DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
P.O. BOX 1109
WAILUKU, MAUI, HAWAII 96793-7109

'91 MAR -5 A10:52

February 26, 1991

OFC. OF ENVIRONMENTAL QUALITY CONTROL

Office of Environmental Quality Control
Central Pacific Plaza
220 South King Street, 4th Floor
Honolulu, Hawaii 96813

Re: Keokea Lateral
Kula, Maui, Hawaii

Gentlemen:

In accordance with the requirement of Chapter 343, HRS and Chapter 200 to Title 11, Administrative Rules, we hereby notify you that an Environmental Impact Statement will not be required for the subject project.

As the proposing agency, we are forwarding, herewith, one copy of OEQC Form 89-01 and four (4) copies of an Environmental Assessment (Negative Declaration) indicating no significant impacts on the environment as a result of the subject project. These are respectfully submitted for your consideration.

Sincerely,

Rae M. Shikuma
Director

Encl: One (1)-OEQC Form 89-01
Four (4)-Environmental Assessments (Negative Declaration)

cip/dj

1991-03-23-MA-FEA

FILE COPY

ENVIRONMENTAL ASSESSMENT - DETERMINATION
FOR
~~KEOKEA LATERAL~~
~~AT KEOKEA~~
~~IN THE~~
~~MAKAWAO DISTRICT~~
~~COUNTY OF MAUI~~

FOR

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
WAILUKU, MAUI, HAWAII

PREPARED BY
AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS * SURVEYORS
HONOLULU * WAILUKU * HILO, HAWAII

FEBRUARY 1991

1991-03-23-MA-FEA

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FEBRUARY 1991

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ENVIRONMENTAL ASSESSMENT - DETERMINATION

KEOKEA LATERAL

AT KEOKEA

MAKAWAO DISTRICT

COUNTY OF MAUI

I. PROPOSING AGENCY

Department of Water Supply
County of Maui
200 South High Street
Wailuku, Maui, Hawaii
Director: Ms. Rae Shikuma

II. APPROVING AGENCY

Office of the Governor, State of Hawaii

III. AGENCIES CONSULTED IN PREPARING THIS ASSESSMENT

A. State of Hawaii

Department of Transportation

Department of Health

Department of Land and Natural Resources

B. County of Maui

Department of Planning

Department of Public Works

Department of Water Supply

IV. GENERAL DESCRIPTION OF PROJECT'S TECHNICAL, ECONOMIC, SOCIAL AND ENVIRONMENTAL CHARACTERISTICS

A. Technical Description

The project consists of installing a new water main to the community of Keokea and, depending on availability of funds, three additional extensions at the locations described herein. Pipe material will be ductile iron. The design concept calls for the pipes to be laid with inverts at a depth of about 4 feet below existing ground. All construction work will be in accordance with construction specifications prepared for the project, as well as with the Standard Specifications and Standard Details of the Department of Public Works, and the Department of Water Supply of the County of Maui.

Basic construction, named the Main Waterline, comprises approximately 3,980 linear feet of 8-inch waterline. This waterline begins at its connection to the existing 47,000-gallon corrugated steel water tank to the southeast of Middle Road. It follows Middle Road to the point at which Middle Road turns south and then turns northwest through a utility easement, bypassing a cemetery, to Kula Highway. The alignment then follows Kula Highway to a deadend beyond Fong Store. If available funds permit, any of three additional waterline extensions will be constructed as follows:

1. Additive No. 1: an 8-inch extension 500 linear feet long, along Middle Road from an existing 6-inch deadend at Hookano Place;
2. Additive No. 2: an 8-inch waterline branch, 513 linear feet long, of the Main Waterline along Kula Highway, northward of the Cross Road intersection.

3. Additive No. 3: a new 8-inch connection from the existing water tank 710 linear feet southeast to the existing Upper Kula waterline, replacing the existing 3-inch galvanized pipe connection.

New fire hydrants at appropriate intervals will be installed along the new waterlines. Existing service laterals for properties along the new waterlines will be replaced with new laterals.

Two pressure reducing valve (PRV) stations will be installed in the system. One station will be used to bypass the water tank from Additive No. 3 pipeline and the other will be located at the intersection of Kula Highway and Cross Road. These PRV stations will reduce the high static pressures to reasonable lower pressures for most of the water users.

The estimated cost of the project is $310,000.

B. Economic and Social Characteristics

The proposed project will provide water service to meet the domestic demand and fire flow requirements for areas that do not have adequate service at this time.

The land use and lifestyle of the area are not anticipated to change with the implementation of the water project. No families or businesses will be relocated by the proposed water project. Further development of the area served by this waterline should not be encouraged by the implementation of this project.

The Keokea lateral requires new utility easements through pasturelands.

C. Environmental Characteristics

There will be no major changes to the environmental characteristics of the areas in which the project is located, as the proposed waterline will be installed underground. Upon completion of the construction of the waterline, all affected areas will

be restored to near original condition and existing general drainage patterns will be maintained. There are no known historical or arachaeological sites along the waterline alignment. No rare or endangered species of flora or fauna have been identified within the projec area.

V. SUMMARY AND DESCRIPTION OF AFFECTED ENVIRONMENT

Portions of the proposed waterline alignment are through existing pasturelands covered with cattle grass and with scattered trees, consisting of avocado, Norfolk Pine, Eucalyptus and Black Wattle. The remaining portions are in roadway rights-of-ways within grassed shoulder areas. The shoulder area of the roadways is graded and grassed.

Soils in the area are classified as Kula Very Rocky Loam (KxbE) and Kula Loam (KxD) by the U.S. Soil Conservation Service. Permeability is moderately rapid. Runoff is medium and the soil erosion hazard is moderate. Some outcropping of rocks exists in the pastureland. See Exhibit 1 for Project Location, Exhibit 2 for Site Plan showing proposed pipelines and Exhibits 3 through 9 for alignment of waterlines.

VI. IDENTIFICATION AND SUMMARY OF MAJOR IMPACTS AND ALTERNATIVES CONSIDERED

A. Major Impacts

There will be no permanent adverse environmental impacts created in the area by the proposed project. Some temporary, unavoidable adverse environmental effects will occur during construction. These effects will be noise and airborne emissions from construction equipment, and inconvenience to motorists, pedestrians and abutting property owners during the construction period.

There will be no other significant adverse effects on the environment of the area.

B. Alternatives

The alternative of "no action" would mean that inadequate water systems and poor or no fire protection would continue to exist for the project location.

