

For General Notes See Drawing No. 6

COUNTY SEWER CODE
2152200
2152201
COUNTY USE ONLY

DRAWING INDEX		
DRAWING NO.	SHEET NO.	TITLE
1	C-1	TITLE, VICINITY MAP, LIST OF DRAWINGS
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3	C-3	SEDIMENT CONTROL PLAN
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5, 6	C-5, C-6	PLAN OF SEWER MAIN
7	C-7	PROFILE OF SEWER MAIN
8	C-8	DETAILS & CROSS-SECTIONS
9	A-1	ARCHITECTURAL PLANS, ELEVATIONS, SECTIONS
10	A-2	ARCHITECTURAL SECTIONS & DETAILS
11	S-1	STRUCTURAL SECTION & PLANS
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16	E-1	ELECTRICAL PLANS & DETAILS
17, 18	E-2, E-3	ELEMENTARY DIAGRAMS & DETAILS

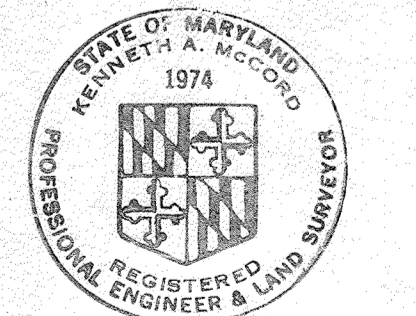
PROJECT NO. S-4-6048

MEADOWRIDGE

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

QUANTITIES			
ITEM	BID	AS-BUILT	MATERIAL / SUPPLIER
8" Sewer	155 LF	151 LF	P.V.C. CERTAINTEED
10" Sewer	1265 LF	1265.5 LF	P.V.C. CERTAINTEED
12" Sewer	695 LF	674 LF	P.V.C. CERTAINTEED
Manholes	9 Each	9	PRECAST TERRA-HILL
B.F.M.	2580 LF	2446 LF	D.P. ATLANTIC STATES
P.S.	1 S	1	P&R SHOT DRAWING



Kenneth A. McCord

Meadowridge Sewer & P.S.
Project No. S-4-6048
Contract # 705-5

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Ruth Buring 4/29/81 Chief-Bureau of Utilities - DATE
Allen S. Brown 4/15/81 Chief-Utilities Division - DATE

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Henry F. Newman 4-28-81 Director of Public Works - DATE
Richard S. Boring 4/14/81 Chief-Bureau of Engineering - DATE

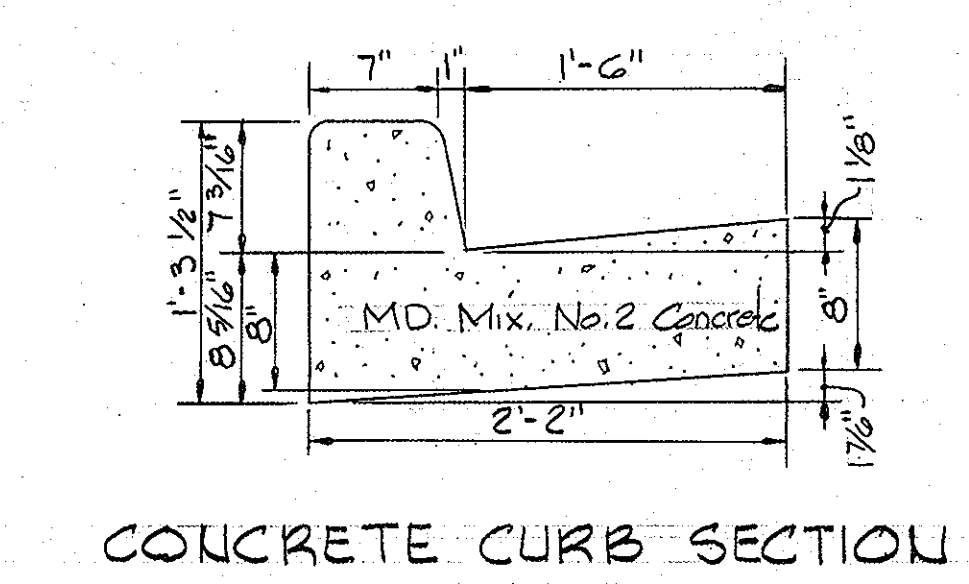
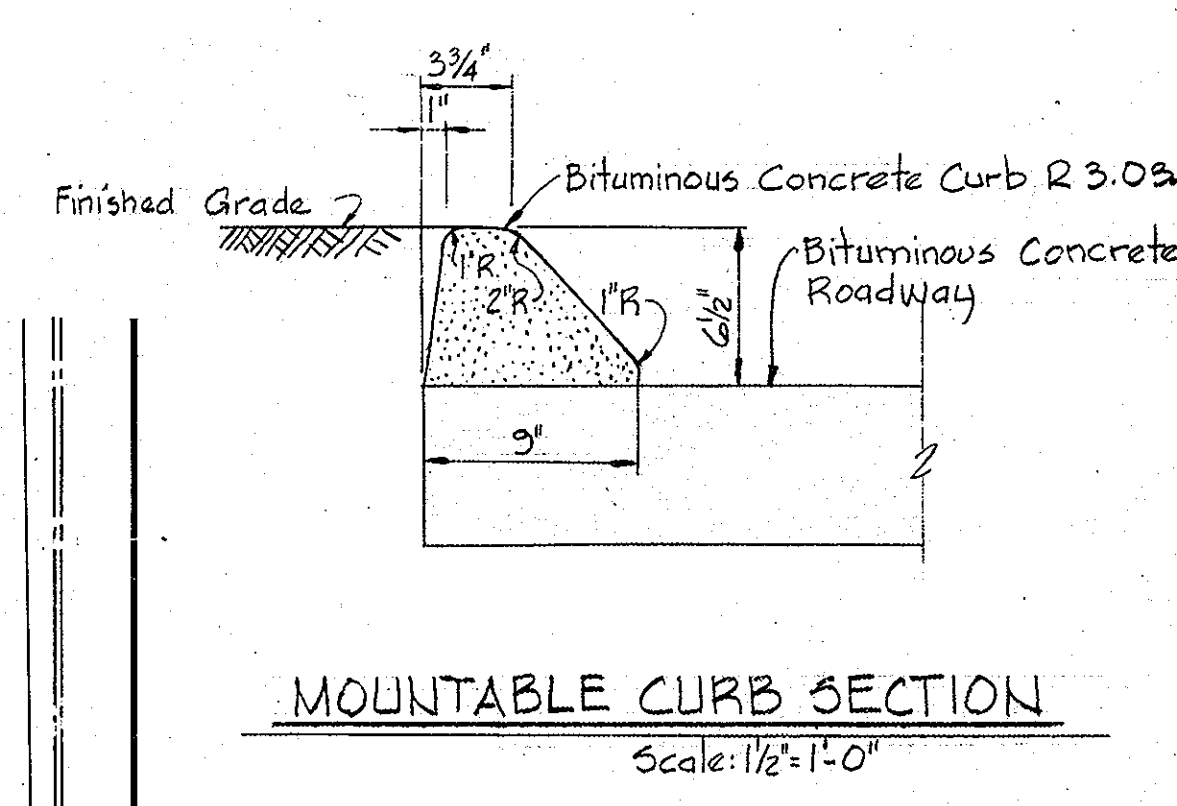
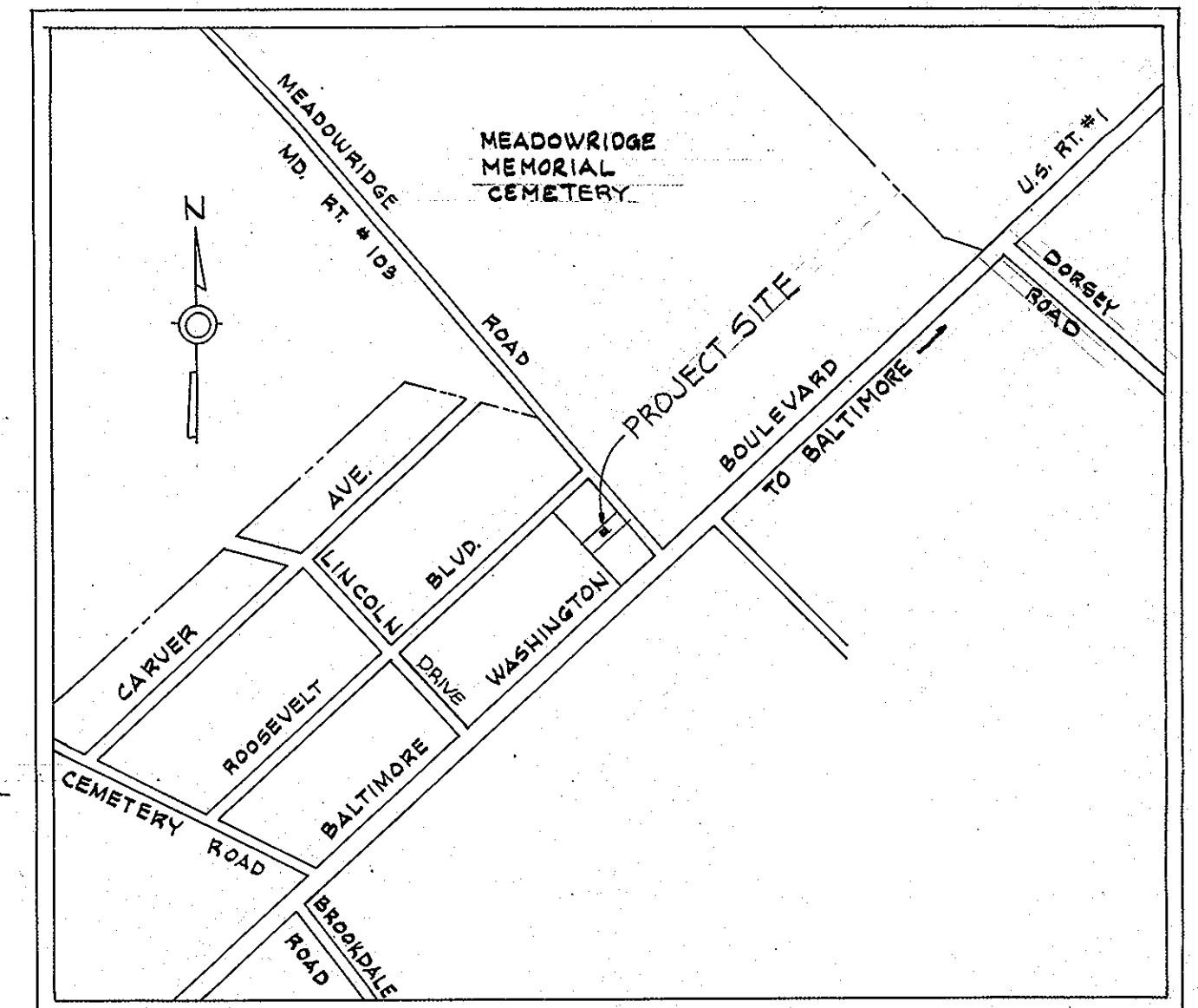
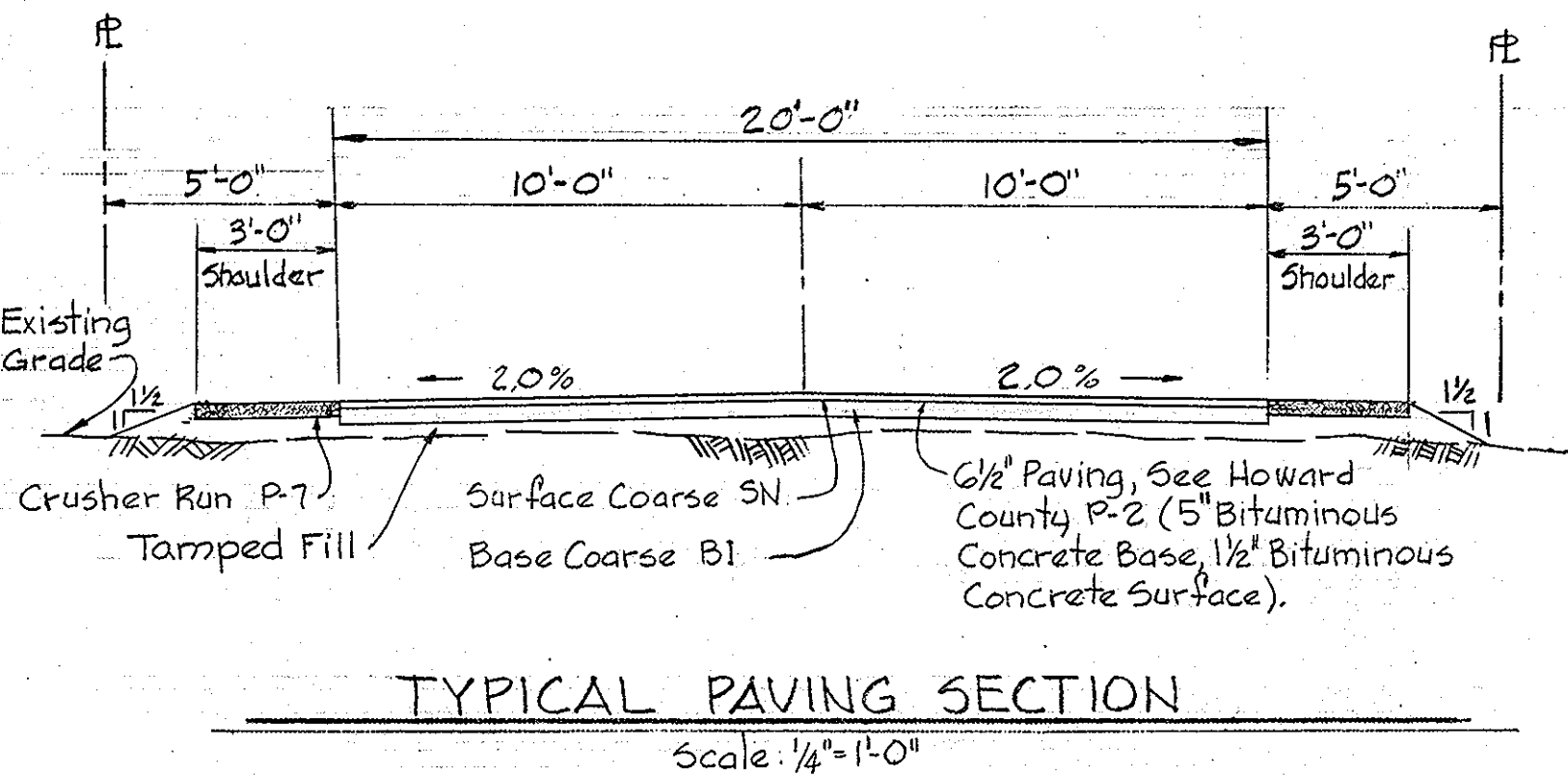
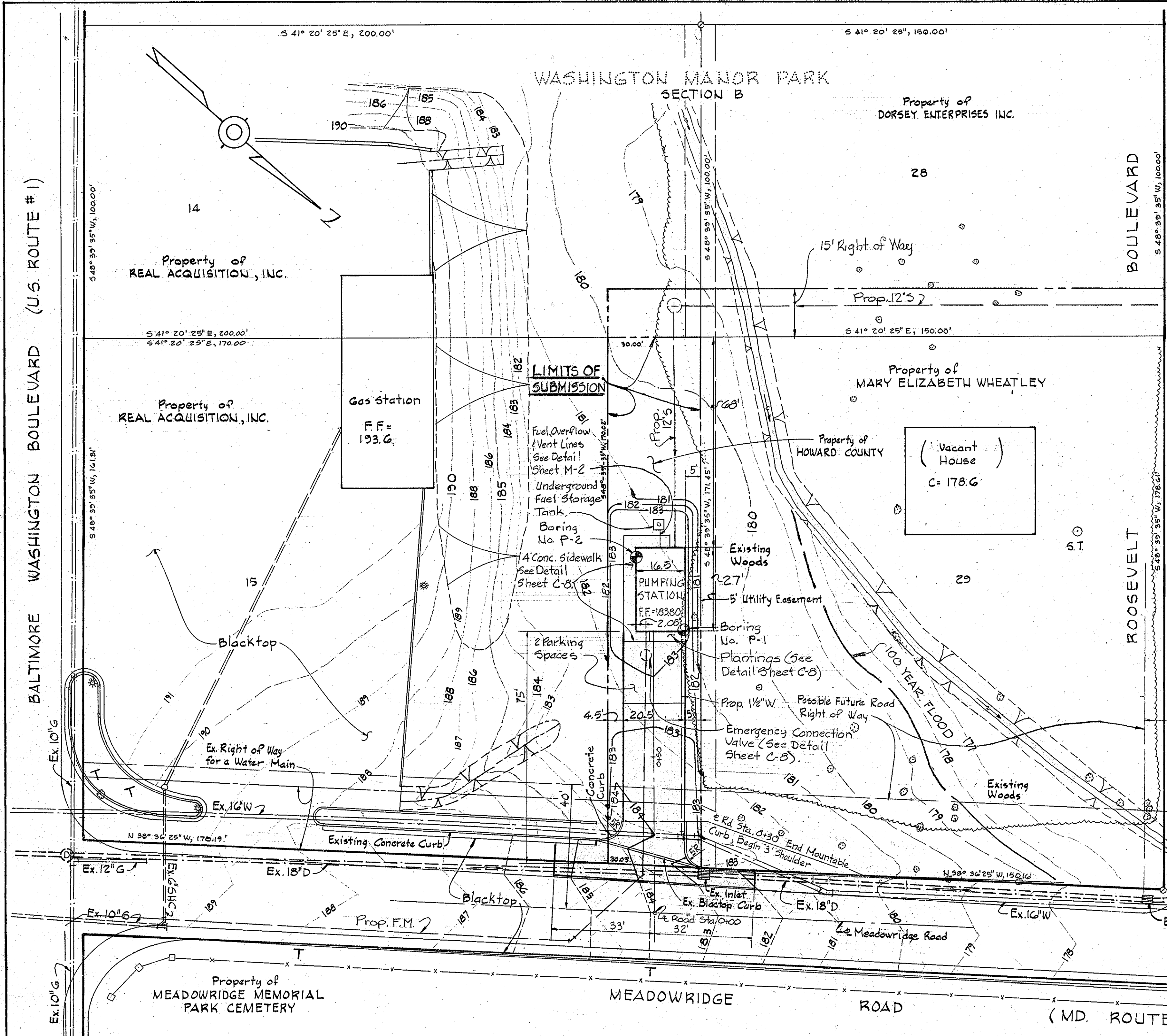
CONTRACT NO. 705-S
PROJECT NO. S-4-6048

LOCATION MAP

ELECTION DISTRICT
ELKRIDGE NO.1

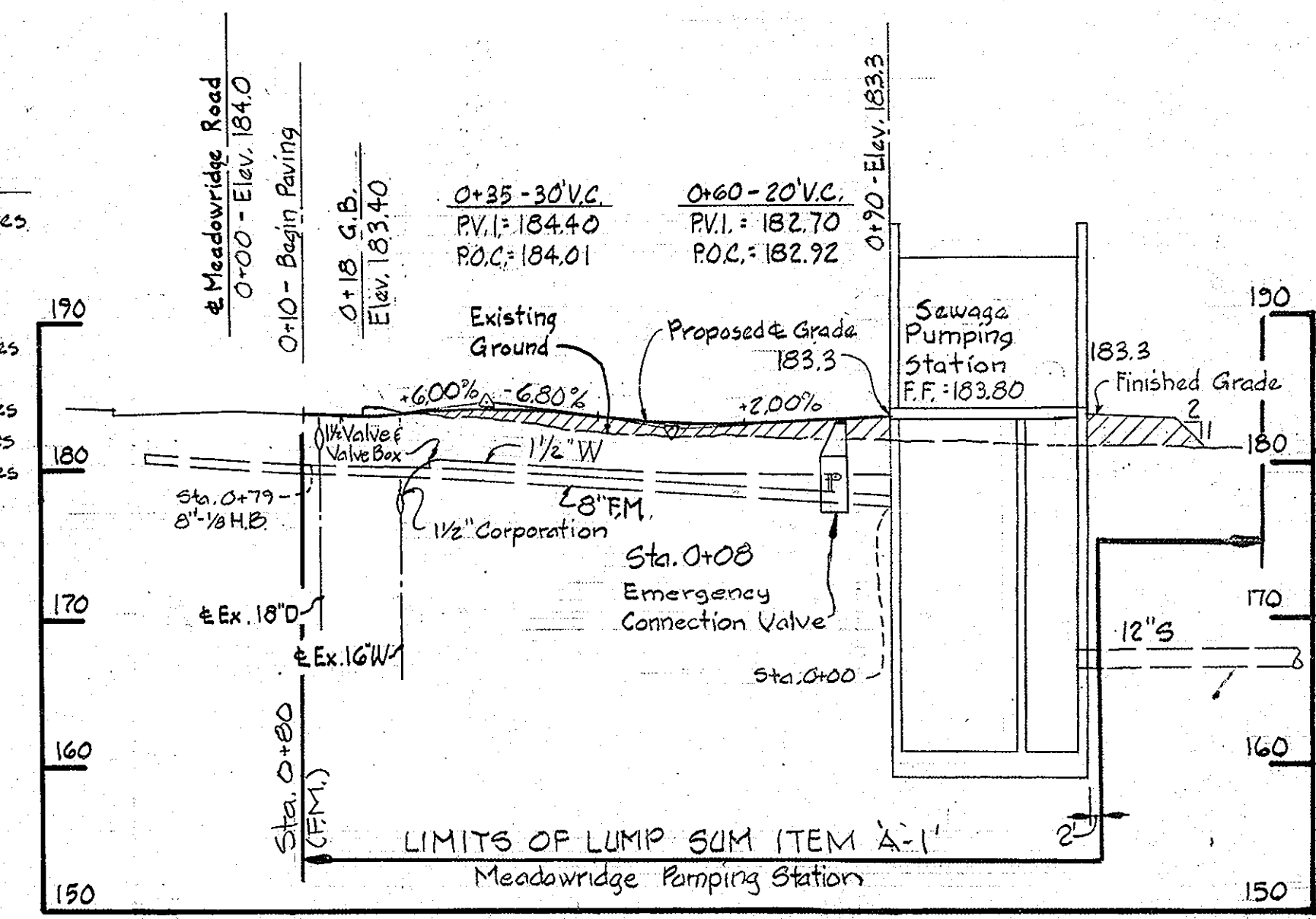
DRAWING NO. 1 OF 18
SCALE 1" = 1200'

WS 705-S/1



SITE ANALYSIS

Area of Site	0.12 Acres
Number of Employees	0
Parking Required	2
Parking Provided	2
Area to be graded	0.08 Acres
Area to be roofed	330 S.F.
Area to be paved	0.05 Acres
Area to be seeded	0.03 Acres
Area to be undisturbed	0.04 Acres
Zoned	M-1
Tax Map Number	43



APPROVED
DIVISION OF LAND DEVELOPMENT
HOWARD COUNTY, MARYLAND
DATE 8-27-80

SITE PLAN
Scale: 1" = 20'

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
1304 ST. PAUL STREET
BALTIMORE, MARYLAND
Kenneth A. McCord
P.E. & L.S. No. 1974

HOWARD COUNTY, MARYLAND
OWNER AND DEVELOPER
Liber 304 Folio 470
Tax Map 43, Parcel 375 (lot 15)
Zoned M-1

Reviewed for Approved S.C.D.
Name
and meets technical requirements.
James M. Hall 8-1-80
Signature Date
U.S. Soil Conservation District

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
Joseph J. Ryan 8-16-80
COUNTY HEALTH OFFICER DATE

THIS DEVELOPMENT PLAN IS
APPROVED FOR SOIL EROSION AND
SEDIMENT CONTROL BY THE HOWARD
SOIL CONSERVATION DISTRICT.
William J. Rowe 8-1-80
APPROVED (HOWARD S.C.D.) DATE

APPROVED:
FOR PUBLIC WATER, PUBLIC SEWERAGE,
STORM DRAINAGE SYSTEMS AND ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Henry F. Nummy 8-1-80
DIRECTOR DATE

William J. Rowe 6-16-80
CHIEF, BUREAU OF ENGINEERING DATE

James L. Blair 7/30/80
CHIEF, BUREAU OF UTILITIES DATE

APPROVED: HOWARD COUNTY OFFICE OF
PLANNING AND ZONING
Ronald L. Harris 3-2-81
PLANNING DIRECTOR DATE

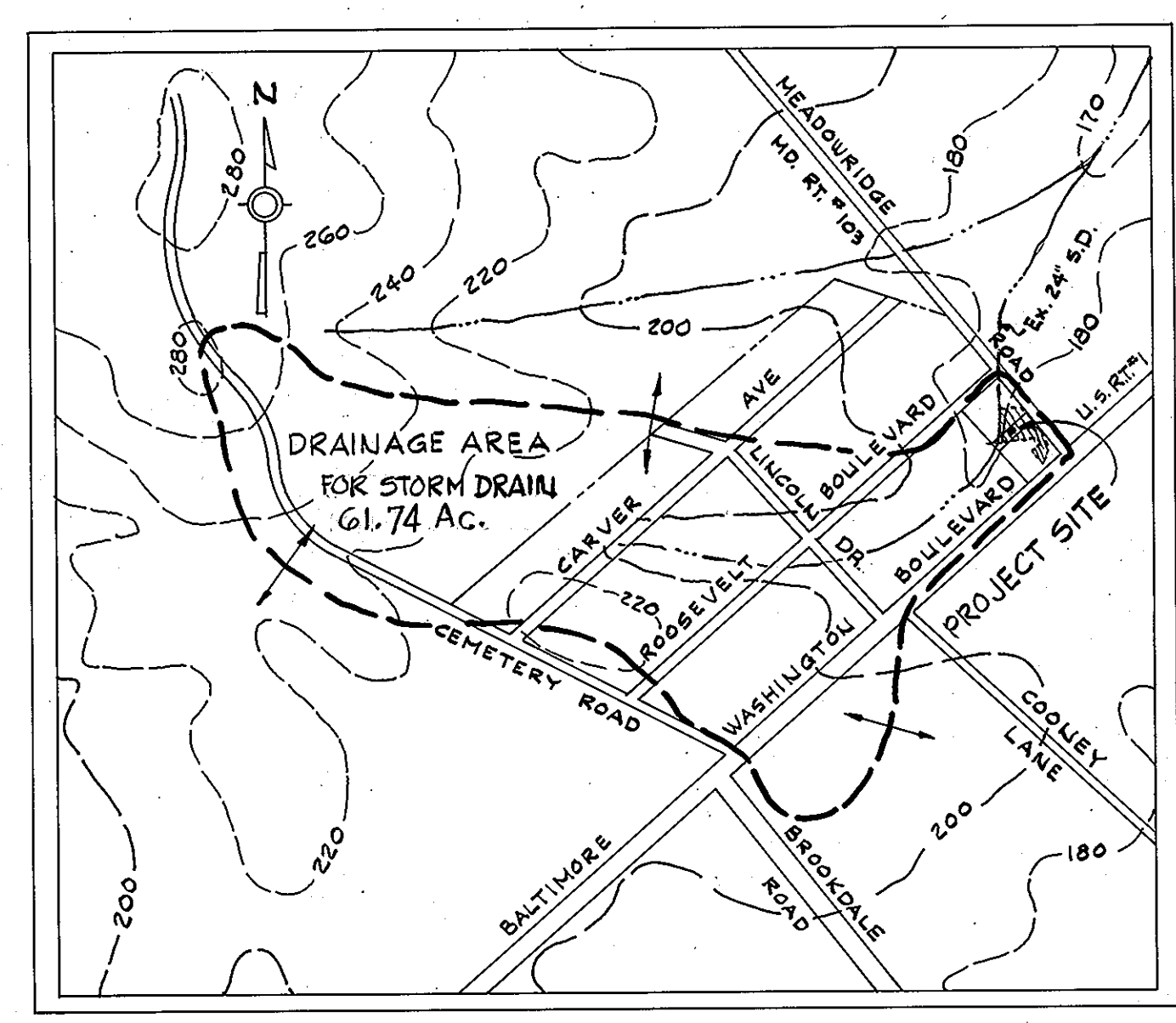
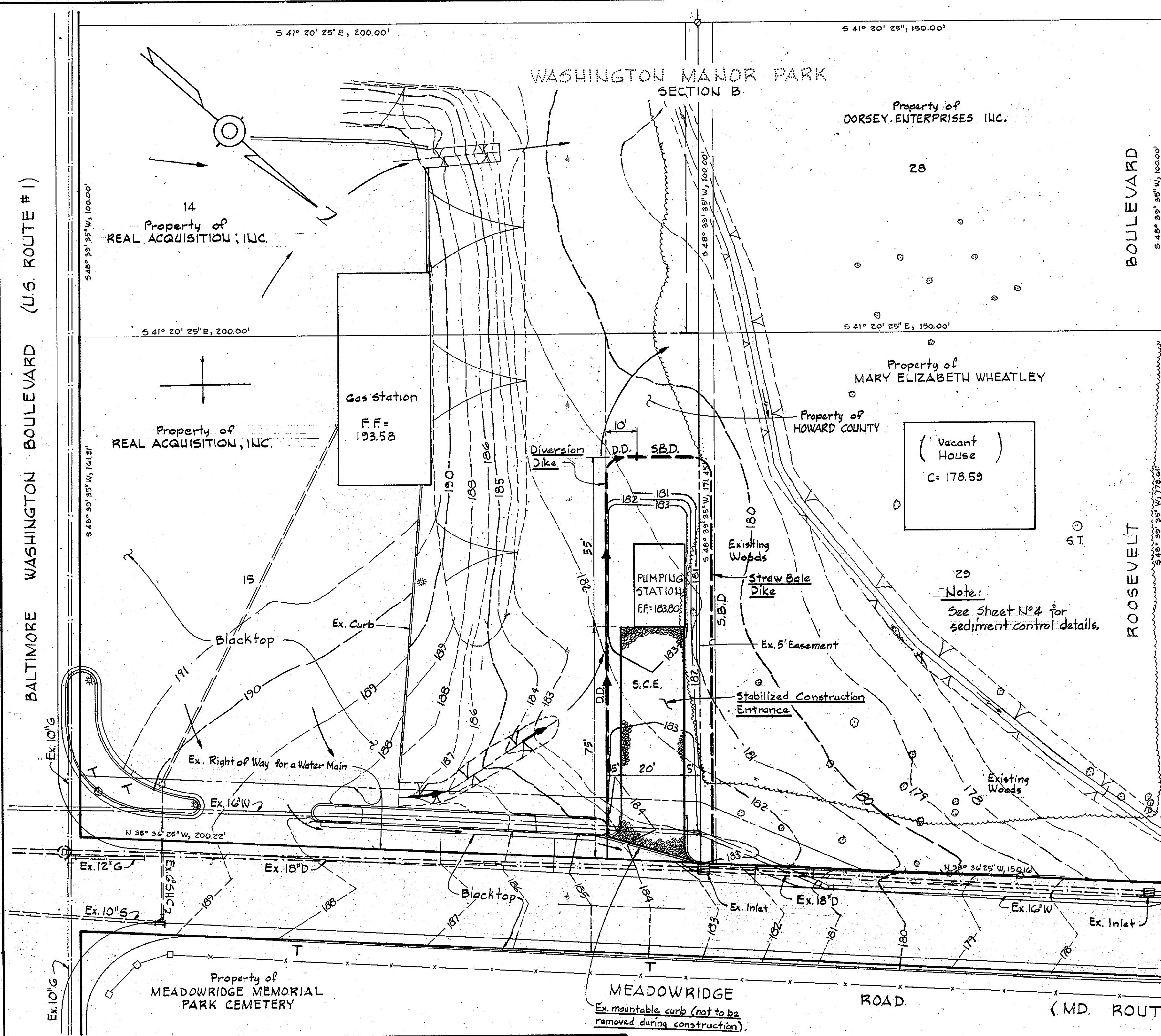
Shirley M. Harris 3-1-81
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CERTIFICATION BY THE ENGINEER
"I certify that this plan for Erosion and Sediment
control represents a practical and workable plan
based on my personal knowledge of the site
condition and it was prepared in accordance with
the requirements of the Howard Soil Conservation
District."
Kenneth A. McCord
Signature of Engineer Date 8/4/80

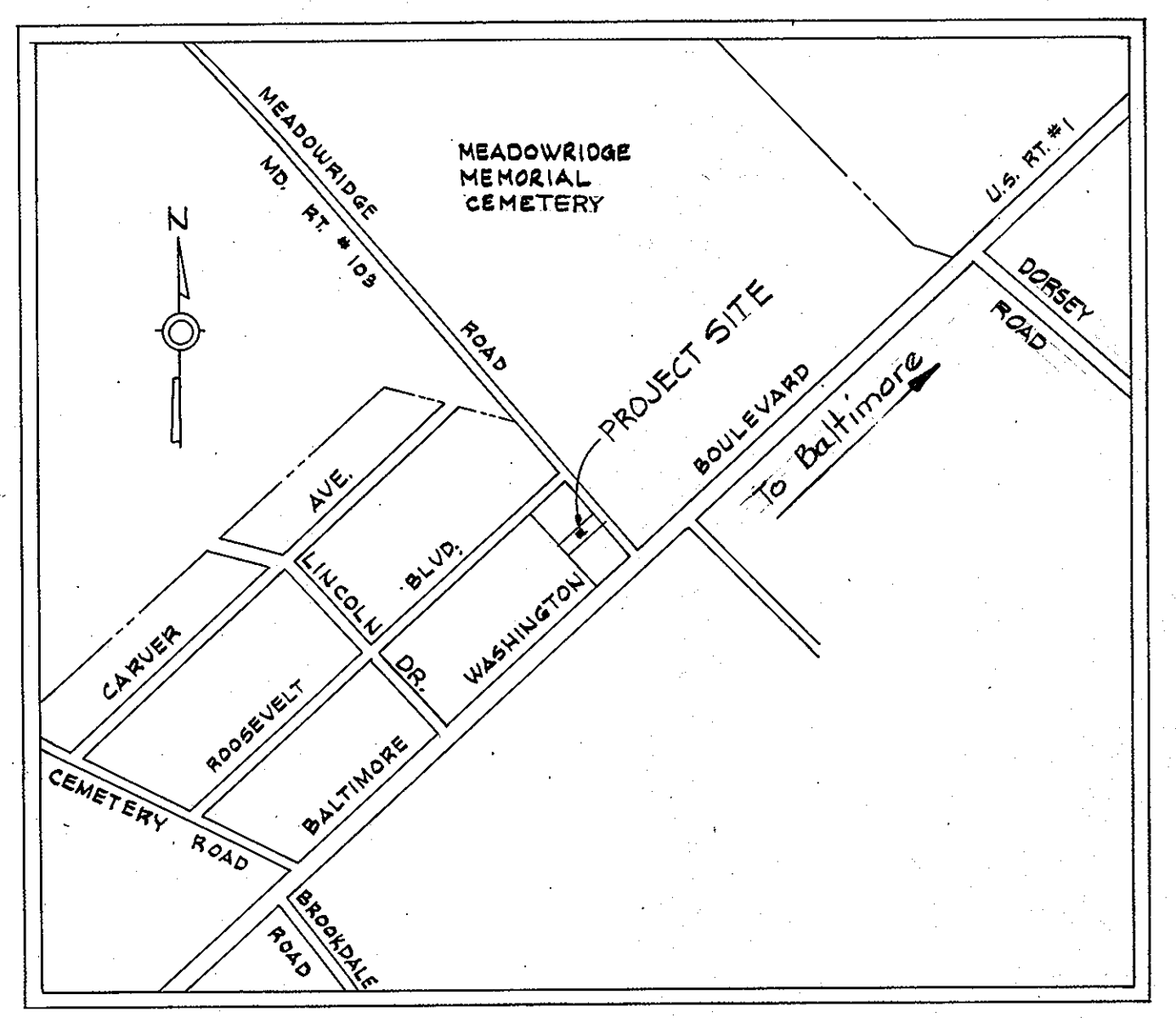
CERTIFICATION BY THE DEVELOPER
"I certify that all development and/or
construction will be done according to these Plans
of Development and Plans for Erosion and Sediment
Control and I also authorize periodic on site
inspection by the Howard Soil Conservation District
or their authorized agents as are deemed necessary."
Deviation from this plan will not be made unless
authorized by the Howard Soil Conservation
District.
Henry F. Nummy
Signature of Developer Date 8-1-80

NO.	DATE	DESCRIPTION OF REVISION

SITE DEVELOPMENT PLAN
FOR
MEADOWRIDGE SEWAGE PUMPING STATION
PROJECT NO. S-4-604B
CONTRACT NO. 705-5
ELECTION DISTRICT - ELKRIEGE No. 1
HOWARD COUNTY, MARYLAND
Date: June 4, 1980 Drawing 2 of 18 Scale: As Shown
AS-BUILT October 25, 1984 SDP-81-24 August 17, 1981



DRAINAGE AREA MAP
Scale: 1"=600'



LOCATION PLAN
Scale: 1"=600'

SITE PLAN
Scale: 1"=20'

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
1304 ST. PAUL STREET
BALTIMORE, MARYLAND

HOWARD COUNTY, MARYLAND
OWNER AND DEVELOPER

Liber 304 Folio 470
Tax Map 43, Parcel 375 (lot 15)
Zoned M-1

APPROVED
DIVISION OF LAND DEVELOPMENT
HOWARD COUNTY, MARYLAND
DATE 8-22-80
Jum

Reviewed for Howard S.C.D. Name and meets technical requirements.
James M. Helms Signature Date 8-18-80
U.S. Soil Conservation District

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
William T. Rowe Signature Date 8-18-80
APPROVED (HOWARD S.C.D.) DATE

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

John F. Nemeyer Signature Date 8-1-80
DIRECTOR

William B. Esby Signature Date 6-16-80
CHIEF, BUREAU OF ENGINEERING

James L. Greig Signature Date 7/30/80
CHIEF, BUREAU OF UTILITIES

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

James L. Hanft Signature Date 3-28-81
PLANNING DIRECTOR

William W. Munchman Signature Date 3-1-81
CHIEF, DIVISION OF LAND DEVELOPMENT

CERTIFICATION BY THE ENGINEER
"I certify that this plan for Erosion and Sediment control represents a practical and workable plan based on my personal knowledge of the site condition and it was prepared in accordance with the requirements of the Howard Soil Conservation District."
Kenneth A. McCord Signature of Engineer Date 6-4-80

CERTIFICATION BY THE DEVELOPER
"I certify that all development and/or construction will be done according to these Plans of Development and Plans for Erosion and Sediment Control and I also authorize periodic on site inspection by the Howard Soil Conservation District or their authorized agents as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District."
John F. Nemeyer Signature of Developer Date 8-1-80

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

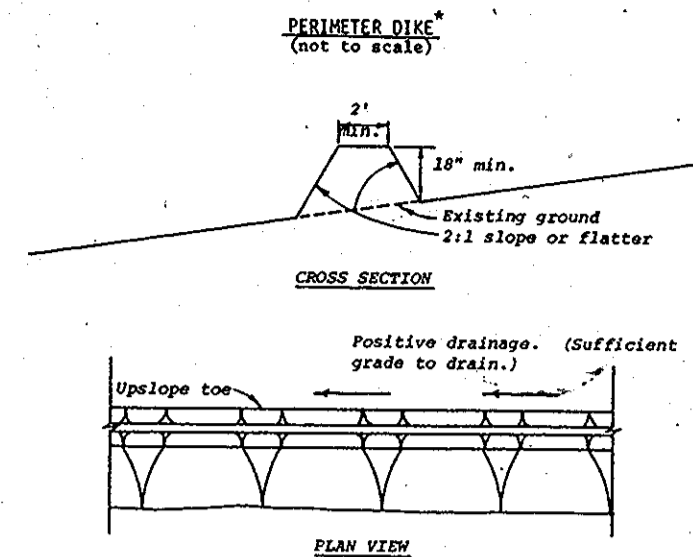
James M. Helms Signature Date 8-6-80
COUNTY HEALTH OFFICER DATE

NO. DATE DESCRIPTION OF REVISION

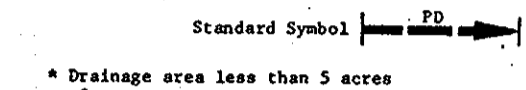
SEDIMENT CONTROL PLAN
FOR
MEADOWRIDGE SEWAGE PUMPING STATION

PROJECT NO. 5-4-604B
CONTRACT NO. 705-5
ELECTION DISTRICT-ELKRIDGE No. 1
HOWARD COUNTY, MARYLAND

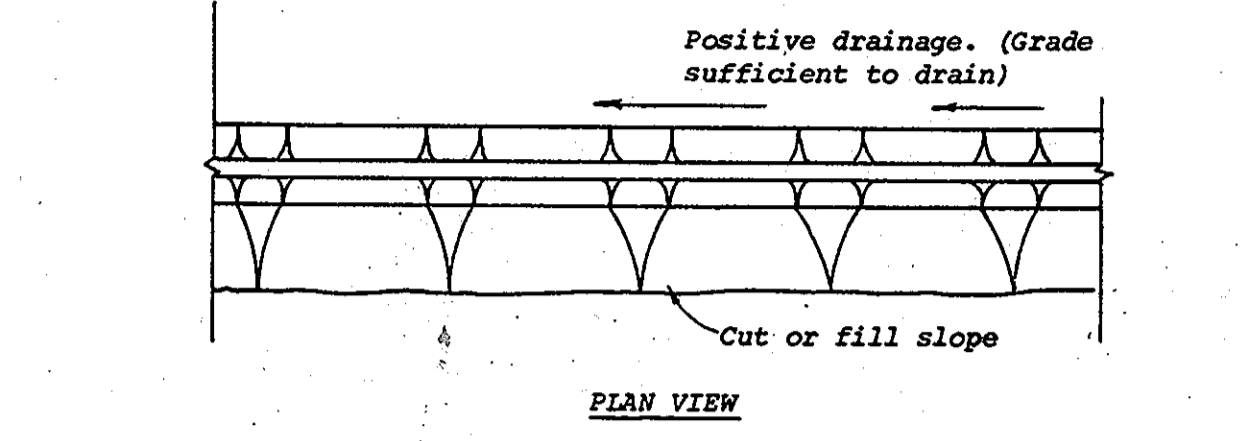
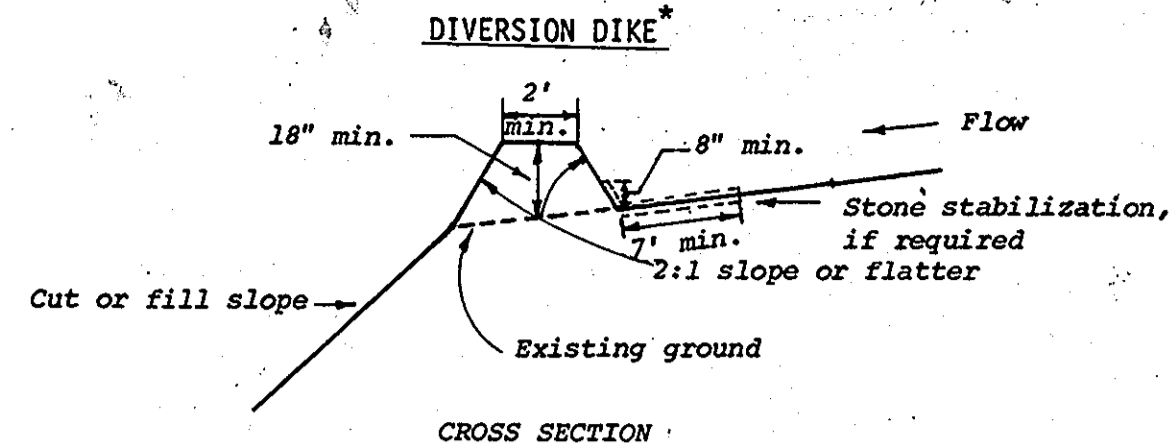
Date: June 4, 1980
Drawing 3 of 18
Scale: As Shown



- Construction Specifications**
- All dikes shall be machine compacted.
 - All perimeter dikes shall have positive drainage to an outlet.
 - A. Diverted runoff from a protected or stabilized upland area shall outlet directly into an undisturbed stabilized area or into a level spreader or grade stabilization structure.
 - B. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device such as sediment trap or a sediment basin or to an area protected by any of these practices.
 - Stabilization, when required, shall be done in accordance with Standard and Specifications for Grassed Waterway. The minimum area to be stabilized shall be the channel flow area.
 - Periodic inspection and required maintenance shall be provided.

