INDEX OF SHEETS

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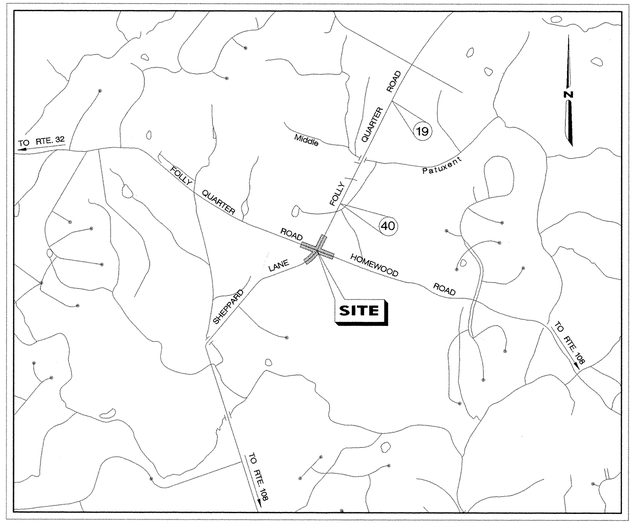
3	TYPICAL SECTIONS AND DETAILS
4	SEDIMENT AND EROSION CONTROL PLAN
5–6A	SEDIMENT AND EROSION CONTROL DETAILS AND NOTES
7	SIGNING AND MARKING PLAN
8	TRAFFIC CONTROL PLAN
9	TRAFFIC CONTROL DETAILS AND NOTES
10	ROADWAY PROFILES
11–14	ROADWAY CROSS SECTIONS
15	GEOMETRY PLAN

THE CONTRACTOR IS ALERTED TO THE FACT THAT FOLLY QUARTER ROAD AND SHEPPARD LANE ARE SCENIC ROADS AND AS SUCH THE CLEANING AND GRUBBING WORK AND GRADING WORK SHALL BE MINIMIZED.



LOCATION MAP
SCALE 1" = 2000'

GENERAL NOTES

1. ALL INFORMATION AND DETAILS ON THESE DRAWINGS SHALL BE CONSTRUCTED AS PER THE PLANS OR AS DIRECTED BY THE HOWARD COUNTY ENGINEER.
2. ALL STATIONING AND DIMENSIONING ARE TO BE FIELD VERIFIED BY THE CONTRACTOR.
3. STORM DRAINAGE SLOPES ARE TO BE AS SHOWN ON THE PLANS OR AS DIRECTED BY HOWARD COUNTY ENGINEER.
4. APPROXIMATE LOCATIONS 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. THE 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
   BALTIMORE GAS & ELECTRIC CO. – ELECTRIC DISTRIBUTION 410–291–3096
   VERIZON – TELECOMMUNICATIONS 410–224–9500
   COMCAST CABLE – 410–461–0444
   HOWARD COUNTY D.P.W. 410–313–4900

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

   A. PROPOSED/EXISTING RIGHT–OF–WAY.
   B. UTILITY RELOCATION.
   C. MAINTENANCE OF TRAFFIC DURING CONSTRUCTION.
   D. EROSION /SEDIMENT CONTROL CERTIFICATION AND PERMIT.
   E. HORIZONTAL /VERTICAL SURVEY CONTROL.
   F. GRADING PERMIT.

5. SEE HOWARD COUNTY STANDARD DETAILS NO'S G–1.01 AND G–1.02 FOR STANDARD SYMBOLS.
6. HORIZONTAL COORDINATES ARE BASED ON MD NAD 83/91 DATUM AND VERTICAL ELEVATIONS ARE BASED ON NGVD 1929 ELEVATIONS, TRANSFERRED FROM HOWARD COUNTY CONTROL STATIONS 0019 AND 0040.

   0019 N 580468.1280
   E 1333675.5180
   ELEV. 385.842

   0040 N 577270.5840
   E 1333002.5750
   ELEV. 365.305

7. MAINTENANCE OF TRAFFIC FOR FOLLY QUARTER ROAD, SHEPPARD LANE AND HOMEWOOD ROAD SHALL BE STAGED IN THREE PARTS WITH TRAFFIC CONTROL FOR ALL THREE STAGES. (SEE SHEETS 8 AND 9) TEMPORARY APPROACH SIGNS WILL REMAIN IN EFFECT THROUGHOUT THE DURATION OF THE WORK. THERE ARE NO ACCESS DRIVES WITH THE WORK ZONE TO BE MAINTAINED BY THE CONTRACTOR.
8. A STAGING AND STOCKPILE AREA WILL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE HOWARD COUNTY ENGINEER.
9. TOPOGRAPHIC SURVEY INFORMATION BASED ON FIELD SURVEY PERFORMED BY A. MORTON THOMAS AND ASSOCIATES DATED 9/13/00. THREE HORIZONTAL AND VERTICAL CONTROL POINTS (B.M. #1, 2 AND #3 WERE SET AT THE SITE.

   THE COUNTY WILL CLOSE THE FOLLY QUARTER ROAD NORTH APPROACH DURING THE CONSTRUCTION OF THE INTERSECTION.

CAPITAL PROJECT NO. J–4164

Folly Quarter Road at Sheppard Lane and Homewood Road

"ROUND–ABOUT INTERSECTION"

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

ON–SITE BENCH MARKS

B.M. #1
N 576566.9199 E 1331651.4376 ELEV. 402.066
STEEL REBAR WITH PLASTIC CAP

B.M. #2
N 576383.2965 E 1331456.8059 ELEV. 400.321
STEEL REBAR WITH PLASTIC CAP

B.M. #3
N 576631.6305 E 1331394.2846 ELEV. 392.179
STEEL REBAR WITH PLASTIC CAP

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. Natural Resources Conservation Service — Date 9/27/02

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

Howard Soil Conservation District — Date 9/27/02

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

CHIEF, DIVISION OF TRANSPORTATION AND SPECIAL PROJECTS — DATE 9/27/02

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 9/27/02
CHIEF, BUREAU OF ENGINEERING — DATE 9/27/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 9/27/02
CHIEF, BUREAU OF HIGHWAYS — DATE 9-27-02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99–393.027

BOARD OF PROFESSIONAL ENGINEERS — No. 23505 — PATRICK A. CRAHAN — STATE OF MARYLAND — 9/10/02

DES:	F.A.C.
DRN:	J.N.W.
CHK:	F.A.C.
DATE:	09/02

BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J–4164

600' SCALE MAP NO. _____ DATE: _____

TITLE SHEET
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 1 OF 15

FILE: c:\cadd_jobs\99-393.027\ps01folly.dgn
DATE: 7-Aug-02 20:30

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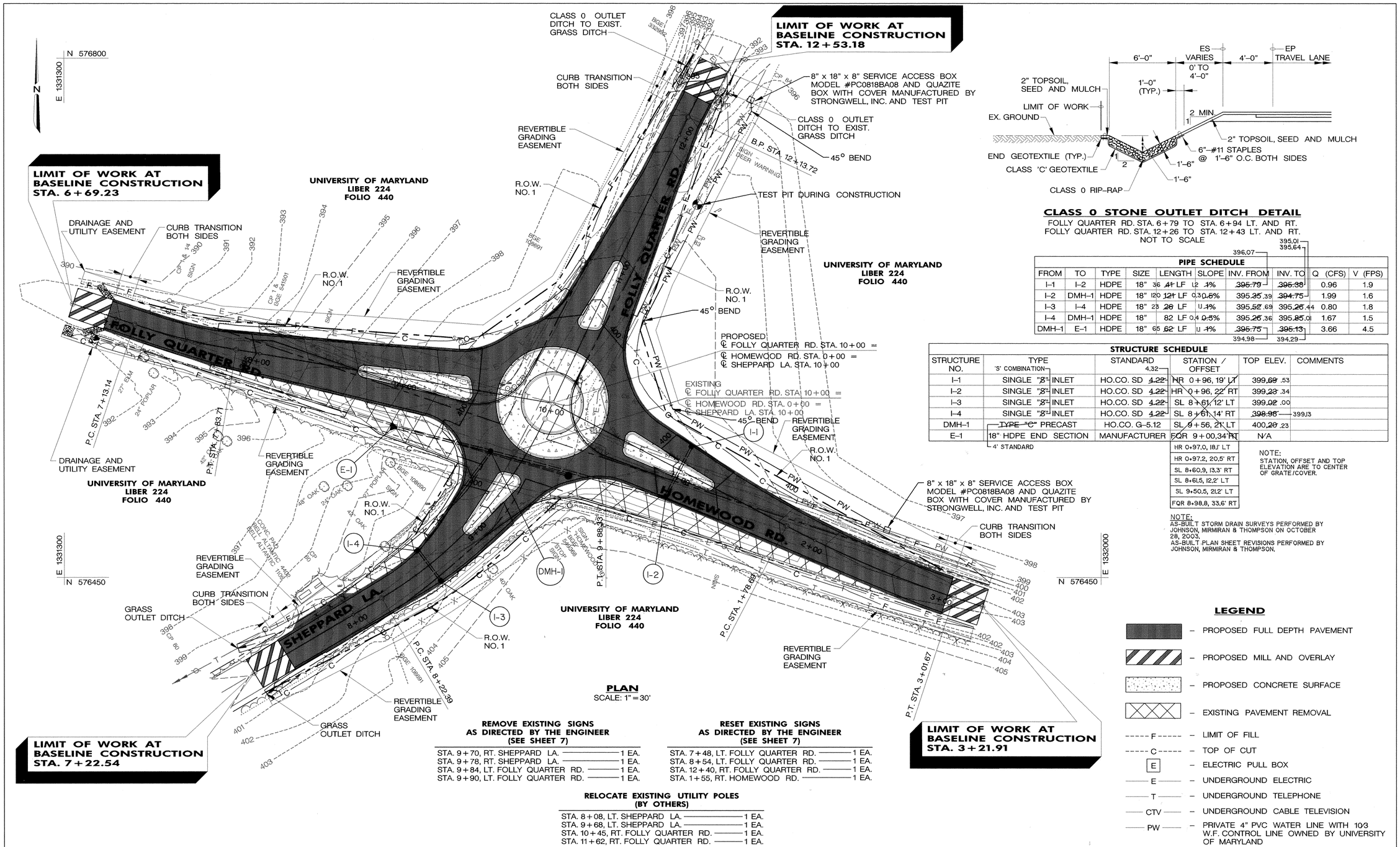

CLASS 0 STONE OUTLET DITCH DETAIL

FOLLY QUARTER RD. STA. 6+79 TO STA. 6+94 LT. AND RT.
FOLLY QUARTER RD. STA. 12+26 TO STA. 12+43 LT. AND RT.
NOT TO SCALE

PIPE SCHEDULE

FROM	TO	TYPE	SIZE	LENGTH	SLOPE	INV. FROM	INV. TO	Q (CFS)	V (FPS)
I-1	I-2	HDPE	18"	36 41 LF	1.2 1%	395.79 396.07	395.38 395.01	0.96	1.9
I-2	DMH-1	HDPE	18"	120 121 LF	0.30.5%	395.35 .39	394.75 395.64	1.99	1.6
I-3	I-4	HDPE	18"	23 28 LF	1.0 1%	395.52 .69	395.26 .44	0.80	1.8
I-4	DMH-1	HDPE	18"	82 LF	0.4 0.5%	395.26 .36	395.85 .01	1.67	1.5
DMH-1	E-1	HDPE	18"	65 62 LF	1.0 1%	395.75 394.98	395.13 394.29	3.66	4.5

STRUCTURE SCHEDULE

STRUCTURE NO.	TYPE 'S' COMBINATION	STANDARD 4.32	STATION / OFFSET	TOP ELEV.	COMMENTS
I-1	SINGLE "S" INLET	HO.CO. SD 4.22	HR 0+96, 19' LT	399.69 .53	
I-2	SINGLE "S" INLET	HO.CO. SD 4.22	HR 0+96, 22' RT	399.23 .34	
I-3	SINGLE "S" INLET	HO.CO. SD 4.22	SL 8+61, 12' LT	399.02 .00	
I-4	SINGLE "S" INLET	HO.CO. SD 4.22	SL 8+61, 14' RT	398.98 399.13	
DMH-1	TYPE "C" PRECAST 4' STANDARD	HO.CO. G-5.12	SL 9+56, 21' LT HR 0+97.0, 18.1' LT HR 0+97.2, 20.5' RT SL 8+60.9, 13.3' RT SL 8+61.5, 12.2' LT SL 9+50.5, 21.2' LT FOR 8+98.8, 33.6' RT	400.20 .23	
E-1	18" HDPE END SECTION	MANUFACTURER	FOR 9+00.34 RT	N/A	

NOTE:
STATION, OFFSET AND TOP ELEVATION ARE TO CENTER OF GRATE/COVER.

NOTE:
AS-BUILT STORM DRAIN SURVEYS PERFORMED BY JOHNSON, MIRMIRAN & THOMPSON ON OCTOBER 28, 2003.
AS-BUILT PLAN SHEET REVISIONS PERFORMED BY JOHNSON, MIRMIRAN & THOMPSON.

REMOVE EXISTING SIGNS AS DIRECTED BY THE ENGINEER (SEE SHEET 7)

STA. 9+70, RT. SHEPPARD LA. ——— 1 EA.
STA. 9+78, RT. SHEPPARD LA. ——— 1 EA.
STA. 9+84, LT. FOLLY QUARTER RD. ——— 1 EA.
STA. 9+90, LT. FOLLY QUARTER RD. ——— 1 EA.

RESET EXISTING SIGNS AS DIRECTED BY THE ENGINEER (SEE SHEET 7)

STA. 7+48, LT. FOLLY QUARTER RD. ——— 1 EA.
STA. 8+54, LT. FOLLY QUARTER RD. ——— 1 EA.
STA. 12+40, RT. FOLLY QUARTER RD. ——— 1 EA.
STA. 1+55, RT. HOMEWOOD RD. ——— 1 EA.

RELOCATE EXISTING UTILITY POLES (BY OTHERS)

STA. 8+08, LT. SHEPPARD LA. ——— 1 EA.
STA. 9+68, LT. SHEPPARD LA. ——— 1 EA.
STA. 10+45, RT. FOLLY QUARTER RD. ——— 1 EA.
STA. 11+62, RT. FOLLY QUARTER RD. ——— 1 EA.

