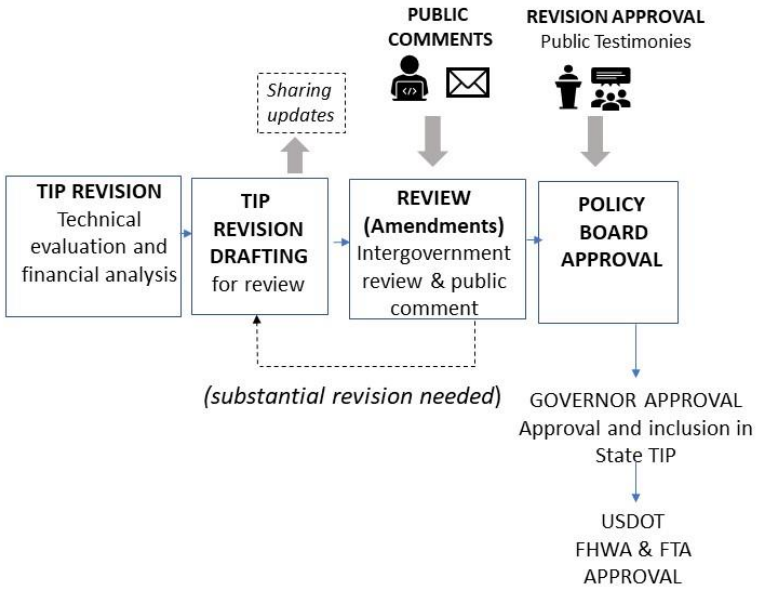


TIP – Public Participation



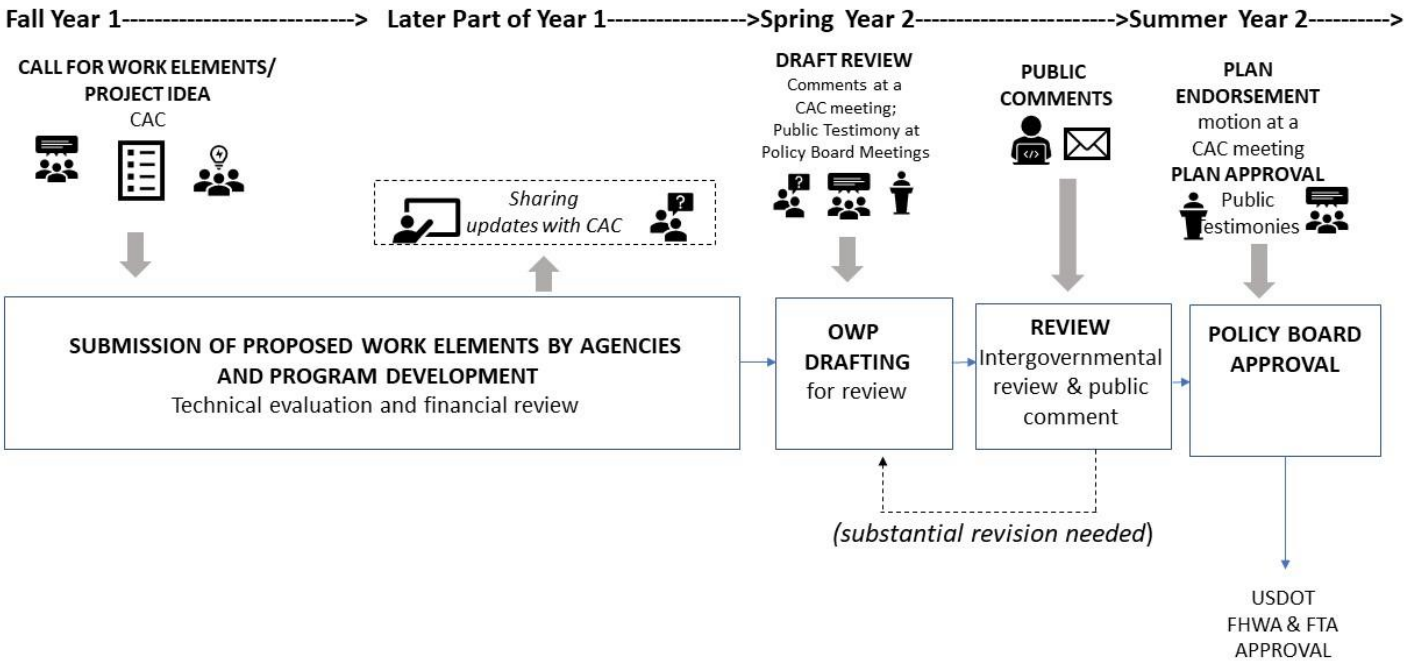
TIP Revision – Public Participation

Early Part of Year 1----------> Spring Year 1----------->Summer Year 1---------->

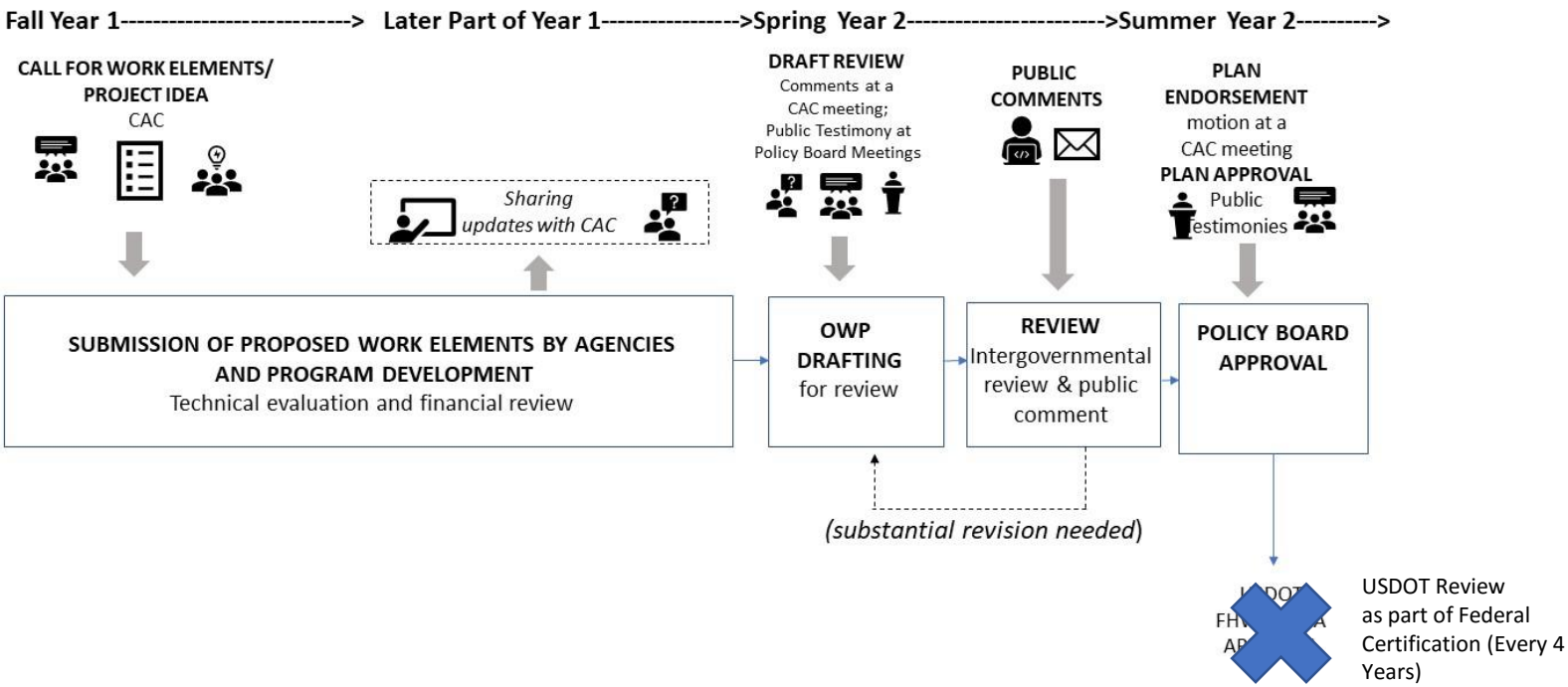


Note: Another cycle of revision takes place during the summer period

OWP– Public Participation



PPP– Public Participation



Public Participation for Each Work Plan – Other Elements in the Document

Program Description

Key elements

CAC's early involvement

Significant comments

Plan updates.

Timeline.

Key elements –example from OWP

Activity	Target Participants	Methods, techniques and/or tools	How the public gains access to information
Early call for work elements (planning study ideas)	CAC	CAC meetings	OahuMPO' s Standard notification methods: Public notices of meetings; CAC mailing list; Website
Early response to CAC submitted ideas	CAC	CAC meetings	Standard notification methods
Review of OWP draft for public review	CAC; general public	CAC, TAC and PB meetings; public testimony	Standard notification methods including TAC, PB mailing lists
Intergovernmental Review and Public Comment Period.	General public; Mandated stakeholders	Comment form (copies available in hard, soft, and digital format)	Standard notification methods; IGR mailing list; social media and public media
Endorsement by CAC, TAC; Approval by Policy Board	CAC; General public	CAC, TAC, and PB meetings; CAC report, public testimony	Standard notification methods including TAC, PB mailing lists

Public Involvement Plan Elements

Cited Resources

- **COMPREHENSIVE** Public Involvement Techniques for Transportation Decisionmaking: 2015 Update
- **BEST PRACTICES** MPO The Innovative MPO Smart Planning, Strong Communities: A Guidebook for Metropolitan Transportation Planning
- **HDOT PUBLIC INVOLVEMENT HANDBOOK**
- **MAUI MPO** List
- **DIGITAL ENGAGEMENT** IAP2 Canada Social Media White Paper for digital engagement, including limitations
- **MISSING VOICES** Orton Family Foundation techniques
- **PUANANI BURGESS**' Building a Community: A Lifes' Practice
- Identifying Participants (various) –It is also about **building relationships**

Public Involvement Plan - Appendices

APPENDIX 1

Sample Context: 2019 OahuMPO Agenda and Public Participation

APPENDIX 2

Title VI/EJ Population

APPENDIX 3

OahuMPO's Standard Methods

- CAC
- Public Meetings
- Website

Goal 1.
The public will be involved early and continuously in the decision-making process.

Goal 2.
All residents and mandated stakeholders will be given the opportunity to participate.

Goal 3.
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Goal 4.
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Goal 5.
Progress in achieving the above goals will be measured, and results reported.

Goal 6.
Outcomes of public participation will be communicated and managed in realistic and pragmatic ways.

Evaluation & Reporting

Evaluation – *Keep it simple and flexible*

Observational

Survey

Self-Assessment

Reporting – *Use existing reports*

Final reports of each plan, studies

Annual reports

T6/EJ Reports

Report to the State Legislature and Federal Government

Special reports

Mahalo!