VII. PROPOSED MITIGATION MEASURES

A. Noise and Airborne Emission Management

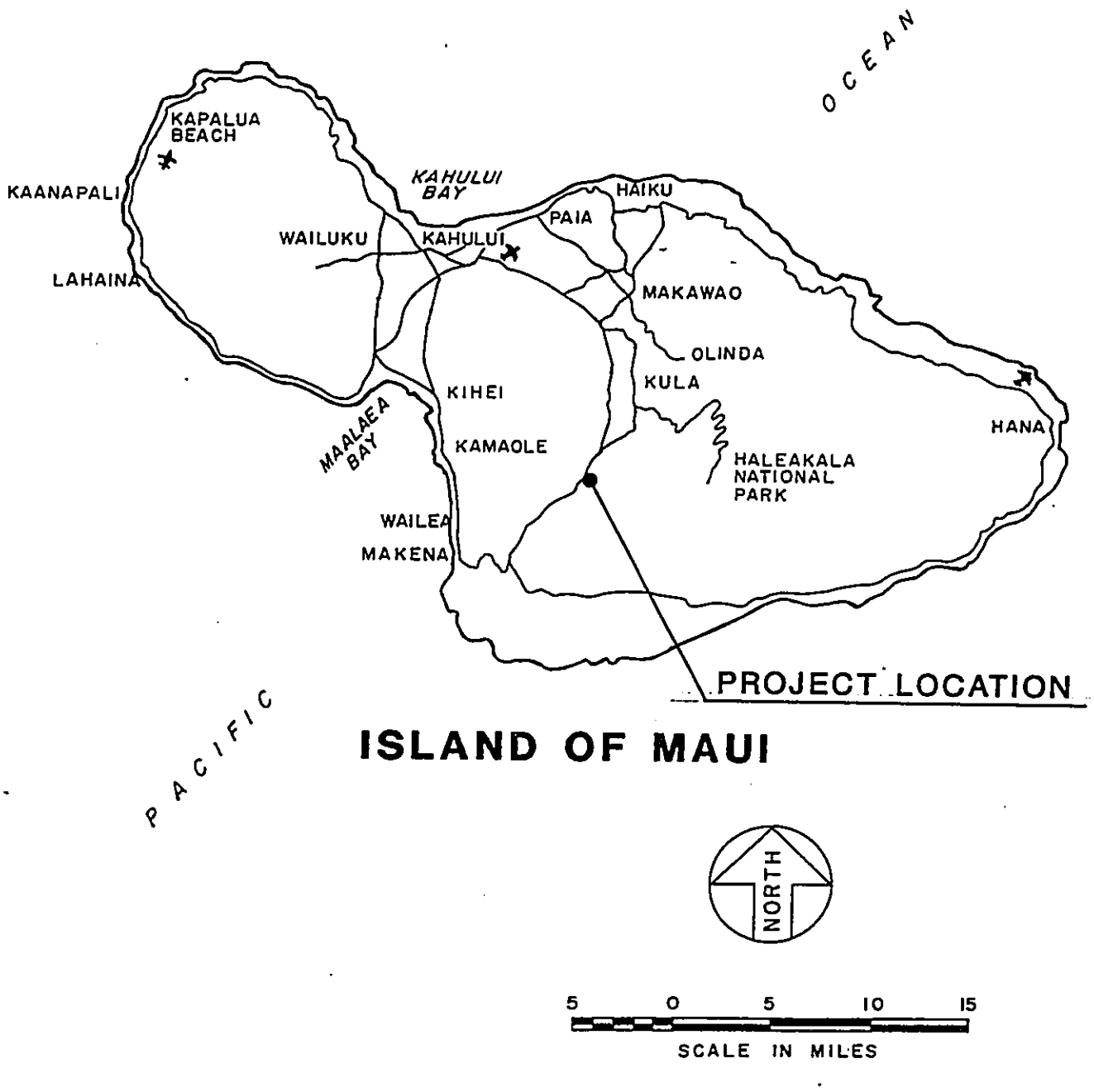
The Contractor will be required to observe all Federal, State and County rules and regulations relating to air and noise pollution during construction.

B. Vehicular and Pedestrian Traffic Inconvenience

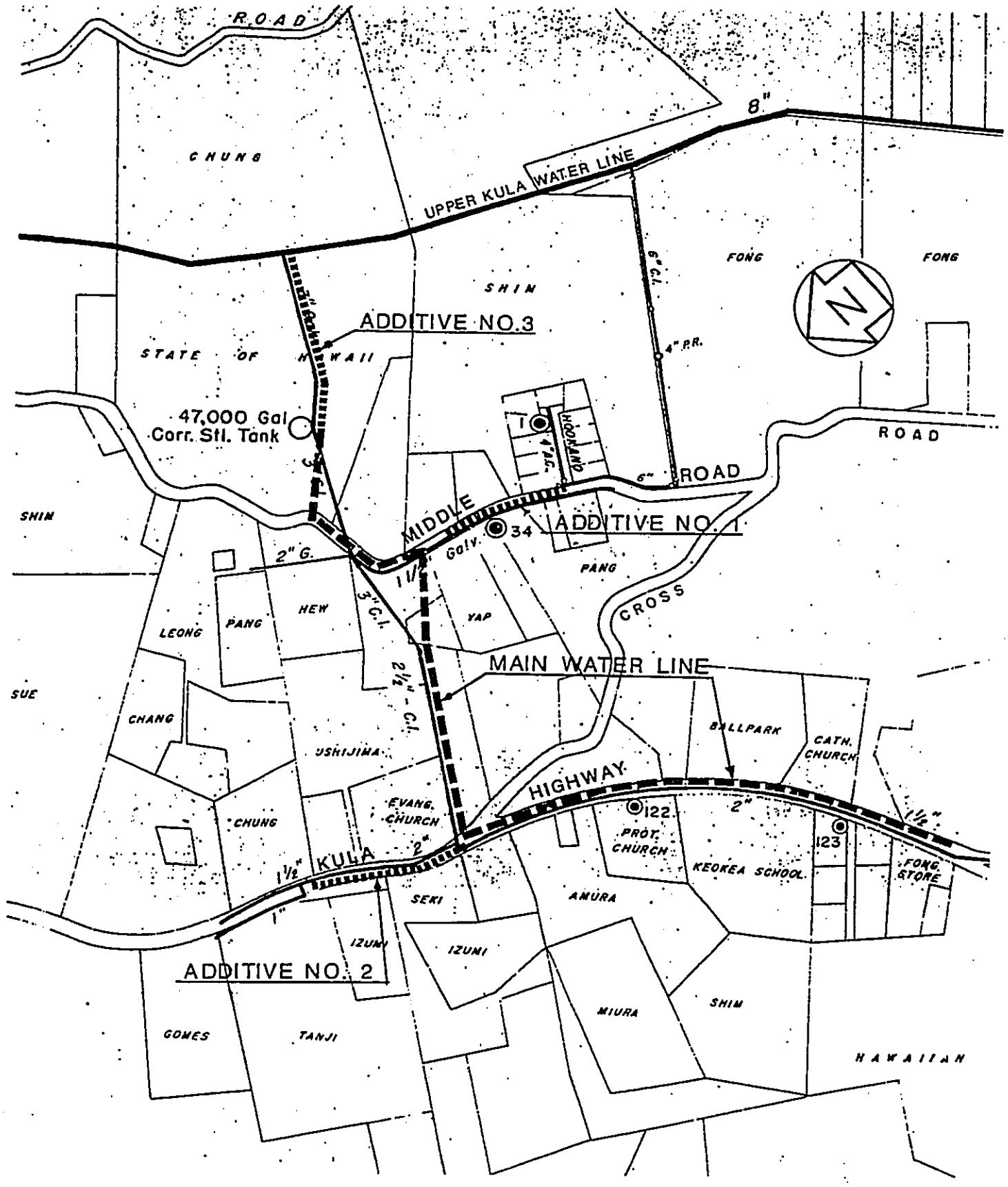
Contract provisions will restrict work during peak periods of traffic. Specific working hours in the public rights-of-way will be established. Safety precautions and traffic control measures contained in the "Rules and Regulations Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways", as adopted by the State Highway Coordinator and the "Manual of Uniform Traffic Control Devices for Streets and Highways, Part VI - Traffic Controls for Street and Highway Construction, Maintenance, Utility and Emergency Operations" will be used on the project.

