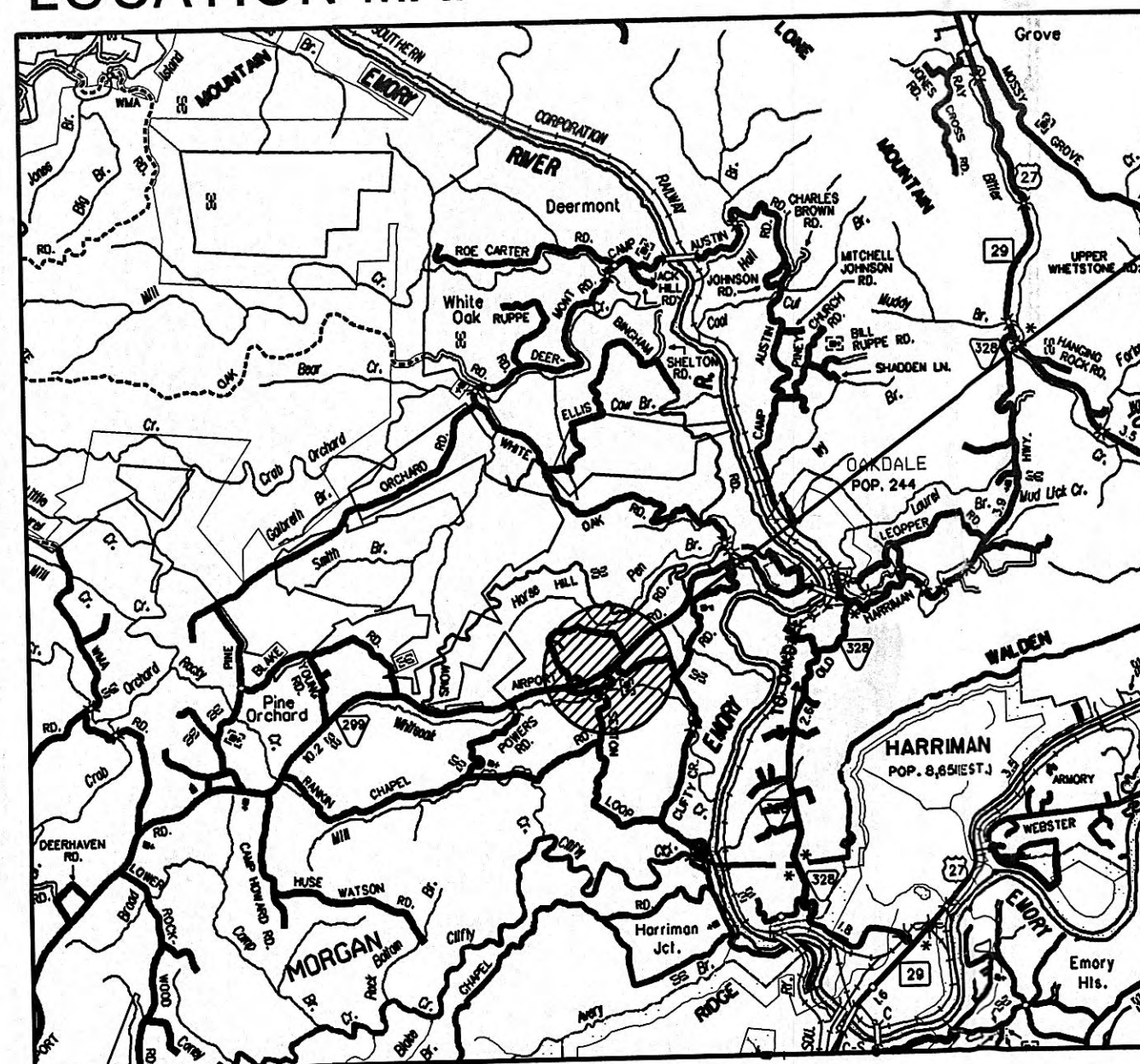


HARRIMAN UTILITY BOARD

Roane County, Tennessee

WATER LINE REPLACEMENTS AIRPORT ROAD

LOCATION MAP



PROJECT LOCATION

Project Engineer



PLANS REVIEWED AND APPROVED BY HARRIMAN UTILITY BOARD

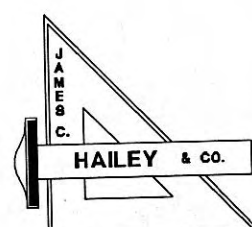
Frankie Davis

4-2-2013
DATE

SHEET INDEX

TITLE SHEET	
WATER LINE ADDITIONS	1
STANDARD DETAILS	2
STANDARD DETAILS	3

SET NUMBER _____



JAMES C. HAILEY & CO.

