

COLUMBIA/ADAIR UTILITIES DISTRICT PHASE 11-2 WATER LINE EXTENSIONS & CONNECTOR LINES ADAIR COUNTY, KENTUCKY

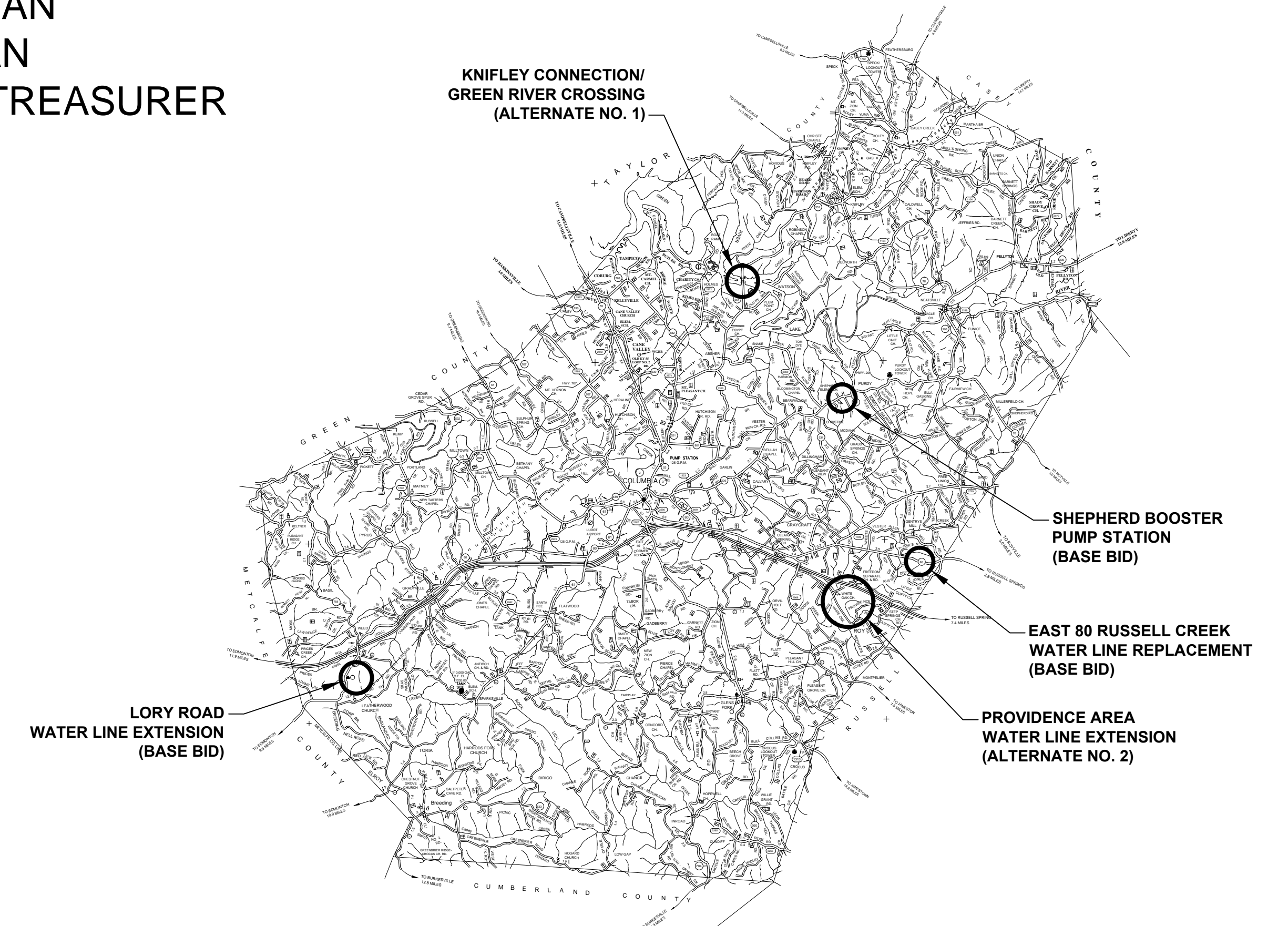
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COLUMBIA/ADAIR UTILITIES DISTRICT BOARD MEMBERS:

ROBERT FLOWERS, CHAIRMAN
 TIM BAKER, VICE CHAIRMAN
 RUDY HIGGINBOTHAM, SECRETARY/TREASURER
 DAVID JONES
 BARRY STOTTS
 MANAGER
 LENNON STONE
 ATTORNEY
 MARSHALL LOY

LOCATION MAP



PROJECT FUNDED BY:

KENTUCKY INFRASTRUCTURE AUTHORITY DWSRF FUND F

OCTOBER 2011


Monarch Engineering, Inc.

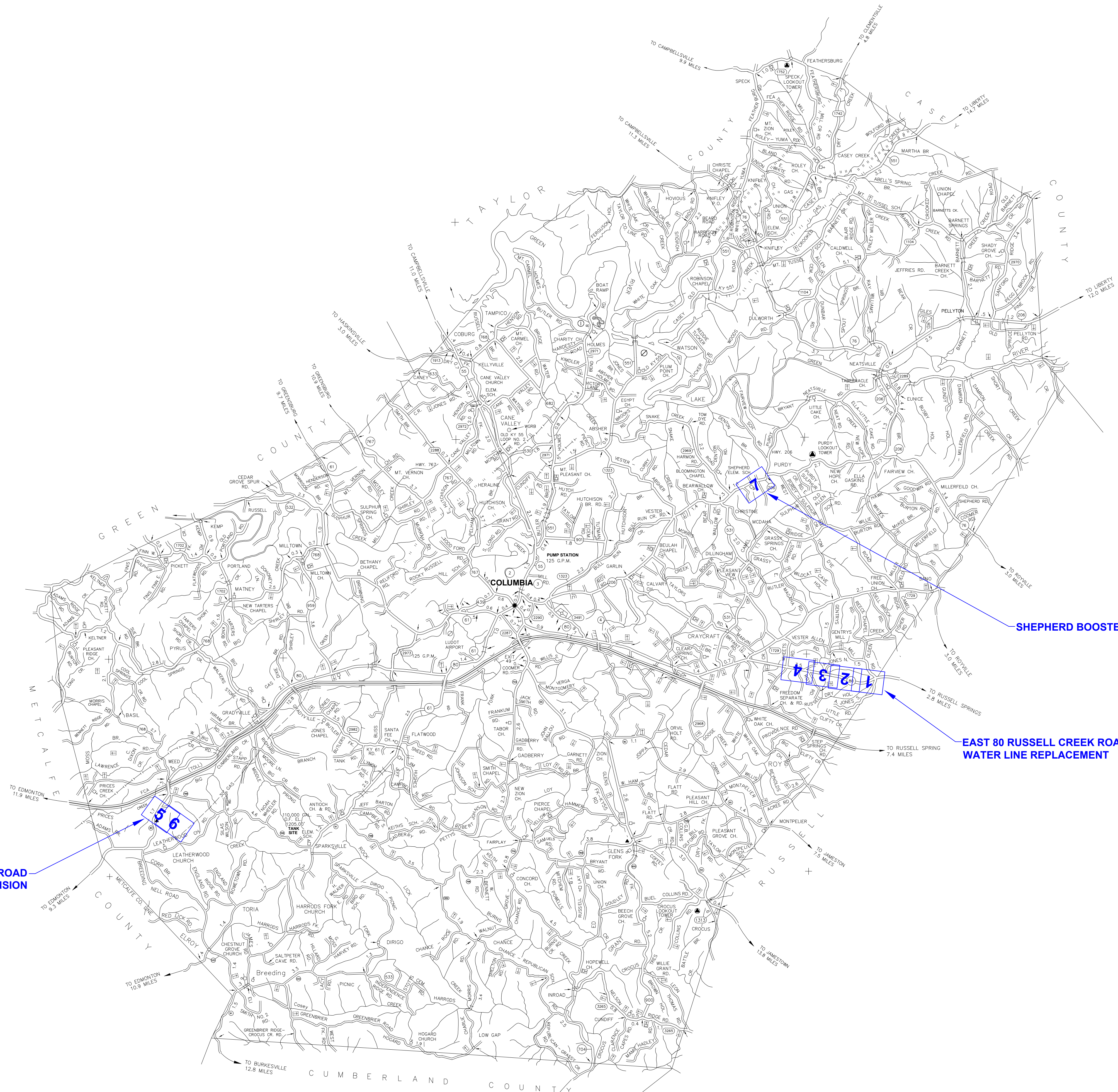
556 CARLTON DRIVE
 LAWRENCEBURG, KY 40342

RECORD DRAWINGS





LORY ROAD
WATER LINE EXTENSION



SHEPHERD BOOSTER PUMP STATION

EAST 80 RUSSELL CREEK ROAD
WATER LINE REPLACEMENT

DESCRIPTION:

**COUNTYWIDE WATER SYSTEM
EXTENSIONS & IMPROVEMENTS**

CUSTOMER:

**COLUMBIA/AIR UTILITIES DISTRICT
ADAIR COUNTY, KENTUCKY**

PROJECT NO. 1049

DATE: JAN 2010

DRAWN BY: JRC

CHECKED BY: DSB

CHECKED BY: DMB

SCALE: N.T.S.

SHEET:

LM-1

RECORD DRAWING



Monarch Engineering, Inc.

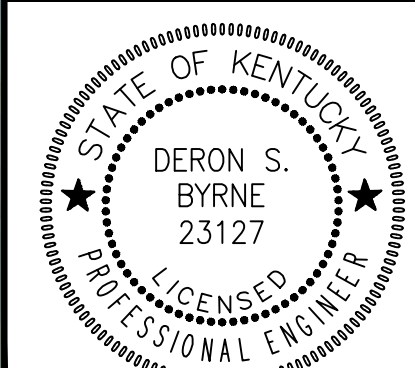
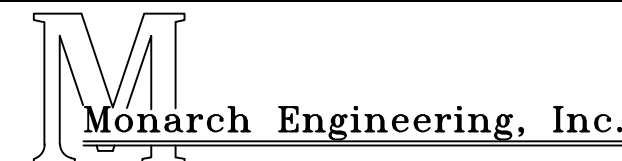
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342





- ① 8-INCH GATE VALVE - TANK SITE
 - A. 14 LF TO CENTER OF GRAVEL DRIVE
 - B. N 37° 04' 27.153"
 - C. W 85° 08' 02.148"
 - D. 941.56 HAE
- ② 8-INCH INLINE GATE VALVE
 - A. 13 LF TO EDGE OF EAST HWY 80
 - B. 11 LF TO EDGE OF A. JONES ROAD
 - C. N 37° 04' 23.195"
 - D. W 85° 08' 04.620"
 - E. 950.12 HAE
- ③ 6-INCH SIDE LINE VALVE
 - A. 11 LF TO EDGE OF EAST HWY 80
 - B. 9 LF TO EDGE OF A. JONES ROAD
 - C. N 37° 04' 23.195"
 - D. W 85° 08' 04.620"
 - E. 950.12 HAE
- ④ 8-INCH INLINE GATE VALVE
 - A. 13 LF TO EDGE OF EAST HWY 80
 - B. 6 LF TO EDGE OF A. JONES ROAD
 - C. N 37° 04' 23.195"
 - D. W 85° 08' 04.620"
 - E. 950.12 HAE
- ⑤ 6-INCH TAPPING VALVE
 - A. 9 LF TO EDGE OF EAST HWY 80
 - B. 21 LF TO EDGE OF GENTRY MILL ROAD
 - C. N 37° 04' 23.638"
 - D. W 85° 08' 04.893"
 - E. 948.80 HAE
- ⑥ 3-INCH SLIDE LINE VALVE - A. JONES ROAD
 - A. 25 LF TO EDGE OF EAST HWY 80
 - B. 102 LF TO EDGE OF BLACKTOP DRIVE
 - C. N 37° 04' 22.534"
 - D. W 85° 08' 07.184"
 - E. 938.43 HAE

RECORD DRAWING

WATER SYSTEM EXTENSIONS COLUMBIA/ADAIR UTILITIES DISTRICT ADAIR COUNTY, KENTUCKY			
EAST 80 RUSSELL CREEK WATER LINE REPLACEMENT			
			
DERON S. BYRNE 23127 LICENSED PROFESSIONAL ENGINEER		Monarch Engineering, Inc. 556 CARLTON DRIVE LAWRENCEBURG, KY 40342	
DRAWN BY: JRC	DATE: JAN 2010	REVISED	SHEET
CHECKED BY: DSB	SCALE: 1"=100'		1
CHECKED BY: DMB	PROJECT: 1049		



RECORD DRAWING

WATER SYSTEM EXTENSIONS
 COLUMBIA/ADAIR UTILITIES DISTRICT
 ADAIR COUNTY, KENTUCKY

EAST 80 RUSSELL CREEK WATER LINE REPLACEMENT



M
 Monarch Engineering, Inc.
 556 CARLTON DRIVE
 LAWRENCEBURG, KY 40342

DRAWN BY: JRC	DATE: JAN 2010	REVISED	SHEET
CHECKED BY: DSB	SCALE: 1"=100'		2
CHECKED BY: DMB	PROJECT: 1049		



- ⑦ 6-INCH SIDE LINE GATE VALVE - COPPAGE ROAD
 - A. 37 LF TO EDGE OF EAST HWY 80
 - B. 18 LF TO EDGE OF COPPAGE ROAD
 - C. N 37° 04' 25.487"
 - D. W 85° 08' 56.401"
 - E. 904.46 HAE
- ⑧ 8-INCH INLINE GATE VALVE
 - A. 42 LF TO EDGE OF EAST HWY 80
 - B. 26 LF TO CORNER POST
 - C. N 37° 04' 30.730"
 - D. W 85° 09' 09.628"
 - E. 843.11 HAE

RECORD DRAWING



WATER SYSTEM EXTENSIONS COLUMBIA/ADAIR UTILITIES DISTRICT ADAIR COUNTY, KENTUCKY			
EAST 80 RUSSELL CREEK WATER LINE REPLACEMENT			
	556 CARLTON DRIVE LAWRENCEBURG, KY 40342		
	DRAWN BY: JRC	DATE: JAN 2010	REVISED
	CHECKED BY: DSB	SCALE: 1"=100'	PROJECT: 1049
			3



- ⑨ 6-INCH BLOWOFF GATE VALVE
 - A. 42 LF TO EDGE OF EAST HWY 80
 - B. 10 LF TO EDGE OF GRAVEL DRIVE
 - C. N 37° 04' 33.642"
 - D. W 85° 09' 27.572"
 - E. 721.03 HAE
- ⑩ 8-INCH TAPPING VALVE
 - A. 21 LF TO EDGE OF EAST HWY 80
 - B. 6 LF TO POWER POLE
 - C. N 37° 04' 38.983"
 - D. W 85° 09' 58.720"
 - E. 879.91 HAE

STA. 103+80
 CONNECT NEW 8-INCH WATER LINE TO EXISTING
 8-INCH WATER LINE WITH 8-INCHx8-INCH TAPPING
 SLEEVE AND 8-INCH GATE VALVE. DISCONNECT
 EXISTING 8-INCH WATER LINE WITH BLIND FLANGE
 AND THRUST RESTRAINT.

