STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

March 15, 2010
Honolulu, Hawaii

Application for Stream Channel Alteration Permit (SCAP.2588.4) for
Temporary By-Pass Road and Replacement of Kawela Bridge, Kawela Gulch
Kawela, Molokai, TMKs: (2) 5-4-001:023, 027 and 999

APPLICANT:

Brennon T. Morioka, Director
Department of Transportation
869 Punchbowl Street, Room 509
Honolulu, HI 96813

LANDOWNERS:

Same, (2) 5-4-001:999

Fred and Pamela Parker, (2) 5-4-001:023
963 Newport Road
Utica, NY 13502

Molokai Properties, Ltd., (2) 5-4-001:027
P.O. Box 259
Maunaloa, HI 96770

SUMMARY OF REQUEST:

Application for Stream Channel Alteration Permit (SCAP.2588.4) for a temporary by-pass road and replacement of Kawela Bridge across Kawela Gulch, Kawela, Molokai, TMKs: (2) 5-4-001:023, 027 and 999.

LOCATION: See Exhibit 1.

BACKGROUND:

Kawela Bridge is located on Kamehameha V Highway (Route 450) along the southern coast of Molokai between Kaunakakai and Halawa. The land in the vicinity of Kawela Bridge is

undeveloped and vegetated with kiawe, monkey pod and mangrove trees. Grazing land owned by Molokai Ranch lies on the north and east of Kamehameha V Highway and the bridge. A muliwai (coastal estuarine pond) extends to the ocean shore and is located on Parcel 27.

The existing 66-year old bridge across Kawela Gulch will be demolished, and a new bridge will be constructed to improve the hydraulic capacity of the bridge and conform to current Hawaii Department of Transportation (HDOT) and American Association of State Highway and Transportation Officials (AASHTO) design standards and Federal Highway Administration (FHWA) standards. The new bridge will be 56-feet long and approximately 47-feet wide with two 12-foot wide lanes and two 10-foot wide shoulders on each side for bicyclists and pedestrians. Improvements will also include a new 20-foot approach slab at both ends of the bridge, guard rails and new concrete abutments. The replacement bridge will be constructed within the existing State right-of-way, and the existing bridge elevation will be raised two feet above the existing height.

DESCRIPTION:

The southern coast of Molokai has a dry climate, and most streams are either perennial or interrupted at the coast, or are intermittent. Kawela Gulch is a multi-branched, interrupted stream that extends from the Molokai Forest Reserve to the ocean near the town of Kawela. Only the upper reaches of the east and west forks are perennial, and much of the stream course is dry throughout the year. A muliwai (coastal estuarine pond) extends from the ocean shore to the vicinity of the highway bridge.

The stream channel under the bridge will be lined with concrete to protect the banks from erosion and to facilitate maintenance. An existing two-inch waterline attached to the bridge will be replaced with either an eight-inch waterline crossing under Kawela Gulch, or a two-inch and a ¾-inch waterline to provide water service to the east side of the gulch. Development of the eight-inch waterline will depend on funding from the County Department of Water Supply or private landowners. If funding is unavailable, HDOT will construct the two-inch and ¾-inch waterline crossing within the bridge deck. The gulch embankment will be protected from erosion with grouted rock. A 12-foot wide concrete access ramp for maintenance will be constructed on both sides of the bridge. Portions of the concrete rubble masonry (CRM) wall, concrete access ramp and concrete channel slab will be constructed on Parcel 27 which is located in the conservation district. Upstream improvements will include CRM walls, concrete access ramp, concrete channel slab and three-foot high bollards which will be constructed on Parcel 23.

A temporary detour route will be constructed on the makai side of the new bridge to allow two lanes of traffic to pass around the construction area. The detour route will require a construction easement over private property (Parcel 27) and the removal of existing vegetation. The detour route will be located within 100 feet from the existing highway and bridge but will be located outside of the muliwai which extends about 100 feet makai of the bridge to the ocean. The design of the detour route road will include using six 42-inch reinforced concrete pipes (RCP) culverts to allow stream flow. However, no major grading will be required, and the existing topography will not be altered. The detour route will be removed upon completion of the new Kawela Bridge, and the land will be restored to its original condition as practicable.

Construction of the new bridge and stream channel lining will be staged in two phases so that half of the stream bed will be kept open to allow the stream to flow at all times. Work in the stream channel will be scheduled to minimize work during the rainy season as practicable, and no work will be carried out in the stream during inclement weather. The contractor will coordinate with HDOT, Maui Police Department and Department of Education regarding road flooding conditions during inclement weather while the temporary detour route is in operation.

