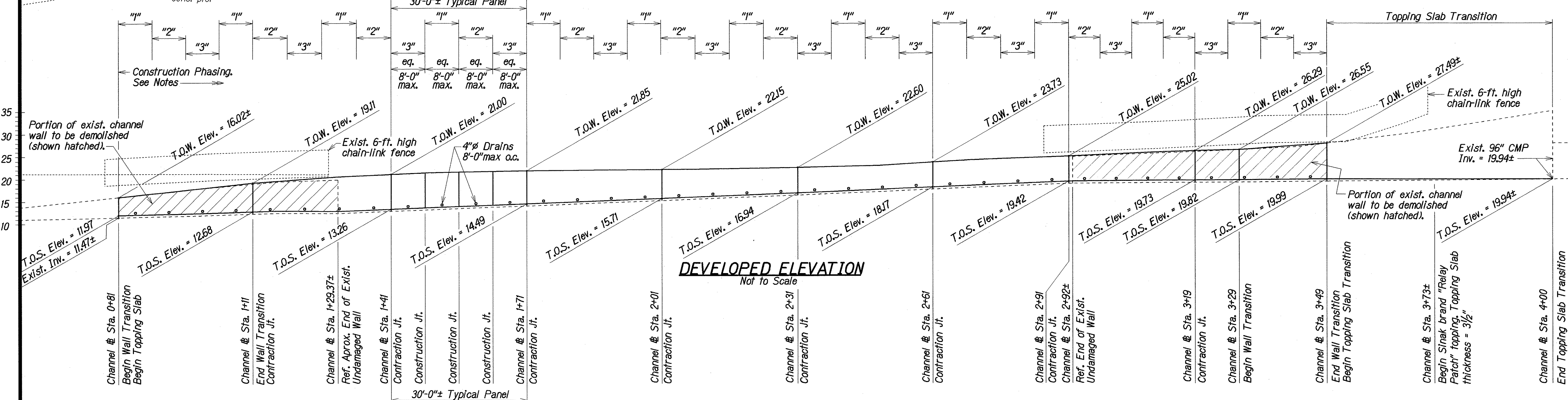
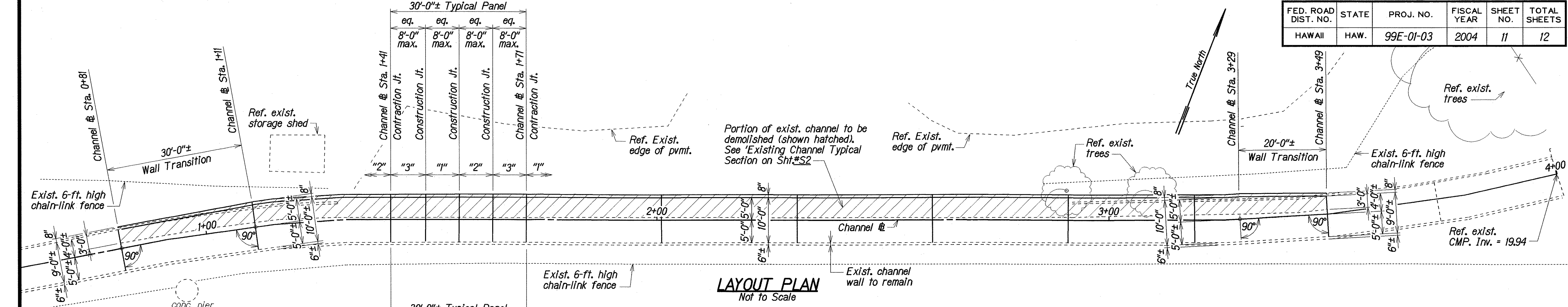


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99E-01-03	2004	11	12



- MATERIALS:**
- Structural channel wall, slab and topping concrete shall have a 28-days strength of 4,000 p.s.i. with water-cement ratio of 0.45 maximum.
 - All reinforcing steel shall conform to the requirements of ASTM A 615 and shall be deformed, Grade 60, unless noted otherwise.
 - All reinforcing bars shown with bends shall conform to standard ACI hooks, unless noted otherwise.
 - Reinforcing bars shall be detailed according to the latest edition of the AASHTO LRFD Bridge Design Specifications, unless noted otherwise.
 - All dimensions relating to reinforcing bars (e.g. spacing of bars, etc.) are to centers of bars, unless noted otherwise.
 - For concrete finish, see Standard Specifications.
 - Sheet Drain to be "Amerdrain 200" manufactured by The American Wick Drain Corporation or equivalent.
 - All longitudinal slab and wall reinforcement at construction joints to be continuous. Use Erico brand "Lenton" bar splice or equivalent. Use bonding agent at all construction joints.
- CONSTRUCTION REQUIREMENTS:**
- Refer to Hawaii Standard Specifications for Road, Bridge and Public Works Construction (Hawaii 1994 Edition and Special Provisions).
 - Exact location of bars shall be arranged so that no interference will occur

