

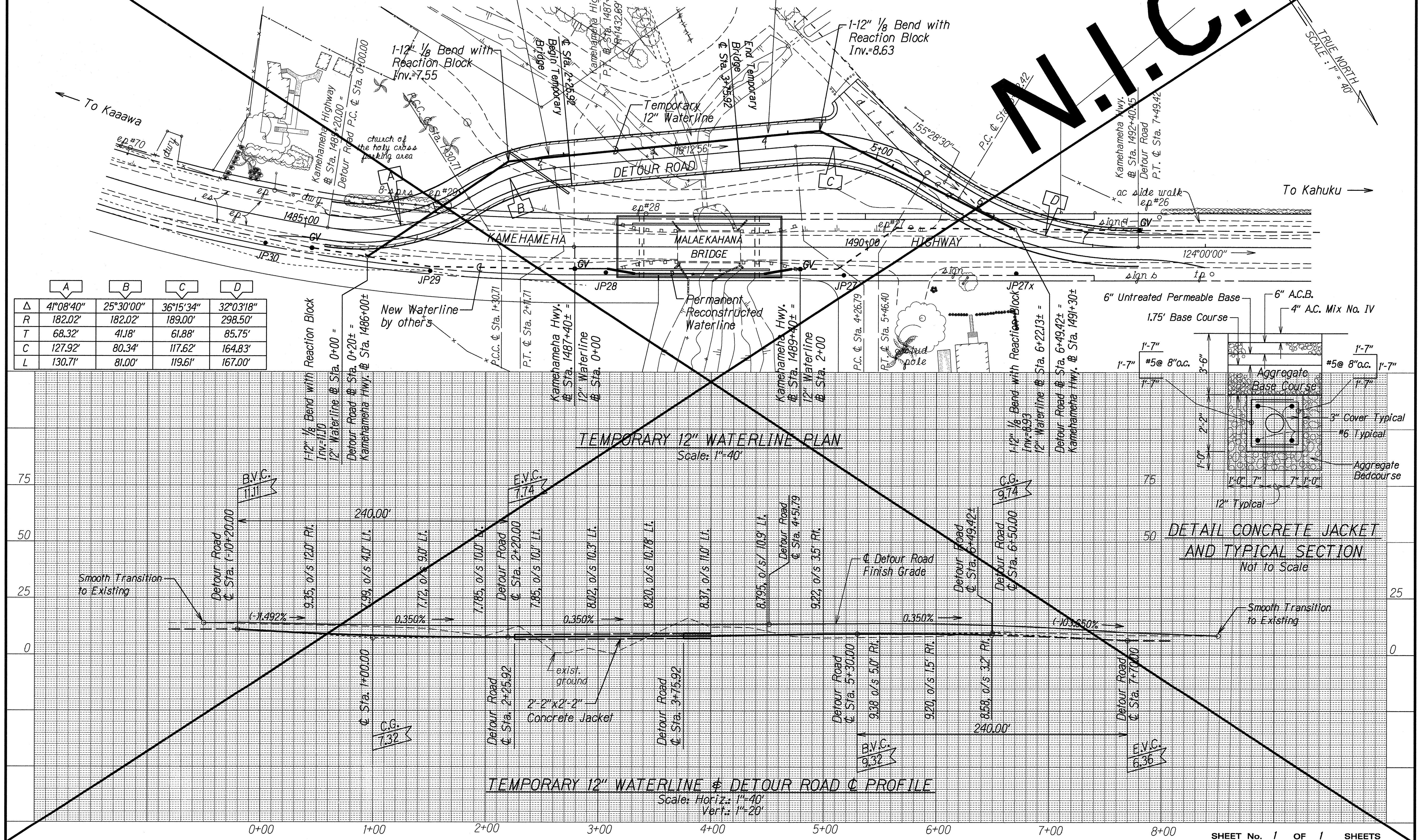
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | BR-083-1(27)       | 1998        | 21        | 58           |

Detour Road @ Sta. 0+92± to  
Detour Road @ Sta. 6+49.42± Lt.  
Place Class 150 Temporary 12" Waterline  
with Concrete Jacket at stream crossing.  
All Bends must have Reaction Blocks.