A Best Management Practices (BMPs) Plan was developed for the Kawela Bridge Replacement Project and will be implemented to mitigate potential pollution into Kawela Gulch and the surrounding construction area. Site specific BMP Plans will be developed by the contractor, once selected, to provide more details to mitigate construction methods.

ANALYSIS:

On June 30, 2006, two biologists from AECOS, an environmental consulting firm, surveyed Kawela Gulch to assess the biological resources and water quality around the Kawela Bridge proposed for replacement.

During the June 30, 2006, survey, the biologists observed both native and introduced aquatic species in the muliwai and the isolated pool under the bridge, and no federally-listed species. Three species of native fish (*oopu naniha, oopu akupa and oopu nakea*) and native prawn (*opae*) were observed. These fish and prawn are anadromous and migrate to and from the ocean but remain in the estuary or stream as adults. *Aholehole* and *amaama* were abundant; they reside in the estuary as juveniles and migrate to the ocean as they grow.

On July 1, 2009, HDOT reviewed the Final Environmental Assessment for the Kawela Bridge Replacement Project and made a Finding of No Significant Impact (FONSI).

Agency Review Comments:

The Department of Health (DOH) Clean Water Branch (CWB):

- Any project and its potential impacts to State waters must meet the State's anti-degradation policies, designated uses and water quality criteria.
- A National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including stormwater runoff, into State surface waters will be required.
- U.S. Army Corps of Engineers Department of Army (DA) permit may be required for the project.

The Molokai Planning Commission approved a Special Management Area (SMA) use permit application on September 28, 2009, subject to its standard and project specific conditions relating to traffic management, historic resources, federal and state permits, BMPs, contingency plans, and site plan review and approval.

The Office of Hawaiian Affairs (OHA):

- Expressed concerns about the detour route which is presently undeveloped and contains a coastal pond where a number of native species are present as well as the sensitive nature of coastal estuarine ponds.
- Requested clarification as to whether or not the detour route will impact this area.
- Supported the mitigation measures to facilitate the migration of aquatic species.
- Requested that work be stopped should *iwi kupuna* (ancestral remains), or native Hawaiian cultural and traditional deposits be found during ground disturbance and that appropriate agencies be contacted pursuant to applicable law.

The U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, Department of Hawaiian Home Lands and the University of Hawaii Environmental Center did not submit comments as of the date of preparation of this submittal.

DLNR Review Comments:

- Division of Aquatic Resources (DAR): Kawela Stream provides habitat for more than 15 species of native macrofauna, including native fish, freshwater crustaceans, dragonflies and damselflies. A continuous streamflow should be provided during all phases of construction to allow the recruitment, migration and reproduction of native species. Other mitigative measure should also be implemented to minimize the potential for erosion, siltation and pollution of the aquatic environment.
- Office of Conservation and Coastal Lands (OCCL): Parcel 27 appears to be located in the Conservation District and is subject to HAR, Chapter 13-5 Conservation District. A Conservation District Use Application (CDUA) will be required. The applicant should consider providing landscape buffers along the highway adjacent to private properties and include discussion of the proposed uses in the Conservation District for the CDUA.
- Land Division: the streambed and surrounding lands are privately owned; accordingly, no permits are required from the Land Division.
- Engineering: according to the Flood Insurance Rate Map (FIRM), the project site is located in Flood Zone A2 which is not regulated by the National Flood Insurance Program (NFIP).
- Forestry and Wildlife: the project is not subject to their authority or permit.
- State Parks had no objections to the project.
- Historic Preservation reviewed the archaeological inventory survey prepared as part of the Final Environmental Assessment and determined that no historical or cultural resources will be adversely affected by the proposed project.

Staff Review

According to DAR's Atlas of Hawaiian Watersheds & Their Aquatic Resources, Island of Molokai, April 2008, Kawela Gulch is a perennial stream with the following native aquatic resources in the lower and upper reaches of the stream: *oopu akupa, oopu alamoo, oopu nakea, oopu naniha, oopu nopili*, and *opae*.

According to the Final Environmental Assessment, the proposed bridge replacement is not anticipated to have an adverse impact upon the biological environment. The applicant will take the following measures to minimize impacts of the project on the environment.

