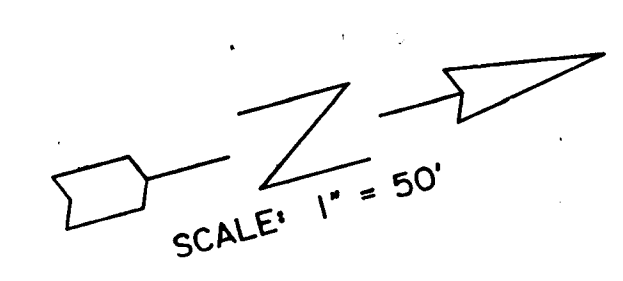


| | | | | | | | | | | | |
|--|--|--|--|---|--|---|--|--|--|----------------------------------|--|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works: <i>James J. ...</i> DATE: 11/15/90 Chief, Bureau of Engineering: <i>...</i> DATE: 11-13-90 Chief, Bureau of Highways: <i>...</i> DATE: 11/14/90 | | MILDENBERG, MOCHI & ASSOCIATES, INC. ENGINEERS • SURVEYORS • PLANNERS 3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350 (301) 461-0078 D.C. Metro: (301) 621-5768 | | DES: JBM/KAM DRN: STAFF CHK: JBM DATE: 12/90 | | PLAN AND PROFILE STA. 146+00 TO STA. 160+50 CENTENNIAL LANE | | CENTENNIAL LANE STA. 146+00 TO U.S. ROUTE 40 CAPITAL PROJECT J-4015-II ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND | | SCALE AS SHOWN SHEET 3 OF 31b | |
|--|--|--|--|---|--|---|--|--|--|----------------------------------|--|

NOTE
SEE FREDERICK ROAD
PLAN AND PROFILE SHEET
FOR PROPOSED
IMPROVEMENTS

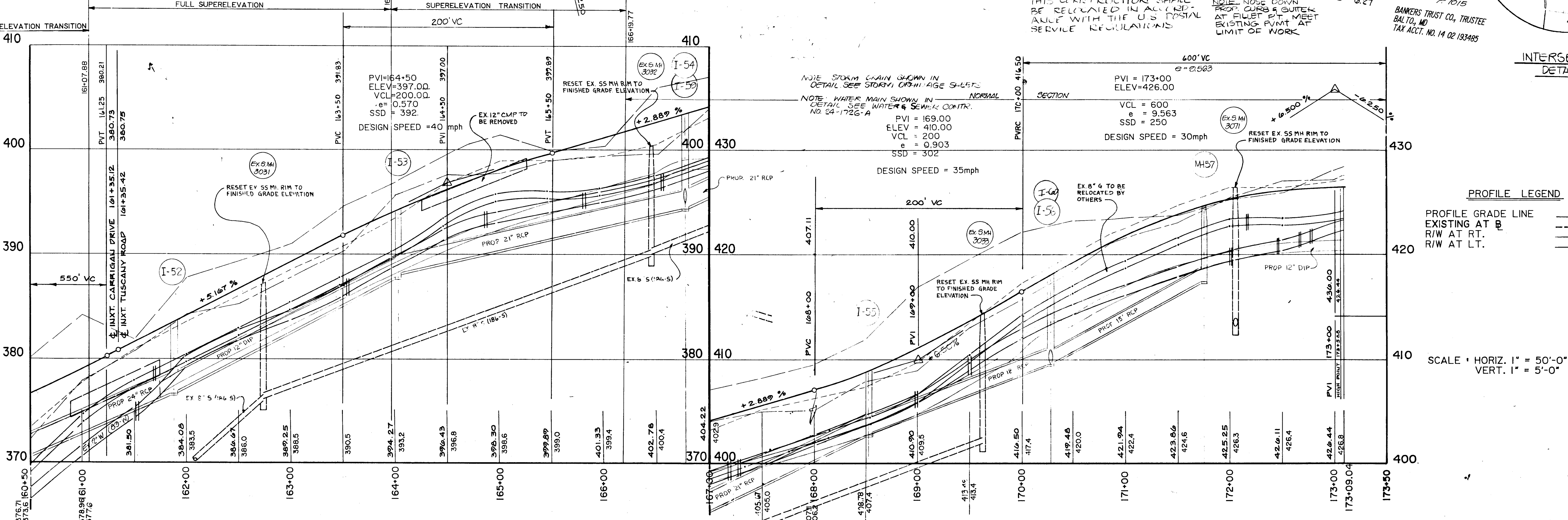
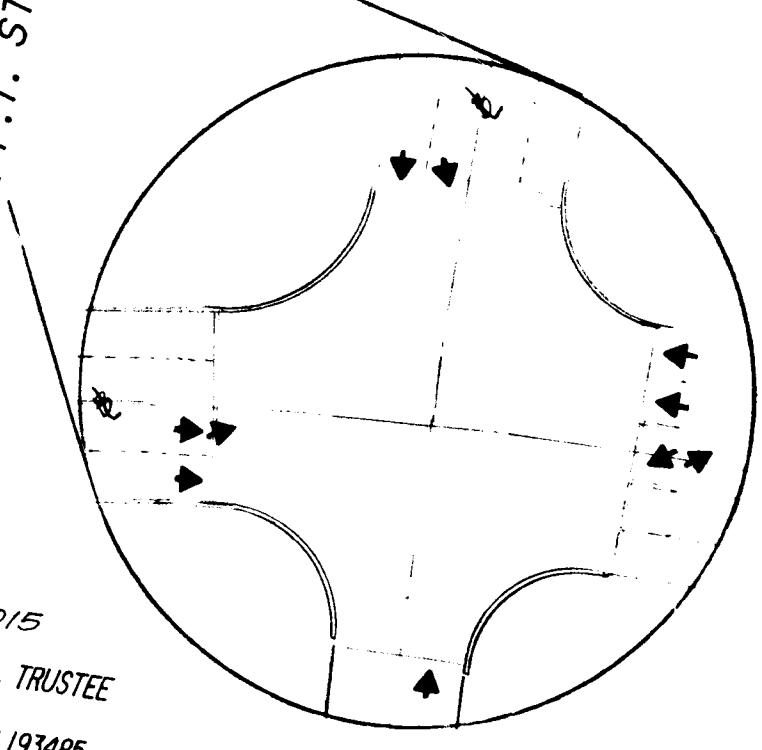
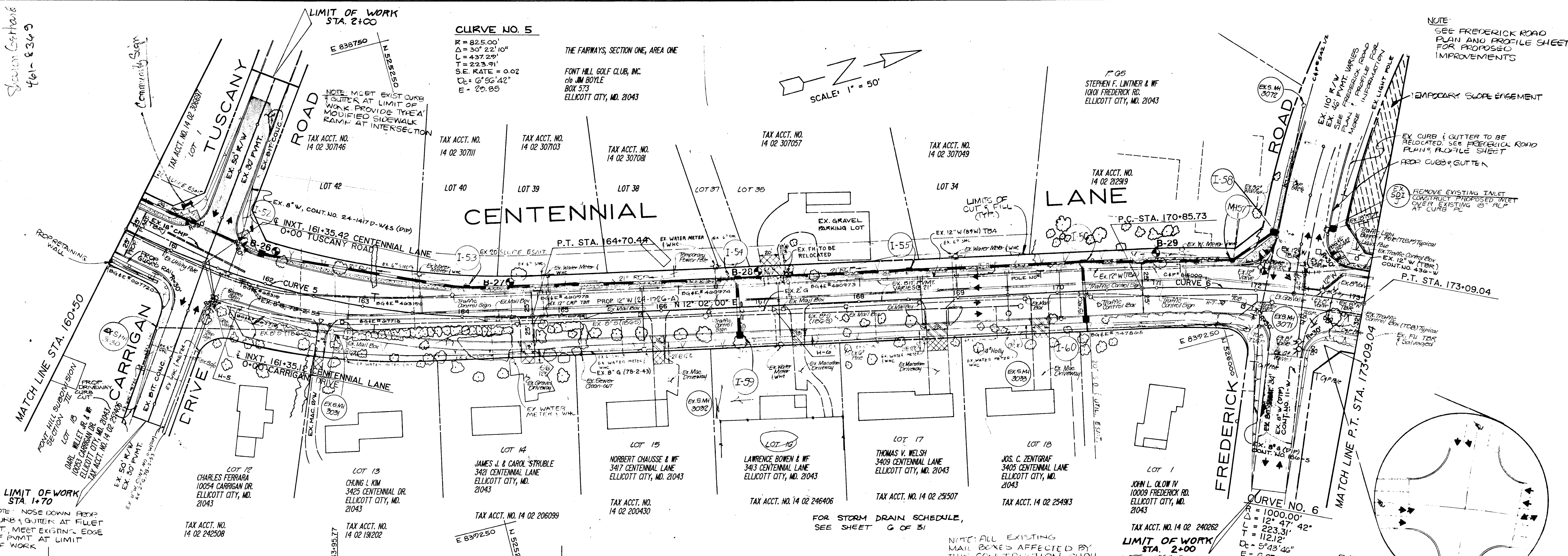
Station Centennial
461-8349



CURVE NO. 5
R = 825.00'
Δ = 30° 22' 10"
L = 437.29'
T = 223.91'
S.E. RATE = 0.02
C.C. = 6° 56' 42"
E = 29.85

THE FARWAYS, SECTION ONE, AREA ONE
FONT HILL GOLF CLUB, INC.
c/o JIM BOYLE
BOX 573
ELLCOTT CITY, MD. 21043

F.05
STEPHEN F. LINTNER & WF
1001 FREDERICK RD.
ELLCOTT CITY, MD. 21043



PROFILE LEGEND
PROFILE GRADE LINE
EXISTING AT R/W AT RT.
R/W AT LT.

SCALE: HORIZ. 1" = 50'-0"
VERT. 1" = 5'-0"

2. SUBMITTED FOR 95% REVIEW (11-2-09)
 1. SUBMITTED TO MAKE AND CAP (4-25-08)
 BRUNING 44-132-69150 C. As Submitted 4/14/08 1/28/08 C. As Submitted for 19 May Review 2/22/08

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *James A. Williams* 11/12/09
 Chief, Bureau of Engineering: *Thomas B. Riley* 11/12/09
 Chief, Roads, Bridges and Storm Drainage: *Granville W. Wickard* 11/12/09

MILDENBERG, MOCHI & ASSOCIATES, INC.
ENGINEERS • SURVEYORS • PLANNERS

3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
 (301) 461-0078 D.C. Metro: (301) 621-5768



| | |
|--------------|-------------|
| DES: JBM/KAC | DATE: 12/00 |
| DRN: STAFF | BY: NO. |
| CHK: JBM | REVISION |
| DATE: 12/00 | DATE |

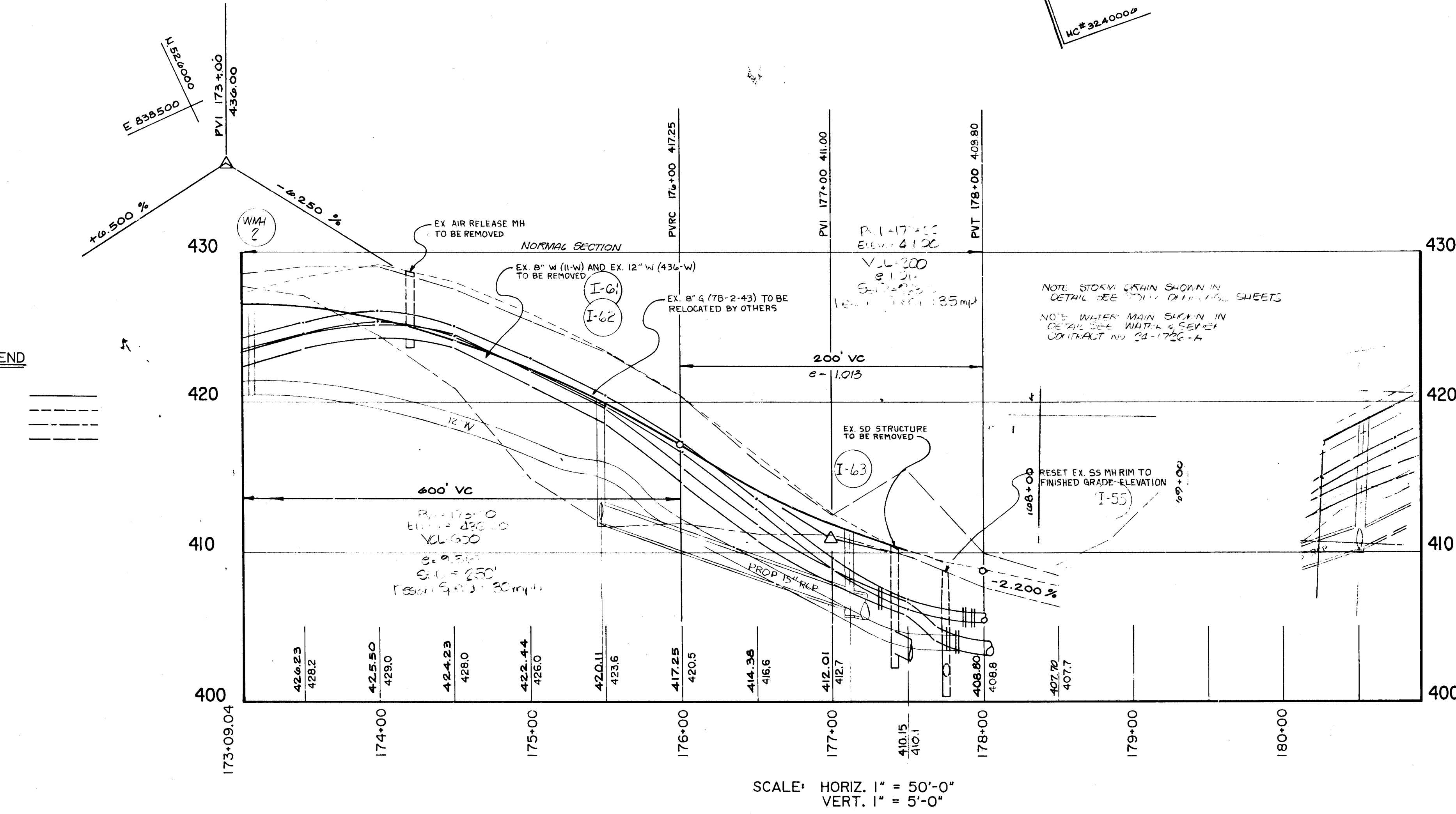
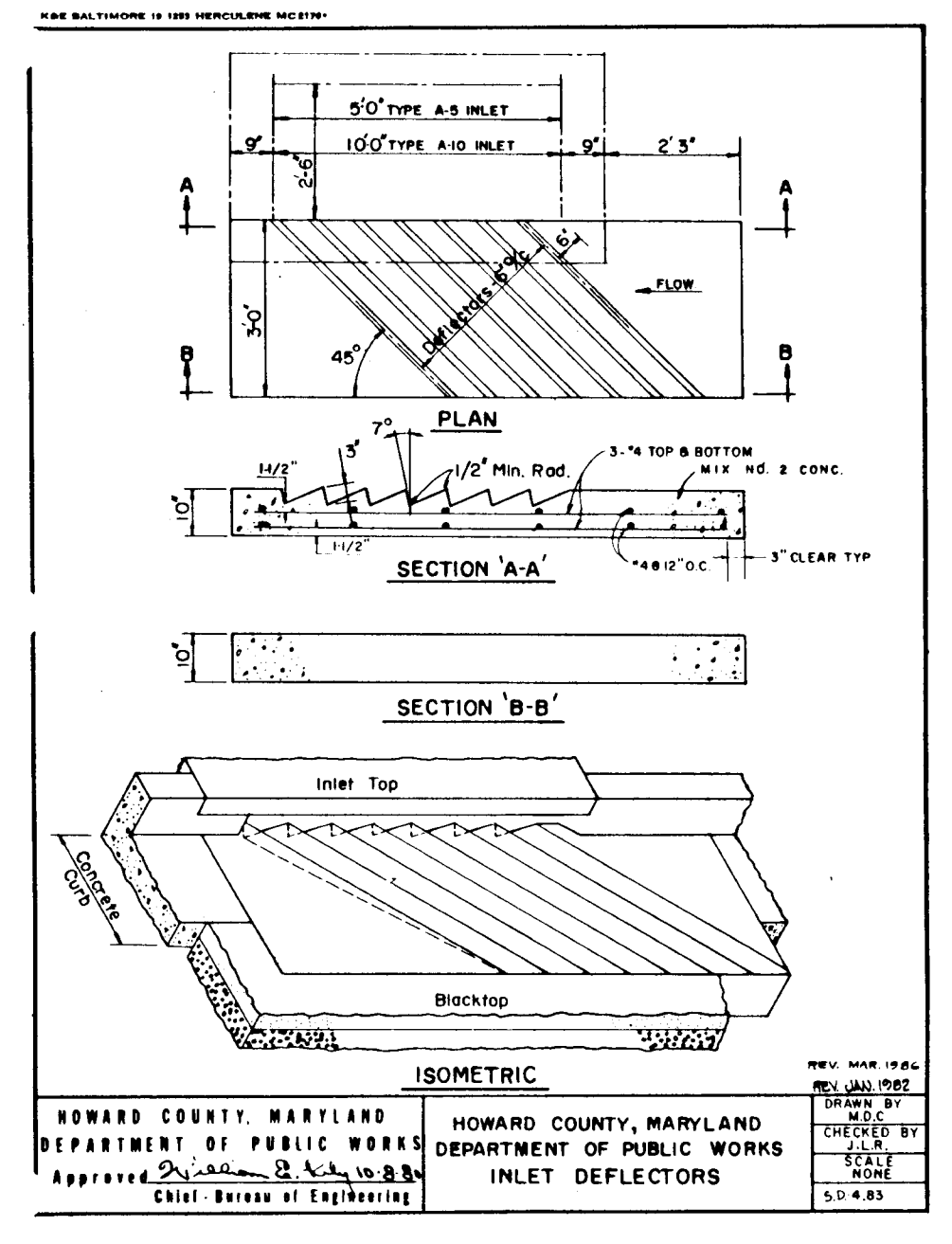
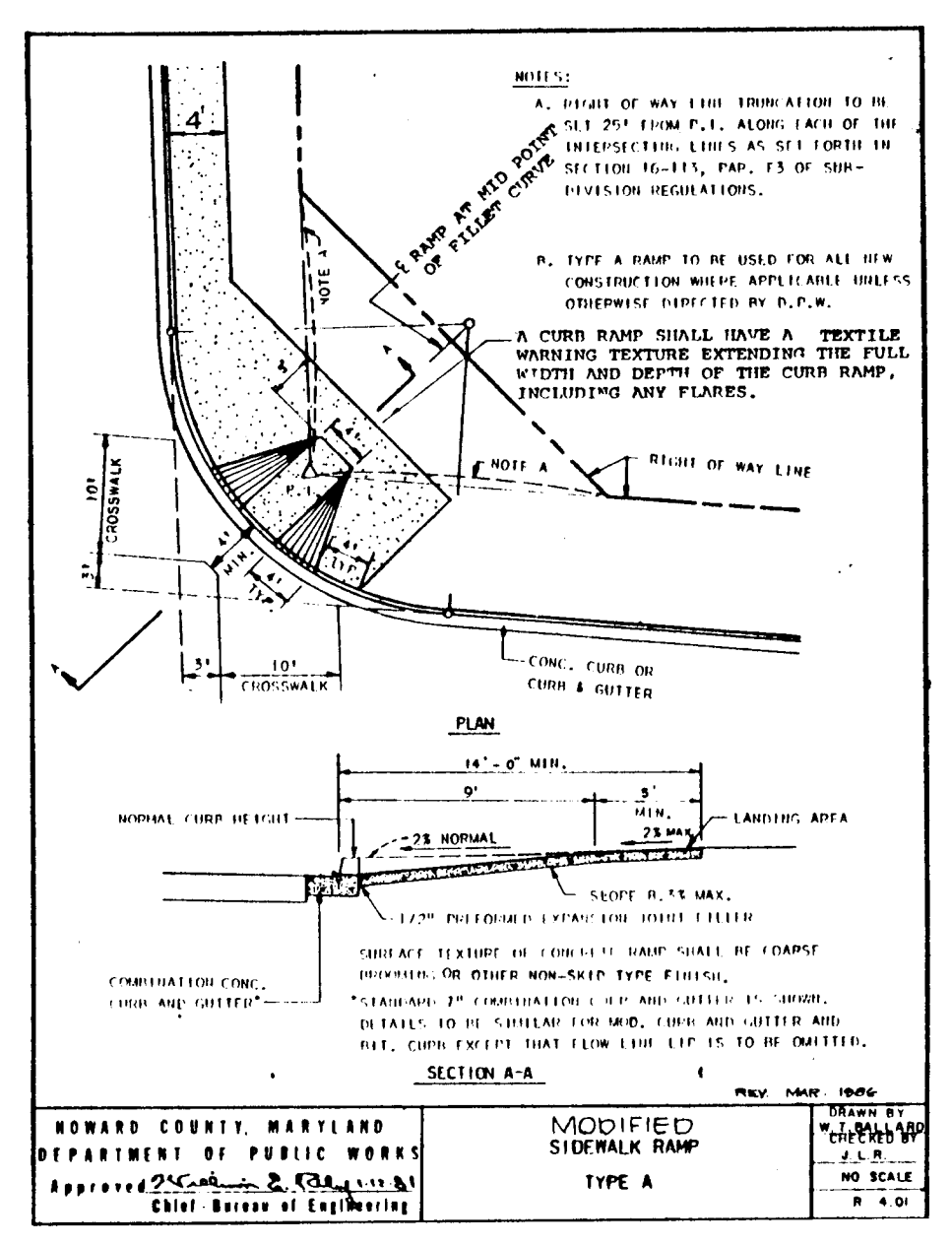
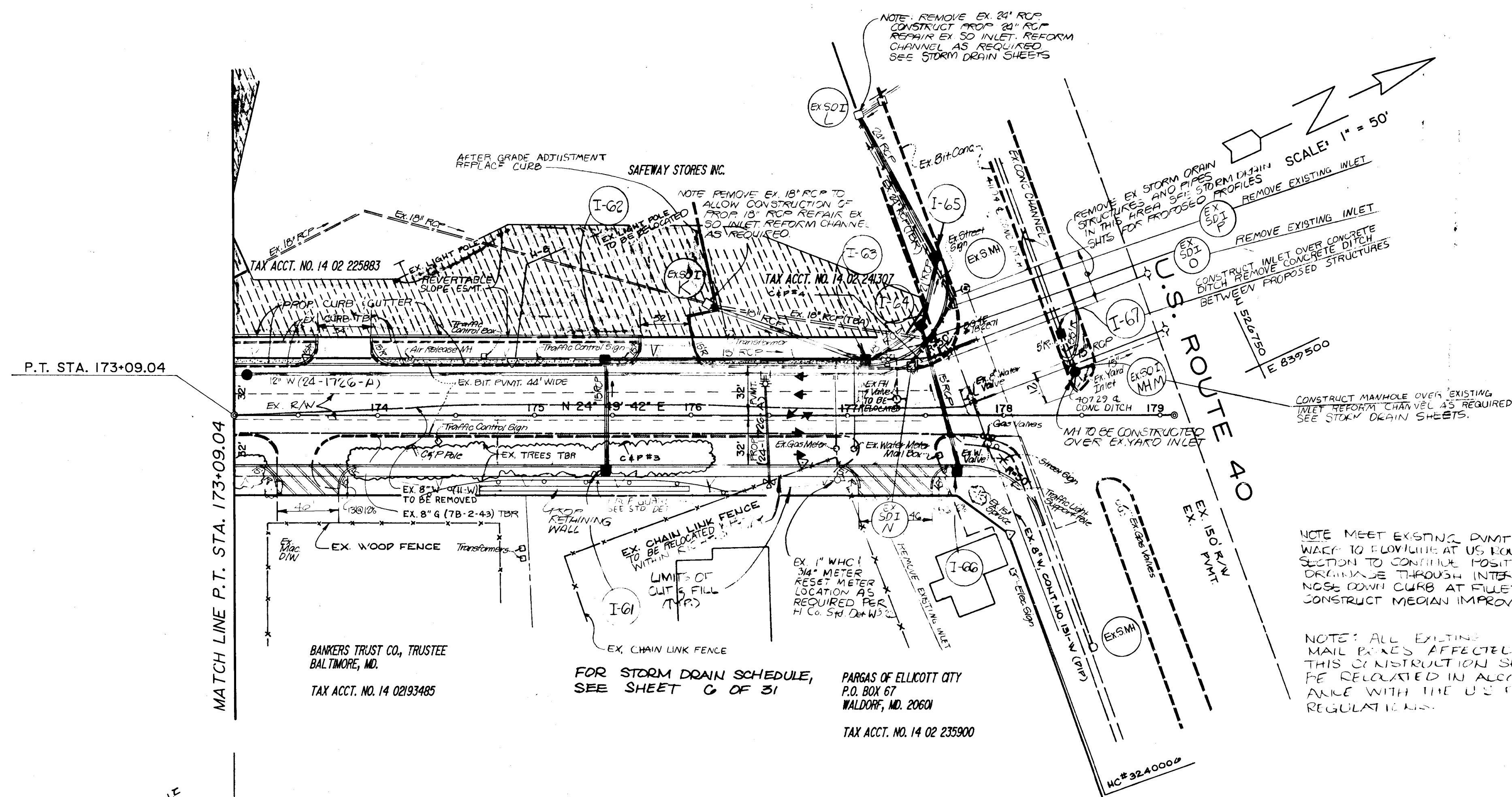
PLAN & PROFILE
STA. 160+50 TO STA. 173+09.04
CENTENNIAL LANE

600 SCALE MAP NO. 24 BLOCK NO.

CENTENNIAL LANE
STA. 135+50 TO U.S. ROUTE 40
CAPITAL PROJECT J-4015-11
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 4 OF 36

E 839'000
N 52'000



2. SUBMITTED FOR 95% REVIEW (11-2-85)
 1. SUBMITTED TO BASE AND CAP (4-25-86)
 0. AS SUBMITTED FOR 95% REVIEW (11-2-85)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

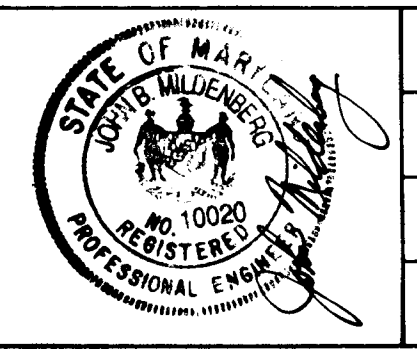
James H. Quinn 11/15/85
DIRECTOR OF PUBLIC WORKS DATE

Robert E. Reilly 11/13/85
CHIEF, BUREAU OF ENGINEERING DATE

Aravind K. Uthappa 11/14/85
CHIEF, BUREAU OF HIGHWAYS DATE

MILDENBERG, MOCHI & ASSOCIATES, INC.
ENGINEERS • SURVEYORS • PLANNERS

3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
(301) 461-0078 D.C. Metro: (301) 621-5768

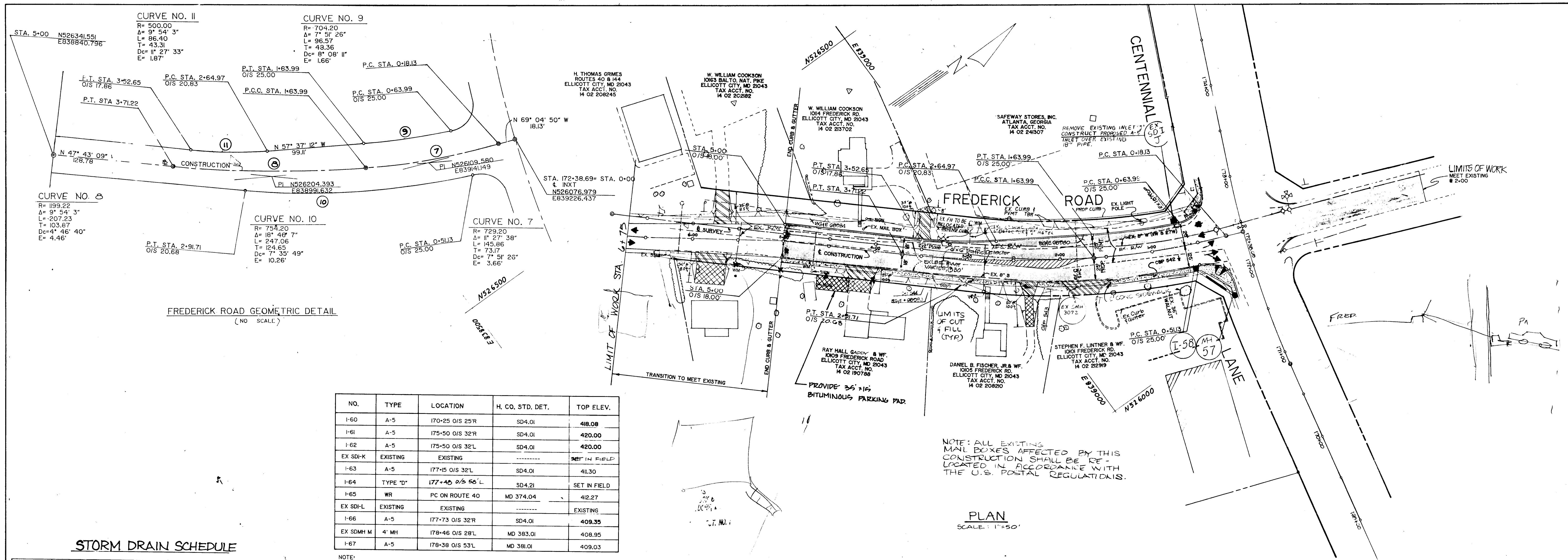


| | | | | | |
|--------------------|--|--|--|--|--|
| DES: JEM/KAM | | | | | |
| DRN: STAFF | | | | | |
| CHK: JEM | | | | | |
| DATE: 12/90 | | | | | |
| BY: NO. | | | | | |
| REVISION | | | | | |
| DATE | | | | | |
| 600' SCALE MAP NO. | | | | | |
| BLOCK NO. | | | | | |

PLAN & PROFILE
STA. 173+09.04 TO END
CENTENNIAL LANE

CENTENNIAL LANE
STA. 135+50 TO U.S. ROUTE 40
CAPITAL PROJECT J-4015- II
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 5 OF 36

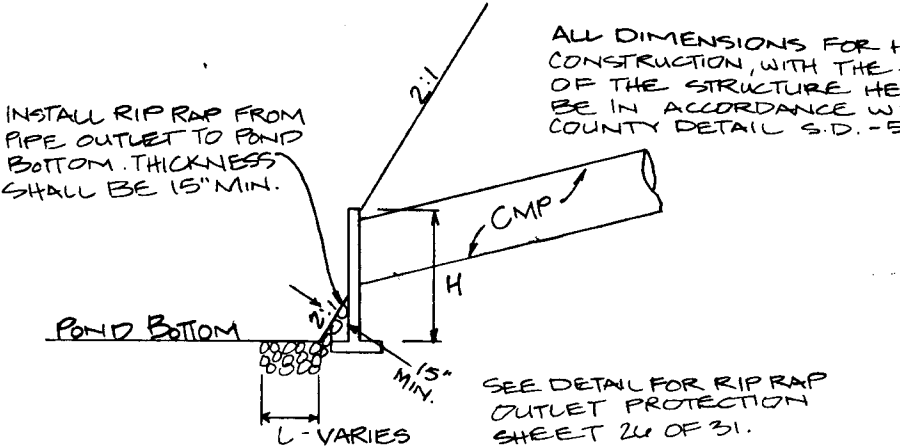


FREDERICK ROAD GEOMETRIC DETAIL
(NO SCALE)

| NO. | TYPE | LOCATION | H. CO. STD. DET. | TOP ELEV. |
|-----------|----------|-----------------|------------------|--------------|
| I-60 | A-5 | 170+25 O/S 25'R | SD4.01 | 418.08 |
| I-61 | A-5 | 175+50 O/S 32'R | SD4.01 | 420.00 |
| I-62 | A-5 | 175+50 O/S 32'L | SD4.01 | 420.00 |
| EX SDI-K | EXISTING | EXISTING | ----- | SET IN FIELD |
| I-63 | A-5 | 177+15 O/S 32'L | SD4.01 | 411.30 |
| I-64 | TYPE 'D' | 177+40 O/S 50'L | SD4.21 | SET IN FIELD |
| I-65 | WR | PC ON ROUTE 40 | MD 374.04 | 412.27 |
| EX SDI-L | EXISTING | EXISTING | ----- | EXISTING |
| I-66 | A-5 | 177+73 O/S 32'R | SD4.01 | 409.35 |
| EX SDMH M | 4' MH | 178+46 O/S 28'L | MD 383.01 | 408.95 |
| I-67 | A-5 | 178+38 O/S 53'L | MD 381.01 | 409.03 |

NOTE:
1. INLET LOCATIONS AND ELEVATIONS ARE BASED AT THE TOP OF CURB ON THE DOWN STREAM CORNER OF THE STRUCTURE. MANHOLE LOCATIONS AND ELEVATIONS ARE SHOWN TO THE CENTERLINE OF THE STRUCTURE.
2. ALL A-5 INLETS TO BE CONSTRUCTED WITH DEFLECTORS. SEE DETAIL SHEET 5.

* STRUCTURES EW-4 & C ARE MODIFIED TYPE "C" HEADWALLS. THE MODIFICATIONS ARE AS FOLLOWS:
NO. HEIGHT OF STRUCTURE
EW-4 --- 3'-0"
EW-5 --- 3'-3"
EW-6 --- 3'-0"

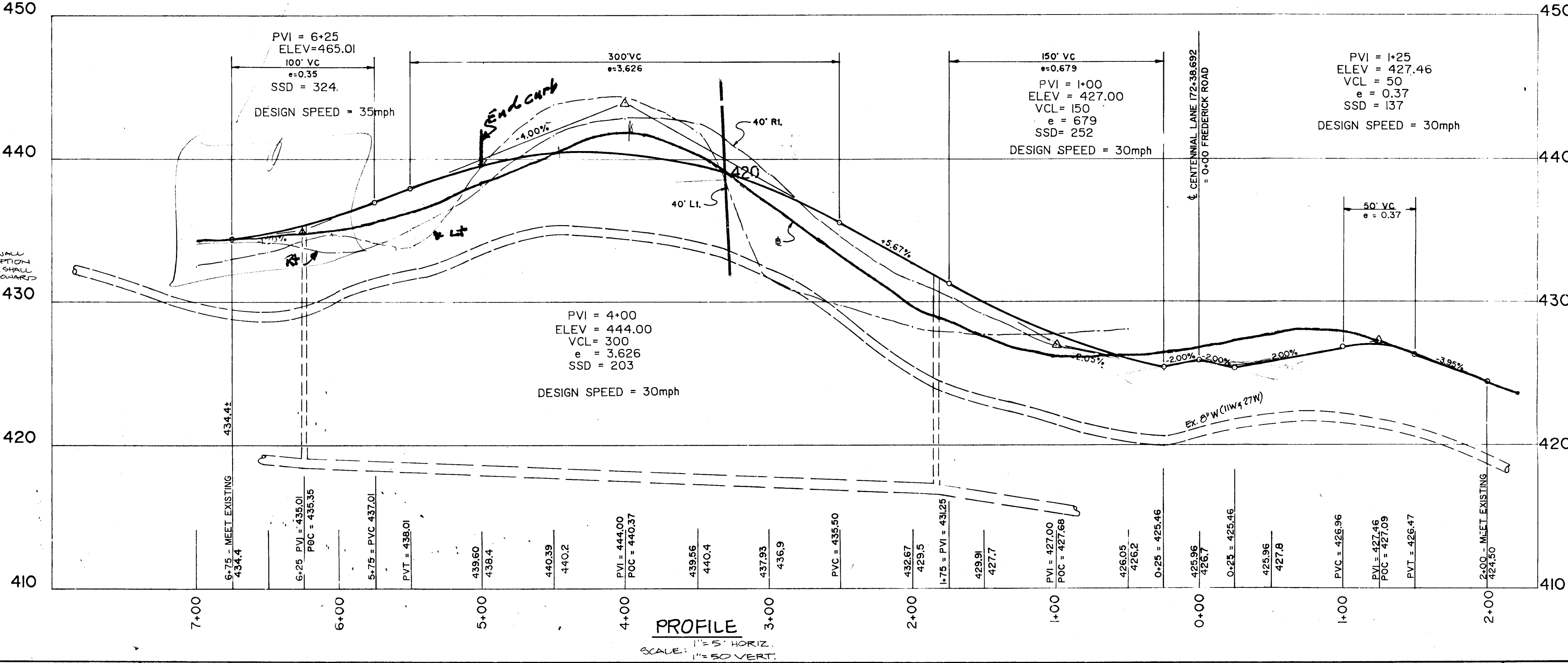


NOTE: ALL EXISTING MAIL BOXES AFFECTED BY THIS CONSTRUCTION SHALL BE RE-LOCATED IN ACCORDANCE WITH THE U.S. POSTAL REGULATIONS.

PLAN
SCALE: 1"=50'

STORM DRAIN SCHEDULE

| NO. | TYPE | LOCATION | H. CO. STD. DET. | TOP ELEV. |
|----------|-----------------|-------------------|------------------|-----------|
| EW-4* | MODIFIED TYPE C | 155+78 O/S 20'R | SD 5.21 | 399.50 |
| I-37 | A-5 | 146 + 00 O/S 25'R | SD4.01 | 411.04 |
| MH-38 | 4' - MH | 144 + 25 O/S 28'R | GS.01 | 424.43 |
| I-39 | A-5 | 142+50 O/S 25'R | SD4.01 | 411.02 |
| MH-40 | 4' MH | 142+50 O/S 28'L | GS.01 | 416.02 |
| I-41 | A-5 | 140+25 O/S 25'L | SD4.01 | 440.78 |
| I-42 | A-5 | 139+00 O/S 25'L | SD4.01 | 442.05 |
| I-43 | A-5 | 137+75 O/S 25'L | SD4.01 | 443.45 |
| I-44 | A-5 | 136+50 O/S 25'L | SD4.01 | 444.91 |
| *EW-5 | MODIFIED TYPE C | 157+02 O/S 20'L | SD 5.21 | 399.75 |
| I-46 | A-5 | 150+00 O/S 25'L | SD4.01 | 442.05 |
| I-47 | A-5 | 136+50 O/S 25'R | SD4.01 | 444.91 |
| EW-2 | TYPE C | 150+80 O/S 37'R | SD5.21 | 391.05 |
| EW-3 | TYPE C | 150+25 O/S 35'L | SD5.21 | 394.26 |
| MH-34 | 4' MH | 150+50 O/S 20'R | GS.03 | 383.12 |
| I-35 | A-5 | 149+20 O/S 25'R | SD4.01 | 389.29 |
| MH-36 | 4' MH | 147+50 O/S 28'R | GS.01 | 400.21 |
| I-48 | A-5 | 152+50 O/S 25' R | SD4.01 | 379.71 |
| MH-45-A | 4' MH | 100+44 O/S 28'R | GS.01 | 372.56 |
| EW-6* | MODIFIED TYPE C | 158+26 O/S 36'L | SD 5.21 | 390.25 |
| I-49 | A-5 | 157+30 O/S 25'R | SD4.01 | 370.14 |
| I-50 | A-5 | 157+30 O/S 25'L | SD4.01 | 370.14 |
| I-51 | A-5 | 159+50 O/S 25'L | SD4.01 | 373.23 |
| I-52 | A-5 | 161+80 O/S 25'L | SD4.01 | 383.09 |
| I-53 | A-5 | 164+00 O/S 25'L | SD4.01 | 394.21 |
| I-54 | A-5 | 166+75 O/S 25'L | SD4.01 | 402.94 |
| I-55 | A-5 | 168+50 O/S 25'L | SD4.01 | 408.77 |
| I-56 | A-5 | 170+25 O/S 25'L | SD4.01 | 418.08 |
| MH-57 | 4' MH | 171+75 O/S 28'L | GS.01 | 424.72 |
| I-58 | A-5 | 0+53 O/S 25'L | SD4.01 | 426.18 |
| EX SDI-J | A-5 | 0+65 O/S 25'R | SD4.01 | 426.44 |
| I-59 | A-5 | 166+75 O/S 25'R | SD4.01 | 402.94 |



PROFILE
SCALE: 1"=5' HORIZ.
SCALE: 1"=50' VERT.

2. REVISED PER 100% COMMENTS (10-5-90)
1. SUBMITTED FOR 95% REVIEW (11-2-90)
SUBMITTED TO HOWARD CO (4-25-98)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

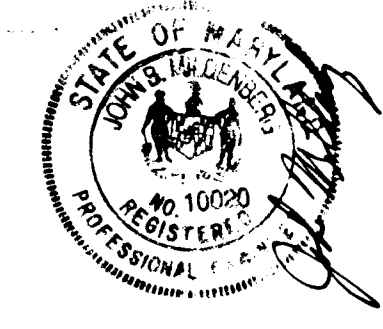
James A. ... DATE 11/15/90
DIRECTOR OF PUBLIC WORKS

... DATE 11/14/90
CHIEF, BUREAU OF HIGHWAYS

MILDENBERG,
MOCHI & ASSOCIATES, INC.

ENGINEERS - SURVEYORS - PLANNERS

3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
(301) 461-0078 D.C. Metro: (301) 621-5768

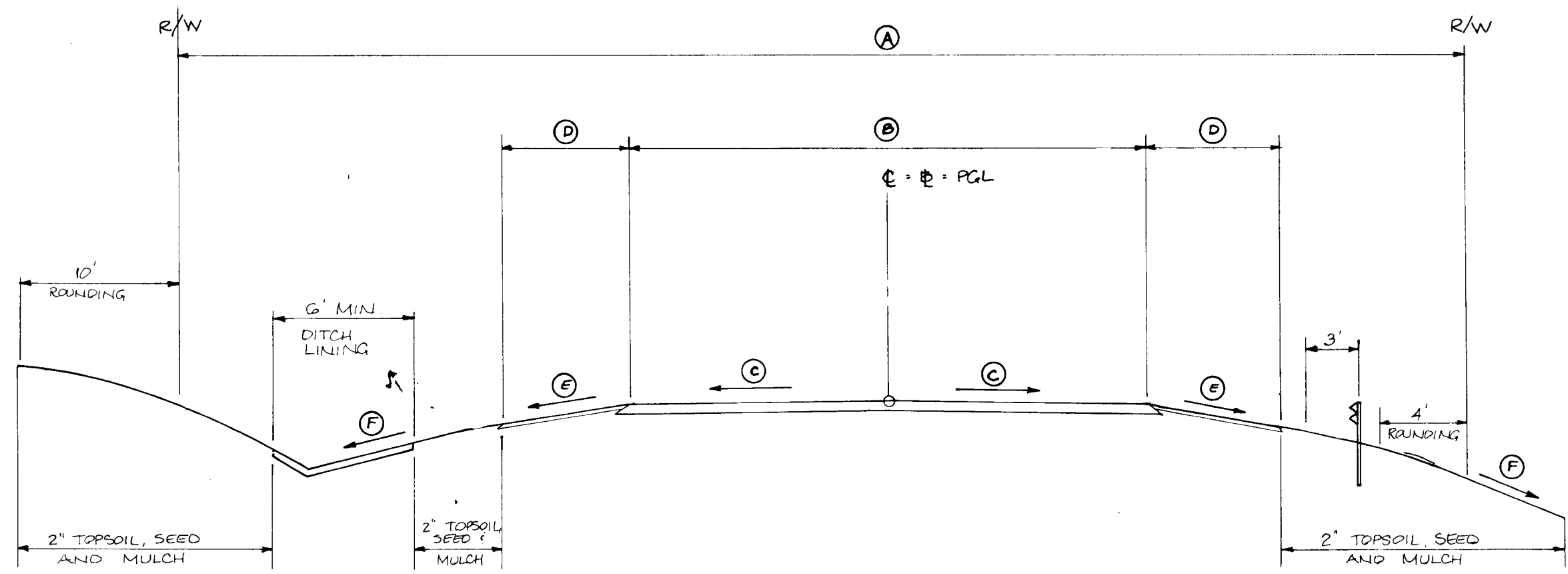


| | |
|--------------------|--|
| DES: JBM/KAM | |
| DRN: STAFF | |
| CHK: JBM | |
| DATE: 12/30 | |
| BY: NO. | |
| REVISION | |
| DATE | |
| 600' SCALE MAP NO. | |
| BLOCK NO. | |

PLAN & PROFILE
FREDERICK ROAD

CENTENNIAL LANE
STA. 135+50 TO U.S. ROUTE 40
CAPITAL PROJECT J-4015-11
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 6 OF 26



TYPICAL OPEN SECTION-INTERSECTING ROADS
NOT TO SCALE

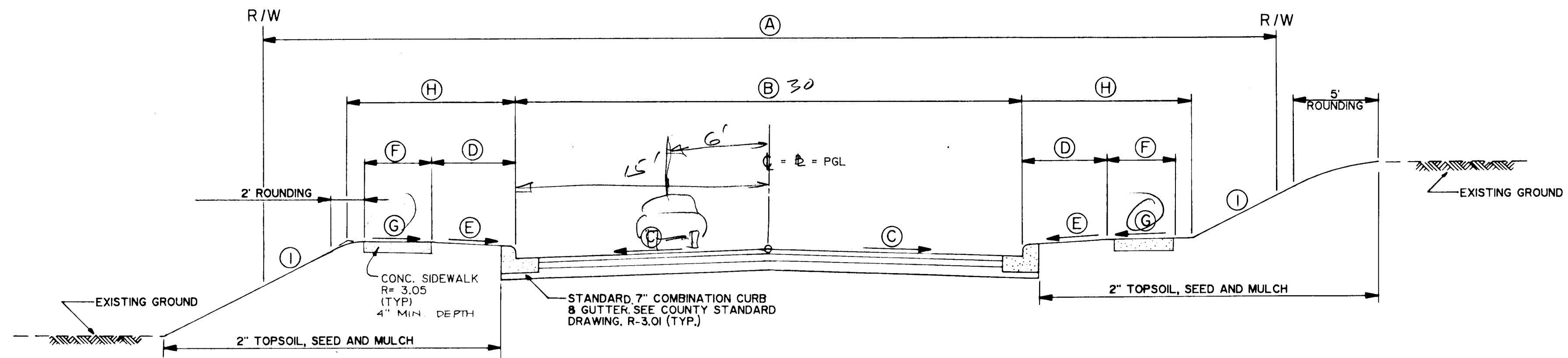
| Stationing | Roadway | A R/W | B Pavement Width | C Cross Slope | D Shoulder Width | E Slope | F MAX. Slope | Pavement Ho. Co. Std R-201.202 | Classification |
|--------------|----------------|-------|---------------------|---------------|------------------|----------|--------------|--------------------------------|-----------------|
| 0+00 to 0+75 | Burnside Drive | 60' | 36' | existing | existing | existing | 2:1 | P-3 | Minor Collector |
| 0+75 to 2+00 | Burnside Drive | 60' | 36' Trans to 24' | existing | existing | existing | 2:1 | P-3 | Minor Collector |
| 0+00 to 1+70 | Carrigan Drive | 50' | 30' | existing | existing | existing | 2:1 | P-2 | Local Street |
| 5+00 to 6+75 | Frederick Road | 80' | 36' Trans to 24' | 2% | existing | existing | 2:1 | P-5 | Minor Arterial |

TRAFFIC BARRIER W-BEAM TABULATION

Begin Type I End Flare 154.25 O/S 40' R
 Begin Transition to Normal 154.75 O/S 32' R
 Begin Transition from Normal 161.00 O/S 32' R
 End Type I End Flare Carrigan Drive 0+55' O/S 25' R

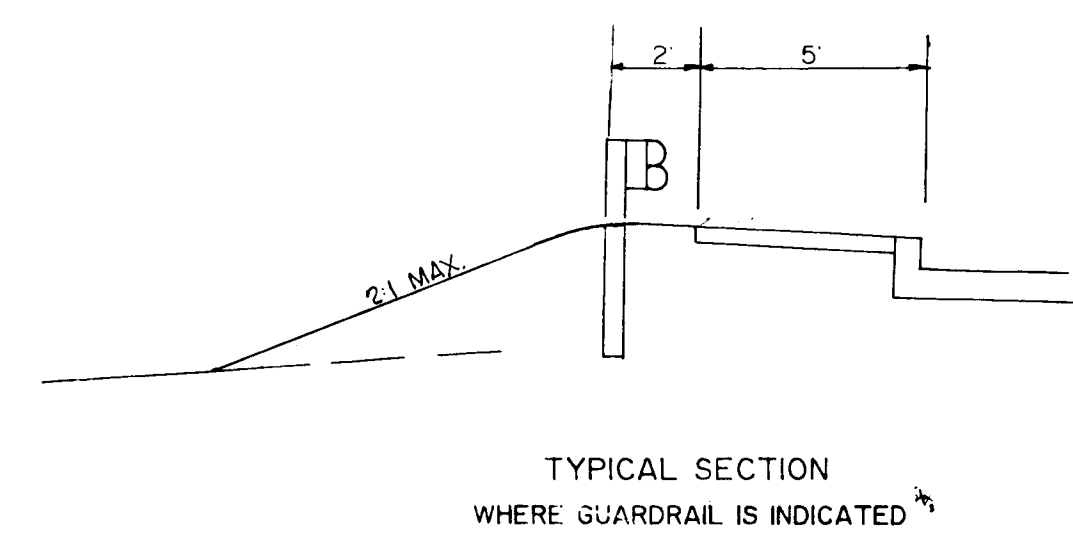
Begin Type I End Flare 153.25 O/S 40' L
 Begin Transition to Normal 153.75 O/S 32' L
 Begin Transition from Normal 159.50 O/S 32' L
 End Type I End Flare 160.00 O/S 40' L

Begin Type I End Flare 174.25 O/S 50' R
 Begin Transition to Normal 174.75 O/S 42' R
 Begin Transition from Normal 175.80 O/S 42' R
 End Type I End Flare 176.30 O/S 50' R

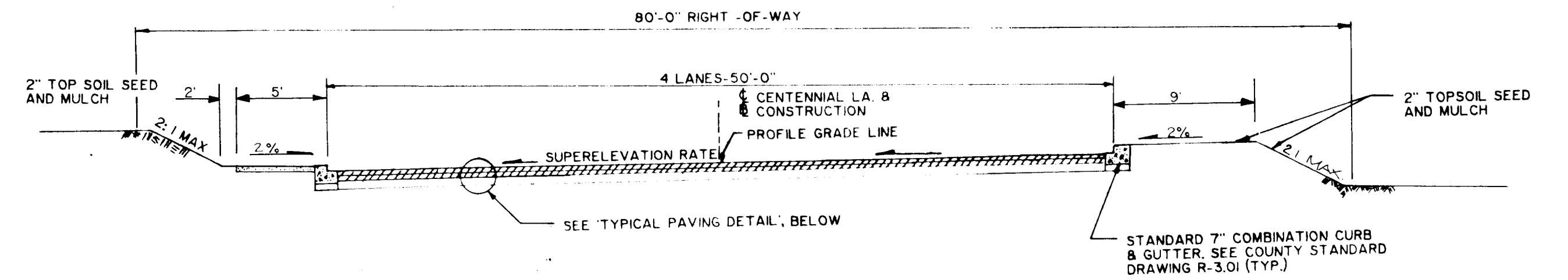


TYPICAL CLOSED SECTION INTERSECTING ROADS
NOT TO SCALE

| Stationing | Roadway | A R/W | B Pavement Width | C Cross Slope | D Grass Strip | E Slope | F Sidewalk Width | G Slope | H Transition to Max. Slope | I Max. Slope | Pavement Ho. Co. Std R-201.202 | Classification |
|--------------|----------------|-------|---------------------|---------------|---------------|---------|------------------|---------|----------------------------|--------------|--------------------------------|-------------------|
| 0+00 to 0+90 | Char-III Court | 50' | 28' | 3% | 4' | 4% | 4' | 4% | 9' | 2:1 | P-2 | Cul-de-Sac Street |
| 0+00 to 5+00 | Frederick Road | 80' | 50' Trans to 36' | 2% | N/A | N/A | 4' | 4% | 9' | 2:1 | P-5 | Minor Arterial |
| 0+00 to 2+00 | Tuscany Road | 50' | 30' | 3% | 4' | 4% | 4' | 4% | 9' | 2:1 | P-2 | Local Street |



TYPICAL SECTION
WHERE GUARDRAIL IS INDICATED



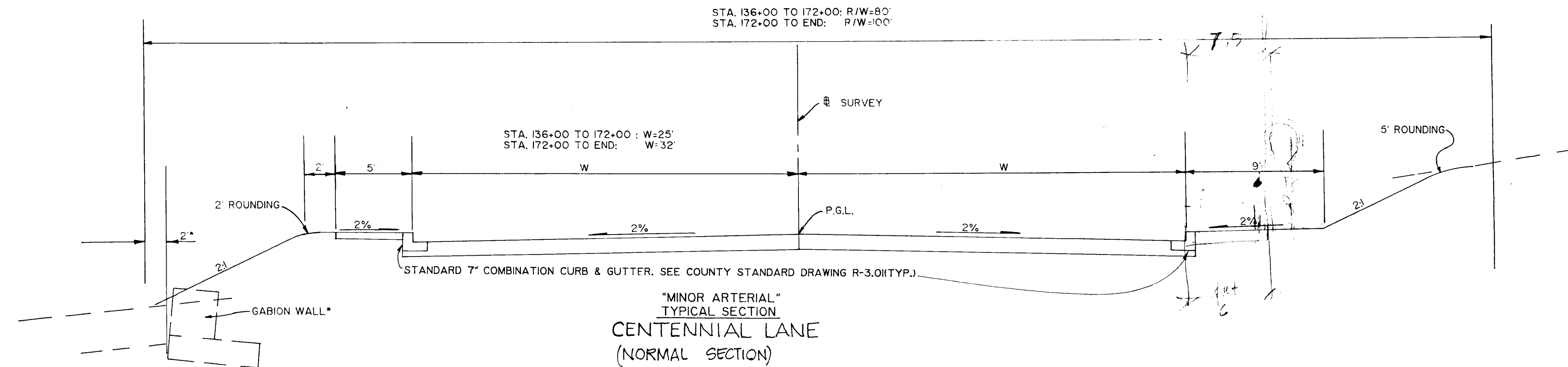
TYPICAL SUPERELEVATION SECTION
CENTENNIAL LANE
(NO SCALE)

* SEE SUPERELEVATION HORIZONTAL AND VERTICAL CONTROL SHEET FOR MORE INFORMATION

SUPERELEVATION TABULATION

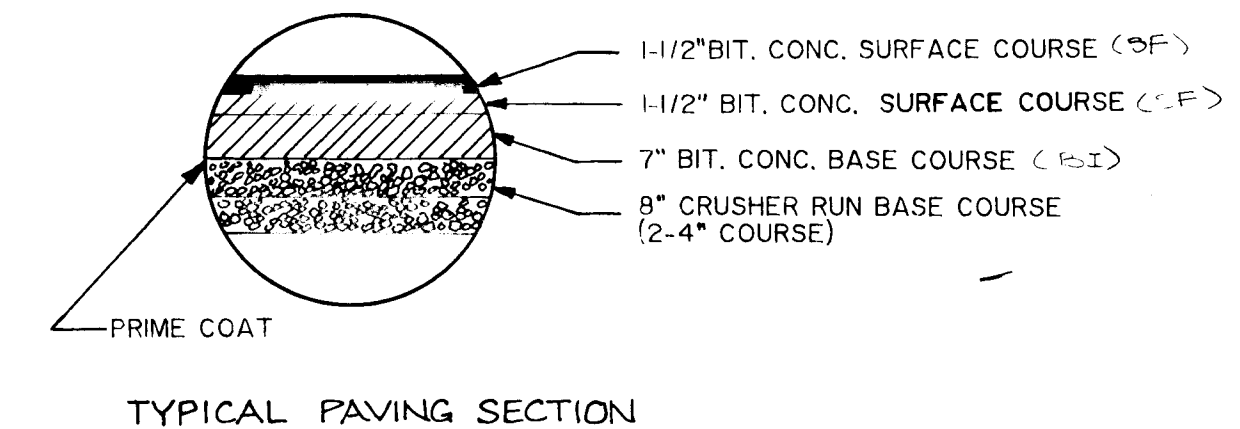
BEGIN SUPERELEVATION TRANSITION 140+61.73
 BEGIN FULL SUPERELEVATION 141+00.00
 END FULL SUPERELEVATION 151+26.36
 END SUPERELEVATION TRANSITION 153+00.36

BEGIN SUPERELEVATION TRANSITION 158+83.82
 BEGIN FULL SUPERELEVATION 161+07.82
 END FULL SUPERELEVATION 163+95.77
 END SUPERELEVATION TRANSITION 166+19.77



"MINOR ARTERIAL"
TYPICAL SECTION
CENTENNIAL LANE
(NORMAL SECTION)

* GABION WALL IS LOCATED 2' FROM RIGHT OF WAY WHERE INDICATED ON DRWGS.



TYPICAL PAVING SECTION

BRUNING 44-132-69150 2. REVISED PER C.O. 100% COMMENTS (10-5-90) 1. SUBMITTED FOR 95% REVIEW (11-2-85)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Miller
DIRECTOR OF PUBLIC WORKS

Gregory B. Riley
CHIEF, BUREAU OF ENGINEERING

Francis W. Weiland
CHIEF, BUREAU OF HIGHWAYS

DATE: 11-13-90

MILDENBERG,
MOCHI & ASSOCIATES, INC.

