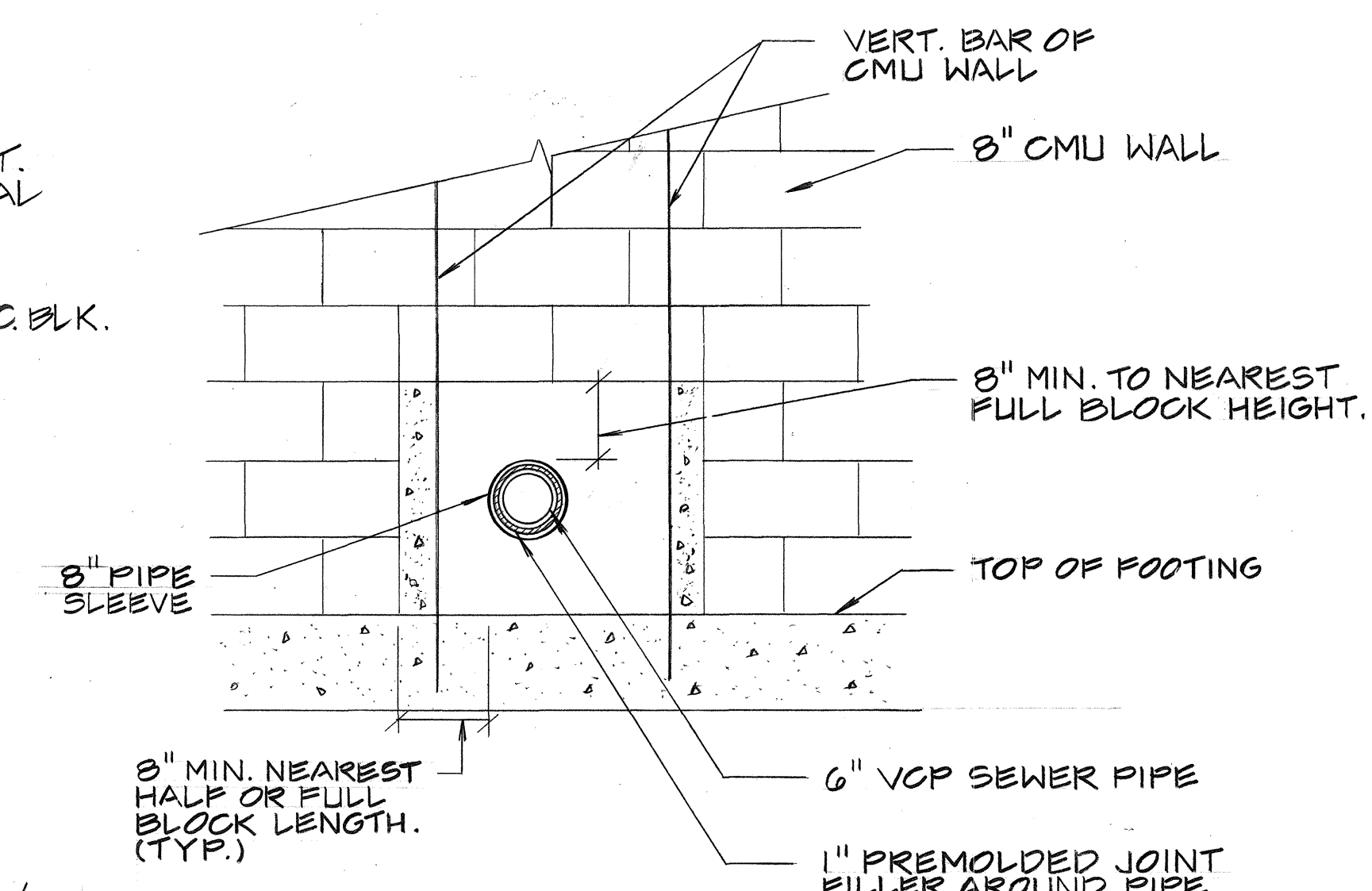


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-072-1(35)	1993	163	340

NH

NOTE: USE COUNTERSUNK FLUG IN PAVEMENT AREAS

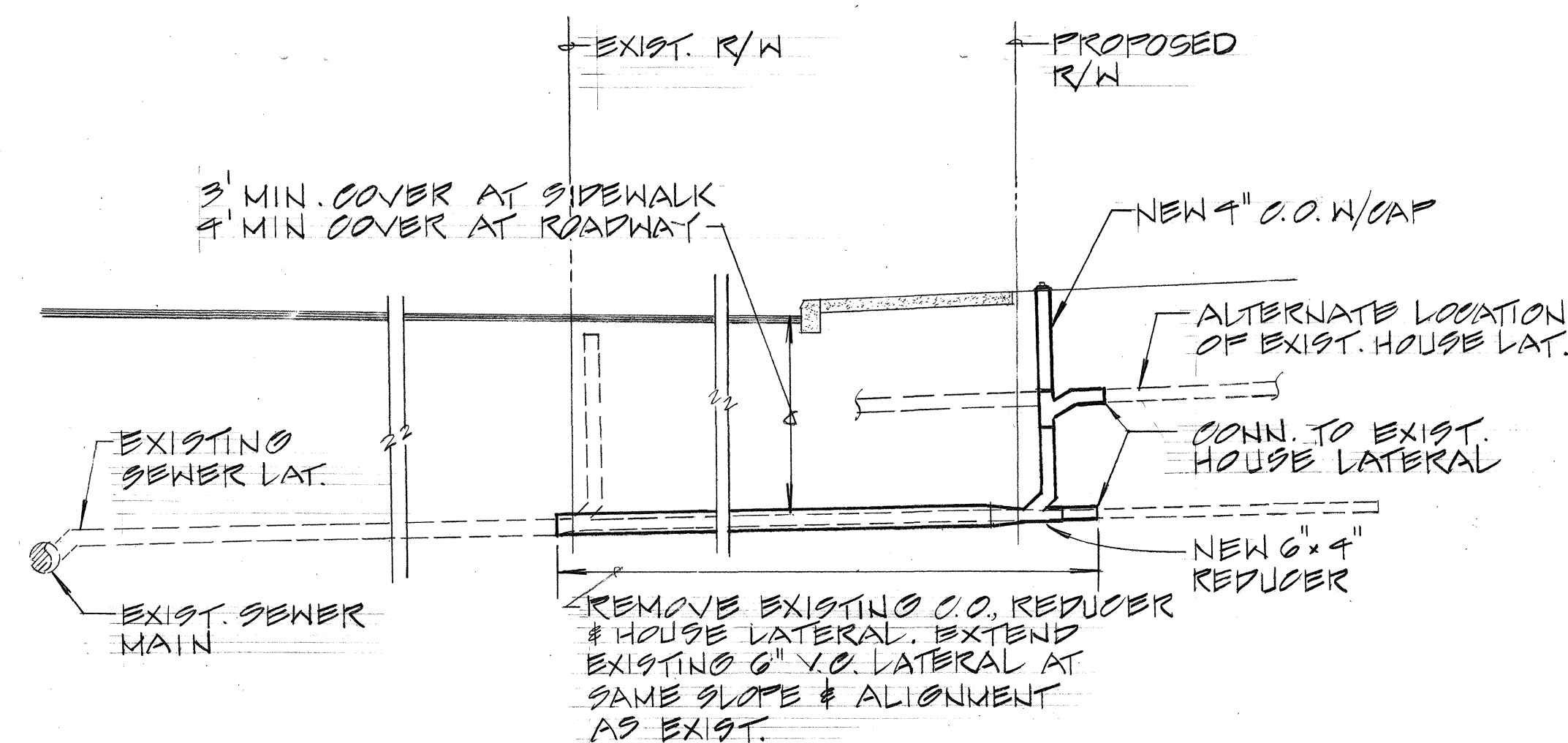


PIPE SLEEVE THROUGH CMU WALL
NO SCALE

