Welcome

Kauaʻi Emergency Flood Repairs and Cleanup
Various Locations
April 2018

Public Informational Meeting
Kūhiō Highway Repair Locations

Haʻena to Hanalei

Kalihiwai

Wailua
1. Kūhiō Highway (Route 560), MP 10 at Kēōkea State Park:
Reconstruct roadway;
Status: Federal Permits & Environmental Review in Progress
Est. Construction Start: Mid-Late June

2. Limahuli Stream Crossing (Route 560), MP 9.55:
Repair concrete section lost in flooding, Resurface entire ford crossing;
Status: Environmental Review in Progress
Est. Construction Start: Mid-Late June

3. Kūhiō Highway (Route 560), MP 8.87 at Hāena Beach Park:
Repair roadway shoulder;
Status: Federal Permits & Environmental Review in Progress
Est. Construction Start: Mid-Late June

4. Mānoa Stream Ford Crossing (Route 560), MP 8.76 near Hāena Beach Park:
Repair the entire crossing;
Status: Federal Permits & Environmental Review in Progress
Est. Construction Start: Mid-Late June
Kūhiō Highway Repairs at Wainiha

Landslide and Repair Sites

Landslide Photos

Repair Description

Over 15 locations from MP 6.5 through MP 4.4 along Kūhiō Highway (Route 560). Landslide zones are noted as Zones A thru N. Individual Repair Sites also occur in this area. All repairs include debris removal, slope scaling, slope stabilization, guardrail replacement, pavement repairs.

Status: All landslide repairs are in progress. Repair sites number 1 and 2 are in progress, but require additional permits; heavy equipment and heavy materials to complete.

Estimated Construction: Landslide repairs and repair sites in construction. Repair sites to be fully complete after bridge replacements.
Kūhiō Highway Repairs at Wainiha

**Description of Repair Site 1:**
Located at MP 4.5 on Kūhiō Highway, Repair Site 1 is a roadway stabilization area that requires debris removal, slope wall installation including soil nails, foot of slope revetment, guardrail/sign replacement, and pavement repair.

**Description of Repair Site 2:**
Site 2 is a stabilization area with only 1 lane remaining. Similar to Site 1, repairs include debris removal, slope wall installation with soil nails, foot of slope revetment, guardrail/sign replacement, and pavement repair.

**Status:**
Construction is in progress for both sites. Environmental review and permitting is being pursued at the same time as the construction repairs occur.

**Est. Construction Completion:**
Completion is dependent on bridge replacements to allow heavy materials and equipment for revetments.
Waikoko Bridge Replacement

Existing Waikoko Bridge

Proposed Simulation

Proposed Plan View

Proposed Cross-section
Waipā Bridge Replacement

Existing Waipā Bridge

Proposed Simulation

Proposed Plan View

Proposed Cross-section
HDOT and FHWA is consulting with the State Historic Preservation Division, Hanalei Roads Committee, Hanalei Watershed Hui, Konohiki Restoration Project, and the Historic Hawai‘i Foundation under Section 106 of the National Historic Preservation Act to identify historic resources, and avoid, minimize, or mitigate repair impacts.

Waikoko, Wai‘oli, Waipā Bridge Replacement:
- Kūhiō Highway (Route 560) Historic Roadway Corridor Plan recognizes the deterioration, load-bearing deficiencies, and need for bridge replacement, particularly for Waikoko.
- Current 8-ton load capacity of these bridges do not allow for equipment with enough reach and capacity to remove the dirt material, and place the boulder revetments needed at the repair sites.
- In addition to the revetment repairs, it is anticipated that further stabilization of the up-slope reaches will be conducted over the next two years. Some of these failures reach as high as 70 feet.
- HDOT has considered numerous alternatives, however, those alternatives carry additional environmental impacts and do not address the long-term issues of the bridge deficiencies.
- Replacement of these bridges is considered an adverse effect to these historic resources.
- Designs will maintain the character-defining qualities of the existing bridges: single-lane operations; narrow width no sidewalks; solid reinforced-concrete parapets; and flat slab, or girder structural systems.
- Construction will occur primarily at night to minimize impacts to the community.

Kūhiō Highway Rehabilitation:
- Repairs will restore the historic roadway back to its historical function.
- Permanent bridge replacement rather than temporary Acrow bridges will maintain the historic alignment rather than create an additional bypass.

Archaeological and Cultural Resources:
- Archaeological monitoring will be conducted in areas that SHPD has identified as sensitive.
Kūhiō Highway Repairs at Hanalei

**Description of Repairs:** Repairs at MP 1 include debris removal, slope scaling, guardrail replacement, minor pavement repair. Repairs at MP 0.5, near Hanalei Bridge involve debris removal and slope clean-up.

**Status:** Repairs are complete.
Kāhīō Highway Repairs at Kālihiwai & Wailua

Kālihiwai Location Map

Kālihiwai Project Description:
Debris Removal and Scaling at MP 25. Debris Removal and CRM Wall Replacement.

