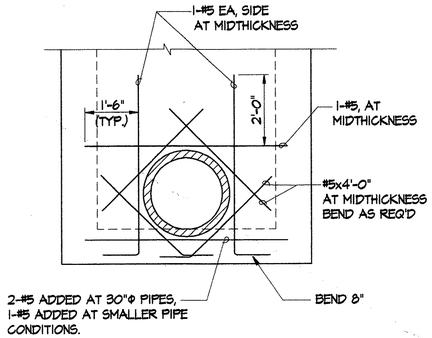
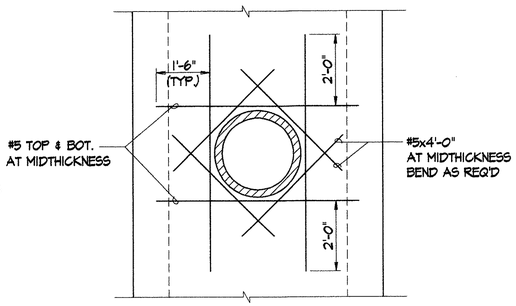


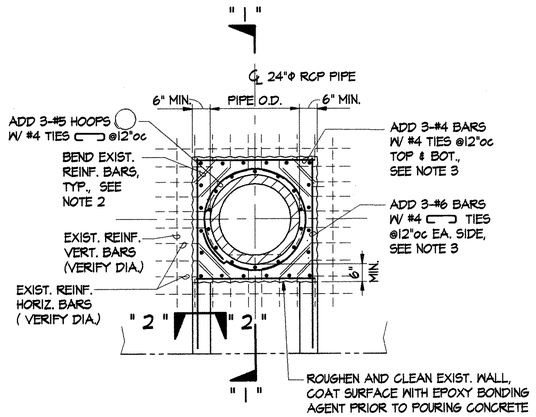
AT INVERT



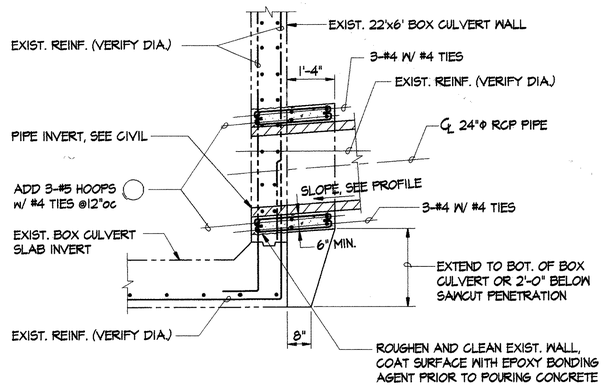
AT MIDHIGHT

TYP. PIPE PENETRATION DETAILS AT MANHOLES AND CATCH BASINS (A, S-1)

NOT TO SCALE



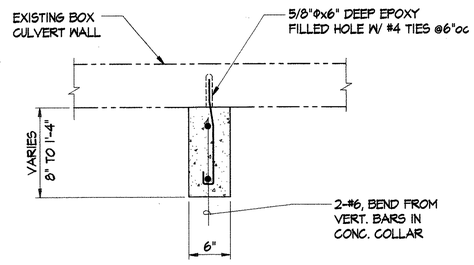
ELEVATION



SECTION " 1-1 "

NOTE:

1. SAWCUT & CHIP EXISTING BOX CULVERT, EXPOSING EXISTING REINFORCEMENT AS REQUIRED.
2. BEND EXISTING HORIZONTAL AND VERTICAL REINFORCEMENT BARS AROUND NEW RCP PENETRATION.
3. DIAMETER OF ADDED REINFORCEMENT BARS TO BE GREATER THAN OR EQUAL TO EXISTING REINFORCEMENT BARS REPLACED.
4. SHORE EXISTING BOX CULVERT PRIOR TO SAWCUTTING AND FOR 10 DAYS AFTER PLACING CONCRETE.



SECTION " 2-2 "

24"ϕ PIPE CONNECTION TO EXIST. 22' x 6' BOX DRAIN (B, S-1)

