

**GENERAL NOTES**

1. Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately.
2. All pipe elevations are invert  $\ominus$  elevations.
3. The contractor shall locate existing utilities a minimum of two weeks in advance of construction operations in vicinity of utilities.
4. For all standard details see Howard County standard specifications and details for water mains and sanitary sewers.
5. Water mains shall be all cast iron pipe or all asbestos cement pressure pipe with no combinations allowed.
6. Block all fittings with concrete, see Howard County standard specifications and details for water mains and sanitary sewers.
7. Bury line elevations on fire hydrants shall be set to the elevations shown on the drawings.
8. All fire hydrants shall be buttressed in accordance with standard detail W-4.
9. All valves shall be strapped to tees in accordance with standard details W-6A or W-6C.
10. Cost of strapping valves to tees to be included in the unit price bid for furnishing and laying of water mains.
11. Clear all utilities by a minimum of 6'.
12. All manholes shall be 4'-0" inside diameter.
13. The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole walls.
14. Brick manholes shall have 12" walls as called for on the Profiles.
15. All horizontal and vertical controls are based on Maryland State datum.
16. Bid line for sanitary sewer:  
SMH 1 to SMH 10 existing ground  
In Roads top of subgrade  
Elsewhere proposed ground.
17. Sanitary sewers shall be all VCPX or all A.C.S.P. with no combinations allowed.
18. 20' Utility Easements shall be As Shown On The Plans.

QUANTITIES	
ITEMS	QUANTITY
12" WATER	4216 L.F.
6" WATER	155 L.F.
6" F.H.	8 EA.
10" SANITARY	2828 L.F.
8" SANITARY	5600 L.F.
6" SANITARY S.H.C.	192 L.F.

**CONTRACT**  
**506-D-W8S**  
**WATER AND SEWER MAINS**  
**HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS**  
**ELLICOTT CITY, MARYLAND**

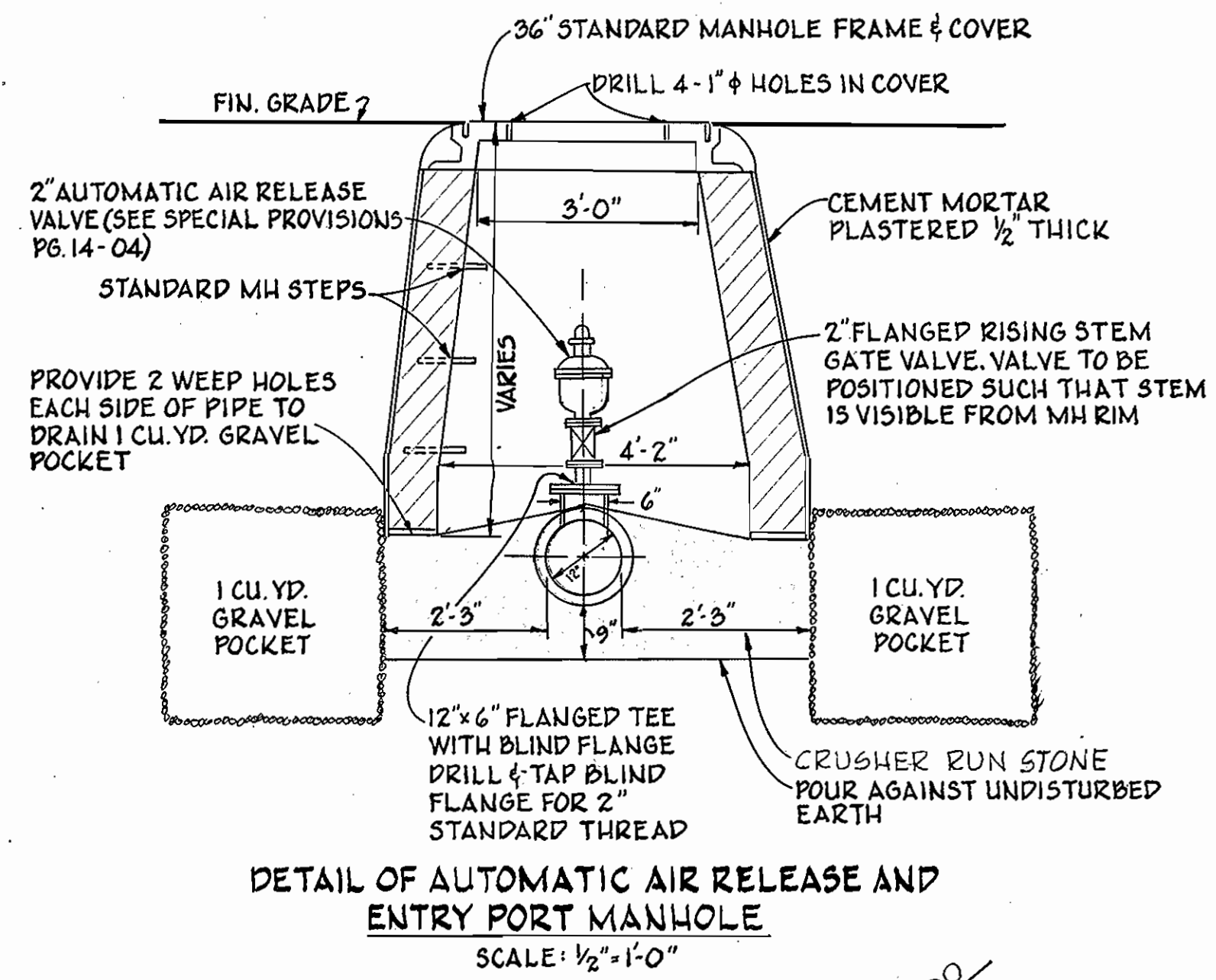


9/20/72  
 DATE

GEORGE W. STEPHENS JR. & ASSOC. INC. CONSULTING ENGINEERS 303 ALLEGHENY AVE. TOWSON, MD. 21204	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 10-13-72 DATE W. O. Albert CHIEF ENGINEER	CONTRACT NO. 506-D-W8S	LOCATION MAP OF WATER & SEWER MAINS	ROUTE ONE HUNDRED OFFICE/INDUSTRIAL PARK HOWARD COUNTY, MARYLAND PHASE I	DRAWING NO. 1 OF 8 SCALE AS SHOWN	DES. PRG. ORW. DWF. CHK. TC
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7/5 BUILT 4-30-73

