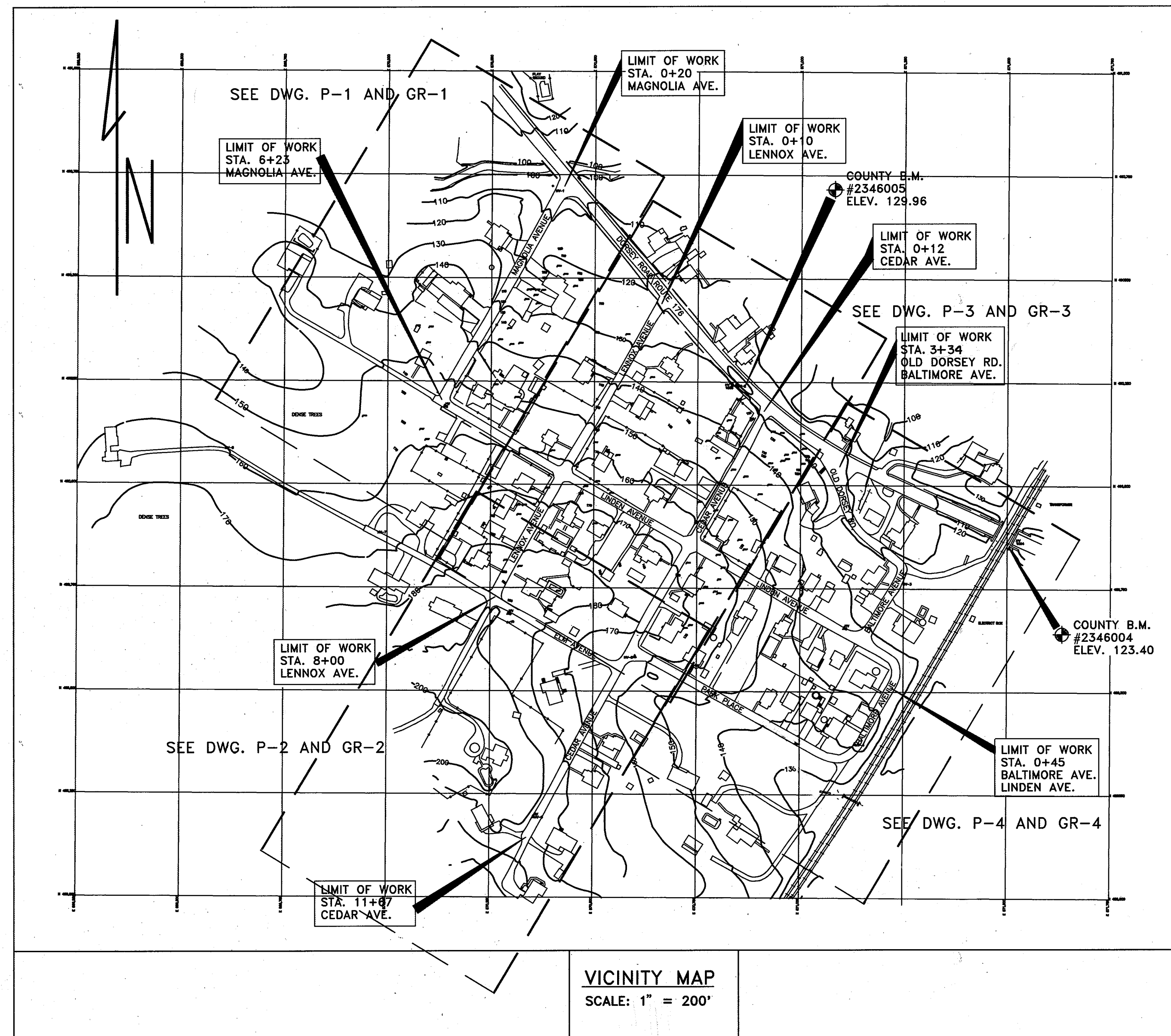


GENERAL NOTES

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS, SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB AT ALL TIMES.
- THE CONTRACTOR WILL BE REQUIRED TO PERFORM HIS OWN TESTS TO VERIFY LOCATIONS AND DEPTHS OF EXISTING UTILITIES CROSSING THE PROPOSED STORM DRAINS PRIOR TO PLACING NEW STORM DRAINS, TO VERIFY THE NEED TO RELOCATE UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH GAS AND ELECTRIC COMPANIES TO RELOCATE THESE FACILITIES WHEN NECESSARY.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:  
BALTIMORE GAS AND ELECTRIC CO. - CONTRACTOR SERVICE: 850-4620  
BALTIMORE GAS AND ELECTRIC CO. - UNDERGROUND DAMAGE CONTROL: 685-0123  
  
BUREAU OF UTILITIES, HOWARD COUNTY DEPT. OF PUBLIC WORKS: 313-4900  
C & P TELEPHONE COMPANY: 954-6232  
MISS UTILITY: 1-800-257-7777  
COLONIAL PIPELINE CO. - 795-1390  
STATE HIGHWAY ADMINISTRATION - 531-5533
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- ALL STORM SEWER MAINS SHALL BE REINFORCED CONCRETE PIPE, CLASS IV UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL STORM SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- TRENCH REPAIR TO BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAILS.
- ALL WORK WILL BE IN ACCORDANCE WITH HOWARD COUNTY STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- LENGTH OF OPEN TRENCH WILL BE LIMITED TO THAT WHICH CAN BE FILLED AND STABILIZED WITHIN ONE WORKING DAY.
- CONTRACTOR SHALL BE REQUIRED TO REMOVE AND REINSTALL ALL EXISTING SIGNS, FENCES OR MAILBOXES WITHIN THE LIMIT OF WORK AT A LOCATION DETERMINED BY THE CONTRACTOR. ALL COSTS INCURRED BY THE CONTRACTOR SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS OF WORK PROVIDED IN THE CONTRACT BID SCHEDULE.
- THE CONTRACTOR SHALL CONFINE ALL WORK WITHIN THE EXISTING COUNTY RIGHT-OF-WAY AND EASEMENTS SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL TEST PIT ALL LOCATIONS WHERE PROPOSED STORM DRAINS CROSS EXISTING UTILITIES AS DIRECTED BY THE ENGINEER.



INDEX OF DRAWINGS

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| 2 OF 24   | TYPICAL SECTIONS                             | C-1      |
| 3 OF 24   | TYPICAL SECTIONS                             | C-2      |
| 4 OF 24   | MISC. DETAILS                                | C-3      |
| 5 OF 24   | SURVEY CONTROL DATA                          | C-4      |
| 6 OF 24   | DRAINAGE MAP AND DATA                        | G-2      |
| 7 OF 24   | STORM DRAIN AND ROAD IMPROVEMENT PLAN        | P-1      |
| 8 OF 24   | STORM DRAIN AND ROAD IMPROVEMENT PLAN        | P-2      |
| 9 OF 24   | STORM DRAIN AND ROAD IMPROVEMENT PLAN        | P-3      |
| 10 OF 24  | STORM DRAIN AND ROAD IMPROVEMENT PLAN        | P-4      |
| 11 OF 24  | GRADING, SEDIMENT AND EROSION CONTROL PLAN   | GR-1     |
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| 13 OF 24  | GRADING, SEDIMENT AND EROSION CONTROL PLAN   | GR-3     |
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| 17 OF 24  | STORM DRAIN PROFILES                         | PR-3     |
| 18 OF 24  | SUMM. OF STRUCTURES, PIPE AND DITCH SCHEDULE | C-5      |
| 19 OF 24  | PROFILE-CURB FLOW LINE                       | PR-4     |
| 20 OF 24  | PROFILE-CURB FLOW LINE                       | PR-5     |
| 21 OF 24  | PROFILE-CURB FLOW LINE                       | PR-6     |
| 22 OF 24  | PROFILE-CURB FLOW LINE                       | PR-7     |
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INDEX OF CROSS SECTIONS

NOTE: THESE DESIGNED SHEETS ARE SUPPLEMENTAL TO THE ABOVE SHEETS.

| SHEET NO. | TITLE                                 | DRAWING NO. |
|-----------|---------------------------------------|-------------|
| 1         | TITLE SHEET                           |             |
| 2         | MAGNOLIA AVE. STA. 0+00 to STA. 1+50  | CS-1        |
| 3         | MAGNOLIA AVE. STA. 2+00 to STA. 3+50  | CS-2        |
| 4         | MAGNOLIA AVE. STA. 4+00 to STA. 5+50  | CS-3        |
| 5         | MAGNOLIA AVE. STA. 6+00 to STA. 6+09  | CS-4        |
| 6         | LINDEN AVE. STA. 0+00 to STA. 1+50    | CS-5        |
| 7         | LINDEN AVE. STA. 2+00 to STA. 4+00    | CS-6        |
| 8         | LINDEN AVE. STA. 4+50 to STA. 6+00    | CS-7        |
| 9         | LINDEN AVE. STA. 6+50 to STA. 8+50    | CS-8        |
| 10        | LINDEN AVE. STA. 9+06 to STA. 10+56   | CS-9        |
| 11        | LINDEN AVE. STA. 11+06 to STA. 12+56  | CS-10       |
| 12        | LINDEN AVE. STA. 13+06                | CS-11       |
| 13        | LENNOX AVE. STA. 0+00 to STA. 1+50    | CS-12       |
| 14        | LENNOX AVE. STA. 2+00 to STA. 3+50    | CS-13       |
| 15        | LENNOX AVE. STA. 4+00 to STA. 4+87    | CS-14       |
| 16        | LENNOX AVE. STA. 5+00 to STA. 6+50    | CS-15       |
| 17        | LENNOX AVE. STA. 7+00 to STA. 8+00    | CS-16       |
| 18        | CEDAR AVE. STA. 0+00 to STA. 1+50     | CS-17       |
| 19        | CEDAR AVE. STA. 2+00 to STA. 3+50     | CS-18       |
| 20        | CEDAR AVE. STA. 3+70 to STA. 5+00     | CS-19       |
| 21        | CEDAR AVE. STA. 5+50 to STA. 7+00     | CS-20       |
| 22        | CEDAR AVE. STA. 7+22 to STA. 8+72     | CS-21       |
| 23        | CEDAR AVE. STA. 9+22 to STA. 10+72    | CS-22       |
| 24        | CEDAR AVE. STA. 11+22 to STA. 11+66   | CS-23       |
| 25        | ELM AVE. STA. 0+50 to STA. 2+00       | CS-24       |
| 26        | ELM AVE. STA. 2+50 to STA. 3+00       | CS-25       |
| 27        | PARK AVE. STA. 0+51 to STA. 2+01      | CS-26       |
| 28        | PARK AVE. STA. 2+51 to STA. 4+00      | CS-27       |
| 29        | BALTIMORE AVE. STA. 0+00 to STA. 1+50 | CS-28       |
| 30        | BALTIMORE AVE. STA. 1+86              | CS-29       |
| 31        | BALTIMORE AVE. STA. 3+69 to STA. 5+19 | CS-30       |
| 32        | OLD DORSEY RD. STA. 0+00 to STA. 1+50 | CS-31       |
| 33        | OLD DORSEY RD. STA. 1+63 to STA. 3+13 | CS-32       |

# LENNOX PARK STORM DRAINAGE IMPROVEMENTS HOWARD COUNTY, MARYLAND CAPITAL PROJECT NO. D-1100 ELECTION DISTRICT NO. 1

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

*J. Co. Campbell* 6/5/96  
SIGNATURE DATE

U.S. NATURAL RESOURCES CONSERVATION SERVICE

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

*Richard D. Parks* 6/5/96  
SIGNATURE DATE

CERTIFICATION BY THE DEVELOPER

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

*Richard D. Parks* 6/5/96  
SIGNATURE OF DEVELOPER DATE

CERTIFICATION BY THE ENGINEER

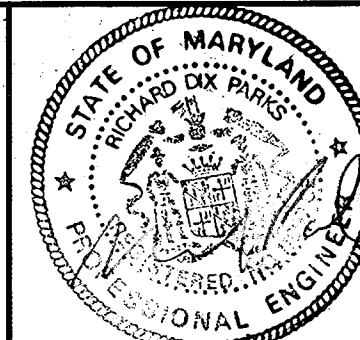
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT."

