

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-03-98	2000	ADD.10	60

GENERAL NOTES

1. Refer to "Landscape Specification" section prior to the start of work. Contractor shall be held responsible for all; materials, scheduling, product, warranties and methods for execution of work which may not indicated within the drawings.
2. Contractor shall verify locations of all existing utility lines, All existing trees and extend of the root ball prior to starting landscaping work operations. Any utility lines damaged and any trees/roots. damaged by Contractor's operations shall be repaired at no additional cost to the State.
3. Contractor shall notify Engineer of any discrepancies prior to layout work.
4. For building layout see Architectural drawings.
5. For final grading see Civil drawings.
6. Contractor to verify exact locations of all trees and shrubs with the Engineer prior to commencement of planting operations.
7. Upon completion of landscaping work. Contractor shall furnish to the State with one set of reproducible "As Built" plans. The "As Built" plan shall indicate all changes and deviation on landscaping work in a drawing format acceptable to the Department of Transportation.
8. The Contractor shall verify locations of all existing utility lines, Both overhead and underground structural footing and foundation prior to any operations. Any utility lines damaged by Contractor's operations shall be repaired at no additional cost to the State.

IRRIGATION NOTES

1. Perform a pressure test at the point of connection to verify sufficient working pressure. Notify the Engineer if any discrepancies should occur.
2. The Landscape Contractor is responsible to ensure all remote control valves and sprinkler heads operate at the optimum pressure.
3. The Irrigation Plan is diagrammatical and exact locations of heads for adequate coverage is the Contractor's responsibility.
4. All irrigation lines, where possible shall be placed adjacent to sidewalk, curb, or walls.
5. For hose bib installation, see City & County of Honolulu Standard Detail W-2
6. The irrigation products listed on sheet 12 are based on the minimum requirements for the type and quality of materials and equipment.

PLANTING NOTES

1. Install topsoil in all landscaped areas. The Contractor shall determine and provide quantities of topsoil required to install planting complete and in place. Carefully coordinate to insure proper placement of topsoil to planter finish grades. It shall be the responsibility of the Contractor to maintain finish grades.
2. Install temporary irrigation as required to maintain plant material and to insure Plant establishment for duration of the landscape maintenance period. Temporary irrigation shall be the property of the Contractor, and shall be removed upon completion and final acceptance of the project.
3. Plant called out to be relocated or removed shall be neatly removed with root ball from the original locations, Provide temporary bracing and support to existing trees. Voided space shall be backfilled with sctructural fill firmly compacted at 8" per layer up to 8" inches below finish top soil.
4. The plant list quantities are approximate and should serve only as a guidelines for the Contractor. All work indicated on the drawings by notes shall be provided whether or not specifically mentioned in the Plant list. Plants and ground covers shall be furnished in quantities as required to cover the areas indicated on the plans at the space noted. The Contractor shall verify all quantities before bidding.
5. All trees shall be placed 6 feet minimum away from all utility lines.
6. Provide a minimum 2" layer of organic soil conditioner over all planting areas (see specifications.)
7. Backfill mix shall consist of three (3) parts of amended imported planting soil to one (1) part organic soil conditioner. Add one (1) pound of 10-30-10 fertilizer to one (1) cubic yard of backfill mix. Mix thoroughly on project site prior to any planting operations.
8. Planting tablet for trees and shrubs shall be as follows:

a) Field Specimen

b) 15 Gallon

c) 5 Gallon

d) 3 Gallon

e) 1 Gallon

12 Tablets

8 Tablets

3 Tablets

2 Tablets

1 Tablet

Use slow release fertilizer tablets 20-10-5, 21 gram size
9. Ground cover shall be planted under all trees and shrubs (unless otherwise noted on plans)
10. Provide a typical 24" deep root barrier around each root ball of all trees new or transplanted (except palms)

