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PHOTOGRAPHS OF
KALIHI TUNNEL
AT CAVE-IN AREA

FOR REFERENCE
not to be taken from this room

TA900
W691
H615
1954

PHOTO TAKEN BY
ROY SKINNER
BUREAU OF PLANS

PREPARED AND SUBMITTED BY

SAM O. HIROTA

Disasters * Wilson Tunnel (~~Kalihi and Kaiwa~~, Oahu) * Sinkholes * Humus * Grouting * Photographs * Skinner, Roy * Honolulu. Dept. of Public Works. Bureau of Plans

B8110034:19
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TA 900
W691
H615
1954

TOE OF CAVE-IN NO. 1 (JULY 10, 1954)

PICTURE TAKEN JULY 13, 1954 LOOKING TOWARDS KALIHI

Gift fr. Bur. of Plans
I/29

TOE OF MUCK FROM CAVE-IN NO. 1 (JULY 10, 1954)
PICTURE TAKEN JULY 13, 1954, LOOKING TOWARDS KALIHI

TOE OF MUCK FROM CAVE-IN NO. 1 (JULY 10, 1954)
PICTURE TAKEN JULY 13, 1954 LOOKING TOWARDS KALIHI

TOE OF MUCK FROM CAVE-IN NO. 1 (JULY 10, 1954)
PICTURE TAKEN JULY 13, 1954
LOOKING TOWARDS KALIHI AT "EWA" TUNNEL WALL

TOE OF MUCK FROM CAVE-IN NO. 1 (JULY 10, 1954)
PICTURE TAKEN JULY 13, 1954 LOOKING TOWARDS KALIHI

TOE OF CAVE-IN (JULY 10, 1954)

PICTURE TAKEN JULY 13, 1954

LOOKING TOWARDS KALIHI AT "EWA" TUNNEL WALL

TOE OF CAVE-IN NO. 1 (JULY 10, 1954)

APPROXIMATELY 84,000 GAL. PER DAY WAS MEASURED
PICTURE TAKEN JULY 13, 1954 LOOKING TOWARDS NUUANU.

SINK HOLE FROM CAVE-IN NO. 1 (JULY 10, 1954)

APPROXIMATE DIMENSIONS
- DIAMETER AT TOP : 75 FT.
- DIAMETER-BOTTOM : 60 FT.
- DEPTH AT CENTER : 28 FT.

PICTURE TAKEN JULY 13, 1954, LOOKING TOWARDS EWA.

SINK HOLE FROM CAVE-IN NO. 1 (JULY 10, 1954)

APPROXIMATE DIMENSIONS
- DIAMETER AT TOP : 75 FT.
- DIAMETER BOTTOM : 60 FT.
- DEPTH AT CENTER : 28 FT.

PICTURE TAKEN JULY 13, 1954 LOOKING TOWARDS NUUANU.

SINK HOLE FROM CAVE-IN NO. 1 (JULY 10, 1954)

APPROXIMATE DIMENSIONS:
- DIAMETER AT TOP : 75 FT.
- DIAMETER-BOTTOM : 60 FT.
- DEPTH AT CENTER : 28 FT.

PICTURE TAKEN JULY 13, 1954, LOOKING TOWARDS "KAILUA"

MR. THOMAS L. WHITE (CONSULTING ENGINEER WITH COMMERCIAL SHEARING AND STAMPING CO. OF YOUNGSTOWN, OHIO) INSPECTING TUNNEL AT TOE OF MUCK FROM CAVE-IN NO. 2 (JULY 28, 1954)
PICTURE TAKEN AUG. 3, 1954 LOOKING TOWARDS NUUANU

STANDING AT TOE OF MUCK, FROM CAVE-IN NO.2 (JULY 28, 1954)

LEFT TO RIGHT : SAM O. HIROTA, CITY & COUNTY ENGINEER
THOMAS L. WHITE, CONSULTANT, COMMERCIAL SHEARING & STAMPING CO.,
GLEN NIELSON, DISTRICT MANAGER, GIBBONS AND REED
PICTURE TAKEN AUG. 3, 1954