Status:
Federal permitting in progress for CRM Wall replacement. Construction on wall replacement may begin as soon as permitted.

Wailua Location Map

Wailua

Status:
Debris Removal from Wailua River is complete.
# Kūhiō Highway Repair Status

<table>
<thead>
<tr>
<th>No.</th>
<th>Location on Kūhiō Highway</th>
<th>Repair Description</th>
<th>Progress</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Haʻena to Hanalei</td>
</tr>
<tr>
<td>1</td>
<td>Route 560, MP 10 at Kēʻe</td>
<td>Reconstruct Roadway</td>
<td>Permitting in progress.</td>
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<tr>
<td></td>
<td>State Park</td>
<td>Repair concrete section lost in flooding. Resurface entire ford crossing</td>
<td>Permitting in progress.</td>
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<tr>
<td>2</td>
<td>Route 560, MP 9.55 at</td>
<td>Repair roadway shoulder.</td>
<td>Permitting in progress.</td>
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<td></td>
<td>Limahuli Stream Crossing</td>
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<tr>
<td>3</td>
<td>Route 560, MP 8.7 at</td>
<td>Repair the entire crossing.</td>
<td>Permitting in progress.</td>
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<td></td>
<td>Hāʻena Beach Park</td>
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<tr>
<td>4</td>
<td>Route 560, MP 8.76 at</td>
<td>Roadway stabilization area with only 1 lane remaining. Debris removal, slope wall</td>
<td>In progress. Revetment will be completed once</td>
</tr>
<tr>
<td></td>
<td>Mānoa Stream Ford Crossing</td>
<td>安装 including soil nails, foot of slope revetment, guardrail/sign replacement,</td>
<td>bridge replacements are done.</td>
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<tr>
<td></td>
<td>near Hāʻena Beach Park</td>
<td>pavement repair</td>
<td></td>
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<tr>
<td>5</td>
<td>Route 560, MP 6.5 Repair Site 2</td>
<td>Debris removal, slope scaling, slope stabilization, guardrail replacement, pavement repairs</td>
<td>Various stages of progress and completion. Full restoration and removal of debris contingent on bridge replacements.</td>
</tr>
<tr>
<td>6</td>
<td>Route 560, 15 locations or more from MP 6.5 through MP 4.4, (noted as Land Slide Zones A thru N):</td>
<td>Roadway stabilization area: Debris removal, slope wall installation including soil nails, foot of slope revetment, guardrail/sign replacement, pavement repair</td>
<td>In progress. Revetment will be completed once bridge replacements are done.</td>
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<tr>
<td>7</td>
<td>Route 560, MP 5.8</td>
<td>Stockpile area</td>
<td></td>
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<tr>
<td>8</td>
<td>Route 560, MP 4.5, Repair Site 1</td>
<td>Roadway stabilization area; Debris removal, slope wall installation including soil nails, foot of slope revetment, guardrail/sign replacement, pavement repair</td>
<td>In progress. Revetment will be completed once bridge replacements are done.</td>
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<tr>
<td>9</td>
<td>Route 560, MP 4.4</td>
<td>Stockpile area</td>
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<td>10</td>
<td>Waikoko Bridge (Route 560)</td>
<td>Replace existing bridge</td>
<td>In design and permitting, anticipated start late June.</td>
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<tr>
<td>11</td>
<td>Waipā Bridge (Route 560)</td>
<td>Replace existing bridge</td>
<td>In design and permitting, anticipated start late June.</td>
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<tr>
<td>12</td>
<td>Route 560, MP 3.7</td>
<td>Staging area</td>
<td></td>
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<tr>
<td>13</td>
<td>Waiʻoli Bridge (Route 560)</td>
<td>Replace existing bridge; debris removal from under bridge</td>
<td>In design and permitting, anticipated start late June.</td>
</tr>
<tr>
<td>14</td>
<td>Route 560, MP 1</td>
<td>Debris removal, slope scaling, guardrail replacement, minor pavement repair</td>
<td>Complete</td>
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<tr>
<td>15</td>
<td>Route 560, MP 0.5, near Hanalei Bridge</td>
<td>Debris removal and slope clean-up</td>
<td>Complete</td>
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<td>Kalihiwai</td>
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<tr>
<td>16</td>
<td>Route 56, MP 25</td>
<td>Debris removal, slope scaling</td>
<td>Complete</td>
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<tr>
<td>17</td>
<td>Route 56, MP 24.9</td>
<td>Debris removal from under bridge, and CRM wall replacement</td>
<td>Debris removal complete. CRM Wall in permitting.</td>
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<td>Wailua</td>
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<tr>
<td>18</td>
<td>Wailua Bridge (Route 56)</td>
<td>Debris removal from river under bridge</td>
<td>Complete</td>
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