

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTION
3	TYPICAL SECTION
4	SURVEY TRAVERSE AND BENCH MARKS
5	ROADWAY PLAN - MD 103 & SOUTH HAVEN DRIVE
6	ROADWAY PLAN - SOUTH HAVEN & ELBERTA DRIVES
7	ROADWAY PLAN - ELBERTA & HALE HAVEN DRIVES
8	ROADWAY PLAN - HALE HAVEN/DONCASTER CONNECTION
9	ROADWAY PLAN - DONCASTER DRIVE
10	ROADWAY PLAN - DONCASTER DRIVE & ROUNDHILL ROAD
11	ROADWAY PLAN - ROUNDHILL ROAD & HUNTLEY DRIVE
12	ROADWAY PLAN - MD 103 & WORTHINGTON WAY
13	ROADWAY PLAN - WORTHINGTON WAY & EASTWOOD COURT
14	ROADWAY PLAN - WORTHINGTON WAY
15	ROADWAY PLAN - WORTHINGTON WAY & ELICOTT WOODS
16	ROADWAY PLAN - WORTHINGTON WAY & ROUNDHILL ROAD
17	ROADWAY PLAN - ROLLINGTOP ROAD, ORCHARD DRIVE & ROLLINGTOP ROAD AT ORCHARD DRIVE
18	ROADWAY PLAN - DONCASTER DRIVE AT VINTERS WAY & CHEWS VINEYARD & CHEWS VINEYARD
19	PROFILE - HALE HAVEN/DONCASTER CONNECTION
20	PROFILE - EAST ACCESS ROAD
21	PROFILE - STORM DRAINS
22	PROFILE - STORM DRAINS
23	PROFILE - STORM DRAINS
24	MAINTENANCE OF TRAFFIC - HALE HAVEN/DONCASTER CONNECTION
25	MAINTENANCE OF TRAFFIC - WORTHINGTON WAY & ROUNDHILL ROAD
25A	MAINTENANCE OF TRAFFIC - ROUNDHILL ROAD DETOUR
26	UTILITY RELOCATIONS
27	DETAIL - SPEED HUMPS & SPEED TABLES
28	EROSION & SEDIMENT CONTROL PLAN - HALE HAVEN/DONCASTER CONNECTION
29	EROSION & SEDIMENT CONTROL PLAN - NOTES & DETAILS
30	EROSION & SEDIMENT CONTROL PLAN - NOTES & DETAILS
31	EROSION & SEDIMENT CONTROL PLAN - NOTES & DETAILS
32	STORMWATER MANAGEMENT - DETAILS
33	STORMWATER MANAGEMENT - STRUCTURAL DETAILS
33A & 33B	TIMBER CRIB RETAINING WALL - PLAN, SECTION AND DETAILS
34 & 33C	LANDSCAPE PLAN - PLANTING DETAILS
35	LANDSCAPE PLAN - PLANTING DETAILS & SCHEDULE
36	LANDSCAPE PLAN - MD 103 & SOUTH HAVEN DRIVE
37	LANDSCAPE PLAN - SOUTH HAVEN & ELBERTA DRIVES
38	LANDSCAPE PLAN - ELBERTA & HALE HAVEN DRIVES
39	LANDSCAPE PLAN - HALE HAVEN/DONCASTER CONNECTION
40	LANDSCAPE PLAN - DONCASTER DRIVE
41	LANDSCAPE PLAN - DONCASTER DRIVE & ROUNDHILL ROAD
42	LANDSCAPE PLAN - ROUNDHILL ROAD & HUNTLEY DRIVE
43	LANDSCAPE PLAN - MD 103 & WORTHINGTON WAY
44	LANDSCAPE PLAN - WORTHINGTON WAY & EASTWOOD COURT
45	LANDSCAPE PLAN - WORTHINGTON WAY
46	LANDSCAPE PLAN - WORTHINGTON WAY & ELICOTT WOODS
47	LANDSCAPE PLAN - WORTHINGTON WAY & ROUNDHILL ROAD
48	LANDSCAPE PLAN - ROLLINGTOP ROAD, ORCHARD DRIVE & ROLLINGTOP ROAD AT ORCHARD DRIVE
49	LANDSCAPE PLAN - DONCASTER DRIVE AT VINTERS WAY & CHEWS VINEYARD & CHEWS VINEYARD
50	SIGNING & MARKING PLAN - MD 103 & SOUTH HAVEN DRIVE
51	SIGNING & MARKING PLAN - SOUTH HAVEN & ELBERTA DRIVES
52	SIGNING & MARKING PLAN - ELBERTA & HALE HAVEN DRIVES
53	SIGNING & MARKING PLAN - HALE HAVEN/DONCASTER CONNECTION
54	SIGNING & MARKING PLAN - DONCASTER DRIVE
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56	SIGNING & MARKING PLAN - ROUNDHILL ROAD & HUNTLEY DRIVE
57	SIGNING & MARKING PLAN - MD 103 & WORTHINGTON WAY
58	SIGNING & MARKING PLAN - WORTHINGTON WAY & EASTWOOD COURT
59	SIGNING & MARKING PLAN - WORTHINGTON WAY
60	SIGNING & MARKING PLAN - WORTHINGTON WAY & ELICOTT WOODS
61	SIGNING & MARKING PLAN - WORTHINGTON WAY & ROUNDHILL ROAD
62	SIGNING & MARKING PLAN - ROLLINGTOP ROAD, ORCHARD DRIVE & ROLLINGTOP ROAD AT ORCHARD DRIVE
63	SIGNING & MARKING PLAN - DONCASTER DRIVE AT VINTERS WAY & CHEWS VINEYARD & CHEWS VINEYARD

GENERAL NOTES

- ALL INFORMATION AND DETAILS SHALL BE CONSTRUCTED AS PER PLAN OR AS DIRECTED BY THE HOWARD COUNTY ENGINEER.
- ALL STATIONING AND DIMENSIONING ARE TO BE FIELD VERIFIED BY CONTRACTOR.
- STORM DRAINAGE SLOPES ARE TO BE AS DIRECTED BY HOWARD COUNTY ENGINEER UNLESS OTHERWISE SHOWN ON PLANS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.
 - MISS UTILITY 1-800-257-7777
 - SCOTT WOODALL/BALTIMORE GAS & ELECTRIC COMPANY 410-281-3126

THE CONTRACTOR SHALL CONTACT THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION OF ENGINEERING FOR VERIFICATION AND/OR INFORMATION REGARDING:

- PROPOSED/EXISTING RIGHT-OF-WAY.
- UTILITY RELOCATION.
- MAINTENANCE OF TRAFFIC DURING CONSTRUCTION.
- EROSION/SEDIMENT CONTROL CERTIFICATION AND PERMIT
- HORIZONTAL/VERTICAL SURVEY CONTROL.

UNDER NO CIRCUMSTANCES SHOULD THE EQUIPMENT MAINTAIN LESS THAN A FIFTEEN (15) FEET CLEARANCE FROM ANY TRANSMISSION WIRES OR LESS THAN A TEN (10) FEET CLEARANCE FROM ANY OTHER OVERHEAD ELECTRIC WIRES. THE CONTRACTOR SHALL ALSO ADHERE TO THE APPLICABLE PROVISIONS OF THE HIGH VOLTAGE LINE ACT, MARYLAND CODE ARTICLE 89 SECTIONS 58 THROUGH 62, AND THE OCCUPATIONAL SAFETY AND HEALTH ACT STANDARDS, TITLE 29 CFR, PARTS 1910 AND 1926.

- SEE HOWARD COUNTY STANDARD DETAILS NO'S G-1.01 & G-1.02 FOR STANDARD SYMBOLS.
- COORDINATES BASED ON NAD 83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 31D4 AND NO. 31A3.

31D4 N, 571,700.681
E, 1,369,606.396
ELEV. 495.181 (NAVD29)

31A3 N, 573,217.884
E, 1,368,237.766
ELEV. 487.642 (NAVD29)

- MAINTENANCE OF TRAFFIC ALONG MD 103 SHALL BE HANDLED BY SHA STANDARD MD-104.33-02 - WORK ZONE TRAFFIC CONTROL TYPICAL - SHOULDER WORK/2 LANE, 2 WAY. MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION ALONG THE RESIDENTIAL STREETS SHALL BE HANDLED BY SHA STANDARD MD-104.33-00-WORK ZONE TRAFFIC CONTROL TYPICAL, MD-104.32-01-INTERSECTION FLAGGING OPERATION.

- A STAGING AND STOCKPILE AREA TO BE DETERMINED BY CONTRACTOR AND APPROVED BY HOWARD COUNTY ENGINEER.

- TOPOGRAPHIC SURVEY INFORMATION BASED ON FIELD SURVEY PERFORMED BY DEWBERRY & DAVIS DATED 7/12/99.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. Natural Resources Conservation Service _____ Date _____

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

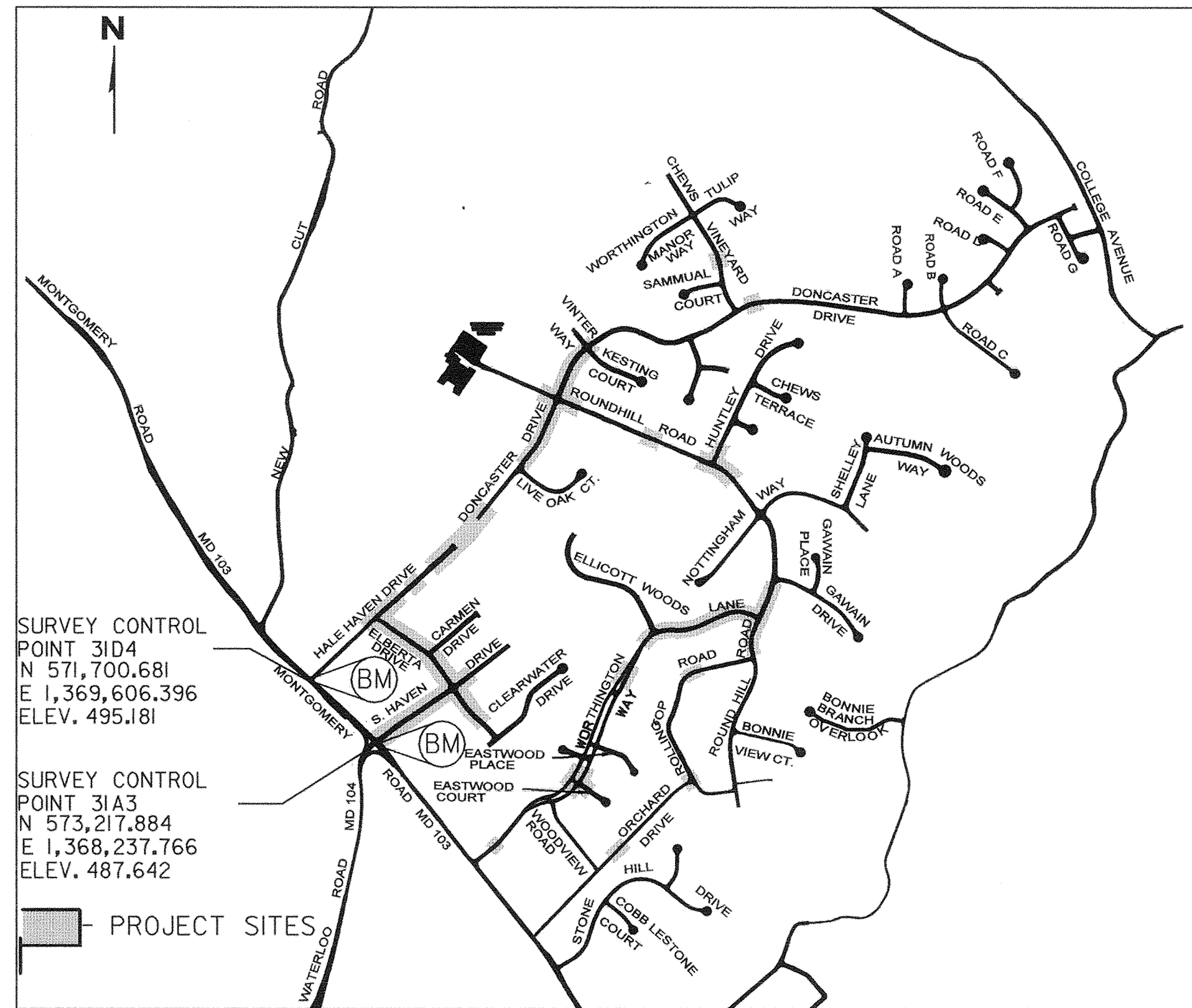
Howard Soil Conservation District _____ Date _____

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

Elizabeth Anderson-Cavin 5/3/00
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT. Date

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

Signature _____ PE No. _____
Date _____



LOCATION MAP
SCALE 1" = 1000'

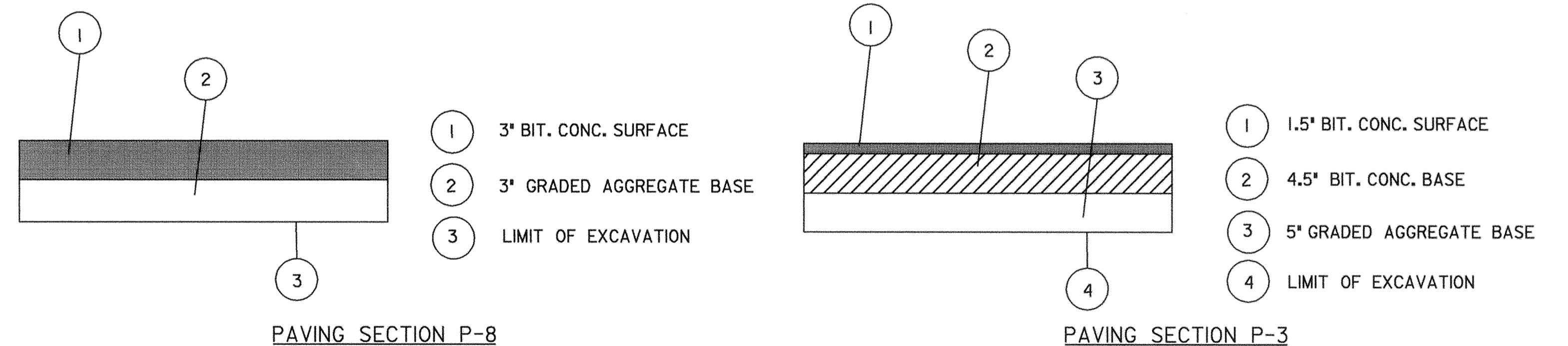
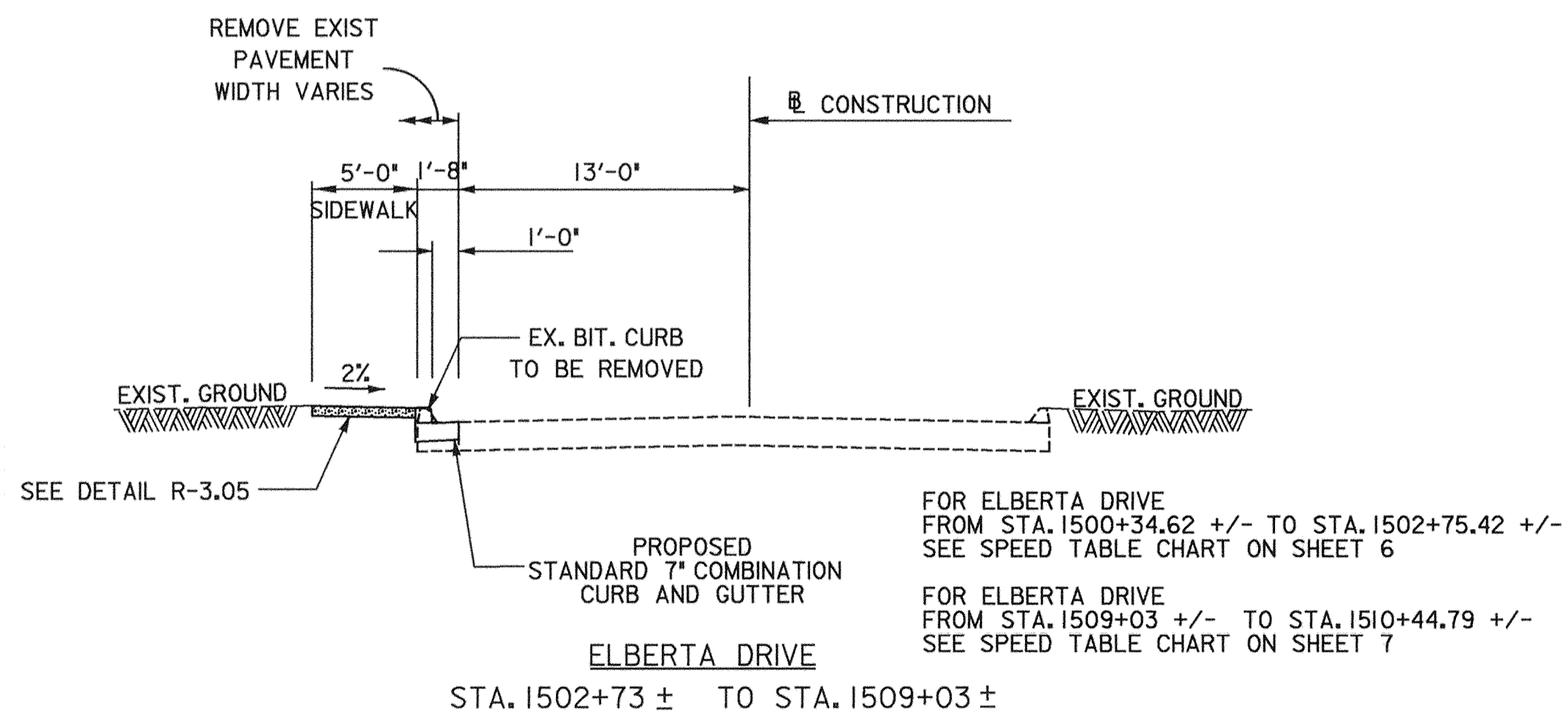
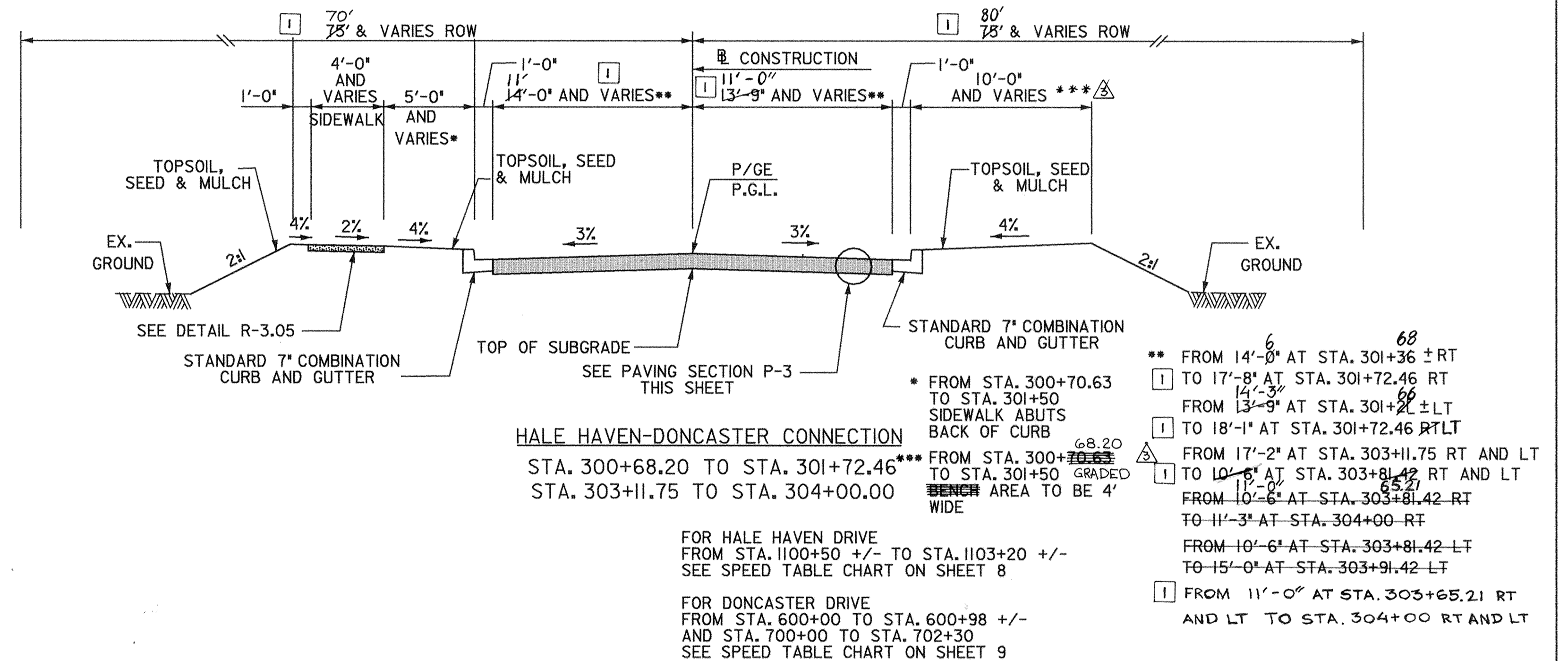
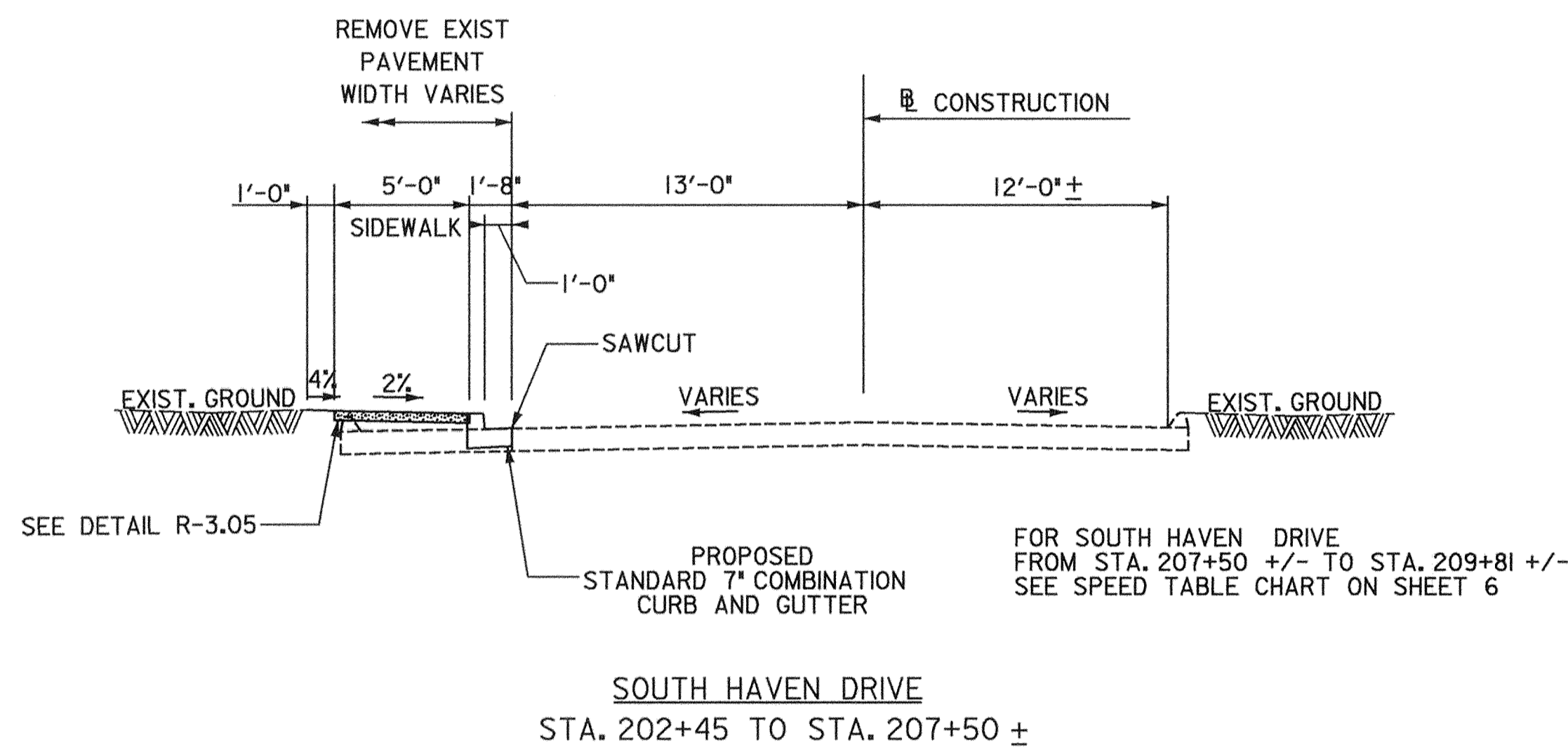
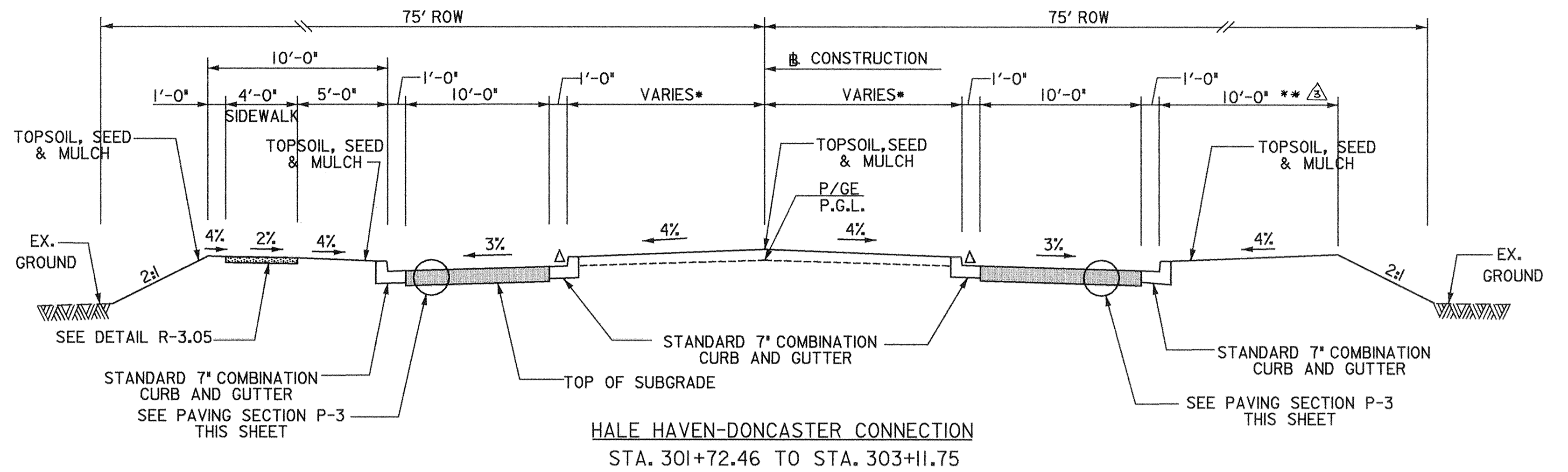
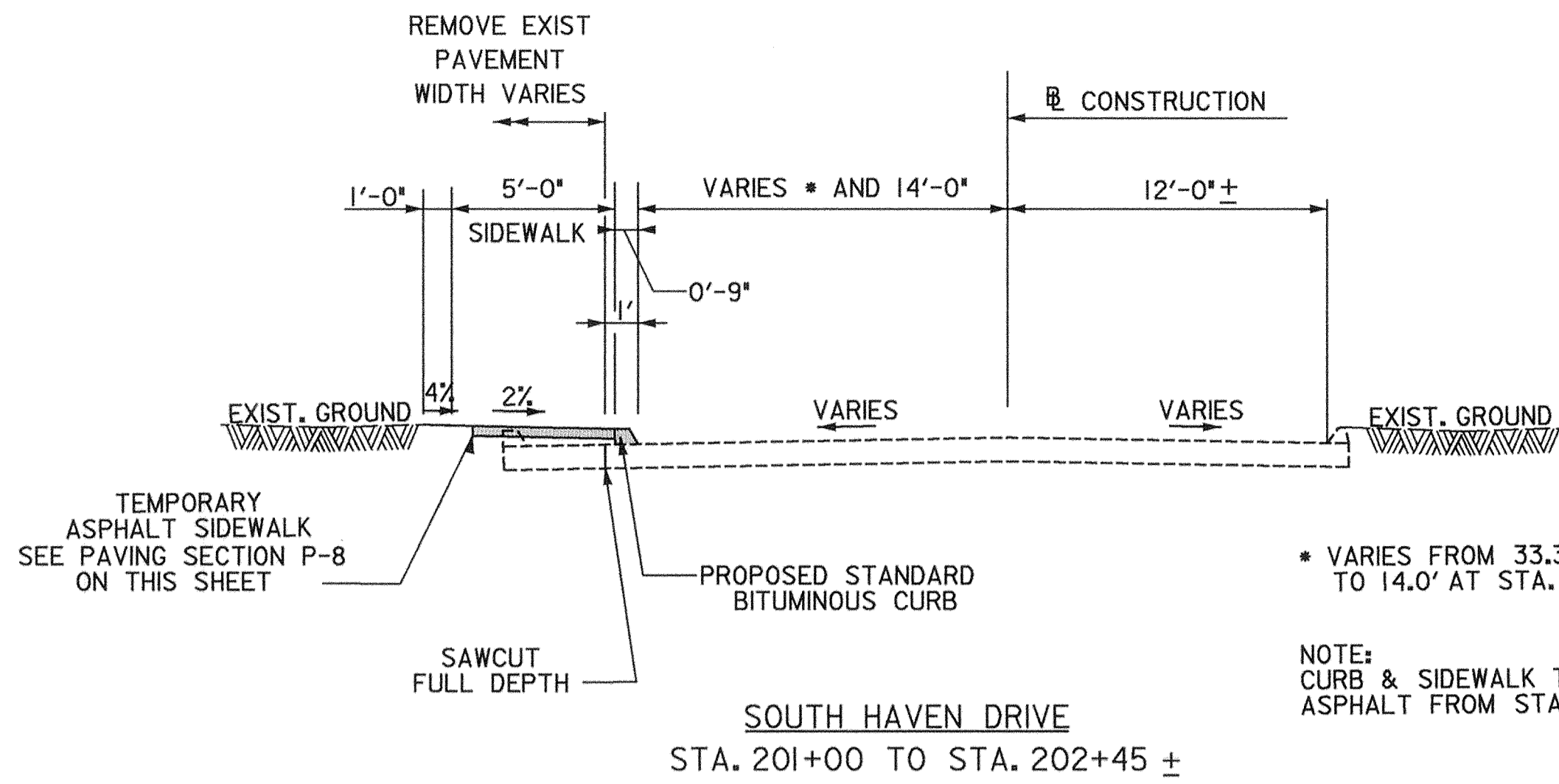
CAPITAL PROJECT NO. J-4158

WORTHINGTON AREA VEHICULAR ACCESS

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Jan 2, 00</i> 5/3/00 DEPARTMENT OF PUBLIC WORKS DATE <i>Saalec</i> 5/3/00 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION DATE	Dewberry & Davis Architects 3120 Timanus Lane, Suite 211 Engineers Baltimore, Maryland 21244 Planners Tel. 410-265-9500 Surveyors Fax. 410-265-8875	DES: _____ DRN: _____ CHK: _____ DATE: _____	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>BY</td> <td>NO.</td> <td>REVISION</td> <td>DATE</td> </tr> <tr> <td>D&D</td> <td>1</td> <td>REVISED SHEETS 1, 2, 5-18, 21, 22, 23, 26</td> <td>9/1/00</td> </tr> <tr> <td>D&D</td> <td>2</td> <td>REVISED SHEETS 1, 2, 8, 28 & 33A</td> <td>6/12/00</td> </tr> <tr> <td>D&D</td> <td>3</td> <td>ADDED SHEET 33C (EXHIBITS 3-6)</td> <td></td> </tr> <tr> <td>D&D</td> <td>4</td> <td>REPLACED SHEET 20, ADDED SHEETS 33A & 33B, REVISED SHEETS 1, 8, 10, 22, 25 & 32</td> <td>04/2/00</td> </tr> </table>	BY	NO.	REVISION	DATE	D&D	1	REVISED SHEETS 1, 2, 5-18, 21, 22, 23, 26	9/1/00	D&D	2	REVISED SHEETS 1, 2, 8, 28 & 33A	6/12/00	D&D	3	ADDED SHEET 33C (EXHIBITS 3-6)		D&D	4	REPLACED SHEET 20, ADDED SHEETS 33A & 33B, REVISED SHEETS 1, 8, 10, 22, 25 & 32	04/2/00	CAPITAL PROJECT NO. J-4158 NO.: _____ DATE: _____	<h2 style="text-align: center;">PHASE 1</h2> <h1 style="text-align: center;">WORTHINGTON AREA VEHICULAR ACCESS</h1> SCALE AS SHOWN SHEET 1 OF 63
BY	NO.	REVISION	DATE																						
D&D	1	REVISED SHEETS 1, 2, 5-18, 21, 22, 23, 26	9/1/00																						
D&D	2	REVISED SHEETS 1, 2, 8, 28 & 33A	6/12/00																						
D&D	3	ADDED SHEET 33C (EXHIBITS 3-6)																							
D&D	4	REPLACED SHEET 20, ADDED SHEETS 33A & 33B, REVISED SHEETS 1, 8, 10, 22, 25 & 32	04/2/00																						



TYPICAL SECTIONS

SCALE: 1"=5'

SHEET NO. TS-1 OF TS-2

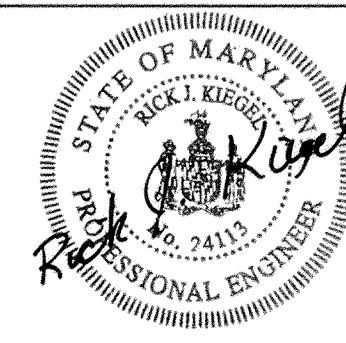
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 5/3/00
CHIEF, BUREAU OF ENGINEERING

[Signature] 5/3/00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



DES:			
DRN:			
CHK:	D&D	1	CORRECTED HALEHAVEN DONCASTER CONN. TYPICAL SECTION 9/1/00
	D&D	2	CHANGED GRADED AREA WIDTHS BEHIND CURB 6/12/00
DATE:	BY	NO.	REVISION

CAPITAL PROJECT NO.

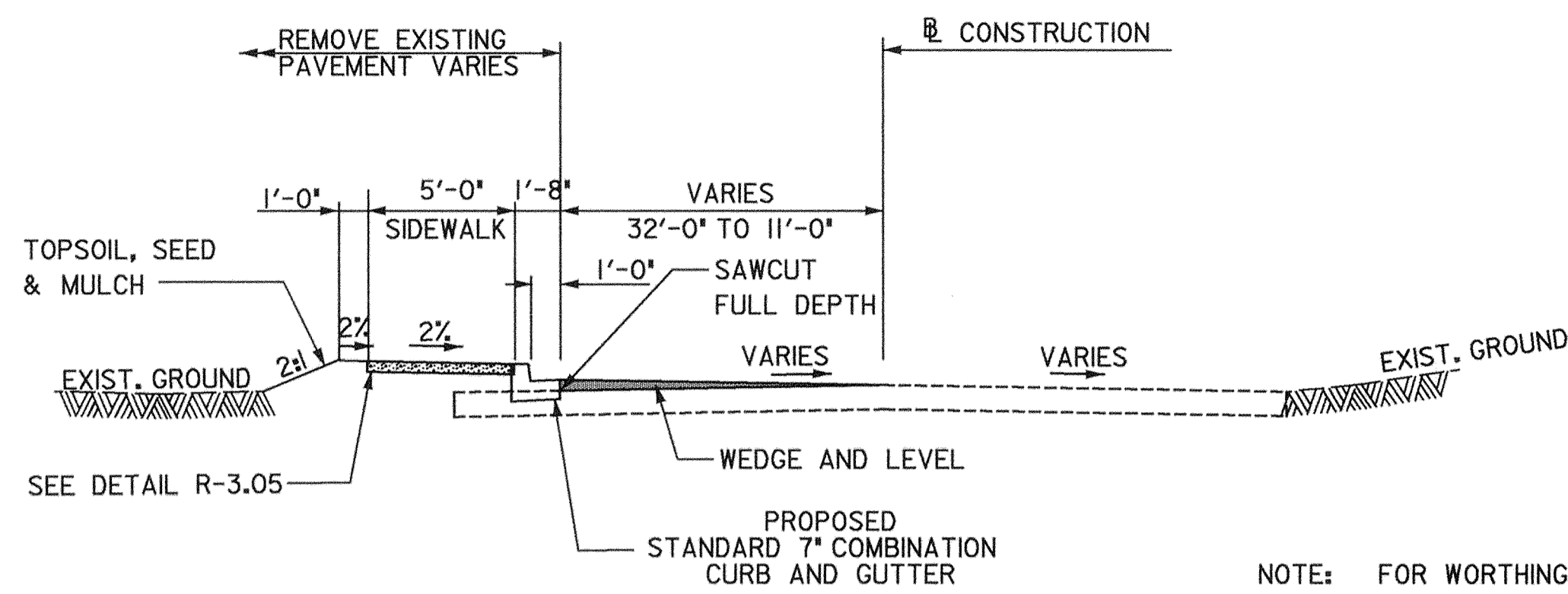
J-4158

NO.: _____ DATE: _____

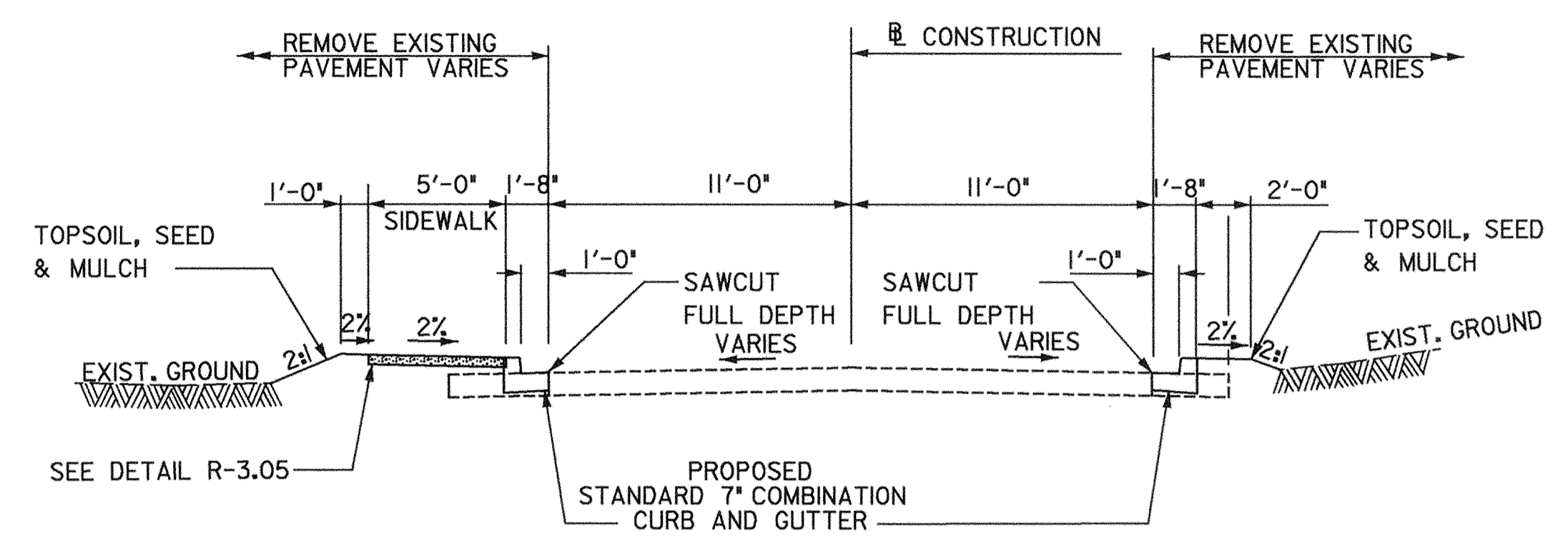
PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN

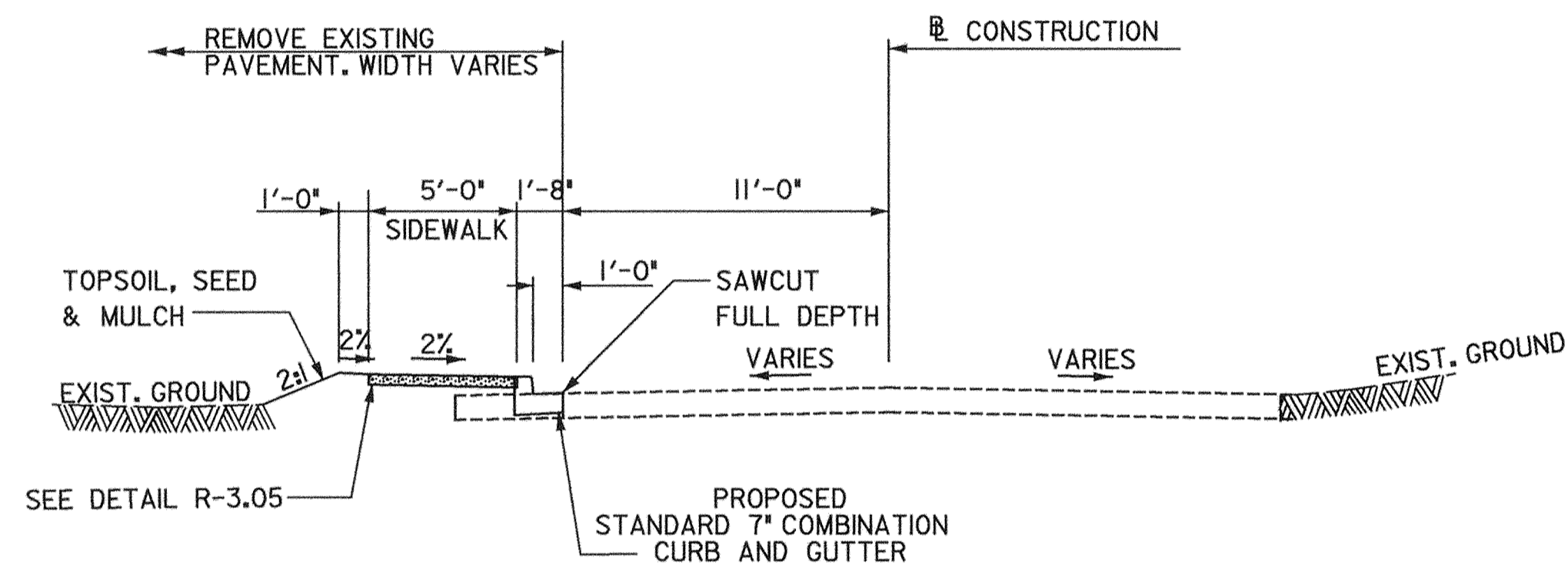
SHEET 2 OF 63



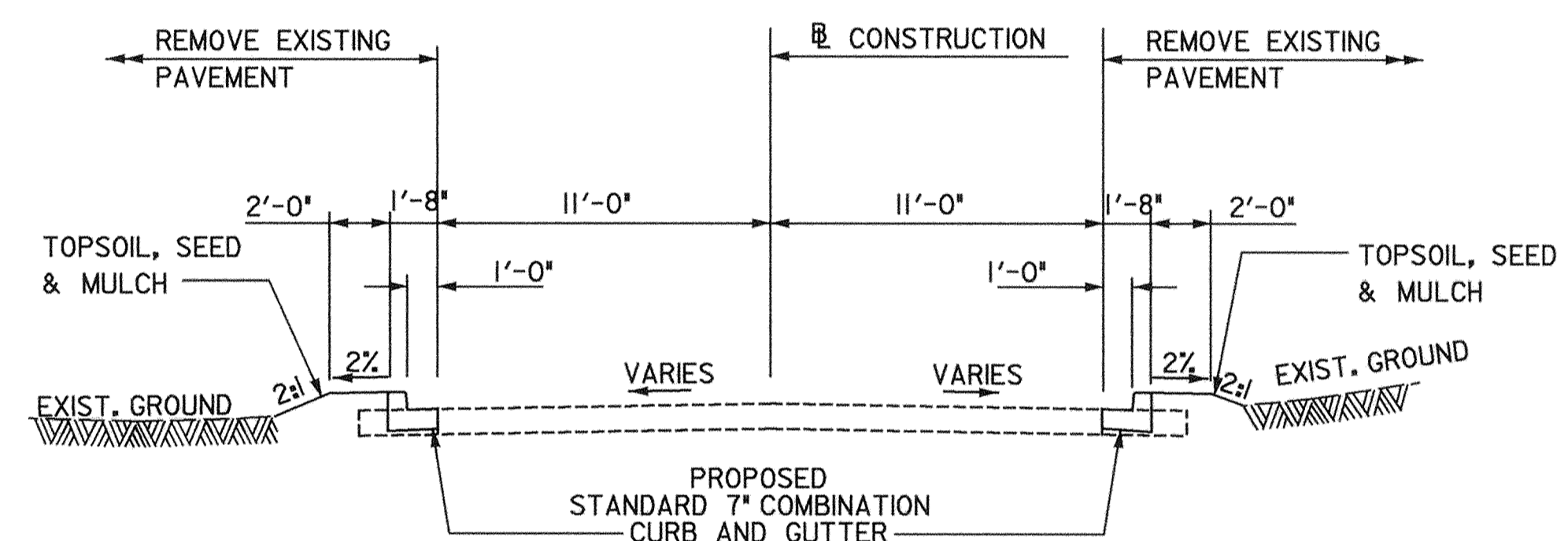
WORTHINGTON WAY
STA. 1425+00 TO STA. 1425+22.08



WORTHINGTON WAY
STA. 1432+75 TO STA. 1434+75



WORTHINGTON WAY
STA. 1426+06.30 TO STA. 1432+75



ROUNDHILL ROAD AT WORTHINGTON WAY
STA. 1502+00 TO STA. 1504+20

NOTE: FOR ROUNDHILL ROAD FROM STA. 415+22+ TO STA. 417+50
SEE SPEED TABLE CHART ON SHEET 10
FOR ROUNDHILL ROAD FROM STA. 401+00+ TO STA. 403+80
SEE SPEED TABLE CHART ON SHEET 11
FOR ROUNDHILL ROAD FROM STA. 1501+67+ TO STA. 1504+20
SEE SPEED TABLE CHART ON SHEET 15

- POC - POINT ON CURVE
- POT - POINT ON TANGENT
- ☐ - TEST PIT LOCATION

NON-STANDARD SYMBOLS

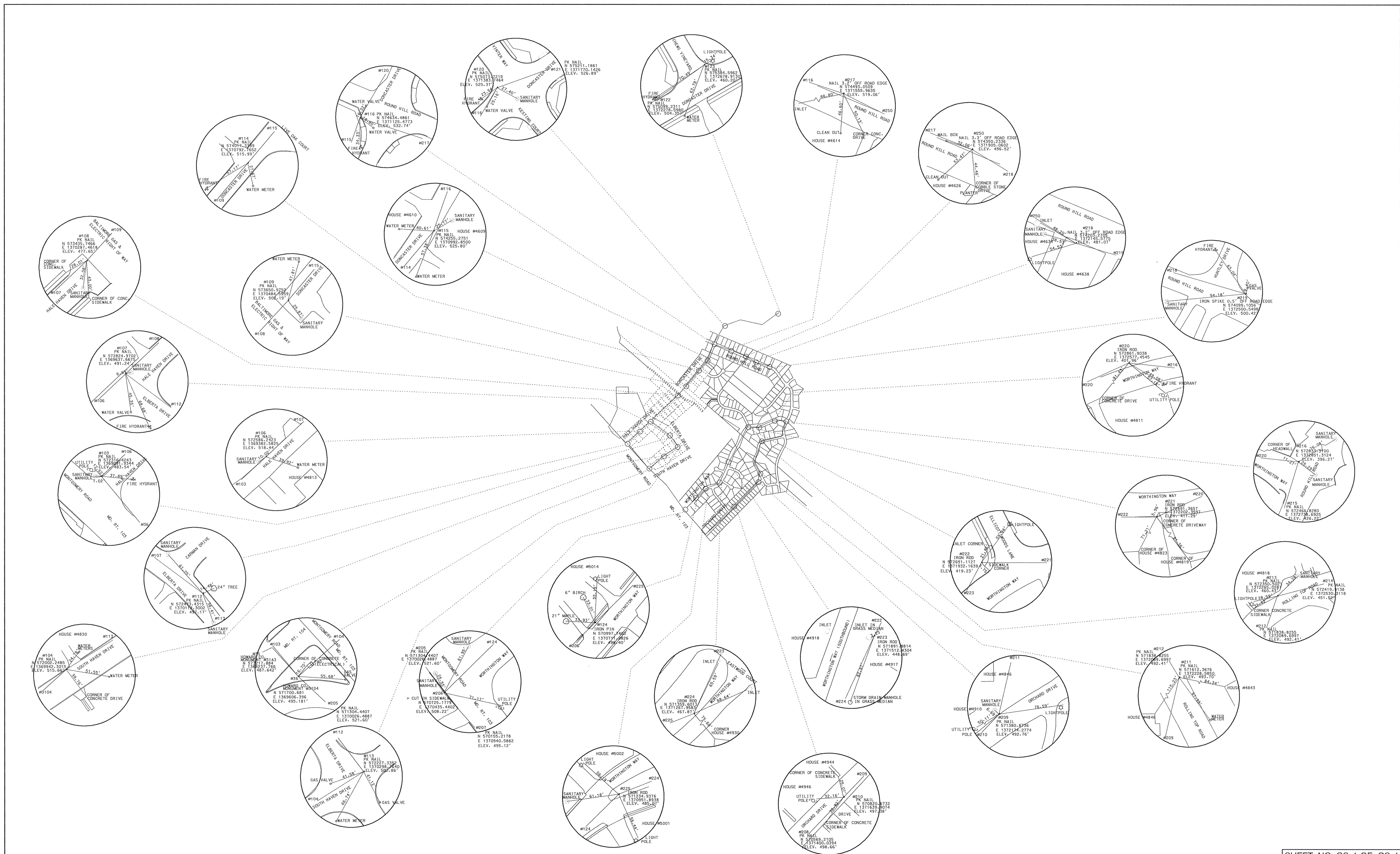
NO SCALE

TYPICAL SECTIONS

SCALE: 1" = 5'

SHEET NO. TS-2 OF TS-2

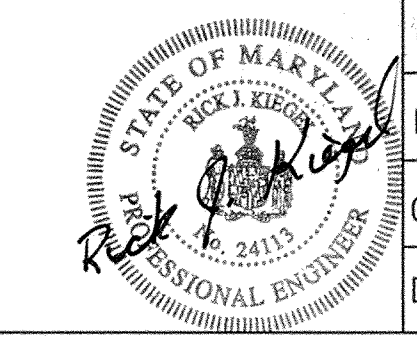
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Randy J. New</i> 5/3/00 DEPARTMENT OF PUBLIC WORKS CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION		Dewberry & Davis Architects 3120 Timanus Lane, Suite 211 Engineers Baltimore, Maryland 21244 Planners Tel. 410-265-9500 Surveyors Fax. 410-265-8875				DES: _____ DRN: _____ CHK: _____ DATE: _____		CAPITAL PROJECT NO. J-4158		PHASE 1 WORTHINGTON AREA VEHICULAR ACCESS		SCALE AS SHOWN SHEET 3 OF 63	
BY NO. REVISION DATE				NO. DATE									



SHEET NO. GS-1 OF GS-1

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DATE: 5/3/06
 DEPARTMENT OF PUBLIC WORKS
 DATE: 5/3/06
 CHIEF, TRANSPORTATION PROJECTS
 AND WATERSHED MANAGEMENT DIVISION

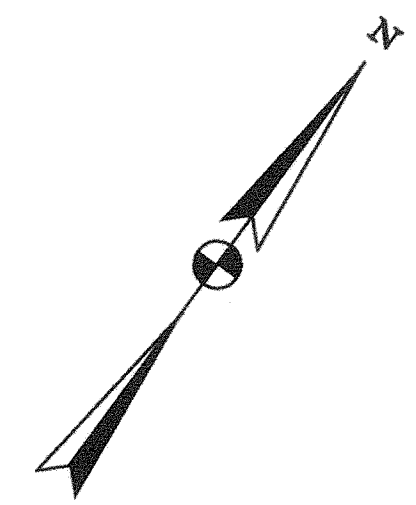
Dewberry & Davis
 Architects
 3120 Timanus Lane, Suite 211
 Baltimore, Maryland 21244
 Tel. 410-265-9500
 Fax. 410-265-8875



DES:					
DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

CAPITAL PROJECT NO.
 J-4158
 NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS
 SCALE AS SHOWN
 SHEET 4 OF 63



CURVE - SOUTH HAVEN | 1
 P.I. STA. = 201+91.27
 Δ α = 2° 44' 19.69"
 Δ α = 7° 44' 23.75" RT
 R = 2092.00'
 T = 141.52'
 L = 282.60'
 E = 0.74' 4.78'

CONSTRUCTION NOTES:

- ALL MAILBOXES ARE TO BE RESET.
- ALL NEW DRIVEWAY ENTRANCES TO MATCH EXISTING WIDTH AT RIGHT-OF-WAY LINE.
- SEE SHEET XX FOR SPEED HUMP, SPEED TABLE AND CURB TREATMENT DETAILS.
- ALL MEASUREMENTS TAKEN TO FACE OF CURB.

RESIDENTIAL DRIVEWAY STD. NO. R-6.02			
LOCATION	STATION	OFFSET	QTY
SOUTH HAVEN	203+44.00	14.00' LT.	32 S.Y.
SOUTH HAVEN	204+69.84	14.00' LT.	32 S.Y.

RESIDENTIAL DRIVEWAY STD. NO. R-6.04			
LOCATION	STATION	OFFSET	QTY
SOUTH HAVEN	201+58.00	14.00' LT.	15 S.Y.

SOUTH HAVEN DRIVE - ALIGNMENT POINTS			
POINT	STATION	NORTHING	EASTING
POT	200+00.00	571,712.7770	1,369,587.9690
PC	200+49.76	571,745.8683	1,369,625.1265
PI	201+91.27	571,839.9860	1,369,730.8090
PT	203+32.36	571,919.0132	1,369,848.2042

STANDARD 7" BITUMINOUS CURB STD. NO. R-3.03		
STA. 201+01.44, 30.34' LT. TO STA. 202+44.88, 14' LT.	SOUTH HAVEN	150 L.F.

STANDARD 7" COMBINATION CURB AND GUTTER STD. NO. R-3.01		
STA. 202+44.88, 14' LT. TO STA. 205+00.00, 14' LT.	SOUTH HAVEN	256 L.F.

5' BITUMINOUS SIDEWALK		
STA. 201+01.44, LT. TO STA. 202+44.88, LT.	SOUTH HAVEN	150 L.F.

CONCRETE SIDEWALK - STD. NO. R-3.05		
STA. 202+44.88, LT. TO STA. 205+00.00, LT.	SOUTH HAVEN	1280 S.F.

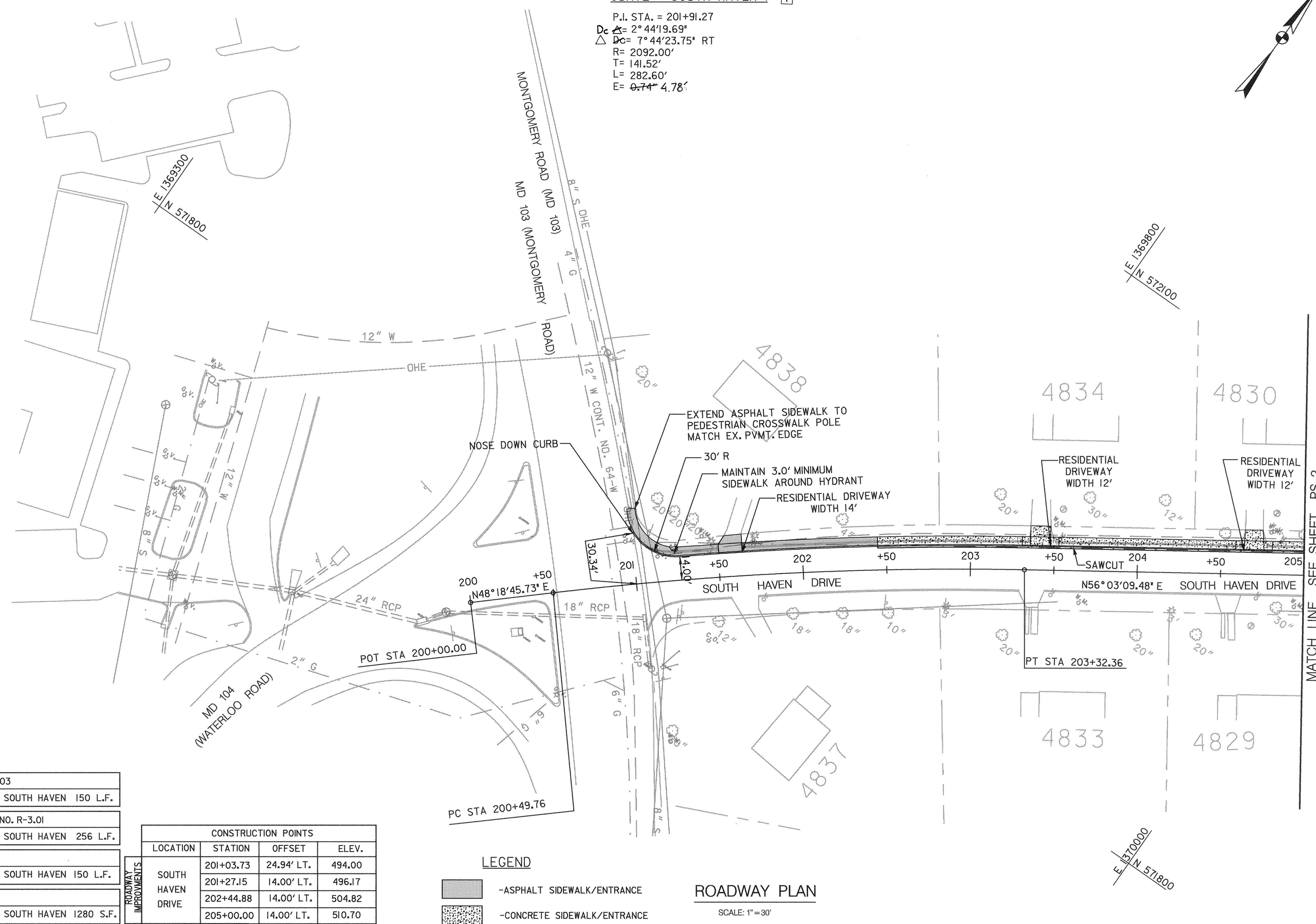
CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
SOUTH HAVEN DRIVE	201+03.73	24.94' LT.	494.00
	201+27.15	14.00' LT.	496.17
	202+44.88	14.00' LT.	504.82
	205+00.00	14.00' LT.	510.70

LEGEND

- ASPHALT SIDEWALK/ENTRANCE
- CONCRETE SIDEWALK/ENTRANCE

ROADWAY PLAN

SCALE: 1" = 30'



MATCH LINE SEE SHEET PS-2

SHEET NO. PS-1 OF PS-14

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James P. Shaw 5/3/00
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

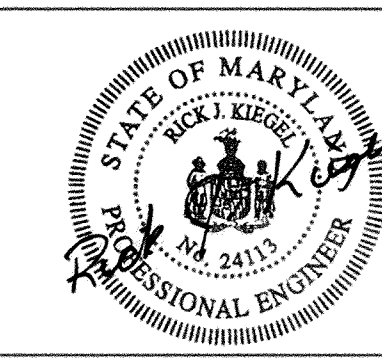
Robert P. Seppan 5/3/00
 CHIEF, BUREAU OF ENGINEERING

Christopher M. Smith 5-3-00
 CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects
 Engineers
 Planners
 Surveyors

3120 Timanus Lane, Suite 211
 Baltimore, Maryland 21244
 Tel. 410-265-9500
 Fax. 410-265-8875



DES:				
DRN:				
CHK:	D & D	1	CURVE DATA & DRIVEWAY OFFSET CORRECTED	9/1/00
DATE:	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.	J-4158
30' SCALE MAP NO.:	DATE:

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
 SHEET 5 OF 63

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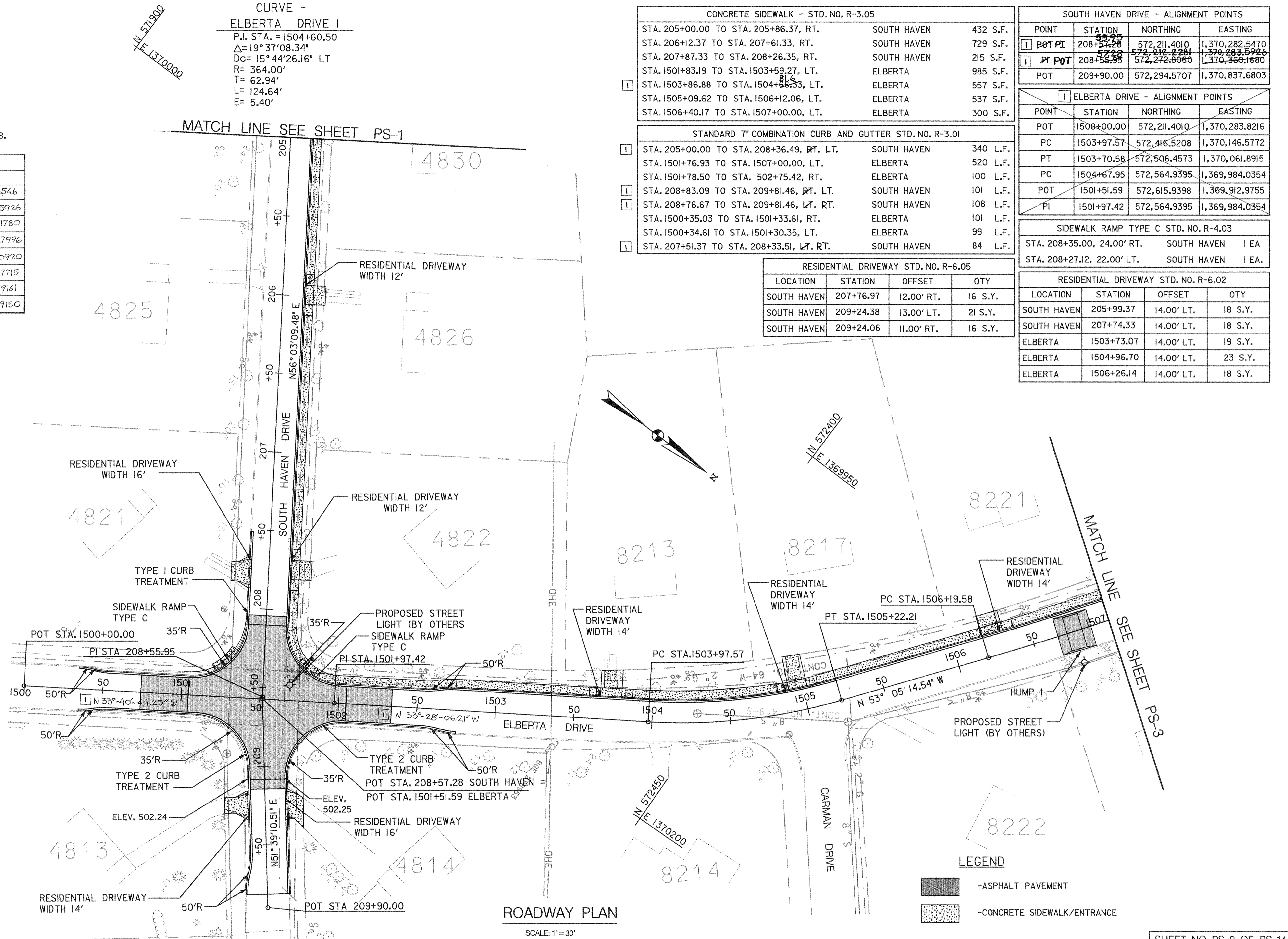
CONSTRUCTION NOTES:

- ALL MAILBOXES ARE TO BE RESET.
- ALL NEW DRIVEWAY ENTRANCES TO MATCH EXISTING WIDTH AT RIGHT-OF-WAY LINE.
- SEE SHEET XX FOR SPEED HUMP, SPEED TABLE AND CURB TREATMENT DETAILS.
- ALL MEASUREMENTS TAKEN TO FACE OF CURB.

ELBERTA DRIVE-ALIGNMENT POINTS			
POINT	STATION	NORTHING	EASTING
POT	1500+00.00	572,086.0830	1,370,367.6546
POT	1501+51.59	572,212.2281	1,370,283.5926
PI	1501+97.42	572,250.3660	1,370,258.1780
PC	1503+97.57	572,417.3296	1,370,147.7996
PI	1504+60.50	572,469.8300	1,370,113.0920
PT	1505+22.21	572,507.6290	1,370,062.7715
PC	1506+19.58	572,566.1114	1,369,984.9161
PI	1506+63.36	572,592.4030	1,369,949.9150

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
ELBERTA DRIVE AND SOUTH HAVEN DRIVE	207+51.37	12.00' RT.	506.67
	208+10.06	12.00' RT.	504.27
	208+10.52	14.00' LT.	504.56
	209+00.70	10.00' RT.	502.65
	209+08.46	14.00' RT.	501.24
	209+55.11	10.00' RT.	500.84
	209+68.28	11.77' RT.	499.88
	209+81.46	13.54' RT.	499.16
	1500+35.03	13.92' RT.	501.08
	1500+34.62	13.99' LT.	501.72
	1500+44.35	12.99' LT.	502.07
	1500+44.51	12.96' RT.	501.38
	1500+54.26	12.00' RT.	501.67
	1500+54.27	12.00' LT.	502.37
	1501+04.43	12.00' LT.	503.07
	1501+09.47	12.00' RT.	502.72
	1502+00.09	12.00' RT.	503.16
	1502+04.76	12.00' RT.	502.74
	1502+53.13	12.00' RT.	502.34
	1502+53.83	12.00' LT.	502.28
1502+63.78	13.00' LT.	502.11	
1502+64.31	13.27' RT.	501.34	
1502+73.73	14.00' LT.	501.94	
1502+75.42	14.53' RT.	501.71	

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
ELBERTA DRIVE	1506+66.00	11.18' LT.	SEE SHT 27
	1506+66.00	12.35' RT.	SEE SHT 27
	1506+72.00	10.58' LT.	SEE SHT 27
	1506+72.00	11.50' RT.	SEE SHT 27
	1506+82.00	10.37' LT.	SEE SHT 27
	1506+82.00	11.77' RT.	SEE SHT 27
	1506+88.00	11.24' LT.	SEE SHT 27
	1506+88.00	12.96' RT.	SEE SHT 27



ROADWAY PLAN

SCALE: 1" = 30'

SHEET NO. PS-2 OF PS-14

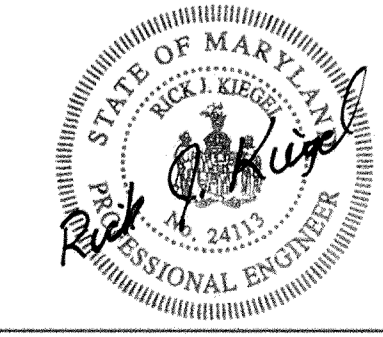
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Ramon P. Shaw 5/3/00
 DEPARTMENT OF PUBLIC WORKS
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Paul P. Brown 5/3/00
 CHIEF, BUREAU OF ENGINEERING

Salvatore 5/3/00
 CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
 Architects
 3120 Timanus Lane, Suite 211
 Baltimore, Maryland 21244
 Tel. 410-265-9500
 Fax. 410-265-8875



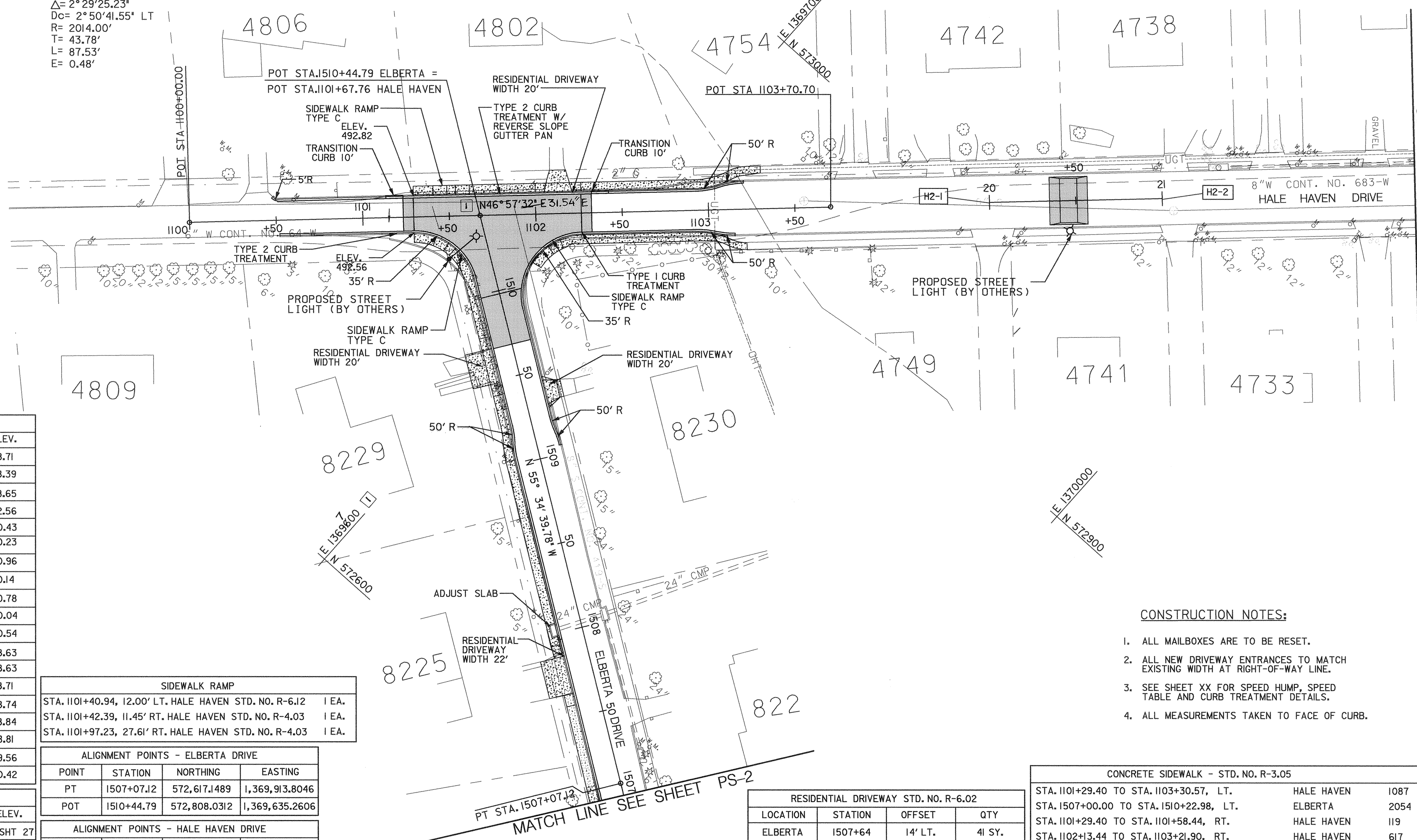
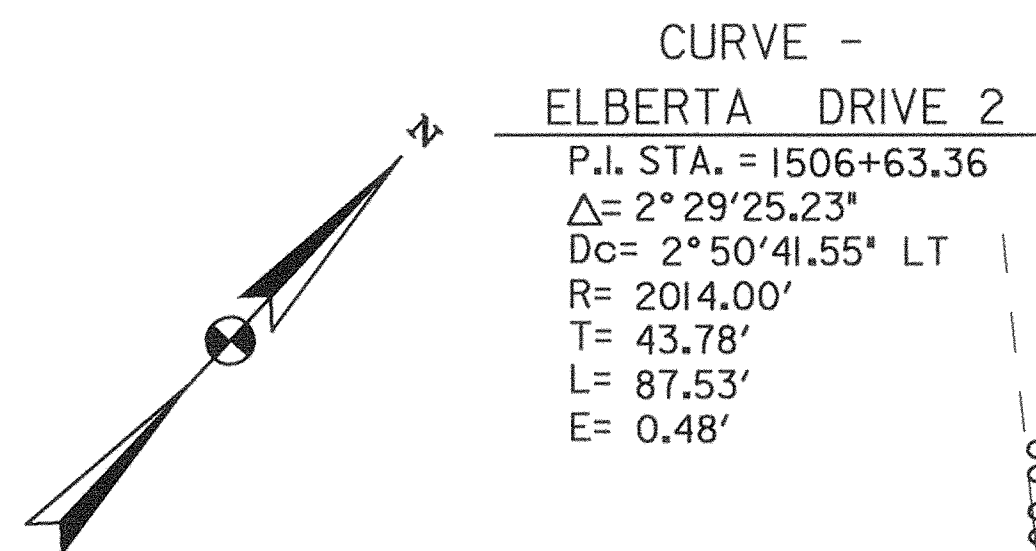
DES:	
DRN:	
CHK:	
DATE:	9/1/00
BY:	D&D
NO.:	1
REVISION:	ADDED BEARINGS, CORRECTED ALIGNMENT POINTS AND CONSTR. TABLES

CAPITAL PROJECT NO.	J-4158
30' SCALE MAP NO.:	
DATE:	

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
 SHEET 6 OF 63

... (cada) contract 10562001.dgn Apr. 30, 2000 2:12:58



MATCH LINE SEE SHEET PS-4

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
HALE HAVEN DRIVE AND ELBERTA DRIVE	1100+48.34	13.57' LT.	498.71
	1100+51.98	12.00' LT.	498.39
	1100+51.98	8.76' RT.	498.65
	1101+29.52	9.00' RT.	492.56
	1102+26.46	12.00' RT.	490.43
	1102+92.46	12.00' RT.	490.23
	1102+92.46	12.00' LT.	490.96
	1103+03.78	13.30' RT.	490.14
	1103+06.45	14.00' LT.	490.78
	1103+15.08	14.60' RT.	490.04
	1103+20.56	16.00' LT.	490.54
	1509+03.04	13.78' LT.	488.63
1509+05.20	13.77' RT.	488.63	
1509+12.69	12.77' LT.	488.71	
1509+09.23	13.00' RT.	488.74	
1509+22.92	12.24' RT.	488.84	
1509+23.13	11.76' LT.	488.81	
1509+86.21	12.31' RT.	489.56	
1510+10.16	11.67' LT.	490.42	

SIDEWALK RAMP			
STA. 1101+40.94, 12.00' LT. HALE HAVEN STD. NO. R-6.12	1 EA.		
STA. 1101+42.39, 11.45' RT. HALE HAVEN STD. NO. R-4.03	1 EA.		
STA. 1101+97.23, 27.61' RT. HALE HAVEN STD. NO. R-4.03	1 EA.		

ALIGNMENT POINTS - ELBERTA DRIVE			
POINT	STATION	NORTHING	EASTING
PT	1507+07.12	572,617.1489	1,369,913.8046
POT	1510+44.79	572,808.0312	1,369,635.2606

ALIGNMENT POINTS - HALE HAVEN DRIVE			
POINT	STATION	NORTHING	EASTING
POT	1100+00.00	572,693.5280	1,369,512.6480
POT	1103+70.70	572,946.5410	1,369,783.5800

ALIGNMENT POINTS - HUMP 2			
POINT	STATION	NORTHING	EASTING
H2-1	20+00.00	573,009.6975	1,369,850.2723
H2-2	21+00.00	573,077.8442	1,369,923.4574

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
HALE HAVEN DRIVE	20+34.83	13.75' LT	SEE SHT 27
	20+34.83	13.75' RT	SEE SHT 27
	20+40.83	12.75' LT	SEE SHT 27
	20+40.83	12.75' RT	SEE SHT 27
	20+50.83	12.75' LT	SEE SHT 27
	20+50.83	12.75' RT	SEE SHT 27
	20+56.83	13.75' LT	SEE SHT 27
20+56.83	13.75' RT	SEE SHT 27	

RESIDENTIAL DRIVEWAY STD. NO. R-6.02			
LOCATION	STATION	OFFSET	QTY
ELBERTA	1507+64	14' LT.	41 SY.
ELBERTA	1509+43.36	12' LT.	40 SY.
HALE HAVEN	1102+00	12' LT.	24 SY.

RESIDENTIAL DRIVEWAY STD. NO. R-6.05			
LOCATION	STATION	OFFSET	QTY
ELBERTA	1509+29.56	12' RT.	15 SY.

CONCRETE SIDEWALK - STD. NO. R-3.05			
STA. 1101+29.40 TO STA. 1103+30.57, LT.	HALE HAVEN	1087	S.F.
STA. 1507+00.00 TO STA. 1510+22.98, LT.	ELBERTA	2054	S.F.
STA. 1101+29.40 TO STA. 1101+58.44, RT.	HALE HAVEN	119	S.F.
STA. 1102+13.44 TO STA. 1103+21.90, RT.	HALE HAVEN	617	S.F.

STANDARD 7" COMBINATION CURB AND GUTTER STD. NO. R-3.01			
STA. 1100+44.62 TO STA. 1103+20.56, LT. [1]	HALE HAVEN	273	L.F.
STA. 1100+51.98 TO STA. 1101+51.44, RT.	HALE HAVEN	99	L.F.
STA. 1101+99.17 TO STA. 1103+15.08, RT.	HALE HAVEN	116	L.F.
STA. 1507+00.00 TO STA. 1510+22.98, LT.	ELBERTA	323	L.F.
STA. 1509+05.20 TO STA. 1510+11.45, RT.	ELBERTA	109	L.F.

- CONSTRUCTION NOTES:**
- ALL MAILBOXES ARE TO BE RESET.
 - ALL NEW DRIVEWAY ENTRANCES TO MATCH EXISTING WIDTH AT RIGHT-OF-WAY LINE.
 - SEE SHEET XX FOR SPEED HUMP, SPEED TABLE AND CURB TREATMENT DETAILS.
 - ALL MEASUREMENTS TAKEN TO FACE OF CURB.

LEGEND

- CONCRETE SIDEWALK/ENTRANCE
- ASPHALT PAVEMENT

ROADWAY PLAN
 SCALE: 1" = 30'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James M. ... 5/3/00
 DEPARTMENT OF PUBLIC WORKS
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Robert ... 5/3/00
 CHIEF, BUREAU OF ENGINEERING

Calalea ... 5/3/00
 CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
 Architects
 Engineers
 Planners
 Surveyors

3120 Timanus Lane, Suite 211
 Baltimore, Maryland 21244
 Tel. 410-265-9500
 Fax. 410-265-8875



DES:			
DRN:			
CHK:			
DATE:	D & D	[1]	9/1/00
BY:			
NO.:			

REVISION: CORRECTED BEARINGS, COMB CURB & GUTTER STARTING POINT AND GRID TICK

CAPITAL PROJECT NO.
 J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
 SHEET 7 OF 63

... (Scale) Contract 1 UseSheet.dgn Apr. 30, 2000 2:15:25

CURVE - PRIVATE DRIVE EAST 1

P.I. STA. = 801+30.00
 $D_c \Delta = 28^\circ 38' 52.40''$
 $D_c = 7^\circ 10' 55.87''$ LT
 R = 200.00'
 T = 12.55'
 L = 25.07'
 E = 0.39'

CURVE - CONNECTION

P.I. STA. = 301+10.93
 $D_c \Delta = 5^\circ 43' 46.48''$
 $D_c = 6^\circ 59' 04.16''$ LT
 R = 1000.00'
 T = 61.03'
 L = 121.90'
 E = 1.86'

CURVE - PRIVATE DRIVE EAST 2

P.I. STA. = 802+13.16
 $D_c \Delta = 57^\circ 17' 44.81''$
 $D_c = 14^\circ 12' 39.00''$ RT
 R = 100.00'
 T = 12.47'
 L = 24.80'
 E = 0.77'

CURVE - PRIVATE DRIVE EAST 3

P.I. STA. = 802+75.68
 $D_c \Delta = 57^\circ 17' 44.81''$
 $D_c = 28^\circ 06' 09.30''$ LT
 R = 100.00'
 T = 25.03'
 L = 49.05'
 E = 3.08'

DEPRESSED CURB - HALE HAVEN & DONCASTER CONNECTION
 STA. 301+60, 17.10' RT. TO STA. 301+70, 18.75' RT. 10 L.F.