5/26/00 Add new notes

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE GENERAL NOTES

HAUULA BASEYARD IMPROVEMENTS

Project No. HWY-0-03-98

Scale: No ScaleDate: May 2000

SHEET No. L-1 OF 60 SHEETS

ORIGINAL PLAN

NOTED FOR CONSTRUCTION

SURVEY PLOTTED BY

DRAWN BY

DESIGNED BY

QUANTITIES BY

CHECKED BY

DATE

5/26/00

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-03-98	2000	ADD.11	60

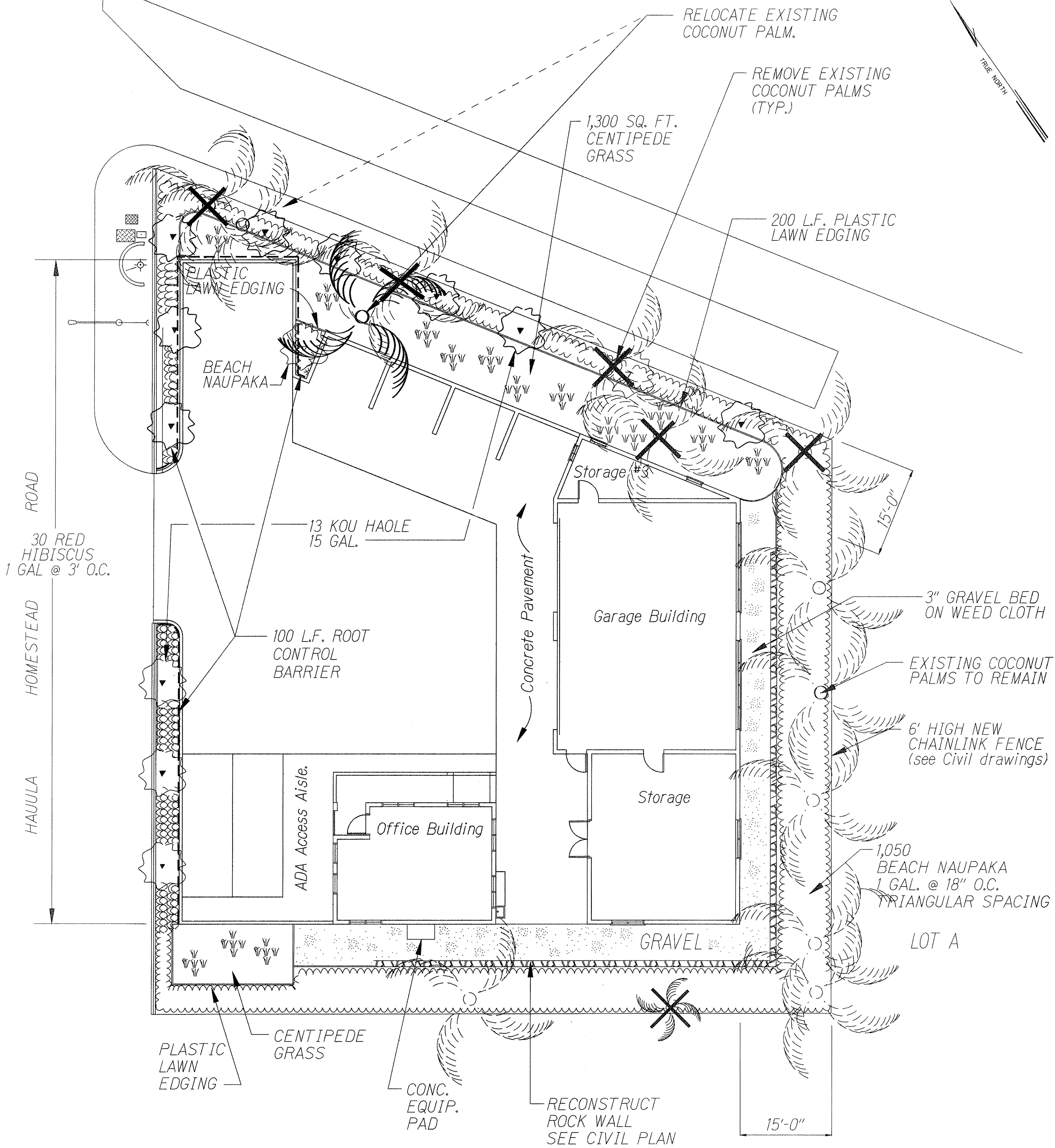
PLANT LIST

QUANTITY	BOTANICAL NAME	COMMON NAME
8*	COCOS NUCIFERA	COCONUT PALM
1	TRANSPLANTED TREE	COCONUT PALM
6	REMOVED TREE	COCONUT PALM
13	CORDIA SEBESTENA	KOU HAOLE
30	HIBISCUS ROSA-SINENSIS	RED HIBISCUS
1,050 SQ.FT.	SCAEVOLA FRUTESCENS	BEACH NAUPAKA
1,300 SQ.FT.	EREMOCHLOA OPHIUROIDES	CENTIPEDE GRASS
900 SQ.FT.	GRAVEL AREA	

* EXISTING COCONUT PALM TO REMAIN

NOTE:

Contractor Shall Remove All Coconut Palms And Other Trees Within The New Walls, Footings, And Other Construction Works. Select Coconut Palms In Good Condition For Transplantation As Indicated In Drawing. Removed Coconut Palms And Trees Not Used For Relocation Shall Be Disposed To Dump Site At Contractor's Expense.



