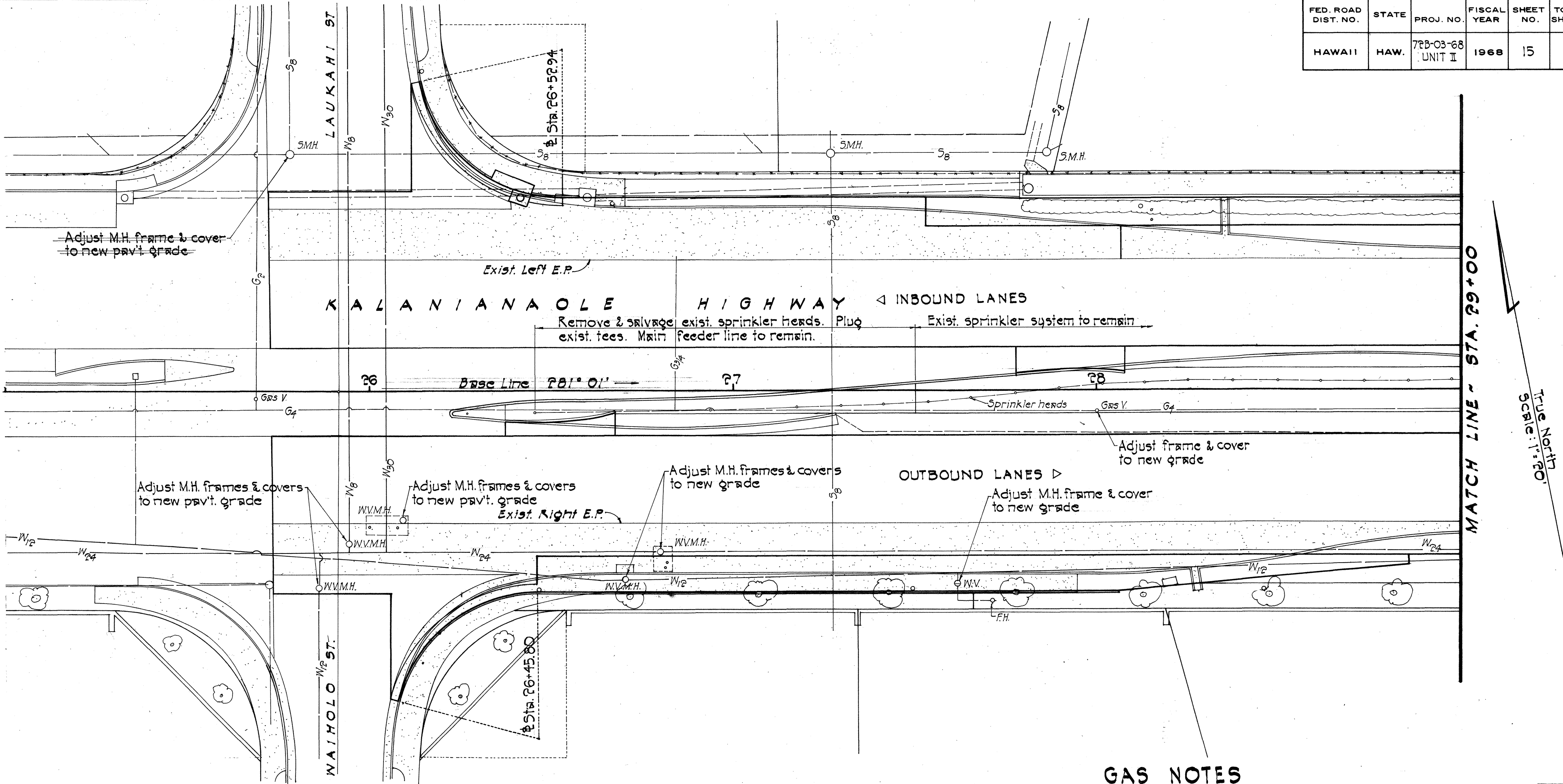


| FED. ROAD DIST. NO. | STATE | PROJ. NO.         | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 78B-03-68 UNIT II | 1968        | 15        | 71           |



WATER NOTES

1. The contractor shall notify the Board of Water Supply in writing one week prior to commencing work on the water system.
2. The contractor shall arrange with the Board of Water Supply to cut off existing unused service laterals and remove meter boxes and appurtenances prior to commencement of clearing and grading operations. Contractor shall provide all necessary excavation.
3. Astericks (\*) indicate work to be performed by B.W.S. Materials shall be furnished by the contractor unless specified as "relocate".
4. All excavation and backfill shall be done by the contractor, including excavation for meter to house service connections.
5. The minimum clearance between utility pole or light standard shall be 3.0 feet.
6. The location of existing mains and appurtenances shown on the plans are approximate only. Any adjustment to the water system whether shown on the construction plans or not shall be made and paid for by the project.
7. Prior to final inspection, all fire hydrants shall be cleaned of all oil, grease or other loose material and given one coat of an approved red lead and one coat of an approved aluminum hydrant paint.
8. Relocation of meters and service connections shall be done by the Board of Water Supply and paid for by the State. The contractor shall perform all necessary excavation and backfill.
9. The Board of Water Supply will install all new service laterals including furnishing of all materials, excavation and backfill at no cost to the project.
10. All demolition work for water system structure shall be incidental to "Structure Exc. for Water System".

GAS NOTES

1. The contractor shall call the Honolulu Gas Co., Distribution Dept., Maps & Records Section at 5448-263 for field location of gas facilities before excavating.
2. The contractor shall expose gas lines by hand before excavating with power equipment in the immediate vicinity.
3. The contractor shall provide adequate support for gas lines exposed in excavation.

Existing Left E.P. - Inbound Lanes

INBOUND LANES

Existing Right E.P. - Outbound Lanes

OUTBOUND LANES

APPROVED:

HONOLULU GAS COMPANY

CHIEF ENGINEERING DIV., B.W.S.