RESIDENTIAL DRIVEWAY STD. NO. R-3.05			
LOCATION	STATION	OFFSET	QTY
DONCASTER	304+00.00	12.00' RT.	35 S.Y.

DRAINAGE PIPE SCHEDULE		
SIZE	RCP CLASS	LENGTH
15"	IV	62
18"	IV	483
33"	IV	256

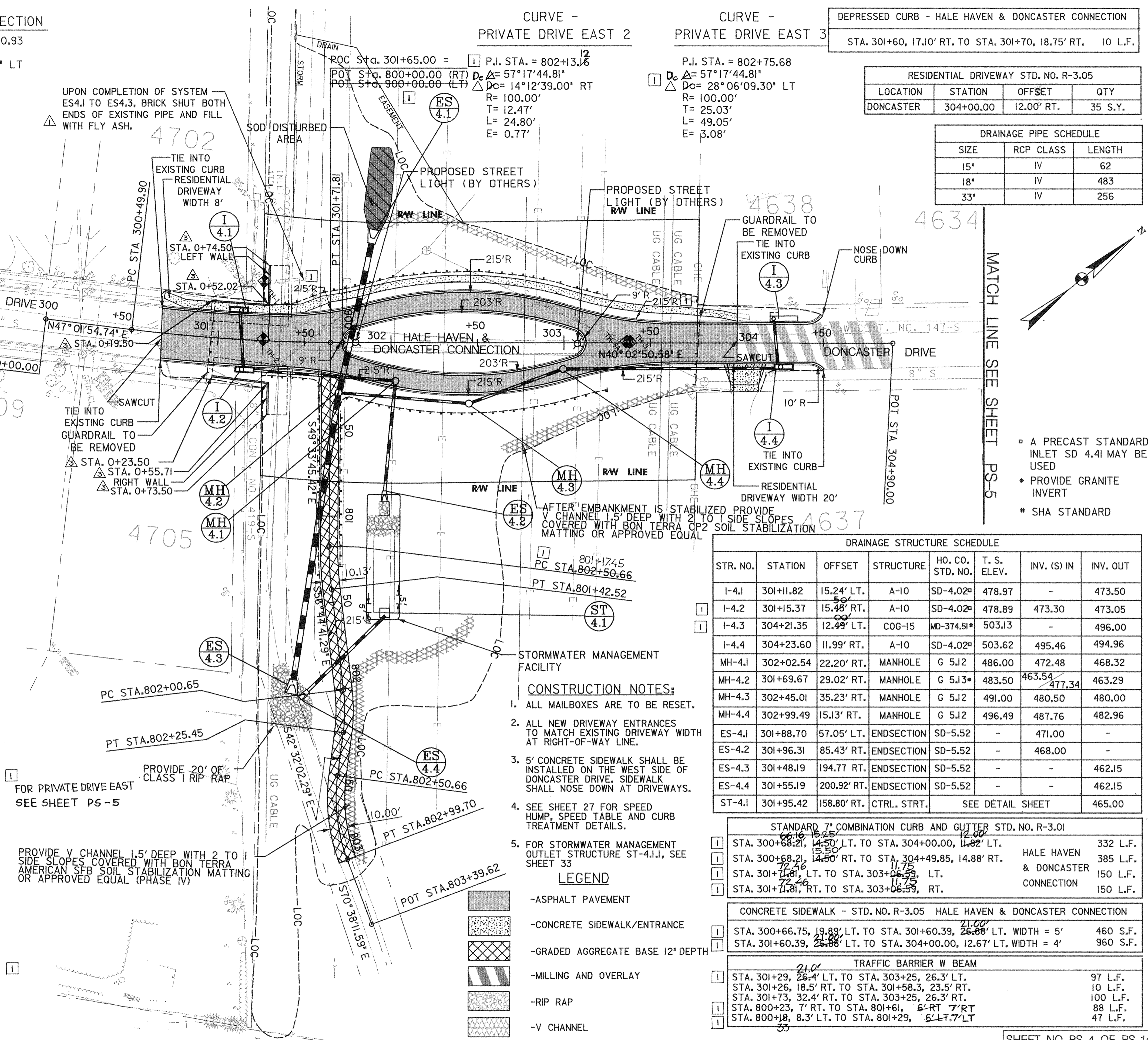
TYPE C TRAFFIC BARRIER END TREATMENT		
STA. 301+25, RT	HALE HAVEN - DONCASTER	1 EA.
STA. 301+32, LT	HALE HAVEN - DONCASTER	1 EA.
STA. 303+25, LT	HALE HAVEN - DONCASTER	1 EA.
STA. 303+25, RT	HALE HAVEN - DONCASTER	1 EA.
STA. 801+30, LT	EAST ACCESS ROAD	1 EA.
STA. 801+60, RT	EAST ACCESS ROAD	1 EA.

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
HALE HAVEN DRIVE	100+46.42	14.37' LT.	SEE SHT 27
	100+46.42	14.44' RT.	SEE SHT 27
	100+52.42	13.37' RT.	SEE SHT 27
	100+52.42	13.29' RT.	SEE SHT 27
	100+62.42	13.37' LT.	SEE SHT 27
	100+62.42	13.25' RT.	SEE SHT 27
	100+68.42	14.37' LT.	SEE SHT 27
100+68.42	14.23' RT.	SEE SHT 27	

HALE HAVEN DR/ DONCASTER CONN.				
SOUTH HAVEN DRIVE - ALIGNMENT POINTS				
POINT	STATION	NORTHING	EASTING	
POT	300+00.00	573,362.2422	1,370,228.0170	
PC	300+49.90	573,369.2567	1,370,264.5337	
PI	301+10.93	573,437.8520	1,370,309.1890	
PT	301+71.81	573,484.5687	1,370,348.4549	
POT	304+90.00	573,728.1515	1,370,553.1884	
HI2-1	100.00.00	573,226.2740	1,370,082.1980	
HI2-2	101+00.00	573,294.3940	1,370,155.4080	

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
HALE HAVEN AND DONCASTER CONNECTION	300+66.16	15.25' LT.	475.30
	300+68.20	15.50' RT.	475.58
	301+22.66	15.25' LT.	471.67
	301+36.66	15.50' RT.	470.97
	301+77.93	7.59' LT.	474.24
	301+77.93	7.59' RT.	474.25
	301+85.33	22.37' RT.	475.29
	301+88.03	23.09' LT.	474.26
	303+03.66	21.00' LT.	492.87
	303+03.66	21.00' RT.	492.23
ROADWAY IMPROVEMENTS	303+06.28	7.59' LT.	493.08
	303+06.28	7.59' RT.	492.79
	303+65.21	12.00' LT.	499.97
	303+65.21	12.00' RT.	500.21
	303+81.42	12.00' LT.	501.32
	304+00.00	12.82' LT.	502.3834
	304+24.77	16.50' LT.	503.4780
	304+48.85	14.88' LT.	504.5739

SOUTH HAVEN DRIVE - ALIGNMENT POINTS				
POINT	STATION	NORTHING	EASTING	
POT	800+00.00	573,479.3750	1,370,344.0576	
PC	800+68.05	573,435.2365	1,370,395.8493	
PI	800+85.00	573,424.2406	1,370,408.7523	
PT	801+00.74	573,467.6646	1,370,412.3070	
PC	801+14.26	573,394.4427	1,370,415.1424	
PI	801+34.11	573,375.0342	1,370,419.3045	
PT	801+52.05	573,363.7653	1,370,435.6453	
POT	801+68.98	573,354.1550	1,370,449.5810	



- CONSTRUCTION NOTES:**
- ALL MAILBOXES ARE TO BE RESET.
 - ALL NEW DRIVEWAY ENTRANCES TO MATCH EXISTING DRIVEWAY WIDTH AT RIGHT-OF-WAY LINE.
 - 5' CONCRETE SIDEWALK SHALL BE INSTALLED ON THE WEST SIDE OF DONCASTER DRIVE. SIDEWALK SHALL NOSE DOWN AT DRIVEWAYS.
 - SEE SHEET 27 FOR SPEED HUMP, SPEED TABLE AND CURB TREATMENT DETAILS.
 - FOR STORMWATER MANAGEMENT OUTLET STRUCTURE ST-4.1.I, SEE SHEET 33

LEGEND

- ASPHALT PAVEMENT
- CONCRETE SIDEWALK/ENTRANCE
- GRADED AGGREGATE BASE 12" DEPTH
- MILLING AND OVERLAY
- RIP RAP
- V CHANNEL

DRAINAGE STRUCTURE SCHEDULE							
STR. NO.	STATION	OFFSET	STRUCTURE	HO. CO. STD. NO.	T. S. ELEV.	INV. (S) IN	INV. OUT
I-4.1	301+11.82	15.24' LT.	A-10	SD-4.02a	478.97	-	473.50
I-4.2	301+15.37	15.48' RT.	A-10	SD-4.02a	478.89	473.30	473.05
I-4.3	304+21.35	12.49' LT.	COG-15	MD-374.51*	503.13	-	496.00
I-4.4	304+23.60	11.99' RT.	A-10	SD-4.02a	503.62	495.46	494.96
MH-4.1	302+02.54	22.20' RT.	MANHOLE	G 5.12	486.00	472.48	468.32
MH-4.2	301+69.67	29.02' RT.	MANHOLE	G 5.13*	483.50	463.54	477.34
MH-4.3	302+45.01	35.23' RT.	MANHOLE	G 5.12	491.00	480.50	480.00
MH-4.4	302+99.49	15.13' RT.	MANHOLE	G 5.12	496.49	487.76	482.96
ES-4.1	301+88.70	57.05' LT.	ENDSECTION	SD-5.52	-	471.00	-
ES-4.2	301+96.31	85.43' RT.	ENDSECTION	SD-5.52	-	468.00	-
ES-4.3	301+48.19	194.77 RT.	ENDSECTION	SD-5.52	-	-	462.15
ES-4.4	301+55.19	200.92' RT.	ENDSECTION	SD-5.52	-	-	462.15
ST-4.1	301+95.42	158.80' RT.	CTRL. STRT.			SEE DETAIL SHEET	465.00

STANDARD 7" COMBINATION CURB AND GUTTER STD. NO. R-3.01			
I	STA. 300+68.21, 15.50' LT. TO STA. 304+00.00, 11.82' LT.		332 L.F.
I	STA. 300+68.21, 15.50' RT. TO STA. 304+49.85, 14.88' RT.		385 L.F.
I	STA. 301+71.81, 11.75' LT. TO STA. 303+06.28, 11.75' LT.		150 L.F.
I	STA. 301+71.81, 11.75' RT. TO STA. 303+06.28, 11.75' RT.		150 L.F.

CONCRETE SIDEWALK - STD. NO. R-3.05 HALE HAVEN & DONCASTER CONNECTION		
I	STA. 300+66.75, 19.89' LT. TO STA. 301+60.39, 26.88' LT. WIDTH = 5'	460 S.F.
I	STA. 301+60.39, 26.88' LT. TO STA. 304+00.00, 12.67' LT. WIDTH = 4'	960 S.F.

TRAFFIC BARRIER W BEAM		
I	STA. 301+29, 26.4' LT. TO STA. 303+25, 26.3' LT.	97 L.F.
I	STA. 301+26, 18.5' RT. TO STA. 301+58.3, 23.5' RT.	10 L.F.
I	STA. 301+73, 32.4' RT. TO STA. 303+25, 26.3' RT.	100 L.F.
I	STA. 800+23, 7' RT. TO STA. 801+61, 6' RT. 7' RT	88 L.F.
I	STA. 800+18, 8.3' LT. TO STA. 801+29, 6' LT. 7' LT	47 L.F.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

[Signatures]
 DATE: 7/20/00

DEPARTMENT OF PUBLIC WORKS
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Dewberry & Davis
 Architects 3120 Timanus Lane, Suite 211
 Engineers Baltimore, Maryland 21244
 Planners Tel. 410-265-9500
 Surveyors Fax. 410-265-8875



DES:				
DRN:	D&D	I	CORRECTED ALIGNMENT AND CONSTR. POINTS	9/1/00
CHK:	D&D	A	REVISED TIMBER CRIB RETAINING WALL LOCATIONS	6/12/00
	D&D	A	ADDED NOTE FOR EXISTING PIPE	6/2/00
DATE:	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
 J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
 SHEET 8 OF 63

CURVE - PRIVATE DRIVE EAST 1
 P.I. STA. = 801+30.00
 $\Delta = 28^\circ 38' 52.40''$
 $Dc = 7^\circ 10' 55.87''$ LT
 R= 200.00'
 T= 12.55'
 L= 25.07'
 E= 0.39'

CURVE - CONNECTION
 P.I. STA. = 301+0.93
 $\Delta = 5^\circ 43' 46.48''$
 $Dc = 6^\circ 59' 04.16''$ LT
 R= 1000.00'
 T= 61.03'
 L= 121.90'
 E= 1.86'

CURVE - PRIVATE DRIVE EAST 2
 P.I. STA. = 802+13.16
 $\Delta = 57^\circ 17' 44.81''$
 $Dc = 14^\circ 12' 39.00''$ RT
 R= 100.00'
 T= 12.47'
 L= 24.80'
 E= 0.77'

CURVE - PRIVATE DRIVE EAST 3
 P.I. STA. = 802+75.68
 $\Delta = 57^\circ 17' 44.81''$
 $Dc = 28^\circ 06' 09.30''$ LT
 R= 100.00'
 T= 25.03'
 L= 49.05'
 E= 3.08'

DEPRESSED CURB - HALE HAVEN & DONCASTER CONNECTION
 STA. 301+60, 17.10' RT. TO STA. 301+70, 18.75' RT. 10 L.F.

RESIDENTIAL DRIVEWAY STD. NO. R-3.05			
LOCATION	STATION	OFFSET	QTY
DONCASTER	304+00.00	12.00' RT.	35 S.Y.

DRAINAGE PIPE SCHEDULE		
SIZE	RCP CLASS	LENGTH
15"	IV	62
18"	IV	483
33"	IV	256

TYPE C TRAFFIC BARRIER END TREATMENT

STA. 301+25, RT	HALE HAVEN - DONCASTER	1 EA.
STA. 301+32, LT	HALE HAVEN - DONCASTER	1 EA.
STA. 303+25, LT	HALE HAVEN - DONCASTER	1 EA.
STA. 303+25, RT	HALE HAVEN - DONCASTER	1 EA.
STA. 801+30, LT	EAST ACCESS ROAD	1 EA.
STA. 801+60, RT	EAST ACCESS ROAD	1 EA.

CONSTRUCTION POINTS

LOCATION	STATION	OFFSET	ELEV.
HALE HAVEN DRIVE	100+46.42	14.37' LT.	SEE SHT 27
	100+46.42	14.44' RT.	SEE SHT 27
	100+52.42	13.37' LT.	SEE SHT 27
	100+52.42	13.29' RT.	SEE SHT 27
	100+62.42	13.37' LT.	SEE SHT 27
	100+62.42	13.25' RT.	SEE SHT 27
HALE HAVEN AND DONCASTER CONNECTION	100+68.42	14.37' LT.	SEE SHT 27
	100+68.42	14.23' RT.	SEE SHT 27

SOUTH HAVEN DRIVE - ALIGNMENT POINTS

POINT	STATION	NORTHING	EASTING
POT	300+00.00	573,362.2422	1,370,228.0170
PC	300+49.90	573,369.2567	1,370,264.5337
PI	301+01.93	573,437.8520	1,370,309.1890
PT	301+71.81	573,484.5687	1,370,348.4549
POT	304+90.00	573,728.1515	1,370,553.1884
HI2-1	100.00.00	573,226.2740	1,370,082.1980
HI2-2	101+00.00	573,294.3940	1,370,155.4080

CONSTRUCTION POINTS

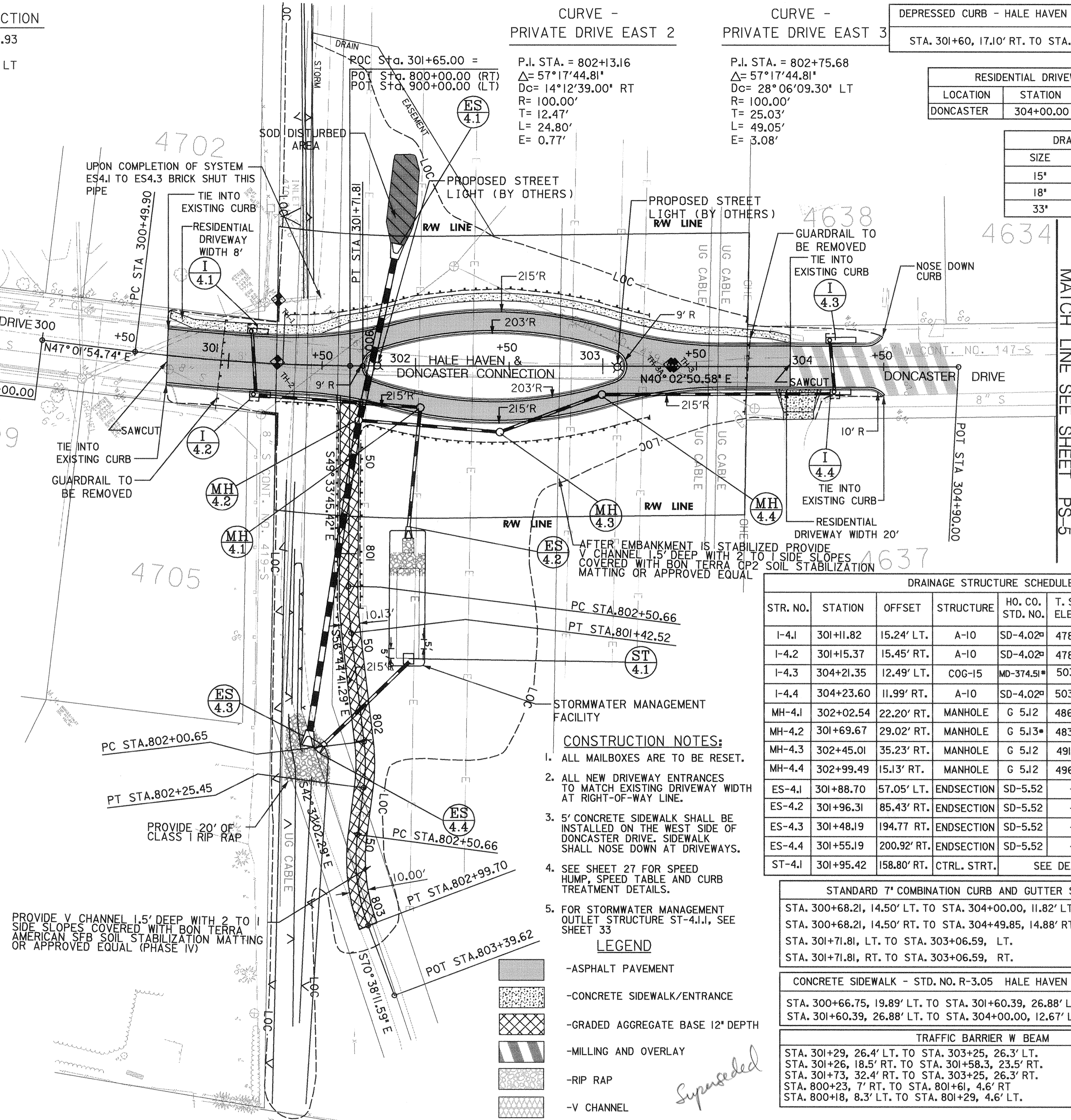
LOCATION	STATION	OFFSET	ELEV.
HALE HAVEN AND DONCASTER CONNECTION	300+66.16	15.25' LT.	475.30
	300+68.20	15.50' RT.	475.58
	301+22.66	15.25' LT.	471.67
	301+36.66	15.50' RT.	470.97
	301+77.93	7.59' LT.	474.24
	301+77.93	7.59' RT.	474.25
	301+85.33	22.37' RT.	475.29
ROADWAY IMPROVEMENTS	301+88.03	23.09' LT.	474.26
	303+03.66	21.00' LT.	492.87
	303+03.66	21.00' RT.	492.23
	303+06.28	7.59' LT.	493.08
	303+06.28	7.59' RT.	492.79
	303+65.21	12.00' LT.	499.97
	303+65.21	12.00' RT.	500.21
	303+81.42	12.00' LT.	501.32
ROADWAY IMPROVEMENTS	304+00.00	12.82' LT.	502.38
	304+24.77	16.50' LT.	503.47
	304+49.85	14.88' LT.	504.57

SOUTH HAVEN DRIVE - ALIGNMENT POINTS

POINT	STATION	NORTHING	EASTING
POT	800+00.00	573,479.3750	1,370,344.0576
PC	800+68.05	573,435.2365	1,370,395.8493
PI	800+85.00	573,424.2406	1,370,408.7523
PT	801+00.74	573,407.6646	1,370,412.3070
PC	801+14.26	573,394.4427	1,370,415.1424
PI	801+34.11	573,375.0342	1,370,419.3045
PT	801+52.05	573,363.7653	1,370,435.6453
POT	801+68.98	573,354.1550	1,370,449.5810

SOUTH HAVEN DRIVE - ALIGNMENT POINTS

POINT	STATION	NORTHING	EASTING
POT	900+00.00	573,479.3730	1,370,344.0576
PC	900+77.41	573,529.5793	1,370,285.1433
PI	900+90.00	573,537.7485	1,370,275.5572
PT	901+02.08	573,540.4016	1,370,263.2450
PC	901+13.76	573,542.1822	1,370,251.7006
PI	901+25.59	573,545.3451	1,370,240.3036
PT	901+36.99	573,553.2791	1,370,231.5317
POT	901+53.37	573,564.4010	1,370,219.2350



AFTER EMBANKMENT IS STABILIZED PROVIDE V CHANNEL 1.5' DEEP WITH 2 TO 1 SIDE SLOPES COVERED WITH BON TERRA OR P2 SOIL STABILIZATION MATTING OR APPROVED EQUAL

- CONSTRUCTION NOTES:**
- ALL MAILBOXES ARE TO BE RESET.
 - ALL NEW DRIVEWAY ENTRANCES TO MATCH EXISTING DRIVEWAY WIDTH AT RIGHT-OF-WAY LINE.
 - 5' CONCRETE SIDEWALK SHALL BE INSTALLED ON THE WEST SIDE OF DONCASTER DRIVE. SIDEWALK SHALL NOSE DOWN AT DRIVEWAYS.
 - SEE SHEET 27 FOR SPEED HUMP, SPEED TABLE AND CURB TREATMENT DETAILS.
 - FOR STORMWATER MANAGEMENT OUTLET STRUCTURE ST-4.1, SEE SHEET 33

LEGEND

- ASPHALT PAVEMENT
- CONCRETE SIDEWALK/ENTRANCE
- GRADED AGGREGATE BASE 12" DEPTH
- MILLING AND OVERLAY
- RIP RAP
- V CHANNEL

DRAINAGE STRUCTURE SCHEDULE

STR. NO.	STATION	OFFSET	STRUCTURE	HO. CO. STD. NO.	T. S. ELEV.	INV. (S) IN	INV. OUT
I-4.1	301+11.82	15.24' LT.	A-10	SD-4.02*	478.97	-	473.50
I-4.2	301+15.37	15.45' RT.	A-10	SD-4.02*	478.89	473.30	473.05
I-4.3	304+21.35	12.49' LT.	COG-15	MD-374.51*	503.13	-	496.00
I-4.4	304+23.60	11.99' RT.	A-10	SD-4.02*	503.62	495.46	494.96
MH-4.1	302+02.54	22.20' RT.	MANHOLE	G 5.12	486.00	472.48	468.32
MH-4.2	301+69.67	29.02' RT.	MANHOLE	G 5.13*	483.50	463.54	463.29
MH-4.3	302+45.01	35.23' RT.	MANHOLE	G 5.12	491.00	480.50	480.00
MH-4.4	302+99.49	15.13' RT.	MANHOLE	G 5.12	496.49	487.76	482.96
ES-4.1	301+88.70	57.05' LT.	ENDSECTION	SD-5.52	-	471.00	-
ES-4.2	301+96.31	85.43' RT.	ENDSECTION	SD-5.52	-	468.00	-
ES-4.3	301+48.19	194.77 RT.	ENDSECTION	SD-5.52	-	-	462.15
ES-4.4	301+55.19	200.92' RT.	ENDSECTION	SD-5.52	-	-	462.15
ST-4.1	301+95.42	158.80' RT.	CTRL. STRT.		SEE DETAIL SHEET		465.00

STANDARD 7" COMBINATION CURB AND GUTTER STD. NO. R-3.01
 STA. 300+68.21, 14.50' LT. TO STA. 304+00.00, 11.82' LT. 332 L.F.
 STA. 300+68.21, 14.50' RT. TO STA. 304+49.85, 14.88' RT. HALE HAVEN 385 L.F.
 STA. 301+71.81, LT. TO STA. 303+06.59, LT. & DONCASTER 150 L.F.
 STA. 301+71.81, RT. TO STA. 303+06.59, RT. CONNECTION 150 L.F.

CONCRETE SIDEWALK - STD. NO. R-3.05 HALE HAVEN & DONCASTER CONNECTION
 STA. 300+66.75, 19.89' LT. TO STA. 301+60.39, 26.88' LT. WIDTH = 5' 460 S.F.
 STA. 301+60.39, 26.88' LT. TO STA. 304+00.00, 12.67' LT. WIDTH = 4' 960 S.F.

TRAFFIC BARRIER W BEAM
 STA. 301+29, 26.4' LT. TO STA. 303+25, 26.3' LT. 97 L.F.
 STA. 301+26, 18.5' RT. TO STA. 301+58.3, 23.5' RT. 10 L.F.
 STA. 301+73, 32.4' RT. TO STA. 303+25, 26.3' RT. 100 L.F.
 STA. 800+23, 7' RT. TO STA. 801+61, 4.6' RT. 88 L.F.
 STA. 800+18, 8.3' LT. TO STA. 801+29, 4.6' LT. 47 L.F.

SHEET NO. PS-4 OF PS-14

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 James P. ... 5/3/00
 DEPARTMENT OF PUBLIC WORKS
 Chief, Transportation Projects and Watershed Management Division

Dewberry & Davis
 Architects
 3120 Timanus Lane, Suite 211
 Baltimore, Maryland 21244
 Tel. 410-265-9500
 Fax. 410-265-8875



DES:						
DRN:						
CHK:						
DATE:	BY	NO.	REVISION	DATE	30' SCALE MAP NO.:	DATE:

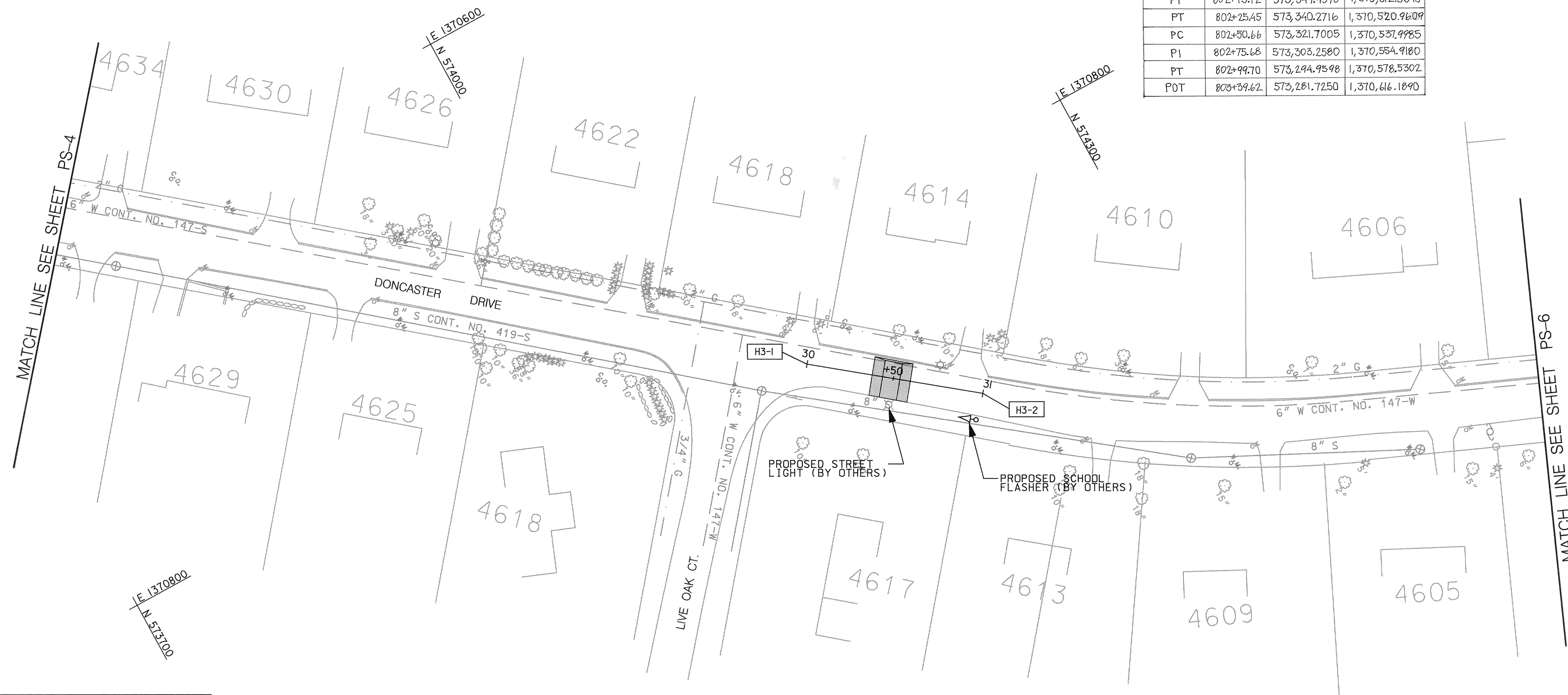
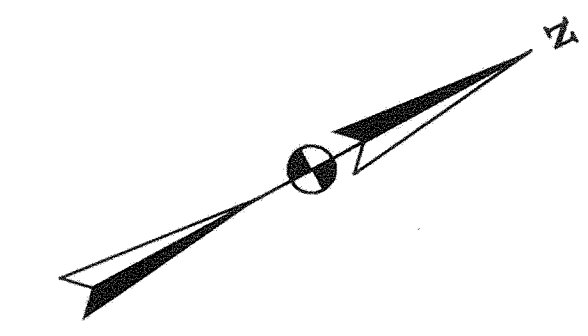
CAPITAL PROJECT NO. J-4158

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
 SHEET 8 OF 63

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PRIVATE DRIVE EAST - ALIGNMENT POINTS			
POINT	STATION	NORTHING	EASTING
POT	800+00.00	573,479.3730	1,370,344.0576
PC	801+17.45	573,403.1941	1,370,433.4492
PI	801+30.00	573,395.0528	1,370,443.0025
PT	801+42.52	573,388.1699	1,370,452.4987
PC	802+00.65	573,356.2926	1,370,502.1101
PI	802+13.12	573,349.4570	1,370,512.5340
PT	802+25.45	573,340.2716	1,370,520.9609
PC	802+30.66	573,321.7005	1,370,531.9985
PI	802+75.68	573,303.2580	1,370,554.9180
PT	802+99.70	573,294.9598	1,370,578.5302
POT	803+39.62	573,281.7250	1,370,616.1890



ROADWAY PLAN

SCALE: 1" = 30'

CONSTRUCTION NOTES:

- ALL MAILBOXES ARE TO BE RESET.
- SEE SHEET XX FOR SPEED HUMP, SPEED TABLE AND CURB TREATMENT DETAILS.

LEGEND

- ASPHALT PAVEMENT

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
HUMP 3 DONCASTER DRIVE	30+37.83	10.46' LT.	SEE SHT 27
	30+37.83	11.76' RT.	SEE SHT 27
	30+43.83	9.40' LT.	SEE SHT 27
	30+43.83	11.82' RT.	SEE SHT 27
	30+53.83	9.20' LT.	SEE SHT 27
	30+53.83	11.99' LT.	SEE SHT 27
	30+59.83	10.04' LT	SEE SHT 27
	30+59.83	12.09' RT.	SEE SHT 27

ALIGNMENT POINTS- HUMP 3			
POINT	STATION	NORTHING	EASTING
H3-1	30+00	574,100.9940	1,370,862.6809
H3-2	31+00	574,178.0730	1,370,925.5658

SHEET NO. PS-5 OF PS-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

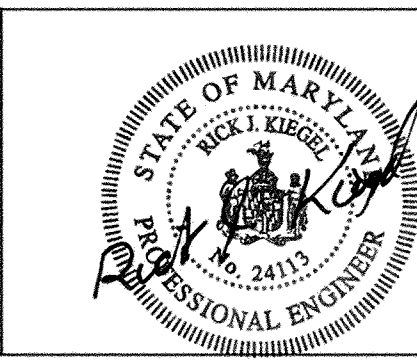
James J. Lewis 5/3/00
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Robert J. Wilson 5/3/00
CHIEF, BUREAU OF ENGINEERING

William W. Dwyer 5/3/00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



DES:	
DRN:	
CHK:	D & D
DATE:	9/1/00
BY:	
NO.:	1
REVISION:	CORRECTED ALIGNMENT POINT AND ADDED PRIVATE DRIVE EAST ALIGNMENT POINTS TABLE
DATE:	9/1/00

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

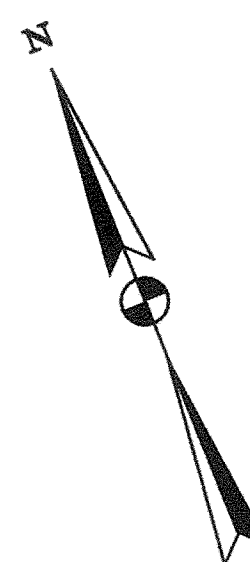
PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN

SHEET 9 OF 63

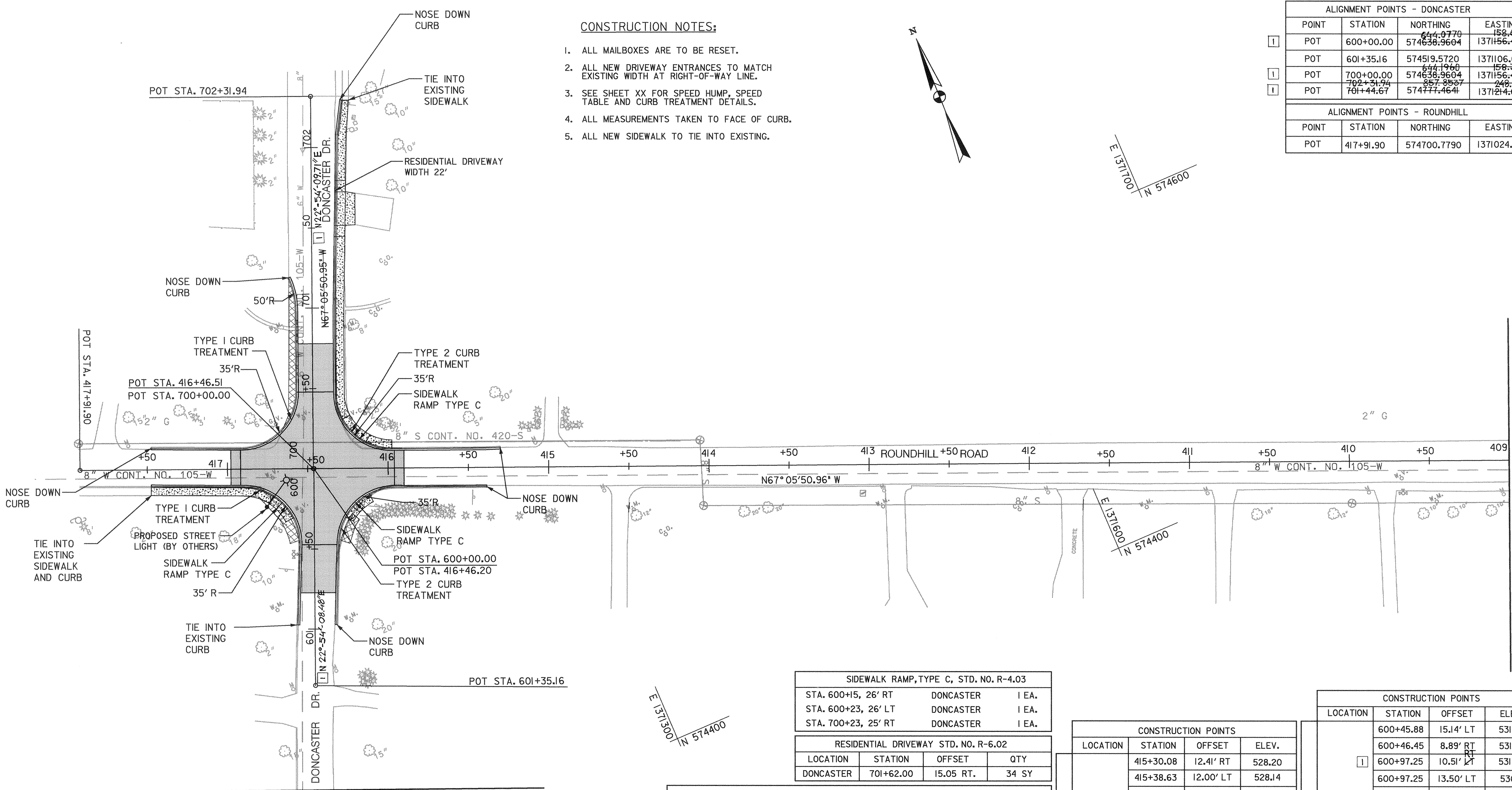
CONSTRUCTION NOTES:

1. ALL MAILBOXES ARE TO BE RESET.
2. ALL NEW DRIVEWAY ENTRANCES TO MATCH EXISTING WIDTH AT RIGHT-OF-WAY LINE.
3. SEE SHEET XX FOR SPEED HUMP, SPEED TABLE AND CURB TREATMENT DETAILS.
4. ALL MEASUREMENTS TAKEN TO FACE OF CURB.
5. ALL NEW SIDEWALK TO TIE INTO EXISTING.



ALIGNMENT POINTS - DONCASTER			
POINT	STATION	NORTHING	EASTING
POT	600+00.00	574638.9604	137156.4429
POT	601+35.16	574519.5720	137106.0052
POT	700+00.00	574638.9604	137156.4429
POT	701+44.67	574777.4641	137124.6247

ALIGNMENT POINTS - ROUNDHILL			
POINT	STATION	NORTHING	EASTING
POT	417+91.90	574700.7790	1371024.3880



MATCH LINE SEE SHEET PS-7

MATCH LINE SEE SHEET PS-5

ROADWAY PLAN

SCALE: 1"=30'

LEGEND

- ASPHALT PAVEMENT
- CONCRETE SIDEWALK/ENTRANCE
- PAVEMENT REMOVAL

CONCRETE SIDEWALK - STD. NO. R-3.05			
STATION	DESCRIPTION	LOCATION	S.F.
STA. 700+30.98, RT. TO STA. 701+44.50, RT.		DONCASTER	659 S.F.
STA. 701+76.80 RT. TO STA. 702+29.05, RT.		DONCASTER	527 S.F.
STA. 415+97.51, RT. TO STA. 416+13.53, RT.		ROUNDHILL	78 S.F.
STA. 416+71.62, LT. TO STA. 417+47.51, LT.		ROUNDHILL	378 S.F.

SIDEWALK RAMP, TYPE C, STD. NO. R-4.03			
STATION	DESCRIPTION	LOCATION	QTY
STA. 600+15, 26' RT		DONCASTER	1 EA.
STA. 600+23, 26' LT		DONCASTER	1 EA.
STA. 700+23, 25' RT		DONCASTER	1 EA.

RESIDENTIAL DRIVEWAY STD. NO. R-6.02			
LOCATION	STATION	OFFSET	QTY
DONCASTER	701+62.00	15.05 RT.	34 SY

STANDARD 7" COMBINATION CURB AND GUTTER STD. NO. R-3.01			
STATION	DESCRIPTION	LOCATION	L.F.
STA. 415+22.67, 20.00' LT. TO STA. 416+20.43, 22.00' LT.		ROUNDHILL	103 L.F.
STA. 600+21.86, 25.78' LT. TO STA. 600+97.25, 13.50' LT.		DONCASTER	79 L.F.
STA. 600+21.88, 18.63' RT. TO STA. 600+97.25, 10.51' RT.		DONCASTER	75 L.F.
STA. 416+64.83, 21.88' LT. TO STA. 417+47.48, 10.41' LT.		ROUNDHILL	76 L.F.
STA. 416+66.88, 23.05' RT. TO STA. 417+47.52, 13.48' RT.		ROUNDHILL	84 L.F.
STA. 700+23.05, 20.37' LT. TO STA. 701+06.55, 14.33' LT.		DONCASTER	88 L.F.
STA. 700+22.25, 22.25' RT. TO STA. 702+29.60, 14.09' RT.		DONCASTER	211 L.F.
STA. 415+30.08, 12.41' RT. TO STA. 416+22.26, 22.25' RT.		ROUNDHILL	85 L.F.

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
DONCASTER AND ROUNDHILL ROAD	415+30.08	12.41' RT	528.20
	415+38.63	12.00' LT	528.14
	415+40.08	12.00' RT	528.71
	415+96.08	12.00' LT	530.52
	415+97.51	12.00' RT	530.48
	416+89.74	11.10' LT	533.38
	416+91.86	12.92' RT	533.11
	417+37.51	10.62' LT	534.86
417+47.50	10.41' LT	535.19	
417+47.50	13.48' RT	535.01	

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
DONCASTER AND ROUNDHILL ROAD	600+45.88	15.14' LT	531.00
	600+46.45	8.89' RT	531.56
	600+97.25	10.51' LT	531.05
	600+97.25	13.50' LT	530.11
	700+47.00	14.00' RT	531.48
	700+47.92	10.00' LT	531.93
	700+87.92	14.00' RT	531.37
	700+98.63	10.00' LT	531.23
	700+97.92	14.00' RT	531.00
	701+19.05	14.36' LT	530.76
702+08.00	16.47' RT	529.63	
702+29.59	19.19' RT	529.22	

SHEET NO. PS-6 OF PS-14

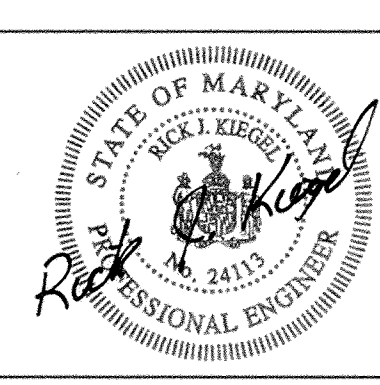
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert J. ... 5/3/00
DATE: 5/3/00
CHIEF, BUREAU OF ENGINEERING

Carol ... 5/3/00
DATE: 5/3/00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



DES:			
DRN:			
CHK:			
DATE:	D & D	9/1/00	
BY:			
NO.			
ADDED BEARINGS, CORRECTED ALIGNMENT POINTS AND CONSTR. TABLES		9/1/00	
REVISION		DATE	

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

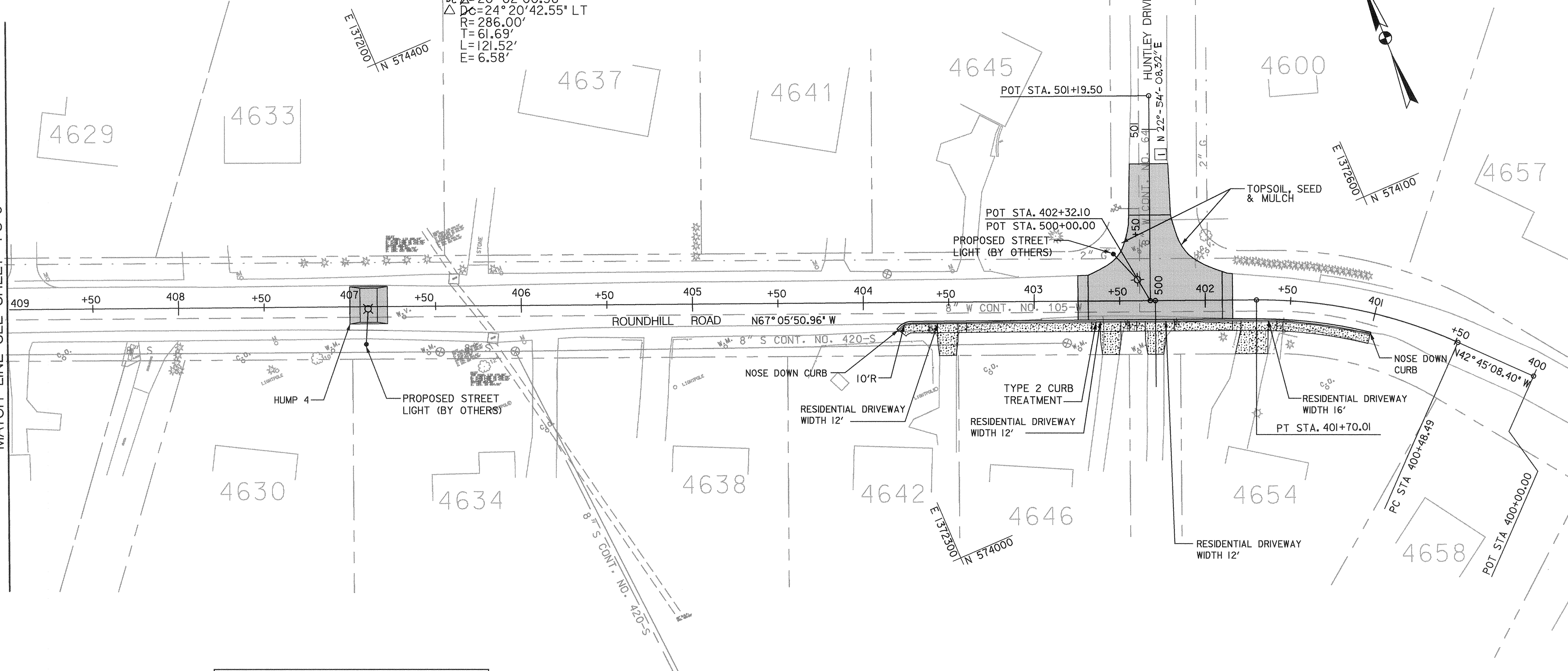
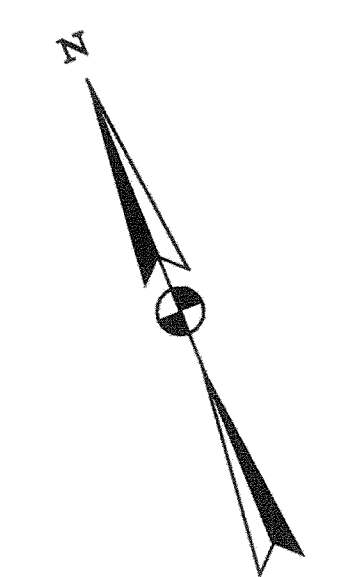
SCALE AS SHOWN

SHEET 10 OF 63

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MATCH LINE SEE SHEET PS-6

1 CURVE - ROUNDHILL
 P.I. STA. = 401+10.18
 $\Delta = 20^{\circ}02'00.56''$
 $\Delta DC = 24^{\circ}20'42.55''$ LT
 R = 286.00'
 T = 61.69'
 L = 121.52'
 E = 6.58'



CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
ROUNDHILL	401+00.00	12.00' LT.	496.00
ROAD & HUNTLEY DRIVE	401+70.01	12.00' LT.	499.10
	403+71.64	12.00' LT.	494.39
	403+79.64	16.00' LT.	493.80

RESIDENTIAL DRIVEWAY STD. NO. R-6.02 1			
LOCATION	STATION	OFFSET	QTY
ROUNDHILL	403+50.00	12H.00' LT.	24 S.Y.
ROUNDHILL	402+55.00	12H.00' LT.	25 S.Y.
ROUNDHILL	402+27.00	12H.00' LT.	24 S.Y.
ROUNDHILL	401+70.00	12H.00' LT.	36 S.Y.

1 CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
407+00	406+28.00	10.00' LT.	SEE SHT. 27
407+00	406+28.00	11.62' RT.	SEE SHT. 27
407+06	406+34.00	9.00' LT.	SEE SHT. 27
407+06	406+34.00	11.62' RT.	SEE SHT. 27
ROAD 407+16	406+44.00	9.00' LT.	SEE SHT. 27
407+16	406+44.00	11.62' RT.	SEE SHT. 27
407+22	406+50.00	10.00' LT.	SEE SHT. 27
407+22	406+50.00	11.62' RT.	SEE SHT. 27

ALIGNMENT POINTS - HUNTLEY DRIVE			
POINT	STATION	NORTHING	EASTING
POT	500+00.00	574,093.7590	1,372,461.2300
1 POT	501+19.50	574,203.8365	1,372,507.7337

ALIGNMENT POINTS - ROUNDHILL ROAD			
POINT	STATION	NORTHING	EASTING
POT	400+00.00	573,964.6830	1,372,650.048
PC	400+48.49	574,000.2868	1,372,617.1335
PI	401+10.18	574,045.5870	1,372,575.2550
PT	401+70.01	574,069.5954	1,372,518.4262

LEGEND

- ASPHALT PAVEMENT/ENTRANCE
- CONCRETE SIDEWALK/ENTRANCE

STANDARD 7" COMBINATION CURB AND GUTTER STD. NO. R-3.01			
STATION	OFFSET	LOCATION	QTY
STA. 401+00.00, 12.00' LT. TO STA. 403+79.64, 16.00' LT.		ROUNDHILL	278 L.F.

CONCRETE SIDEWALK - STD. NO. R-3.05			
STATION	OFFSET	LOCATION	QTY
STA. 401+00.00, LT. TO STA. 403+79.64, LT.		ROUNDHILL	1376 S.F.

ROADWAY PLAN
 SCALE: 1"=30'

CONSTRUCTION NOTES:

- ALL MAILBOXES ARE TO BE RESET.
- ALL NEW DRIVEWAY ENTRANCES TO MATCH EXISTING WIDTH AT RIGHT-OF-WAY LINE.
- SPEED TABLE EDGES SHALL MATCH EXISTING PAVEMENT.
- SEE SHEET 27 FOR SPEED HUMP, SPEED TABLE AND CURB TREATMENT DETAILS.
- ALL MEASUREMENTS TAKEN TO FACE OF CURB.

SHEET NO. PS-7 OF PS-14

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James J. Lewis 5/3/00
 CHIEF, BUREAU OF ENGINEERING

Robert J. Sporn 5/3/00
 CHIEF, BUREAU OF HIGHWAYS

DATE: 5/3/00

Dewberry & Davis
 Architects
 Engineers
 Planners
 Surveyors

3120 Timanus Lane, Suite 211
 Baltimore, Maryland 21244
 Tel. 410-265-9500
 Fax. 410-265-8875



DES:			
DRN:			
CHK:			
DATE:	D & D	1	9/1/00
BY:			
NO.:			
REVISION:	ADDED HUNTLEY DR BEARING AND CORRECTED CONSTE. DATA TABLES		

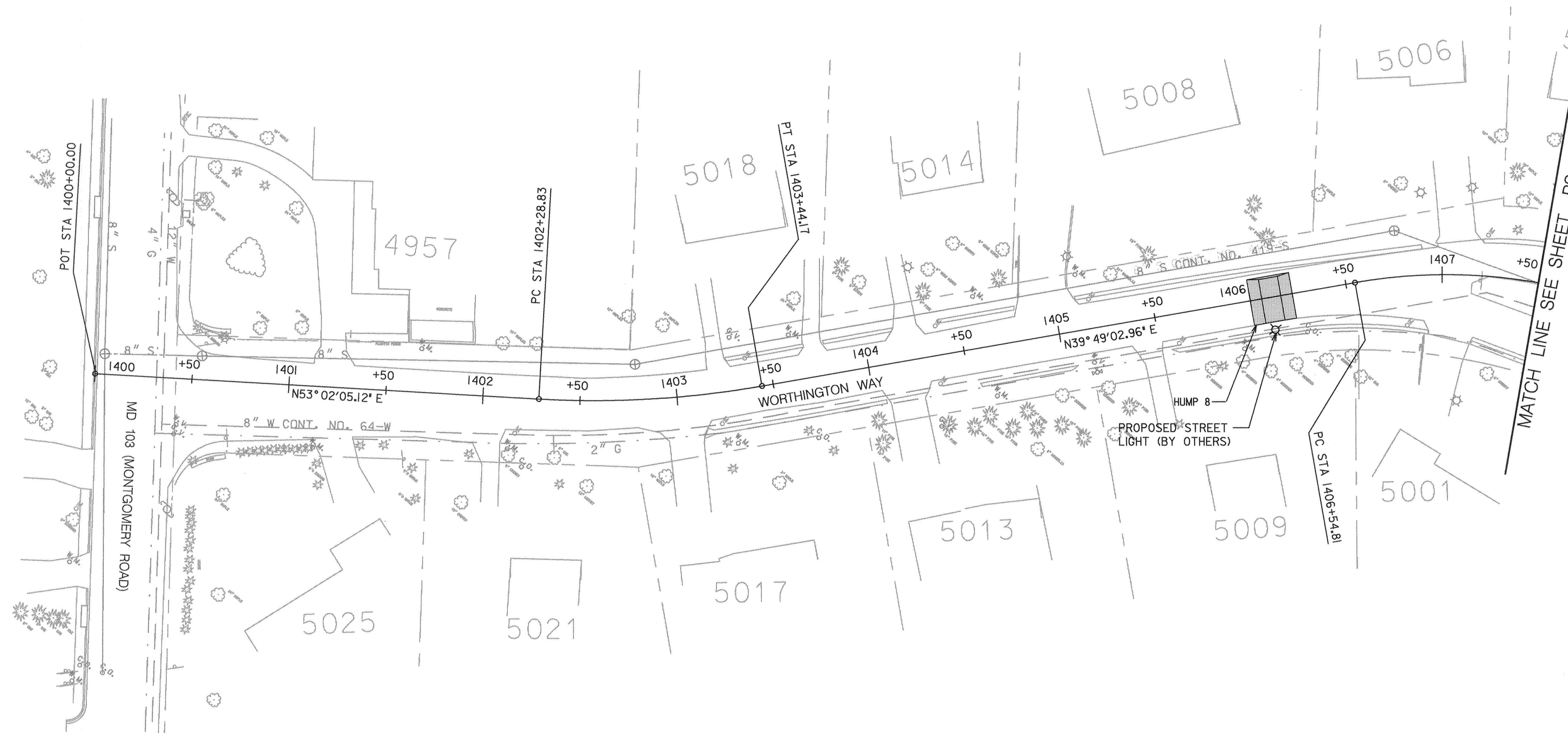
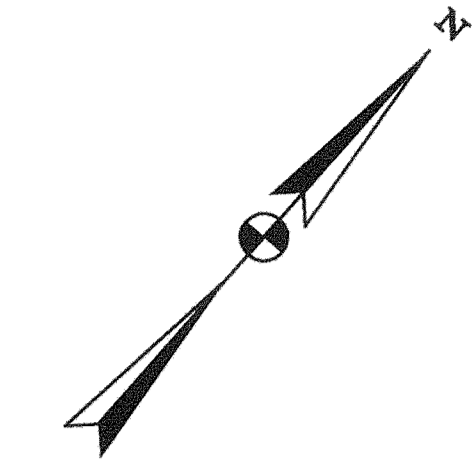
CAPITAL PROJECT NO.	J-4158
30' SCALE MAP NO.:	DATE:

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
 SHEET 11 OF 63

CURVE - WORTHINGTON WAY 1
 P.I. STA. = 1402+86.76
 $\Delta = 13^{\circ}13'02.16''$
 $Dc = 11^{\circ}27'32.96''$ LT
 $R = 500.00'$
 $T = 57.93'$
 $L = 115.34'$
 $E = 3.34'$

CURVE - WORTHINGTON WAY 2
 P.I. STA. = 1407+48.48
 $\Delta = 37^{\circ}37'00.60''$
 $Dc = 20^{\circ}50'05.38''$ RT
 $R = 275.00'$
 $T = 93.66'$
 $L = 180.55'$
 $E = 15.51'$



LEGEND
 [Hatched Box] - ASPHALT PAVEMENT

ROADWAY PLAN
 SCALE: 1" = 30'

CONSTRUCTION NOTES:
 1. SEE SHEET 27 FOR SPEED HUMP, SPEED TABLE AND CURB TREATMENT DETAILS.

WORTHINGTON WAY - ALIGNMENT POINTS			
POINT	STATION	NORTHING	EASTING
POT	1400+00.00	570,737.9690	1,370,427.9770
PC	1402+28.83	570,875.0729	1,370,610.8142
PI	1402+86.76	570,909.9070	1,370,657.0990
PT	1403+44.17	570,954.4011	1,370,694.1931
PC	1406+54.81	571,192.9988	1,370,893.1086
P71	1407+48.48	571,264.9400	1,370,953.0850

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
HUMP 8 WORTHINGTON WAY	1406+00.00	11.00' LT.	SEE SHT 27
	1406+00.00	12.97' RT.	SEE SHT 27
	1406+06.00	10.00' LT.	SEE SHT 27
	1406+06.00	12.97' RT.	SEE SHT 27
	1406+16.00	10.00' LT.	SEE SHT 27
	1406+16.00	12.82' RT.	SEE SHT 27
	1406+22.00	11.00' LT.	SEE SHT 27
	1406+22.00	13.05' RT.	SEE SHT 27

SHEET NO. PS-8 OF PS-14

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
[Signatures]
 DATE: 5/3/00
 DATE: 5/3/00
 DATE: 5/3/00

Dewberry & Davis
 Architects 3120 Timanus Lane, Suite 211
 Engineers Baltimore, Maryland 21244
 Planners Tel. 410-265-9500
 Surveyors Fax. 410-265-8875



DES:			
DRN:			
CHK:			
DATE:	D & D	BY NO.	9/1/00

CAPITAL PROJECT NO.
 J-4158
 30' SCALE MAP NO.: _____ DATE: _____

**PHASE 1
 WORTHINGTON AREA
 VEHICULAR ACCESS**
 SCALE AS SHOWN
 SHEET 12 OF 63

CURVE - WORTHINGTON WAY 2

P.I. STA. = 1407+48.48
 $\Delta = 37^\circ 37' 00.60''$
 $Dc = 20^\circ 50' 05.38''$ RT
 $R = 275.00'$
 $T = 93.66'$
 $L = 180.55'$
 $E = 15.51'$

CURVE - WORTHINGTON WAY 3

P.I. STA. = 1409+60.49
 $\Delta = 34^\circ 02' 40.23''$
 $Dc = 28^\circ 38' 52.40''$ LT
 $R = 200.00'$
 $T = 61.23'$
 $L = 118.84'$
 $E = 9.16'$

CURVE - WORTHINGTON WAY 4

P.I. STA. = 1410+89.71
 $\Delta = 11^\circ 06' 34.73''$
 $Dc = 11^\circ 27' 32.96''$ LT
 $R = 500.00'$
 $T = 48.63'$
 $L = 96.95'$
 $E = 2.36'$

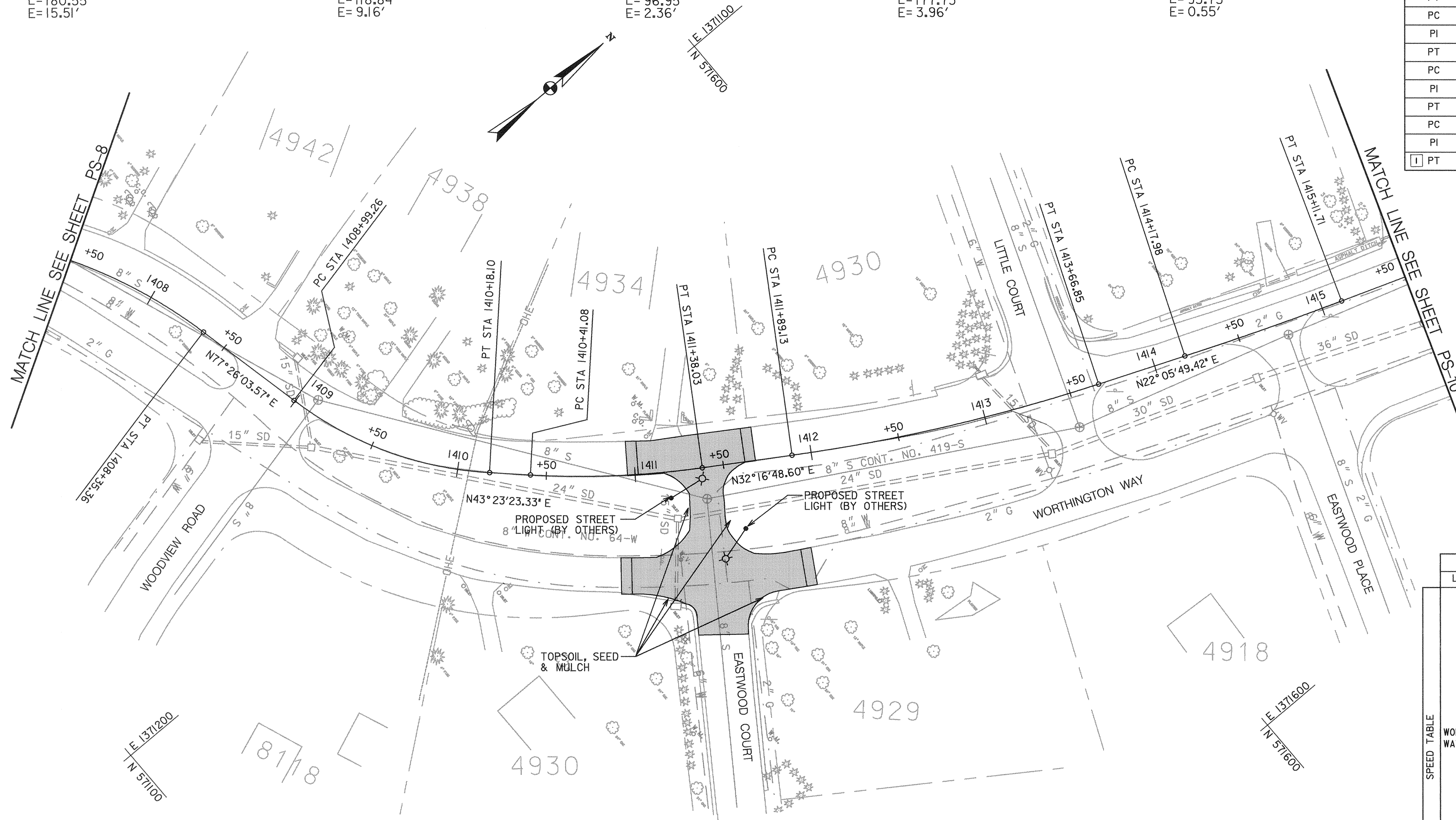
CURVE - WORTHINGTON WAY 5

P.I. STA. = 1412+78.22
 $\Delta = 10^\circ 10' 59.18''$
 $Dc = 5^\circ 43' 46.48''$ LT
 $R = 1,000.00'$
 $T = 89.10'$
 $L = 177.73'$
 $E = 3.96'$

CURVE - WORTHINGTON WAY 6

P.I. STA. = 1414+64.85
 $\Delta = 2^\circ 41' 06.27''$
 $Dc = 2^\circ 51' 53.24''$ LT
 $R = 2,000.00'$
 $T = 46.87'$
 $L = 93.73'$
 $E = 0.55'$

WORTHINGTON WAY - ALIGNMENT POINTS			
POINT	STATION	NORTHING	EASTING
PT	1408+35.36	571,285.3171	1,371,044.5042
PC	1408+99.26	571,299.2187	1,371,106.8716
PI	1409+60.49	571,312.5400	1,371,166.6360
PT	1410+18.10	571,357.0364	1,371,208.6992
PC	1410+41.08	571,373.7396	1,371,224.4890
PI	1410+89.71	571,409.0770	1,371,257.8940
PT	1411+38.03	571,450.1889	1,371,283.8640
PC	1411+89.13	571,493.3855	1,371,311.1508
PI	1412+78.22	571,568.7140	1,371,358.7350
PT	1413+66.85	571,651.2685	1,371,392.2520
PC	1414+7.98	571,698.6379	1,371,411.4839
PI	1414+64.85	571,742.0670	1,371,429.1160
PT	1415+11.71	571,768.2745	1,371,444.6943



CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
WORTHINGTON WAY	1410+89.81	67.09 RT.	467.19
	1410+90.04	46.50 RT.	467.26
	1410+95.18	67.34 RT.	467.27
	1410+95.50	46.75 RT.	467.28
	1410+95.52	18.88 LT.	466.08
	1410+95.76	0.44 LT.	466.61
	1411+01.75	0.40 RT.	466.65
	1411+01.75	18.66 LT.	466.15
	1411+25.35	93.23 RT.	466.09
	1411+50.76	96.31 RT.	466.29
1411+62.28	0.26 RT.	464.93	
1411+62.28	18.93 LT.	464.34	
1411+68.28	0.26 RT.	464.51	
1411+68.28	18.88 RT.	463.91	
1411+86.56	53.25 RT.	464.73	
1411+86.91	64.31 RT.	464.84	
1411+92.38	52.87 RT.	464.31	
1411+92.68	64.15 RT.	464.41	

LEGEND

- ASPHALT PAVEMENT

ROADWAY PLAN

SCALE: 1" = 30'

CONSTRUCTION NOTES:

- SEE SHEET XX FOR SPEED HUMP, SPEED TABLE AND CURB TREATMENT DETAILS.
- ALL MEASUREMENTS TAKEN TO FACE OF CURB.

SHEET NO. PS-9 OF PS-14

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

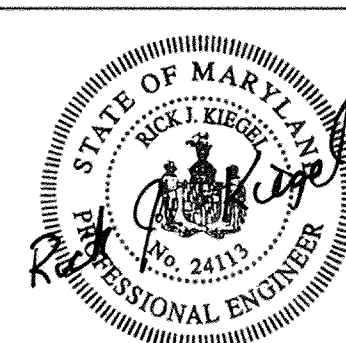
James M. Shaw 5/3/00
 DEPARTMENT OF PUBLIC WORKS
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Robert J. Szymon 5/3/00
 CHIEF, BUREAU OF ENGINEERING

Anthony J. Szymon 5-3-00
 CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
 Engineers Baltimore, Maryland 21244
 Planners Tel. 410-265-9500
 Surveyors Fax. 410-265-8875



DES:			
DRN:			
CHK:	D&D	1	CORRECTED ALIGNMENT AND CONSTR. POINTS
DATE:	BY	NO.	REVISION
			9/1/00

CAPITAL PROJECT NO.
 J-4158

30' SCALE MAP NO.: _____ DATE: _____

**PHASE 1
 WORTHINGTON AREA
 VEHICULAR ACCESS**

SCALE AS SHOWN
 SHEET 13 OF 63

CURVE - WORTHINGTON WAY 7

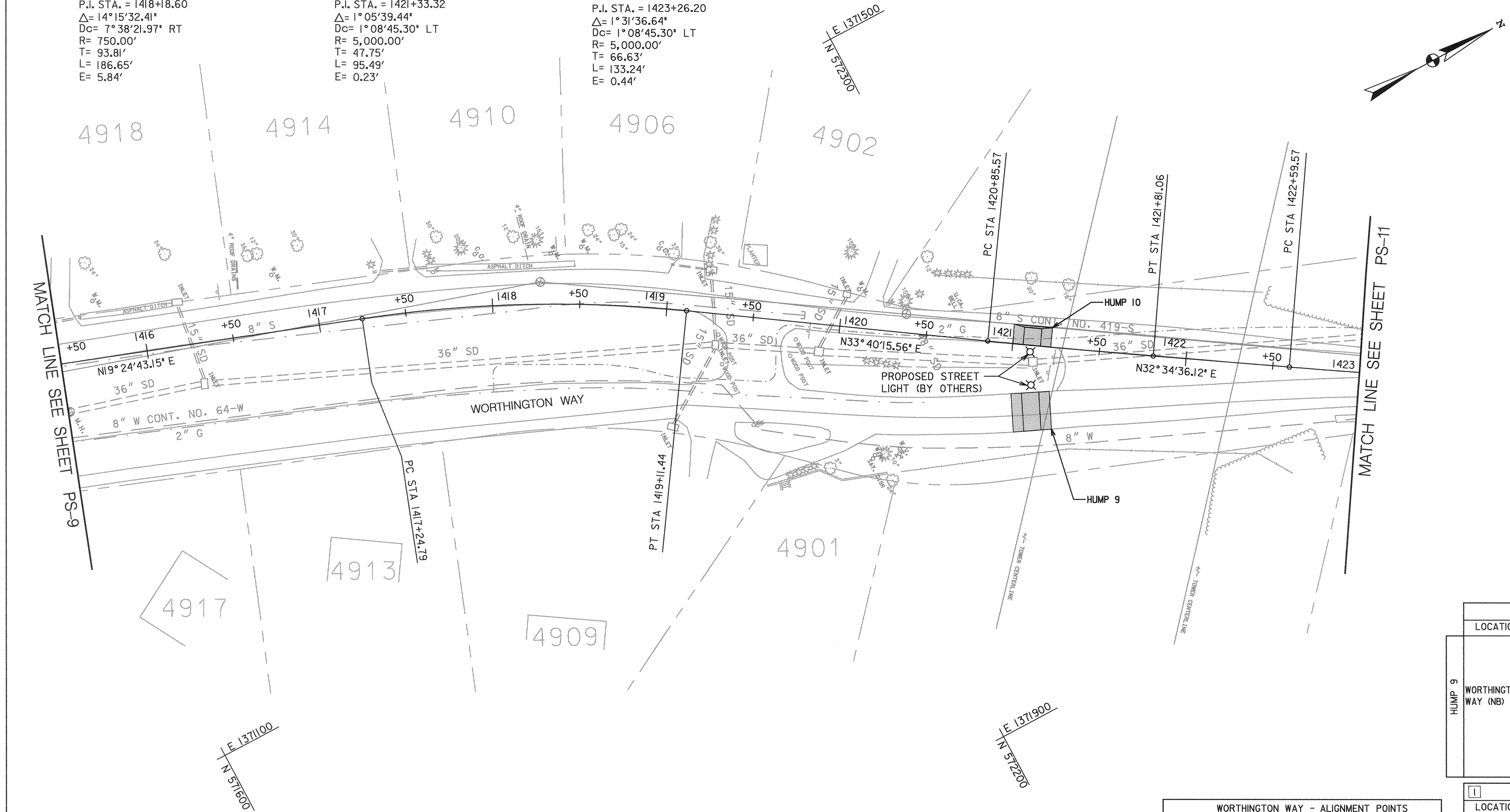
P.I. STA. = 1418+18.60
 $\Delta = 14^\circ 15' 32.41''$
 $Dc = 7^\circ 38' 21.97''$ RT
 $R = 750.00'$
 $T = 93.81'$
 $L = 186.65'$
 $E = 5.84'$

CURVE - WORTHINGTON WAY 8

P.I. STA. = 1421+33.32
 $\Delta = 1^\circ 05' 39.44''$
 $Dc = 1^\circ 08' 45.30''$ LT
 $R = 5,000.00'$
 $T = 47.75'$
 $L = 95.49'$
 $E = 0.23'$

CURVE - WORTHINGTON WAY 9

P.I. STA. = 1423+26.20
 $\Delta = 1^\circ 31' 36.64''$
 $Dc = 1^\circ 08' 45.30''$ LT
 $R = 5,000.00'$
 $T = 66.63'$
 $L = 133.24'$
 $E = 0.44'$



LEGEND

-ASPHALT PAVEMENT

ROADWAY PLAN

SCALE: 1" = 30'

CONSTRUCTION NOTES:

- 1. SEE SHEET XX FOR SPEED HUMP, SPEED TABLE AND CURB TREATMENT DETAILS.

WORTHINGTON WAY - ALIGNMENT POINTS			
POINT	STATION	NORTHING	EASTING
PC	1417+24.79	571,987.2482	1,371,515.5156
PI	1418+18.60	572,075.7250	1,371,546.6940
PT	1419+11.44	572,153.7966	1,371,598.7042
PC	1420+85.57	572,298.7107	1,371,695.2439
PI	1421+33.32	572,338.4490	1,371,721.7170
PT	1421+81.06	572,378.6856	1,371,747.4263
PC	1422+59.57	572,444.8419	1,371,789.6971

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
HUMP 9 WORTHINGTON WAY (NB)	1421+01.81	28.95' LT.	SEE SHT 27
	1421+05.24	50.84' RT.	SEE SHT 27
	1421+07.70	28.01' RT.	SEE SHT 27
	1421+11.11	49.91' RT.	SEE SHT 27
	1421+17.53	26.44' RT.	SEE SHT 27
	1421+20.86	48.15' RT.	SEE SHT 27
	1421+23.43	25.56' RT.	SEE SHT 27
1421+26.71	47.10' RT.	SEE SHT 27	

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
HUMP 10 WORTHINGTON WAY (SB)	1421+00	H406+00.00	11.00' LT. SEE SHT 27
	1421+00	H406+00.00	0.00' RT. SEE SHT 27
	1421+06	H406+06.00	10.00' LT. SEE SHT 27
	1421+06	H406+06.00	0.00' RT. SEE SHT 27
	1421+16	H406+16.00	10.00' LT. SEE SHT 27
	1421+16	H406+16.00	0.11' RT. SEE SHT 27
	1421+22	H406+22.00	11.00' LT. SEE SHT 27
	1421+22	H406+22.00	0.14' RT. SEE SHT 27

SHEET NO. PS-10 OF PS-14

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James A. Slone 5/3/00
 DEPARTMENT OF PUBLIC WORKS
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Robert J. Seaman 5/3/00
 CHIEF, BUREAU OF ENGINEERING

Michael J. ... 5/3/00
 CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
 Architects 3120 Timanus Lane, Suite 211
 Engineers Baltimore, Maryland 21244
 Planners Tel. 410-265-9500
 Surveyors Fax. 410-265-8875



DES:			
DRN:			
CHK:			
DATE:	D#D	CORRECTED CONSTRUCTION POINTS STATIONS FOR HUMP 10	9/1/00
	BY NO.	REVISION	DATE

CAPITAL PROJECT NO.
 J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
 SHEET 14 OF 63

CURVE - WORTHINGTON WAY 9

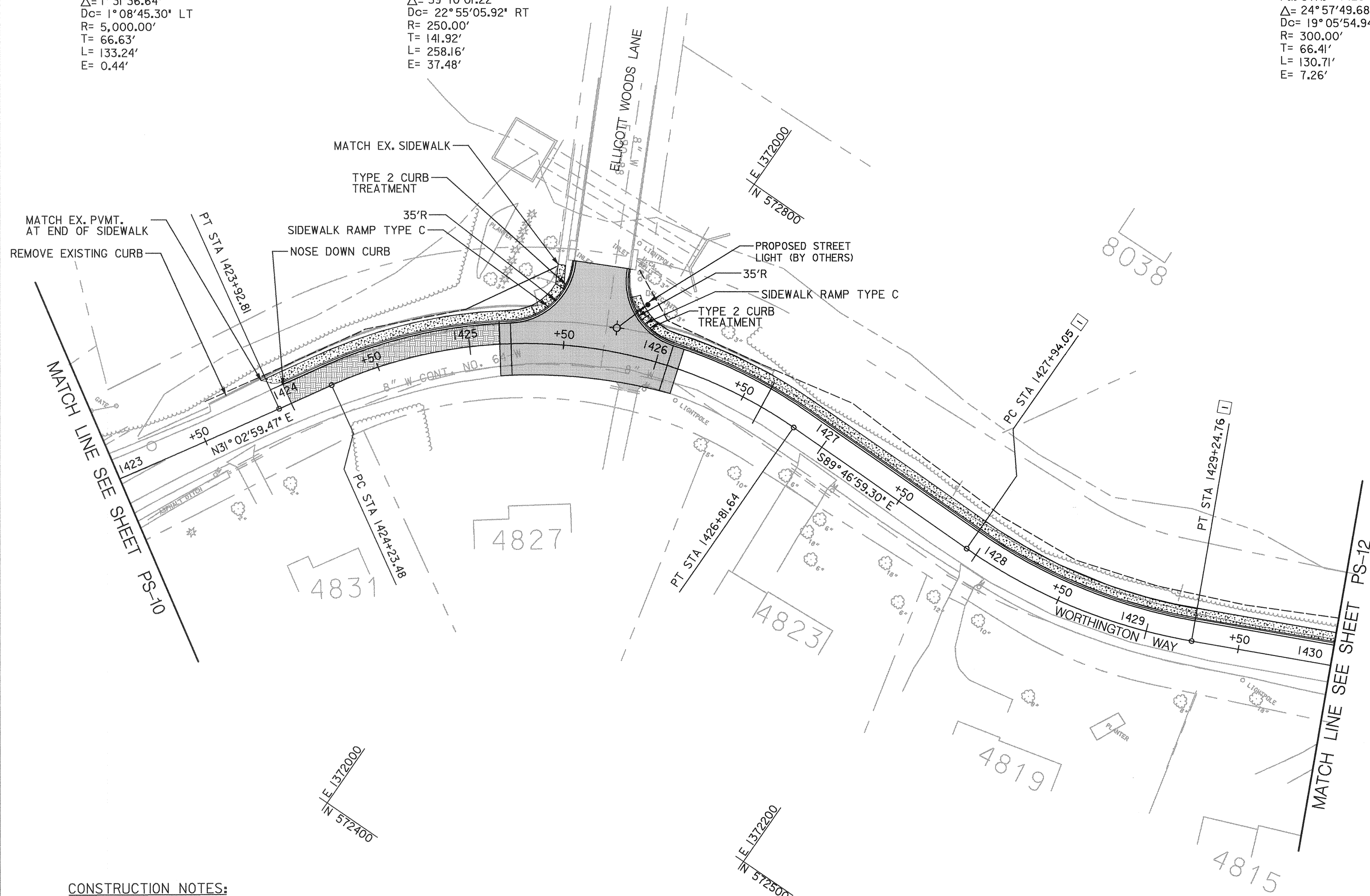
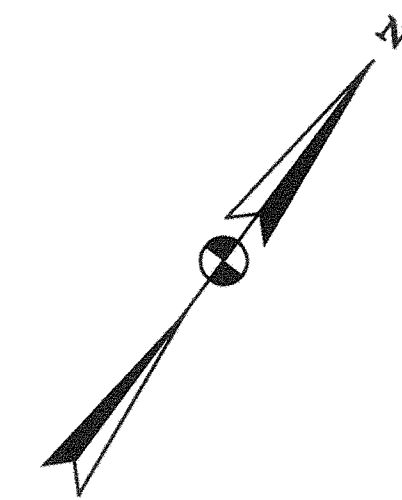
P.I. STA. = 1423+26.20
 $\Delta = 1^{\circ}31'36.64''$
 $Dc = 1^{\circ}08'45.30''$ LT
 $R = 5,000.00'$
 $T = 66.63'$
 $L = 133.24'$
 $E = 0.44'$

CURVE - WORTHINGTON WAY 10

P.I. STA. = 1425+65.40
 $\Delta = 59^{\circ}10'01.22''$
 $Dc = 22^{\circ}55'05.92''$ RT
 $R = 250.00'$
 $T = 141.92'$
 $L = 258.16'$
 $E = 37.48'$

CURVE - WORTHINGTON WAY 11

P.I. STA. = 1428+60.46
 $\Delta = 24^{\circ}57'49.68''$
 $Dc = 19^{\circ}05'54.94''$ LT
 $R = 300.00'$
 $T = 66.41'$
 $L = 130.71'$
 $E = 7.26'$



SIDEWALK RAMP TYPE C STD. NO. R-4.03		
STA. 1425+34.88, 15.13' LT	WORTHINGTON	1 EA.
STA. 1425+97.31, 15.09' LT	WORTHINGTON	1 EA.

