GENERAL NOTES

1. GENERAL SPECIFICATIONS: HAWAII DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1985, TOGETHER WITH SPECIAL PROVISIONS PREPARED FOR THIS CONTRACT, AND THE C&C OF HONOLULU STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEE SEWER NOTES SHEET C-3.

2. LOADS:

   (A) LIVE LOAD: HS20-44

3. MATERIALS:

   (A) ALL CONCRETE SHALL BE CLASS A UNLESS OTHERWISE NOTED. SEE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.

   (B) ALL REINFORCING STEEL SHALL BE A.S.T.M. A615 GRADE 40, UNLESS OTHERWISE NOTED. BAR SIZED #6 OR LARGER: CONTRACTOR OPTION TO USE GRADE 60 BARS IF PROVIDING SAME NUMBER, SIZE AND SPACING AS GRADE 40.

   (C) MANHOLE RUNGS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.

4. DESIGN STRESSES: SHALL FOLLOW A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES IN ADDITION TO THOSE LISTED BELOW.

CONCRETE	CLASS	PRECAST RISER/RING
f'c	3,000 P.S.I.	4,000
fc	1,200 P.S.I.	1,600
N	9	8

5. REINFORCEMENT:

   (A) THE MINIMUM COVERING MEASURED FROM THE SURFACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING BARS SHALL BE AS FOLLOWS:

   (1) WALLS & SLABS = 3", U.O.N.

   (B) REINFORCING BARS SHALL BE DETAILED IN ACCORDANCE WITH A.C.I. MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE HIGHWAY STRUCTURES UNLESS OTHERWISE NOTED.

   (C) MINIMUM CLEAR SPACING BETWEEN PARALLEL BARS SHALL BE 1-1/2 TIMES THE DIAMETER OF BARS (FOR NON BUNDLED BARS). BUT IN NO CASE SHALL THE CLEAR DISTANCE BETWEEN THE BARS BE LESS THAN 1-1/2 TIMES THE MAXIMUM SIZE OF THE COARSE AGGREGATE.

   (D) ALL DIMENSIONS RELATING TO REINFORCING BARS (E.G., SPACING OF BARS ETC.) ARE TO CENTERS OF BARS UNLESS OTHERWISE NOTED.

   (E) REINFORCING BARS SHALL BE SECURELY TIED AT ALL INTERSECTIONS AND LAP SPLICES.

6. CONSTRUCTION METHODS:

   (A) SEE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

   (B) EXCEPT AS OTHERWISE NOTED, ALL VERTICAL DIMENSIONS ARE MEASURED PLUMB.

7. GENERAL:

   (A) THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITY LINES AND NOTIFY THE RESPECTIVE OWNERS BEFORE COMMENCING THE WORK OF EXCAVATION.

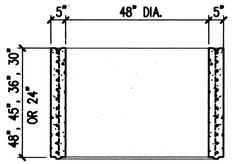
   (B) FOR CONCRETE FINISH SEE STANDARD SPECIFICATIONS AND OTHER DRAWINGS.

   (C) STANDARD DETAIL DRAWINGS REFER TO ALL STRUCTURES IN GENERAL, EXCEPT FOR MODIFICATIONS AS MAY BE REQUIRED FOR SPECIAL CONDITIONS. FOR SUCH MODIFICATIONS, REFER TO THE CORRESPONDING DETAILED DRAWINGS.

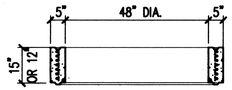
   (D) ALL EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER.

8. WHERE REFERENCE IS MADE TO NOTE 8, FOLLOW THE "STANDARD PLANS", STATE OF HAWAII, DEPARTMENT OF TRANSPORTATION, HIGHWAYS DIVISION, HONOLULU, HAWAII, 1986.