LEGEND

- PROPOSED FULL DEPTH PAVEMENT
- PROPOSED MILL AND OVERLAY
- PROPOSED CONCRETE SURFACE
- EXISTING PAVEMENT REMOVAL
- F — LIMIT OF FILL
- C — TOP OF CUT
- E — ELECTRIC PULL BOX
- E — UNDERGROUND ELECTRIC
- T — UNDERGROUND TELEPHONE
- CTV — UNDERGROUND CABLE TELEVISION
- PW — PRIVATE 4" PVC WATER LINE WITH 10③ W.F. CONTROL LINE OWNED BY UNIVERSITY OF MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 9/27/02
CHIEF, BUREAU OF ENGINEERING — DATE 9/27/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 9/27/02
CHIEF, BUREAU OF HIGHWAYS — DATE 9-27-02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99-393.027

BOARD OF PROFESSIONAL ENGINEERS — No. 23505 — PATRICK A. CARLSON — STATE OF MARYLAND
9/18/02

DES:	F.A.C.
DRN:	S.F.N.
CHK:	F.A.C.
DATE:	09/02

BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J-4164
600' SCALE MAP NO. _____ DATE: _____

PLAN SHEET
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 2 OF 15

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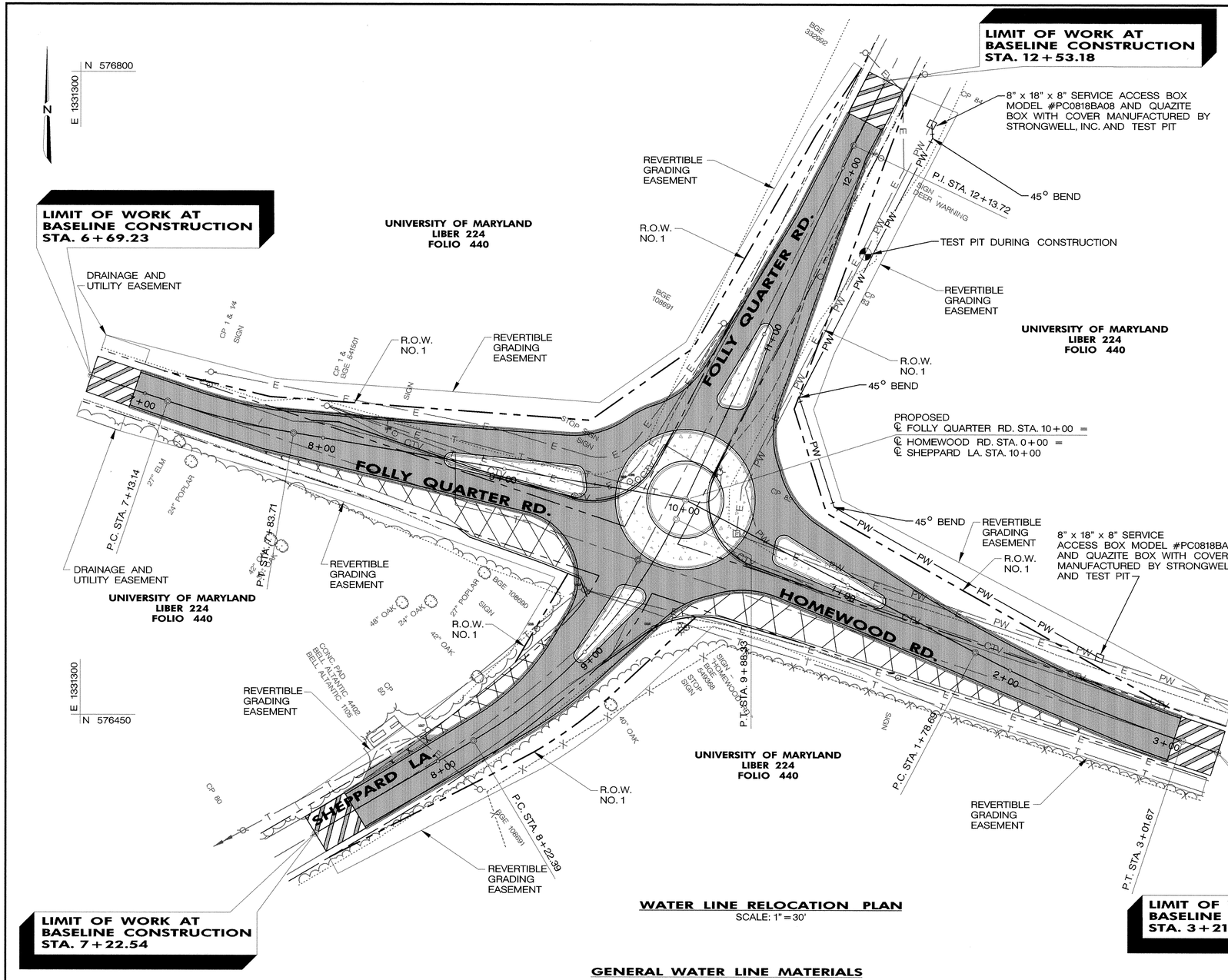


WATER LINE RELOCATION PLAN
SCALE: 1" = 30'

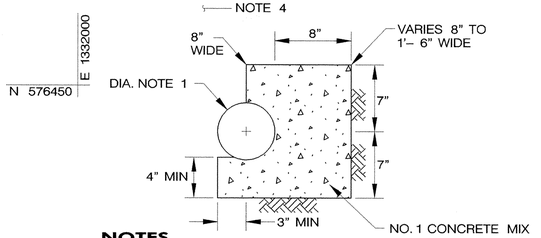
GENERAL WATER LINE MATERIALS

420 LF – 4" C–900 (DR–14) PVC
840 LF – 2" SCHEDULE 40 PVC CONDUITS
3 EA – 45° BENDS WITH THRUST BLOCKS
2 EA – 8"x18"x8" MODEL #PC0818BA08 QUAZITE BOXES WITH COVERS MANUFACTURED BY STRONGWELL, INC.

GENERAL NOTES

1. THE APPROXIMATE LOCATION OF ALL KNOWN EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING SERVICES AND TO MAINTAIN AN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED TO THESE UTILTES SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER ATTHE CONTRACTOR'S EXPENSE.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MD NAD 8391 DATUM.
3. ALL VERTICAL CONTROLS ARE BASED ON NGVD 1929 DATUM.
4. CLEAR ALL UNDERGROUND UTILITIES BY A MINIMUM OF 3' EITHER HORIZONTALLY OR VERICALLY.
5. THE LOCATION OF THE EXISTING PRIVATE WATER LINE WAS NOT LOCATED BY MISS UTILITY BUT IS BASED ON INFORMATION PROVIDED BY THE UNIVERSITY OF MARYLAND. THREE TEST PITS WILL BE DUG, ONE AT BOTH SERVICE BOX LOCATIONS AND ONE TO DETERMINE THE LOCATION OF THE EXISTING WATER LINE RELATIVE TO THE EXISTING UNDERGROUND ELECTRIC SERVICE. THE NEW WATER LINE SHALL BE PLACED A MINIMUM OF 3' FROM THE EXISTING WATER LINE AND 5' FROM THE ELECTRIC SERVICE.
6. FOR DETAILS NOT SHOWN ON THE DRAWINGS AND FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAIL FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
7. 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 UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.

   MISS UTILITY – 1–800–257–7777
   BALTIMORE GAS & ELECTRIC CO. – ELECTRIC DISTRIBUTION – 410–291–3096
   VERIZON – TELECOMMUNICATIONS – 410–224–9500
   COMCAST CABLE – 410–461–0444
   HOWARD COUNTY D.P.W. – 410–313–4900
9. THE TOP OF THE NEW WATER MAIN WILL HAVE A MINIMUM OF 3'– 6" COVER UNLESS OTHERWISE NOTED.
10. ALL BENDS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE DETAILS PROVIDED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
11. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM. THE SYSTEM WILL BE SHUT DOWN BY THE UNIVERSITY OF MARYLAND AT THE APPROPRIATE TIME.
12. TOPOGRAPHY WAS PROVIDED BY A. MORTON THOMAS AND ASSOCIATES SEPTEMBER 13, 2000.
13. LENGTH OF OPEN TRENCH IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH WILL BE BACKFILLED AND STABILIZED IN ONE WORKDAY, WHICHEVER IS SHORTER.
14. THE ABUTTING PRIVATE UTILITY COMPANIES MAY RELOCATE THEIR AERIAL AND UNDERGROUND LINES PRIOR TO THE RELOCATION OF THE WATER LINE. CONTACT THE COUNTY AND UTILITY COMPANIES FOR PLANS OF THEIR NEW LOCATIONS



NOTES

1. 4" C–900 (DR–14) PVC PIPE
2. BUTTRESS MATERIALS, LABOR AND EQUIPMENT COST WILL BE PART OF THE PIPE COSTS. NO SEPARATE PAYMENT WILL BE MADE.
3. PIPE TENCHING, BEDDING AND BACKFILL WILL BE ACCORDING TO THE PIPE MANUFACTURERS REQUIREMENTS
4. PLACE TWO–2" SCHEDULE 40 PVC PIPES A MINIMUM OF 1'–0" ABOVE THE 4" PIPE

THRUST BLOCK DETAIL
SCALE: 1" = 30'

LEGEND

- PROPOSED CONSTRUCTION
- EXISTING PAYMENT TO BE REMOVED
- PROPOSED RIGHT OF WAY
- REVERTIBLE EASEMENT
- PW – PROPOSED 4" C–900 (DR–14) PVC WATER LINE OWNED BY THE UNIVERSITY OF MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 9/20/02
CHIEF, BUREAU OF ENGINEERING — DATE 9/27/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 9/27/02
CHIEF, BUREAU OF HIGHWAYS — DATE 9-27-02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99–393.027

BOARD OF PROFESSIONAL ENGINEERS No. 23508 — PATRICK A. CARNEY — STATE OF MARYLAND — 9/12/02

DES: F.A.C.
DRN: C.D.F.
CHK: F.A.C.
DATE: 09/02

BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J–4164
600' SCALE MAP NO. _____ DATE: _____

WATER LINE RELOCATION PLAN, DETAIL & NOTES
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN
SHEET 2B OF 15

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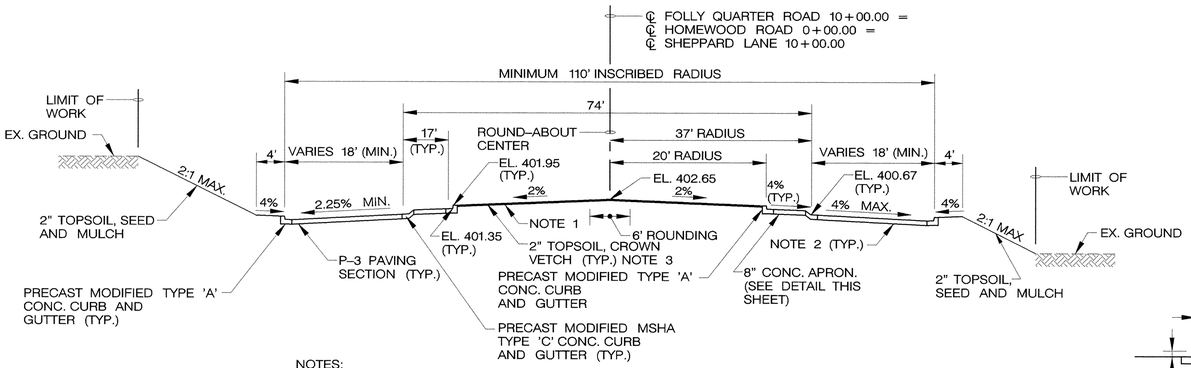
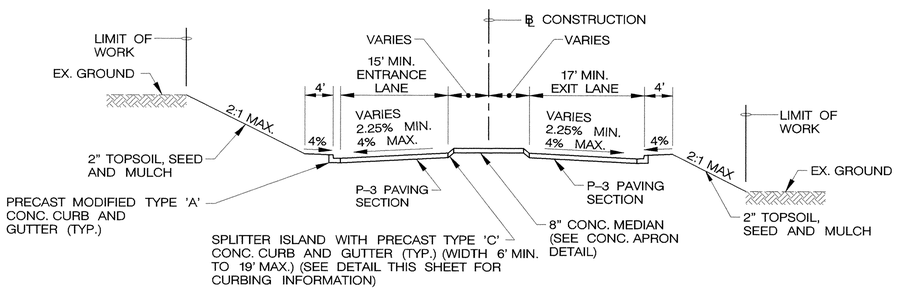


NOTES:

1. BREAK UP EXISTING BITUMINOUS CONCRETE INTO PIECES NO LARGER THAN 6" MAX, UNDER THE ROUND–ABOUT ISLAND AND CONCRETE APRON, FINE GRADE IN–PLACE. EMBANK WITH COMMON BORROW AND COMPACT.
2. REMOVE THE EXISTING PAVEMENT ONLY UNDER ALL OF THE NEW ROUND–ABOUT PAVEMENT AS DIRECTED BY THE COUNTY. DO NOT REMOVE ANY EXISTING GRADED AGGREGATE BASE. EMBANK WITH COMPACTED COMMON BORROW TO REACH THE PROPOSED GRADE OVER THE G.A.B.
3. AT THE DIRECTION OF THE COUNTY THE TOPSOIL DEPTH MAYBE INCREASED AND OTHER LANDSCAPING MATERIALS PLACED IN THE ROUNDABOUT ISLAND

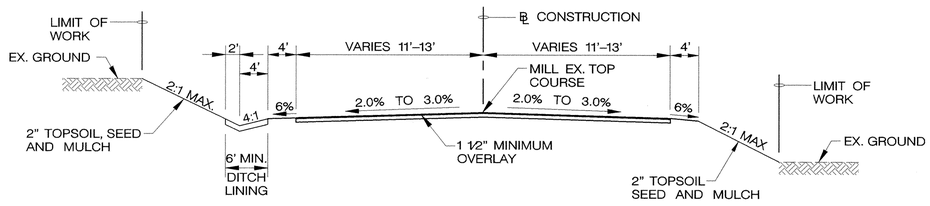
TYPICAL SECTION
NOT TO SCALE



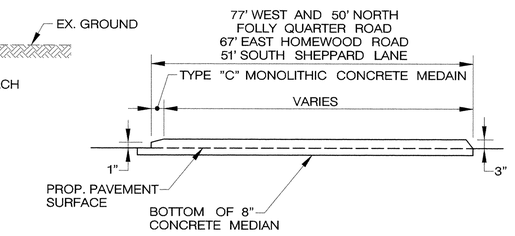
NOTES:

1. REMOVE THE EXISTING PAVEMENT ONLY UNDER THE SPLITTER ISLAND. GRADE BETWEEN THE EXISTING GRADED AGGREGATE AND THE BOTTOM OF THE SPLITTER ISLAND WITH GRADED AGGREGATE BASE.
2. REMOVE THE EXISTING PAVEMENT ONLY UNDER THE ENTRANCE AND EXIT LANES AS DIRECTED BY THE COUNTY. DO NOT REMOVE ANY EXISTING GRADED AGGREGATE BASE. EMBANK WITH COMPACTED COMMON BORROW TO REACH THE PROPOSED GRADES OVER THE G.A.B.

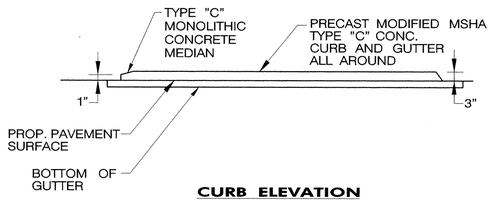
TYPICAL SECTION
NOT TO SCALE
EXCEL/DECEL LANE



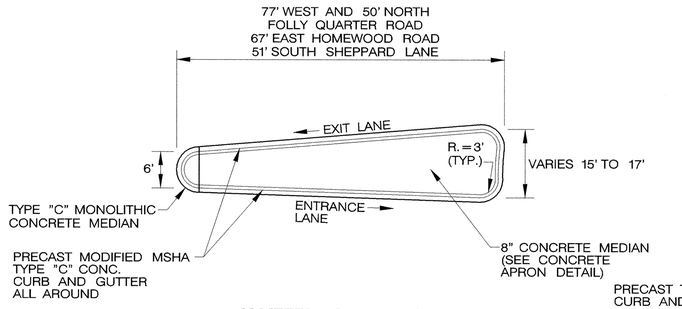
TYPICAL MILLING AND OVERLAY SECTION
NOT TO SCALE



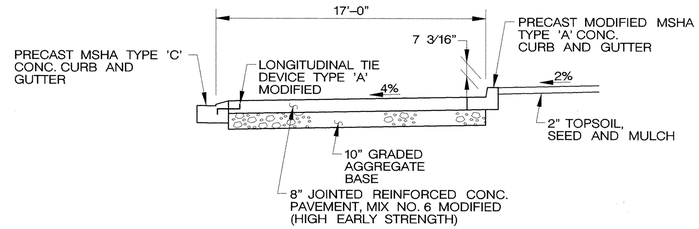
SPLITTER ISLAND ELEVATION
NOT TO SCALE



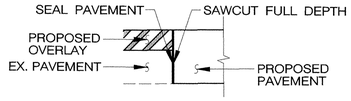
CURB ELEVATION
NOT TO SCALE



SPLITTER ISLAND PLAN
NOT TO SCALE



CONCRETE APRON DETAIL
NOT TO SCALE



TYPICAL PAVEMENT JOINT
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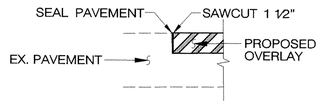
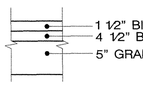
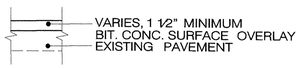


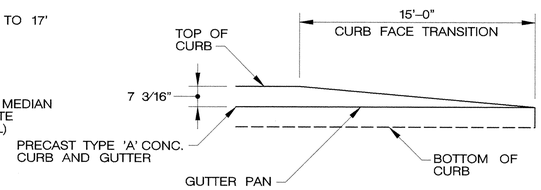
TYPICAL PAVEMENT JOINT
NOT TO SCALE



P–3 PAVING SECTION
NOT TO SCALE



PAVING OVERLAY SECTION
NOT TO SCALE



CURB AND GUTTER TRANSITION DETAIL
FOLLY QUARTER RD. STA. 6+94 TO STA. 7+09 LT. AND RT.
FOLLY QUARTER RD. STA. 12+03 TO STA. 12+28 LT. AND RT.
HOMEWOOD RD. STA. 2+72 TO STA. 2+97 LT. AND RT.
SHEPPARD LA. STA. 7+48 TO STA. 7+73 RT.
DRIVEWAY AT STA. 7+99 TO 8+14 LT. EXTEND CURB AND GUTTER TO STA 7+48 LT AS A DROP SECTION
NOT TO SCALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 9/27/02
CHIEF, BUREAU OF ENGINEERING — DATE 9/27/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 9/27/02
CHIEF, BUREAU OF HIGHWAYS — DATE 9-27-02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99–393.027