ENGINEERS - SURVEYORS - PLANNERS

3300 North Ridge Road, Suite 225, Ellicott City, Maryland 21043-2350
 (301) 461-0078 D.C. Metro: (301) 621-5788

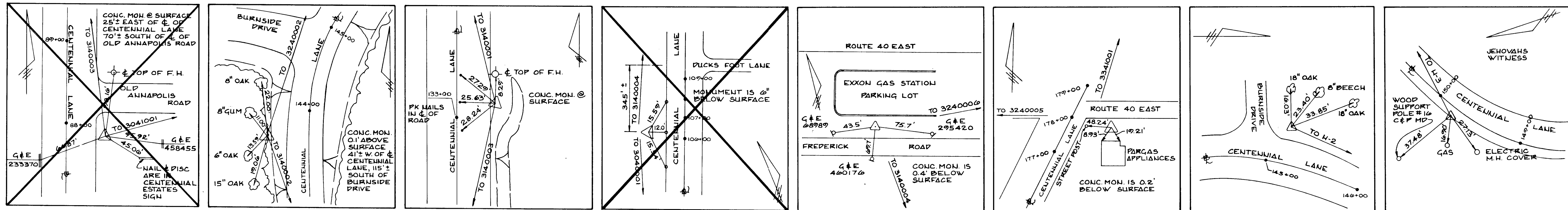


| | | | | | |
|--------------|----|-----|----------|------|------------------------------|
| DES: JEM/KAM | | | | | |
| DRN: STAFF | | | | | |
| CHK: JEM | | | | | |
| DATE: 12/90 | BY | NO. | REVISION | DATE | 600' SCALE MAP NO. BLOCK NO. |

TYPICAL SECTIONS

CENTENNIAL LANE
STA. 135+50 TO U.S. ROUTE 40
CAPITAL PROJECT J-4015-II
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 7 OF 36



HOWARD CO. # 3040001

N 518298.243
E 838017.587
ELEV = 449.42
STA 87+70 ± 0.5 32 ± R

HOWARD CO. # 3140001

N 523547.740
E 838056.376
ELEV = 430.43
STA 143+70 ± 0.5 37 ± L

HOWARD CO. # 3140002

N 522590.105
E 838594.190
ELEV = 445.77
STA 153+10 ± 0.5 30 ± R

HOWARD CO. # 3140005

N 520049.576
E 838594.190
ELEV = 420.95
STA 100+15 ± 0.5 20 ± L

HOWARD CO. # 3240005

N 526615.577
E 838351.344
ELEV =
STA

HOWARD CO. # 3240006

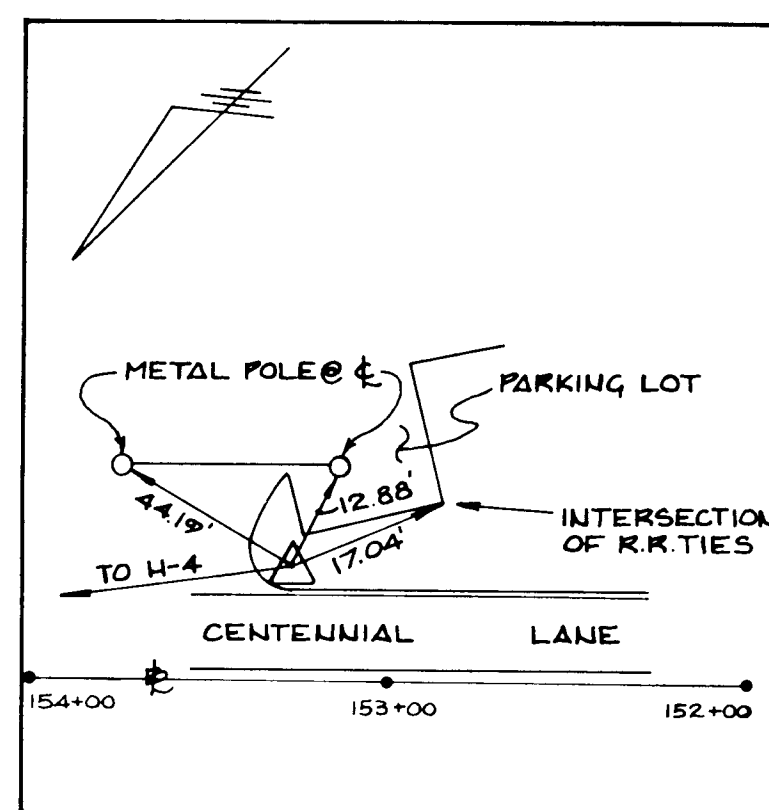
N 52658.644
E 839530.099
ELEV = 408.33
STA 178+04 ± 0.5 70 ± R

△ H-1

N 52373.218
E 838046.549
ELEV = 418.04
STA 145+30 ± 0.5 25 ± L

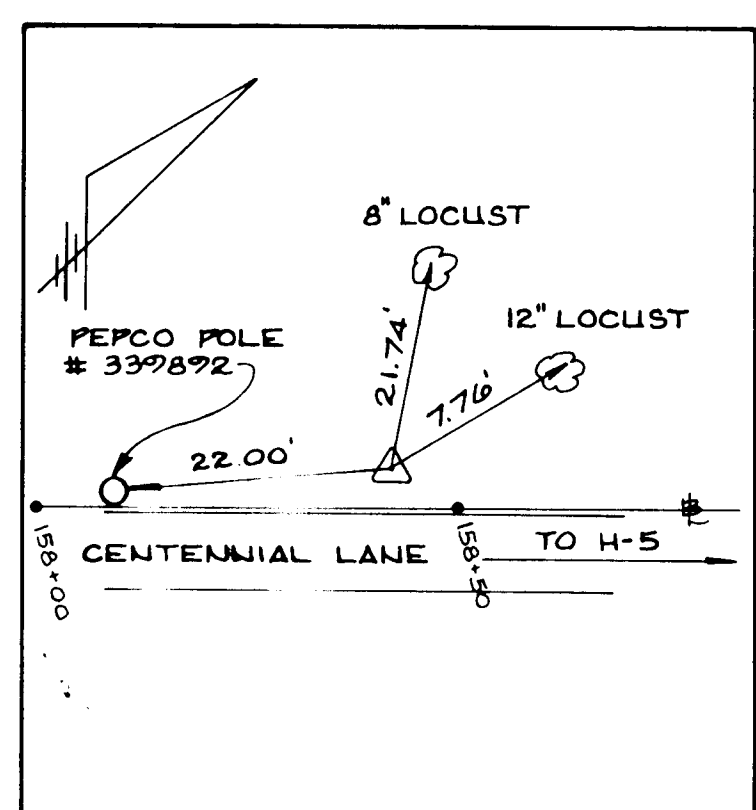
△ H-2

N 52458.117
E 838169.845
ELEV = 383.82
STA 149+90 ± 0.5 5 ± L



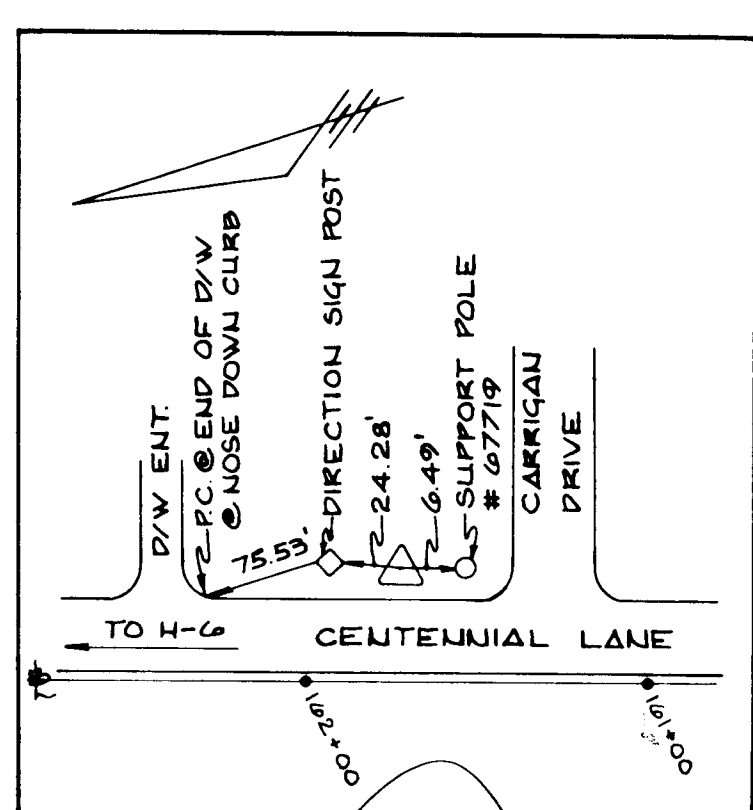
△ H-3

N 524403.962
E 838400.668
ELEV = 374.04
STA 153+20 ± 0.5 27 ± R



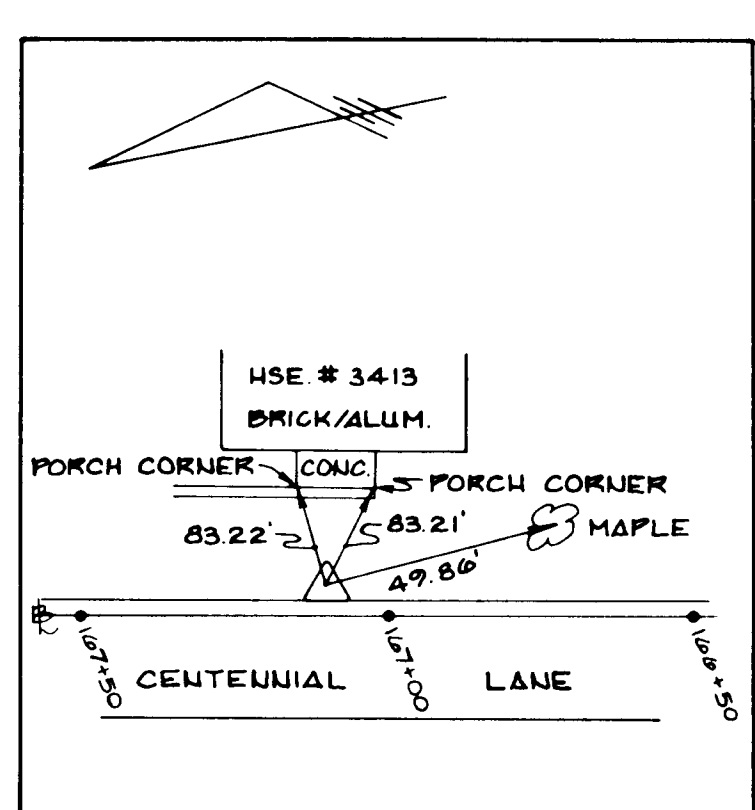
△ H-4

N 524800.695
E 838721.728
ELEV = 361.89
STA 158+37 ± 0.5 5 ± L



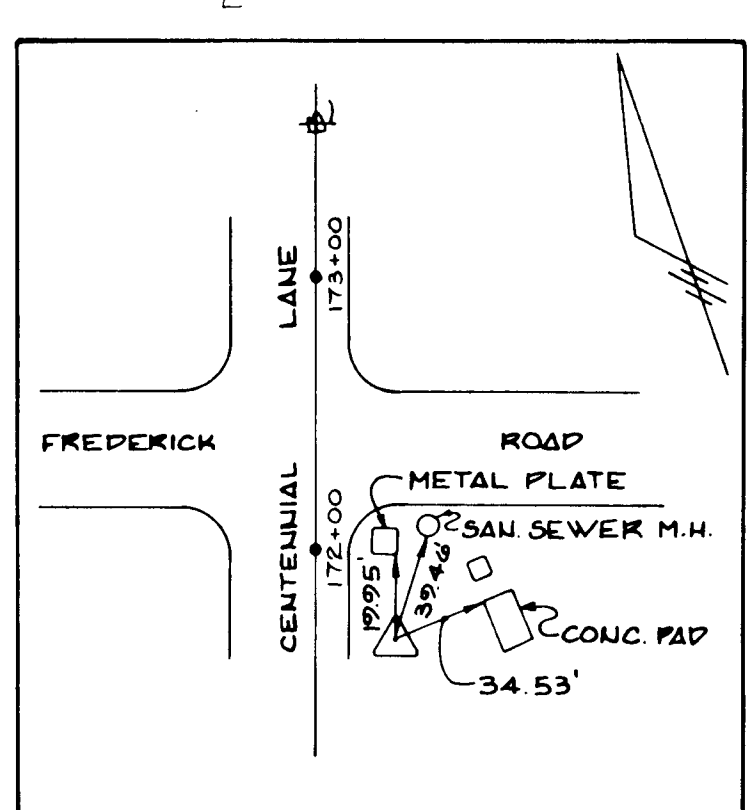
△ H-5

N 525046.407
E 838973.591
ELEV = 383.91
STA 191+83 ± 0.5 31 ± R



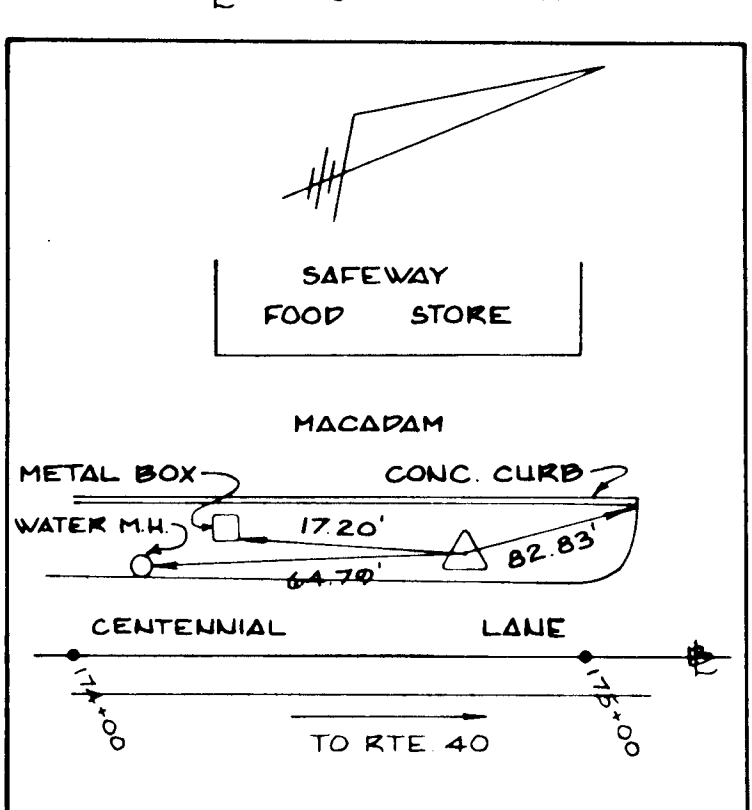
△ H-6

N 525566.666
E 839108.332
ELEV = 404.30
STA 107+15 ± 0.5 14 ± R



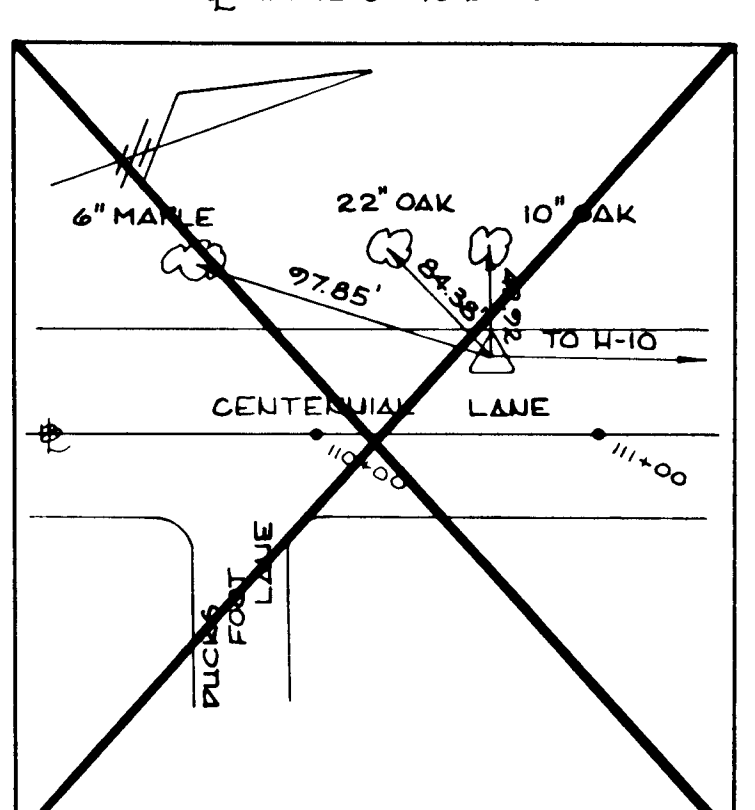
△ H-7

N 526004.030
E 839217.444
ELEV = 425.31
STA 171+45 ± 0.5 14 ± R



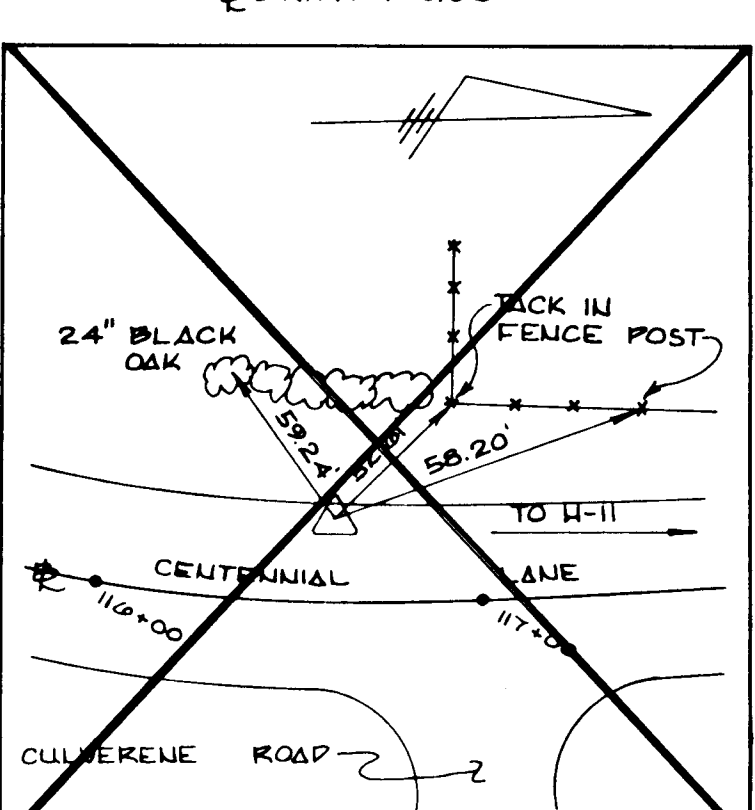
△ H-8

N 526317.482
E 839296.061
ELEV = 420.35
STA 174+85 ± 0.5 34 ± L



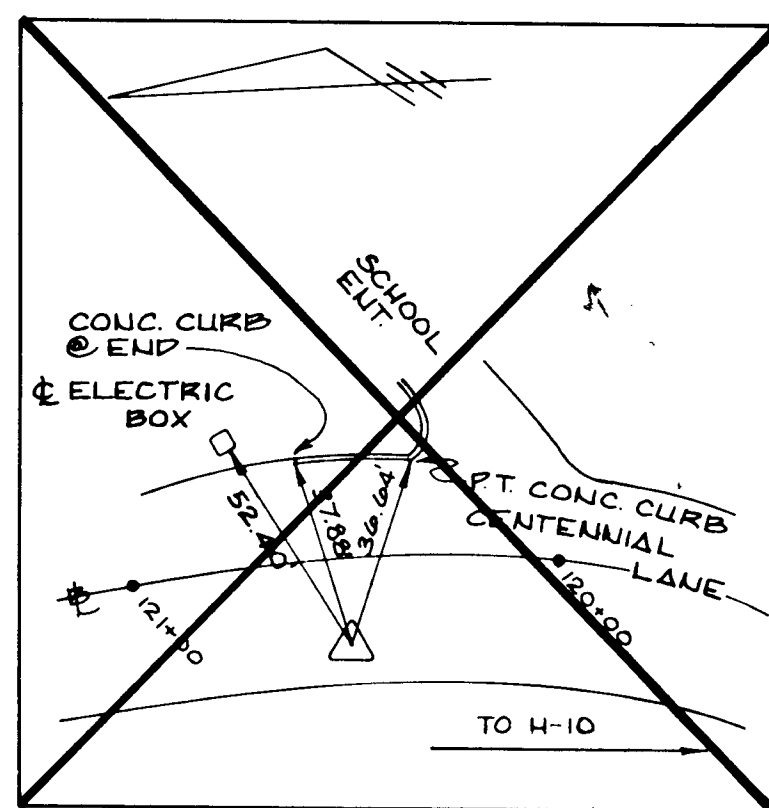
△ H-9

N 520476.628
E 838757.086
ELEV = 413.68
STA 110+70 ± 0.5 12 ± L



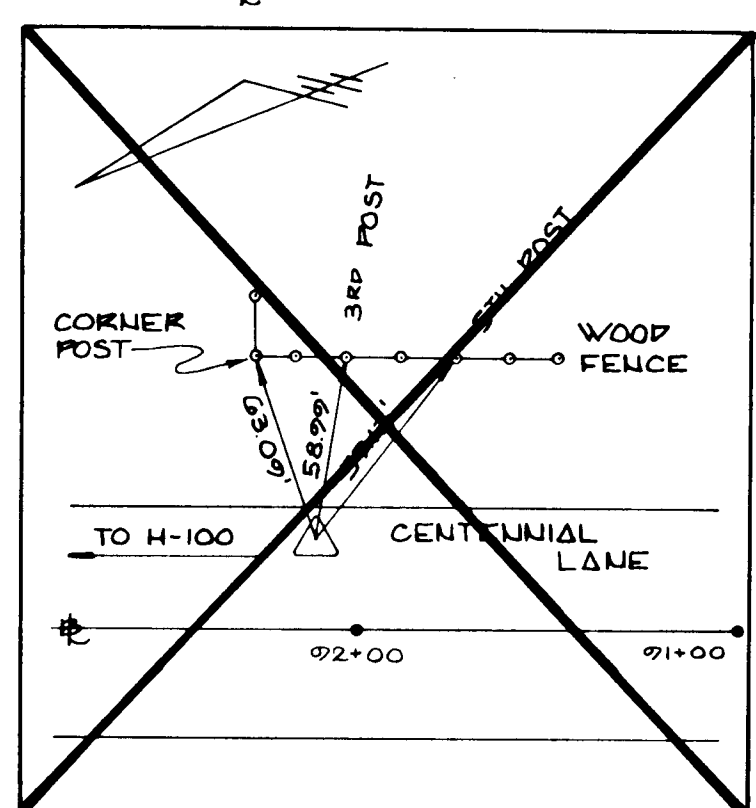
△ H-10

N 521034.270
E 838948.916
ELEV = 410.60
STA 116+60 ± 0.5 16 ± L



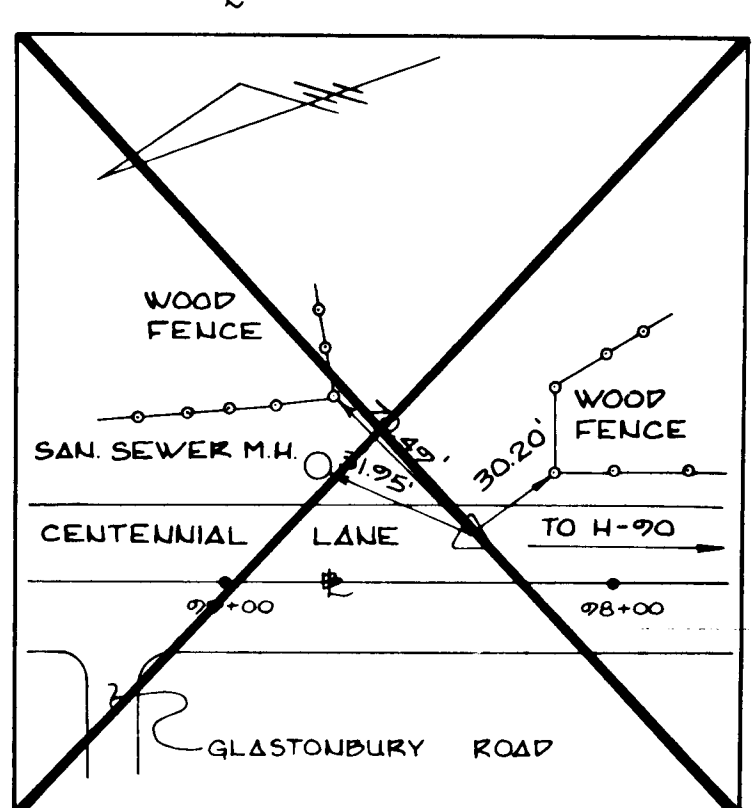
△ H-11

N 521408.854
E 838968.613
ELEV = 425.71
STA 120+45 ± 0.5 12 ± L



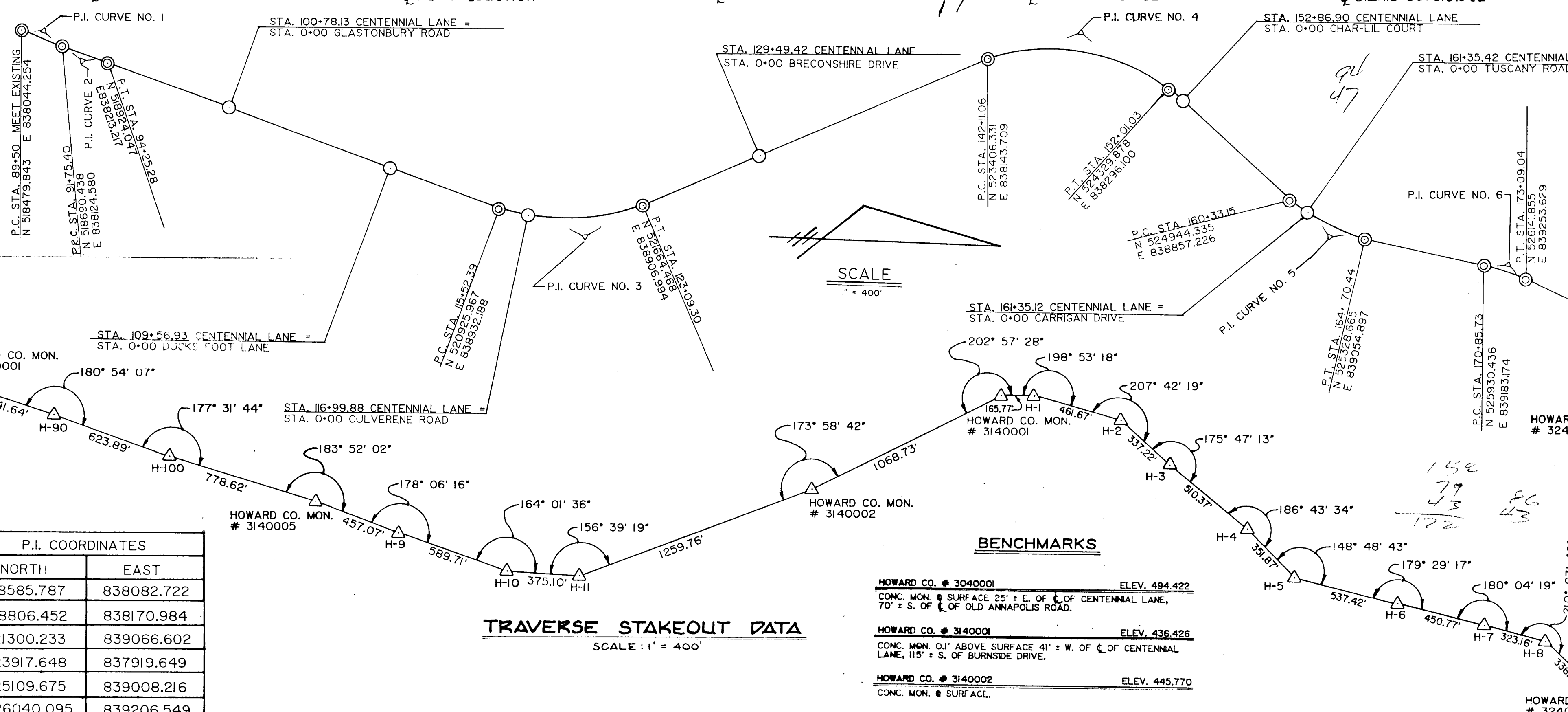
△ H-90

N 518716.862
E 838158.311
ELEV = 479.99
STA 92+10 ± 0.5 22 ± R



△ H-100

N 519305.026
E 838366.393
ELEV = 437.68
STA 98+35 ± 0.5 16 ± R



TRAVERSE STAKEOUT DATA
SCALE: 1" = 400'

| CURVE NO. | DELTA | DC | RADIUS | TAN | ARC | EXT | CHORD | CENTER CURVE COORDINATES | | P.I. COORDINATES | |
|-----------|-------------|-------------|----------|---------|---------|---------|--------------------------|--------------------------|------------|------------------|------------|
| | | | | | | | | NORTH | EAST | NORTH | EAST |
| 1 | 01° 50' 42" | 00° 49' 07" | 7000.00' | 112.71' | 225.40' | 0.91' | N 20° 52' 41" E, 225.39' | 516090.803 | 844623.957 | 518585.787 | 838082.722 |
| 2 | 02° 02' 43" | 00° 49' 07" | 7000.00' | 124.95' | 249.87' | 1.12' | N 20° 46' 40" E, 249.86' | 521290.073 | 831625.203 | 518806.452 | 838170.984 |
| 3 | 43° 25' 06" | 05° 44' 10" | 998.84' | 397.67' | 756.91' | 76.25' | N 01° 57' 14" W, 738.93' | 521263.578 | 837992.138 | 521300.233 | 839066.602 |
| 4 | 66° 03' 56" | 06° 40' 24" | 858.56' | 558.26' | 989.97' | 165.54' | N 09° 22' 11" E, 936.04' | 523750.920 | 838930.083 | 523917.648 | 837919.649 |
| 5 | 30° 22' 09" | 06° 56' 42" | 825.00' | 223.91' | 437.29' | 29.85' | N 27° 13' 05" E, 432.18' | 525500.661 | 838248.025 | 525109.675 | 839008.216 |
| 6 | 12° 47' 42" | 05° 43' 46" | 1000.00' | 112.12' | 223.31' | 6.27' | N 18° 25' 51" E, 222.85' | 525721.955 | 840161.200 | 526040.095 | 839206.549 |

BENCHMARKS
 HOWARD CO. # 3040001 ELEV. 494.222
 CONC. MON. @ SURFACE 25' E. OF E. OF CENTENNIAL LANE, 70' S. OF E. OF OLD ANNAPOLIS ROAD.
 HOWARD CO. # 3140001 ELEV. 436.426
 CONC. MON. 01' ABOVE SURFACE 41' W. OF E. OF CENTENNIAL LANE, 115' S. OF BURNSIDE DRIVE.
 HOWARD CO. # 3140002 ELEV. 445.770
 CONC. MON. @ SURFACE.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: *James W. Wilson* DATE: 11/15/90
 Chief, Bureau of Engineering: *William E. Ray* DATE: 11/15/90
 Chief, Bureau of Highways: *Francis W. Welsand* DATE: 11/14/90

MILDENBERG, MOCHI & ASSOCIATES, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
 (301) 461-0078 U.C. Metro (301) 521-5768

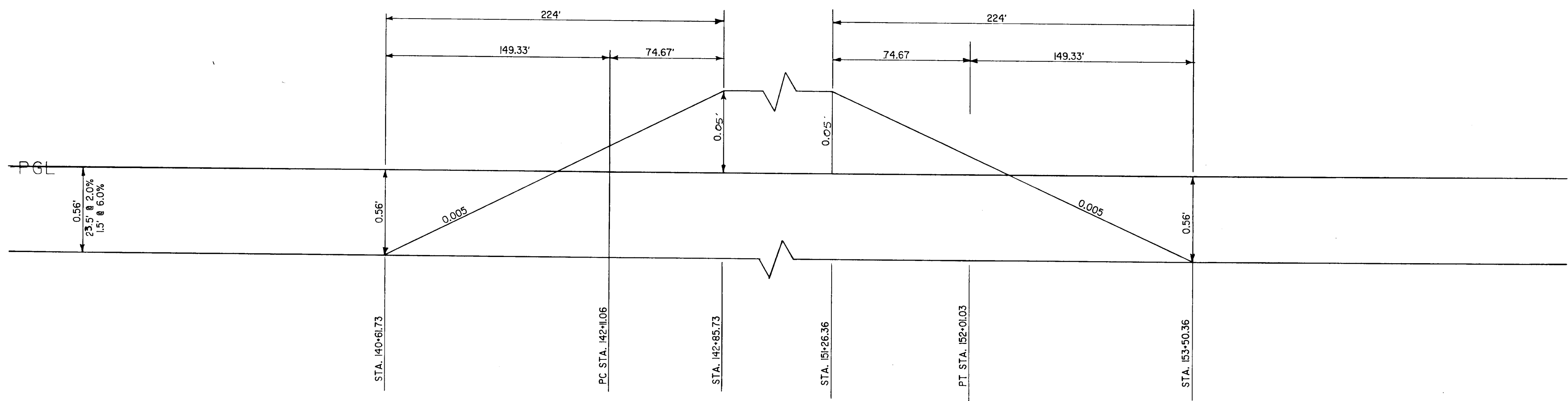
DES: JBM/KAM
 DRN: STAFF
 CHK: JBM
 DATE: 12/90
 BY: NO. REVISION DATE

HORIZONTAL & VERTICAL CONTROLS
 CENTENNIAL LANE
 600 SCALE MAP NO. BLOCK NO.

CENTENNIAL LANE
 STA. 135+50 TO U.S. ROUTE 40
 CAPITAL PROJECT J-4015-H
 ELECTION DISTRICT NO. 2
 HOWARD COUNTY, MARYLAND
 NOT TO SCALE
 SHEET 8 OF 26

SUPERELEVATION DATA, CURVE
 DESIGN SPEED 40 MPH, HORIZONTAL CURVE R=859.56 P.C. STA. 142+0.06
 DEGREE OF CURVE 06:40:24e = 163.54 P.T. STA. 152+01.03
 MAX. S.E. 0.02 LENGTH OF RUMOUT 224

| TOP OF CURB | LT. F.L. | C.L. STATION | RT. F.L. | TOP OF CURB |
|-------------|----------|--------------|----------|-------------|
| 439.95 | 437.35 | 140 + 61.73 | 439.91 | 439.95 |
| 439.30 | 437.70 | 141 + .00 | 439.07 | 439.11 |
| 439.18 | 437.58 | 141 + 50.00 | 437.70 | 437.74 |
| 436.73 | 436.13 | 142 + .00 | 436.00 | 436.04 |
| 436.37 | 435.77 | 142 + 11.06 | 435.58 | 435.62 |
| 434.96 | 434.36 | 142 + 50.00 | 433.98 | 434.02 |
| 433.50 | 432.90 | 142 + 89.75 | 432.34 | 432.38 |
| 432.80 | 432.20 | 143 + .00 | 431.64 | 431.68 |
| 430.14 | 429.54 | 143 + 50.00 | 429.98 | 429.42 |
| 427.16 | 426.56 | 144 + .00 | 426.00 | 425.44 |
| 423.86 | 423.26 | 144 + 50.00 | 422.70 | 422.74 |
| 421.57 | 420.97 | 144 + 82.00 | 420.41 | 419.85 |
| 420.23 | 419.63 | 145 + .00 | 419.07 | 419.11 |
| 416.45 | 415.85 | 145 + 50.00 | 415.29 | 415.33 |
| 412.66 | 412.06 | 146 + .00 | 411.50 | 411.54 |
| 408.87 | 408.27 | 146 + 50.00 | 407.71 | 407.75 |
| 405.09 | 404.49 | 147 + .00 | 403.92 | 403.96 |
| 401.30 | 400.70 | 147 + 50.00 | 400.14 | 399.58 |
| 397.69 | 397.09 | 148 + .00 | 396.35 | 396.39 |
| 394.41 | 393.81 | 148 + 50.00 | 392.56 | 392.60 |
| 391.48 | 390.88 | 149 + .00 | 388.77 | 389.21 |
| 390.40 | 389.80 | 149 + 20.00 | 387.24 | 387.28 |
| 389.38 | 388.78 | 149 + 40.00 | 385.72 | 385.76 |
| 388.89 | 388.29 | 149 + 50.00 | 384.20 | 384.24 |
| 387.96 | 387.36 | 149 + 50.00 | 382.68 | 382.72 |
| 386.54 | 385.94 | 150 + .00 | 381.16 | 381.20 |
| 384.73 | 384.13 | 150 + 50.00 | 379.64 | 379.68 |
| 384.53 | 383.93 | 150 + 50.00 | 378.12 | 378.16 |
| 382.16 | 381.56 | 151 + .00 | 376.60 | 376.64 |
| 382.47 | 381.87 | 151 + 26.36 | 375.08 | 375.12 |
| 381.82 | 381.22 | 151 + 50.00 | 373.56 | 373.60 |
| 380.51 | 379.91 | 152 + .00 | 372.04 | 372.08 |
| 380.49 | 379.89 | 152 + 1.02 | 370.52 | 370.56 |
| 379.21 | 378.61 | 152 + 50.00 | 369.00 | 369.04 |
| 378.25 | 377.65 | 152 + 86.90 | 367.48 | 367.52 |
| 378.24 | 377.64 | 153 + 87.50 | 365.96 | 366.00 |
| 377.90 | 377.30 | 153 + .00 | 364.44 | 364.48 |
| 376.60 | 375.00 | 153 + 50.00 | 362.92 | 362.96 |
| 376.59 | 375.99 | 153 + 50.36 | 361.40 | 361.44 |

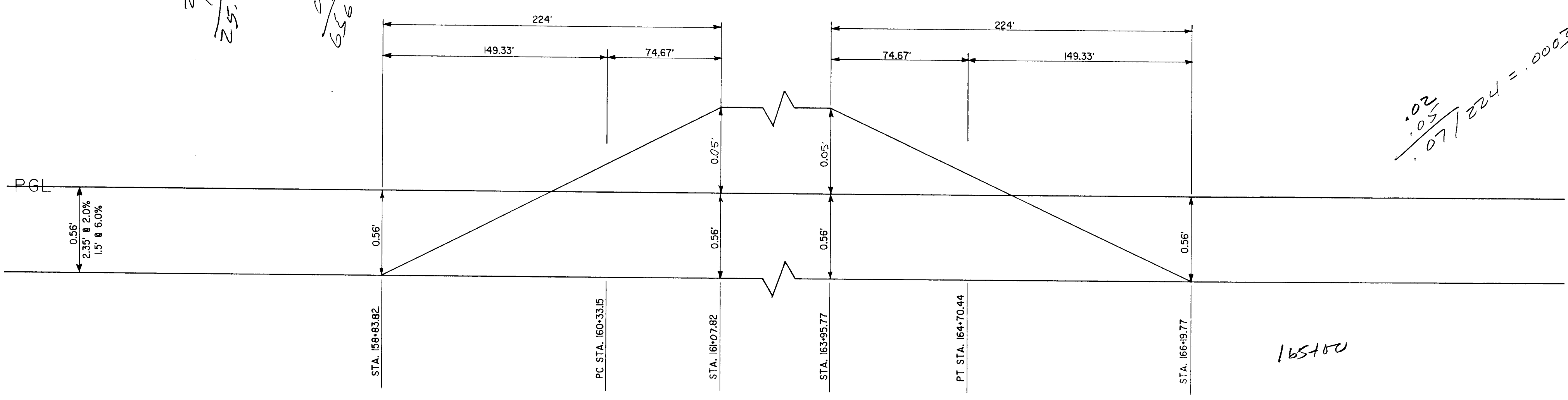


CURVE NO. 4 - STA. 140+61.73 TO STA. 153+50.36

SCALE: HORIZ. 1" = 50'
 VERT. 1" = 0.5'

23.5
 1.5
 25.0

5.7
 0.5
 5.2



CURVE NO. 5 - STA. 158+83.82 TO STA. 166+19.77

SCALE: HORIZ. 1" = 50'
 VERT. 1" = 0.5'

3000
 20
 150
 0.07/224 = 0.0003

165+50

1.07%

SUPERELEVATION DATA, CURVE
 DESIGN SPEED 40 MPH, HORIZONTAL CURVE R=859.56 P.C. STA. 160+33.15
 DEGREE OF CURVE 06:56:42e = 29.85 P.T. STA. 166+19.77
 MAX. S.E. 0.02 LENGTH OF RUMOUT 224

| TOP OF CURB | LT. F.L. | C.L. STATION | RT. F.L. | TOP OF CURB |
|-------------|----------|--------------|----------|-------------|
| 371.64 | 371.04 | 158 + 83.82 | 371.60 | 371.64 |
| 371.57 | 371.37 | 159 + .00 | 371.93 | 371.45 |
| 371.23 | 372.63 | 159 + 50.00 | 373.19 | 372.96 |
| 374.82 | 374.22 | 160 + .00 | 374.78 | 375.40 |
| 376.06 | 375.46 | 160 + 33.14 | 376.02 | 376.21 |
| 376.75 | 376.15 | 160 + 50.00 | 376.71 | 376.98 |
| 377.00 | 376.40 | 161 + .00 | 376.96 | 376.48 |
| 379.38 | 378.78 | 161 + 7.82 | 379.34 | 378.90 |
| 380.77 | 380.17 | 161 + 35.12 | 380.73 | 381.29 |
| 380.79 | 380.19 | 161 + 35.42 | 380.75 | 381.31 |
| 381.54 | 380.94 | 161 + 50.00 | 381.50 | 382.06 |
| 383.99 | 383.39 | 161 + 80.00 | 383.95 | 384.51 |
| 384.12 | 383.52 | 162 + .00 | 384.08 | 384.64 |
| 384.71 | 385.11 | 162 + 50.00 | 386.67 | 387.23 |
| 388.00 | 387.40 | 162 + 75.00 | 389.76 | 389.12 |
| 389.29 | 388.69 | 163 + .00 | 389.25 | 389.81 |
| 391.87 | 391.27 | 163 + 50.00 | 391.85 | 392.39 |
| 394.12 | 393.52 | 163 + 95.77 | 394.08 | 394.64 |
| 394.31 | 393.71 | 164 + .00 | 394.27 | 394.81 |
| 395.47 | 394.87 | 164 + 50.00 | 396.43 | 396.72 |
| 397.27 | 396.67 | 164 + 70.44 | 397.23 | 397.42 |
| 398.34 | 397.74 | 165 + .00 | 398.30 | 398.34 |
| 399.33 | 398.73 | 165 + 50.00 | 399.89 | 399.68 |
| 401.57 | 400.77 | 166 + .00 | 401.33 | 401.47 |
| 401.94 | 401.34 | 166 + 19.77 | 401.90 | 401.34 |

2. REVISED PER COUNTY 100% COMMENT (10-8-90)
 1. REVISED CURVES NO. 4 & 5

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Director of Public Works: *James H. Davis* DATE: 11.5.90
 Chief, Bureau of Engineering: *Richard E. Kelly* 11-13-90
 Chief, Bureau of Highways: *James W. Cleveland* 11/14/90

MILDENBERG MOCHI & ASSOCIATES, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
 (301) 461-0078 D.C. Metro No. (301) 621-5768



| | | | | | |
|-----------|----------|--|--|--|--|
| DES: | JSM/KAM | | | | |
| DRN: | SHD | | | | |
| CHK: | JSM | | | | |
| PROJ: | 87001.04 | | | | |
| DATE: | 12/1/90 | | | | |
| BY: | | | | | |
| NO.: | | | | | |
| REVISION: | | | | | |
| DATE: | | | | | |

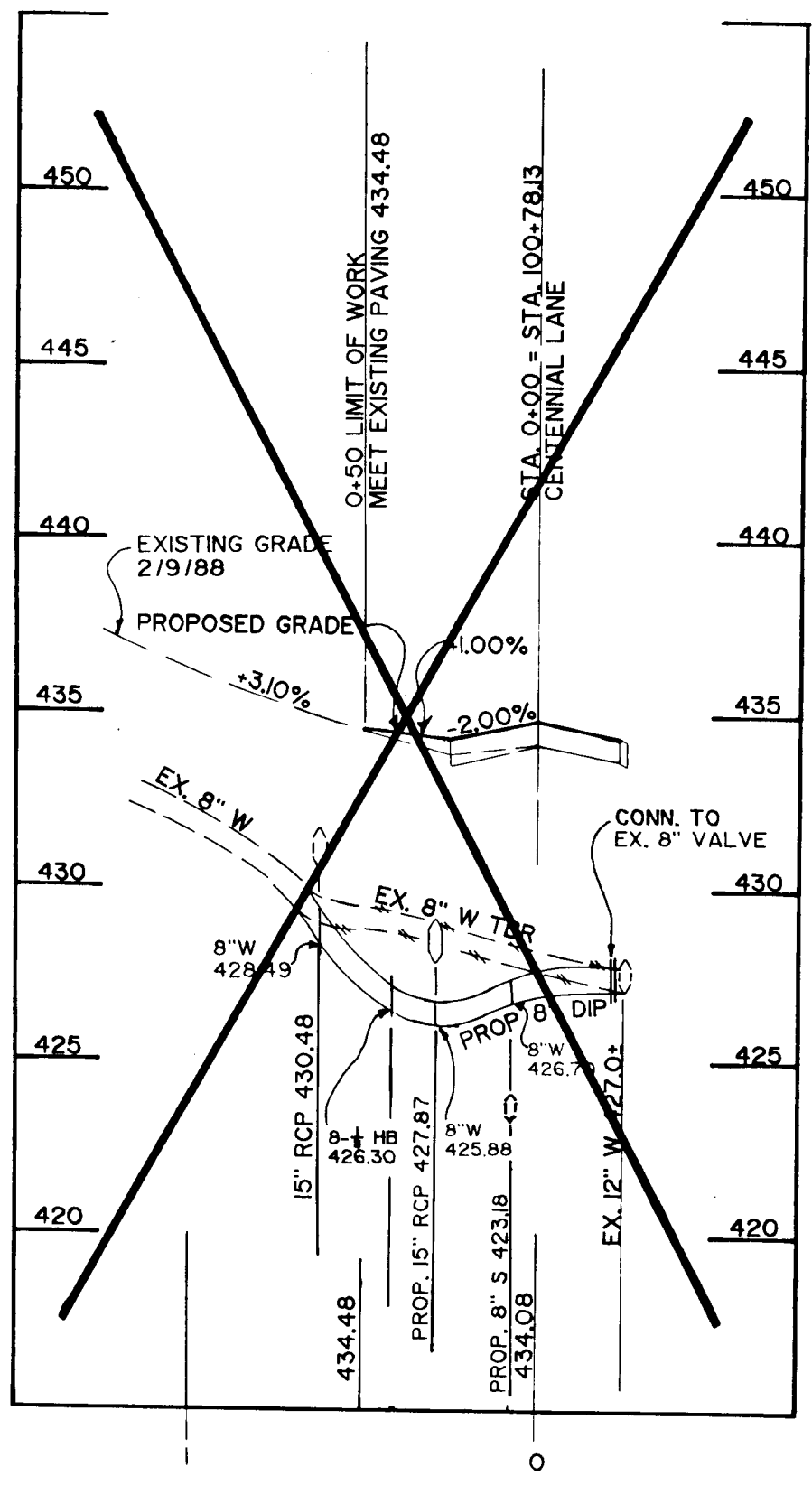
SUPERELEVATION

600' SCALE MAP NO. _____ BLOCK NO. _____

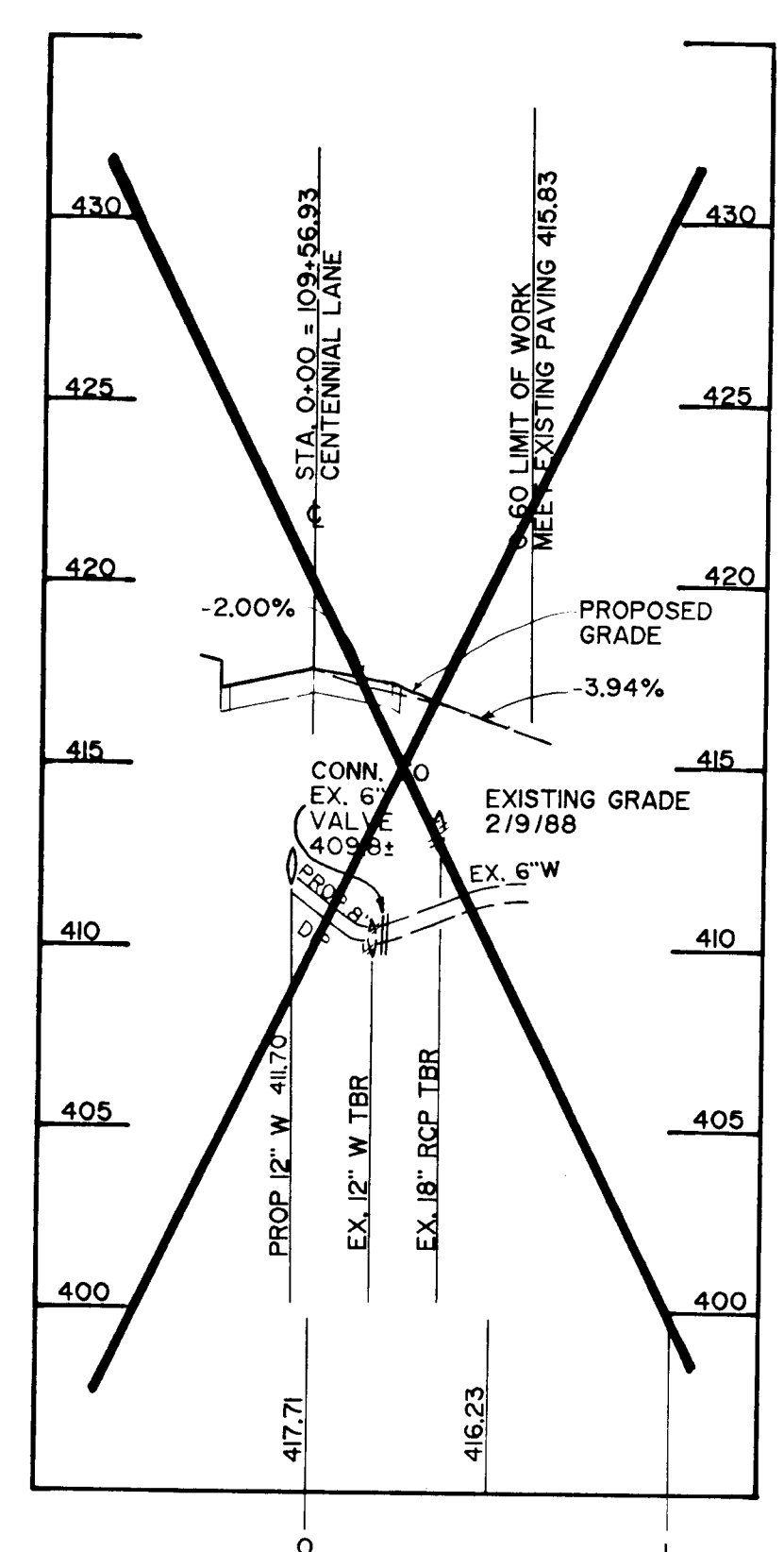
CENTENNIAL LANE
 STA. 135+50 TO U.S. ROUTE 40
 CAPITAL PROJECT J-4015-II
 ELECTION DISTRICT No. 2
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

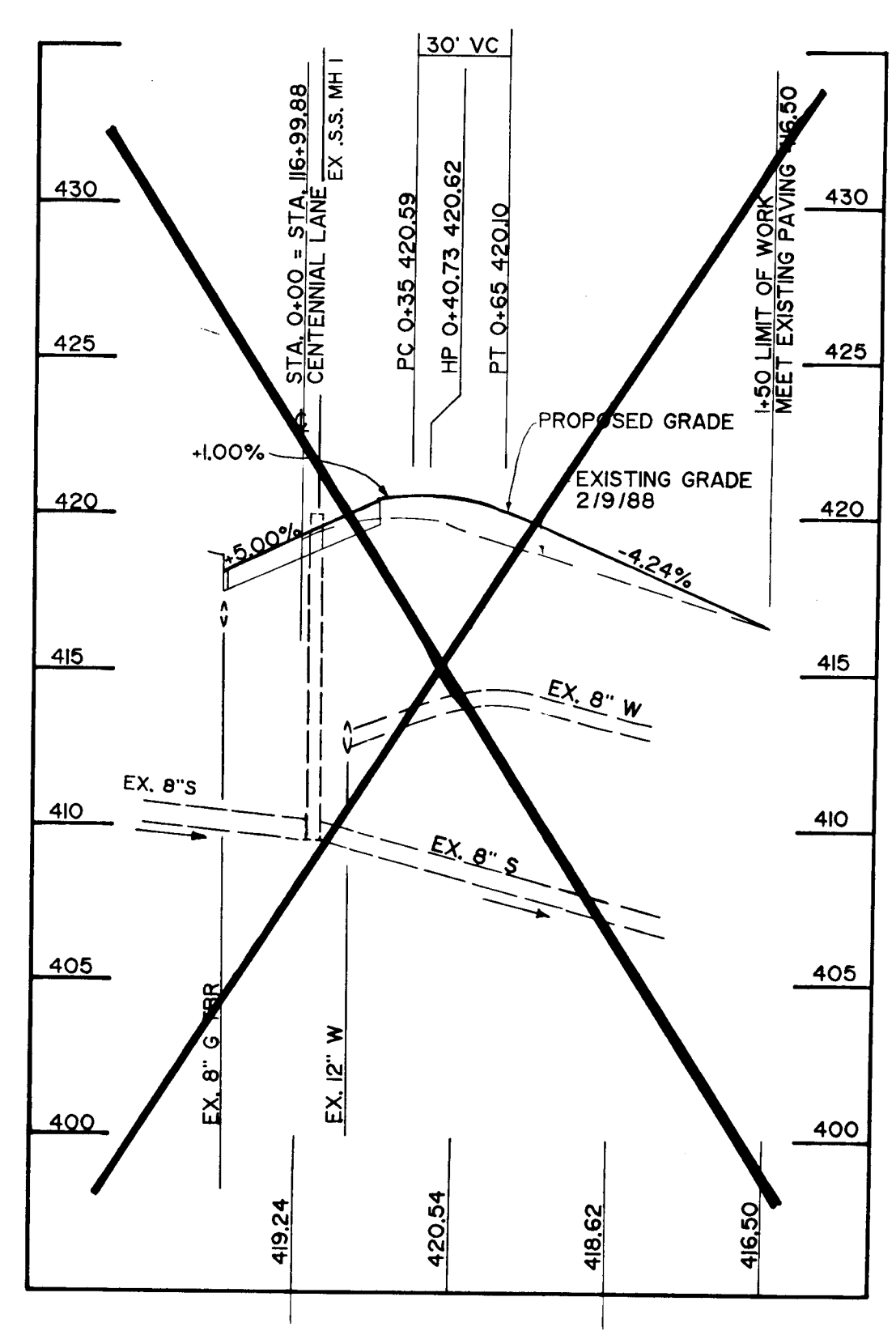
SHEET 9 OF 31e



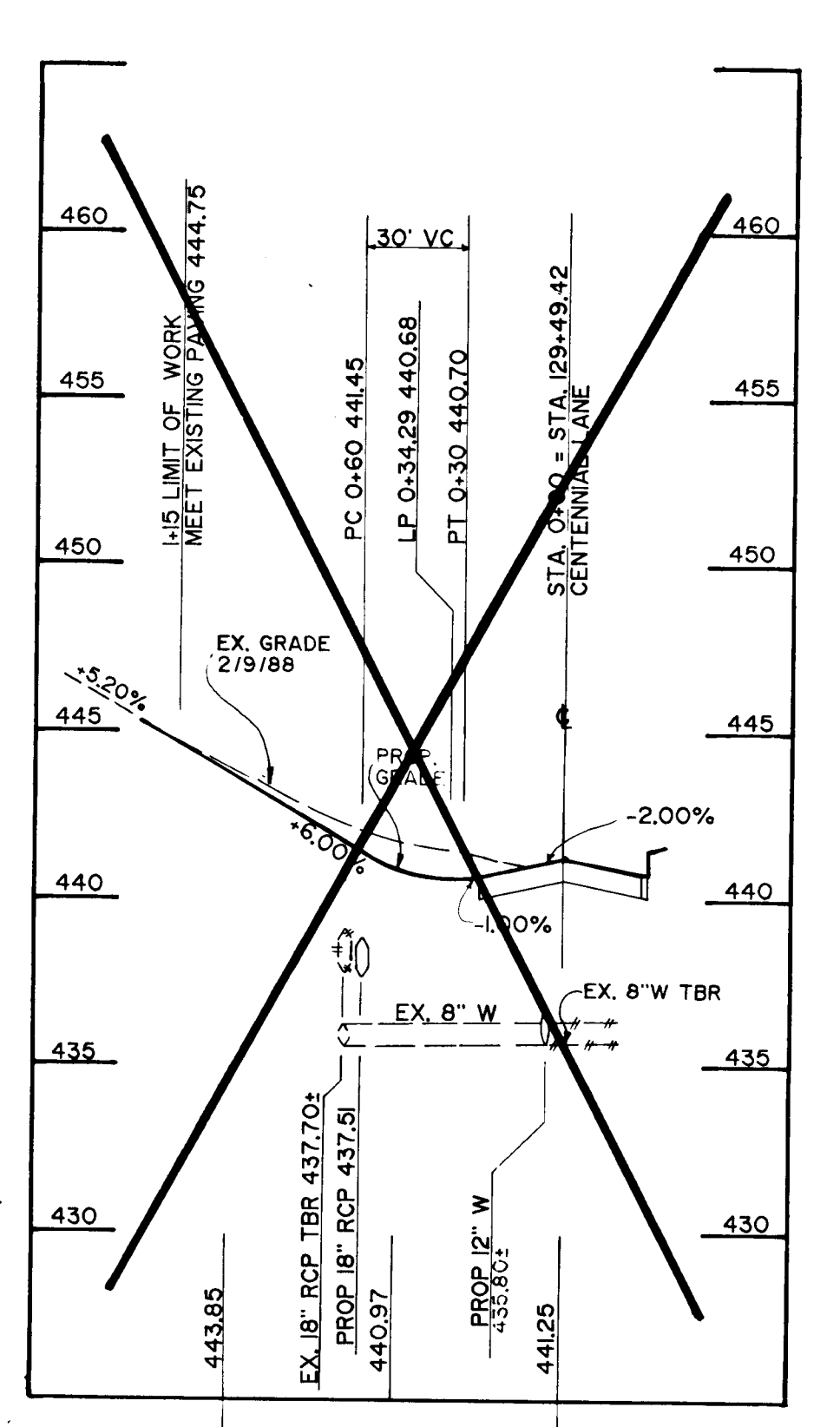
GLASTONBURY PLACE



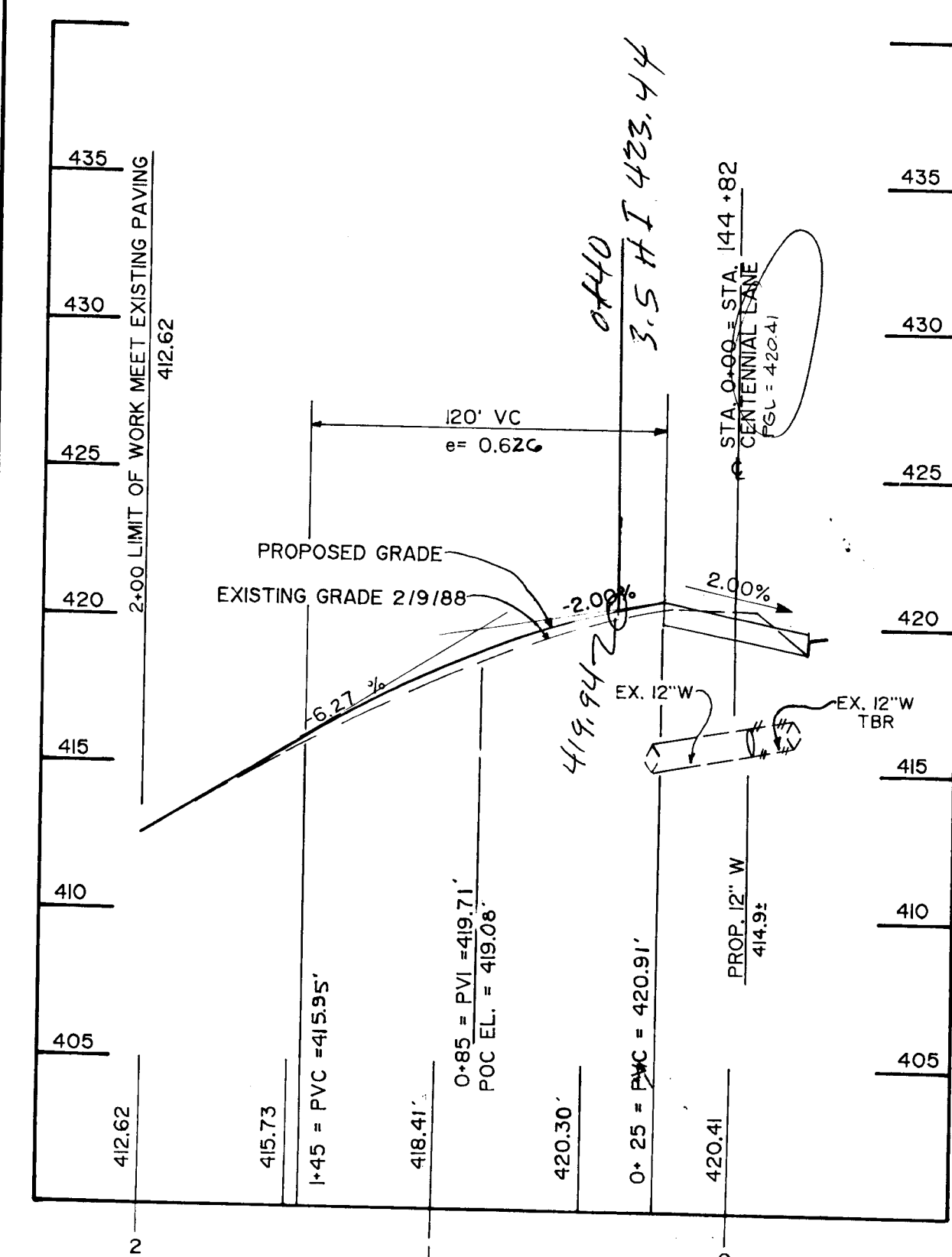
DUCKS FOOT LANE



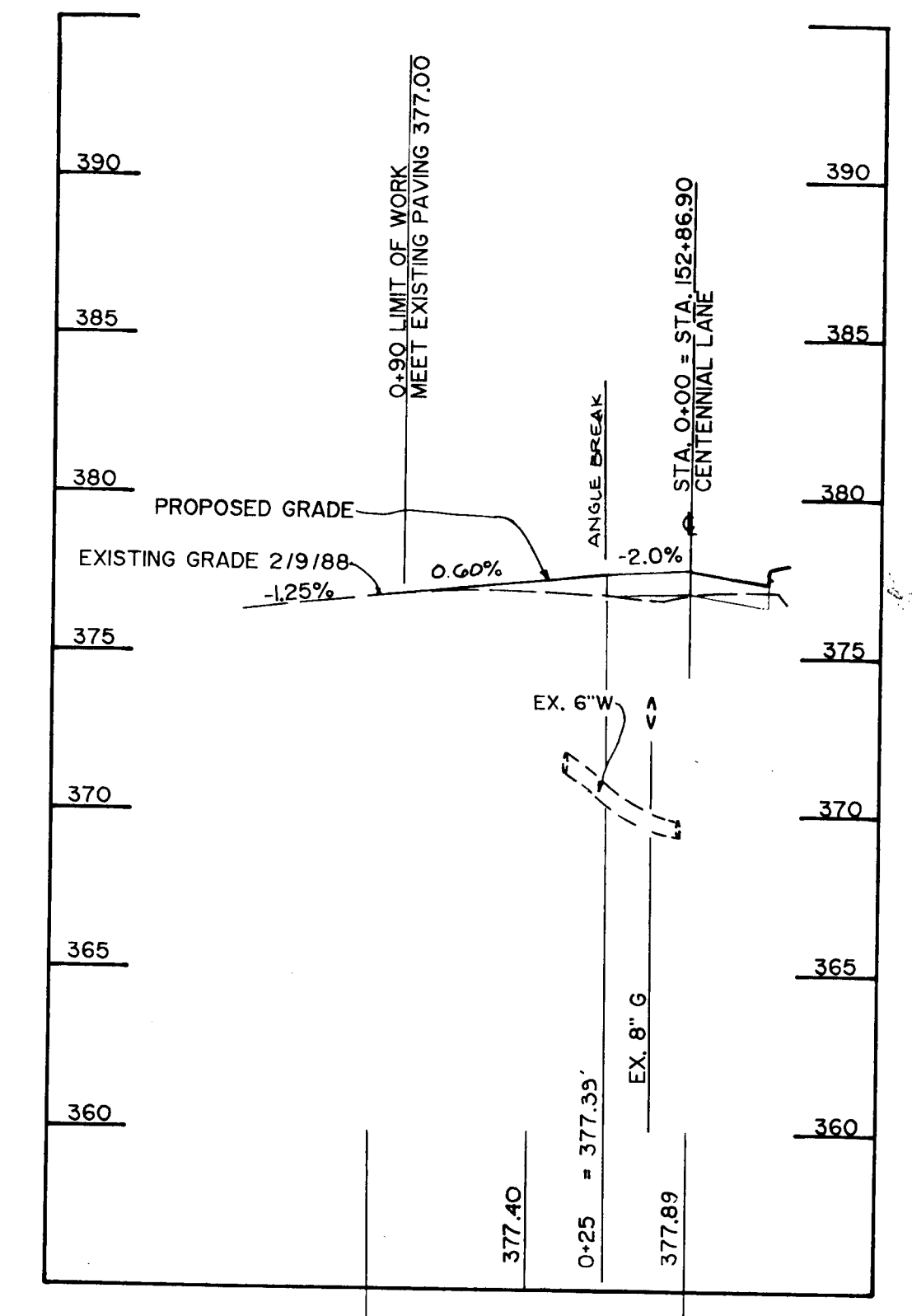
CULVERENE ROAD



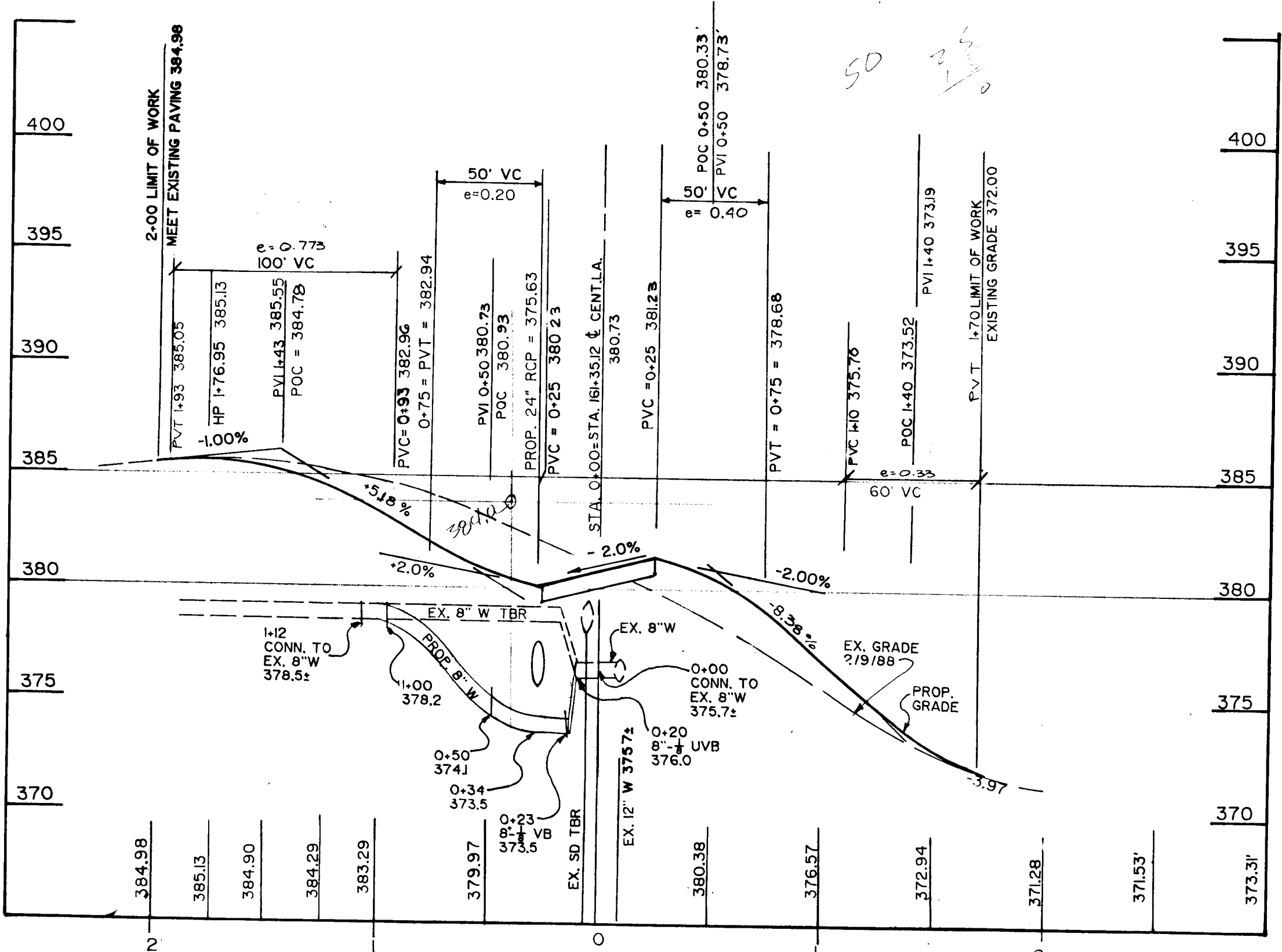
BRECONSHIRE ROAD



BURNSIDE DRIVE



CHAR-LIL COURT



TUSCANY ROAD AND CARRIGAN DRIVE

Handwritten calculations and notes:

