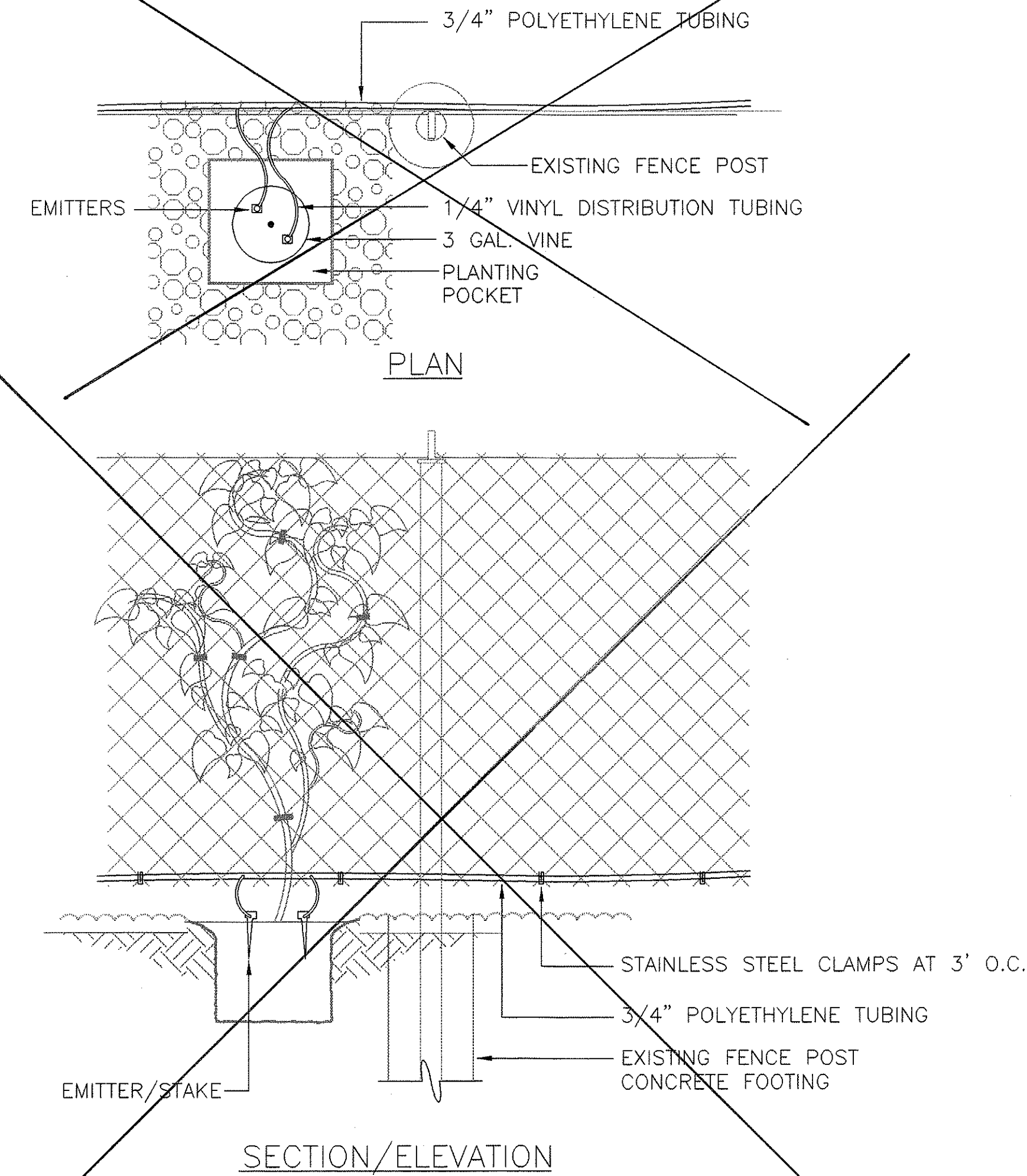


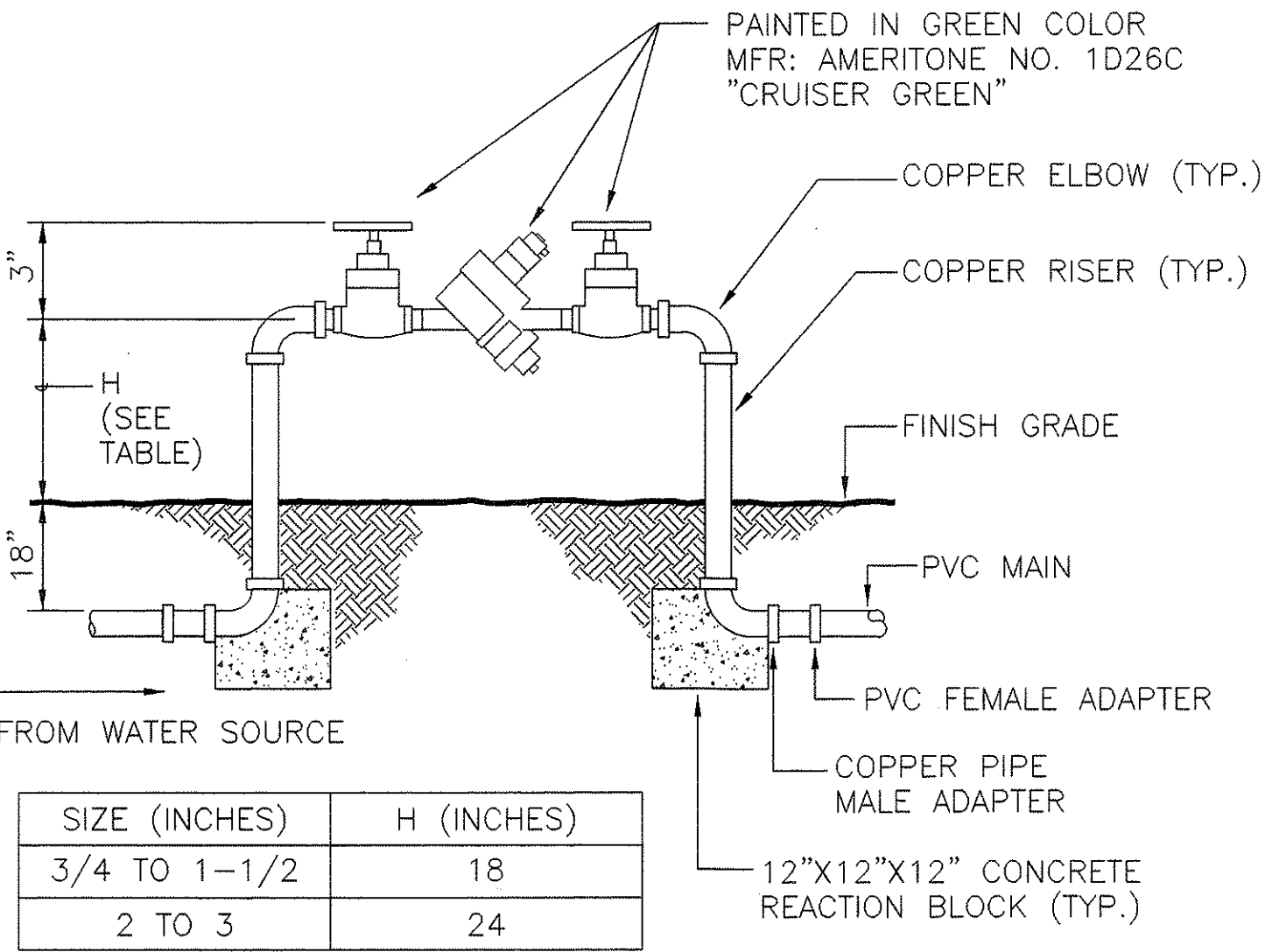
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7801A-01-98	2000	13	14

IRRIGATION EQUIPMENT LIST

SYMBOL	DESCRIPTION	GPM	RADIUS	PSI
●	12" POP-UP SPRAY SPRINKLER, LARGE FILTER SCREEN AND HEAVY DUTY WIPER SEAL, FULL	1.57	8'	30
○	12" POP-UP SPRAY SPRINKLER, LARGE FILTER SCREEN AND HEAVY DUTY WIPER SEAL, HALF	0.79	8'	30
◐	12" POP-UP SPRAY SPRINKLER, LARGE FILTER SCREEN AND HEAVY DUTY WIPER SEAL, 1/3	0.52	8'	30
◑	12" POP-UP SPRAY SPRINKLER, LARGE FILTER SCREEN AND HEAVY DUTY WIPER SEAL, QTR.	0.39	8'	30
◒	12" POP-UP SPRAY SPRINKLER, LARGE FILTER SCREEN AND HEAVY DUTY WIPER SEAL, SIDE STRIP	1.21	4'x30'	30
●	6" POP-UP SPRAY SPRINKLER (SEE 12" POP-UP SPRINKLERS FOR TYPICAL FLOW RATES AND SPRAY PATTERNS)			
⊕	GATE VALVE			
⊖	DOUBLE CHECK VALVE			
⊗	BALL VALVE AND REMOTE CONTROL VALVE			
⊙	BALL VALVE / INLINE FILTER / REMOTE CONTROL VALVE / PRESSURE REGULATOR			
⊚	AUTOMATIC CONTROLLER 'A', WALL MOUNT, 12 STATION			
⊛	AUTOMATIC CONTROLLER 'B', WALL MOUNT, 12 STATION			
---	POLYETHYLENE TUBING			
---	PVC SCHEDULE 80 MAIN			
---	PVC CLASS 200 LATERAL			
---	PVC SCHEDULE 80 SLEEVE			
⬢	CONTROLLER / STATION NUMBER			
⬢	GPM OF SYSTEM / SIZE OF BV AND RCV			
○	SIZE OF SLEEVE			
□	SIZE OF CONDUIT			