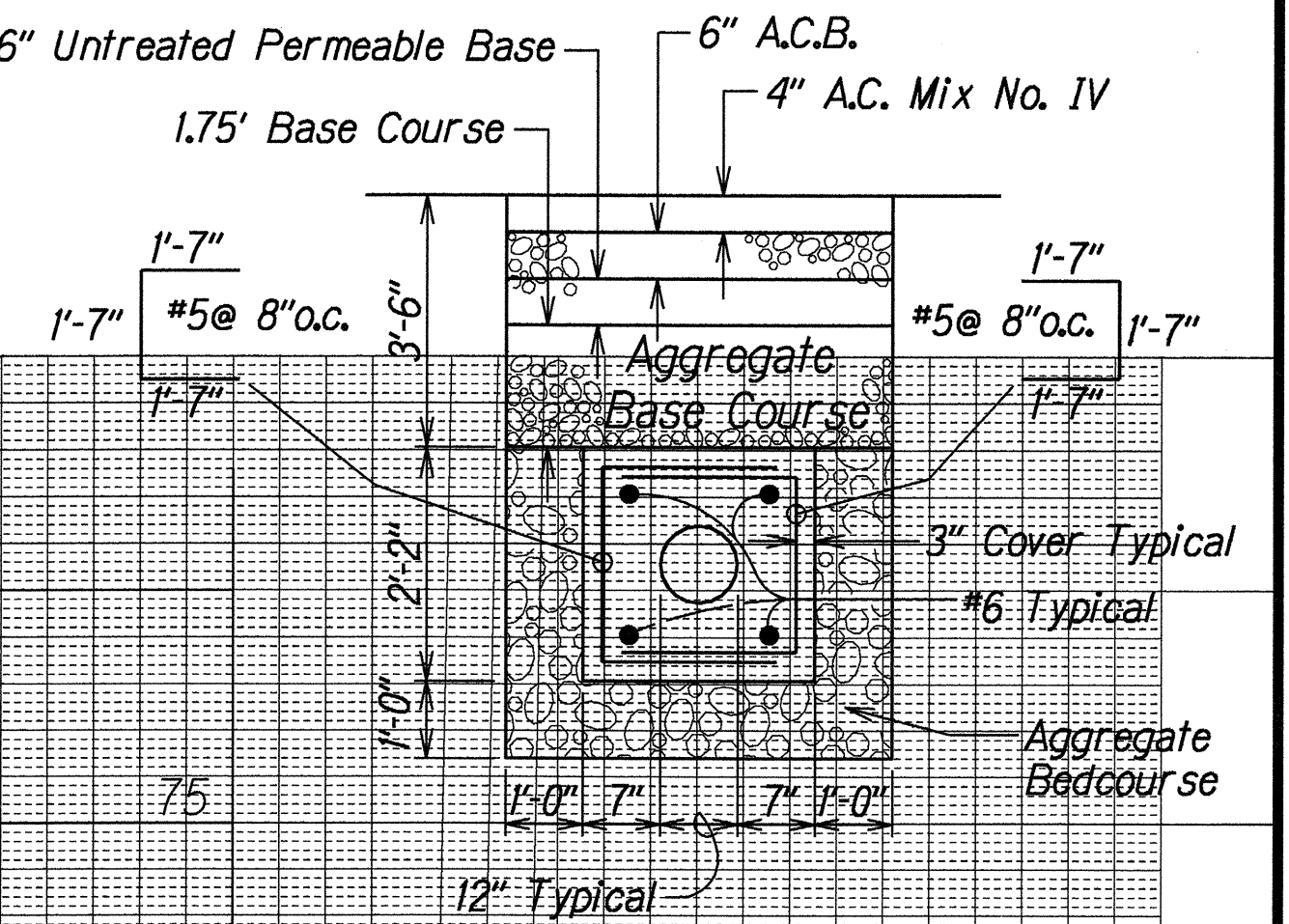
Break Sleeve  
12" Sleeve x 12" Long  
with 1" Thermal  
Expansion Gap