9. PROVIDE MEANS TO KEEP DIRT, CONCRETE, DEBRIS, ETC. FROM DROPPING INTO THE EXISTING SEWERLINE.



RISER
SCALE: ½" = 1'-0"



RISER
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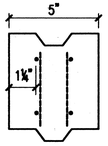
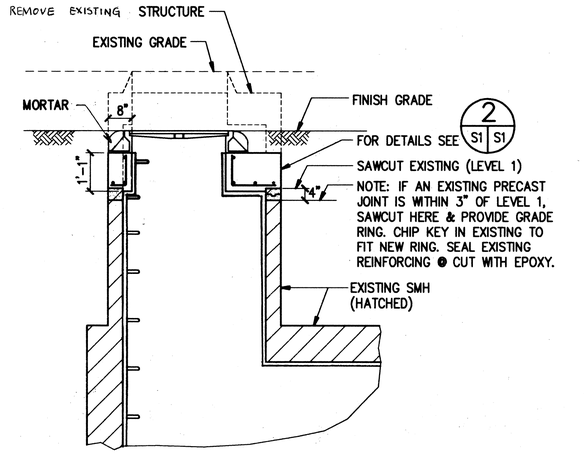


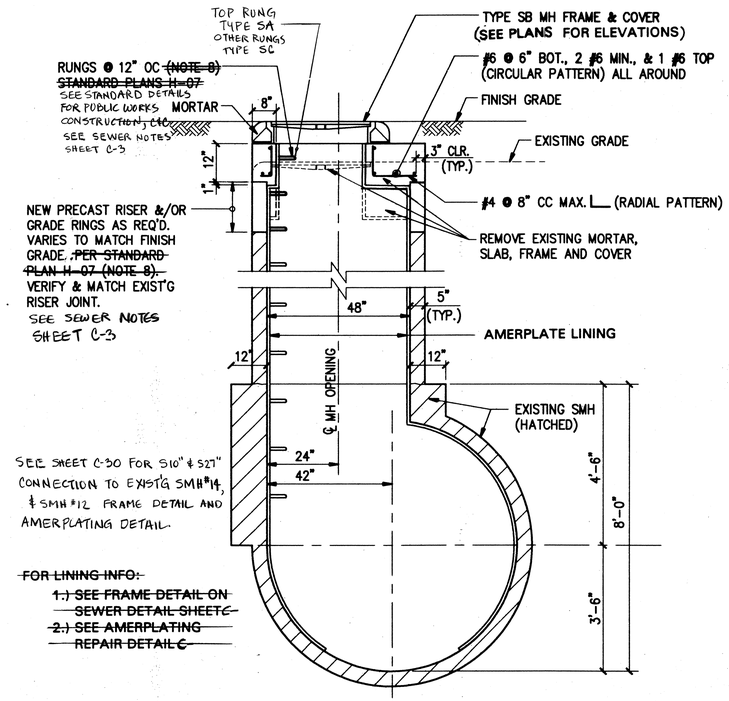
GRADE RING
SCALE: 3" = 1'-0"

SECTION	A_S /L.F.
48" x 48" RISER	0.15
48" x 45" RISER	0.15
48" x 36" RISER	0.15
48" x 30" RISER	0.15
48" x 24" RISER	0.15
48" x 15" RISER	0.15
48" x 12" RISER	0.15
22" x 4" GRADE RING	0.12
22" x 2½" GRADE RING	0.12

NOTE:
PRECAST SECTIONS SHALL CONFORM TO ASTM C478.



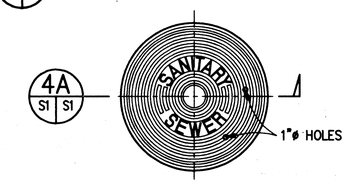
1 S1 S1 LOWER EXISTING SMH #8 (9 SIM.)
SCALE: ½" = 1'-0"



2 S1 S1 EXTEND EXISTING SMH #11, 12, 13, 14, 15 (10 SIM.)
SCALE: ½" = 1'-0"

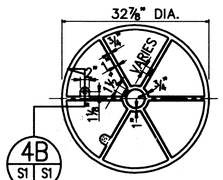
3 S1 S1

4A S1 S1



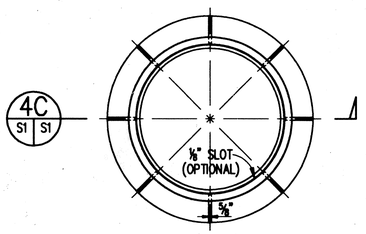
PLAN
SPECIAL MANHOLE COVER (TYPE SB)
SCALE: ¾" = 1'-0"
APPROX. WEIGHT 260 POUNDS