*Richard D. Parks* 3-25-96  
SIGNATURE - RICHARD D. PARKS, P.E. MD. LIC. # 11697 DATE

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James M. ...* 6/5/96  
DIRECTOR OF PUBLIC WORKS - DATE  
*Richard D. Parks* 6/5/96  
CHIEF, BUREAU OF ENGINEERING - DATE  
*Richard D. Parks* 6-5-96  
CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE  
*Richard D. Parks* 6-5-96  
CHIEF, BUREAU OF HIGHWAYS - DATE

**acer**  
Acer Engineers & Consultants, Inc.  
201 South Cleveland Avenue, Suite 304  
Hagerstown, Maryland 21740  
Tel 301-791-1100



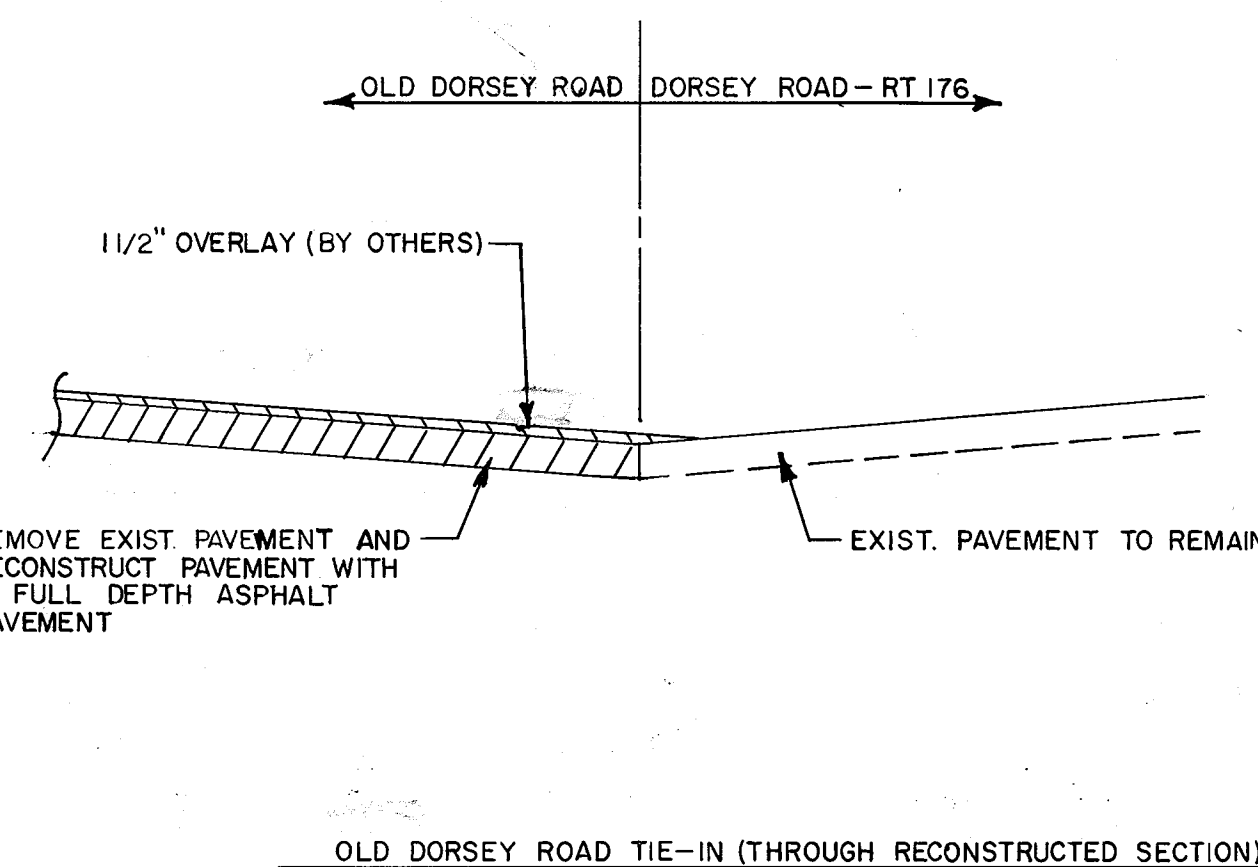
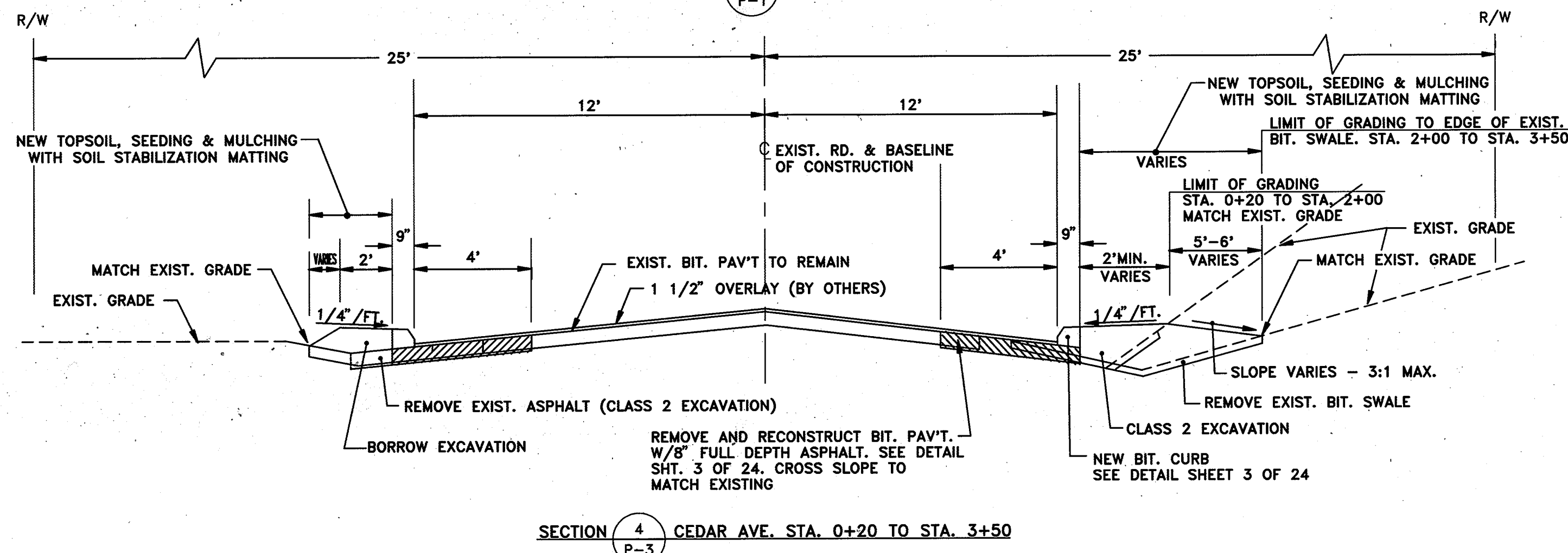
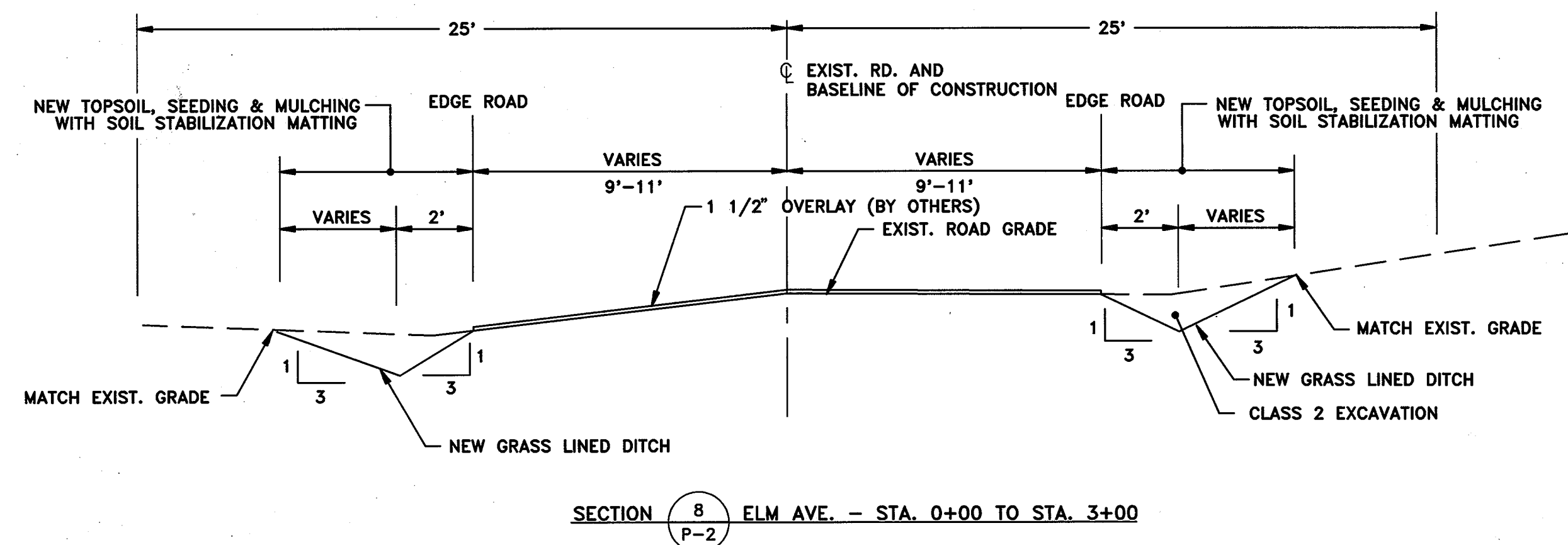
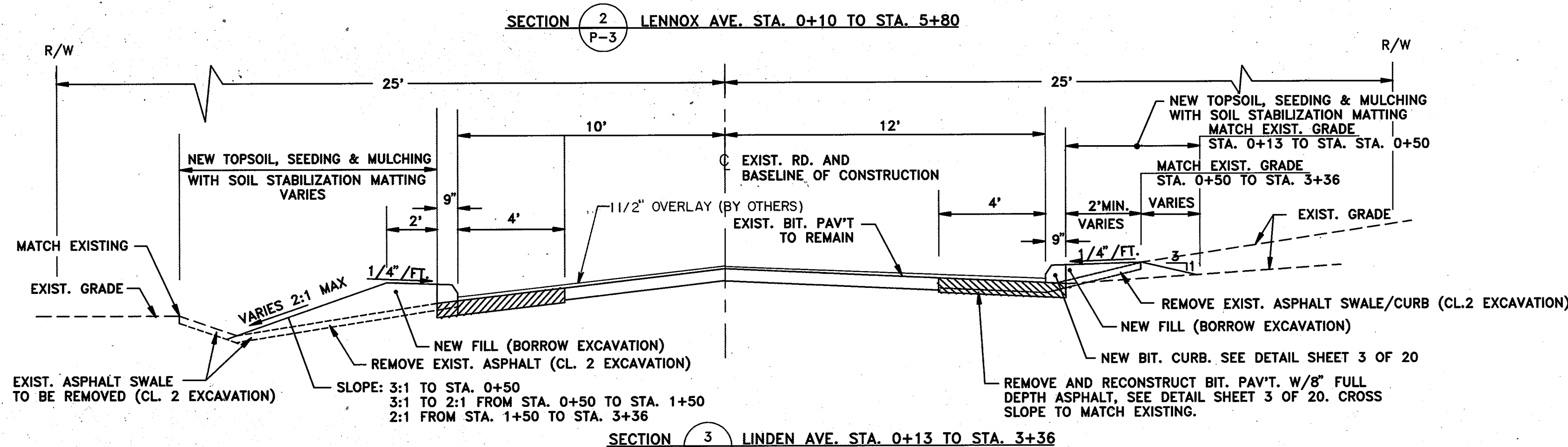
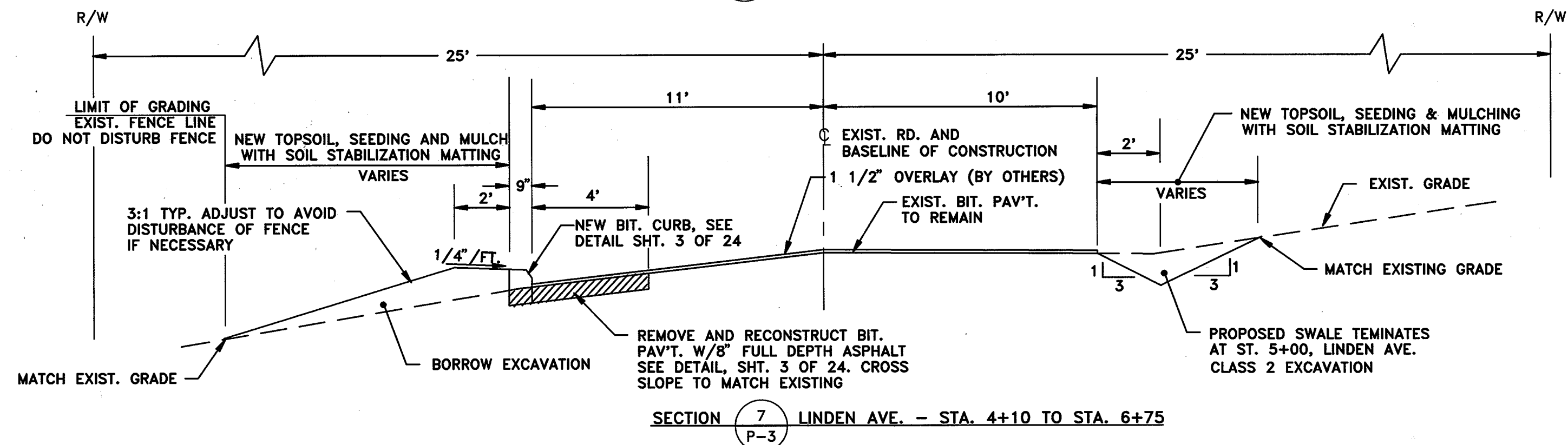
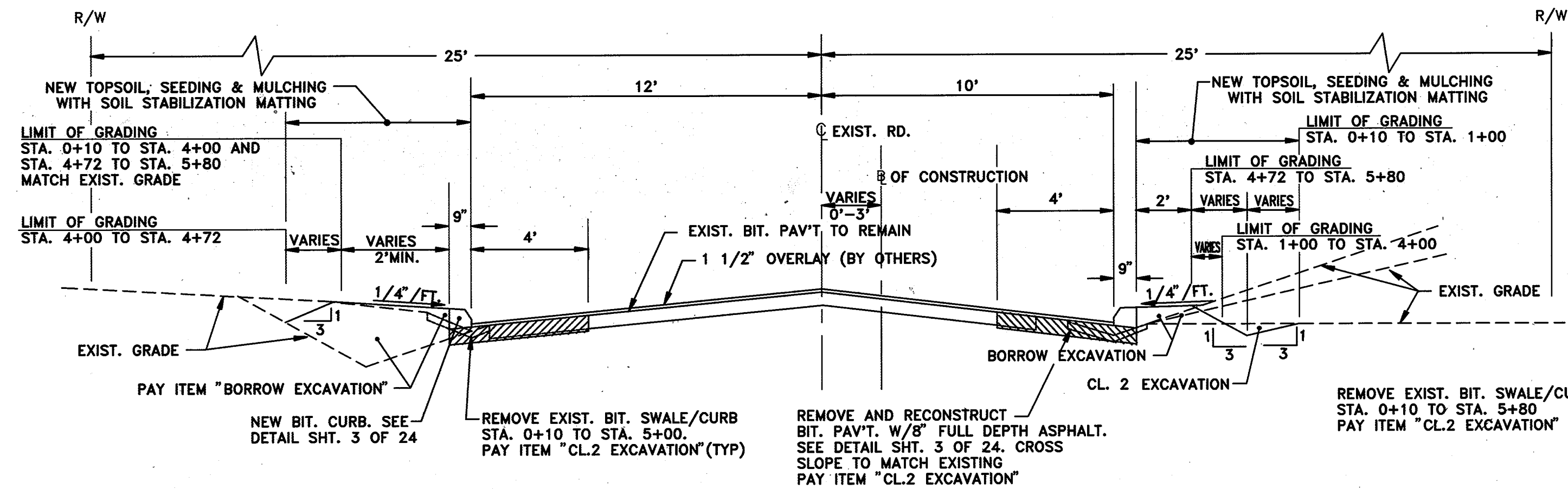
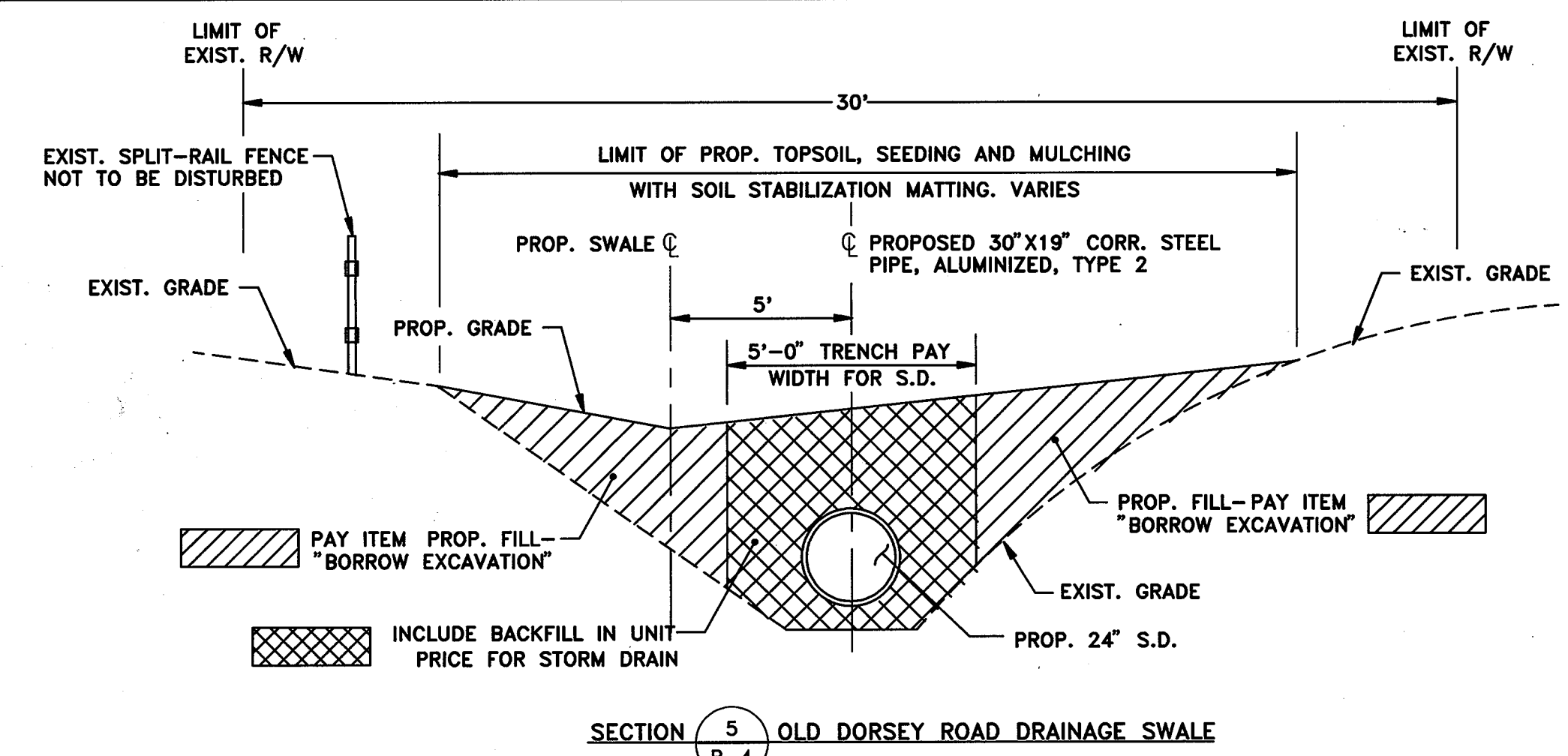
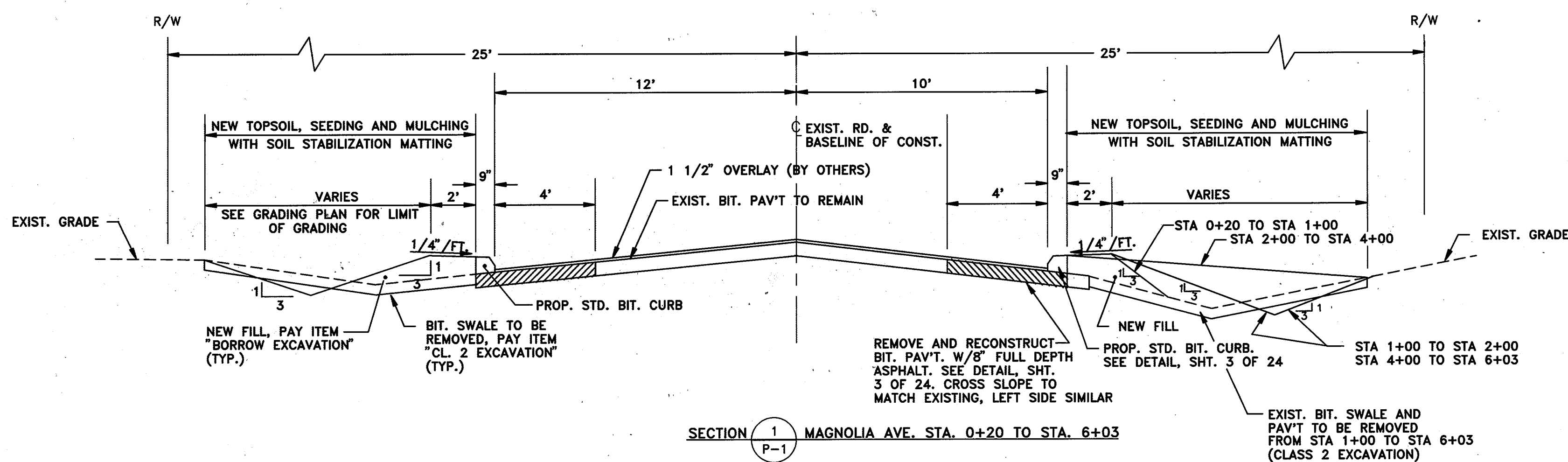
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| DRN: A.C.M. |    |    |          |      |
| CHK: R.D.P. |    |    |          |      |
| DATE: 03/93 | BY | NO | REVISION | DATE |