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12" Sleeve x 12" Long  
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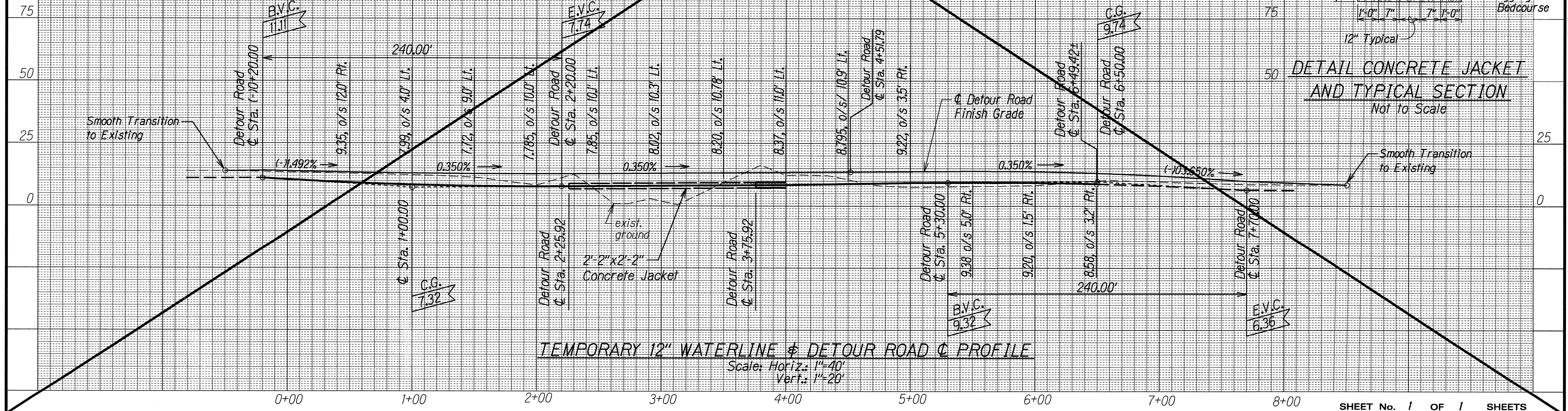
Detour Road @ Sta. 2+25.92± to  
Detour Road @ Sta. 3+75.92±, o/s 13' Lt.  
Place 3'-0"x3'-0" Concrete Jacket around  
Temporary 12" Waterline. For Detail, See  
This Sheet.



TEMPORARY 12" WATERLINE PLAN  
Scale: 1"=40'



DETAIL CONCRETE JACKET  
AND TYPICAL SECTION  
Not to Scale

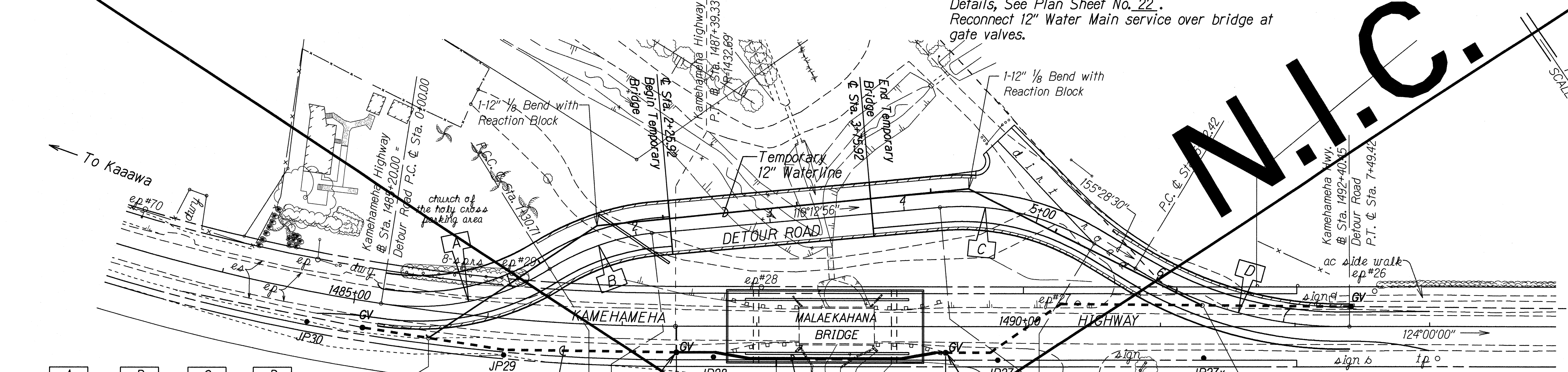


TEMPORARY 12" WATERLINE & DETOUR ROAD @ PROFILE  
Scale: Horiz. 1"=40', Vert. 1"=20'

|               |                   |         |
|---------------|-------------------|---------|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE    |
| NOTED         | DRAWN BY          | 11-2-97 |
| DESIGNED BY   | TRACED BY         |         |
| CHECKED BY    | DESIGNED BY       |         |
|               | CHECKED BY        |         |

