

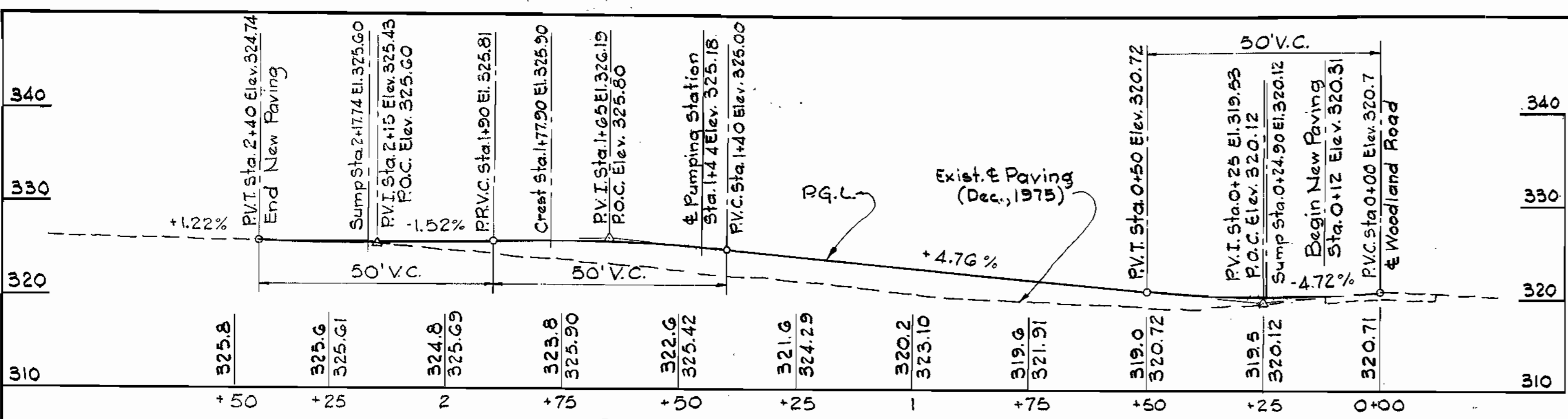
PROJECT NO. S-4-6041
CONTRACT NO. 681-S
MARYLAND ROUTE 108 SEWAGE PUMPING STATION
HOWARD COUNTY, MARYLAND

Stakeout FB # 6468
 Diary FB # 6557, 6557-A, 6557-B,
 6691 & 6730

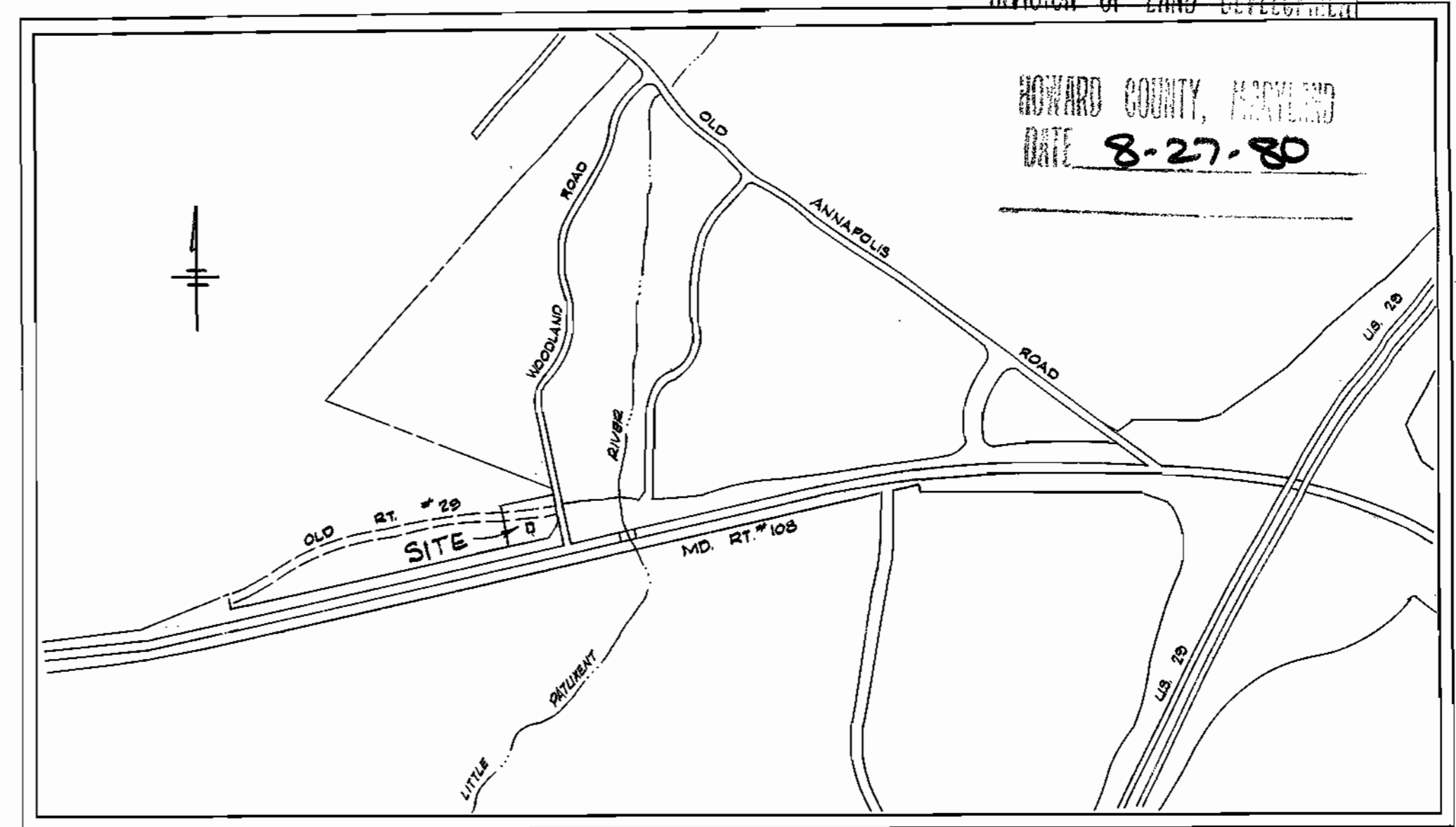
DEPARTMENT OF PUBLIC WORKS

Maryland Route 108
 Sewage Pumping Station
 Project No. S-4-6041
 Contract No. 681-S

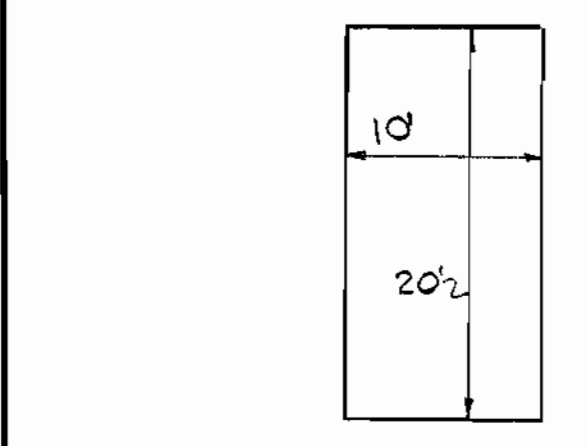
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DIRECTOR OF PUBLIC WORKS - DATE _____ CHIEF - BUREAU OF ENGINEERING - DATE _____ CHIEF - BUREAU OF UTILITIES - DATE _____ CHIEF - UTILITIES DIVISION - DATE _____	CONTRACT NO. <u>681-S</u> PROJECT NO. <u>S-4-6041</u>	LOCATION MAP	ELECTION DISTRICT ELLICOTT CITY NO. 2	DRAWING NO. <u>1</u> OF <u>21</u>	SCALE AS SHOWN
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ROADWAY PROFILE
Scale: Horiz: 1" = 20'
Vert: 1" = 10'



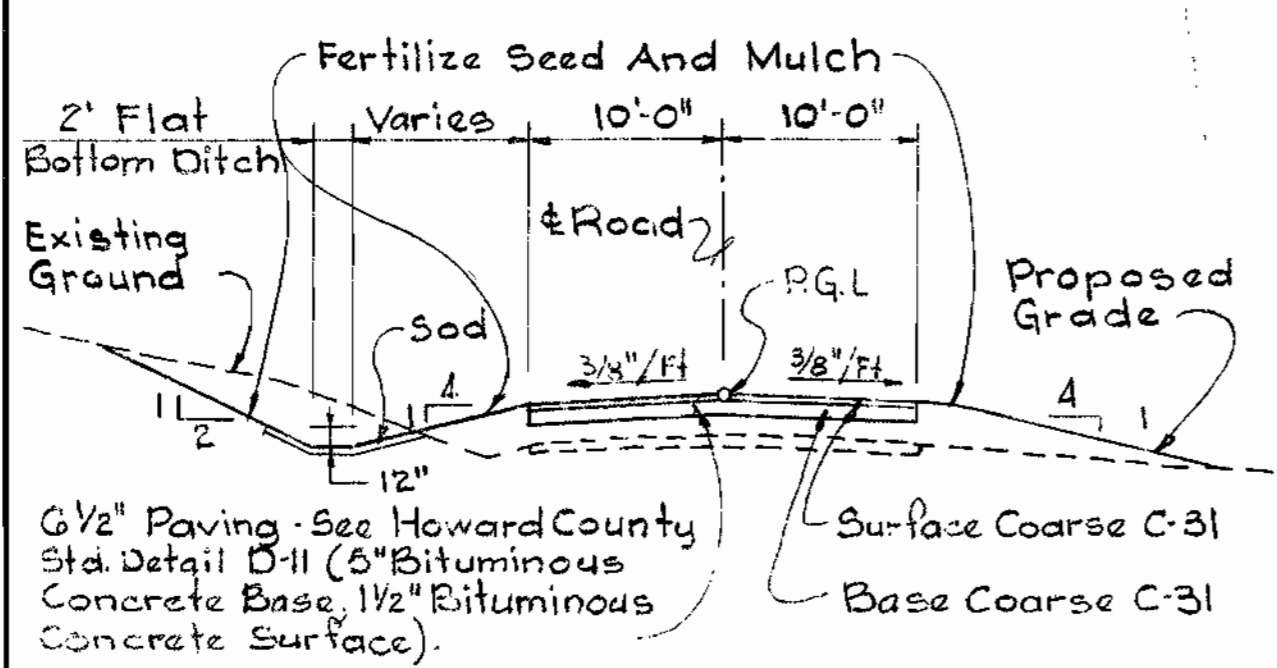
LOCATION PLAN
Scale: 1" = 600'



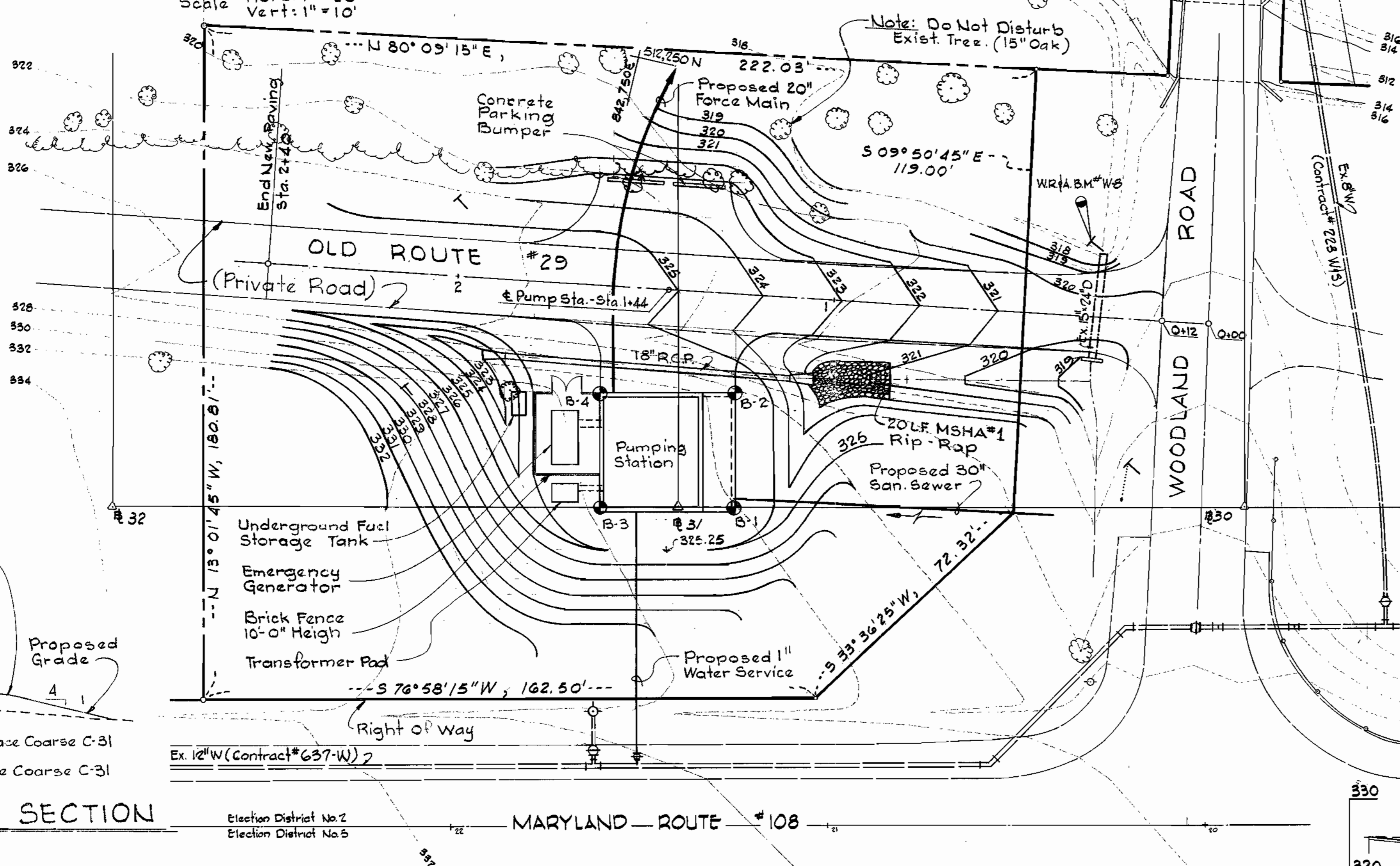
TYPICAL PARKING
Scale: 1" = 10'

SITE ANALYSIS

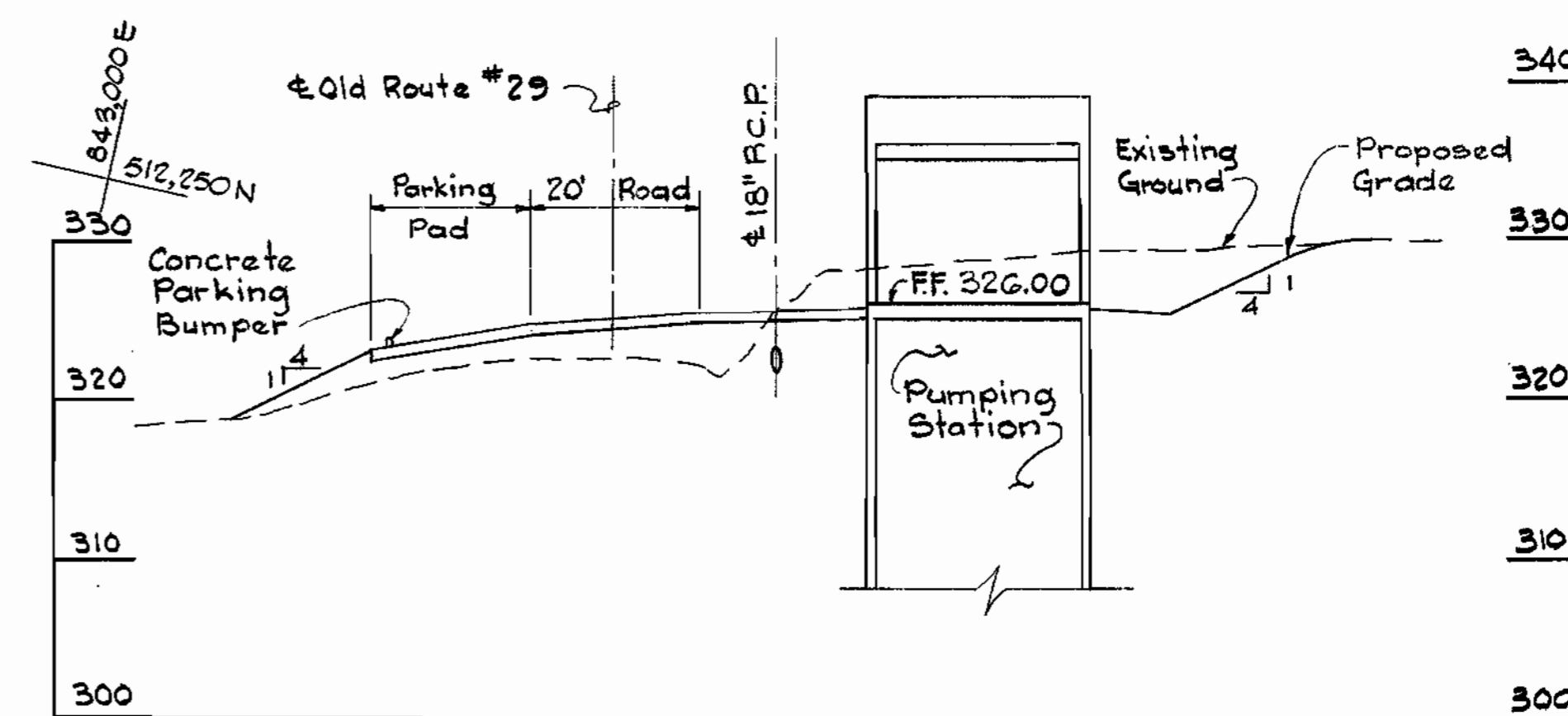
Area of Site	0.842 Ac.
No of Employees	0
Parking Required	0
Parking Provided	2
Area to be Graded	0.29 Ac.
Area to be Roofed	0.025 Ac.
Area to be Paved	0.14 Ac.
Area to be Seeded	0.29 Ac.
Area to be Undisturbed	0.387 Ac.
Zoned	R-20
Tax Map No.	30
Roadway Speed Limit	25 M.P.H.



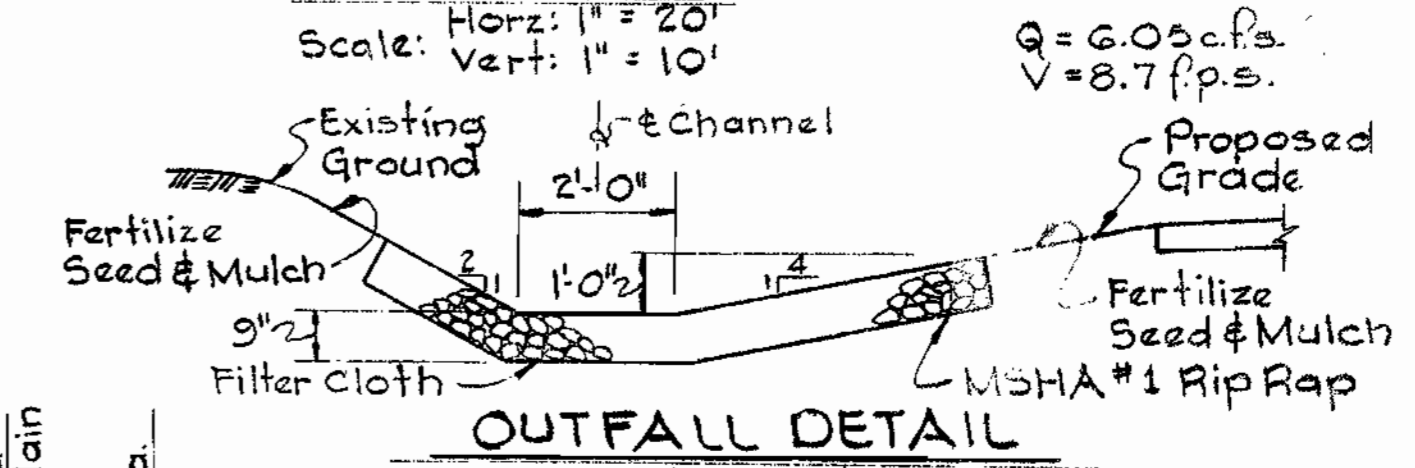
TYPICAL ROADWAY SECTION
Scale: 1" = 10' 0"



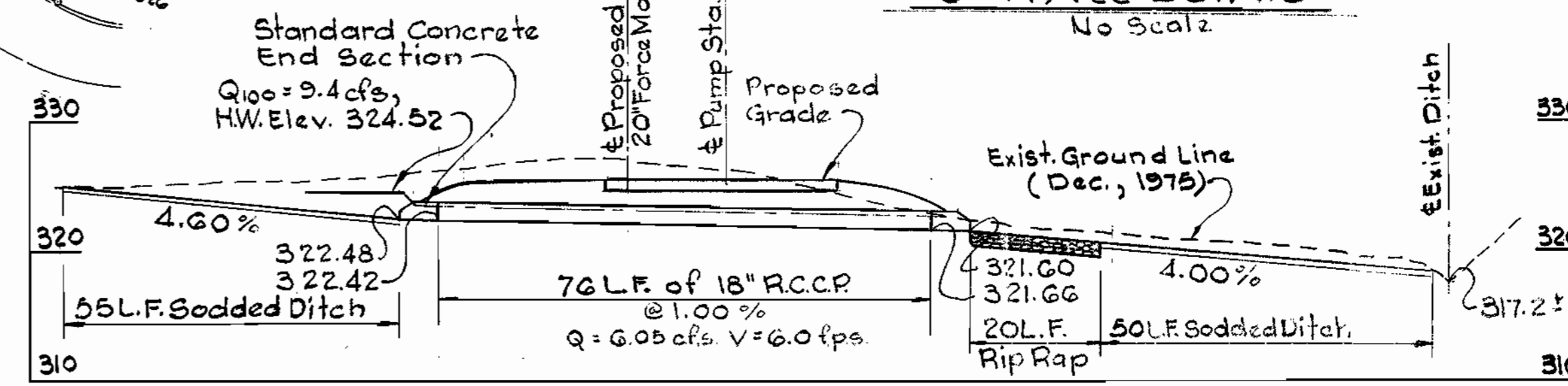
SITE PLAN
Scale: 1" = 20'



PROFILE
Scale: Horiz: 1" = 20'
Vert: 1" = 10'



OUTFALL DETAIL
No Scale



STORM DRAIN PROFILE
Scale: Horiz: 1" = 20'
Vert: 1" = 10'

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
1111 N. CHARLES ST.
BALTIMORE, MARYLAND
Kenneth A. McCord
PE & LS No. 1974

HOWARD COUNTY, MARYLAND
OWNER AND DEVELOPER
Liber 474, Folio 161
Liber 513, Folio 218
Tax Map 30, Parcel 111
Zoned R-20

WR1A.B.M.# W-8 Elev. 317.83
R.R. Spike in Power Pole Intersection
of Old Rt. 29 and Woodland Road.

NOTE: 100 Year Flood Elev. = 324.0

Reviewed for Howard S.C.D.
Name and meets technical requirements.
James M. Helms 8-1-80
Signature Date
U.S. Soil Conservation Service
APPROVED FOR PUBLIC WATER AND SEWER SYSTEM HOWARD COUNTY HEALTH DEPARTMENT
James B. Brown 7-31-80
Signature Date
COUNTY HEALTH OFFICER

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

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
George F. Nemmey 7-31-80
Signature Date
DIRECTOR
William S. Ryan 6-16-80
Signature Date
CHIEF BUREAU OF ENGINEERING
James L. Glavin 4/30/80
Signature Date
CHIEF BUREAU OF UTILITIES

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Thomas J. Harris 8-27-80
Signature Date
PLANNING DIRECTOR
Ripley Radwisch 8/27/80
Signature Date
CHIEF, DIVISION OF LAND DEVELOPMENT

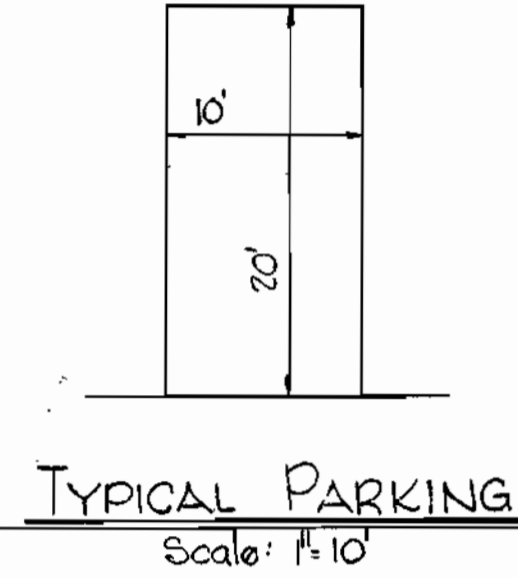
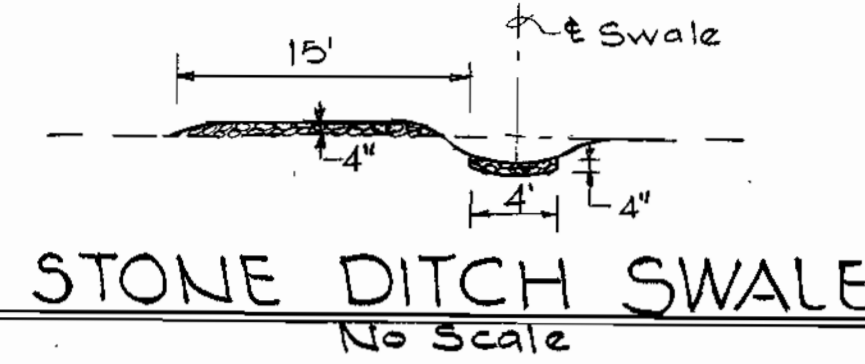
CERTIFICATION BY THE ENGINEER
"I certify that this plan for Erosion and Sediment control represents a practical and workable plan based on my personal knowledge of the site condition and it was prepared in accordance with the requirements of the Howard Soil Conservation District."
Kenneth A. McCord 4-18-80
Signature Date
REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR

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.
George F. Nemmey 7-31-80
Signature Date

SITE DEVELOPMENT PLAN
FOR
MARYLAND ROUTE 108
SEWAGE PUMPING STATION
PROJECT NO. S-4-6041
CONTRACT NO. 681-S
ELECTION DISTRICT ELLICOTT CITY NO. 2
HOWARD COUNTY, MARYLAND
Date: 8-27-80
Sheet 2 of 21
Scale: As Shown

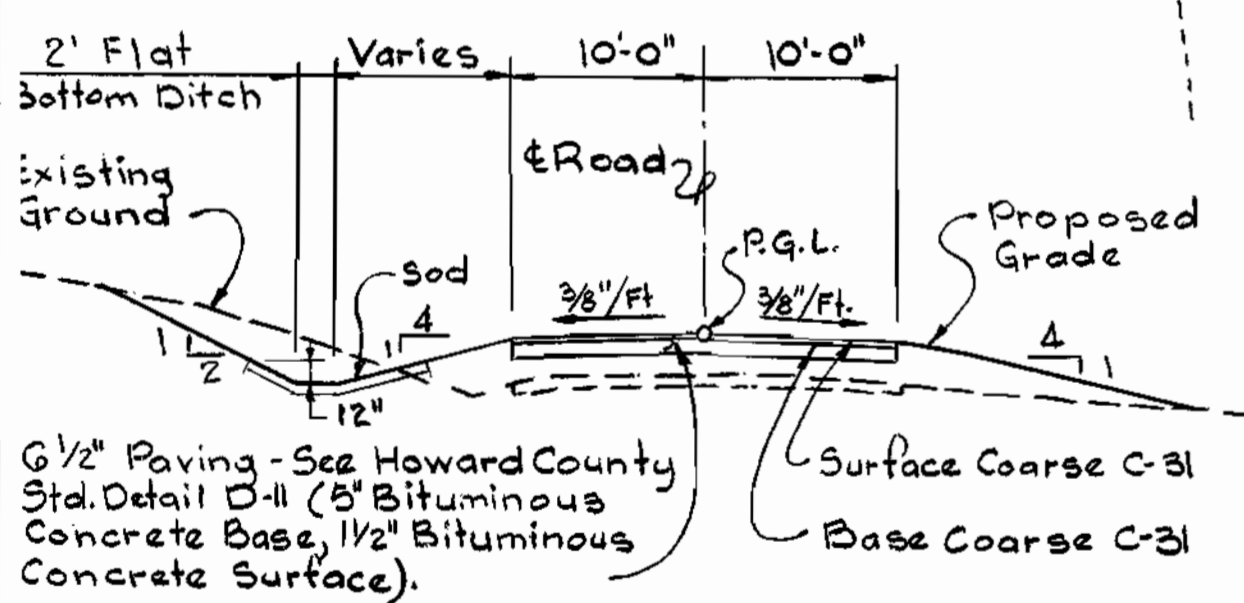
NO.	DATE	DESCRIPTION OF REVISION

Note:
For Details of Sediment Controls See Sheet 3 of 3.

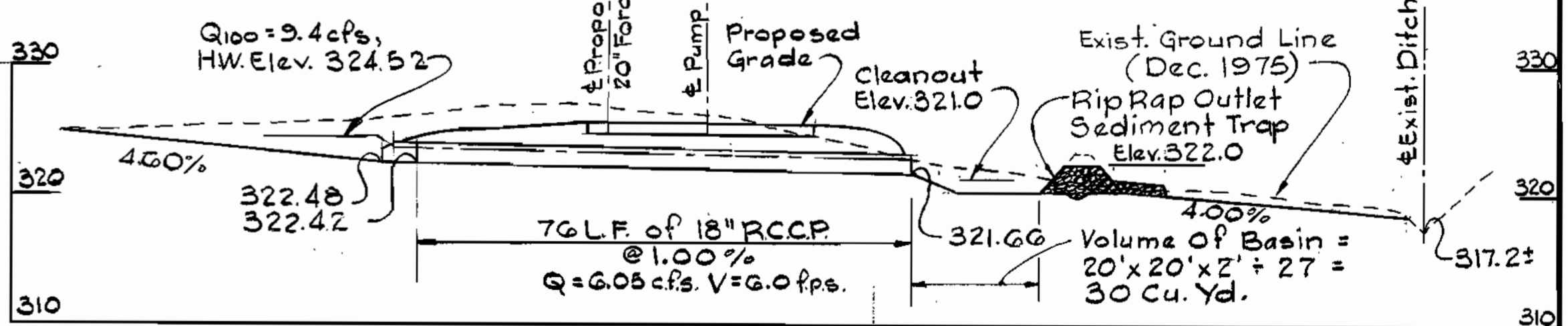
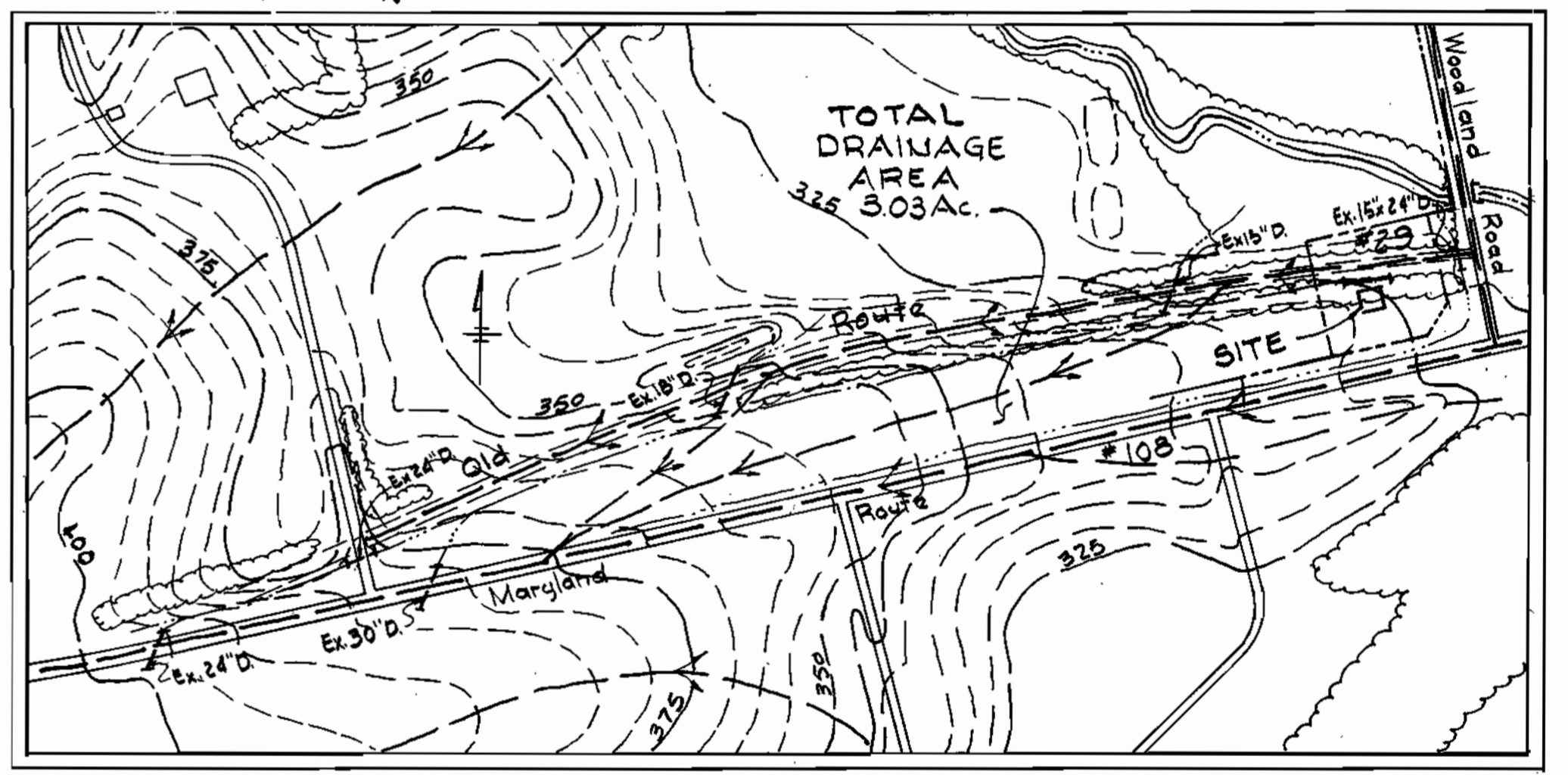
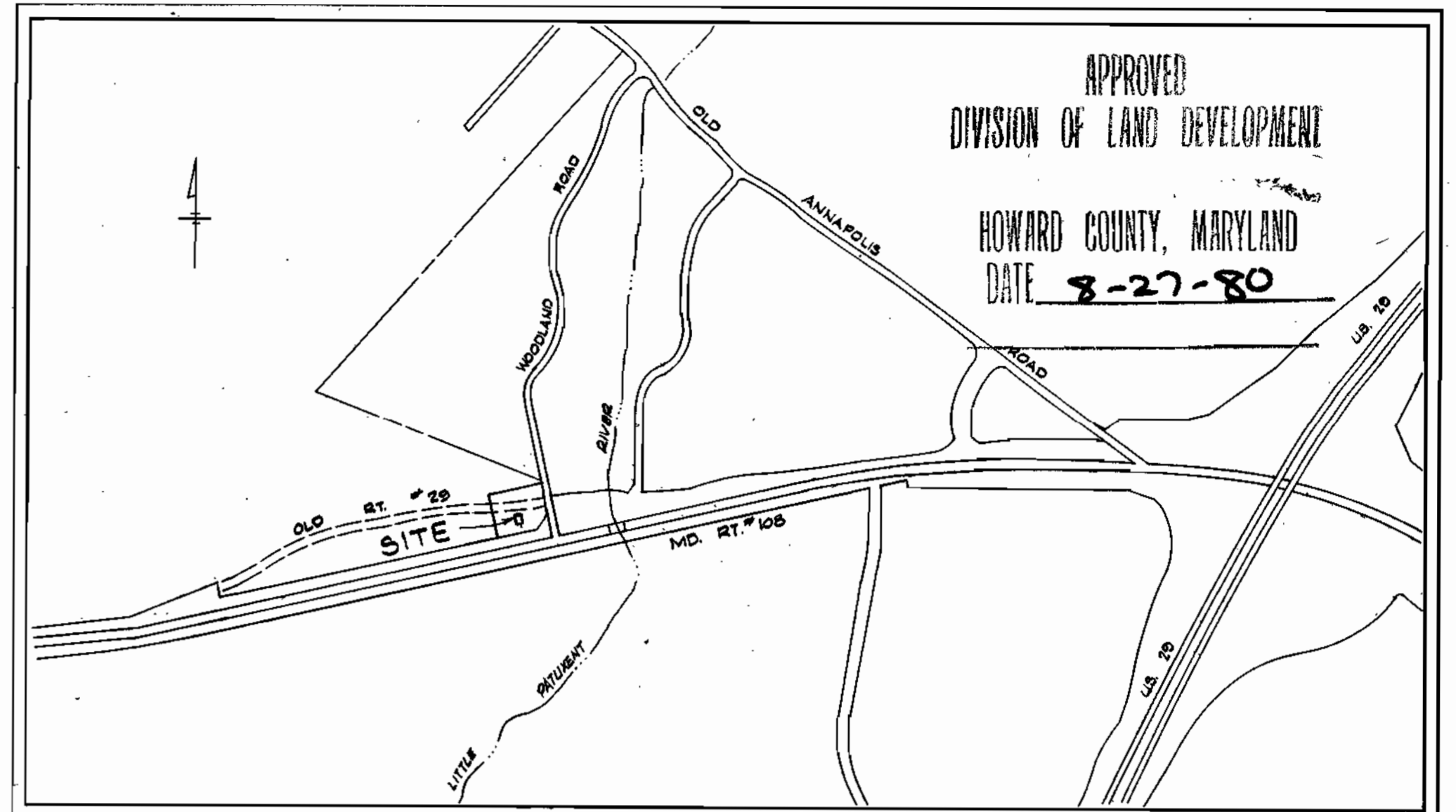
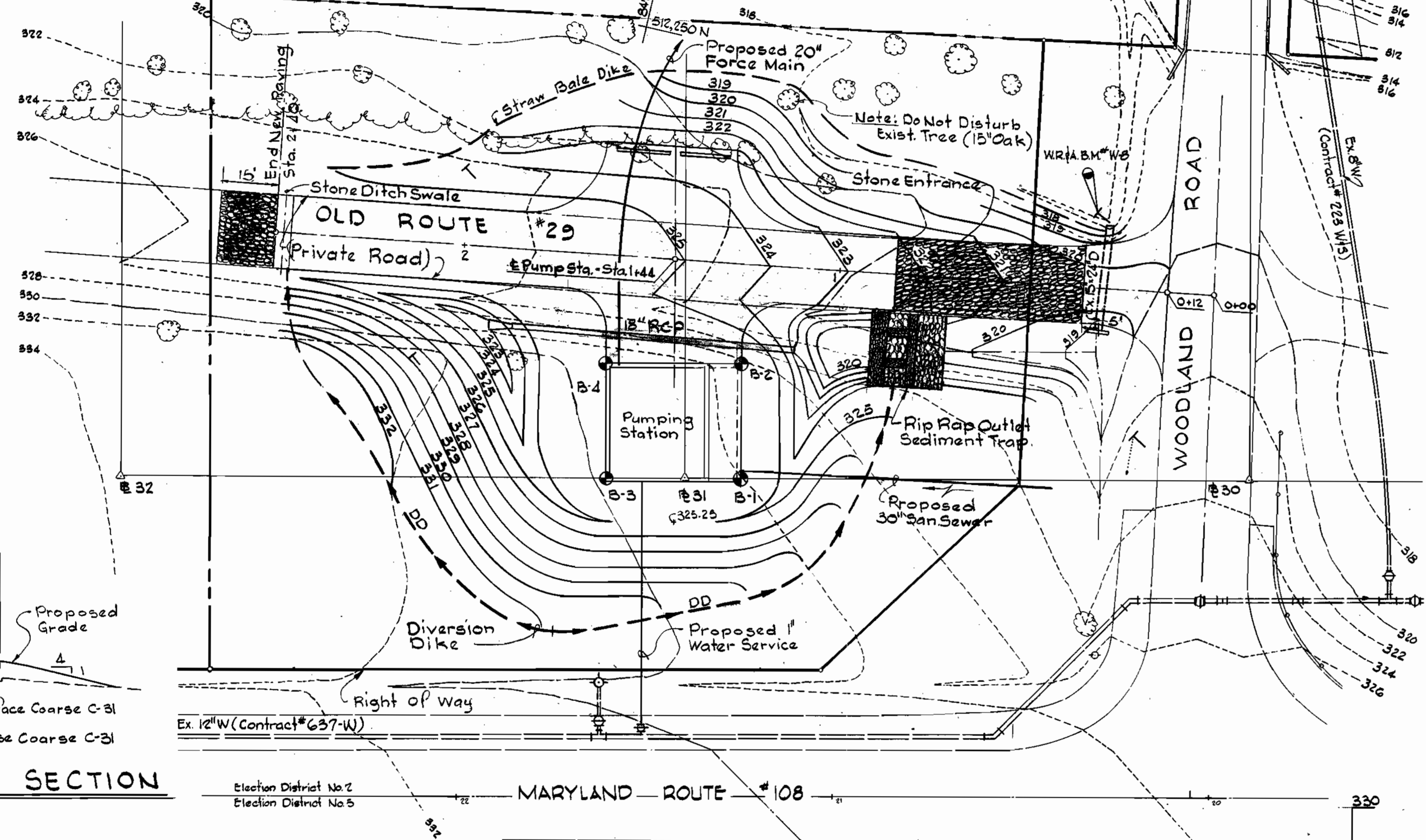


SITE ANALYSIS

Area of Site	0.842 Ac.
No. of Employees	0
Parking Required	0
Parking Provided	2
Area to be Graded	0.29 Ac.
Area to be Roofed	0.025 Ac.
Area to be Paved	0.14 Ac.
Area to be Seeded	0.29 Ac.
Area to be Undisturbed	0.387 Ac.
Zone	R-20
Tax Map No.	30
Roadway Speed Limit	25 M.P.H.



- SEDIMENT CONTROL NOTES:**
- THE DEVELOPER SHALL NOTIFY THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS AT LEAST 24 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION SHOWN HEREOF (992-2433).
 - DIKES, SEDIMENT TRAPS, ETC., TO BE CONSTRUCTED PRIOR TO ANY ONSITE GRADING OR DISTURBANCE TO ANY EXISTING SURFACE MATERIAL AND ARE TO BE STABILIZED AS SOON AS CONSTRUCTED.
 - ALL SEDIMENT STRUCTURES TO REMAIN IN PLACE UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS (992-2433).
 - ALL GRADED AREAS SHALL BE STABILIZED BY SEEDING AND MULCHING IN ACCORDANCE WITH THE FOLLOWING:
 - SITE PREPARATION:**
 - HARROW OR DISC IN AREAS PROPOSED TO BE SEED WITH THE FOLLOWING MATERIALS AT THE SPECIFIED RATE, TO A DEPTH OF 3"
 - PULVERIZED LIMESTONE AT 1-1/2 TONS/ACRE.
 - COMMERCIAL FERTILIZER 5-10-5 AT 3/TONS/ACRE.
 - SUPER PHOSPHATE OF 600 LBS./ACRE.
 - SEEDING:**
 - SOW THE FOLLOWING SEED MIXTURE.
 - TEMPORARY: ITALIAN RYE GRASS (60 LBS/ACRE).
 - PERMANENT: KY-31 TALL FESCUE 100% (125 LBS/ACRE).
 - THE SEEDED AREA SHALL THEN BE RAKED WITH A YOKE RAKE (MINIMUM OF 2 PASSES), COVERED AND COMPACTED WITH MULTIPACKER OR OTHER APPROVED METHOD.
 - MULCHING:**
 - SEEDED AREAS SHALL BE UNIFORMLY MULCHED IMMEDIATELY AFTER SEEDING WITH UNWEATHERED SMALL GRAIN STRAW AT THE RATE OF 1-1/2 TO 2 TONS/ACRE.
 - TIE-MULCH SOWN WITH LIQUID ASPHALT OR EMULSIFIED ASPHALT AT 0.04 GAL./S.Y. ON MULCH NETTING.
 - ACCESS ROAD SHALL BE GRAVEL SURFACE IMMEDIATELY AFTER GRADING TO PREVENT SOIL EROSION.
 - ALL AREAS DISTURBED BY GRADING SHALL BE SEED & MULCHED WITH TEMPORARY SEED MIXTURE.



WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
1111 N. CHARLES ST.
BALTIMORE, MARYLAND

HOWARD COUNTY, MARYLAND
OWNER AND DEVELOPER
Liber 474, Folio 101
Liber 513, Folio 218
Tax Map 30, Parcel 111
Zoned R-20

W.R.#A.B.M.#W-8
Elev. 31783
22 Spikes in Power Pole, Intersection of Old Rt. 29 and Woodland Road.

SITE PLAN
Scale: 1" = 20'

NOTE: 100 Year Flood Elev. = 324.0

Reviewed for Howard S.C.D.
Name
and meets technical requirements.
James M. Helms 8/18/80
Signature Date
U.S. Soil Conservation Service
APPROVED FOR PUBLIC WATER AND SEWER SYSTEM HOWARD COUNTY HEALTH DEPARTMENT
James M. Helms 8/18/80
COUNTY HEALTH OFFICER DATE

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

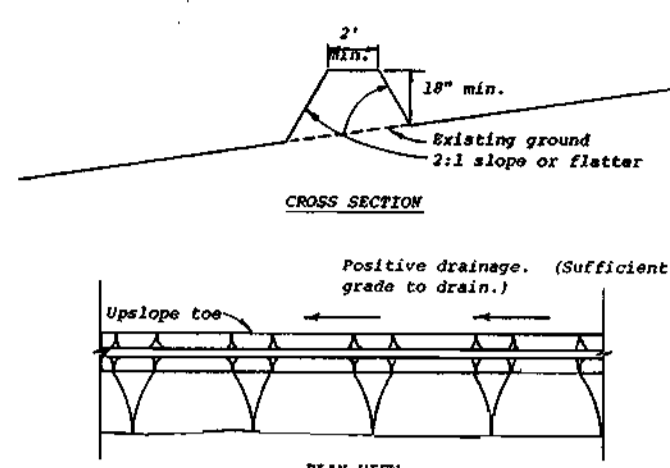
APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Henry F. Neumeier 7-31-80
DIRECTOR DATE
William S. Rame 6-16-80
CHIEF, BUREAU OF ENGINEERING DATE
James K. Glick 7/20/80
CHIEF, BUREAU OF UTILITIES DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Donald A. Homig 8-27-80
PLANNING DIRECTOR DATE
Roger A. Scharf 8/27/80
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

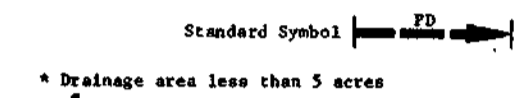
CERTIFICATION BY THE ENGINEER
"I certify that this plan for Erosion and Sediment control represents a practical and workable plan based on my personal knowledge of the site condition and it was prepared in accordance with the requirements of the Howard Soil Conservation District."
James M. Helms 4-18-80
Signature of Engineer Date

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. Neumeier 7-31-80
Signature of Developer Date

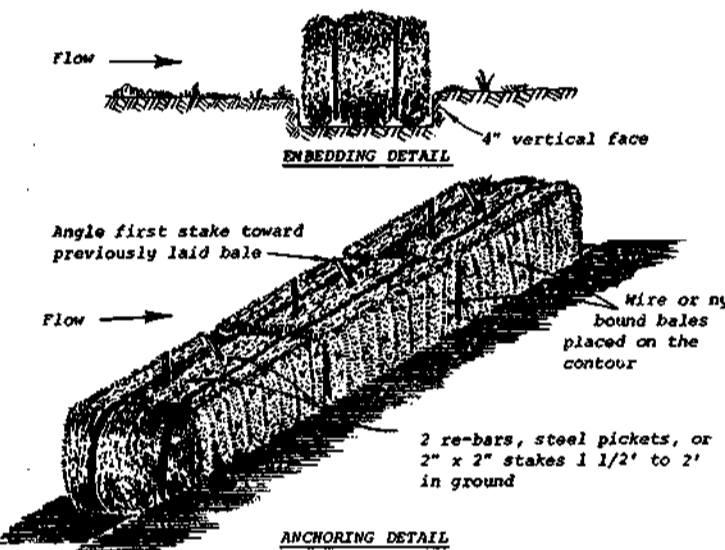
SEDIMENT CONTROL PLAN
FOR
MARYLAND ROUTE 108
SEWAGE PUMPING STATION
PROJECT NO. S-4-6041
CONTRACT NO. G81-5
ELECTION DISTRICT ELLICOTT CITY NO. 2
HOWARD COUNTY, MARYLAND
Date: *8-27-80*
Sheet 3 of 21
Scale: As Shown



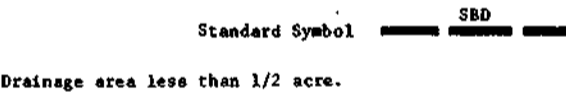
- PERIMETER DIKE**
NOT TO SCALE
- All dikes shall be machine compacted.
 - All perimeter dikes shall have positive drainage to an outlet.
 - A. Diverted runoff from a protected or stabilized upland area shall outlet directly onto an undisturbed stabilized area or into a level spreader or grade stabilization 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, 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.