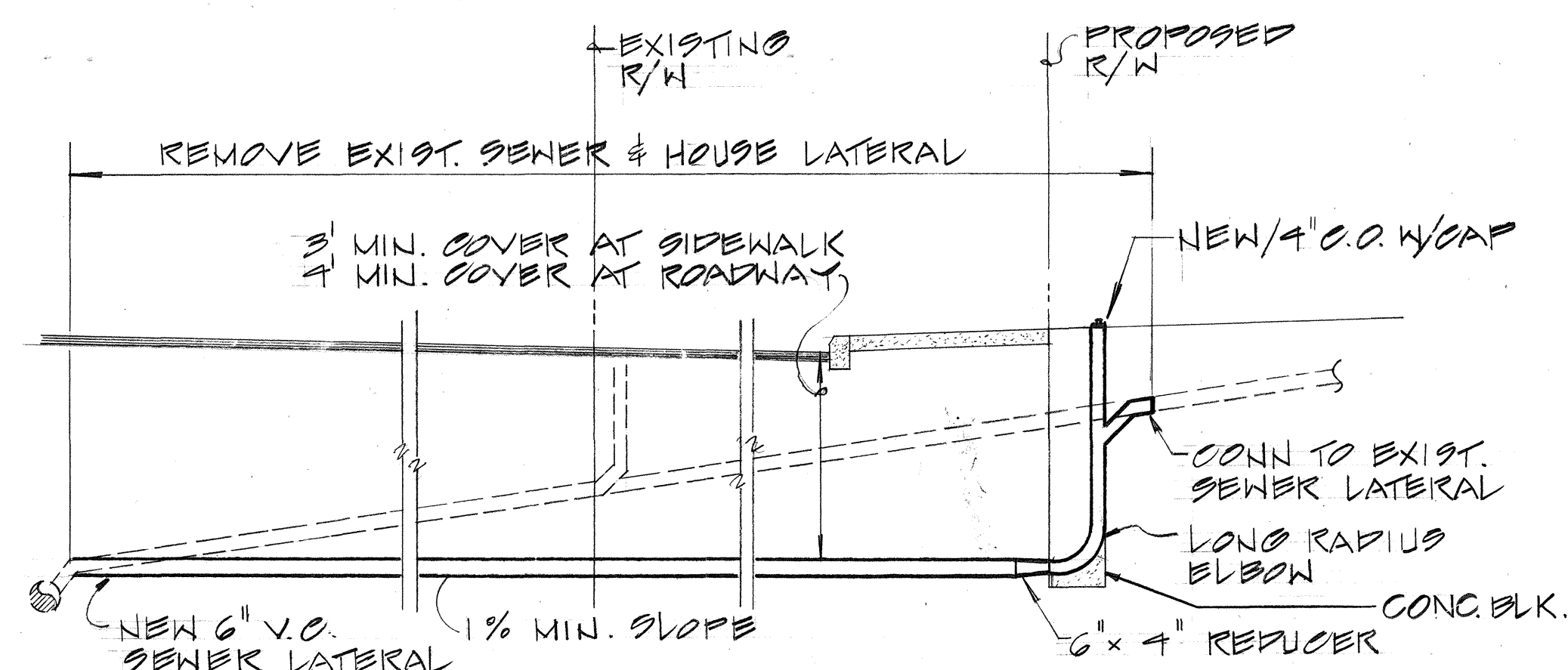


6/30/93	C.O. #1
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
SEWER DETAILS	
KALANIANA'OLE HIGHWAY E. HALEMAUMAU ST. TO KEAHOE ST. F.A. PROJECT NO. STP-072-1(35)	
Scale:	NH Date: 10/1/92
SHEET NO. 119 OF 20 SHEETS	