4B S1 S1

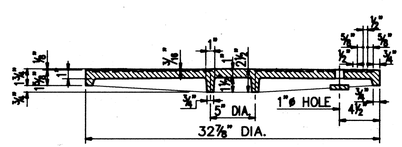


PLAN
BOTTOM VIEW OF COVER
SCALE: ¾" = 1'-0"

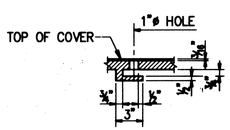
4C S1 S1



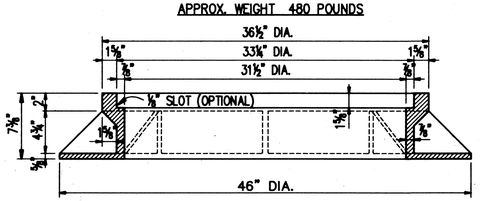
PLAN
SPECIAL MANHOLE FRAME (TYPE SB)
SCALE: ¾" = 1'-0"
APPROX. WEIGHT 480 POUNDS



SECTION 4A
SCALE: 1½" = 1'-0"



SECTION 4B
SCALE: 1½" = 1'-0"



SECTION 4C
SCALE: 1½" = 1'-0"

4 S1 S1 MANHOLE

PMT-76A-01-97

Rev	Date	Description	Eng	App
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△				

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NAGAMINE ENGINEERS INC.
STRUCTURAL ENGINEERS
TEL 536-2626 FAX 536-3926

Client:
GENTRY DEVELOPMENT CO., A HAWAII LIMITED PARTNERSHIP
P.O. BOX 295
HONOLULU, HAWAII 96809

FORT WEAVER ROAD INTERSECTION AND IROQUOIS POINT ROAD IMPROVEMENTS
MANHOLE DETAILS

Designed by: NN
Drawn by: DR
Approved:
CHIEF, DIVISION OF ENGINEERING SERVICES Date
CHIEF, DIV. OF PLANNING & SERVICES CONTR'L DIV. DPW (FOR SEWERWORK WITHIN "PUBLIC ROAD" R/W ONLY) Date
Date: JANUARY 1994
Proj. no.: (BCA)233.1900
Date
Date

NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER No. 8479-S HAWAII, U.S.A.
NORMAN K. NAGAMINE REGISTERED PROFESSIONAL ENGINEER No. 8479-S HAWAII, U.S.A.
This work was prepared by me or under my supervision
Norman K. Nagamine
CONSTRUCTION SHALL BE UNDER MY SUPERVISION

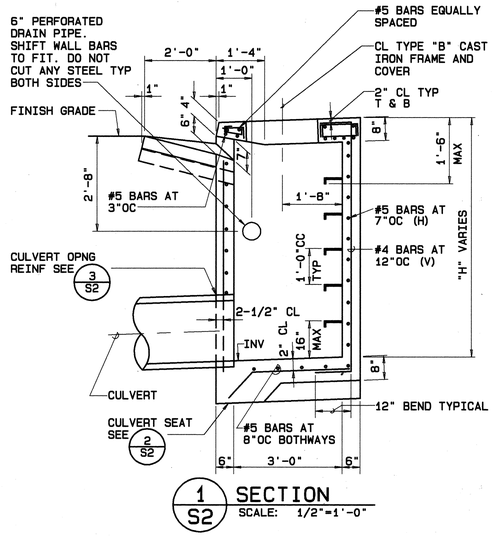
S1

FILE	POCKET	FOLDER	NO.

