

NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY

1. THE CONTRACTOR SHALL OBTAIN A CONSTRUCTION PERMIT FROM THE STATE'S HIGHWAY DISTRICT ENGINEER AT 50 MAKAALA STREET PRIOR TO THE COMMENCEMENT OF WORK WITHIN STATE HIGHWAY RIGHT-OF-WAY.
2. CONSTRUCTION AND RESTORATION OF ALL EXISTING HIGHWAY FACILITIES WITHIN STATE RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED 1976, AND THE SPECIFICATIONS FOR INSTALLATION OF MISCELLANEOUS IMPROVEMENTS WITHIN STATE HIGHWAYS, DATED APRIL 1, 1974 OF THE STATE HIGHWAYS DIVISION.
3. ALL LANES SHALL BE OPENED TO TRAFFIC DURING THE MORNING PEAK HOURS FROM 6:00 A.M. TO 8:00 A.M. AND DURING THE AFTERNOON PEAK HOURS FROM 3:30 P.M. TO 5:30 P.M. AND DURING OFF-WORK HOURS. ONLY ONE LANE OF KANOELEHUA AVE. SHALL BE CLOSED AT ANY OTHER TIME.
4. THE CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES, AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION AND FOR THE CONVENIENCE AND SAFETY OF PUBLIC TRAFFIC. ALL SUCH PROTECTIVE FACILITIES AND PRECAUTIONS TO BE TAKEN SHALL CONFORM WITH THE "RULES AND REGULATIONS GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON, OR ADJACENT TO PUBLIC STREETS AND HIGHWAYS" ADOPTED BY THE HIGHWAY SAFETY COORDINATOR, AND THE U.S. FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, PART VI - TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS", DATED 1971.
5. THE MINIMUM PAVEMENT STRUCTURE SHALL CONSIST OF 2 1/2" ASPHALT CONCRETE, 8" AGGREGATE BASE COURSE 12" AGGREGATE SUBBASE, OR 2 1/2" ASPHALT CONCRETE AND 5" ASPHALT TREATED BASE COURSE OR ASPHALT CONCRETE.
6. NO MATERIAL AND/OR EQUIPMENT SHALL BE STOCKPILED OR OTHERWISE STORED WITHIN HIGHWAY RIGHTS-OF-WAY EXCEPT AT LOCATIONS DESIGNATED IN WRITING AND APPROVED BY THE DISTRICT ENGINEER.
7. LONGITUDINAL DRAINAGE ALONG THE HIGHWAY SHALL BE MAINTAINED.

WATER NOTES

1. CONTRACTOR SHALL VERIFY ALL EXISTING WATERLINES IN THE FIELD AND SHALL PAY FOR ANY DAMAGES TO THE EXISTING PIPELINE.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LEAKAGE OR DAMAGE OF PIPELINES UNTIL COMPLETION OF THE CONTRACT.
3. SHOULD SUCH WORK BE REQUIRED, CONTRACTOR SHALL DO ALL NECESSARY CONNECTION WORK, RELOCATION, LONERING, OR NEW INSTALLATION OF WATER FACILITIES, ALL UNDER THE SUPERVISION OF THE DWS ENGINEER OR INSPECTOR.
4. ALL WORK WILL BE ACCORDING TO S.M.S. STANDARDS.
5. ANY WORK, MATERIALS AND EQUIPMENT PROVIDED BY THE DWS SHALL BE PAID FOR BY THE COUNTY DEPT. OF PUBLIC WORKS OR ITS CONTRACTOR.
6. THE DWS SHALL BE INFORMED AT LEAST 72 HOURS PRIOR TO COMMENCING WORK ON WATER LINES AND OTHER WATER APPURTANANCES.
7. THE CONTRACTOR SHALL INSURE CONTINUOUS WATER SERVICE AT ALL TIMES AND SHALL BE RESPONSIBLE FOR ANY BY-PASS LINES, AS APPROVED BY THE DWS ENGINEER.
8. CONTROLLING OF WATER VALVES AND SHUTOFF NOTICES SHALL BE DONE BY DWS PERSONNEL ONLY.
9. ANY SALVAGE MATERIALS FOR REINSTALLATION SHALL BE APPROVED BY THE DWS ENGINEER, OTHERWISE NEW MATERIALS SHALL BE USED.

GRADING NOTES

1. ALL GRADING WORK SHALL CONFORM TO ORDINANCE NO 168 AND TO THE EROSION AND SEDIMENTATION CONTROL STANDARDS AND GUIDELINES OF THE DEPT. OF PUBLIC WORKS, COUNTY OF HAWAII, AND SHALL NOT COMMENCE UNTIL A GRADING PERMIT IS OBTAINED.
2. THE CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS RESULTING FROM HIS WORK AND DEPOSITED IN DRAINAGE FACILITIES, ROADWAYS AND OTHER AREAS. THE COSTS INCURRED FOR ANY NECESSARY REMEDIAL ACTION BY THE CHIEF ENGINEER SHALL BE PAYABLE BY THE CONTRACTOR.
3. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH. WHENEVER MORE THAN 75 MICROGRAMS OF DUST PER CUBIC METER OF AIR IS MEASURED, A DUST PROBLEM IS CONSIDERED TO EXIST. THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION TO ALLEVIATE THIS PROBLEM. THE COUNTY SHALL REQUIRE SUPPLEMENTAL MEASURES AS NECESSARY.
4. ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS CONTAINED IN THE PUBLIC HEALTH REGULATIONS, STATE DEPARTMENT OF HEALTH, ON WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS.
5. ALL SLOPES AND EXPOSED AREAS SHALL BE SODED OR PLANTED IMMEDIATELY AFTER THE GRADING WORK HAS BEEN COMPLETED.
6. THE COUNTY SHALL BE INFORMED OF THE LOCATION OF THE DISPOSAL AND/OR BORROW SITE REQUIRED FOR THE PROJECT WHEN THE APPLICATION FOR A GRADING PERMIT IS MADE.
7. NO GRADING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS, AND HOLIDAYS AT ANY TIME WITHOUT PRIOR NOTICE TO THE CHIEF ENGINEER.

CONCRETE NOTES

1. CONCRETE SHALL HAVE A 28-DAY STRENGTH OF 3000 PSI.
2. REINFORCING : ASTM A615, GRADE 40.
3. CONCRETE COVER FOR REINFORCING IN MANHOLES & CATCH BASINS, EXCEPT WHERE SHOWN OTHERWISE:

TOP SLAB: TOP	1 1/2"
	BOTTOM 1 1/2"
BOTTOM SLAB: TOP	2"
	BOTTOM 3"
WALLS :	2"

GENERAL NOTES

1. WHERE REQUIRED, CONTRACTOR SHALL SAW-CUT AND MATCH EXISTING PAVEMENT WITH SMOOTH RIDING CONNECTION.
2. CONSTRUCTION PARCEL TO BE 10 FEET WIDE UNLESS OTHERWISE NOTED. CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES WITHIN CONSTRUCTION PARCEL.
3. UPON COMPLETION OF CONSTRUCTION, CONSTRUCTION PARCEL SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION OR EQUAL. RESTORATION SHALL BE INCIDENTAL TO OTHER BID ITEMS.
4. ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON PLANS SHALL BE PROTECTED AT ALL TIMES DURING CONSTRUCTION, AND ANY DAMAGE TO THEM SHALL BE REPAIRED AND PAID FOR BY THE CONTRACTOR. PERSONNEL INJURY RESULTING FROM CONTACT WITH EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
5. CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING FOR DRAINLINES, CATCH BASINS AND MANHOLES SO AS NOT TO DAMAGE EXISTING UTILITY LINES. ALL DAMAGES TO EXISTING UTILITY LINES NOT TO BE DEMOLISHED SHALL BE MAINTAINED AND REPAIRED IF DAMAGED AT THE CONTRACTOR'S EXPENSE.
6. FOR PIPE ALTERNATES AND CORRESPONDING INVERTS, SEE SHEET C-10.
7. THE CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN ALL NECESSARY SIGNS AND OTHER PROTECTIVE FACILITIES, WHICH SHALL CONFORM WITH THE RULES AND REGULATIONS GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON OR ADJACENT TO PUBLIC STREETS AND HIGHWAYS ADOPTED BY THE HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, PART VI - TRAFFIC CONTROL FOR STREET AND HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS".
8. ACCESS TO ALL STREETS AND DRIVENAYS SHALL BE PROVIDED AT ALL TIMES.
9. DURING NON-WORKING HOURS, ALL LANES SHALL BE OPEN AND ALL EXCAVATIONS ON THE ROADWAY SHALL BE COVERED WITH A SAFE, NON-SKID BRIDGING MATERIAL.
10. CMP ALTERNATE SHALL BE 16 GAGE "BLUCOTE" GALVANIZED STEEL SHEETS OR APPROVED EQUAL. INTERIOR SHALL BE COATED WITH 10 MIL. MINIMUM AND EXTERIOR WITH 3 MIL. MINIMUM POLYVINYL/CHLORIDE PLASTISOL/ORGANISOL COATINGS.
11. A FIELD OFFICE FOR THE INSPECTOR SHALL NOT BE REQUIRED FOR THIS PROJECT.

ADDITIONAL WATER NOTES

10. THE FIRE DEPARTMENT SHALL BE GIVEN 72 HOURS PRIOR NOTICE TO ANY TEMPORARY REMOVAL OF FIRE HYDRANTS.
11. WATER LINES SHALL BE CONCRETE JACKETED AS REQUIRED BY THE DWS ENGINEER WHEREVER COMMON CROSSING WITH DRAINLINES OCCUR.

REVISION	DATE	BRIEF	MADE BY	APPROVED

WILSON, OKAMOTO & ASSOCIATES
ENGINEERS AND ARCHITECTS
P.O. BOX 3530 HONOLULU, HAWAII 96811
PHONE 531-5261

DEPT. OF PUBLIC WORKS COUNTY OF HAWAII
BUREAU OF PLANS AND SURVEYS

HILO STORM DRAINAGE SYSTEM,
ALONG KAWILI STREET

WATER, GRADING, & GENERAL NOTES

APPROVED BY:	DESIGNED BY: GT, HH
<i>Robert T. Tamba</i> DATE 3/3/77	DRAWN BY: RO
BUREAU HEAD	CHECKED BY:
<i>Wilson Okamoto</i> DATE 2-21-77	SURVEYED BY:
CONSULTANT	SHEET NO. 1
	OF 6 SHEETS

NOTE:
RECONSTRUCT TIE-IN TO EXIST DRYWELLS WITH CRM TO THE SATISFACTION OF THE ENGINEER - IN-CHARGE. (INCIDENTAL TO PIPE COST)

CHARLES T. OTANI
E.N.
T.M.K.: 2-2-50:137

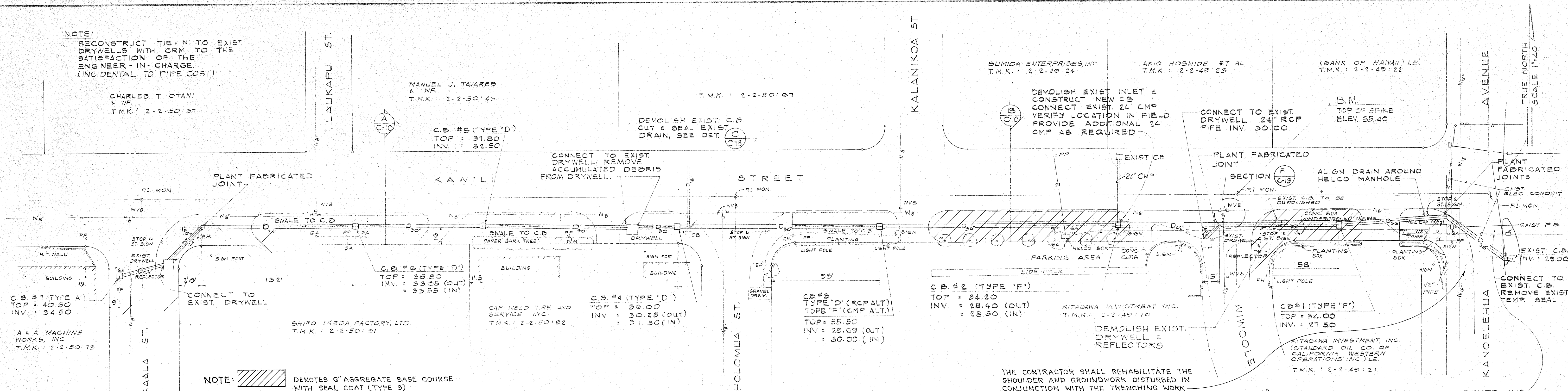
MANUEL J. TAVARES
& W.F.
T.M.K.: 2-2-50:43