NOT TO SCALE

GENERAL NOTES

STATE PROJECT NO. PMT-901A-01-98

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS OF DUCTS AND PIPES BEFORE POURING CONCRETE AND COORDINATE INFORMATION SHOWN ON STRUCTURAL DRAWINGS WITH CIVIL DRAWINGS BEFORE COMMENCEMENT OF WORK.
2. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 p.s.i. .
3. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO A.S.T.M. A-615, GRADE 60.
4. UNLESS OTHERWISE NOTED, ALL CONTINUOUS BARS IN WALLS AND SLABS SHALL BE LAPPED 40 BAR DIAMETERS AT ALL SPLICES, CORNERS AND INTERSECTIONS. SPLICES BETWEEN ADJACENT BARS SHALL BE STAGGERED 4'-0" APART.
5. EXCEPT AS OTHERWISE NOTED, ALL MANHOLE COVERS, PRECAST CONCRETE MANHOLE RINGS, RUNGS, AND OTHER TYPICAL ENGINEERING DETAILS SHALL REFER TO THE CITY AND COUNTY OF HONOLULU STANDARDS (DENOTED AS "STANDARD DETAILS").
6. MINIMUM CONCRETE COVER OVER REINFORCING STEEL SHALL BE AS FOLLOWS :
   - BOTTOM SLAB OR FOOTING IN CONTACT WITH GROUND . . . . . 3"
   - TOP BARS IN BOTTOM SLAB . . . . . 2"
   - TOP AND BOTTOM BARS IN TOP SLAB . . . . . 2"
   - WALLS . . . . . 2"
7. REFER TO CIVIL DRAWINGS FOR THE LOCATION OF BOX CULVERTS, DRAIN MANHOLES, CATCH BASINS AND OTHER ITEMS.
8. DESIGN LIVE LOADS :
   - ROADWAY HS20-44
   - SURCHARGE . . . . . 240 p.s.f.
9. OPTION OF PRECAST CONCRETE :
   AT HIS OPTION, THE CONTRACTOR MAY USE PRECAST CONCRETE IN THE CONSTRUCTION OF MANHOLE. SUBMIT CALCULATIONS AND SHOP DRAWINGS FOR APPROVAL BEFORE FABRICATION. CALCULATIONS AND SHOP DRAWINGS SHALL BE STAMPED AND SIGNED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF HAWAII.
10. FOUNDATION NOTES :
    A. FOR GEOTECHNICAL INFORMATION AND RECOMMENDATIONS FOR THE DESIGN AND CONSTRUCTION OF ALL FOUNDATIONS, REFER TO THE GEOTECHNICAL REPORT ENTITLED "GEOTECHNICAL ENGINEERING EXPLORATION, VILLAGES OF KAPOLEI, FARRINGTON HIGHWAY IMPROVEMENTS, EWA, OAHU, HAWAII" DATED JUNE 28, 1996 AND FAX ADDENDUM LETTER DATED FEBRUARY 4, 1997, PREPARED BY GEOLABS HAWAII.
    B. EXCEPT AS OTHERWISE NOTED, THE FOLLOWING CRITERIA WAS USED IN THE DESIGN OF THE FOUNDATION.
       - ALLOWABLE SOIL BEARING CAPACITY . . . . . 3,000 p.s.f.
       - ACTIVE EARTH PRESSURE . . . . . 50 p.c.f.
    C. THE EXCAVATIONS AND BACKFILLING FOR CONSTRUCTION OF FOUNDATIONS SHALL BE MONITORED BY THE SOILS ENGINEER. ANY DEVIATION FROM HIS ORIGINAL RECOMMENDATIONS WHICH MAY CHANGE THE DESIGN OF THE FOUNDATION SHALL BE REPORTED TO THE STRUCTURAL ENGINEER IN WRITING.

PROPOSED PUBLIC ROAD

DELETE

Approved:

Chief, Division of Engineering, DPW&S — Date 8/29/97

ENGINEER	C.T.
DRAFTSMAN	H.C.
CHECKED BY	J.W.

JEFFREY Y.C. WONG — LICENSED PROFESSIONAL ENGINEER — 3207-S — HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE

REVISION	DATE	BRIEF	BY	APPROVED

R. M. TOWILL CORPORATION
ENGINEERS • PLANNERS • SURVEYORS • PHOTOGRAMMETRISTS
CONSTRUCTION MANAGERS
420 Waiakamilo Road Honolulu, Hawaii 96817-4941