Email comments to
Community Planner
oahumpo@oahumpo.org
or call 808-587-2015

VI. New Business

C. HDOT TAMP Presentation

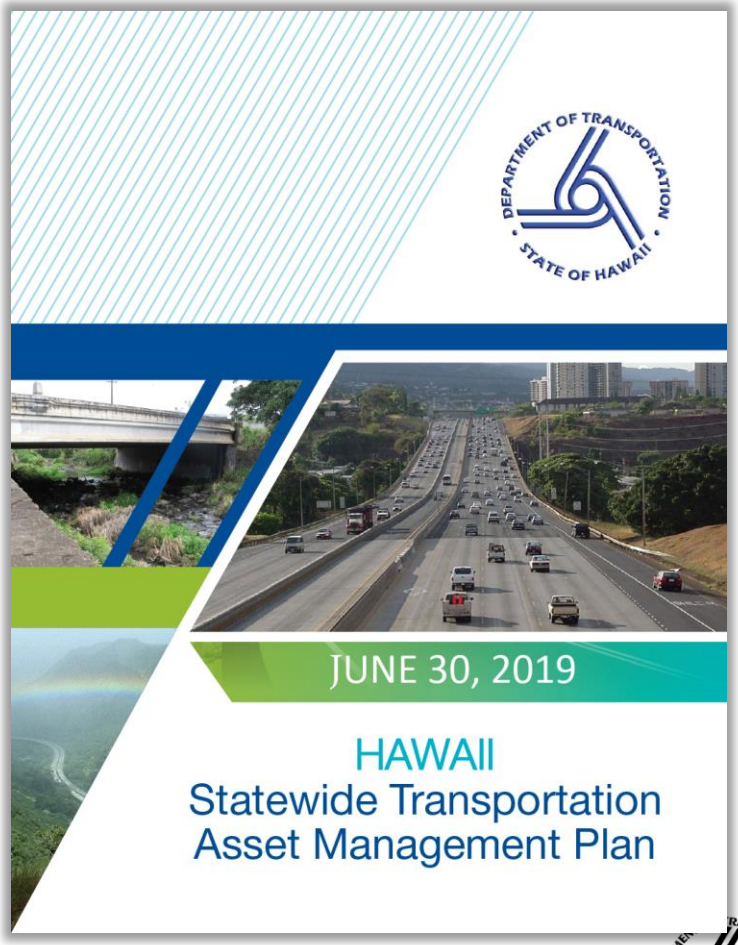
Transportation Asset Management Plan (TAMP)

OahuMPO

August 27, 2019

Meeting Agenda

- Welcome
- Background
  - FHWA Requirements and Penalties
  - Roles and Responsibilities
- Overview of the TAMP
  - Inventory and Conditions
  - Performance Measures
  - Performance Gaps
    - Targets
  - Risk Management
  - Life-Cycle Planning
  - Financial Plan
  - Investment Strategies
- Next Steps



BACKGROUND

FHWA Requirements

The Federal Highway Administration (FHWA) on October 24, 2016, published its final rule on required state-approved asset management plans and processes. (23 CFR 515.17)

Asset management is a strategic and systematic process of operating, maintaining, and improving physical assets, with a focus on engineering and economic analysis based upon quality information, to identify a structured sequence of maintenance, preservation, repair, rehabilitation, and replacement actions that will achieve and sustain a desired state of good repair over the lifecycle of the assets at minimum practicable cost.

DOTs must use a PMS/BMS that meets the requirements of 23 CFR 500.106/107 to analyze the condition of NHS pavements and bridges.

Penalties

If a State DOT has not developed and implemented an asset management plan consistent with requirements and has not established NHS pavements and bridges targets within 18 months of that rule's effective date, the **FHWA will not approve any further projects using NHPP funds until the State has done so**.

Beginning October 1, 2019, and in each fiscal year thereafter, if a State DOT has not developed and implemented a TAMP consistent with section 119 and 23 CFR Part 515, **the maximum Federal share for NHPP projects and activities carried out by the State in that fiscal year shall be reduced to 65% for that fiscal year. The reduction remains in effect for the entire fiscal year.**

Roles and Responsibilities

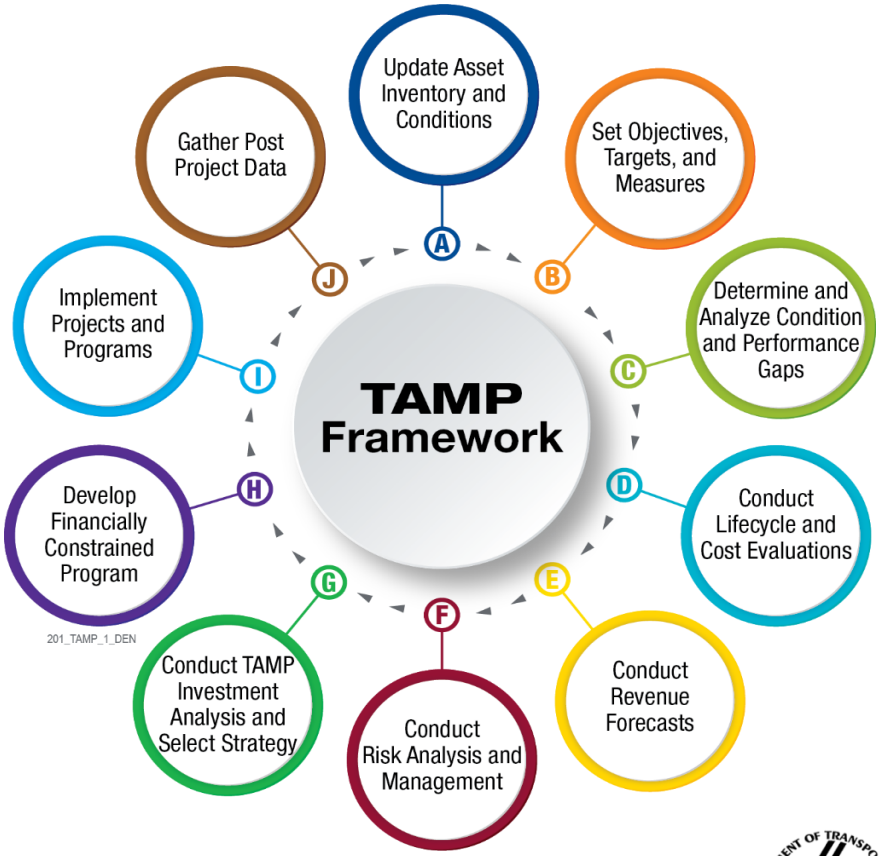
Authority: Administration

Lead:

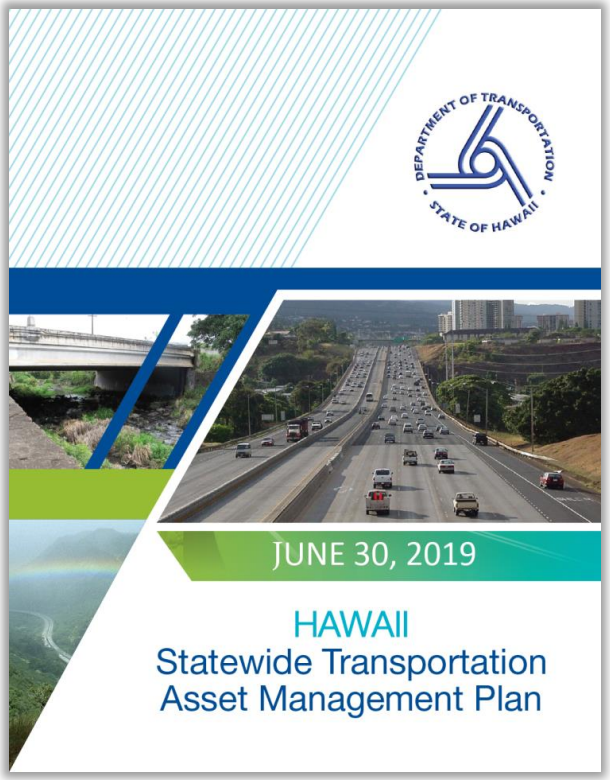
- TAMP: HWY-P
- Bridge Program: HWY-DB
- Pavement Program: HWY-L

Necessary Support:

- Districts/Counties/CCH
- Budget/Fiscal
- Design
- Right-of-Way
- Traffic
- Planning Survey



TAMP OVERVIEW



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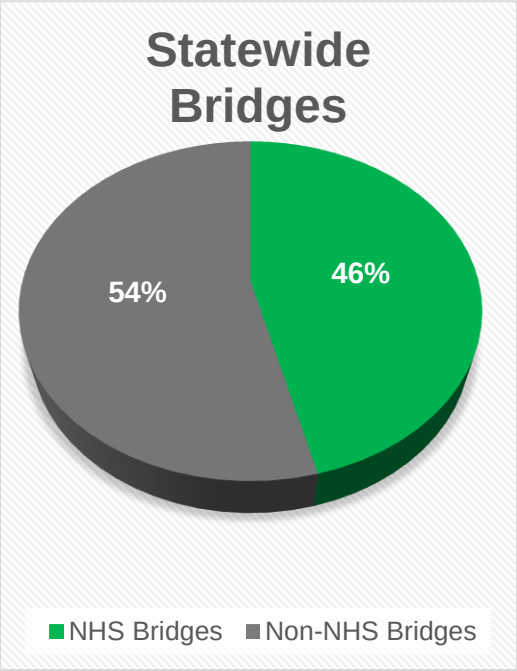
TAMP Chapters

I. Introduction and Overview
II. Asset Management Approach and Process
III. Inventory and Condition
IV. Asset Management Performance Measures and Targets
V. Asset Management Performance Gap
VI. Environmental Vulnerability
VII. Risk Management Assessments
VIII. Life-Cycle Planning
IX. Financial Plan
X. Investment Strategies
XI. Process Improvements

Existing Transportation System



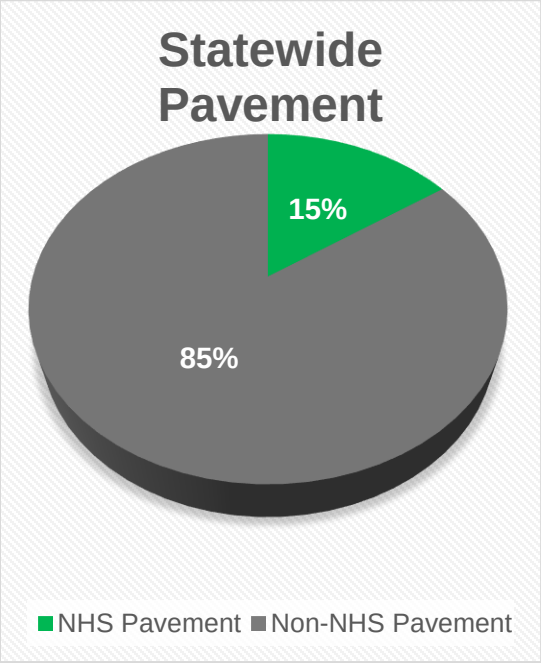


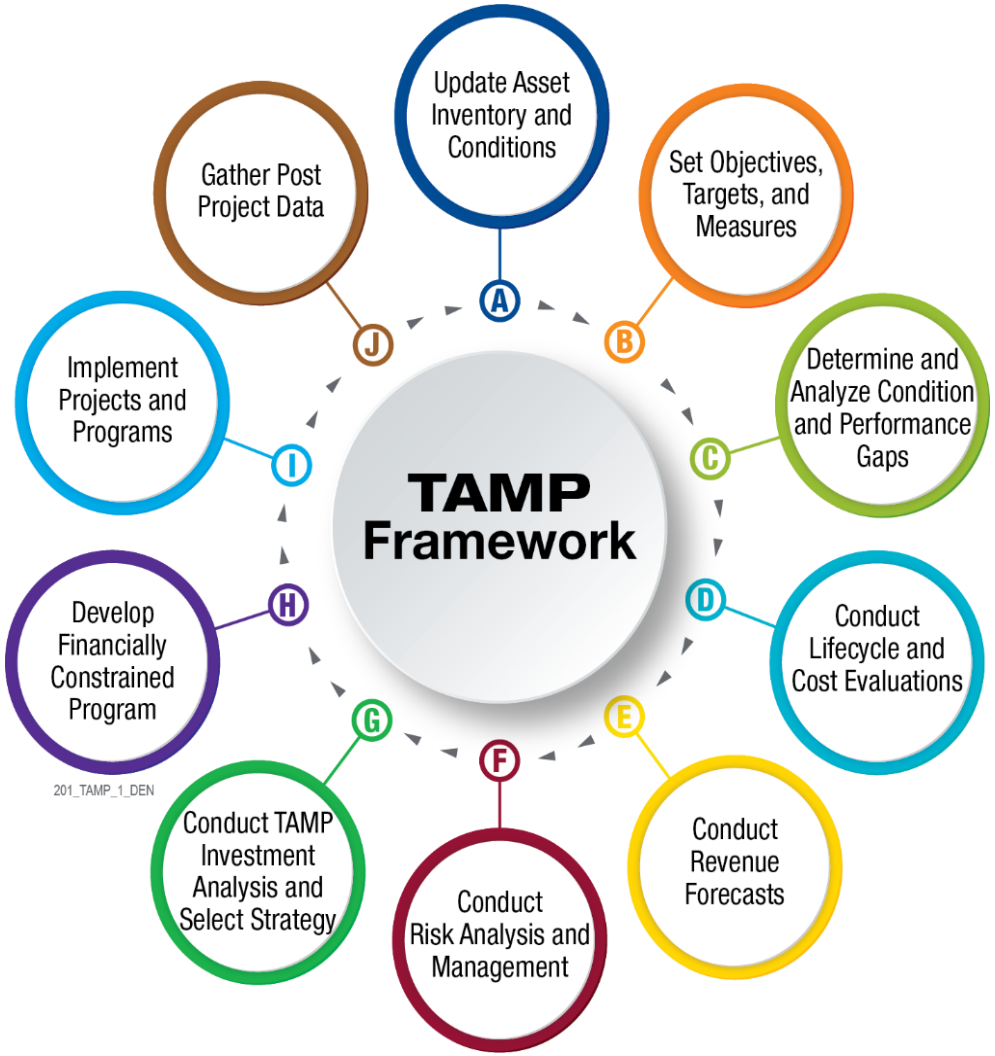
Table 1.1. NHS vs. Non-NHS Pavement and Bridges	
NHS Pavement	1,433 lane miles
Non-NHS Pavement	8,322 lane miles
NHS Bridges	530 bridges
Non-NHS Bridges	632 bridges