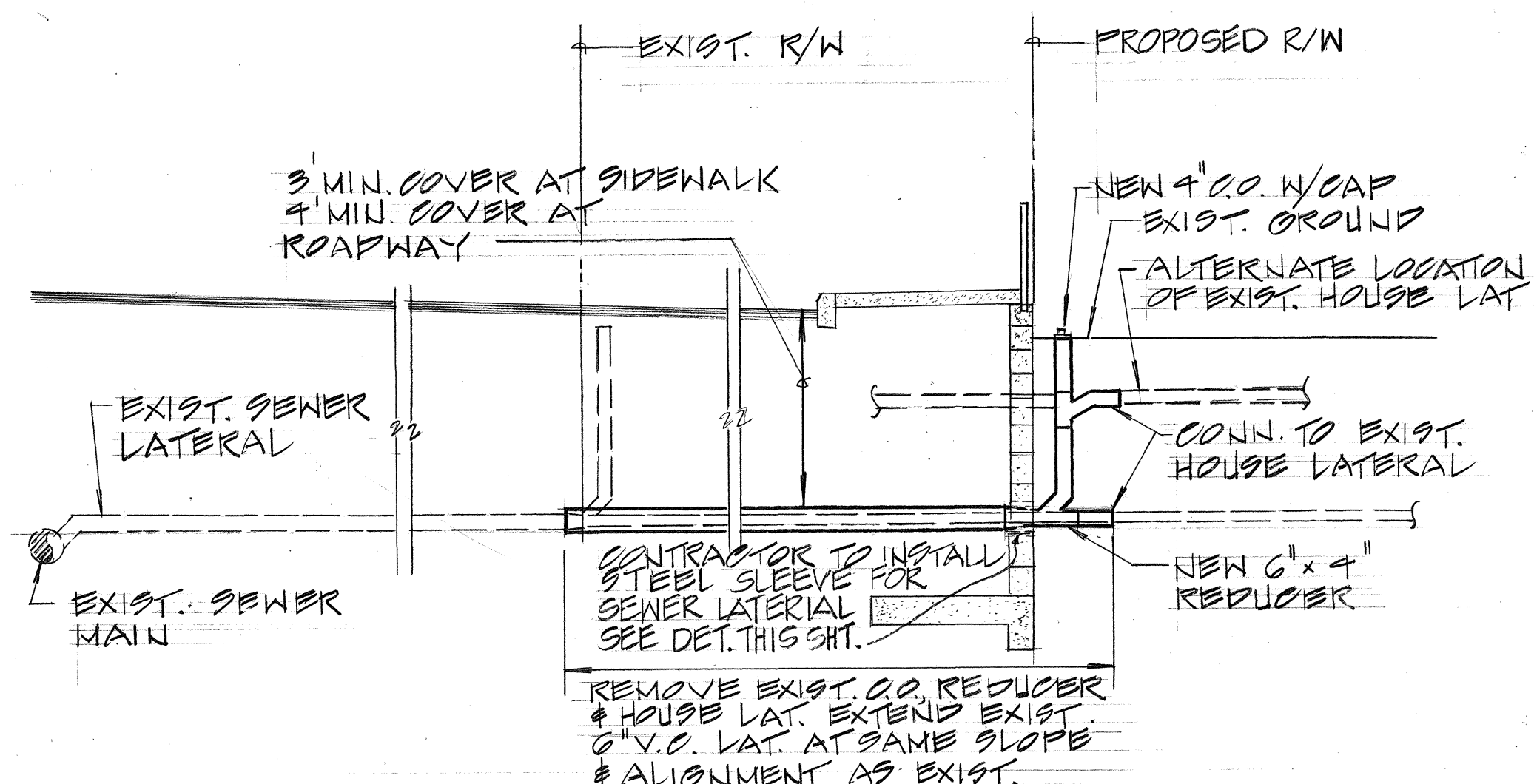
C.O. 163



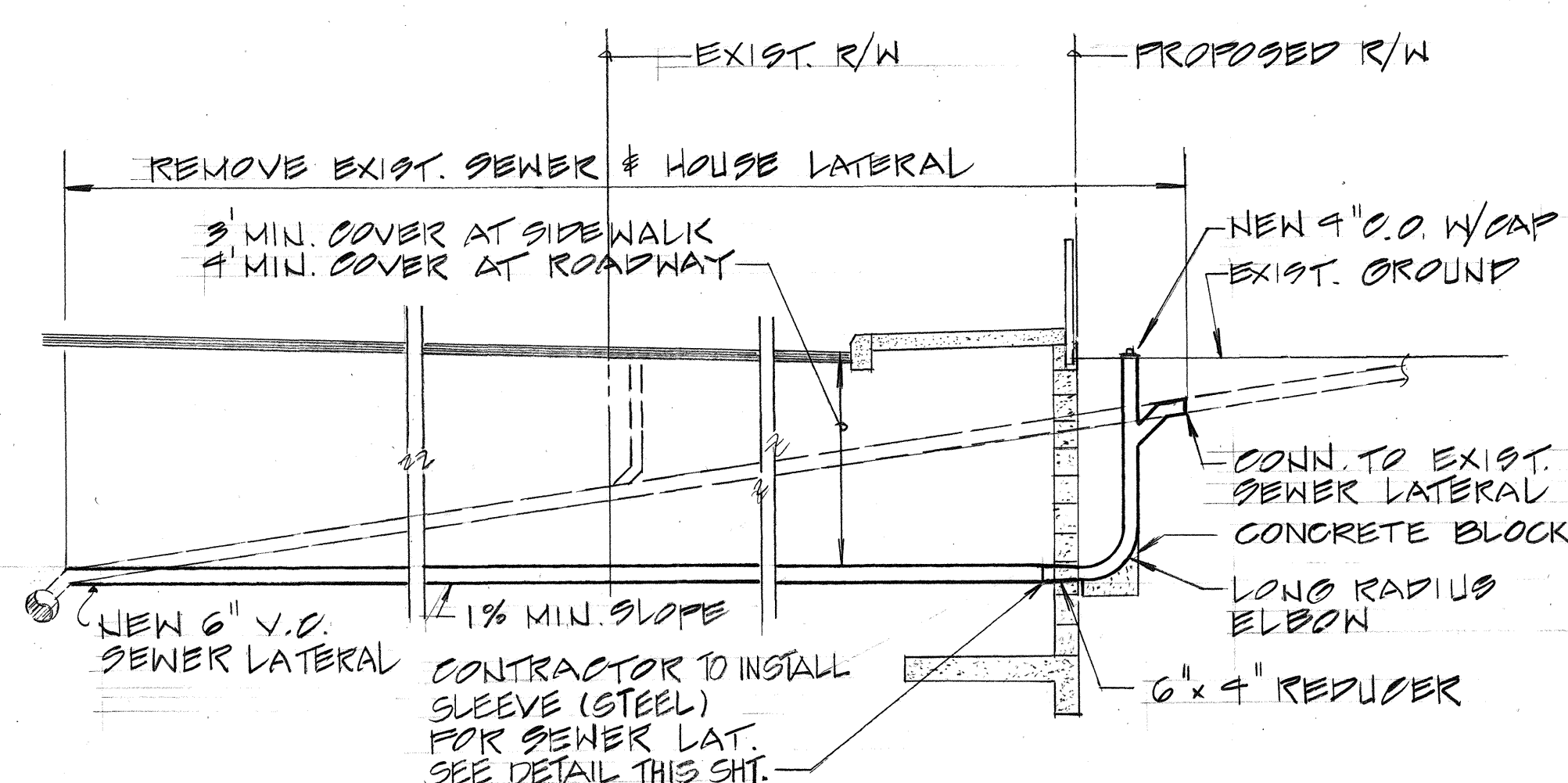
SEWER LATERAL EXTENSION TYPE "A"
N.T.S.