- Work within the stream channel will be phased to maintain continuous stream flow, and culverts under the detour route will allow water to pass downstream.
- The design of the new bridge and temporary bridge detour road will take into consideration the needs of migrating native aquatic animals.
- Temporary pipe culverts used for the detour road will be placed flush with the stream be to allow passage by migrating fish, and the ends of the culverts will not hang over the stream bed.
- The detour route has been designed and aligned as close to the existing right-of-way as possible to minimize disruption of existing vegetation. Removal of vegetation will be reviewed and assessed during the Conservation District Use Application process, and replacement trees will be planted along the detour route.
- The selected contractor will develop site-specific BMPs to mitigate impacts to the environment.

RECOMMENDATION:

That the Commission approve a Stream Channel Alteration Permit (SCAP.2588.4) for a temporary by-pass road and replacement of Kawela Bridge across Kawela Gulch, Kawela, Molokai, TMKs: (2) 5-4-001:023, 027 and 999, subject to the standard conditions in Exhibit 6.

Respectfully submitted,

KEN C. KAWAHARA, P.E.
Deputy Director

Exhibits:
1. Location Map
2. Bridge Layout Plan
3. Bridge Sections
4. Detour Route Plan
5. Photos of Kawela Gulch
6. Standard Stream Channel Alteration Permit Conditions

APPROVED FOR SUBMITTAL:

