

MICHAEL P. VICTORINO
Mayor
ROWENA M. DAGDAG-ANDAYA
Director

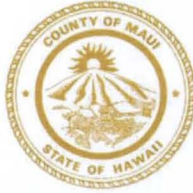
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COUNTY OF MAUI
**DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION**
200 SOUTH HIGH STREET, ROOM NO. 410
WAILUKU, MAUI, HAWAII 96793

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OFFICE OF THE MAYOR

August 12, 2019

Honorable Michael P. Victorino
Mayor, County of Maui
200 South High Street
Wailuku, Hawaii 96793

For Transmittal to:

Honorable Alice L. Lee, Chair
Maui County Council
Water and Infrastructure Committee
200 South High Street
Wailuku, Hawaii 96793

Dear Chair Lee:

APPROVED FOR TRANSMITTAL

Michael P. Victorino 8/14/19
Mayor Date

SUBJECT: DEPARTMENT OF PUBLIC WORKS, ENGINEERING DIVISION AND HIGHWAYS DIVISION, PAVEMENT PRESERVATION PRESENTATION (WAI-30(5))

Thank you for allowing the Department of Public Works (DPW) to present the Pavement Preservation Program at the June 3, 2019 Water and Infrastructure Committee meeting. In response to your June 12, 2019 letter, we offer the following information in response to your requests:

1. ***For the Molokai District:***
 - a. ***The iWorQ listing; and***
 - b. ***The pavement preservation schedule.***

Please refer to the enclosed iWorQ ratings and pavement preservation schedule for the Molokai District. See Exhibit A and Exhibit B. Please note that the resurfacing of Airport Loop Road is still tentative. DPW has been working with the State of Hawaii, Department of Transportation (DOT) to determine who is responsible for maintaining the road. If concluded that the State is responsible for resurfacing the Airport Loop Road, roads on the resurfacing schedule will be moved a year ahead.

2. ***Relating to the employee training program for the Engineering and Highways Divisions:***
 - a. ***The annual training schedule, including costs; and***

A short description of the training provided to Highways Division staff with estimated costs is as follows:

- FEMA, NIMS, ICS – Federal Emergency Management Agency, National Incident Management System, Incident Command System – Provides a basic understanding of the lingo and coordinated response to an event. This system is also used to manage a large event such as the Maui Fair. No cost for online training or advance training for fee.
- HLTAP – Hawaii Local Technical Assistance Program – Locally managed by the DOT, a program overseen nationally by the Federal Highways Administration (FHWA) – provides training on highways-related matter. HLTAP has provided the following training at no cost to the County of Maui.
- ATSSA, TCT/TCS – American Traffic Safety Services Association, Traffic Control Technician & Traffic Control Supervisor – training to properly set up work zones for work within an active roadway. HLTAP program covers training costs.
- Heavy Equipment Operator Training – contracted with recognized heavy equipment operator trainer from Utah to provide advance heavy equipment operator training. In 2019, training will be provided on the following equipment: Grader, Dozer, Excavator, and Backhoe.
- RISK – County of Maui, Corporation Counsel, Risk Management Division provides safety-related training. Currently visiting all Highways District Baseyards to update CPR/AED/First Aid certification training. Provides work zone safety training and consultation of safety matters. In-house trainers covered by RISK.
- Highways Equipment Operator Trainer – in-house heavy equipment operator trainer providing classroom and hands-on operator training to qualify for Commercial Driver License (CDL) and equipment operator certifications. Collaborate with Department of Personnel Services (DPS) to offer countywide training. In-house trainer. Annual overtime/additional costs about \$30,000 (DPS covers \$10,000).
- DLNR, DOFAW – State of Hawaii, Department of Land and Natural Resources, Division of Forestry and Wildlife – Wildland fire training to expose our staff to wildland fire behavior, response, and safety. Training provided by DOFAW at no cost to the County of Maui.
- HAPI – Hawaii Asphalt Paving Industry – coordinates training/clinics of asphalt paving operations. Provided roller training and techniques. Cost is dependent on the type of training/travel.
- ISSA – International Slurry Systems Association – hosts the Slurry Systems Workshop annually to explain slurry systems (slurry, micro-surfacing, and chip seals). One of the best workshops to keep abreast of the industry by providing technical and educational support. Annual Cost is about \$10,000.

- Mechanic Technical Training – Automotive Service Excellence (ASE) and Diesel programs are offered to mechanics to further develop skill sets and training for mechanics at the County Garages. Local trainings are offered infrequently by organizations such as NAPA Auto Parts, and others. As technological advancements continue to grow, this training is becoming more and more of a focus for the Highways Division to recruit and retain valuable talent in the field. Cost is typically dependent on seminar/course cost and travel requirements.

b. An estimate of the additional funding needed to train a new employee.

In addition, the Highways Division would like to send more staff to specialized operator training, and/or bring in specialized trainers to Maui. An increase of approximately \$25,000 annually in the Pavement Preservation Operating Budget would be helpful to make this a reality.

Other considerations for training are the employee's time away from project work and the need for redundant equipment. The more Equivalent Personnel (EP) count we have in the Division, the easier it will be to strategically schedule training on a rotating basis. The same is true with equipment. Similar to private contractors, if we have redundant equipment, such as multiple pavers and multiple micro-surfacing trucks, we can train and produce projects simultaneously. Currently, production is essentially shut down when we train or when a single piece of equipment breaks down. Additional staff and equipment will help the Division continue to complete projects while training is in progress.

3. The Department's growth plan, including resources needed and partnership opportunities.

The Highways Division is geographically situated at six separate baseyard locations. Four on Maui, and one each on Molokai and Lanai. As the County population grows and the infrastructure and roadways age, the department continues to take on more maintenance responsibilities in each District.

On Molokai, there is a new baseyard location currently under construction; estimated completion is in 2020. In order for the Division to meet the growing needs of both maintenance and preservation of our roads, bridges, and drainageways, all five of the remaining baseyards have significant needs for expansion and/or relocation. At each baseyard, we are actively looking for opportunities to team with other Departments to help accommodate the needs of the Division.

The Wailuku baseyard on Kaohu Street is currently at maximum capacity, with little or no room for growth or expansion. It is home to several separate field crews, supervisory staff, and the associated equipment, all of which have grown causing major concerns for the capacity of the baseyard. The Wailuku baseyard includes employees and equipment from Wailuku Roads/Bridge/Drains, Pavement Preservation, Wailuku Garage Services, Traffic Signs and Markings, Traffic Signals, Highways Administration, and Solid Waste Refuse Collection.

There is a total of 107 employees, 245 pieces of heavy equipment, support trucks, and other types of equipment in an approximate 3.78 acres footprint.

To address space issues at the baseyard, there are two partnership opportunities that the Department would like to pursue. The first is with the Parks Department to establish a shared, South Maui baseyard on County-owned land above the Maui Police Department Station. This action would allow us to split Kihei from some of the Wailuku District responsibilities. Second, is to partner with the Department of Environmental Management (DEM), Solid Waste Division, Refuse Collection Section to establish a centralized garage services facility/baseyard dedicated to Highways Division and DEM Heavy Equipment. Considerable amounts of maintenance and repair work is provided by Highways to DEM Solid Waste at all County baseyards to ensure vehicle availability and reliability.