PRESSURE GROUTING AT END OF MUCK FROM CAVE-IN NO.2 (JULY 28, 1954)
GROUT PIPES ARE AT STA. 249+60±
PICTURE TAKEN AUG. 3, 1954 LOOKING TOWARDS KALIHI

PRESSURE GROUTING AT END OF MUCK FROM CAVE-IN NO. 2 (JULY 28, 1954)
PICTURE TAKEN AUG. 3, 1954, LOOKING TOWARDS KALIHI

PRESSURE GROUTING AT END OF MUCK FROM CAVE-IN NO. 2 (JULY 28, 1954)

GROUT PIPES ARE AT STA. 249+60

PICTURE TAKEN AUG. 3, 1954, LOOKING
TOWARDS KALIHI AT "EWA" TUNNEL WALL

PRESSURE GROUTING AT END OF MUCK FROM CAVE-IN NO. 2 (JULY 28, 1954)
GROUT PIPES ARE AT STA. 249+60±. PICTURE TAKEN AUG. 3, 1954
LOOKING TOWARDS KALIHI

END OF MUCK AND DEBRIS FROM EARTH SLIP ON MORNING OF AUG. 14, 1954, KILLING 5 WORKMEN AND INJURING 2. STEEL TRUSS AND GIRDER ARE PARTS OF CONCRETE FORM CARRIAGE. PICTURE TAKEN AUG. 14, 1954 LOOKING TOWARDS KALIHI.

END OF MUCK AND DEBRIS FROM EARTH SLIP ON MORNING OF AUG. 14, 1954. WORKMEN DIGGING FOR 5 BODIES.

PICTURE TAKEN AUG. 14, 1954 LOOKING TOWARDS KALIHI.

END OF MUCK AND DEBRIS FROM EARTH SLIP ON MORNING OF AUG. 14, 1954. WORKMEN DIGGING FOR 5 BURIED BODIES.
PICTURE TAKEN AUG. 14, 1954 LOOKING TOWARDS KALIHI.

END OF MUCK AND DEBRIS FROM EARTH SLIP ON MORNING OF AUG. 14, 1954
KILLING 5 WORKMEN AND INJURING 2. STEEL TRUSS AND GIRDER
ARE PARTS OF CONCRETE FORM CARRIAGE.
PICTURE TAKEN AUG. 14, 1954 LOOKING TOWARDS KALIHI

END OF MUCK AND DEBRIS FROM EARTH SLIP ON MORNING OF AUG. 14, 1954 KILLING 5 WORKMEN AND INJURING 2. STEEL FORMS FOR TUNNEL CONCRETE LINING AND DRILL JUMBO MAY BE SEEN AT CENTER.

PICTURE TAKEN AUG. 14, 1954, LOOKING TOWARDS KALIHI.

MAUKA EDGE OF SINK-HOLE NO. 3

PICTURE TAKEN SEPT. 9, 1954, LOOKING TOWARDS KAILUA

MAUKA EDGE OF SINK HOLE NO. 3

PICTURE TAKEN SEPT. 9, 1954

LOOKING TOWARDS VENTILATION BLDG. ALONG TUNNEL CENTERLINE.

WAIKIKI EDGE OF SINK-HOLE NO. 3

APPROXIMATE DIMENSIONS
- DIAMETER AT TOP : 72 FT.
- DIAMETER-BOTTOM : 40 FT.
- DEPTH AT CENTER : 60 FT.

PICTURE TAKEN SEPT. 9, 1954 LOOKING TOWARDS NUUANU

WAIKIKI AND MAKAI EDGE OF SINK-HOLE NO. 3

PICTURE TAKEN SEPT. 9, 1954 LOOKING TOWARDS WAIKIKI

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BOTTOM OF SINK-HOLE NO. 3

PICTURE TAKEN SEPT. 9, 1954 LOOKING TOWARDS NUUANU

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