VIII. DETERMINATION

After completing an assessment of the potential environmental effects of the proposed project, it is determined that the adverse effects will not be significant and does not warrant an environmental impact statement. Therefore, this document constitutes a notice of negative declaration.

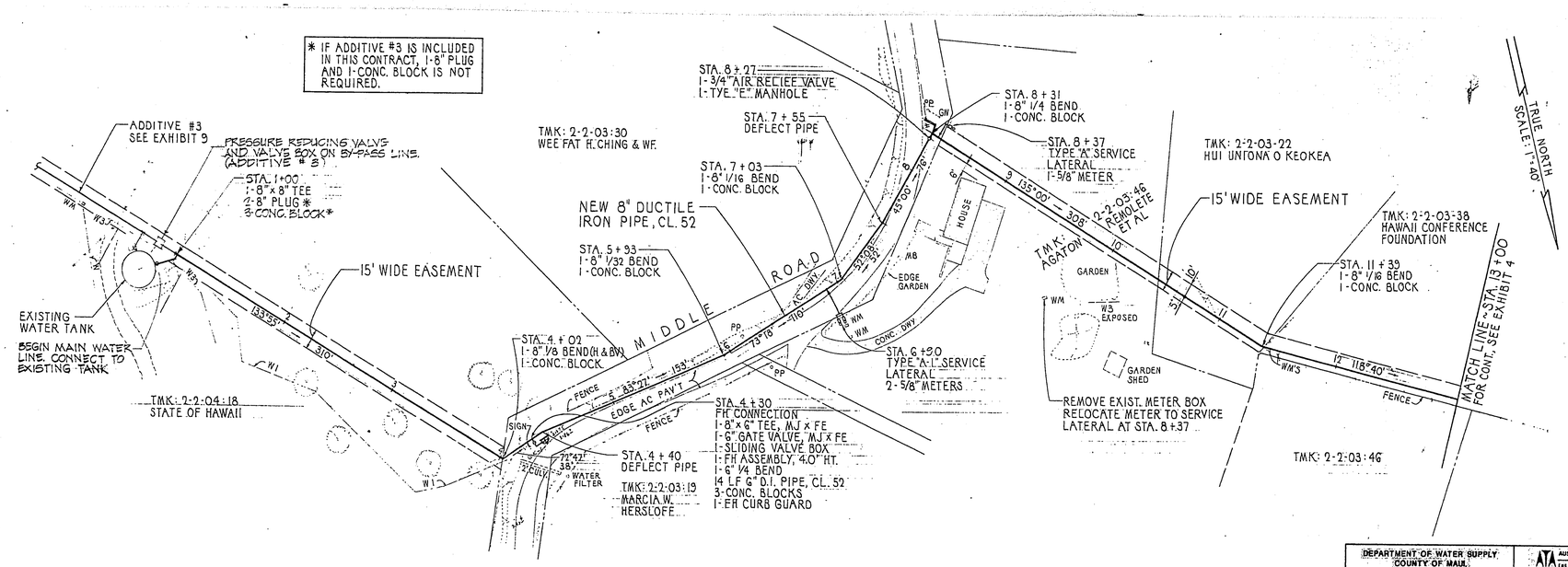


DEPARTMENT OF WATER SUPPLY COUNTY OF MAUI KEOKEA LATERAL	AUSTIN, TSUTSUMI, & ASSOC., INC. ENGINEERS, SURVEYORS • HAWAII PROJECT LOCATION	EXHIBIT 1



DEPARTMENT OF WATER SUPPLY COUNTY OF MAUI KEOKEA LATERAL	AUSTIN, TSUTSUMI, & ASSOC., INC. ENGINEERS, SURVEYORS • HAWAII SITE PLAN	EXHIBIT 2

