

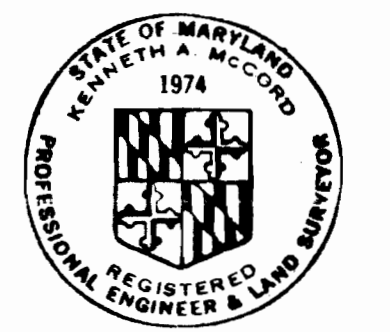
PROJECT NO. W-4-8034
SOUTHWEST TRANSMISSION MAIN
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

QUANTITIES	
36" Water	6283.42 LF

OPERATING GRADIENT = ELEVATION 350
 TEST GRADIENT = ELEVATION 525

"AS - BUILT"
 Stakeout F.B.# 5841
 Diary #1 F.B.# 5799
 Diary #2 F.B.# 5848
 Diary #3 F.B.# 5901

36" Lock Joint Pipe
 Prestressed Concrete Cylinder Pipe



Kenneth A. McLeod

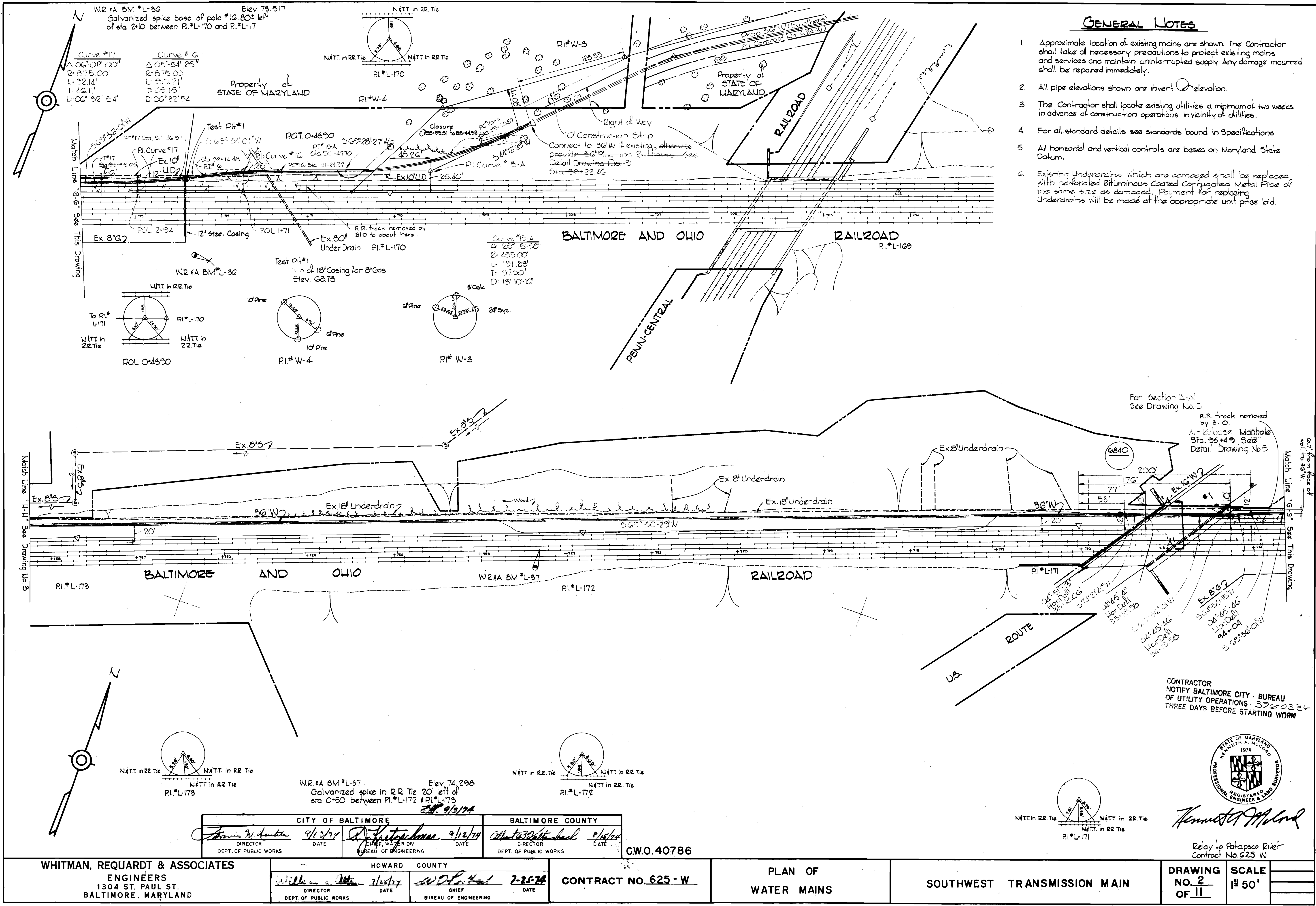
Relay to Patapsco River
 Contract No. 625-W

CITY OF BALTIMORE <i>James A. Hunter</i> 9/12/74 DIRECTOR DEPT. OF PUBLIC WORKS	BALTIMORE COUNTY <i>Robert J. Kretschmer</i> 9/12/74 CHIEF WATER DIV. BUREAU OF ENGINEERING
HOWARD COUNTY <i>William A. Alt</i> 7/15/74 DIRECTOR DEPT. OF PUBLIC WORKS	BALTIMORE COUNTY <i>Robert J. Kretschmer</i> 9/12/74 DIRECTOR DEPT. OF PUBLIC WORKS

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	HOWARD COUNTY <i>William A. Alt</i> 7/15/74 DIRECTOR DEPT. OF PUBLIC WORKS	BALTIMORE COUNTY <i>Robert J. Kretschmer</i> 9/12/74 CHIEF BUREAU OF ENGINEERING	CONTRACT NO. 625 - W	LOCATION PLAN	SOUTHWEST TRANSMISSION MAIN	DRAWING NO. 1 OF 11	SCALE 1" = 600'
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GENERAL NOTES

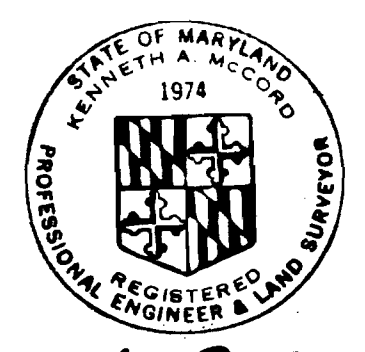
1. Approximate location of existing mains are shown. The Contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately.
2. All pipe elevations shown are invert elevation.
3. The Contractor shall locate existing utilities a minimum of two weeks in advance of construction operations in vicinity of utilities.
4. For all standard details see standards bound in Specifications.
5. All horizontal and vertical controls are based on Maryland State Datum.
6. Existing Underdrains which are damaged shall be replaced with perforated Bituminous Coated Corrugated Metal Pipe of the same size as damaged. Payment for replacing Underdrains will be made at the appropriate unit price bid.



For Section A-A
See Drawing No. 5

R.R. track removed
by B.O.
Air Release Manhole
Sta. 95+49. See
Detail Drawing No. 5

CONTRACTOR
NOTIFY BALTIMORE CITY - BUREAU
OF UTILITY OPERATIONS - 376-0321
THREE DAYS BEFORE STARTING WORK



Kenneth A. McCord

Relay to Potapoco River
Contract No. 625-W

CITY OF BALTIMORE		BALTIMORE COUNTY	
<i>James W. Dunbar</i>	9/13/74	<i>Robert J. Patterson</i>	9/13/74
DIRECTOR	DATE	DIRECTOR	DATE
DEPT. OF PUBLIC WORKS		DEPT. OF PUBLIC WORKS	

C.W.O. 40786

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	HOWARD COUNTY		CONTRACT NO. 625 - W	PLAN OF WATER MAINS	SOUTHWEST TRANSMISSION MAIN	DRAWING NO. 2 OF 11	SCALE 1" = 50'
	<i>William A. Whitman</i>	<i>John J. Reardon</i>					
DIRECTOR	DATE	CHIEF	DATE				
DEPT. OF PUBLIC WORKS		BUREAU OF ENGINEERING					

W. O. 6257-2

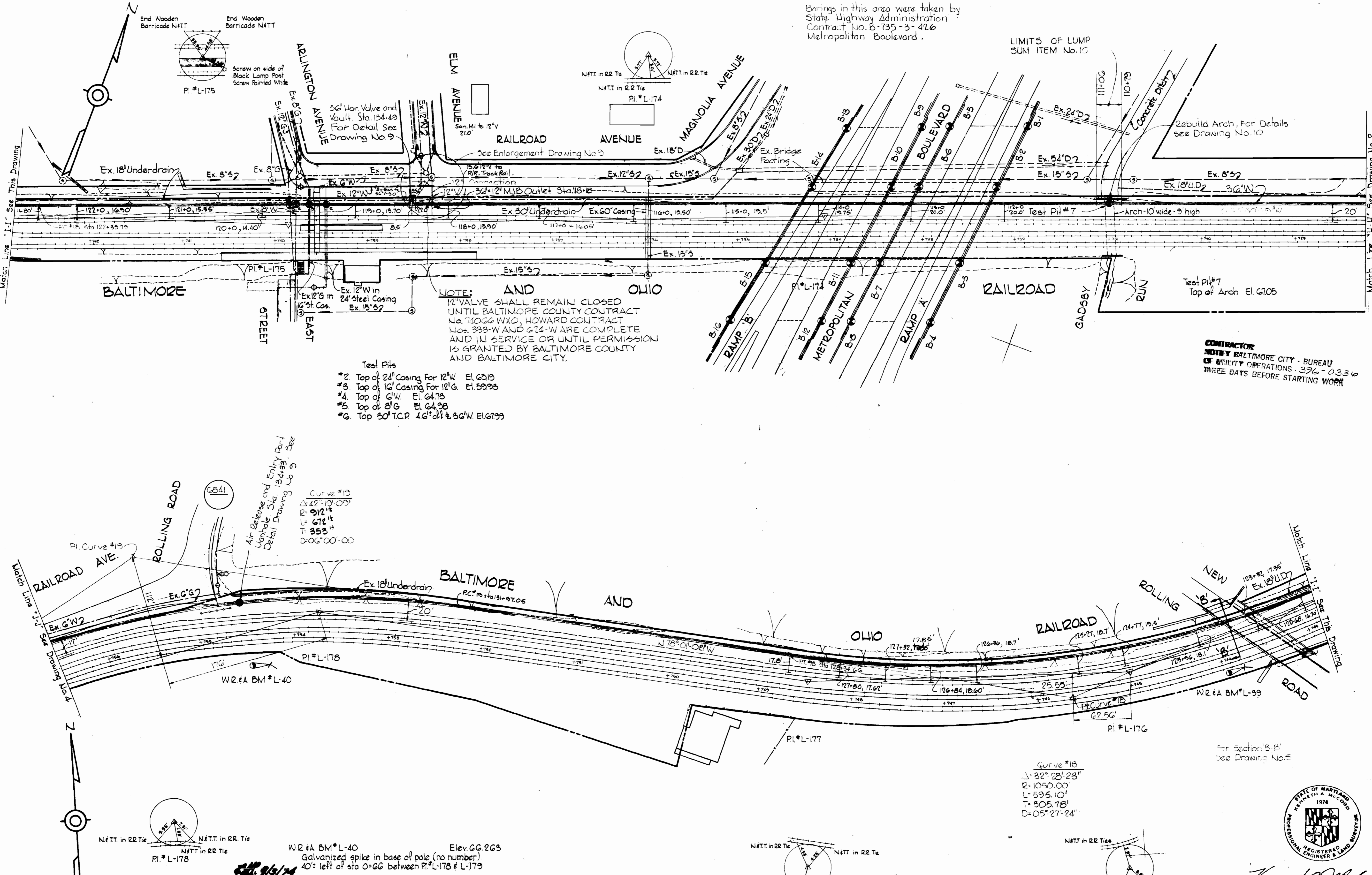
AS BUILT
March 7, 1976

FB* 4462, 4469, 4496, 4938
July 17, 1974
April 1, 1975

WS 625-W/2

Borings in this area were taken by State Highway Administration Contract No. B-735-3-426 Metropolitan Boulevard.

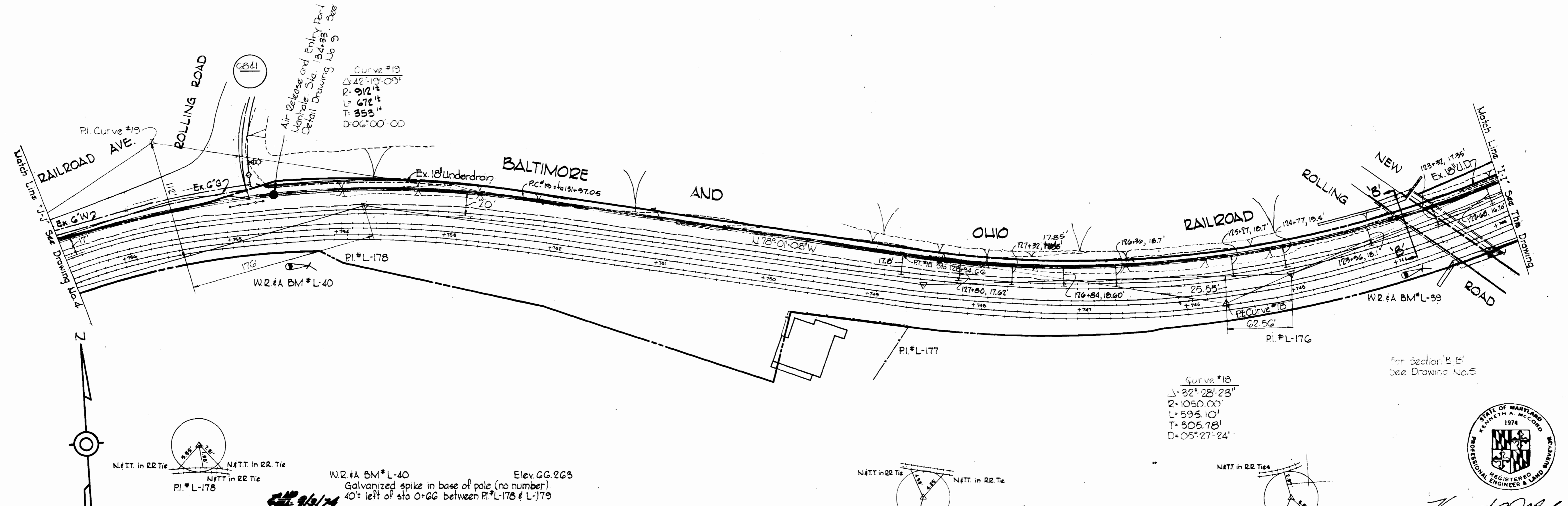
LIMITS OF LUMP SUM ITEM No. 10



NOTE: AND VALVE SHALL REMAIN CLOSED UNTIL BALTIMORE COUNTY CONTRACT NO. 74022 W&O, HOWARD CONTRACT NOS. 333-W AND 624-W ARE COMPLETE AND IN SERVICE OR UNTIL PERMISSION IS GRANTED BY BALTIMORE COUNTY AND BALTIMORE CITY.

- Test Pits
- *2. Top of 24" Casing For 12" W. El. 6319
 - *3. Top of 16" Casing For 12" G. El. 5993
 - *4. Top of 6" W. El. 6473
 - *5. Top of 8" G. El. 6498
 - *6. Top 30" T.C.P. 4.6" dia. & 36" W. El. 6799

CONTRACTOR NOTE: BALTIMORE CITY - BUREAU OF UTILITY OPERATIONS - 376-0336 THREE DAYS BEFORE STARTING WORK

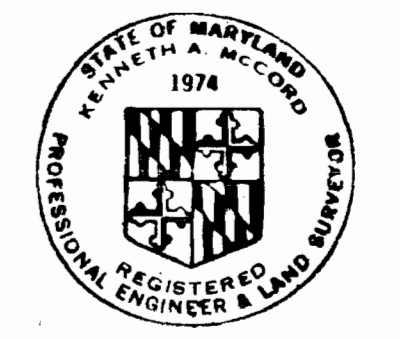


WS 625-W/3

<p>W. O. 40786</p> <p>W. O. 40786</p>	<p>CITY OF BALTIMORE</p> <p>Director: <i>[Signature]</i> 9/12/74</p> <p>Chief, Water Div: <i>[Signature]</i> 9/12/74</p> <p>BALTIMORE COUNTY</p> <p>Director: <i>[Signature]</i> 9/12/74</p>	<p>HOWARD COUNTY</p> <p>Chief: <i>[Signature]</i> 7-21-74</p>	<p>CONTRACT NO. 625 - W</p> <p>PLAN OF WATER MAINS</p> <p>SOUTHWEST TRANSMISSION MAIN</p>
<p>WHITMAN, REQUARDT & ASSOCIATES</p> <p>ENGINEERS</p> <p>1304 ST. PAUL ST.</p> <p>BALTIMORE, MARYLAND</p>	<p>DRAWING NO. 3 OF 11</p> <p>SCALE 1"=50'</p>		<p>AS BUILT</p> <p>March 7, 1978</p>

W. O. 6257-2

AS BUILT FB# 4462, 4469, 4496 August 29, 1974 April 1, 1975

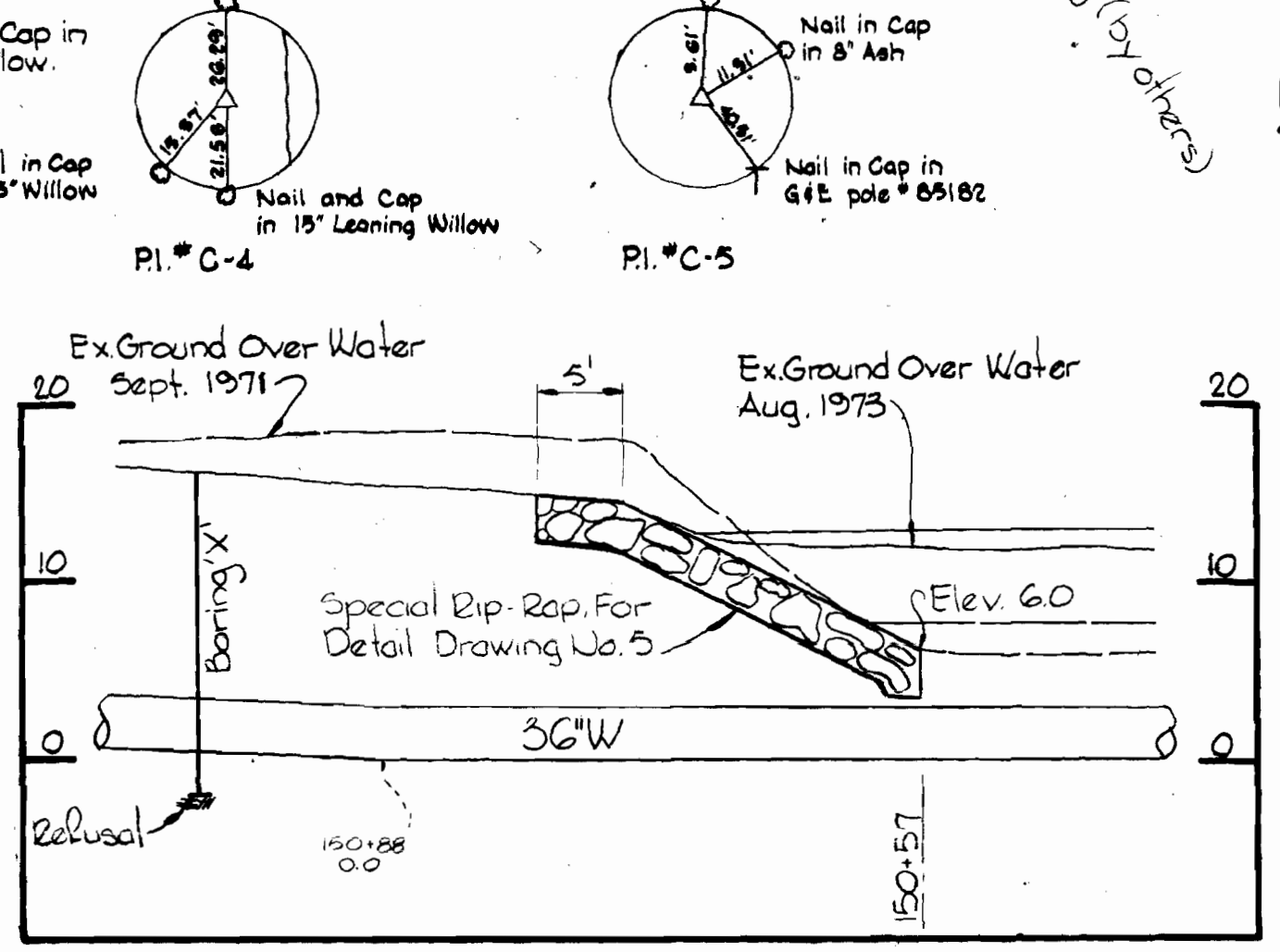
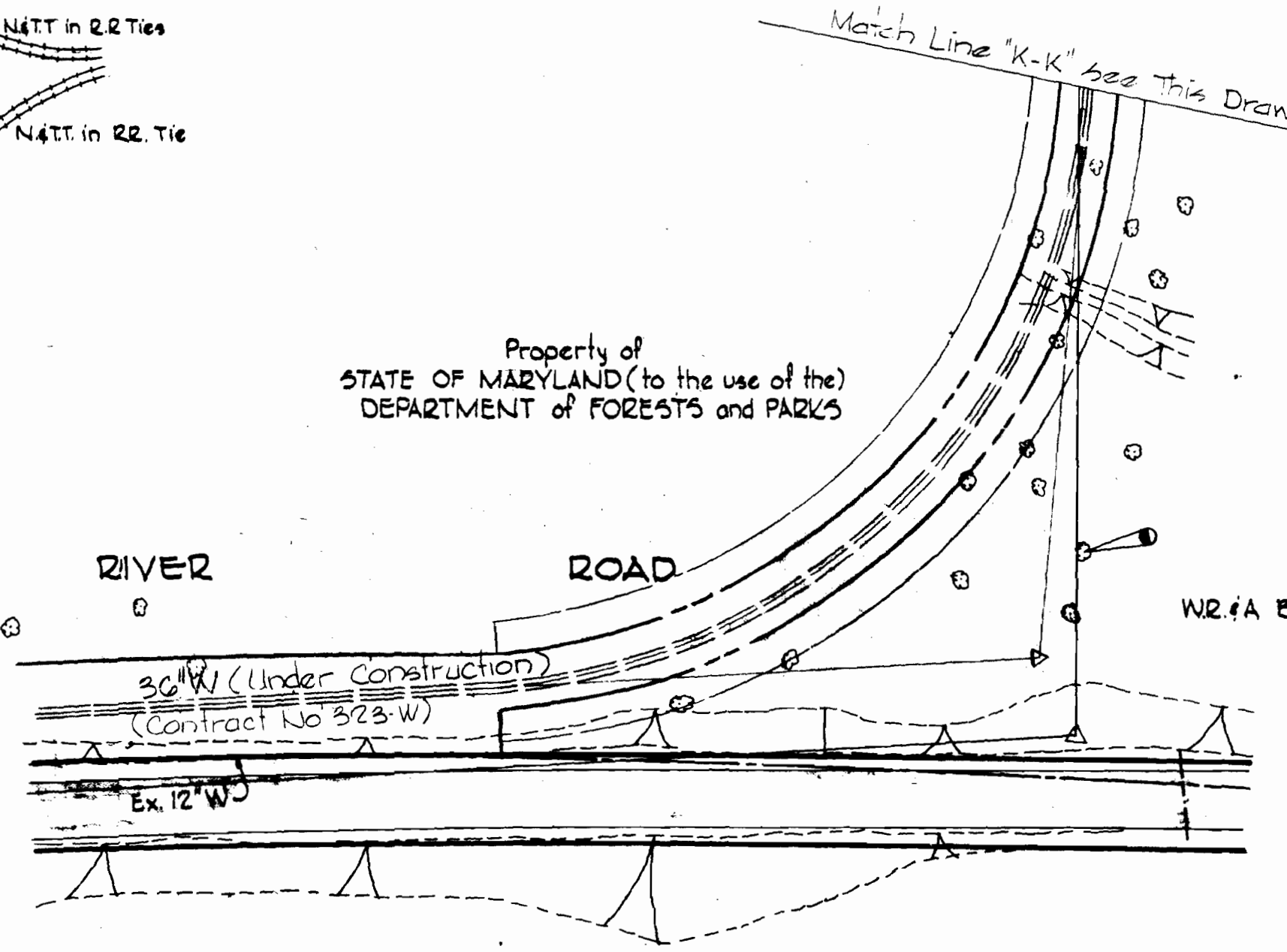
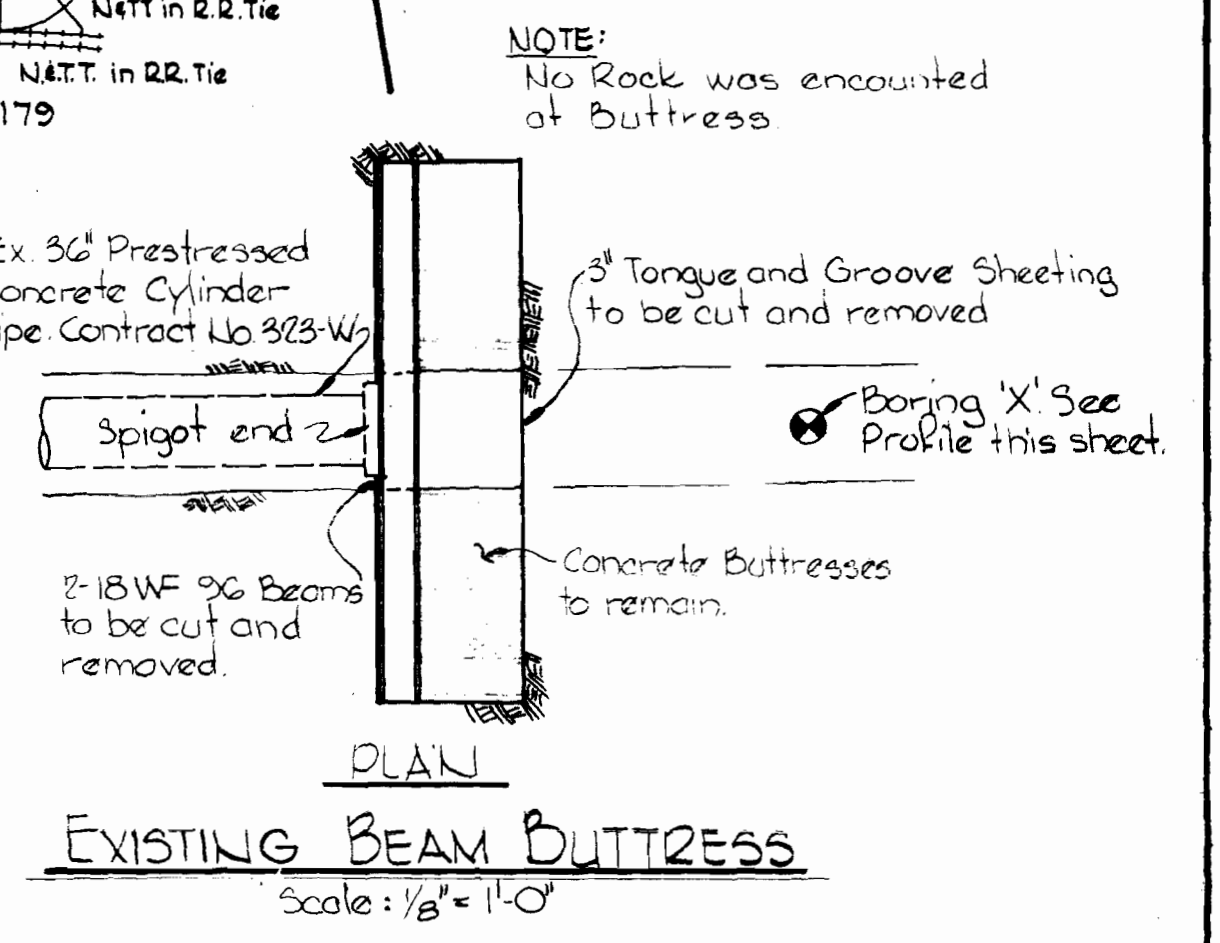
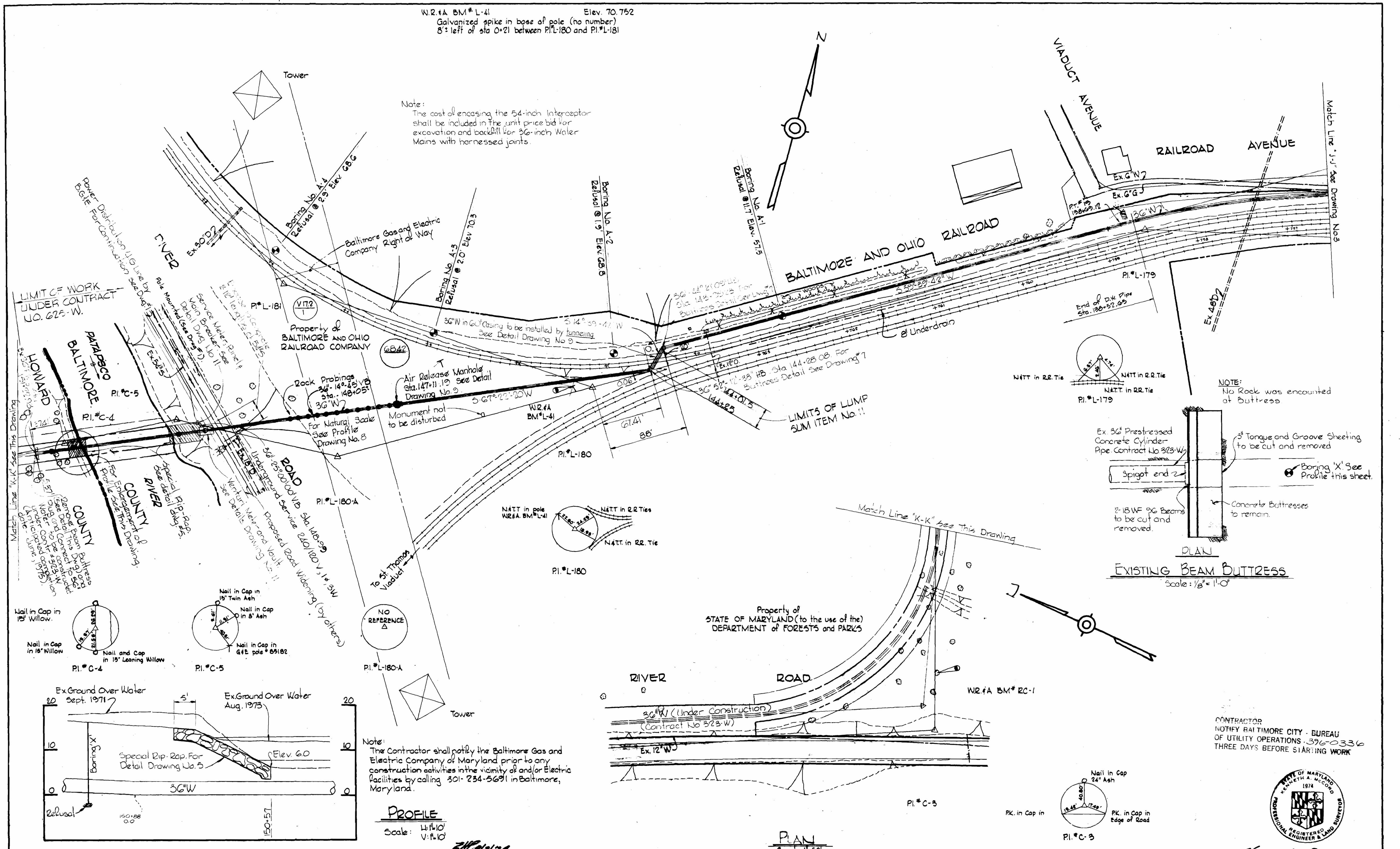


Kenneth J. McLeod

Relay to Potomac River Contract No. 625 - W

W.R.#A BM*L-41 Elev. 70.752
Galvanized spike in base of pole (no number)
8' left of sta 0+21 between P.L.#180 and P.L.#181

Note:
The cost of encasing the 54-inch interceptor shall be included in the unit price bid for excavation and backfill for 36-inch Water Mains with harnesses joints.



Note:
The Contractor shall notify the Baltimore Gas and Electric Company of Maryland prior to any construction activities in the vicinity of and/or Electric facilities by calling 301-234-5691 in Baltimore, Maryland.

CONTRACTOR
NOTIFY BALTIMORE CITY - BUREAU
OF UTILITY OPERATIONS - 396-0336
THREE DAYS BEFORE STARTING WORK



Note:
Boring X was made by contractor constructing Contract No. 323-W.

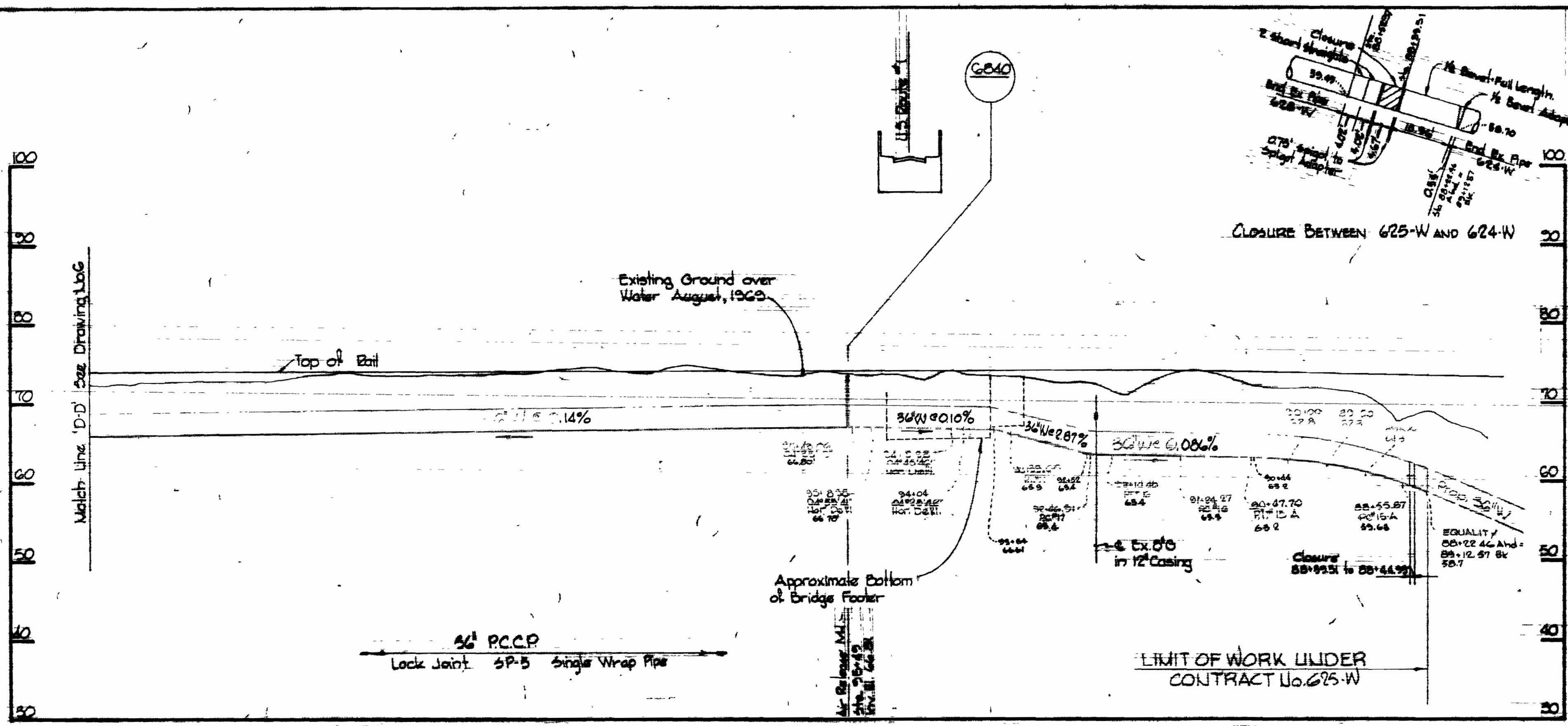
CITY OF BALTIMORE		BALTIMORE COUNTY	
<i>James J. ...</i> 9/12/74	DATE	<i>R. J. ...</i> 9/12/74	DATE
DIRECTOR DEPT. OF PUBLIC WORKS		DIRECTOR DEPT. OF PUBLIC WORKS	

G.W.O. 40786

W.R.#A BM*RC-1 Elev. 20.689
R.R. Spike in 30' Maple 5' right of sta
0+20 between P.L.#C-5 and P.L.#C-4

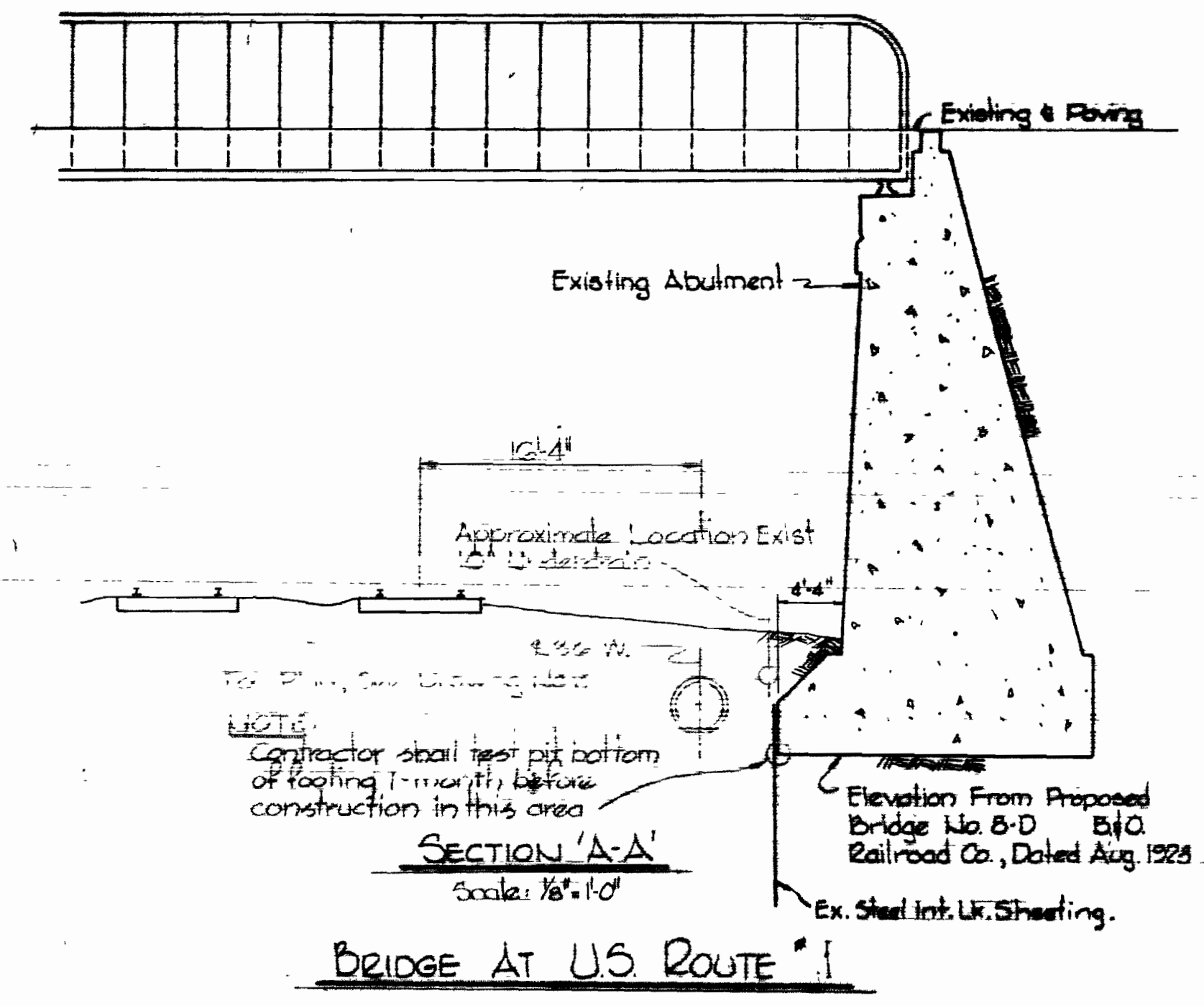
Kenneth P. McLeod
Relay to Palopoco River
Contract No. 625-W

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	HOWARD COUNTY		CONTRACT NO. 625 - W	PLAN, PROFILE AND DETAIL OF WATER MAINS	SOUTHWEST TRANSMISSION MAIN	DRAWING NO. 4 OF 11	SCALE AS SHOWN
	<i>William J. ...</i> 7/15/74	DATE					
DIRECTOR DEPT. OF PUBLIC WORKS		CHIEF BUREAU OF ENGINEERING					

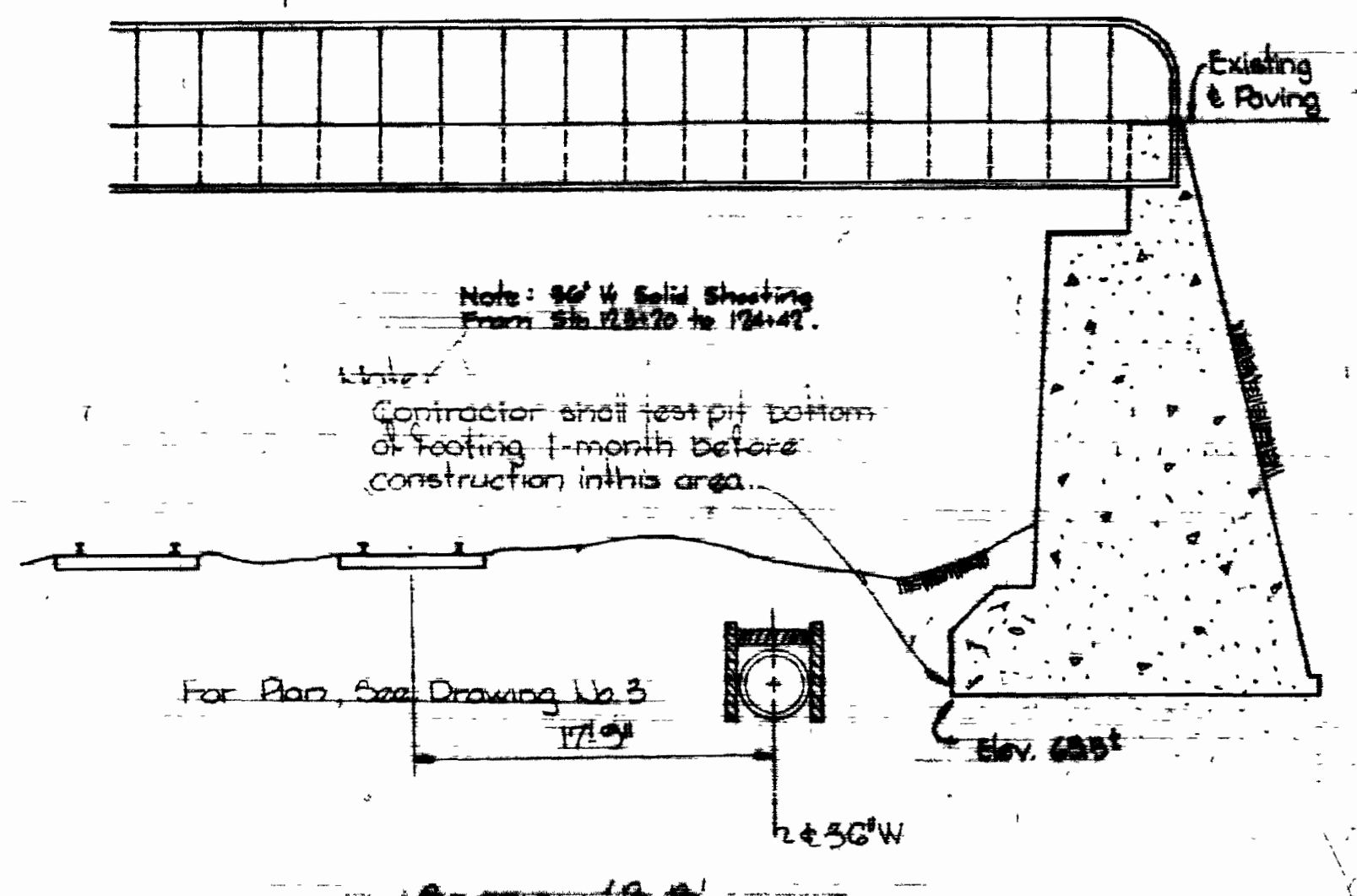


PROFILE
Scale: 1/4" = 10'
V. 1" = 10'

- NOTES:**
1. Special Rip-Rap shall be maximum size 1000 lbs., 25% greater than 500 lbs., 45% to 95% from 50 to 500 lbs. not more than 25% less than 50 lbs. and placed as shown.
 2. Erosion Control Fabric shall be Poly Filter X as manufactured by Cartridge Mills Inc., Erosion Control Div., 124 W. 36th Street, Cincinnati, Ohio; Laurel Erosion Control Cloth as manufactured by Laurel Plastics, Inc., Madison, Maine; or approved equal.
 3. Payment for Special Rip-Rap will be made at the unit price bid.

