

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-0100(27)	1985	7	47

GENERAL STRUCTURE NOTES

DESIGN SPECIFICATIONS:

(AASHTO) Standard Specifications for Hwy. Bridges (12th Edition) with subsequent interim specifications, 1978 to 1983.

DESIGN LOAD: HS-20-44

DESIGN STRESSES:

- fc = 1200 psi (0.4 F'c)
- fs = 20,000 psi

MATERIALS:

- Reinforced Concrete - Class A
- Reinforcing Steel - ASTM A615 Grade 40.

CONSTRUCTION REQUIREMENTS:

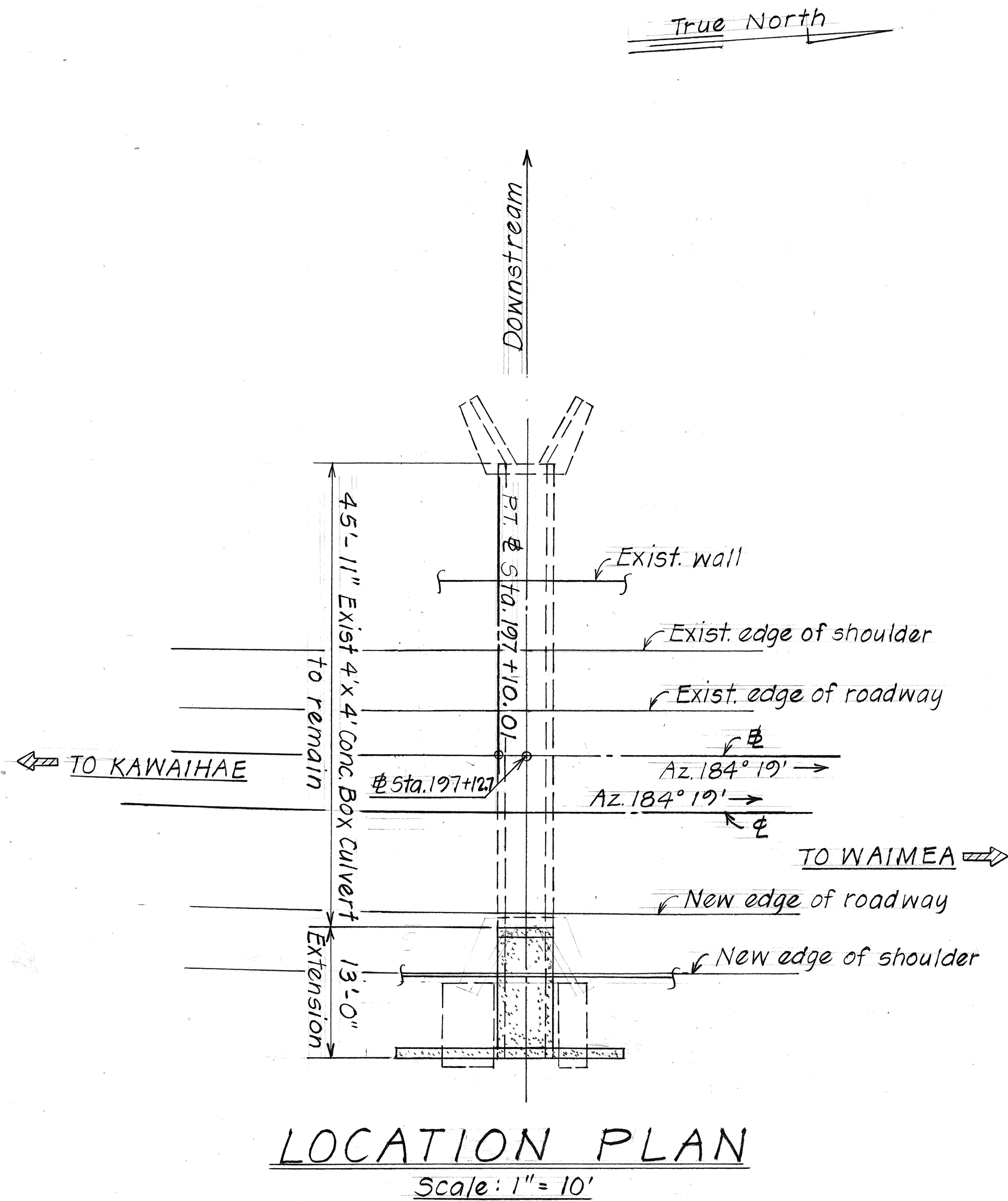
- See Standard Specifications for Road & Bridge Construction, (Hawaii 1976) & Special Provisions.
- All exterior corners & re-entrant angles in concrete work shall be chamfered 3/4" x 3/4".
- It shall be the Contractor's responsibility to maintain the stability of the existing roadway prism & adjacent ground thruout the course of work. He shall conduct his work in such a manner, and provide such temporary shoring or other measures as may be necessary to insure the safety of all concerned.
- Any damage to the existing structure, due to the Contractor's operation, shall be repaired at his expense to the satisfaction of the Engineer.
- Broken concrete, with reinforcement removed, may be used in lieu of rock in the embankment of the depression beneath the culvert extension.

GENERAL:

- The work of constructing the 4.0 ft x 4.0 ft Reinforced Concrete Box Culvert Extension & Wingwalls, including all materials, labor, equipment, tools & incidentals necessary to complete the work, shall be paid for on a lump sum basis.

ESTIMATED QUANTITIES

ITEM	QUANTITIES	UNIT
Removal of Existing Concrete Wingwall	3 c.y.	Cu.Yd.
Rock embankment	4 c.y.	Cu.Yd.
Structure Excavation	21 c.y.	Cu.Yd.
Channel Excavation	3 c.y.	Cu.Yd.
Structure Backfill	22 c.y.	Cu.Yd.
Filter Material	1 c.y.	Cu.Yd.
Class-A Concrete	15 c.y.	Cu.Yd.
Reinforcing Steel	2,000 lbs.	Lbs.