90 B



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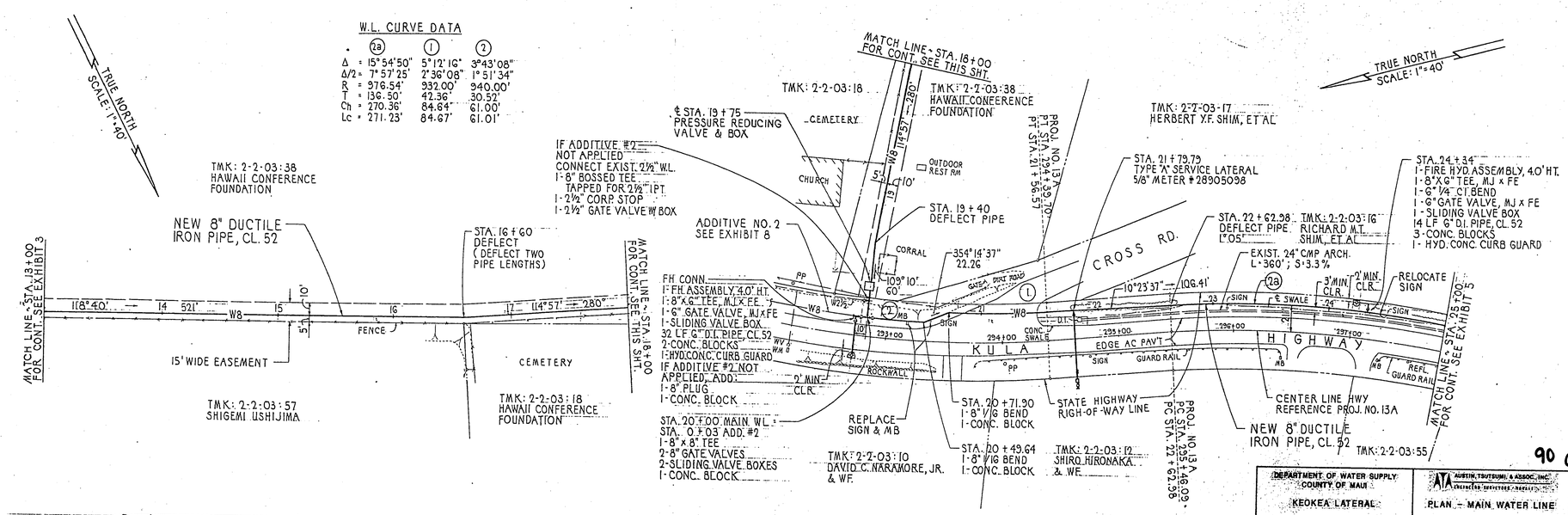
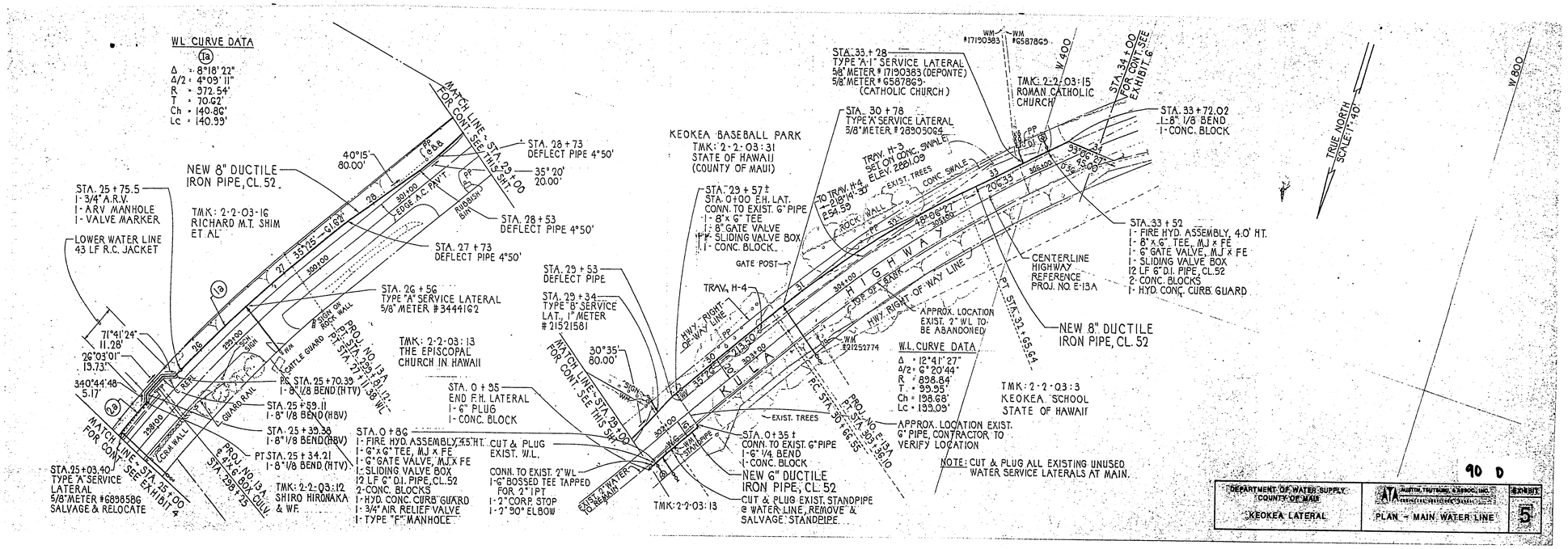
DEPARTMENT OF WATER SUPPLY COUNTY OF MAUI	AUSTIN, TSUTSUMI, & ASSOC., INC. ENGINEERS SURVEYORS HONOLULU	EXHIBIT
KEOKEA LATERAL	PLAN - MAIN WATER LINE	3