PLANTING PLAN
SCALE 1"=10'-0"

5/26/00	Modify drawing and change notes.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLANTING PLAN

HAUULA BASEYARD IMPROVEMENTS

Project No. HWY-0-03-98

Scale: As Shown Date: May 2000

SHEET No. L-1 OF 60 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-03-98	2000	ADD.12	60

IRRIGATION LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER AND MODEL NO.	RADIUS (FT)	PSI	GPM	REMARKS
	4" POP-UP HEAD, HALF CIRCLE	RAINBIRD #1804-SAM PRS-15H	11-15	15-70	1.30-1.85	STANDARD 30 DEGREE SPRAY
	4" POP-UP HEAD, THIRD CIRCLE	RAINBIRD #1804-SAM PRS-15T	11-15	15-70	0.87-1.23	STANDARD 30 DEGREE SPRAY
	12" POP-UP HEAD, HALF CIRCLE	RAINBIRD #1812-SAM PRS-5H	2-5	15-70	0.04-0.20	FLAT 5 DEGREE SPRAY
	12" POP-UP HEAD, SIDE STRIP	RAINBIRD #1812-SAM PRS-15SST	4 X 30	15-70	0.89-1.21	STANDARD 30 DEGREE SPRAY
	12" POP-UP HEAD, END STRIP	RAINBIRD #1812-SAM PRS-15EST	4 X 15	15-70	0.45-0.61	STANDARD 30 DEGREE SPRAY
	SHRUB HEAD ON RISER, HALF CIRCLE	RAINBIRD PA-8S PRS-15H	11-15	15-70	1.30-1.85	STANDARD 30 DEGREE SPRAY
	SHRUB HEAD ON RISER, THIRD CIRCLE	RAINBIRD PA-8S PRS-15T	11-15	15-70	0.87-1.23	STANDARD 30 DEGREE SPRAY
	SHRUB HEAD ON RISER, QUARTER CIRCLE	RAINBIRD PA-8S PRS-15Q	11-15	15-70	0.65-0.92	STANDARD 30 DEGREE SPRAY
	SHRUB HEAD ON RISER, VARIABLE ARC	RAINBIRD PA-8S PRS-15VAN	11-15	15-70	0.65-3.70	STANDARD 30 DEGREE SPRAY
	ANGLE VALVE WITH SIZE	BUCKNER #VBM10				1" BRASS ANGLE VALVE
	REMOTE CONTROL VALVE	RAINBIRD #100-PEB				1" ELECTRIC REMOTE CONTROL VALVE
	IRRIGATION CONTROLLER	RAINBIRD #ESP-8				WALL-MOUNTED INDOOR/OUTDOOR IRRIGATION CONTROLLER
	IRRIGATION MAINLINE	PVC SCHEDULE 40 PIPE				SEE DRAWING FOR SIZE
	IRRIGATION LATERAL	PVC CLASS 200 PIPE				SEE DRAWING FOR SIZE
	IRRIGATION SLEEVE WITH SIZE	PVC SCHEDULE 40 PIPE				SEE DRAWING FOR SIZE
	IRRIGATION CONDUIT WITH SIZE	PVC SCHEDULE 80 PIPE				SEE DRAWING FOR SIZE
	VALVE NO. FLOW (GPM) THRU VALVE/ VALVE SIZE					

IRRIGATION NOTES

1. For Trenching Detail, see City & County of Honolulu Standard Detail I-1
2. For Angle Valve Installation, see City & County of Honolulu Standard Detail I-2
3. For Remote Control Valve Installation, see City & County of Honolulu Standard Detail I-6
4. For 4" Pop-up Spray Head Installation, see City & County of Honolulu Standard Detail I-10
5. For 12" Pop-up Spray Head Installation, see City & County of Honolulu Standard Detail I-11
6. For Shrub Head On Riser Installation, see City & County of Honolulu Standard Detail I-12
7. For Irrigation Controller Installation, see City & County of Honolulu Standard Detail I-14
8. Verify Location Of Structures, Fencings, Walls, Trees and Vegetation.
9. Adjust layout of Irrigation System as required to fit the site.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