LAURA H. THIELEN
Chairperson

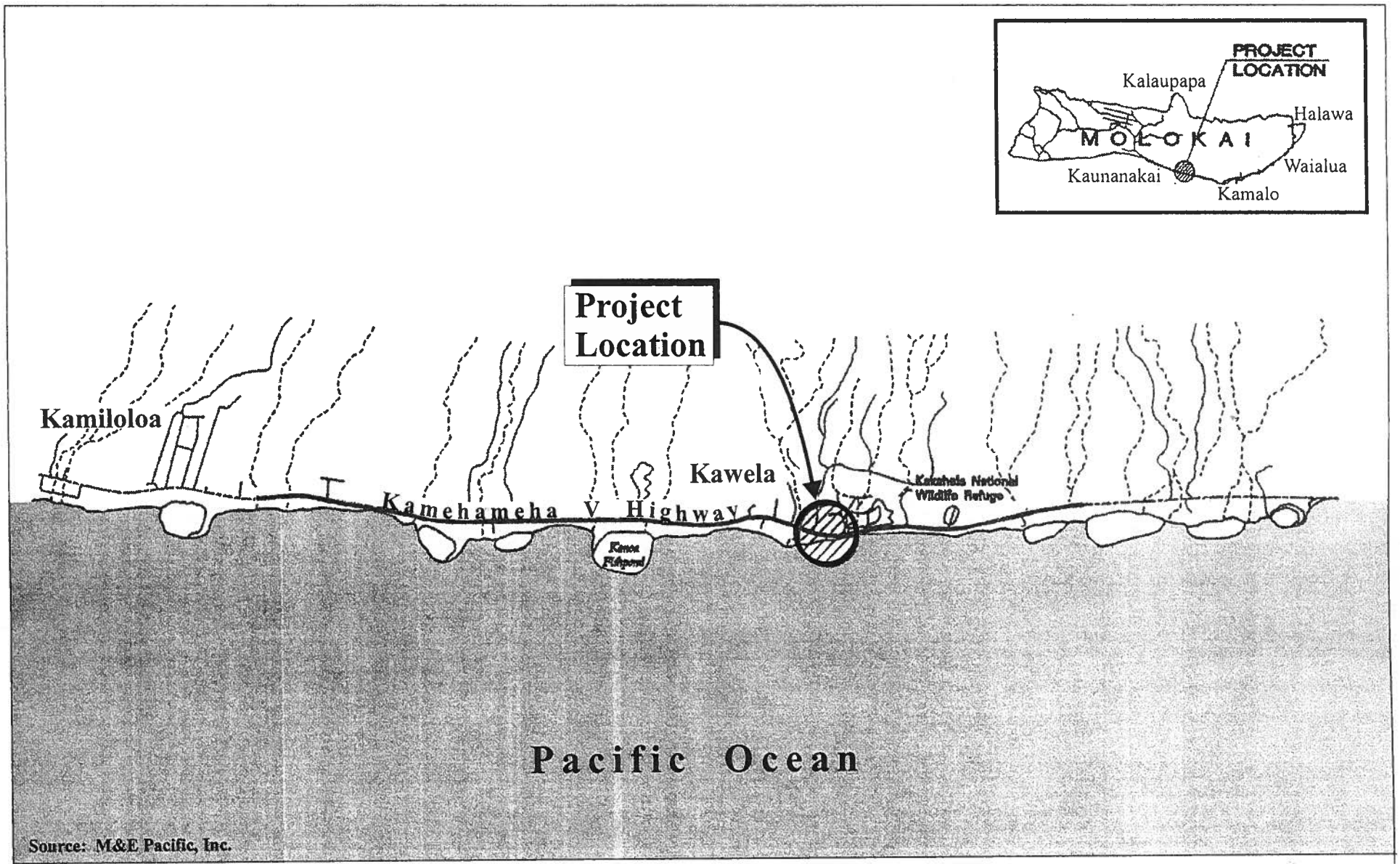


Figure 1

Proposed Kawela Bridge Replacement

Regional Location Map

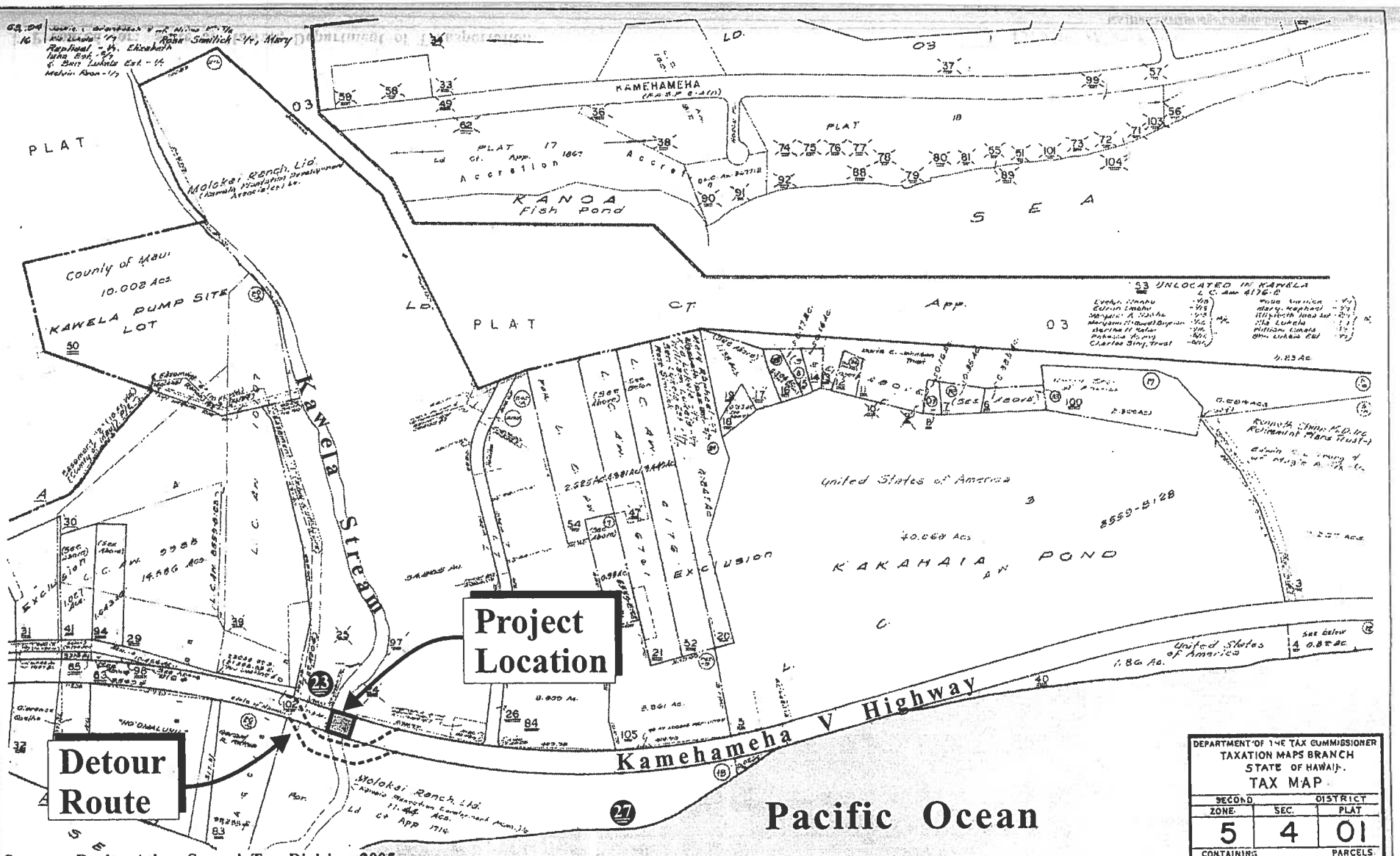
1000 0 Feet 500 2000

MUNEKIYO & HIRAGA, INC.