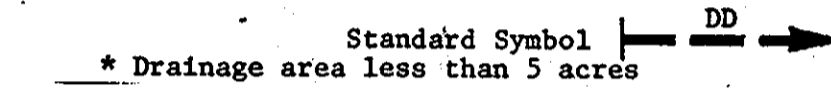


* Drainage area less than 5 acres

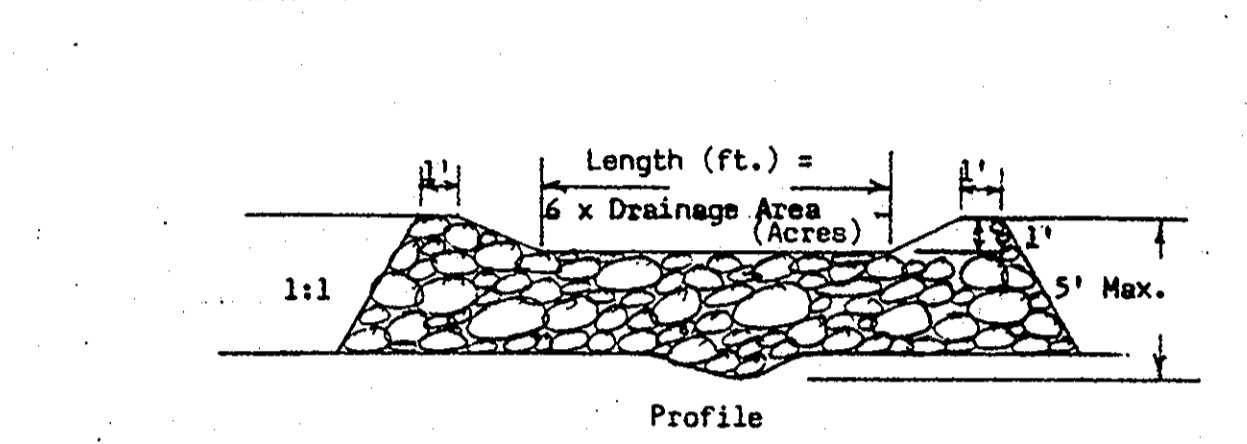
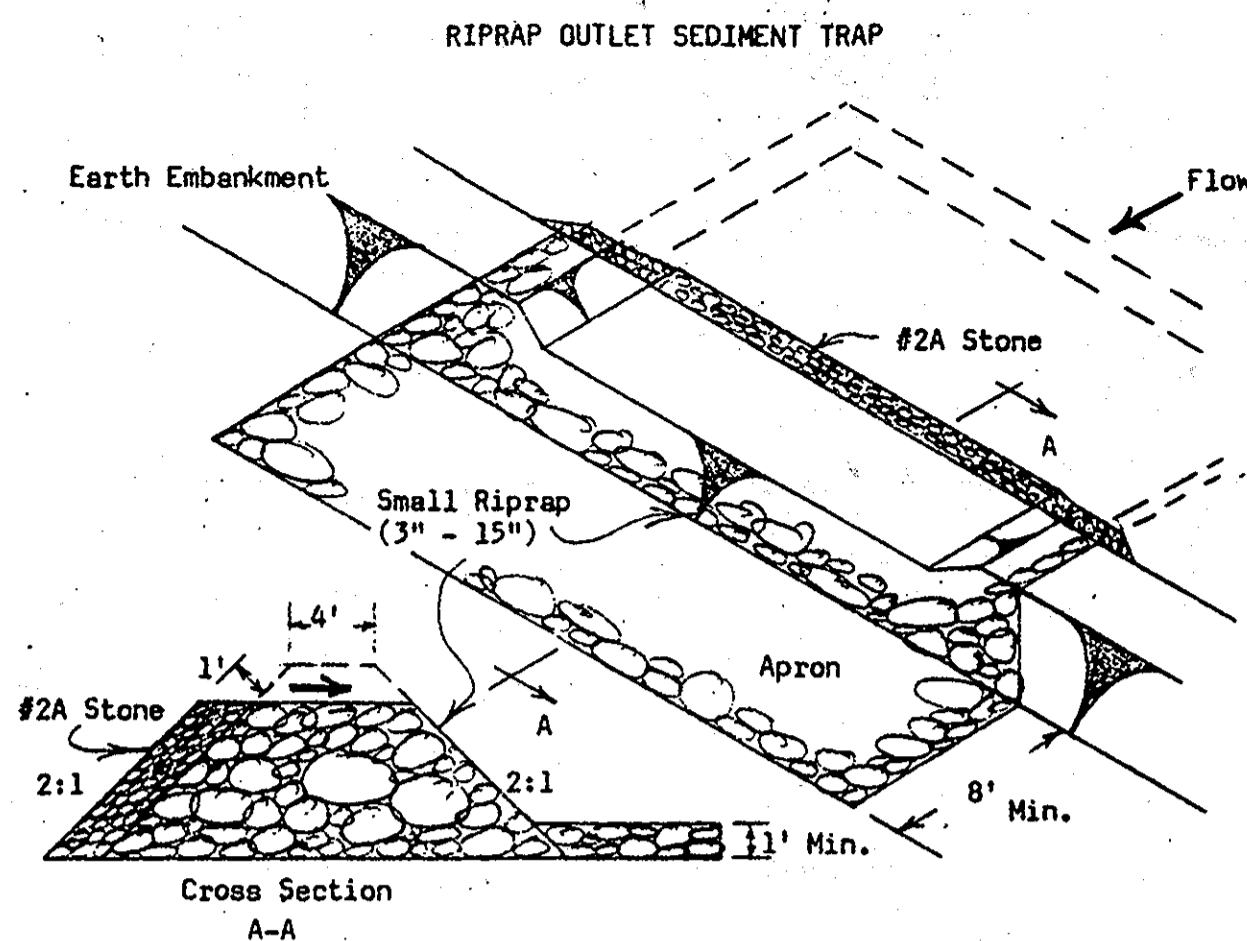


Construction Specifications

- All dikes shall be machine compacted.
- All diversion dikes shall have positive drainage to an outlet.
- A. Diverted runoff from a protected or stabilized area shall outlet directly to an undisturbed stabilized area or into a level spreader or grade stabilization structure.
- B. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device such as a sediment trap or a sediment basin or to an area protected by any of these practices.
- Stabilization, as specified by the plans, shall be: (1) in accordance with Standard and Specifications for Grassed Waterway, and the area to be stabilized shall be the channel (flow area); or (2) the flow area shall be lined with stone that meets MSHA size No. 2 or AASHTO M43 size No. 2 or 24 which is placed in a 3 inch thick layer and pressed into the soil. The area covered by the stone shall be as shown on the drawing above.
- Periodic inspection and required maintenance shall be provided.



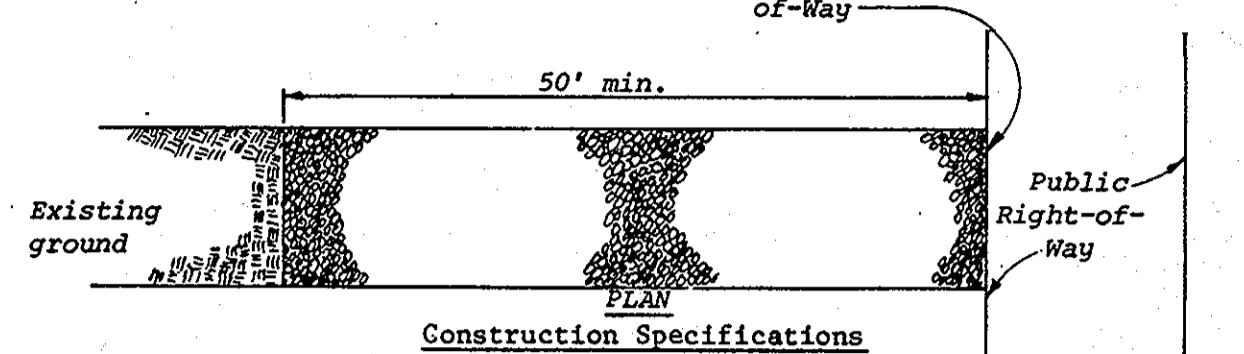
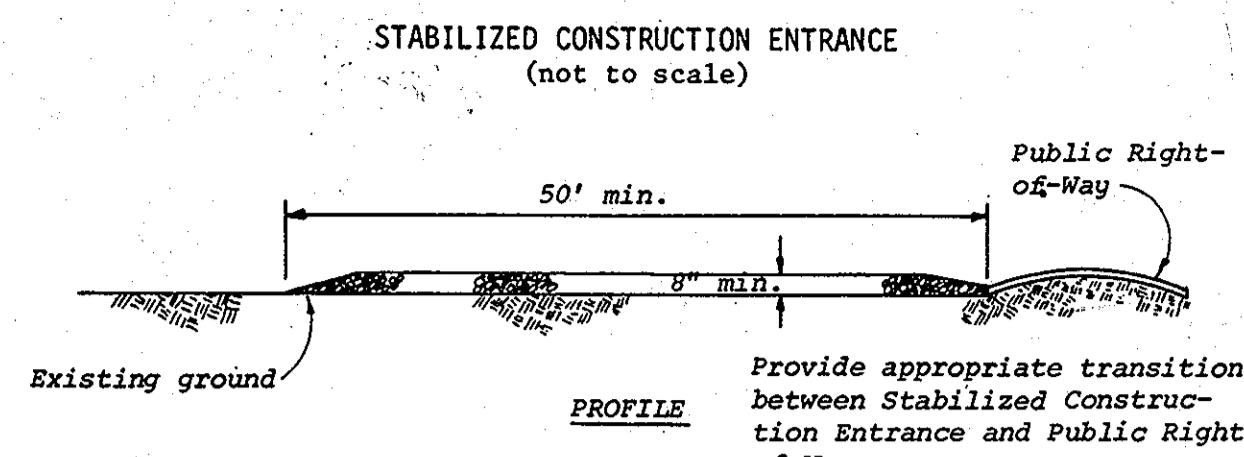
* Drainage area less than 5 acres



Construction Specifications

The construction specifications for this practice will be the same as the Stone Outlet Sediment Trap except for the following:

- The stone used in the outlet shall be small riprap 3" - 15", with a 1' thickness of #2-A crushed stone placed on the up-grade side of the small riprap.
- Drainage area for this practice is limited to 3 acres or less.

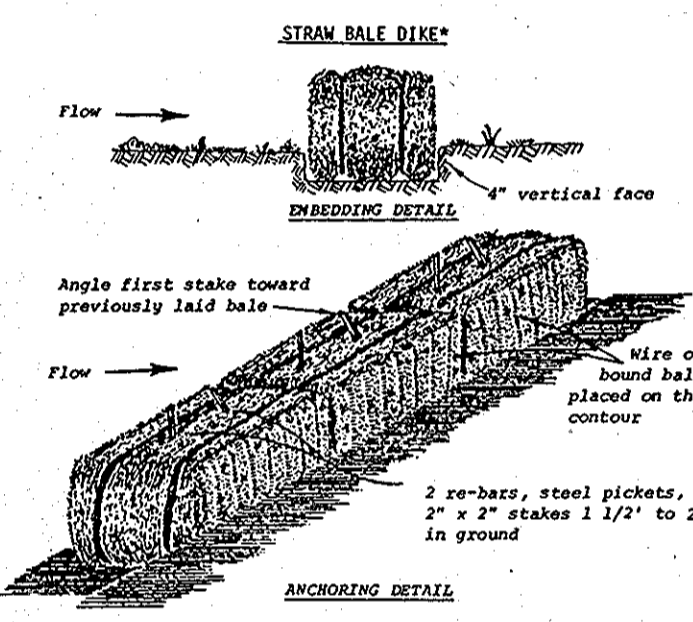


Construction Specifications

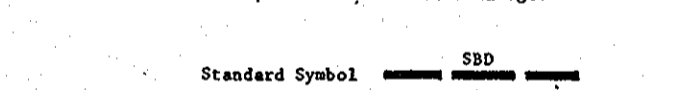
- Stone size - Use MSHA size No. 2 (2-1/2" to 1") or AASHTO designation M43, size No. 2 (2-1/2" to 1-1/2"). Use crushed stone.
- Length - As effective, but not less than 50 feet.
- Thickness - Not less than eight (8) inches.
- Width - Not less than full width of all points of ingress or egress.
- Washing - When necessary, wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with crushed stone which drains into an approved sediment trap or sediment basin. All sediment shall be prevented from entering any storm drain, ditch, or watercourse through use of sand bags, gravel, boards or other approved methods.
- Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.



* Drainage area less than 1/2 acre



- Construction Specifications**
- Bales shall be placed in a row with ends tightly abutting the adjacent bales.
 - Each bale shall be embedded in the soil a minimum of 4".
 - Bales shall be securely anchored in place by stakes or re-bars driven through the bales. The first stake in each bale shall be angled toward previously laid bales to force bales together.
 - Inspection shall be frequent and repair or replacement shall be made promptly as needed.
 - Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.



* Drainage area less than 1/2 acre

SEQUENCE OF CONSTRUCTION

- Construct Straw Bale Dike, Diversion Dike and Stabilized Construction Entrance. Excess excavated material shall be disposed of off-site.
- Construct Building and Pipe Lines.
- Complete site work within confines of diversion and straw bale dikes.
- Remove Stabilized Construction Entrance and construct roadway.
- Remove dikes after ground cover is established within the construction area, sod disturbed areas.

APPROVED
DIVISION OF LAND DEVELOPMENT
HOWARD COUNTY, MARYLAND
DATE 8-22-80
JAM

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
1304 ST. PAUL STREET
BALTIMORE, MARYLAND
Kenneth A. McCord
KENNETH A. McCORD P.E. & L.S. NO. 1974

HOWARD COUNTY, MARYLAND
OWNER AND DEVELOPER
LIBER 304 & 470 FOLIO 470
TAX MAP 43 PARCEL 375 LOT 15
ZONED M-1

REVIEWED FOR Howard S.C.D.
NAME
AND MEETS TECHNICAL REQUIREMENTS
James M. Selinger
NAME DATE 8-1-80
U.S. SOIL CONSERVATION SERVICE
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT
Joseph M. Boyle
NAME DATE 8-16-80
COUNTY HEALTH OFFICER

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
William J. Rame
NAME DATE 8-1-80
APPROVED: (HOWARD S.C.D.) DATE

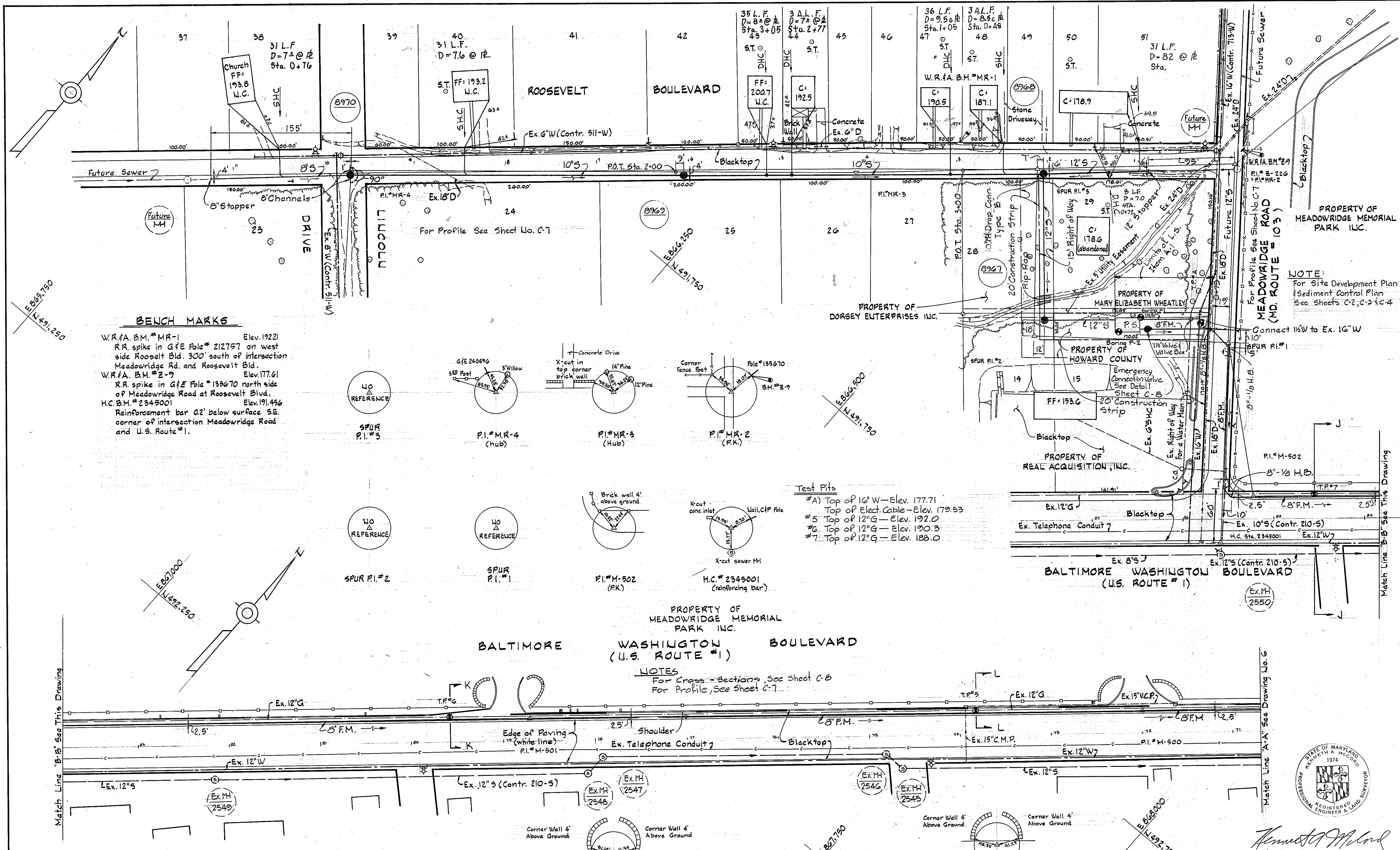
APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Roy F. Nemy
NAME DATE 8-1-80
DIRECTOR
James L. Selig
NAME DATE 6-16-80
CHIEF, BUREAU OF ENGINEERING
James L. Selig
NAME DATE 7-20-80
CHIEF, BUREAU OF UTILITIES

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Thomas L. Hamig
NAME DATE 3-2-81
PLANNING DIRECTOR
William M. ...
NAME DATE 3-2-81
CHIEF, DIVISION OF LAND DEVELOPMENT

CERTIFICATION BY THE ENGINEER
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
Kenneth A. McCord
NAME DATE 8/14/80
SIGNATURE OF ENGINEER

CERTIFICATION BY THE DEVELOPER
"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY" DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT.
Roy F. Nemy
NAME DATE 8-1-80
SIGNATURE OF DEVELOPER

NO.	DATE	DESCRIPTION OF REVISION
SEDIMENT CONTROL DETAILS FOR MEADOWRIDGE SEWAGE PUMPING STATION		
PROJECT NO. S-4-6048 CONTRACT NO. 705-S ELECTION DISTRICT ELKRIDGE NO. 1 HOWARD COUNTY, MARYLAND		
DATE: June 4, 1980		SCALE: AS SHOWN



BENCH MARKS

W.R.F.A. B.M. #MR-1 Elev. 192.21
R.R. spike in G&E Pole # 212757 on west side Roosevelt Bld. 300' south of intersection Meadowridge Rd. and Roosevelt Bld.

W.R.F.A. B.M. #Z-9 Elev. 177.61
R.R. spike in G&E Pole # 135670 north side of Meadowridge Road at Roosevelt Blvd.

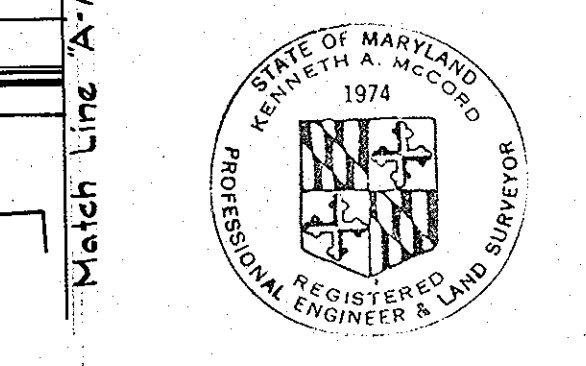
H.C. B.M. #2345001 Elev. 191.456
Reinforcement bar 02' below surface S.E. corner of intersection Meadowridge Road and U.S. Route #1.

Test Fits

#A) Top of 16" W - Elev. 177.71
Top of Elect. Cable - Elev. 179.53
#5) Top of 12" G - Elev. 192.0
#6) Top of 12" G - Elev. 190.3
#7) Top of 12" G - Elev. 188.0

NOTES

For Cross-Sections, See Sheet C-8
For Profile, See Sheet C-7



Kenneth A. McLeod

Meadowridge
Sewer & P.S.
Project No. S-4-6048
Contract No. 705-5

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert M. Brown 4/24/81
CHIEF-BUREAU OF UTILITIES - DATE

Allen S. Brown 4/15/81
CHIEF-UTILITIES DIVISION - DATE

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Joseph F. Nemmer 4-28-81
DIRECTOR OF PUBLIC WORKS - DATE

Robert M. Brown 4/14/81
CHIEF-BUREAU OF ENGINEERING - DATE

CONTRACT NO. 705-S
PROJECT NO. S-4-6048

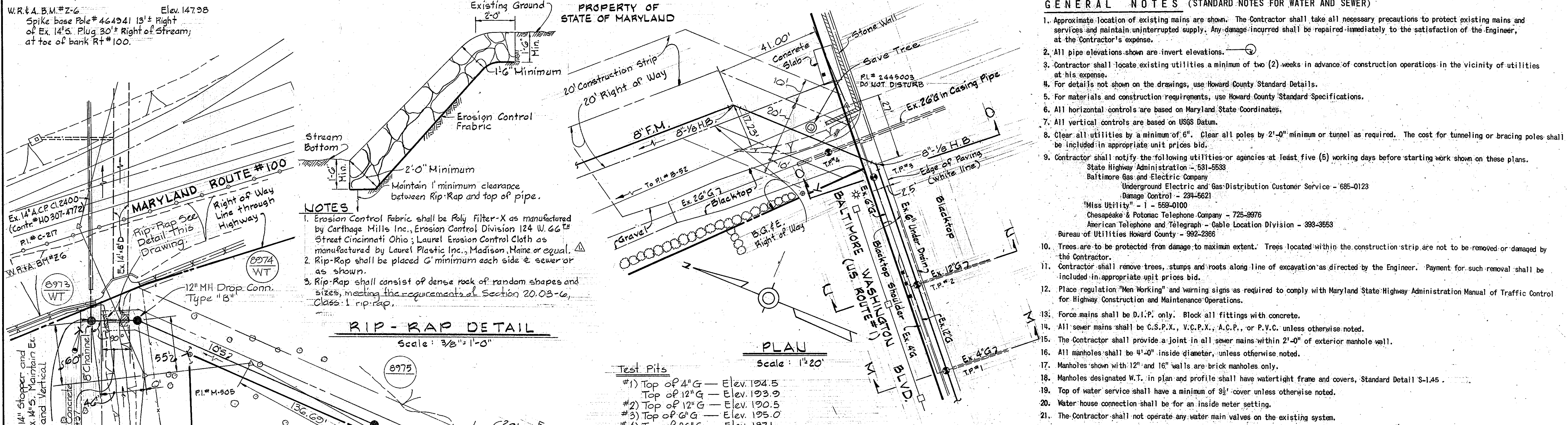
PLAN OF
SEWER MAIN

ELECTION DISTRICT
ELKRIDGE NO. 1

DRAWING NO. 5 OF 18
SCALE 1"=50'

WS 705-S/5

W.R.&A. B.M.#Z-6 Elev. 147.98
 Spike base Pole # 464941 13' 1/2 Right
 of Ex. 14' S. Plug 30' Right of Stream;
 at toe of bank Rt #100.



NOTES

- Erosion Control Fabric shall be Poly Filter-X as manufactured by Carthage Mills Inc., Erosion Control Division 124 W. 66th Street Cincinnati Ohio; Laurel Erosion Control Cloth as manufactured by Laurel Plastic Inc., Madison, Maine or equal.
- Rip-Rap shall be placed 6' minimum each side of sewer or as shown.
- Rip-Rap shall consist of dense rock of random shapes and sizes, meeting the requirements of Section 20.03-6, Class 1 rip-rap.

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

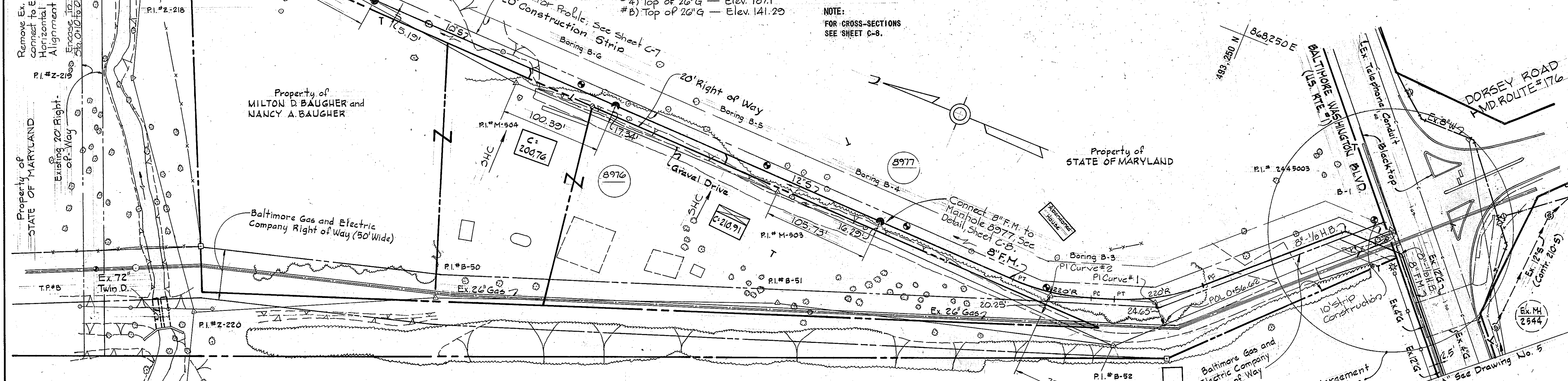
Test Pits

#1) Top of 4" G	Elev. 194.5
Top of 12" G	Elev. 193.9
#2) Top of 12" G	Elev. 190.5
#3) Top of 6" G	Elev. 195.0
#4) Top of 26" G	Elev. 187.1
#B) Top of 26" G	Elev. 141.29

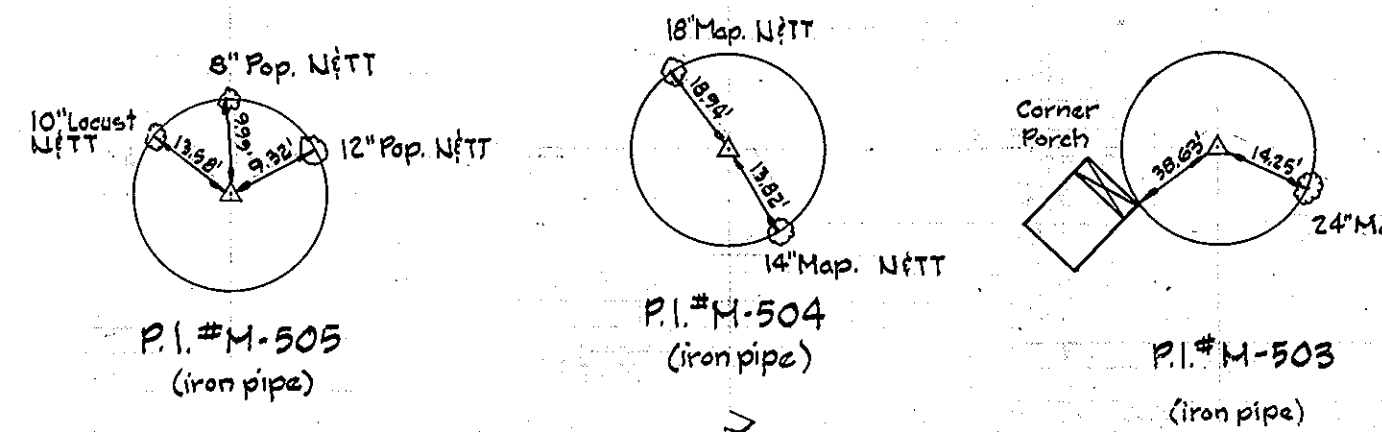
NOTE:
 FOR CROSS-SECTIONS
 SEE SHEET C-8.

GENERAL NOTES (STANDARD NOTES FOR WATER AND SEWER)

- 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 to the satisfaction of the Engineer, at the Contractor's expense.
- All pipe elevations shown are invert elevations.
- Contractor shall locate existing utilities a minimum of two (2) weeks in advance of construction operations in the vicinity of utilities at his expense.
- For details not shown on the drawings, use Howard County Standard Details.
- For materials and construction requirements, use Howard County Standard Specifications.
- All horizontal controls are based on Maryland State Coordinates.
- All vertical controls are based on USGS Datum.
- Clear all utilities by a minimum of 6". Clear all poles by 2'-0" minimum or tunnel as required. The cost for tunneling or bracing poles shall be included in appropriate unit prices bid.
- Contractor shall notify the following utilities or agencies at least five (5) working days before starting work shown on these plans.
 - State Highway Administration - 531-5533
 - Baltimore Gas and Electric Company
 - Underground Electric and Gas Distribution Customer Service - 685-0123
 - Damage Control - 294-5621
 - "Miss Utility" - 1 - 558-0100
 - Chesapeake & Potomac Telephone Company - 725-3976
 - American Telephone and Telegraph - Cable Location Division - 393-3553
 - Bureau of Utilities Howard County - 992-2366
- Trees are to be protected from damage to maximum extent. Trees located within the construction strip are not to be removed or damaged by the Contractor.
- Contractor shall remove trees, stumps and roots along line of excavation as directed by the Engineer. Payment for such removal shall be included in appropriate unit prices bid.
- Place regulation "Men Working" and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction and Maintenance Operations.
- Force mains shall be D.I.P. only. Block all fittings with concrete.
- All sewer mains shall be C.S.P.X., V.C.P.X., A.C.P., or P.V.C. unless otherwise noted.
- The Contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.
- All manholes shall be 4'-0" inside diameter, unless otherwise noted.
- Manholes shown with 12" and 16" walls are brick manholes only.
- Manholes designated W.T. in plan and profile shall have watertight frame and covers, Standard Detail S-1.45.
- Top of water service shall have a minimum of 3 1/2' cover unless otherwise noted.
- Water house connection shall be for an inside meter setting.
- The Contractor shall not operate any water main valves on the existing system.



PLAN
 Scale: 1" = 50'



No.	Date	Revision
12-2-81		Revised Rip-Rap Detail Note #1

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Robert Berman 4/29/81 *Allen J. Brown* 4/15/81
 CHIEF-BUREAU OF UTILITIES - DATE CHIEF-UTILITIES DIVISION - DATE

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

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

John E. Nunnally 4-28-81 *K. Keenan* 4/11/81
 DIRECTOR OF PUBLIC WORKS - DATE CHIEF-BUREAU OF ENGINEERING - DATE

CONTRACT NO. 705-S
 PROJECT NO. S-4-6048

PLAN OF
 SEWER MAIN

ELECTION DISTRICT
 ELKRIDGE NO. 1

DRAWING
 NO. 6
 OF 18

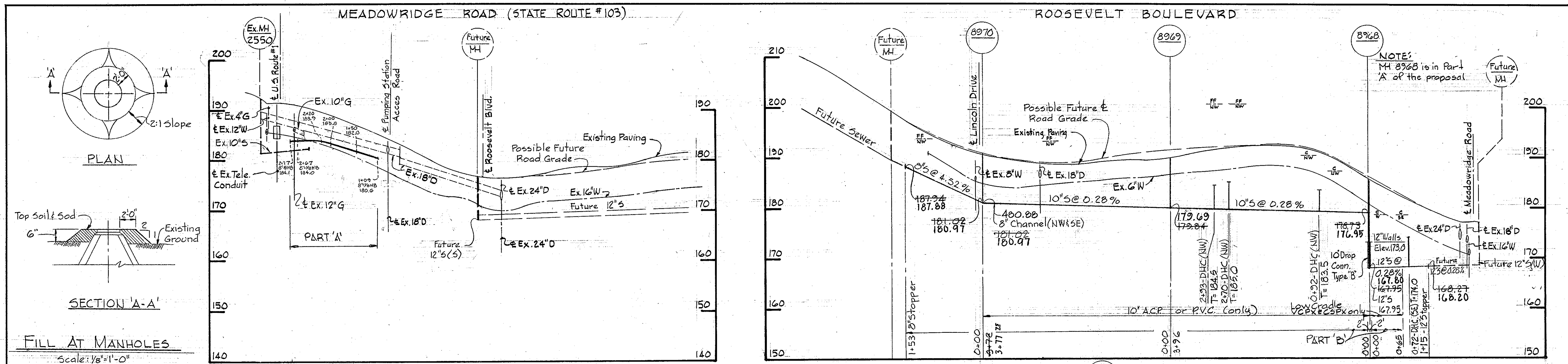
SCALE
 AS
 SHOWN

493-13
 493-14
 494-13
 494-14

W.O. 7555-2

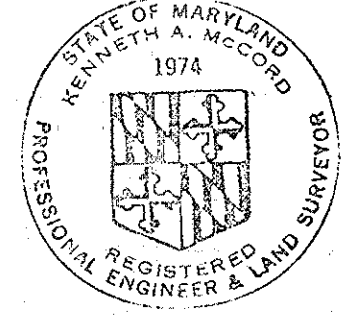
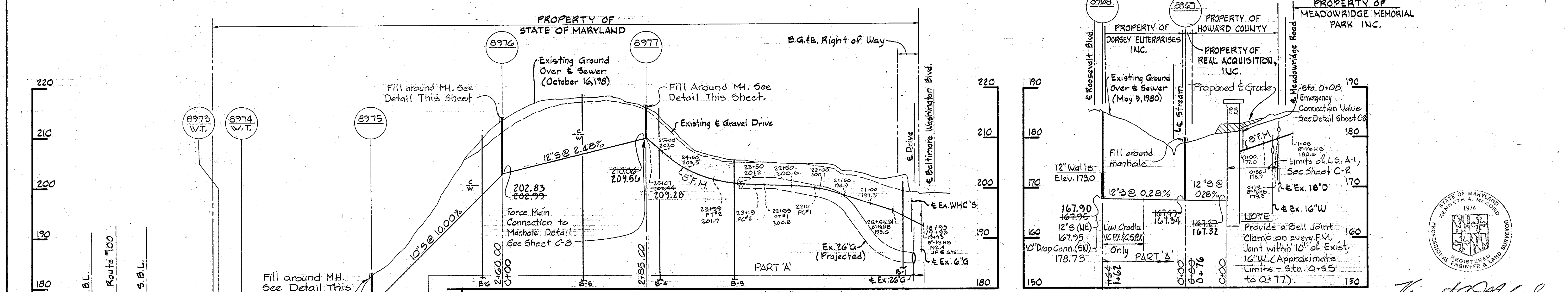
AS-BUILT October 29, 1984 December 2, 1981

WS 705-516

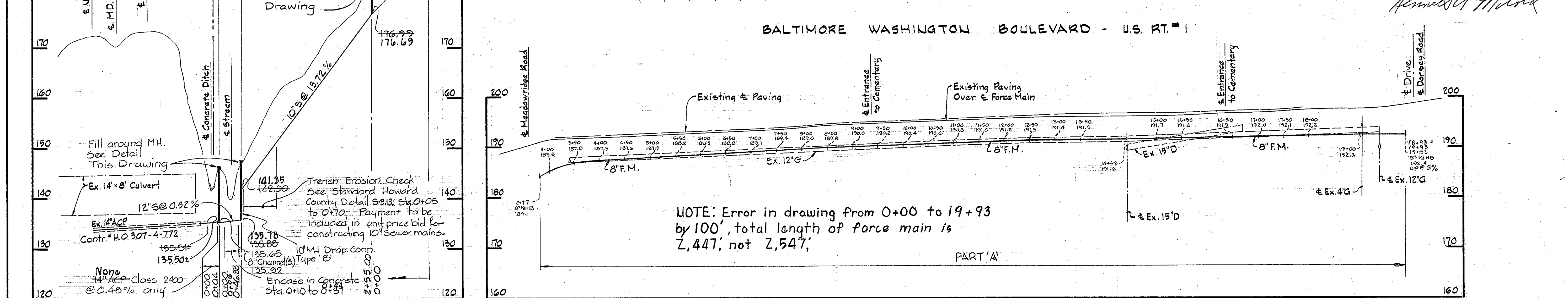


NOTE: MH 8968 is in Part 'A' of the proposal.