T.M.K.: 2-2-50:67

SUMIDA ENTERPRISES, INC.
T.M.K.: 2-2-49:24

AKIO HOSHIDE ET AL
T.M.K.: 2-2-49:29

(BANK OF HAWAII) L.E.
T.M.K.: 2-2-49:22



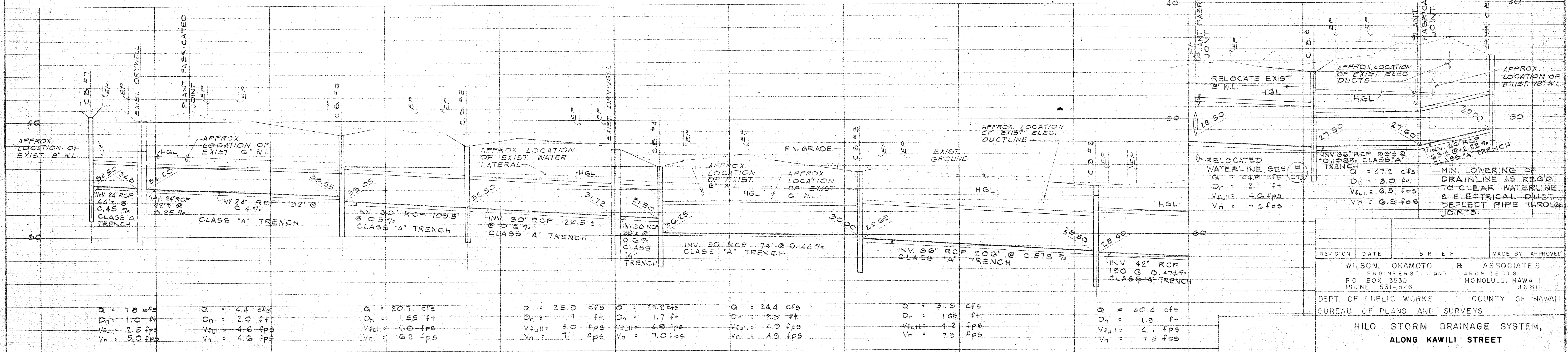
NOTE: DENOTES 6" AGGREGATE BASE COURSE WITH SEAL COAT (TYPE 3) (SEE SEC. 409 OF STATE STANDARD SPECS. FOR ROAD & BRIDGE CONSTRUCTION - 1976 ED.)

THE COST FOR SHOULDER WORK INCLUDING OILING SHALL BE INCLUDED IN ITEM 14 ROADWAY IMPROVEMENTS AND WILL NOT BE PAID FOR SEPARATELY.

THE CONTRACTOR SHALL REHABILITATE THE SHOULDER AND GROUNDWORK DISTURBED IN CONJUNCTION WITH THE TRENCHING WORK WITHIN THE STATE HIGHWAY RIGHT-OF-WAY TO THE SATISFACTION OF THE DISTRICT ENGINEER

CONTRACTOR SHALL COORDINATE HIS WORK AT SIGNALIZATION DUCTLINES w/ THE STATE HIGHWAY DEPARTMENT, DISTRICT OFFICE. CARE SHALL BE TAKEN NOT TO DAMAGE THE SIGNAL DUCTLINES & APPURTENANCES. ANY DAMAGE SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

PLAN, DRAINLINE "A"



PROFILE, DRAINLINE "A"
SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

REVISION	DATE	BRIEF	MADE BY	APPROVED

WILSON, OKAMOTO & ASSOCIATES
ENGINEERS AND ARCHITECTS
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DEPT. OF PUBLIC WORKS COUNTY OF HAWAII
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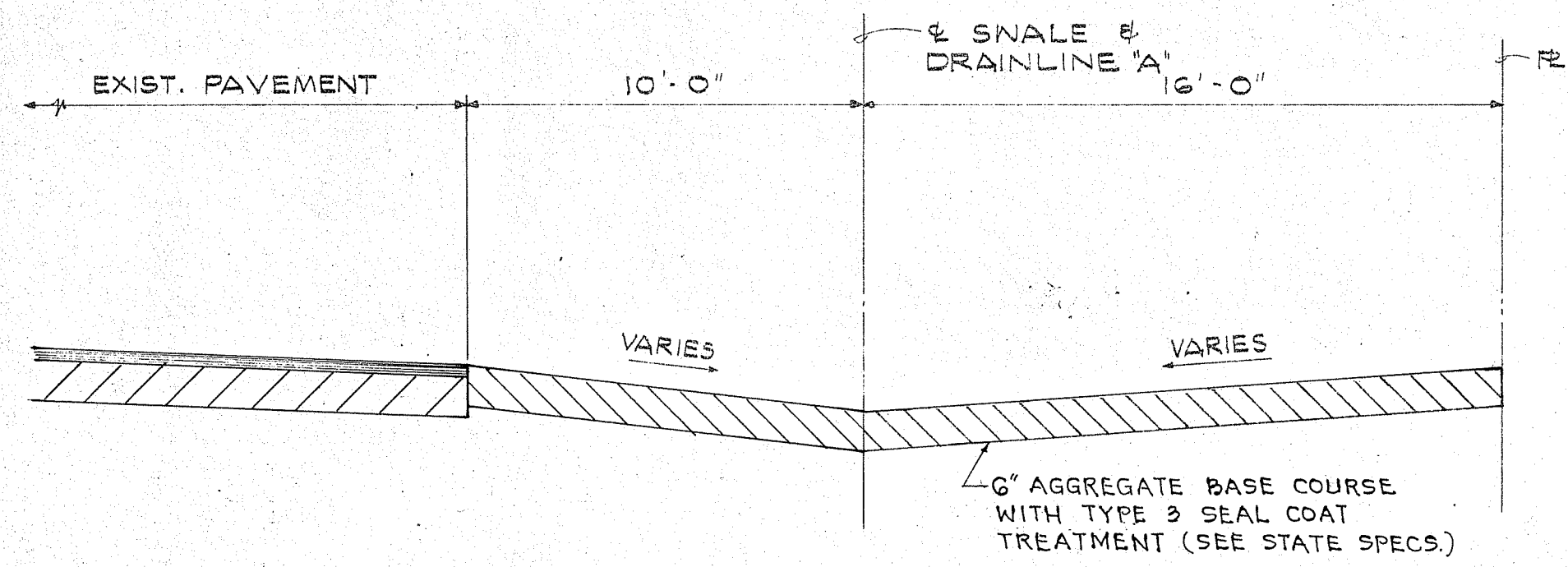
HILO STORM DRAINAGE SYSTEM,
ALONG KAWILI STREET

PLAN & PROFILE
DRAINLINE "A"

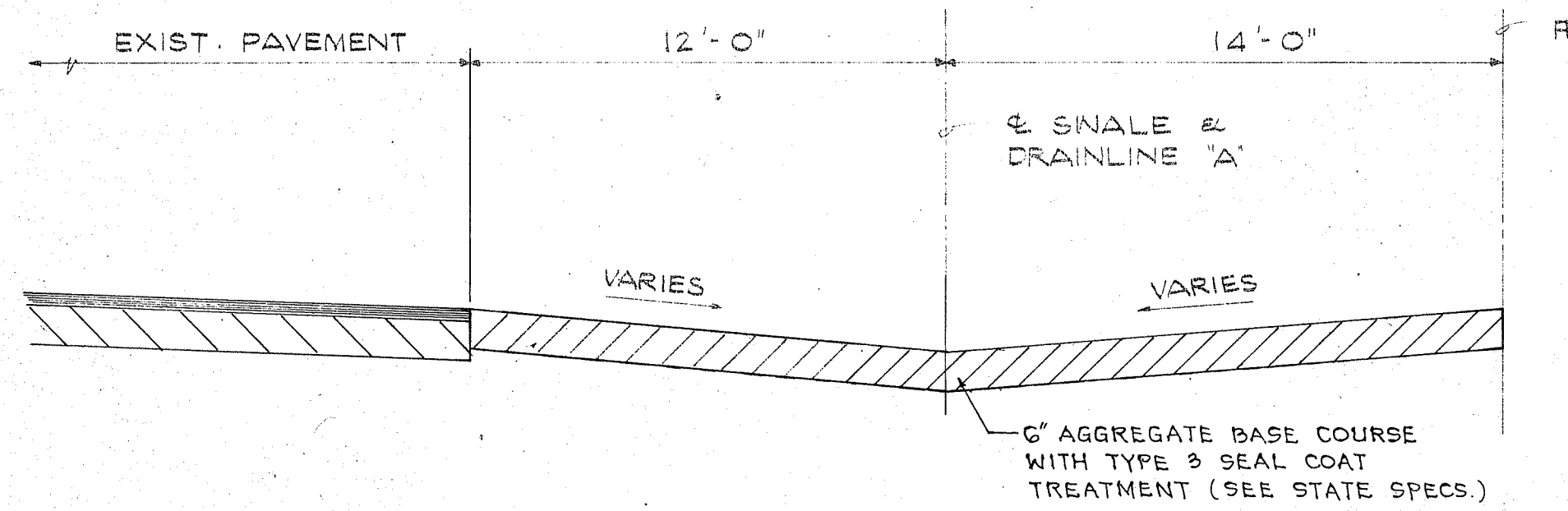
APPROVED BY:
T. Hoshida, T. Tanihara DATE 3/3/77
BUREAU HEAD
Wilson Okamoto DATE 2-25-77
CONSULTANT

DESIGNED BY: G.T.H.
DRAWN BY: R.Q.S.
CHECKED BY:
SURVEYED BY:

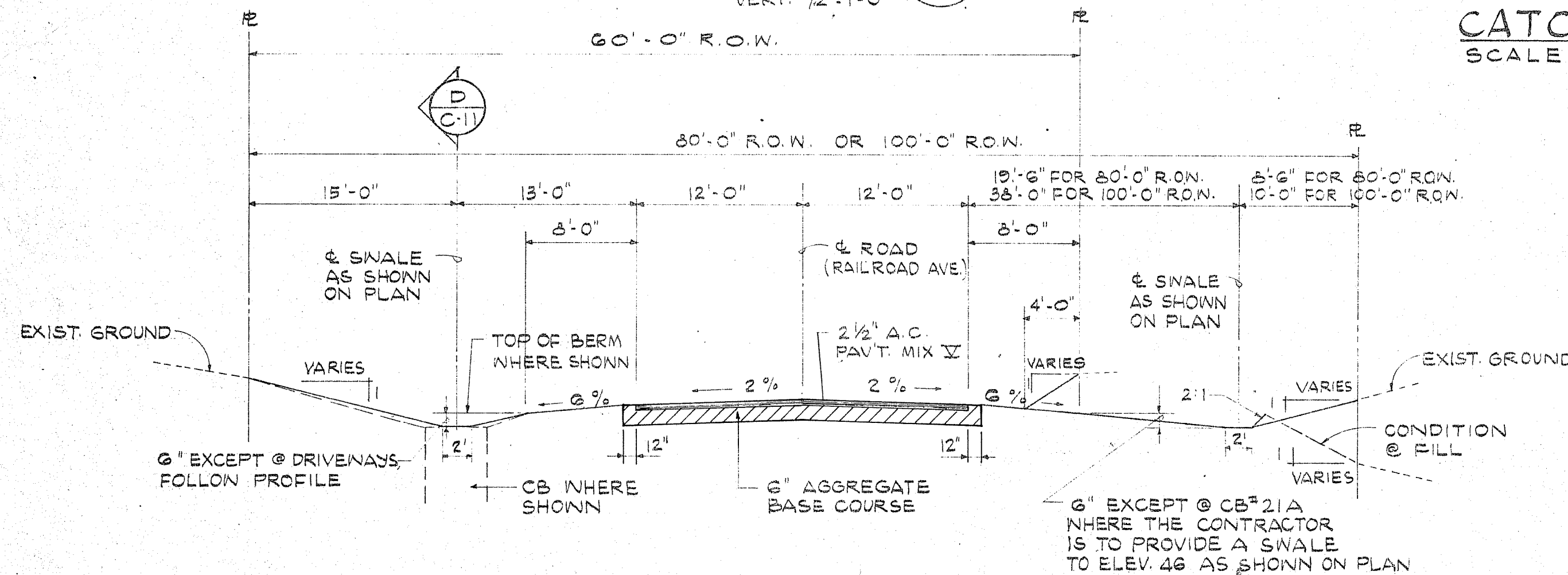
SHEET NO. 6



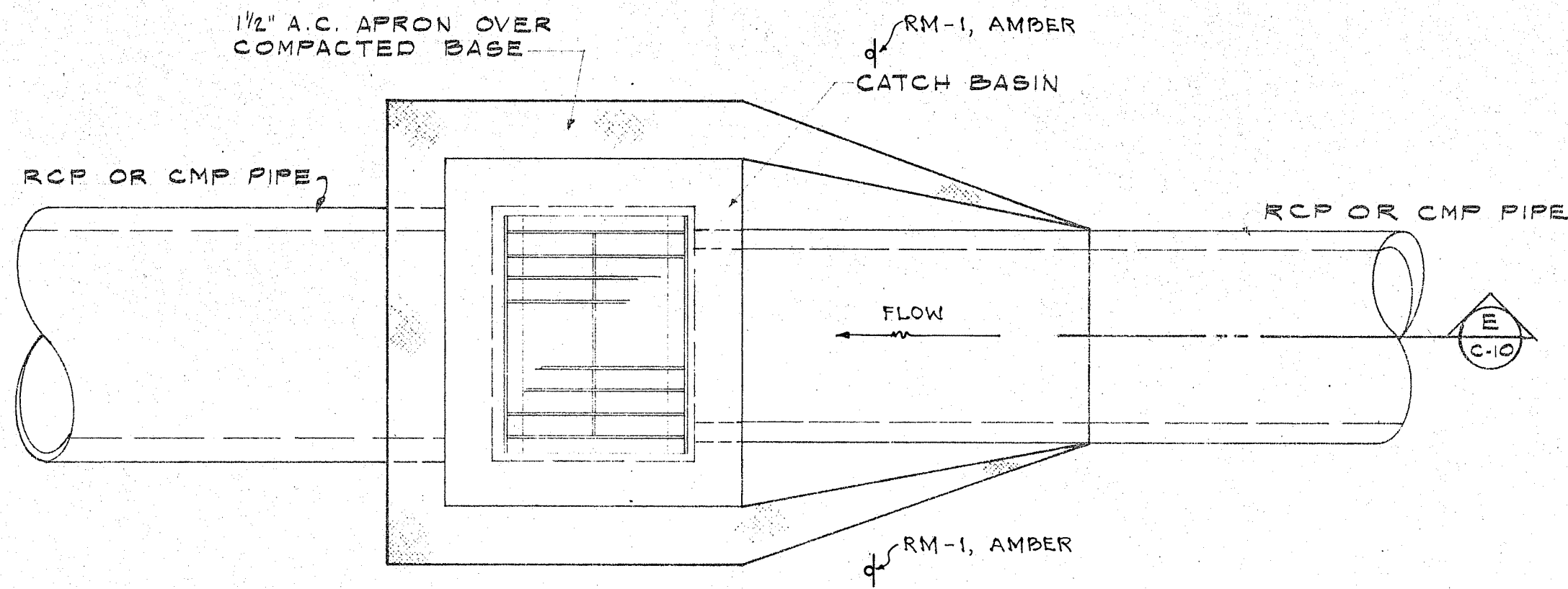
SECTION A
SCALE: HOR. 1/4" = 1'-0"
VERT. 1/2" = 1'-0"
C-10



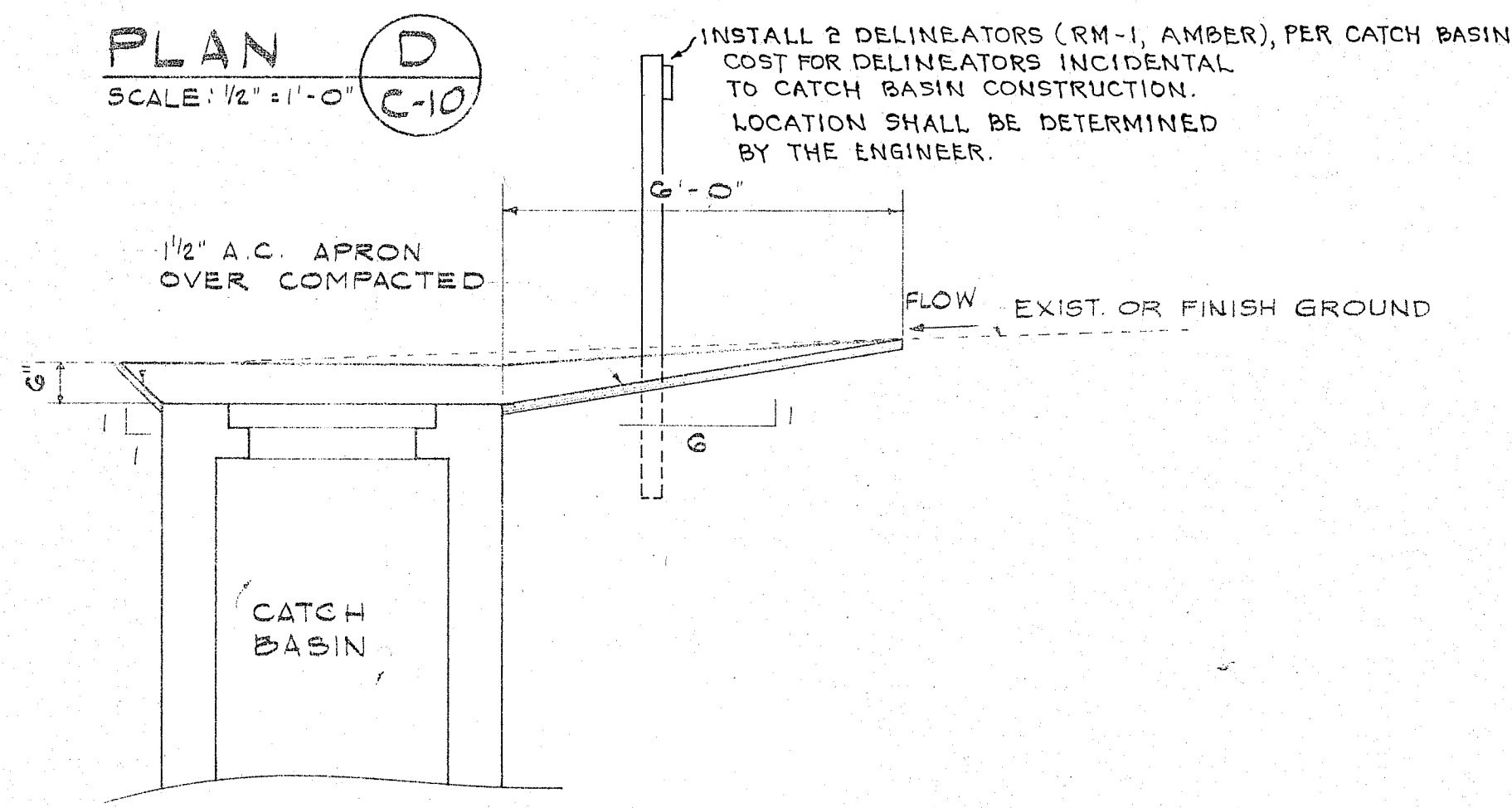
SECTION B
SCALE: HOR. 1/4" = 1'-0"
VERT. 1/2" = 1'-0"
C-10



SECTION C
SCALE: HOR. 1/8" = 1'-0"
VERT. 1/4" = 1'-0"
C-10



PLAN D
SCALE: 1/2" = 1'-0"
C-10



SECTION E
SCALE: 1/2" = 1'-0"
C-10

CATCH BASIN APRON TRANSITION
SCALE AS NOTED

RCP/CMP ALTERNATE TABLE

STR. TO STR.	R. C. P.			C. M. P.		
	SIZE	INV. IN	ELEV. OUT	SIZE	INV. IN	ELEV. OUT
DRAINLINE "A"						
CB# 7 TO DN	24"	34.50	34.30	30"	34.50	34.30
DN TO CB# 6	24"	34.20	33.55	30"	34.00	33.35
CB# 6 TO CB# 5	30"	33.05	32.50	36"	33.05	32.50
CB# 5 TO DW	30"	32.50	31.72	36"	32.50	31.72
DW TO CB# 4	30"	31.72	31.50	36"	31.72	31.50
CB# 4 TO CB# 3	30"	30.25	30.00	36"	30.00	29.75
CB# 3 TO CB# 2	36"	29.69	28.50	48"	29.00	28.71
CB# 2 TO CB# 1	42"	28.40	27.50	(NO ALTERNATE)		
CB# 1 TO EXIST. CB	36"	27.50	25.00	(NO ALTERNATE)		
DRAINLINE "B"						
CB# 24 TO CB# 23	24"	61.00	59.00	24"	61.00	59.00
CB# 23 TO CB# 22	24"	59.00	55.50	24"	59.00	55.50
CB# 22 TO CB# 21	24"	55.50	44.00	24"	55.50	44.00
CB# 21 TO CB# 20	30"	42.00	35.00	36"	42.00	35.00
CB# 20 TO CB# 19	36"	32.50	25.00	42"	34.50	33.00
CB# 19 TO CB# 18B	42"	32.50	31.08	48"	32.50	31.08
CB# 18B TO CB# 18	42"	31.08	31.50	48"	31.08	31.50
CB# 18 TO CB# 17	48"	31.00	29.50	54"	30.75	29.25
CB# 17 TO CB# 16B	54"	29.00	26.25	60"	28.75	24.00
CB# 16B TO SDMH# 2	54"	28.25	21.50	60"	28.00	21.25
SDMH# 2 TO SDMH# 1	66"	19.50	19.00	78"	19.00	18.50
SDMH# 1 TO EXIST. SDMH	66"	19.00	17.91	78"	18.50	17.41
DRAINLINE "B-1"						
CB# 11C TO CB# 11B	24"	31.50	28.50	24"	31.50	28.50
CB# 11B TO CB# 11A	24"	28.50	26.00	24"	28.50	26.00
CB# 11A TO EXIST. D.N.	30"	28.50	24.00	36"	25.25	23.75
EXIST. D.W. TO SDMH# 1	30"	22.00	21.50	36"	22.00	21.50
DRAINLINE "B-2"						
CB# 13A TO CB# 13	24"	31.00	29.00	24"	31.00	29.00
CB# 13 TO SDMH# 2	24"	29.00	24.00	24"	29.00	24.00
DRAINLINE "C"						
CB# 35 TO CB# 34	18"	50.50	49.50	18"	50.50	49.50
CB# 34 TO CB# 33	24"	49.50	46.50	24"	49.50	46.50
CB# 33 TO SDMH# 5	30"	45.00	44.50	36"	45.00	44.50
SDMH# 5 TO SDMH# 4	30"	44.50	43.50	36"	44.50	43.50
SDMH# 4 TO CB# 32	36"	43.00	34.00	36"	43.00	34.00
CB# 32 TO CB# 31	36"	34.00	33.00	42"	33.00	32.80
CB# 31 TO CB# 30	36"	29.00	28.50	42"	29.25	28.75
CB# 30 TO CB# 29	42"	28.50	28.00	48"	28.75	27.75
CB# 29 TO CB# 28	42"	28.00	27.64	54"	27.75	27.39
CB# 28 TO SDMH# 3	42"	27.64	27.50	54"	27.39	27.25
CB# 28A TO SDMH# 3	24"	29.50	29.00	24"	29.50	29.00
SDMH# 3 TO EXIST. 48" CMP STUB	(NO ALTERNATE)			48"	27.25	24.55

REVISION	DATE	BRIEF	MADE BY	APPROVED

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ENGINEERS AND ARCHITECTS
P.O. BOX 3530
HONOLULU, HAWAII 96811

DEPT. OF PUBLIC WORKS COUNTY OF HAWAII
BUREAU OF PLANS AND SURVEYS

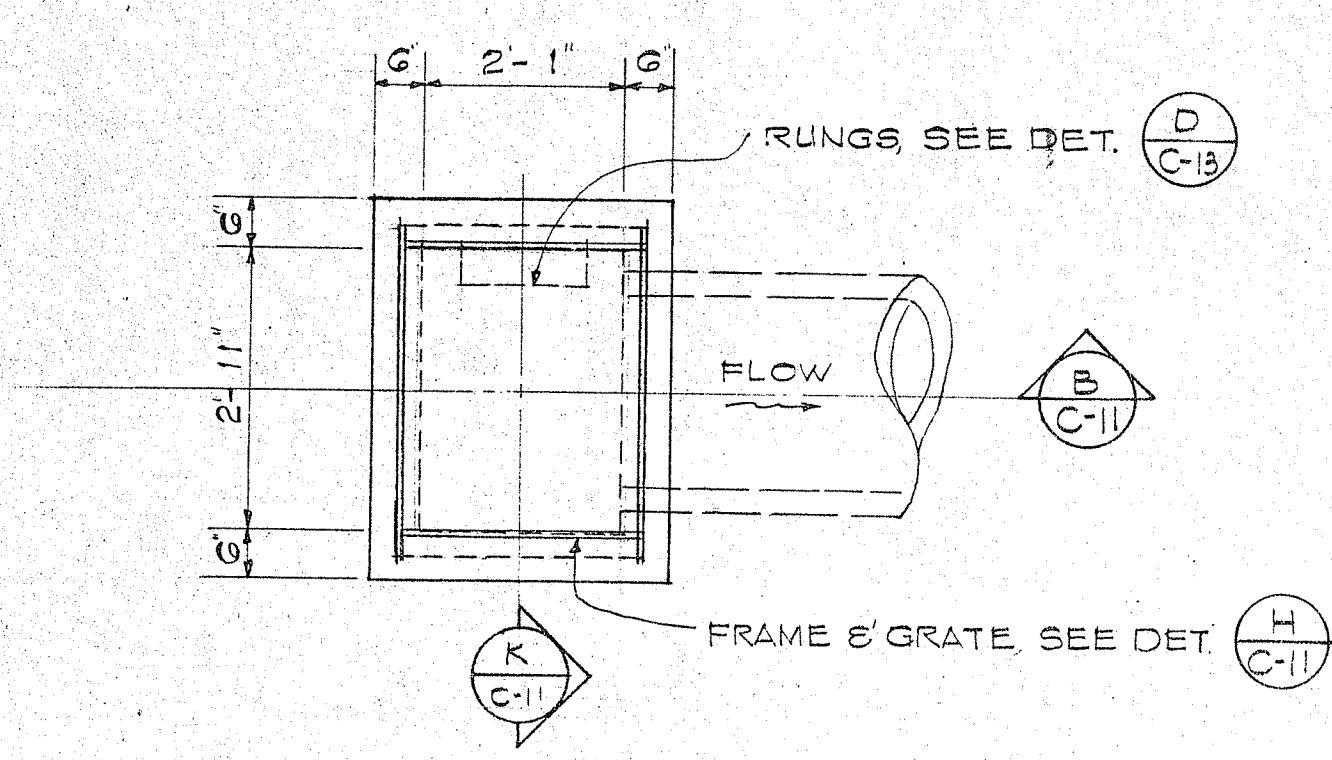
HILO STORM DRAINAGE SYSTEM,
ALONG KAWILI STREET

