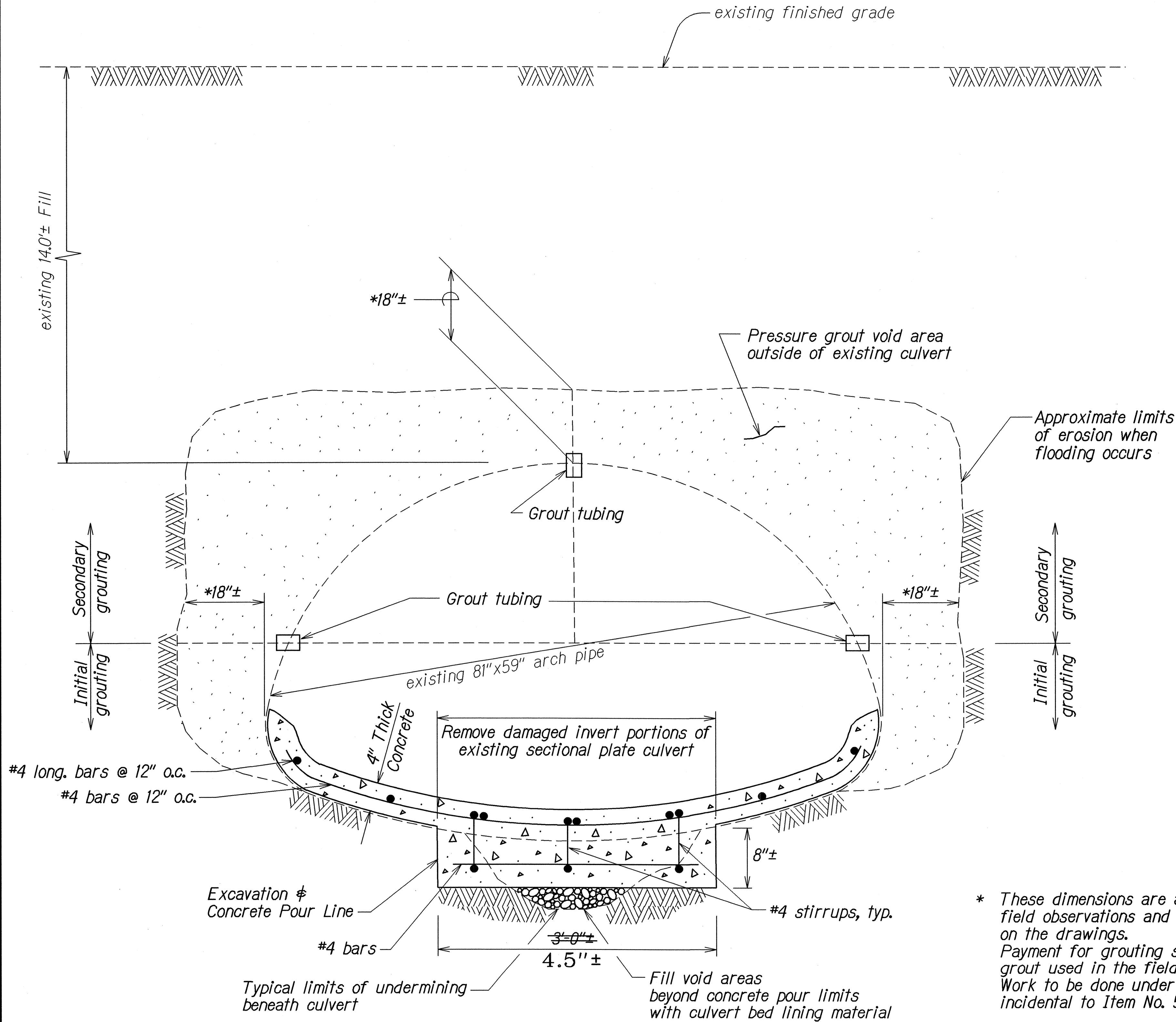


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	30A-01-02M	2002	6	7

**NOTES:**

Contractor shall pressure grout void space outside of culvert as follows:

- Void space at outside bottom half of culvert shall be filled initially. Holes shall be drilled in sides of culvert for insertion of grout tubing.
- Holes shall be drilled at 5.0' on centers and shall be large enough to accomodate grout tubing.
- Inspection holes shall be drilled above the grout tubing holes to check status of grout fill on either side of culvert.
- Grout shall be allowed to set for at least 48-hours before void space above top half of culvert is filled.
- Filling of void space above top half of culvert shall be accomplished by drilling holes @ 5.0' o.c. at the soffit of the culvert.
- If necessary, additional holes shall be drilled in the culvert sides to act as pressure relief vents during the grouting operation.
- All drilled holes in culvert shall be covered by lapping a section of culvert plate over the drilled holes and fillet welding the cover plate to the culvert wall with a continuous weld. Cover plate shall overlap the holes by at least one-inch all around.
- Pressure shall be just sufficient to move the grout, and pressure must be monitored so that the operation can be stopped if the pressure builds up because of a blockage in the pipes.
- Prior to grouting, Contractor shall install I-beam bracing in the interior of the culvert to prevent displacement of culvert walls during the grouting operation. Bracing sets shall include cross and diagonal bracings, tackwelded to the sides of the culvert and spaced at 10', max. o.c..
- The Contractor shall submit grout mix design prior to construction.



\* These dimensions are assumed dimensions and are based on field observations and may be smaller or greater than indicated on the drawings.  
Payment for grouting shall be based on the actual volume of grout used in the field. (Cubic yards)  
Work to be done under notes Item a, b & g shall be considered incidental to Item No. 503.0020.

**INVERT REPAIR DETAIL FOR  
SECTIONAL PLATE CULVERT**  
Scale: 1½"= 1'-0"

LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**CULVERT REPAIR DETAILS**  
**HONOAPIILANI HIGHWAY REPAIR OF**  
**8"x59" ARCH PIPE**  
**AT M.P. 24.75**  
**Project No. 30A-01-02M**

Scale: As Shown
Date: April, 2002

SHEET No. 1 OF 1 SHEETS

"AS-BUILT"