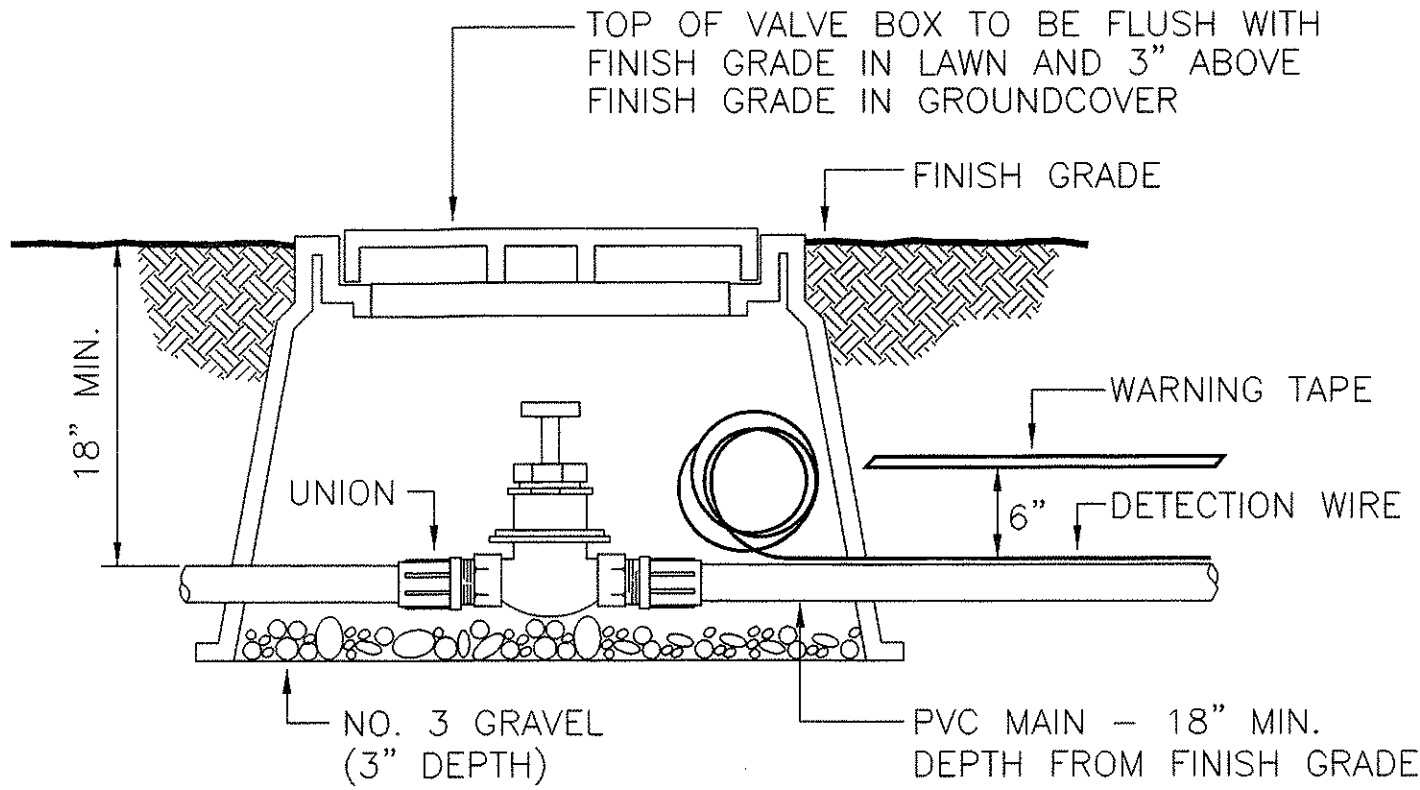


1 VINE IRRIGATION DETAIL  
L-13 NOT TO SCALE

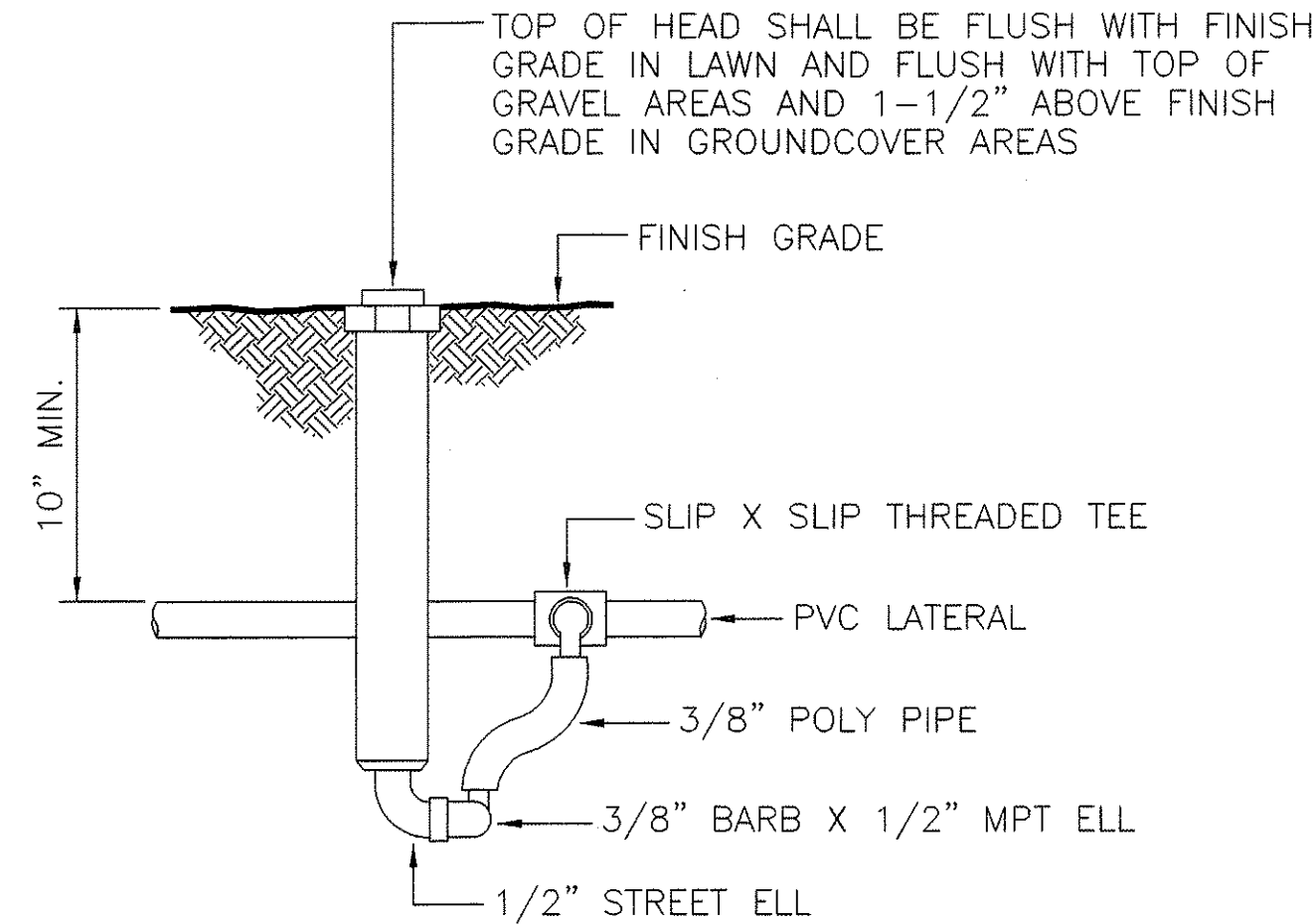