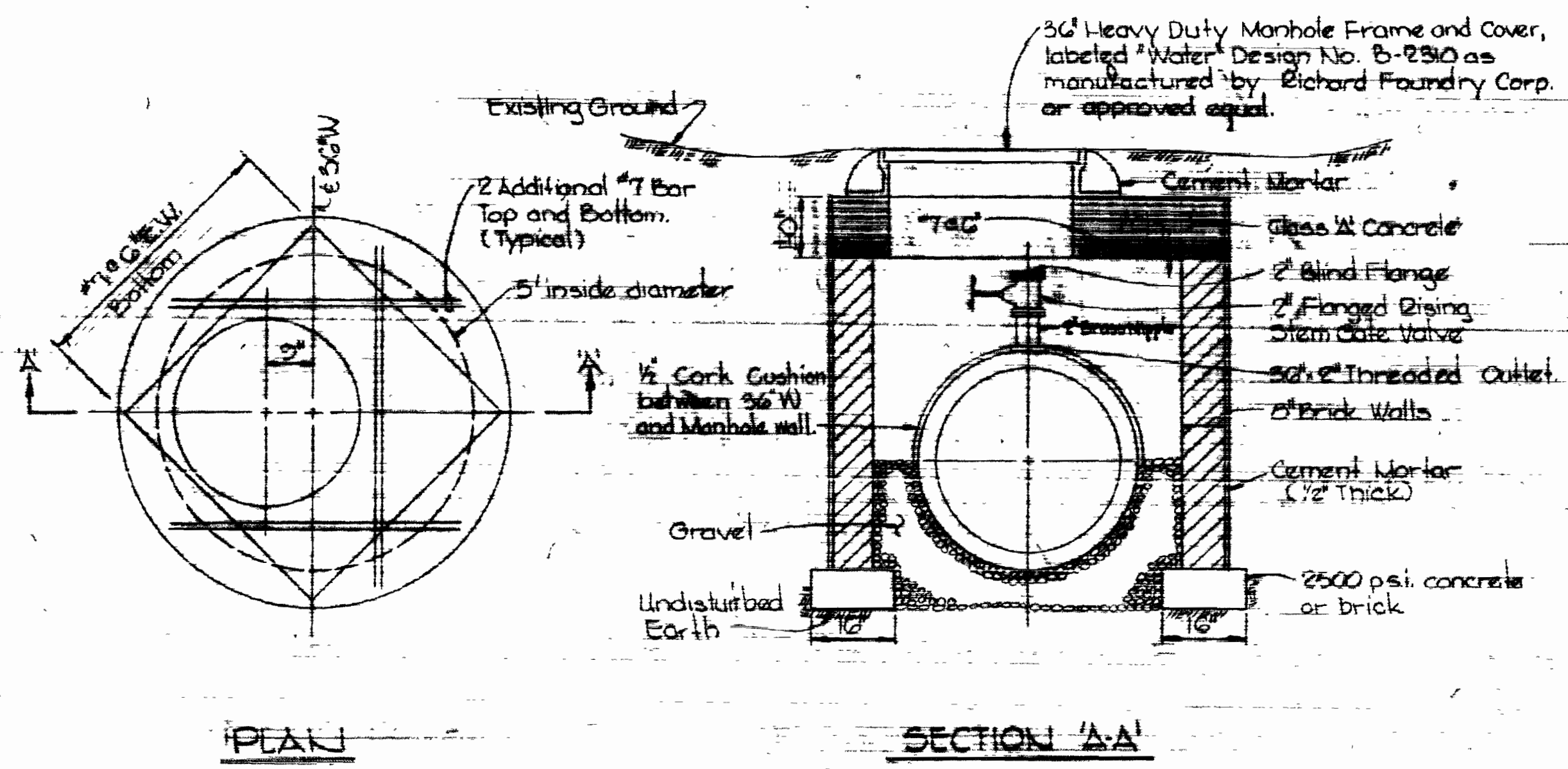


SECTION 'A-A'
Scale: 1/8" = 10'



SECTION 'B-B'
Scale: 1/8" = 10'

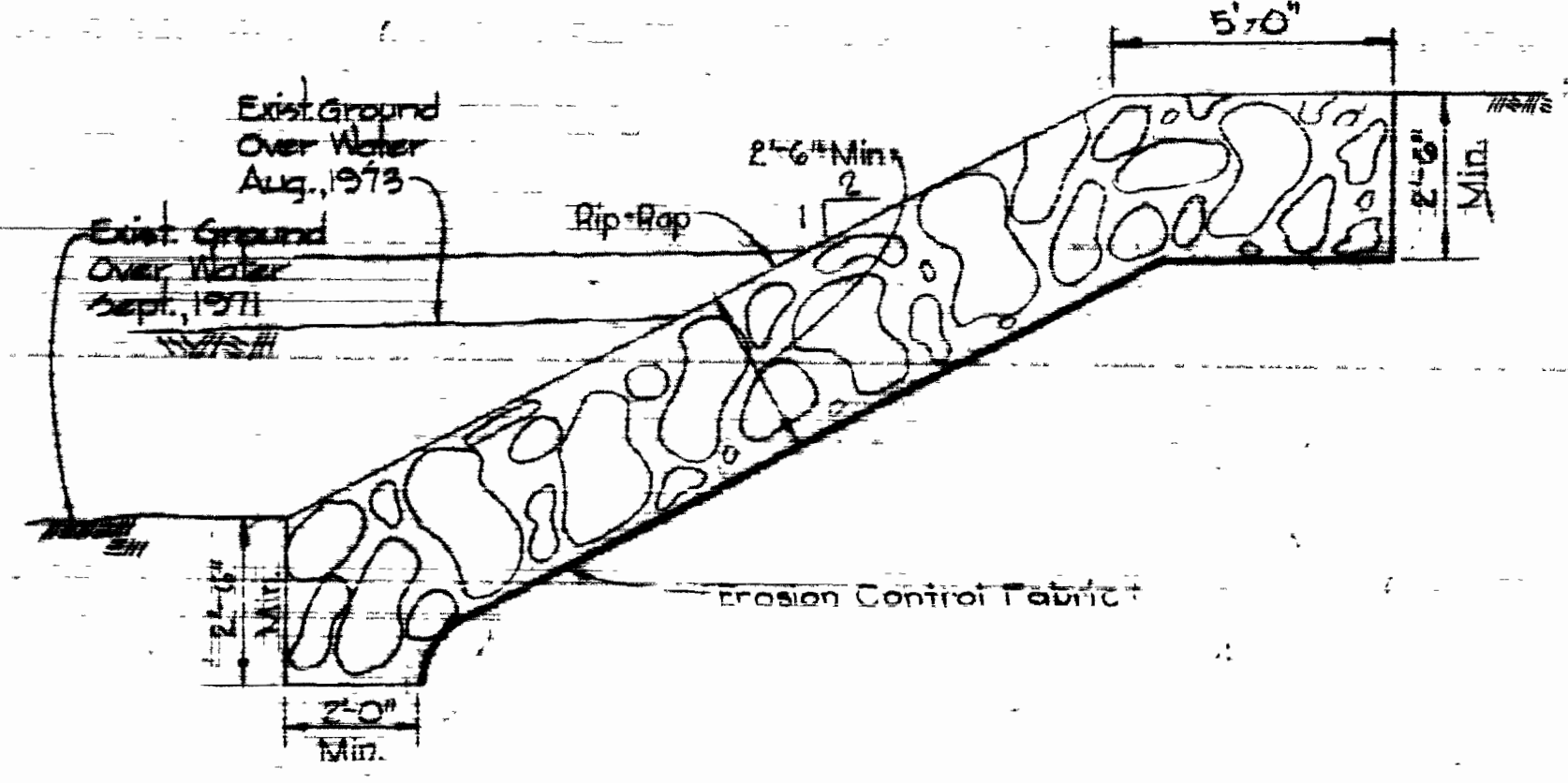
CONTRACTOR VERIFY BALTIMORE CITY - BUREAU OF UTILITY OPERATIONS - 376-0336 THREE DAYS BEFORE STARTING WORK



SECTION 'A-A'

PLAN

DETAIL OF AIR RELEASE MANHOLE
Scale: 1/4" = 10'



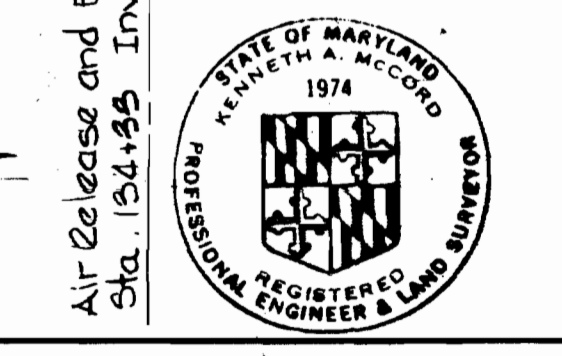
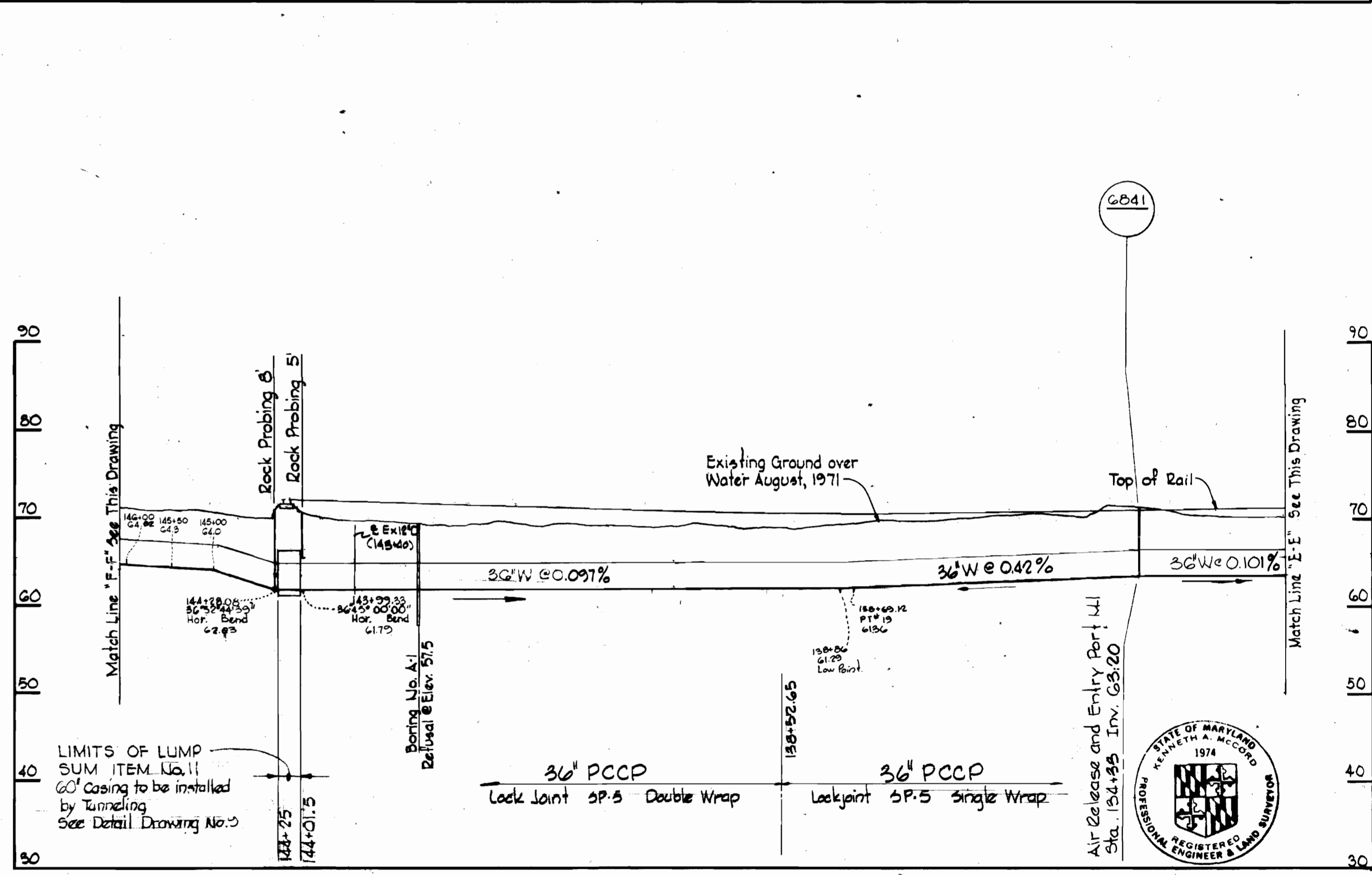
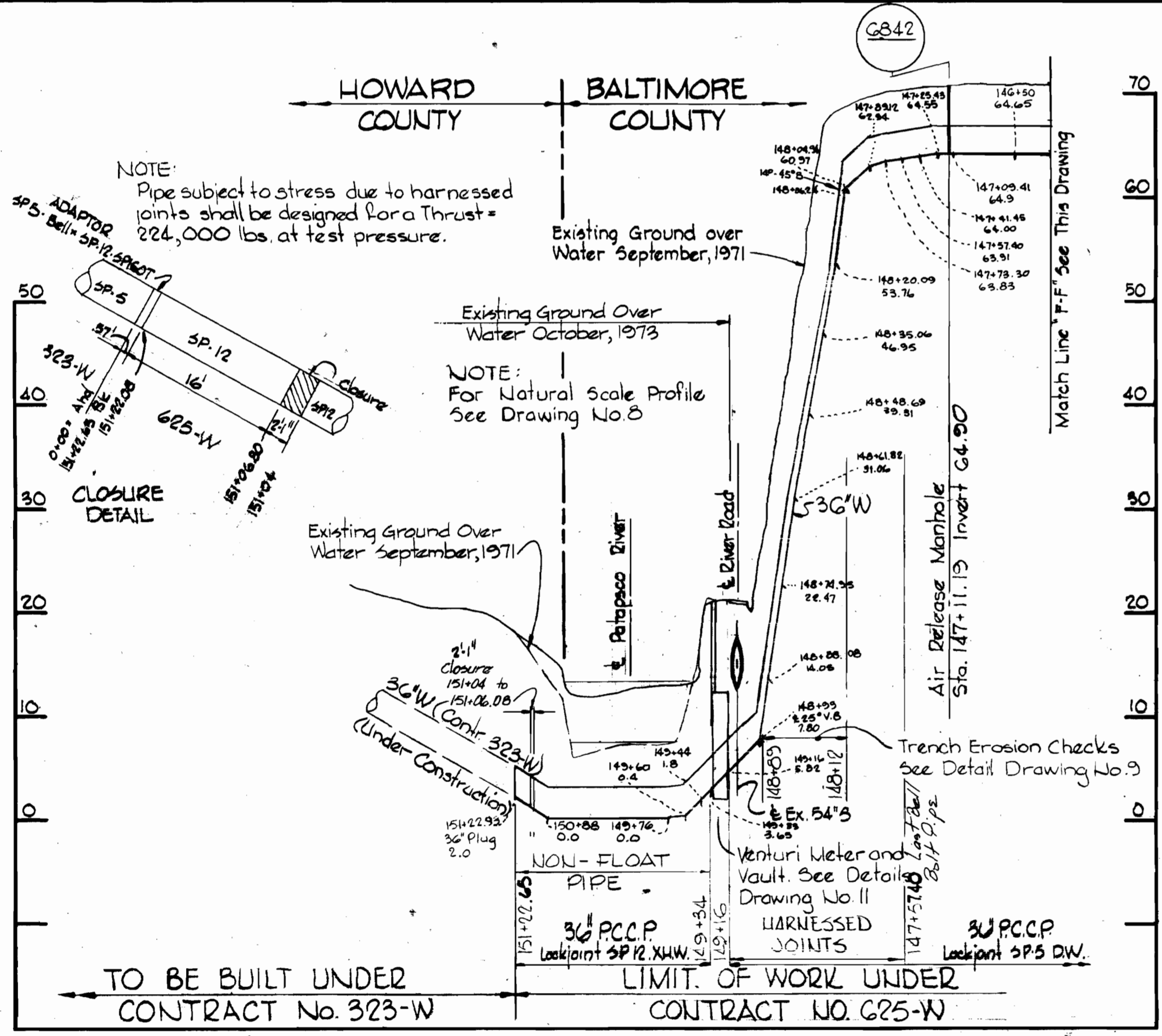
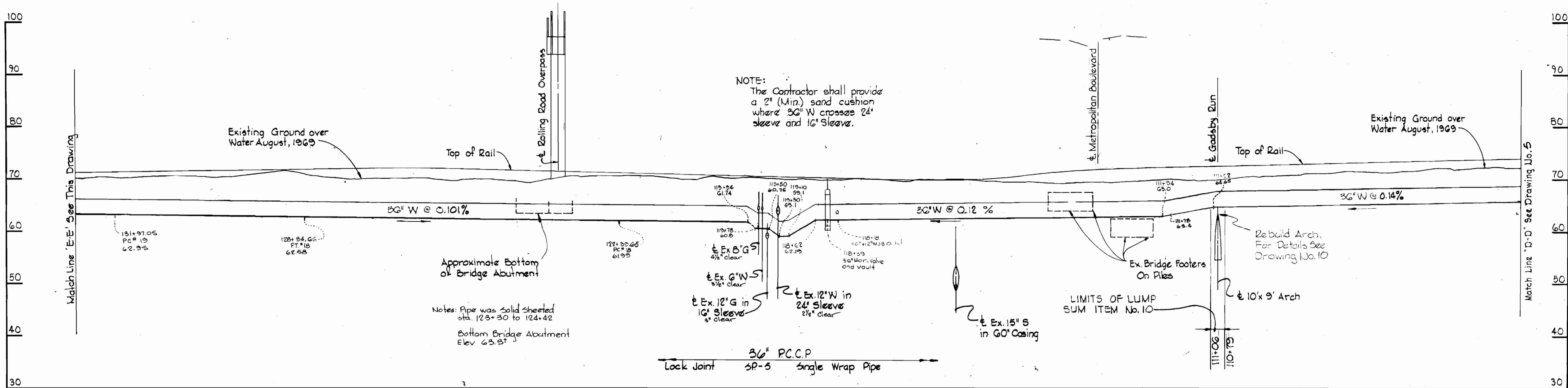
SPECIAL RIP-RAP DETAIL
Scale: 1/4" = 10'



Kenneth A. McCord

CITY OF BALTIMORE <i>John V. Fisher</i> Mayor DEPT. OF PUBLIC WORKS		BALTIMORE COUNTY <i>John V. Fisher</i> Director DEPT. OF PUBLIC WORKS		CONTRACT NO. 625-W PROFILE & DETAILS OF WATER MAINS SOUTHWEST TRANSMISSION MAIN DRAWING NO. 2 OF 11 SCALE AS SHOWN	
WHITMAN, BEQUARDT & ASSOCIATES ENGINEERS 1294 ST. PAUL ST. BALTIMORE, MARYLAND		W. O. 40786 CONTRACT NO. 625-W PROFILE & DETAILS OF WATER MAINS SOUTHWEST TRANSMISSION MAIN DRAWING NO. 2 OF 11 SCALE AS SHOWN		DATE: March 1, 1975 APPROVED: <i>[Signature]</i> APRIL 1, 1975	

WS 625-W/5



Kenneth A. McCord

CITY OF BALTIMORE		BALTIMORE COUNTY	
<i>James W. Smith</i>	9/13/74	<i>John P. ...</i>	9/12/74
DIRECTOR	DATE	CHIEF, WATER DIV.	DATE
DEPT. OF PUBLIC WORKS		BUREAU OF ENGINEERING	

C.W.O. 40786

Relay to Patapsco River
Contract No. 625-W

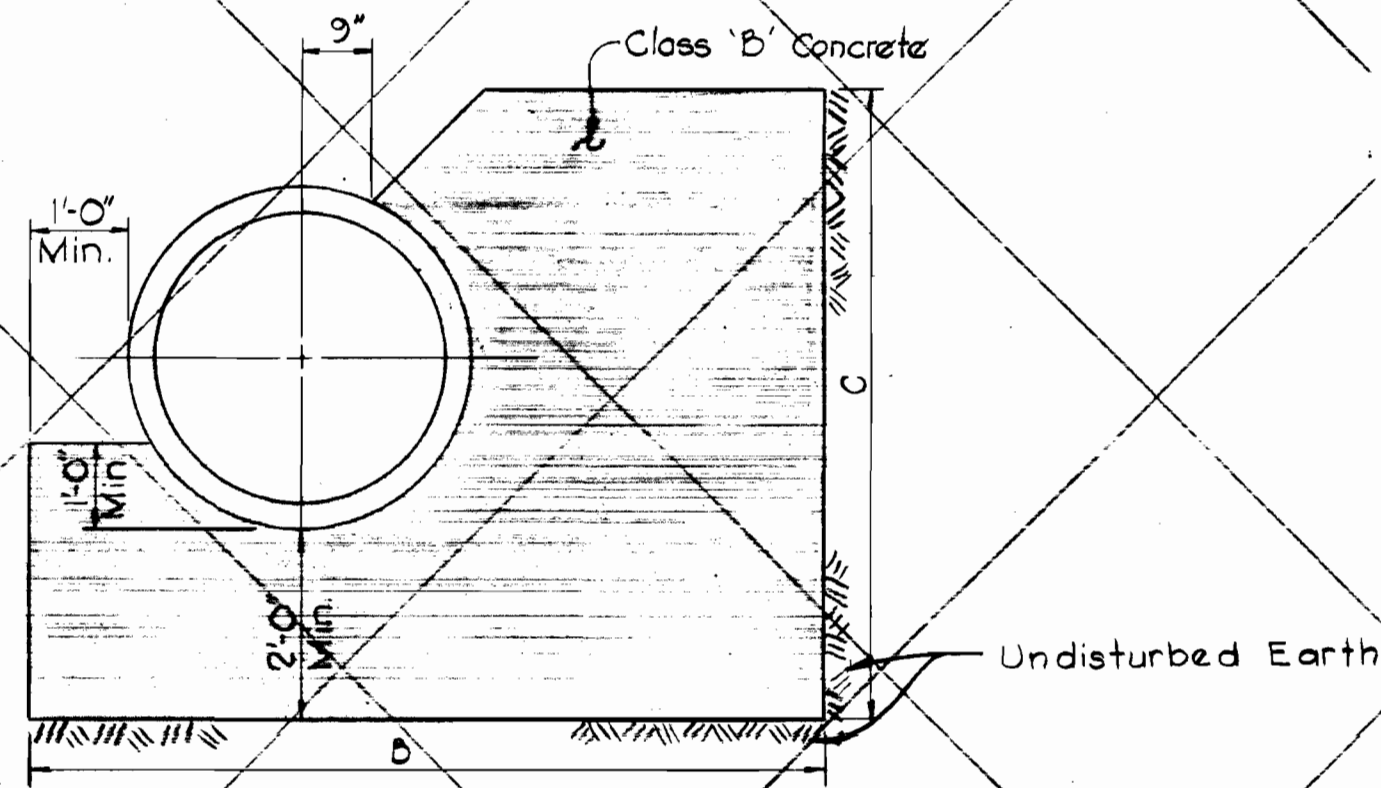
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	HOWARD COUNTY <i>William D. ...</i> 7/15/74 DIRECTOR DATE DEPT. OF PUBLIC WORKS BUREAU OF ENGINEERING		BALTIMORE COUNTY <i>W. O. ...</i> 7-25-74 CHIEF DATE BUREAU OF ENGINEERING		CONTRACT NO. 625-W	PROFILES OF WATER MAINS	SOUTHWEST TRANSMISSION MAIN	DRAWING NO. 6 OF 11	SCALE H:1"=100' V:1"=10'
	W. O. 625-W-6								

W. O. 6257-2 AS BUILT March 7, 1978 August 13, 1974 April 1, 1975

WS 625-W-6

Horizontal and Vertical Buttriss Schedule				
Bend	A	B	C	D
Horiz. 45°-00'-00"	8'-6"	8'-6"	6'-6"	5'-2"
Vert. 10°-00'-00"				
Horiz. 54°-34'-22"	9'-0"	8'-6"	6'-6"	3'-0"
Vert. 10°-00'-00"				

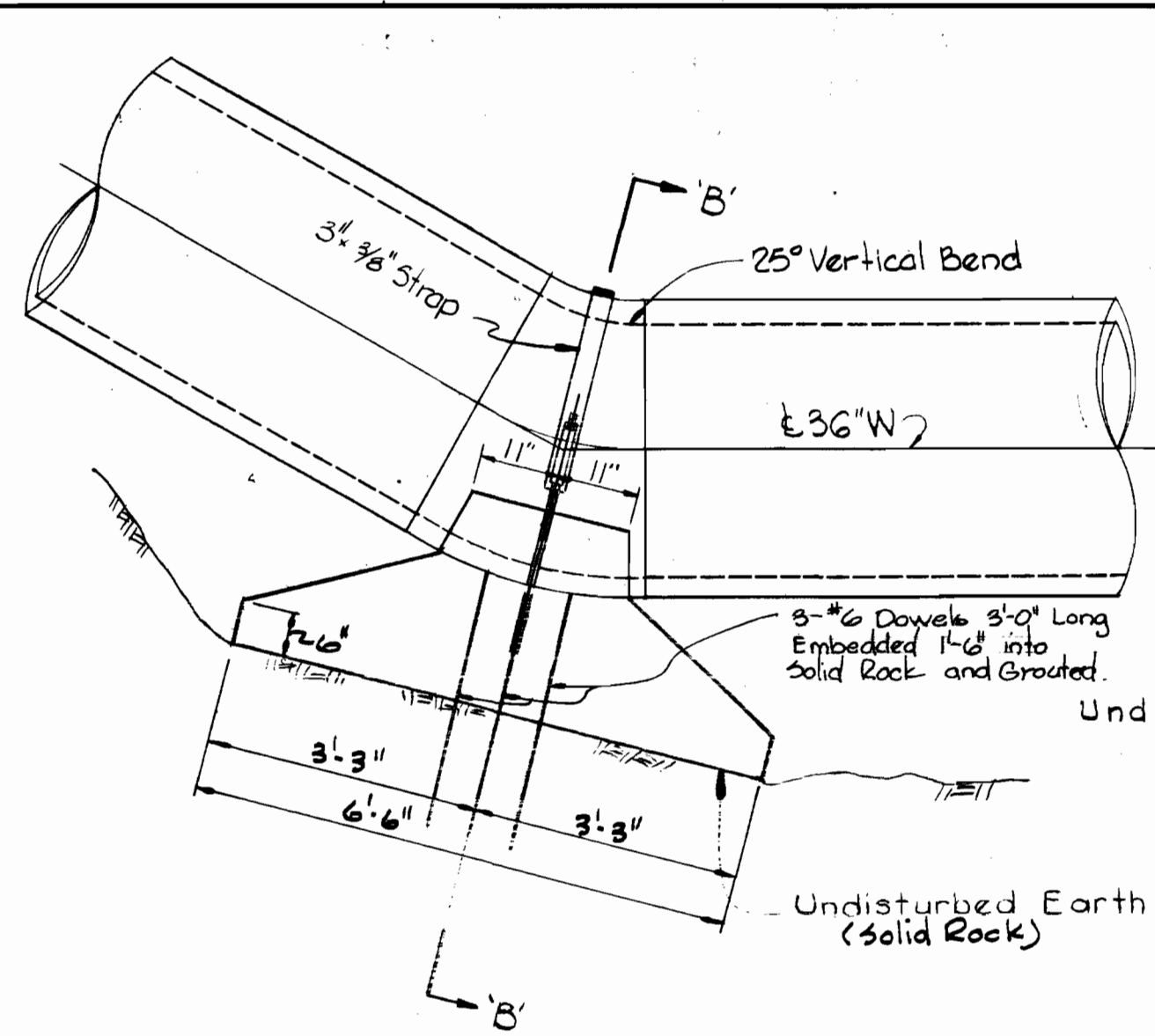
PLAN
Scale: 1/2"=1'-0"



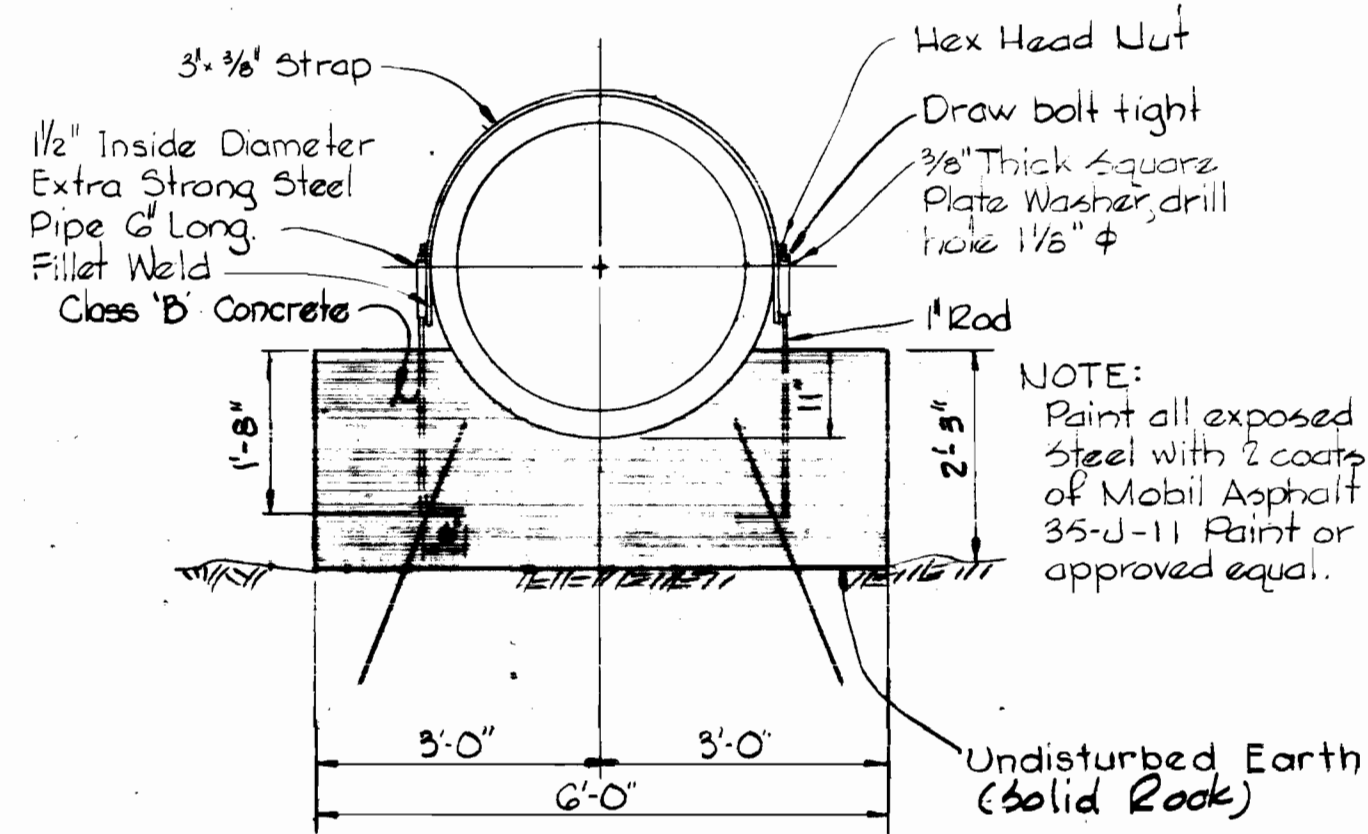
SECTION 'C-C'
Scale: 1/2"=1'-0"

DETAILS OF HORIZONTAL AND VERTICAL BUTTRISSES

NOT INCLUDED IN THIS CONTRACT



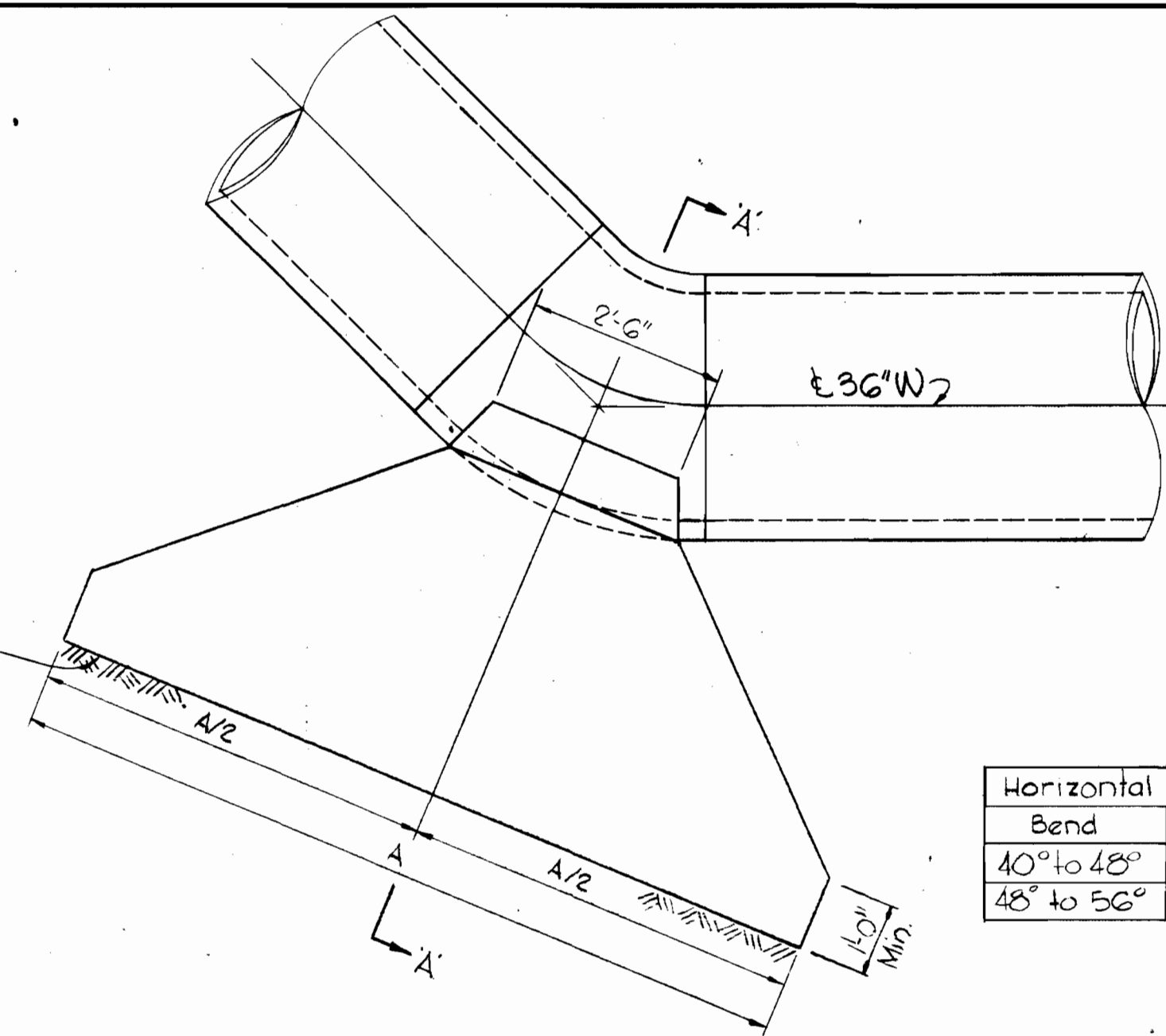
ELEVATION
Scale: 1/2"=1'-0"



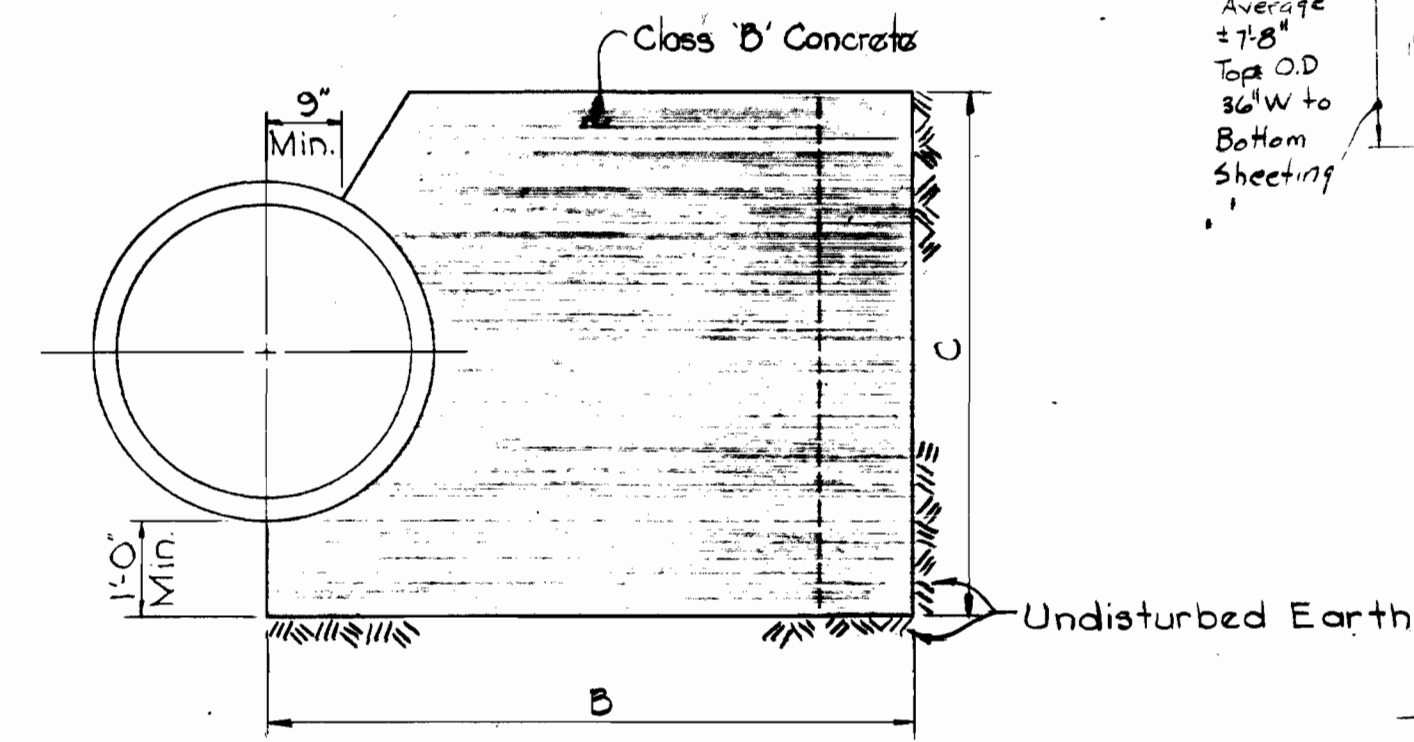
SECTION 'B-B'
Scale: 1/2"=1'-0"

DETAILS OF VERTICAL BUTTRISS

STA. 148+99



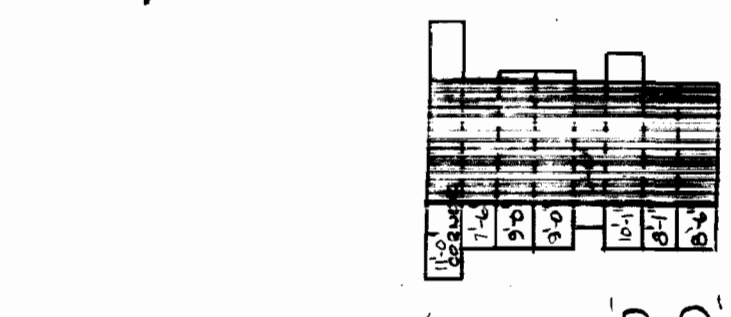
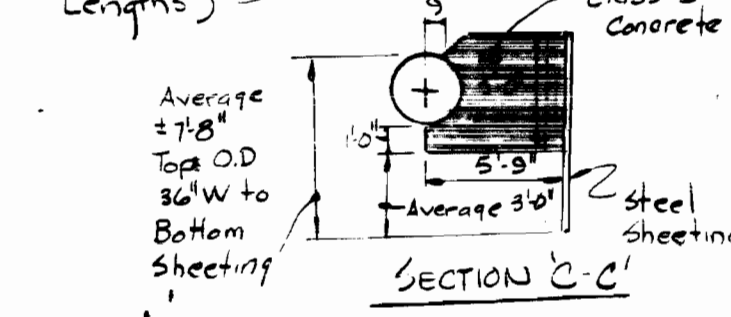
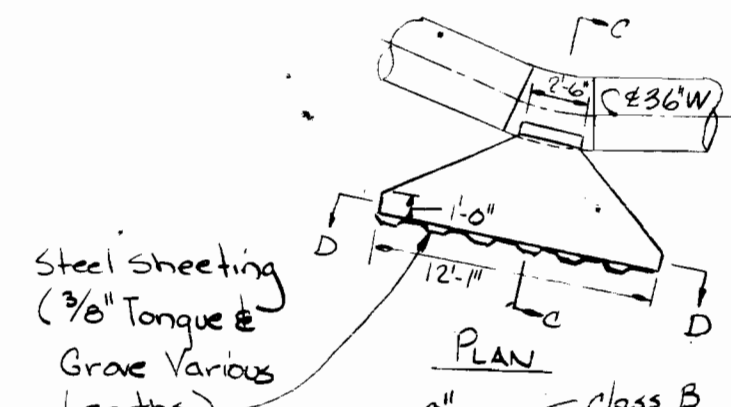
PLAN
Scale: 1/2"=1'-0"



SECTION 'A-A'
Scale: 1/2"=1'-0"

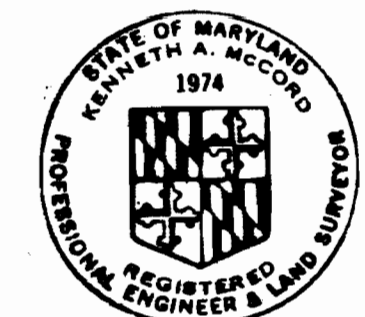
DETAILS OF HORIZONTAL BUTTRISSES

Horizontal Buttriss Schedule			
Bend	A	B	C
40° to 48°	10'-6"	5'-9"	5'-6"
48° to 56°	11'-0"	5'-9"	5'-6"



DETAIL OF H.B.
Sta. 148+28.08
no scale

NOTE:
Design Soil Bearing Capacity = 3,000 psf. An increase or decrease in the size of the buttriss will be made if the Soil Bearing is more or less than the design. Credit or payment will be made based on the stipulated item No. 22.