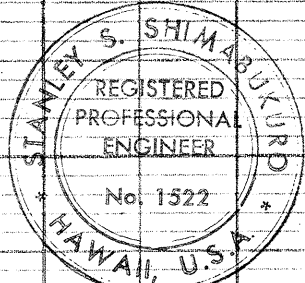
DIRECTOR, DIVISION OF SEWERS

9-25-68  
DATE

10/17/68  
DATE

9/16/68  
DATE

SEWER, WATER, GAS  
& SPRINKLER SYSTEM

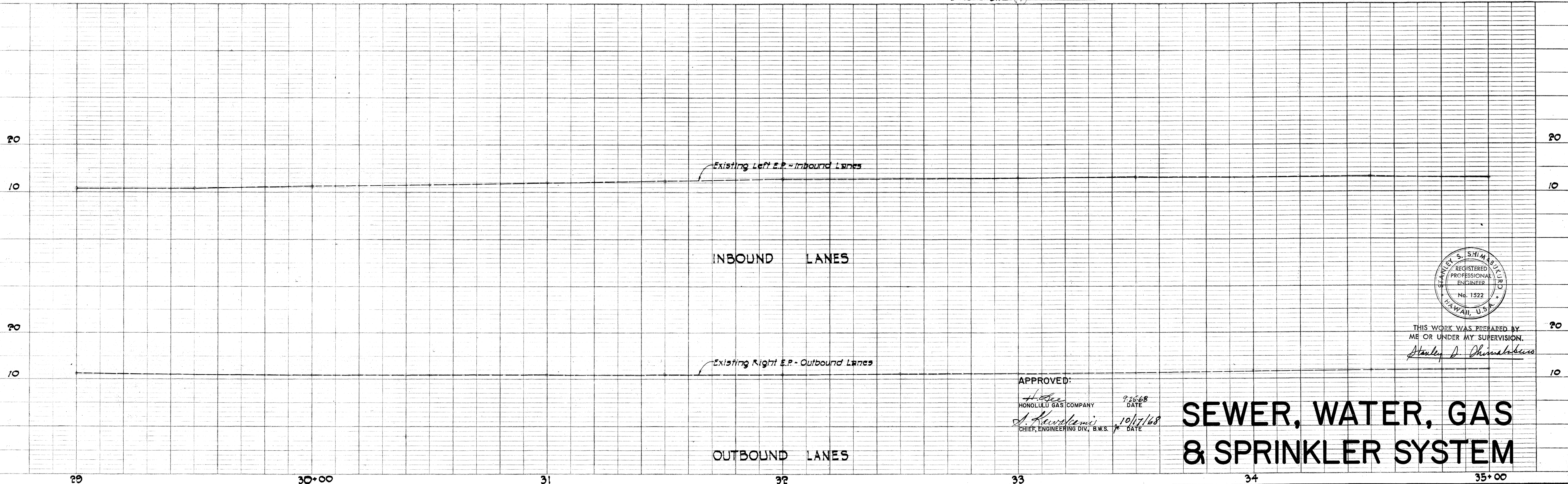
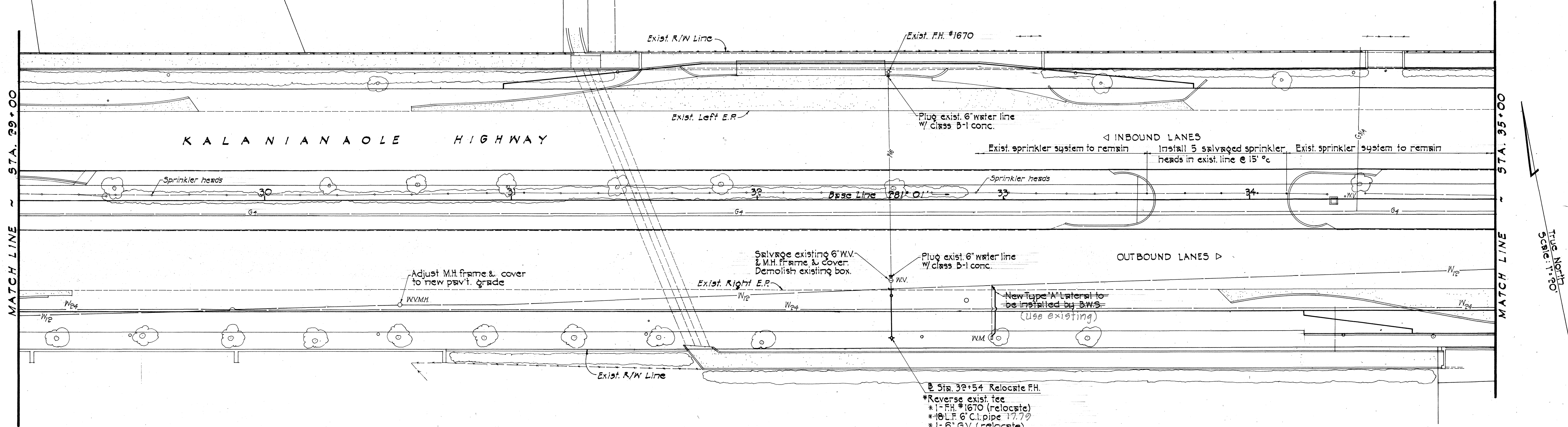


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Stanley S. Shumaker

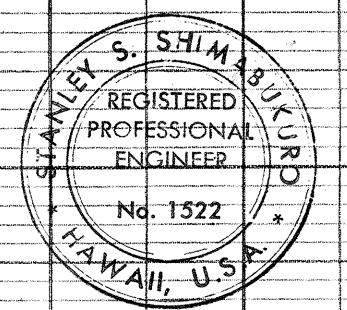


| FED. ROAD DIST. NO. | STATE | PROJ. NO.         | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 72B-03-68 UNIT II | 1968        | 16        | 71           |