PHONE: 615-883-4933

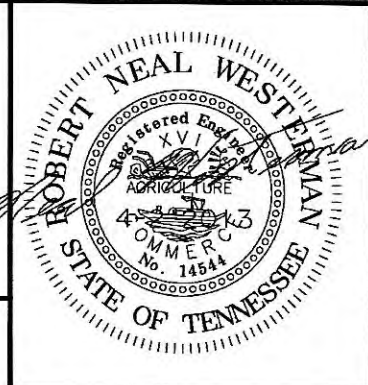
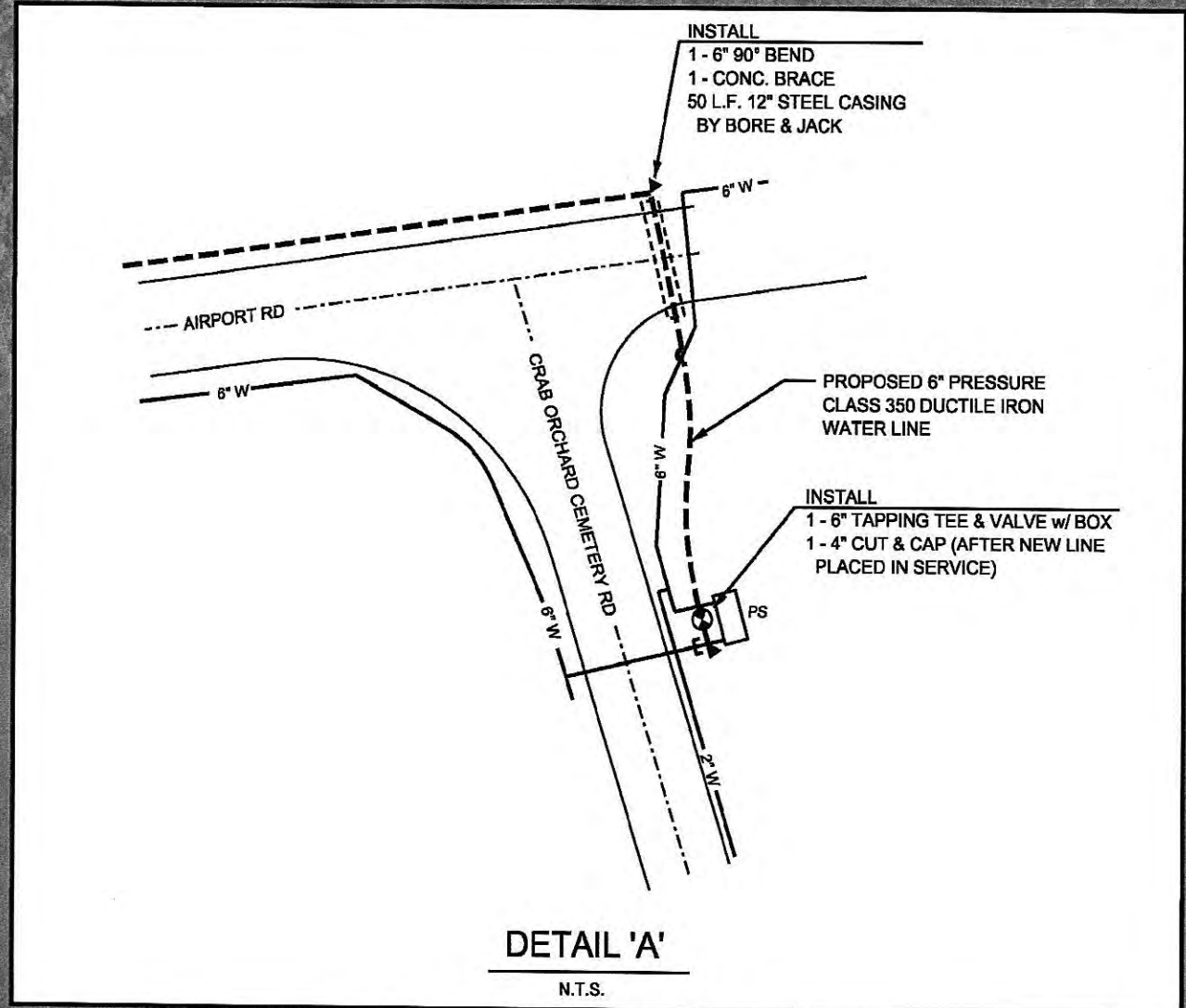
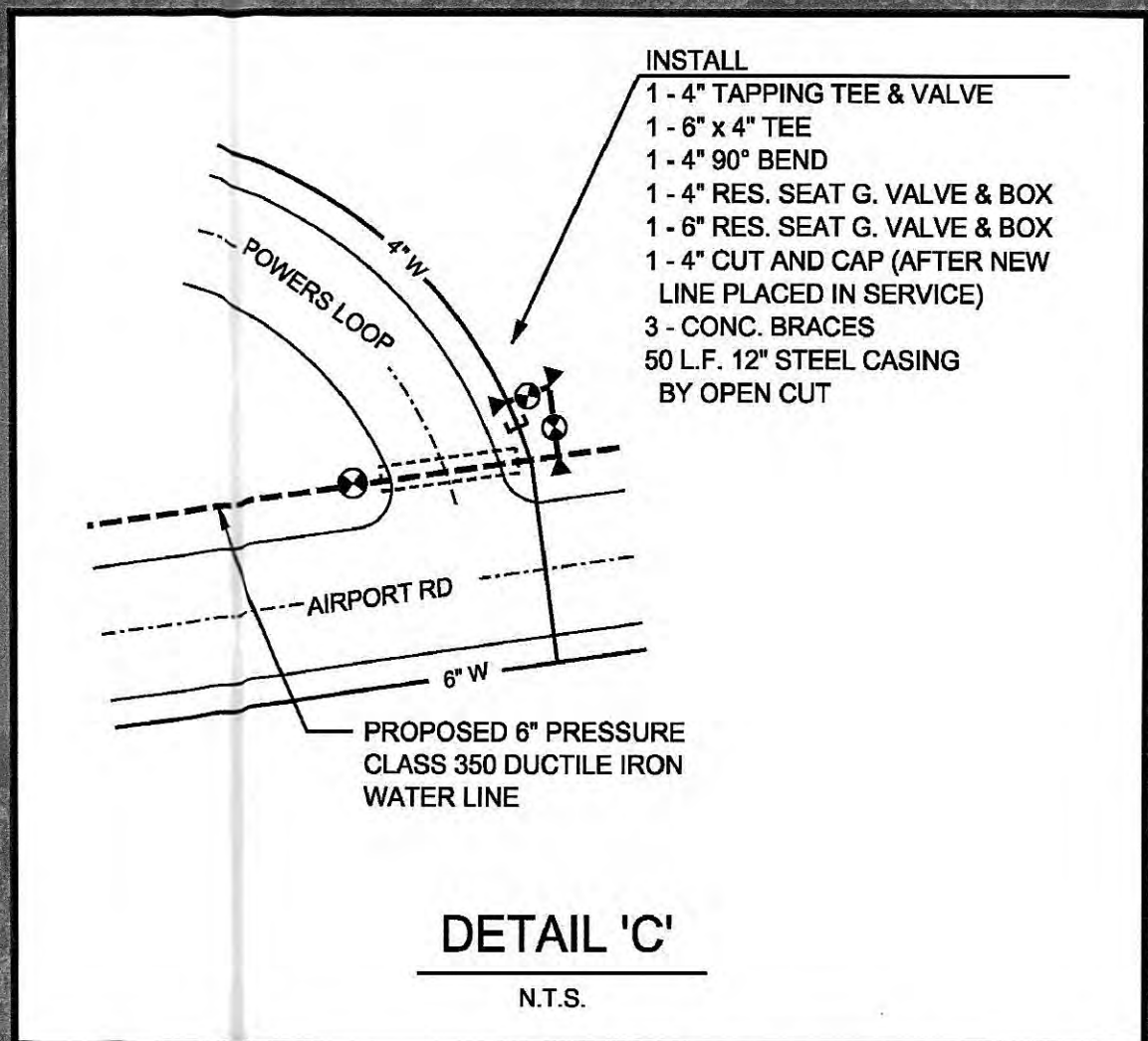
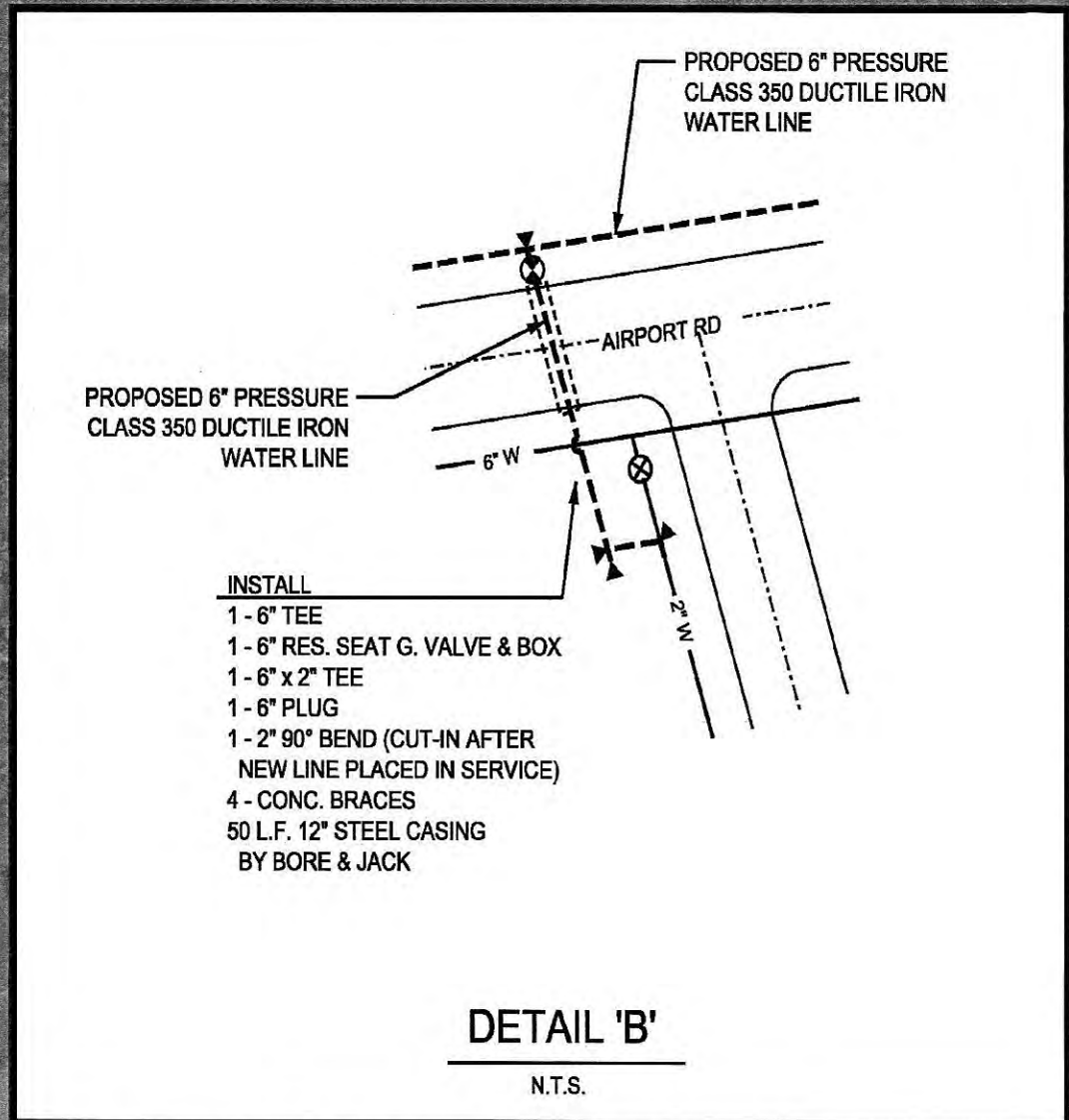
7518 HIGHWAY 70 S - SUITE 100 NASHVILLE, TENNESSEE