Kenneth A. McLeod
Relay to Patapsco River
Contract No. 625-W

CITY OF BALTIMORE		BALTIMORE COUNTY	
<i>Thomas J. Miller</i> DIRECTOR DEPT. OF PUBLIC WORKS	9/13/74 DATE	<i>Albert J. ...</i> DIRECTOR DEPT. OF PUBLIC WORKS	9/17/74 DATE

C.W.O. 40786

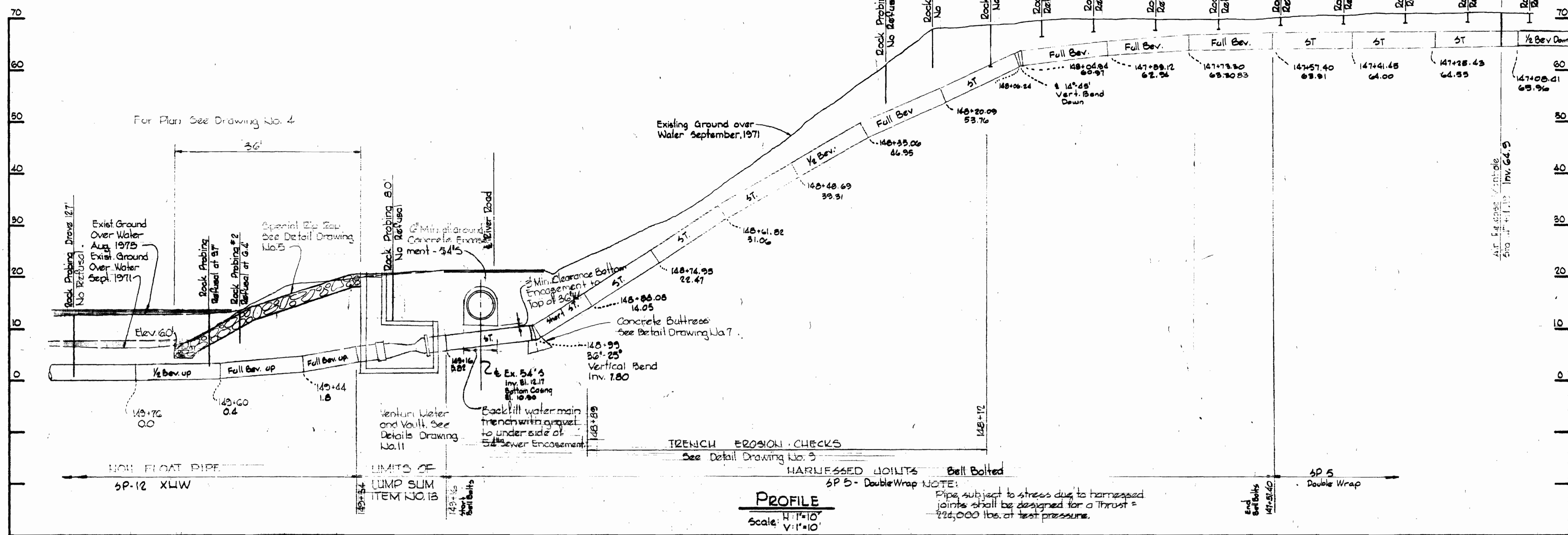
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	HOWARD COUNTY	CONTRACT NO. 625-W	DETAILS OF WATER MAINS	SOUTHWEST TRANSMISSION MAIN	DRAWING NO. 7 OF 11	SCALE AS SHOWN
	<i>Wick J. ...</i> DIRECTOR DEPT. OF PUBLIC WORKS					

W.O. 6257-2

AS BUILT
March 7, 1978
July 17, 1974
April 1, 1975

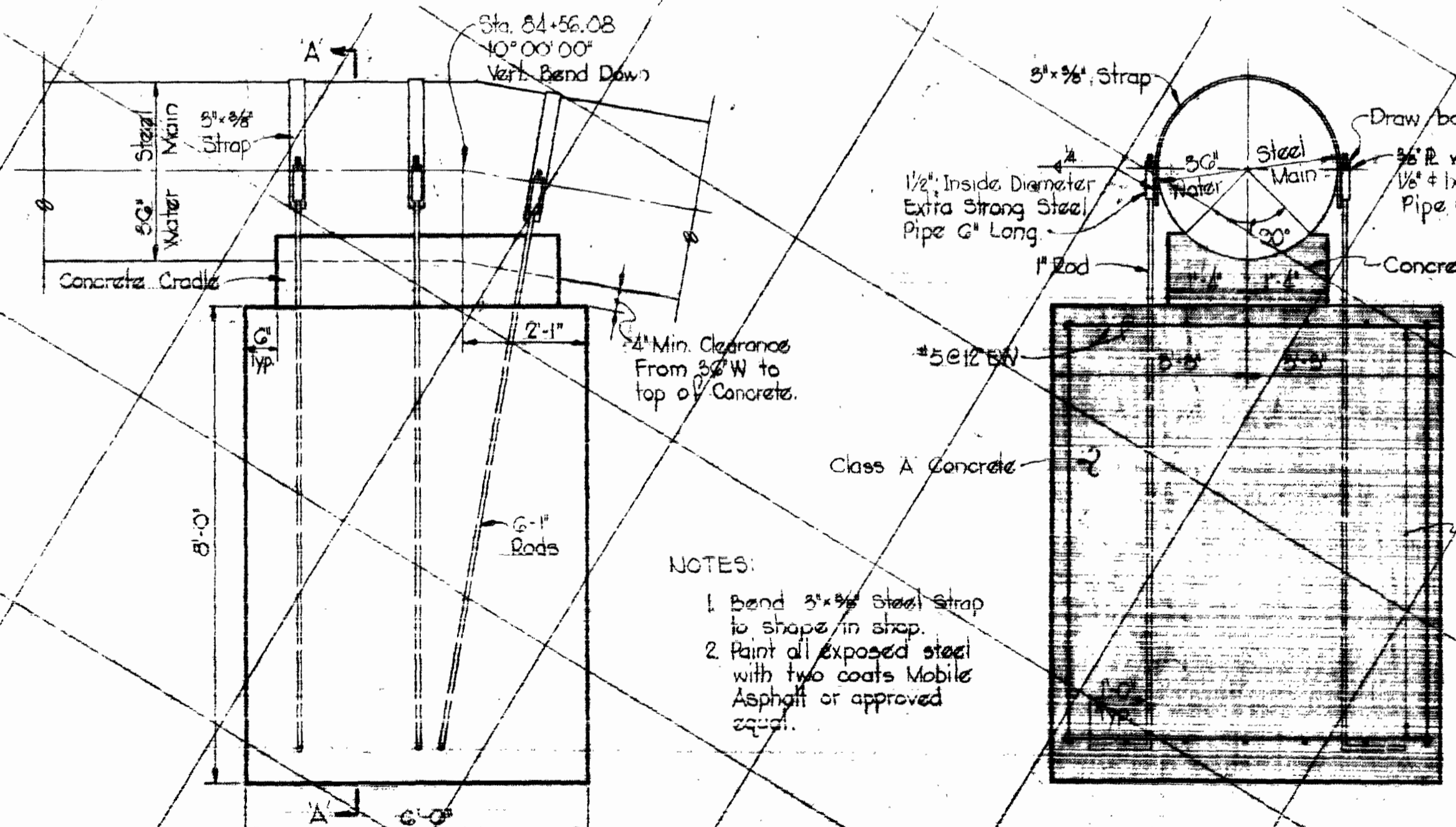
WS 625-W/1

ROCK PROBINGS
 1/2" rod hand driven in 4 foot sections

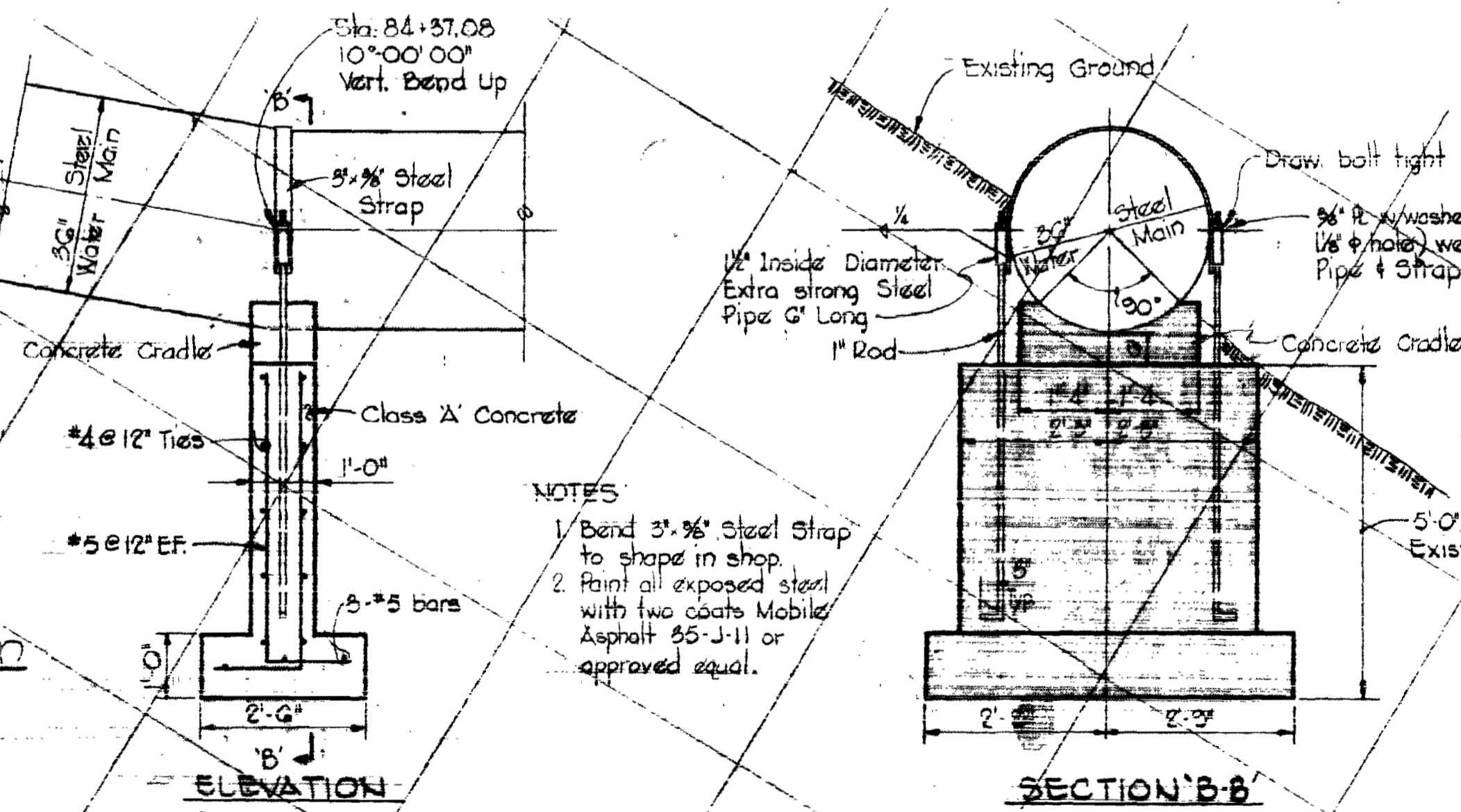


PROFILE
 Scale: H: 1"=10'
 V: 1"=10'

NOTE:
 Pipe subject to stress due to harnessed joints shall be designed for a Thrust = 225,000 lbs. at test pressure.



SECTIONAL PLAN
 DETAIL OF VERTICAL BEND SUPPORT @ STA. 84+56.08
 Scale: 1/2"=1'-0"



ELEVATION
 SECTION 'B-B'
 DETAILS OF VERTICAL BEND SUPPORT @ STA. 84+37.08
 Scale: 1/2"=1'-0"

NOTES:
 1. Bend 3/8" Steel Strap to shape in shop.
 2. Paint all exposed steel with two coats Mobile Asphalt 65-J-11 or approved equal.

NOT INCLUDED IN THIS CONTRACT



Kenneth M. Lord

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 1304 ST. PAUL ST.
 BALTIMORE, MARYLAND

HOWARD COUNTY
 Director: *William J. Allen* DATE: *7/27/74*
 Chief Engineer: *W.O. Felber* DATE: *2/27/74*
 BUREAU OF ENGINEERS

CWO. 40786
 CONTRACT NO. 625-W

CITY OF BALTIMORE
 Director: *William J. Allen* DATE: *7/27/74*
 Chief Engineer: *W.O. Felber* DATE: *2/27/74*
 BUREAU OF ENGINEERS

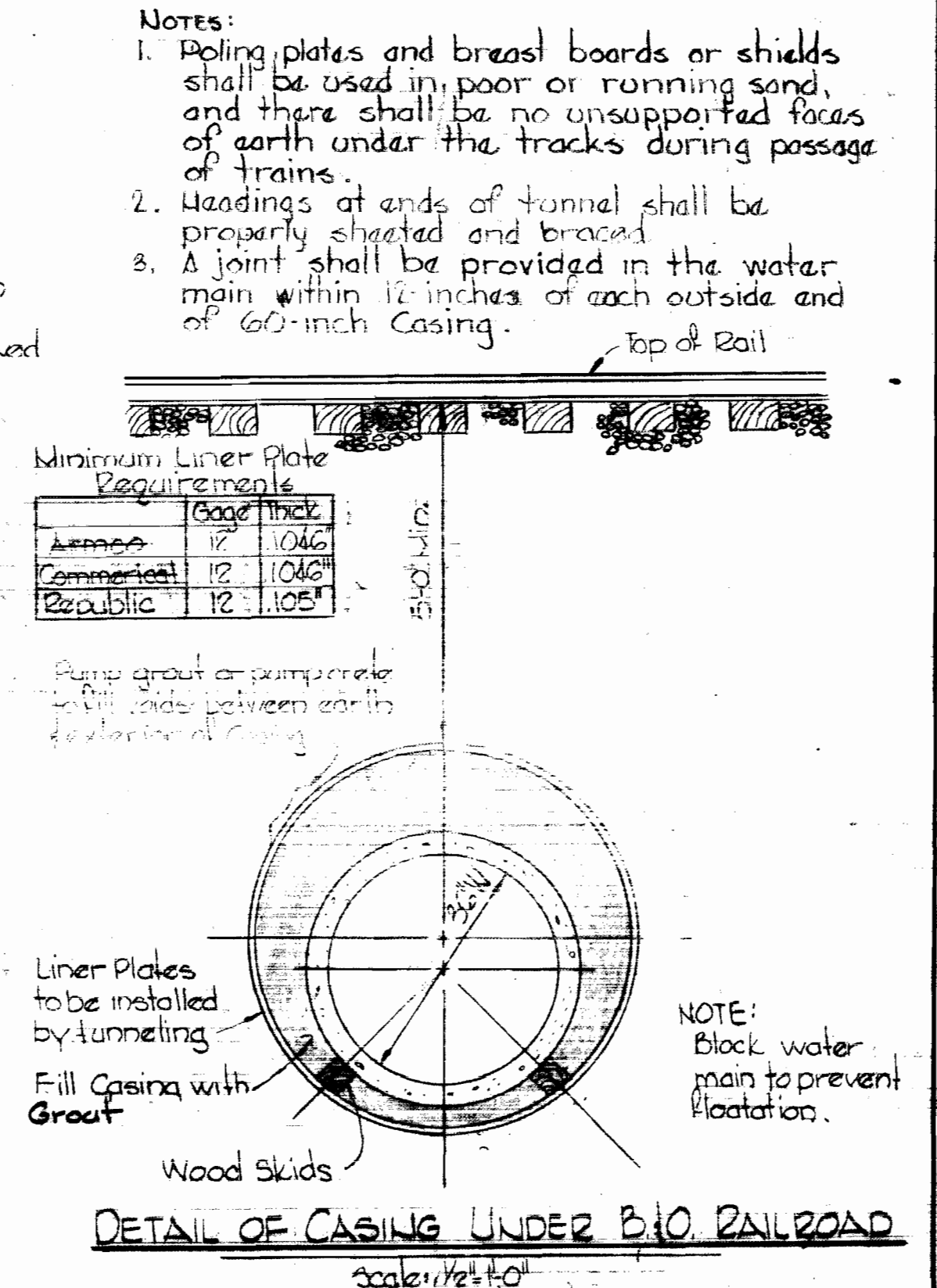
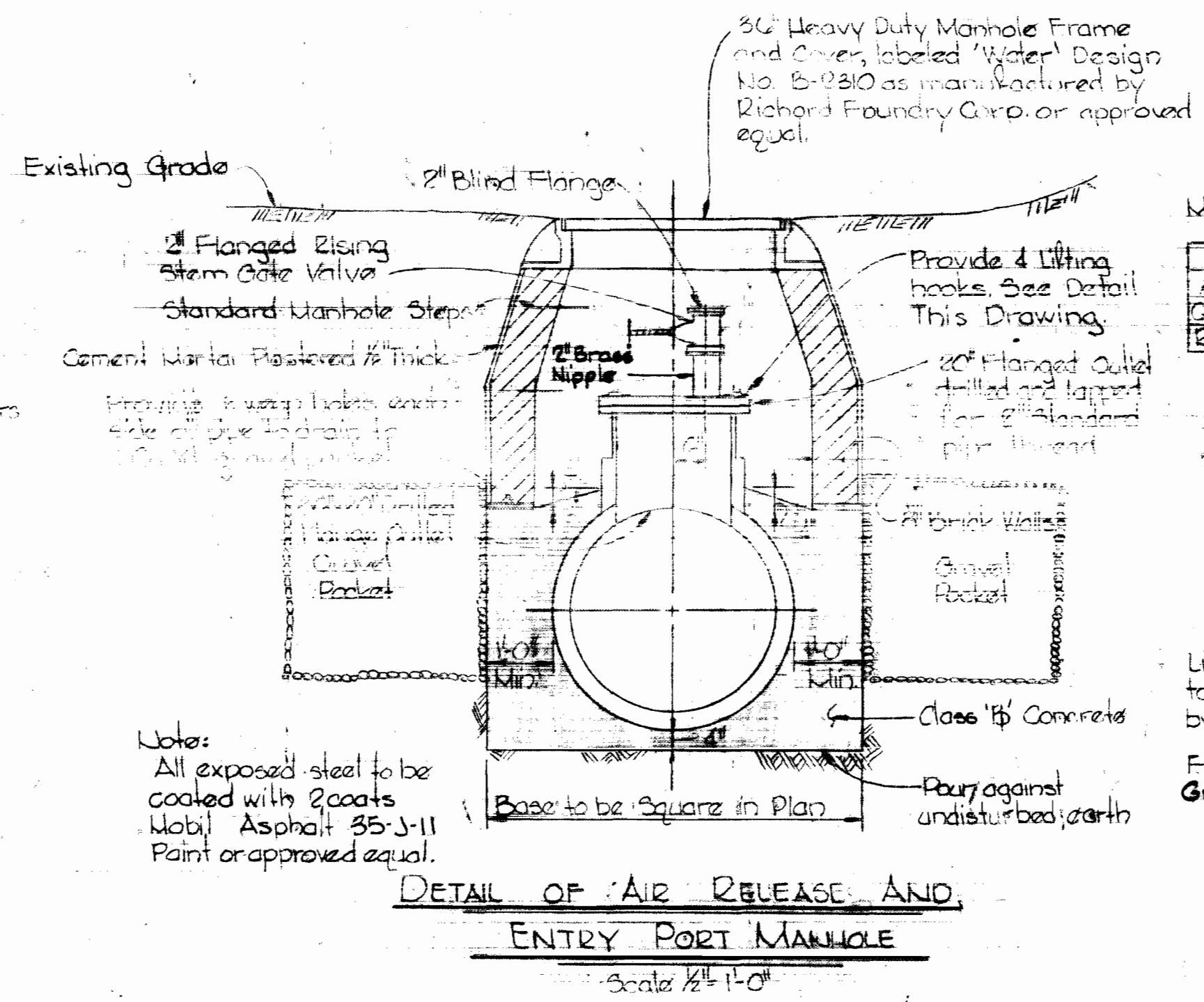
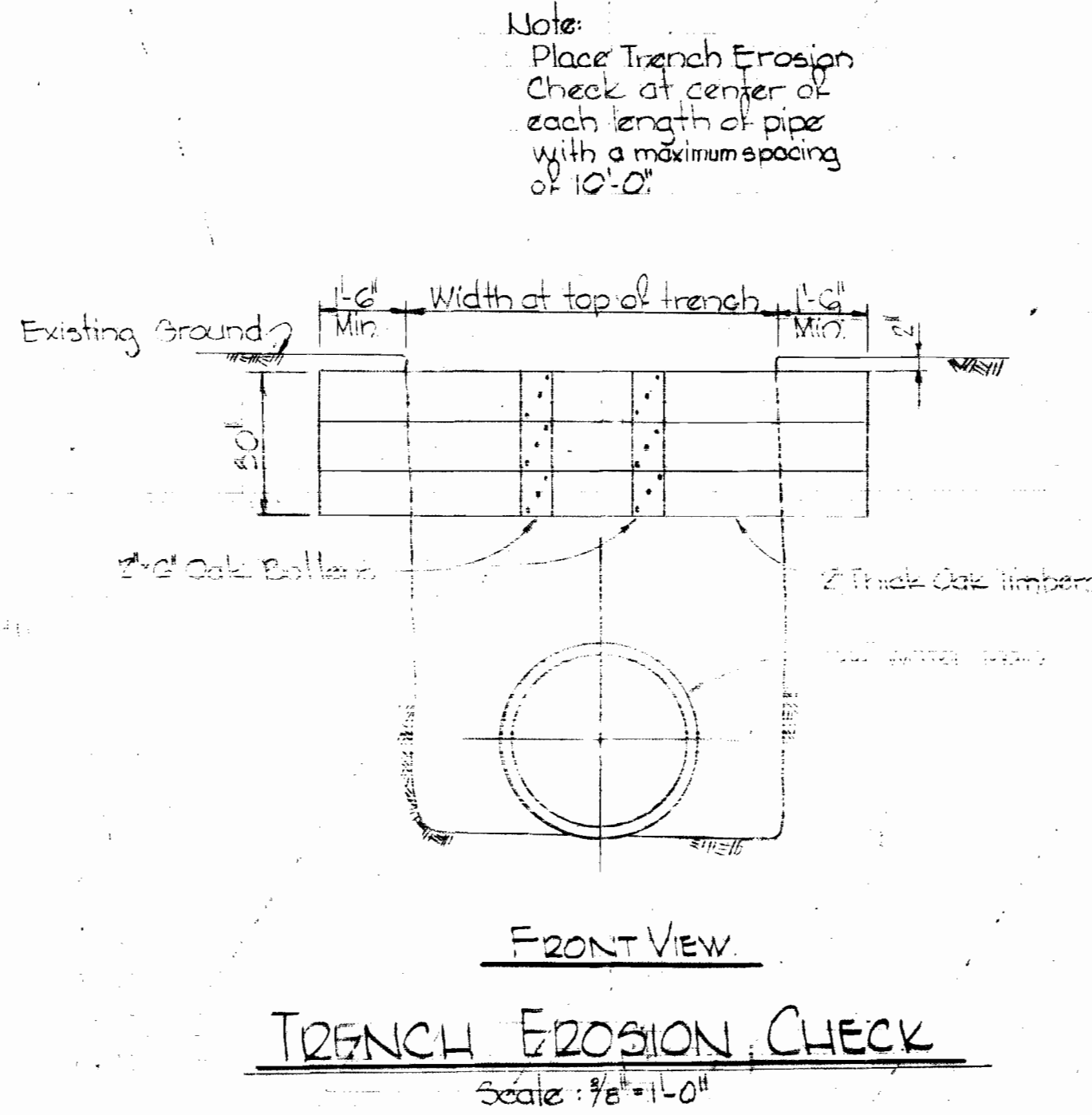
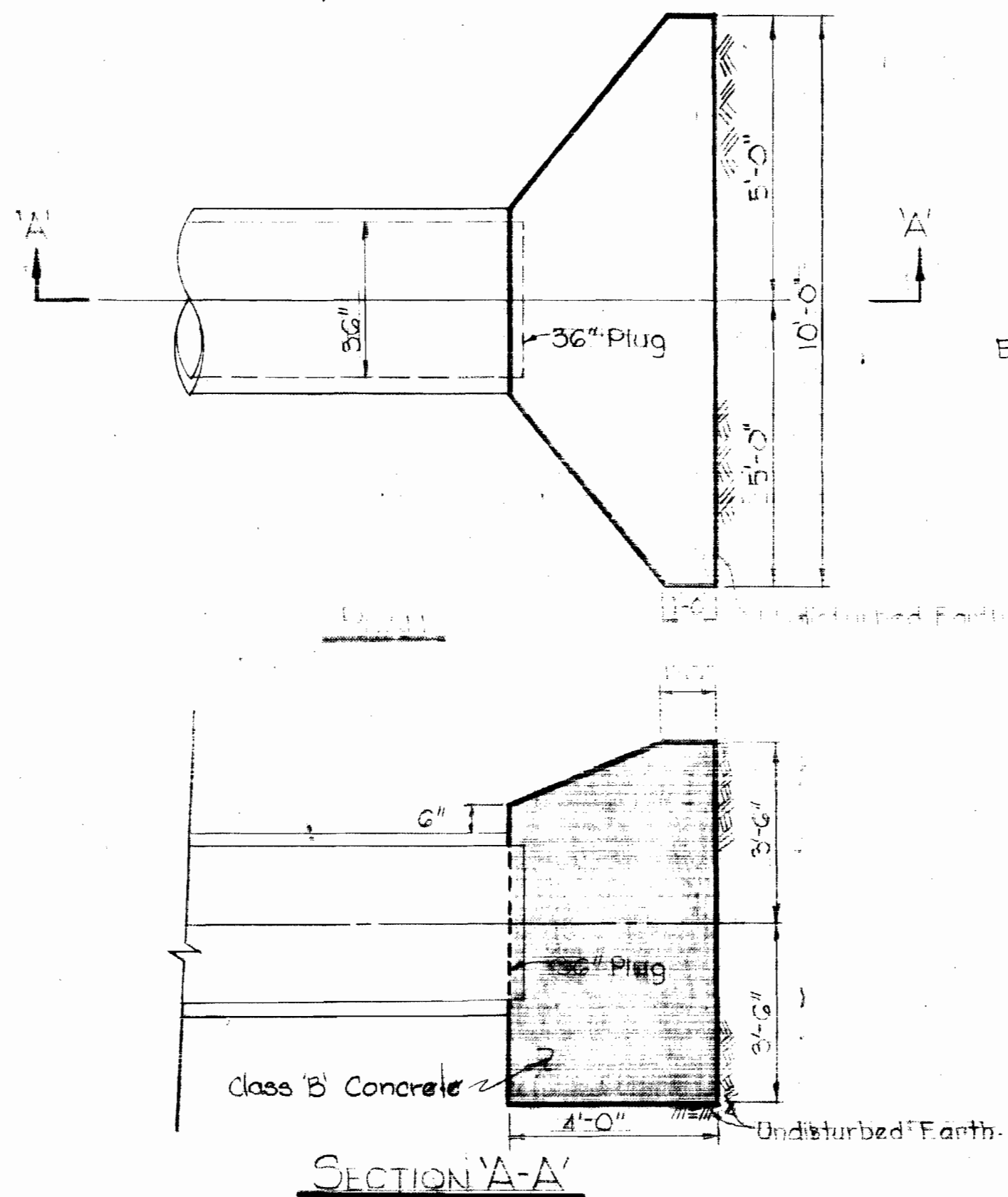
BALTIMORE COUNTY
 Director: *William J. Allen* DATE: *7/27/74*
 Chief Engineer: *W.O. Felber* DATE: *2/27/74*
 BUREAU OF ENGINEERS

Relay to Republic Elec
 Contract No. 625-W
 DRAWING NO. 8 OF 11
 SCALE AS SHOWN

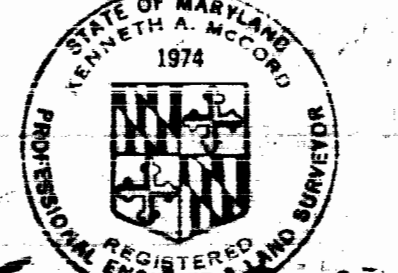
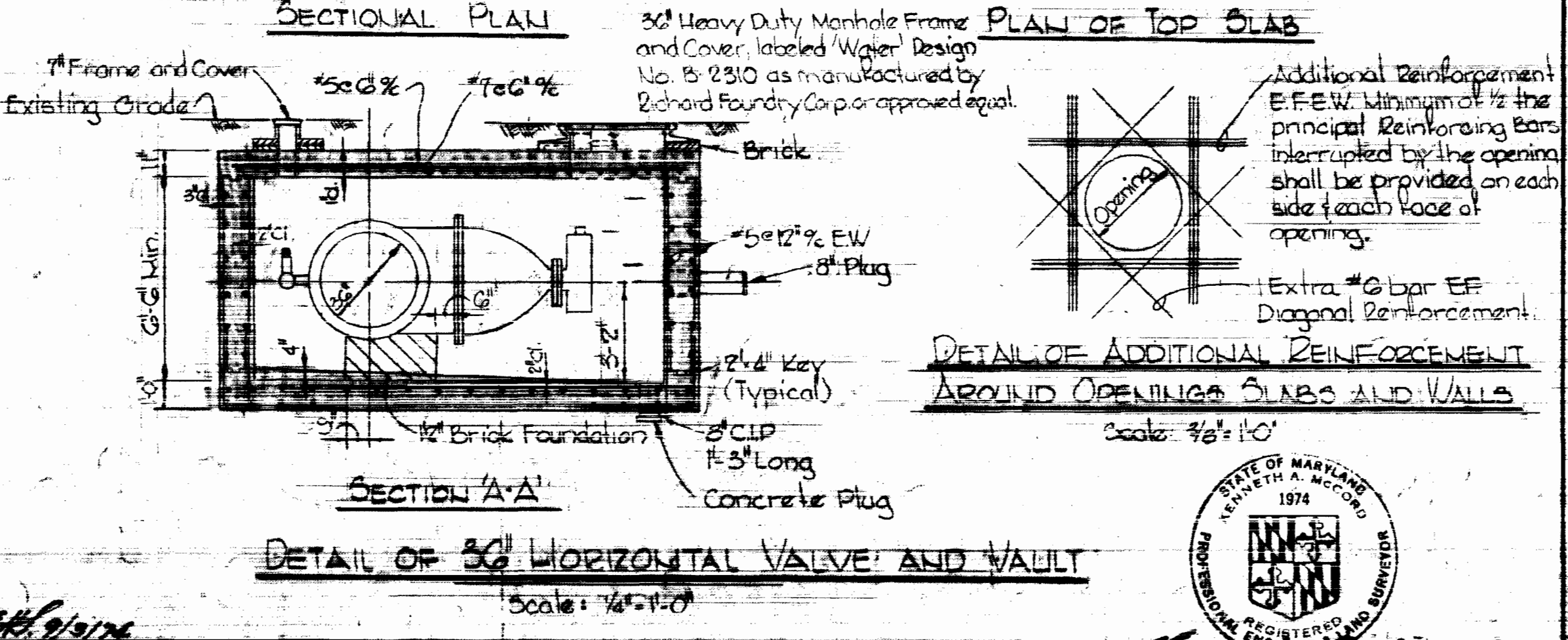
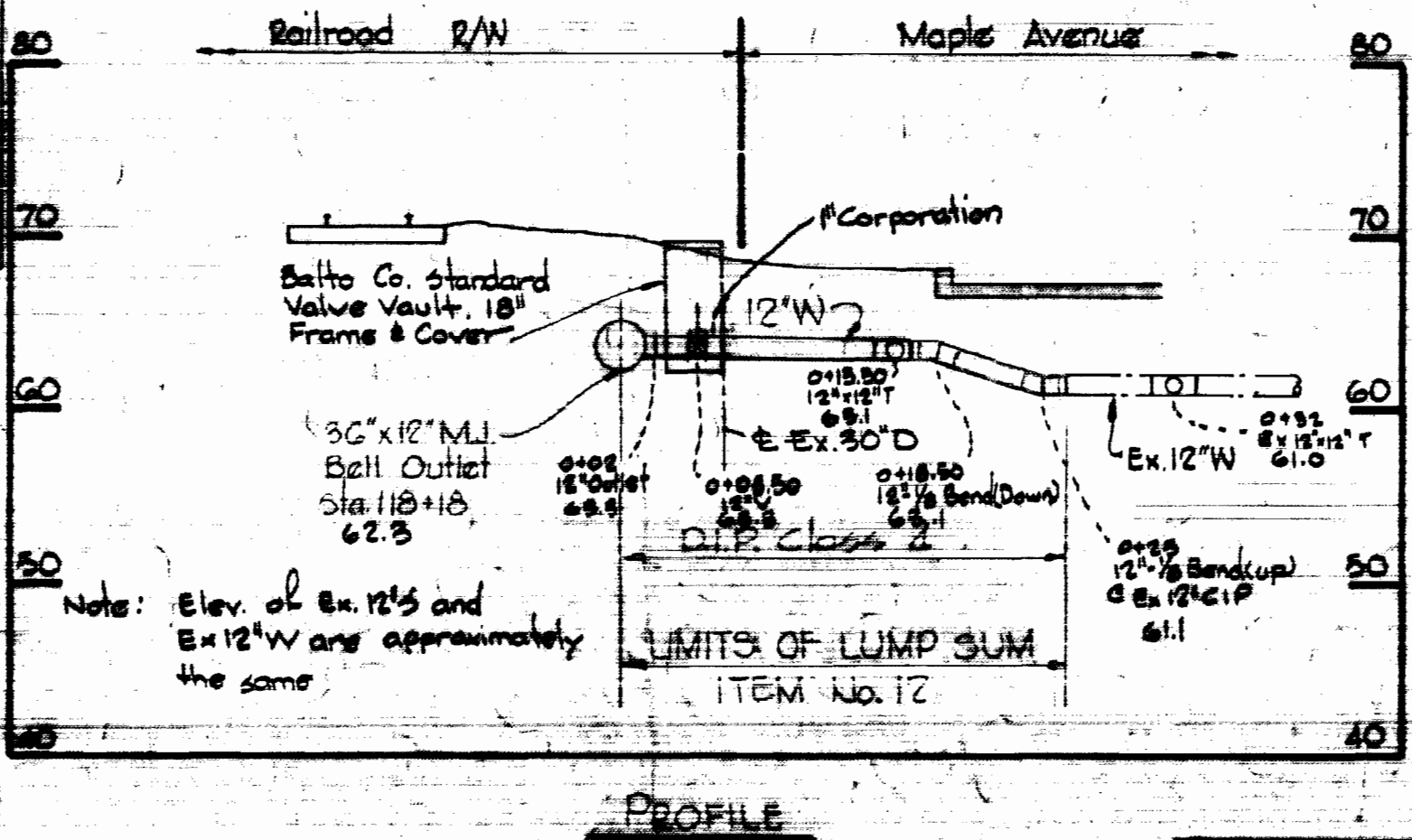
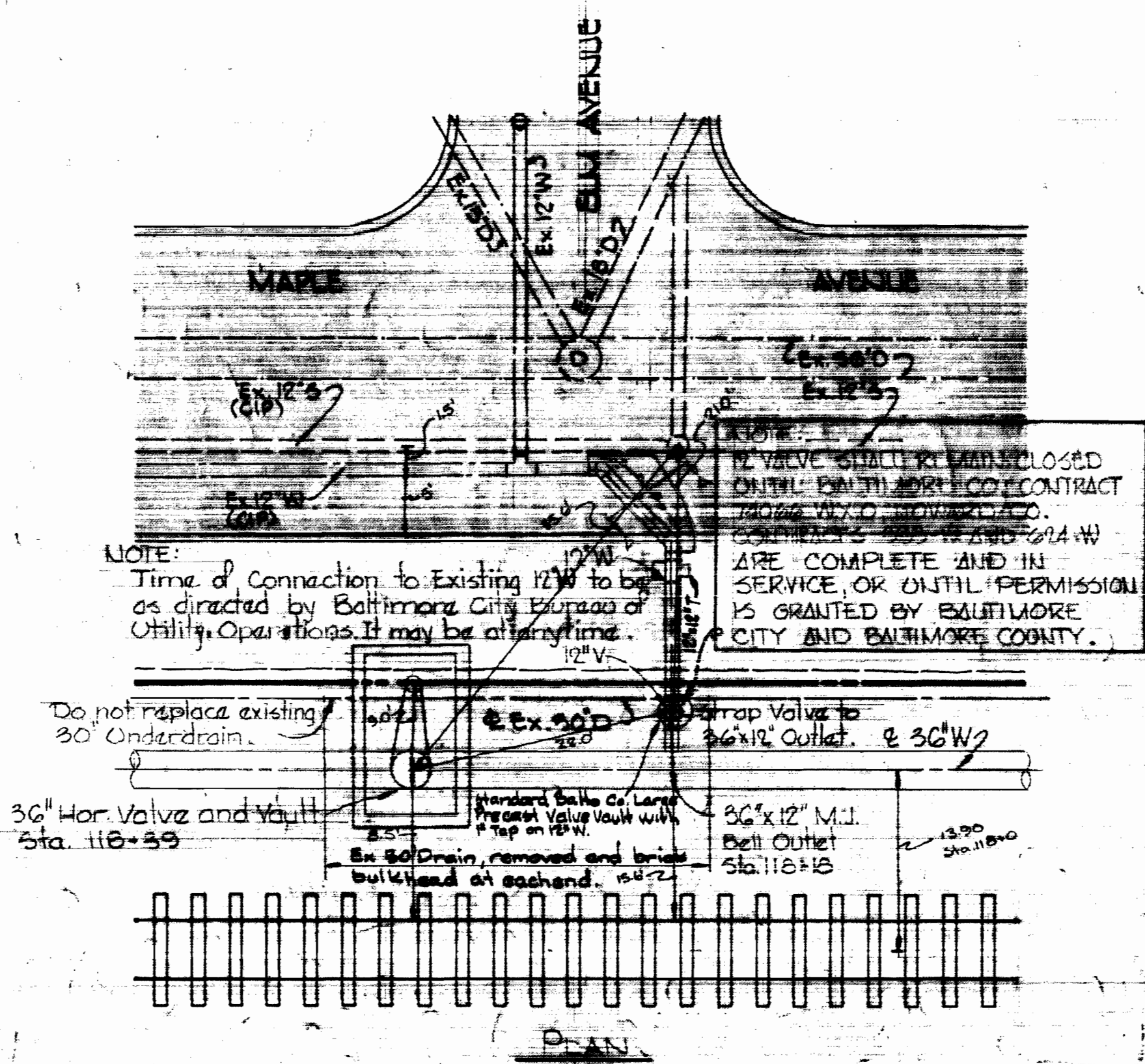
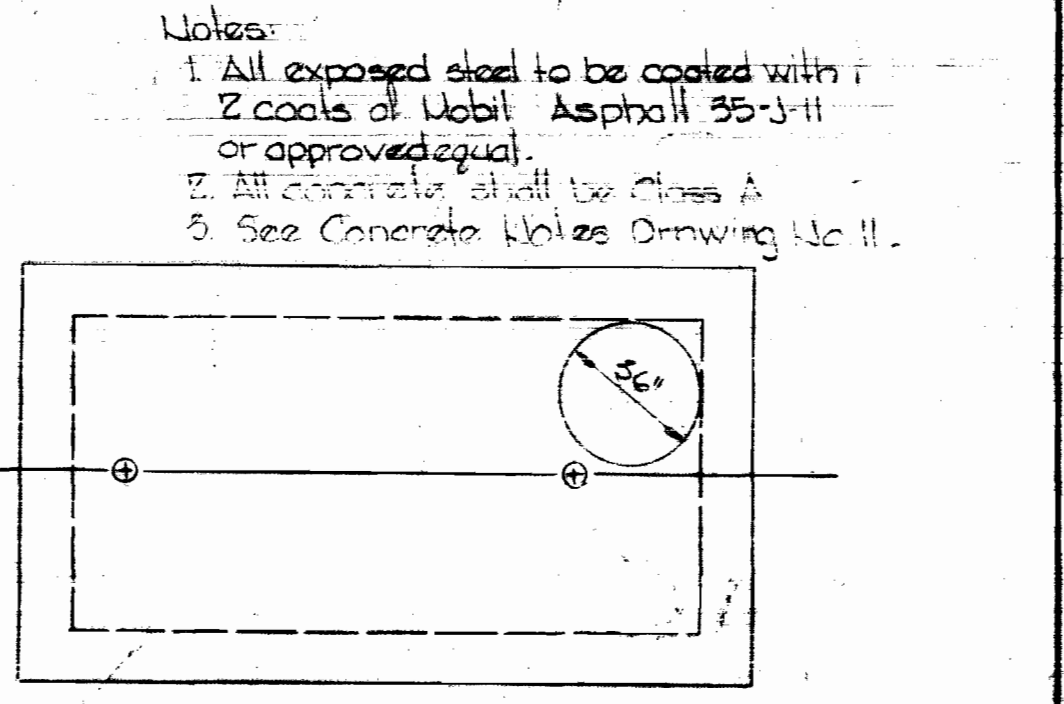
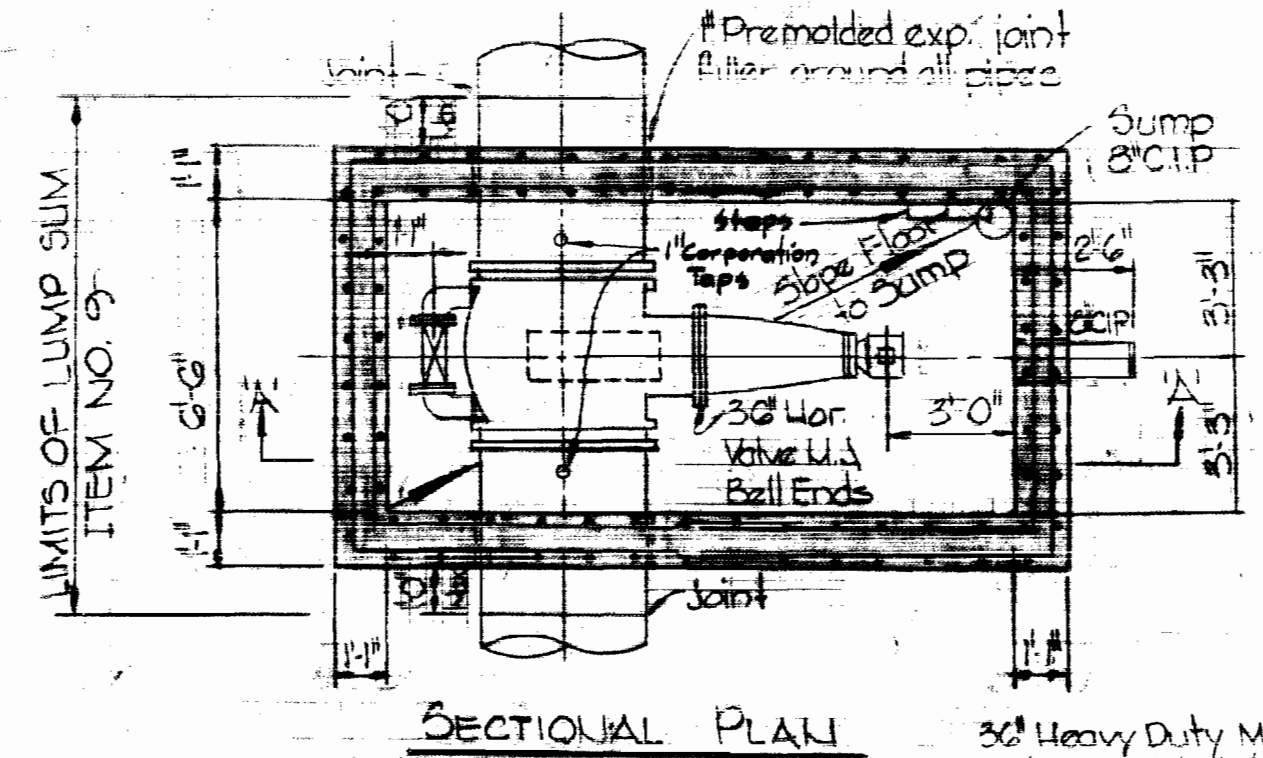
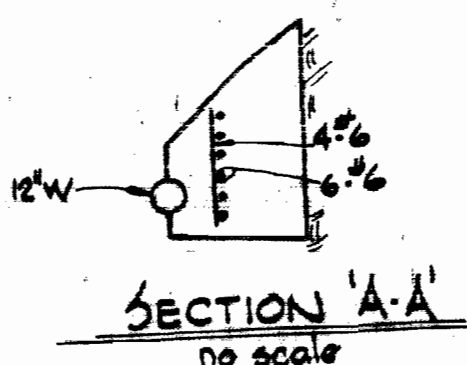
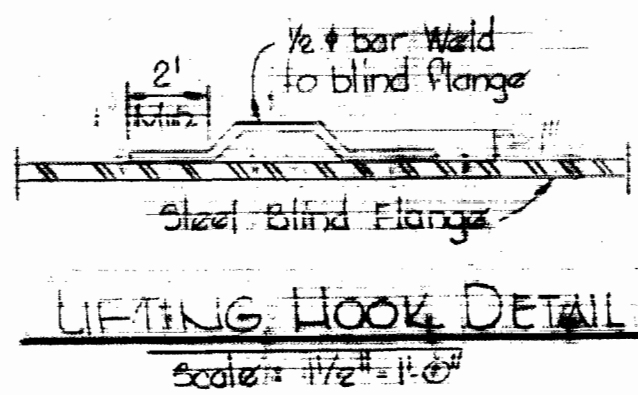
AS BUILT
 March 7, 1978
 August 12, 1976
 April 1, 1975

WS 625-W/8

DRAWING 44,390 1477E



BUTTRESS DETAIL FOR 36" PLUG
Scale: 3/8" = 1'-0"



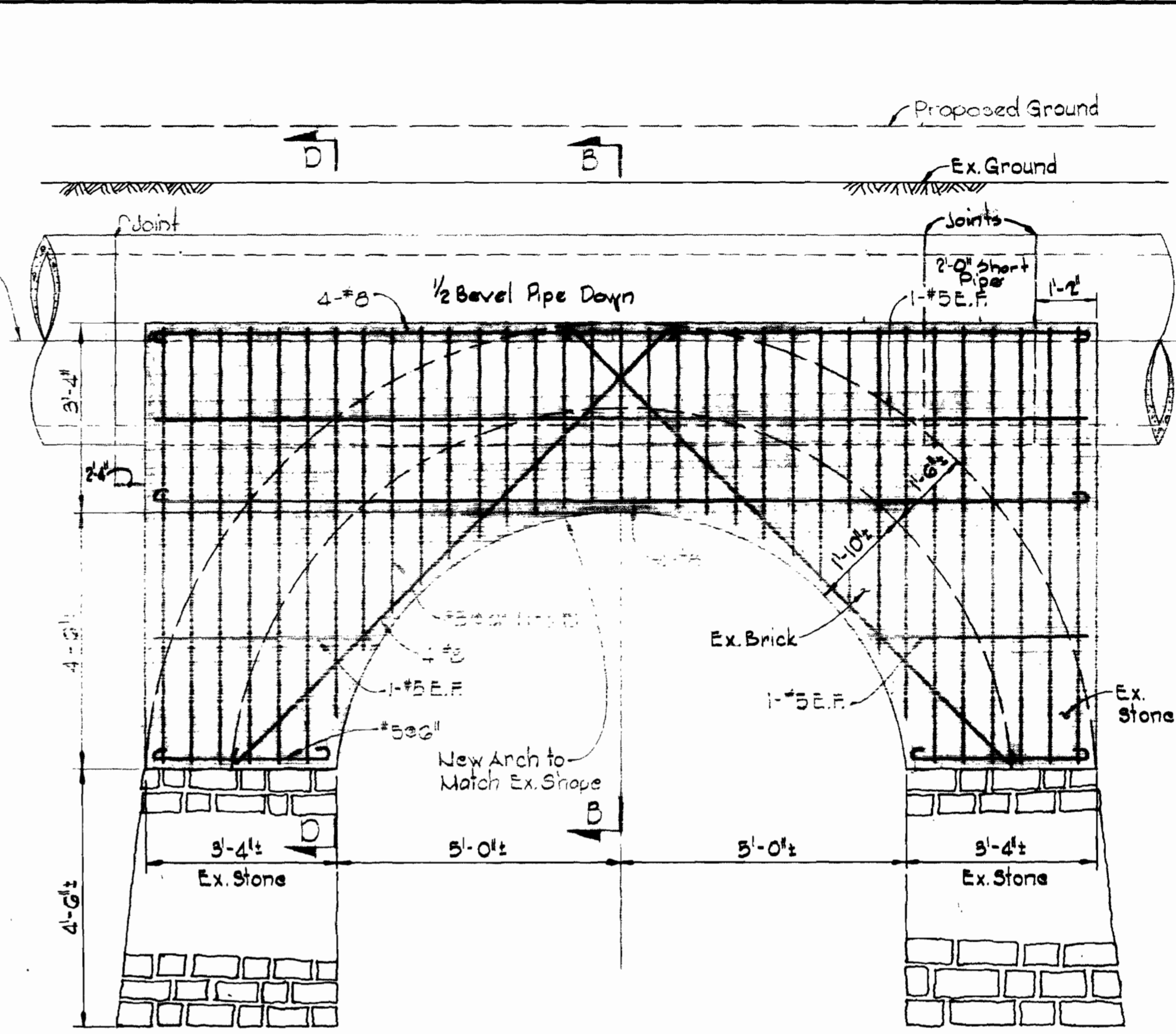
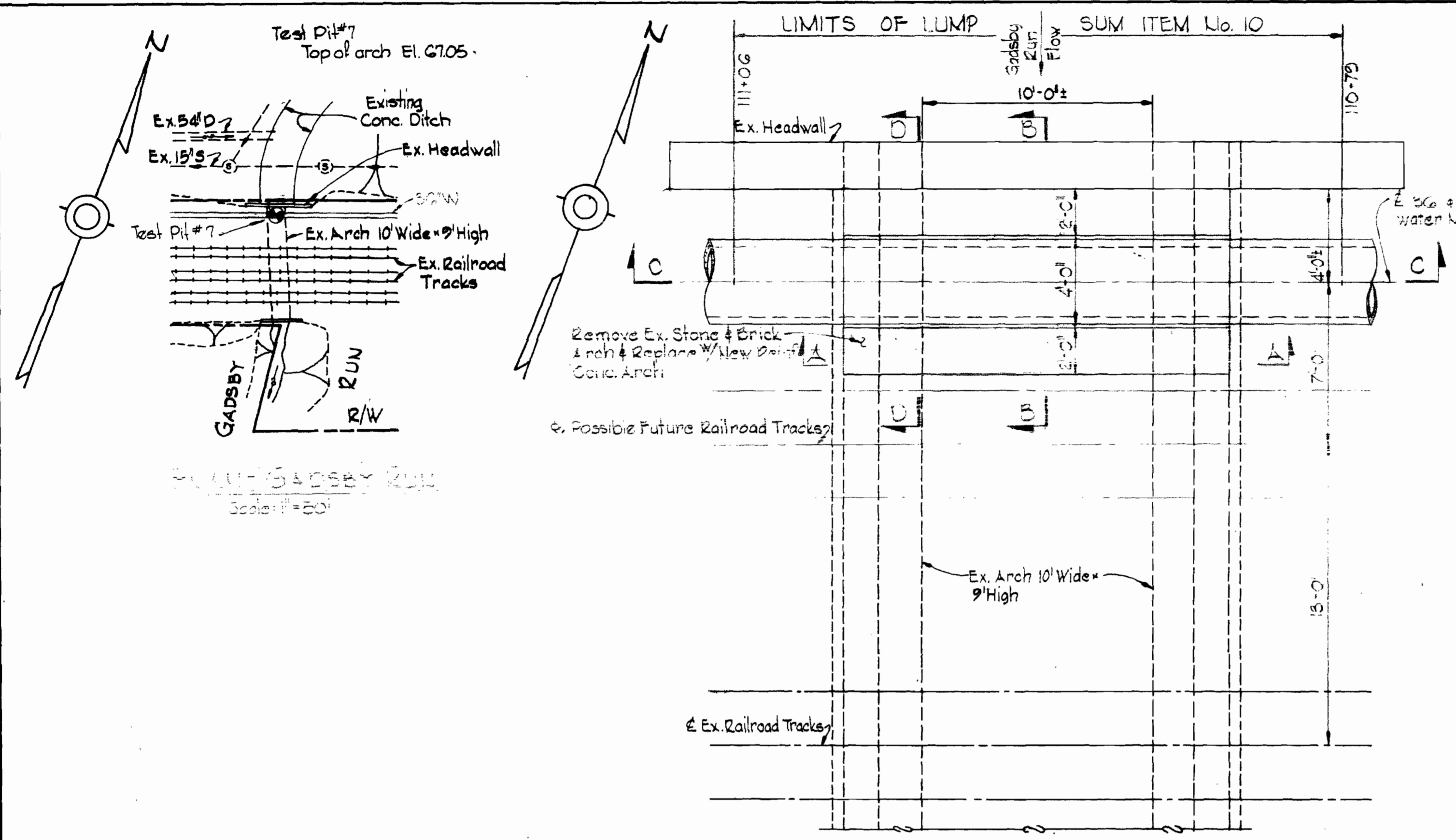
Kenneth A. Milrod
Baltimore County
Contract No. 625-W