NHS Bridges: 86% of the deck area

NHS Pavements: 48% of the traffic volume

Chapter 2: Asset Management Approach

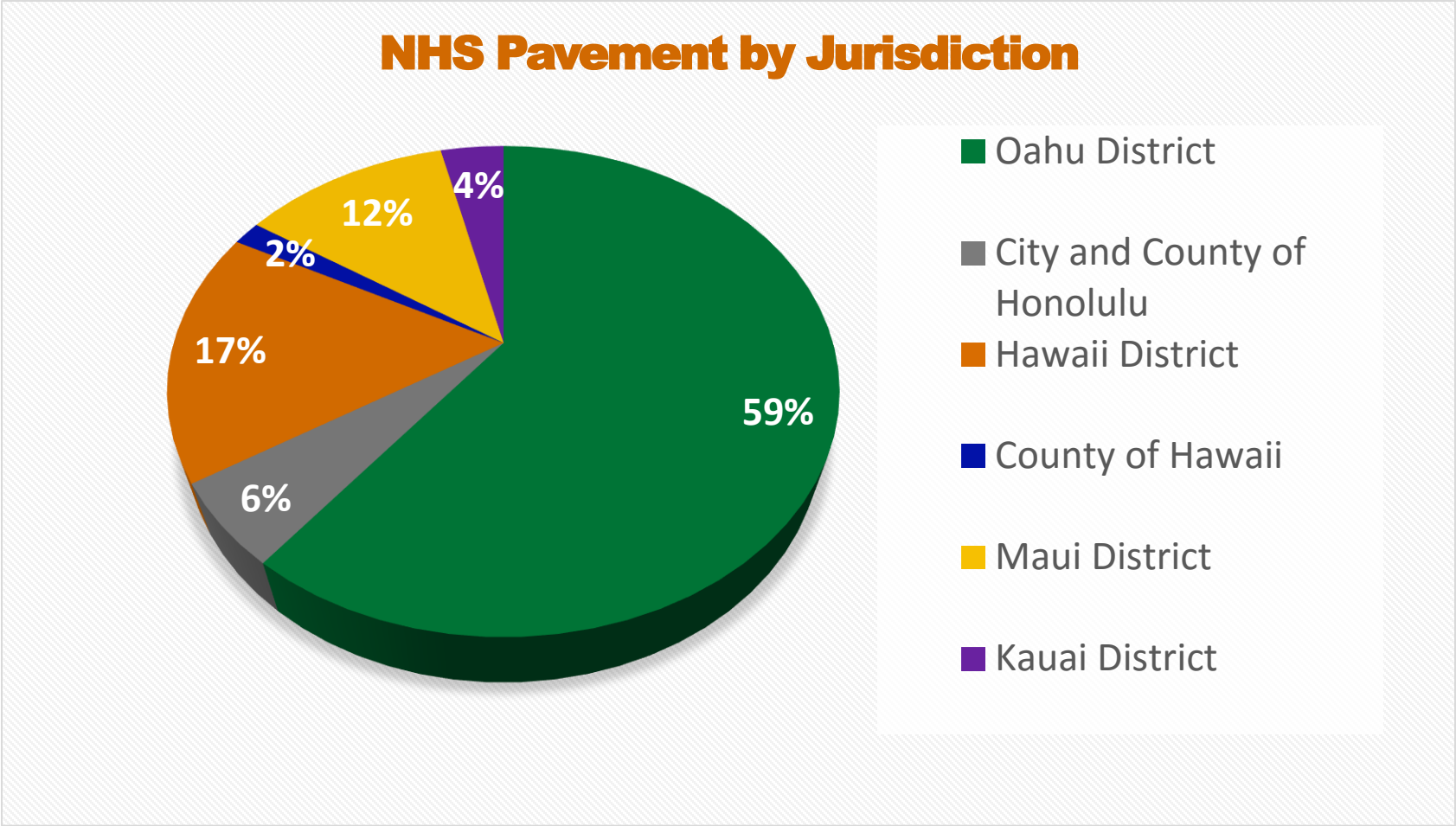
TAMP Framework



Chapter 2:
Asset Management Approach

Governance

Chapter 3: Inventory and Condition



Chapter 3: Inventory and Condition

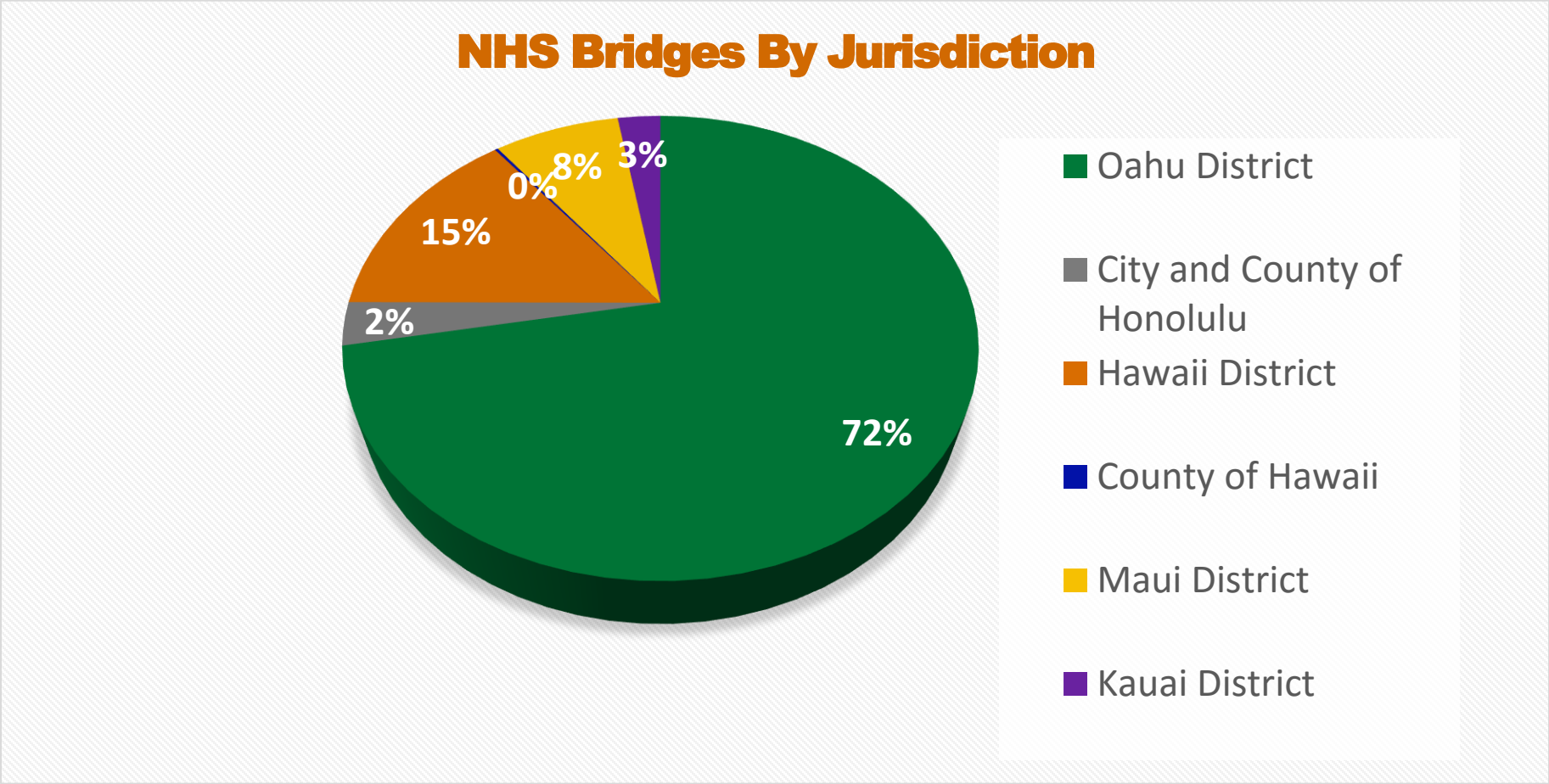


Table 3.5. NHS Pavement Inventory and Condition

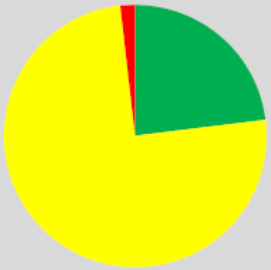
	Lane- Miles	Good	Fair	Poor	
All NHS					
Interstate	290	15%	83%	2%	
Non-Interstate NHS	1143	18%	76%	6%	

Summary of NHS Pavement Conditions

Summary of Oahu NHS Pavement

Oahu District	852	5%	93%	2%	
City and County of Honolulu	80	0%	87%	13%	

Table 3.6. NHS Bridge Inventory and Conditions

	Amount	Good	Fair	Poor	
All NHS					
NHS Bridges	530	23%	75%	2%	

Summary of NHS Bridge Conditions

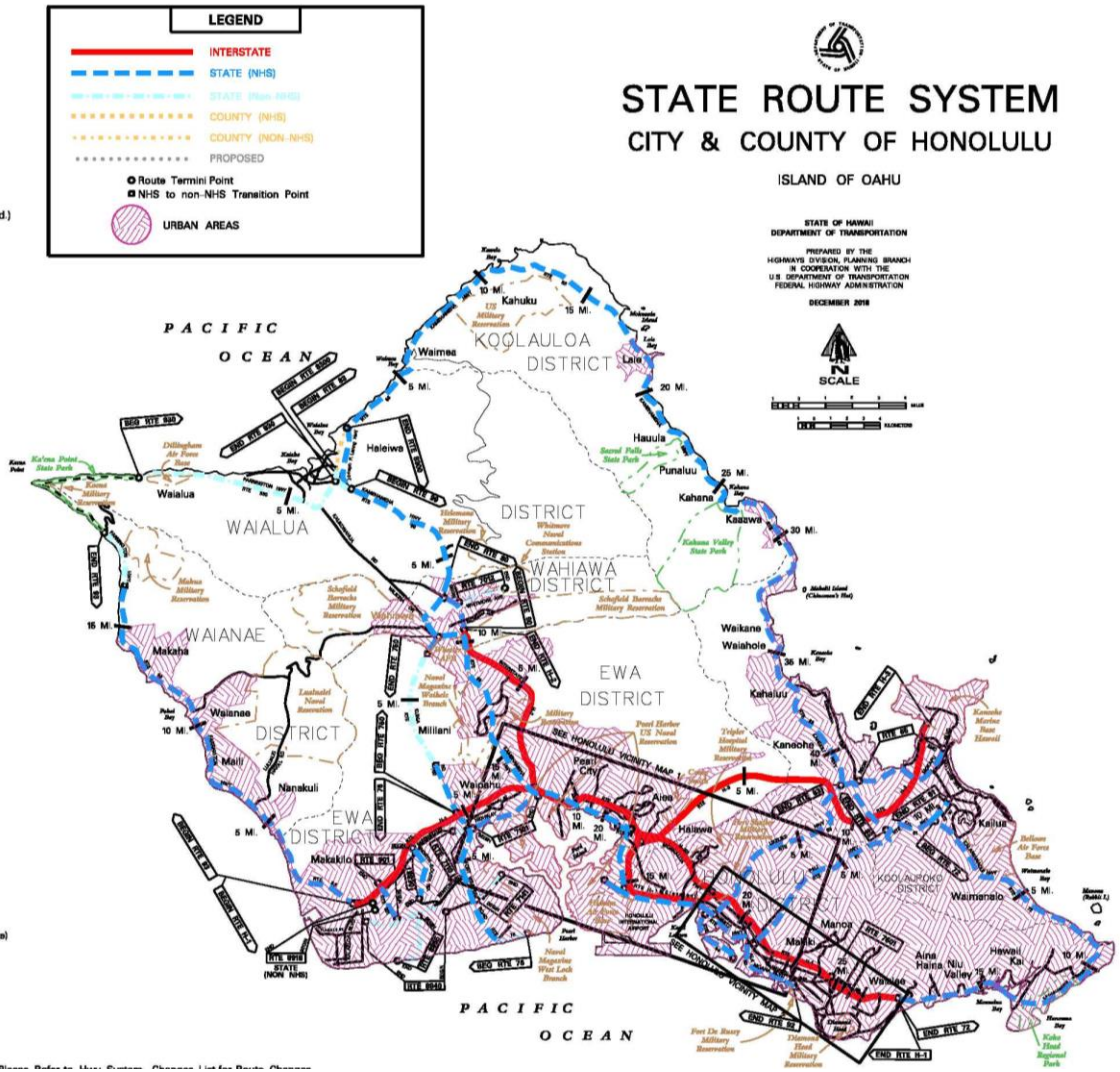
Summary of Oahu NHS Bridges

Oahu District	380	20%	79%	1%	
City and County of Honolulu	9	25%	67%	8%	

Island of Oahu
National Highway System (NHS)