IRRIGATION PLAN

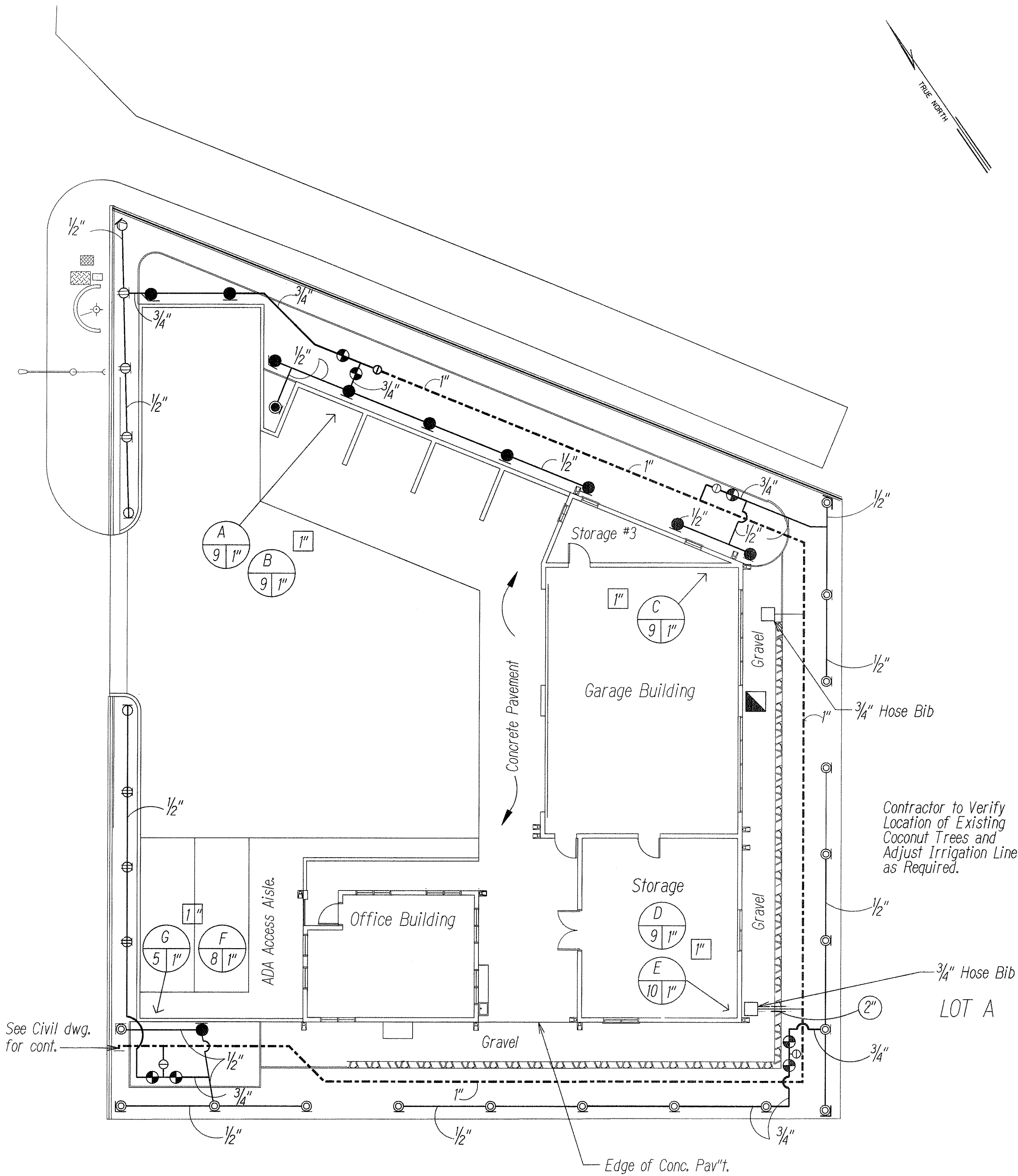
HAUULA BASEYARD IMPROVEMENTS

Project No. HWY-O-03-98

Scale: As Shown Date: May 2000

SHEET No. L-3 OF 60 SHEETS

5/26/00	Modify drawing and notes.
DATE	REVISION



IRRIGATION PLAN
SCALE 1"=10'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	5/23/00
DESIGNED BY	CHECKED BY	
CHECKED BY		