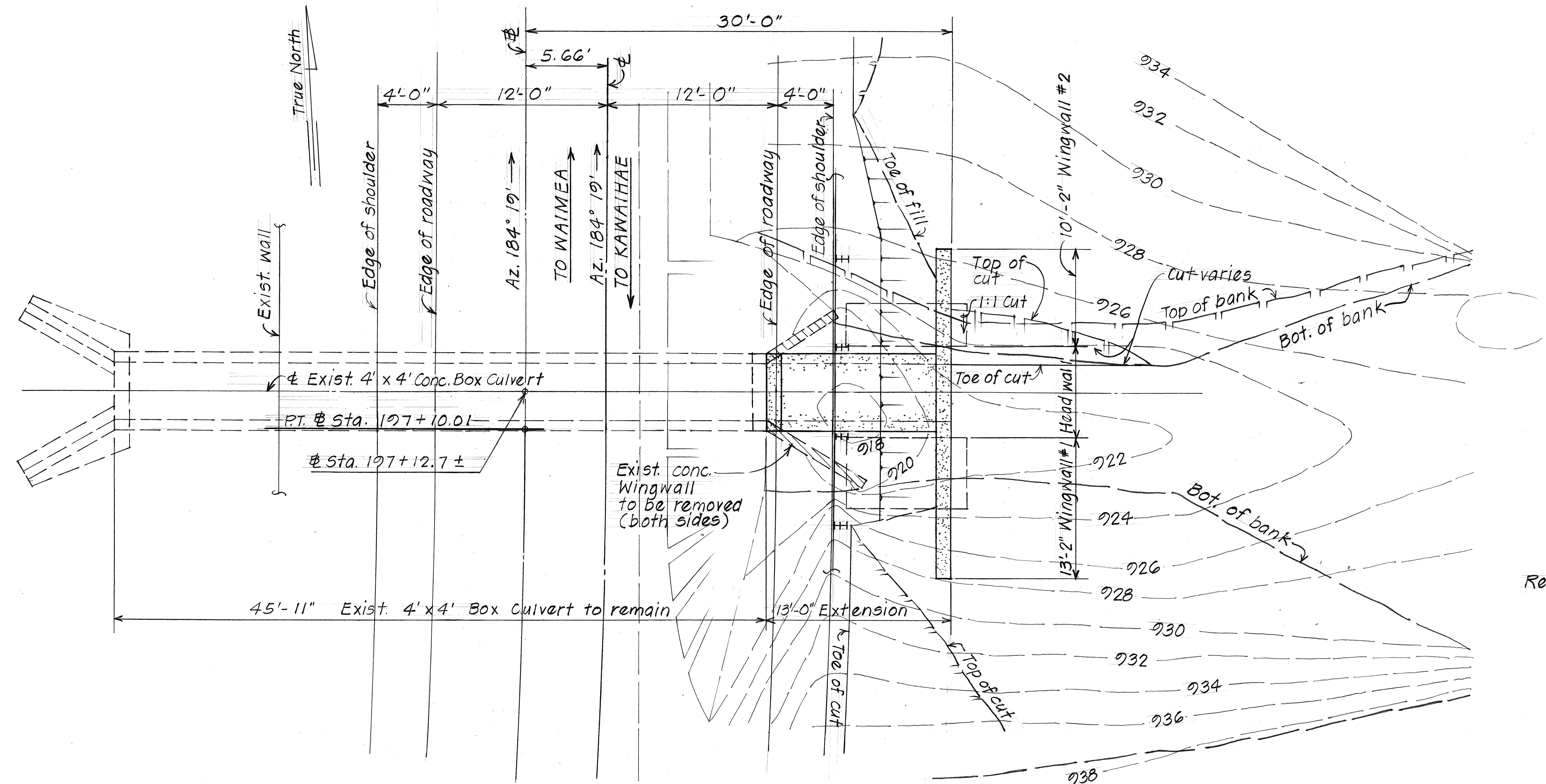


LOCATION PLAN
Scale: 1" = 10'