BOARD OF PROFESSIONAL ENGINEERS — No. 23501 — FREDERICK A. CARLSON — STATE OF MARYLAND — 9/18/02

DES: F.A.C.
DRN: J.N.W.
CHK: F.A.C.
DATE: 09/02

BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J–4164
600' SCALE MAP NO. _____ DATE: _____

TYPICAL SECTIONS AND DETAILS
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN
SHEET 3 OF 15

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ENGINEER'S CERTIFICATE

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

Frederick A. Carivan 9/18/02

FREDERICK A. CARIVAN, P.E. DATE

OWNER'S CERTIFICATE

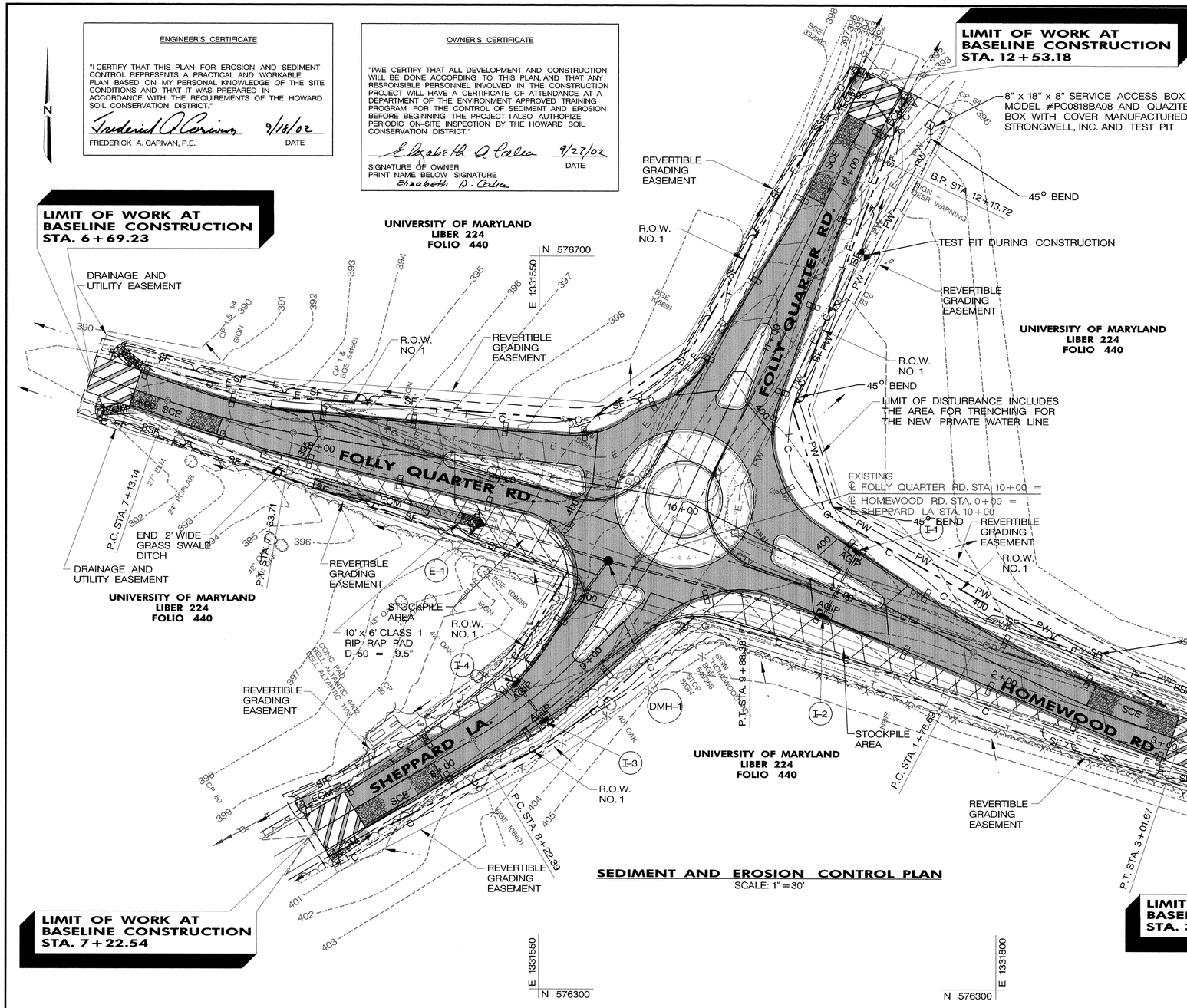
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Elizabeth A. Calva 9/27/02

SIGNATURE OF OWNER DATE

PRINT NAME BELOW SIGNATURE

Elizabeth A. Calva



SEDIMENT AND EROSION CONTROL PLAN
SCALE: 1" = 30'

SEDIMENT CONTROL NOTES

1. 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 (410-313-1855).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL 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 STEEPER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOLUME 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. 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 SEEDINGS, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. 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.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	N/A
AREA DISTURBED	1.91 ACRES
AREA TO BE ROOFED OR PAVED	1.13 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.78 ACRES
TOTAL CUT	965 CU. YDS.
TOTAL FILL	1210 CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION	TO BE DETERMINED BY CONTRACTOR (SITE WITH A CURRENT ACTIVE GRADING PERMIT)

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY INSPECTOR.
10. 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.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

LEGEND

- FULL DEPTH PAVEMENT
- MILL AND OVERLAY
- SCE – STABILIZED CONSTRUCTION ENTRANCE
- ECM – EROSION CONTROL MATTING
- LIMIT OF DISTURBANCE
- EXISTING CONTOURS
- XXX – PROPOSED CONTOURS
- C – TOP OF CUT
- F – LIMIT OF FILL
- SF – SILT FENCE
- SSF – SUPER SILT FENCE
- CLEAN OFF-SITE STORMWATER
- STRAW BALE DIKE
- SSDM #2 – STONE OUTLET SEDIMENT TRAP #2 MODIFIED
- AGIP – AT GRADE INLET PROTECTION

FOR SEDIMENT & EROSION CONTROL ONLY

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 9/27/02

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 9/27/02

CHIEF, BUREAU OF ENGINEERING — DATE 9/27/02

CHIEF, BUREAU OF HIGHWAYS — DATE 9-27-02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99-393.027

BOARD OF PROFESSIONAL ENGINEERS No. 23506 FREDERICK A. CARIVAN STATE OF MARYLAND — 9/18/02

DES: F.A.C.				
DRN: J.N.W.				
CHK: F.A.C.				
DATE: 09/02	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J-4164

600' SCALE MAP NO. _____ DATE: _____

SEDIMENT AND EROSION CONTROL PLAN
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 4 OF 15

FILE: c:\cadd\dgn\99-393-0271.00 submittal\es04folly.dgn
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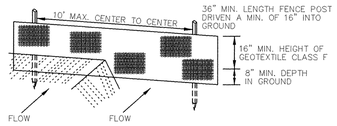
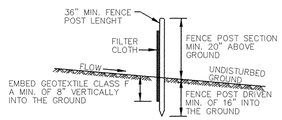
DETAIL 22 – SILT FENCE

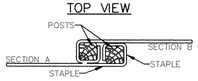


PERSPECTIVE VIEW



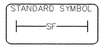
CROSS SECTION

TOP VIEW



JOINING TWO ADJACENT SILT FENCE SECTIONS

STANDARD SYMBOL



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" X 1 1/2" square (minimum) cut or 1 3/4" diameter (minimum) round and shall bee of sound quality hardwood. Steel posts wil be standard T or U section weighting not less than 1.00 pound per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid–section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow rate	0.3 gal ft²/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of Geotextile fabric come together. They shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E – 15 – 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SILT FENCE

Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E – 15 – 3A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. Natural Resources Conservation Service — Date 9/27/02

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

Howard Soil Conservation District — Date 9/27/02

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

CHIEF, DIVISION OF TRANSPORTATION AND SPECIAL PROJECTS — DATE 9/27/02

STANDARDS AND SPECIFICATIONS FOR TOPSOIL

DEFINITION AND PURPOSE

PLACE TOPSOIL OVER A PREPARED SUBSOIL, PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION, TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SUBSOILS OF CONCERN HAVE A LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

CONDITIONS WHERE PRACTICE APPLIES

I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:

- A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
- B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
- C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
- D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

I. TOPSOIL SALVAGED FROM EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA–SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

II. TOPSOIL SPECIFICATIONS – SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

- A. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURE SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONE, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
- B. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
- C. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4–8 TONS/ACRE (200–400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

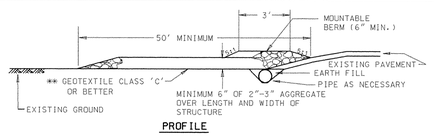
III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:

- A. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION – SECTION I– VEGETATIVE STABILIZATION METHODS AND MATERIALS.

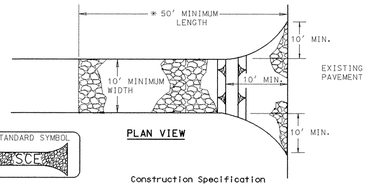
IV. TOPSOIL APPLICATION

- A. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
- B. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4"–8" HIGHER IN ELEVATION.
- C. TOPSOIL SHALL BE UNIFORMLY DISTURBED IN A 4" – 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PREFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- D. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

DETAIL 24 – STABILIZED CONSTRUCTION ENTRANCE



PROFILE



PLAN VIEW

STANDARD SYMBOL

Construction Specification

1. Length – minimum of 50' (*30' for single residence lot).

2. Width – 10' minimum, should be flared at the existing road to provide a turning radius.

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.

4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

6. Location – A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F – 17 – 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

STABILIZED CONSTRUCTION ENTRANCE

Construction Specification

1. Length – minimum of 50' (*30' for single residence lot).

2. Width – 10' minimum, should be flared at the existing road to provide a turning radius.

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.

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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F – 17 – 3A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

NOTES:

1. CONTRACTOR WILL PROVIDE STONE CONSTRUCTION ENTRANCES IN THE WORK ZONES DURING ALL PHASES OF CONSTRUCTION. SEE DETAIL NO. 24 ON THIS SHEET.
2. PROVIDE E.C.M. DITCH LINING FOR ALL SWALES WHERE RIP–RAP LINING IS NOT INDICATED.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT AND SUBMIT NOTIFICATION TO THE COUNTY AS NOTED IN THE SPECIFICATIONS. OBTAIN PERMISSION FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR PRIOR TO ANY CONSTRUCTION. (1 DAY)
2. INSTALL PERIMETER SEDIMENT CONTROL MEASURES. (1 DAY)
3. CLEAR AND GRUB THE ENTIRE AREA. RECONSTRUCT THE FOLLY QUARTER ROAD WEST APPROACH AND THE HOMEWOOD ROAD EAST APPROACH, INCLUDING THE NEW MEDIAN ISLAND, BOTH SPLITTER ISLANDS AND CONCRETE CURB AND GUTTER EDGES PAVE BOTH BASE COURSES AND ADD TEMPORARY STRIPING (20 DAYS)
4. RECONSTRUCT THE FOLLY QUARTER ROAD NORTH APPROACH AND THE SHEPPARD LANE SOUTH APPROACH, INCLUDING THE SPLITTER ISLAND, CONCRETE CURB AND GUTTER EDGES AND PAVEMENT BASE COURSES AND TEMPORARY STRIPING (15 DAYS)
5. PLACE ASPHALT SURFACE COURSE AND FINAL SIGNING AND STRIPING. PLACE STONE OUTLET DITCHES, TOPSOIL SEED AND MULCH. (5 DAYS)
6. REMOVE SEDIMENT CONTROL DEVICES WITH APPROVAL FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. (1 DAY)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 9/27/02
CHIEF, BUREAU OF ENGINEERING — DATE 9/27/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 9/27/02
CHIEF, BUREAU OF HIGHWAYS — DATE 9-27-02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99–393.027

BOARD OF PROFESSIONAL ENGINEERS No. 21431 ERICK A. CARRION STATE OF MARYLAND

FOR SEDIMENT & EROSION CONTROL ONLY

	BY	NO.	REVISION	DATE
DES: F.A.C.				
DRN: J.N.W.				
CHK: F.A.C.				
DATE: 09/02				

CAPITAL PROJECT NO.
J–4164
600' SCALE MAP NO. _____ DATE: _____

SEDIMENT AND EROSION CONTROL DETAILS
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 5 OF 15

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SECTION I – VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. SITE PREPARATION
   I. INSTALL EROSION AND SEDIMENT CONTROL STRUCTURES (EITHER TEMPORARY OR PERMANENT) SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, WATERWAYS, OR SEDIMENT CONTROL BASINS.
   II. PERFORM ALL GRADING OPERATIONS AT RIGHT ANGLES TO THE SLOPE. FINAL GRADING AND SHAPING IS NOT USUALLY NECESSARY FOR TEMPORARY SEEDING.
   III. SCHEDULE REQUIRED SOIL TESTS TO DETERMINE SOIL AMENDMENT COMPOSITION AND APPLICATION RATES FOR SITE HAVING DISTURBED AREA OVER 5 ACRES.

B. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
   I. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OVER 5 ACRES. SOIL ANALYSIS MAY BE PERFORMED BY THE UNIVERSITY OF MARYLAND OR A RECOGNIZED COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
   II. FERTILIZERS SHALL BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROVED EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS SHALL ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE STATE FERTILIZER LAWS AND SHALL BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTEE OF THE PRODUCER.
   III. LIME MATERIALS SHELL BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED) WHICH CONTAINS AT LEAST 50% TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE SHALL BE GROUND TO SUCH FINENESS THAT AT LEAST 50% WILL PASS THROUGH A #100 MESH SIEVE AND 98–100% WILL PASS THROUGH A #20 MESH SIEVE.
   IV. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3–5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

C. SEEDBED PREPARATION
   I. TEMPORARY SEEDING
      A. SEEDBED PREPARATION SHALL CONSIST OF LOOSENING SOIL TO A DEPTH OF 3" TO 5" BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED IT SHOULD NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPED AREAS (GREATER THAN 3:1) SHOULD BE TRACKED LEAVING THE SURFACE IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
      B. APPLY FERTILIZER AND LIME AS PERSCRIBED ON THE PLANS.
      C. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 – 5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
   II. PERMANENT SEEDING
      A. MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT:
         1. SOIL PH SHALL BE BETWEEN 6.0 AND 7.0.
         2. SOLUBLE SALTS SHALL BE LESS THAN 500 PARTS PER MILLION (PPM).
         3. THE SOIL SHALL CONTAIN LESS THAN 40% CLAY BUT ENOUGH FINE GRAINED MATERIAL (>30% SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION IS IF LOVEGRASS OR SERECIA LESPEDEZA IS TO BE PLANTED, THEN A SANDY SOIL (<30% SILT PLUS CLAY) WOULD BE ACCEPTABLE.
         4. SOIL SHALL CONTAIN 1.5% MINIMUM ORGANIC MATTER BY WEIGHT.
         5. SOIL MUST CONTAIN PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
         6. IF THESE CONDITIONS CANNOT BE MET BY SOILS ON SITE, ADDING TOPSOIL IS REQUIRED IN ACCORDANCE WITH SECTION 21 STANDARD AND SPECIFICATION FOR TOPSOIL.
      B. AREAS PREVIOUSLY GRADED IN CONFORMANCE WITH THE DRAWINGS SHALL BE MAINTAINED IN A TRUE AND EVEN GRADE, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 – 5" TO PERMIT BONDING OF THE SOPSOIL TO THE SURFACE AREA AND TO CREATE HORIZONTAL EROSION CHECK SLOTS TO PREVENT TOPSOIL FROM SLIDING DOWN A SLOPE.
      C. APPLY SOIL AMENDMENTS AS PER SOIL TEST OR AS INCLUDED ON THE PLANS.
      D. MIX SOIL AMENDMENTS INTO THE TOP 3 – 5" OF TOPSOIL BY DISKING OF OTHER SUITABLE MEANS. LAWN AREAS SHOULD BE RAKED TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION, LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE.

         STEEP SLOPES (STEEPER THAN 3:1) SHOULD BE TRACKED BY A DOZER LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. THE TOP 1 – 3" OF SOIL SHOULD BE LOOSE AND FRIABLE. SEEDBED LOOSENING MAY NOT BE NECESSARY ON NEWLY DISTURBED AREAS.