RECORD DRAWING

WATER SYSTEM EXTENSIONS COLUMBIA/A DAIR UTILITIES DISTRICT ADAIR COUNTY, KENTUCKY			
EAST 80 RUSSELL CREEK WATER LINE REPLACEMENT			
		 Monarch Engineering, Inc. 556 CARLTON DRIVE LAWRENCEBURG, KY 40342	
DRAWN BY: JRC	DATE: JAN 2010	REVISED	SHEET
CHECKED BY: DSB	SCALE: 1"=100'		4
CHECKED BY: DMB	PROJECT: 1049		



11 3-INCH TAPPING VALVE
 A. 30 LF TO EDGE OF EAST HWY 80
 B. 24 LF TO LORY ROAD
 C. N 37° 01' 24.494"
 D. W 85° 28' 39.293"
 E. 962.82 HAE

STA. 0+00
 CONNECT NEW 3-INCH WATER LINE TO
 EXISTING 4-INCH WATER LINE WITH
 4-INCHx3-INCH TAPPING SLEEVE & VALVE

BILLY & ELLA
 M. SALMON

LESTER E. LORY

5+00 10+00 LORY ROAD 15+00
 3-INCH PVC SDR 17 WATER LINE

18+00
 MATCH LINE
 SHEET 6

3-INCH WATER LINE INSTALLED
 10 FEET OFF FENCE

RECORD DRAWING

WATER SYSTEM EXTENSIONS ADAIR COUNTY WATER DISTRICT ADAIR COUNTY, KENTUCKY			
LORY ROAD WATER LINE EXTENSION			
	556 CARLTON DRIVE LAWRENCEBURG, KY 40342		
	DRAWN BY: JRC CHECKED BY: DSB CHECKED BY: DMB	DATE: JULY 2012 SCALE: 1"=100' PROJECT: 1049	REVISED

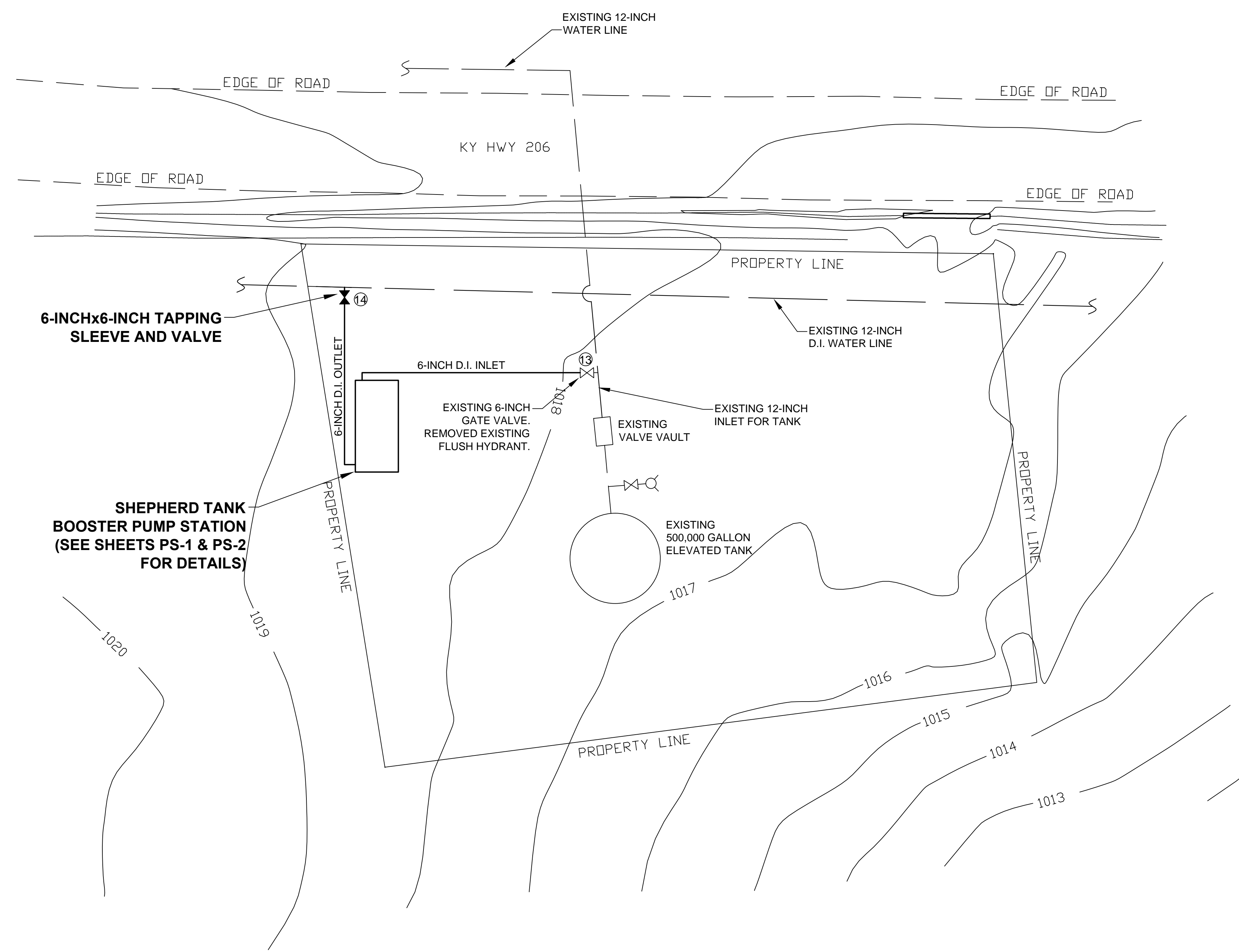


ALL 3-INCH WATER LINE, THIS SHEET,
INSTALLED 10 FEET OFF FENCE

12 3-INCH BLOWOFF VALVE
 A. 54 LF TO GRAVEL ROAD
 B. N 37° 00' 46.340"
 C. W 85° 28' 20.534"
 D. 754.63 HAE

RECORD DRAWING

WATER SYSTEM EXTENSIONS ADAIR COUNTY WATER DISTRICT ADAIR COUNTY, KENTUCKY			
LORY ROAD WATER LINE EXTENSION			
556 CARLTON DRIVE LAWRENCEBURG, KY 40342			
DRAWN BY: JRC	DATE: JULY 2012	REVISED	SHEET
CHECKED BY: DSB	SCALE: 1"=100'		6
CHECKED BY: DMB	PROJECT: 1049		



- ⑬ EXISTING 6-INCH GATE VALVE
 - A. 41 LF TO EDGE OF HWY 206
 - B. 2.5 LF TO CORNER OF METAL BUILDING
 - C. 11.0 LF TO CHAIN LINK FENCE
 - D. 11.0 LF TO CHAIN LINK FENCE
 - E. 910.37 HAE
- ⑭ 6-INCH TAPPING VALVE
 - A. 27 LF TO EDGE OF HWY 206
 - B. 3 LF TO CHAIN LINK FENCE
 - C. 11.0 LF TO CHAIN LINK FENCE
 - D. 11.0 LF TO CHAIN LINK FENCE
 - E. 915.34 HAE

RECORD DRAWING

WATER SYSTEM IMPROVEMENTS COLUMBIA/A DAIR UTILITIES DISTRICT ADAIR COUNTY, KENTUCKY			
SHEPHERD TANK BOOSTER PUMP STATION SITE PLAN			
	556 CARLTON DRIVE LAWRENCEBURG, KY 40342		
	DRAWN BY: JRC	DATE: NOV 2006	REVISED
CHECKED BY: BGB	SCALE: 1"=30'		7
CHECKED BY: DSB	PROJECT: 1049		

DESIGN CRITERIA

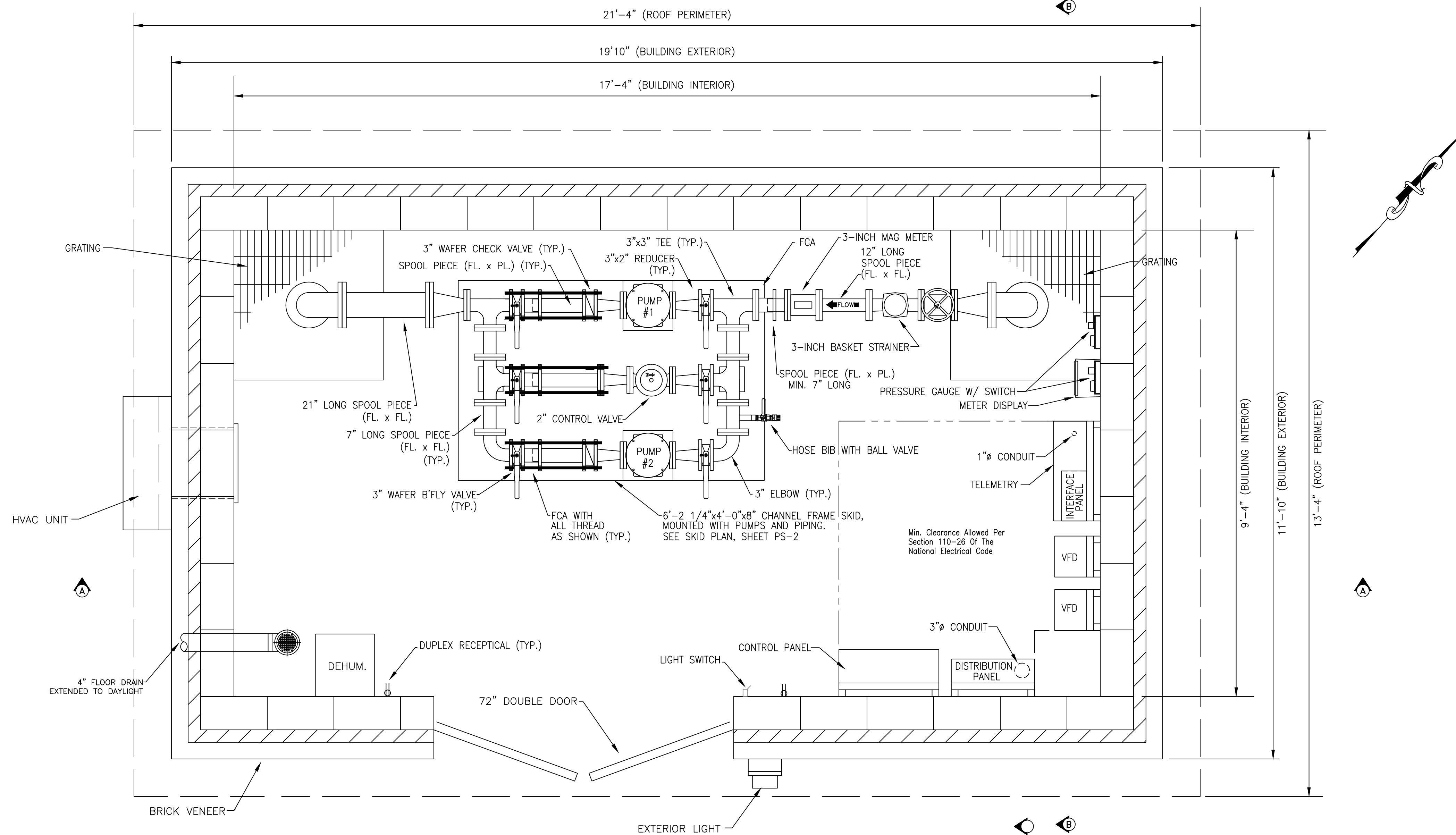
Controls : PRESSURE SWITCH
 Power Service: 230 Volts, 3Phase, 60 Cycle

PUMP DATA

Type: MULTISTAGE CENTRIFUGAL
 Pump: 1&2
 Capacity: 250 G.P.M. AT 180 FEET T.D.H.
 Size: CRN 64-3-2
 Motor: 30 H.P., 3520R.P.M.

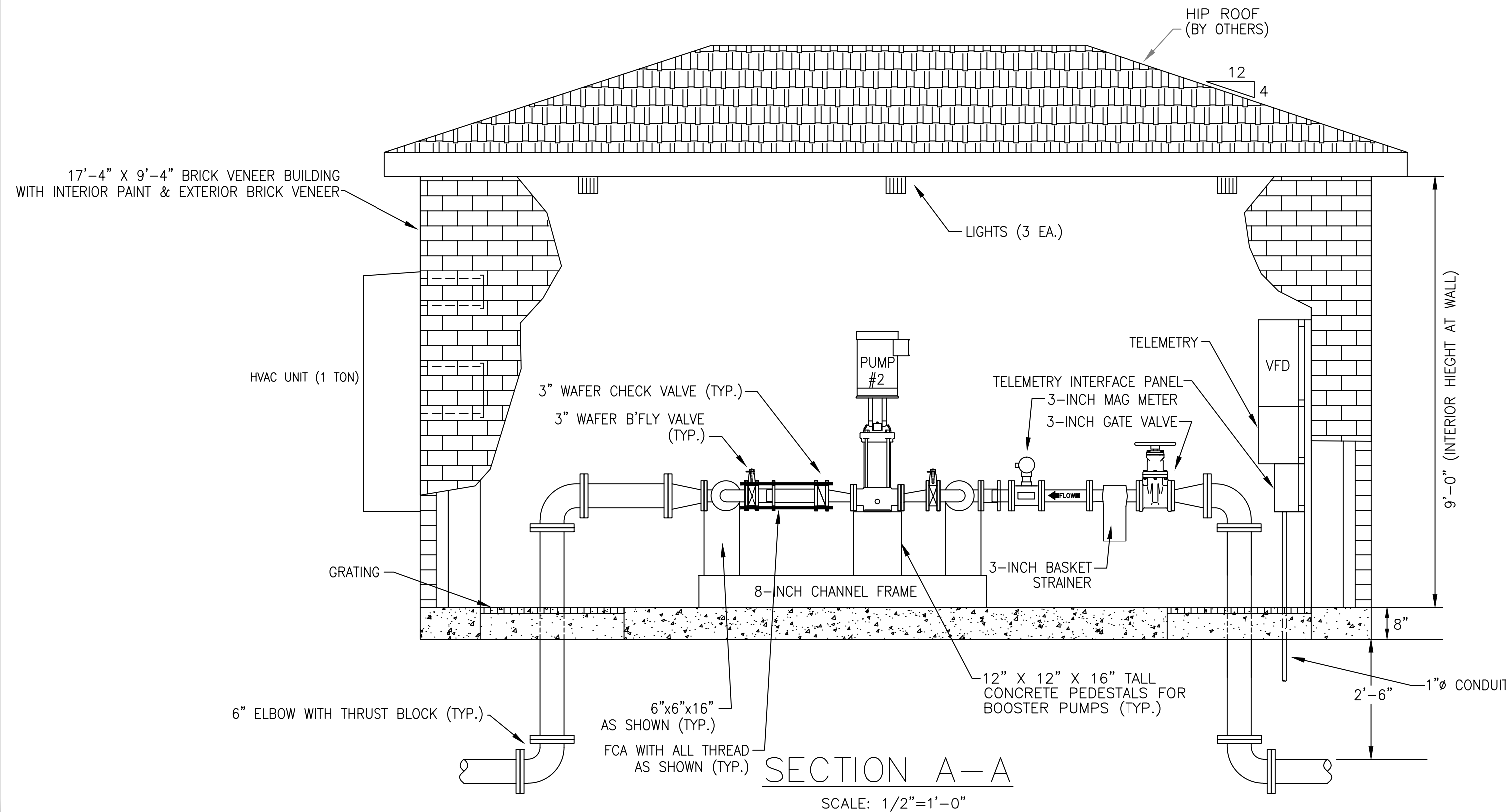
GENERAL NOTES:

- ALL STATION PIPING SHALL DUCTILE IRON CL350
- ALL PIPING AND EQUIPMENT SHALL BE EQUIPPED WITH ANSI STANDARD B16.42, CLASS 300 FLANGES
- ALL PIPING AND EQUIPMENT SHALL BE ADEQUATELY SUPPORTED AND BRACED AS DIRECTED BY THE ENGINEER
- FCA - FLANGED COUPLING ADAPTER