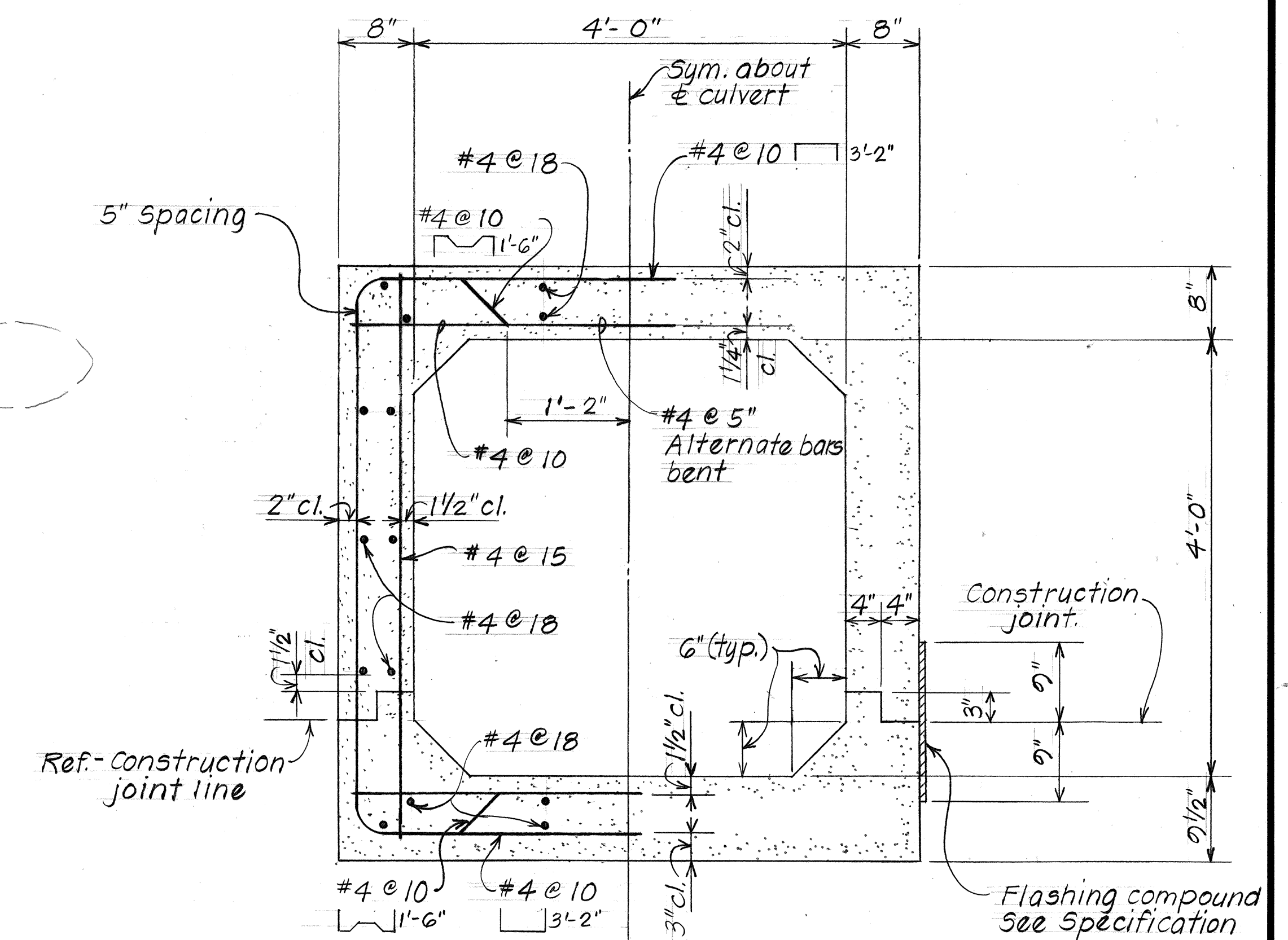
SURVEY PLOTTED BY	DATE
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QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
4'-0" x 4'-0" BOX CULVERT EXTENSION
AT & STA. 197+12.7 ±
LOCATION PLAN, GENERAL NOTES
KAWAIHAE RD. SAFETY IMPROVEMENTS
WAIMEA TOWARDS KAWAIHAE
F.A. Proj. No. HES-0100(27)
Scale: As Noted REV. 1 Date Feb., 1985
SHEET NO. 1 OF 3 SHEETS

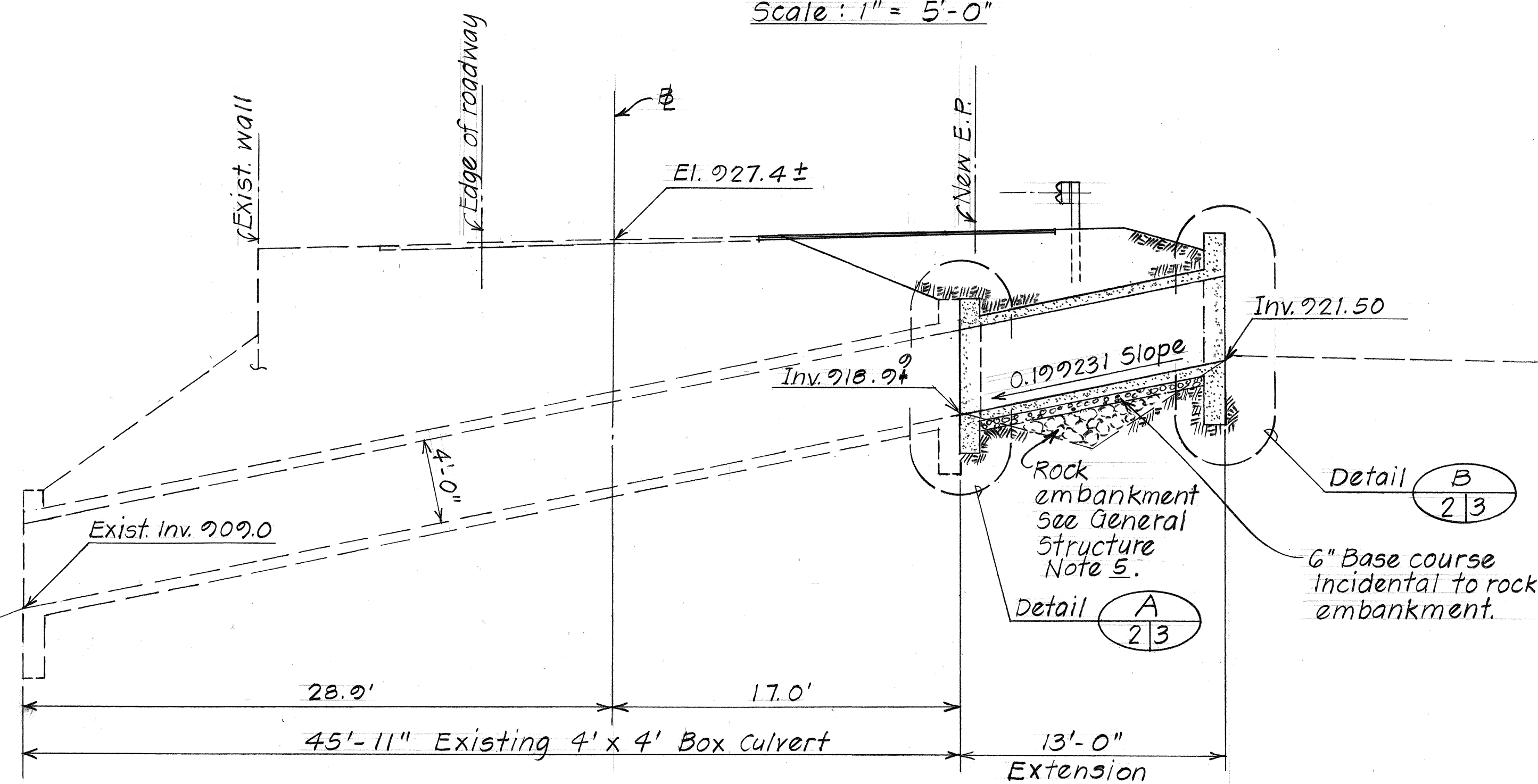
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PLAN
Scale: 1" = 5'-0"