WORTHINGTON WAY - ALIGNMENT POINTS			
POINT	STATION	NORTHING	EASTING
PI	1423+26.20	572,500.9850	1,371,825.5700
PT	1423+92.81	572,558.0640	1,371,859.9342
PC	1424+23.48	572,584.3335	1,371,875.7496
PI	1425+65.40	572,705.9230	1,371,948.9520
PT	1426+81.64	572,705.3858	1,372,090.8756
PC	1427+94.05	572,704.9604	1,372,203.2875
PI	1428+60.46	572,704.7090	1,372,269.6960
PT	1429+24.76	572,732.5085	1,372,330.0063

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
WORTHINGTON WAY	1424+00.00	12.00' LT.	422.91
	1424+23.48	12.00' LT.	422.11
	1425+00.00	12.00' LT.	419.42
	1425+22.08	12.00' LT.	418.63
	1425+51.56	43.03' LT.	418.37
	1425+51.65	44.89' LT.	418.40
	1425+76.74	44.79' LT.	418.36
	1425+76.80	43.32' LT.	418.26
	1426+06.30	12.00' LT.	415.85
	1426+81.64	12.00' LT.	413.40
1427+94.05	12.00' LT.	411.21	
1429+24.76	12.00' LT.	408.49	

CONSTRUCTION NOTES:

- SEE SHEET 27 FOR SPEED HUMP, SPEED TABLE AND CURB TREATMENT DETAILS.
- WEDGE AND LEVELING COURSE TO BE PLACED FROM 1424+00.00, LT. TO 1425+16.24, LT.
- PROPOSED CURB AND GUTTER TO BE CONSTRUCTED AT EXISTING GROUND UNLESS OTHERWISE NOTED.
- ALL MEASUREMENTS TAKEN TO FACE OF CURB.

LEGEND

- ASPHALT PAVEMENT/ENTRANCE
- WEDGE AND LEVELING COURSE
- CONCRETE SIDEWALK

ROADWAY PLAN

SCALE: 1" = 30'

STANDARD 7" COMBINATION CURB AND GUTTER STD. NO. R-3.01	
1	STA. 1423+95.06, 18.24' LT. TO STA. 1425+51.66, 45.06' LT. WORTHINGTON 87 L.F.
1	STA. 1425+76.74, 44.79' LT. TO STA. 1430+00.00, 12.00' LT. WORTHINGTON 437 L.F.
CONCRETE SIDEWALK - STD. NO. R-3.05	
1	STA. 1423+90.36, 17.67' LT. TO STA. 1425+48.05, 42.12' LT. WORTHINGTON 891 S.F.
1	STA. 1425+80.40, 30.05' LT. TO STA. 1430+00.00, 17.72' LT. WORTHINGTON ELBERTA 2121 S.F.

SHEET NO. PS-11 OF PS-14

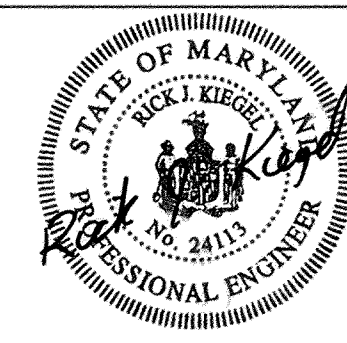
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Samuel A. Allen 5/3/00
 DEPARTMENT OF PUBLIC WORKS
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Robert J. Seaton 5/3/00
 CHIEF, BUREAU OF ENGINEERING

Charles W. Dwyer 5-3-00
 CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
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 3120 Timanus Lane, Suite 211
 Engineers
 Baltimore, Maryland 21244
 Planners
 Tel. 410-265-9500
 Surveyors
 Fax. 410-265-8875



DES:			
DRN:			
CHK:	D & D	1	CORRECTED CURVE POINTS AND CONSTR. DATA TABLE
DATE:	BY	NO.	REVISION
			DATE

CAPITAL PROJECT NO.	J-4158
30' SCALE MAP NO.:	DATE:

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN

SHEET 15 OF 63

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7" CURB & GUTTER STD. NO. R-3.01			
STA. 1430+00.00, 12.00' LT. TO STA. 1434+71.74, 107.31' LT.	WORTHINGTON	568	L.F.
STA. 1432+75.34, 12.00' RT. TO STA. 1434+72.45, 112.24' RT.	WORTHINGTON	280	L.F.
STA. 1435+06.88, 110.82' RT. TO STA. 1435+10.86, 108.02' LT.	WORTHINGTON	225	L.F.

CONCRETE SIDEWALK STD. NO. R-3.05			
STA. 1430+00.00, 12.70' LT. TO STA. 1434+63.11, 15.48' LT.	WORTHINGTON	2288	S.F.
STA. 906+08.37, 14.83' LT. TO STA. 906+21.00, 12.66' LT.	ROUNDHILL	59	S.F.

RESIDENTIAL DRIVEWAY STD. NO. R-6.05			
LOCATION	STATION	OFFSET	QTY
ROUNDHILL	1503+84	12.00' LT.	26 S.Y.
ROUNDHILL	1502+12	12.00' RT.	17 S.Y.
ROUNDHILL	1501+80	12.00' LT.	37 S.Y.

SIDEWALK RAMP TYPE C STD. NO. R-4.03			
STA. 1434+63.11, 15.48' LT.	WORTHINGTON	1	EA.

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
WORTHINGTON WAY AND ROUNDHILL ROAD	1430+00.00	12.00' LT	406.42
	1431+74.72	12.00' LT	403.00
	1432+56.72	12.00' LT	400.96
	1432+75.34	12.00' RT	400.14
	1433+98.84	12.00' LT	397.39
	1434+43.65	12.00' LT	396.38
	1434+48.36	12.00' RT	396.22
	1434+71.74	107.31' LT	398.26
	1434+72.45	112.24' LT	399.67
	1434+78.18	98.00' LT	397.97
	1434+78.36	42.00' LT	396.19
	1434+78.65	46.89' LT	397.09
	1434+78.83	102.89' RT	399.28
	1435+02.83	102.81' RT	399.70
	1435+02.18	98.08' RT	397.58
	1435+06.88	110.82' RT	399.93
	1435+10.86	108.01' RT	397.86

CONSTRUCTION NOTES:

- ALL MAILBOXES ARE TO BE RESET.
- ALL NEW DRIVEWAY ENTRANCES TO MATCH EXISTING WIDTH AT RIGHT-OF-WAY LINE.
- SEE SHEET 27 FOR SPEED HUMP, SPEED TABLE AND CURB TREATMENT DETAILS.
- ALL MEASUREMENTS TAKEN TO FACE OF CURB.
- FOR WATER RELOCATION DETAIL SEE SHEET 26.

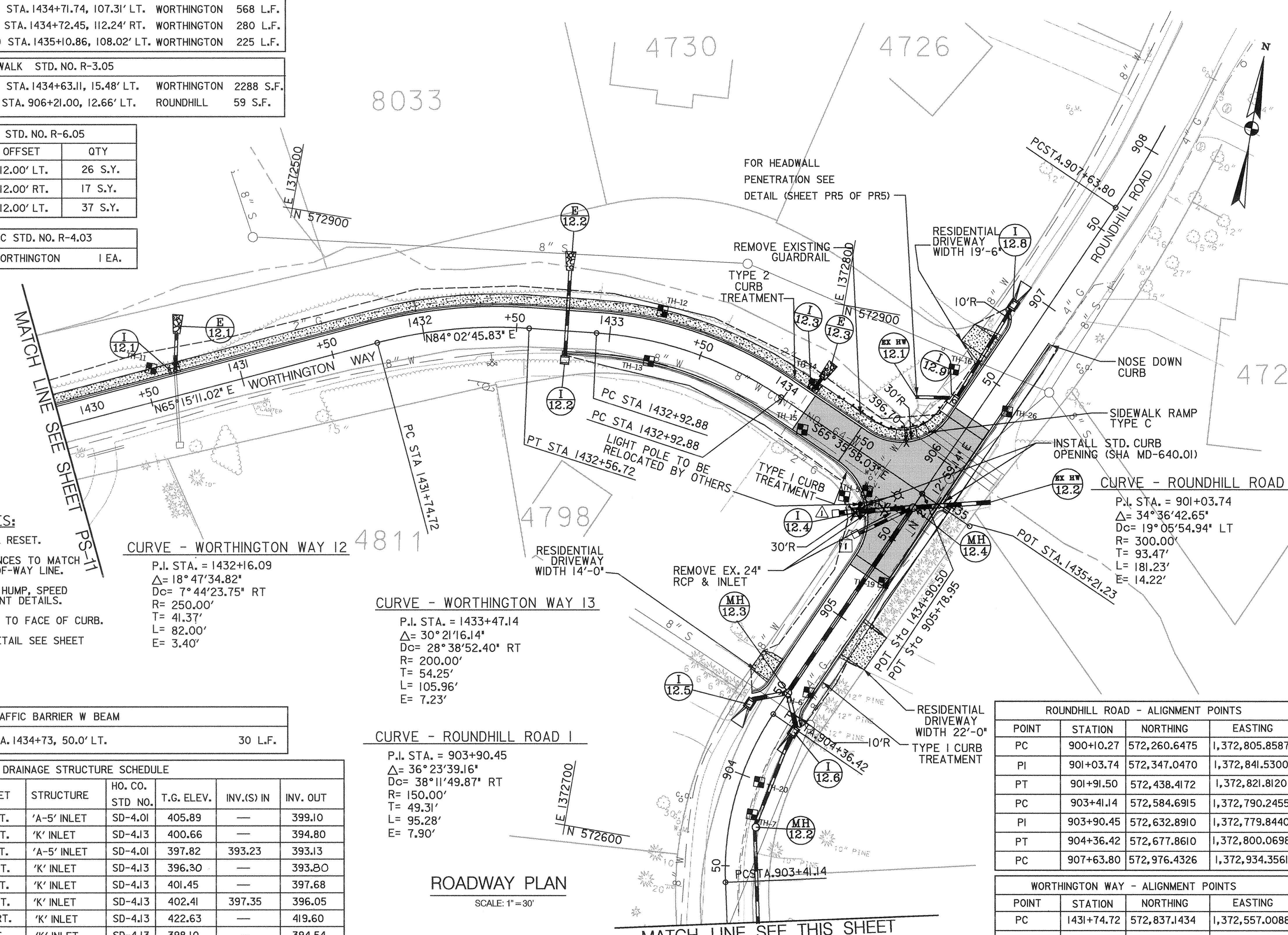
TRAFFIC BARRIER W BEAM		
STA. 1434+25, 17.6' LT. TO STA. 1434+73, 50.0' LT.	30	L.F.

DRAINAGE STRUCTURE SCHEDULE							
STR. NO.	R STATION	OFFSET	STRUCTURE	HO. CO. STD NO.	T.G. ELEV.	INV.(S) IN	INV. OUT
I-12.1	1430+66	13.5 LT.	'A-5' INLET	SD-4.01	405.89	—	399.10
I-12.2	1432+76	15.5 RT.	'K' INLET	SD-4.13	400.66	—	394.80
I-12.3	1434+10	13.5 LT.	'A-5' INLET	SD-4.01	397.82	393.23	393.13
I-12.4	905+40	32.0 LT.	'K' INLET	SD-4.13	396.30	—	393.80
I-12.5	904+34	13.9 LT.	'K' INLET	SD-4.13	401.45	—	397.68
I-12.6	904+35	14.2 RT.	'K' INLET	SD-4.13	402.41	397.35	396.05
I-12.7	900+93	15.0 RT.	'K' INLET	SD-4.13	422.63	—	419.60
I-12.8	906+90	16.1 LT.	'K' INLET	SD-4.13	398.10	—	394.54
I-12.9	906+29	13.5 LT.	'A-5' INLET	SD-4.01	396.77	392.55	392.45
MH-12.1	901+54	15.0 RT.	STD. MANHOLE	G-5.12	420.54	415.58	415.48
MH-12.2	903+73	13.4 RT.	STD. MANHOLE	G-5.12	407.31	402.41	402.31
MH-12.3	904+50	CL	STD. MANHOLE	G-5.12	401.28	395.36 / 395.42	394.72
MH-12.4	905+70	CL	STD. MANHOLE	G-5.12	397.39	393.00 / 390.50	390.40
E-12.1	1430+72	32.4 LT.	STD. END SECT.	SD-5.51	—	399.00	—
E-12.2	1432+77	32.2 LT.	STD. END SECT.	SD-5.51	—	394.00	—
E-12.3	1434+11	20.7 LT.	STD. END SECT.	SD-5.51	—	393.10	—

TYPE C TRAFFIC BARRIER END TREATMENT			
STA. 1434+30.00, LT. WORTHINGTON	1	EA.	
STA. 906+25.00, LT. ROUNDHILL	1	EA.	

TRAFFIC BARRIER REMOVAL			
STA. 1434+37.20, LT. WORTHINGTON	27	L.F.	
STA. 905+73.25, RT. ROUNDHILL	29	L.F.	

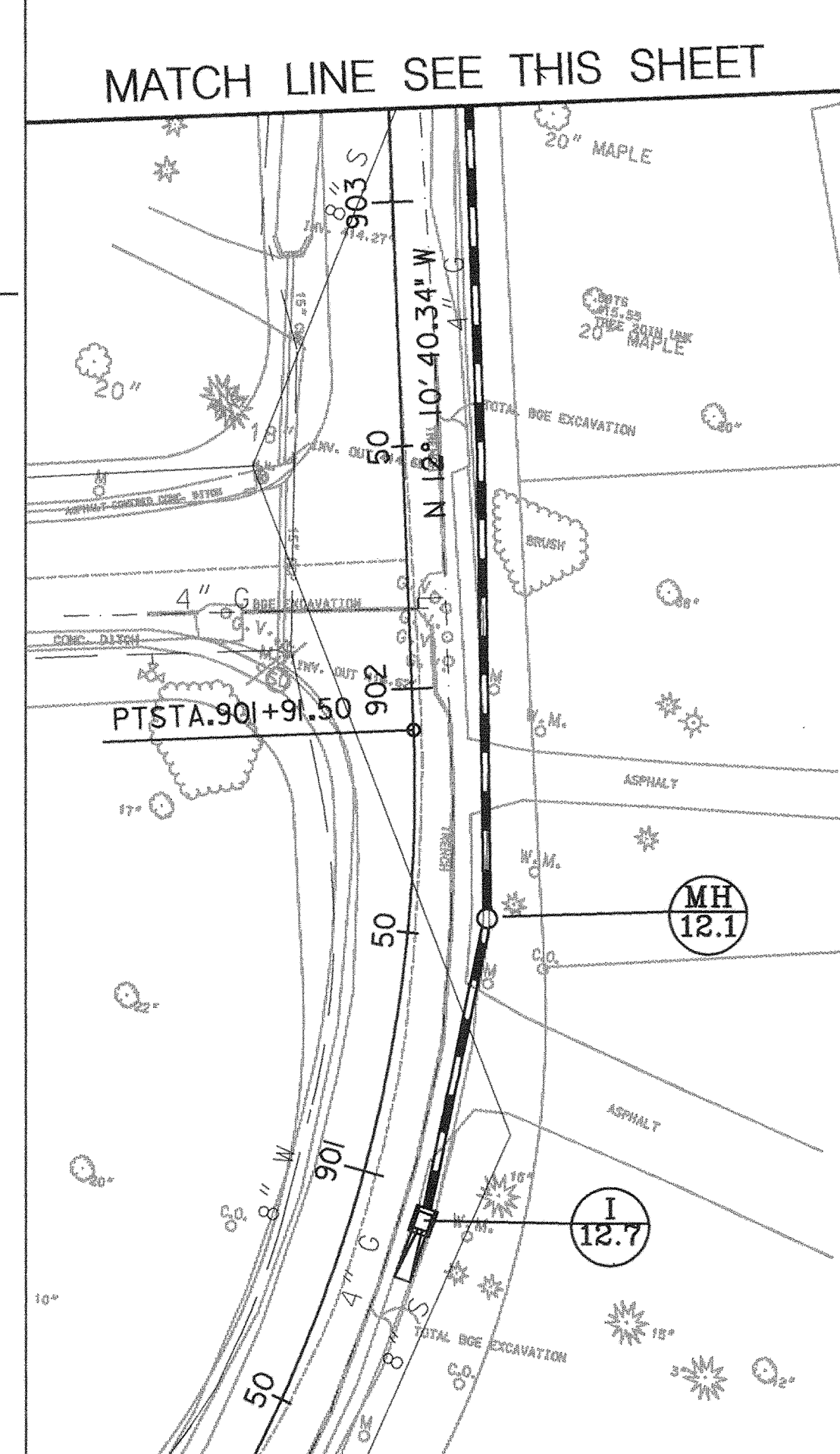
DRAINAGE PIPE SCHEDULE			
SIZE	RCP CLASS	LENGTH	
24"	RCP CL IV	214	L.F.
18"	RCP CL IV	513	L.F.



ROADWAY PLAN
SCALE: 1"=30'

ROUNDHILL ROAD - ALIGNMENT POINTS			
POINT	STATION	NORTHING	EASTING
PC	900+10.27	572,260.6475	1,372,805.8587
PI	901+03.74	572,347.0470	1,372,841.5300
PT	901+91.50	572,438.4172	1,372,821.8120
PC	903+41.14	572,584.6915	1,372,790.2455
PI	903+90.45	572,632.8910	1,372,779.8440
PT	904+36.42	572,677.8610	1,372,800.0698
PC	907+63.80	572,976.4326	1,372,934.3561

WORTHINGTON WAY - ALIGNMENT POINTS			
POINT	STATION	NORTHING	EASTING
PC	1431+74.72	572,837.1434	1,372,557.0088
PI	1432+16.09	572,854.4620	1,372,594.5810
PT	1432+56.72	572,858.7534	1,372,635.7294
PC	1432+92.88	572,862.5043	1,372,671.6962
PI	1433+47.14	572,868.1320	1,372,725.6560
PT	1433+98.84	572,845.7192	1,372,775.0636
POT	1435+21.23	572,795.1590	1,372,886.5200



LEGEND

- ASPHALT PAVEMENT/ENTRANCE
- CONCRETE SIDEWALK

SHEET NO. PS-12 OF PS-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John A. Lewis 5/3/00
CHIEF, BUREAU OF PUBLIC WORKS

Richard E. Jones 5/3/00
CHIEF, BUREAU OF ENGINEERING

Robert M. Dale 5/3/00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects
Engineers
Planners
Surveyors

3120 Timanus Lane, Suite 211
Baltimore, Maryland 21244
Tel. 410-265-9500
Fax. 410-265-8875



DES:				
DRN:				
CHK:	D&D	1	CORRECTED INLET LOCATION & OFFSET	9/1/00
	D&D	1	REVISED INLET LOCATIONS & INVERTS	6/2/00
DATE:	BY	NO.	REVISION	DATE

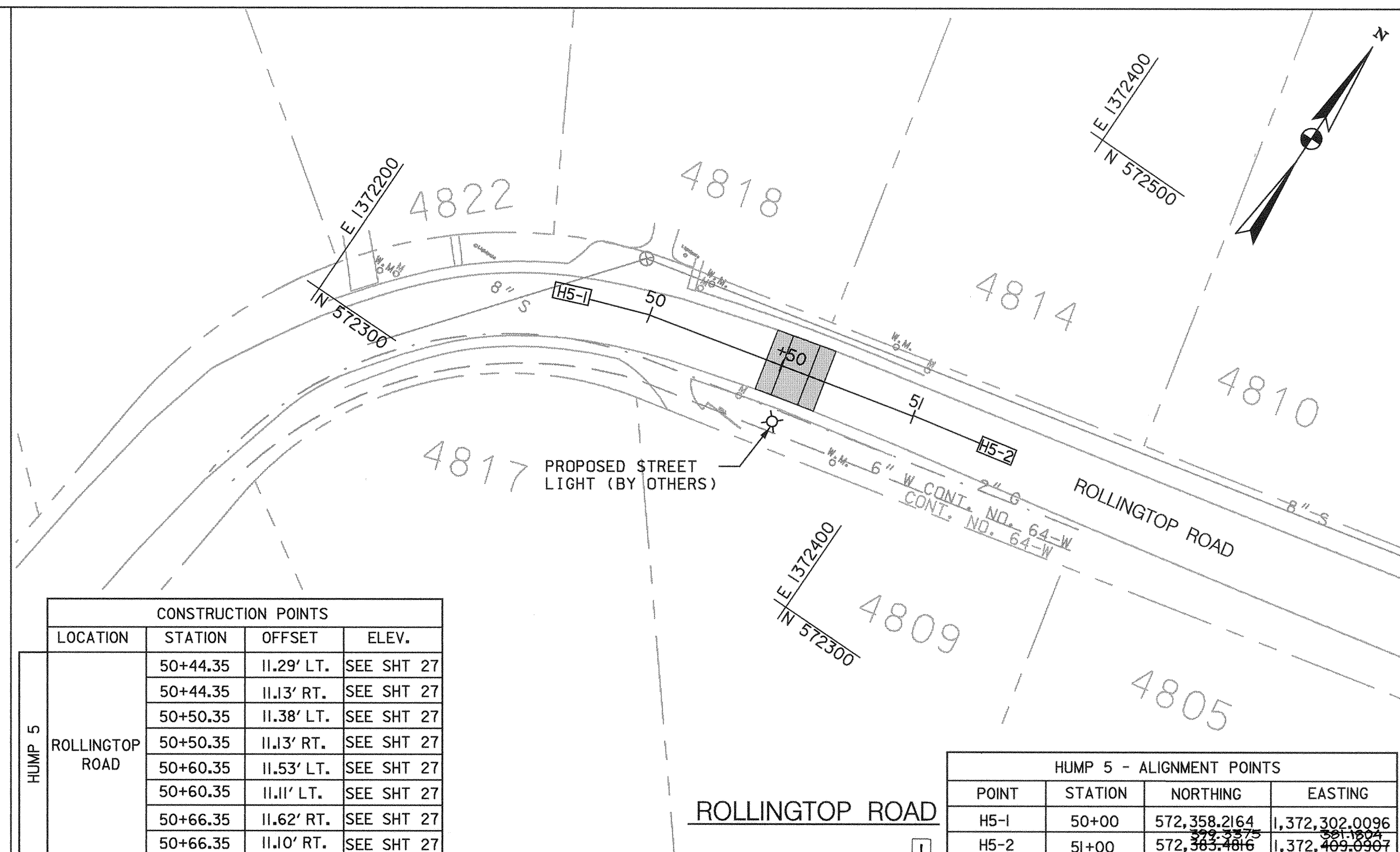
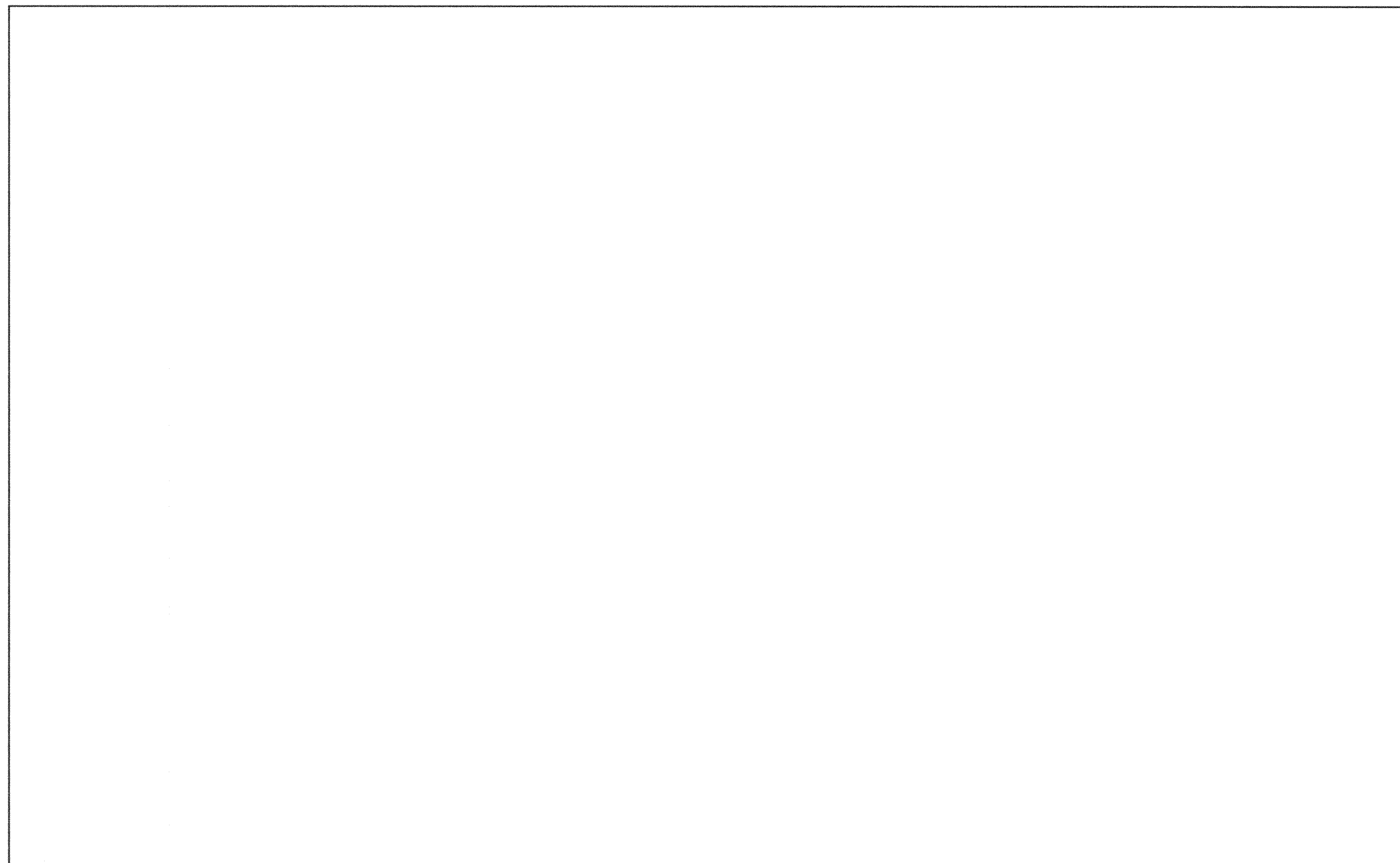
CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 16 OF 63

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CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
HUMP 5 ROLLINGTOP ROAD	50+44.35	11.29' LT.	SEE SHT 27
	50+44.35	11.13' RT.	SEE SHT 27
	50+50.35	11.38' LT.	SEE SHT 27
	50+50.35	11.13' RT.	SEE SHT 27
	50+60.35	11.53' LT.	SEE SHT 27
	50+60.35	11.11' LT.	SEE SHT 27
	50+66.35	11.62' RT.	SEE SHT 27
	50+66.35	11.10' RT.	SEE SHT 27

HUMP 5 - ALIGNMENT POINTS			
POINT	STATION	NORTHING	EASTING
H5-1	50+00	572,358.2164	1,372,302.0096
H5-2	51+00	572,363.4816	1,372,409.6967

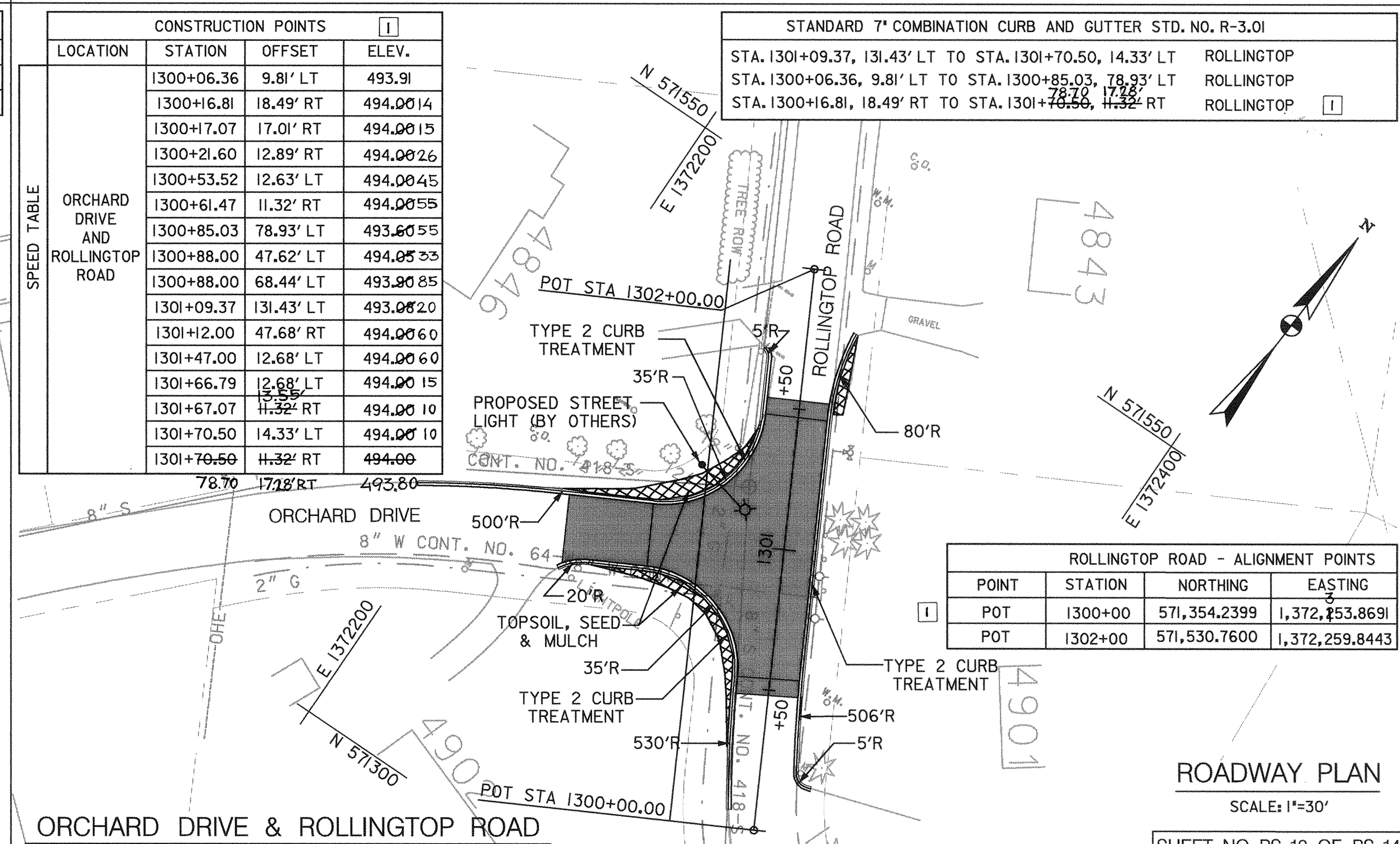
HUMP 6 - ALIGNMENT POINTS			
POINT	STATION	NORTHING	EASTING
H6-1	60+00	570,754.4546	1,371,567.9632
H6-2	61+00	570,872.7333	1,371,636.0536

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
HUMP 6 ORCHARD DRIVE AND ROLLINGTOP ROAD	1300+06.36	9.81' LT	493.91
	1300+16.81	18.49' RT	494.0014
	1300+17.07	17.01' RT	494.0015
	1300+21.60	12.89' RT	494.0026
	1300+53.52	12.63' LT	494.0045
	1300+61.47	11.32' RT	494.0055
	1300+85.03	78.93' LT	493.0055
	1300+88.00	47.62' LT	494.0055
	1300+88.00	68.44' LT	493.0085
	1301+09.37	131.43' LT	493.0020
	1301+12.00	47.68' RT	494.0060
	1301+47.00	12.68' LT	494.0060
	1301+66.79	12.68' LT	494.0015
	1301+67.07	11.32' RT	494.0010
	1301+70.50	14.33' LT	494.0010
1301+70.50	11.32' RT	494.00	

STANDARD 7" COMBINATION CURB AND GUTTER STD. NO. R-3.01			
STA. 1301+09.37, 131.43' LT TO STA. 1301+70.50, 14.33' LT	ROLLINGTOP		
STA. 1300+06.36, 9.81' LT TO STA. 1300+85.03, 78.93' LT	ROLLINGTOP		
STA. 1300+16.81, 18.49' RT TO STA. 1301+70.50, 11.32' RT	ROLLINGTOP		

CONSTRUCTION POINTS			
LOCATION	STATION	OFFSET	ELEV.
HUMP 6 ORCHARD DRIVE	60+40.32	12.57' LT.	SEE SHT 27
	60+40.32	12.00' RT.	SEE SHT 27
	60+46.32	12.38' LT.	SEE SHT 27
	60+46.32	12.00' RT.	SEE SHT 27
	60+56.32	12.07' LT.	SEE SHT 27
	60+56.32	12.00' LT.	SEE SHT 27
	60+62.32	11.88' RT.	SEE SHT 27
	60+62.32	12.00' RT.	SEE SHT 27

LEGEND	
	-ASPHALT PAVEMENT
	-PAVEMENT REMOVAL



ROLLINGTOP ROAD - ALIGNMENT POINTS			
POINT	STATION	NORTHING	EASTING
POT	1300+00	571,354.2399	1,372,253.8691
POT	1302+00	571,530.7600	1,372,259.8443

ROADWAY PLAN
SCALE: 1"=30'

SHEET NO. PS-13 OF PS-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

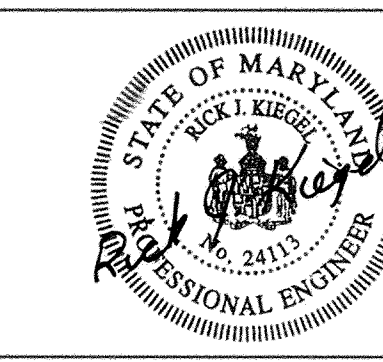
Ramon J. Clark 5/3/00
CHIEF, BUREAU OF HIGHWAYS

Robert J. DeLeon 5/3/00
CHIEF, BUREAU OF HIGHWAYS

Carolea 5/3/00
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Dewberry & Davis
Architects
Engineers
Planners
Surveyors

3120 Timanus Lane, Suite 211
Baltimore, Maryland 21244
Tel. 410-265-9500
Fax. 410-265-8875



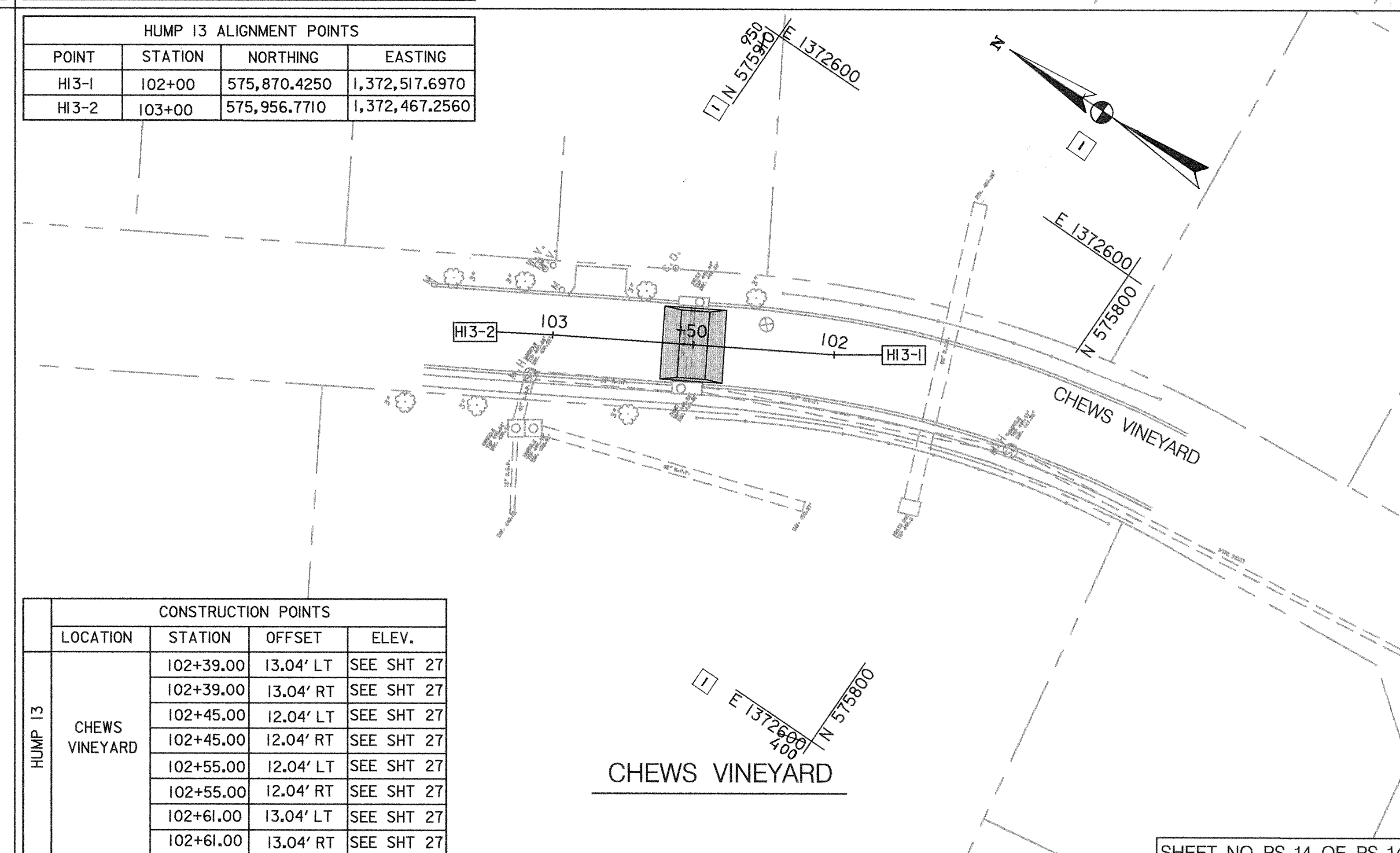
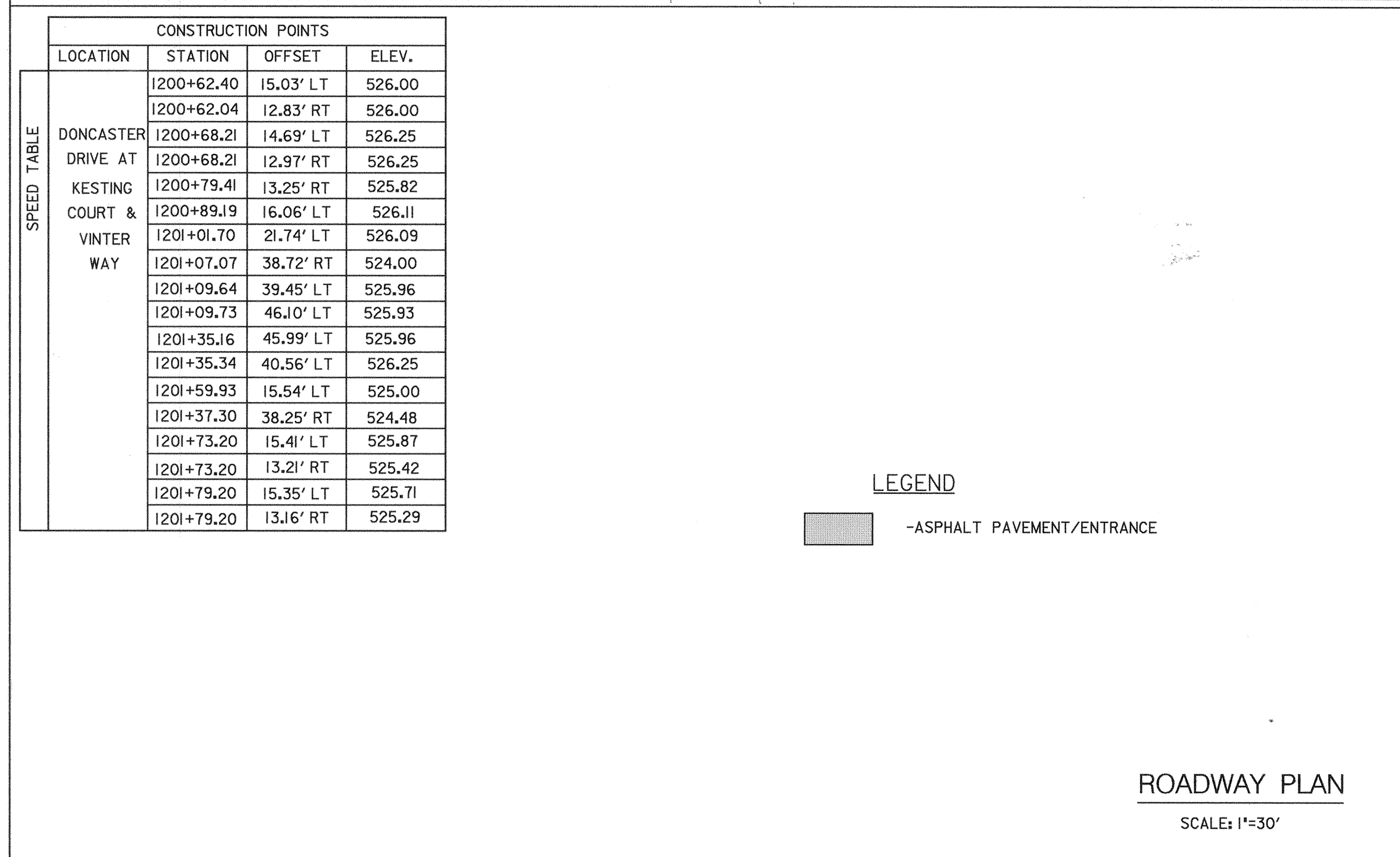
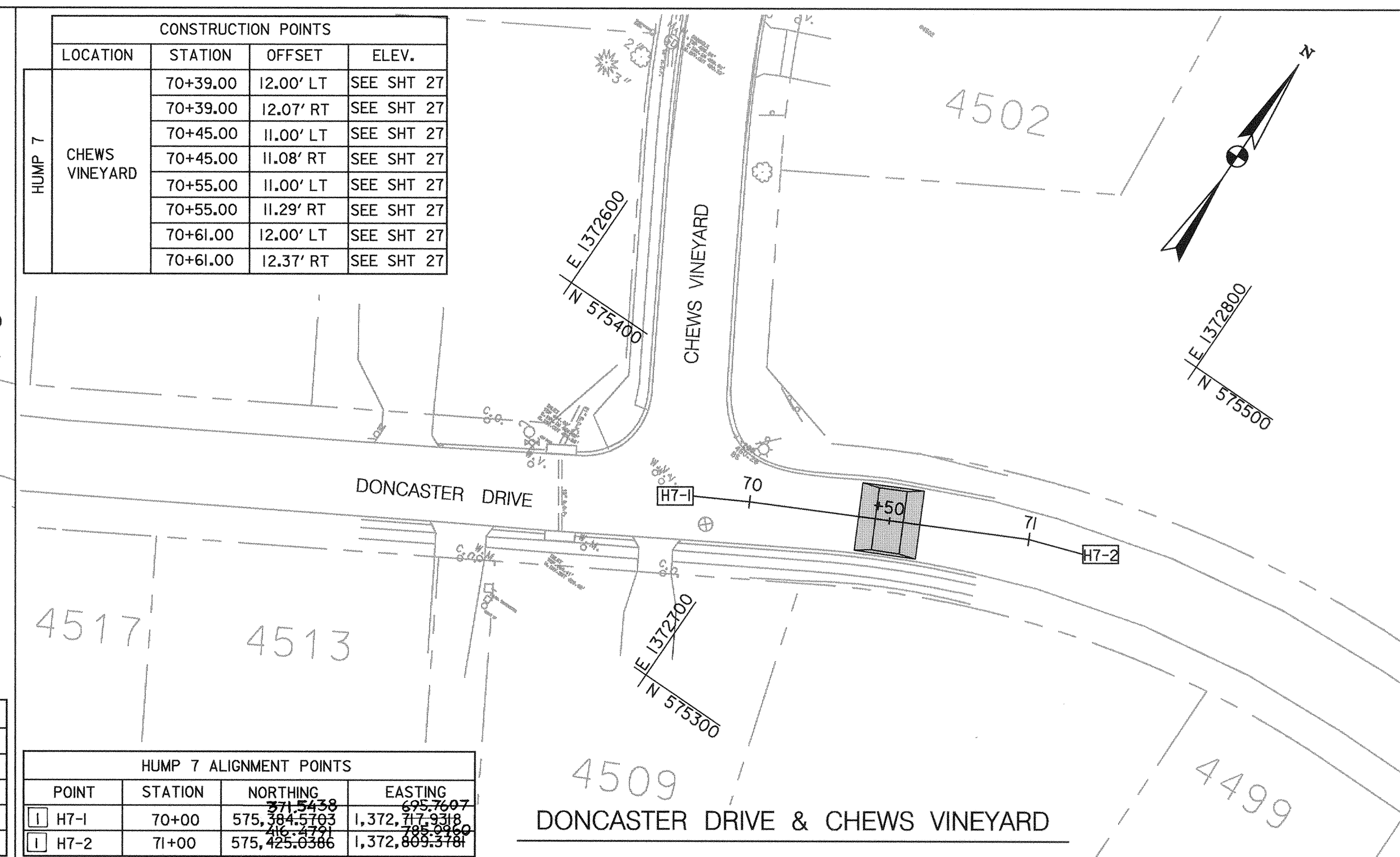
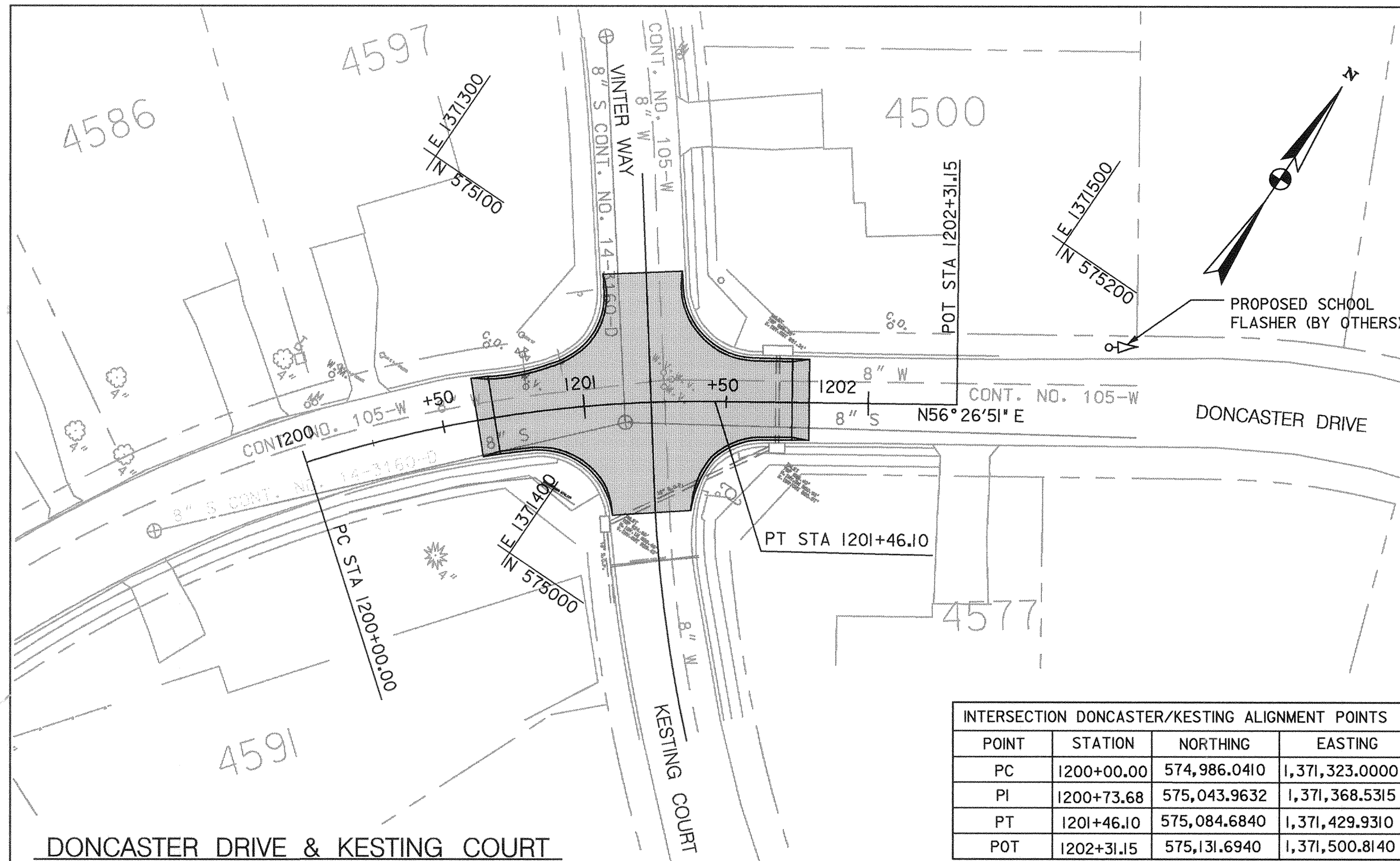
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DRN:	
CHK:	
DATE:	9/1/00
BY:	DJD
NO.:	1
REVISION:	CORRECTED ALIGNMENT AND CONSTR. POINTS

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 17 OF 63



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

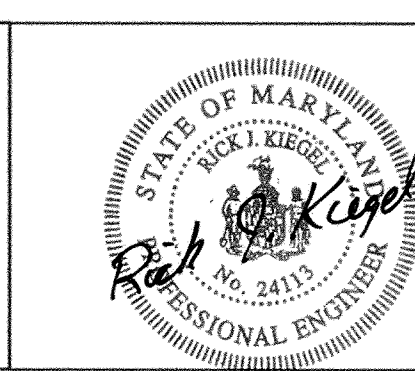
Lam... 5/3/00
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Robt... 5/3/00
CHIEF, BUREAU OF ENGINEERING

Quinn... 5-3-00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects
Engineers
Planners
Surveyors

3120 Timanus Lane, Suite 211
Baltimore, Maryland 21244
Tel. 410-265-9500
Fax. 410-265-8875



DES: _____
DRN: _____
CHK: _____
DATE: _____

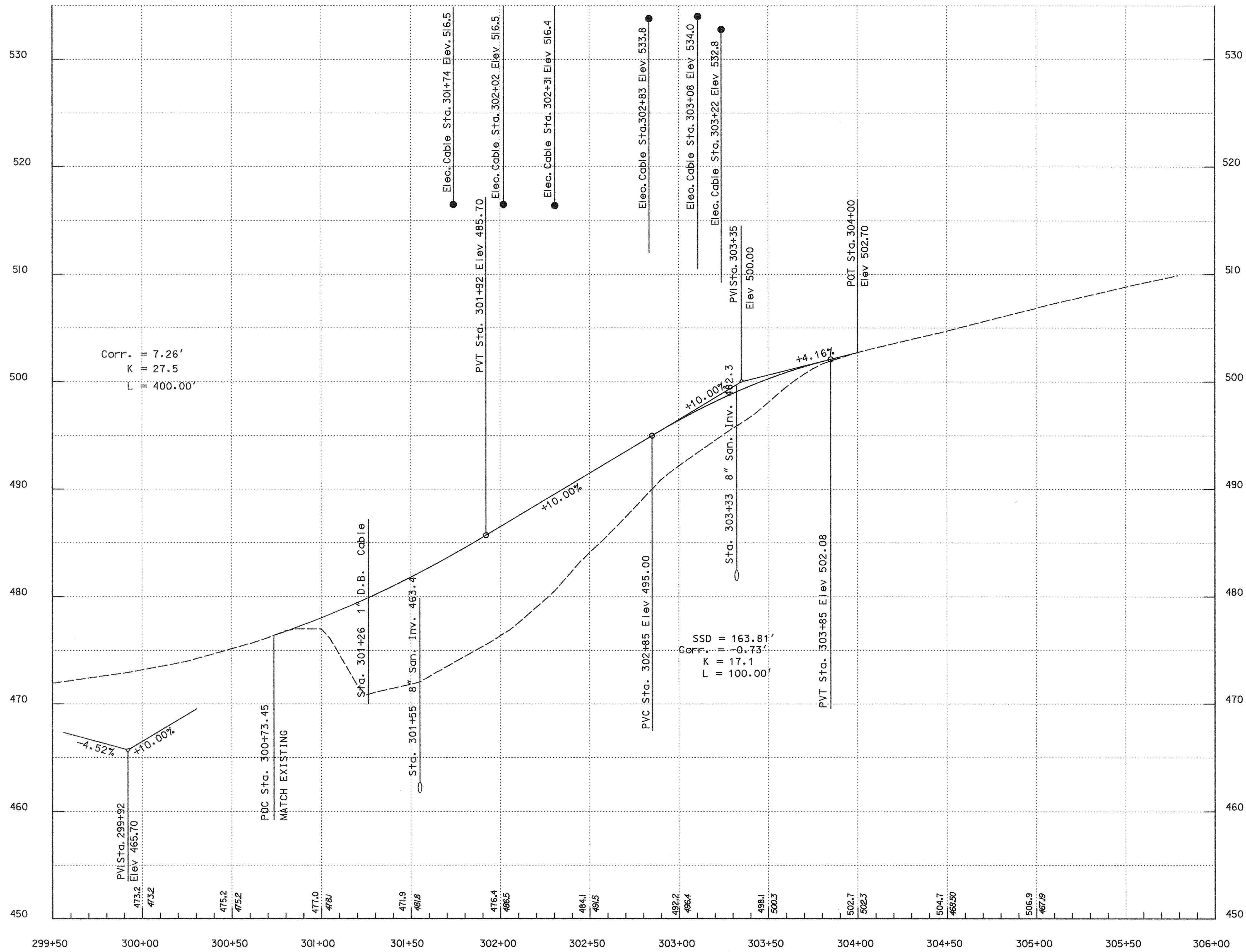
D & D | CORRECTED GRID AND HUMP 7 ALIGNMENT POINTS 8/1/00
BY NO. REVISION DATE

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 18 OF 63



PROFILE
SCALE: HOR. 1"=30'
VER. 1"=5'

HALE HAVEN - DONCASTER CONNECTION

ROADWAY PROFILE SHEET NO. PR-1 OF PR-5

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Sam Arkin 5/3/00
DATE
5/3/00
DATE

Robert M. Dye 5-3-00
DATE
5-3-00
DATE

CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION
CHIEF, BUREAU OF ENGINEERING
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects
Engineers
Planners
Surveyors

3120 Timanus Lane, Suite 211
Baltimore, Maryland 21244
Tel. 410-265-9500
Fax. 410-265-8875



DES:				
DRN:				
CHK:				
DATE:	BY	NO.	REVISION	DATE

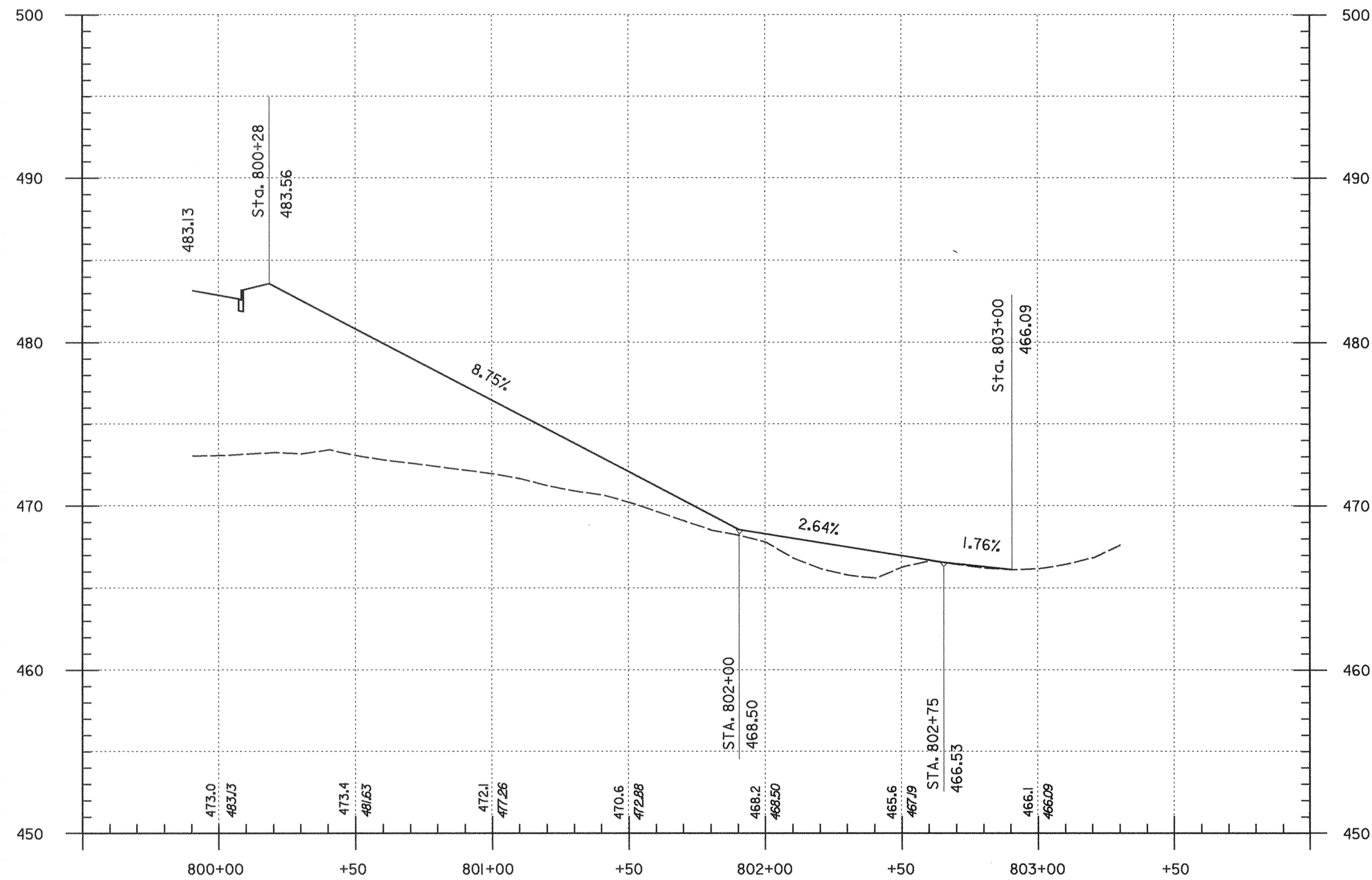
CAPITAL PROJECT NO.
J-4158

NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 19 OF 63

...:\acad\Contract 1\pr03\wort.dgn May, 02, 2000 08:44:19



EAST ACCESS ROAD

PROFILE
SCALE: HOR. 1"=30'
VERT. 1"=5'

SHEET NO. PR-2 OF PR-5

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Lawrence 5/3/00
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Paul R. Brown 5/3/00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



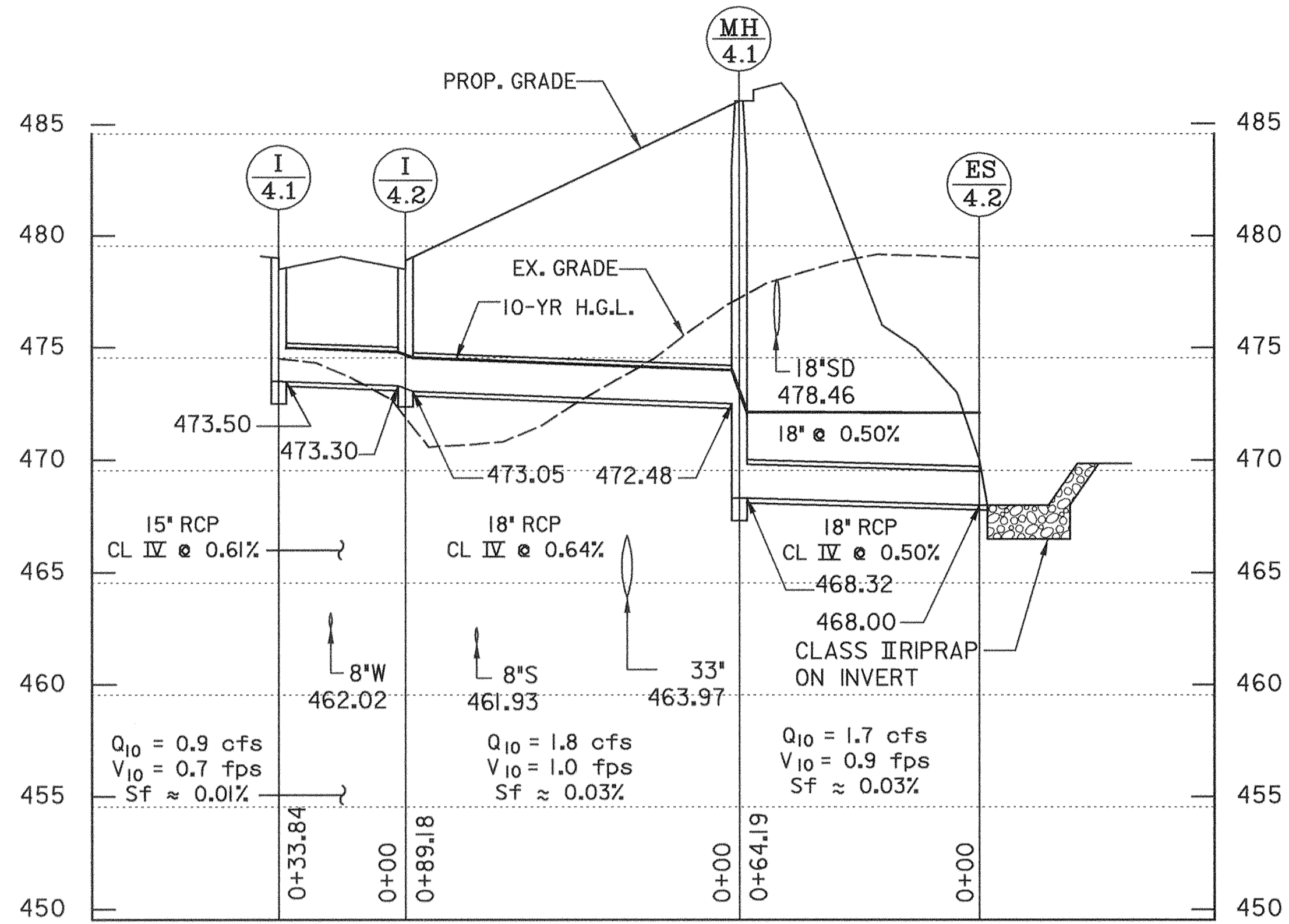
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DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

CAPITAL PROJECT NO.
J-4158

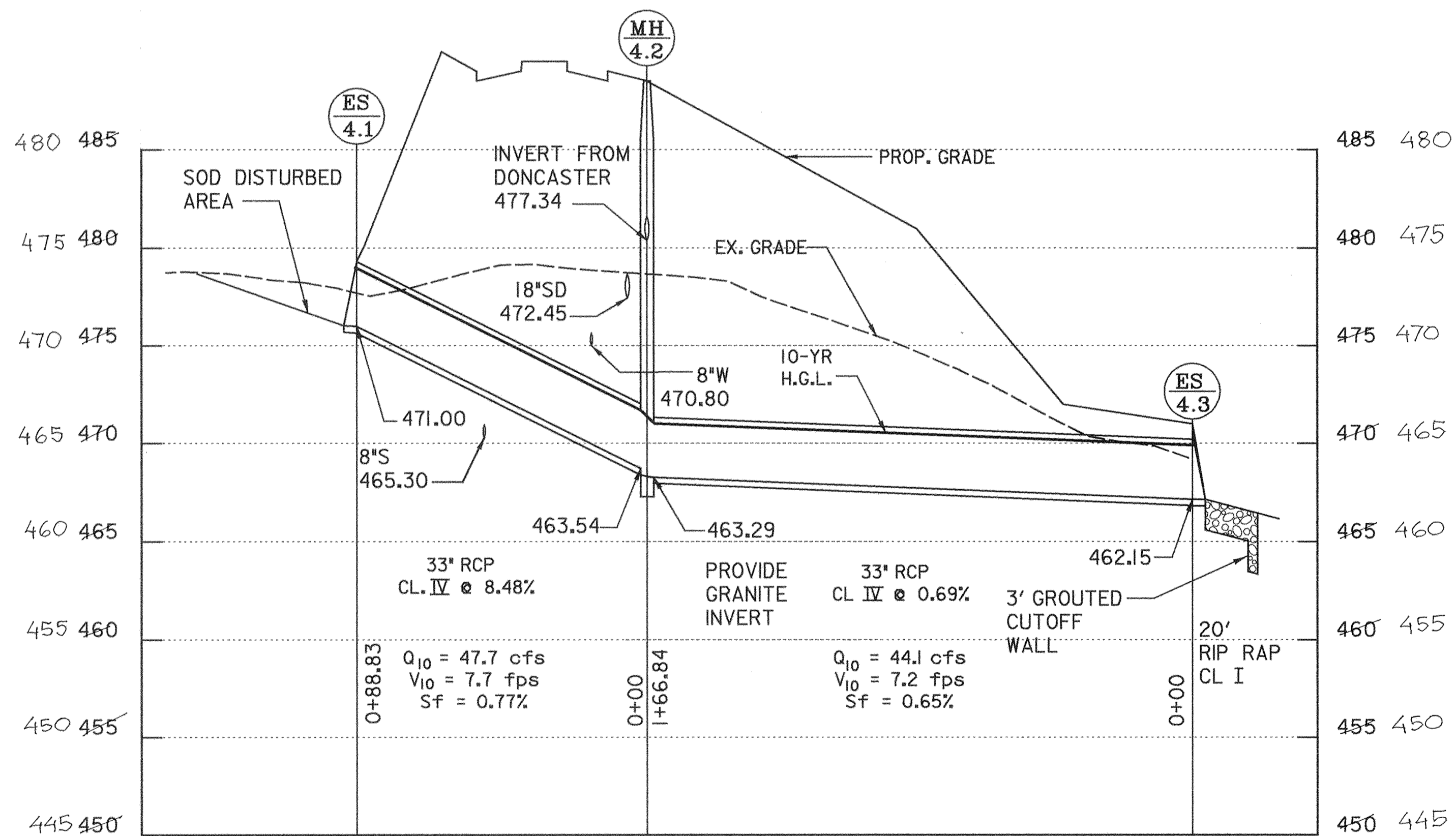
30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

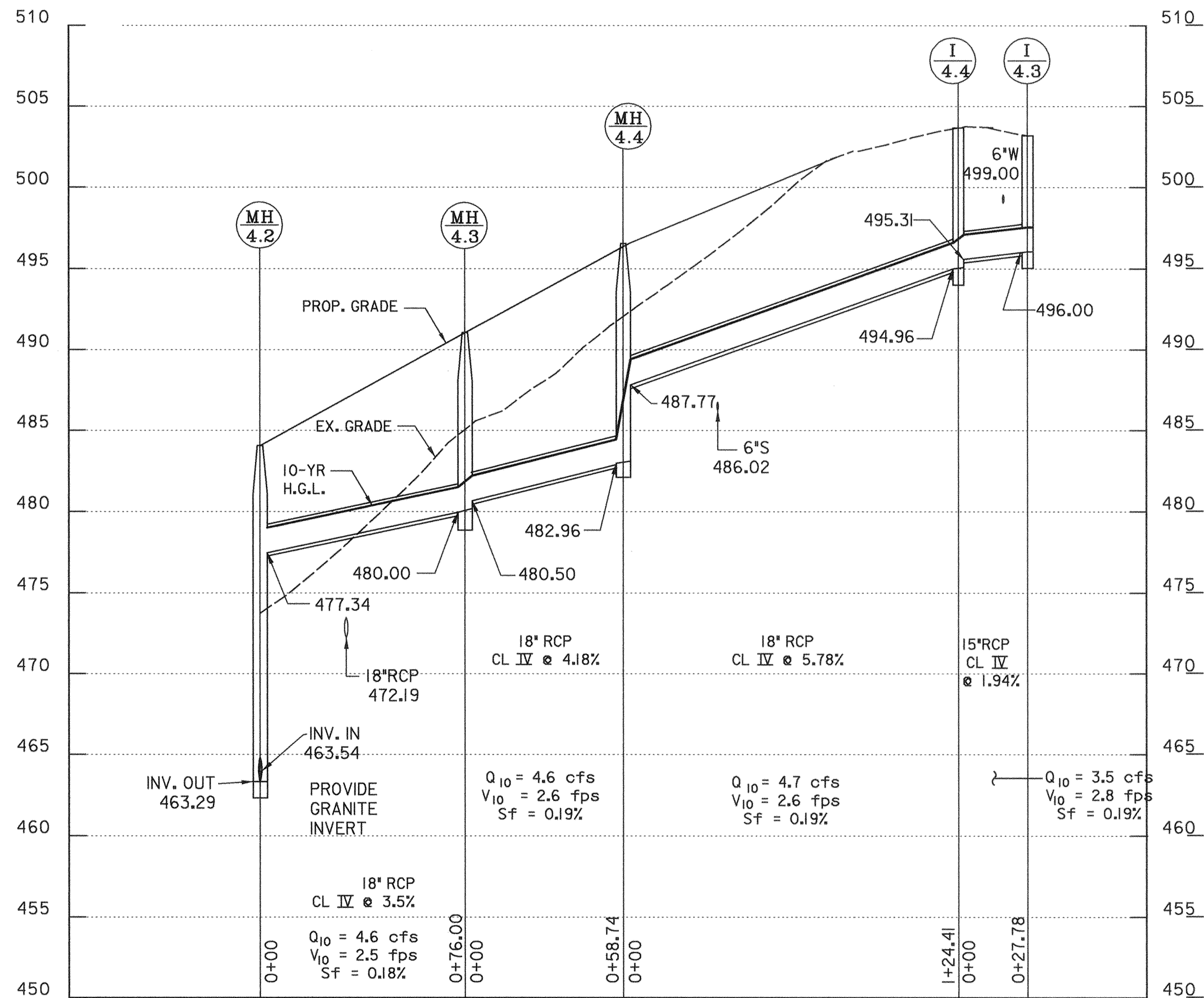
SCALE AS SHOWN
SHEET 20 OF 63



I-4.1 TO ES-4.2
HALE HAVEN DRIVE TO STORMWATER MANAGEMENT BASIN



ES-4.1 TO ES-4.3
HALE HAVEN - DONCASTER CONNECTION



I-4.3 TO MH-4.2
DONCASTER DRIVE

STORM DRAIN
PROFILE
SCALE: HOR. 1" = 30'
VERT. 1" = 5'

SHEET NO. PR-3 OF PR-5

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Sam A. Blum 5/3/00
DATE
5/3/00

Robert J. ... 5/3/00
DATE
5/3/00

CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



DES:				
DRN:				
CHK:	D&D	I	CORRECTED GRID ELEVATIONS	9/1/00
DATE:	BY	NO.	REVISION	DATE

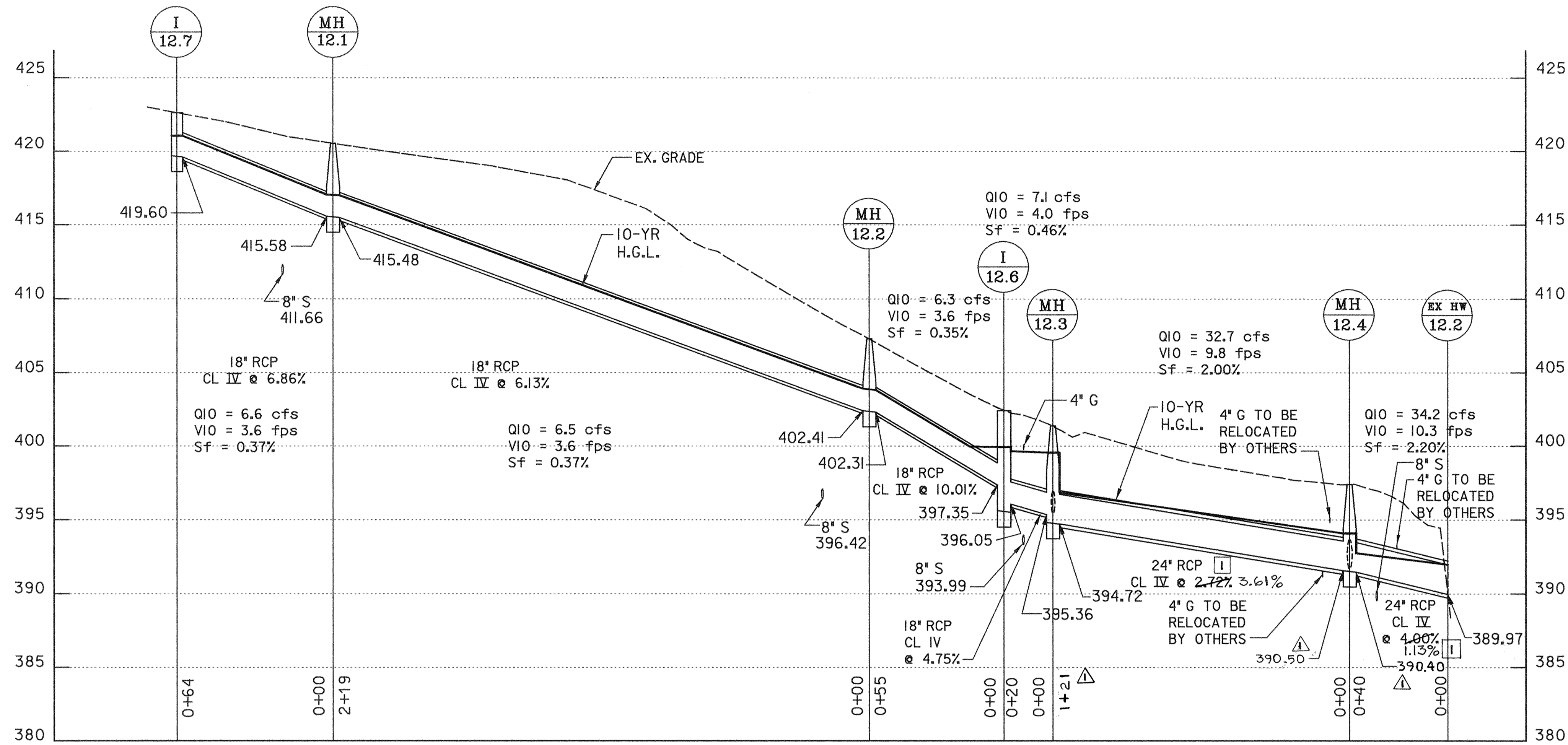
CAPITAL PROJECT NO.
J-4158

NO.: _____ DATE: _____

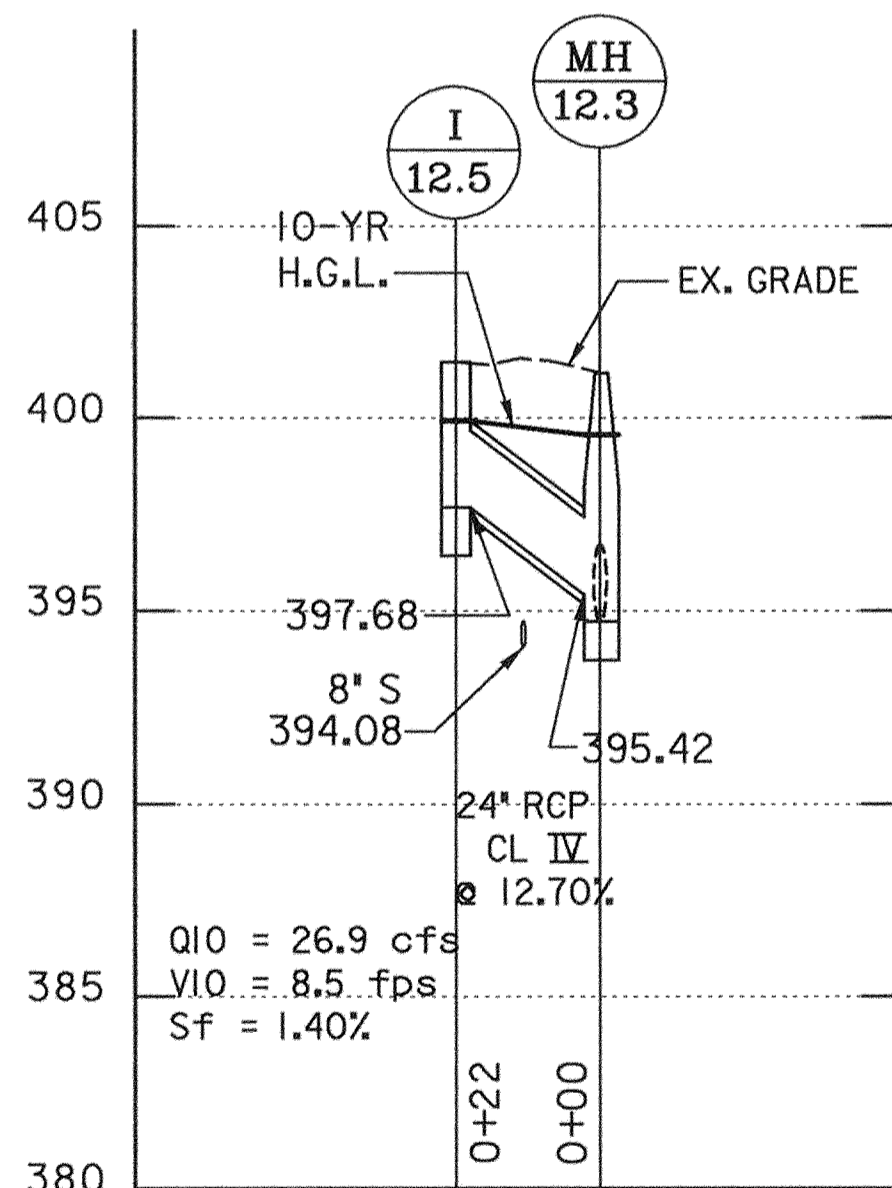
PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 2L OF 63