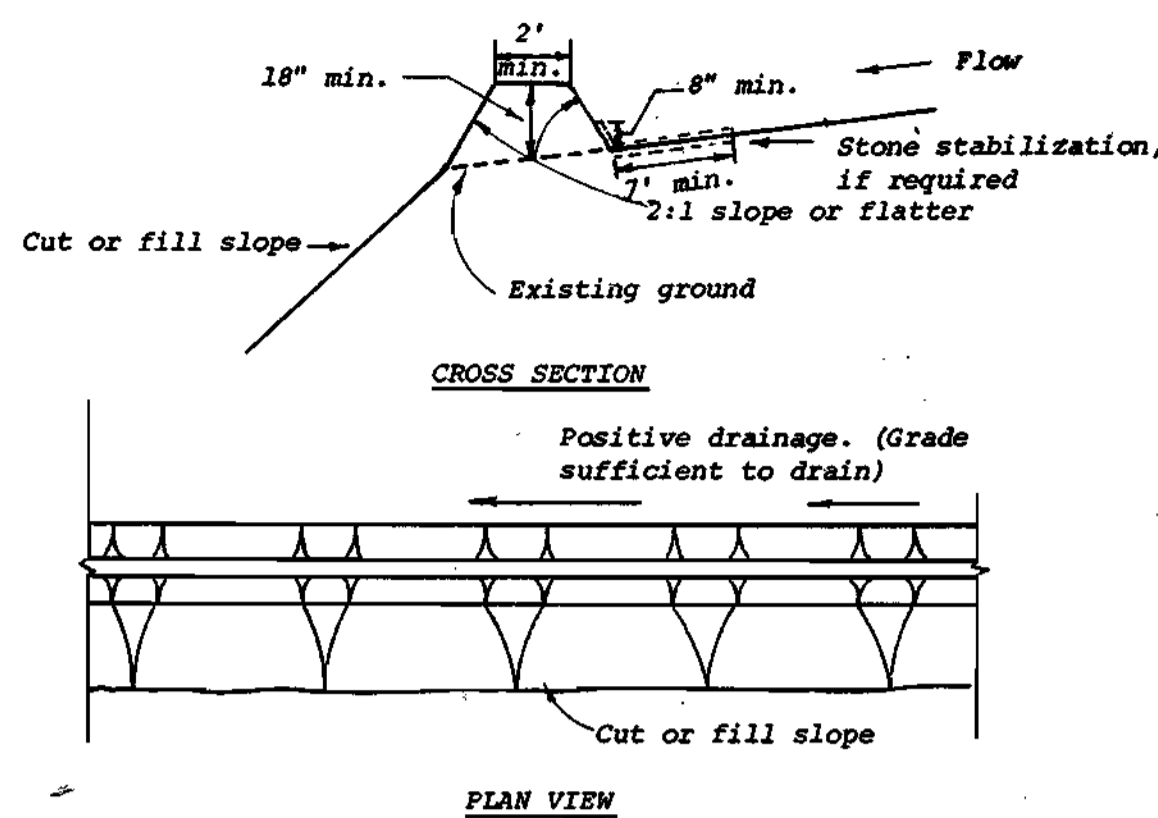
PERIMETER DIKE
NOT TO SCALE



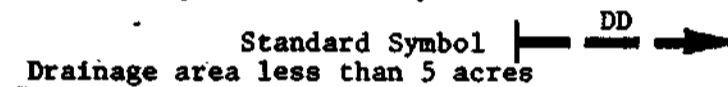
- Bales shall be placed in a row with ends tightly abutting the adjacent bales.
- Each bale shall be embedded in the soil a minimum of 4".
- Bales shall be securely anchored in place by stakes or re-bars driven through the bales. The first stake in each bale shall be angled toward previously laid bales 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.



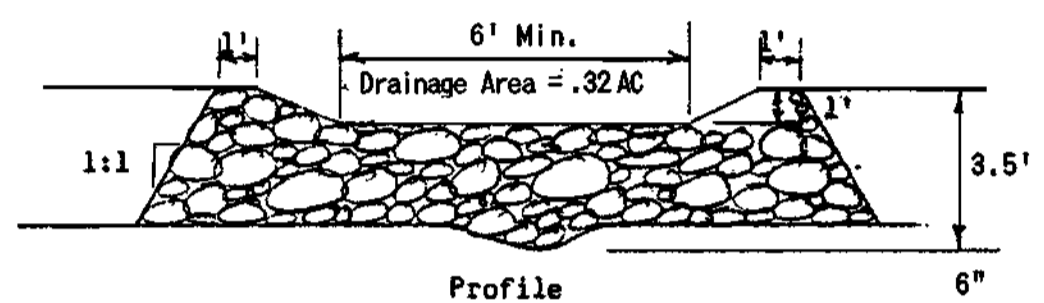
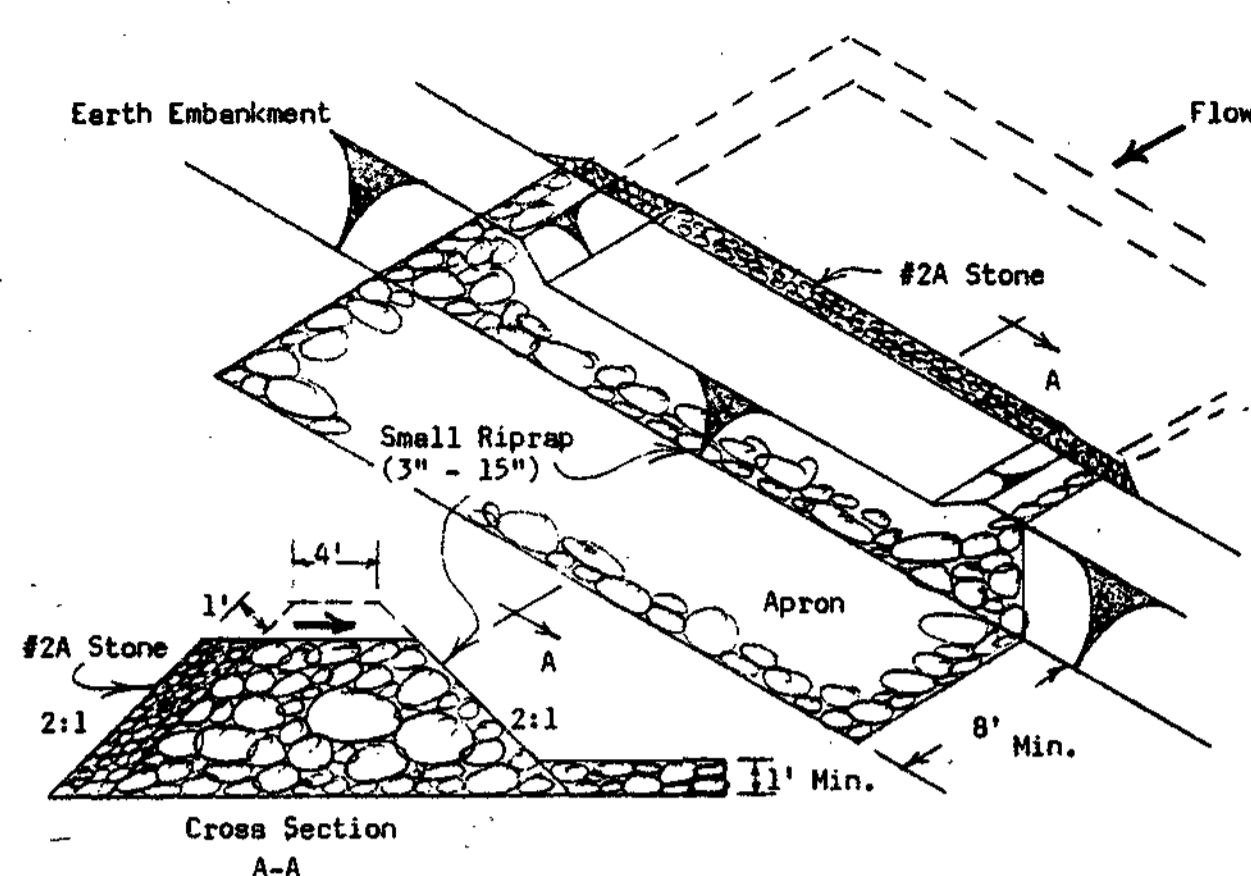
STRAW BALE DIKE
NOT TO SCALE



- 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.

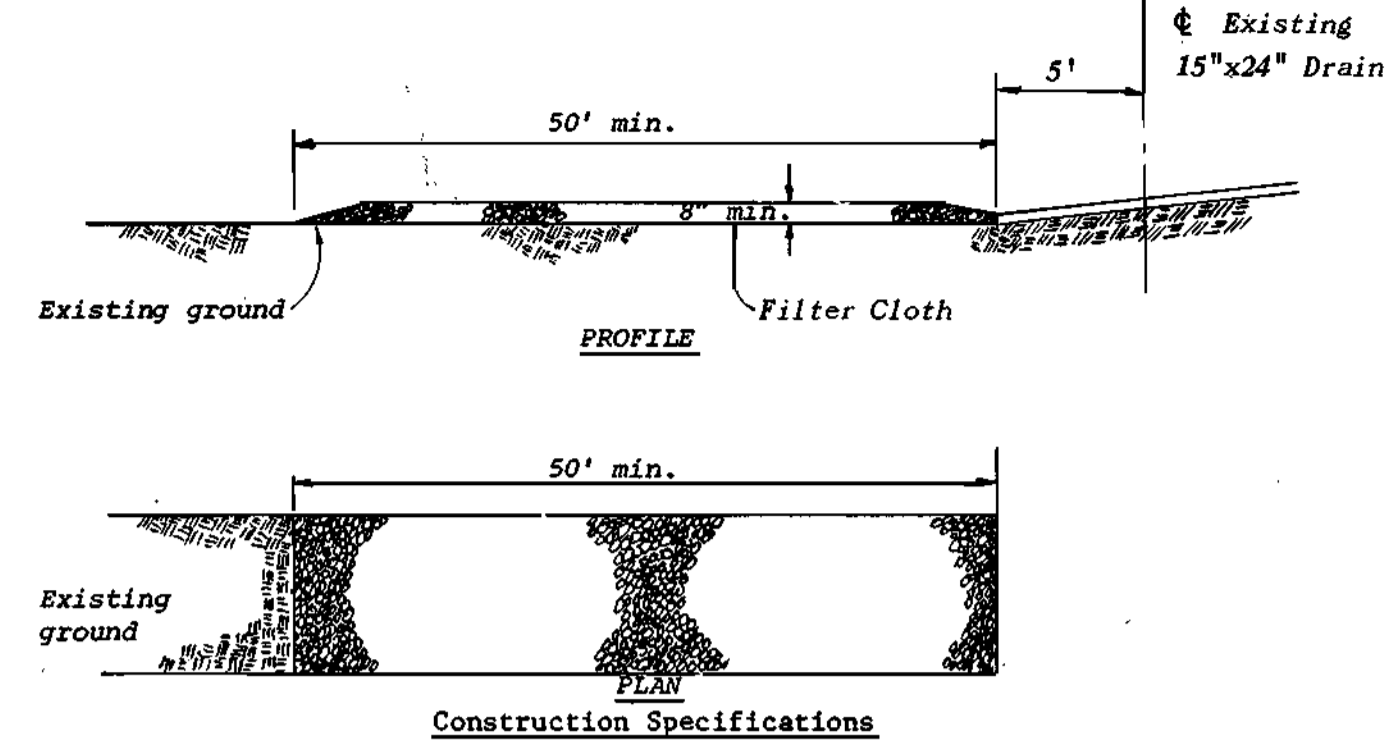


DIVERSION DIKE
NOT TO SCALE



RIP RAP OUTLET SEDIMENT TRAP
NOT TO SCALE

- 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.
- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
- Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
- The structure shall be inspected after each rain and repairs made as needed.
- Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
- The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.



- 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.



STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

SEQUENCE OF CONSTRUCTION

- Clear, grub and strip area required for Rip Rap Outlet Sediment Trap.
- Construct Rip Rap Outlet Sediment Trap and stabilize. Excess excavated material shall be disposed of off-site.
- Construct Straw Bale Dike, Diversion Dikes, Stabilized Construction Entrance and Stone Ditch Swale.
- Construct Storm Drain.
- Construct Building and Pipe Lines.
- Complete site work within confines of Diversion Dike.
- Remove Stabilized Construction Entrance and construct road.
- Remove temporary sediment trap after ground cover is established in the contributing drainage area.
- Complete drainage ditch as shown on Site Development Plan and sod.

AS-BUILT

WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS 1111 NORTH CHARLES STREET BALTIMORE, MARYLAND	HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER LIBER 474 & 513 FOLIO 161 & 218 TAX MAP 30 PARCEL 111 ZONED R-20
KENNETH A. McCORD P.E. & L.S. NO. 1974	

REVIEWED FOR HOWARD S.C.D. NAME <i>James M. Helms</i> NAME DATE U.S. SOIL CONSERVATION SERVICE APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT <i>James M. Helms</i> COUNTY HEALTH OFFICER DATE	THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. <i>William J. Rome</i> APPROVED: (HOWARD S.C.D.) DATE
---	---

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS <i>Henry E. Nimmig</i> DATE DIRECTOR <i>James E. [unclear]</i> CHIEF, BUREAU OF ENGINEERING <i>James E. [unclear]</i> CHIEF, BUREAU OF UTILITIES	APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING <i>Thomas L. Harris</i> DATE PLANNING DIRECTOR <i>James E. [unclear]</i> 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." <i>Thomas L. Harris</i> SIGNATURE OF ENGINEER DATE	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." <i>James E. [unclear]</i> SIGNATURE OF DEVELOPER DATE
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SEDIMENT CONTROL DETAILS FOR MARYLAND ROUTE 108 SEWAGE PUMPING STATION PROJECT NO. S-4-6041 CONTRACT NO. 681-S ELECTION DISTRICT ELLICOTT CITY NO. 2 HOWARD COUNTY, MARYLAND DATE: SDP-81-23 SCALE: AS SHOWN	NO. DATE DESCRIPTION OF REVISION
---	----------------------------------

REVIEWED FOR HOWARD S.C.D. NAME <i>James M. Helms</i> NAME DATE U.S. SOIL CONSERVATION SERVICE APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT <i>James M. Helms</i> COUNTY HEALTH OFFICER DATE	THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. <i>William J. Rome</i> APPROVED: (HOWARD S.C.D.) DATE
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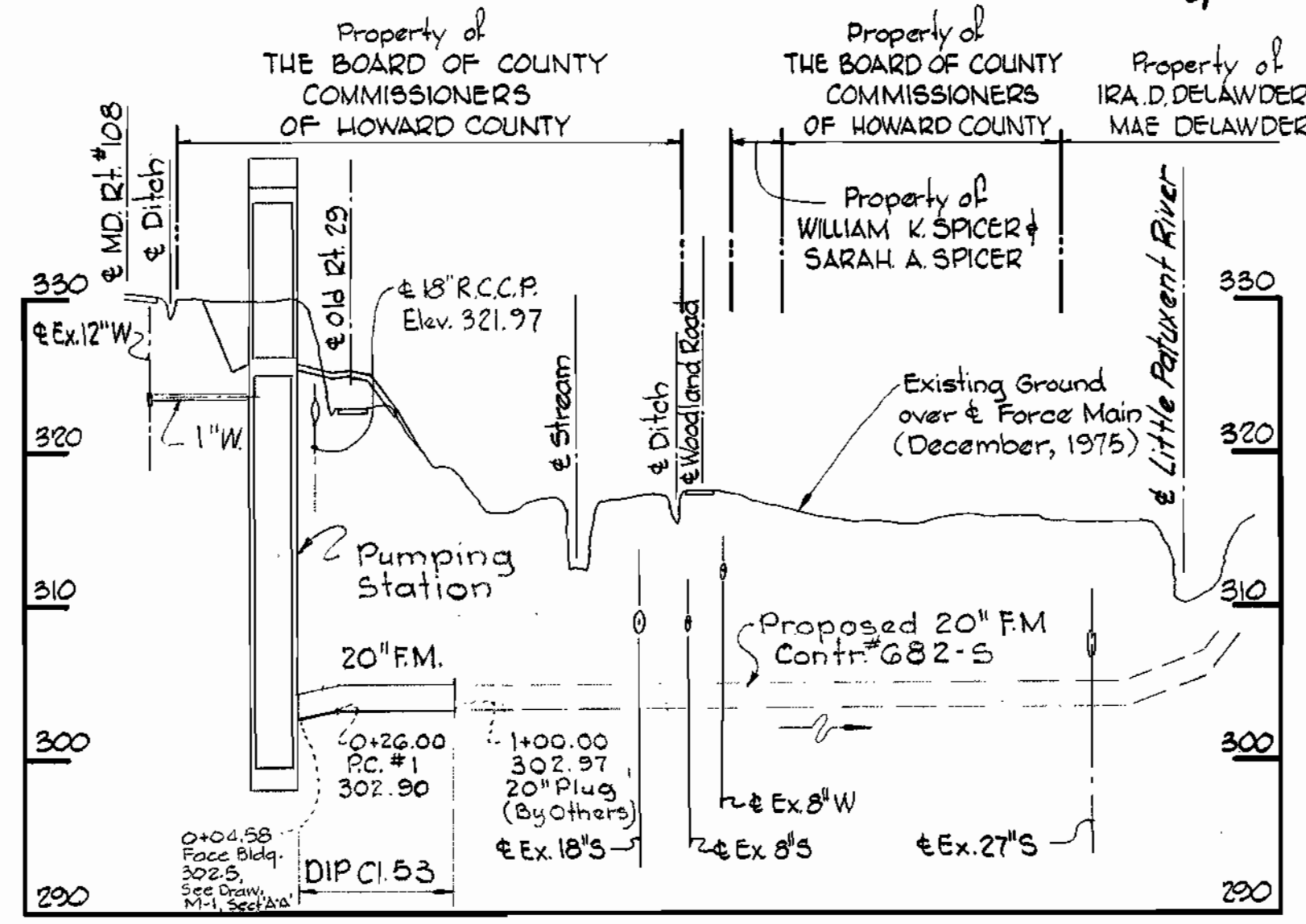
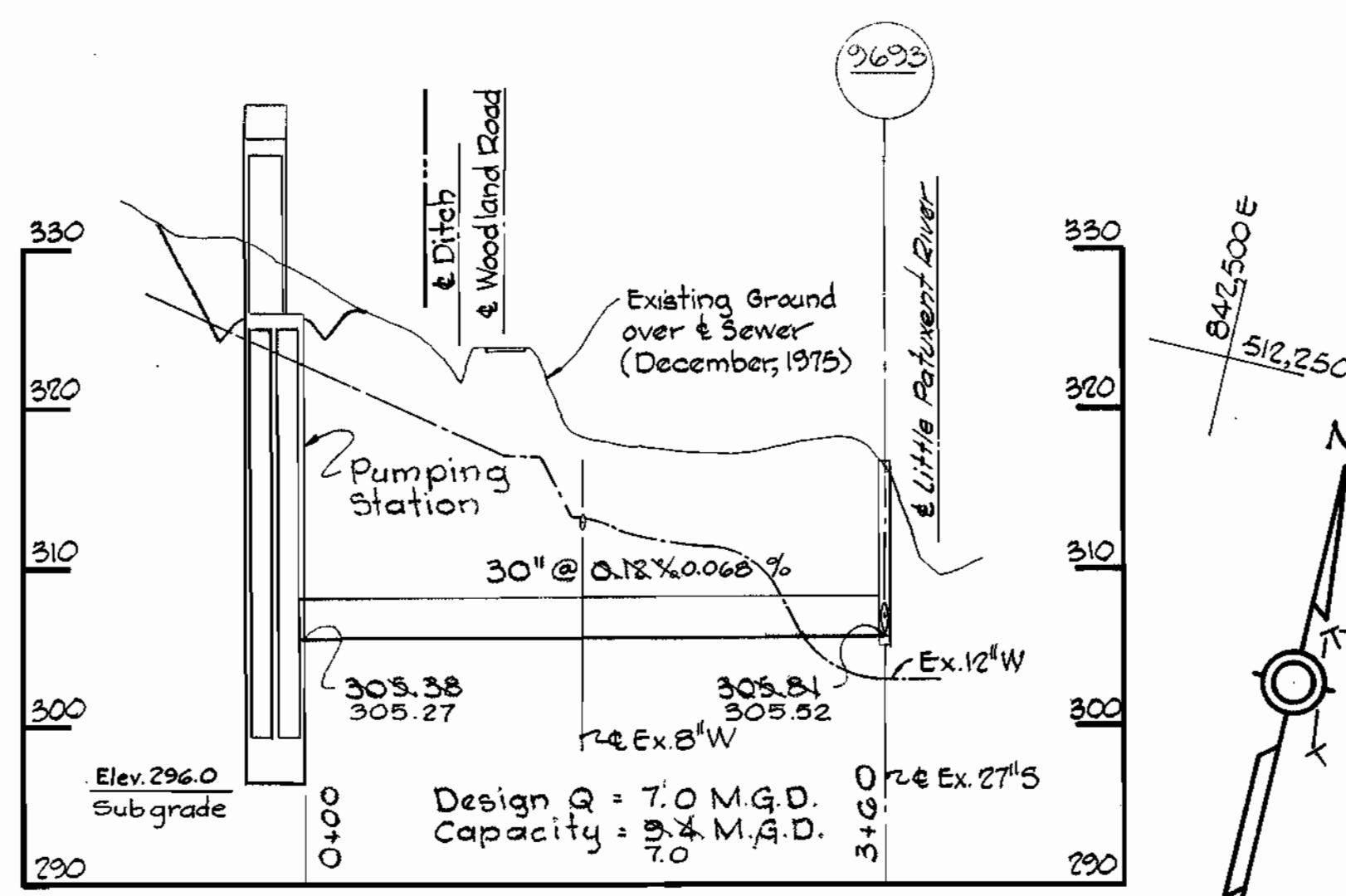
APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS <i>Henry E. Nimmig</i> DATE DIRECTOR <i>James E. [unclear]</i> CHIEF, BUREAU OF ENGINEERING <i>James E. [unclear]</i> CHIEF, BUREAU OF UTILITIES	APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING <i>Thomas L. Harris</i> DATE PLANNING DIRECTOR <i>James E. [unclear]</i> CHIEF, DIVISION OF LAND DEVELOPMENT
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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." <i>Thomas L. Harris</i> SIGNATURE OF ENGINEER DATE	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." <i>James E. [unclear]</i> SIGNATURE OF DEVELOPER DATE
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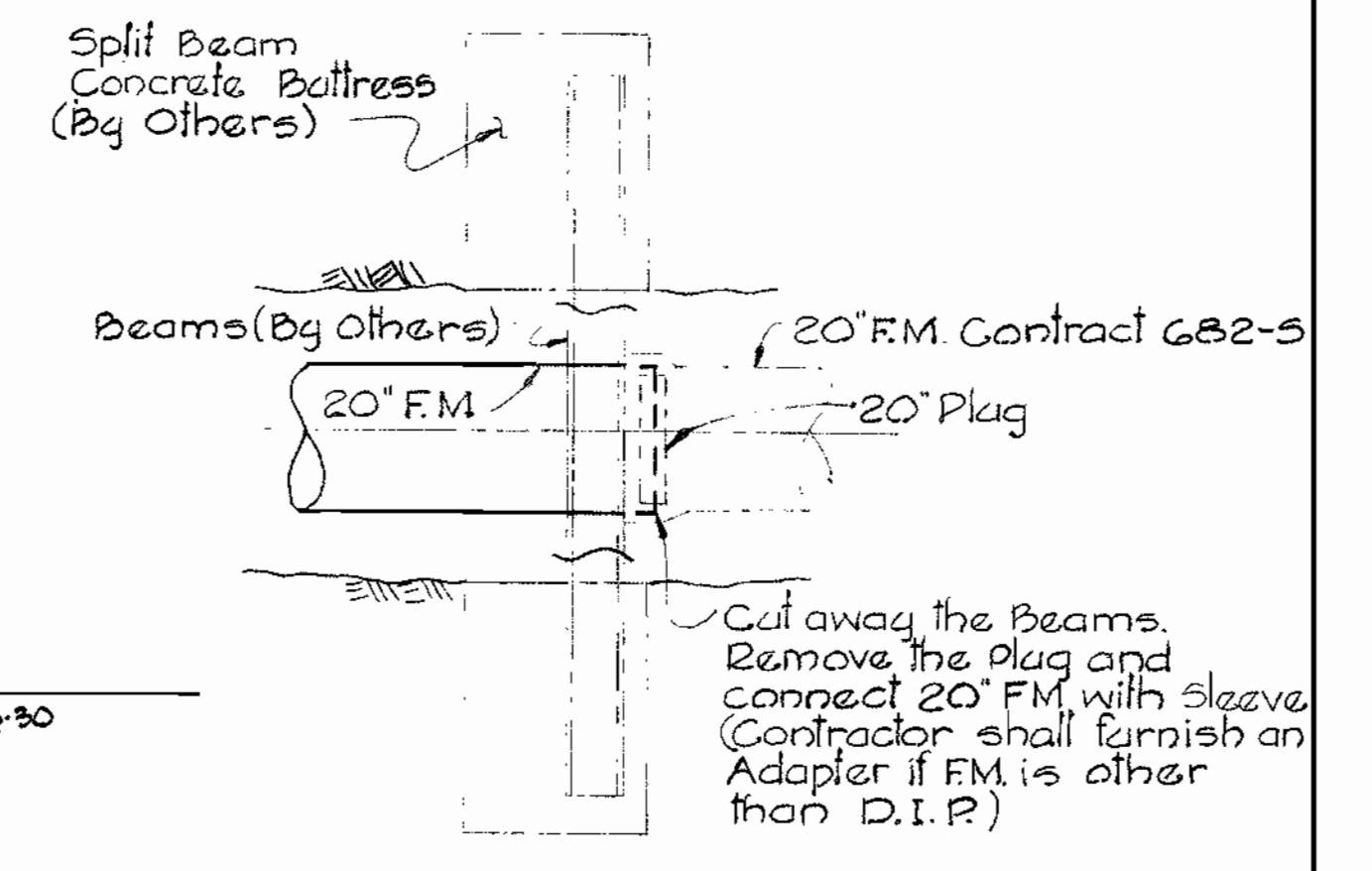
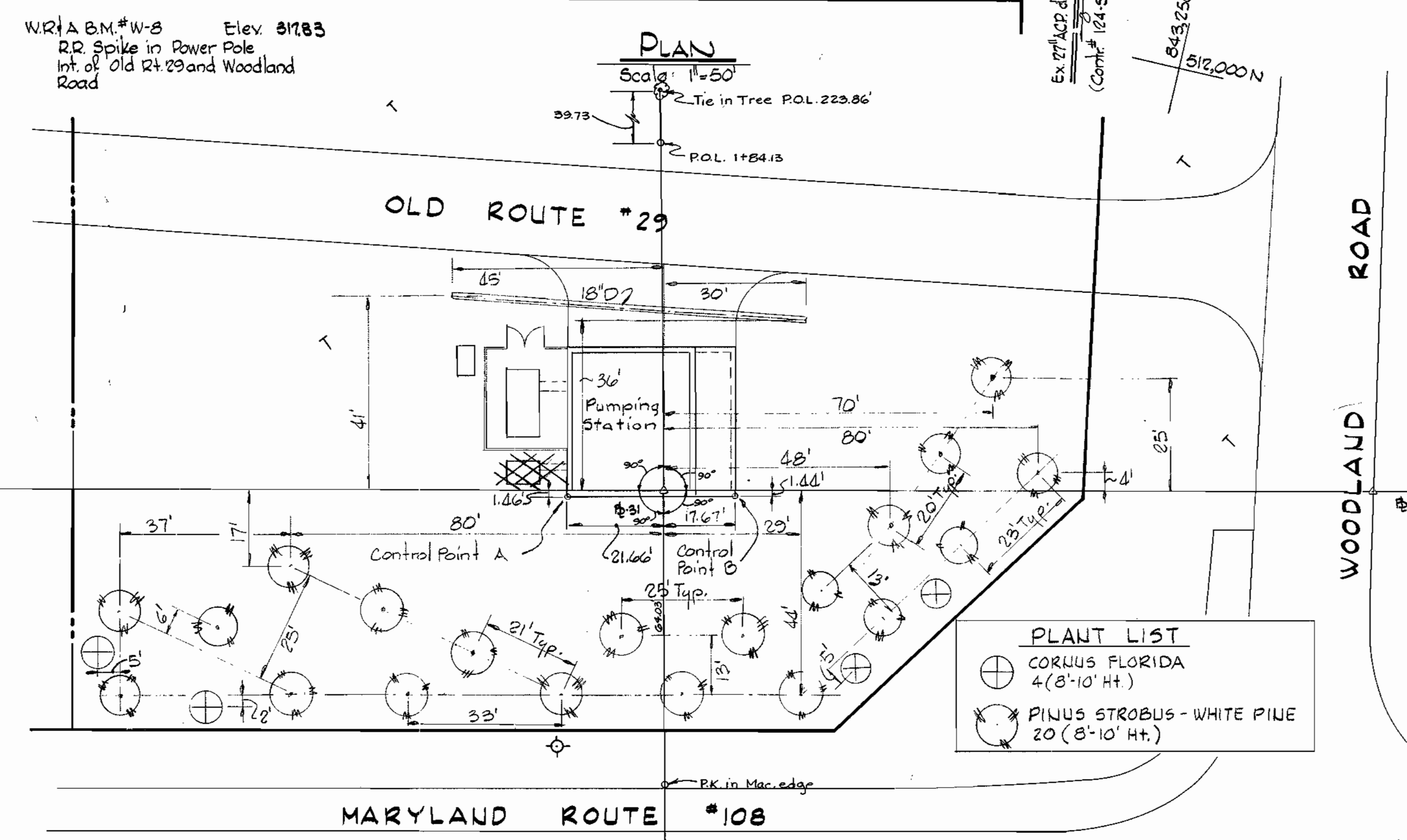
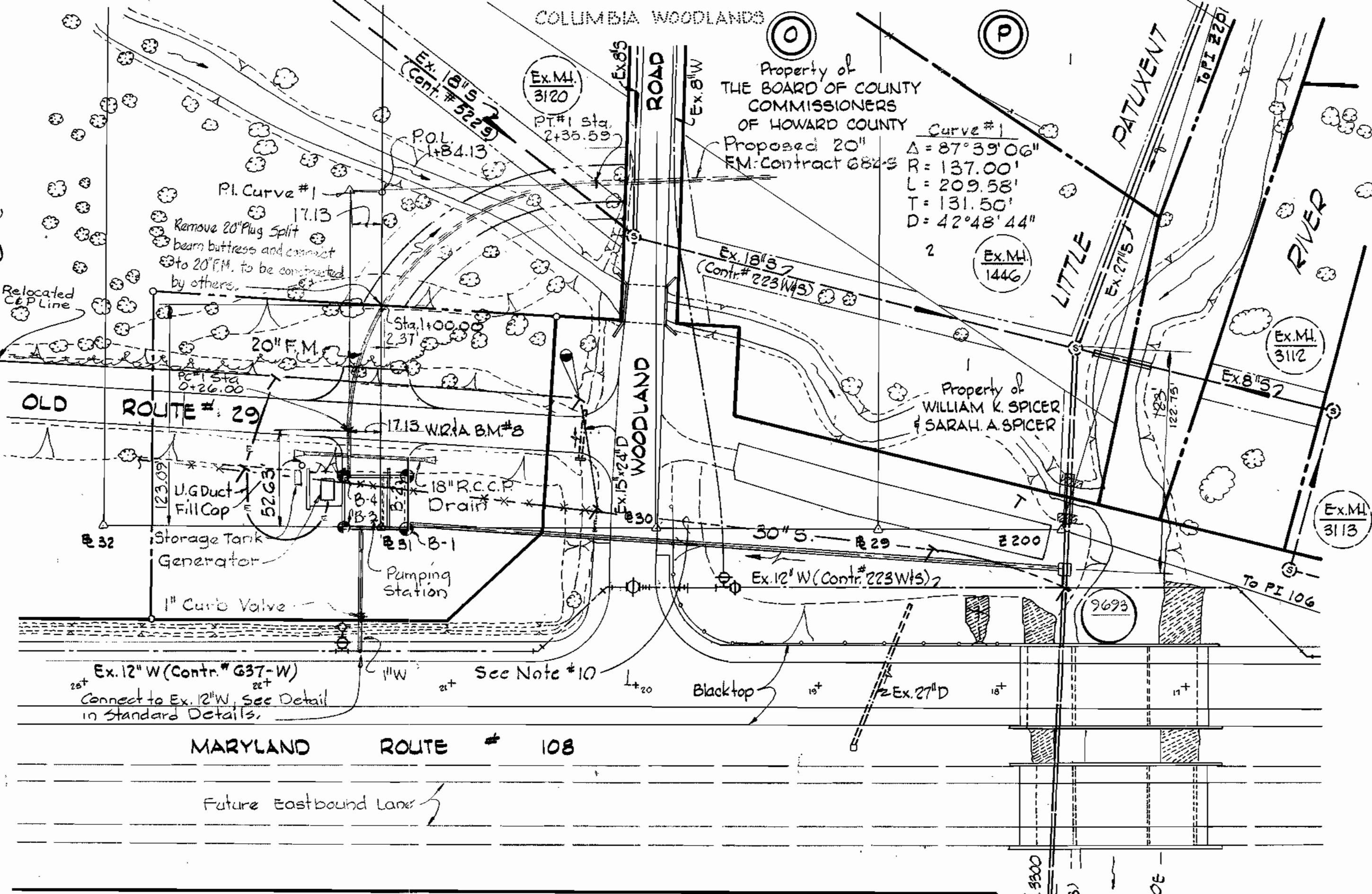
SEDIMENT CONTROL DETAILS FOR MARYLAND ROUTE 108 SEWAGE PUMPING STATION PROJECT NO. S-4-6041 CONTRACT NO. 681-S ELECTION DISTRICT ELLICOTT CITY NO. 2 HOWARD COUNTY, MARYLAND DATE: SDP-81-23 SCALE: AS SHOWN	NO. DATE DESCRIPTION OF REVISION
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GENERAL NOTES

1. Approximate locations 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 elevation shown are invert elevations.
3. All horizontal and vertical controls are based on Maryland State Datum.
4. For all standard details see standards bound in Specifications.
5. The Contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole walls.
6. Contractor shall locate existing utilities two weeks prior to construction operations in the vicinity of utilities.
7. Contractor shall notify the following utilities or agencies at least five (5) days before starting works shown on these plans:
 - a. State Highway Administration - 531-5533.
 - b. Baltimore Gas and Electric Company.
 1. Underground Gas Distribution Engineering - 234-5800
 2. Underground Electric Distribution Engineering "Damage Control" - 234-7481.
 - c. Chesapeake and Potomac Telephone Company - 725-9976.
 - d. American Telephone and Telegraph - Cable Location Division - 301-393-3533.
 - e. Mies Utility - 559-0100.
8. 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.
9. Force Main shall be 20-inch D.I.P. Class B3.
10. Aerial electrical distribution line to be relocated by Baltimore Gas and Electric Company prior to construction start. C&P Telephone Company
11. 30-inch Sewer shall be R.C.P. Class B-50.



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



CONNECTION AT BEAM BUTTRESS FOR 20\"/>

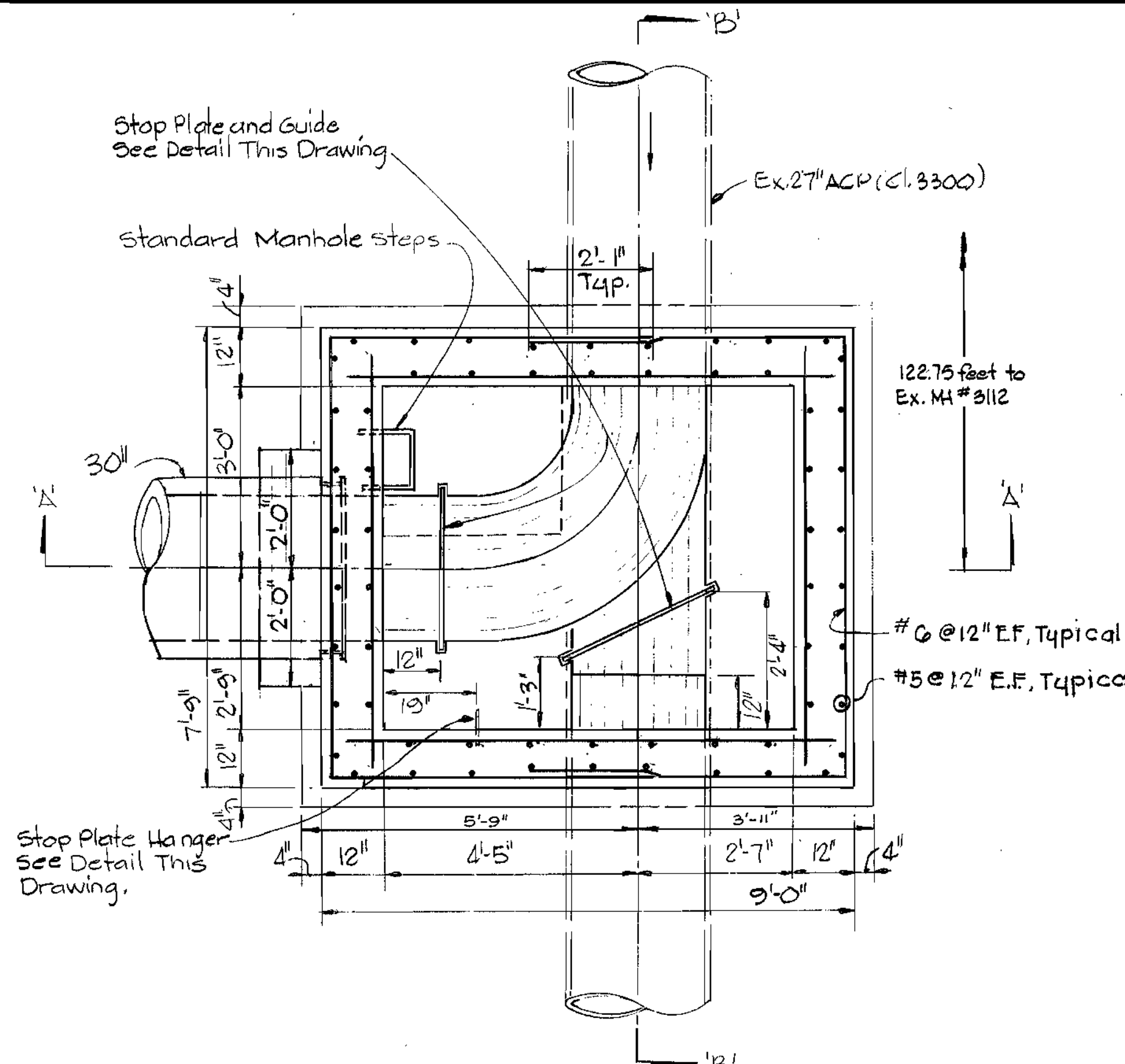
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND		CONTRACT NO. <u>681-S</u>	PLAN, PROFILES & DETAILS	ELECTION DISTRICT ELLICOTT CITY NO.2	DRAWING NO. <u>5</u> OF 21	SCALE AS SHOWN	512-(4)
	DIRECTOR OF PUBLIC WORKS - DATE CHIEF - BUREAU OF UTILITIES - DATE	CHIEF - BUREAU OF ENGINEERING - DATE CHIEF - UTILITIES DIVISION - DATE	PROJECT NO. <u>S-4-6041</u>	MARYLAND ROUTE 108 Sewage Pumping Station Project No. S-4-6041 Contract No. G81-S	Sheet C-4	RB* 5305, 5472 & 5780 DECEMBER 19, 1980 Jan. 24, 1984		

W.O. #6918-2

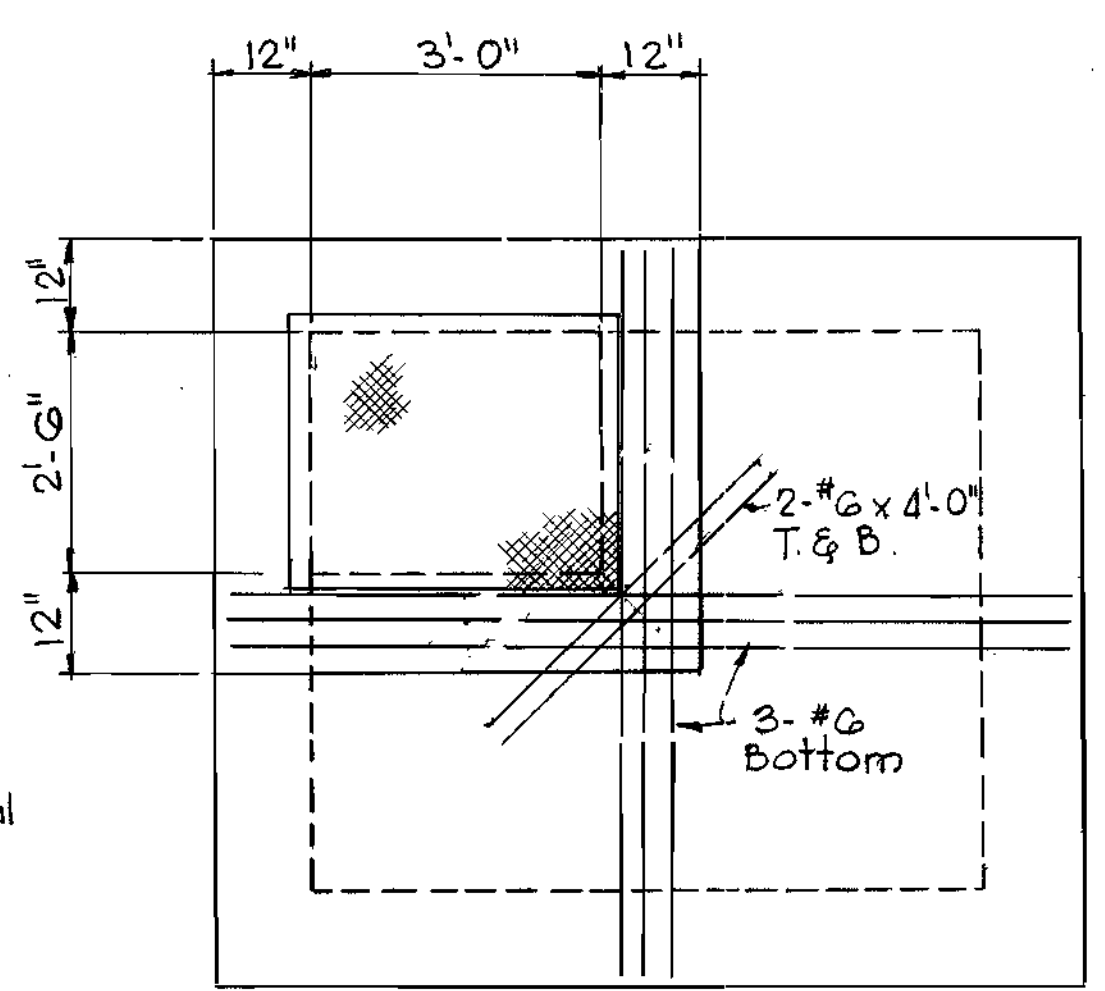
AS-BUILT

WS 681 S/5

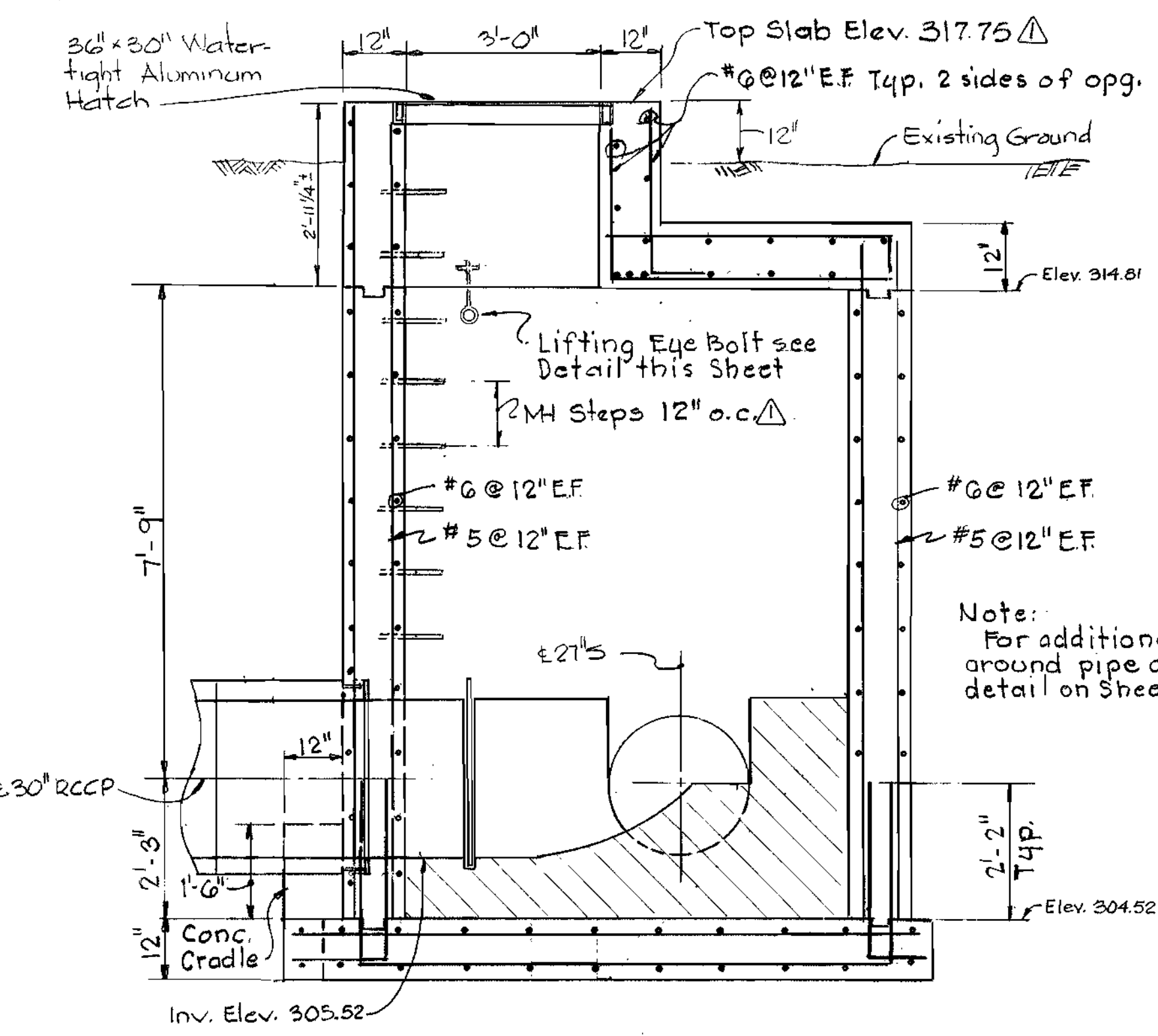
NOTES:
 1. Structure shall be constructed around existing 27-inch sewer. Flow shall be maintained in existing pipe at all times until pumping station is approved for service. When sewage is diverted to pumping station it shall be control by flume, sand bag or other approved method. No flow shall be diverted to the stream.