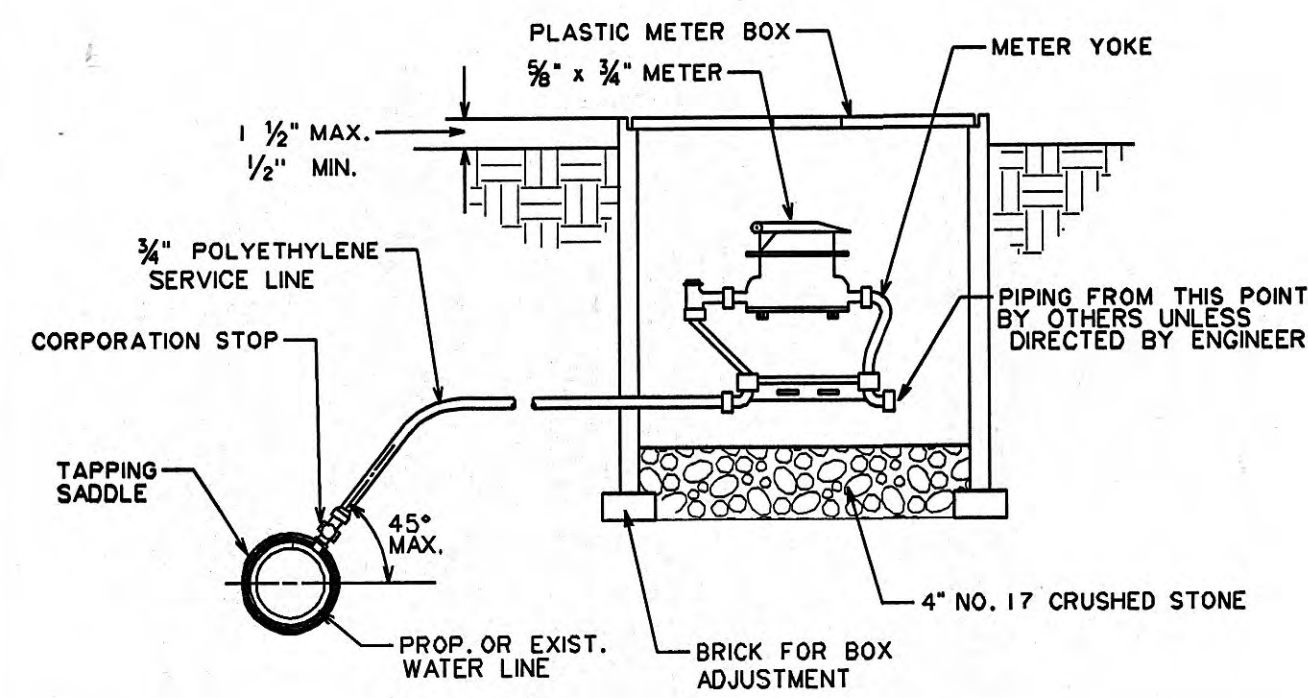
FAX: 615-883-4937

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JCH PROJECT NO. 13133

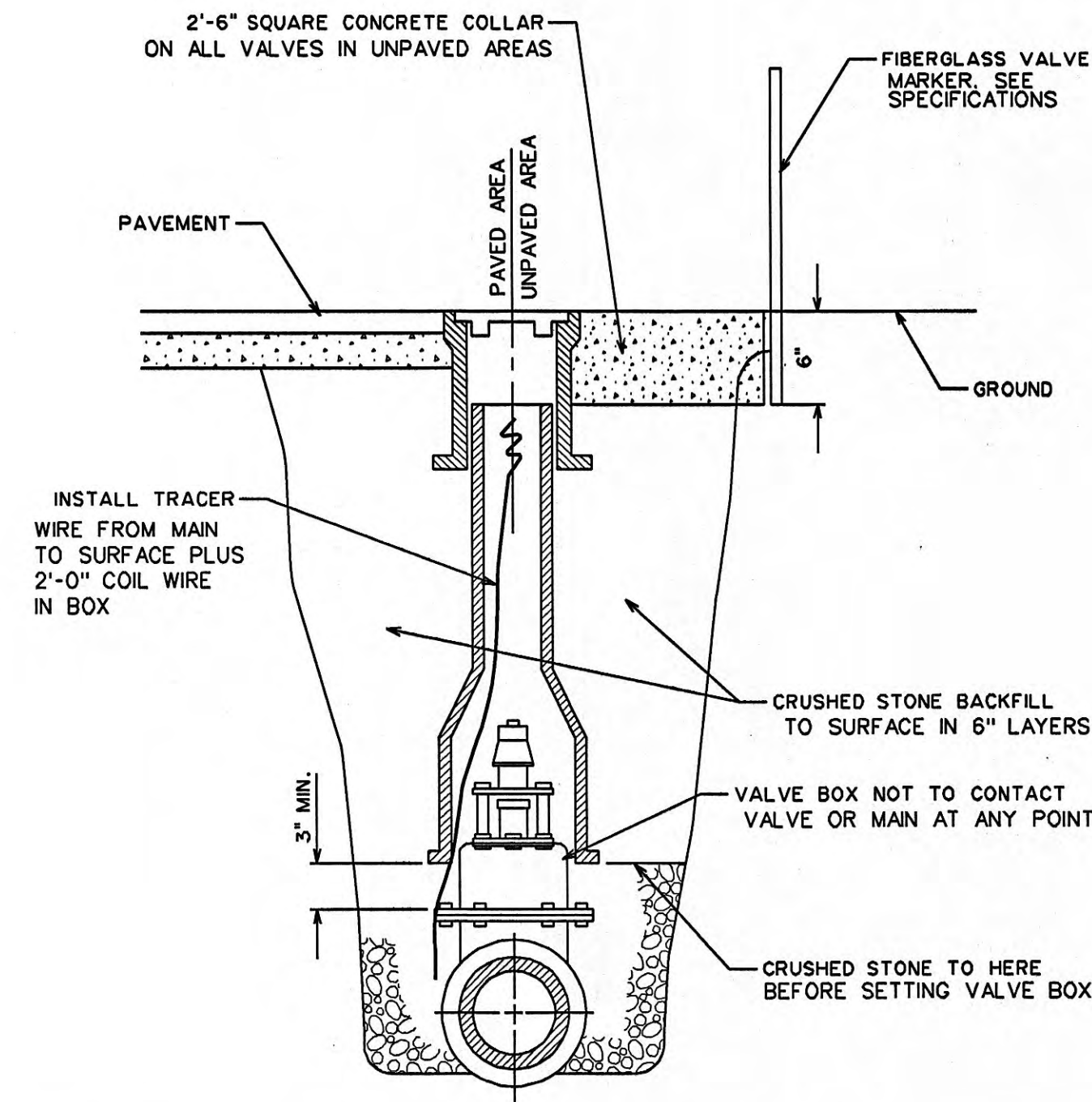
HARRIMAN - WATER LINE REPLACEMENT - AIRPORT ROAD



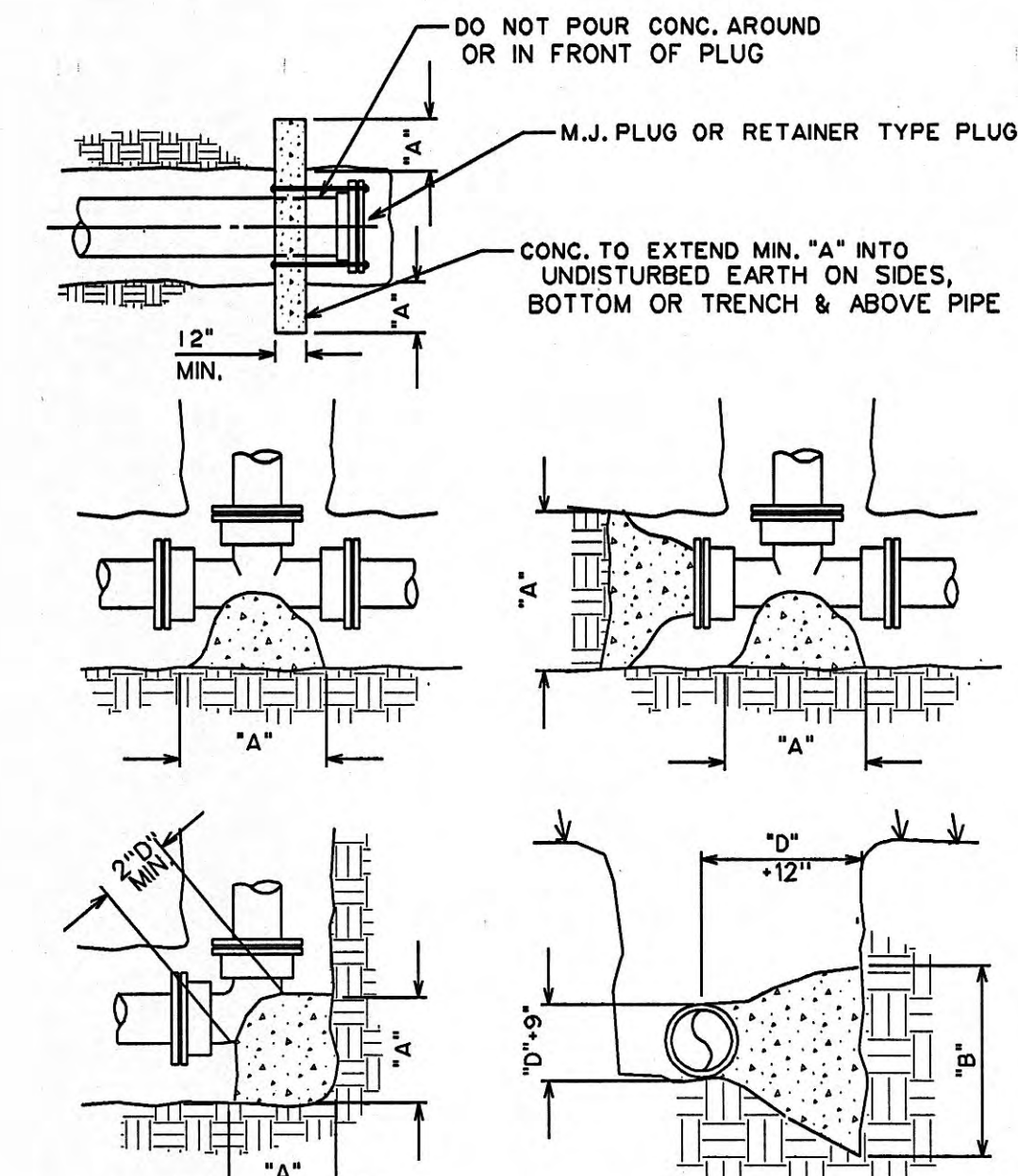


- NOTES:
1. NO. 17 CRUSHED STONE TO BE PROVIDED FOR METER SUPPORT IF PLASTIC SERVICE LINE IS USED.
 2. SERVICE LINE TO RUN FROM MAIN TO METER BOX ALONG THE SHORTEST, MOST DIRECT ROUTE POSSIBLE UNLESS OTHERWISE DIRECTED BY RESIDENT INSPECTOR.
 3. SERVICE LINE TO BE CONTINUOUS FROM MAIN LINE TO METER YOKE WITHOUT COUPLINGS.