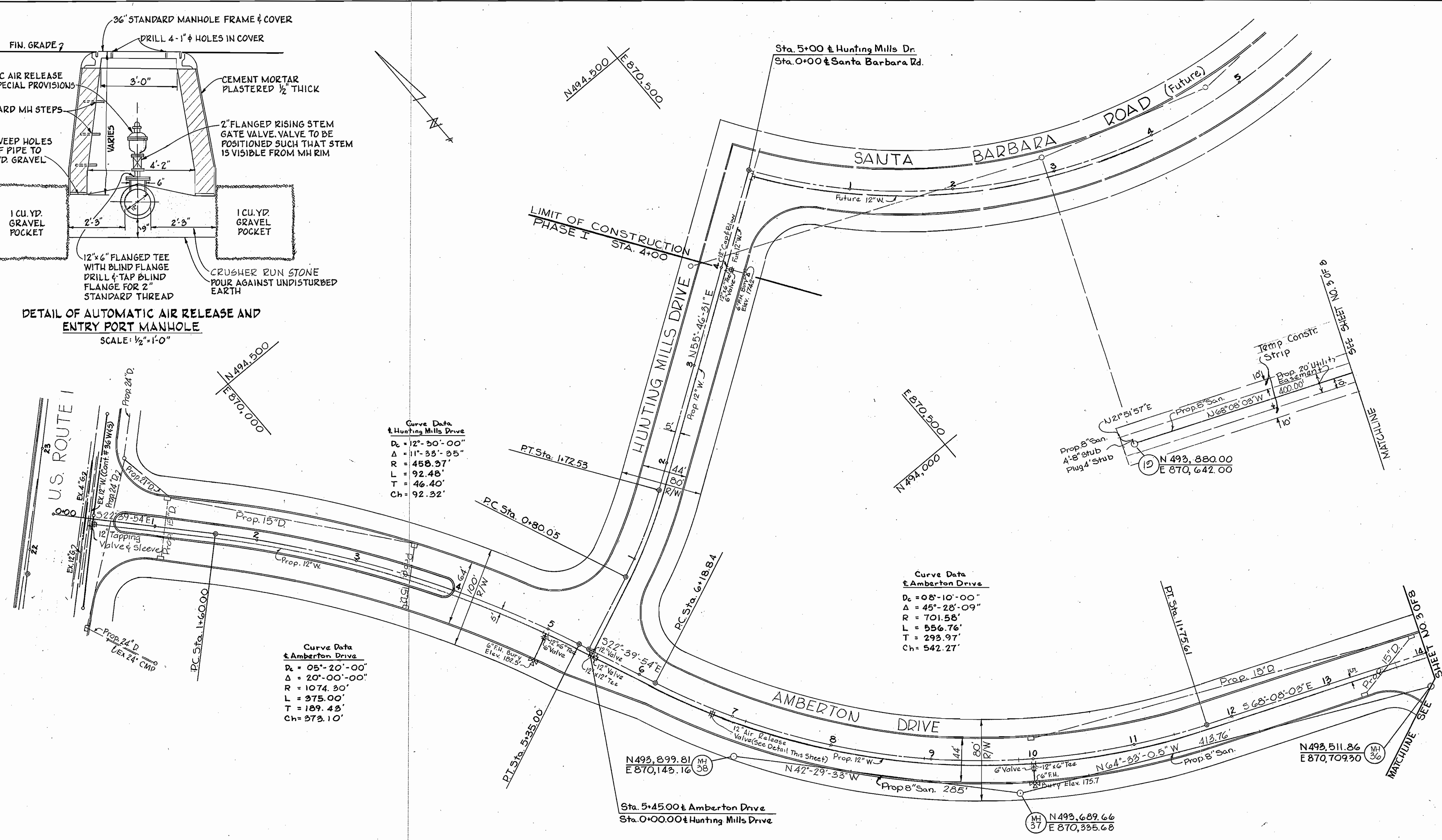
WS 506 W4S/1



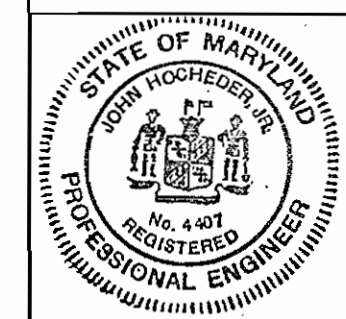
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Hunting Mills Drive  
Dc = 12°-30'-00"  
Δ = 11°-38'-25"  
R = 458.97'  
L = 92.48'  
T = 46.40'  
Ch = 92.32'

Curve Data  
Amberton Drive  
Dc = 05°-20'-00"  
Δ = 20°-00'-00"  
R = 1074.30'  
L = 375.00'  
T = 189.43'  
Ch = 373.10'

Curve Data  
Amberton Drive  
Dc = 08°-10'-00"  
Δ = 45°-28'-09"  
R = 701.58'  
L = 556.76'  
T = 293.97'  
Ch = 542.27'