With regards to roadway pavement maintenance, we are taking a comprehensive approach towards preserving our pavements. Highways Division would like to see this particular program essentially double in size and capacity within the next few years from 10 Employees in FY20 to 20 Employees by FY23.

There are also new regulatory requirements for drainage systems through the MS4 program, and a need to remove large quantities of sediment/waste, and repair our flood control and drainage infrastructure. There is an increased awareness and an active reduction effort of herbicide on our roadways.

In addition, there are new goals from the State for the electrification of our Fleet by 2040. In order to meet all these new demands, the Highways Division as a whole will need to adapt and grow simultaneously with the Pavement Preservation group. Also, the recruitment and retention of talented and motivated fleet employees continues to be a challenge. The Highways Division is investigating possible partnerships with technical colleges in Hawaii and the mainland to provide on-the-job training and opportunities to the local economies. Each road we preserve adds significant life to the roads without ruts or potholes, and gives our Engineering Division time to reconstruct or rehabilitate other major roads in the system.

Taking into account maintenance demands for Pavement Preservation, MS4/Drainage, and Garage/Fleet services, the overall necessary growth of the Division is projected to be approximately 35 persons in the next few years. As stated above, ten new positions for Pavement Preservation, 15 new positions for Road Bridge Drains, and ten new positions for Garage Services. The costs for new or expansion facilities is unknown at this point.

4. *An explanation as to how the Department ensures compliance with the Davis-Bacon Act and payment of fair wages for road construction projects.*

The Davis-Bacon Act of 1931 applies to contractors performing work on federally-funded projects in excess of \$2,000 for the construction, alteration, or repair of public buildings or public works. All DPW projects receiving funds through the Federal Highways Administration have required contract provisions relating to the Davis-Bacon Act.

Additionally, Hawaii law requires all State and County construction projects greater than \$2,000 to pay prevailing wages and overtime to laborers and mechanics per Chapter 104, HRS. All DPW projects, including federal-aid work, adheres to this law by review of weekly certified payrolls and the latest wage rate schedule.

5. *An explanation for why Molokai should buy its own crack sealer or additional equipment.*

Molokai District currently possesses a crack seal melting pot. Crack sealing is essential to pavement preservation. We are considering additional micro-surfacing equipment for the Molokai District as part of our pavement preservation growth plan. Currently, microsurfacing equipment is shipped to Molokai for four to six months each year. The overall condition and cost of reconstruction of Molokai roads provide an ideal situation for pavement preservation activities such as micro-surfacing and slurry applications. Eventually, we would like to see the Molokai District have their own micro-surfacing equipment, including the necessary increase to their operations budget.

6. *An explanation for why road resurfacing is done without drainage in place, especially in heavy rainfall areas such as Haiku.*

The cost of constructing drainage improvements in areas where there is no existing drainage infrastructure in place would limit the amount of roads that can be resurfaced per year.

Based on data from six drainline replacement projects bid in the past several years, the cost to install new drainline and structures ranges from \$400-\$2,000 per foot depending on the location, depth, size of materials, and conflict with other utilities. There is also a considerable cost associated with acquiring land to discharge the runoff to a gulch or stream, or constructing a retention basin.

DPW recognizes that lack of proper drainage is a major contributor to the degradation of a pavement structure, and does implement minor drainage improvements with resurfacing projects where possible. Grading to improve slopes, reestablishing swales and thru-gutters, and repairing deficiencies with existing drainage systems are examples of measures taken to improve drainage with resurfacing jobs.

7. *An explanation for why the Department is not utilizing new materials such as pervious pavement, which is designed for heavy rainfall areas.*

DPW supports the use of low-impact design elements such as pervious concrete pavement or porous asphalt pavement, but does not utilize those materials for roadways due to the initial cost and the required maintenance.

In order for these materials to be effective, a thicker pavement section and underlying gravel layer must be installed to provide sufficient void space for stormwater storage. Not only does this require deeper roadway excavation and possible conflict with shallow utilities, but it also must be installed by a specialty contractor who is familiar with the product and proper placement. The use of this technology is also limited to relatively flat roadways, where runoff has a sufficient opportunity to percolate into the pavement structure.

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Additionally, the recommended maintenance for pervious pavement entails frequent visual inspection and periodic blowing, sweeping, and vacuuming of the roadway using specialty equipment to minimize the clogging by organic matter and sediment.

DPW agrees that use of this material may greatly benefit the County and encourages its engineers to continuously learn and network with the concrete and pavement industry as technology develops. Use of pervious concrete pavement has been approved at several private developments and DPW hopes to remain at the forefront of emerging "green" development.

8. *An accounting of any lapsed funds for money allocated for road improvements.*

Please refer to the attached lapsed fund report. See Exhibit C.

If you have any further questions, please call John Smith of our Highways Division at 270-7869 or Chico Rabara of our Engineering Division at 270-7745.

Sincerely,

A handwritten signature in black ink, appearing to read 'RM Dagdag-Andaya', with a long horizontal flourish extending to the right.

ROWENA M. DAGDAG-ANDAYA
Director of Public Works

RMDA/RRR/KO (ED19-0997)