LENNOX PARK  
A RESIDENTIAL COMMUNITY

600' SCALE MAP NO. 43 BLOCK NO. 6

CAPITAL PROJECT NO. D-1100  
LENNOX PARK  
STORM DRAINAGE IMPROVEMENTS  
TITLE SHEET AND GENERAL NOTES

SCALE NONE  
SHEET 1 OF 24  
DWG. NO. G-1



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

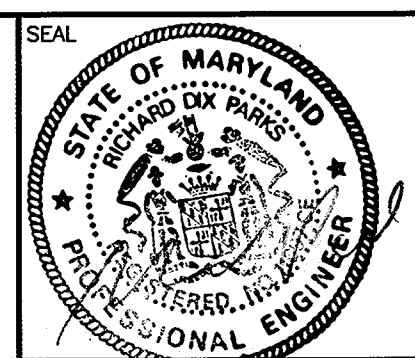
*James W. Davis*  
DIRECTOR OF PUBLIC WORKS - DATE

*Richard S. ...*  
CHIEF, BUREAU OF ENGINEERING - DATE

*Elizabeth ...*  
CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*Charles ...*  
CHIEF, BUREAU OF HIGHWAYS - DATE

**acer**  
Acer Engineers & Consultants, Inc.  
201 South Cleveland Avenue, Suite 304  
Hagerstown, Maryland 21740  
Tel 301-791-1100



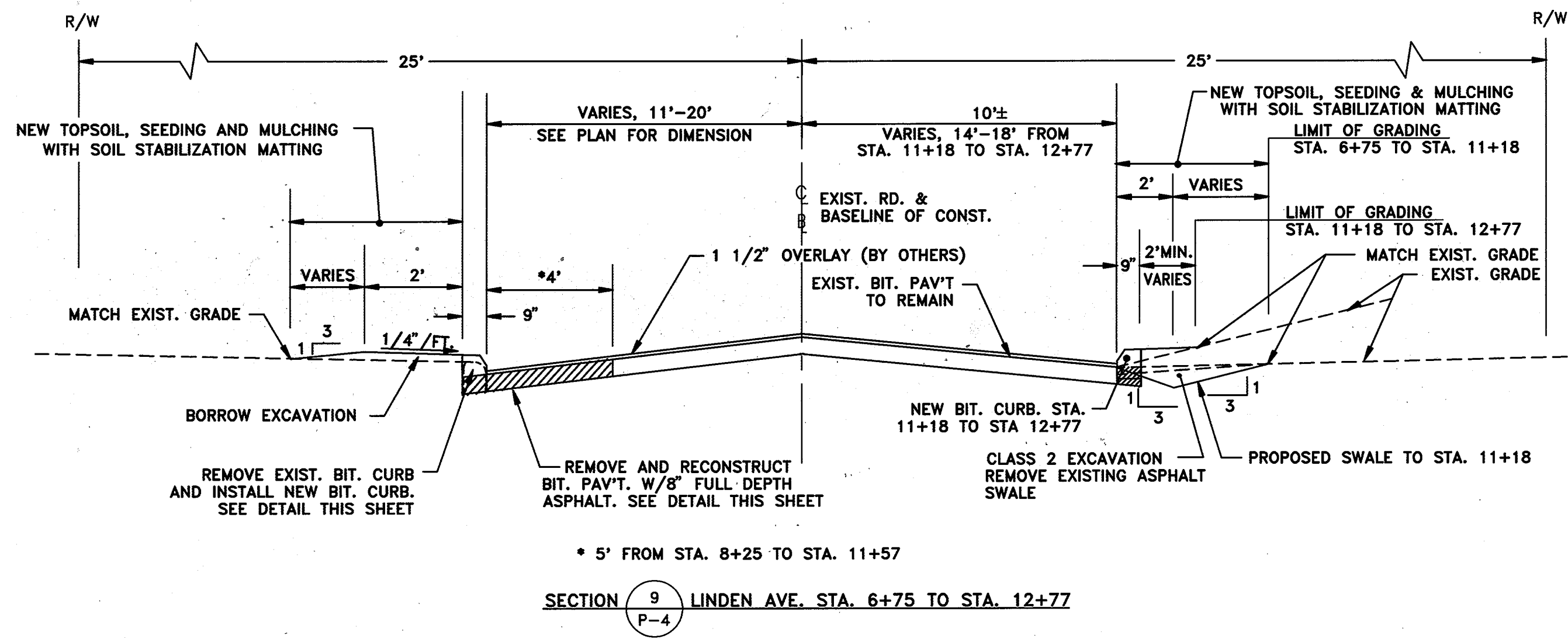
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| CHK: R.D.P. |    |          |      |                       |             |
| DATE: 01/93 |    |          |      |                       |             |
| BY          | NO | REVISION | DATE | 600' SCALE MAP NO. 43 | BLOCK NO. 6 |

LENNOX PARK  
A RESIDENTIAL COMMUNITY

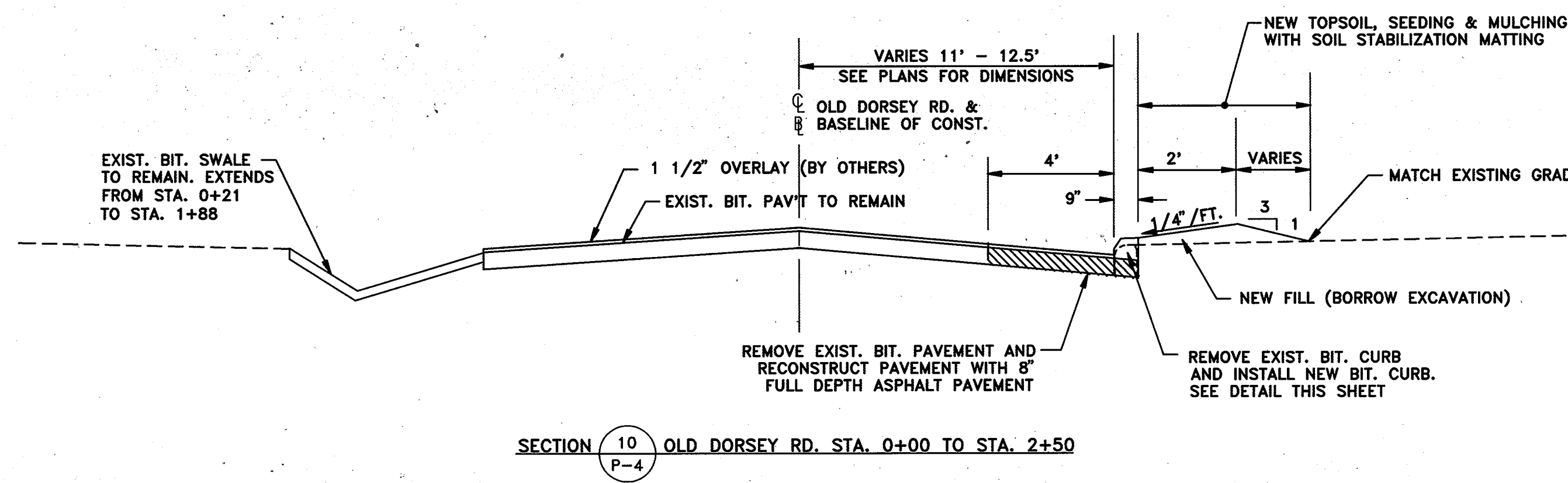
CAPITAL PROJECT NO. D-1100  
LENNOX PARK  
STORM DRAINAGE IMPROVEMENTS  
TYPICAL SECTIONS