SECTIONS 8
RCP/CMP ALTERNATE TABLE

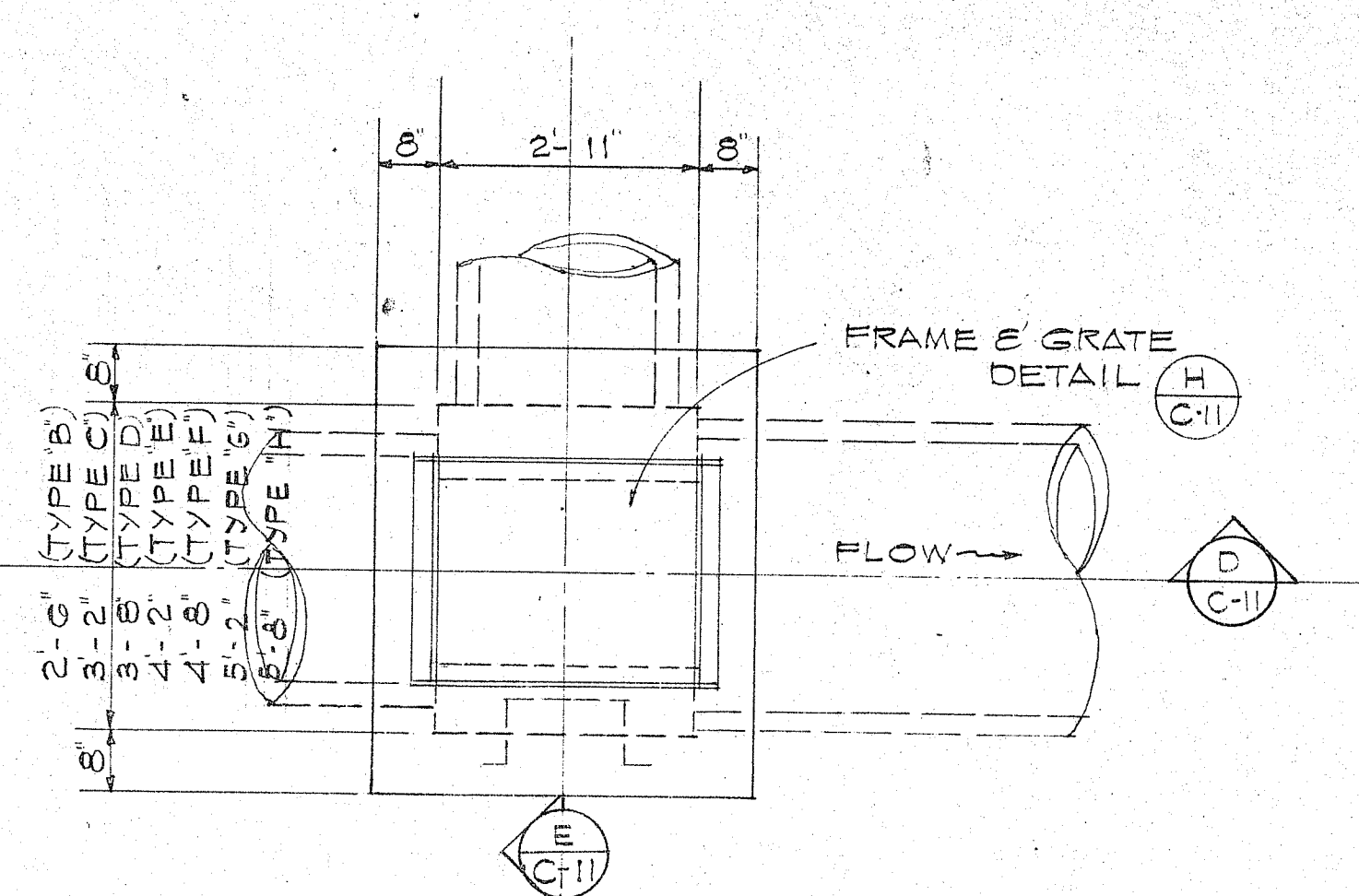
APPROVED BY: _____
DESIGNED BY: HH
DRAWN BY: RQ
CHECKED BY: _____
SURVEYED BY: _____

DATE 3/3/77
DATE 2-2-77

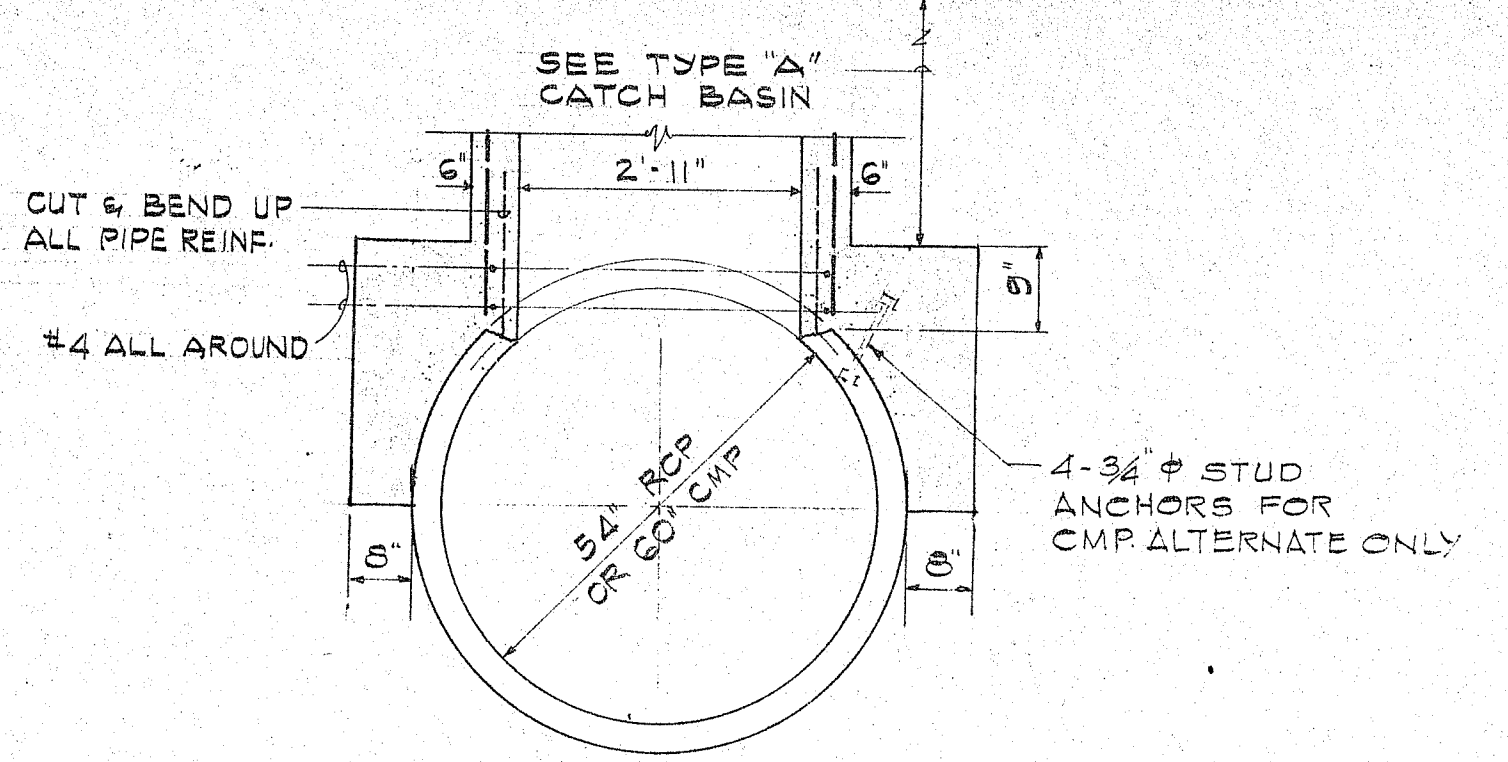
SHEET NO. C-10
OF 6 SHEETS



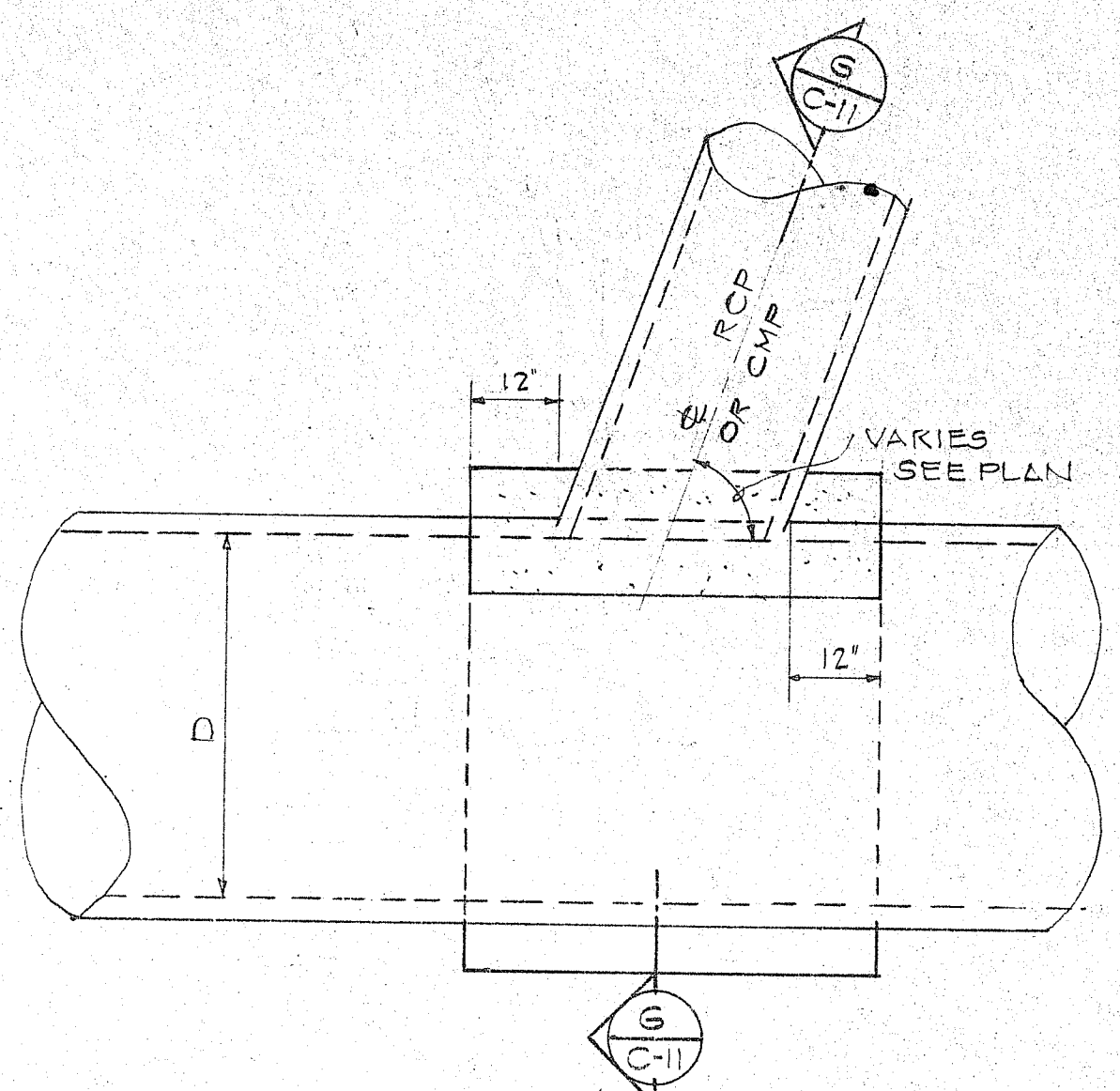
PLAN (A/C-11) TYPE 'A' CATCHBASIN
SCALE: 1/2" = 1'-0"