TYPICAL SERVICE CONNECTION



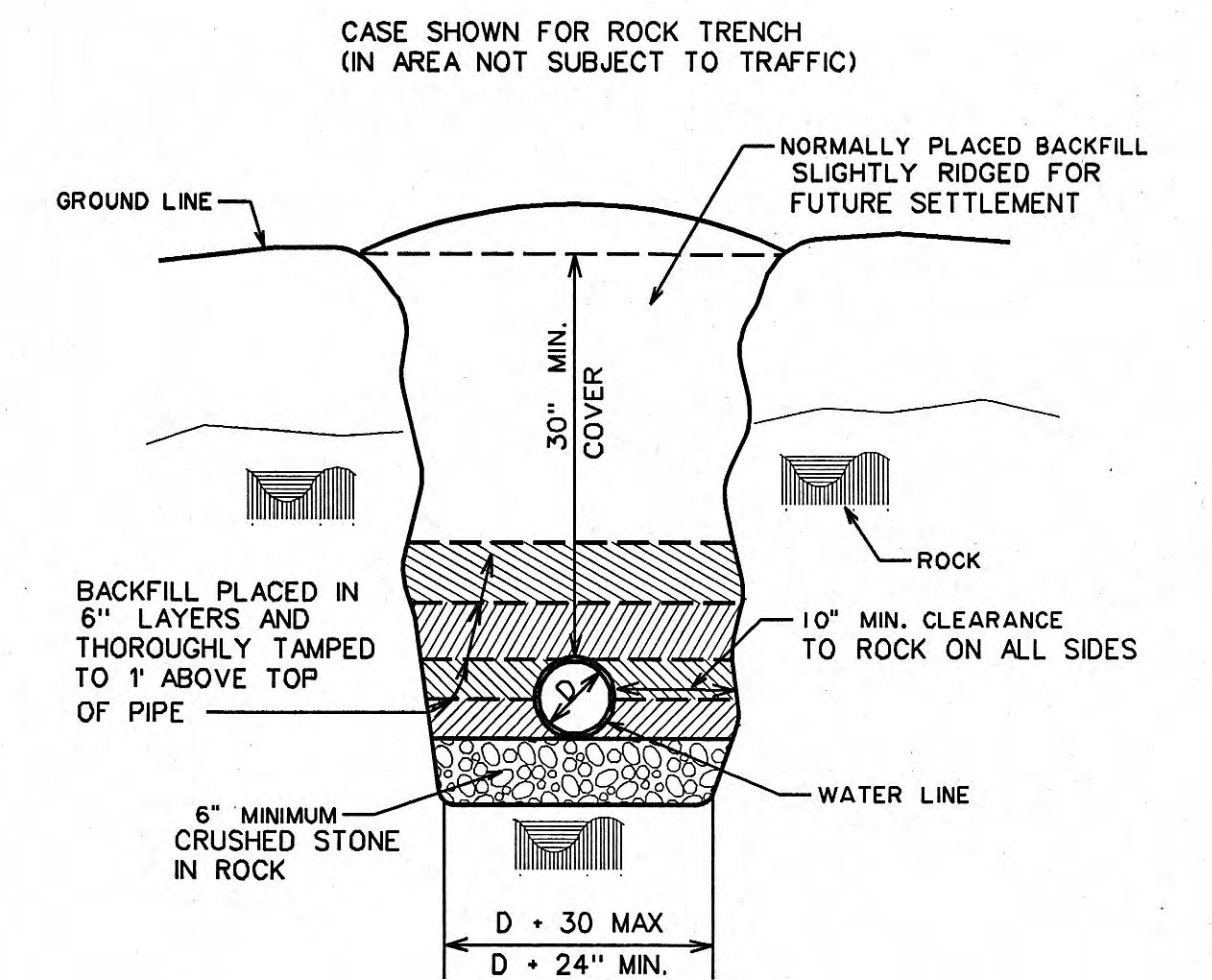
TYPICAL VALVE BOX SETTING



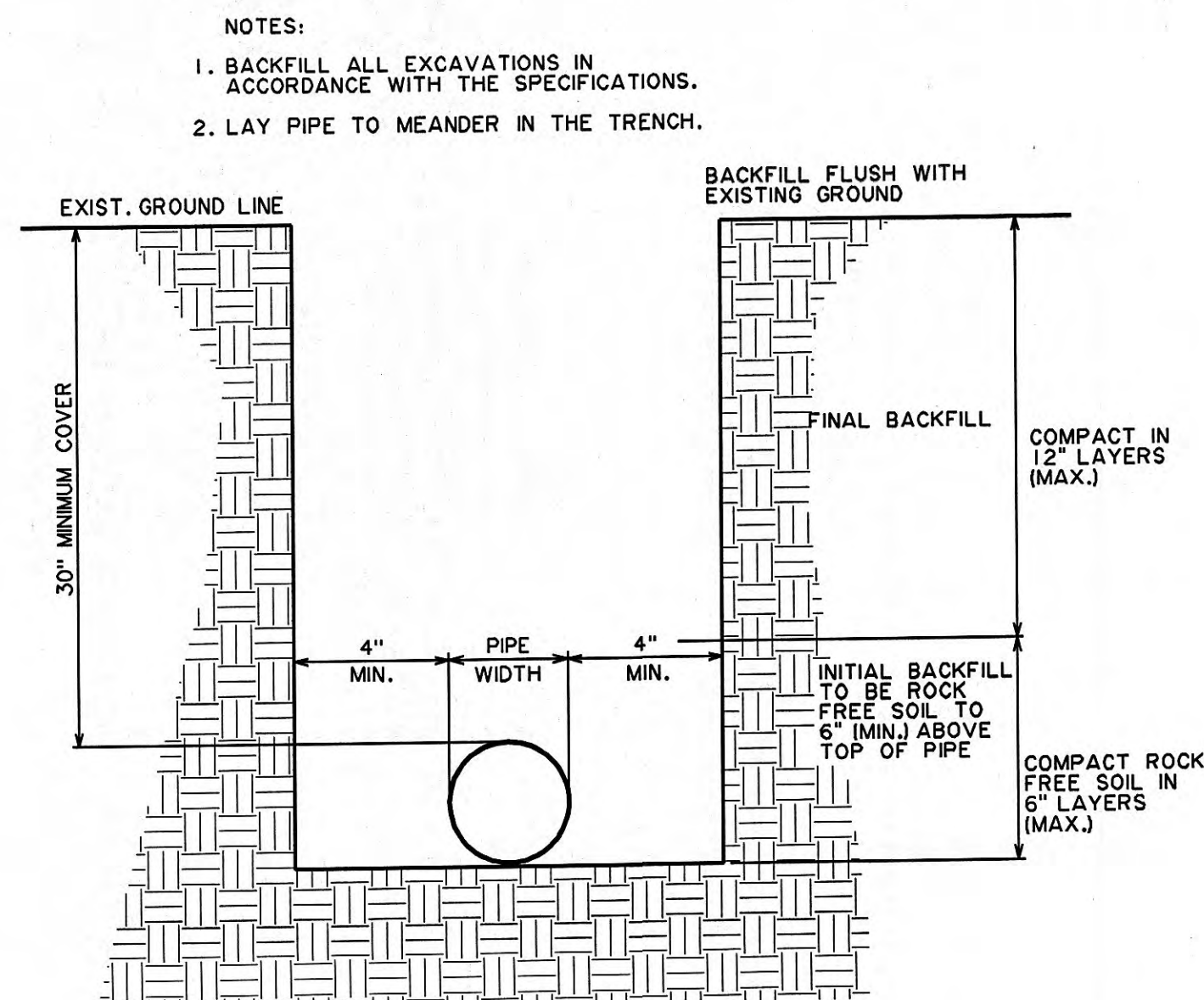
BLOCK MUST BE POURED AGAINST UNDISTURBED EARTH (TYP.)

PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		TEE		DEAD END	
	A	B	A	B	A	B	A	B	A	B
6" OR UNDER	2'-0"	2'-0"	1'-6"	1'-6"	1'-6"	1'-6"	2'-0"	2'-0"	1'-6"	1'-6"
8"	2'-3"	2'-3"	1'-9"	1'-9"	1'-9"	1'-9"	2'-6"	2'-6"	2'-0"	2'-0"
10"	2'-6"	2'-6"	2'-0"	2'-0"	2'-0"	2'-0"	3'-0"	3'-0"	2'-4"	2'-4"
12"	3'-6"	3'-0"	2'-6"	2'-6"	2'-3"	2'-3"	4'-0"	3'-6"	2'-9"	2'-9"
16"	4'-0"	4'-0"	3'-0"	3'-0"	2'-6"	2'-6"	5'-6"	4'-0"	4'-0"	3'-0"
20"	5'-6"	4'-6"	4'-0"	3'-6"	3'-0"	3'-0"	6'-6"	5'-0"	5'-0"	3'-6"
24"	7'-0"	5'-0"	5'-0"	4'-0"	3'-6"	3'-6"	8'-0"	6'-0"	6'-0"	4'-0"
30"	9'-0"	6'-0"	6'-6"	4'-6"	4'-0"	4'-0"	12'-0"	6'-0"	7'-9"	5'-0"

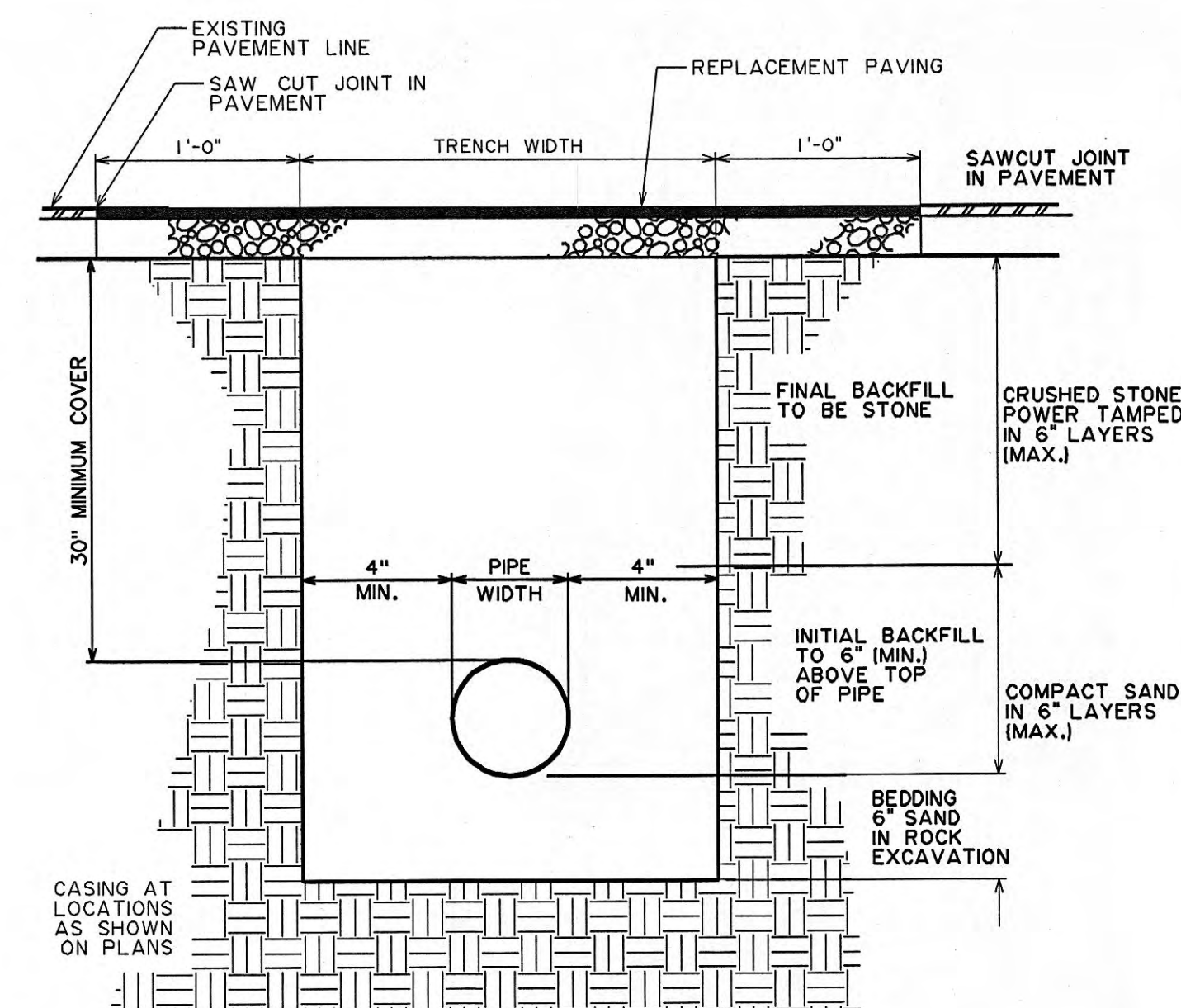
CONC. THRUST BLOCK (BRACE)