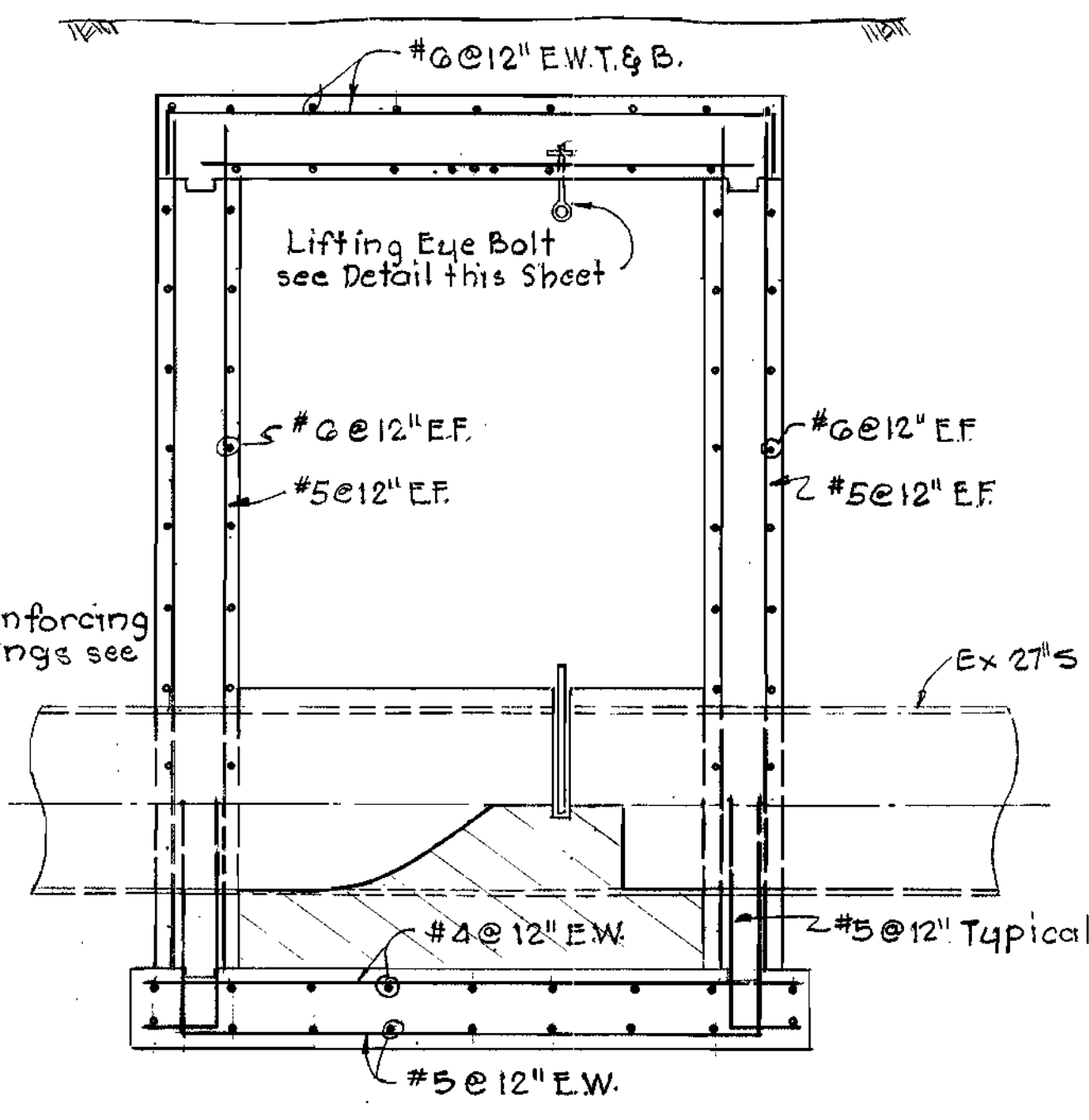
PLAN-BELOW TOP SLAB
 Scale 1/2"=1'-0"



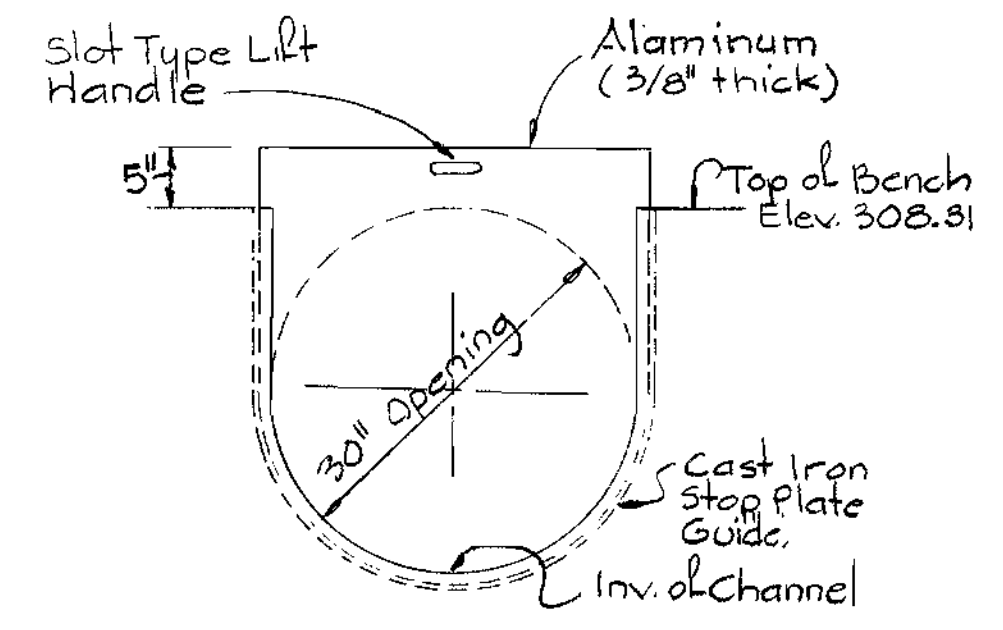
PLAN-TOP SLAB
 Scale 1/2"=1'-0"



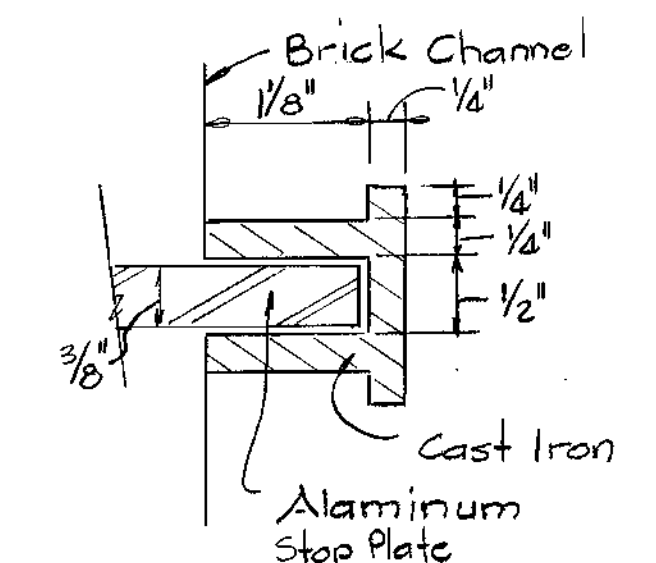
SECTION 'A-A'
 Scale 1/2"=1'-0"



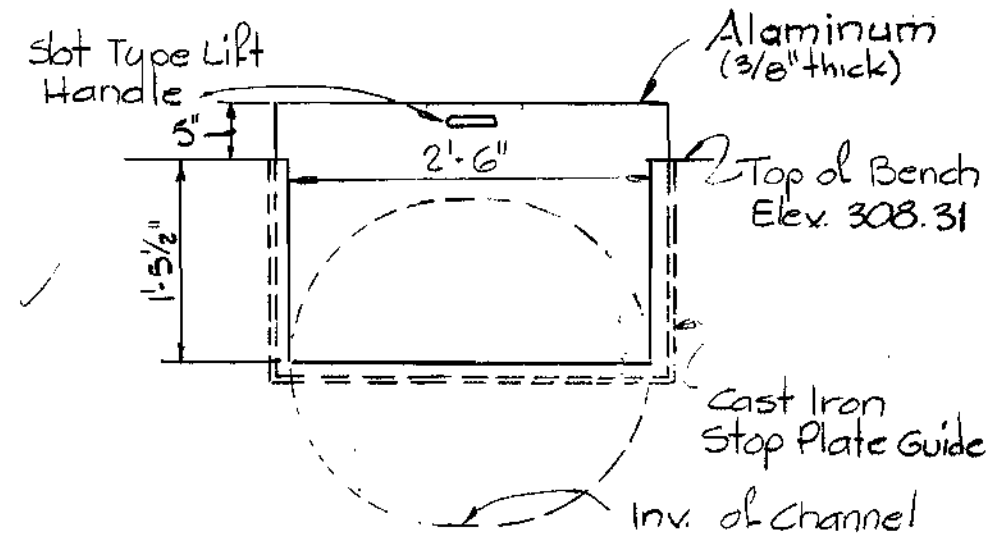
SECTION 'B-B'
 Scale 1/2"=1'-0"



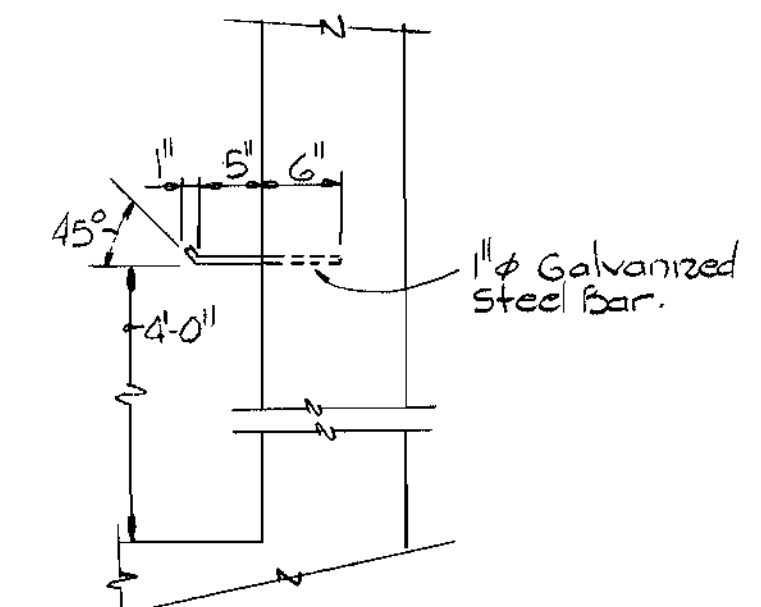
STOP PLATE - 30" CHANNEL
 Scale 3/4"=1"



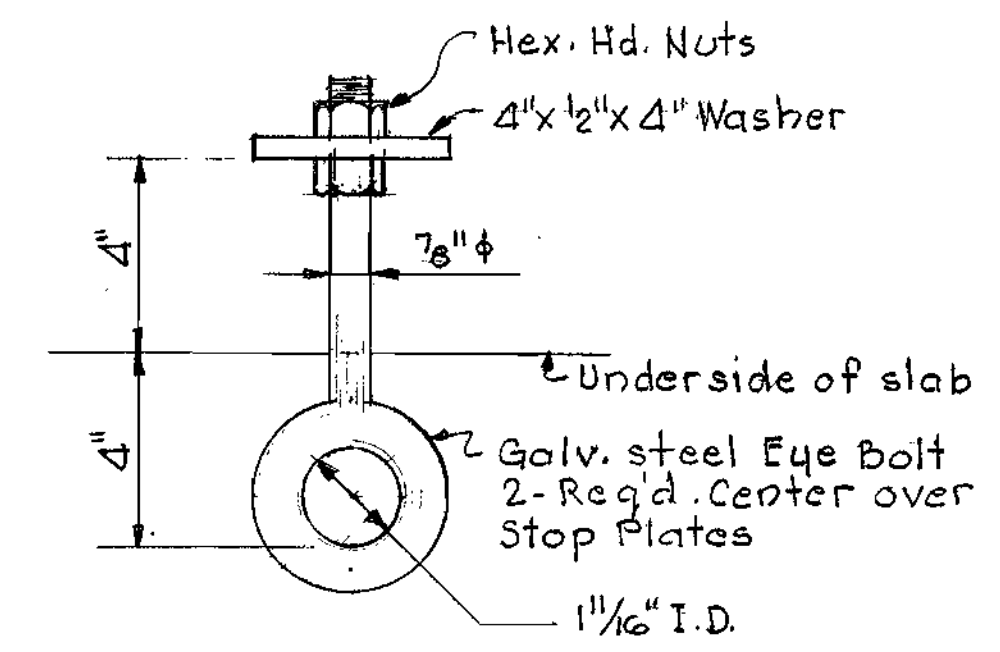
STOP PLATE GUIDE
 Scale 3/4"=1"



STOP PLATE - 27" CHANNEL
 Scale 3/4"=1"



STOP PLATE HANGER
 Scale 3/4"=1"



LIFTING EYE BOLT DETAIL
 Scale: None

This Manhole Cannot Be Completed
 Until Pumping Station is Placed in Service

NOT COMPLETE



Maryland Route 108
 Sewage Pumping Station
 Project No. S-4-6041
 Contract No. 681-5

DATE	REVISIONS
9-26-80	General Revisions

Sheet C-5

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

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

John F. Nierney 8/26/80
 DIRECTOR OF PUBLIC WORKS - DATE

James L. Blair 8/26/80
 CHIEF - BUREAU OF UTILITIES - DATE

John Schiller 8/25/80
 CHIEF - BUREAU OF ENGINEERING - DATE

Allan S. Brown 8/25/80
 CHIEF - UTILITIES DIVISION - DATE

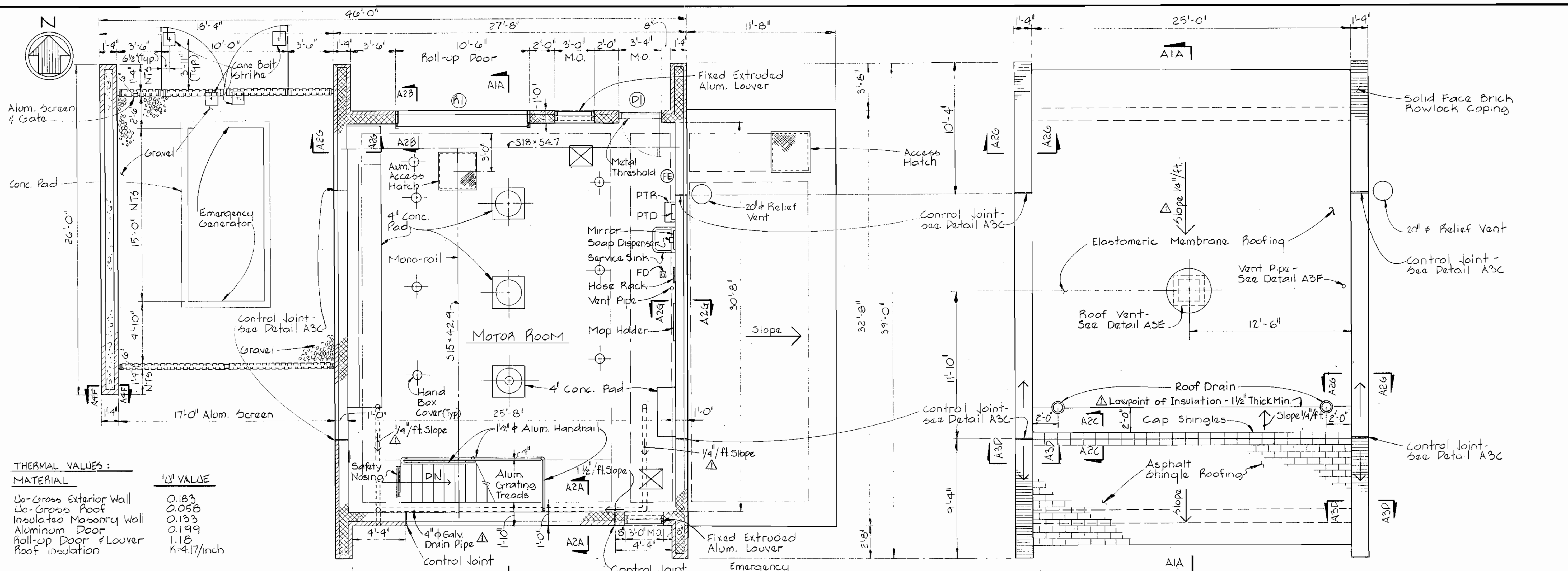
CONTRACT NO. 681-S
 PROJECT NO. S-4-6041

PLAN & DETAILS
 OF MANHOLE 9693

ELECTION DISTRICT
 ELLICOTT CITY NO. 2

DRAWING NO. 6 OF 21
 SCALE AS SHOWN

WS 681 S/6

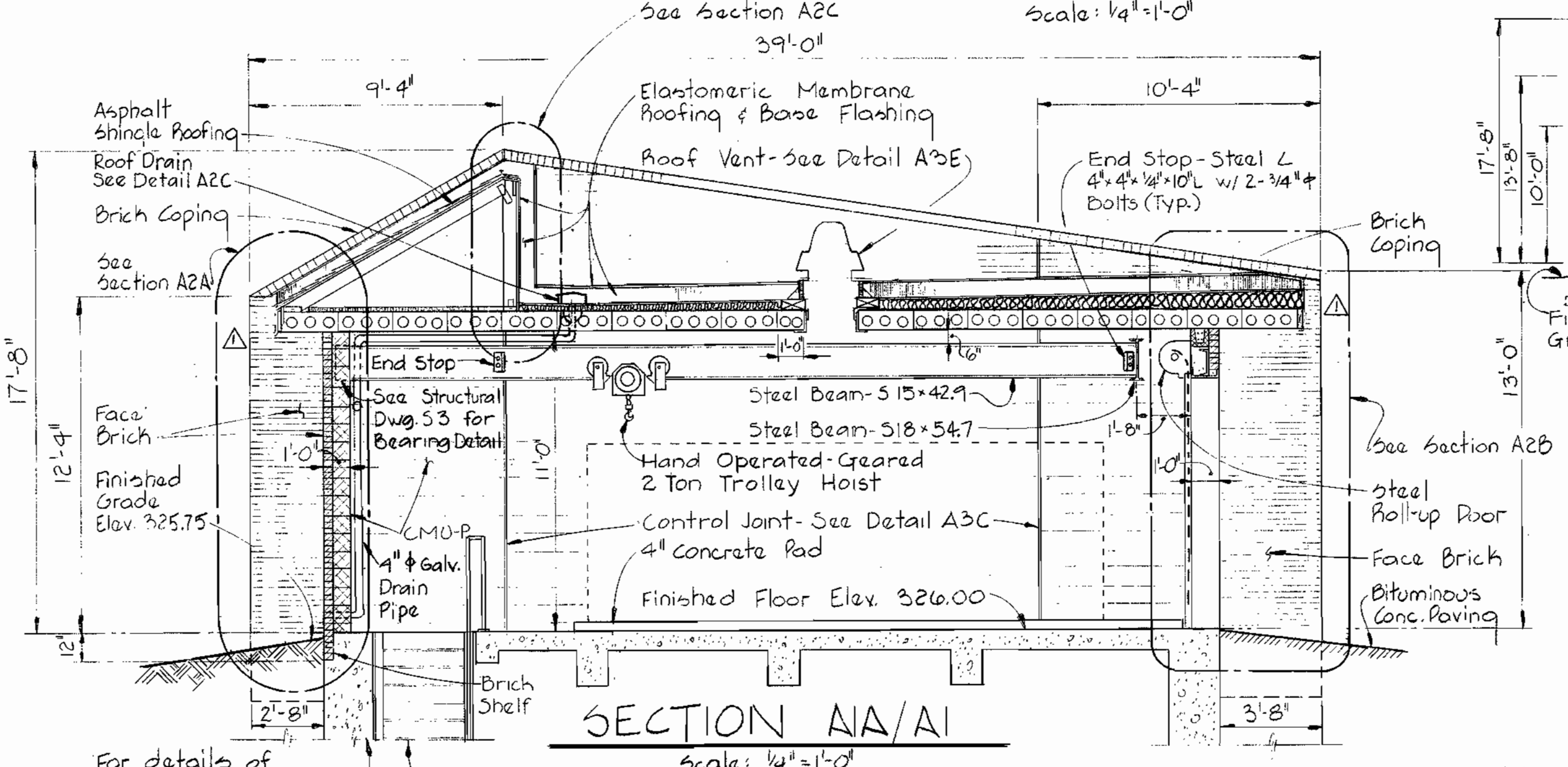


THERMAL VALUES:

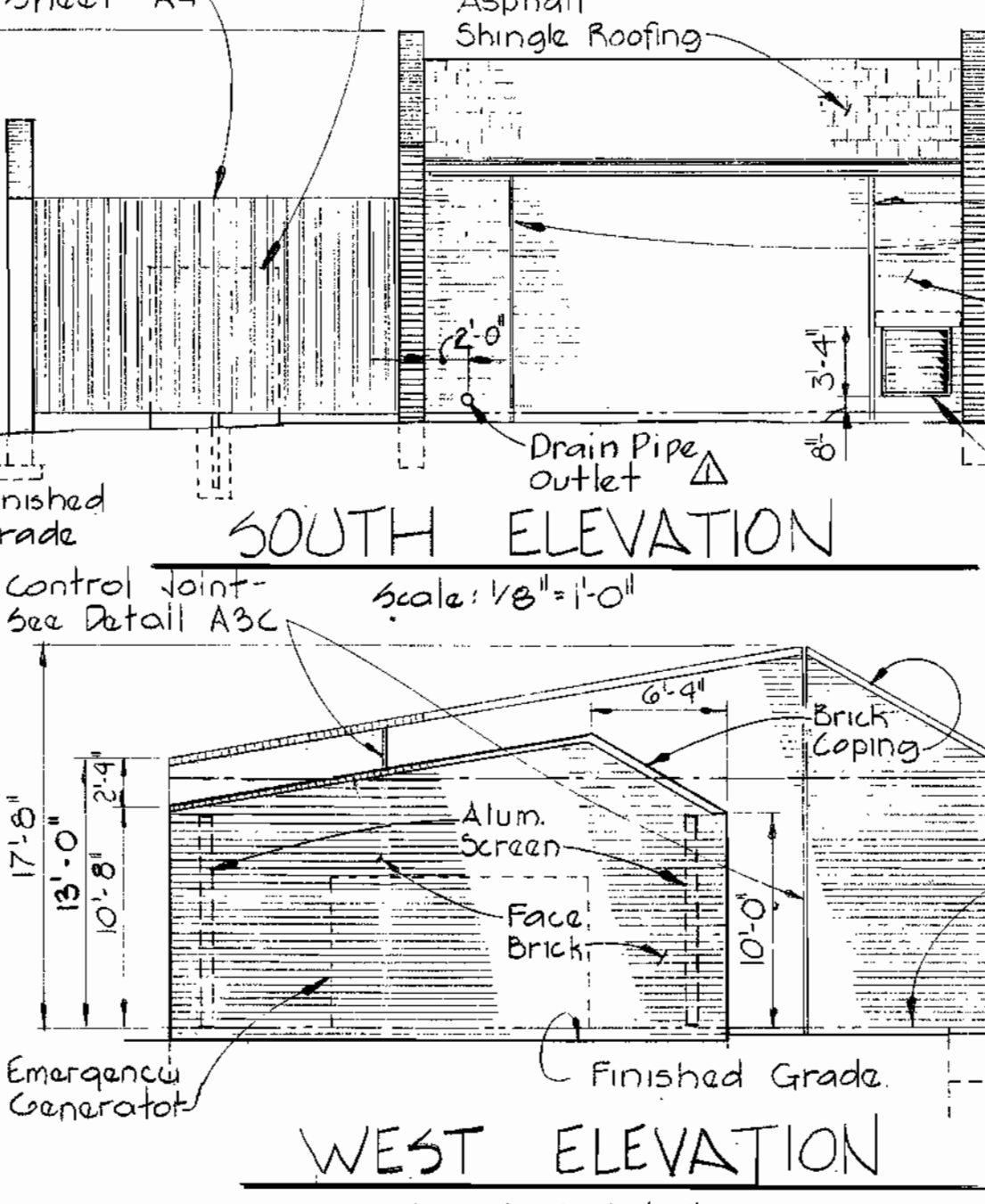
MATERIAL	U VALUE
No-Gross Exterior Wall	0.183
No-Gross Roof	0.058
Insulated Masonry Wall	0.133
Aluminum Door	0.199
Roll-up Door & Louver	1.18
Roof Insulation	k=4.17/inch

FLOOR PLAN ELEV. 326.00
Scale: 1/4" = 1'-0"

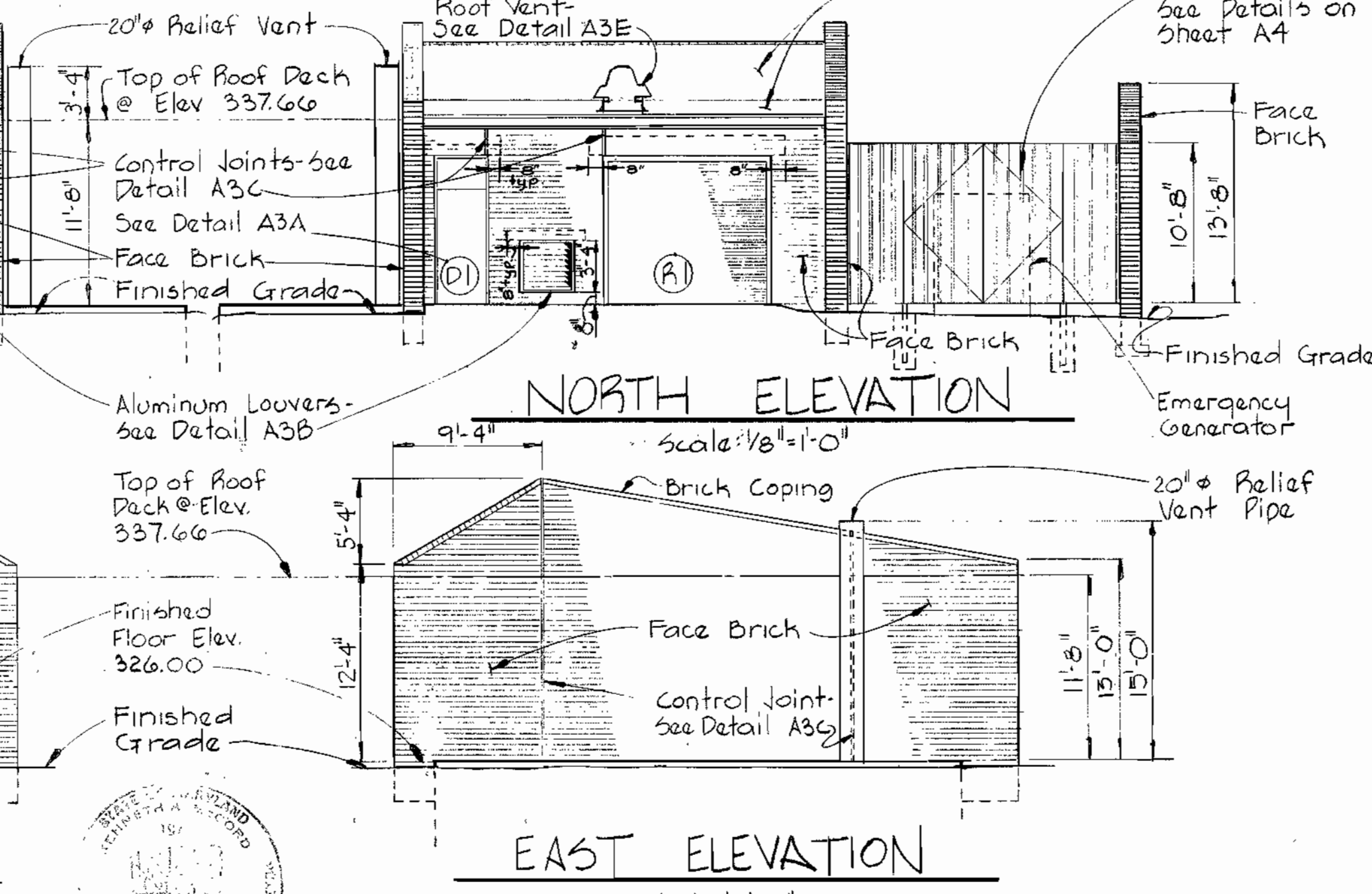
ROOF PLAN
Scale: 1/4" = 1'-0"



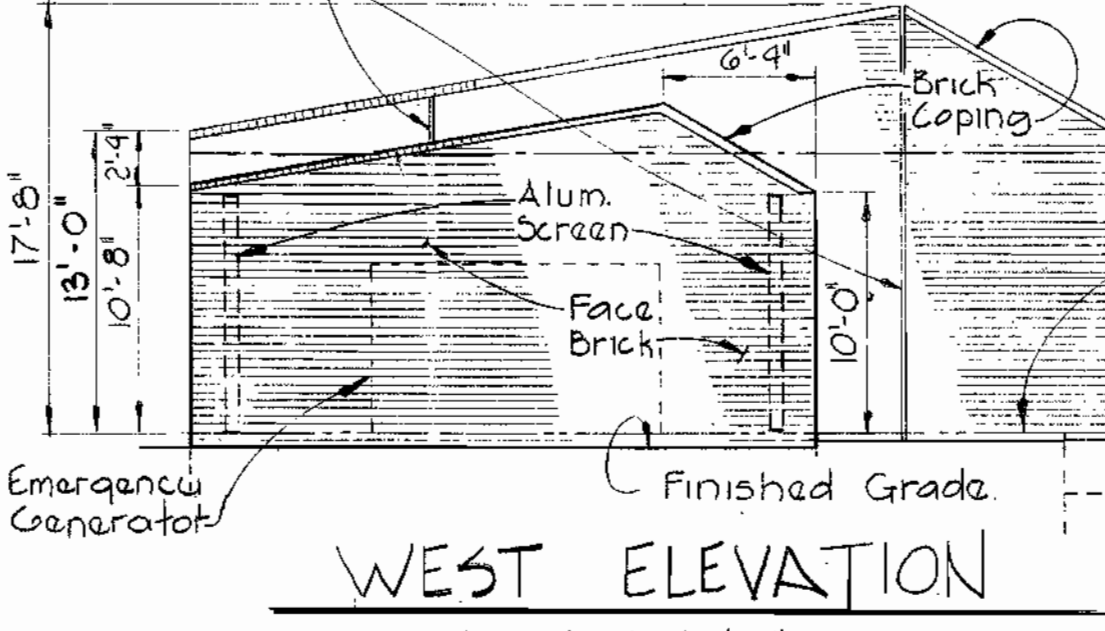
SECTION AA/AI
Scale: 1/4" = 1'-0"



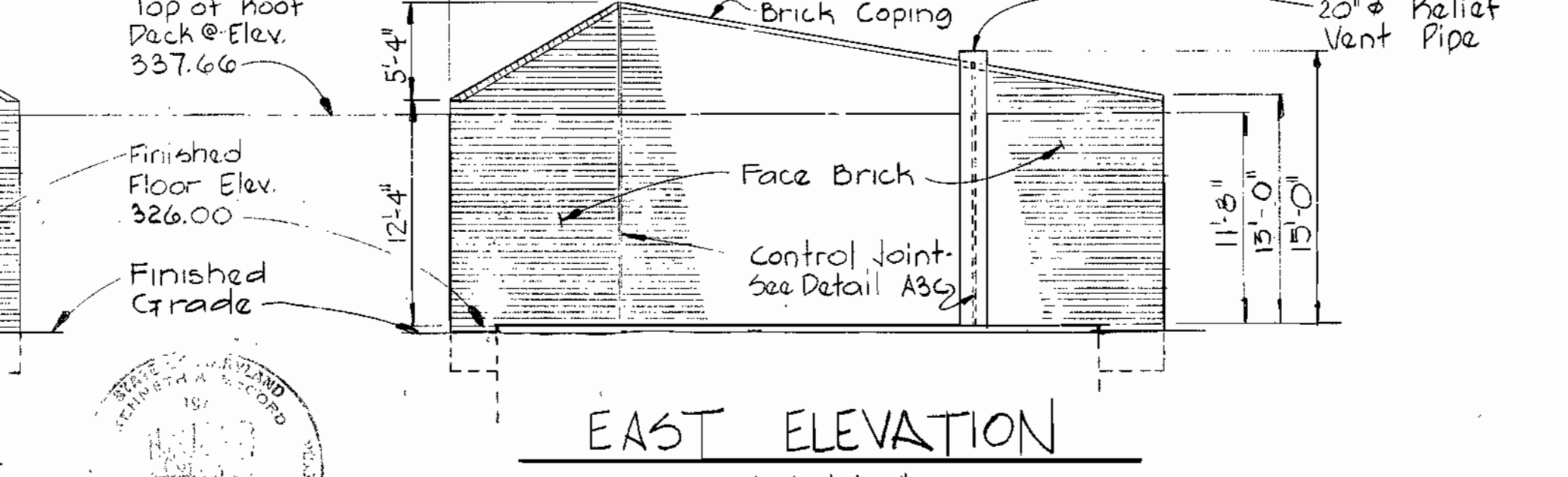
SOUTH ELEVATION
Scale: 1/8" = 1'-0"



NORTH ELEVATION
Scale: 1/8" = 1'-0"



WEST ELEVATION
Scale: 1/8" = 1'-0"



EAST ELEVATION
Scale: 1/8" = 1'-0"

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John F. Newman 8/26/80
DIRECTOR OF PUBLIC WORKS - DATE

John Z. Pille 8/25/80
CHIEF - BUREAU OF ENGINEERING - DATE

Allen S. Barber 8/25/80
CHIEF - UTILITIES DIVISION - DATE

DATE	REVISIONS
9-26-80	General Revisions

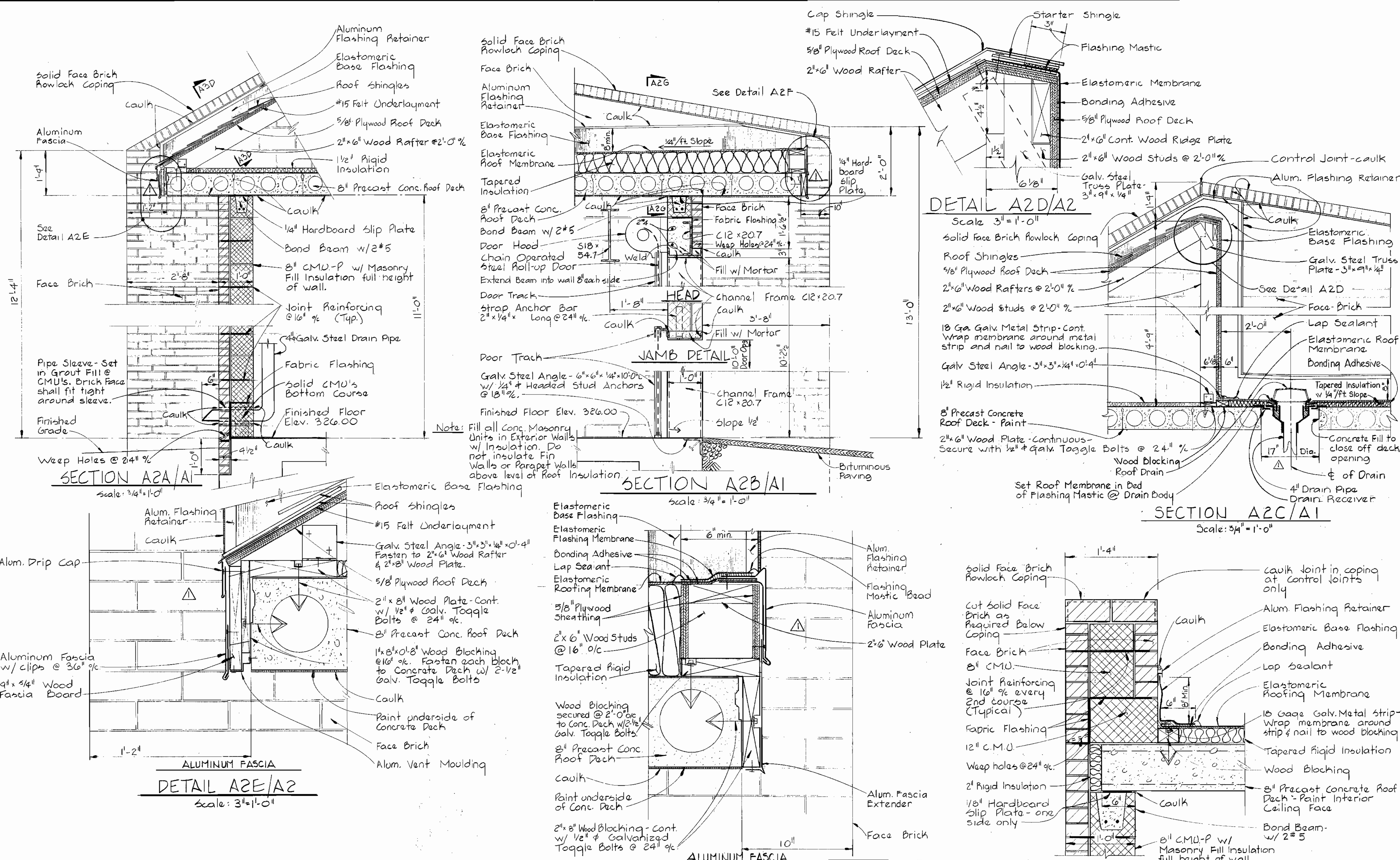
CONTRACT NO. 681-S
PROJECT NO. S-4-6041

ARCHITECTURAL
PLANS, ELEVATIONS, SECTION

ELECTION DISTRICT
ELLICOTT CITY NO. 2

DRAWING NO. 7	SCALE AS SHOWN
OF 21	

WS 681 S/7



Note: Fill all Conc. Masonry Units in Exterior Walls w/ Insulation. Do not insulate Fin Walls or Parapet Walls above level of Roof Insulation.

DATE	REVISIONS
9-26-80	General Revisions

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

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

[Signature] 8/25/80
 DIRECTOR OF PUBLIC WORKS - DATE

[Signature] 8/25/80
 CHIEF - BUREAU OF UTILITIES - DATE

CONTRACT NO. 681-S
 PROJECT NO. S-4-6041

ARCHITECTURAL
 SECTIONS & DETAILS

ELECTION DISTRICT
 ELLICOTT CITY NO. 2

DRAWING NO. 8 OF 21
 SCALE AS SHOWN

Maryland Route 108
 Sewage Pumping Station
 Project No. S-4-6041
 Contract No. 681-S

WS 6815/8

FINISH SCHEDULE

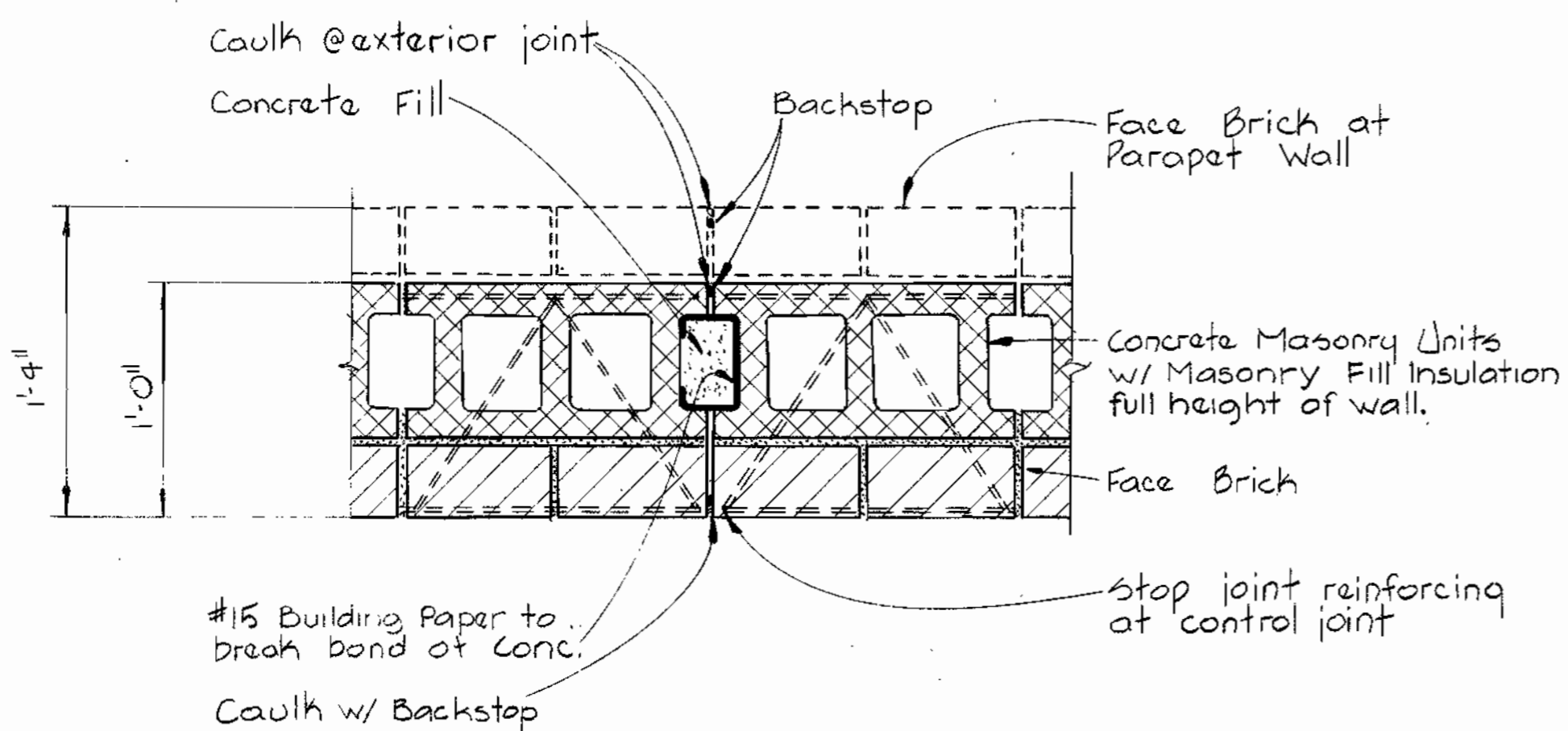
ABBREVIATIONS USED IN FINISH SCHEDULE AND DRAWINGS

ACT	ACOUSTICAL TILE	HM	HOLLOW METAL
ALUM	ALUMINUM	HT	HEIGHT
CARP	CARPETING	KCPL	KEENE'S CEMENT PLASTER
CFH	CONCRETE FLOOR HARDENER	MT	METAL THRESHOLD
CJT	CONTROL JOINT	PLAS-P	PLASTER-(P-PAINTED)
CMU-P	CONCRETE MASONRY UNITS-(P-PAINTED)	PTD	PAPER TOWEL DISPENSER
CONC	CONCRETE	PTR	PAPER TOWEL RECEPTOR
ES-P	EXPOSED STRUCTURE-(P-PAINTED)	RD	ROOF DRAIN
EXP. JT.	EXPANSION JOINT	SAT	SUSPENDED ACOUSTICAL TILE
FD	FLOOR DRAIN	SST	STAINLESS STEEL
GA	GAUGE	TPD	TOILET PAPER DISPENSER
GCMU	GLAZED CONCRETE MASONRY UNITS	VAT	VINYL ASBESTOS TILE
GPDW-P	GYPSUM DRY WALL-(P-PAINTED)	VCB	VINYL COVE BASE
HDW	HARDWARE	VCGB	VINYL COVERED GYPSUM BOARD

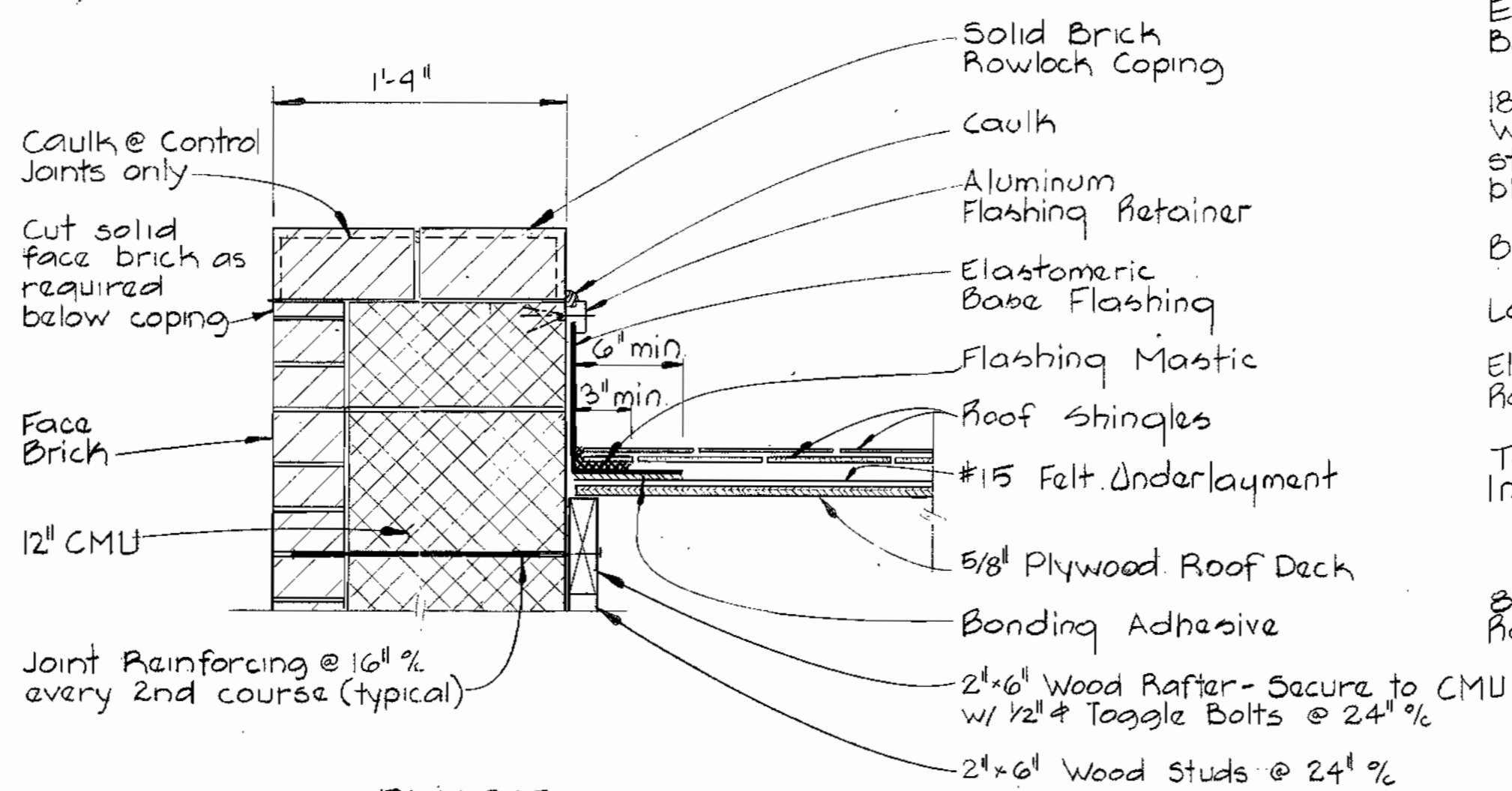
ROOM OR AREA	FLOOR		BASE		WALL		CEILING		REMARKS
	MAT'L	COLOR	MAT'L	COLOR	MAT'L	COLOR	MAT'L	COLOR	
MOTOR ROOM	CFH	—	CMU-P	—	CMU-P	—	Conc-P	11'-0"	Paint exterior concrete soffits
PUMP ROOM	CFH	—	Conc-P	—	Conc-P	—	Conc-P		
WET WELL	Conc-P	—	Conc-P	—	Conc-P	—	Conc-P		
STEEL ROLL-UP DOOR	—	—	—	—	Steel-P	—	—		
STEEL RELIEF VENT	—	—	—	—	Steel-P	—	—		
ALUMINUM SCREEN	—	—	—	—	Alum-P	—	—		Refer to Hardware Set HW-2

DOOR SCHEDULE

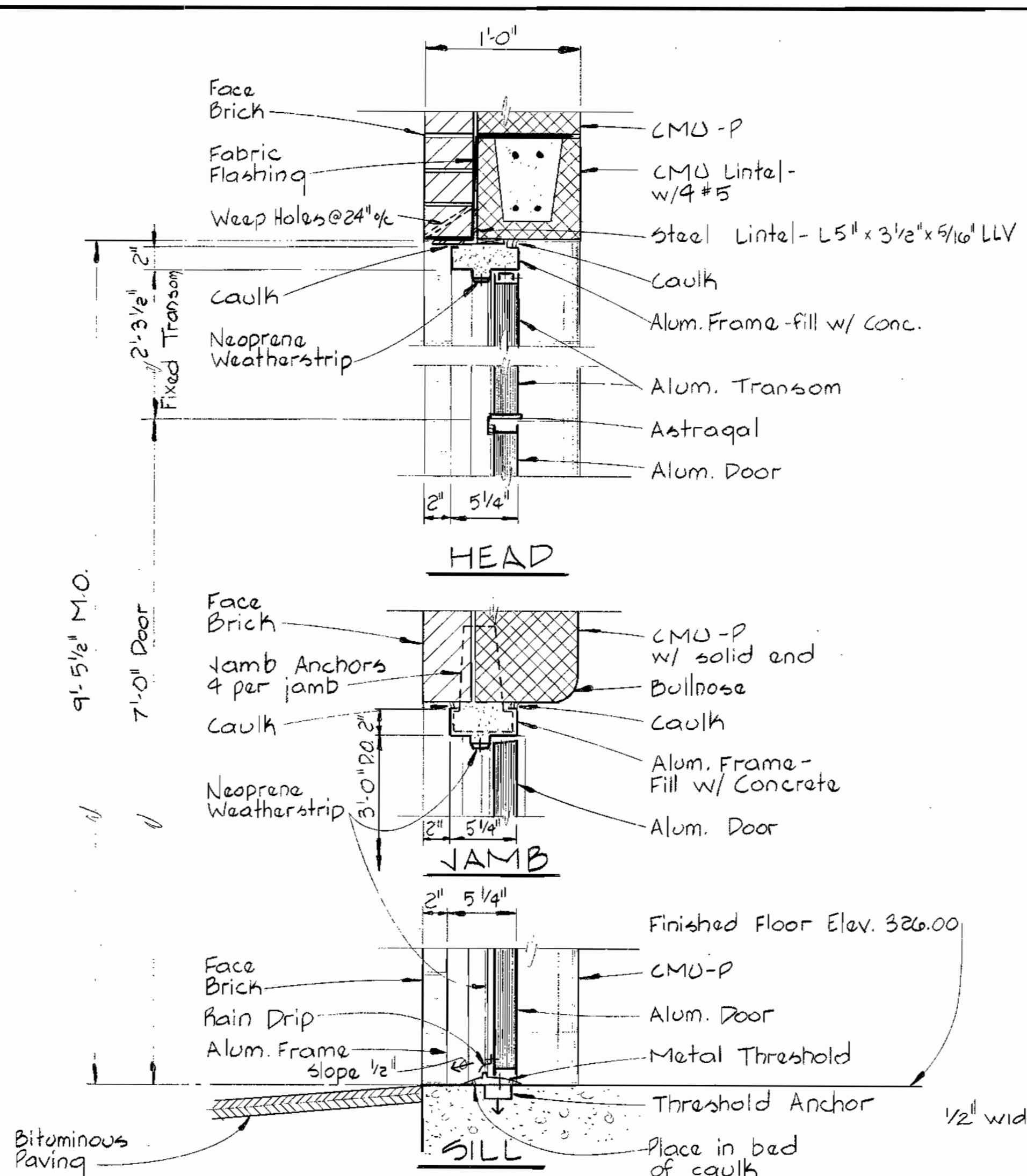
No.	Door Size	Masonry Opening	Matl.	Head	Jamb	Sill	Transom	HDW.	Remarks
D1	3'-0" x 7'-0" x 1 3/4"	3'-4" x 9'-5 1/2"	ALUM.	A3A	A3A	A3A	3'-0" x 2'-3 1/2"	HW-1	
R1	10'-0" x 9'-2 1/2"	10'-6" x 9'-5 1/2"	STEEL	A2B	A2B	A2B			