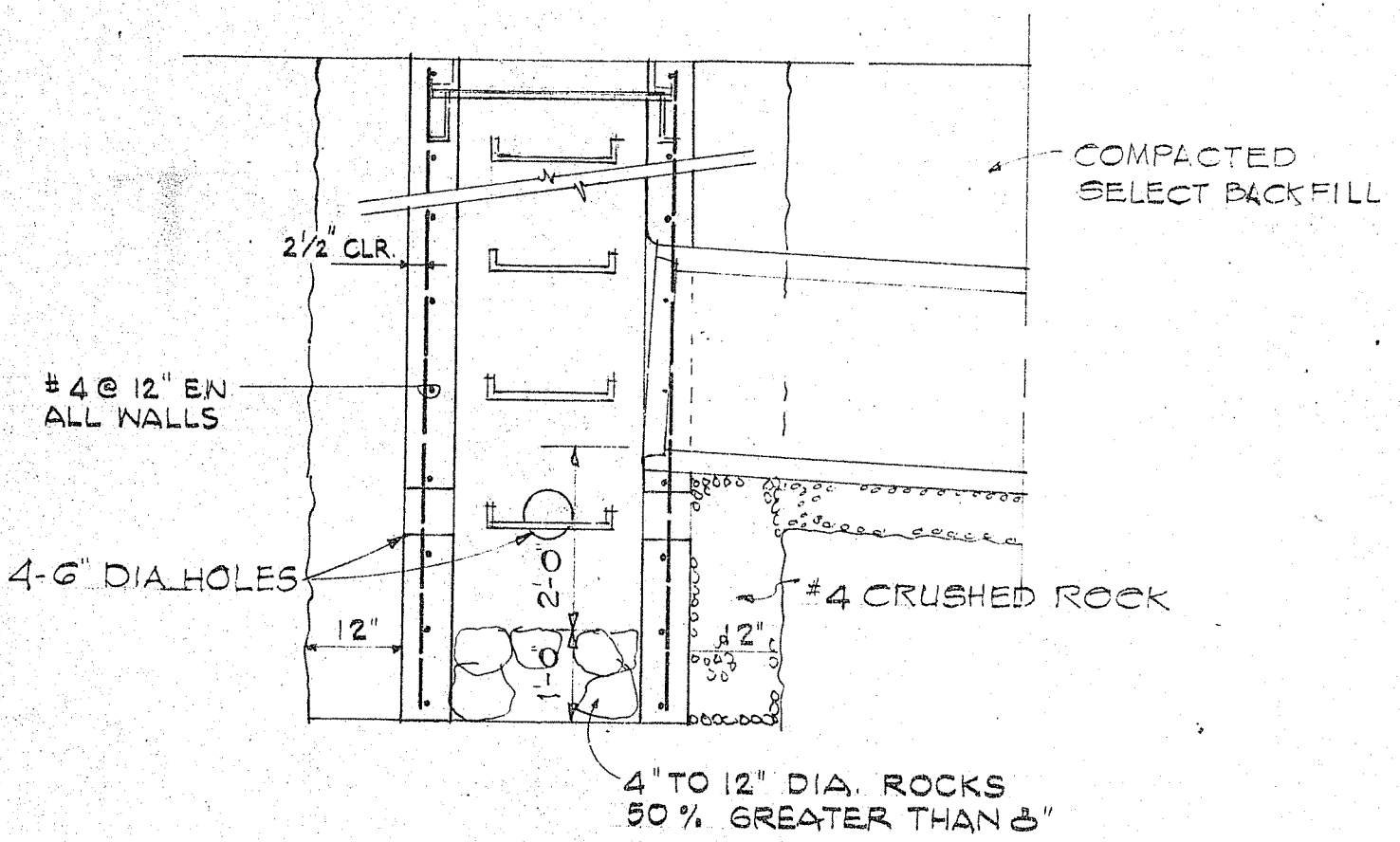
PLAN (C/C-11) TYPE B, C, D, E, F, G & H
SCALE: 1/2" = 1'-0"



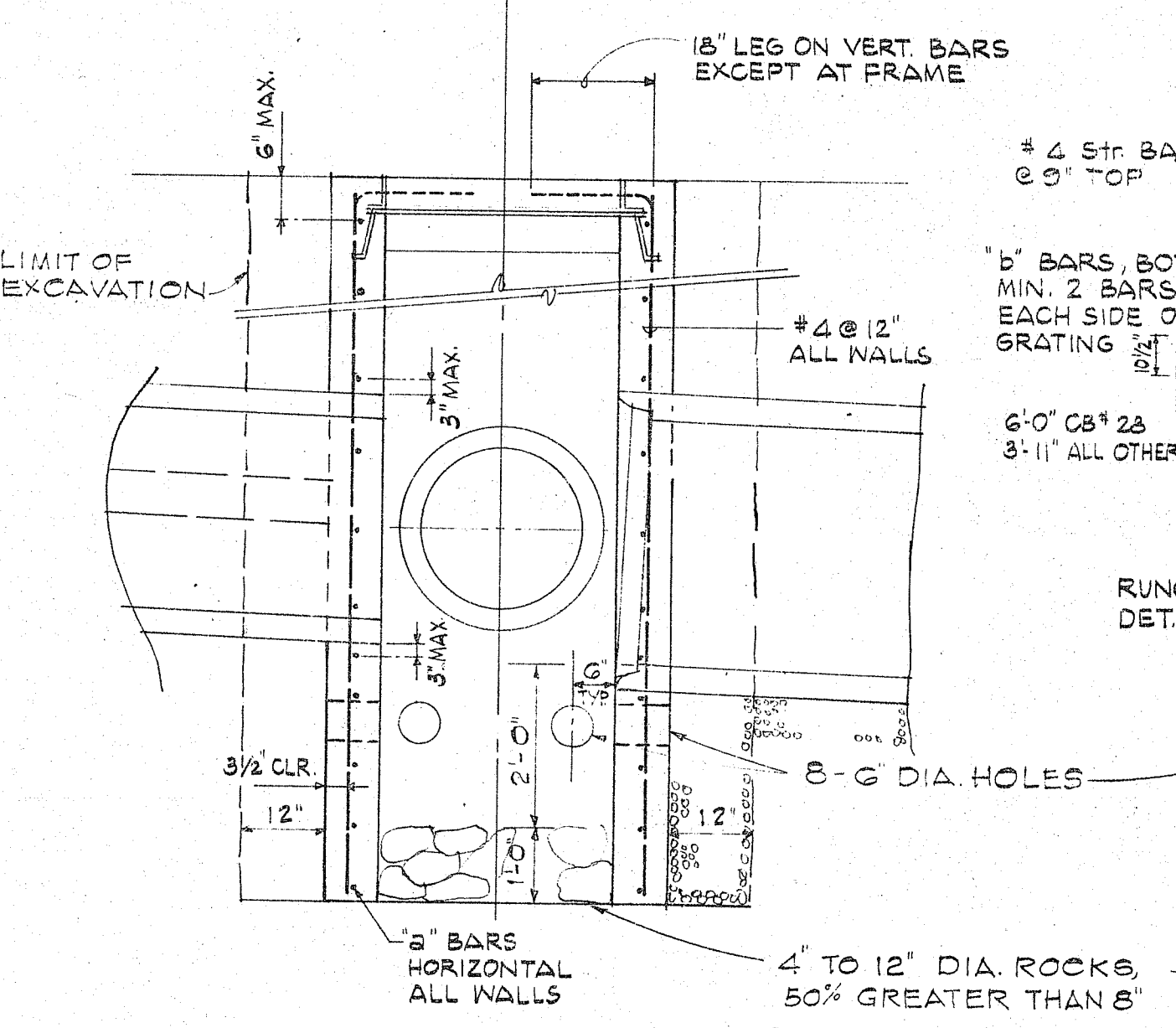
CB # 1GB TYPE 'A-1'
SECTION (K/C-11)
SCALE: 1/2" = 1'-0"



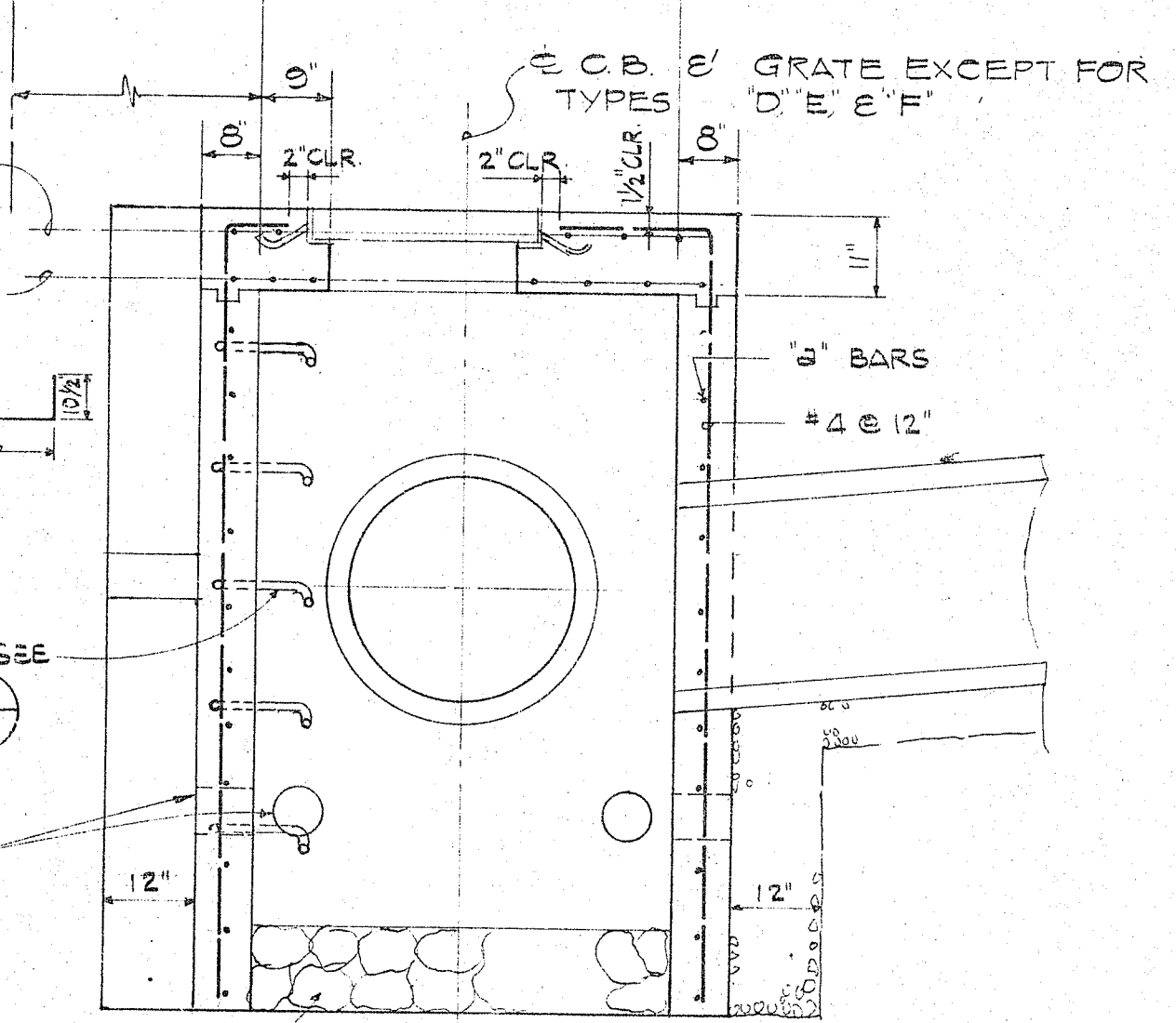
DETAIL (F/C-11) JUNCTION STRUCTURE
SCALE: 1/2" = 1'-0"