THE ESTATE OF JAMES CAMPBELL,
FINANCE REALTY COMPANY, AND
HOUSING FINANCE AND DEVELOPMENT CORPORATION
STATE OF HAWAII

FARRINGTON HIGHWAY IMPROVEMENTS
EWA, OAHU, HAWAII
T.M.K.: (1ST DIVISION) PORTION OF 9-1-16

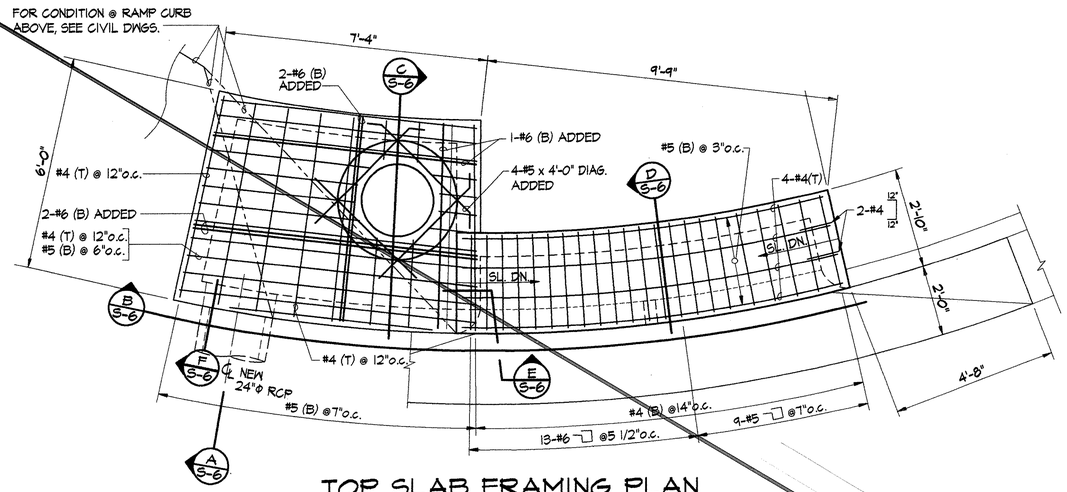
GENERAL NOTES AND TYPICAL DETAILS

RMC JOB NO.	SCALE	DATE
DEV 93-41	AS NOTED	JULY 1997

"RECORD DRAWINGS" S-1 SHEET 38 OF 130 SHEETS

FILE	POCKET	FOLDER	NO.

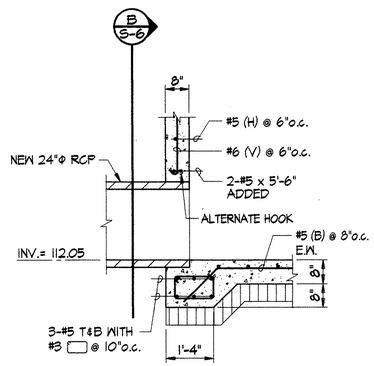
STATE PROJECT NO. PMT-901A-01-98



TOP SLAB FRAMING PLAN

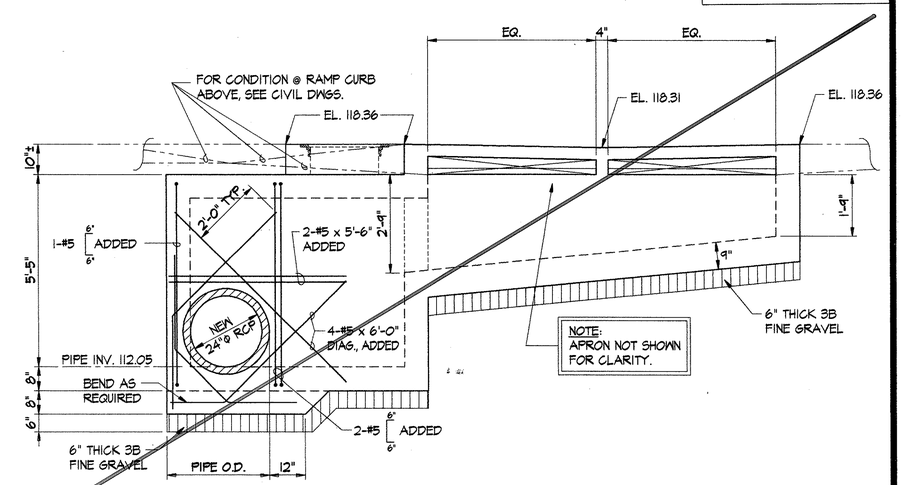
SCALE: 1/2" = 1'-0"

N.I.C



SECTION A S-6

SCALE: 1/2" = 1'-0"



SECTION B S-6

SCALE: 1/2" = 1'-0"

PLAN VIEW OF WALL SECTION

SCALE: 1/2" = 1'-0"

SECTION C S-6

SCALE: 1/2" = 1'-0"

SECTION D S-6

SCALE: 1/2" = 1'-0"

SECTION E S-6

SCALE: 1/2" = 1'-0"

SECTION F S-6

SCALE: 1/2" = 1'-0"

PROPOSED PUBLIC ROAD

SPECIAL CATCH BASIN TYPE "C"

Approved:

Chief, Division of Engineering, DPW — Date

ENGINEER	L.M.
DRAFTSMAN	H.C.
CHECKED BY	J.W.

REVISION	DATE	BRIEF	BY	APPROVED

JEFFREY Y.C. WONG LICENSED PROFESSIONAL ENGINEER 3207-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE

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EWA, OAHU, HAWAII
T.M.K.: (1ST DIVISION) PORTION OF 9-1-16

MODIFIED CATCH BASIN TYPE "C"
(STATE CATCH BASIN)

WORK JOB NO.	SCALE	DATE
DEV 93-41	AS NOTED	

"RECORD DRAWINGS" S-6 SHEET OF SHEETS

FILE	POCKET	FOLDER	NO.