90 c

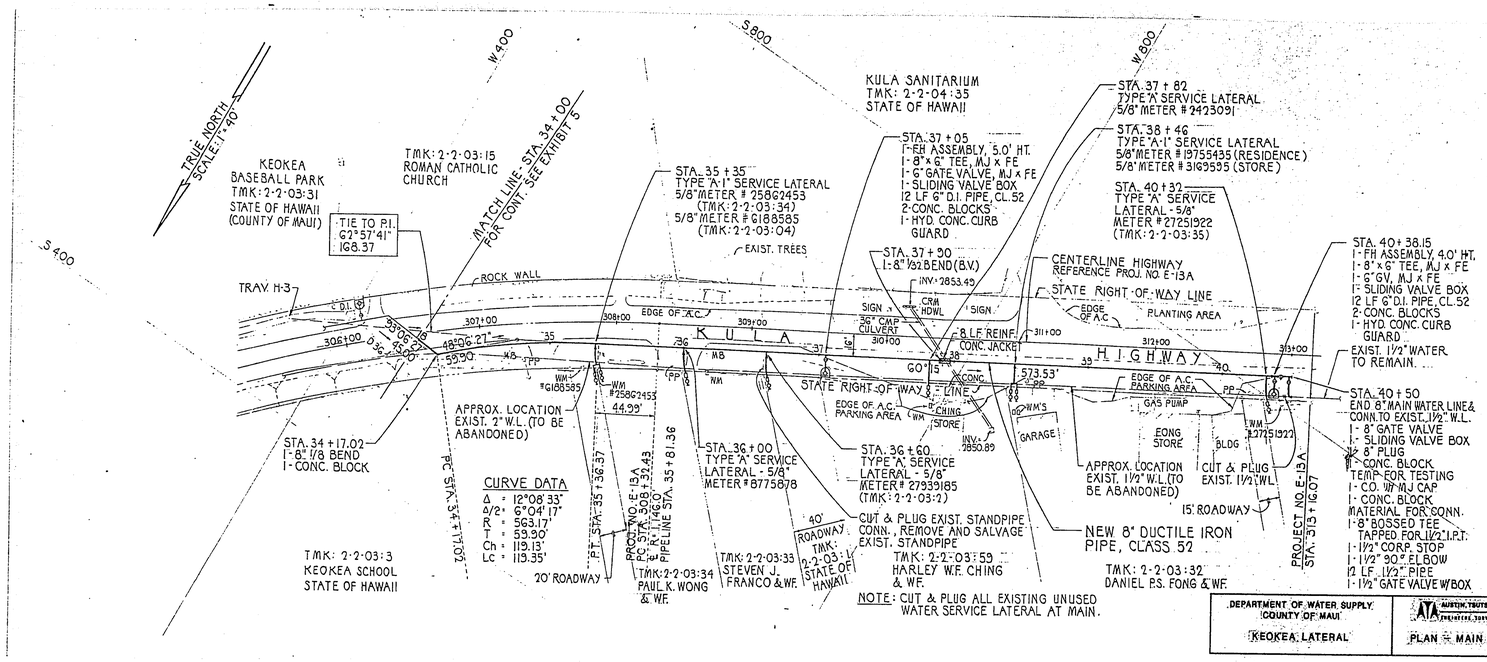

W.L. CURVE DATA
(2a) (1) (2)
Δ = 15°54'50" 5°12'16" 3°43'08"
Δ/2 = 7°57'25" 2°36'08" 1°51'34"
R = 976.54' 932.00' 940.00'
T = 136.50' 42.36' 30.52'
Ch = 270.36' 84.64' 61.00'
Lc = 271.23' 84.67' 61.01'
TRUE NORTH SCALE: 1"=40'
MATCH LINE - STA. 13+00 FOR CONT. SEE EXHIBIT 3
MATCH LINE - STA. 18+00 FOR CONT. SEE THIS SHT.
MATCH LINE - STA. 25+00 FOR CONT. SEE EXHIBIT 5
TMK: 2-2-03:38 HAWAII CONFERENCE FOUNDATION
NEW 8" DUCTILE IRON PIPE, CL. 52
15' WIDE EASEMENT
TMK: 2-2-03:57 SHIGEMI USHIJIMA
STA. 16+60 DEFLECT (DEFLECT TWO PIPE LENGTHS)
FENCE
CEMETERY
TMK: 2-2-03:18 HAWAII CONFERENCE FOUNDATION
IF ADDITIVE #2 NOT APPLIED CONNECT EXIST. 2½" W.L. 1-8" BOSSED TEE TAPPED FOR 2½" IPT 1-2½" CORP. STOP 1-2½" GATE VALVE W/ BOX
ADDITIVE NO. 2 SEE EXHIBIT 8
FH CONN. 1-FH ASSEMBLY, 4.0' HT. 1-8"x6" TEE, MJ x FE 1-6" GATE VALVE, MJ x FE 1-SLIDING VALVE BOX 32 LF 6" D.I. PIPE, CL. 52 2-CONC. BLOCKS 1-HYD. CONC. CURB GUARD IF ADDITIVE #2 NOT APPLIED, ADD: 1-8" PLUG 1-CONC. BLOCK
STA. 20+00 MAIN WL = STA. 0+03 ADD. #2 1-8"x8" TEE 2-8" GATE VALVES 2-SLIDING VALVE BOXES 1-CONC. BLOCK
℄ STA. 19+75 PRESSURE REDUCING VALVE & BOX
CEMETERY
CHURCH
OUTDOOR REST RM
STA. 19+40 DEFLECT PIPE
CORRAL
354°14'37" 22.26
109°10' 60'
GATE DUST ROAD
ROCKWALL
2' MIN. CLR.
REPLACE SIGN & MB
TMK: 2-2-03:10 DAVID C. NARAMORE, JR. & WF.
STA. 20+71.90 1-8" 1/16 BEND 1-CONC. BLOCK
STA. 20+49.64 1-8" 1/16 BEND 1-CONC. BLOCK
STATE HIGHWAY RIGH-OF-WAY LINE
TMK: 2-2-03:12 SHIRO HIRONAKA & WF.
PROJ. NO. 13A PT STA. 294+39.70 PT STA. 21+56.57
PROJ. NO. 13A PC STA. 295+46.09 PC STA. 22+62.98
TMK: 2-2-03:17 HERBERT Y.F. SHIM, ET AL
STA. 21+79.79 TYPE "A" SERVICE LATERAL 5/8" METER #28905098
STA. 22+62.98 DEFLECT PIPE 1°05'
TMK: 2-2-03:16 RICHARD M.T. SHIM, ET AL
EXIST. 24" CMP ARCH. L=360'; S=3.3%
CROSS RD.
10°23'37" 106.41'
KULA HIGHWAY
EDGE AC PAV'T
GUARD RAIL
SIGN
℄ SWALE
3' MIN. CLR.
2' MIN. CLR.
RELOCATE SIGN
CENTER LINE HWY REFERENCE PROJ. NO. 13A
NEW 8" DUCTILE IRON PIPE, CL. 52
TMK: 2-2-03:55
STA. 24+34 1-FIRE HYD. ASSEMBLY, 4.0' HT. 1-8"x6" TEE, MJ x FE 1-6" 1/4 CT. BEND 1-6" GATE VALVE, MJ x FE 1-SLIDING VALVE BOX 14 LF 6" D.I. PIPE, CL. 52 3-CONC. BLOCKS 1-HYD. CONC. CURB GUARD
90 c
DEPARTMENT OF WATER SUPPLY COUNTY OF MAUI
KEOKEA LATERAL
AUSTIN, TSUTSUMI & ASSOC., INC.
PLAN - MAIN WATER LINE
EXHIBIT 4