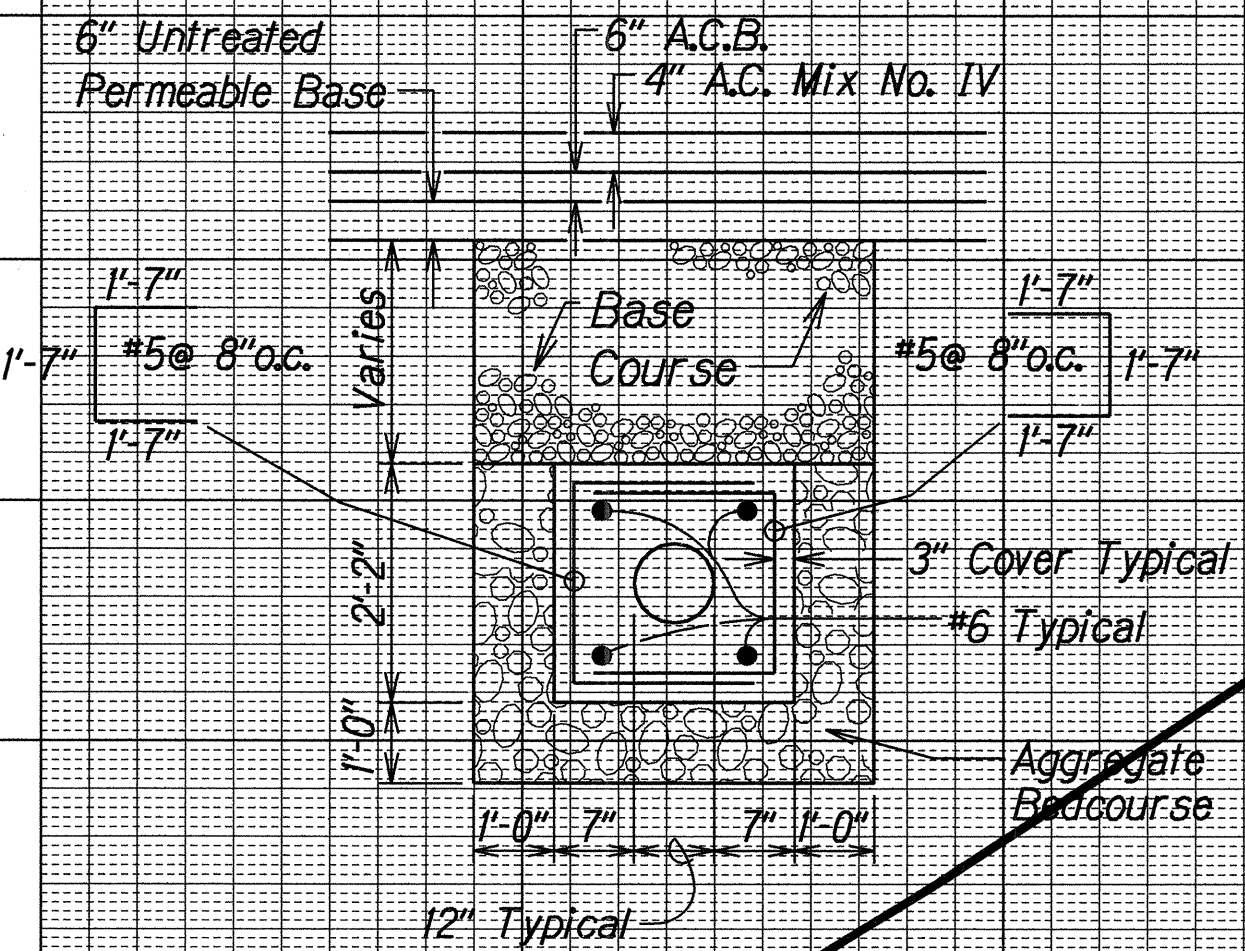
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
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| HAWAII              | HAW.  | BR-083-1(27)       | 1998        | 22        | 58           |

Sta. 1487+40 to Sta. 1489+40, o/s 20' Rt.  
Place 12" Waterline at a depth of 3' below finish grade on roadway and hang from bridge. For Details, See Plan Sheet No. 22.  
Reconnect 12" Water Main service over bridge at gate valves.