CITY OF BALTIMORE		BALTIMORE COUNTY	
Director	Date	Director	Date
DEPT. OF PUBLIC WORKS		DEPT. OF PUBLIC WORKS	

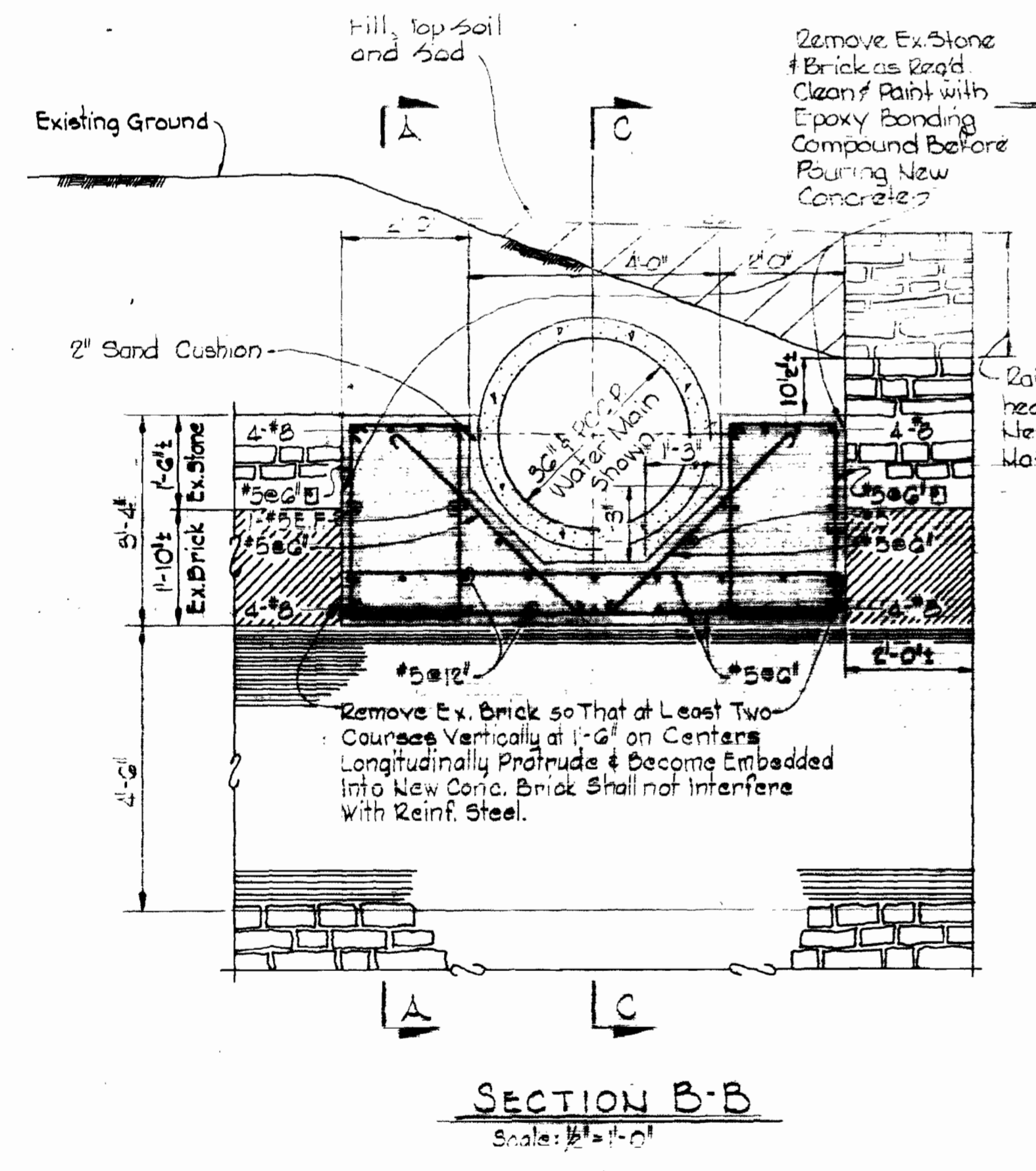
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	HOWARD COUNTY	CONTRACT NO. 625-W	DETAILS OF WATER MAINS	SOUTHWEST TRANSMISSION MAIN	DRAWING NO. 9 OF 11	SCALE AS SHOWN
	W. O. G257-2	CONTRACT NO. 625-W				

AS BUILT
March 7, 1975
August 23, 1974
April 1, 1975

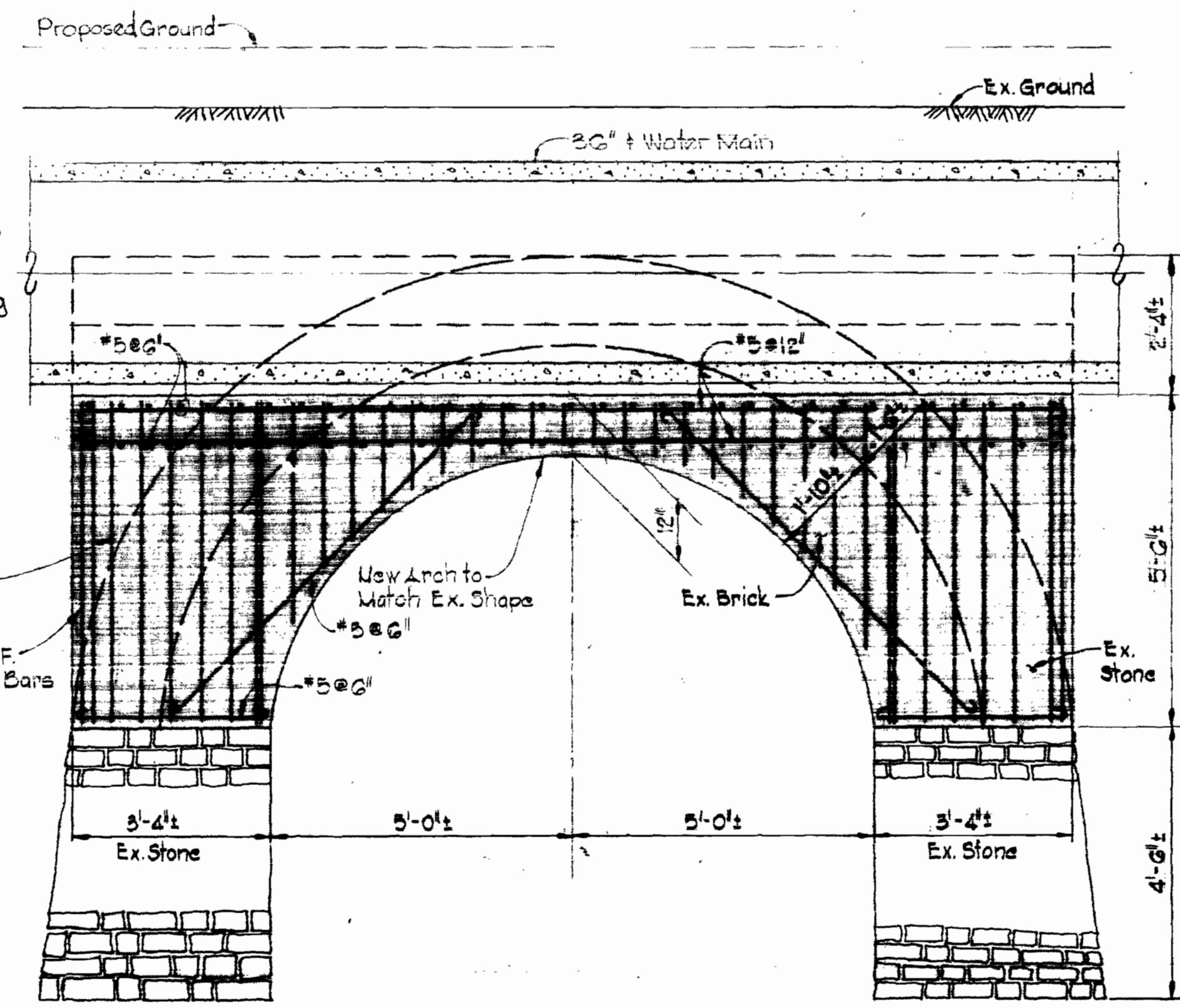
WS 625-W/9



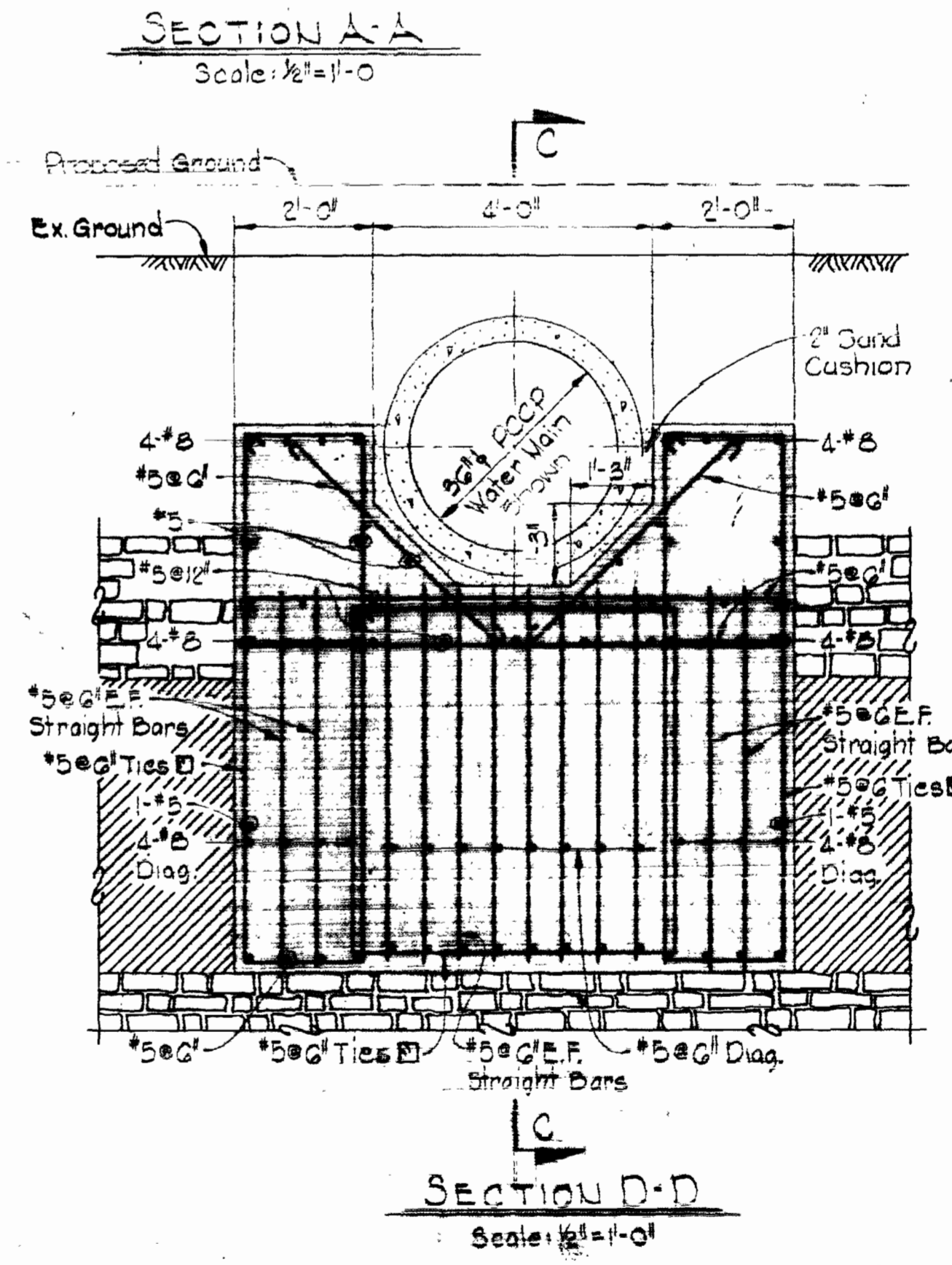
- GENERAL NOTES**
1. Concrete structure has been designed in accordance with the American Railway Engineering Association Manual For Railway Engineering - 1972.
 2. All concrete shall have a minimum 28 day compressive strength of 3,500 p.s.i.
 3. All reinforcing bars to have a concrete cover of 2".
 4. All reinforcing steel shall be A.S.T.U.-A615-70, Grade 40.
 5. All reinforcing bar laps and all dowel projections and embedments shall be a minimum of 30 bar diameters unless otherwise noted on the drawings.
 6. Epoxy Bonding Compound to be Colma Fix as manufactured by the Sika Chemical Co. of Baltimore, Md. or approved equal.



PLAN - 10' x 9' ARCH AT GADSBY RUN
Scale: 1/4" = 1'-0"



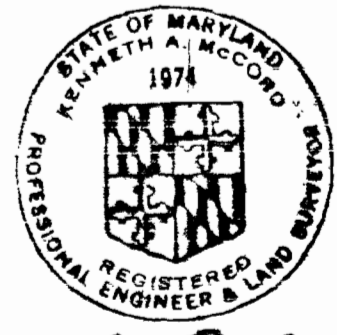
SECTION C-C
Scale: 1/4" = 1'-0"



SECTION D-D
Scale: 1/4" = 1'-0"

LEGEND

New Concrete in Section	
Existing Brick in Section	
Existing Brick in Elevation	
Existing Stone in Section and Elevation	
Concrete Pipe in Section	
Existing Ground	



Kenneth A. McCord

CITY OF BALTIMORE		BALTIMORE COUNTY	
<i>James J. ...</i>	2/2/74	<i>...</i>	9/15/74
DIRECTOR	DATE	DIRECTOR	DATE
DEPT. OF PUBLIC WORKS		BUREAU OF ENGINEERING	

WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
1304 ST. PAUL ST.
BALTIMORE, MARYLAND

HOWARD COUNTY
William A. ... 7/2/74
DIRECTOR
DEPT. OF PUBLIC WORKS

W.C. ... 7-28-74
CHIEF
BUREAU OF ENGINEERING

CONTRACT NO. 625-W

DETAILS OF WATER MAINS

SOUTHWEST TRANSMISSION MAIN

DRAWING NO. 10 OF 11 AS SHOWN

AS BUILT
March 7, 1970
July 17, 1974
April 1, 1975

WS 625-W/10

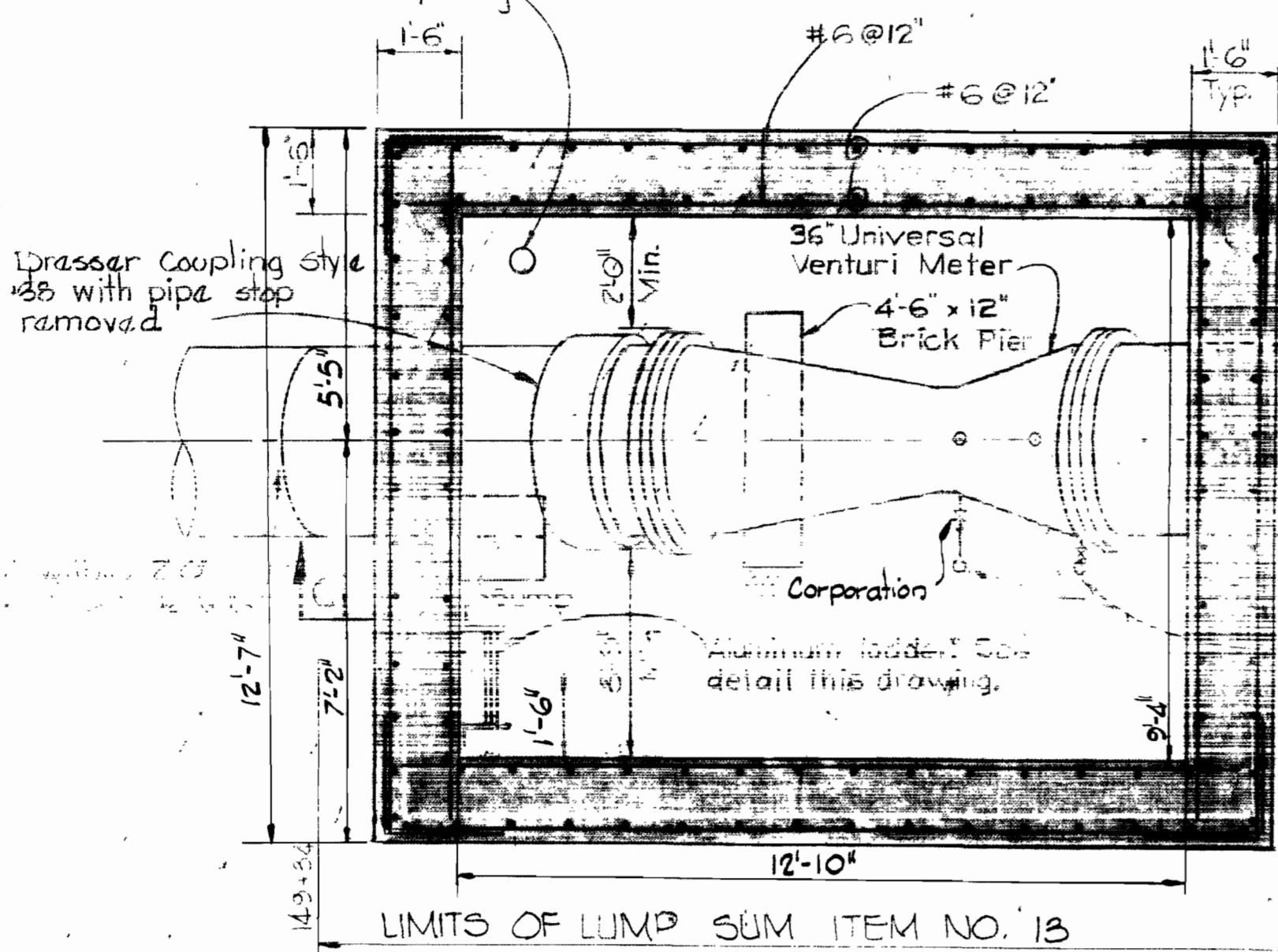
PRINTING 44,510 1879C

W. O. 6257-2

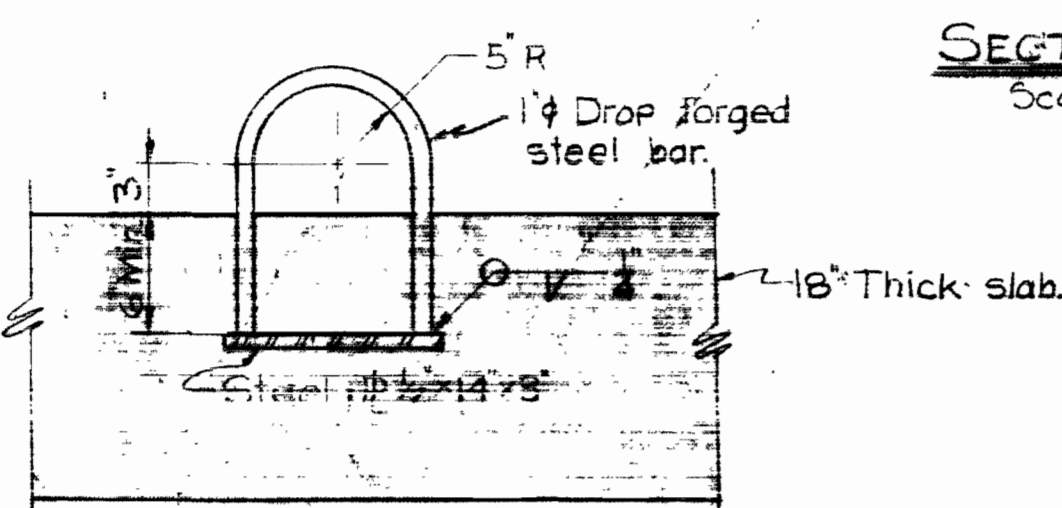
GENERAL CONCRETE NOTES

- All Concrete shall have a minimum 28 Days Compressive Strength of 3500psi.
- All Exposed Concrete shall be Chamfered 1/4" unless otherwise noted.
- All Reinforcing Steel shall be ASTM A615-70 Grade 40.
- All Reinforcing bar laps, dowel projections and embedment shall be a minimum of 30 bar diameters.

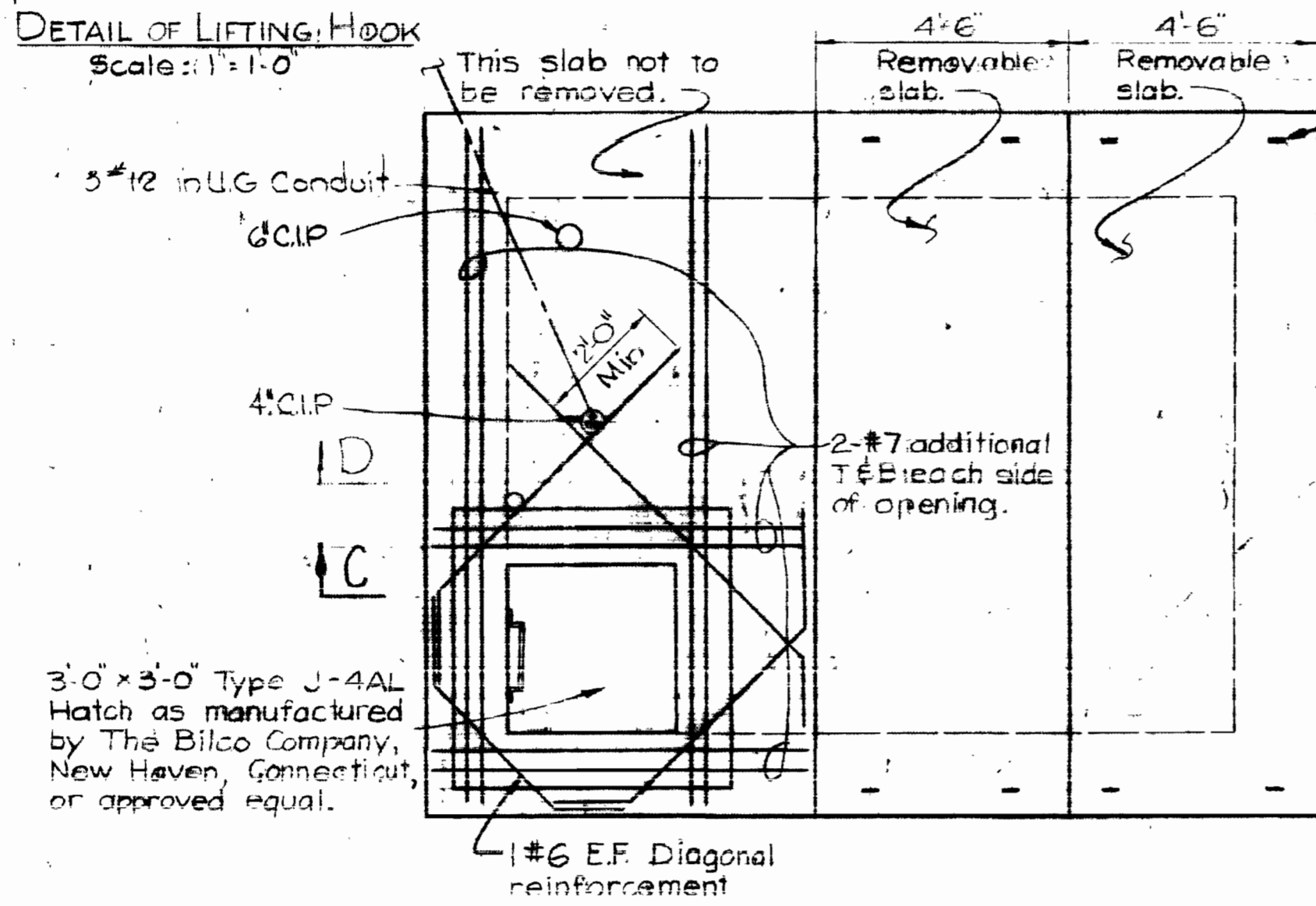
6" C.I.P. up thru slab to 3'-0" above grade terminate with 180° bend and provide 1/4" mesh screen over opening



SECTIONAL PLAN
Scale: 3/8"=1'-0"



DETAIL OF LIFTING HOOK
Scale: 1"=1'-0"



TOP SLAB PLAN
Scale: 1/2"=1'-0"

1/2" Drain coupling welded under frame for pipe connection to drain into Rip Rap

Special Rip Rap. See detail drawing No. 5.

Harnessed Joint within 2'-0" Max. of outside wall.

2-#7 additional each side of opening #6 @ 12" (Typ).
Drasser Coupling Style #8 with pipe stop removed.
2-#7 additional each side of opening.

Provide 1" premolded expansion joint around pipe openings.

#6 Dowels @ 12" (Typ)

One lifting hook at each corner. Typical for each removable slab. See detail this drawing.

Thermostat for heat tape
Fasten Housing to WF with 4 3/4" Stainless Steel bolts and lock type nuts.
Fasten WF member to concrete with 4 3/4" Stainless Steel Anchor bolts.
Elev 12.15

D. 1" Slab 3' 6" square 2" thick

Duck Seal 4" pipe water tight thru sleeve

Guard Rail

Note: Provide heat tape 4-sides of housing and around piping from meter to bottom 4" C.I.P.

1/4" differential piping in 4" C.I.P. from under side of vault top slab thru meter housing mounting pad. Wrap with electric heat tape (65 watts/ft rating) and insulated with 1/2" thick Fiberglass insulation. Extend tape around meter housing. Heat tape shall be Chromalex, catalog No. NT, or approved equal.

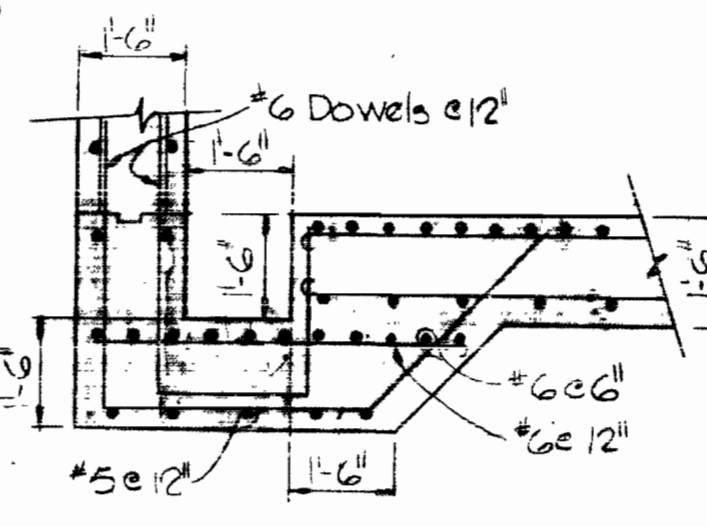
Note: Electric Heat Tape stop here.

28/9/74

SECTION 'D-D'
Scale: 3/8"=1'-0"

1/2" Meter enclosed in 1/2" Gauge Steel NEMA 12 Housing 1/2" locking doors on front and back of housing. Housing shall be Hoffman Model A-122424 FSDA with 2-ADK 36A dripshields, 2-type L1 padlock handles and mounting panel. Housing shall be factory coated for weather protected duty.
Valve pressure gage connection
1/2" Needle Valve
2 1/4" WF 15.5-18lb

SECTION C-C
Scale: 3/8"=1'-0"



SUMP DETAIL
Scale: 3/8"=1'-0"

ELECTRICAL NOTES

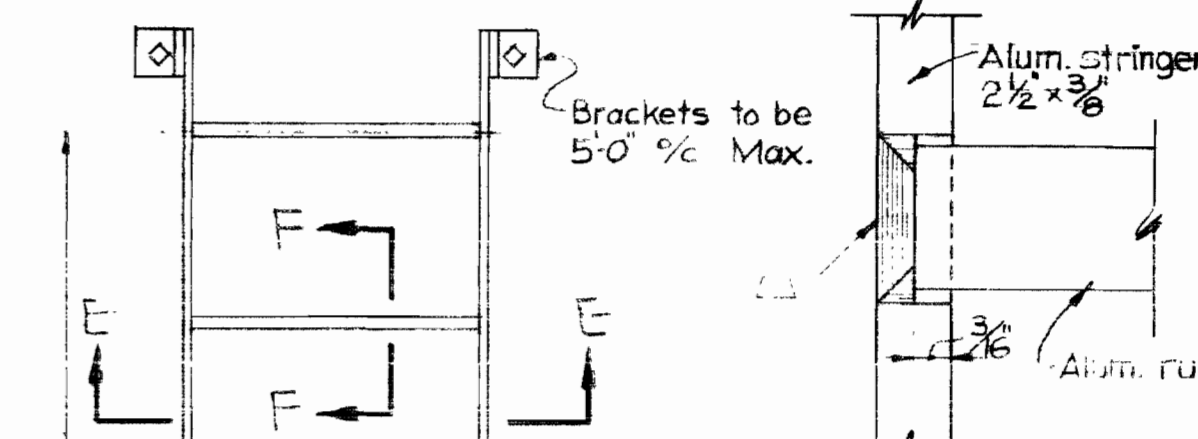
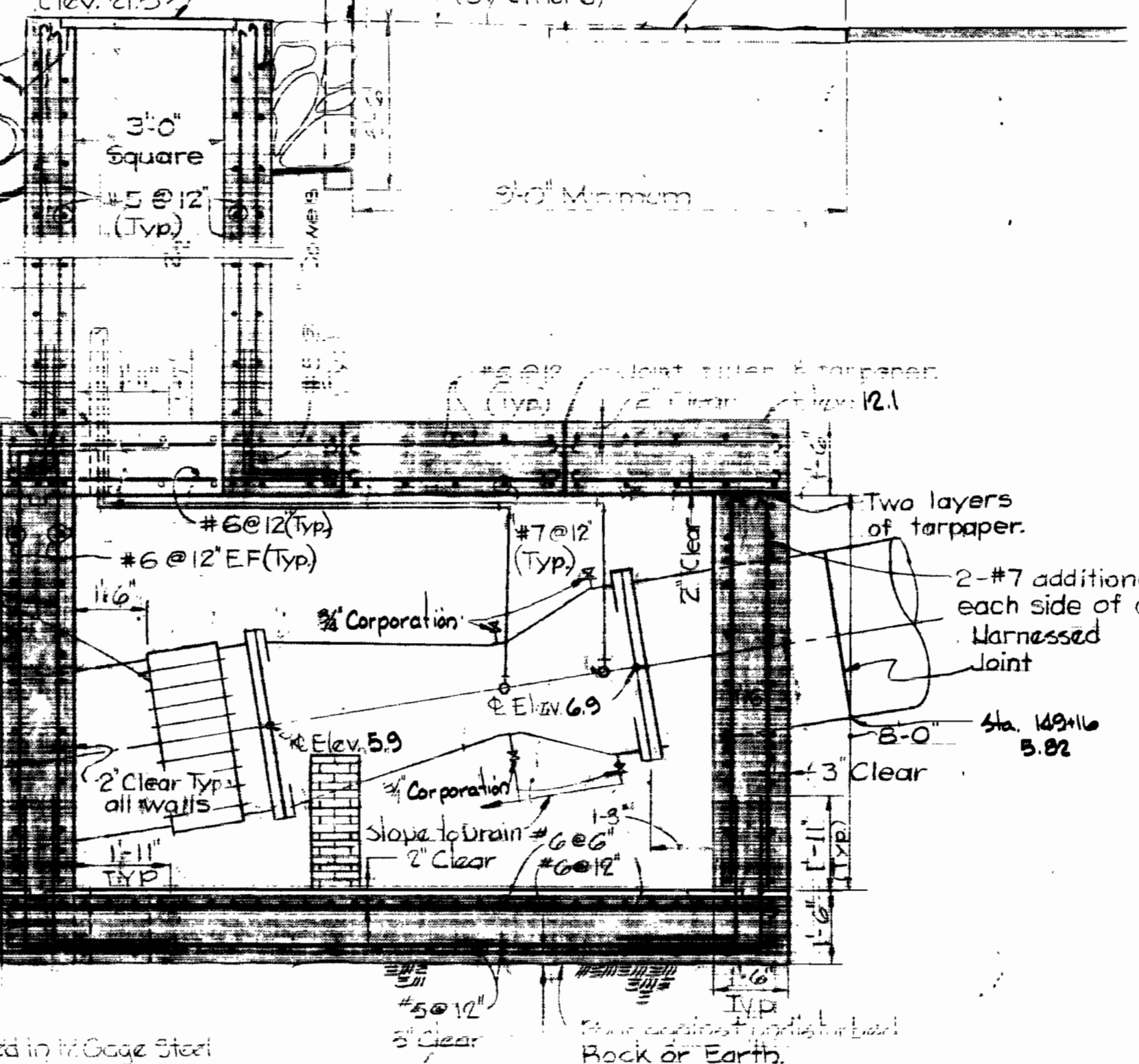
- The Electrical System shall be provided and installed in accordance with local codes and N.E.C.
- The Contractor shall obtain all required permits.
- Wire outside and under-ground in conduit shall be copper type R.H.W./USE.
- Under ground conduits shall be Kor-kop with 40 mil. coating.
- All conduits shall be rigid heavy wall, hot-dipped galvanized.
- All wiring shall be run in conduit.

C.W.O. 40786

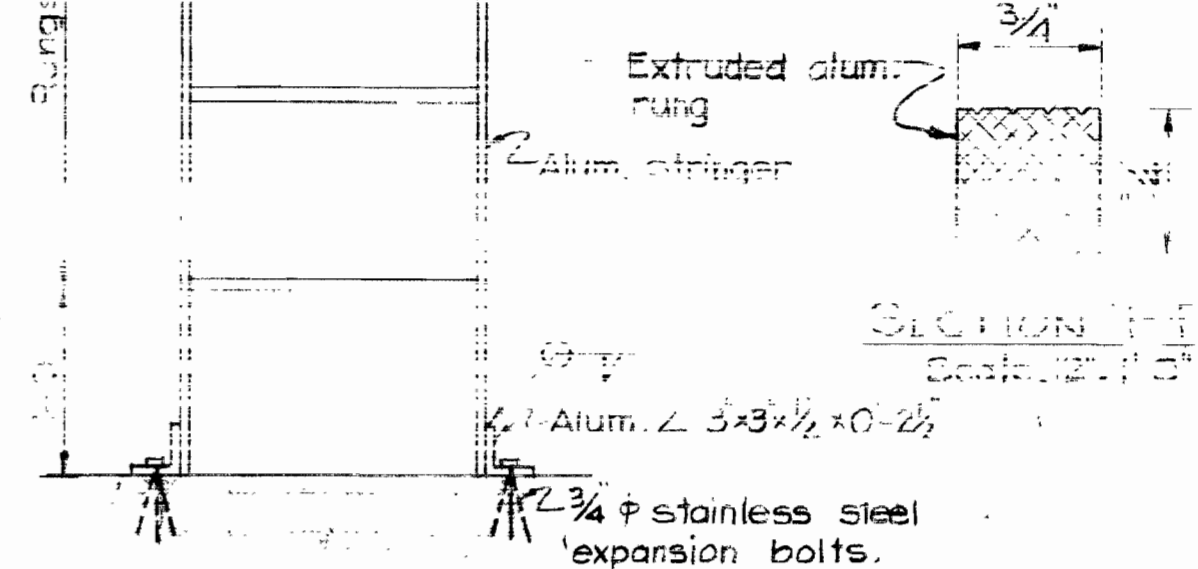
Guardrail post (3 required). Minimum 1 1/2" diameter treated lumber. Post spacing shall be 10' max. Baltimore County Road Dept.

frameded window (by others)

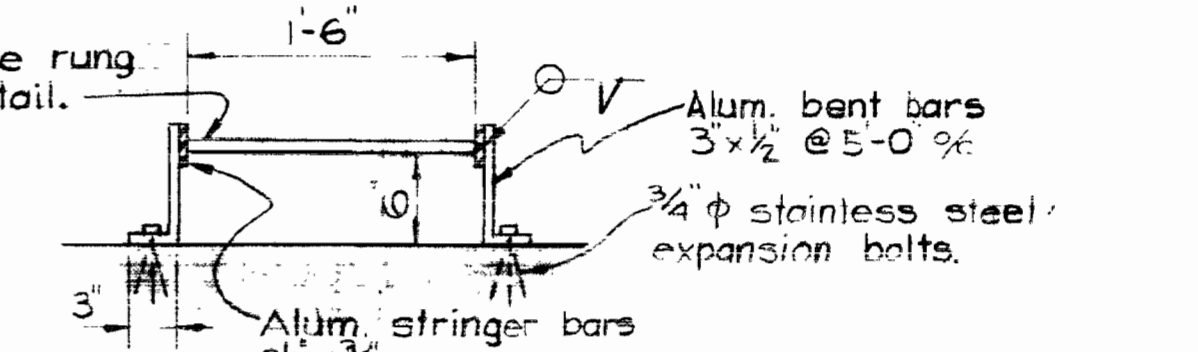
RIVER ROAD



MOUNTING RUNG TO STRINGER
Scale: 1/2"=1'-0"



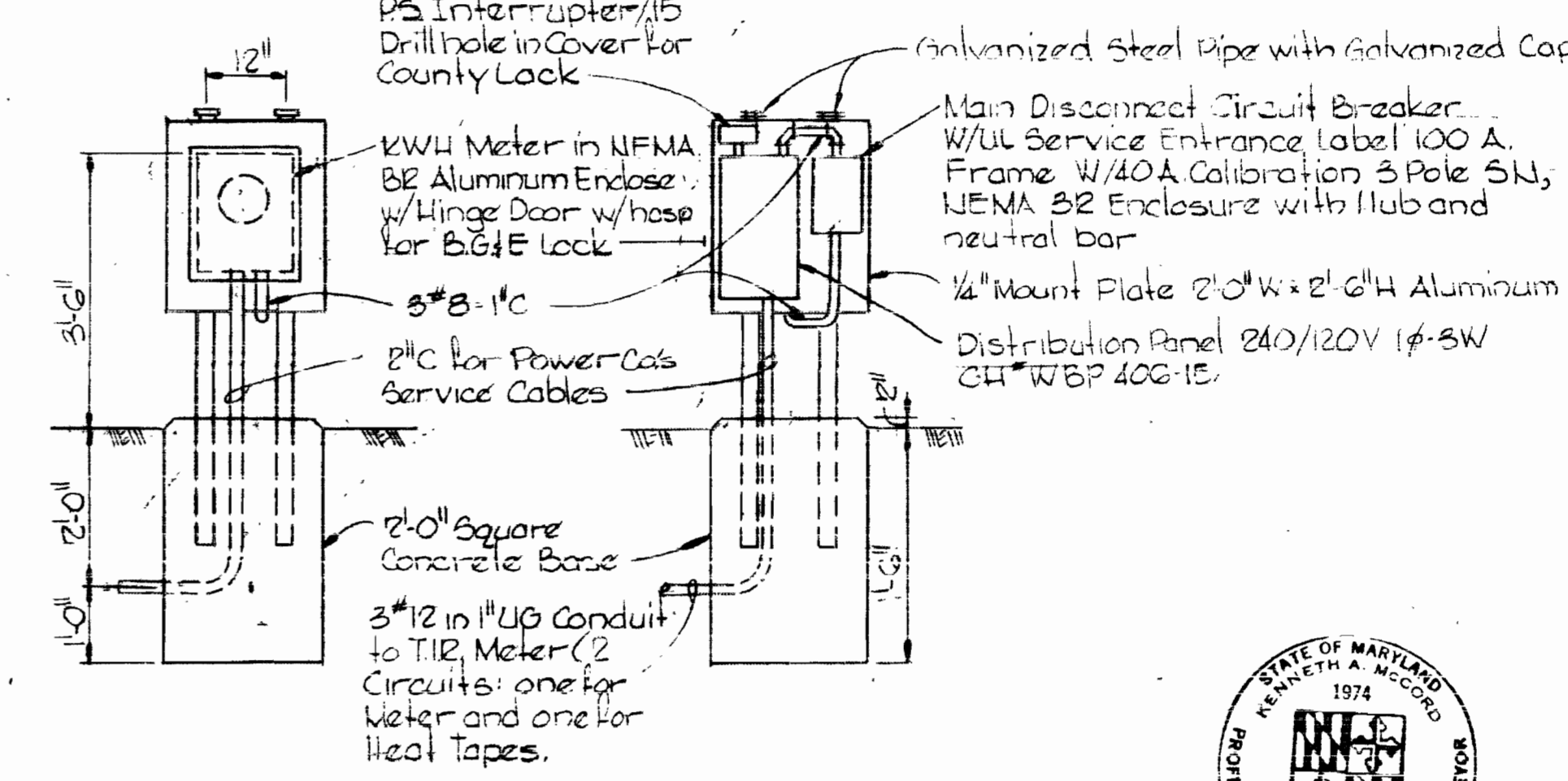
ELEVATION
Scale: 1"=1'-0"



SECTION E-E
Scale: 1"=1'-0"

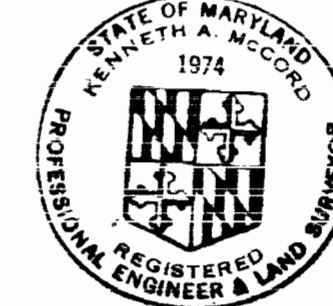
DETAILS OF ALUMINUM LADDER

W.P. Ground Fault Interrupter w/ Cast Aluminum lift cover and Box #1591-WP P.S. Interrupter #15 Drill hole in cover for County Lock



FRONT ELEVATION **BACK ELEVATION**

MOUNTING DETAIL FOR PANEL, METER AND MAIN BREAKER
Scale: 1/2"=1'-0"



Kenneth A. McCord

Relay to Patapsco River Contract No. 625-W

CITY OF BALTIMORE		BALTIMORE COUNTY	
Director: <i>John A. Lutz</i> 9/12/74	Chief, Water Div.: <i>Ed. Kretschmer</i> 9/12/74	Director: <i>Alfred B. Johnson</i> 9/12/74	Chief, Bureau of Engineering: <i>Ed. Kretschmer</i> 9/12/74
DEPT. OF PUBLIC WORKS	BUREAU OF ENGINEERING	DEPT. OF PUBLIC WORKS	DEPT. OF PUBLIC WORKS

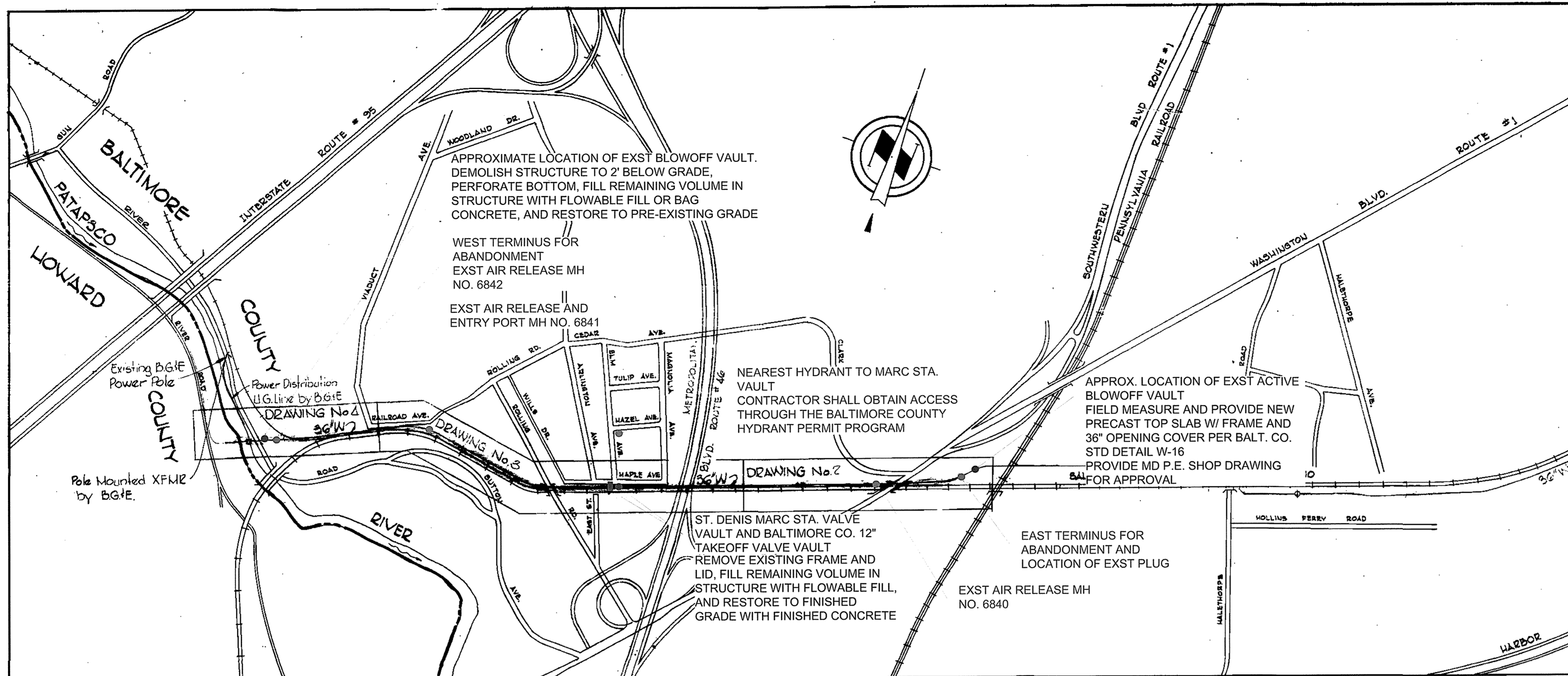
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	HOWARD COUNTY Director: <i>William A. Lutz</i> 7/27/74 DEPT. OF PUBLIC WORKS	CHIEF BUREAU OF ENGINEERING <i>Ed. Kretschmer</i> 7-25-74	CONTRACT NO. 625-W	DETAILS OF VENTURI METER AND VAULT	SOUTHWEST TRANSMISSION MAIN	DRAWING NO. 11 OF 11	SCALE AS SHOWN
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W. O. 625-2

AS BUILT
March 7, 1976
OCTOBER 14, 1974
April 1, 1975

WS 625-W/11

DRAWING 44 510 1832



- GENERAL NOTES**
1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH BALTIMORE COUNTY STANDARD SPECIFICATIONS DATED FEBRUARY, 2000 AND AMENDED AND DETAILS FOR CONSTRUCTION DATED 2007 AND AMENDED, UNLESS OTHERWISE NOTED ON PLANS.
 2. THE CONTRACTOR SHALL CONTACT BALTIMORE CITY BUREAU OF WATER AND WASTEWATER AT 410-396-3671 SEVENTY-TWO (72) HOURS PRIOR TO STARTING THE PROJECT.
 3. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777, 4 DAYS PRIOR TO BEGINNING WORK.
 4. NO WATER SYSTEM SHUTDOWNS ARE REQUIRED AS PART OF THIS PROJECT.
 5. ONLY THAT SECTION OF TRENCH SHALL BE OPENED WHICH CAN BE BACKFILLED AND STABILIZED IN ONE DAY. THE END OF THE PIPE SHALL BE PLATED OVER AT THE END OF EACH WORK DAY.
 6. WHEN EXCAVATING FOR UTILITIES, ALL SPOIL MATERIAL SHALL BE PLACED ON THE THE UPHILL SIDE OF THE TRENCH.
 7. FULL COMPACTION IS REQUIRED FOR ALL TRENCHES.
 8. TEST PITS HAVE NOT BEEN MADE ON EXISTING UTILITIES. IF REQUIRED, TEST PITS SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION.
 9. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE VARIOUS BUSINESSES AND RESIDENCES AND COORDINATING THE WORK ACTIVITIES SO AS TO NOT NEGATIVELY IMPACT THE CONNECTED CUSTOMERS. THE CONSTRUCTION SHALL CAUSE MINIMUM DISTURBANCE TO THE EXISTING BUSINESSES AND RESIDENCES AND NOTIFICATION OF ANY INTERRUPTIONS OF SERVICE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COUNTY REQUIRES THAT THE CONTRACTOR NOTIFY EACH AFFECTED BUSINESS AND RESIDENCE OF THE IMPENDING INTERRUPTION BY LETTER OR DOOR TAGS AT LEAST 48 HOURS IN ADVANCE OF THE PLANNED INTERRUPTION. IN THE EVENT OF UNPLANNED INTERRUPTION, THE CONTRACTOR WILL BE RESPONSIBLE FOR NOTIFYING THE BUSINESSES AND RESIDENCES BY DOOR-TO-DOOR CANVASSING.
 10. THERE HAVE BEEN NO GEOTECHNICAL OR SUBSURFACE INVESTIGATIONS COMPLETED FOR THIS PROJECT.