Prepared for: State of Hawaii, Department of Transportation

KAIHi KawelaBridge regionalloca

EXHIBIT 1



Source: Realty Atlas, Second Tax Division 2005

Figure 2

Proposed Kawela Bridge Replacement

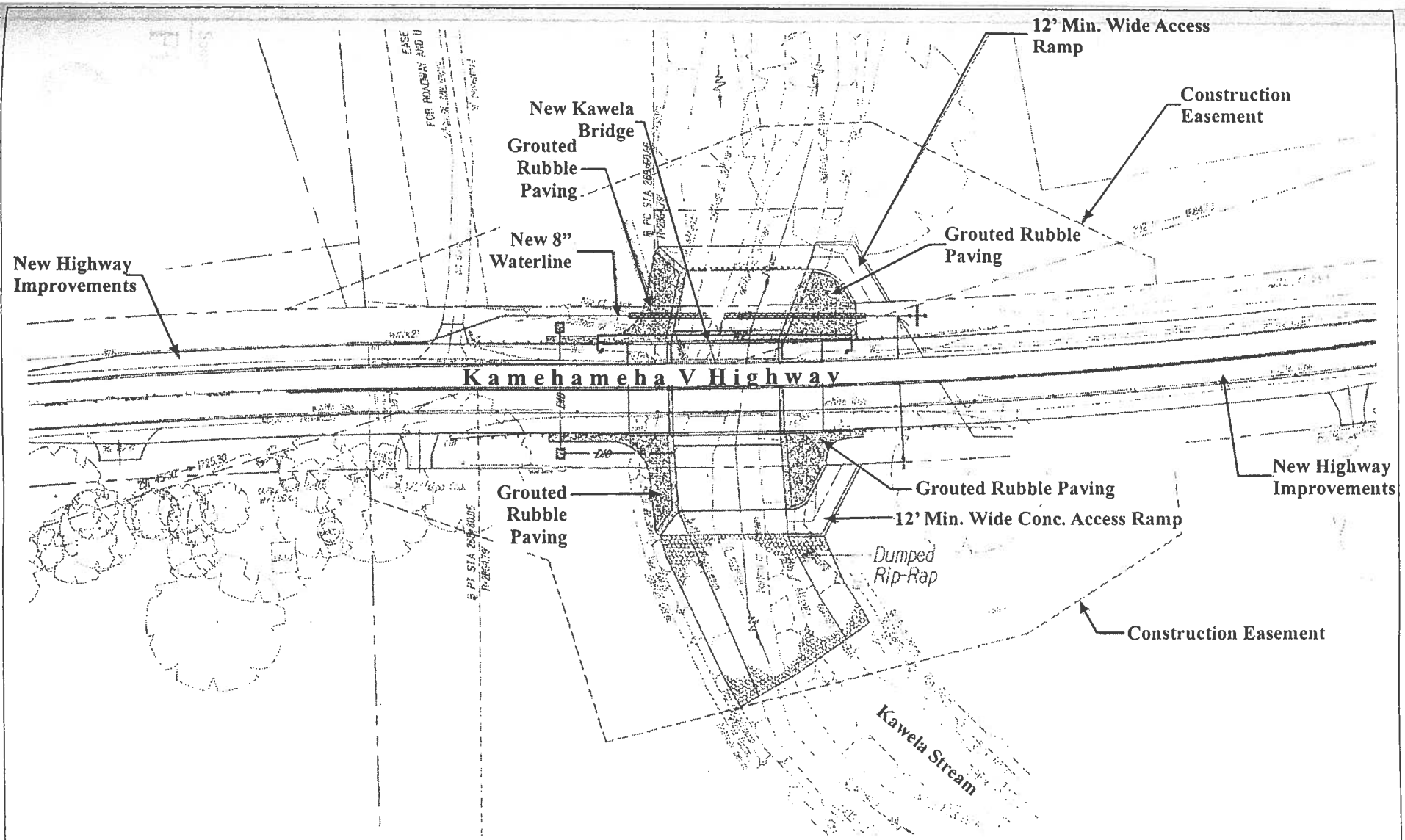
Project Location Map

NOT TO SCALE

MUNEKIYO & HIRAGA, INC.