SCALE NONE  
SHEET 2 OF 24  
DWG. NO. C-1

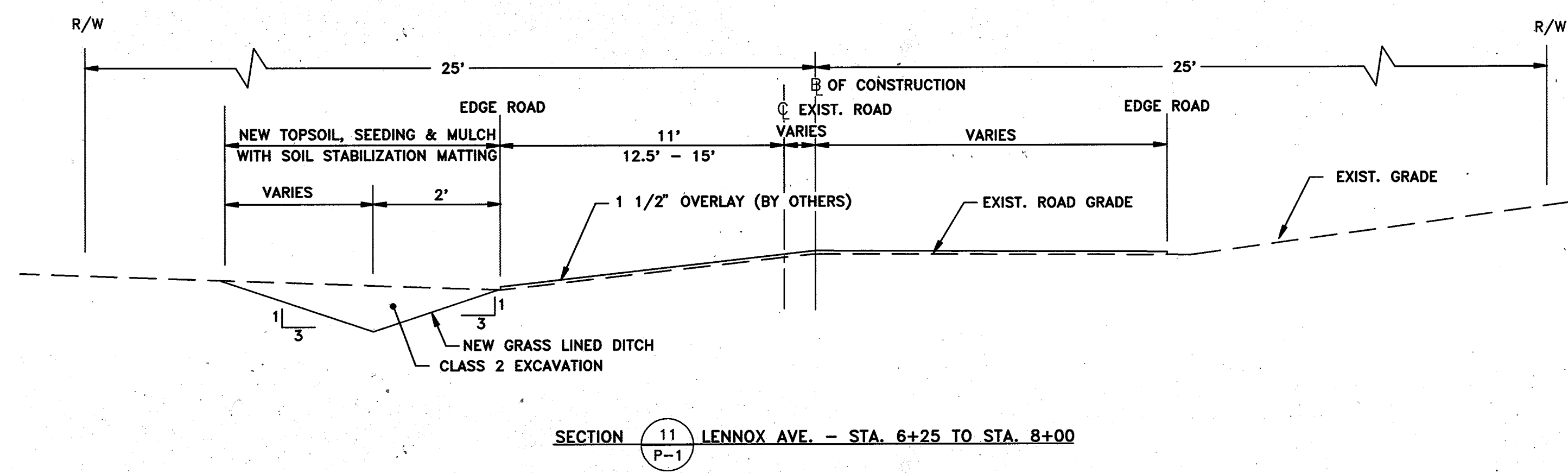




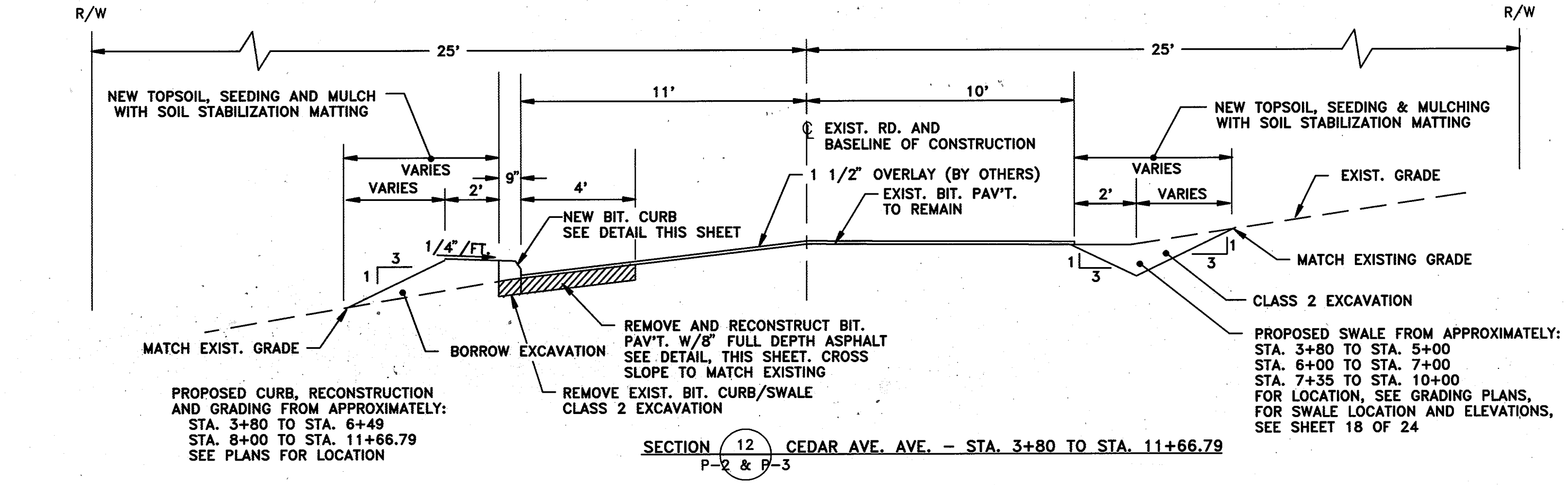
SECTION 9 LINDEN AVE. STA. 6+75 TO STA. 12+77  
P-4



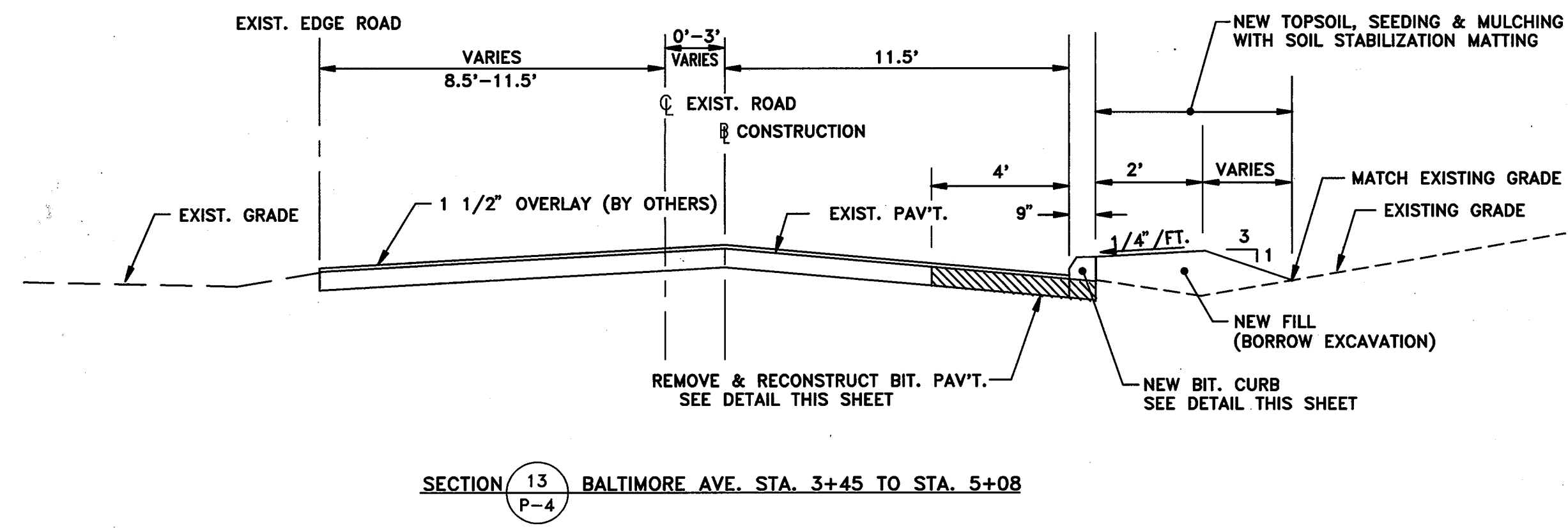
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P-4



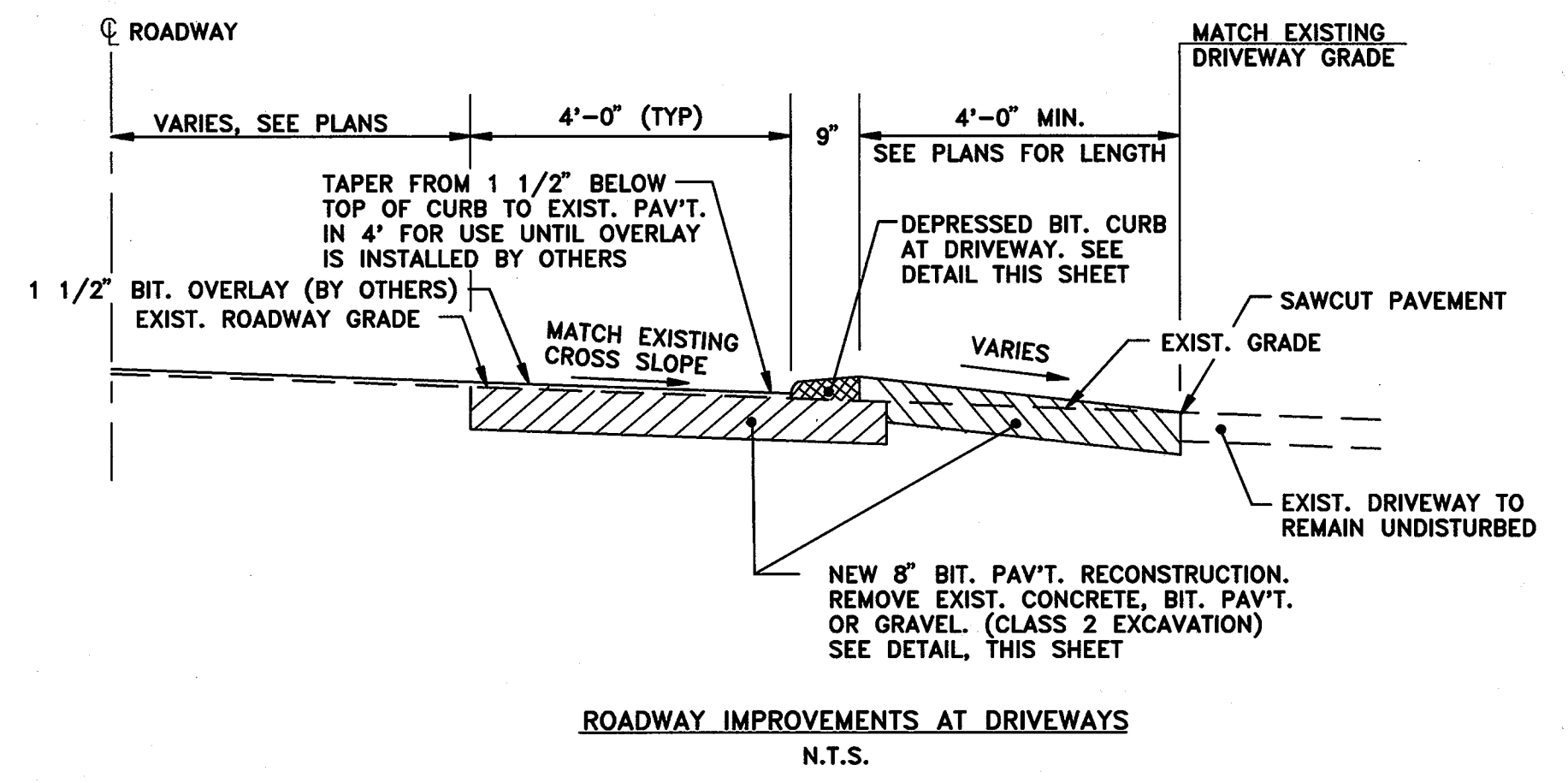
SECTION 11 LENNOX AVE. - STA. 6+25 TO STA. 8+00  
P-1



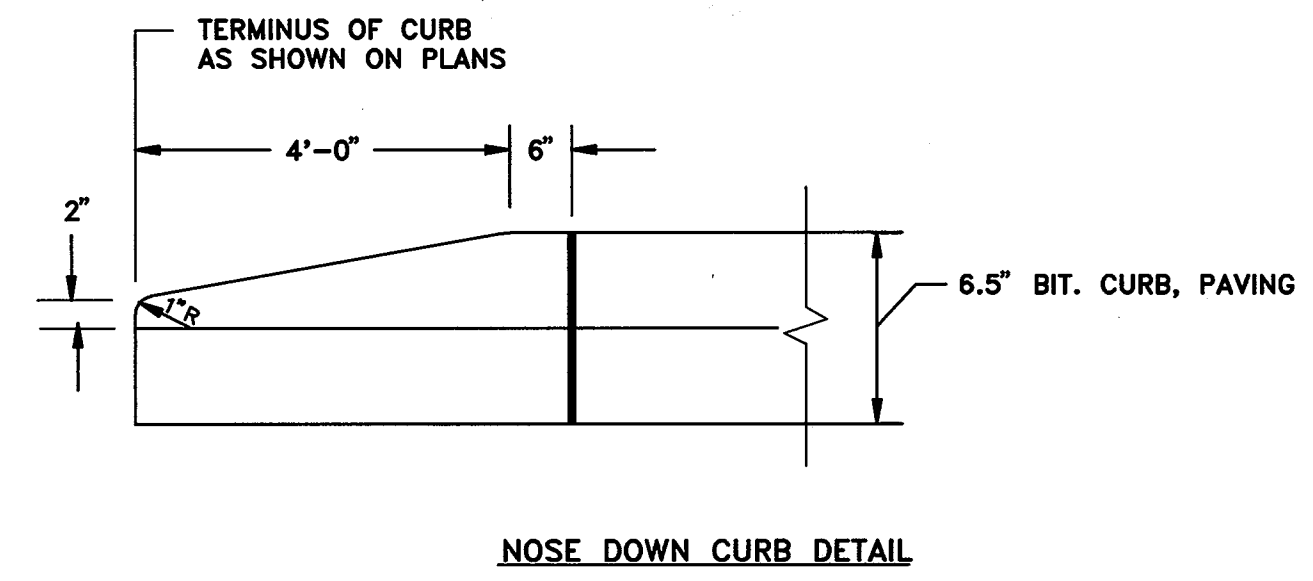
SECTION 12 CEDAR AVE. AVE. - STA. 3+80 TO STA. 11+66.79  
P-2 & P-3