Attachments

iWorQ Ratings - Molokai District

ROAD NAME	FROM ADDRESS	TO ADDRESS	RSL*	LENGTH	REC. TREATMENT
AAHI PL	ILIAHI PL	END	20	275	No Maintenance/Seal Coat
AAHI PL	ROAD	ILIAHI PL	20	1229	Crack Seal/Seal Coat
AAHI PL	KAMEHAMEHA V HY	ROAD	20	1256	Crack Seal/Seal Coat
AILOA ST	KAMEHAMEHA V HY	AINOA ST	17	750	Patching/Slurry Seal
AINOA ST	AILOA ST	ALA MALAMA AV	14	655	Crack Seal/Seal Coat
AIRPORT LP	KEONELELE AV	MOKULELE ST	4	2108	Rebuild/Thick Overlay
AIRPORT LP	MOKULELE ST	MAUNALOA HY	6	1884	Mill and Fill - Thin Overlay
AKEU WY	KOALA PL	END	0	169	Reconstruction
AKEU WY	NANIKAI PL	KOALA PL	0	256	Reconstruction
ALA EKAHI ST	FARRINGTON AV	PUU KAPELE AV	8	3202	Mill and Fill - Thin Overlay
ALA EKOLU ST	FARRINGTON AV	END	16	1759	Crack Seal/Seal Coat
ALA ELUA ST	FARRINGTON AV	LIHI PALI AV	4	2872	Rebuild/Thick Overlay
ALA MALAMA AV	KOLAPA PL	ILIO RD	18	284	Crack Seal/Seal Coat
ALA MALAMA AV	PALAPALAE PL	END	14	125	Crack Seal/Seal Coat
ALA MALAMA AV	ILIO RD	KOKIO ST	12	569	Patching/Slurry Seal
ALA MALAMA AV	AINOA ST	KOLAPA PL	4	399	Rebuild/Thick Overlay
ALA MALAMA AV	PUALI PL	AINOA ST	4	415	Rebuild/Thick Overlay
ALA MALAMA AV	HOTEL LN	KAMOI ST	6	217	Mill and Fill - Thin Overlay
ALA MALAMA AV	N MOHALA ST	HOTEL LN	12	120	Crack Seal/Slurry Seal
ALA MALAMA AV	MANAKO LN	N MOHALA ST	12	102	Crack Seal/Slurry Seal
ALA MALAMA AV	MAKAENA PL	MANAKO LN	12	196	Crack Seal/Slurry Seal
ALA MALAMA AV	KIKIPUA ST	PALAPALAE PL	20	475	No Maintenance/Seal Coat
ALA MALAMA AV	KOKIO ST	MALAMALAMA PL	20	738	No Maintenance/Seal Coat
ALA MALAMA AV	KALOHI ST	KIKIPUA ST	20	297	No Maintenance/Seal Coat
ALA MALAMA AV	MALAMALAMA PL	KALOHI ST	14	478	Crack Seal/Seal Coat
ALA MALAMA AV	KAUNAKAKAI PL	MAKAENA PL	6	476	Mill and Fill - Thin Overlay
ALAEKEA ST	ALAHULA ST	LIMAII PL	18	258	Crack Seal/Seal Coat
ALAEKEA ST	OKANA ST	EPANE ST	16	162	Crack Seal/Seal Coat
ALAEKEA ST	FARRINGTON AV	OKANA ST	16	207	Crack Seal/Seal Coat
ALAHULA ST	ALAEKEA ST	UWAO ST	12	523	Patching/Slurry Seal
ALAHULA ST	UWAO ST	HUILA ST	12	824	Patching/Slurry Seal
ALOHI ST	KAMOI ST	END	6	232	Mill and Fill - Thin Overlay
ALOHI ST	N MOHALA ST	KAMOI ST	12	309	Crack Seal/Slurry Seal
ANALU PL	KALAMA RD	END	4	423	Rebuild/Thick Overlay
AUKUU PL	KIKIPUA ST	END	10	89	Patching/Slurry Seal
BEACH PL	KAUNAKAKAI PL	S MOHALA ST	13	599	Crack Seal/Seal Coat
BEACH PL	S MOHALA ST	END	14	512	Crack Seal/Seal Coat
EHAKO PL	KALAE HY	KIALOA ST	12	152	Crack Seal/Slurry Seal
EHAKO PL	LEOMELE ST	KALAE HY	12	147	Crack Seal/Slurry Seal
EPANE ST	FARRINGTON AV	ALAEKEA ST	12	734	Patching/Slurry Seal
FARRINGTON AV	HAUAKEA AV	ANHAKI ST	10	3176	Patching/Slurry Seal
FARRINGTON AV	NENEHANAPO AV	HAUAKEA AV	12	3331	Crack Seal/Slurry Seal
FARRINGTON AV	KOLEA AV	NENEHANAPO AV	10	3347	Patching/Slurry Seal
FARRINGTON AV	PUUPEELUA AV	KOLEA AV	10	5451	Patching/Slurry Seal
HALENA ST	KAANA ST	PUUNANA ST	12	407	Crack Seal/Slurry Seal
HIO PL	KAUNAKAKAI PL	END	10	461	Patching/Slurry Seal
HOAIKANE ST	HOALUA ST	OHA ST	12	405	Crack Seal/Slurry Seal
HOAIKANE ST	OHA ST	END	12	693	Crack Seal/Slurry Seal
HOALUA ST	WAIELI ST	UNAHE ST	14	261	Crack Seal/Seal Coat
HOALUA ST	UNAHE ST	HOAIKANE ST	14	202	Crack Seal/Seal Coat
HOALUA ST	HOAIKANE ST	HOEA ST	14	198	Crack Seal/Seal Coat
HOALUA ST	HOEA ST	MAUNALOA RD	14	256	Crack Seal/Seal Coat
HOAWA RD	KAUNAKAKAI RD	MAUNALOA HY	10	579	Patching/Slurry Seal
HOAWA RD	KALANIANAOLE AV	KAUNAKAKAI RD	10	2127	Mill and Fill - Thin Overlay
HOEA LANE	HOEA ST	UNAHE ST	14	861	Crack Seal/Seal Coat
HOEA ST	HOALUA ST	OHA ST	14	367	Crack Seal/Seal Coat
HOME OLU PL	PUALI PL	END	10	592	Patching/Slurry Seal
HOOMALU DR	LIKELIKE AV	KAHIIWA ST	16	3526	Crack Seal/Seal Coat
HOOLU PL	KAMEHAMEHA V HY	END	12	268	Crack Seal/Slurry Seal
HOTEL LN	ALA MALAMA AV	END	6	1074	Mill and Fill - Thin Overlay
HUAAI RD	MAUNALOA HY	PALUA PL	14	3277	Crack Seal/Seal Coat
HUAAI RD	PALUA PL	PEELUA PL	4	3701	Rebuild/Thick Overlay
HUAAI RD	PEELUA PL	END	4	2298	Rebuild/Thick Overlay
HUILA ST	OKANA ST	ALAHULA ST	18	168	Crack Seal/Seal Coat
HUILA ST	FARRINGTON AV	OKANA ST	6	184	Mill and Fill - Thin Overlay

*RSL = Remaining service life (years)

1 of 5

EXHIBIT "A"