- STRUCTURAL GENERAL NOTES**
- Except as noted otherwise, all vertical dimensions are measured plumb.
 - Where the plans call for reinforcement bars to be embedded or anchored into existing concrete, see Special Provisions Section 674 - Concrete Retrofit for the Use of Adhesive Anchors.
 - Where the plans call for placing fresh plastic concrete against existing concrete, see Special Provisions Section 674 - Concrete Retrofit for the Use of Bonding Agent.
 - Recompact existing soil under all new slabs and footings.
- GENERAL:**
- All items noted incidental will not be paid for separately.
 - The Contractor shall verify all grades and dimensions before commencing with any work.
 - The Contractor shall verify the locations of all utility lines near the channel and notify their respective owners before commencing with excavation work.
 - Any damage to utility lines that are caused by the Contractor shall be repaired at his expense at no cost to the State.
 - Construction joints shall be located as shown on the plans unless noted otherwise.
 - Unless noted otherwise, all exposed concrete edges shall be chamfered 3/4".

- In the event of over-excavation, the space between the footing and the ground shall be filled with a minimum of Class D concrete at the Contractor's expense at no cost to the State.
 - All concrete shall be removed from the exposed joint face of premolded joint filler immediately after removal of forms.
- 3-PHASE WALL CONSTRUCTION:**
- Each segment designated "1" shall be demolished and reconstructed before the next segment "2" is demolished. Segment "3" shall not be demolished until Segment "2" is finished.
 - Maximum length of each segment is 8'-0".
 - Provide shoring for adjacent existing wall segments before saw-cutting wall. New wall segments do not need to be shored. The top portion of the wall shall be braced against the wall on the opposite side of the channel.
 - Saw-cut only the segment to be removed. Limit the depth of saw cutting so as not to cut through any channel slab rebar. Wall portion can be cut through completely.
 - Demolish and remove wall/slab segments, shotcrete repair and collapsed wall sections.
 - Excavate as required and construct wall segments
 - Allow concrete to achieve 3,000 p.s.i. and to cure a minimum of three (3) days before backfilling the segments.
 - Place shoring and saw-cut next segment only after backfilling.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CHANNEL LAYOUT PLAN, DEVELOPED ELEVATION and GENERAL NOTES
KAMEHAMEHA HIGHWAY DRAINAGE IMPROVEMENTS
Vicinity of Wai'au Power Plant
Project No. 99E-01-03

Scale: As Noted Date: Jun. 2003

SHEET No. 11 OF 12 SHEETS

ORIGINAL PLAN	DATE	BY
DESIGNED BY	JUL 2003	KSG
TRACED BY	JUL 2003	JWW
NOTE BOOK	JUL 2003	JWW
QUANTITIES BY	JUL 2003	JWW
CHECKED BY	JUL 2003	JWW

Remove exist. key.
See Note below



EXISTING CHANNEL WALL

Note: If existing slab or wall has a key, remove key before installing dowels

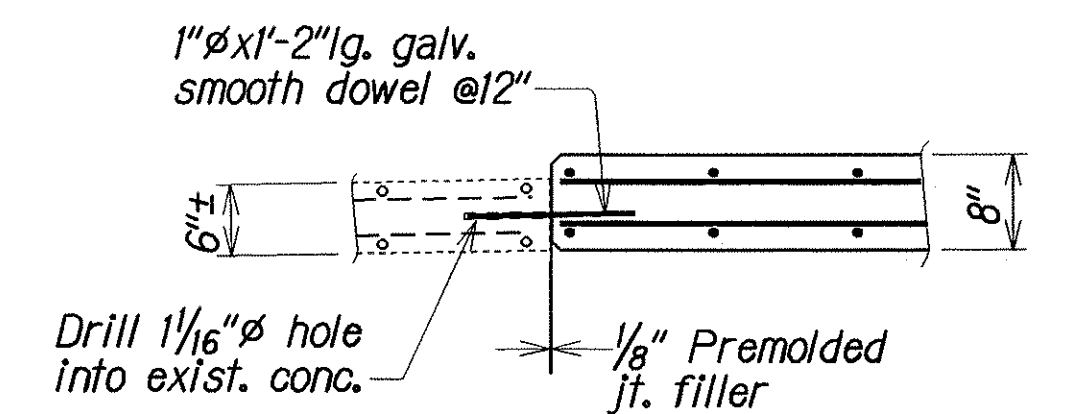


Diagram illustrating the assembly of a 1/8" Premolded joint filler. The assembly consists of a central 1/8" Premolded joint filler (indicated by a double-headed arrow) sandwiched between two 1"Øx1'-2"lg. galv. smooth dowels @1/2" (indicated by a line pointing to the dowels). The total length of the assembly is 8" (indicated by a dimension line on the right). A note indicates to "Grease one end" (indicated by a line pointing to the left end of the assembly).