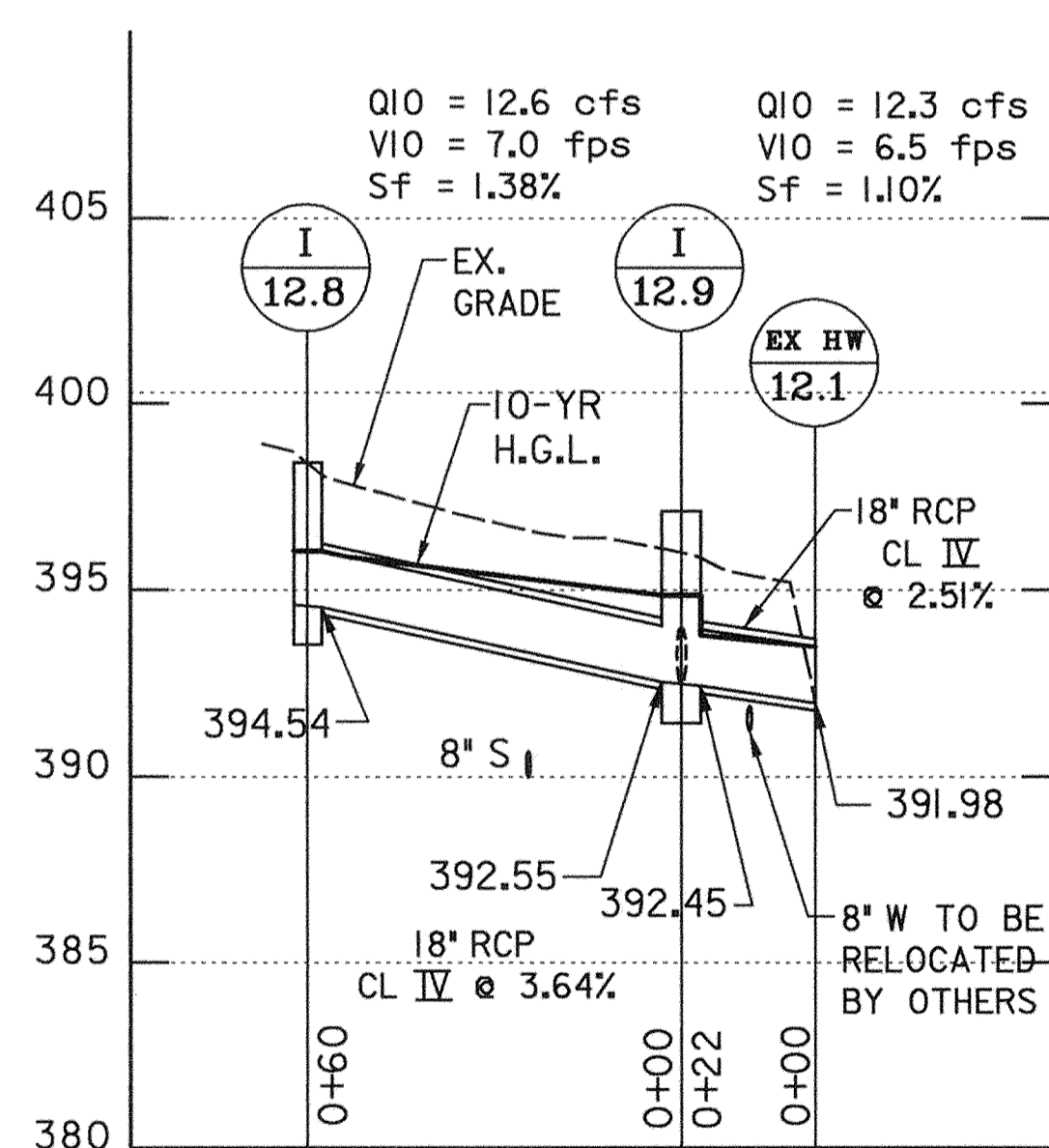
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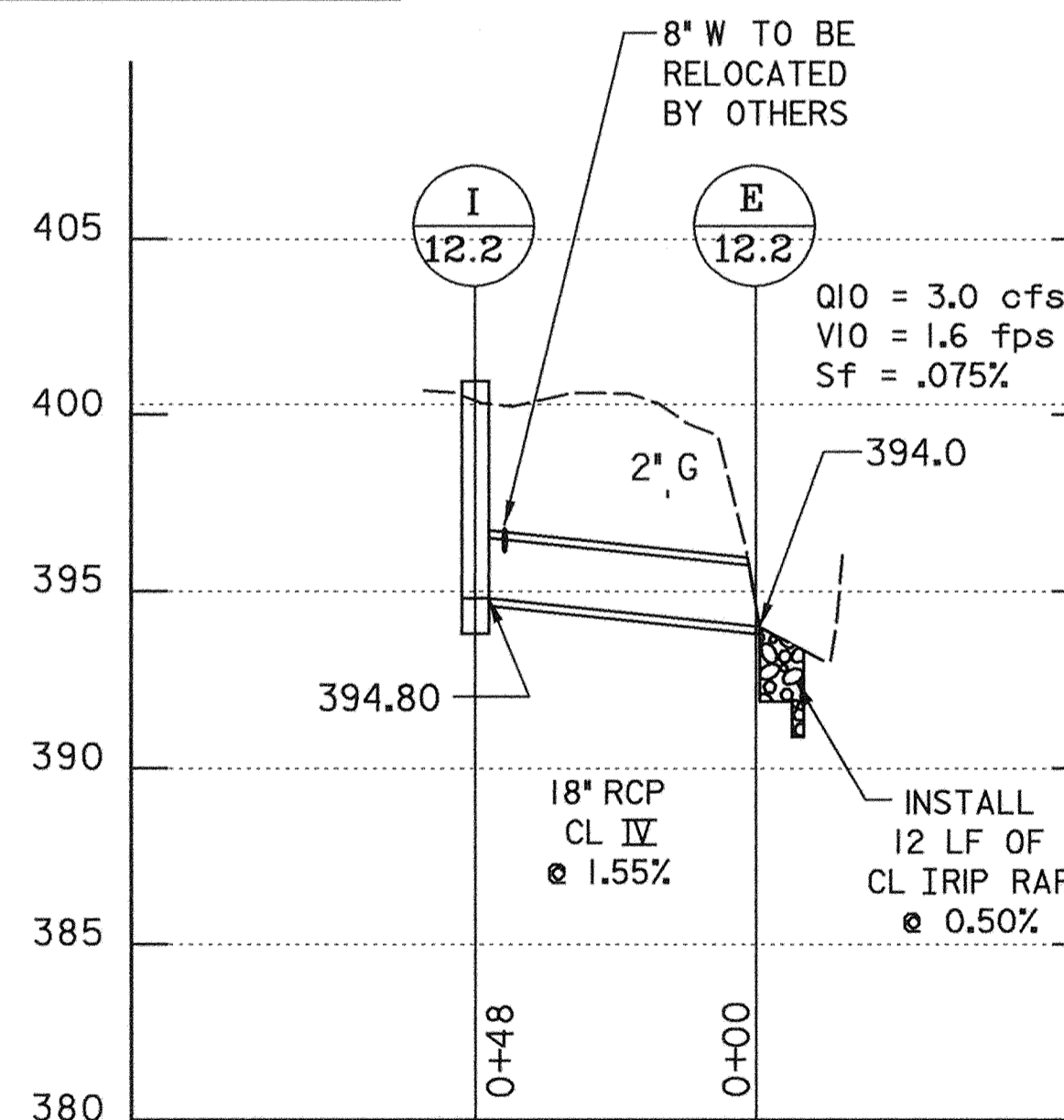
I-12.7 TO EXISTING OUTFALL
ROUNDHILL ROAD



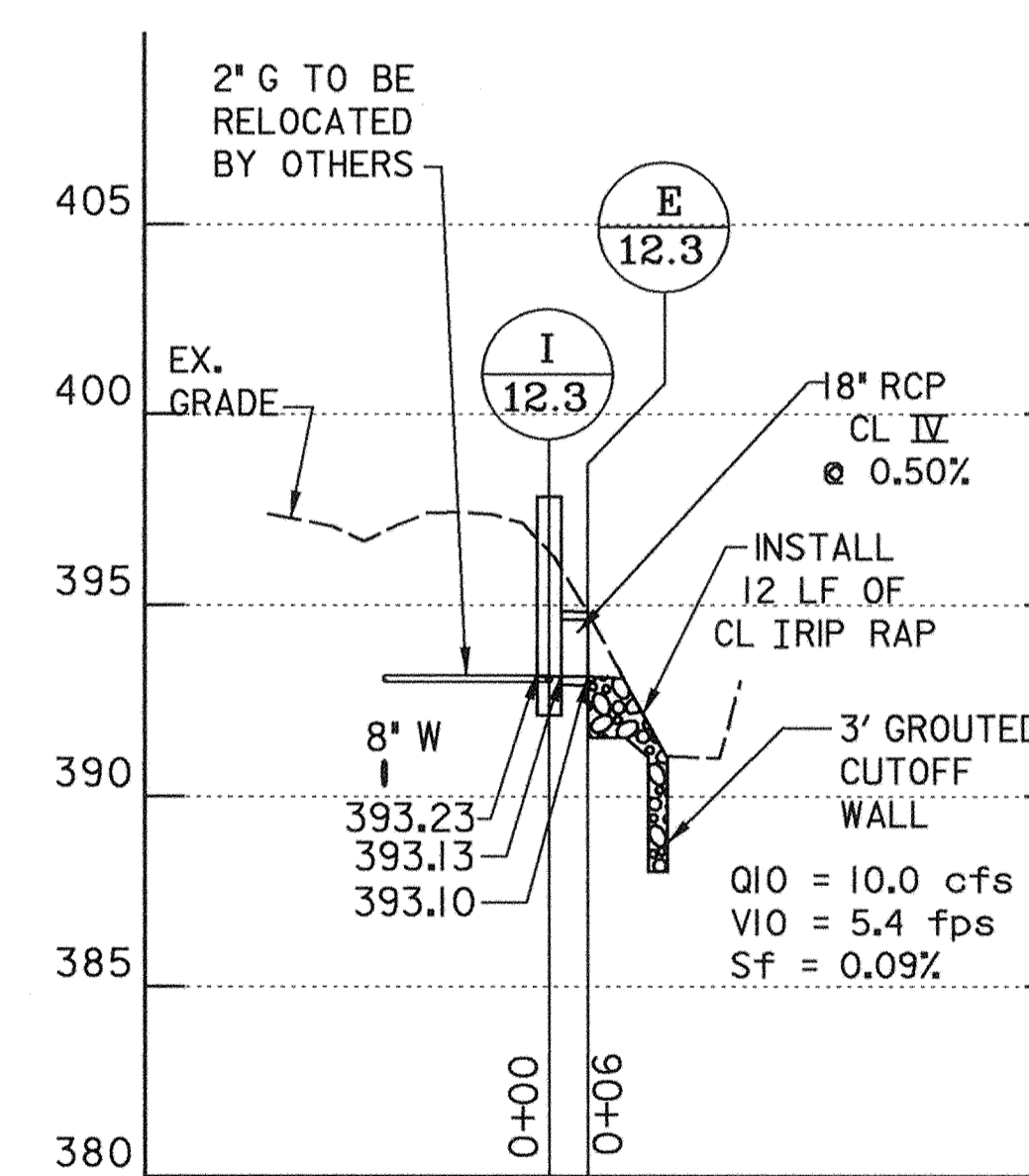
I-12.5 TO MH 12.3
WORTHINGTON WAY @
ROUNDHILL ROAD



I-12.8 TO OUTFALL AT EX. HEADWALL
ROUNDHILL ROAD



I-12.2 TO E-12.2
WORTHINGTON WAY



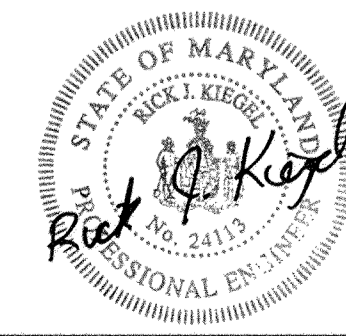
I-12.3 TO E-12.3
WORTHINGTON WAY

STORM DRAIN
PROFILE
SCALE: HOR. 1" = 30'
VERT. 1" = 5'

SHEET NO. PR-4 OF PR-5

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Ram M. Lu 5/3/00
 DEPARTMENT OF PUBLIC WORKS
 DATE
Erica 5/3/00
 CHIEF, TRANSPORTATION PROJECTS
 AND WATERSHED MANAGEMENT DIVISION
 DATE
John Deason 5/3/00
 CHIEF, BUREAU OF HIGHWAYS
 DATE
Deason 5-3-00
 CHIEF, BUREAU OF HIGHWAYS
 DATE

Dewberry & Davis
 Architects 3120 Timanus Lane, Suite 211
 Engineers Baltimore, Maryland 21244
 Planners Tel. 410-265-9500
 Surveyors Fax. 410-265-8875



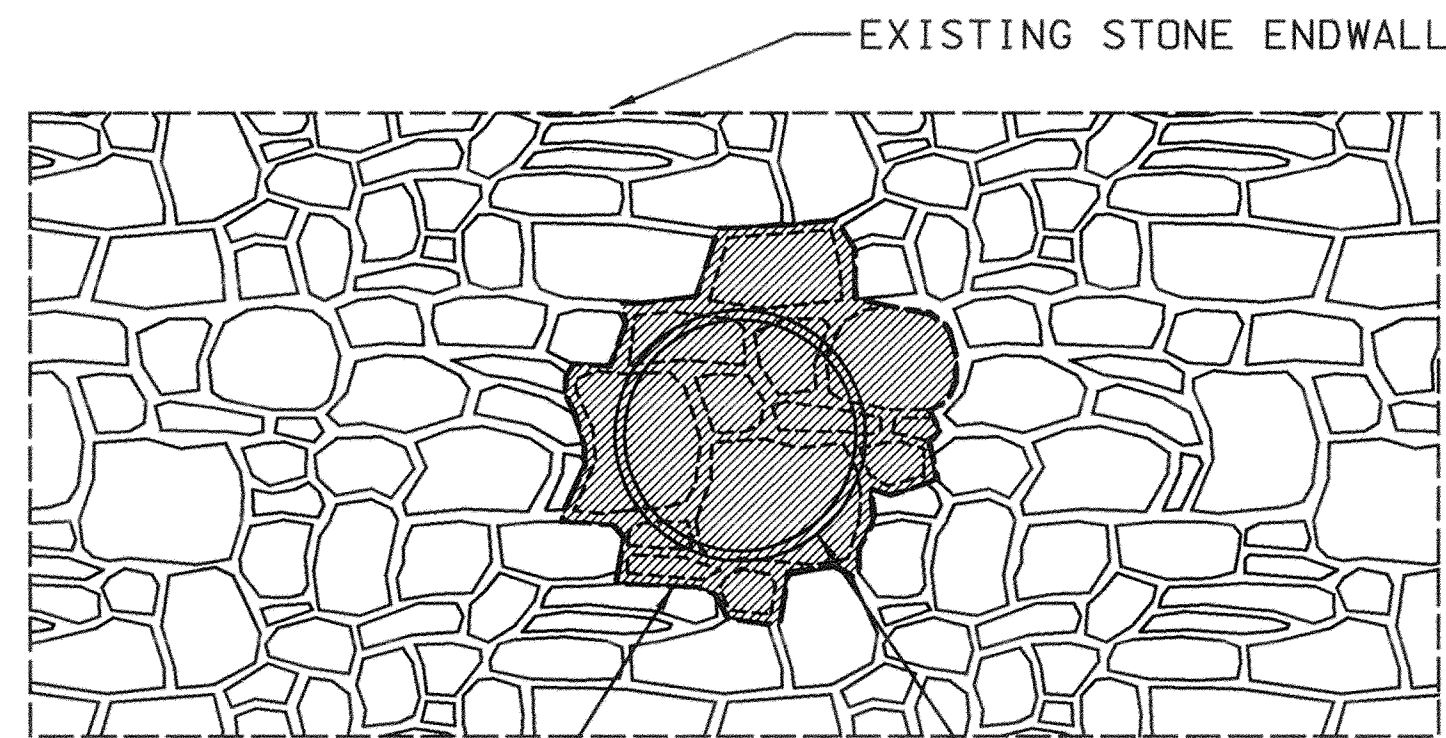
DES:				
DRN:				
CHK:	D & D	I	CORRECTED PIPE GRADES	9/1/00
DATE:	D & D	Δ	REVISED PIPE INVERTS & LENGTHS	6/2/00
	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J-4158

NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE
AS
SHOWN
SHEET
22 OF 63



EXISTING STONE & GROUT TO BE REMOVED

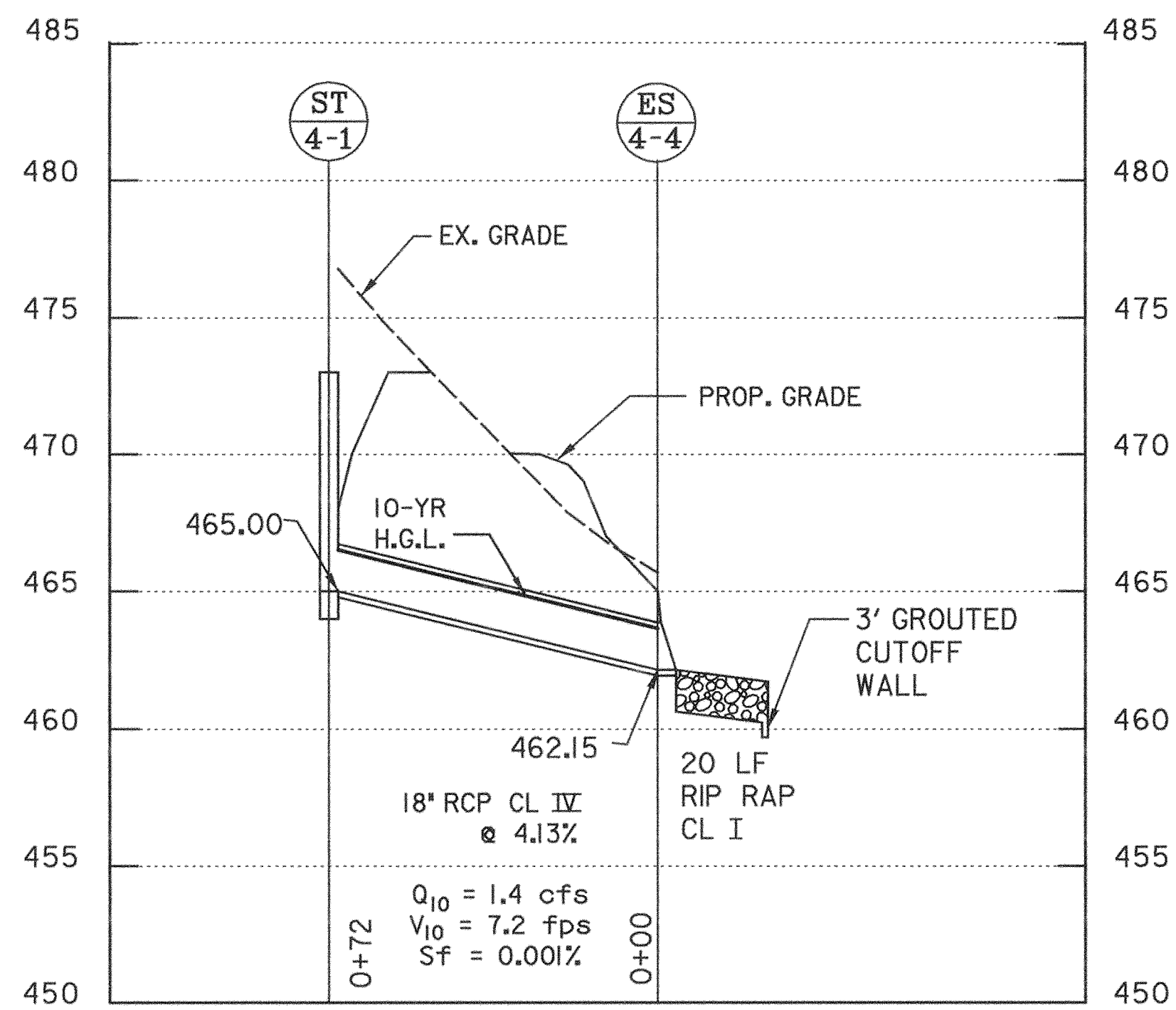
PROP. 18" RCP

NOTES:

1. CONTRACTOR TO REMOVE EX. PIPE AND GROUT AS NECESSARY TO INSTALL NEW 18" RCP.
2. VOID BETWEEN NEW PIPE AND REMAINING STONES TO BE REFILLED WITH STONE AND GROUT.

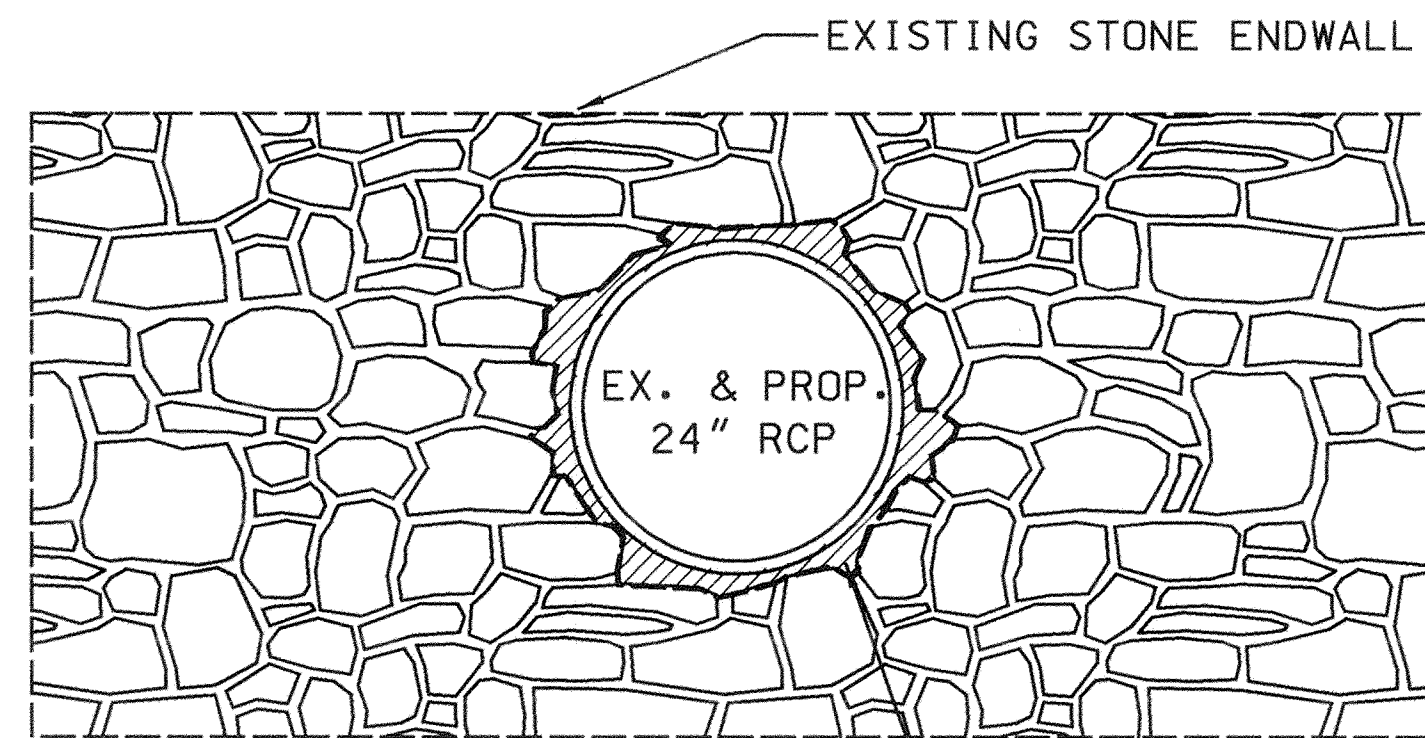
EXISTING WALL EX-HW 12.1
PROPOSED 18" RCP PENETRATION

WORTHINGTON WAY @ ROUNDHILL ROAD



ST-1 TO ES-4

HALE HAVEN ROAD - DONCASTER DRIVE CONNECTION
SWM FACILITY OUTLET



EXISTING STONE ENDWALL

EX. & PROP. 24" RCP

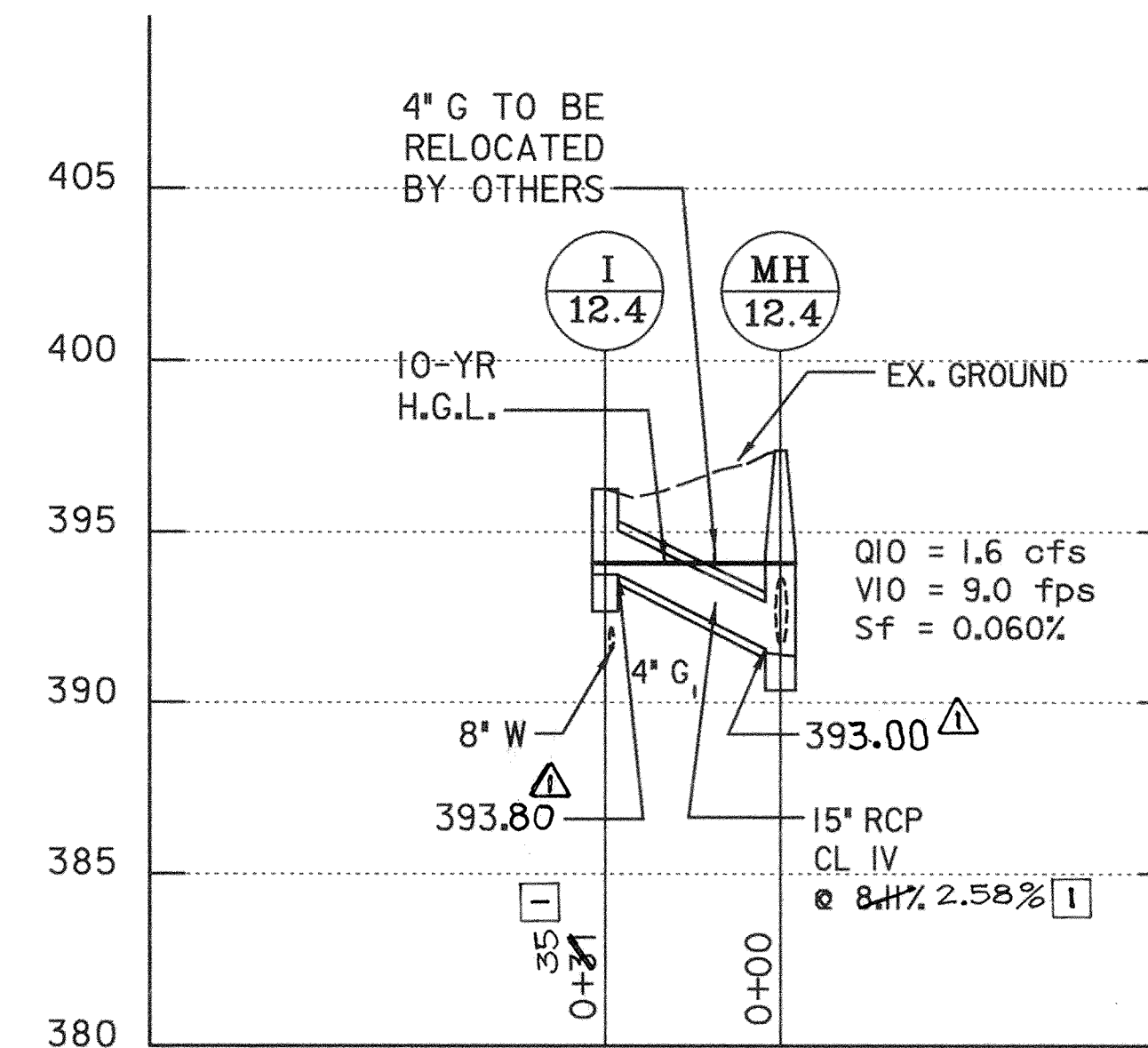
GROUT TO BE REMOVED

NOTES:

1. CONTRACTOR TO REMOVE EX. PIPE AND GROUT AS NECESSARY TO INSTALL NEW 24" RCP.
2. VOID BETWEEN NEW PIPE AND REMAINING STONES TO BE REFILLED WITH GROUT.

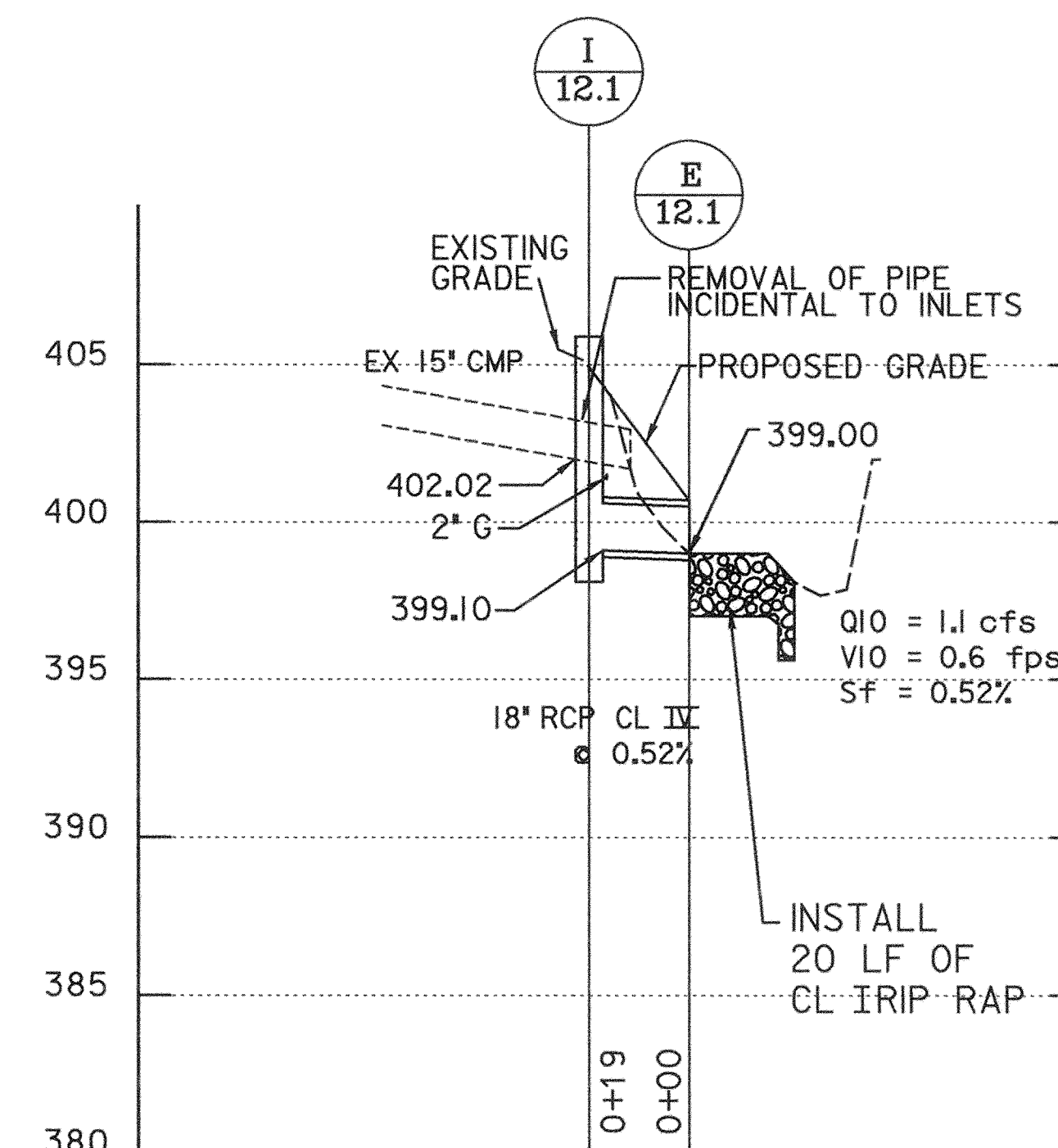
EXISTING WALL EX-HW 12.2
PROPOSED 24" RCP PENETRATION

WORTHINGTON WAY @ ROUNDHILL ROAD



WORTHINGTON WAY @ ROUNDHILL DRIVE

I-12.4 TO MH-12.4



I-12.1 TO E-12.1
WORTHINGTON WAY

STORM DRAIN PROFILE
SCALE: HOR. 1" = 30'
VERT. 1" = 5'

SHEET NO. PR-5 OF PR-5

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Ramon A. Lujan 5/3/00
DATE

Robert J. Ryan 5/3/00
DATE

DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



DES:				
DRN:				
CHK:	D&D	I	CORRECTED INLET STATION AND PIPE GRADE	9/1/00
	D&D	A	REVISED INVERTS	6/2/00
DATE:	BY	NO.	REVISION	DATE

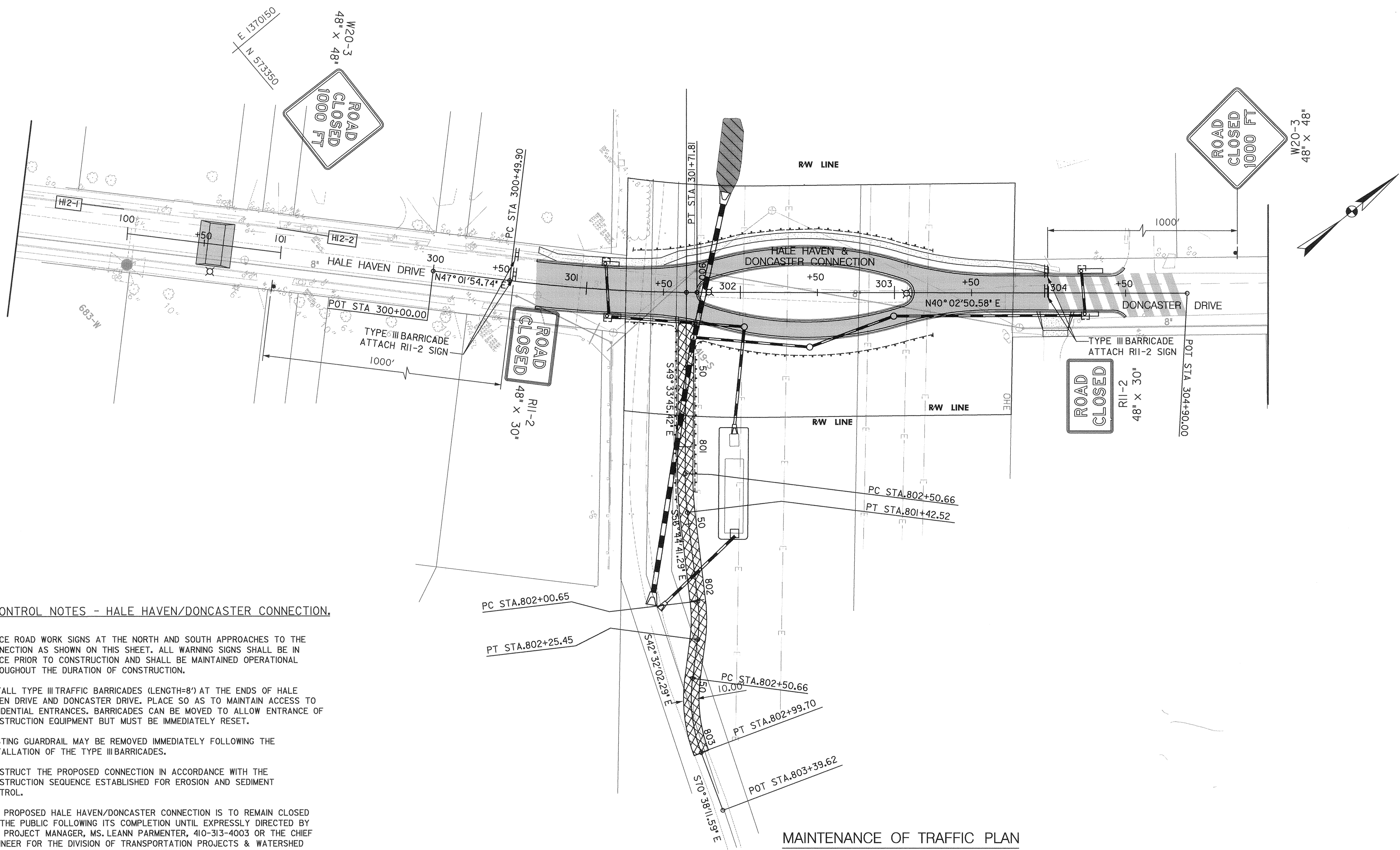
CAPITAL PROJECT NO.
J-4158

NO.: _____ DATE: _____

PHASE 1
**WORTHINGTON AREA
VEHICULAR ACCESS**

SCALE AS SHOWN

SHEET 23 OF 63



TRAFFIC CONTROL NOTES - HALE HAVEN/DONCASTER CONNECTION.

1. PLACE ROAD WORK SIGNS AT THE NORTH AND SOUTH APPROACHES TO THE CONNECTION AS SHOWN ON THIS SHEET. ALL WARNING SIGNS SHALL BE IN PLACE PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED OPERATIONAL THROUGHOUT THE DURATION OF CONSTRUCTION.
2. INSTALL TYPE III TRAFFIC BARRICADES (LENGTH=8') AT THE ENDS OF HALE HAVEN DRIVE AND DONCASTER DRIVE. PLACE SO AS TO MAINTAIN ACCESS TO RESIDENTIAL ENTRANCES. BARRICADES CAN BE MOVED TO ALLOW ENTRANCE OF CONSTRUCTION EQUIPMENT BUT MUST BE IMMEDIATELY RESET.
3. EXISTING GUARDRAIL MAY BE REMOVED IMMEDIATELY FOLLOWING THE INSTALLATION OF THE TYPE III BARRICADES.
4. CONSTRUCT THE PROPOSED CONNECTION IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE ESTABLISHED FOR EROSION AND SEDIMENT CONTROL.
5. THE PROPOSED HALE HAVEN/DONCASTER CONNECTION IS TO REMAIN CLOSED TO THE PUBLIC FOLLOWING ITS COMPLETION UNTIL EXPRESSLY DIRECTED BY THE PROJECT MANAGER, MS. LEANN PARMENTER, 410-313-4003 OR THE CHIEF ENGINEER FOR THE DIVISION OF TRANSPORTATION PROJECTS & WATERSHED MANAGEMENT MS. ELIZABETH CALIA, 410-313-4001. IF THIS CLOSURE IS TO LAST LONGER THAN ONE WEEK FOLLOWING THE ROADWAY'S COMPLETION, THE TYPE III BARRICADES ARE TO BE REPLACED BY TEMPORARY CONCRETE BARRIERS UNTIL SUCH TIME THE ROADWAY IS OPENED.

MAINTENANCE OF TRAFFIC PLAN
SCALE: 1" = 30'

SHEET NO. MOT-1 OF MOT-3

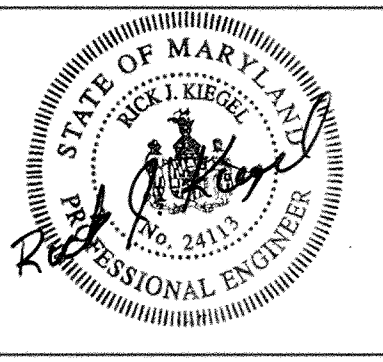
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Swain 5/3/00
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Elizabeth Calia 5/3/00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



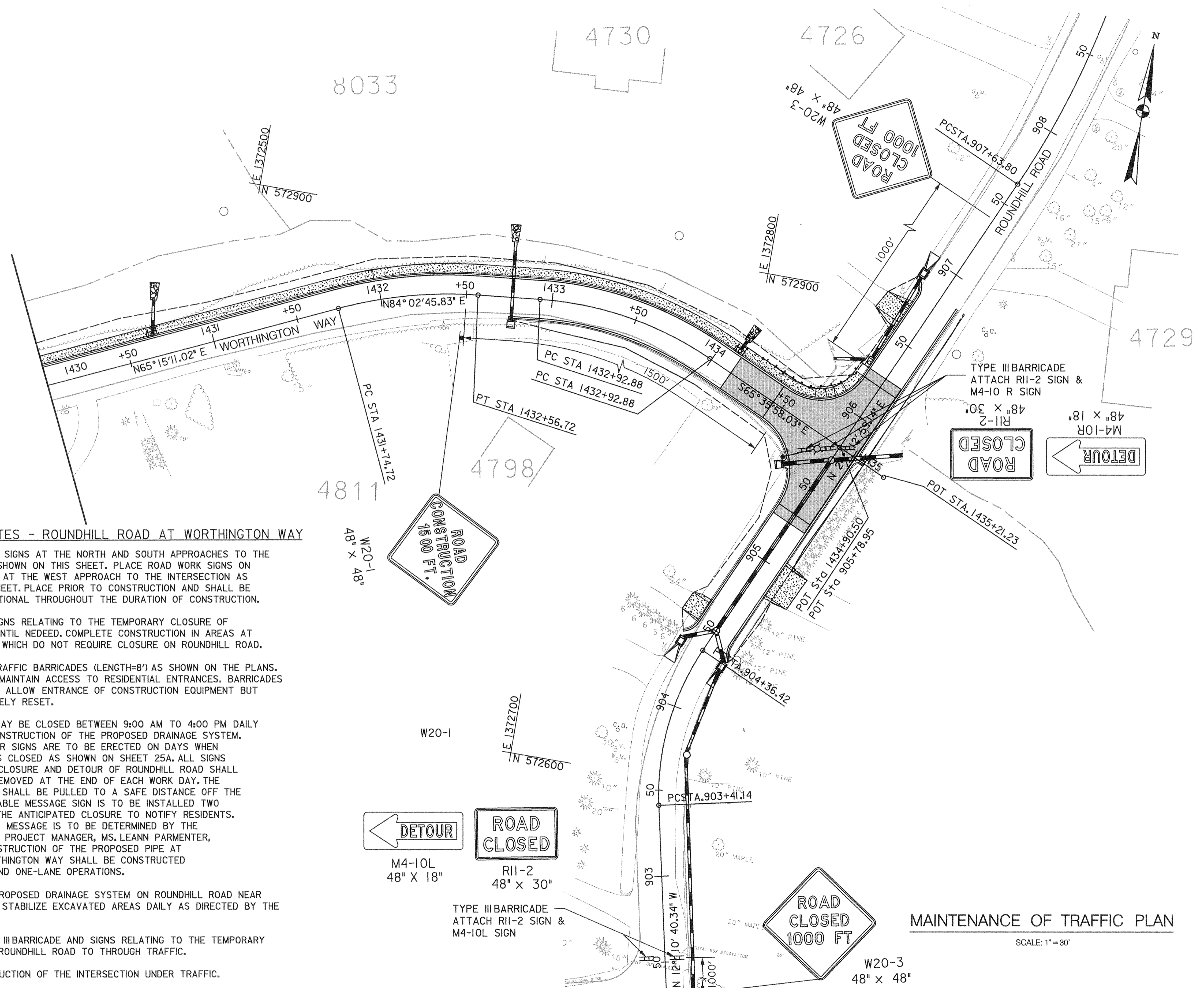
DES:					
DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

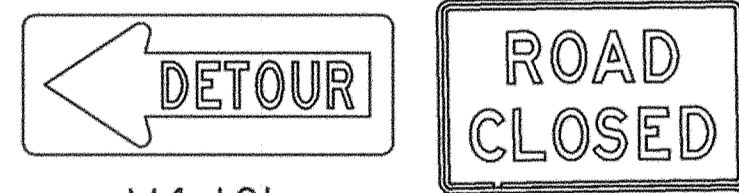
PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 24 OF 63



TRAFFIC CONTROL NOTES - ROUNDHILL ROAD AT WORTHINGTON WAY

1. PLACE ROAD WORK SIGNS AT THE NORTH AND SOUTH APPROACHES TO THE INTERSECTION AS SHOWN ON THIS SHEET. PLACE ROAD WORK SIGNS ON WORTHINGTON WAY AT THE WEST APPROACH TO THE INTERSECTION AS SHOWN ON THIS SHEET. PLACE PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED OPERATIONAL THROUGHOUT THE DURATION OF CONSTRUCTION.
2. COVER WARNING SIGNS RELATING TO THE TEMPORARY CLOSURE OF ROUNDHILL ROAD UNTIL NEEDED. COMPLETE CONSTRUCTION IN AREAS AT THE INTERSECTION WHICH DO NOT REQUIRE CLOSURE ON ROUNDHILL ROAD.
3. INSTALL TYPE III TRAFFIC BARRICADES (LENGTH=8') AS SHOWN ON THE PLANS. PLACE SO AS TO MAINTAIN ACCESS TO RESIDENTIAL ENTRANCES. BARRICADES CAN BE MOVED TO ALLOW ENTRANCE OF CONSTRUCTION EQUIPMENT BUT MUST BE IMMEDIATELY RESET.
4. ROUNDHILL ROAD MAY BE CLOSED BETWEEN 9:00 AM TO 4:00 PM DAILY TO ALLOW THE CONSTRUCTION OF THE PROPOSED DRAINAGE SYSTEM. TEMPORARY DETOUR SIGNS ARE TO BE ERECTED ON DAYS WHEN ROUNDHILL ROAD IS CLOSED AS SHOWN ON SHEET 25A. ALL SIGNS RELATED TO THE CLOSURE AND DETOUR OF ROUNDHILL ROAD SHALL BE COVERED OR REMOVED AT THE END OF EACH WORK DAY. THE TYPE III BARRICADE SHALL BE PULLED TO A SAFE DISTANCE OFF THE PAVEMENT. A VARIABLE MESSAGE SIGN IS TO BE INSTALLED TWO WEEKS PRIOR TO THE ANTICIPATED CLOSURE TO NOTIFY RESIDENTS. THE LOCATION AND MESSAGE IS TO BE DETERMINED BY THE ENGINEER AND THE PROJECT MANAGER, MS. LEANN PARMENTER, 410-313-4003. CONSTRUCTION OF THE PROPOSED PIPE AT STA. 1432+75 WORTHINGTON WAY SHALL BE CONSTRUCTED UNDER FLAGGER AND ONE-LANE OPERATIONS.
5. CONSTRUCT THE PROPOSED DRAINAGE SYSTEM ON ROUNDHILL ROAD NEAR THE INTERSECTION. STABILIZE EXCAVATED AREAS DAILY AS DIRECTED BY THE ENGINEER.
6. REMOVE THE TYPE III BARRICADE AND SIGNS RELATING TO THE TEMPORARY CLOSURE. REOPEN ROUNDHILL ROAD TO THROUGH TRAFFIC.
7. COMPLETE CONSTRUCTION OF THE INTERSECTION UNDER TRAFFIC.



M4-10L
48" X 18"

R11-2
48" X 30"

TYPE III BARRICADE
ATTACH R11-2 SIGN &
M4-10L SIGN



W20-3
48" X 48"

MAINTENANCE OF TRAFFIC PLAN

SCALE: 1"=30'

SHEET NO. MOT-2 OF MOT-3

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James A. Lewis 5/3/00
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS
AND WATERSHED MANAGEMENT DIVISION

John P. Reppan 5/3/00
DEPT. SUPPORT OF ENGINEERING
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects
Engineers
Planners
Surveyors

3120 Timanus Lane, Suite 211
Baltimore, Maryland 21244
Tel. 410-265-9500
Fax. 410-265-8875



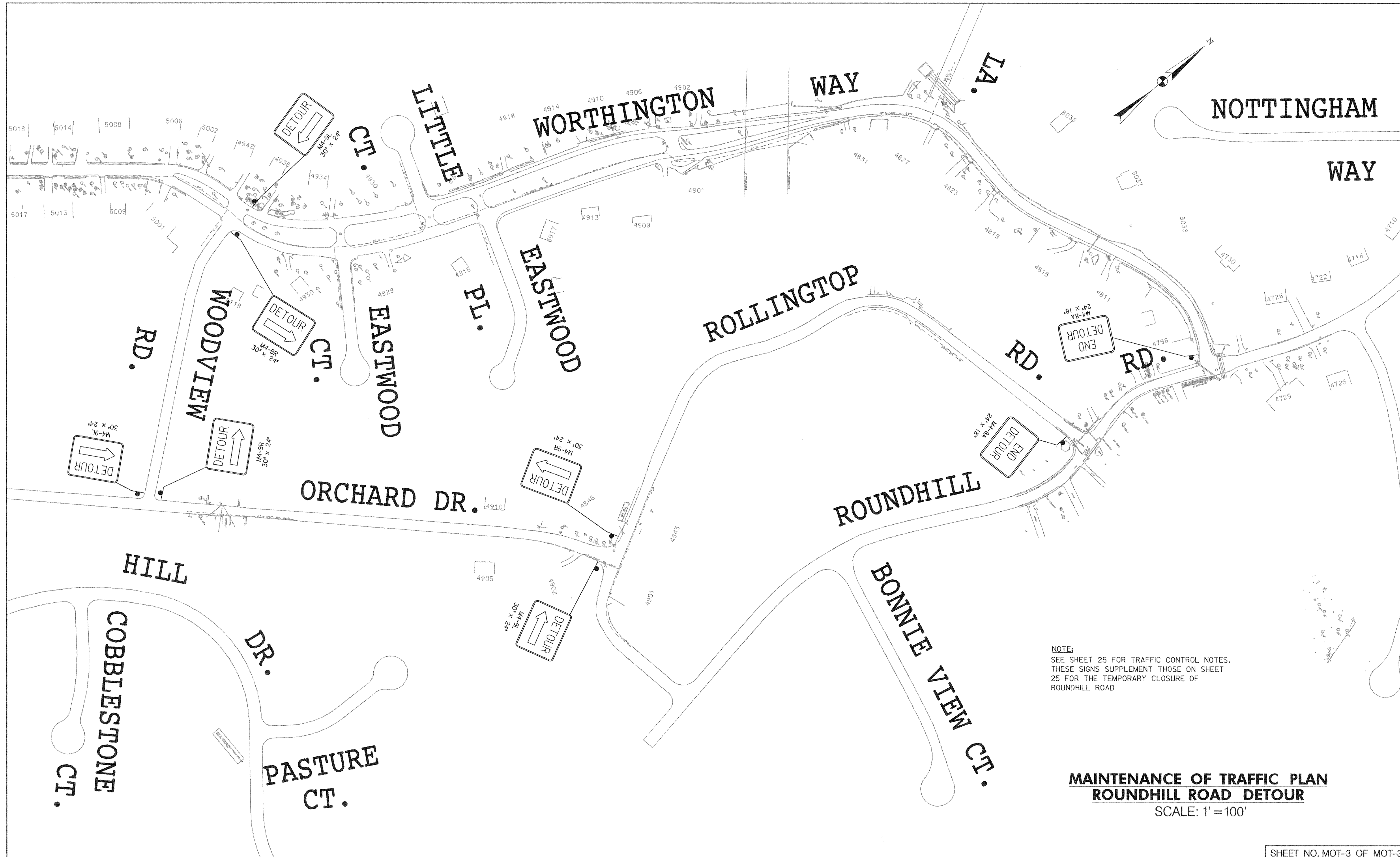
DES:					
DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 25 OF 63



NOTE:
 SEE SHEET 25 FOR TRAFFIC CONTROL NOTES.
 THESE SIGNS SUPPLEMENT THOSE ON SHEET
 25 FOR THE TEMPORARY CLOSURE OF
 ROUNDHILL ROAD

**MAINTENANCE OF TRAFFIC PLAN
 ROUNDHILL ROAD DETOUR**
 SCALE: 1' = 100'

SHEET NO. MOT-3 OF MOT-3

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

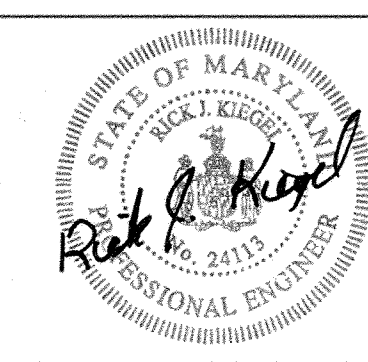
James H. ... 5/3/00
 DEPARTMENT OF PUBLIC WORKS
 CHIEF, TRANSPORTATION PROJECTS
 AND WATERSHED MANAGEMENT DIVISION

William M. ... 5/3/00
 CHIEF, BUREAU OF ENGINEERING

William M. ... 5-3-00
 CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
 Engineers Baltimore, Maryland 21244
 Planners Tel. 410-265-9500
 Surveyors Fax. 410-265-8875



DES:					
DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

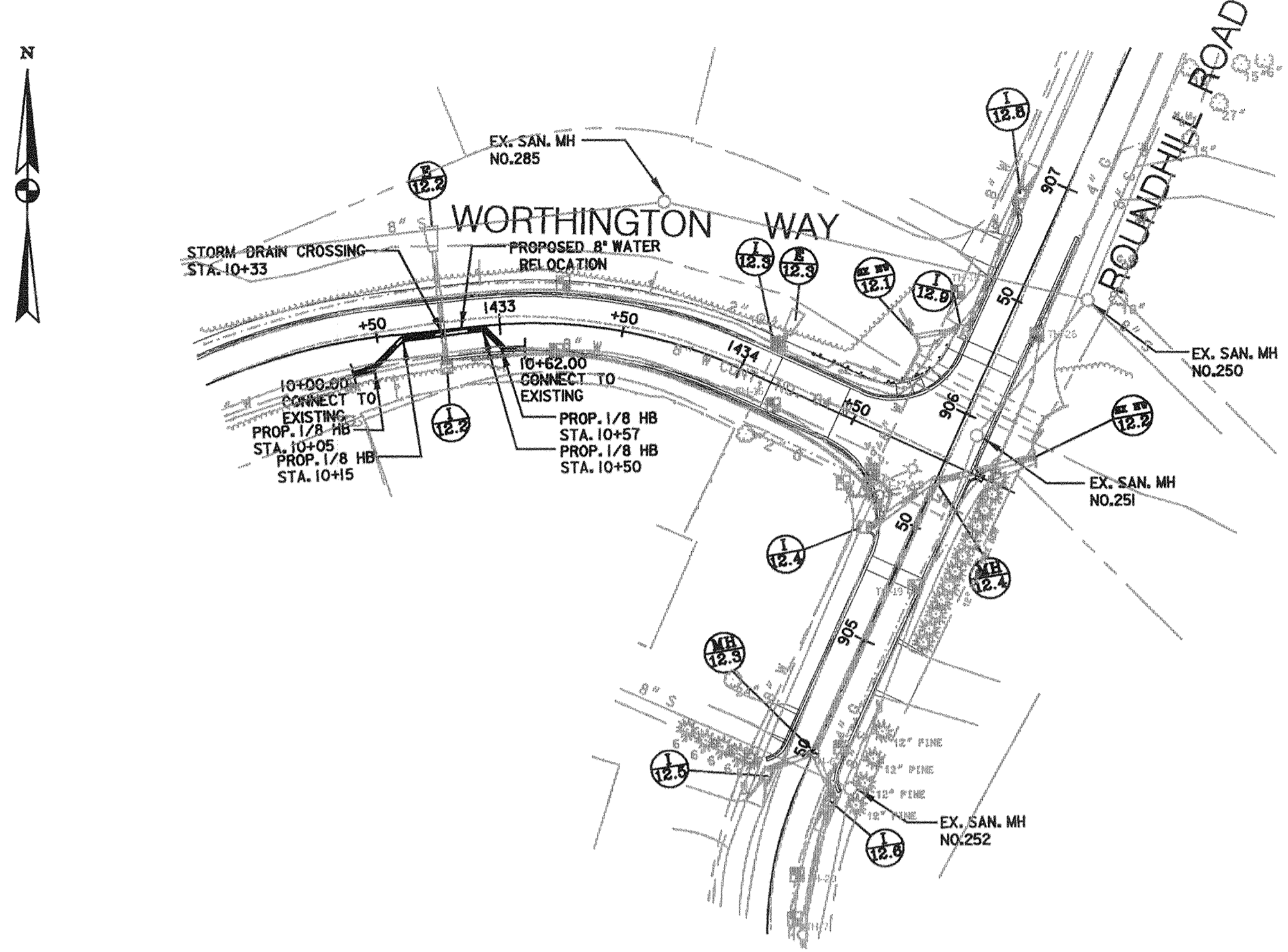
CAPITAL PROJECT NO.
 J-4158

NO.: _____ DATE: _____

**PHASE 1
 WORTHINGTON AREA
 VEHICULAR ACCESS**

SCALE
 AS
 SHOWN

SHEET
 25A OF 63



PLAN
SCALE: 1"=50'

WATER MAIN RELOCATION
STA. 1432+67 WORTHINGTON WAY

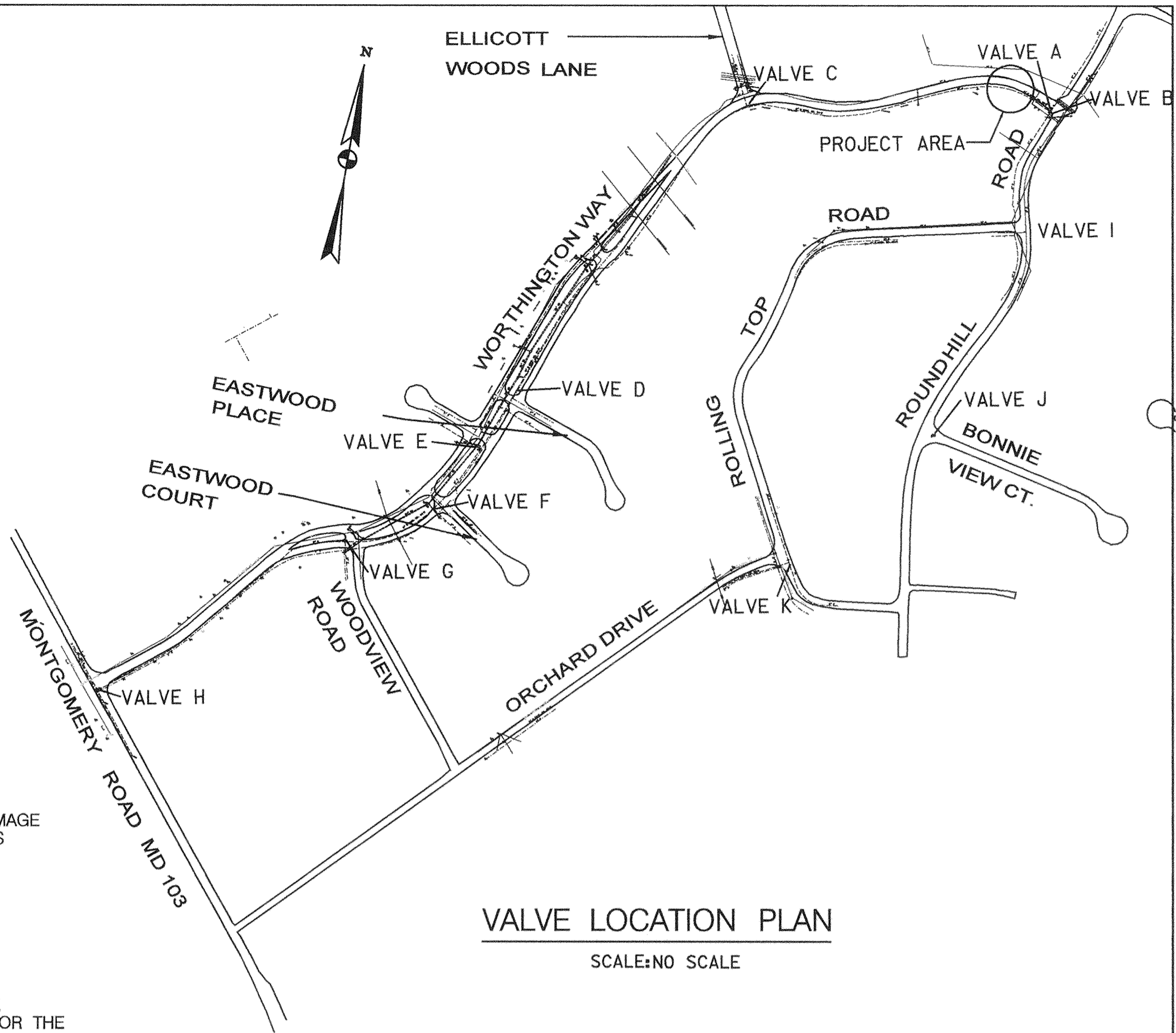
SUGGESTED SEQUENCE OF CONSTRUCTION

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST AMENDED HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND THE CONTRACT DRAWINGS AND SPECIFICATIONS.
2. TEST HOLES SHALL BE EXCAVATED ON THE EXISTING 8-INCH WATER MAIN AT THE TIE-IN LOCATIONS PRIOR TO CONSTRUCTION OF THE PROPOSED WATER MAIN RELOCATION TO VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF THE EXISTING WATER MAIN.
3. THE CONTRACTOR SHALL PREPARE A TEMPLATE OF THE EXISTING WATER MAIN TO CONFIRM THE ROUNDNESS OF THE PIPE.
4. INSTALL RELOCATED WATER MAIN FROM STA. 10+05± TO 10+57± INCLUDING HORIZONTAL AND VERTICAL BENDS, THRUST BLOCKS, ANCHORAGES AND BUTTRESSES. BACKFILL TRENCH IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, CHLORINATE AND PRESSURE TEST THIS SECTION OF WATER MAIN.
5. INSTALL PRE-POURED THRUST BLOCKS FOR THE HORIZONTAL BENDS AT STATION 10+05 AND STATION 10+52. CONTRACTOR SHALL SUBMIT DETAILS FOR PRE-POURED THRUST BLOCKS AND WATER MAIN TIE-IN DETAILS TO ENGINEER FOR APPROVAL.
6. CLOSE ISOLATION VALVES 'A', 'D' AND 'G' ON THE EXISTING 8-INCH WATER MAIN ALONG WORTHINGTON WAY AS SHOWN ON THE VALVE LOCATION PLAN.
7. REMOVE THE EXISTING 8-INCH WATER MAIN AS NECESSARY AND CONNECT THE RELOCATED WATER MAIN TO THE EXISTING WATER MAIN IN ACCORDANCE WITH THE CONTRACT DRAWINGS. TIE-INS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL NO. W-4.15. THE RELOCATED WATER MAIN AND FITTINGS SHALL BE CHLORINATED DURING THE INSTALLATION AND IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION NO. 1006, "DISINFECTION OF WATER MAIN".
8. VISUALLY INSPECT THE TIE-INS FOR LEAKS AND WHEN ASSURED THAT THERE ARE NO LEAKS, BACKFILL THE REMAINING TRENCH IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.

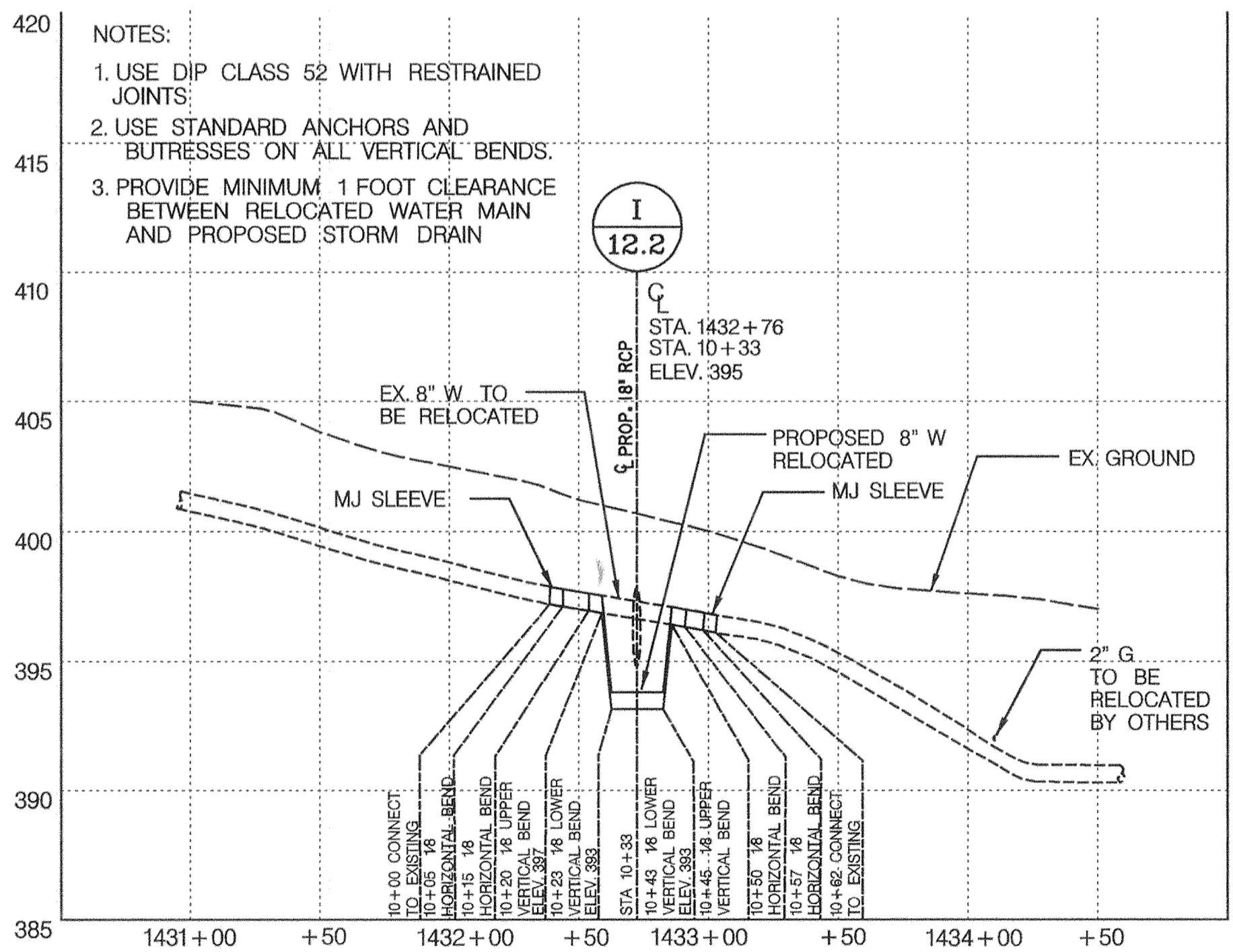
GENERAL NOTES

1. APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES, NAD 83.
3. ALL VERTICAL CONTROLS ARE BASED ON NAVD 29.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. CLEAR UTILITIES BY A MINIMUM OF 12". CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
6. FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
7. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATIONS OF THE TEST PITS. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
8. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

AT&T	1-800-526-2000
BGE (CONTRACTOR SERVICES)	410-850-4620
BGE (UNDERGROUND DAMAGE CONTROL)	410-787-9068
BUREAU OF UTILITIES	410-313-4900
BELL ATLANTIC MARYLAND, INC	1-800-621-9900
COLONIAL PIPELINE CO	410-795-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
11. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(A) OF THE HOWARD COUNTY CODE
12. ALL WATER MAINS SHALL BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
13. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
14. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
15. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
16. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
17. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND BUREAU OF UTILITIES AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE SCHEDULED TIE-IN TO EXISTING WATER MAIN. THE CONTRACTOR SHALL NOTIFY AFFECTED WATER CUSTOMERS A MINIMUM OF FORTY-EIGHT (48) HOURS PRIOR TO SCHEDULED TIE-IN AND WATER OUTAGE.



VALVE LOCATION PLAN
SCALE: NO SCALE



RELOCATION
WORTHINGTON WAY
SCALE: HOR. 1"=50'
VERT. 1"=5'

WATER SERVICE ZONE: 630 E
MAXIMUM WORKING PRESSURE = 104 PSI
TEST GRADIENT = 780 FT

UTILITY RELOCATION PLAN
SCALE: AS SHOWN

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John H. Lee 7/24/00
DATE
7/24/00

Robert J. Seaman 6/5/00
DATE
6/5/00

John H. Lee 6-5-00
DATE
6-5-00

Robert J. Seaman 6-8-00
DATE
6-8-00

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875

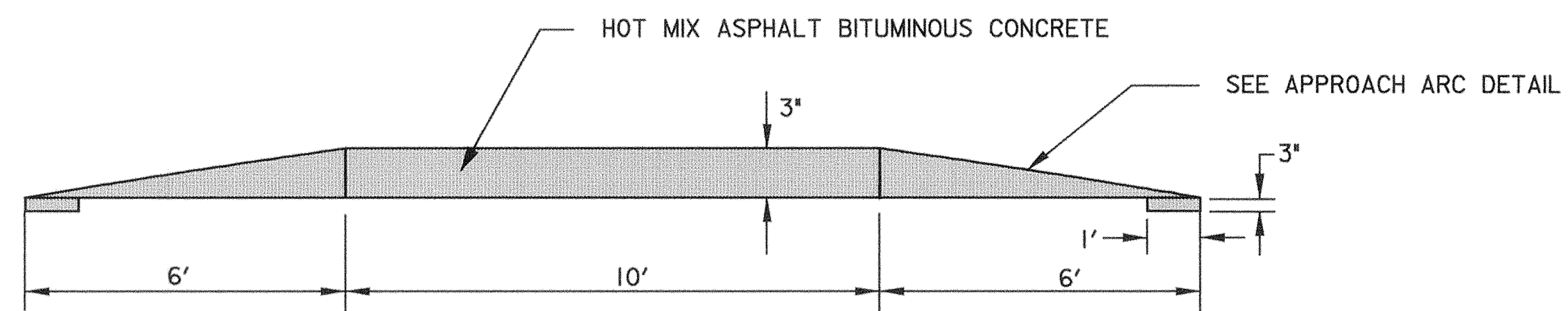


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DRN:				
CHK:	D#D	<input checked="" type="checkbox"/>	CORRECTED SHEET DESIGNATION	9/1/00
	D#D	<input checked="" type="checkbox"/>	REPLACEMENT SHEET	6/2/00
DATE:	BY	NO.	REVISION	DATE

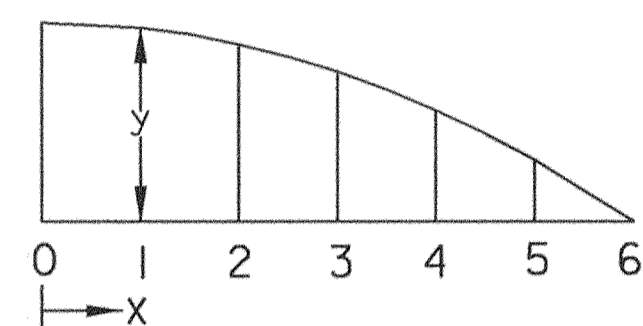
CAPITAL PROJECT NO.	J-4158
600' SCALE MAP NO.:	31 BLOCK 9

PHASE 1
**WORTHINGTON AREA
VEHICULAR ACCESS**
CONTRACT NO. 64-W

SCALE AS SHOWN
SHEET 26 OF 63



SPEED HUMP PROFILE



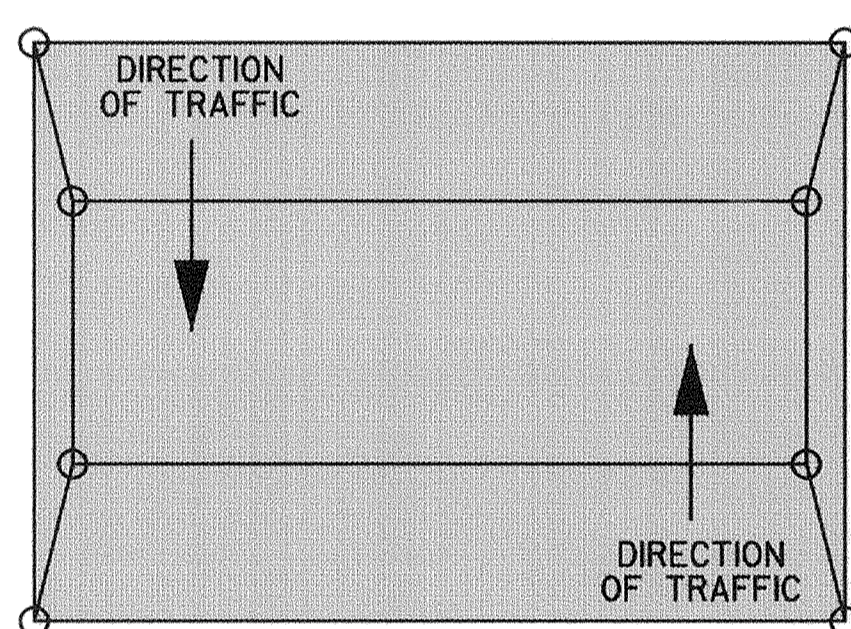
APPROACH ARC DETAIL

SPEED HUMP LOCATIONS

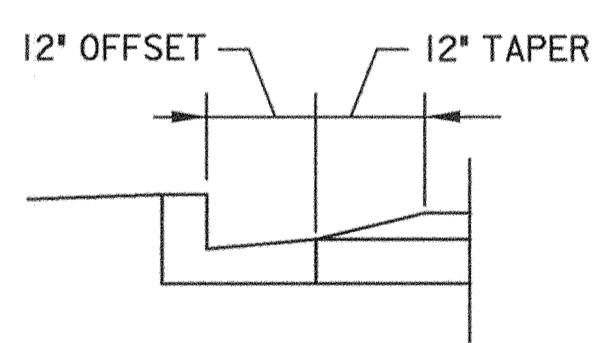
- ELBERTA DRIVE WEST OF CARMAN DRIVE
- HALE HAVEN DRIVE NORTH OF ELBERTA DRIVE
- DONCASTER DRIVE NORTH OF LIVE OAK COURT
- DONCASTER DRIVE NORTH OF CHEWS VINEYARD
- ROUNDHILL ROAD WEST OF HUNTLEY DRIVE
- ROLLINGTOP ROAD WEST OF ROUNDHILL ROAD
- ORCHARD DRIVE NORTH OF WOODVIEW ROAD

x (ft.)	y (ft.)	=	Inches
0	0.25	=	3.0
1	0.243	=	2.92
2	0.222	=	2.64
3	0.188	=	2.25
4	0.139	=	1.67
5	0.077	=	0.92
6	0.0	=	0.0

VERTICAL DIMENSIONS CHART



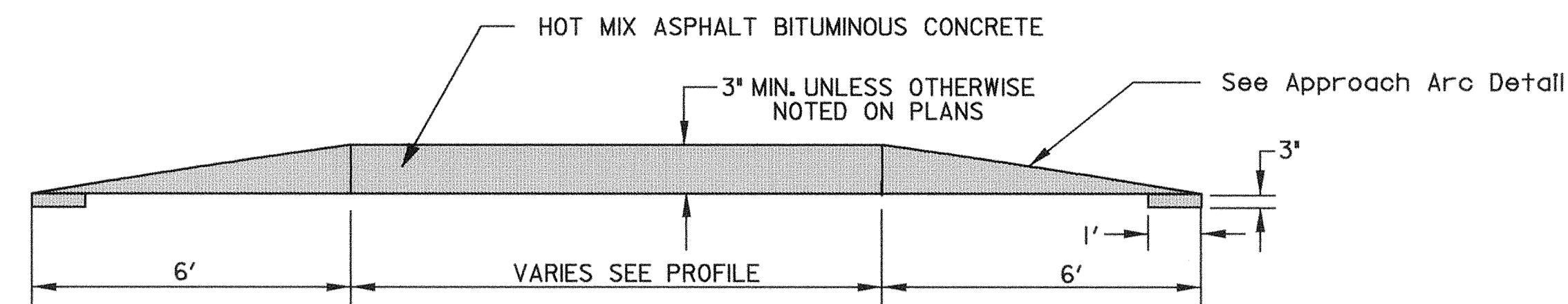
FOR STATION AND OFFSET AT KEYPOINTS DENOTED HERE BY O, SEE PLAN SHEET CONSTRUCTION POINTS TABLE.