6/14/2019

iWorQ Ratings - Molokai District

ROAD NAME	FROM ADDRESS	TO ADDRESS	RSL*	LENGTH	REC. TREATMENT
ILIAHI PL	Road	AAHI PL	20	1001	No Maintenance/Seal Coat
ILIAHI PL	KAMEHAMEHA V HY	Road	20	1139	Crack Seal/Seal Coat
ILIO RD	KIKIPUA ST	END	20	135	No Maintenance/Seal Coat
ILIO RD	KAIWI ST	KIKIPUA ST	20	815	No Maintenance/Seal Coat
ILIO RD	ALA MALAMA AV	KAIWI ST	20	518	No Maintenance/Seal Coat
KAANA ST	MAUNALOA HY	PUUMALU ST	12	152	Crack Seal/Slurry Seal
KAANA ST	PUUMALU ST	MAHIKI PL	12	243	Crack Seal/Slurry Seal
KAANA ST	MAHIKI PL	LINOHOU PL	12	267	Crack Seal/Slurry Seal
KAANA ST	LINOHOU PL	WAIELI ST	12	293	Crack Seal/Slurry Seal
KAANA ST	WAIELI ST	HALENA ST	12	273	Crack Seal/Slurry Seal
KAANA ST	HALENA ST	KAMAKAHI ST	12	421	Crack Seal/Slurry Seal
KAHANU ST	LIKELIKE AV	END	12	778	Crack Seal/Slurry Seal
KAHANU ST	MAUNALOA HY	LIKELIKE AV	12	304	Crack Seal/Slurry Seal
KAHANU ST	HOAWA RD	MAUNALOA HY	6	709	Mill and Fill - Thin Overlay
KAHI PL	KALAE HY	HE PL	12	229	Crack Seal/Slurry Seal
KAHI PL	HE PL	END	18	207	Crack Seal/Seal Coat
KAHINANI PL	END	KAMEHAMEHA V HY	6	2403	Mill and Fill - Thin Overlay
KAIHIWA ST	HOOMALU DR	END	18	250	Crack Seal/Seal Coat
KAIHIWA ST	KAMAHELE PL	HOOMALU DR	18	492	Crack Seal/Seal Coat
KAIHIWA ST	LIKELIKE AV	KAMAHELE PL	18	1313	Crack Seal/Seal Coat
KAIHIWA ST	MAUNALOA HY	LIKELIKE AV	18	586	Crack Seal/Seal Coat
KAIWI ST	LAMALOA PL	KIKIPUA ST	10	309	Patching/Slurry Seal
KAIWI ST	PAILOLO PL	LAMALOA PL	10	382	Patching/Slurry Seal
KAIWI ST	ILIO RD	PAILOLO PL	10	482	Patching/Slurry Seal
KAKALAHLE ST	KOLAPA PL	ALANUI KAIMIIE ST	10	636	Patching/Slurry Seal
KALAMA RD	PAKALA PL	ANALU PL	10	289	Patching/Slurry Seal
KALAMA RD	AKA PL	PAKALA PL	12	519	Crack Seal/Slurry Seal
KALANIANAOLE AV	LIKELIKE AV	END	12	673	Crack Seal/Slurry Seal
KALANIANAOLE AV	MAUNALOA HY	LIKELIKE AV	12	406	Crack Seal/Slurry Seal
KALOHI PL	KALOHI ST	END	10	195	Patching/Slurry Seal
KALOHI ST	KALOHI PL	WILIWILI PL	18	600	Crack Seal/Seal Coat
KALOHI ST	WILIWILI PL	ALA MALAMA AV	10	340	Patching/Slurry Seal
KALOHI ST	ALA MALAMA AV	ALANUI KAIMIIE ST	10	281	Patching/Slurry Seal
KAMAHELE PL	KAHIIWA ST	END	16	982	Crack Seal/Seal Coat
KAMAKANA PL	KAWELA WY	END	4	223	Rebuild/Thick Overlay
KAMAKANA PL	KAMEHAMEHA V HY	KAWELA WY	4	167	Rebuild/Thick Overlay
KAMILOLOA PL	POKO PL	END	12	1799	Crack Seal/Slurry Seal
KAMILOLOA PL	KAMEHAMEHA V HY	POKO PL	12	266	Crack Seal/Slurry Seal
KAMOI ST	ALOHI ST	ALA MALAMA AV	18	299	Crack Seal/Seal Coat
KAMOI ST	KAMEHAMEHA V HY	ALOHI ST	12	438	Crack Seal/Slurry Seal
KANO PL	KOKIO ST	END	10	177	Patching/Slurry Seal
KAPAAKEA LP	KAMEHAMEHA V HY	KAMEHAMEHA V HY	10	2042	Mill and Fill - Thin Overlay
KAPUAIWA PL	MAUNALOA HY	POND PL	12	411	Crack Seal/Slurry Seal
KAPUAIWA PL	POND PL	END	0	100	Reconstruction
KAWELA PLANT 2 RD	KAMEHAMEHA V HY	ULUANUI RD	8	329	Mill and Fill - Thin Overlay
KAWELA PLANT 3 RD	KAMEHAMEHA V HY	MAKAHI RD	4	271	Rebuild/Thick Overlay
KAWELA WY	KAMAKANA PL	END	4	182	Rebuild/Thick Overlay
KE ALA OLUOLU WY	KEALANUI OHINA PL	END	10	173	Patching/Slurry Seal
KE ALA OLUOLU WY	END	KEALANUI OHINA PL	10	208	Patching/Slurry Seal
KEALANUI OHINA PL	KAMEHAMEHA V HY	KE ALA OLUOLU WY	10	151	Patching/Slurry Seal
KEENA PL	FARRINGTON AV	END	12	586	Crack Seal/Slurry Seal
KEONELELE AV	AIRPORT RD	NENEHANAUPO AV	4	1694	Rebuild/Thick Overlay
KEONELELE AV	AIRPORT LP	AIRPORT RD	8	519	Mill and Fill - Thin Overlay
KIALOA ST	NONI ST	EHAKO PL	6	519	Mill and Fill - Thin Overlay
KIALOA ST	N KIAPA ST	NONI ST	12	419	Crack Seal/Slurry Seal
KIAWE PL	KOKIO ST	END	10	165	Patching/Slurry Seal
KIKIPUA ST	ILIO RD	KAIWI ST	10	644	Patching/Slurry Seal
KIKIPUA ST	KAIWI ST	KOKIO ST	10	528	Patching/Slurry Seal
KIKIPUA ST	KOKIO ST	KUPA PL	10	225	Patching/Slurry Seal
KIKIPUA ST	KUPA PL	AUKUU PL	10	462	Patching/Slurry Seal
KIKIPUA ST	AUKUU PL	ALA MALAMA AV	10	272	Patching/Slurry Seal
KOALA PL	AKEU WY	END	0	150	Reconstruction
KOKIO ST	KIKIPUA ST	END	10	172	Patching/Slurry Seal
KOKIO ST	KALOHI ST	KIKIPUA ST	10	292	Patching/Slurry Seal
KOKIO ST	KANO PL	KALOHI ST	10	296	Patching/Slurry Seal