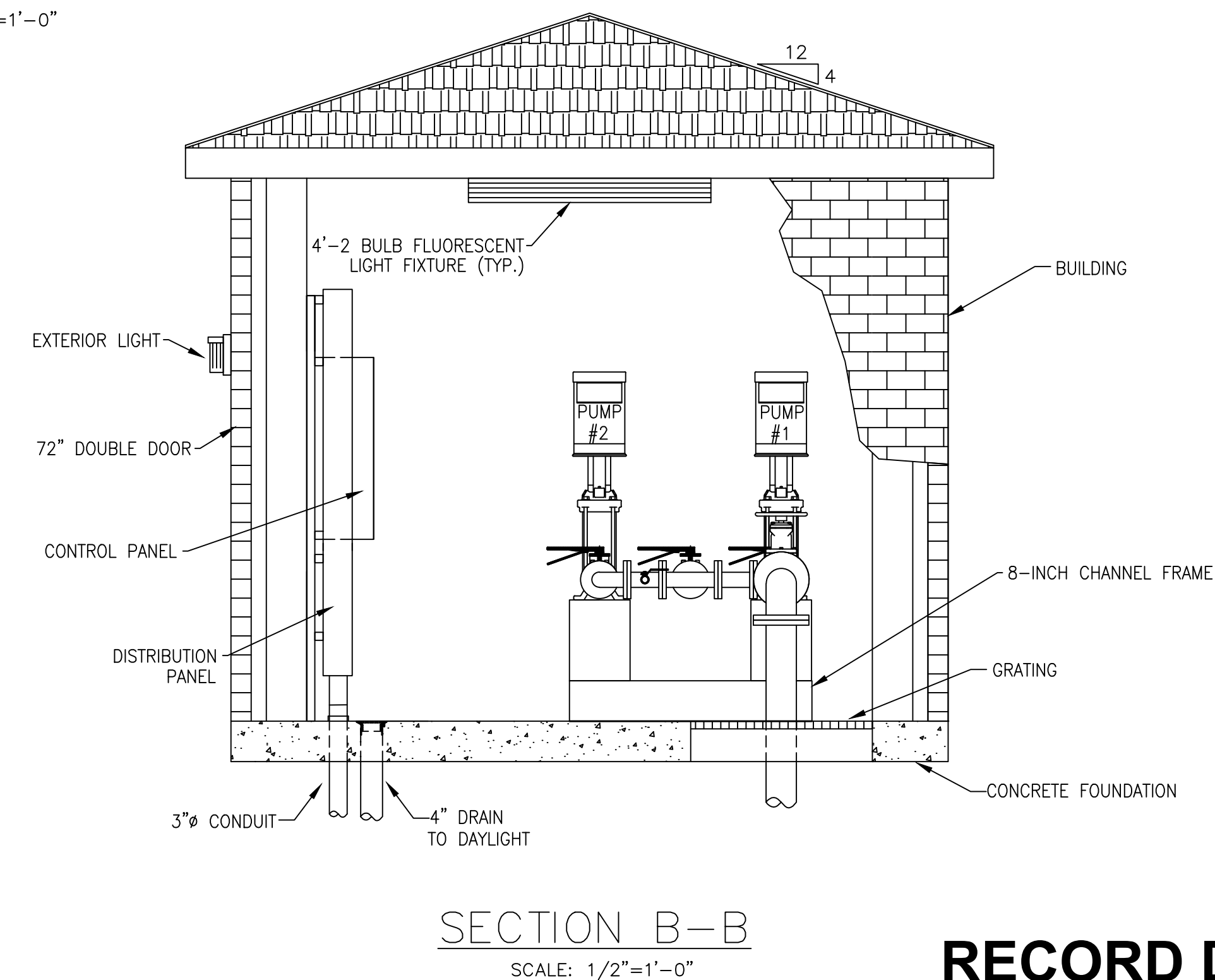
INTERIOR PLAN

SCALE: 3/4"=1'-0"



SECTION A-A

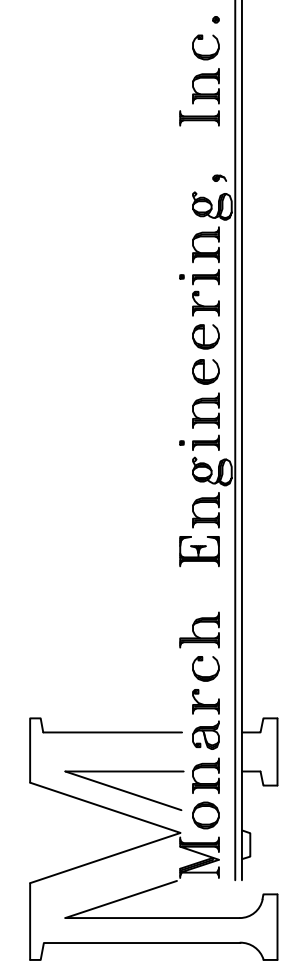
SCALE: 1/2"=1'-0"



SECTION B-B

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

RECORD DRAWING



556 CARLTON DRIVE
 LAWRENCEBURG, KY 40342

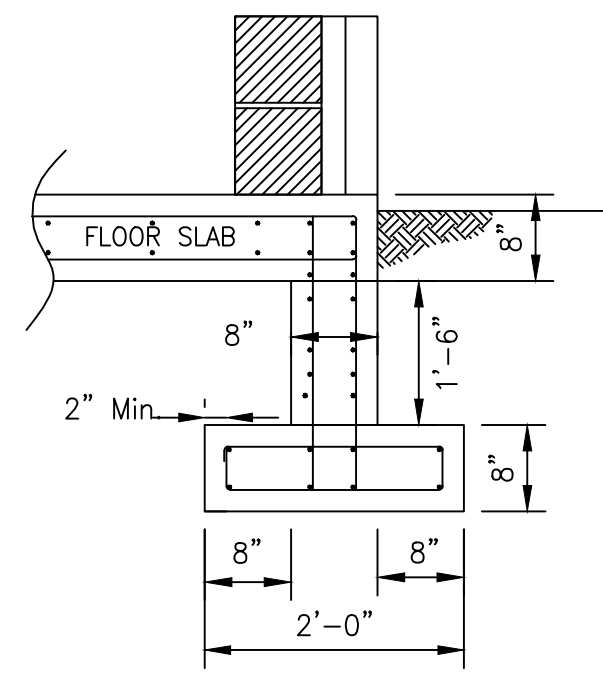
DESCRIPTION:
 SHEPHERD PUMP STATION

CUSTOMER:
 COLUMBIA/AIR UTILITIES DISTRICT
 ADAIR COUNTY, KENTUCKY

PROJECT NO. 1049
 DATE: SEPT 2012
 DRAWN BY: JRC
 CHECKED BY: DSB
 CHECKED BY: DMB
 SCALE: AS NOTED

SHEET:
PS-1



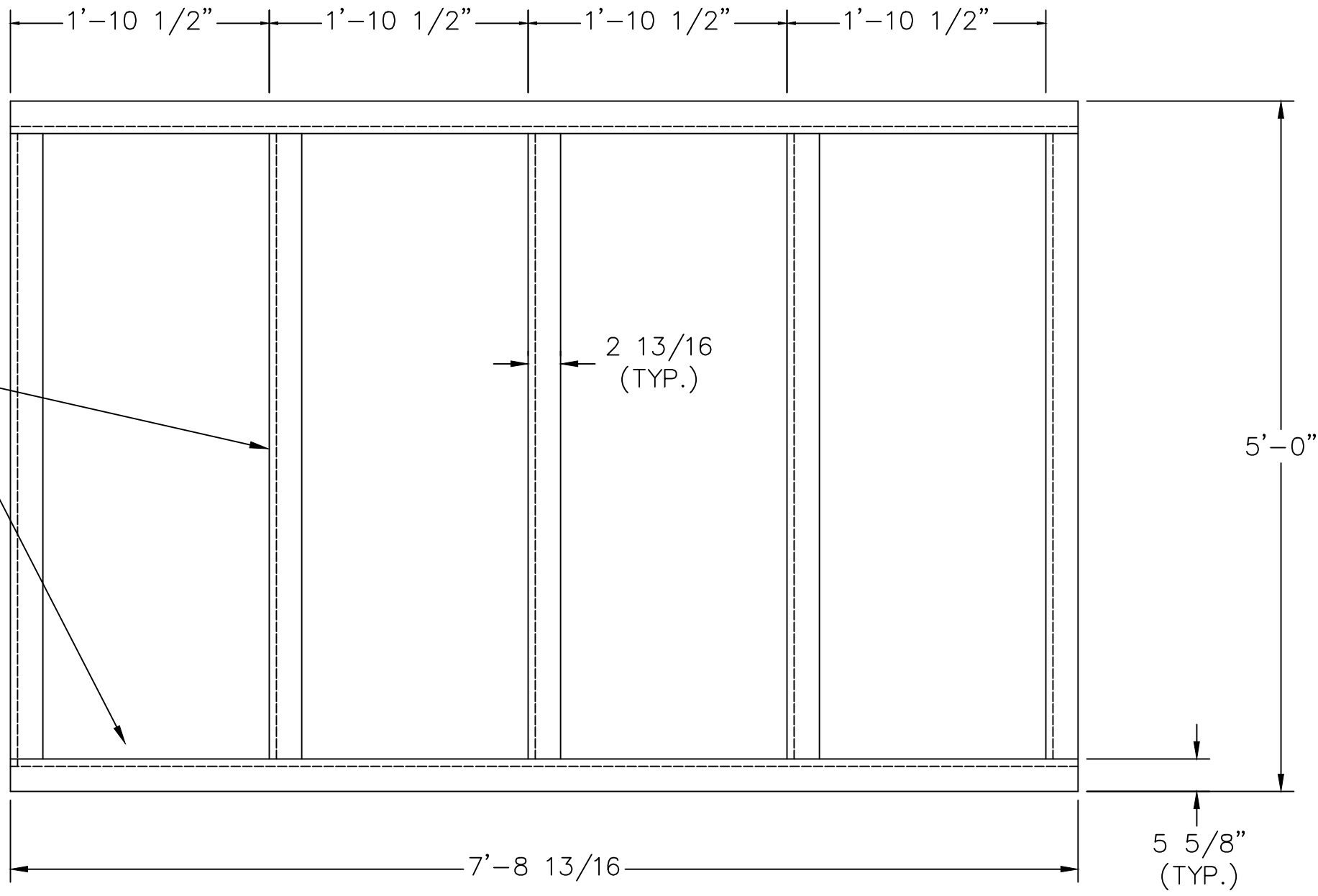


NOTE:
ALL CONCRETE SHALL HAVE #4 BARS
12-INCHES ON CENTER, EACH WAY, BOTH FACES.

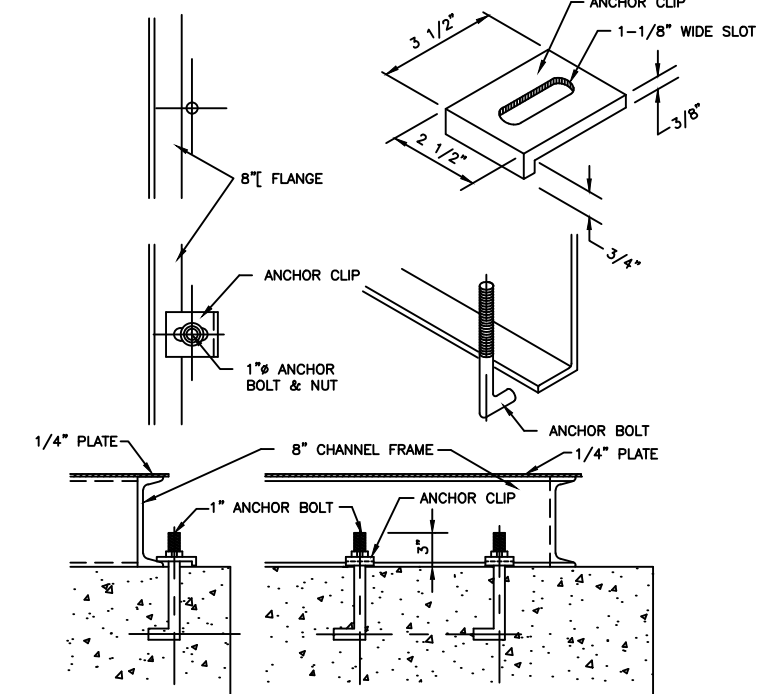
TYPICAL SECTION
FOUNDATION & REINFORCING DETAIL

NOT TO SCALE

C8x11.5

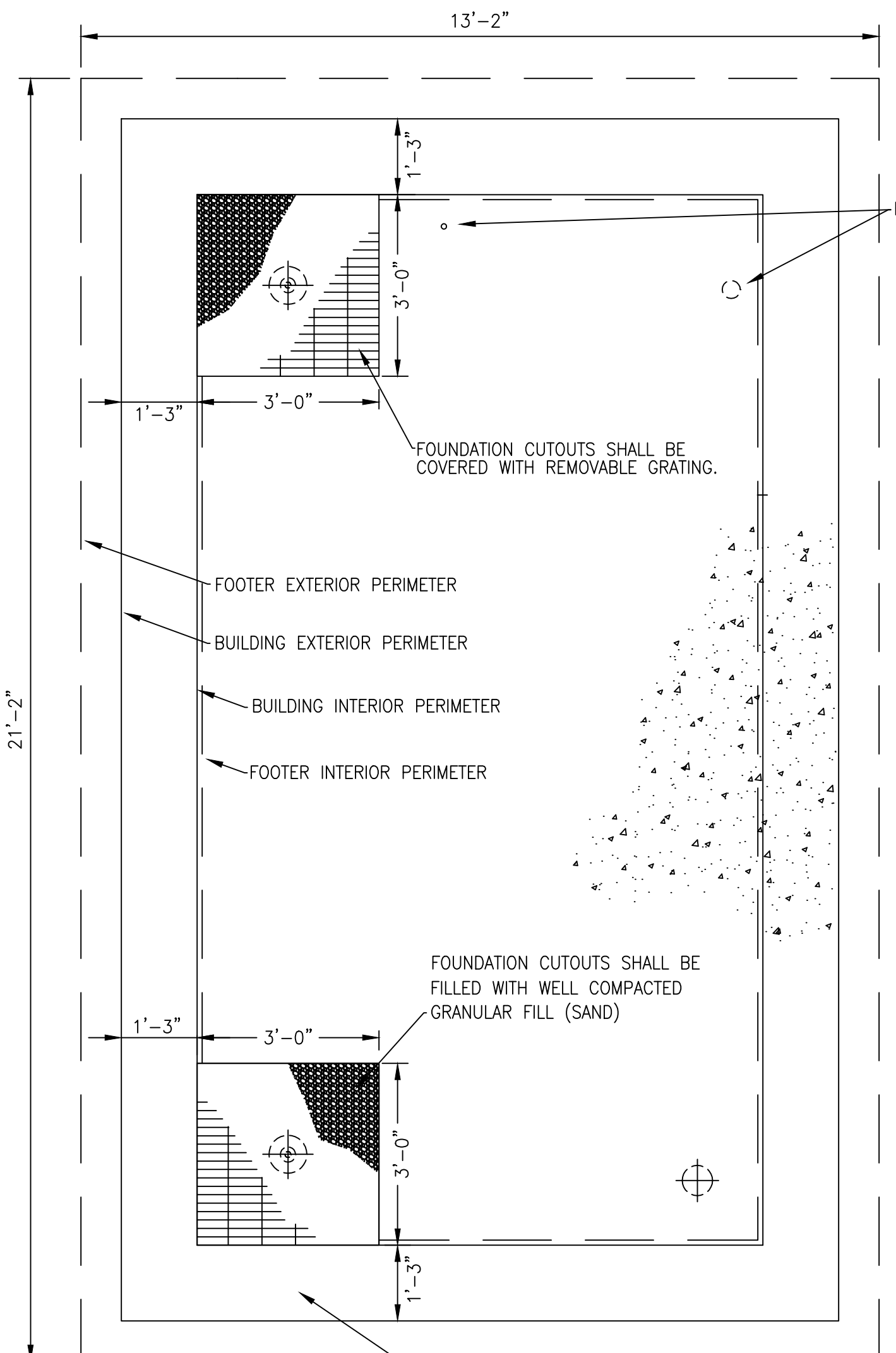


SKID PLAN
SCALE: 1" = 1'-0"