APPROVED:  
 H. H. HONOLULU GAS COMPANY  
 DATE 9/25/68  
 J. K. K. CHIEF, ENGINEERING DIV. BWS. DATE 10/17/68

# SEWER, WATER, GAS & SPRINKLER SYSTEM



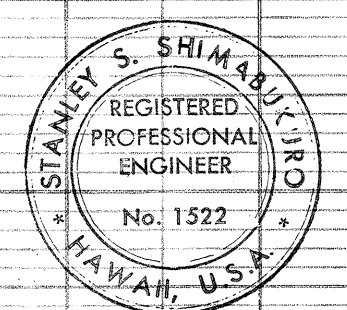
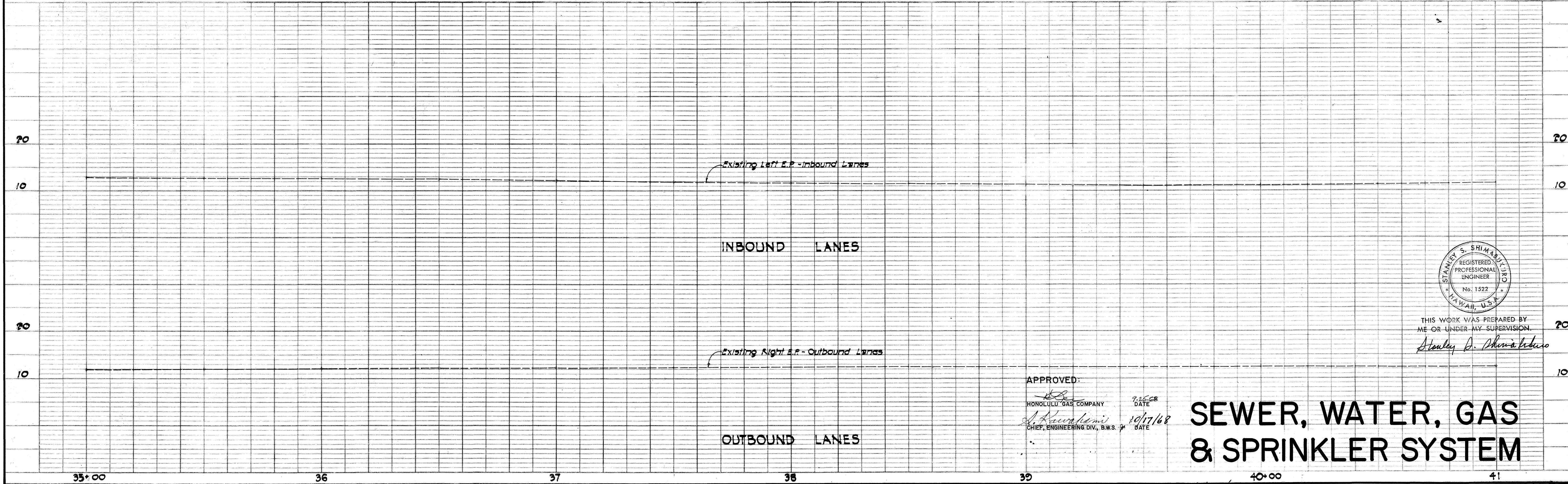
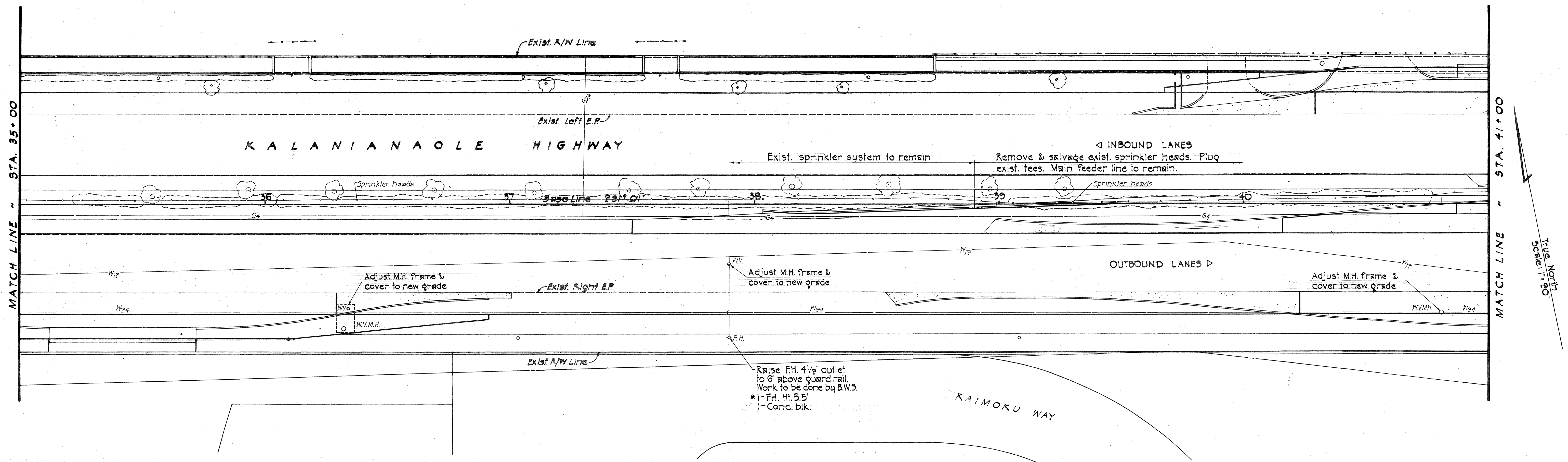
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
 Stanley S. Shimizu



| FED. ROAD DIST. NO. | STATE | PROJ. NO.         | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 72B-03-68 UNIT II | 1968        | 17        | 71           |

PLAN  
 REVISIONS  
 NO. 1  
 DATE 10/17/68  
 BY J. K. HARRIS  
 CHECKED BY J. K. HARRIS  
 IN CHARGE BY J. K. HARRIS

PROFILE  
 SURVEYED  
 PLOTTED  
 GRADES CHECKED  
 NO. 1  
 DATE 10/17/68  
 BY J. K. HARRIS  
 CHECKED BY J. K. HARRIS  
 IN CHARGE BY J. K. HARRIS



THIS WORK WAS PREPARED BY  
 ME OR UNDER MY SUPERVISION.  
*Stanley S. Shimabukuro*