$18' \times 25' = 450'$
 $18' \times 24' = 432'$
 $450' - 432' = 18'$
 $18' / 30' = 0.6$

$0.725 \times 15 = 10.875$
 $0.440 \times 15 = 6.6$
 $10.875 + 6.6 = 17.475$
 $17.475 / 45 = 0.3883$

$383.92 \times 2.00 = 767.84$
 $767.84 + 381.92 = 1149.76$
 $1149.76 / 300 = 3.8325$

$399.44 \times 2.00 = 798.88$
 $798.88 + 381.92 = 1180.8$
 $1180.8 / 300 = 3.936$

$17.52 / 360' = 4.8667\%$

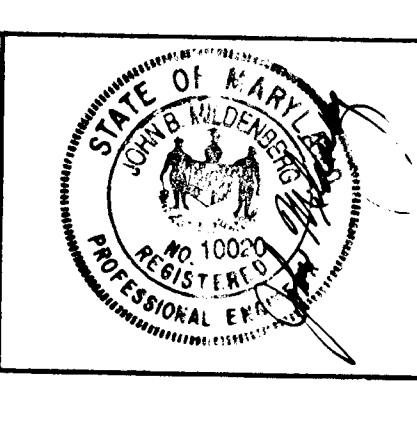
SUBMITTED FOR 95% REVIEW (11-2-83)

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Director of Public Works: *James M. ...*
 Chief, Bureau of Engineering: *James B. ...*
 Chief, Bureau of Highways: *Drummond W. ...*

MILDENBERG, MOCHI & ASSOCIATES, INC.
 ENGINEERS • SURVEYORS • PLANNERS

3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
 (301) 451-0078 D.C. Metro: (301) 621-5788



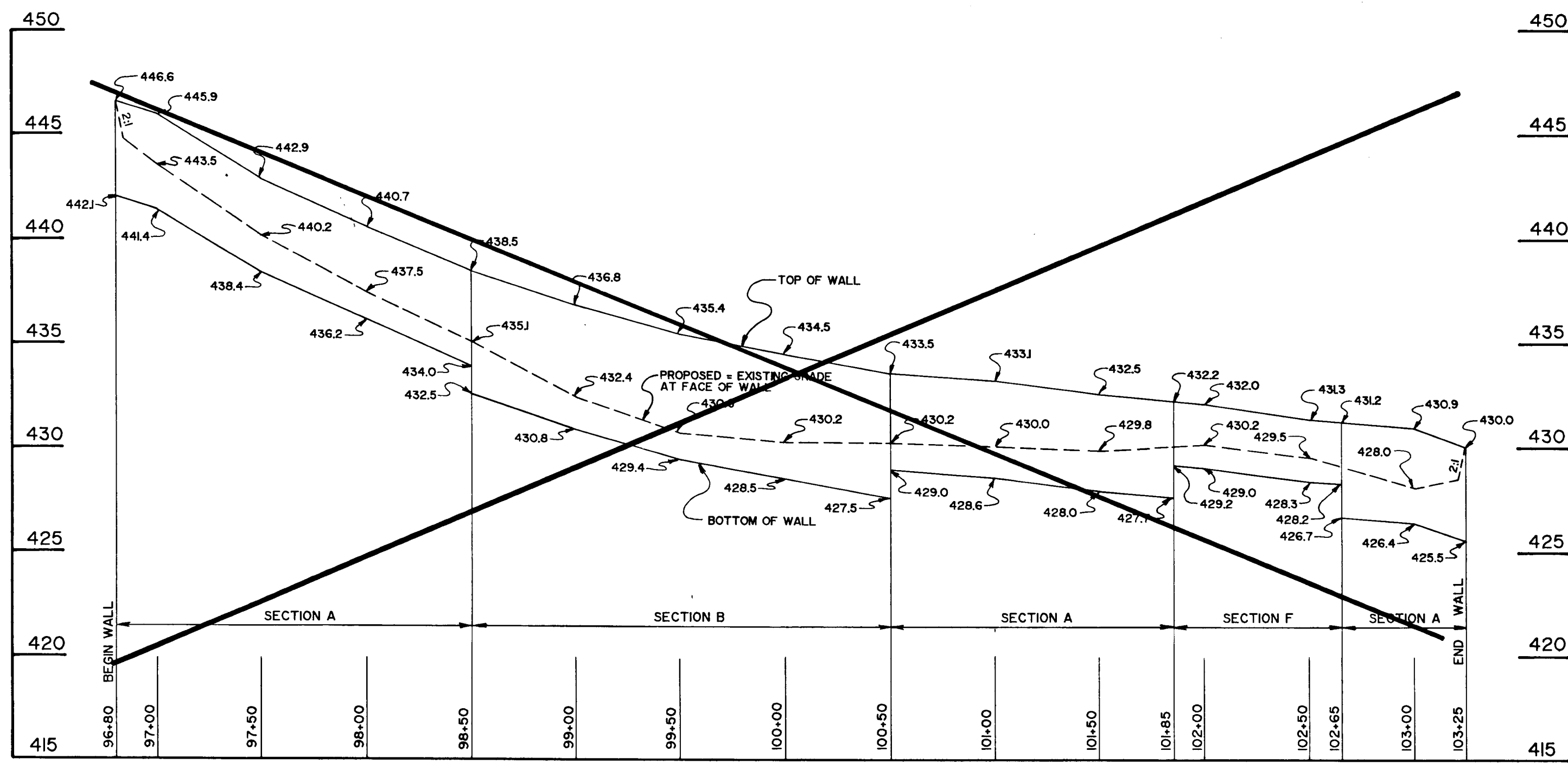
| | | | |
|--------------|-----|----------|------|
| DES: JEM/KAM | | | |
| DRN: STAFF | | | |
| CHK: JEM | | | |
| DATE: 12/30 | | | |
| BY | NO. | REVISION | DATE |

CENTENNIAL LANE
 INTERSECTING STREETS
 PROFILES

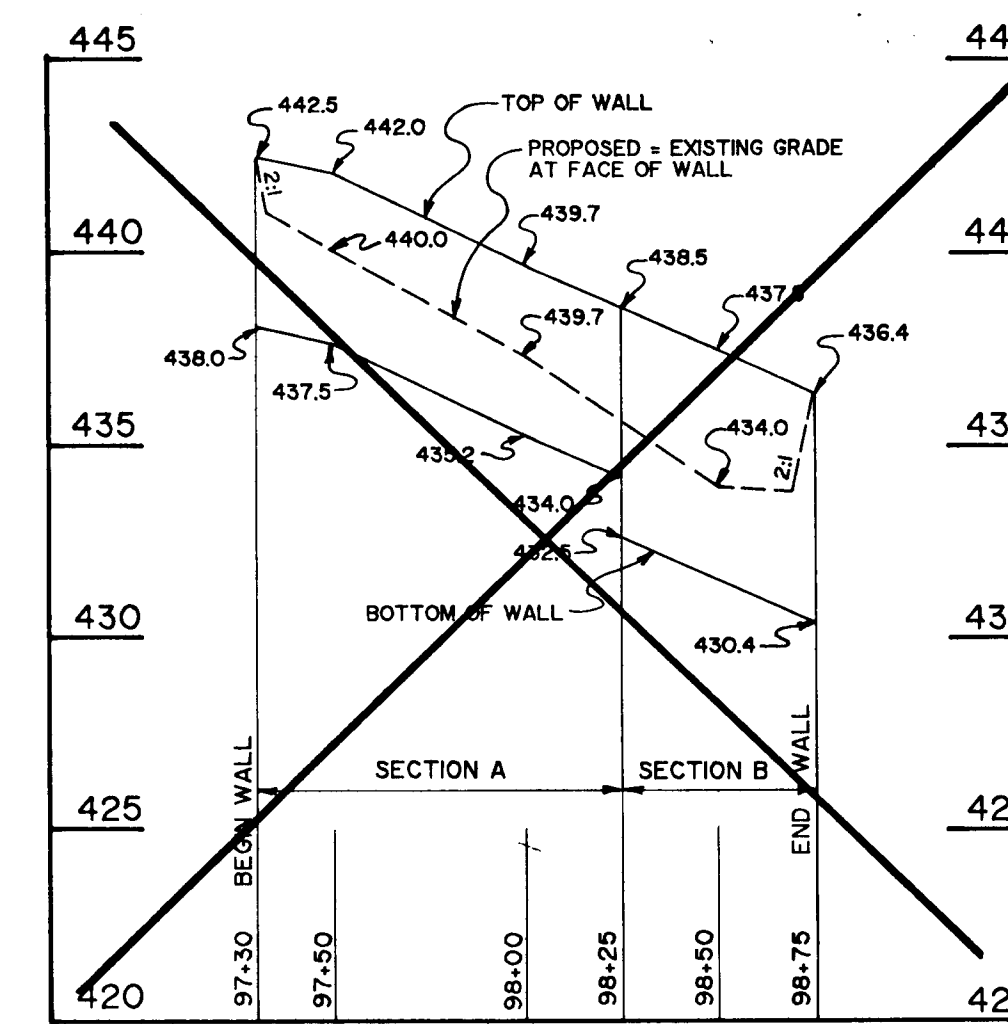
600' SCALE MAP NO. _____ BLOCK NO. _____

CENTENNIAL LANE
 STA. 135+50 TO U.S. ROUTE 40
 CAPITAL PROJECT J-4015-II
 ELECTION DISTRICT NO. 2
 HOWARD COUNTY, MARYLAND

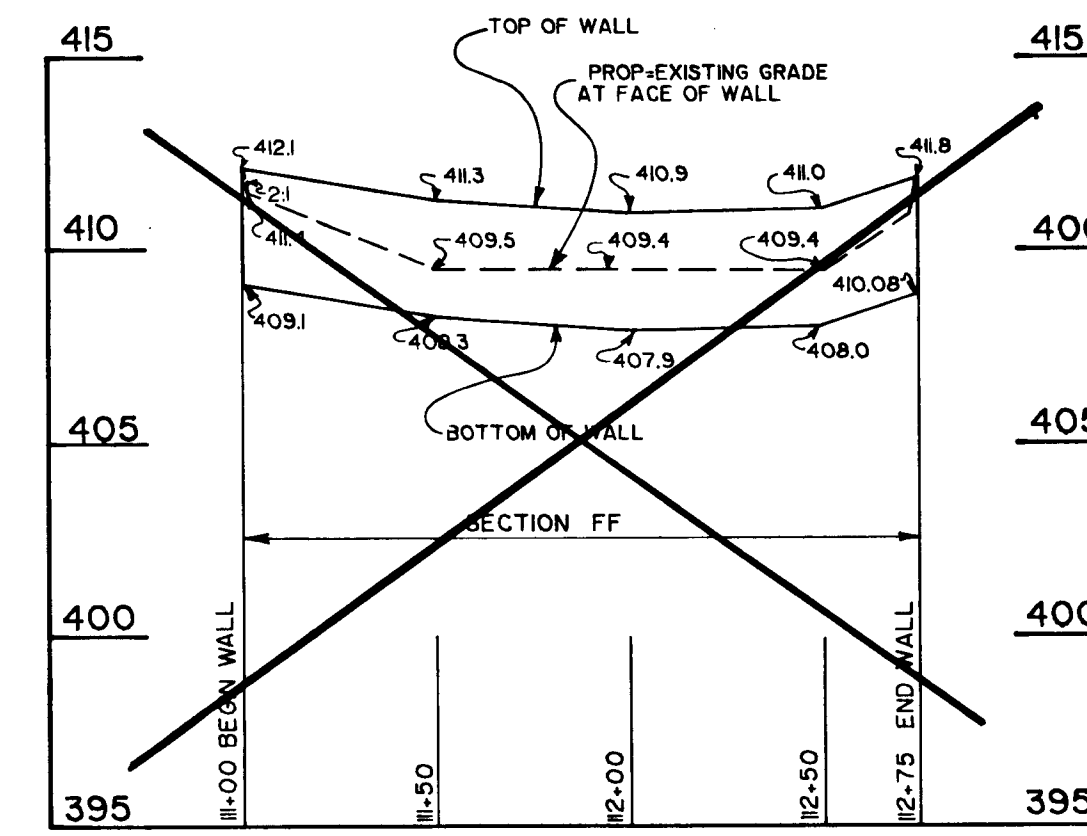
PROFILE SCALE: 5" = 8' 50"
 SHEET 10 OF 310



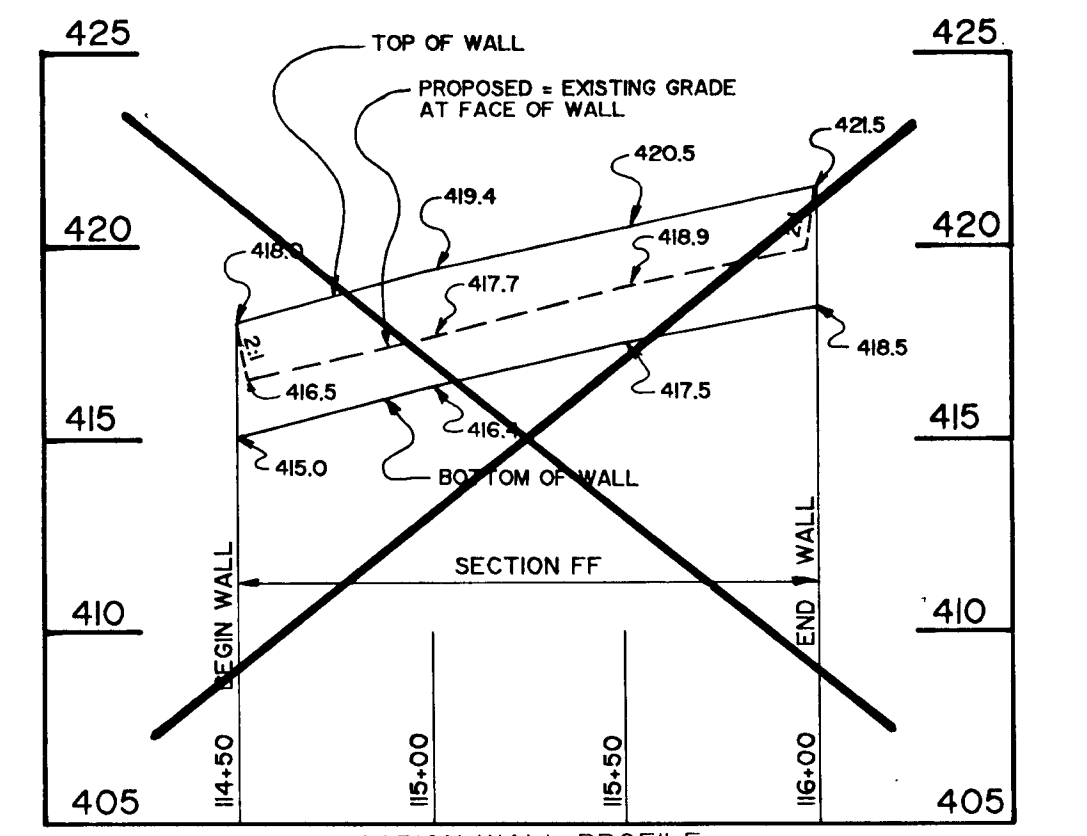
GABION WALL PROFILE
STATION 96+80 TO STATION 103+25
OFFSET RIGHT OF R/W



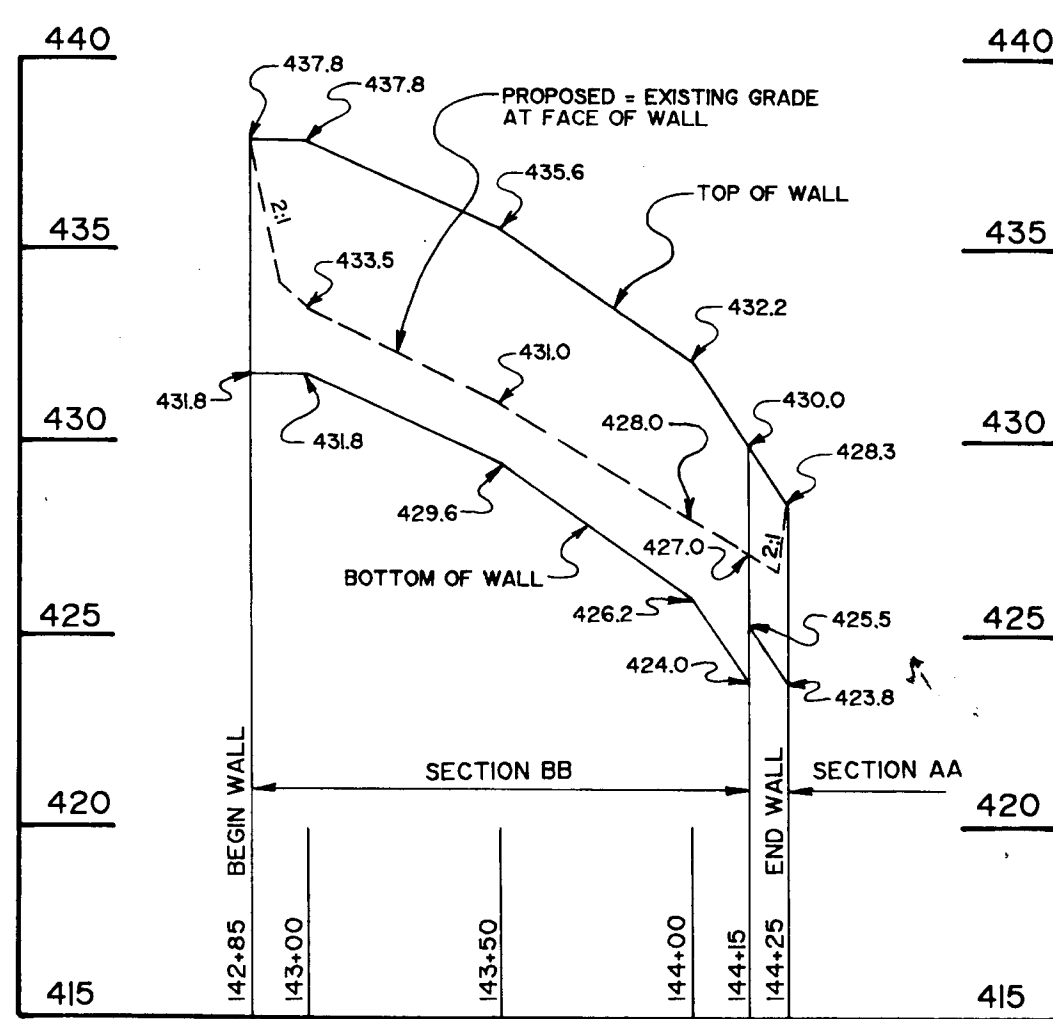
GABION WALL PROFILE
STATION 97+30 TO STATION 98+75
OFFSET LEFT OF R/W



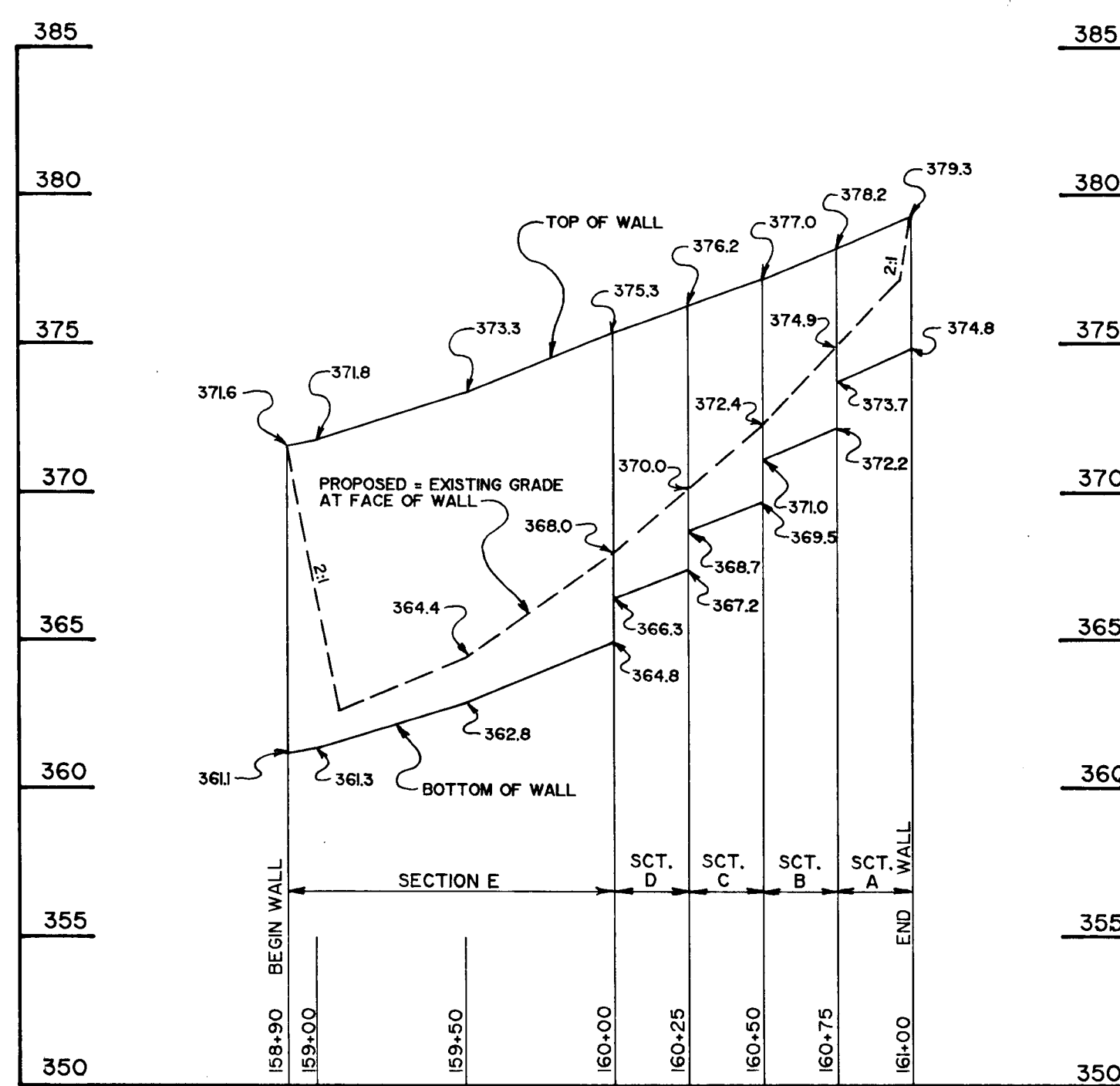
GABION WALL PROFILE
STATION 114+00 TO STATION 112+75
OFFSET RIGHT OF R/W



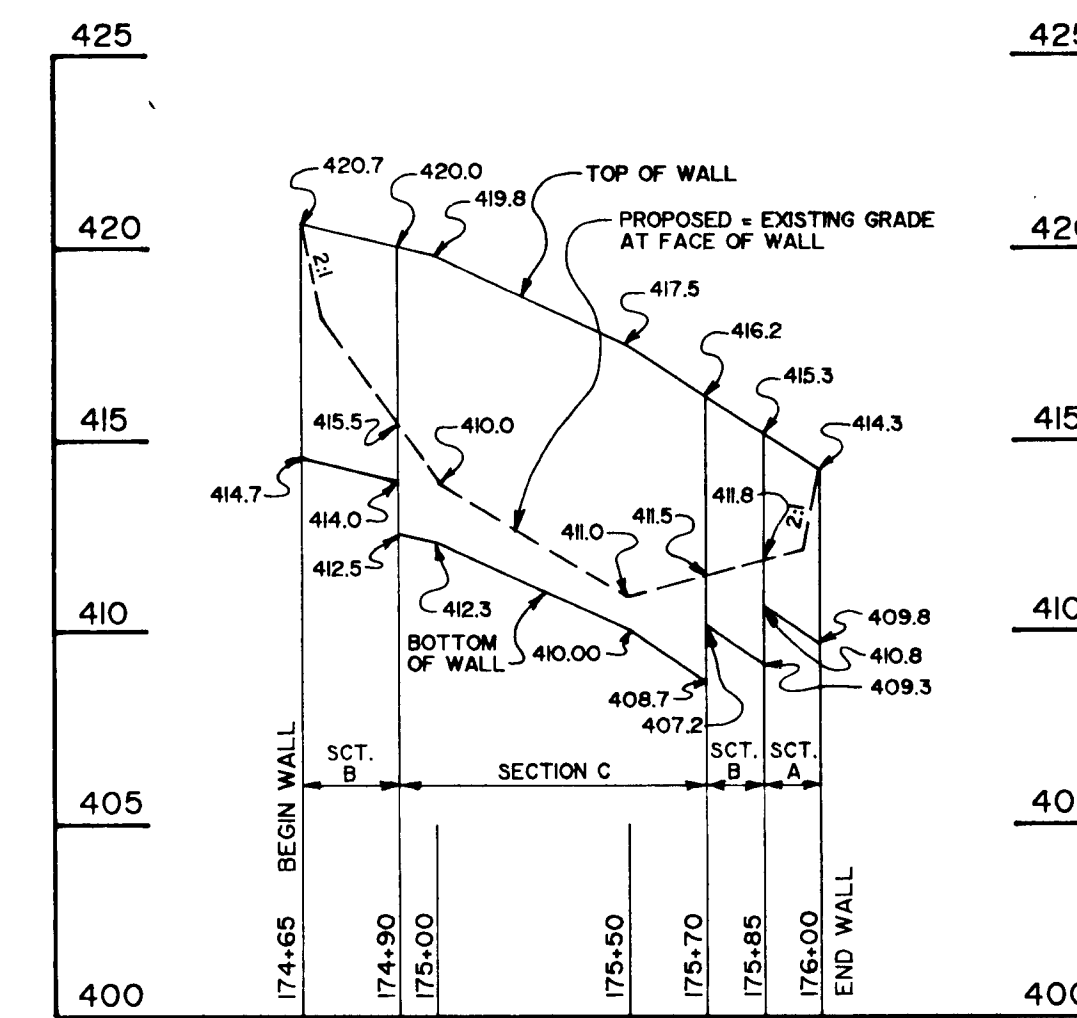
GABION WALL PROFILE
STATION 114+50 TO STATION 116+00
OFFSET RIGHT OF R/W



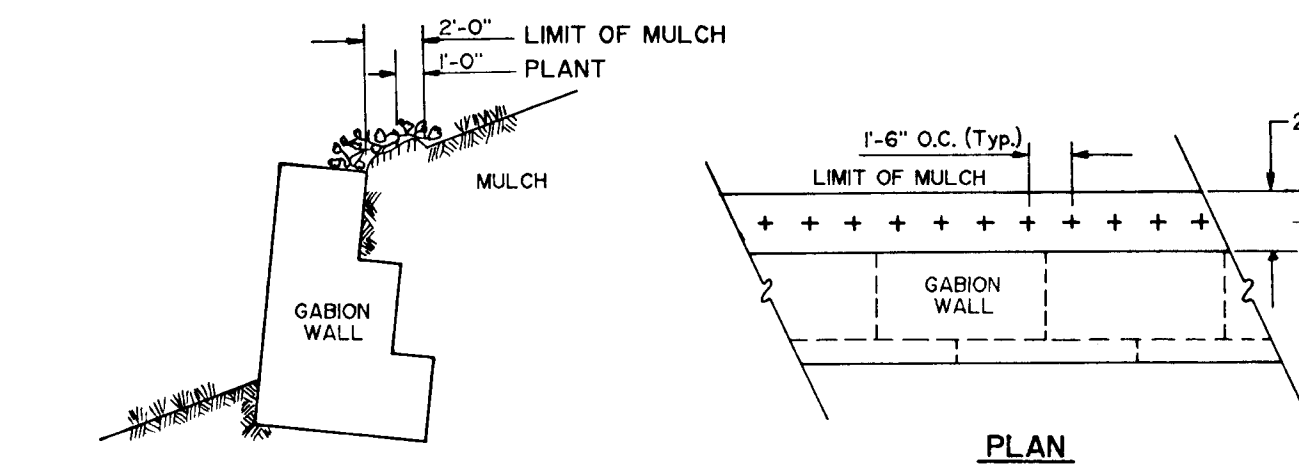
GABION WALL PROFILE
STATION 142+85 TO STATION 144+25
OFFSET LEFT OF R/W



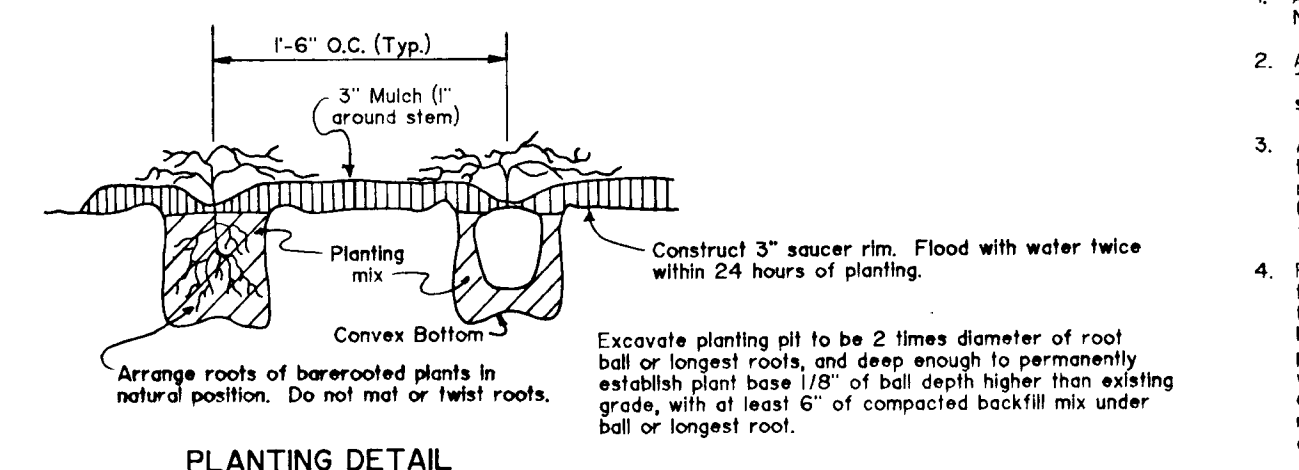
GABION WALL PROFILE
STATION 158+90 TO STATION 161+00
OFFSET RIGHT OF R/W



GABION WALL PROFILE
STATION 174+65 TO STATION 176+00
OFFSET RIGHT OF R/W



PLAN



SECTION

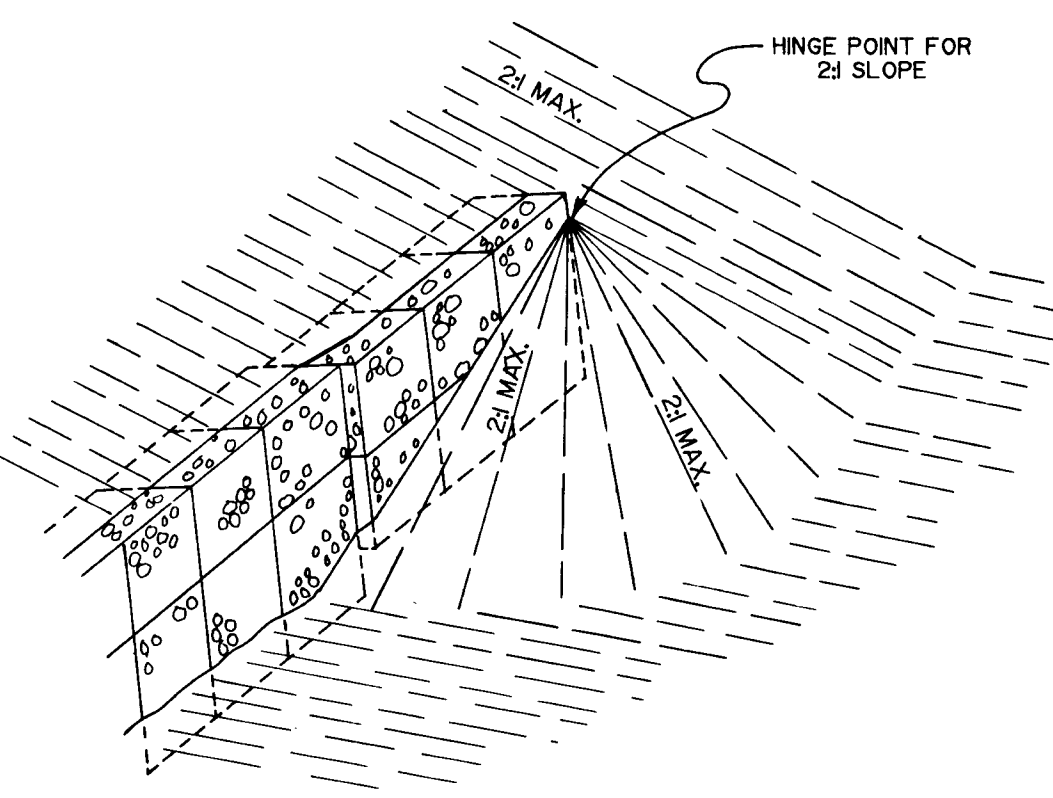
PLANTING NOTES

- All plant material shall conform to the American Standard for Nursery Stock (ANSI Z601-1980).
- All landscaped areas to receive a 6" layer of compacted topsoil. Topsoil used for planting shall be a mixture of three (3) parts soil to one (1) part peat.
- All planting pits shall be backfilled with a uniform mixture of three (3) parts soil to one (1) part peat. All plants shall have a minimum of six (6) inches compacted backfill mix under root ball (measured from top of convex pit bottom). No soil mix shall be worked or placed when it is in a frozen or muddy condition.
- Plants shall be set in the center pits, plumb and straight, at such a level that after settlement, 1/8" of the dirt ball depth shall project above the existing ground surface. Backfill shall be brought up to level of top of pit. Backfill shall be lightly tamped around root ball to eliminate air pockets, then a shallow saucer, slightly wider than the pit, shall be formed with a ridge of soil to facilitate watering. The saucer shall be neatly constructed, sturdy, and capable of holding water to its full depth. Any non-biodegradable materials, including plastic containers, shall be removed completely.
- All plants shall be watered thoroughly within 24 hours of planting regardless of soil moisture conditions. Water shall be introduced slowly into saucer until saucer is filled, then allowed to soak in. A second watering similar to the first shall follow within the same 24 hour period to insure complete saturation.
- Organic matter used for mulching plants and planter beds shall be a constant mixture of aged shredded hardwood bark, free from weeds, dirt, or other foreign material applied in a 3" deep layer to diameter of planting pit or as otherwise specified in planter beds.
- In no case shall mulch be lumped excessively around stem of plants. A maximum of 1" of any plant stem may be covered by mulch.
- Container stock shall be checked for excessive root development. If roots completely encircle perimeter of ball, they should be lightly scored with a clean, sharp pruning blade in accordance with proper nursery practice.

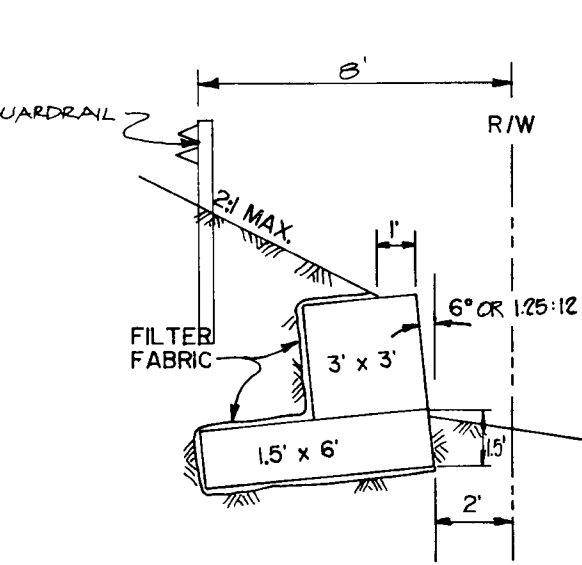
PLANTING DETAIL

PLANT MATERIAL TO BE:
Parthenocarpus Ficusoides - BOSTON IVY
In one gallon containers (can also be found in flats. See planting detail)

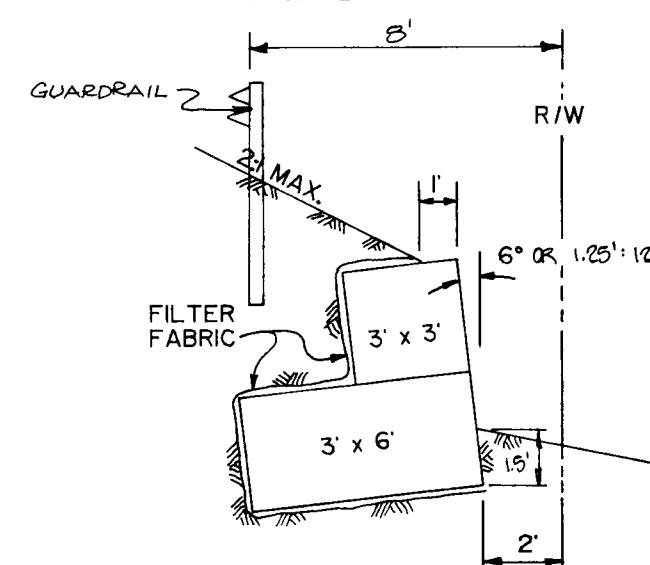
GABION WALL PLANTING BED



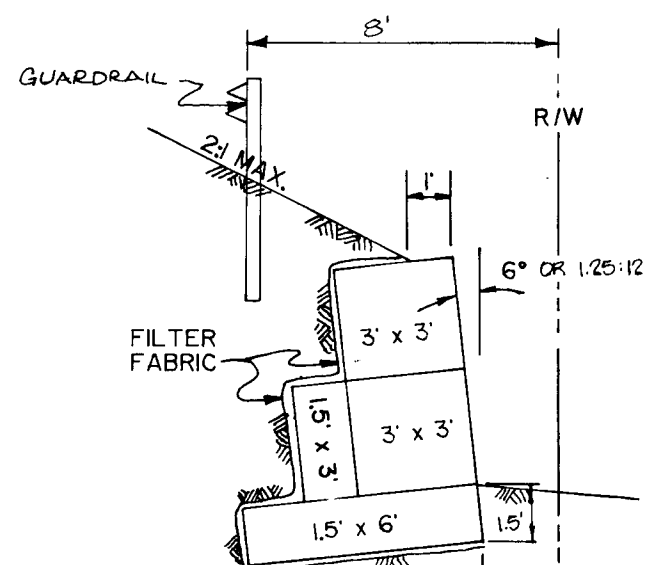
GRADING DETAIL FOR BEGINNING
AND END OF GABION WALLS
NTS



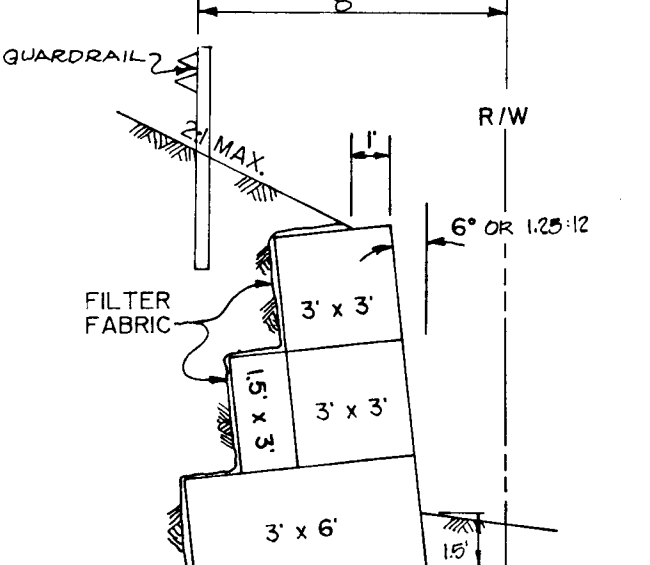
SECTION A
NTS



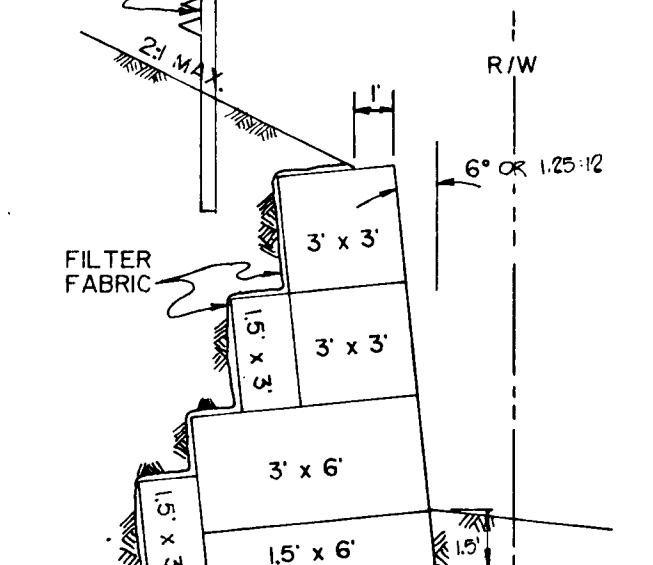
SECTION B
NTS



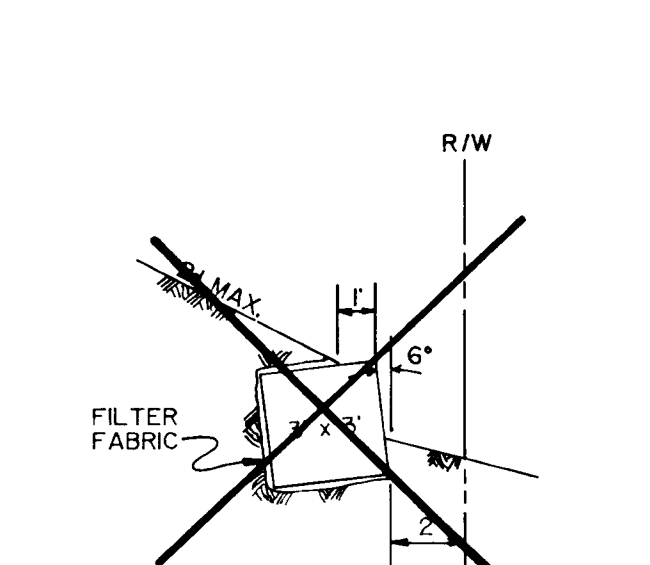
SECTION C
NTS



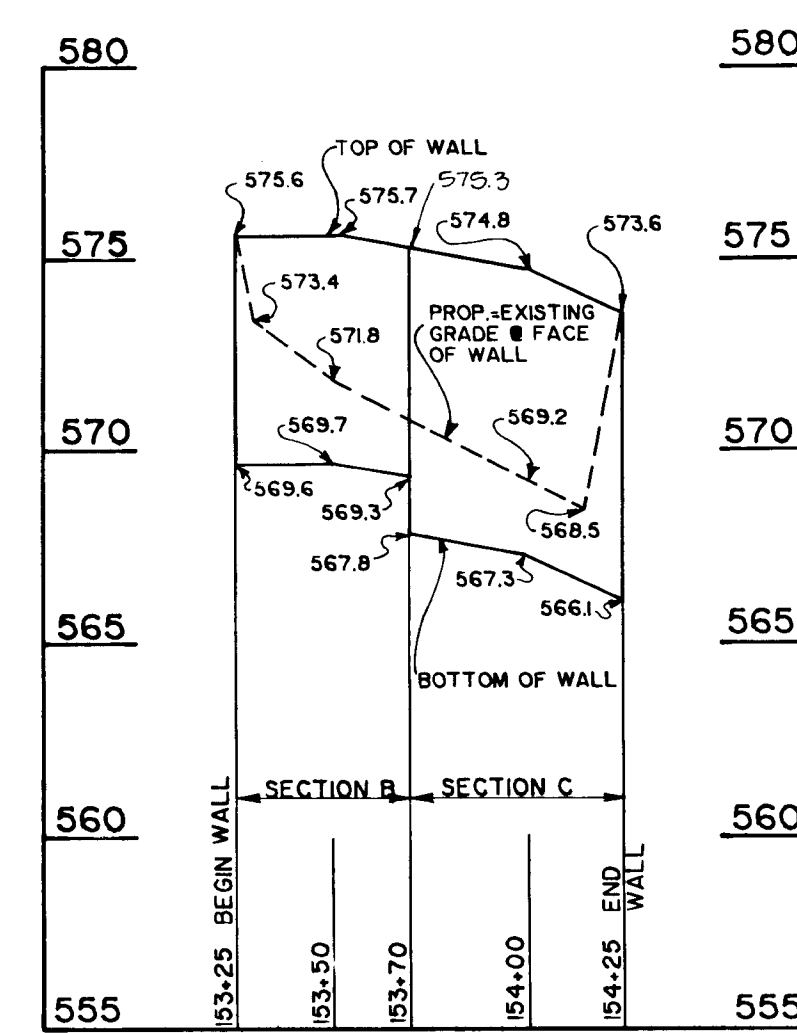
SECTION D
NTS



SECTION E
NTS



SECTION F
NTS



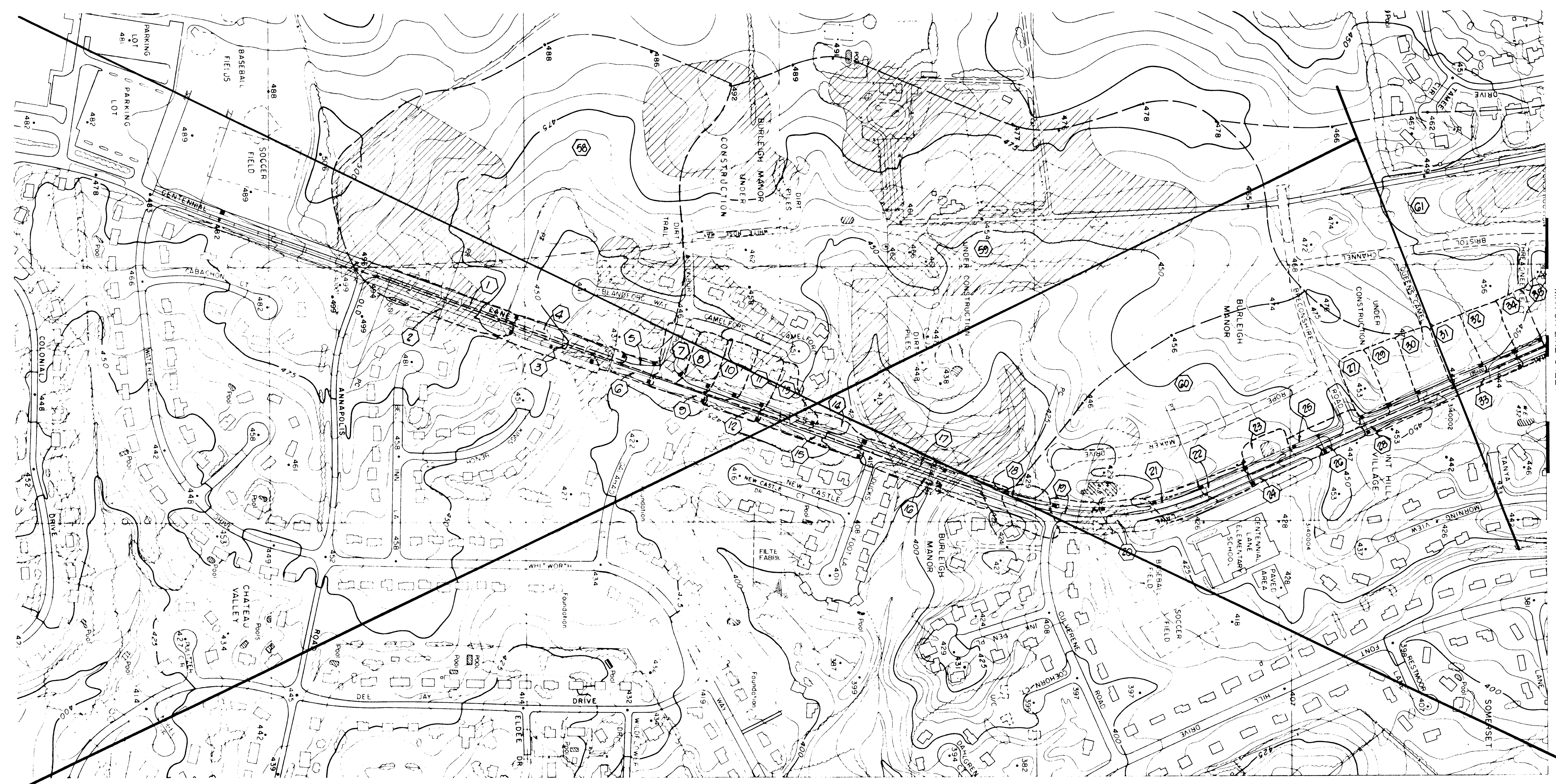
GABION WALL DETAIL
STATION 153+29 TO STATION 154+25
OFFSET RIGHT OF R/W

NOTE: ALL GABION BASKETS SHALL BE GALVANIZED OR EPOXY COATED.