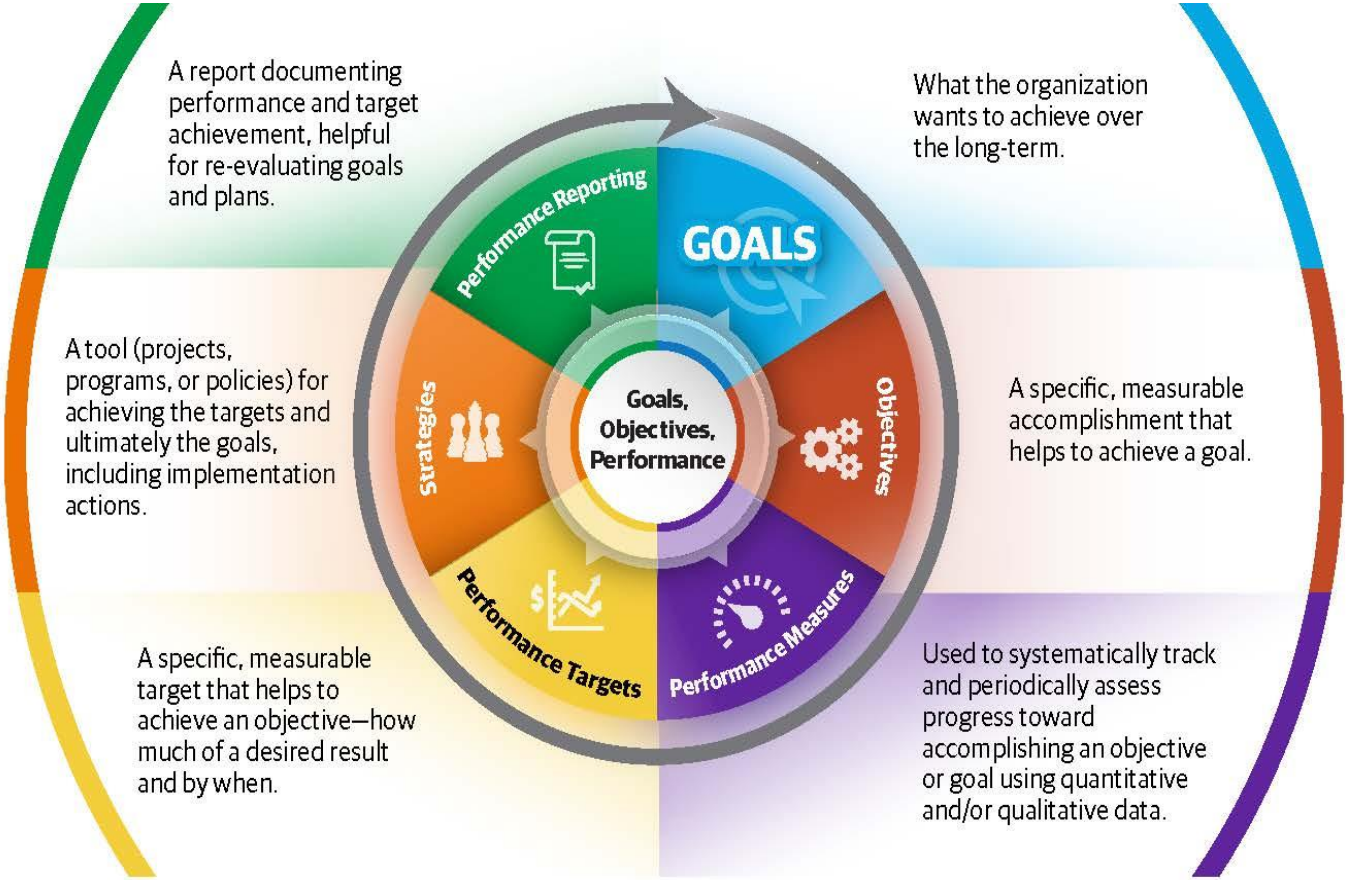
OAHU:

ROUTE	LENGTH	(MILES)
H-1	27.149	(Queen Lili'uokalani Freeway, Lunalilo Freeway)
H-2	8.319	(Veterans Memorial Freeway)
• H-3	15.316	(John A. Burns Freeway)
H-201	4.075	(Moanalua Freeway)
SUBTOTAL	54.859	(Interstate)
• 61	10.586	(Pali Hwy., Kalanianaole Hwy., Kailua Rd.)
• 63	8.299	(Kalihi St., Likelike Hwy.)
• 64	2.605	(Sand Island Pkwy. and Access Rd.)
• 65	4.148	(Kaneohe Bay Dr., Mokapu Saddle Rd., Mokapu Blvd.)
• 72	18.423	(Kalanianaole Hwy.)
• 76	6.617	(Fort Weaver Road, Kunia Rd.)
78	0.739	(Moanalua Freeway)
• 80	1.890	(Kamehameha Highway)
• 83	43.904	(Kam. Hwy., Kahekili Hwy., Likelike Hwy.)
92	9.279	(Kam-Nimitz Hwy., Nimitz Hwy., Ala Moana Blvd.)
• 93	19.524	(Farrington Hwy.)
• 98	1.758	(Vineyard Blvd.)
• 99	23.842	(Kam. Hwy., Kamananui Rd., Wilikina Dr., Farrington Hwy.)
• 750	8.046	(Kunia Road)
• 901	1.383	(Fort Barrette Road, Makakilo Dr.)
930	7.931	(Farrington Hwy., Kaukonahua Rd.)
• 7012	1.860	(Whitmore Ave.)
• 7101	2.990	(Farrington Hwy.)
• 7110	0.60	(Farrington Hwy.)
• 7141	1.496	(Iroquois Rd.)
• 7239	0.329	(Ulune St., Halawa Valley Rd.)
• 7241	2.324	(Kahuapaani St., Halawa Hts. Rd.)
• 7310	1.030	(Puuloa Rd.)
• 7345	0.551	(Jarrett White Rd.)
• 7350	0.586	(Bougainville Dr.)
7351	0.230	(Radford Dr.)
7401	0.106	(Kam. Hwy.)
• 7413	0.343	(Lilihe St.)
• 7415	0.517	(Middle St.)
7601	0.419	(Old Waialae Rd.)
• 8300	0.375	(Kamehameha Highway) (RTE TOTAL 1.969)
8918	0.116	(Wekea Street)
• 8930	2.461	(Kualakai Parkway)
• 8940	3.320	(Franklin D. Roosevelt Ave.)
8955	2.689	(Coral Sea Rd.)
SUBTOTAL	191.316	(State Routes only)
TOTAL	246.175	(State & Interstate)
• 6001	0.164	(Kailua Rd. – NHS Section of County Route)
• 7402	5.196	(King St. – NHS Section of County Route)
• 7414	0.413	(Middle St. – NHS Section of County Route)
• 7502	3.299	(Beretania St. – NHS Section of County Route)
• 7503	3.112	(Kapiolani Blvd. – NHS Section of County Route)
• 7504	0.395	(Alakea St. – NHS Section of County Route)
• 7505	0.597	(Pali Hwy., Bishop St. – NHS Section of County Route)
• 7511	0.942	(Ward Ave. – NHS Section of County Route)
• 7512	0.865	(Pensacola St., Waimanu St. – NHS Section of County Route)
• 7516	0.553	(Punchbowl St. – NHS Section of County Route)
• 7526	0.600	(Lunalilo St. – NHS Section of County Route)
• 7614	0.457	(Punahou St. – NHS Section of County Route)
• 7615	0.488	(University Ave. – NHS Section of County Route)
• 7801	0.412	(Waialae Ave. – NHS Section of County Route)
74140	0.120	(Notley St. – NHS Local Rd.)
SUBTOTAL	17.613	(County NHS)



CH2MHILL

Performance Management Process



Chapter 4: Performance Measures and Targets

GOAL: Provide a process to help the HDOT achieve and sustain a state of good repair over the lifecycle of the assets, and to improve or preserve the condition of the NHS.

OBJECTIVES:

- Implement plans and projects to support the transportation asset management process.
- Establish data governance and data collection standards.
- Facilitate coordination, collaboration, and knowledge transfer within the team.
- Communicate the transportation asset management activities to the executive levels of the HDOT.
- Pursue the solicitation and promotion of best practices.
- Promote transportation asset management benefits and uses throughout the HDOT, counties, and other external stakeholders.

Chapter 4: Performance Measures and Targets

Table 4.1. HDOT's Performance Measures and Performance Goals for NHS Pavements and Bridges

Asset	Performance Measure	Current Condition 2017	2-Year Target	4-Year Target	Perf. Goal 10-year Goal
Bridges	% of NHS bridges classified in good condition	23%	20%	20%	20%
	% of NHS bridges classified in poor condition	2%	2%	2%	2%
Pavements	% of pavements on the Interstate in good condition	15%	n/a	7%	50%
	% of pavements on the Interstate in poor condition	2%	n/a	4%	4%
	% of non-Interstate NHS pavements in good condition	18%	15%	15%	25%
	% of non-Interstate NHS pavements in poor condition	6%	4%	4%	2%

Chapter 5: Performance Gap

Federal Requirements

- 23 CFR Part 515 requires that states establish a performance gap analysis process for their TAMPs.
- As part of the gap analysis, the HDOT must compare the current asset performance to the target and/or desired performance condition.
- A projected asset performance is determined and compared to the target and/or the desired performance condition.

Performance gap means the gaps between the current asset condition and state DOT targets for asset condition, and the gaps in system performance effectiveness that are best addressed by improving the physical assets.

Performance Gap Analysis Process

A. Performance measures were proposed and established in Chapter 4 of this TAMP.

B. The current condition of the assets is presented in Chapter 3 of this TAMP.

C. BrM is used to conduct performance-based scenarios based on condition and life cycle strategies, policies, and consideration of the full life cycle. In addition, funding assumptions and risks are considered.

D. Based on the results of the scenarios, the HDOT is able to quickly identify the gap between the desired condition or target and the current condition.

E. If a gap occurs between the desired condition/target and current condition, investment strategies will be identified to close or reduce the gaps.