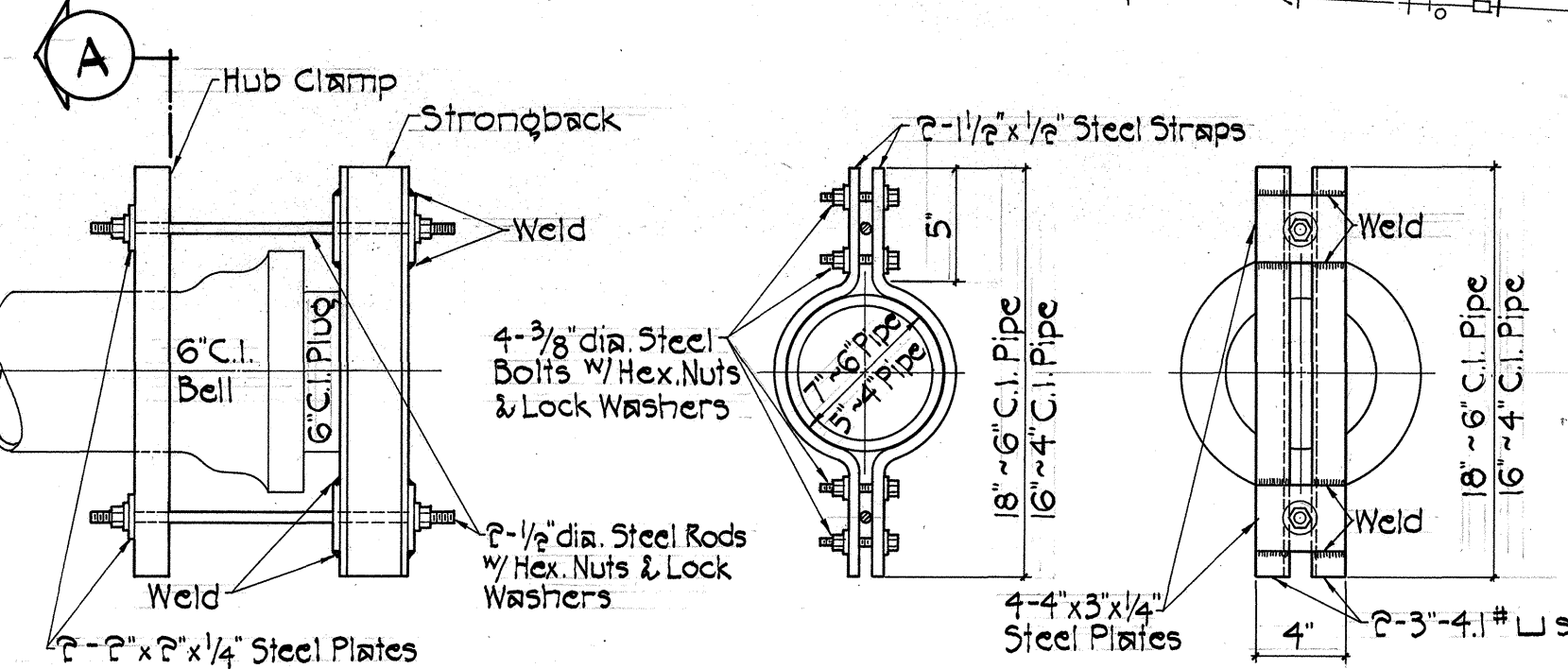
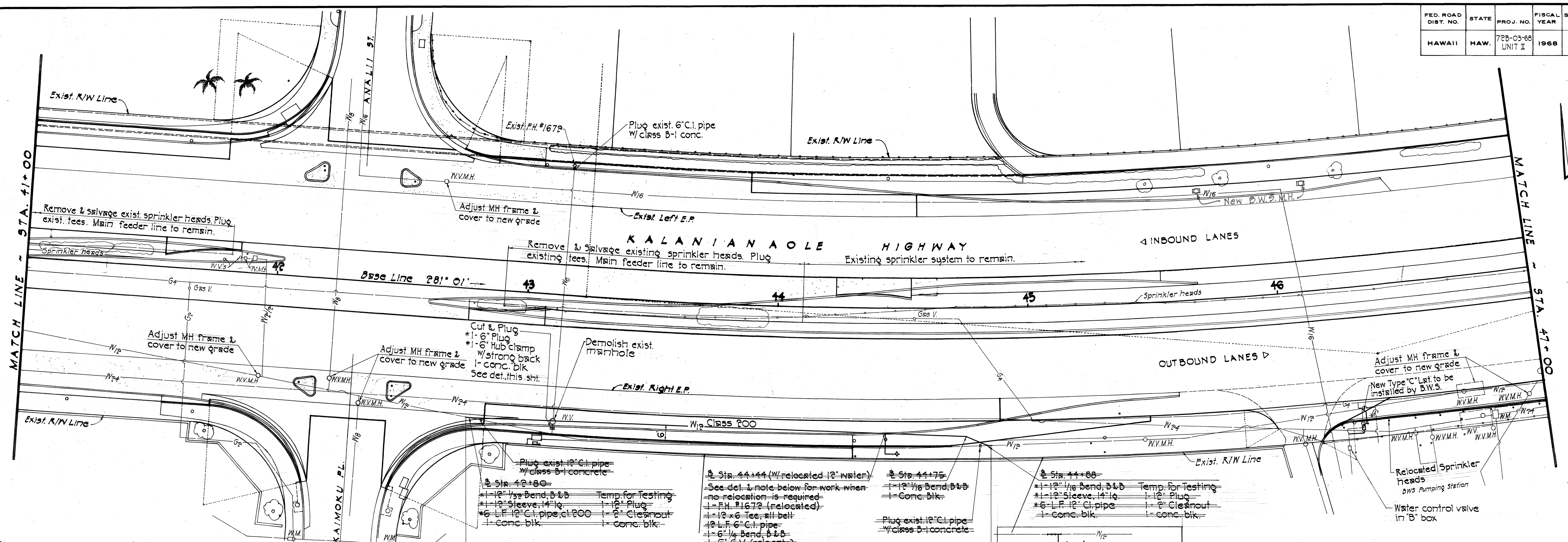
APPROVED:  
*[Signature]*  
 HONOLULU GAS COMPANY  
 DATE 7/25/68  
*[Signature]*  
 CHIEF, ENGINEERING DIV., B.W.S.  
 DATE 10/17/68

# SEWER, WATER, GAS & SPRINKLER SYSTEM



PLAN  
SURVEYED  
PLOTTED  
CHECKED  
BY  
DATE  
NO.

PROFILE  
SURVEYED  
PLOTTED  
CHECKED  
BY  
DATE  
NO.



ELEVATION  
SECTION (HUB CLAMP)  
END VIEW (STRONGBACK)  
**TYPICAL HUB CLAMP & STRONGBACK ASSEMBLY**  
Scale: 1 1/2\"/>

NOTE: Contractor shall first expose the existing 12\"/>

- Relocated F.H. #1672 w/ exist. 12\"/>
- \* 1- 12\"/>
  - \* 1- 12\"/>
  - \* 1- F.H. #1672 (relocated)
  - \* 6- L.F. 12\"/>
  - \* 10- L.F. 6\"/>
  - \* 1- 6\"/>
  - \* 1- Type C M.H. 6'0\" deep (5.0')
  - \* 1- 20\" M.H. Frame & cover (relocate)
  - \* 3- Conc. blk.
  - \* 1- 6\"/>

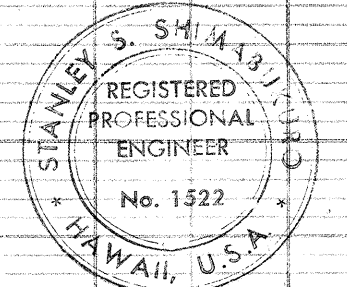
Construct according to this

INBOUND LANES

OUTBOUND LANES

APPROVED:  
*[Signature]*  
HONOLULU GAS COMPANY  
DATE 7-25-68  
*[Signature]*  
CHIEF, ENGINEERING DIV., B.W.S. DATE 10/17/68

# SEWER, WATER, GAS & SPRINKLER SYSTEM



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
*Stanley P. Shimada*



| FED. ROAD DIST. NO. | STATE | PROJ. NO.         | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 728-03-68 UNIT II | 1968        | 19        | 71           |