Prepared for: State of Hawaii, Department of Transportation

KAIHi/KawelaBridge/projectlocat



Source: KAI Hawaii

Figure 4

Proposed Kawela Bridge Replacement

Bridge Layout Plan

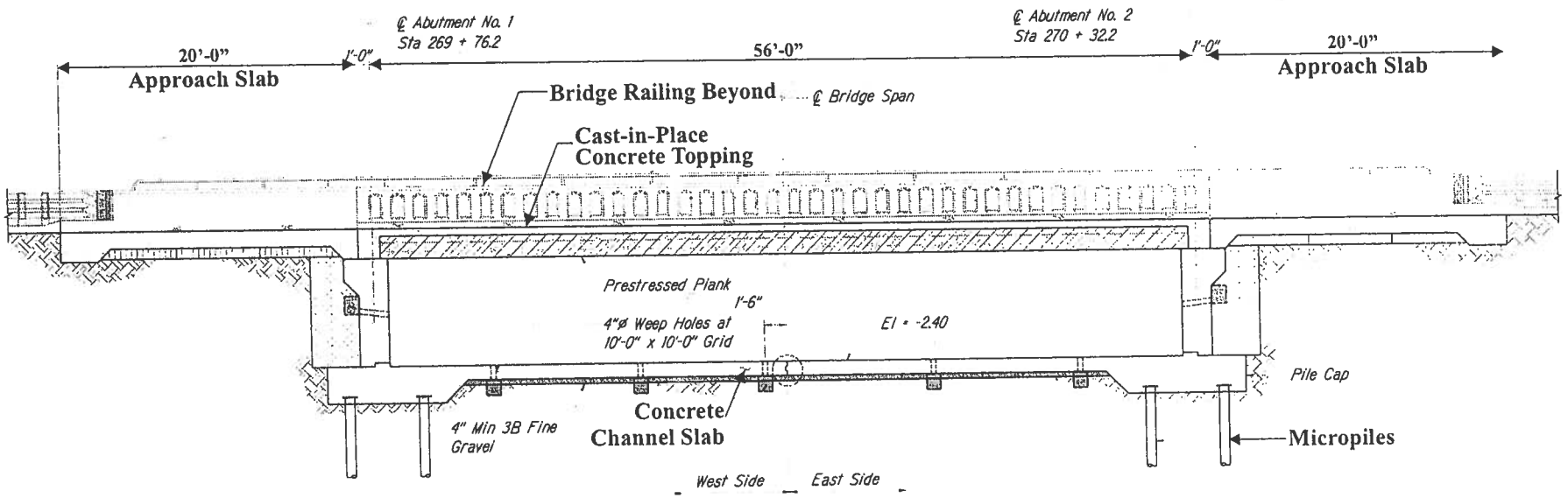
NOT TO SCALE

MUNEKIYO & HIRAGA, INC.