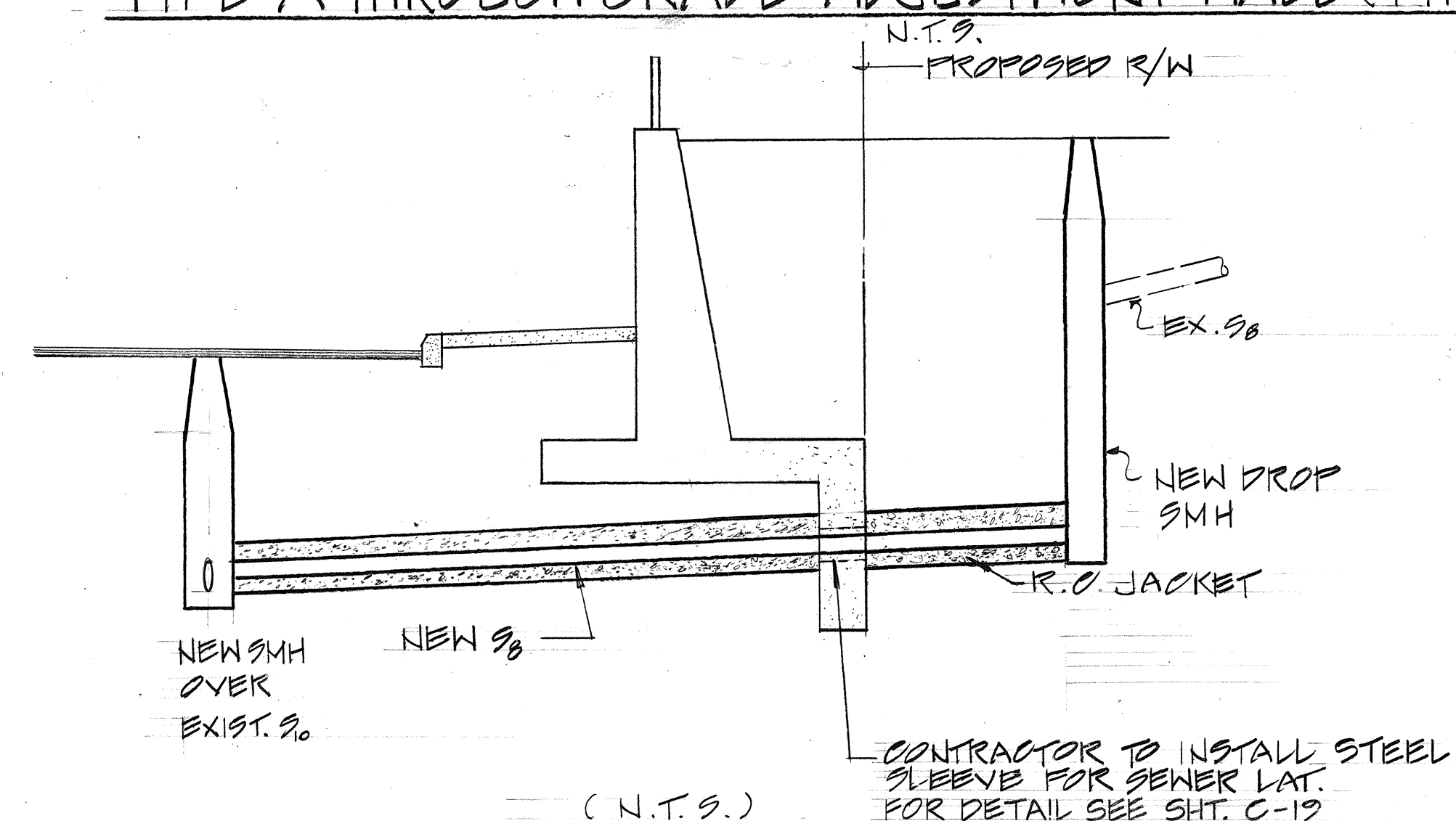
SEWER LATERAL EXTENSION TYPE "B"
N.T.S.