FILL AT MANHOLES
Scale: 1/8"=1'-0"



Kenneth A. McCord



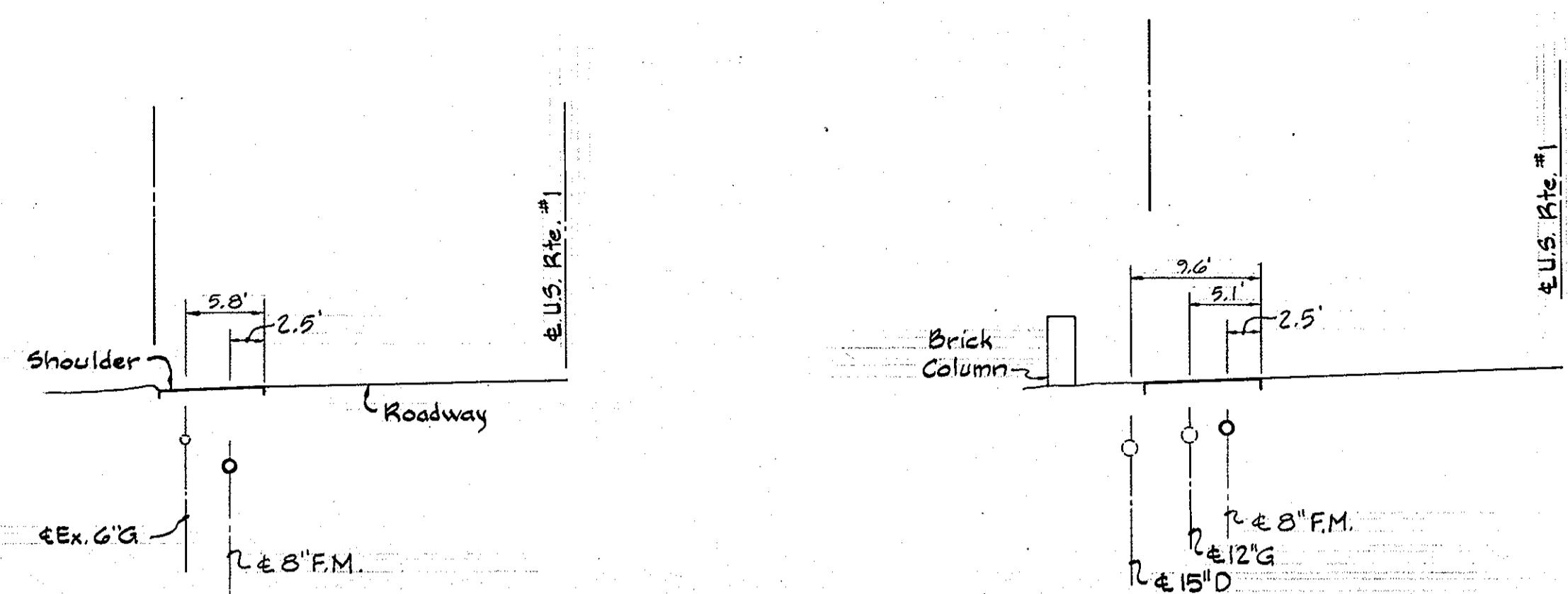
NOTE: Error in drawing from 0+00 to 19+93 by 100', total length of force main is 2,447', not 2,547'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
R. J. Sumner 4/24/81
CHIEF-BUREAU OF UTILITIES - DATE
Allen S. Brown 4/15/81
CHIEF-UTILITIES DIVISION - DATE
WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
1304 ST. PAUL ST.
BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
W. F. N... 4/24/81
DIRECTOR OF PUBLIC WORKS - DATE
K... 4/16/81
CHIEF-BUREAU OF ENGINEERING & DATE

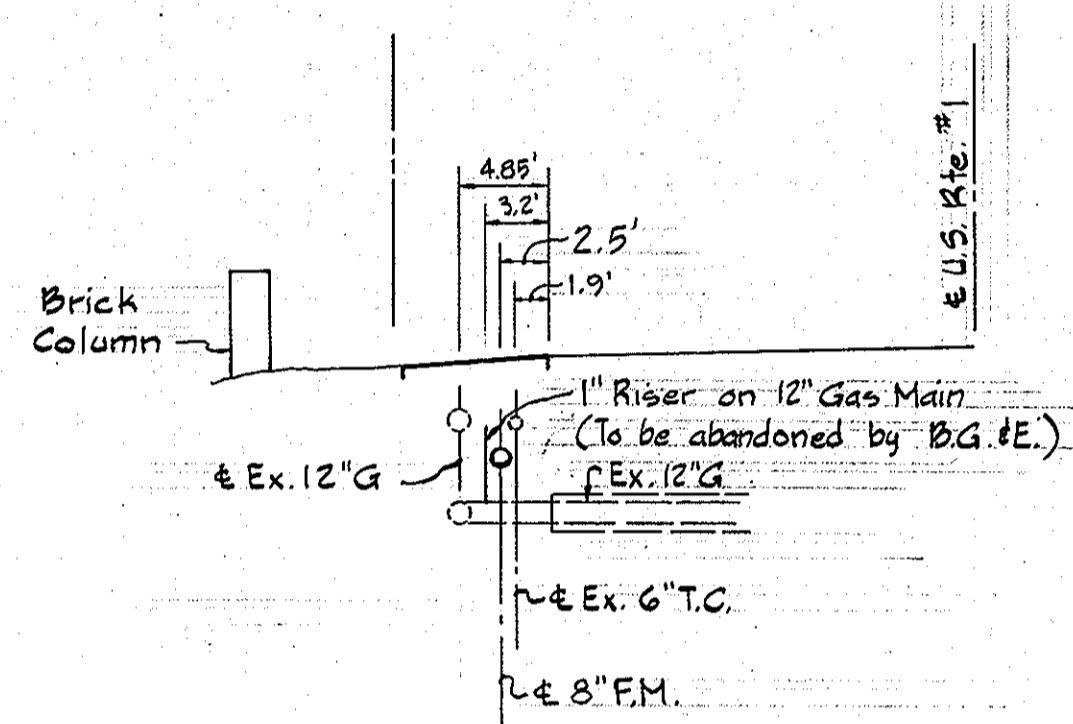
CONTRACT NO. 705-S PROJECT NO. S-4-6048	PROFILE OF SEWER MAIN	ELECTION DISTRICT ELKRIDGE NO. 1	DRAWING NO. 7 OF 18	SCALE AS SHOWN
Meadowridge Sewer & P.S. Project No. S-4-6048 Contract No. 705-S			Sheet No. C-7	

WS 705-S/7

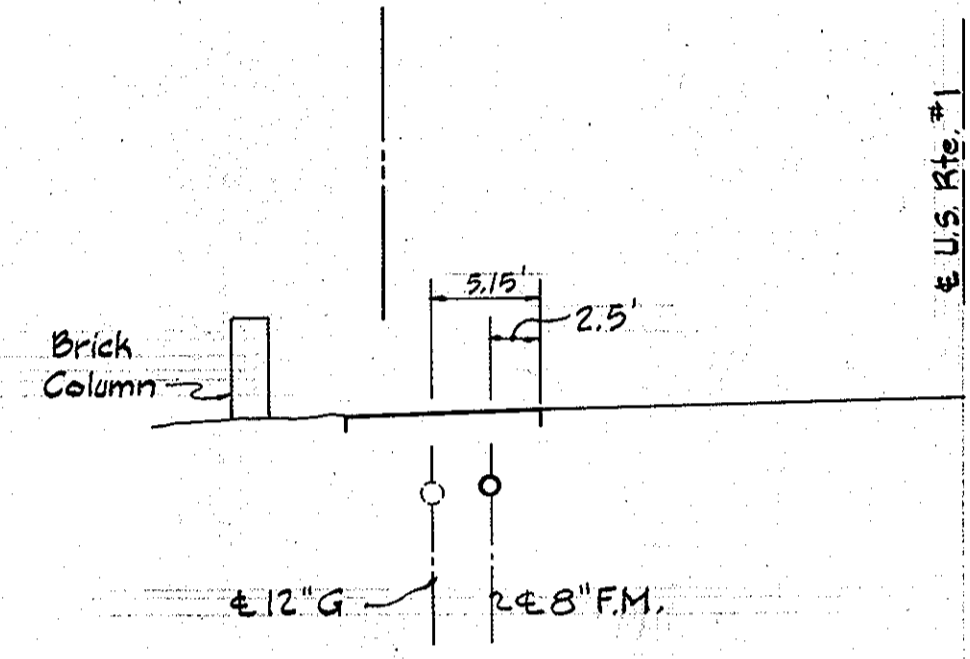


SECTION "O-O"

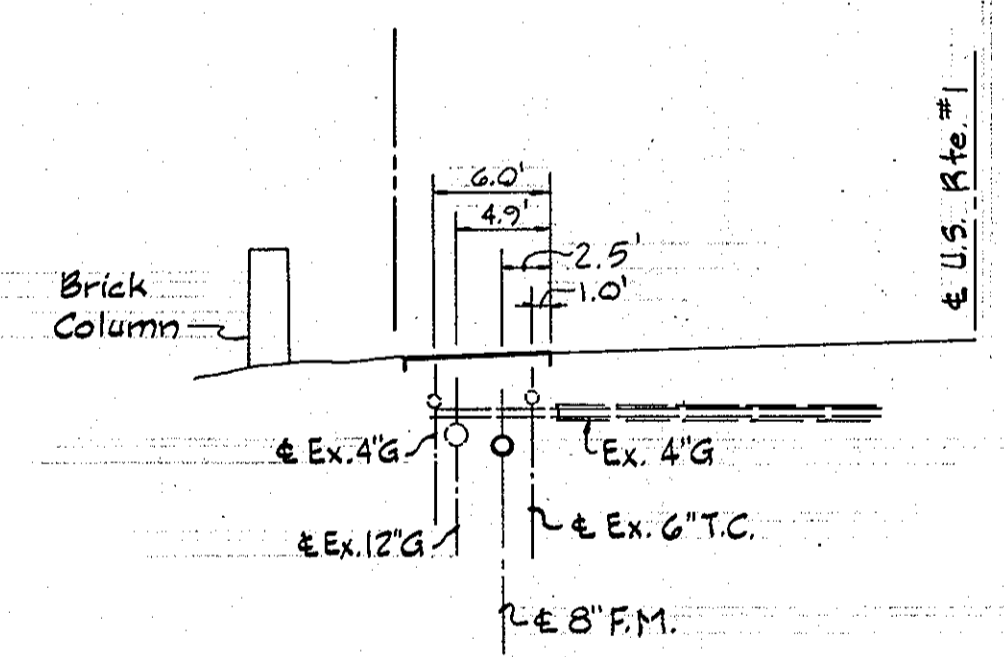
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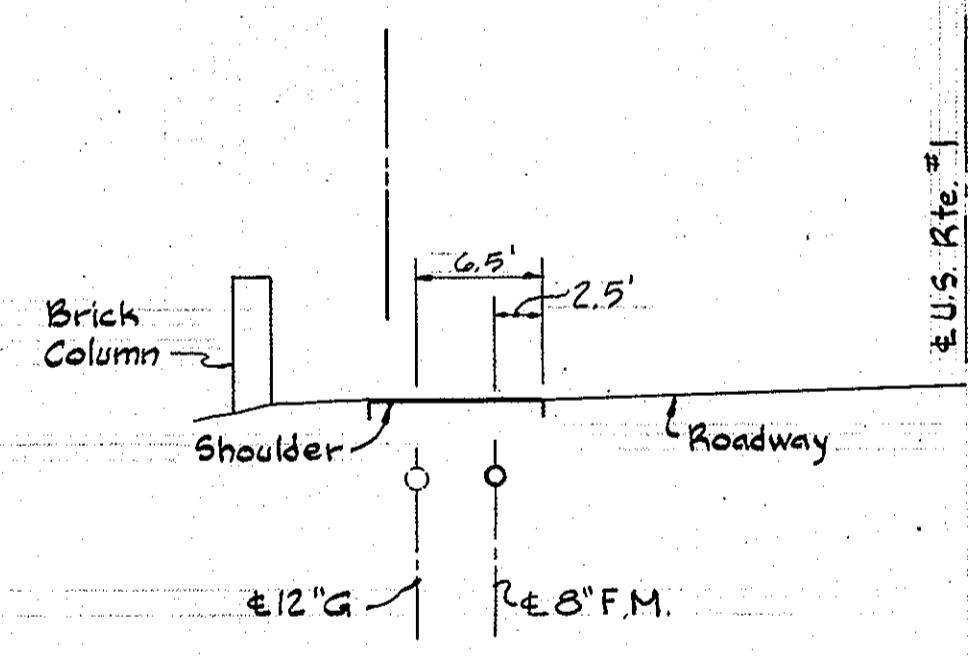
SECTION "N-N"



SECTION "K-K"



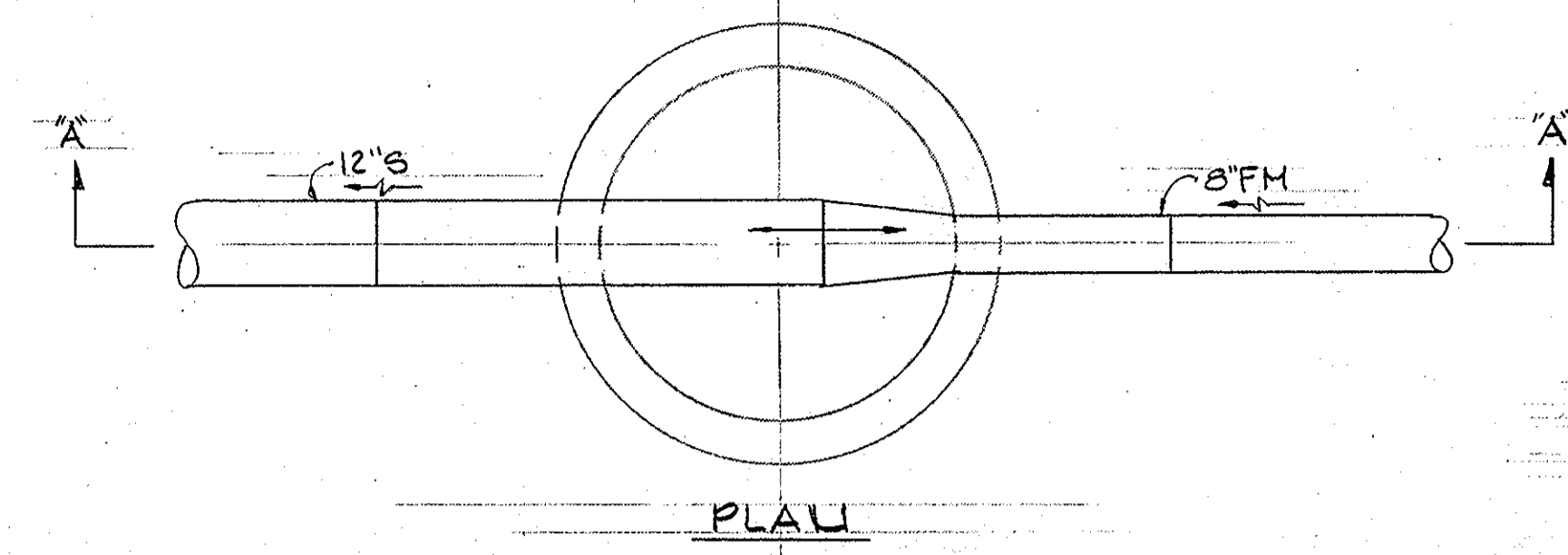
SECTION "M-M"



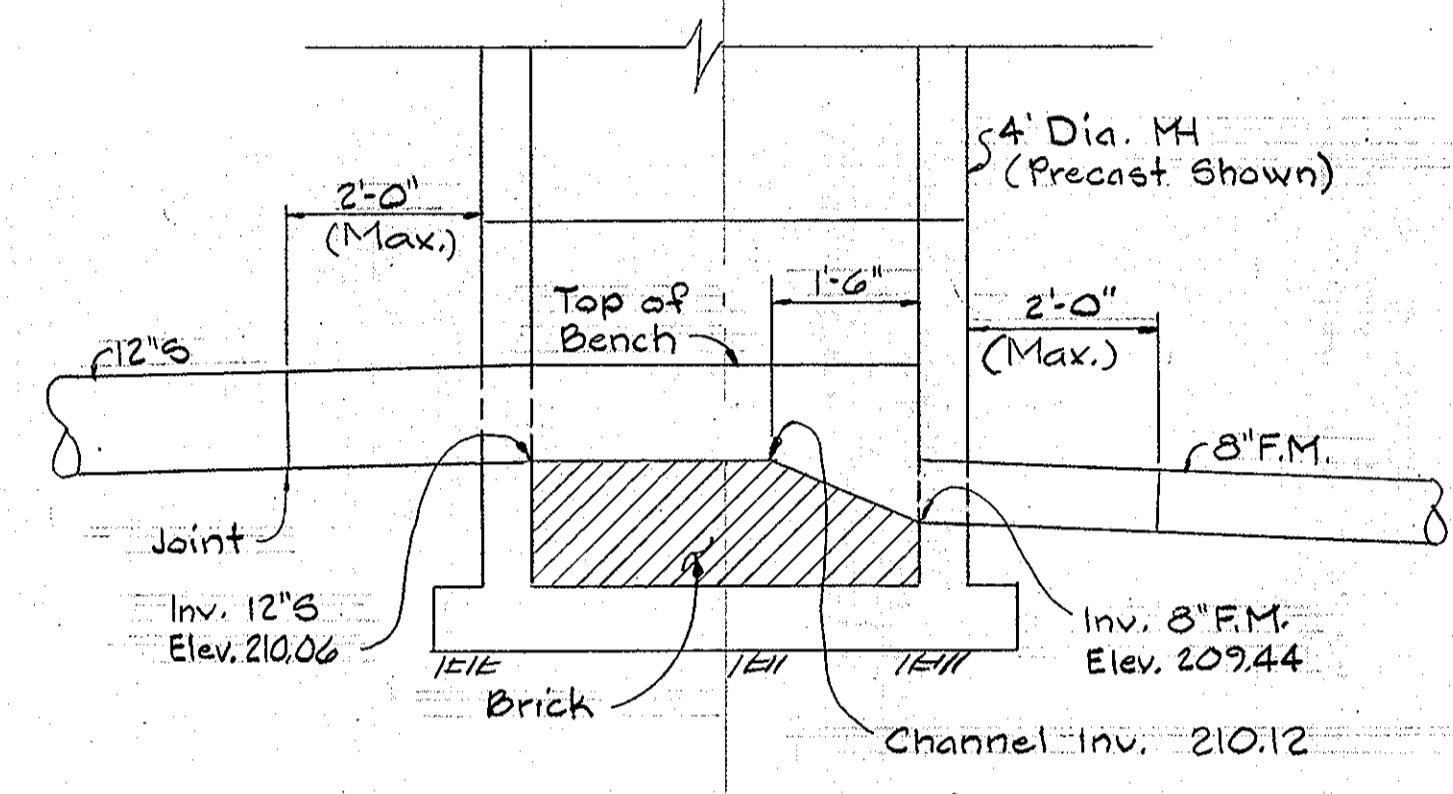
SECTION "J-J"

CROSS-SECTIONS

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

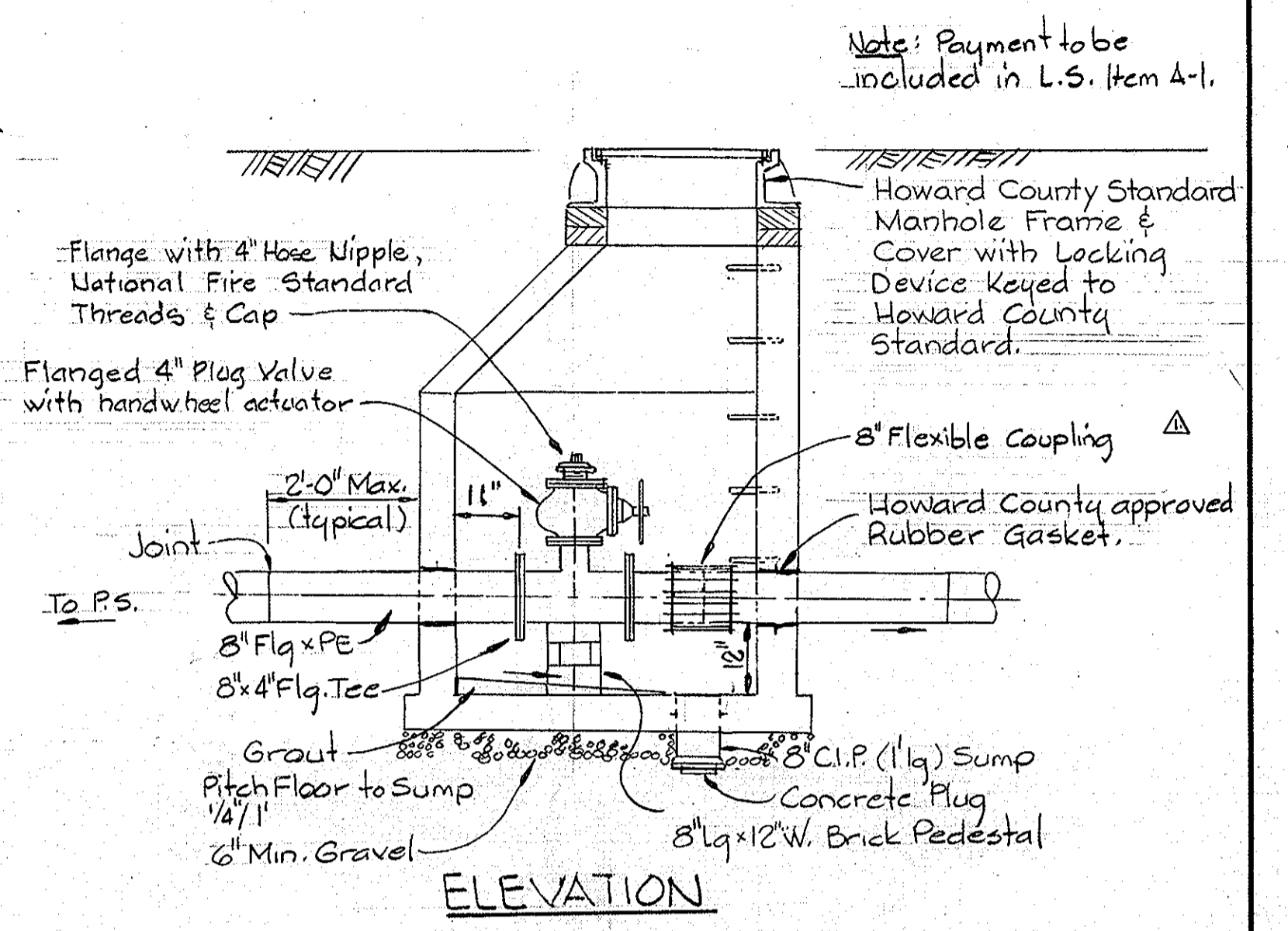


PLAN

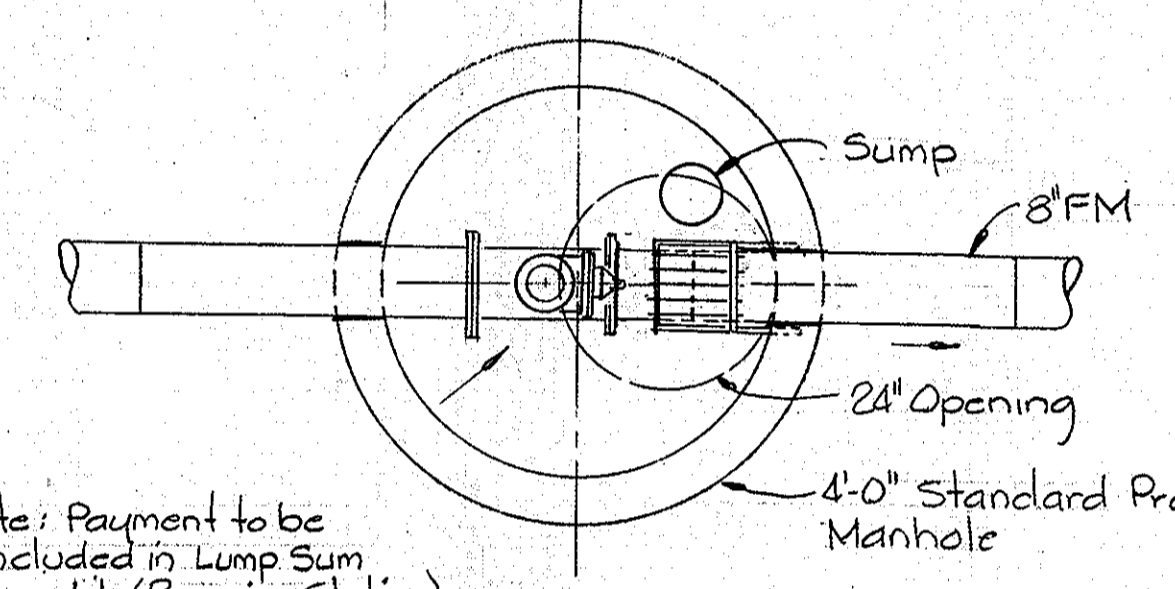


SECTION "A-A"
DETAIL MH# 8977

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



ELEVATION

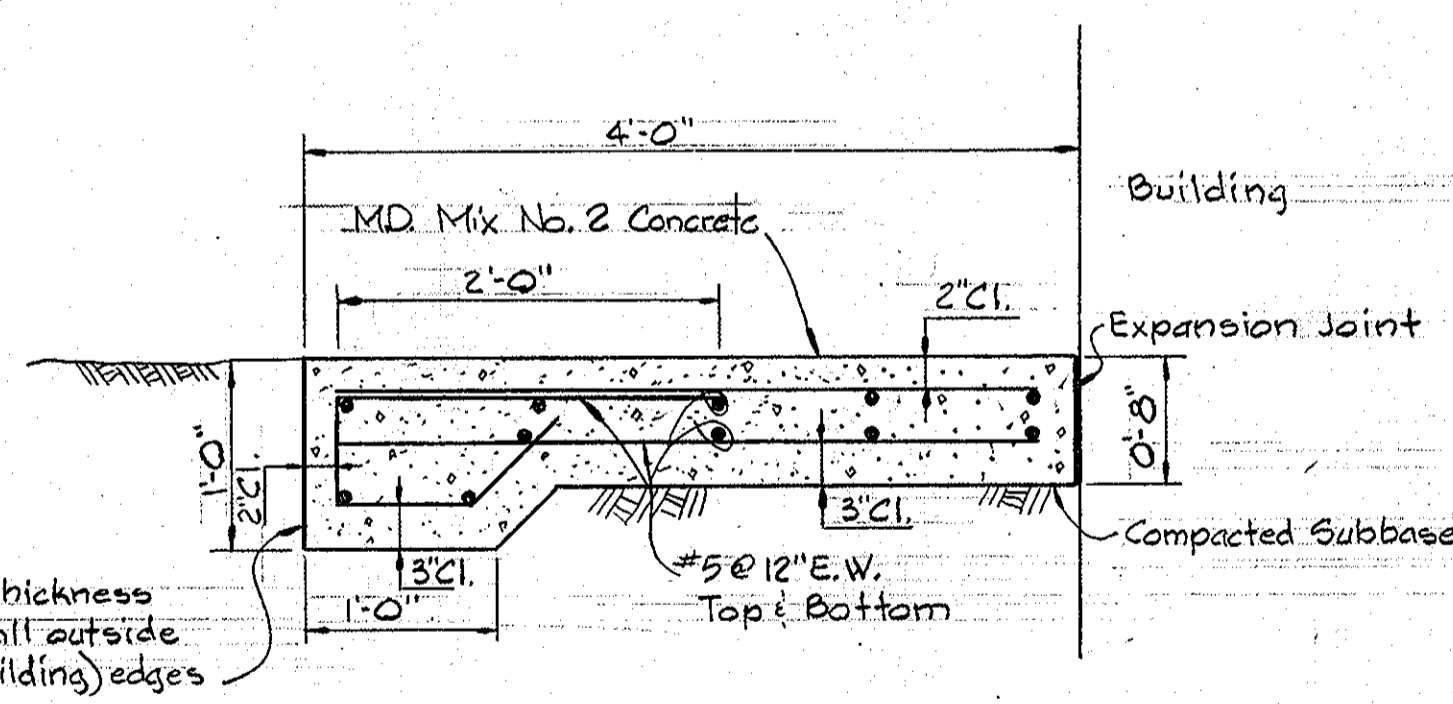


PLAN

EMERGENCY CONNECTION VALVE DETAIL

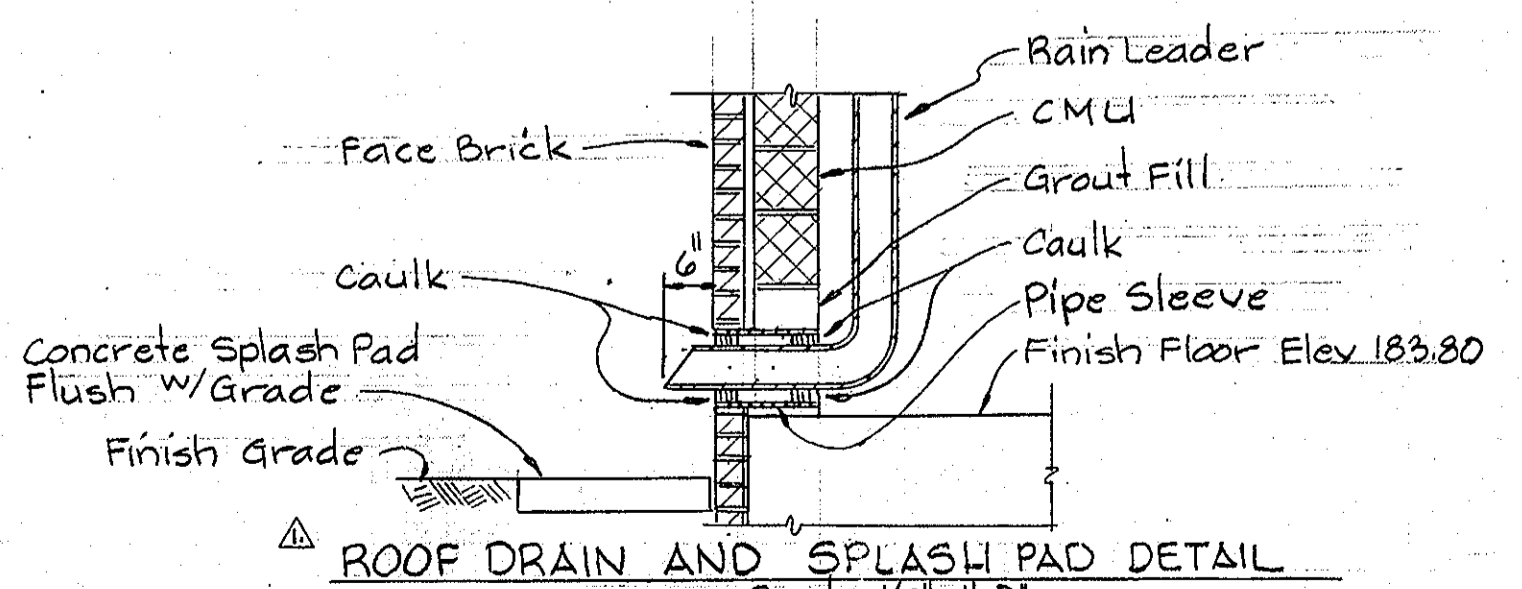
Scale: 1/2"=1'-0"

Note: Payment to be included in Lump Sum Item 4-1. (Pumping Station)



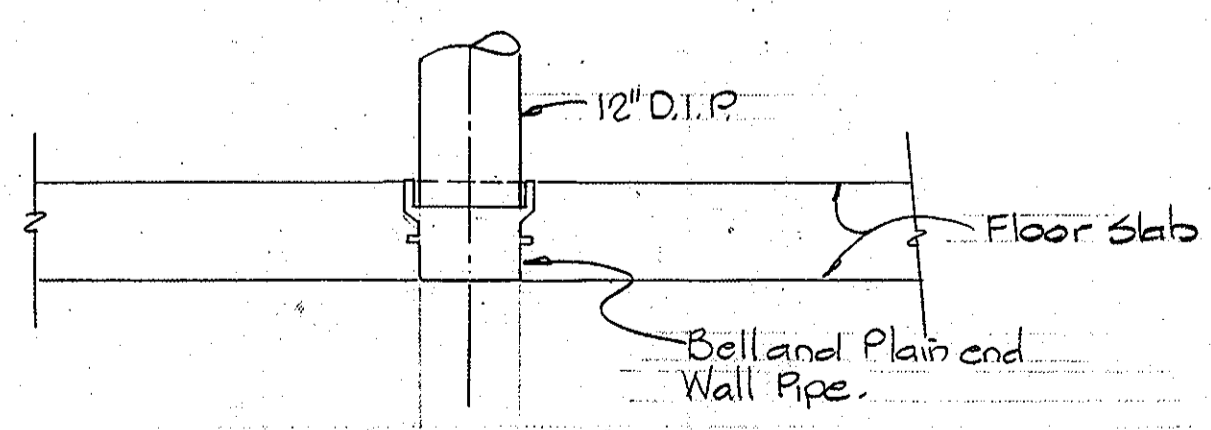
SIDEWALK DETAIL

Scale: 1"=1'-0"



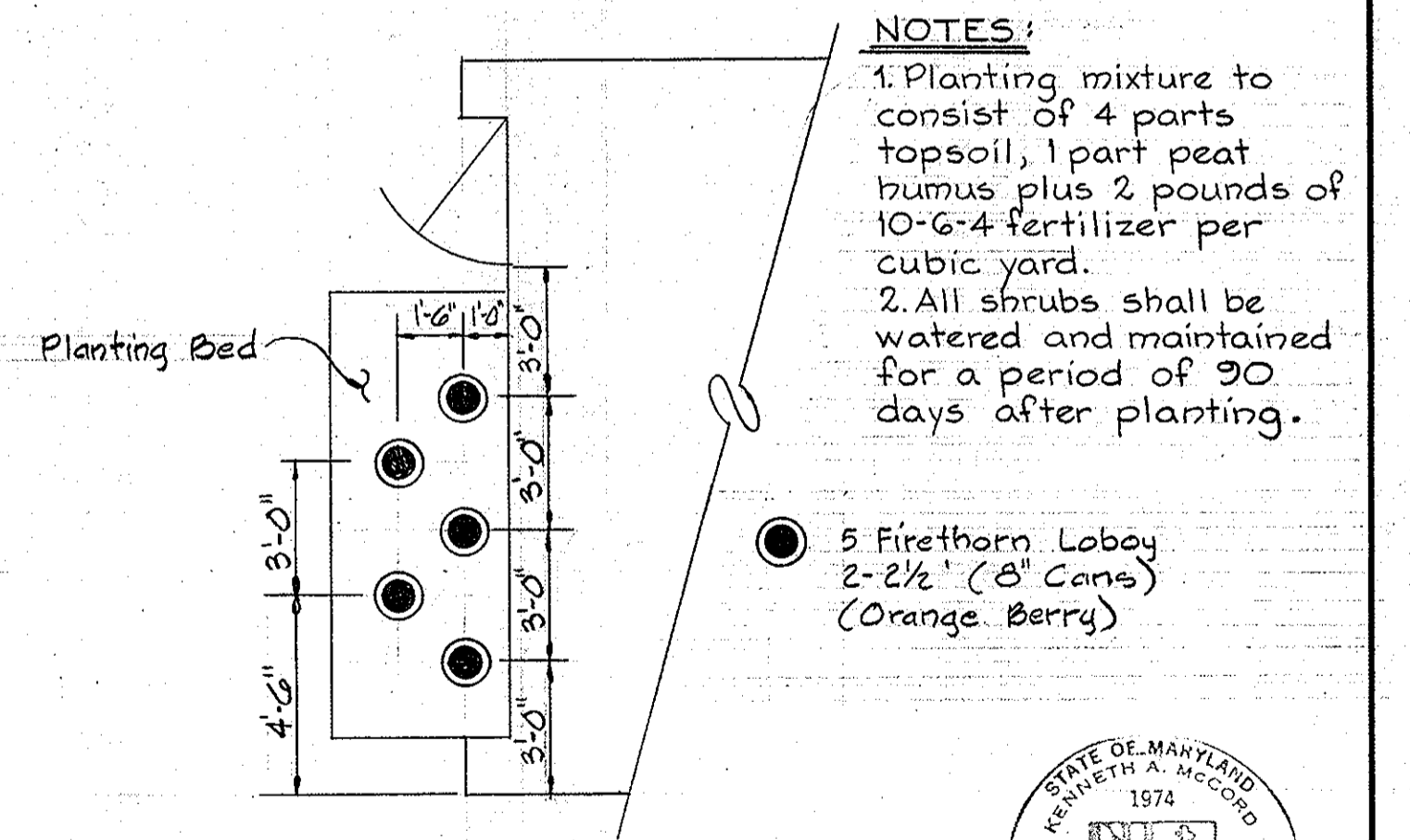
ROOF DRAIN AND SPLASH PAD DETAIL

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



WET WELL VENT PIPE SUPPORT DETAIL

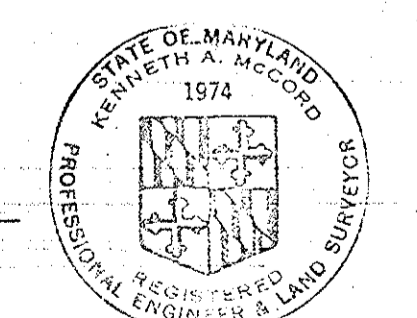
Scale: 1/2"=1'-0"



PLANTING BED DETAIL

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

NOTES:
1. Planting mixture to consist of 4 parts topsoil, 1 part peat humus plus 2 pounds of 10-6-4 fertilizer per cubic yard.
2. All shrubs shall be watered and maintained for a period of 90 days after planting.



Kenneth A. McLeod
Meadowridge
Sewer & P.S.
Project No. S-4-6048
Contract No. 705-5

Sheet No. C-8

Δ	12-2-81	Revised Emergency Connection Valve Detail and Added Roof Drain and Splash Pad Detail
No.	Date	Revision
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Robert Bunnin 9/24/81 CHIEF-BUREAU OF UTILITIES - DATE Allen J. Brown 4/15/81 CHIEF-UTILITIES DIVISION - DATE		

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
George F. Newman 4-28-81
DIRECTOR OF PUBLIC WORKS - DATE
William J. Rupp 4/14/81
CHIEF-BUREAU OF ENGINEERING - DATE

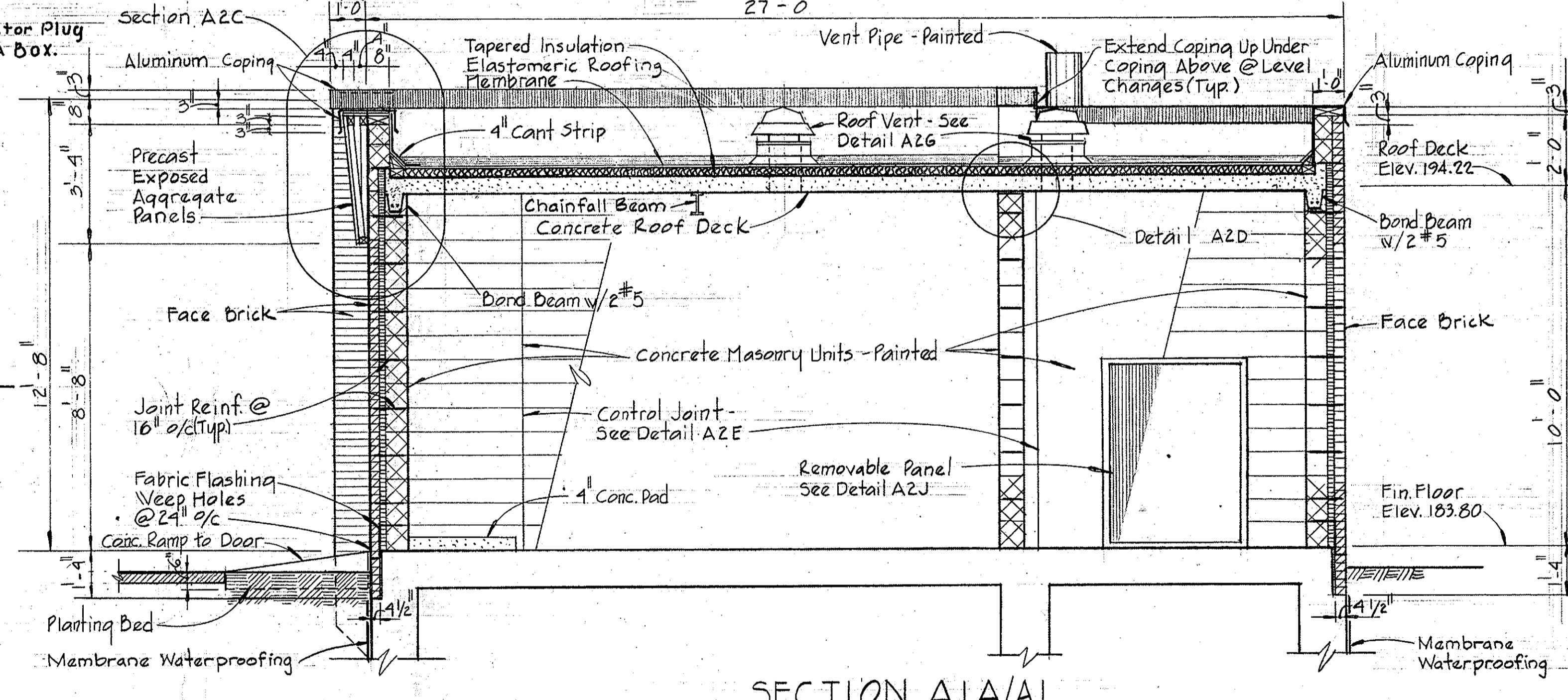
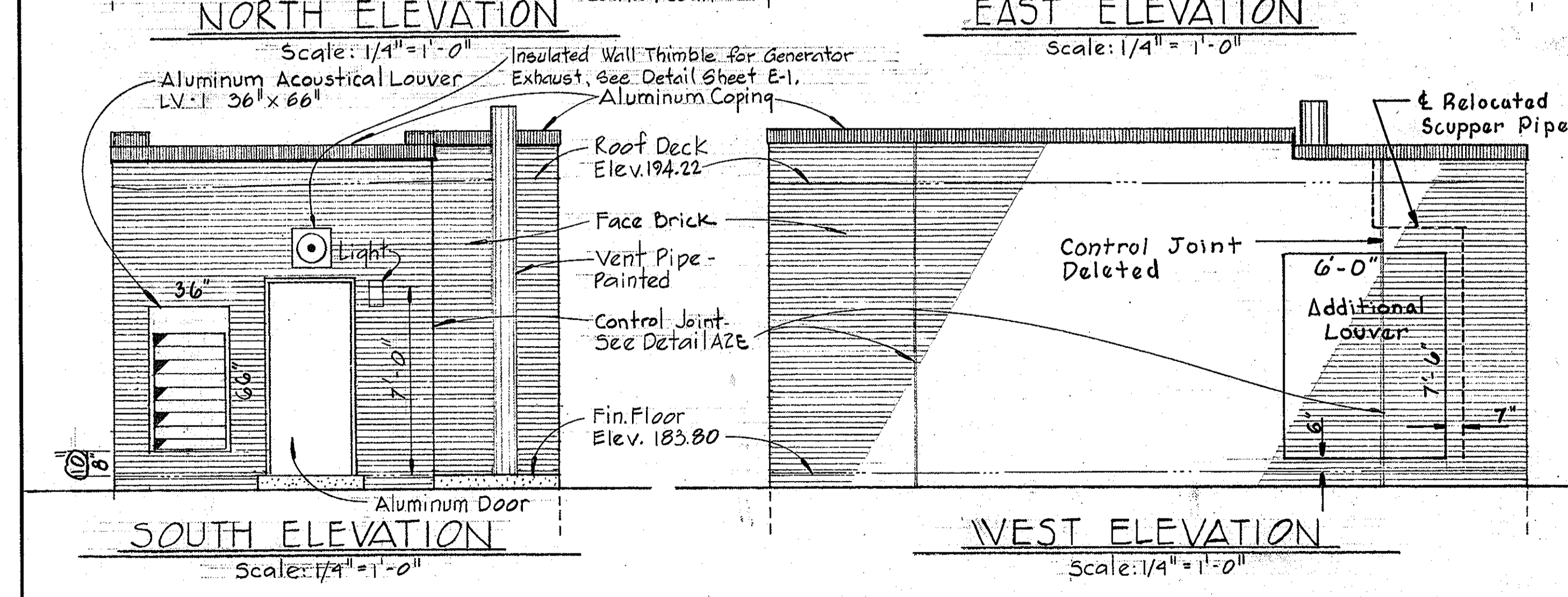
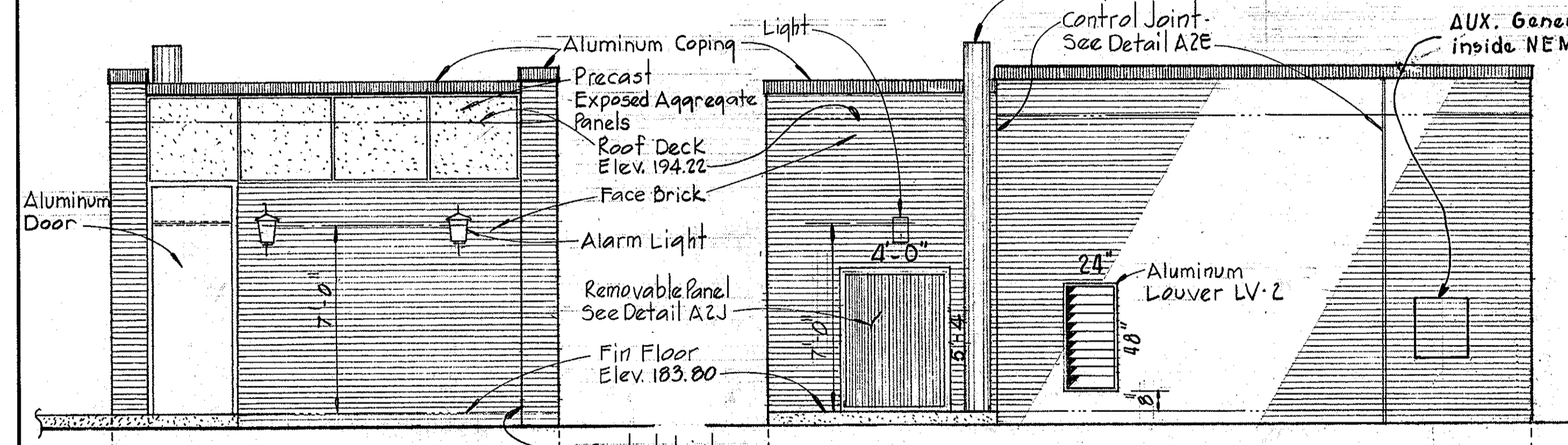
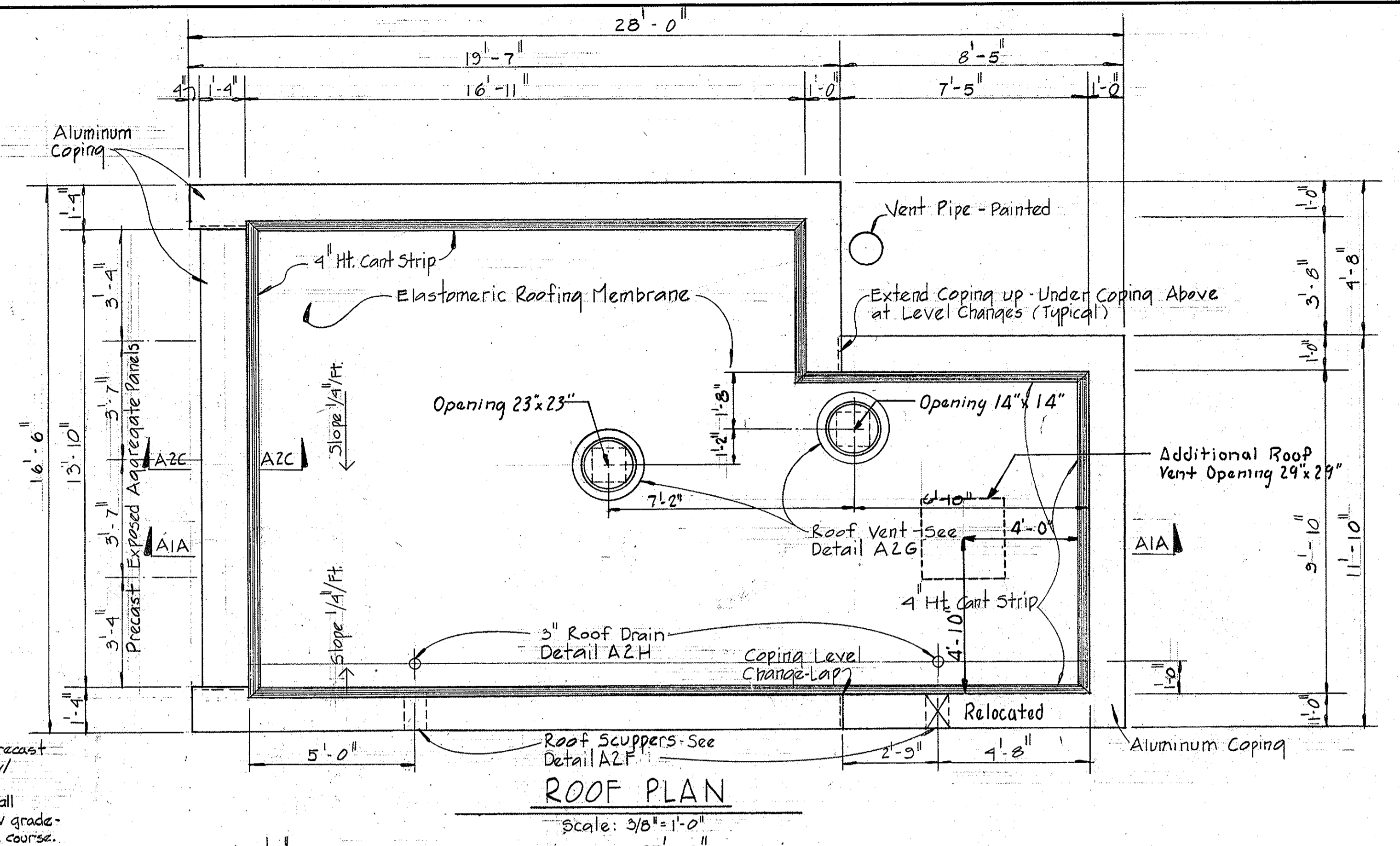
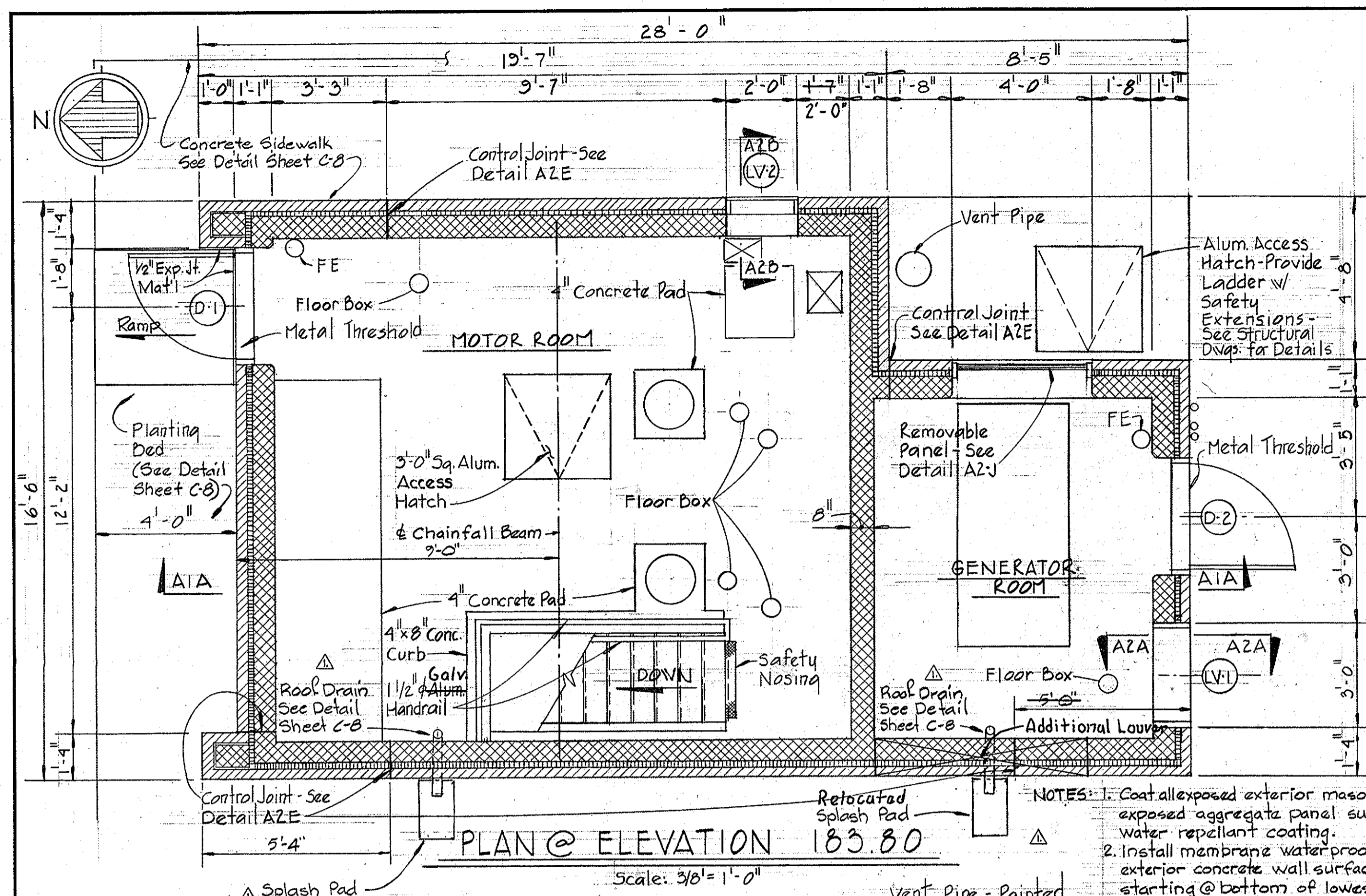
CONTRACT NO. 705-S
PROJECT NO. S-4-6048