Prepared for: State of Hawaii, Department of Transportation

EXHIBIT 2

KAIHi-KawelaBridge-BridgeLayoutPlan



Source: KAI Hawaii

Figure 3

Proposed Kawela Bridge Replacement

Longitudinal Section Along Base Line

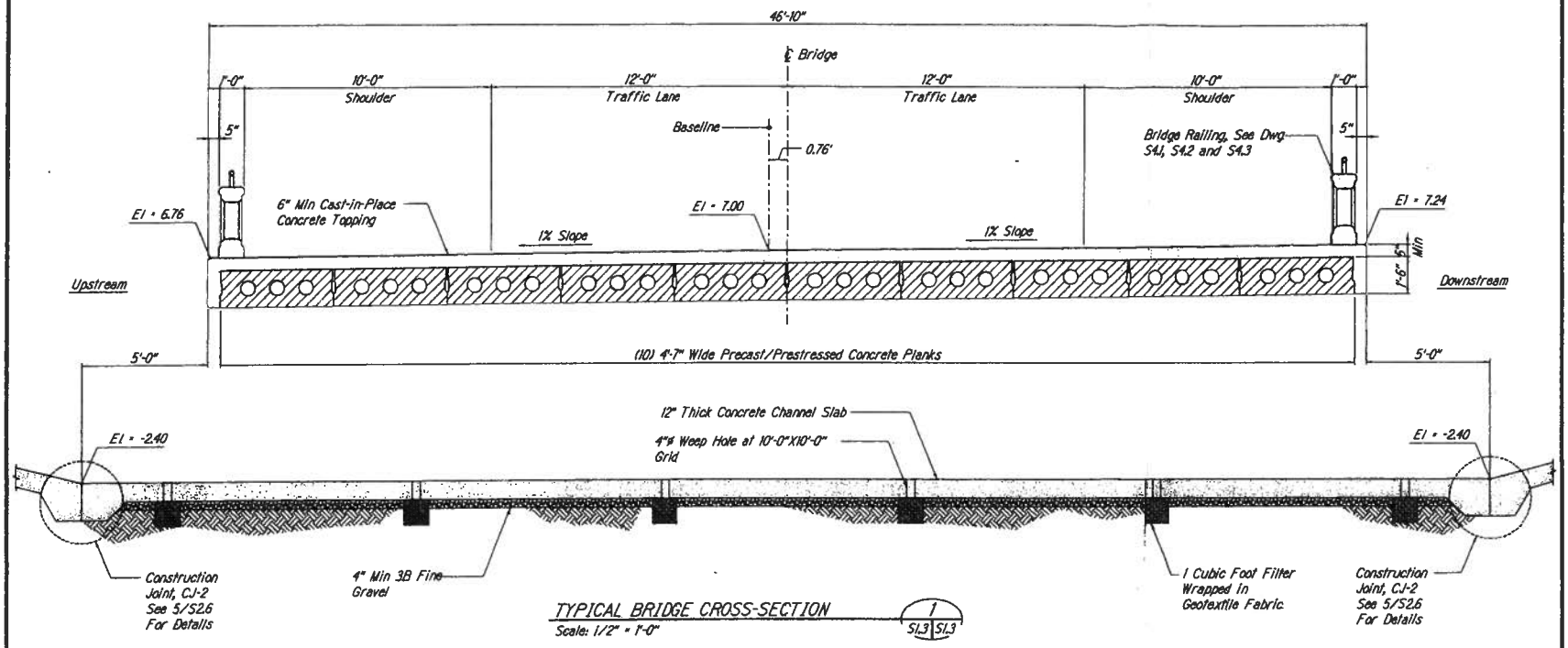
NOT TO SCALE

Prepared for: State of Hawaii, Department of Transportation

EXHIBIT 3

KAIHi/KawelaBridge/LongitudinalSectionAlongBaseLine

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	BR-0450(8)	2008	57	81



TYPICAL BRIDGE CROSS-SECTION (1 / S1.3 | S1.3)

Scale: 1/2" = 1'-0"

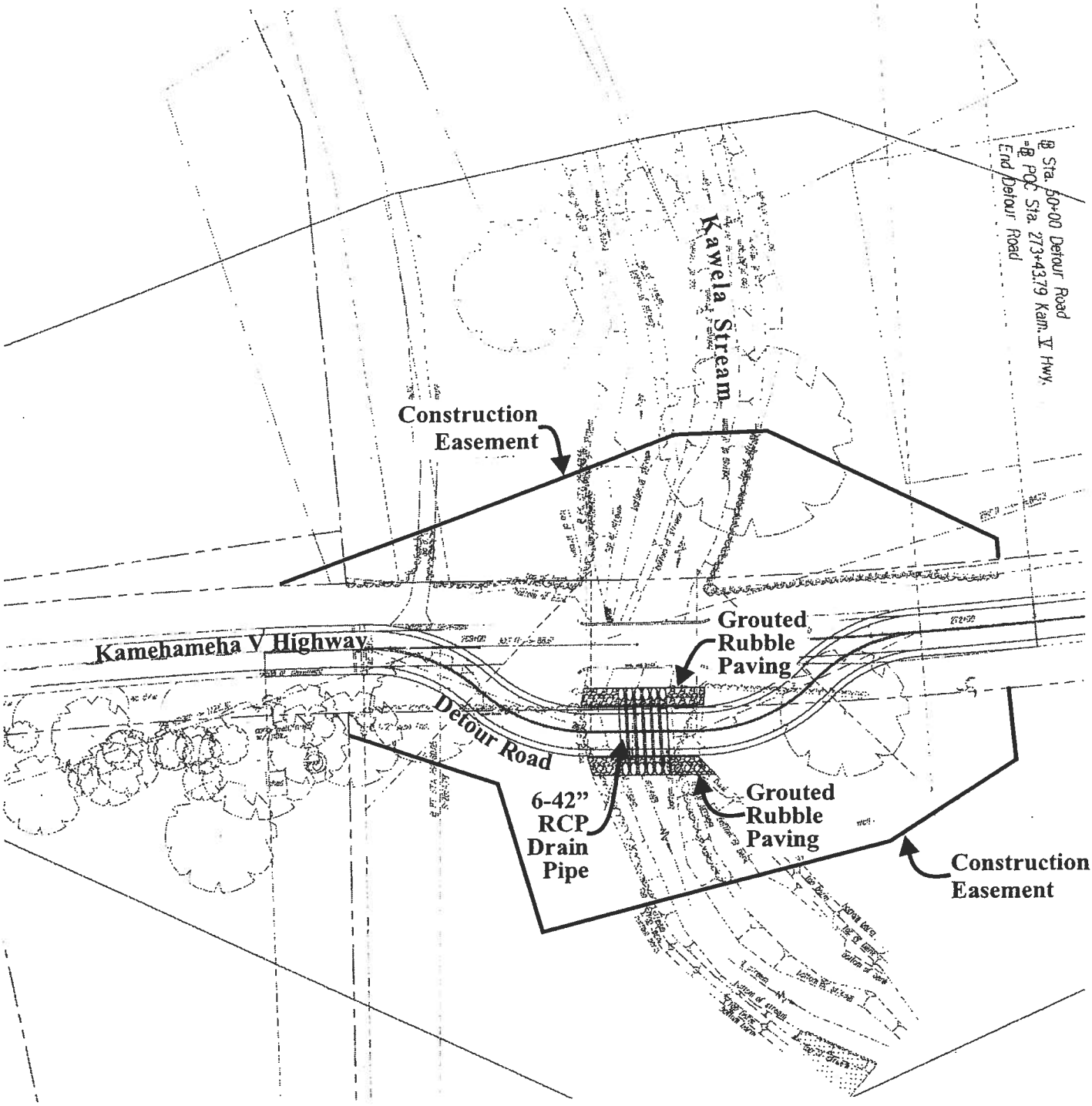
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL BRIDGE CROSS SECTION