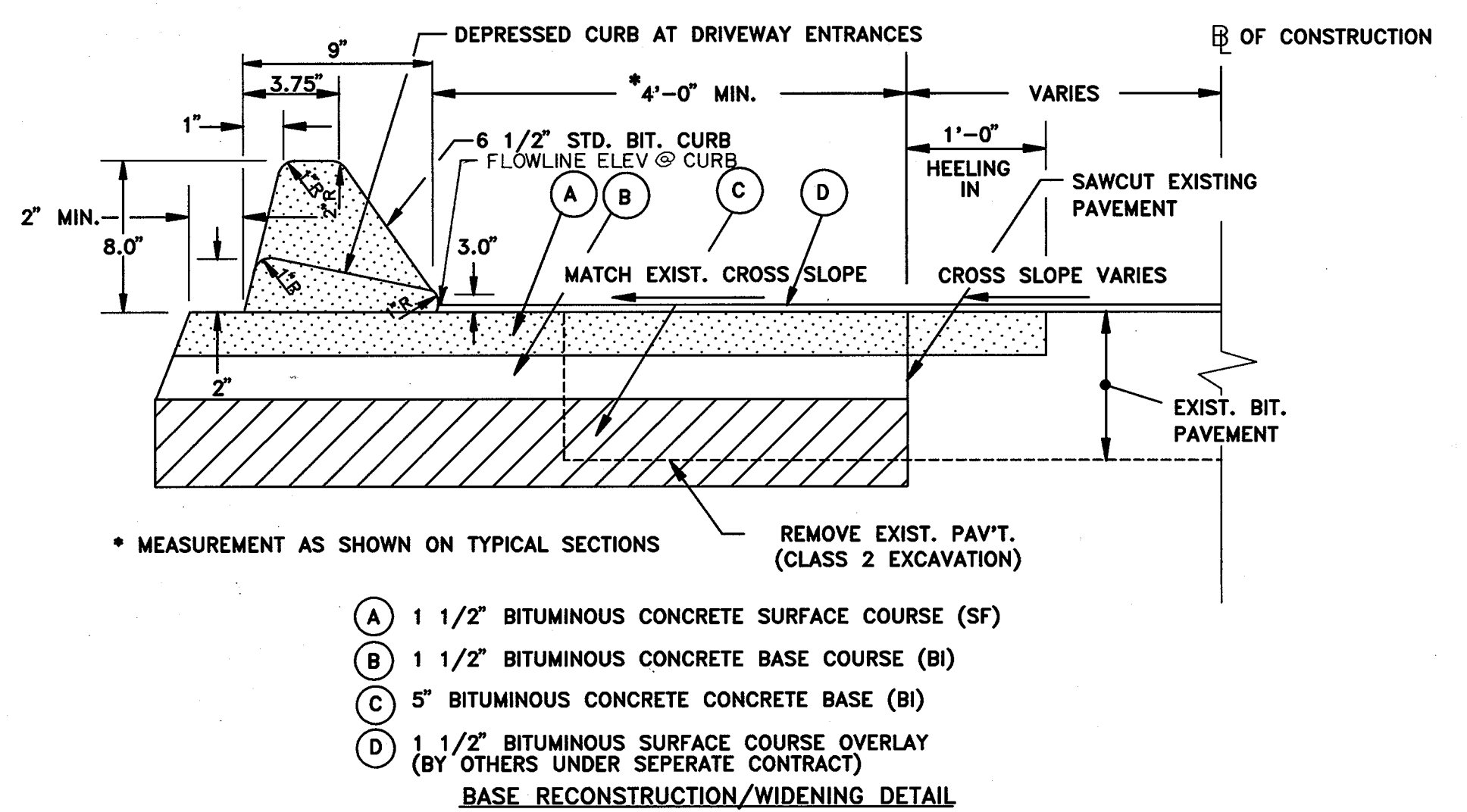
SECTION 13 BALTIMORE AVE. STA. 3+45 TO STA. 5+08  
P-4



ROADWAY IMPROVEMENTS AT DRIVEWAYS  
N.T.S.



NOSE DOWN CURB DETAIL



- (A) 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE (SF)
- (B) 1 1/2" BITUMINOUS CONCRETE BASE COURSE (BI)
- (C) 5" BITUMINOUS CONCRETE CONCRETE BASE (BI)
- (D) 1 1/2" BITUMINOUS SURFACE COURSE OVERLAY (BY OTHERS UNDER SEPARATE CONTRACT)

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

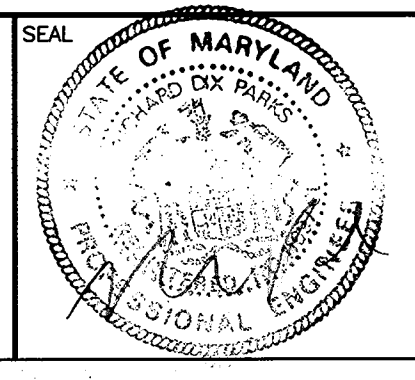
*James M. Lewis*  
DIRECTOR OF PUBLIC WORKS - DATE

*Paul J. Pagan* 6/5/96  
CHIEF, BUREAU OF ENGINEERING - DATE

*Charles W. Anderson* 6/5/96  
CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*Charles W. Anderson* 6/5/96  
CHIEF, BUREAU OF HIGHWAYS - DATE

**acer**  
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201 South Cleveland Avenue, Suite 304  
Hagerstown, Maryland 21740  
Tel 301-791-1100



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|-------------|----|----------|------|-----------------------|-------------|
| DES: R.D.P. |    |          |      |                       |             |
| DRN: A.C.M. |    |          |      |                       |             |
| CHK: R.D.P. |    |          |      |                       |             |
| DATE: 01/93 |    |          |      |                       |             |
| BY          | NO | REVISION | DATE | 600' SCALE MAP NO. 43 | BLOCK NO. 6 |

LENNOX PARK  
A RESIDENTIAL COMMUNITY

CAPITAL PROJECT NO. D-1100

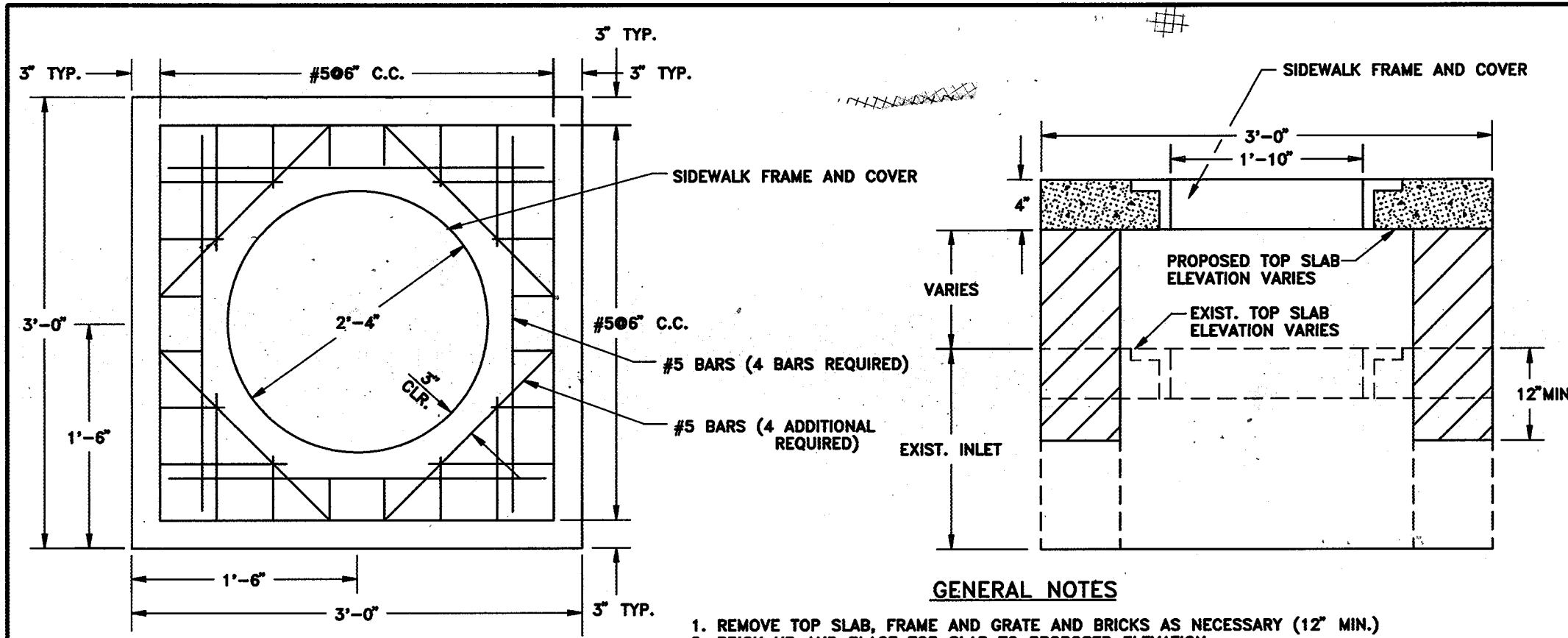
LENNOX PARK  
STORM DRAINAGE IMPROVEMENTS