DETAILS & CROSS-SECTIONS

ELECTION DISTRICT ELKRIDGE NO. 1

DRAWING NO. 8 OF 18	SCALE AS SHOWN
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WS 705 - S/8



FINISH SCHEDULE

ROOM	FLOOR MAT'L	FLOOR COLOR	BASE MAT'L	BASE COLOR	WALLS MAT'L	WALLS COLOR	CEILING MAT'L	CEILING COLOR	REMARKS
DRY WELL	CFH		CONCP		CONCP		CONCP		
WET WELL	CONCP	BLACK	CONCP	BLACK	CONCP	BLACK	CONCP		Paint Conc. Below Water Black - Paint Conc. Above Water Color.
MOTOR ROOM	CFH		CMU-P		CMU-P		CONCP		
GENERATOR ROOM	CFH		CMU-P		CMU-P		CONCP		

DOOR SCHEDULE

NO.	SIZE	MAT'L	HEAD	JAMB	SILL	HDW.	REMARKS
D-1	3'-0" x 7'-2" x 1 3/4"	ALUM	H-1	J-1	S-1	HW-1	1'-4" x 3'-0" Removable Transom Panel
D-2	3'-0" x 7'-2" x 1 3/4"	ALUM	H-2	J-1	S-1	HW-1	

12-2-81 Added Roof Detail and Splash Pad.
No. Date Revision

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

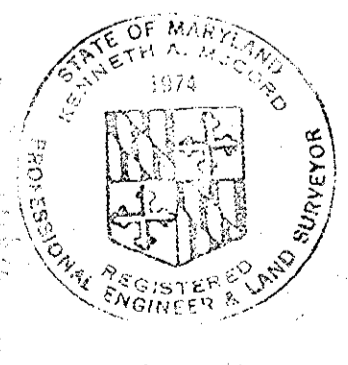
Director of Public Works - DATE
Chief - Bureau of Engineering - DATE
Chief - Bureau of Utilities - DATE

CONTRACT NO. 705-S
PROJECT NO. S-4-6048

ARCHITECTURAL
PLANS, ELEVATIONS, SECTIONS.

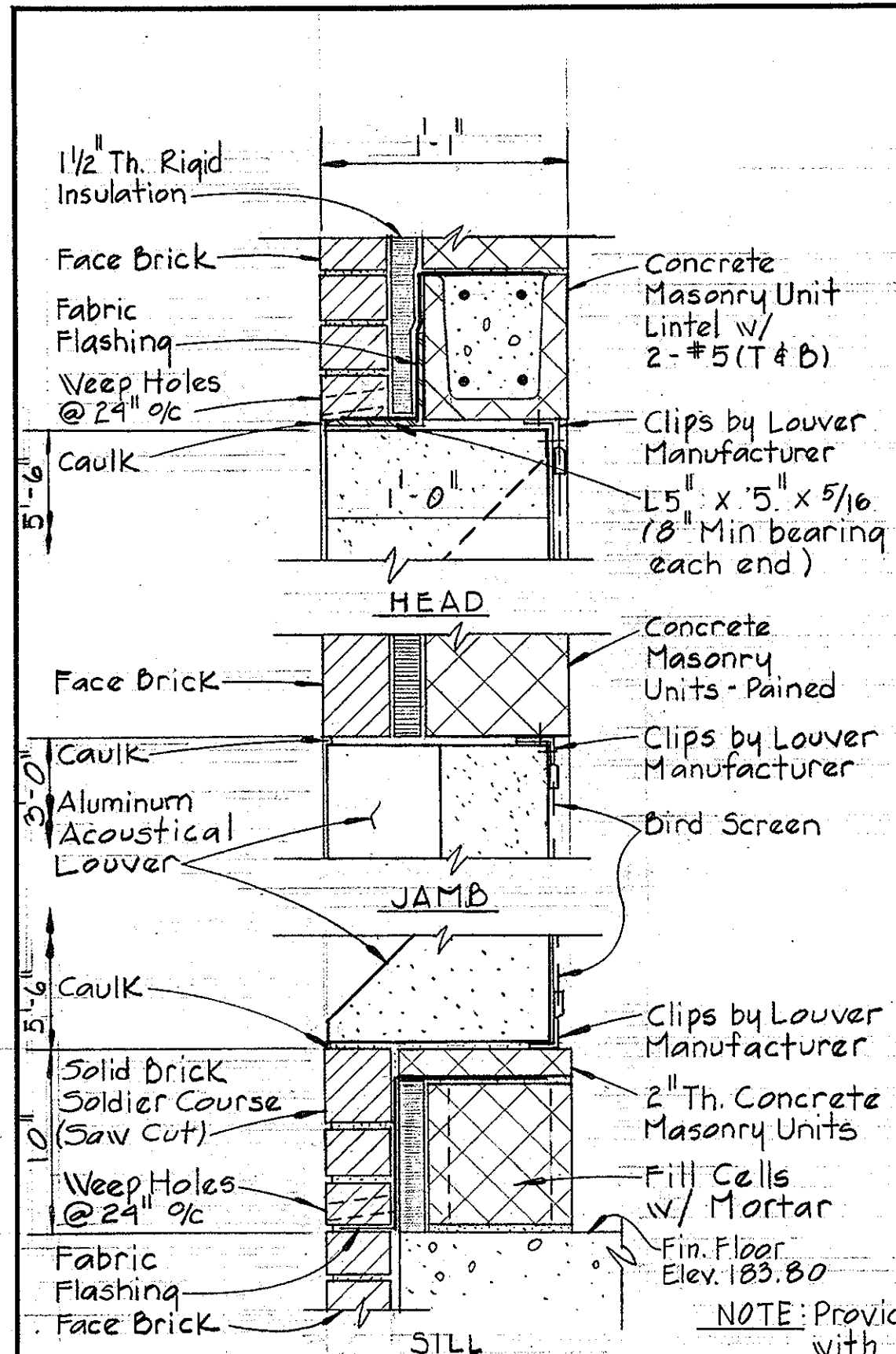
ELECTION DISTRICT
ELKRIDGE NO. 1

DRAWING NO. 9 OF 18
SCALE AS SHOWN

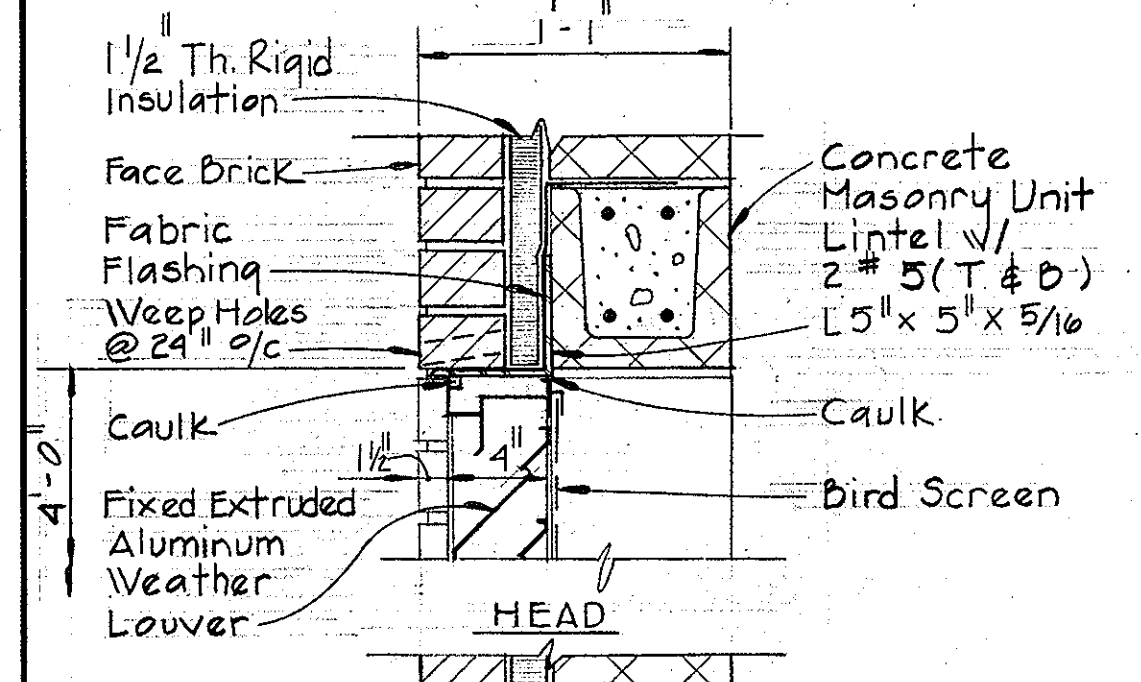


Kenneth A. McLeod

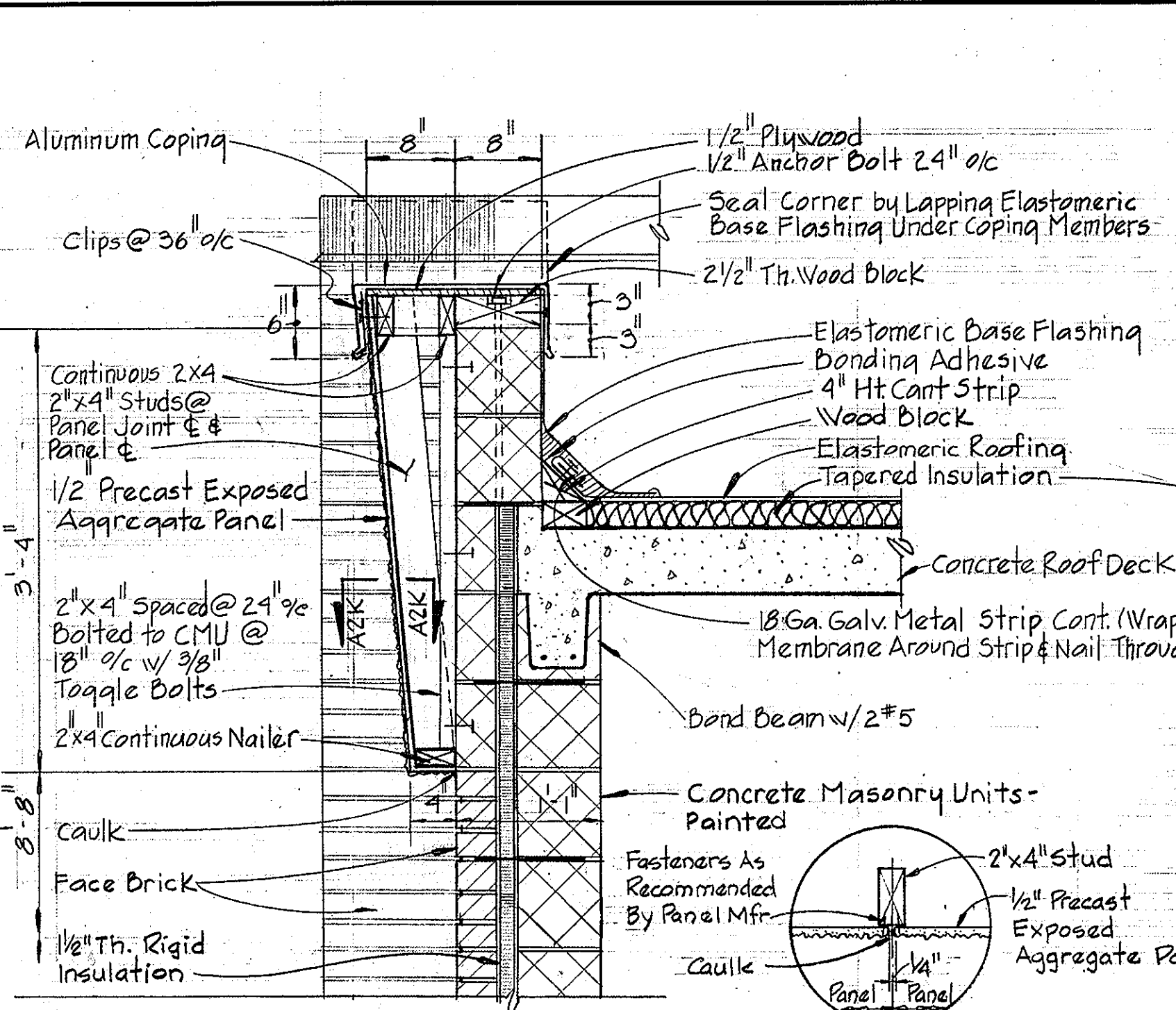
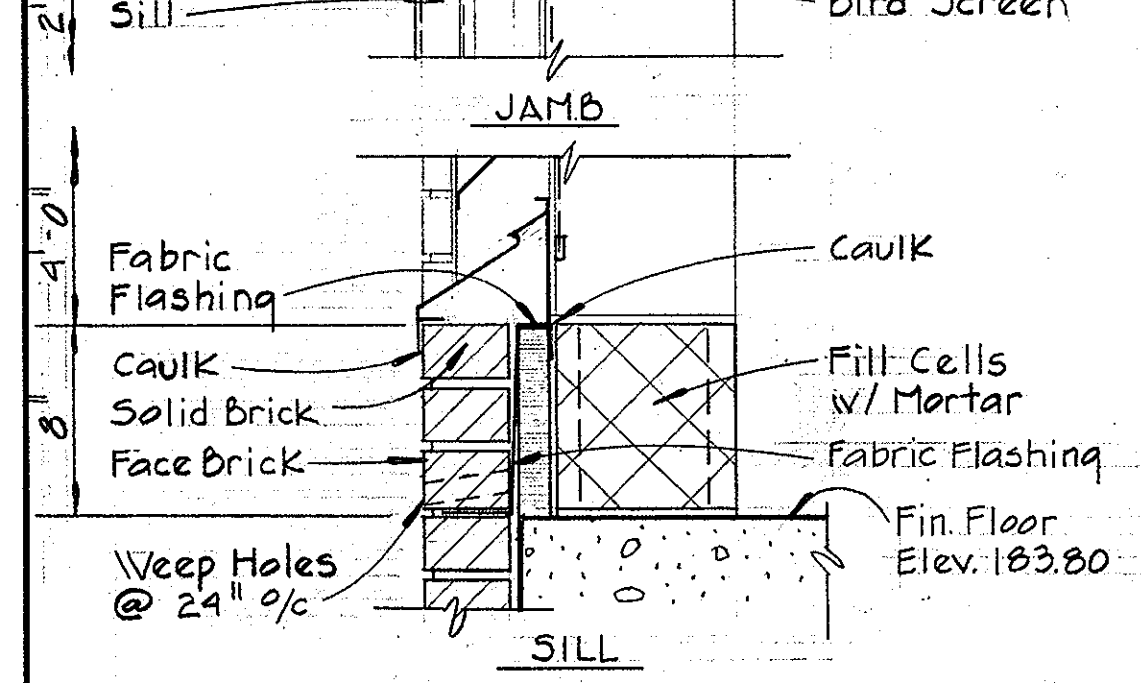
WS 705-S/9



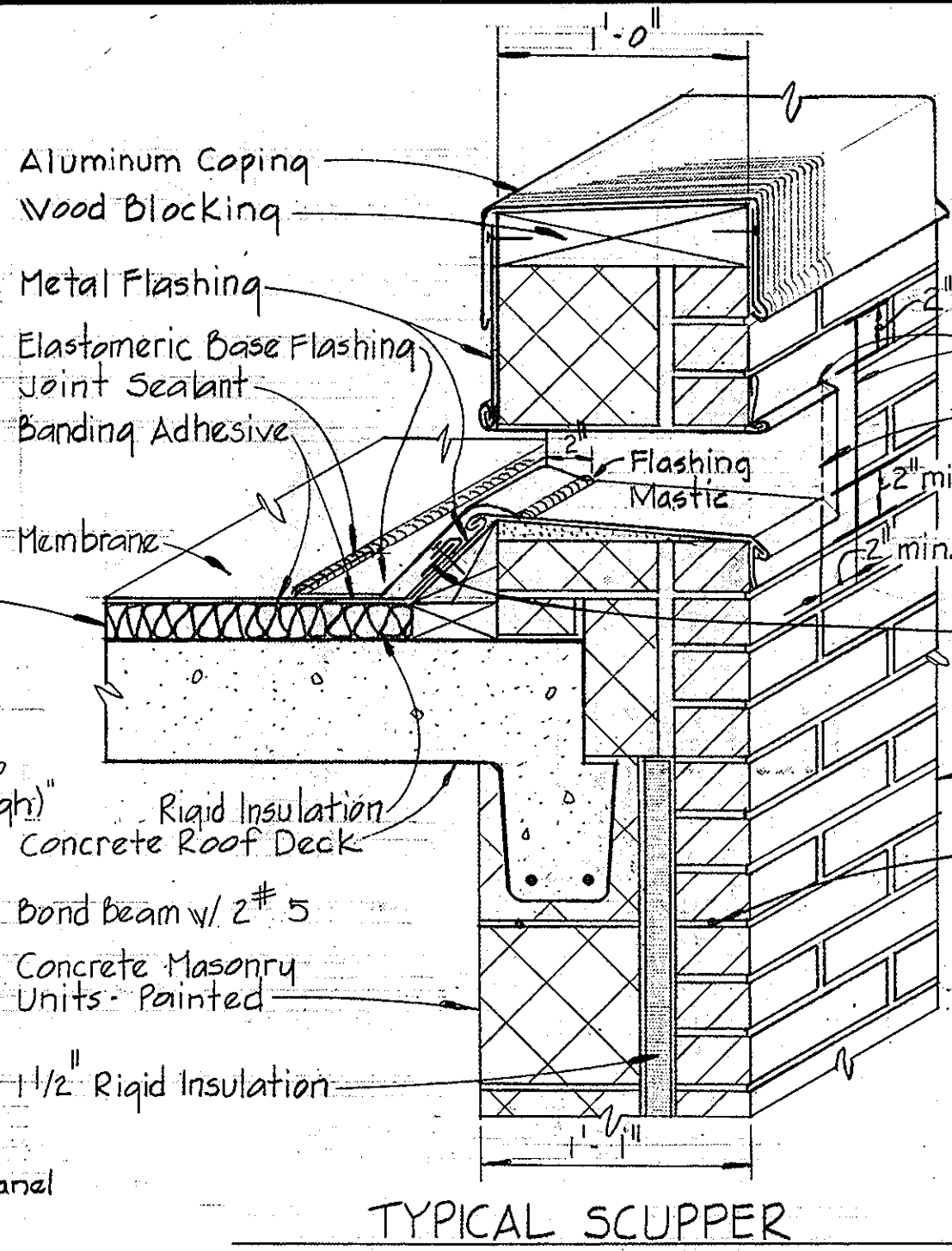
SECTION A2A/A1
Scale: 1/2" = 1'-0"



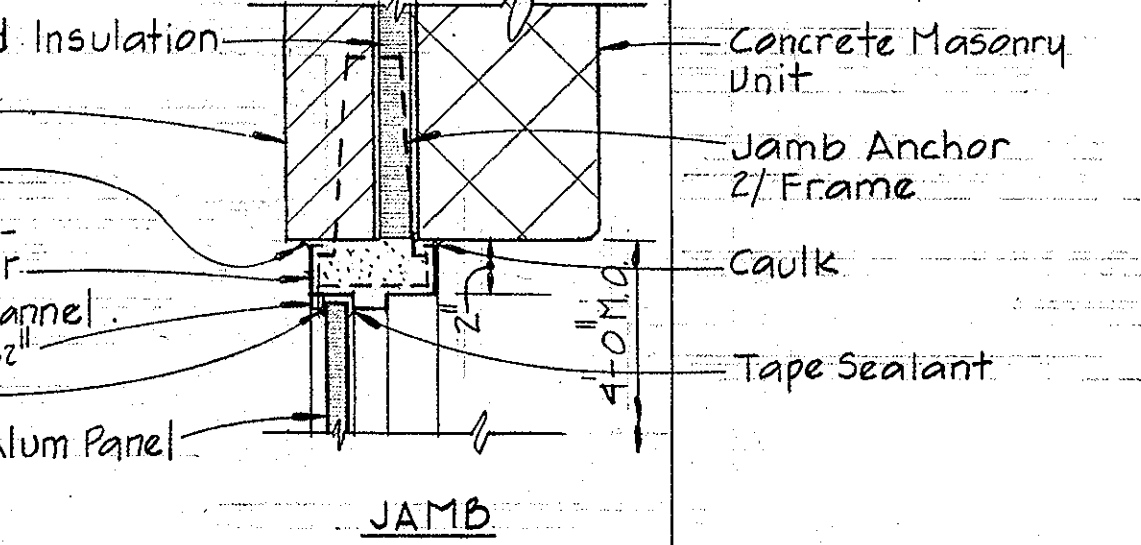
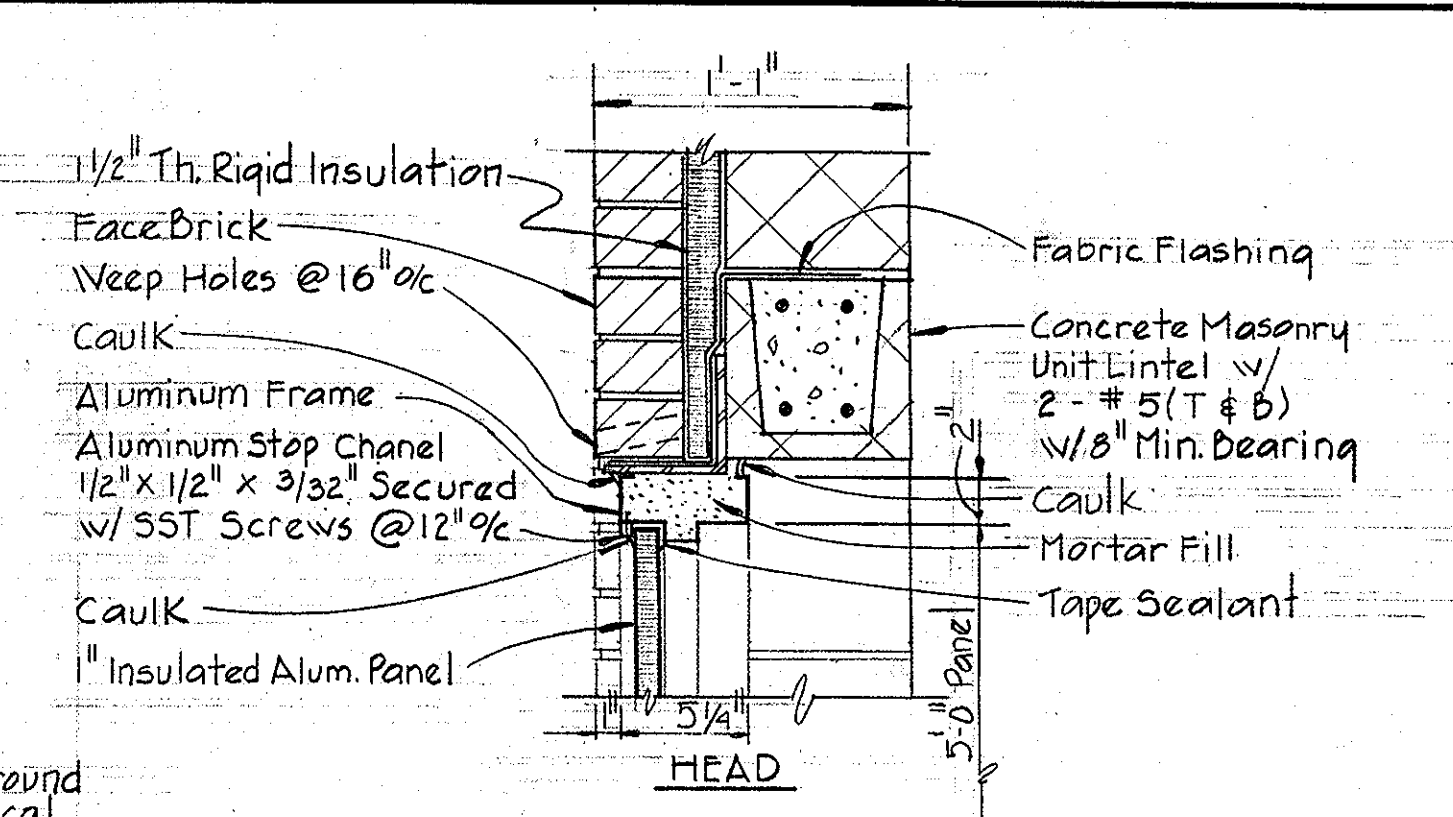
SECTION A2B/A1
Scale: 1/2" = 1'-0"



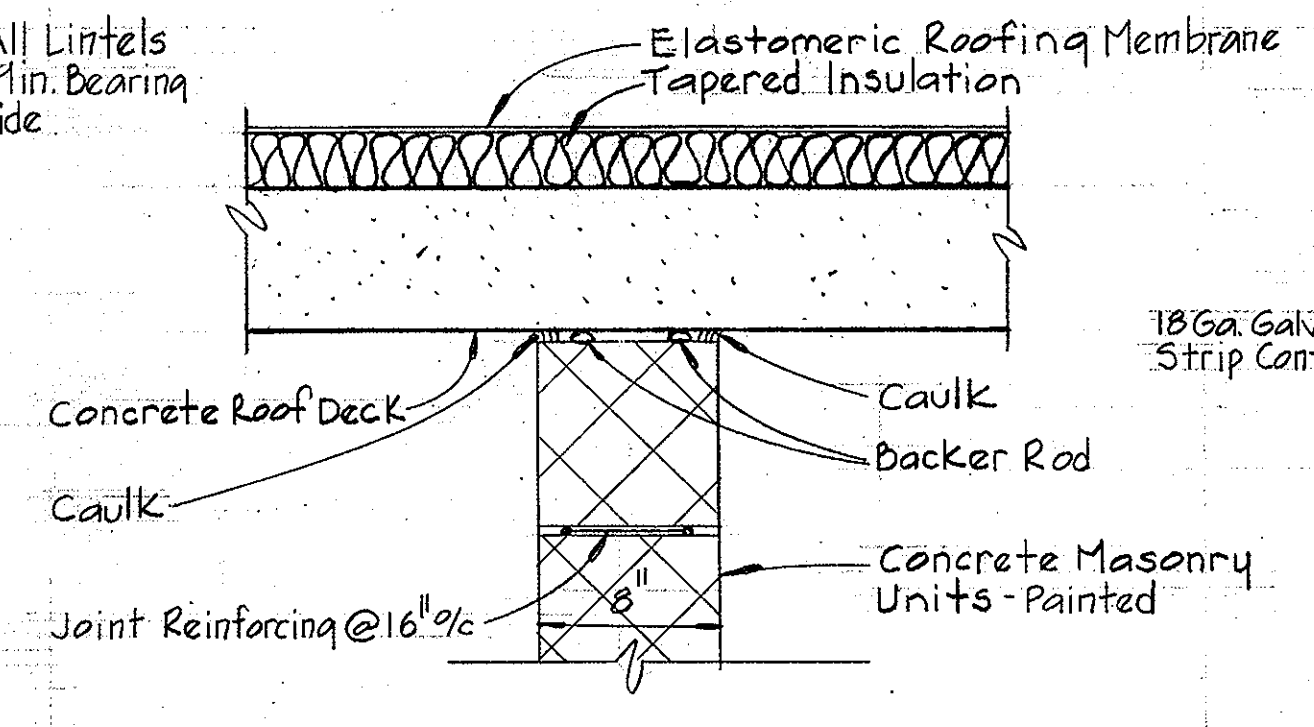
SECTION A2C/A1
Scale: 1/2" = 1'-0"



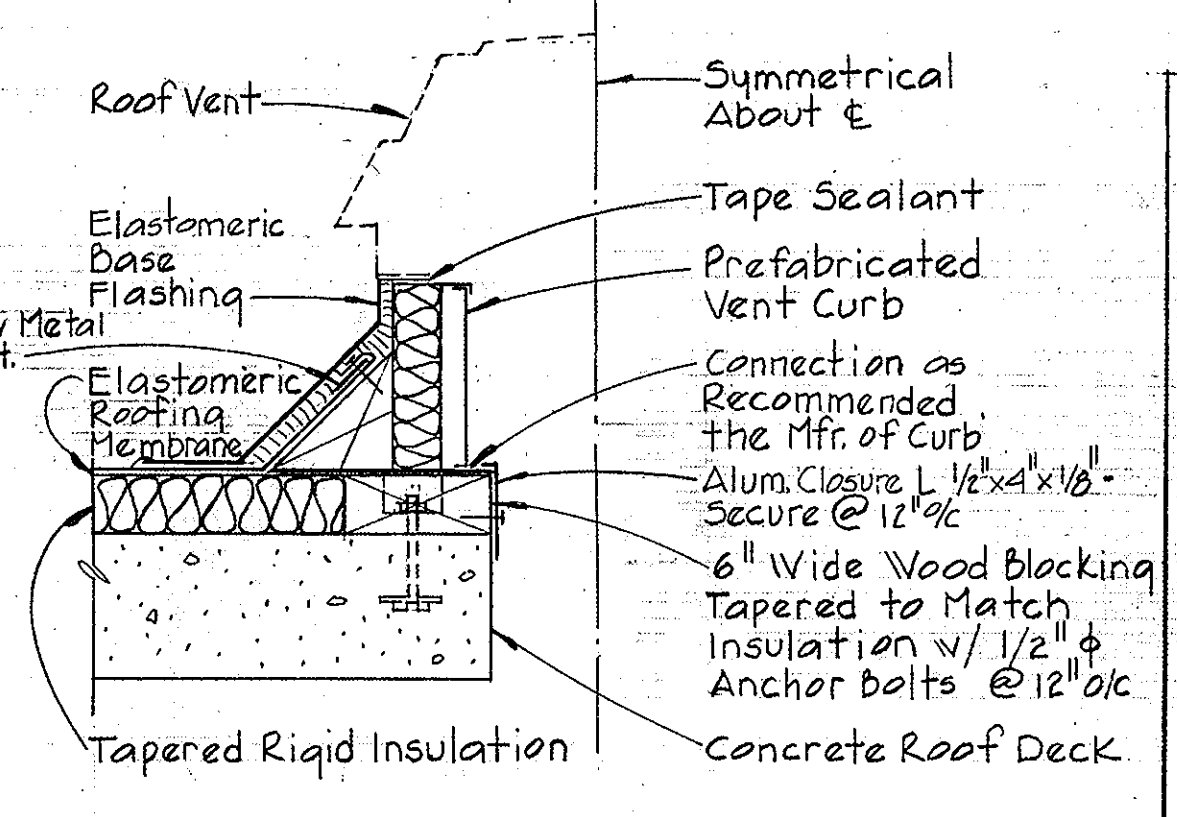
TYPICAL SCUPPER
DETAIL A2K/A2
Scale: 1/2" = 1'-0"



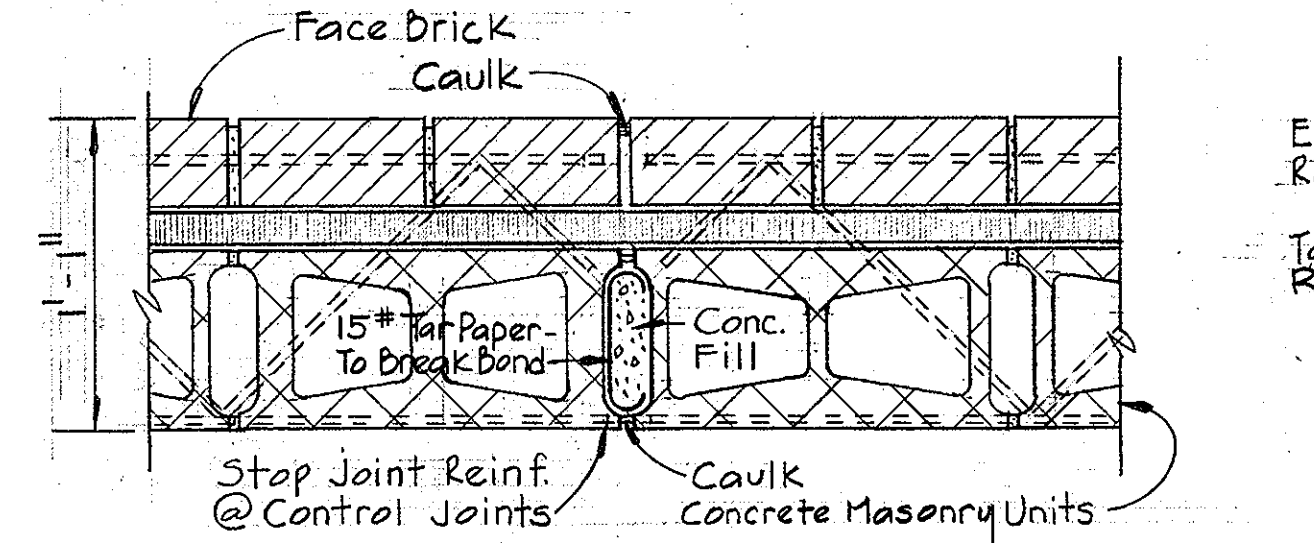
REMOVABLE PANEL
DETAIL A2J/A1
Scale: 1/2" = 1'-0"



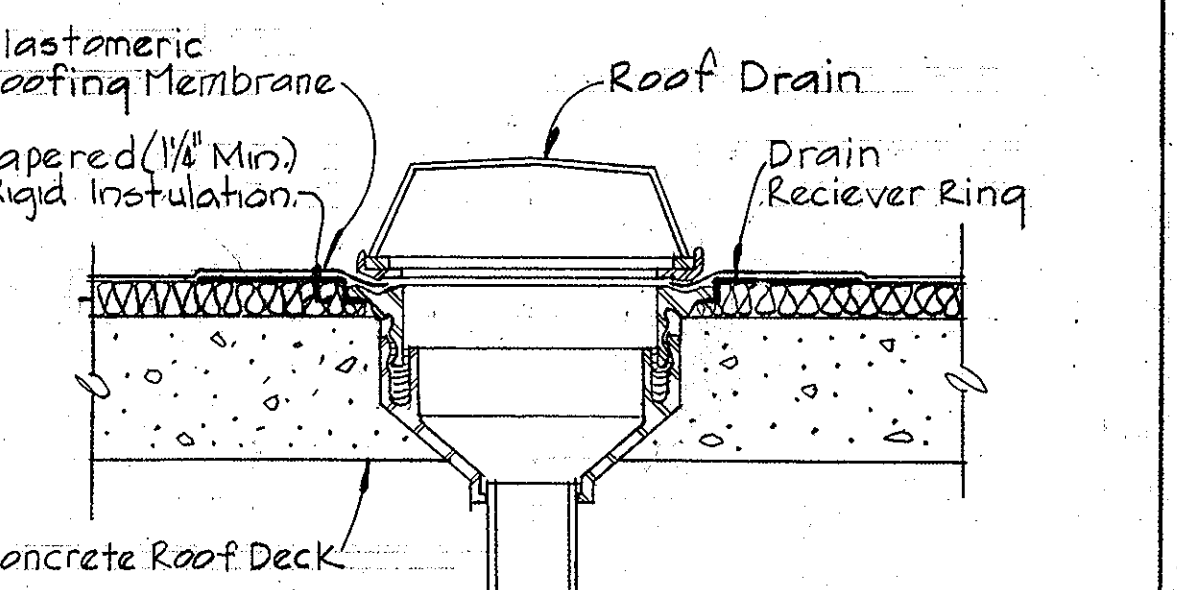
DETAIL A2D/A1
Scale: 1/2" = 1'-0"



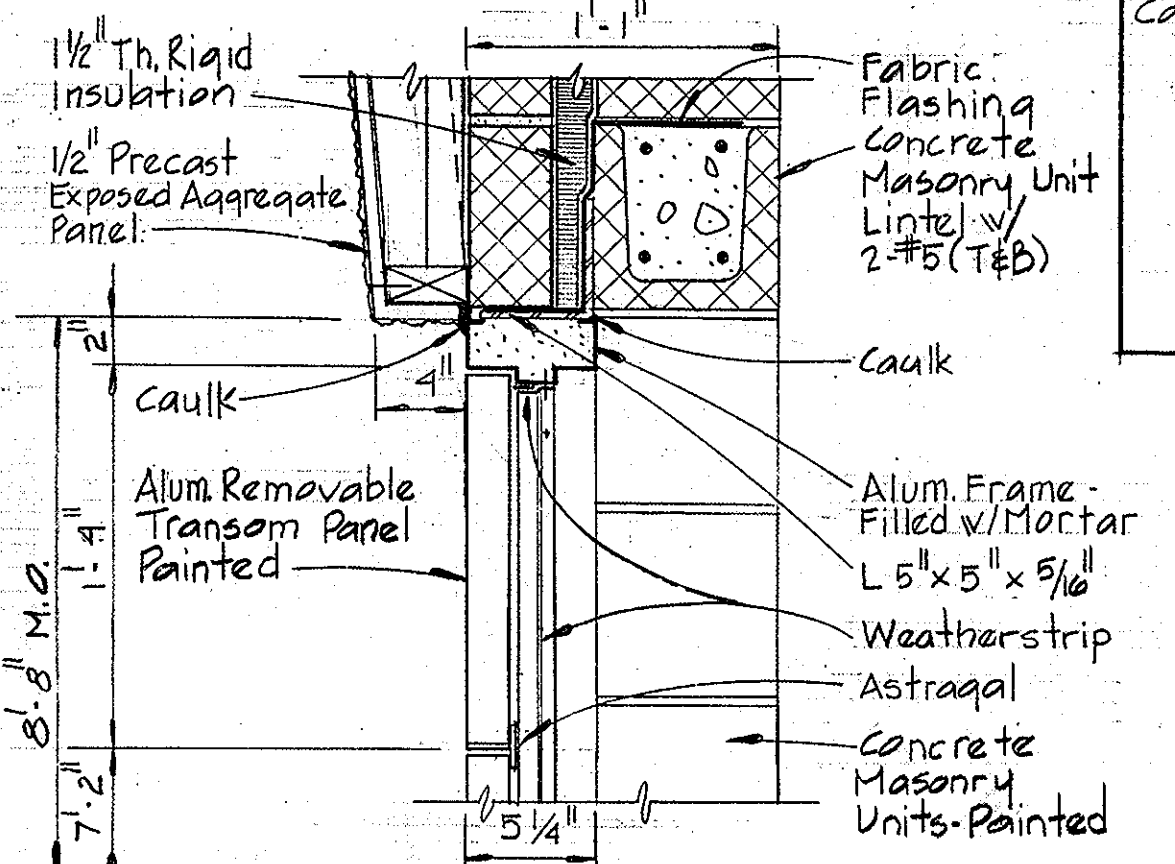
ROOF VENT CURB
DETAIL A2G/A1
Scale: 1/2" = 1'-0"