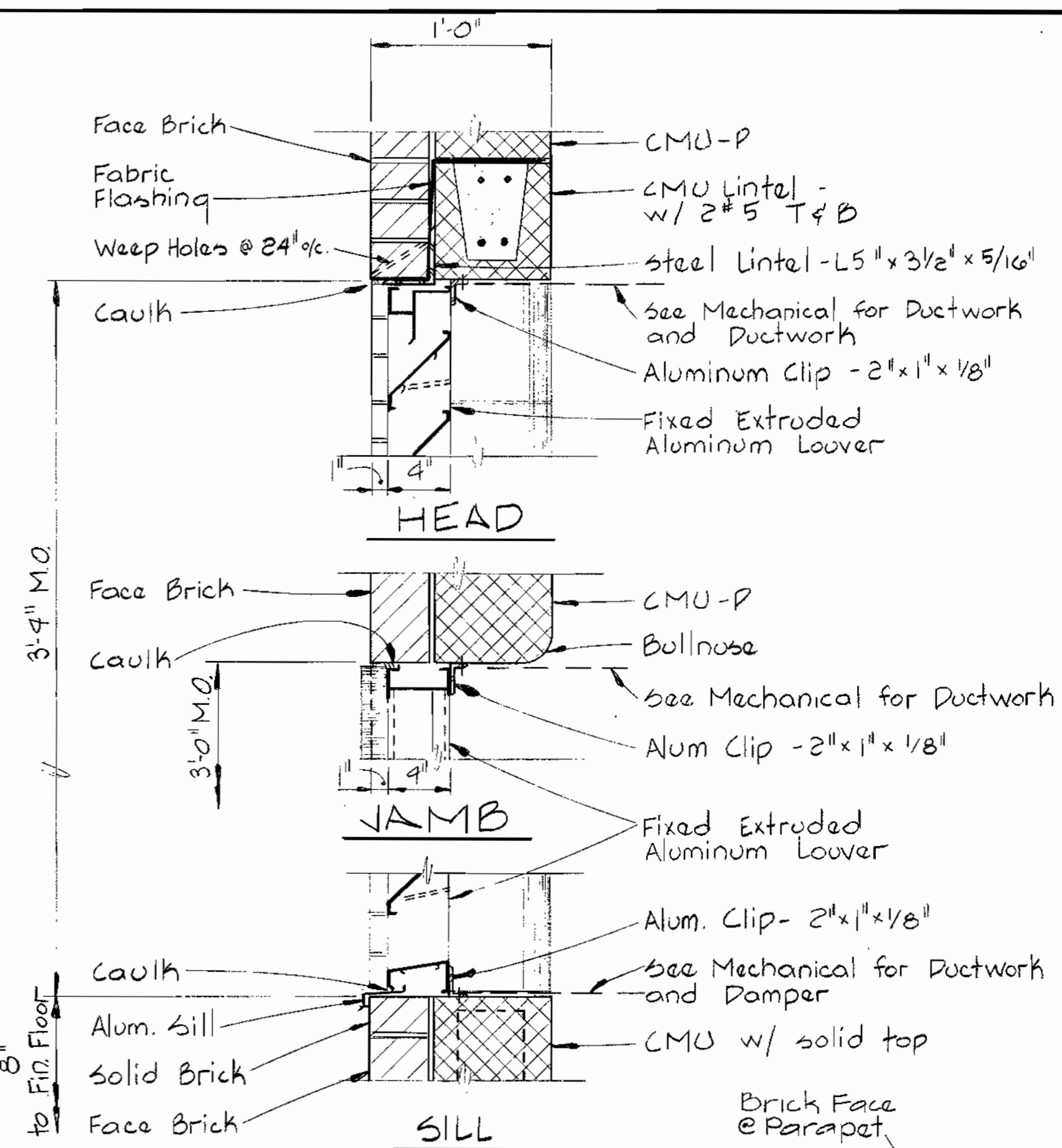
CONTROL JOINT
DETAIL A3C/A1
Scale: 1/2" = 1'-0"



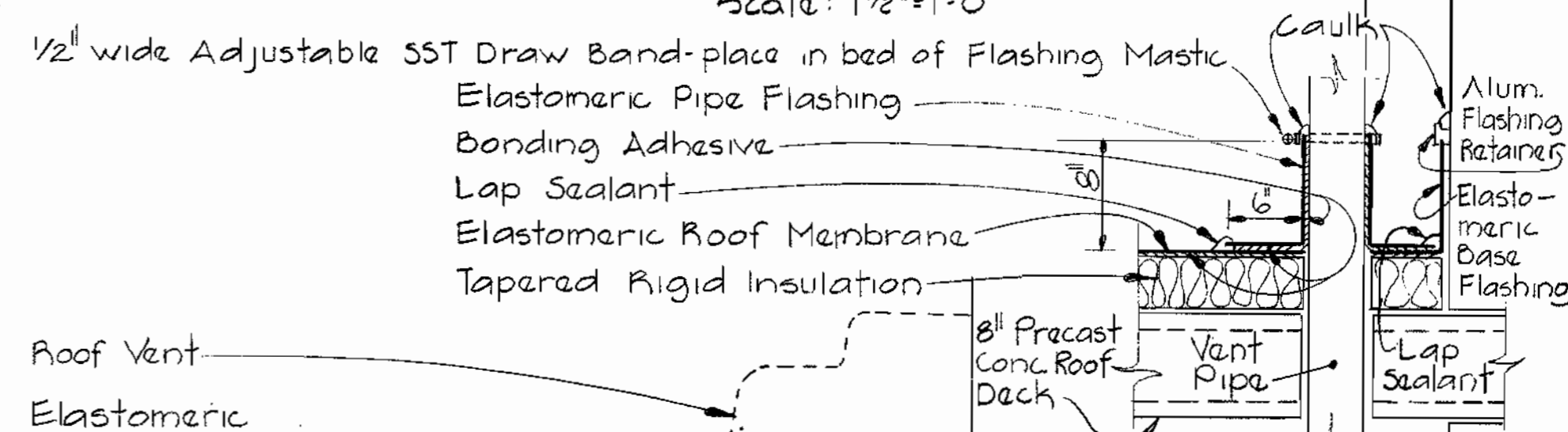
PARAPET
SECTION A3D/A1, A2
Scale: 1/2" = 1'-0"



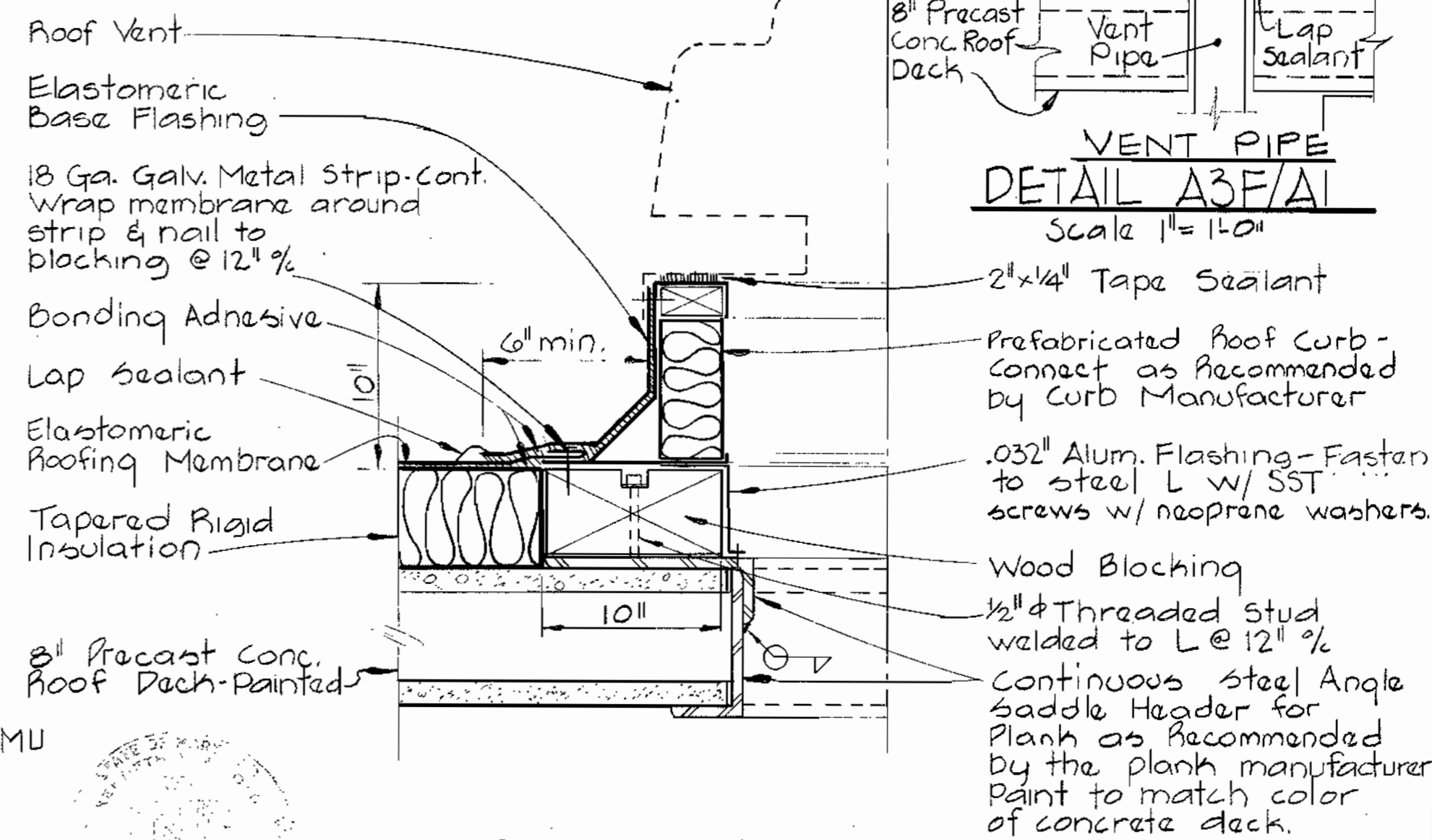
DOOR D1 DETAIL A3A/A1
Scale: 1/2" = 1'-0"



LOUVER DETAIL A3B/A1
Scale: 1/2" = 1'-0"



VENT PIPE
DETAIL A3E/A1
Scale: 1" = 1'-0"



ROOF VENT
DETAIL A3E/A1
Scale: 1/2" = 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. 681-S
PROJECT NO. S-4-6041

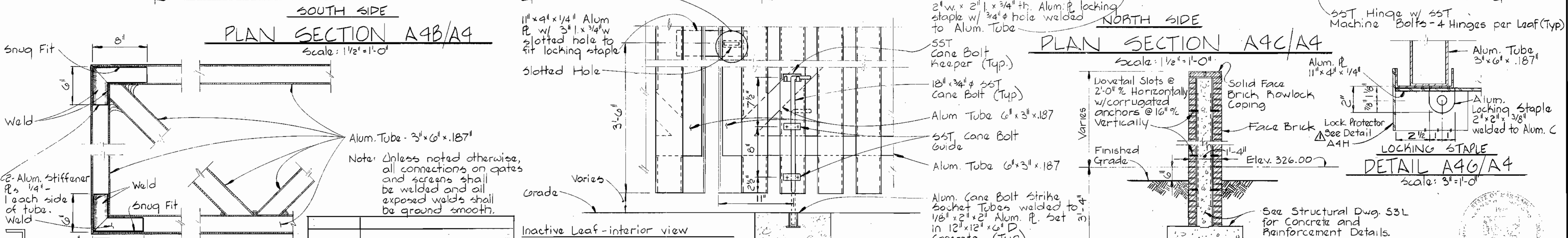
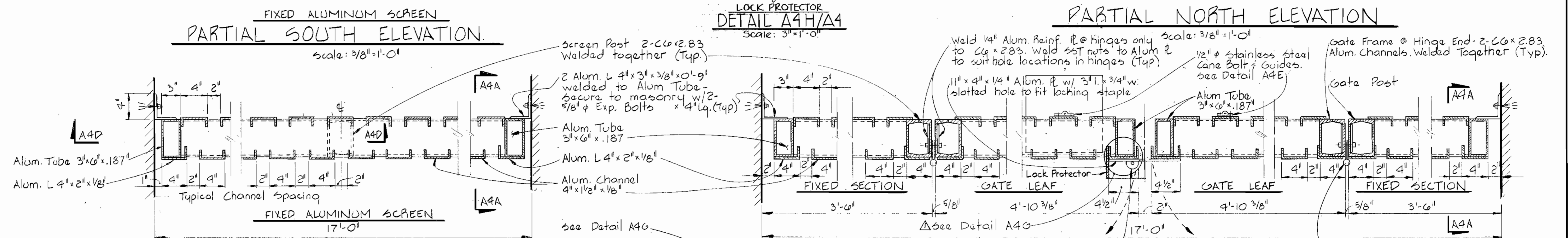
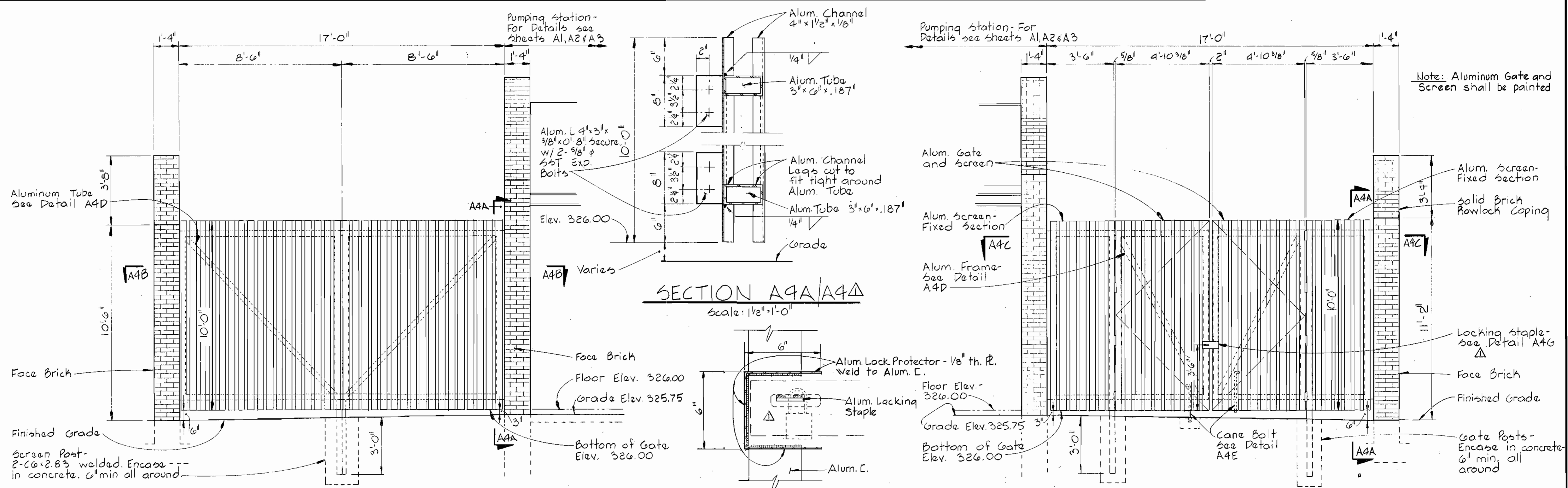
ARCHITECTURAL
SCHEDULES & DETAILS

ELECTION DISTRICT
ELICOTT CITY NO. 2

DRAWING NO. 9 OF 21
SCALE AS SHOWN

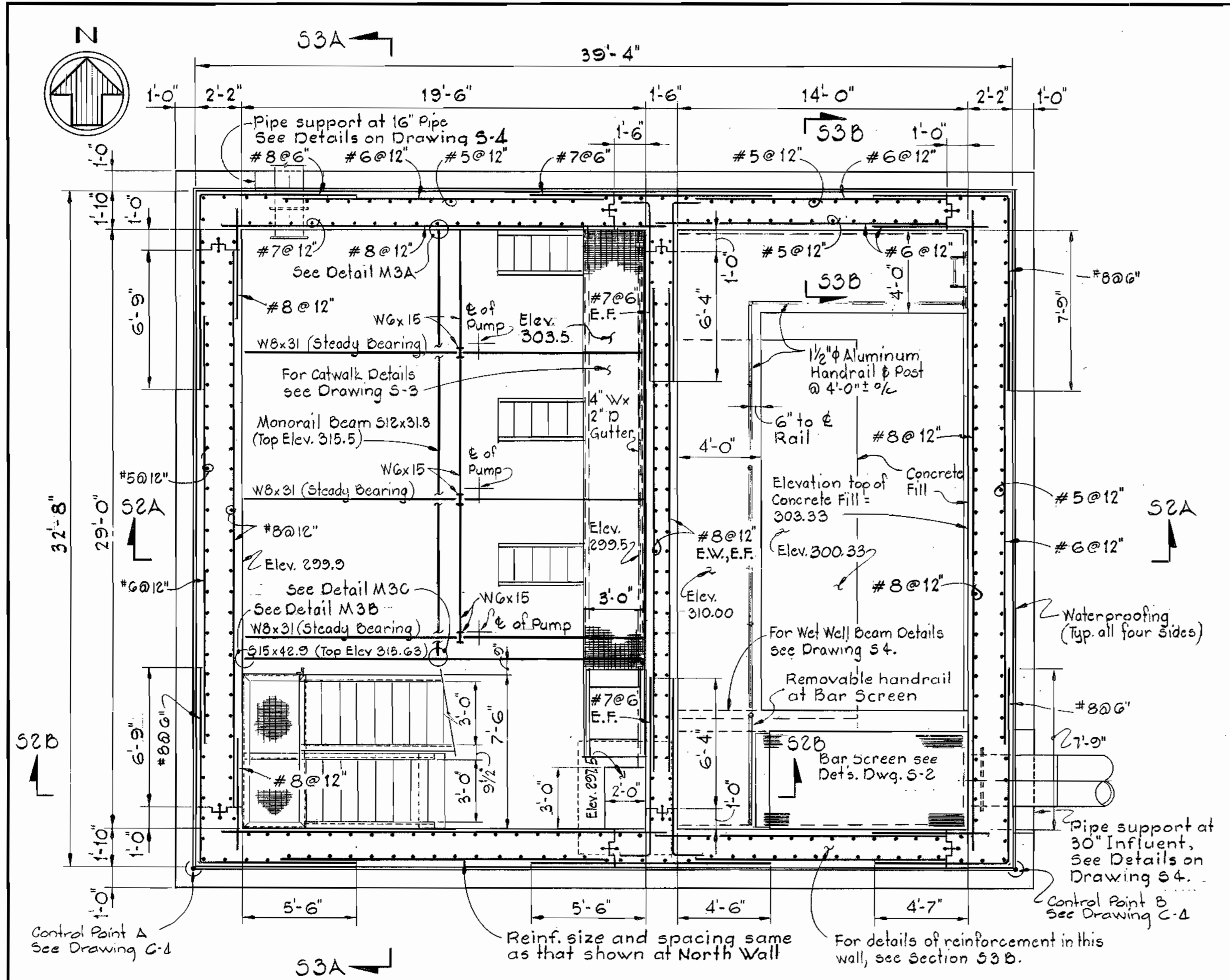
Maryland Route 108
Sewage Pumping Station
Project No. S-4-6041
Contract No. 681-S

A-3

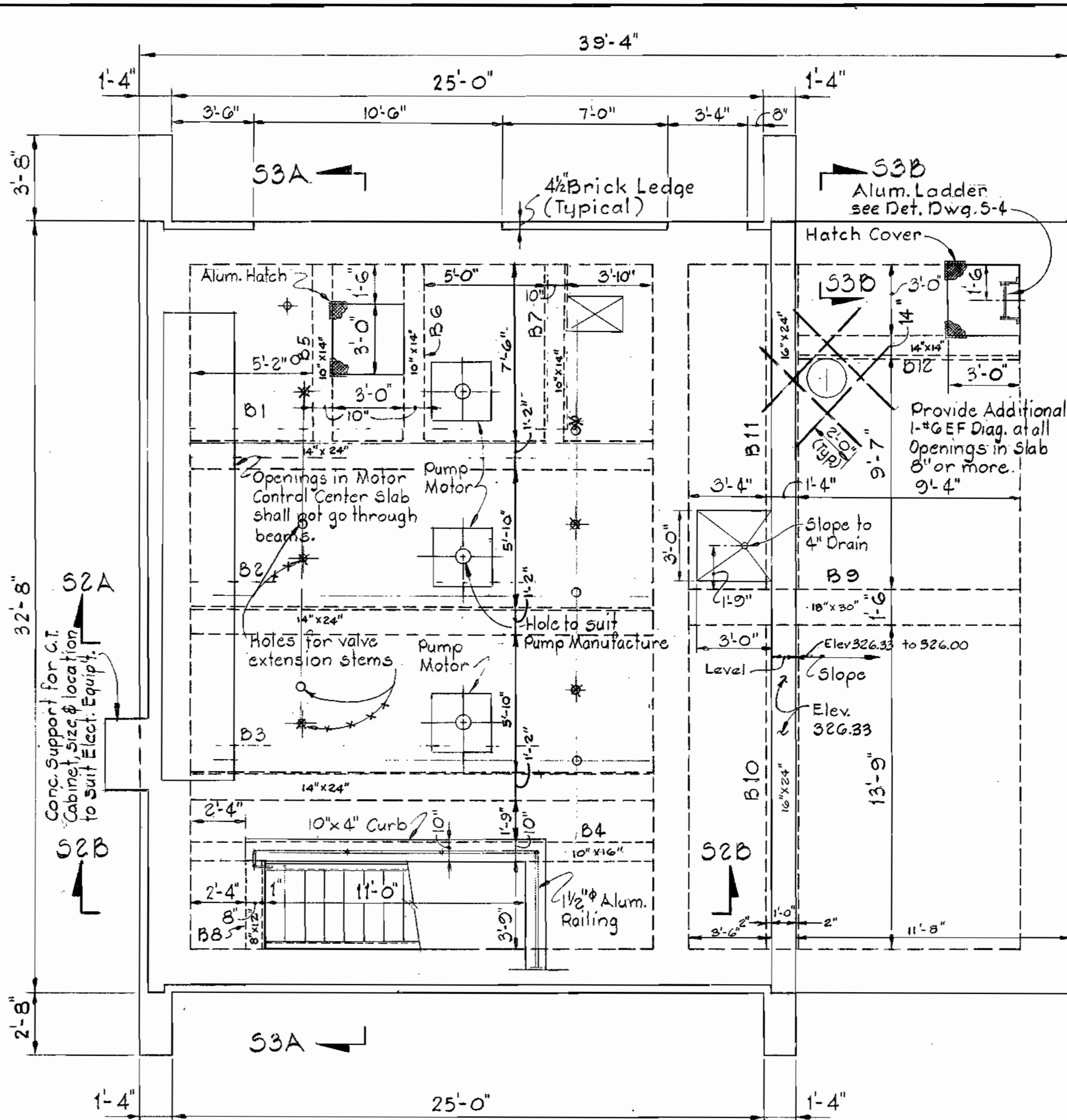


DATE	REVISIONS	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND		CONTRACT NO.	ARCHITECTURAL	ELECTION DISTRICT	DRAWING NO.	SCALE
9-26-80	General Revisions	Director of Public Works - DATE	Chief - Bureau of Engineering - DATE	681-S	SCREEN DETAILS	ELLICOTT CITY NO. 2	NO. 10 OF 21	AS SHOWN
		Chief - Bureau of Utilities - DATE	Chief - Utilities Division - DATE	S-4-6041				

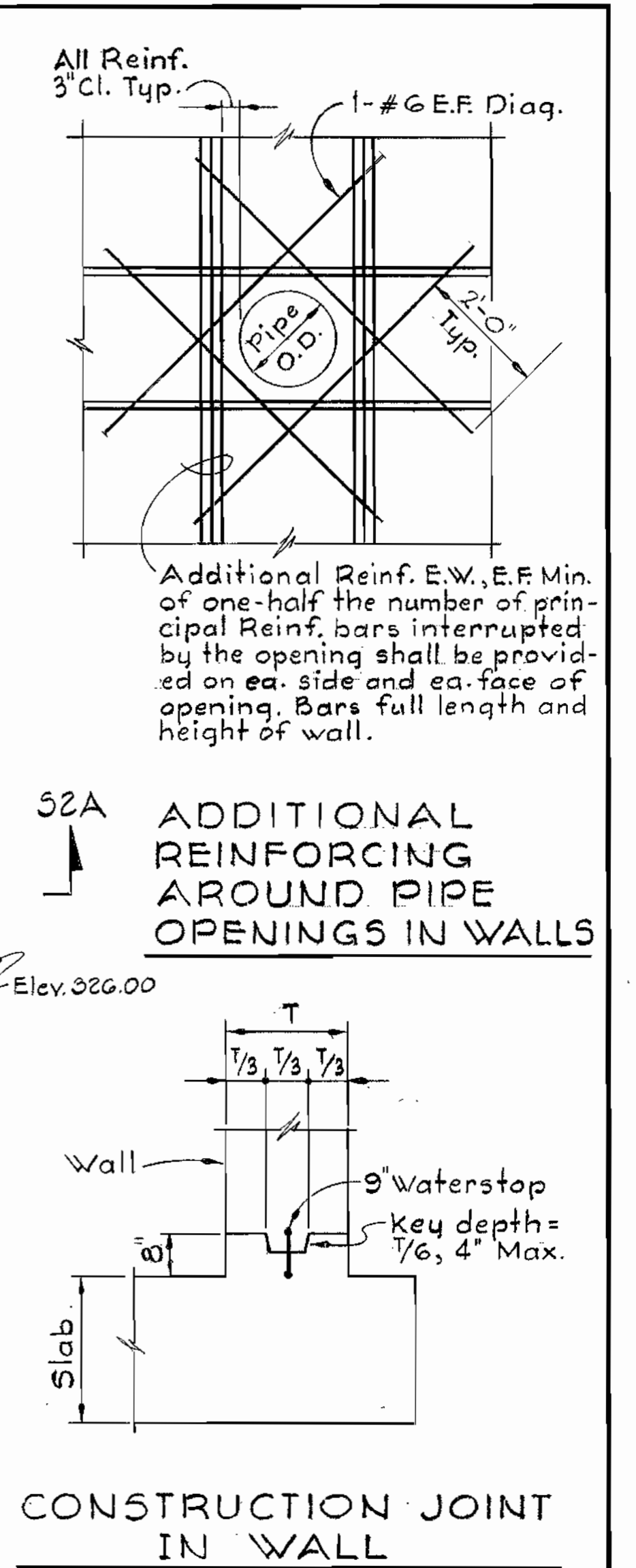
WS 681 S/10



PLAN BELOW OPERATING FLOOR
Scale: 1/4" = 1'-0"



PLAN AT ELEVATION 326.00
Scale: 1/4" = 1'-0"

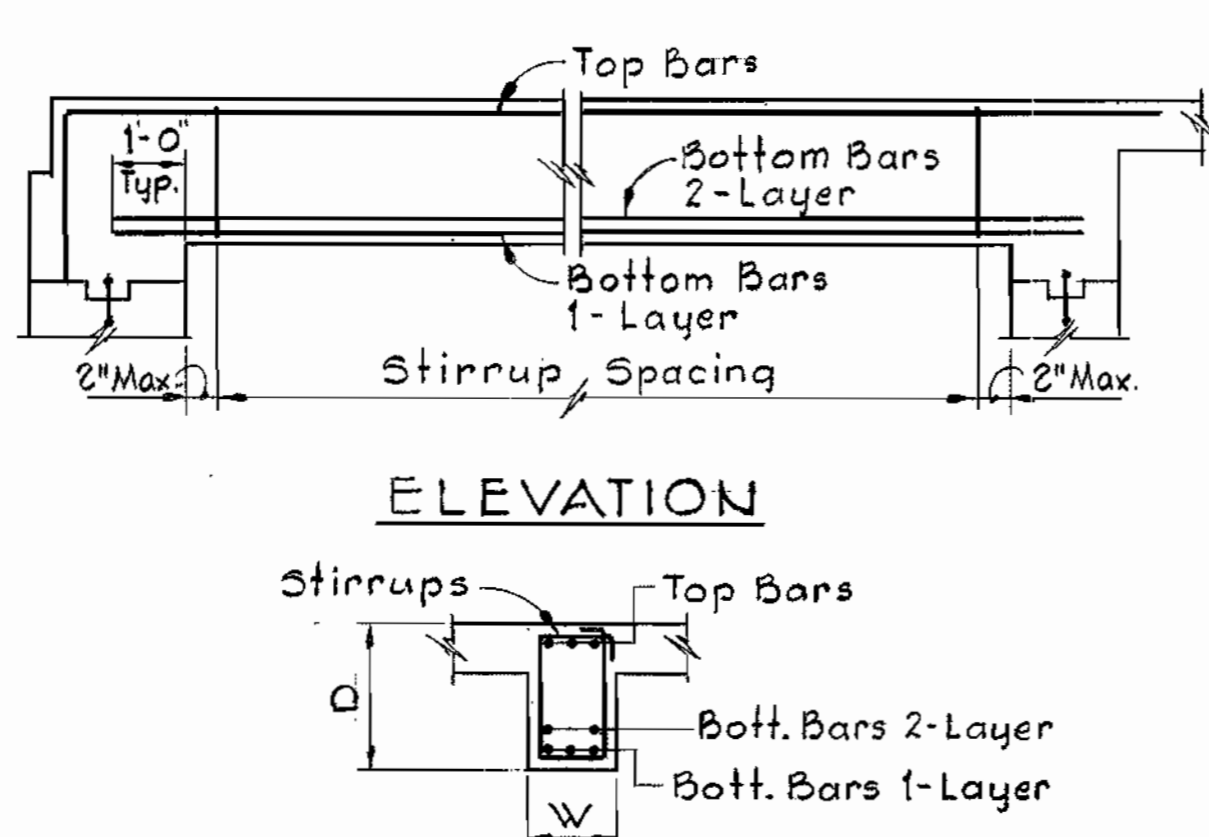


CONSTRUCTION JOINT IN WALL

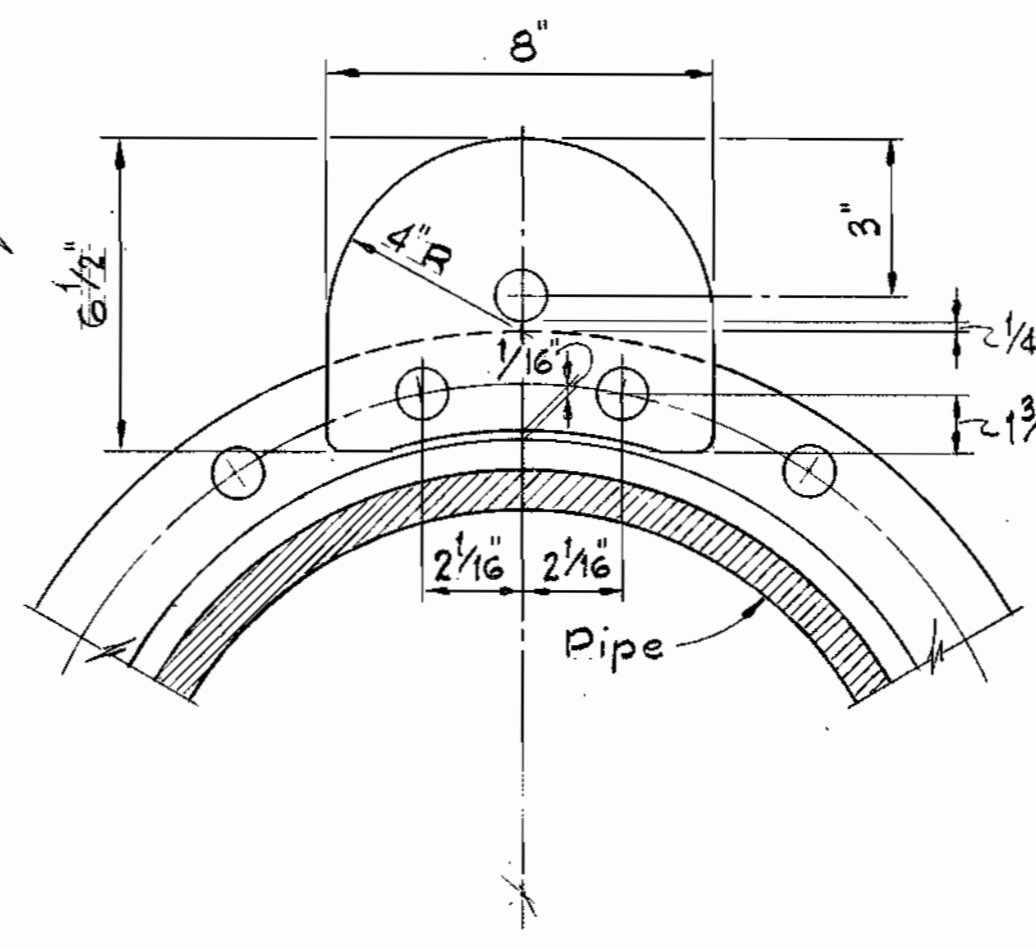
BEAM SCHEDULE						
MARK	SIZE W x D	BOTTOM BARS		TOP BARS	STIRRUP SIZE AND SPACING	CLEAR COVER
		1-LAYER	2-LAYER			
B1	14' 24"	3-#8	2-#8	3-#8	#3 @ 10"	1 1/2"
B2 & B3	14' 24"	4-#9		2-#9	#3 @ 10"	1 1/2"
B4	10' 16"	3-#9		2-#8	#3 @ 6"	1 1/2"
B5, B6 & B7	10' 14"	2-#8		2-#6	#3 @ 5"	1 1/2"
B8	8' 12"	2-#6		2-#4	#3 @ 4"	1 1/2"
B9	18' 30"	4-#9	4-#9	4-#9*	#4 @ 6"	2"
B10 & B11	16' 24"	5-#9		5-#9**	#3 @ 10"	2"
B12	10' 14"	3-#8		2-#7	#3 @ 5"	2"

* Two #9 bars shall extend continuously into beam 2 other two bars will extend into slab.
** Continuous over B9

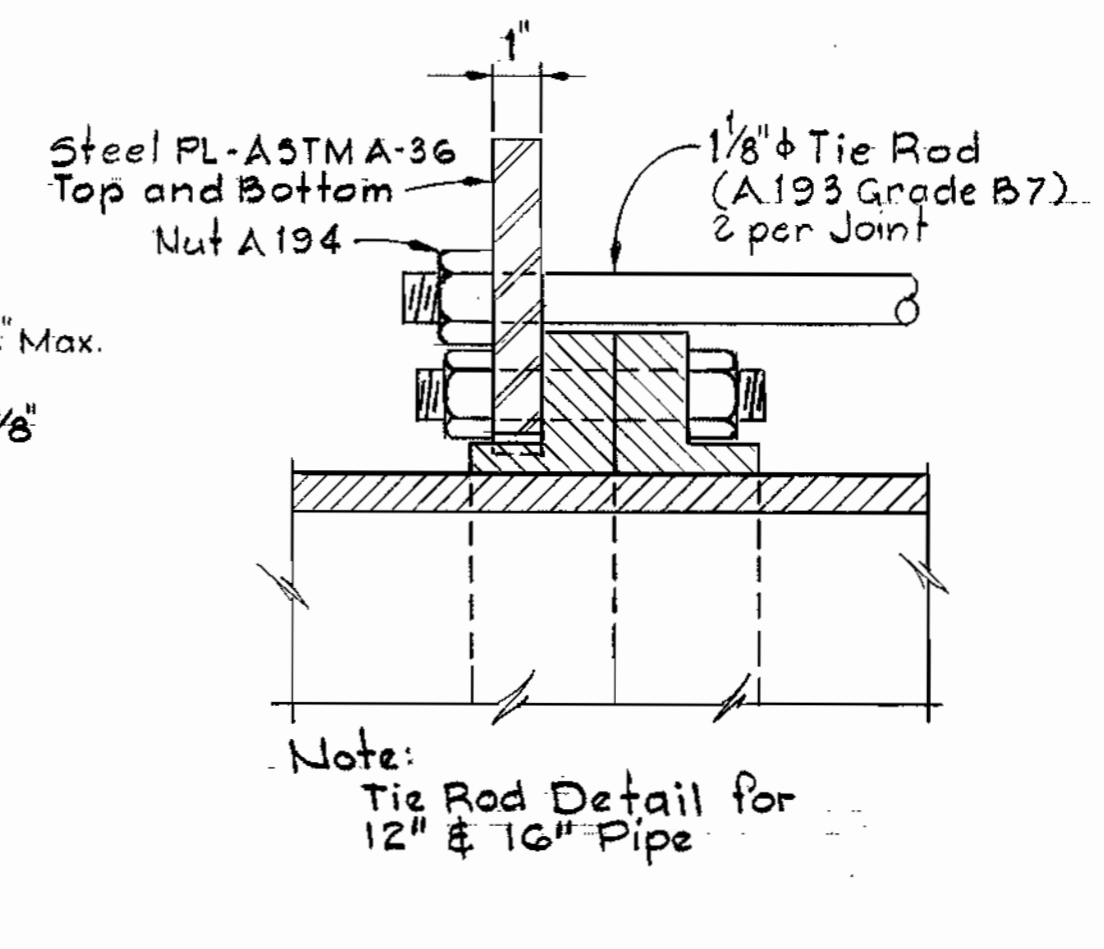
BEAM DETAILS



SECTION

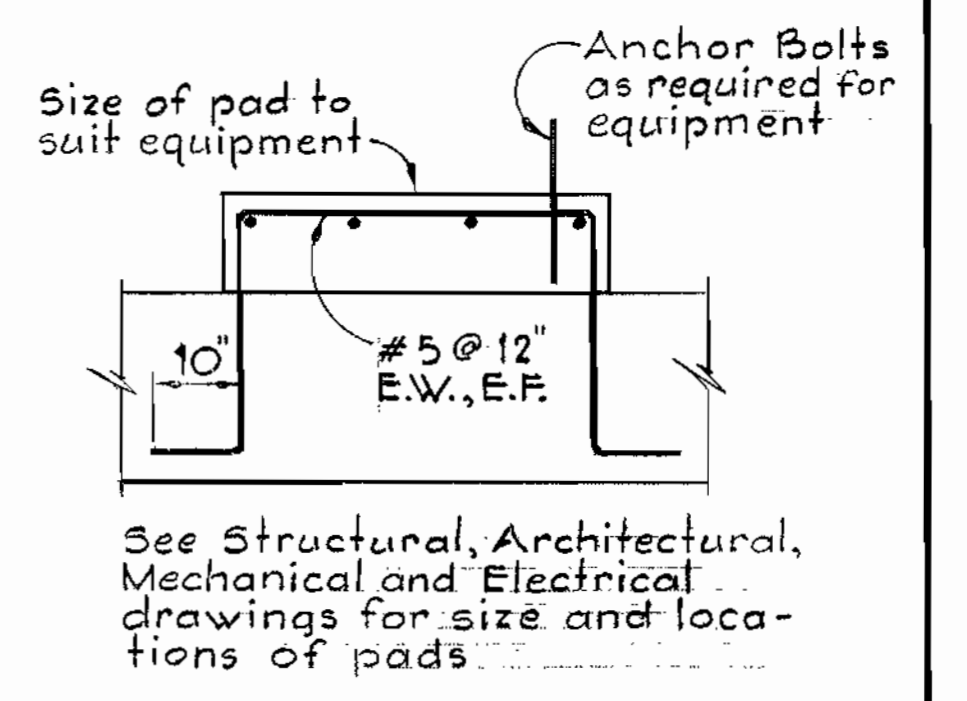


ELEVATION



SECTION

TIE ROD DETAILS
Scale: 3" = 1'-0"



EQUIPMENT PAD
TYPICAL DETAILS
No Scale

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
M. F. Neumann, P.E. 8/26/80
DIRECTOR OF PUBLIC WORKS - DATE
James S. Glick, P.E. 8/25/80
CHIEF - BUREAU OF UTILITIES - DATE

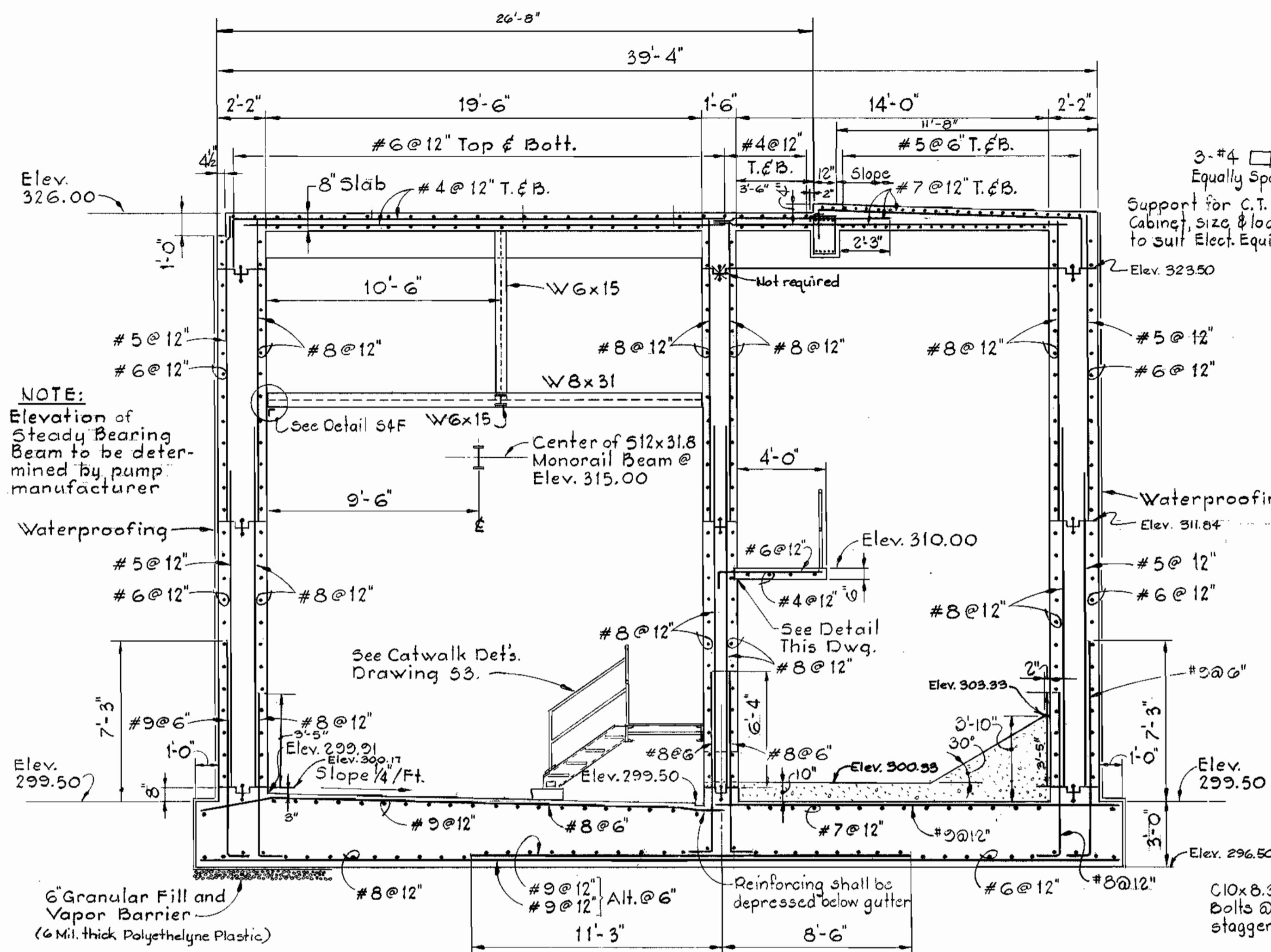
CONTRACT NO. 681-S
PROJECT NO. S-4-6041

PLANS & DETAILS

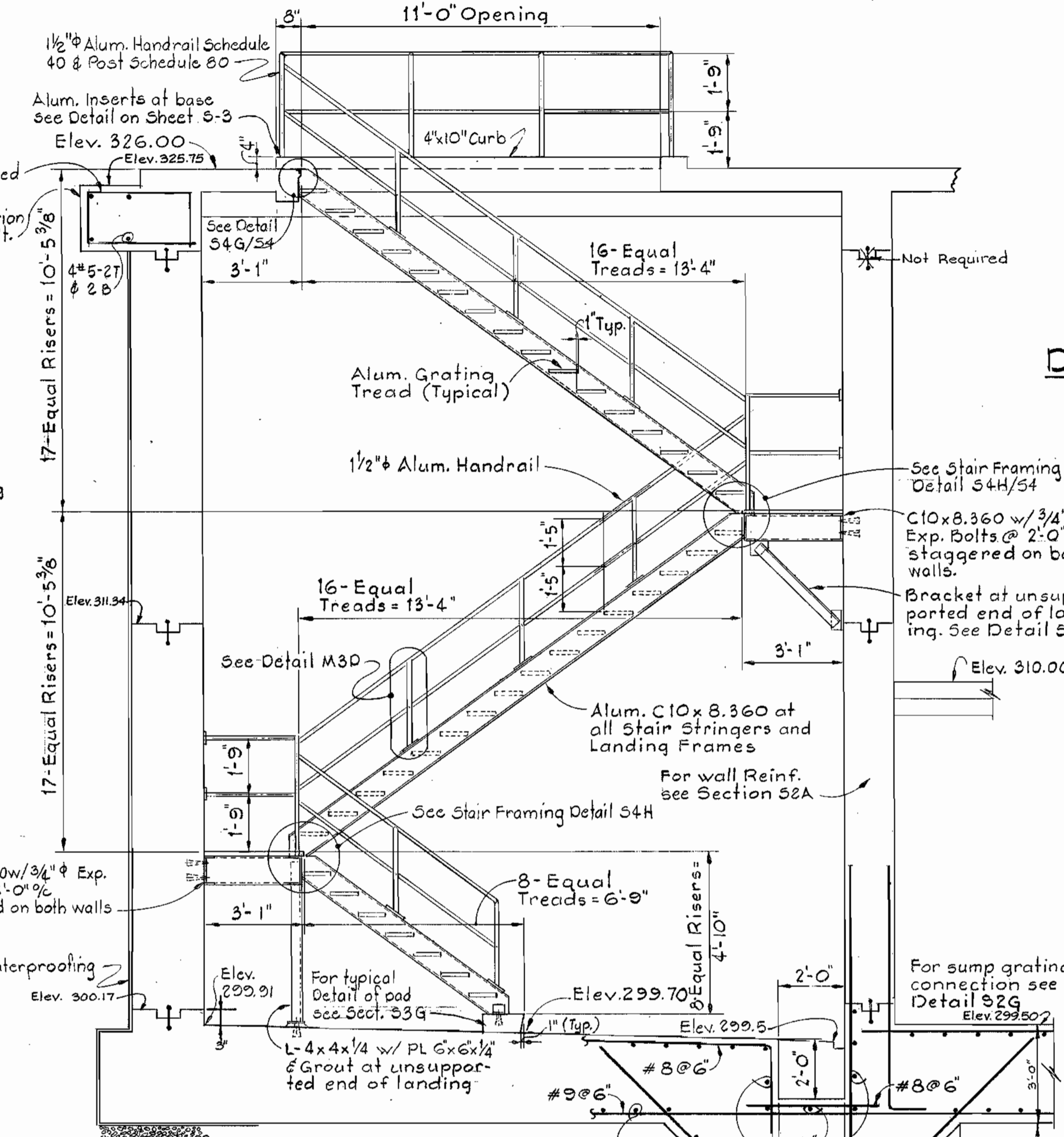
ELECTION DISTRICT
ELLCOTT CITY NO.2

DRAWING NO. 11 OF 21
SCALE AS SHOWN
512-(4)

WS 681 S/11



SECTION 52A/51
Scale: 1/4" = 1'-0"

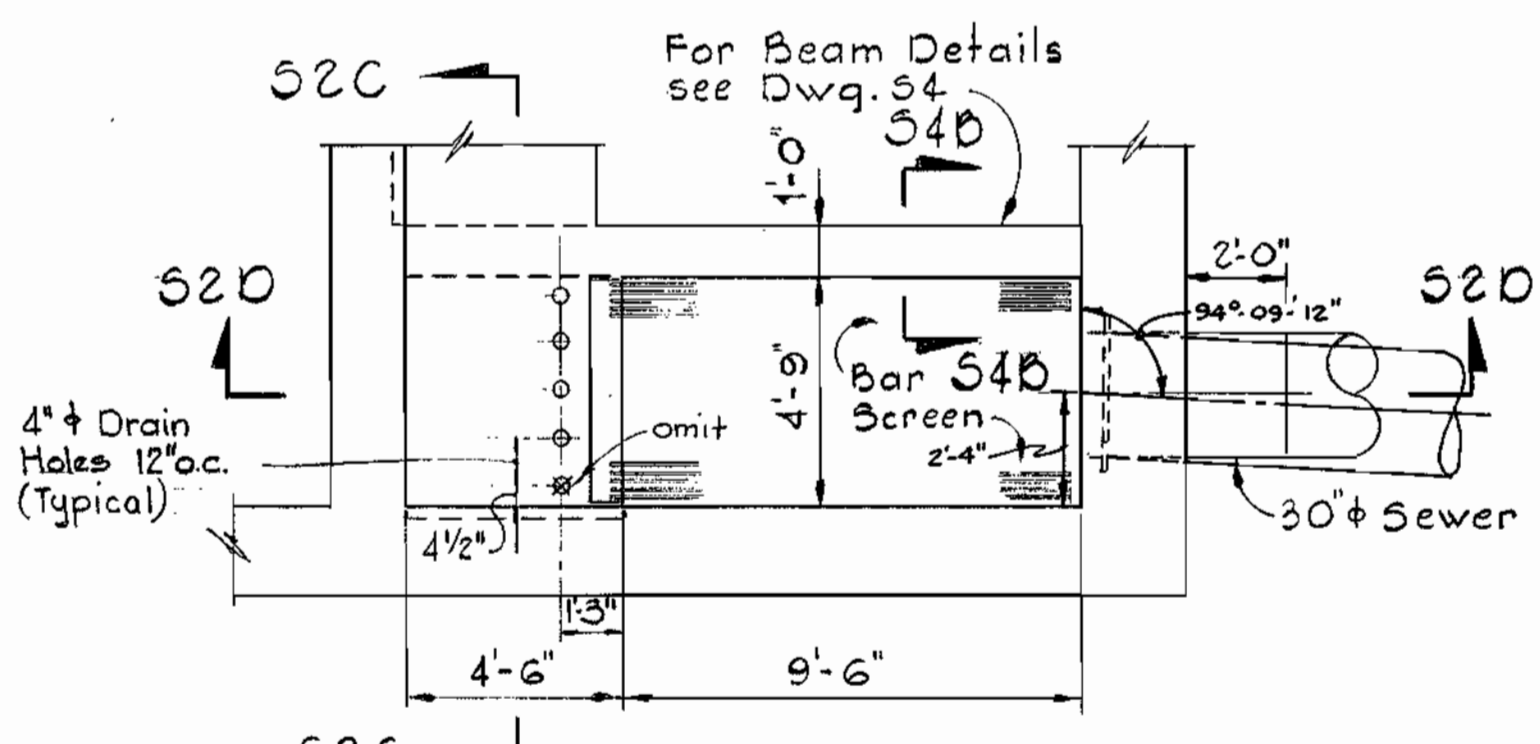


SECTION 52B/51
Scale: 3/8" = 1'-0"