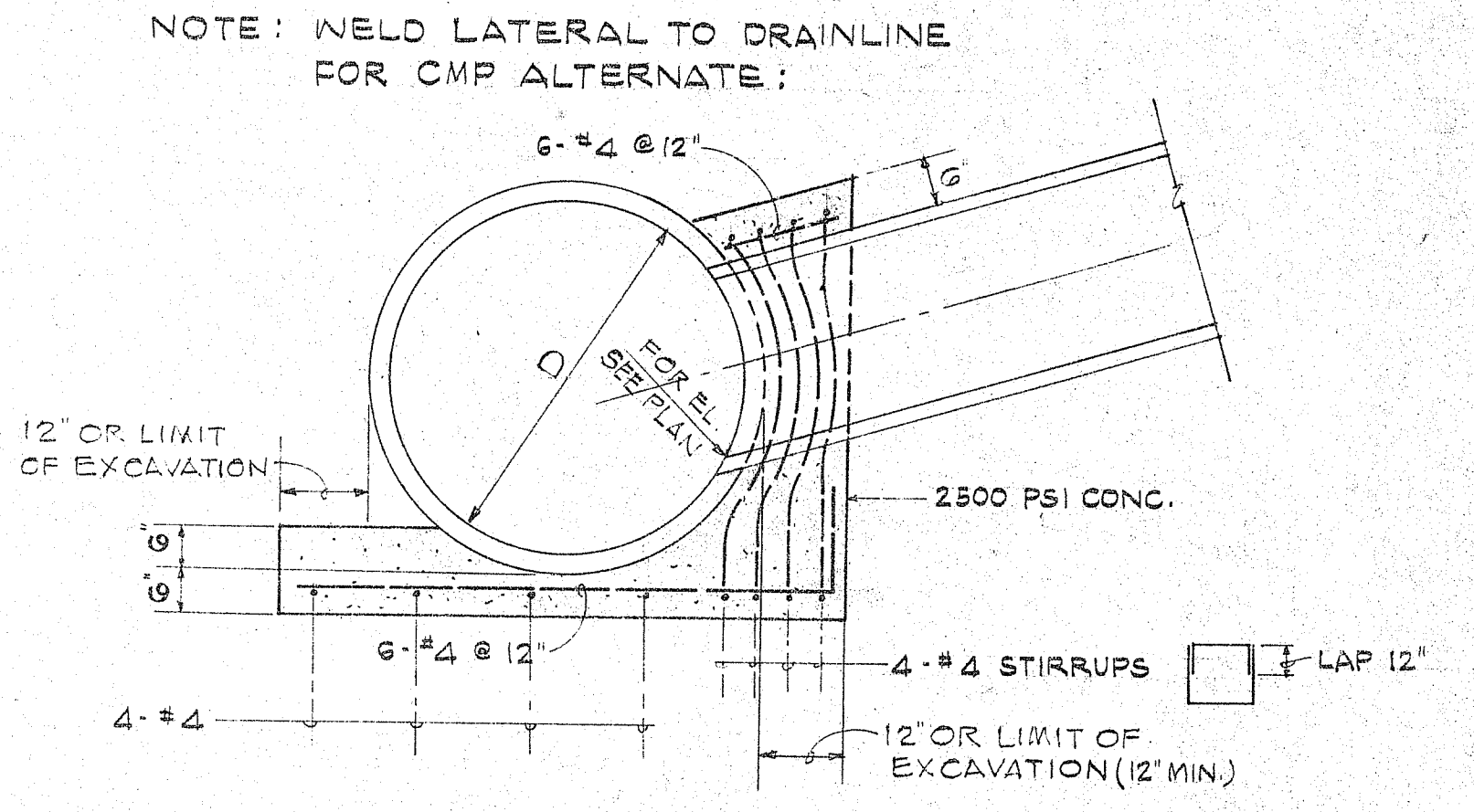
SECTION (B/C-11)
SCALE: 1/2" = 1'-0"



SECTION (D/C-11)
SCALE: 1/2" = 1'-0"

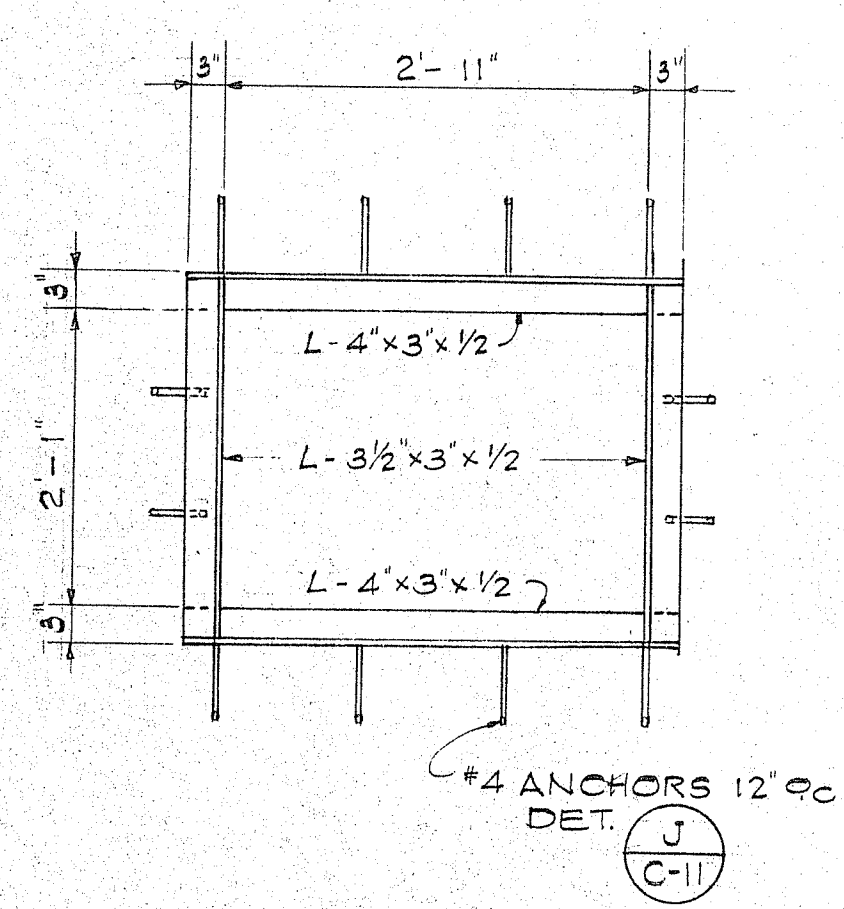


SECTION (E/C-11)
SCALE: 1/2" = 1'-0"

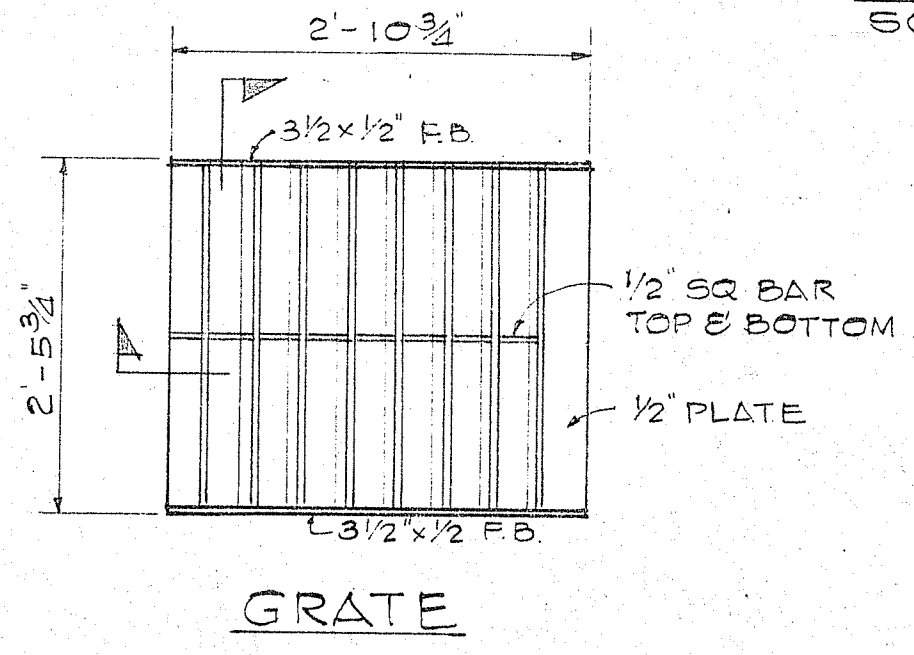


SECTION (G/C-11)
SCALE: 1/2" = 1'-0"

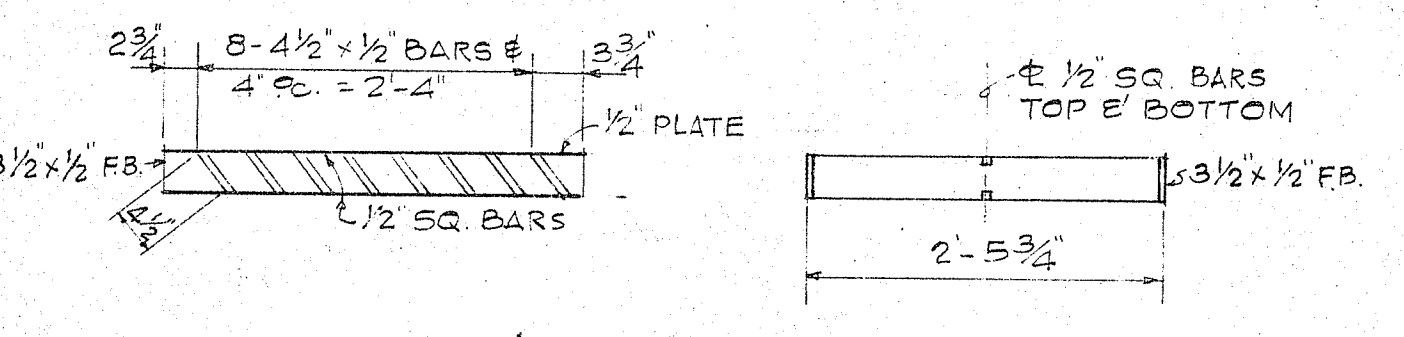
NOTE: HOT-DIP GALVANIZE FRAME AND GRATES AFTER FABRICATION.



TYPE 'Z' STEEL FRAME & GRATE DETAIL (H/C-11)
SCALE: 3/4" = 1'-0"



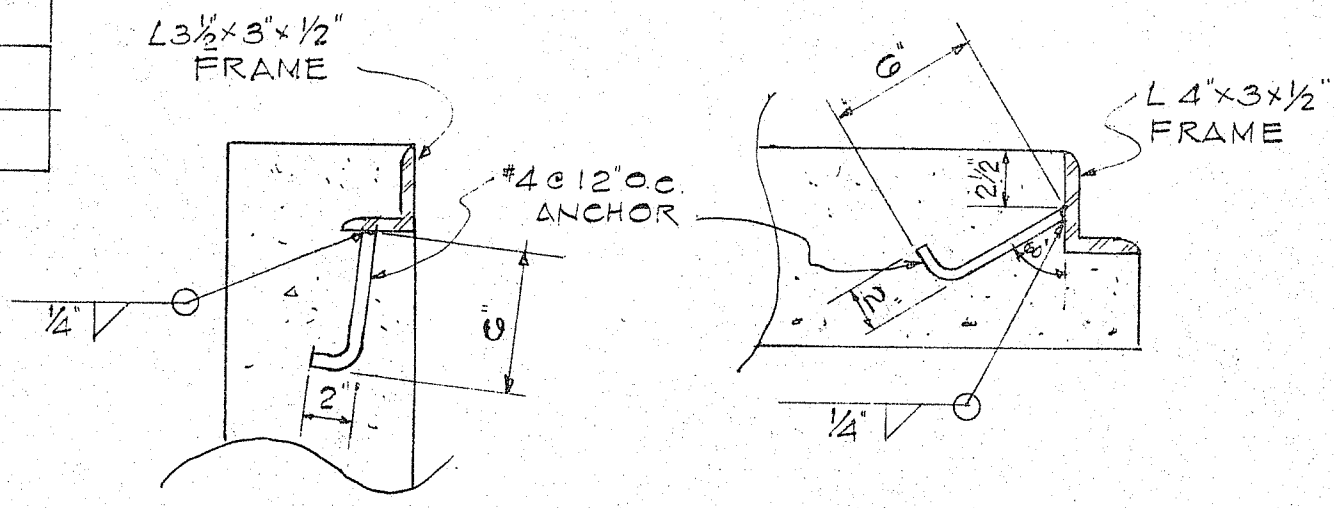
GRATE



SECTION

SECTION

CB TYPE	"a" BARS	"b" BARS
B, C, D & E	#4 @ 12"	#6 @ 8"
F & G	#5 @ 12"	#6 @ 8"
H	#5 @ 9"	#6 @ 8"