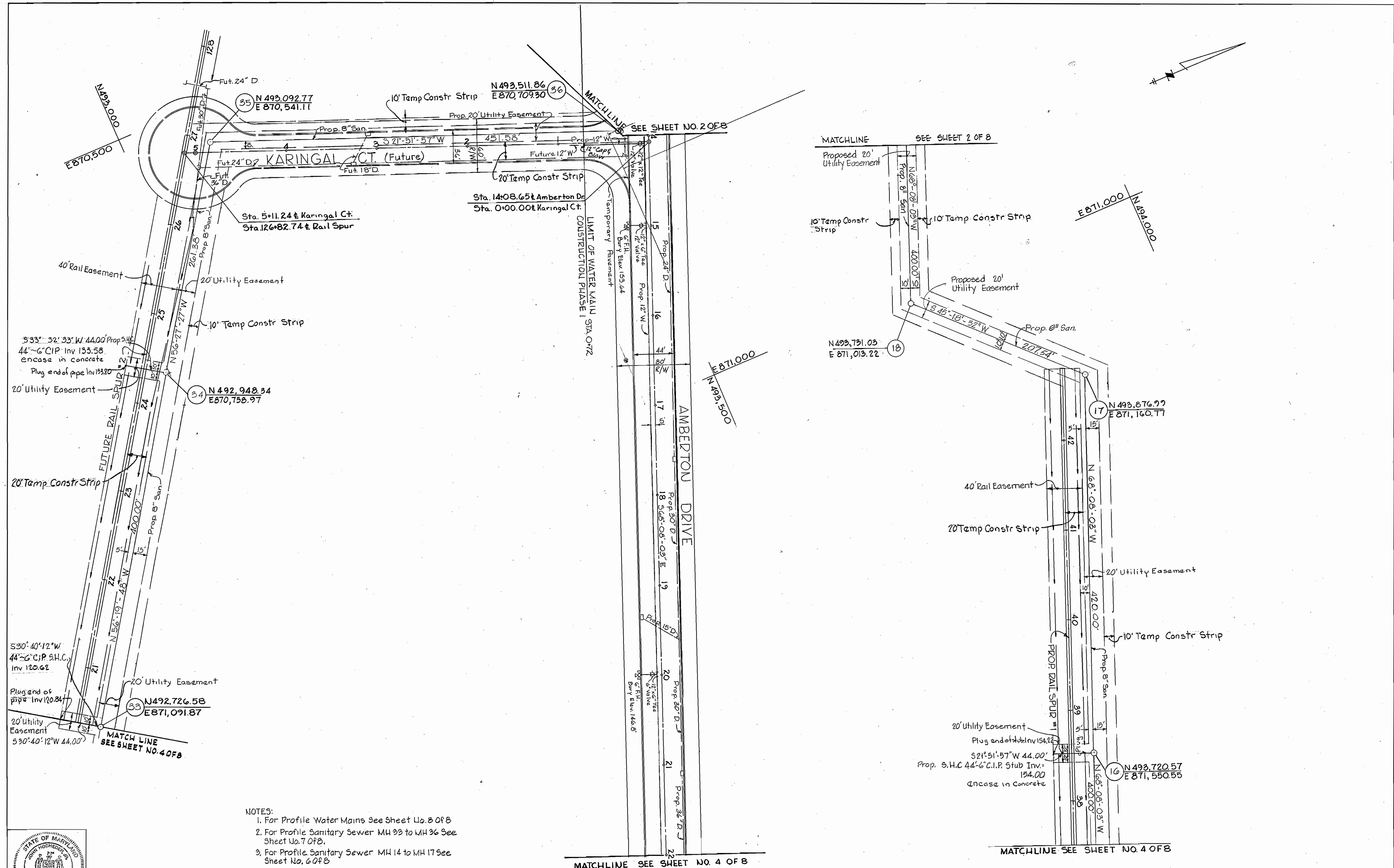
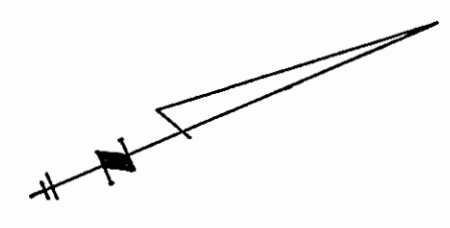
- NOTES:
1. For Profile Water Mains See Sheet No. 80FB
  2. For Profile Sanitary Sewer MH 38 to MH 36 See Sheet No. 60FB
  3. For Profile Sanitary Sewer MH 17 to MH 18 See Sheet No. 70FB



*George W. Stephens Jr.*  
REG. NO. 4407 DATE 9/20/72

GEORGE W. STEPHENS JR. & ASSOC. CONSULTING ENGINEERS 303 ALLEGHENY AVE. TOWSON, MD. 21204	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 10-13-72 DATE <i>W. O. Fikert</i> CHIEF ENGINEER	CONTRACT NO. 506-D-W&S	PLAN OF WATER & SEWER MAINS	ROUTE ONE HUNDRED OFFICE/INDUSTRIAL PARK HOWARD COUNTY, MARYLAND PHASE I	DRAWING NO. 2 OF 8 SCALE 1"=50'	DES. PRC. DRW. GWP. CHK. TC.
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WS 506 wds/2