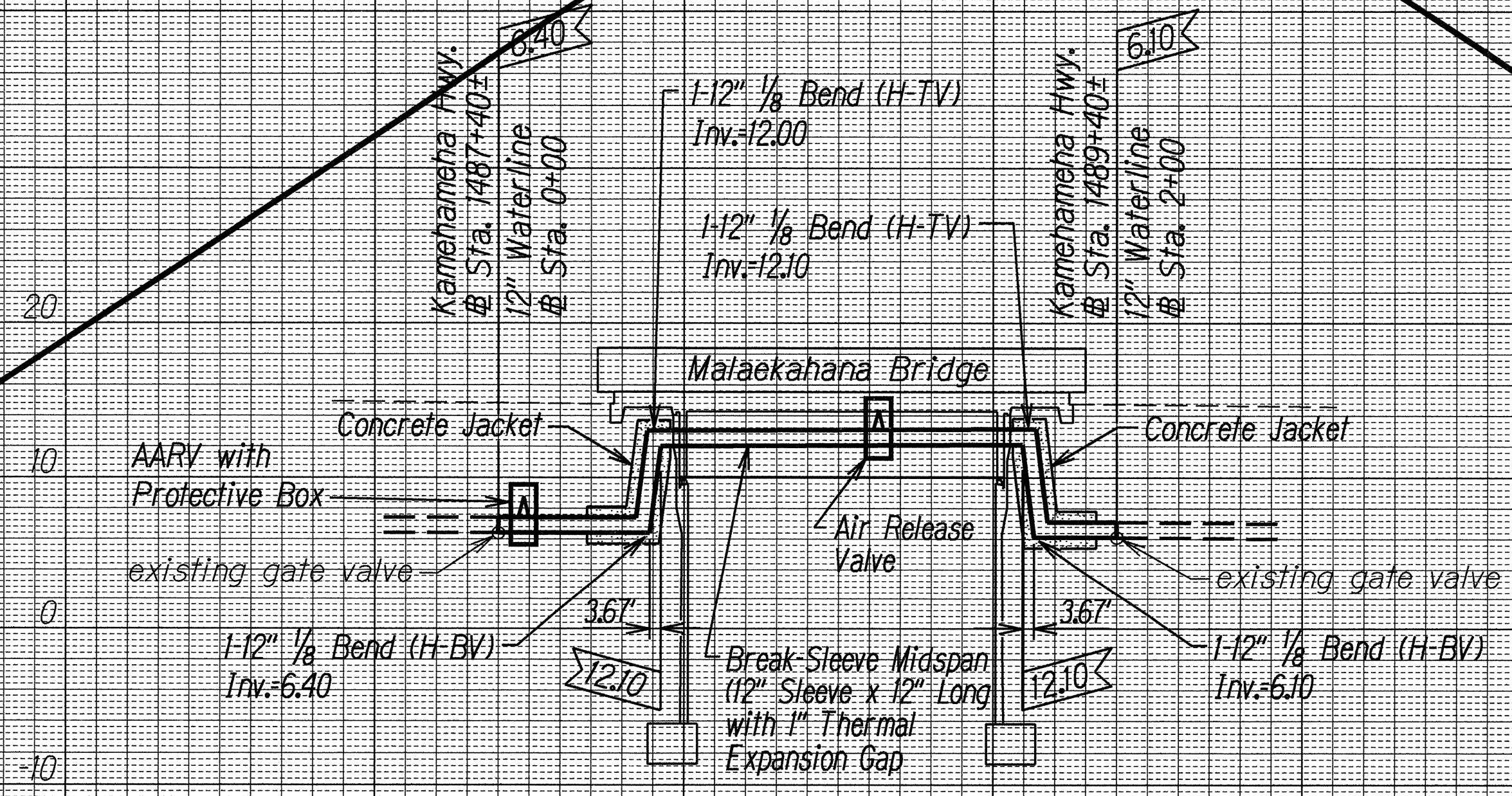


|   | A        | B         | C         | D         |
|---|----------|-----------|-----------|-----------|
| Δ | 4°08'40" | 25°30'00" | 36°15'34" | 32°03'18" |
| R | 182.02'  | 182.02'   | 189.00'   | 298.50'   |
| T | 68.32'   | 41.18'    | 61.88'    | 85.75'    |
| C | 127.92'  | 80.34'    | 117.62'   | 164.83'   |
| L | 130.71'  | 81.00'    | 119.61'   | 167.00'   |