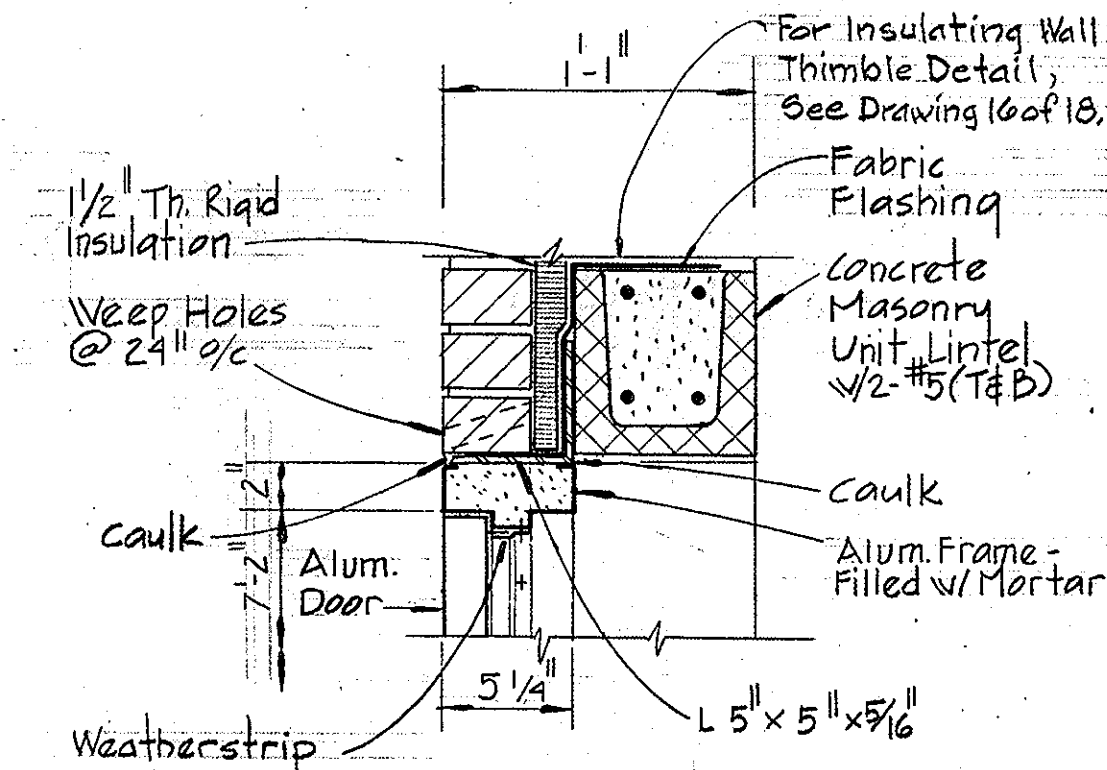
TYPICAL CONTROL JOINT
DETAIL A2E/A1
Scale: 1/2" = 1'-0"



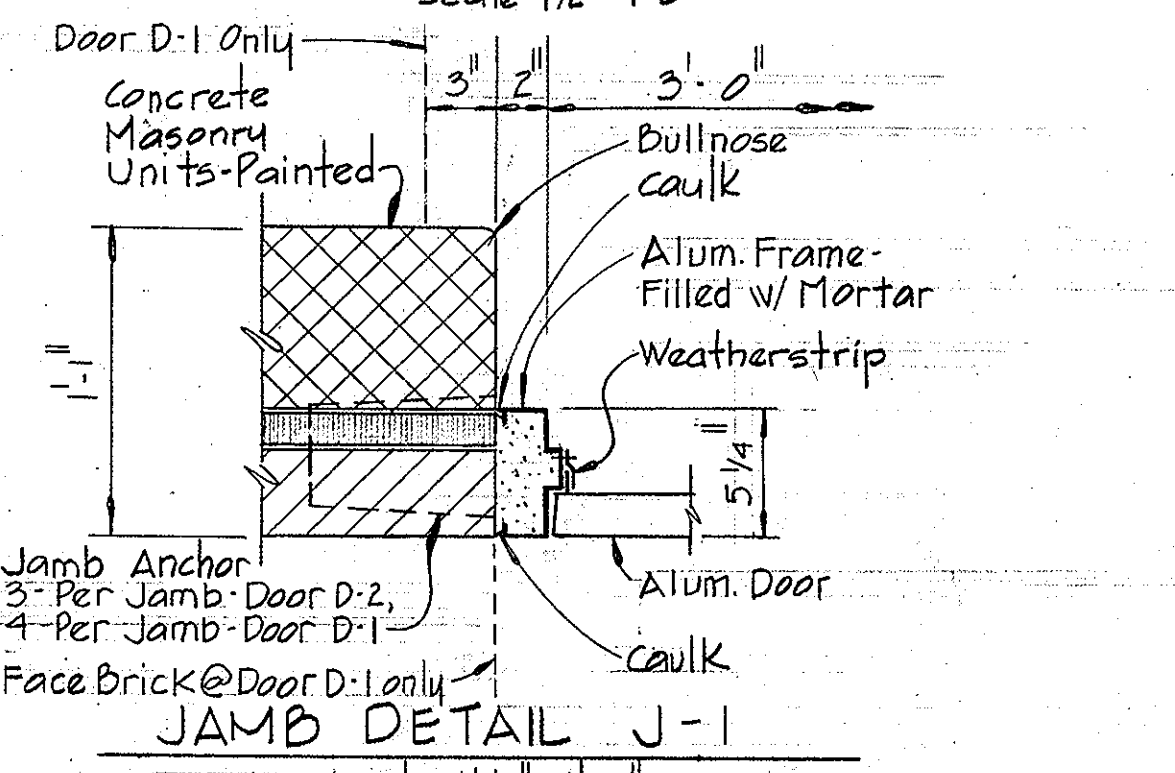
TYPICAL ROOF DRAIN
DETAIL A2H/A1
Scale: 1/2" = 1'-0"



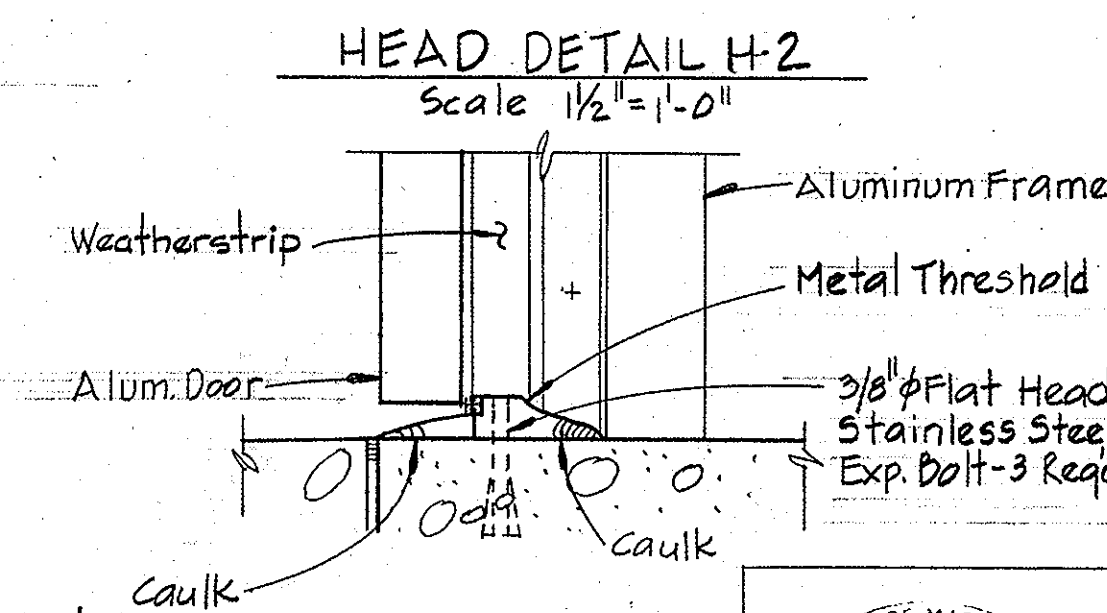
HEAD DETAIL H-1
Scale: 1/2" = 1'-0"



HEAD DETAIL H-2
Scale: 1/2" = 1'-0"



JAMB DETAIL J-1
Scale: 1/2" = 1'-0"



DOOR SILL S-1
Scale: 3/4" = 1'-0"

Note: Tubular frames approved, for both remove panel and doors, frames not filled with mortar

DOOR HEAD & JAMB DETAILS
Scale: As Shown

ABBREVIATIONS:

Alum.	Aluminum
CFH	Concrete Floor Hardener
CMU-P	Concrete Masonry Units - Painted
Conc.	Concrete
FE	Fire Extinguisher
Ht.	High
Th	Thick
SST	Stainless Steel

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

J. F. Nemery 4/25/81 DIRECTOR OF PUBLIC WORKS - DATE	R. E. Brown 4/24/81 CHIEF - BUREAU OF UTILITIES - DATE
R. E. Brown 4/24/81 CHIEF - BUREAU OF UTILITIES - DATE	A. L. Brown 4/15/81 CHIEF - UTILITIES DIVISION - DATE

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

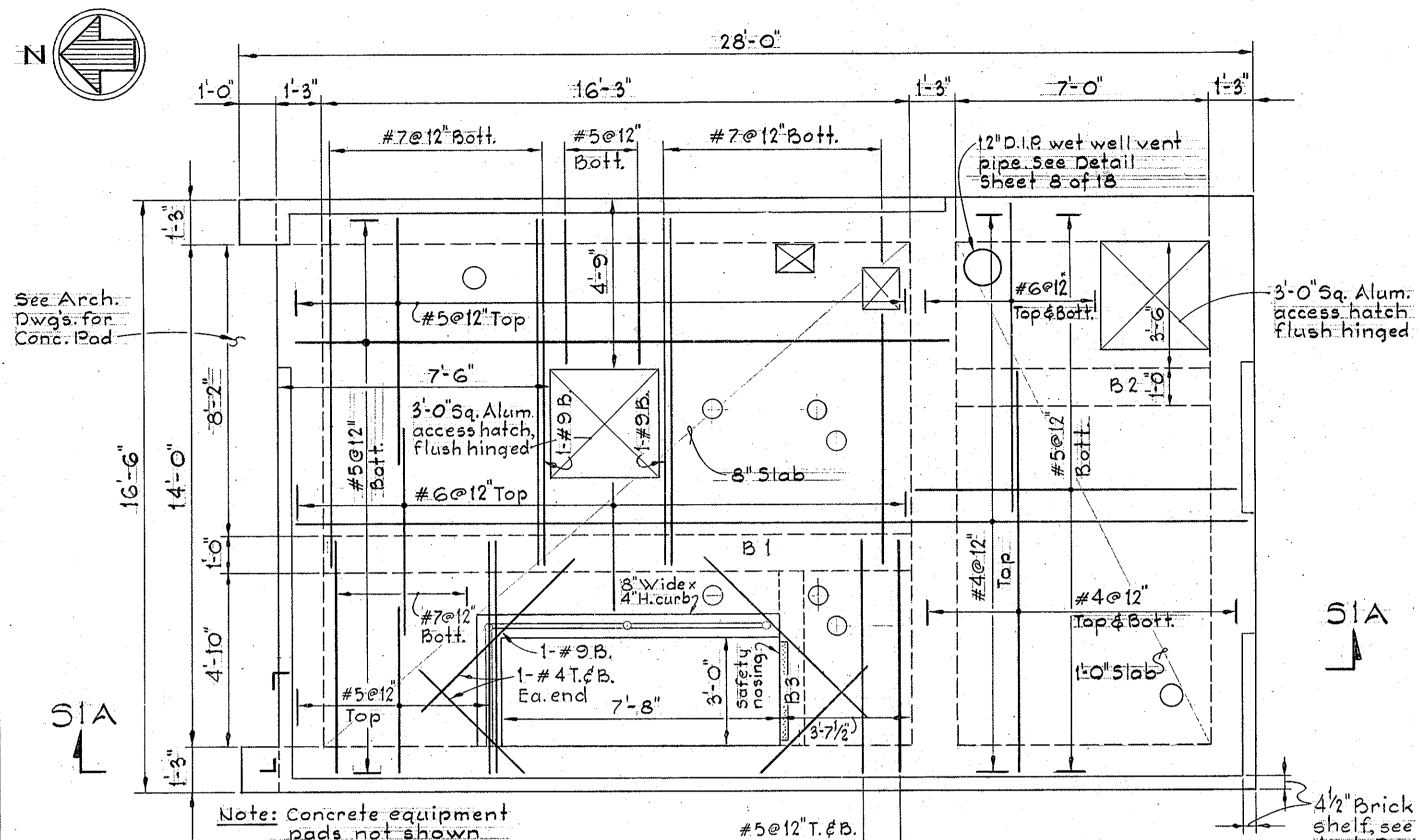
CONTRACT NO. 705-S
PROJECT NO. S-4-6048

ARCHITECTURAL
SECTIONS & DETAILS

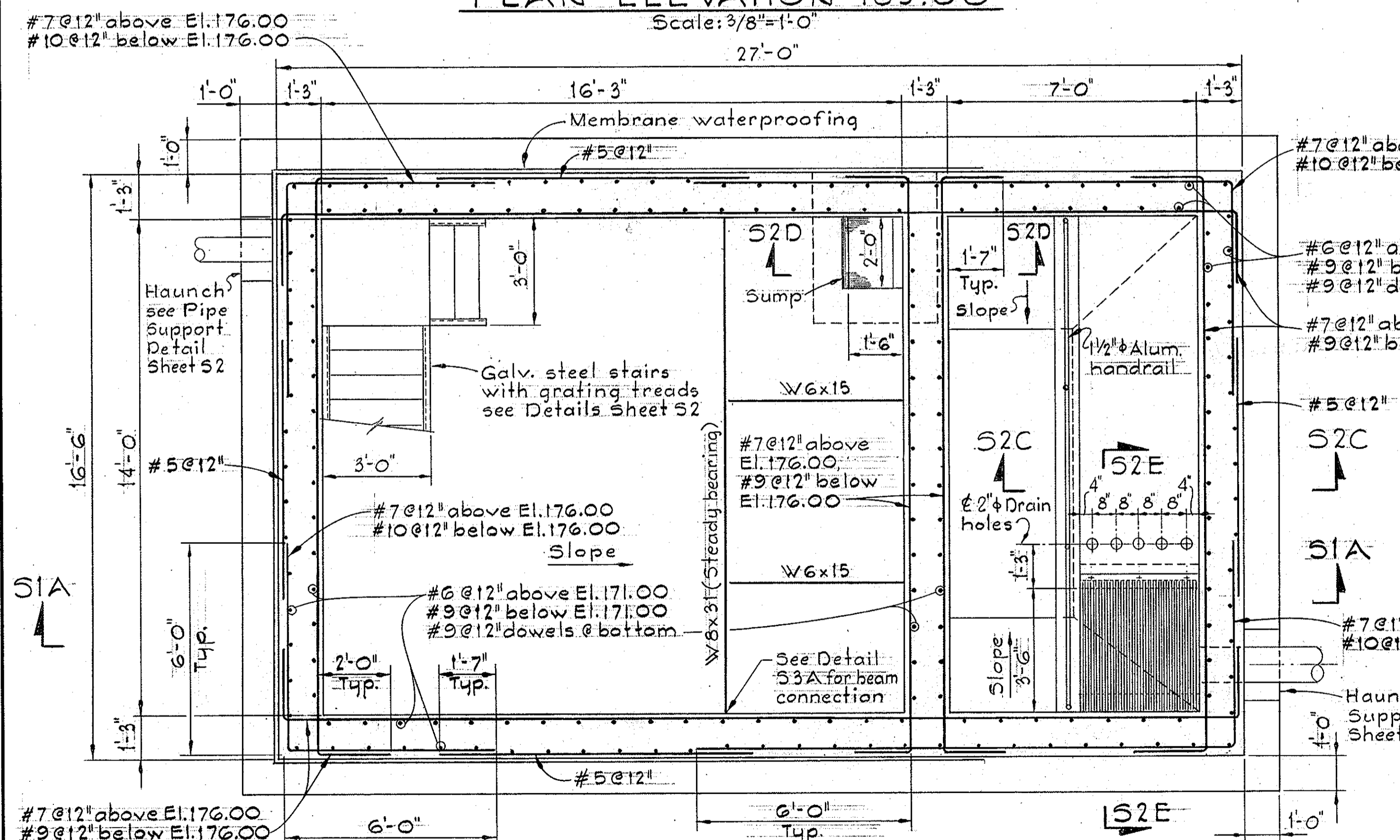
ELECTION DISTRICT
ELKRIDGE NO. 1

DRAWING NO. 10
OF 18
SCALE AS SHOWN

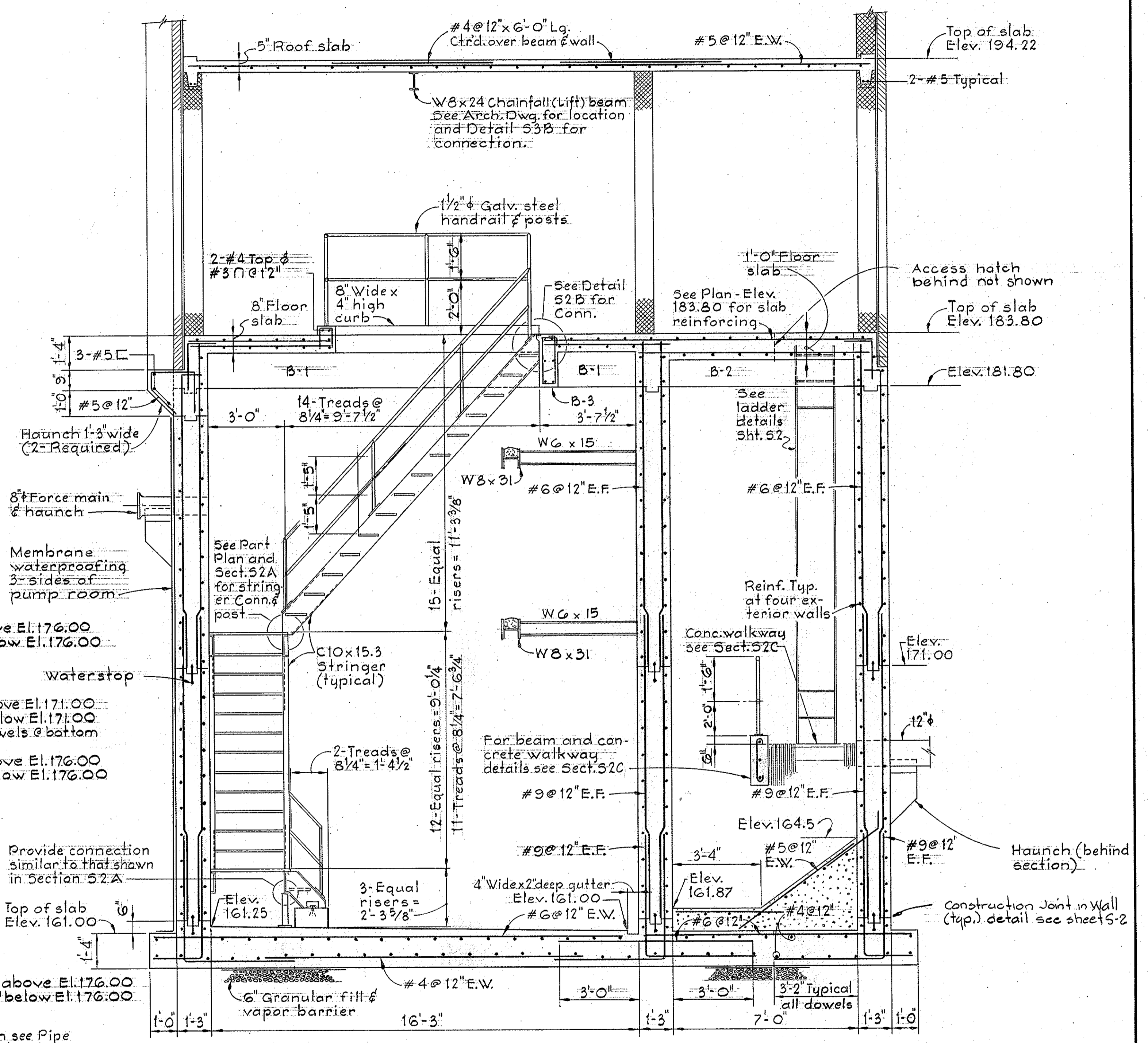
WS 705 - S/10



PLAN-ELEVATION 183.80
Scale: 3/8"=1'-0"



PLAN-ABOVE BOTTOM SLAB
Scale: 3/8"=1'-0"



SECTION S1A/S1
Scale: 3/8"=1'-0"

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Director of Public Works - DATE
Chief - Bureau of Engineering - DATE
Chief - Bureau of Utilities - DATE

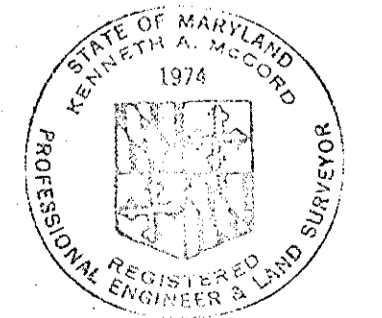
CONTRACT NO. 705-S
PROJECT NO. S-4-6048

STRUCTURAL
SECTION & PLANS

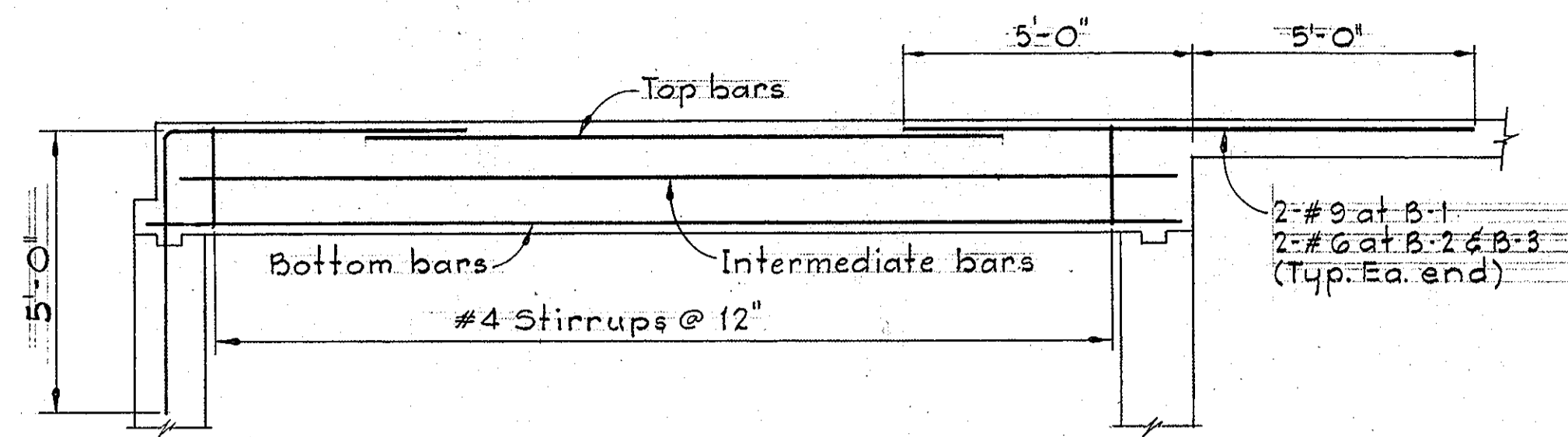
ELECTION DISTRICT
ELKRIDGE NO. 1

DRAWING NO. 11 OF 18	SCALE AS SHOWN
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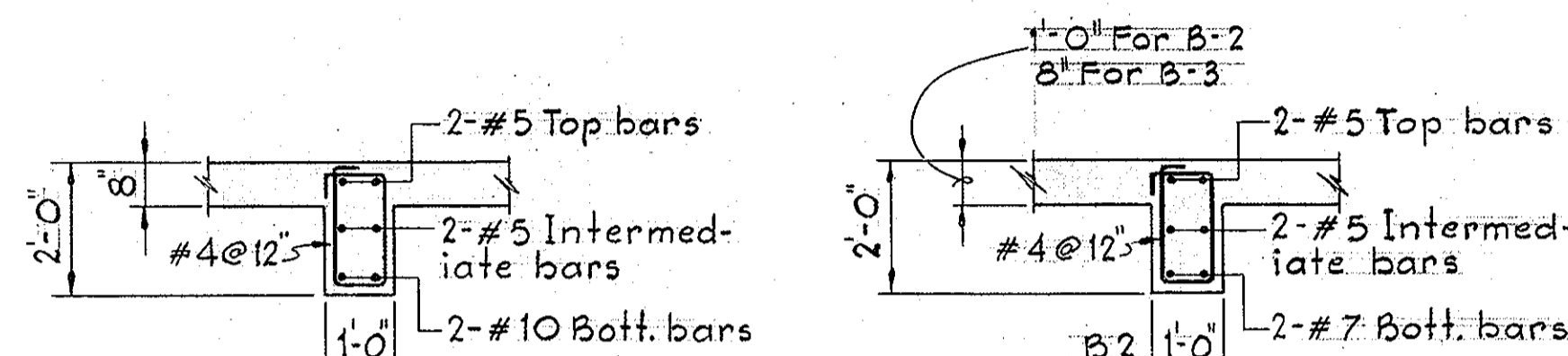
WS 705-S/11



Kenneth J. Meland
SHEET S-1



ELEVATION

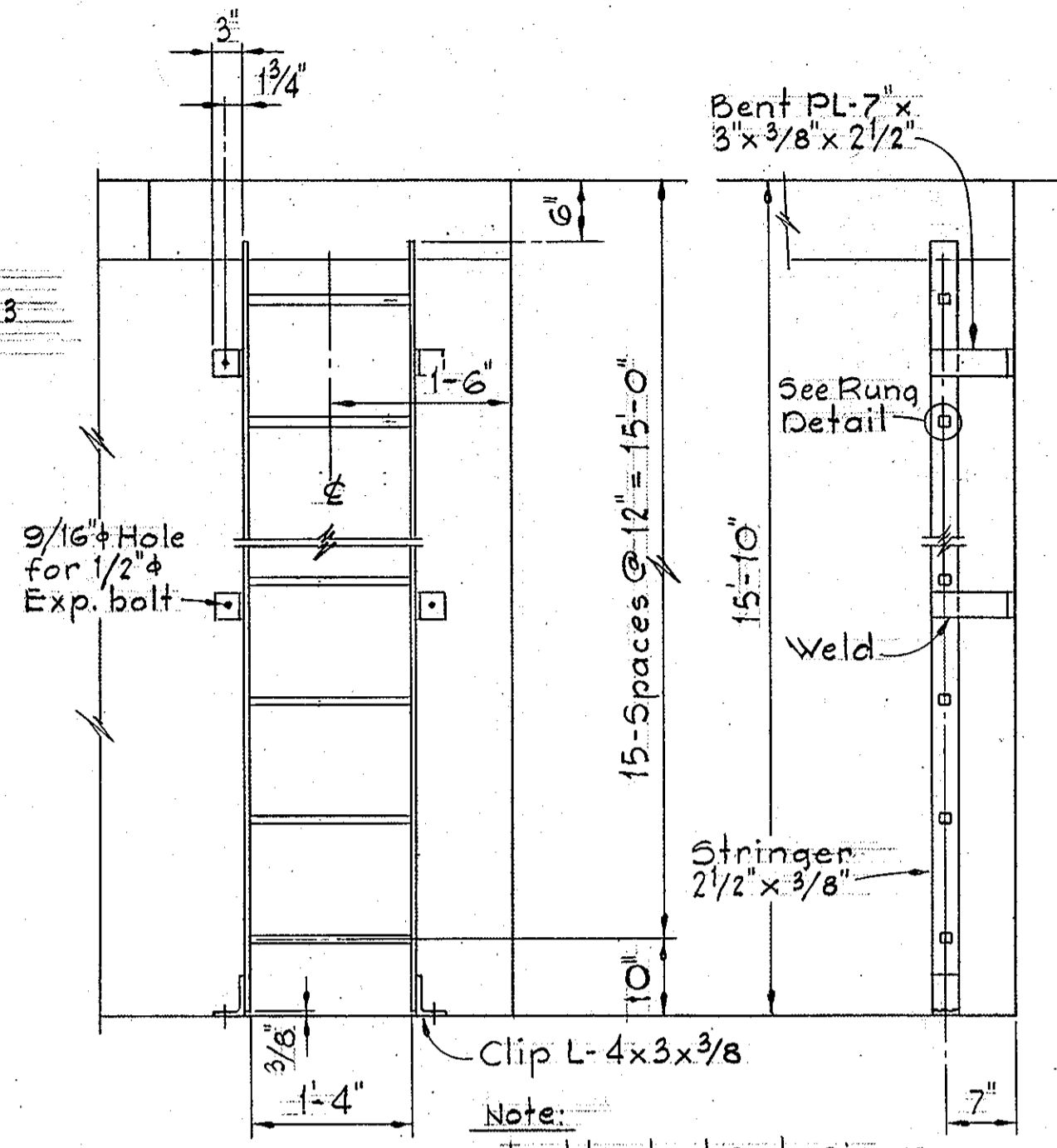


SECTION B1

SECTION B2 & B3

BEAM DETAILS

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



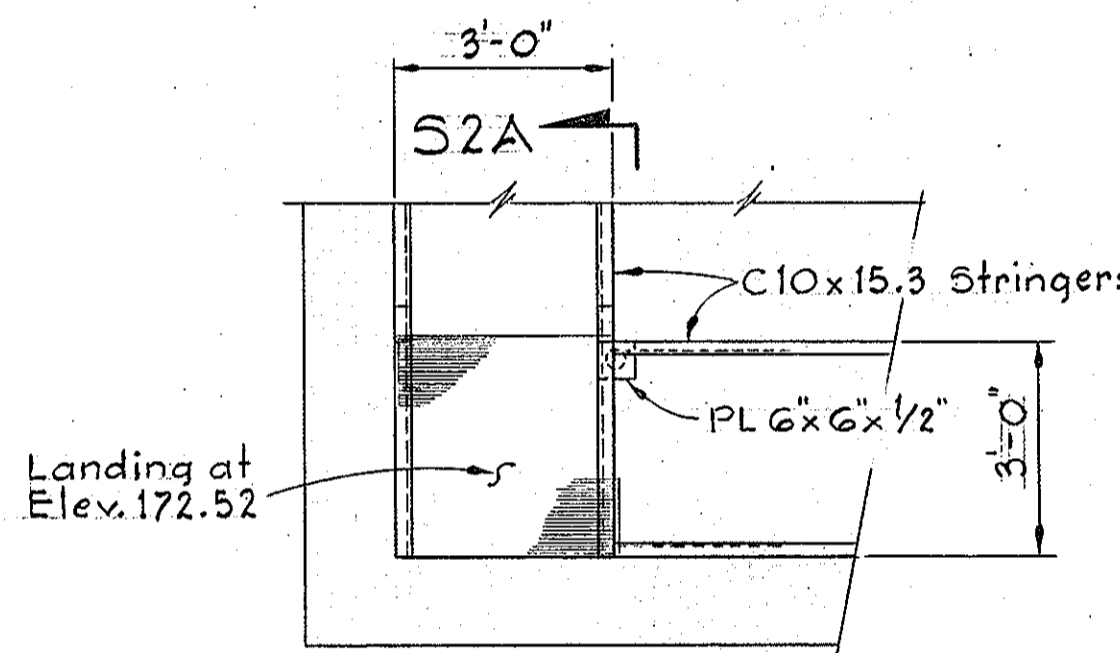
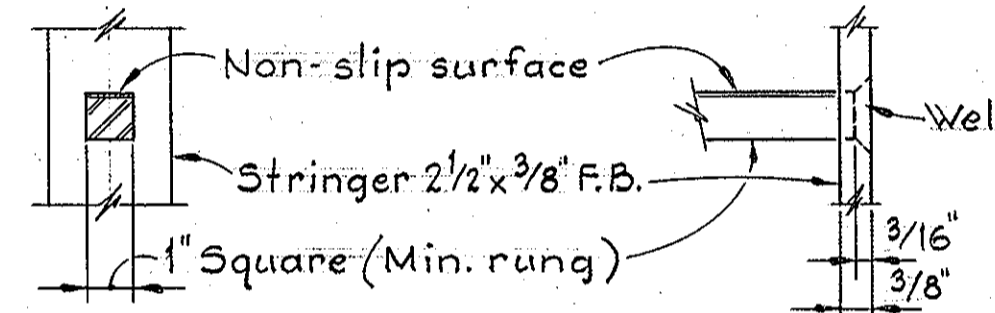
ELEVATION

SECTION

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

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

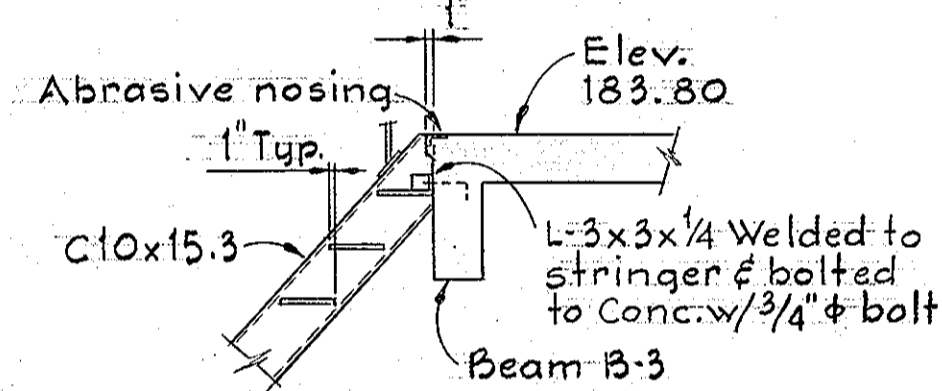
RUNG DETAILS
LADDER DETAILS



S2A

PART PLAN

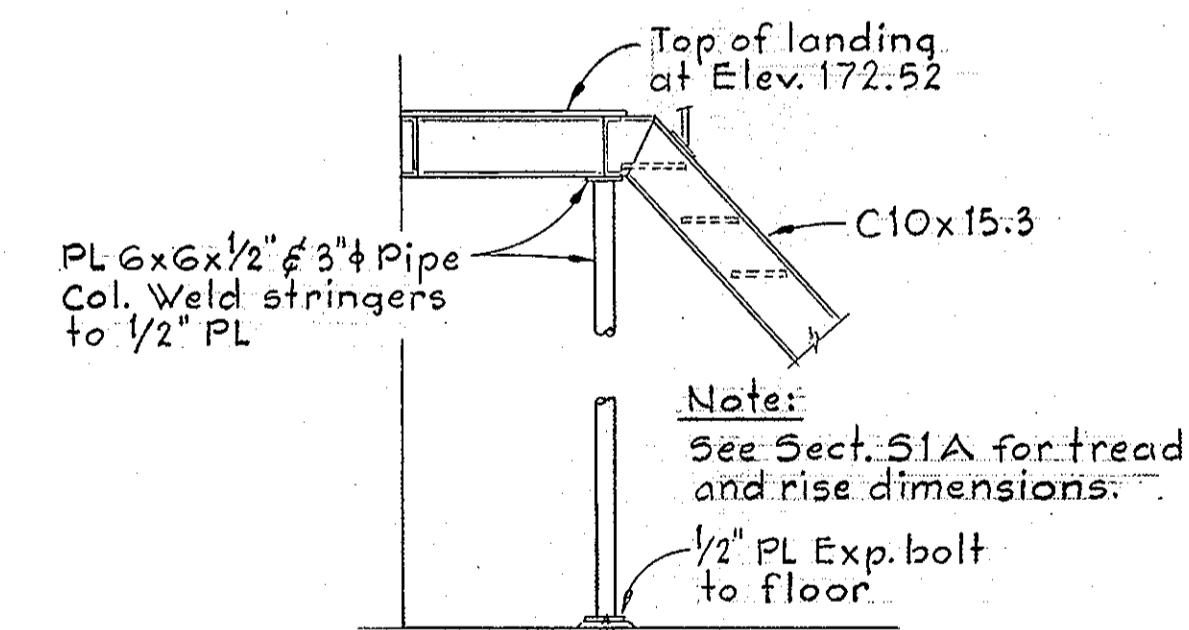
Scale: 3/8"=1'-0"



DETAIL S2B/S1

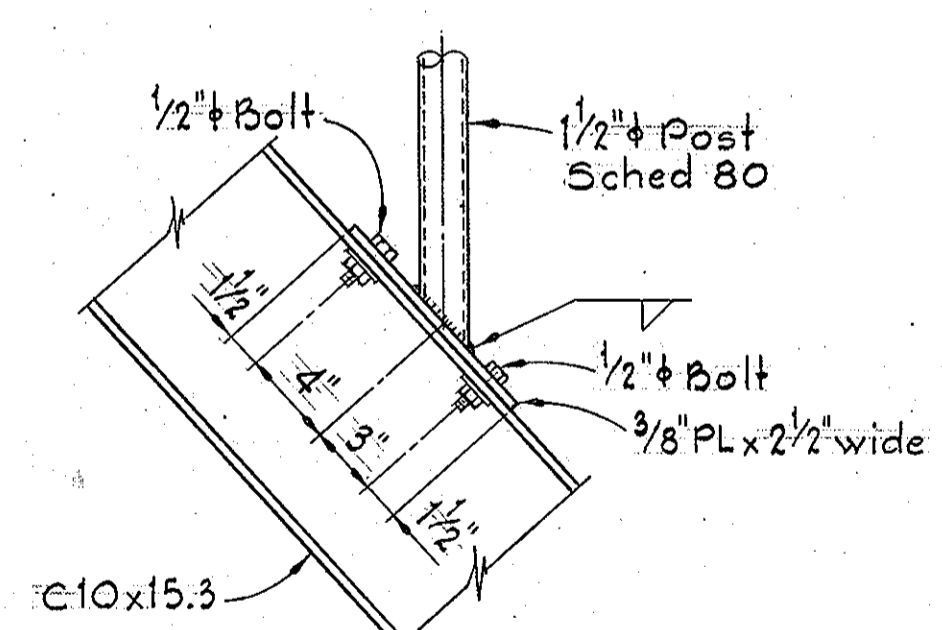
Scale: 3/8"=1'-0"

- Notes:
- All treads to be 1" x 3/16" steel grating w/ abrasive nosing
 - Railing to be 1 1/2" x Sched. 40 galvanized steel.
 - All stair channels, supports & materials shall be galvanized.



SECTION S2A/S2

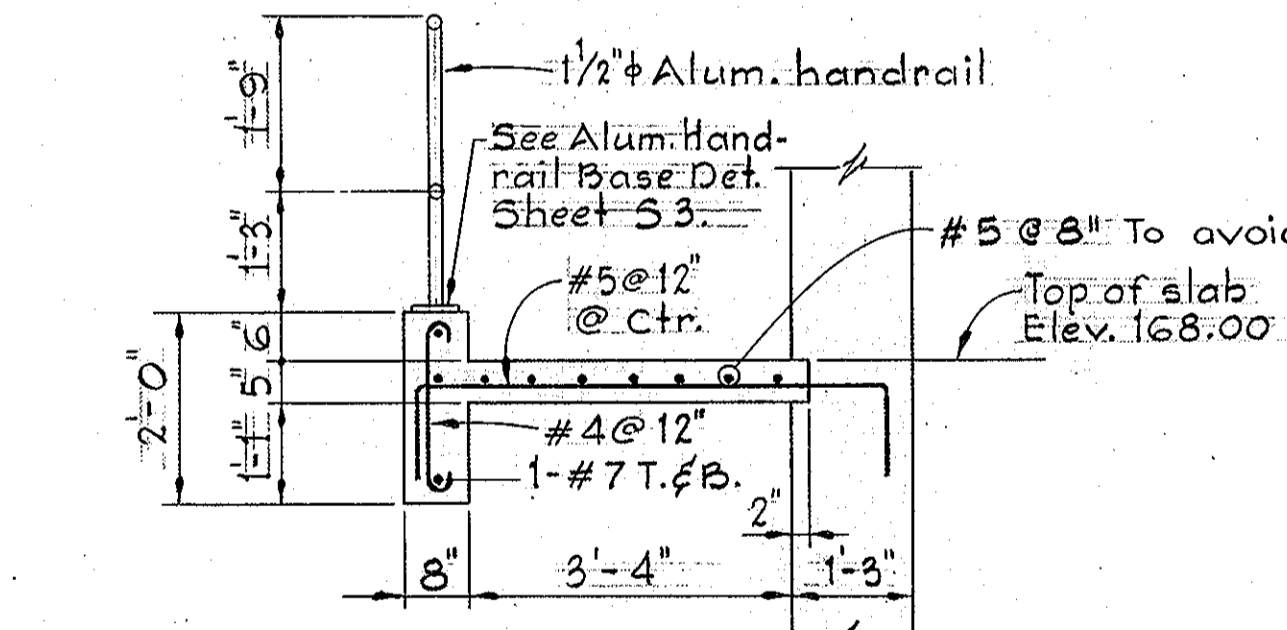
Scale: 3/8"=1'-0"



TYPICAL POST CONNECTION

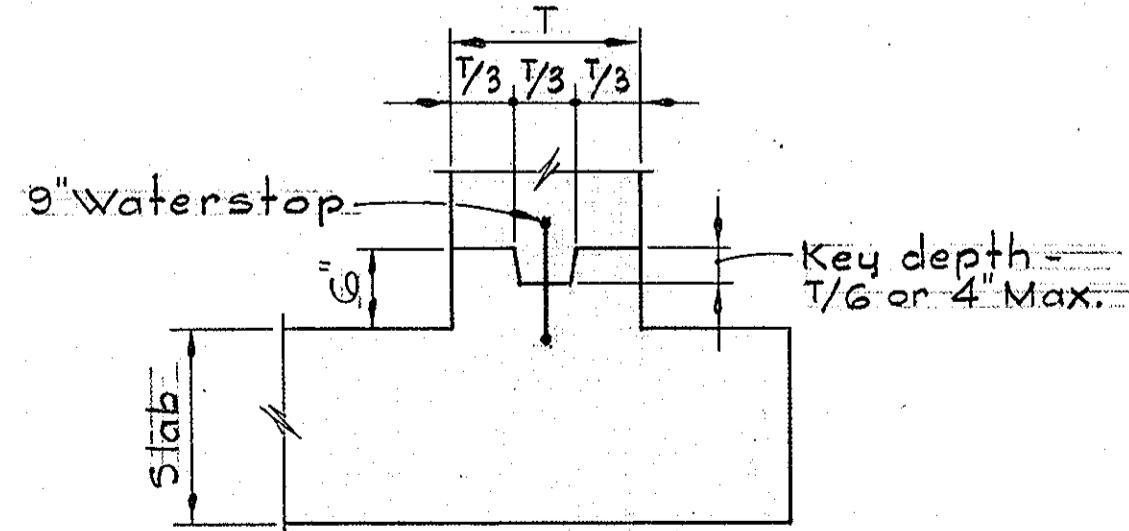
Scale: 1/2"=1'-0"

STAIR DETAILS



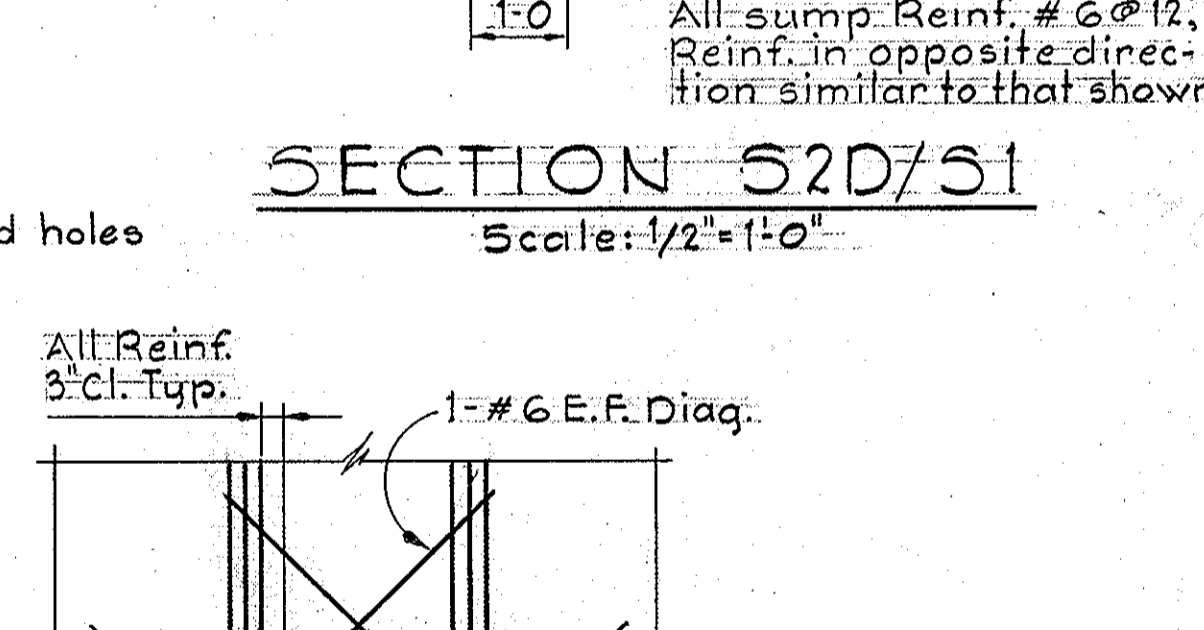
SECTION S2C/S1

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



CONSTRUCTION JOINT IN WALL

No Scale



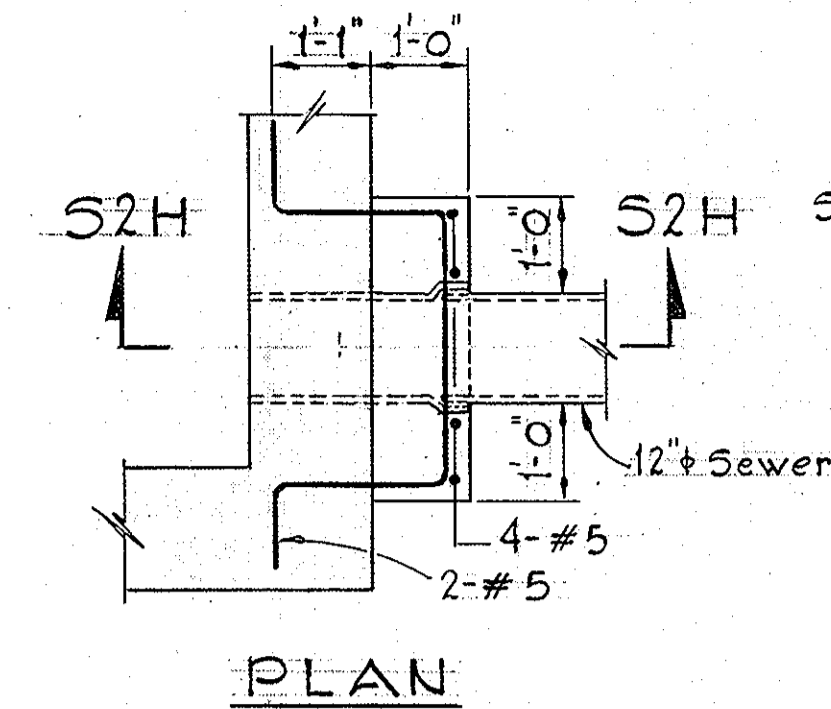
SECTION S2D/S1

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

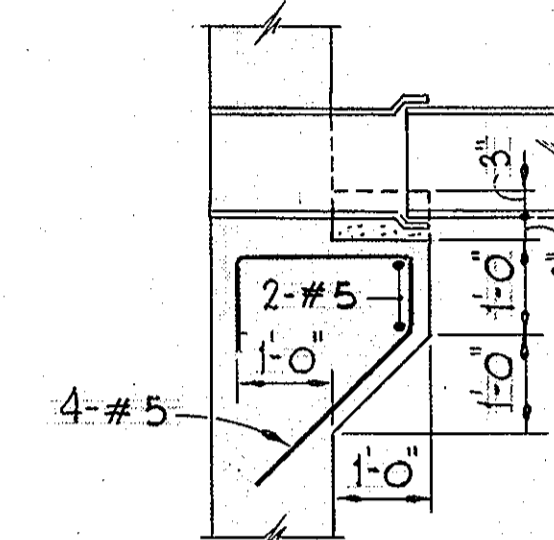
ADDL. REINF. AROUND PIPE OPENINGS IN WALLS

Additional Reinf. E.W., E.F. Min. of one-half the number of principal Reinf. bars interrupted by the opening shall be provided on Ea. side and Ea. face of opening. Bars to be full height and length of wall.