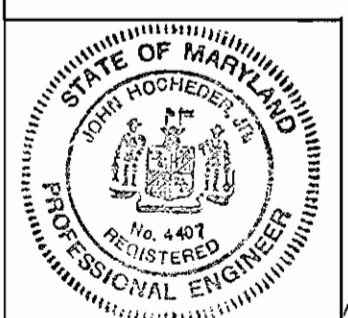
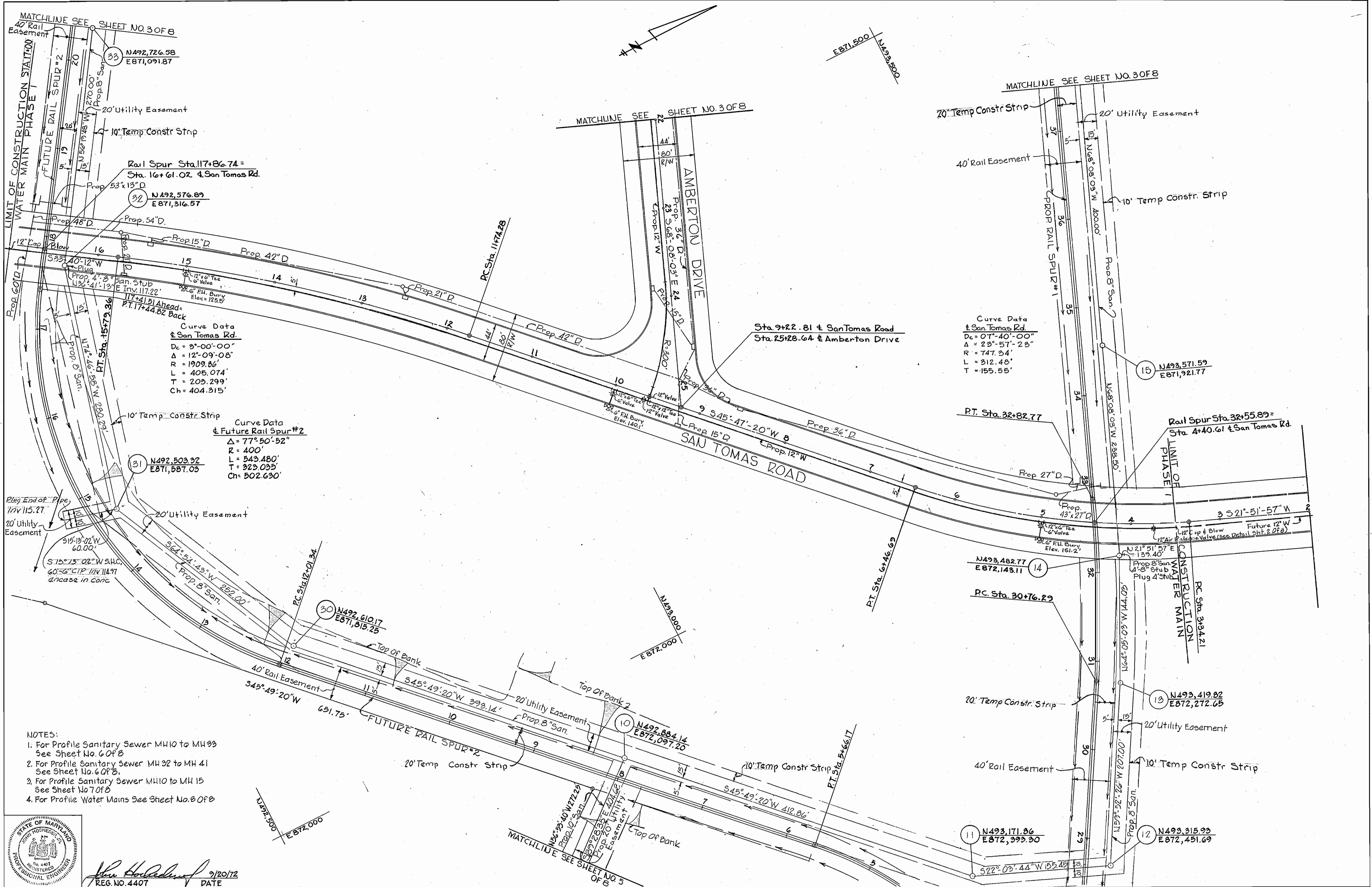
- NOTES:
1. For Profile Water Mains See Sheet No. 8 OF 8
  2. For Profile Sanitary Sewer MH 23 to MH 36 See Sheet No. 7 OF 8.
  3. For Profile Sanitary Sewer MH 14 to MH 17 See Sheet No. 6 OF 8