NORMAL CONC. BOX SECTION
Scale: 1" = 1'-0"



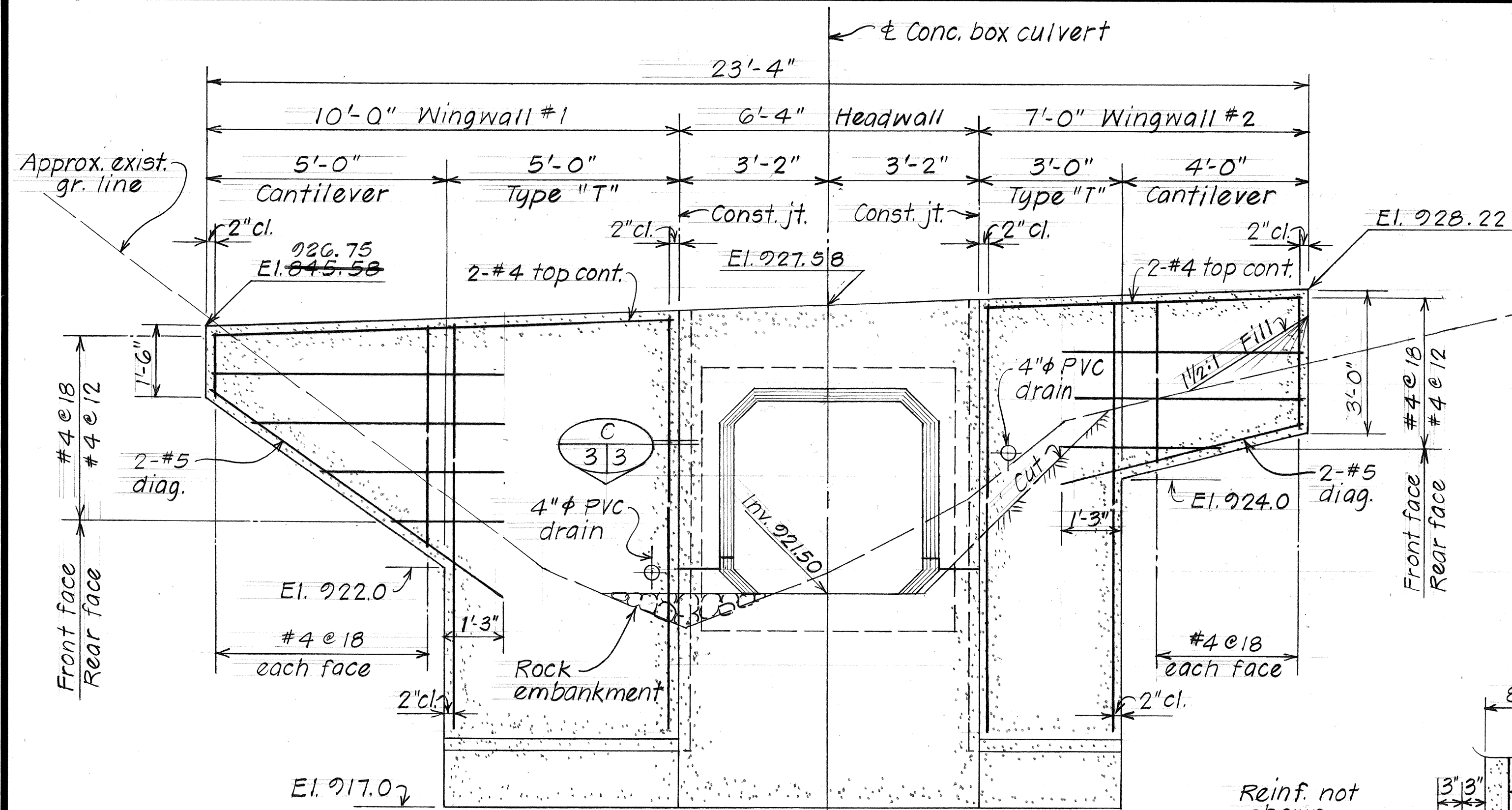
PROFILE ALONG & CULVERT
Scale: 1" = 5'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