TYPICAL SECTIONS

SCALE  
NONE

SHEET  
3 OF 24

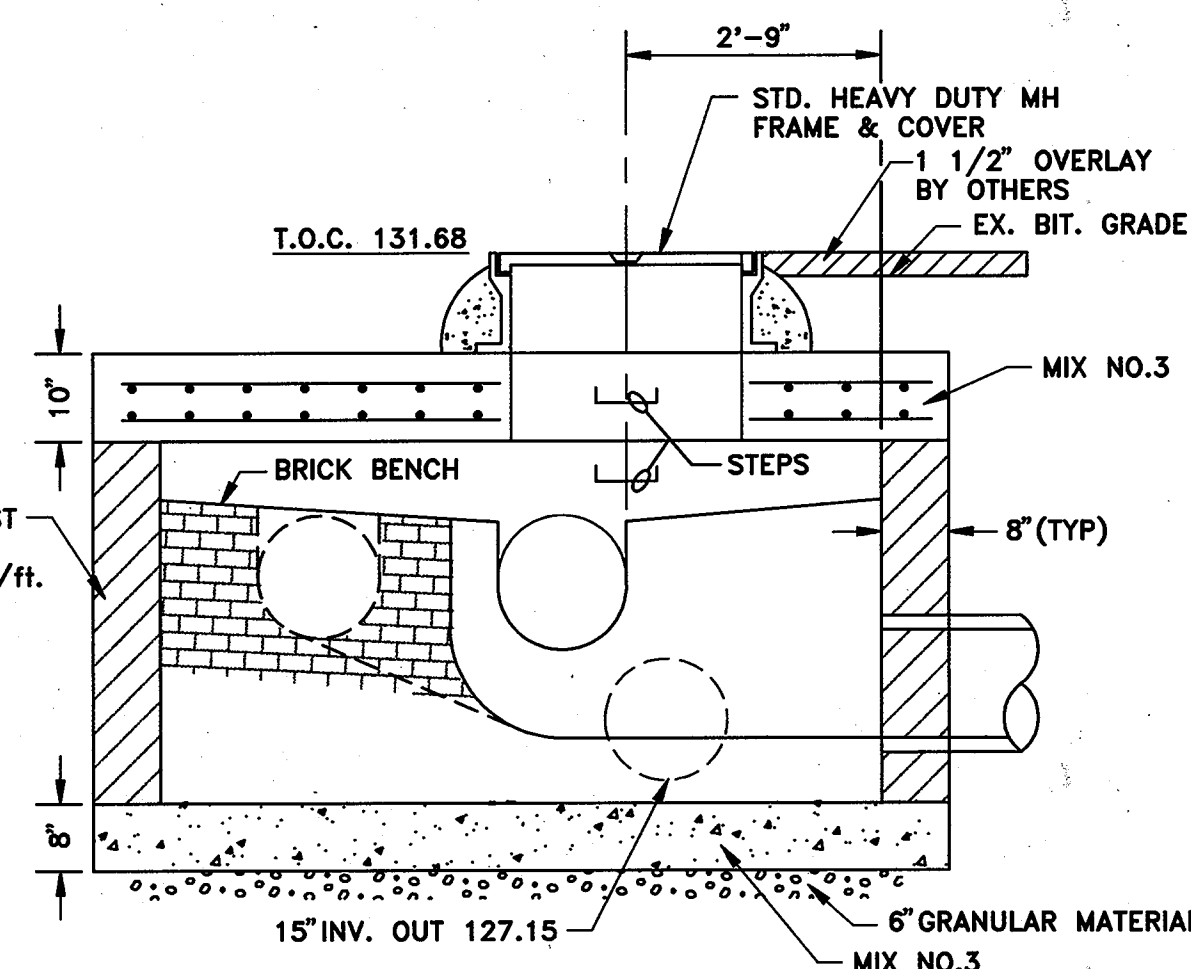
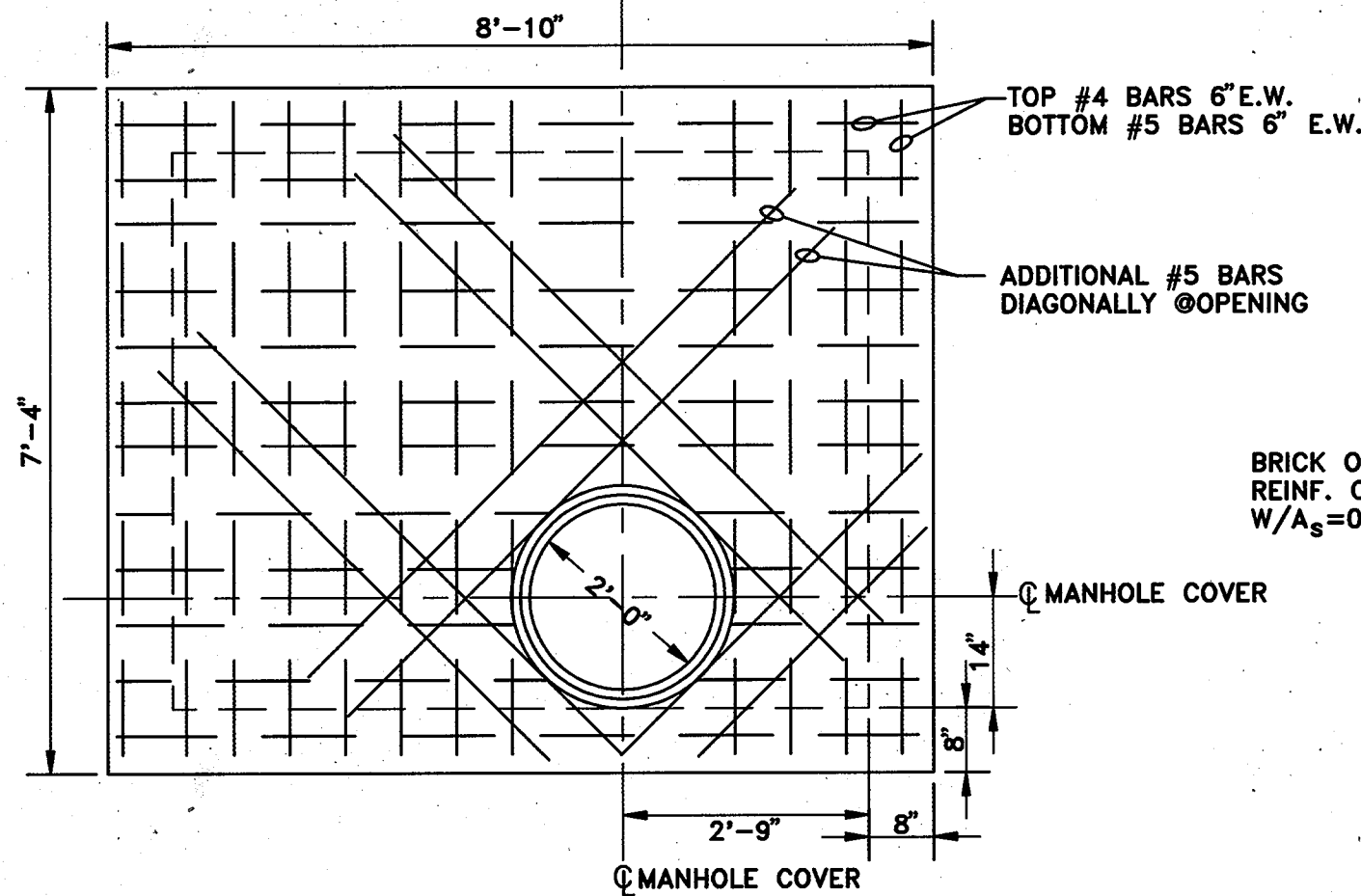
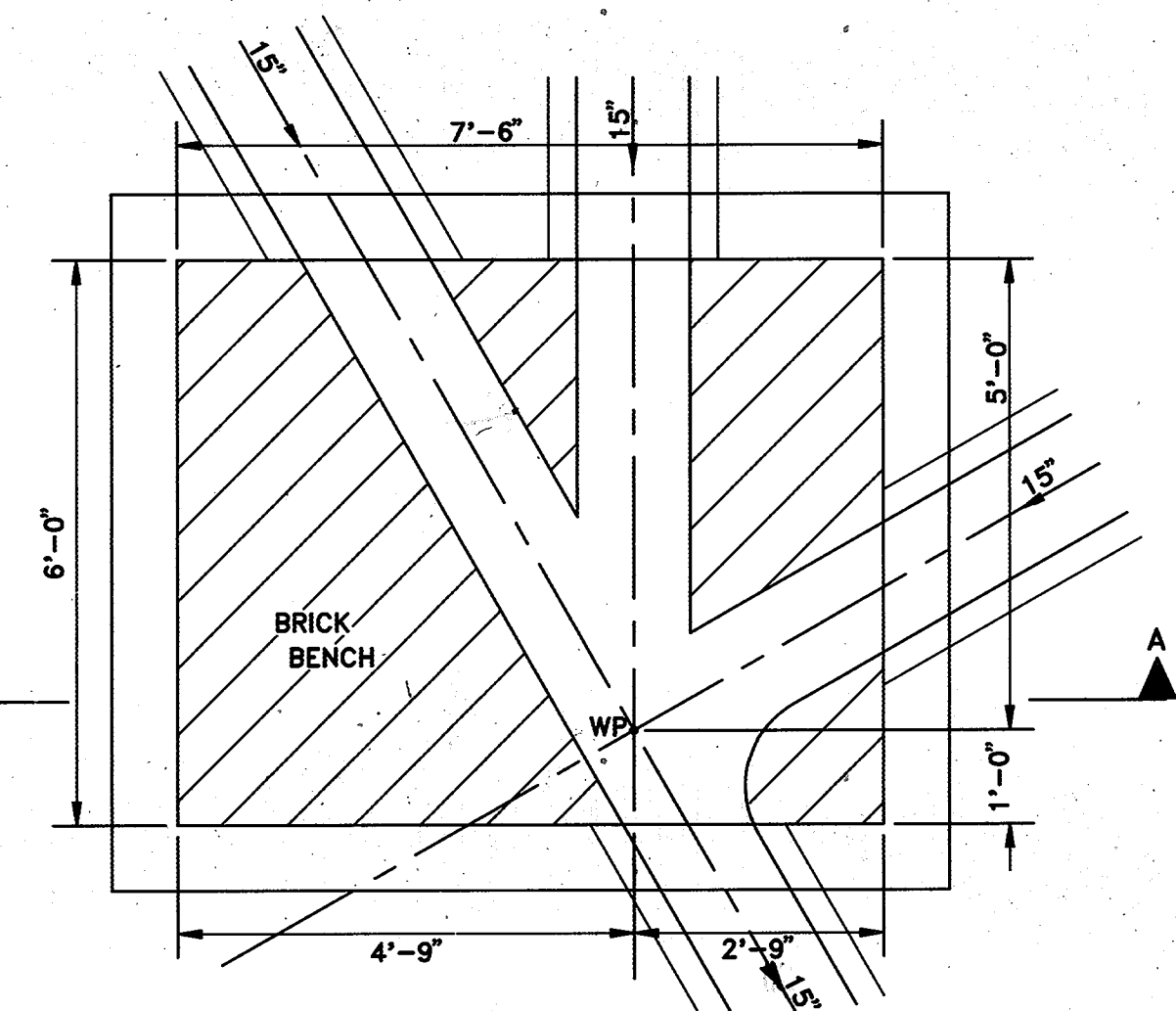
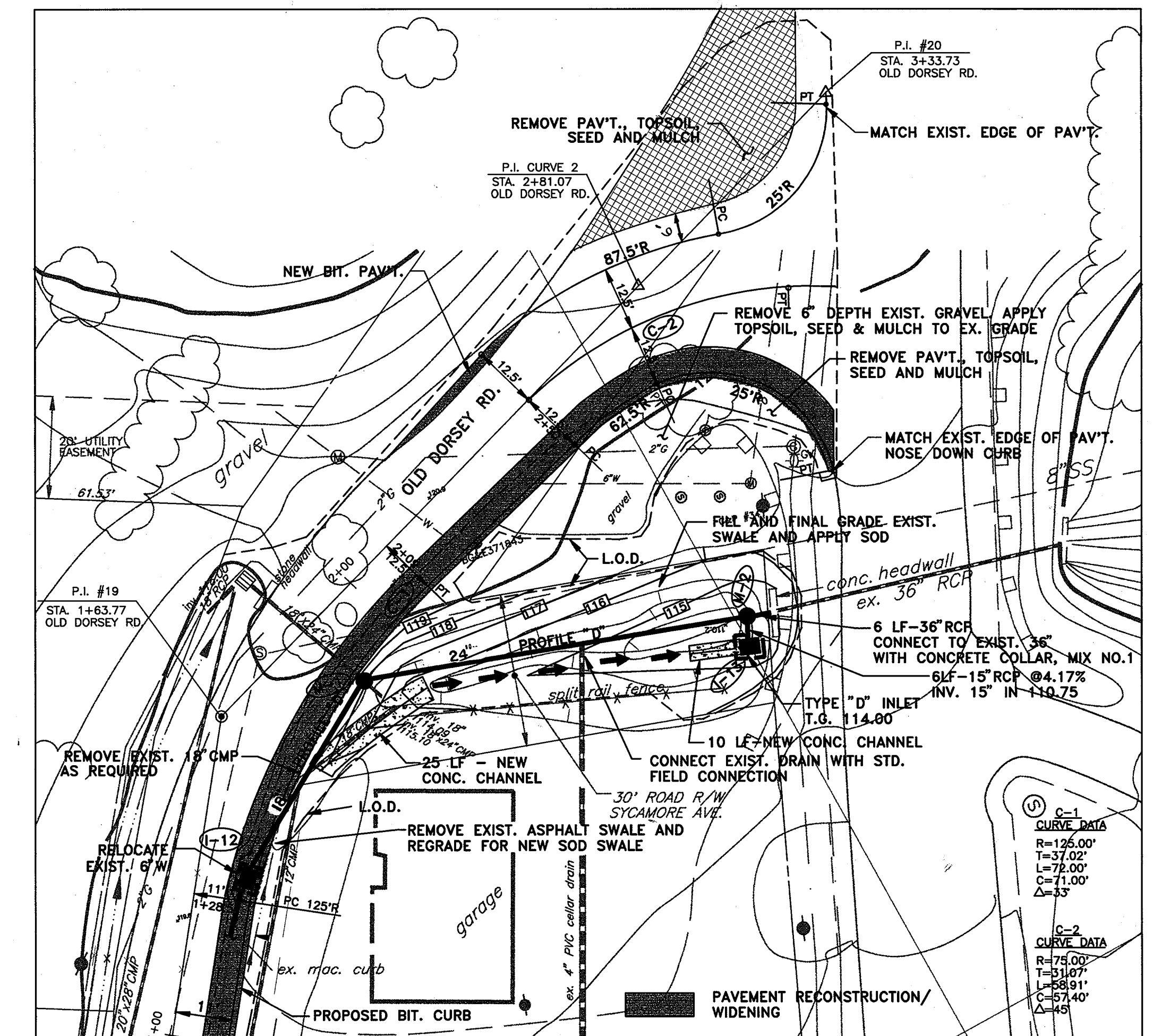