TYPICAL TRENCH SECTION

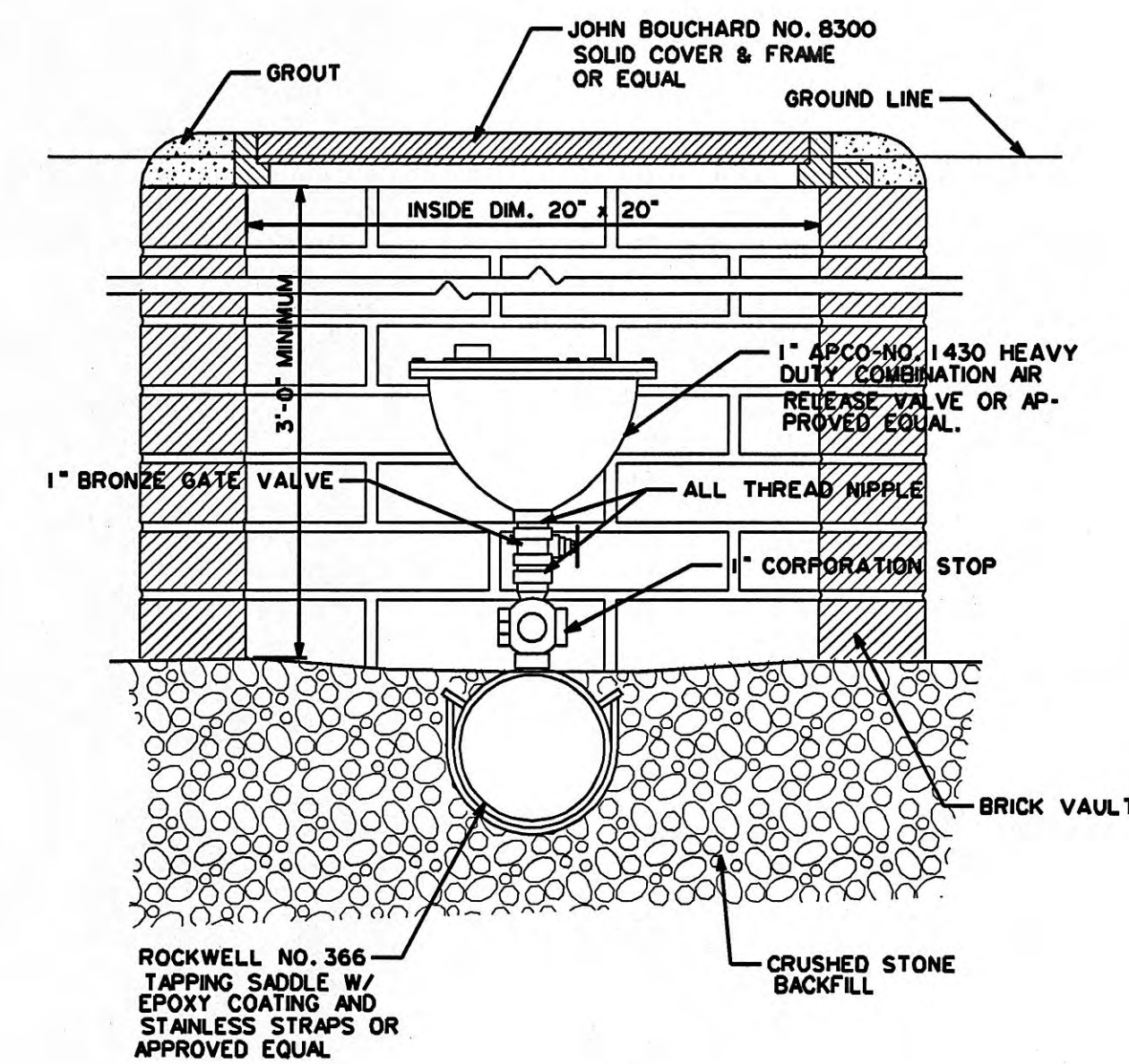


TYPICAL TRENCH SECTION IN SOIL EXCAVATION



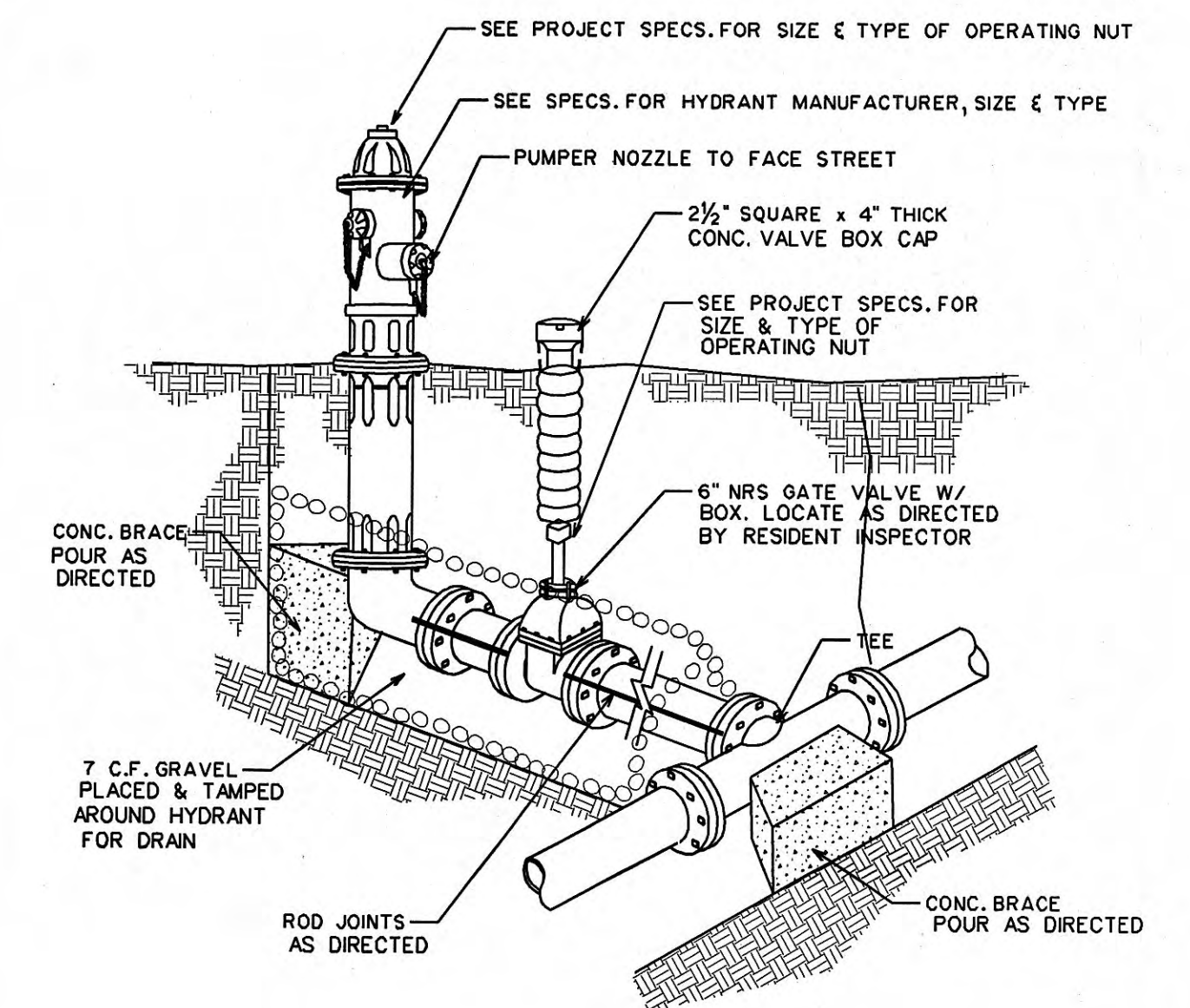
- NOTES:
1. CRUSHED STONE DRIVES SHALL BE PREPARED IN ACCORDANCE WITH THIS DETAIL EXCEPT THAT THE REPLACEMENT PAVING SHALL BE DELETED.
 2. WHEN CASING IS REQUIRED, THE PIPE WIDTH AND MINIMUM COVER SHALL REFER TO THE CASING DIAMETER.