D. SEED SPECIFICATIONS
   I. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED SHALL BE SUBJECT TO RE–TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED SHALL HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON THIS JOB. NOTE: SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED.
   II. INNOCULANT – THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES SHALL BE A PURE CULTURE OF NITROGEN–FIXING BACTERIA ON THE CONTAINER. ADD FRESH INOCULANT AS DIRECTED ON PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING.
      NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75–80 F. CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.

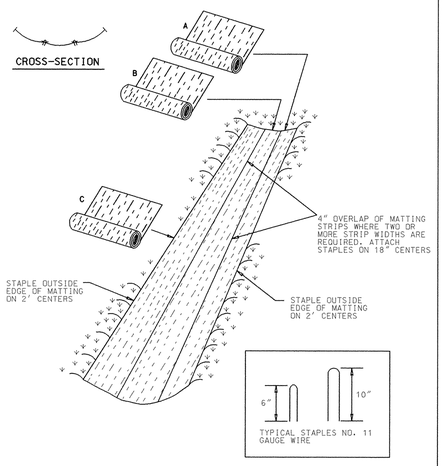
E. METHODS OF SEEDING
   I. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER), BROADCAST OR DROP SEEDER, OR A CULTIPACKER SEEDER.
      A. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES AMOUNTS WILL NOT EXCEED THE FOLLOWING: NITROGEN; MAXIMUM OF 100 LBS. PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS); 200 LBS./AC; K20 (POTASSIUM): 200 LBS./AC.
      B. LIME – USE ONLY GROUND AGRICULTURAL LIMESTONE, (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
      C. SEED AND FERTILIZER SHALL BE MIXED ON SITE AND SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.
   II. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OF BROADCAST SPREADERS.
      A. SEED SPREAD DRY SHALL BE INCORPORATED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE TEMPORARY OR PERMANENT SEEDING SUMMARIES OR TABLES 25 OR 26. THE SEEDED AREA SHALL THEN BE ROLLED WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
      B. WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
   III. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
      A. CULTIPACKER SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
      B. WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

F. MULCH SPECIFICATIONS (IN ORDER OF PREFERENCE)
   I. STRAW SHALL CONSIST OF THOROUGHLY THRESHED WHEAT, RYE OR OAT STRAW, REASONABLY BRIGHT IN COLOR, AND SHALL NOT BE MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY AND SHALL BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW.
   II. WOOD CELLULOSE FIBER MULCH (WCFM).
      A. WCFM SHALL CONSIST OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
      B. WCFM SHALL BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
      C. WCFM, INCLUDING DY, SHALL CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
      D. WCFM MATERIALS SHALL BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL SHALL FORM A BLOTTER–LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND SHALL COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDINGS.
      E. WCFM MATERIAL SHALL CONTAIN NO ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO–TOXIC.
      F. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH TO APPROXIMATELY 10 MM. DIAMETER APPROXIMATELY 1 MM., PH. RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6% MAXIMUM AND WATER HOLDING CAPACITY OF 90% MINIMUM.
      NOTE: ONLY STERILE STRAW MULCH SHOULD BE USED IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.

G. MULCHING SEEDED AREAS MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
   I. IF GRADING IS COMPLETED OUTSIDE OF THE SEEDING SEASON, MULCH ALONE SHALL BE APPLIED AS PRESCRIBED IN THIS SECTION AND MAINTAINED UNTIL THE SEEDING SEASON RETURNS AND SEEDING CAN BE PERFORMED IN ACCORDANCE WITH THESE SPECIFICATIONS.
   II. WHEN STRAW MULCH IS USED, IT SHALL BE SPREAD OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS/ACRE. MULCH SHALL BE APPLIED TO A UNIFORM LOOSE DEPTH OF BETWEEN 1" AND 2". MULCH APPLIED SHALL ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. IF A MULCH ANCHORING TOOL IS TO BE USED, THE RATE SHOULD BE INCREASED TO 2.5 TONS/ACRE.
   III. WOOD CELLULOSE FIBER USED AS A MULCH SHALL BE APPLIED AT A NET DRY WEIGHT OF 1,500 LBS. PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER, AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LBS. OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

H. SECURING STRAW MULCH (MULCH ANCHORING): MULCH ANCHORING SHALL BE PERFORMED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE TOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON SIZE OF AREA AND EROSION HAZARD:
   I. A MULCH ANCHORING TOOL IS A TRACTOR DRAWING IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF TWO (2) INCHES. THE PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD BE USED ON THE CONTOUR IF POSSIBLE.
   II. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. THE FIBER BINDER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 POUNDS/ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
   III. APPLICATIONS OF LIQUID BINDERS SHOULD BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. THE REMAINDER OF AREA SHOULD APPEAR TO BE UNIFORM AFTER BINDER APPLICATION. SYNTHETIC BINDERS – SUCH AS ACRYLIC DLR (AGRO–TACK), DCA–70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH.

DETAIL 30 – EROSION CONTROL MATTING



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G – 22 – 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

EROSION CONTROL MATTING

Construction Specifications

1. Key–in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross–section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".

2. Staple the 4" overlap in the channel center using an 18" spacing between staples.

3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.

4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.

5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.

6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed–in.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G – 22 – 2A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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

CHIEF, DIVISION OF TRANSPORTATION AND SPECIAL PROJECTS — DATE 9/27/02

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. Natural Resources Conservation Service — Date 9/27/02

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

Howard Soil Conservation District — Date 9/27/02

FOR SEDIMENT & EROSION CONTROL ONLY

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 9/27/02
CHIEF, BUREAU OF ENGINEERING — DATE 9/27/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 9/27/02
CHIEF, BUREAU OF HIGHWAYS — DATE 9-27-02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99–393.027

BOARD OF PROFESSIONAL ENGINEERS — No. 23505 — PATRICK A. CRAVEN — STATE OF MARYLAND — 9/13/02

DES: F.A.C.					
DRN: J.N.W.					
CHK: F.A.C.					
DATE: 09/02	BY	NO.	REVISION	DATE	

CAPITAL PROJECT NO.
J–4164
600' SCALE MAP NO. _____ DATE: _____

SEDIMENT AND EROSION CONTROL DETAILS AND NOTES
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 6i OF 15

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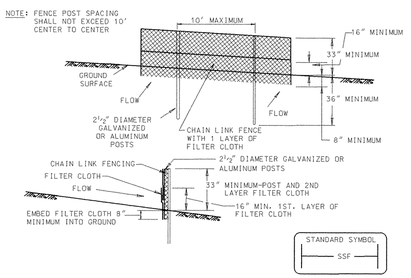
DETAIL 33 - SUPER SILT FENCE



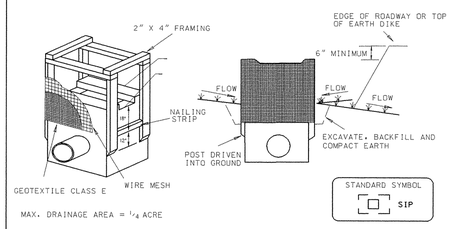
Construction Specifications

Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The SHA specifications for a 6 foot fence shall be used, substituting 42 inch fabric and 6 foot length posts.

1. The posts do not need to be set in concrete.
2. Chain link fence shall be fastened securely to the fence posts with wire ties. or staples.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 8" into the ground.
5. When two sections of geotextile filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE H - 26 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 23A - STANDARD INLET PROTECTION



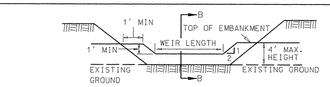
MAX. DRAINAGE AREA = ¼ ACRE

Construction Specifications

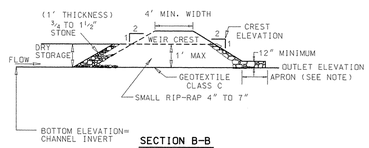
1. Excavate completely around the inlet to a depth of 18" below the notch elevation.
2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the 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.
3. 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.
4. Stretch the Geotextile Class E tightly over the wire mesh with the geotixtile 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.
5. 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.
6. 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.
7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 16 - 5	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

MODIFIED DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II



SECTION A-A
SEE ALSO MODIFIED CHECK DAM CROSS SECTION



SECTION B-B

Construction Specifications

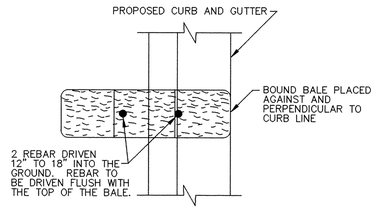
1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1' thick layer of ¾" to 1½" washed aggregate placed on the upstream face of the outlet. Stone facing shall be adjusted as necessary to prevent clogging. Geotextile Class C shall be placed on the inside face of the stone outlet under the ¾" to 1½" aggregate.
5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 9 - 10	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

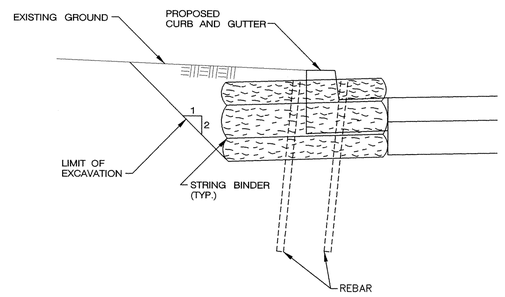
STONE OUTLET SEDIMENT TRAP - ST II

6. The structure shall be inspected periodically and after each rain and repairs made as needed.
7. Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentration inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
8. The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.
9. Refer to Section D for specifications concerning trap dewatering.
10. Minimum trap depth shall be measured from the weir elevation.
11. The elevation of the top of any dike directing water into the trap must equal or exceed the elevation of the trap embankment.
12. Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to the placement of stone. Sections of filter cloth must overlap at least 1' with the section nearest the entrance placed on top. The filter cloth shall be embedded at least 6" into existing ground at the entrance of the outlet channel.
13. Outlet - An outlet shall be provided, including a means of conveying the discharge in an erosion free manner to an existing stable channel.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 9 - 10A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



PLAN VIEW



ELEVATION VIEW

STRAW BALE DIKE DETAILS
NOT TO SCALE

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

E A Calvert — 9/27/02

CHIEF, DIVISION OF TRANSPORTATION AND SPECIAL PROJECTS — DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. Natural Resources Conservation Service — 9/27/02 Date

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

Howard Soil Conservation District — 9/27/02 Date

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — 9/27/02 DATE
CHIEF, BUREAU OF ENGINEERING — E A Calvert — 9/27/02 DATE
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — E A Calvert — 9/27/02 DATE
CHIEF, BUREAU OF HIGHWAYS — William F. Mraloue Jr. for — 9-27-02 DATE

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99-393.027

BOARD OF PROFESSIONAL ENGINEERS — No. 23644 — PATRICK A. CARVAN — STATE OF MARYLAND — 9/13/02

FOR SEDIMENT & EROSION CONTROL ONLY

DES: F.A.C.					
DRN: J.N.W.					
CHK: F.A.C.					
DATE: 09/02	BY	NO.	REVISION	DATE	

CAPITAL PROJECT NO.
J-4164
600' SCALE MAP NO. _____ DATE: _____

SEDIMENT AND EROSION CONTROL DETAILS AND NOTES
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 6a OF 15

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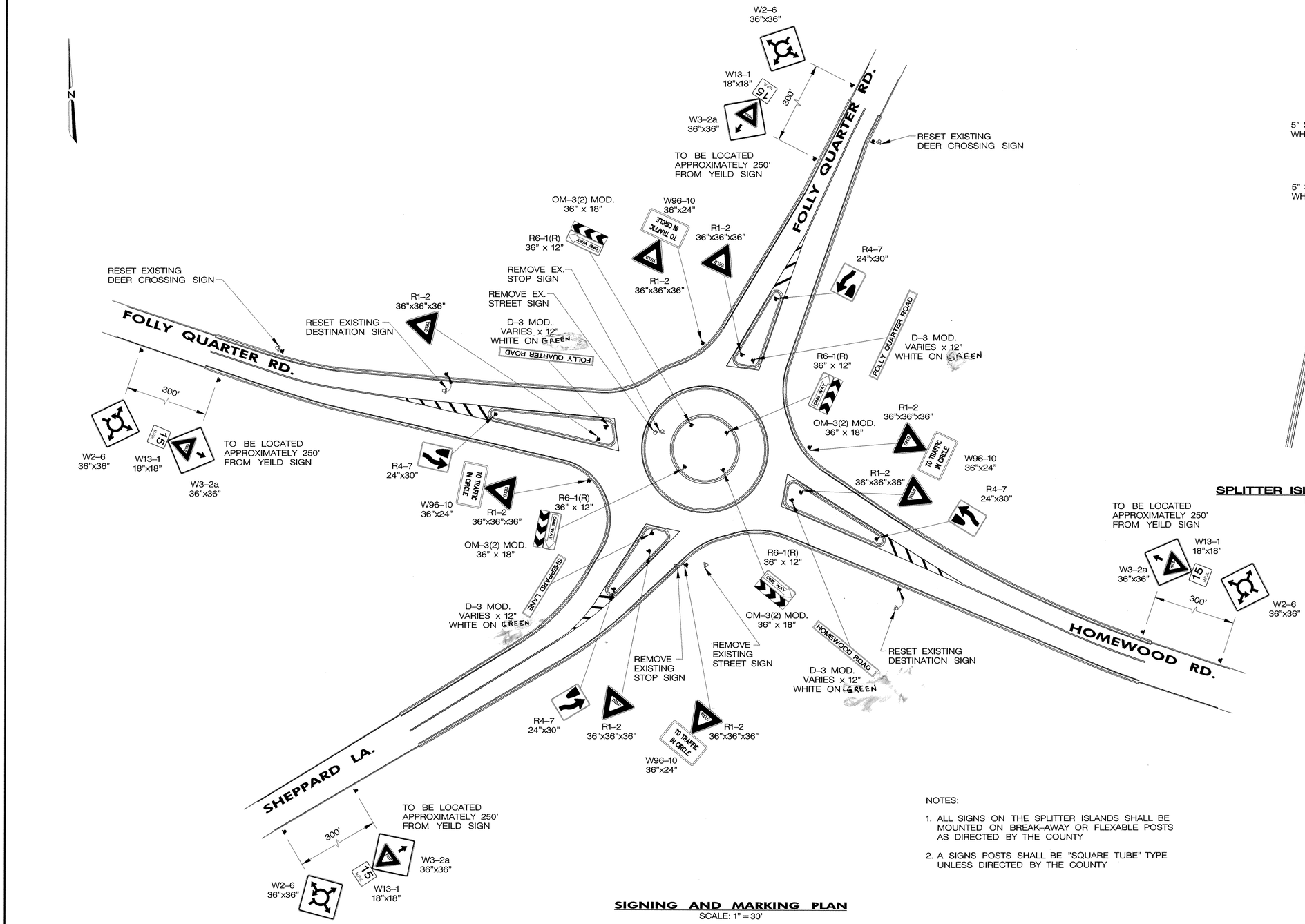
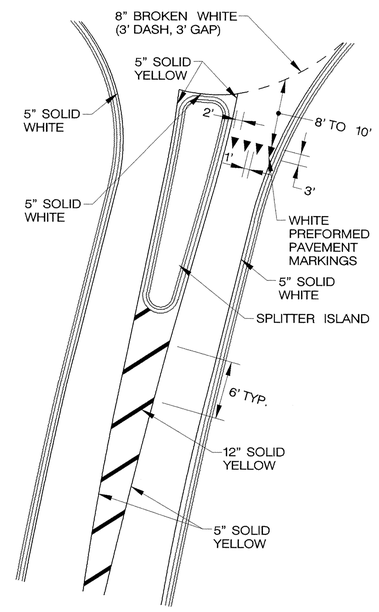


SIGNING AND MARKING PLAN
SCALE: 1" = 30'



SPLITTER ISLAND MARKING DETAIL
NOT TO SCALE

TO BE LOCATED
APPROXIMATELY 250'
FROM YEILD SIGN

NOTES:

1. ALL SIGNS ON THE SPLITTER ISLANDS SHALL BE MOUNTED ON BREAK–AWAY OR FLEXABLE POSTS AS DIRECTED BY THE COUNTY
2. A SIGNS POSTS SHALL BE "SQUARE TUBE" TYPE UNLESS DIRECTED BY THE COUNTY

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 9/27/02
CHIEF, BUREAU OF ENGINEERING — DATE 9/27/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 9/27/02
CHIEF, BUREAU OF HIGHWAYS — DATE 9-27-02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99–393.027