a 90

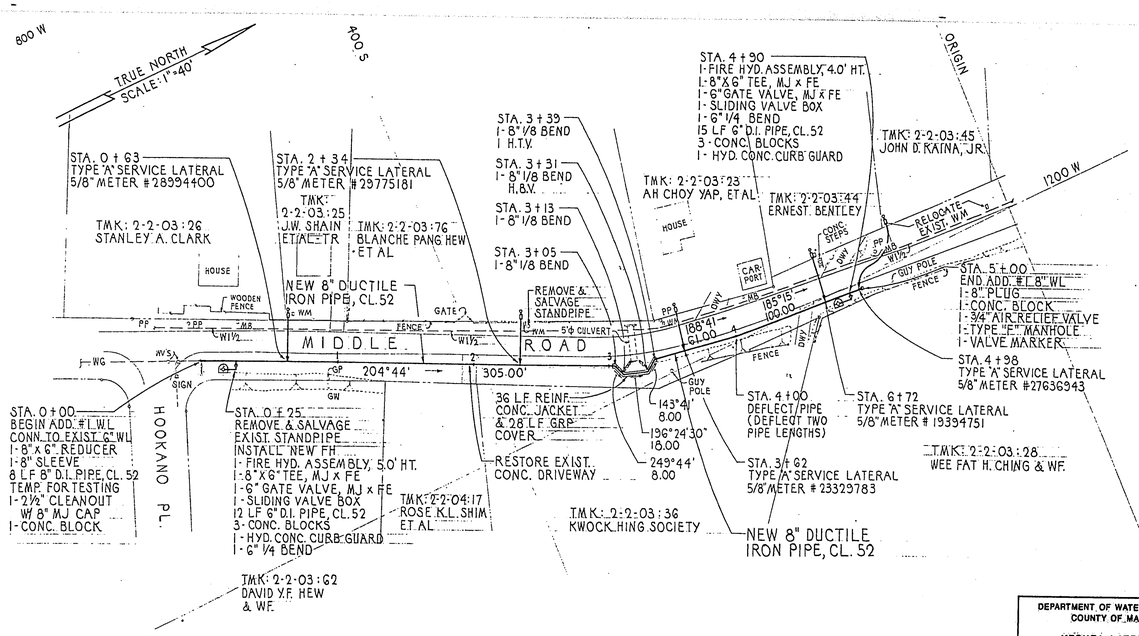


WL CURVE DATA
Δ = 8°18'22"
Δ/2 = 4°09'11"
R = 972.54'
T = 70.62'
Ch = 140.86'
Lc = 140.99'
MATCH LINE ~ STA. 29+00 FOR CONT. SEE THIS SHT.
STA. 28 + 73 DEFLECT PIPE 4°50'
35°20' 20.00'
40°15' 80.00'
NEW 8" DUCTILE IRON PIPE, CL. 52
TMK: 2-2-03-16 RICHARD M.T. SHIM ET AL
STA. 25 + 75.5 1-3/4" A.R.V. 1-ARV MANHOLE 1-VALVE MARKER
LOWER WATER LINE 43 LF R.C. JACKET
STA. 28 + 53 DEFLECT PIPE 4°50'
STA. 27 + 73 DEFLECT PIPE 4°50'
STA. 26 + 56 TYPE "A" SERVICE LATERAL 5/8" METER #3444162
TMK: 2-2-03:13 THE EPISCOPAL CHURCH IN HAWAII
71°41'24" 11.28'
26°03'01" 19.73'
340°44'48" 5.17'
PC STA. 25 + 70.39 1-8" 1/8 BEND (HTV)
STA. 25 + 59.11 1-8" 1/8 BEND (HBV)
STA. 25 + 39.38 1-8" 1/8 BEND (HBV)
PT STA. 25 + 34.21 1-8" 1/8 BEND (HTV)
STA. 25 + 03.40 TYPE "A" SERVICE LATERAL 5/8" METER #6898586 SALVAGE & RELOCATE
MATCH LINE ~ STA. 25+00 FOR CONT. SEE EXHIBIT 4
PROJ. NO. 13A PT. STA. 299+81.12 PT. STA. 27+11.38 WL
PROJ. NO. 13A PT. STA. 298+25 CULV. & 4'x6' BOX
TMK: 2-2-03:12 SHIRO HIRONAKA & WF.
STA. 0 + 86 1-FIRE HYD. ASSEMBLY, 4.5' HT. 1-6"x6" TEE, MJ x FE 1-6" GATE VALVE, MJ x FE 1-SLIDING VALVE BOX 12 LF 6" D.I. PIPE, CL. 52 2-CONC. BLOCKS 1-HYD. CONC. CURB GUARD 1-3/4" AIR RELIEF VALVE 1-TYPE "F" MANHOLE
STA. 0 + 95 END F.H. LATERAL 1-6" PLUG 1-CONC. BLOCK
CUT & PLUG EXIST. W.L.
CONN. TO EXIST. 2" WL 1-6" BOSSED TEE TAPPED FOR 2" IPT 1-2" CORP. STOP 1-2" 90° ELBOW
EXIST. 2" WATER TO REMAIN
TMK: 2-2-03:13
STA. 29 + 53 DEFLECT PIPE
STA. 29 + 34 TYPE "B" SERVICE LAT., 1" METER #21521581
30°35' 80.00'
MATCH LINE ~ STA. 29+00 FOR CONT. SEE THIS SHT.
KEOKEA BASEBALL PARK TMK: 2-2-03:31 STATE OF HAWAII (COUNTY OF MAUI)
STA. 29 + 57± STA. 0+00 E.H. LAT. CONN. TO EXIST. 6" PIPE 1-8"x6" TEE 1-8" GATE VALVE 1-SLIDING VALVE BOX 1-CONC. BLOCK
GATE POST
TRAV. H-4
HWY. RIGHT OF WAY LINE
KUHIA HIGHWAY
STA. 33 + 28 TYPE "A-1" SERVICE LATERAL 5/8" METER #17190383 (DEPONTE) 5/8" METER #6587869 (CATHOLIC CHURCH)
STA. 30 + 78 TYPE "A" SERVICE LATERAL 5/8" METER #28905064
TRAV. H-3 SET ON CONC. SWALE ELEV. 2881.09
TO TRAV. H-4 ELEV. 2881.09
EXIST. TREES
CONC. SWALE
ROCK WALL
TMK: 2-2-03:15 ROMAN CATHOLIC CHURCH
STA. 34 + 00 FOR CONT. SEE EXHIBIT 6
STA. 33 + 72.02 1-8" 1/8 BEND 1-CONC. BLOCK
STA. 33 + 52 1-FIRE HYD. ASSEMBLY, 4.0' HT. 1-8"x6" TEE, MJ x FE 1-6" GATE VALVE, MJ x FE 1-SLIDING VALVE BOX 12 LF 6" D.I. PIPE, CL. 52 2-CONC. BLOCKS 1-HYD. CONC. CURB GUARD
CENTERLINE HIGHWAY REFERENCE PROJ. NO. E-13A
APPROX. LOCATION EXIST. 2" WL TO BE ABANDONED
NEW 8" DUCTILE IRON PIPE, CL. 52
PT. STA. 32+65.64
W.L. CURVE DATA
Δ = 12°41'27"
Δ/2 = 6°20'44"
R = 898.84'
T = 99.95'
Ch = 198.68'
Lc = 199.09'
TMK: 2-2-03:3 KEOKEA SCHOOL STATE OF HAWAII
EXIST. TREES
STA. 0 + 35± CONN. TO EXIST. 6" PIPE 1-6" 1/4 BEND 1-CONC. BLOCK
NEW 6" DUCTILE IRON PIPE, CL. 52
CUT & PLUG EXIST. STANDPIPE @ WATER LINE, REMOVE & SALVAGE STANDPIPE
PROJ. NO. E-13A PT. STA. 305+36.10 PT. STA. 30+66.55
APPROX. LOCATION EXIST. 6" PIPE, CONTRACTOR TO VERIFY LOCATION
NOTE: CUT & PLUG ALL EXISTING UNUSED WATER SERVICE LATERALS AT MAIN.
TRUE NORTH SCALE: 1"=40'
W 400
W 800
90 D
DEPARTMENT OF WATER SUPPLY COUNTY OF MAUI
KEOKEA LATERAL
PLAN - MAIN WATER LINE
EXHIBIT 5