2 BACKFLOW PREVENTER DETAIL  
L-13 NOT TO SCALE

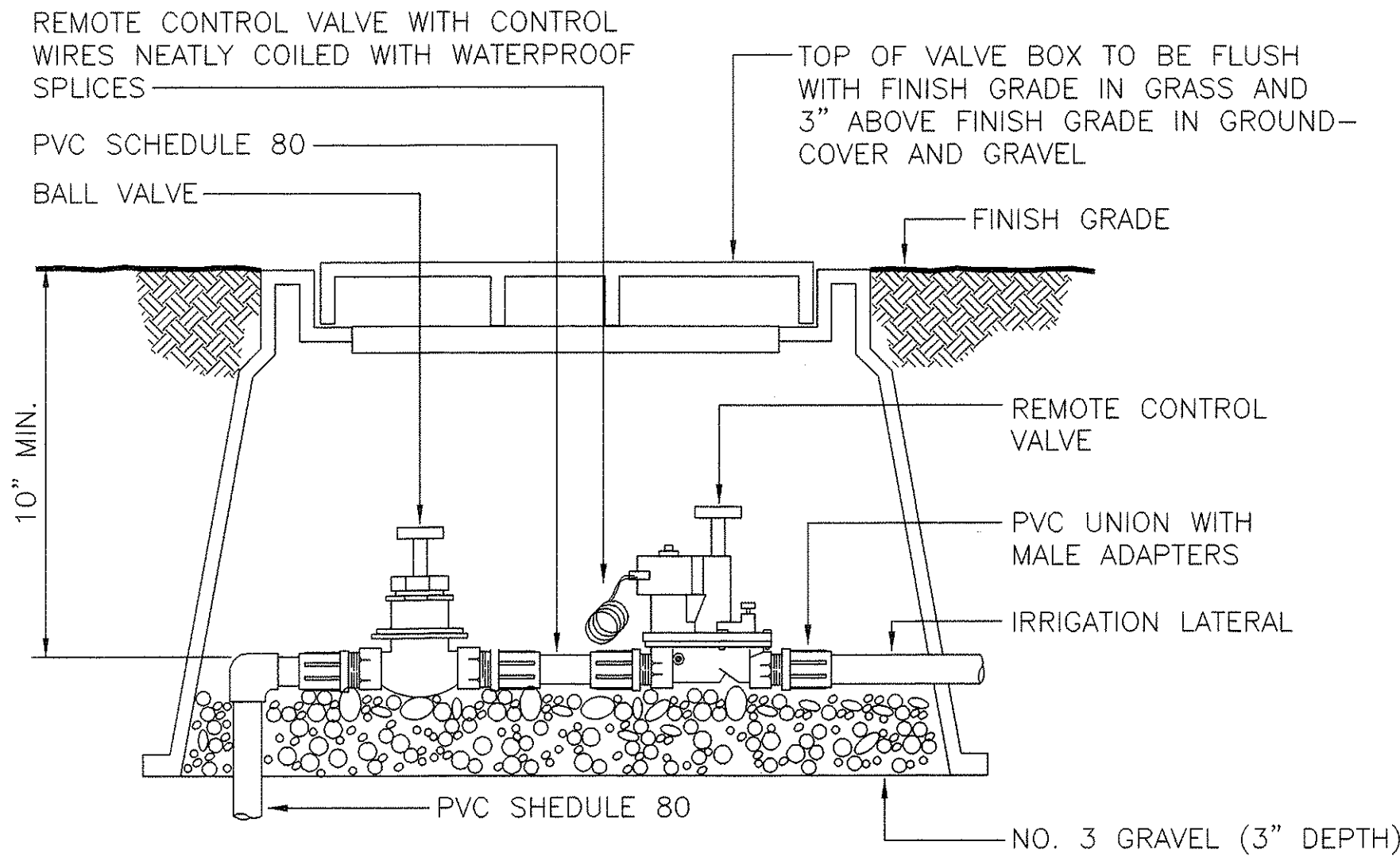
SIZE (INCHES)	H (INCHES)
3/4 TO 1-1/2	18
2 TO 3	24