BOARD OF PROFESSIONAL ENGINEERS — No. 22540 — PATRICK A. CARLSON — STATE OF MARYLAND — 9/17/02

DES:	F.A.C.
DRN:	C.D.F.
CHK:	F.A.C.
DATE:	0902

BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J–4164
600' SCALE MAP NO. _____ DATE: _____

SIGNING AND MARKING PLAN
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 7 OF 15

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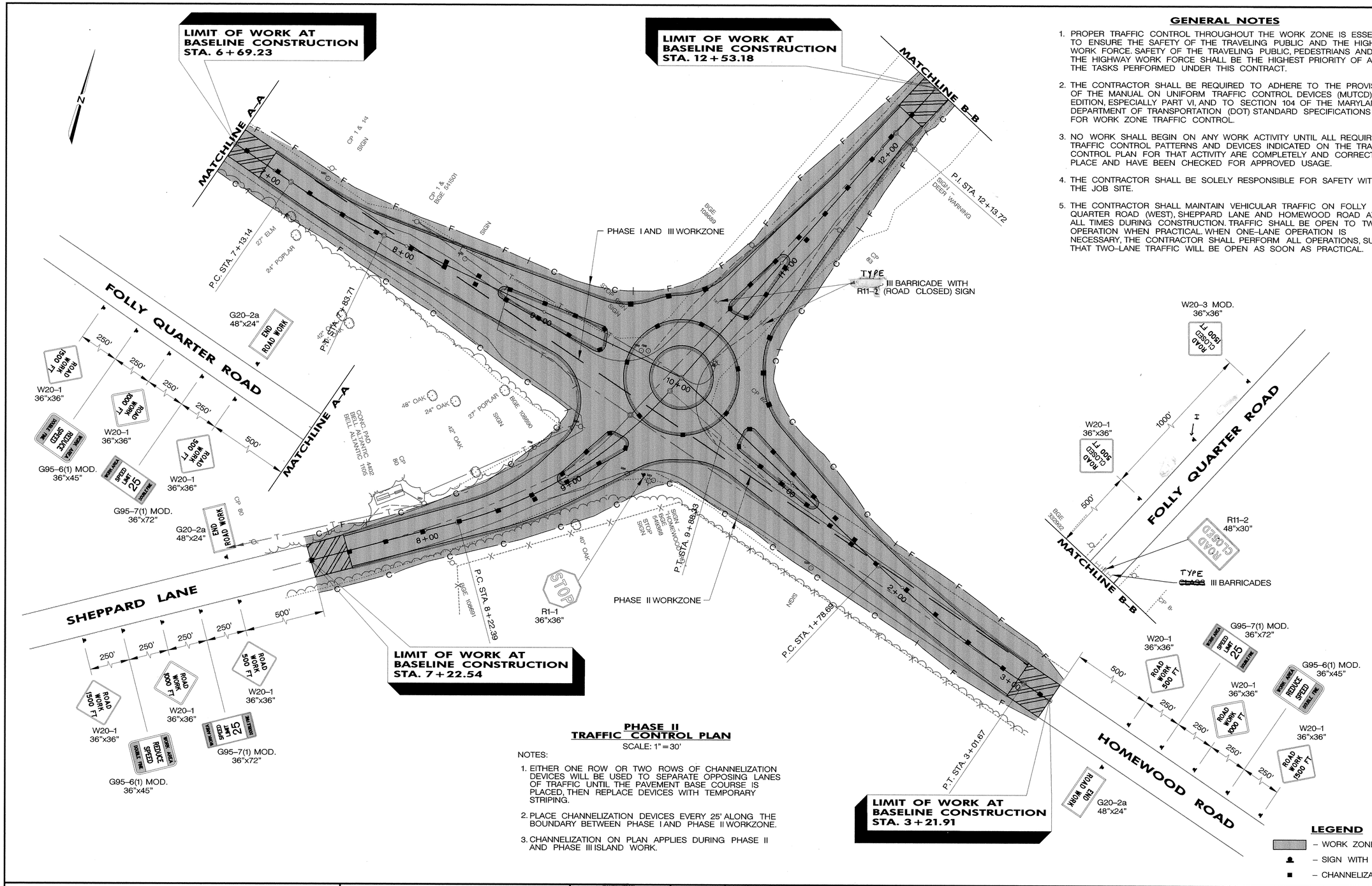


GENERAL NOTES

1. PROPER TRAFFIC CONTROL THROUGHOUT THE WORK ZONE IS ESSENTIAL TO ENSURE THE SAFETY OF THE TRAVELING PUBLIC AND THE HIGHWAY WORK FORCE. SAFETY OF THE TRAVELING PUBLIC, PEDESTRIANS AND THE HIGHWAY WORK FORCE SHALL BE THE HIGHEST PRIORITY OF ALL THE TASKS PERFORMED UNDER THIS CONTRACT.
2. THE CONTRACTOR SHALL BE REQUIRED TO ADHERE TO THE PROVISIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2000 EDITION, ESPECIALLY PART VI, AND TO SECTION 104 OF THE MARYLAND DEPARTMENT OF TRANSPORTATION (DOT) STANDARD SPECIFICATIONS FOR WORK ZONE TRAFFIC CONTROL.
3. NO WORK SHALL BEGIN ON ANY WORK ACTIVITY UNTIL ALL REQUIRED TRAFFIC CONTROL PATTERNS AND DEVICES INDICATED ON THE TRAFFIC CONTROL PLAN FOR THAT ACTIVITY ARE COMPLETELY AND CORRECTLY IN PLACE AND HAVE BEEN CHECKED FOR APPROVED USAGE.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY WITHIN THE JOB SITE.
5. THE CONTRACTOR SHALL MAINTAIN VEHICULAR TRAFFIC ON FOLLY QUARTER ROAD (WEST), SHEPPARD LANE AND HOMEWOOD ROAD AT ALL TIMES DURING CONSTRUCTION. TRAFFIC SHALL BE OPEN TO TWO–LANE OPERATION WHEN PRACTICAL. WHEN ONE–LANE OPERATION IS NECESSARY, THE CONTRACTOR SHALL PERFORM ALL OPERATIONS, SUCH THAT TWO–LANE TRAFFIC WILL BE OPEN AS SOON AS PRACTICAL.

PHASE II TRAFFIC CONTROL PLAN

SCALE: 1" = 30'

NOTES:

1. EITHER ONE ROW OR TWO ROWS OF CHANNELIZATION DEVICES WILL BE USED TO SEPARATE OPPOSING LANES OF TRAFFIC UNTIL THE PAVEMENT BASE COURSE IS PLACED, THEN REPLACE DEVICES WITH TEMPORARY STRIPING.
2. PLACE CHANNELIZATION DEVICES EVERY 25' ALONG THE BOUNDARY BETWEEN PHASE I AND PHASE II WORKZONE.
3. CHANNELIZATION ON PLAN APPLIES DURING PHASE II AND PHASE III ISLAND WORK.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 9/27/02
CHIEF, BUREAU OF ENGINEERING — DATE 9/27/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE 9/19/02
CHIEF, BUREAU OF HIGHWAYS — DATE 9-27-02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99–393.027

BOARD OF PROFESSIONAL ENGINEERS — No. 23505 — FREDERICK A. CARVIN, JR. — STATE OF MARYLAND — 9/19/02

DES:	F.A.C.
DRN:	S.F.N.
CHK:	F.A.C.
DATE:	09/02

BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J–4164
600' SCALE MAP NO. _____ DATE: _____

TRAFFIC CONTROL PLAN
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 8 OF 15

FILE: c:\cadd\plots\99–393–0371100 submittal\ps08folly.dgn
DATE: 17–SEP–02 23:03

...\100 submittal\ps08folly.dgn Sep. 17, 2002 23:04:19

GENERAL NOTES

1. CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN FOR REVIEW AND APPROVAL BY THE HOWARD COUNTY ENGINEER.
2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR WILL CLOSE THE FOLLY QUARTER NORTH APPROACH. THIS APPROACH WILL REMAIN CLOSED UNTIL THE COUNTY DEEMS THAT IT IS SAFE TO OPEN THE ROAD TO THROUGH TRAFFIC.
3. DURING CONSTRUCTION, THE CONTRACTOR SHALL SIGN ALL FOUR APPROACHES TO THE INTERSECTION FOLLOWING SHEET 8 OF THE CONTRACT DRAWINGS.
4. AT THE DIRECTION OF THE COUNTY, THE CONTRACTOR MAY LEAVE THE EXISTING PAVEMENT UNDER THE ROUNDABOUT MEDIAN ISLAND IN PLACE IF IT IS RUBBILIZED SO THAT NO PARTICLE HAS A DIAMETER GREATER THAN 6 INCHES. THE REMAINING PAVEMENT MAY BE REMOVED BUT IN NO CASE SHALL THE EXISTING GRAVEL AGGREGATE BE REMOVED.

PHASE I

I–1 SET UP THE SIGNING AND CHANNELIZING DEVICES AS SHOWN ON SHEET 8 COVER OR REMOVE EXISTING SIGNS THAT DO NOT APPLY. PLACE CHANNELIZATION DEVICES EVERY 25' ALONG THE NORTH SIDE OF FOLLY QUARTER ROAD AND HOMEWOOD ROAD.

I–2 CONSTRUCT THE NORTH SIDE OF THE WORK AREA TO THE TOP OF THE NEW GRAVEL AGGREGATE BASE.

I–3 PLACE EROSION MATERIALS AND COVER THE NON–DRIVING AREAS WITH GRASS.

PHASE II

II–1 REMOVE THE EXISTING PAVEMENT ON FOLLY QUARTER ROAD FORM STATION 7+00 TO 10+00, ON SHEPPARD LANE FORM STATION 7+50 TO 10+00 AND HOMEWOOD ROAD FROM STATION 0+00 TO 3+00. USING THE TYPICAL SECTION ON SHEET 9 GRADE THE INTERSECTION IN ONE FOOT (1') LIFTS. TRANSFER TRAFFIC TO THE AGGREGATE BASE SURFACE BUILT IN PHASE I AS SOON AS PRACTICAL. THE MAXIMUM GRADE DIFFERENCE BETWEEN ABUTTING SHOULD BE NO MORE THAN ONE FOOT (1'). USE THE CHANNELIZATION DEVICES TO SEPARATE THE TRAVEL LANES.

II–2 ONCE THE GRADING WORK IS COMPLETE STABILIZE THE NON–DRIVING AREA WITH GRASS AS REQUIRED AND STABILIZE THE DRIVING AREA WITH CALCIUM CHLORIDE.

II–3 MILL THE REMAINING PAVEMENT AND PLACE THE AGGREGATE BASE

II–4 ONCE THE AGGREGATE BASE IS SET CONSTRUCT ALL THE CONCRETE CURB AND GUTTER ON SHEPPARD LANE AND THE SOUTH SIDE OF FOLLY QUARTER ROAD AND HOMEWOOD ROAD AND THE SHEPPARD LANE SPLITTER ISLANDS.

II–5 PLACE THE BITUMINOUS CONCRETE BASE COURSE IN TWO LIFTS. PLACE TEMPORARY STRIPING AS DIRECTED BY THE ENGINEER.

PHASE III

III–1 SHIFT TRAFFIC TO THE PAVEMENT SURFACE BUILT IN PHASE II.

III–2 CONSTRUCT SPLITTER ISLANDS, THREE–QUARTERS OF THE MEDIAN ISLAND AND EDGE CURBING.

III–3 PLACE PAVEMENT BASE COURSES AND SURFACE COURSE.

III–4 PLACE PERMANENT STRIPING, DELINEATION AND SIGNING ON FOLLY QUARTER ROAD NORTH APPROACH.

III–5 SHIFT TRAFFIC TO THE NORTH AND COMPLETE WORK ON MEDIAN ISLAND.

PHASE IV

IV.1 SET UP THE SIGNING AND CHANNELING DEVICES AS SHOWN ON MSHA STANDARD 104.32–02 FOR THE THREE APPROACHES WHEN NECESSARY. PLACE THE BITUMINOUS CONCRETE SURFACE COURSE OVER THE ENTIRE AREA OF BASE COURSE.

IV.2 PLACE FINAL STRIPING, SIGNING AND DELINEATION DEVICES.

IV.3 DO FINAL GRADING, TOPSOIL AND SEEDING.

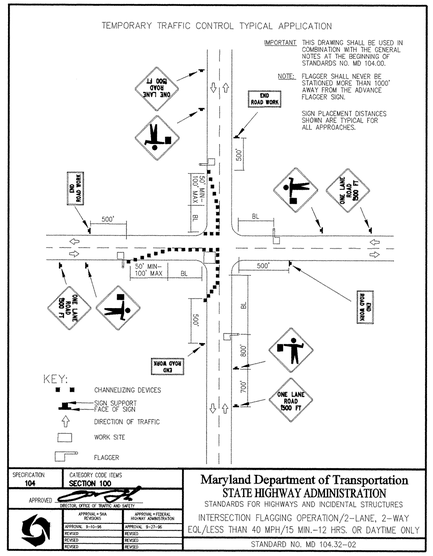
IV.4 REMOVE TEMPORARY EROSION CONTROL DEVICES AND TEMPORARY SIGNING AS DIRECTED BY HOWARD COUNTY.

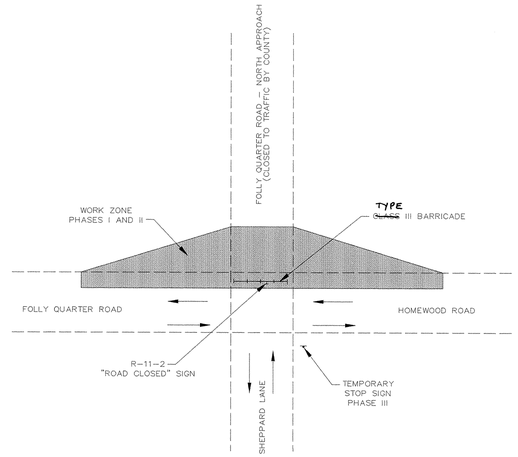
NOTES

W95–3

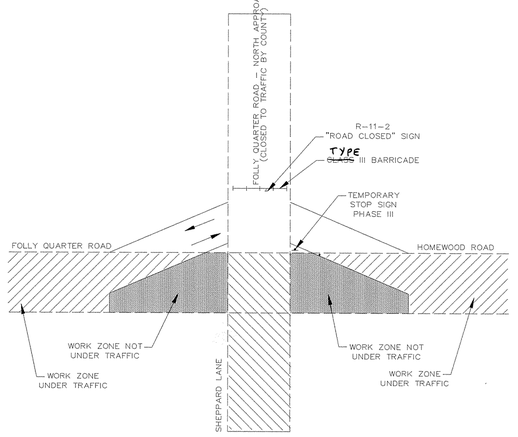
W8–8

1. THE HOWARD COUNTY ENGINEER HAS THE OPTION OF PLACING ONE OR BOTH OF THESE SIGNS ON FOLLY QUARTER ROAD, SHEPPARD LANE AND HOMEWOOD ROAD WHILE THE PUBLIC IS TRAVELING ON THE NATIVE GROUND OR GRAVEL AGGREGATE SURFACE AS A SUPPLEMENT TO PHASE I AND PHASE II SIGNING.
2. THE CONTRACTOR SHALL SCHEDULE THE WORK OPERATIONS TO MINIMIZE THE TIME WHEN THE PUBLIC IS TRAVELING ON THE GRAVEL AGGREGATE SURFACE. IN NO CASE SHOULD TRAVEL ON THE NATIVE GROUND OR THE GRAVEL SURFACE OCCUR OVER A HOLIDAY WEEKEND.
3. AT THE DIRECTION OF THE HOWARD COUNTY ENGINEER, THE CONTRACTOR MAY RETURN AT ANY TIME TO REAPPLY CALCIUM CHLORIDE AND/OR WATER TO THE NAIVE GROUND OR THE GRAVEL AGGREGATE SURFACE IF IN THE OPINION OF THE ENGINEER TOO MUCH DUST IS BEING RAISED BY MOVING VEHICLES.