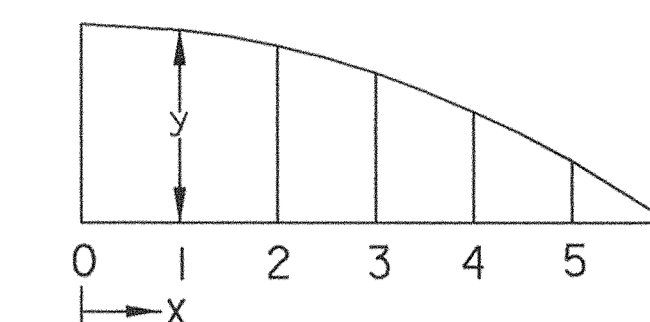
CURB TREATMENT (BITUMINOUS OR PCC CURB)

FLAT TOP PROFILE SPEED HUMP

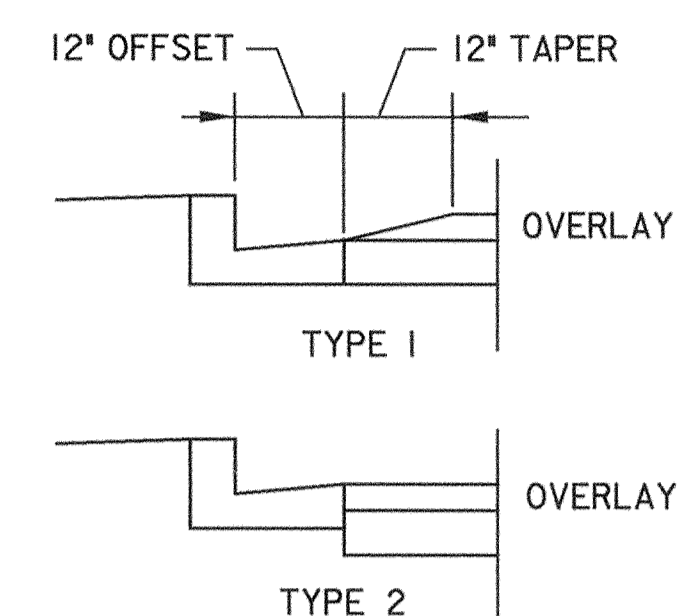
SCALE: NTS



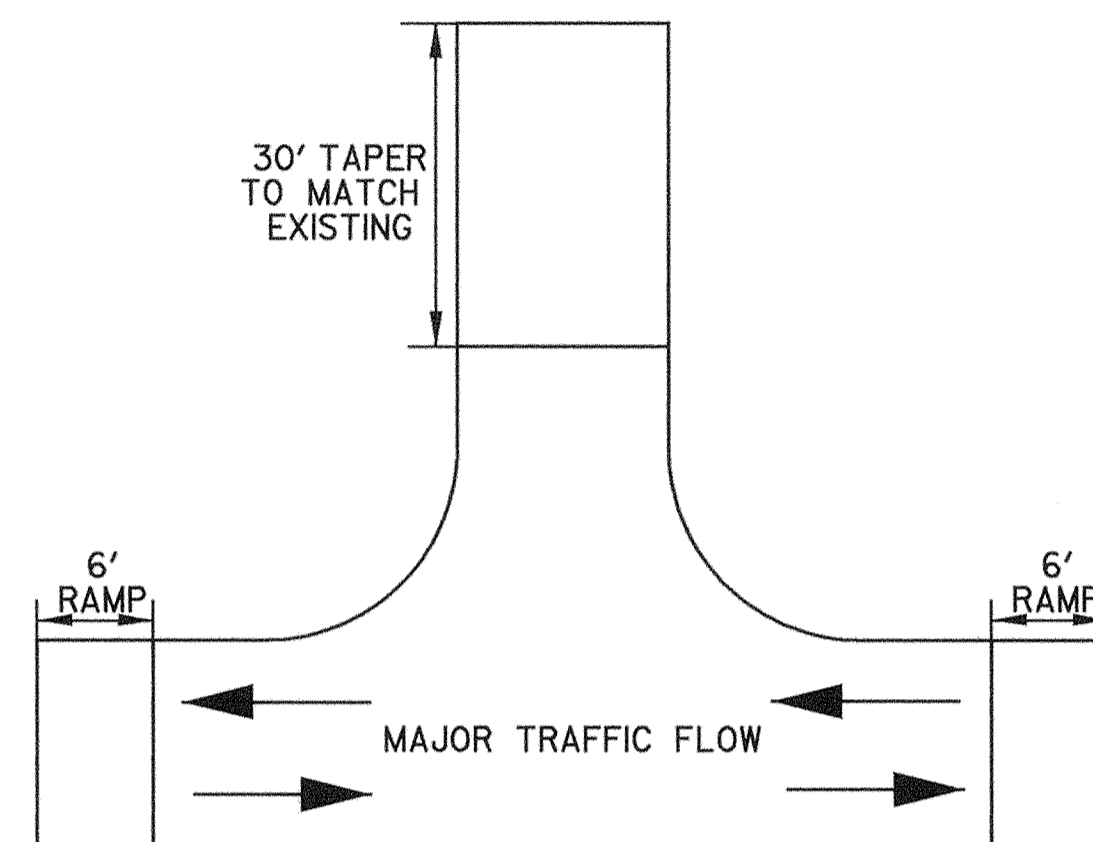
SPEED TABLE PROFILE



APPROACH ARC DETAIL



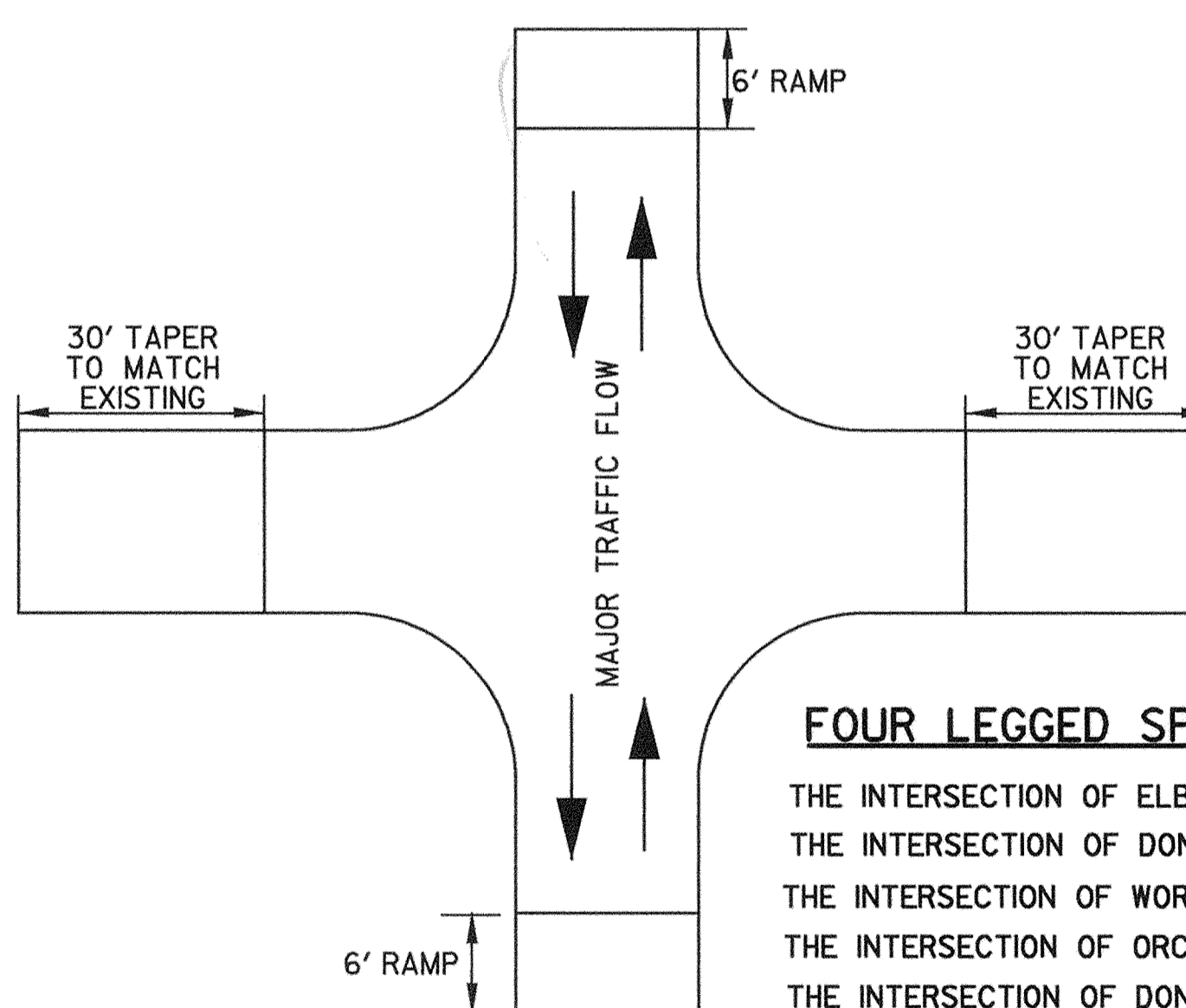
CURB TREATMENT (PCC CURB)



THREE LEGGED SPEED TABLE

THREE LEGGED SPEED TABLE LOCATIONS

- THE INTERSECTION OF ELBERTA DRIVE AND HALE HAVEN DRIVE
- THE INTERSECTION OF ROUNDHILL ROAD AND HUNTLEY DRIVE
- THE INTERSECTION OF WORTHINGTON WAY AND ELLICOTT WOODS LANE
- THE INTERSECTION OF WORTHINGTON WAY AND ROUNDHILL ROAD



FOUR LEGGED SPEED TABLE

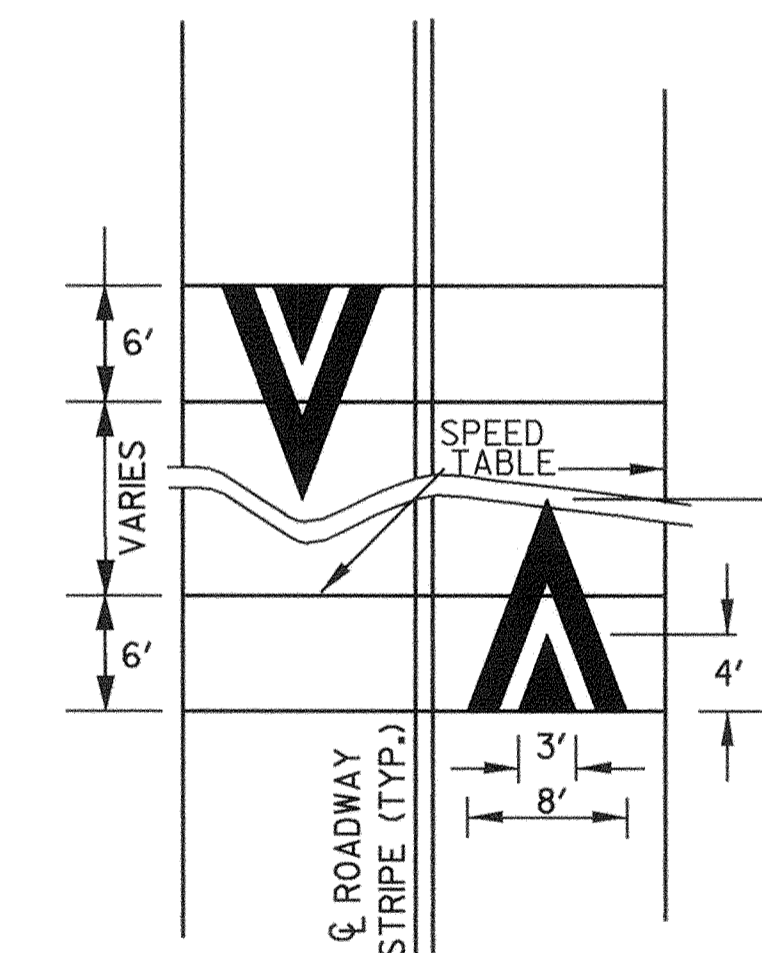
FOUR LEGGED SPEED TABLE LOCATIONS

- THE INTERSECTION OF ELBERTA DRIVE AND SOUTH HAVEN DRIVE
- THE INTERSECTION OF DONCASTER DRIVE AND ROUNDHILL ROAD
- THE INTERSECTION OF WORTHINGTON WAY AND EASTWOOD COURT
- THE INTERSECTION OF ORCHARD DRIVE AND ROLLINGTOP ROAD
- THE INTERSECTION OF DONCASTER DRIVE AND KESTING COURT

x (ft.)	y (ft.)	=	Inches
0	0.25	=	3.0
1	0.243	=	2.92
2	0.222	=	2.64
3	0.188	=	2.25
4	0.139	=	1.67
5	0.077	=	0.92
6	0.0	=	0.0

SPEED TABLE

SCALE: NTS



TYPICAL MARKING DETAIL

SHEET NO. DE-2 OF DE-2

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

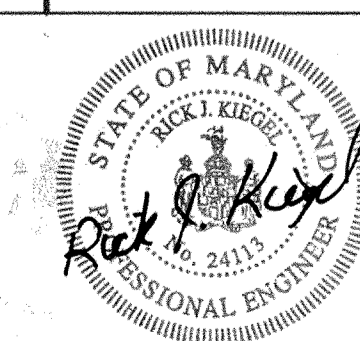
James A. Sluiter 5/3/00
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Richard J. Brown 5/3/00
CHIEF, BUREAU OF ENGINEERING

Robert M. D'Amico 5/3/00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects
Engineers
Planners
Surveyors

3120 Timanus Lane, Suite 211
Baltimore, Maryland 21244
Tel. 410-265-9500
Fax. 410-265-8875



DES:				
DRN:				
CHK:				
DATE:	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.	J-4158
NO.:	DATE:

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 27 OF 63

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAY OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Ronald J. Kegan
Signature of Developer
5/3/00
Date

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Robert S. Kiegel
Signature of Engineer
5/3/00
Date

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

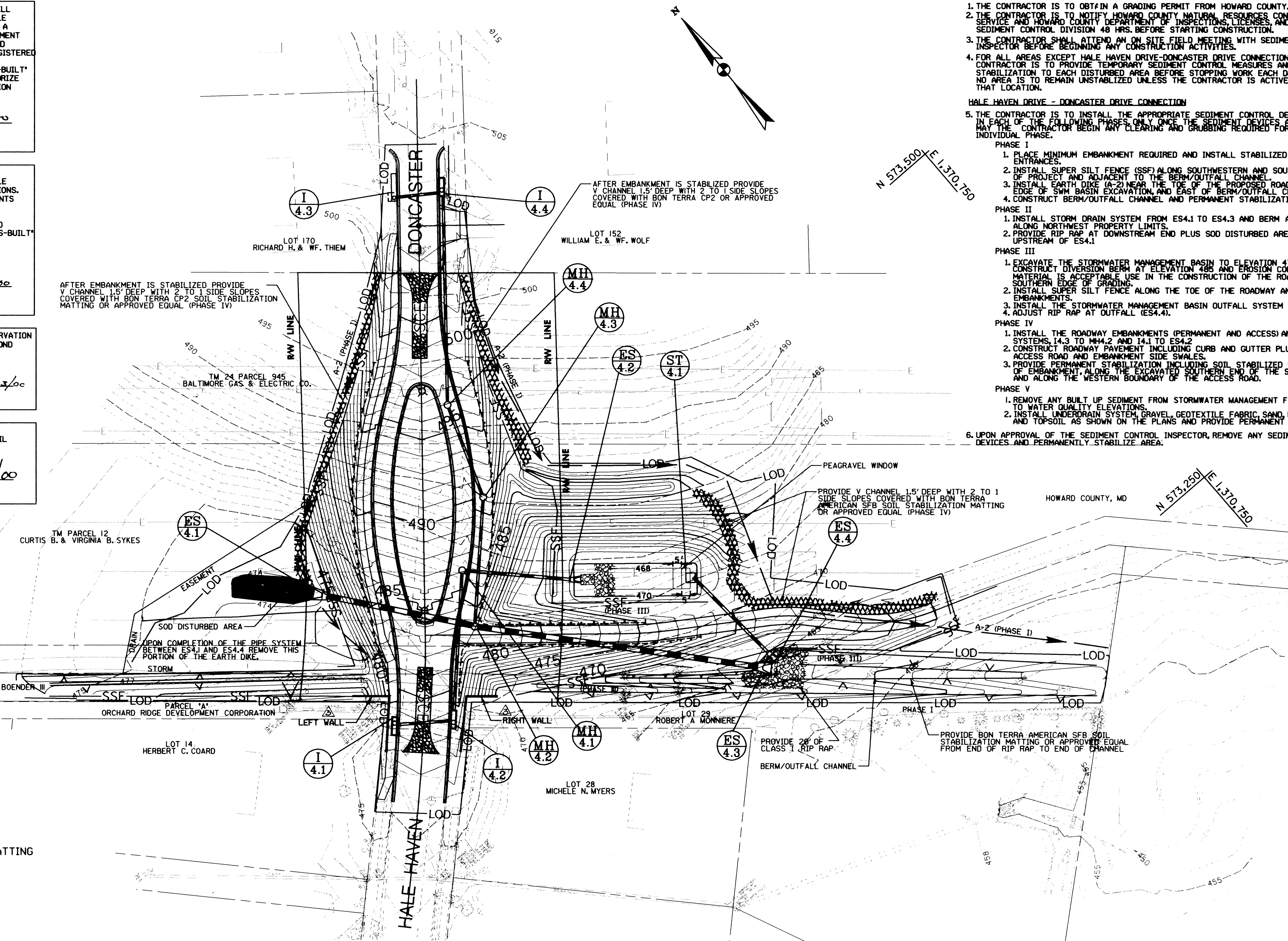
Charles T. Jannoin
USDA-Natural Resources Conservation Service
05/03/00
Date

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

By R. B. ...
Howard Soil Conservation District
5/3/00
Date

SEQUENCE OF CONSTRUCTION:

1. THE CONTRACTOR IS TO OBTAIN A GRADING PERMIT FROM HOWARD COUNTY.
 2. THE CONTRACTOR IS TO NOTIFY HOWARD COUNTY NATURAL RESOURCES CONSERVATION SERVICE AND HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES, AND PERMITS, SEDIMENT CONTROL DIVISION 48 HRS. BEFORE STARTING CONSTRUCTION.
 3. THE CONTRACTOR SHALL ATTEND AN ON SITE FIELD MEETING WITH SEDIMENT CONTROL INSPECTOR BEFORE BEGINNING ANY CONSTRUCTION ACTIVITIES.
 4. FOR ALL AREAS EXCEPT HALE HAVEN DRIVE-DONCASTER DRIVE CONNECTION, THE CONTRACTOR IS TO PROVIDE TEMPORARY SEDIMENT CONTROL MEASURES AND TEMPORARY STABILIZATION TO EACH DISTURBED AREA BEFORE STOPPING WORK EACH DAY. NO AREA IS TO REMAIN UNSTABILIZED UNLESS THE CONTRACTOR IS ACTIVELY WORKING AT THAT LOCATION.
- HALE HAVEN DRIVE - DONCASTER DRIVE CONNECTION**
5. THE CONTRACTOR IS TO INSTALL THE APPROPRIATE SEDIMENT CONTROL DEVICE AS CITED IN EACH OF THE FOLLOWING PHASES ONLY ONCE THE SEDIMENT DEVICES ARE IN PLACE MAY THE CONTRACTOR BEGIN ANY CLEARING AND GRUBBING REQUIRED FOR THE INDIVIDUAL PHASE.
- PHASE I**
1. PLACE MINIMUM EMBANKMENT REQUIRED AND INSTALL STABILIZED CONSTRUCTION ENTRANCES.
 2. INSTALL SUPER SILT FENCE (SSF) ALONG SOUTHWESTERN AND SOUTHEASTERN LIMITS OF PROJECT AND ADJACENT TO THE BERM/OUTFALL CHANNEL.
 3. INSTALL EARTH DIKE (A-2) NEAR THE TOE OF THE PROPOSED ROADWAY EMBANKMENT, EDGE OF SWM BASIN EXCAVATION, AND EAST OF BERM/OUTFALL CHANNEL.
 4. CONSTRUCT BERM/OUTFALL CHANNEL AND PERMANENT STABILIZATION.
- PHASE II**
1. INSTALL STORM DRAIN SYSTEM FROM ES4.1 TO ES4.3 AND BERM AT UPSTREAM END AND ALONG NORTHWEST PROPERTY LIMITS.
 2. PROVIDE RIP RAP AT DOWNSTREAM END PLUS SOD DISTURBED AREA UPSTREAM OF ES4.1
- PHASE III**
1. EXCAVATE THE STORMWATER MANAGEMENT BASIN TO ELEVATION 470 IF THE REMOVED CONSTRUCTION DIVERSION BERM AT ELEVATION 485 AND EROSION CONTROL MATTING ALONG MATERIAL IS ACCEPTABLE USE IN THE CONSTRUCTION OF THE ROADWAY EMBANKMENT, SOUTHERN EDGE OF GRADING.
 2. INSTALL SUPER SILT FENCE ALONG THE TOE OF THE ROADWAY AND ACCESS ROADWAY EMBANKMENTS.
 3. INSTALL THE STORMWATER MANAGEMENT BASIN OUTFALL SYSTEM FROM ST4.1 TO ES4.4.
 4. ADJUST RIP RAP AT OUTFALL (ES4.4).
- PHASE IV**
1. INSTALL THE ROADWAY EMBANKMENTS (PERMANENT AND ACCESS) AND STORM DRAIN SYSTEMS, I4.3 TO MH4.2 AND I4.1 TO ES4.2
 2. CONSTRUCT ROADWAY PAVEMENT INCLUDING CURB AND GUTTER PLUS SIDEWALK, GRAVEL ACCESS ROAD AND EMBANKMENT SIDE SWALES.
 3. PROVIDE PERMANENT STABILIZATION INCLUDING SOIL STABILIZED MATTING AT THE TOE OF EMBANKMENT, ALONG THE EXCAVATED SOUTHERN END OF THE SWM BASIN GRADING AND ALONG THE WESTERN BOUNDARY OF THE ACCESS ROAD.
- PHASE V**
1. REMOVE ANY BUILT UP SEDIMENT FROM STORMWATER MANAGEMENT FACILITY AND EXCAVATE TO WATER QUALITY ELEVATIONS.
 2. INSTALL UNDERDRAIN SYSTEM, GRAVEL, GEOTEXTILE FABRIC, SAND, RIP RAP WEIR AND TOPSOIL AS SHOWN ON THE PLANS AND PROVIDE PERMANENT STABILIZATION.
 6. UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ANY SEDIMENT CONTROL DEVICES AND PERMANENTLY STABILIZE AREA.



**HALE HAVEN & DONCASTER CONNECTION
SEDIMENT CONTROL AND GRADING PLAN**

SCALE: 1" = 30'

LEGEND

- V-CHANNEL WITH SOIL STABILIZATION MATTING
- STABILIZED CONSTRUCTION ENTRANCE
- SUPER SILT FENCE
- RIP RAP PROTECTION
- LIMIT OF DISTURBANCE
- EARTH DIKE
- BERM OUTFALL CHANNEL

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

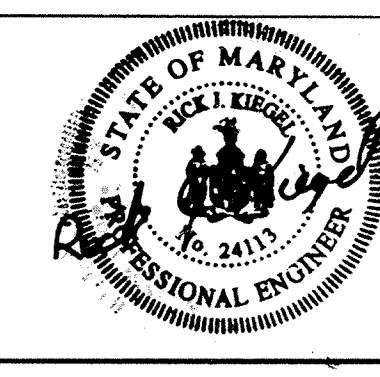
James P. ... 5/3/00
DATE

Robert S. Kiegel 5/3/00
DATE

Charles T. Jannoin 5/3/00
DATE

Dowberry & Davis
Architects
Engineers
Planners
Surveyors

3120 Timanus Lane, Suite 211
Baltimore, Maryland 21244
Tel. 410-265-9500
Fax. 410-265-8875



DES:				
DRN:				
CHK:				
DATE:	D&D	REVISED GRADING AT WALLS (EXHIBIT 2)	6/12/00	
BY:	NO.	REVISION	DATE	

CAPITAL PROJECT NO.	J-4158
NO.:	DATE:

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 28 OF 63

SHEET NO. ES-1 OF ES-4

STANDARDS AND SPECIFICATIONS

FOR VEGETATIVE STABILIZATION

Section I - Vegetative Stabilization Methods and Materials

- A. Site Preparation
1. Install erosion and sediment control structures...
2. Perform all grading operations...
3. Schedule required soil tests...

- B. Soil Amendments (Fertilizer and Lime Specifications)
1. Soil tests must be performed to determine the exact ratios...
2. Fertilizers shall be uniform in composition...
3. Lime materials shall be ground limestone...

- C. Seeded Protection
1. Temporary Seeding
a. Seeded preparation shall consist of loosening soil...
b. Apply fertilizer and lime as prescribed...
2. Permanent Seeding
a. Minimum soil conditions required for permanent vegetative establishment...

- 3. Seed Specifications
1. All seed must meet the requirements of the Maryland State Seed Law...
2. Inoculant - The inoculant for treating legume seed...
3. Methods of Seeding
a. Hydroseeding: Apply seed uniformly with hydroseeder...
b. Dry Seeding: This includes use of conventional drop or broadcast spreaders...

- 4. Mulch Specifications (in order of preference)
1. Straw shall consist of thoroughly threshed wheat, rye or oat straw...
2. Wood Cellulose Fiber Mulch (WCFM)
a. WCFM shall consist of specially prepared wood cellulose...

- 11. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre...
12. Seeding Straw Mulch (straw anchoring): Mulch anchoring shall be performed immediately following mulch application...

- 13. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into soil surface...
14. Wood Cellulose fiber may be used for anchoring straw...
15. Application of liquid binders should be heavier at the edges where wind catches mulch...

- 16. Incremental Stabilization - Cut Slopes
1. All cut slopes shall be dressed, prepared, seeded and mulched as the work progresses...
2. Construction sequence (refer to Figure 4 below):
a. Excavate and stabilize all temporary slopes, side ditches, or berms...

- 3. Embankments shall be constructed in lifts as prescribed on the plans...
4. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embankment...

- 5. Construction sequence: Refer to Figure 5 (below):
a. Excavate and stabilize all temporary slopes, side ditches, or berms that will be used to divert runoff around the fill...
b. Place phase 1 embankment, dress and stabilize...

- 6. Repairs and Maintenance
Inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings within the planting season...
1. Once the vegetation is established, the site shall have 95% ground cover...

Section IV - Turfgrass Establishment
Areas where turfgrasses may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance...

- A. Permanent Seeding
1. Kentucky Bluegrass - Full sun mixture - For use in areas that receive intensive management...
2. Kentucky Bluegrass/Perennial Ryegrass - Full sun mixture - For use in full sun areas where rapid establishment is necessary...

- 3. Tall Fescue/Kentucky Bluegrass - Full sun mixture - For use in drought prone areas and/or for areas receiving low to medium management...
4. Kentucky Bluegrass/Fine Fescue - Shade Mixture - For use in areas with shade in Bluegrass lawns...

- B. Ideal times of seeding
Western MD: March 15 - June 1, August 1 - October 1
Central MD: March 1 - May 15, August 15 - October 15
Southern MD: Eastern Shore: March 1 - May 15, August 15 - October 15

- C. Irrigation
If soil moisture is deficient, apply new seedlings with adequate water for plant growth (2 1/2" - 1" every 3 to 4 days depending on soil texture) until they are firmly established...

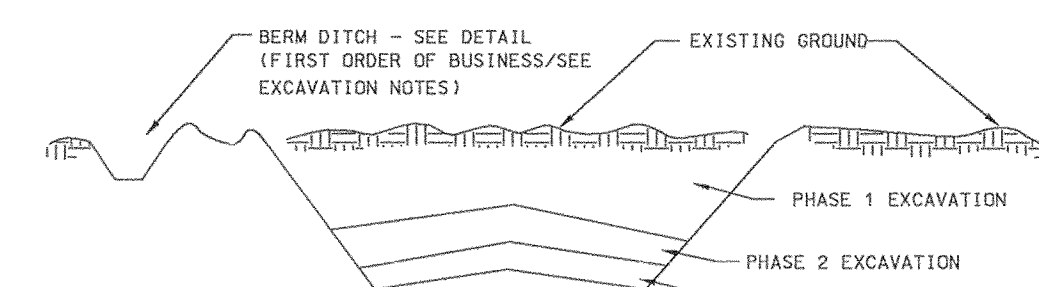


Figure 4 Incremental Stabilization - Cut

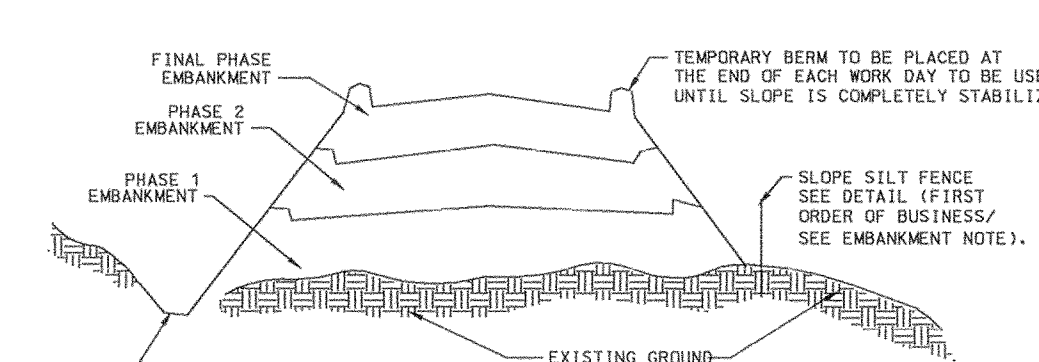


Figure 5 Incremental Stabilization - Embankment Fill

Comply with MD 378 Specifications.

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT...

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT...

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

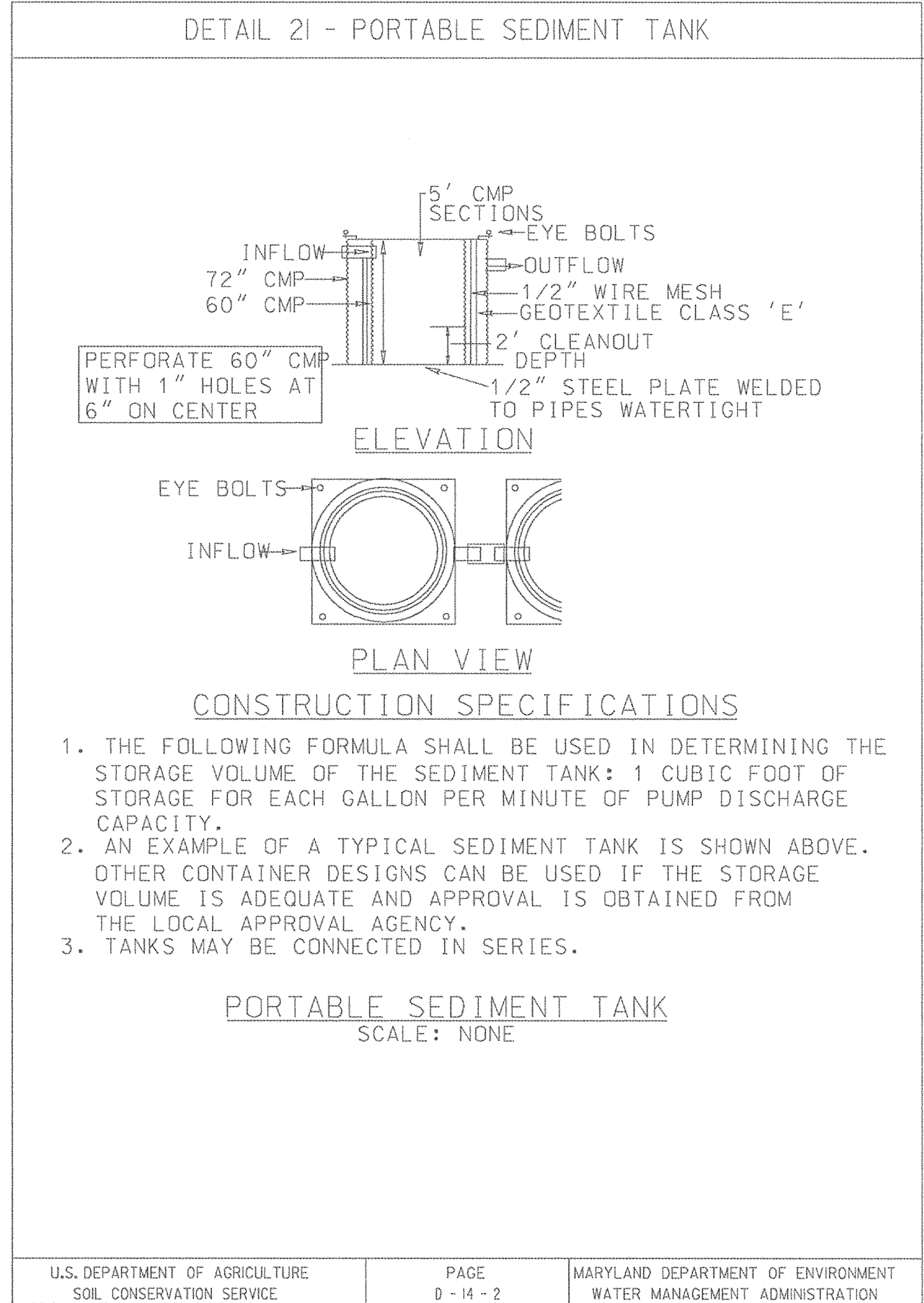
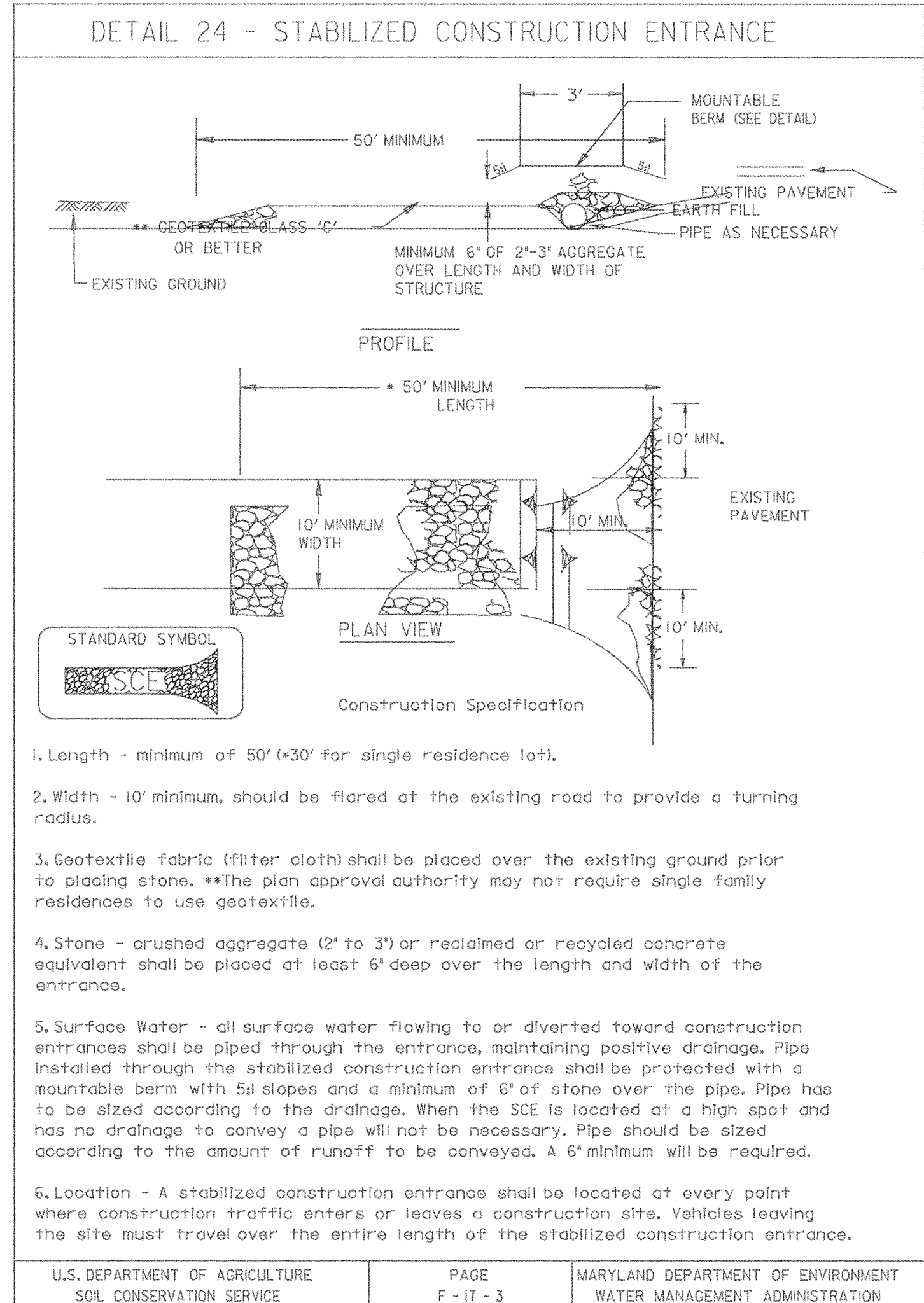
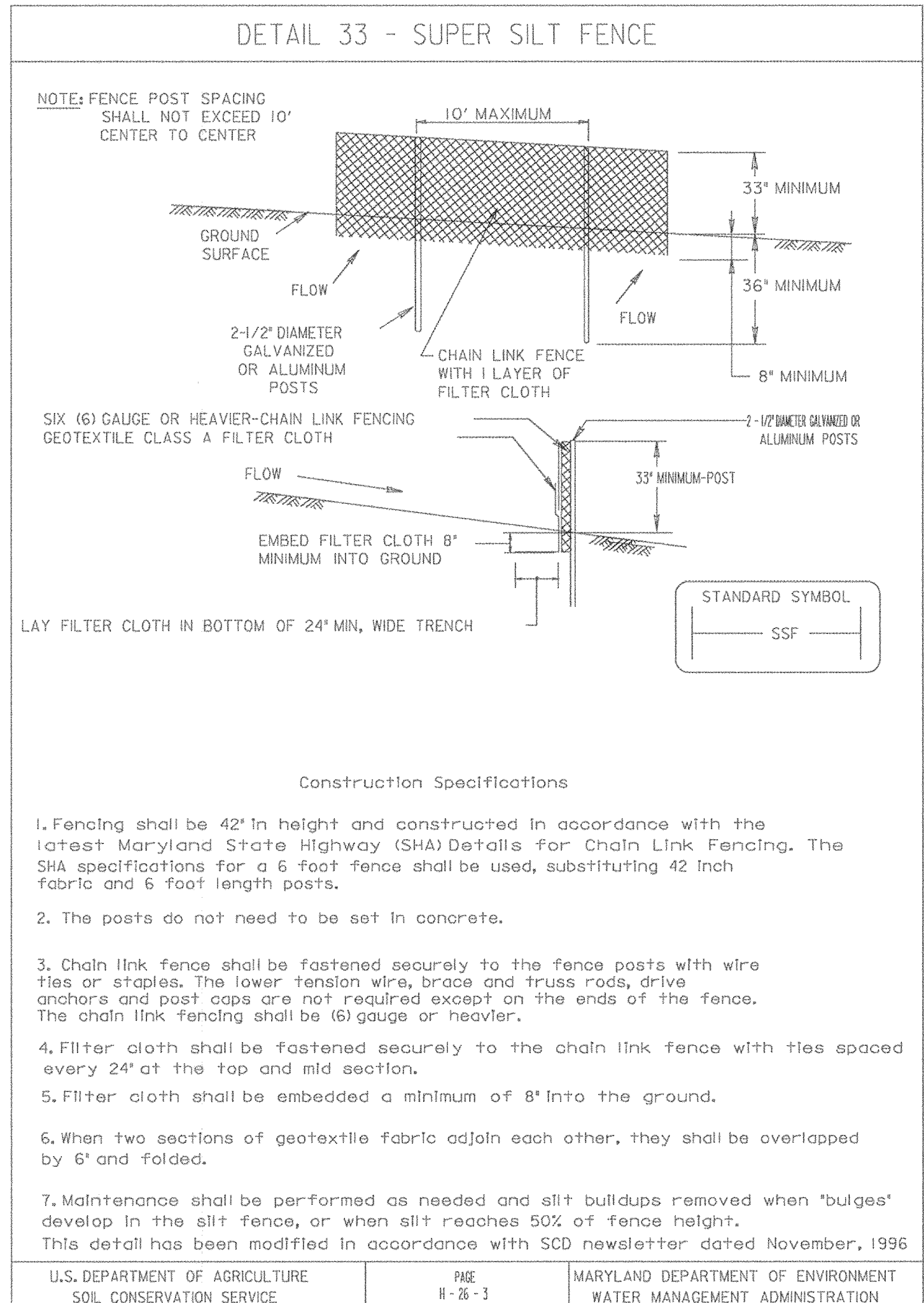
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
5/3/00
DATE

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875

Table with columns: DES, DRN, CHK, DATE, BY, NO., REVISION, DATE

SEDIMENT CONTROL NOTES AND DETAILS SHEET NO. ES-2 OF ES-4
CAPITAL PROJECT NO. J-4158
PHASE 1 WORTHINGTON AREA VEHICULAR ACCESS
SCALE AS SHOWN SHEET 29 OF 63



I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAY OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Ronald L. Lippson
Signature of Developer 5/3/00
Date

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Richard J. Kezlar
Signature of Engineer 5/3/00
Date

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Cheryl K. Johnson
USDA-Natural Resources Conservation Service 05/03/00
Date

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature]
Howard Soil Conservation District 5/3/00
Date

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Samuel A. Lippson 5/3/00
DEPARTMENT OF PUBLIC WORKS DATE
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Ronald L. Lippson 5/3/00
CHIEF, BUREAU OF ENGINEERING DATE

Christopher M. Canale 5-3-00
CHIEF, BUREAU OF HIGHWAYS DATE

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



DES:				
DRN:				
CHK:				
DATE:	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

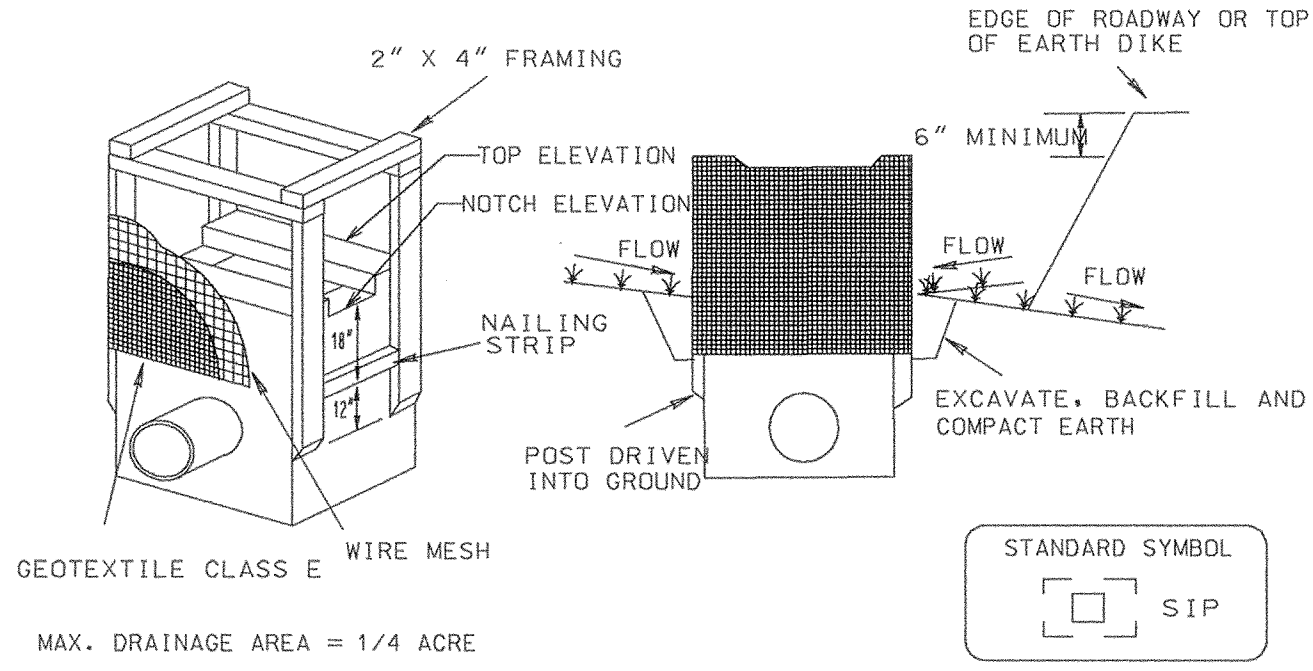
PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 30 OF 63

STANDARD SEDIMENT CONTROL NOTES

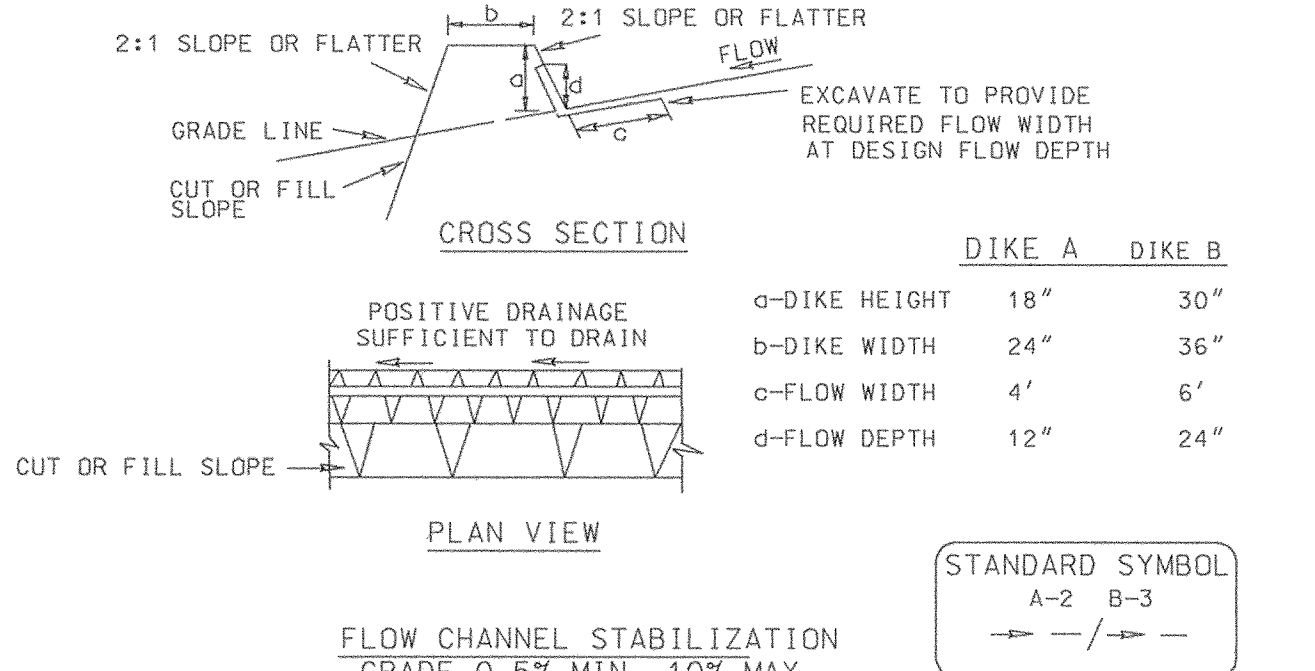
- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current Maryland Standards and Specifications For Soil Erosion and Sediment Control and revisions thereto.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol 1, Chapter 12 of the Howard County Design Manual, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis Site is defined as areas involving any improvements.

Total Area of Site	2.92 Acres
Area Disturbed	2.92 Acres
Area to be roofed or paved	1.35 Acres (New Pavement 0.24 Acres)
Area to be vegetatively stabilized	1.57 Acres
Total Cut	1,380 Cu. Yds.
Total Fill	6,350 Cu. Yds.
Offsite waste/borrow area location	To be determined by contractor.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized by the end of each work day, whichever is shorter.

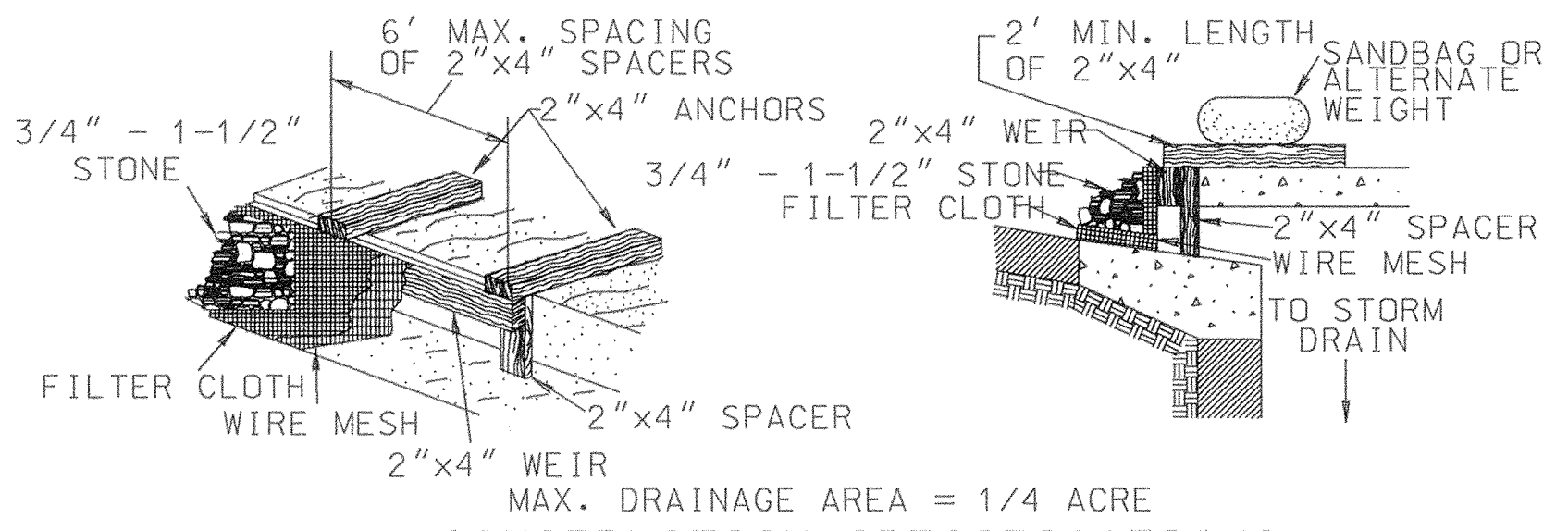


- Excavate completely around the inlet to a depth of 18" below the notch elevation.
- Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
- Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
- Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
- Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
- If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
- The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

STANDARD INLET PROTECTION



- Seed and cover with straw mulch.
 - Seed and cover with Erosion Control Matting or line with sod.
 - 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum.
- Construction Specifications
- All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
 - All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
 - The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
 - Fill shall be compacted by earth moving equipment.
 - All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
 - Inspection and maintenance must be provided periodically and after each rain event.



- ATTACH A CONTINUOUS PIECE OF WIRE MESH (30" MIN. WIDTH BY THROAT LENGTH PLUS 4') TO THE 2"x4" WEIR (MEASURING THROAT LENGTH PLUS 2') AS SHOWN ON THE STANDARD DRAWING.
- PLACE A CONTINUOUS PIECE OF GEOTEXTILE CLASS 'E' THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH IT TO THE 2"x4" WEIR.
- SECURELY NAIL THE 2"x4" WEIR TO A 9" LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND THE INLET FACE (MAX. 4' APART).
- PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MIN. 2' LENGTHS OF 2"x4" TO THE TOP OF THE WEIR AT SPACER LOCATIONS). THESE 2"x4" ANCHORS SHALL EXTEND ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.
- THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MIN. 1' BEYOND BOTH ENDS OF THE THROAT OPENING.
- FORM THE 1/2"x1/2" WIRE MESH AND THE GEOTEXTILE FABRIC TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 3/4"x1-1/2" STONE OVER THE WIRE MESH AND GEOTEXTILE FABRIC IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
- THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
- ASSURE THAT STORM FLOW DOES NOT BYPASS THE INLET BY INSTALLING A TEMPORARY EARTH OR ASPHALT DIKE TO DIRECT THE FLOW TO THE INLET.

CURB INLET PROTECTION
SCALE: NONE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAY OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Ronald G. Larson
Signature of Developer
5/3/00
Date

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Rich J. Keagle
Signature of Engineer
5/3/00
Date

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Charles E. Summers
USDA-Natural Resources Conservation Service
05-03-00
Date

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Brad B. Bullock
Howard Soil Conservation District
5/3/00
Date

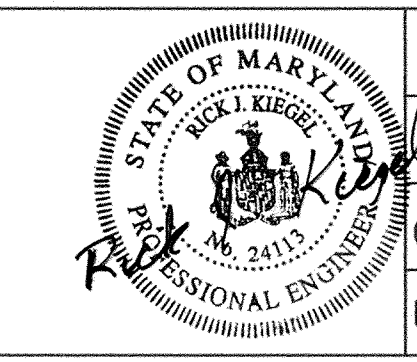
SEDIMENT CONTROL NOTES AND DETAILS SHEET NO. ES-4 OF ES-4

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Ronald G. Larson 5/3/00
DATE
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Ronald G. Larson 5/3/00
DATE
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



DES:					
DRN:					
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DATE:	BY	NO.	REVISION	DATE	

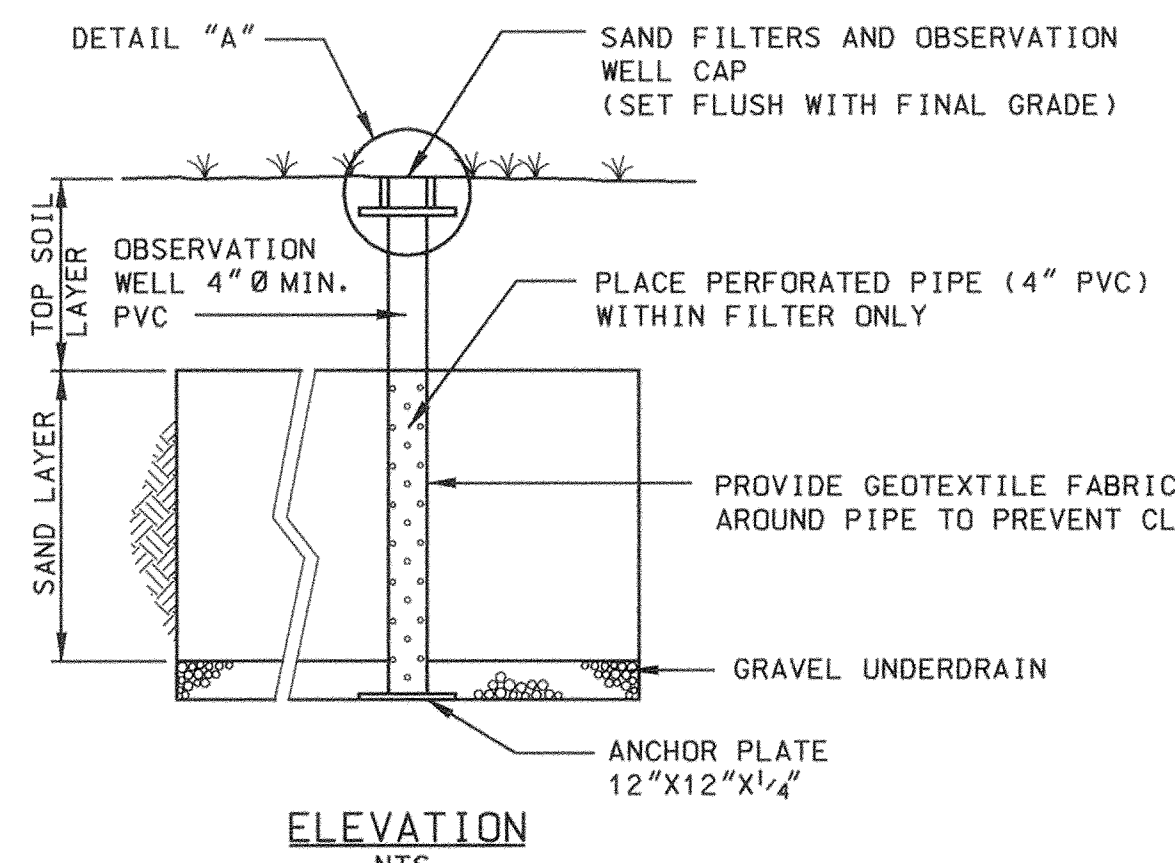
CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

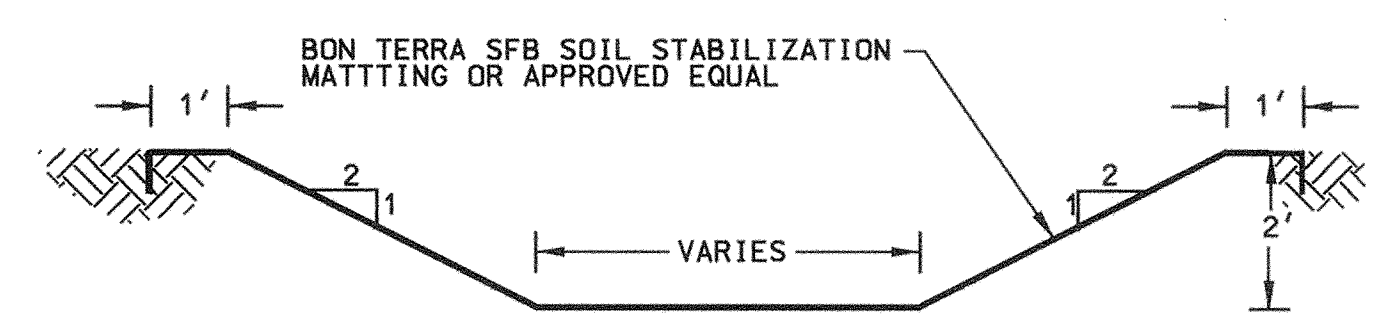
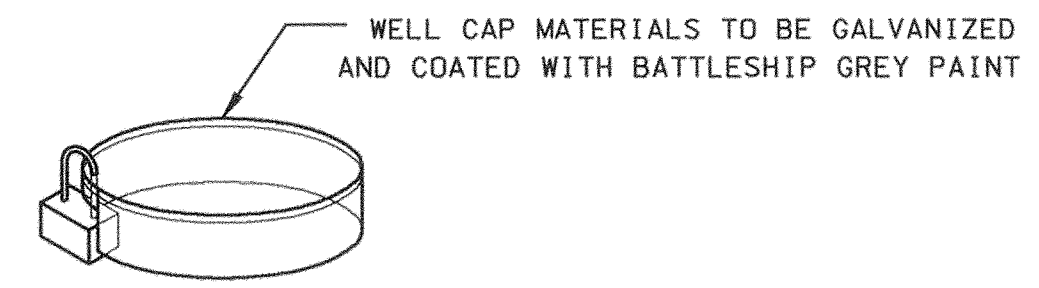
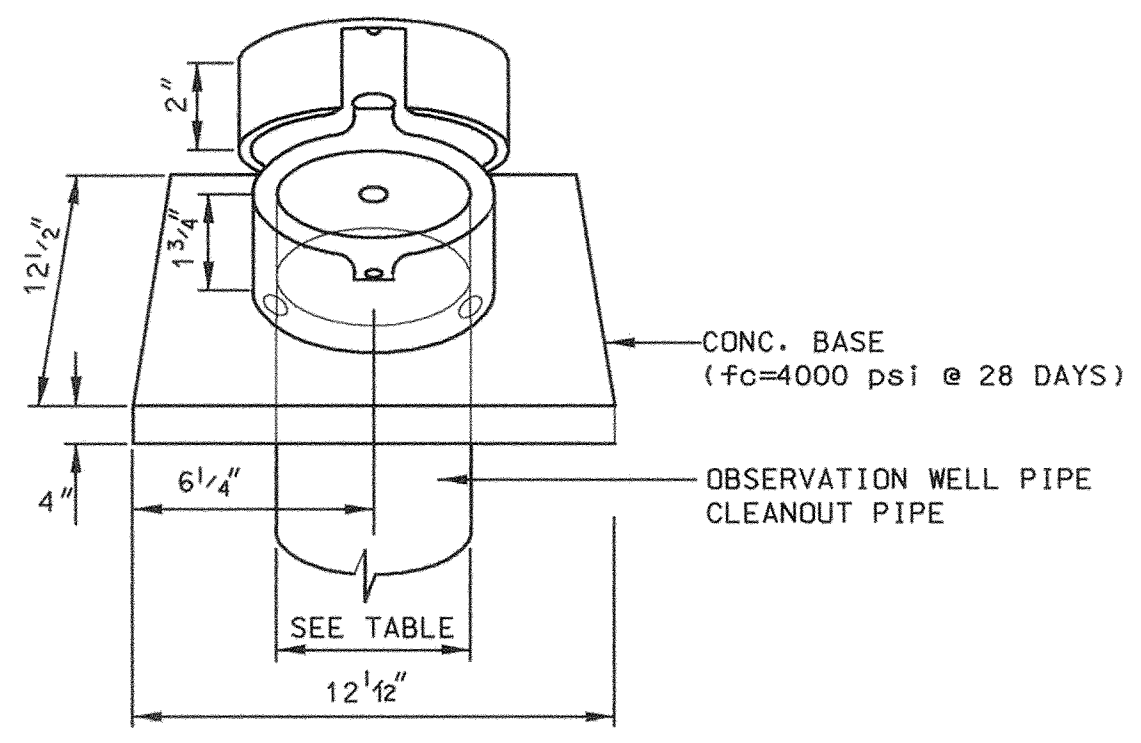
PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN

SHEET 31 OF 63

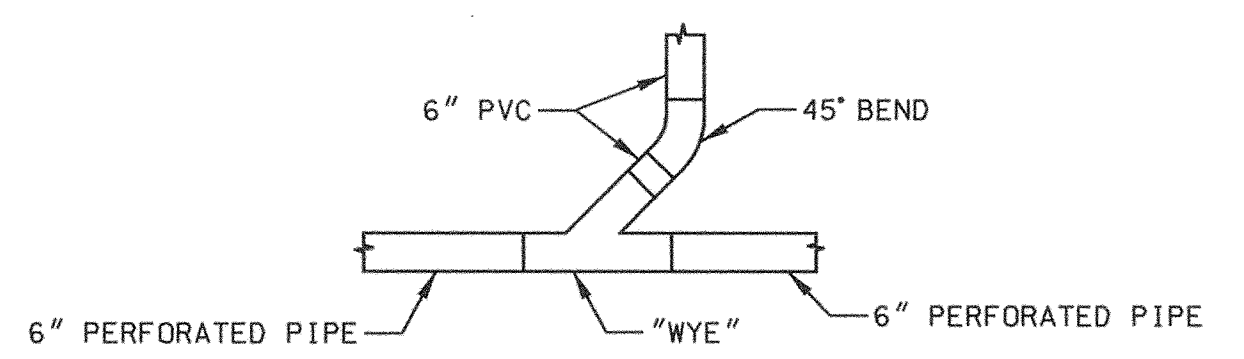


RISER PIPE	
4"	MONITORING WELL
6"	CLEANOUT

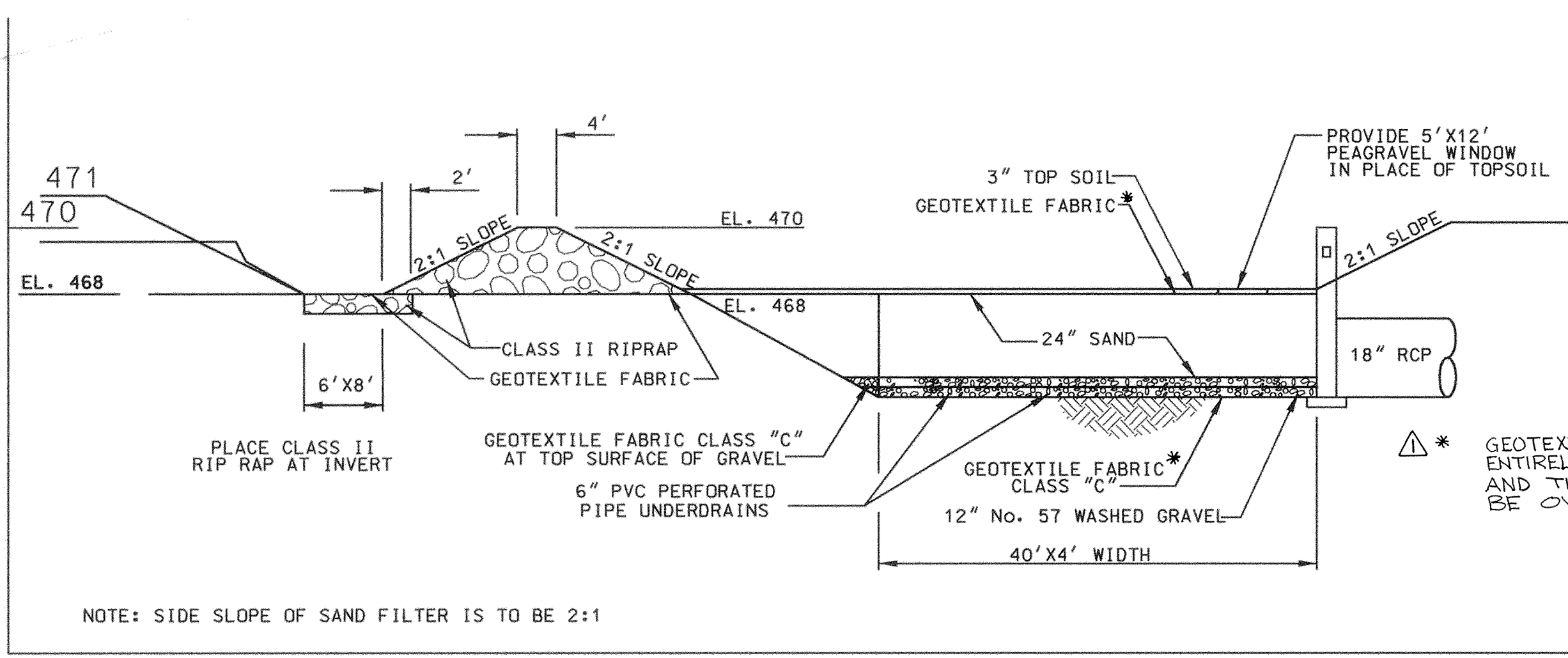


**BERM/OUTFALL CHANNEL
TYPICAL SECTION AT
ES4.3 & ES4.4**
NOT TO SCALE

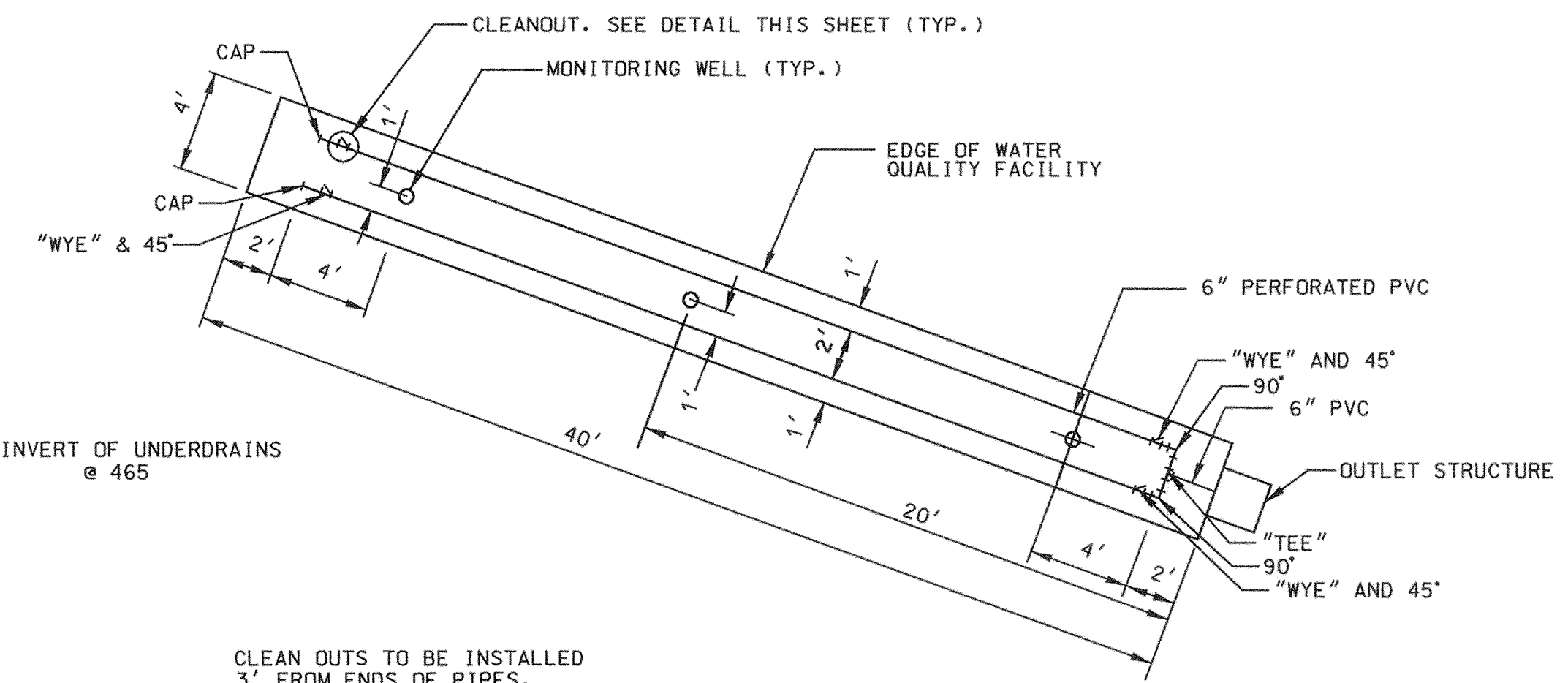
**SAND FILTER CLEANOUTS &
MONITOR WELL DETAIL**
NOT TO SCALE



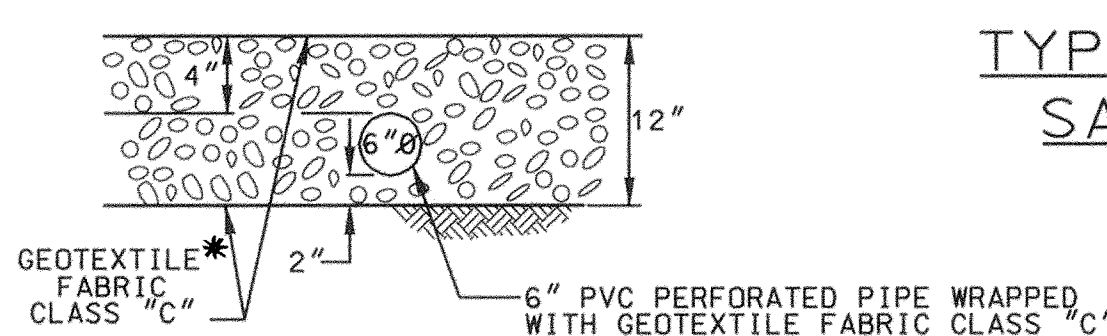
CLEANOUT DETAIL
△ (4 REQUIRED)



**TYPICAL SECTION
SAND FILTER**
NOT TO SCALE



**6" PVC PERFORATED PIPE
UNDERDRAIN DETAILS**
NOT TO SCALE



PVC UNDERDRAIN DETAIL
NOT TO SCALE

STORM WATER MANAGEMENT DETAILS
SCALE: NTS

CLEAN OUTS TO BE INSTALLED
3' FROM ENDS OF PIPES.
PLACE A 45° ELBOW ON WYE AND, EXTEND 6" PIPE TO SURFACE.
AND PROVIDE CAP PER CLEANOUT DETAIL.

SHEET NO. SWM-1 OF SWM-1

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James A. Shuman 5/3/00
CHIEF, TRANSPORTATION PROJECTS
AND WATERSHED MANAGEMENT DIVISION

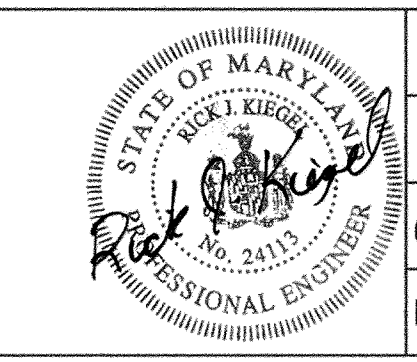
Richard P. Ryan 5/3/00
CHIEF, BUREAU OF ENGINEERING

Erica Callea 5/3/00
CHIEF, TRANSPORTATION PROJECTS
AND WATERSHED MANAGEMENT DIVISION

Christopher M. DeWitt 5-3-00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



DES:				
DRN:				
CHK:				
DATE:	D&D	△	ADDED NOTES	6/2/00
	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J-4158

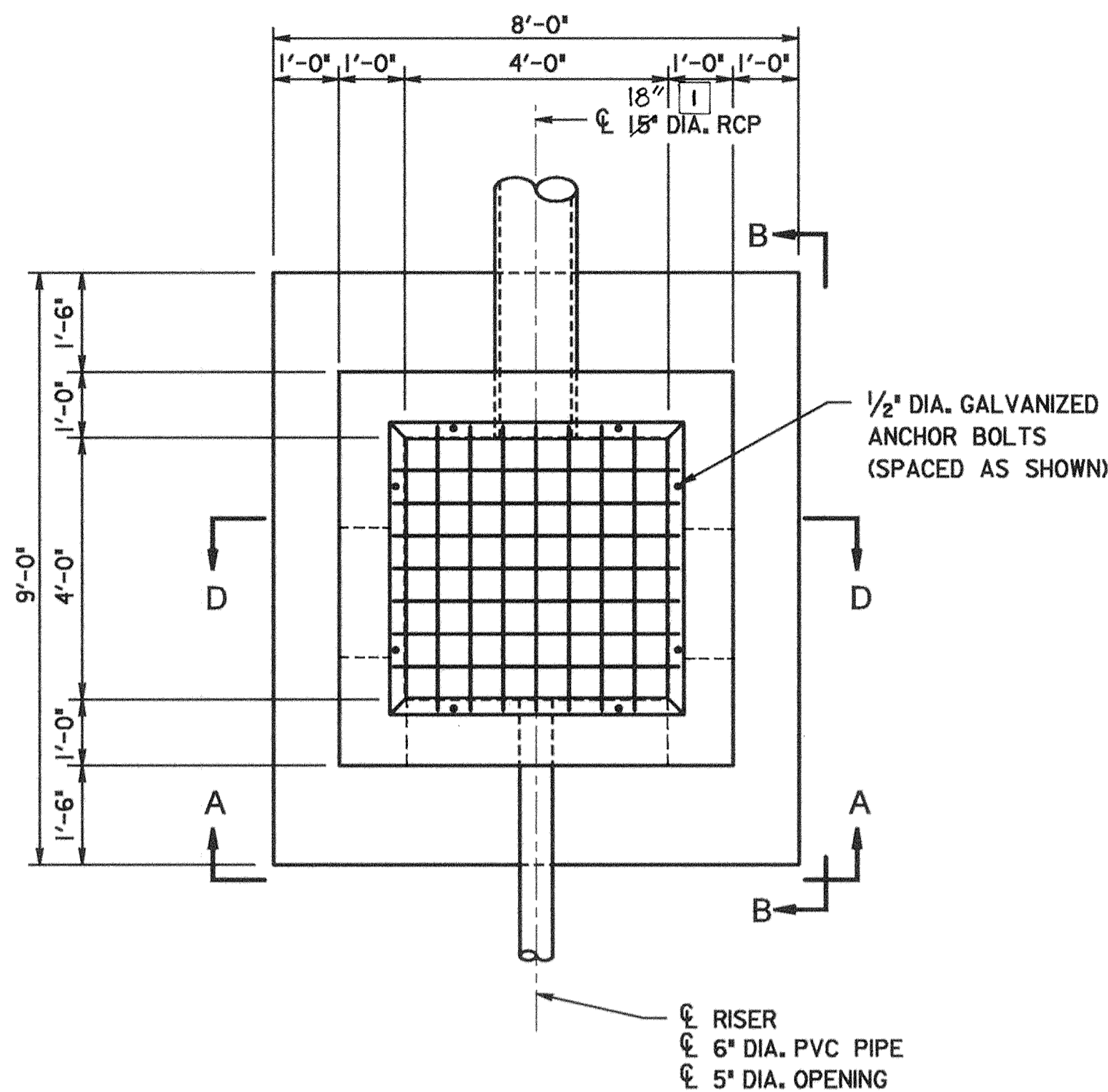
30' SCALE MAP NO.: _____ DATE: _____

**PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS**

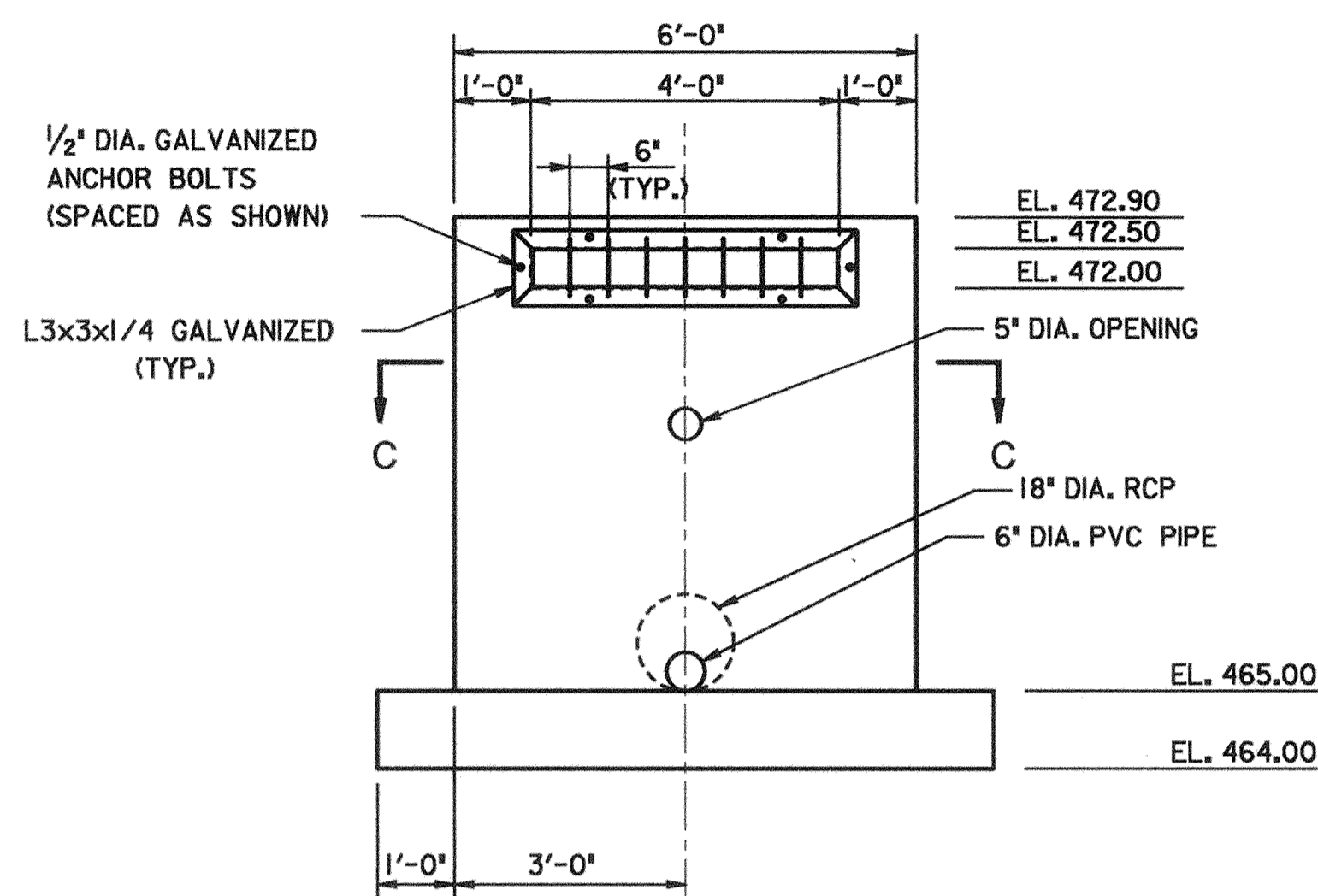
SCALE AS SHOWN

SHEET 32 OF 63

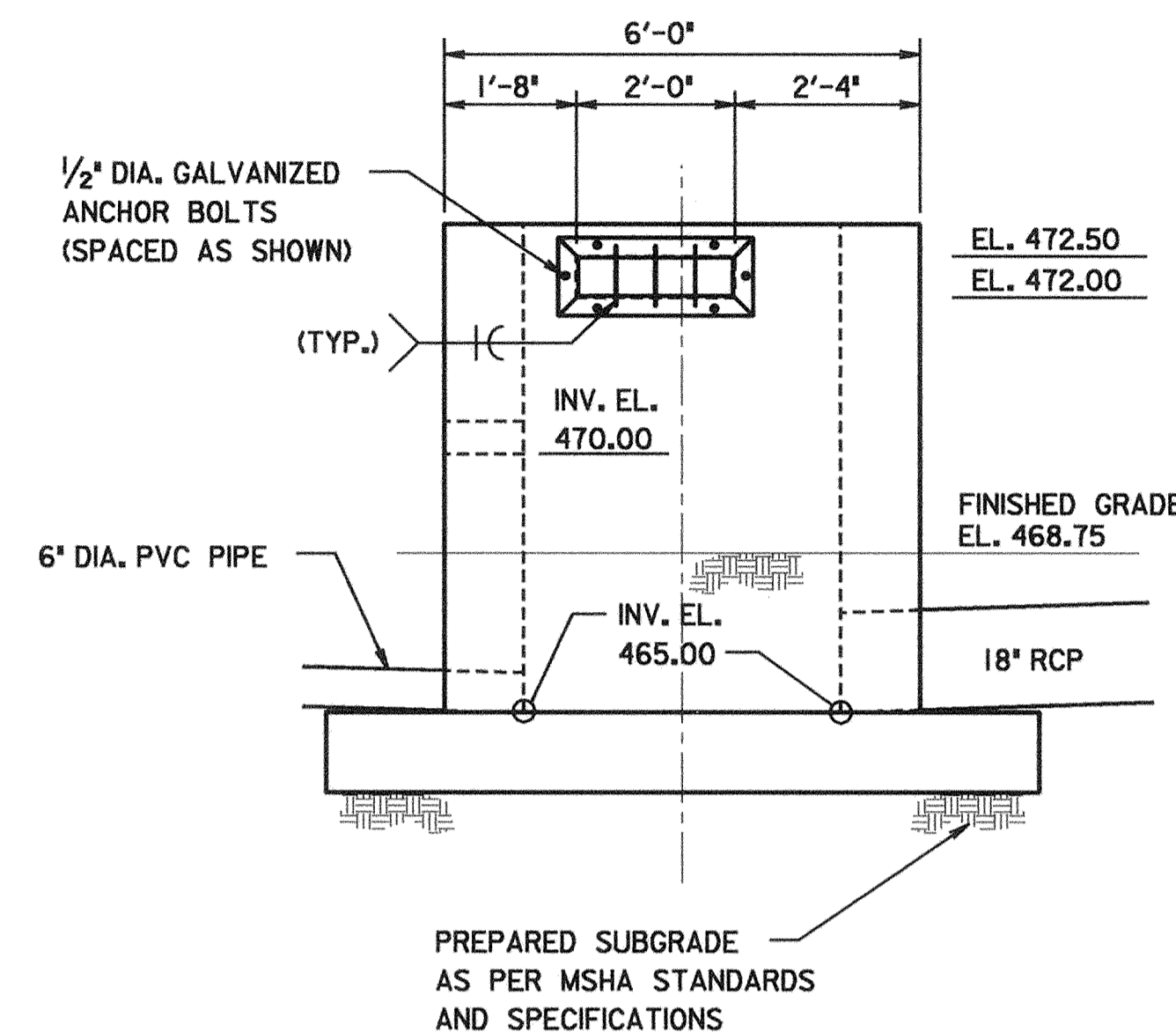
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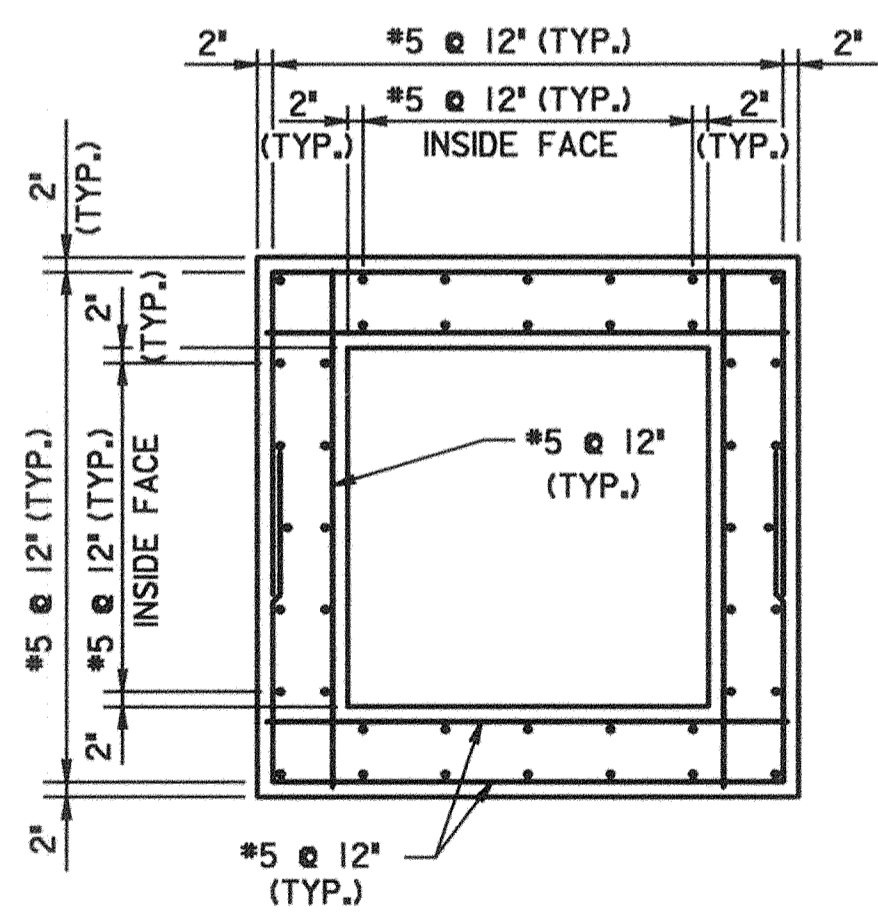
1 PLAN
Scale: 1/2" = 1'-0"



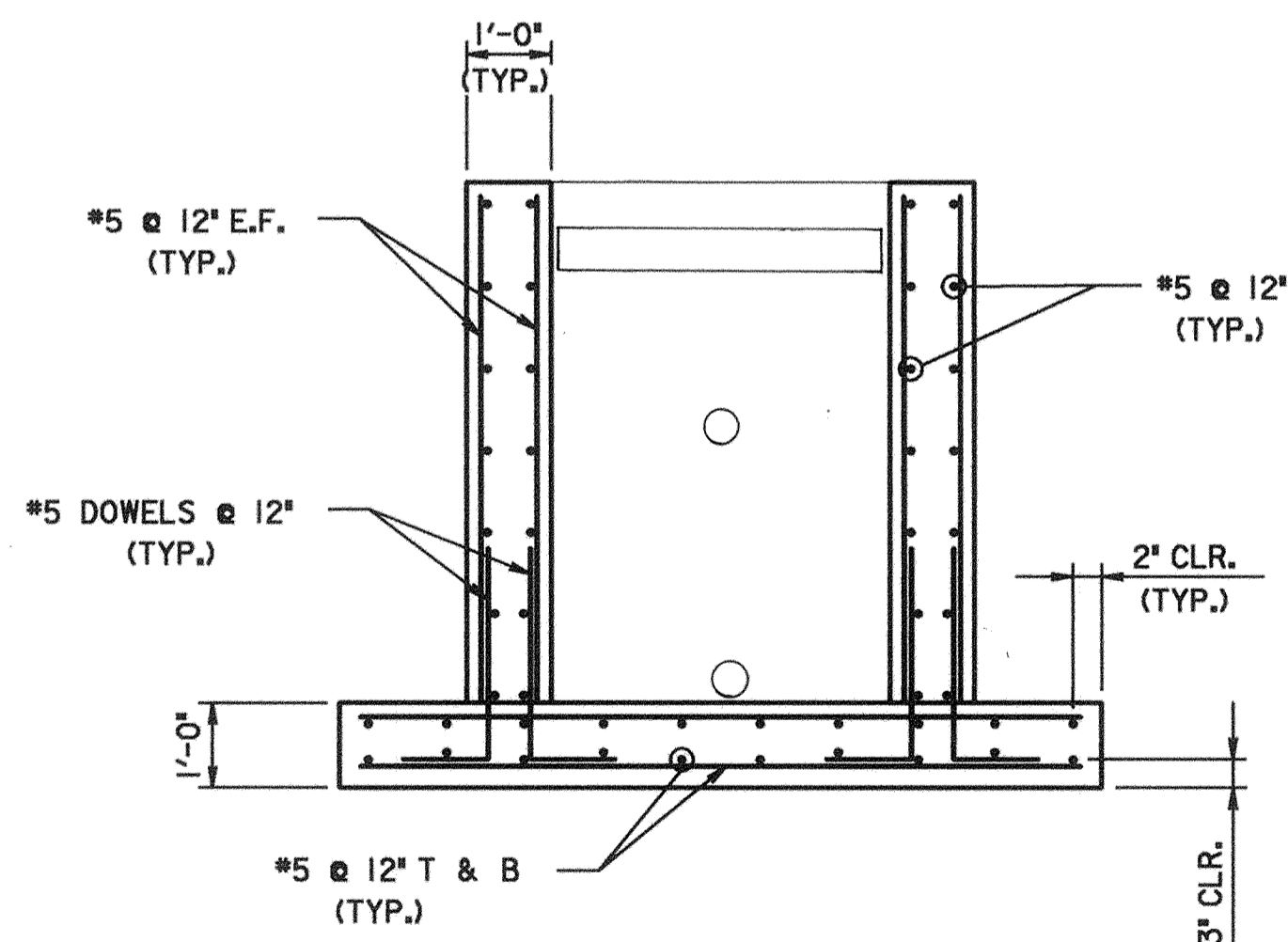
VIEW A-A
Scale: 1/2" = 1'-0"



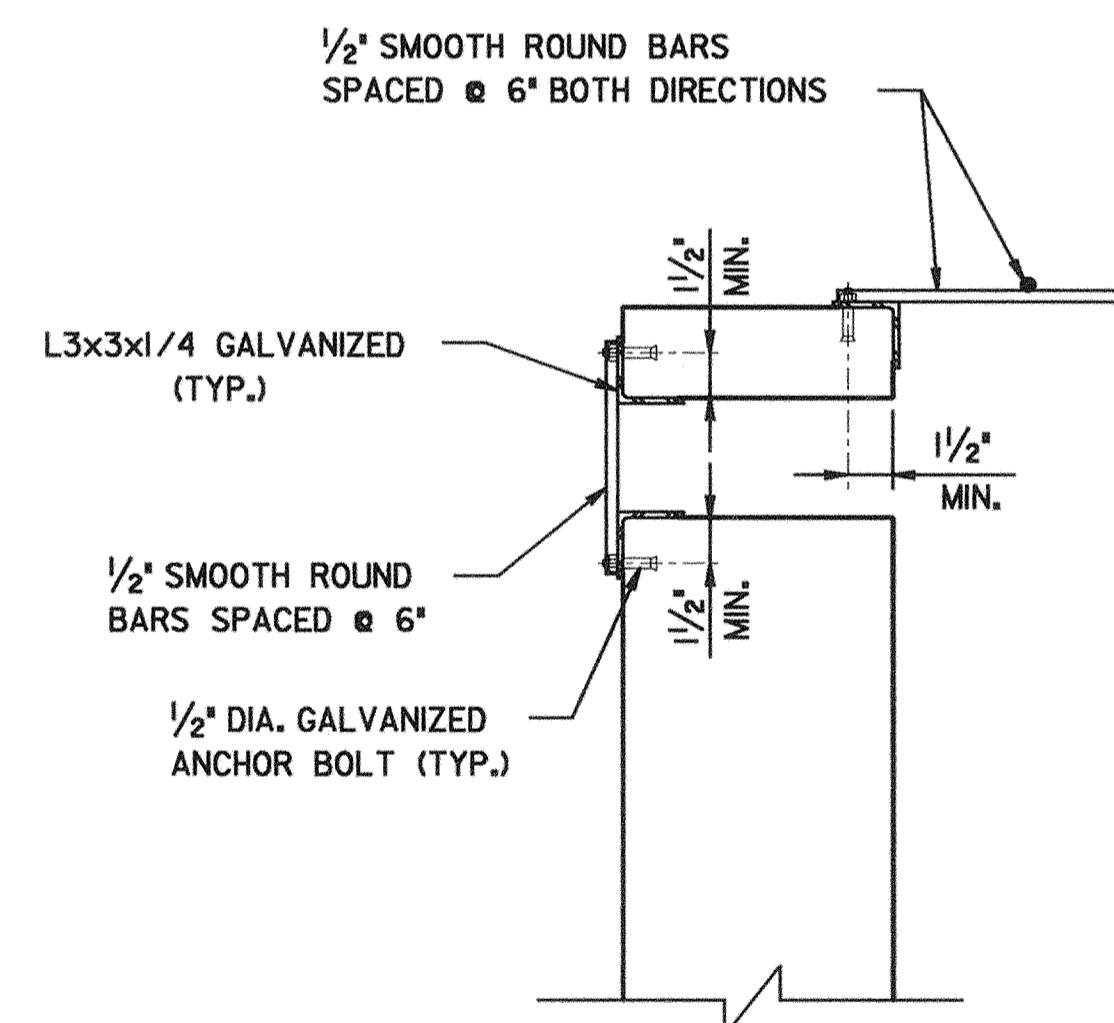
VIEW B-B
Scale: 1/2" = 1'-0"



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



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



REMOVABLE TRASH RACK DETAIL
Scale: 1/2" = 1'-0"

GENERAL NOTES

SPECIFICATIONS:

CONSTRUCTION: MSHA SPECIFICATIONS DATED OCTOBER, 1993, REVISIONS THEREOF AND ADDITIONS THERETO AND SPECIAL PROVISIONS FOR MATERIALS AND CONSTRUCTION.