Trim 22"x36"

RECORD DRAWINGS

SHEET S1 of Sheets



1/S2 SECTION
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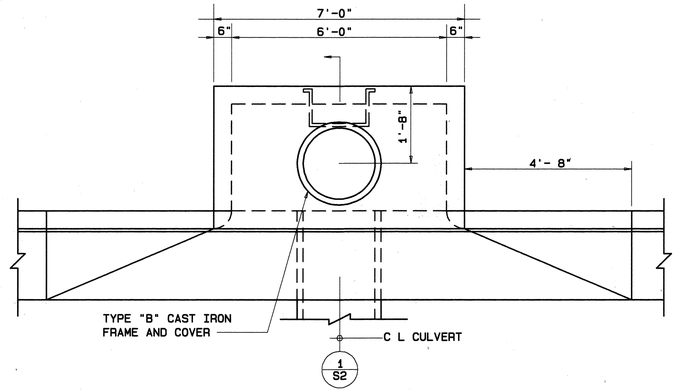
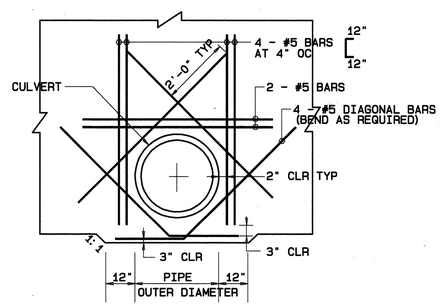


A/S2 PLAN
SCALE: 1/2"=1'-0"

2/S2 DETAIL OF CULVERT SEAT
SCALE: 1/2"=1'-0"



3/S2 ADDED REINFORCING FOR CULVERT OPENINGS
SCALE: 1/2"=1'-0"

B/S2 PLAN VIEW OF REINFORCING STEEL
SCALE: 1/2"=1'-0"

MODIFIED TYPE "D" CATCH BASIN
SCALE: AS SHOWN

PMT-76A-01-97

Rev	Date	Description	Eng	App
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△				
△				

NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER No. 5479-S HAWAII, U.S.A.
NORMAN K. NAGAMINE REGISTERED PROFESSIONAL ENGINEER No. 5479-S HAWAII, U.S.A.
This work was prepared by me or under my supervision

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PHONE: 536-2626

Client:
GENTRY DEVELOPMENT CO.
A HAWAII LIMITED PARTNERSHIP
P.O. BOX 295
HONOLULU, HAWAII 96809

EWA BY GENTRY
FORT WEAVER ROAD INTERSECTION AND IROQUOIS POINT ROAD IMPROVEMENTS

MODIFIED TYPE "D" CATCH BASIN

Designed by: NN Date: SEPTEMBER 1994
Drawn by: JW Proj. no.: (BCA) 233.1900

Approved:

Date Date
Date Date

FILE	POCKET	FOLDER	NO.

RECORD DRAWINGS

SHEET S2 of _____ Sheets

/usans/projects/233.1900.10/D.FUEL-DETAILS

Trim:22"x36"