PHASE I AND III TRAFFIC CONTROL
NOT TO SCALE



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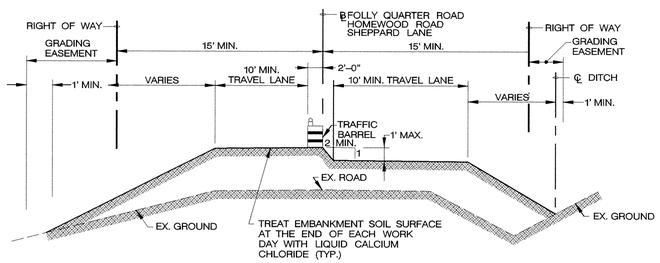
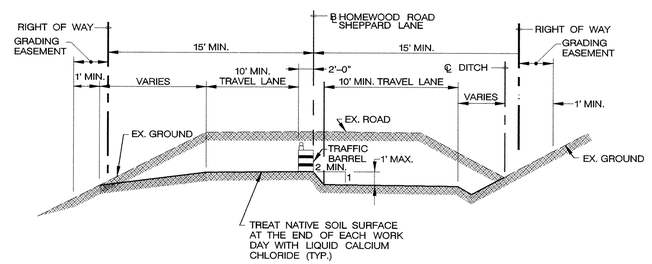


TYPICAL TRAFFIC CONTROL SECTION FOR PHASE II EMBANKMENT
NOT TO SCALE



TYPICAL TRAFFIC CONTROL SECTION FOR PHASE II EXCAVATION
NOT TO SCALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 9/23/02
CHIEF, BUREAU OF ENGINEERING — DATE 9/23/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECT DIVISION — DATE 9/27/02
CHIEF, BUREAU OF HIGHWAYS — DATE 9.27.02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99–393.027

BOARD OF PROFESSIONAL ENGINEERS — No. 22547 — FREDERICK A. CARMAN — STATE OF MARYLAND — PROFESSIONAL ENGINEER — 9/9/02

DES: F.A.C.
DRN: S.F.N.
CHK: F.A.C.
DATE: 09/02

BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J–4164
600' SCALE MAP NO. _____ DATE: _____

TRAFFIC CONTROL DETAILS AND NOTES
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 9 OF 15

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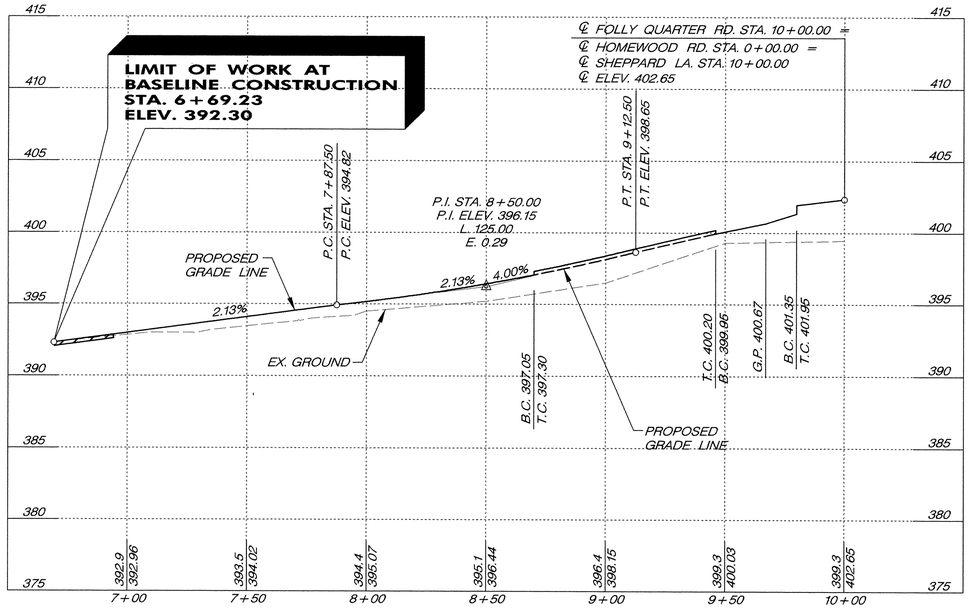
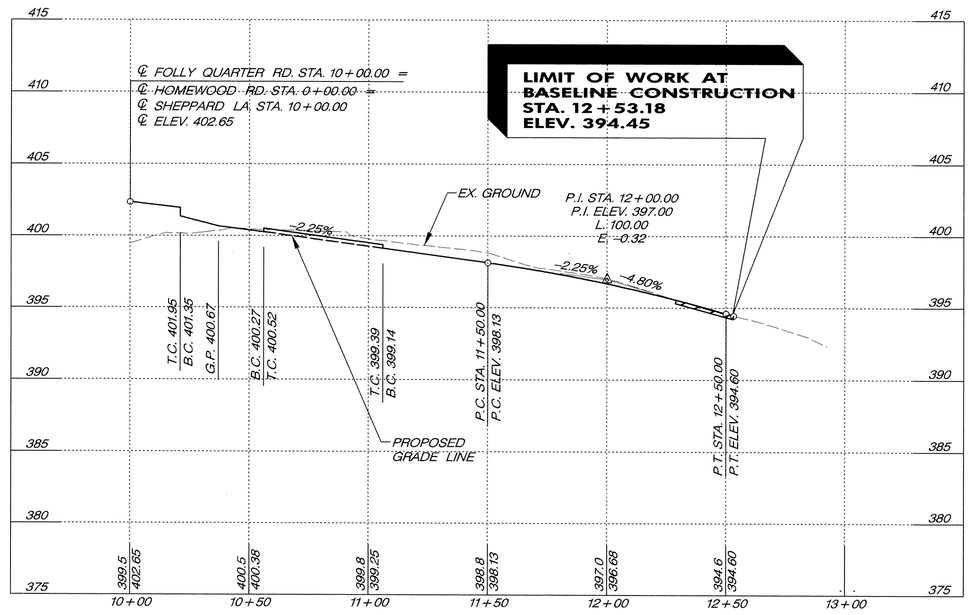
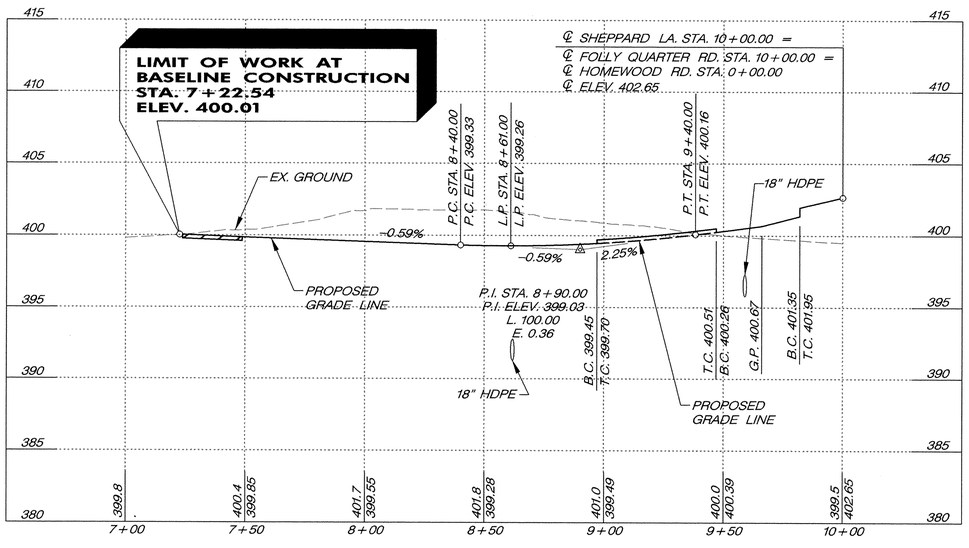
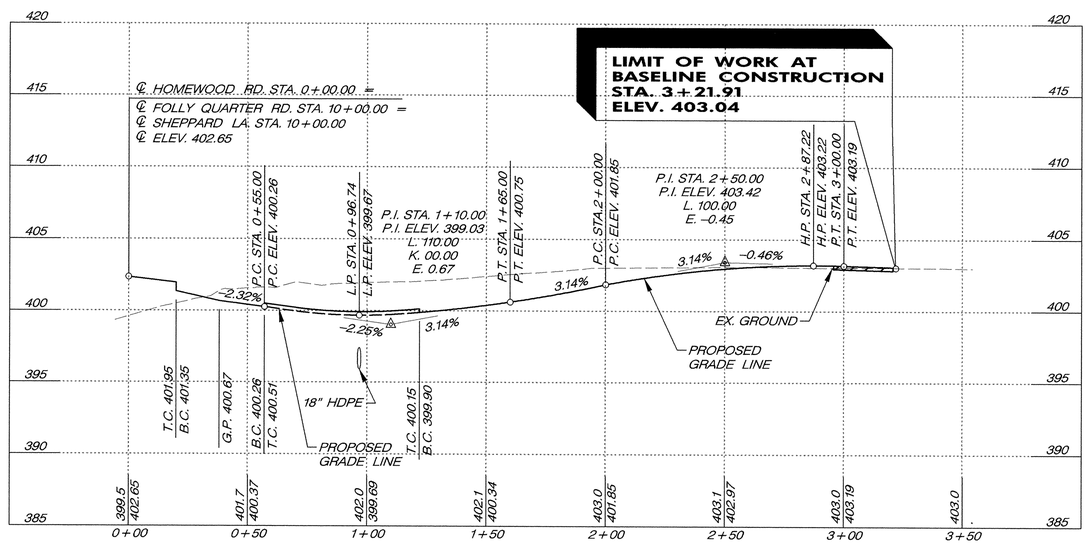




FOLLY QUARTER ROAD PROFILES

SCALE: HORZ. 1" = 30'
VERT. 1" = 5'





SHEPPARD LANE PROFILE

SCALE: HORZ. 1" = 30'
VERT. 1" = 5'

HOMEWOOD ROAD PROFILE

SCALE: HORZ. 1" = 30'
VERT. 1" = 5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS — DATE 9/27/02
CHIEF, BUREAU OF ENGINEERING — DATE 9/27/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECT DIVISION — DATE 9/27/02
CHIEF, BUREAU OF HIGHWAYS — DATE 9-27-02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99-393.027

BOARD OF PROFESSIONAL ENGINEERS No. 23508 — FREDERICK A. GRIFFIN — STATE OF MARYLAND — 9/18/02

DES:	F.A.C.
DRN:	C.D.F.
CHK:	F.A.C.
DATE:	09/02

BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J-4164
600' SCALE MAP NO. _____ DATE: _____

ROADWAY PROFILES
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 10 OF 15

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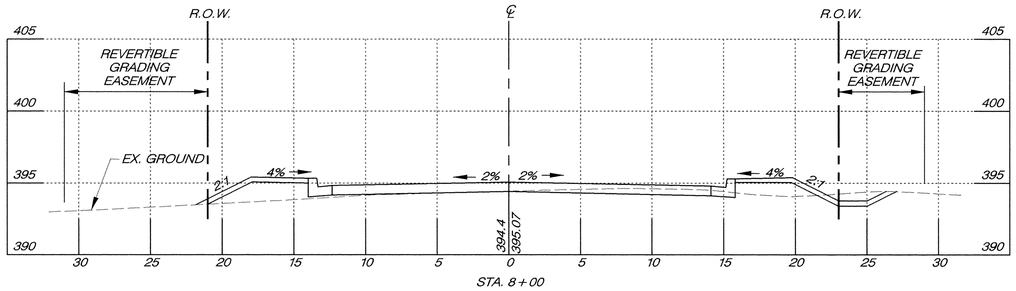

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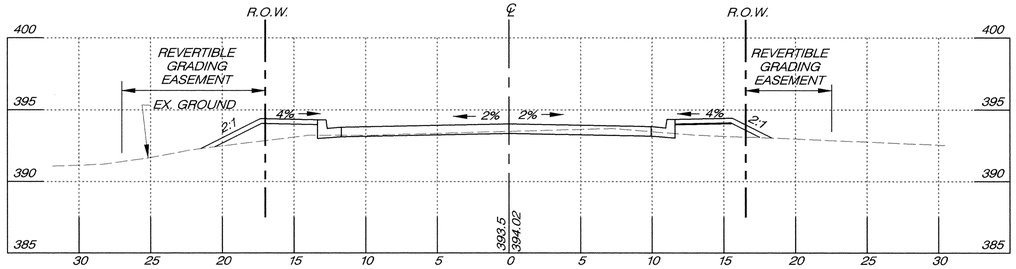

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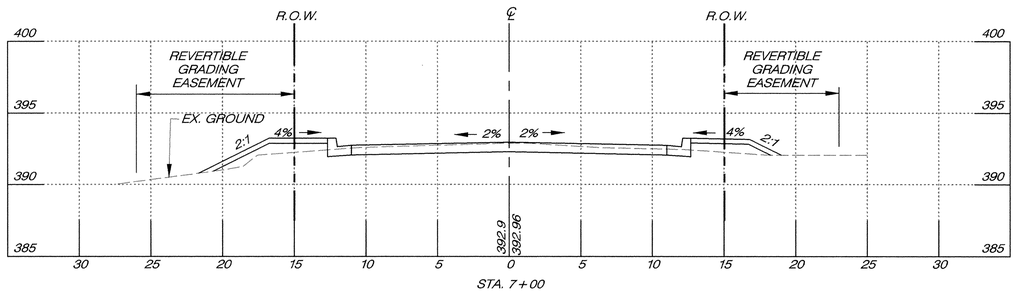

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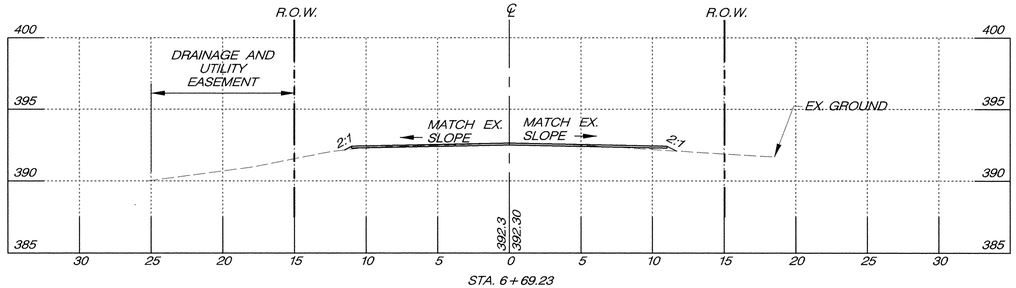

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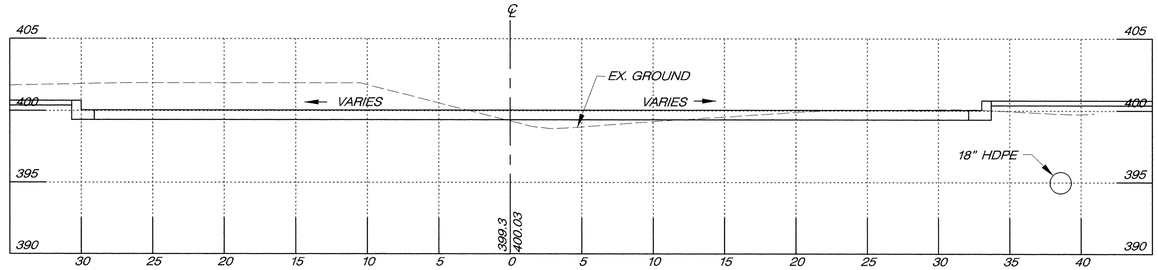
NOTE: SEE PROFILES FOR GRADING WITHIN INTERSECTION.