*George W. Stephens, Jr.*  
 REG. NO. 4497 DATE 9/20/72

GEORGE W. STEPHENS, JR. & ASSOC. INC. CONSULTING ENGINEERS 303 ALLEGHENY AVE. TOWSON, MD. 21204	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS DATE 10.13.72 <i>W.O. Filbert</i> CHIEF ENGINEER	CONTRACT NO. 506-D-W&S	PLAN OF WATER & SEWER MAINS	ROUTE ONE HUNDRED OFFICE/INDUSTRIAL PARK HOWARD COUNTY, MARYLAND PHASE I JUNE 1, 1972	DRAWING NO. 3 OF 8 SCALE 1"=50' DES. PRC DRW. DWF CHK. TC
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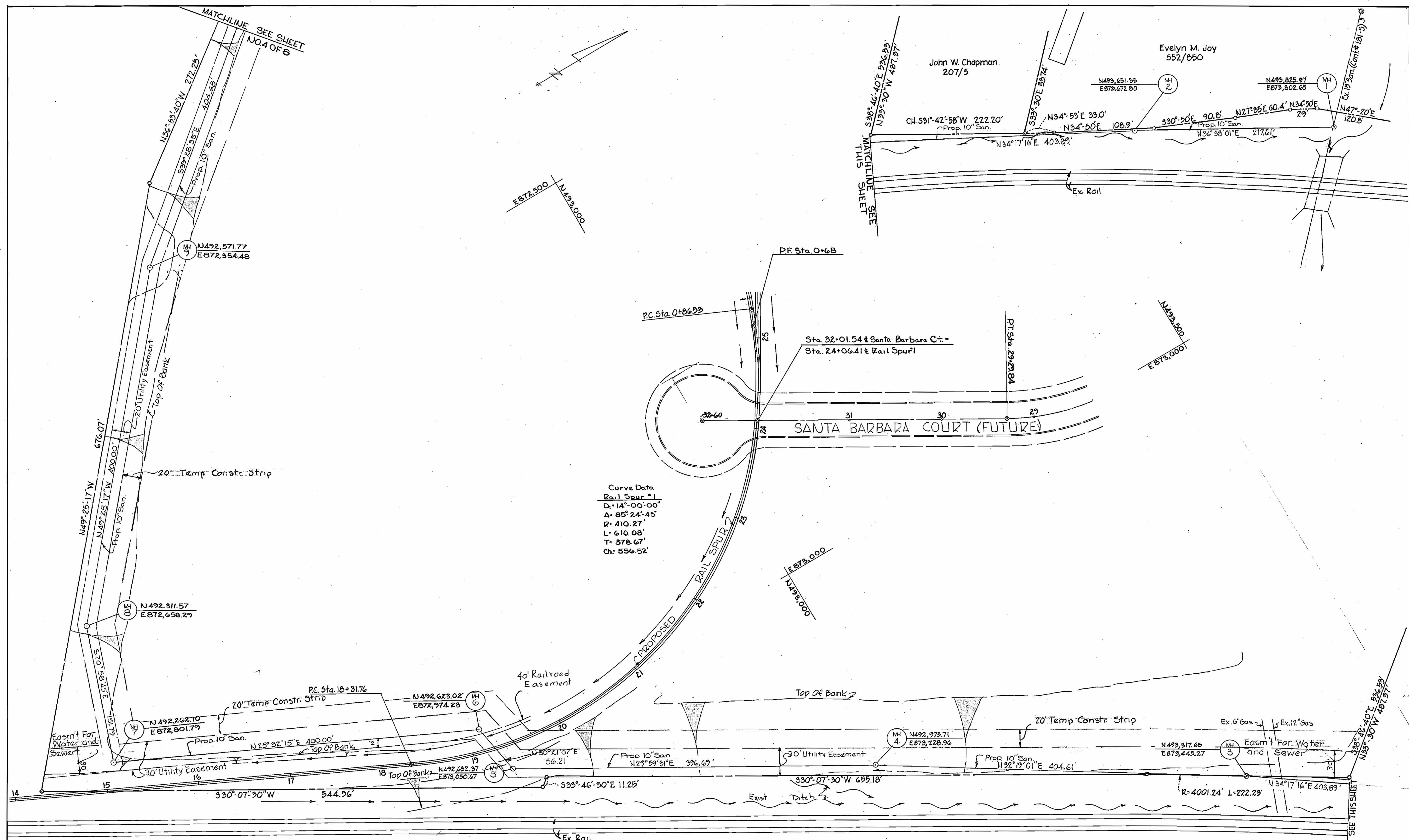
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*George W. Stephens Jr.*  
 REG. NO. 4407 DATE 2/20/72

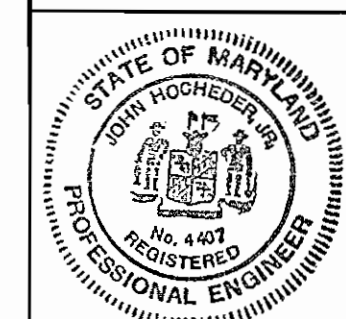
GEORGE W. STEPHENS JR. & ASSOC. INC. CONSULTING ENGINEERS 303 ALLEGHENY AVE. TOWSON, MD. 21204	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 10.13.72 <i>W. O. Fulwider</i> DATE CHIEF ENGINEER	CONTRACT NO. 506-D-W&S	PLAN OF WATER & SEWER MAINS	ROUTE ONE HUNDRED OFFICE/INDUSTRIAL PARK HOWARD COUNTY, MARYLAND PHASE I	DRAWING NO. 4 OF 8	SCALE 1"=50'	DES. PRC. DRW. CHK. TO
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WS 506 W&S/4



Curve Data  
 Rail Spur #1  
 D: 14°-00'-00"  
 Δ: 85°-24'-45"  
 R: 410.27'  
 L: 610.08'  
 T: 378.67'  
 Ch: 556.52'