BRUNING 44-132 69150 I. SUBMITTED FOR 95% REVIEW (11-2-89)

| | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|---|--|---|--|--|--|--|--|--|--|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND [Signature] DATE 11/13/90 CHIEF, BUREAU OF ENGINEERING | | [Signature] DATE 11/13/90 CHIEF, BUREAU OF HIGHWAYS | | MILDENBERG, MOCHI & ASSOCIATES, INC. ENGINEERS - SURVEYORS - PLANNERS 3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350 (301) 461-0076 D.C. Mem: (301) 521-5768 | | STATE OF MARYLAND PROFESSIONAL ENGINEER [Signature] | | DES: JBM DRN: LJG CHK: JBM DATE: 12/90 | | GABION WALL PROFILES & DETAILS CENTENNIAL LANE | | CENTENNIAL LANE STA. 135+50 TO U.S. ROUTE 40 CAPITAL PROJECT J-4015-11 ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND | | PROFILE SCALE: 5' & 50' SHEET 11 OF 36 | |
|--|--|--|--|--|--|---|--|---|--|--|--|--|--|--|--|

SCALE: 1" = 200'
TRUE NORTH



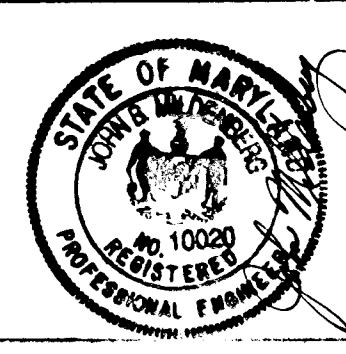
MATCH LINE SHEET

SUBMITTED FOR 95% REVIEW

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Lewis 11-13-90
William E. Ray 11-13-90
Granville W. Weiland 11/14/90

**MILDENBERG,
MOCHI & ASSOCIATES, INC.**
 3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
 (301) 461-0078 D.C. Metro (301) 621-5768



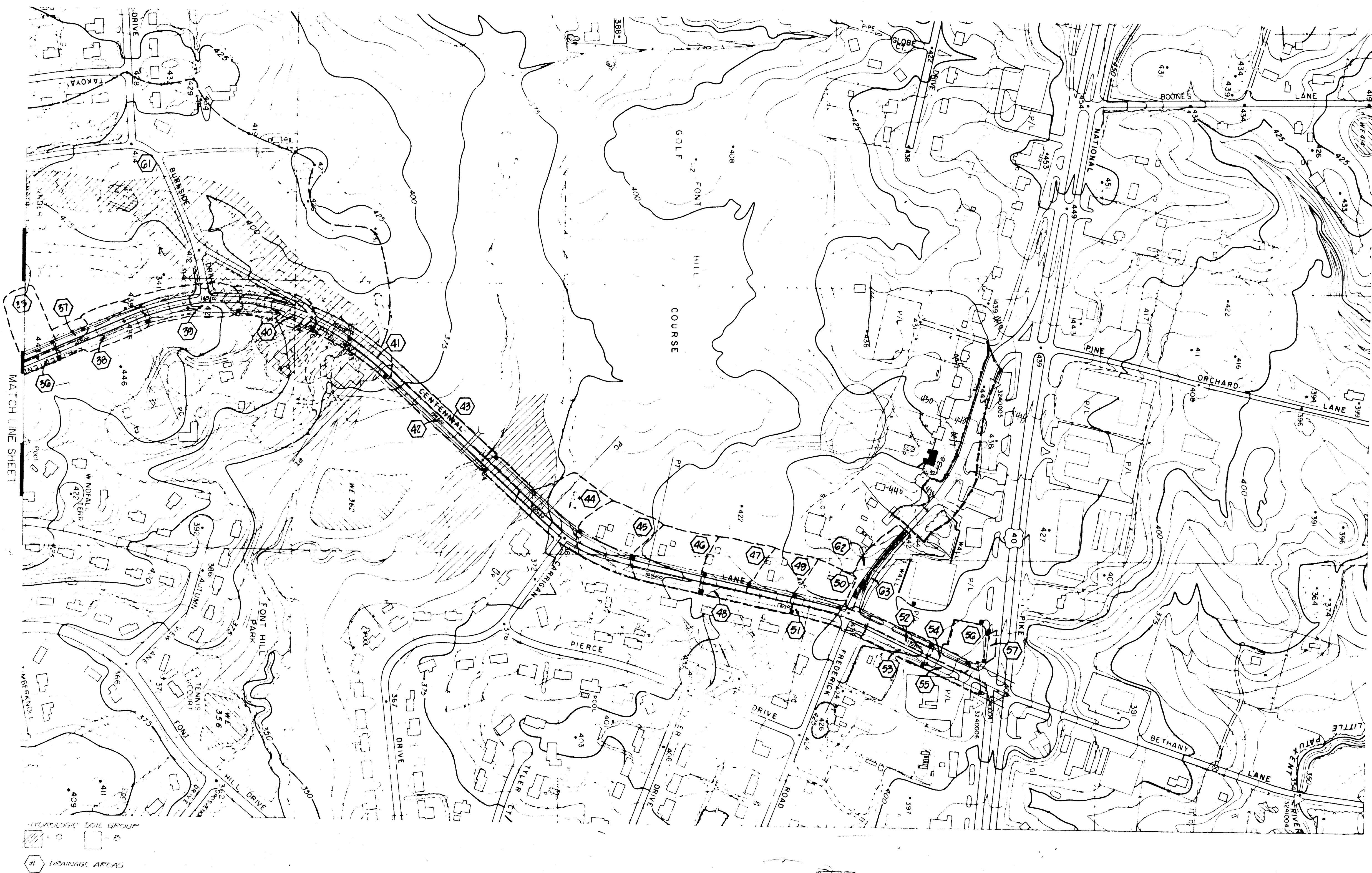
| | |
|--------------------|--|
| DES. DATA | |
| DRN. L.S. | |
| CHK. T.P.A. | |
| DATE: 1/90 | |
| BY: NC | |
| REV. SIGN | |
| DATE | |
| FOOT SCALE MAP NO. | |
| BLOCK NO. | |

DRAINAGE AREA MAP
STA. 88+00 TO STA. 137+50
CENTENNIAL LANE

CENTENNIAL LANE
STA. 135+50 TO U.S. ROUTE 40
CAPITAL PROJECT J-4015-1
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 12 OF 316

SCALE: 1" = 200'
TRUE NORTH



AREA TABULATION FOR DRAINAGE AREA MAP

| NO. | TOTAL ACRES | AREA IN ACRES | | COMPOSITE C-FACTOR | PERCENT OF IMPERVIOUS AREA | ZONING |
|-----|-------------|-------------------------|-------|--------------------|----------------------------|--------|
| | | HYDROLOGICAL SOIL GROUP | | | | |
| 1 | 0.67 | | 0.67 | 0.72 | 70% | |
| 2 | 0.22 | | 1.22 | 0.53 | 40% | |
| 3 | 0.33 | | 0.33 | 0.53 | 40% | |
| 4 | 0.46 | | 0.23 | 0.72 | 70% | |
| 5 | 0.14 | | | 0.72 | 70% | |
| 6 | 0.29 | | 0.10 | 0.68 | 60% | |
| 7 | 0.50 | | 0.40 | 0.44 | 15% | |
| 8 | 0.65 | | 0.65 | 0.44 | 15% | |
| 9 | 0.25 | | 0.25 | | 60% | |
| 10 | 0.57 | | 0.40 | 0.44 | 15% | |
| 11 | 0.57 | | 0.37 | 0.44 | 15% | |
| 12 | 0.29 | | 0.29 | 0.68 | 15% | |
| 13 | 0.61 | | 0.61 | 0.40 | 20% | |
| 14 | 0.25 | | 0.25 | 0.68 | 50% | |
| 15 | 0.47 | | 0.47 | 0.66 | 60% | |
| 16 | 0.78 | | 0.43 | 0.54 | 60% | |
| 17 | 0.82 | | 0.42 | 0.40 | 50% | |
| 18 | 0.70 | | 0.70 | | 40% | |
| 19 | 0.51 | | 0.26 | 0.26 | 55% | |
| 20 | 0.51 | | 0.26 | 0.56 | 55% | |
| 21 | 0.51 | | 0.51 | 0.56 | 55% | |
| 22 | 0.51 | | 0.51 | 0.56 | 55% | |
| 23 | 0.41 | | 0.41 | 0.49 | 33% | |
| 24 | 0.30 | | 0.36 | 0.56 | 22% | |
| 25 | 0.52 | | 0.62 | 0.49 | 33% | |
| 26 | 0.33 | | 0.33 | 0.55 | 60% | |
| 27 | 0.79 | | 0.79 | 0.38 | 11% | |
| 28 | 0.44 | | 0.44 | 0.54 | 60% | |
| 29 | 0.82 | | 0.82 | 0.38 | 11% | |
| 31 | 0.68 | | 0.68 | 0.36 | 12% | |
| 32 | 0.86 | | 0.86 | 0.36 | 12% | |
| 33 | 0.25 | | 0.25 | 0.81 | 60% | |
| 34 | 0.72 | | 0.72 | 0.36 | 12% | |
| 35 | 0.72 | | 0.72 | 0.36 | 12% | |
| 36 | 0.23 | | 0.23 | 0.81 | 60% | |
| 37 | 0.17 | | 0.17 | 0.55 | 46% | |
| 38 | 0.77 | | 0.77 | 0.57 | 48% | |
| 39 | 1.03 | | 0.25 | 0.57 | 48% | |
| 40 | 0.88 | | 0.88 | 0.57 | 48% | |
| 41 | 0.44 | | 0.44 | 0.57 | 48% | |
| 42 | 0.69 | | 0.20 | 0.71 | 80% | |
| 43 | 0.84 | | 0.29 | 0.68 | 75% | |
| 44 | 1.24 | | 0.14 | 0.44 | 26% | |
| 45 | 1.32 | | 1.32 | 0.44 | 26% | |
| 46 | 1.52 | | 1.52 | 0.44 | 26% | |
| 47 | 0.88 | | 0.88 | 0.34 | 14% | |
| 48 | 0.32 | | 0.32 | 0.72 | 80% | |
| 49 | 0.88 | | 0.88 | 0.34 | 14% | |
| 50 | 1.17 | | 1.17 | 0.34 | 14% | |
| 51 | 0.26 | | 0.26 | 0.72 | 80% | |
| 52 | 0.28 | | 0.28 | 0.82 | 96% | |
| 53 | 0.25 | | 0.25 | 0.77 | 89% | |
| 54 | 0.19 | | 0.19 | 0.82 | 96% | |
| 55 | 0.21 | | 0.21 | 0.77 | 89% | |
| 56 | 0.17 | | 0.17 | 0.16 | 0% | |
| 57 | 0.13 | | 0.13 | 0.86 | 96% | |
| 58 | 29.42 | | 14.71 | 0.45 | | |
| 59 | 59.86 | | 29.93 | 0.45 | | |
| 60 | 12.52 | | 1.10 | 0.42 | | |
| 61 | 38.08 | | 6.25 | 0.29 | | |
| 62 | 0.41 | | 0.41 | 0.45 | 28% | |
| 63 | 0.19 | | 0.19 | 0.68 | 50% | |

SUBMITTED FOR 95% REVIEW (11-2-89)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Smith 11/15/90
William B. Reid 11-15-90
Elizabeth A. Collins 11/15/90
Dorville W. Weiland 11/14/90

MILDENBERG MOCHI & ASSOCIATES, INC.
3310 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
(301) 461-0978 D.C. Metro (301) 521-5768

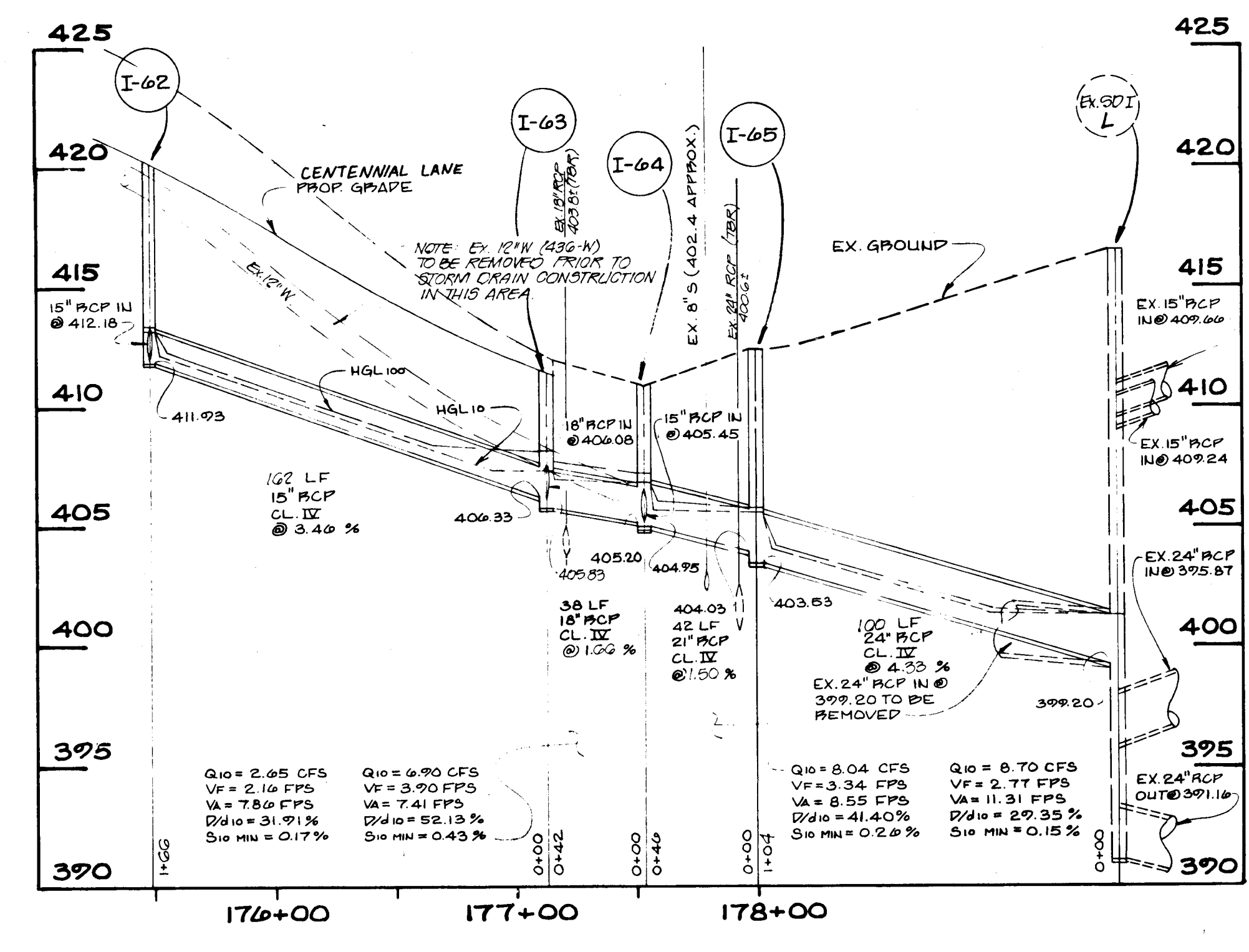
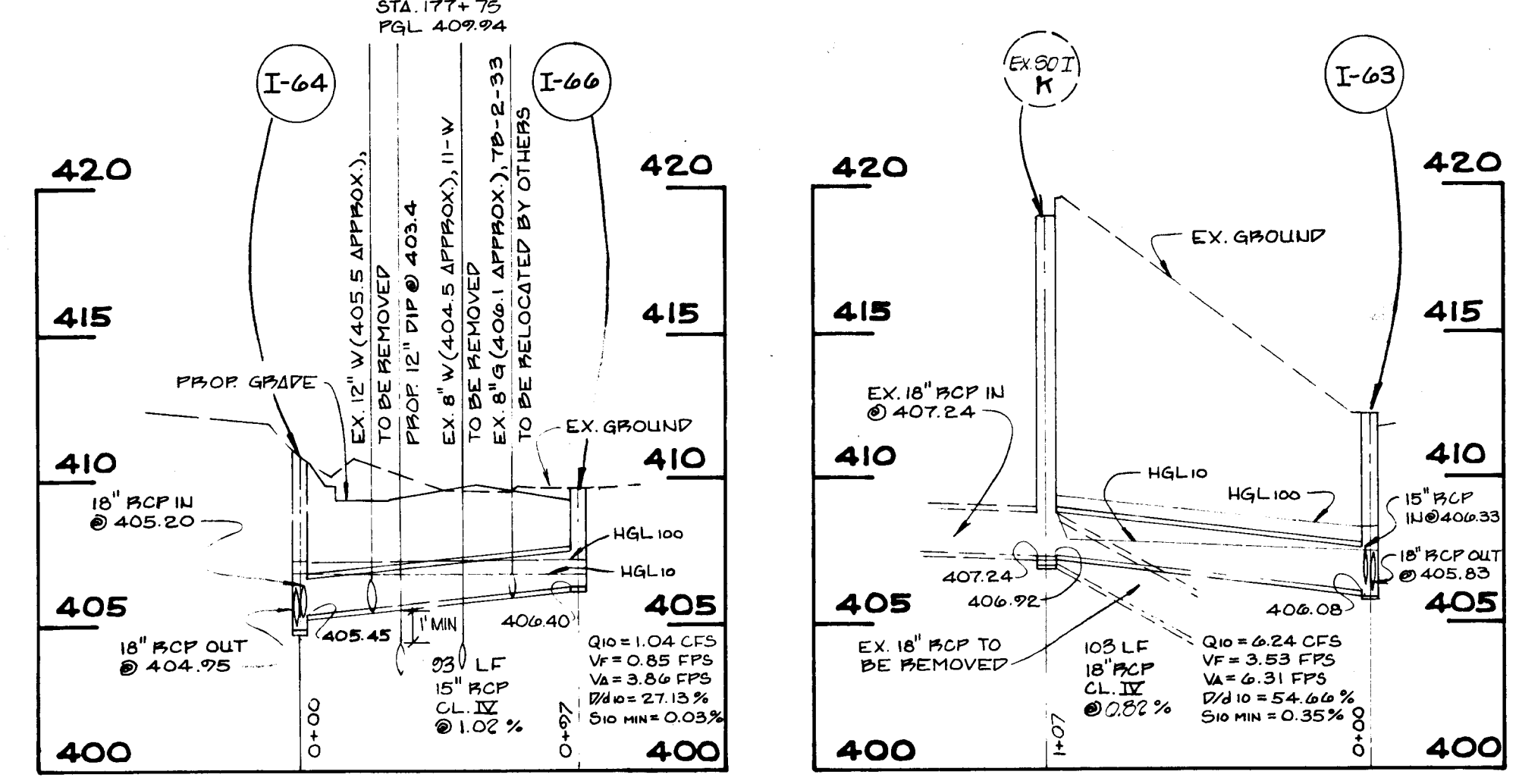
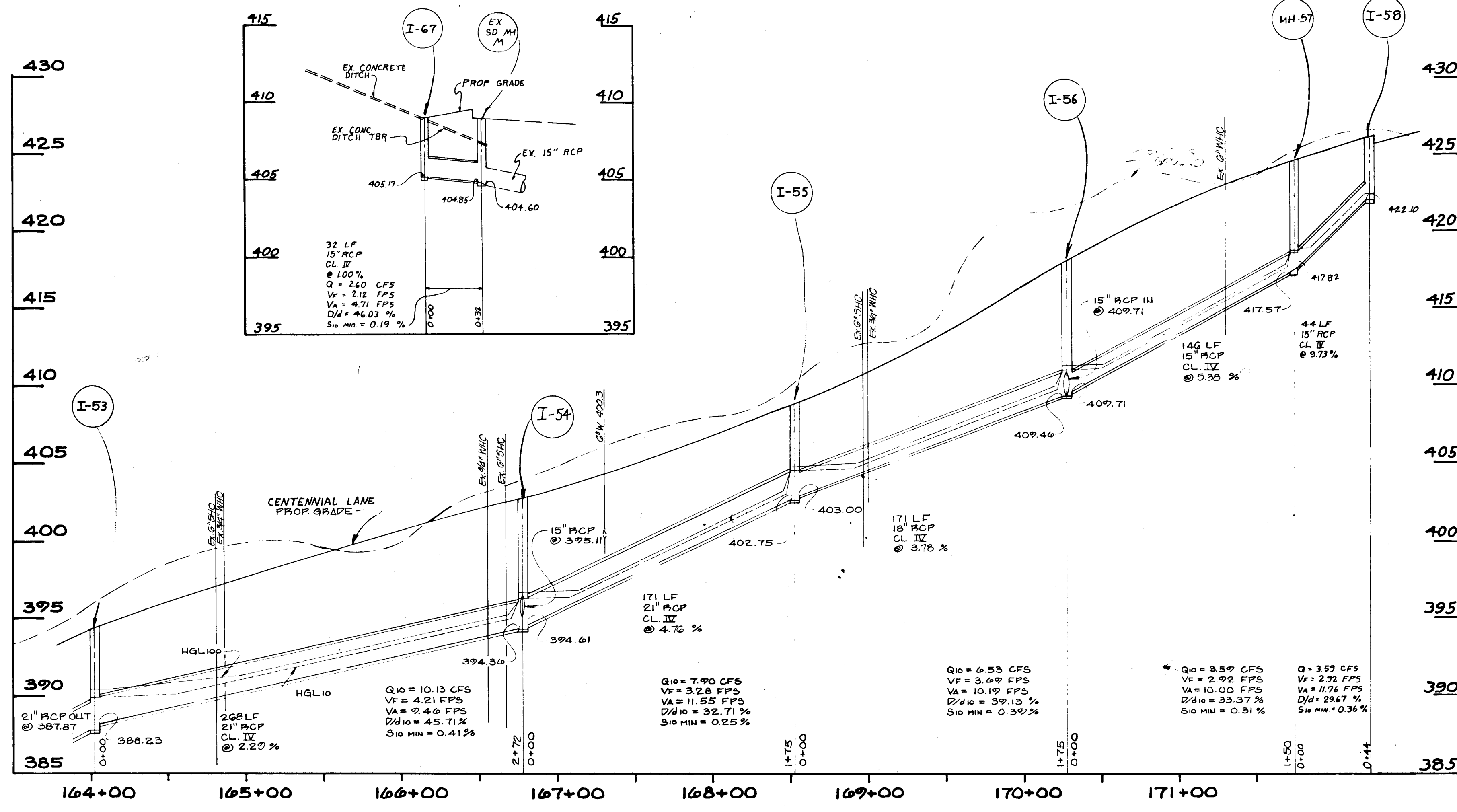
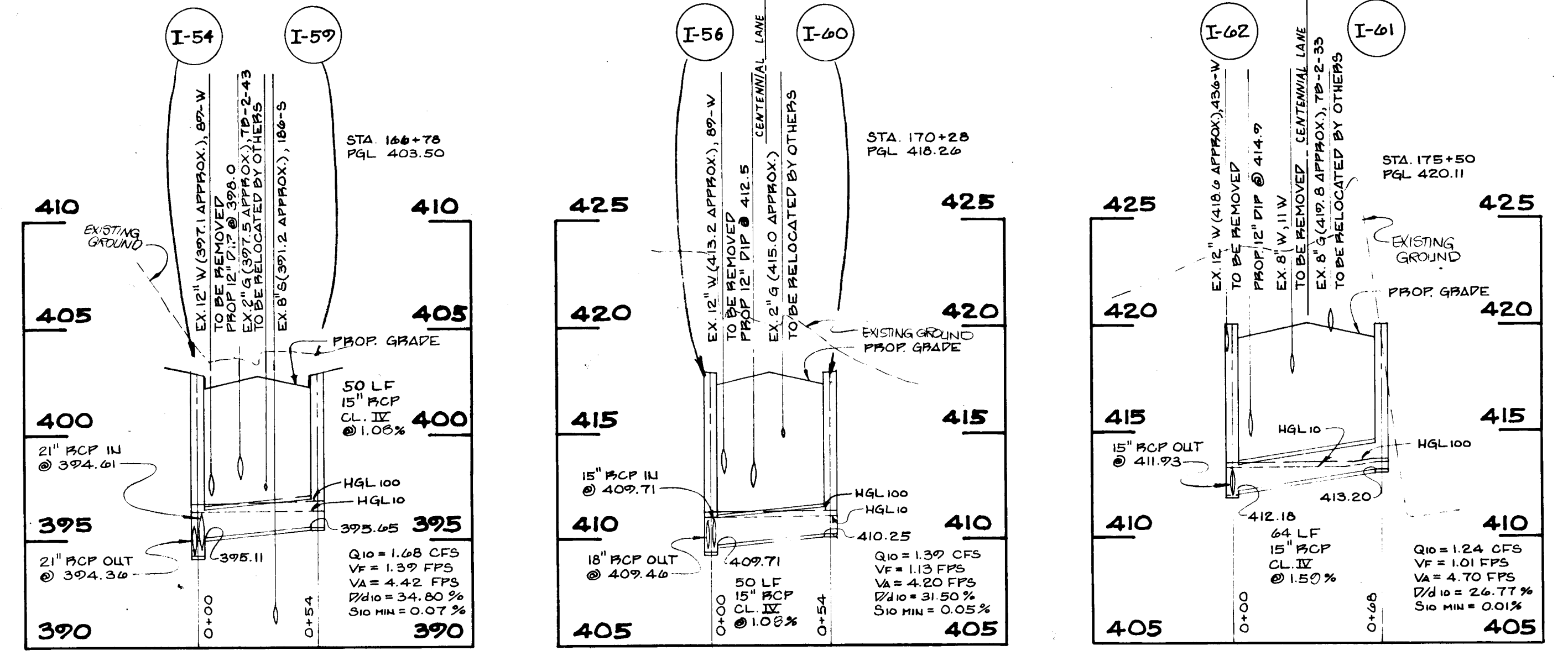
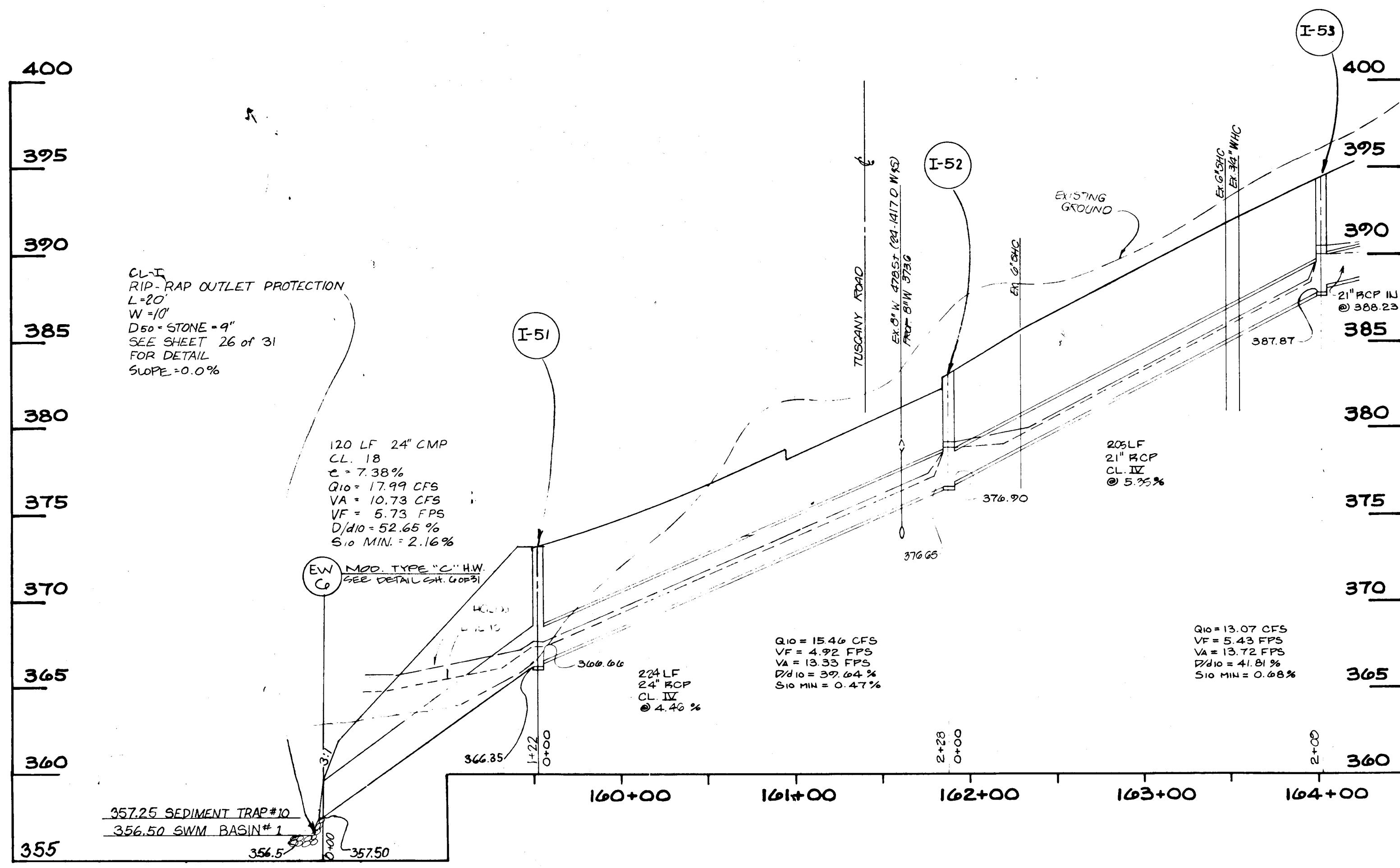


| | |
|-------------------|----------|
| DESIGNED BY | ES: JAM |
| DRAWN BY | DRN: JAS |
| CHECKED BY | CHK: JAS |
| DATE | 12/90 |
| BY | NO |
| REVISION | |
| DATE | |
| 600 SCALE MAP NO. | |
| BLOCK NO. | |

DRAINAGE AREA MAP
STA. 137+50 TO END
CENTENNIAL LANE

CENTENNIAL LANE
STA. 135+50 TO U.S. ROUTE 40
CAPITAL PROJECT J-4015-II
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 13 OF 216

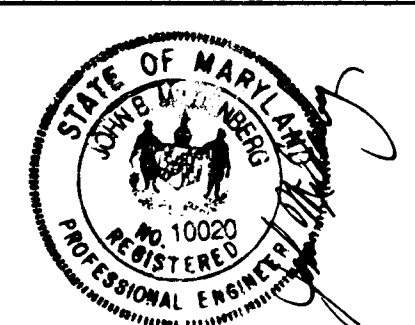


2. REVISED PER COMMENTS (10-5-90)
 1. SUBMITTED FOR 95% REVIEW (11-2-90)
 DATE: 11/2/90

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *[Signature]* DATE: 11/16/90
 Chief, Bureau of Engineering: *[Signature]* DATE: 11/13/90
 Chief, Bureau of Highways: *[Signature]* DATE: 11/14/90

MILDENBERG, MOCHI & ASSOCIATES, INC.
 ENGINEERS - SURVEYORS - PLANNERS
 3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
 (301) 461-0078 D.C. Metro: (301) 621-5168



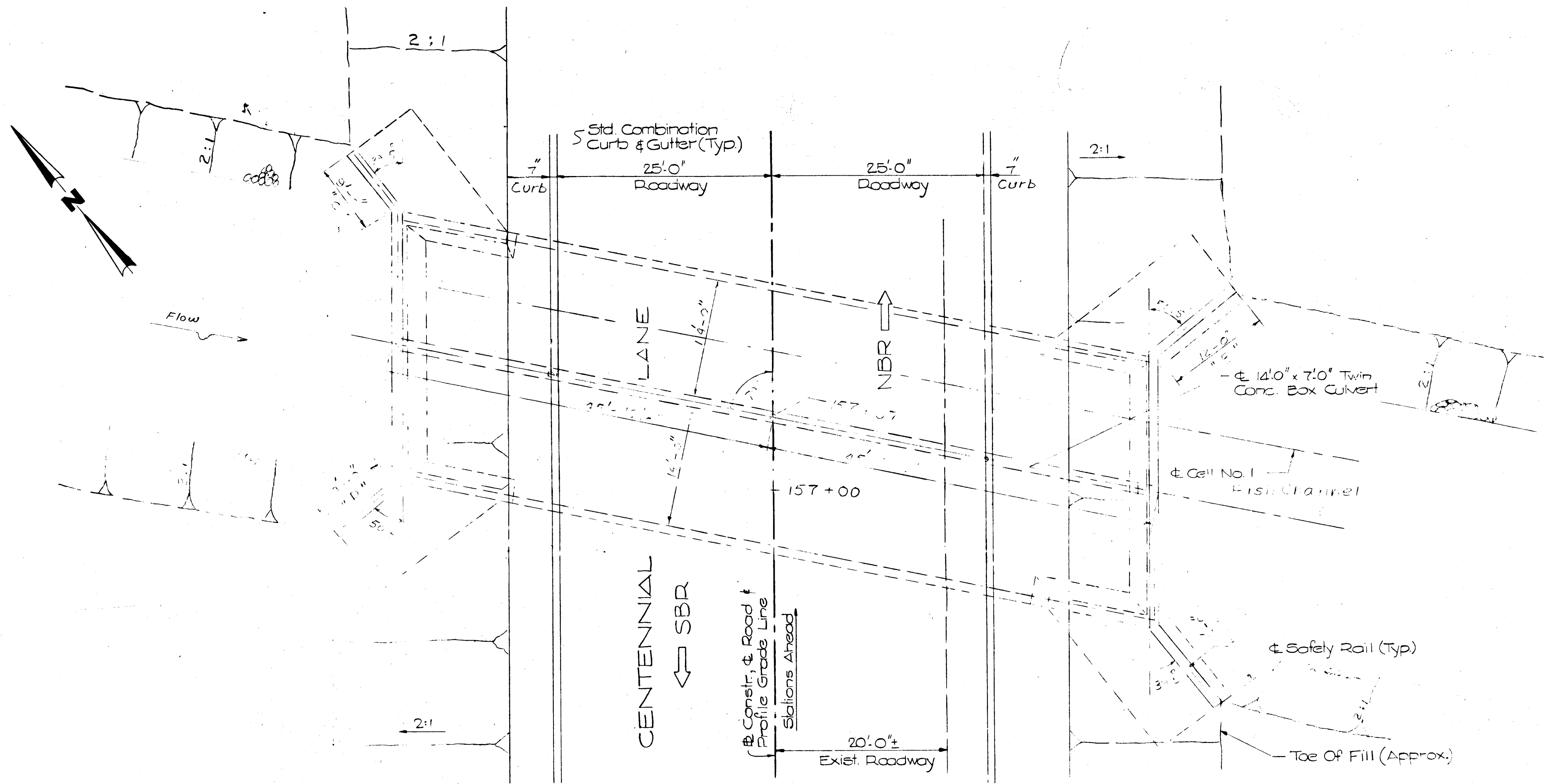
| | |
|--------------|-------------|
| DES: KAM | DATE: 12/20 |
| DRN: LUG/JMS | BY: NO. |
| CHK: JPM | REVISION |
| DATE: 12/20 | DATE: |

STORM DRAIN PROFILES
STA. 157+50 TO END
CENTENNIAL LANE

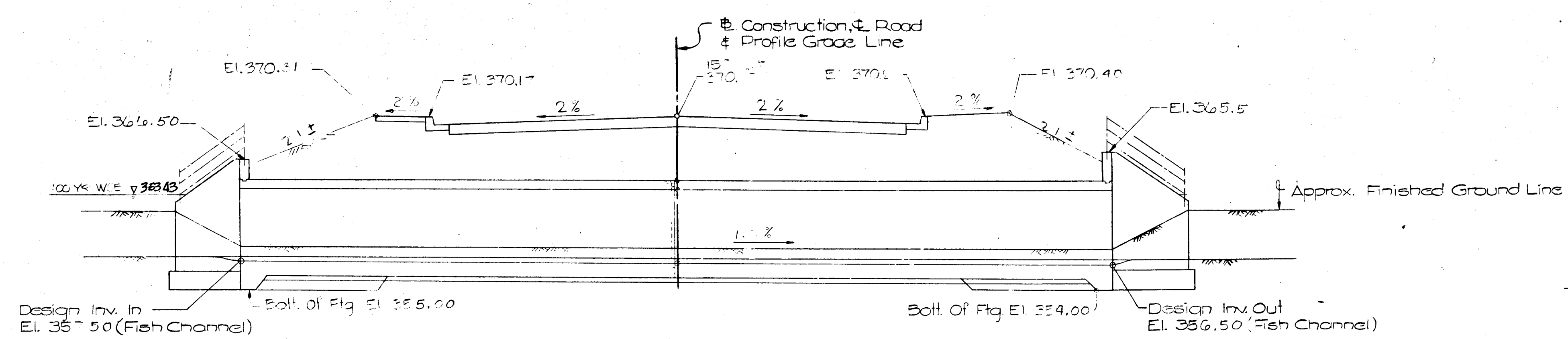
600' SCALE MAP NO. 24 BLOCK NO.

CENTENNIAL LANE
 STA. 135+50 TO U.S. ROUTE 40
 CAPITAL PROJECT J-4015-II
 ELECTION DISTRICT NO. 2
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 15 OF 31



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



ELEVATION ALONG CENTERLINE OF CULVERT
Scale: 1/8" = 1'-0"

GENERAL NOTES

- SPECIFICATIONS:** SHA SPECIFICATIONS DATED JANUARY 1982, SUPPLEMENT TO SHA SPECIFICATIONS DATED JANUARY 1988 AND FEBRUARY 1990, REVISIONS THEREOF AND ADDITIONS THERETO, AND SPECIAL PROVISIONS FOR MATERIALS AND CONSTRUCTION.
- A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 1989 FOR DESIGN.
- REINFORCED CONCRETE DESIGN: SERVICE LOAD DESIGN METHOD, $f_c = 12,000$ PSI.
- REINFORCING STEEL DESIGN: $f_s = 24,000$ PSI.
- LOADING:** HS 20-44
- CONCRETE:** ALL CONCRETE SHALL BE MIX No. 3 (3500 PSI). SEE SPECIAL PROVISIONS.
- CHAMFER:** ALL EXPOSED CORNERS OF CONCRETE SHALL BE CHAMFERED WITH 3/4"x3/4" MILLED CHAMFER STRIPS, EXCEPT ON UNEXPOSED FOOTINGS OR WHERE INDICATED BY THE FOLLOWING NOTATION ON THE PLANS "DO NOT CHAMFER".
- REINF. STEEL:** REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A-615 GRADE 60. ALL SPLICES, NOT SHOWN, SHALL BE LAPPED AS PER BAR LAP CHARTS. MINIMUM COVER FOR ANY BAR SHALL BE 2" UNLESS OTHERWISE NOTED, WITH THE EXCEPTION OF BARS AT THE BOTTOM OF ALL FOOTINGS WHICH SHALL HAVE 3" MINIMUM COVER. ONLY GRADE 60 CAN BE USED ON THIS PROJECT.
- KEYS:** ALL KEYS ARE NOMINAL SIZE.

REFERENCES:

1. For Sequence Of Construction Notes And Details See Dwg. No. S-2 And Sheet No. 26
2. For Channel Diversion See Sheet No. 26
3. For Safety Rail Details, See Dwg. No. S-3
4. For Typical Section Of Box Culvert, See Dwg. No. S-2

DWG. NO. S-1

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. ... 11/15/90
DIRECTOR OF PUBLIC WORKS DATE

Michael ... 11/13/90
CHIEF, BUREAU OF ENGINEERING DATE

Francisco ... 11/14/90
CHIEF, BUREAU OF HIGHWAYS DATE

MILDENBERG,
MOCHI & ASSOCIATES, INC.
ENGINEERS • SURVEYORS • PLANNERS

3300 North Ridge Road, Suite 215, Ellicott City, Maryland 21043-3350
(301) 481-0078 D.C. Metro: (301) 621-5768

ALVI ASSOCIATES, INC.
CONSULTING ENGINEERS
TOWSON, MARYLAND

| | | | | |
|-------------|----|-----|----------|------|
| DES: MSA | | | | |
| DRN: ACR | | | | |
| CHK: MSA | | | | |
| DATE: 12/90 | BY | NO. | REVISION | DATE |

14' x 7' CONCRETE BOX CULVERT
ON CENTENNIAL LANE

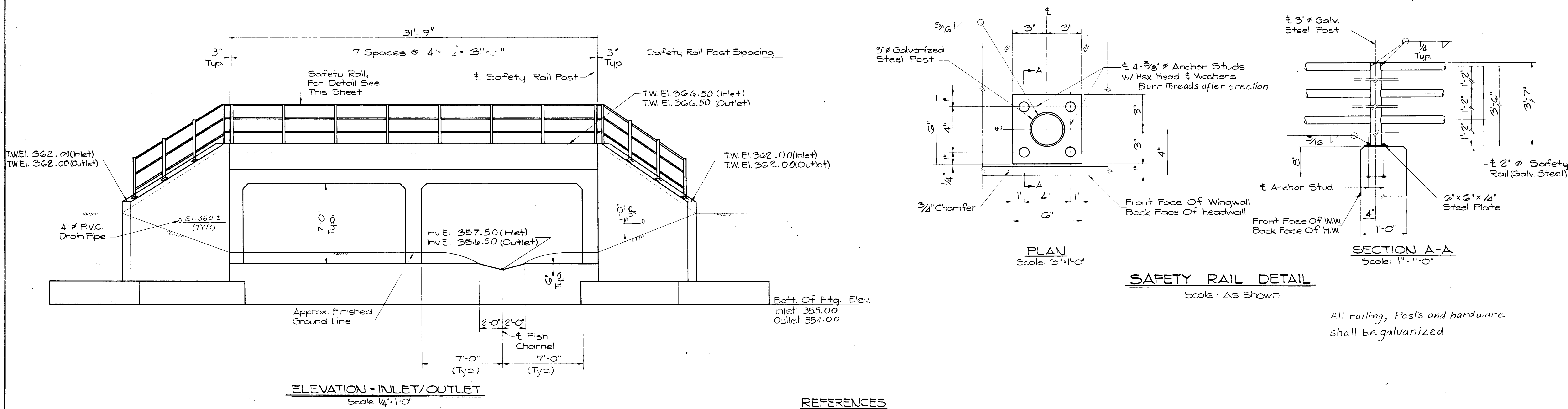
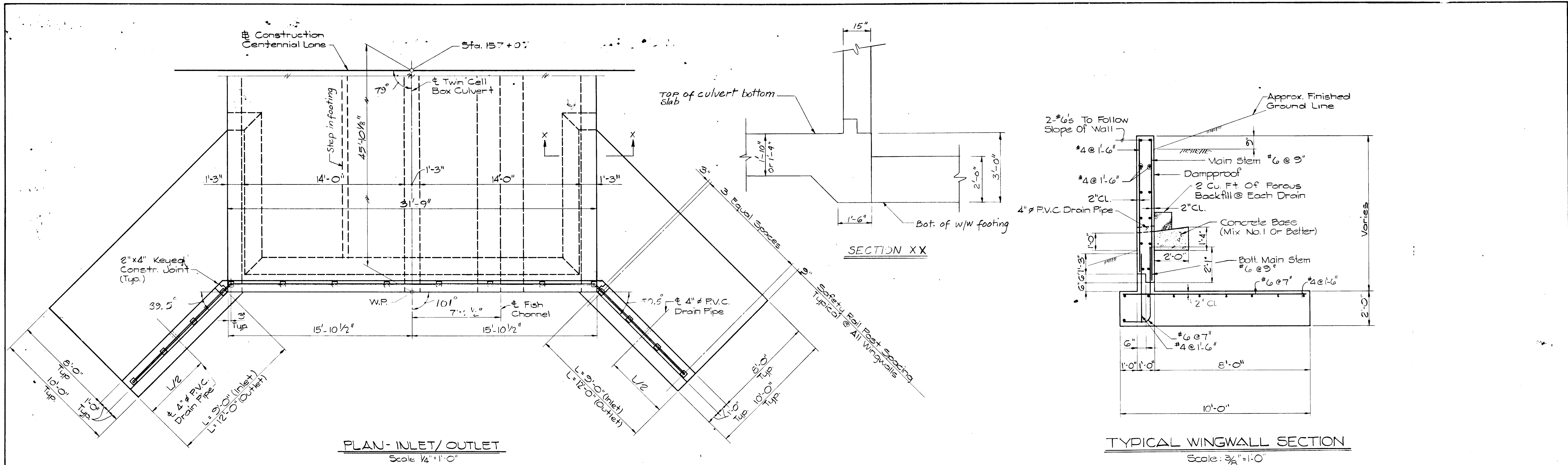
GENERAL PLAN & ELEVATION

600' SCALE MAP NO. _____ BLOCK NO. _____

CENTENNIAL LANE
STATION 135+50 TO U.S. ROUTE 40
CAPITAL PROJECT J-4015-11
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 16 OF 32

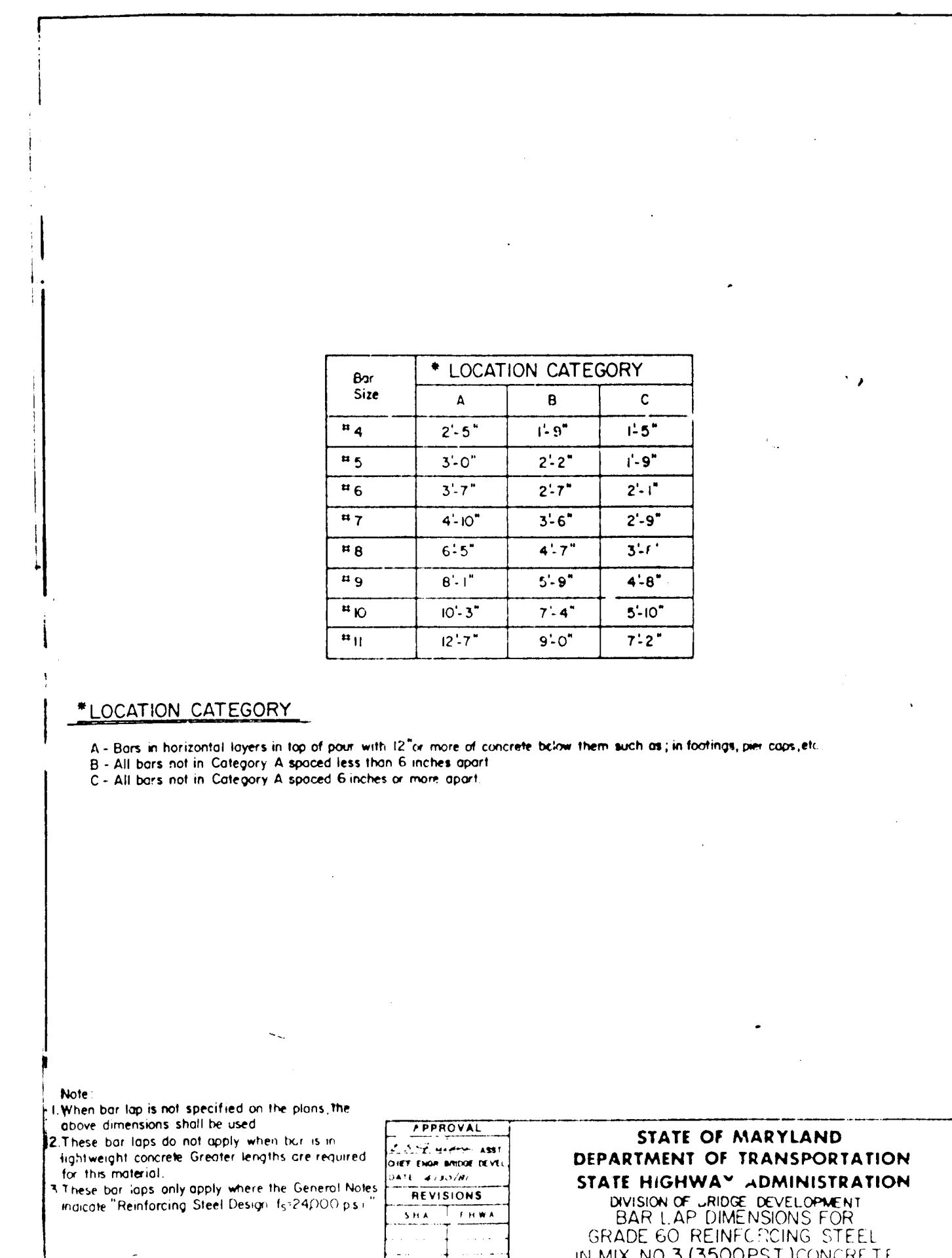
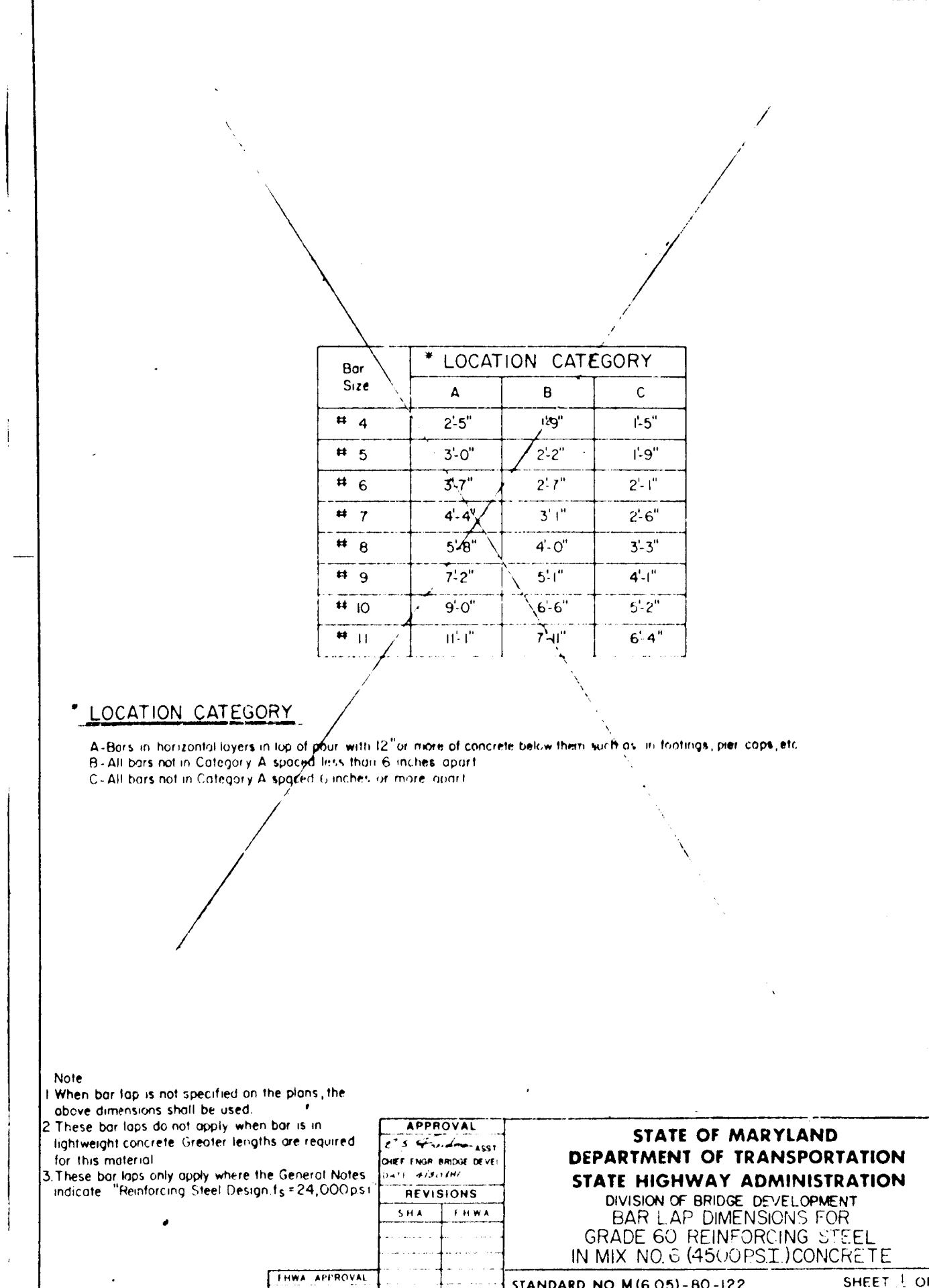
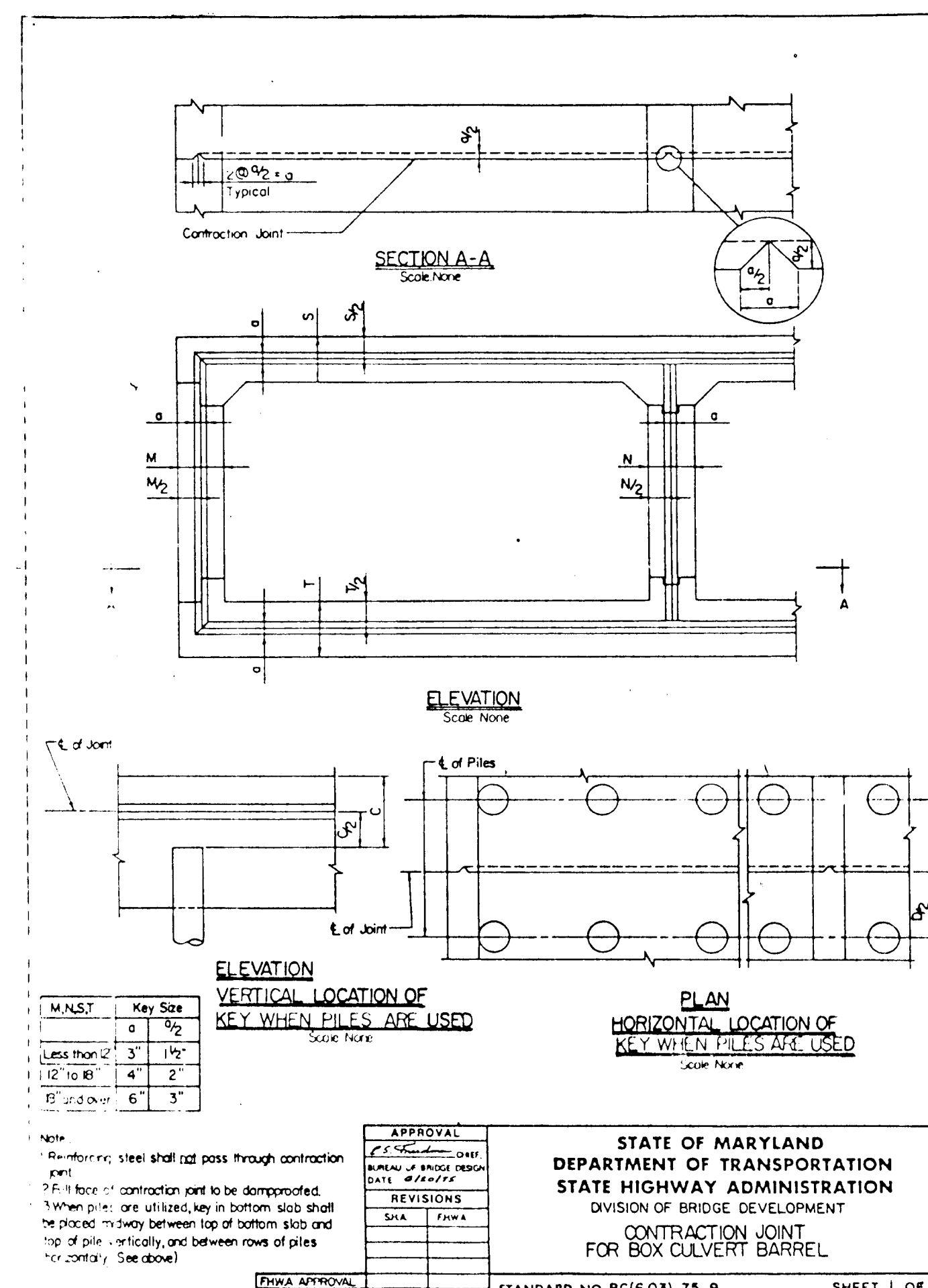
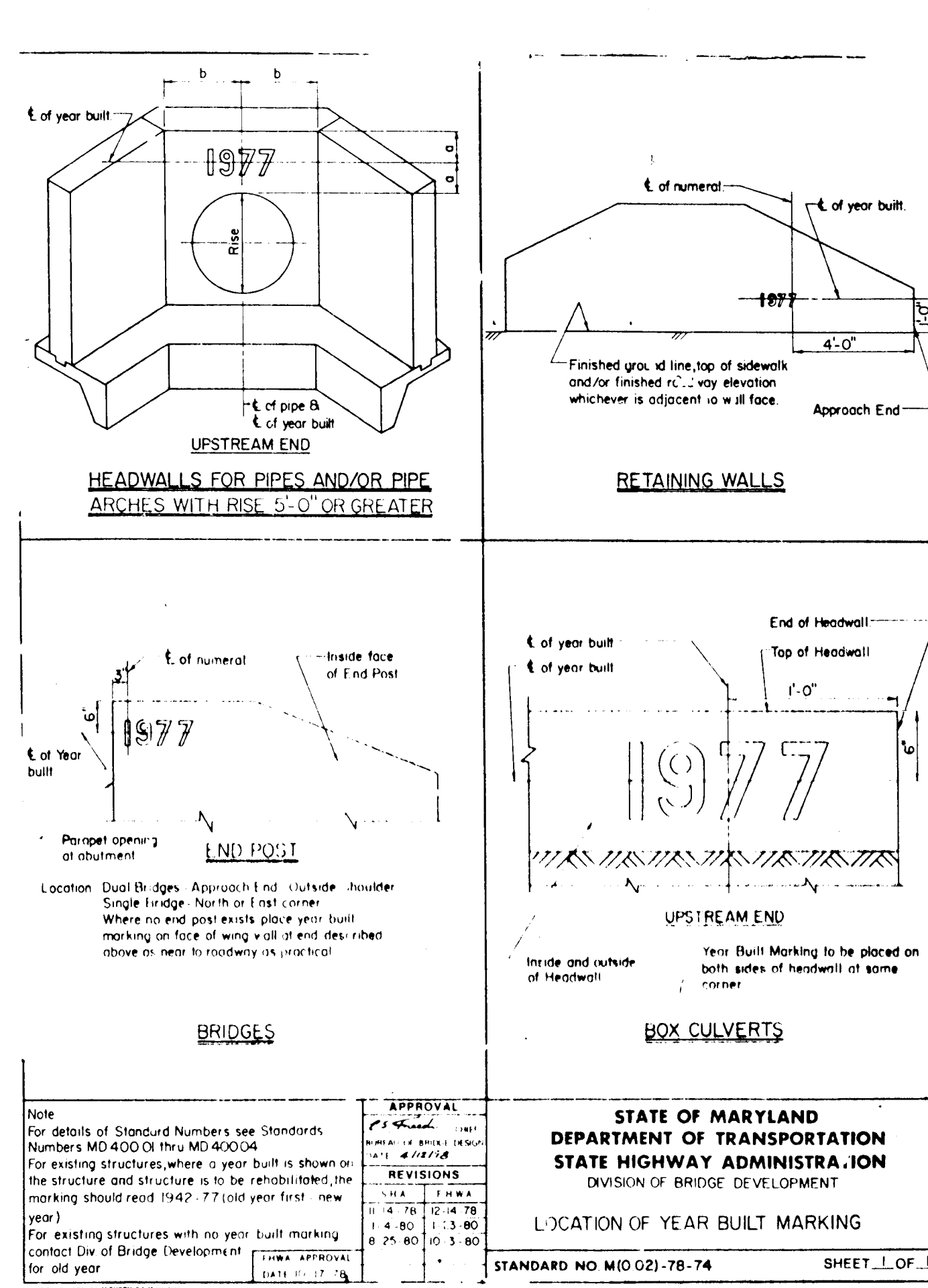
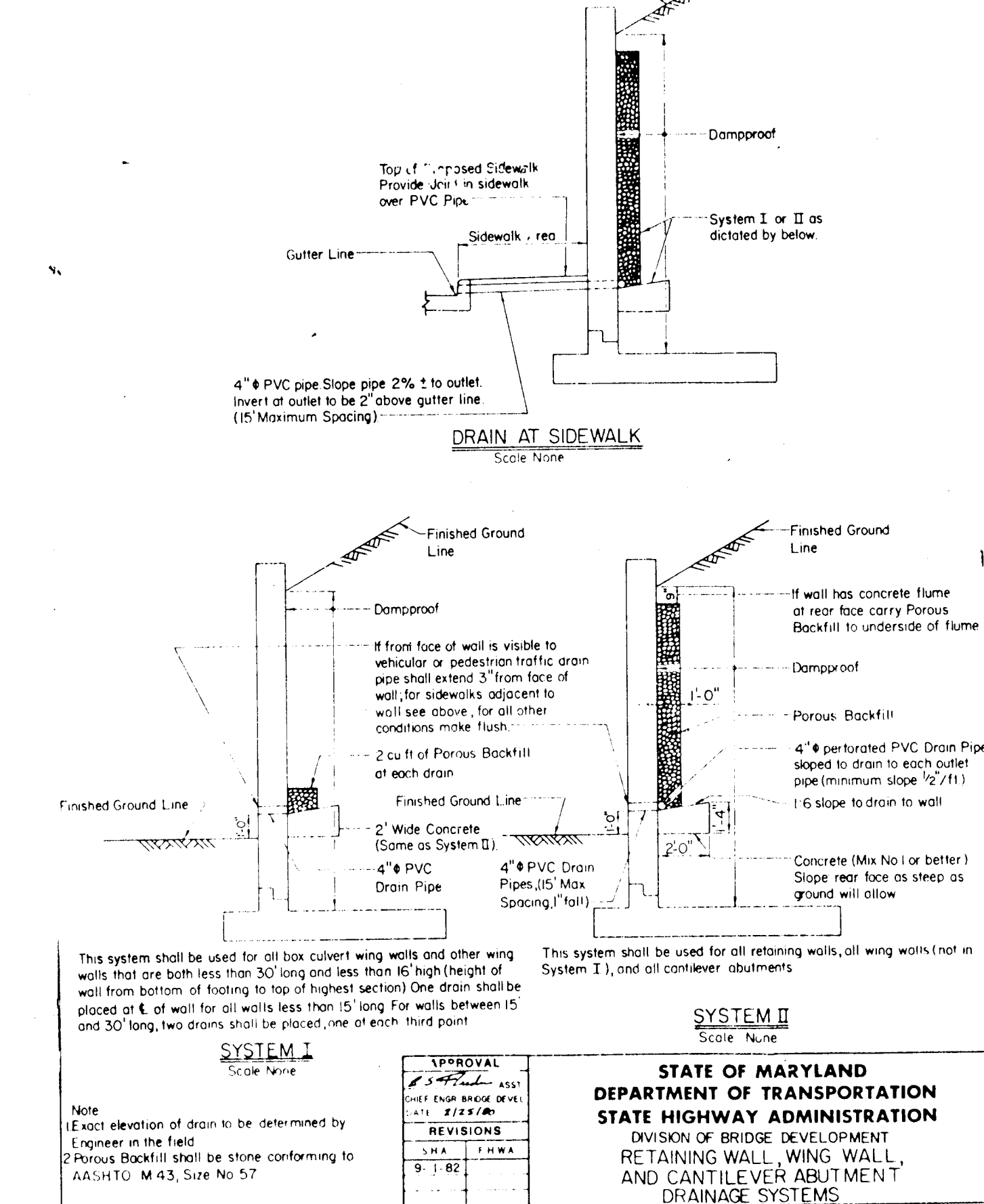
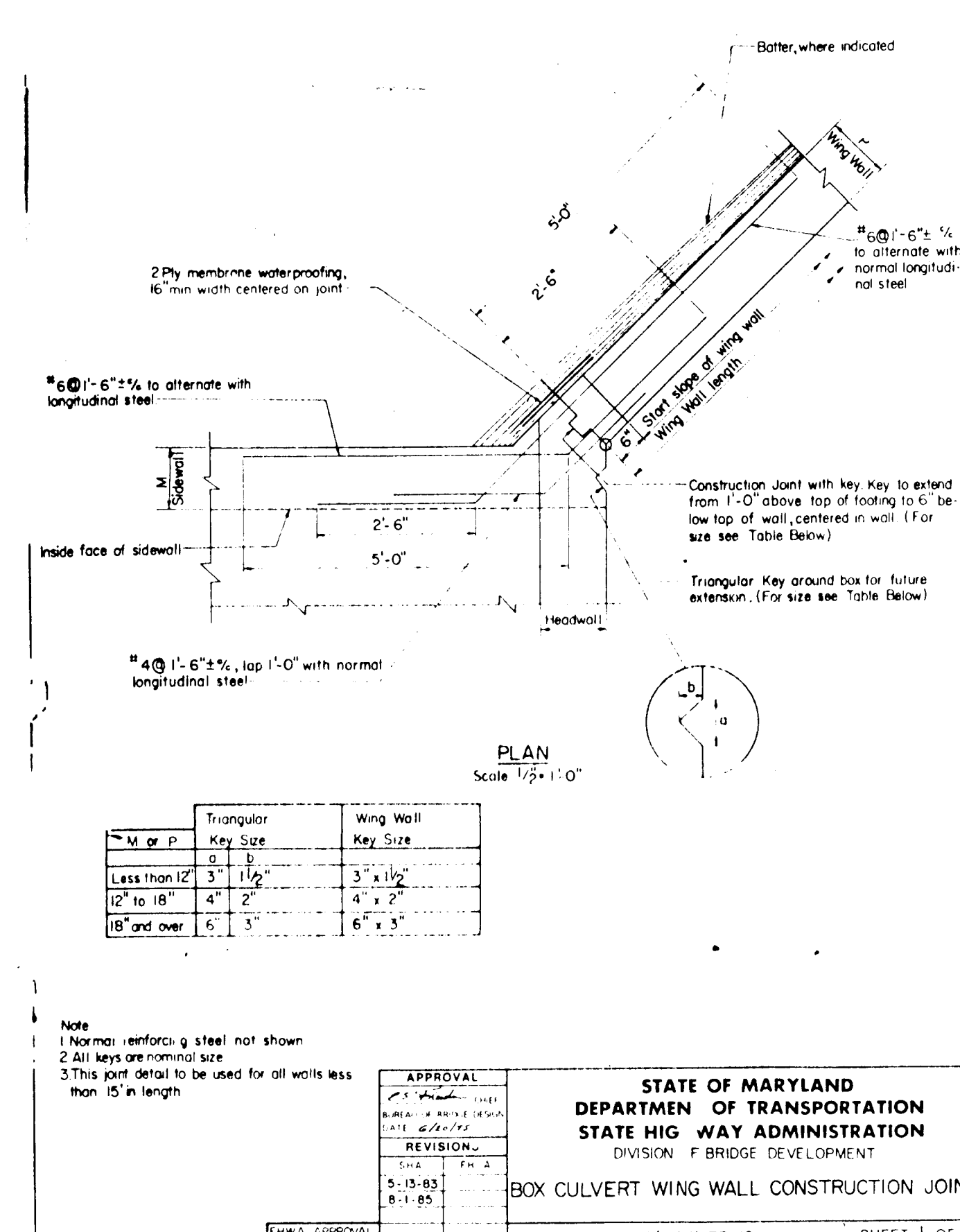
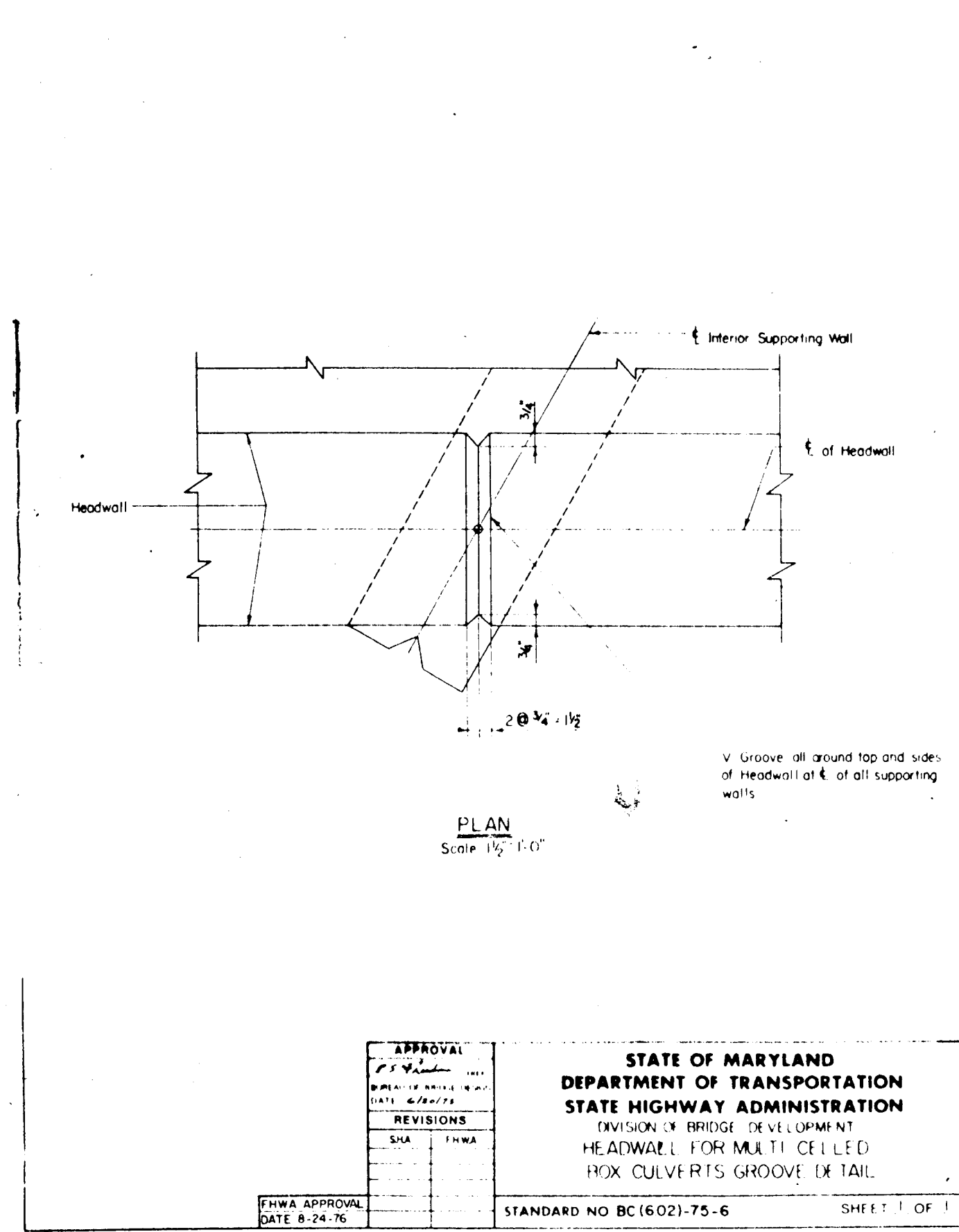
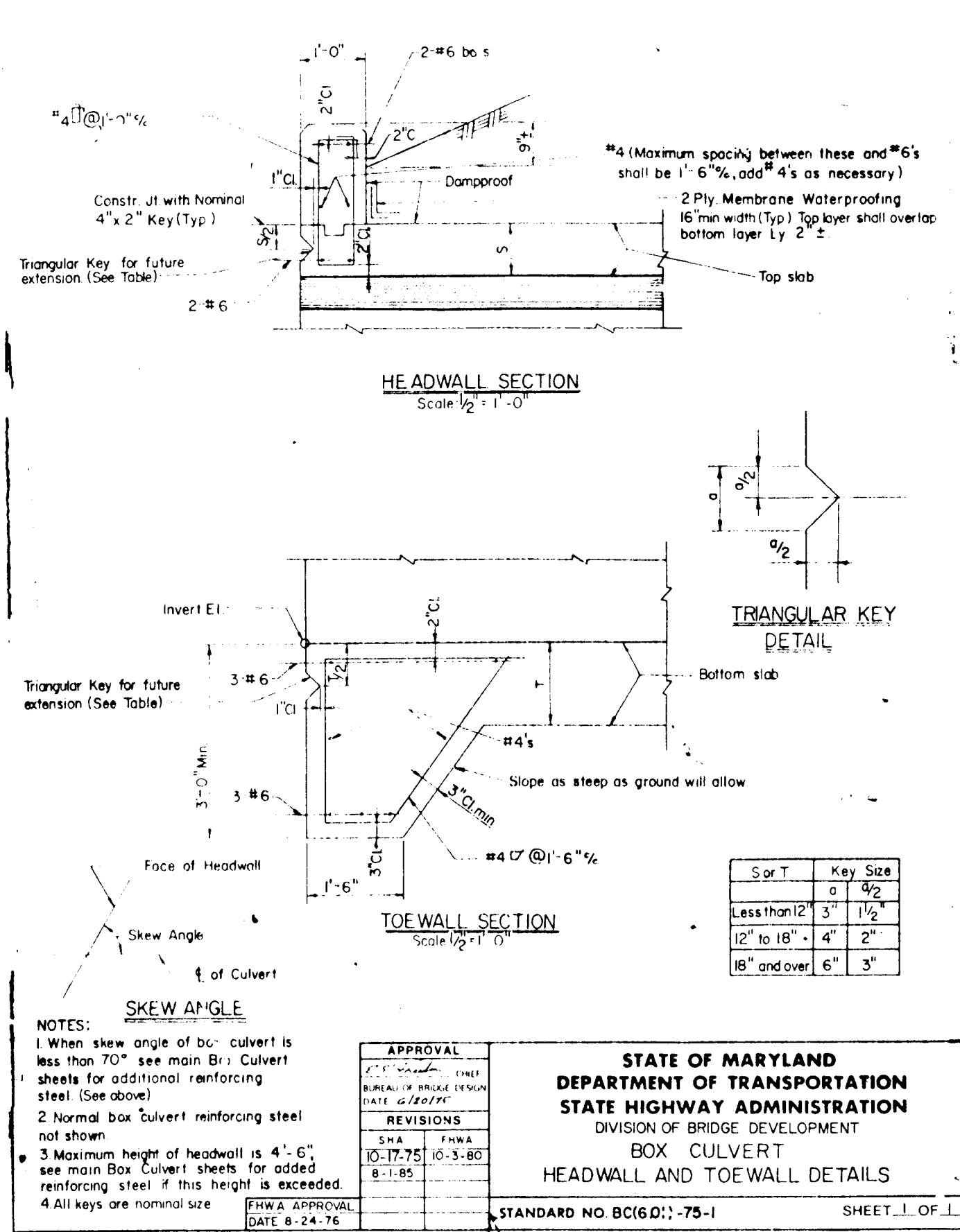


- REFERENCES**
1. For General Plan And Elevation, See Dwg. No. S-1
 2. For Box Culvert Toe Wall Details, See Dwg. No. S-4
 3. For Headwall-Wingwall Joint Details, See Dwg. No. S-4

All railing, Posts and hardware shall be galvanized

| | | | | | | | | | | |
|---|--|---|--|--|--|--|--|---|--|----------------------------------|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND [Signature] 11/15/30 DIRECTOR OF PUBLIC WORKS DATE [Signature] 11/15/30 CHIEF, BUREAU OF ENGINEERING DATE [Signature] 11/15/30 CHIEF, BUREAU OF HIGHWAYS DATE | | MILDBERG MOCHI & ASSOCIATES, INC. ENGINEERS - SURVEYORS - PLANNERS 3300 North River Road, Suite 235, Ellicott City, Maryland 21043-2350 (301) 481-0076 D.C. Metro: (301) 621-5766 | | ALVI ASSOCIATES, INC. CONSULTING ENGINEERS TOWSON, MARYLAND DES: MSA DRN: WCB CHK: MSA DATE: 12/30 | | 14'x7' CONCRETE BOX CULVERT ON CENTENNIAL LANE ELEVATIONS (INLET/OUTLET) 600' SCALE MAP NO. _____ BLOCK NO. _____ | | CENTENNIAL LANE STATION 135+50 TO U.S. ROUTE 40 CAPITAL PROJECT J-4015-11 ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND | | SCALE AS SHOWN SHEET 18 OF 26 |
|---|--|---|--|--|--|--|--|---|--|----------------------------------|

DWG. NO. S-3



**CAPITAL PROJECT J-405-II
SEQUENCE OF CONSTRUCTION
FOR MAINTENANCE OF TRAFFIC
AND SEDIMENT CONTROL**

Phase I Construction

- Obtain grading, C.O.E. and WRA Permits (401 and 404) for the entire project. Install Phase I temporary sediment control devices and maintenance of traffic signage.
- Install temporary paving as shown. Install twin 36" CMP culvert crossing upstream of existing bridge in existing stream and backfill. Maintain two-way traffic on existing Centennial Lane during Phase I construction.
- Utility companies to relocate existing utilities within right-of-way prior to water, storm drainage or roadway construction.
- Construct Gabion Walls with filter fabric (see Gabion Wall Profile and Detail Sheets) as required per Phase I construction or as necessary for installation of temporary pavement prior to Phase I construction. Install silt fence at right-of-way during construction of Gabion Wall.
- Relocate water mains per Water Main Relocation Plan, Capital Project No. W-8156, Contract 24-1726-A, prior to Phase I construction of proposed culvert.
- Construct storm drainage within Phase I construction. Temporarily block any proposed or existing storm drain inlets which cannot be connected to a completed outfall. Provide temporary curb cuts and grade as necessary to provide positive drainage to sediment control devices.
- Construct northern half of western cell of proposed twin cell culvert located in the southbound lanes of Centennial Lane (station 157+07). Install temporary paving between stations 155+50 to 159+00. Temporary paving is to provide a transition in elevation from the proposed road grade across the temporary twin 36" CMP and a portion of the proposed culvert then back to the proposed grade line. See proposed temporary paving elevations shown on plans.
- Construct Phase I Centennial Lane between stations 135+50 to 155+50 and 155+00 to U.S. Route 40. Please note: Road construction between and Station 161+00 to U.S. Route 40 cannot be initiated until October, 1990. Construct tie-ins at Glastonbury Road; Breconshire Drive; Char-I-I Court; and Tuscany Road. Maintain one lane of traffic at all times through tie-ins. Maintain access to all driveways using temporary pavement if necessary on Centennial Lane. Use temporary concrete barriers to block traffic from entering or exiting Frederick Road west of Centennial Lane. Construct Frederick Road. Maintain access to all driveways on Frederick Road. Construct the U.S. Route 40 intersection improvements with minimum disturbance to two-way traffic.
- When area is brought to final grade, provide permanent vegetative stabilization. See Seeding Notes.