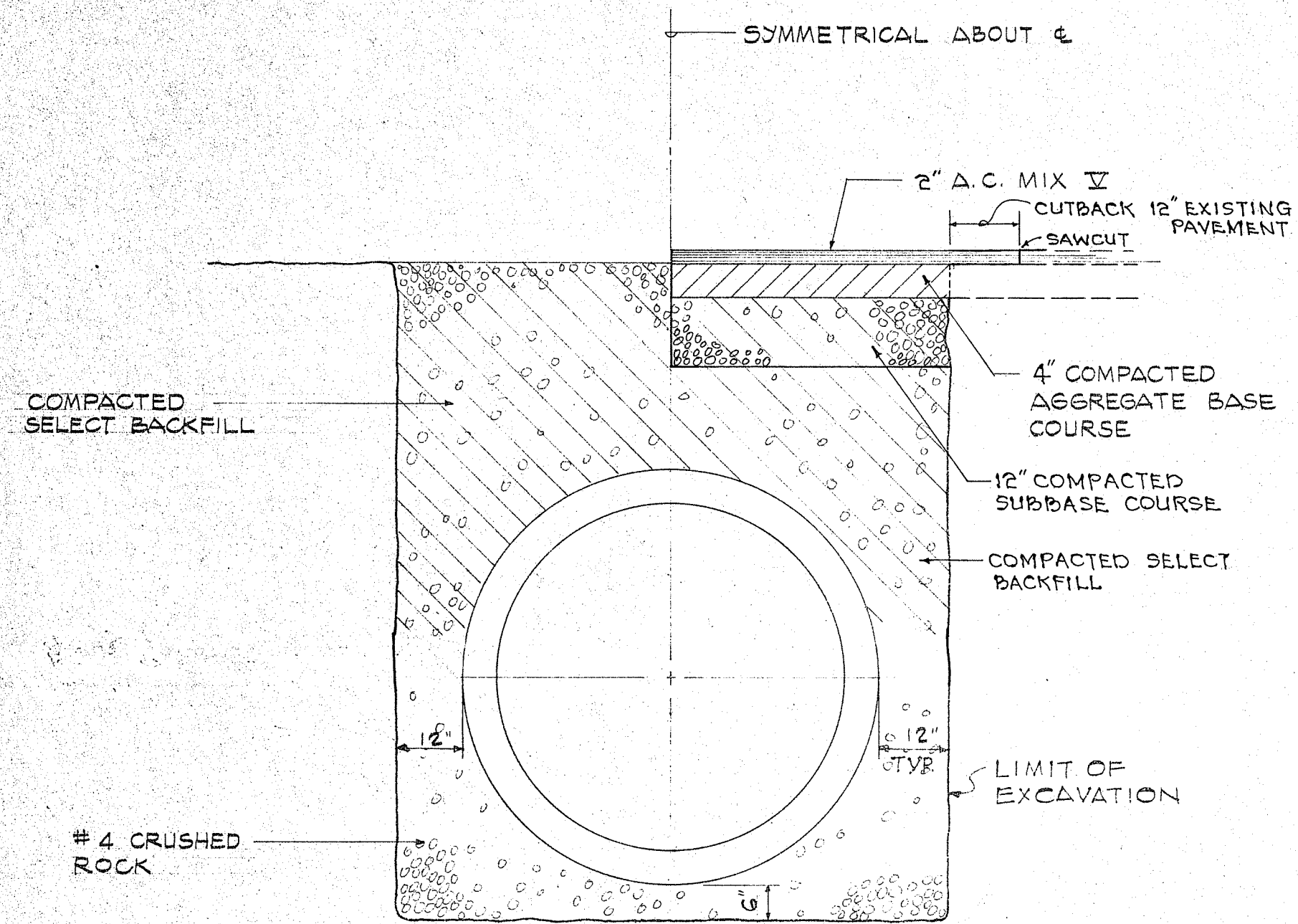
ANCHOR DETAIL (J/C-11)
SCALE: 1/2" = 1'-0"

REVISION	DATE	BRIEF	MADE BY	APPROVED
WILSON, OKAMOTO & ASSOCIATES ENGINEERS AND ARCHITECTS P.O. BOX 3530 HONOLULU, HAWAII 96811 PHONE 531-5261				
DEPT. OF PUBLIC WORKS COUNTY OF HAWAII BUREAU OF PLANS AND SURVEYS				

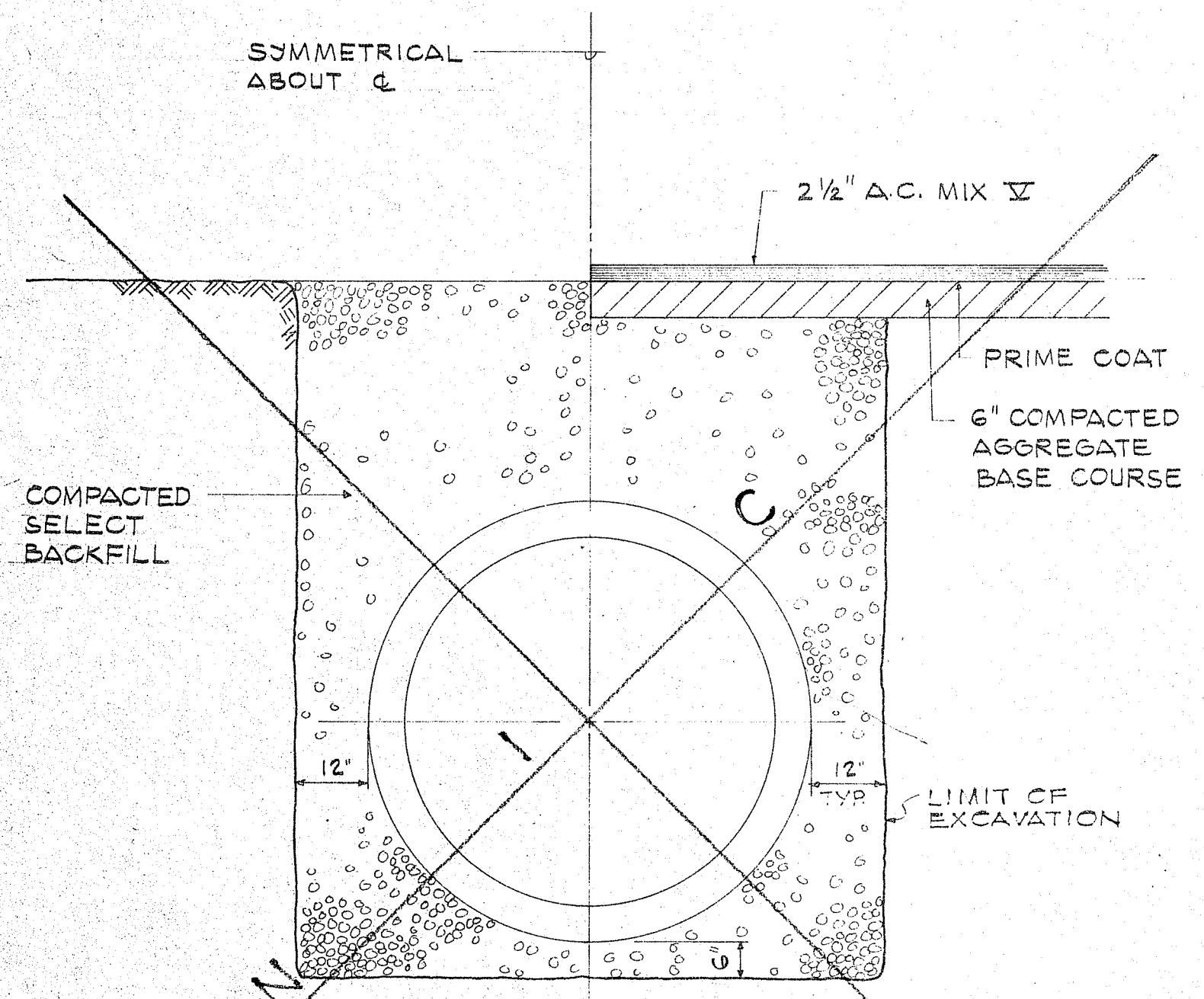
HILO STORM DRAINAGE SYSTEM,
ALONG KAWILI STREET

CATCH BASINS, JUNCTION STRUCTURE,
FRAME & GRATE, & ANCHOR DETAILS

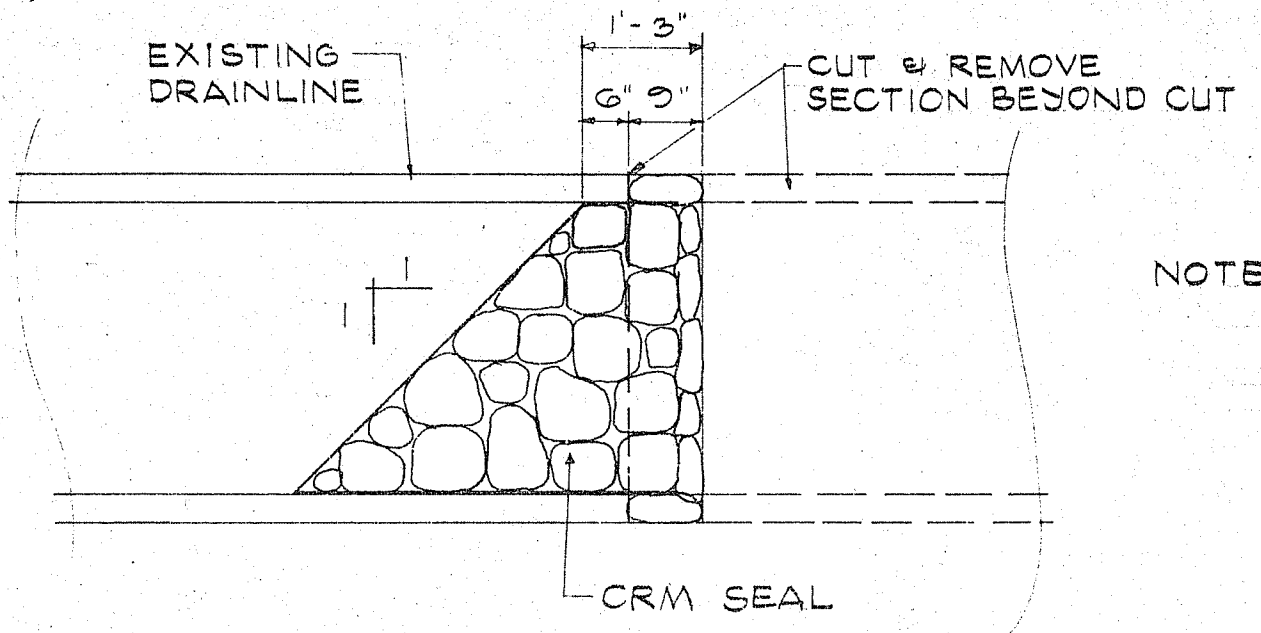
APPROVED BY:	DESIGNED BY: HH
<i>Shobur T. Tamara</i> DATE 3/3/77	DRAWN BY: RY
BUREAU HEAD	CHECKED BY:
<i>Paul Okamoto</i> DATE 2-77	SURVEYED BY:
CONSULTANT	SHEET NO. 6 OF 6



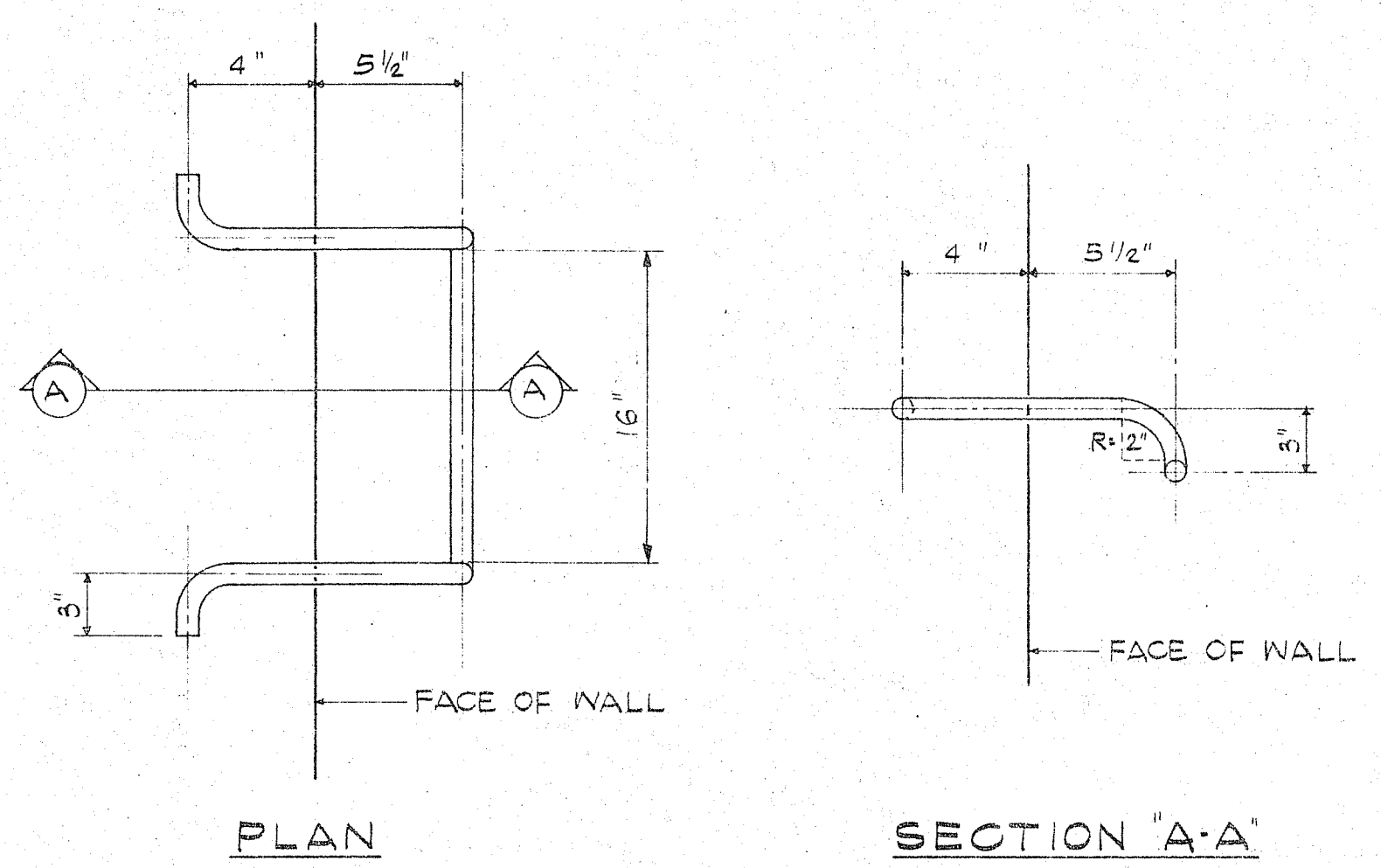
DETAIL A CLASS "A" TRENCH
C-13 NOT TO SCALE