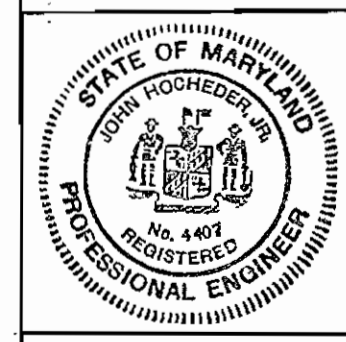
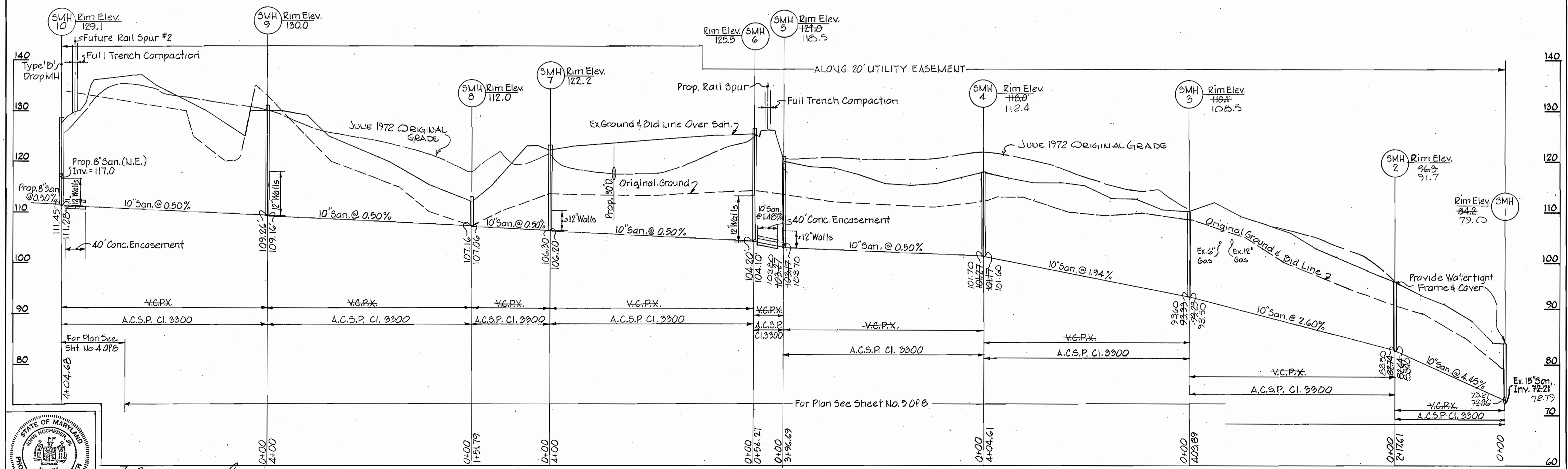
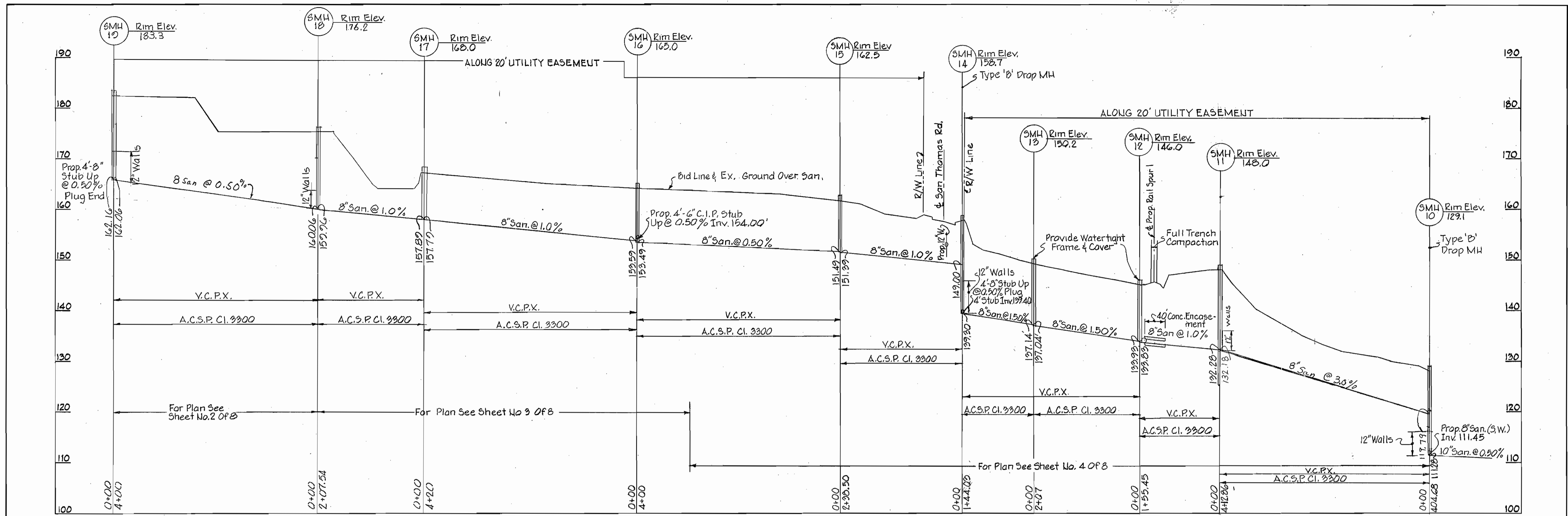
NOTE:  
 1. For Profile Sanitary Sewer See Sheet No. 6 of 8  
 2. Sanitary Sewer From MH1 to MH5 is As Built



*John H. Stephens*  
 REG. NO. 4407 DATE 9/20/72

GEORGE W. STEPHENS JR. & ASSOC. INC. CONSULTING ENGINEERS 303 ALLEGHENY AVE. TOWSON, MD. 21204	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 10.13.72 <i>W O Filbert</i> DATE CHIEF ENGINEER	CONTRACT NO. 506-D-W&S	PLAN OF WATER & SEWER MAINS	ROUTE ONE HUNDRED OFFICE/INDUSTRIAL PARK HOWARD COUNTY, MARYLAND PHASE I JUNE 1, 1972	DRAWING NO. 5 OF 8 SCALE 1"=50' DES. PRC CHK. TC
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WS 506 w&s/s