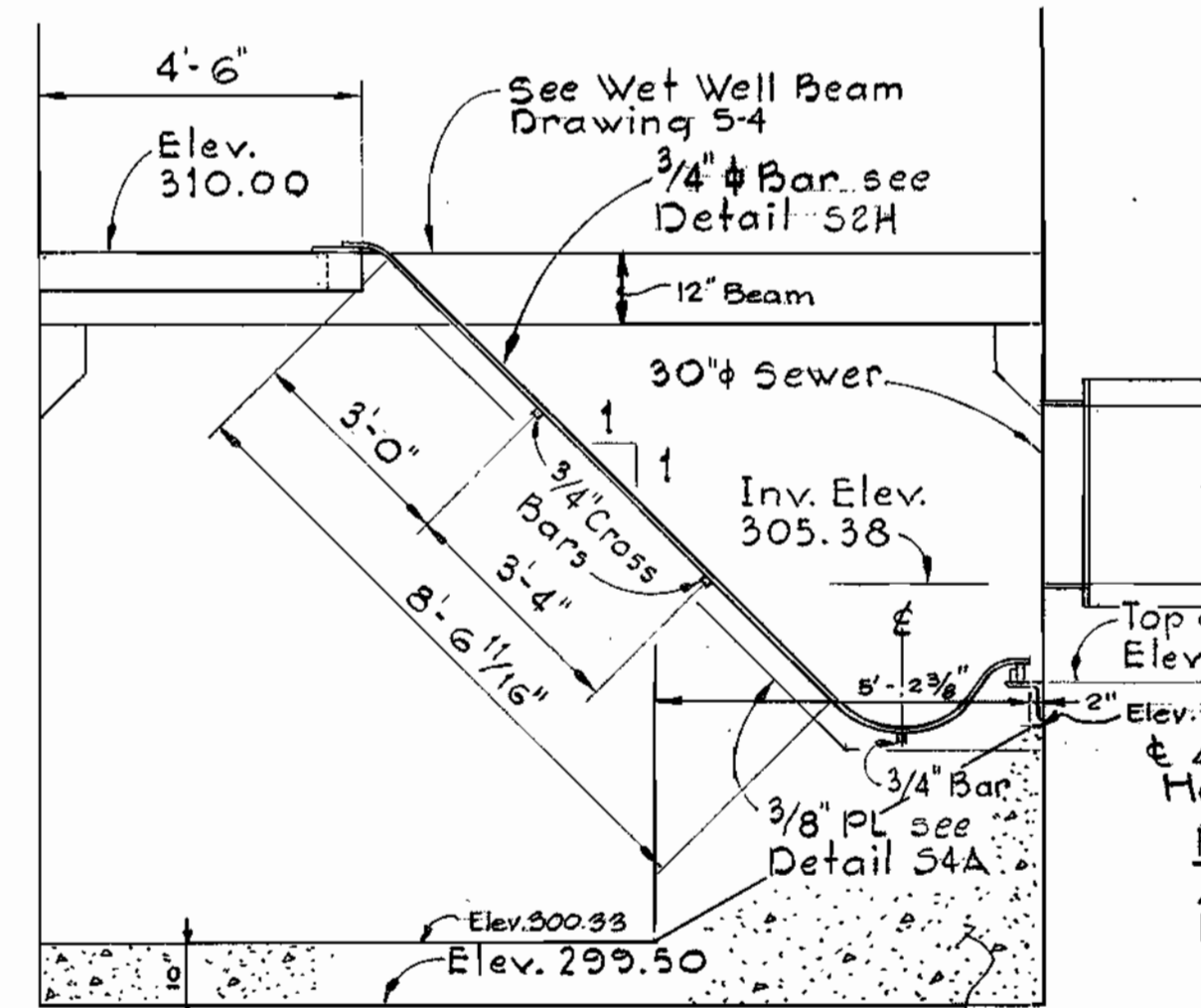
DETAIL 52E
Scale: 1/2" = 1'-0"

DETAIL 52F
Scale: 3/4" = 1'-0"

DETAIL 52G
Scale: 1" = 1'-0"



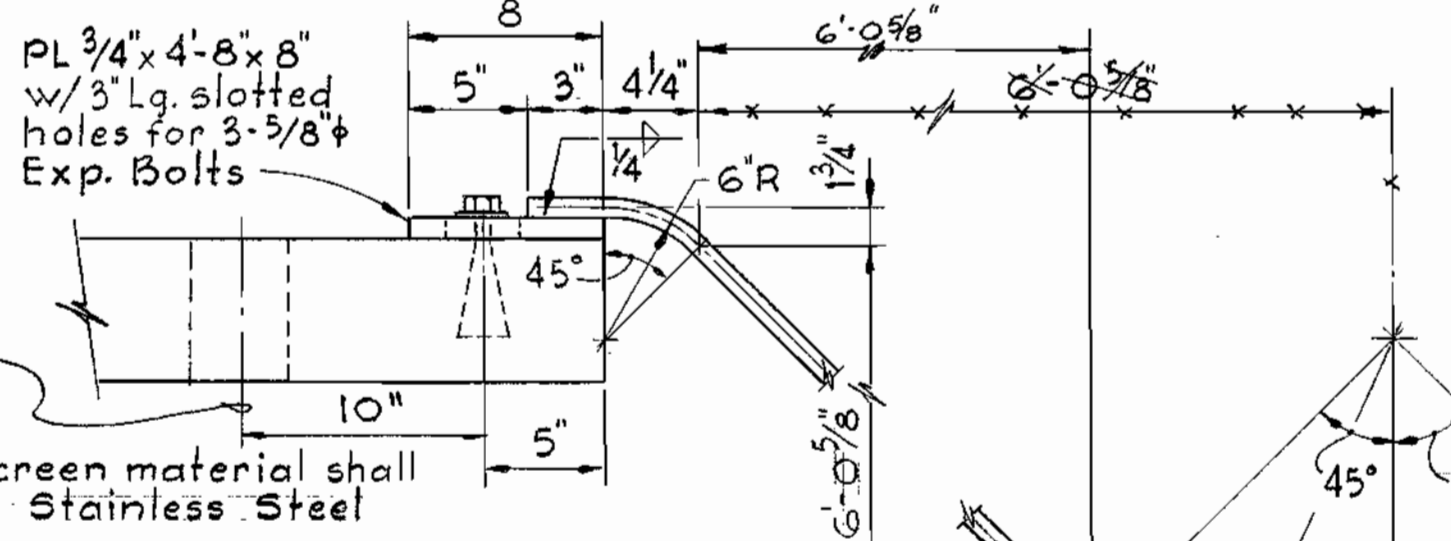
PLAN BAR SCREEN
Scale: 1/4" = 1'-0"



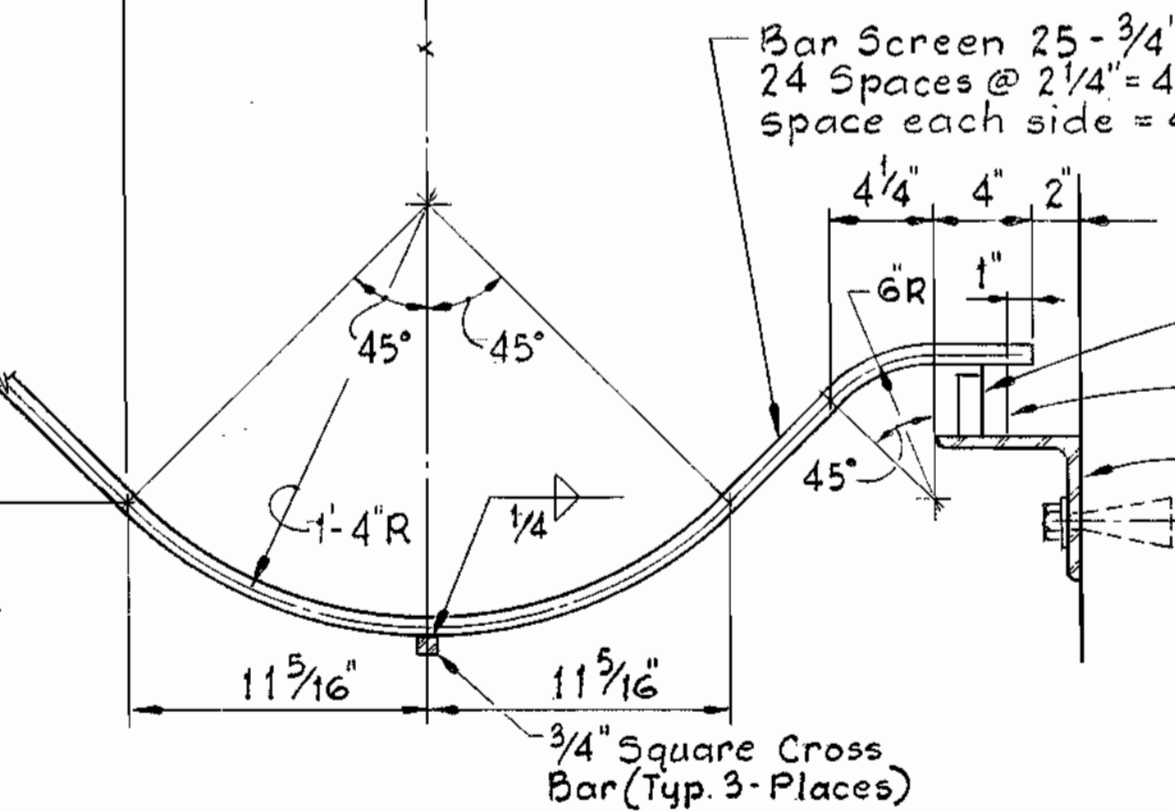
SECTION 52D/52
Scale: 3/8" = 1'-0"

NOTE:
All stair members and connections shall be Aluminum Grade 6061-T6.

NOTE:
All bar screen material shall be A304 Stainless Steel



DETAIL 52H
Scale: 1/2" = 1'-0"



SECTION 52C/52
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

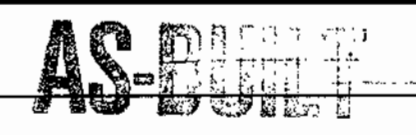
CONTRACT NO. 681-S
PROJECT NO. S-4-6041

SECTIONS & DETAILS

ELECTION DISTRICT
ELLICOTT CITY NO.2

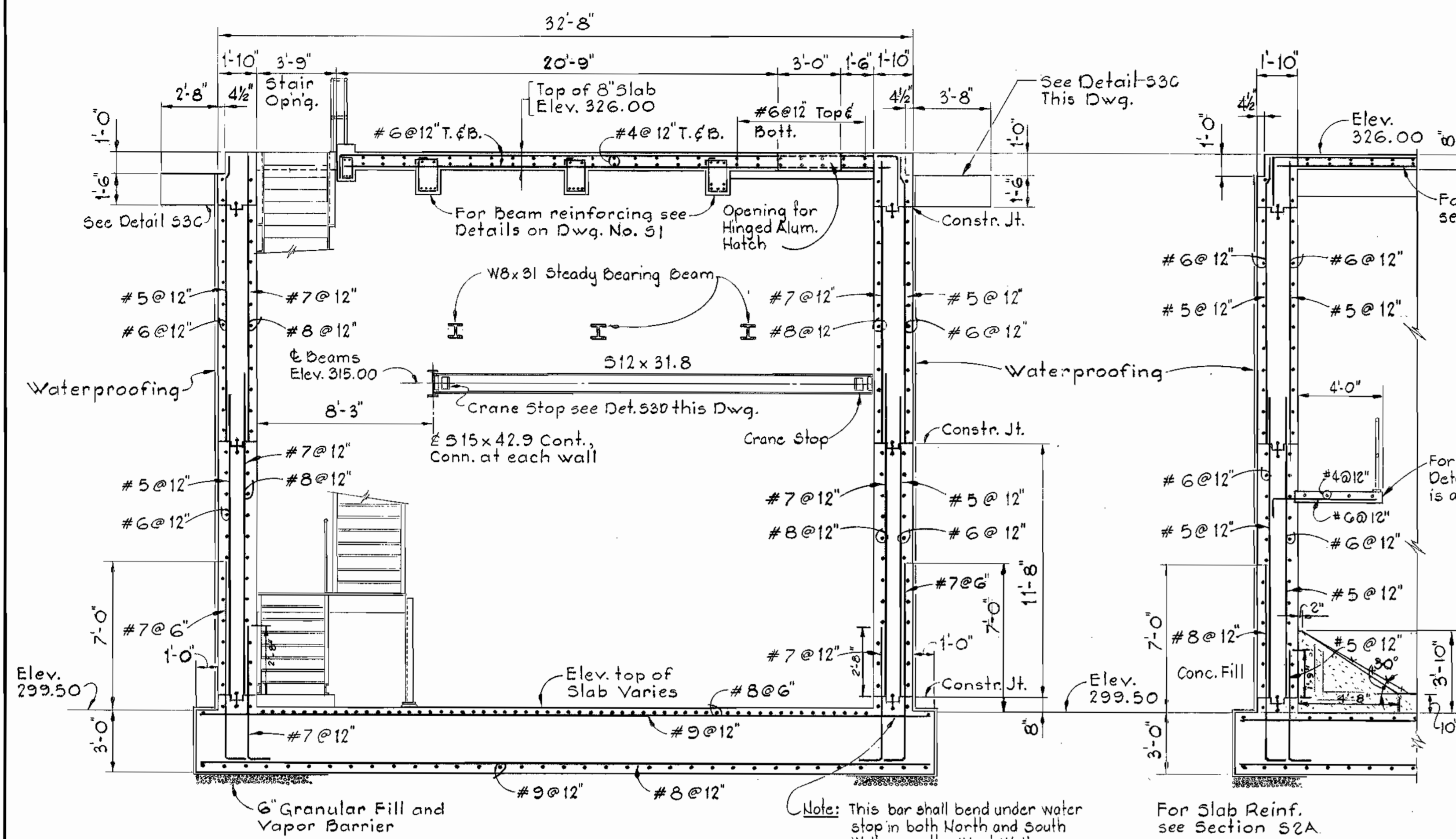
DRAWING NO. 12 OF 21
SCALE AS SHOWN
Sheet 5-2

Maryland Route 108
Sewage Pumping Station
Project No. S-4-6041
Contract No. 681-S



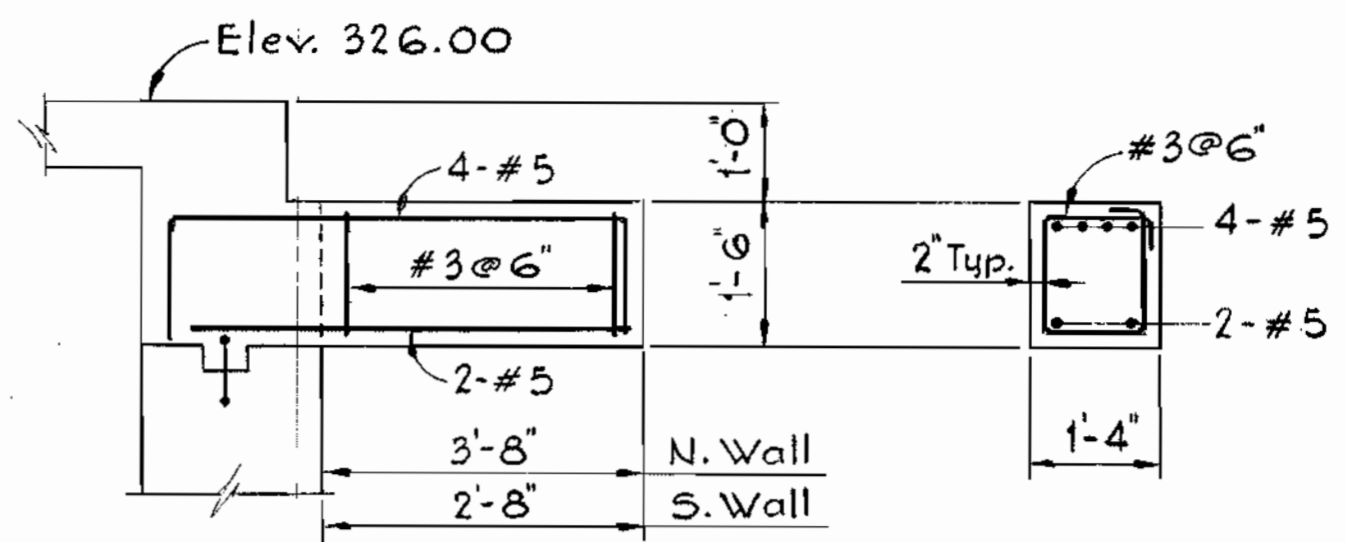
F.D.# 5305, 5472 & 5780
DECEMBER 19, 1988 - JAN. 24, 1984

WS 681/5/12



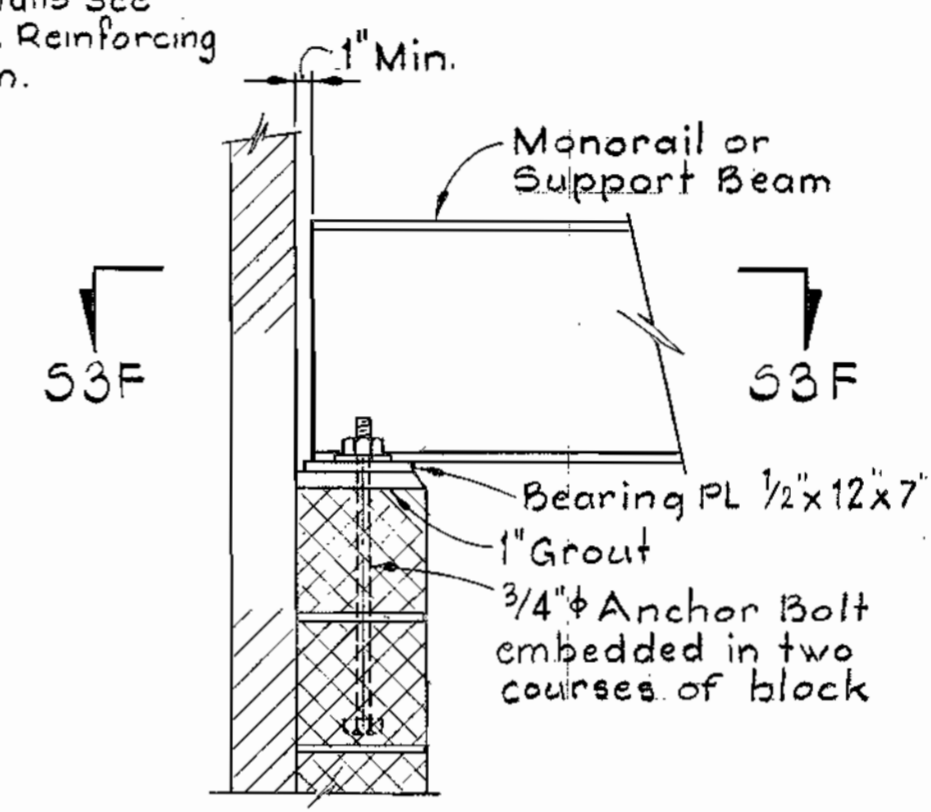
SECTION 53A/S1
Scale: 1/4" = 1'-0"

SECTION 53B/S1
Scale: 1/4" = 1'-0"

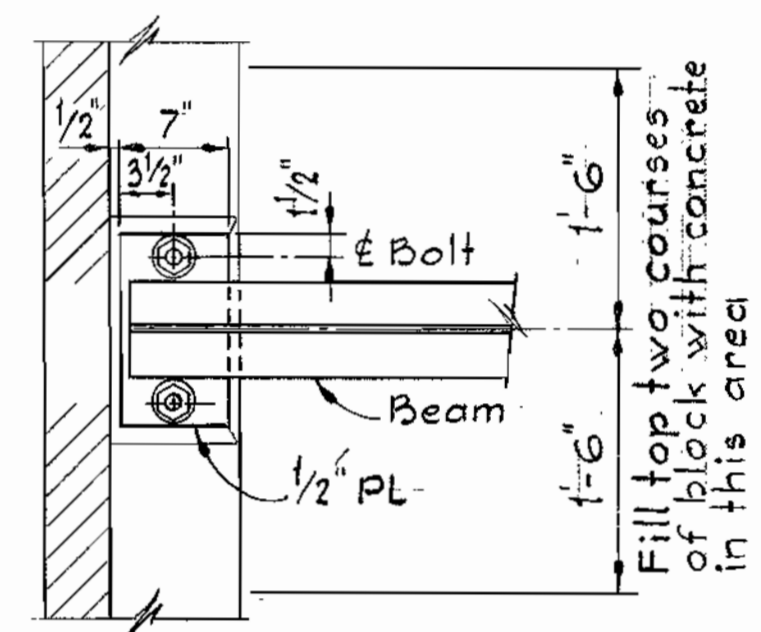


ELEVATION SECTION
DETAIL 530
Scale: 1/2" = 1'-0"

DETAIL 530
Scale: 1" = 1'-0"

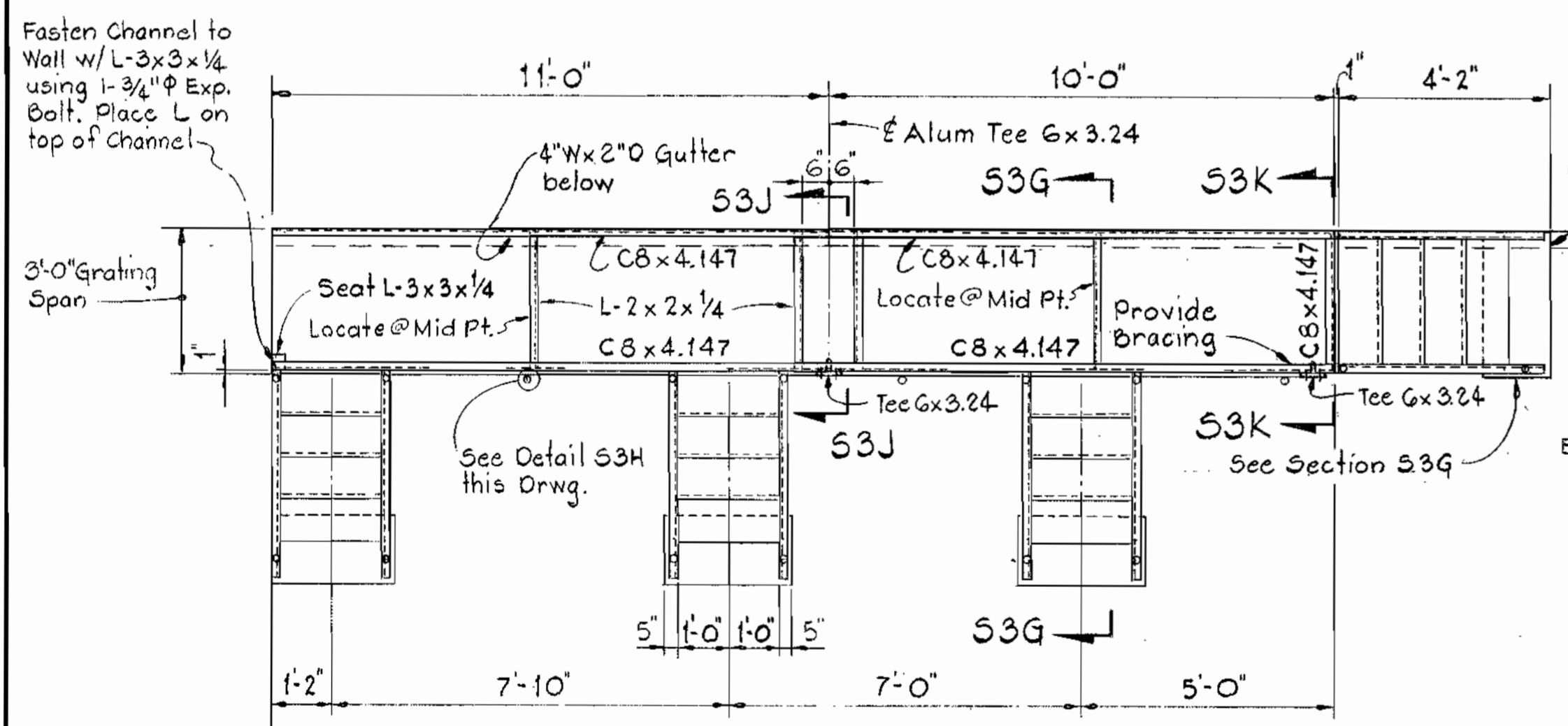


DETAIL 53E
Scale: 1" = 1'-0"

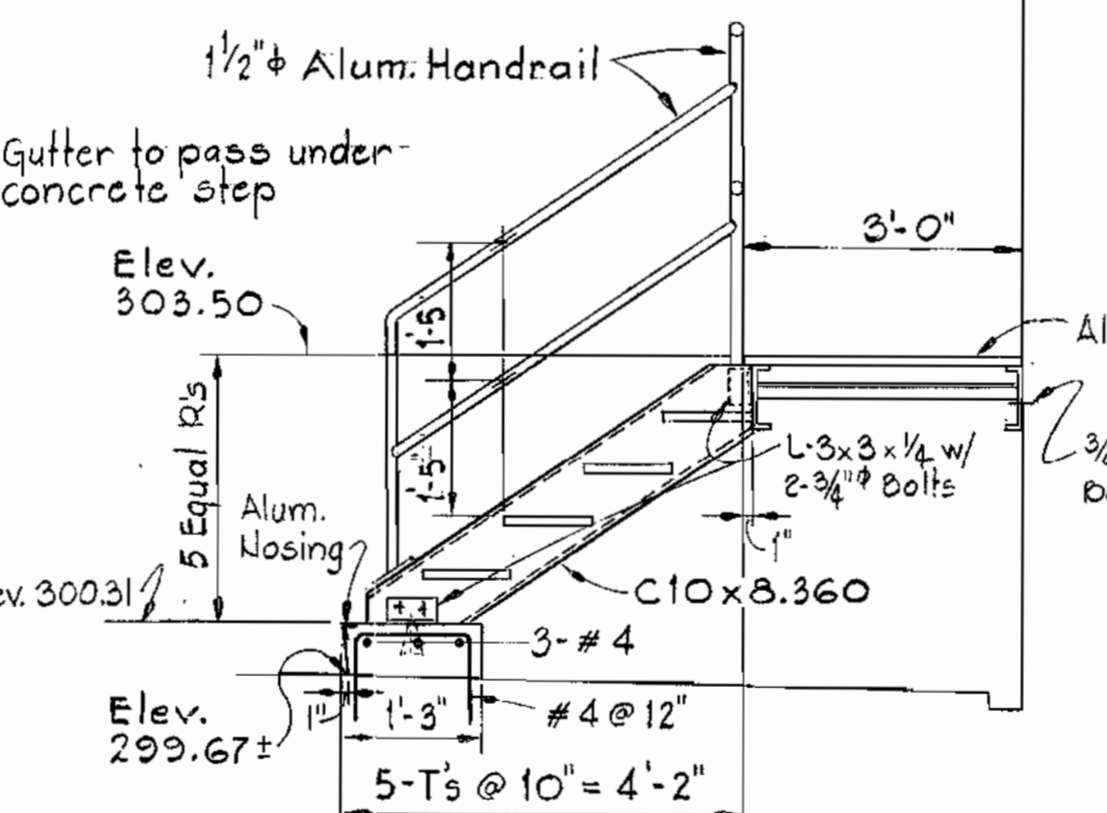


SECTION 53F
Scale: 1" = 1'-0"

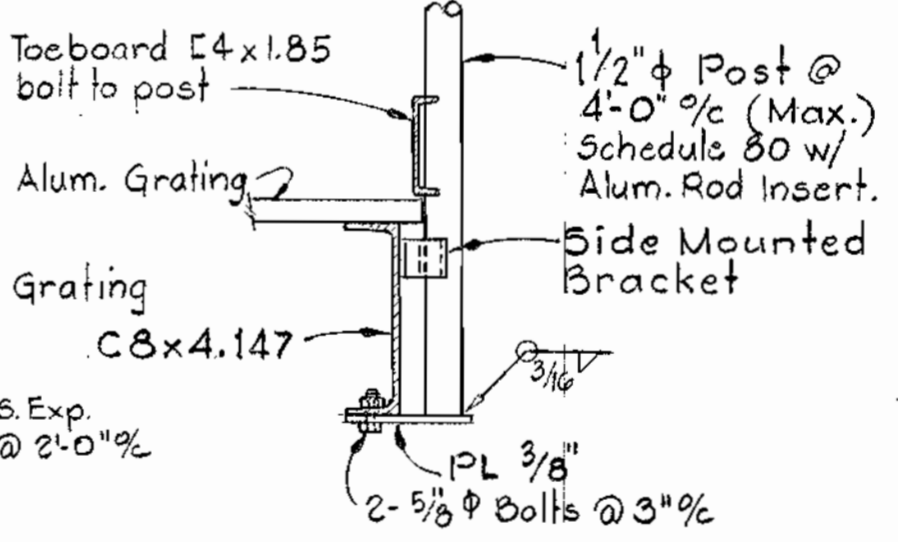
Note:
For size & elevation of Monorail and Support Beam and for location of Supports, see Section A1A.



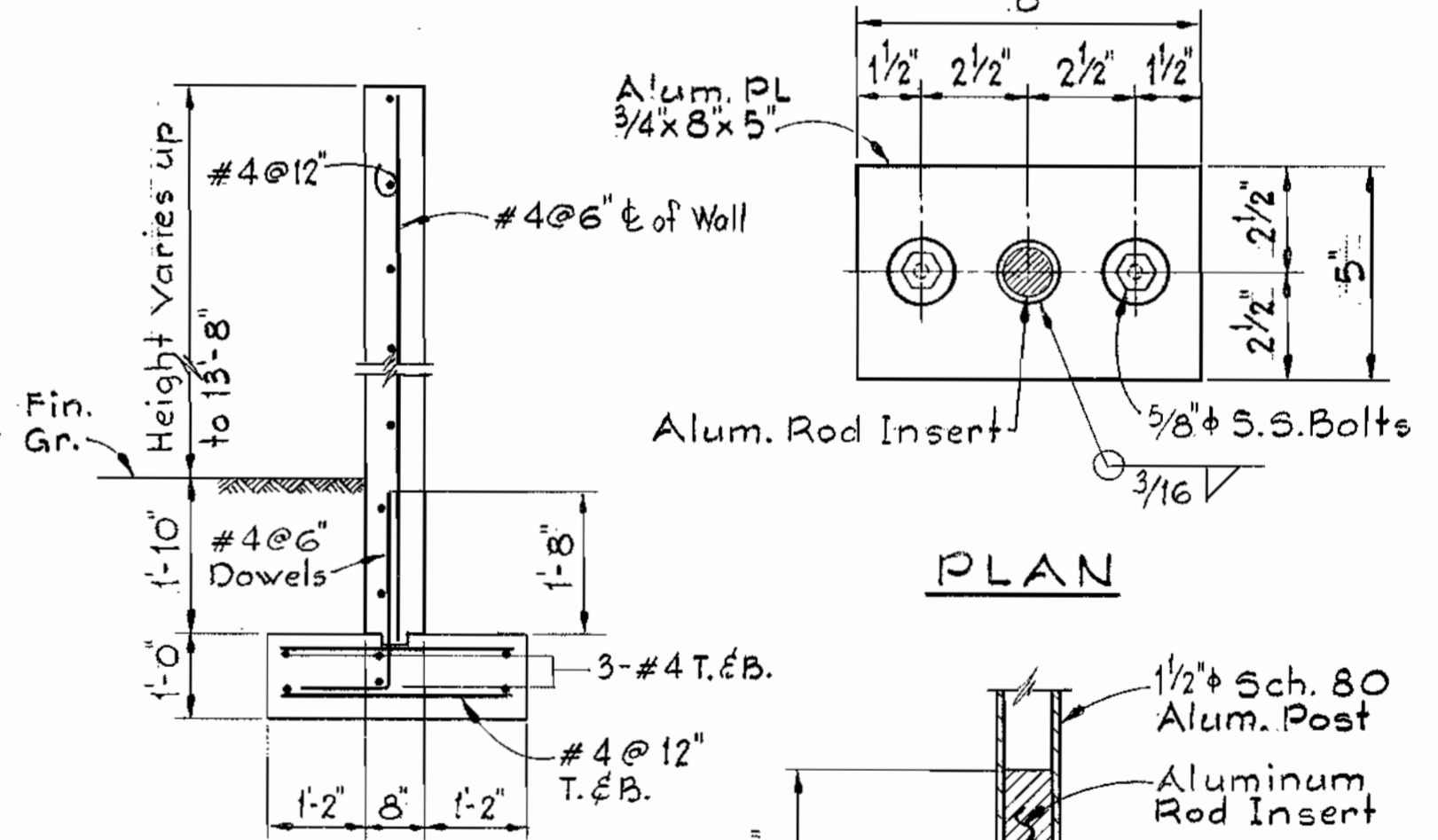
CATWALK PLAN
Scale: 3/8" = 1'-0"



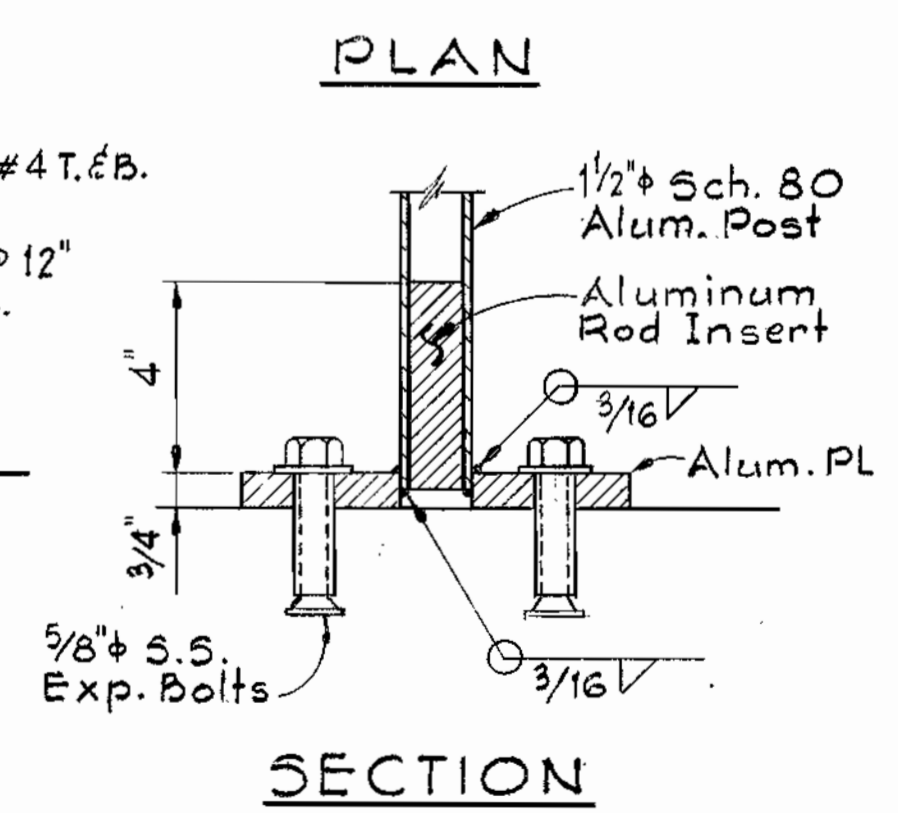
SECTION 53G/S3
Scale: 1/2" = 1'-0"



DETAIL 53H
Scale: 1 1/2" = 1'-0"



SECTION 53L
Scale: 1/2" = 1'-0"



ALUMINUM HANDRAIL BASE DETAILS
Scale: 3" = 1'-0"

NOTE:
All catwalk members and connections shall be structural aluminum alloy 6061-T6 w/ stainless steel bolts.

9-26-80	General Revisions
DATE	REVISIONS

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

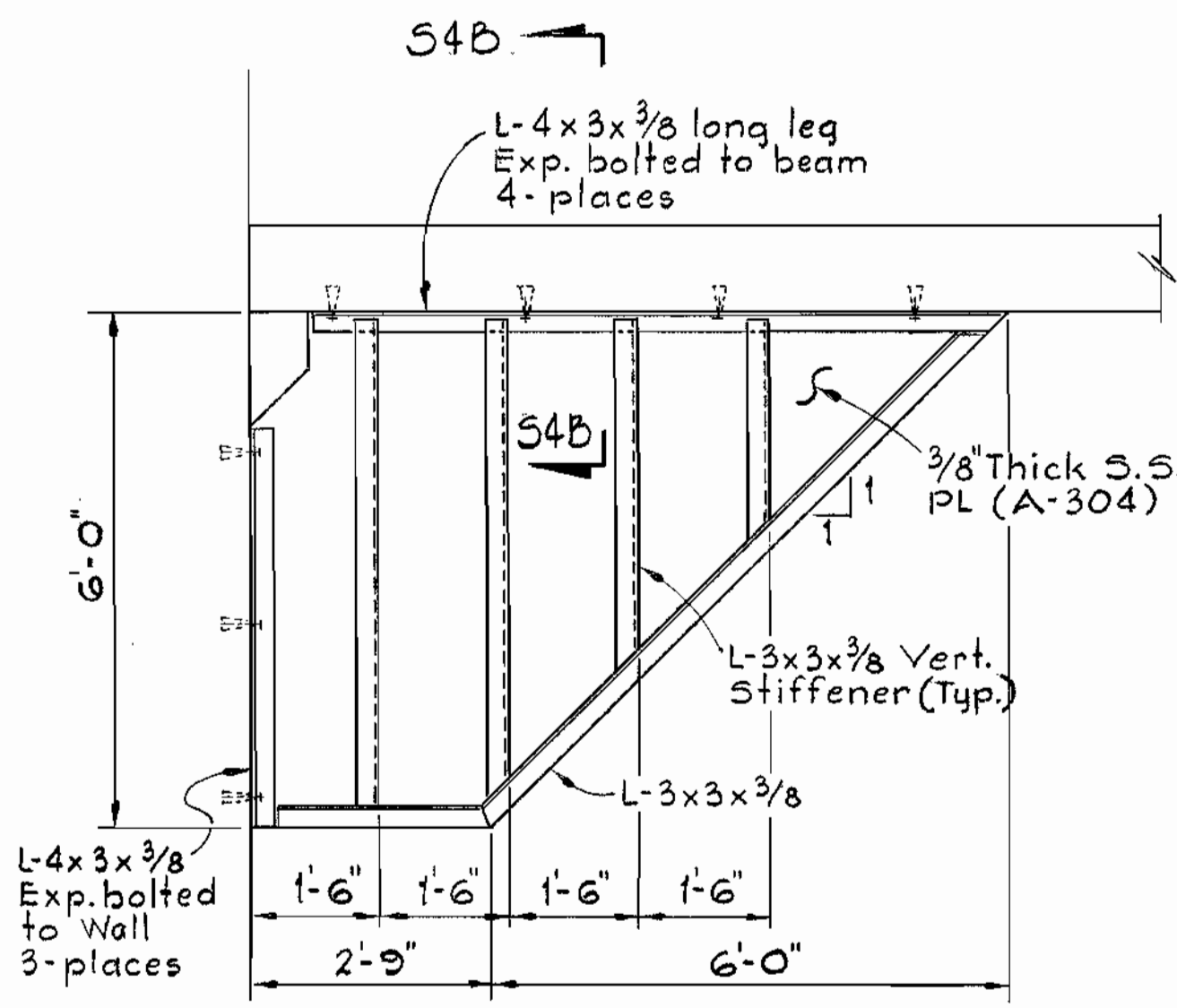
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Director of Public Works: *John F. Norman* 8/26/80
Chief - Bureau of Engineering: *John A. Smith* 8/25/80
Chief - Bureau of Utilities: *James L. Gleig* 8/26/80
Chief - Utilities Division: *Allen S. Berman* 8/25/80

CONTRACT NO. 681-S
PROJECT NO. S-4-6041

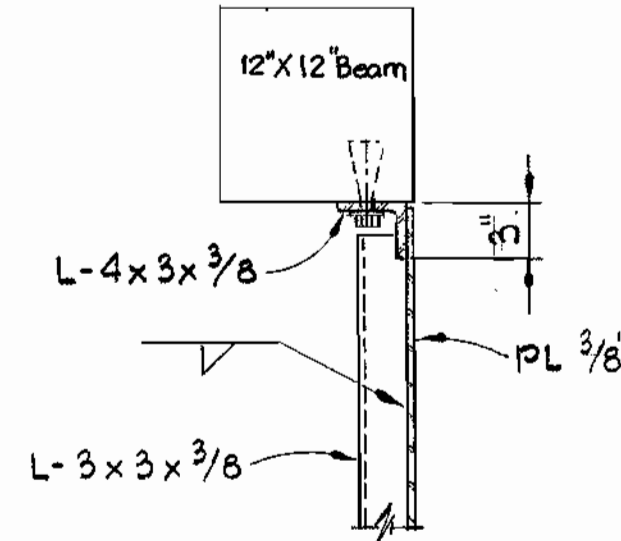
DETAILS

ELECTION DISTRICT
ELICOTT CITY NO.2

DRAWING NO. 13 OF 21
SCALE AS SHOWN

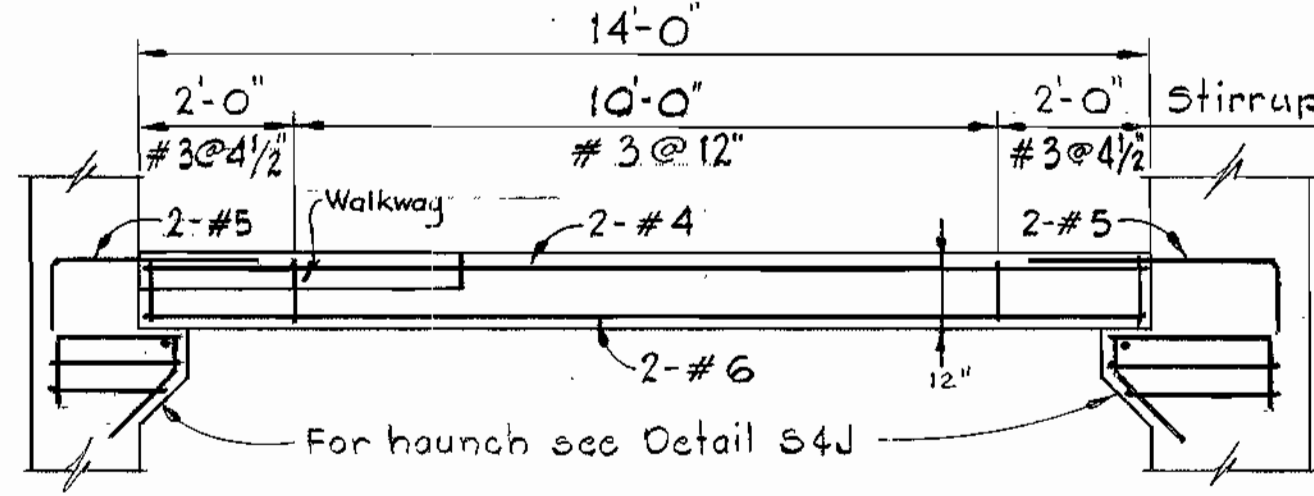


DETAIL 54A Scale: 1/2" = 1'-0"

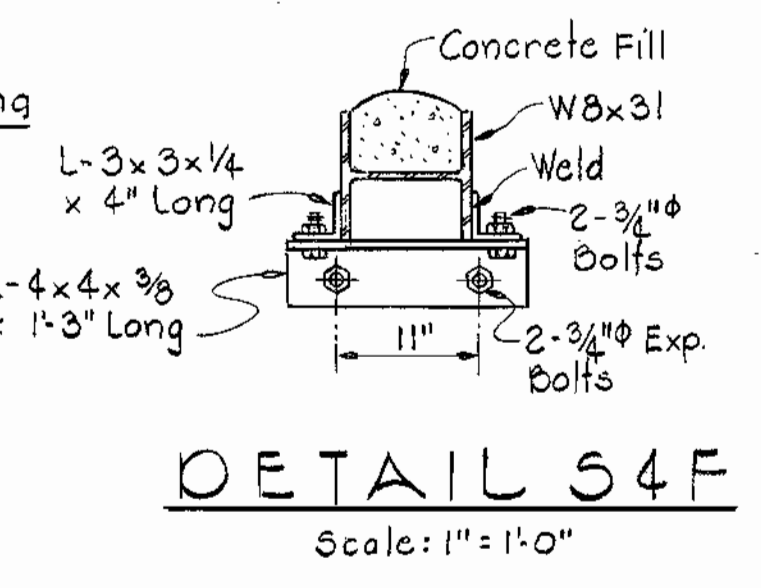


NOTES:
 1 All angles shall be stainless steel, A-304.
 2 All expansion bolts shall be 5/8" stainless steel A-304.