TYPICAL TRENCH SECTION UNDER PAVEMENT

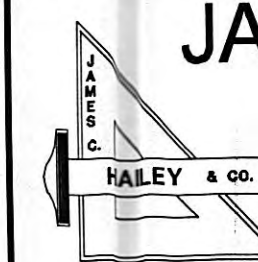


NOTE: ALL FITTINGS AND VALVES TO BE BRASS

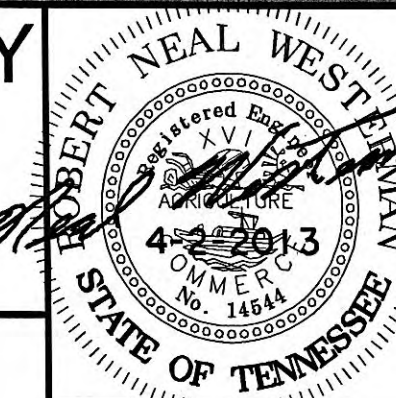
AIR RELEASE VALVE ASSEMBLY



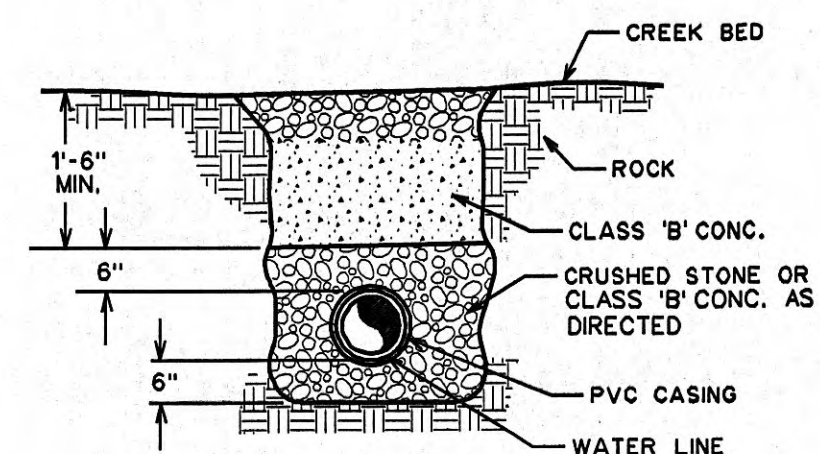
TYPICAL FIRE HYDRANT INSTALLATION



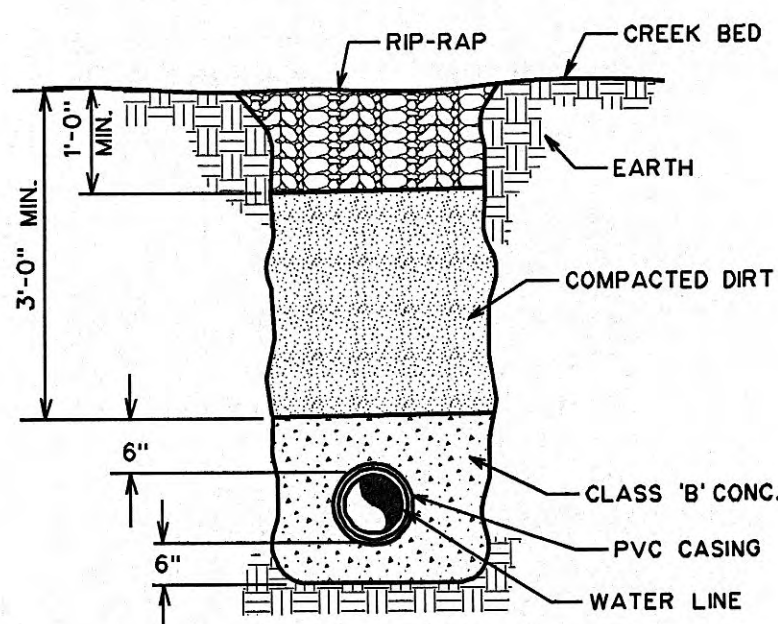
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HARRIMAN UTILITY BOARD Roane County, Tennessee			STANDARD DETAILS			SHEET 2
DESIGN RNW	DRAWN LLB	CHECKED RNW	DATE MAR. 2013	SCALE NONE	PROJECT NO. 13133	

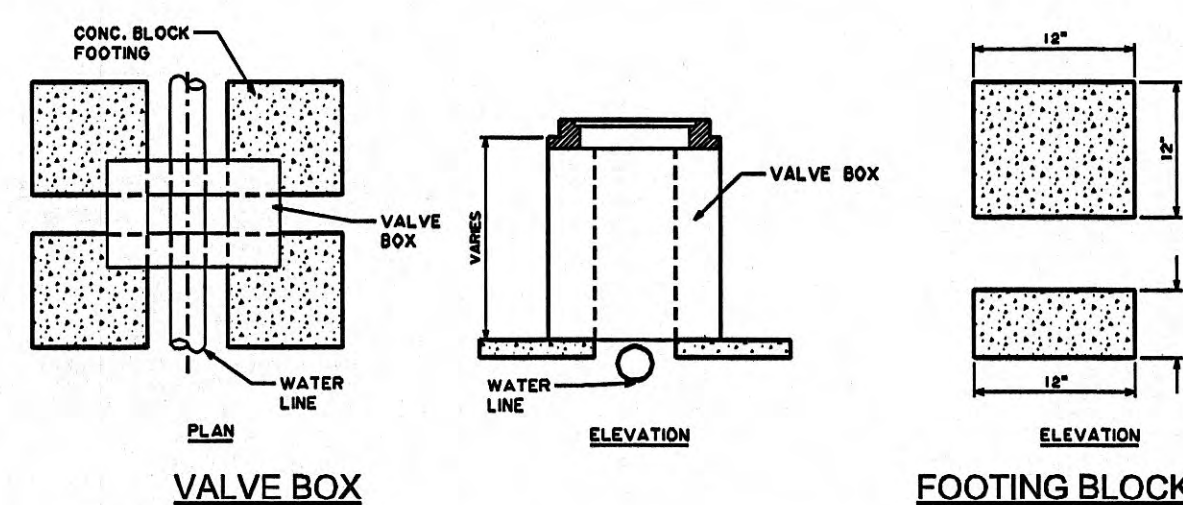


IN ROCK

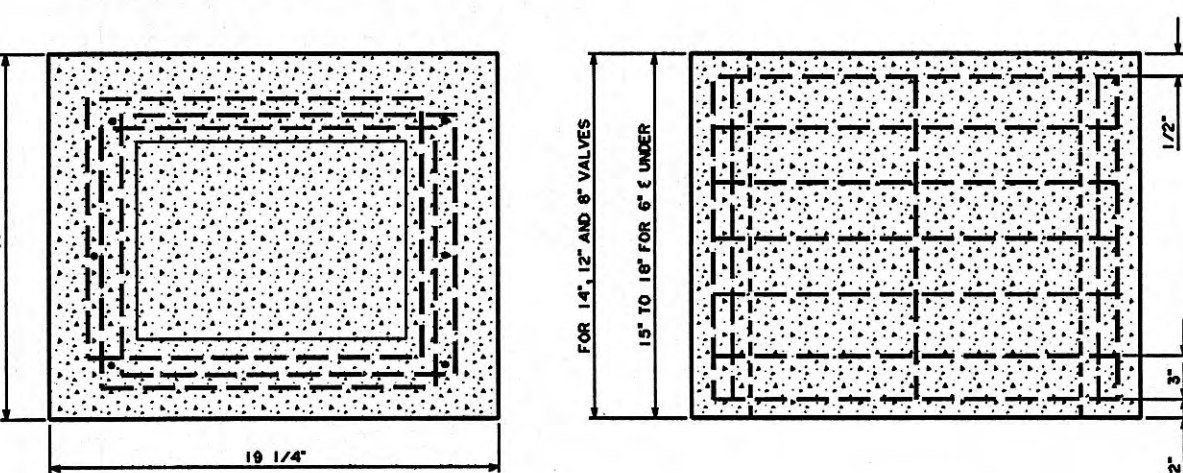


IN EARTH

TYPICAL STREAM CROSSING DETAIL

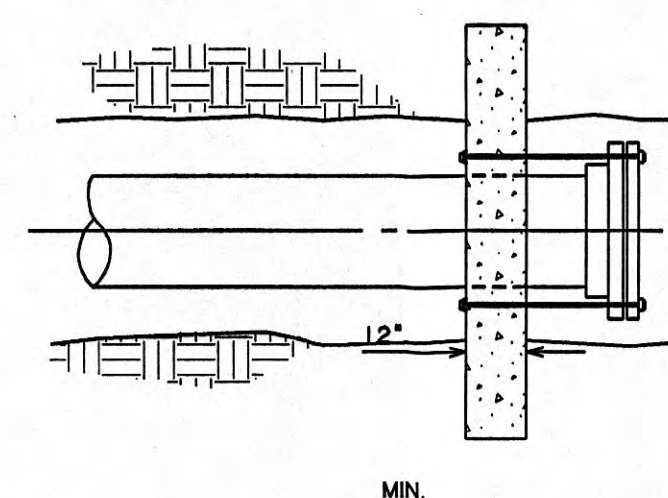


- NOTES:**
- FOUR (4) CONCRETE BLOCKS OF THE SIZE AND SHAPE SHOWN ARE TO BE PLACED UNDER EACH BOX, ONE UNDER EACH CORNER OF BOX.
 - NO REINFORCING STEEL IN FOOTING BLOCKS. CONCRETE MIX TO BE (1) PART CEMENT, (2) PARTS SAND AND (4) PARTS NO. 2 CRUSHED STONE OR GRAVEL. VOLUME FOR ONE BLOCK = .333 CU. FT. WEIGHT OF ONE BLOCK = 50 LBS. ±. WEIGHT FOR ALL FOUR BLOCKS = 200 LBS. BEARING AREA ON SOL. = 576 SQ. IN.



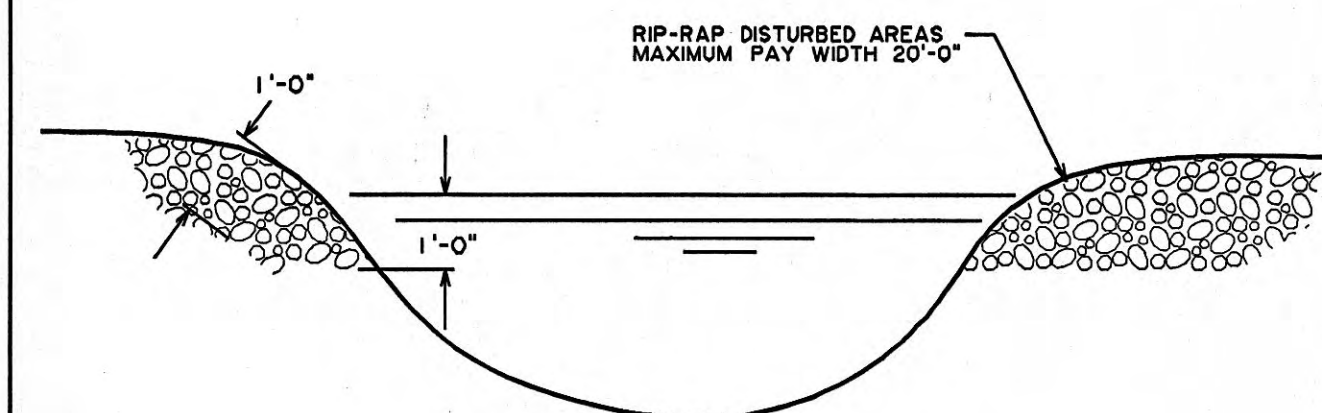
- NOTES:**
- REINFORCING TO BE 1/4" STEEL REINFORCING RODS PLACED HORIZONTALLY IN SQUARES 16 1/4" x 14" AND TO BE STAGGERED APPROXIMATELY AS SHOWN ON PLAN, ONE FOR EVERY 3' OF HEIGHT OF BOX. VERTICAL BARS ARE TO BE 1" SHORTER THAN THE HEIGHT OF THE BOX AND SHALL BE PLACED IN EACH CORNER OF THE BOX AND AT THE HALFWAY POINT TO EACH SIDE OF THE BOX USING 8 RISERS TO THE BOX. TOTAL LENGTH OF REINFORCING ROD FOR BOX APPROX. 47'
 - CONCRETE MIXTURE TO BE (1) PART CEMENT, (2) PARTS SAND AND (4) PARTS NO. 2 CRUSHED STONE OR GRAVEL. TOTAL VOLUME OF MIXTURE FOR BOX APPROXIMATELY 2 CU. FT.