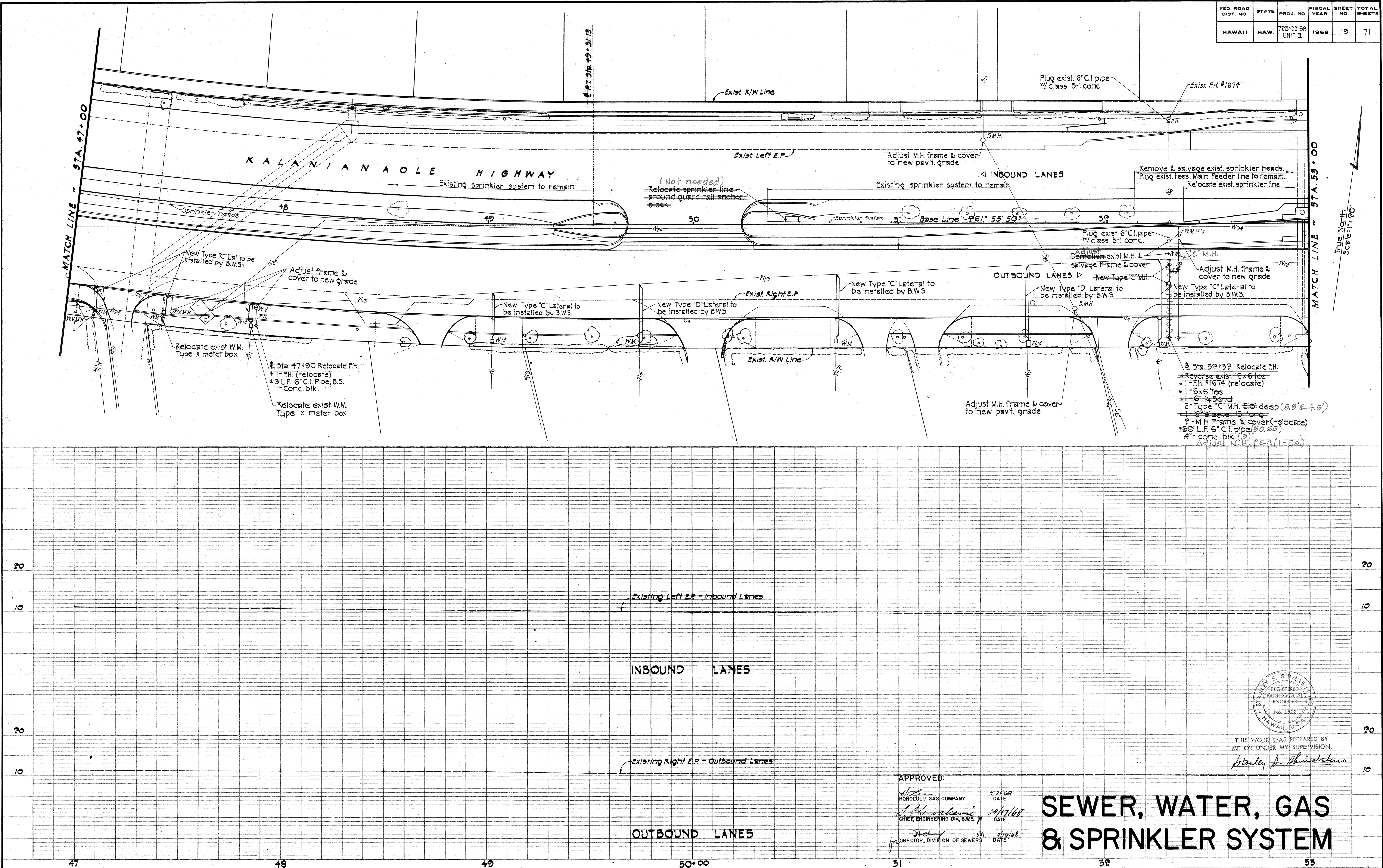
PLAN

NOT FOR CONSTRUCTION

PROFILE

NOTES

NO.