Chapter 5: Performance Gap

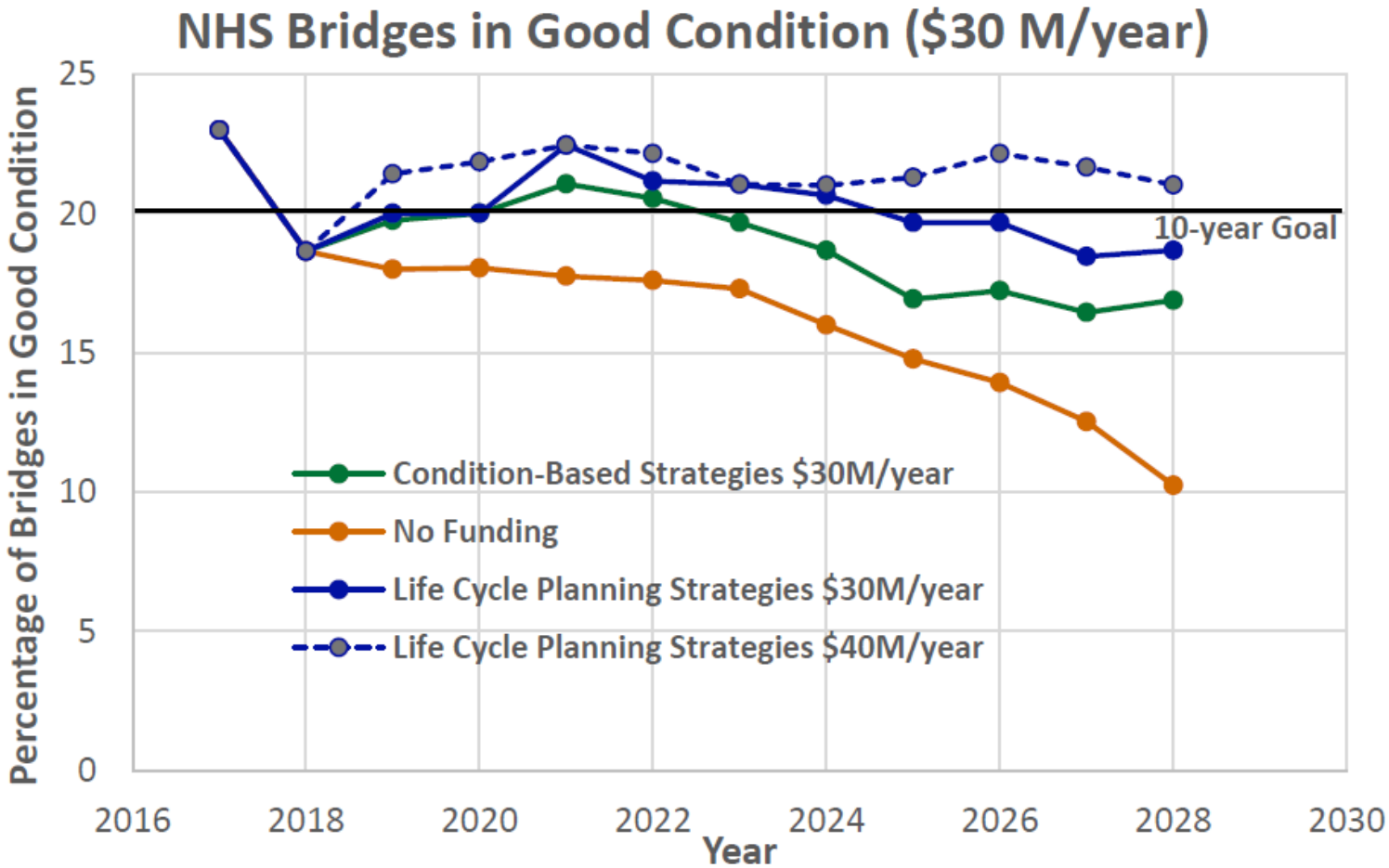


Figure 5.1. Projected State of Good Repair for NHS Bridges

Chapter 5: Performance Gap

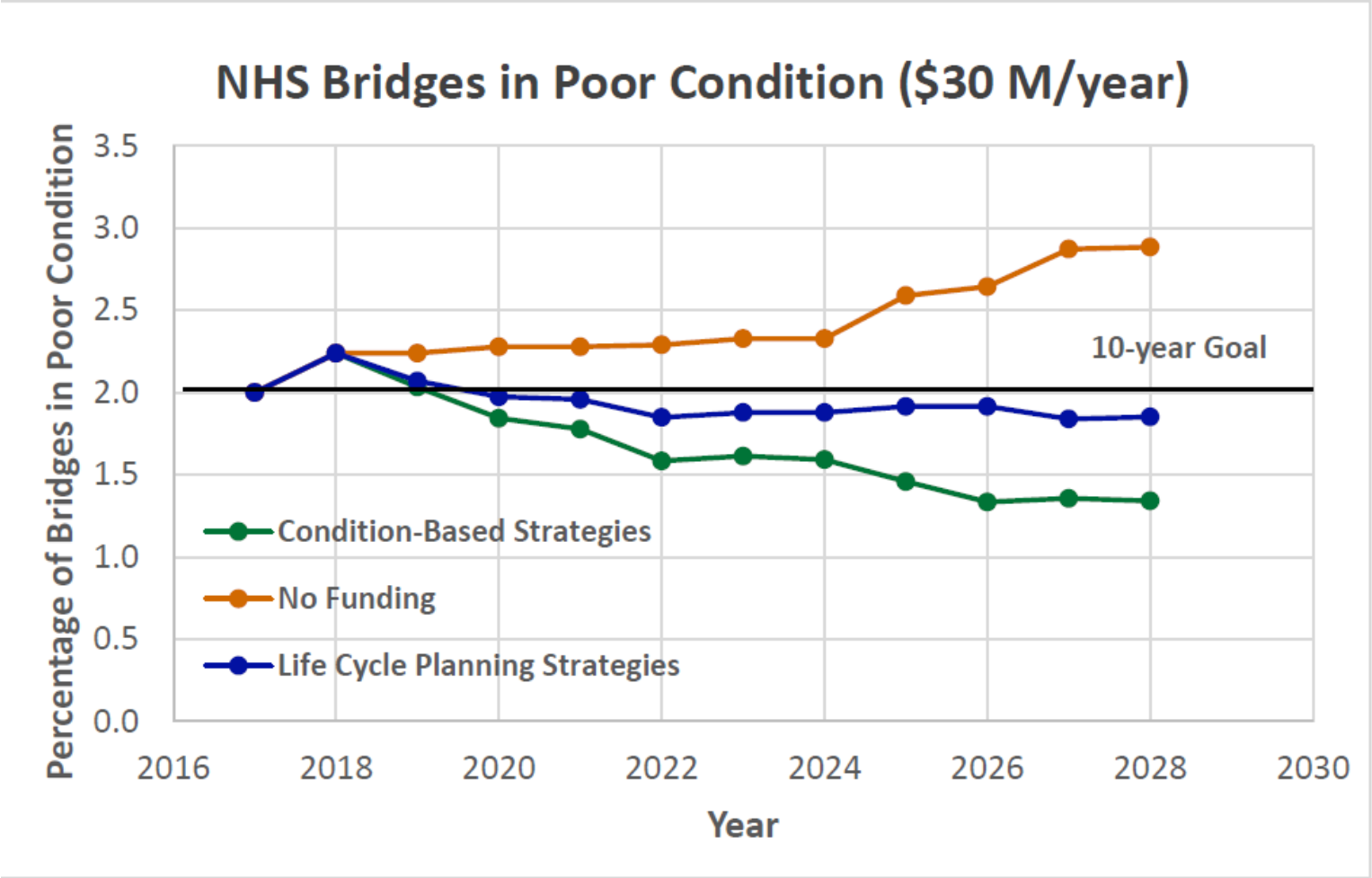


Figure 5.2. Projected State of Poor Repair for NHS Bridges

Chapter 5: Performance Gap

Table 5.1. NHS Bridge Asset Performance and Gap				
	Annual Funding	Good	Fair	Poor
NHS Bridges				
Current Performance (2017)	$30-40 million	23%	75%	2%
2-year Target (2019)		20%		2%
2-year Projection	$30 million	20%		2%
4-year Target (2021)		20%		2%
4-year Projection	$30 million	22.5%		1.9%
10-Year Desired State of Repair (2027)		20%		2%
10-Year Projection	$30 million	18.5%		1.8%
10-Year Projected Gap		1.5%		No gap