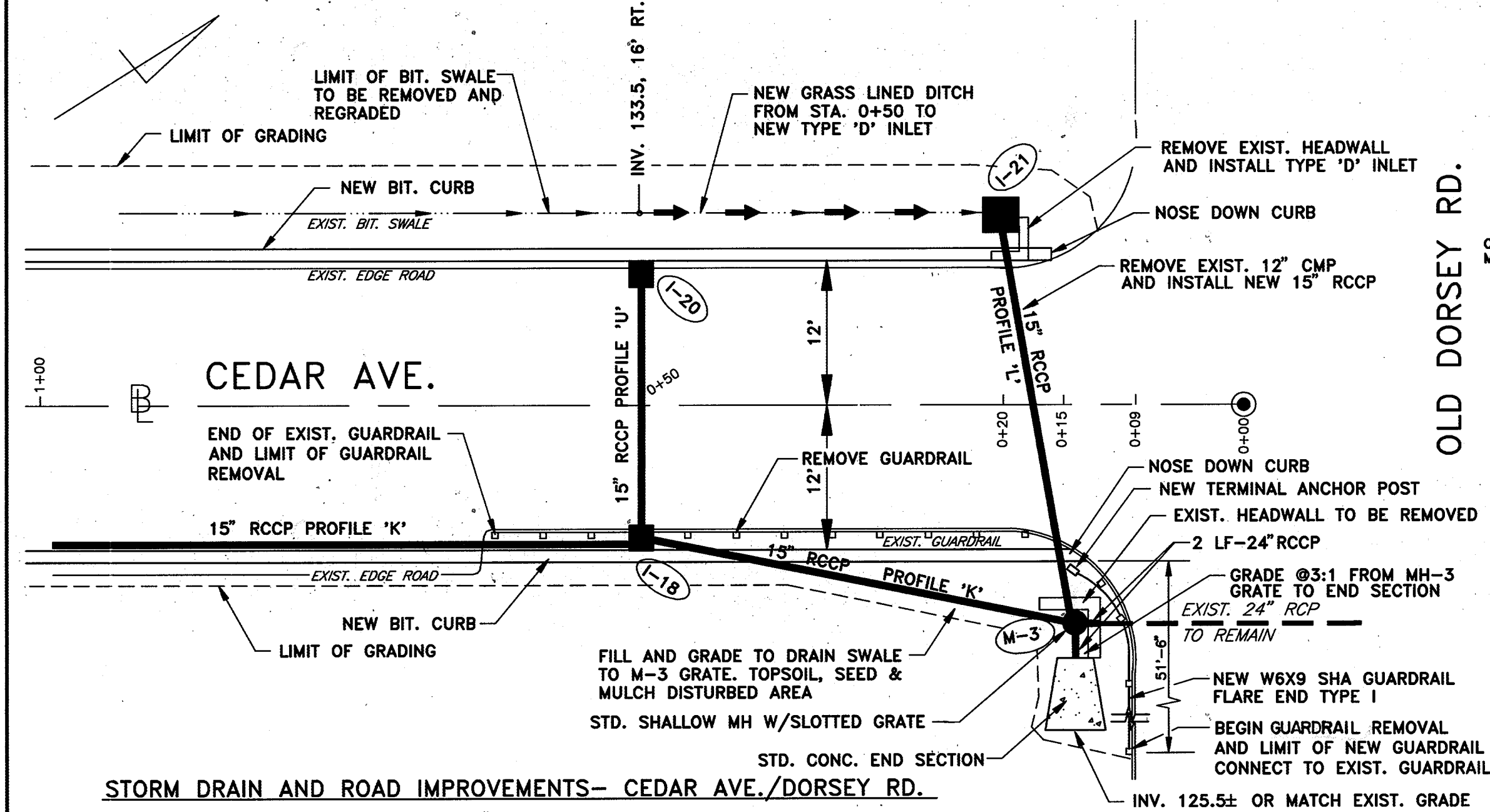
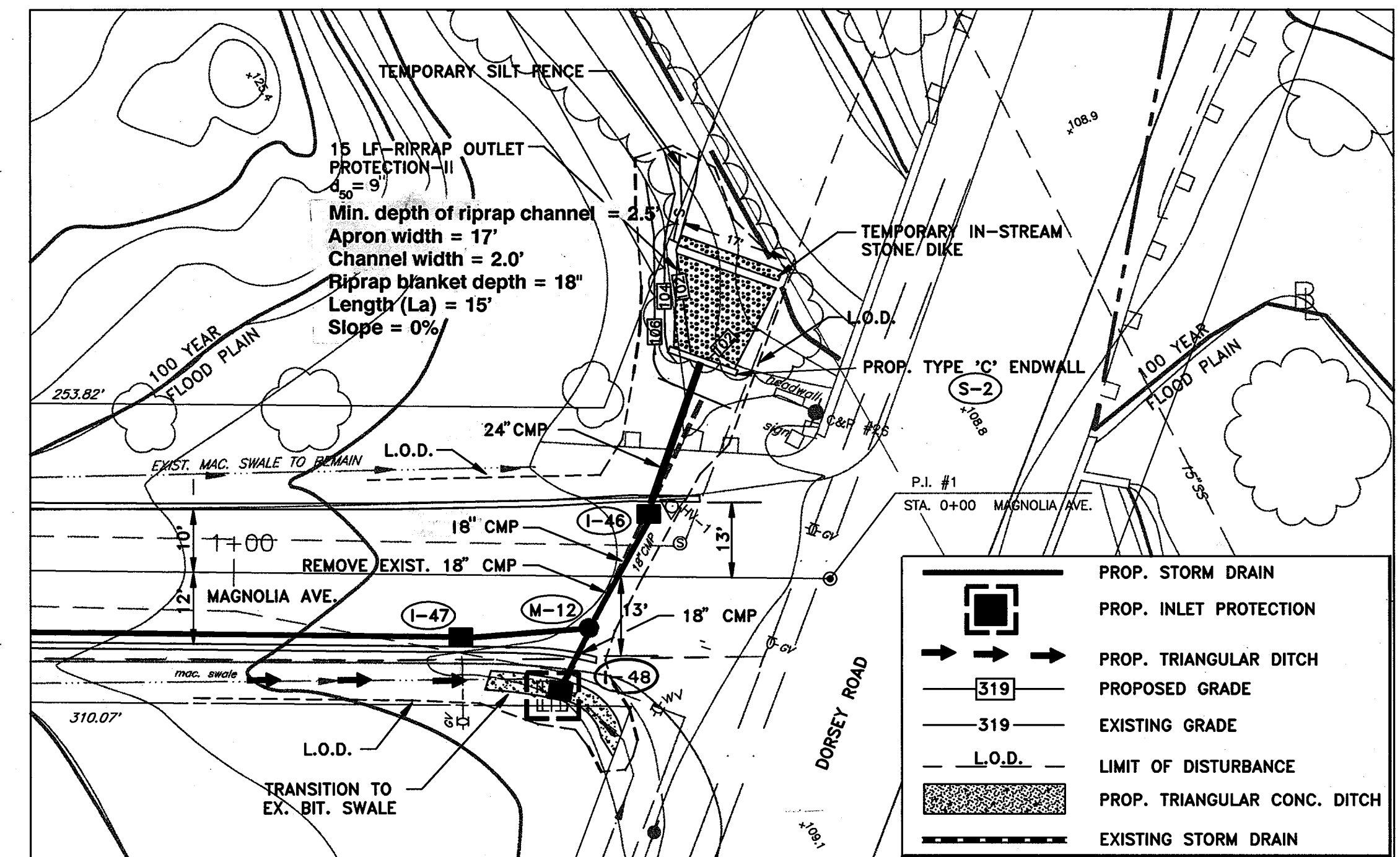
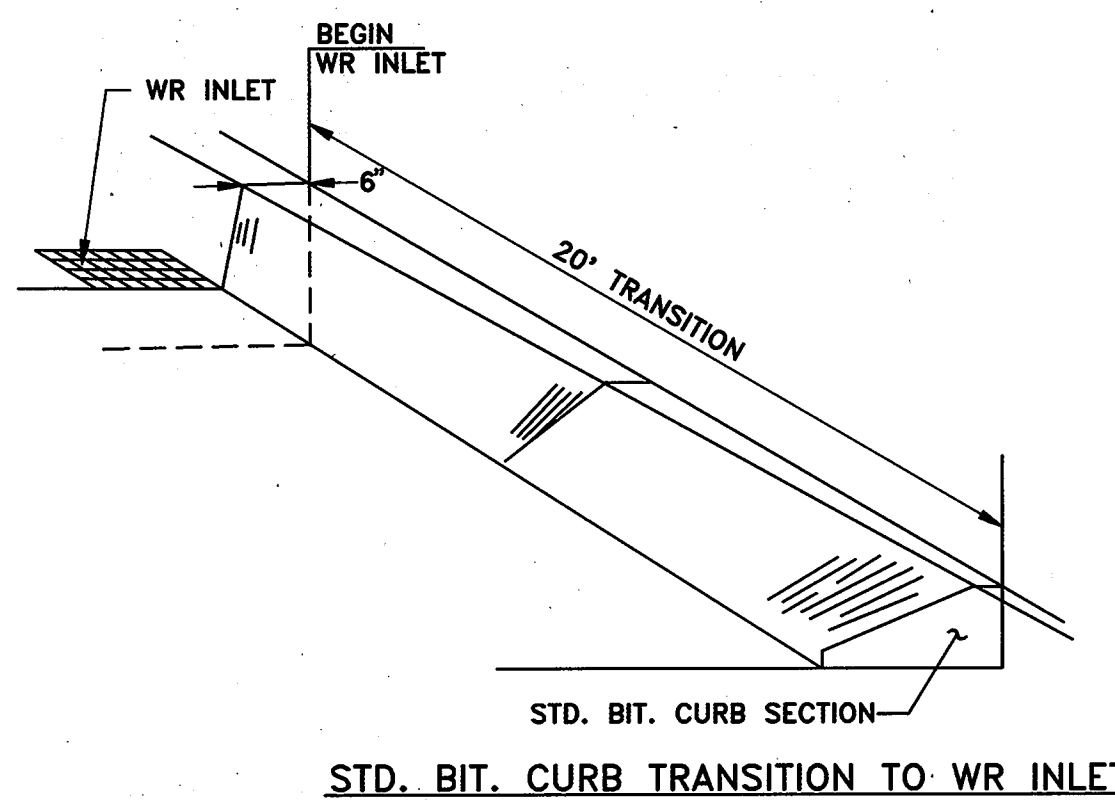
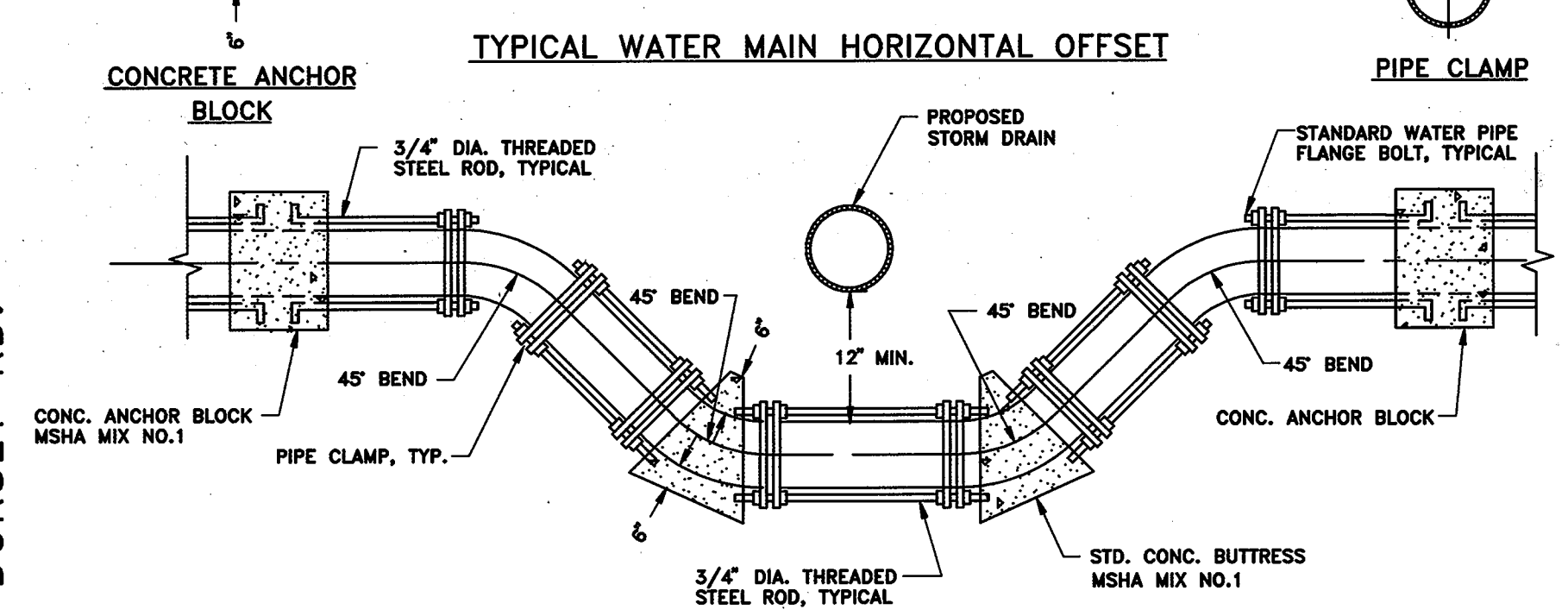
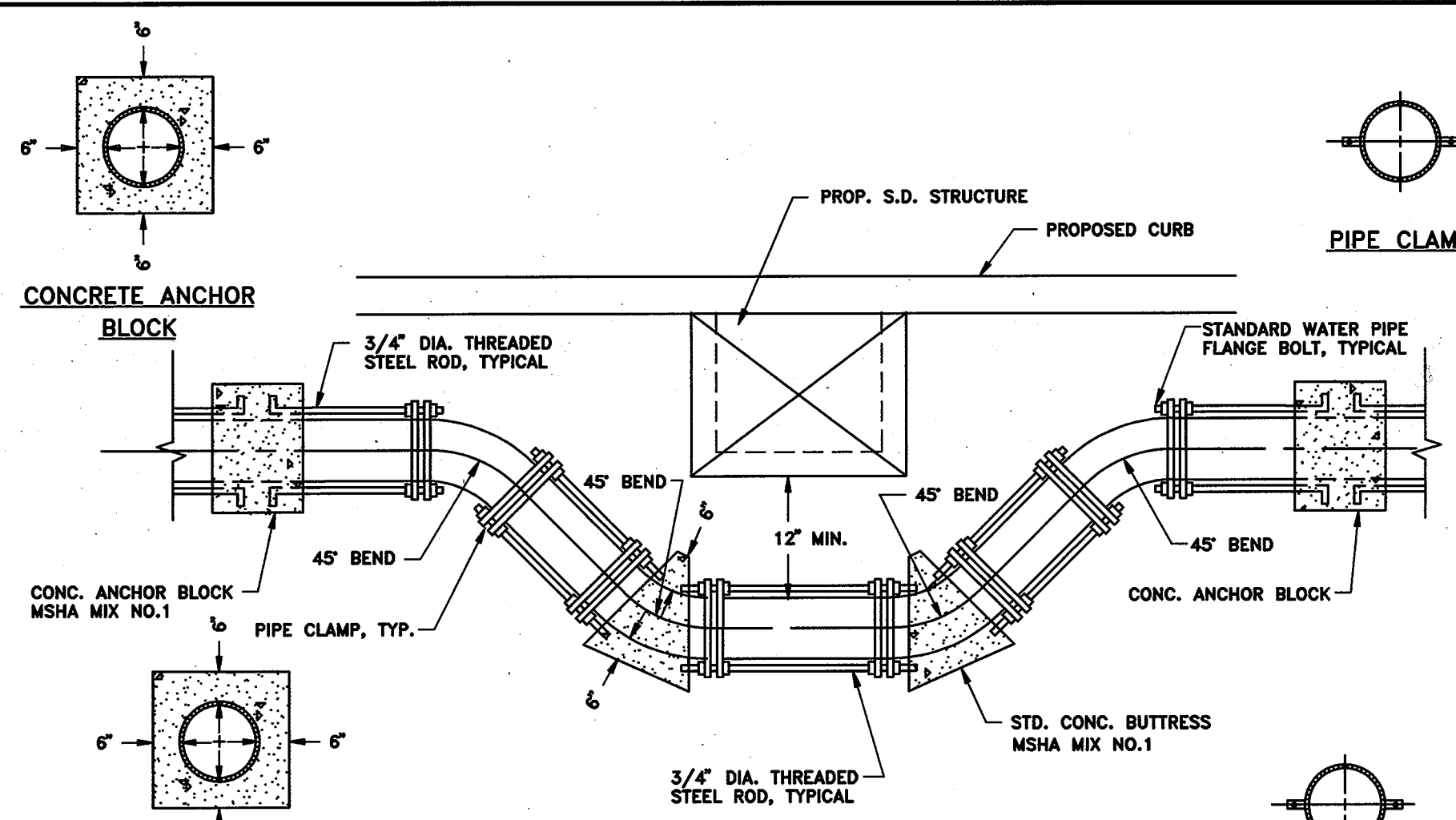
DWG. NO.  
C-2