GENERAL NOTES

1. GENERAL SPECIFICATIONS: HAWAII DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND PUBLIC WORKS CONSTRUCTION, 1994, TOGETHER WITH SPECIAL PROVISIONS PREPARED FOR THIS CONTRACT.
2. LOADS:
   (A) LIVE LOAD: HS20-44
3. MATERIALS:
   (A) ALL CONCRETE SHALL BE CLASS A UNLESS OTHERWISE NOTED. SEE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
   (B) ALL REINFORCING STEEL SHALL BE A.S.T.M. A615 GRADE 40, UNLESS OTHERWISE NOTED. BAR SIZED #6 OR LARGER: CONTRACTOR OPTION TO USE GRADE 60 BARS IF PROVIDING SAME NUMBER, SIZE AND SPACING AS GRADE 40.
   (C) MANHOLE RUNGS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
4. DESIGN STRESSES: SHALL FOLLOW A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
5. REINFORCEMENT
   (A) THE MINIMUM COVERING MEASURED FROM THE SURFACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING BARS SHALL BE AS FOLLOWS:
      (1) WALLS & FOOTING = 3", UON.
   (B) REINFORCING BARS SHALL BE DETAILED IN ACCORDANCE WITH A.C.I. MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE HIGHWAY STRUCTURES UNLESS OTHERWISE NOTED.
   (C) MINIMUM CLEAR SPACING BETWEEN PARALLEL BARS SHALL BE 1-1/2 TIMES THE DIAMETER OF BARS (FOR NON BUNDLED BARS). BUT IN NO CASE SHALL THE CLEAR DISTANCE BETWEEN THE BARS BE LESS THAN 1-1/2 TIMES THE MAXIMUM SIZE OF THE COARSE AGGREGATE.
   (D) ALL DIMENSIONS RELATING TO REINFORCING BARS (EG, SPACING OF BARS ETC) ARE TO CENTERS OF BARS UNLESS OTHERWISE NOTED.
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6. CONSTRUCTION METHODS:
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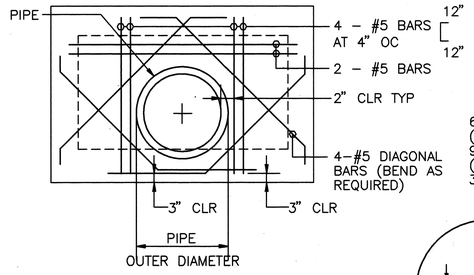
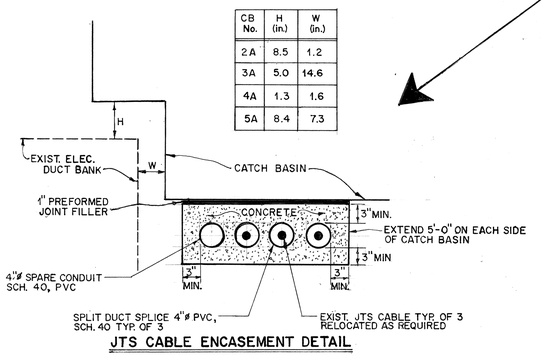
   (B) EXCEPT AS OTHERWISE NOTED, ALL VERTICAL DIMENSIONS ARE MEASURED PLUMB.
7. GENERAL
   (A) THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITY LINES AND NOTIFY THE RESPECTIVE OWNERS BEFORE COMMENCING THE WORK OF EXCAVATION.
   (B) FOR CONCRETE FINISH SEE STANDARD SPECIFICATIONS AND OTHER DRAWINGS.
8. WHERE REFERENCE IS MADE TO NOTE 8, FOLLOW THE "STANDARD PLANS", STATE OF HAWAII, DEPARTMENT OF TRANSPORTATION, HIGHWAYS DIVISION, HONOLULU, HAWAII, 1986.



5 S3 ADDED REINFORCING FOR CULVERT OPENINGS

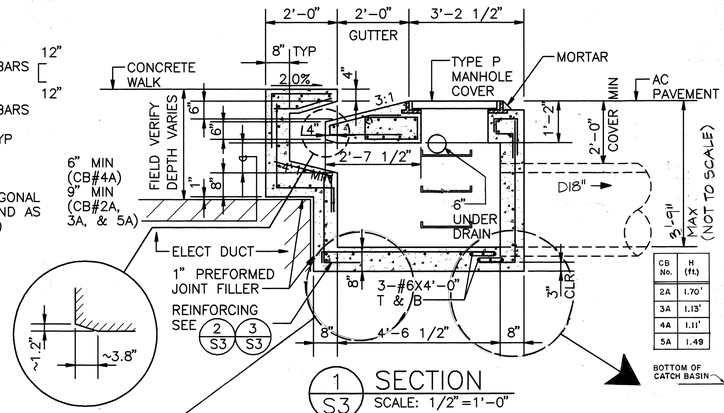
SCALE: 1/2"=1'-0"



CB No.	H (in.)	W (in.)
2A	8.5	1.2
3A	5.0	14.6
4A	1.3	1.6
5A	8.4	7.3

JTS CABLE ENCASEMENT DETAIL

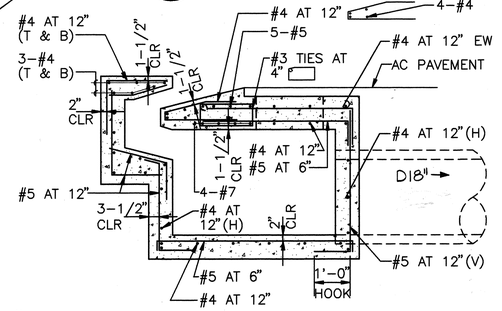
N.T.S.