NOTE: SET ALL THRUST BLOCKS AGAINST UNDISTURBED SOIL

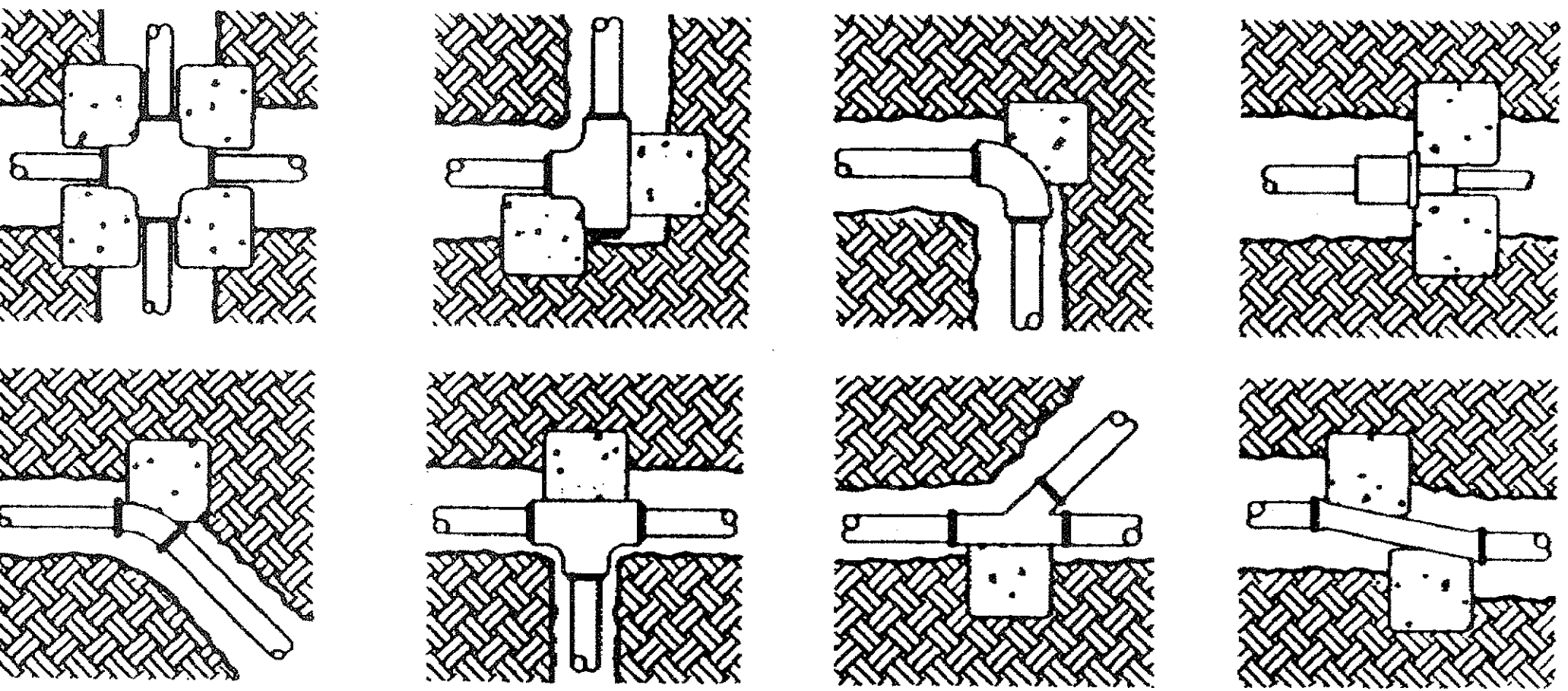
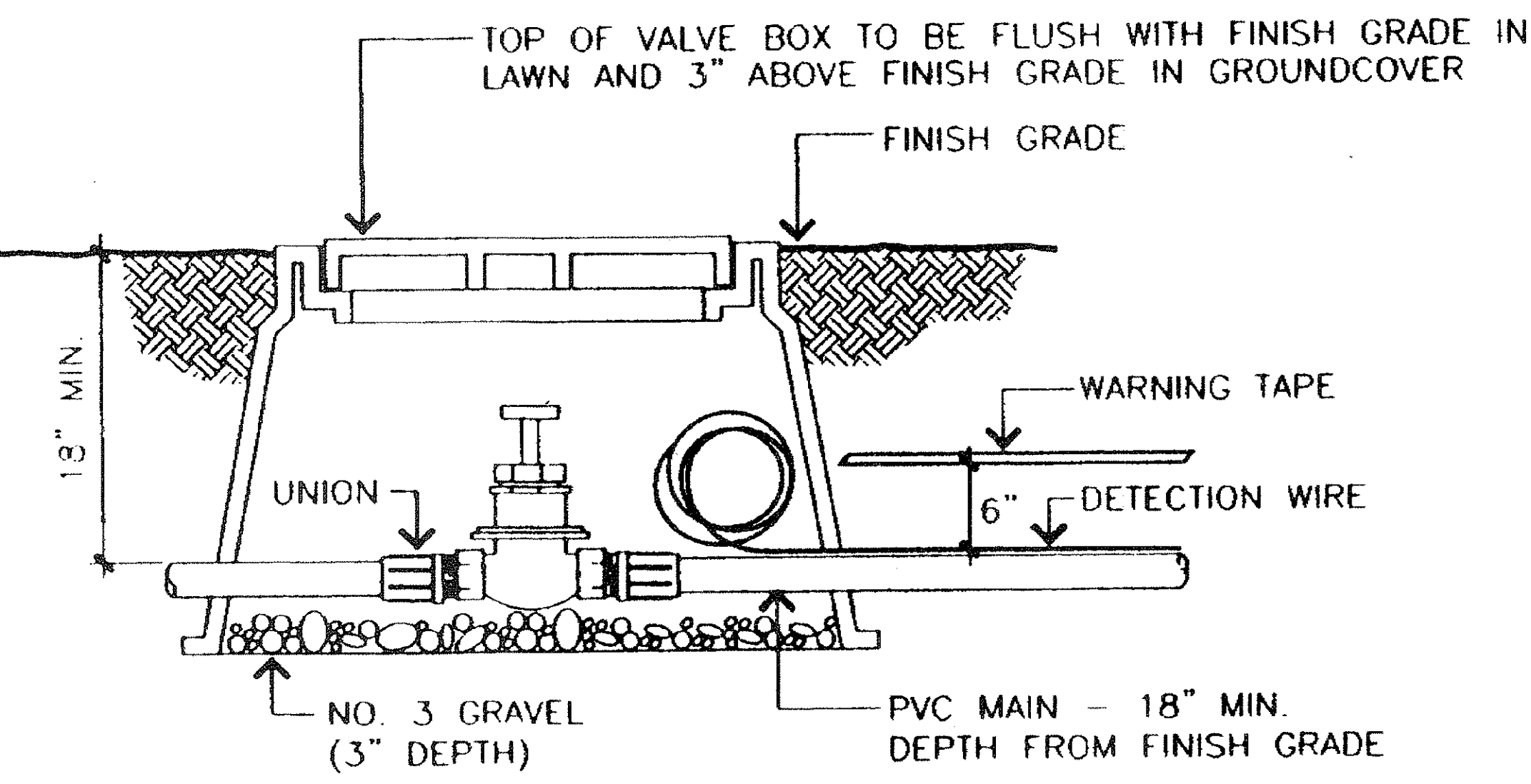


TABLE FOR BEARING AREA OF THRUST BLOCKS (SQ. FT.)