No Scale



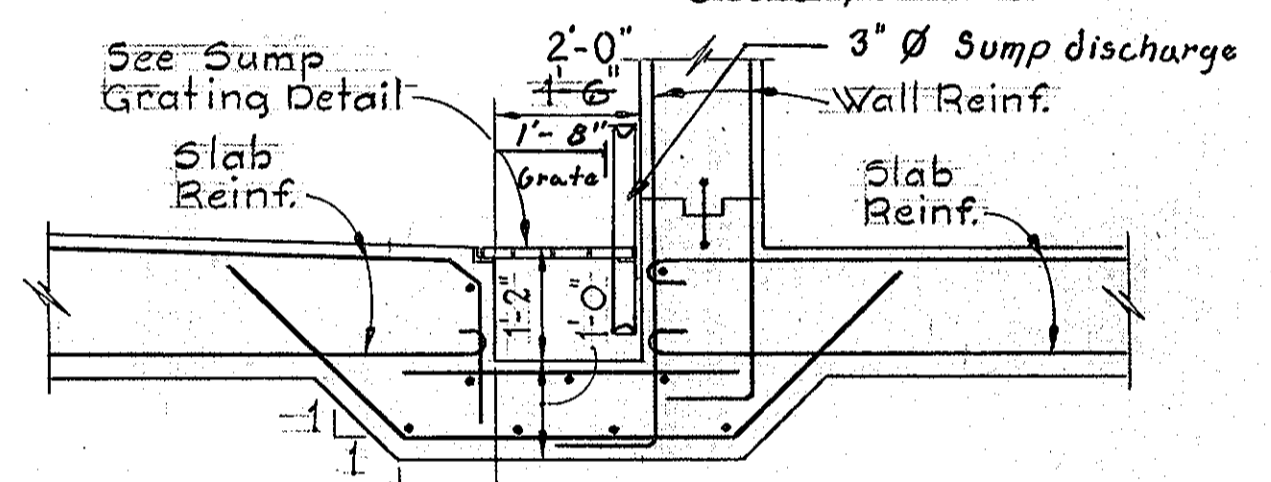
PLAN



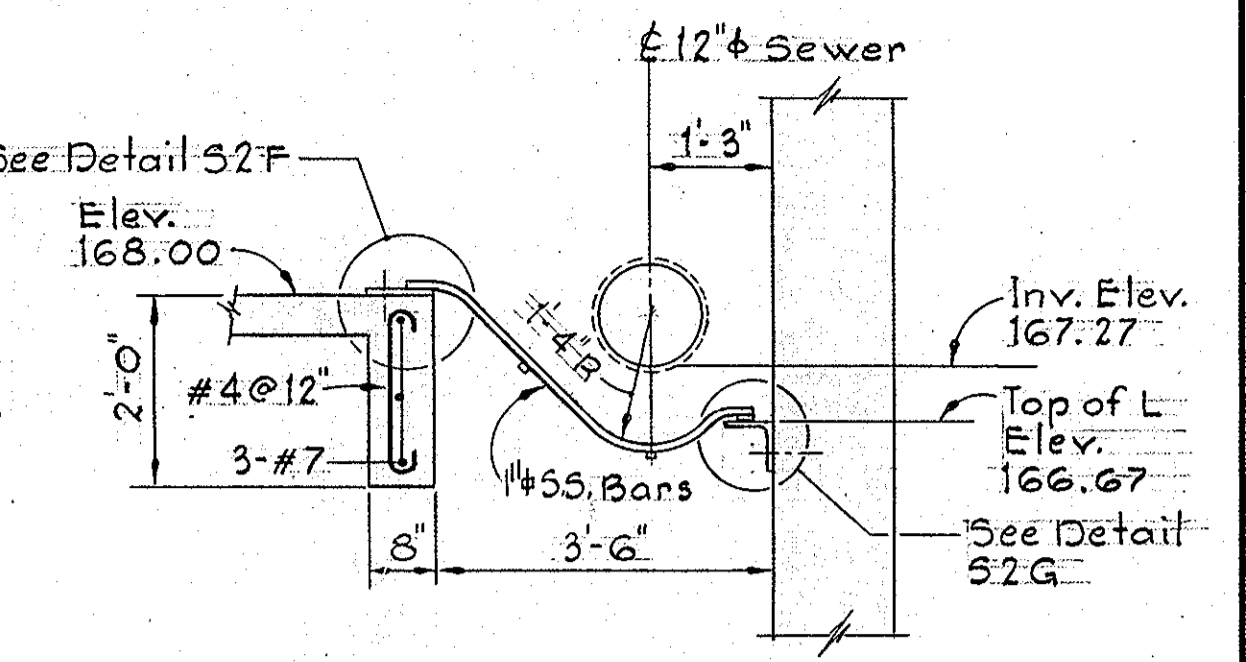
SECTION S2H/S2

PIPE SUPPORT DETAILS

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

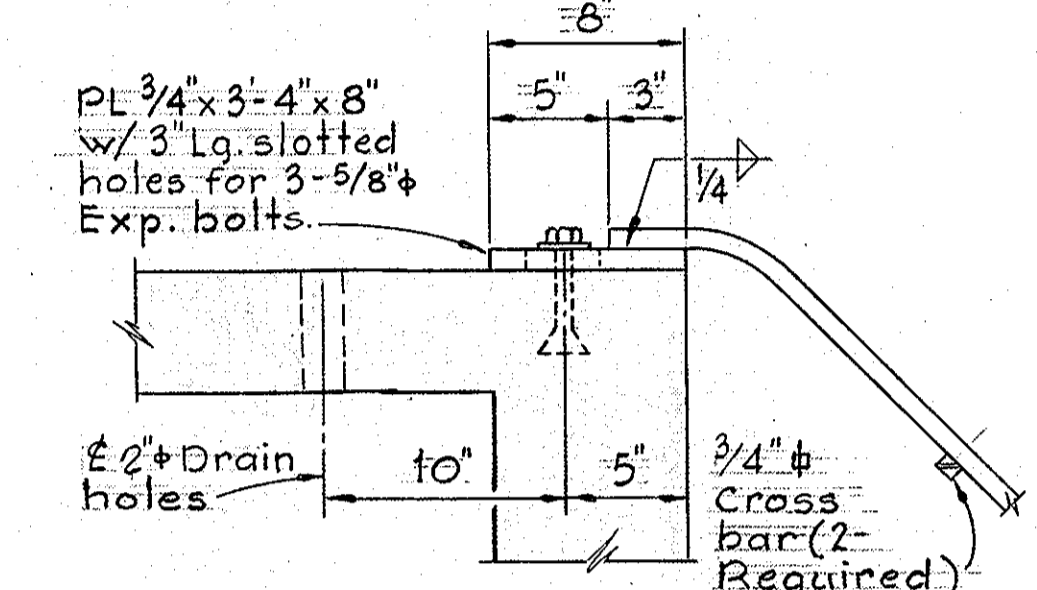


All sump Reinf. #6 @ 12" Reinf. in opposite direction similar to that shown.



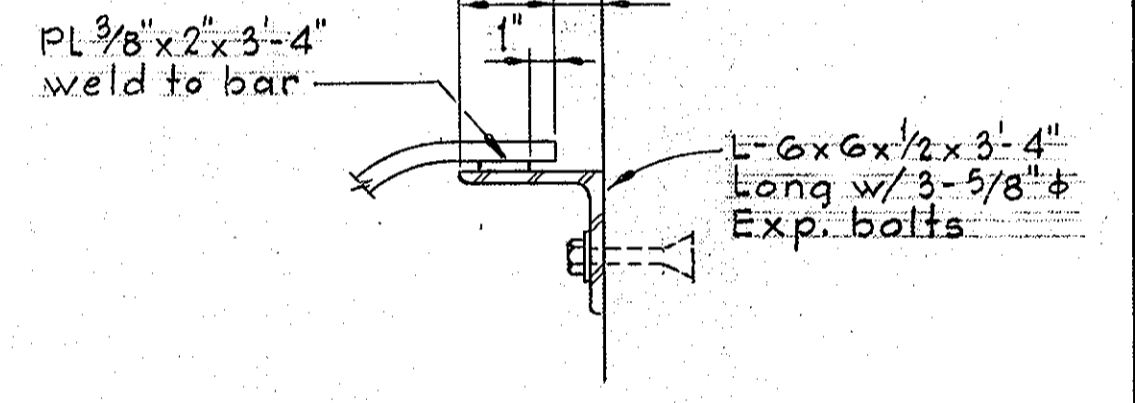
SECTION S2E/S1

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



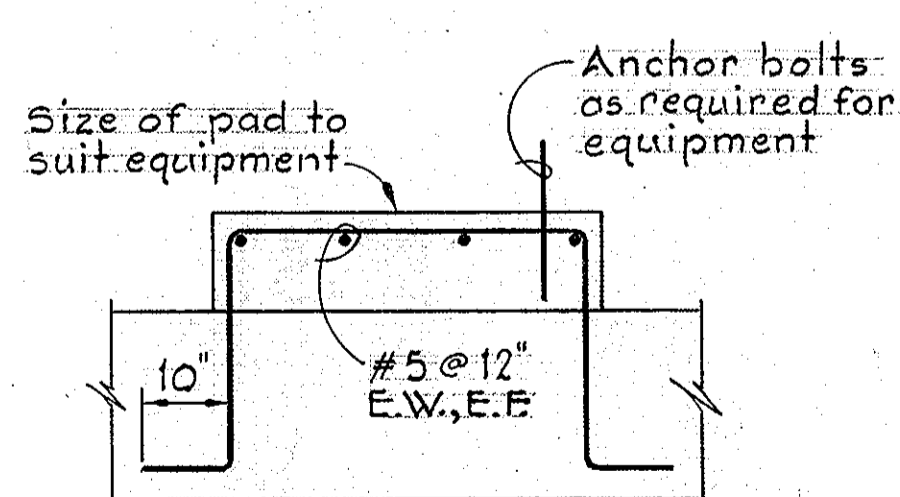
DETAIL S2F/S2

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



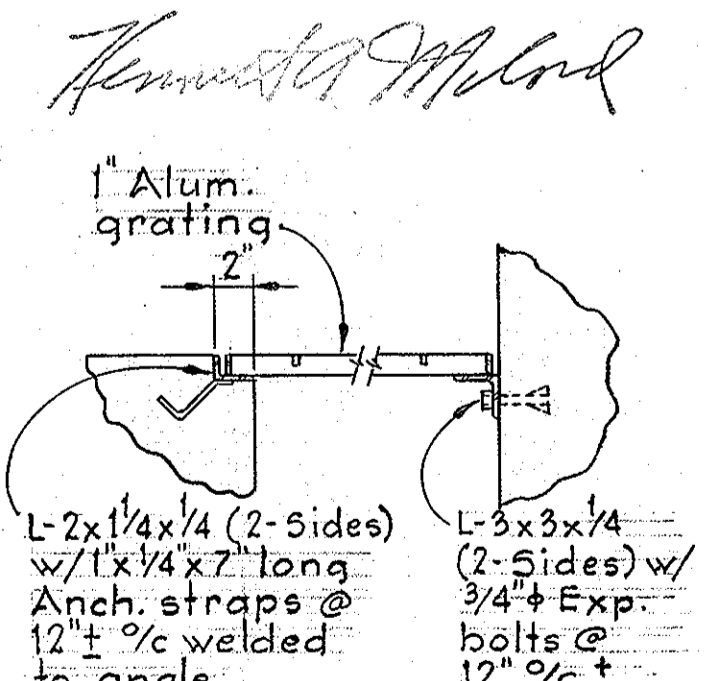
DETAIL S2G/S2

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



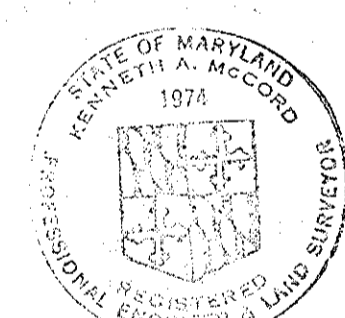
SECTION THRU EQUIPMENT PAD

No Scale



SUMP GRATING DETAIL

Scale: 1"=1'-0"



Kenneth M. Wood

SHEET S-2

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John F. Nunn 4/28/81
DIRECTOR OF PUBLIC WORKS - DATE

Allen J. Brown 4/15/81
CHIEF - BUREAU OF UTILITIES - DATE

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

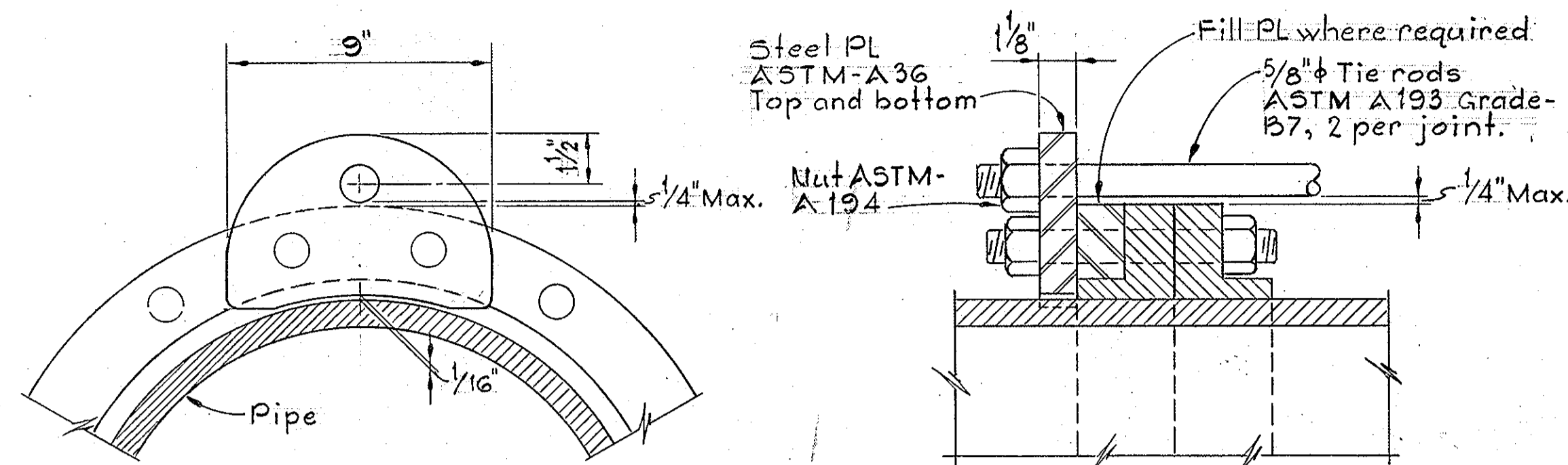
CONTRACT NO. 705-S
PROJECT NO. S-4-6048

STRUCTURAL
SECTION & DETAILS

ELECTION DISTRICT
ELKRIDGE NO. 1

DRAWING NO. 18 OF 18
SCALE AS SHOWN

WS 705 - S/12



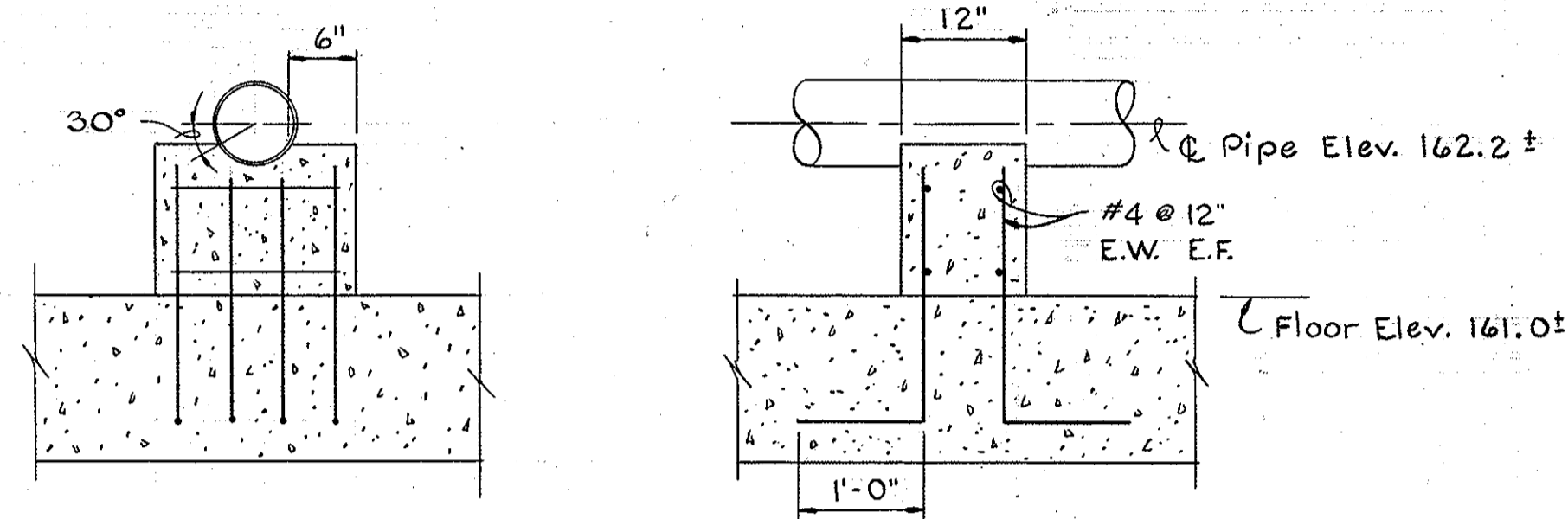
Note: Tie rod details for 6" pipes.

ELEVATION

SECTION

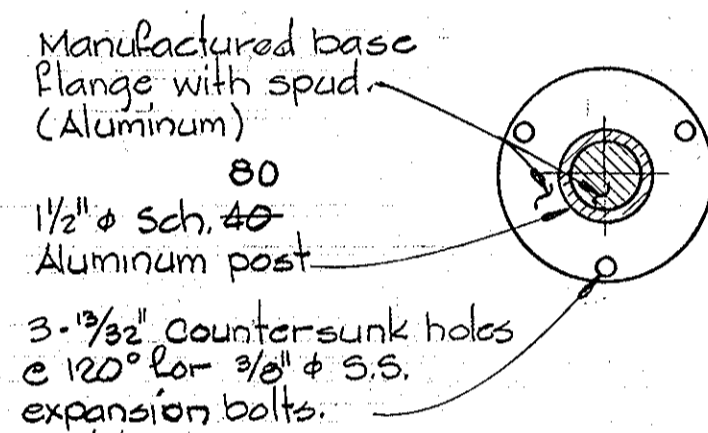
TIE ROD DETAILS

Scale: None



PIPE SUPPORT DETAILS

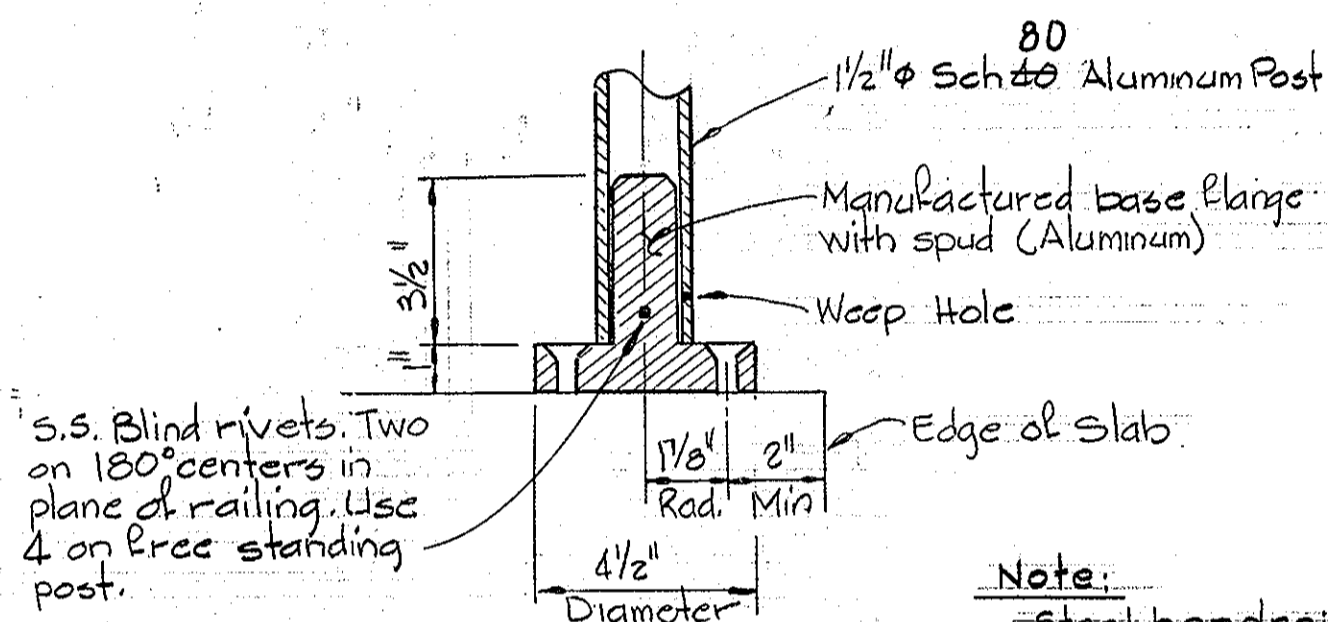
Scale: None



PLAN

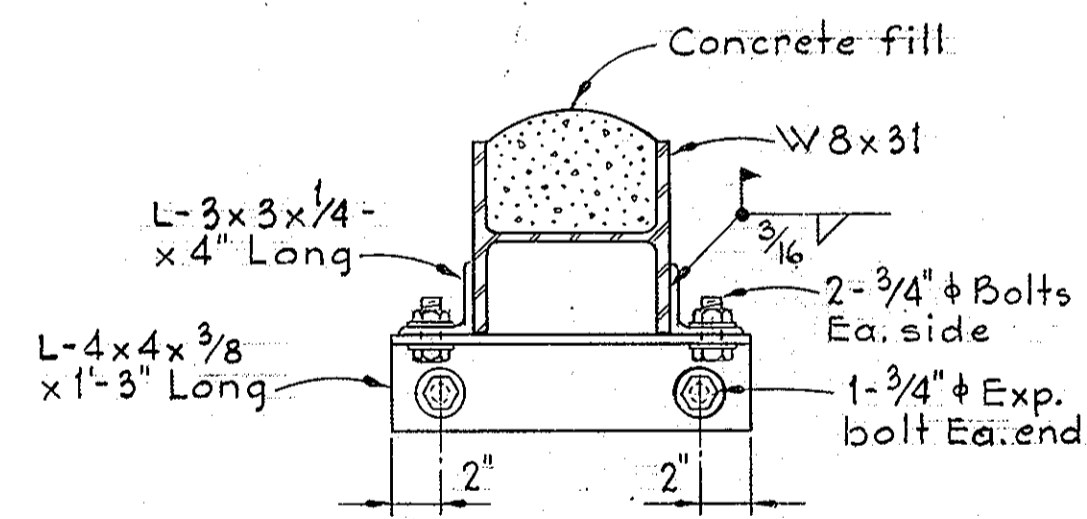
ALUMINUM HANDRAIL BASE DETAILS

Scale: 3" = 1'-0"



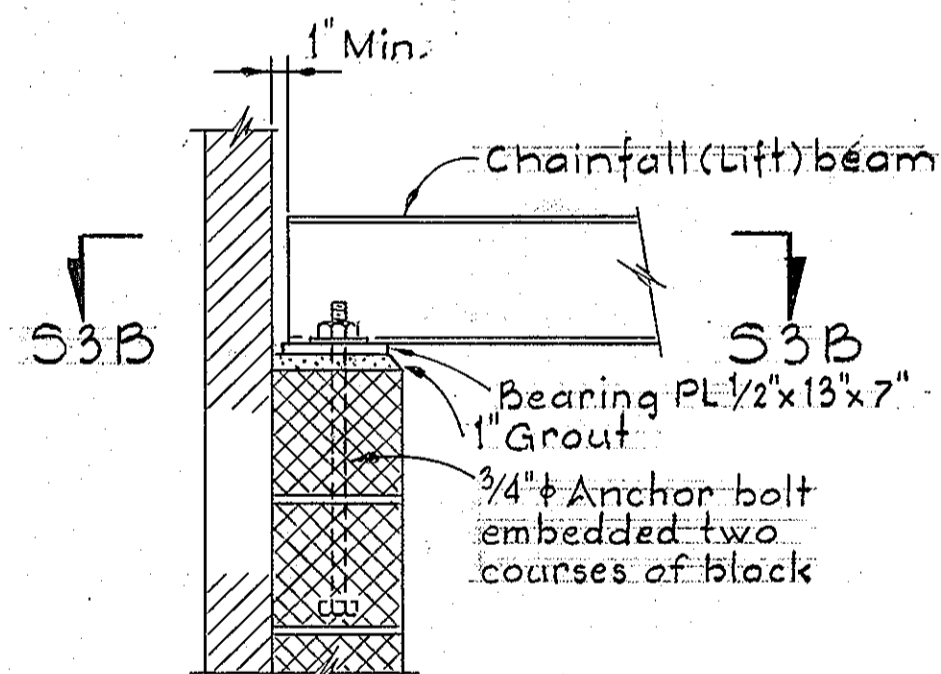
SECTION

Note: Steel handrail base details similar.



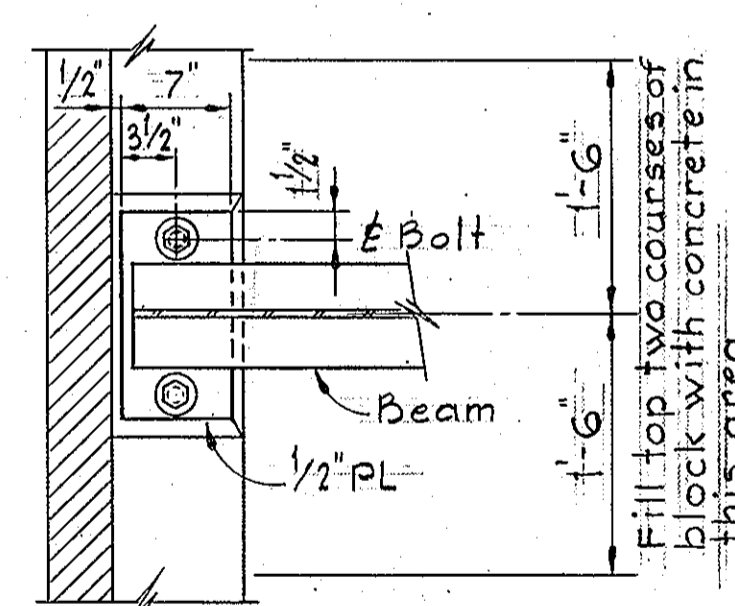
DETAIL S3A/S1

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



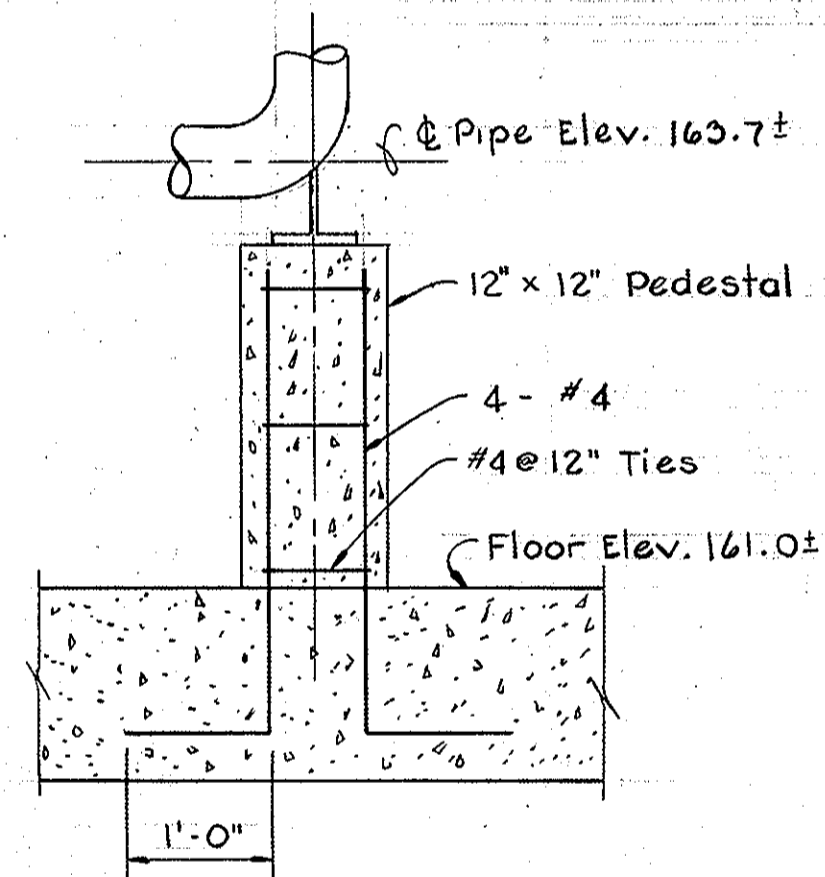
DETAIL S3B/S1

Scale: 1" = 1'-0"



SECTION S3B/S3

Scale: 1" = 1'-0"



CONCRETE PEDESTAL SUPPORT

Scale: None

DESIGN LOAD

- Dead loads: Actual weight of structural components and equipment
 - Weight of soil: 110 PCF to resist uplift
 - 120 PCF dead load
 - Live loads:
 - a. Motor room - 4k over 2 FT² concentrated load or 300 PSF, whichever is greater
 - b. Access hatches - 300 #/FT²
 - c. Catwalk, stairs and walkway - 125 PSF
 - d. Roof load - 30 PSF
 - Wind load: 20 PSF
- Factor of safety against flotation with floor water level at elevation 176.00 = 1.29

GENERAL STRUCTURAL NOTES

1. All exterior walls shall have waterproofing where shown. See specifications for details.
- FOUNDATION NOTES
1. All excavations shall be inspected and approved by the Engineer before placing any gravel, crushed stone and/or concrete.
 2. For Mechanical and Electrical work to be incorporated with foundation construction, see Mechanical and Electrical drawings.
 3. Bottom of all excavations shall receive a minimum of 6" of well compacted crushed stone or gravel. For other requirements, see specifications.
 4. Any excess excavation below the elevations of crushed stone or gravel, shall be filled with compacted stone or gravel. All excavations shall be kept dry. Water shall not be allowed to stand in excavations.

CONCRETE NOTES

1. All concrete shall have a minimum compressive strength of 4000 PSI at 28 days.
2. Reinforced concrete shall be detailed and constructed in accordance with ACI Building Code 318-77 and all supplements. The structure has been designed by the alternate design method.
3. All reinforcing steel shall conform to ASTM A615 grade 60.
4. Concrete cover for reinforcing shall be as follows unless otherwise noted on the drawings.
 - a. Unformed concrete, bottom bars in footings and slabs on earth, gravel or crushed stone - 3"
 - b. Beams, slabs and columns exposed to ground, weather or process liquid after the removal of forms - 2"
 - c. Beams and columns not exposed to weather - 1 1/2"
 - d. Structural slabs not exposed to earth or weather - 3/4"
 - e. Walls - 2"
5. All exposed concrete edges shall be chamfered 3/4" unless otherwise noted.
6. Reinforcing steel shall be detailed in accordance with ACI 318 "Manual of Standard Practice for Detailing Reinforced Concrete Structures" except where shown otherwise.
7. Splices in reinforcement shall be Class "C" splices as per ACI 318 unless otherwise shown on the drawings.
8. Embedment length shall be equal to the development length for open top or bottom in accordance with ACI 318 unless otherwise shown on the drawings.
9. Horizontal bars in walls shall be considered as top bars.
10. Slabs and walls shall be poured between indicated joints, allowing a minimum period of 3 days to elapse between adjacent pours.
11. Construction joints shall be as shown on the drawings. No additional joints shall be used nor any omitted except by the written authorization by the Engineer.
12. All waterstops shall be 3/8" thick, 9" wide, 2 bulb type. See specifications for other requirements.
13. Anchor bolts, pipe supports and equipment pedestals shall be sized and located to suit equipment furnished.
14. See Civil, Mechanical and Electrical drawings for all embedded items such as sleeves, anchors, electrical conduits, openings, chases, etc., which are embedded in the concrete.
15. The contractor shall submit shop details of reinforcing steel before proceeding with fabrication.

STRUCTURAL STEEL NOTES

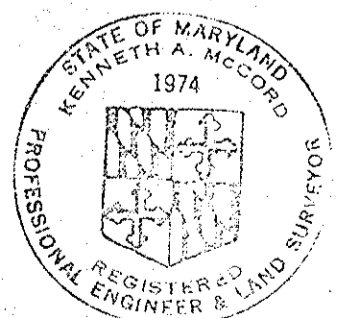
1. All structural steel shall conform to ASTM A-36.
2. All shop connections shall be welded. All field connections shall be bolted using 3/4" diameter A-325 bolts except where noted otherwise.
3. Except where otherwise noted on the drawings, connections of framing members shall be capable of transferring the full strength of the member.
4. All structural steel is designed by elastic analysis and shall be fabricated with the current AISC specifications for buildings.

STRUCTURAL ALUMINUM NOTES

1. All aluminum in contact with concrete shall be coated as specified.
2. All structural aluminum shall be alloy 6061-T6.
3. All grating sections shall be capable of supporting a live load of 125 PSF with a maximum deflection of 1/4" at 100 PSF.
4. Each section of grating shall be mechanically fastened to supports with 2 fasteners at each end.

MISCELLANEOUS STRUCTURAL NOTES

1. All stainless steel shall be ASTM A276 type 304.
2. All shop connections may be welded or bolted and field connections shall be bolted, unless otherwise noted.