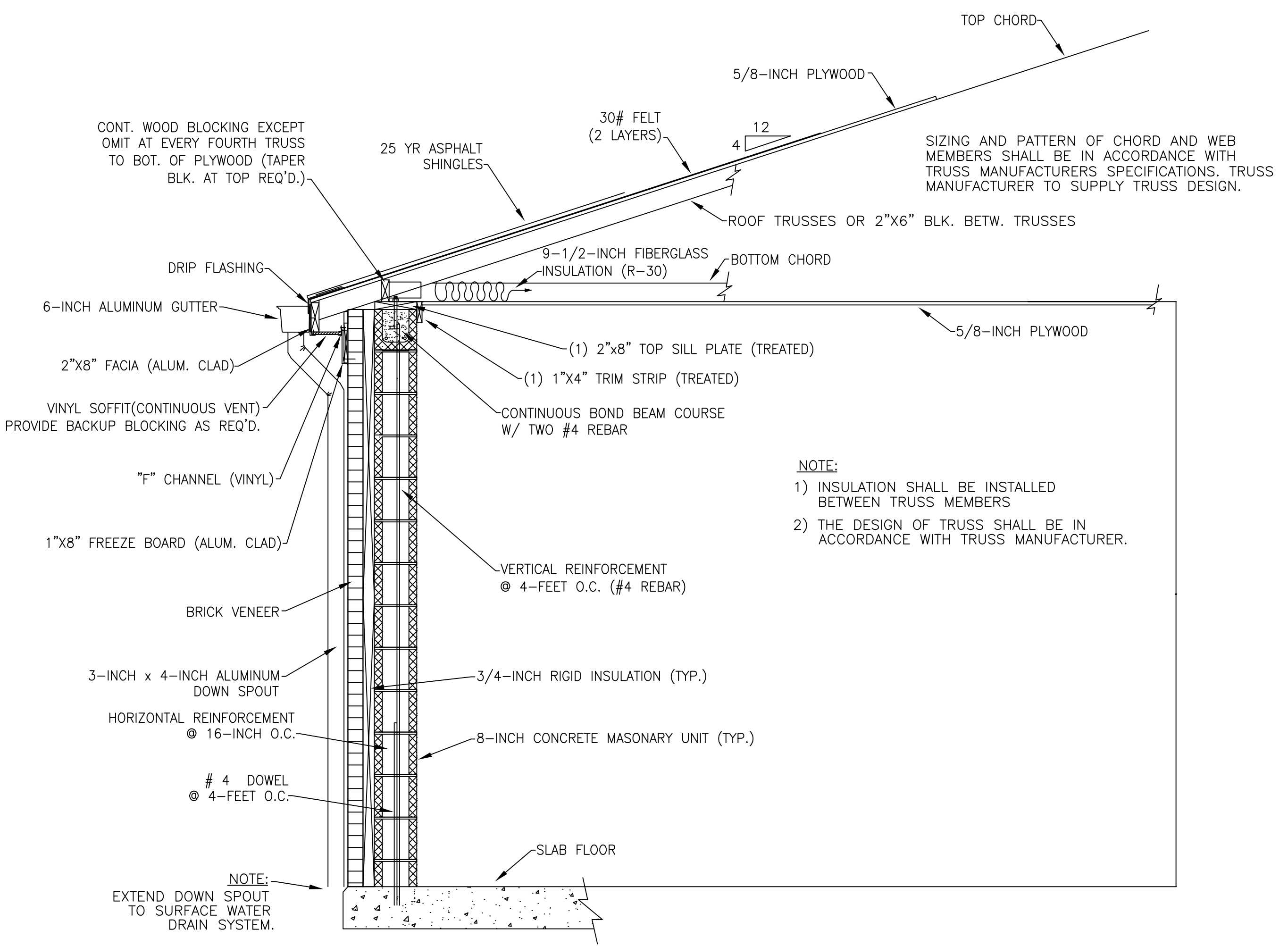


TYPICAL ANCHOR DETAIL

NOTE: ANCHOR CLIPS FURNISHED BY E.F.I.
ANCHOR BOLTS AND NUTS BY INSTALLER

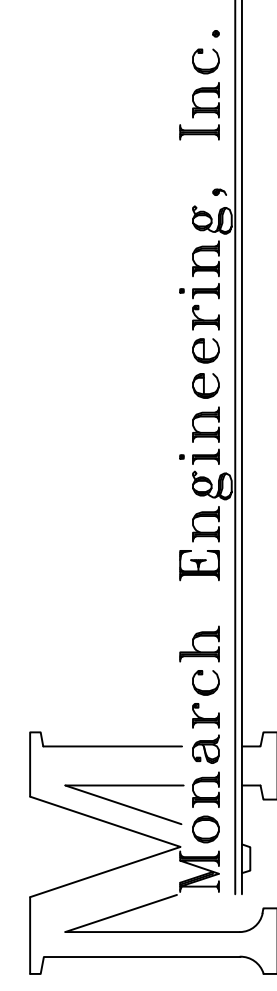


FOUNDATION LAYOUT



TYPICAL SECTION
CMU WALL & TRUSS DETAIL

NOT TO SCALE



Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

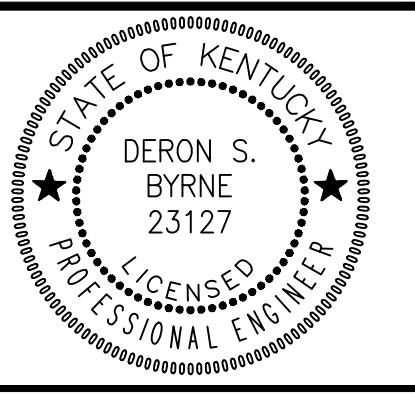
DESCRIPTION:
SHEPHERD PUMP STATION

CUSTOMER:
COLUMBIA/AIR UTILITIES DISTRICT
ADAIR COUNTY, KENTUCKY

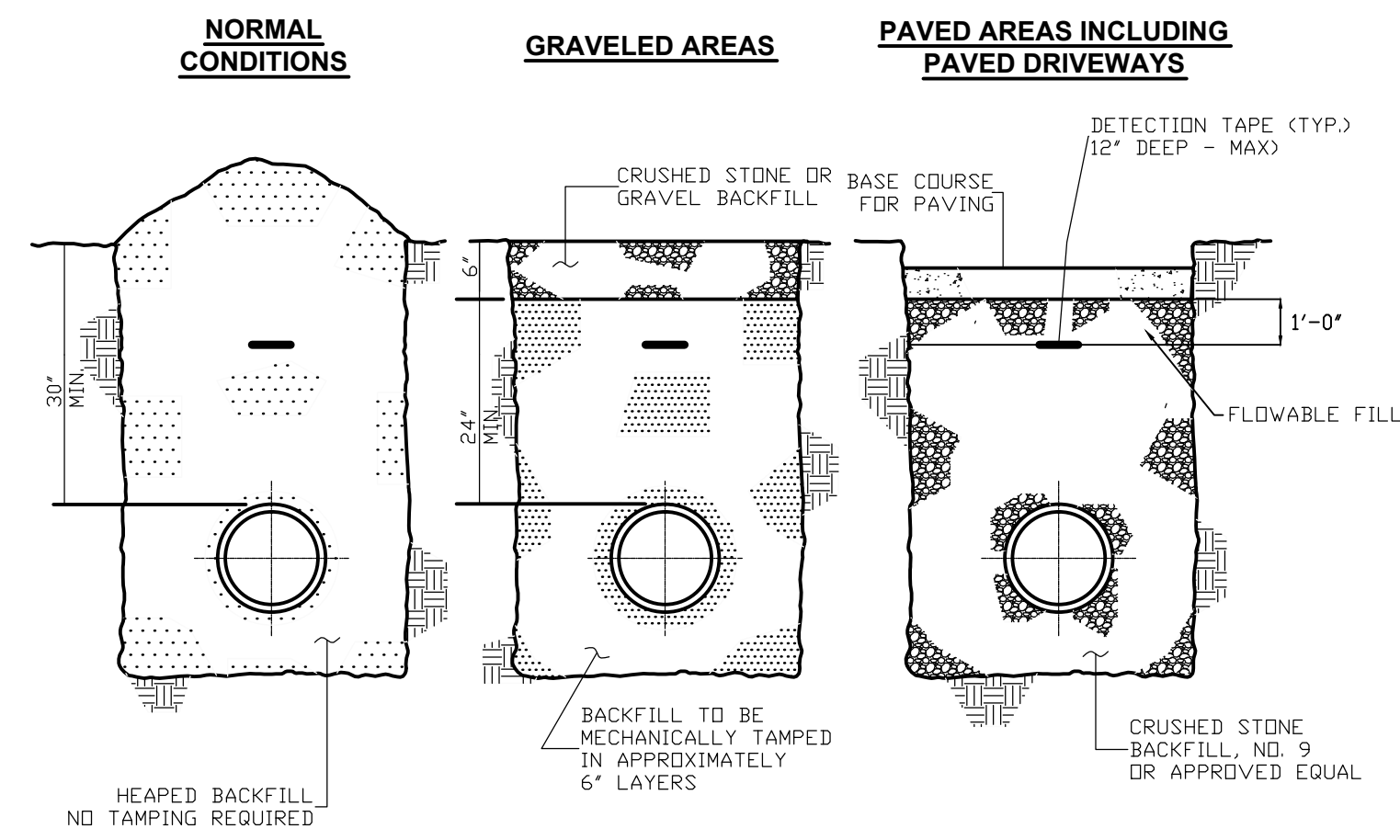
PROJECT NO. 1049
DATE: SEPT 2012
DRAWN BY: JRC
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: AS NOTED

SHEET:

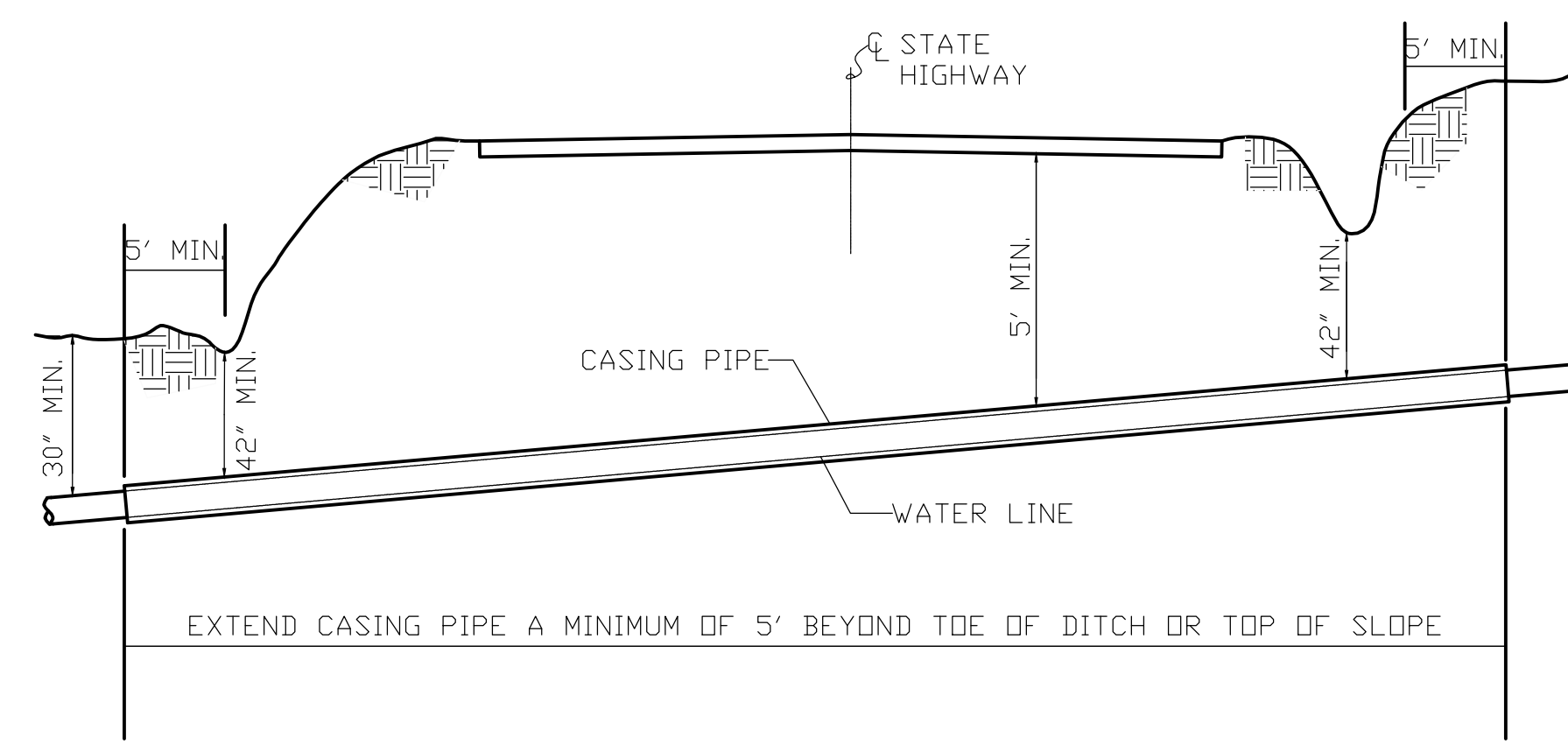
PS-2



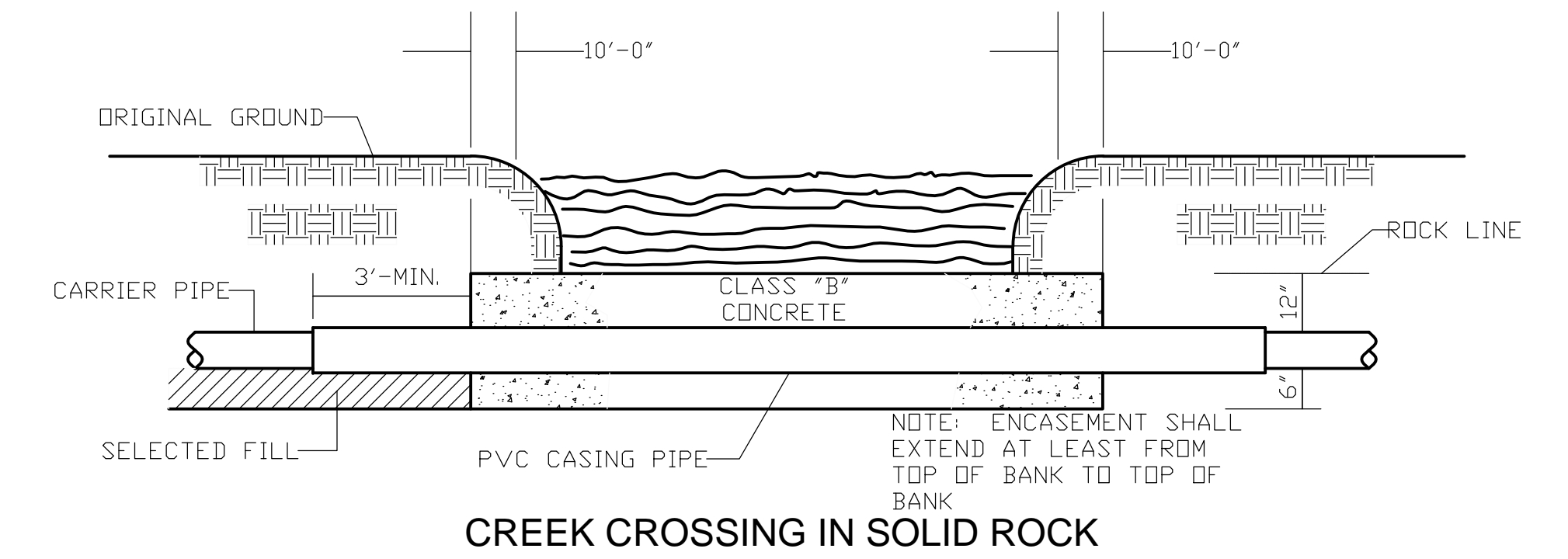
RECORD DRAWING



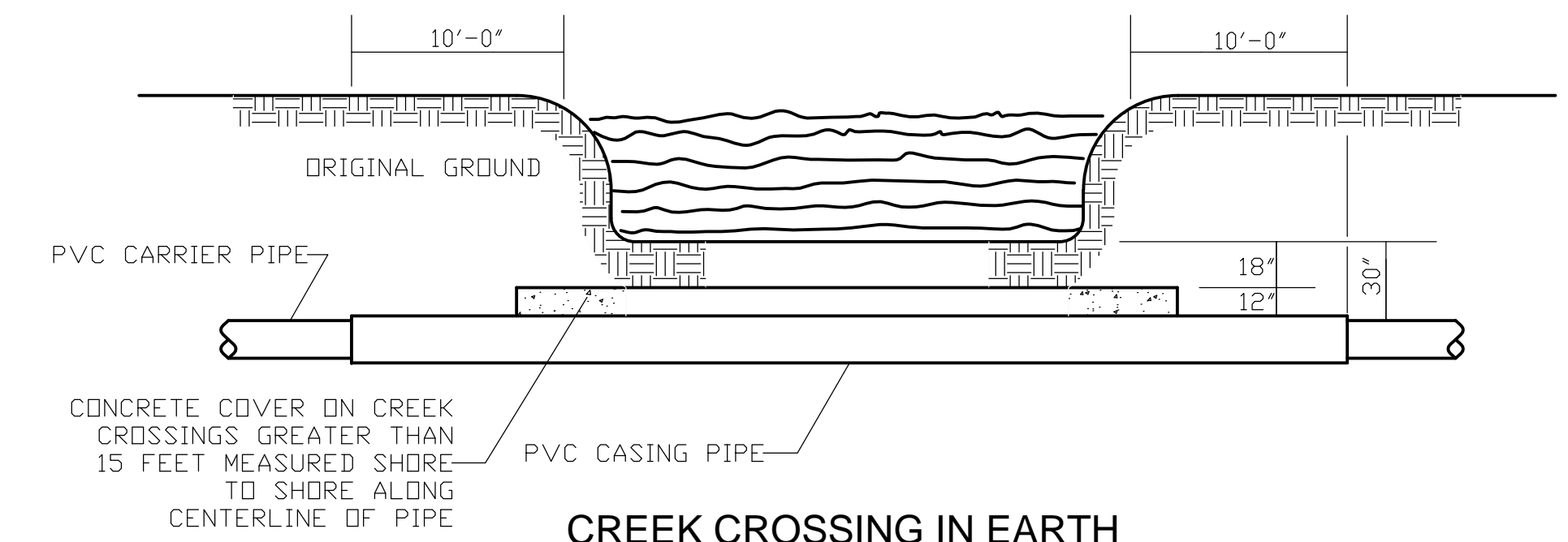
**BACKFILLING DETAILS
N.T.S**



**TYP. STATE HIGHWAY ENCASED BORE CROSSING
N.T.S**

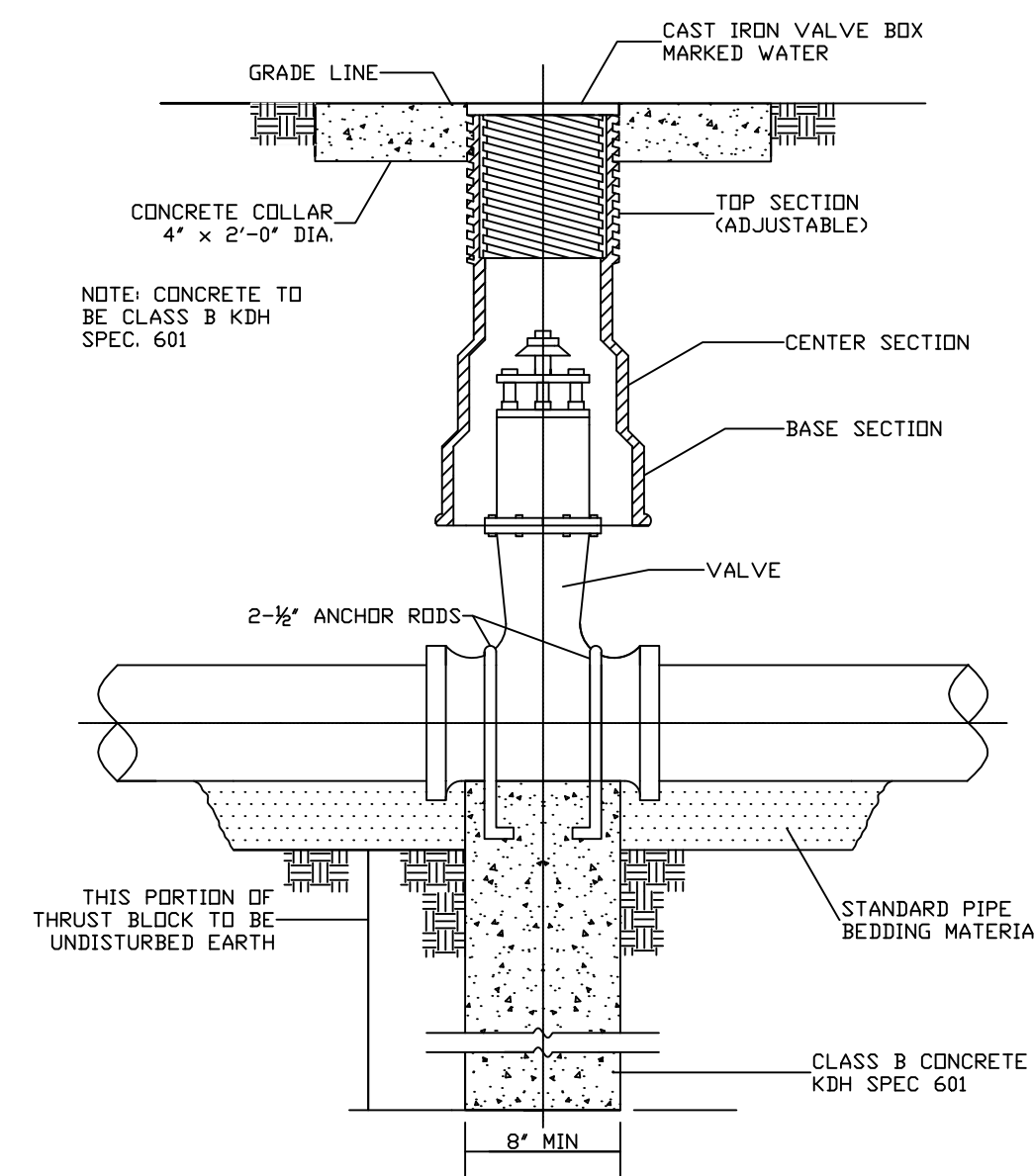


CREEK CROSSING IN SOLID ROCK



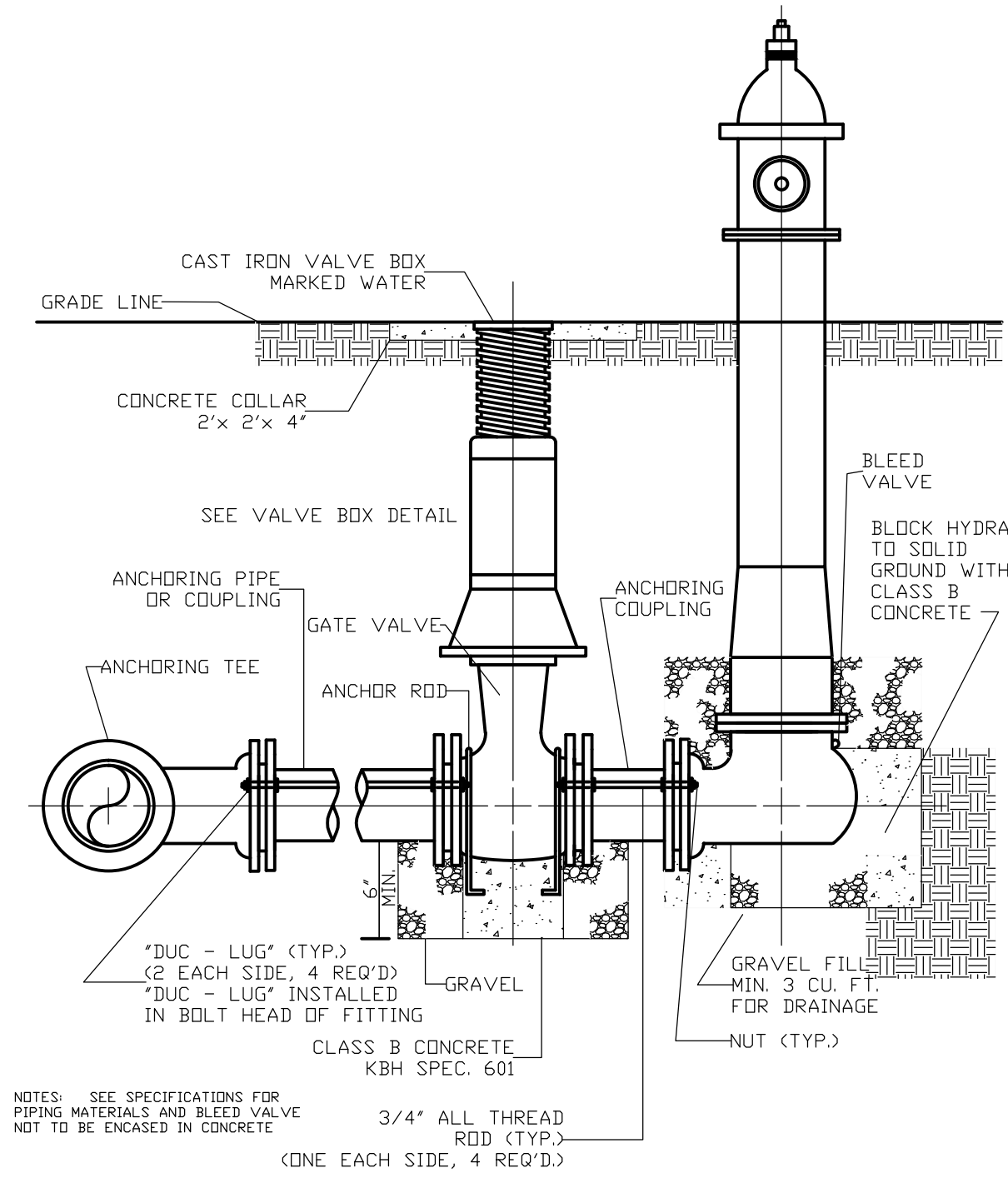
CREEK CROSSING IN EARTH

**CREEK CROSSING DETAILS
N.T.S**



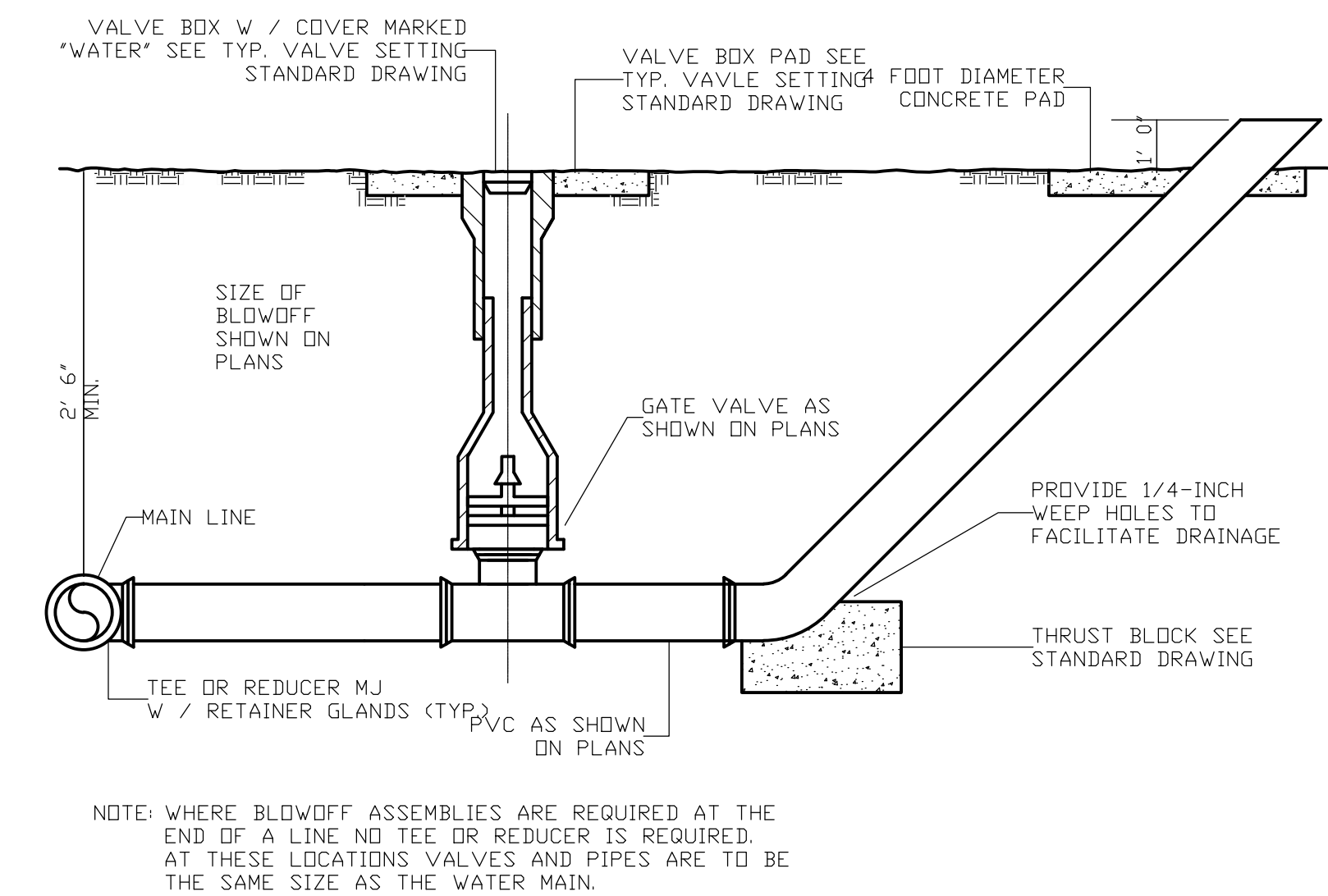
NOTE: SEE SPECIFICATION FOR PIPING MATERIALS AND PIPING JOINTS

**GATE VALVE DETAIL
N.T.S**



NOTES: SEE SPECIFICATIONS FOR PIPING MATERIALS AND BLEED VALVE NOT TO BE ENCASED IN CONCRETE

**FLUSH HYDRANT DETAIL
N.T.S**



NOTE: WHERE BLOWOFF ASSEMBLIES ARE REQUIRED AT THE END OF A LINE NO TEE OR REDUCER IS REQUIRED. AT THESE LOCATIONS VALVES AND PIPES ARE TO BE THE SAME SIZE AS THE WATER MAIN.