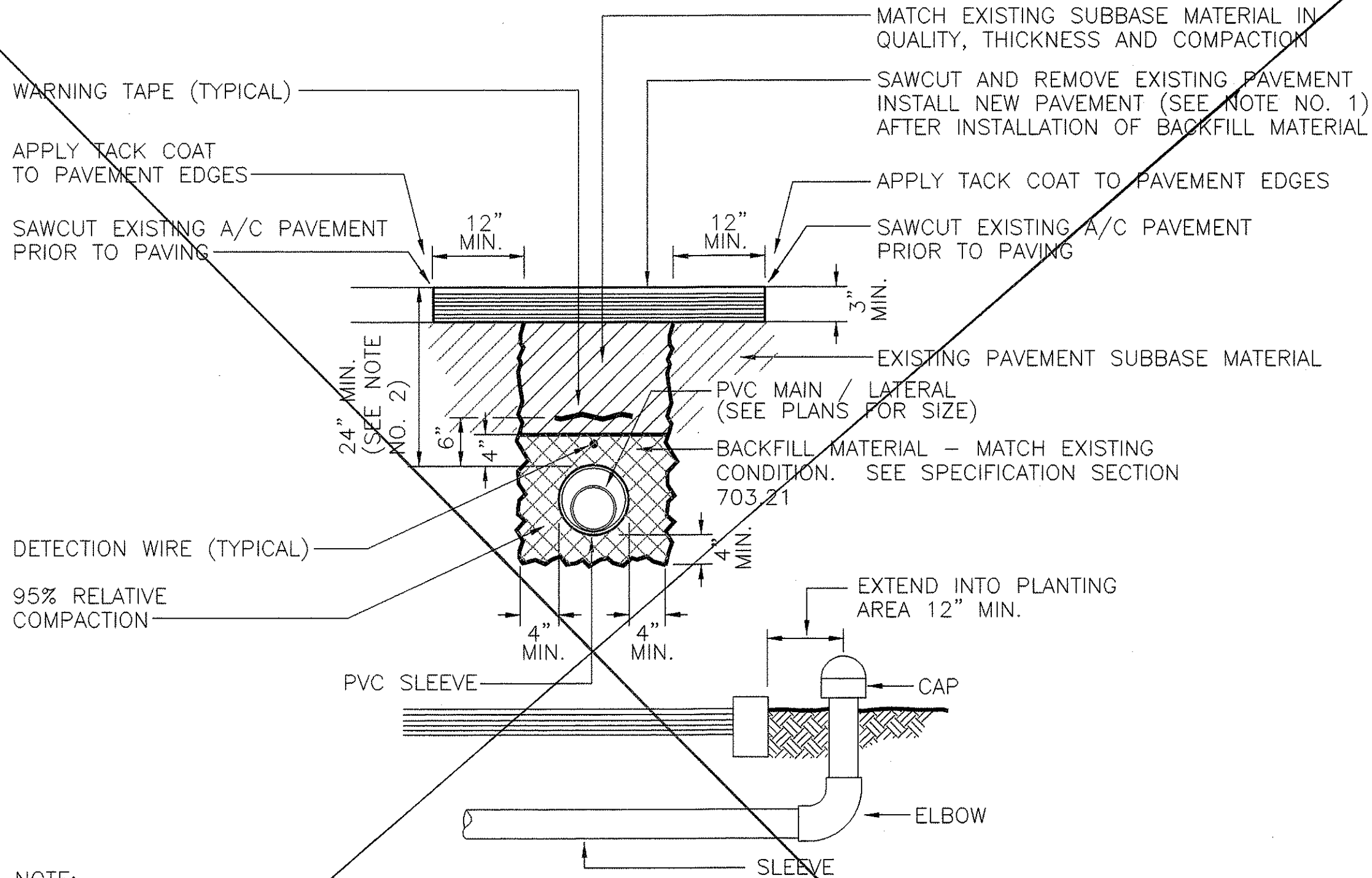
3 GATE VALVE, DETECTION WIRE / WARNING TAPE DETAIL  
L-13 NOT TO SCALE



4 6" / 12" POP-UP SPRAY DETAIL  
L-13 NOT TO SCALE



5 BALL VALVE AND REMOTE CONTROL VALVE DETAIL  
L-13 NOT TO SCALE



- NOTE:
- NEW AC PAVEMENT STRUCTURE SHALL MATCH EXISTING OR BETTER.
  - WHERE IRRIGATION LINES CROSS UTILITY LINES, LANDSCAPE CONTRACTOR SHALL AVOID EXISTING UTILITY. WHERE CONFLICT OCCURS WITH DEPTH OF IRRIGATION AND UTILITY LINES UNDER PAVEMENT AREAS, LOCATE IRRIGATION LINES, SLEEVES, AND CONDUITS MINIMUM OF 18" BELOW FINISH GRADE.