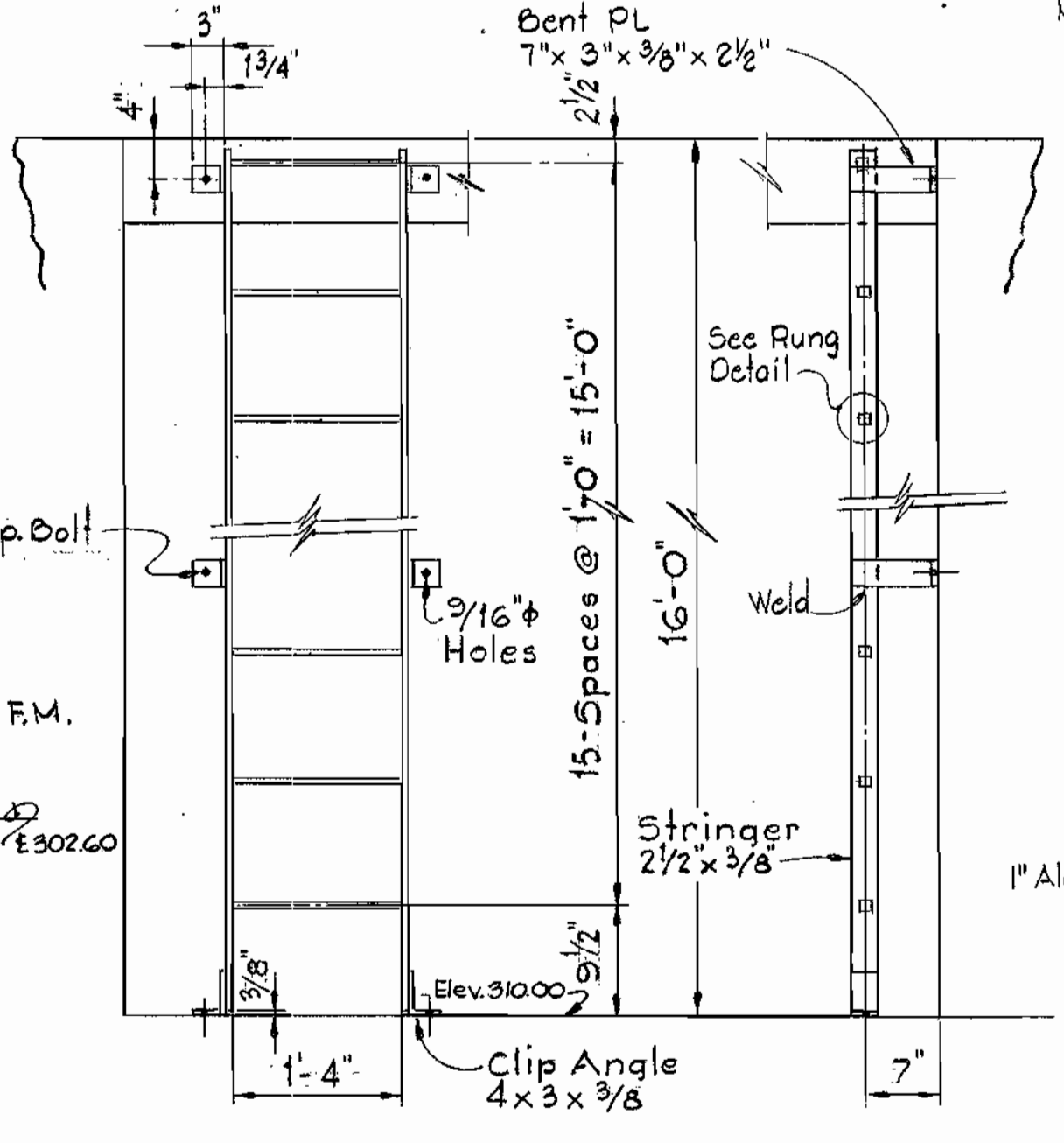
SECTION 54B/54 Scale: 1" = 1'-0"



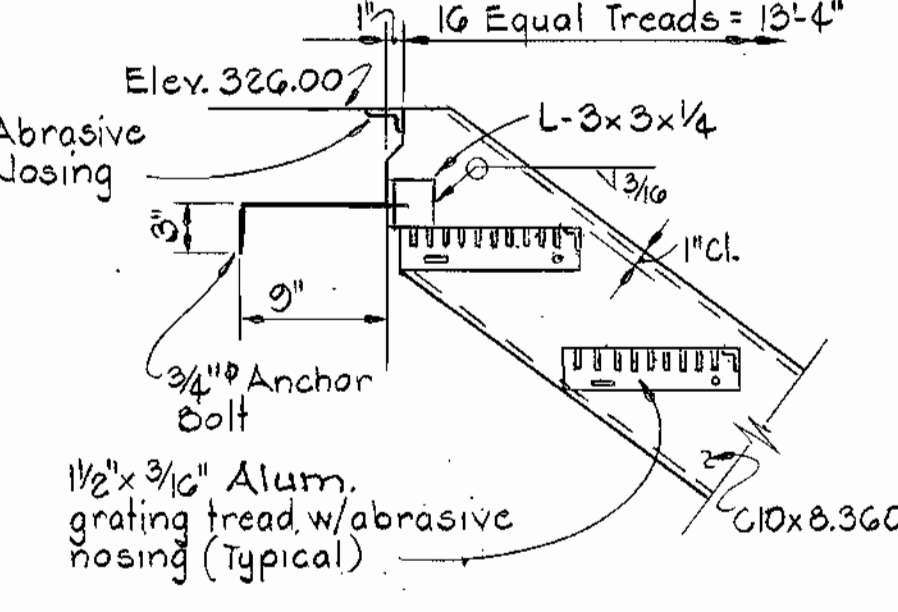
WET WELL BEAM Scale: 3/8" = 1'-0"



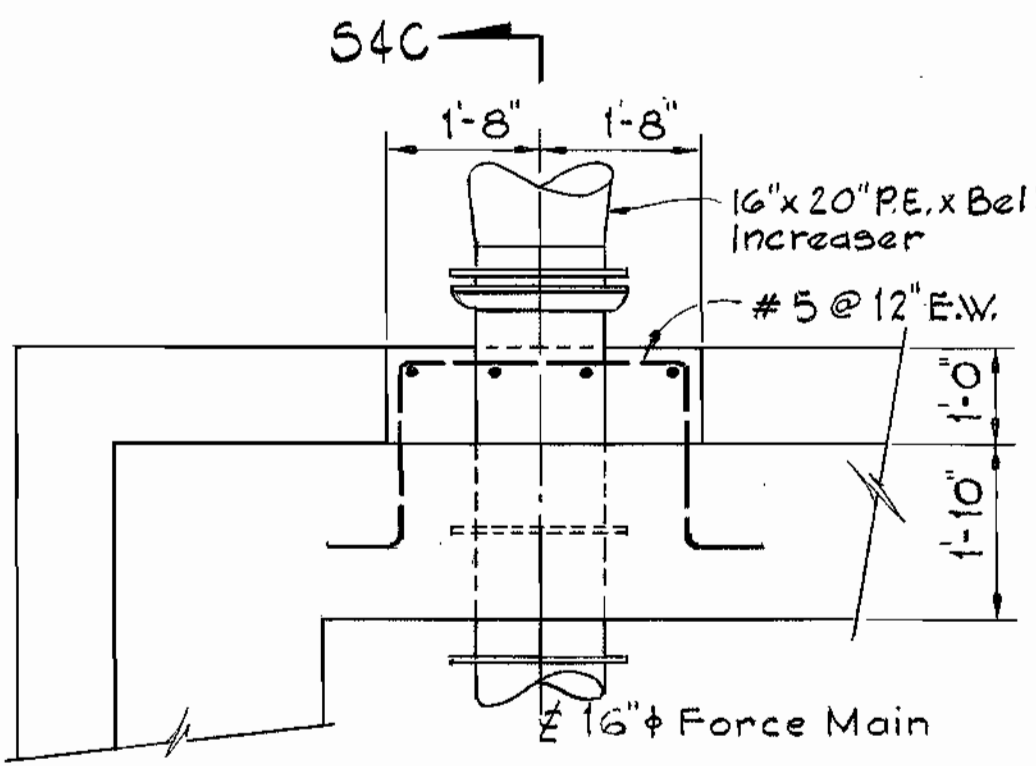
DETAIL 54F Scale: 1" = 1'-0"



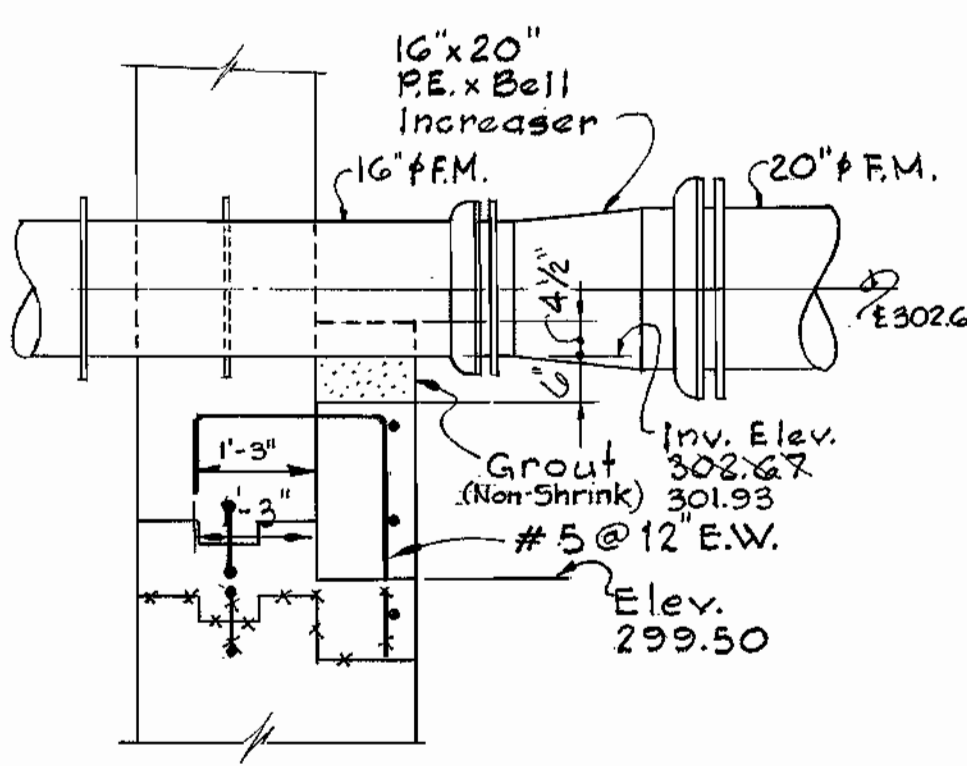
ELEVATION Scale: 3/4" = 1'-0"



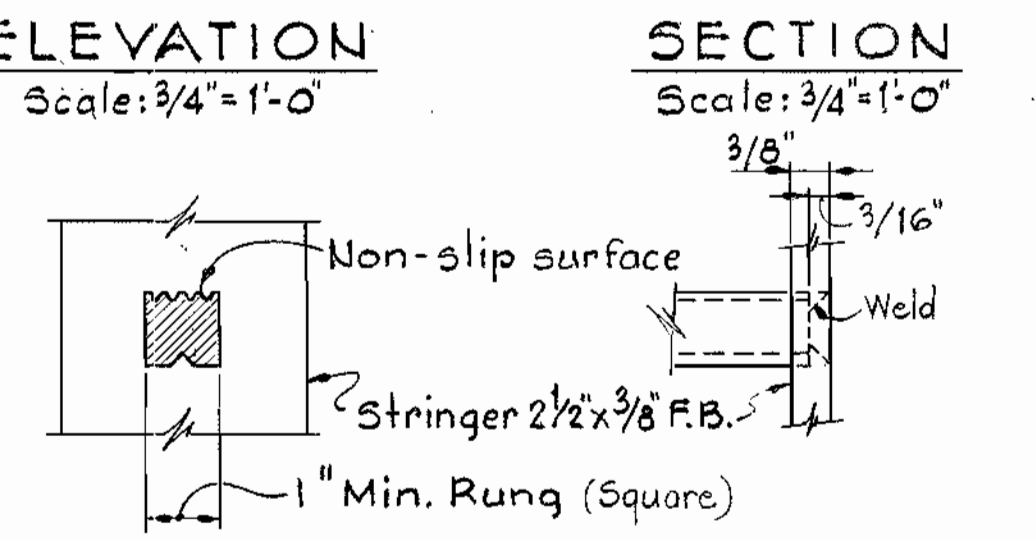
DETAIL 54G Scale: 1" = 1'-0"



PLAN AT 16" FORCE MAIN Scale: 1/2" = 1'-0"



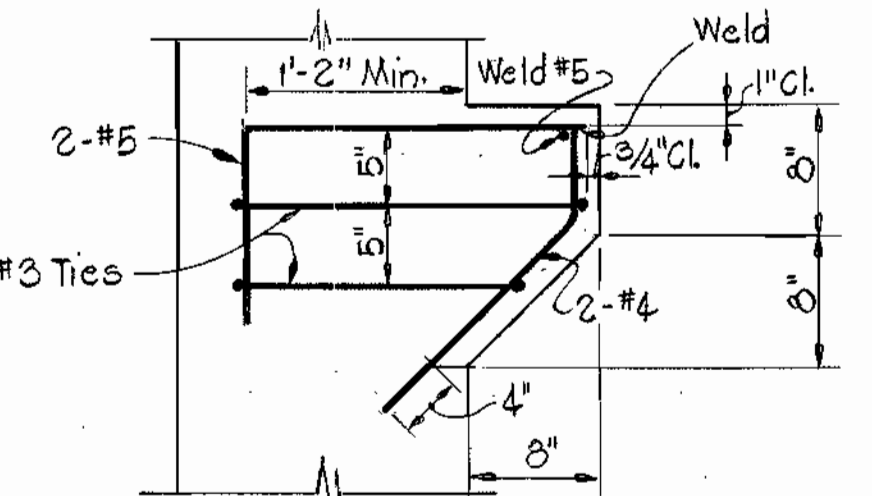
SECTION 54C/54 Scale: 1/2" = 1'-0"



RUNG DETAILS

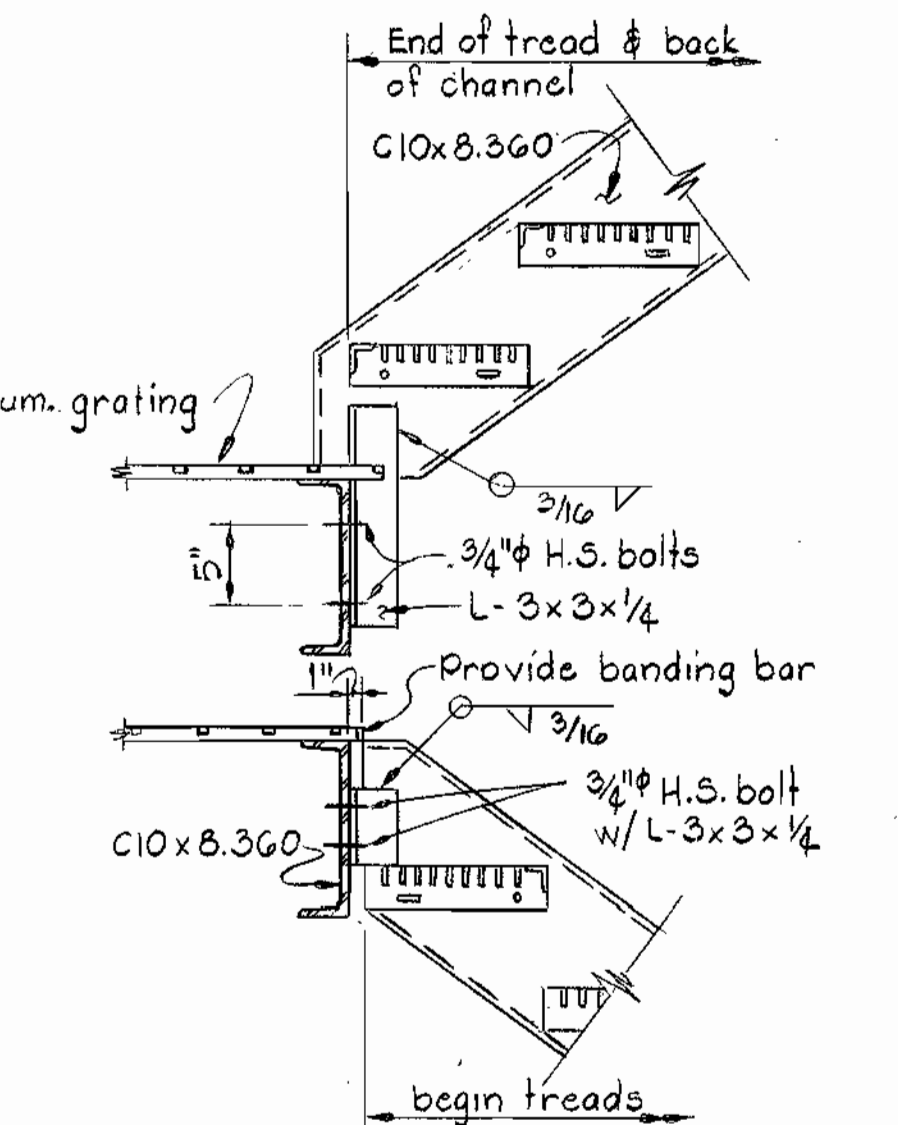
All material to be Aluminum Alloy 6063-T5.

LADDER DETAILS

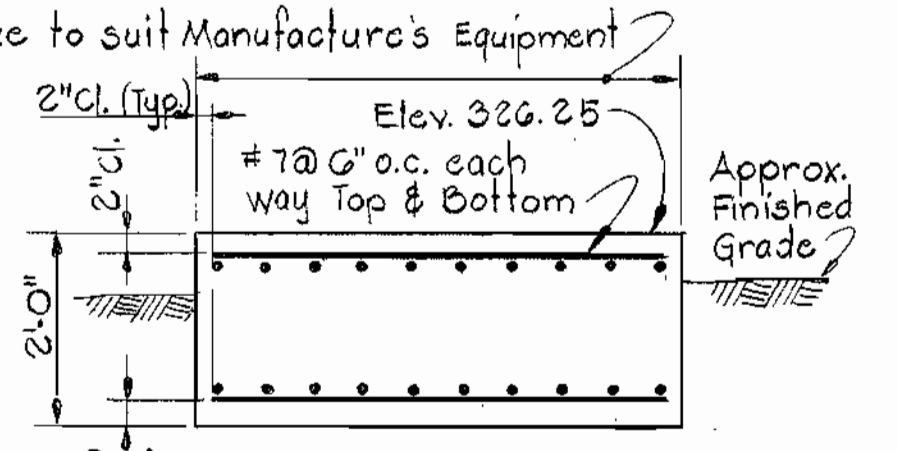


DETAIL 54J Scale: 1" = 1'-0"

Note: Width of haunch shall be 12".



DETAIL 54H Scale: 1" = 1'-0"



DETAIL OF GENERATOR PAD Scale: 1/2" = 1'-0"

GENERAL STRUCTURAL NOTES

1. ALL EXTERIOR WALLS SHALL HAVE WATERPROOFING FROM ELEVATION 296.5 UP TO ELEVATION 325.0. 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.
 5. 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 AND MAY BE GRADE 40 FOR TIES AND STIRRUPS.
 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 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" EXCEPT WHERE SHOWN OTHERWISE.
 7. SPLICES IN REINFORCEMENT SHALL BE CLASS "C" SPLICE LENGTHS AS PER ACI 318 UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
 8. EMBEDMENT LENGTH SHALL BE EQUAL TO THE DEVELOPMENT LENGTH 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.

PRECAST PRESTRESSED CONCRETE SLABS

1. ROOF SLABS SHALL BE PRECAST PRESTRESSED CONCRETE SLABS OF THICKNESS AS SHOWN ON THE DRAWINGS.
 2. SLABS SHALL BE DESIGNED FOR A LIVE LOAD OF 40 PSF PLUS SUPERIMPOSED DEAD LOADS OF AND EQUIPMENT LOADS FOR SPAN CONDITIONS SHOWN ON THE DRAWINGS.
 3. SLAB MANUFACTURER SHALL DESIGN AND SUPPLY THE OPENING SADDLES IN THE SLABS.

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 A325 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

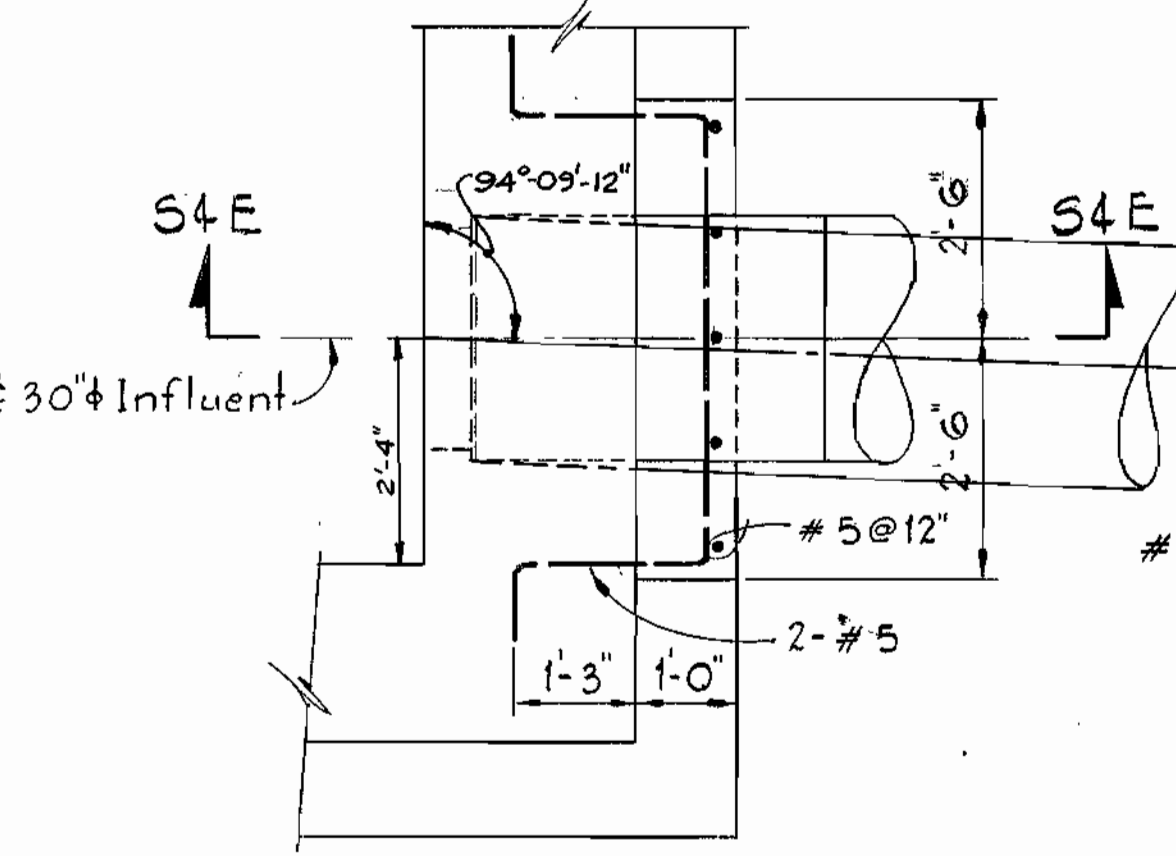
1. ALL ALUMINUM IN CONTACT WITH CONCRETE SHALL BE COATED AS SPECIFIED.
 2. ALL STRUCTURAL ALUMINUM SHALL BE ALLOY 6061-T6.
 3. ALL GRATING SECTIONS SHALL BE CAPABLE OF SUPPORTING A LIVE LOAD OF 125 PSF WITH A MAXIMUM DEFLECTION OF 1/4" AT 100 PSF.
 4. EACH SECTION OF GRATING SHALL BE MECHANICALLY FASTENED TO SUPPORTS WITH 2 FASTENERS AT EACH END.

STAINLESS STEEL NOTES

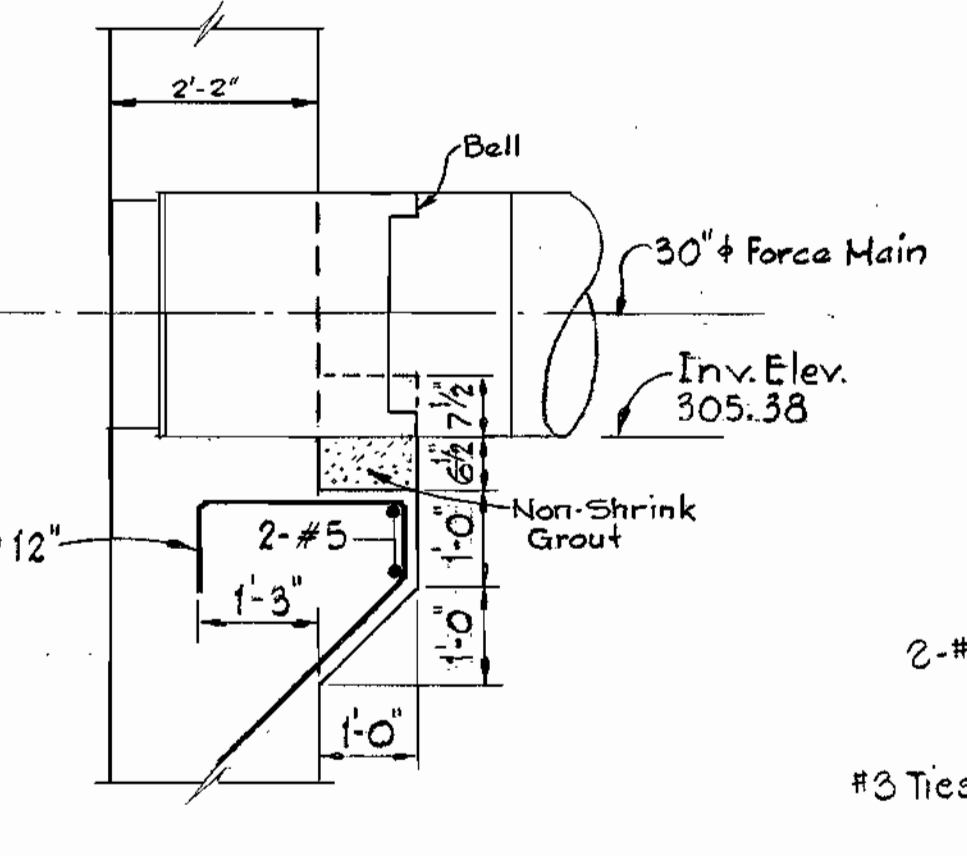
1. ALL STAINLESS STEEL SHALL BE ASTM A276 TYPE 304.
 2. ALL SHOP CONNECTIONS SHALL BE WELDED AND FIELD CONNECTIONS SHALL BE BOLTED.

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 - H-15 TRUCK WHERE TRUCK ACCESS IS POSSIBLE OTHERWISE USE 4" OVER 2FT² CONCENTRATED LOAD OR 300 PSF, WHICHEVER IS GREATER.
 b. ACCESS HATCHES - H-15 TRUCK OR 300 #/FT.² WHICHEVER IS MORE CRITICAL.
 c. CATWALK, STAIRS AND WALKWAY - 125 PSF.
 d. EXTERIOR SLAB OVER WET WELL - OTHER H-15 TRUCK OR 300 PSF.
 e. ROOF LOAD - 30 PSF.
 WIND LOAD: 20 PSF.
 FACTOR OF SAFETY AGAINST FLOTATION WITH FLOOD WATER LEVEL AT ELEVATION 326.00 = 1.27.



PLAN AT 30" INFLUENT Scale: 1/2" = 1'-0"



SECTION 54E/54 Scale: 1/2" = 1'-0"

PIPE SUPPORT DETAILS

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Henry E. Nemmer 8/26/80
 DIRECTOR OF PUBLIC WORKS - DATE

James L. Pleg 8/25/80
 CHIEF - BUREAU OF UTILITIES - DATE

James L. Pleg 8/25/80
 CHIEF - BUREAU OF UTILITIES - DATE

CONTRACT NO. 681-S
 PROJECT NO. S-4-6041

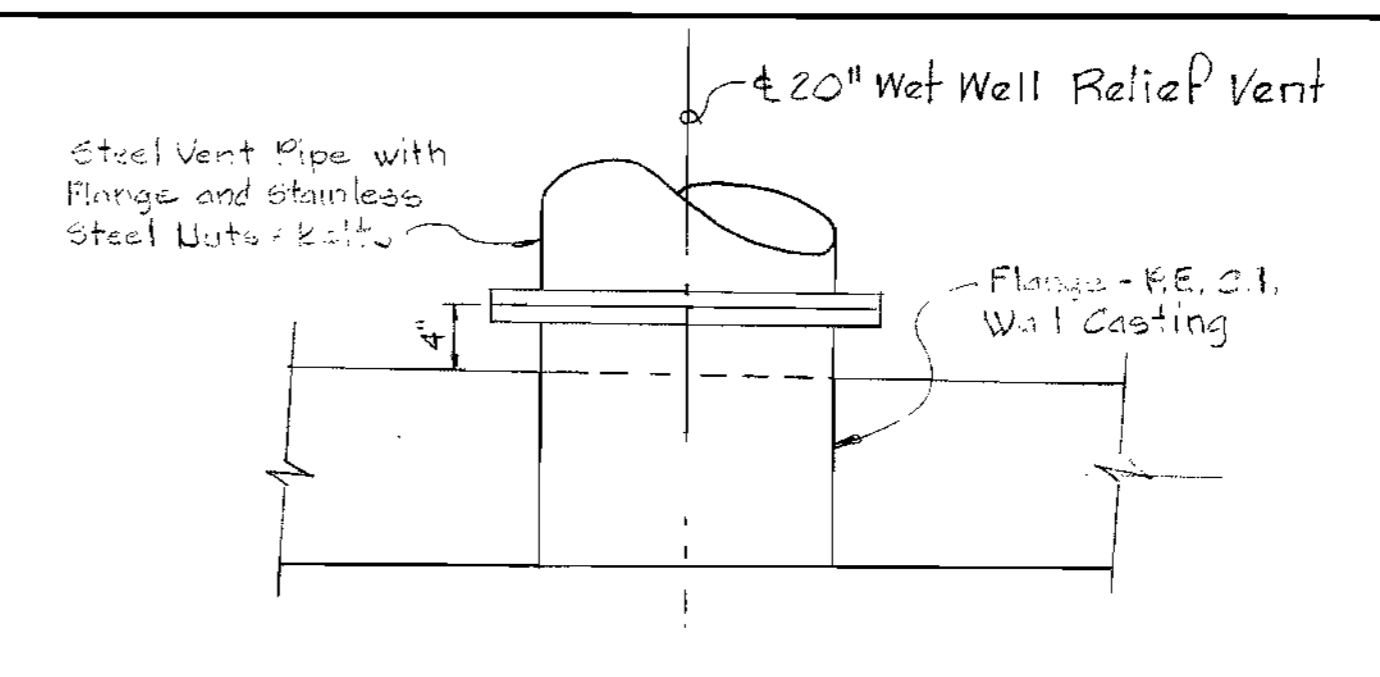
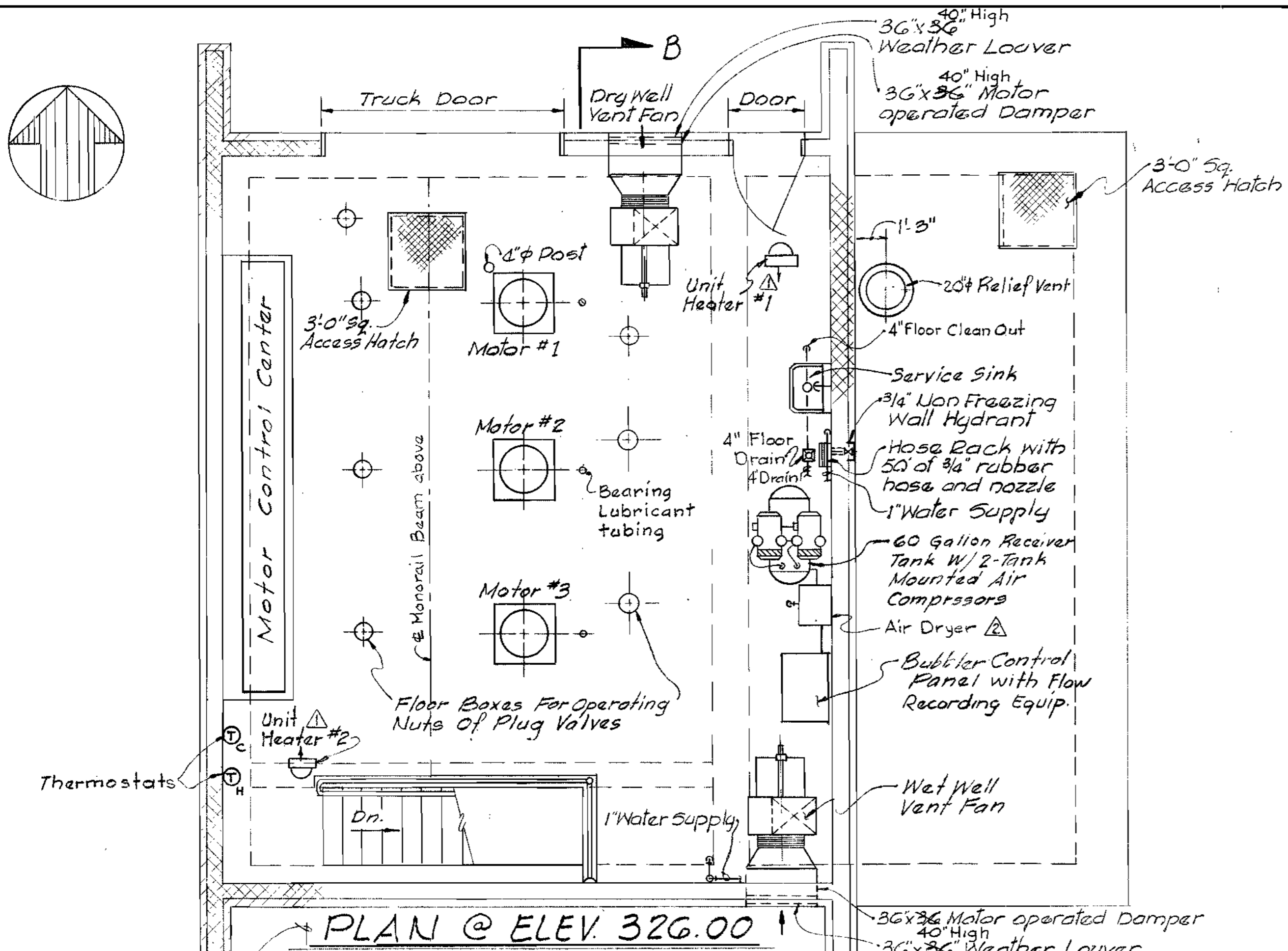
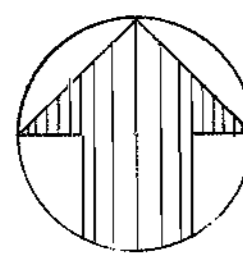
DETAILS & GENERAL NOTES

ELECTION DISTRICT
 ELLICOTT CITY NO.2

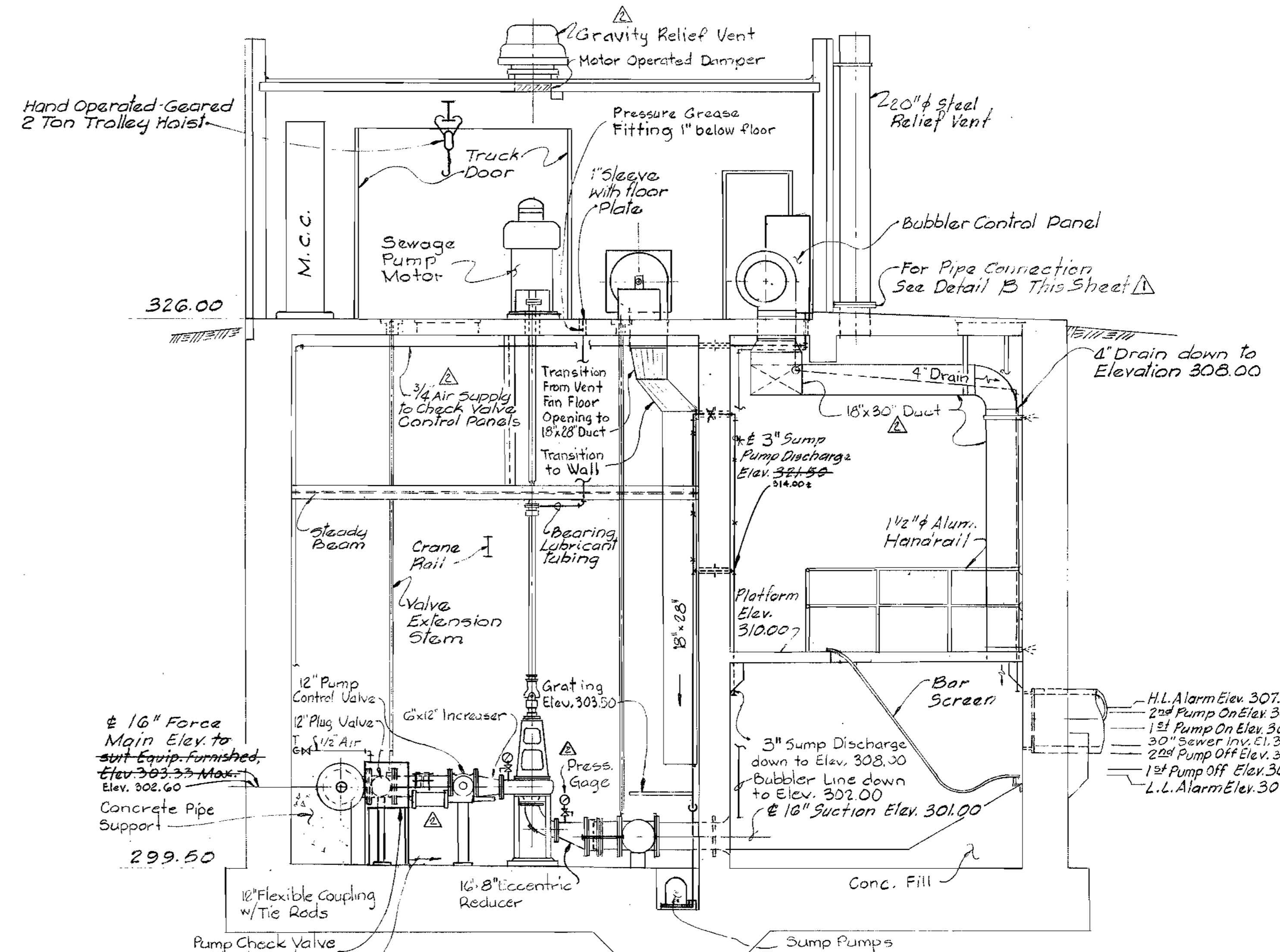
DRAWING NO. 14 OF 21	SCALE AS SHOWN	512-(4)
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WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 1304 ST. PAUL ST.
 BALTIMORE, MARYLAND

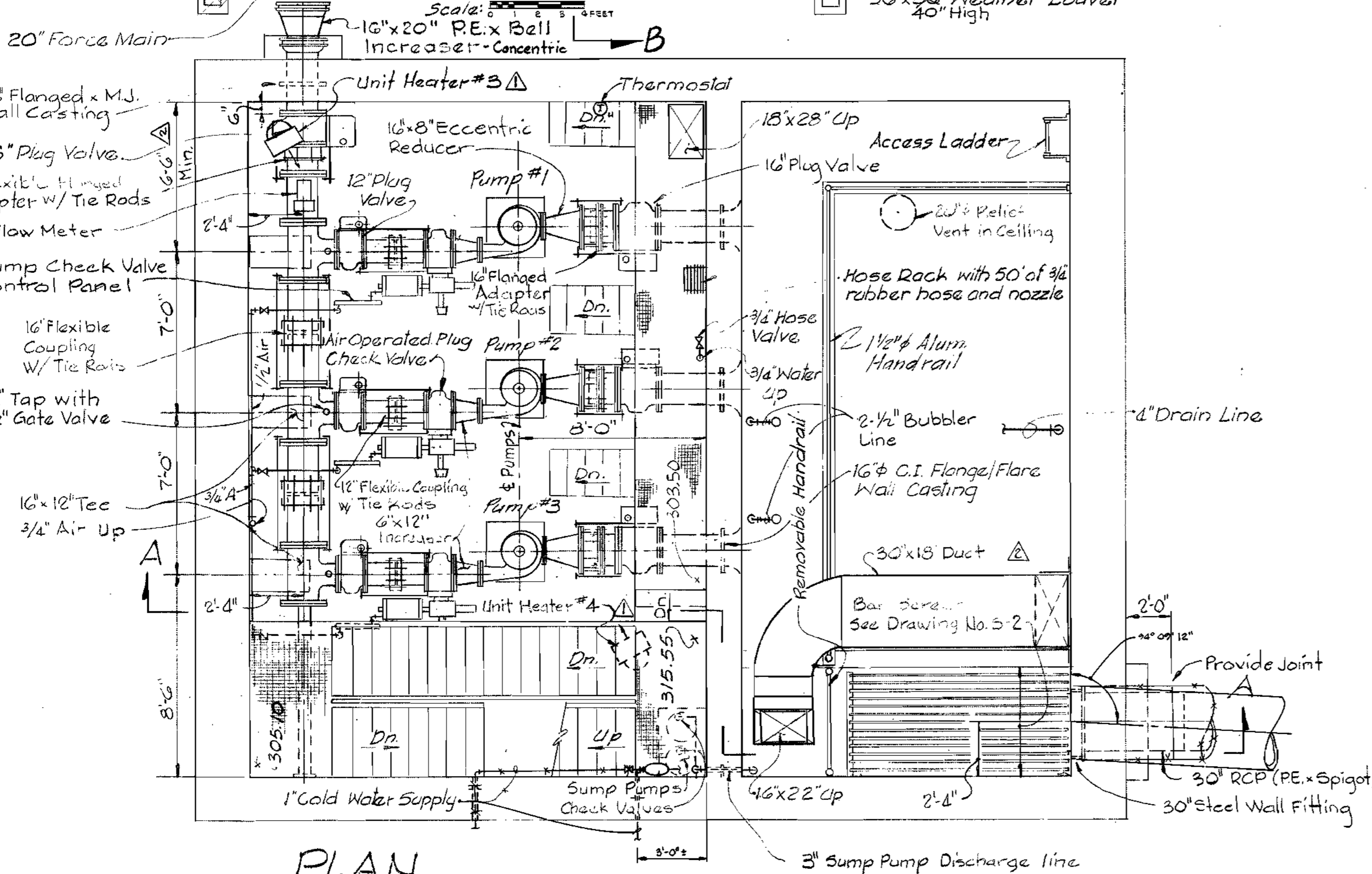
WS 681 S/14



DETAIL 'B' A-A
Scale: 1" = 1'-0"



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



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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS - DATE
CHIEF - BUREAU OF ENGINEERING - DATE
CHIEF - BUREAU OF UTILITIES - DATE

CONTRACT NO. 681-S
PROJECT NO. S-4-6041

MECHANICAL
PLANS & SECTION

ELECTION DISTRICT
ELLCOTT CITY NO. 2

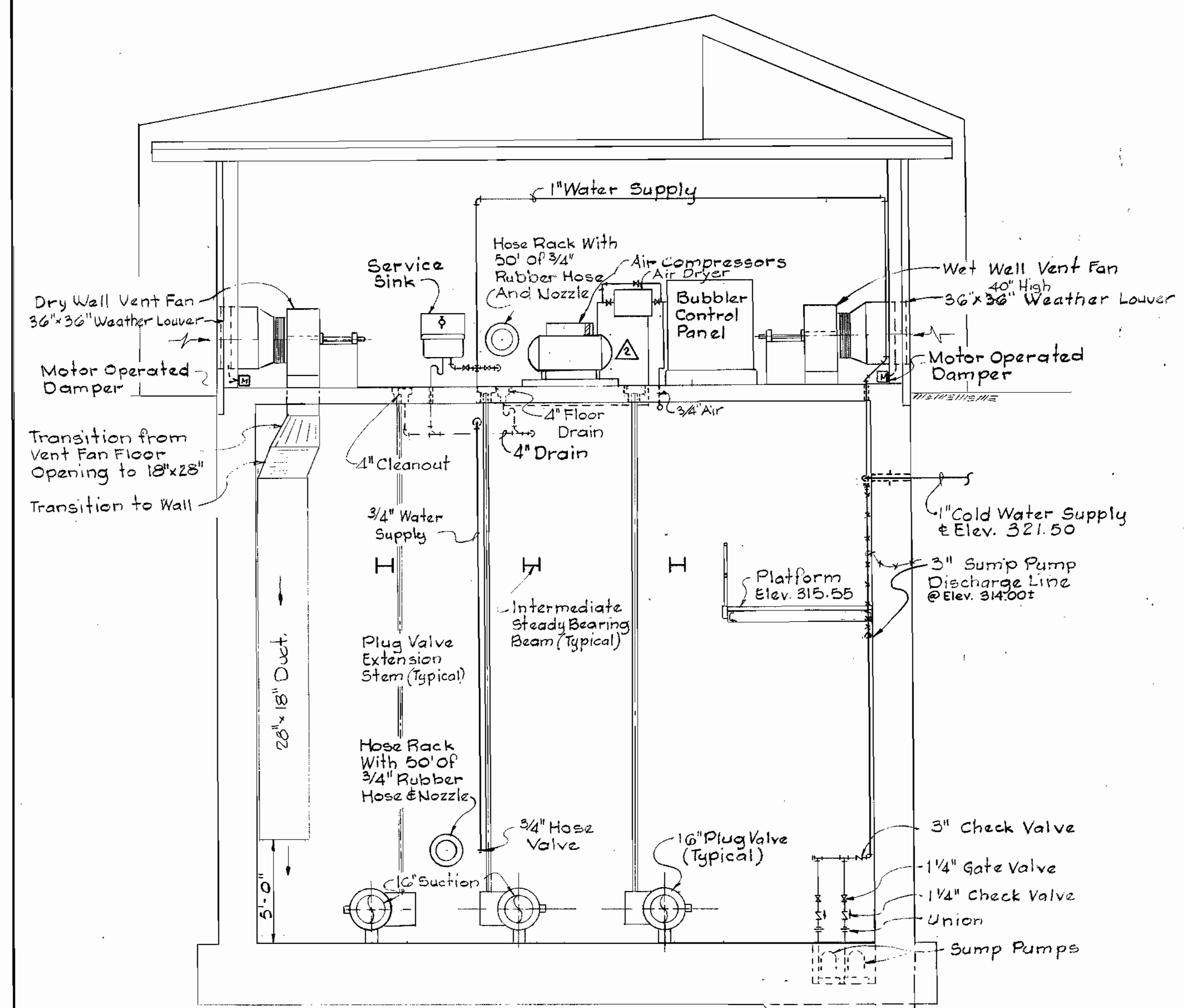
DRAWING NO. 15 OF 21
SCALE AS SHOWN

12-19-80	General Revisions	△
9-26-80	General Revisions	△
REVISIONS		

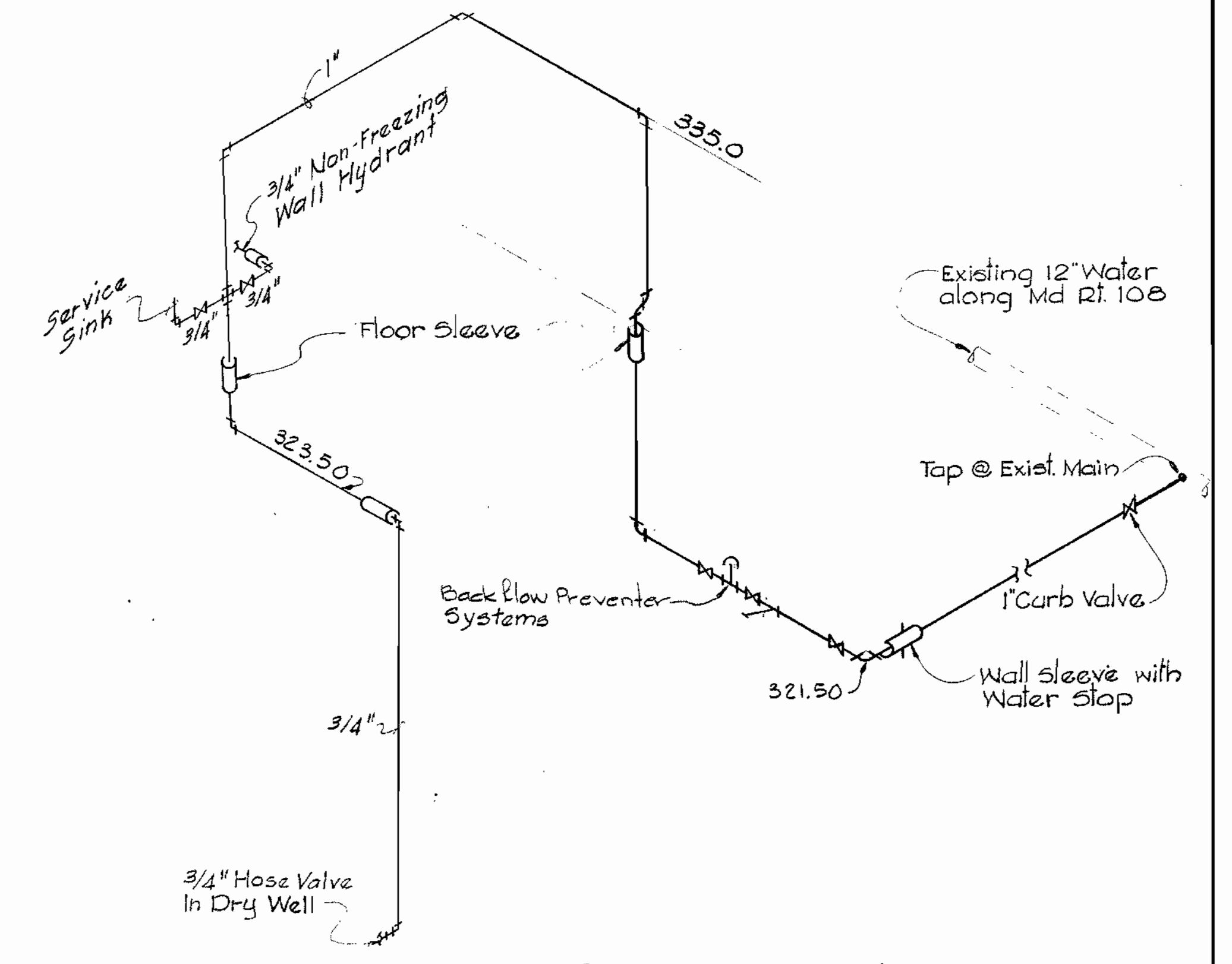
Maryland Route 108
Sewage Pumping Station
Project No. S-4-6041
Contract No. 681-S

Sheet M-1

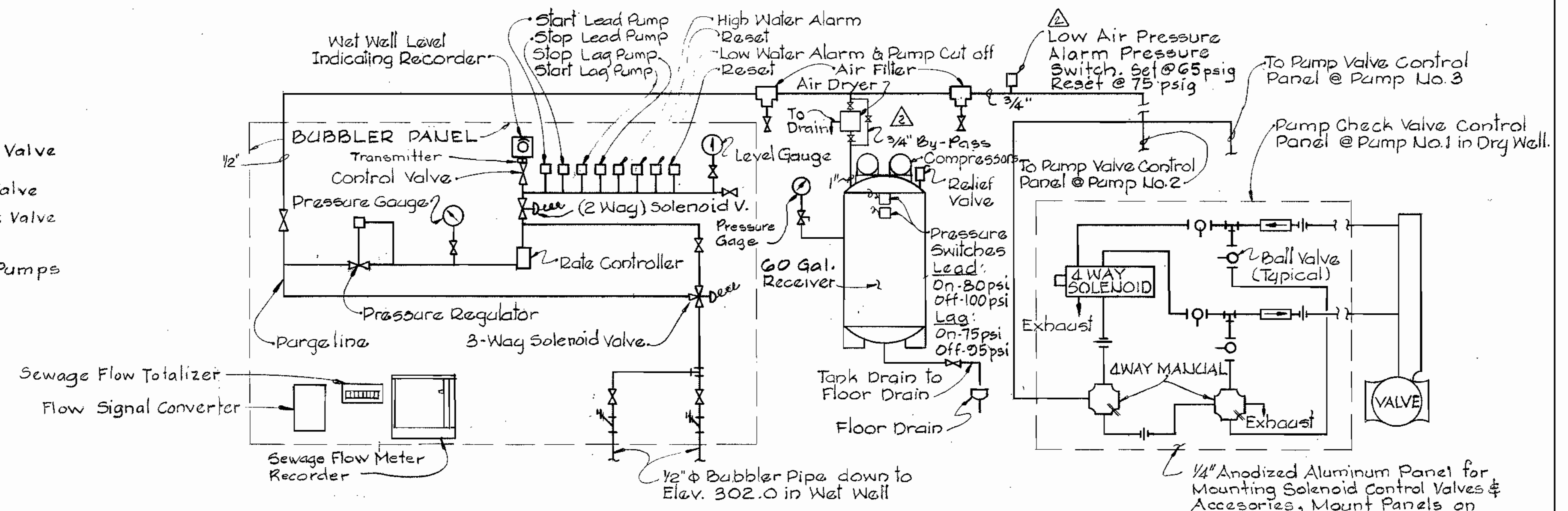
WS 681 S/15



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



WATER SUPPLY SCHEMATIC
Not to Scale



BUBBLER SYSTEM SCHEMATIC
Not to Scale

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James F. Neumann 8/21/80
DIRECTOR OF PUBLIC WORKS - DATE