- SPECIAL PROJECT CONDITIONS**
1. THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL A MAINTENANCE AND PROTECTION OF TRAFFIC PLAN (MPT), INCLUDING CONSTRUCTION VEHICLE ROUTE(S) AND STAGING AREA(S) TO BE USED DURING ABANDONMENT ACTIVITIES. THE MPT SHALL BE SUBMITTED WITH THE CONTRACTOR'S SCHEDULE AND SEQUENCE OF ACTIVITIES WITH DURATIONS TO ALLOW A COORDINATED REVIEW. TRAFFIC SHALL BE MAINTAINED USING METHODS, SIGNS, BARRICADES, LIGHTS, AND INCIDENTAL MATERIALS AS APPROVED IN THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE BALTIMORE COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND SUBSEQUENT REVISIONS. THE MAINTENANCE PROCEDURES SHALL INCLUDE, BUT NOT BE LIMITED TO ADEQUATE WARNING SIGNS AND PLACEMENT OF APPROVED DRUM, TYPE I OR TYPE II BARRICADES EVERY 10 FEET BETWEEN THE TRAVELED WAY AND THE CONSTRUCTION AREA. ONE LANE OF TRAFFIC SHALL REMAIN OPEN AT ALL TIMES.
 2. NOTIFY THE PARK MANAGER AT 410-461-5005 AT LEAST 2 WEEKS IN ADVANCE OF WORK WITHIN THE STATE PARK.

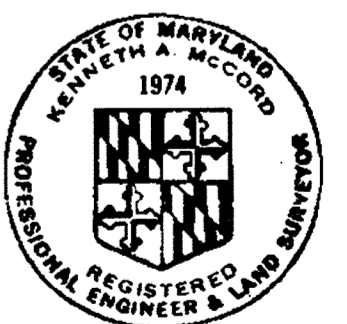
- CSX TRANSPORTATION REQUIREMENTS**
1. THE AREA ENGINEER'S OFFICE MUST BE NOTIFIED A MINIMUM OF 14 WORKING DAYS PRIOR TO DESIRED START OF CONSTRUCTION.
 2. ALL CONSTRUCTION OPERATIONS SHALL BE CONDUCTED SO AS NOT TO INTERFERE WITH, INTERRUPT, OR ENDANGER THE OPERATION OF TRAINS NOR DAMAGE, DESTROY, OR ENDANGER THE INTEGRITY OF RAILROAD FACILITIES. ALL WORK ON AND NEAR CSX TRANSPORTATION PROPERTY SHALL BE CONDUCTED IN ACCORDANCE WITH RAILROAD SAFETY RULES AND REGULATIONS. THE CONTRACTOR SHALL SECURE AND COMPLY WITH THE RAILROAD SAFETY RULES AND SHALL GIVE WRITTEN ACKNOWLEDGMENT TO THE RAILROAD THAT THEY HAVE BEEN RECEIVED, READ, AND UNDERSTOOD BY THE CONTRACTOR AND HIS EMPLOYEES. CONSTRUCTION OPERATIONS WILL BE SUBJECT TO RAILROAD INSPECTION AT ANY AND ALL TIMES.
 3. AT ALL TIMES WHEN THE WORK IS BEING PROGRESSSED, A FIELD SUPERVISOR FOR THE WORK WITH NO LESS THAN 12 MONTHS EXPERIENCE IN THE OPERATION OF THE EQUIPMENT BEING USED SHALL BE PRESENT.
 4. BLASTING WILL NOT BE PERMITTED AT OR NEAR RAILROAD TRACKS AND FACILITIES.
 5. ARRANGEMENTS MUST BE MADE AT LEAST TWO WEEKS IN ADVANCE OF THE WORK, WHERE FOULING OF TRACK OR STRUCTURES IS REQUIRED FOR ACCESS. THESE OPERATIONS REQUIRE THE PRIOR APPROVAL OF THE CHIEF ENGINEER. FURTHER, SUCH OPERATIONS SHALL BE COORDINATED AND SCHEDULED IN AGREEMENT WITH THE CHIEF TRANSPORTATION OFFICER.
 6. ALL CRANES, LIFTS, OR OTHER EQUIPMENT THAT WILL BE OPERATED IN THE VICINITY OF THE RAILROAD'S ELECTRIFICATION AND POWER TRANSMISSION FACILITIES SHALL BE ELECTRICALLY GROUNDED AS DIRECTED BY THE CSX TRANSPORTATION CHIEF ENGINEER.
 7. CROSSING OF TRACKS AT GRADE BY EQUIPMENT AND PERSONNEL IS PROHIBITED EXCEPT BY PRIOR ARRANGEMENT WITH, AND AS DIRECTED BY, THE CSX TRANSPORTATION CHIEF ENGINEER.
 8. ALL CSX TRANSPORTATION COSTS ASSOCIATED WITH THE PIPE ABANDONMENT (INSPECTION, FLAGGING, TRACK WORK, PROTECTION OF SIGNAL CABLES, ETC.) SHALL BE REIMBURSED TO CSX TRANSPORTATION BY THE OWNER.
 9. THE CONTRACTOR MUST COMPLY WITH THE FACILITY ENCROACHMENT AGREEMENT BETWEEN CSX TRANSPORTATION INC. AND HOWARD COUNTY, MARYLAND. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE AGREEMENT REQUIREMENTS, WHICH ARE TRANSMITTED WITH THESE PLANS.

SCOPE OF WORK AND INFORMATION REGARDING USE OF THESE PLANS
 THE SCOPE OF WORK TO BE COMPLETED UNDER THIS CONTRACT CONSISTS OF THE ABANDONMENT, COMPLETE IN PLACE, OF APPROXIMATELY 5,817 LINEAR FEET OF 36-INCH DIAMETER PRESTRESSED CONCRETE CYLINDER PIPE (PCCP) WATER MAIN USING CONTROLLED LOW STRENGTH MATERIAL (CLSM) CONCRETE FLOWABLE FILL AS SPECIFIED, PARTIAL DEMOLITION AND ABANDONMENT OF AIR RELEASE AND ACCESS MANHOLES AND A VALVE VAULT, AND SITE RESTORATION. WORK IS DESCRIBED ON THESE RECORD DRAWINGS, WHICH ARE PROVIDED FOR THE PURPOSE OF THE 36" PCCP ABANDONMENT ONLY, AND SHALL SERVE NO OTHER PURPOSE OTHER THAN INFORMATION RELATED TO ABANDONMENT ACTIVITIES. THE SCOPE OF THE ABANDONMENT DOES NOT INCLUDE EXCAVATION, DEMOLITION, OR WORK OUTSIDE THE 36" PCCP AND ASSOCIATED STRUCTURES SPECIFIED. RECORD INFORMATION SHOWN INCLUDING EXISTING PROPERTY LINES, UTILITIES, ROADS, RAIL, AND STRUCTURES IS DATED AND SHALL NOT BE UTILIZED.

- SUGGESTED SEQUENCE OF CONSTRUCTION**
1. COMPLETE ALL NECESSARY NOTIFICATIONS.
 2. INSPECT ALL STRUCTURES, MONITORING POINTS, AND ANY OTHER LOCATIONS PERTINENT TO THE WORK TO VERIFY EXISTING CONDITIONS PRIOR TO CLSM SUBCONTRACTOR MOBILIZATION.
 3. SETUP MPT DEVICES AND STAGING AREA(S) AT THE APPROVED LOCATIONS.
 4. CONSTRUCT BULKHEAD AT MH 6842. CONSTRUCT MONITORING DEVICES AT HIGH POINTS AT MANHOLES 6840 AND 6842 AS DETERMINED BY CLSM SUBCONTRACTOR TO BE USED DURING CLSM PLACEMENT. ALLOW 72 HOURS BETWEEN BULKHEAD PLACEMENT AND MOBILIZATION OF CLSM SUBCONTRACTOR.
 4. DEWATER THE 36" PCCP FROM THE MARC STATION VALVE VAULT UTILIZING MEANS OF INSPECTION NECESSARY TO ENSURE THE PIPELINE IS FREE OF WATER. THE CONTRACTOR IS RESPONSIBLE FOR HANDLING AND DISPOSAL OF DISPLACED WATER ENCOUNTERED DURING CLSM POURS.
 5. SUBSEQUENT TO OBTAINING A BALTIMORE COUNTY HYDRANT PERMIT, SETUP HOSE AND TEMPORARY EQUIPMENT NECESSARY FOR ACCESSING POTABLE WATER AND SITE BATCHING OPERATIONS.
 6. COMPLETE CLSM POURS AS SPECIFIED, UTILIZING MONITORING DEVICES AT MANHOLES 6840, 6841, AND 6842, AND THE EAST POUR TERMINUS, TO ENSURE COMPLETE PLACEMENT WITHIN THE 36" PCCP. THE CONTRACTOR SHALL SAMPLE AND PROVIDE TESTING OF THE CLSM AS SPECIFIED.
 7. DEMOBILIZE CLSM POUR OPERATION AS APPLICABLE.
 8. PARTIALLY DEMOLISH 36" PCCP STRUCTURES, FILL WITH SAND, AND RESTORE AS SPECIFIED.
 9. CONDUCT SITE WALKTHROUGH WITH COUNTY PM, ADDRESS PUNCHLIST, AND COMPLETE DEMOBILIZATION.
 10. SUCCESSFUL ABANDONMENT OF THE 36" PCCP SHALL BE DEMONSTRATED AS SPECIFIED BY PROVIDING CERTIFIED FIELD LOGS OF CAST DENSITY, VOLUME PLACEMENT, AND 28-DAY TEST RESULTS OF CLSM SAMPLE CYLINDERS DEMONSTRATING ACHIEVEMENT OF THE MINIMUM STRENGTH SPECIFIED.

HOWARD COUNTY CAPITAL PROJECT W-8600
DECOMMISSIONING OF REPLACED SECTIONS OF THE
SOUTHWEST TRANSMISSION MAIN
~~PROJECT NO. W48034~~
SOUTHWEST TRANSMISSION MAIN
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

36" Lock Joint Pipe
 Prestressed Concrete Cylinder Pipe



Thomas J. McLeod
 REGISTERED PROFESSIONAL ENGINEER

HOWARD COUNTY CONTACT INFORMATION
 HOWARD CO. PROJECT MANAGER: ZACK KNIGHT, PE, PHONE: 410-313-6125
 HOWARD CO. UTILITY DESIGN DIVISION: 410-313-2040

CITY OF BALTIMORE		BALTIMORE COUNTY	
<i>Thomas J. McLeod</i> 9/12/74	<i>Robert J. ...</i> 9/12/74	<i>Albert ...</i> 9/12/74	<i>...</i> 9/12/74
DIRECTOR	CHIEF WATER DIV.	DIRECTOR	DIRECTOR
DEPT. OF PUBLIC WORKS	BUREAU OF ENGINEERING	DEPT. OF PUBLIC WORKS	DEPT. OF PUBLIC WORKS

CWO. 40786

SHEET 37 OF 47

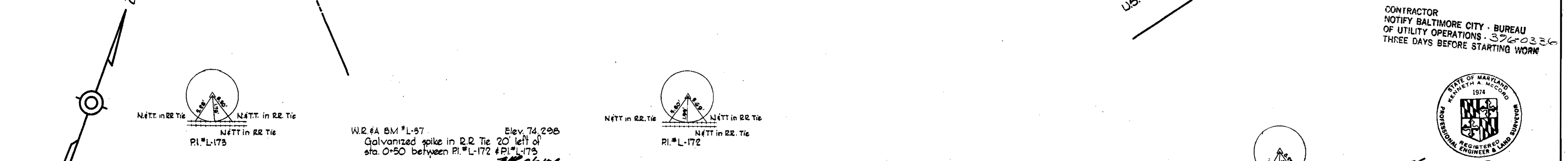
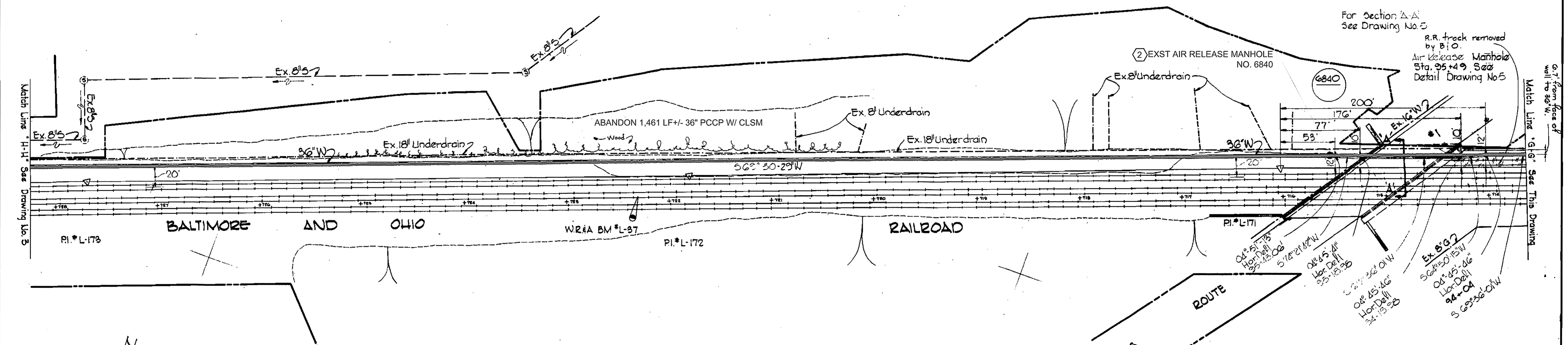
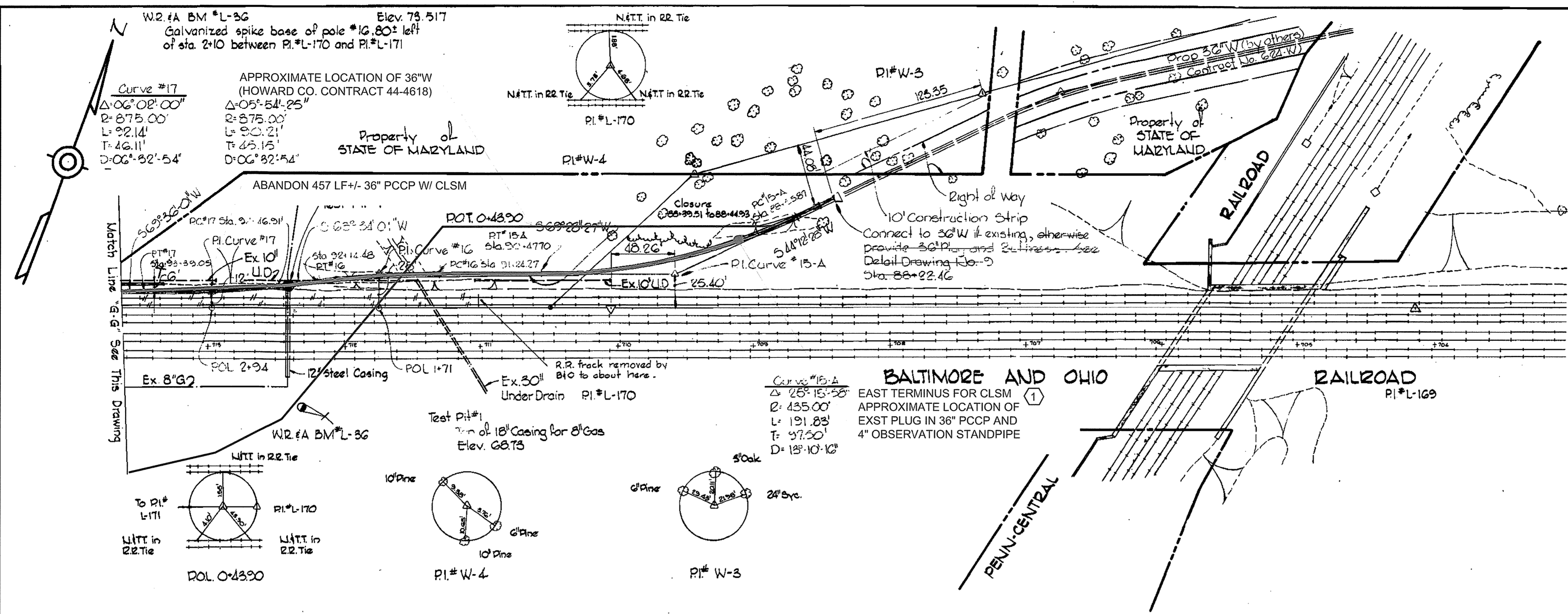
Relay to Patapsco River
 Contract No. 625-W

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	HOWARD COUNTY <i>William J. ...</i> 7/25/74 DIRECTOR DEPT. OF PUBLIC WORKS		HOWARD COUNTY <i>W. O. ...</i> 7-25-74 CHIEF BUREAU OF ENGINEERING		CONTRACT NO. 625 - W	LOCATION PLAN	RECORD DRAWING FOR REFERENCE AND ABANDONMENT OF 36" PCCP ONLY SOUTHWEST TRANSMISSION MAIN	DRAWING NO. R-1 OF R-11	SCALE 1" = 60'
	W. O. 6257-2		AS BUILT March 7, 1978		July 17, 1974 April 1, 1975		40786		

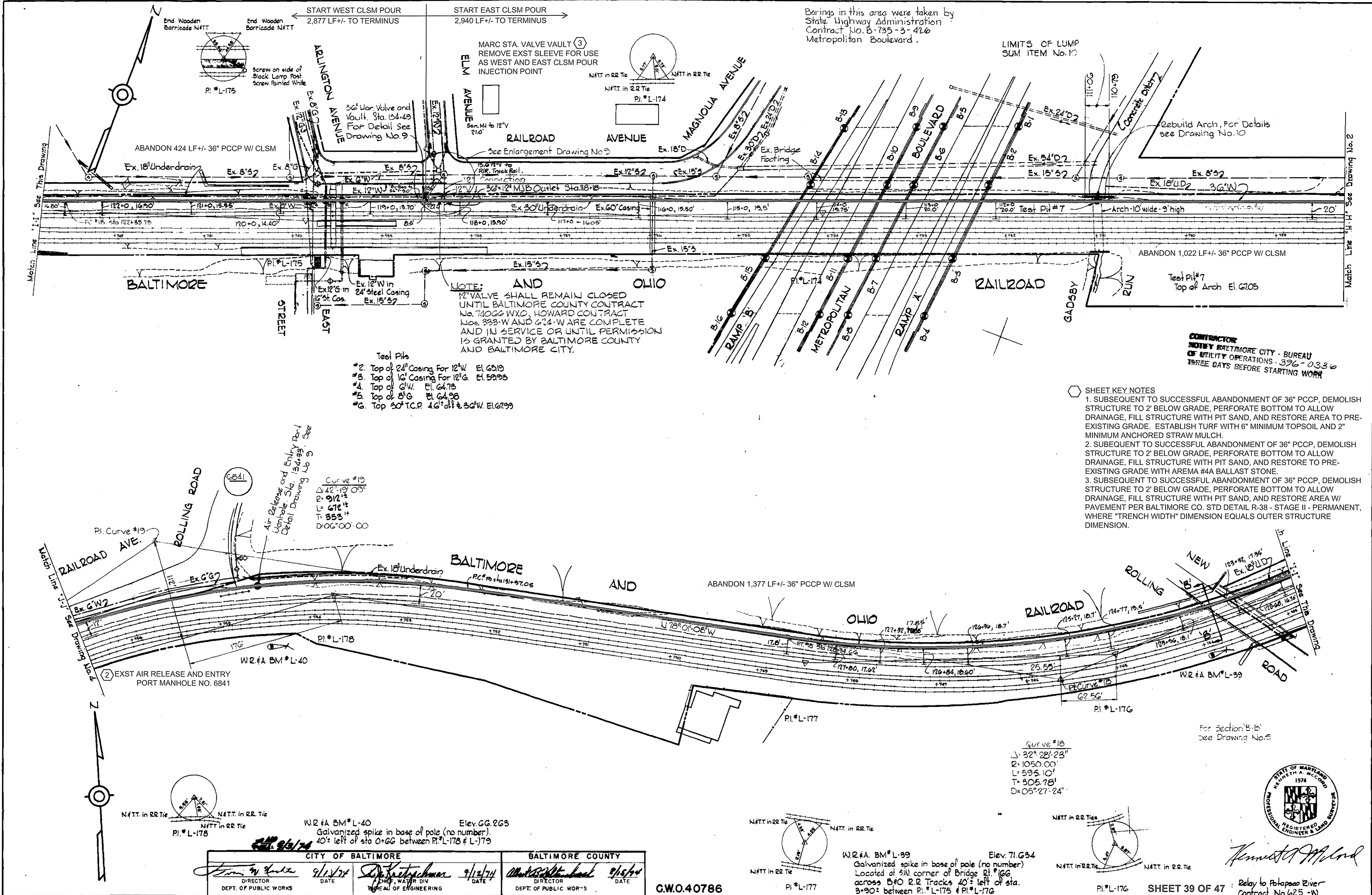
WS 625-W/2

GENERAL NOTES

- Approximate location of existing mains are shown. The Contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately.
 - All pipe elevations shown are invert elevation.
 - The Contractor shall locate existing utilities a minimum of two weeks in advance of construction operations in vicinity of utilities.
 - For all standard details see standards bound in Specifications.
 - All horizontal and vertical controls are based on Maryland State Datum.
 - Existing Underdrains which are damaged shall be replaced with perforated Bituminous Coated Corrugated Metal Pipe of the same size as damaged. Payment for replacing Underdrains will be made at the appropriate unit price bid.
- SHEET KEY NOTES**
- SUBSEQUENT TO SUCCESSFUL ABANDONMENT OF 36" PCPP, DEMOLISH STRUCTURE TO 2' BELOW GRADE, PERFORATE BOTTOM TO ALLOW DRAINAGE, FILL STRUCTURE WITH PIT SAND, AND RESTORE AREA TO PRE-EXISTING GRADE. ESTABLISH TURF WITH 6" MINIMUM TOPSOIL AND 2" MINIMUM ANCHORED STRAW MULCH.
 - SUBSEQUENT TO SUCCESSFUL ABANDONMENT OF 36" PCPP, DEMOLISH STRUCTURE TO 2' BELOW GRADE, PERFORATE BOTTOM TO ALLOW DRAINAGE, FILL STRUCTURE WITH PIT SAND, AND RESTORE TO PRE-EXISTING GRADE WITH AREMA #4 BALLAST STONE.
 - SUBSEQUENT TO SUCCESSFUL ABANDONMENT OF 36" PCPP, DEMOLISH STRUCTURE TO 2' BELOW GRADE, PERFORATE BOTTOM TO ALLOW DRAINAGE, FILL STRUCTURE WITH PIT SAND, AND RESTORE AREA W/ PAVEMENT PER BALTIMORE CO. STD DETAIL R-38 - STAGE II - PERMANENT, WHERE "TRENCH WIDTH" DIMENSION EQUALS OUTER STRUCTURE DIMENSION.



CITY OF BALTIMORE Director: <i>[Signature]</i> 9/13/74 DEPT. OF PUBLIC WORKS		BALTIMORE COUNTY Director: <i>[Signature]</i> 9/13/74 DEPT. OF PUBLIC WORKS		HOWARD COUNTY Chief: <i>[Signature]</i> 7/25/74 BUREAU OF ENGINEERING	CONTRACT NO. 625 - W	PLAN OF WATER MAINS	RECORD DRAWING FOR REFERENCE AND ABANDONMENT OF 36" PCPP ONLY SOUTHWEST TRANSMISSION MAIN	DRAWING NO. R-2 OF R-11	SCALE 1" = 50'
W. O. G257-2		W. O. 40786							



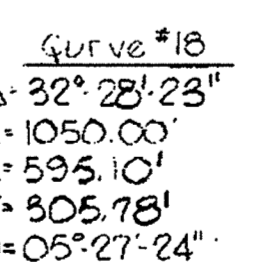
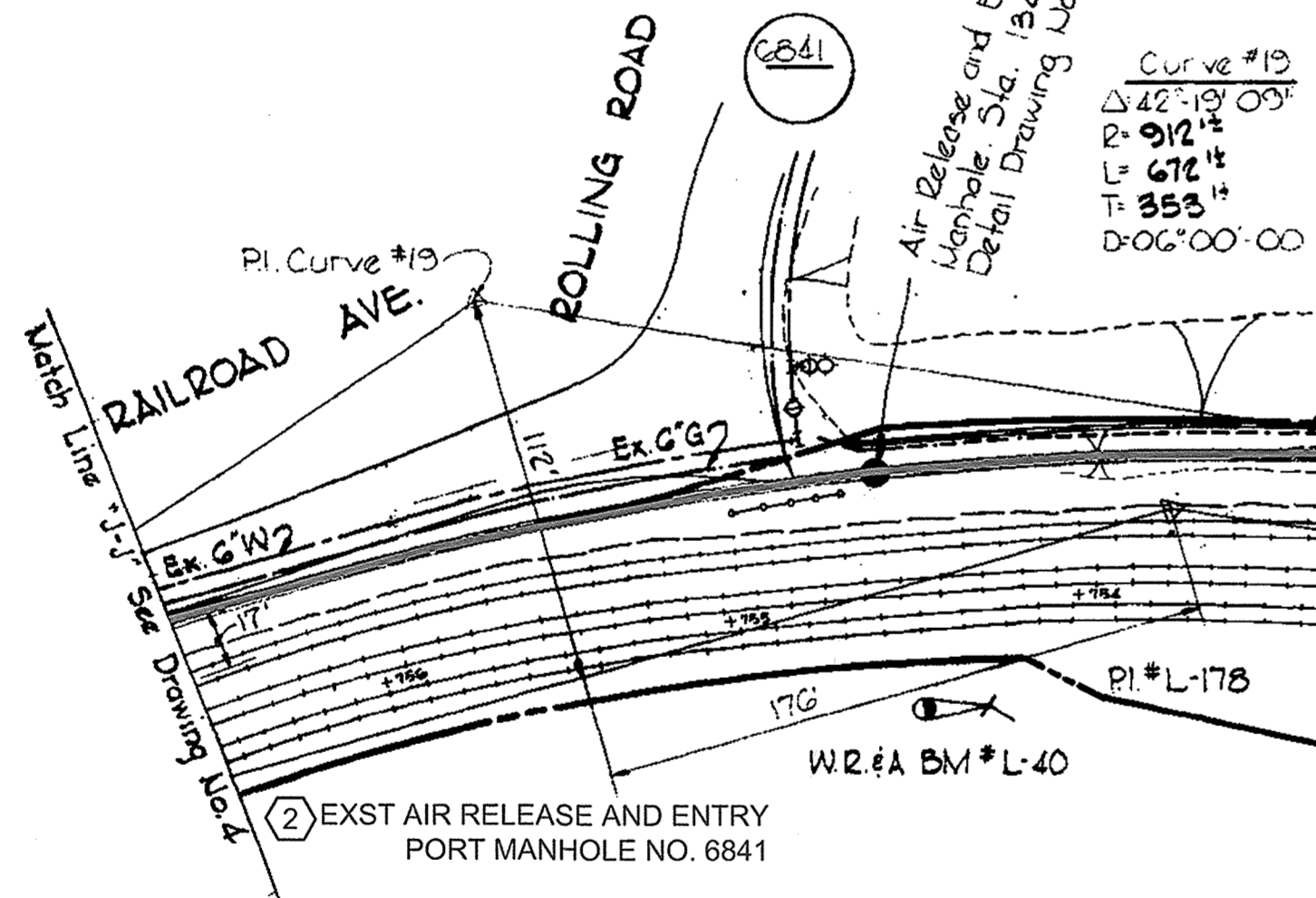
NOTE:
 12" VALVE SHALL REMAIN CLOSED UNTIL BALTIMORE COUNTY CONTRACT NO. 74022 W/O, HOWARD CONTRACT NOS. 333-W AND 624-W ARE COMPLETE AND IN SERVICE OR UNTIL PERMISSION IS GRANTED BY BALTIMORE COUNTY AND BALTIMORE CITY.

Test Pits
 *2. Top of 24" Casing For 12" W. El. 6519
 *3. Top of 10" Casing For 12" G. El. 5995
 *4. Top of 6" W. El. 6475
 *5. Top of 8" G. El. 6495
 *6. Top 30" T.C.P. 4.6' dia. & 30" W. El. 6799

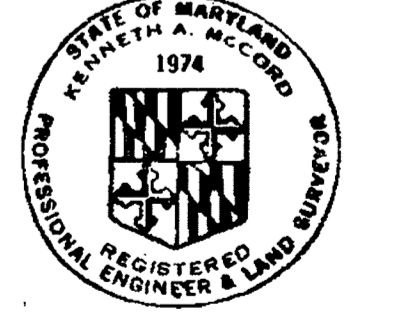
SHEET KEY NOTES

- SUBSEQUENT TO SUCCESSFUL ABANDONMENT OF 36" PCCP, DEMOLISH STRUCTURE TO 2' BELOW GRADE, PERFORATE BOTTOM TO ALLOW DRAINAGE, FILL STRUCTURE WITH PIT SAND, AND RESTORE AREA TO PRE-EXISTING GRADE. ESTABLISH TURF WITH 6" MINIMUM TOPSOIL AND 2" MINIMUM ANCHORED STRAW MULCH.
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- SUBSEQUENT TO SUCCESSFUL ABANDONMENT OF 36" PCCP, DEMOLISH STRUCTURE TO 2' BELOW GRADE, PERFORATE BOTTOM TO ALLOW DRAINAGE, FILL STRUCTURE WITH PIT SAND, AND RESTORE AREA W/ PAVEMENT PER BALTIMORE CO. STD DETAIL R-38 - STAGE II - PERMANENT, WHERE "TRENCH WIDTH" DIMENSION EQUALS OUTER STRUCTURE DIMENSION.

CONTRACTOR
 NOTIFY BALTIMORE CITY - BUREAU OF UTILITY OPERATIONS - 376-0330
 THREE DAYS BEFORE STARTING WORK



CITY OF BALTIMORE Director: <i>[Signature]</i> 9/12/74 DEPT. OF PUBLIC WORKS		BALTIMORE COUNTY Director: <i>[Signature]</i> 9/12/74 DEPT. OF PUBLIC WORKS		HOWARD COUNTY Director: <i>[Signature]</i> 7-25-74 DEPT. OF PUBLIC WORKS	
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND		CONTRACT NO. 625 - W		PLAN OF WATER MAINS	
RECORD DRAWING FOR REFERENCE AND ABANDONMENT OF 36" PCCP ONLY		DRAWING NO. R-3 OF R-11		SCALE 1"=50'	



[Signature]
 Relays to Potomac River
 Contract No. 625 - W

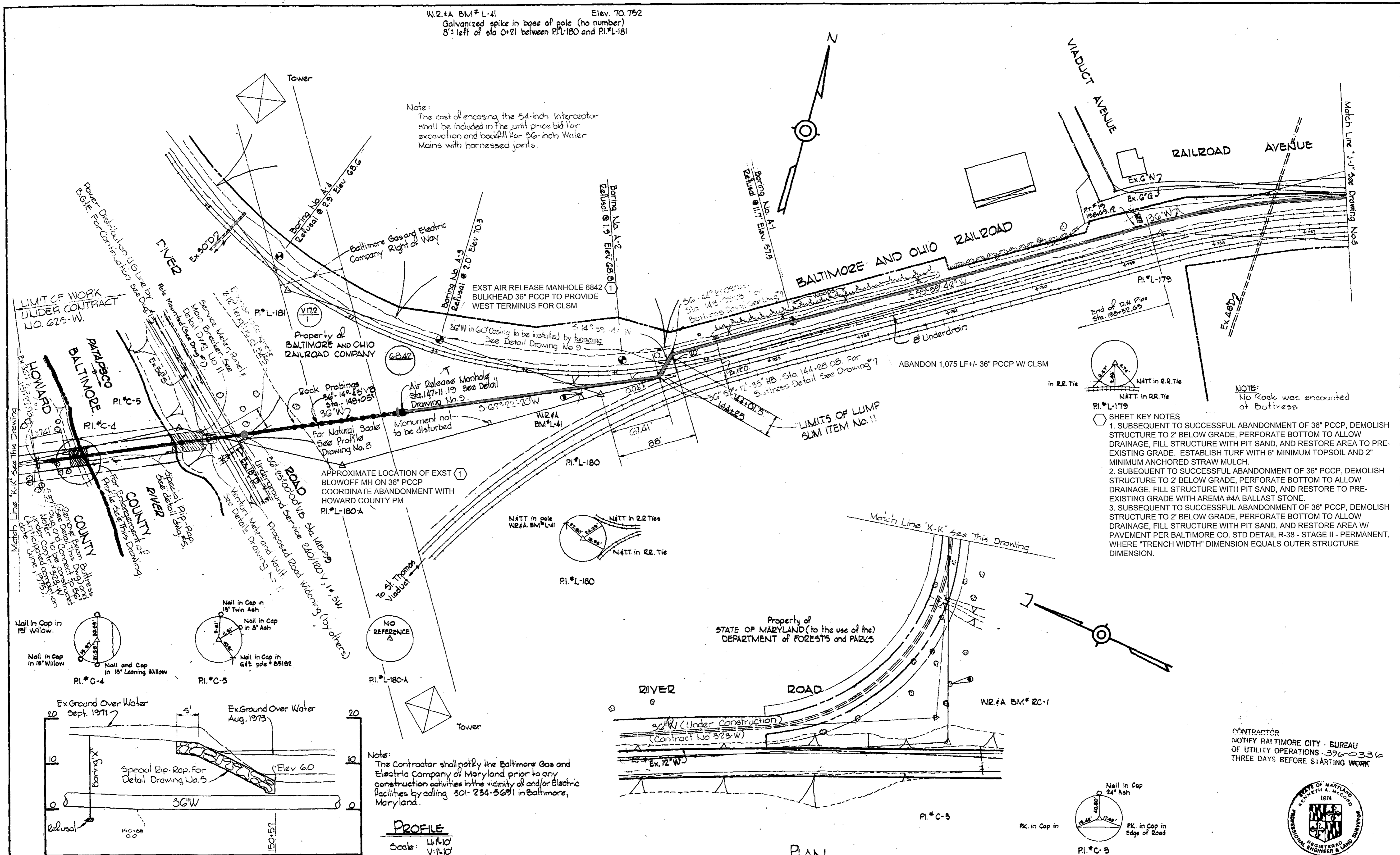
AS BUILT
 March 7, 1978
 FB*4462, 4469, 4496
 August 23, 1974
 April 1, 1975

WS 625-W/3

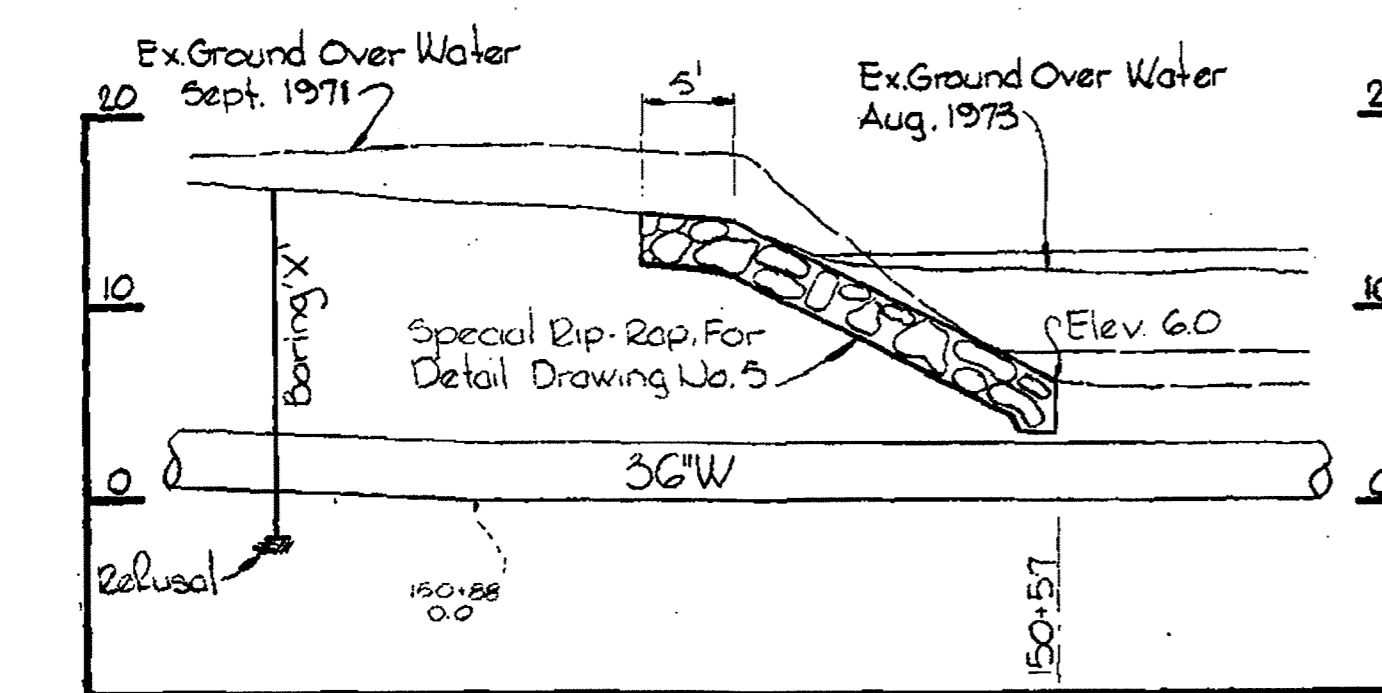
W. O. 6257-2

W.R.#A BM*L-41 Elev. 70.752
Galvanized spike in base of pole (no number)
8' left of sta 0+21 between P.I.*L-180 and P.I.*L-181

Note:
The cost of encasing the 54-inch Interceptor shall be included in the unit price bid for excavation and backfill for 36-inch Water Mains with horned joints.



- NOTE:
No Rock was encountered at Outrigger
- SHEET KEY NOTES
1. SUBSEQUENT TO SUCCESSFUL ABANDONMENT OF 36" PCCP, DEMOLISH STRUCTURE TO 2' BELOW GRADE, PERFORATE BOTTOM TO ALLOW DRAINAGE, FILL STRUCTURE WITH PIT SAND, AND RESTORE AREA TO PRE-EXISTING GRADE. ESTABLISH TURF WITH 6" MINIMUM TOPSOIL AND 2" MINIMUM ANCHORED STRAW MULCH.
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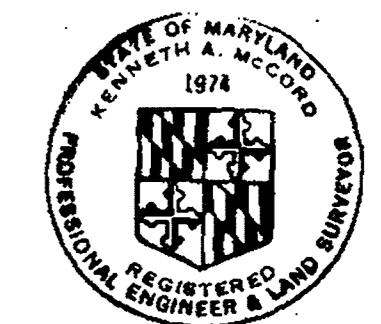


Note:
The Contractor shall notify the Baltimore Gas and Electric Company of Maryland prior to any construction activities in the vicinity of and/or Electric facilities by calling 301-254-5691 in Baltimore, Maryland.