DESIGN LOADING:

INTERNAL FRICTION $\phi' = 27$ DEGREES (ASSUMED)
 RANKINE NON-COHESSIVE ACTIVE SOIL PRESSURE = 45 PCF PER FOOT (ASSUMED)
 BOUYANT NON-COHESSIVE ACTIVE SOIL PRESSURE = 92 PCF (*) PER FOOT
 RANKINE NON-COHESSIVE PASSIVE SOIL PRESSURE = 360 PCF PER FOOT (ASSUMED)
 COEFFICIENT OF FRICTION BETWEEN FOOTING AND BEARING SURFACE = 0.50 (ASSUMED)

(*) = 28.8 PCF BOUYANT SOIL
 62.4 PCF WATER
 91.2 PCF TOTAL

STRUCTURAL CONCRETE:

DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60. ALL REINFORCEMENT SHALL HAVE A COVER OF 2", UNLESS OTHERWISE NOTED. DETAILING SHALL BE IN ACCORDANCE WITH ACI MANUAL 315-88 AND STANDARD 318-89. ALL CONCRETE SHALL BE MIX NO.3 (F'c = 3500 PSI). ALL EXPOSED EDGES SHALL HAVE 3/4" CHAMFER UNLESS OTHERWISE NOTED.

CUT BARS INTERFERING WITH OPENINGS AS NECESSARY TO PROVIDE 2" CLEARANCE TO THE OPENING. MINIMUM REINFORCING BAR SPLICE LENGTHS SHALL BE 2'-2" UNLESS OTHERWISE NOTED.

FOUNDATIONS:

THE FOOTINGS ARE DESIGNED TO EXERT A MAXIMUM FOUNDATION PRESSURE OF 2,000 POUNDS PER SQUARE FOOT.

BOTTOM OF FOOTINGS SHALL BE LOCATED IN VIRGIN SOIL OR COMPACTED FILL THAT HAS BEEN APPROVED BY THE GEOTECHNICAL ENGINEER OR THE PROJECT INSPECTOR TO BE ADEQUATE TO SUPPORT THE DESIGN BEARING PRESSURE PRIOR TO PLACEMENT OF FOOTING CONCRETE. IF REQUIRED, SUBGRADE SHALL BE PREPARED BY REMOVING UNSUITABLE MATERIAL AND BACKFILLING WITH SELECT MATERIAL AS DIRECTED BY THE GEOTECHNICAL ENGINEER OR THE PROJECT INSPECTOR.

BACKFILL:

CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO BRACE WALLS WHEN BACK-FILLING. CARE SHALL BE TAKEN DURING PLACEMENT OF BACKFILL ADJACENT TO THE WALL SO AS NOT TO OVERLOAD THE WALL DUE TO HEAVY EQUIPMENT. ONLY LIGHTWEIGHT COMPACTION EQUIPMENT (NOT EXCEEDING 2,000 POUNDS) SHALL BE PERMITTED WITHIN THE CRITICAL ZONE DEFINED AS BEGINNING AT THE BASE OF THE WALL AND WIDENING UPWARD FROM THE BASE AT A 1:1 SLOPE. ALL PRECAUTIONS SHALL BE TAKEN TO PROVIDE ADEQUATE DRAINAGE PRIOR TO AND AFTER CONSTRUCTION. BACKFILL MATERIALS SHALL BE CLASS SM OR BETTER, APPROVED BY THE GEOTECHNICAL ENGINEER AND SHALL BE PLACED IN 8 INCH LOOSE LIFTS (6 INCH WHEN USING LIGHTWEIGHT COMPACTION EQUIPMENT) COMPACTED TO LEAST 95% OF THE MAXIMUM STANDARD PROCTOR DRY DENSITY PER ASTM D698.

CONSTRUCTION NOTES:

THE STRUCTURE IS TO BE LOCATED IN THE FIELD AS SHOWN ON THE SITE PLANS. ALL DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURES, PROPERTY LINES, EASEMENTS, UTILITIES, EXISTING AND PROPOSED FEATURES SHOWN ON THE STRUCTURAL DRAWINGS, HAVE BEEN OBTAINED BY SCALING FROM THE REFERENCED SITE PLANS. THE CONTRACTOR SHALL VERIFY THESE DIMENSIONS AND ELEVATIONS PRIOR TO START OF CONSTRUCTION OF THE STRUCTURE AND SHALL REPORT ANY SIGNIFICANT DISCREPANCIES TO THE ENGINEER.

TRASH RACK:

TRASH RACK 1/2" GALVANIZED STEEL BARS AT 6" C-C SPACING EACH DIRECTION. BARS TO BE WELDED TO AN L3x3x1/4 GALVANIZED STEEL ANGLE (ASTM A709, GRADE 36).

ALL EXPOSED METAL SURFACES TO BE HOT DIPPED GALVANIZED AT THE FACTORY OR COATED WITH 2 COATS OF ZRC GALVANIZING COMPOUND OR EQUIVALENT AFTER WELDING.

STORMWATER OUTLET STRUCTURE ST-4.1

SHEET NO. ST-1 OF ST-1

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

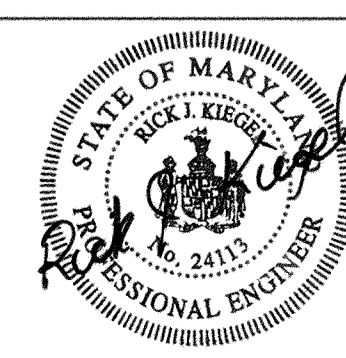
James A. Lewis 5/3/00
 DEPARTMENT OF PUBLIC WORKS
 CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Robert J. Johnson 5/3/00
 CHIEF, BUREAU OF ENGINEERING

Stephen M. Daniels 5-3-00
 CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
 Engineers Baltimore, Maryland 21244
 Planners Tel. 410-265-9500
 Surveyors Fax. 410-265-8875

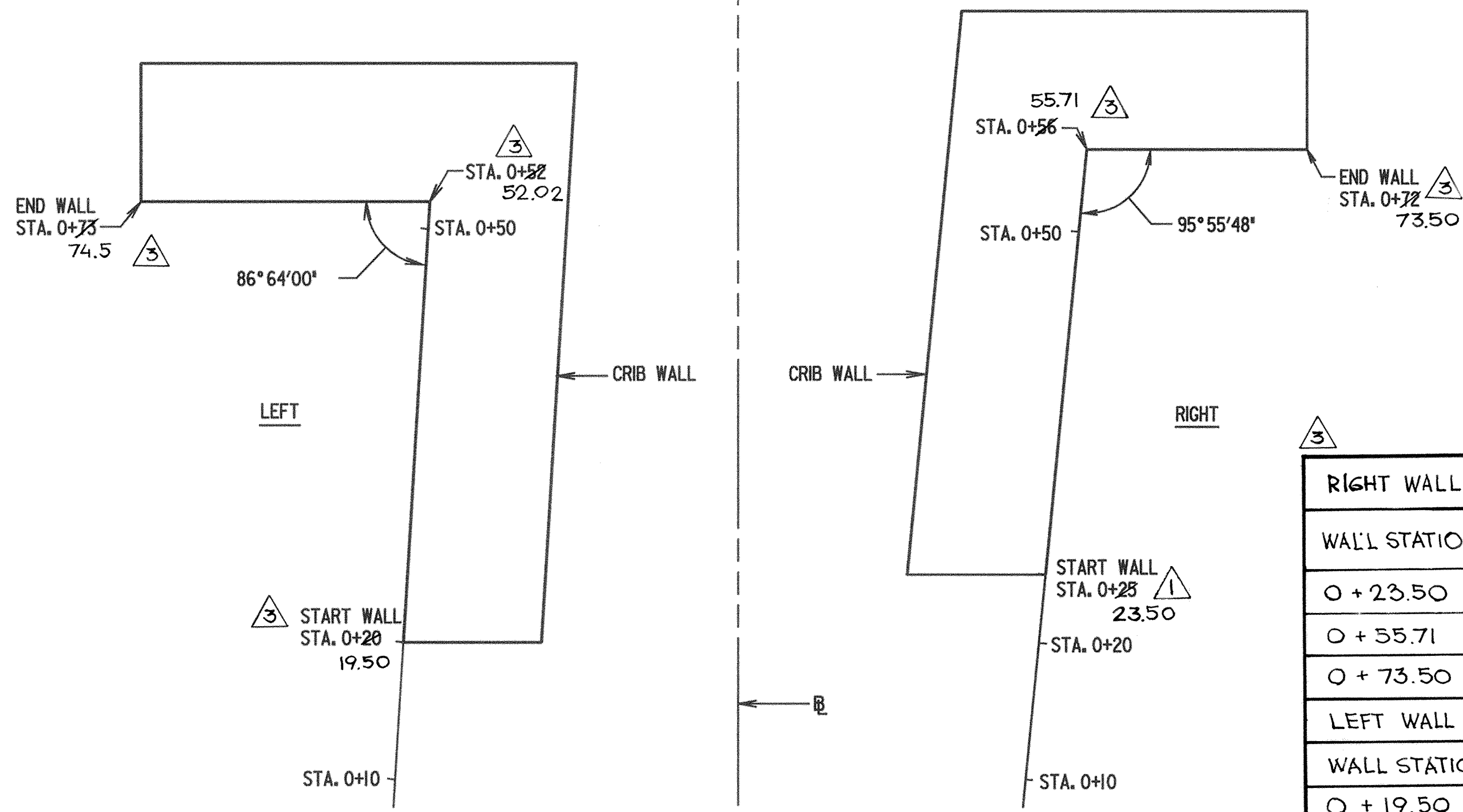


DES:			
DRN:			
CHK:	D&D	1	CORRECTED DETAILS OF OPENINGS IN STRUCTURE ST-4.1, CORR. DIVER SIZE 9/1/00
DATE:	BY	NO.	REVISION

CAPITAL PROJECT NO.	J-4158
NO.:	DATE:

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
 SHEET 33 OF 63



PLAN - TIMBER CRIB RETAINING WALL
SCALE: 1/8"=1'-0"

RIGHT WALL				
WALL STATION	DESCRIPTION	NORTHING	EASTING	HALE HAVEN & DONCASTER CONNECTION STATION & OFFSET TO FACE OF WALL
0 + 23.50	START WALL	573,414.593	1,370,315.984	STA. 300+98.95, 22.88' RT.
0 + 55.71	INSIDE CORNER	573,435.914	1,370,338.775	STA. 301+29.37, 24.82' RT.
0 + 73.50	END WALL	573,424.262	1,370,352.232	STA. 301+29.85, 42.81' RT.
LEFT WALL				
WALL STATION				
0 + 19.50	START WALL	573,442.645	1,370,281.508	STA. 300+94.92, 21.38' LT.
0 + 52.02	INSIDE CORNER	573,466.012	1,370,304.121	STA. 301+28.14, 21.07' LT.
0 + 74.50	END WALL	573,480.801	1,370,287.165	STA. 301+27.55, 43.56' LT.

GENERAL NOTES

DESIGN SPECIFICATIONS:
AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 16TH EDITION, 1996.
NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION 1991 EDITION (NFPA)

CONSTRUCTION SPECIFICATIONS:
MARYLAND SHA ROAD AND BRIDGE SPECIFICATIONS, 1993.
AMERICAN WOOD-PRESERVERS' ASSOCIATION STANDARDS, 1991 (AWPA)
NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION 1991 EDITION (NFPA)

DESIGN LOADS:
BACKFILL = LEVEL
LIVE LOAD SURCHARGE = 250 PSF
INTERNAL FRICTION ANGLE $\phi = 30$ DEGREES (ASSUMED)
EQUIVALENT FLUID WEIGHT = 40 PCF
PASSIVE SOIL PRESSURE = 320 PSF PER VERTICAL FOOT
SOIL UNIT WEIGHT = 120 PCF

GEOMETRY:
SEE SITE PLAN FOR STATION AND OFFSET OF LEFT AND RIGHT CRIB RETAINING WALL BASELINES.

TIMBER:
ALL TIMBER SHALL BE IN ACCORDANCE WITH NFPA STANDARDS AND SPECIFICATIONS. TIMBER SHALL BE SOUTHERN PINE NO. 2 WITH MINIMUM DESIGN VALUES OF $F_b = 850$ P.S.I., $F_v = 100$ P.S.I., $F_t = 550$ P.S.I., $E = 1,200,000$ P.S.I. OR APPROVED EQUAL. ALL SIZES SHOWN ARE NOMINAL DIMENSIONS. A LOAD DURATION FACTOR OF 0.90 WAS APPLIED. ALL TIMBERS SHALL BE LAID FLATWISE UNLESS OTHERWISE NOTED (UON).

PRESSURE PRESERVATIVE TREATMENT:
ALL TIMBER SHALL BE PRESSURE TREATED WITH CHROMATED COPPER ARSENATE (CCA) IN ACCORDANCE WITH THE AWPA STANDARDS. MINIMUM RETENTION FOR CCA WATERBORNE PRESERVATIVE IS 0.4 PCF. WEEP HOLES. WEEP HOLES SHALL BE CIRCULAR HOLES DRILLED HORIZONTALLY THROUGH THE CENTER OF THE TIMBER AND HAVING A DIAMETER OF 2 INCHES.

SPIKES:
ALL SPIKES SHALL BE FLATHEAD, HARDENED-STEEL SPIKES MADE OF HIGH CARBON STEEL, GALVANIZED AND A MINIMUM OF 18" LONG AND INCHES IN DIAMETER. OMIT SPIKE WHERE DESIGN LOCATION COINCIDES WITH TIEBACK CONNECTION.

REINFORCING STEEL PINS:
REINFORCING STEEL PINS SHALL CONFORM TO ASTM A615, GRADE 60. REINFORCING STEEL PINS IN THE TIMBER WALL SHALL BE PLACED IN DRILLED HOLES, WITH A MAXIMUM DIAMETER 1/16 INCH LARGER THAN REINFORCING BARS.

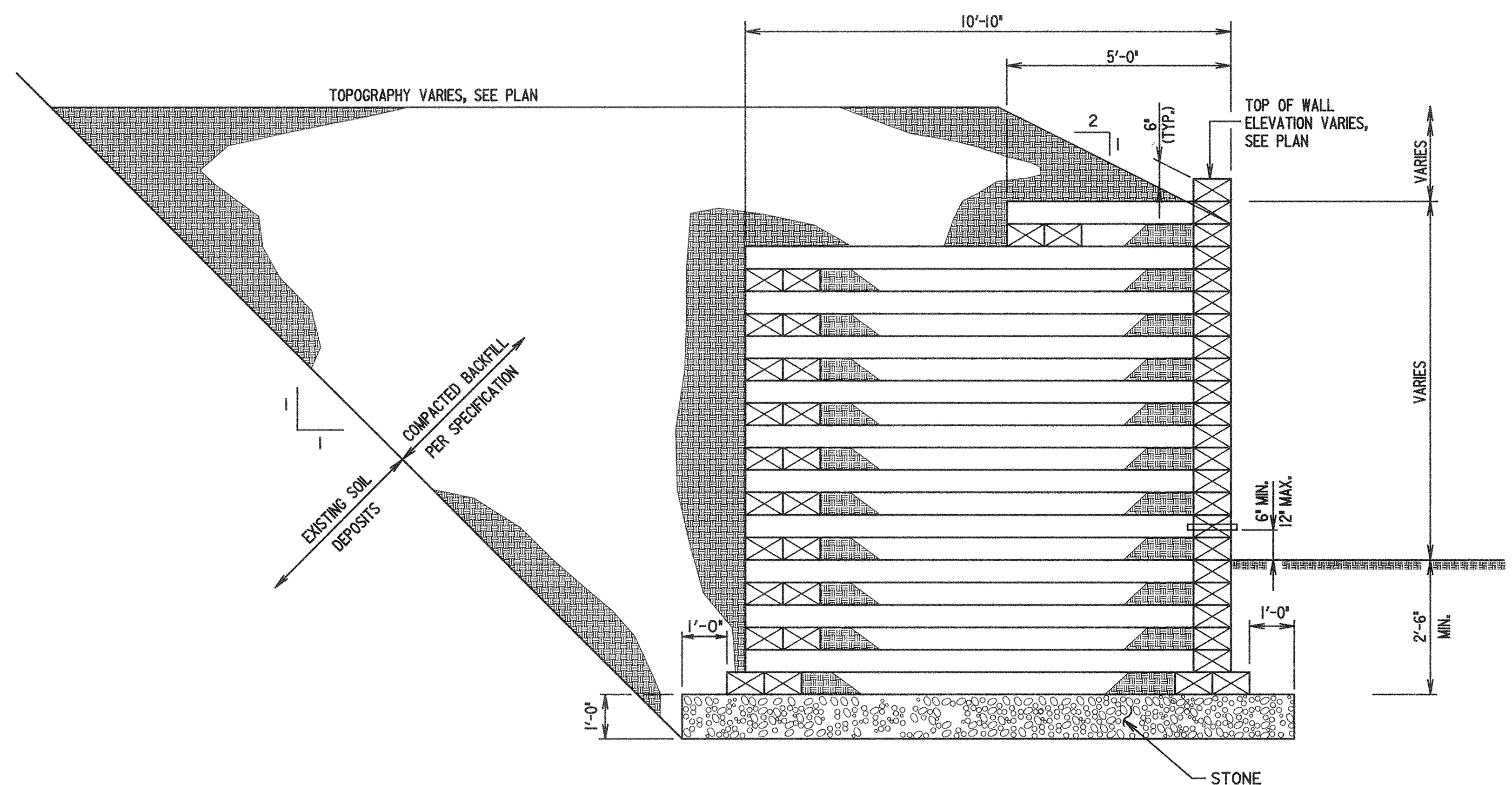
FOUNDATION:
CARE IS REQUIRED DURING EXCAVATION FOR THE TIMBER FOOTING TO ALLOW CONSTRUCTION OF THE FOOTING IN AN AGAINST UNDISTURBED SOIL OR COMPACTED FILL. IF REQUIRED, SUBGRADE BELOW THE WALL SHALL BE PREPARED BY REMOVING UNSUITABLE MATERIAL AND BACKFILLING WITH SELECT MATERIAL AS DIRECTED BY THE GEOTECHNICAL ENGINEER. STONE SHALL BE AASHTO NO. 57 OR LARGER.
THE WALL IS DESIGNED TO EXERT A MAXIMUM FOUNDATION PRESSURE OF 2,000 POUNDS PER SQUARE FOOT.

SELECT BACKFILL:
BACKFILL SHALL CONSIST OF EITHER NO. 57 STONE; A WELL-GRADED CRUSHED ROCK OF AT LEAST 1-INCH DIAMETER; OR A SOIL FREE FROM ORGANIC AND OTHERWISE DELETERIOUS MATERIALS AND CONFORMING TO THE REQUIREMENTS FOR SELECT MATERIAL, TYPE SM OR BETTER.
BACKFILL SHALL BE PLACED TO THE TOP OF EACH DEADMAN AND COMPACTED PRIOR TO EXCAVATION FOR PLACEMENT OF THE DEADMAN.
THE AREAS BEHIND AND ABOVE THE WALL SHALL BE FINISHED TO THE ELEVATION SHOWN ON THE PROJECT PLANS, TAKING CARE TO INSURE THAT DRAINAGE IS DIVERTED FROM GOING OVER THE FACE OF THE WALL.
IF SOIL BACKFILL IS USED, COMPACTION SHALL BE TO A MINIMUM OF 90% MAXIMUM DENSITY AS DETERMINED BY ASTM D 1556 OR BY NUCLEAR DENSITY TESTING DEVICE. COMPACTION TESTS SHALL BE TAKEN AT THE CENTER OF THE TIEBACK, APPROXIMATELY ONE - THIRD OF THE DISTANCE FROM DEADMAN TO FRONT STRETCHER.

BACKFILL:
CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO BRACE WALLS WHEN BACKFILLING. CARE SHALL BE TAKEN DURING PLACEMENT OF BACKFILL ADJACENT TO THE CRIB WALL SO AS NOT TO OVERLOAD THE CRIB WALL DUE TO HEAVY EQUIPMENT. ONLY LIGHTWEIGHT COMPACTION EQUIPMENT (NOT EXCEEDING 2,000 POUNDS) SHALL BE PERMITTED WITHIN THE CRITICAL ZONE DEFINED AS BEGINNING AT THE BASE OF THE CRIB WALL AND WIDENING UPWARD FROM THE BASE AT 1:1 SLOPE. ALL PRECAUTIONS SHALL BE TAKEN TO PROVIDE ADEQUATE DRAINAGE PRIOR TO AND AFTER CONSTRUCTION. BACKFILL MATERIALS APPROVED BY THE GEOTECHNICAL ENGINEER OR PROJECT INSPECTOR (SM CLASSIFICATION) SHALL BE PLACED IN 8 INCH LOOSE LIFTS (6" WHEN USING LIGHTWEIGHT COMPACTION EQUIPMENT) AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM STANDARD PROCTOR DRY DENSITY PER ASTM D698. BACKFILL SHALL PROGRESS SIMULTANEOUSLY WITH THE ERECTION OF THE TIMBER WALL. CARE SHALL BE EXERCISED IN PLACING THE BACKFILL SO THAT THE CRIB WALL IS NOT DAMAGED.

CONSTRUCTION NOTES:
THE WALL SHALL BE LOCATED IN THE FIELD AS SHOWN ON THE SITE PLAN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ALL DIMENSIONS REQUIRED TO CONSTRUCT THE WALL. IN THE EVENT THE EXPOSED FACE OF THE WALL EXCEEDS THE DIMENSIONS SHOWN ON THE TYPICAL SECTION, CONTACT THE ENGINEER FOR INSTRUCTIONS PRIOR TO PROCEEDING WITH CONSTRUCTION.
ALL WALL CONSTRUCTION SHALL END WITH A TOP COURSE. THE LAST ROW OF TIEBACKS SHALL BE COVERED BY A MINIMUM OF 6" OF COMPACTED FILL.
THIS WALL DESIGN IS INTENDED FOR USE AS A SINGLE WALL. USE OF THIS DESIGN FOR PROVIDING TERRACED WALLS SHALL BE REVIEWED BY A GEOTECHNICAL ENGINEER TO DETERMINE IF THE UPPER WALLS HAVE ANY INFLUENCE ON THE LOWER WALLS. ANY ADDITIONAL LOADS TO THE LOWER WALLS SHALL BE REVIEWED BY A STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.

SUBMITTALS:
THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WHICH SHOW THE PROPOSED LAYOUT, BREAK POINTS, BOTTOM AND TOP-OF-WALL ELEVATIONS, STEP LOCATIONS AND DETAILS AND CONSTRUCTION AND BACKFILL SEQUENCES.



SECTION AT STA. 0+50 RIGHT (TYPICAL)
LEFT - OPPOSITE HAND
SCALE: 1/2"=1'-0"

S:\P\MISC\NOTHINGON\RETWALL\CRIBW.DGN

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Lewis 7/24/00
DEPARTMENT OF PUBLIC WORKS DATE
Elizabeth A. Cole 6/5/00
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION DATE

Robert J. Eason 6/5/00
CHIEF, BUREAU OF ENGINEERING DATE
Andrew M. Quirk 6-7-00
CHIEF, BUREAU OF HIGHWAYS DATE

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875

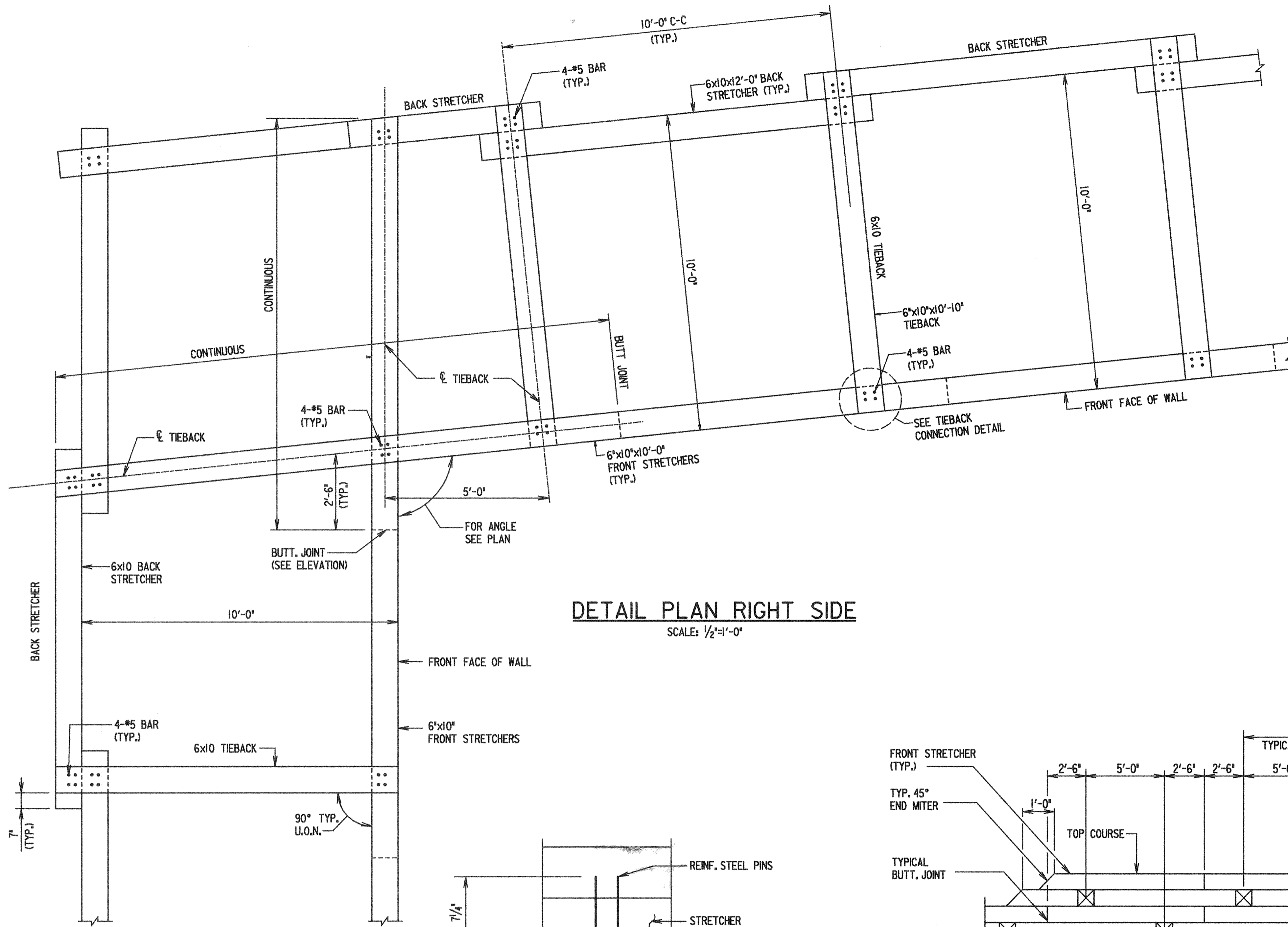


DES: DMM				
DRN: HTN				
CHK: SAC	D & D	ADDED TABLES, REVISED STA. & OFFSETS	6/12/00	
	D & D	SHEET ISSUED	6/2/00	
DATE: 6/1/00	BY	NO.	REVISION	DATE

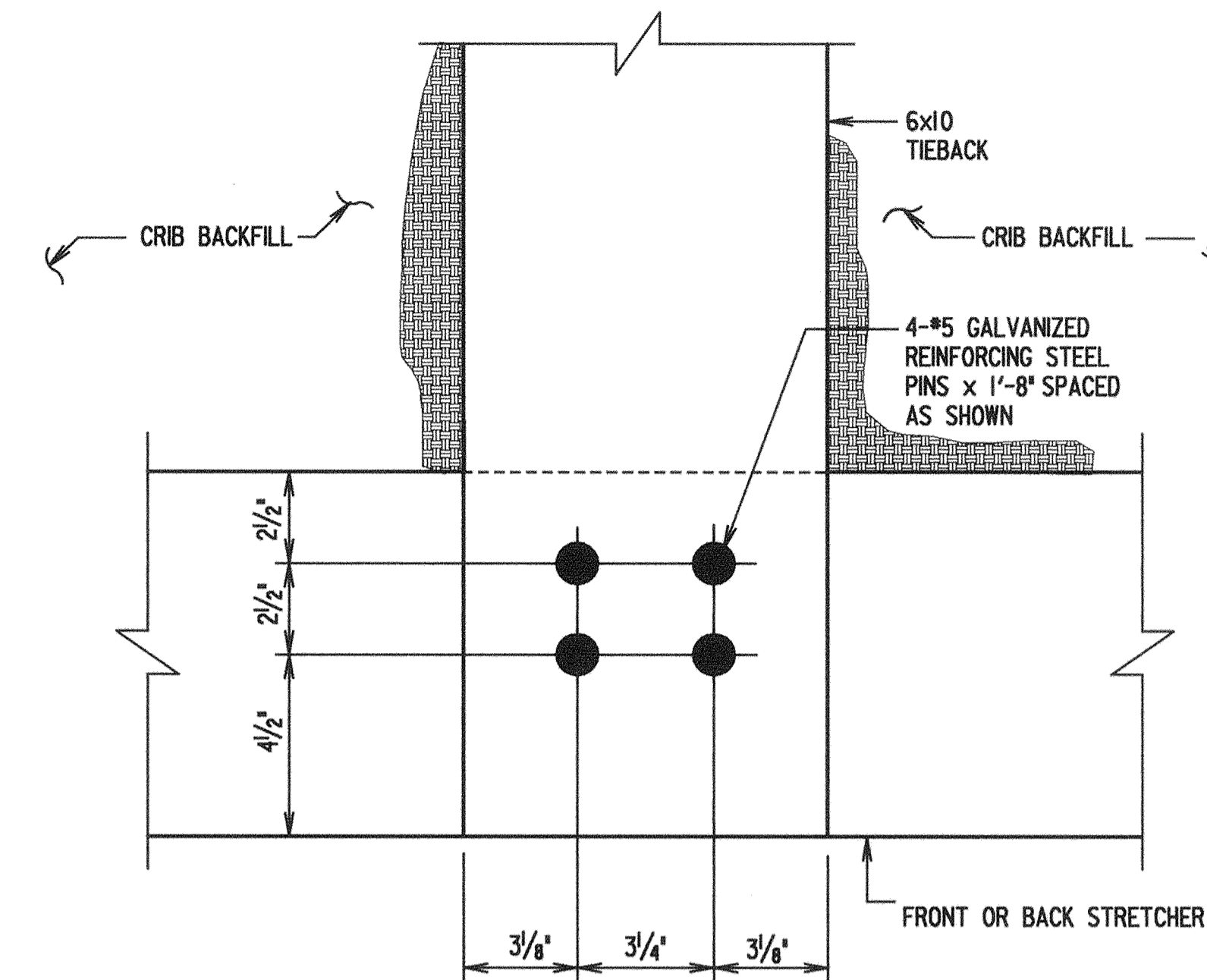
CAPITAL PROJECT NO. J-4158
30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

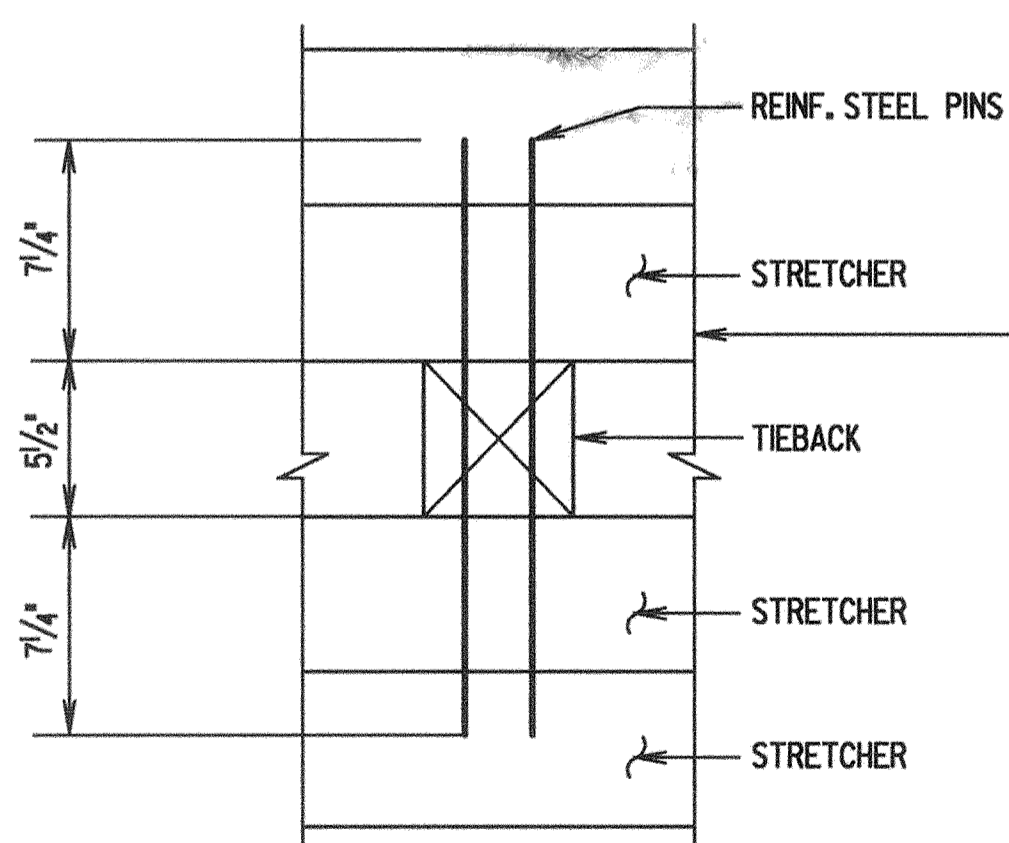
SCALE AS SHOWN
SHEET 33A OF 63



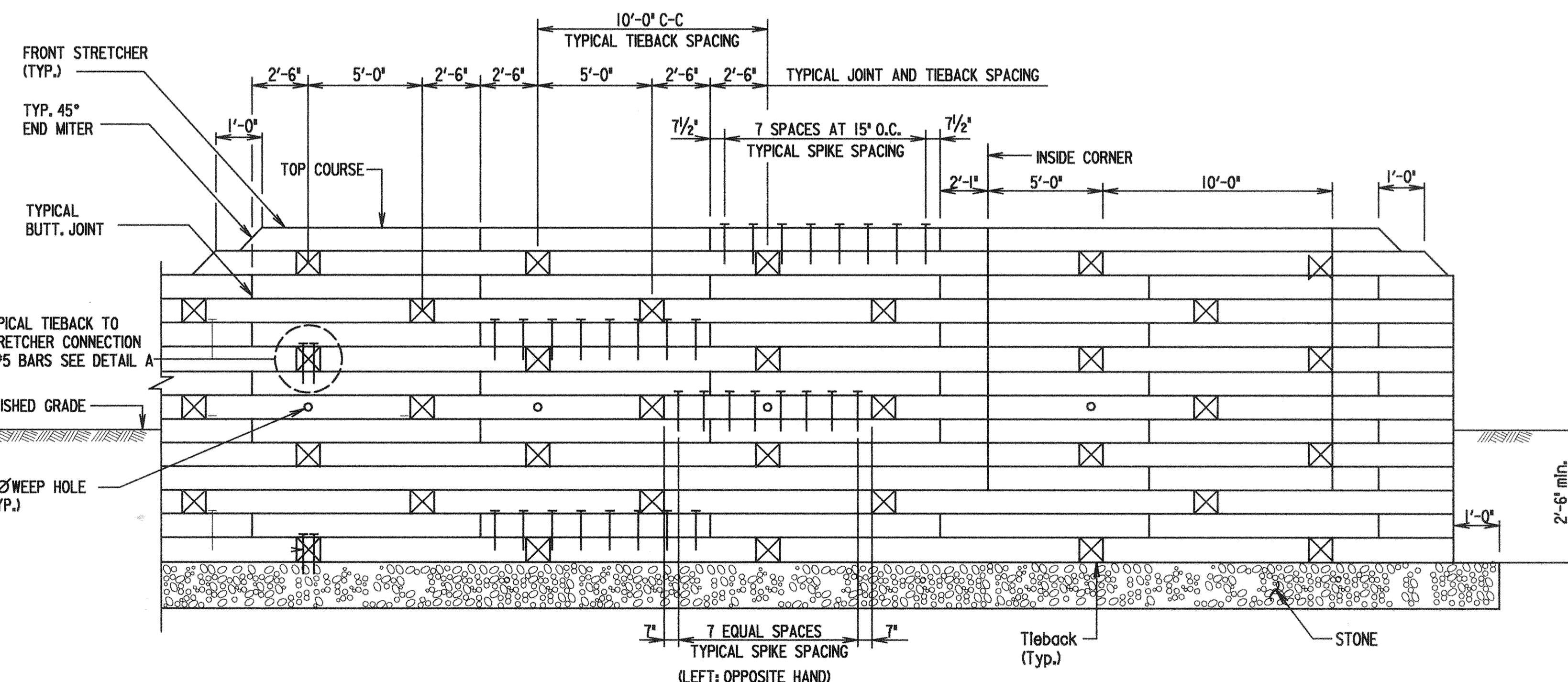
DETAIL PLAN RIGHT SIDE
SCALE: 1/2"=1'-0"



TYPICAL TIEBACK TO STRETCHER CONNECTION DETAIL
SCALE: 3/4"=1'-0"



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



DEVELOPED ELEVATION - RIGHT (TYPICAL)
SCALE: 1/2"=1'-0"

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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. New 7/24/00
DATE: 7/24/00
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Robert J. Seppan 6/5/00
DATE: 6/5/00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875

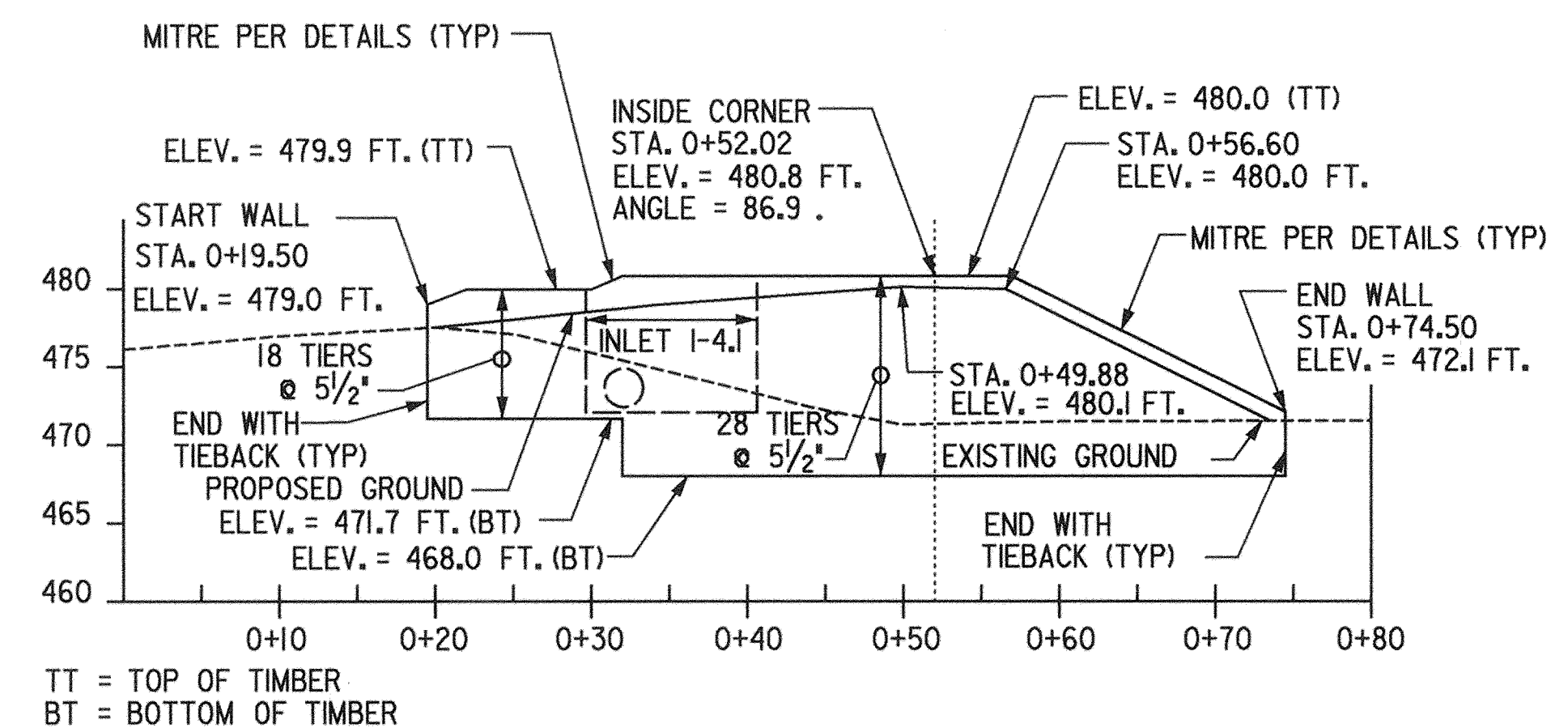


DES: DMM			
DRN: HTN			
CHK: SAC			
DATE: 6/1/00	D&D	BY	NO.
	SHEET ISSUED		6/2/00
	REVISION		DATE

CAPITAL PROJECT NO.
J-4158
30' SCALE MAP NO.: _____ DATE: _____

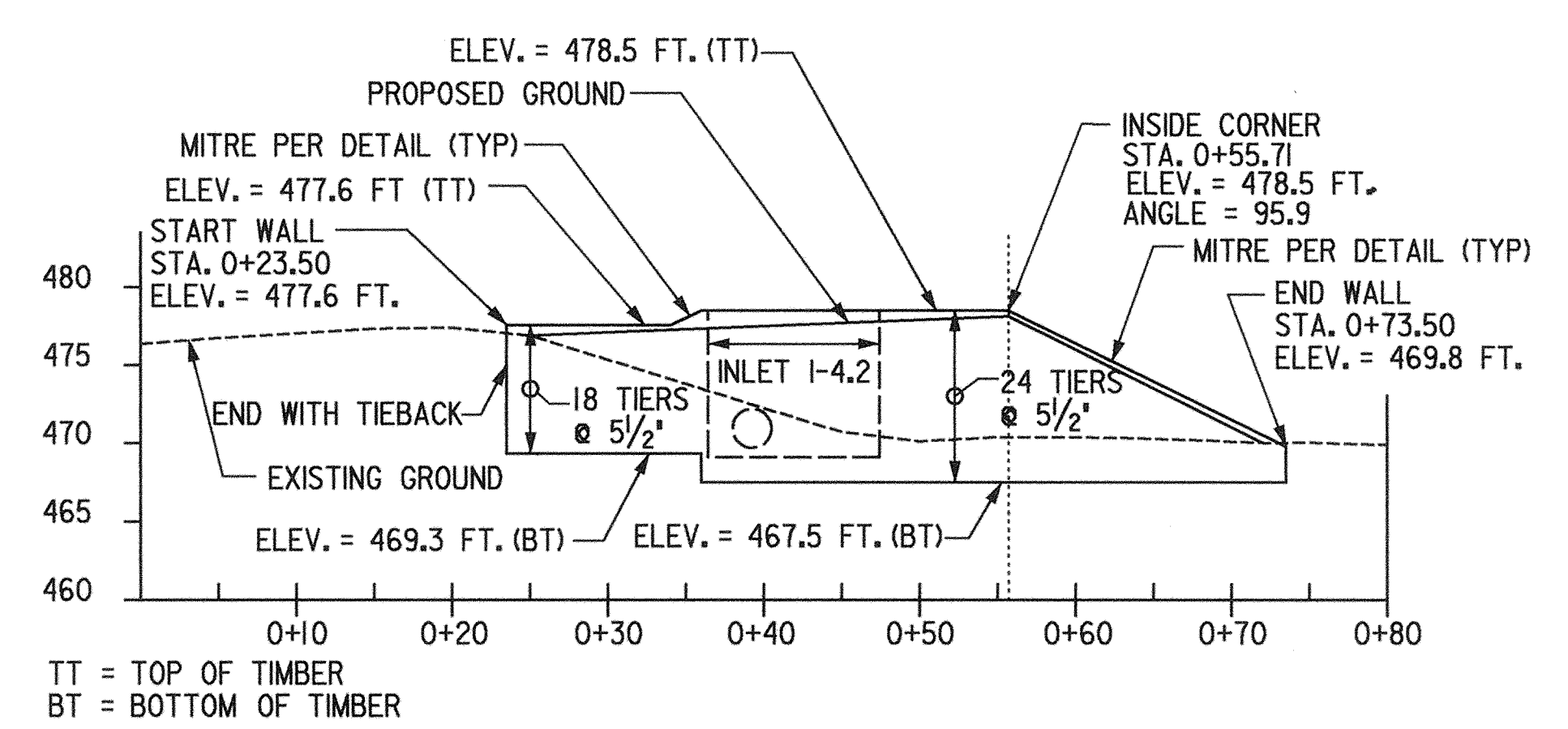
PHASE 1
WORTHINGTON AREA
RETAINING WALL

SCALE AS SHOWN
SHEET 338 OF 631



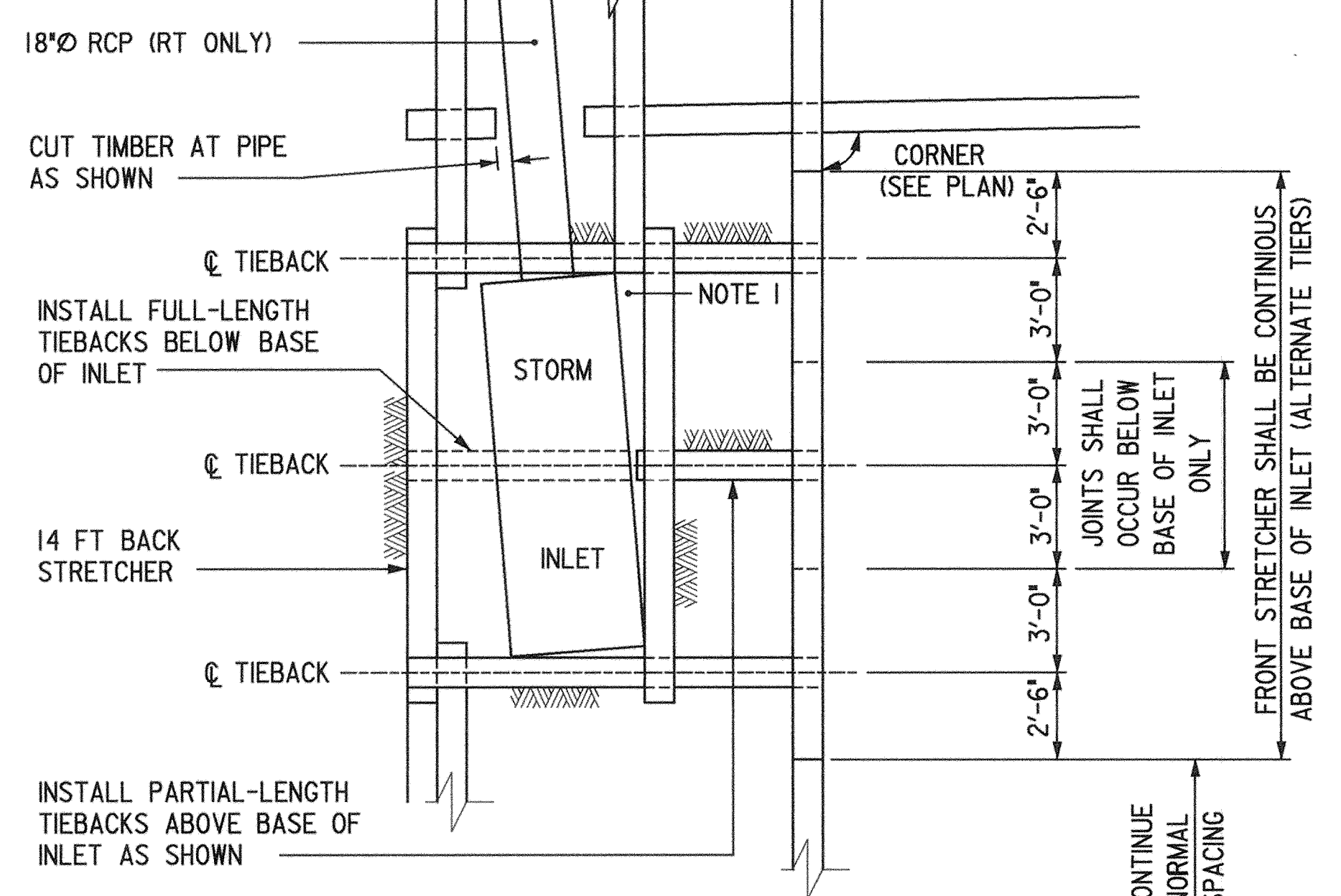
PROFILE (AT FACE OF WALL)
TIMBER CRIB RETAINING LEFT WALL
SCALE: 1" = 10' (H)
1" = 10' (V)

EXHIBIT 3



PROFILE (AT FACE OF WALL)
TIMBER CRIB RETAINING RIGHT WALL
SCALE: 1" = 10' (H)
1" = 10' (V)

EXHIBIT 4

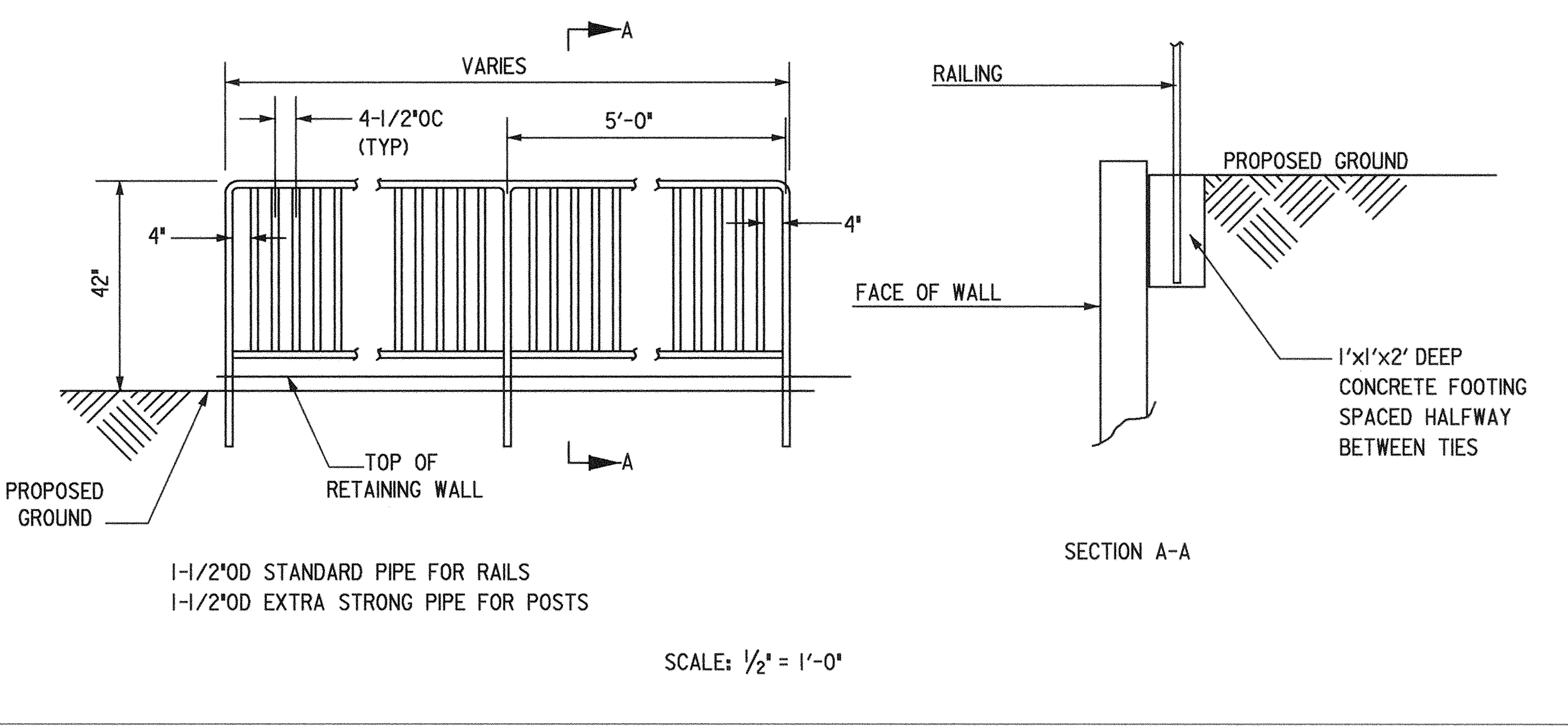


NOTE 1: ALL SPACES TOO SMALL TO COMPACT SOIL SHALL BE FILLED WITH #57 STONE OR GROUT.

SPECIAL TIEBACK SPACING AND CRIB FRAMING AT INLETS
RIGHT AS SHOWN LEFT OPPOSITE HAND & SIMILAR

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

EXHIBIT 5



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

EXHIBIT 6

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

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Engineers Baltimore, Maryland 21244
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DES:			
DRN:			
CHK:	D & D	NEW SHEET (EXHIBITS 3-6)	6/12/00
DATE:	BY	NO.	REVISION

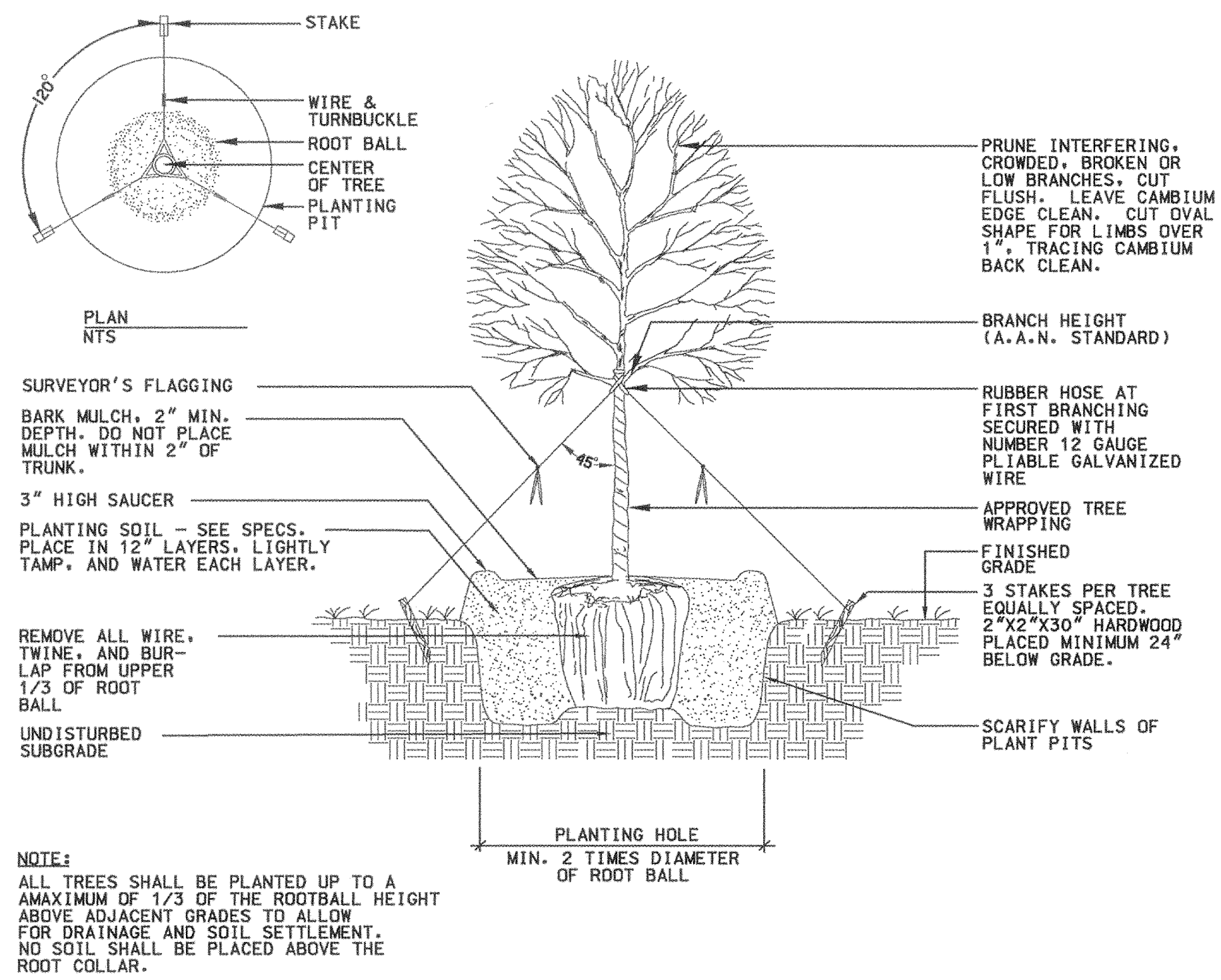
CAPITAL PROJECT NO.
J-4158
NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

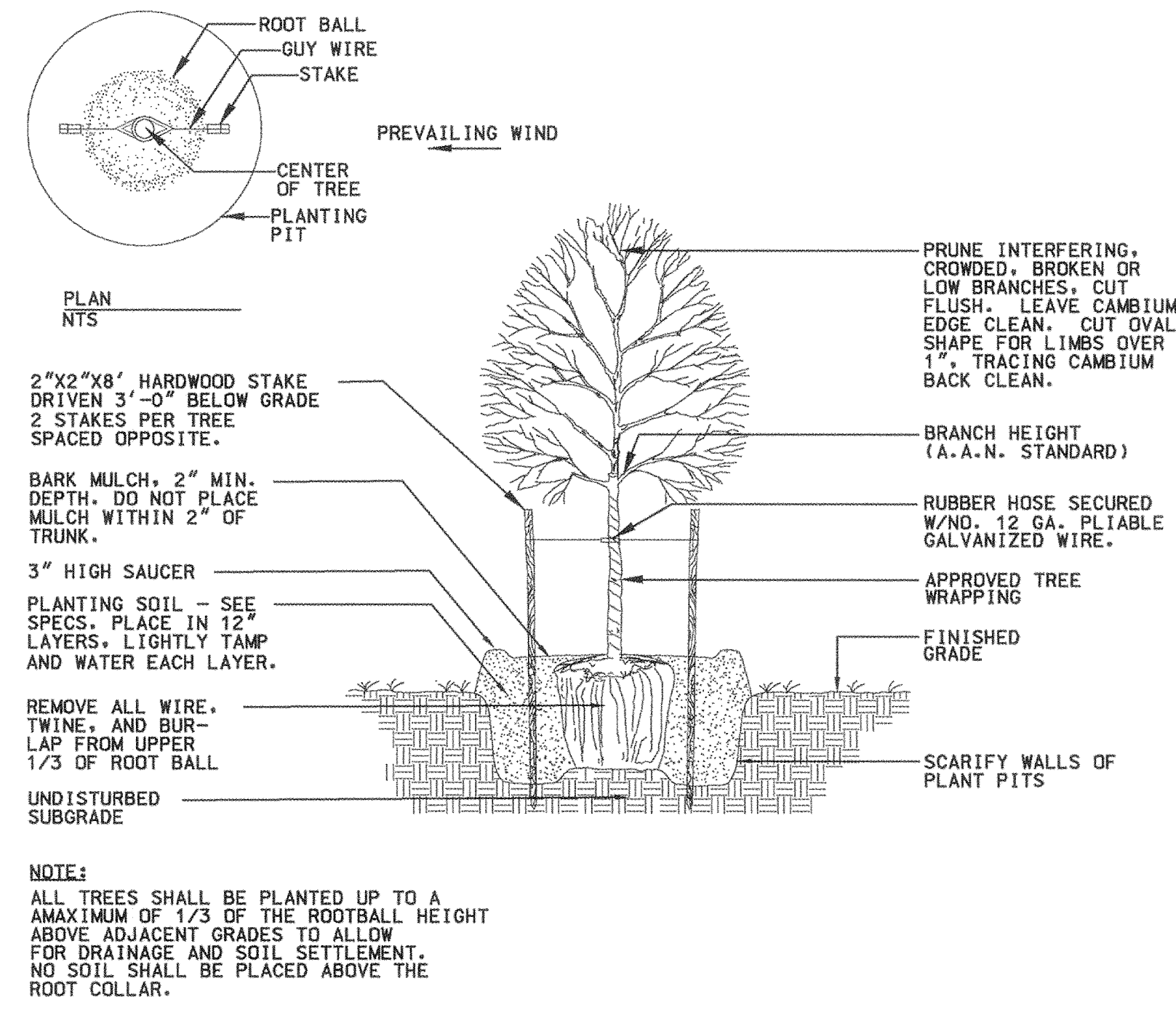
SHEET
33C OF 63

DEPARTMENT OF PUBLIC WORKS	DATE	CHIEF, BUREAU OF ENGINEERING	DATE
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION	DATE	CHIEF, BUREAU OF HIGHWAYS	DATE

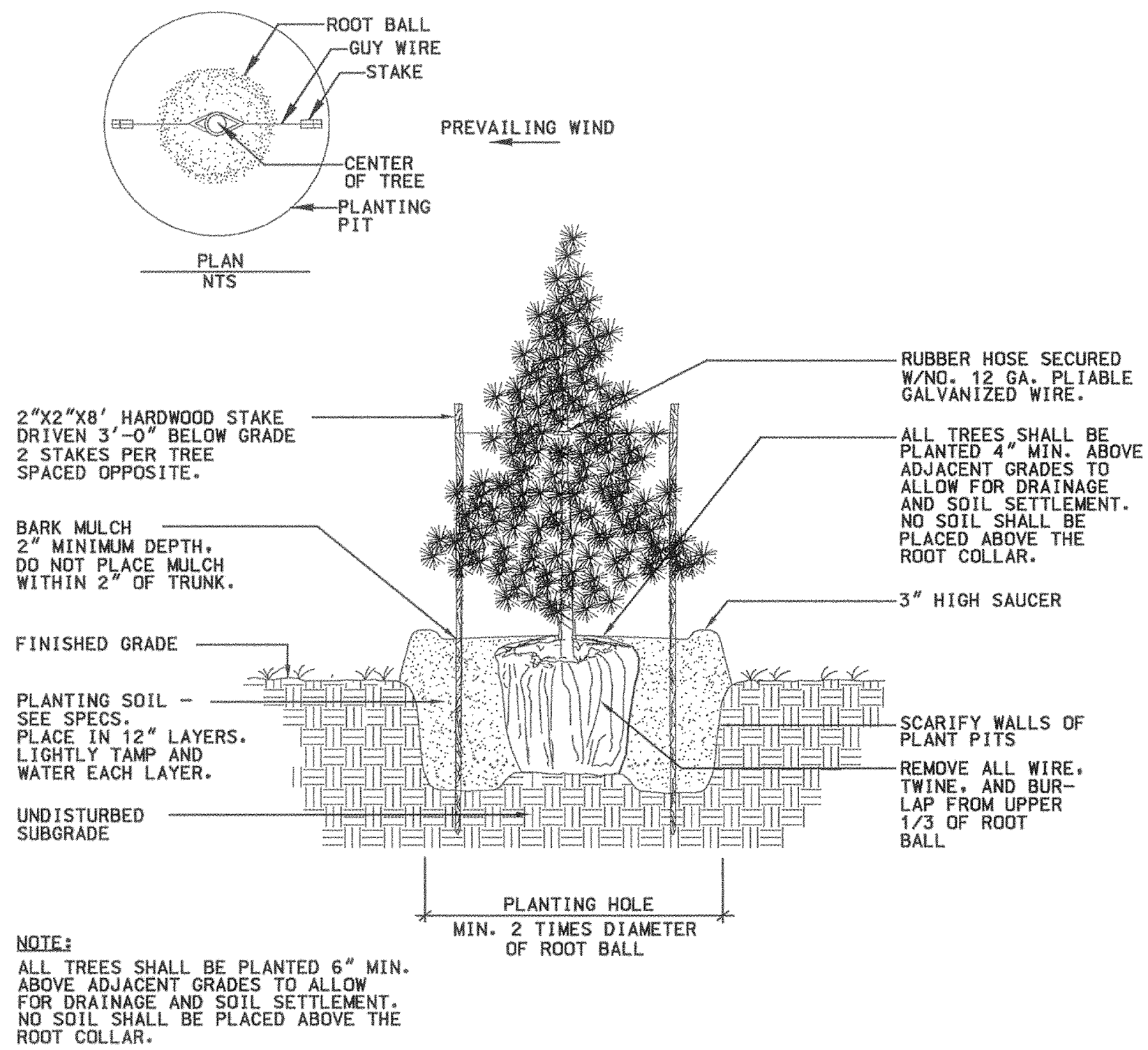
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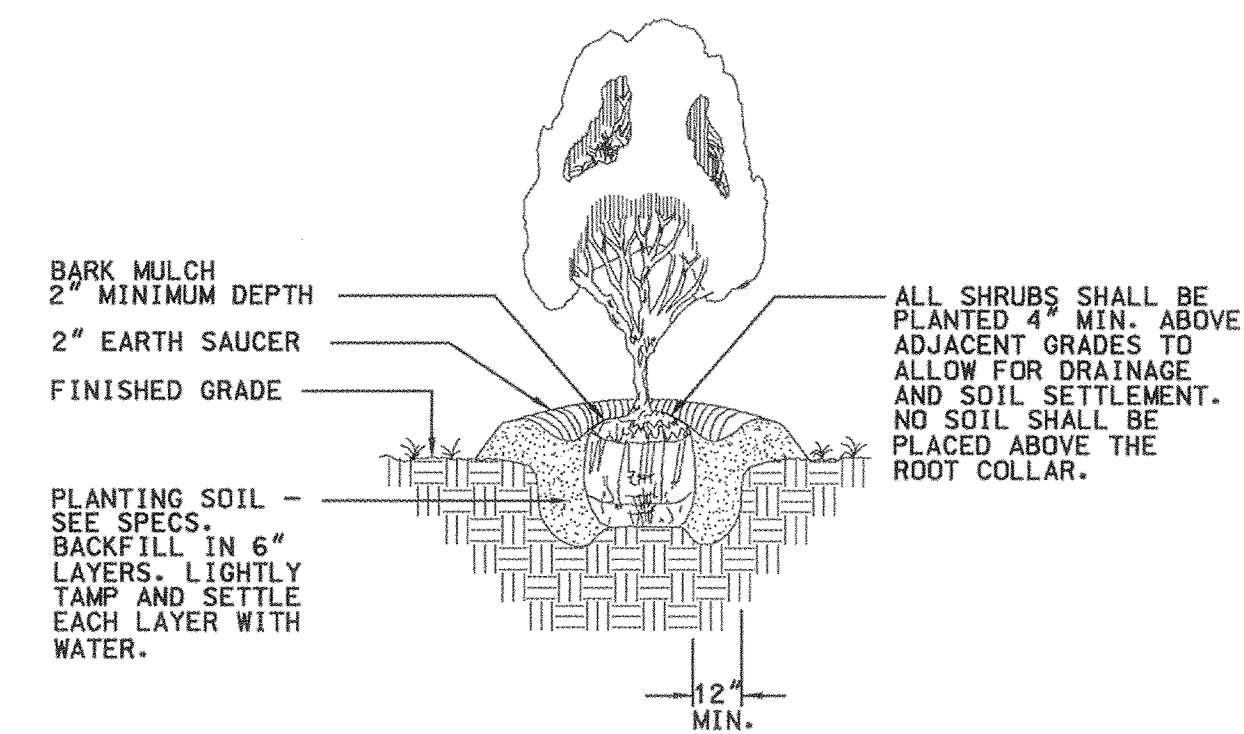
TYPICAL LARGE TREE PLANTING DETAIL
(2-1/2" CALIPER AND LARGER)
NOT TO SCALE



TYPICAL SMALL TREE PLANTING DETAIL
(2" CALIPER OR LESS)
NOT TO SCALE



TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



TYPICAL SHRUB PLANTING DETAIL
NOT TO SCALE

SHEET NO. LD-1 OF LD-2

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

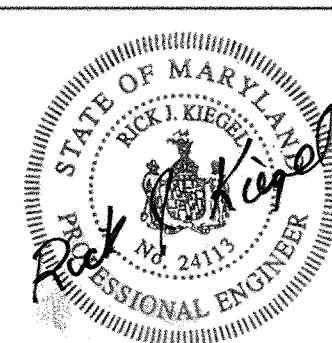
James C. Lee 5/3/00
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Robert Egan 5/3/00
CHIEF, BUREAU OF ENGINEERING

William M. Bueh 5-3-00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects
Engineers
Planners
Surveyors

3120 Timanus Lane, Suite 211
Baltimore, Maryland 21244
Tel. 410-265-9500
Fax. 410-265-8875



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DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

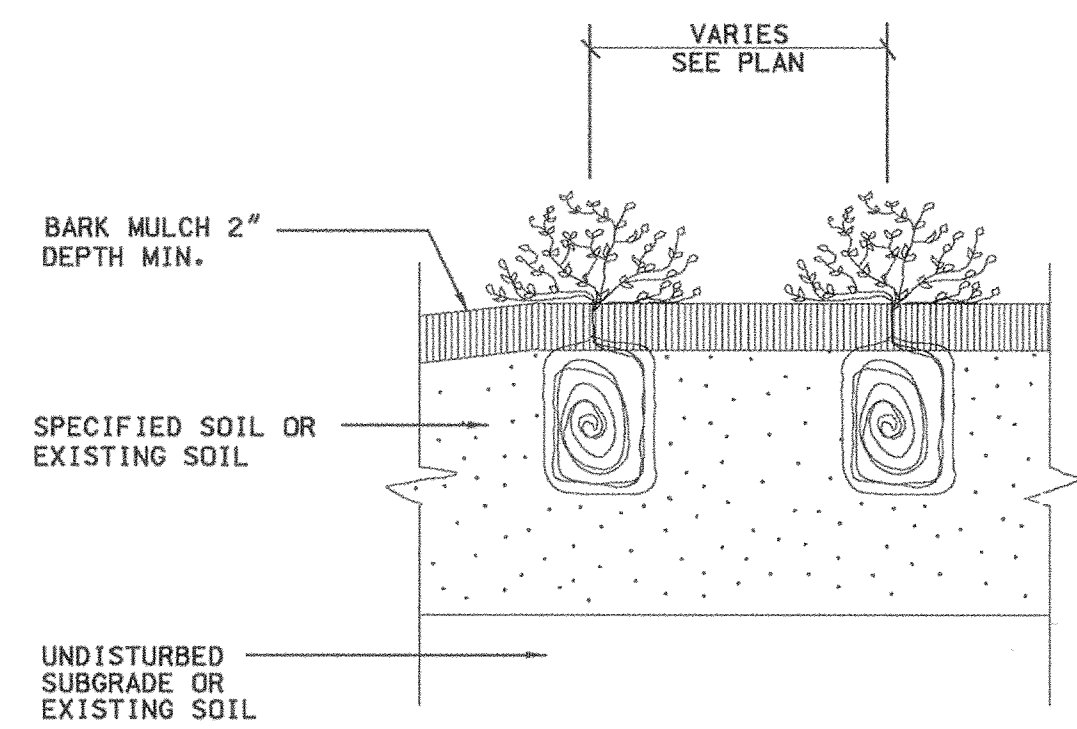
CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

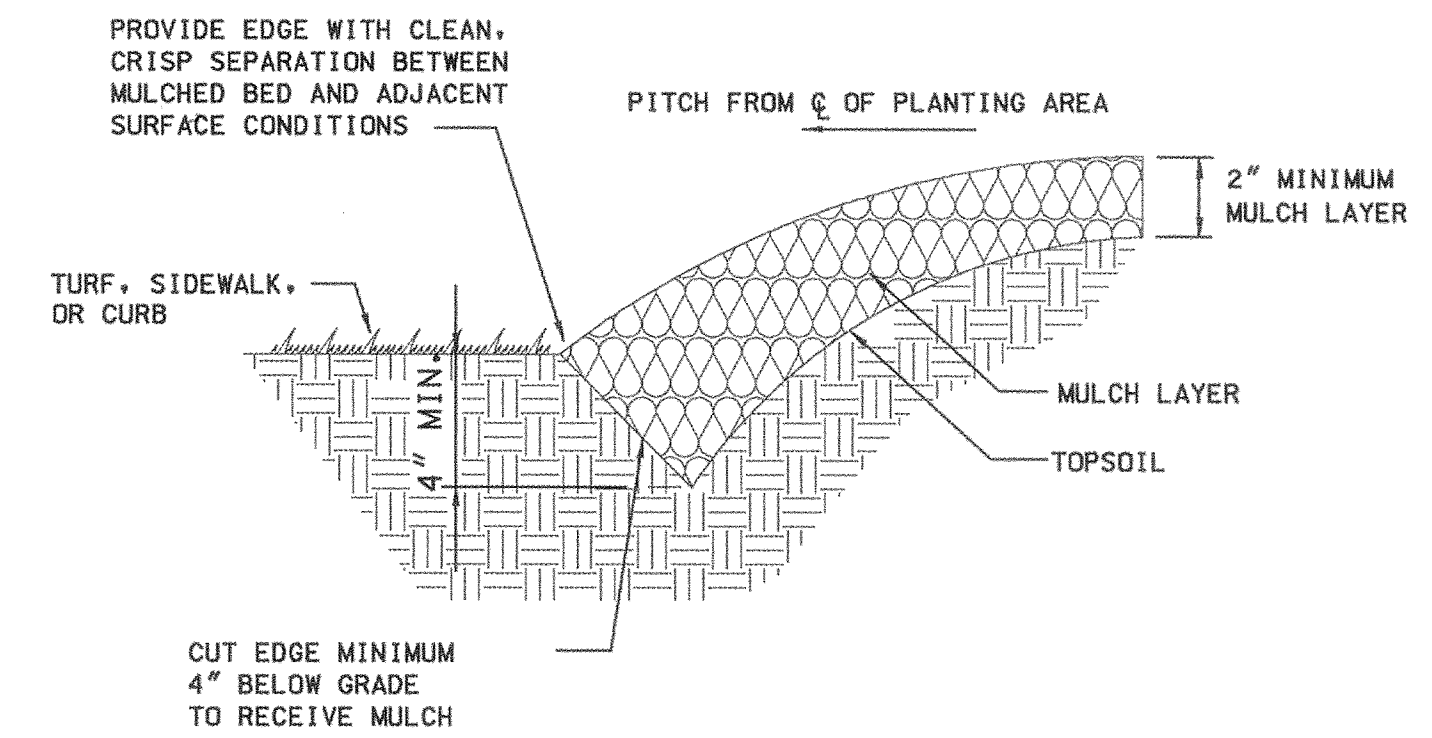
PHASE 1
**WORTHINGTON AREA
VEHICULAR ACCESS**

SCALE AS SHOWN
SHEET 34 OF 63

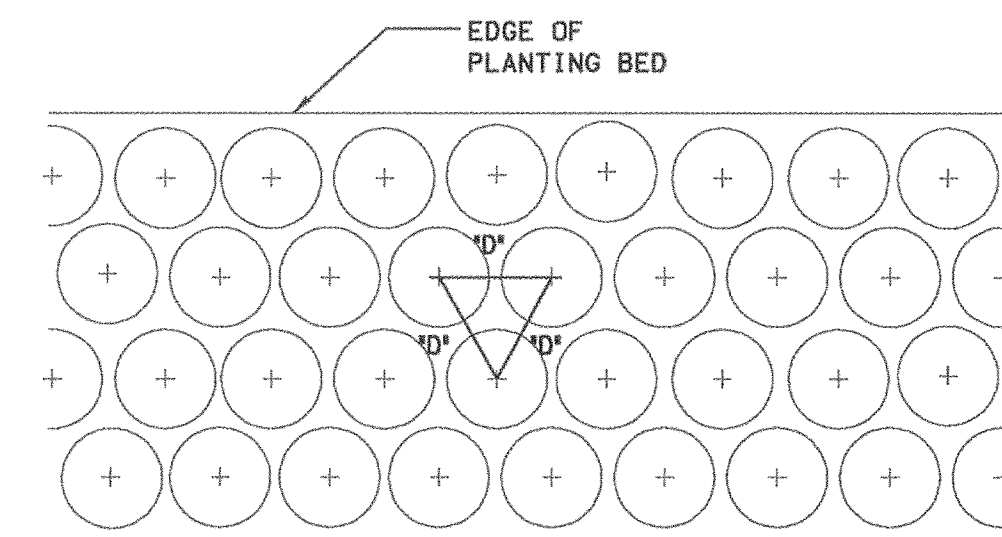
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GROUNDCOVER, ORNAMENTAL
GRASS OR PERENNIAL PLANTING DETAIL
NOT TO SCALE



TYPICAL MULCH EDGING DETAIL
NOT TO SCALE



D=DIMENSION OF PLANT SPACING (SHRUB,
GROUNDCOVER, ORNAMENTAL GRASS
OR PERENNIAL) AS INDICATED ON PLANS
OR PLANT SCHEDULE.