James L. Blug 8/26/80
CHIEF - BUREAU OF UTILITIES - DATE

Allen J. Brown 8/25/80
CHIEF - UTILITIES DIVISION - DATE

CONTRACT NO. **681-S**
PROJECT NO. **S-4-6041**

MECHANICAL
SECTION & DETAILS

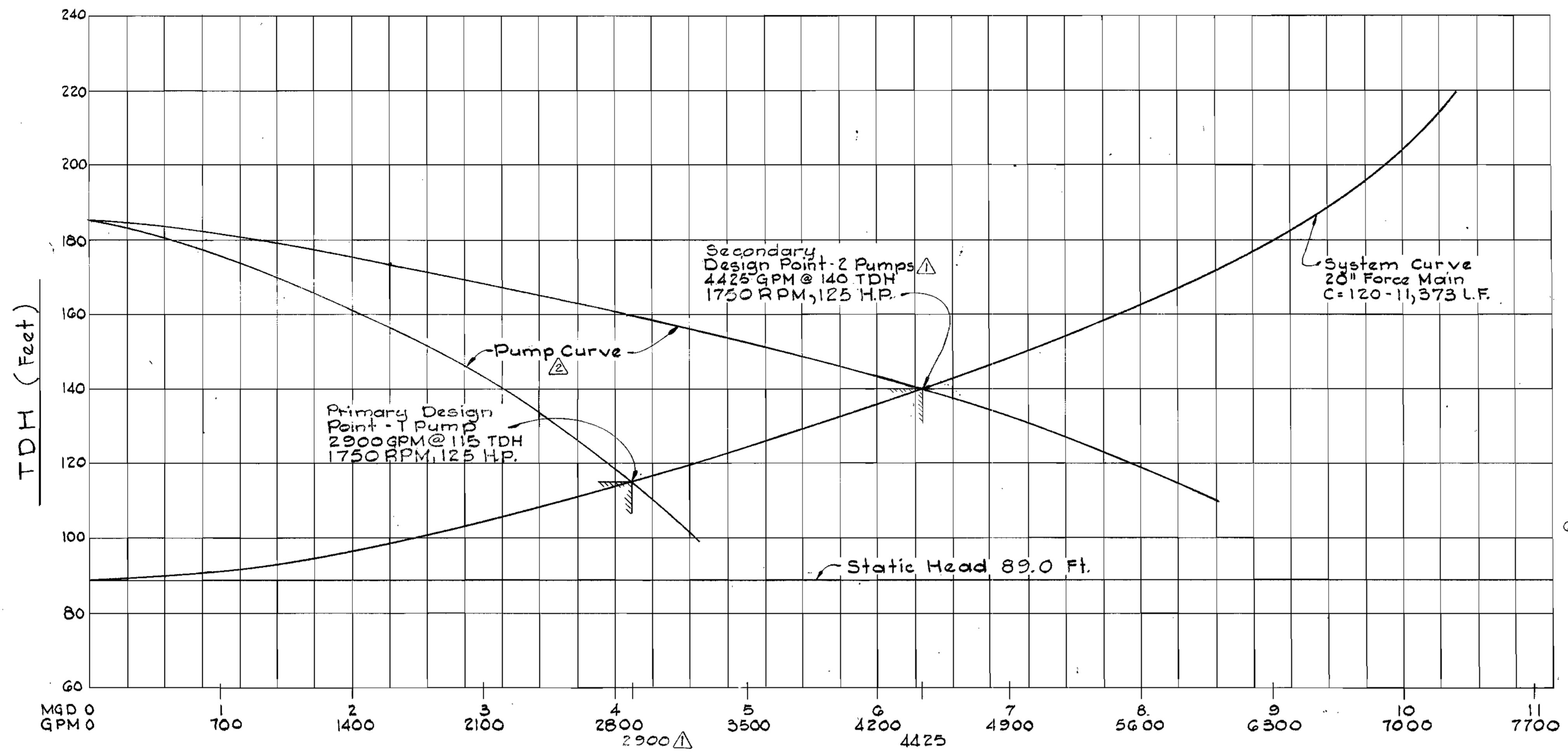
ELECTION DISTRICT
ELLCOTT CITY NO. 2

Sheet M-2

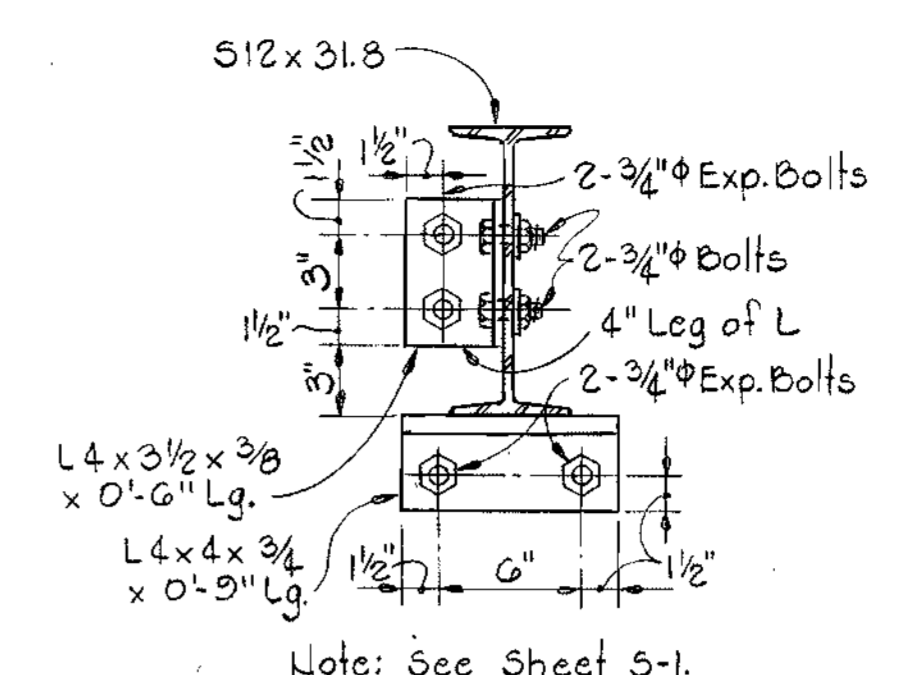
DRAWING NO. 16 OF 21	SCALE AS SHOWN
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Maryland Route 108
Sewage Pumping Sta.
Project No S-4-6041
Contract No 681-S

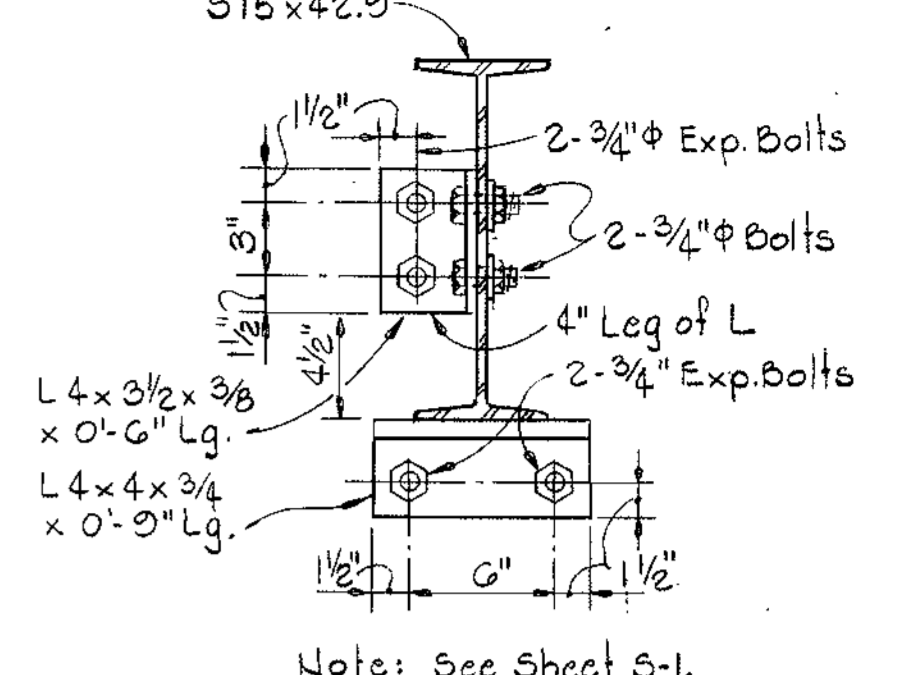
WS 681 S/16



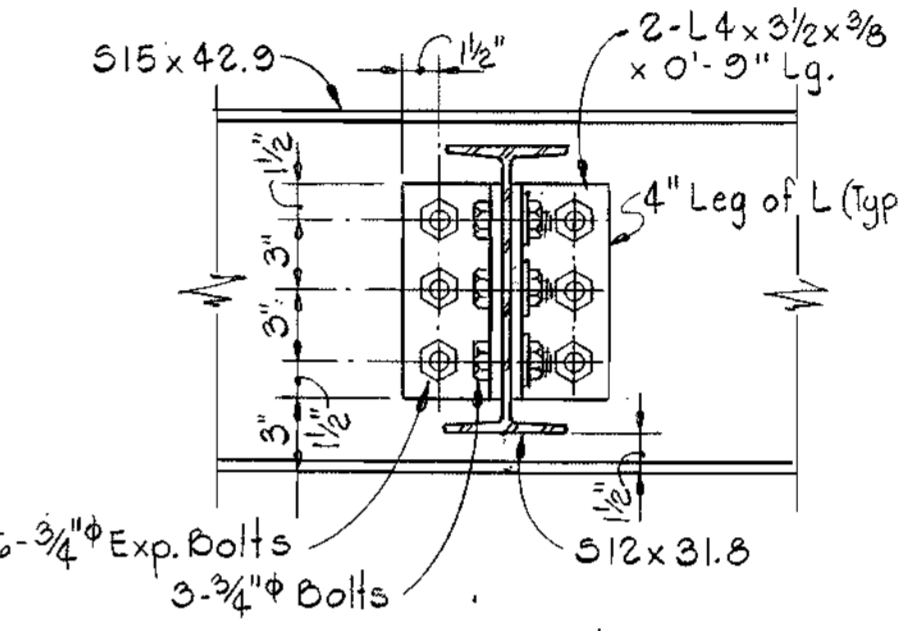
FLOW SYSTEM CURVE



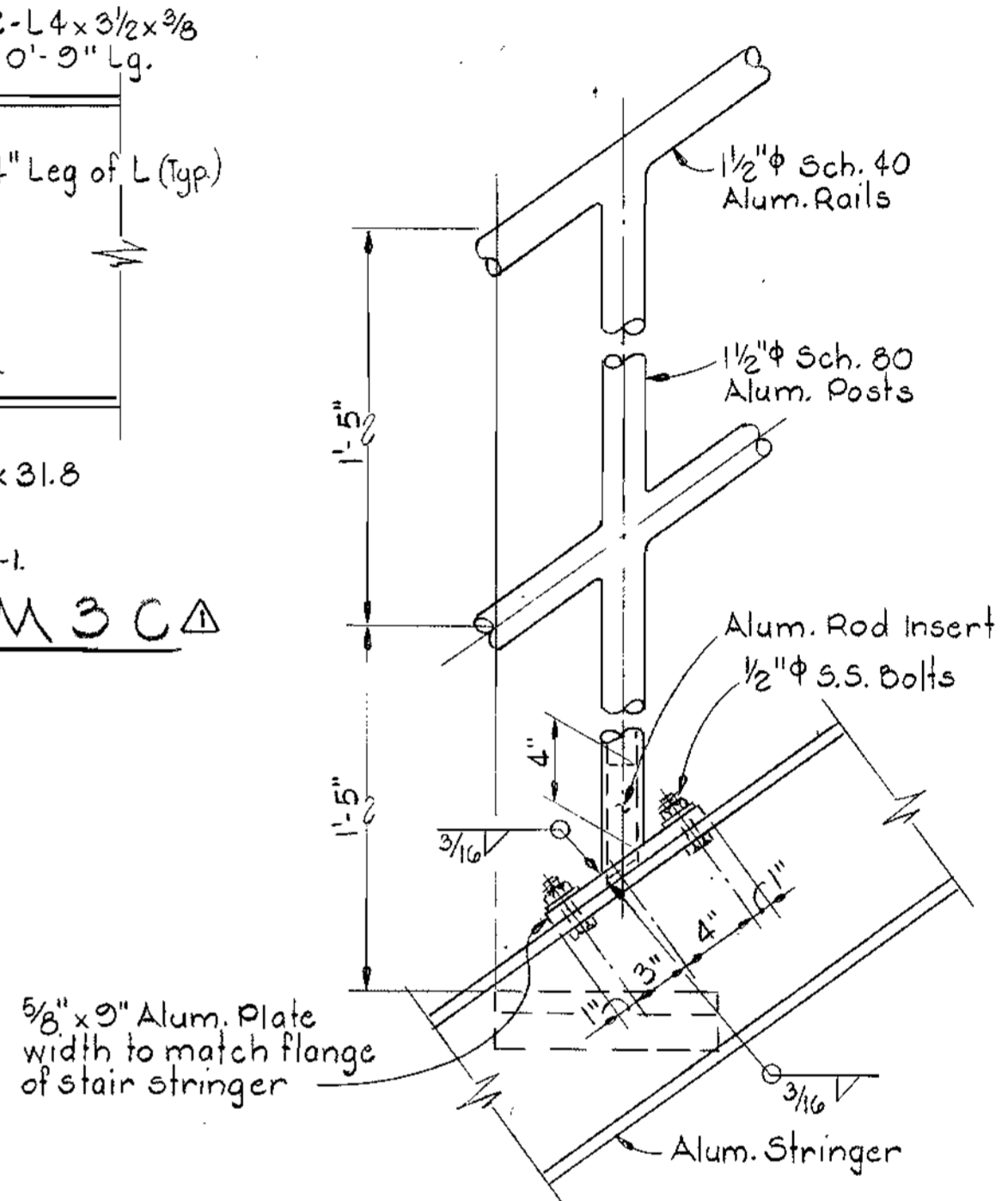
DETAIL M3A
Scale: 1/2"=1'-0"



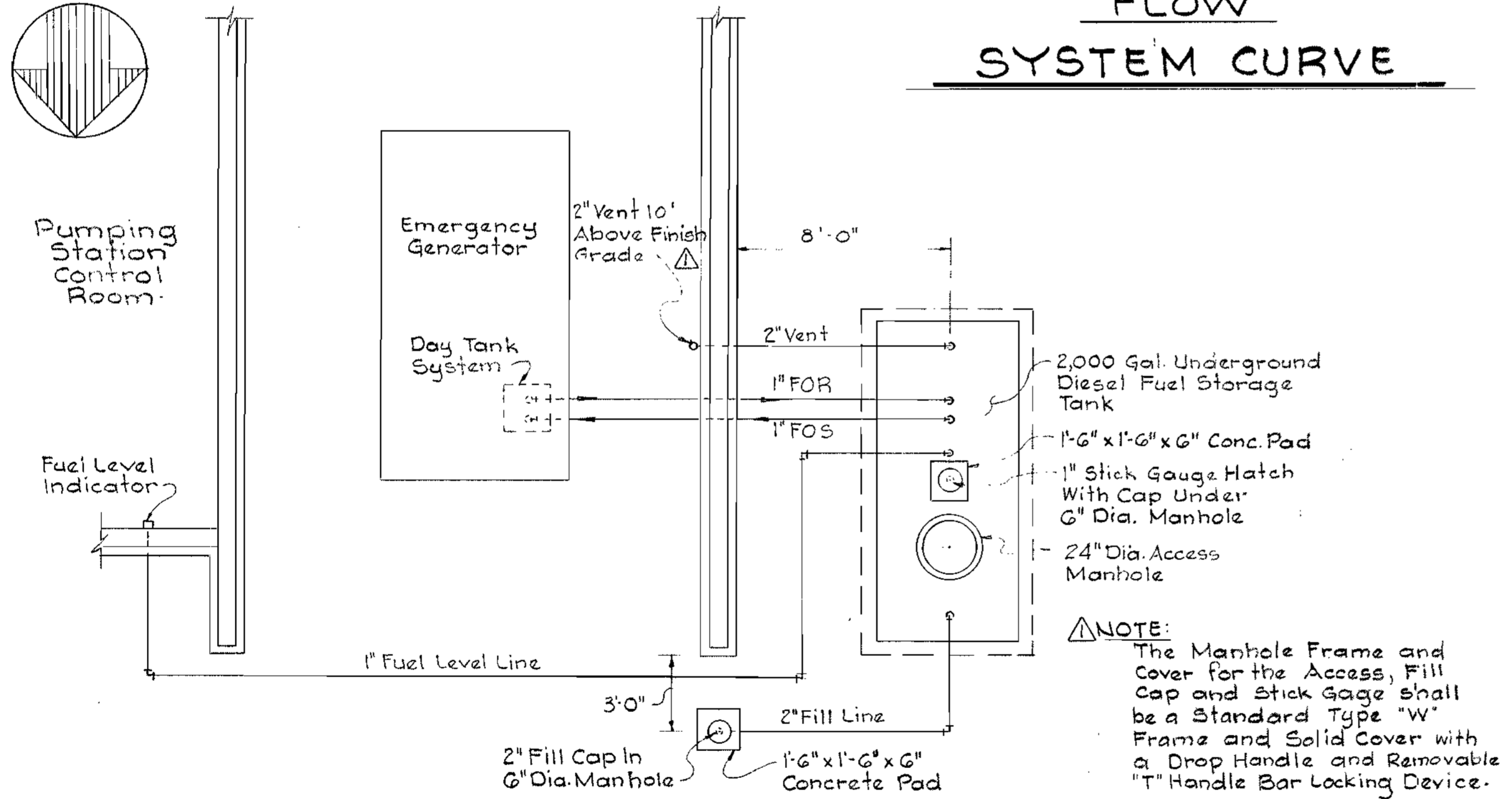
DETAIL M3B
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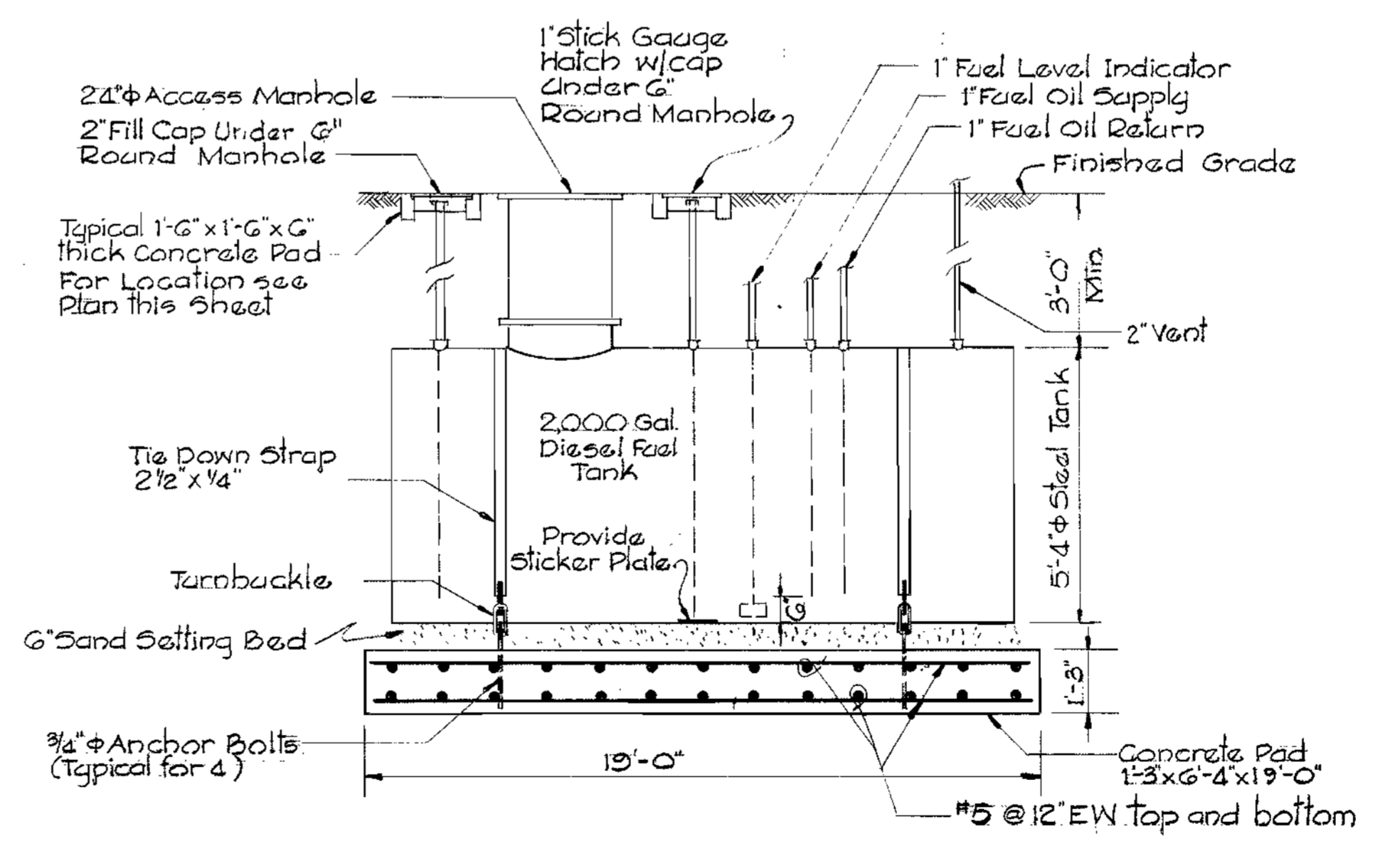
DETAIL M3C
Scale: 1/2"=1'-0"



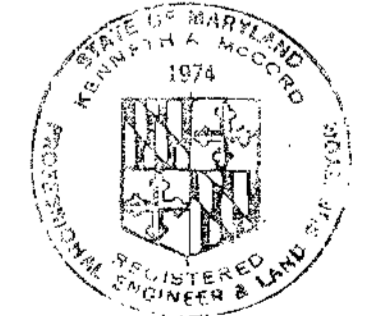
DETAIL M3D
Scale: 1/2"=1'-0"



PLAN FUEL OIL PIPING ARRANGEMENT
Scale: 1/4"=1'-0"



UNDERGROUND FUEL TANK INSTALLATION DETAIL
Scale: 3/8"=1'-0"



Kenneth J. Melick

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James L. Blair 8/26/80
DIRECTOR OF PUBLIC WORKS - DATE

Allen S. Brown 8/25/80
CHIEF - UTILITIES DIVISION - DATE

CONTRACT NO. 681-S
PROJECT NO. S-4-6041

PUMP SYSTEM CURVE AND
GENERATOR DETAILS

12-19-80	General Revisions	△
9-26-80	General Revisions	△
DATE	REVISIONS	

ELECTION DISTRICT
ELLCOTT CITY NO. 2

DRAWING NO. 17
OF 21

SCALE AS SHOWN

Sheet M-3
Maryland Route 108
Sewage Pumping Sta.
Project No. S-4-6041
Contract No. G81-5

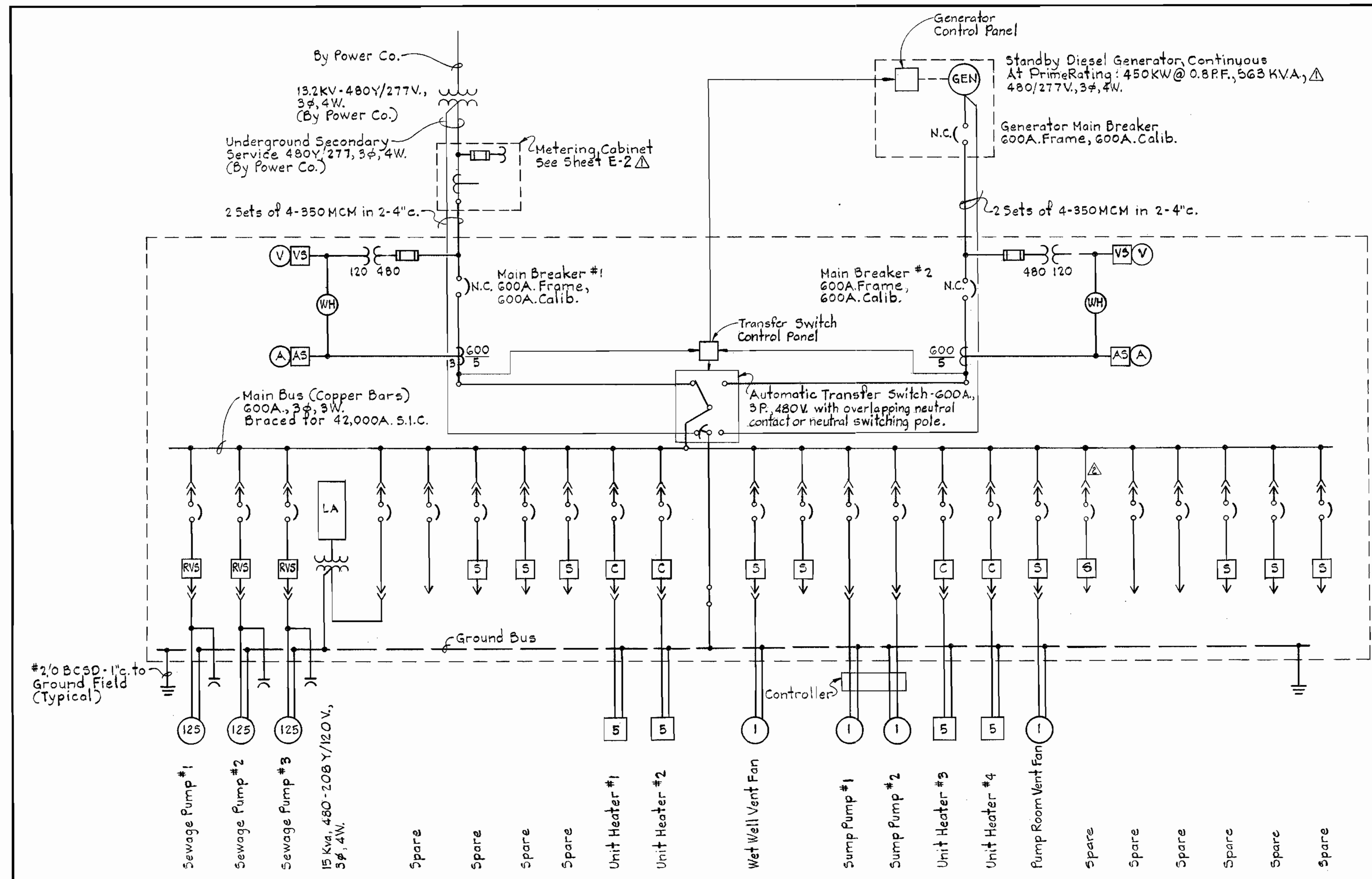
AS-BUILT

DECEMBER 19, 1980 Jan. 24, 1984

WS 681 S/17

PRINTING 44510 18152

W. O. 6918-2



- ### LEGEND
- Outlet - fluorescent - 4 foot with Kindorf wiring channel
 - Outlet - fluorescent - 4 foot with Kindorf wiring channel & conduit
 - Outlet - incandescent - wall bracket
 - Outlet - duplex convenience
 - Junction box
 - EXP WP Explosion proof - weatherproof where indicated
 - S S₂ Switch - single pole - two pole
 - T_H T_C Thermostat - heating - cooling
 - Disconnect switch - non-fused - fused Δ
 - Homerun to panelboard - number of arrows indicates number of circuits. Number of cross lines indicates number of wires. Where no cross lines appear two conductors are implied.
 - Conduit - on ceiling or wall
 - - - Conduit - under floor
 - Conduit - stub up - down
 - * Conduit seal
 - L.O. Pushbutton station - lock out-maintained type
 - Motor
 - Starter - manual
 - DM Δ Damper motor
 - GFI Ground fault interrupter
 - LS
 - Sol. Solenoid valve
 - RVS Δ Motor starter-reduced voltage type-auto transformer
 - S Motor starter - full voltage
 - C Contactor
 - FS Float switch
 - FM Magnetic flow meter
 - T Δ Timer
 - RTM Δ Running Time Meter

ONE LINE DIAGRAM

GENERAL ELECTRICAL NOTES

1. Schematic and elementary wiring diagrams are intended to be complementary to and descriptive of the motor control portions of the Mechanical Specifications.
2. Electrical equipment mounted on masonry walls shall be spaced not less than 1/4" away from the masonry surface, unless otherwise noted. Spacers shall be made of corrosion resistant material.
3. Conduits crossing building expansion joints shall be fitted with expansion fittings at the point of crossing.
4. Conduits entering or leaving NEMA 4 equipment shall have watertight fittings installed to prevent the entrance of moisture.
5. The number of conductors shown for control of the equipment is minimum. Actual number of conductors shall be as required by manufacturer of equipment.
6. Insulated grounding type bushings shall be installed on all conduits entering Motor Control Center, etc. Δ Bushing shall be connected to the ground bus.
7. Contractor shall verify mechanical equipment locations in the field before installing electrical outlets for the equipment.
8. Contractor shall coordinate openings in floor with structural drawings and approved equipment shop drawings.

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

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James F. N... 8/26/80
 DIRECTOR OF PUBLIC WORKS - DATE

Allen J. Brown 8/25/80
 CHIEF - BUREAU OF UTILITIES - DATE

CONTRACT NO. 681-S
 PROJECT NO. S-4-604I

ONE LINE,
 LEGEND & NOTES

12-19-80	General Revisions Δ
9-26-80	General Revisions Δ
DATE	REVISIONS

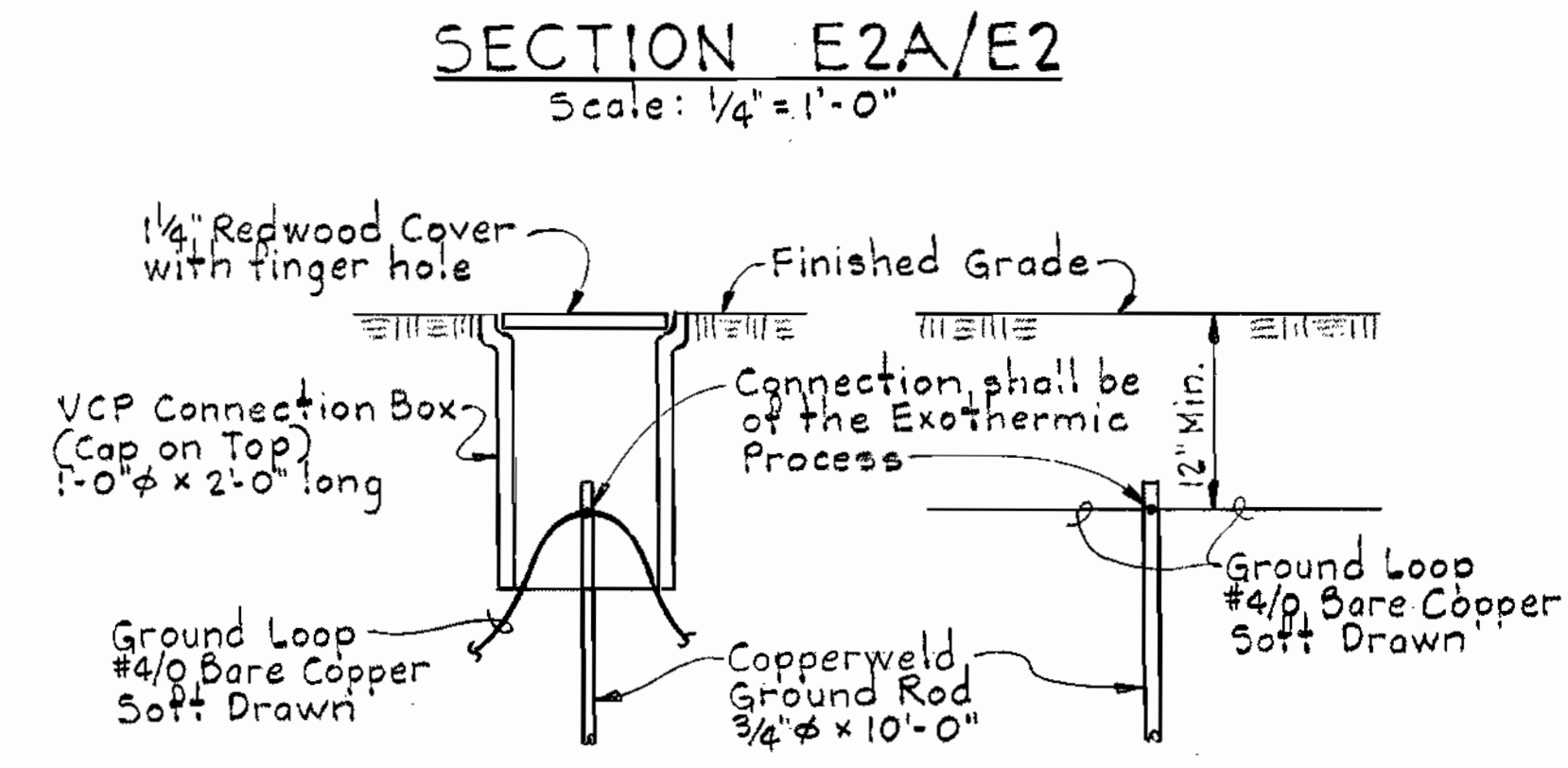
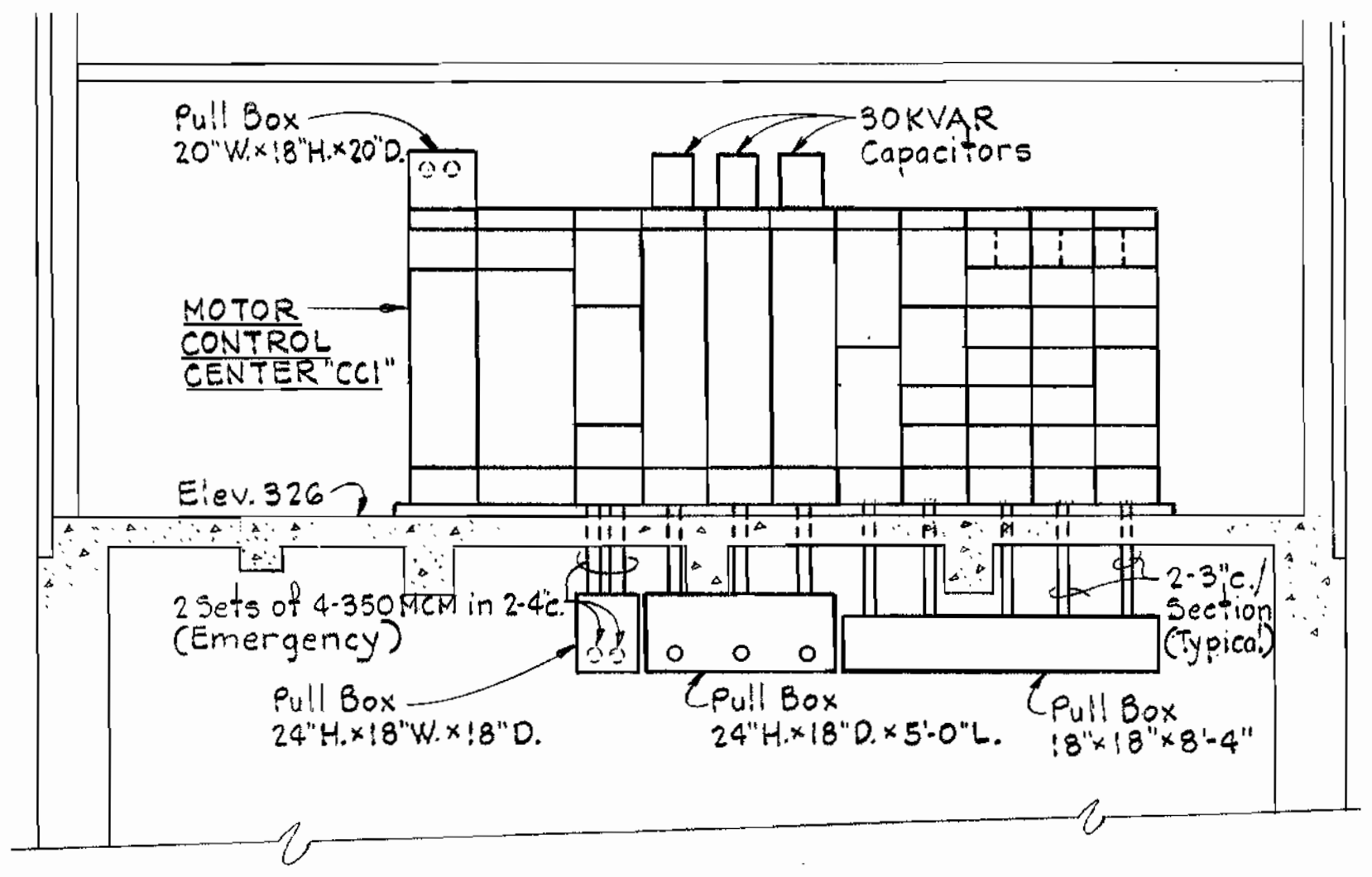
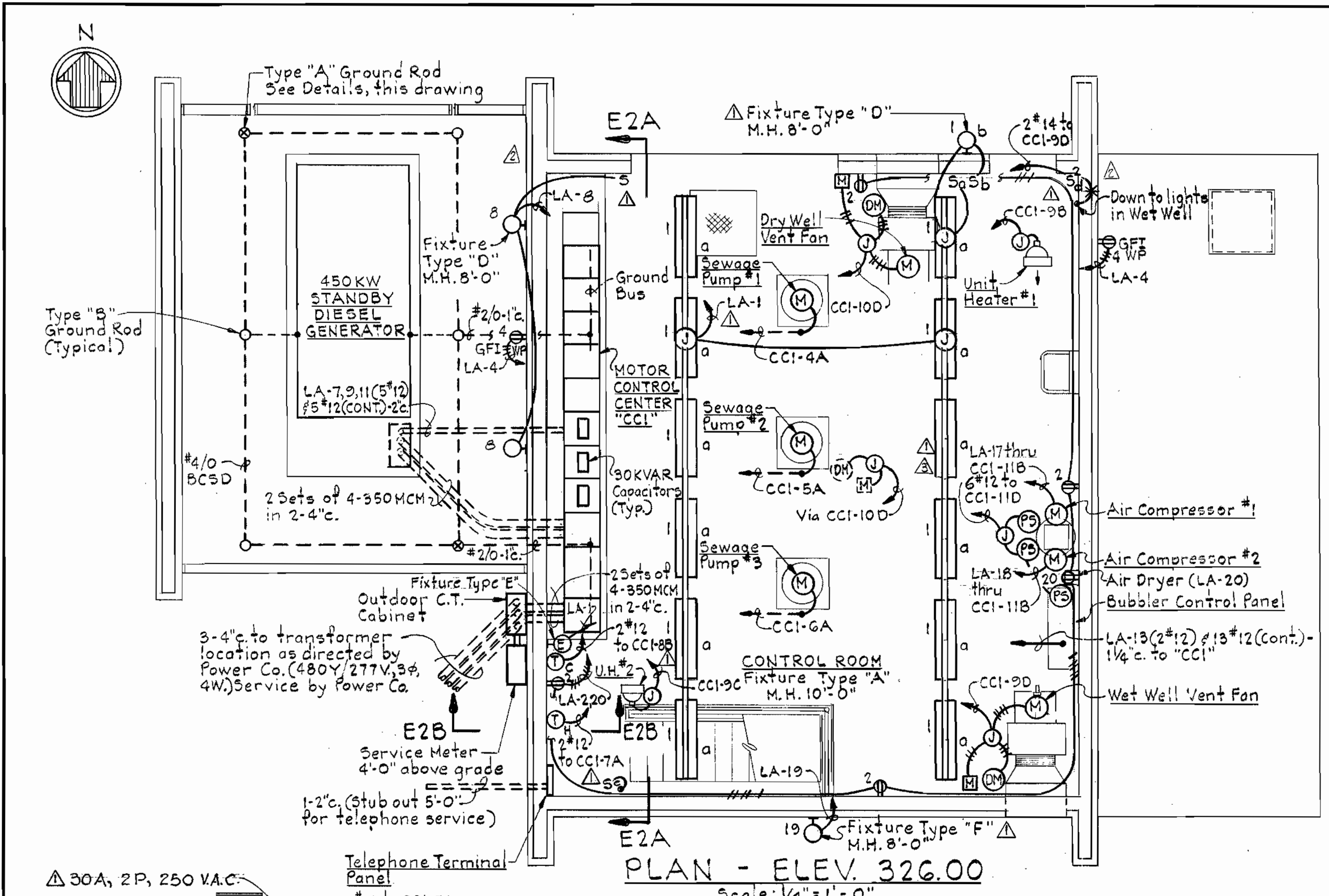
ELECTION DISTRICT
 ELLICOTT CITY NO.2

DRAWING NO. 18 OF 21
 SCALE NO SCALE

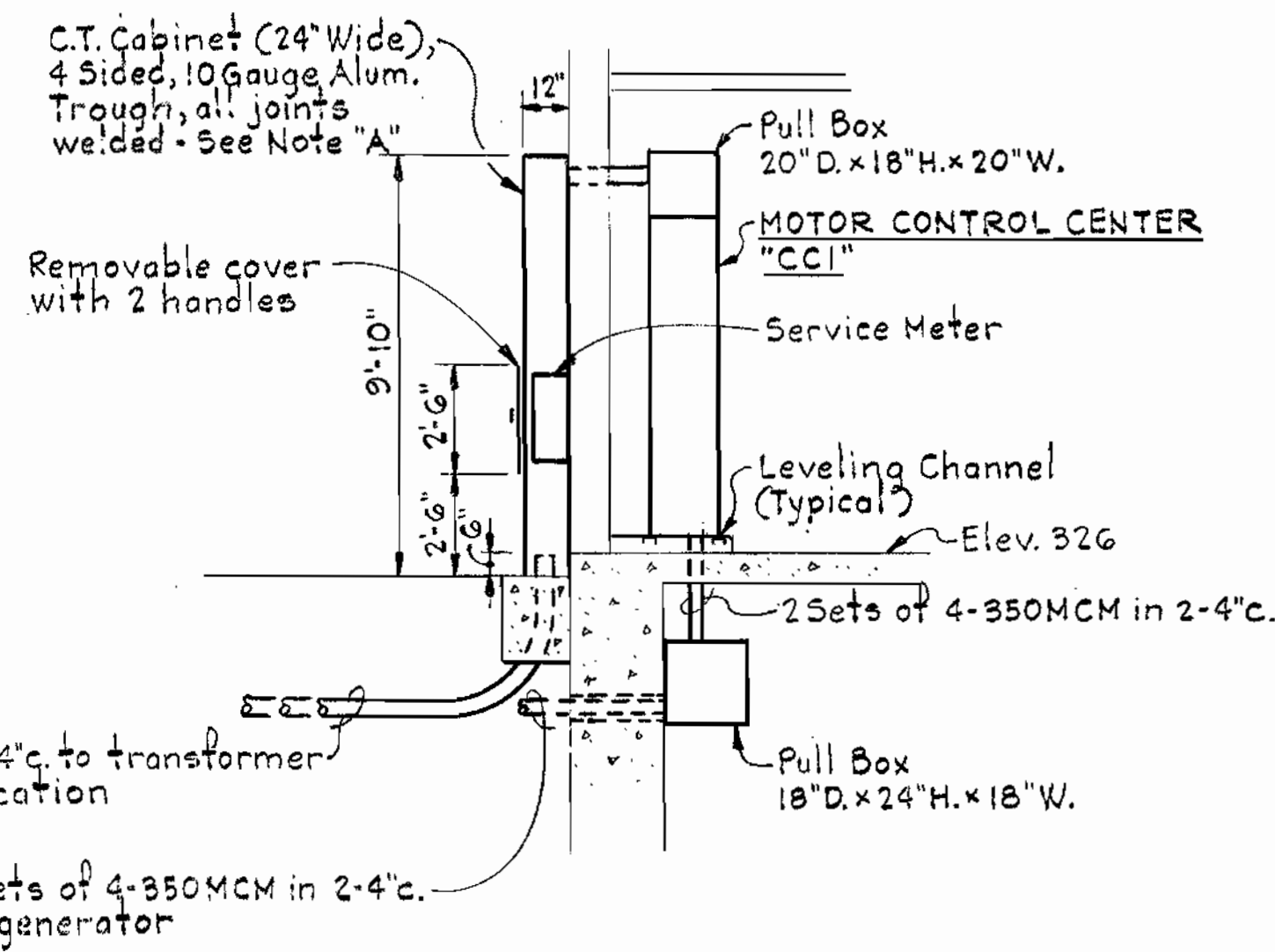
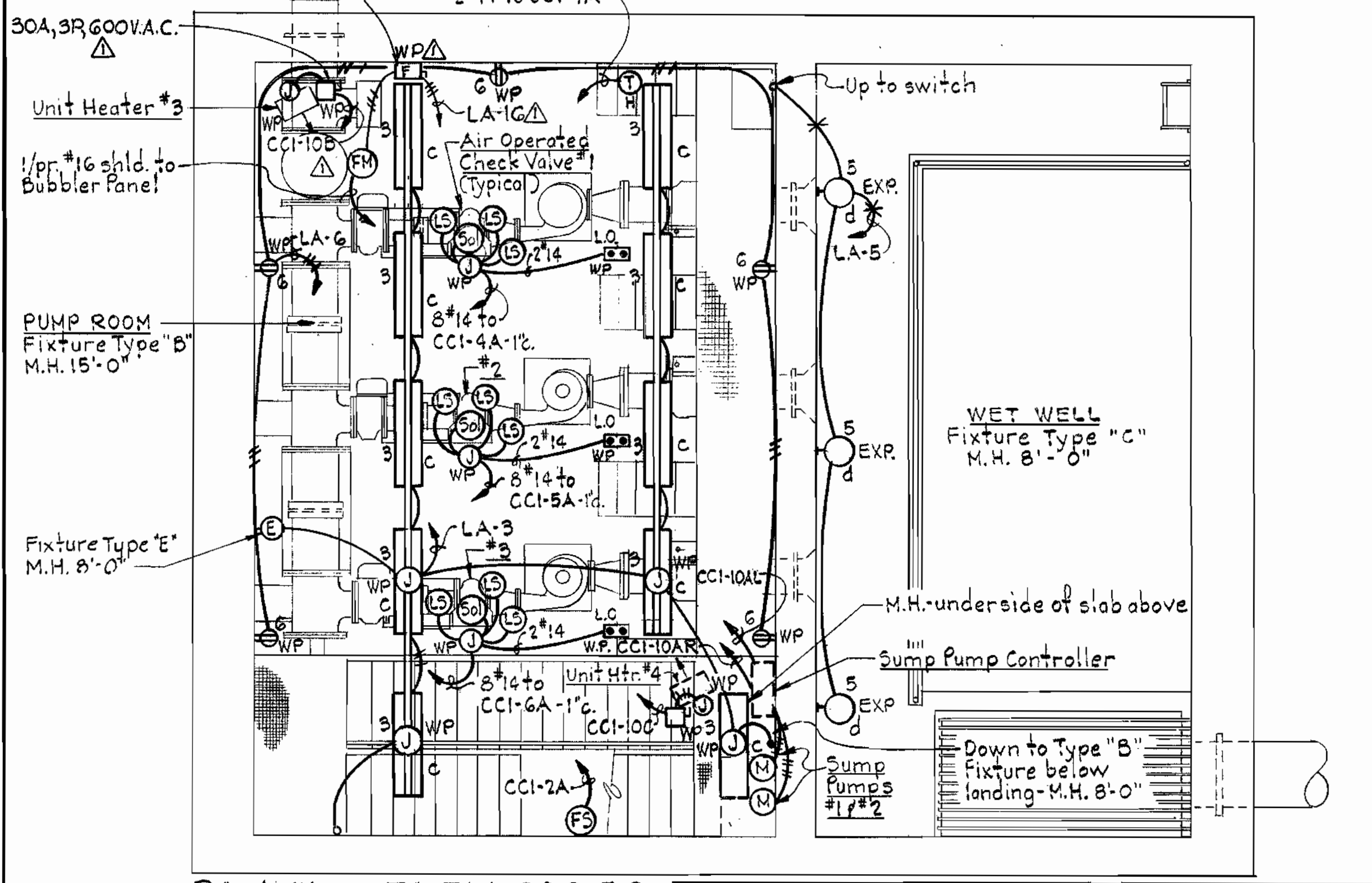
Maryland Route 108
 Sewage Pumping Station
 Project No. S-604I
 Contract No. 681-S

Sheet E-1

WS 681 5/18 SM



NOTES
1. For Legend and General Notes, see Dwg. E-1.



NOTE "A"
See Power Co. Electric Service & Metering Manual, (Sheet 211-1 & 211-2) for additional details for the C.T. Cabinet for underground service, outdoor instrument current transformer (C.T.) meter.