PIPE SIZE	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"
TEES & CROSSES	0.50	0.50	0.50	0.50	1.00	1.25	3.2
90° BEND	0.50	0.50	0.50	0.75	1.25	2.00	4.5
45° BEND	0.50	0.50	0.50	0.50	0.75	1.00	2.4

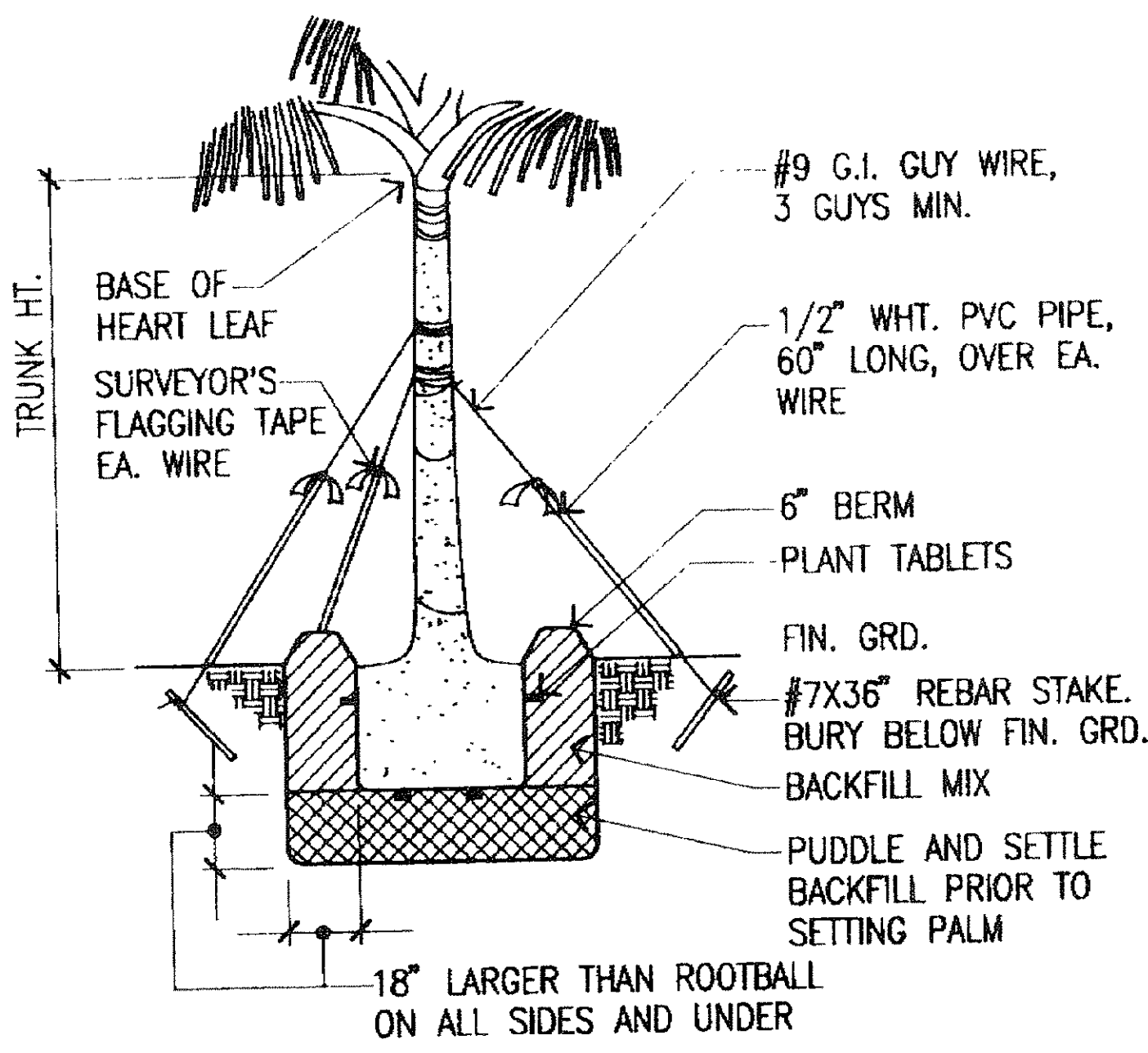
TYPICAL THRUST BLOCK DETAIL FOR IRRIGATION MAINS