PLANT SPACING DIAGRAM
NOT TO SCALE

PLANTING SCHEDULE

QUAN.	PLANT NAME	SIZE	ROOT CONDITION	REMARKS
DECIDUOUS TREES				
4	QUERCUS RUBRA RED OAK	3" - 3 1/2" CAL.	B&B	SPECIMEN QUALITY
106	PRUNUS X INCAMP 'OKAME' OKAME CHERRY	2 1/2" - 3" CAL.	B&B	SPECIMEN QUALITY SINGLE TRUNK
16	CORNUS MAS 'GOLDEN GLORY' GOLDEN GLORY CORNELIAN CHERRY	4' - 5' HT.	B&B	SPECIMEN QUALITY MULTI-STEMMED TRUNK
EVERGREEN TREES				
6	PINUS STROBUS WHITE PINE	5' - 6' HT.	B&B	12' + D.C.
SHRUBS AND GROUNDCOVER				
81	BERBERIS THUNBERGII 'ROSY GLOW' ROSY GLOW BARBERRY	15" - 18"	CONT.	
23	CORNUS ALBA 'SIBIRICA BLOODGOOD' BLOODGOOD DOGWOOD	30" - 36"	B&B	
36	ITEA VIRGINICA SWEETSPIRE	18" - 24"	CONT.	
90	JUNIPERUS HORIZONTALIS 'WILTONII' BLUE RUG JUNIPER	15" - 18"	CONT.	

PLANTING NOTES

- ALL PLANT MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD AMERICAN ASSOCIATION OF NURSERYMEN PROCEDURES AND SPECIFICATIONS, UNLESS NOTED OR DETAILED OTHERWISE.
- ALL PLANT MATERIALS SHALL CONFORM TO THE SIZE AND STANDARDS SET FORTH IN THE LATEST EDITION OF THE "AMERICAN STANDARDS FOR NURSERY STOCK", AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
- CONTRACTOR AND REPRESENTATIVE OF OWNER SHALL VERIFY THE CORRECT LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO INSTALLATION OF ANY PLANT MATERIAL.
- ALL EXISTING LAWN AREAS DISTURBED BY PLANTING OPERATIONS SHALL BE SEEDED.

SHEET NO. LD-2 OF LD-2

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Lewis 5/3/00
DATE
CHIEF, TRANSPORTATION PROJECTS
AND WATERSHED MANAGEMENT DIVISION

Robert J. Sorenson 5/3/00
DATE
CHIEF, BUREAU OF ENGINEERING

Andrew M. Cavall 5-3-00
DATE
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



DES:					
DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

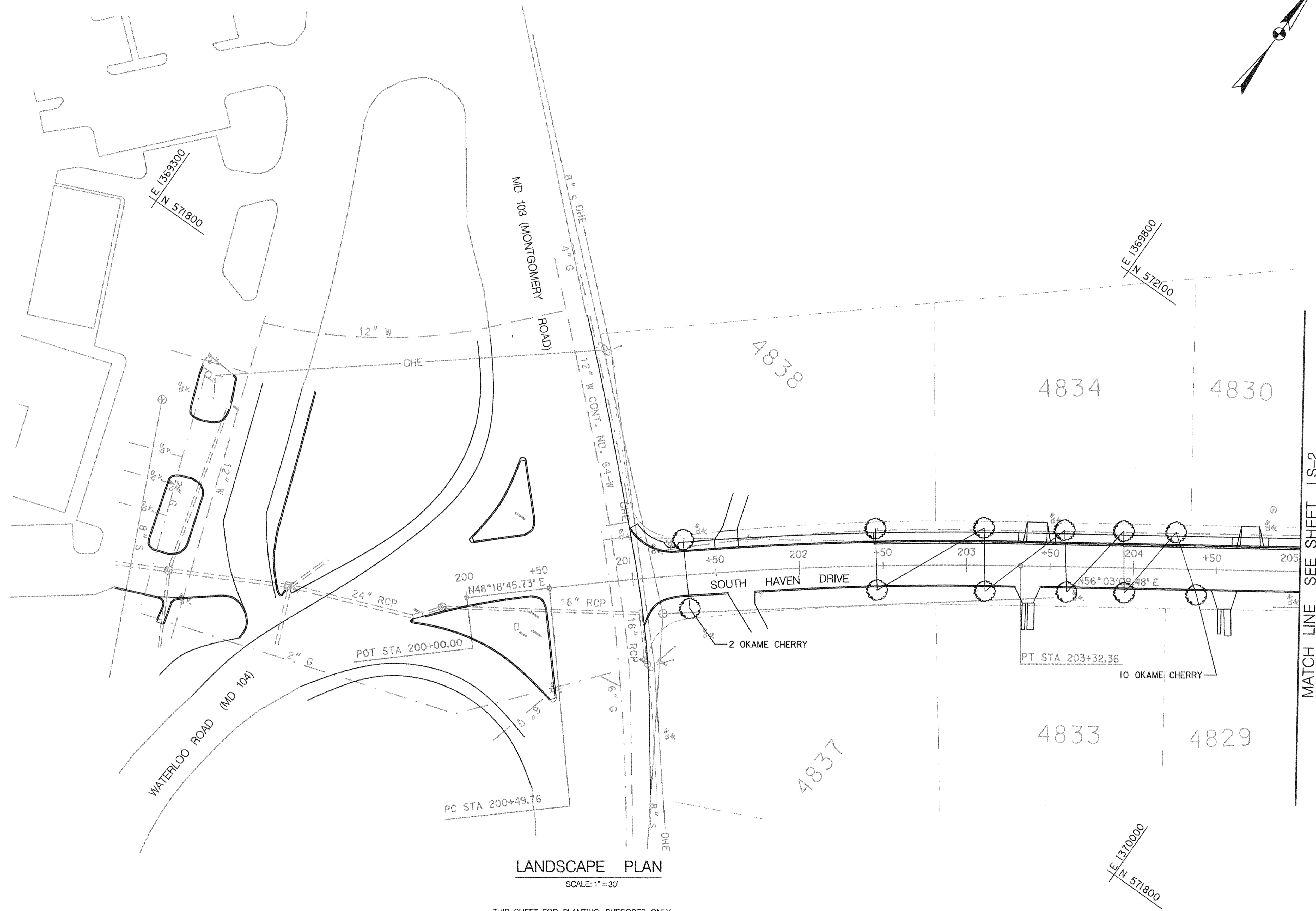
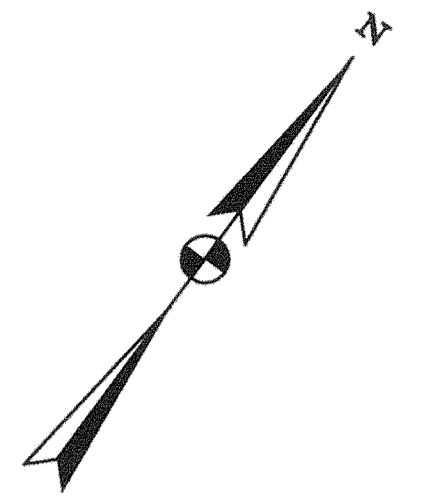
PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE
AS
SHOWN

SHEET
35 OF 63

LEGEND

- * ○ EXISTING VEGETATION
- ORNAMENTAL TREES



LANDSCAPE PLAN
SCALE: 1"=30'

THIS SHEET FOR PLANTING PURPOSES ONLY

SHEET NO. LS-1 OF LS-14

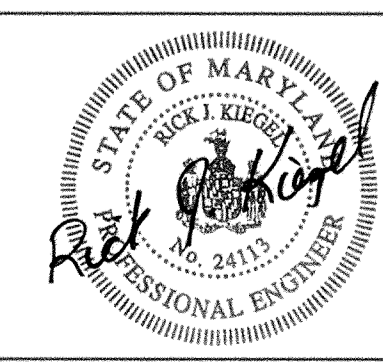
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Shaw 5/3/00
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS
AND WATERSHED MANAGEMENT DIVISION

Richard J. Brown 5/3/00
CHIEF, BUREAU OF ENGINEERING

Christopher M. Canale 5-3-00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



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DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

CAPITAL PROJECT NO.
J-4158

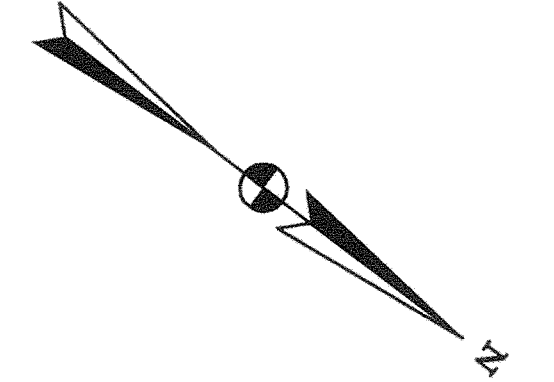
30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 36 OF 63

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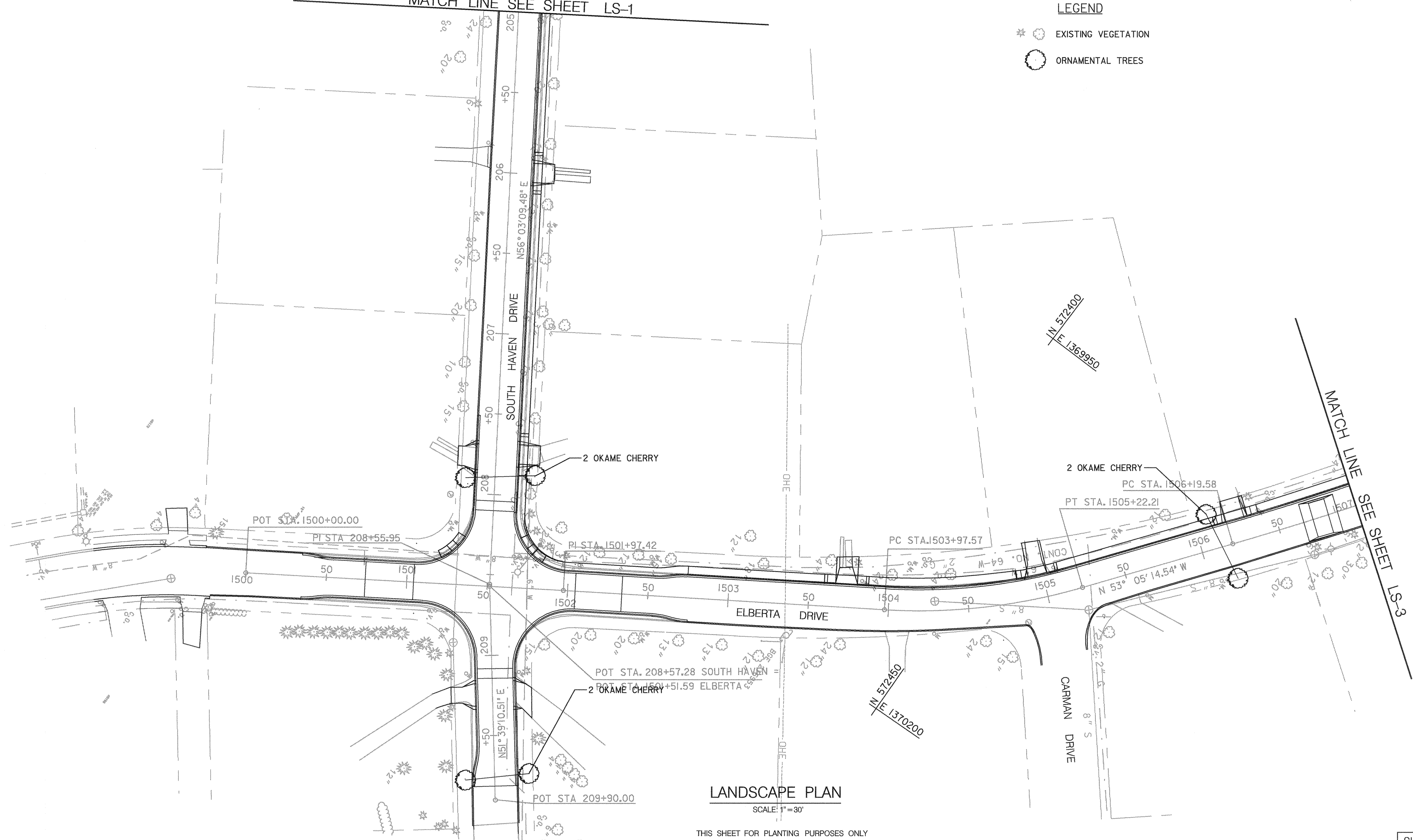
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MATCH LINE SEE SHEET LS-1

LEGEND

- EXISTING VEGETATION
- ORNAMENTAL TREES



LANDSCAPE PLAN

SCALE: 1" = 30'

THIS SHEET FOR PLANTING PURPOSES ONLY

MATCH LINE SEE SHEET LS-3

SHEET NO. LS-2 OF LS-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James H. Lewis 5/3/00
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS
AND WATERSHED MANAGEMENT DIVISION

Robert J. Seaman 5/3/00
CHIEF, BUREAU OF ENGINEERING

Christina M. Havelle 5-3-00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



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CHK:					
DATE:	BY	NO.	REVISION	DATE	

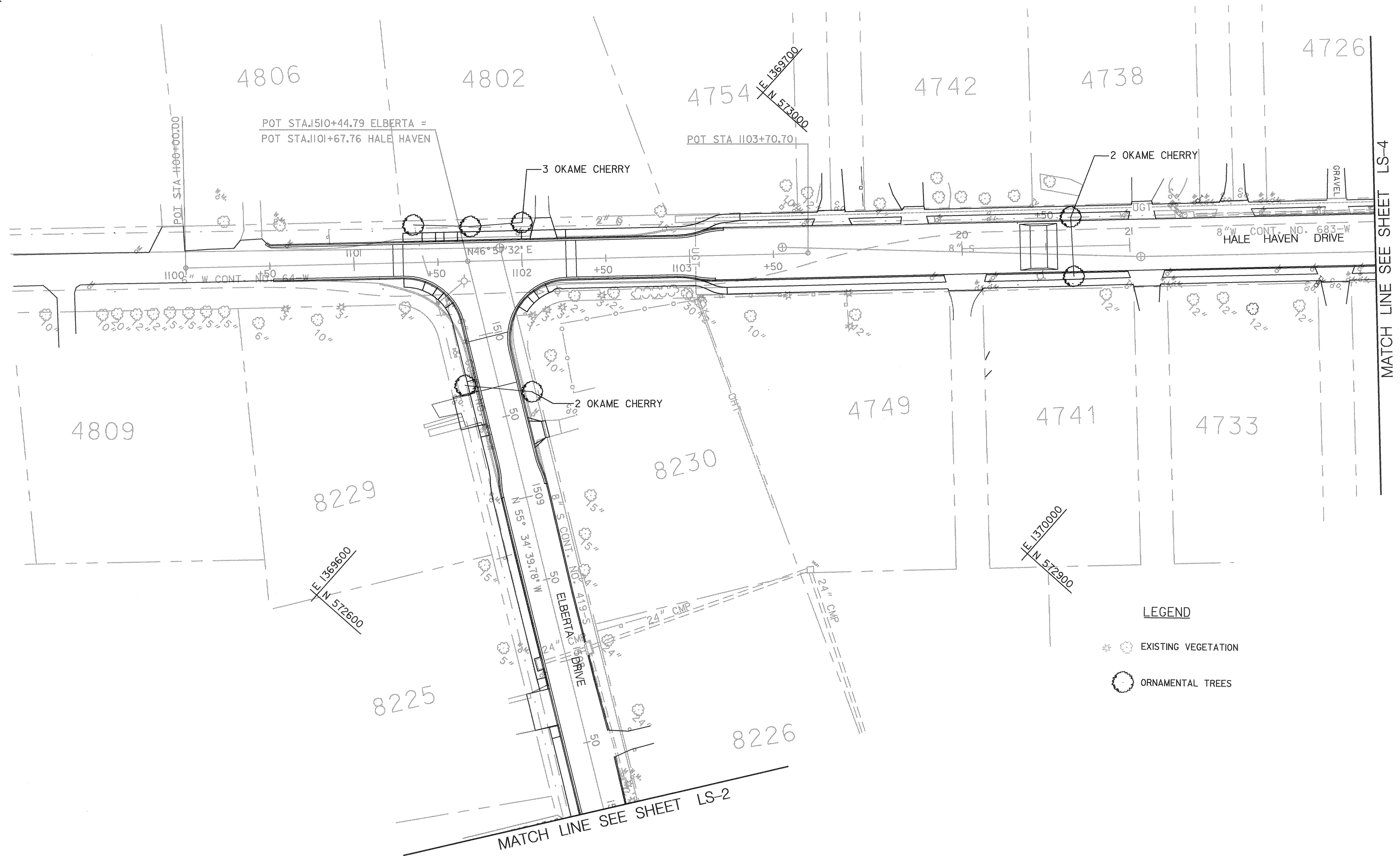
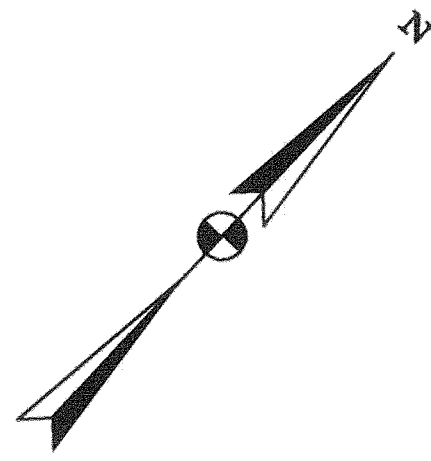
CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN

SHEET 37 OF 63



MATCH LINE SEE SHEET LS-4

MATCH LINE SEE SHEET LS-2

- LEGEND**
- ⊛ EXISTING VEGETATION
 - ⊙ ORNAMENTAL TREES

HOWARD COUNTY, MARYLAND

HOWARD COUNTY, MARYLAND

HOWARD COUNTY, MARYLAND

HOWARD COUNTY, MARYLAND

HOWARD COUNTY, MARYLAND HOWARD COUNTY, MARYLAND
THIS SHEET FOR PLANTING PURPOSES ONLY
HOWARD COUNTY, MARYLAND

LANDSCAPE PLAN

SCALE: 1" = 30'

SHEET NO. LS-3 OF LS-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 5/3/00
CHIEF, BUREAU OF ENGINEERING
DATE

[Signature] 5-3-00
CHIEF, BUREAU OF HIGHWAYS
DATE

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



DES:				
DRN:				
CHK:				
DATE:	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J-4158

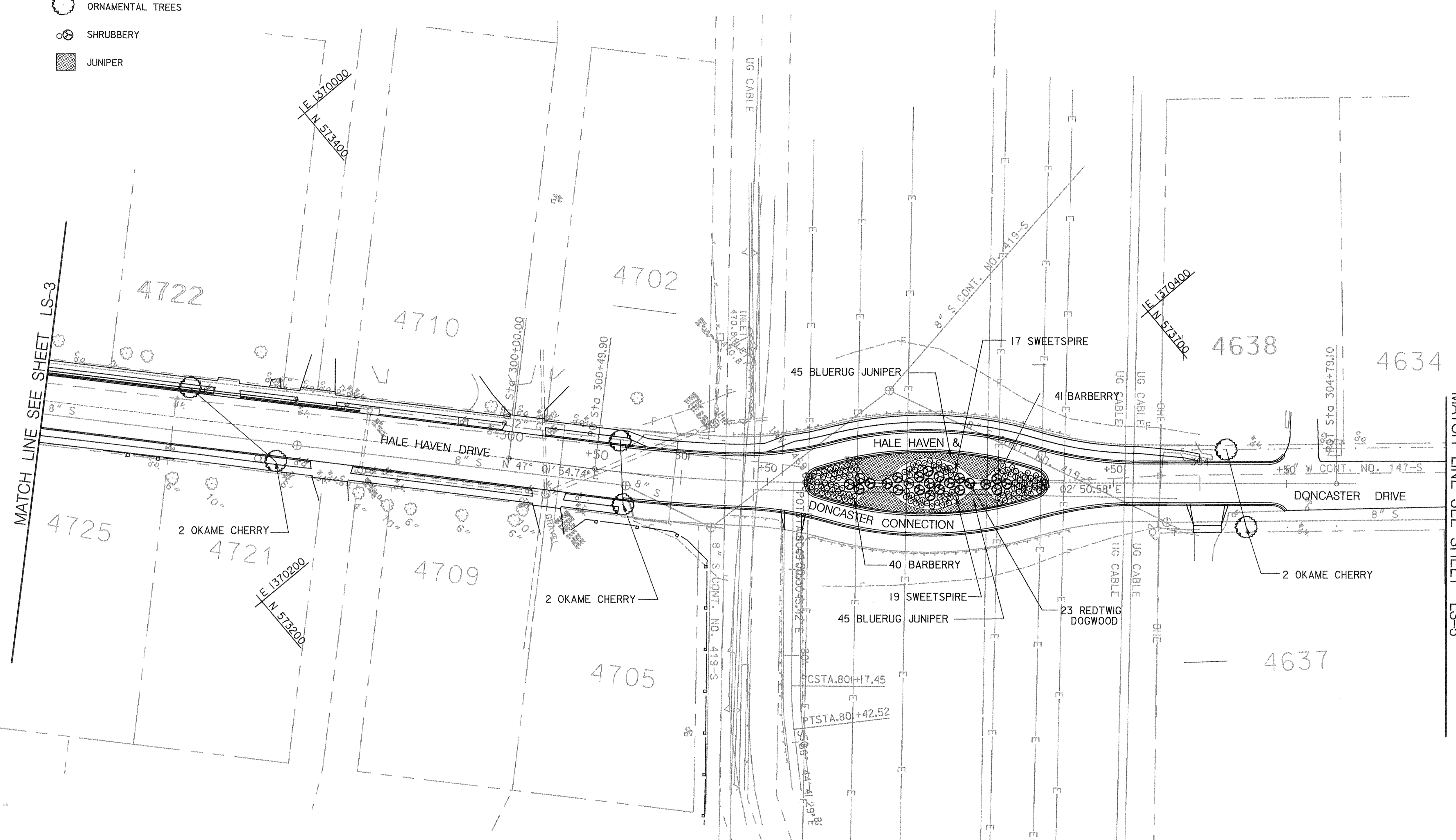
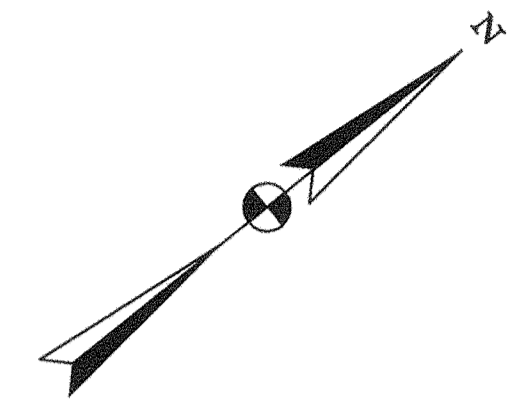
30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 38 OF 63

LEGEND

- * ○ EXISTING VEGETATION
- ORNAMENTAL TREES
- SHRUBBERY
- JUNIPER



LANDSCAPE PLAN

SCALE: 1"=30'

THIS SHEET FOR PLANTING PURPOSES ONLY

SHEET NO. LS-4 OF LS-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Samuel A. Lewis 5/3/04
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS
AND WATERSHED MANAGEMENT DIVISION

Robert L. Simpson 5/3/00
CHIEF, BUREAU OF ENGINEERING

Christina M. Conkle 5-3-06
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



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DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

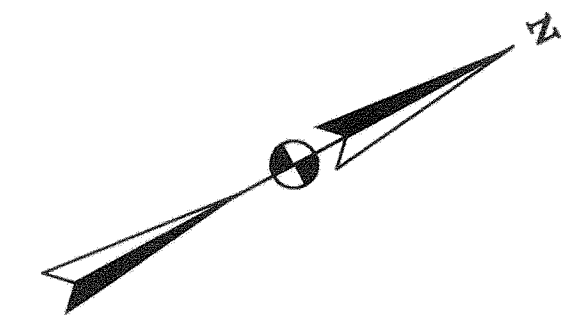
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J-4158

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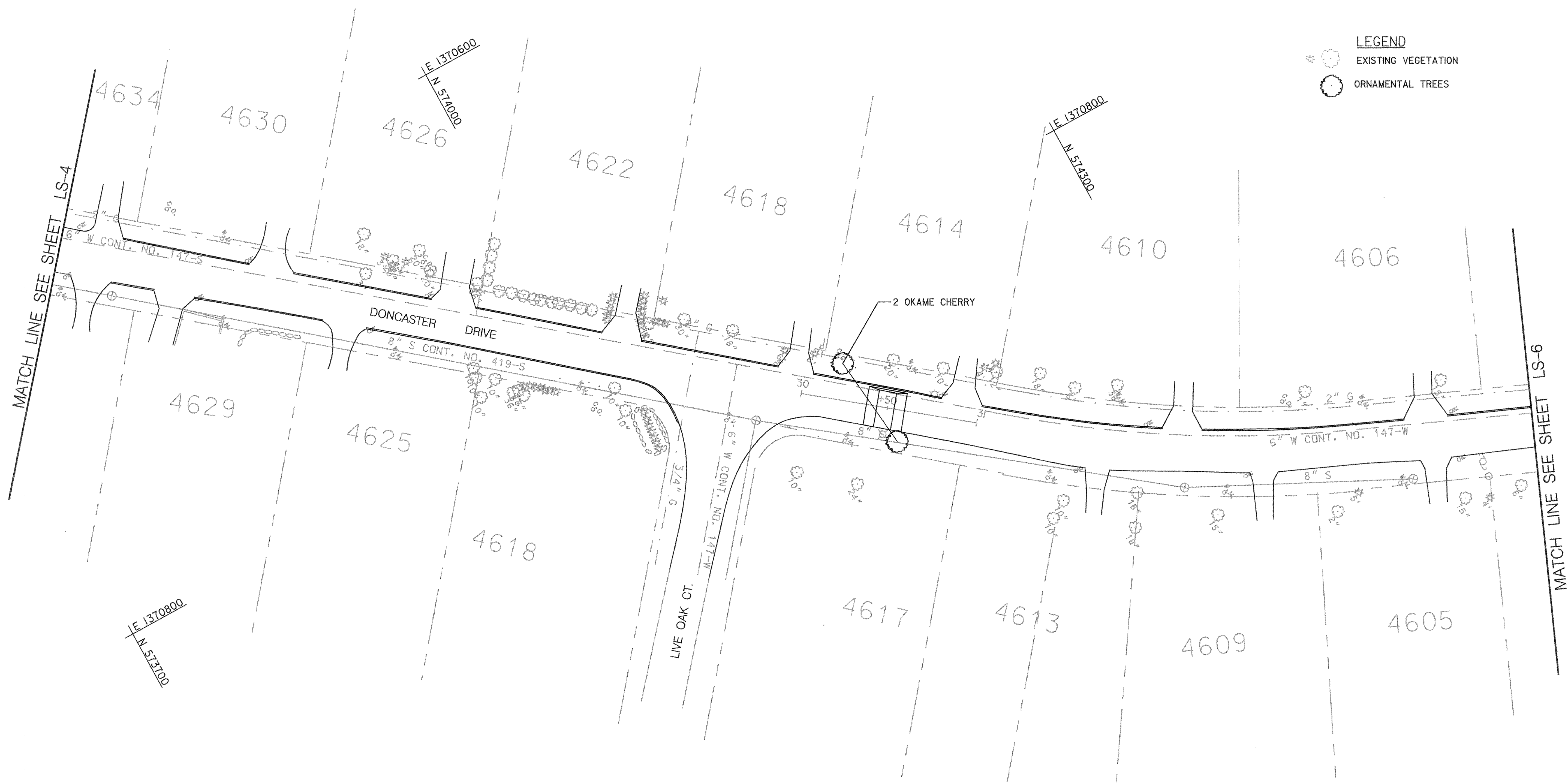
PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN

SHEET 39 OF 63



- LEGEND**
- * (tree symbol) EXISTING VEGETATION
 - (circle symbol) ORNAMENTAL TREES



LANDSCAPE PLAN

SCALE: 1"=30'

THIS SHEET FOR PLANTING PURPOSES ONLY

SHEET NO. LS-5 OF LS-14

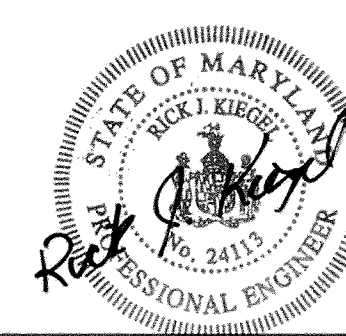
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 5/3/00
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

[Signature] 5/3/00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



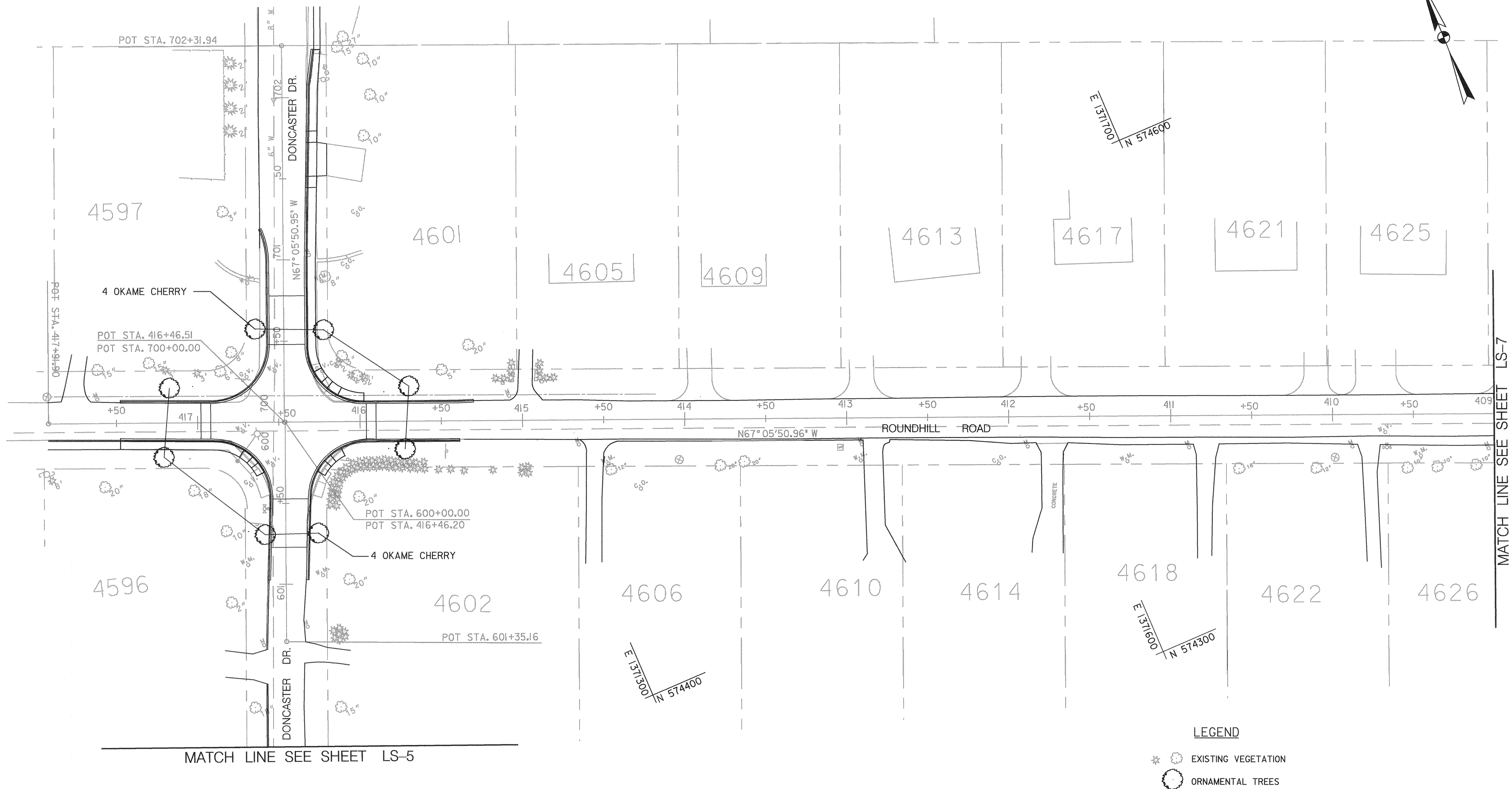
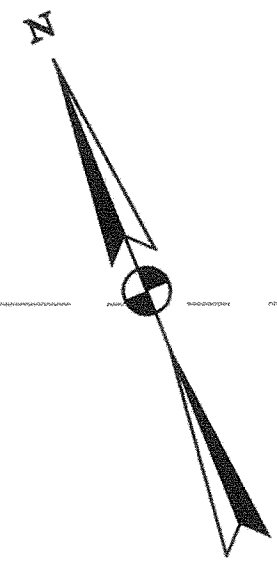
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DRN:				
CHK:				
DATE:	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 40 OF 63



LEGEND

- EXISTING VEGETATION
- ORNAMENTAL TREES

LANDSCAPE PLAN
SCALE: 1" = 30'

THIS SHEET FOR PLANTING PURPOSES ONLY

SHEET NO. LS-6 OF LS-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 5/3/00
DATE

[Signature] 5/3/00
DATE

CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



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DRN:				
CHK:				
DATE:	BY	NO.	REVISION	DATE

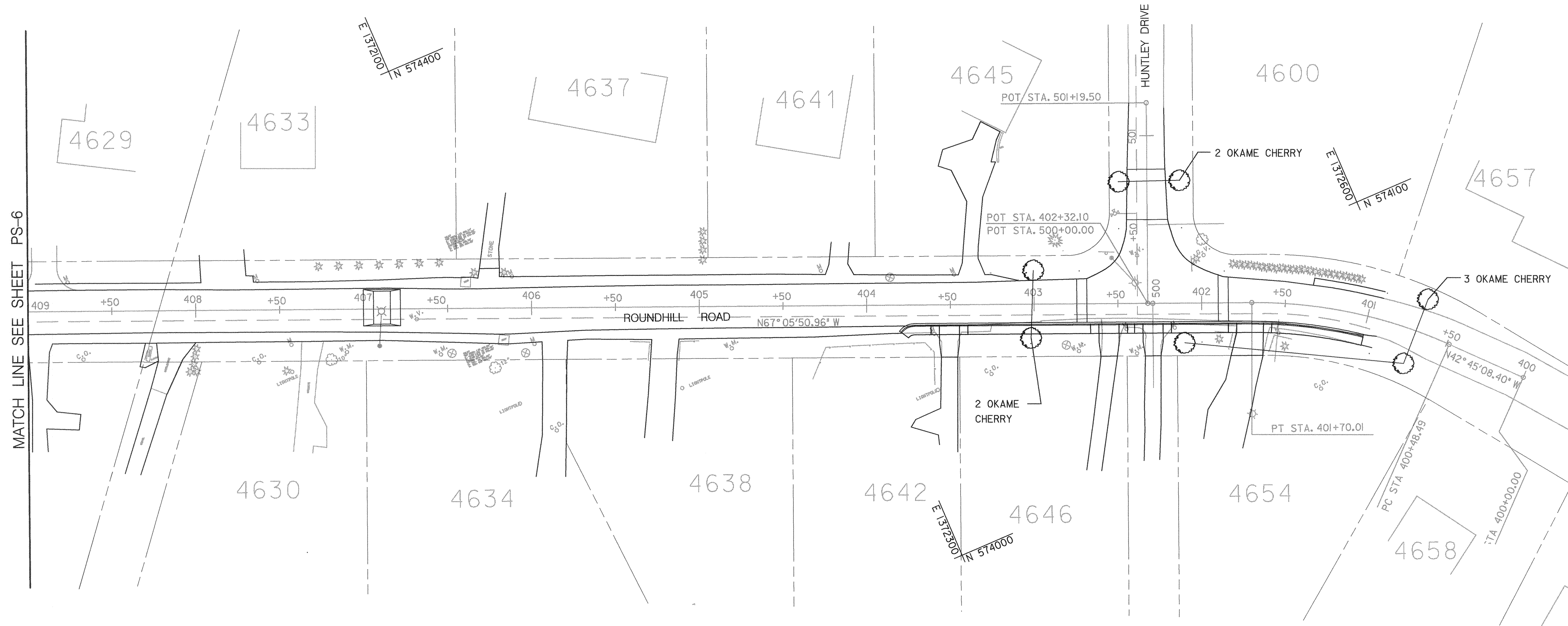
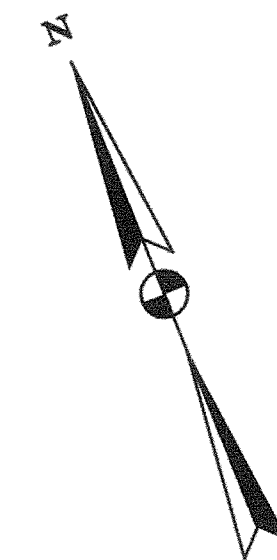
CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN

SHEET 41 OF 63



MATCH LINE SEE SHEET PS-6

- LEGEND**
- EXISTING VEGETATION
 - ORNAMENTAL TREES

LANDSCAPE PLAN

SCALE: 1" = 30'

THIS SHEET FOR PLANTING PURPOSES ONLY

SHEET NO. LS-7 OF LS-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

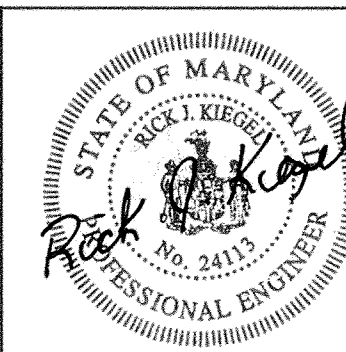
John M. Lee 5/3/00
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS
AND WATERSHED MANAGEMENT DIVISION

Robert P. Ryan 5/3/00
CHIEF, BUREAU OF ENGINEERING

Richard W. Conkle 5-3-00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



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CHK:					
DATE:	BY	NO.	REVISION	DATE	

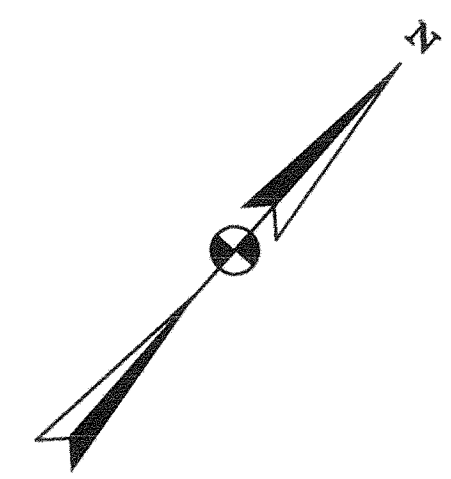
CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN

SHEET 42 OF 63



- LEGEND**
- * EXISTING VEGETATION
 - ORNAMENTAL TREES

LANDSCAPE PLAN
SCALE: 1" = 30'

THIS SHEET FOR PLANTING PURPOSES ONLY

SHEET NO. LS-8 OF LS-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James A. New 5/3/00
DATE
CHIEF, BUREAU OF ENGINEERING

Richard J. Ryan 5/3/00
DATE
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



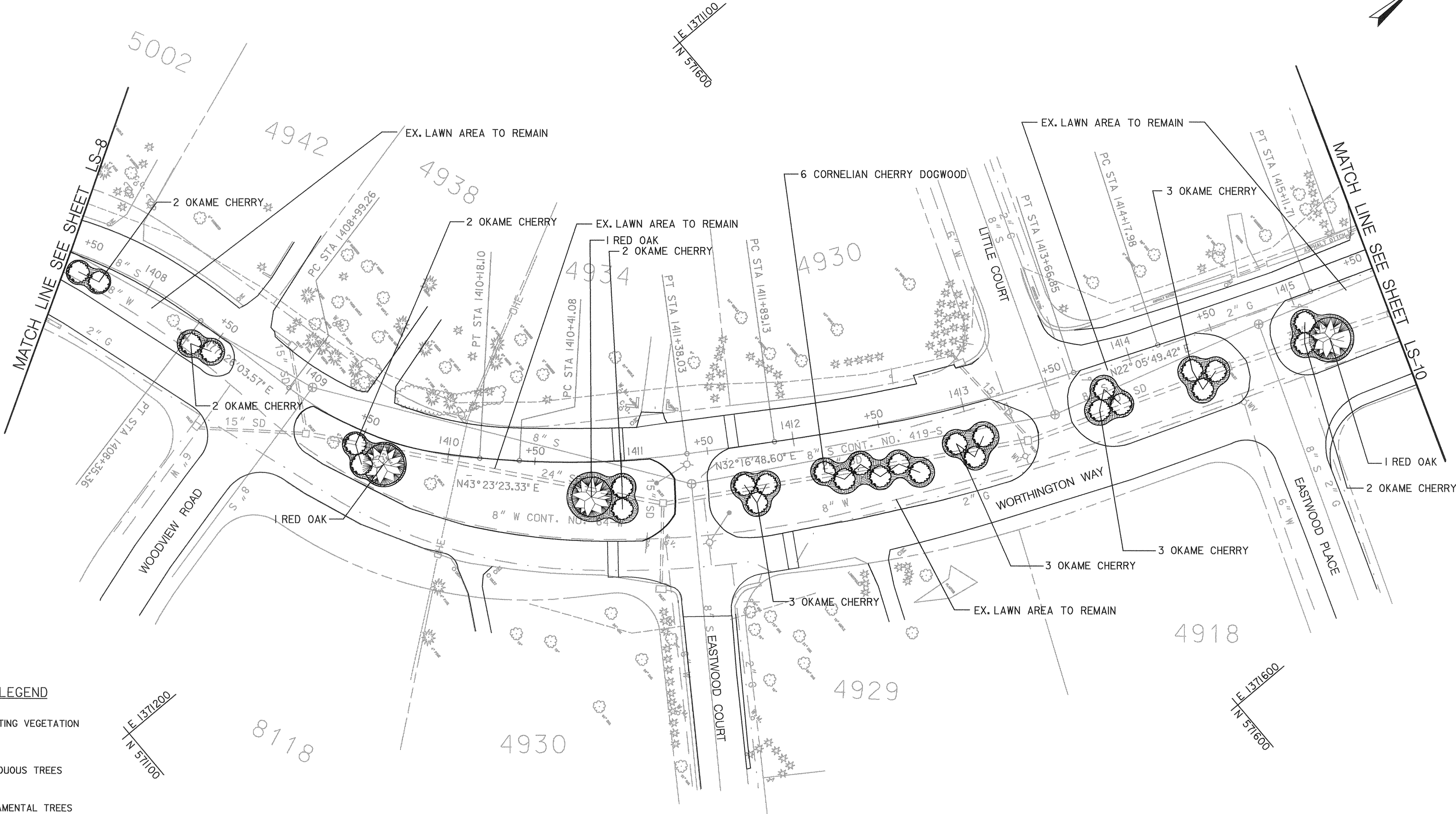
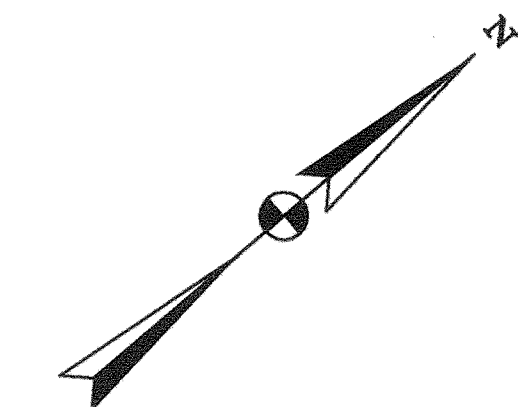
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CHK:					
DATE:	BY	NO.	REVISION	DATE	

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 43 OF 63



LEGEND

- EXISTING VEGETATION
- DECIDUOUS TREES
- ORNAMENTAL TREES
- MULCH

LANDSCAPE PLAN

SCALE: 1"=30'

THIS SHEET FOR PLANTING PURPOSES ONLY

SHEET NO. LS-9 OF LS-14

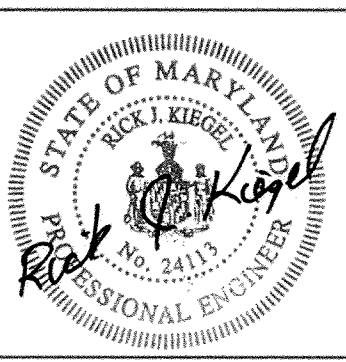
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 5/3/00
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

[Signature] 5/3/00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

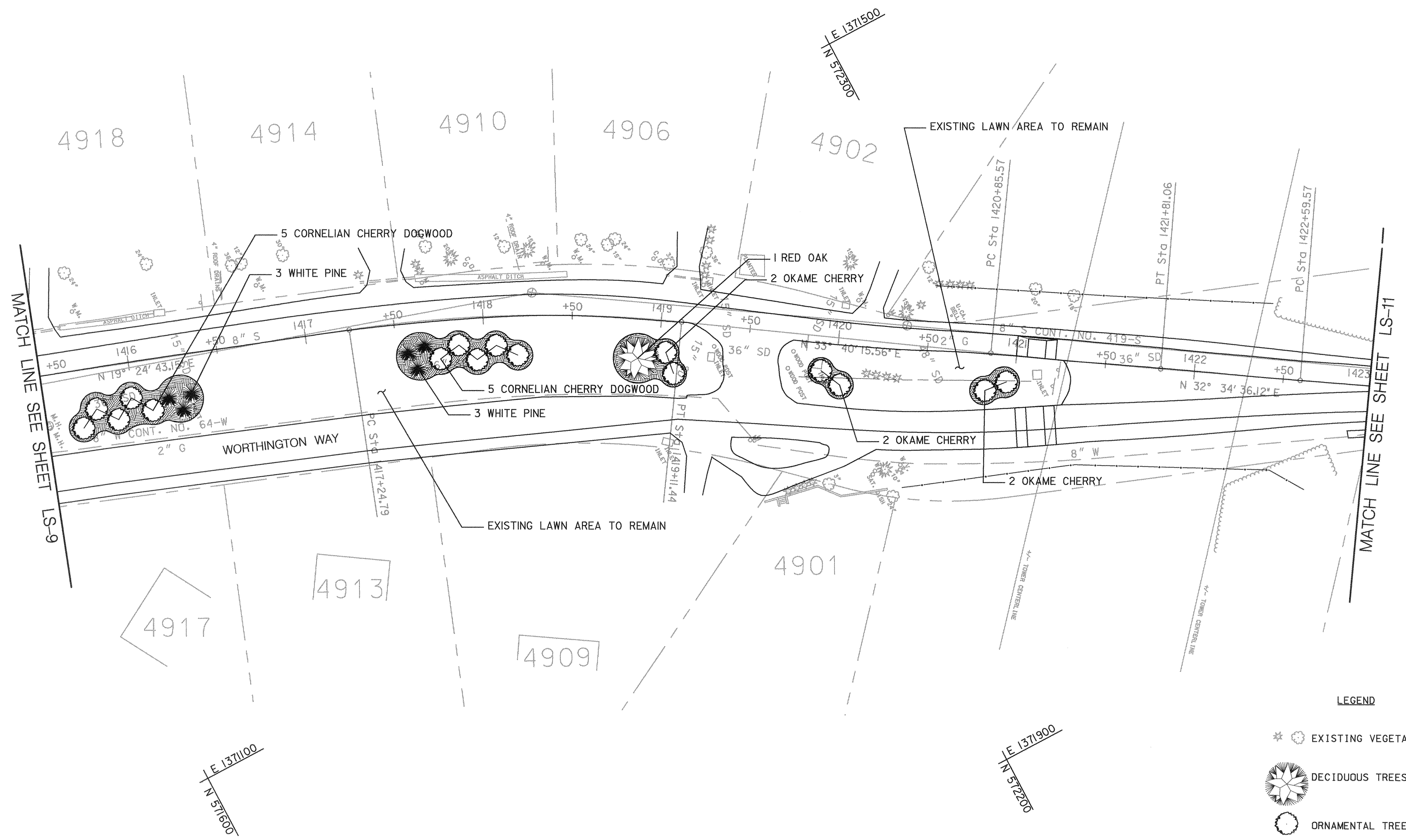
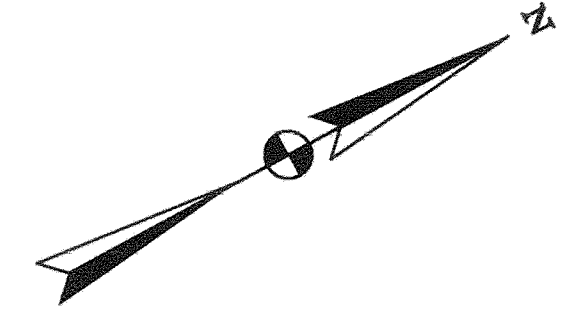
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



DES:					
DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 44 OF 63



LANDSCAPE PLAN

SCALE: 1" = 30'

THIS SHEET FOR PLANTING PURPOSES ONLY

LEGEND

- EXISTING VEGETATION
- DECIDUOUS TREES
- ORNAMENTAL TREES
- EVERGREEN TREES
- MULCH

SHEET NO. LS-10 OF LS-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Samuel A. Lewis 5/3/00
DATE
5/3/00

Richard M. Decker 5/3/00
DATE
5/3/00

CHEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



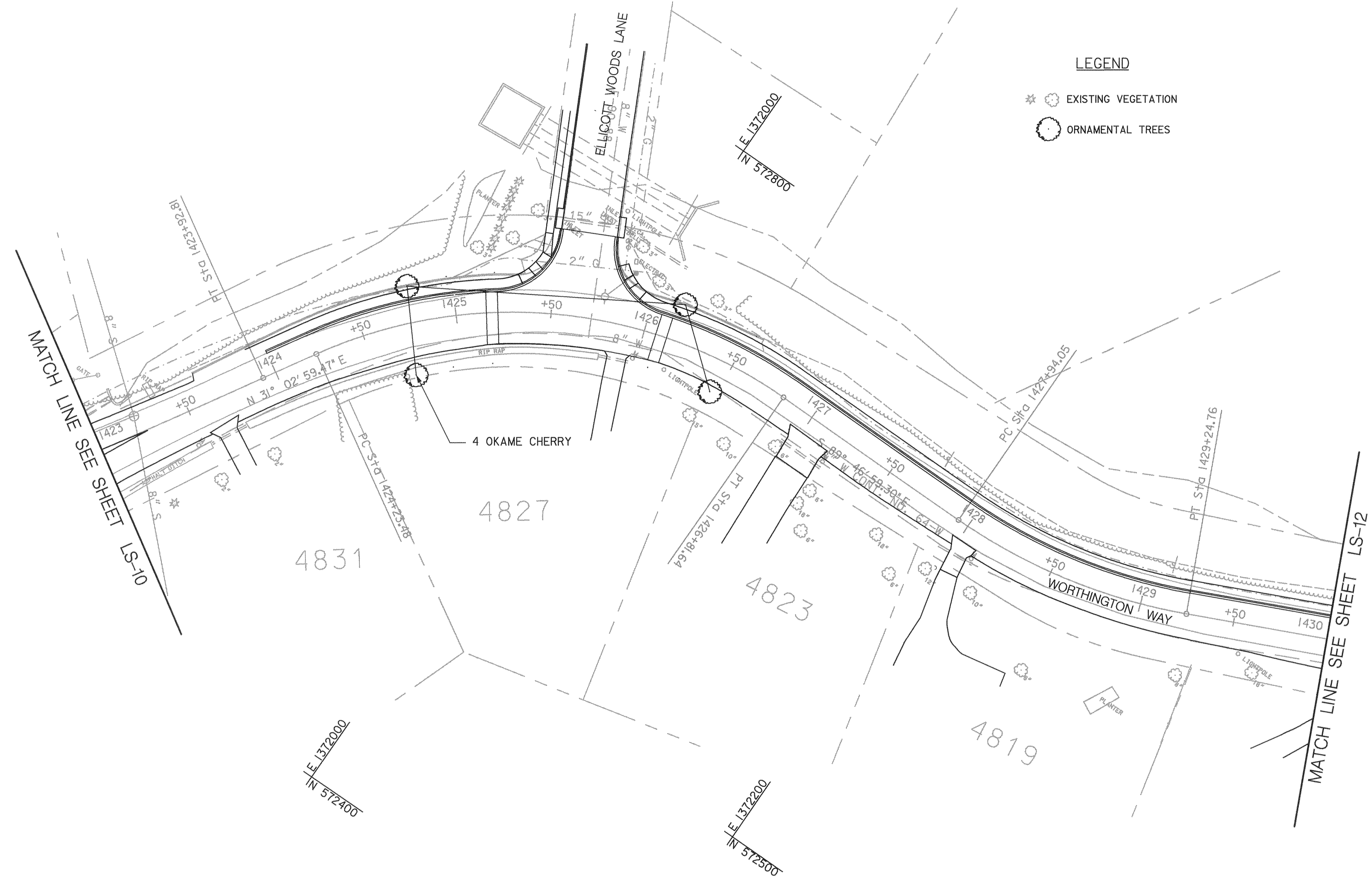
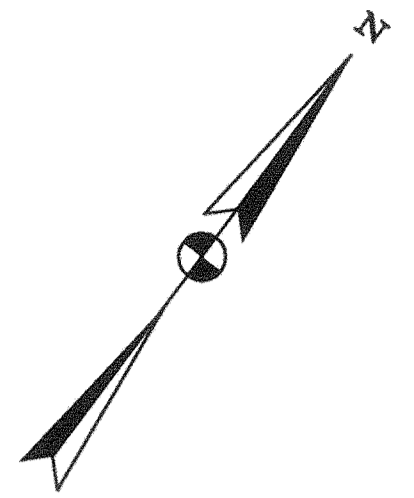
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DATE:	BY	NO.	REVISION	DATE	

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 45 OF 63



LEGEND

- * EXISTING VEGETATION
- ORNAMENTAL TREES

LANDSCAPE PLAN
SCALE: 1"=30'

THIS SHEET FOR PLANTING PURPOSES ONLY

SHEET NO. LS-11 OF LS-14

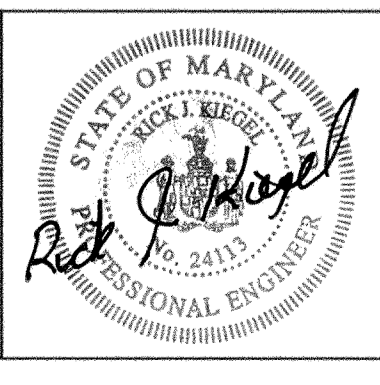
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Sam Wilson 5/3/00
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS
AND WATERSHED MANAGEMENT DIVISION

Robert Johnson 5/3/00
CHIEF, BUREAU OF ENGINEERING

Robert Johnson 5-3-00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



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DRN:					
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DATE:	BY	NO.	REVISION	DATE	

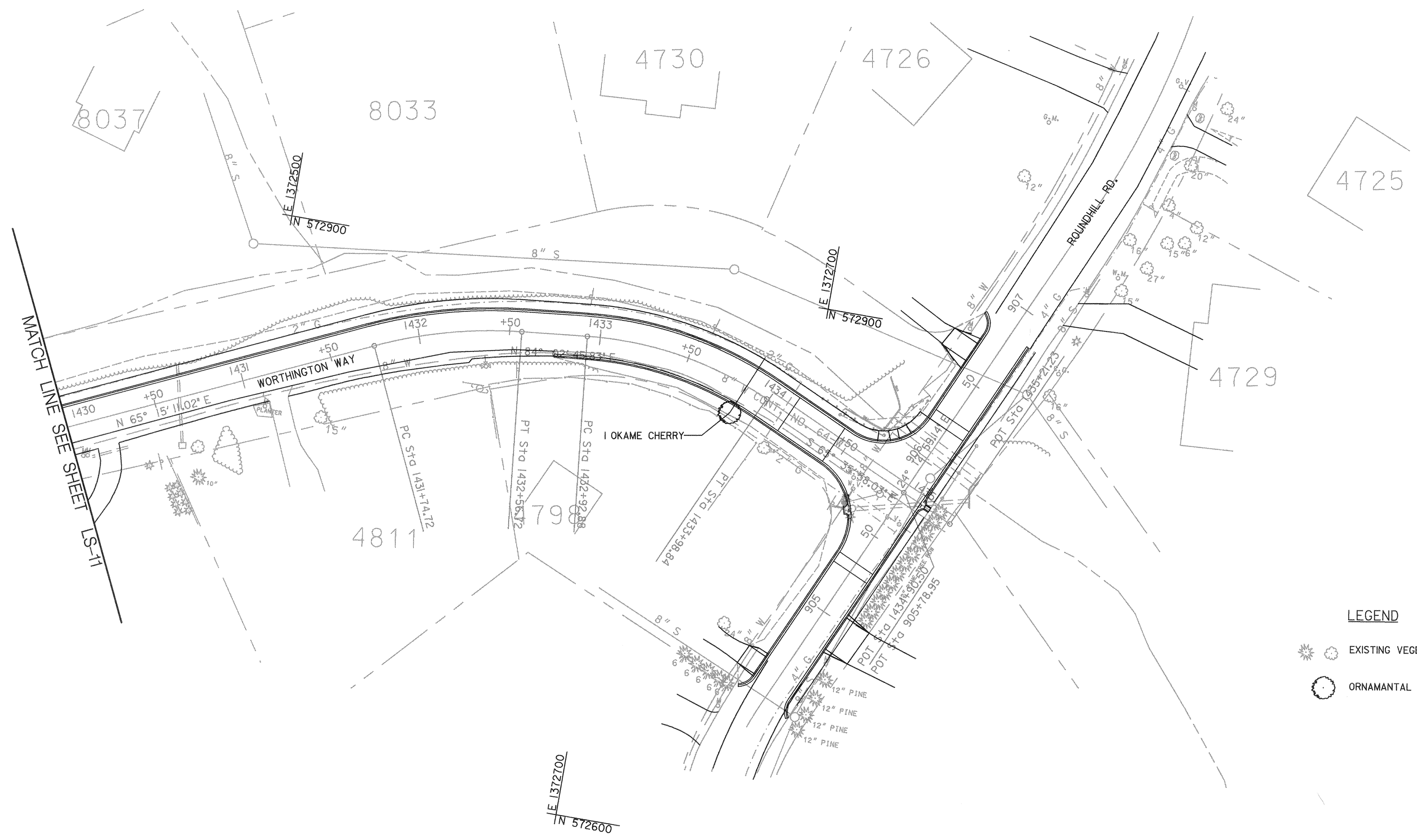
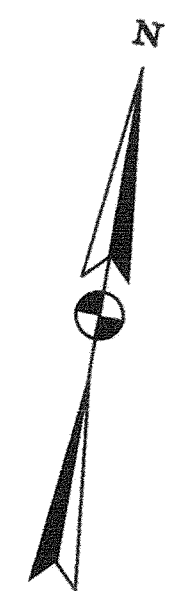
CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN

SHEET 46 OF 63



- LEGEND**
- EXISTING VEGETATION
 - ORNAMANTAL TREES

LANDSCAPE PLAN
SCALE: 1" = 30'

THIS SHEET FOR PLANTING PURPOSES ONLY

SHEET NO. LS-12 OF LS-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

L. M. Shaw 5/3/00
DATE

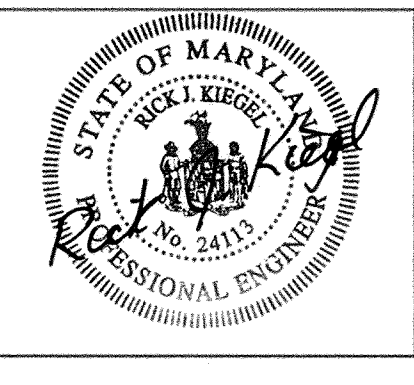
R. J. P. ... 5/3/00
DATE

S. ... 5/3/00
DATE

CHEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Dewberry & Davis
Architects
Engineers
Planners
Surveyors

3120 Timanus Lane, Suite 211
Baltimore, Maryland 21244
Tel. 410-265-9500
Fax. 410-265-8875



DES:					
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CHK:					
DATE:	BY	NO.	REVISION	DATE	

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

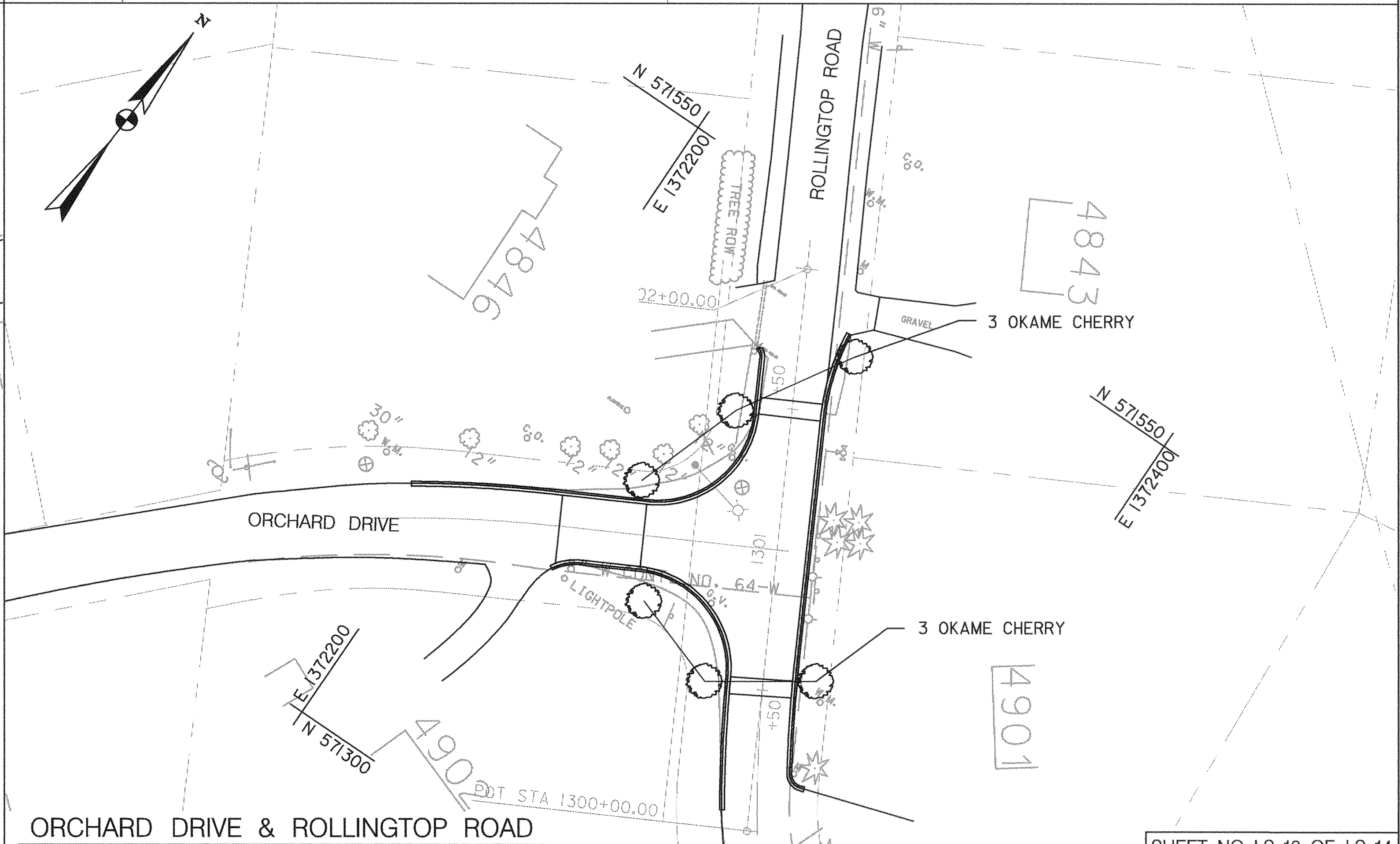
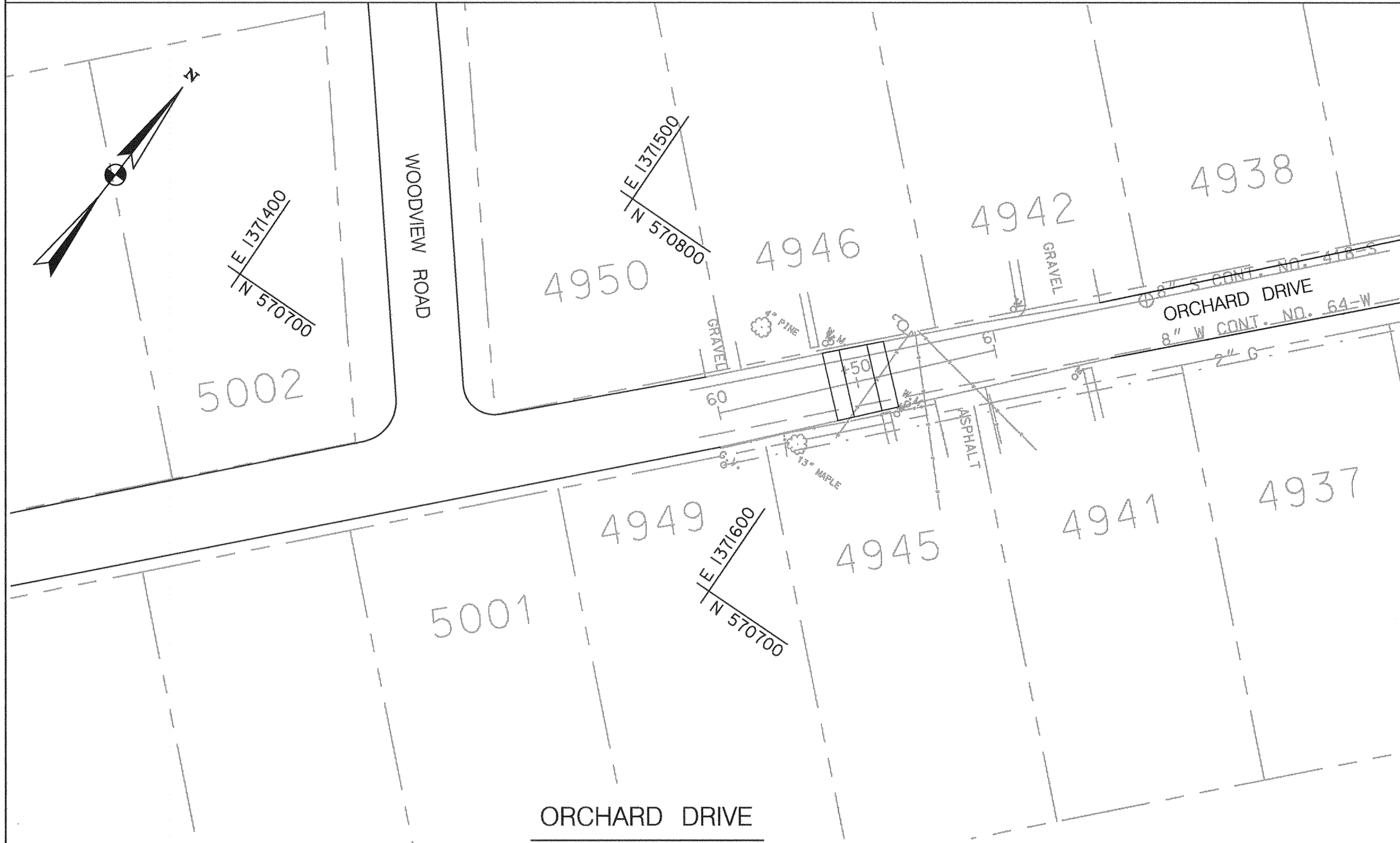
**PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS**

SCALE AS SHOWN
SHEET 47 OF 63

- LEGEND**
- * ○ EXISTING VEGETATION
 - ORNAMENTAL TREES

LANDSCAPE PLAN
SCALE: 1"=30'

THIS SHEET FOR PLANTING PURPOSES ONLY



SHEET NO. LS-13 OF LS-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

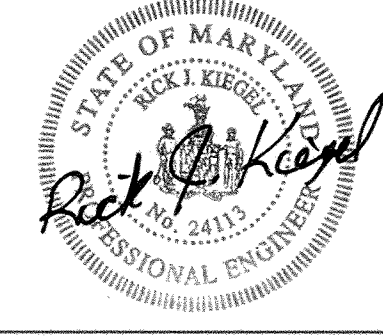
James A. ... 5/3/00
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Richard ... 5/3/00
CHIEF, BUREAU OF ENGINEERING

William ... 5-3-00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects
Engineers
Planners
Surveyors

5120 Timanus Lane, Suite 211
Baltimore, Maryland 21244
Tel. 410-265-9500
Fax. 410-265-8875



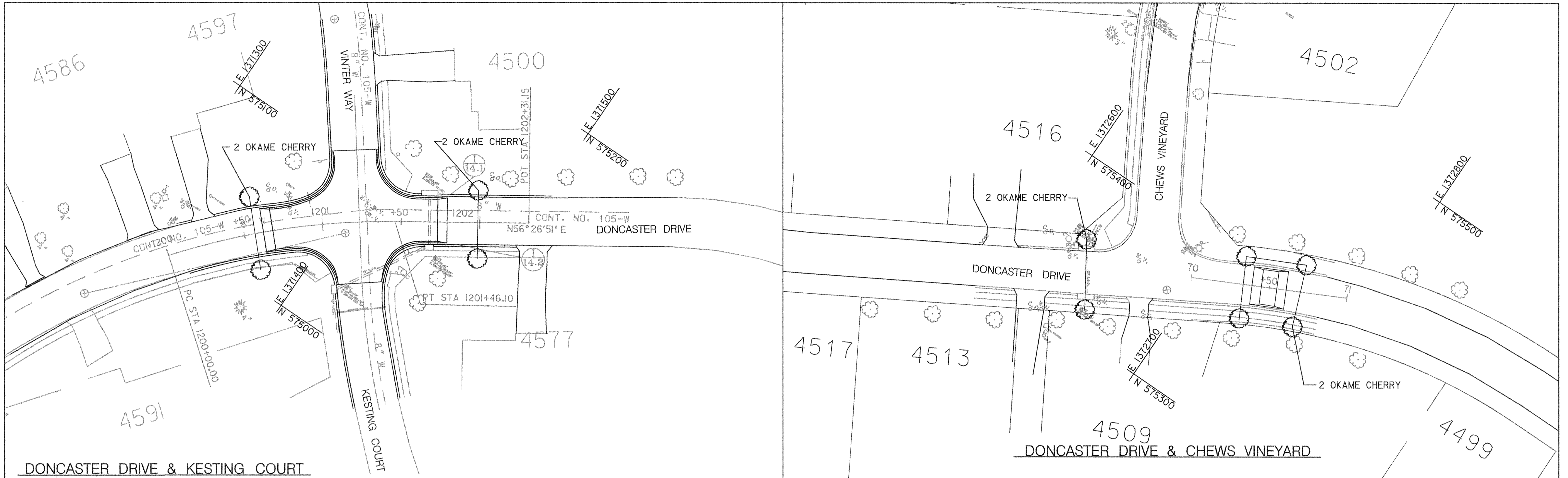
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CHK:					
DATE:	BY	NO.	REVISION	DATE	

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 48 OF 63



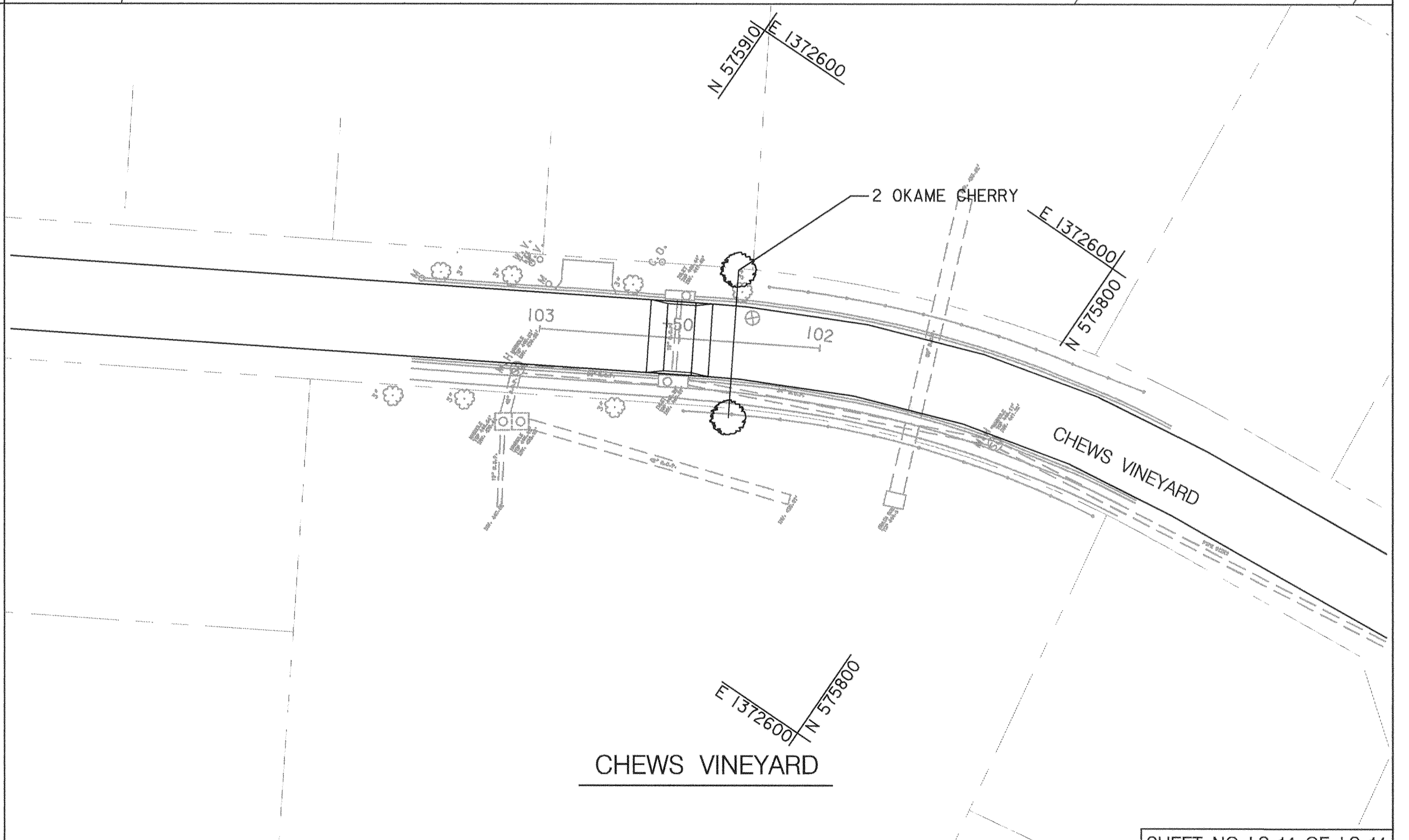
LEGEND

- * ○ EXISTING VEGETATION
- ORNAMENTAL TREES

LANDSCAPE PLAN

SCALE: 1"=30'

THIS SHEET FOR PLANTING PURPOSES ONLY



SHEET NO. LS-14 OF LS-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

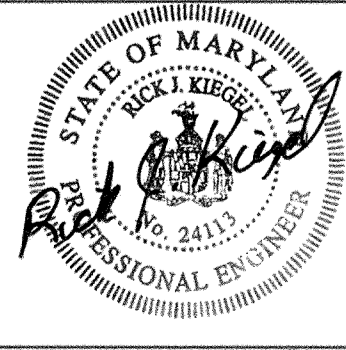
James H. Shum 5/3/00
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Robert J. Seaton 5/3/00
CHIEF, BUREAU OF ENGINEERING