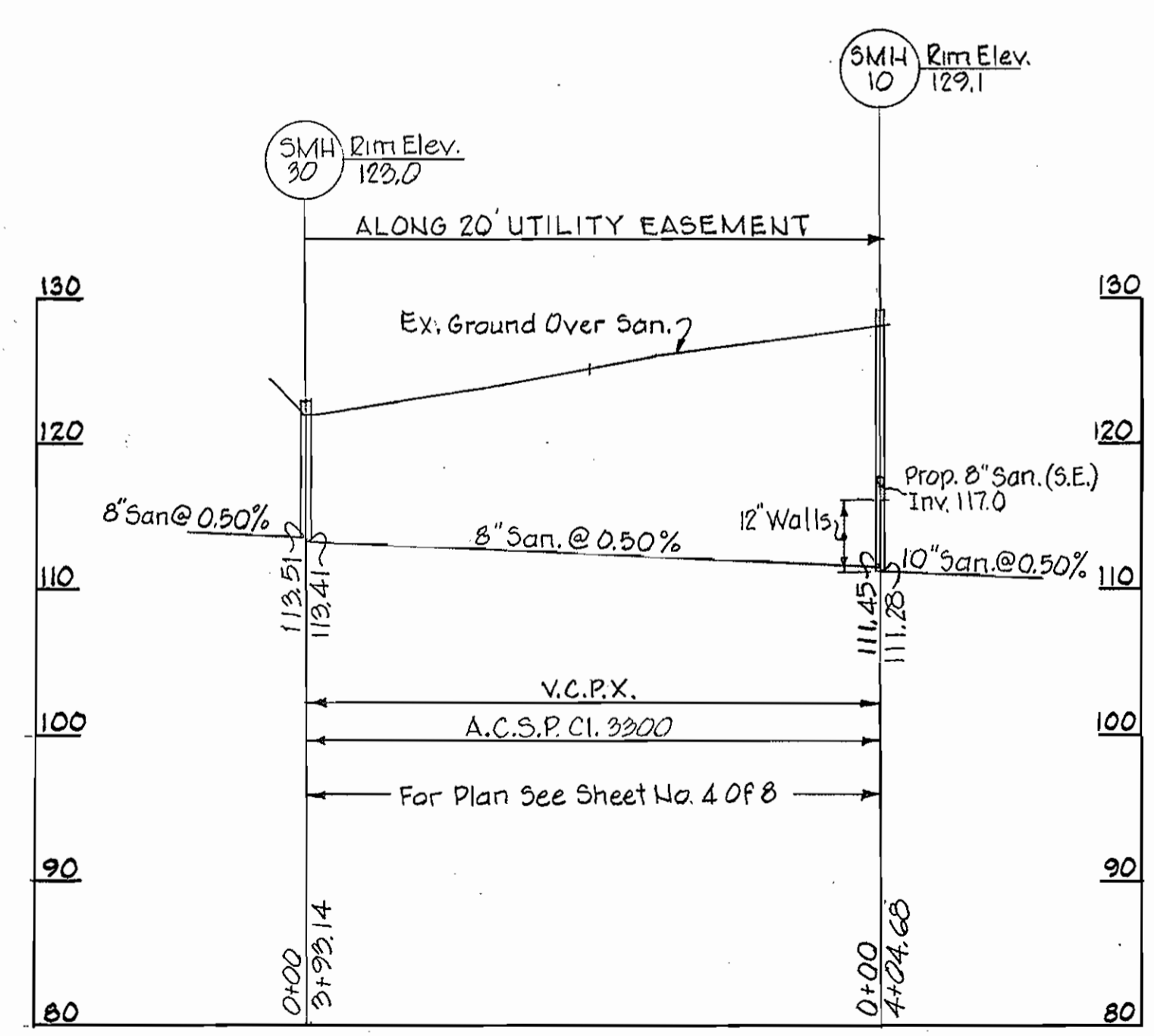
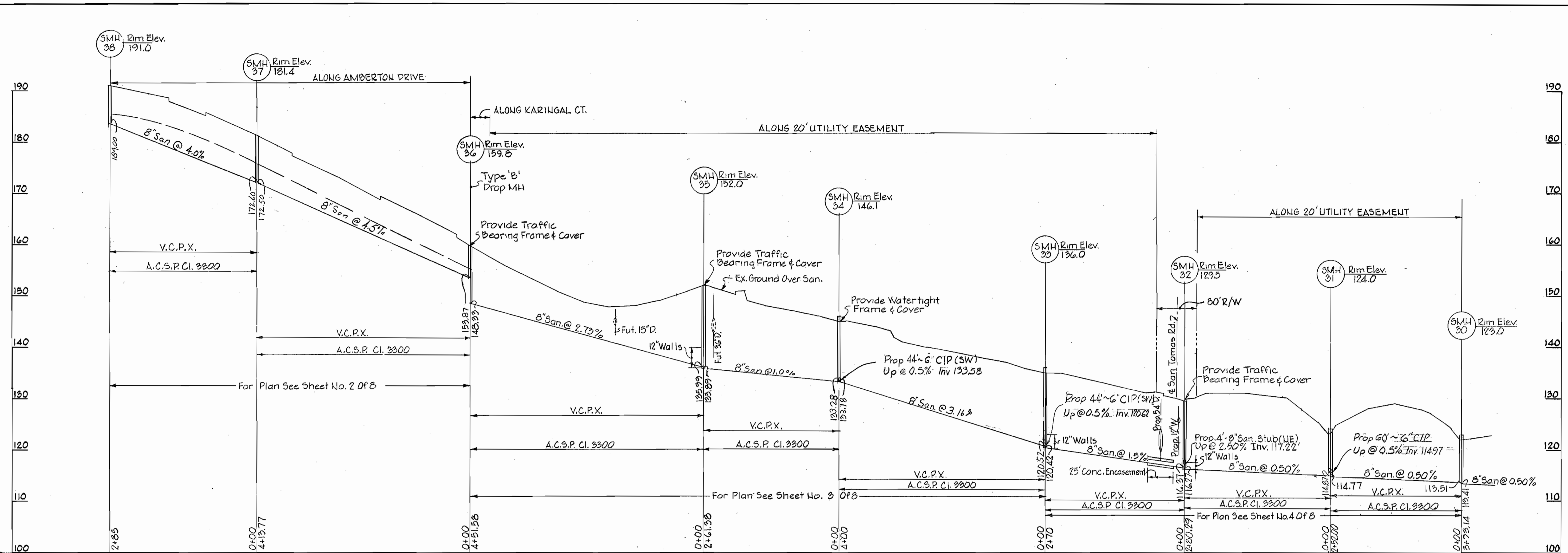
*George W. Stephens, Jr.*  
 REG. NO. 4407 DATE 9/20/72

GEORGE W. STEPHENS, JR. & ASSOC. INC. CONSULTING ENGINEERS 303 ALLEGHENY AVE. TOWSON, MD. 21204	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS DATE 10-13-72 <i>W O Falbert</i> CHIEF ENGINEER	CONTRACT NO. 506-D-W&S	PROFILES OF WATER & SEWER MAINS	ROUTE ONE HUNDRED OFFICE / INDUSTRIAL PARK HOWARD COUNTY, MARYLAND PHASE I	DRAWING NO. 6 OF 8	SCALE Hor 1"=100' Vert 1"=10'	DES. TC DRW. PRC CHK. TC
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NOTE: Sanitary Sewer From MH 1 to MH 5 is As Built