**BLOWOFF DETAIL
N.T.S**

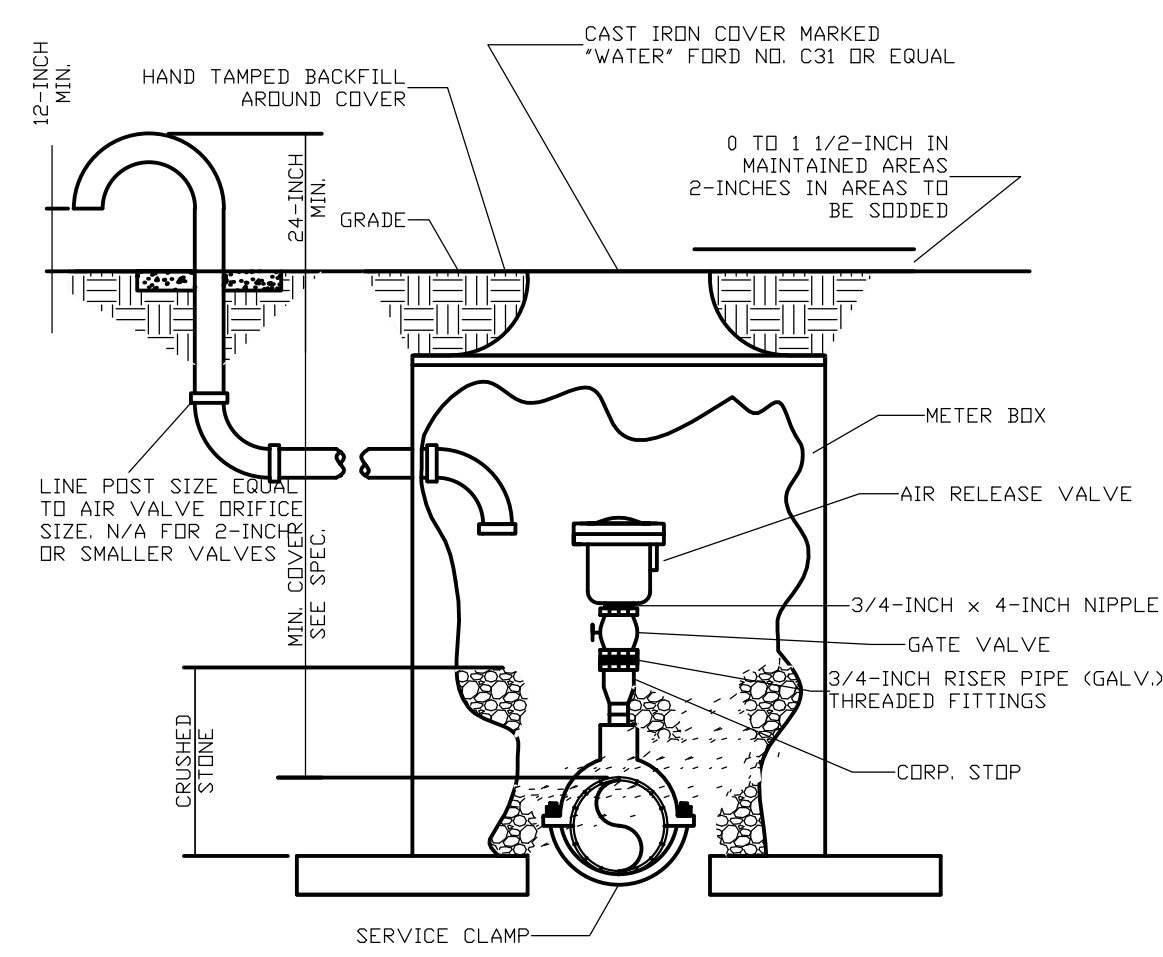
**PHASE 11-2 WATER LINE EXTENSIONS
ADAIR COUNTY WATER DISTRICT
ADAIR COUNTY, KENTUCKY**

STANDARD DRAWINGS



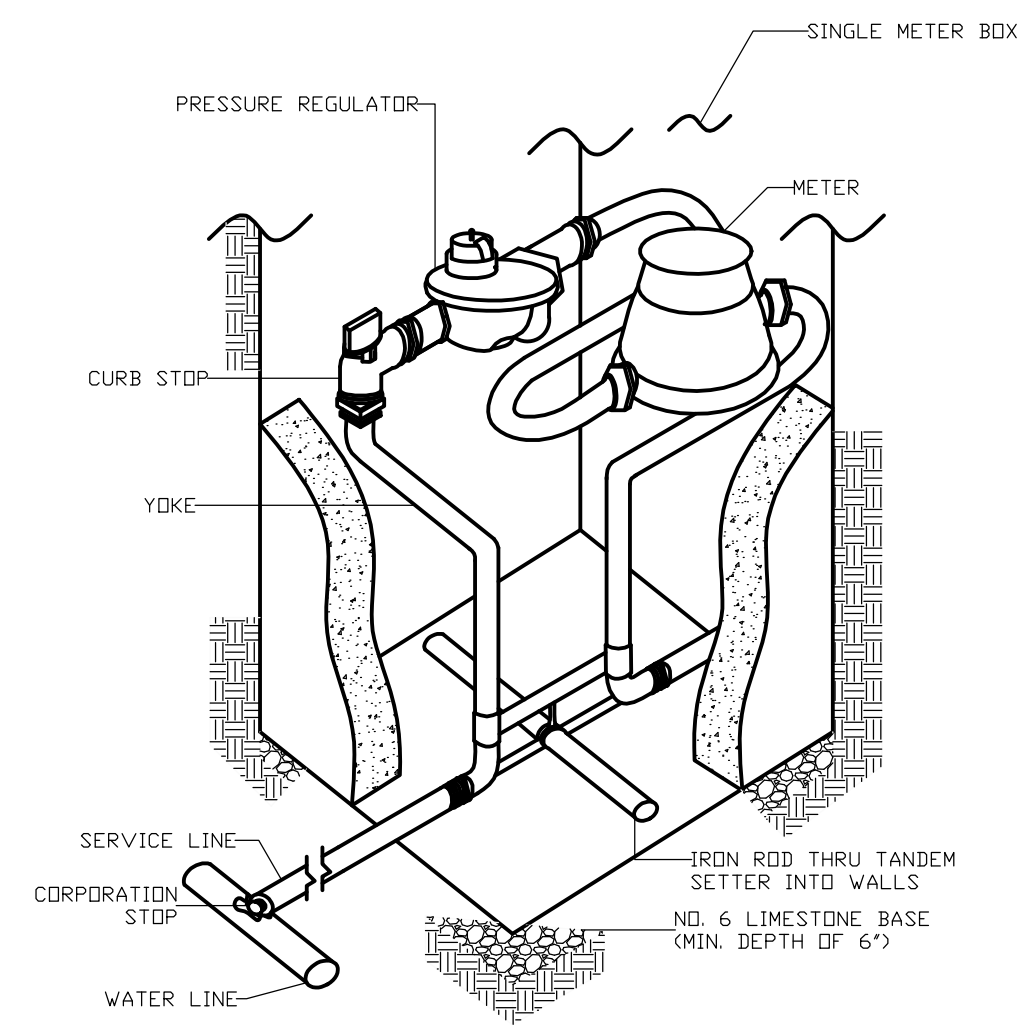
Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

DRAWN BY: JRC	DATE: JAN 2010	REVISED	SHEET
CHECKED BY: DSB	SCALE: AS SHOWN		SD-1
CHECKED BY: DMB	PROJECT: 1049		



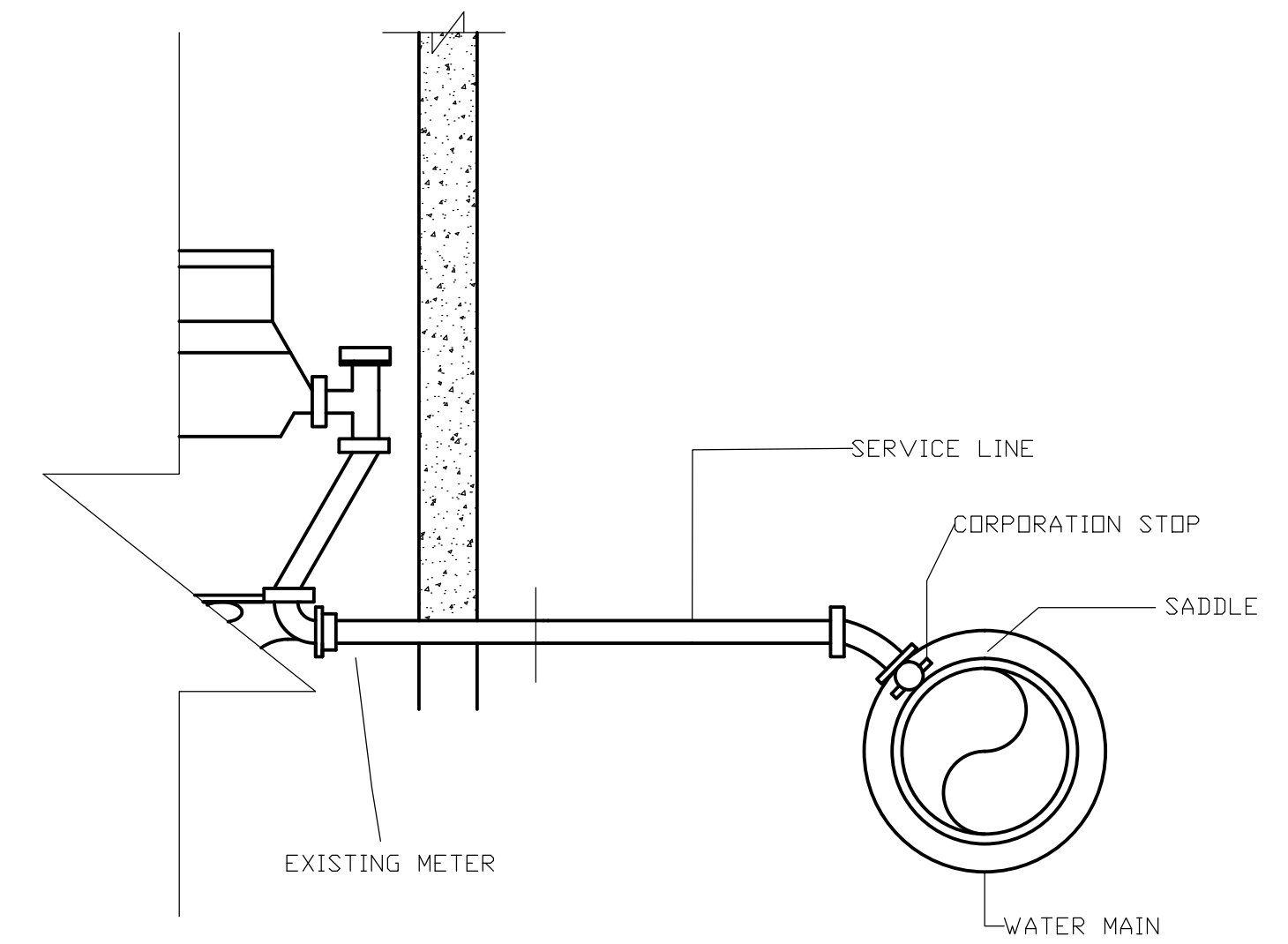
NOTE: WHERE THE WATER LINE IS LOCATED IN A STREET OR ROAD, THE AIR RELEASE VALVE AND BOX ARE TO BE LOCATED OFF THE ROAD AS DIRECTED BY THE ENGINEER AND CONNECTED TO THE MAINLINE BY 3/4-INCH SERVICE PIPE.
 NOTE: 2-INCH 90° ELBOWS TO CURB STOP SHALL PAY ITEM 4 REQ'D TO SUPPORT BOX OFF MAINLINE.

AIR RELEASE VALVE
N.T.S



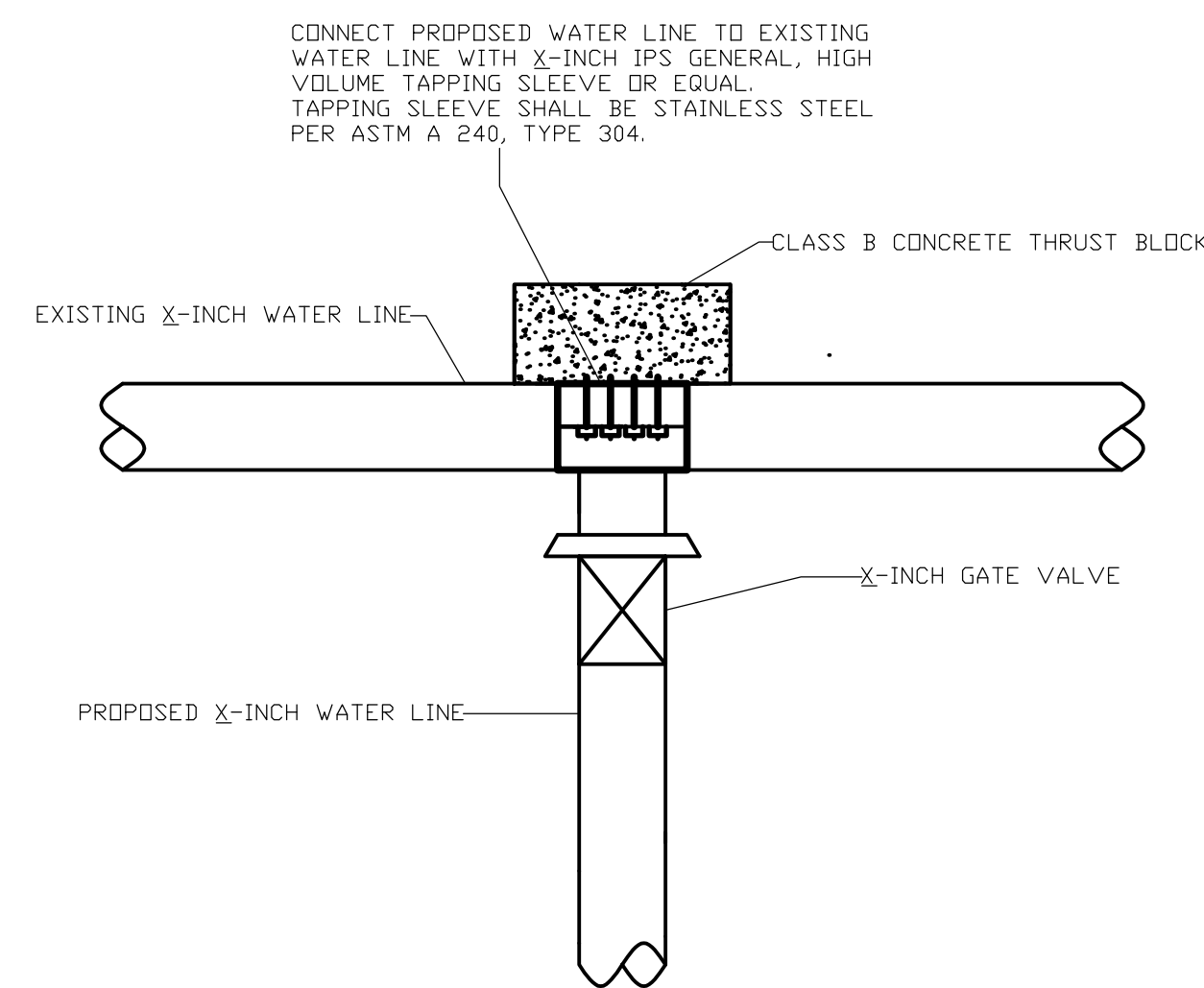
NOTE: METER SETTING SHALL BE PLACED 6" INSIDE PROPERTY LINE UNLESS OTHERWISE DIRECTED BY ENGINEER.