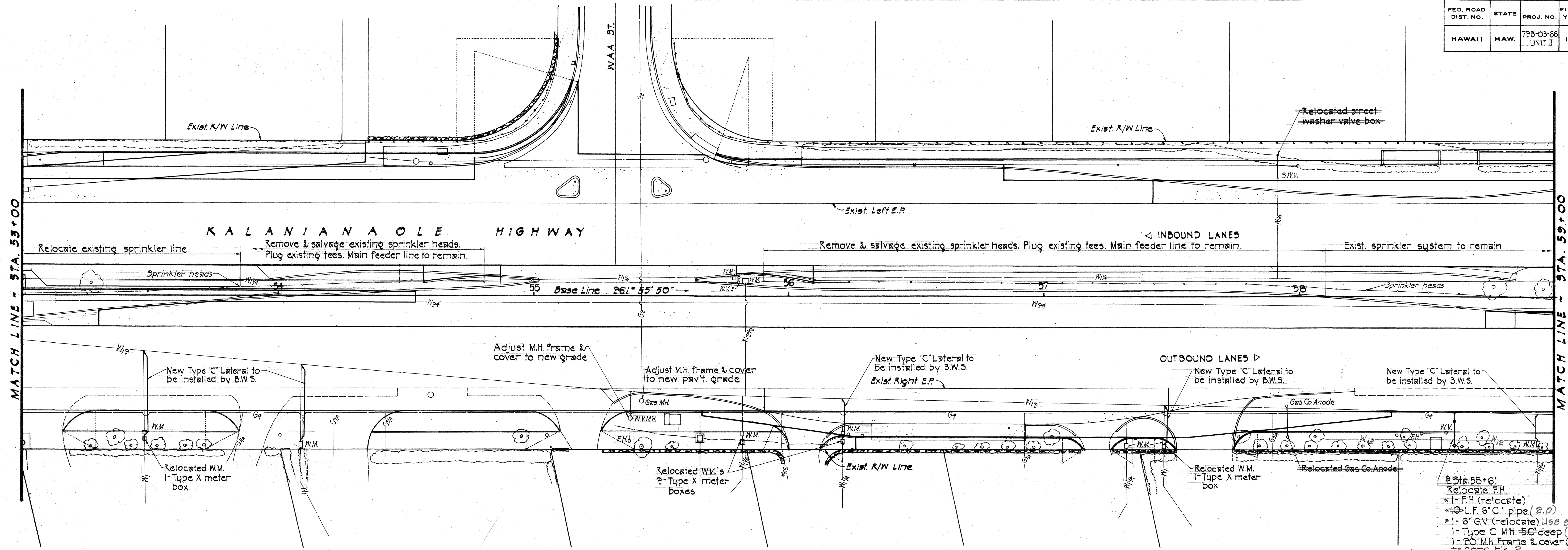




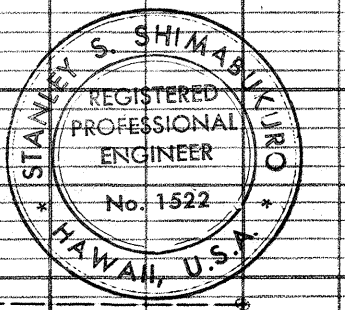
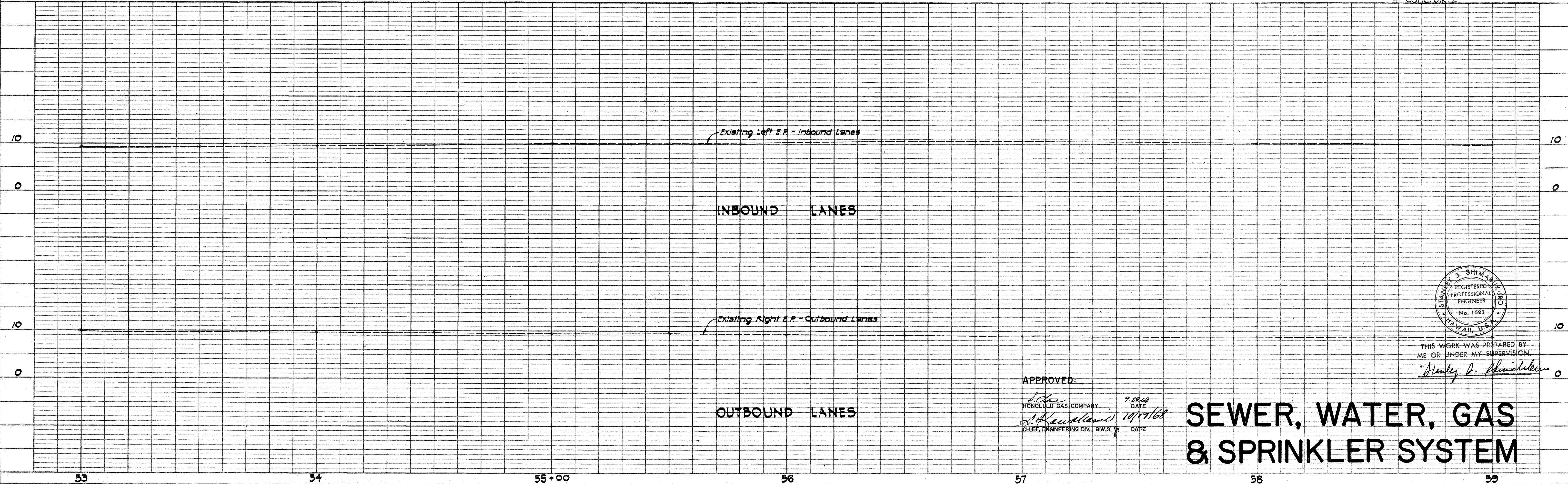
| FED. ROAD DIST. NO. | STATE | PROJ. NO.         | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 78B-03-68 UNIT II | 1968        | 20        | 71           |

| PLAN               | DATE | BY | DATE | BY |
|--------------------|------|----|------|----|
| SURVEYED           |      |    |      |    |
| NOTE BOOK          |      |    |      |    |
| ALIGNMENT CHECKED  |      |    |      |    |
| RT. OF WAY CHECKED |      |    |      |    |
| NO.                |      |    |      |    |

| PROFILE                     | DATE | BY | DATE | BY |
|-----------------------------|------|----|------|----|
| SURVEYED                    |      |    |      |    |
| NOTE BOOK                   |      |    |      |    |
| GRADES CHECKED              |      |    |      |    |
| B. M. 3 NOTED               |      |    |      |    |
| STRUCTURE NOTATIONS CHECKED |      |    |      |    |
| NO.                         |      |    |      |    |



True North  
Scale 1"=20'



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Stanley S. Shimamura

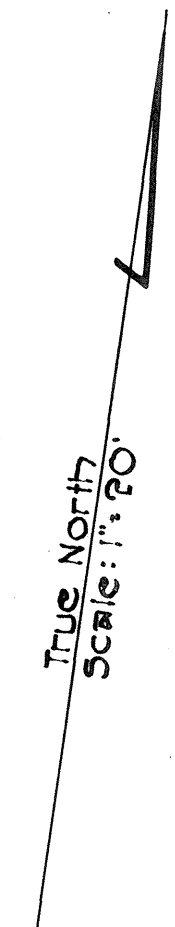
APPROVED:  
Honolulu Gas Company  
DATE 7-29-68  
10/17/68  
CHIEF, ENGINEERING DIV., B.W.S.

# SEWER, WATER, GAS & SPRINKLER SYSTEM

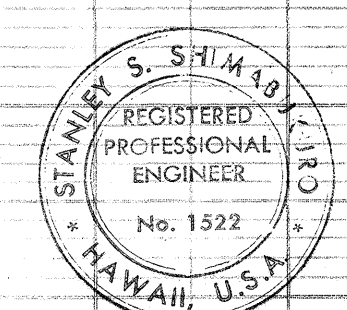


|           |                     |      |    |
|-----------|---------------------|------|----|
| PLAN      | CLERKED             | DATE | BY |
| NOTE BOOK | ILLUSTRATED         |      |    |
| NO.       | AT CP WASH DC 10000 |      |    |

|                                                                                                                            |                                                                             |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <b>PROFILE</b><br>SURVEYED _____<br>PLOTTED _____<br>GRADES CHECKED _____<br>B. M. NOTED _____<br>STRUCTURE NOTATION CH KD | DATE OF SURVEY _____<br>BY _____<br>CHECKED BY _____<br>DATE OF CHECK _____ |
|                                                                                                                            | NO. _____<br>NOTE BOOK _____                                                |



- \* Reverse exist. 24 x 6 tee
- \* 1 - F.H. #1676 (relocate)
- \* 1 - 6" G.V. (relocate)
- \* 1 - Type C.M.H. 60" deep
- \* 50 L.F. 6" C.I. pipe (59.62)
- 2 - Conc. blks.
- 1 - 20" M.H. Frame & cover (relocate)
- 1 - 6" 1/4 Bend



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Stanley D. Shumilov

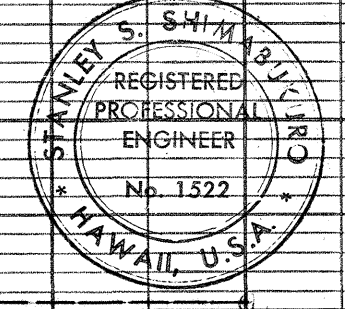
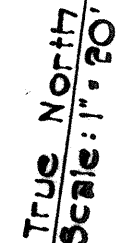
HONOLULU GAS COMPANY  
DATE  
CHIEF, ENGINEERING DIV., B.W.S. 941  
DATE

# SEWER, WATER, GAS & SPRINKLER SYSTEM



|      |     |           |                                                    |    |      |
|------|-----|-----------|----------------------------------------------------|----|------|
| PLAN | NO. | NOTE BOOK | SURVEYED                                           | BY | DATE |
|      |     |           | PLOTTED<br>ALIGNMENT CHECKED<br>RT. OF WAY CHECKED |    |      |

| PROFILE                         |  | BY | DATE |
|---------------------------------|--|----|------|
| SURVEYED _____                  |  |    |      |
| GRADES CHECKED _____            |  |    |      |
| B. M.'S NOTED _____             |  |    |      |
| STRUCTURE NOTATIONS CH'KD _____ |  |    |      |



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ME OR UNDER MY SUPERVISION.