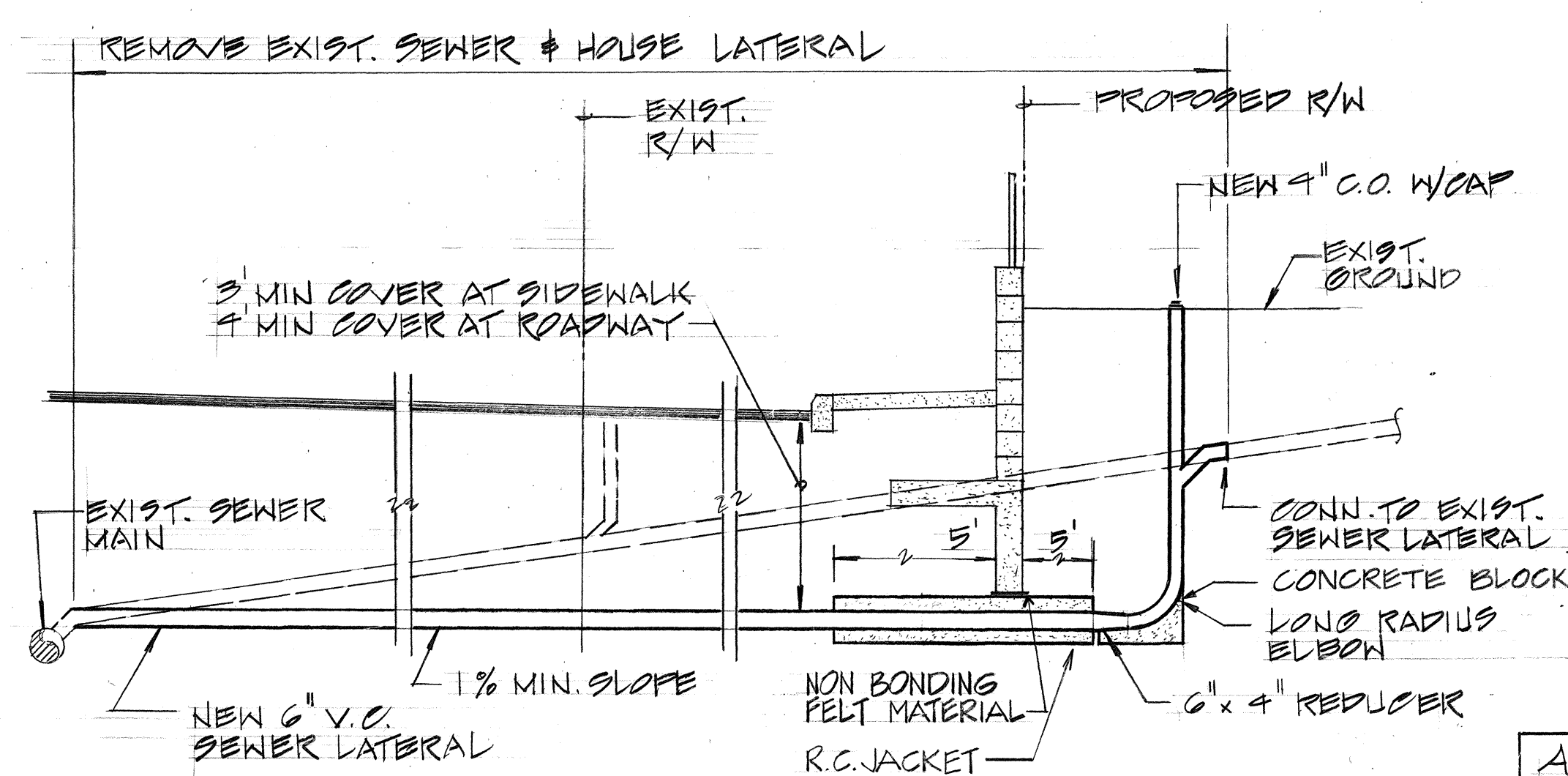
SEWER LATERAL EXTENSION
TYPE "A" THROUGH GRADE ADJUSTMENT WALL (TYPE "B")
N.T.S.



SEWER LATERAL EXTENSION
TYPE "B" THROUGH GRADE ADJUSTMENT WALL (TYPE "B")
N.T.S.



NEW 8" SEWER THROUGH REINFORCED
CONCRETE WALL @ STA. 190+83.5 "A"
N.T.S.