Chapter 5: Performance Gap

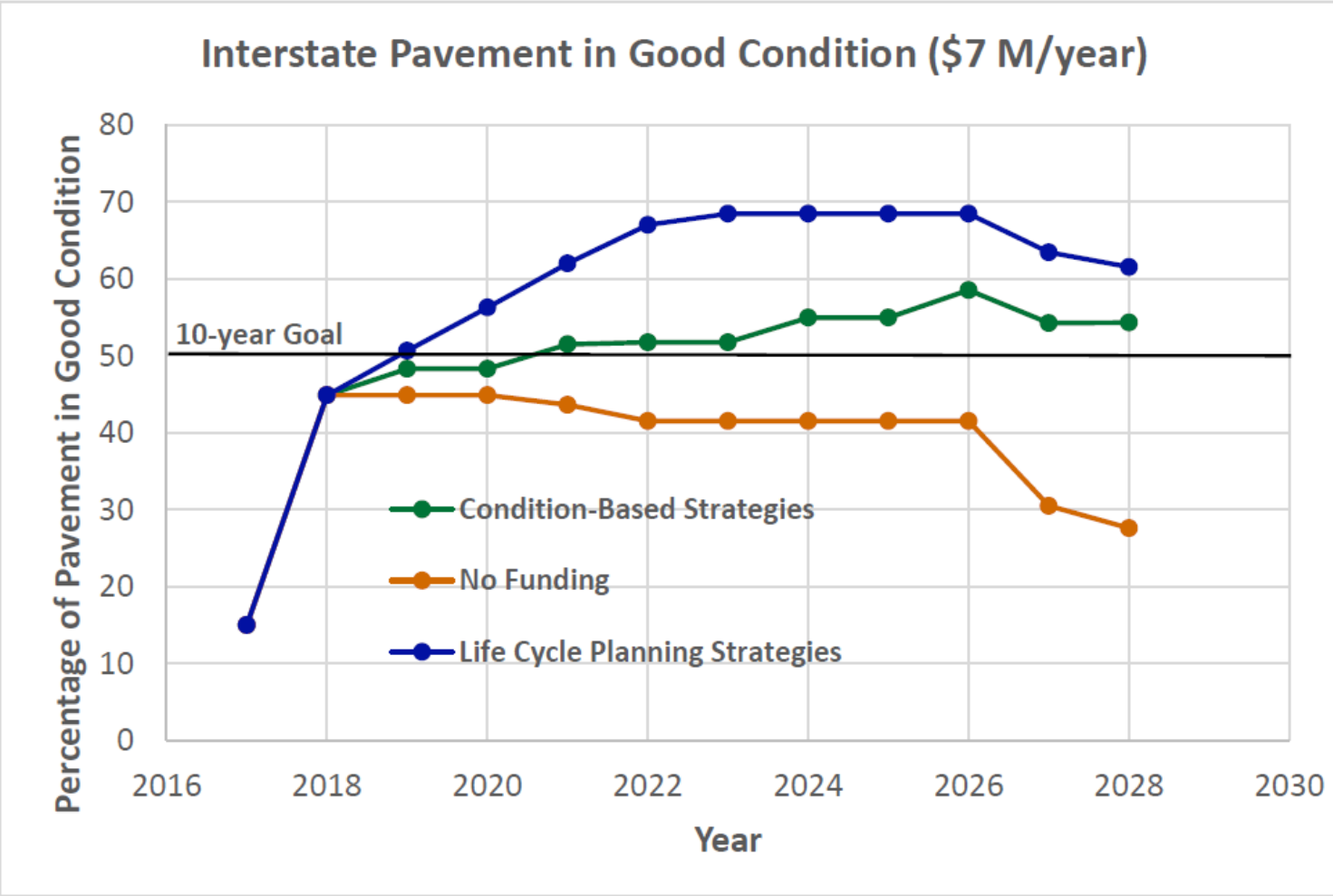


Figure 5.3. Projected State of Good Repair for Interstate Pavements

Chapter 5: Performance Gap

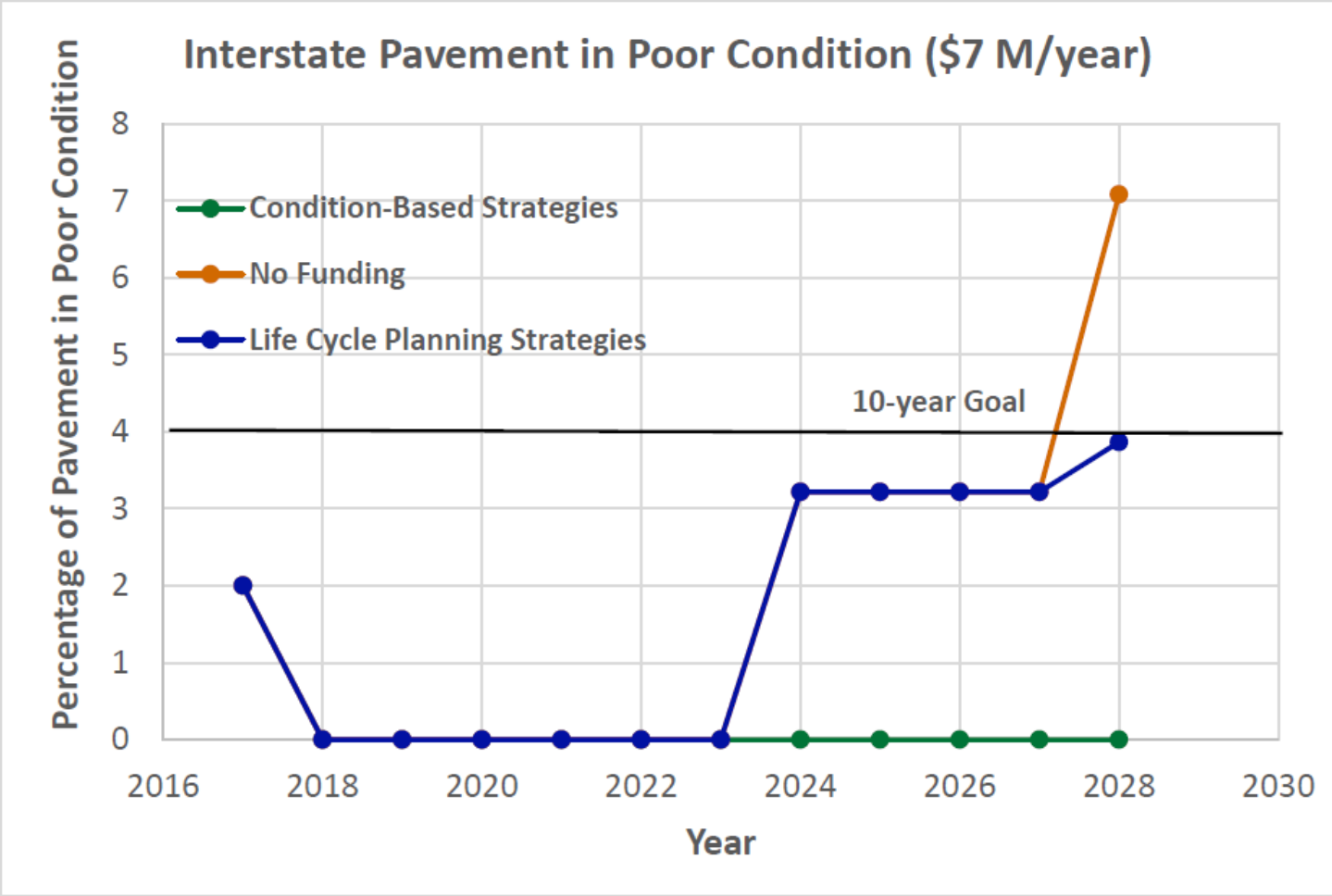


Figure 5.4. Projected State of Poor Repair for Interstate Pavements

Chapter 5: Performance Gap

Table 5.2. NHS Interstate Asset Performance and Gap

NHS INTERSTATE	Annual Funding	Good	Fair	Poor
Current Performance (2017)	$26 million	15%	83%	2%
4-year Target (2021)		7%		4%
4-year Projection	$7 million	62%		0%
10-year Desired State of Repair		50%		4%
10-year Projection	$7 million	63%		3.2%
10-year Projected Gap		No gap		No gap

Chapter 5: Performance Gap

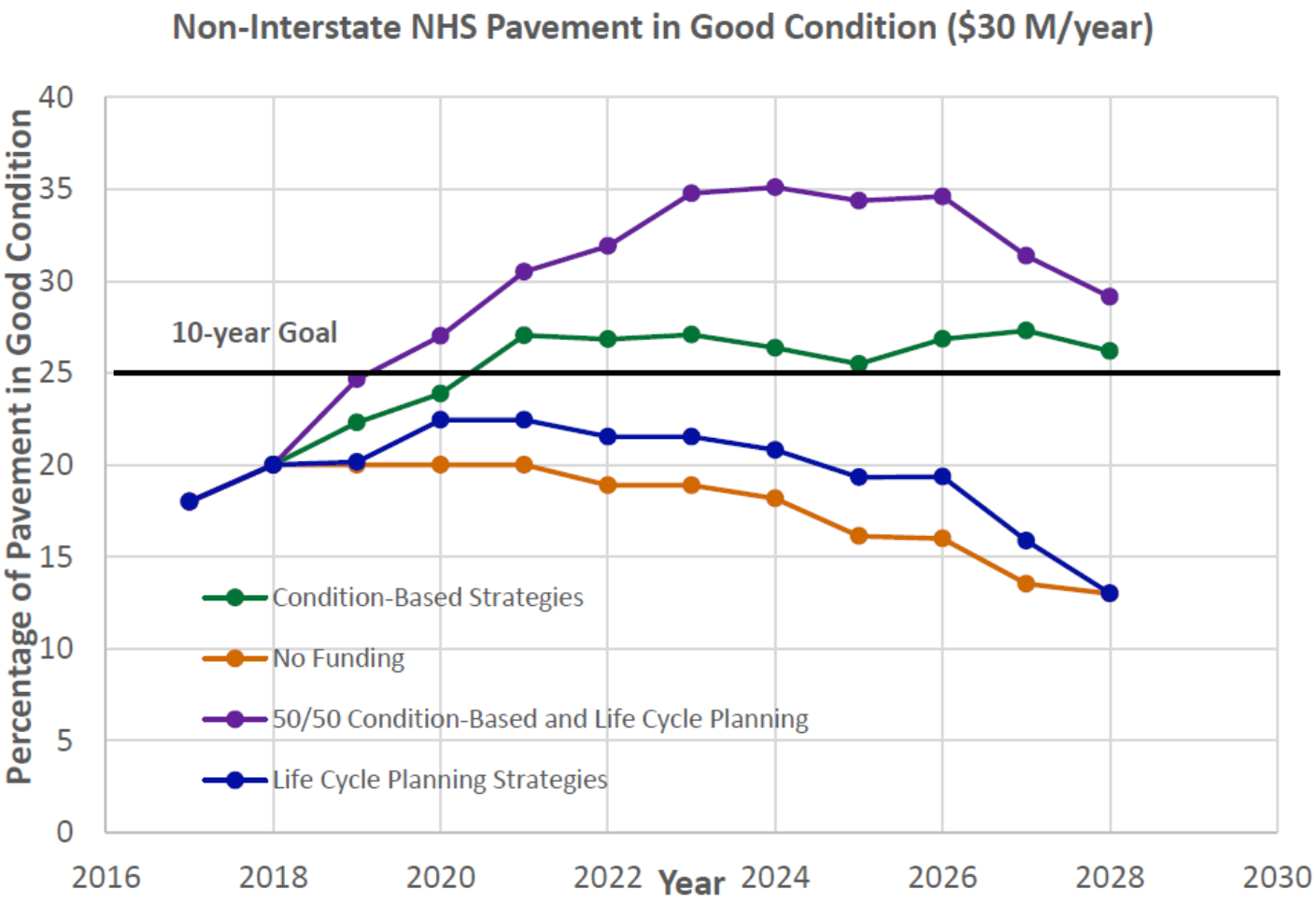


Figure 5.5. Projected State of Good Repair for Non-Interstate NHS

Chapter 5: Performance Gap

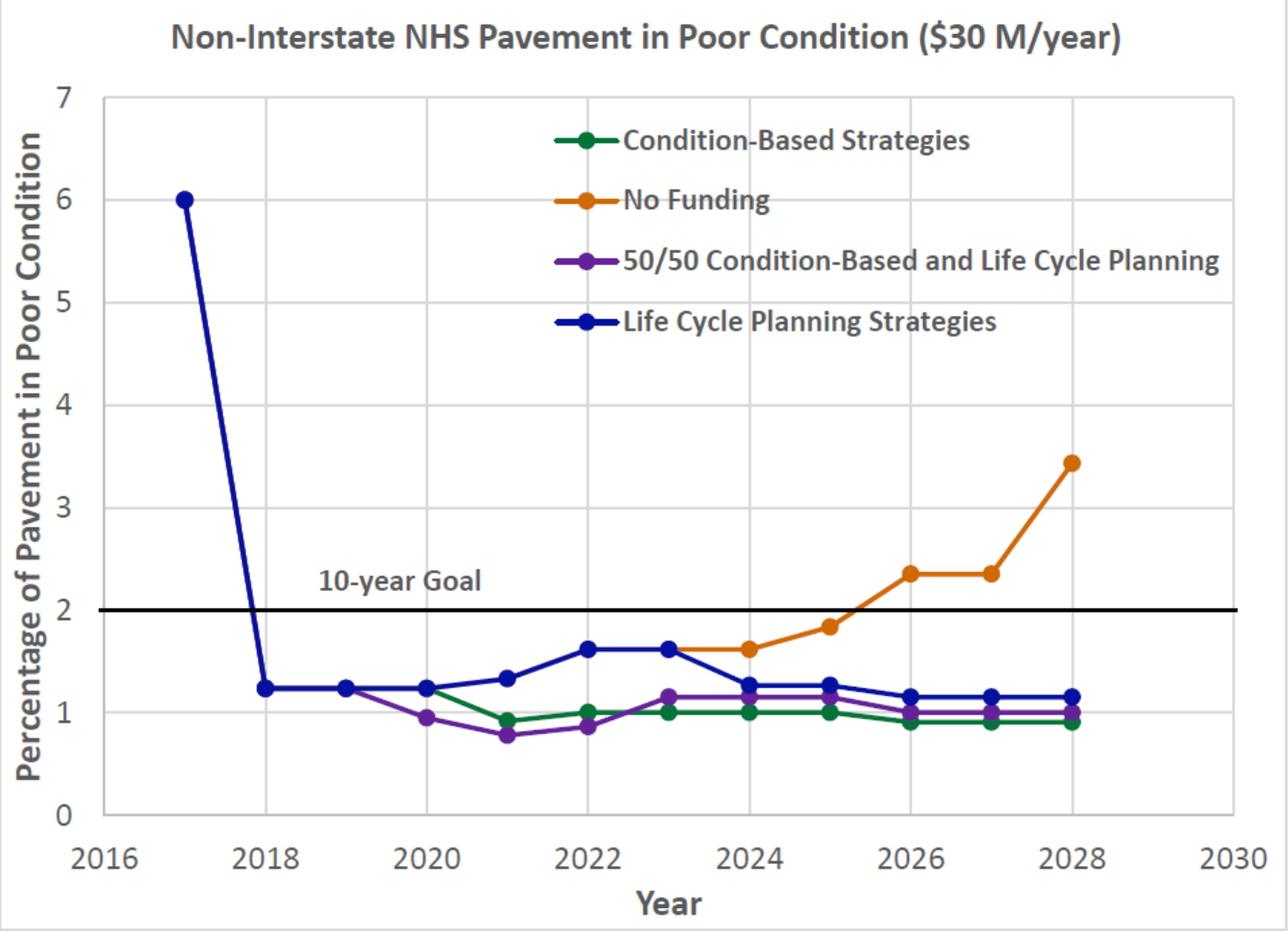


Figure 5.6. Projected State of Poor Repair for Non-Interstate NHS

Chapter 5: Performance Gap

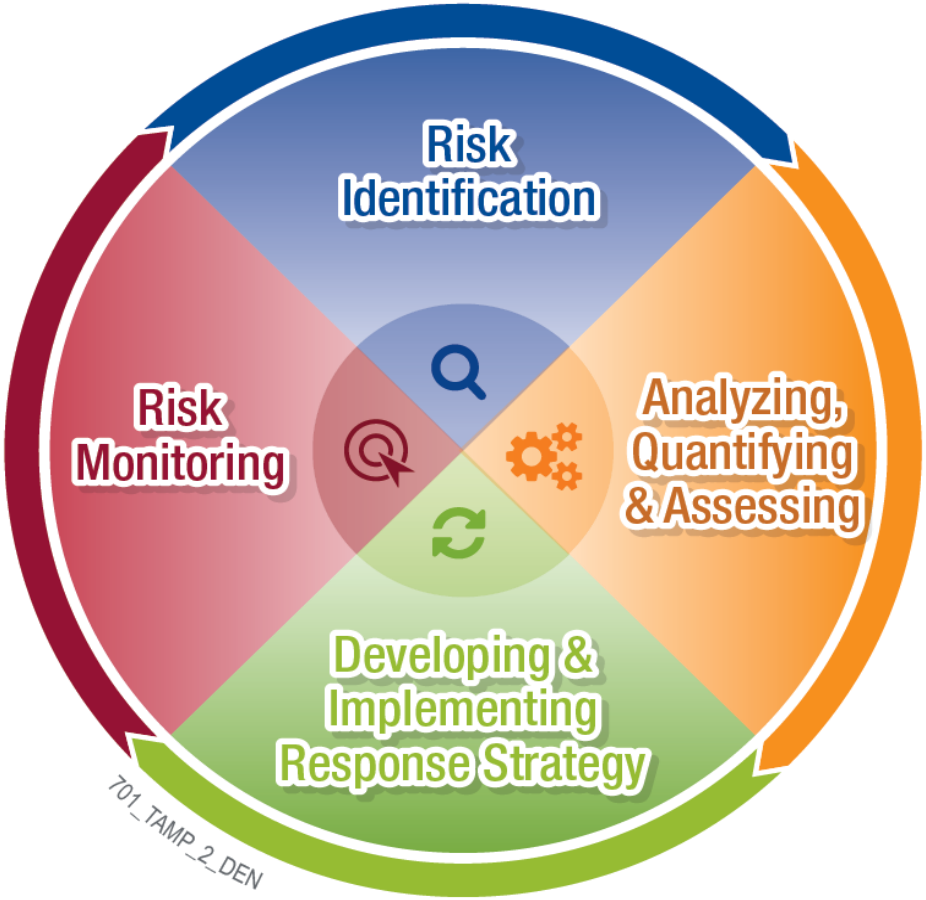
Table 5.3. Non-Interstate NHS Pavement Asset Performance and Gap