6 SLEEVE DETAIL  
L-13 NOT TO SCALE



THIS WORK WAS PREPARED BY  
ME OF UNDER MY SUPERVISION

*Melvin S. Kurakawa*

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

LANDSCAPE IRRIGATION DETAILS

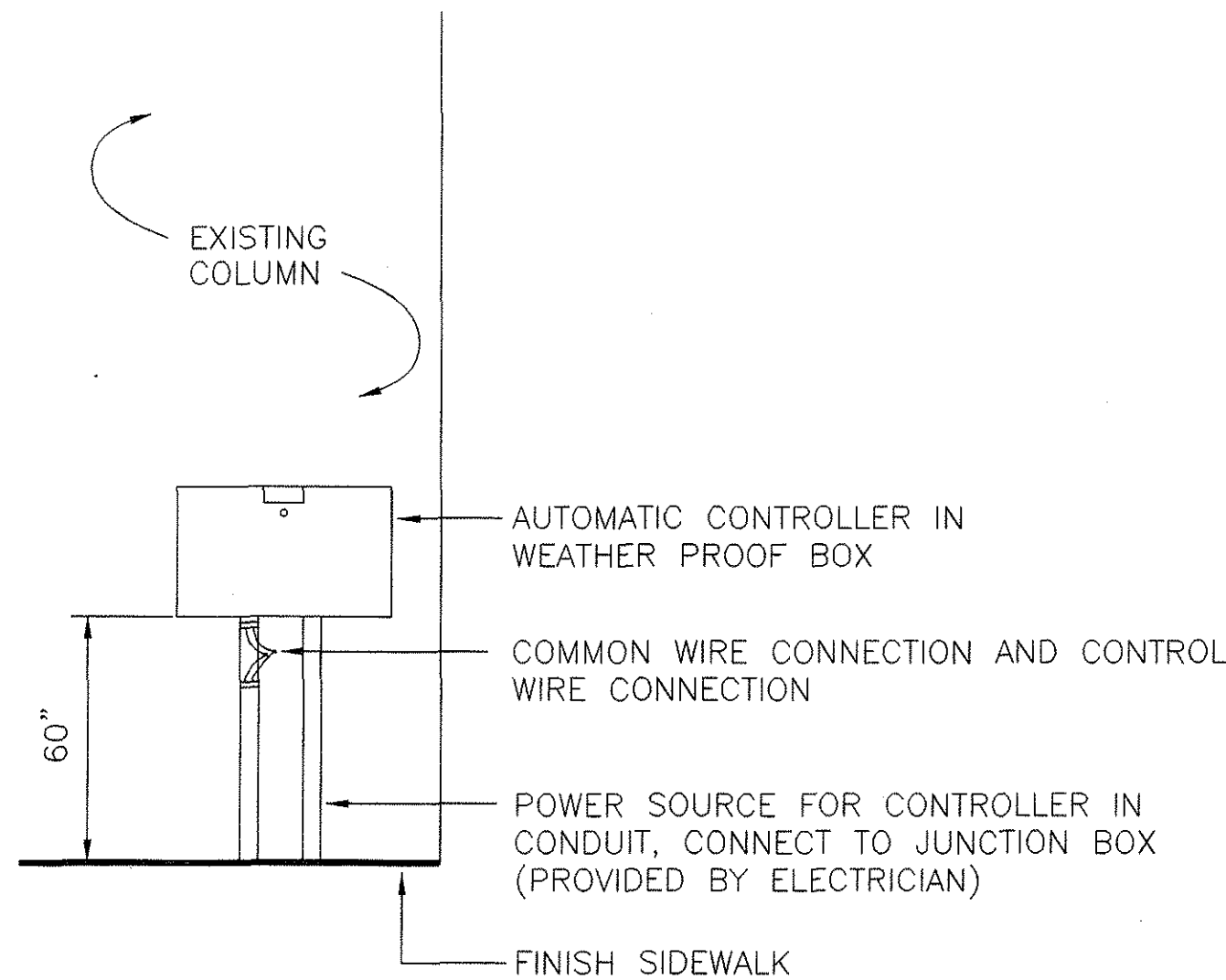
WAIALAE AVENUE LANDSCAPE IMPROVEMENTS  
VICINITY OF KAHALA MALL  
PROJECT NO. 7801A-01-98

SCALE: NONE DATE: NOVEMBER 1999

SHEET NO. 13 OF 14 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	7801A-01-98	2000	14	14



- NOTE:
1. MOUNT CONTROLLER 60" FROM FINISH FLOOR TO BOTTOM OF CONTROLLER.
  2. ALL WIRING TO BE INSTALLED AS PER LOCAL CODE.
  3. SEE MANUFACTURER'S RECOMMENDATIONS FOR MOUNTING.