NOT TO SCALE



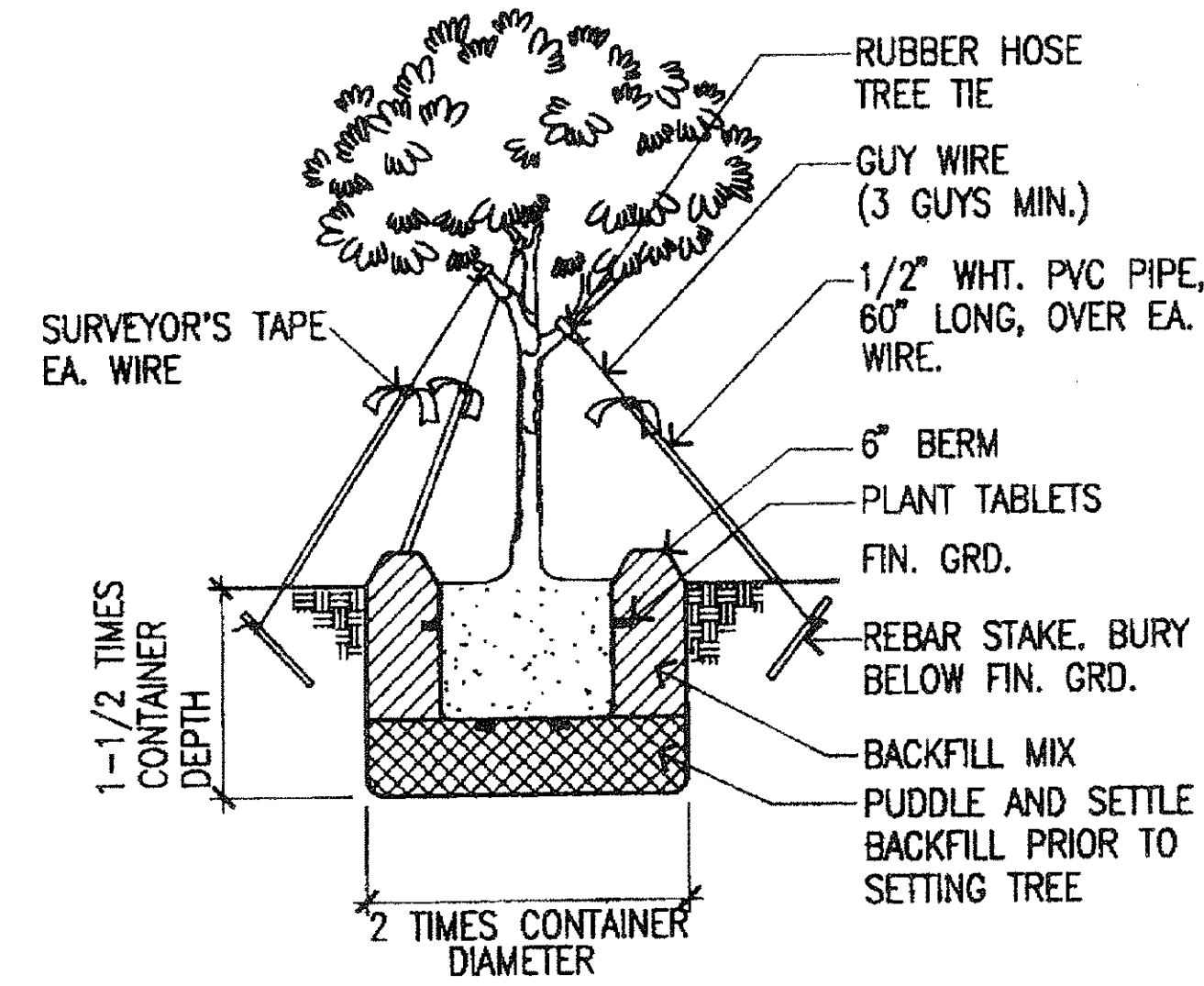
GATE VALVE, DETECTION WIRE/ WARNING TAPE DETAIL