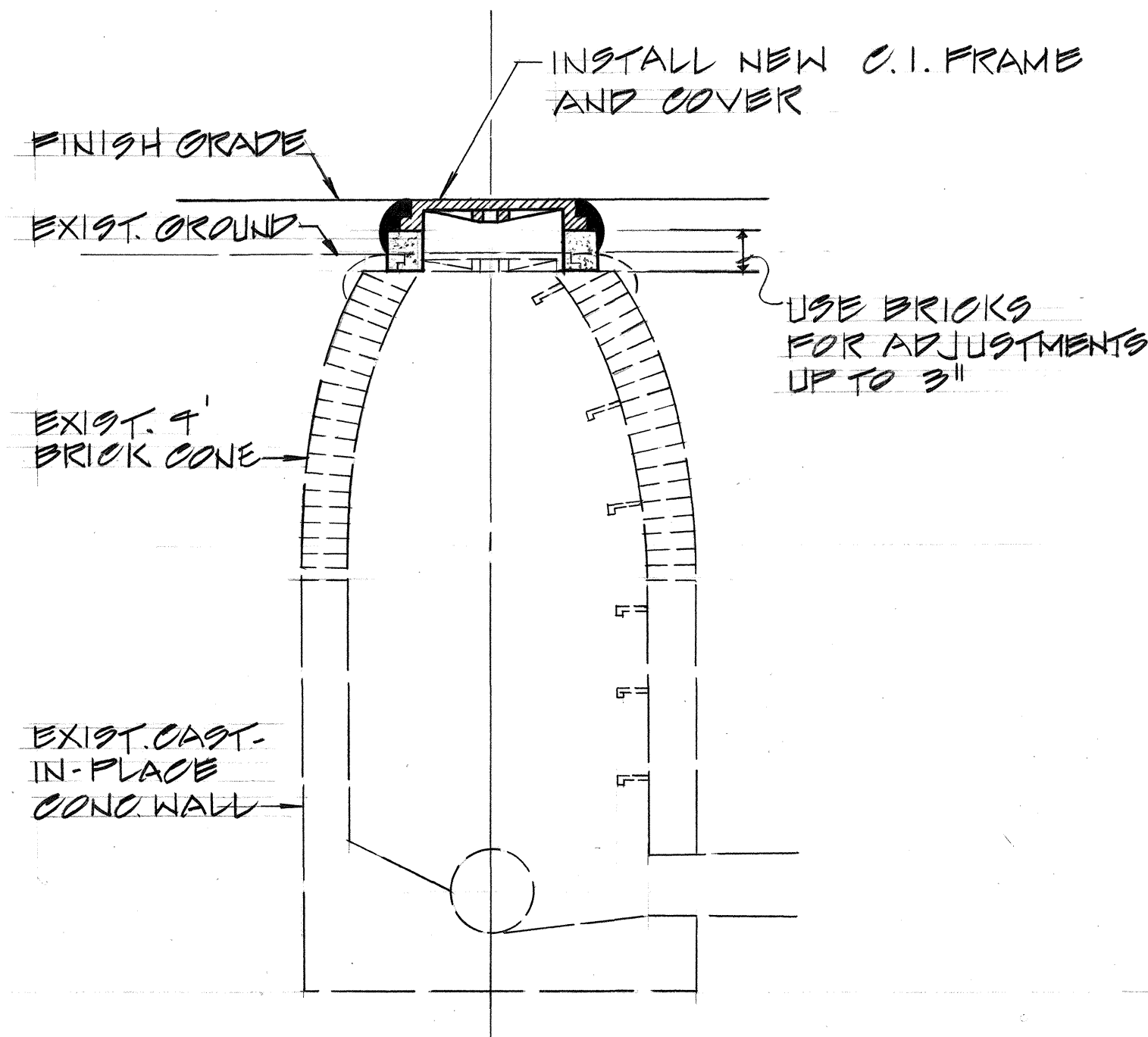


SEWER LATERAL EXTENSION
UNDER GRADE ADJUSTMENT WALL
N.T.S.

Approved: *G. Lynn* Date: 7/2/93
Chief, Division of Wastewater Management
Department of Public Works
City and County of Honolulu

SURVEY PLOTTED BY	DATE
DRAWN BY	PLAN
DESIGNED BY	DESIGNED BY
QUANTITIES BY	QUANTITIES BY
CHECKED BY	CHECKED BY
ORIGINAL	NO.
NOTE BOOK	NO.

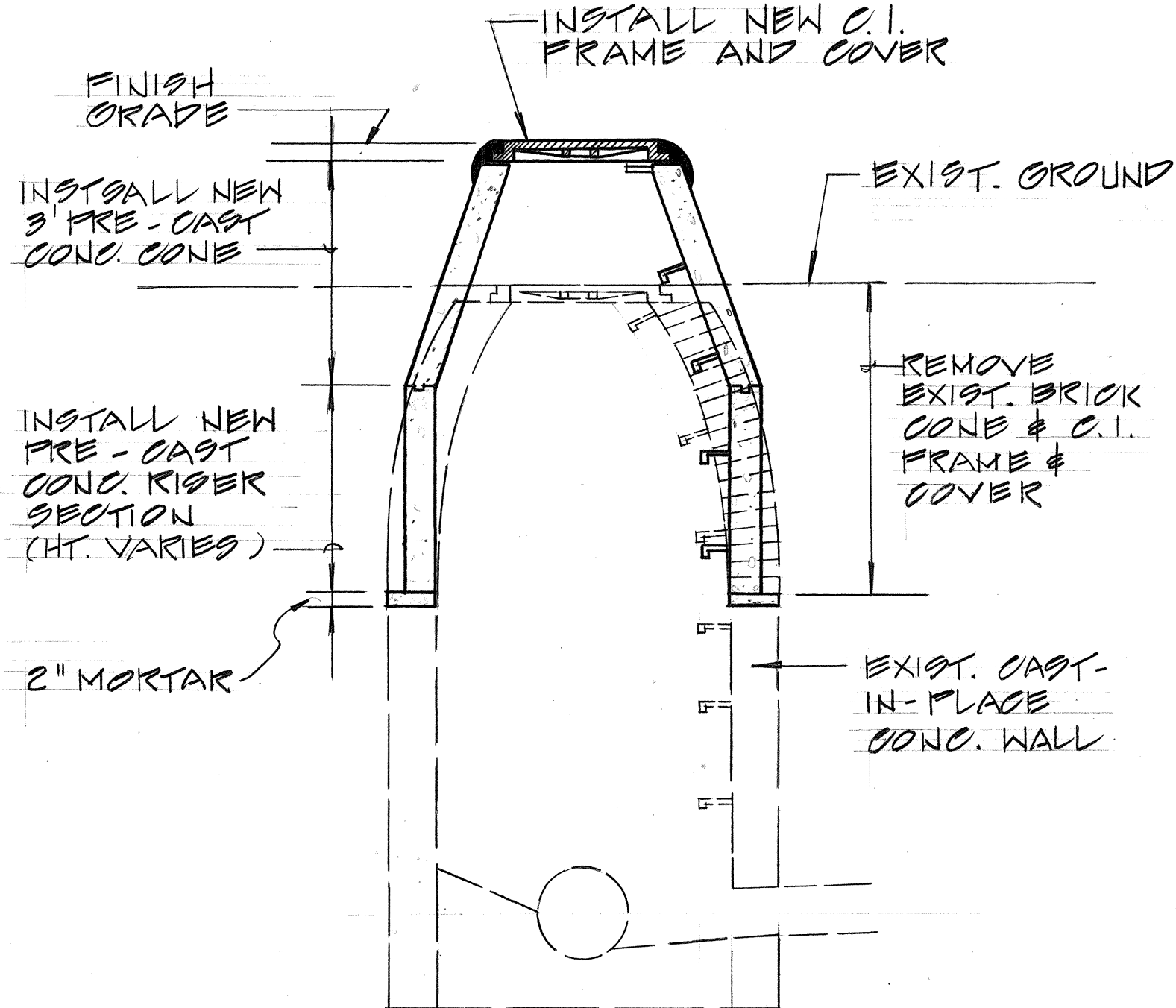
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-STP-072-1(35)	1993	164	340