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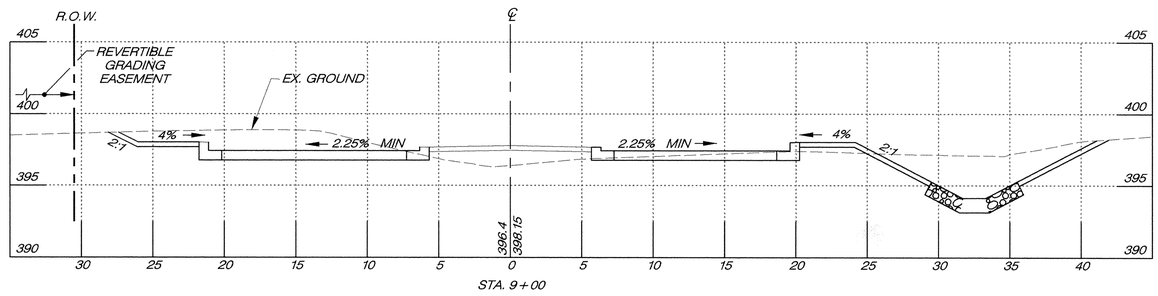

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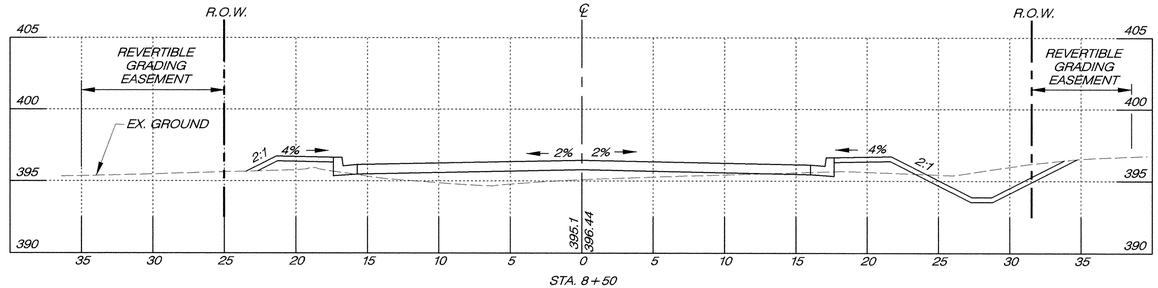

STA. 8+50

FOLLY QUATER ROAD CROSS SECTIONS

SCALE: HORZ. 1" = 5'
VERT. 1" = 5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS — DATE 9/27/02
CHIEF, BUREAU OF ENGINEERING — DATE 9/27/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECT DIVISION — DATE 9/27/02
CHIEF, BUREAU OF HIGHWAYS — DATE 9-27-02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99-393.027

BOARD OF PROFESSIONAL ENGINEERS — No. 23552 — PATRICK A. CARVAN — STATE OF MARYLAND — 9/18/02

DES: F.A.C.
DRN: C.D.F.
CHK: F.A.C.
DATE: 09/02

BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J-4164
600' SCALE MAP NO. _____ DATE: _____

ROADWAY CROSS SECTIONS
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 11 OF 15

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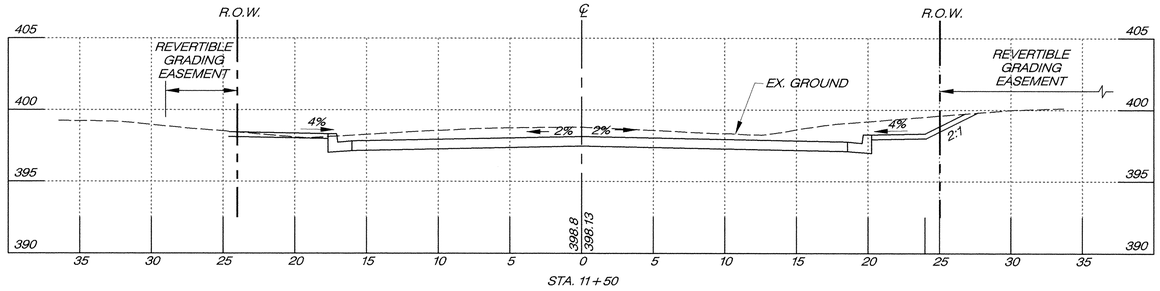

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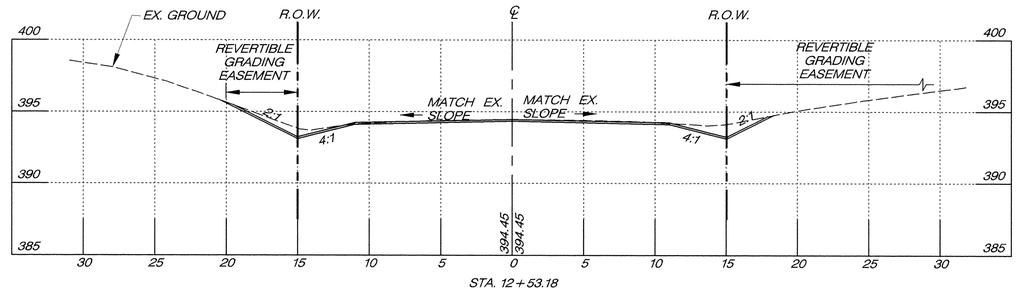

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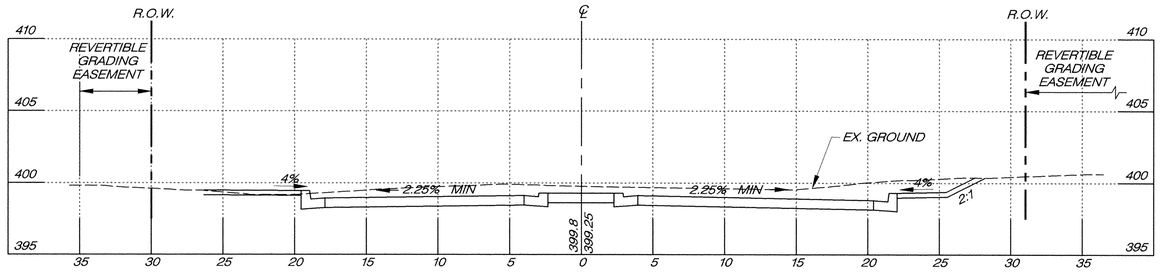

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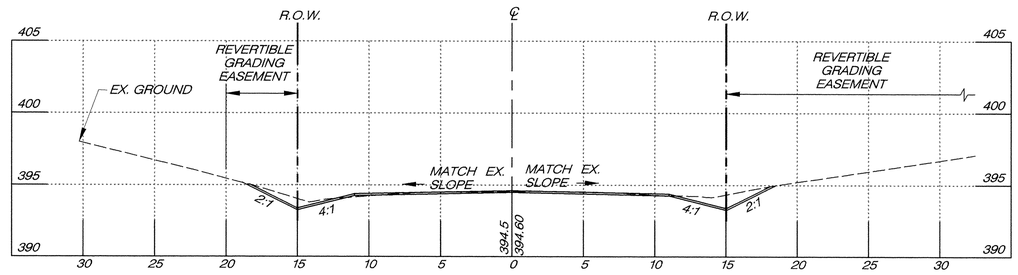

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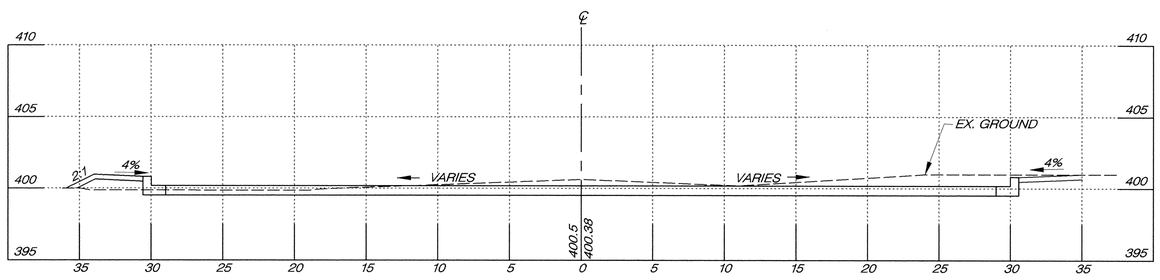

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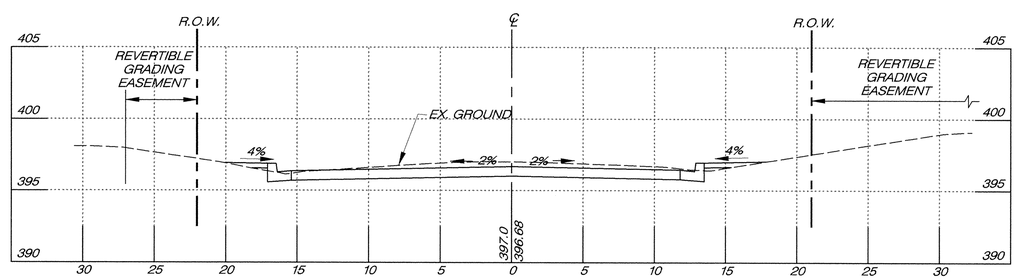

STA. 12+00

NOTE: SEE PROFILES FOR GRADING WITHIN INTERSECTION.

FOLLY QUARTER ROAD CROSS SECTIONS

SCALE: HORZ. 1" = 5'
VERT. 1" = 5'

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DATE: 17-Sep-02 23:31

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS — DATE 9/27/02
CHIEF, BUREAU OF ENGINEERING — DATE 9/27/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECT DIVISION — DATE 9/27/02
CHIEF, BUREAU OF HIGHWAYS — DATE 9-27-02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99-393.027

BOARD OF PROFESSIONAL ENGINEERS — No. 23804 — PATRICK A. CRIMMIN — STATE OF MARYLAND — 7/10/02

DES: F.A.C.
DRN: C.D.F.
CHK: F.A.C.
DATE: 09/02

BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J-4164
600' SCALE MAP NO. _____ DATE: _____

ROADWAY CROSS SECTIONS
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 12 OF 15

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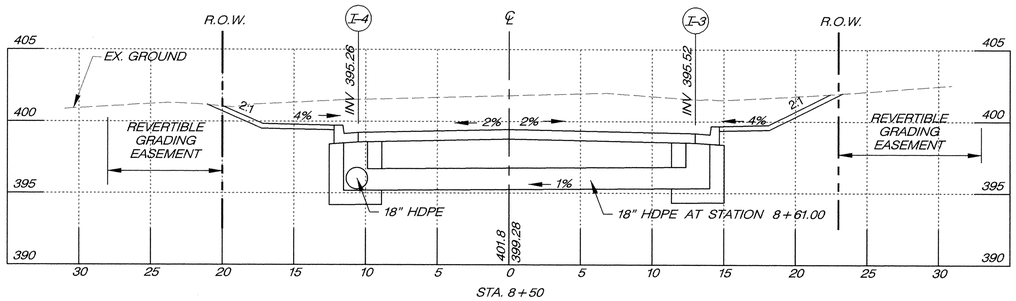

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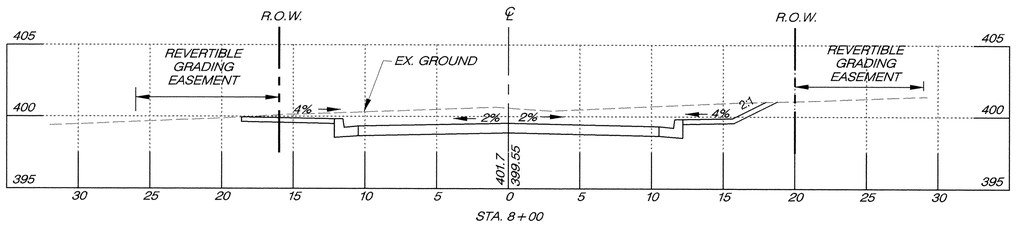

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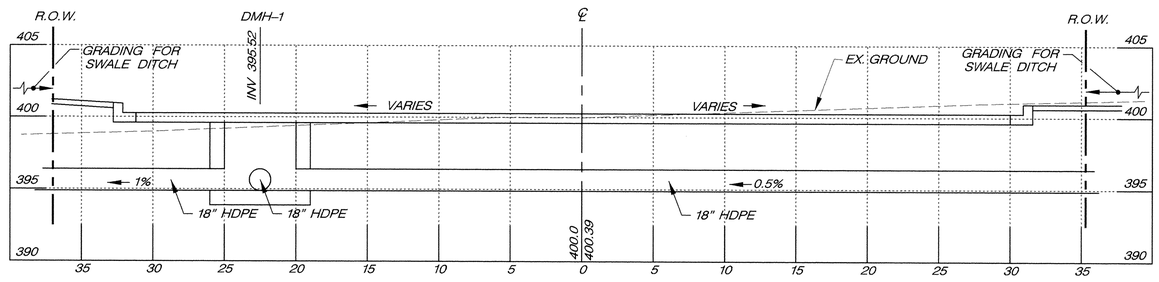
NOTE: SEE PROFILES FOR GRADING WITHIN INTERSECTION.



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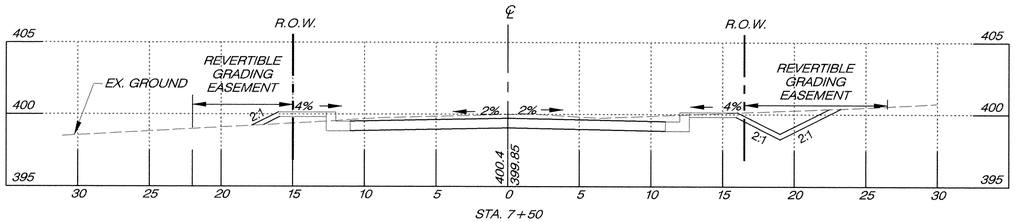

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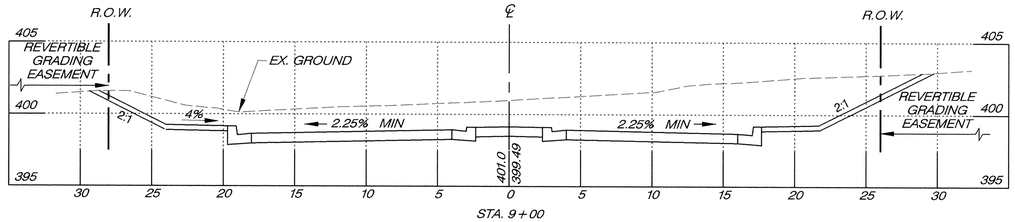

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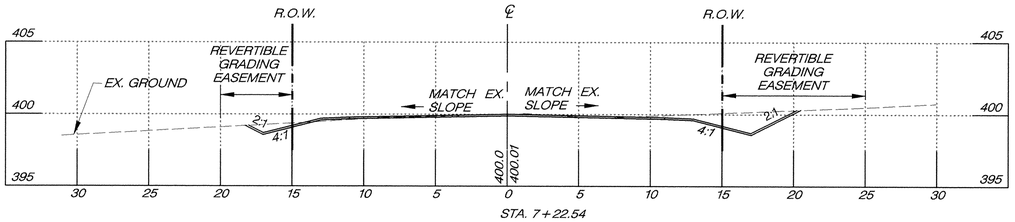

STA. 7+22.54

SHEPPARD LANE CROSS SECTIONS

SCALE: HORZ. 1" = 5'
VERT. 1" = 5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS — DATE 9/27/02
CHIEF, BUREAU OF ENGINEERING — DATE 9/27/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECT DIVISION — DATE 9/27/02
CHIEF, BUREAU OF HIGHWAYS — DATE 9.27.02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99-393.027

BOARD OF PROFESSIONAL ENGINEERS — No. 23801 — PATRICK A. CARVAN — STATE OF MARYLAND — 9/18/02

DES: F.A.C.				
DRN: C.D.F.				
CHK: F.A.C.				
DATE: 09/02	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J-4164
600' SCALE MAP NO. _____ DATE: _____

ROADWAY CROSS SECTIONS
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 13 OF 15