AS-BUILT 4-30-73

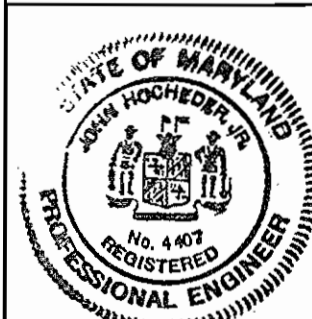
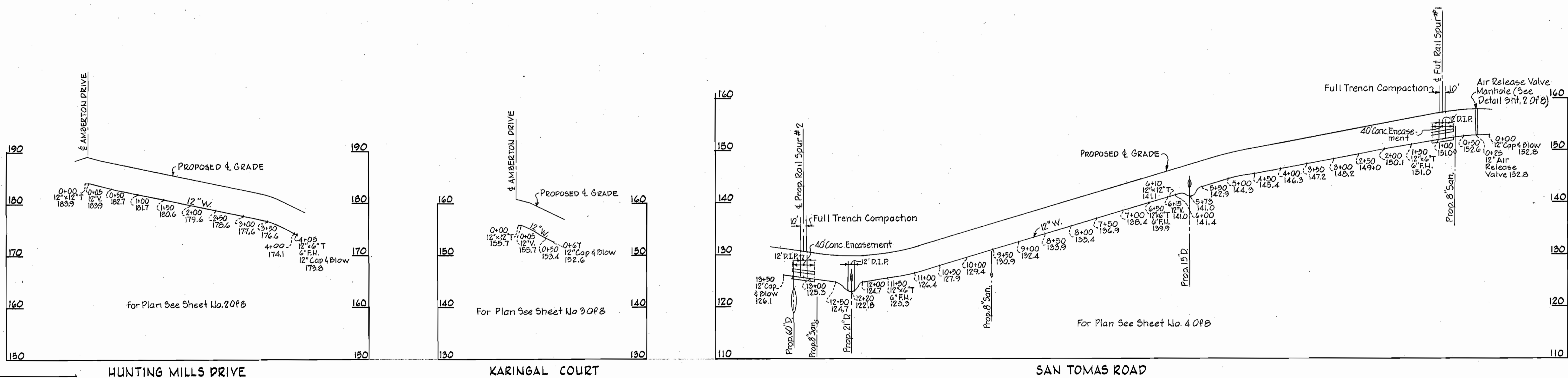
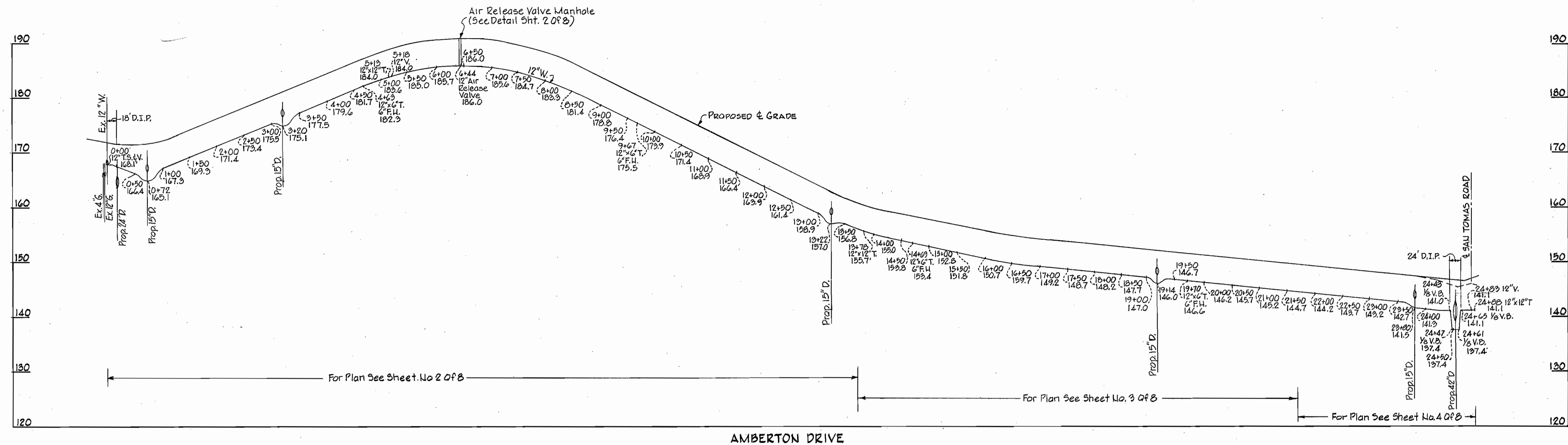
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*John H. ...*  
 REG. NO. 4407 DATE 7/20/72

GEORGE W. STEPHENS JR. & ASSOC. INC. CONSULTING ENGINEERS 303 ALLEGHENY AVE. TOWSON, MD. 21204	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS DATE 10-13-72 CHIEF ENGINEER <i>W O Filbert</i>	CONTRACT NO. 506-D-W&S	PROFILES OF WATER & SEWER MAINS	ROUTE ONE HUNDRED OFFICE/INDUSTRIAL PARK HOWARD COUNTY, MARYLAND PHASE I	DRAWING NO. 7 OF 8 SCALE Hor. 1"=100' Vert. 1"=10'	DES. JRS CHK. TC DATE JUNE 1, 1972
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WS 506 W&S/7



*George W. Stephens Jr.*  
 REG. NO. 4407 DATE 9/20/72

GEORGE W. STEPHENS JR. & ASSOC. INC.  
 CONSULTING ENGINEERS  
 303 ALLEGHENY AVE. TOWSON, MD. 21204

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DATE 10-13-72 *W O Falbert*  
 CHIEF ENGINEER

CONTRACT NO. 506-D-W&S

PROFILES OF  
 WATER & SEWER MAINS

ROUTE ONE HUNDRED  
 OFFICE / INDUSTRIAL PARK  
 HOWARD COUNTY, MARYLAND PHASE I  
 JUNE 1, 1972

DRAWING NO. 8 OF 8  
 SCALE Hor. 1"=100'  
 Vert. 1"=10'

WS 506 W&S/8