iWorQ Ratings - Molokai District

ROAD NAME	FROM ADDRESS	TO ADDRESS	RSL*	LENGTH	REC. TREATMENT
KOKIO ST	KIAWE PL	KANO PL	10	281	Patching/Slurry Seal
KOKIO ST	ALA MALAMA AV	KIAWE PL	12	328	Crack Seal/Slurry Seal
KOLAPA PL	PUALI PL	ALA MALAMA AV	20	428	No Maintenance/Seal Coat
KOLAPA PL	ALA MALAMA AV	MALAMALAMA PL	20	1442	No Maintenance/Seal Coat
KOLAPA PL	MALAMALAMA PL	KAKALAHAE ST	20	225	No Maintenance/Seal Coat
KOLAPA PL	KAKALAHAE ST	END	12	410	Crack Seal/Slurry Seal
KUKUI PL	ING PL	END	4	353	Rebuild/Thick Overlay
KUKUI PL	PUALI PL	ING PL	4	325	Rebuild/Thick Overlay
KUPA PL	KIKIPUA ST	END	10	166	Patching/Slurry Seal
KUPAIA PL	ONI ONI DR	END	10	2259	Patching/Slurry Seal
LAMALOA PL	KAIWI ST	END	8	304	Patching/Slurry Seal
LAUNUI ST	PINE AV	KEONELELE AV	4	2971	Rebuild/Thick Overlay
LAUNUI ST	MAUNALOA HY	PINE AV	4	1767	Rebuild/Thick Overlay
LEHUA AV	ENA ST	LIKELIKE AV	4	194	Rebuild/Thick Overlay
LEHUA AV	MAUNALOA HY	ENA ST	4	544	Rebuild/Thick Overlay
LEI KUKUI PL	FARRINGTON AV	END	16	1156	Crack Seal/Seal Coat
LEOMELE ST	NONI ST	EHAKO PL	12	519	Crack Seal/Slurry Seal
LEOMELE ST	KIAPA ST	NONI ST	6	415	Mill and Fill - Thin Overlay
LIHI PALI AV	PUU KAPELE AV	END	10	1621	Patching/Slurry Seal
LIHI PALI AV	MALU KUKUI PL	ALA ELUA ST	8	2888	Mill and Fill - Thin Overlay
LIHI PALI AV	PUA KUKUI PL	MALU KUKUI PL	4	475	Rebuild/Thick Overlay
LIHI PALI AV	PUA KUKAI PL	PUA KUKUI PL	4	516	Rebuild/Thick Overlay
LIHI PALI AV	FARRINGTON AV	PUA KUKAI PL	10	1454	Patching/Slurry Seal
LIKELIKE AV	KALANIANAOLE AV	MAUNALOA HY	12	1611	Crack Seal/Slurry Seal
LIKELIKE AV	KAHANU ST	KALANIANAOLE AV	12	843	Crack Seal/Slurry Seal
LIKELIKE AV	LEHUA AV	KAHANU ST	0	1293	Reconstruction
LIKELIKE AV	PALENA AINA PL	HAENA ST	18	448	Crack Seal/Seal Coat
LIKELIKE AV	POOKELA PL	PALENA AINA PL	18	707	Crack Seal/Seal Coat
LIKELIKE AV	KAHIIWA ST	POOKELA PL	18	618	Crack Seal/Seal Coat
LIKELIKE AV	END	HOOMALU DR	18	268	Crack Seal/Seal Coat
LIKELIKE AV	HOOMALU DR	KAHIIWA ST	18	698	Crack Seal/Seal Coat
LIMAIKI PL	ALAEKEA ST	END	18	202	Crack Seal/Seal Coat
LIMAIKI PL	END	ALAEKEA ST	18	287	Crack Seal/Seal Coat
LINOHAI PL	KAANA ST	END	12	418	Crack Seal/Slurry Seal
MAHALO PL	MOAI LP	END	10	124	Patching/Slurry Seal
MAHALO PL	MOHA PL	MOAI LP	8	271	Mill and Fill - Thin Overlay
MAHALO PL	MOAI LP	MOHA PL	6	248	Mill and Fill - Thin Overlay
MAHALO PL	MAKAENA PL	MOAI LP	6	363	Mill and Fill - Thin Overlay
MAHIKI PL	KAANA ST	END	14	440	Crack Seal/Seal Coat
MAKAENA PL	MAHALO PL	END	12	541	Crack Seal/Slurry Seal
MAKAENA PL	MANILA RD	MAHALO PL	12	630	Crack Seal/Slurry Seal
MAKAENA PL	ALA MALAMA AV	END	12	565	Crack Seal/Slurry Seal
MAKAIKI RD	MAKANUI RD	END	12	3554	Crack Seal/Slurry Seal
MAKANUI RD	MAKAIKI RD	END	8	3249	Mill and Fill - Thin Overlay
MALAMALAMA PL	KOLAPA PL	ALA MALAMA AV	8	381	Mill and Fill - Thin Overlay
MALUOLU PL	N MOHALA ST	END	6	198	Mill and Fill - Thin Overlay
MAMALULAI PL	PUU KAPELE AV	END	16	860	Crack Seal/Seal Coat
MANAKO LN	ALA MALAMA AV	END	6	755	Mill and Fill - Thin Overlay
MANILA RD	MAUNALOA HY	MAKAENA PL	12	1199	Crack Seal/Slurry Seal
MAUNAHUI RD	MAUNALOA HY	END	12	12093	Crack Seal/Slurry Seal
MAUNALOA RD	UNAHE ST	KAMAKAHI ST	12	549	Crack Seal/Slurry Seal
MAUNALOA RD	WAIELI ST	UNAHE ST	12	304	Crack Seal/Slurry Seal
MAUNALOA RD	MOKIO ST	WAIELI ST	12	333	Crack Seal/Slurry Seal
MAUNALOA RD	MAUNALOA HY	MOKIO ST	12	530	Crack Seal/Slurry Seal
MAUNALOA RD	KAMAKAHI ST	KAHALE MUA SUBDIV RD	12	464	Crack Seal/Slurry Seal
MAUNALOA RD	KAHALE MUA SUBDIV RD	HOALUA ST	12	272	Crack Seal/Slurry Seal
MAUNALOA RD	HOALUA ST	OHA ST	12	293	Crack Seal/Slurry Seal
MAUNALOA RD	MAUNALOA SCHOOL RD	END	12	752	Crack Seal/Slurry Seal
MIKIA PL	END	MOAI LP	8	429	Mill and Fill - Thin Overlay
MIOMIO PL	END	MAHALO PL	8	429	Mill and Fill - Thin Overlay
MOAI LP	MAHALO PL	MAHALO PL	8	1474	Mill and Fill - Thin Overlay
MOHA PL	END	MAHALO PL	10	250	Patching/Slurry Seal
MOHALA STREET	KAMEHAMEHA V	BEACH PLACE	11	1030	Patching/Slurry Seal
MOKULELE ST	MOOMOMI AV	AIRPORT LP	6	1080	Mill and Fill - Thin Overlay
MOOMOMI AV	ANHAKE ST	FARRINGTON AV	12	8930	Crack Seal/Slurry Seal

*RSL = Remaining service life (years)