PROFILE
Scale: H:V:10'

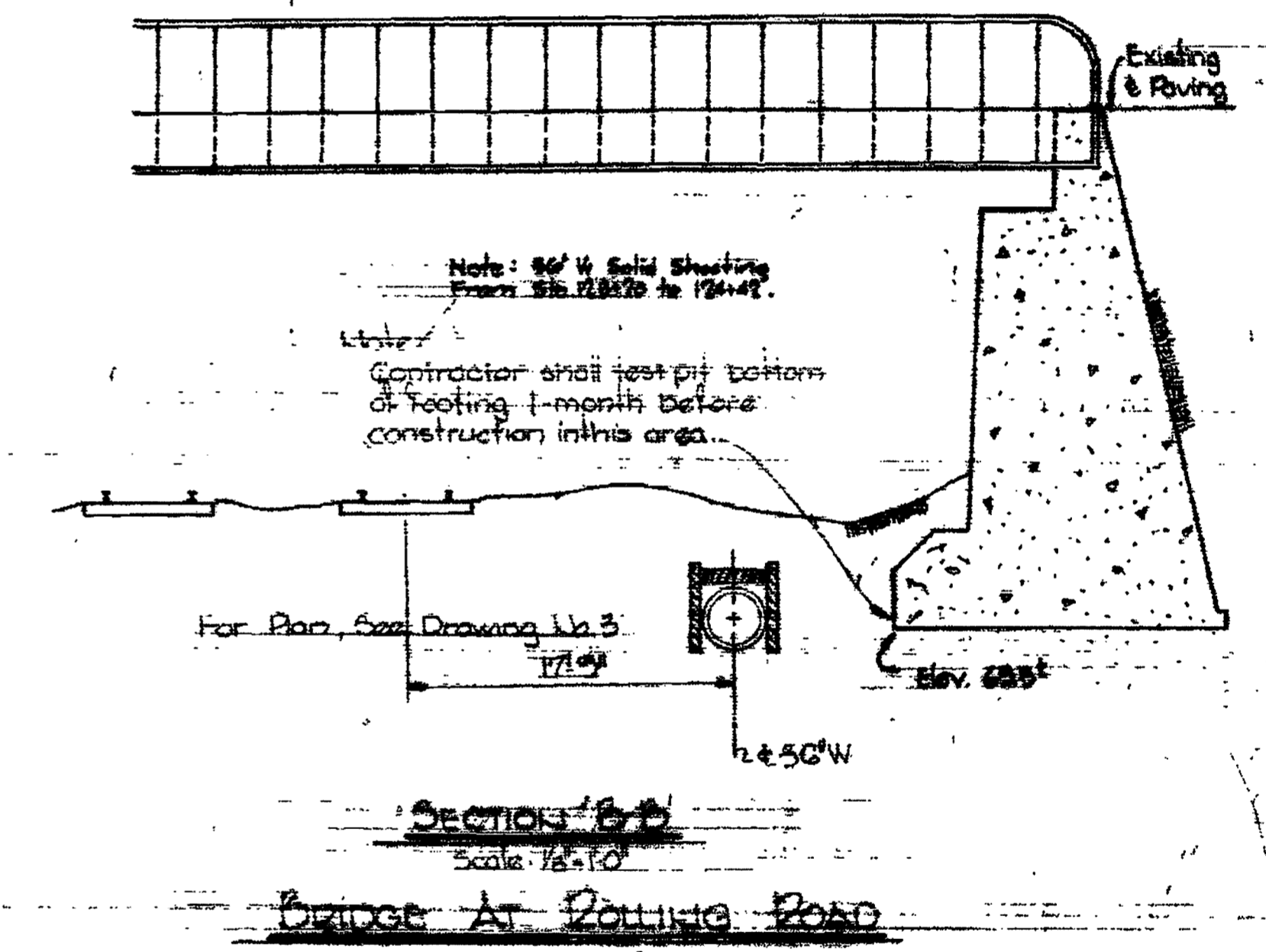
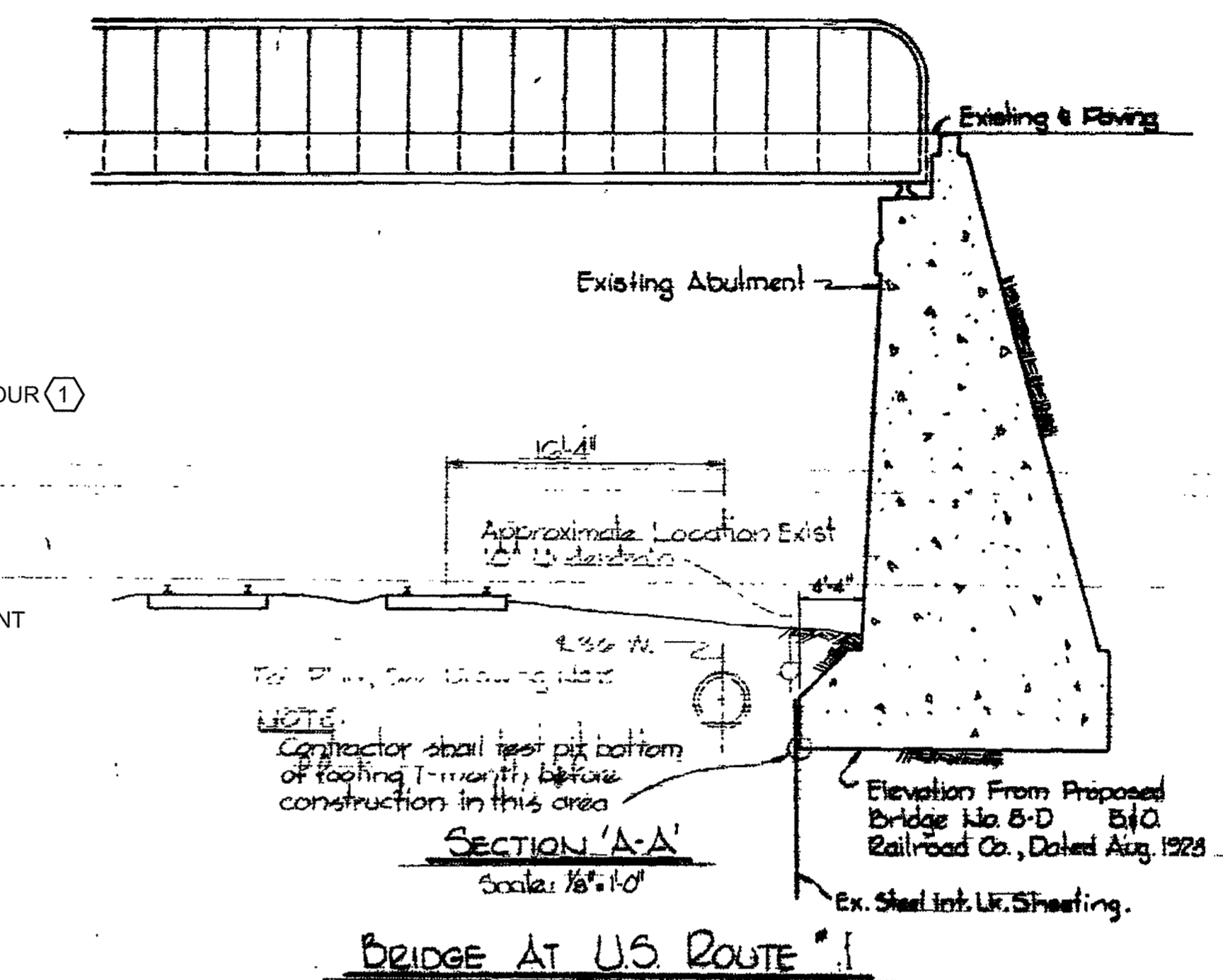
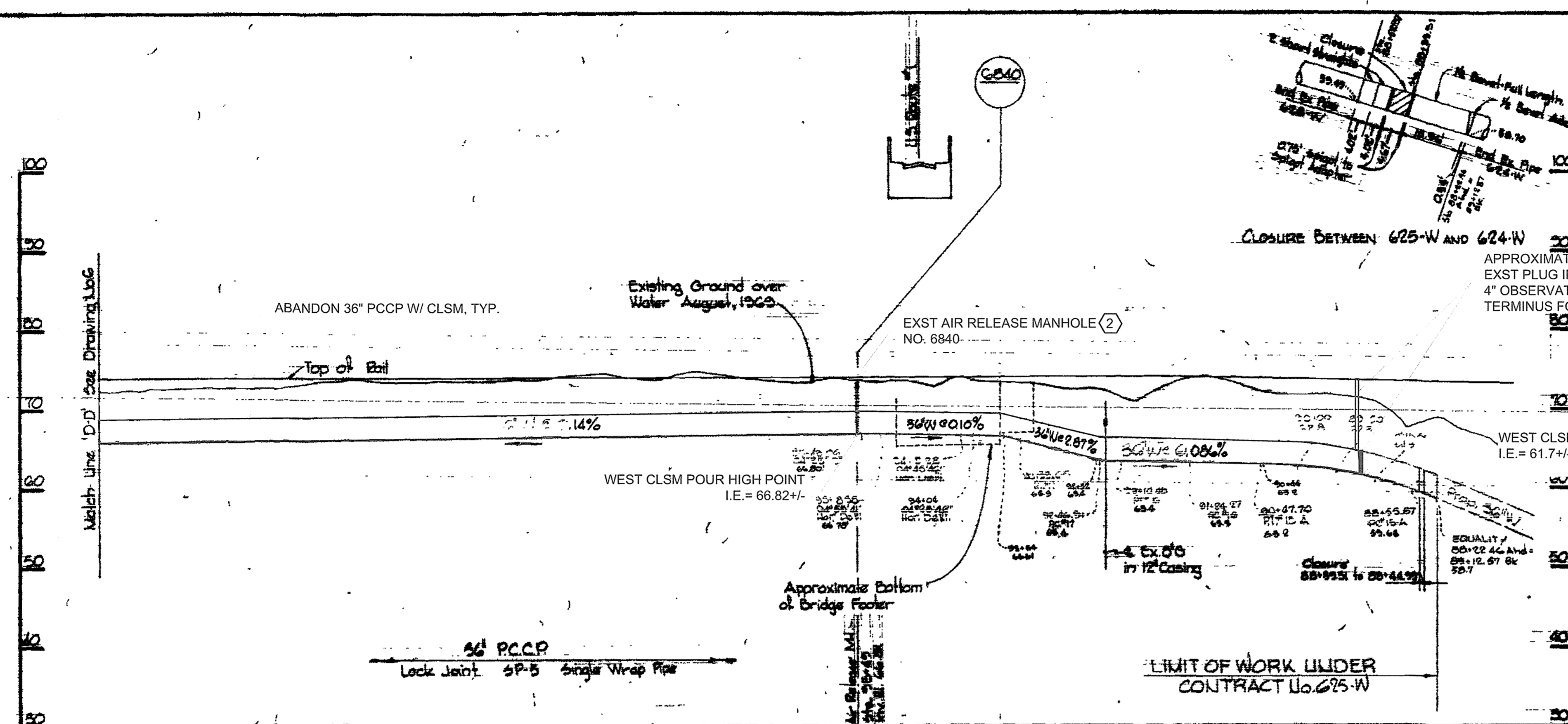
PLAN
Scale: 1"=50'

CONTRACTOR
NOTIFY BALTIMORE CITY - BUREAU
OF UTILITY OPERATIONS - 396-2336
THREE DAYS BEFORE STARTING WORK

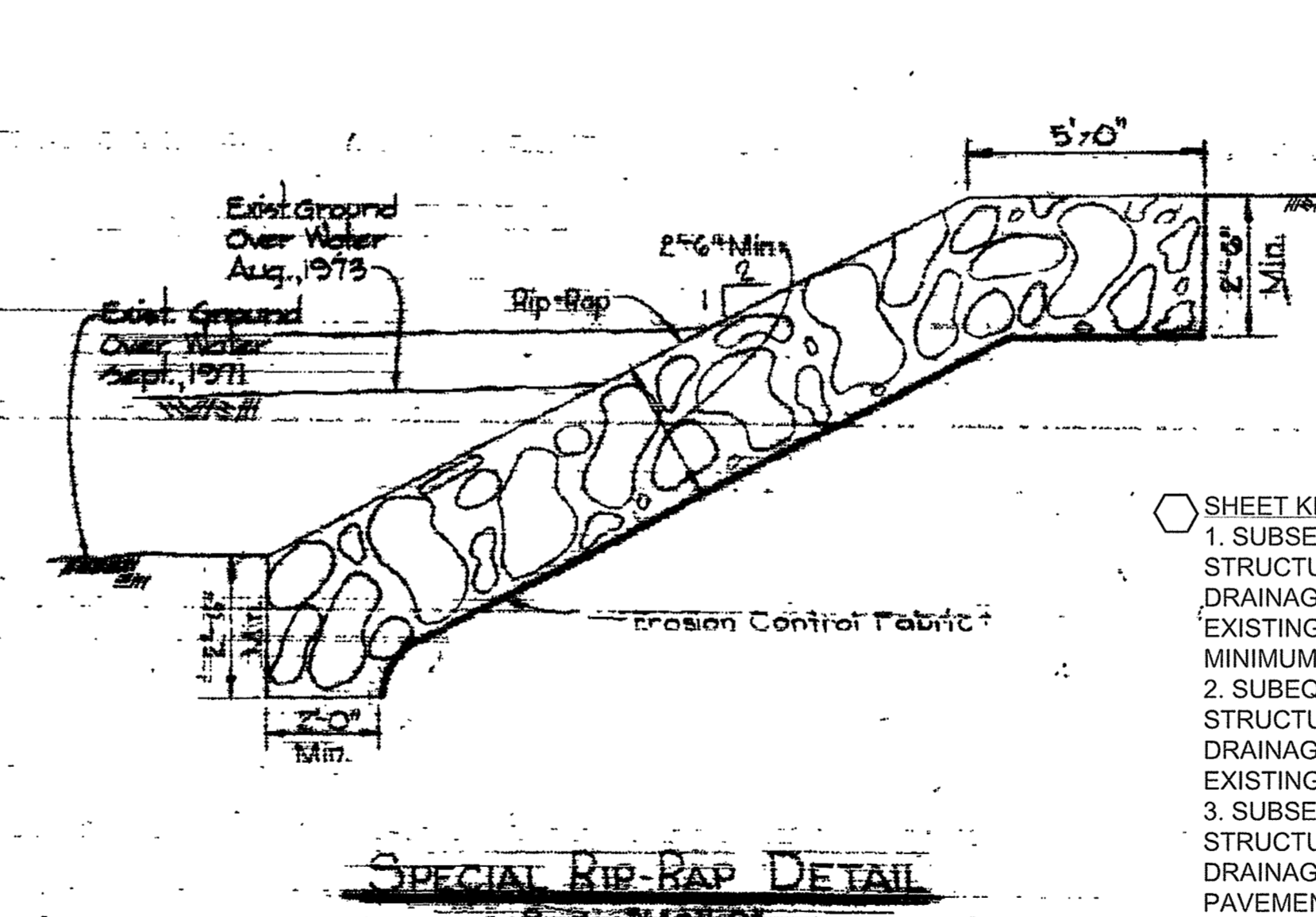
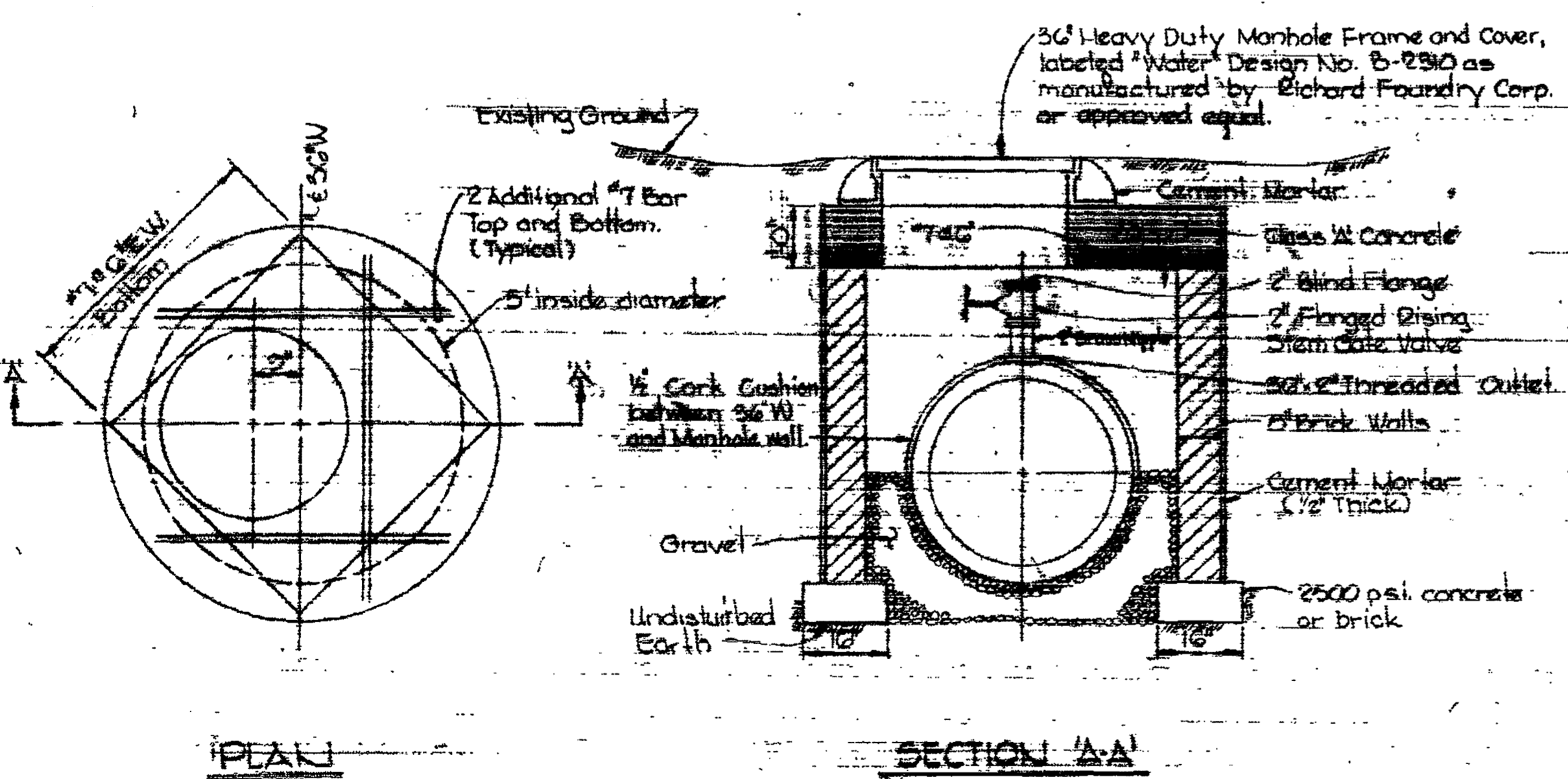


Kenneth A. Milrod
Relay to Patuxent River
Contract No. 625-W

CITY OF BALTIMORE		BALTIMORE COUNTY		HOWARD COUNTY		CONTRACT NO. 625 - W		PLAN, PROFILE AND DETAIL OF WATER MAINS		RECORD DRAWING FOR REFERENCE AND ABANDONMENT OF 36" PCCP ONLY SOUTHWEST TRANSMISSION MAIN		DRAWING NO. R-4 OF R-11	SCALE AS SHOWN
Director: <i>James R. Spake</i> 9/13/74 DEPT. OF PUBLIC WORKS		Director: <i>Ray Kretschmer</i> 9/12/74 CHIEF WATER DIV. BUREAU OF ENGINEERING		Director: <i>Robert J. Stetson</i> 9/15/74 DEPT. OF PUBLIC WORKS		G.W.O. 40786		W.R.#A BM*2C-1 Elev. 20.685 R.R. Spike in 30" Maple 5' right of sta 0+60 between P.I.*C-3 and P.I.*C-4		SHEET 40 OF 47 AS BUILT March 7, 1975		FB. 4462, 4463, 4496, 4892, 4951 JANUARY 30, 1975 April 1, 1975	1"=20' 1"=20' 1"=20'
Whitman, Requardt & Associates ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND		Director: <i>William A. Oltz</i> 7/24/74 DEPT. OF PUBLIC WORKS		Chief: <i>W.D. Oltz</i> 7-25-74 BUREAU OF ENGINEERING		CONTRACT NO. 625 - W		PLAN, PROFILE AND DETAIL OF WATER MAINS		RECORD DRAWING FOR REFERENCE AND ABANDONMENT OF 36" PCCP ONLY SOUTHWEST TRANSMISSION MAIN		DRAWING NO. R-4 OF R-11	SCALE AS SHOWN



- NOTES:
1. Special Rip-Rap shall be maximum size 1000 lbs, 25% greater than 500 lbs, 75% to 95% from 50 to 500 lbs not more than 25% less than 50 lbs, and placed as shown.
 2. Erosion Control Fabric shall be Poly Filter X as manufactured by Carthage Mills Inc., Erosion Control Div, 124 W-83rd Street, Cincinnati, Ohio; Laurel Frosion Control Cloths as manufactured by Laurel Plastics, Inc., Madison, Maine; or approved equal.
 3. Payment for Special Rip-Rap will be made at the unit price bid.



- SHEET KEY NOTES
1. SUBSEQUENT TO SUCCESSFUL ABANDONMENT OF 36" PCCP, DEMOLISH STRUCTURE TO 2' BELOW GRADE, PERFORATE BOTTOM TO ALLOW DRAINAGE, FILL STRUCTURE WITH PIT SAND, AND RESTORE AREA TO PRE-EXISTING GRADE. ESTABLISH TURF WITH 6" MINIMUM TOPSOIL AND 2" MINIMUM ANCHORED STRAW MULCH.
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W. O. G. 252

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS
1206 ST. PAUL ST.
BALTIMORE, MARYLAND

CONTRACT NO. 525-W

PROFILE & DETAILS OF WATER MAINS

RECORD DRAWING FOR REFERENCE AND ABANDONMENT OF 36" PCCP ONLY
SOUTHWEST TRANSMISSION MAIN

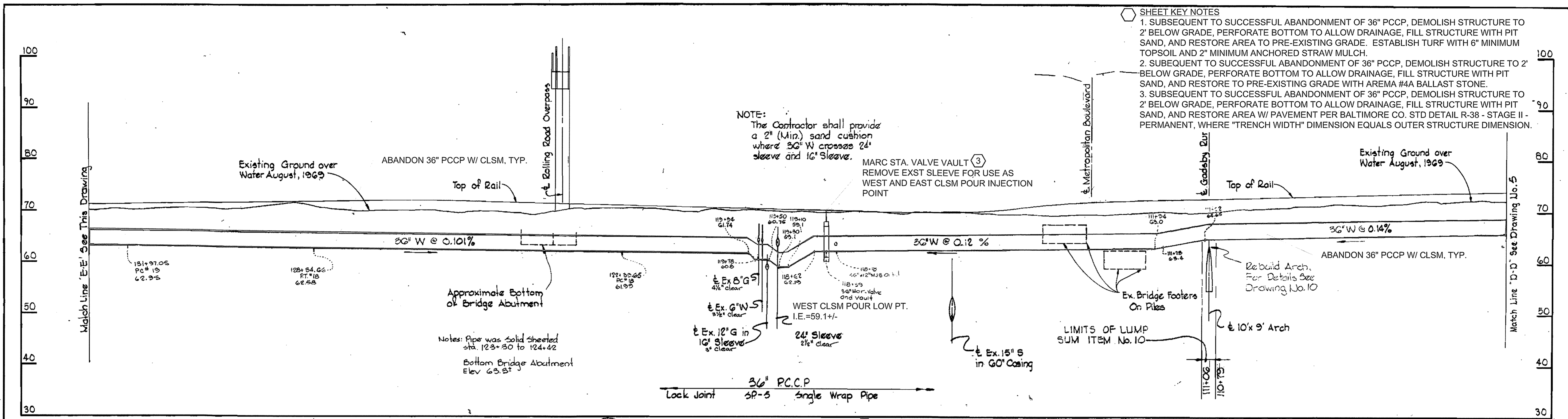
DRAWING NO. R-5 OF R-11
SCALE AS SHOWN

SHEET 41 OF 47

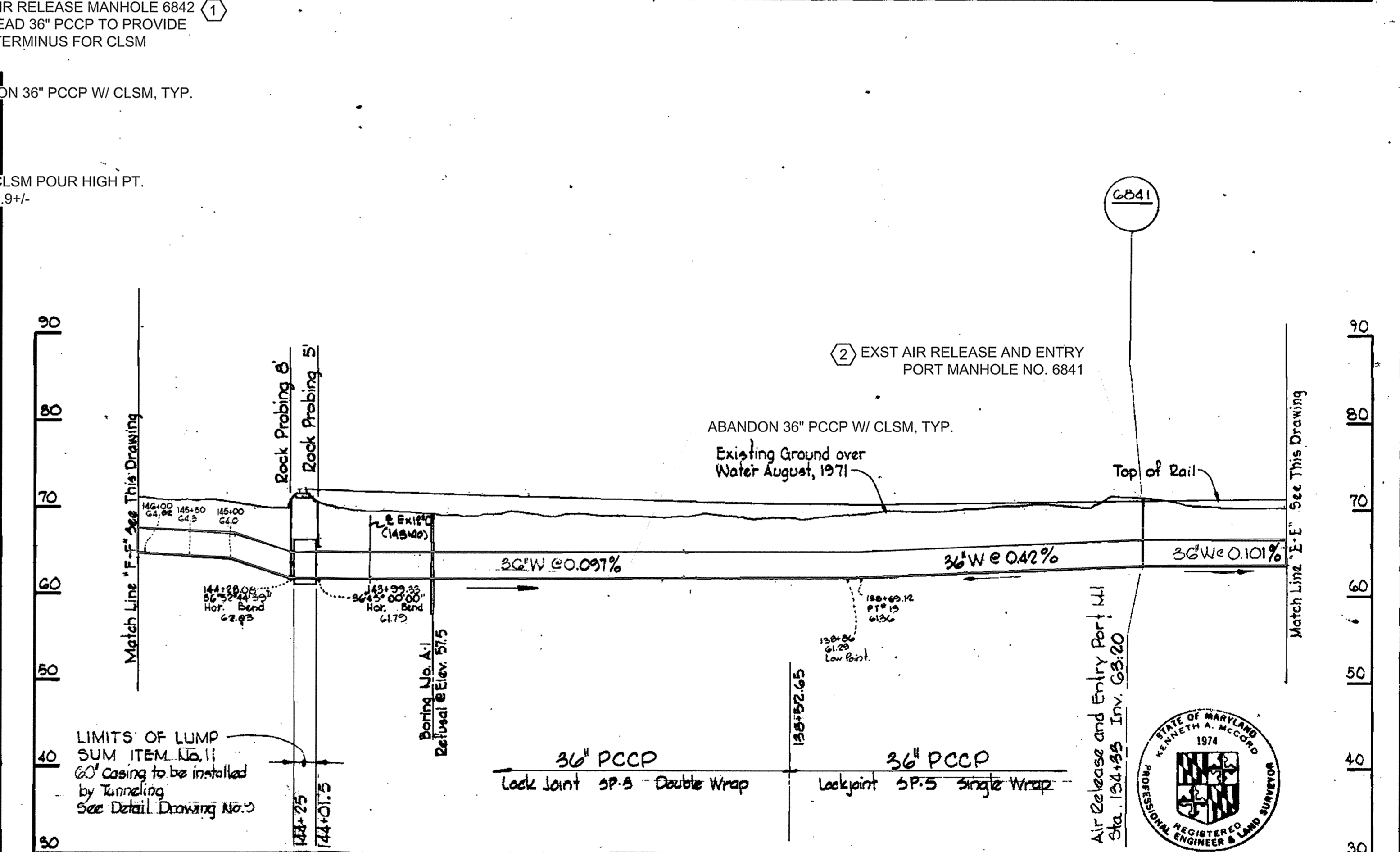
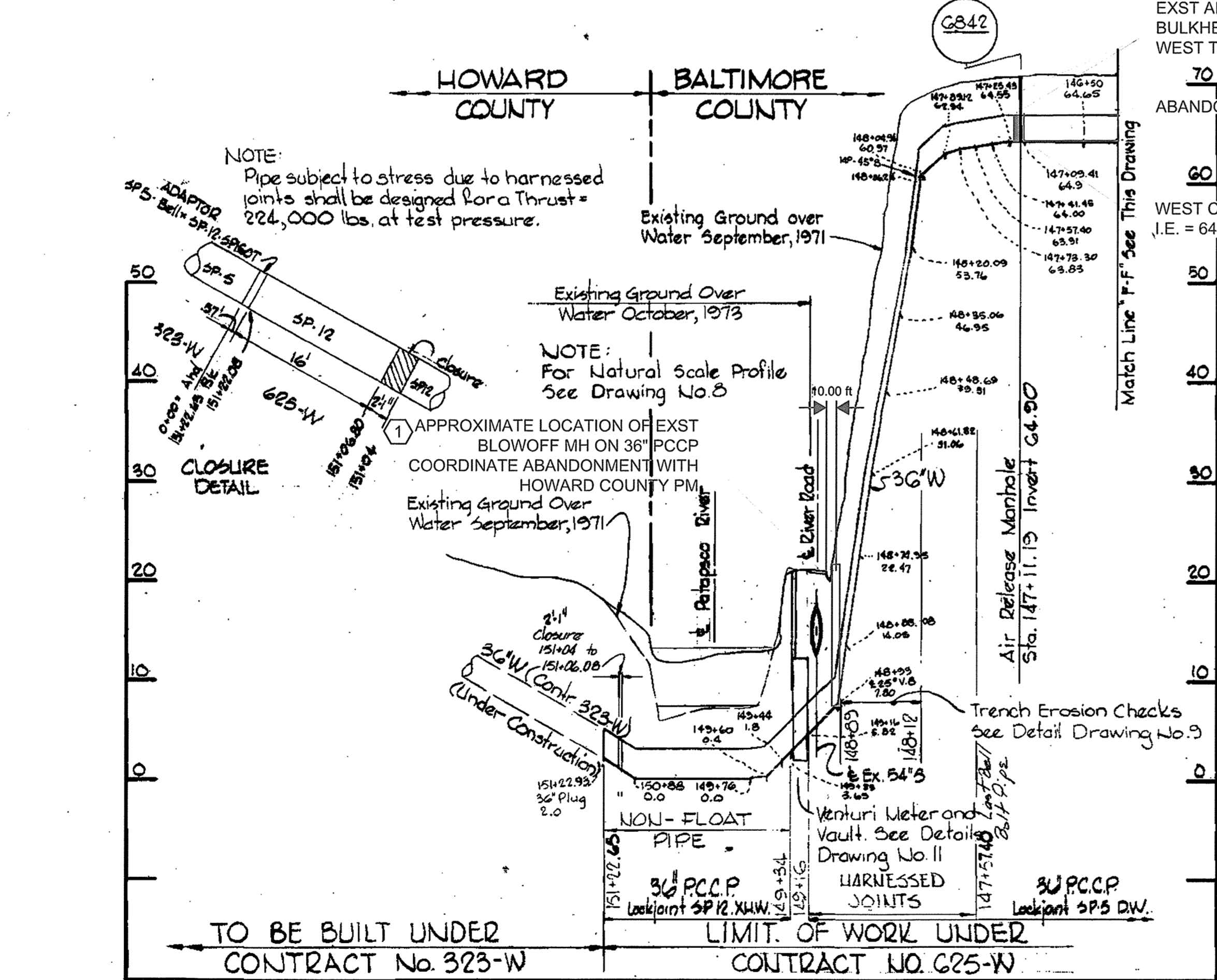
DATE: 11/15/74

WS 625-W/5

WS 625-W/6



SHEET KEY NOTES
 1. SUBSEQUENT TO SUCCESSFUL ABANDONMENT OF 36" PCCP, DEMOLISH STRUCTURE TO 2' BELOW GRADE, PERFORATE BOTTOM TO ALLOW DRAINAGE, FILL STRUCTURE WITH PIT SAND, AND RESTORE AREA TO PRE-EXISTING GRADE. ESTABLISH TURF WITH 6" MINIMUM TOPSOIL AND 2" MINIMUM ANCHORED STRAW MULCH.
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NOTE:
 Pipe subject to stress due to harnessed joints shall be designed for a Thrust = 224,000 lbs. at test pressure.

NOTE:
 For Natural Scale Profile See Drawing No. 8

NOTE:
 The Contractor shall provide a 2" (Min.) sand cushion where 36" W crosses 24" sleeve and 16" sleeve.

MARC STA. VALVE VAULT (3)
 REMOVE EXST SLEEVE FOR USE AS WEST AND EAST CLSM POUR INJECTION POINT

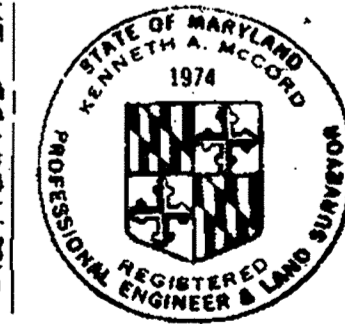
Rebuild Arch. For Details See Drawing No. 10

36" PCCP
 Lock Joint SP-5 Single Wrap Pipe

LIMITS OF LUMP SUM ITEM No. 11
 60" Casing to be installed by Tunneling See Detail Drawing No. 3

36" PCCP
 Lock Joint SP-5 Double Wrap

36" PCCP
 Lock Joint SP-5 Single Wrap



Kenneth A. McCord

CITY OF BALTIMORE		BALTIMORE COUNTY	
<i>John W. Smith</i> DIRECTOR	9/13/74	<i>John W. Smith</i> DIRECTOR	9/13/74
DEPT. OF PUBLIC WORKS		DEPT. OF PUBLIC WORKS	

C.W.O. 40786

SHEET 42 OF 47

Relay to Patuxent River Contract No. 625-W

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 1304 ST. PAUL ST.
 BALTIMORE, MARYLAND

HOWARD COUNTY
William R. Smith 7/15/74
 DIRECTOR
 DEPT. OF PUBLIC WORKS

BALTIMORE COUNTY
John W. Smith 7-25-74
 CHIEF
 BUREAU OF ENGINEERING

CONTRACT NO. 625-W

PROFILES OF WATER MAINS

RECORD DRAWING
 FOR REFERENCE AND ABANDONMENT OF 36" PCCP ONLY
 SOUTHWEST TRANSMISSION MAIN

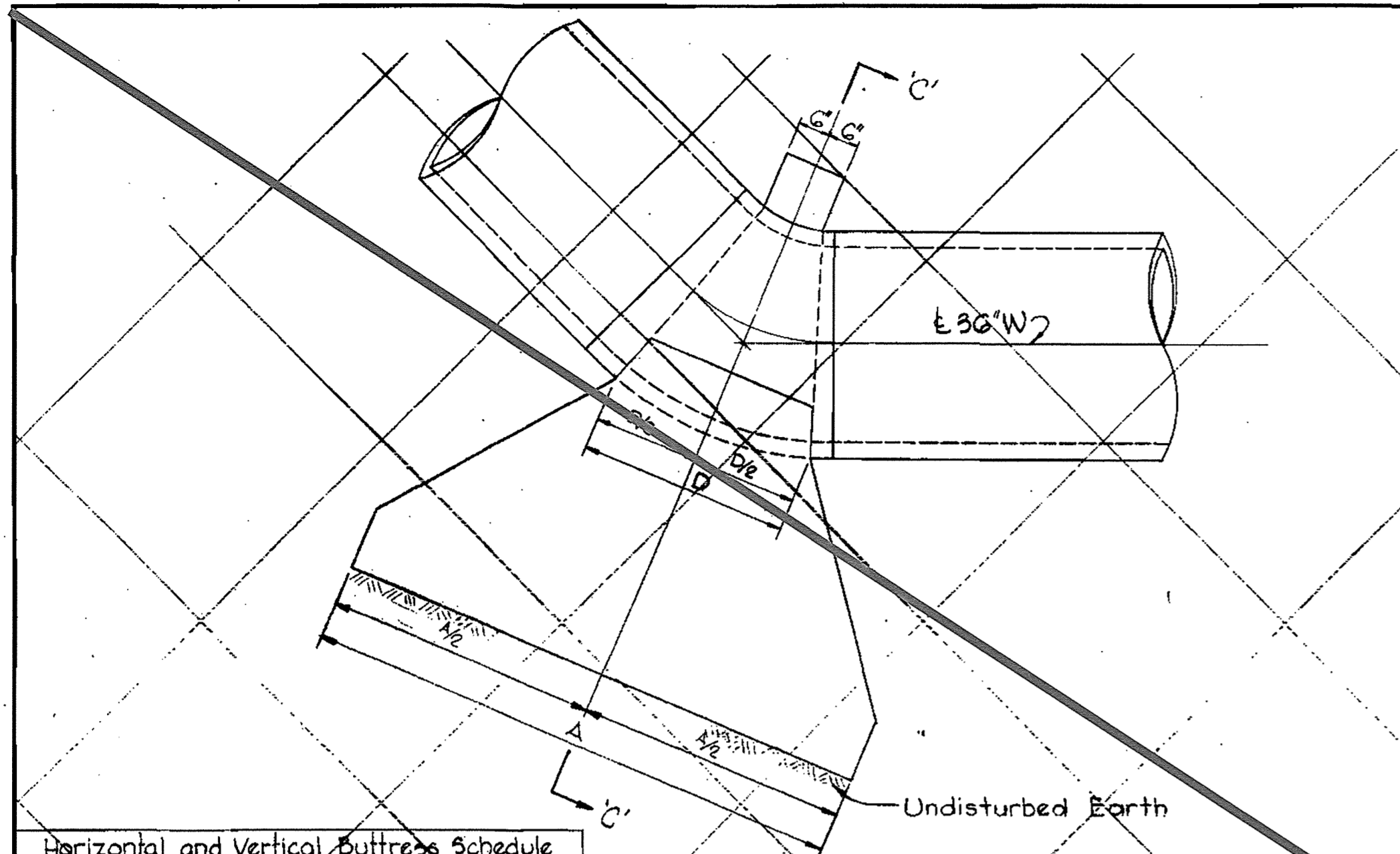
DRAWING NO. R-6 OF R-11

SCALE H:1"=100' V:1"=10'

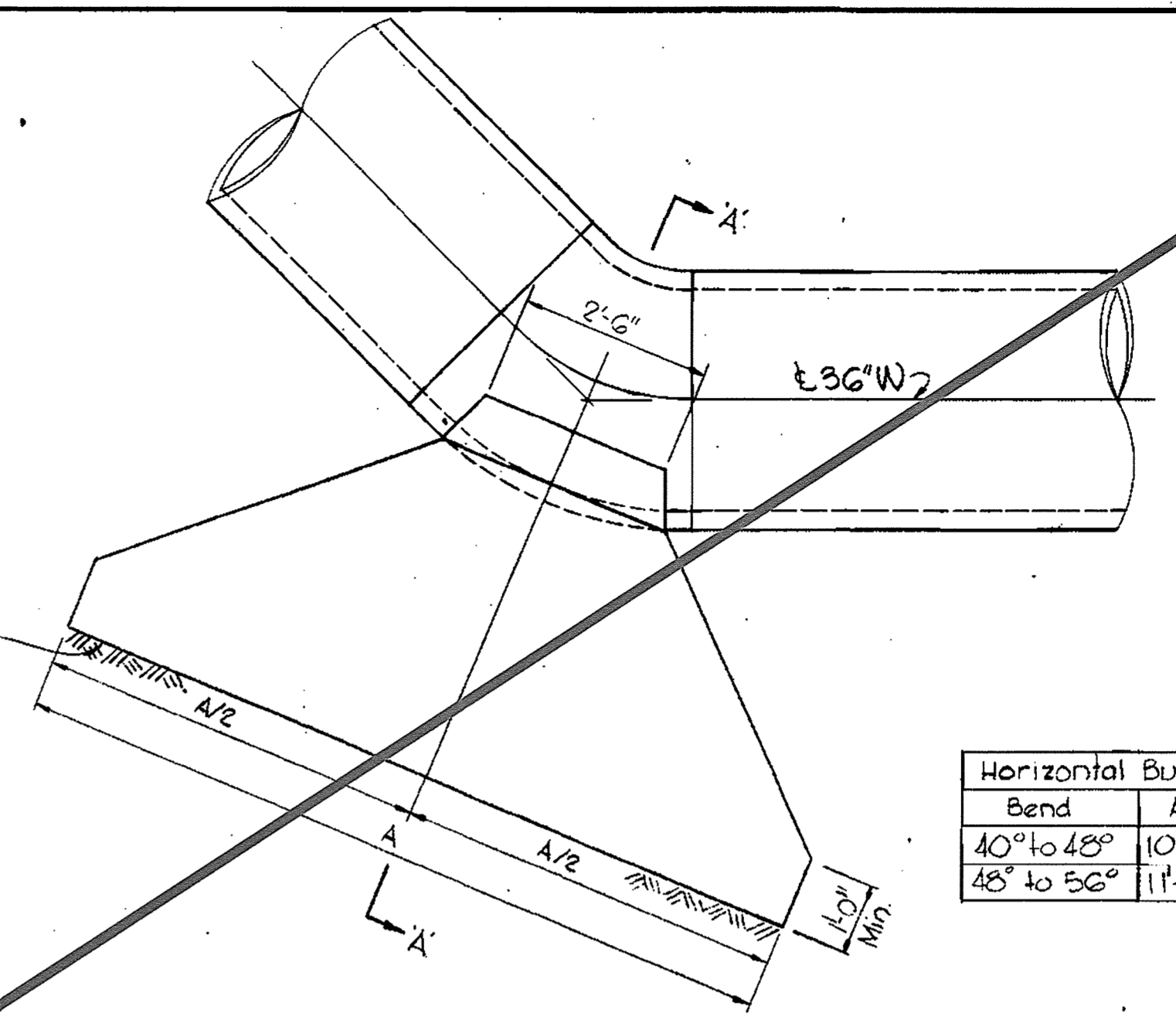
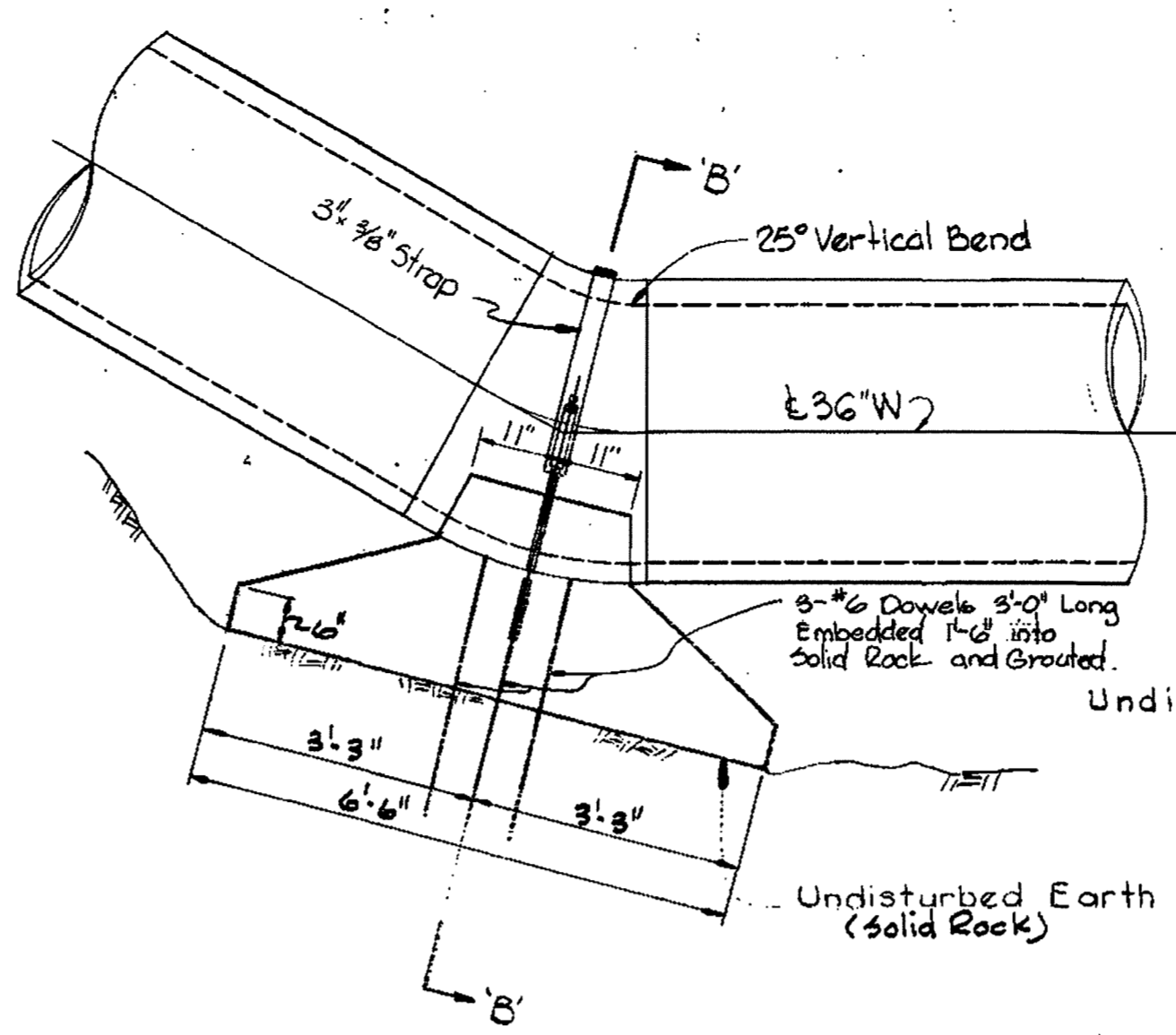
W.O. 6257-2