STANDARD CONCRETE VALVE BOX

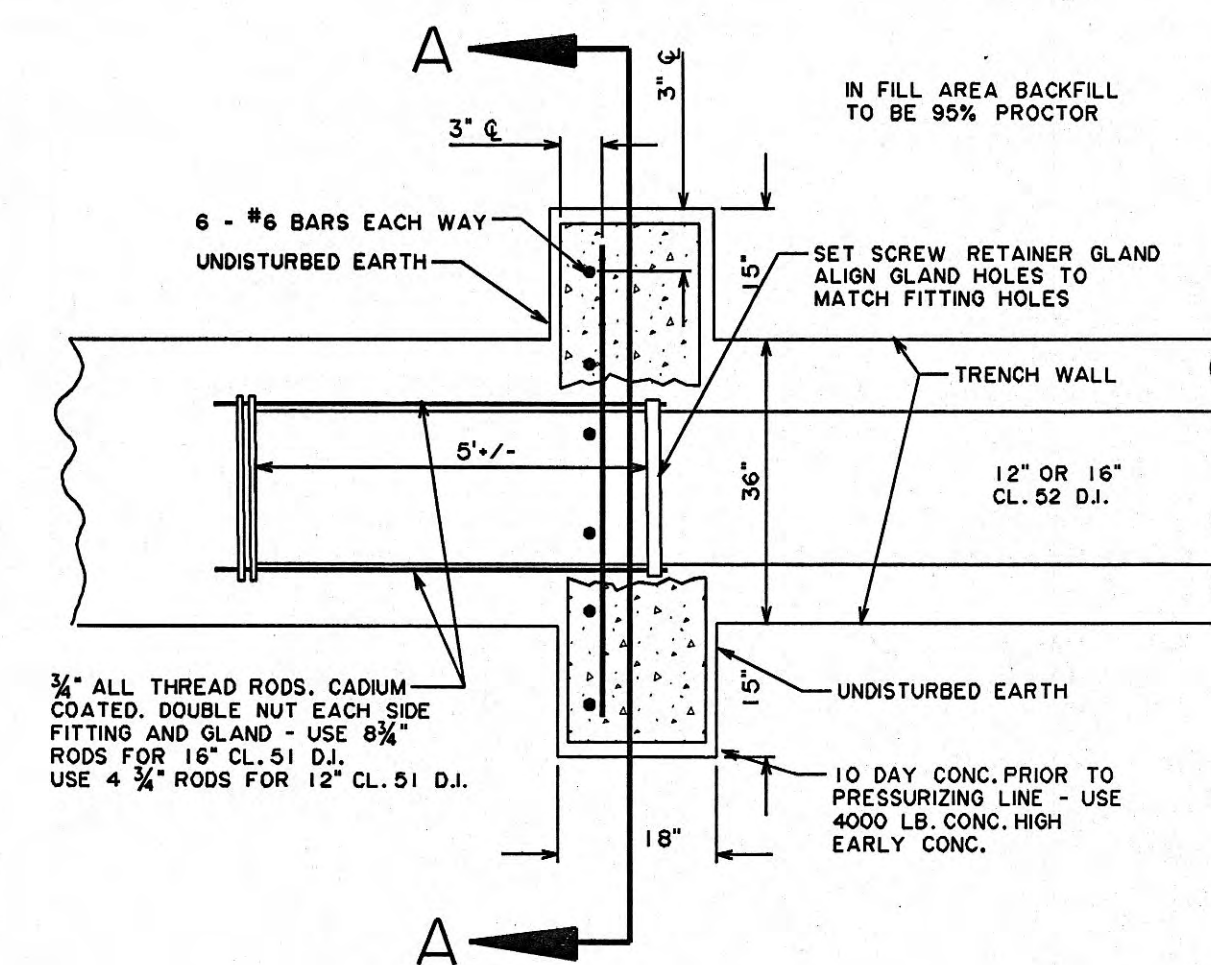


SIZE	2	4	6	8	10	12	16	20
* OF RODS	2	2	4	5	7	10	16	24

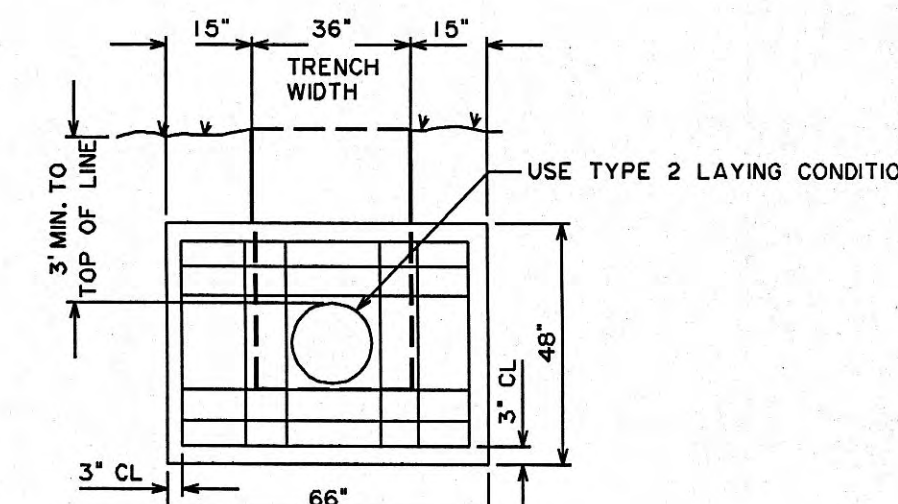
CONC. THRUST BLOCK (BRACE)
3/4" RODS - DEAD END