TANDEM METER SETTING AND CONNECTION DETAIL
N.T.S

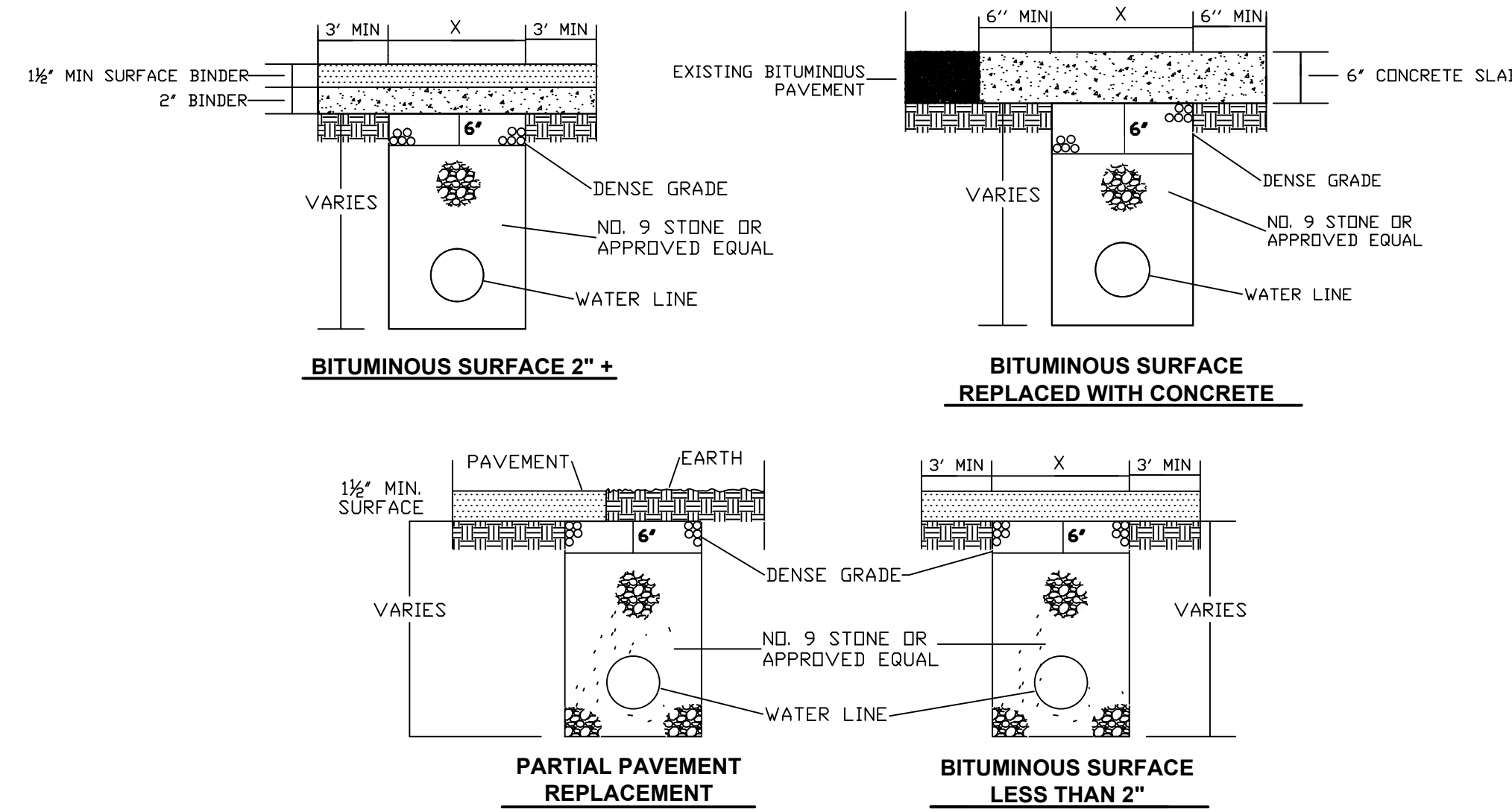


CONNECT NEW SERVICE LINE TO NEW WATER MAIN AND EXTEND TO AND CONNECT TO EXISTING METER.

METER RECONNECTION DETAIL
N.T.S

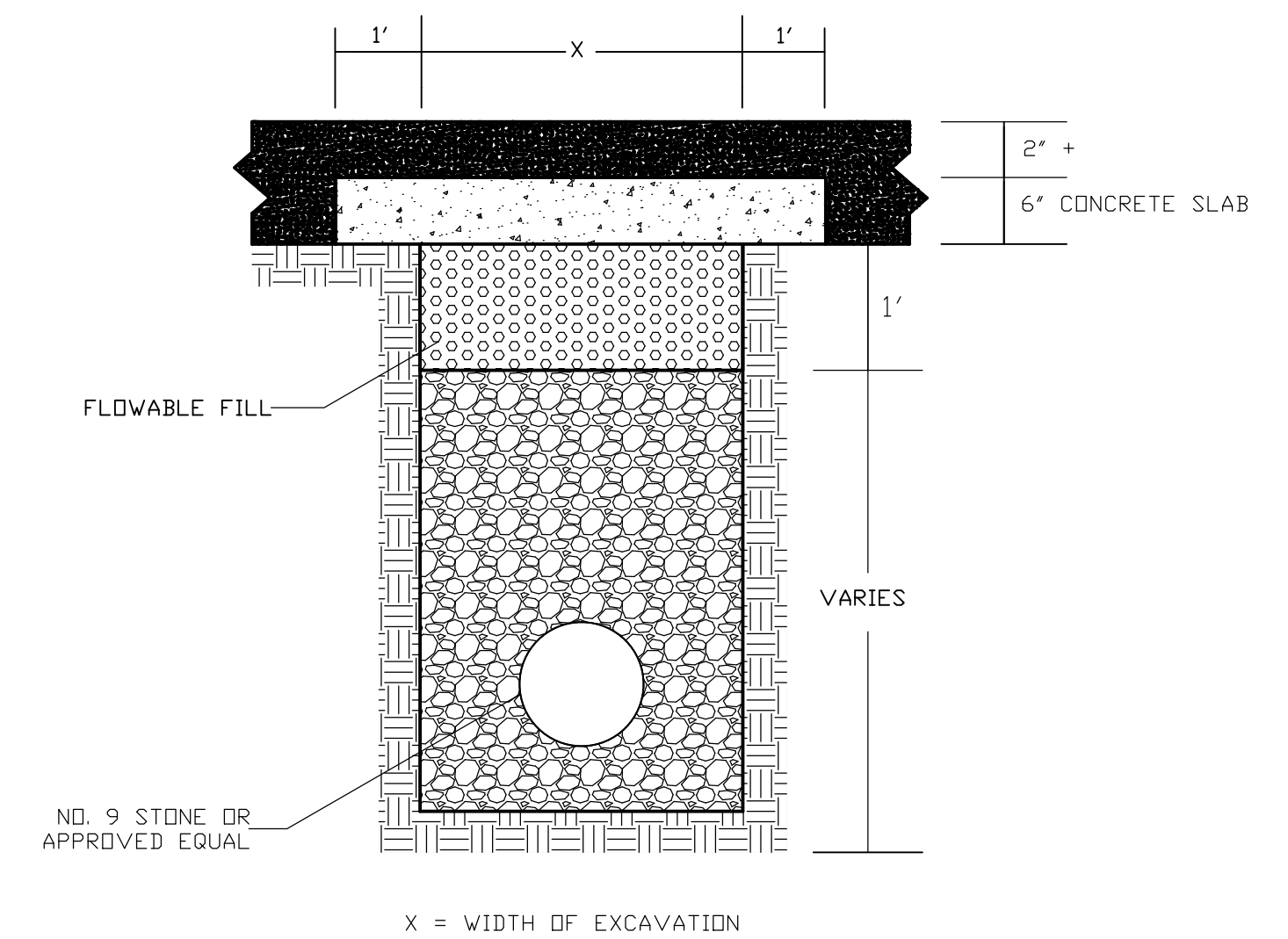


WATER LINE CONNECTION DETAIL
N.T.S



ANY TRENCH THAT DISTURBS PAVEMENT SHALL BE BACKFILLED WITH STONE
 REPLACE BITUMINOUS PAVEMENT WITH SAME TYPE AND DEPTH AS EXISTING PAVEMENT
 X = WIDTH OF EXCAVATION

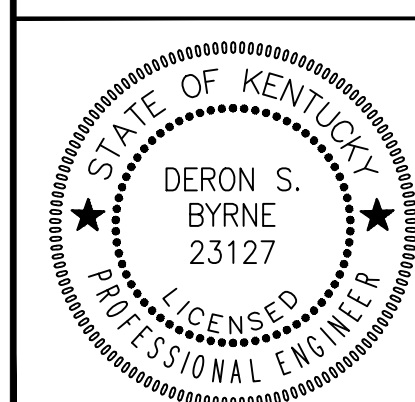
PAVEMENT REPLACEMENT DETAILS
N.T.S



STATE HIGHWAY PAVEMENT REPLACEMENT
N.T.S

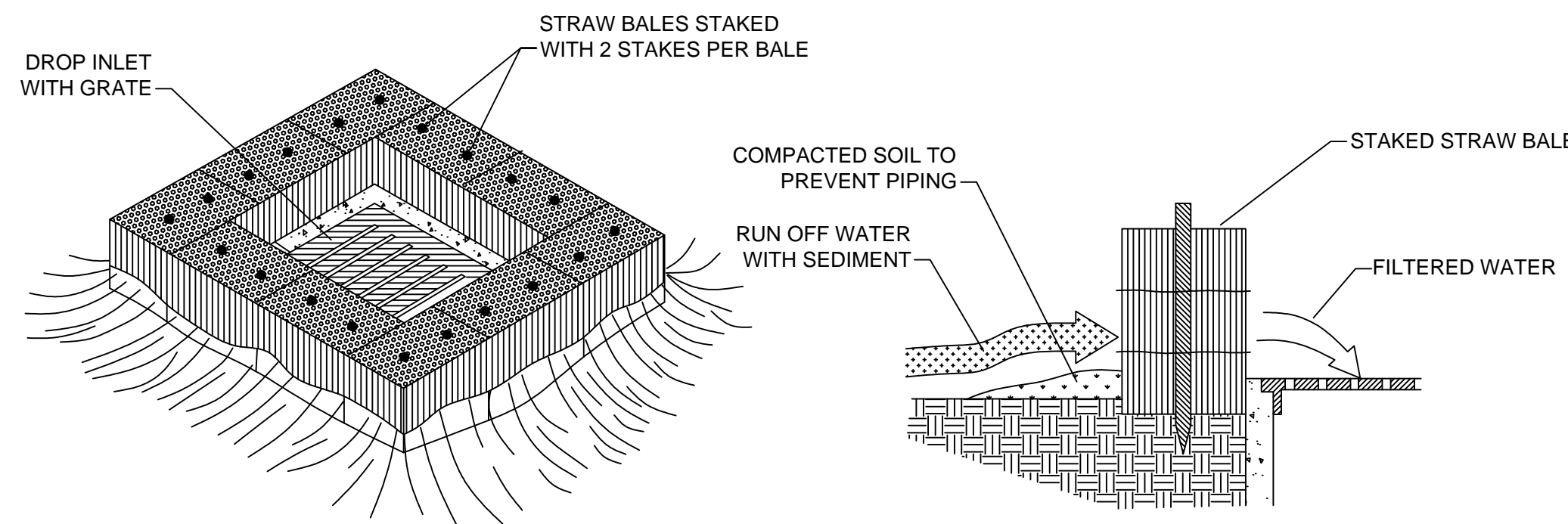
PHASE 11-2 WATER LINE EXTENSIONS
ADAIR COUNTY WATER DISTRICT
ADAIR COUNTY, KENTUCKY

STANDARD DRAWINGS

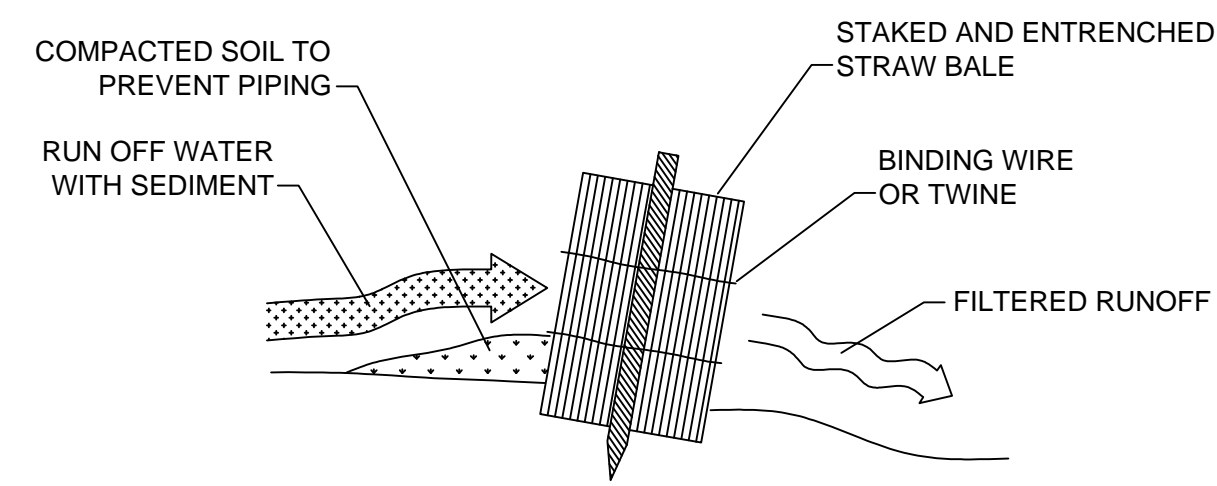


Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

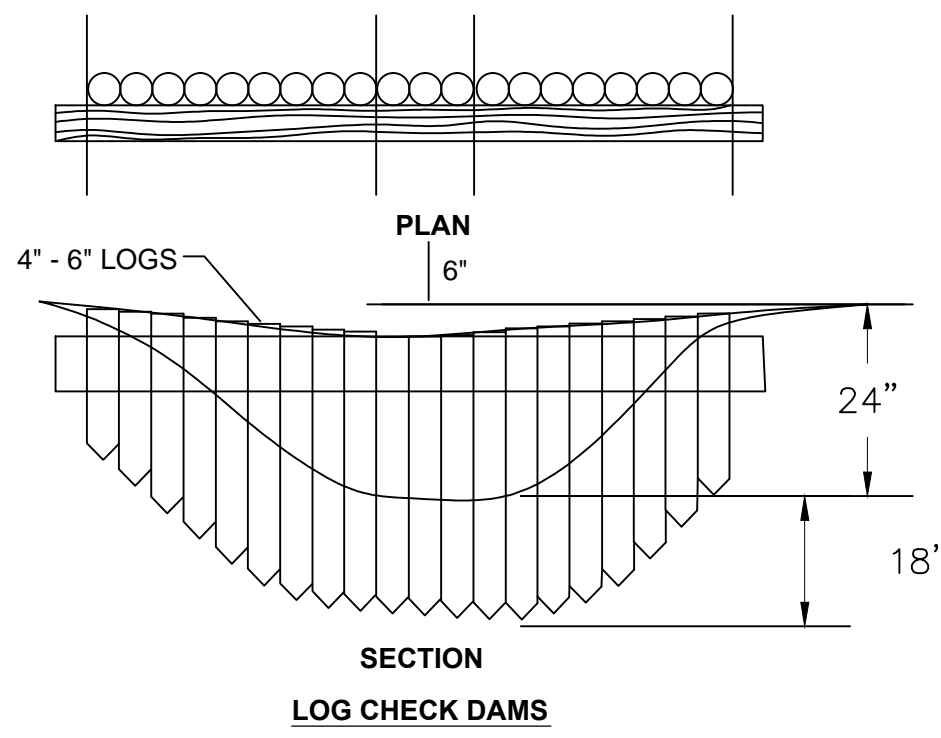
DRAWN BY: JRC	DATE: JAN 2010	REVISED	SHEET
CHECKED BY: DSB	SCALE: AS SHOWN		SD-2
CHECKED BY: DMB	PROJECT: 1049		



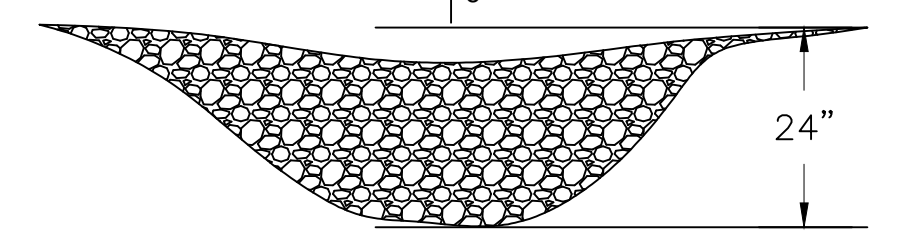
STRAW BALE DROP INLET SEDIMENT FILTER
N.T.S.



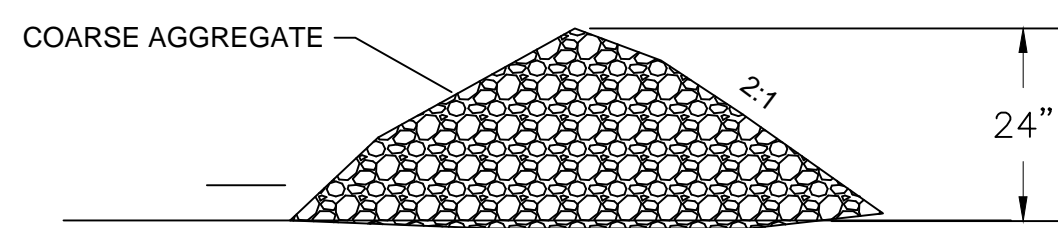
STRAW BALE INSTALLATION PROCEDURES
N.T.S.