NOT TO SCALE



PALM PLANTING

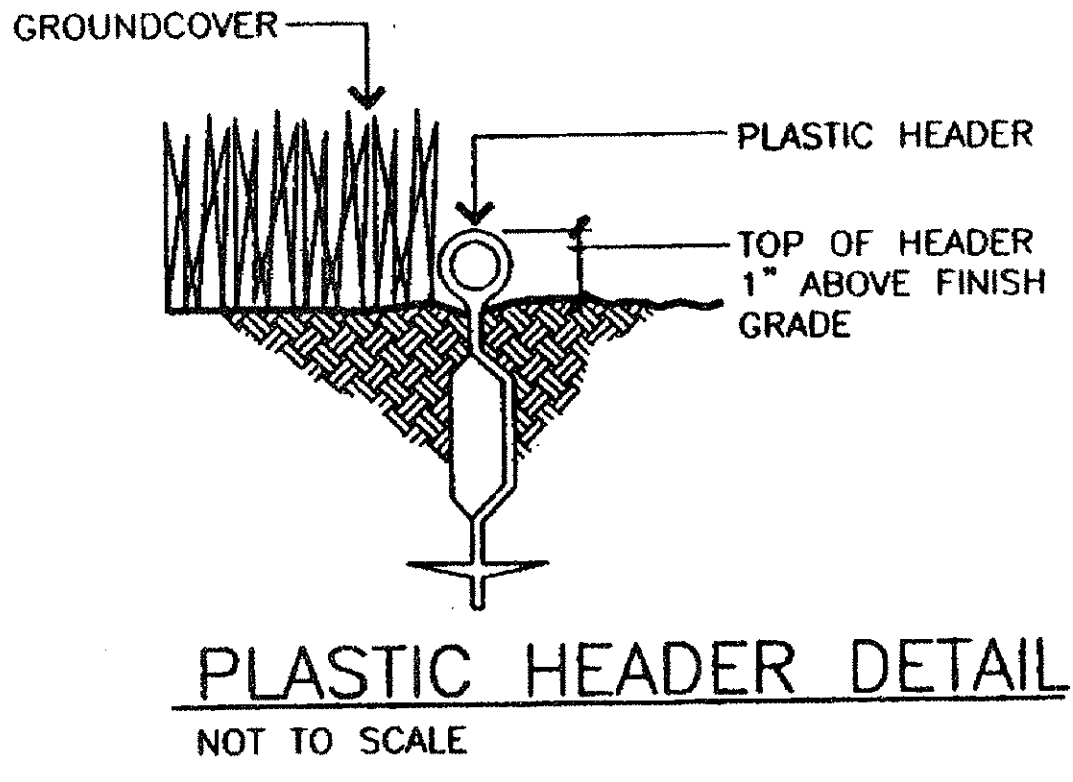
NOT TO SCALE



GUY WIRE SIZES	REBAR STAKE SIZES
#12 FOR 15 AND 25 GAL.	#4x24" FOR 15 AND 25 GAL.
#9 FOR FLD. SPECIMENS	#7x36" FOR FLD. SPECIMENS

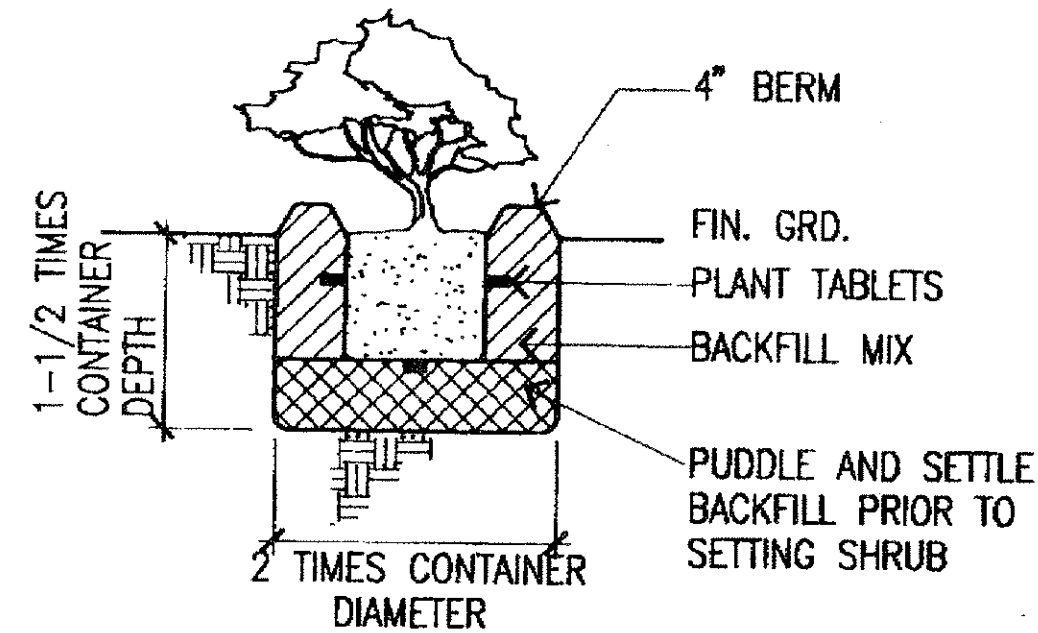
TREE PLANTING AND GUYING

NOT TO SCALE



PLASTIC HEADER DETAIL

NOT TO SCALE



SHRUB PLANTING

NOT TO SCALE

ORIGINAL SURVEY PLOTTED BY DATE
PLAN DRAWN BY MS.BT 1/9/00
NOTE BOOK TRACED BY IC.BT 1/9/00
DESIGNED BY IC.BT 1/9/00
CHECKED BY IC 1/9/00
No.

L-4