Stanley L. Phinaburn

APPROVED:

*L. Bee* 9/25/68  
HONOLULU GAS COMPANY DATE  
*L. Kawakami* 10/17/68  
CHIEF, ENGINEERING DIV., B.W.S. DATE  
*W. J. [unclear]* 9/14/68  
DIRECTOR, DIVISION OF SEWERS DATE

# SEWER, WATER, GAS & SPRINKLER SYSTEM



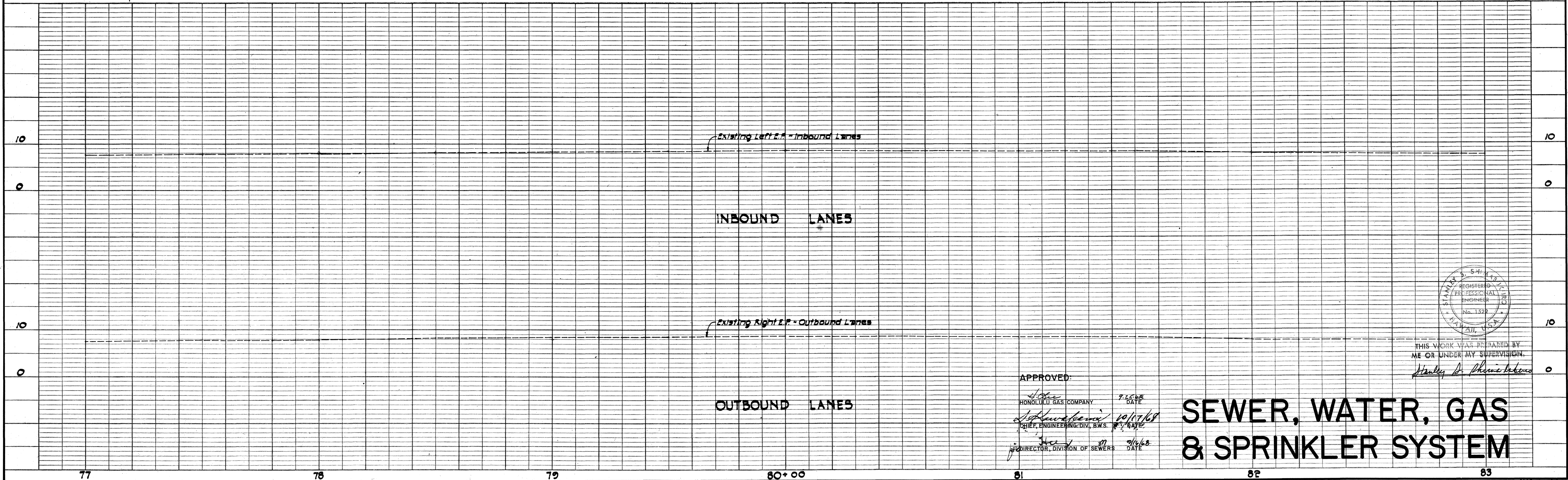
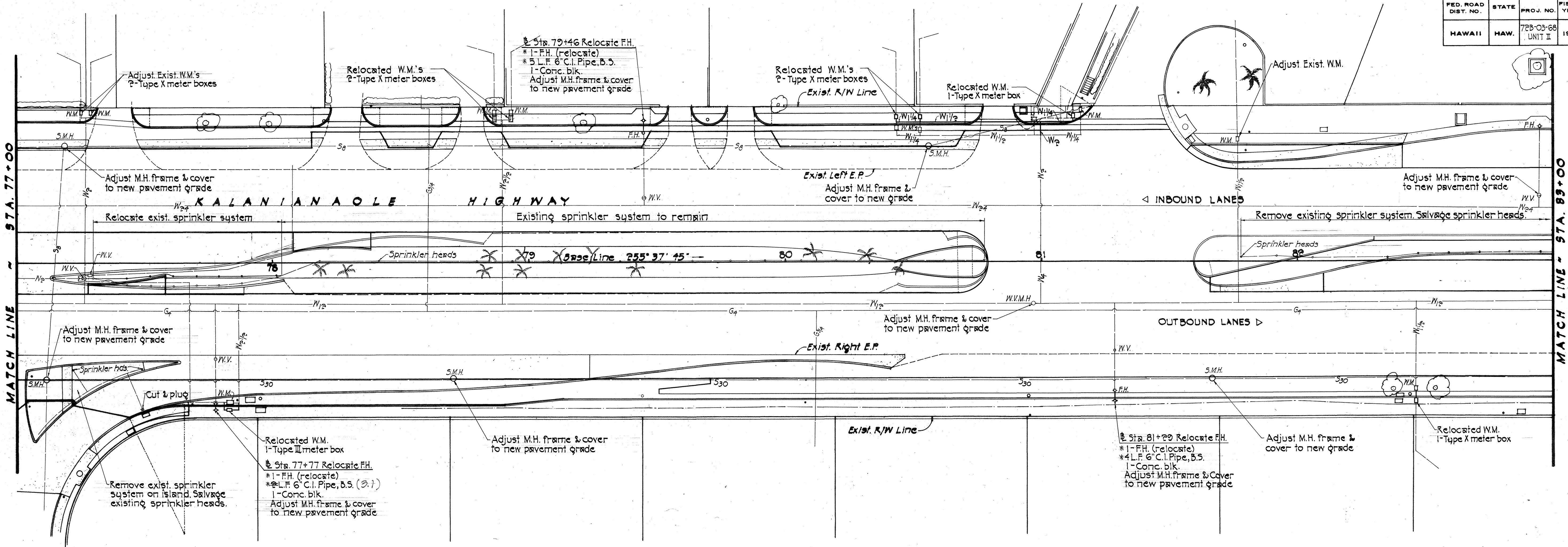




| FED. ROAD DIST. NO. | STATE | PROJ. NO.         | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 728-03-68 UNIT II | 1968        | 24        | 71           |

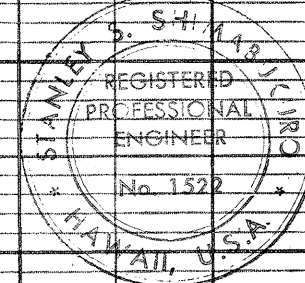
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|-------|----------|----|------|
| NO. 1 | PLOTTED  |    |      |
|       | CHECKED  |    |      |
|       | BY       |    |      |

| PROFILE | SURVEYED | BY | DATE |
|---------|----------|----|------|
| NO. 1   | PLOTTED  |    |      |
|         | CHECKED  |    |      |
|         | BY       |    |      |