Phase II Construction

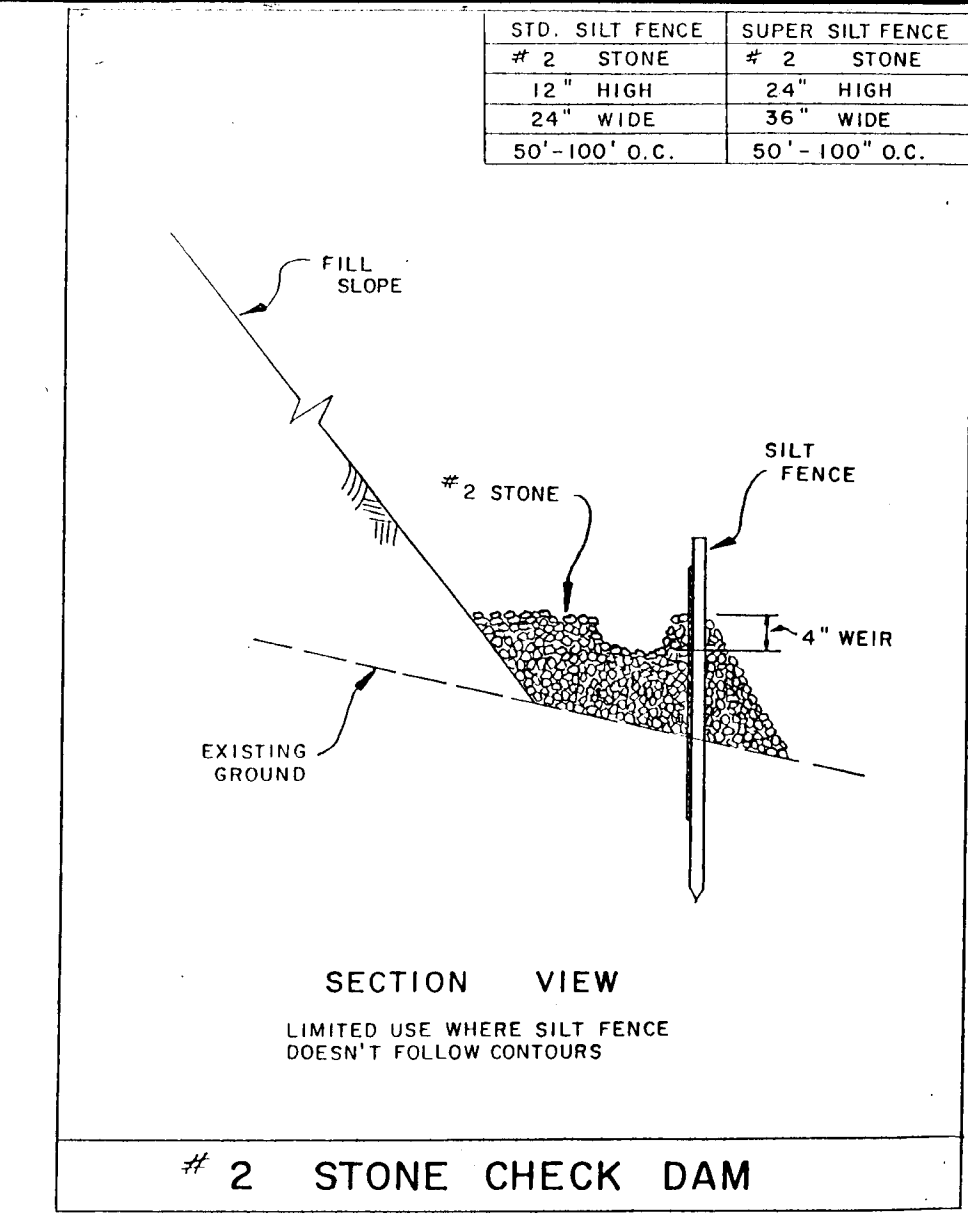
- Install remaining Phase II temporary sediment control devices.
- Install temporary paving at cross-overs, as shown. Redirect and maintain two-way traffic on completed Phase II construction.
- Utility companies to relocate existing utilities prior to water, storm drainage or roadway construction.
- Construct remaining Gabion Wall with filter fabric (see Gabion Wall Profile and Detail Sheet). Install silt fence at right-of-way during construction of Gabion Wall.
- Relocate remaining water mains and make connections within limits of Phase II construction prior to Phase II construction.
- Construct storm drainage within Phase II construction. Temporarily block any proposed storm drain inlets which cannot be connected to a completed outfall. Provide temporary curb cuts and grade to provide positive drainage to sediment control devices.
- Construct southern half of western cell of proposed twin cell culvert located in the northbound lanes of Centennial Lane (station 157+07). When western cell has been completed re-route stream through.
- Construct Phase II of Centennial Lane between stations 136+00 to 155+50 and 159+00 to U.S. Route 40. Maintain access to all driveways on Centennial Lane. Construct tie-ins at Burnside Drive and Carrigan Drive, maintaining at least one lane of traffic at all times. Construct tie-in at Frederick Drive.
- When area is brought to final grade, provide permanent vegetative stabilization. See Seeding Notes.

Phase III Construction

- Install remaining Phase III temporary sediment control devices.
- Maintain two-way traffic in southbound Centennial Lane between station 155+50 and station 155+00. See proposed temporary paving elevations shown on plans.
- Remove existing bridge. Construct southern half of eastern cell of proposed twin cell culvert located in the northbound lanes of Centennial Lane. Construct northbound Centennial Lane between station 155+50 to station 159+00 including storm drainage.
- When area is brought to final grade, provide permanent vegetative stabilization. See Seeding Notes.

Phase IV Construction

- Install remaining Phase IV temporary sediment control devices.
- Re-direct and maintain two-way traffic on northbound Centennial Lane between station 155+50 to station 159+00.
- Remove temporary pavement and temporary culvert between station 155+50 and station 159+00 of the southbound lanes. Construct northern half of eastern cell of proposed twin cell culvert located in the southbound lanes of Centennial Lane. Fill and construct to finished grade. Construct remaining storm drainage.
- When area is brought to final grade, provide permanent vegetative stabilization. See Seeding Notes. At this time, Contractor shall remove accumulated sediment from the SWM basin/sediment trap #10 and #7. The basins shall be graded in accordance with these plans and stabilized using permanent seeding methods.



| STD. SILT FENCE | SUPER SILT FENCE |
|-----------------|------------------|
| #2 STONE | #2 STONE |
| 12" HIGH | 24" HIGH |
| 24" WIDE | 36" WIDE |
| 50'-100' O.C. | 50'-100' O.C. |

SEDIMENT CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (992-2437).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Impacts to the riparian corridor and nontidal wetland areas for equipment access and sediment control devices should be minimized to the greatest extent possible. All unavoidable temporary impact areas shall be restored to pre-construction contours and vegetation within 100 feet upstream and downstream of the project site.
- Sediment controls should be maintained after every storm event. Inspection of the sediment controls should occur at a minimum of two week intervals.
- Clearing in the riparian corridor should be minimized to the greatest extent possible.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within:
 - 7 calendar days for all perimeter slopes and all slopes greater than 3:1;
 - 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps shown must be fenced and warning signs posted around their perimeter in accordance with Volume 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (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:
 - Total Area of Site: 10,008 acres
 - Area Disturbed: 10,008 acres
 - Area to be roofed or paved: 6,255 acres
 - Area to be vegetatively stabilized: 3,753 acres
 - Total Cut: 1,418,000 cu. yd.
 - Total Fill: 1,418,000 cu. yd.
 - EROSION AREA TO BE FROM AN APPROVED SITE SPECIFIC SEDIMENT CONTROL DEVICES IN PLACE.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seeding Preparation: Loosen upper three (3) inches of soil by raking, disking or other acceptable means before seeding, unless previously loosened.

- Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules:
- Preferred:** Apply two (2) tons per acre dolomitic limestone (92 lbs/1000 square feet) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs/1000 square feet) before seeding. Harrow disc into upper three (3) inches of soil. At time of seeding, apply 100 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs/1000 square feet).
 - Acceptable:** Apply two (2) tons per acre dolomitic limestone (92 lbs/1000 square feet) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs/1000 square feet) before seeding harrow or disc into upper three (3) inches of soil.

Seeding: For the periods March 1 through April 30, and August 1 through October 15, seed with 60 lbs. per acre (1.4 lbs/1000 square feet) of Kentucky 31 Tall Fescue. For the period May 1 through July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.5 lbs/1000 square feet) of weeping lovegrass. During the period of October 16 through February 28, protect the site by: Option 1) two tons per acre of well anchored straw, mulch and seed as soon as possible in the spring. Option 2) use sod. Option 3) seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with two tons per acre well anchored straw.

Mulching: Apply 1.5 to 2 tons per acre (70 to 90 lbs/1000 square feet) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or two hundred eighteen (218) gallons per acre (5 gal/1000 square feet) of emulsified asphalt on flat areas. On slopes eight (8) feet or higher, use three hundred forty-eight (348) gallons per acre (8 gal/1000 square feet) for anchoring.

Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseeding.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

Seeding Preparation: Loosen upper three (3) inches of soil by raking, disking or other acceptable means before seeding, unless previously loosened.

Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs/1000 square feet).

Seeding: For periods March 1 through April 30 and from August 15 through November 15, seed with 2.5 bushels per acre of annual ryegrass (3.2 lbs/1000 square feet). For the period May 1 through August 14, seed with 3 lbs. per acre of weeping lovegrass (0.7 lbs/1000 square feet). For the period November 16 through February 28, protect site by applying two (2) tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1.5 to 2 tons per acre (70 to 90 lbs/1000 square feet) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or two hundred eighteen (218) gallons per acre (5 gal/1000 square feet) of emulsified asphalt on flat areas. On slopes, eight (8) feet or higher, use three hundred forty-eight (348) gallons per acre (8 gal/1000 square feet) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

ENGINEER'S CERTIFICATE

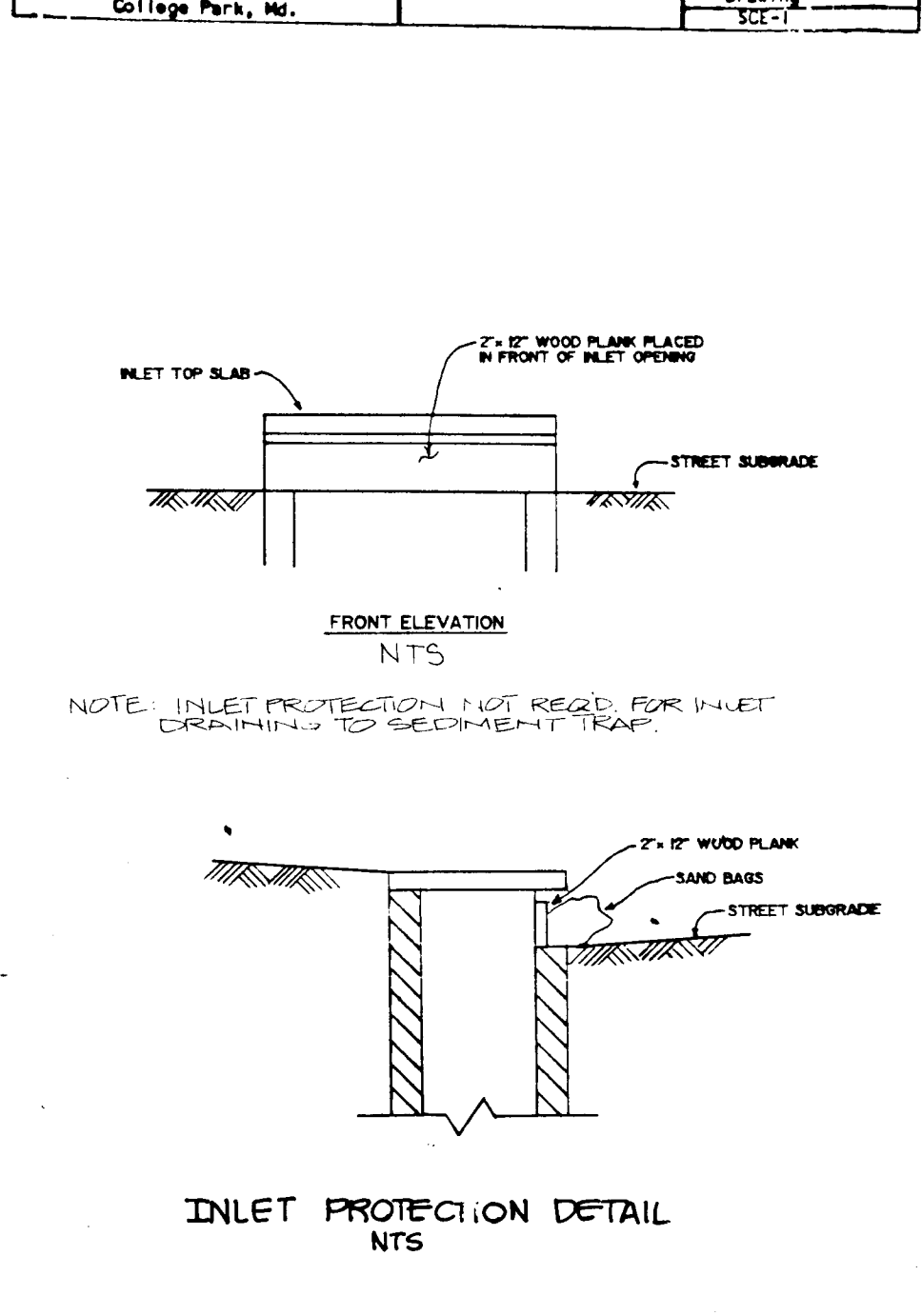
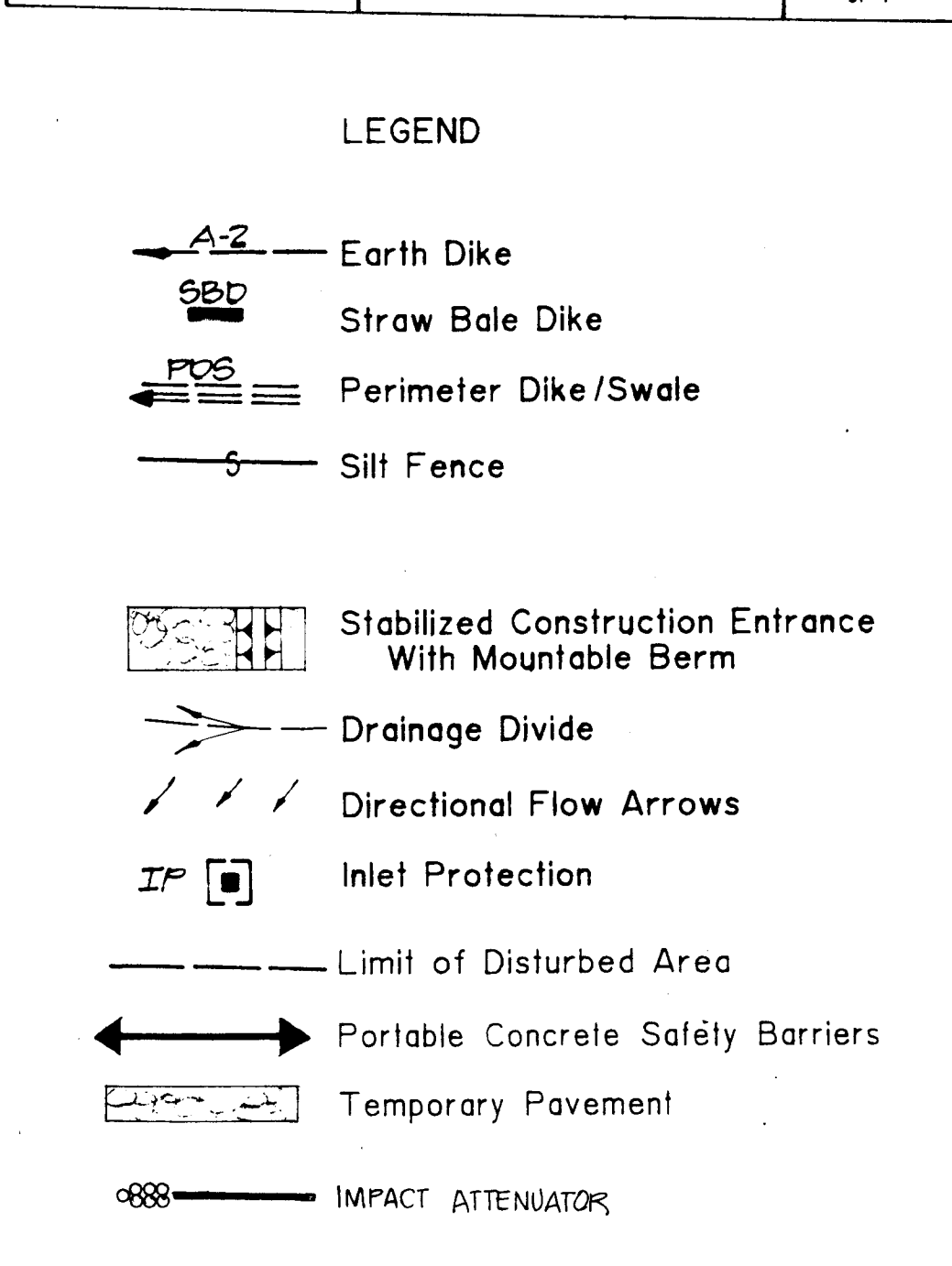
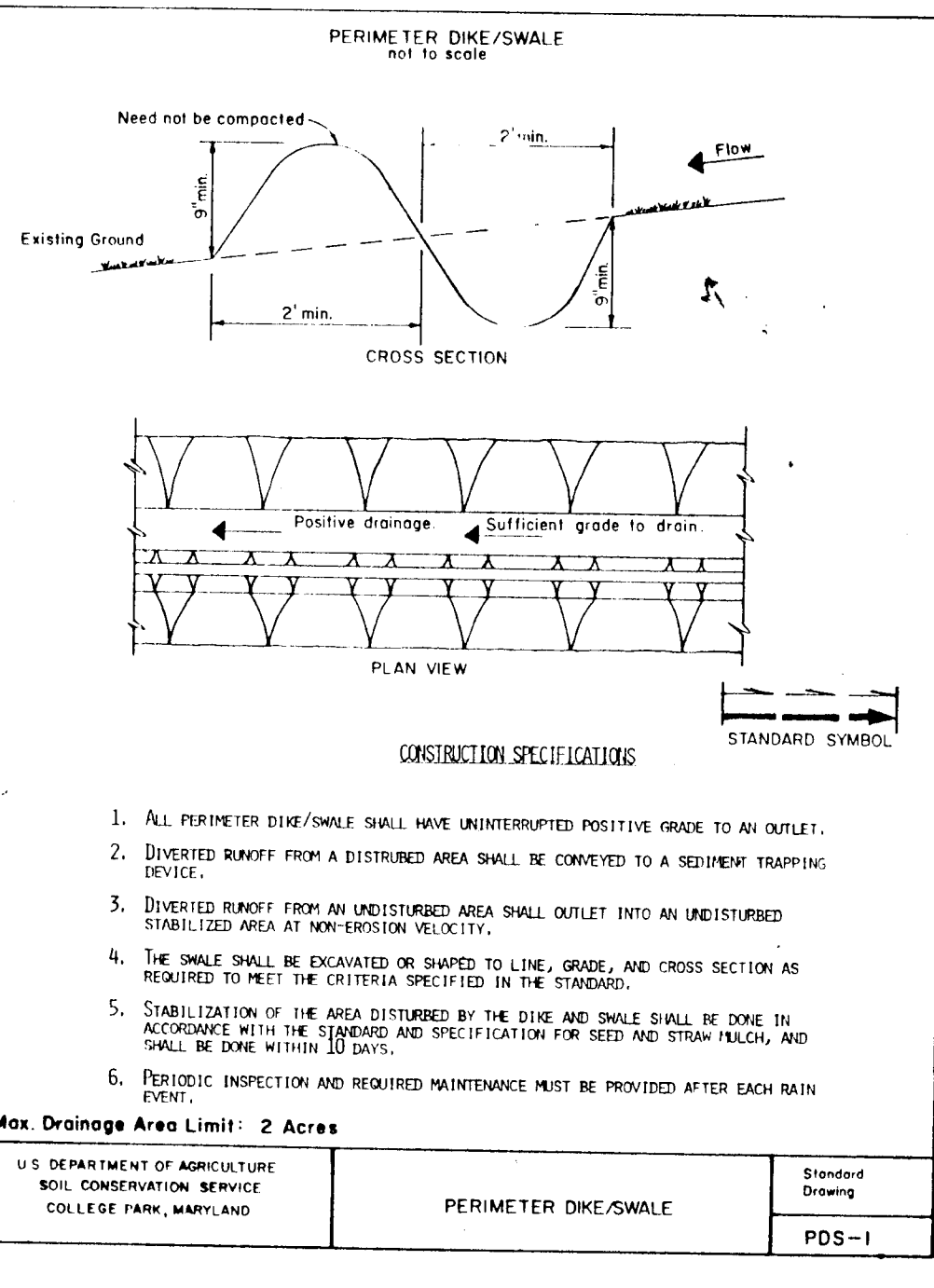
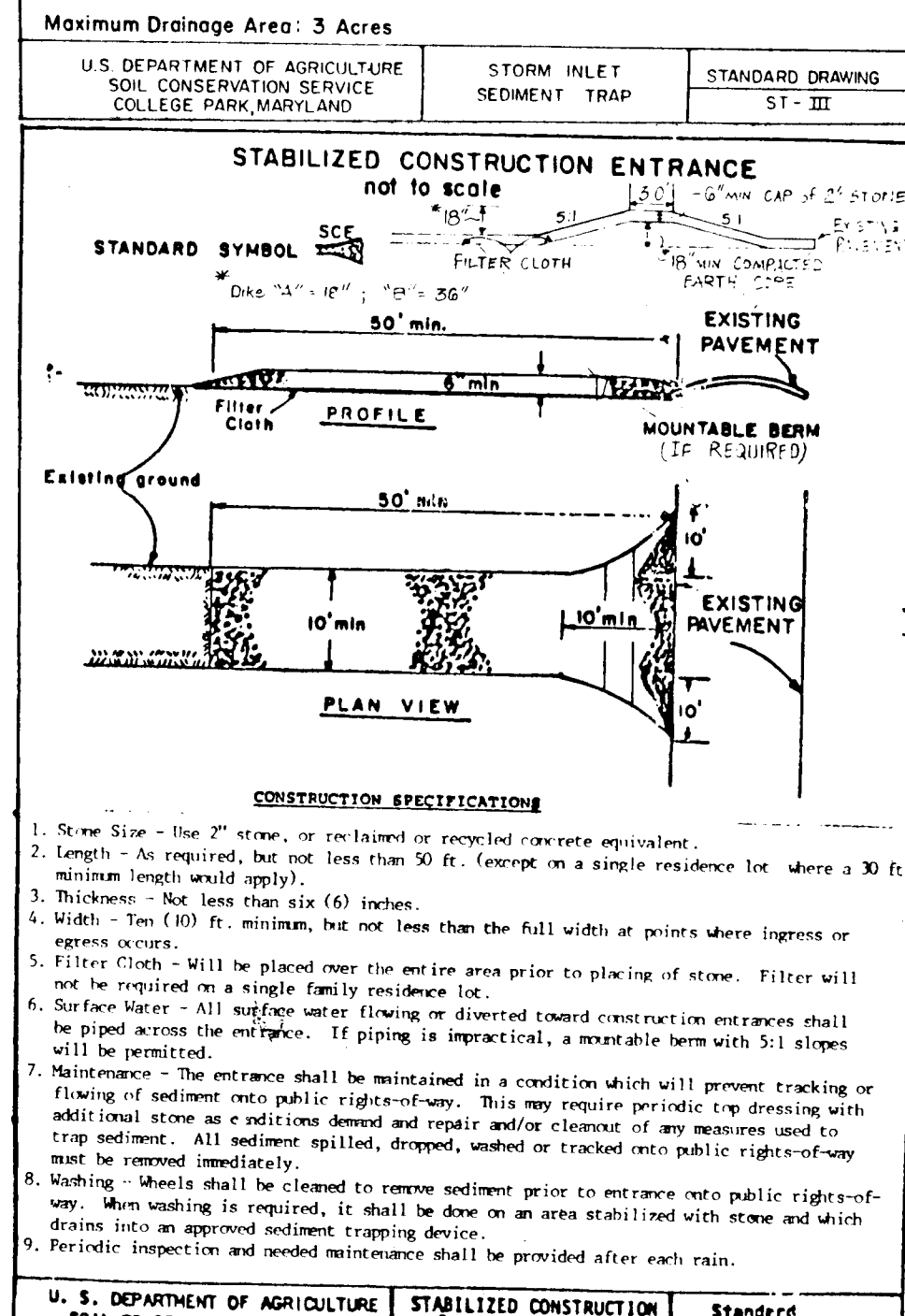
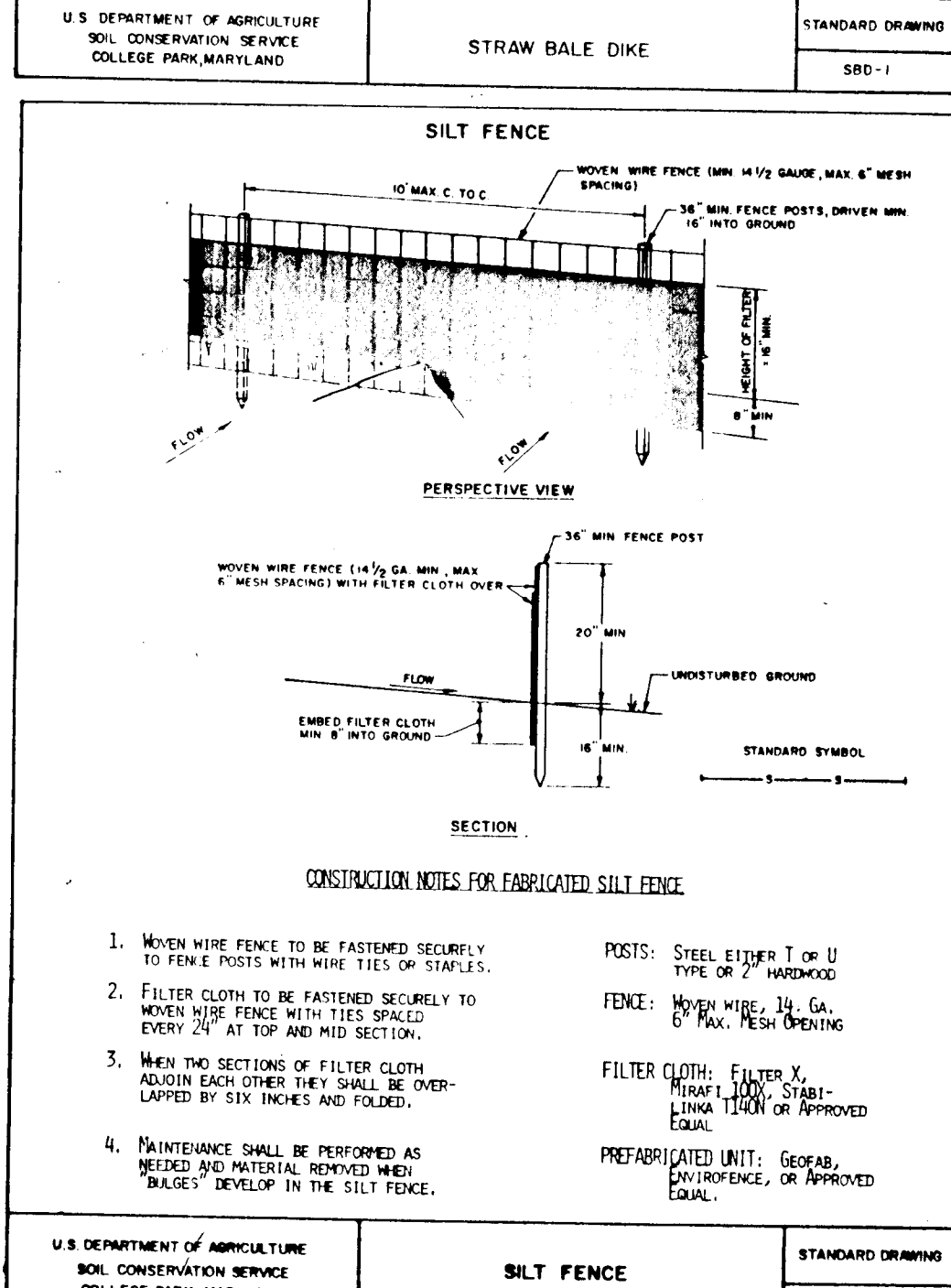
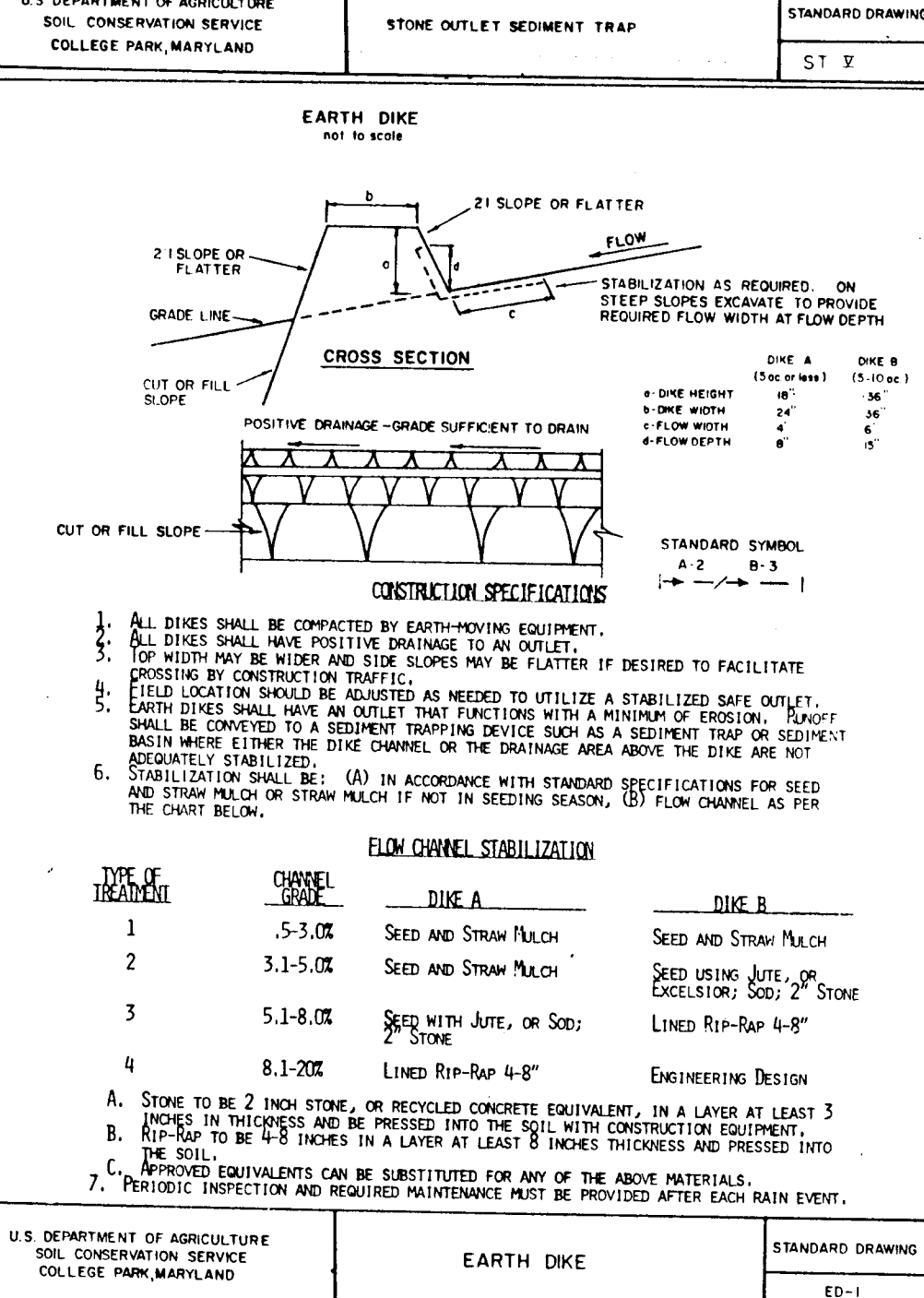
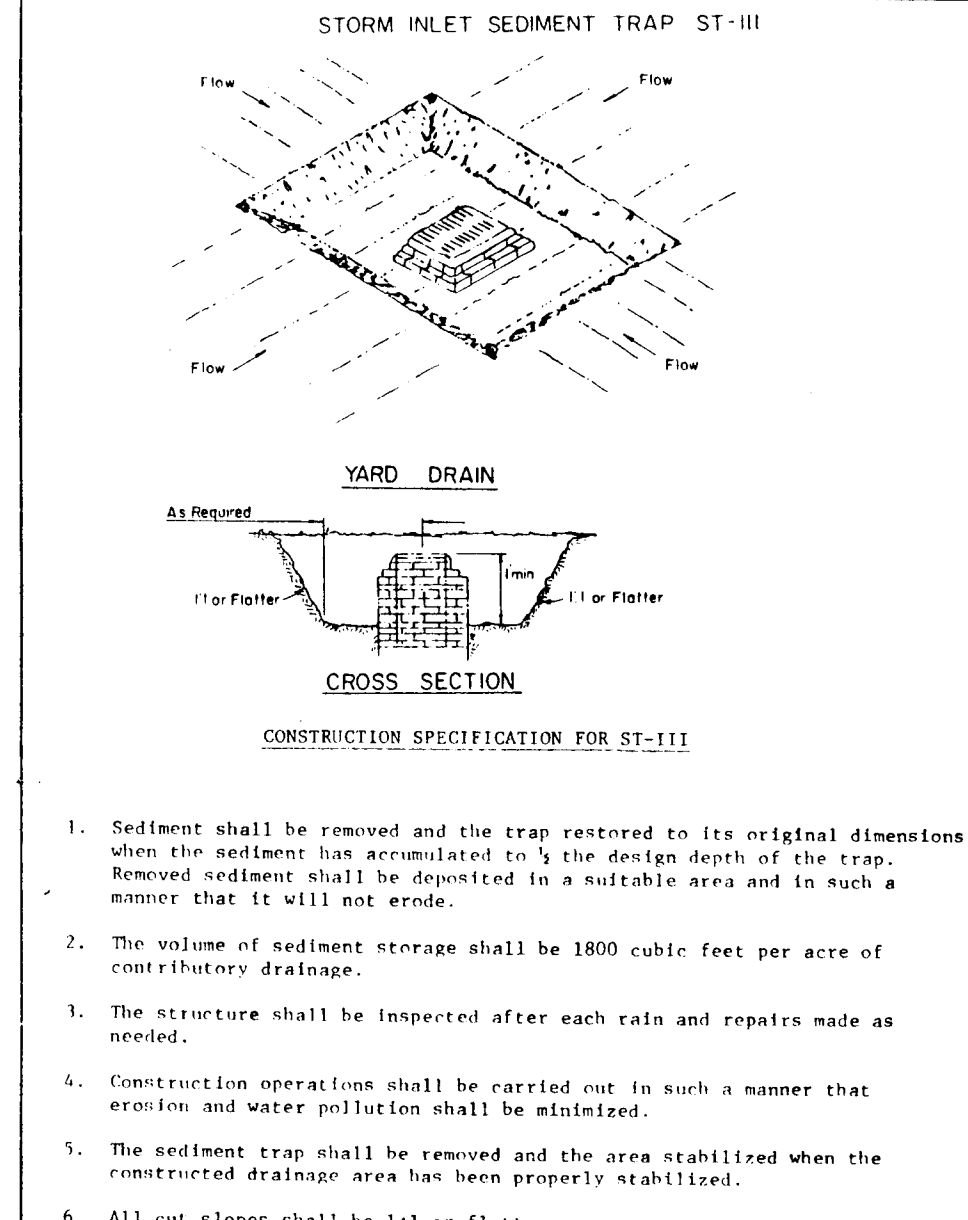
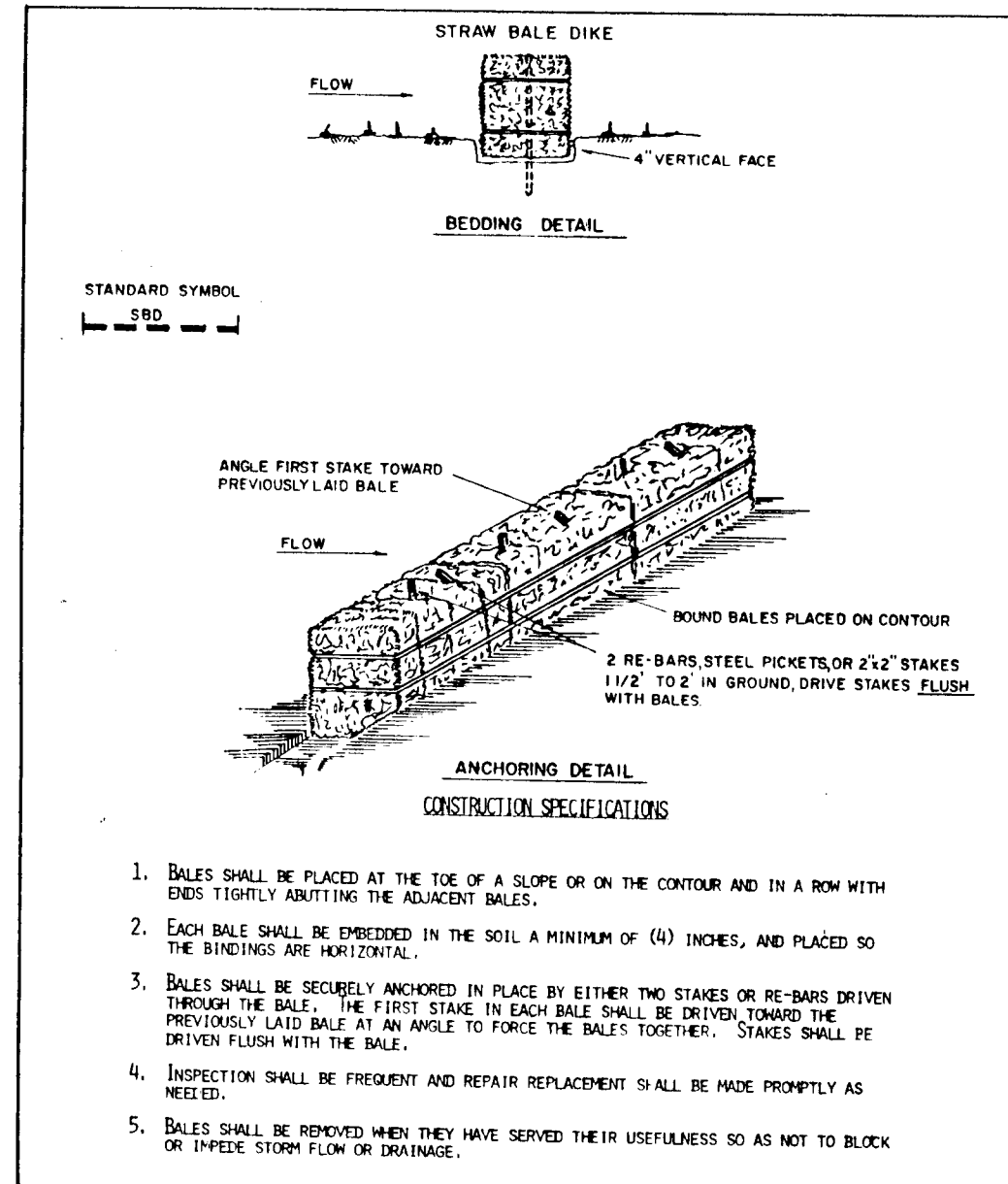
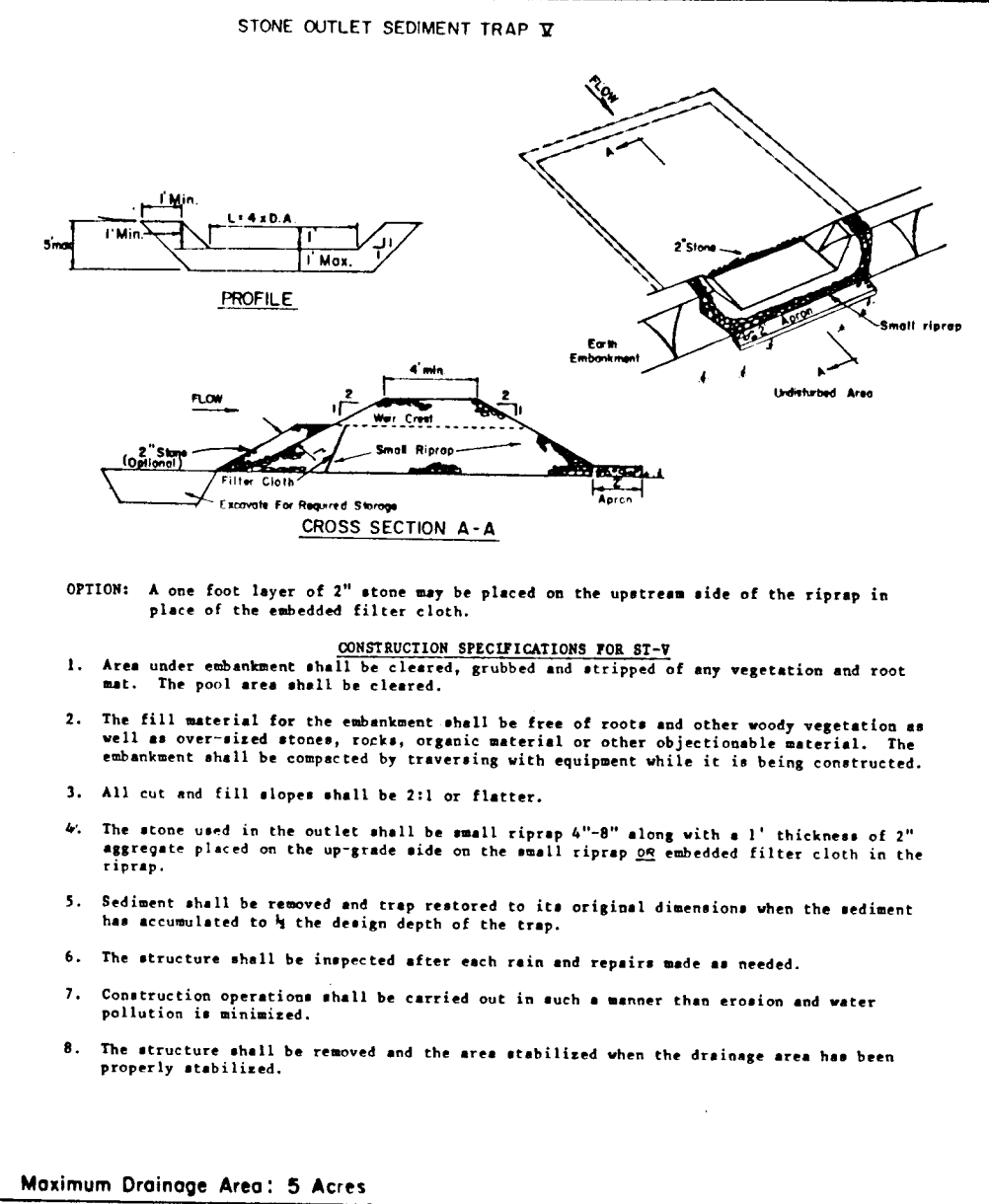
I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it has been prepared in accordance with the requirements of the Howard County Soil Conservation District.

James M. Helms 5/20/91
Professional Engineer

DEVELOPER'S CERTIFICATE

"I/we certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a certificate of attendance at a Department of Environment approved training program for the control of sediment and erosion before beginning the project. I/we also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

James M. Helms 1-23-91
Signature of Developer Date



GENERAL NOTES FOR MAINTENANCE OF TRAFFIC

- Contractor shall provide for two-way traffic at all times on Centennial Lane. See typical detour details for applicable typical section. Typical sections for Phase I construction shall be reversed when Phase I construction is in the northbound lanes. Likewise, typical sections for Phase II construction shall be reversed when Phase II construction is in the southbound lanes.
- Contractor shall provide MSHA STD MD-648.32 temporary precast concrete safety barriers as shown on plans. Place reflectorized barrier markings every 30 feet. Place impact attenuation cells as shown on plans. See typical detour details for applicable section.
- Signs indicated and designations shown to refer to the standard signs of the "Manual on Uniform Traffic Control Devices", latest edition. All traffic control signs, devices and applications shall conform to the "Manual on Uniform Traffic Control Devices", and "Work Zone Traffic Control" as published by the U.S. Department of Transportation, Federal Highway Administration.
- Throughout the entire phase of construction, provide adequate temporary pavement marking of centerline and edge of roadway line.

**DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND**

Director of Public Works: *James M. Helms* DATE: 1-23-91
 Chief, Bureau of Engineering: *James M. Helms* DATE: 1-23-91
 Chief, Bureau of Highways: *James M. Helms* DATE: 1-23-91

**MILDENBERG,
MOCHI & ASSOCIATES, INC.**
ENGINEERS • SURVEYORS • PLANNERS

3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
 (301) 461-0078 D.C. Metro: (301) 621-5768

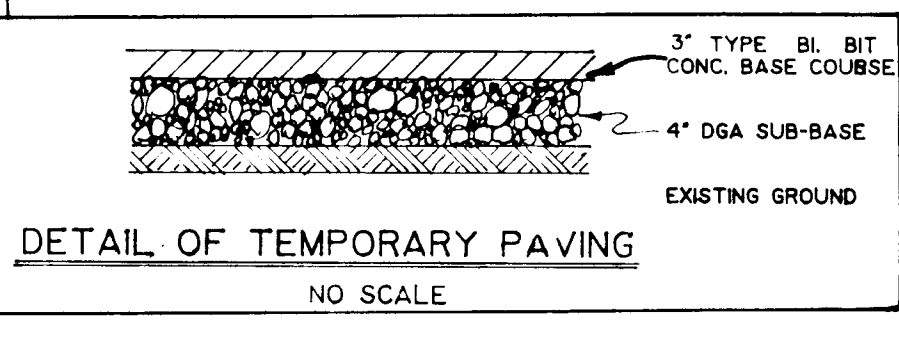
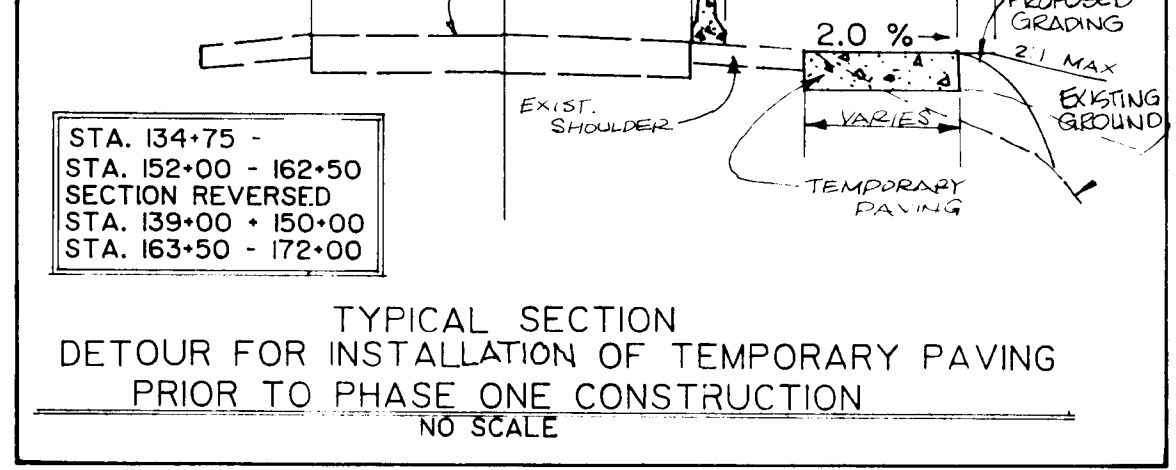
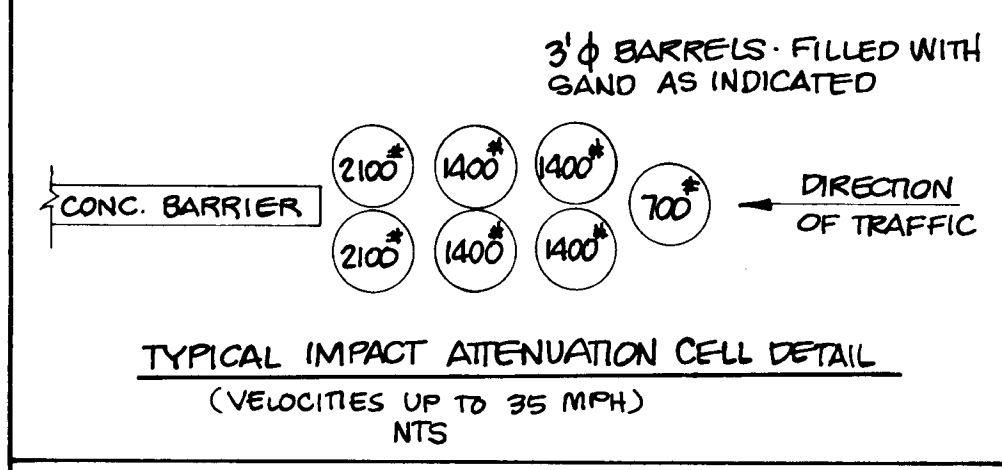
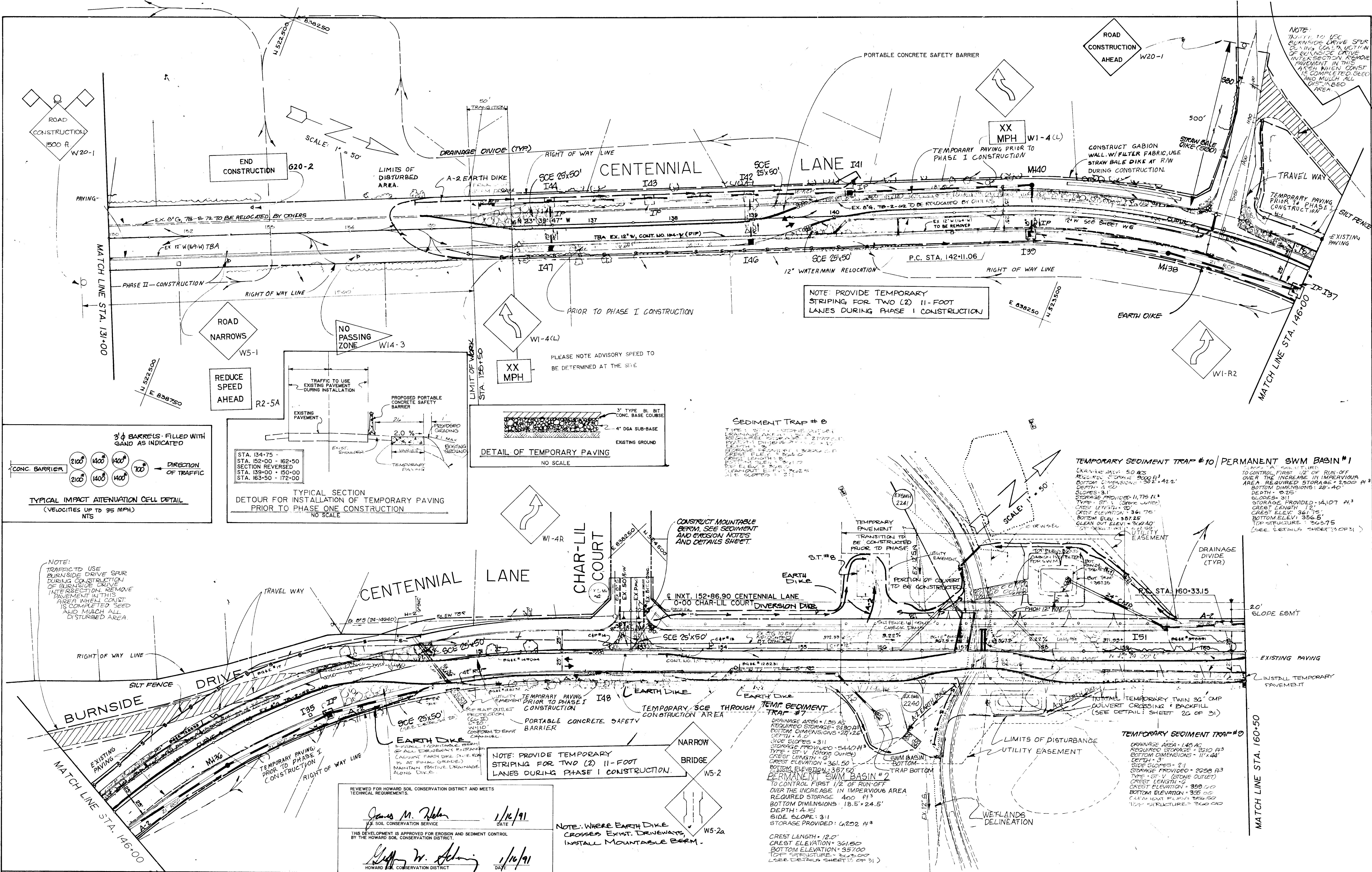
| | | | |
|----------|------------|----------|------------------------------|
| DES: PFB | DRN: STAFF | CHK: JEM | DATE: 12/90 |
| BY: NO. | REVISION | DATE | 600' SCALE MAP NO. BLOCK NO. |

**MAINTENANCE OF TRAFFIC AND
SEDIMENT CONTROL,
NOTES AND DETAILS
CENTENNIAL LANE**

CENTENNIAL LANE
 STA. 135+50 TO U.S. ROUTE 40
 CAPITAL PROJECT J-405-II
 ELECTION DISTRICT NO. 2
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 20 OF 36

PER. SEC. COMMENTS: 12/1/90
 3 REVISED PER CO. 100% COMMENTS: 10/15/90
 4 SUBMITTED FOR 35% REVIEW: 11/2/90
 2 SUBMITTED TO 100% REVIEW: 01/08/91
 1 SUBMITTED TO 100% REVIEW: 01/08/91 (SCP ONLY)
 1 SUBMITTED TO 100% REVIEW: 01/08/91 (SCP & MDT)



SEDIMENT TRAP # 8
 DRAINAGE AREA = 50 AC
 REQUIRED STORAGE = 2100 #3
 BOTTOM DIMENSIONS = 30' x 22'
 DEPTH = 2.5'
 SIDE SLOPES = 3:1
 STORAGE PROVIDED = 1175 #3
 TYPE = ST. V. (STONE OUTLET)
 CREST LENGTH = 12'
 CREST ELEVATION = 361.75'
 BOTTOM ELEV. = 357.25'
 CLEAN OUT ELEV. = 360.40'
 TOP STRUCTURE = 363.75'
 (SEE DETAILS SHEET 29 OF 31)

TEMPORARY SEDIMENT TRAP #10 / PERMANENT SWM BASIN #1
 DRAINAGE AREA = 50 AC
 REQUIRED STORAGE = 2100 #3
 BOTTOM DIMENSIONS = 30' x 22'
 DEPTH = 2.5'
 SIDE SLOPES = 3:1
 STORAGE PROVIDED = 1175 #3
 TYPE = ST. V. (STONE OUTLET)
 CREST LENGTH = 12'
 CREST ELEVATION = 361.75'
 BOTTOM ELEV. = 357.25'
 CLEAN OUT ELEV. = 360.40'
 TOP STRUCTURE = 363.75'
 (SEE DETAILS SHEET 29 OF 31)

PERMANENT SWM BASIN #7
 DRAINAGE AREA = 1.25 AC
 REQUIRED STORAGE = 2430 #3
 BOTTOM DIMENSIONS = 24' x 26'
 DEPTH = 4.0'
 SIDE SLOPES = 3:1
 STORAGE PROVIDED = 5440 #3
 TYPE = ST. V. (STONE OUTLET)
 CREST LENGTH = 12'
 CREST ELEVATION = 361.50'
 BOTTOM ELEVATION = 357.50'
 CLEAN OUT ELEV. = 360.00'
 TOP STRUCTURE = 363.00'
 (SEE DETAILS SHEET 29 OF 31)

TEMPORARY SEDIMENT TRAP #9
 DRAINAGE AREA = 1.45 AC
 REQUIRED STORAGE = 2610 #3
 BOTTOM DIMENSIONS = 11' x 44'
 DEPTH = 3.1'
 SIDE SLOPES = 2:1
 STORAGE PROVIDED = 2008 #3
 TYPE = ST. V. (STONE OUTLET)
 CREST LENGTH = 6'
 CREST ELEVATION = 359.00'
 BOTTOM ELEVATION = 355.00'
 CLEAN OUT ELEV. = 356.50'
 TOP STRUCTURE = 360.00'
 (SEE DETAILS SHEET 29 OF 31)

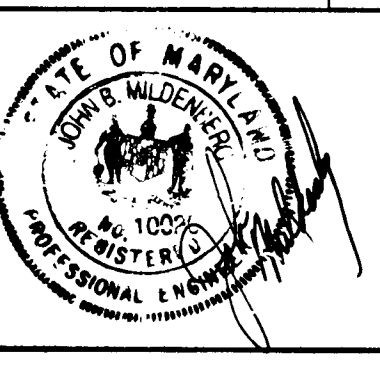
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 James M. Nelson 1/16/91
 U.S. SOIL CONSERVATION SERVICE
 DATE
 THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Jeffrey W. Adams 1/16/91
 HOWARD SOIL CONSERVATION DISTRICT
 DATE

NOTE: WHERE EARTH DIKE CROSSES EXIST. DRIVEWAYS, INSTALL MOUNTABLE BERM.