CB No.	H (ft.)
2A	1.70'
3A	1.13'
4A	1.11'
5A	1.49

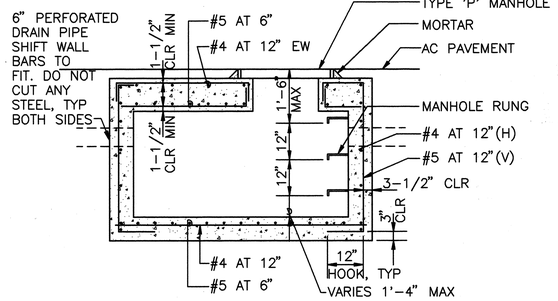
1 S3 SECTION

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



2 S3 SECTION

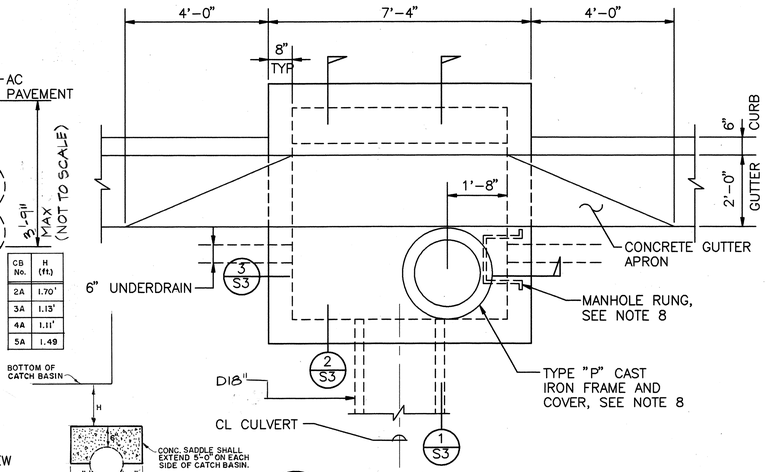
SCALE: 1/2"=1'-0"



3 S3 SECTION

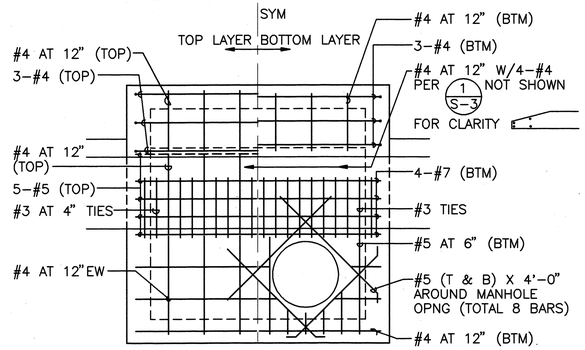
SCALE: 1/2"=1'-0"

4 NOT USED



A S3 PLAN

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



B S3 PLAN VIEW OF REINFORCING STEEL

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

PMT-76A-01-97

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Client:
GENTRY DEVELOPMENT CO.,
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HONOLULU, HAWAII 96809

Rev	Date	Description	Eng	App
1				
2				
3				

EWA BY GENTRY
FORT WEAVER ROAD INTERSECTION AND IROQUOIS POINT ROAD IMPROVEMENTS

SPECIAL CATCH BASIN

Designed by: XY Date: MAY 1995
Drawn by: JW Proj. no.: (BCA)233.1901.12

Approved:

Date Date

Date Date

NORMAN K. NAGAMINE LICENSED PROFESSIONAL ENGINEER NO. 5479-S HAWAII, U.S.A.
Norman K Nagamine
This work was prepared by me or under my supervision

FILE	POCKET	FOLDER	NO.

SHEET S3 of _____ Sheets

RECORD DRAWINGS

C:\NEDWG\9534IRSM\S3 06/16/95 08:46

Trim: 22"x36"