NON- INTERSTATE NHS PAVEMENT	Annual Funding	Good	Fair	Poor
Current Performance (2017)	$30 million	18%	76%	6%
2-year Target (2019)		15%		4%
2-year Projection	$30 million	25%		1%
4-year Target (2021)		15%		4%
4-year Projection	$30 million	30%		1%
10-year Desired State of Repair		25%		2%
10-year Projection	$30 million	31%		1%
10-year Projected Gap		No gap		No gap

Chapter 6: Environmental Vulnerability

- **Tropical Climate**
- **Coastal Environment**
- **Hurricanes and Tropical Storms**
- **Seismic Activity**
- **Lava Flows**
- **Geographic Isolation**
- **Sea Level Rise**

Risk Management Cycle



Risk Identification - Documentation of the material threats to the organization's achievement of its objectives and goals.

Analyzing, Quantifying and Assessing Risks - Identifying probability and consequences.

Developing & Implementing Response Strategies - Formulate methods and implement measures to avoid, minimize, transfer (share), or mitigate risks at the organizational, programming, and project levels.

Monitoring - Continual measurement and monitoring of the risk strategies using a risk register

Asset Management Risks

Hazards - Severe weather events, climate change and sea level rise, shoreline erosion, rockfall/ slope stability, lava flows and earthquakes.

Financial - Dependence on fuel tax revenues, lack of financial data, continuous short-term federal transportation bills or extensions.

Organizational - Changes in administration or division priorities, staff shortages in HDOT and partnering agencies, loss of organization or departmental information as a result of staff turnover and retirement.

Strategic - Uncertainties or incompleteness of data, complexity and lengthy environmental process impacting project delivery process, lengthy procurement and contracting, industries inability to implement a variety of preventative maintenance methods, and resistance to culture change and TAMP sustainment.

Risk Management Assessments

Risk Register

RISK REGISTER (sample)														
Risk Identification							Qualitative Risk Assessment			Risk Response		Monitoring		
Item #	Status	Risk Category	Risk Item	Cause	Effect	Threat or Oppor-tunity	Probability	Impact	Matrix Reference	Response Strategy	Response Action	Lead Office	Monitoring Frequency	Status Update
1	Active	Programming	Increased Storm Severity	Flood / hydraulic induced damage	Loss of access	Threat	M	H	GW 1	Mitigate	HDOT to review design standards to determine cost increase, then make decision to adopt change.	HWY-D	bi-annual for bridges (normal inspection frequency) to determine effectiveness of design change	not yet imple-mented

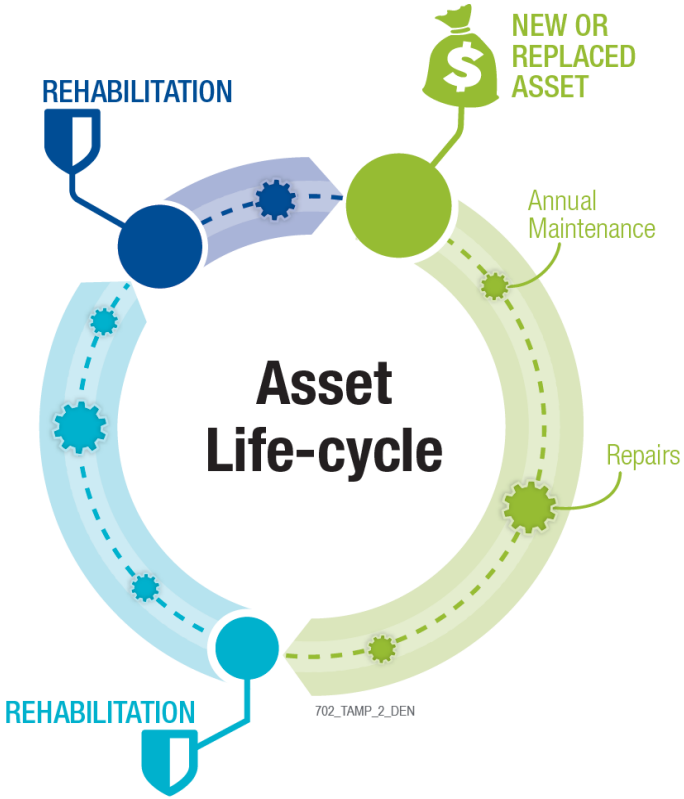
Emergency Events

- Identify roads and bridges that require repeated repair or reconstruction due to emergency events
- Develop a plan to address and monitor risks

Chapter 8: Life-Cycle Planning

Life cycle planning considers the cost and benefits of an asset from the time its need is identified until the need no longer exists and the asset is replaced or retired.

- Requires consideration of future outcomes
- Considers current condition of system assets
- Identifies strategies to get the best return on your investment



Life-Cycle Planning Process

A. Select and identify the asset classes and networks that will be analyzed.

B. Define LCP strategies.

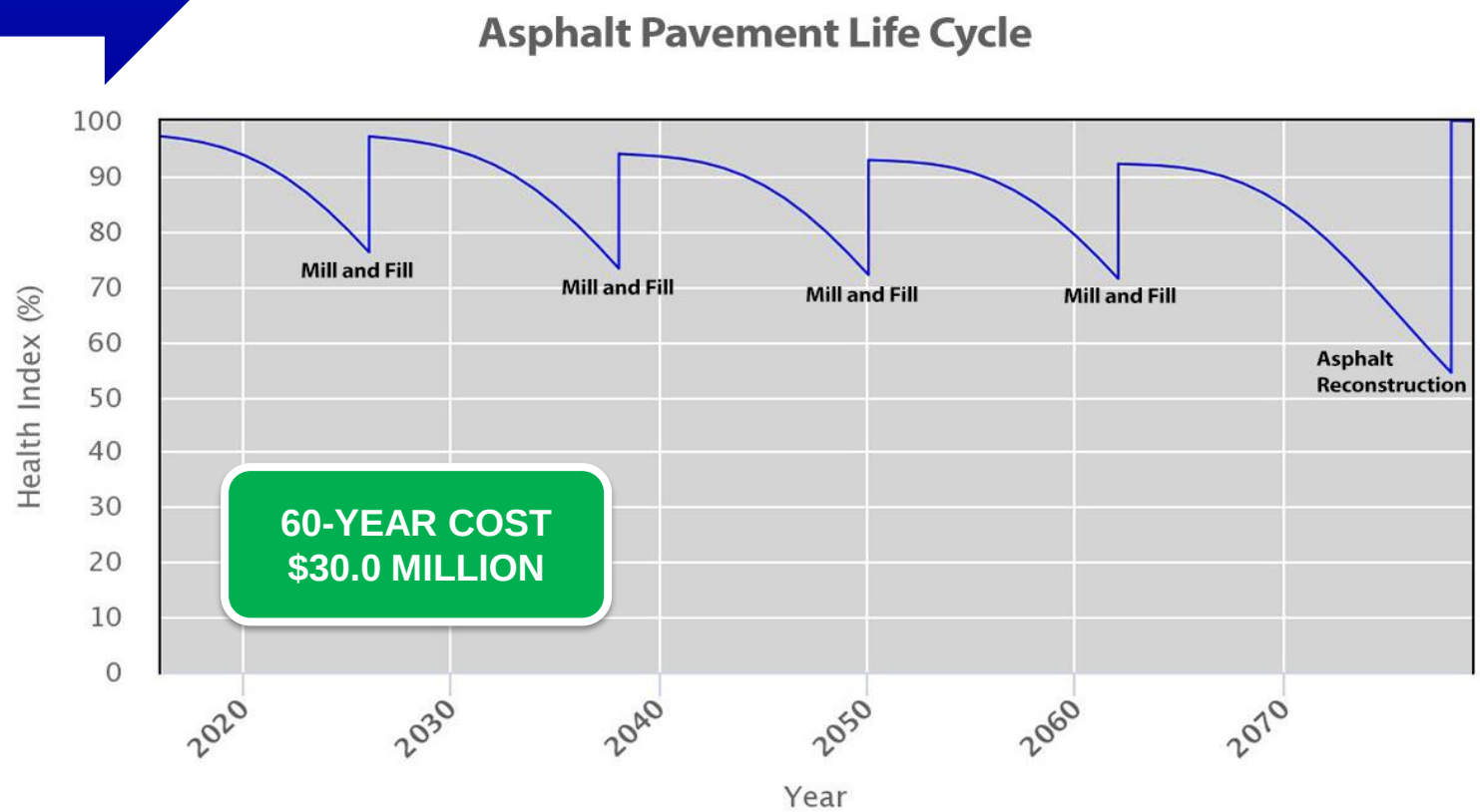
C. Set LCP scenario inputs.