RIP-RAP DETAIL
STREAM CROSSING SECTION

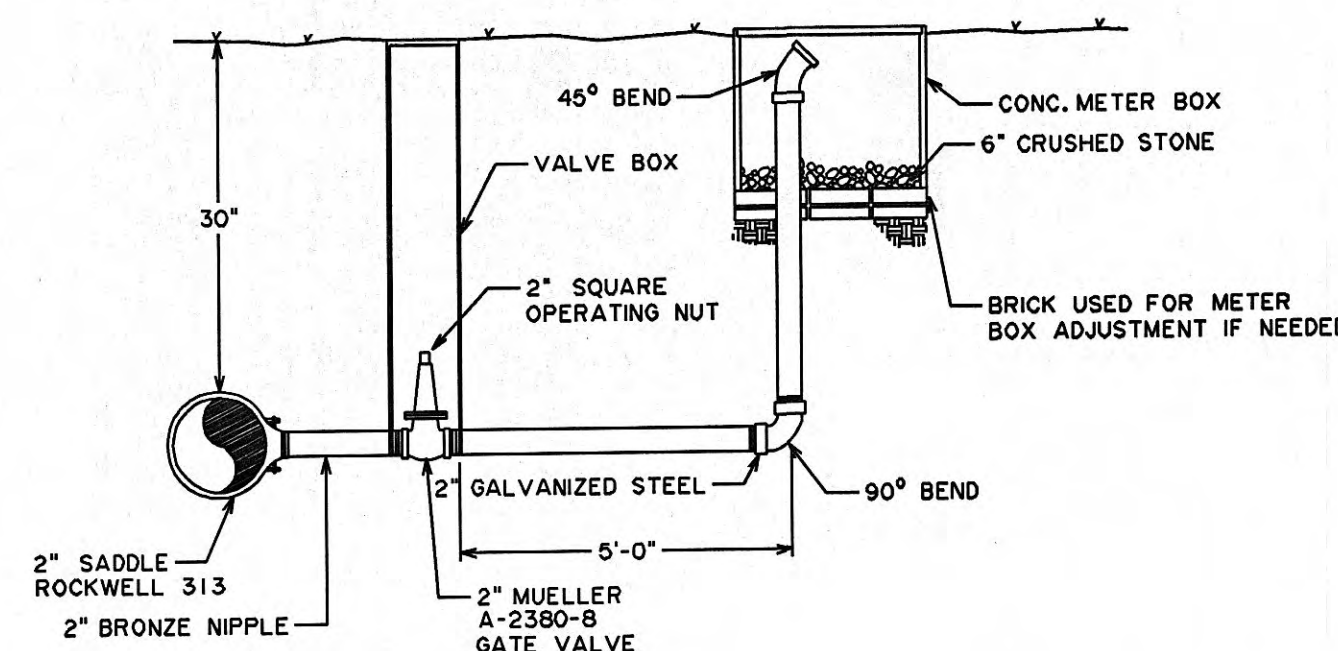


PLAN

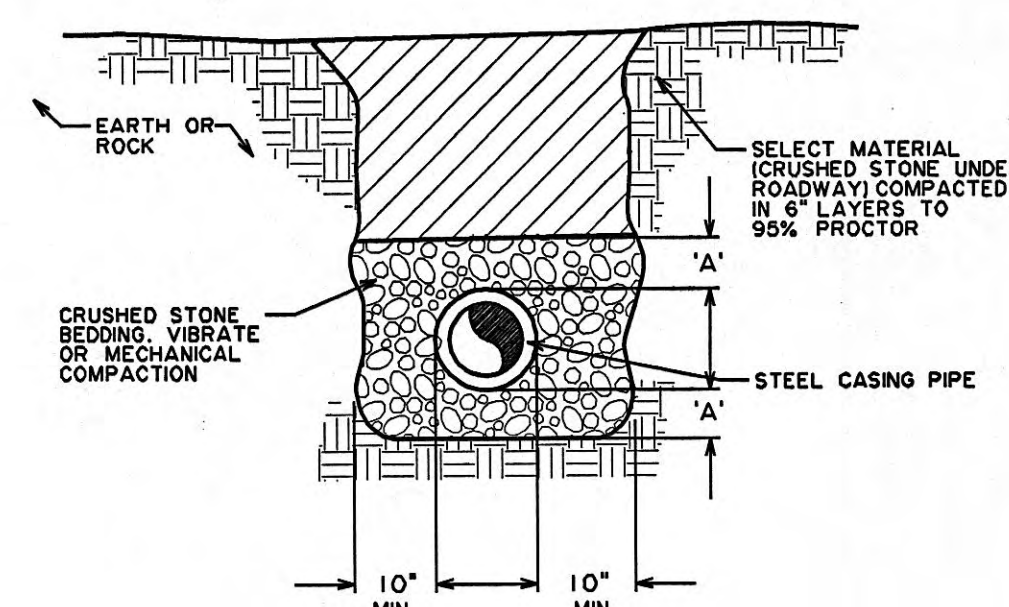


SECTION A-A

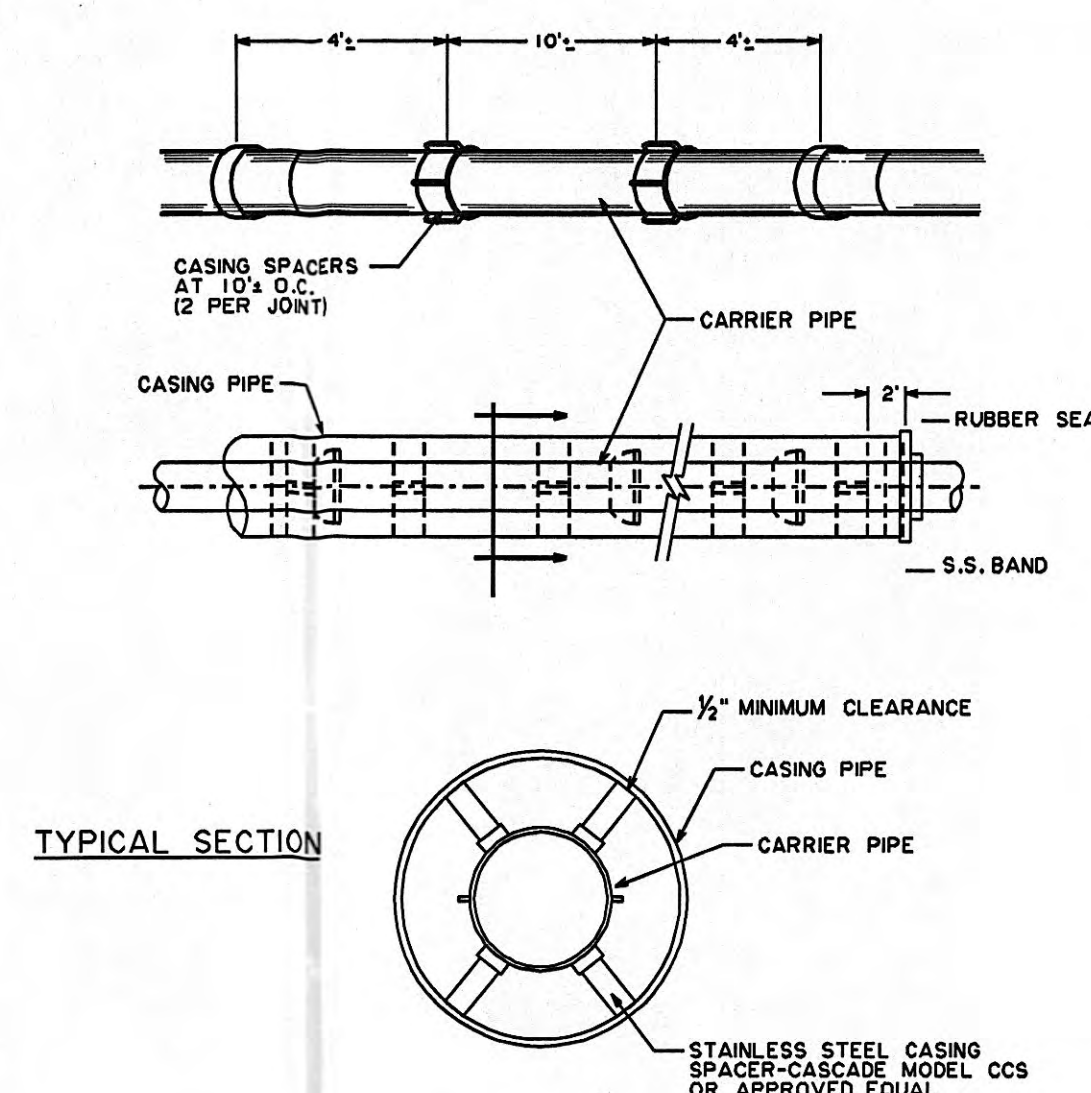
TYPICAL REINFORCED
CONCRETE REVERSE KICKER



BLOW-OFF DETAIL FOR
MAINS OVER 4"



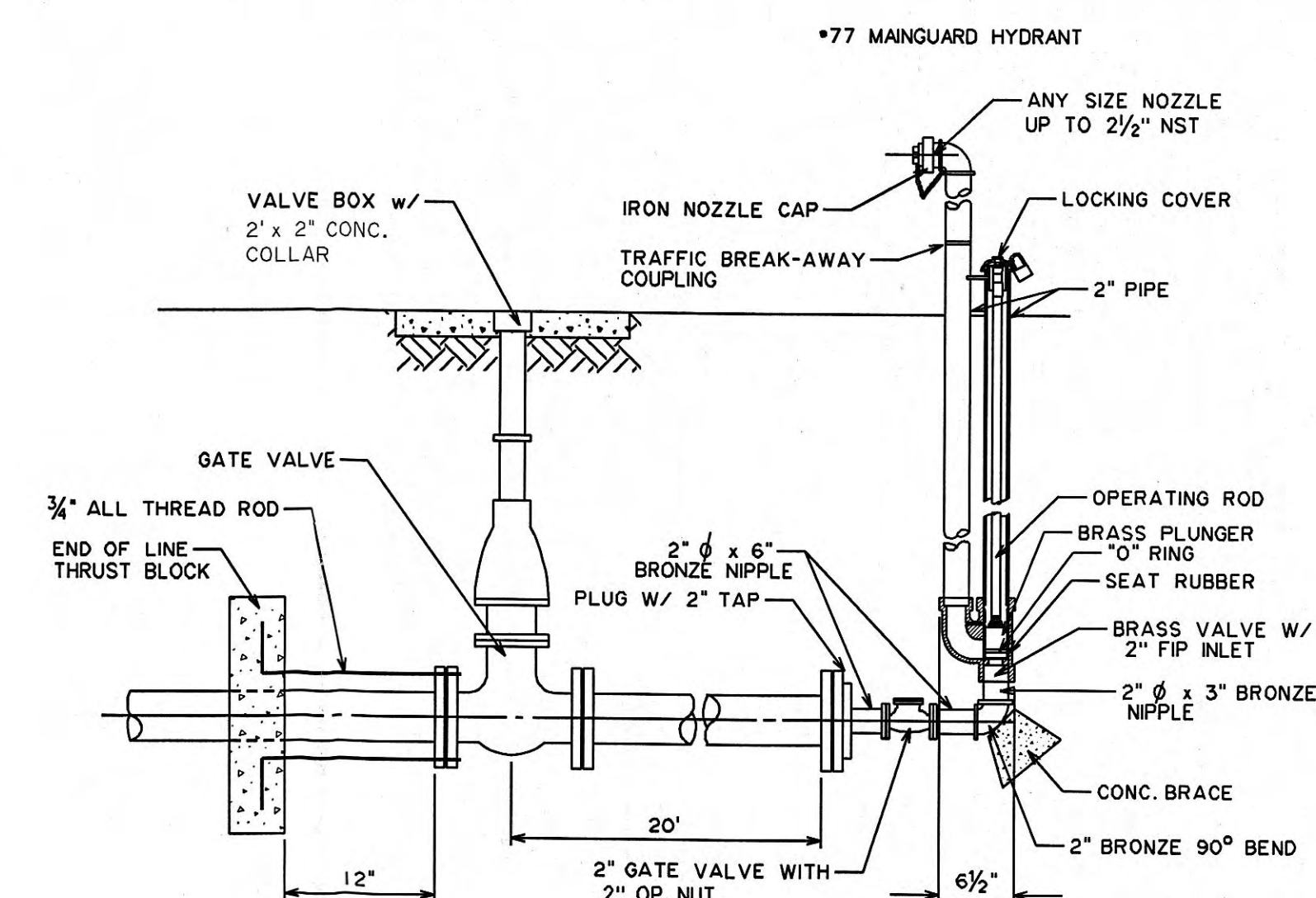
TRENCH SECTION FOR CASING
BY OPEN CUT



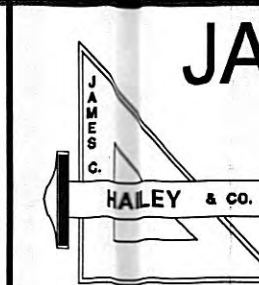
TYPICAL SECTION

- NOTES:**
- ALL JOINTS WITHIN CASING TO BE RESTRAINED.
 - CARRIER PIPE TO BE IN CENTER OF CASING TO PROVIDE RESTRAINT AGAINST MOVEMENT.

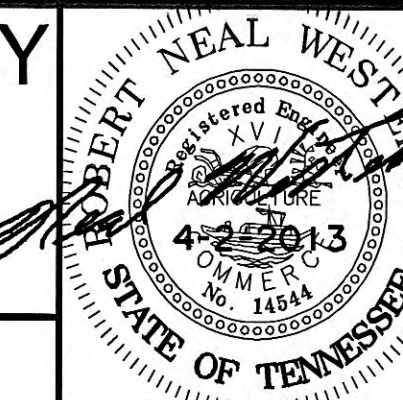
WATER LINE CASING DETAIL



END OF LINE BLOW-OFF
ASSEMBLY DETAIL



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HARRIMAN
UTILITY BOARD
Roane County, Tennessee

STANDARD DETAILS

DESIGN	DRAWN	CHECKED	DATE	SCALE	PROJECT NO.
RNW	LLB	RNW	MAR. 2013	NONE	13133

3