DETAIL B CLASS "B" TRENCH
C-13 NOT TO SCALE



DETAIL C SEAL END
C-13 NOT TO SCALE

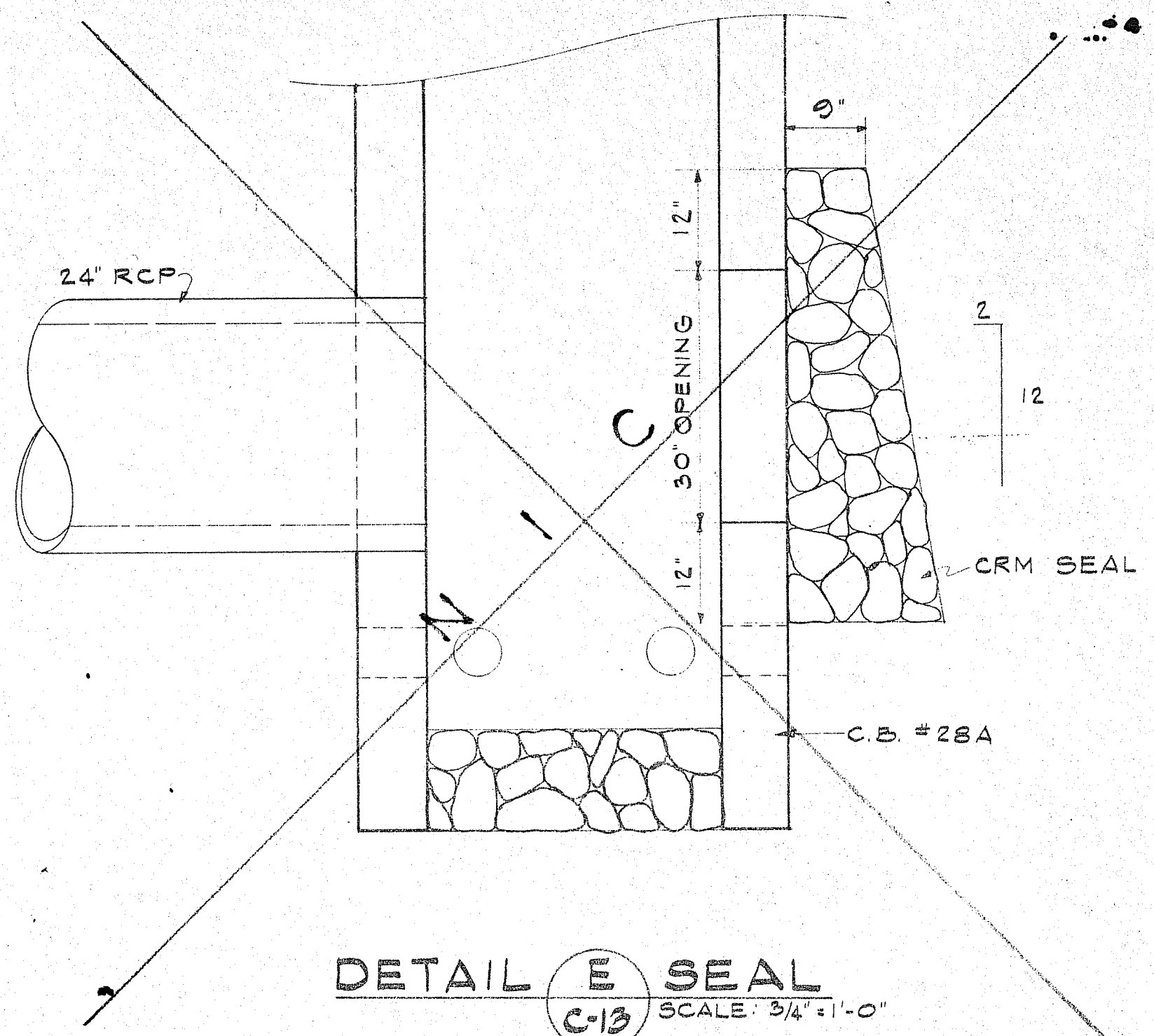


DETAIL D CB & M.H. RUNG
C-13 NOT TO SCALE

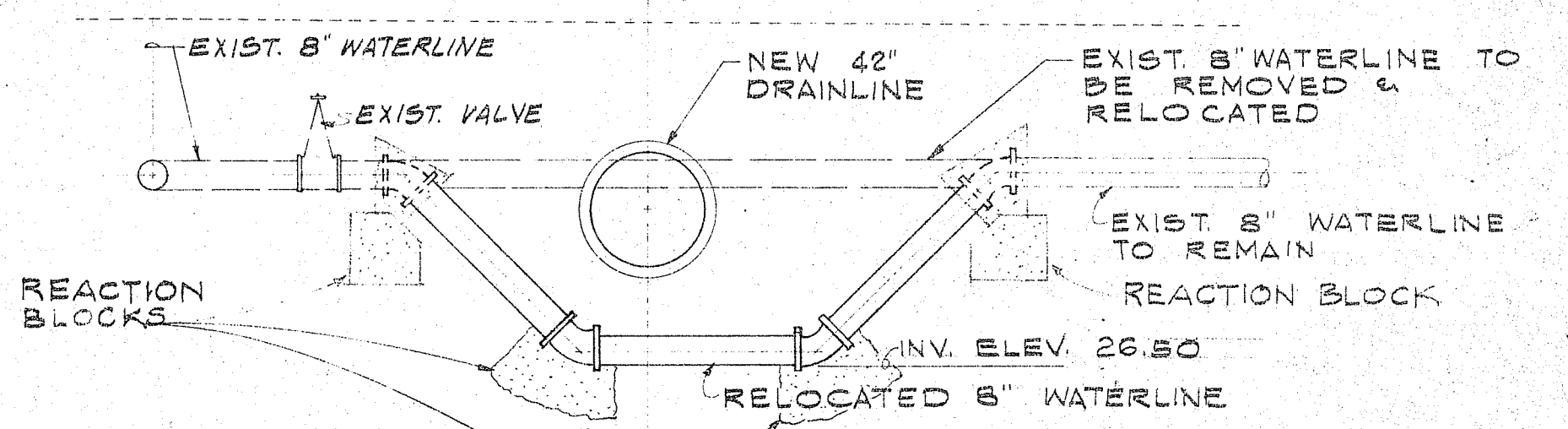
NOTE: FOR CRM PLUG WITHIN EXISTING CATCH BASIN, MAKE CRM FLUSH WITH INSIDE OF CATCH BASIN.

NOTE: RUNGS SHALL BE 1\"/>

NOTE: TYPICAL DETAIL OF REACTION BLOCK WITH STRAPS. DETAIL OF ACTUAL BLOCK TO BE USED SHALL BE FURNISHED DURING CONSTRUCTION BY THE ENGINEER.

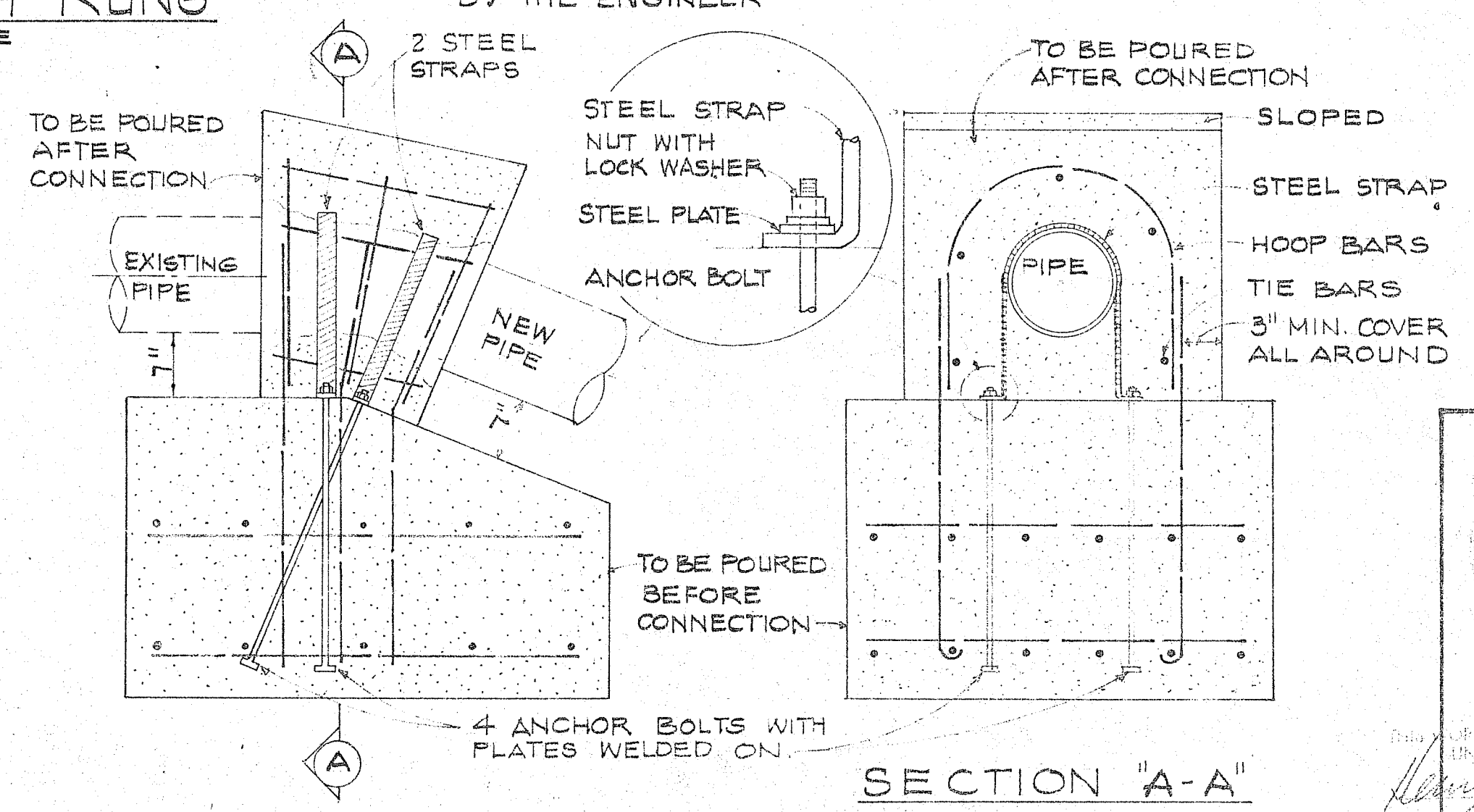


DETAIL E SEAL
C-13 SCALE: 3/4\"/>



SECTION F
NOT TO SCALE C-13

- 4 - 8" 1/8 BENDS
- 1 - 8" SLEEVE
- 4 - CONC. BLKS.



REACTION BLOCK WITH STRAPS
NO SCALE G C-13

REVISION	DATE	BRIEF	MADE BY	APPROVED
WILSON, OKAMOTO & ASSOCIATES ENGINEERS AND ARCHITECTS P.O. BOX 3530 HONOLULU, HAWAII 96811 PHONE 531-5261				
DEPT. OF PUBLIC WORKS, COUNTY OF HAWAII BUREAU OF PLANS AND SURVEYS				

HILO STORM DRAINAGE SYSTEM,
ALONG KAWILI STREET

MISCELLANEOUS DETAILS

APPROVED BY:	DESIGNED BY: HH
BUREAU HEAD	DRAWN BY: RQ
CONSULTANT	CHECKED BY:
	SURVEYED BY:
	SHEET NO. 6
	OF 6 SHEETS