1. CHECKED BY: [Signature]
 2. REVISED: [Date]
 3. REVISED: [Date]
 4. REVISED: [Date]
 5. REVISED: [Date]
 6. REVISED: [Date]
 7. REVISED: [Date]
 8. REVISED: [Date]
 9. REVISED: [Date]
 10. REVISED: [Date]
 11. REVISED: [Date]
 12. REVISED: [Date]
 13. REVISED: [Date]
 14. REVISED: [Date]
 15. REVISED: [Date]
 16. REVISED: [Date]
 17. REVISED: [Date]
 18. REVISED: [Date]
 19. REVISED: [Date]
 20. REVISED: [Date]
 21. REVISED: [Date]
 22. REVISED: [Date]
 23. REVISED: [Date]
 24. REVISED: [Date]
 25. REVISED: [Date]
 26. REVISED: [Date]
 27. REVISED: [Date]
 28. REVISED: [Date]
 29. REVISED: [Date]
 30. REVISED: [Date]
 31. REVISED: [Date]
 32. REVISED: [Date]
 33. REVISED: [Date]
 34. REVISED: [Date]
 35. REVISED: [Date]
 36. REVISED: [Date]
 37. REVISED: [Date]
 38. REVISED: [Date]
 39. REVISED: [Date]
 40. REVISED: [Date]
 41. REVISED: [Date]
 42. REVISED: [Date]
 43. REVISED: [Date]
 44. REVISED: [Date]
 45. REVISED: [Date]
 46. REVISED: [Date]
 47. REVISED: [Date]
 48. REVISED: [Date]
 49. REVISED: [Date]
 50. REVISED: [Date]
 51. REVISED: [Date]
 52. REVISED: [Date]
 53. REVISED: [Date]
 54. REVISED: [Date]
 55. REVISED: [Date]
 56. REVISED: [Date]
 57. REVISED: [Date]
 58. REVISED: [Date]
 59. REVISED: [Date]
 60. REVISED: [Date]
 61. REVISED: [Date]
 62. REVISED: [Date]
 63. REVISED: [Date]
 64. REVISED: [Date]
 65. REVISED: [Date]
 66. REVISED: [Date]
 67. REVISED: [Date]
 68. REVISED: [Date]
 69. REVISED: [Date]
 70. REVISED: [Date]
 71. REVISED: [Date]
 72. REVISED: [Date]
 73. REVISED: [Date]
 74. REVISED: [Date]
 75. REVISED: [Date]
 76. REVISED: [Date]
 77. REVISED: [Date]
 78. REVISED: [Date]
 79. REVISED: [Date]
 80. REVISED: [Date]
 81. REVISED: [Date]
 82. REVISED: [Date]
 83. REVISED: [Date]
 84. REVISED: [Date]
 85. REVISED: [Date]
 86. REVISED: [Date]
 87. REVISED: [Date]
 88. REVISED: [Date]
 89. REVISED: [Date]
 90. REVISED: [Date]
 91. REVISED: [Date]
 92. REVISED: [Date]
 93. REVISED: [Date]
 94. REVISED: [Date]
 95. REVISED: [Date]
 96. REVISED: [Date]
 97. REVISED: [Date]
 98. REVISED: [Date]
 99. REVISED: [Date]
 100. REVISED: [Date]

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 [Signature] 1/25/91
 DIRECTOR OF PUBLIC WORKS
 [Signature] 1/23/91
 CHIEF, BUREAU OF ENGINEERING
 [Signature] 1/24/91
 CHIEF, BUREAU OF HIGHWAYS

MILDENBERG,
 MOCHI & ASSOCIATES, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 3300 North Ridge Road, Suite 231, Ellicott City, Maryland 21043-2350
 (301) 461-0078 D.C. Metro: (301) 621-5788

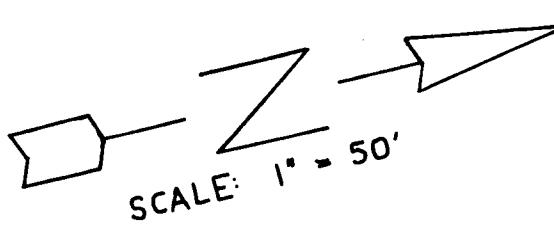
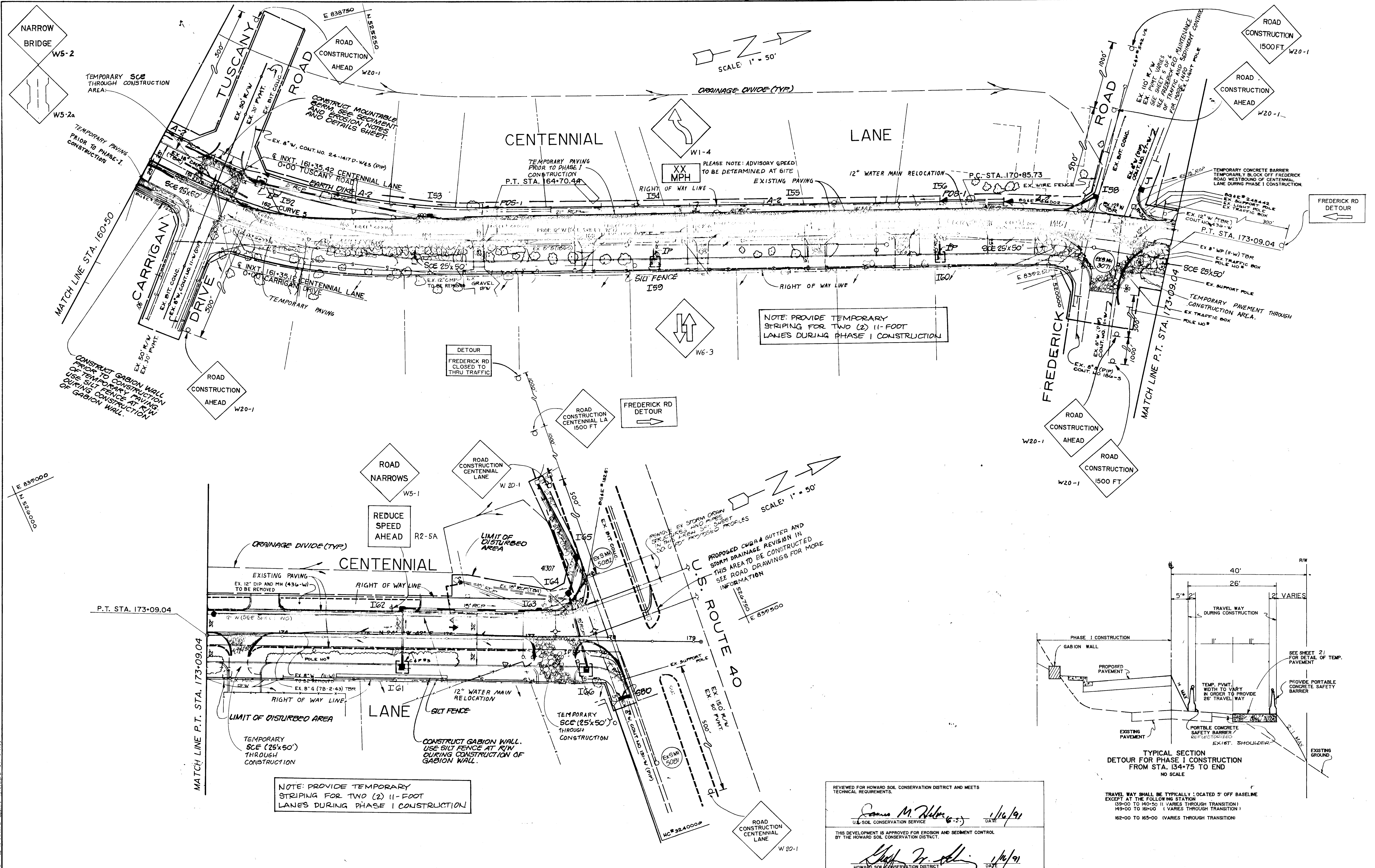


| | | | | | |
|----------|----|-----|----------|------|--------------------|
| DES: PFB | | | | | |
| DRN: LSM | | | | | |
| CHK: JAM | | | | | |
| DATE: | BY | NO. | REVISION | DATE | 600' SCALE MAP NO. |

PHASE I
 MAINTENANCE OF TRAFFIC
 AND SEDIMENT CONTROL
 STA. 131+00 TO 160+50
 CENTENNIAL LANE

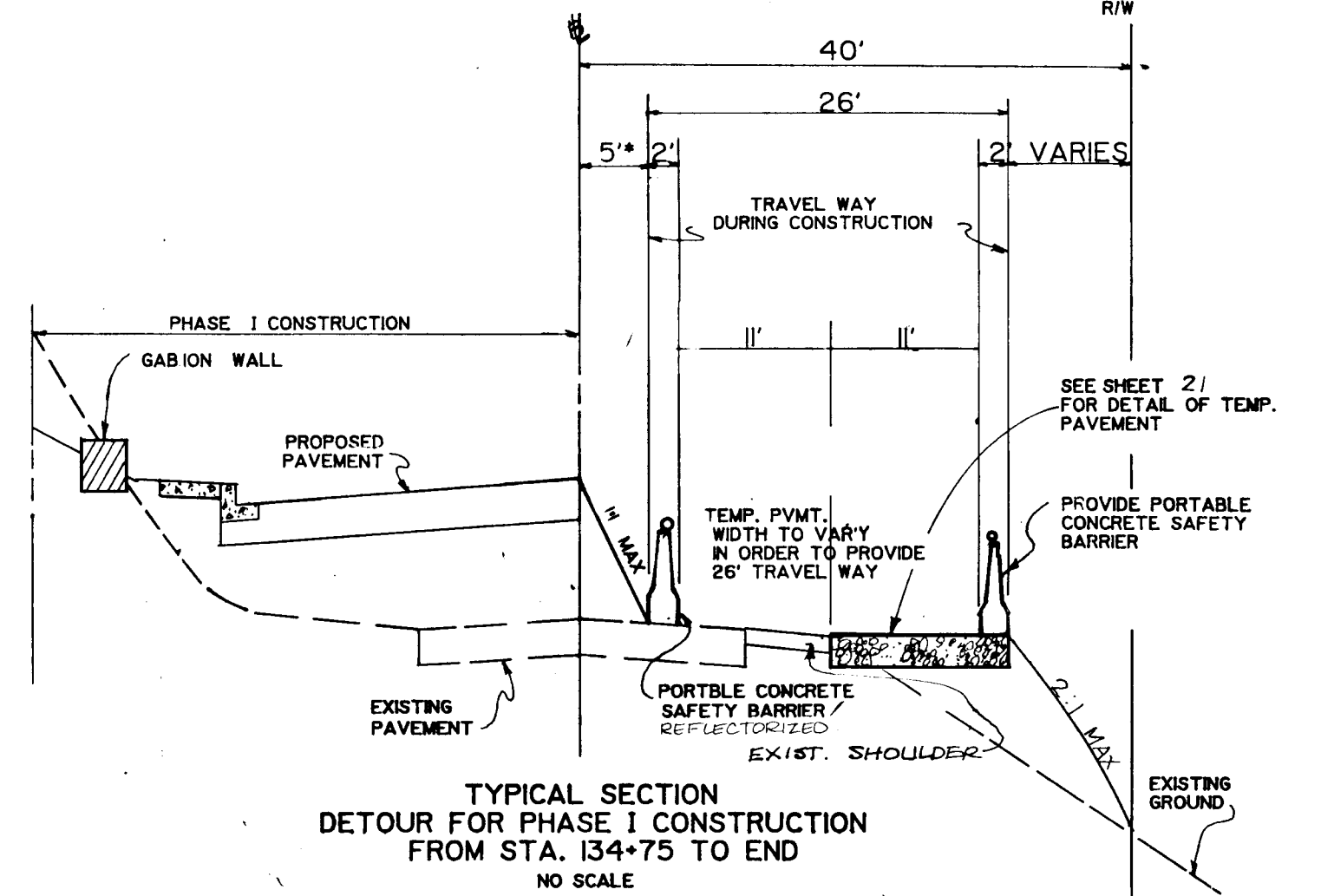
CENTENNIAL LANE
 STA. 135+50 TO U.S. ROUTE 40
 CAPITAL PROJECT J-4015-II
 ELECTION DISTRICT NO. 2
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2 OF 30



NOTE: PROVIDE TEMPORARY STRIPING FOR TWO (2) 11-FOOT LANES DURING PHASE I CONSTRUCTION

NOTE: PROVIDE TEMPORARY STRIPING FOR TWO (2) 11-FOOT LANES DURING PHASE I CONSTRUCTION



TYPICAL SECTION DETOUR FOR PHASE I CONSTRUCTION FROM STA. 134+75 TO END NO SCALE

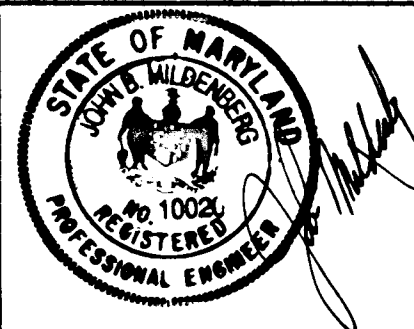
TRAVEL WAY SHALL BE TYPICALLY LOCATED 5' OFF BASELINE EXCEPT AT THE FOLLOWING STATION
 139+00 TO 140+50 (11 VARIES THROUGH TRANSITION)
 149+00 TO 154+00 (1 VARIES THROUGH TRANSITION)
 162+00 TO 165+00 (VARIES THROUGH TRANSITION)

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
James M. Helms 1/16/91
 U.S. SOIL CONSERVATION SERVICE DATE
 THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Shay W. Allen 1/16/91
 HOWARD SOIL CONSERVATION DISTRICT DATE

4. SUBMITTED FOR 95% REVIEW 1/15/91
 3. SUBMITTED TO Md. Co. Dept. of Public Works 1/15/91
 2. SUBMITTED TO Howard County Dept. of Public Works 1/15/91
 1. SUBMITTED TO Howard County Dept. of Public Works 1/15/91

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works DATE 1/16/90
 Chief, Bureau of Engineering DATE 1/16/90
 Chief, Bureau of Highways DATE 1/16/90

MILDENBERG,
MOCHI & ASSOCIATES, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
 (301) 461-0078 D.C. Metro: (301) 621-5788



| | | | | | |
|-------------|----|-----|----------|------|--|
| DES: PFB | | | | | |
| DRN: LSM | | | | | |
| CHK: JM | | | | | |
| DATE: 12/90 | BY | NO. | REVISION | DATE | 600' SCALE MAP NO. _____ BLOCK NO. _____ |

PHASE I
 MAINTENANCE OF TRAFFIC
 AND SEDIMENT CONTROL
 STA. 160+50 TO U.S. ROUTE 40
 CENTENNIAL LANE

CENTENNIAL LANE
 STA. 135+50 TO U.S. ROUTE 40
 CAPITAL PROJECT J-4015- II
 ELECTION DISTRICT NO. 2
 HOWARD COUNTY, MARYLAND

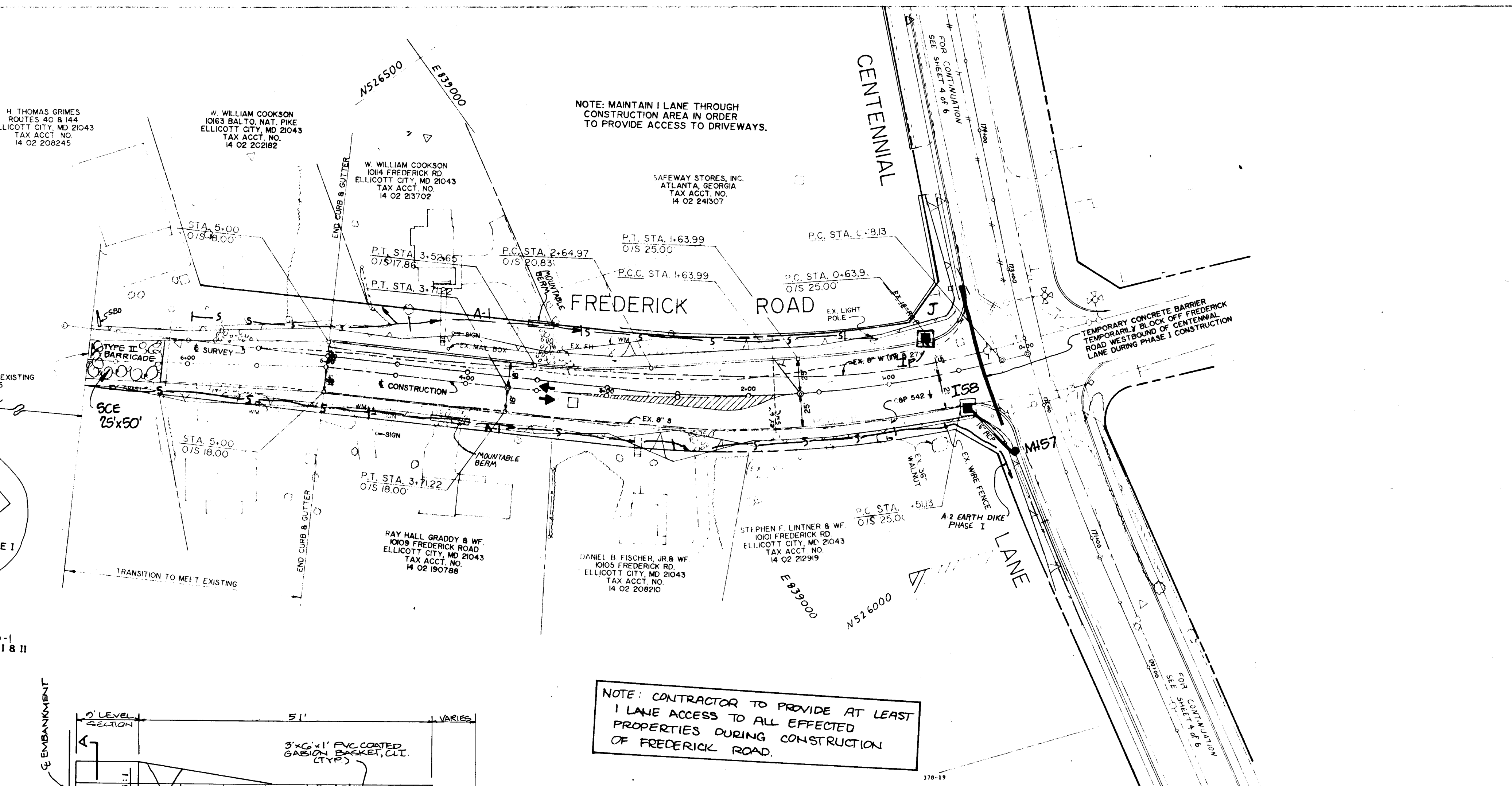
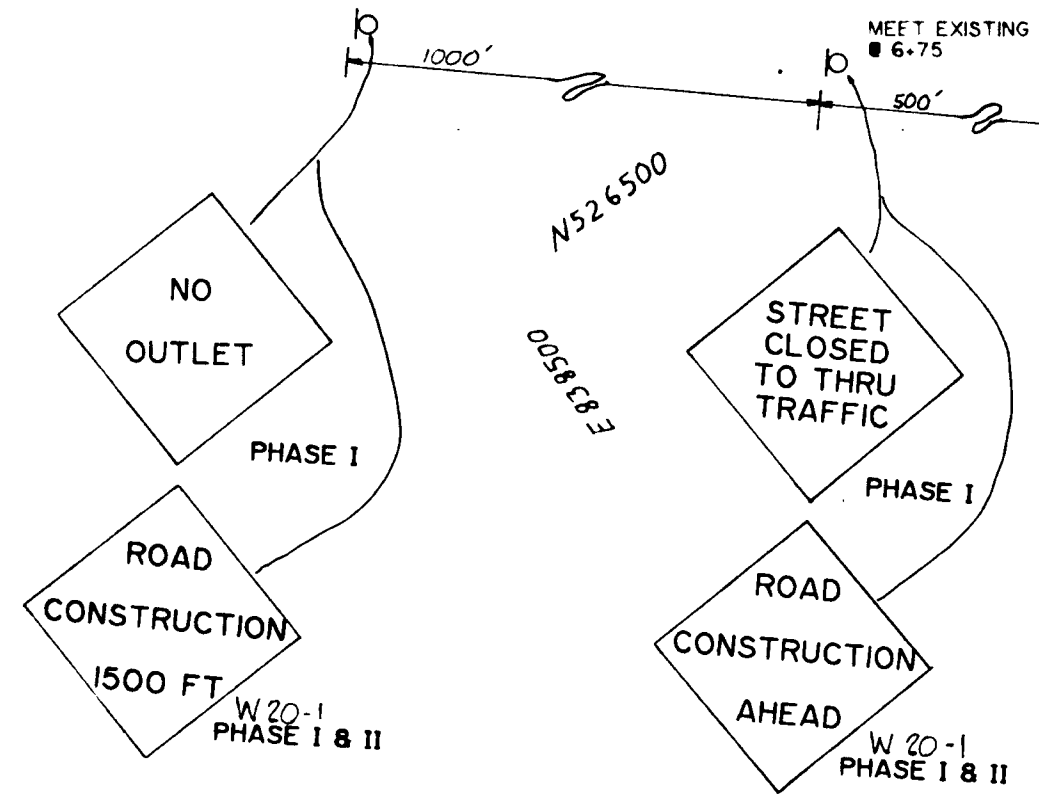
SCALE AS SHOWN
 SHEET 22 OF 210

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.

James M. Helm 1/16/91
U.S. SOIL CONSERVATION SERVICE DATE

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

Geoffrey W. Schomig 1/16/91
HOWARD SOIL CONSERVATION DISTRICT DATE



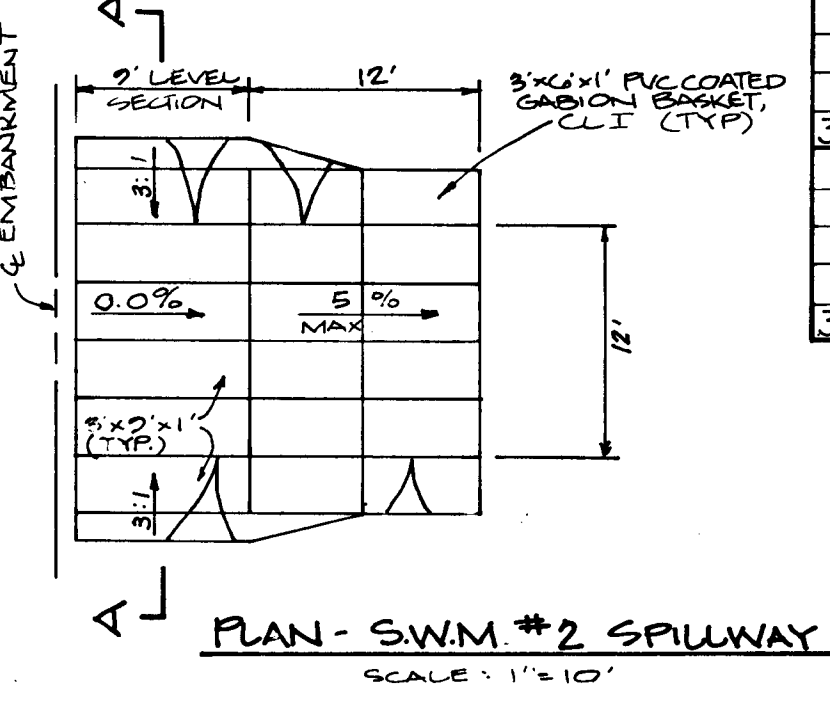
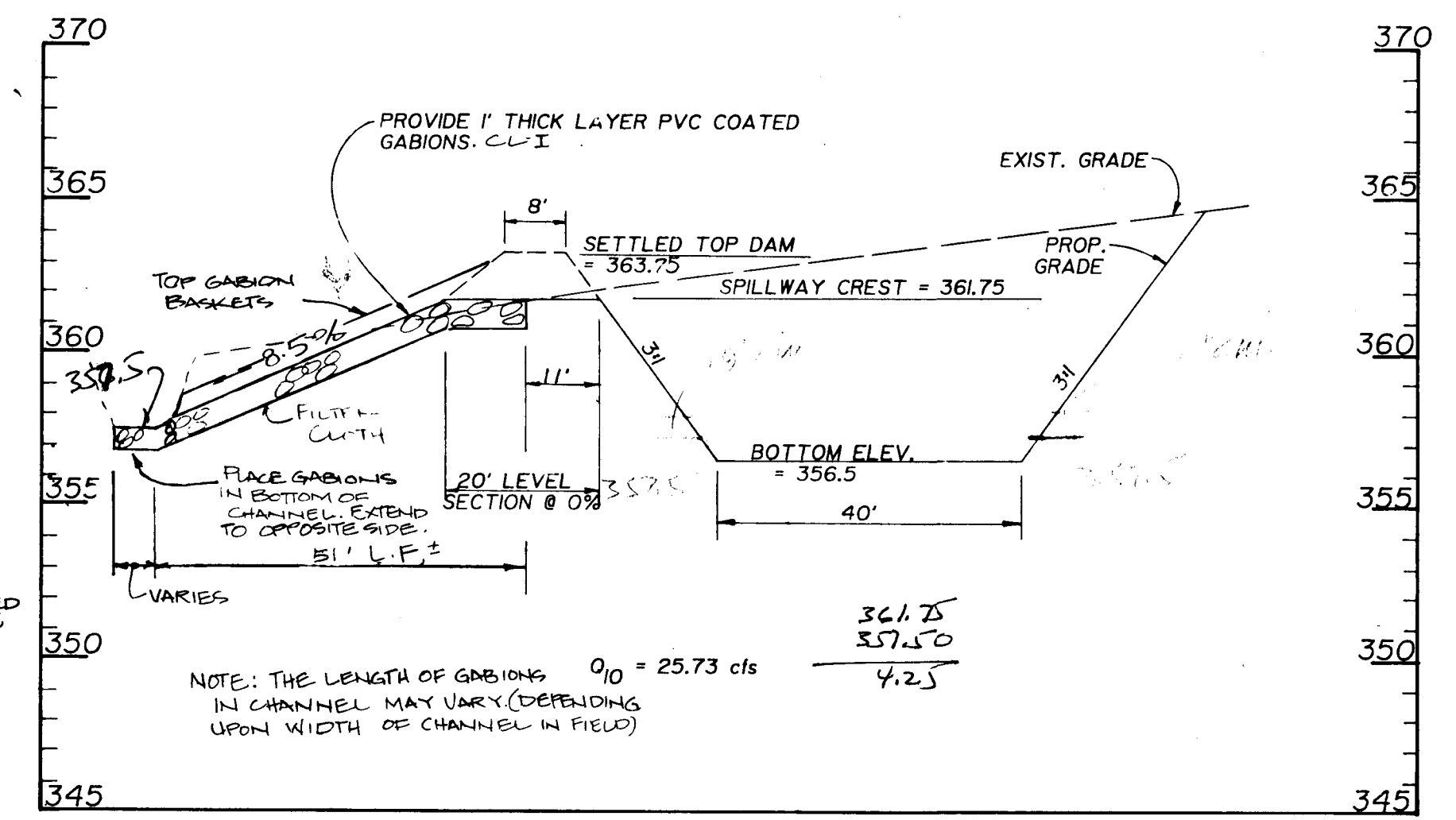
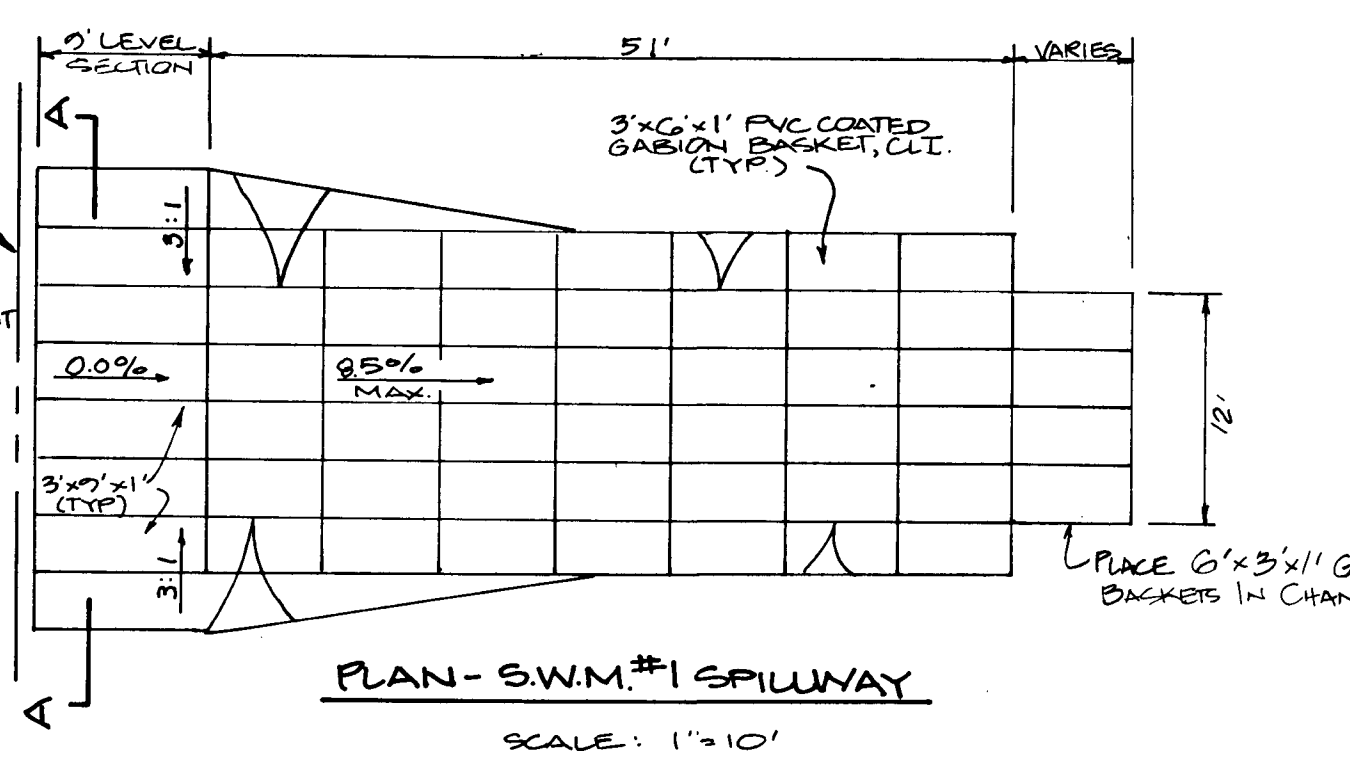
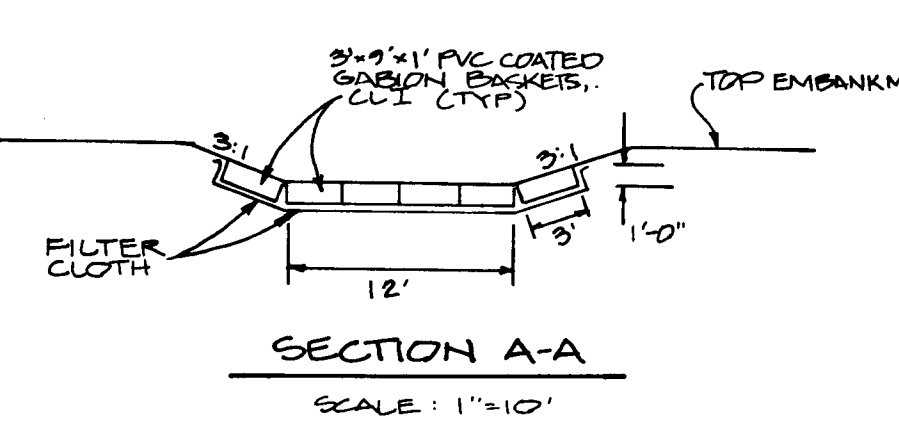
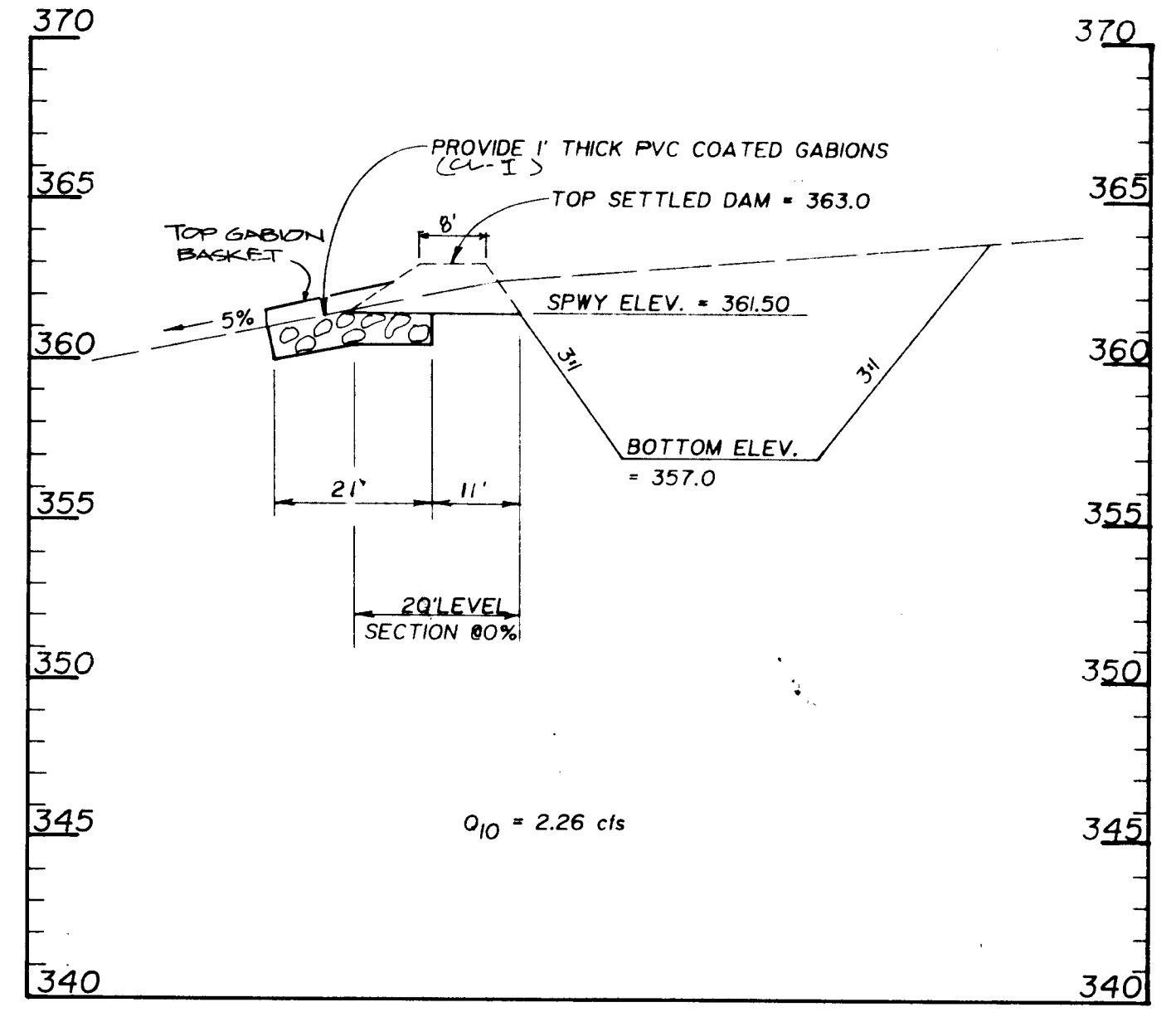
NOTE: CONTRACTOR TO PROVIDE AT LEAST 1 LANE ACCESS TO ALL EFFECTED PROPERTIES DURING CONSTRUCTION OF FREDERICK ROAD.

SOIL CONSERVATION SERVICE MARYLAND CONSTRUCTION SPECIFICATIONS FOR PONDS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378.

- SITE PREPARATION**
Areas designated for borrow areas, embankment, and structural work shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.
Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, the area covered by the 2 year flow will be cleared.
All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.
- EARTH FILL**
Material
The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Embankment material shall conform to Unified Soil Classification GC, SC, MU, CU, or CL. Cutoff trench material shall conform to Unified Soil Classification SC, CL, CU or CH.
Placement
Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill material shall be placed in maximum 8 inch lifts (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.
Compaction
The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used. The fill material shall contain sufficient moisture to form into a ball by hand without crumbling, but not so wet that water can be squeezed out.
Where a minimum required density is specified, each layer of fill shall be compacted as necessary to obtain that density, and it is to be certified by the Engineer at the time of construction. All compaction is to be determined by ASTM METHOD T-99.
Cut-Off Trench
The cutoff trench shall be excavated along or parallel to the crestline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The benefit shall be compacted with construction equipment, rollers, or hand tamper to assure maximum density and minimum permeability.
- Rock Riprap**
All rock shall be dense, sound, and free from cracks, seams, and other defects conducive to accelerated weathering. The rock fragments shall be angular to subangular in shape. The least dimension of an individual rock fragment shall be not less than one-third the greatest dimension of the fragment.

- The rock shall have the following properties:
- Bulk specific gravity (saturated surface-dry basis) not less than 2.5.
 - Absorption not more than two percent.
 - Soundness: Weight loss in five cycles not more than 10 percent when sodium sulfate is used or 15 percent when magnesium sulfate is used.
- Bulk specific gravity and absorption shall be determined according to ASTM C 127. The test for soundness shall be performed according to ASTM C 89.
- Rock that fails to meet the requirements stated in a, b, and c above may be accepted only if similar rock from the same source has been demonstrated to be sound after 5 years or more of service under conditions of weather, wetting and drying, and erosive forces similar to those anticipated for the rock to be installed under this specification.
- The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap.
- Case of Water During Construction**
All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavation, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the millrace or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slope and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the location being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to pumps from which the water shall be pumped.
 - STABILIZATION**
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berm shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the vegetation treatment specifications as shown on the accompanying drawings.
 - EROSION AND SEDIMENT CONTROL**
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.



PROFILE THROUGH OVERFLOW SPILLWAY - SWM #1
SCALE: 1" = 20' HORIZ.
1" = 5' VERT.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

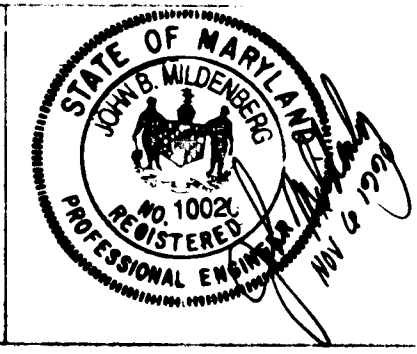
James M. Helm 1/16/91
U.S. SOIL CONSERVATION SERVICE DATE

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

Geoffrey W. Schomig 1/16/91
HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

MILDBERG MOCHI & ASSOCIATES, INC.
1000 North Rock Road, Suite 101, Ellicott City, Maryland 21041-2351
(301) 461-0078 FAX (301) 461-5766

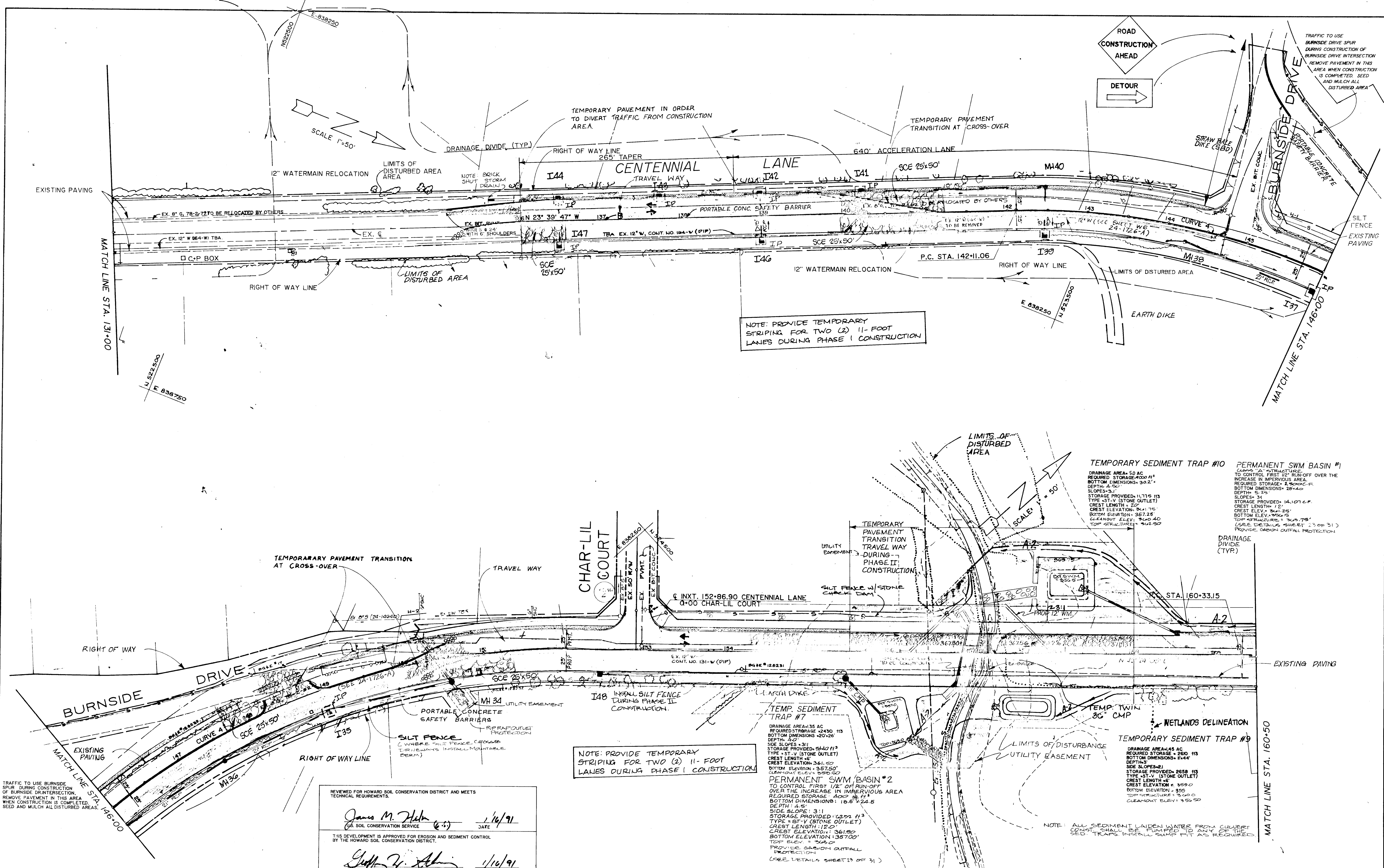


SWM DETAILS
PHASE I
MAINTENANCE OF TRAFFIC
AND SEDIMENT CONTROL
STA. 0+00 TO 6+75
FREDERICK ROAD

CENTENNIAL LANE
STA. 135+50 TO U.S. ROUTE 40
CAPITAL PROJECT J-4015- II
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 23 OF 316

3. CHANGED SPILLWAY (SWM #1)
 1. SUBMITTED FOR 95% REVIEW 11/21/89
 2. SUBMITTED FOR 10% REVIEW 1/12/90
 Submitted to the Co. Dept. of Pub. Works 4/25/91



3 PER. S.D. COMMENTS
 2 REVISED PER 100% COMMENTS
 1 SUBMITTED FOR REVIEW

BRUNING 44-132 091 90

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James M. Helm 1/16/91
 SOIL CONSERVATION SERVICE

Jeffrey V. Allen 1/16/91
 HOWARD SOIL CONSERVATION SERVICE

James M. Helm 1/23/91
 DIRECTOR OF PUBLIC WORKS

William W. Wehner 1/24/91
 CHIEF, BUREAU OF HIGHWAYS

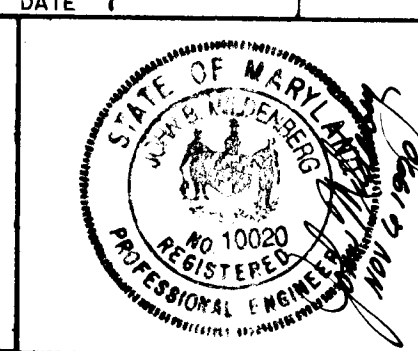
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

James M. Helm 1/16/91
 SOIL CONSERVATION SERVICE

Jeffrey V. Allen 1/16/91
 HOWARD SOIL CONSERVATION SERVICE

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

MILDENBERG, MOCHI & ASSOCIATES, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
 (301) 461-0078 D.C. Metro: (301) 621-5788



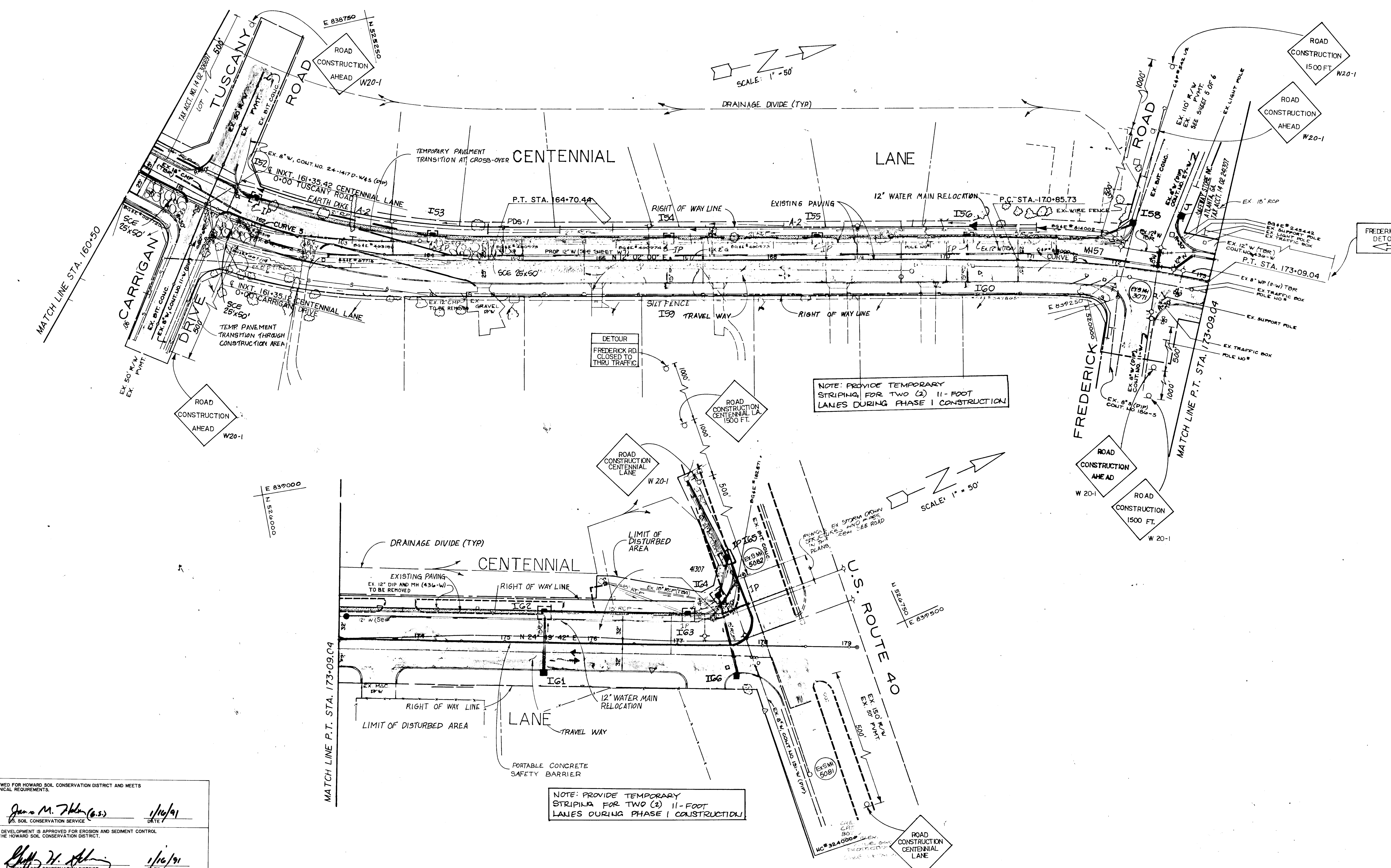
| | | | |
|--------------|----|-----|----------|
| DES: JBM/KAM | | | |
| DRN: SHD/STF | | | |
| CHK: JBM | | | |
| DATE: 12/30 | BY | NO. | REVISION |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

PHASE II
 MAINTENANCE OF TRAFFIC
 AND SEDIMENT CONTROL
 STA. 131+00 TO 160+50
 CENTENNIAL LANE

600' SCALE MAP NO. _____ BLOCK NO. _____

CENTENNIAL LANE
 STA. 135+50 TO U.S. ROUTE 40
 CAPITAL PROJECT J-4015-II
 ELECTION DISTRICT NO. 2
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 24 OF 36



REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

James M. Zelen (S.S.) 1/16/91
 SOIL CONSERVATION SERVICE DATE

Shelley W. Allen 1/16/91
 HOWARD SOIL CONSERVATION DISTRICT DATE

SUBMITTED FOR 100% REVIEW 11-2-88

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

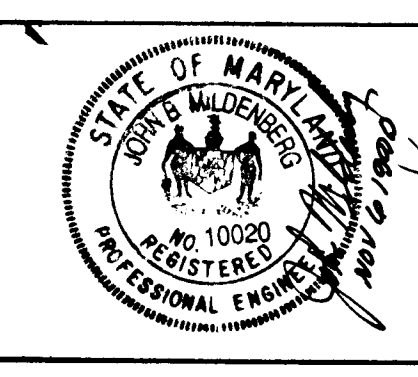
James M. Zelen 1/16/91
 DIRECTOR OF PUBLIC WORKS DATE

James R. Kelly 11-2-90
 CHIEF, BUREAU OF ENGINEERING DATE

Drummond W. Whelan 11/14/90
 CHIEF, BUREAU OF HIGHWAYS DATE

**MILDENBERG,
 MOCHI & ASSOCIATES, INC.**
 ENGINEERS • SURVEYORS • PLANNERS

3300 North Ridge Road, Suite 235 Ellicott City, Maryland 21043-3350
 (301) 461-0078 D.C. Metro: (301) 621-5788

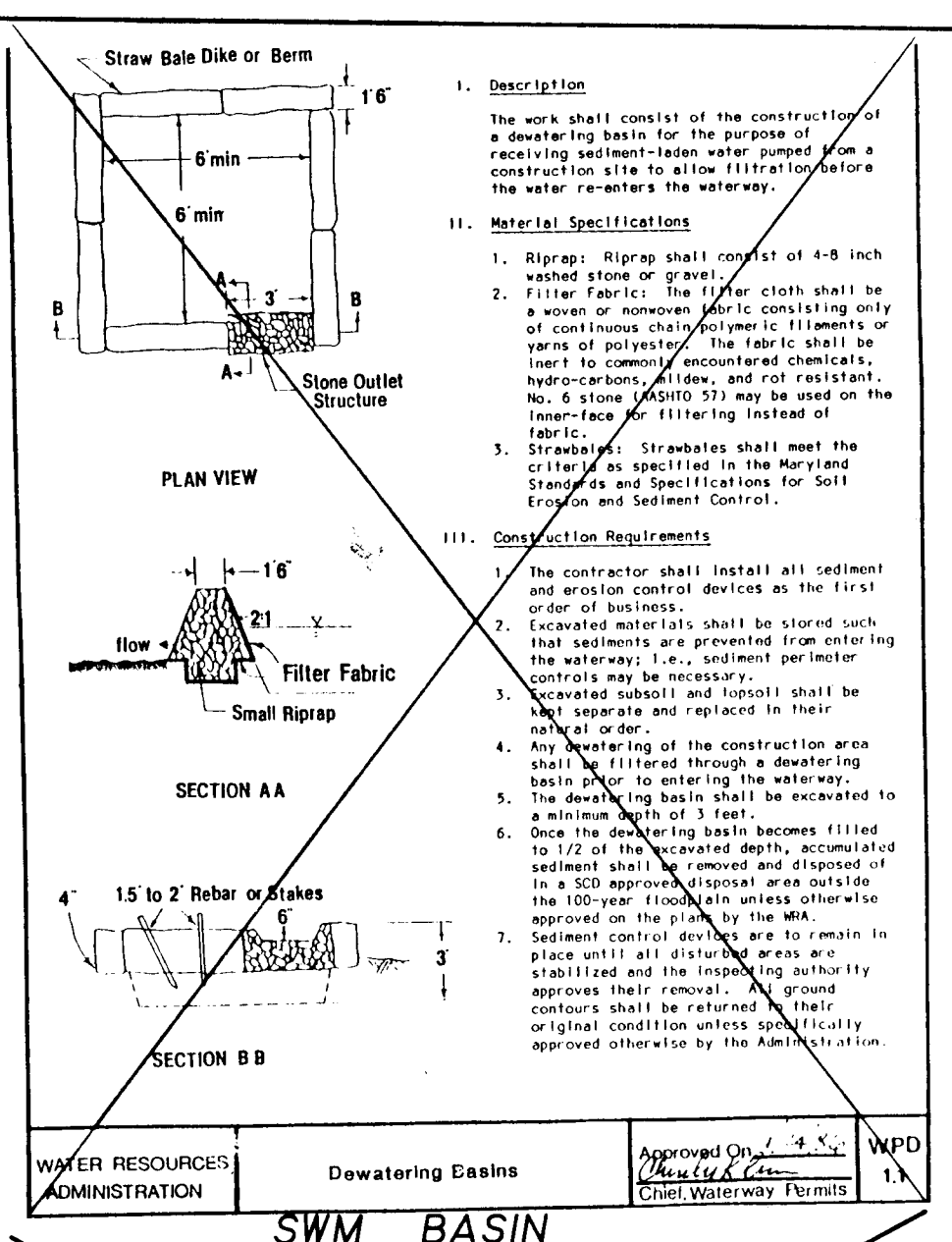
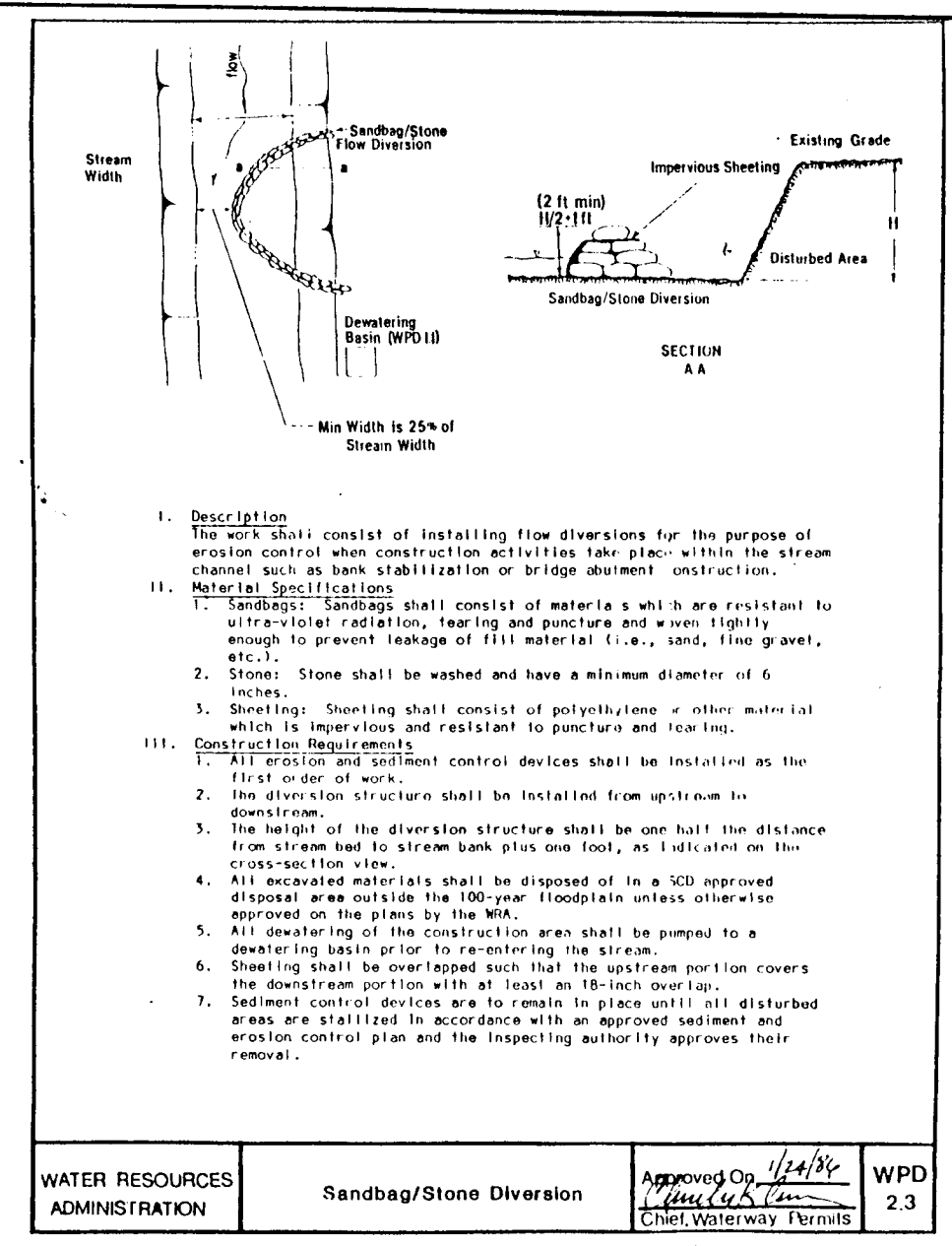
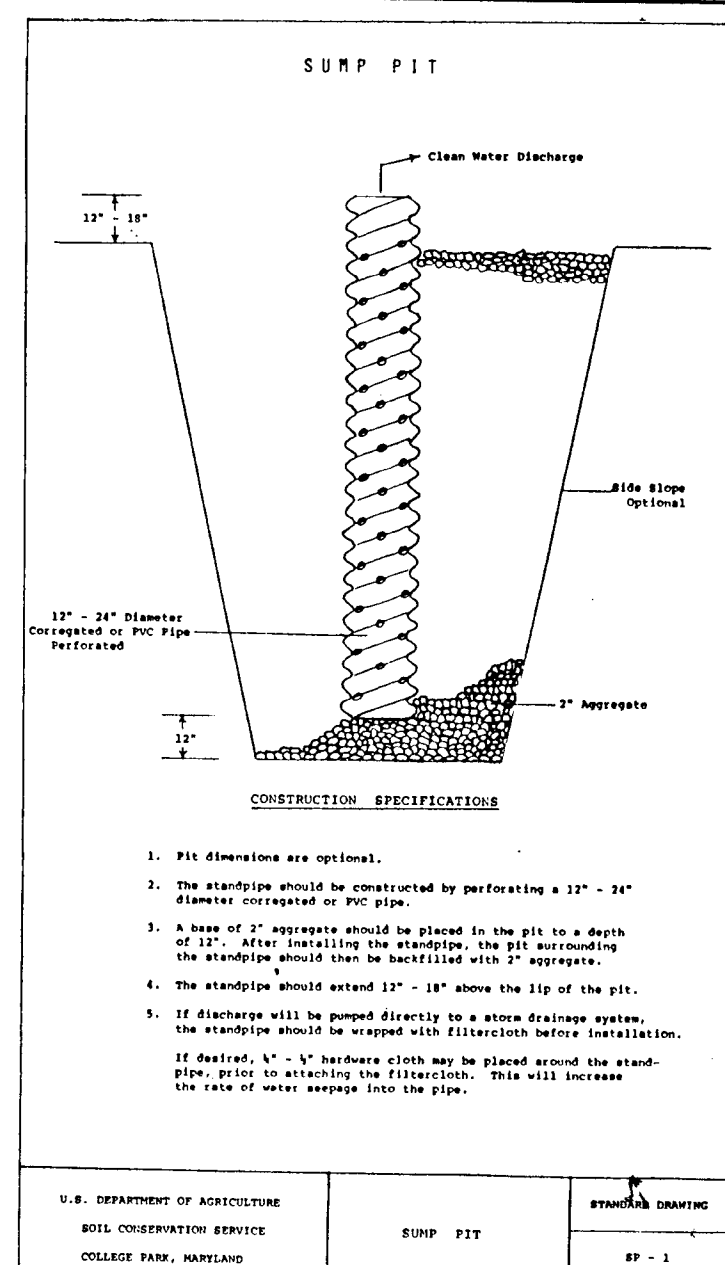


| | | | |
|--------------|-----|----------|------|
| DES: JBM/KAM | | | |
| DRN: SHD/STF | | | |
| CHK: JBM | | | |
| DATE: 12/80 | | | |
| BY | NO. | REVISION | DATE |