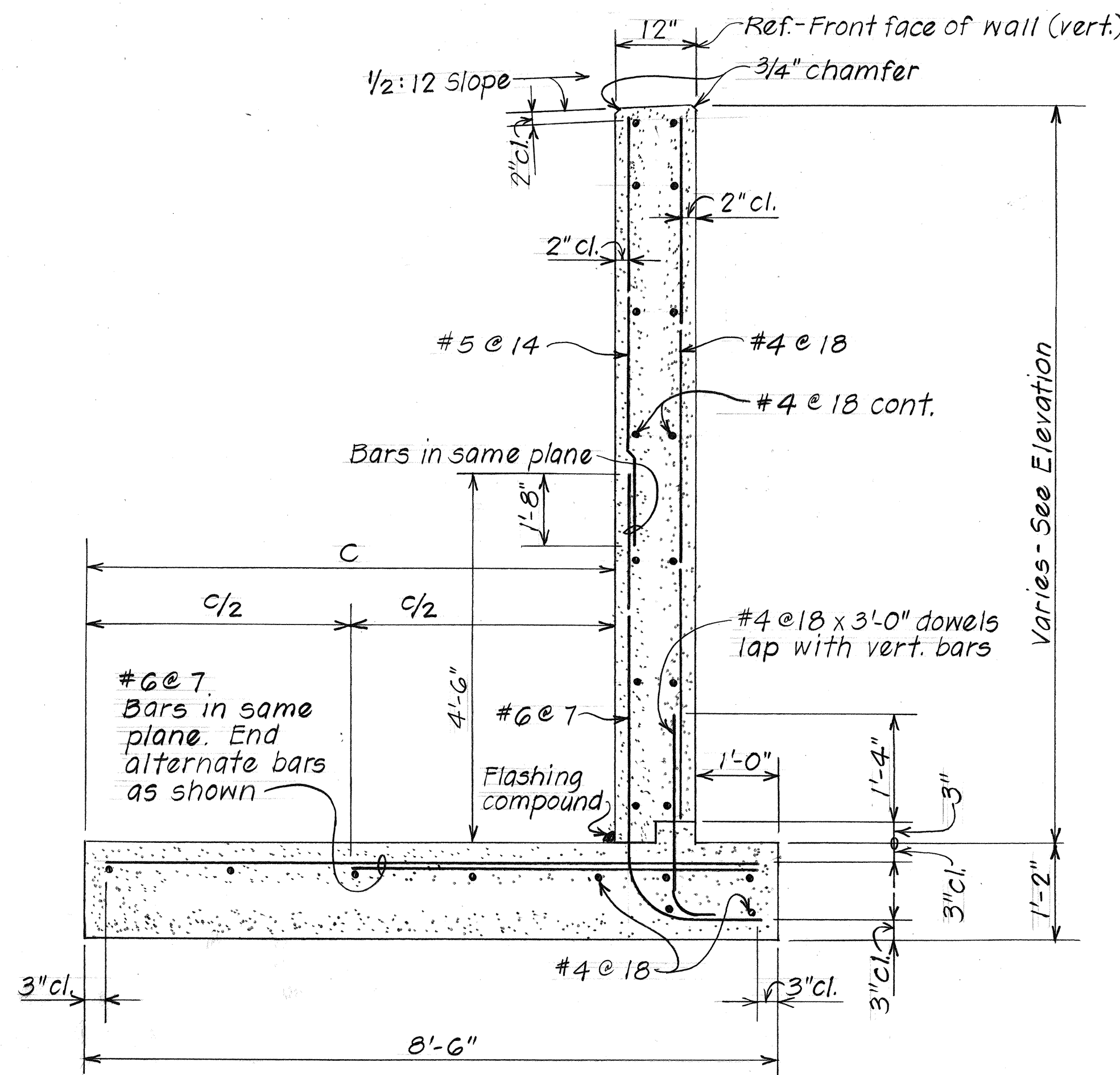
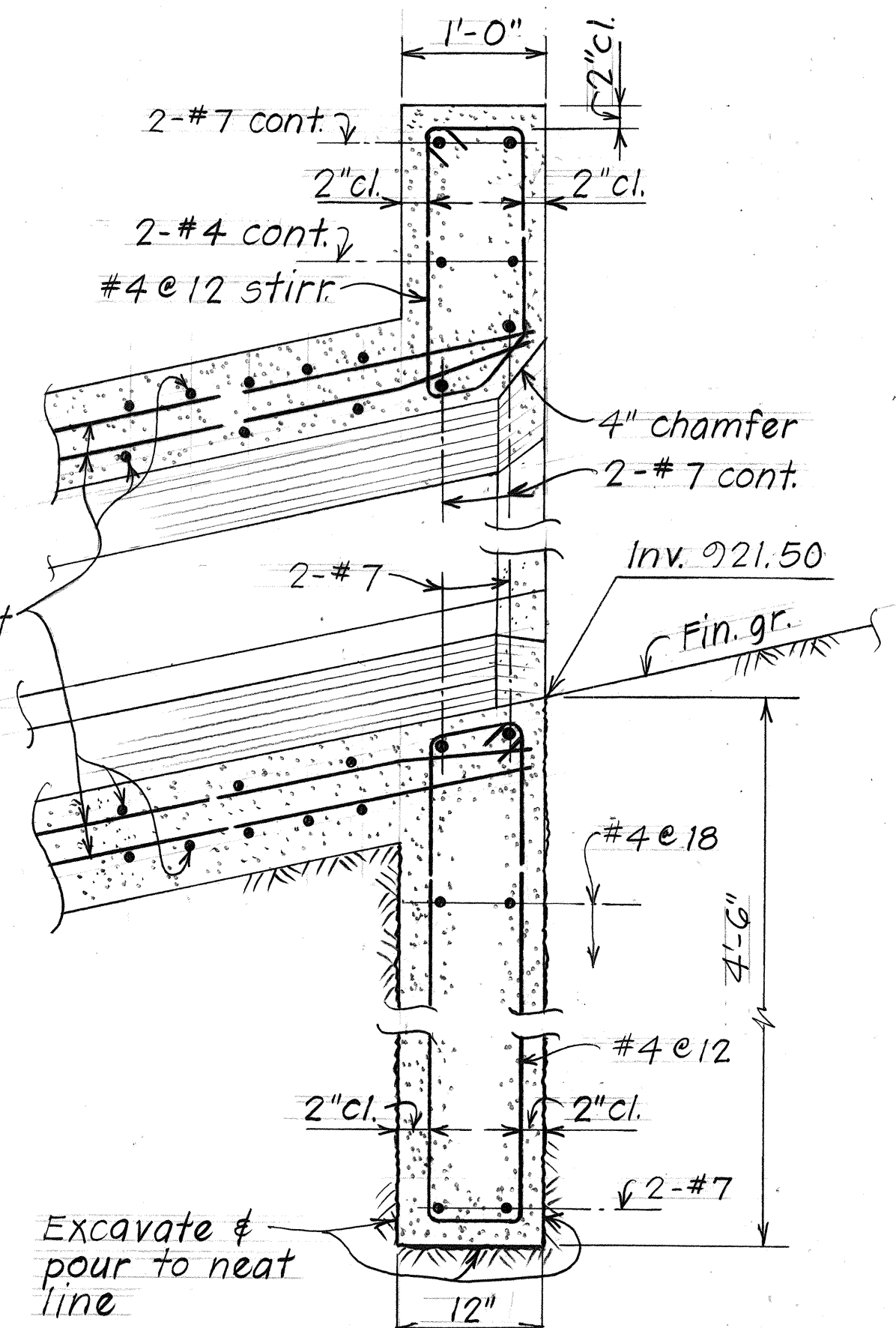
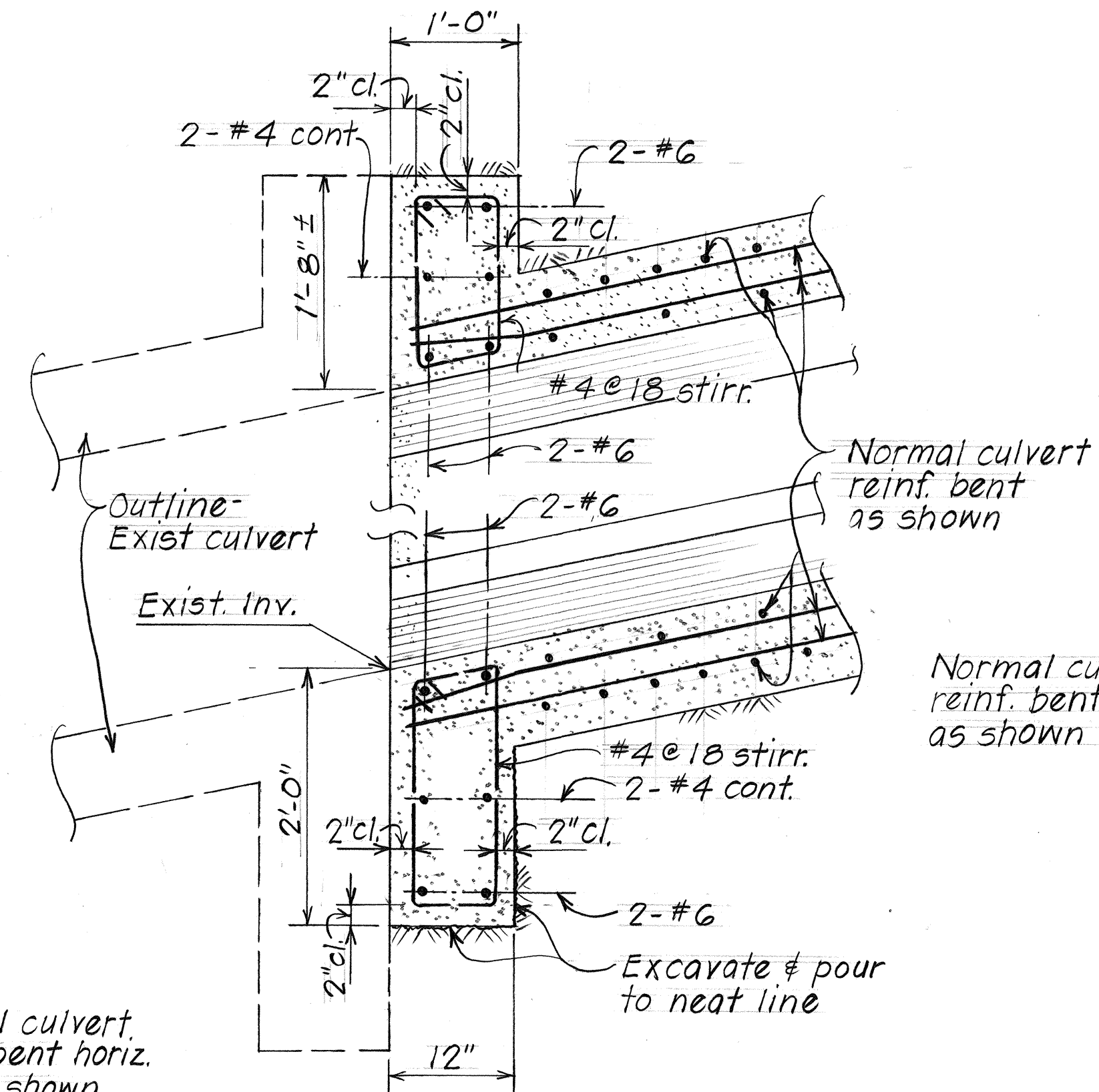
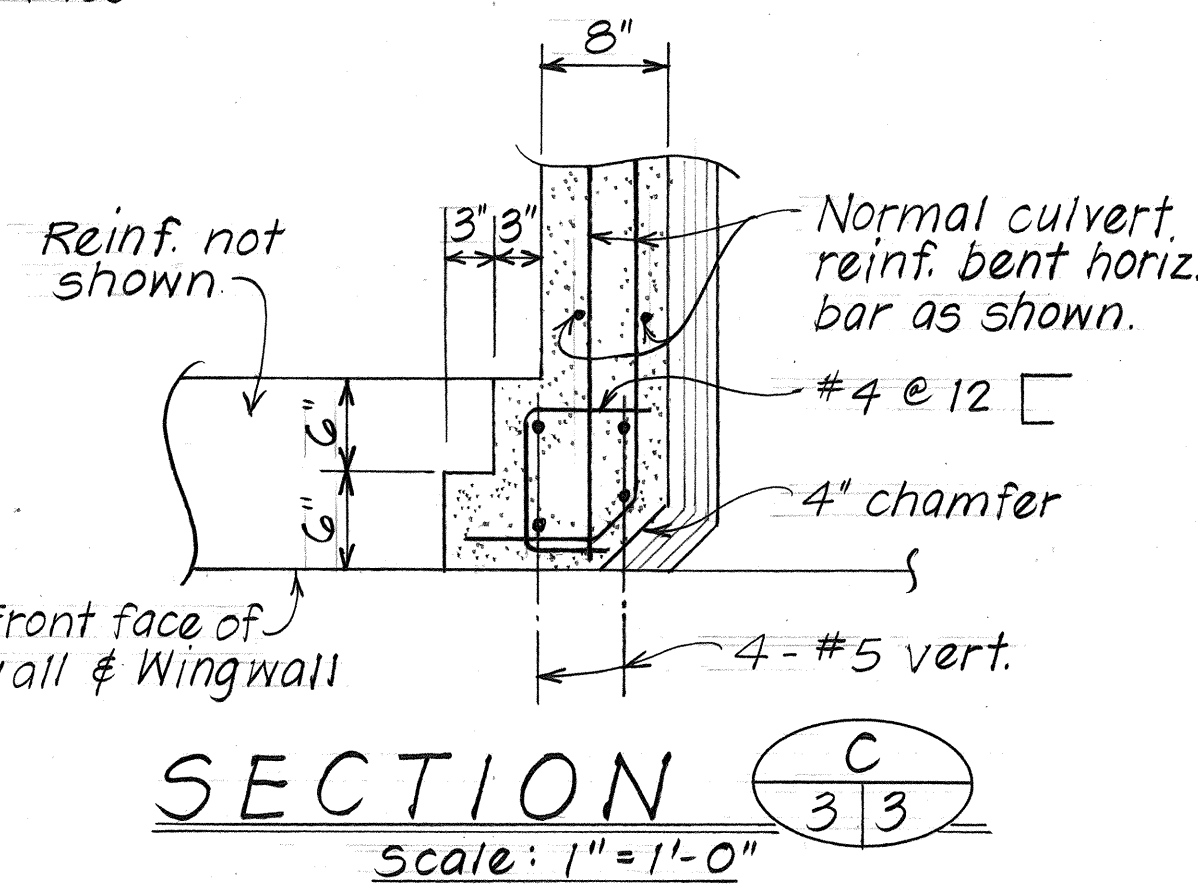
4'-0" x 4'-0" BOX CULVERT EXTENSION
AT & STA. 107 + 12.7 ±
PLAN & PROFILE
NORMAL CONC. BOX SECTION
KAWAIHAE RD. SAFETY IMPROVEMENTS
WAIMEA TOWARDS KAWAIHAE
E.A. Proj. No. HES-0100(27)
Scale: As Noted REV. 1 Date: Feb., 1985