DATE	REVISIONS
12-19-80	General Revisions
11-20-80	Move Light Switches
9-26-80	General Revisions

Maryland Route 10a
Sewage Pumping Station
Project No. S-4-6041
Contract No. 681-5

<p>WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND</p>	<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p>Director of Public Works — DATE Chief - Bureau of Engineering — DATE Chief - Bureau of Utilities — DATE</p>	<p>CONTRACT NO. 681-S PROJECT NO. S-4-6041</p> <p>ELECTRICAL PLANS & DETAILS</p>	<p>ELECTION DISTRICT ELLCOTT CITY NO.2</p> <p>DRAWING NO. 19 OF 21 SCALE AS SHOWN</p>
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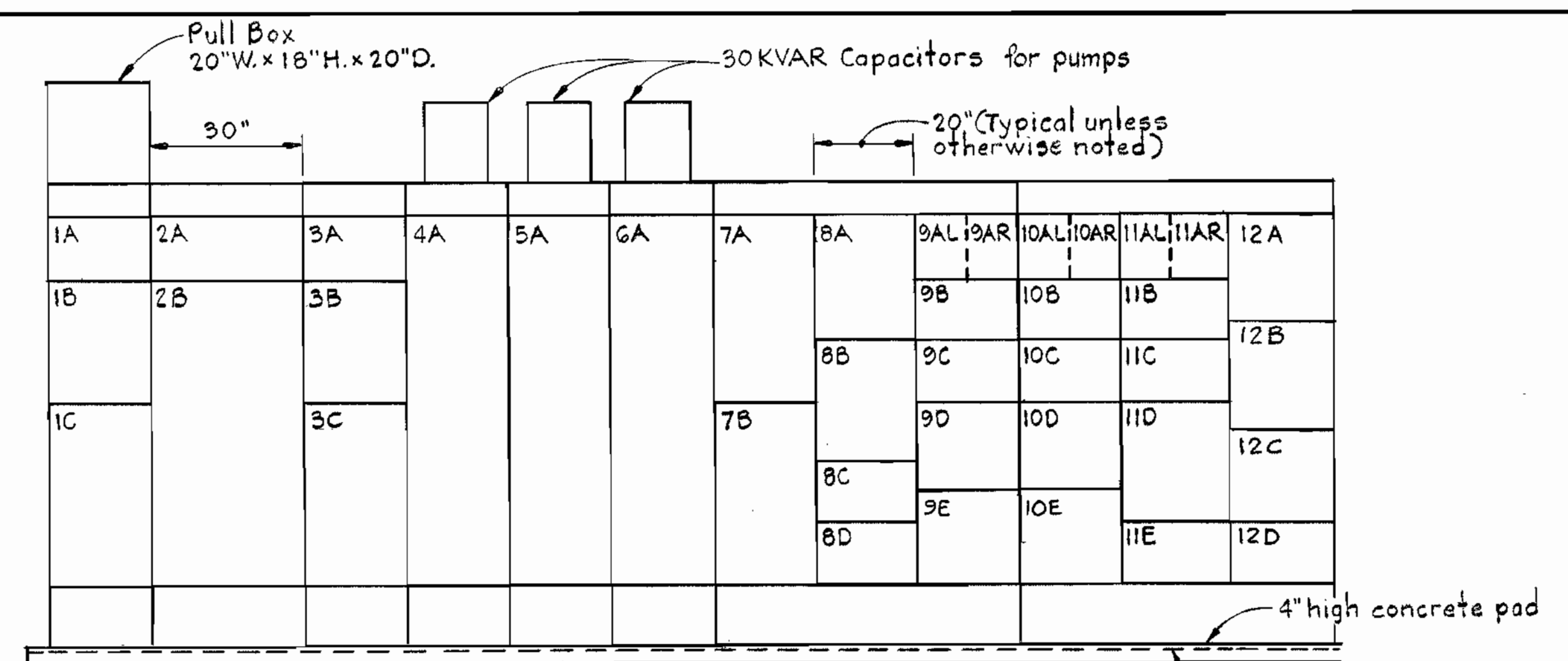
WS 681 S/19

MOTOR CONTROL CENTER "CCI" 480V, 3Φ, 4W, 60HZ, 600A. HORIZ. BUS, 300A. VERTICAL BUS, BRACED FOR 42,000A. S.I.C.

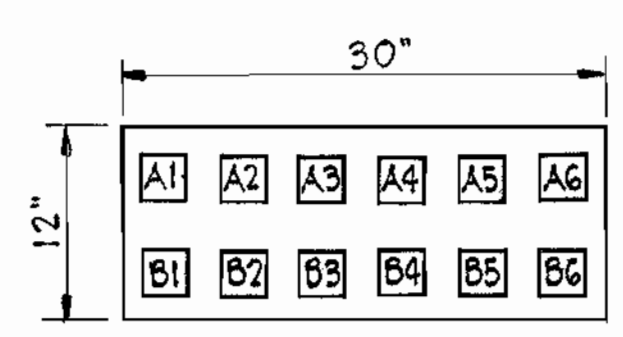
CIR. NO.	NAMEPLATE DATA	DEVICE DESCRIPTION	HP/ KW	AUX. DESCR.	BREAKER OR MCP FRAME POLES CALIB.	S.I.C. #	WIRE-POWER			WIRE-CONTROL			GRD. COND. WIRE SIZE	REMARKS
							NO.	SIZE	TYPE	NO.	SIZE	TYPE		
1A		Incoming Feeder Space					8	350	See Spec.				2-4"	
1B	Standard Nameplates	Meters, Switches etc.		See Spec.										
1C	MAIN BREAKER NO. 1	Circuit Breaker			600 3 600 30									
2A	ANNUNCIATOR	12 point Annunciator Panel												By Manufacturer See Detail, this Dwg.
2B	TRANSFER SWITCH	Automatic Transfer Sw. 600A		See Spec.										
3B	Standard Nameplates	Meters, Switches etc.		See Spec.										
3C	MAIN BREAKER NO. 2	Circuit Breaker			600 3 600 30									
3A		Incoming Feeder Space					6	350	See Spec.			2#6	2-4"	
4A	PUMP NO. 1	RVNR Comb. Starter, Size 5	125	ghijk m n op	MCP 3 400 200 3 3/0				THW	See Dwg	THW	2	3"	See Note #3
5A	PUMP NO. 2	RVNR Comb. Starter, Size 5	125	ghijk m n op	MCP 3 400 200 3 3/0				THW	See Dwg	THW	2	3"	See Note #3
6A	PUMP NO. 3	RVNR Comb. Starter, Size 5	125	ghijk m n op	MCP 3 400 200 3 3/0				THW	See Dwg	THW	2	3"	See Note #3
7A	PANEL "LA"	Circuit Breaker Panelboard		See Spec.										
7B	15KVA TRANSFORMER	Transformer, 480-208Y/120V, 3Φ, 4W, 15		See Spec.										
8A	HEATER CONTROLS	Relays etc.												By Manufacturer
8B	FAN CONTROLS	Relays, Timers etc.												By Manufacturer
8C	WET WELL VENT FAN	FVNR Comb. Starter, Size 1	1	ghijm n	MCP 3 3 100 3 12				THW	2	14	THW	12	3/4"
8D	PUMP ROOM VENT FAN	FVNR Comb. Starter, Size 1	1	ghijm	MCP 3 3 100 3 12				THW	4	14	THW	12	3/4"
9A	15KVA TRANSFORMER FEED	Circuit Breaker			100 3 30 25									By Manufacturer
9A	SPARE	Circuit Breaker			100 3 20 25									
9B	UNIT HEATER NO. 1	Comb. Contactor, Size 1	5	ghijm	100 3 15 25 3 12				THW				12	3/4"
9C	UNIT HEATER NO. 2	Comb. Contactor, Size 1	5	ghijm	100 3 15 25 3 12				THW				12	3/4"
9D	SPARE	FVNR Comb. Starter, Size 1		ghijm	MCP 3 3 100									
9E	SPARE	FVNR Comb. Starter, Size 1		ghijm	MCP 3 7 100									
10A	SUMP PUMP NO. 1	Circuit Breaker	1		100 3 15 25 3 12				THW				12	3/4"
10A	SPARE	Circuit Breaker	1		100 3 15 25 3 12				THW				12	3/4"
10B	UNIT HEATER NO. 3	Comb. Contactor, Size 1	5	ghijm	100 3 15 25 3 12				THW	2	14	THW	12	3/4"
10C	UNIT HEATER NO. 4	Comb. Contactor, Size 1	5	ghijm	100 3 15 25 3 12				THW	2	14	THW	12	3/4"
10D	SPARE	FVNR Comb. Starter, Size 1		ghijm	MCP 3 3 100									
10E	SPARE	FVNR Comb. Starter, Size 1	1	ghijm	MCP 3 3									
11A	GENERATOR WATER HEATER	Circuit Breaker			100 3 20 25									
11A	SPARE	Circuit Breaker			100 3 20 25									
11B	AIR COMPRESSOR NO. 1 & NO. 2	Manual Motor Starters	1/4	hhij										See Dwg.
11C	SPARE	FVNR Comb. Starter, Size 1	1/2	ghijm	MCP 3 3 100									
11D	AIR COMPRESSOR ALTERNATOR	2 Circuit Alternator												
11E	(BLANK)													
12A	(BLANK)													
12B	SPARE													
12C	SPARE													
12D	SPARE													

- AUXILIARY DESCRIPTION**
- | | | | |
|---------------------|----------------------------------|---------------------------|-----------------------|
| a. Ammeter | e. Potential Transformer | i. Red indicating light | m. Running time meter |
| b. Ammeter Switch | f. Current Transformer | j. Green indicating light | n. Timer |
| c. Voltmeter | g. 480-120V. Control Transformer | k. Amber indicating light | o. Auxiliary relay |
| d. Voltmeter Switch | h. 3 Position Selector Switch | l. White indicating light | p. Blue light |

* Interrupting capacity in thousands of symmetrical R.M.S. amperes



ELEVATION
MOTOR CONTROL CENTER "CCI"
Scale: 1/2" = 1'-0"



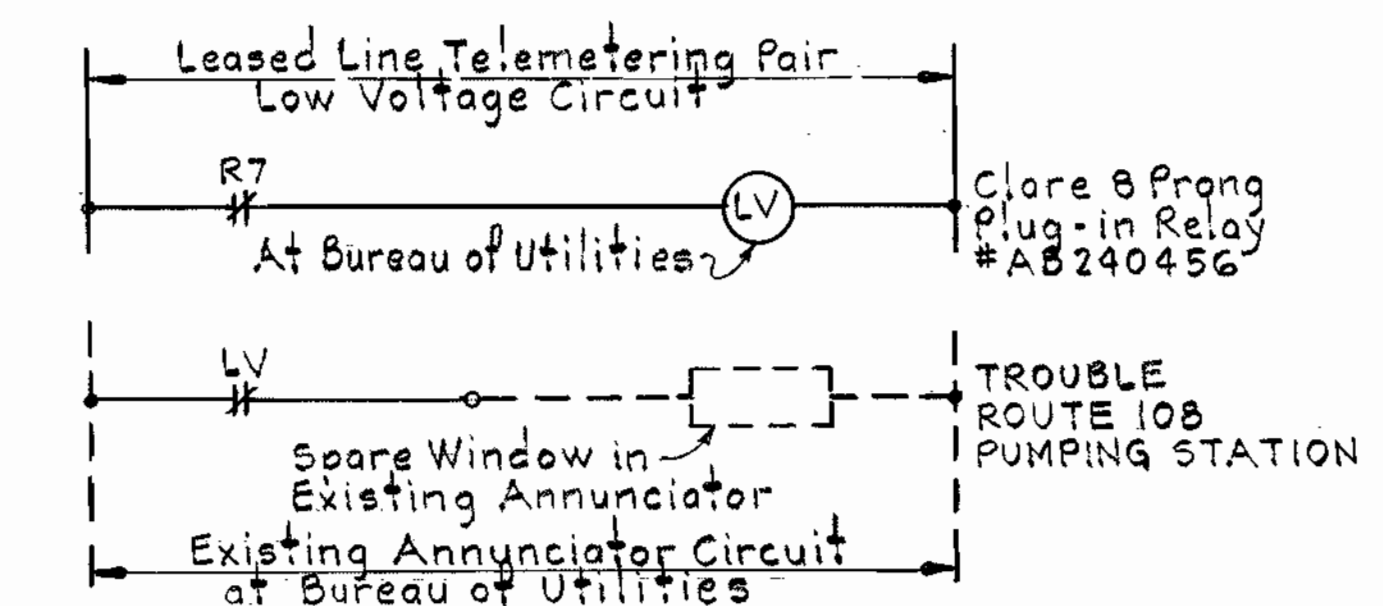
ANNUNCIATOR SECTION "CCI-2A"
No Scale

NAMEPLATE SCHEDULE

- | | |
|-------------------------|-----------------------|
| A1 HIGH LEVEL-WET WELL | B1 DRY WELL FLOODED |
| A2 LOW LEVEL-WET WELL | B2 VALVE FAILURE Δ |
| A3 GENERATOR TROUBLE | B3 LOW AIR PRESSURE Δ |
| A4 GENERATOR RUNNING | B4 (BLANK) Spare |
| A5 MAIN BREAKER #1-OPEN | B5 (BLANK) Spare |
| A6 MAIN BREAKER #2-OPEN | B6 (BLANK) Spare |

NOTES

- For Legend and General Notes, see Dwg. E-1.
- Contactors and Starters, shall be equipped with I.N.O. #1N.C. auxiliary contacts (spares) in addition to the number of auxiliary contacts as indicated in the Schematic Diagrams or as required by the motor control portions of the Mechanical Specifications.
- RVNR starters shall be of the auto-transformer closed transition type with 50%, 65% and 80% taps.
- Contractor shall coordinate voltage requirements with the telephone company and field verify the extent of work at the Bureau of Utilities, 8250 Old Montgomery Road, Ellicott City, Maryland 21043.



ALARM INDICATION AT BUREAU OF UTILITIES
See Note #4



Sheet E-3

Maryland Route 108
Sewage Pumping Station
Project No. S-4-6041
Contract No. 681-5

1-9-81	Added Telemetering Δ
12-19-80	General Revisions Δ
9-26-80	General Revisions Δ
DATE	REVISIONS

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Henry F. Nimmig 8/26/80
DIRECTOR OF PUBLIC WORKS - DATE

James H. Glavin 8/26/80
CHIEF-BUREAU OF UTILITIES - DATE

Robert L. Hill 8/25/80
CHIEF-BUREAU OF ENGINEERING - DATE

Allen S. Brown 8/25/80
CHIEF-UTILITIES DIVISION - DATE

CONTRACT NO. 681-S
PROJECT NO. S-4-6041

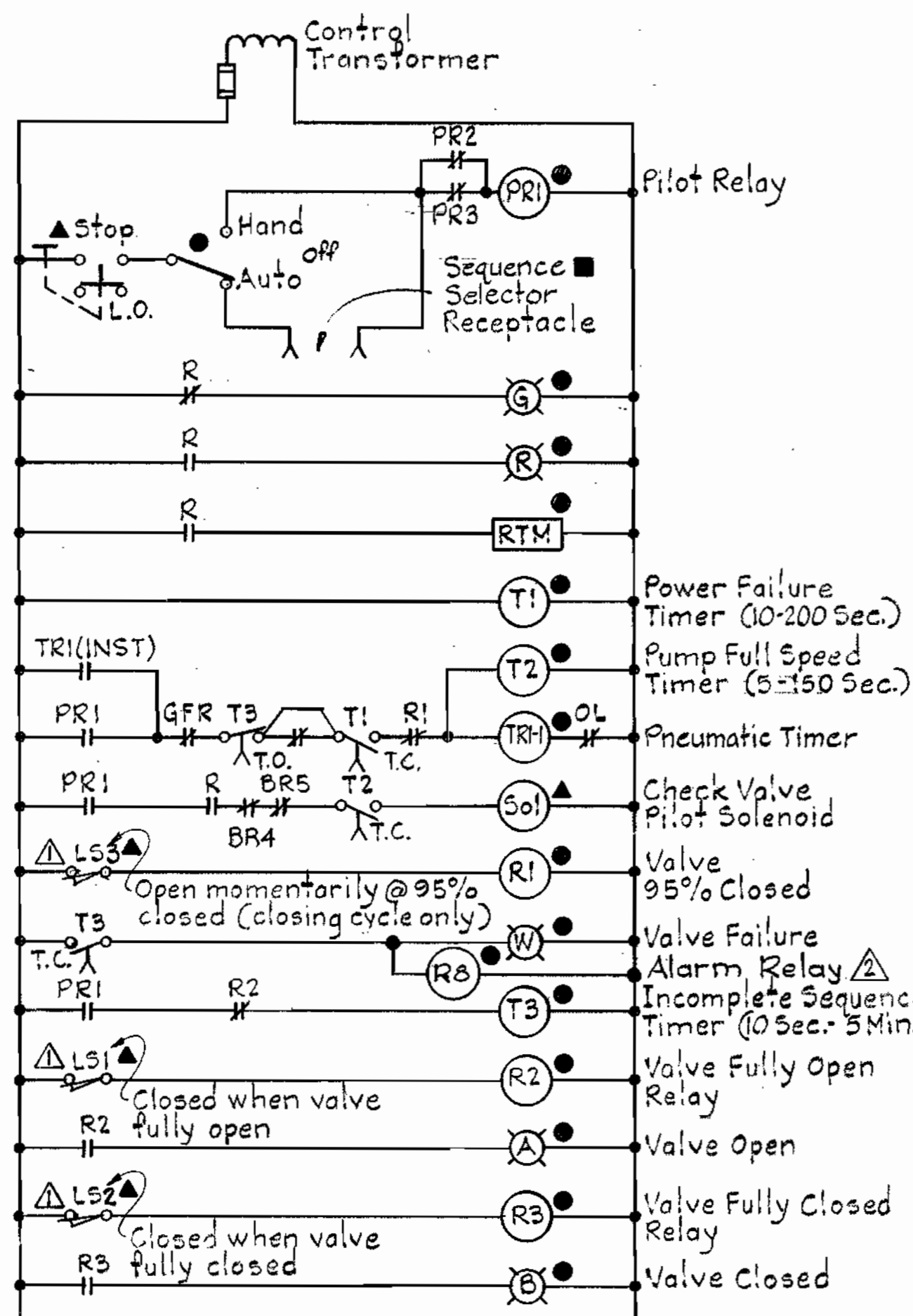
MOTOR CONTROL CENTER

ELECTION DISTRICT
ELLCOTT CITY NO.2

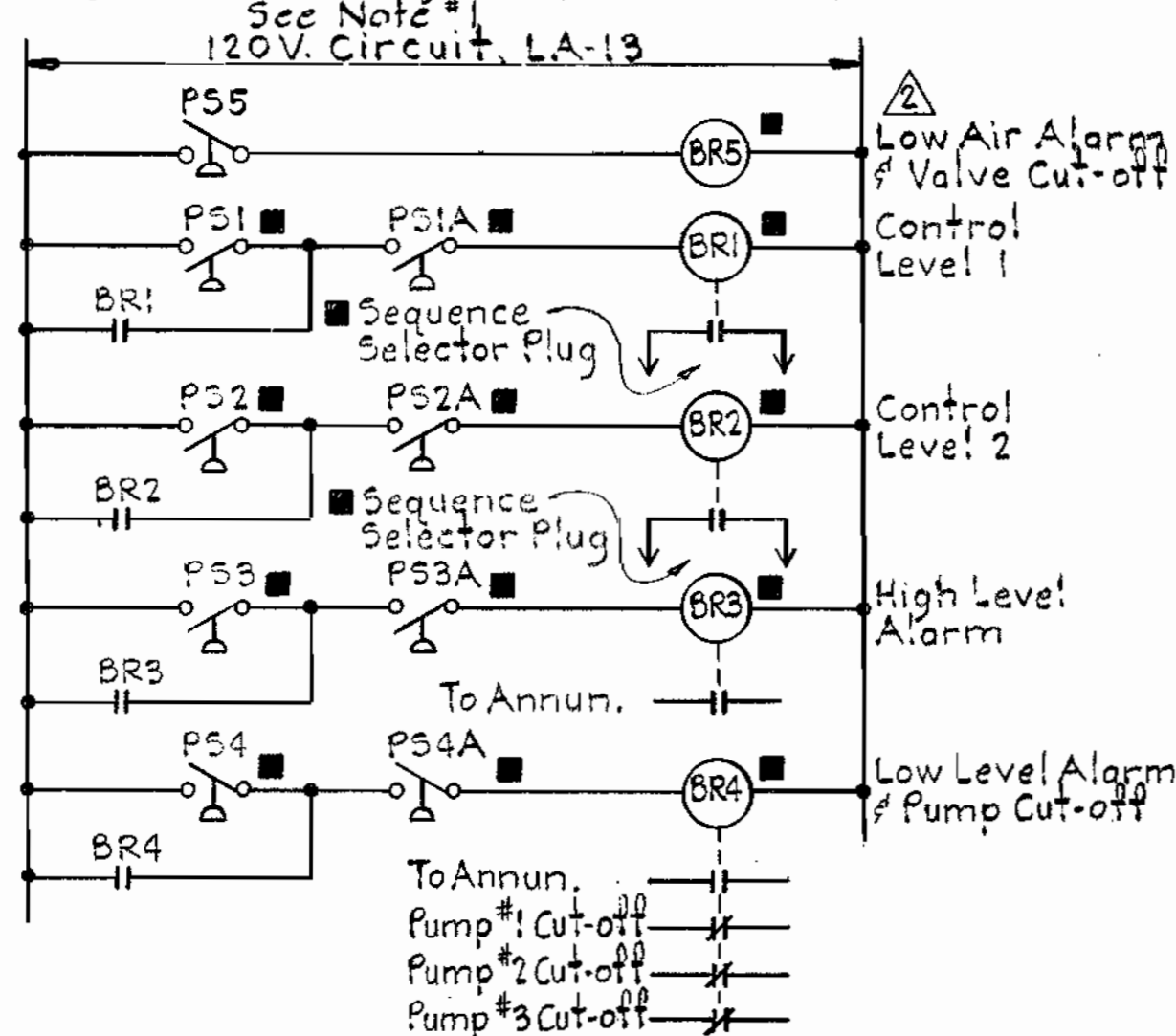
DRAWING NO. 20
OF 21
SCALE

WS 681 S/20

For RVNR Power Diagram see this sheet

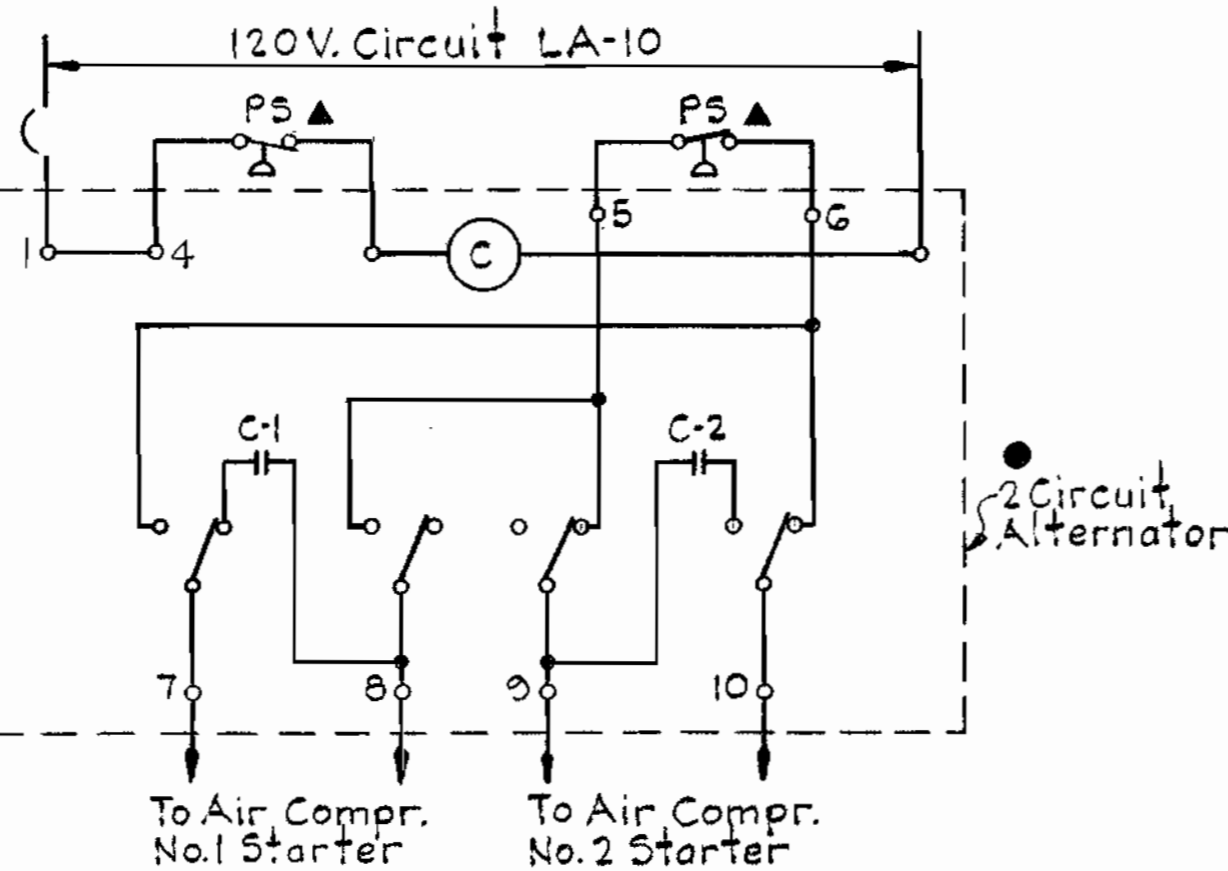
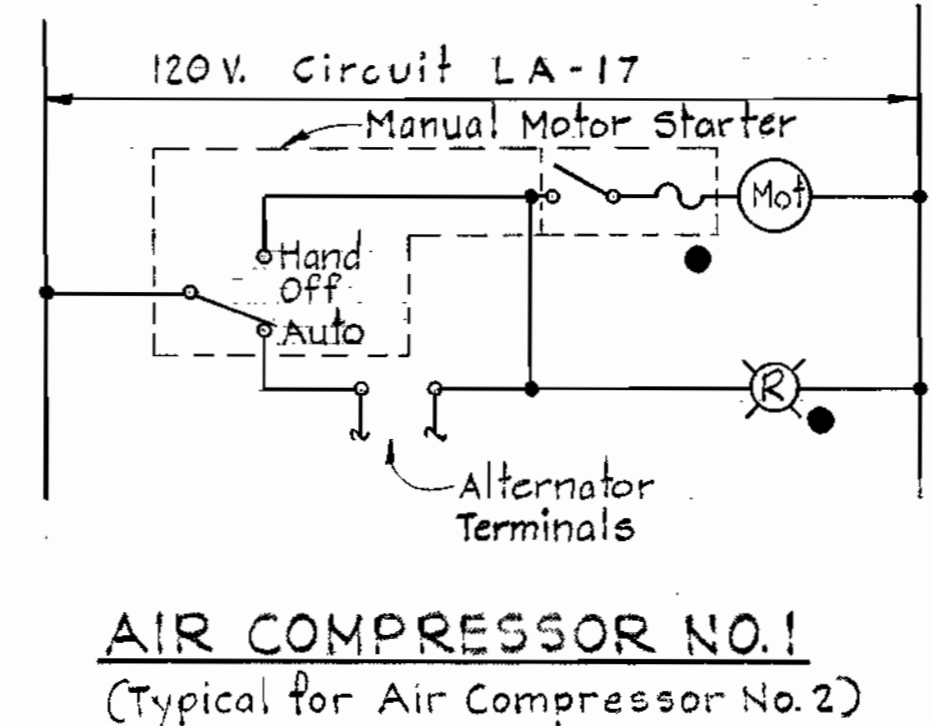
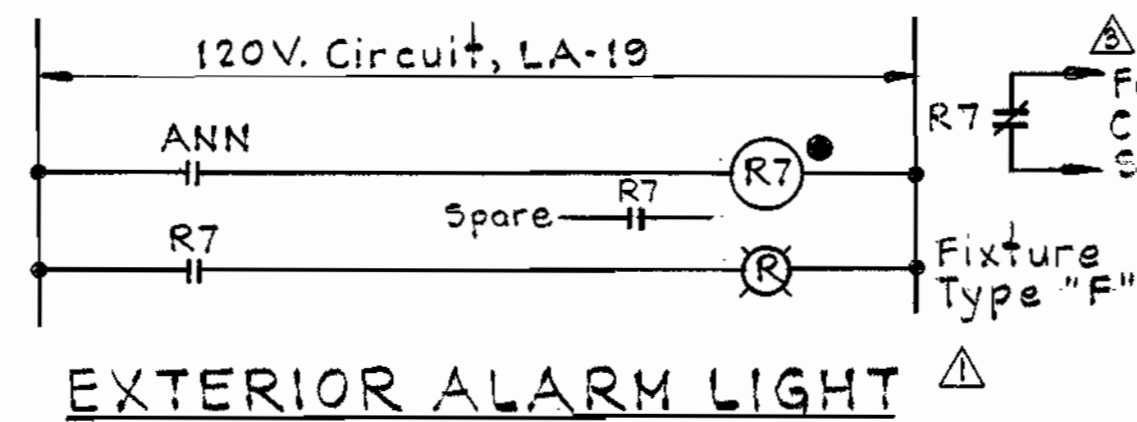


SEWAGE PUMP NO. 1
(Typical for Sewage Pumps No. 2 & No. 3)
See Note #1
120V. Circuit, LA-13

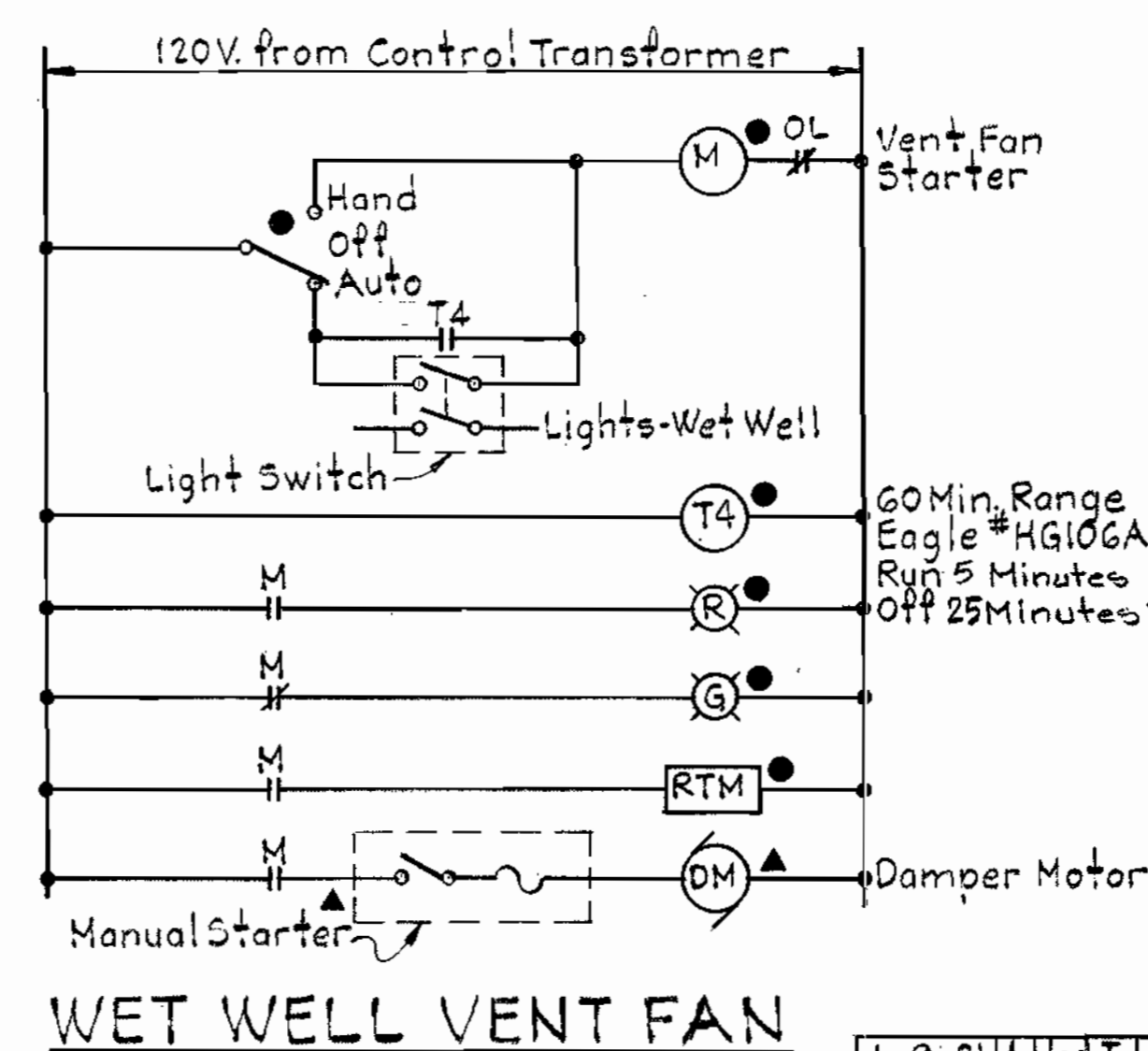


BUBBLER RELAYS - PUMP CONTROL

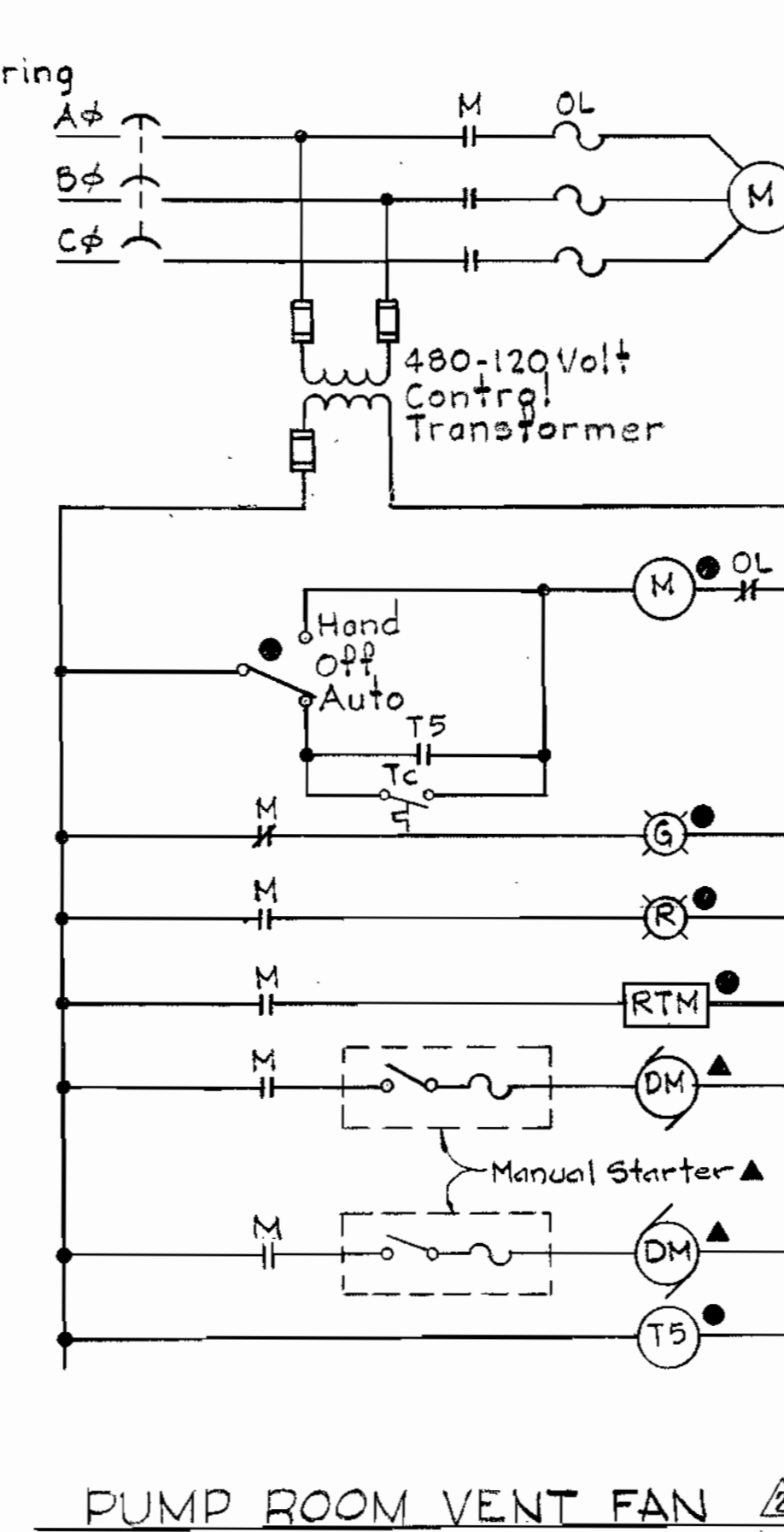
WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
1304 ST. PAUL ST.
BALTIMORE, MARYLAND



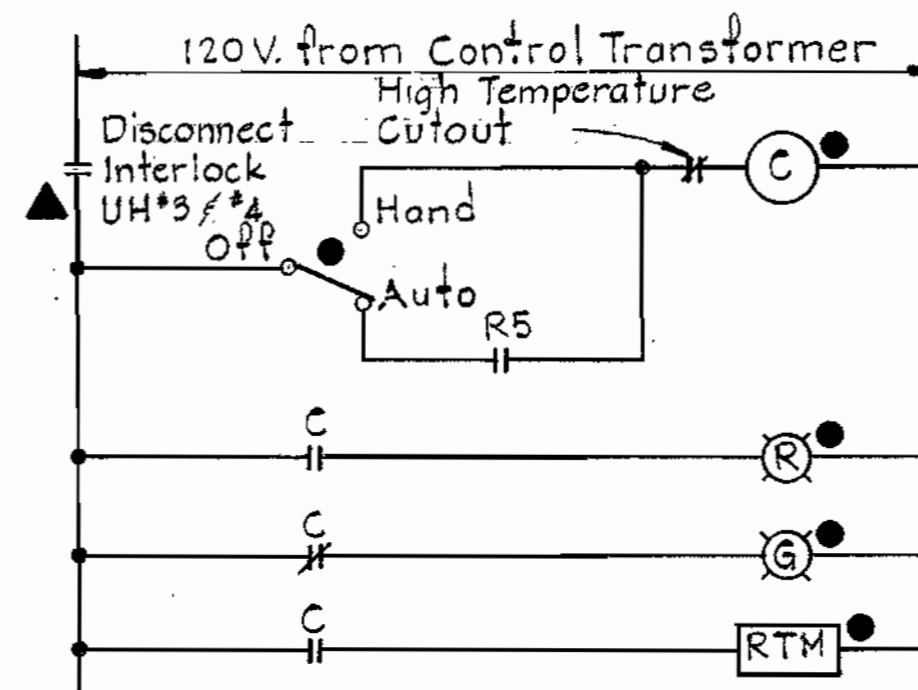
AIR COMPRESSOR ALTERNATOR



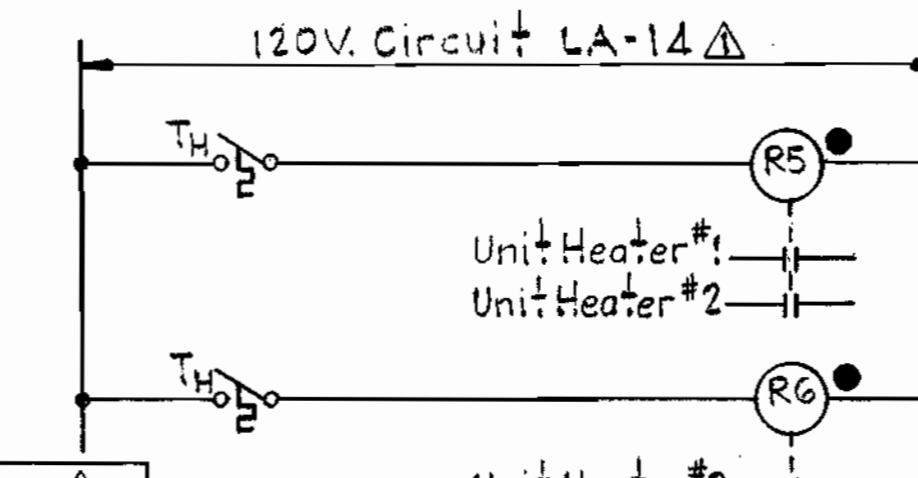
WET WELL VENT FAN



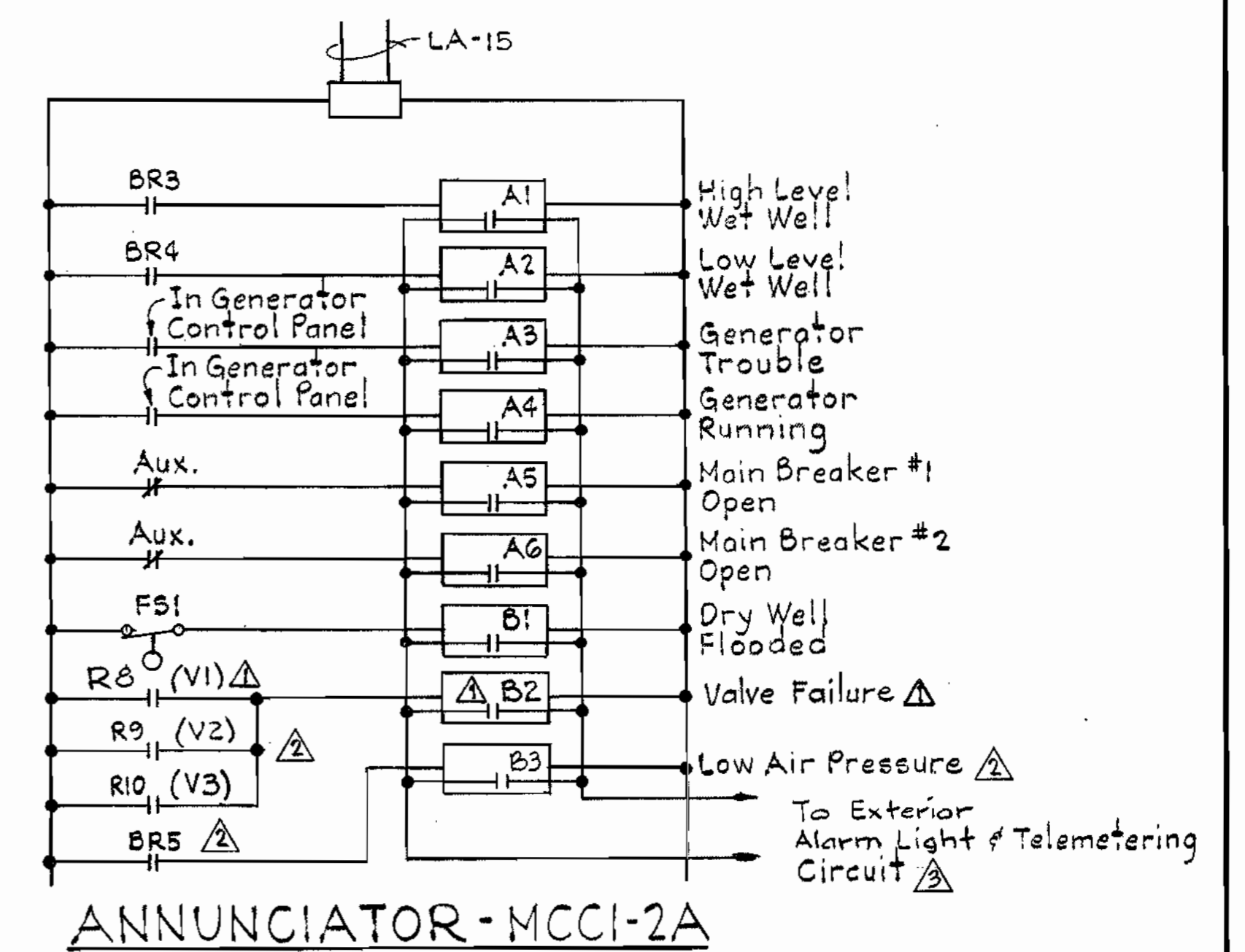
PUMP ROOM VENT FAN



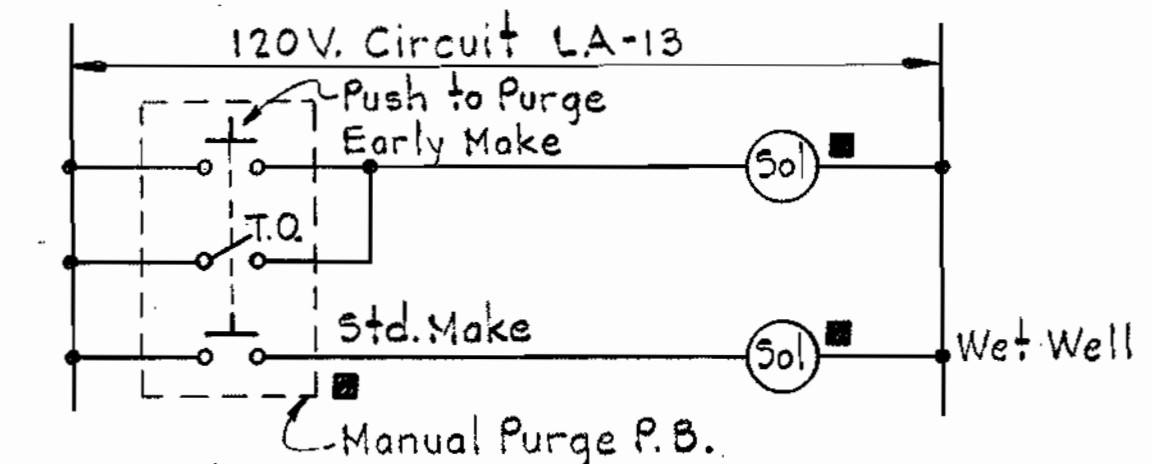
UNIT HEATER NO. 1
(Typical for Unit Heaters No's 2, 3 & 4)



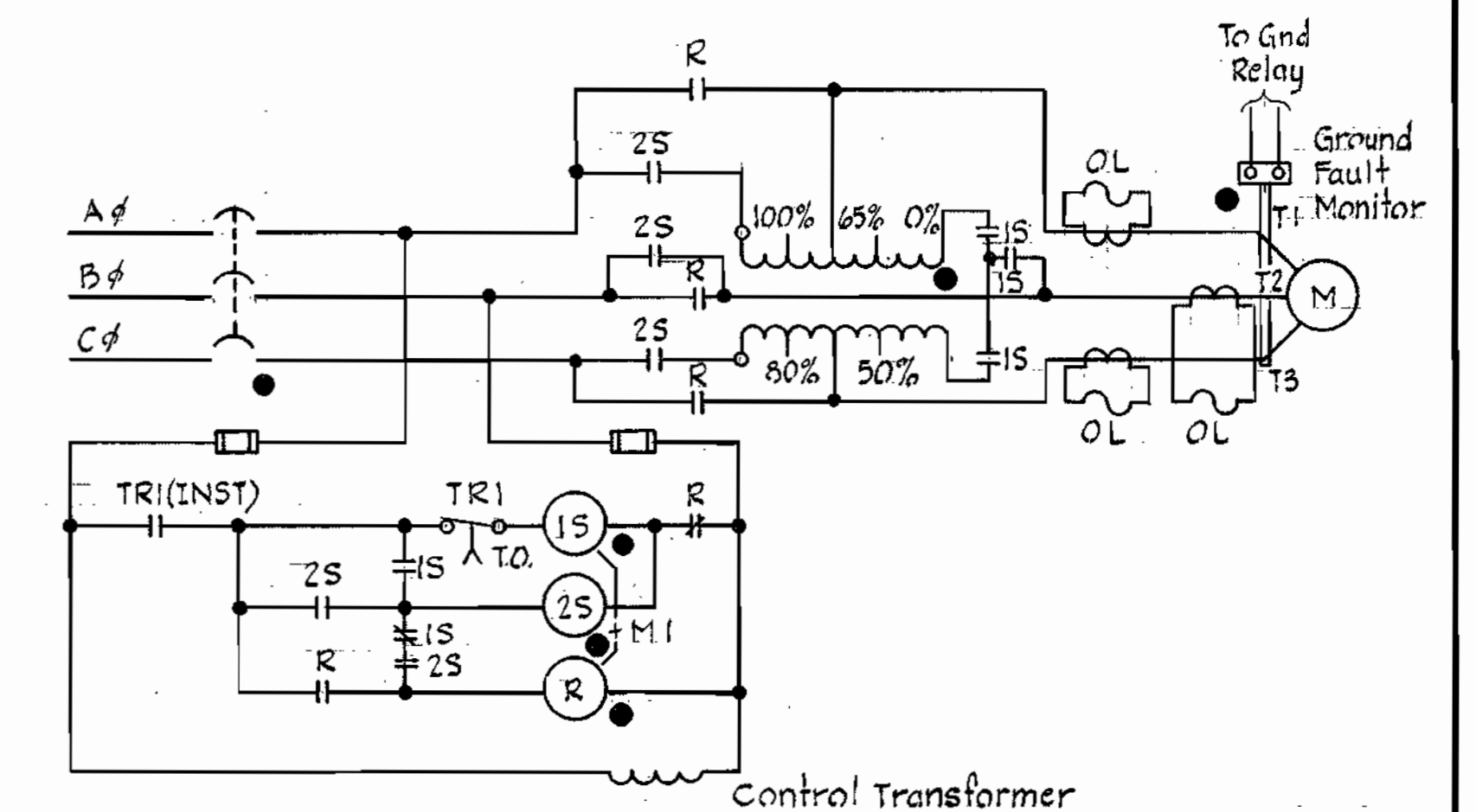
HEATER CONTROL



ANNUNCIATOR - MCCI-2A



BUBBLER PURGE CONTROL



SEWAGE PUMP NO. 1 POWER DIAGRAM
(Typical for Sewage Pumps No. 2 & No. 3)

LOCATION LEGEND

- ▲ Located at or near motor or pump
- Located at Motor Control Center
- Located at Bubbler Panel

NOTES

1. Sewage Pumps are interlocked so that only two of the three can run at the same time whether in hand or automatic mode.
2. See spec. Div. 15 for Control descriptions.

Sheet E-4



Maryland Route 108
Sewage Pumping Station
Project No. S-4-6041
Contract No. 681-5

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James E. Blig 8/26/80
DIRECTOR OF PUBLIC WORKS - DATE

Allen S. Brown 8/25/80
CHIEF - UTILITIES DIVISION - DATE

1-9-81 Added Telemetering
12-19-80 General Revisions
9-26-80 General Revisions

CONTRACT NO. 681-S
PROJECT NO. S-4-6041

WIRING DIAGRAMS

ELECTION DISTRICT
ELLCOTT CITY NO. 2

DRAWING NO. 21
OF 21 SCALE

WS 681 S/21