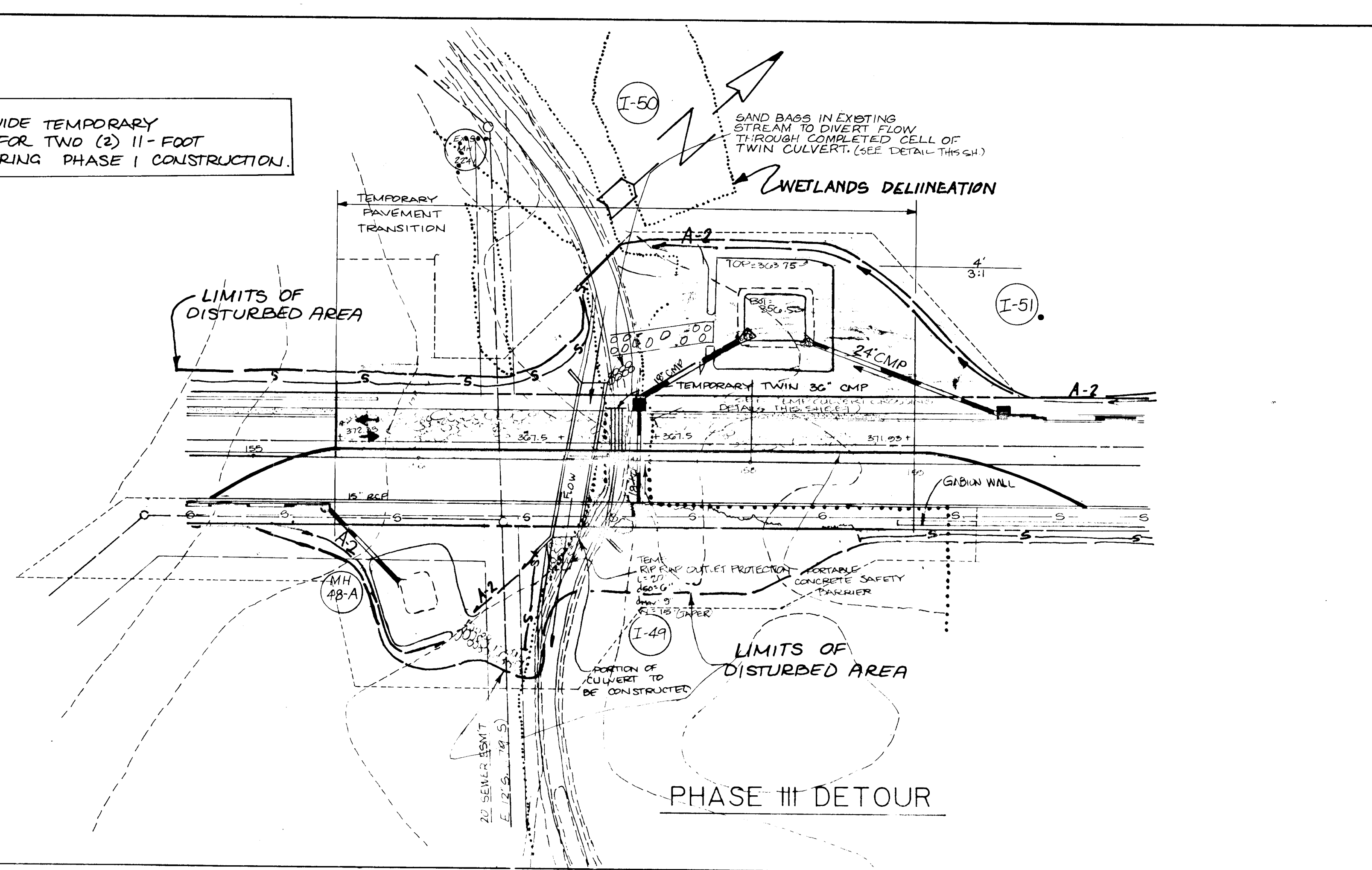
PHASE II
 MAINTENANCE OF TRAFFIC
 AND SEDIMENT CONTROL
 STA. 160+50 TO END
 CENTENNIAL LANE

CENTENNIAL LANE
 STA. 135+50 TO U.S. ROUTE 40
 CAPITAL PROJECT J-4015-II
 ELECTION DISTRICT NO. 2
 HOWARD COUNTY, MARYLAND

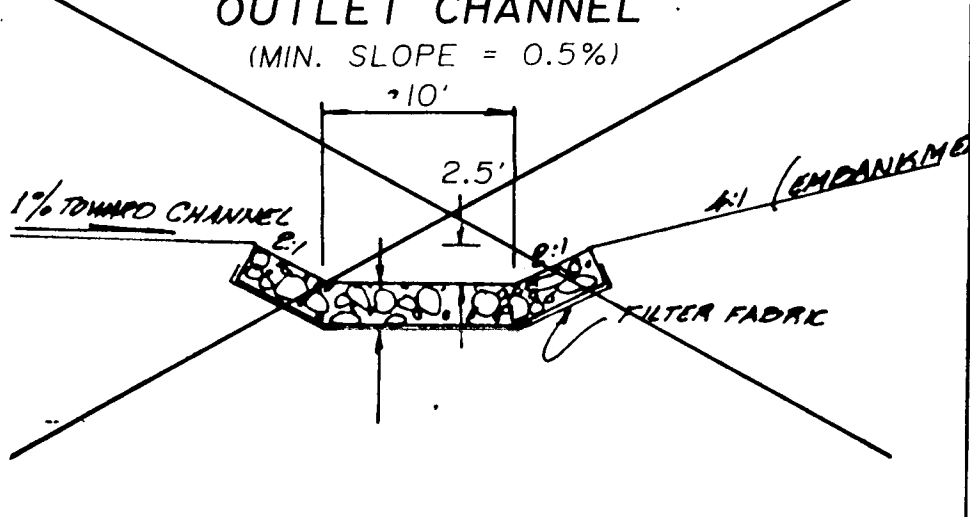
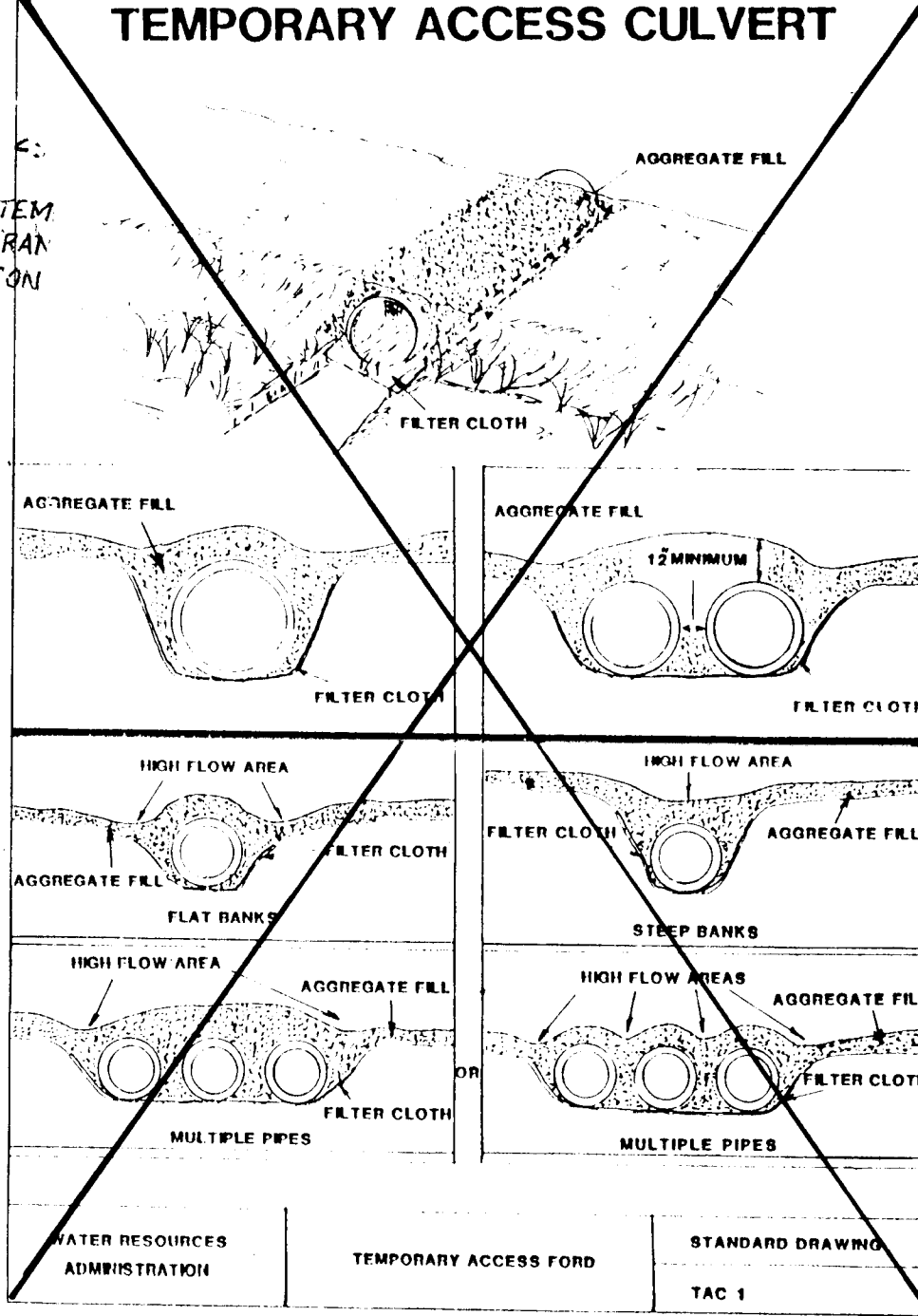
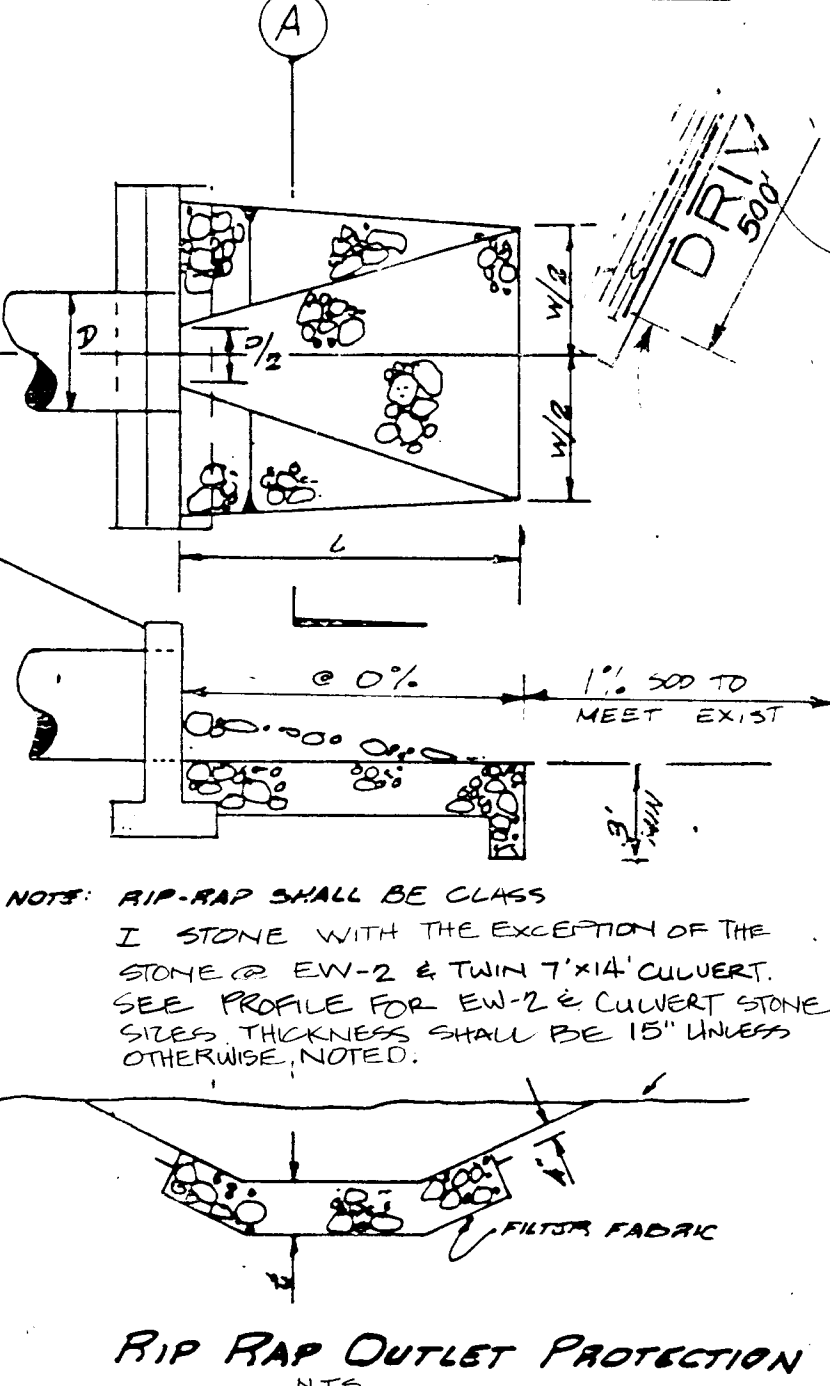
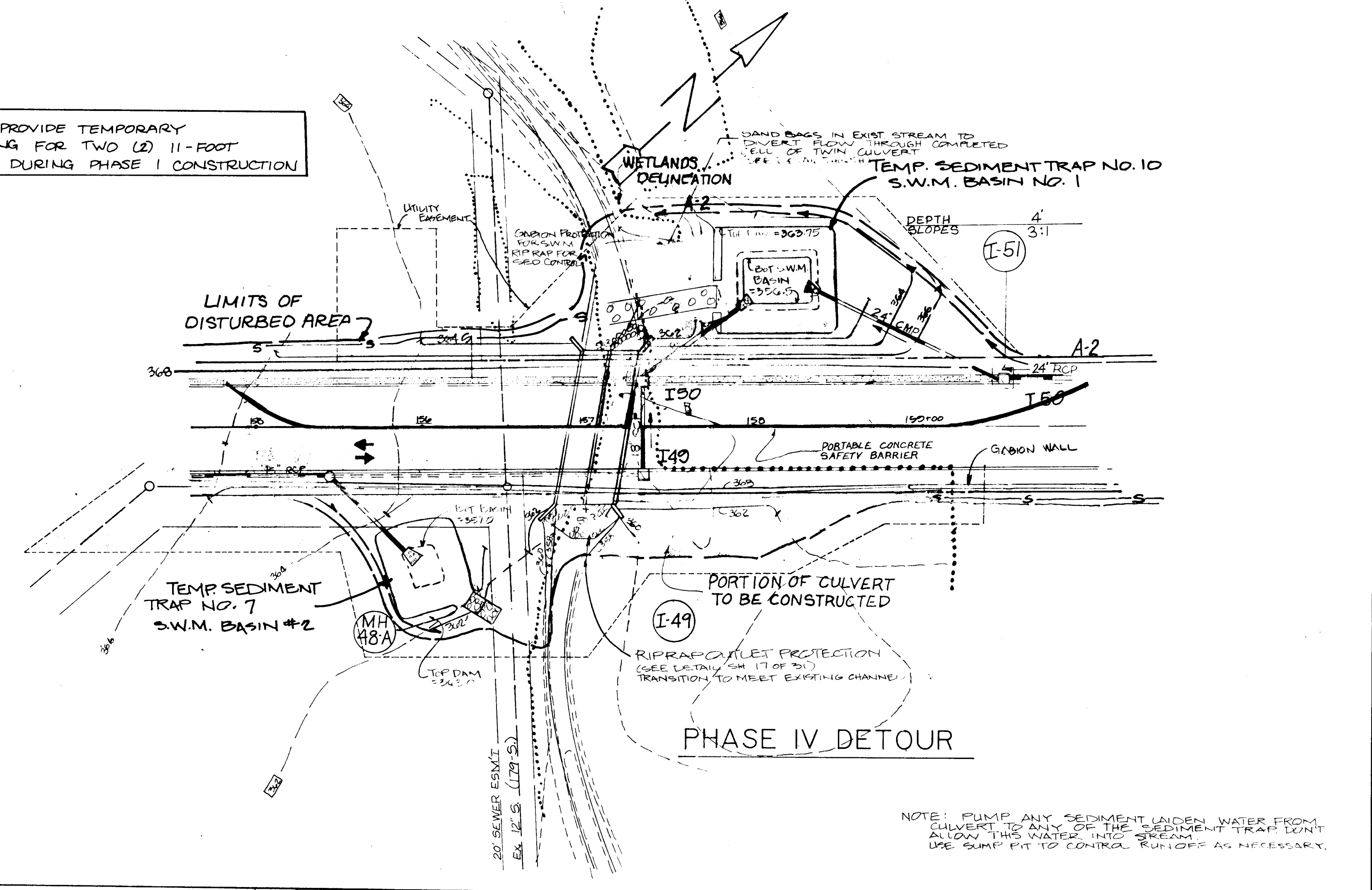
SCALE AS SHOWN
 SHEET 25 OF 30



NOTE: PROVIDE TEMPORARY STRIPING FOR TWO (2) 11-FOOT LANES DURING PHASE I CONSTRUCTION.

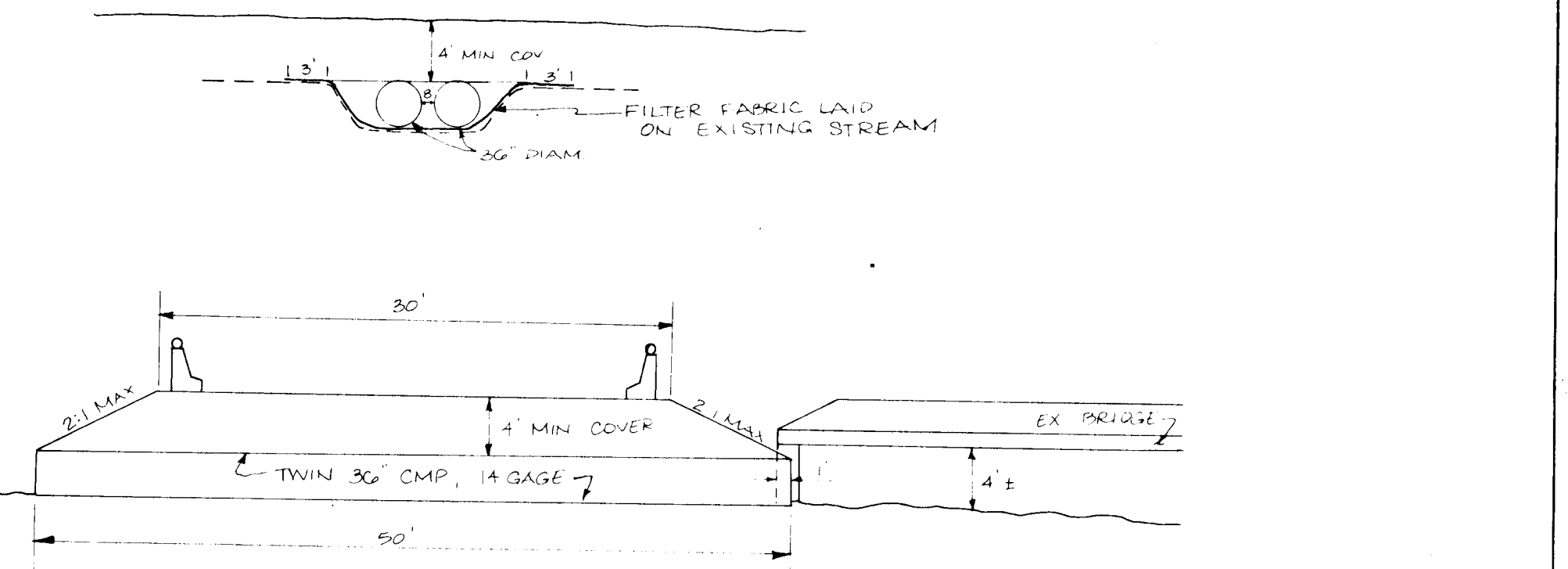


NOTE: PROVIDE TEMPORARY STRIPING FOR TWO (2) 11-FOOT LANES DURING PHASE I CONSTRUCTION.



Sequence of Construction for Culvert Crossing

- Place silt fence along both banks of existing stream from downstream limits of work to upstream limits of work.
- Install temporary twin 36" CMP culvert crossing upstream of existing bridge in existing stream and backfill.
- All traffic is to utilize existing bridge and roadway during construction of northern half of the western cell of the proposed twin cell culvert located in the southbound lanes of Centennial Lane.
- Upon completion of aforesaid portion of permanent culvert, provide a minimum of two feet of backfill and divert traffic to cross completed portion of culvert and temporary twin 36" CMP culvert during construction of the southern half of the western cell of proposed twin cell culvert located in the northbound lanes of Centennial Lane.
- With the approval of the Engineer, re-route stream through completed western cell of proposed twin cell culvert.
- Remove existing bridge. Construct southern half of eastern cell of proposed twin cell culvert located in the northbound lanes of Centennial Lane. When southern half of twin cell culvert is completed, finish construction of the two northbound lanes of Centennial Lane.
- When northbound lane of Centennial Lane has been brought to grade and stabilized with bituminous pavement, divert traffic to northbound lane, remove temporary culvert and complete construction of proposed twin cell culvert and southbound lanes.



NOTES:
1. ALL BACKFILL FOR TEMPORARY CROSSING SHALL BE MSHA NO. 2 STONE.
2. TEMPORARY CULVERTS TO BE PLACED ON FILTER FABRIC LAID IN EXISTING STREAM.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
James M. Nelson 1/16/91
SOIL CONSERVATION SERVICE DATE
THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Sherry W. Allen 1/16/91
HOWARD SOIL CONSERVATION DISTRICT DATE

12/10/90
2. PERMITS
3. COMMENTS
10/15/90
4. SUBMITTED FOR 35% REVIEW
1/2/91

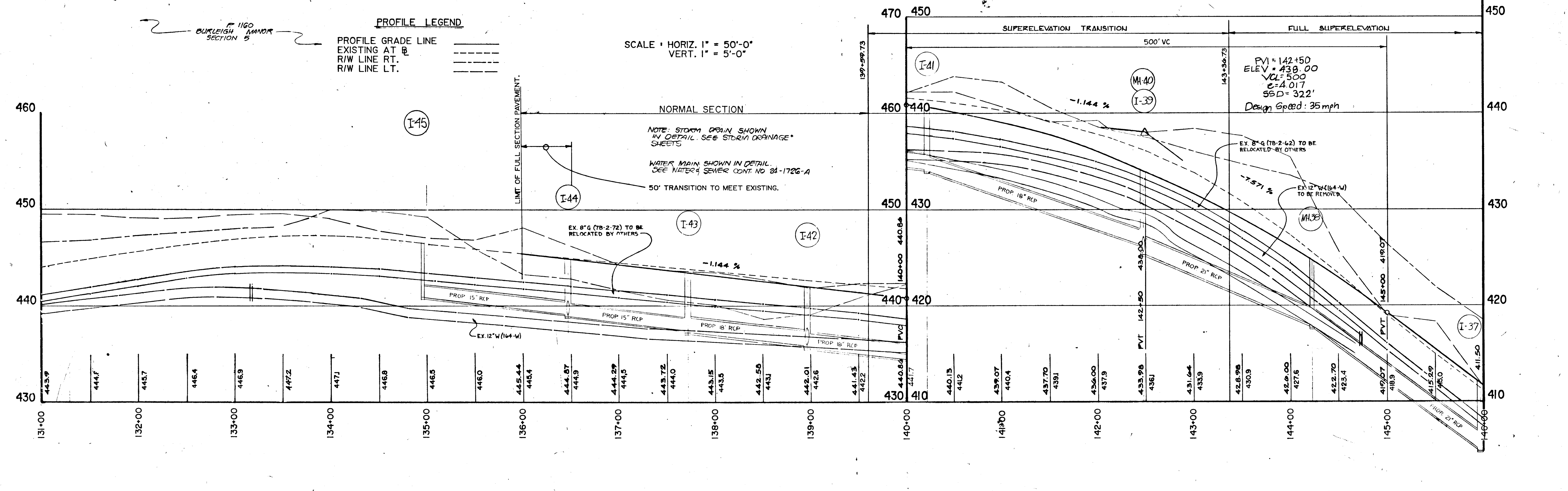
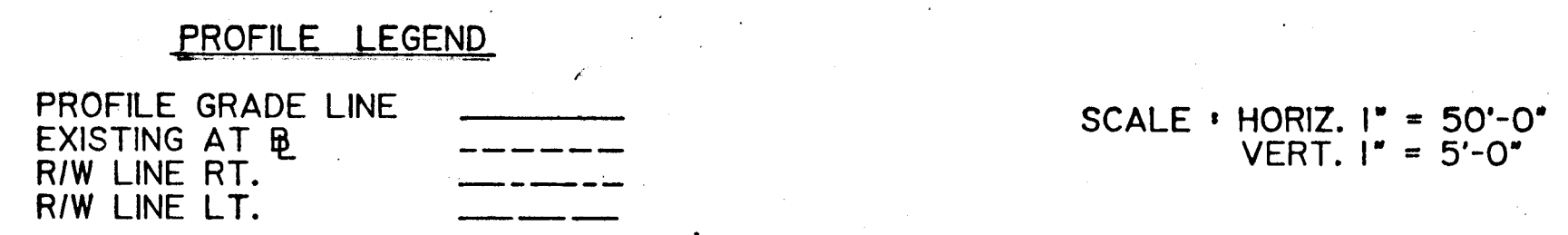
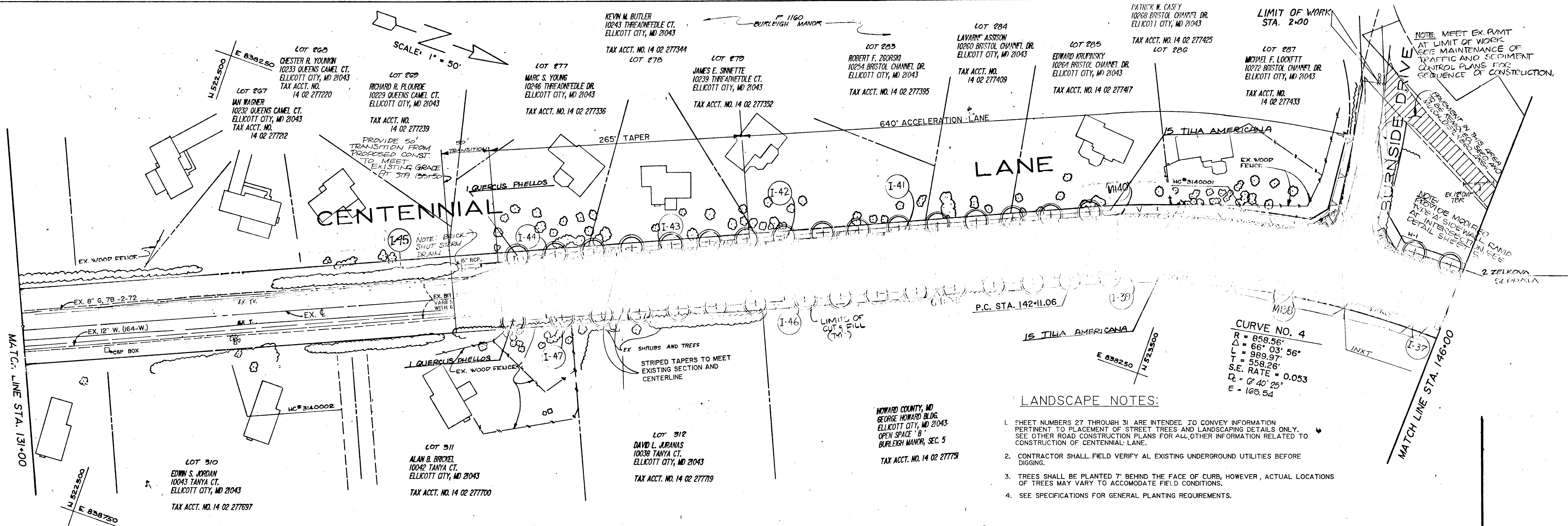
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
James M. Nelson 1/25/91
DIRECTOR OF PUBLIC WORKS DATE
William E. Ray 1/23/91
CHIEF, BUREAU OF ENGINEERING DATE
Elizabeth Anderson-Cole 1/23/91
CHIEF, ROADS, BRIDGES & STORMDRAINAGE DATE
Francis W. Wallace 1/24/91
CHIEF, BUREAU OF HIGHWAYS DATE

MILDENBERG,
MOCHI & ASSOCIATES, INC.
ENGINEERS - SURVEYORS - PLANNERS
3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-2350
(301) 461-0078 D.C. Metro (301) 621-5768

DES: PFB
DRN: STAFF
CHK: JEM
DATE: 12/90
BY NO. REVISION DATE 600' SCALE MAP NO. BLOCK NO.

PHASE III AND PHASE IV
MAINTENANCE OF TRAFFIC
AND SEDIMENT CONTROL
BURNSIDE DRIVE TO U.S. ROUTE 40
CENTENNIAL LANE

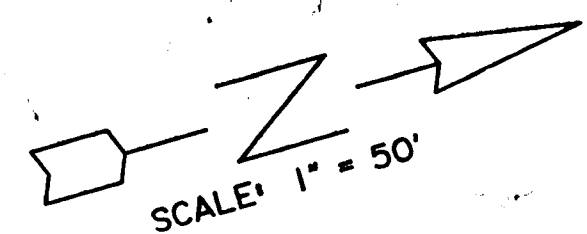
CENTENNIAL LANE
STA. 135+50 TO U.S. ROUTE 40
CAPITAL PROJECT J-4015-II
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 26 OF 36



BRUNING 44-132-69150
 7. SUBMITTED FOR REVIEW 12/19/99
 8. SUBMITTED FOR REVIEW 12/19/99
 9. SUBMITTED FOR REVIEW 12/19/99
 10. SUBMITTED FOR REVIEW 12/19/99
 11. SUBMITTED FOR REVIEW 12/19/99
 12. SUBMITTED FOR REVIEW 12/19/99
 13. SUBMITTED FOR REVIEW 12/19/99
 14. SUBMITTED FOR REVIEW 12/19/99
 15. SUBMITTED FOR REVIEW 12/19/99
 16. SUBMITTED FOR REVIEW 12/19/99
 17. SUBMITTED FOR REVIEW 12/19/99
 18. SUBMITTED FOR REVIEW 12/19/99
 19. SUBMITTED FOR REVIEW 12/19/99
 20. SUBMITTED FOR REVIEW 12/19/99
 21. SUBMITTED FOR REVIEW 12/19/99
 22. SUBMITTED FOR REVIEW 12/19/99
 23. SUBMITTED FOR REVIEW 12/19/99
 24. SUBMITTED FOR REVIEW 12/19/99
 25. SUBMITTED FOR REVIEW 12/19/99
 26. SUBMITTED FOR REVIEW 12/19/99
 27. SUBMITTED FOR REVIEW 12/19/99
 28. SUBMITTED FOR REVIEW 12/19/99
 29. SUBMITTED FOR REVIEW 12/19/99
 30. SUBMITTED FOR REVIEW 12/19/99
 31. SUBMITTED FOR REVIEW 12/19/99
 32. SUBMITTED FOR REVIEW 12/19/99
 33. SUBMITTED FOR REVIEW 12/19/99
 34. SUBMITTED FOR REVIEW 12/19/99
 35. SUBMITTED FOR REVIEW 12/19/99
 36. SUBMITTED FOR REVIEW 12/19/99
 37. SUBMITTED FOR REVIEW 12/19/99
 38. SUBMITTED FOR REVIEW 12/19/99
 39. SUBMITTED FOR REVIEW 12/19/99
 40. SUBMITTED FOR REVIEW 12/19/99
 41. SUBMITTED FOR REVIEW 12/19/99
 42. SUBMITTED FOR REVIEW 12/19/99
 43. SUBMITTED FOR REVIEW 12/19/99
 44. SUBMITTED FOR REVIEW 12/19/99
 45. SUBMITTED FOR REVIEW 12/19/99
 46. SUBMITTED FOR REVIEW 12/19/99
 47. SUBMITTED FOR REVIEW 12/19/99
 48. SUBMITTED FOR REVIEW 12/19/99
 49. SUBMITTED FOR REVIEW 12/19/99
 50. SUBMITTED FOR REVIEW 12/19/99
 51. SUBMITTED FOR REVIEW 12/19/99
 52. SUBMITTED FOR REVIEW 12/19/99
 53. SUBMITTED FOR REVIEW 12/19/99
 54. SUBMITTED FOR REVIEW 12/19/99
 55. SUBMITTED FOR REVIEW 12/19/99
 56. SUBMITTED FOR REVIEW 12/19/99
 57. SUBMITTED FOR REVIEW 12/19/99
 58. SUBMITTED FOR REVIEW 12/19/99
 59. SUBMITTED FOR REVIEW 12/19/99
 60. SUBMITTED FOR REVIEW 12/19/99
 61. SUBMITTED FOR REVIEW 12/19/99
 62. SUBMITTED FOR REVIEW 12/19/99
 63. SUBMITTED FOR REVIEW 12/19/99
 64. SUBMITTED FOR REVIEW 12/19/99
 65. SUBMITTED FOR REVIEW 12/19/99
 66. SUBMITTED FOR REVIEW 12/19/99
 67. SUBMITTED FOR REVIEW 12/19/99
 68. SUBMITTED FOR REVIEW 12/19/99
 69. SUBMITTED FOR REVIEW 12/19/99
 70. SUBMITTED FOR REVIEW 12/19/99
 71. SUBMITTED FOR REVIEW 12/19/99
 72. SUBMITTED FOR REVIEW 12/19/99
 73. SUBMITTED FOR REVIEW 12/19/99
 74. SUBMITTED FOR REVIEW 12/19/99
 75. SUBMITTED FOR REVIEW 12/19/99
 76. SUBMITTED FOR REVIEW 12/19/99
 77. SUBMITTED FOR REVIEW 12/19/99
 78. SUBMITTED FOR REVIEW 12/19/99
 79. SUBMITTED FOR REVIEW 12/19/99
 80. SUBMITTED FOR REVIEW 12/19/99
 81. SUBMITTED FOR REVIEW 12/19/99
 82. SUBMITTED FOR REVIEW 12/19/99
 83. SUBMITTED FOR REVIEW 12/19/99
 84. SUBMITTED FOR REVIEW 12/19/99
 85. SUBMITTED FOR REVIEW 12/19/99
 86. SUBMITTED FOR REVIEW 12/19/99
 87. SUBMITTED FOR REVIEW 12/19/99
 88. SUBMITTED FOR REVIEW 12/19/99
 89. SUBMITTED FOR REVIEW 12/19/99
 90. SUBMITTED FOR REVIEW 12/19/99
 91. SUBMITTED FOR REVIEW 12/19/99
 92. SUBMITTED FOR REVIEW 12/19/99
 93. SUBMITTED FOR REVIEW 12/19/99
 94. SUBMITTED FOR REVIEW 12/19/99
 95. SUBMITTED FOR REVIEW 12/19/99
 96. SUBMITTED FOR REVIEW 12/19/99
 97. SUBMITTED FOR REVIEW 12/19/99
 98. SUBMITTED FOR REVIEW 12/19/99
 99. SUBMITTED FOR REVIEW 12/19/99
 100. SUBMITTED FOR REVIEW 12/19/99

| | | | | | | | | | | |
|--|--|--|--|---|--|---|--|---|--|-----------------------------------|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE: 11/19/99 DATE: 11/19/99 | | MILDENBERG, MOCHI & ASSOCIATES, INC. ENGINEERS • SURVEYORS • PLANNERS 3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350 (301) 461-0078 D.C. Metro: (301) 621-5788 | | DES: JBA/KAM DRN: STAFF CHK: JEM DATE: 12/90 | | LANDSCAPE PLAN STA. 131+00 TO STA. 146+00 CENTENNIAL LANE 600' SCALE MAP NO. 24 BLOCK NO. | | CENTENNIAL LANE STA. 135+50 TO U.S. ROUTE 40 CAPITAL PROJECT J-4015-II ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND | | SCALE AS SHOWN SHEET 27 OF 310 |
|--|--|--|--|---|--|---|--|---|--|-----------------------------------|

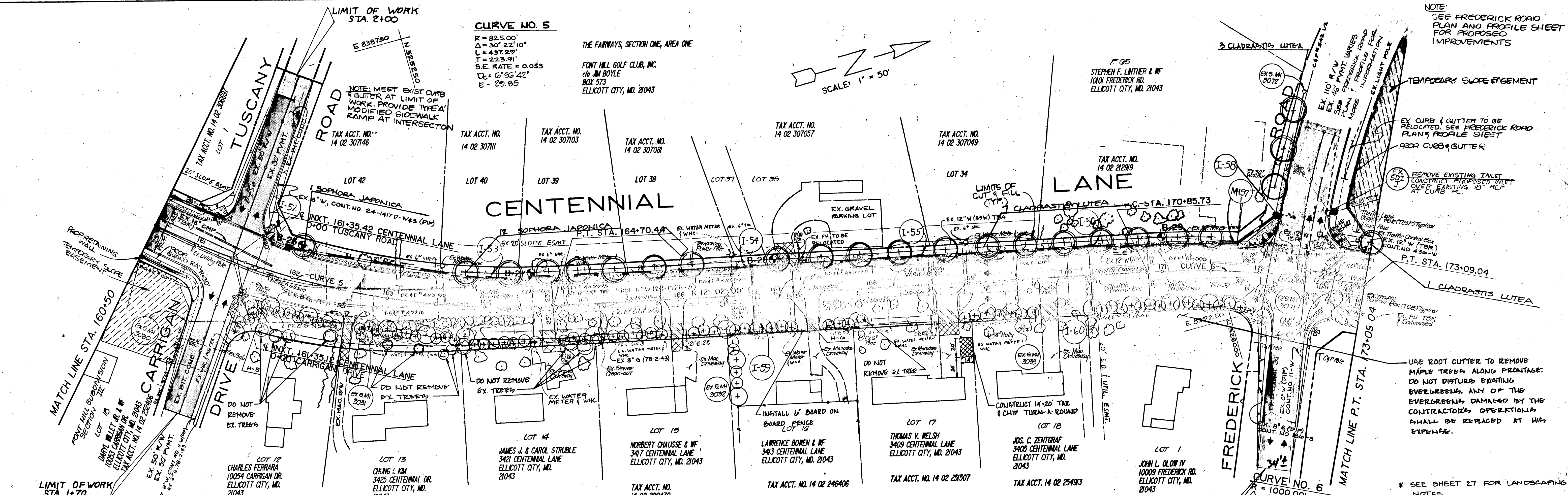
NOTE: SEE FREDERICK ROAD PLAN AND PROFILE SHEET FOR PROPOSED IMPROVEMENTS



CURVE NO. 5
 R = 825.00'
 Δ = 33° 22' 10"
 L = 437.29'
 T = 223.91'
 S.E. RATE = 0.053
 C.E. = 6° 55' 42"
 E = 29.85

THE FARWAYS, SECTION ONE, AREA ONE
 FONT HILL GOLF CLUB, INC.
 c/o JIM BOYLE
 BOX 373
 ELLICOTT CITY, MD. 21043

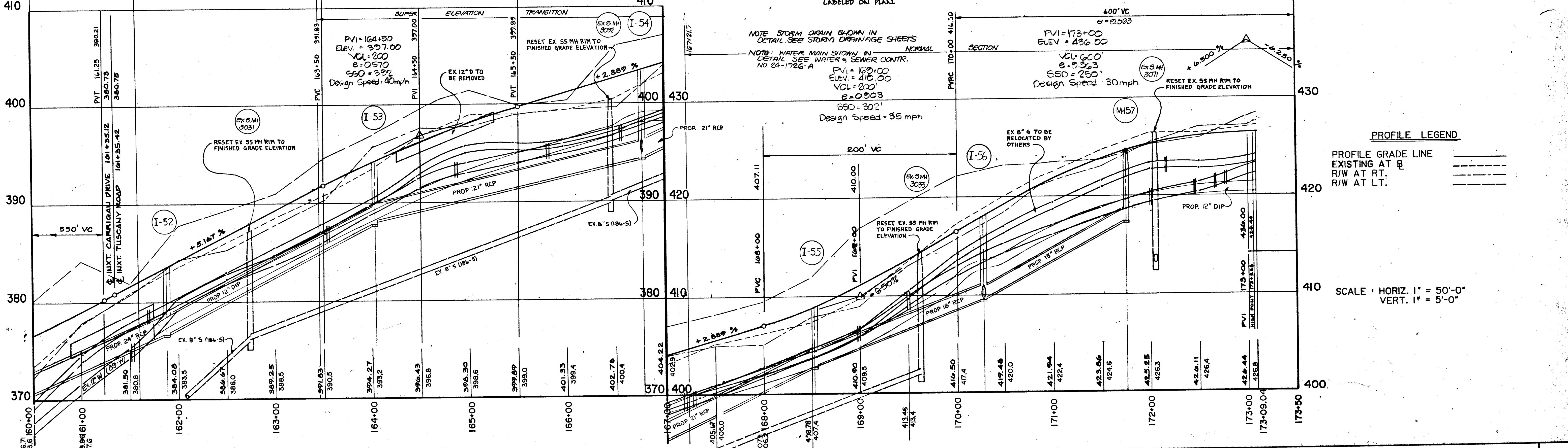
F 05
 STEPHEN F. LINTNER & WF
 1001 FREDERICK RD.
 ELLICOTT CITY, MD. 21043



LEGEND
 ⊕ THILIA OCCIDENTALIS AMERICAN ARBOREVIETAE 'NIGRA'
 ⊕ ACER RUBRUM RED SUNBET MAPLE
 NOTE: TREES NOT SHOWN IN LEGEND ARE LABELED ON PLAN.

LIMIT OF WORK STA. 2+00
 NOTE: NOSE DOWN PROP CURBS & GUTTER AT FILLET PT. MEET EXISTING PVMT AT LIMIT OF WORK

LIMIT OF WORK STA. 1+70
 NOTE: NOSE DOWN PROP CURBS & GUTTER AT FILLET PT. MEET EXISTING EDGE OF PVMT AT LIMIT OF WORK



2. REVISED PER COMMENTS 10/15/00
 3. REVISED PER COMMENTS 11/14/00
 4. REVISED PER COMMENTS 11/14/00
 5. REVISED PER COMMENTS 11/14/00
 6. REVISED PER COMMENTS 11/14/00
 7. REVISED PER COMMENTS 11/14/00
 8. REVISED PER COMMENTS 11/14/00
 9. REVISED PER COMMENTS 11/14/00
 10. REVISED PER COMMENTS 11/14/00
 11. REVISED PER COMMENTS 11/14/00
 12. REVISED PER COMMENTS 11/14/00
 13. REVISED PER COMMENTS 11/14/00
 14. REVISED PER COMMENTS 11/14/00
 15. REVISED PER COMMENTS 11/14/00
 16. REVISED PER COMMENTS 11/14/00
 17. REVISED PER COMMENTS 11/14/00
 18. REVISED PER COMMENTS 11/14/00
 19. REVISED PER COMMENTS 11/14/00
 20. REVISED PER COMMENTS 11/14/00
 21. REVISED PER COMMENTS 11/14/00
 22. REVISED PER COMMENTS 11/14/00
 23. REVISED PER COMMENTS 11/14/00
 24. REVISED PER COMMENTS 11/14/00
 25. REVISED PER COMMENTS 11/14/00
 26. REVISED PER COMMENTS 11/14/00
 27. REVISED PER COMMENTS 11/14/00
 28. REVISED PER COMMENTS 11/14/00
 29. REVISED PER COMMENTS 11/14/00
 30. REVISED PER COMMENTS 11/14/00
 31. REVISED PER COMMENTS 11/14/00
 32. REVISED PER COMMENTS 11/14/00
 33. REVISED PER COMMENTS 11/14/00
 34. REVISED PER COMMENTS 11/14/00
 35. REVISED PER COMMENTS 11/14/00
 36. REVISED PER COMMENTS 11/14/00
 37. REVISED PER COMMENTS 11/14/00
 38. REVISED PER COMMENTS 11/14/00
 39. REVISED PER COMMENTS 11/14/00
 40. REVISED PER COMMENTS 11/14/00
 41. REVISED PER COMMENTS 11/14/00
 42. REVISED PER COMMENTS 11/14/00
 43. REVISED PER COMMENTS 11/14/00
 44. REVISED PER COMMENTS 11/14/00
 45. REVISED PER COMMENTS 11/14/00
 46. REVISED PER COMMENTS 11/14/00
 47. REVISED PER COMMENTS 11/14/00
 48. REVISED PER COMMENTS 11/14/00
 49. REVISED PER COMMENTS 11/14/00
 50. REVISED PER COMMENTS 11/14/00
 51. REVISED PER COMMENTS 11/14/00
 52. REVISED PER COMMENTS 11/14/00
 53. REVISED PER COMMENTS 11/14/00
 54. REVISED PER COMMENTS 11/14/00
 55. REVISED PER COMMENTS 11/14/00
 56. REVISED PER COMMENTS 11/14/00
 57. REVISED PER COMMENTS 11/14/00
 58. REVISED PER COMMENTS 11/14/00
 59. REVISED PER COMMENTS 11/14/00
 60. REVISED PER COMMENTS 11/14/00
 61. REVISED PER COMMENTS 11/14/00
 62. REVISED PER COMMENTS 11/14/00
 63. REVISED PER COMMENTS 11/14/00
 64. REVISED PER COMMENTS 11/14/00
 65. REVISED PER COMMENTS 11/14/00
 66. REVISED PER COMMENTS 11/14/00
 67. REVISED PER COMMENTS 11/14/00
 68. REVISED PER COMMENTS 11/14/00
 69. REVISED PER COMMENTS 11/14/00
 70. REVISED PER COMMENTS 11/14/00
 71. REVISED PER COMMENTS 11/14/00
 72. REVISED PER COMMENTS 11/14/00
 73. REVISED PER COMMENTS 11/14/00
 74. REVISED PER COMMENTS 11/14/00
 75. REVISED PER COMMENTS 11/14/00
 76. REVISED PER COMMENTS 11/14/00
 77. REVISED PER COMMENTS 11/14/00
 78. REVISED PER COMMENTS 11/14/00
 79. REVISED PER COMMENTS 11/14/00
 80. REVISED PER COMMENTS 11/14/00
 81. REVISED PER COMMENTS 11/14/00
 82. REVISED PER COMMENTS 11/14/00
 83. REVISED PER COMMENTS 11/14/00
 84. REVISED PER COMMENTS 11/14/00
 85. REVISED PER COMMENTS 11/14/00
 86. REVISED PER COMMENTS 11/14/00
 87. REVISED PER COMMENTS 11/14/00
 88. REVISED PER COMMENTS 11/14/00
 89. REVISED PER COMMENTS 11/14/00
 90. REVISED PER COMMENTS 11/14/00
 91. REVISED PER COMMENTS 11/14/00
 92. REVISED PER COMMENTS 11/14/00
 93. REVISED PER COMMENTS 11/14/00
 94. REVISED PER COMMENTS 11/14/00
 95. REVISED PER COMMENTS 11/14/00
 96. REVISED PER COMMENTS 11/14/00
 97. REVISED PER COMMENTS 11/14/00
 98. REVISED PER COMMENTS 11/14/00
 99. REVISED PER COMMENTS 11/14/00
 100. REVISED PER COMMENTS 11/14/00

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DATE: 11/13/00
 DATE: 11/13/00

MILDENBERG MOCHI & ASSOCIATES, INC.
 ENGINEERS • SURVEYORS • PLANNERS

3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-3350
 (301) 461-0078 D.C. Metro (301) 621-5768

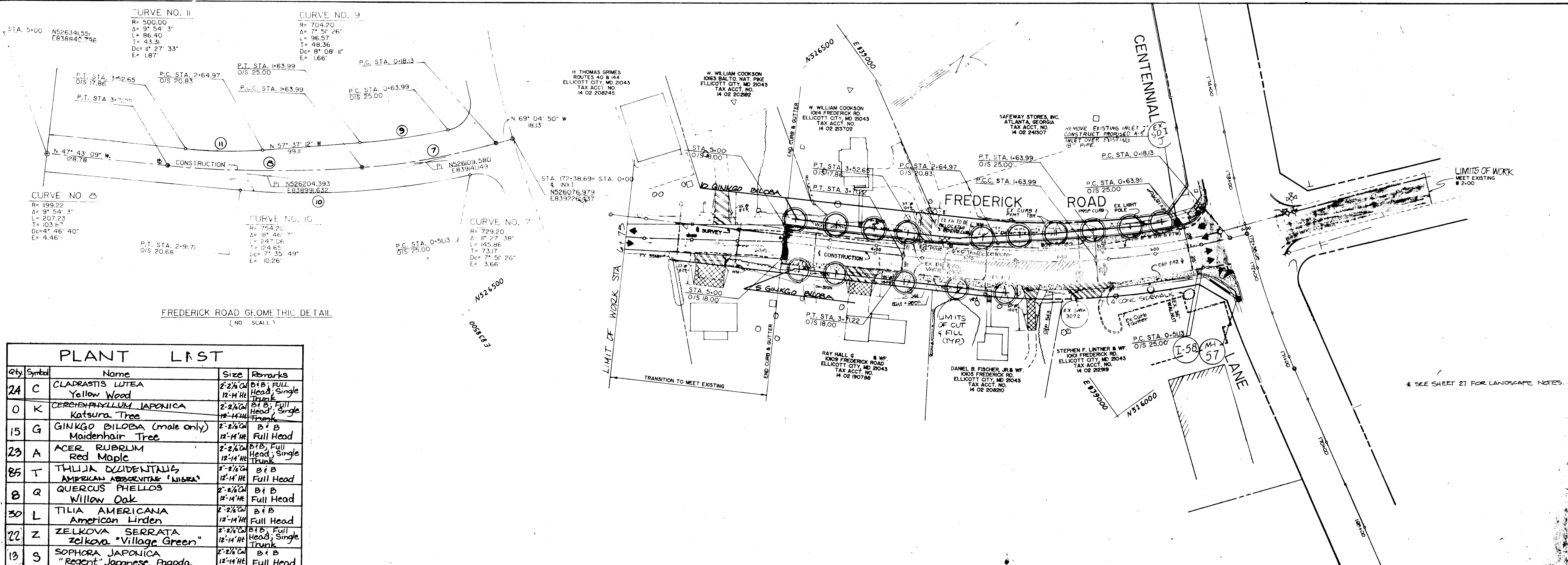


| | | | |
|--------------|---------|----------|------|
| DES: JBM/KAS | BY: NO. | REVISION | DATE |
| DRN: STAFF | | | |
| CHK: JBM | | | |
| DATE: 12/00 | | | |

LANDSCAPE PLAN
 STA. 160+50 TO STA. 173+09.04
 CENTENNIAL LANE

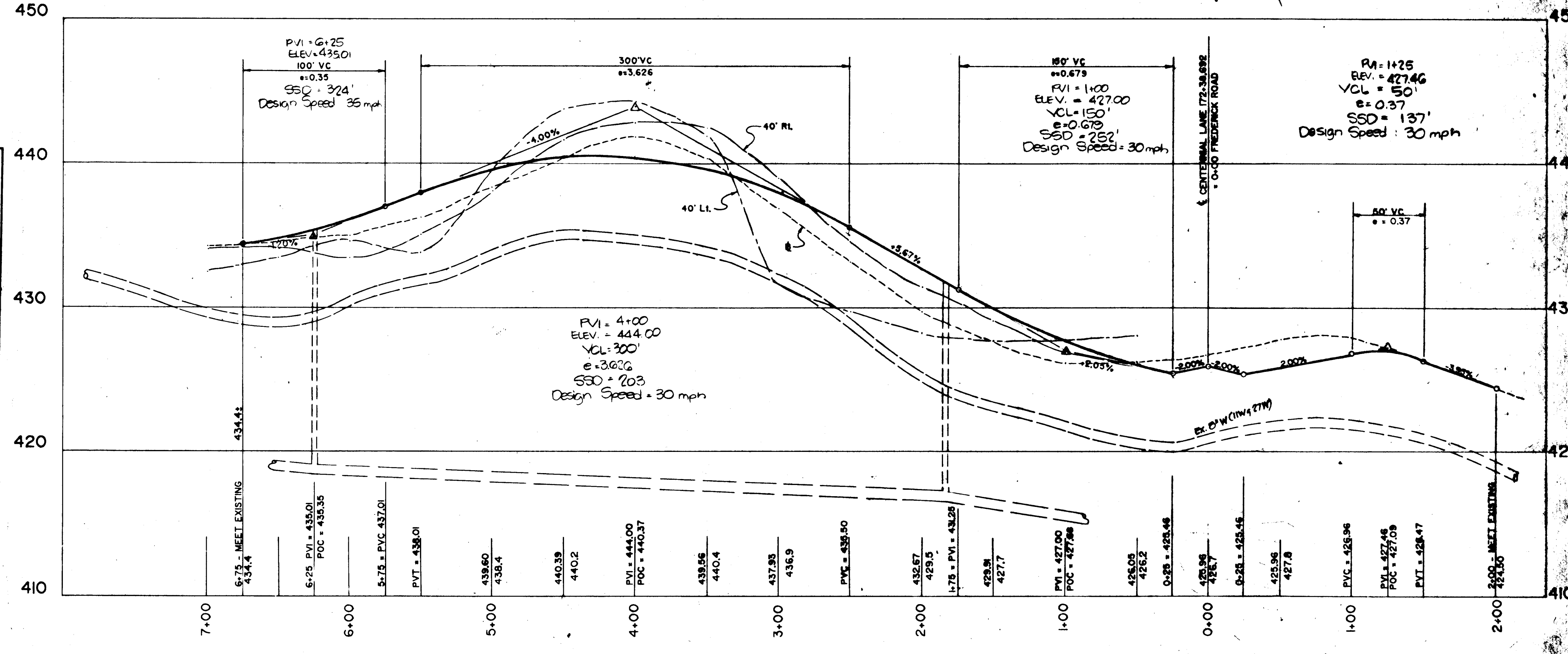
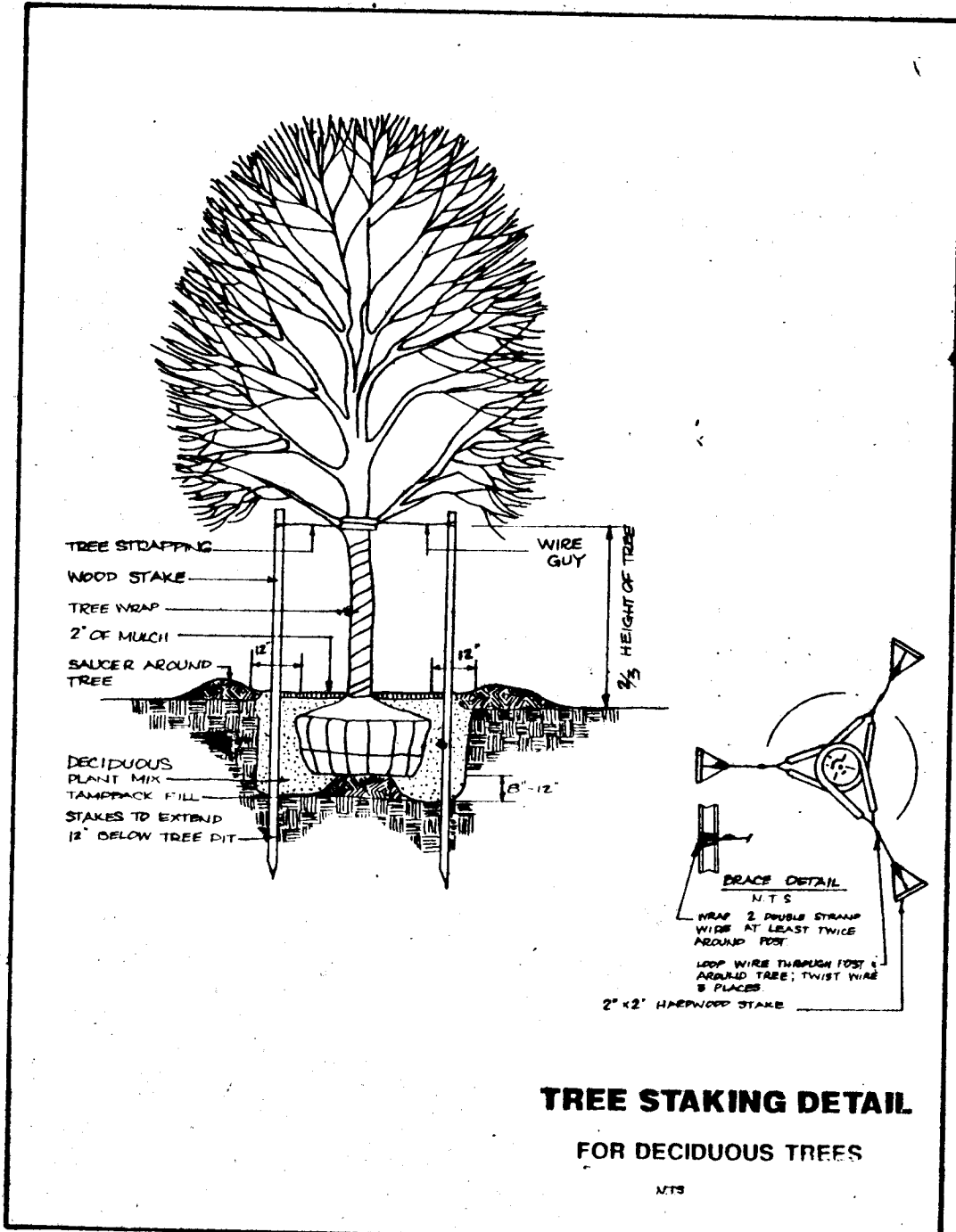
CENTENNIAL LANE
 STA. 135+50 TO U.S. ROUTE 40
 CAPITAL PROJECT J-4015-II
 ELECTION DISTRICT NO. 2
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 29 OF 39



| Qty | Symbol | Name | Size | Remarks |
|-----|--------|---|---------------------------|--------------------------------|
| 24 | C | CLADRASTIS LUTEA Yellow Wood | 2-2 1/2" Cal 12-14" Ht | B + B, Full Head; Single Trunk |
| 0 | K | CERCIDIPHYLLUM JAPONICA Katsura Tree | 2-2 1/2" Cal 18-14" Ht | B + B, Full Head; Single Trunk |
| 15 | G | GINKGO BILOBA (male only) Maidenhair Tree | 2-2 1/2" Cal 12-14" Ht | B + B Full Head |
| 23 | A | ACER RUBRUM Red Maple | 2-2 1/2" Cal 12-14" Ht | B + B, Full Head; Single Trunk |
| 85 | T | THILIA OCCIDENTALIS AMERICAN ARBORESCENS 'NIGRA' | 2-2 1/2" Cal 12-14" Ht | B + B Full Head |
| 8 | Q | QUERCUS PHELLOS Willow Oak | 2-2 1/2" Cal 12-14" Ht | B + B Full Head |
| 30 | L | TILIA AMERICANA American Linden | 2-2 1/2" Cal 12-14" Ht | B + B Full Head |
| 22 | Z | ZELKOVA SERRATA Zelkova "Village Green" | 2-2 1/2" Cal 12-14" Ht | B + B, Full Head; Single Trunk |
| 13 | S | SOPHORA JAPONICA "Regent" Japanese Pagoda | 2-2 1/2" Cal 12-14" Ht | B + B Full Head |

- Contractor to verify underground utilities before digging.
- Locations of trees may vary slightly to accommodate field conditions.
- See specifications for general planting requirements.