iWorQ Ratings - Molokai District

ROAD NAME	FROM ADDRESS	TO ADDRESS	RSL*	LENGTH	REC. TREATMENT
MOOMOMI AV	HAUAKEA AV	ANHAKI ST	12	3188	Crack Seal/Slurry Seal
MOOMOMI AV	NENEHANAUPO AV	HAUAKEA AV	4	3311	Rebuild/Thick Overlay
MOOMOMI AV	KOLEA AV	NENEHANAUPO AV	10	3320	Patching/Slurry Seal
MOOMOMI AV	MOKULELE ST	KOLEA AV	12	470	Crack Seal/Slurry Seal
MOOMOMI AV	PUUPEELUA AV	MOKULELE ST	12	5013	Crack Seal/Slurry Seal
MOOMOMI AV	KULEA ST	PUUPEELUA AV	18	4717	Crack Seal/Seal Coat
N MOHALA ST	MALUOLU PL	ALA MALAMA AV	12	166	Crack Seal/Slurry Seal
N MOHALA ST	ALOHI ST	MALUOLU PL	12	129	Crack Seal/Slurry Seal
N MOHALA ST	S MOHALA ST	ALOHI ST	12	306	Crack Seal/Slurry Seal
NANIKAI PL	AKEU WY	END	4	251	Rebuild/Thick Overlay
NANIKAI PL	KALAE HY	AKEU WY	4	178	Rebuild/Thick Overlay
NAUWE	AAHI PL	ILIAHI PL	20	502	No Maintenance/Seal Coat
NONI ST	KALAE HY	KIALOA ST	18	160	Crack Seal/Seal Coat
NONI ST	LEOMELE ST	KALAE HY	18	165	Crack Seal/Seal Coat
OHA ST	HALE O LONO BEACH RD	WAIELI ST	14	198	Crack Seal/Seal Coat
OHA ST	HOEA ST	MAUNALOA RD	12	192	Crack Seal/Slurry Seal
OHA ST	HOAIKANE ST	HOEA ST	12	196	Crack Seal/Slurry Seal
OHA ST	WAIELI ST	WAHINANI ST	14	201	Crack Seal/Seal Coat
OHA ST	UNAHE ST	HOAIKANE ST	12	235	Crack Seal/Slurry Seal
OHA ST	WAHINANI ST	UNAHE ST	12	206	Crack Seal/Slurry Seal
OHAI ALII PL	KAMEHAMEHA V HY	END	12	505	Crack Seal/Slurry Seal
OKANA ST	ALAEKEA ST	UWAO ST	12	524	Crack Seal/Slurry Seal
OKANA ST	UWAO ST	HUILA ST	12	769	Crack Seal/Slurry Seal
OKI PL	KAMEHAMEHA V HY	SEASIDE PL	18	423	Crack Seal/Seal Coat
OLOOLO AV	MAUNALOA HY	EKELA PL	10	925	Patching/Slurry Seal
ONI ONI DR	KUPAIA PL	WAIOKAMA PL	4	1424	Rebuild/Thick Overlay
ONI ONI DR	WAIOKAMA PL	END	4	4129	Rebuild/Thick Overlay
ONI ONI DR	KAMEHAMEHA V HY	KUPAIA PL	4	2177	Rebuild/Thick Overlay
PAIAA PL	KAMAHELE PL	END	16	440	Crack Seal/Slurry Seal
PAILOLO PL	KAIWI ST	END	10	205	Patching/Slurry Seal
PAKALA PL	KALAMA RD	END	4	179	Rebuild/Thick Overlay
PALAPALAE PL	END	ALA MALAMA AV	10	372	Patching/Slurry Seal
PALAPALAE PL	ALA MALAMA AV	END	12	91	Crack Seal/Slurry Seal
PALENA AINA PL	LIKELIKE AV	END	18	393	Crack Seal/Seal Coat
PALUA PL	HUAAI RD	END	4	1196	Rebuild/Thick Overlay
PANO PL	KAMEHAMEHA V HY	PUI LI PL	6	616	Mill and Fill - Thin Overlay
PEELUA PL	HUAAI RD	END	12	768	Crack Seal/Slurry Seal
POKO PL	KAMILOLOA PL	END	12	101	Crack Seal/Slurry Seal
POND PL	KAPUAIWA PL	END	10	200	Patching/Slurry Seal
POOKELA PL	LIKELIKE AV	END	16	414	Crack Seal/Slurry Seal
PUA KUKAI PL	LIHI PALI AV	END	18	597	Crack Seal/Seal Coat
PUA KUKUI PL	LIHI PALI AV	END	16	274	Crack Seal/Seal Coat
PUALI PL	KUKUI PL	KOLAPA PL	12	177	Crack Seal/Slurry Seal
PUALI PL	PUALI PL	KUKUI PL	12	57	Crack Seal/Slurry Seal
PUALI PL	PUALI PL	ALA MALAMA AV	20	163	No Maintenance/Seal Coat
PUALI PL	ALA MALAMA AV	PUALI PL	20	284	No Maintenance/Seal Coat
PUALI PL	KAMOI ST	ALA MALAMA AV	20	54	No Maintenance/Seal Coat
PUI LI PL	END	PANO PL	6	225	Mill and Fill - Thin Overlay
PUI LI PL	PANO PL	END	6	482	Mill and Fill - Thin Overlay
PUU KAPELE AV	KOLEA AV	NENEHANAUPO AV	10	3321	Patching/Slurry Seal
PUU KAPELE AV	PUUPEELUA AV	KOLEA AV	4	5446	Rebuild/Thick Overlay
PUU KAPELE AV	MAMALULAI PL	PUUPEELUA AV	8	2426	Mill and Fill - Thin Overlay
PUU KAPELE AV	ALA EKAHI ST	MAMALULAI PL	8	342	Mill and Fill - Thin Overlay
PUU KAPELE AV	LIHI PALI AV	ALA EKAHI ST	8	479	Mill and Fill - Thin Overlay
PUUMALU ST	KAANA ST	WAIELI ST	12	1469	Crack Seal/Slurry Seal
PUUNANA ST	WAIELI ST	HALENA ST	12	257	Crack Seal/Slurry Seal
PUUNANA ST	HALENA ST	KAMAKAHI ST	12	555	Crack Seal/Slurry Seal
PUUNANA ST	KAMAKAHI ST	END	12	1297	Crack Seal/Slurry Seal
PUUPEELUA AV	FARRINGTON AV	PUU KAPELE AV	10	3239	Patching/Slurry Seal
RUDOLPH PL	PAKALA PL	END	12	667	Crack Seal/Slurry Seal
S MOHALA ST	KAMEHAMEHA V HY	BEACH PL	9	1051	Patching/Slurry Seal
SEASIDE PL	OKI PL	END	20	1373	No Maintenance/Seal Coat
UALA PUE PL	KAMEHAMEHA V HY	END	18	443	Crack Seal/Seal Coat
ULUA RD	ULUANUI RD	END	4	4009	Rebuild/Thick Overlay
ULUANUI RD	ULUA RD	END	8	5151	Mill and Fill - Thin Overlay

iWorQ Ratings - Molokai District

ROAD NAME	FROM ADDRESS	TO ADDRESS	RSL*	LENGTH	REC. TREATMENT
UNAHE ST	MAUNALOA RD	HOALUA ST	14	670	Crack Seal/Seal Coat
UNAHE ST	HOALUA ST	OHA ST	12	434	Crack Seal/Slurry Seal
UNAHE ST	OHA ST	END	12	649	Crack Seal/Slurry Seal
WAHINANI ST	OHA ST	END	14	671	Crack Seal/Slurry Seal
WAIELI ST	KAANA ST	PUUNANA ST	12	451	Crack Seal/Slurry Seal
WAIELI ST	PUUNANA ST	PUUMALU ST	12	214	Crack Seal/Slurry Seal
WAIELI ST	PUUMALU ST	MAUNALOA RD	12	281	Crack Seal/Slurry Seal
WAIELI ST	MAUNALOA RD	HOALUA ST	12	634	Crack Seal/Slurry Seal
WAIELI ST	HOALUA ST	OHA ST	6	400	Mill and Fill - Thin Overlay
WAIOKAMA PL	ONI ONI DR	END	4	2295	Rebuild/Thick Overlay
WILIWILI PL	END	KALOHI ST	6	500	Mill and Fill - Thin Overlay