Charles W. Smith 5-3-00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



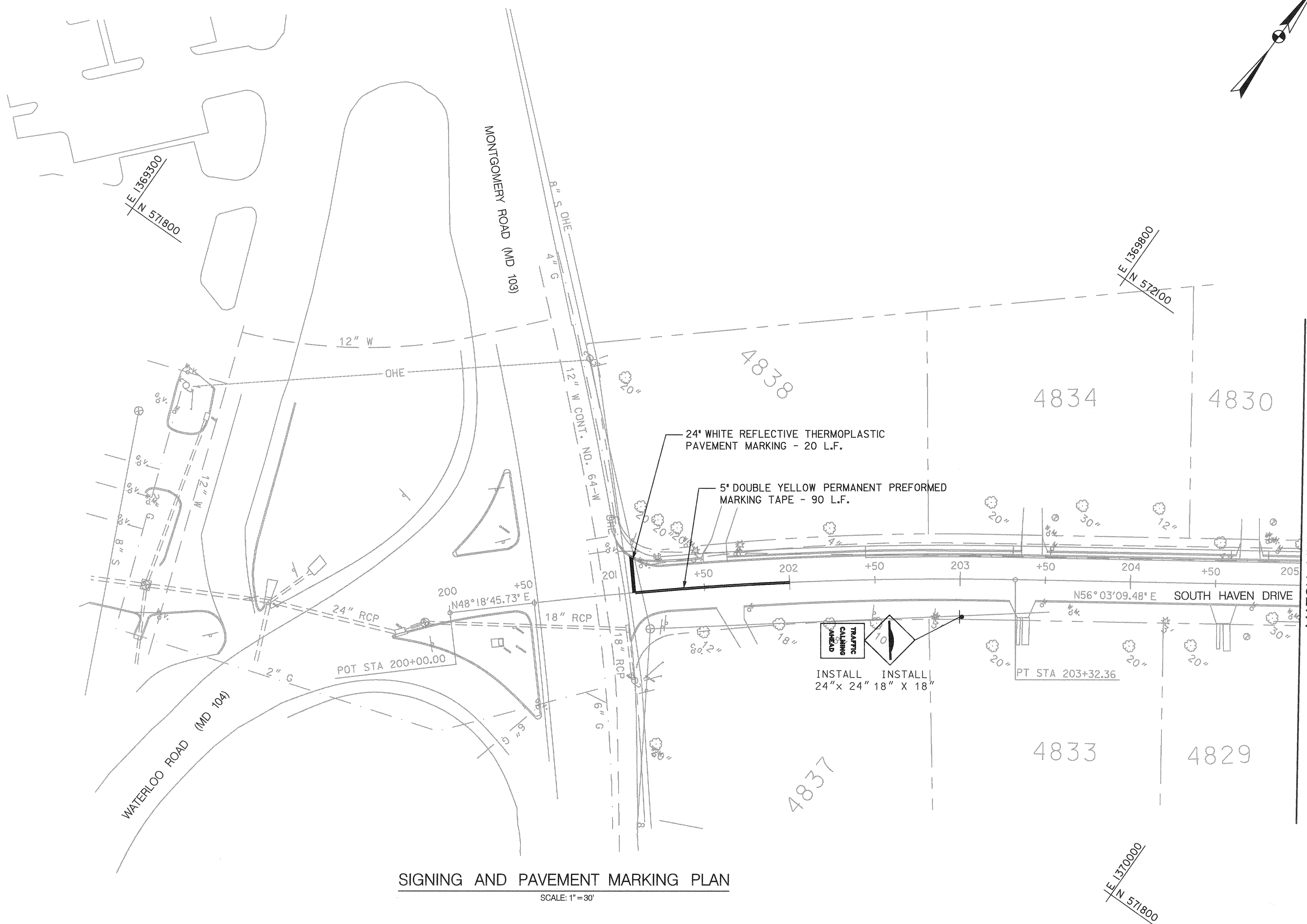
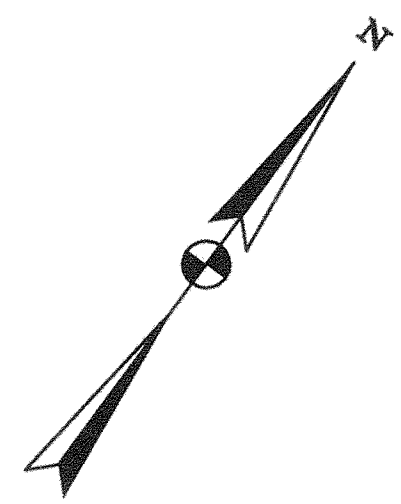
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CHK:				
DATE:	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 49 OF 63



SIGNING AND PAVEMENT MARKING PLAN
SCALE: 1"=30'

MATCH LINE SEE SHEET TP-2

SHEET NO. TP-1 OF TP-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Lewis 5/3/00
DATE

Robert J. Seaman 5/3/00
DATE

Erica Allen 5/3/00
DATE

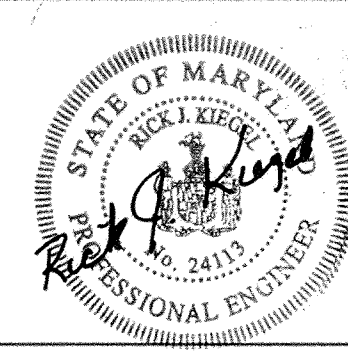
CHIEF, TRANSPORTATION PROJECTS
AND WATERSHED MANAGEMENT DIVISION

CHIEF, BUREAU OF ENGINEERING

CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 5120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



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DRN:				
CHK:				
DATE:	BY	NO.	REVISION	DATE

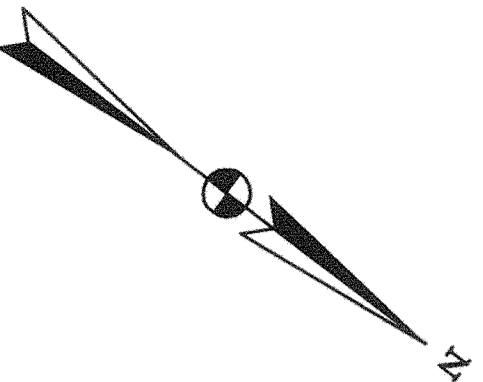
CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

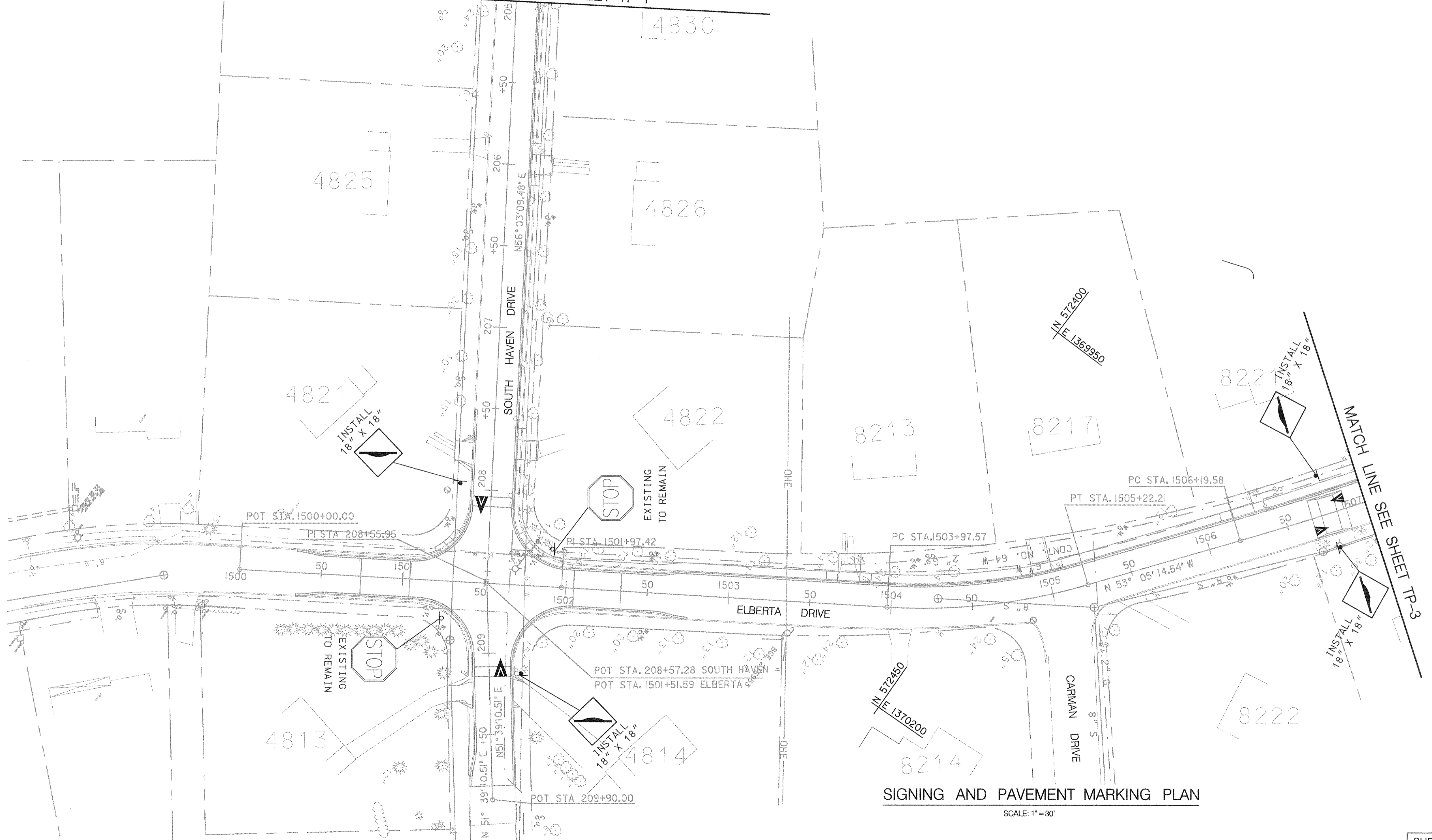
SCALE AS SHOWN
SHEET 50 OF 63

...: \cadd\contract\1\tp01\tp01.dgn May. 03. 2000 10:15:05



N 571900
E 1370000

MATCH LINE SEE SHEET TP-1



MATCH LINE SEE SHEET TP-3

SIGNING AND PAVEMENT MARKING PLAN

SCALE: 1"=30'

SHEET NO. TP-2 OF TP-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

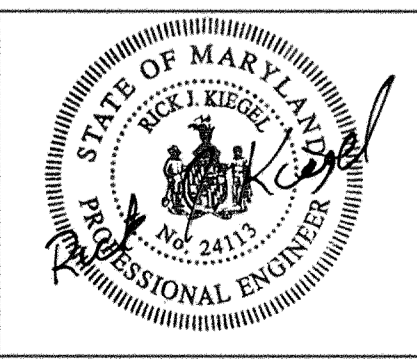
[Signature] 5/3/00
DATE

[Signature] 5/3/00
DATE

CHIEF, BUREAU OF ENGINEERING
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



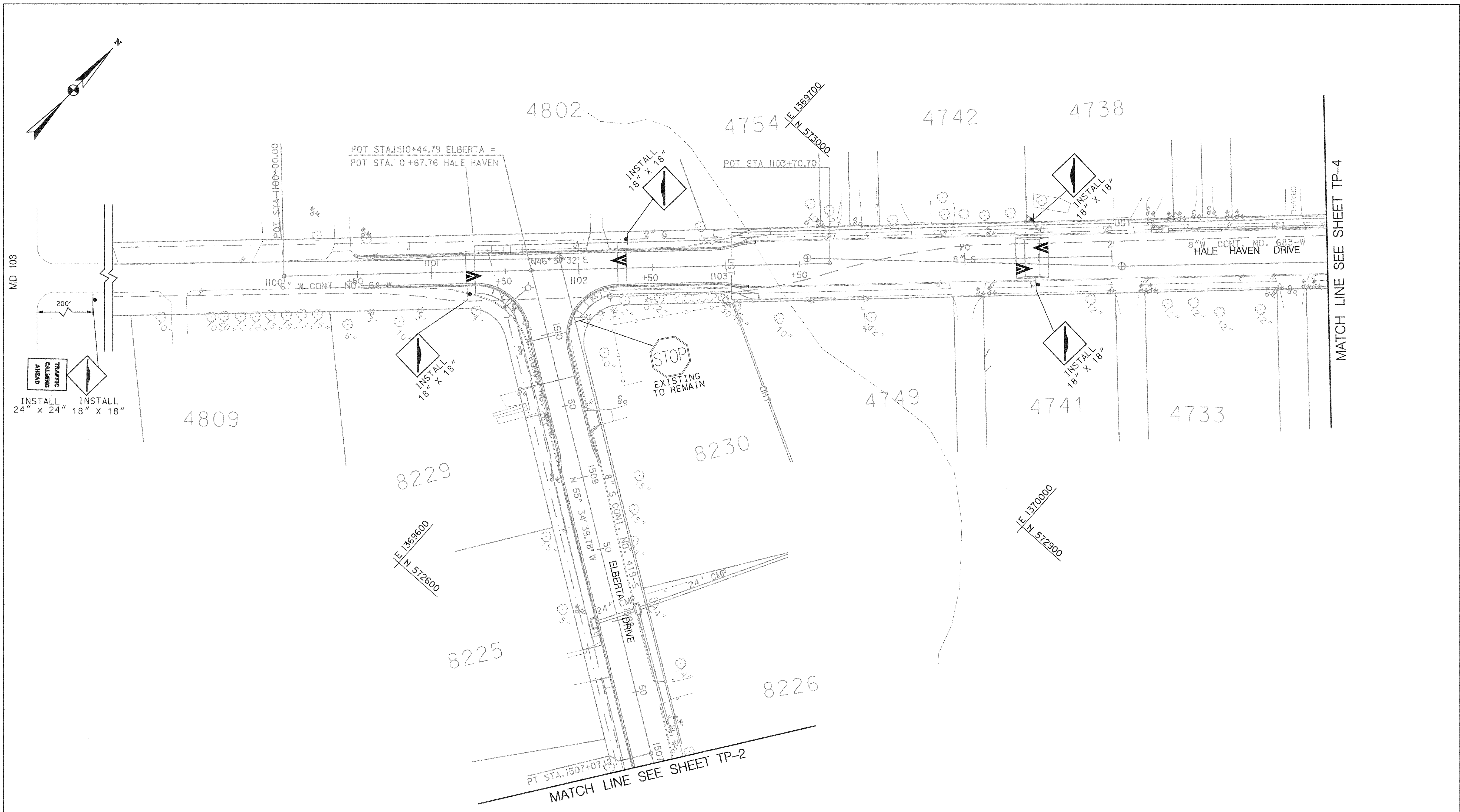
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CHK:					
DATE:	BY	NO.	REVISION	DATE	

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 51 OF 63



SIGNING AND PAVEMENT MARKING PLAN
SCALE: 1" = 30'

MATCH LINE SEE SHEET TP-4

MATCH LINE SEE SHEET TP-2

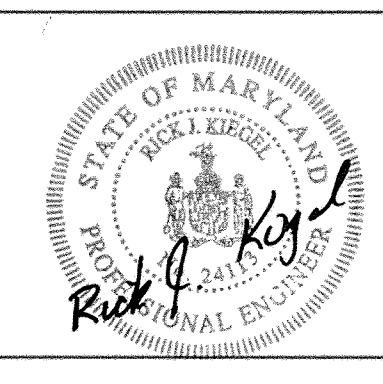
SHEET NO. TP-3 OF TP-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Lawrence M. ... 5/3/00
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Robert ... 5/3/00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



DES:				
DRN:				
CHK:				
DATE:	BY	NO.	REVISION	DATE

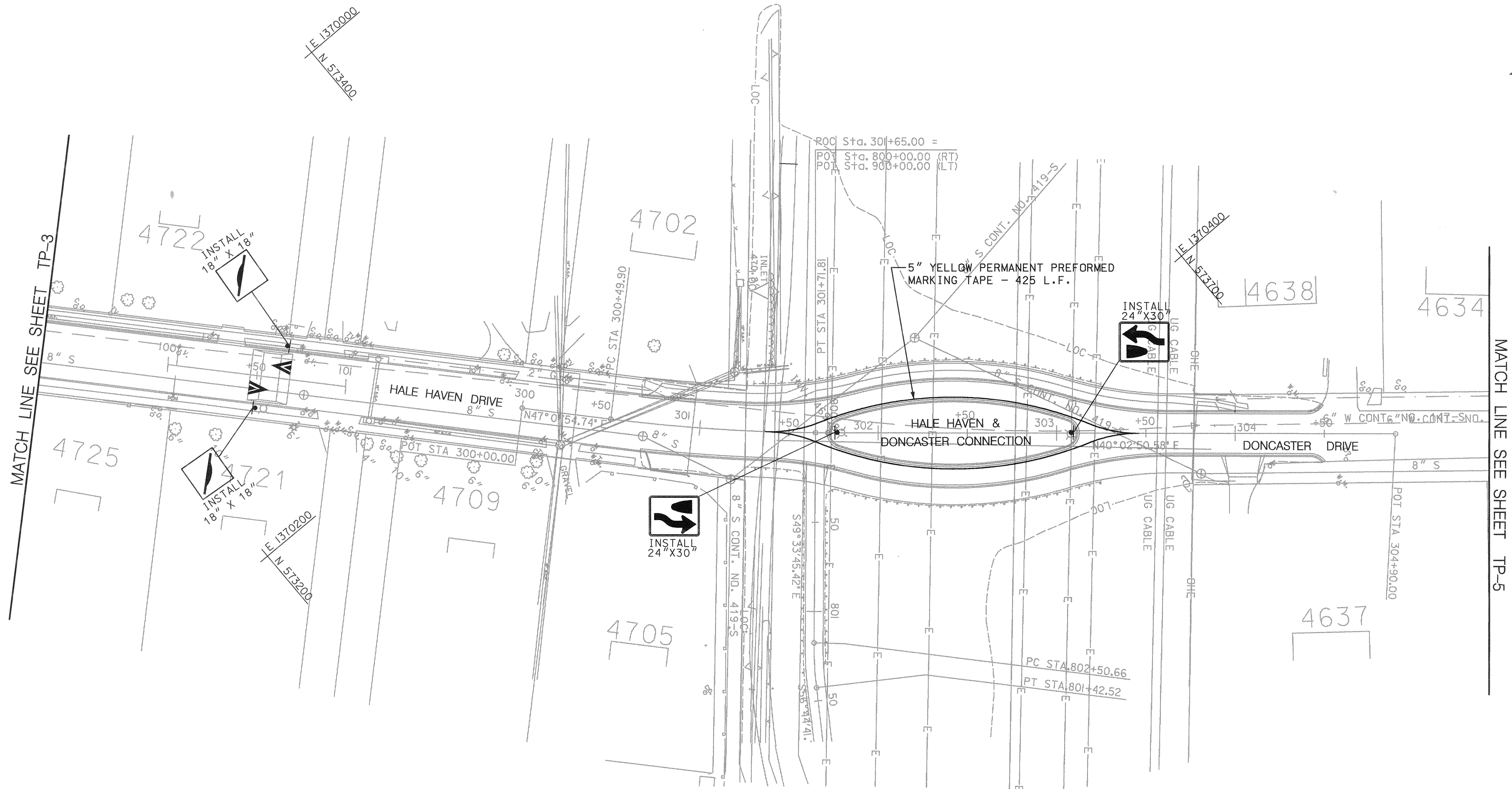
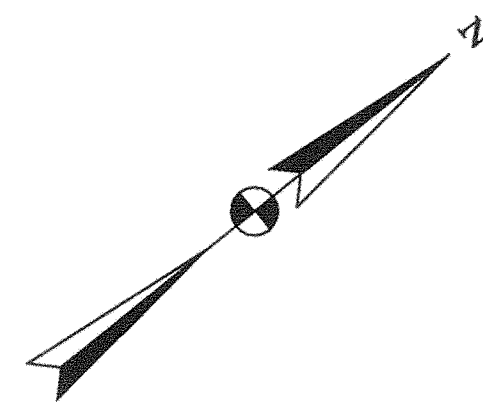
CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 52 OF 63

...:\cadd\contract\1\tp03\work\1.dgn May, 03, 2000 10:24:55



SIGNING AND PAVEMENT MARKING PLAN
SCALE: 1" = 30'

SHEET NO. TP-4 OF TP-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Lewis 5/3/00
DATE
CHIEF, TRANSPORTATION PROJECTS
AND WATERSHED MANAGEMENT DIVISION

Robert J. Seaton 5/3/00
DATE
CHIEF, BUREAU OF ENGINEERING

Andrew M. Lankford 5-3-00
DATE
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects 5120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



DES:					
DRN:					
CHK:					
DATE:	BY	NO.	REVISION	DATE	

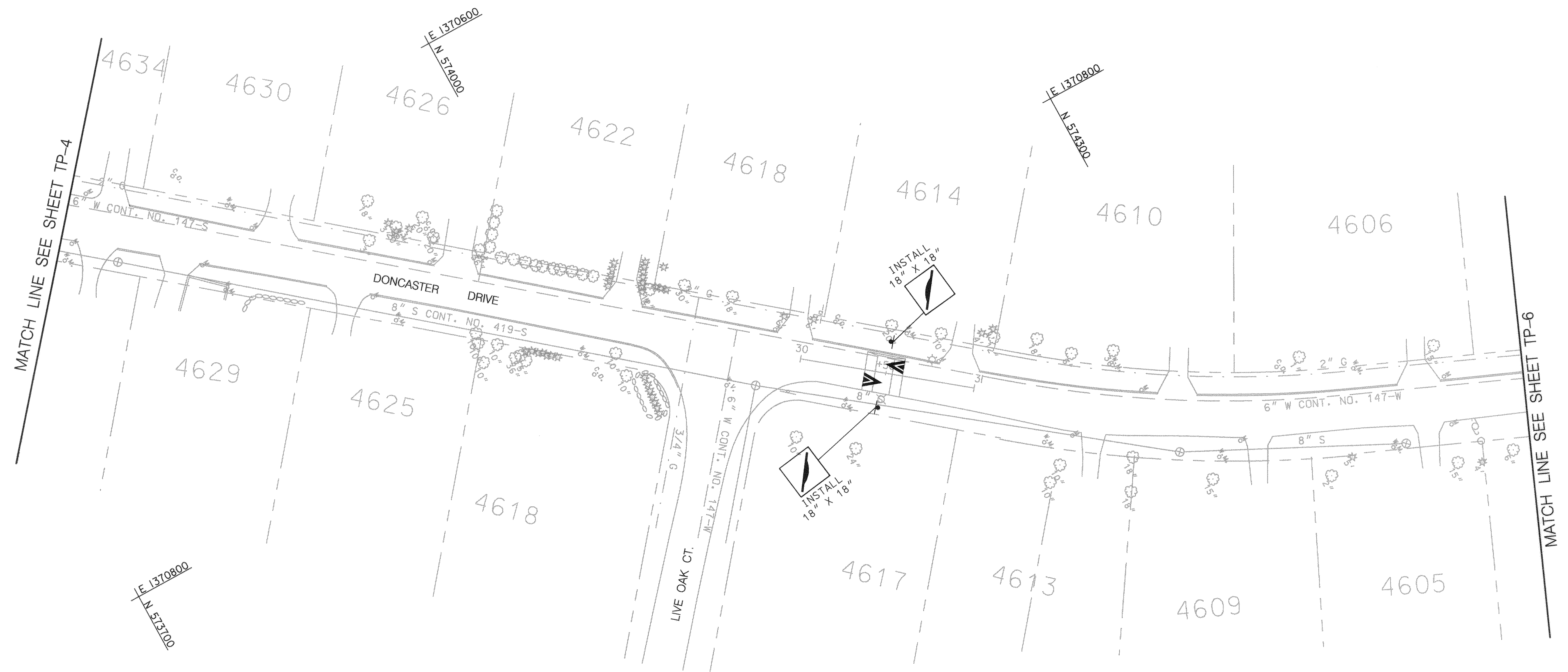
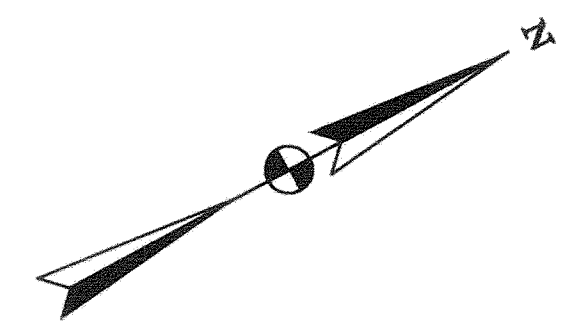
CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

**PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS**

SCALE AS SHOWN
SHEET 53 OF 63

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SIGNING AND PAVEMENT MARKING PLAN
SCALE: 1" = 30'

SHEET NO. TP-5 OF TP-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Lee 5/3/04
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Robert J. Seaman 5/3/00
CHIEF, BUREAU OF ENGINEERING

Christopher M. Daniels 5-3-00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



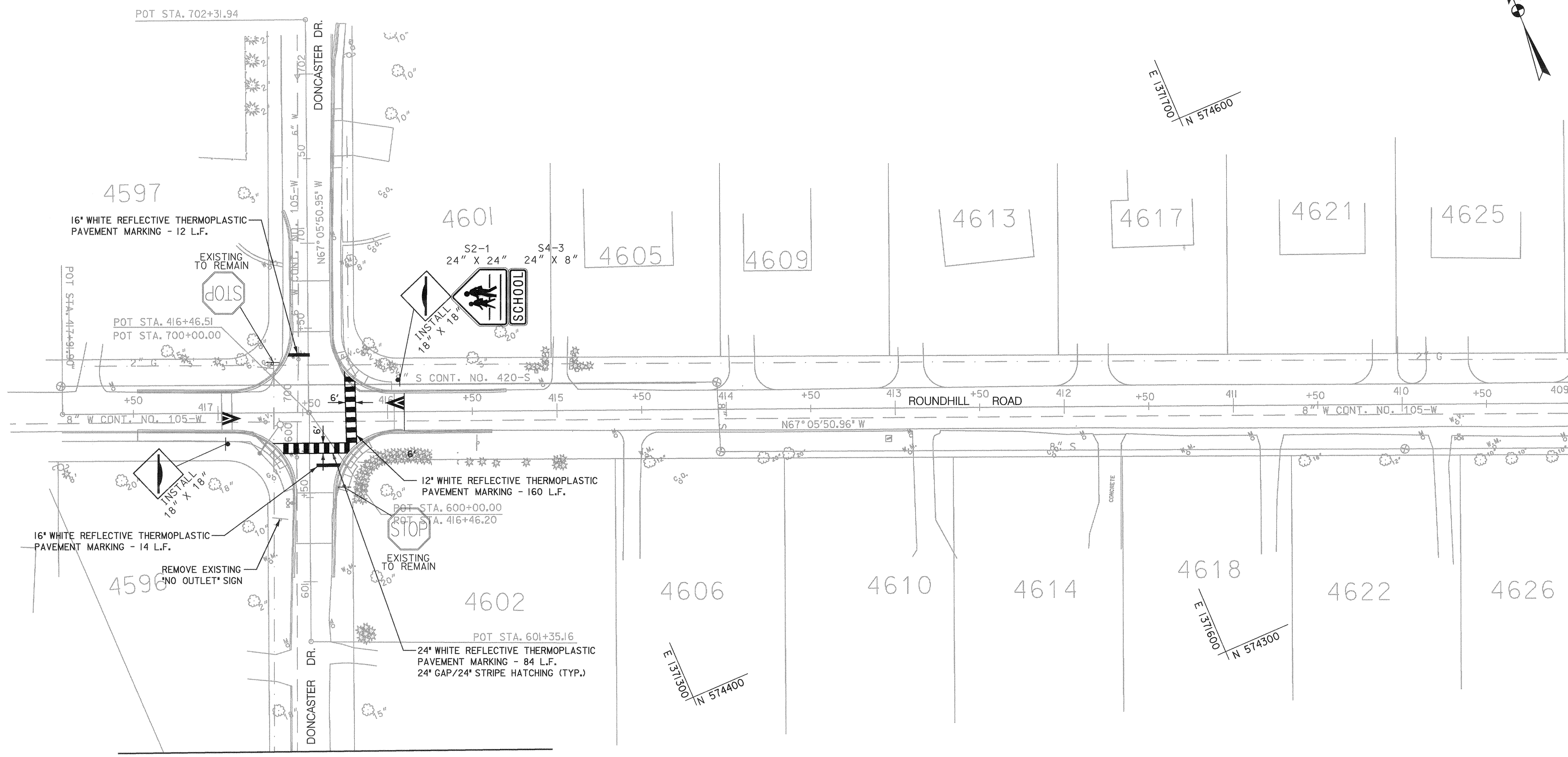
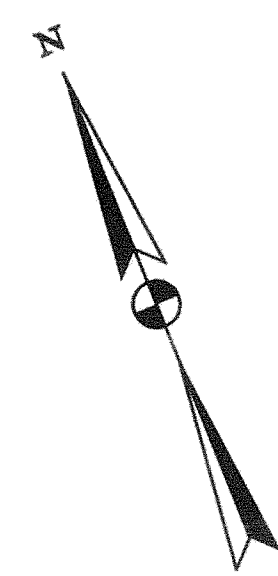
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DRN:				
CHK:				
DATE:	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

**PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS**

SCALE AS SHOWN
SHEET 54 OF 63



MATCH LINE SEE SHEET TP-7

SIGNING AND PAVEMENT MARKING PLAN

SCALE: 1" = 30'

SHEET NO. TP-6 OF TP-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

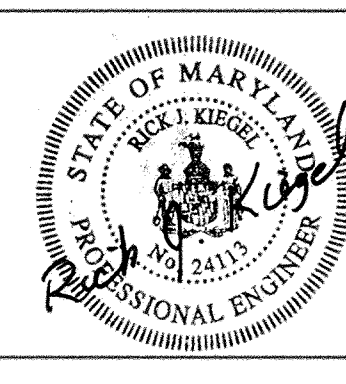
James P. ... 5/3/00
DEPARTMENT OF PUBLIC WORKS
AND WATERSHED MANAGEMENT DIVISION

Robert ... 5/3/00
CHIEF, BUREAU OF ENGINEERING

... 5-3-00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



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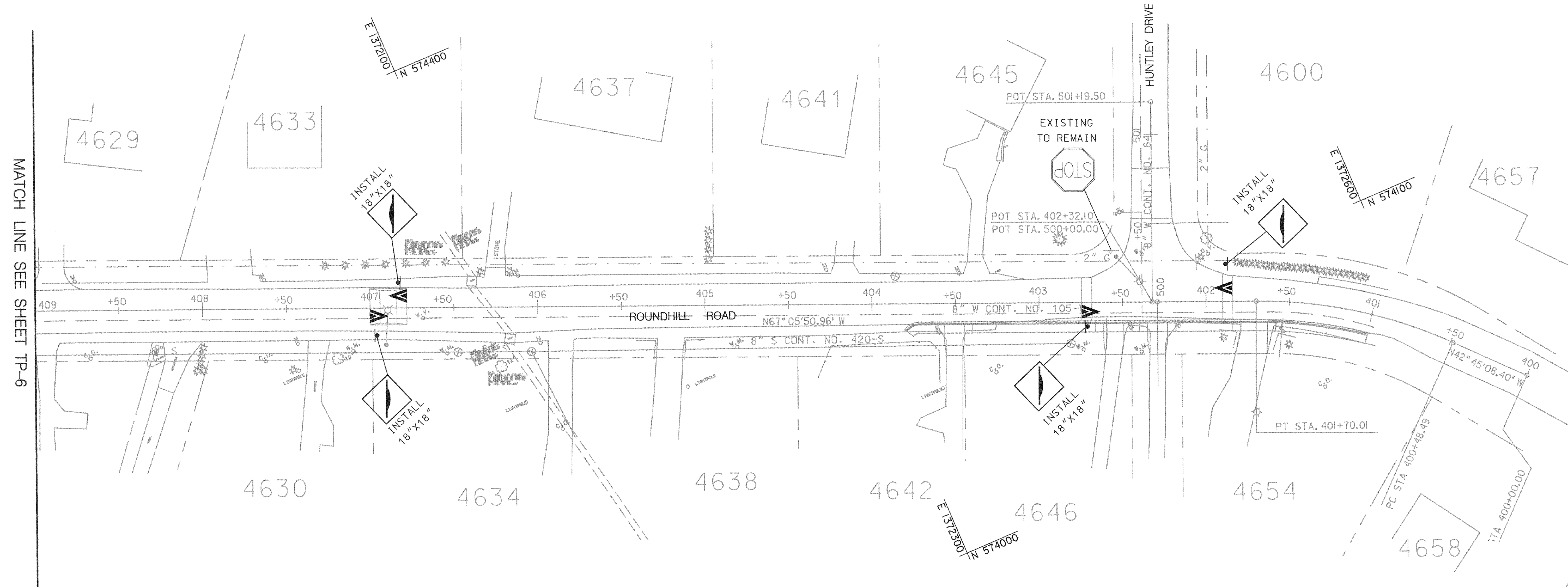
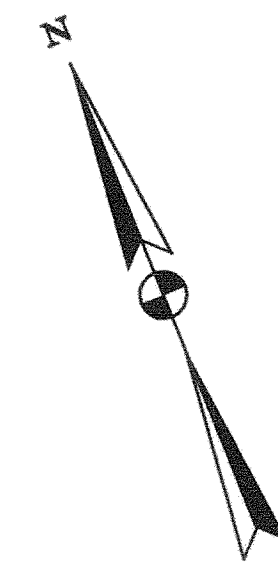
CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN

SHEET 55 OF 63



MATCH LINE SEE SHEET TP-6

SIGNING AND PAVEMENT MARKING PLAN
SCALE: 1" = 30'

SHEET NO. TP-7 OF TP-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Lewis 5/3/00
DATE
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Robert J. Deane 5/3/00
DATE
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



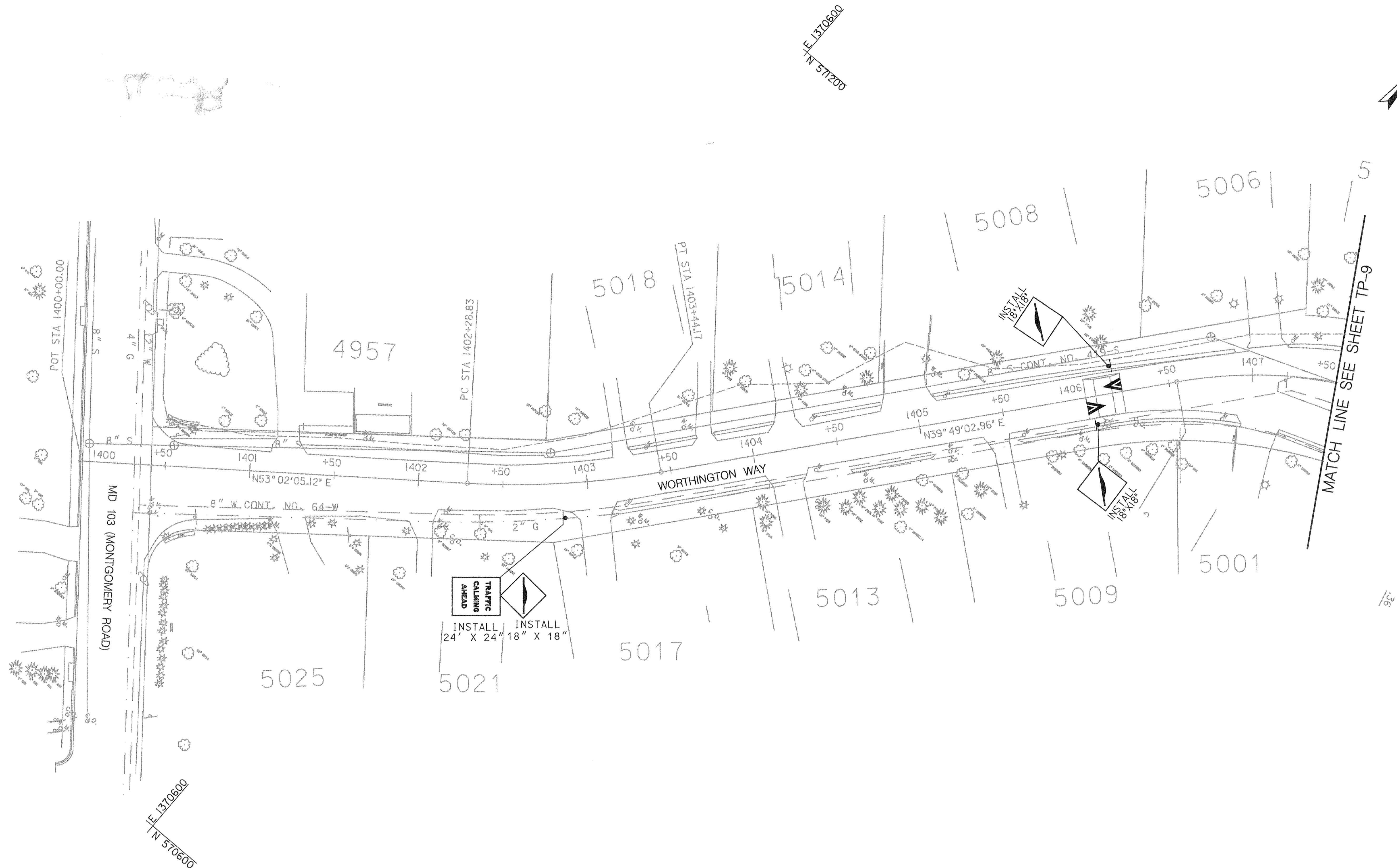
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CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

**PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS**

SCALE AS SHOWN
SHEET 56 OF 63



SIGNING AND PAVEMENT MARKING PLAN

SCALE: 1"=30'

SHEET NO. TP-8 OF TP-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James H. ... 5/3/00
DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS
AND WATERSHED MANAGEMENT DIVISION

Robert ... 5/3/00
CHIEF, BUREAU OF ENGINEERING

Leon ... 5-3-00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



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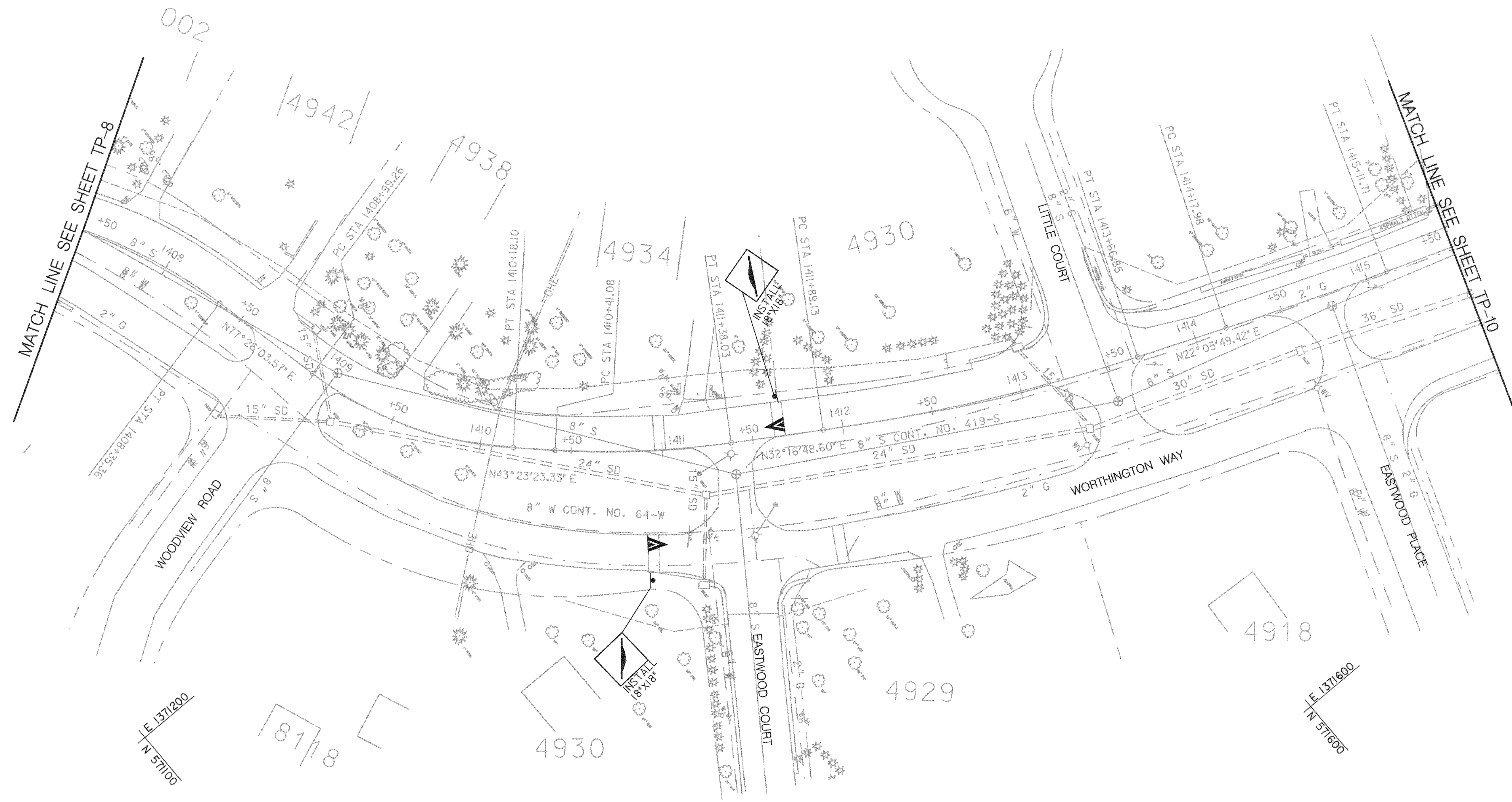
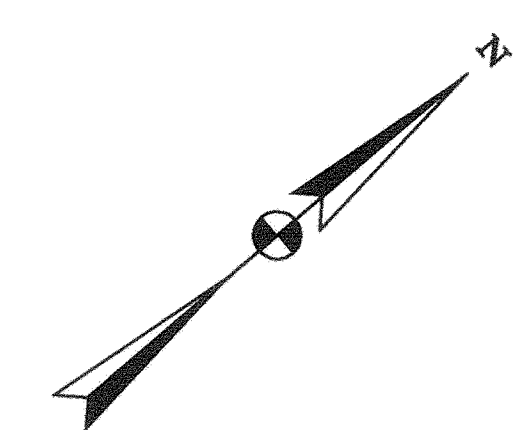
CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN

SHEET 51 OF 63



SIGNING AND PAVEMENT MARKING PLAN
SCALE: 1" = 30'

SHEET NO. TP-9 OF TP-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Jan P. [Signature] 5/3/00
DATE

[Signature] 5/3/00
DATE

CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

Dewberry & Davis
Architects
Engineers
Planners
Surveyors

3120 Timanus Lane, Suite 211
Baltimore, Maryland 21244
Tel. 410-265-9500
Fax. 410-265-8875



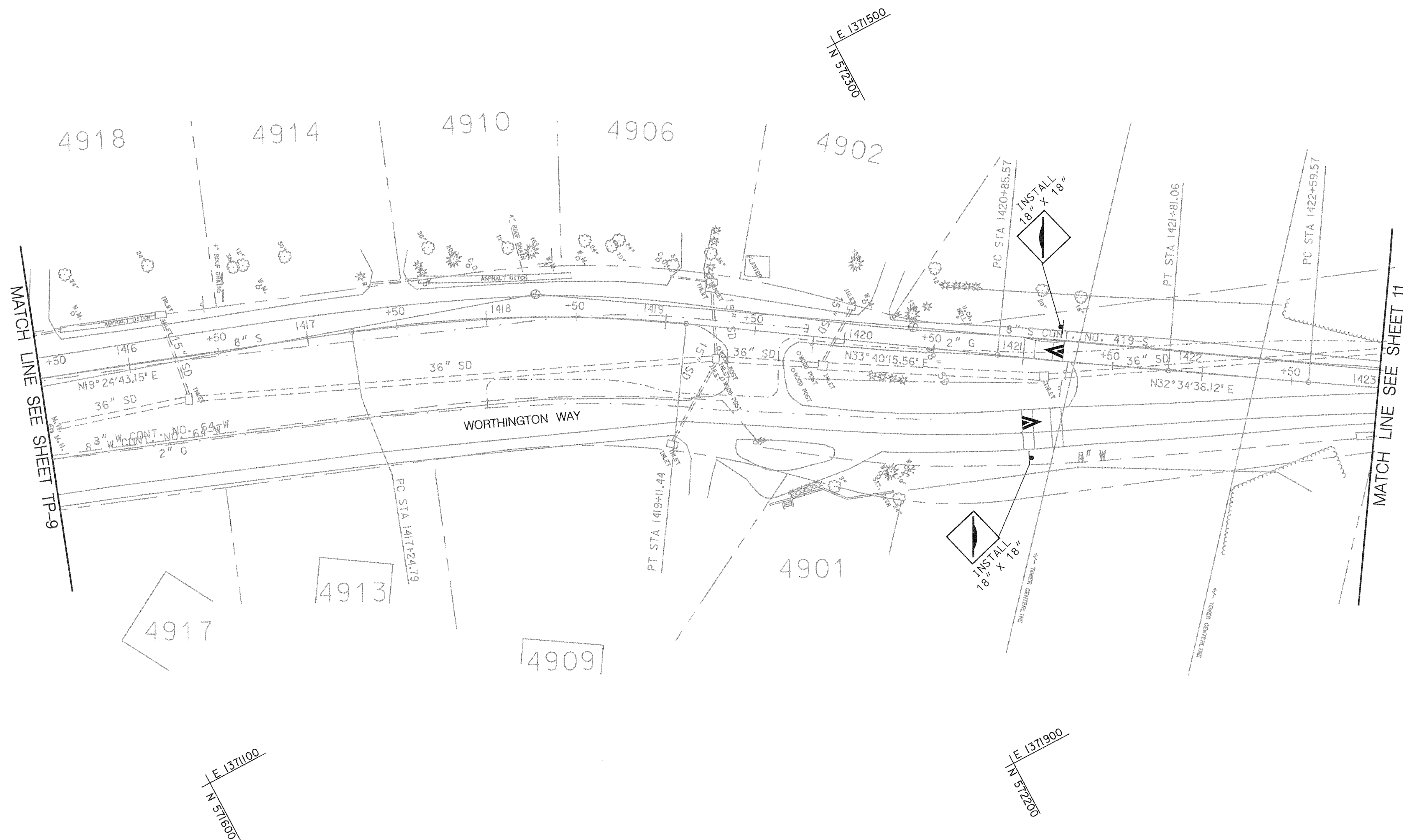
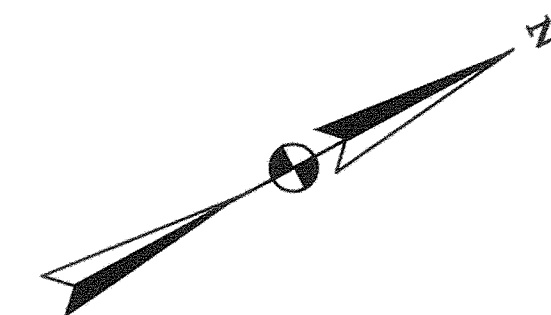
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CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

**PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS**

SCALE AS SHOWN
SHEET 58 OF 63



SIGNING AND PAVEMENT MARKING PLAN

SCALE: 1"=30'

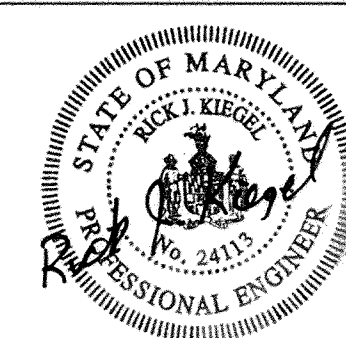
SHEET NO. TP-10 OF TP-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Samuel... 5/3/00
CHIEF, BUREAU OF ENGINEERING

... 5-3-00
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis
Architects 3120 Timanus Lane, Suite 211
Engineers Baltimore, Maryland 21244
Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



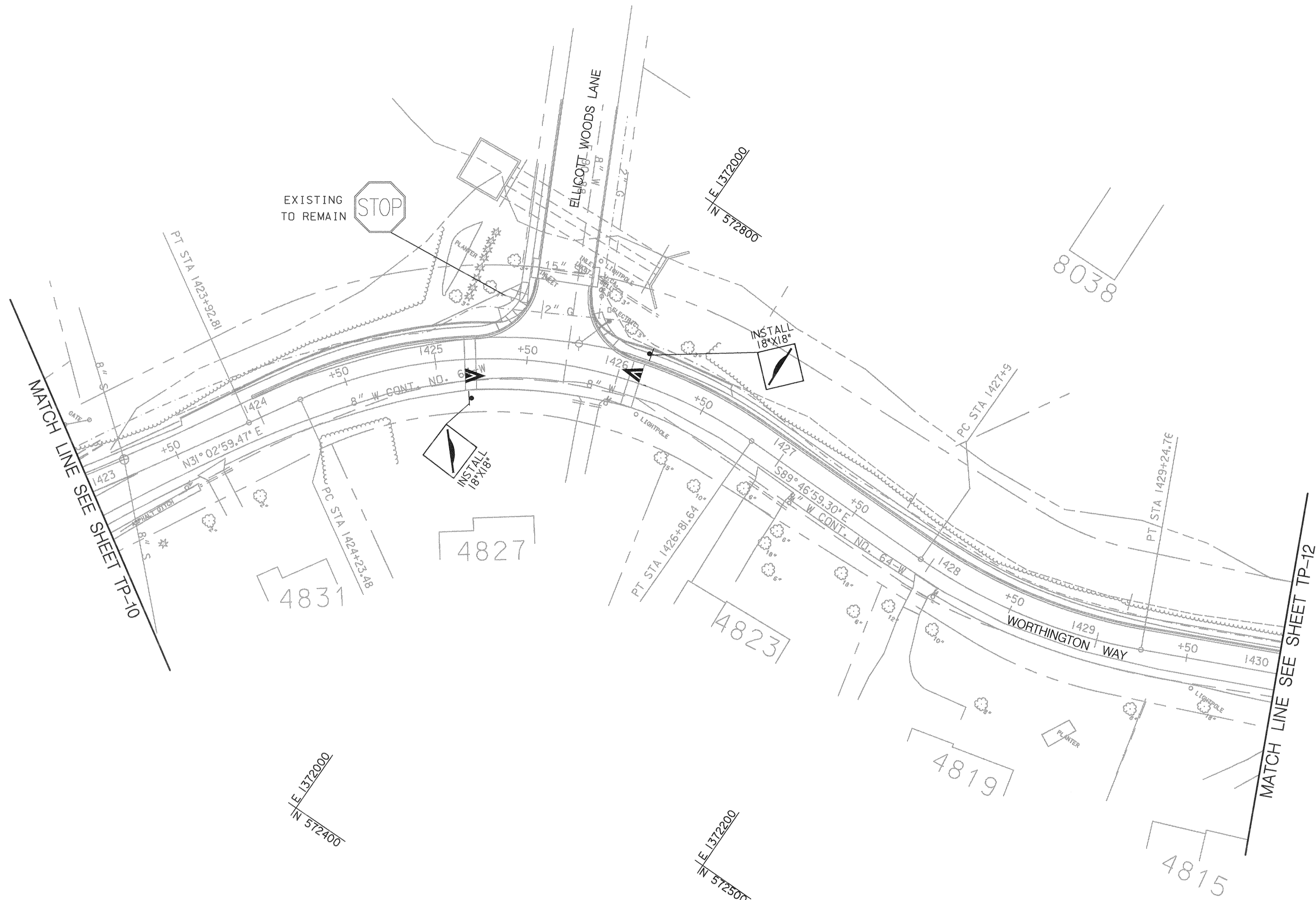
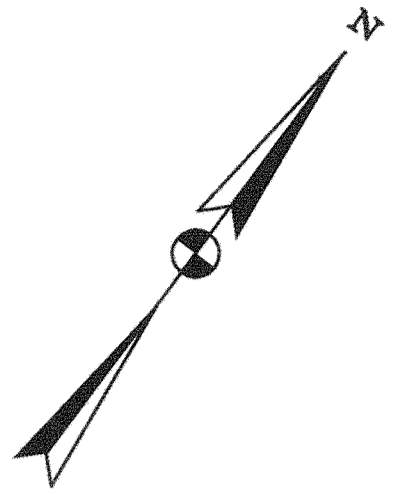
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CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 59 OF 63



SIGNING AND PAVEMENT MARKING PLAN

SCALE: 1" = 30'

SHEET NO. TP-11 OF TP-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Allen 5/3/00
DATE

Robert J. Sporn 5/3/00
DATE

Sal Calca 5/3/00
DATE

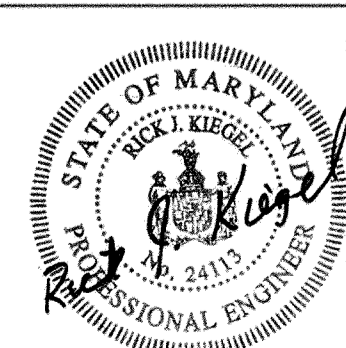
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DIVISION

CHIEF, BUREAU OF ENGINEERING

CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

Architects 3120 Timanus Lane, Suite 211
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Planners Tel. 410-265-9500
Surveyors Fax. 410-265-8875



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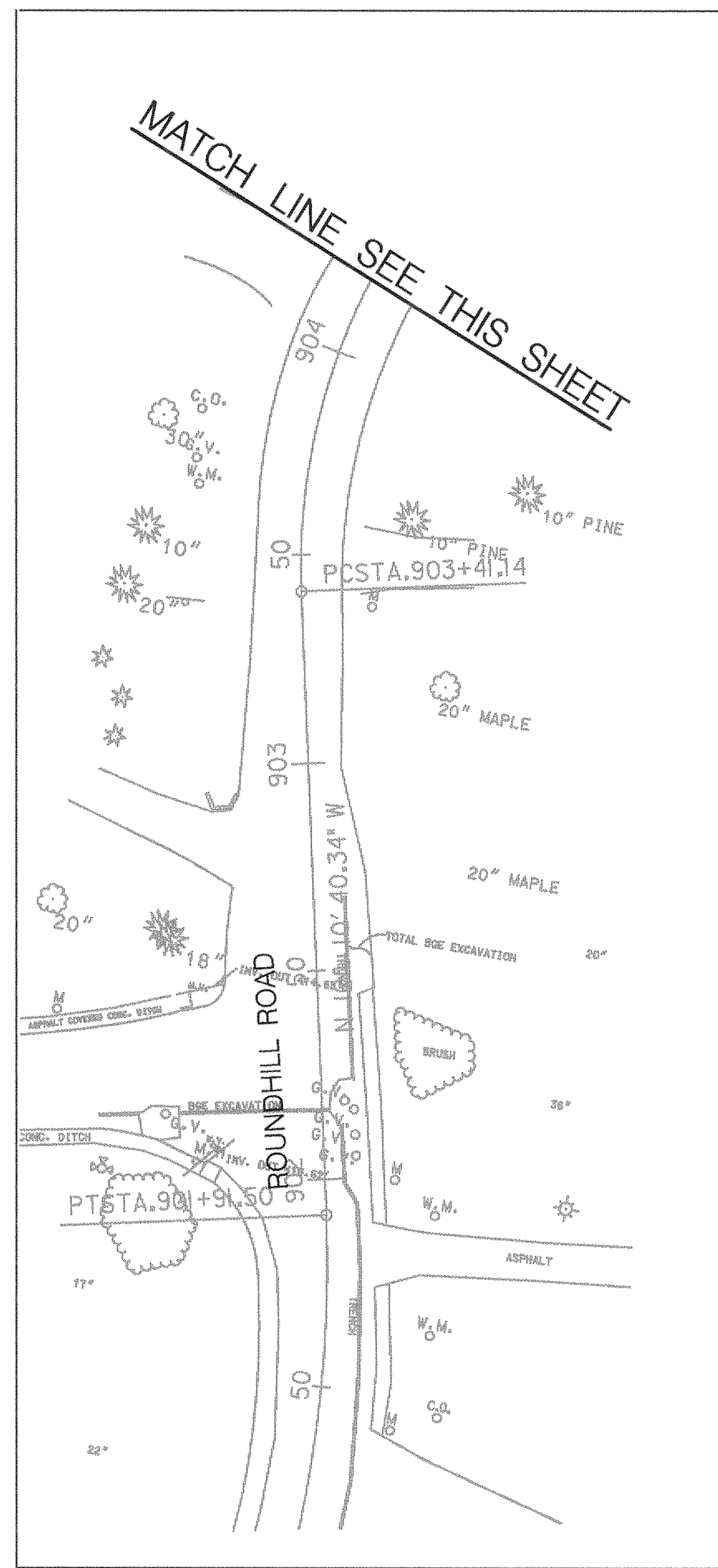
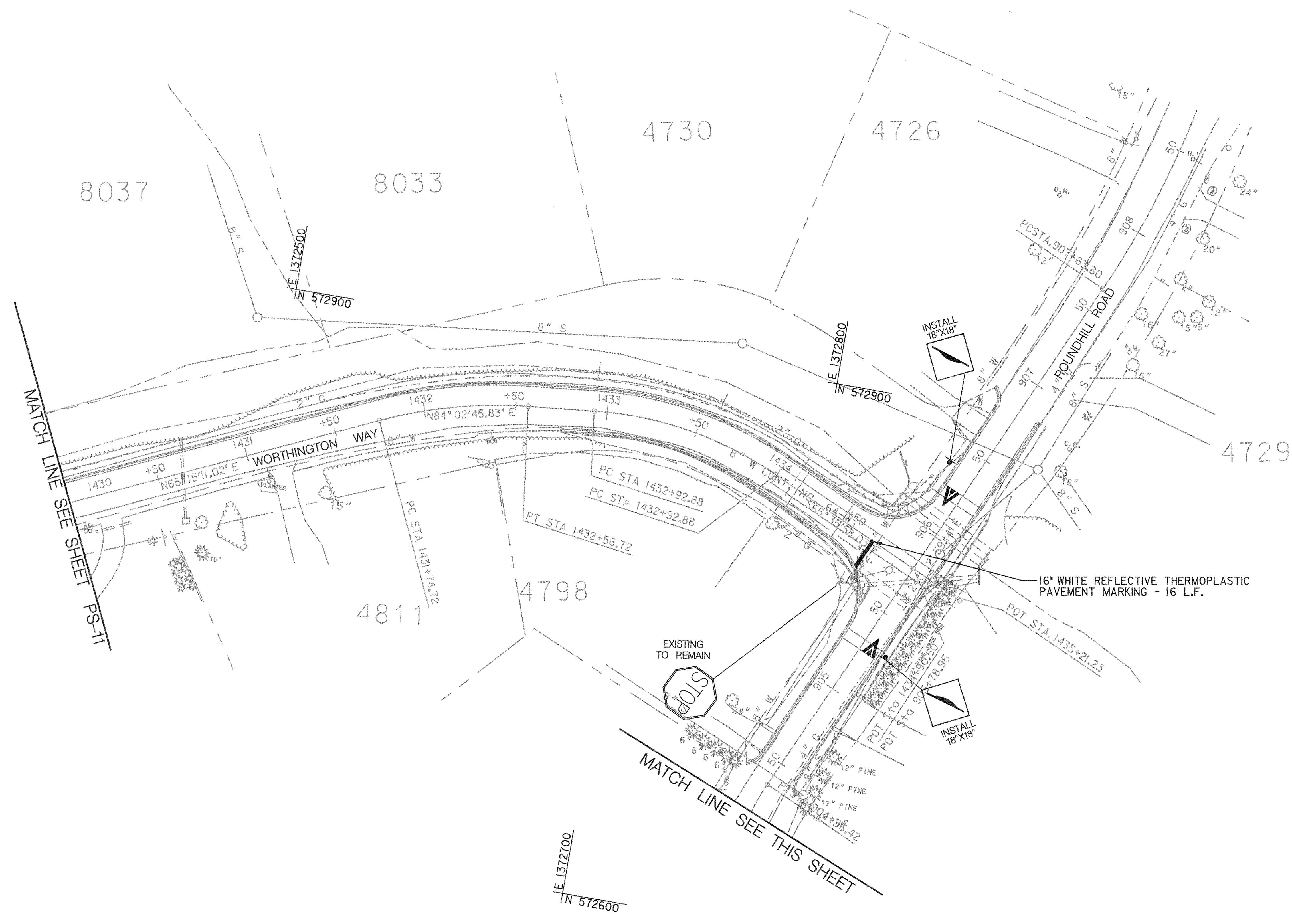
CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN

SHEET 60 OF 63



SIGNING AND PAVEMENT MARKING PLAN
SCALE: 1" = 30'

SHEET NO. TP-12 OF TP-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Ram M. Shaw 5/3/00
DATE
5/3/00

Robert J. Spon 5/3/00
DATE
5-3-00

Robert M. Duke 5-3-00
DATE

DEPARTMENT OF PUBLIC WORKS
CHIEF, TRANSPORTATION PROJECTS
AND WATERSHED MANAGEMENT DIVISION

CHIEF, BUREAU OF ENGINEERING
CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

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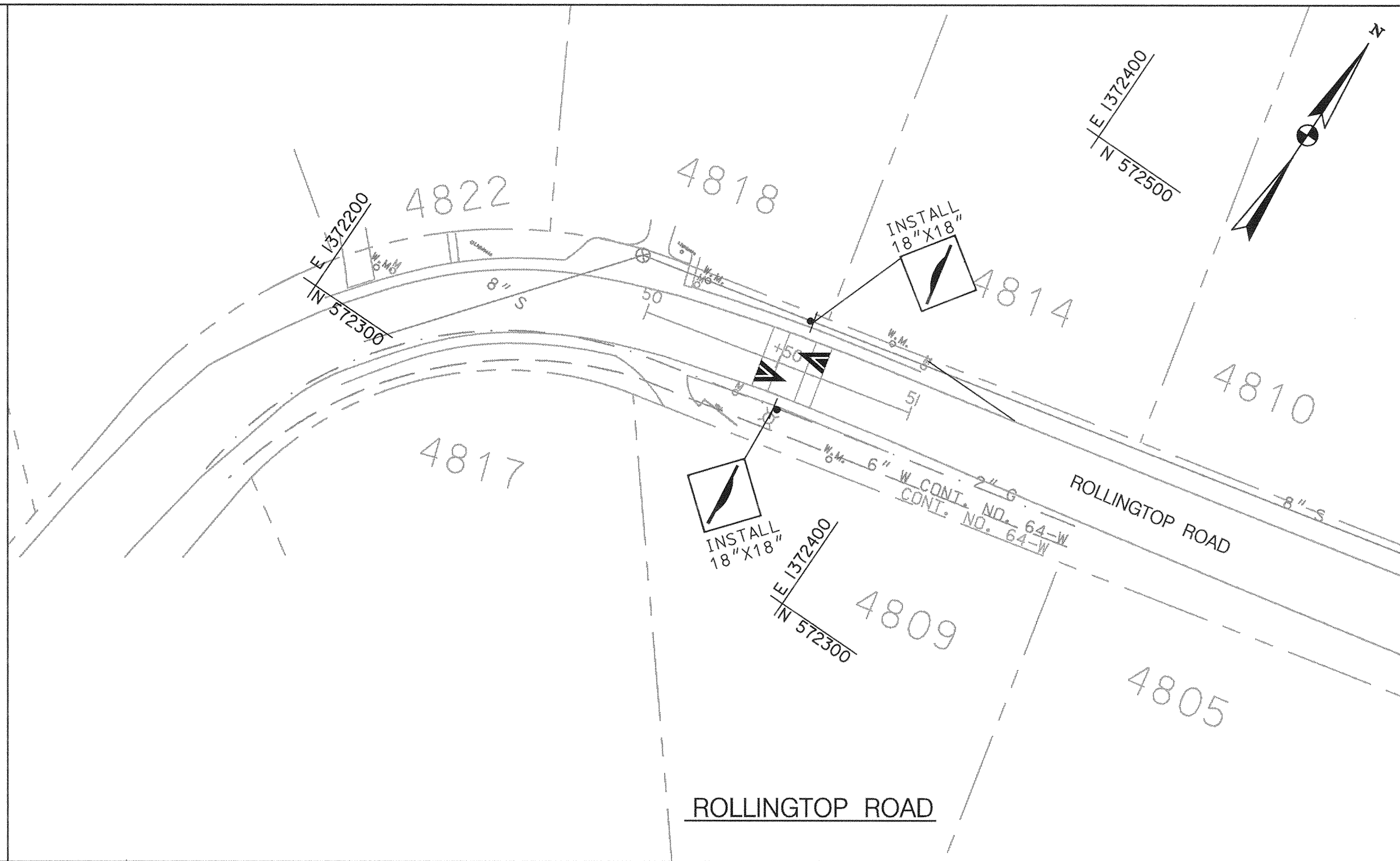
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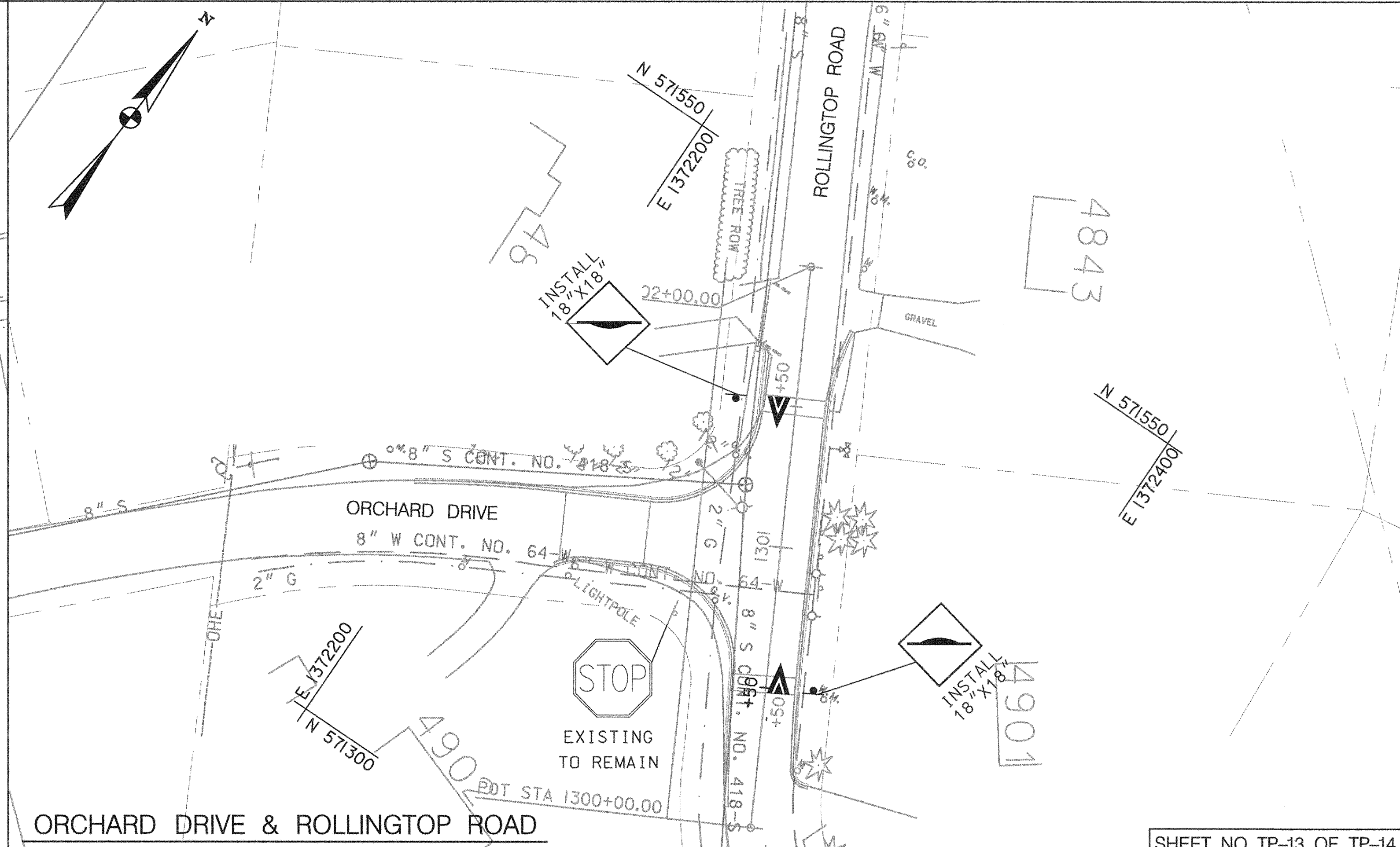
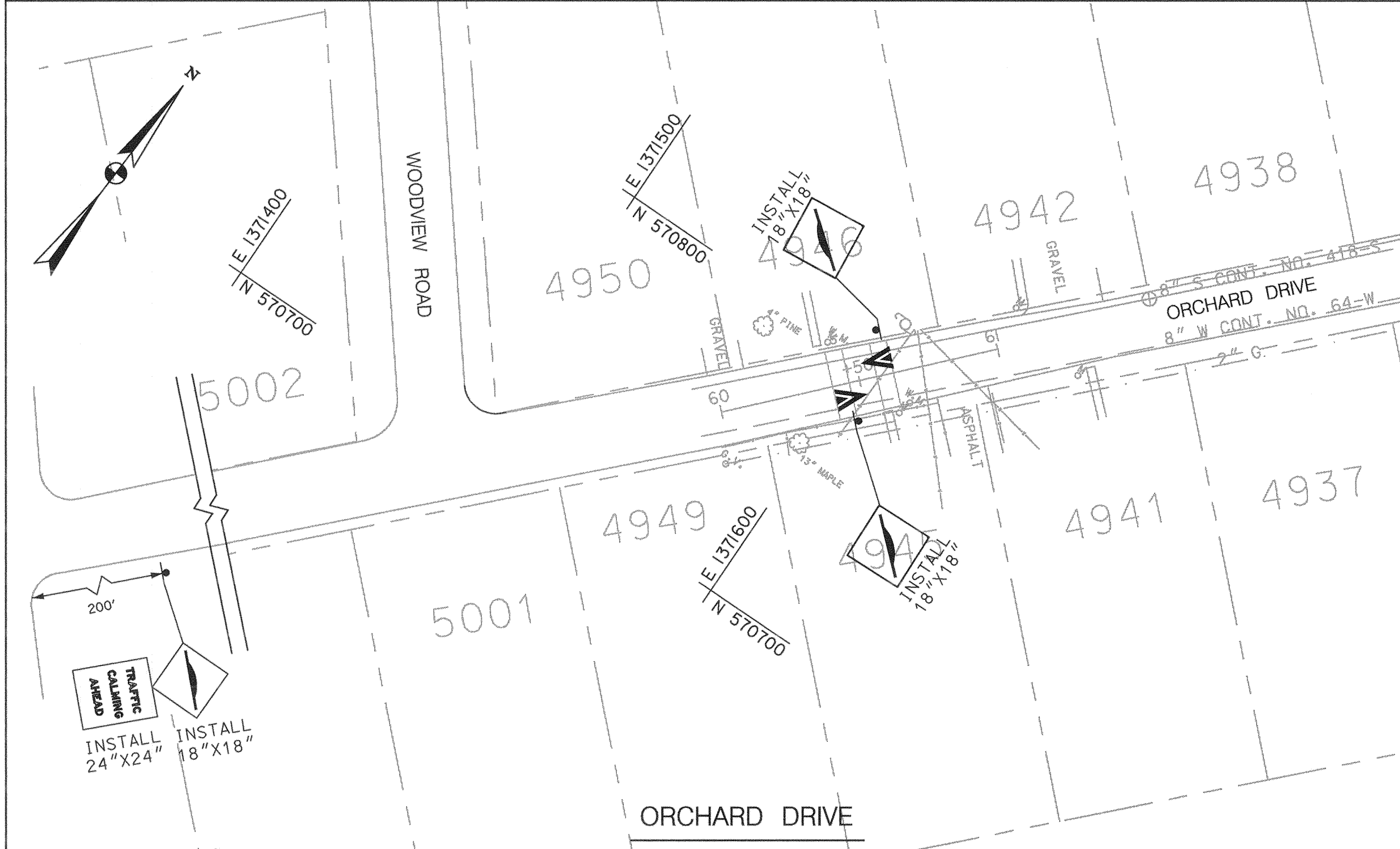
30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 61 OF 63



SIGNING AND PAVEMENT MARKING PLAN
SCALE: 1"=30'



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 5/3/00
DATE

[Signature] 5/3/00
DATE

CHIEF, TRANSPORTATION PROJECTS
AND WATERSHED MANAGEMENT DIVISION

CHIEF, BUREAU OF ENGINEERS

CHIEF, BUREAU OF HIGHWAYS

Dewberry & Davis

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	REVISION
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CAPITAL PROJECT NO.
J-4158

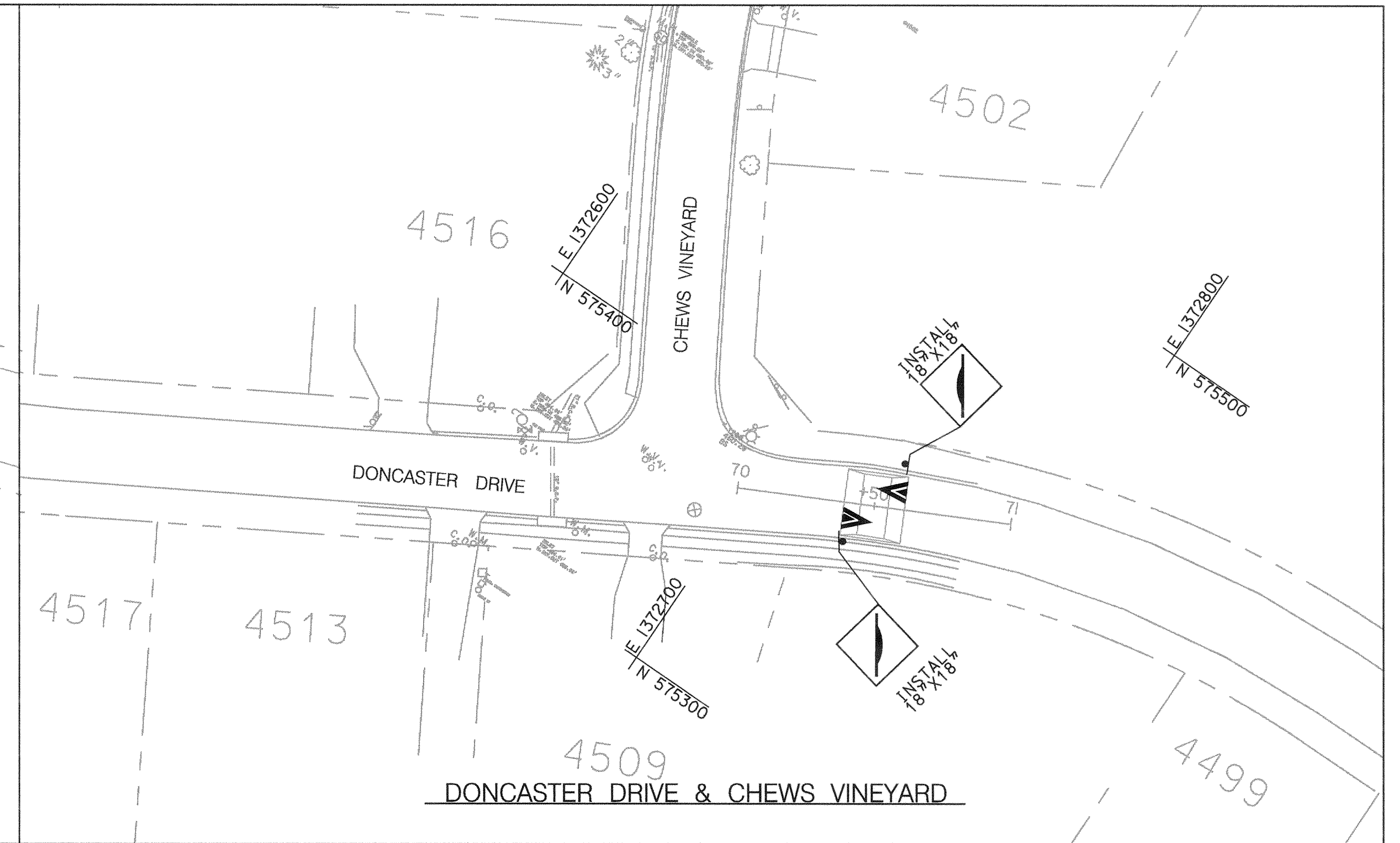
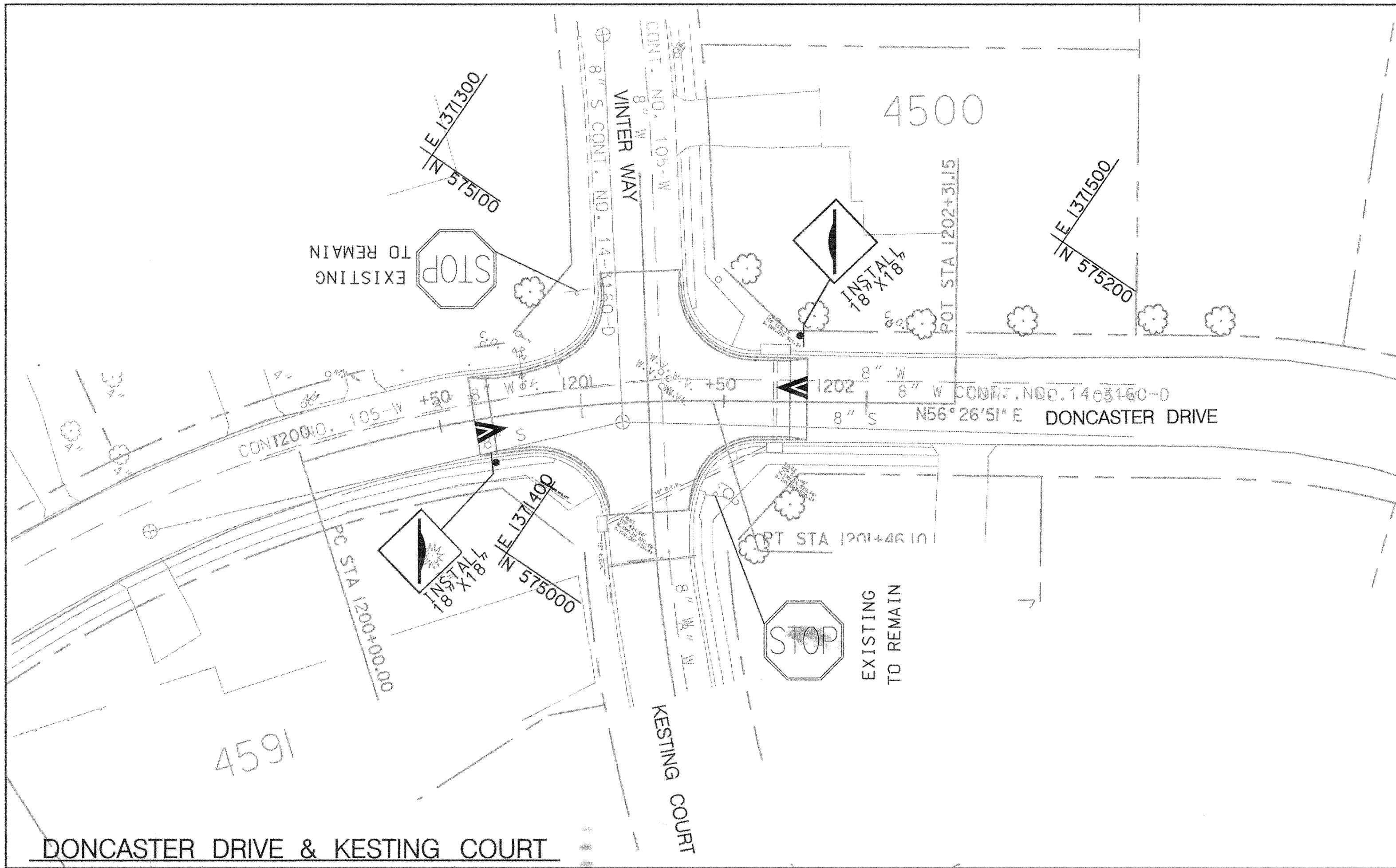
30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN

SHEET 62 OF 63

SHEET NO. TP-13 OF TP-14



SIGNING AND PAVEMENT MARKING PLAN

SCALE: 1" = 30'

SHEET NO. TP-14 OF TP-14

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

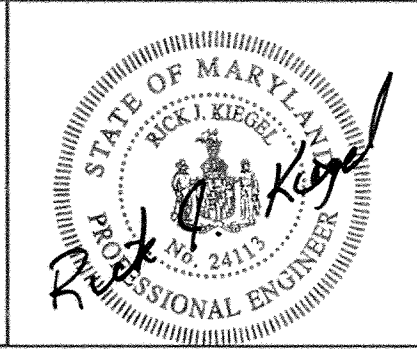
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[Signature] 5/3/00
DATE

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AND WATERSHED MANAGEMENT DIVISION

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CAPITAL PROJECT NO.
J-4158

30' SCALE MAP NO.: _____ DATE: _____

PHASE 1
WORTHINGTON AREA
VEHICULAR ACCESS

SCALE AS SHOWN
SHEET 63 OF 63