SMH ADJUSTMENT DETAIL
(RAISE UP TO 3")

N.T.S.

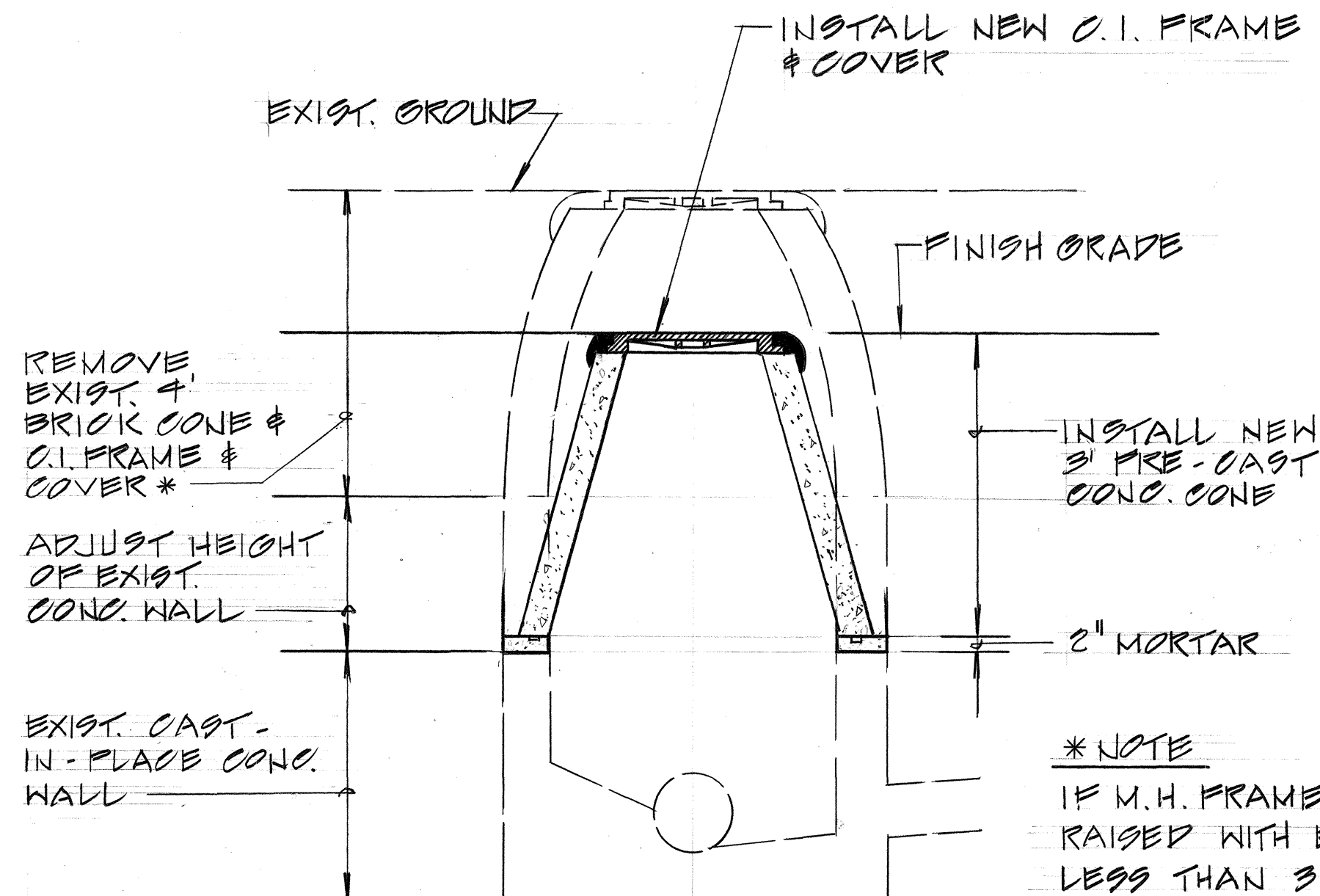
STRUCT.	SHT. NO.	STATION	EXIST. GROUND (FT.)	FINISH GRADE (FT.)	ADJUSTMENT (FT.)
SMH 16	F-3	179+06 @ "A"	6.87	7.10	0.23
SMH 15	F-3	179+53 @ "C"	6.22	6.20	(-)0.02
SMH 17	F-3	181+12 @ "A"	7.11	6.00	(-)1.11
SMH 23	F-3	181+34 @ "C"	5.83	5.90	0.07
SMH 20	F-4	183+65 @ "C"	6.14	6.60	0.46
SMH 19	F-4	183+72 @ "A"	6.51	7.40	0.89
SMH 74A	F-4	184+01 @ "A"	6.97	7.70	0.73
SMH 74	F-4	185+40 @ "A"	6.63	8.80	2.17
SMH 75	F-4	186+83 @ "A"	5.82	9.35	3.53
SMH 21	F-4	186+45 @ "C"	7.04	7.50	0.46
SMH 22	F-5	188+34 @ "C"	7.53	8.35	0.82
SMH 76	F-5	188+37 @ "A"	6.07	7.45	1.38
SMH 77	F-5	190+18 @ "A"	6.57	6.57	0.00
SMH 84A	F-5	191+33 @ "A"	29.10	29.50	0.40
SMH 85	F-5	192+53 @ "A"	38.30	40.40	2.10
SMH 78	F-5	192+96 @ "A"	6.94	8.05	1.11
SMH 79	F-6	194+49 @ "A"	7.22	7.70	0.48



SMH ADJUSTMENT DETAIL
(RAISE MORE THAN 3")

N.T.S.