90 E


TRUE NORTH
SCALE: 1"=40'
KEOKEA BASEBALL PARK
TMK: 2-2-03:31
STATE OF HAWAII
(COUNTY OF MAUI)
TMK: 2-2-03:15
ROMAN CATHOLIC CHURCH
MATCH LINE STA. 34+00
FOR CONT. SEE EXHIBIT 5
TIE TO P.I.
62°57'41"
168.37
TRAV. H-3
ROCK WALL
EDGE OF A.C.
KULA HIGHWAY
STATE RIGHT-OF-WAY LINE
APPROX. LOCATION EXIST. 2" W.L. (TO BE ABANDONED)
STA. 34+17.02
1-8" 1/8 BEND
1-CONC. BLOCK
CURVE DATA
Δ = 12°08'33"
Δ/2 = 6°04'17"
R = 563.17'
T = 59.90'
Ch = 119.13'
Lc = 119.35'
20' ROADWAY
TMK: 2-2-03:3
KEOKEA SCHOOL
STATE OF HAWAII
TMK: 2-2-03:34
PAUL K. WONG & W.F.
TMK: 2-2-03:33
STEVEN J. FRANCO & W.F.
STA. 35+35
TYPE "A-1" SERVICE LATERAL
5/8" METER # 25862453
(TMK: 2-2-03:34)
5/8" METER # 6188585
(TMK: 2-2-03:04)
EXIST. TREES
STA. 36+00
TYPE "A" SERVICE LATERAL - 5/8"
METER # 8775878
KULA SANITARIUM
TMK: 2-2-04:35
STATE OF HAWAII
STA. 37+05
1-FH ASSEMBLY, 5.0' HT.
1-8"x6" TEE, MJ x FE
1-6" GATE VALVE, MJ x FE
1-SLIDING VALVE BOX
12 LF 6" D.I. PIPE, CL. 52
2-CONC. BLOCKS
1-HYD. CONC. CURB GUARD
STA. 37+30
1-8" 1/32 BEND (B.V.)
INV. 2853.45
8 LF REINF. CONC. JACKET
STA. 36+60
TYPE "A" SERVICE LATERAL - 5/8"
METER # 27939185
(TMK: 2-2-03:2)
CUT & PLUG EXIST. STANDPIPE CONN., REMOVE AND SALVAGE EXIST. STANDPIPE
TMK: 2-2-03:59
HARLEY W.F. CHING & W.F.
NOTE: CUT & PLUG ALL EXISTING UNUSED WATER SERVICE LATERAL AT MAIN.
STA. 37+82
TYPE "A" SERVICE LATERAL
5/8" METER # 2423091
STA. 38+46
TYPE "A-1" SERVICE LATERAL
5/8" METER # 19755435 (RESIDENCE)
5/8" METER # 31695595 (STORE)
STA. 40+32
TYPE "A" SERVICE LATERAL - 5/8"
METER # 27251922
(TMK: 2-2-03:35)
CENTERLINE HIGHWAY
REFERENCE PROJ. NO. E-13A
STATE RIGHT-OF-WAY LINE
PLANTING AREA
EDGE OF A.C. PARKING AREA
GAS PUMP
EONG STORE
BLDG.
GARAGE
APPROX. LOCATION EXIST. 1½" W.L. (TO BE ABANDONED)
CUT & PLUG EXIST. 1½" W.L.
15' ROADWAY
NEW 8" DUCTILE IRON PIPE, CLASS 52
TMK: 2-2-03:32
DANIEL P.S. FONG & W.F.
PROJECT NO. E-13A
STA. 313+16.07
STA. 40+38.15
1-FH ASSEMBLY, 4.0' HT.
1-8"x6" TEE, MJ x FE
1-6" GV, MJ x FE
1-SLIDING VALVE BOX
12 LF 6" D.I. PIPE, CL. 52
2-CONC. BLOCKS
1-HYD. CONC. CURB GUARD
EXIST. 1½" WATER TO REMAIN.
STA. 40+50
END 8" MAIN WATER LINE & CONN. TO EXIST. 1½" W.L.
1-8" GATE VALVE
1-SLIDING VALVE BOX
1-8" PLUG
1-CONC. BLOCK
TEMP. FOR TESTING
1-C.O. W/ MJ CAP
1-CONC. BLOCK
MATERIAL FOR CONN.
1-8" BOSSED TEE TAPPED FOR 1½" I.P.T.
1-1½" CORP. STOP
1-1½" 90° ELBOW
12 LF 1½" PIPE
1-1½" GATE VALVE W/BOX
90 E
DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
KEOKEA LATERAL
AUSTIN, TSUTSUMI & ASSOC., INC.
PLAN - MAIN WATER LINE
EXHIBIT
6