CONTRACTION JOINT
at NEW WALL
Not to Scale

NEW CHANNEL SLAB NEW TOPPING SLAB
TYPICAL SECTION * Contractor
Scale: $\frac{3}{4}" = 1'-0"$ to maintain

Technical drawing of a bridge deck cross-section showing the connection between a new concrete topping slab and an existing 96-inch CMP.

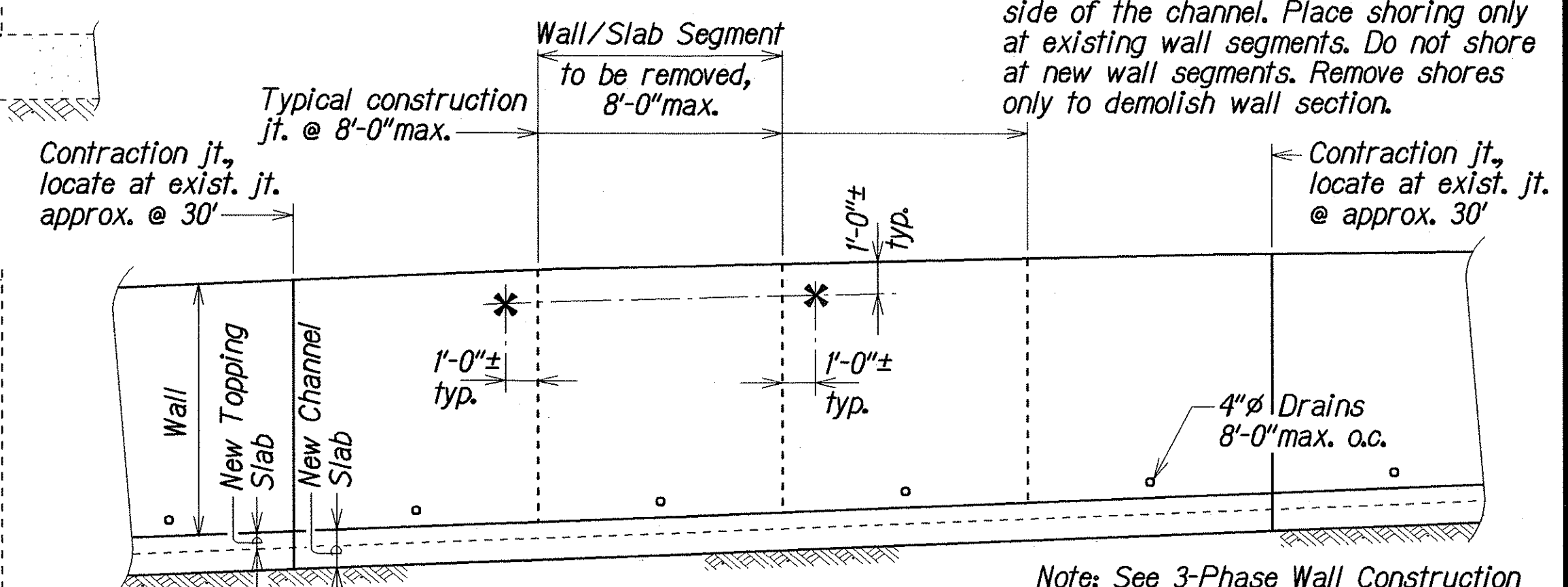
Labels and Dimensions:

- New topping slab reinf. See Typical Section above
- New conc. topping slab
- 3/4" cont. chamfer
- 1/8" Premolded jt. filler
- 6" 6"
- 2" cl.
- 4"
- Embed #3 @ 18" into exist. conc. w/ adhesive anchor
- Exist. contraction jt., typ.
- Embed #3 @ 18" # around perimeter (4-sides) into exist.
- 6"
- 3 1/2"
- Exist. 96" CMP Inv. = 19.94±
- Ref. face of exist.

NEW CHANNEL SLAB

Scale: $\frac{3}{4}'' = 1'-0''$





PARTIAL WALL ELEVATION SHOWING SHORING LOCATIONS
Not to Scale

Scale: As Noted Date: Jun, 2003

SHEET No. S2 OF 2 SHEETS