FILE: c:\cadd\dcds\99-393-027\100 submittal\ps13folly.dgn
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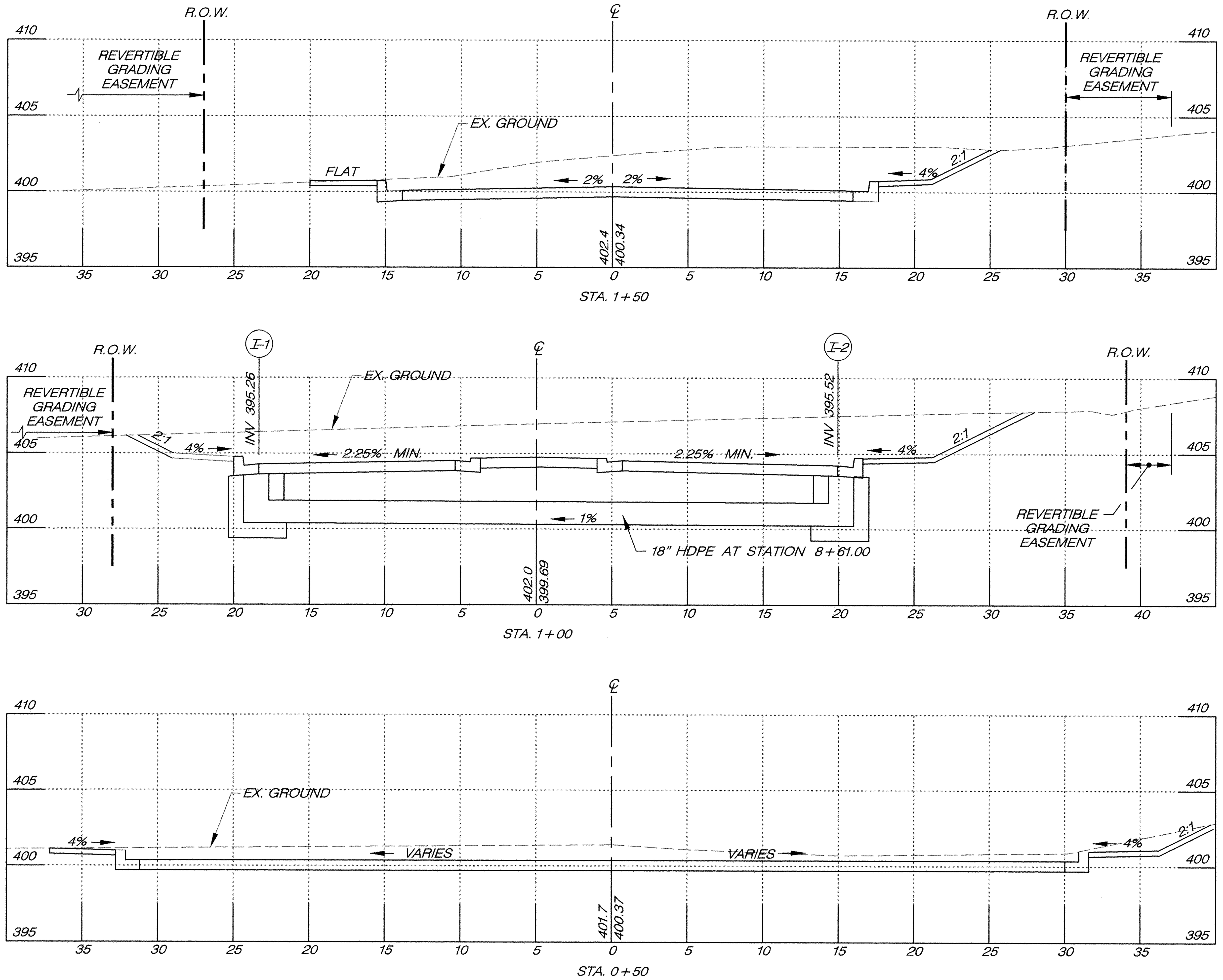
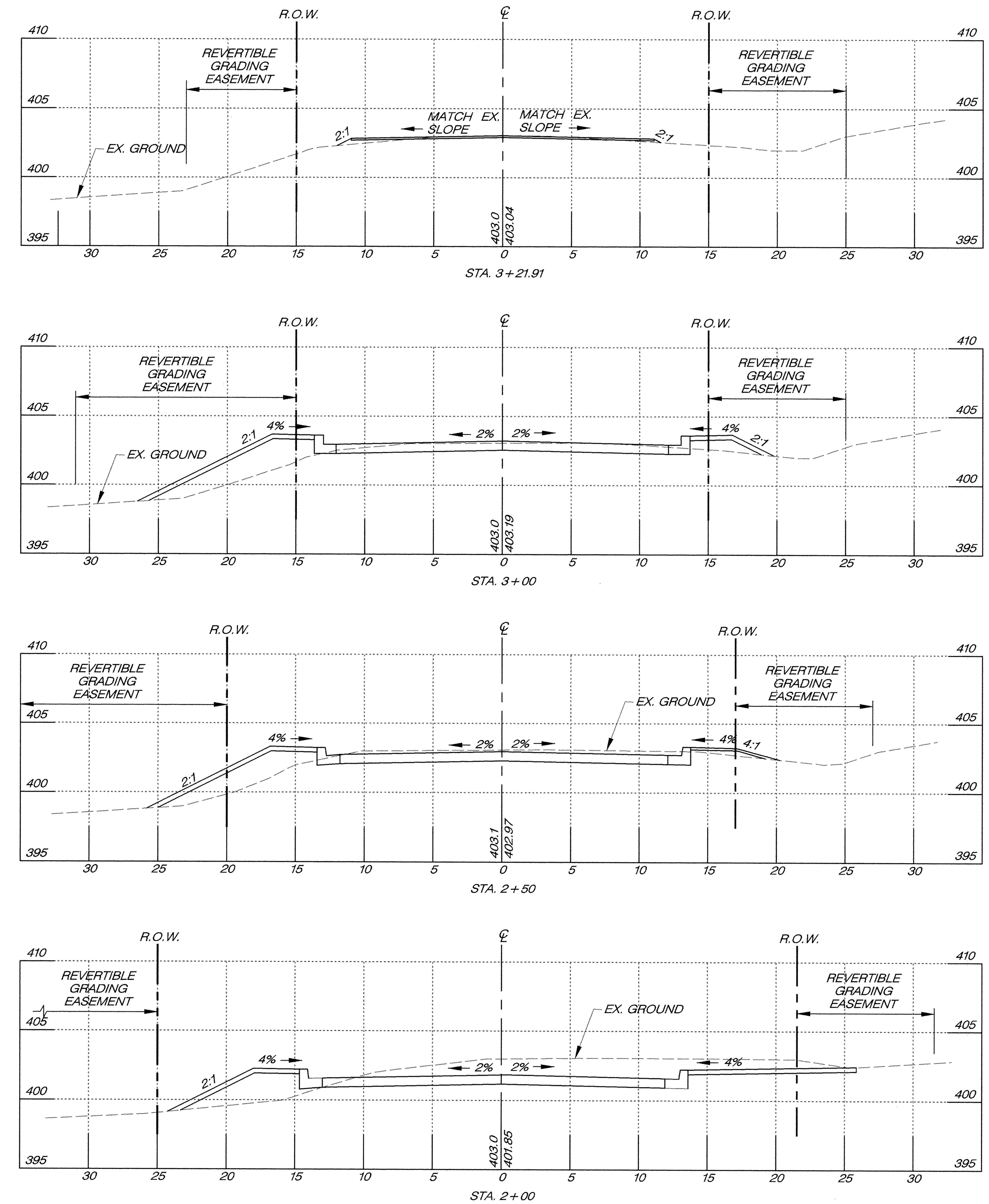




NOTE: SEE PROFILES FOR GRADING WITHIN INTERSECTION.

HOMEWOOD ROAD CROSS SECTIONS

SCALE: HORZ. 1" = 5'
VERT. 1" = 5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS — DATE 9/27/02
CHIEF, BUREAU OF ENGINEERING — DATE 9/27/02
CHIEF, TRANSPORTATION AND SPECIAL PROJECT DIVISION — DATE 9/27/02
CHIEF, BUREAU OF HIGHWAYS — DATE 9-27-02

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99-393.027

DES: F.A.C.
DRN: C.D.F.
CHK: F.A.C.
DATE: 09/02

BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J–4164
600' SCALE MAP NO. ______ DATE: ______

ROADWAY CROSS SECTIONS
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 14 OF 15

GUTTER PAN CONTROL GEOMETRY

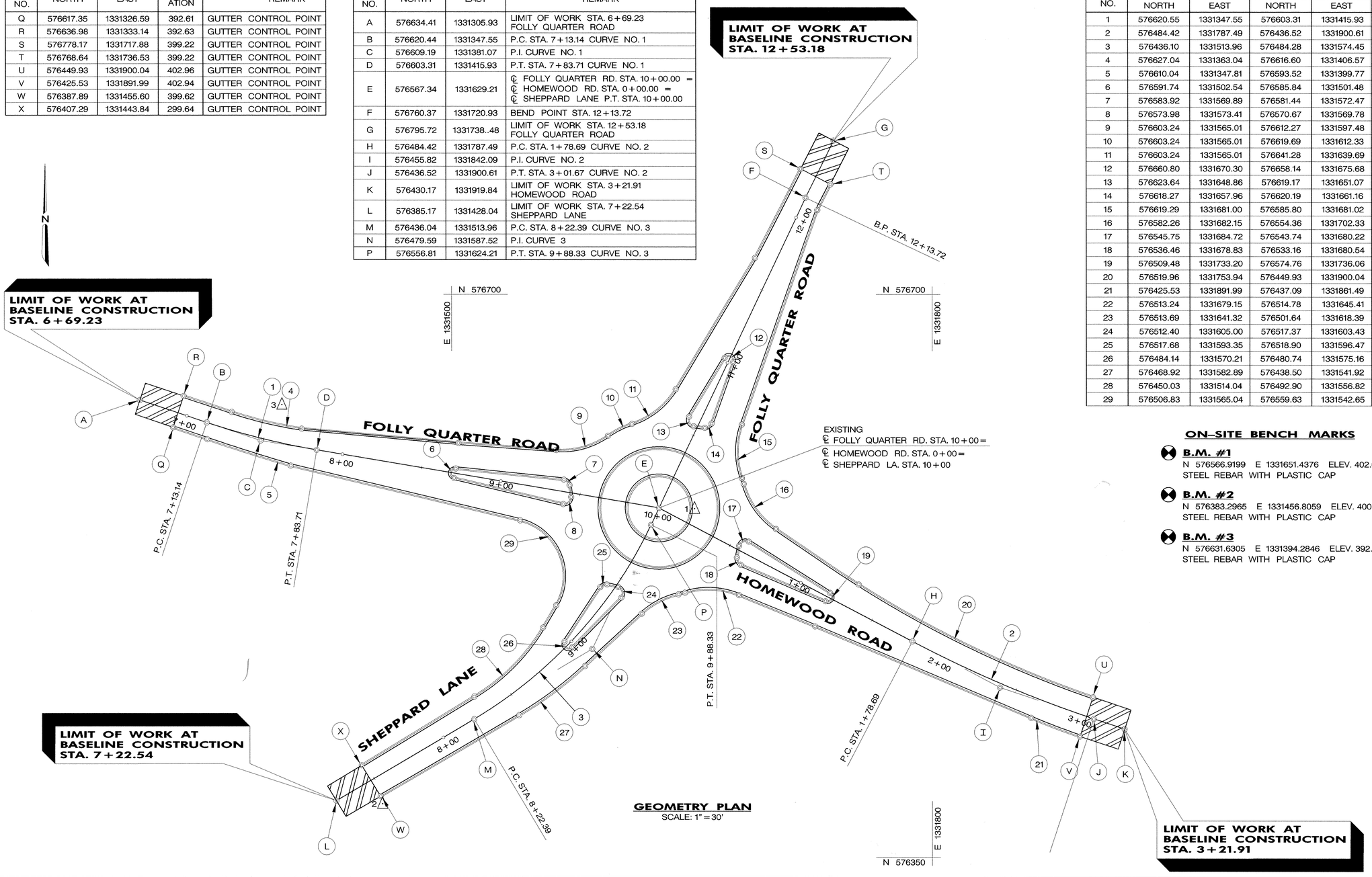
POINT NO.	NORTH	EAST	ELEV–ATION	REMARK
Q	576617.35	1331326.59	392.61	GUTTER CONTROL POINT
R	576636.98	1331333.14	392.63	GUTTER CONTROL POINT
S	576778.17	1331717.88	399.22	GUTTER CONTROL POINT
T	576768.64	1331736.53	399.22	GUTTER CONTROL POINT
U	576449.93	1331900.04	402.96	GUTTER CONTROL POINT
V	576425.53	1331891.99	402.94	GUTTER CONTROL POINT
W	576387.89	1331455.60	399.62	GUTTER CONTROL POINT
X	576407.29	1331443.84	299.64	GUTTER CONTROL POINT

CONSTRUCTION CENTERLINE GEOMETRY

POINT NO.	NORTH	EAST	REMARK
A	576634.41	1331305.93	LIMIT OF WORK STA. 6+69.23 FOLLY QUARTER ROAD
B	576620.44	1331347.55	P.C. STA. 7+13.14 CURVE NO. 1
C	576609.19	1331381.07	P.I. CURVE NO. 1
D	576603.31	1331415.93	P.T. STA. 7+83.71 CURVE NO. 1
E	576567.34	1331629.21	℄ FOLLY QUARTER RD. STA. 10+00.00 = ℄ HOMEWOOD RD. STA. 0+00.00 = ℄ SHEPPARD LANE P.T. STA. 10+00.00
F	576760.37	1331720.93	BEND POINT STA. 12+13.72
G	576795.72	1331738..48	LIMIT OF WORK STA. 12+53.18 FOLLY QUARTER ROAD
H	576484.42	1331787.49	P.C. STA. 1+78.69 CURVE NO. 2
I	576455.82	1331842.09	P.I. CURVE NO. 2
J	576436.52	1331900.61	P.T. STA. 3+01.67 CURVE NO. 2
K	576430.17	1331919.84	LIMIT OF WORK STA. 3+21.91 HOMEWOOD ROAD
L	576385.17	1331428.04	LIMIT OF WORK STA. 7+22.54 SHEPPARD LANE
M	576436.04	1331513.96	P.C. STA. 8+22.39 CURVE NO. 3
N	576479.59	1331587.52	P.I. CURVE 3
P	576556.81	1331624.21	P.T. STA. 9+88.33 CURVE NO. 3

CURVE DATA

CURVE NO.	P.C. COORDINATES NORTH	P.C. COORDINATES EAST	P.T. COORDINATES NORTH	P.T. COORDINATES EAST	R	L
1	576620.55	1331347.55	576603.31	1331415.93	450.00'	70.52'
2	576484.42	1331787.49	576436.52	1331900.61	734.88'	123.00'
3	576436.10	1331513.96	576484.28	1331574.45	280.00'	77.61'
4	576627.04	1331363.04	576616.60	1331406.57	258.00'	44.82'
5	576610.04	1331347.81	576593.52	1331399.77	1113.70'	54.53
6	576591.74	1331502.54	576585.84	1331501.48	3.00'	9.42'
7	576583.92	1331569.89	576581.44	1331572.47	3.00'	4.01'
8	576573.98	1331573.41	576570.67	1331569.78	4.00'	7.72'
9	576603.24	1331565.01	576612.27	1331597.48	50.00'	34.38'
10	576603.24	1331565.01	576619.69	1331612.33	55.00'	16.66'
11	576603.24	1331565.01	576641.28	1331639.69	50.00'	35.60'
12	576660.80	1331670.30	576658.14	1331675.68	3.00'	9.41'
13	576623.64	1331648.86	576619.17	1331651.07	3.00'	5.94'
14	576618.27	1331657.96	576620.19	1331661.16	3.00'	4.00'
15	576619.29	1331681.00	576585.80	1331681.02	50.00'	34.14'
16	576582.26	1331682.15	576554.36	1331702.33	50.00'	35.15
17	576545.75	1331684.72	576543.74	1331680.22	3.00'	5.84'
18	576536.46	1331678.83	576533.16	1331680.54	3.00'	4.00'
19	576509.48	1331733.20	576574.76	1331736.06	3.00'	9.40'
20	576519.96	1331753.94	576449.93	1331900.04	676.50'	162.40'
21	576425.53	1331891.99	576437.09	1331861.49	452.75'	32.63'
22	576513.24	1331679.15	576514.78	1331645.41	50.00'	34.45'
23	576513.69	1331641.32	576501.64	1331618.39	50.00'	26.20'
24	576512.40	1331605.00	576517.37	1331603.43	3.00'	6.39'
25	576517.68	1331593.35	576518.90	1331596.47	3.00'	3.68'
26	576484.14	1331570.21	576480.74	1331575.16	4.00'	9.41'
27	576468.92	1331582.89	576438.50	1331541.92	236.61'	51.21'
28	576450.03	1331514.04	576492.90	1331556.82	121.58'	61.26'
29	576506.83	1331565.04	576559.63	1331542.65	35.66'	66.61'



GEOMETRY PLAN
SCALE: 1" = 30'

ON–SITE BENCH MARKS

B.M. #1
N 576566.9199 E 1331651.4376 ELEV. 402.066
STEEL REBAR WITH PLASTIC CAP

B.M. #2
N 576383.2965 E 1331456.8059 ELEV. 400.321
STEEL REBAR WITH PLASTIC CAP

B.M. #3
N 576631.6305 E 1331394.2846 ELEV. 392.179
STEEL REBAR WITH PLASTIC CAP

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE
CHIEF, BUREAU OF ENGINEERING — DATE
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION — DATE
CHIEF, BUREAU OF HIGHWAYS — DATE

A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 99–393.027

DES: F.A.C.
DRN: A.M.T.
CHK: F.A.C.
DATE: 04/03

BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
J–4164
600' SCALE MAP NO. _____ DATE: _____

GEOMETRY PLAN
Folly Quarter Road at Sheppard Lane and Homewood Road

SCALE AS SHOWN

SHEET 15 OF 15

FILE: I:\99-393-2071\100submittal\100submittal\gs15folly.dgn
DATE: 03-Apr-03 20:55

...\100submittal\gs15folly.dgn Apr. 03, 2003 20:55:58

Chris Date Rec 4/4/03