LOG CHECK DAMS



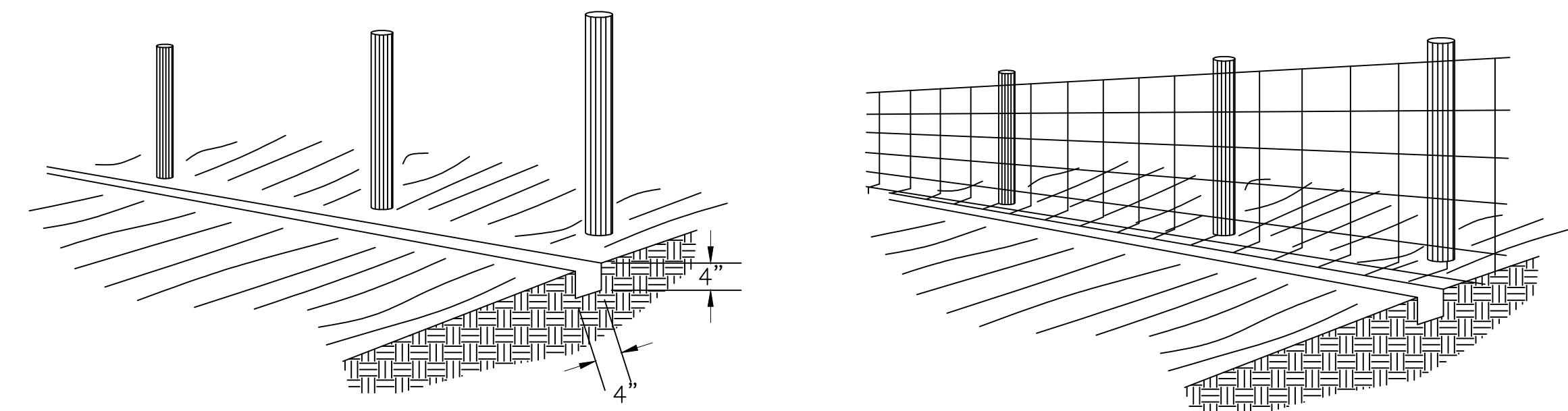
ROCK CHECK DAMS



L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION

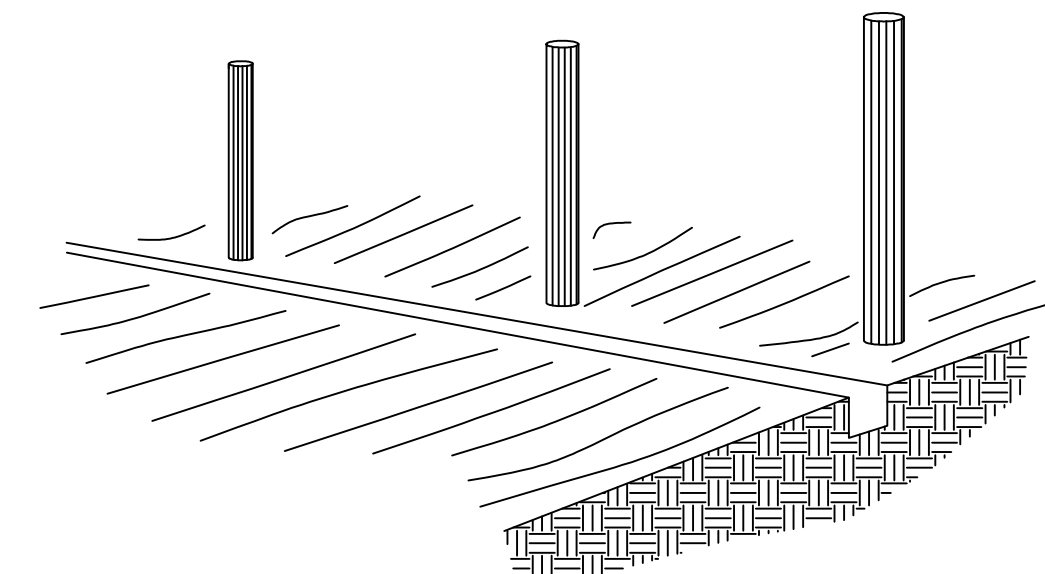
SPACING BETWEEN CHECK DAMS

CHECK DAM DETAILS
N.T.S.

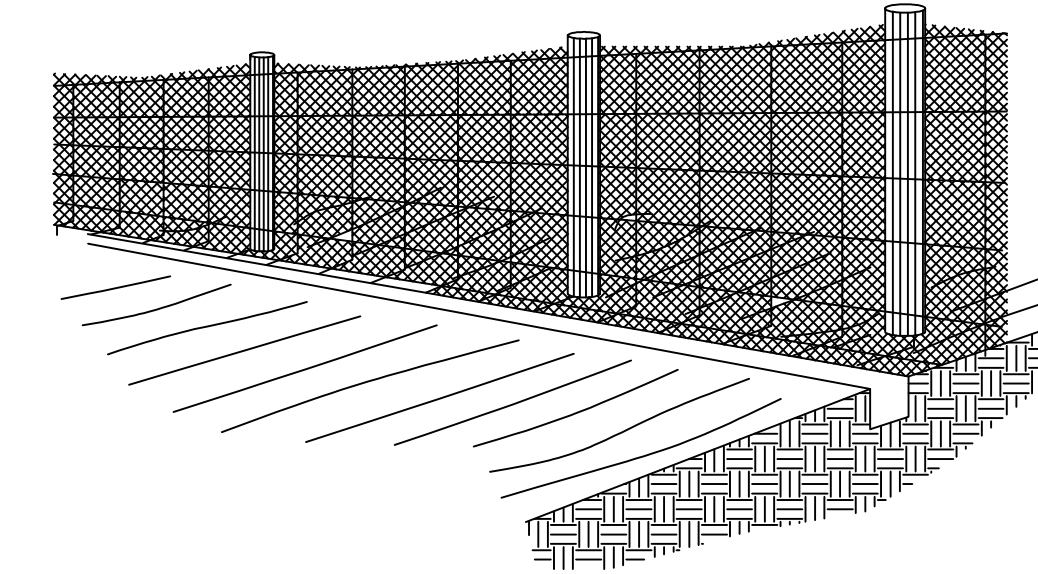


1. SET POSTS AND EXCAVATE A 4" x 4" TRENCH UPSLOPE ALONG THE LINE OF POSTS

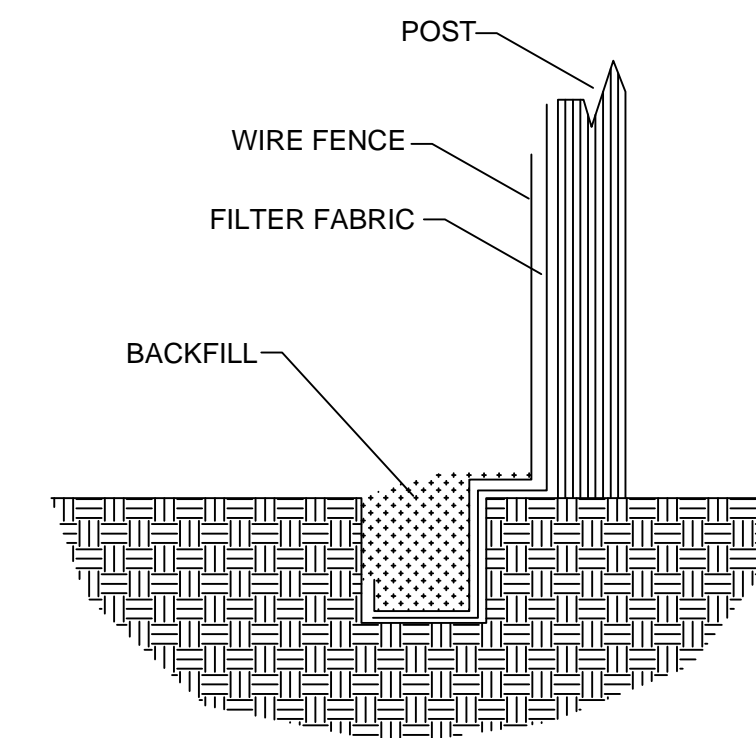
2. STAPLE WIRE FENCING TO POSTS



3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH

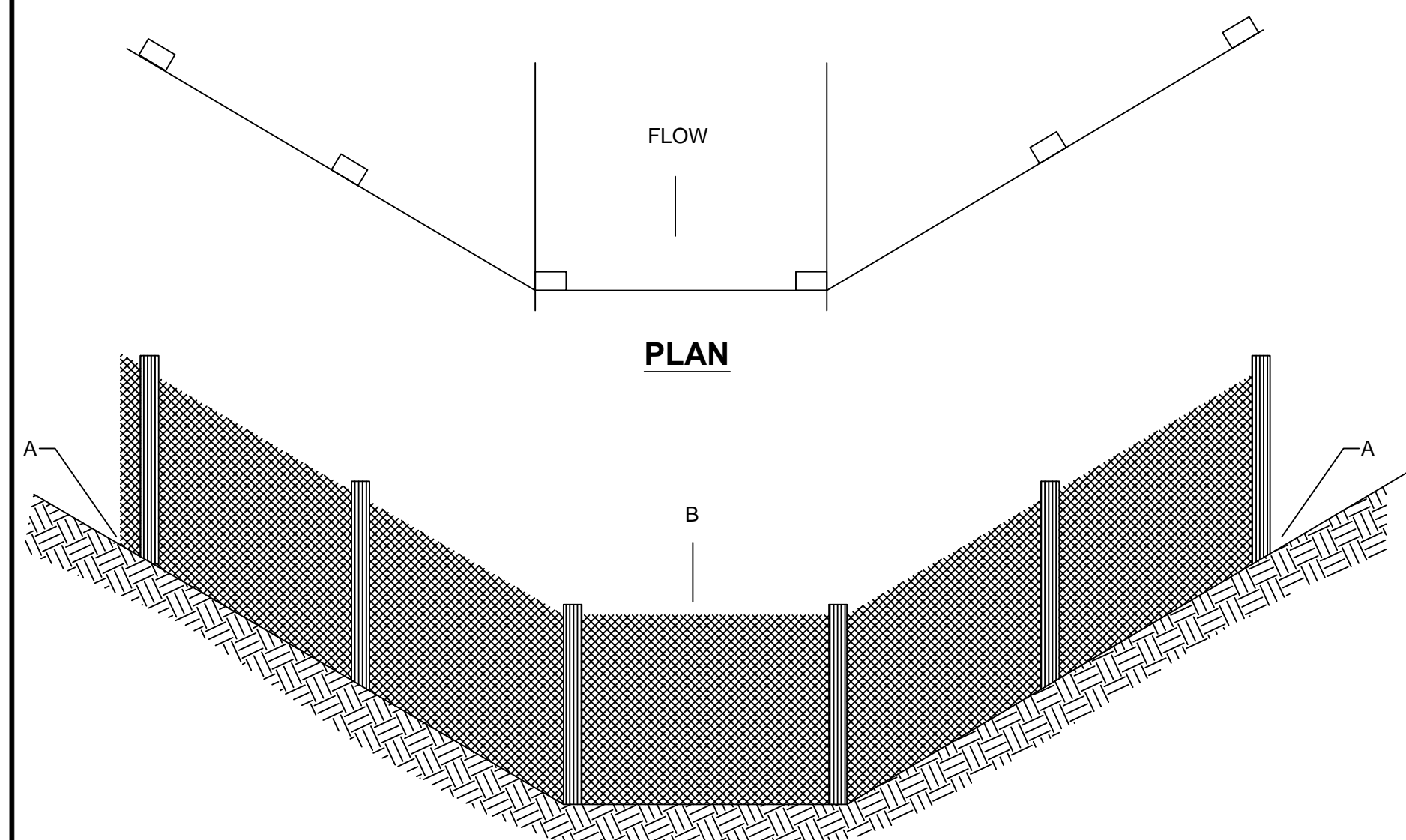


4. BACKFILL AND COMPACT THE EXCAVATED SOIL



EXTENSION OF FABRIC AND WIRE INTO THE TRENCH

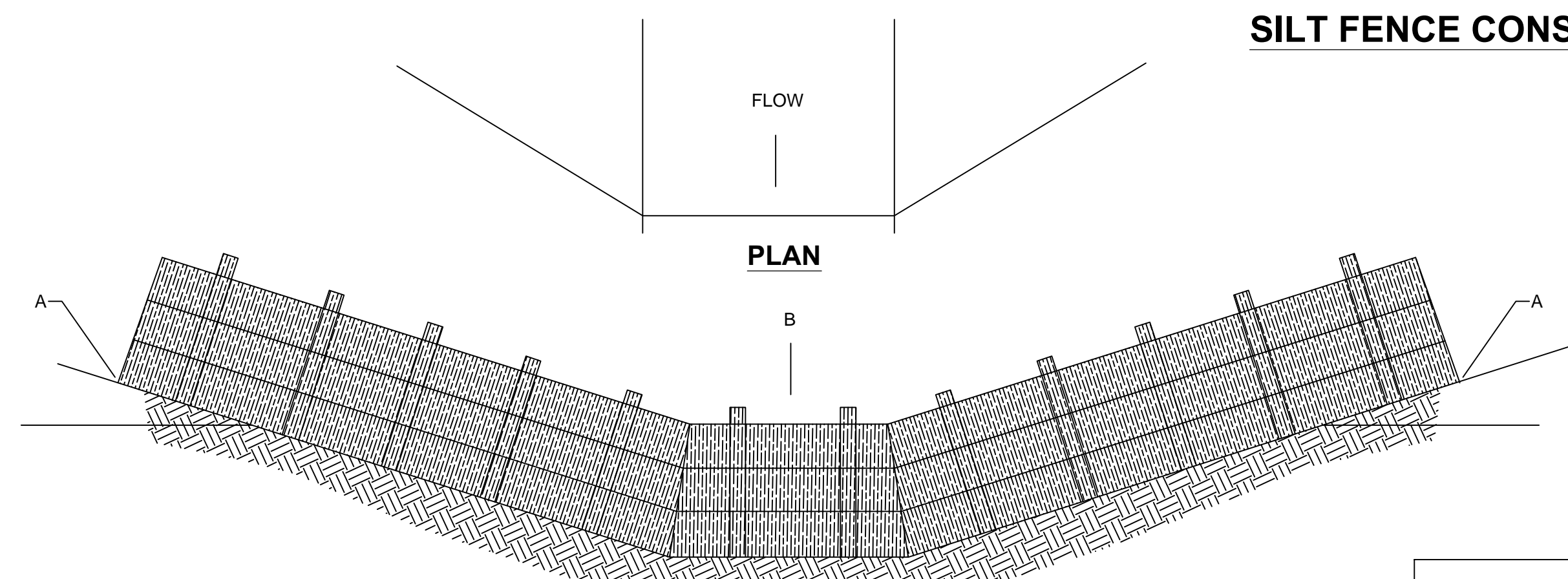
SILT FENCE CONSTRUCTION PROCEDURES
N.T.S.



ELEVATION

POINT A SHOULD BE HIGHER THAN POINT B

PLACEMENT OF FILTER BARRIER
N.T.S.



ELEVATION

POINT A SHOULD BE HIGHER THAN POINT B

PLACEMENT OF STRAW BALE BARRIER
N.T.S.

EROSION CONTROL DETAILS
N.T.S.

The Contractor shall do all work and take all measures necessary to control soil erosion resulting from construction operations, and shall prevent the flow of sediment from the construction site, and shall contain construction materials (including excavation and backfill) within their protected working area so as to prevent damage to the adjacent wetlands and water courses. The Contractor shall use any of the acceptable methods necessary to control soil erosion and prevent the flow of sediment to the maximum extent possible. These methods shall include, but not be limited to, the use of water diversion structures, diversion ditches, and settling basins.

Monarch Engineering, Inc.

556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

EROSION CONTROL DETAILS

COLUMBIA/ADAIR UTILITIES DISTRICT
ADAIR COUNTY, KENTUCKY

DESCRIPTION:

CUSTOMER:

PROJECT NO. 1049

DATE: JAN 2010

DRAWN BY: JRC

CHECKED BY: DSB

CHECKED BY: DMB

SCALE: AS NOTED

SHEET:

EC-1