APPROVED:  
 HONOLULU GAS COMPANY  
 10/17/68  
 CHIEF, ENGINEERING DIV. B.W.S.  
 DIRECTOR, DIVISION OF SEWERS  
 7/1/68

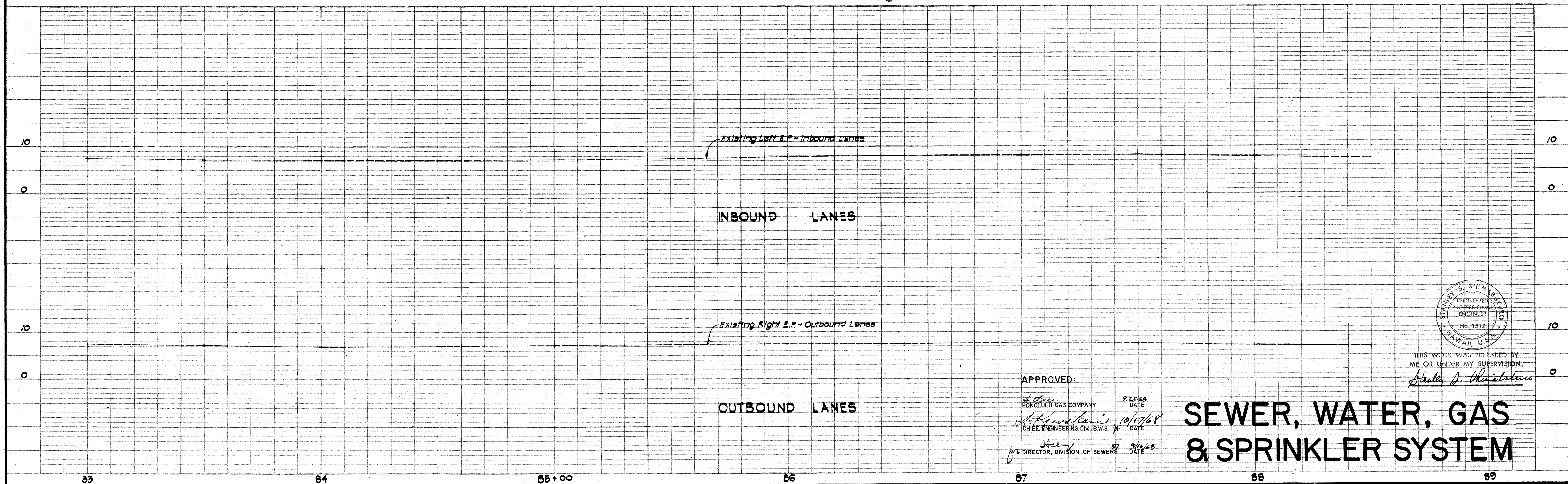
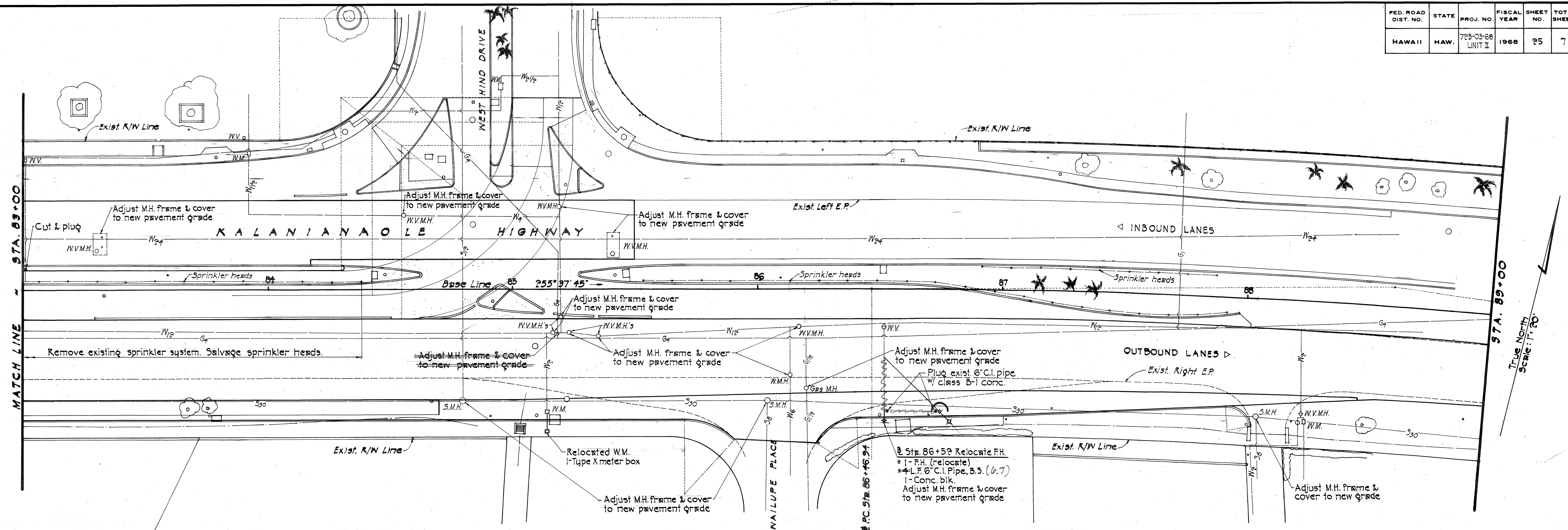
# SEWER, WATER, GAS & SPRINKLER SYSTEM



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 ME OR UNDER MY SUPERVISION.  
 Stanley D. Phinney



| FED. ROAD<br>DIST. NO. | STATE | PROJ. NO.            | FISCAL<br>YEAR | SHEET<br>NO. | TOTAL<br>SHEETS |
|------------------------|-------|----------------------|----------------|--------------|-----------------|
| HAWAII                 | HAW.  | 72B-03-68<br>UNIT II | 1968           | 25           | 71              |



**APPROVED:**

# *Dec*  
HONOLULU GAS COMPANY  
*A. Kawakami*  
CHIEF, ENGINEERING DIV., B.W.S. *10/17/68*  
*H. C.*  
DIRECTOR, DIVISION OF SEWERS *10/16/68*

A circular professional engineer seal. The outer ring contains the text "STANLEY S. SHIMABUKURO" at the top and "HAWAII, U.S.A." at the bottom, separated by two small stars. The inner circle contains the text "REGISTERED PROFESSIONAL ENGINEER" and "No. 1522" below it.

THIS WORK WAS PREPARED BY  
ME OR UNDER MY SUPERVISION.

Stanley S. Chemtoburo

# SEWER, WATER, GAS & SPRINKLER SYSTEM