D. Develop the LCP scenarios.

E. Provide input to financial planning.

Rehab vs. Preventative Strategies

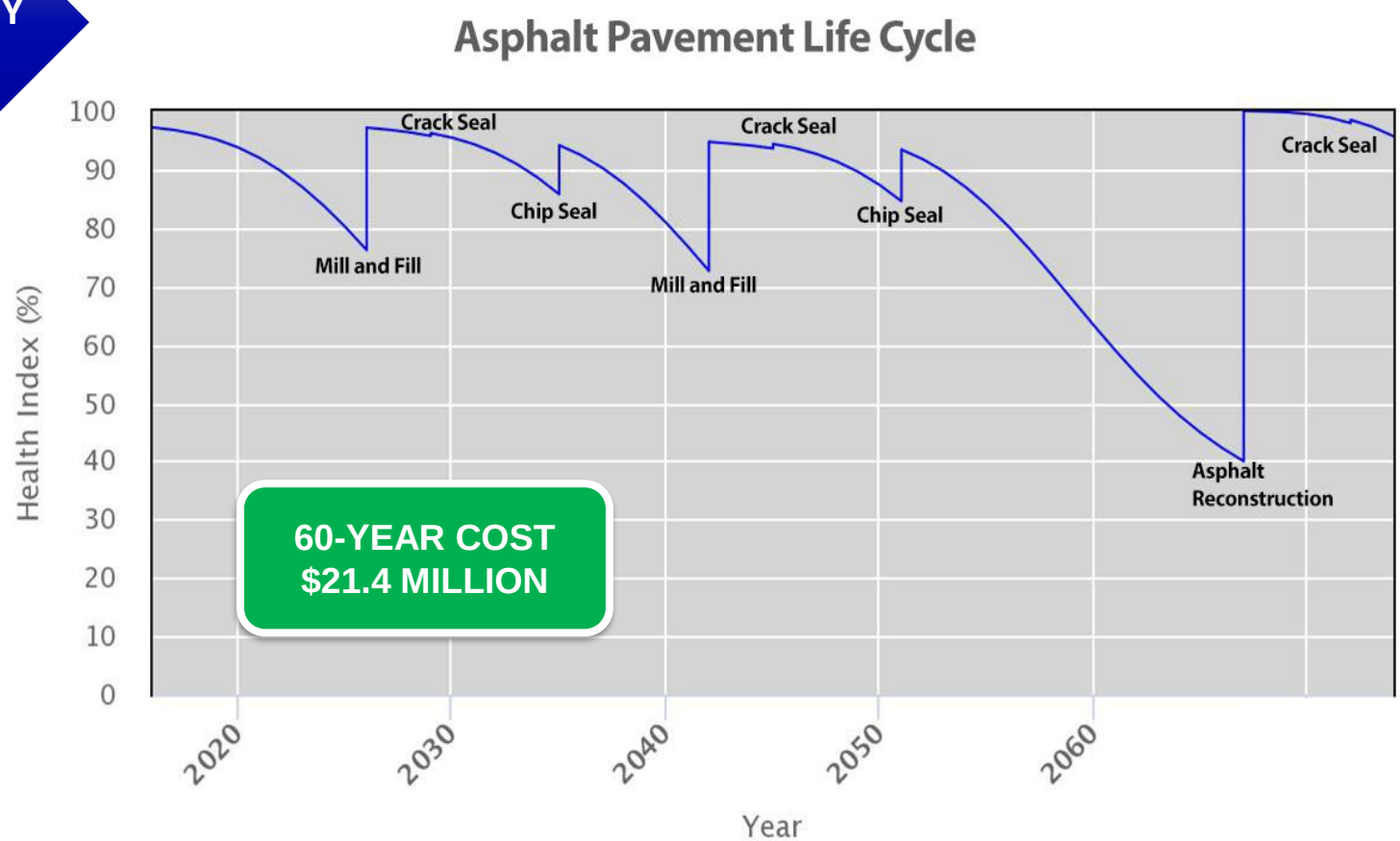
PAST STRATEGY



60-YEAR COST
$30.0 MILLION

Rehab vs. Preventative Strategies

CURRENT STRATEGY



60-YEAR COST
$21.4 MILLION

Table 8.1. Pavement Life Cycle Work Activities

Work Activity	Activity Type	Frequency (years)	Unit Cost
Maintenance	Street Sweeping	Annually	
	Inlet Cleaning	Annually	
	Pothole Repair	Annually	
	Field Inspections	Annually	
Preservation/ Preventative	Asphalt Crack Seal	3	$6/foot
	Asphalt Slurry Seal	5	$28/square foot
	Asphalt Chip Seal	5	$26/square foot
	Asphalt Thin Overlay	8	$36/square foot
	Concrete Joint Resealing	10	$29 each
	Concrete Spall Repair	5	$96 each
	Concrete Diamond Grinding	10	$36/square foot
Rehabilitation	Asphalt Localized Repair	5	$28/square foot
	Asphalt Mill and Fill	15	$45/square foot
	Concrete Slab Jacking	10	$158 /square foot
	Concrete Dowel Bar Retrofit	15	$16/square foot
	Concrete Slab Replacement	15	$14,800 each
Reconstruction	Asphalt Reconstruction	30	$135/square foot
	Concrete Reconstruction	40	$1,600/square foot

Chapter 8: Life-Cycle Planning

Table 8.2. Bridge Life Cycle Work Activities

Work Activity	Activity Type	Frequency (years)	Unit Cost
Maintenance	Crack Sealing	Annually	
	Inlet Cleaning	Annually	
	Bridge Inspections	Annually	
	Spall Repairs	Annually	
Preservation/ Preventative	Paint Structure	10	$45/square foot
	Scour Countermeasures	10	$100/square foot
	Repair Joints	10	$75/foot
	Deck Repair	7	$80/square foot
	Repair Concrete Superstructure	10	$56-10,000 each (greatly varies per element of the structure)
	Repair Steel Superstructure	10	
	Repair Concrete Substructure	10	
	Repair Steel Substructure	10	
	Repair Culvert	10	$400/foot
Rehabilitation	Deck Overlay	20	$100/square foot
	Replace Joints	15	$400-$2500/ft
	Rehab Concrete Superstructure	20	$586-125,000 each (greatly varies per element of the structure)
	Rehab Steel Superstructure	20	
	Rehab Concrete Substructure	20	
	Rehab Steel Substructure	20	
	Rehab Culvert	20	$200/square foot
	Seismic Retrofit		$100/square foot
Replacement	Replace Bridge	75	$700/square foot

Federal Requirements

23 CFR § 515.7 (d) requires state DOTs to establish a process for the development of an asset management financial plan spanning 10 years.

The Financial Plan shall

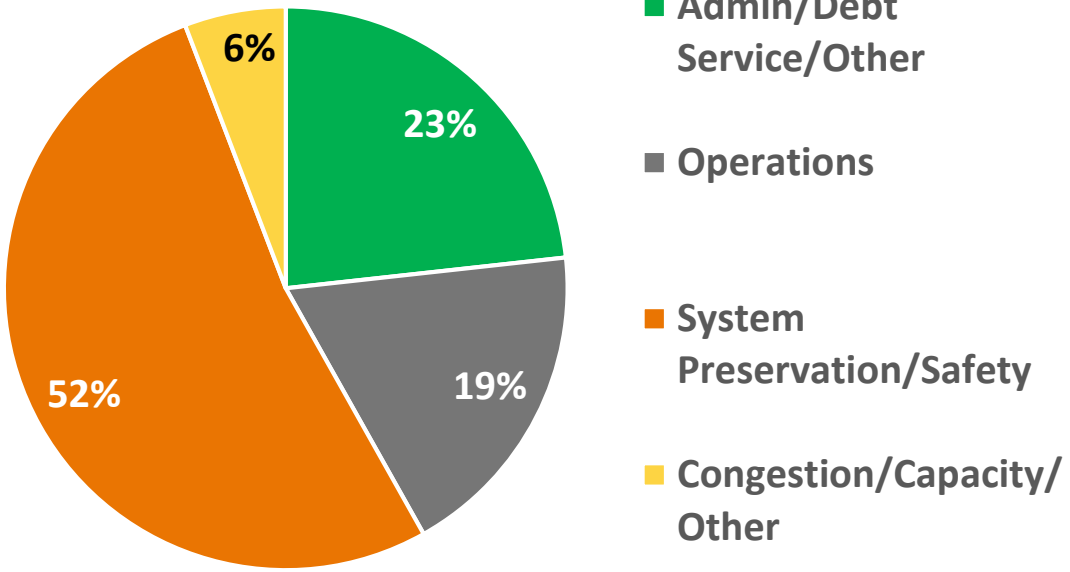
- Include the estimated cost to implement the investment strategies by State fiscal year and work type.
- Include the estimated funding levels that are expected to be reasonably available, by fiscal year, to address the costs of implementing the strategies, by work type.
- Identifies anticipated sources of available funding.
- Includes a summary asset valuation for the State's NHS pavement and bridges

HDOT Expenditures

Two primary functions:

- Administration/Debt Service/Operations
- Programs/Projects

Approximately 58 percent goes to Programs and Projects (approximately $255 million)



Chapter 9: Financial Plan

Table 9.7. Annual Funding for NHS Assets (in Millions)

Asset	Maint-enance	Preventa-tive	Rehabilita-tion	Recon-struction	Initial Construct-ion	Annual Funding
NHS Bridges	$1-3	$3-6	$5-10	$15-$20	$0	$30
NHS Interstate Pavement	$0.5-1	$1-2	$1-2	$3-5	$0	$7
NHS Non-Interstate Pavement	$1-3	$2-5	$5-10	$15-$20	$0	$30

Chapter 10: Investment Strategies

In accordance with FWHA requirements, the TAMP must identify **investment strategies** that make progress towards:

- Achieving a desired state of good repair over the life of the assets.
- Improving or preserving the asset condition and performance.
- Achieving the targets for asset condition and performance of the NHS.
- Achieving national performance goals.

Investment Strategies

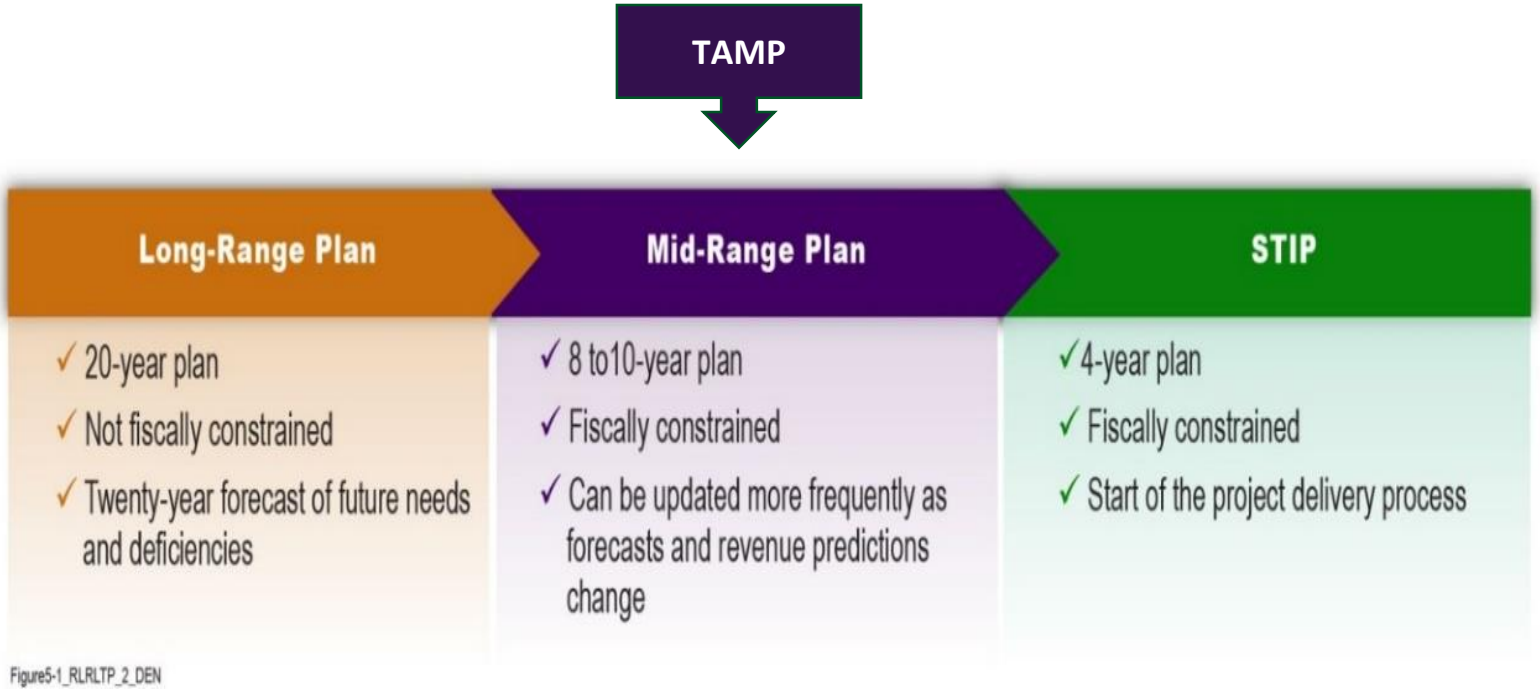
- Review of projected trends
- Look at the budget needed to meet all targets and goals
- Identify short-term and long-term financial needs

Chapter 10: Investment Strategies

Table 10.1. Condition, Targets, and 10-Year Investment Levels

Asset	Current Condition 2017	10-Year Target	10-Year Projection	Investments Required to Achieve Targets in 2027
NHS bridges	Good- 23%	20%	18.5%	$30 million annually
	Poor- 2%	2%	1.8%	
Interstate Pavements	Good- 15%	50%	63%	$7 million annually
	Poor- 2%	4%	3.2%	
Non-Interstate NHS pavements	Good- 18%	25%	31%	$30 million annually
	Poor- 6%	2%	1%	

Figure 2.5. Implementation from Long-Range Plan to Mid-Range Plan to STIP



Continuous Improvements

- Summary of takeways and important actions
- Organizational alignment
- Strengthening data and information systems
- Firming up the process

VII. Invitation to interested members of the public to be heard on matters not included on the agenda

VIII. Announcements
Next meeting is scheduled for September 24, 2019 at 1:00 p.m.

IX. Adjournment