90 F



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DEPARTMENT OF WATER SUPPLY COUNTY OF MAUI KEOKEA LATERAL	AUSTIN, TSUTSUMI, & ASSOC., INC. ENGINEERS · SURVEYORS · PLANNERS PLAN - ADDITIVE NO. 1	EXHIBIT 7

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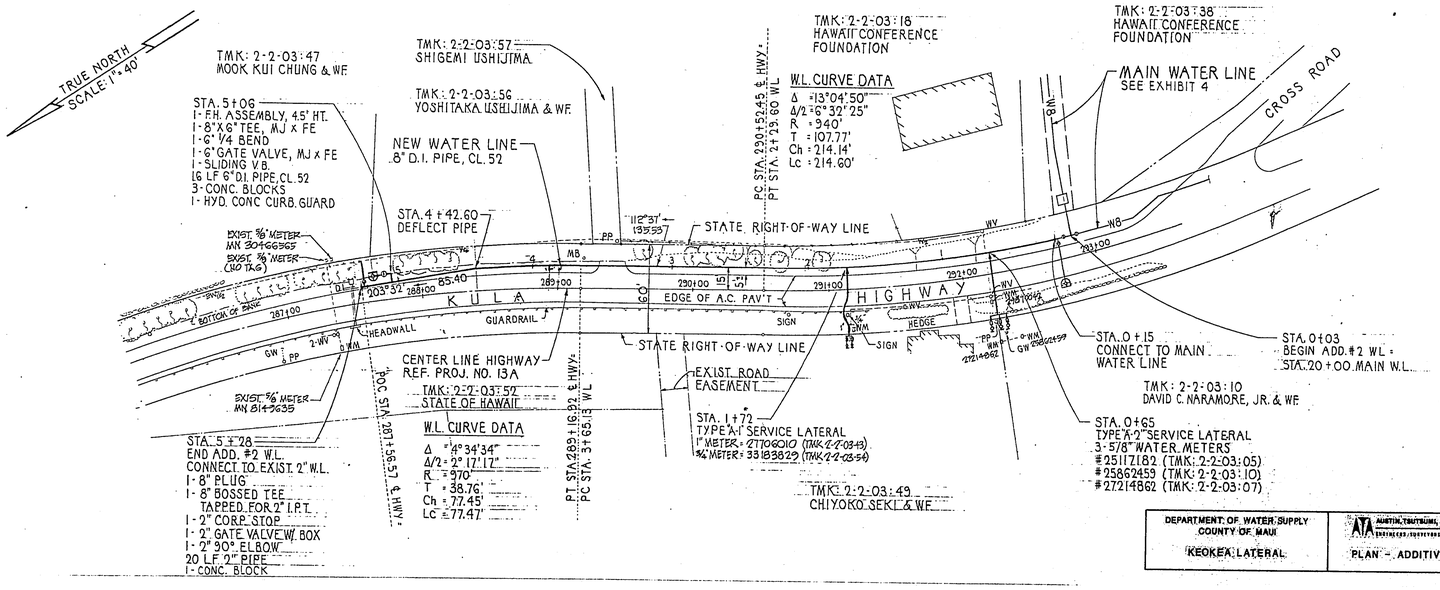

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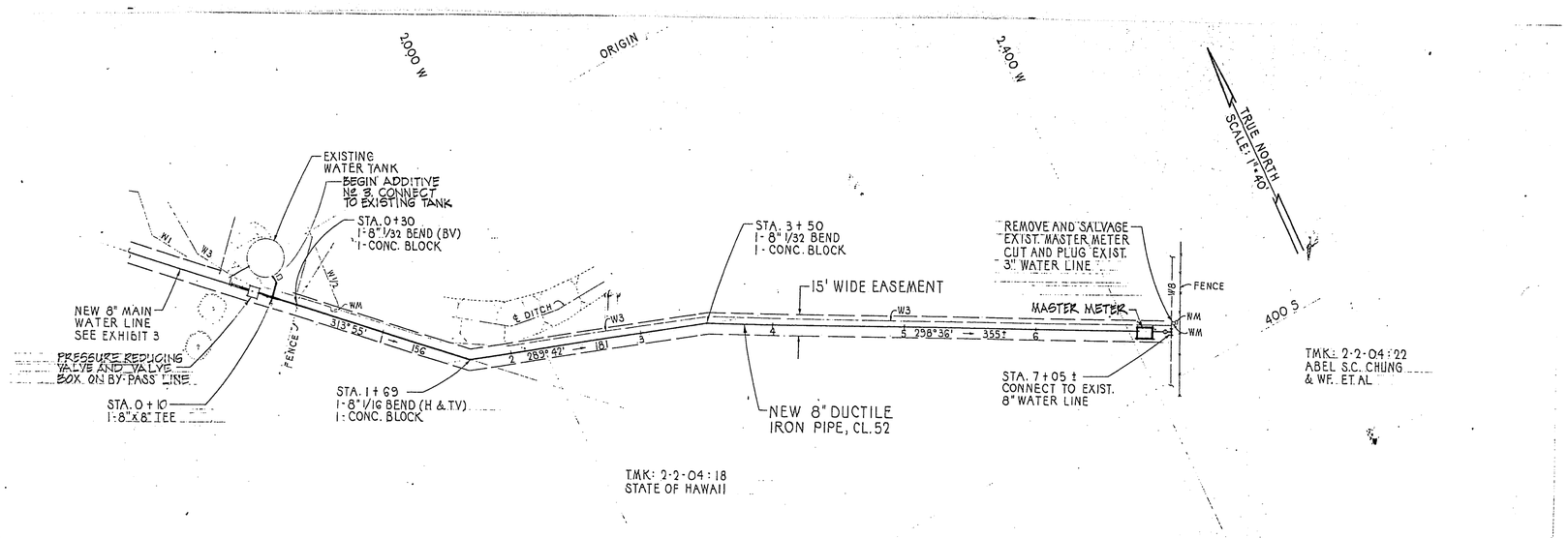
DEPARTMENT OF WATER SUPPLY COUNTY OF MAUI KEOKEA LATERAL	AUSTIN, TSUTSUMI, & ASSOC., INC. ENGINEERS · SURVEYORS · HONOLULU PLAN - ADDITIVE NO. 2	EXHIBIT 8

H 9b



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DEPARTMENT OF WATER SUPPLY COUNTY OF MAUI	AUSTIN, TSUTSUMI, & ASSOC., INC. ENGINEERS, SURVEYORS - HONOLULU	EXHIBIT
KEOKEA LATERAL	PLAN - ADDITIVE NO. 3	9