1 AUTOMATIC CONTROLLER DETAIL  
L-14 NOT TO SCALE

NOTE: SET ALL THRUST BLOCKS AGAINST UNDISTURBED SOIL

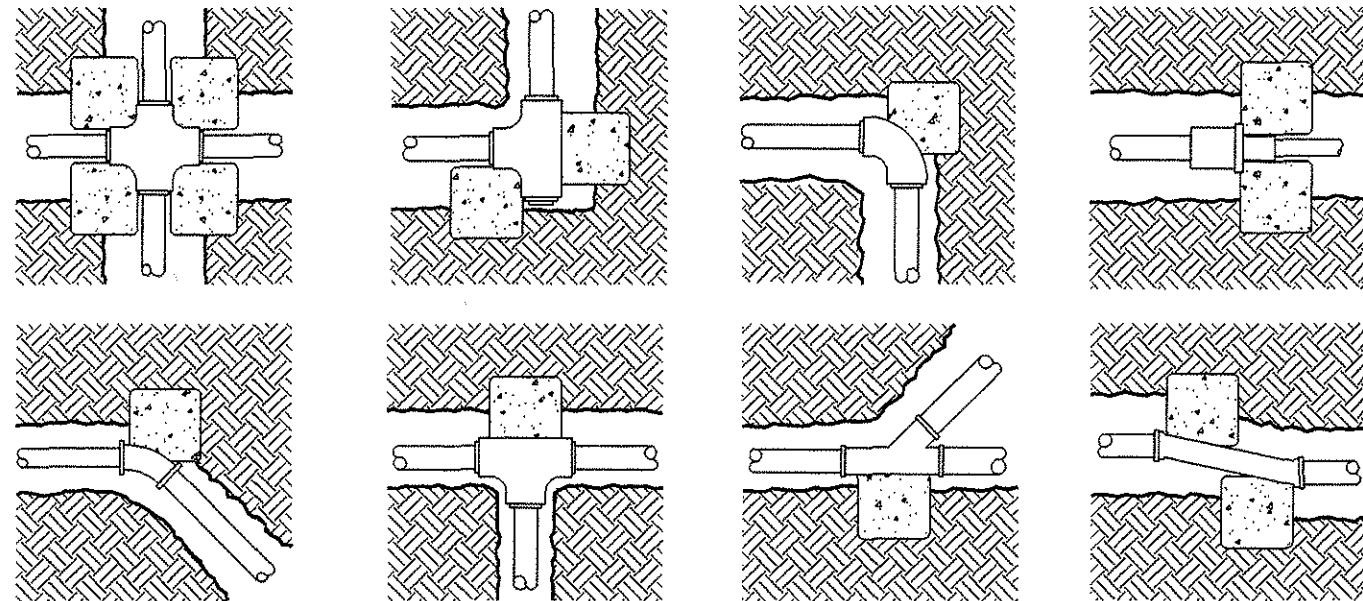
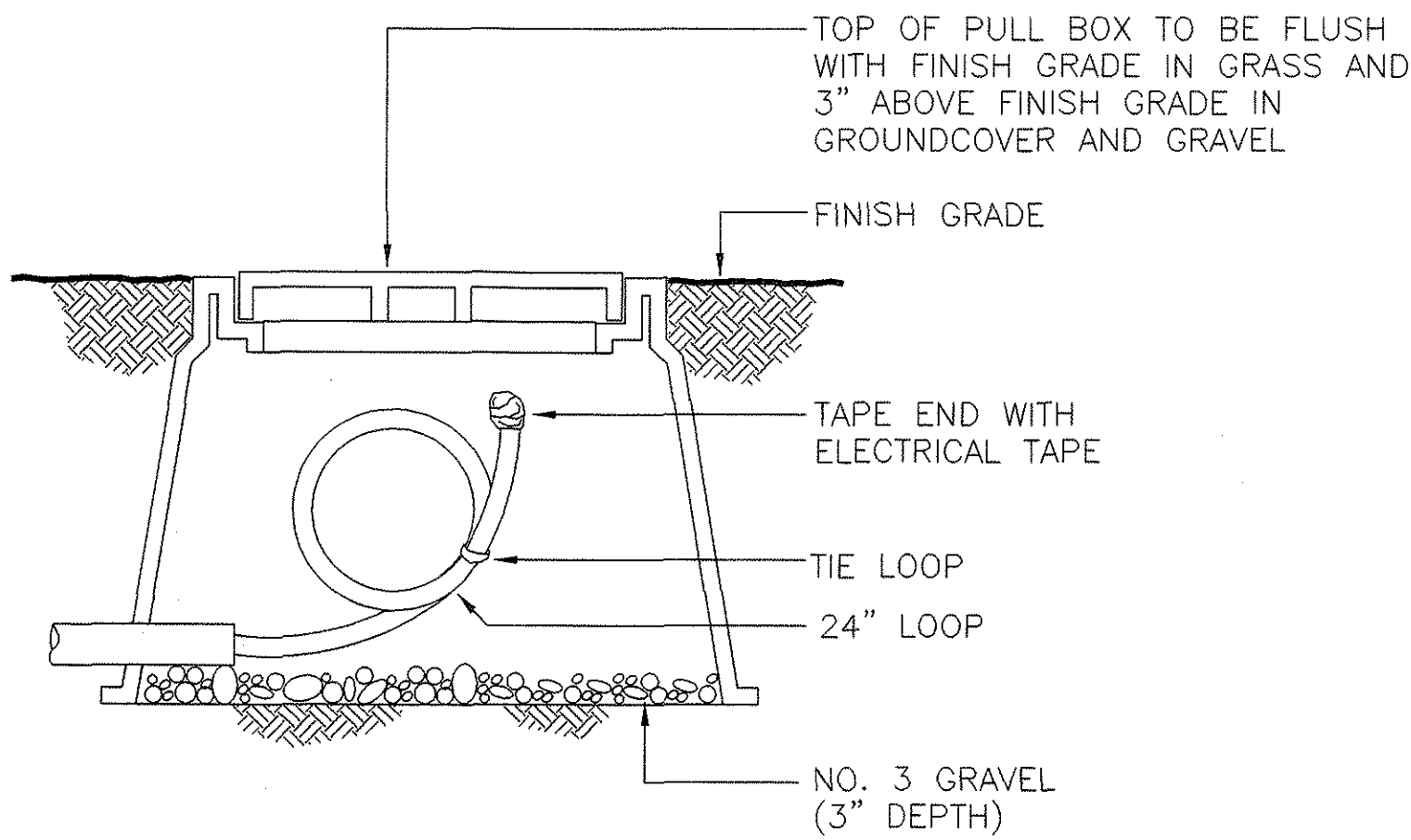