FY 2020/2021

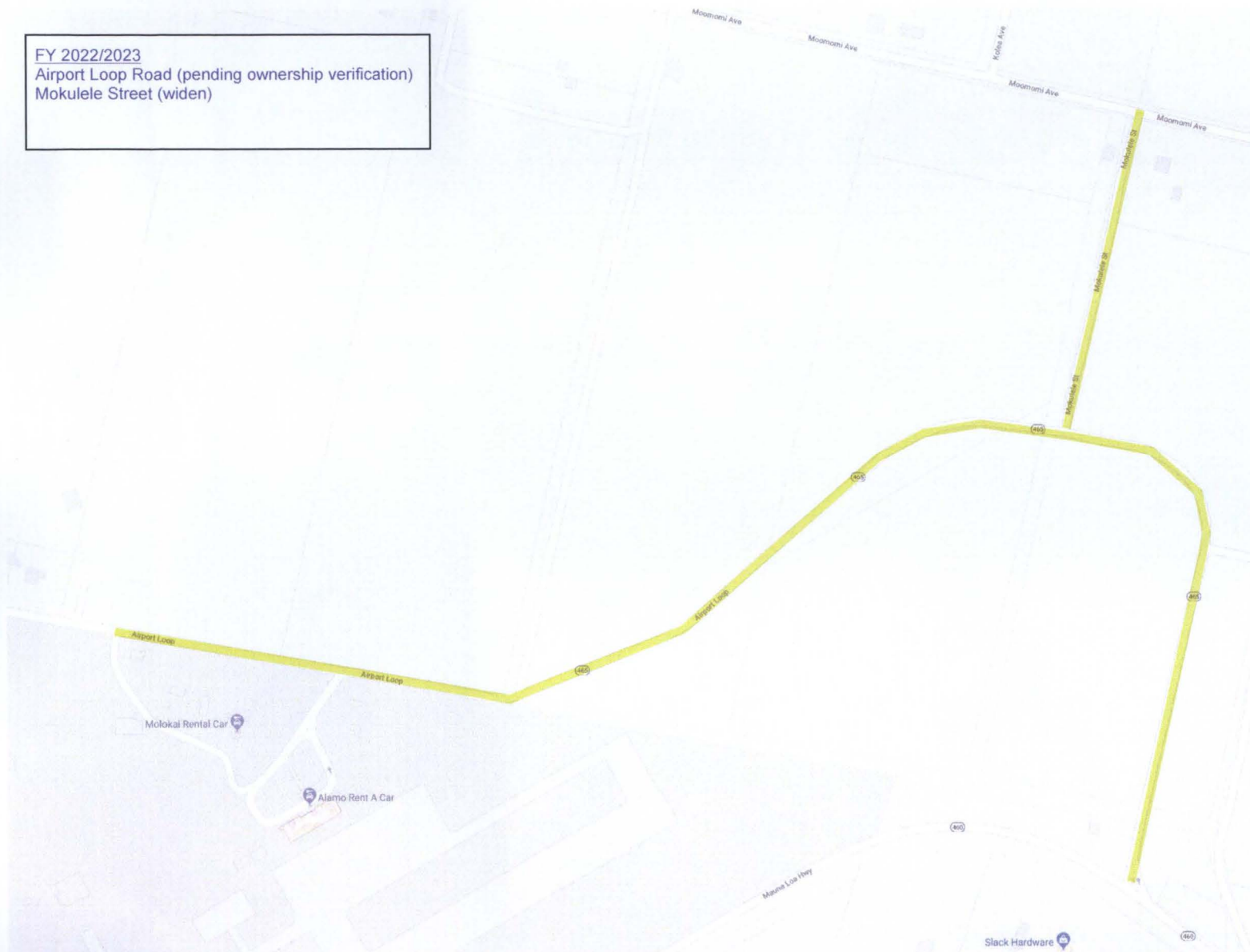
Analú Road
Rudolph Road
Kalama Road
Nanikai Place
Akeu Way
Pakala Place
Koala Way



EXHIBIT " B "

FY 2022/2023

Airport Loop Road (pending ownership verification)
Mokulele Street (widen)

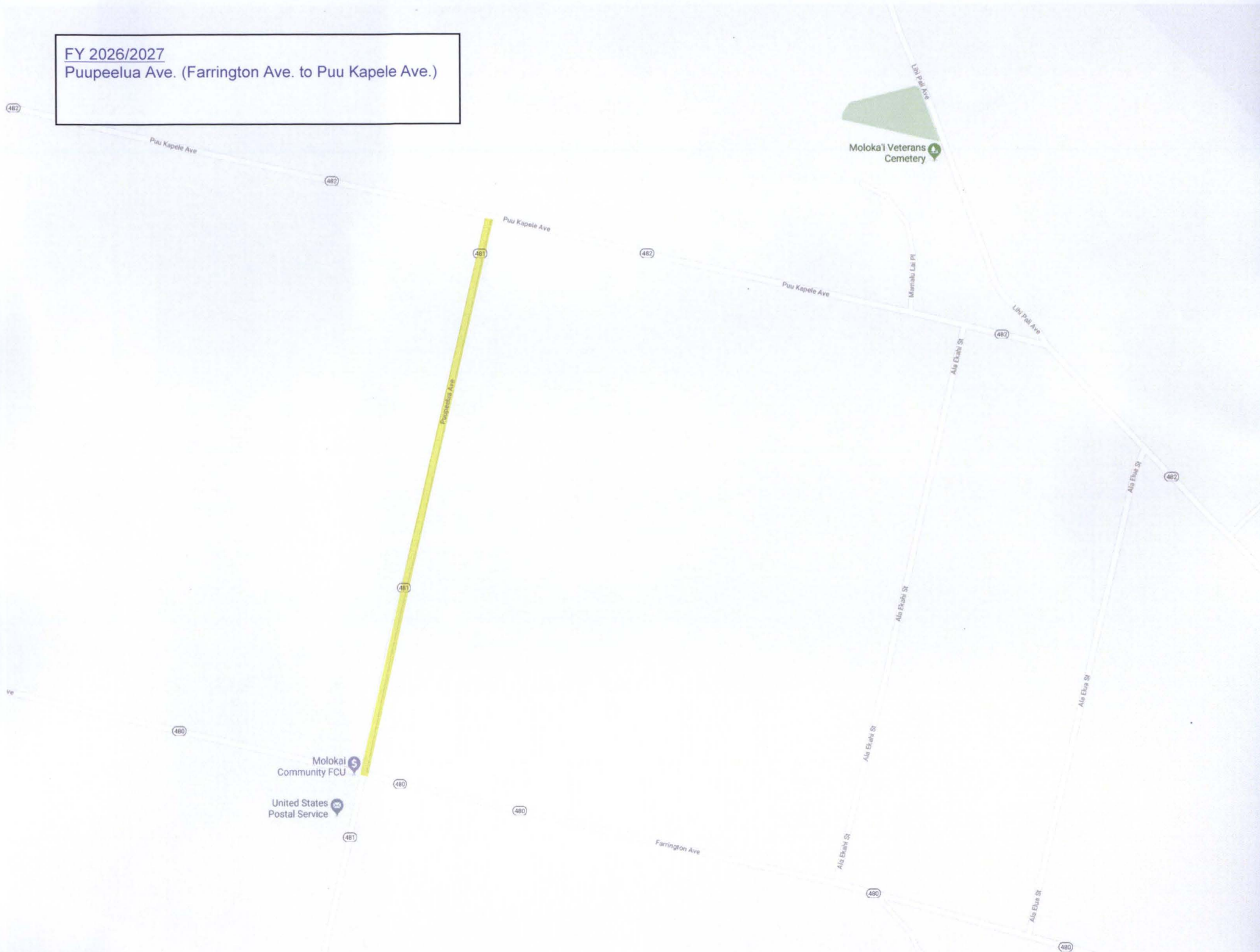


FY 2024/2025
Mahalo Place
Miomio Place
Moha Place
Mikia Place
Moai Loop



FY 2026/2027

Puupeelua Ave. (Farrington Ave. to Puu Kapele Ave.)