Kamehameha V Highway
Kawela Bridge Replacement
Federal Aid Project No. BR-0450(8)

Scale: AS NOTED Date: Oct 2008

SHEET No. S1.3 OF 81 SHEETS



Source: KAI Hawaii

Figure 5

Proposed Kawela Bridge Replacement

Detour Route Plan

NOT TO SCALE

Prepared for: State of Hawaii, Department of Transportation

MUNEKIYO & HIRAGA, INC.

EXHIBIT 4

PHOTO NO. 1
View Looking West from Bridge Deck

PHOTO NO. 2
View Looking East from Bridge Deck

EXHIBIT 5

PHOTO NO. 5
Looking Downstream from Bridge

PHOTO NO. 6
Bridge Elevation, Looking Upstream

STANDARD STREAM CHANNEL ALTERATION PERMIT CONDITIONS
(Revised 9/19/07)

1. The permit application and staff submittal approved by the Commission at its meeting on March 15, 2010, shall be incorporated herein by reference.

2. The applicant shall comply with all other applicable statutes, ordinances, and regulations of the Federal, State and county governments.

3. The applicant, his successors, assigns, officers, employees, contractors, agents, and representatives, shall indemnify, defend, and hold the State of Hawaii harmless from and against any claim or demand for loss, liability, or damage including claims for property damage, personal injury, or death arising out of any act or omission of the applicant or his successors, assigns, officers, employees, contractors, and agents under this permit or related to the granting of this permit.

4 The applicant shall notify the Commission, by letter, of the actual dates of project initiation and completion. The applicant shall submit a set of as-built plans and photos of the completed work to the Commission upon completion of this project. This permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The proposed work under this stream channel alteration permit shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Commission upon showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

5. Before proceeding with any work authorized by the Commission, the applicant shall submit one set of construction plans and specifications to determine consistency with the conditions of the permit and the declarations set forth in the permit application.

6. The applicant shall develop site-specific, construction best management practices (BMPs) that are designed, implemented, operated, and maintained by the applicant and its contractor to properly isolate and confine construction activities and to contain and prevent any potential pollutant(s) discharges from adversely impacting state waters. BMPs shall control erosion and dust during construction and schedule construction activities during periods of low stream flow.

7. The applicant shall protect and preserve the natural character of the stream bank and stream bed to the greatest extent possible. The applicant shall plant or cover lands denuded of vegetation as quickly as possible to prevent erosion and use native plant species common to riparian environments to improve the habitat quality of the stream environment.

8. In the event that subsurface cultural remains such as artifacts, burials or deposits of shells or charcoal are encountered during excavation work, the applicant shall stop work in the area of the find and contact the Department's Historic Preservation Division immediately. Work may commence only after written concurrence by the State Historic Preservation Division.

EXHIBIT 6