SHEET No. 2 OF 3 SHEETS

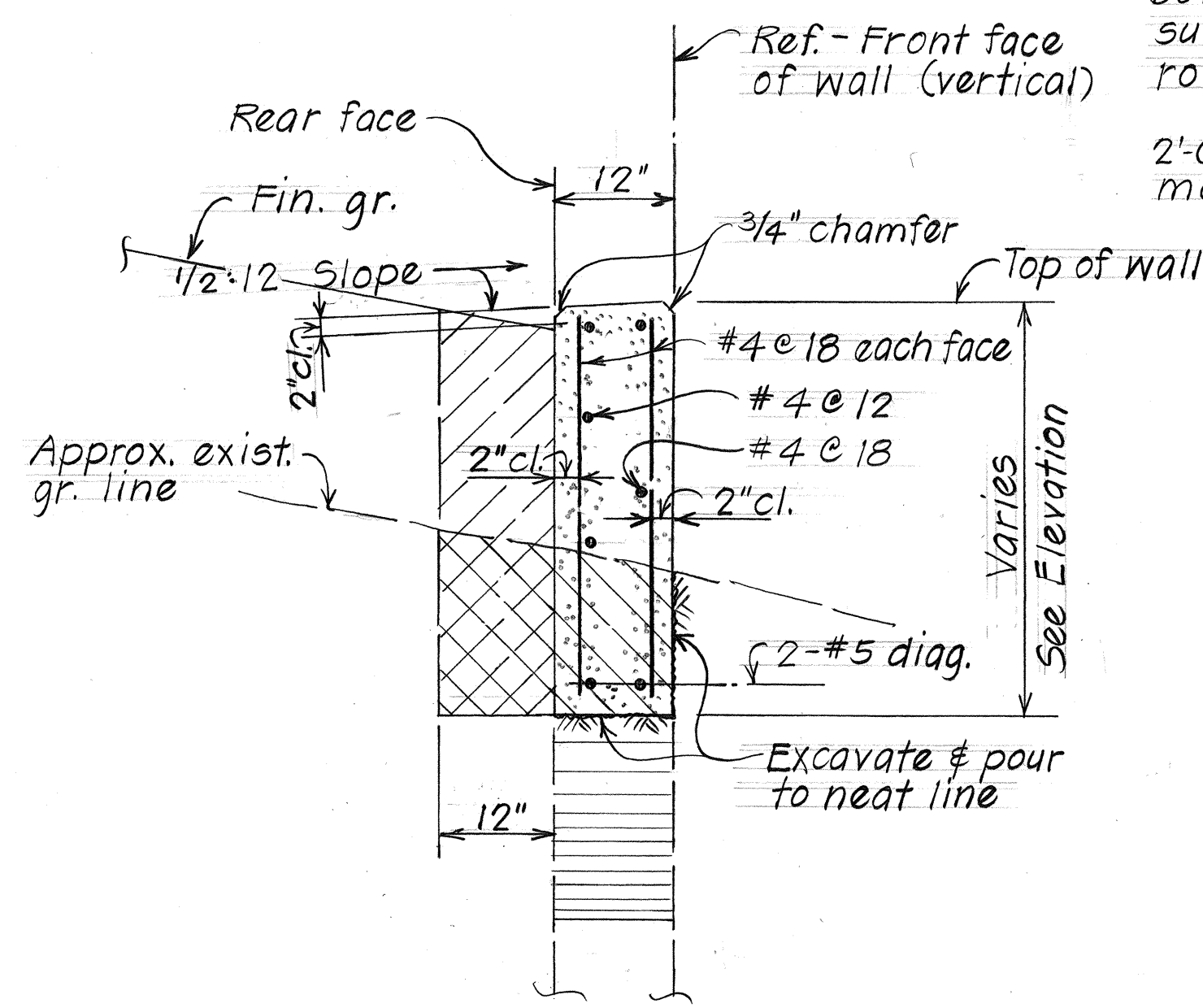
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ELEVATION - HEADWALL
Scale: 1/2" = 1'-0"