SHEET S-3 *Kenneth J. Moran*

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John F. Neumaier 4/28/81
DIRECTOR OF PUBLIC WORKS - DATE

Robert B. Brown 9/24/81
CHIEF - BUREAU OF UTILITIES - DATE

William S. Ryan 4/16/81
CHIEF - BUREAU OF ENGINEERING - DATE

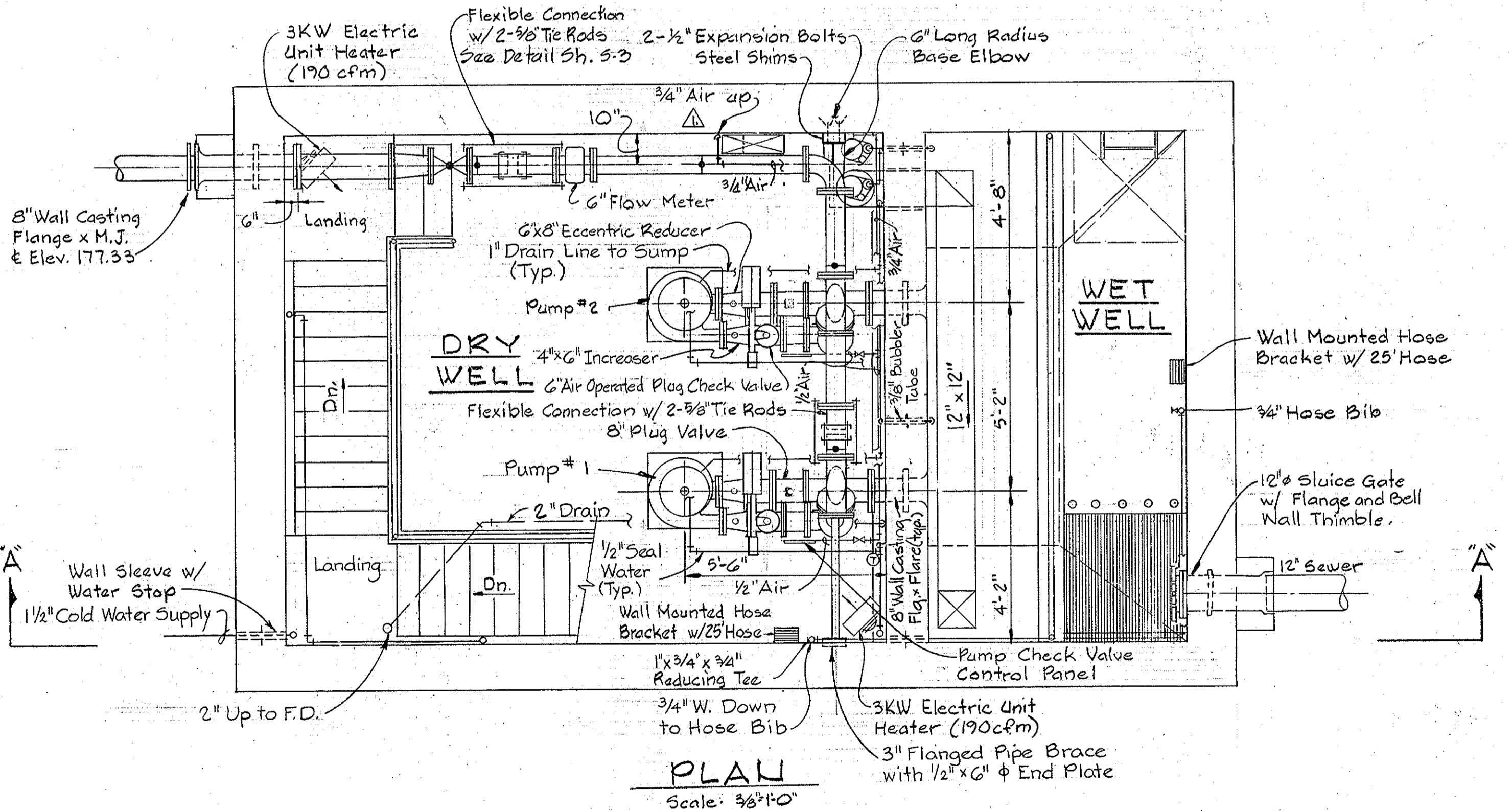
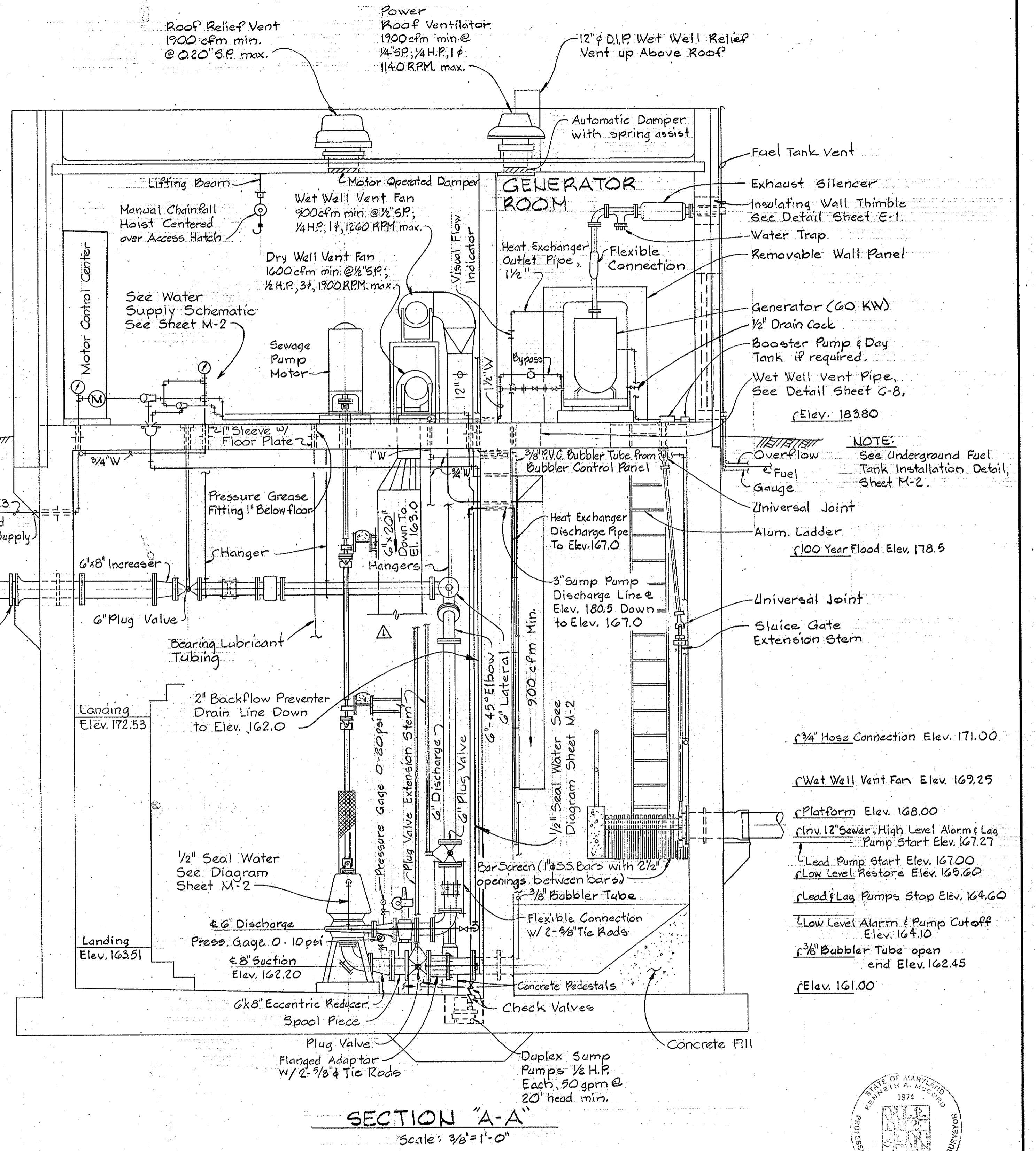
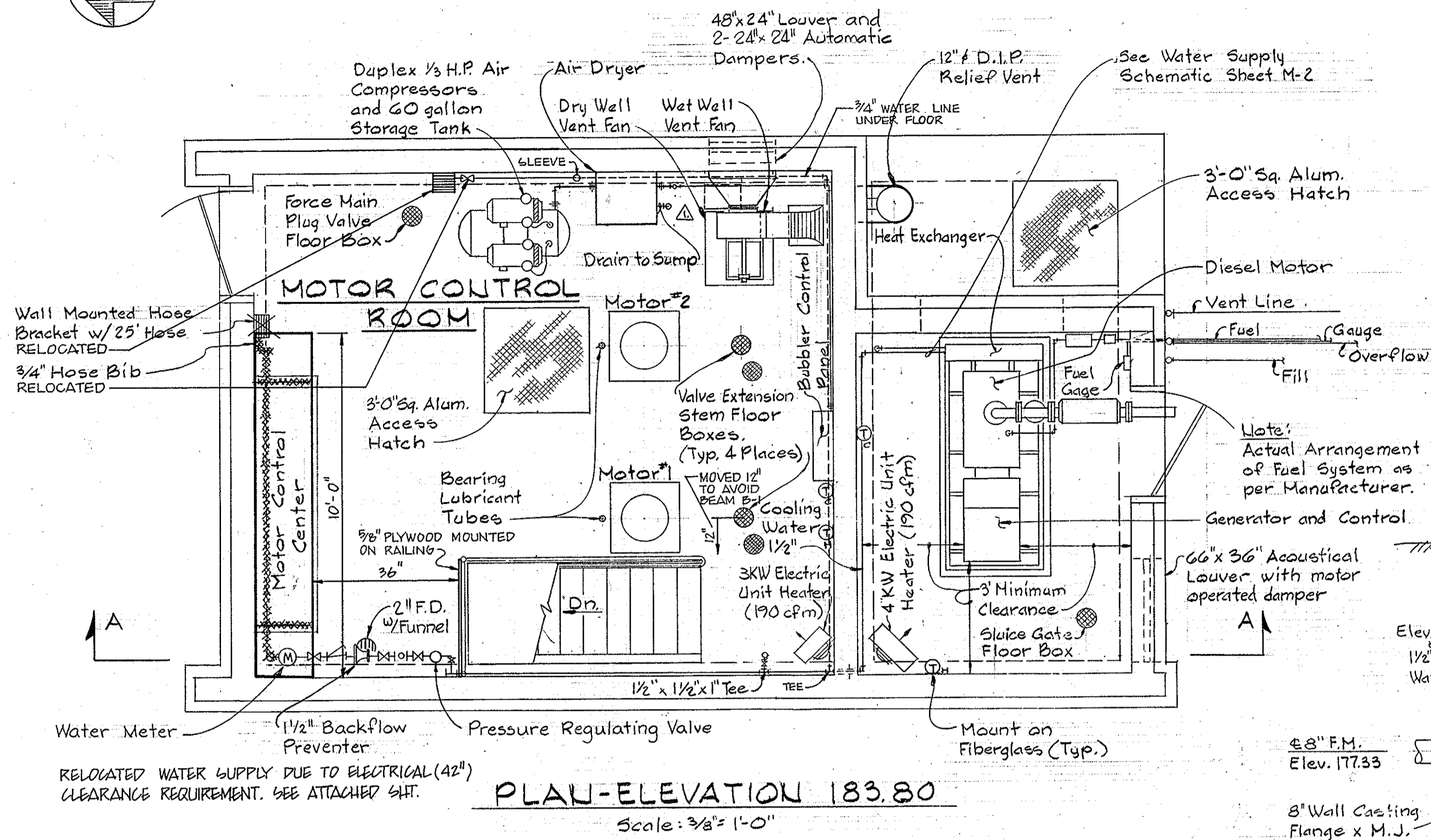
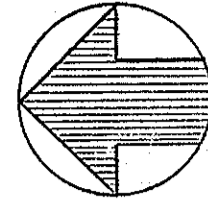
Allen S. Brown 4/15/81
CHIEF - UTILITIES DIVISION - DATE

CONTRACT NO. 705-S
PROJECT NO. S-4-6048

STRUCTURAL
SECTIONS, DETAILS & NOTES

ELECTION DISTRICT
ELKRIDGE NO. 1

DRAWING NO. 13
OF 18
SCALE AS SHOWN



No.	Date	Revision
12-2-81		Revised Dry Well Ventilators

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

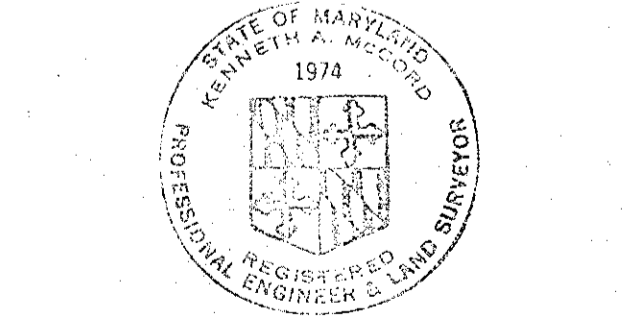
<i>[Signature]</i> DIRECTOR OF PUBLIC WORKS DATE	<i>[Signature]</i> CHIEF-BUREAU OF ENGINEERING DATE
<i>[Signature]</i> CHIEF - BUREAU OF UTILITIES DATE	<i>[Signature]</i> CHIEF UTILITIES DIVISION DATE

CONTRACT NO. 705-S
PROJECT NO. S-4-6048

MECHANICAL
PLANS & SECTION

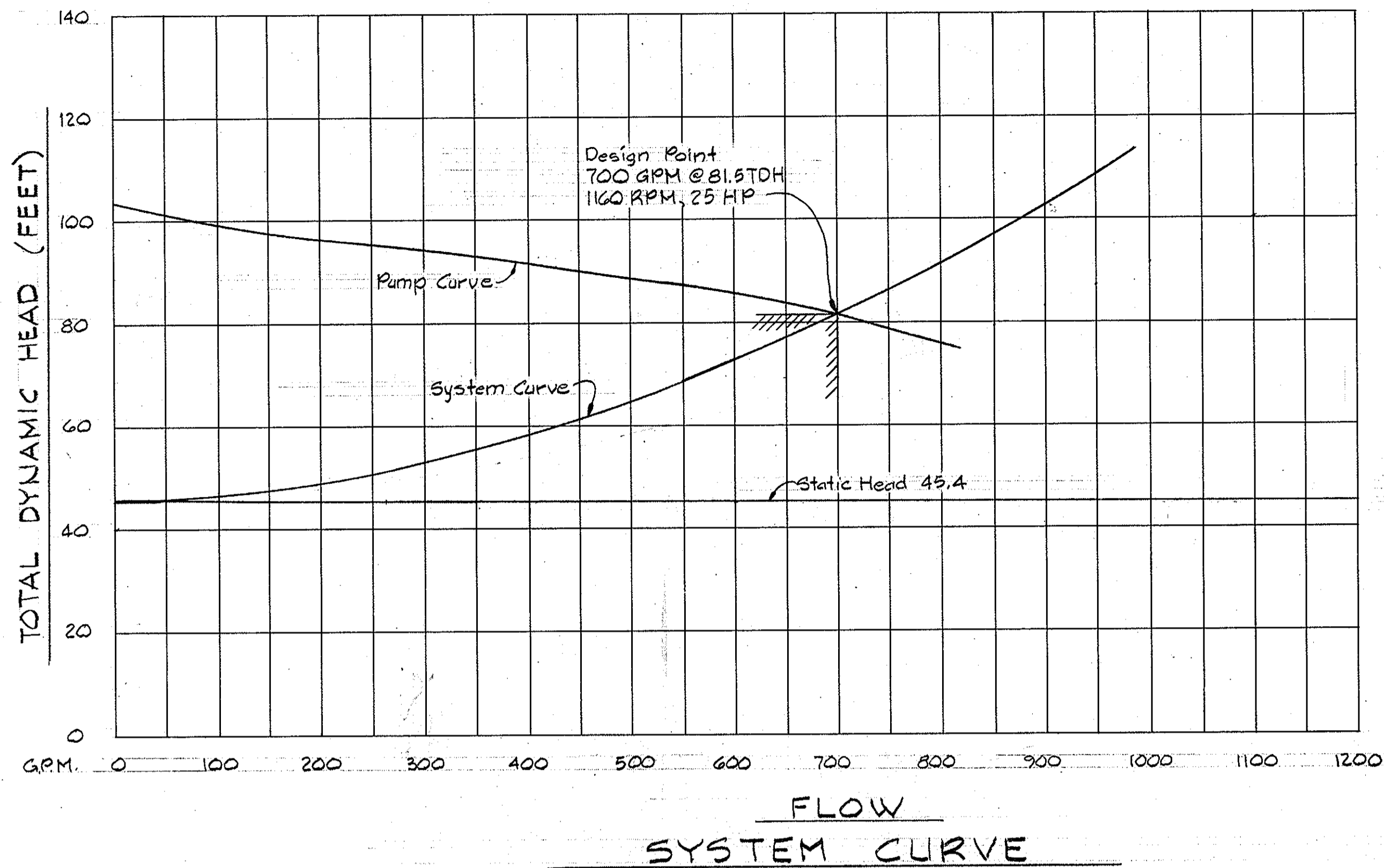
ELECTION DISTRICT
ELKRIDGE NO. 1

DRAWING NO. 14 OF 18	SCALE AS SHOWN
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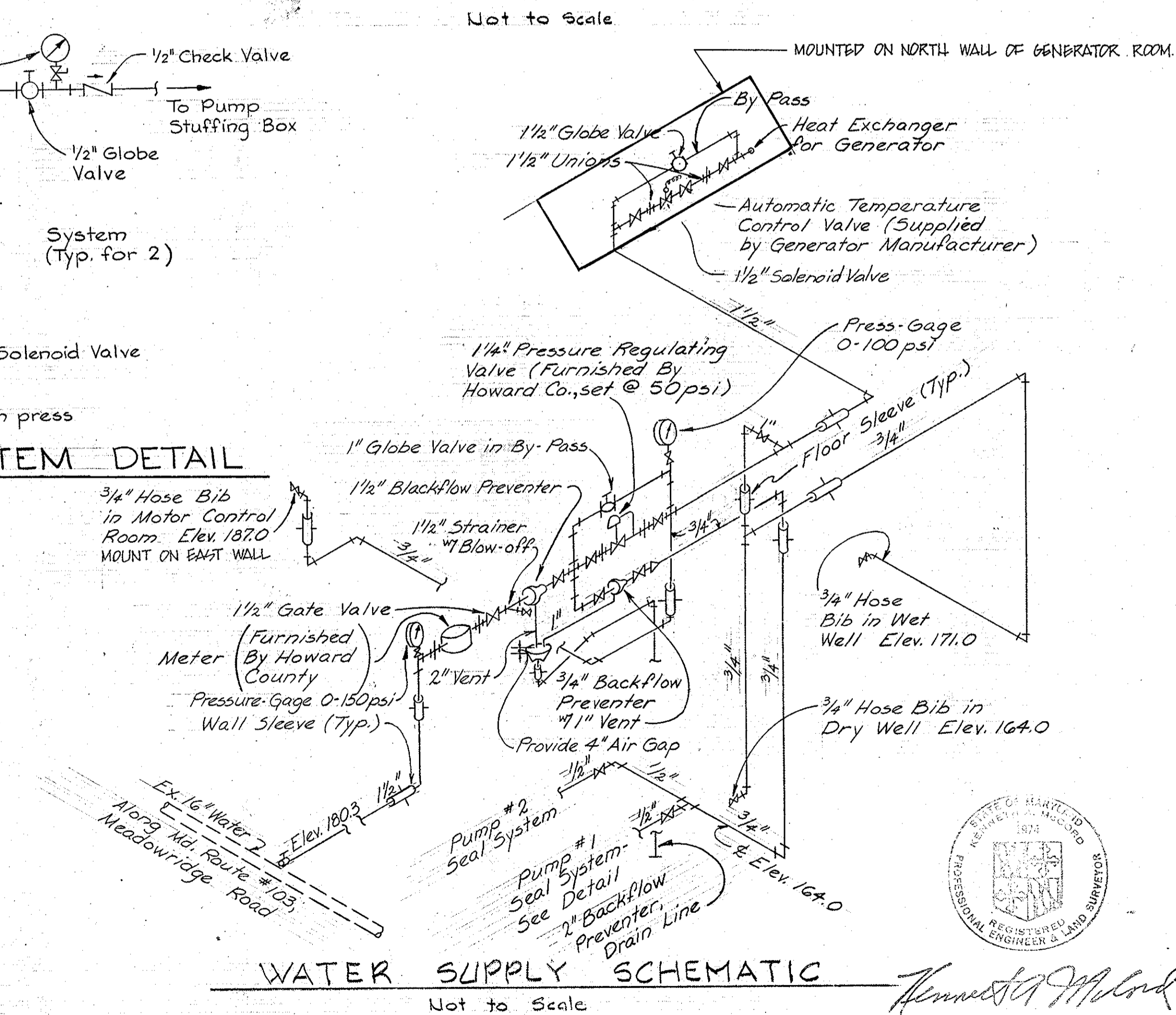
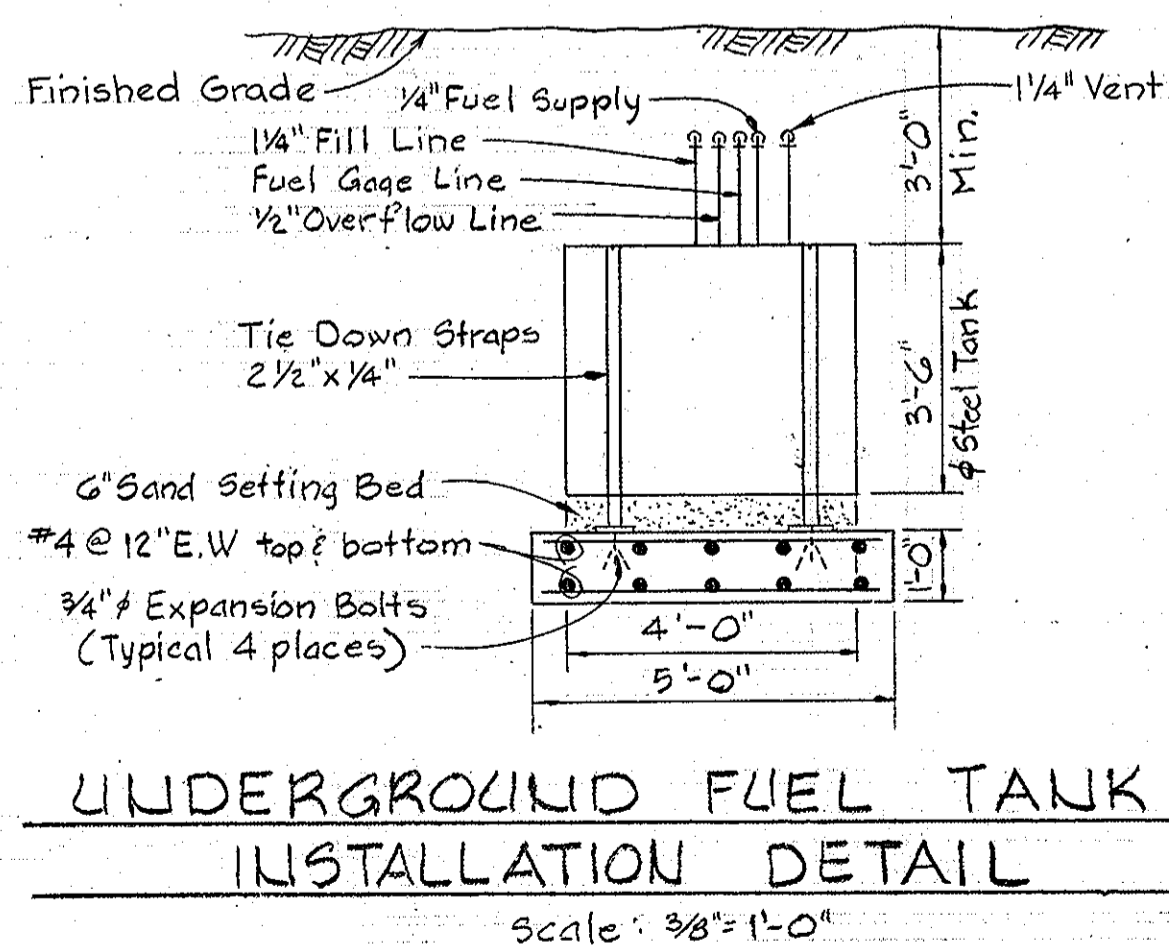
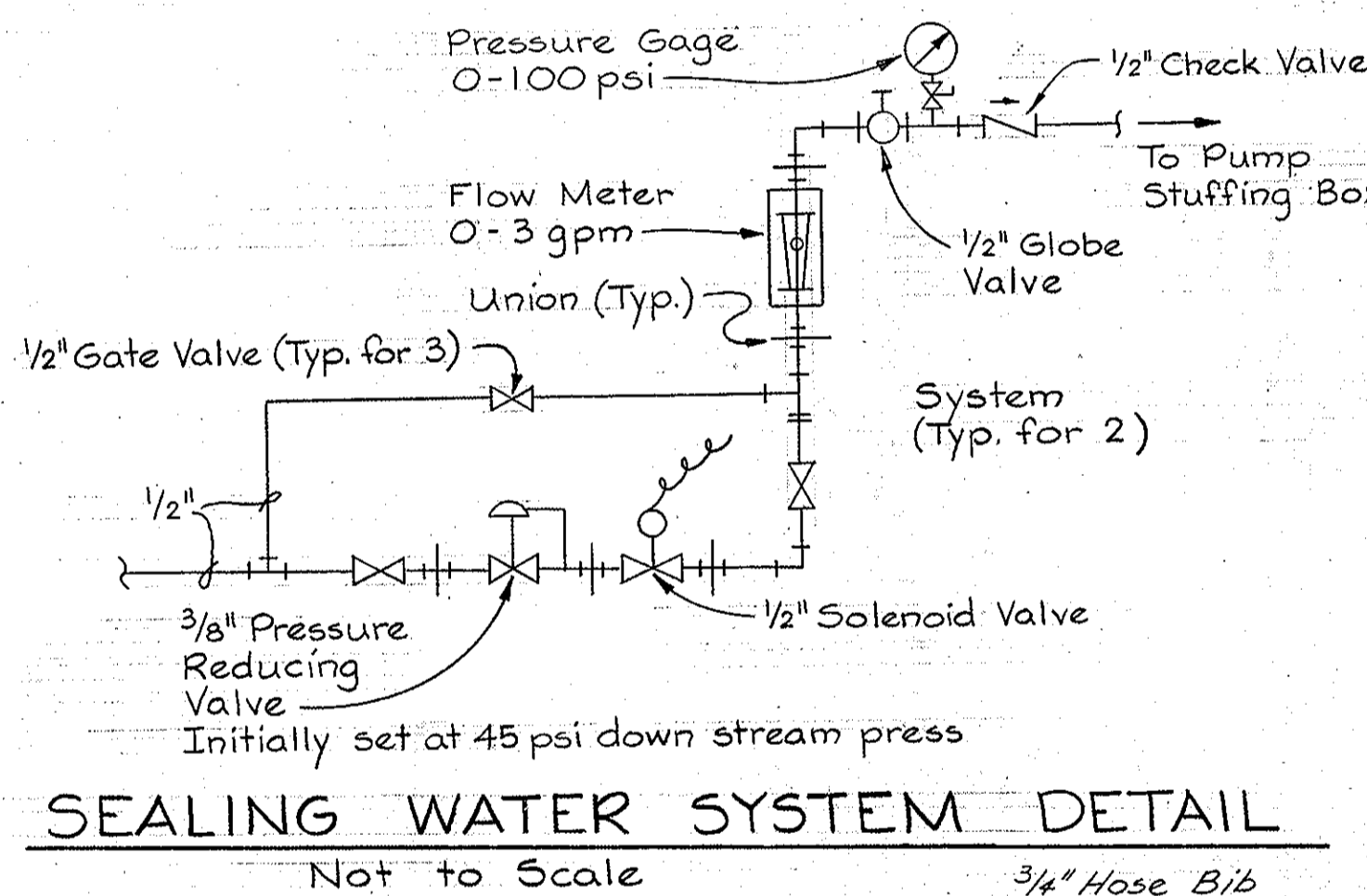
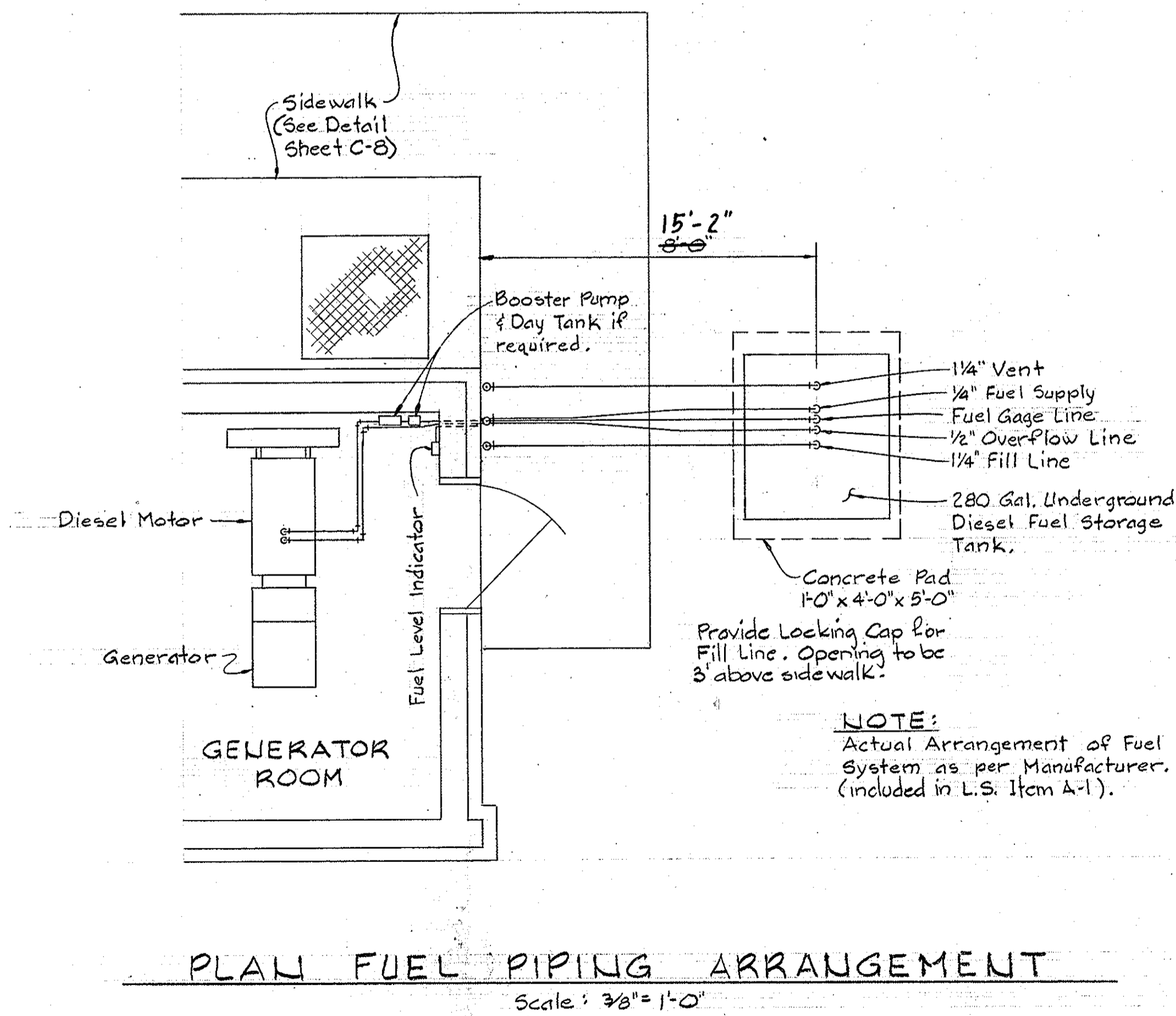
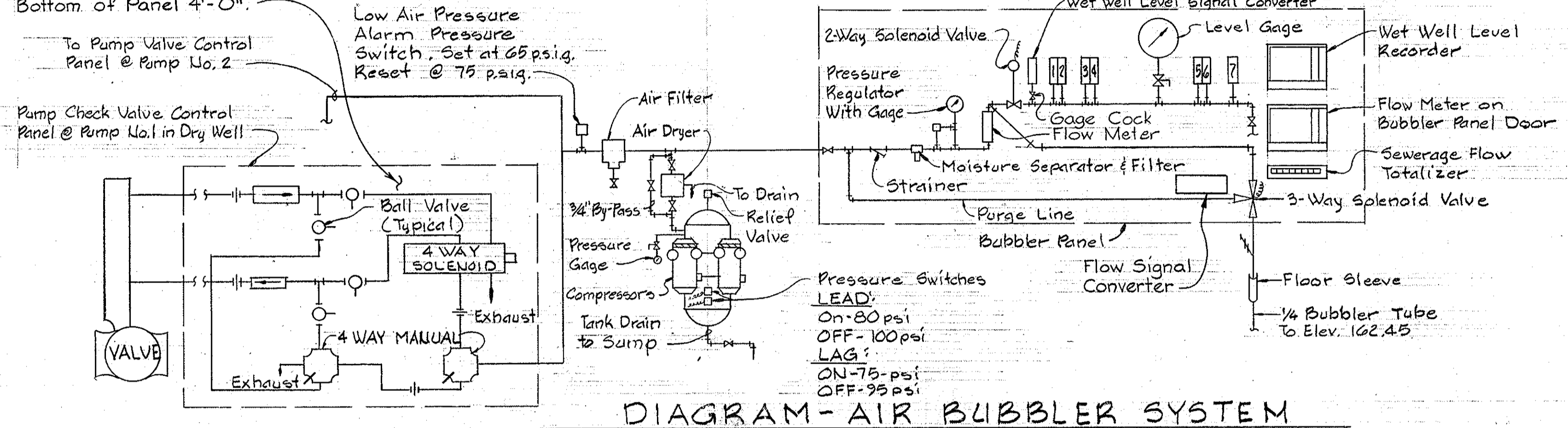


Kenneth A. Meadridge
Meadowridge
Sewer & P.S.
Project No. S-4-6048
Contract No. 705-S

WS 705 - S/14



1/4" Anodized Aluminum Panel for Mounting Solenoid Control Valves & Accessories, Mount Panels on 2 1/2" x 2 1/2" x 1/4" Ls Support from floor, Mounting Height to Bottom of Panel 4'-0".



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

4/24/81
CHIEF-BUREAU OF UTILITIES

4/28/81
CHIEF UTILITIES DIVISION

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

4-28-81
DIRECTOR OF PUBLIC WORKS

4/28/81
CHIEF-BUREAU OF ENGINEERING

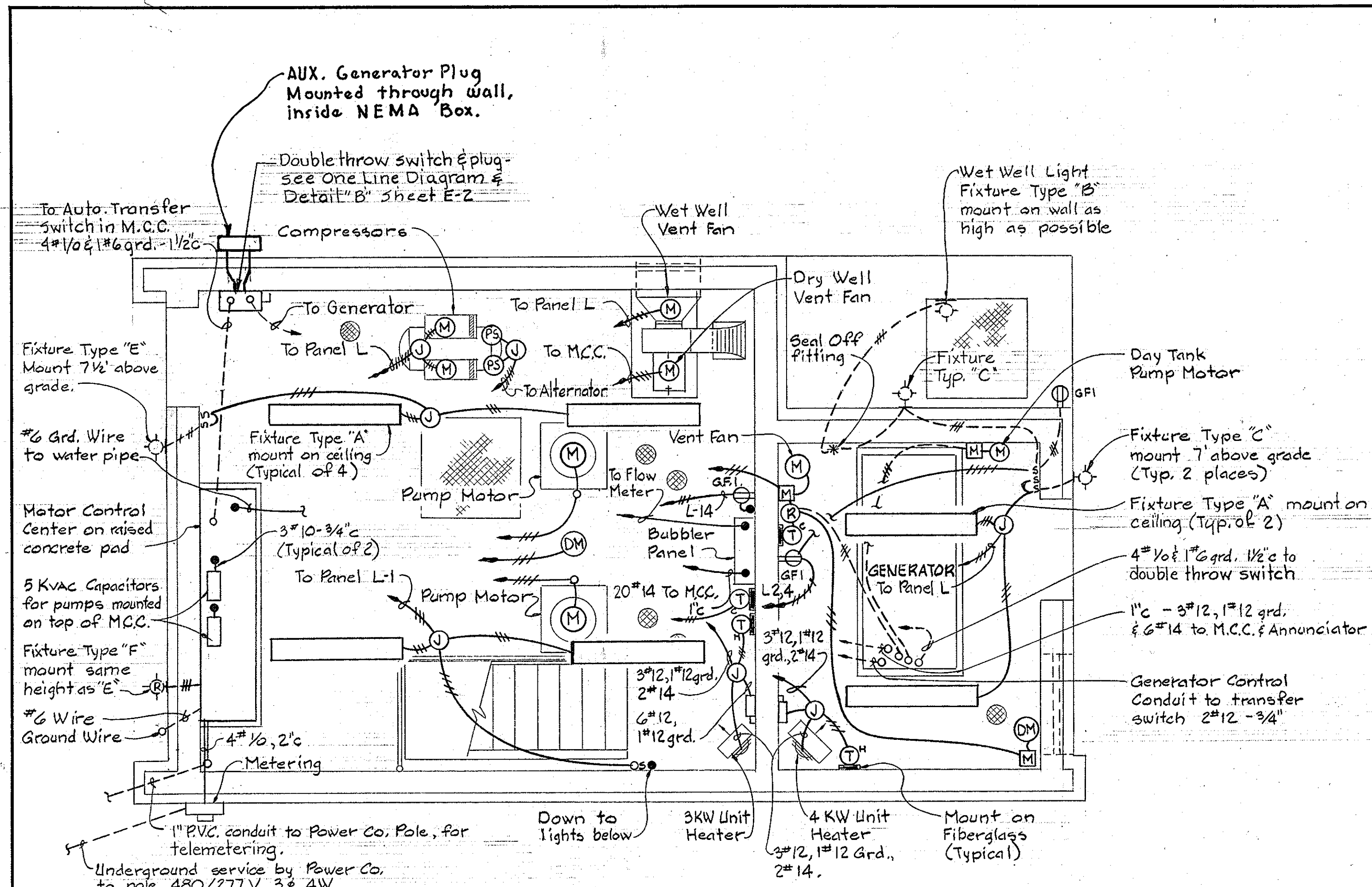
CONTRACT NO. 705-S
PROJECT NO. S-4-6048

SYSTEM CURVE
& DETAILS

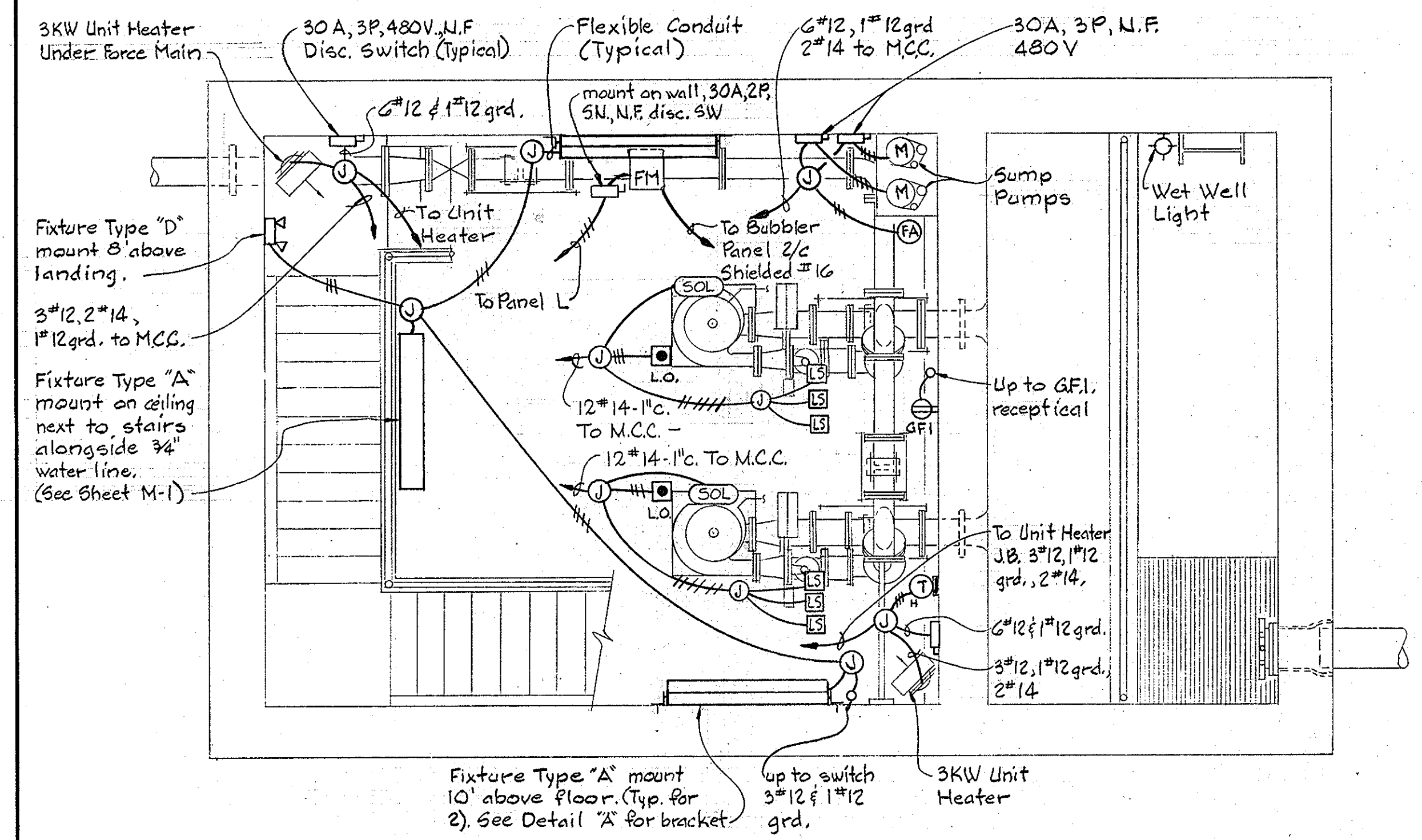
ELECTION DISTRICT
ELKRIDGE NO.1

DRAWING NO. 15 OF 18
SCALE AS SHOWN

WS 705 - S/15



PLAN-ELEV. 183.80
Scale: 3/8"=1'-0"

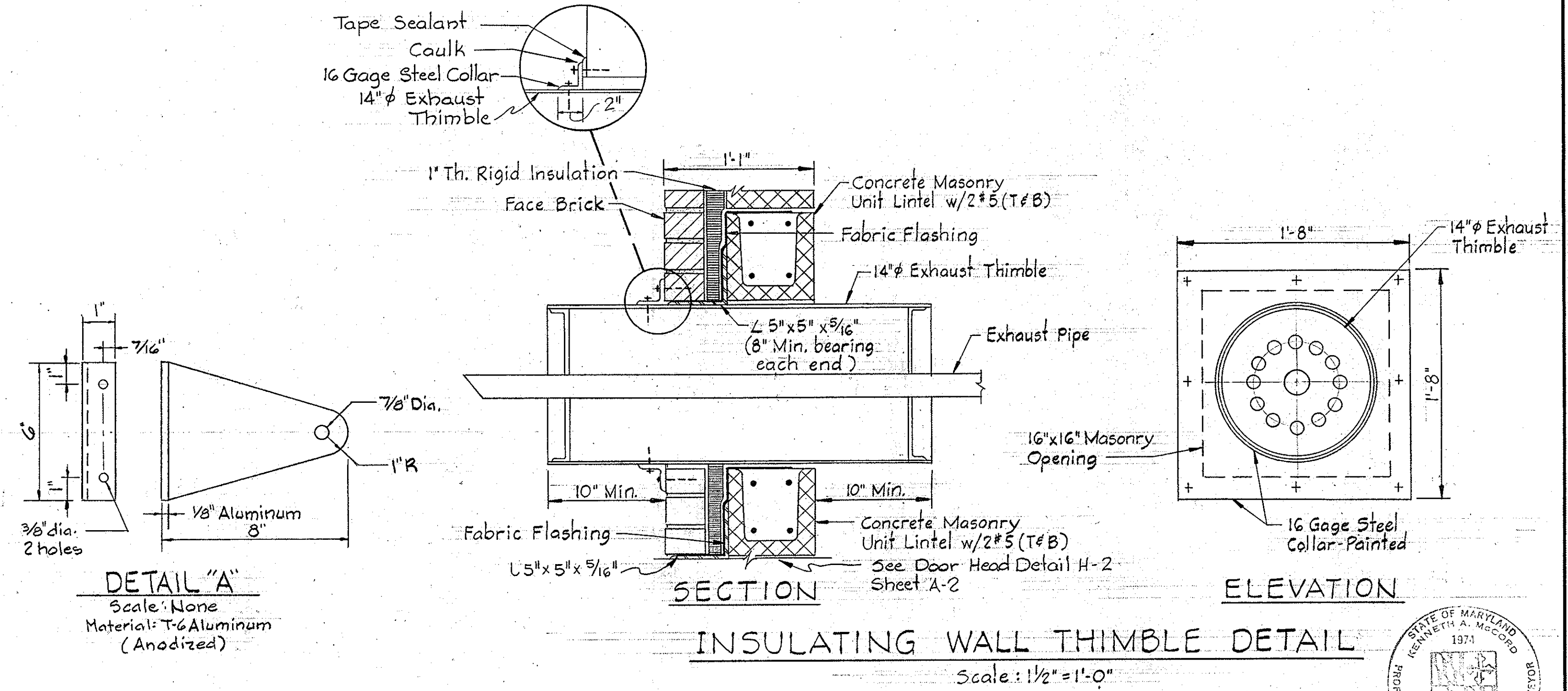


PLAN-ELEV. 161.00
Scale: 3/8"=1'-0"

MOTOR CONTROL CENTER 480/277V, 3φ, 4W												
NAMEPLATE DATA	DEVICE DESCRIPTION	HP/ KW	AUX. DESCR.	BREAKER OR MCP	FRAME	POLES	CALIB.	S. I. C.	WIRE- POLE	WIRE- CONTROL	GRD WIRE	COND. SIZE
INCOMING SERVICE SPACE												
MAIN BREAKER NO. 1	Circuit Breaker		a	Breaker	225	3	150	22				
TRANSFER CONTROL PANEL	Transfer Control Panel		See Spec.	See Spec.						2#12		3/4"
TRANSFER SWITCH	Auto. Transfer Switch		See Spec.	See Spec.	150	3		22	4#1/2		#6	1 1/2"
MAIN BREAKER NO. 2	Circuit Breaker		a	Breaker	225	3	150	22				
SEWAGE PUMP ANNUNCIATOR	Combination Starter, Size 2	25	b,c,d,e,i, k,l,m,n	M.C.P.	100	3	50		3#8		#10	3/4"
SEWAGE PUMP SPARE	Comb. Starter, Size 2	25	b,c,d,e,i, k,l,m,n	M.C.P.	100	3	50		3#8		#10	3/4"
DRY WELL CONTROL RM. FAN	Comb. Starter, Size 1	1/2	b,c,e,i	M.C.P.	100	3	3		3#12		#12	3/4"
SUMP PUMP	Comb. Starter, Size 1	1/2	b,c,i,j	M.C.P.	100	3	3		3#12	2#14	#12	1"
ALTERNATOR	2 Circuit Alternator											
GENERATOR	2 Circuit Alternator											
PANEL L	16 Circuit w/Main Breaker			Breaker	100	2	30	25				
TRANSFORMER	480V-120/240V-5KVA-1φ			Breaker	100	3	15	25				
WET WELL EXH. FAN		1/4	c,e,f,g,h									
UNIT HEATER- GEN. RM.	Comb. Contactor, Size 1	4	i	Breaker	100	3	15	25	3#12	2#14	#12	
UNIT HEATERS- DRY WELL	Comb. Contactor, Size 1	3-3	i	Breaker	100	3	15	25	3#12	2#14	#12	
UNIT HEATER- CONTROL RM.	Comb. Contactor, Size 1	3	i	Breaker	100	3	15	25	3#12	2#14	#12	
SPARE	Comb. Starter, Size 1			M.C.P.	100	3						
SPARE	Breaker			Breaker	100	3	15	25				