County of Maui
Capital Improvement Projects Report (Excluding Department of Water Supply)
As of 6/30/2019

	Original Appropriation	Allotted To Date	Expenditure Prior Years	Expenditure Current Year	Amount Lapsed	Encumbrance	Allotment Balance
13-907 Roads							
BY14-304-345337: Lapse 12/31/14 CBS-1036	300,000.00	300,000.00	149,058.05		147,941.95	3,000.00	
BY15-304-356C37: Lapse 12/31/15 CBS-1036	620,000.00	620,000.00	603,040.91	500.00	16,459.09		
BY16-304-367C31: Lapse 12/31/16 CBS-1036	150,000.00	150,000.00	56,021.21			93,978.79	
BY18-304-389C49: Lapse 12/31/18 CBS-1036	97,276.00	97,276.00	3,396.16	11,417.00	2,016.52	80,446.32	
BY19-304-390C73: Lapse 12/31/19 CBS#1036	140,000.00	140,000.00		30,577.13		79,461.66	29,961.21
CW SIDEWALK IMPROVEMENTS							
HY13-302-331133: Lapse 12/31/13 CBS-1037	500,000.00	500,000.00	401,651.13	33,604.03	45,328.87	19,415.97	
HY14-302-345335: Lapse 12/31/14 CBS-1037	450,000.00	450,000.00	371,688.72		44,403.73		33,907.55
HY16-302-367C26: Lapse 12/31/16 CBS-1037	400,000.00	400,000.00	366,567.01		19,829.39	13,603.60	
HY17-302-378C76: Lapse 12/31/17 CBS-1037	500,000.00	500,000.00	271,596.37	805.19		227,598.44	
HY19-302-390C78: Lapse 12/31/19 CBS#1037	490,000.00	490,000.00		156,202.94		270,835.26	62,961.80
CW BRIDGE IMPROVEMENTS							
HY14-302-345332: Lapse 12/31/14 CBS-1031	295,000.00	295,000.00	150,402.76		418.70	144,178.54	()
HY15-302-356C31: Lapse 12/31/15 CBS-1031	370,000.00	370,000.00	255,337.21	9,998.10	104,664.69		
HY16-302-367C22: Lapse 12/31/16 CBS-1031	370,000.00	370,000.00	213,743.50		100,847.50	55,409.00	
GO18-373-378C72: Lapse 12/31/17 CBS-1031	370,000.00	370,000.00	198,803.74	91,551.34		79,644.92	
HY19-302-390C76: Lapse 12/31/19 CBS#1031	220,000.00	220,000.00		2,048.59		1,000.00	216,951.41
PAIA SCHOOL SAFE ROUTES TO SCH							
DOT19-325-390095: #STP-SRS-0900(0 91)	1,226,784.55	1,226,784.55		926,580.52		140,188.66	160,015.37
CW SAFETY IMPROVEMENTS							
HY07-302-377033: Lapse 12/31/07	600,000.00	600,000.00	557,129.51	895.97	41,374.52	600.00	()
HY08-302-387030: Lapse 12/31/08	500,000.00	500,000.00	359,986.26	2,184.00	137,829.74		
HY13-302-331132: Lapse 12/31/13 CBS-1024	600,000.00	600,000.00	521,268.24	18,363.19	22,959.77	37,408.80	
HY14-302-345334: Lapse 12/31/14 CBS-1024	500,000.00	500,000.00	383,294.79		104,879.98	11,825.23	
HY16-302-367C25: Lapse 12/31/16 CBS-1024	390,000.00	390,000.00	303,304.34	6,005.00	49,766.80	30,923.86	
HY17-302-378C75: Lapse 12/31/17 CBS-1024	600,000.00	600,000.00	236,335.80	108,839.33	62,607.40	157,503.10	34,714.37
HY18-302-389C51: Lapse 12/31/18 CBS-1024	500,000.00	500,000.00	37,962.68	151,558.85	7,365.86	303,112.61	
HY19-302-390C75: Lapse 12/31/19 CBS#1024	850,000.00	850,000.00		228,914.72		388,550.33	232,534.95
EHA ST RDWAY DEDICATION							
HY16-302-367324: Lapse 12/31/16 CBS-1023	300,000.00	300,000.00	71,910.00		220,090.00		8,000.00
CW PAVEMENT PRESERVATION							
HY17-302-378C73: Lapse 12/31/17 CBS-1034	500,000.00	500,000.00	144.02	249,900.00	135,410.98	114,545.00	
CW ROAD RESURFACING							
HY12-302-327032: Lapse 12/31/12 CBS-1023	5,436,736.00	5,436,736.00	5,137,057.67		188,399.03	111,279.30	
HY14-302-345333: Lapse 12/31/14 CBS-1023	5,546,744.00	5,546,744.00	5,396,205.75	8,523.56	56,526.05	85,488.64	
HY15-302-356C33: Lapse 12/31/15 CBS-1023	4,943,698.00	4,943,698.00	4,357,683.90	6,372.68	555,946.42	23,695.00	
HY16-302-367C24: Lapse 12/31/16 CBS-1023	5,718,028.00	5,718,028.00	4,660,507.34	231,643.93	579,663.43	178,223.41	67,989.89
HY17-302-378C74: Lapse 12/31/17 CBS-1023	5,634,267.00	5,634,267.00	3,248,696.37	1,147,231.92	129,277.24	1,109,061.47	()
HY18-302-389C50: Lapse 12/31/18 CBS-1023	5,238,541.00	5,238,541.00	402,780.21	2,579,095.30	12,098.47	2,244,567.02	
HY19-302-390C74: Lapse 12/31/19 CBS#1023	6,266,792.00	6,266,792.00		1,083,912.05		2,485,495.51	2,697,384.44
CW TRAFFIC CALMING PRG							
HY17-302-378C77: Lapse 12/31/17 CBS-1035	200,000.00	200,000.00	11,342.24	177,325.86	3,551.08	7,780.82	
HY19-302-390C77: Lapse 12/31/19 CBS#1035	350,000.00	350,000.00		127.20		158,911.36	190,961.44
CW FEDERAL AID PROGRAM							
GO20-374-390C72: Lapse 12/31/19 CBS#5022	2,000,000.00	52,078.11		52,078.11			