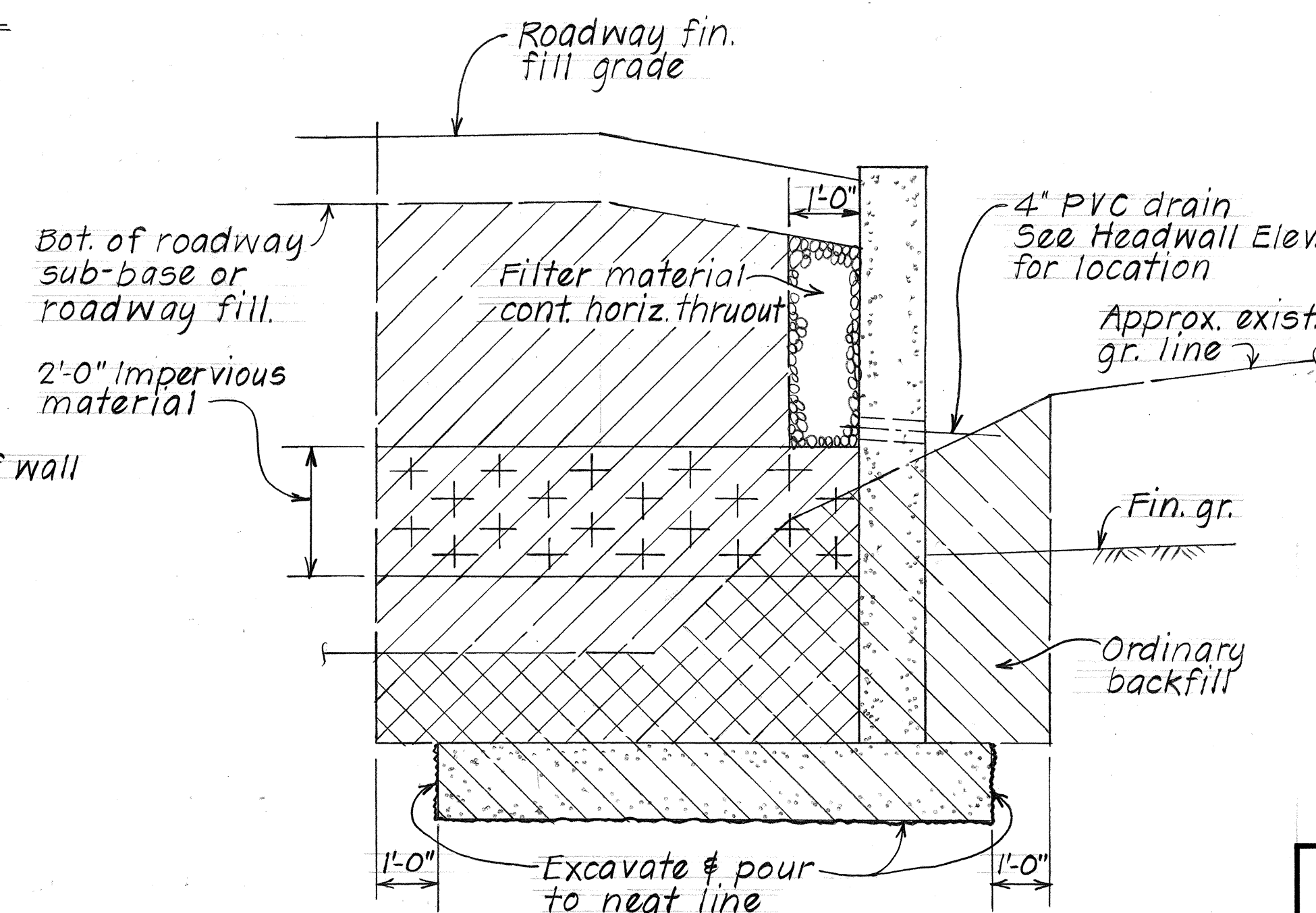


AT TYPE "T"



AT CANTILEVER

TYPICAL WINGWALL SECTIONS Scale: 3/4" = 1'-0"



NOTES

1. Hatched area shown thus denotes limits of structure excavation.
2. Hatched area shown thus denotes limits of structure backfill.

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
4'-0" x 4'-0" BOX CULVERT EXTENSION AT STA. 107+12.7 ±
HEADWALL & WINGWALL DETAILS
KAWAIHAE RD. SAFETY IMPROVEMENTS WAIKANA TOWARDS KAWAIHAE F.A. Proj. No. HES-0100(27)
Scale: As Noted REV. 1 Date: Feb. 1985
SHEET NO. 3 OF 3 SHEETS