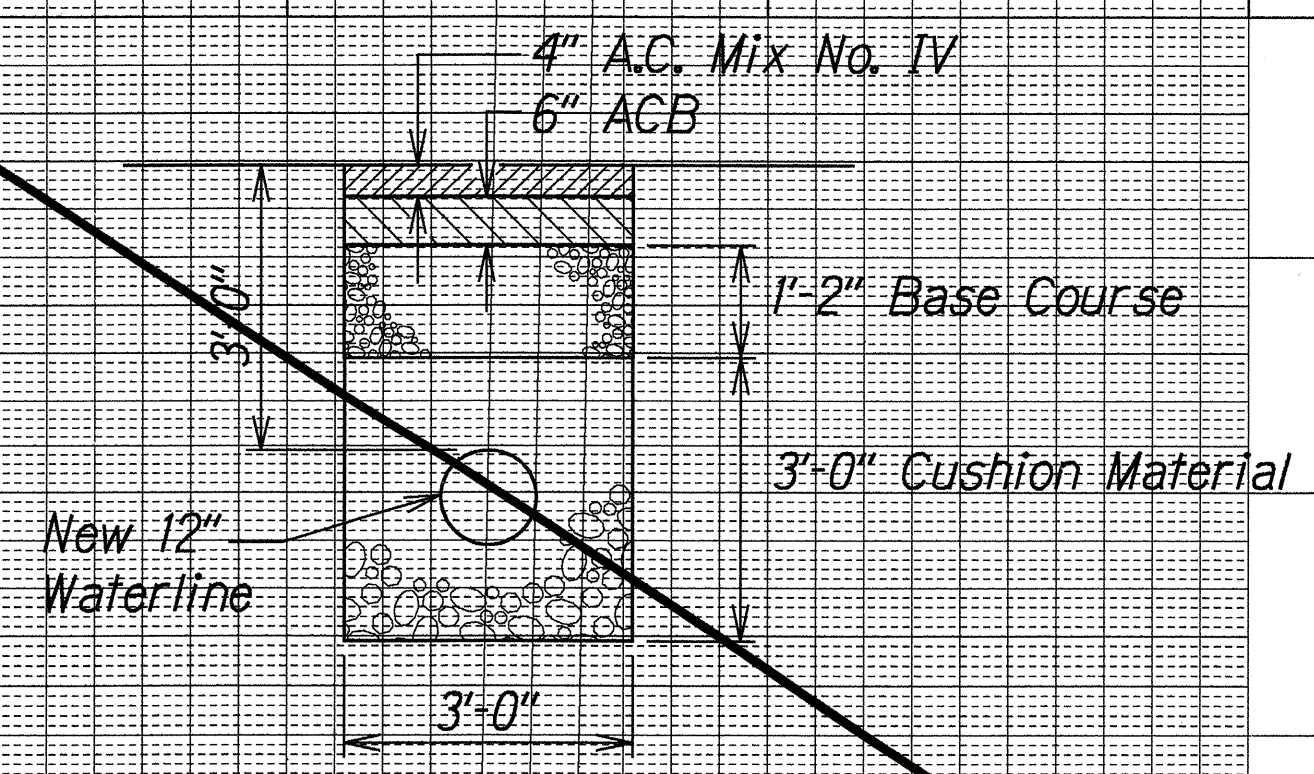
PERMANENT 12" WATERLINE PLAN  
Scale: 1"=40'



DETAIL CONCRETE JACKET AND TYPICAL SECTION  
Not to Scale



PERMANENT 12" WATERLINE PROFILE  
Scale: Horiz. 1"=40'  
Vert. 1"=8'



NEW 12" WATERLINE  
Not to Scale

ORIGINAL SURVEY PLOTTED BY: DATE: 11-20-98  
PLAN DRAWN BY: J. Malsam  
NOTES BOOK TRACED BY: J. Malsam  
DESIGNED BY: J. Malsam  
CHECKED BY: J. Malsam