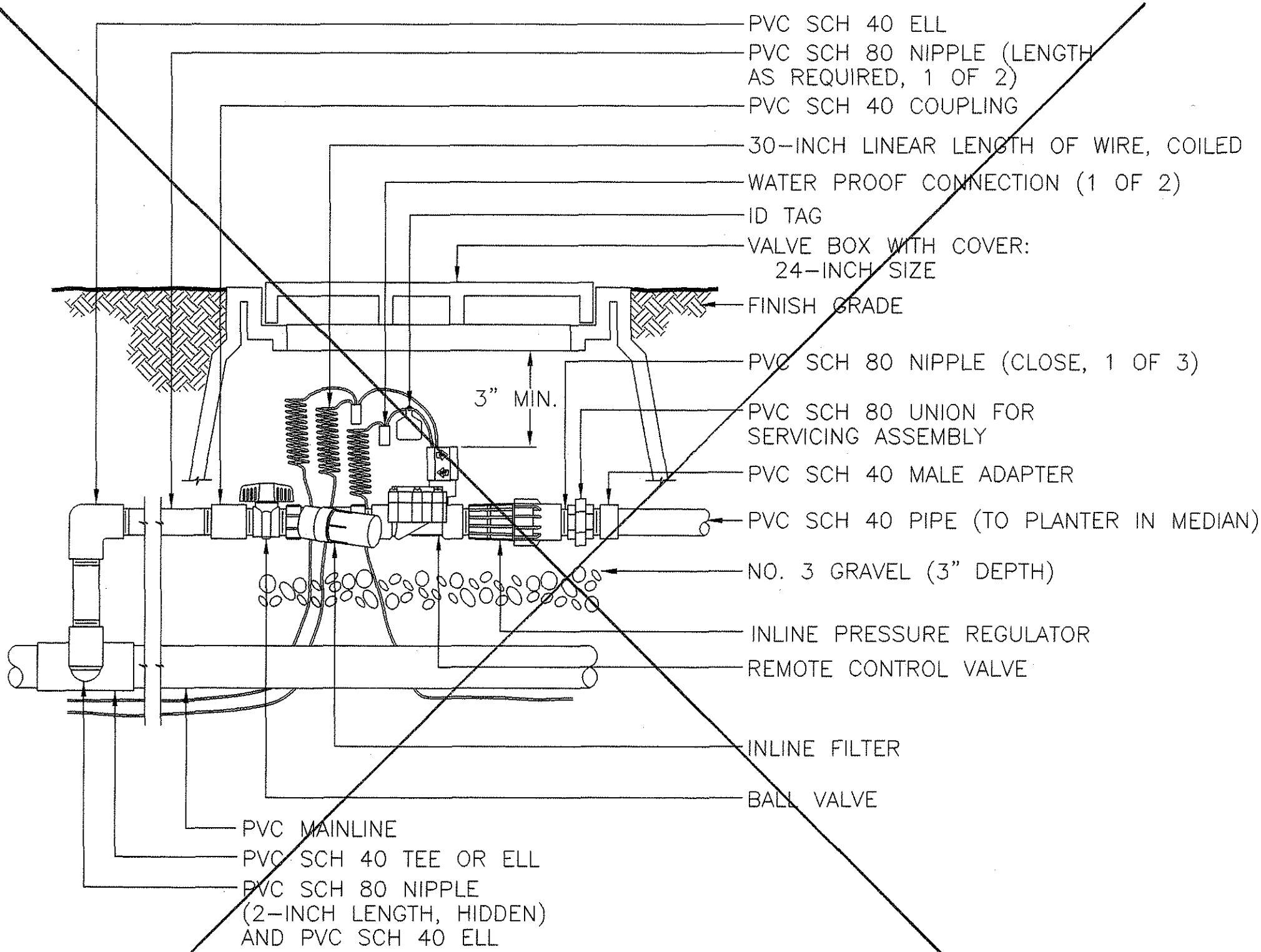
TABLE FOR BEARING AREA OF THRUST BLOCKS (SQ. FT.)

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

2 TYPICAL THRUST BLOCK DETAIL  
L-14 FOR IRRIGATION MAINS  
NOT TO SCALE



3 PULL BOX DETAIL  
L-14 NOT TO SCALE



- NOTE:
1. IRRIGATION LATERAL FROM REMOTE CONTROL VALVE TO THE MEDIAN PLANTER SHALL BE 1/2" PVC SCHEDULE 40 PIPE.
  2. COMPRESSION FITTINGS SHALL BE USED TO CONVERT FROM THE 1/2" PVC SCHEDULE 40 PIPE TO THE 1/2" POLYETHYLENE TUBE.

4 CONTROL ZONE KIT DETAIL FOR DRIP SYSTEM  
L-14 NOT TO SCALE



THIS WORK WAS PREPARED BY  
ME OF UNDER MY SUPERVISION

*[Signature]*

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

LANDSCAPE IRRIGATION DETAILS

WAIALAE AVENUE LANDSCAPE IMPROVEMENTS  
VICINITY OF KAHALA MALL  
PROJECT NO. 7801A-01-98

SCALE: AS SHOWN DATE: NOVEMBER 1999  
SHEET NO. 14 OF 14 SHEETS

"AS-BUILT"