SUBMITTED FOR 25% SUBMITTAL 11/2/80

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James J. Lee 11/12/80
 DIRECTOR OF PUBLIC WORKS DATE

William W. Weisand 11/12/80
 CHIEF, BUREAU OF HIGHWAYS DATE

MILDENBERG MOCHI & ASSOCIATES, INC.
 ENGINEERS - SURVEYORS - PLANNERS

3300 North Ridge Road, Suite 235, Ellicott City, Maryland 21043-2350
 (301) 461-0078 D.C. Meer (301) 621-5788



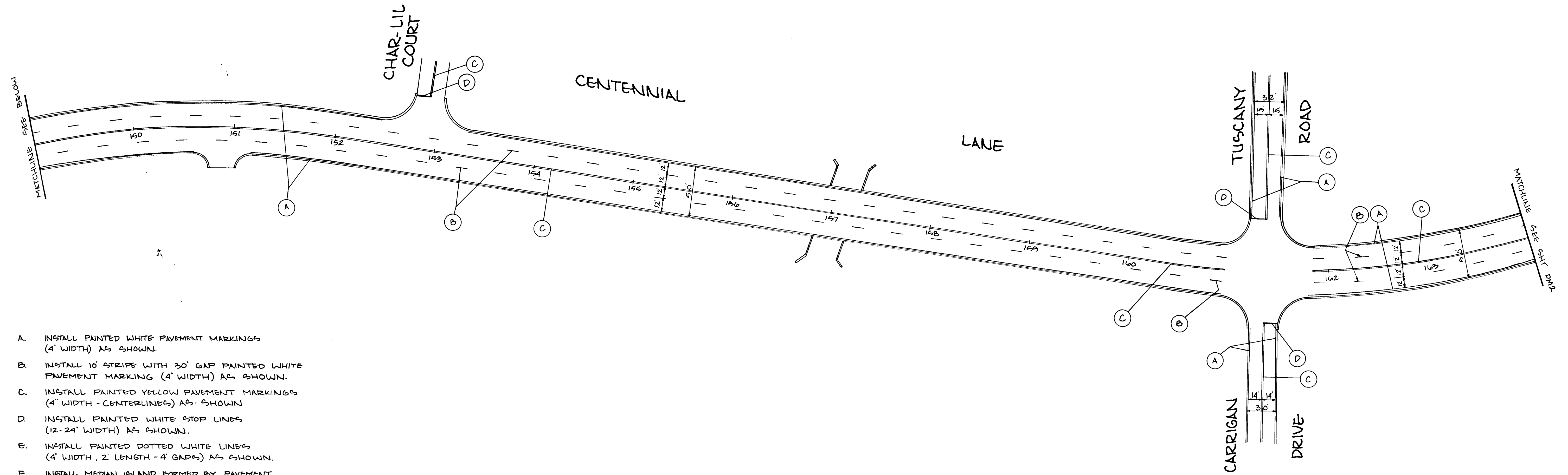
| | |
|--------------|-------------|
| DES: JBM/KAM | DATE: 12/80 |
| DRN: STAFF | BY: NO. |
| CHK: JBM | REVISION |
| DATE: 12/80 | DATE: |

LANDSCAPE PLAN
 FREDERICK ROAD

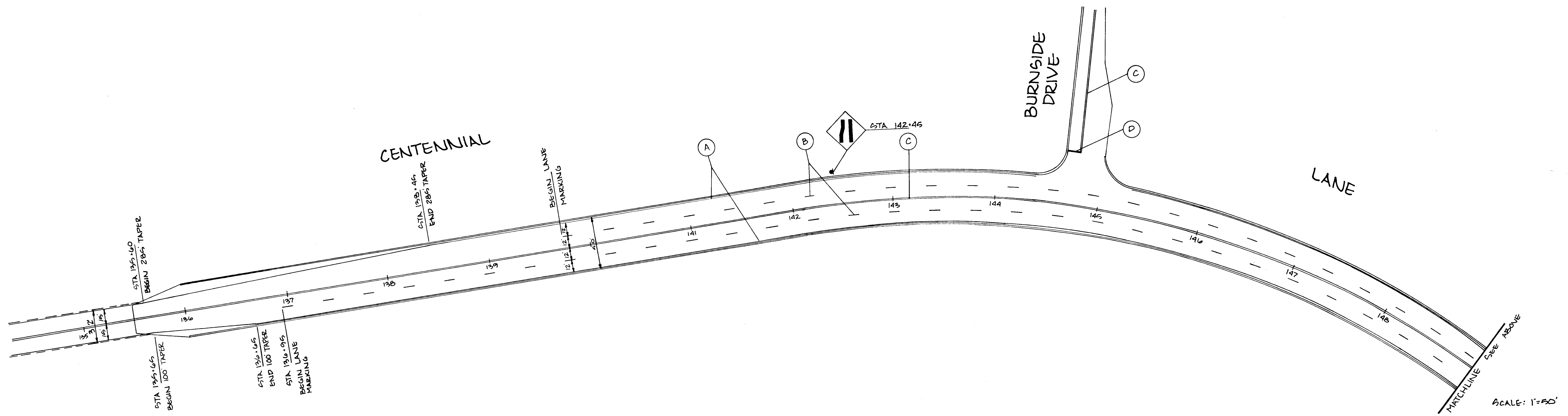
600' SCALE MAP NO. _____ BLOCK NO. _____

CENTENNIAL LANE
 STA. 135+50 TO U.S. ROUTE 40.
 CAPITAL PROJECT J-4015-II
 ELECTION DISTRICT NO. 2
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 31 OF 32



- A. INSTALL PAINTED WHITE PAVEMENT MARKINGS (4' WIDTH) AS SHOWN.
- B. INSTALL 10' STRIPE WITH 30' GAP PAINTED WHITE PAVEMENT MARKING (4' WIDTH) AS SHOWN.
- C. INSTALL PAINTED YELLOW PAVEMENT MARKINGS (4' WIDTH - CENTERLINES) AS SHOWN.
- D. INSTALL PAINTED WHITE STOP LINES (12-24' WIDTH) AS SHOWN.
- E. INSTALL PAINTED DOTTED WHITE LINES (4' WIDTH, 2' LENGTH - 4' GAPS) AS SHOWN.
- F. INSTALL MEDIAN ISLAND FORMED BY PAVEMENT MARKINGS. SEE MUTCD 3B-10



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE
CHIEF, DIV. OF ROADS, BRIDGES & B.D. DATE CHIEF, BUREAU OF HIGHWAYS DATE

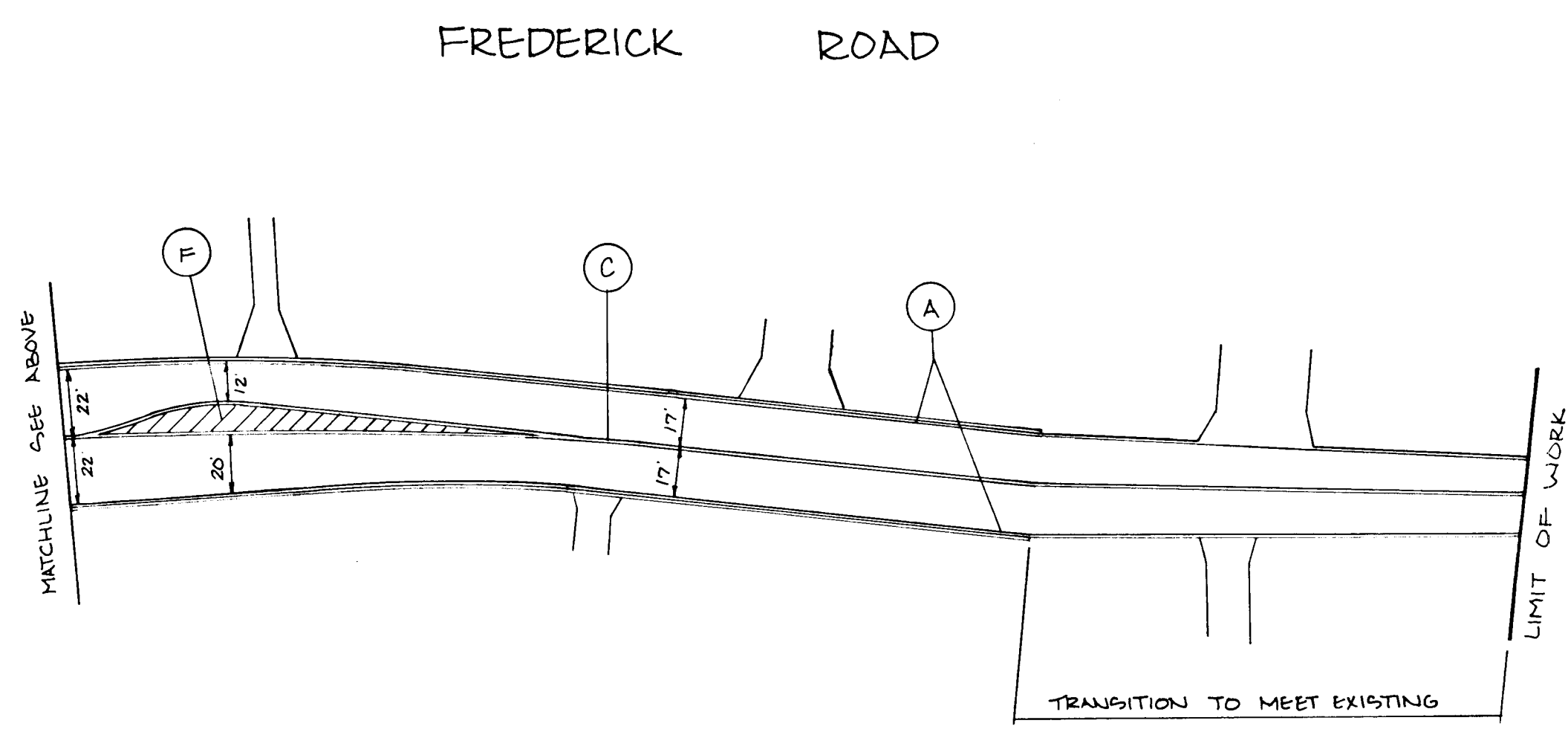
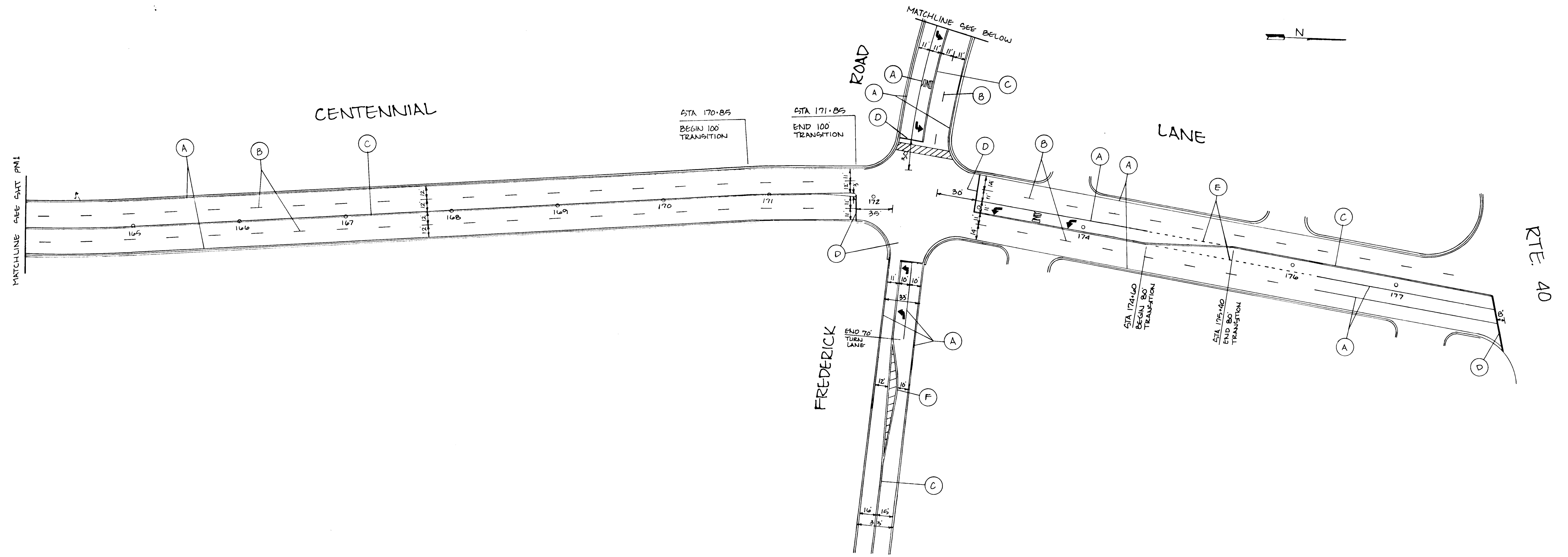
| | | | | |
|------------|----|-----|----------|------|
| DES: SMI | | | | |
| DRN: SMI | | | | |
| CHK: JSN | | | | |
| DATE: 1/91 | BY | NO. | REVISION | DATE |

PERMANENT STRIPING
PLAN

CENTENNIAL LANE
CAPITAL PROJECT J-4015-II
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

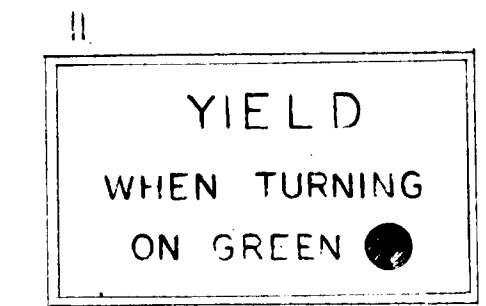
SHEET 22 OF 36



SCALE 1"=50'

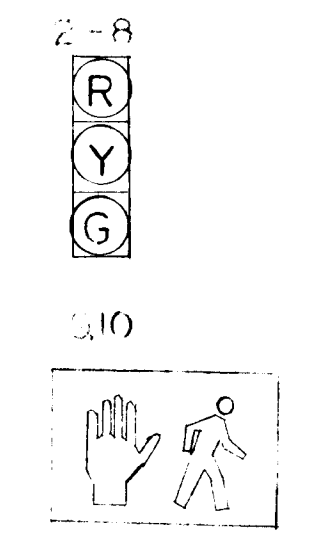
| | | | | | | | | |
|---|---|---|--|----------------------------|----------------|--|--|----------------|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND | | DES: GMI DRN: GMI CHK: JBN DATE: 1/91 | | PERMANENT STRIPING PLAN | | CENTENNIAL LANE CAPITAL PROJECT J-4016-II ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND | | SCALE AS SHOWN |
| DIRECTOR OF PUBLIC WORKS _____ DATE _____ | CHIEF, BUREAU OF ENGINEERING _____ DATE _____ | CHIEF, DIV. OF ROADS, BRIDGES & S.D. DATE _____ | CHIEF, BUREAU OF HIGHWAYS _____ DATE _____ | BY _____ NO. _____ | REVISION _____ | DATE _____ | 600' SCALE MAP NO. _____ BLOCK NO. _____ | SHEET 32 OF 36 |

SIGNS

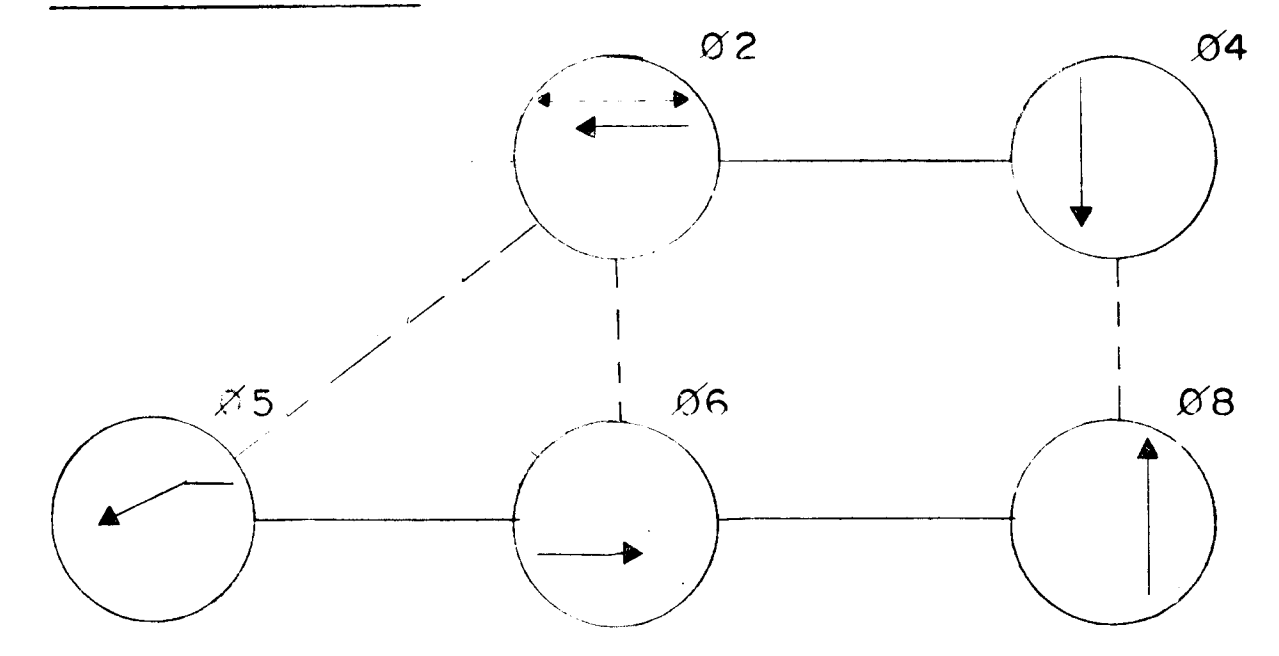


1"=30'

SIGNALS

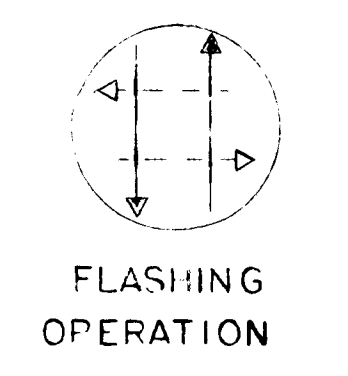


NEMA PHASING



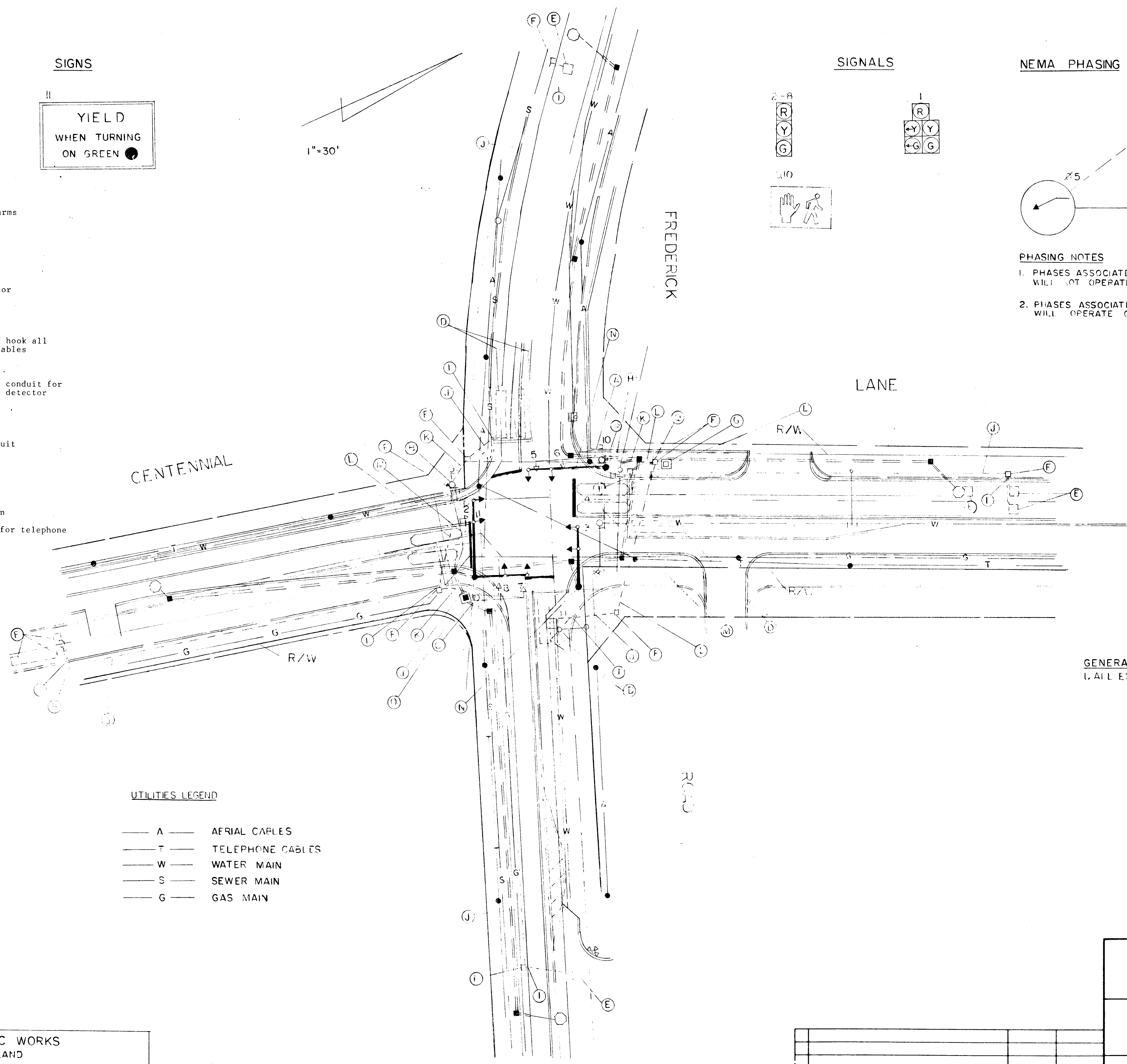
PHASING NOTES

- PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY
- PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY



CONSTRUCTION DETAILS

- Install 21' pole with dual 40' mast arms (Note: 1-2", 90° galvanized elbow)
- Install 21' pole with 30' mast arm (Note: 1-2", 90° galvanized elbow)
- Install 21' pole with 25' mast arm (Note: 1-2", 90° galvanized elbow)
- Install 6' X 30' quadrupole loop detector
- Install 6' X 6' loop detector
- Install hand box
- Install new controller and cabinet and hook all electrical and loop detector lead-in cables
- Install new electrical service
- Install 1" galvanized steel electrical conduit for detector sleeve. NOTE: One sleeve per detector
- Install 2" P.V.C. electrical conduit
- Install 3" P.V.C. electrical conduit
- Install 3" Rigid steel electrical conduit
- Install sign on Mast arms
- Remove existing pole
- Remove existing controller cabinet
- Install pedestrian push button and sign
- Install 1" P.V.C. capped conduit stub for telephone connection



UTILITIES LEGEND

- A — AERIAL CABLES
- T — TELEPHONE CABLES
- W — WATER MAIN
- S — SEWER MAIN
- G — GAS MAIN

GENERAL NOTES

1. ALL EXISTING EQUIPMENT IS TO BE REMOVED

CENTENNIAL LANE & FREDERICK ROAD

HOWARD COUNTY

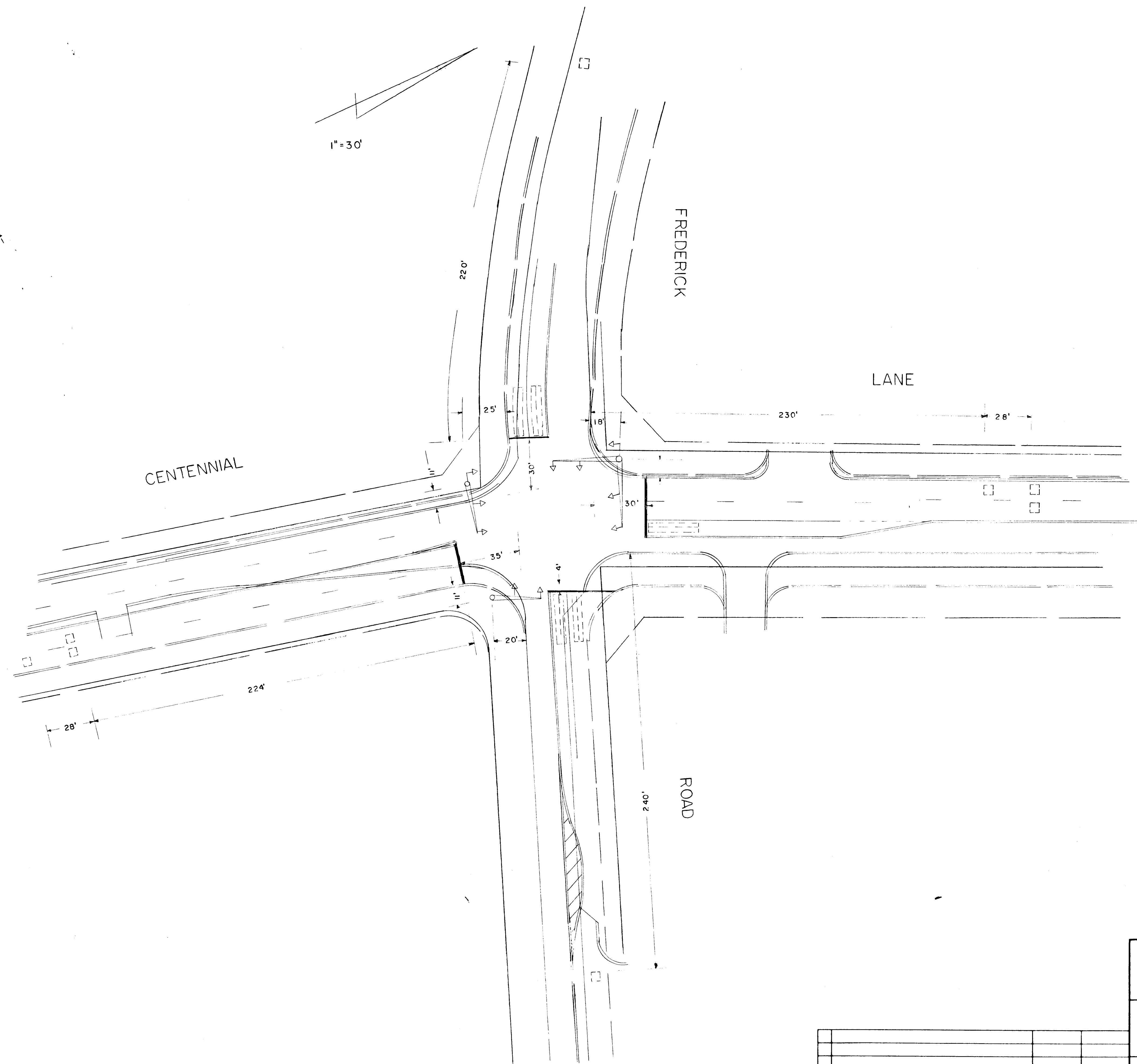
TRAFFIC SIGNAL MODIFICATION

| | | | | |
|--------------|----------------|------------|----------|--------------|
| PROJECT ENG. | DESIGNED BY | CHECKED BY | DRAWN BY | PROJECT MGR. |
| | | | | |
| DATE | FILE | | | |
| | SHEET 34 OF 36 | | | |

| | | | |
|---|------|------------------------------|------|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND | | | |
| DIRECTOR OF PUBLIC WORKS | DATE | CHIEF, BUREAU OF ENGINEERING | DATE |
| | | CHIEF, TRAFFIC ENGINEERING | DATE |

| NO. | DESCRIPTION | NAME | DATE |
|-----|-------------|------|------|
| | | | |
| | | | |
| | | | |

| | | | | |
|-------------------------|-------|-------------------------|--------------|-----------------|
| F. H. W. A. REG. NO. | STATE | FED. AID PROJECT NO. | SHEET NO. | TOTAL SHEETS |
| | | | | |



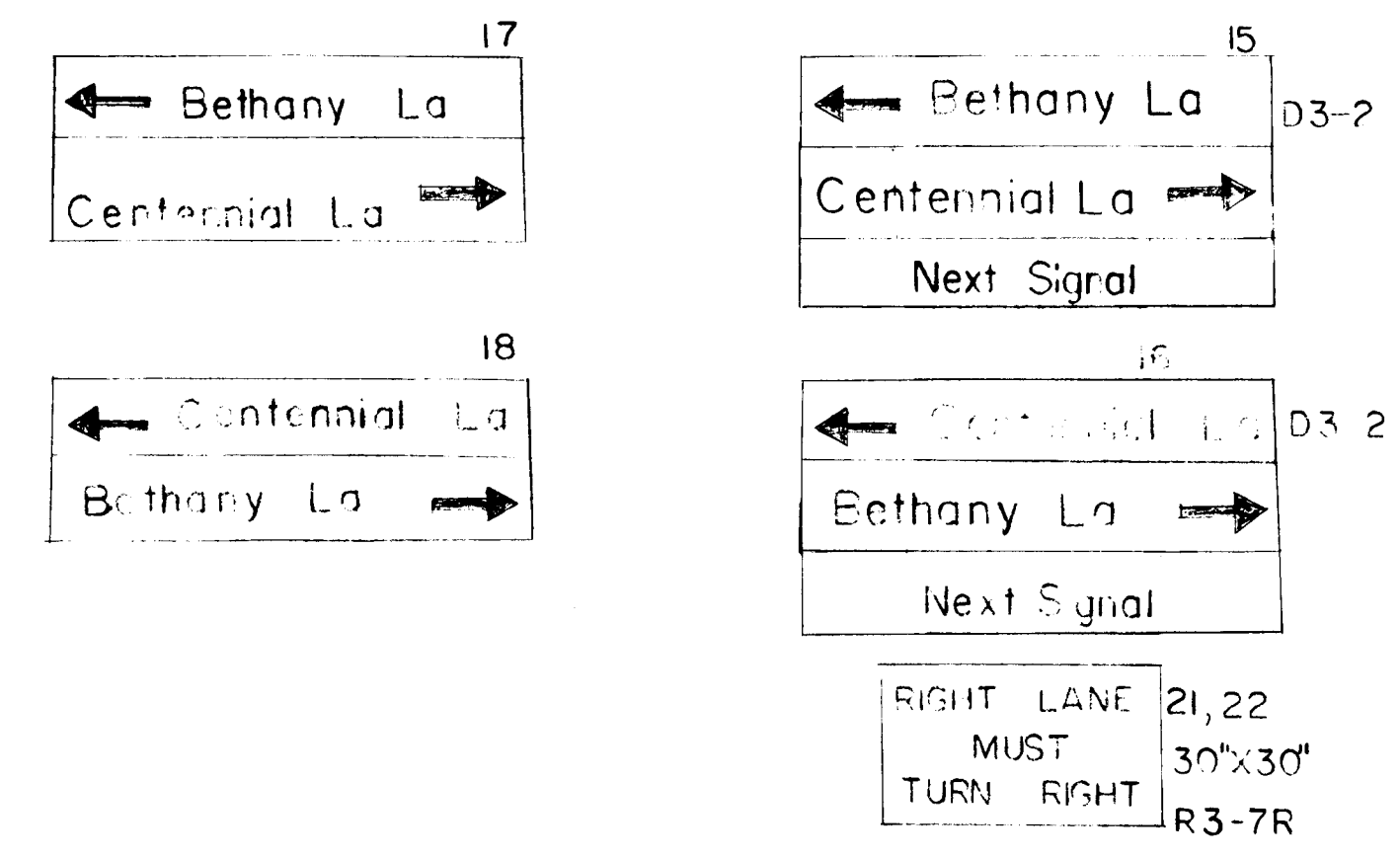
| | |
|----------------------------------|--|
| CENTENNIAL LANE & FREDERICK ROAD | |
| HOWARD COUNTY | PROJECT ENG. _____ DESIGNED BY _____ CHECKED BY _____ DRAWN BY _____ PROJECT MGR _____ |
| TRAFFIC SIGNAL MODIFICATION | DATE _____ FILE _____ SHEET 35 OF 36 |

| NO. | DESCRIPTION | NAME | DATE |
|-----|-------------|------|------|
| | | | |
| | | | |
| | | | |
| | | | |

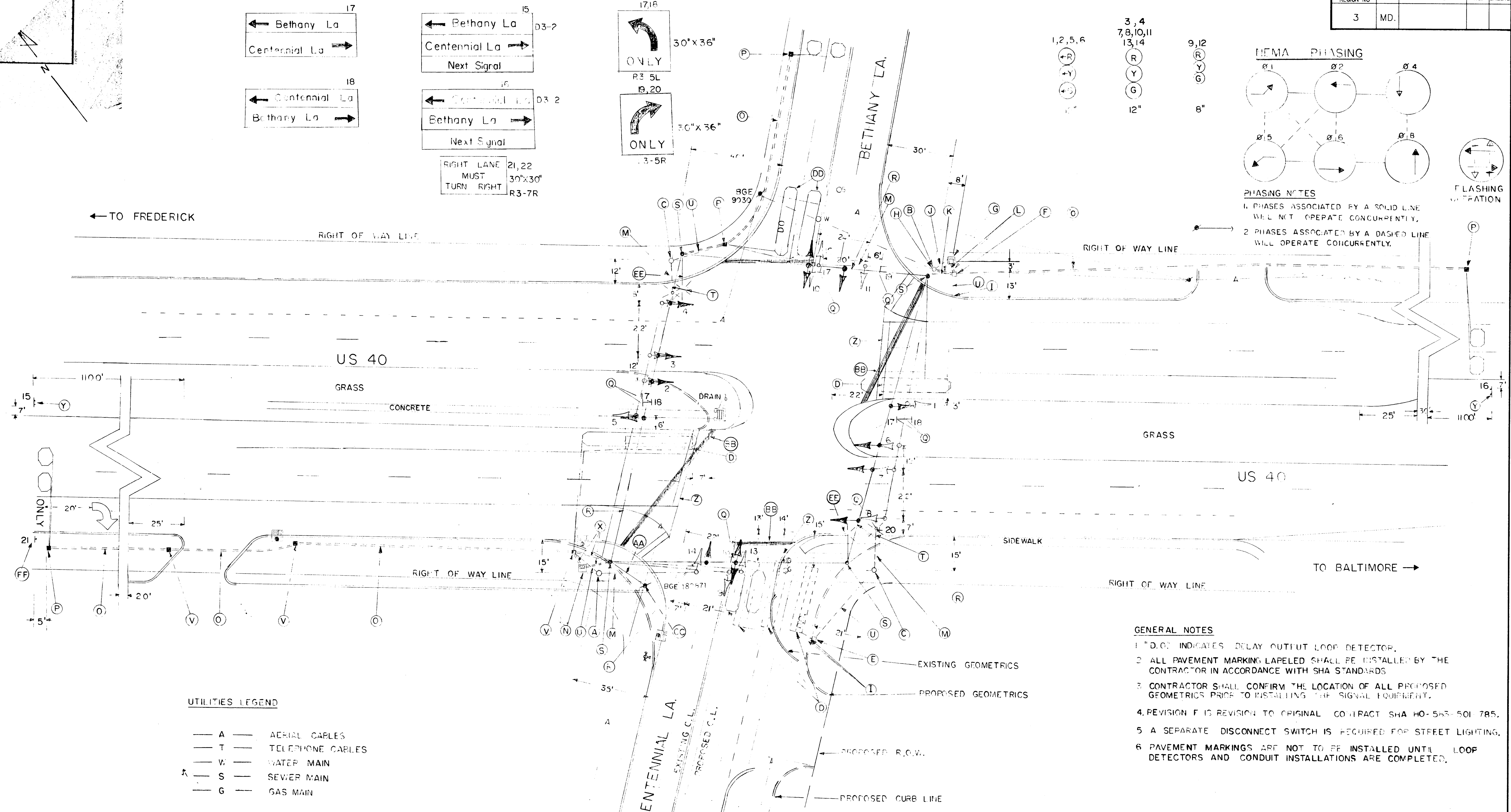
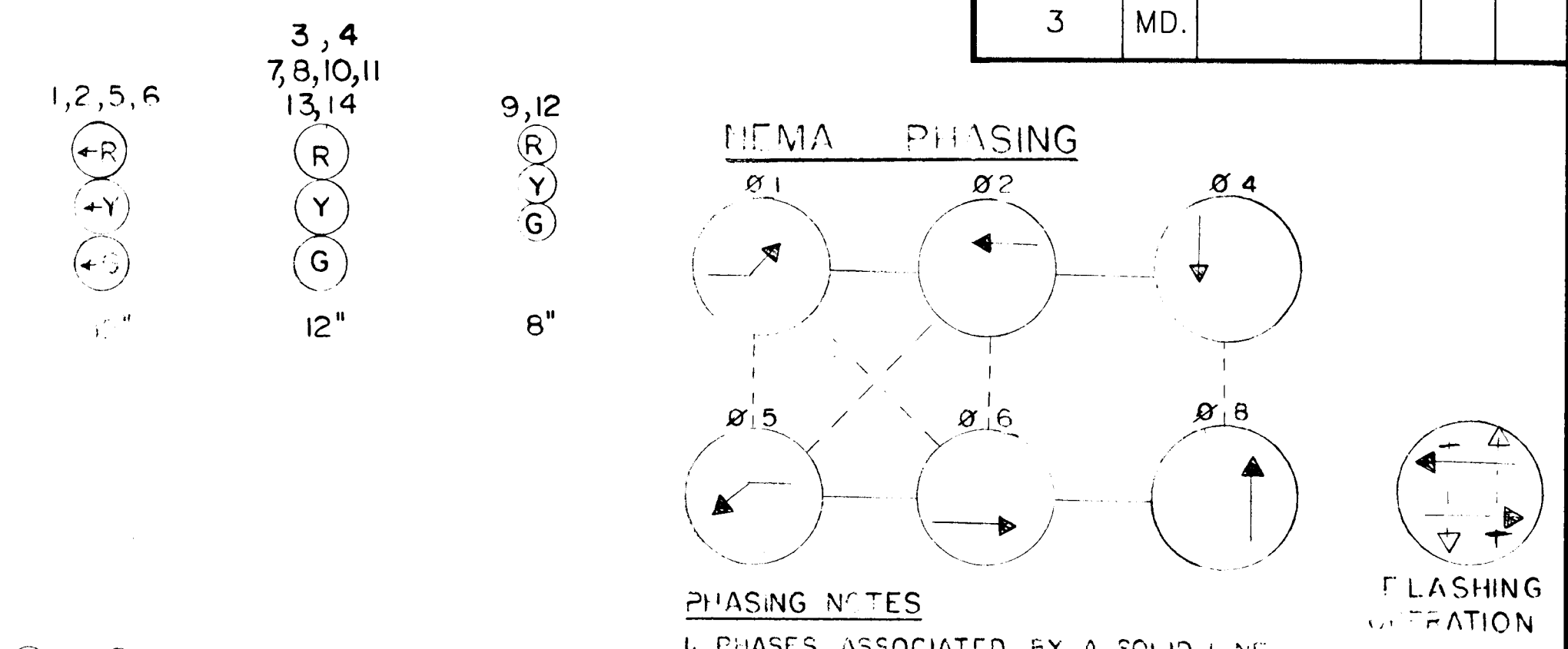
REVISIONS

| | | | | |
|---------------------|-------|--------------------|-----------|--------------|
| F.H.W.A. REGION NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
| 3 | MD. | | | |

SIGNS



SIGNALS



UTILITIES LEGEND

| | |
|-------|------------------|
| — A — | AERIAL CABLES |
| — T — | TELEPHONE CABLES |
| — W — | WATER MAIN |
| — S — | SEWER MAIN |
| — G — | GAS MAIN |

- GENERAL NOTES**
- "D.O." INDICATES DELAY OUTPUT LOOP DETECTOR.
 - ALL PAVEMENT MARKING LAPEL SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH SHA STANDARDS.
 - CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL PROPOSED GEOMETRICS PRIOR TO INSTALLING THE SIGNAL EQUIPMENT.
 - REVISION F IS REVISION TO ORIGINAL CONTRACT SHA HO-563-501 785.
 - A SEPARATE DISCONNECT SWITCH IS REQUIRED FOR STREET LIGHTING.
 - PAVEMENT MARKINGS ARE NOT TO BE INSTALLED UNTIL LOOP DETECTORS AND CONDUIT INSTALLATIONS ARE COMPLETED.

| REVISIONS | APPROVALS |
|---|--|
| 1. FEDERAL SPECIFICATION FOR PAVEMENT MARKING 12-86 | ORIGINAL ON FILE |
| 2. CHAIRMAN'S PLANS TO EXCHANGE 200' SHA 674-782 FOR 200' SHA 674-782 | CHIEF, DESIGN SECTION |
| 3. SHA 81-25073 REVISE SIGNAL DUE TO GEOM. | ASST. DISTRICT ENGINEER, TRAFFIC |
| 4. REVISE EXIST. SIGNAL | CHIEF, BUREAU OF TRAFFIC ENGINEERING |
| | DEPUTY CHIEF ENGINEER, OFFICE OF TRAFFIC |

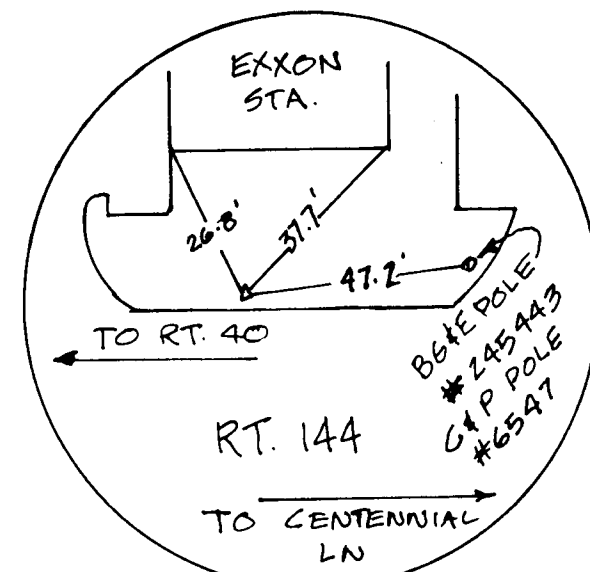
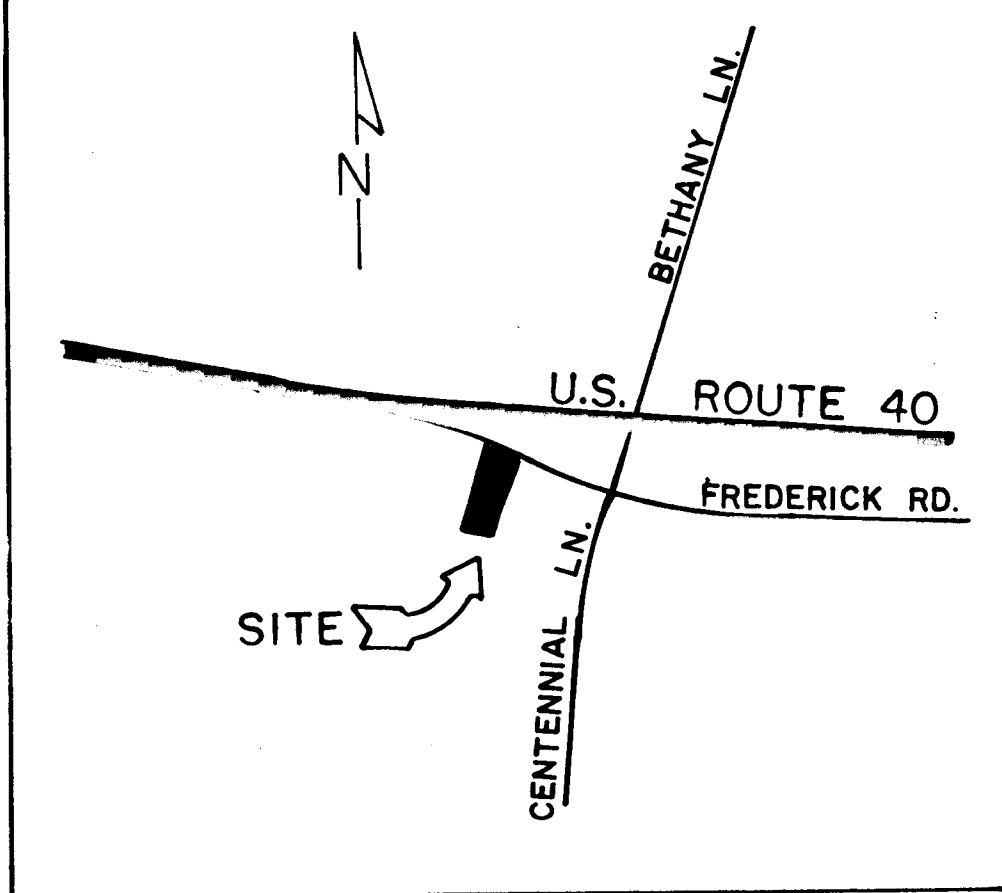
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION - OFFICE OF TRAFFIC
BUREAU OF TRAFFIC ENGINEERING

DRAWN BY: J. GORDON
DES. BY: J. GORDON
CHK. BY: D.A. ZAFIRIS

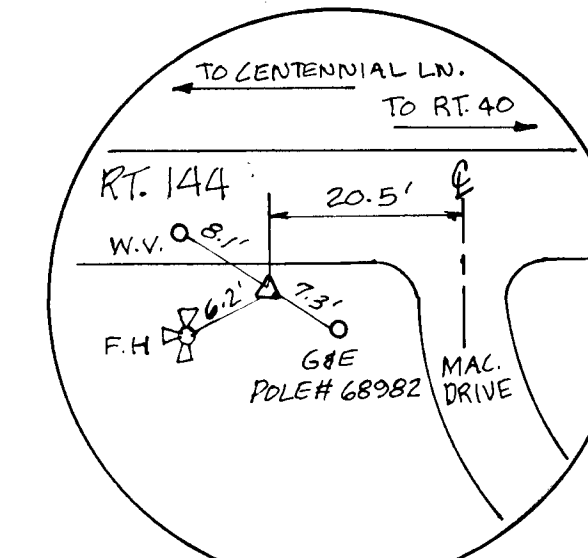
US 40 & CENTENNIAL LA/BETHANY LA
COUNTY: HOWARD

DATE: 1-11-83 F.A.P. NO. _____ TS/FILE NO. 717-F
SCALE: 1"=20' S.H.A. NO. BW-375-602 712 SHEET NO. 36 OF 36

FORETRANS Ltd.

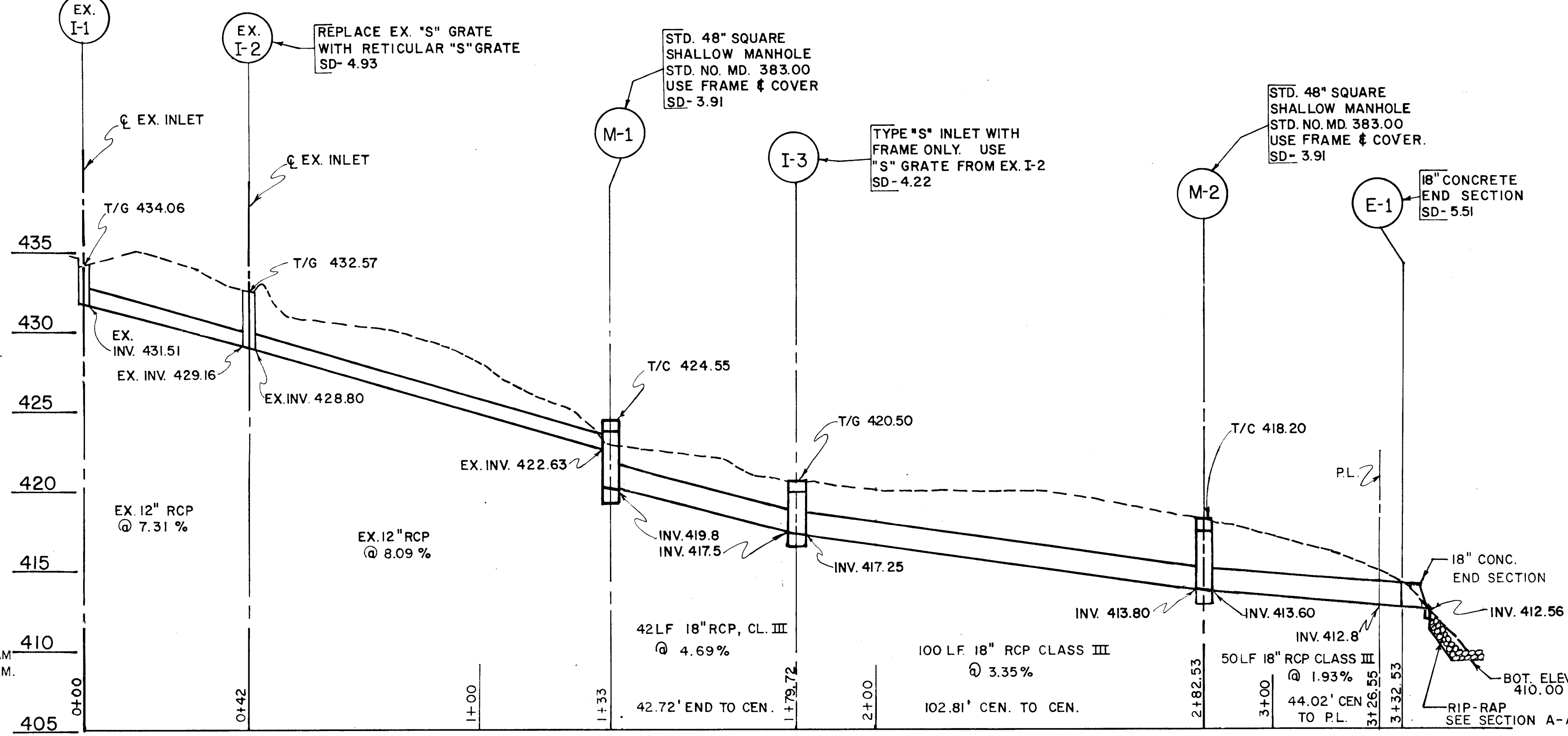
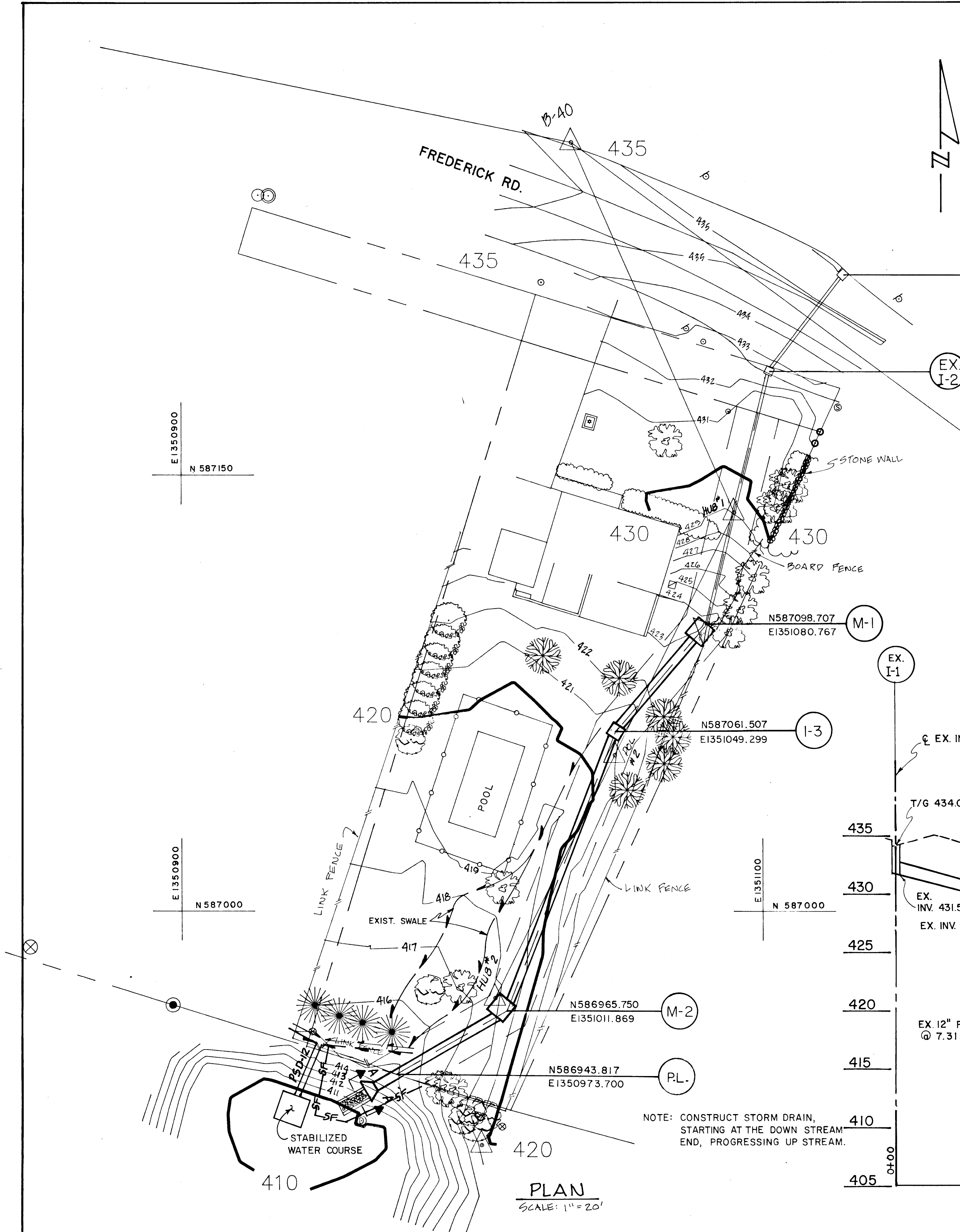
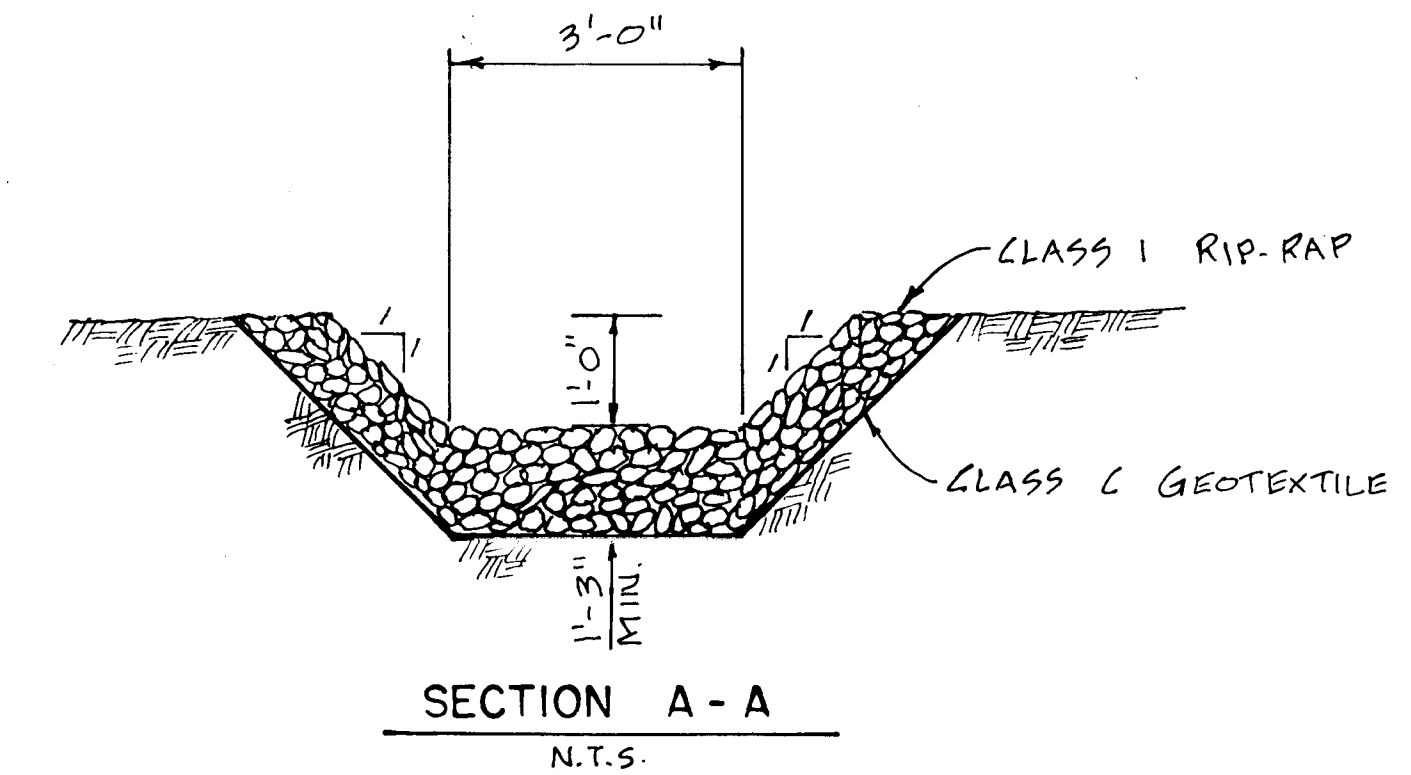


B-40
N-581264.584, E-1351034.480



B-39
N-587008.209, E-1351381.298

| STAKE OUT TABLE | | | | |
|-----------------|------------|------------|--------------|----------|
| TO | OCC. POINT | BACK SIGHT | ANGLE | DIST. |
| M-1 | HUB 2 | HUB 1 | 3° 16' 32" | 147.814' |
| I-3 | " | " | 358° 07' 41" | 100.333' |
| M-2 | " | " | 110° 58' 58" | 6.001' |
| PL. | " | " | 206° 00' 25" | 43.008' |

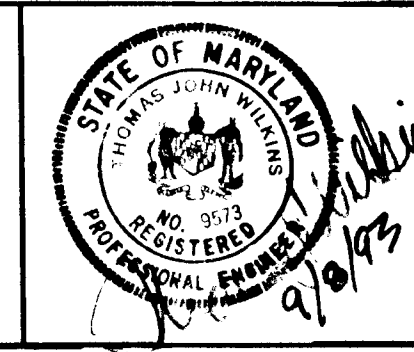


PROFILE
Scale: 1" = 30' HOR.
1" = 5' VERT.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DATE: 9-8-93
DATE: 9/8/93

DATE: 9-8-93
DATE: 9-8-93



| | |
|------------|--|
| DES. T.W. | |
| DRN. AM/WH | |
| CHK. T.W. | |
| DATE: | |
| BY NO. | |
| REVISION | |
| DATE | |

STORM DRAIN PROFILES
STA. 6+40±
FREDERICK ROAD

DATE: 600' SCALE MAP NO. 24 BLOCK NO. 1

CENTENNIAL LANE
CAPITAL PROJECT J-4015-II
ELECTION DISTRICT NO. 2
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 15A OF 36