AS BUILT
 March 7, 1978

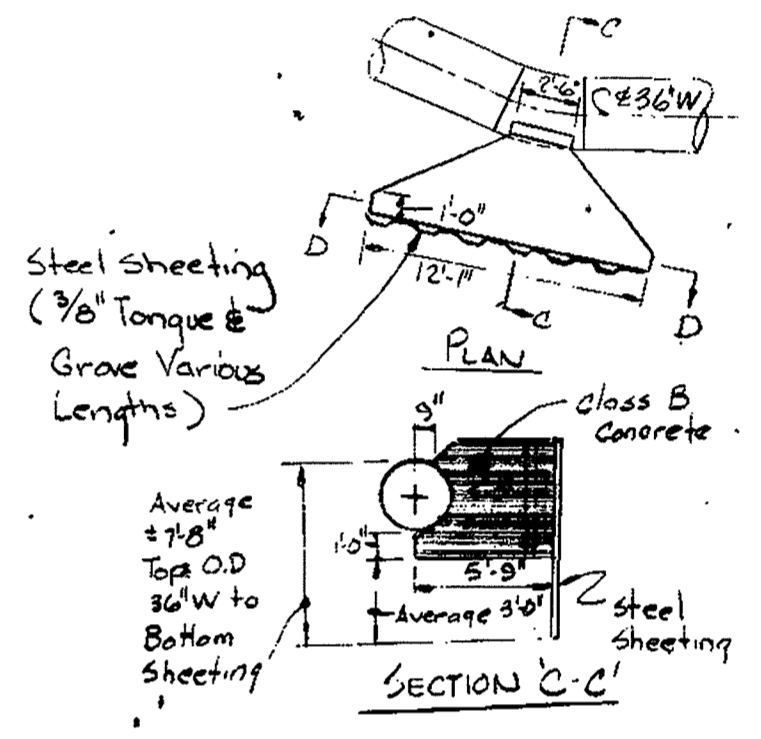
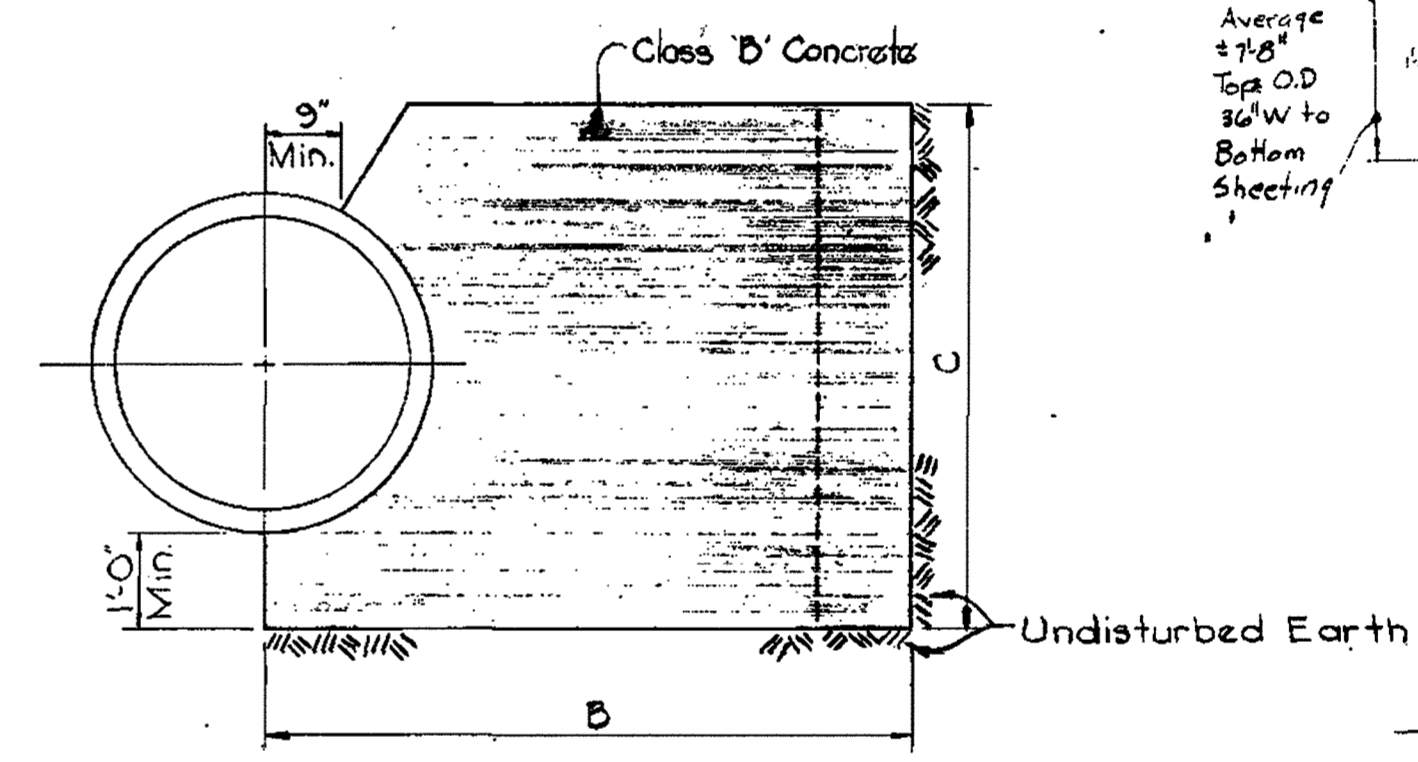
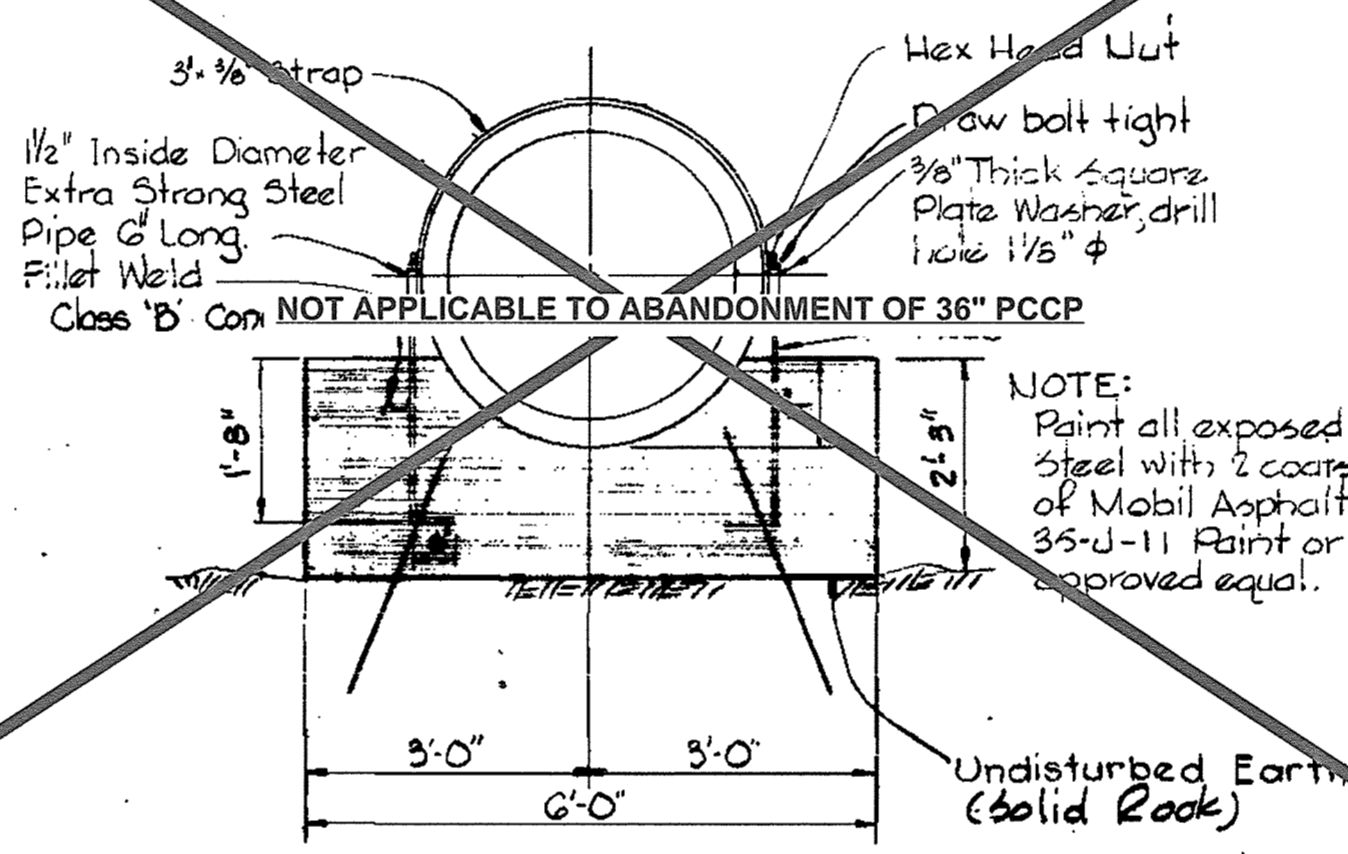
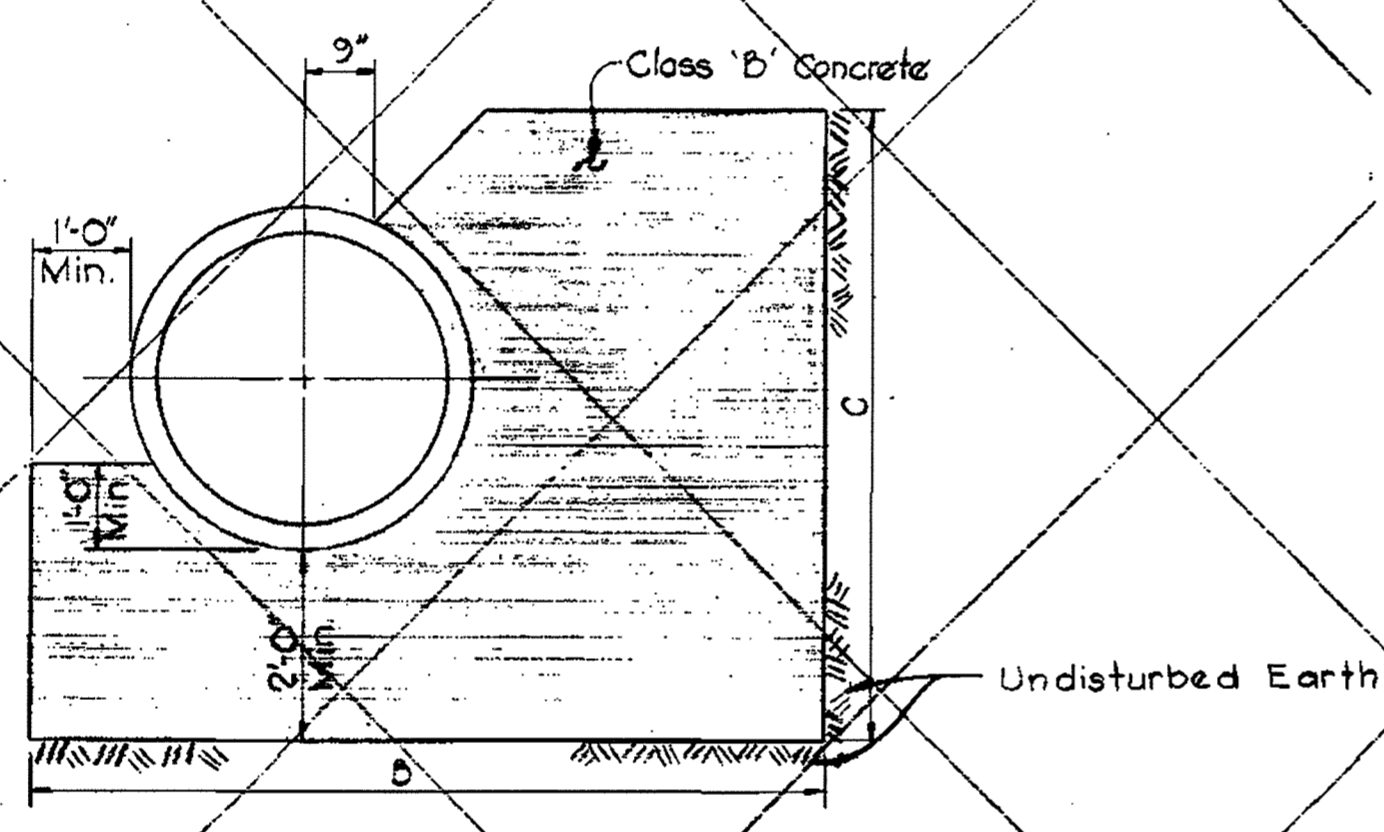
August 13, 1974
 April 1, 1975



Bend	A	B	C	D
45° to 90°	8'-0"	8'-0"	6'-0"	5'-2"
10° to 45°	9'-0"	8'-0"	6'-0"	5'-0"



Bend	A	B	C
40° to 45°	10'-0"	8'-0"	5'-0"
45° to 50°	11'-0"	8'-0"	5'-0"



DETAILS OF HORIZONTAL AND VERTICAL BUTTRESSES

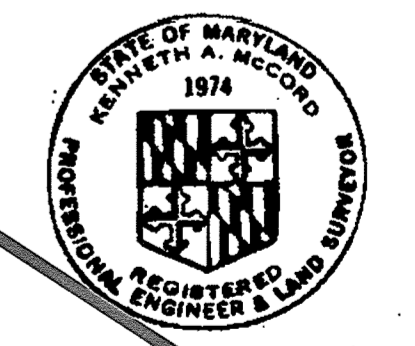
DETAILS OF VERTICAL BUTTRESS

DETAILS OF HORIZONTAL BUTTRESSES

NOT INCLUDED IN THIS CONTRACT

STA. 148+99

NOTE: Design Soil Bearing Capacity = 3,000 psf. An increase or decrease in the size of the buttress will be made if the Soil Bearing is more or less than the design. Credit or payment will be made based on the stipulated item No. 22.



Kenneth A. McCord

CITY OF BALTIMORE DIRECTOR DEPT. OF PUBLIC WORKS <i>Wm. R. ...</i> 9/13/74	BALTIMORE COUNTY DIRECTOR DEPT. OF PUBLIC WORKS <i>...</i> 9/13/74
---	---

CWO. 40786

WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
1304 ST. PAUL ST.
BALTIMORE, MARYLAND

HOWARD COUNTY DIRECTOR DEPT. OF PUBLIC WORKS <i>William C. ...</i> 7-21-74	BUREAU OF ENGINEERING CHIEF <i>W.O. ...</i> 7-21-74
---	---

CONTRACT NO. 625-W

DETAILS OF WATER MAINS

RECORD DRAWING FOR REFERENCE AND ABANDONMENT OF 36" PCCP ONLY
SOUTHWEST TRANSMISSION MAIN

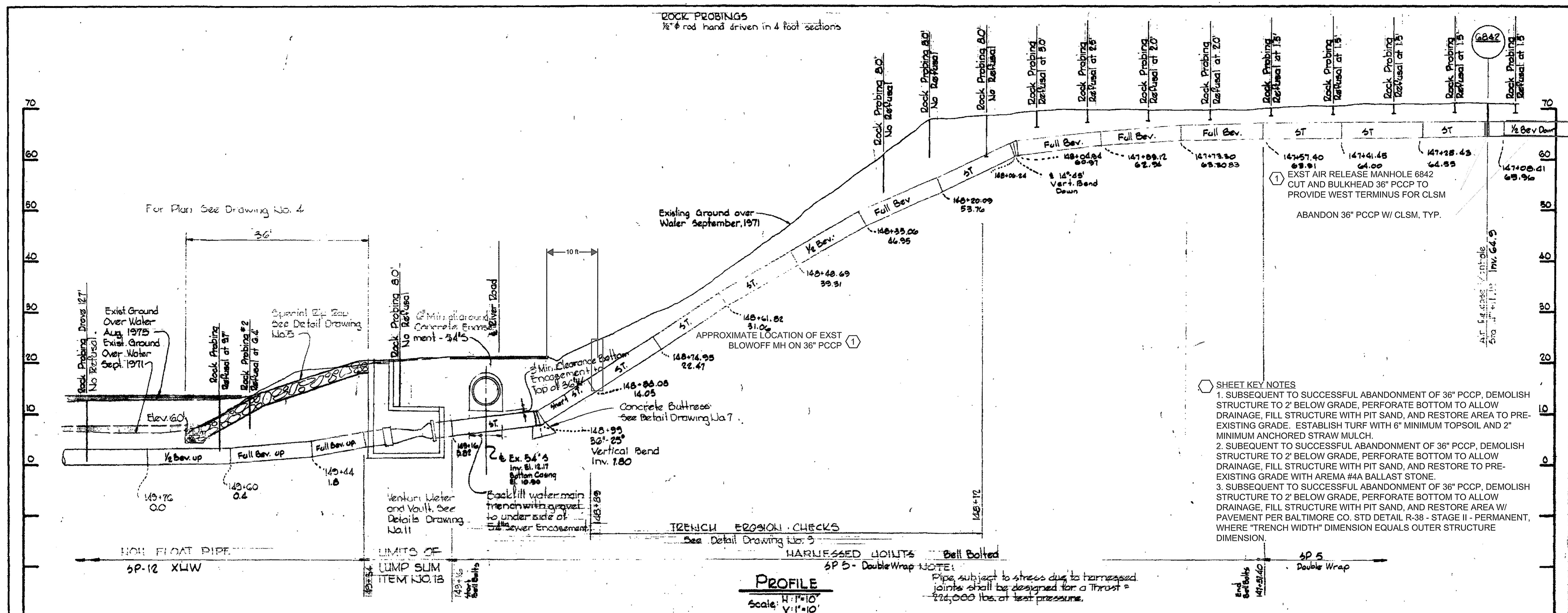
DRAWING NO. R-7 OF R-11
SCALE AS SHOWN

AS BUILT
March 7, 1978
July 17, 1974
April 1, 1975

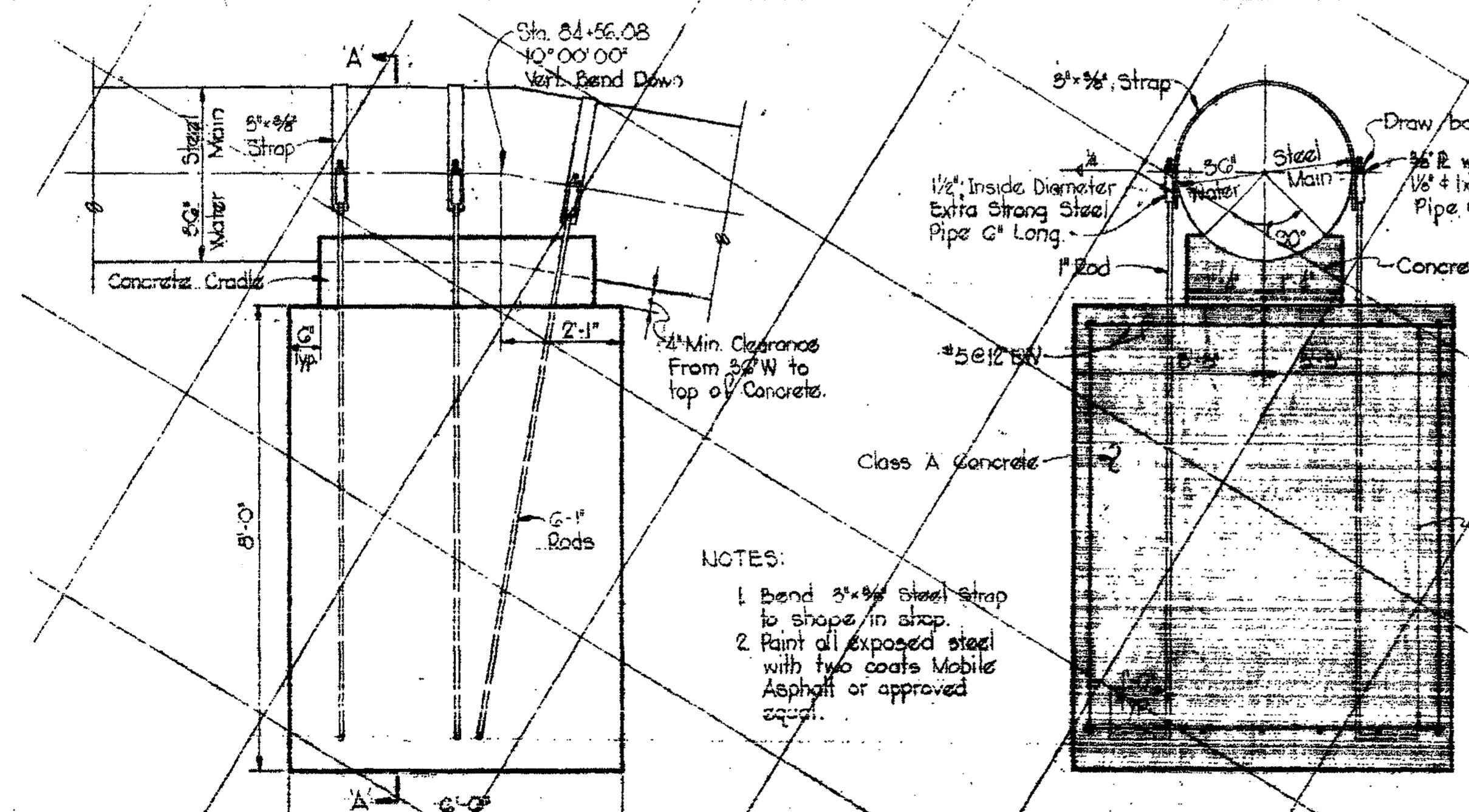
WS 625-W/7

W. O. 6257-2

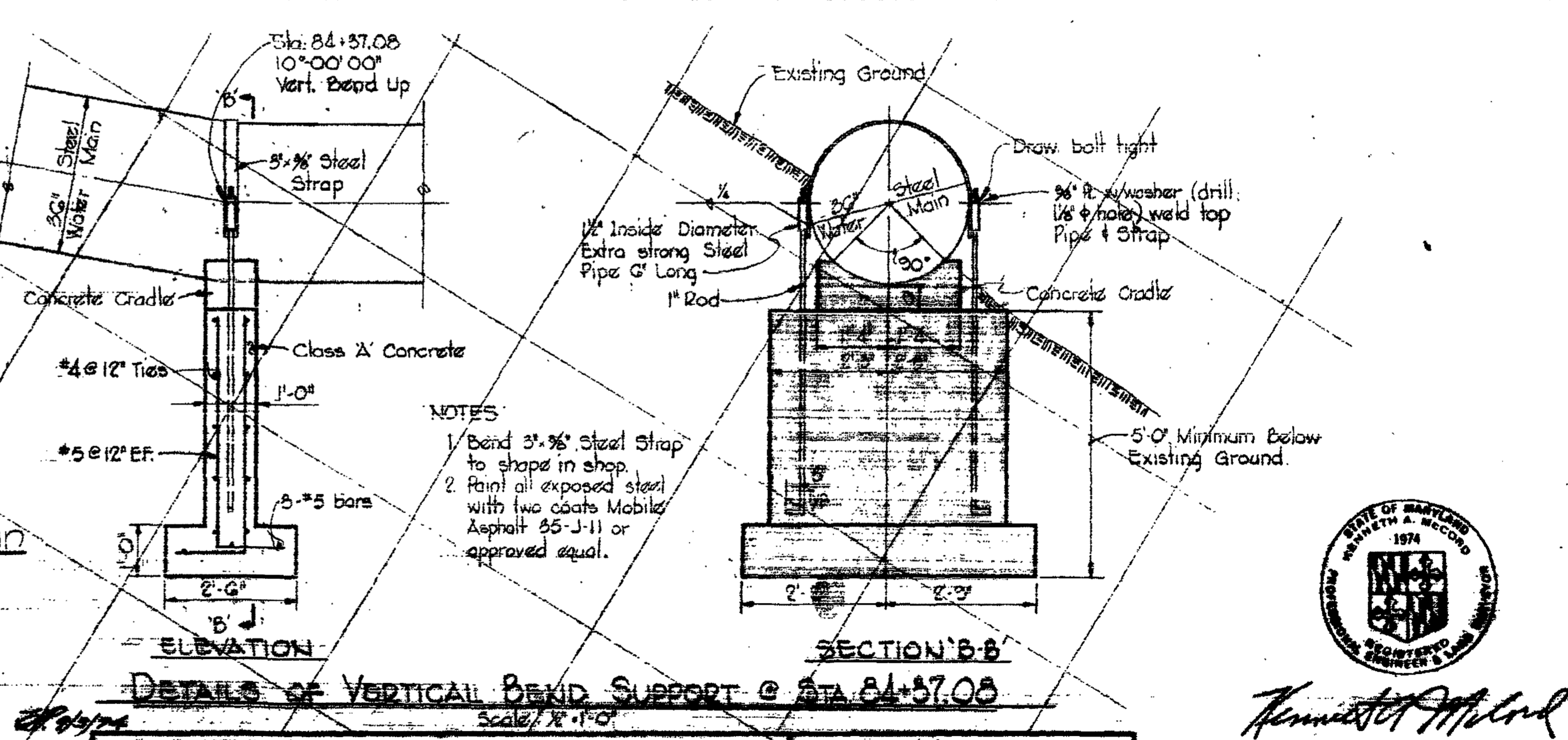
WS 625-W/8



- SHEET KEY NOTES**
- SUBSEQUENT TO SUCCESSFUL ABANDONMENT OF 36" PCCP, DEMOLISH STRUCTURE TO 2' BELOW GRADE, PERFORATE BOTTOM TO ALLOW DRAINAGE, FILL STRUCTURE WITH PIT SAND, AND RESTORE AREA TO PRE-EXISTING GRADE. ESTABLISH TURF WITH 6" MINIMUM TOPSOIL AND 2" MINIMUM ANCHORED STRAW MULCH.
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NOT INCLUDED IN THIS CONTRACT



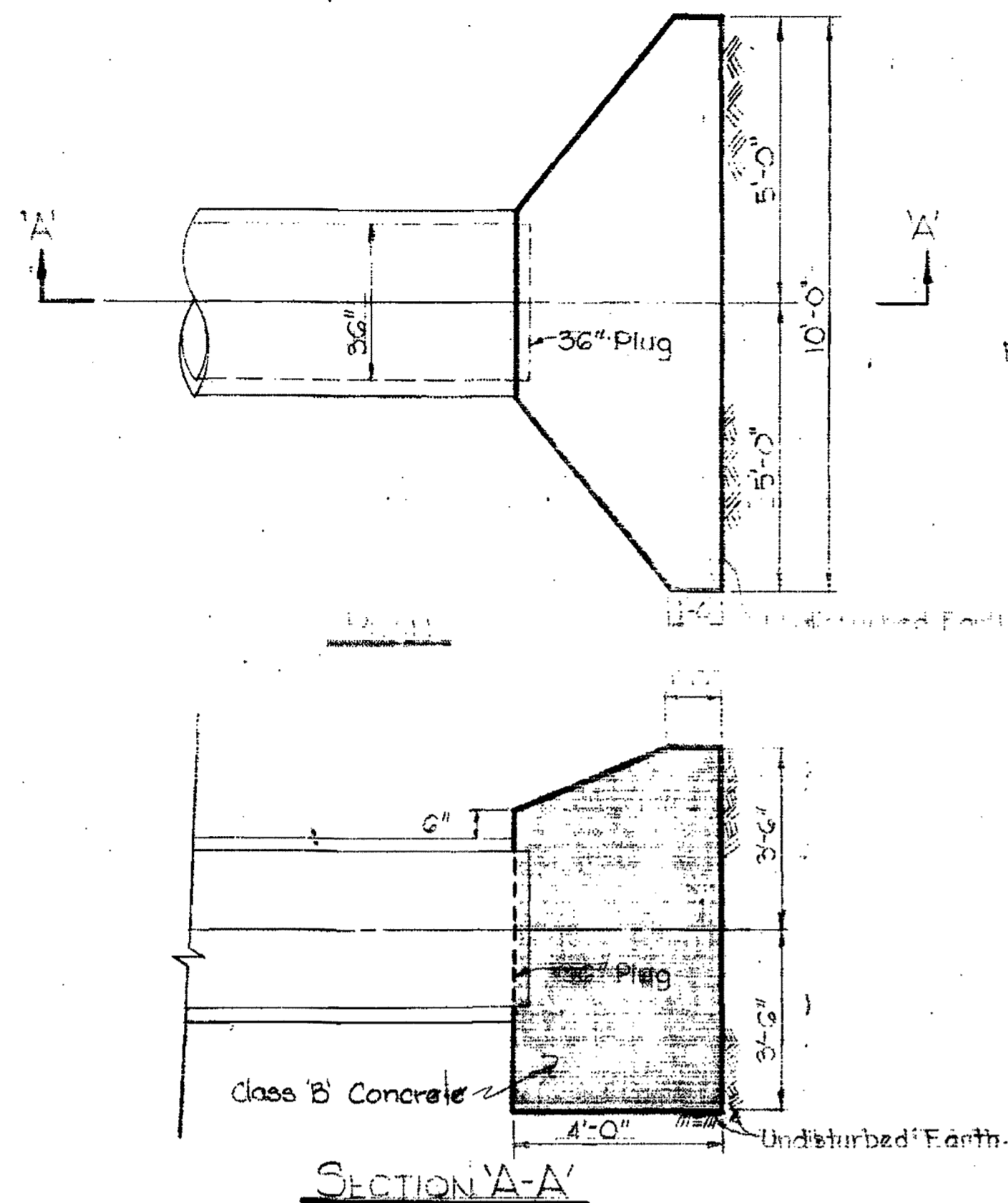
- NOTES:**
- Bend 3/8" Steel Strap to shape in shop.
 - Paint all exposed steel with two coats Mobile Asphalt 35-J-11 or approved equal.



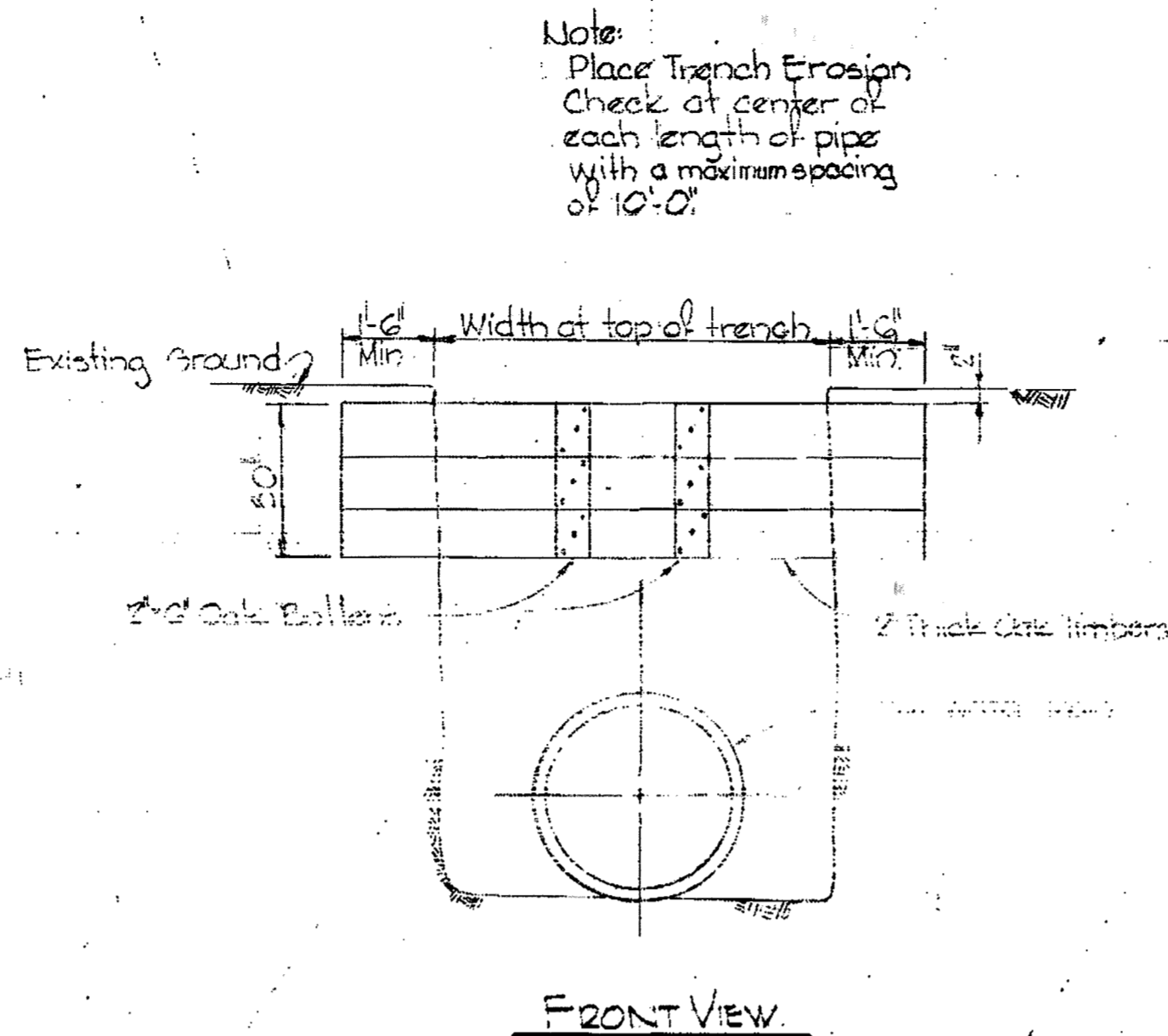
Kenneth J. Milrod

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND		HOWARD COUNTY BUREAU OF ENGINEERS DATE: _____		CONTRACT NO. 625-W CWO. 40786		CITY OF BALTIMORE DEPT. OF PUBLIC WORKS DATE: _____		BALTIMORE COUNTY DEPT. OF PUBLIC WORKS DATE: _____		SHEET 44 OF 47 Contract No. 625-W	
DETAILS OF WATER MAINS				RECORD DRAWING FOR REFERENCE AND ABANDONMENT OF 36" PCCP ONLY SOUTHWEST TRANSMISSION MAIN				DRAWING NO. R-8 OF R-11 SCALE AS SHOWN		AS BUILT March 1, 1978	

W.O. 6257-2

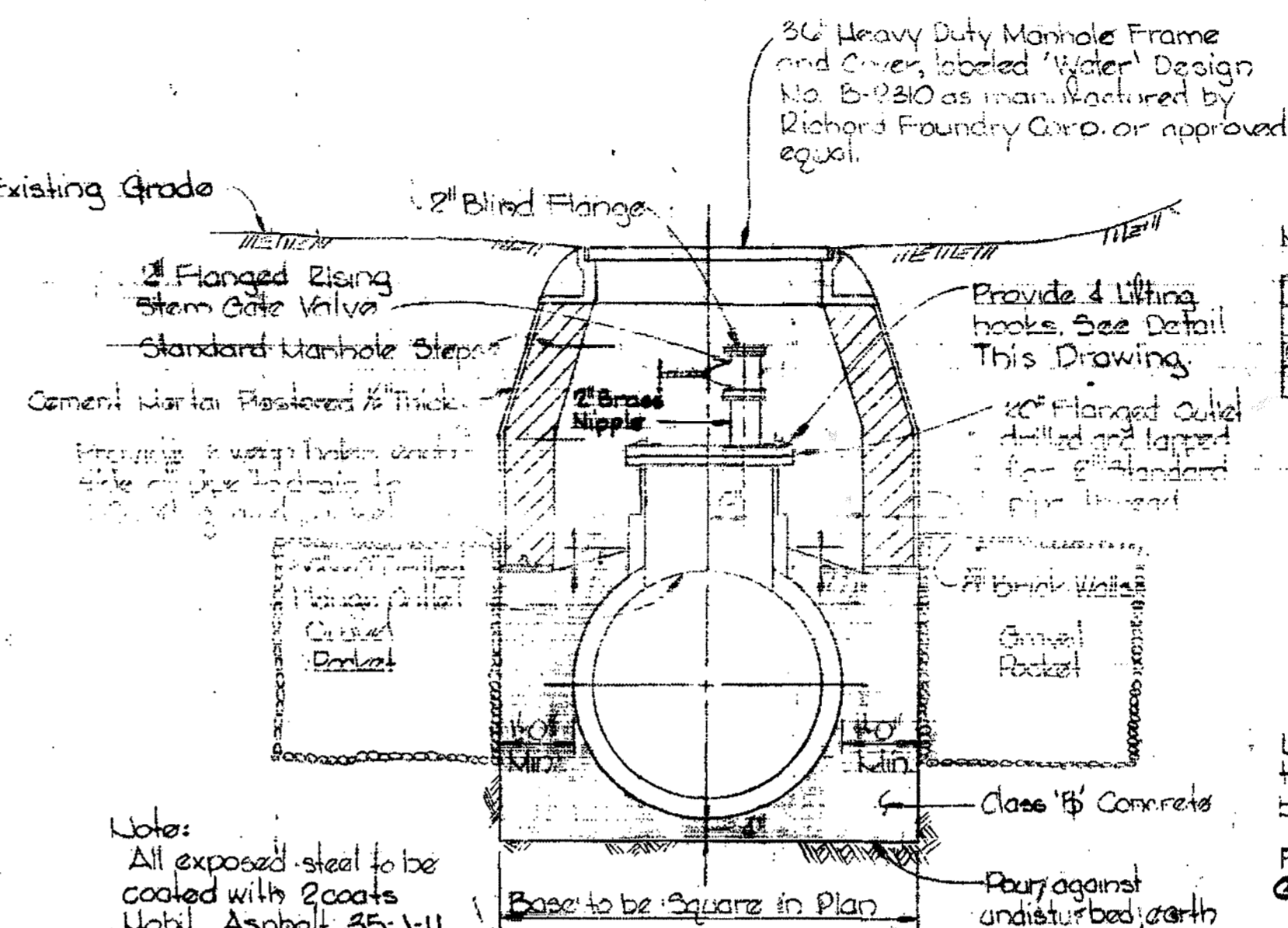


BUTTRESS DETAIL FOR 36" PLUG
Scale: 1/2" = 1'-0"

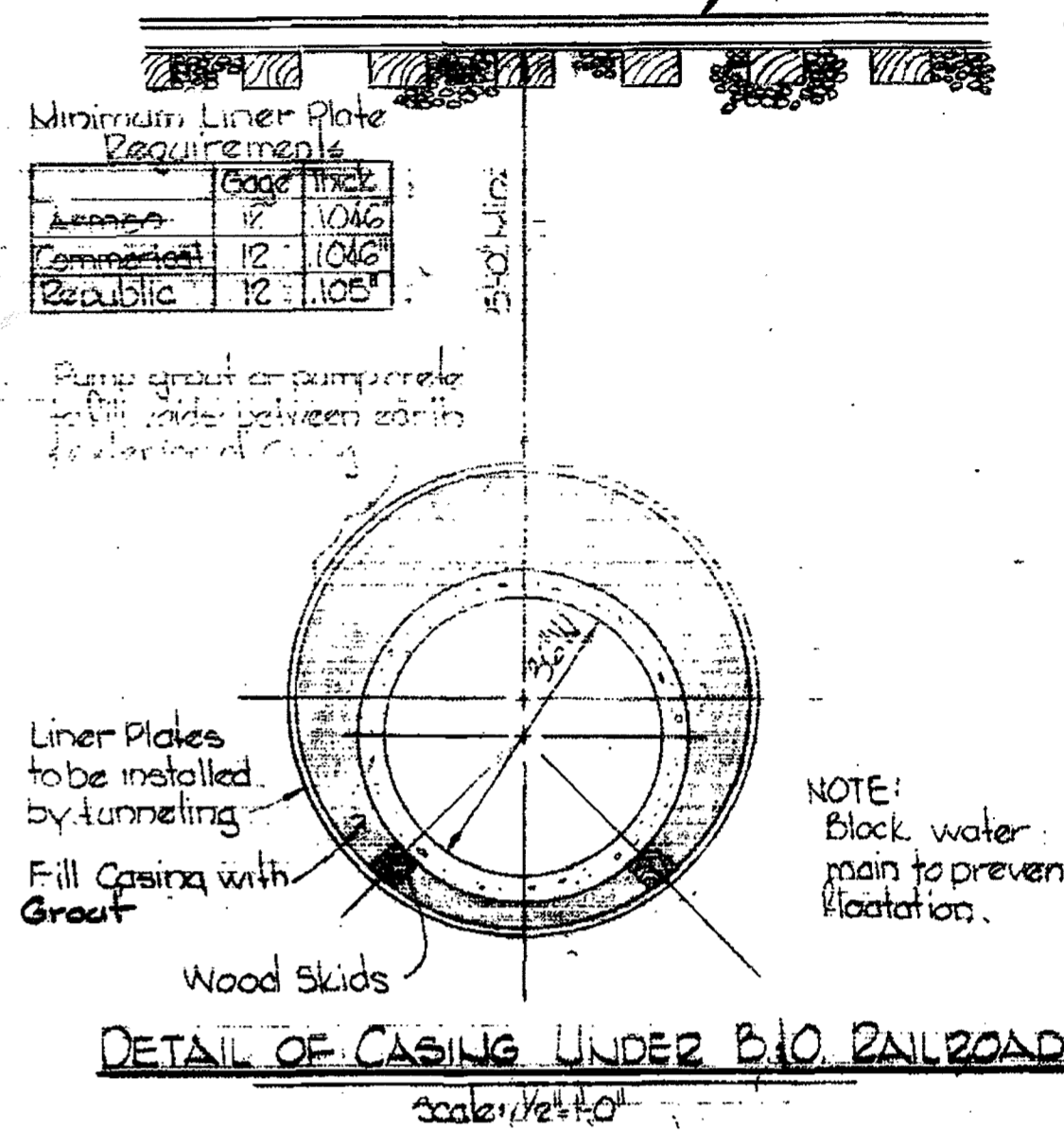


TRENCH EROSION CHECK
Scale: 1/2" = 1'-0"

DRAWING PROVIDED FOR REFERENCE ONLY
REFER TO OTHER DRAWINGS FOR
DESCRIPTION OF ABANDONMENT PROJECT



DETAIL OF AIR RELEASE AND ENTRY POINT MANHOLE
Scale: 1/2" = 1'-0"

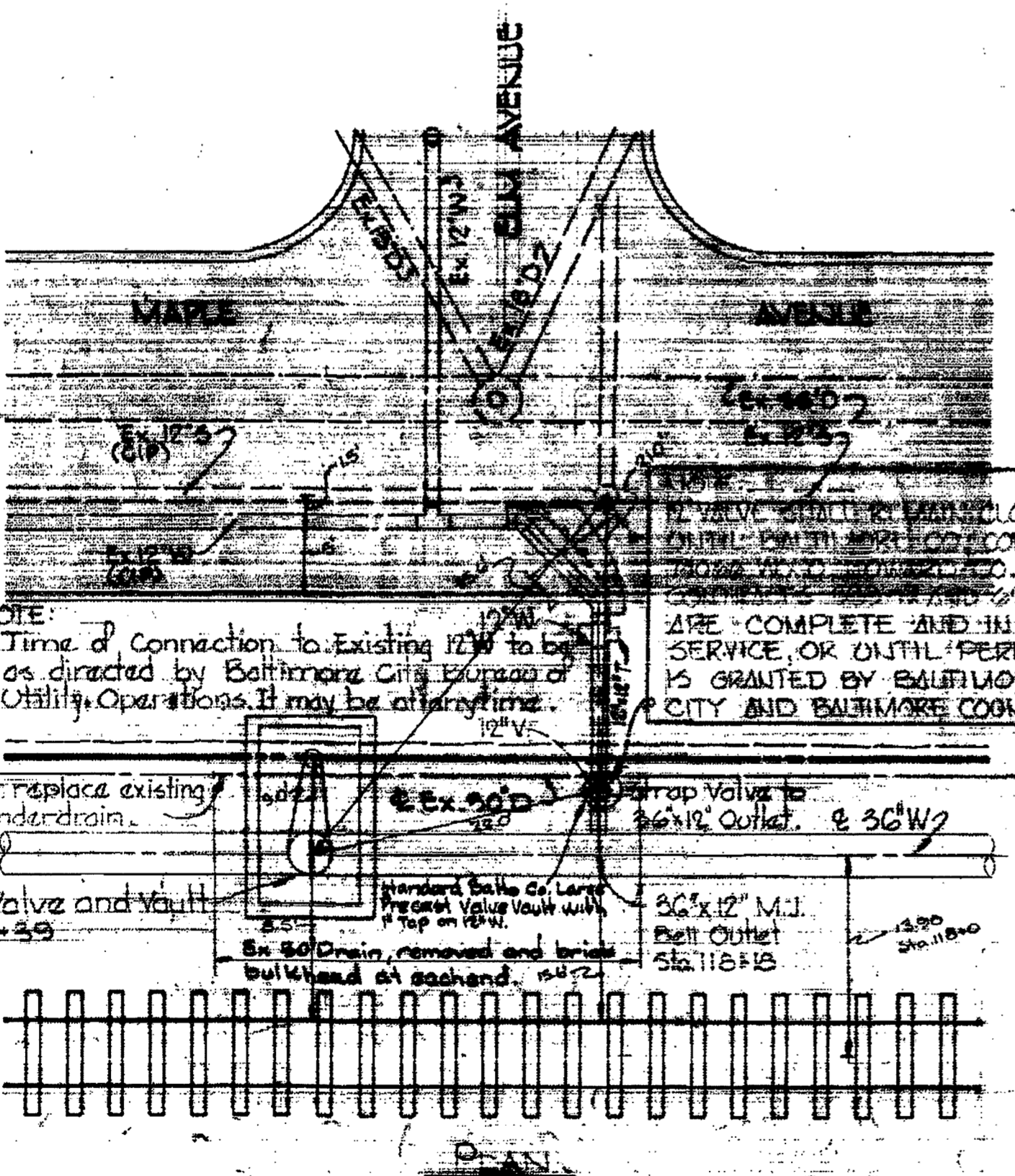


DETAIL OF CASING UNDER B.O. RAILROAD
Scale: 1/2" = 1'-0"

- Notes:
1. Poling plates and breast boards or shields shall be used in poor or running sand, and there shall be no unsupported faces of earth under the tracks during passage of trains.
 2. Headings at ends of tunnel shall be properly sheeted and braced.
 3. A joint shall be provided in the water main within 12 inches of each outside and of 60-inch casing.

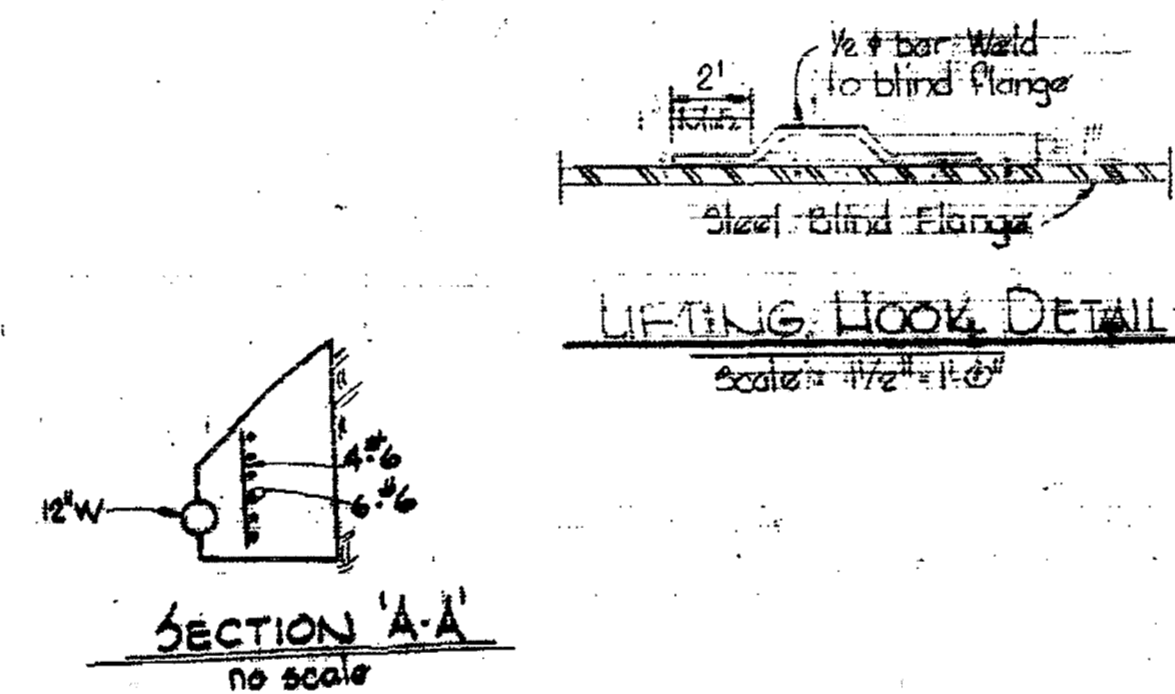
Minimum Liner Plate Requirements

Company	Edge Thick
Ames	12 - 1.046
Commercial	12 - 1.046
Republic	12 - 1.051



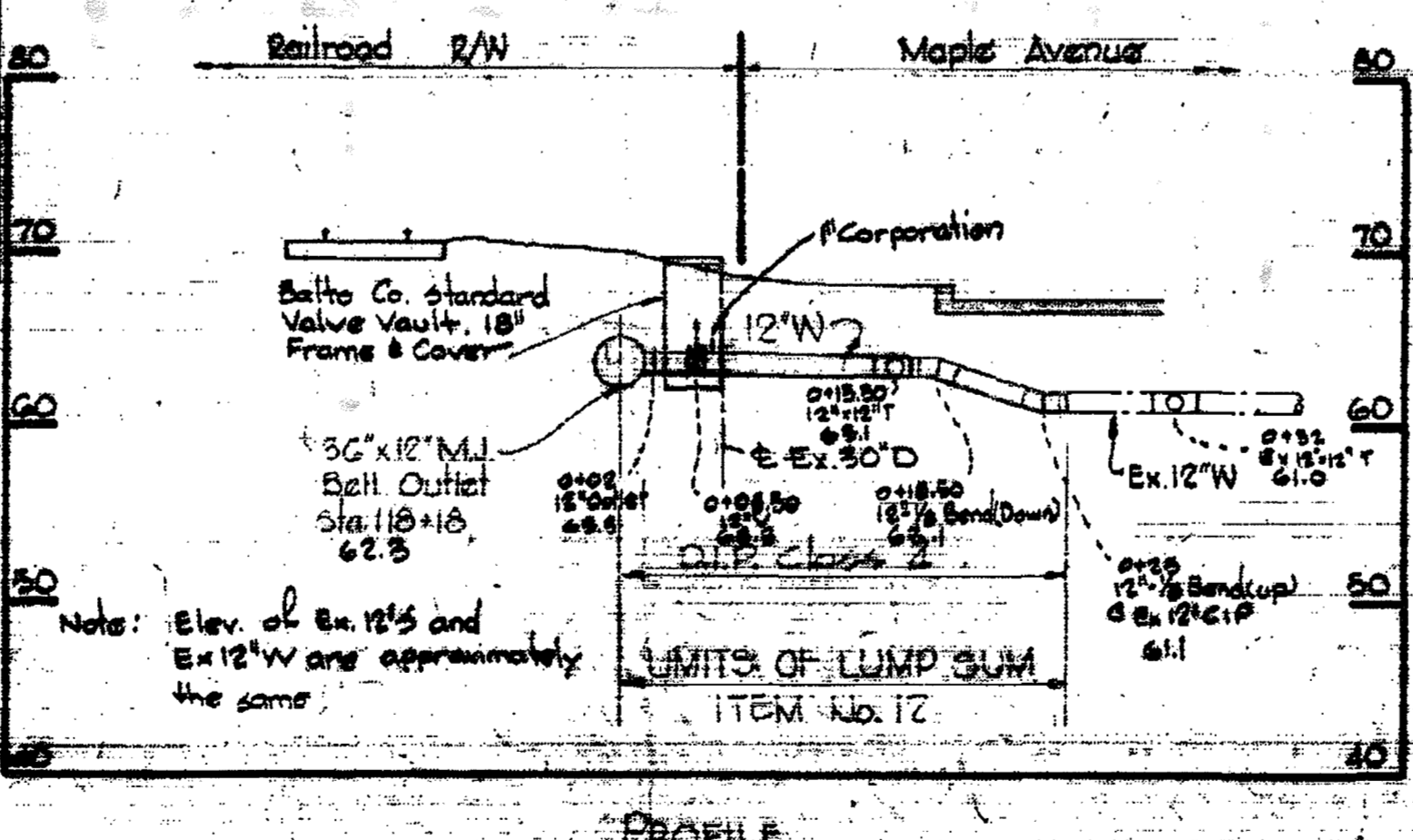
NOTE: Time of Connection to Existing 12" W to be as directed by Baltimore City Bureau of Utility Operations. It may be at any time.