AUXILIARY DESCRIPTION

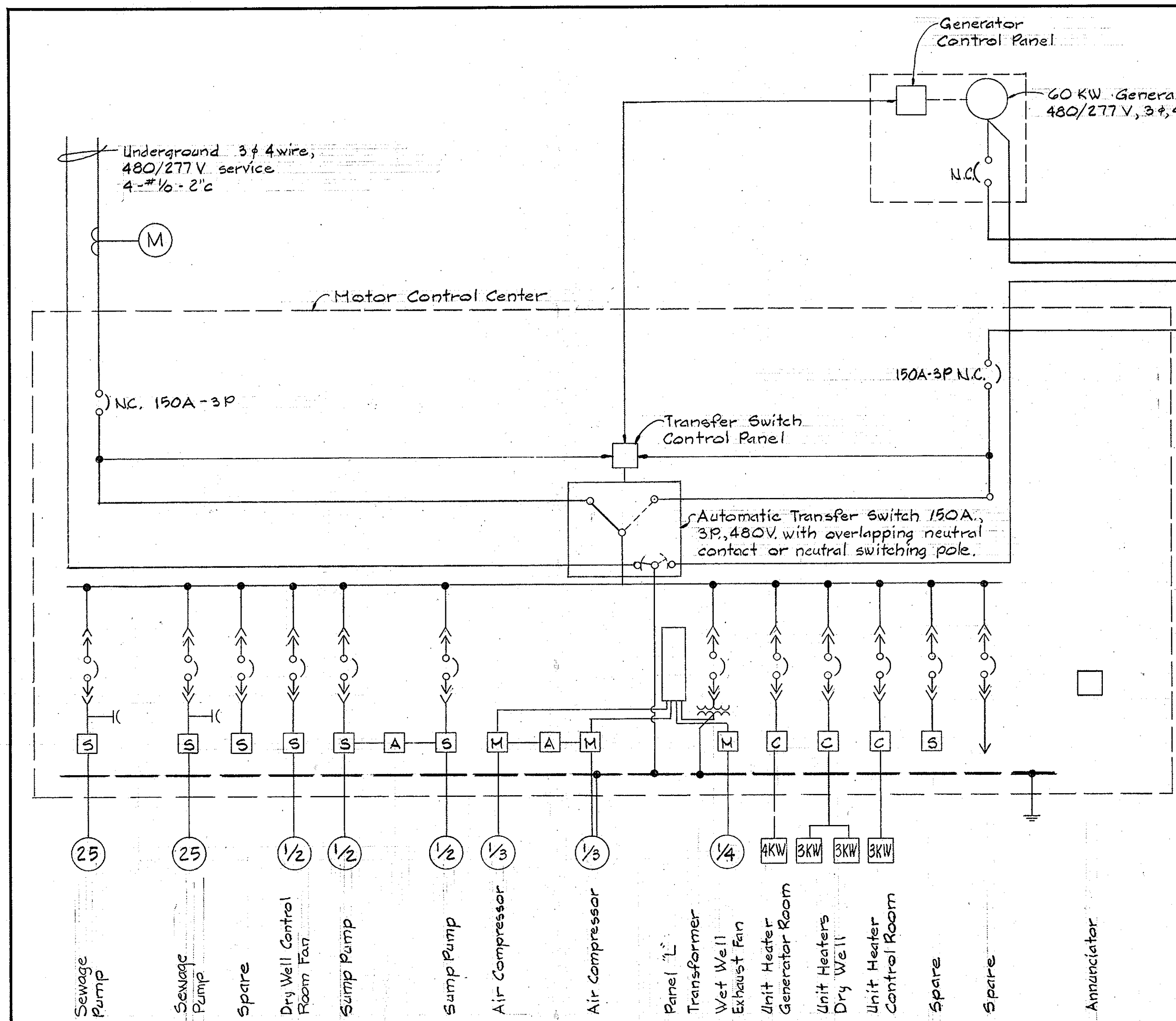
- a. Auxiliary Contact
- b. Green Indicating Light
- c. Red Indicating Light
- d. Power Failure Timer
- e. H-O-A Selector Switch
- f. Repeat Cycle Timer
- g. Manual Motor Starter
- h. Auxiliary Relay
- i. Control Power Transformer 480-120 Volt
- j. Test-Off-Auto Selector Switch
- k. White Indicating Light
- l. Amber Indicating Light
- m. Blue Indicating Light
- n. Phase monitor



INSULATING WALL THIMBLE DETAIL
Scale: 1/2"=1'-0"

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND		CONTRACT NO. 705-S PROJECT NO. S-4-6048	ELECTRICAL PLANS & DETAILS	ELECTION DISTRICT ELKRIDGE NO. 1	DRAWING NO. 16 OF 18	SCALE AS SHOWN
	Director of Public Works - DATE Chief - Bureau of Utilities - DATE	Chief - Bureau of Engineers - DATE Chief - Utilities Division - DATE					

WS 705 - S/16



ONE LINE DIAGRAM

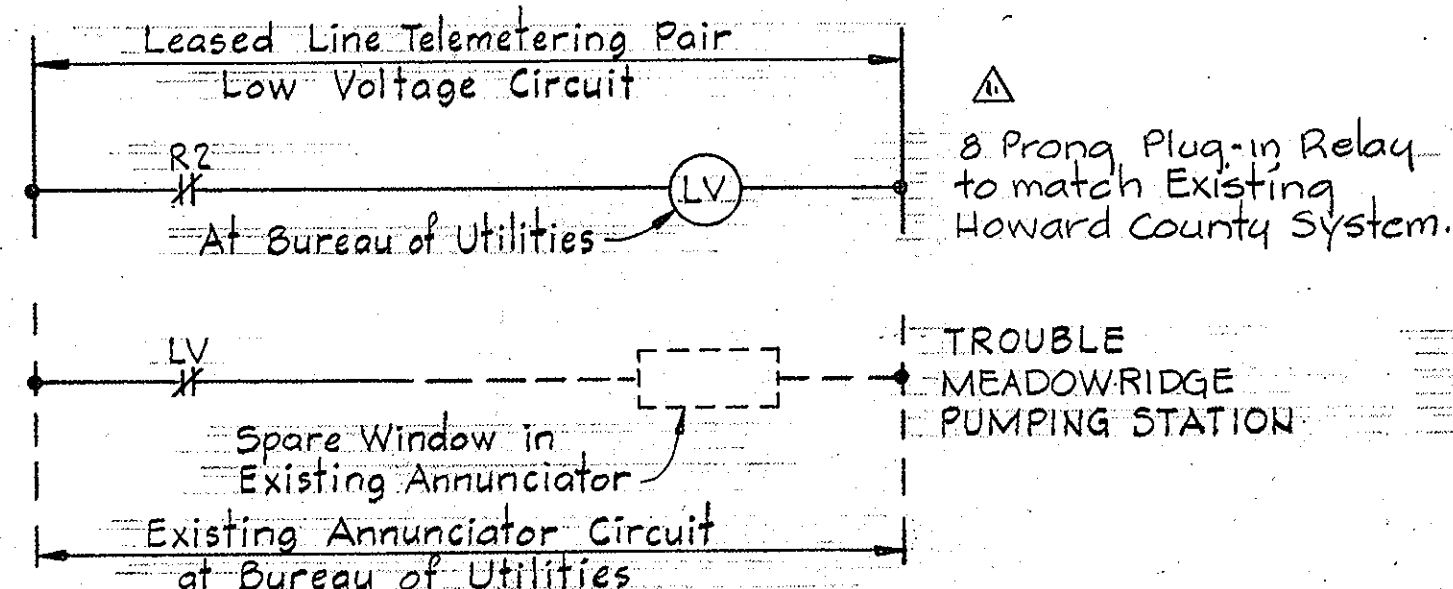
- LEGEND**
- Fluorescent fixture
 - Outlet - incandescent - wall bracket
 - ⊕ Outlet - duplex convenience
 - ⊙ Junction Box
 - EXP WP Explosion proof - weatherproof where indicated
 - S₁ S₂ Switch - single pole - two pole
 - T_H T_C Thermostat - heating - cooling with 3/4" insulating board mounted on wall
 - Disconnect switch - non-fused
 - /// Homerun to panelboard - number of arrows indicates number of circuits, Number of cross lines indicate number of wires, Where no cross lines appear two conductors are implied.
 - Conduit - on ceiling or wall
 - - - Conduit - under floor
 - - - - Conduit - step up - down
 - * Conduit seal
 - Lo Pushbutton station - lock out
 - (M) Motor
 - (M) Starter - manual
 - (DM) Damper motor
 - G.F.I. Ground fault interrupter
 - (LS) Limit switch
 - (Sol) Solenoid valve
 - (S) Motor starter - full voltage
 - (C) Contactor
 - (FS) Float switch
 - (FM) Magnetic flow meter
 - (PS) Pressure switch
 - (FA) Flood alarm
 - (R) Relay
 - (C) Starter or Contractor Coil
 - (-C) Capacitor
 - (A) Alternator
 - (SOL) Solenoid

NAMEPLATE SCHEDULE

A-1	A-2	A-3	A-4
B-1	B-2	B-3	B-4
C-1	C-2	C-3	C-4

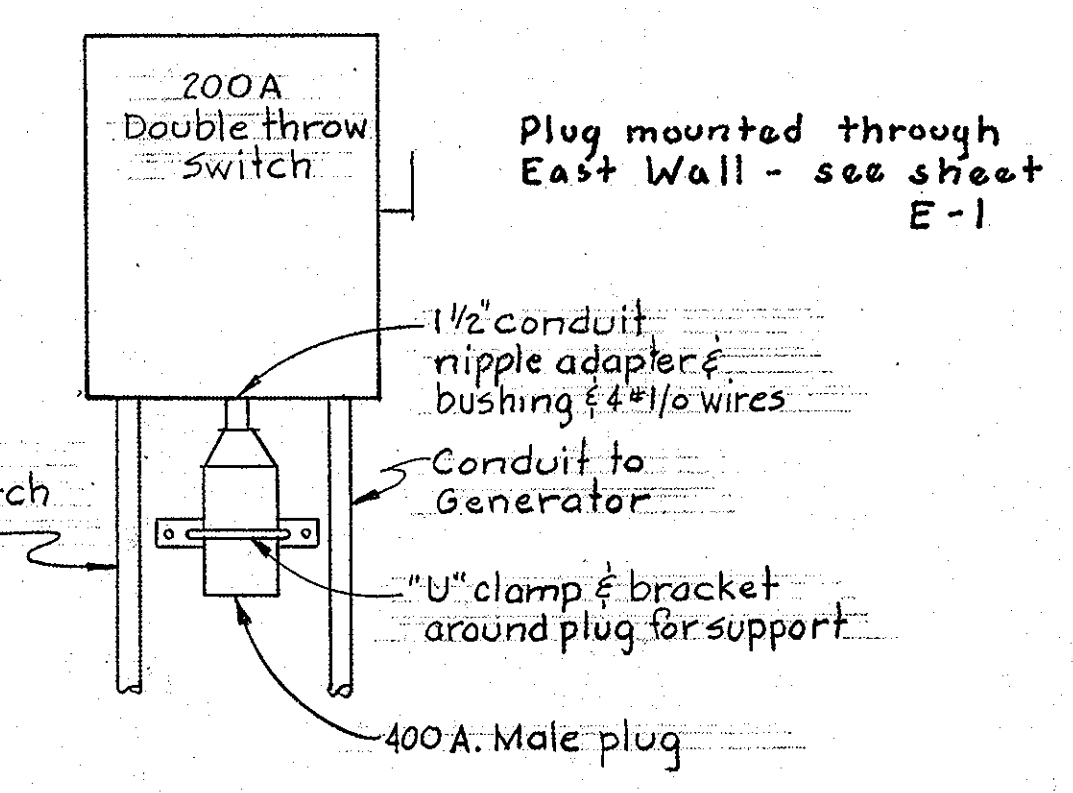
ANNUNCIATOR

- A-1 High level wet well
- A-2 Low level wet well
- A-3 Generator trouble
- A-4 Generator running
- B-1 Main breaker no. 1 - open
- B-2 Main breaker no. 2 - open
- B-3 Dry Well - flood
- B-4 Low air - bubbler
- C-1 Valve Failure
- C-2 Spare
- C-3 Spare
- C-4 Spare



ALARM INDICATION AT BUREAU OF UTILITIES

Note: Contractor shall coordinate voltage requirements with the telephone company and field verify the extent of work at the Bureau of Utilities
8250 Old Montgomery Rd, Ellicott City, Maryland 21043



DETAIL "B"
See Sheet E-1
No Scale

12-2-81 Revised Plug and Relay.
No. Date Revision

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

W. F. Newman 4/28/81
DIRECTOR OF PUBLIC WORKS - DATE

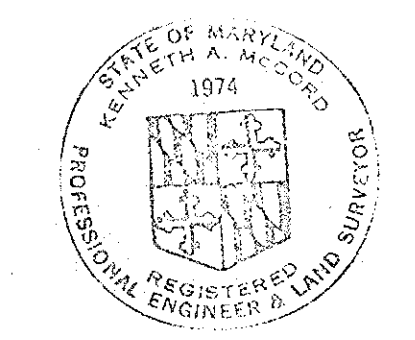
Allen S. Brown 4/15/81
CHIEF - UTILITIES DIVISION - DATE

CONTRACT NO. 705 - S
PROJECT NO. S-4-6048

ELEMENTARY DIAGRAMS
AND DETAILS

ELECTION DISTRICT
ELKIDGE NO. 1

DRAWING NO. 17 OF 18
SCALE AS SHOWN

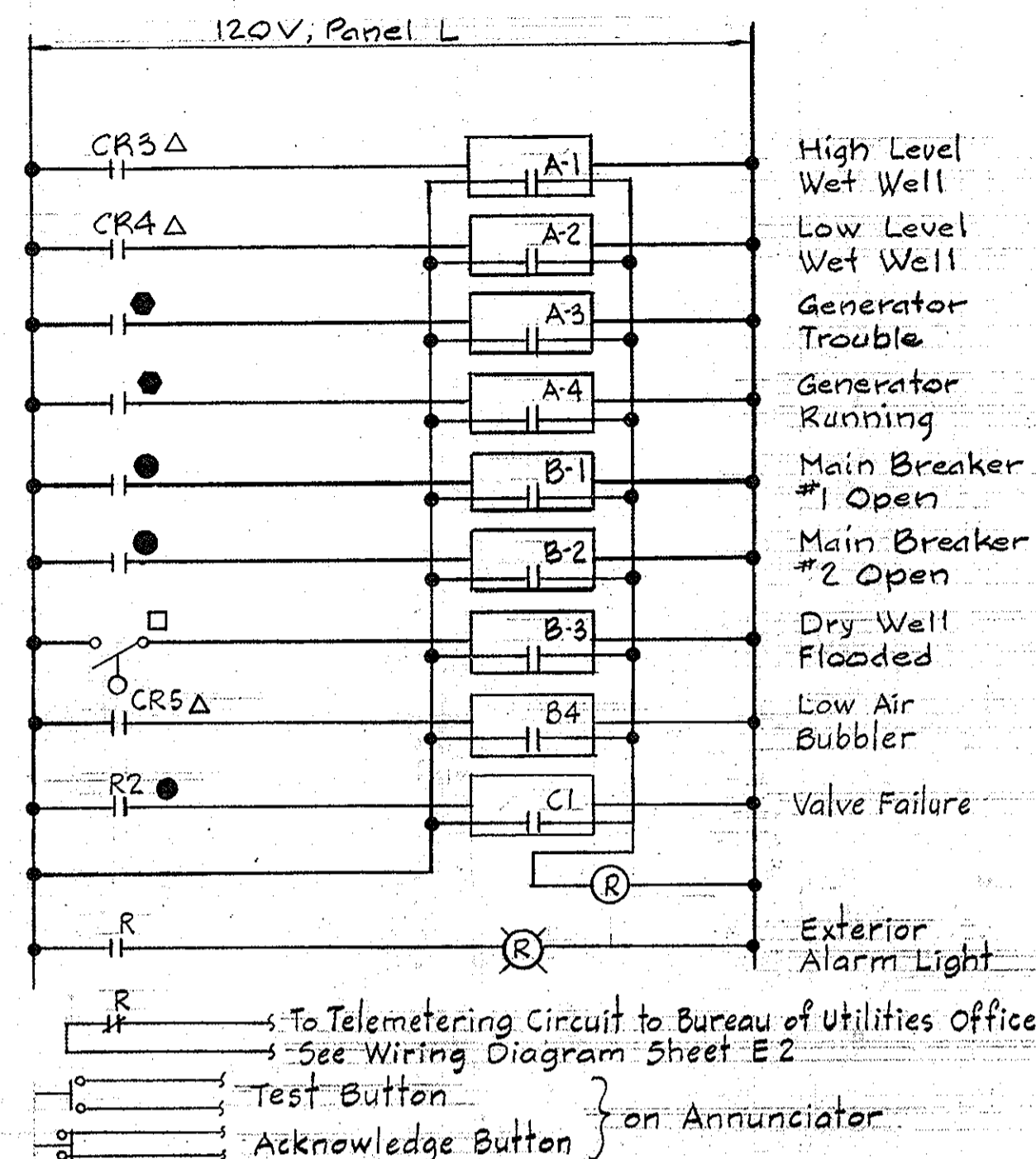


Kenneth A. Melrod

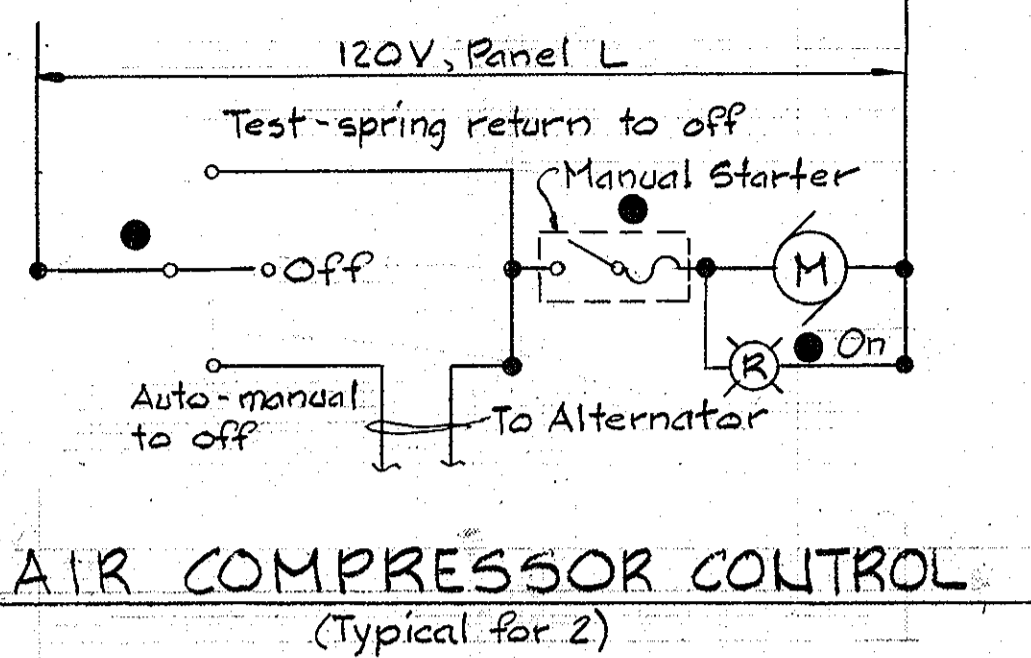
Meadowridge
Sewer and P.S.
Project No. S-4-6048
Contract No. 705-S

Sheet No. E-2

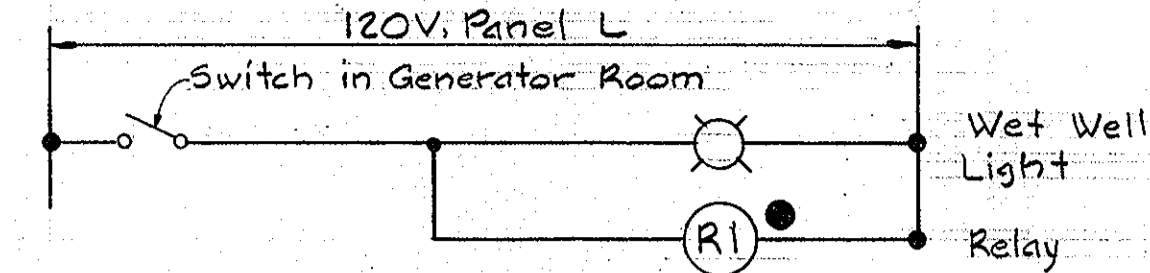
WS 705 - S/17



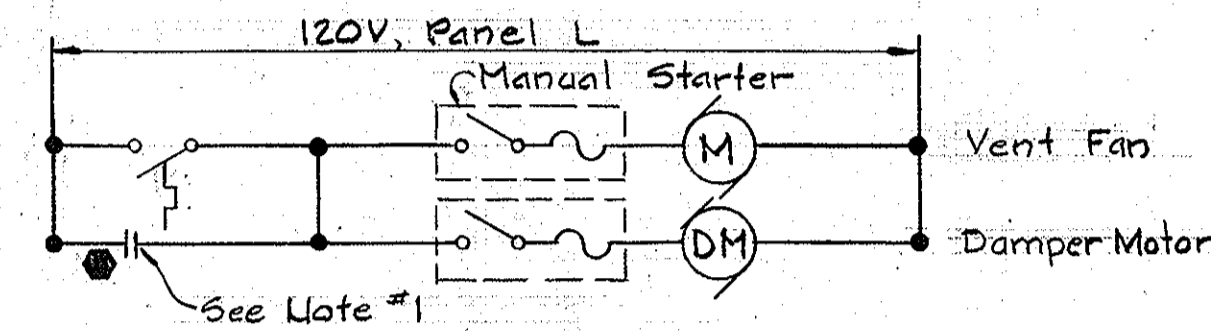
ANNUNCIATOR ALARM WIRING



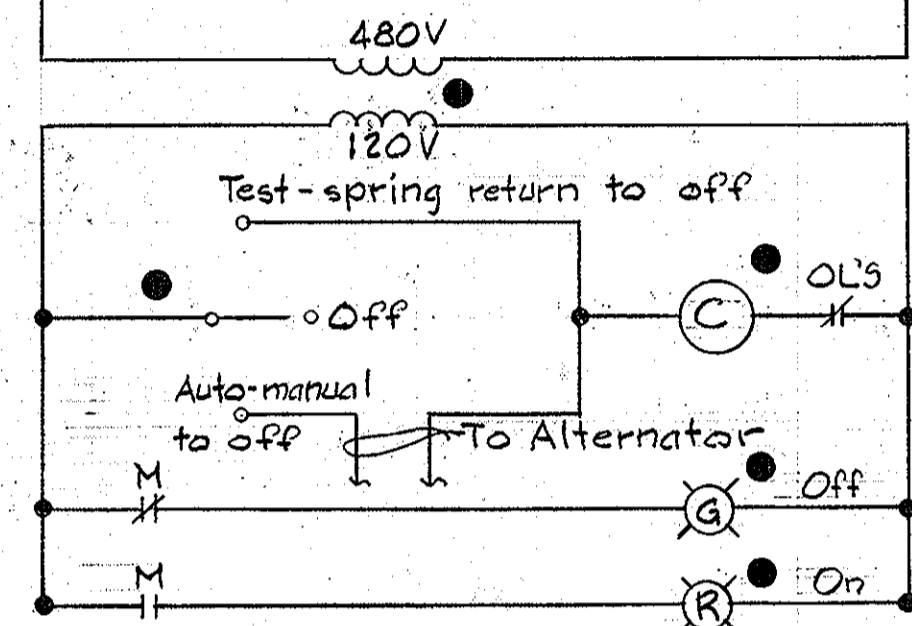
AIR COMPRESSOR CONTROL (Typical for 2)



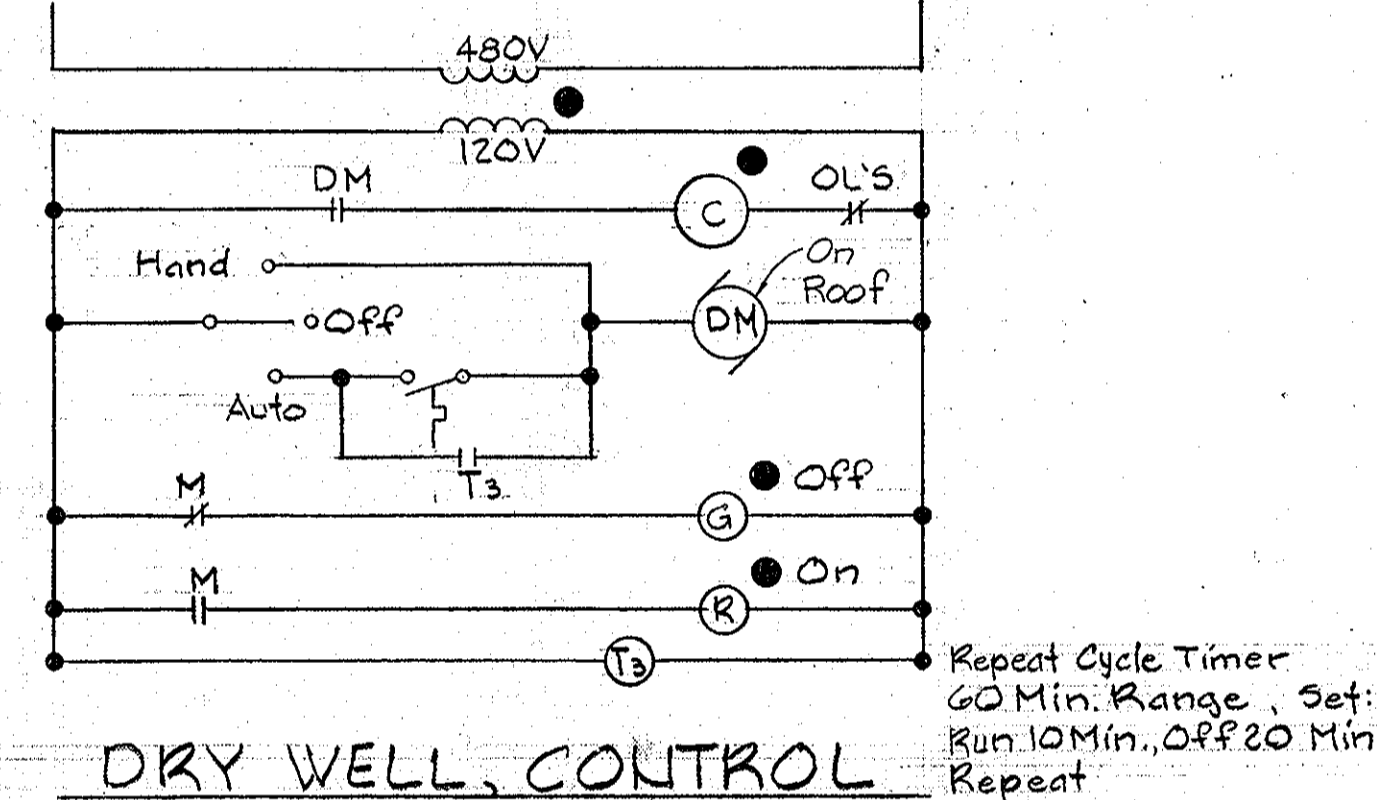
WET WELL LIGHT WITH FAN CONTROL



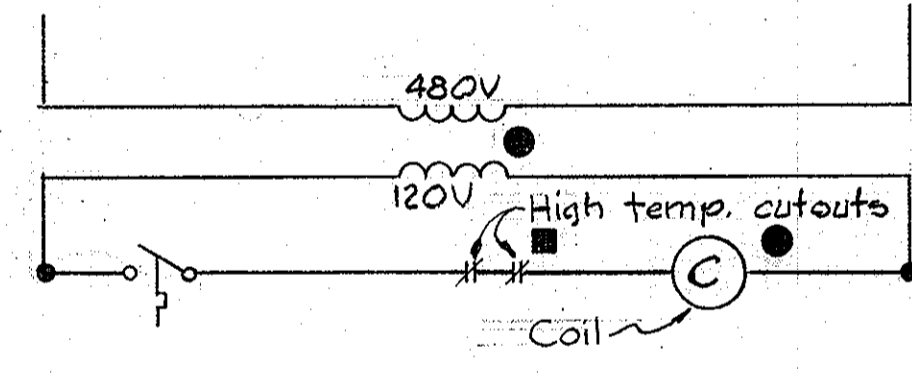
EXHAUST FAN GENERATOR ROOM



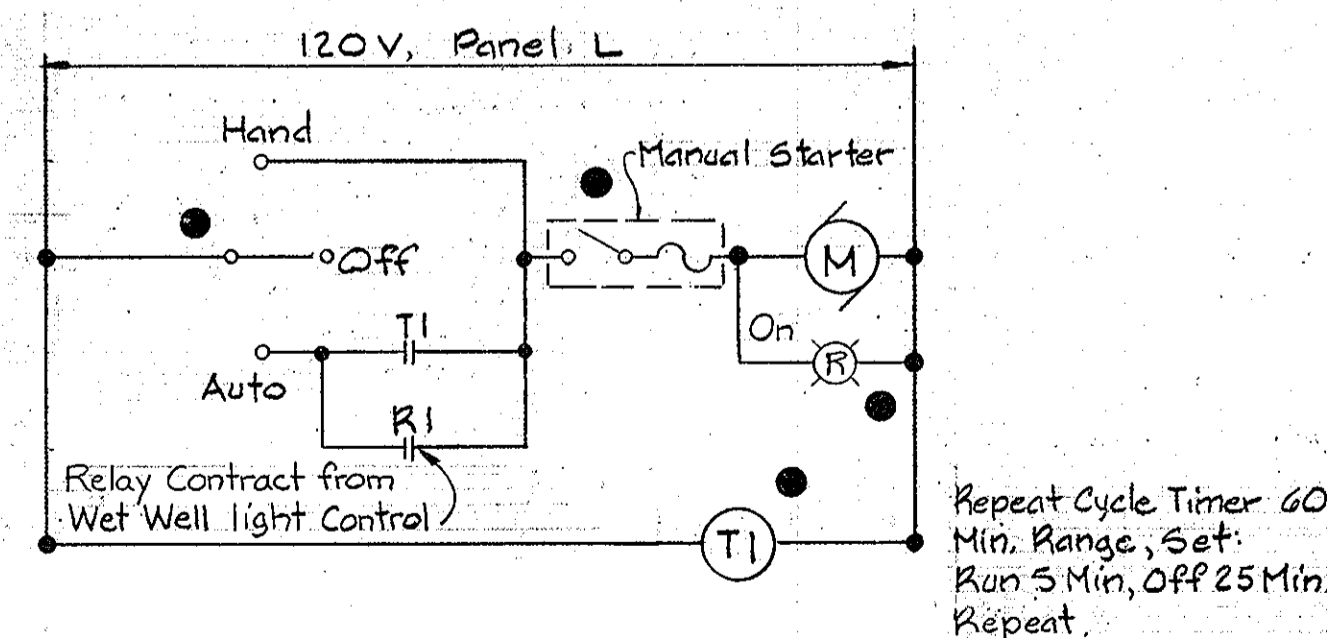
SLUMP PUMP CONTROL



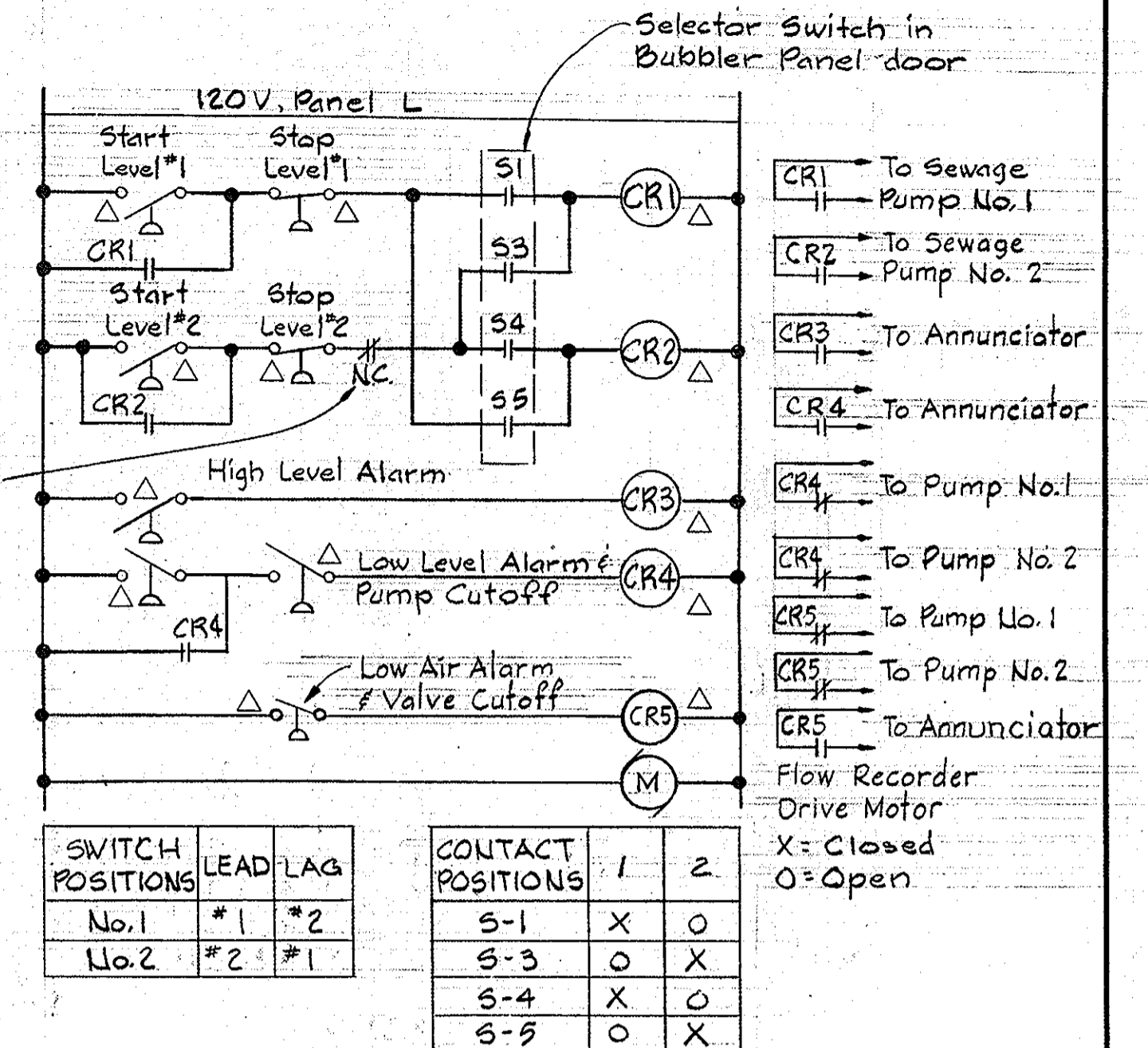
DRY WELL CONTROL ROOM VENT FAN



UNIT HEATERS CONTROL DRY WELL (Similar for Control Room & Generator Room except only one heater in each room.)



WET WELL VENT FAN



BUBBLER PANEL CONTROL

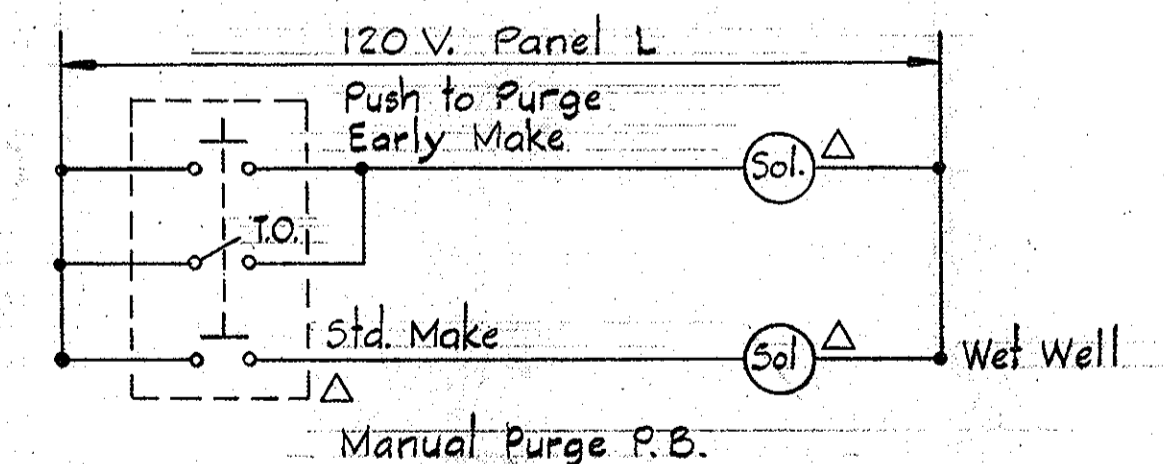
LOCATION LEGEND

- Located in Motor Control Center
- ▲ Located at pump location
- Located on or in equipment
- △ Located in Bubbler Panel
- Located on Valve
- Located in Dry Well - Near Sump Pump
- Located on Generator

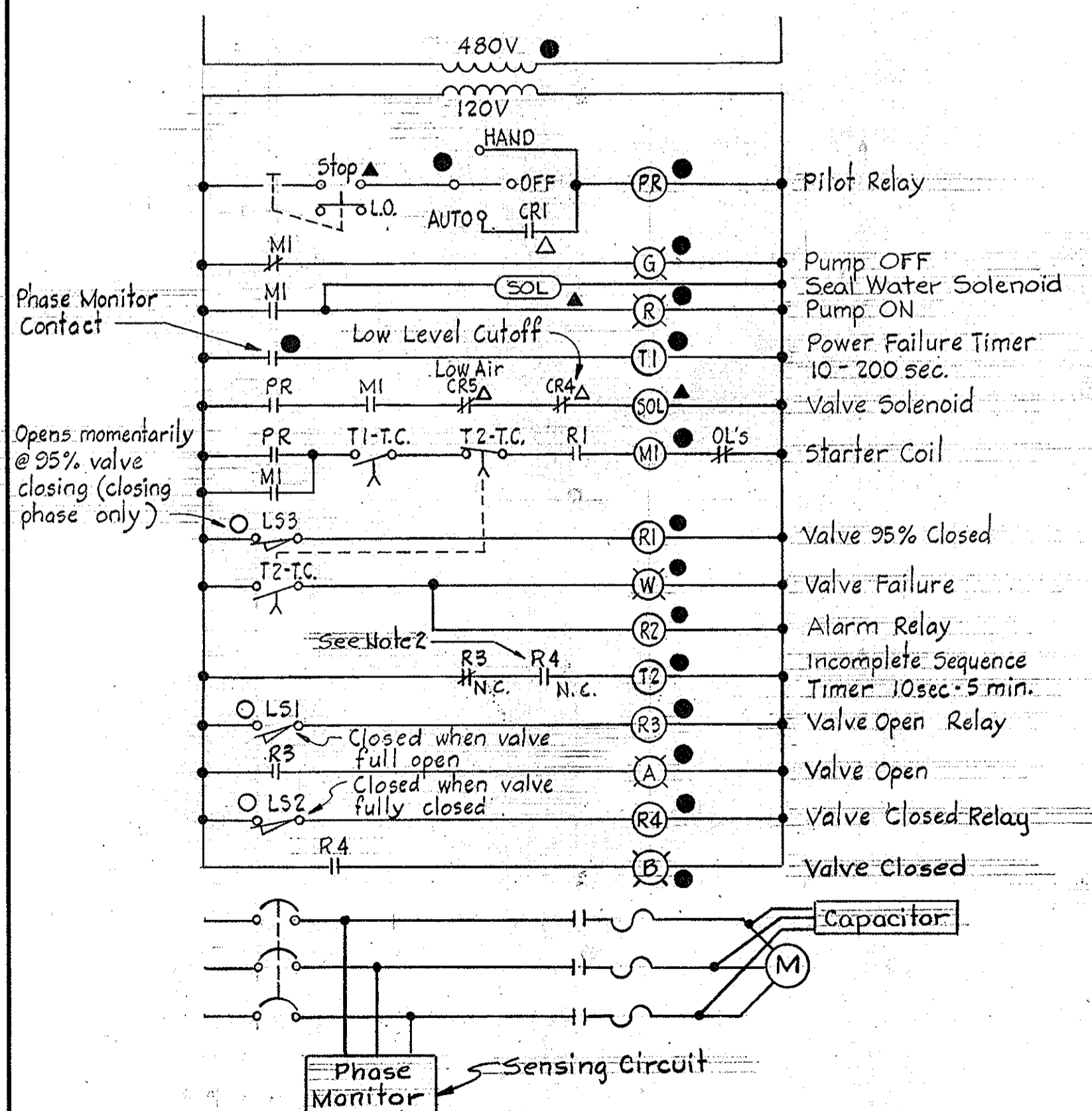
NOTES

1 Contact closes when generator starts, contact to be rated 10 amp. minimum.

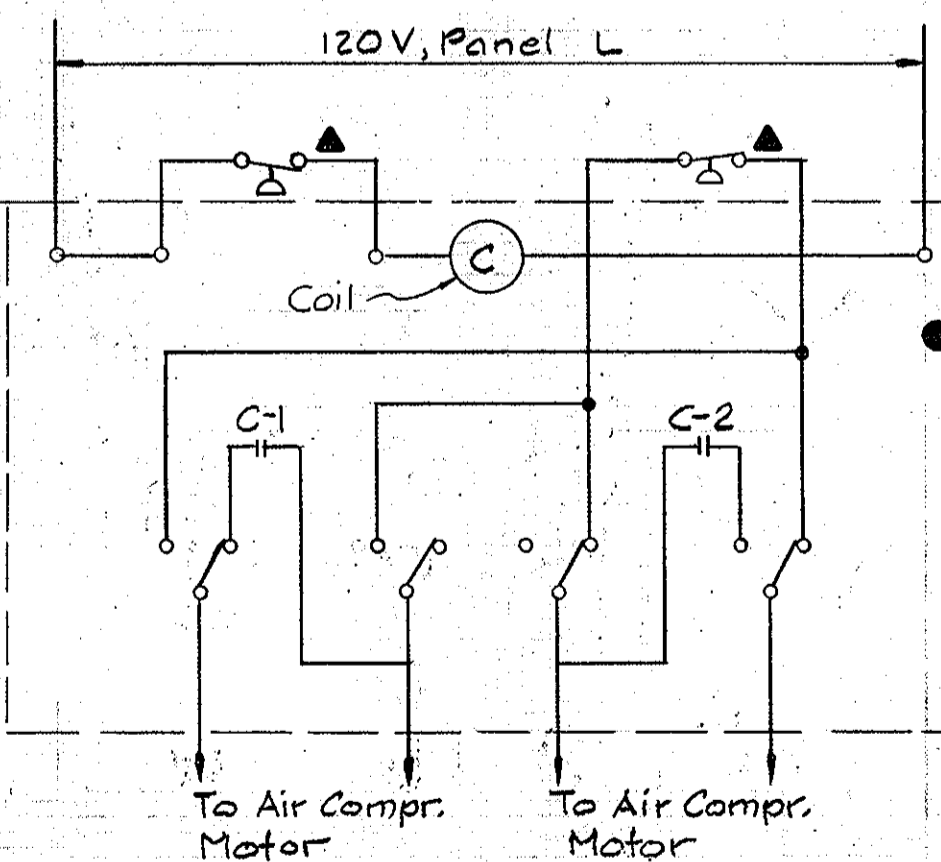
2 R4 contact open only when valve fully closed.



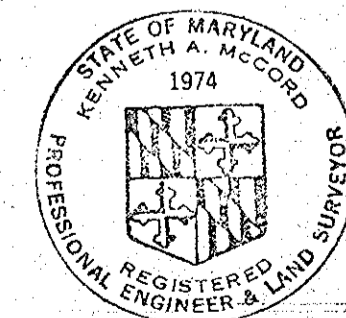
BUBBLER PURGE CONTROL



SEWAGE PUMP CONTROL (Typical for 2)



TWO CIRCUIT ALTERNATOR FOR AIR COMPRESSORS (Typical for Sump Pumps except with Float Switches connected in starter control circuit)



Kenneth A. Meador

Meadowridge
Sewer and P.S.
Project No. S-4-6048
Contract No. 705-5

Sheet No. E-3

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works - DATE

Chief - Bureau of Engineering - DATE

Chief - Bureau of Utilities - DATE

CONTRACT NO. 705-S
PROJECT NO. S-4-6048

ELEMENTARY DIAGRAMS
AND DETAILS

ELECTION DISTRICT
ELKRIDGE NO. 1

DRAWING NO. 18 OF 18 SCALE AS SHOWN