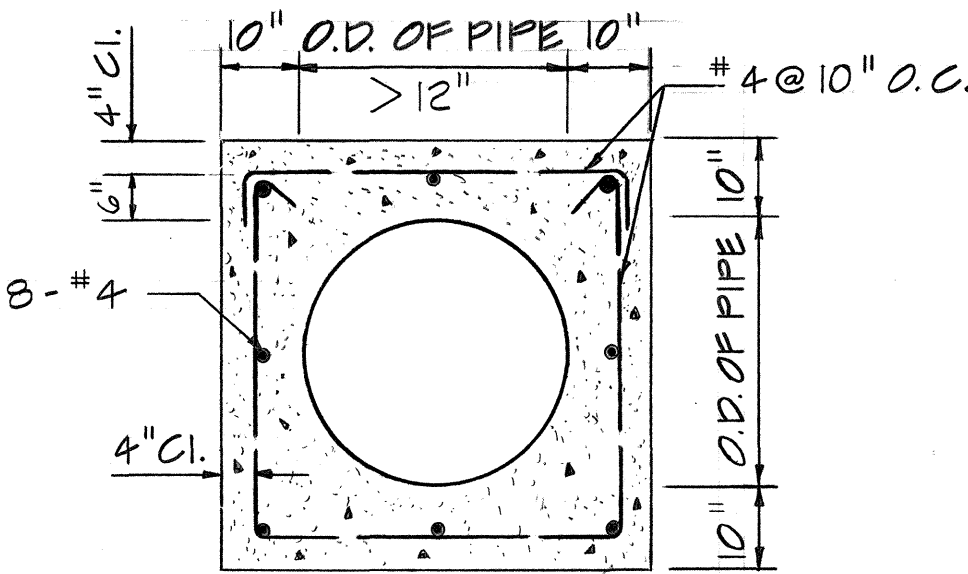
STRUCT.	SHT. NO.	STATION	EXIST. GROUND (FT.)	FINISH GRADE (FT.)	ADJUSTMENT (FT.)
SMH 80	F-6	196+63 @ "A"	8.20	8.00	(-)0.20
SMH 81	F-6	198+56 @ "A"	9.35	10.00	0.65
SMH 99	F-7	200+16 @ "C"	9.66	9.90	0.24
SMH 109	F-7	200+45 @ "A"	9.26	12.00	2.74
SMH 101	F-7	202+25 @ "A"	8.96	12.30	3.34
SMH 100	F-7	202+47 @ "C"	8.91	8.90	(-)0.01
SMH 102	F-7	204+54 @ "A"	7.80	9.20	1.40
SMH 16	F-8	206+77 @ "C"	6.03	6.20	0.17
SMH 15	F-8	207+94 @ "C"	5.31	5.60	0.29
SMH 14	F-8	209+13 @ "C"	5.03	4.90	(-)0.13
SMH 1	F-8	209+26 @ "A"	3.60	6.20	2.60
SMH 9	F-8	211+80 @ "A"	4.43	4.40	(-)0.03
SMH 13	F-9	212+08 @ "C"	4.71	4.80	0.09
SMH 10	F-9	212+88 @ "C"	4.77	5.10	0.33
SMH 28	F-9	216+56 @ "A"	5.11	5.50	0.39
SMH 27	F-10	218+78 @ "A"	5.45	6.40	0.95
SMH 30	F-10	220+77 @ "A"	6.12	5.50	(-)0.62
SMH 31	F-10	223+02 @ "A"	8.17	8.50	0.33
SMH 3	F-11	225+03 @ "A"	8.88	9.20	0.32



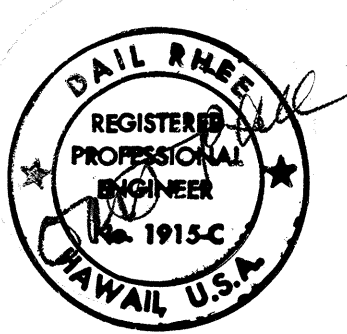
SMH ADJUSTMENT DETAIL
(LOWER MORE THAN 3")

N.T.S.

* NOTE
IF M.H. FRAME WAS PREVIOUSLY
RAISED WITH BRICKS, ADJUSTMENTS
LESS THAN 3" CAN BE DONE BY
REMOVING THE EXIST. BRICKS
INSTEAD OF REMOVING THE EXIST.
4" BRICK CONE.



REINFORCED
CONCRETE JACKET (PIPE $\phi > 12"$)
NOT TO SCALE



Approved: *[Signature]* Date: 7/2/93
Chief, Division of Wastewater Management
Department of Public Works
City and County of Honolulu

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SEWER DETAILS

KALANIANA'OLE HIGHWAY
E. HALEMAUMAU ST. TO KEAHOLE ST.
F.A. PROJECT NO. STP-072-1(35)
Scale: NH- Date: 10/1/92
SHEET No. 164 OF 20 SHEETS

C.O. #2	
6/30/93	C.O. #1
DATE	REVISION

DATE	
SURVEY PLOTTED BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	