NOTE: VALVE SHALL BE REMOVED UNTIL PERMITTED BY CONTRACT. ALL VALVE AND SERVICE ARE COMPLETE AND IN SERVICE, OR UNTIL PERMISSION IS GRANTED BY BALTIMORE CITY AND BALTIMORE COUNTY.

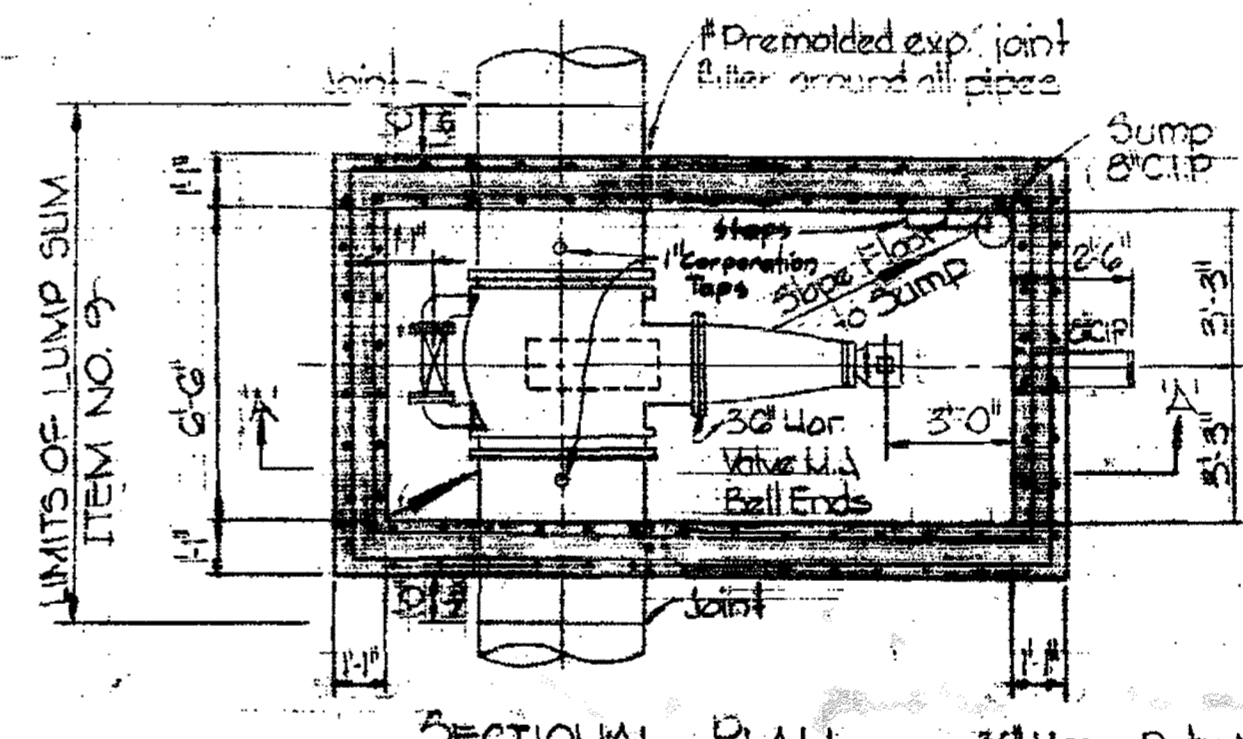


LIFTING HOOD DETAIL
Scale: 1/2" = 1'-0"

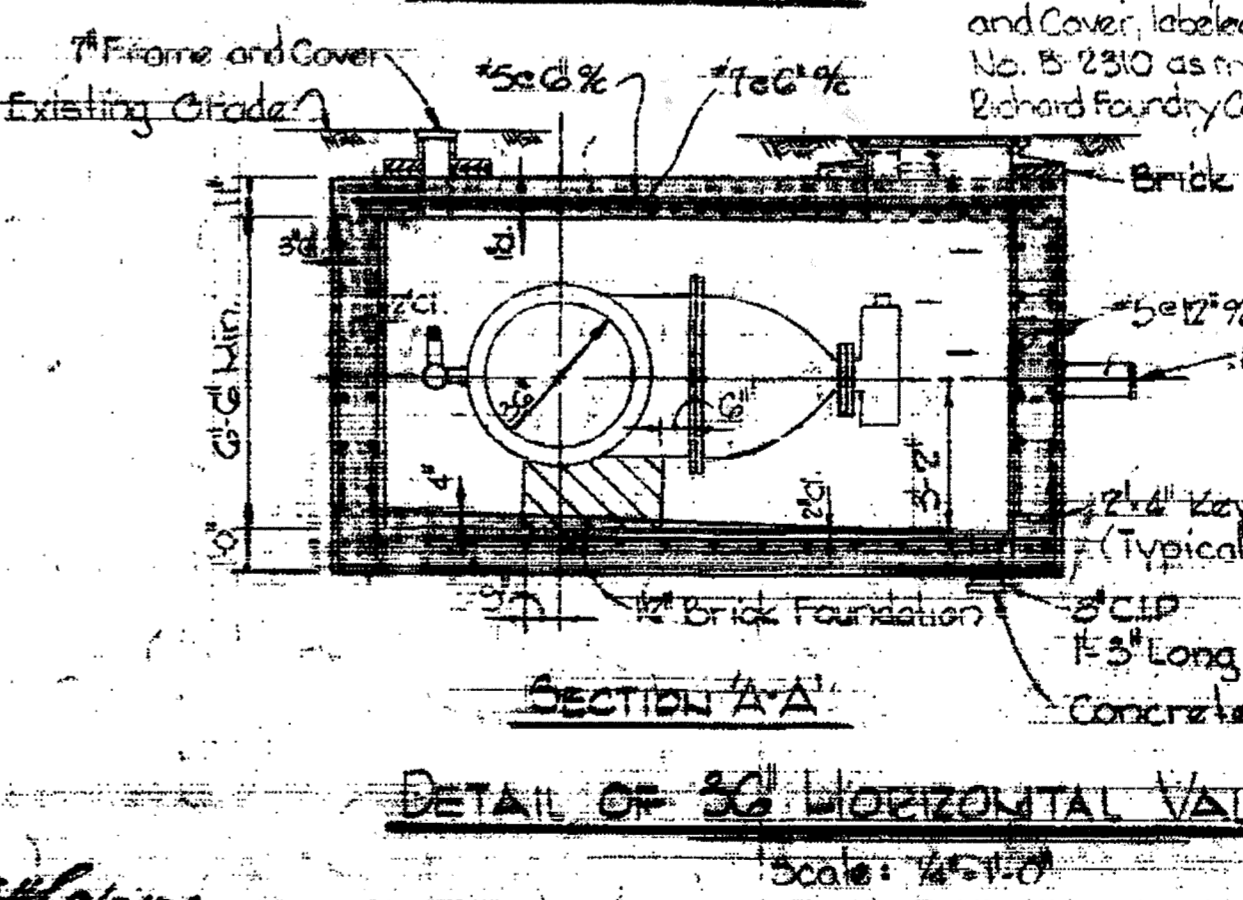
SECTION A-A
no scale



PROFILE

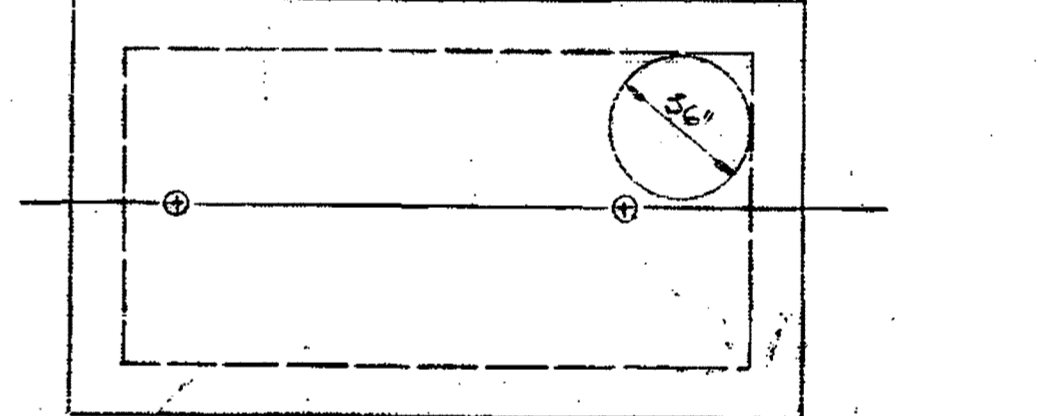


SECTIONAL PLAN

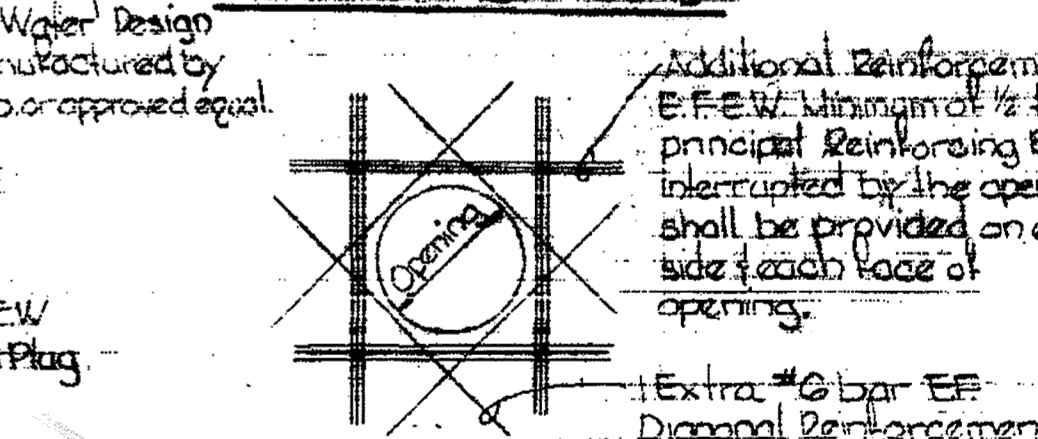


DETAIL OF 36" HORIZONTAL VALVE AND VAULT
Scale: 1/2" = 1'-0"

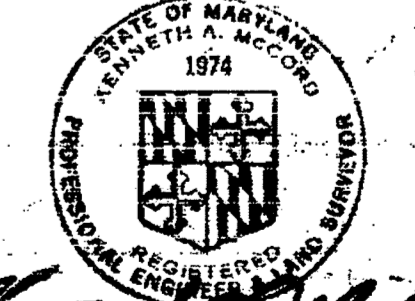
- Notes:
1. All exposed steel to be coated with 2 coats of Mobil Asphalt 35-J-11 or approved equal.
 2. All concrete shall be Class A.
 3. See Concrete Notes Drawing No. 11.



PLAN OF TOP SLAB



DETAIL OF ADDITIONAL REINFORCEMENT AROUND OPENINGS SLABS AND WALLS
Scale: 1/2" = 1'-0"



WS 625-W/9

12" CONNECTION AT MAPLE AVENUE

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

CONTRACT NO. 625-W

RECORD DRAWING FOR REFERENCE AND ABANDONMENT OF 36" PCCG ONLY
SOUTHWEST TRANSMISSION MAIN

DRAWING NO. R-9 OF R-11
SCALE AS SHOWN

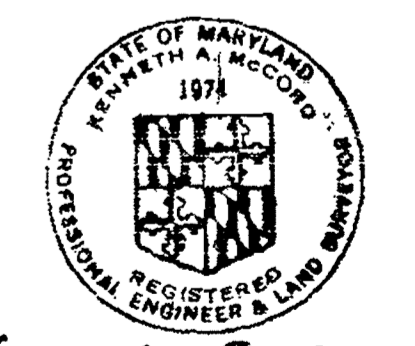
DATE: March 7, 1976

GENERAL NOTES

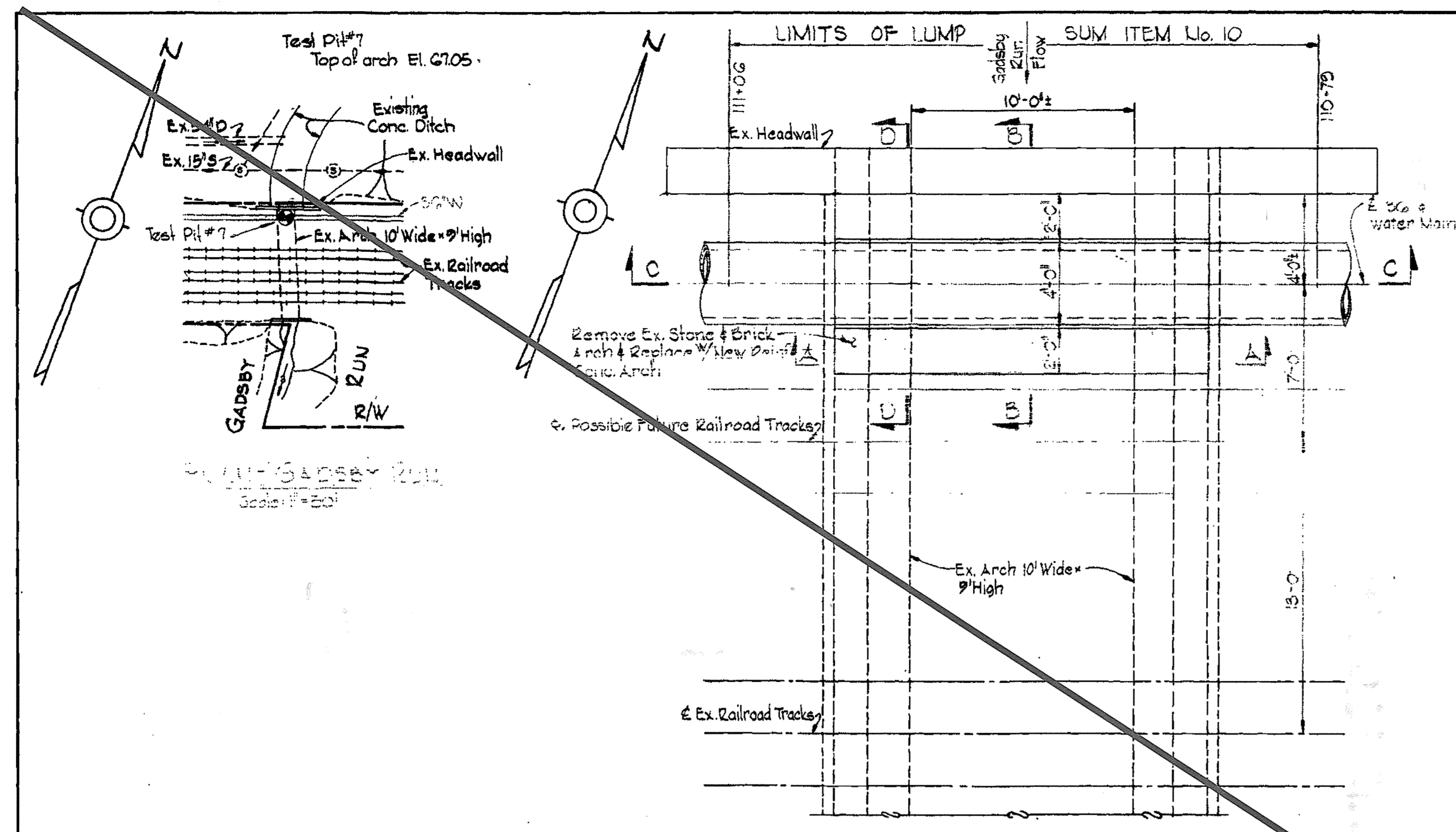
- Concrete structure has been designed in accordance with the American Railway Engineering Association Manual For Railway Engineering - 1972
- All concrete shall have a minimum 28 day compressive strength of 3,500 p.s.i.
- All reinforcing bars to have a concrete cover of 2".
- All reinforcing steel shall be A.S.T.M. A615-70, Grade 40.
- All reinforcing bar laps and all dowel projections and embedments shall be a minimum of 80 bar diameters unless otherwise noted on the drawings.
- Epoxy Bonding Compound to be Colma Fix as manufactured by the Sika Chemical Co. or Ball Mine, Md. or approved equal.

LEGEND

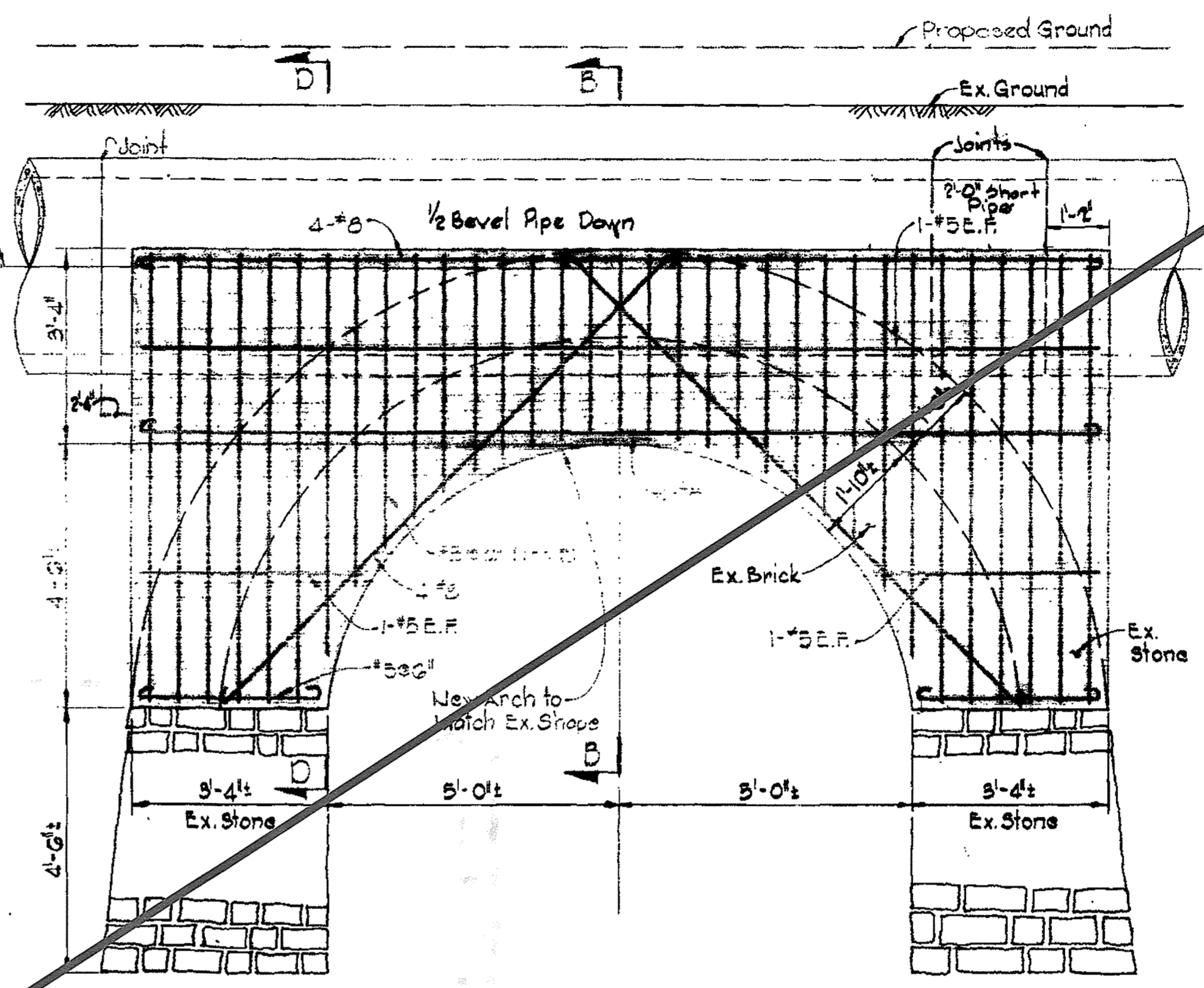
- New Concrete in Section
- Existing Brick in Section
- Existing Brick in Elevation
- Existing Stone in Section and Elevation
- Concrete Pipe in Section
- Existing Ground



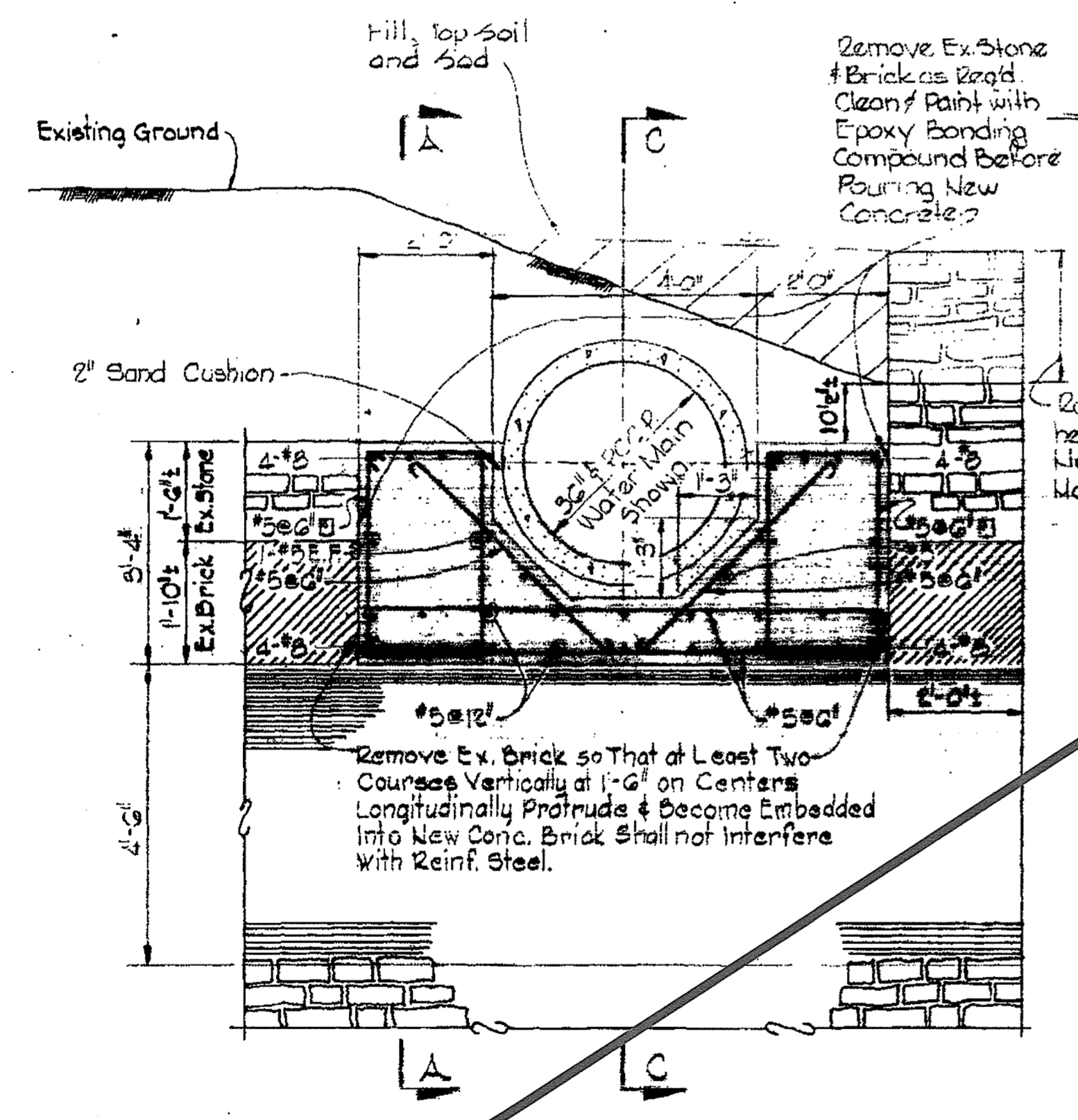
Kenneth A. McCord



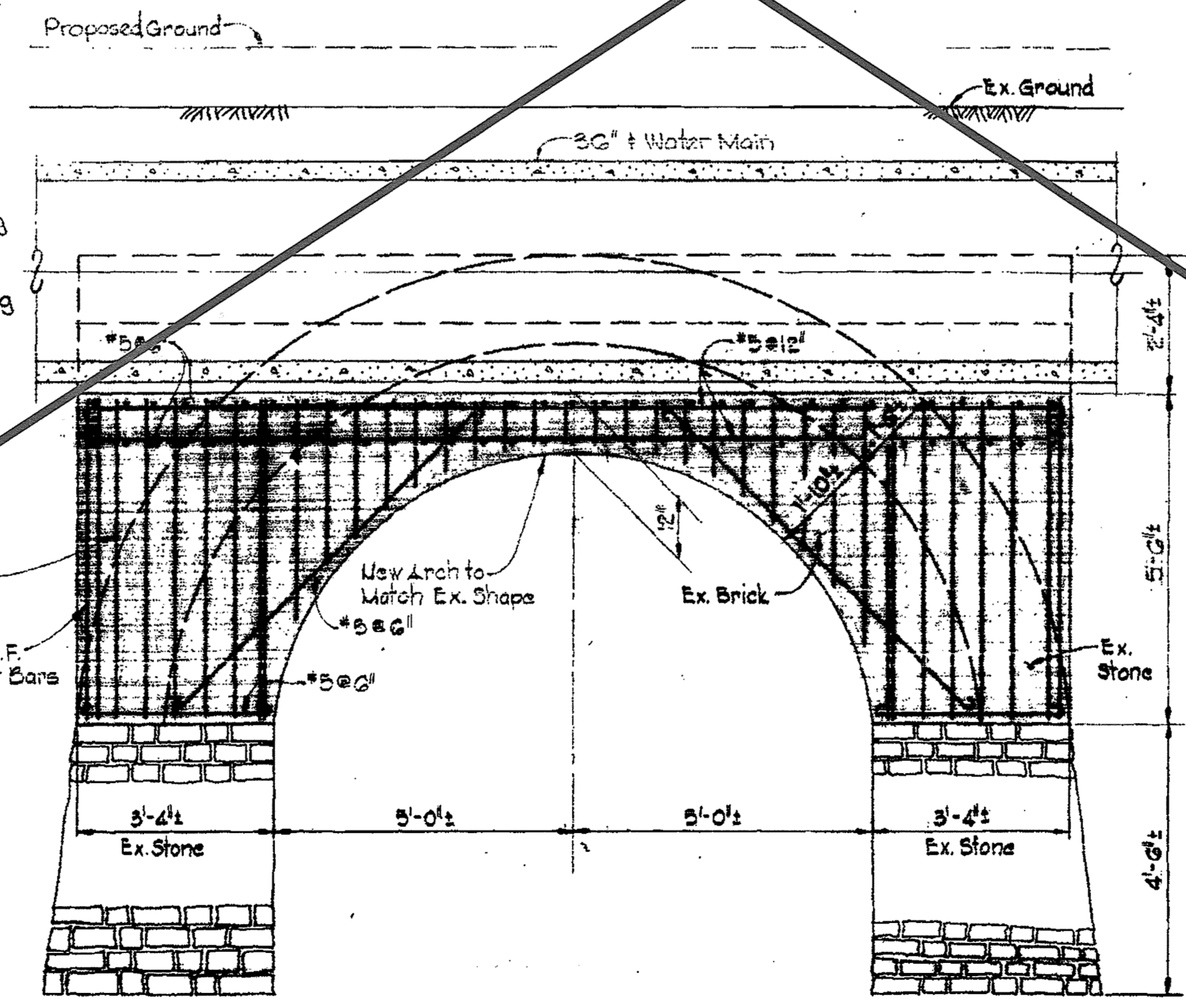
PLAN - 10' x 9' ARCH AT GADSBY RUN
Scale: 1/2" = 1'-0"
NOT APPLICABLE TO ABANDONMENT OF 36" PCCP



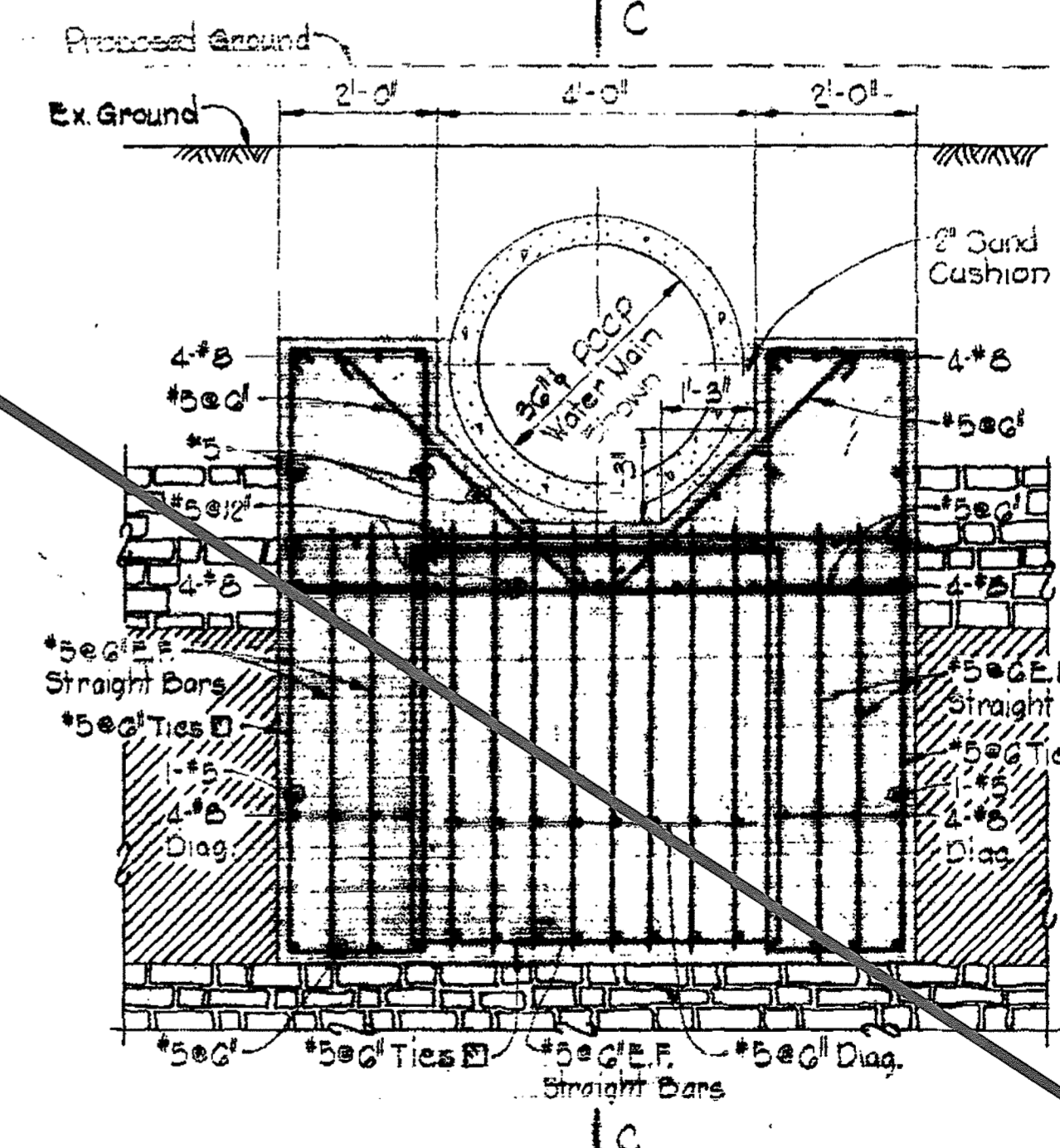
SECTION A-A
Scale: 1/2" = 1'-0"



SECTION B-B
Scale: 1/2" = 1'-0"



SECTION C-C
Scale: 1/2" = 1'-0"



SECTION D-D
Scale: 1/2" = 1'-0"

WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
1304 ST. PAUL ST.
BALTIMORE, MARYLAND

HOWARD COUNTY
William D. Otten 7/2/74
 DIRECTOR DATE
 DEPT. OF PUBLIC WORKS
W.O. Selved 7/2/74
 CHIEF DATE
 BUREAU OF ENGINEERING

C.W.O. 40786
CONTRACT NO. 625-W

CITY OF BALTIMORE
James V. Smith 7/2/74
 DIRECTOR DATE
 DEPT. OF PUBLIC WORKS
W. J. Kesteven 9/10/74
 CHIEF, WATER DIV. DATE
 BUREAU OF ENGINEERING
 BALTIMORE COUNTY
Robert A. Schuch 7/2/74
 DIRECTOR DATE
 DEPT. OF PUBLIC WORKS

DETAILS OF WATER MAINS

RECORD DRAWING
 FOR REFERENCE AND ABANDONMENT OF 36" PCCP ONLY
SOUTHWEST TRANSMISSION MAIN

DRAWING NO. R-10 OF R-11
SCALE AS SHOWN

AS BUILT
 March 7, 1974
 July 17, 1974
 April 1, 1975

WS 625-W/10

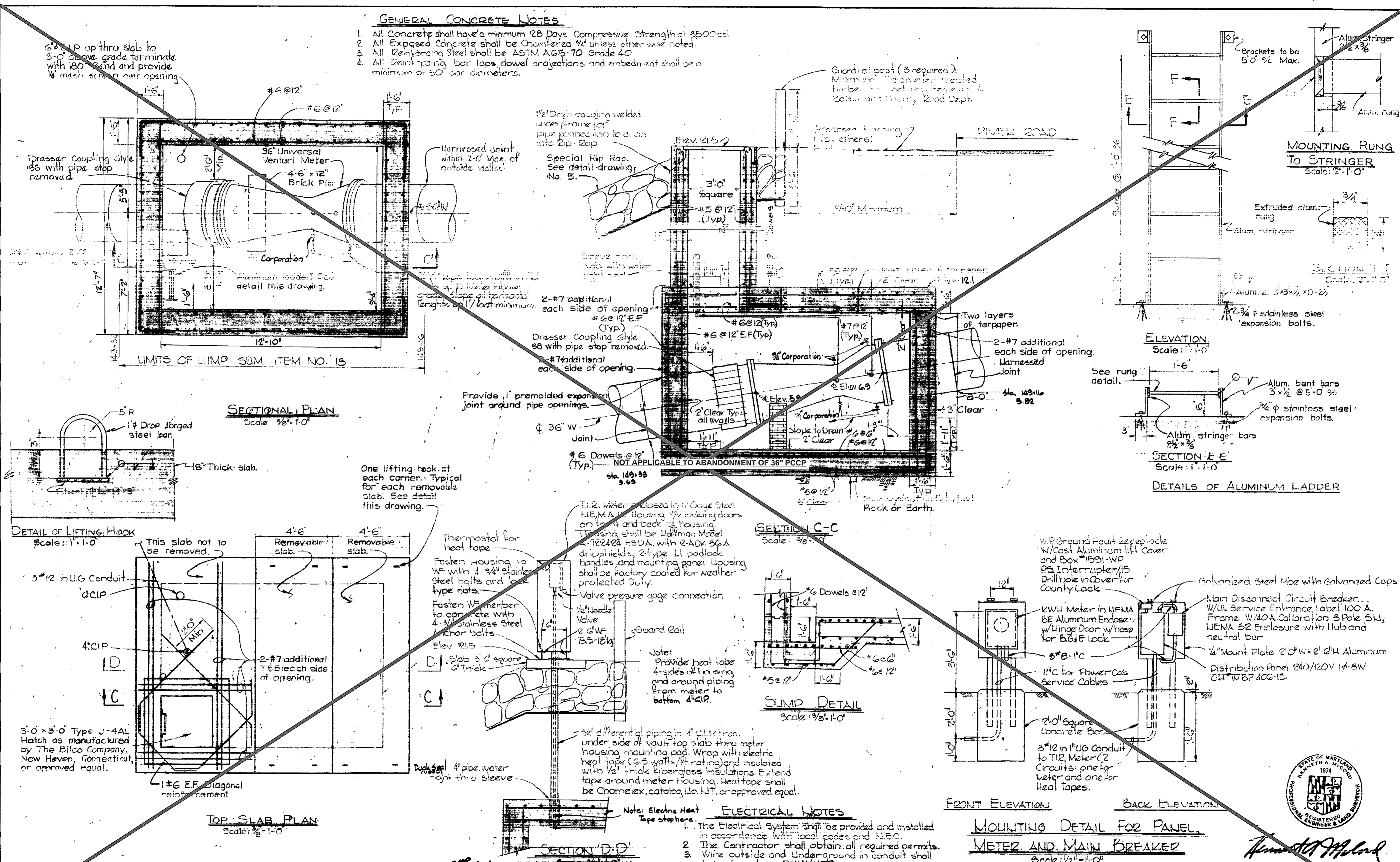
BRUNING 44510 1878E

W. O. 625T-2

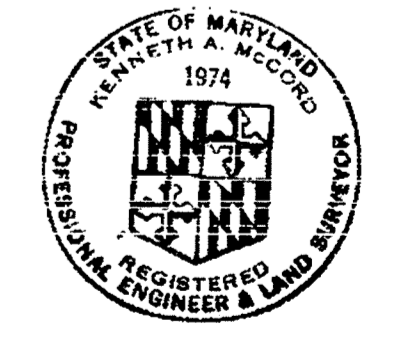
SHEET 46 OF 47
 City to Release River
 Contract No. 625-W

GENERAL CONCRETE NOTES

- All Concrete shall have a minimum 28 Days Compressive Strength of 3500 psi.
- All Exposed Concrete shall be Chamerled 1/2" unless other wise noted.
- All Reinforcing Steel shall be ASTM A615-70 Grade 40.
- All Reinforcing bar laps, dowel projections and embedment shall be a minimum of 30 bar diameters.



- ELECTRICAL NOTES**
- The Electrical System shall be provided and installed in accordance with local codes and NEC.
 - The Contractor shall obtain all required permits.
 - Wire outside and underground in conduit shall be copper type RHW/USE.
 - Under ground conduits shall be Kor-kop with 40 mil. coating.
 - All conduits shall be rigid heavy wall, hot-dipped galvanized.
 - All wiring shall be run in conduit.



Howard M. ...

CITY OF BALTIMORE		BALTIMORE COUNTY	
<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
DIRECTOR	DATE	DIRECTOR	DATE
DEPT. OF PUBLIC WORKS		DEPT. OF PUBLIC WORKS	

HOWARD COUNTY		CONTRACT NO. 625-W	
<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
DIRECTOR	DATE	CHIEF	DATE
DEPT. OF PUBLIC WORKS		BUREAU OF ENGINEERING	

WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
1304 ST. PAUL ST.
BALTIMORE, MARYLAND

RECORD DRAWING
FOR REFERENCE AND ABANDONMENT OF 36" PCCP ONLY
SOUTHWEST TRANSMISSION MAIN

DRAWING NO. R-11 OF R-11
SCALE AS SHOWN

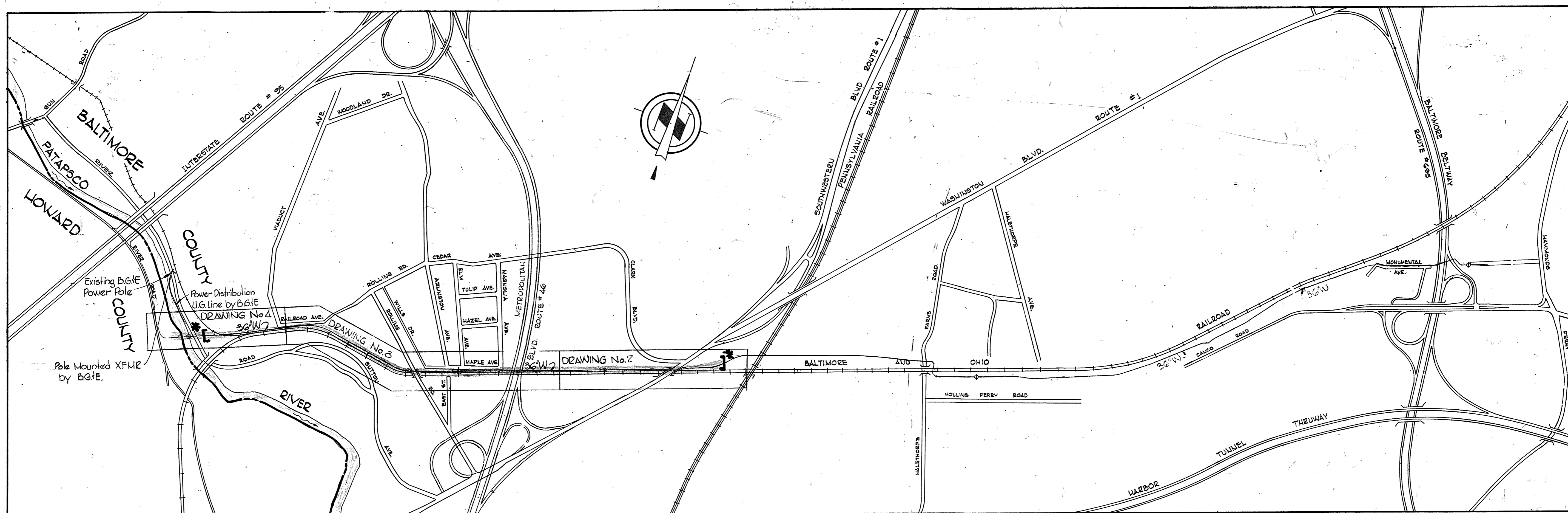
AS BUILT
March 7, 1976
OCTOBER 14, 1974
April 1, 1975

WS 625-W/11

WORKING 44,510 1832

W. O. 6251-2

SHEET 47 OF 47
Relay to Palopasco Elev.
Contract No. 625-W



[PROJECT NO. W-4-8034]

* PLEASE NOTE:
 THE PORTION IN BRACKETS ON
 THIS PLAN WAS DECOMMISSIONED
 (ABANDONED) AS DETAILED ON
 REFERENCE DRAWINGS R-1
 THROUGH R-11 OF CONTRACT
 NO. 44-4618.

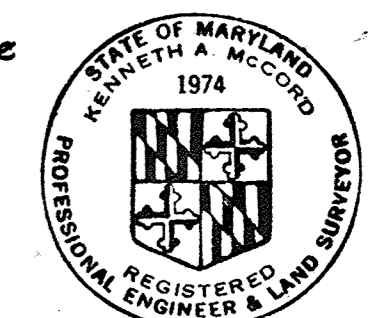
QUANTITIES	
36" Water	6283.42 LF

SOUTHWEST TRANSMISSION MAIN
 HOWARD COUNTY, MARYLAND
 DEPARTMENT OF PUBLIC WORKS

OPERATING GRADIENT = ELEVATION 350
 TEST GRADIENT = ELEVATION 525

"AS-BUILT"
 Stakeout F.B.# 5841
 Diary #1 F.B.# 5799
 Diary #2 F.B.# 5848
 Diary #3 F.B.# 5901

36" Lock Joint Pipe
 Prestressed Concrete Cylinder Pipe



Kenneth A. Milrod

Relay to Patapsco River
 Contract No. 625-W

CITY OF BALTIMORE		BALTIMORE COUNTY	
<i>James W. Hunter</i> 9/12/74 DIRECTOR DEPT. OF PUBLIC WORKS	<i>R.V. Kretschmer</i> 9/12/74 CHIEF, WATER DIV. BUREAU OF ENGINEERING	<i>W.O. Latham</i> 9/12/74 DIRECTOR DEPT. OF PUBLIC WORKS	

CWO. 40786

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	HOWARD COUNTY		CONTRACT NO. 625 - W	LOCATION PLAN	SOUTHWEST TRANSMISSION MAIN	DRAWING NO. 1 OF 11	SCALE 1"=600'
	<i>William A. Allen</i> 7/15/74 DIRECTOR DEPT. OF PUBLIC WORKS	<i>W.O. Latham</i> 7-25-74 CHIEF BUREAU OF ENGINEERING					

W. O. 6257-2

"AS BUILT"
 March 7, 1978
 July 17, 1974
 April 1, 1975

CWO 40786

WS 625-W/1