**GENERAL NOTES**

1. REMOVE TOP SLAB, FRAME AND GRATE AND BRICKS AS NECESSARY (12" MIN.)
2. BRICK UP AND PLACE TOP SLAB TO PROPOSED ELEVATION.
3. CONCRETE SHOULD CONFORM TO HOWARD CO. SPECIFICATIONS.
4. REINFORCING SHALL BE DEFORMED BARS (EPOXY COATED)
5. ALL MATERIALS TO CONFORM TO HOWARD CO. SPECIFICATIONS.

**DETAIL - EXISTING INLET #51 CONVERSION TO MANHOLE**



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

Director of Public Works - DATE  
Chief, Bureau of Engineering - DATE  
Chief, Roads, Bridges, & Storm Drainage Div. - DATE  
Chief, Bureau of Highways - DATE

**acer**  
Acer Engineers & Consultants, Inc.  
201 South Cleveland Avenue, Suite 304  
Hagerstown, Maryland 21740  
Tel 301-791-1100



|       |        |          |      |                    |    |
|-------|--------|----------|------|--------------------|----|
| DES:  | R.D.P. |          |      |                    |    |
| DRN:  | A.C.M. |          |      |                    |    |
| CHK:  | R.D.P. |          |      |                    |    |
| DATE: | 01/93  |          |      |                    |    |
| BY    | NO     | REVISION | DATE | 600' SCALE MAP NO. | 43 |
|       |        |          |      | BLOCK NO.          | 6  |

LENNOX PARK  
A RESIDENTIAL COMMUNITY

CAPITAL PROJECT NO. D-1100

LENNOX PARK  
STORM DRAINAGE IMPROVEMENTS

MISC DETAILS

SCALE AS SHOWN

SHEET 4 OF 24

DWG. NO. C-1

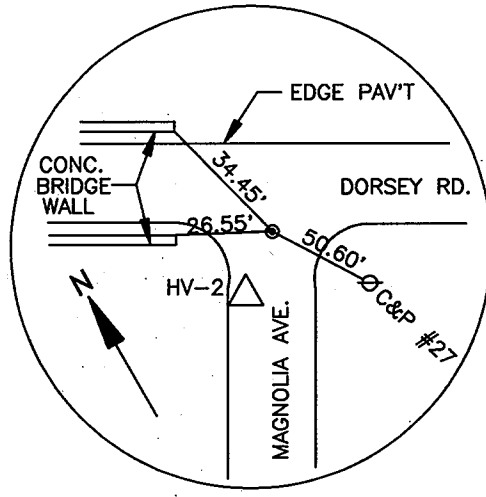


**TRAVERSE DATA**

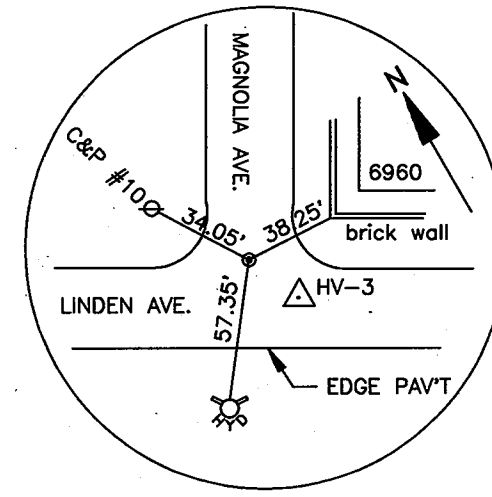
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|---------|-----------|----------|-----------------|-------------|-------------|-----------------------------------|
|         |           |          |                 | NORTH       | EAST        |                                   |
| 2346004 | 123.401   |          |                 | 489849.4996 | 871505.1138 | CONC. MONUMENT, COUNTY BENCH MARK |
| 2346005 | 129.960   | 778.01'  | N 59° 34' 20" W | 490243.5241 | 870834.2609 | CONC. MONUMENT, COUNTY BENCH MARK |
| HV-2    | 130.00    | 8.72'    | S 82° 13' 56" E | 490242.3455 | 870842.9009 | PK NAIL                           |
| HV-1    | 106.89    | 644.63'  | N 43° 11' 25" W | 490712.3354 | 870401.7009 | PK NAIL                           |
| HV-3    | 154.75    | 585.50'  | S 25° 44' 00" W | 490136.4196 | 870136.3205 | PK NAIL                           |
| HV-7    | 166.56    | 346.36'  | S 28° 10' 00" W | 489884.0761 | 869974.8254 | PK NAIL                           |
| HV-5    | 189.06    | 375.13'  | S 58° 29' 10" E | 489687.9937 | 870294.6288 |                                   |
| HV-6    | 162.33    | 323.41'  | S 71° 18' 10" E | 489584.3191 | 870600.9711 |                                   |
| HV-8    | 137.42    | 420.06'  | S 61° 35' 40" E | 489384.4926 | 870970.4570 | PK NAIL                           |
| HV-4    | 140.44    | 163.51'  | S 86° 06' 35" E | 489373.3991 | 871133.5902 |                                   |
| HV-9    | 131.63    | 282.33'  | N 05° 22' 20" W | 489655.0863 | 871107.1007 | PK NAIL                           |
| HV-10   | 123.07    | 176.27'  | N 51° 55' 00" E | 489763.8109 | 871245.8453 |                                   |
| 2346004 | 123.401   | 273.06'  | N 71° 42' 40" E | 489849.4996 | 871505.1138 | CONC. MONUMENT, COUNTY BENCH MARK |

**BASELINE DATA**

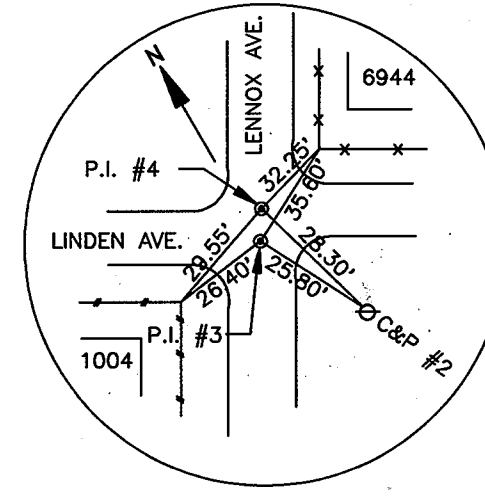
| P.I. # | BEARING         | DISTANCE | COORDINATES |            |
|--------|-----------------|----------|-------------|------------|
|        |                 |          | NORTH       | EAST       |
| 1      | S 29° 39' 13" W | 609.344  | 490731.388  | 870428.201 |
| 2      | S 59° 10' 5" E  | 346.252  | 490024.387  | 870424.041 |
| 3      |                 |          |             |            |
| 5      |                 |          | 490447.961  | 870666.060 |
| 4      | S 29° 44' 30" W | 483.292  | 490028.332  | 870426.304 |
| 3      | S 29° 49' 48" W | 4.548    | 490024.387  | 870424.041 |
| 12     | S 29° 45' 10" W | 344.531  | 489725.273  | 870253.065 |
| 11     | S 60° 31' 35" E | 354.658  | 489550.774  | 870561.824 |
| 6      |                 |          | 490179.772  | 870917.460 |
| 7      | S 29° 29' 05" W | 370.472  | 489857.281  | 870735.118 |
| 8      | S 29° 46' 20" W | 3.516    | 489854.229  | 870733.372 |
| 9      | S 30° 24' 54" W | 175.199  | 489703.141  | 870644.676 |
| 10     | S 28° 33' 02" W | 110.611  | 489605.981  | 870591.811 |
| 11     | S 28° 30' 36" W | 62.826   | 489550.774  | 870561.824 |
| 13     | S 28° 32' 53" W | 444.162  | 489160.615  | 870349.561 |
| 4      |                 |          | 490028.332  | 870426.304 |
| 8      | S 60° 26' 51" E | 352.991  | 489854.229  | 870733.372 |
| 7      |                 |          | 489857.281  | 870735.118 |
| 17     | S 60° 19' 48" E | 476.215  | 489621.553  | 871148.896 |
| 16     | S 60° 21' 26" E | 123.436  | 489560.503  | 871256.177 |
| 15     | S 31° 28' 31" W | 186.662  | 489401.305  | 871158.715 |
| 14     | N 87° 31' 21" W | 215.892  | 489410.637  | 870943.025 |
| 10     | N 60° 55' 02" W | 401.884  | 489605.981  | 870591.811 |
| 20     |                 |          | 490065.638  | 871075.774 |
| 19     | S 16° 44' 57" E | 169.959  | 489902.890  | 871124.753 |
| 18     | S 52° 16' 31" E | 163.768  | 489802.886  | 871254.288 |
| 17     | S 30° 11' 34" W | 209.562  | 489621.553  | 871148.896 |



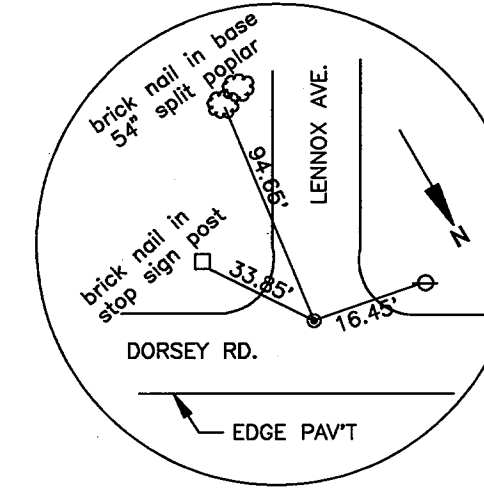
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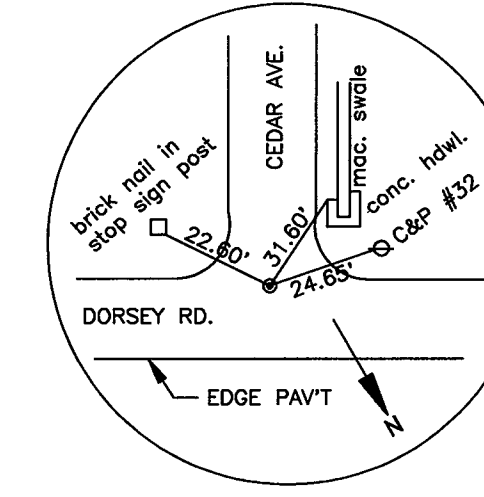
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STA. 0+00 @ LINDEN AVE.



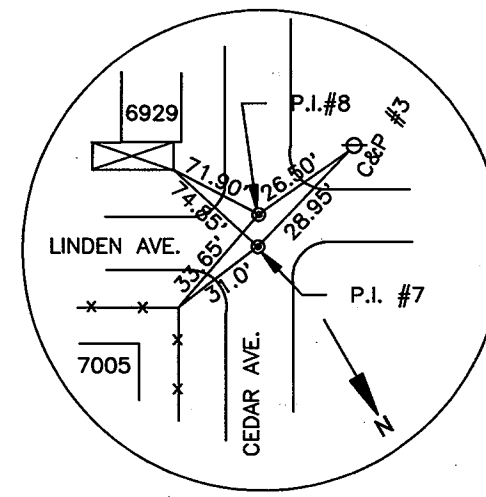
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STA. 3+46.25 @ LINDEN AVE.=  
STA. 4+83.29 @ LENNOX AVE.=  
STA. 3+50.80 @ LINDEN AVE.



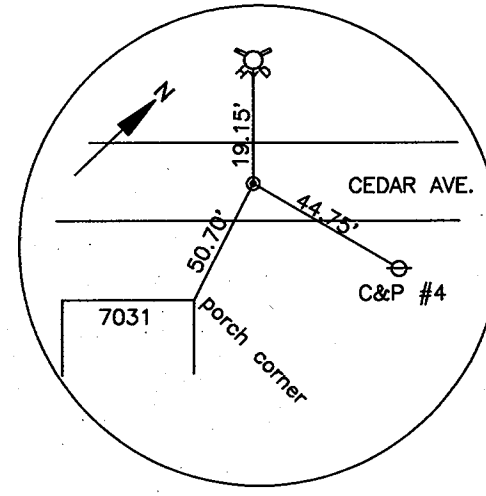
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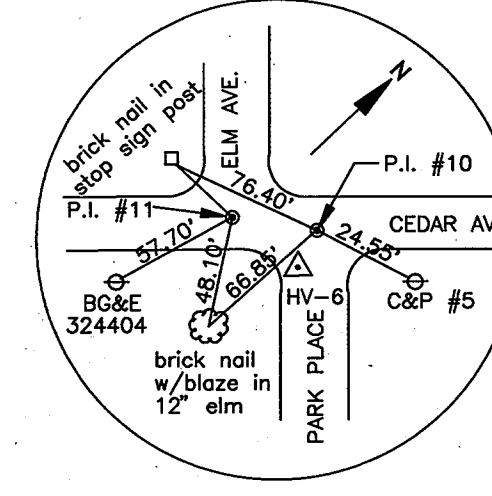
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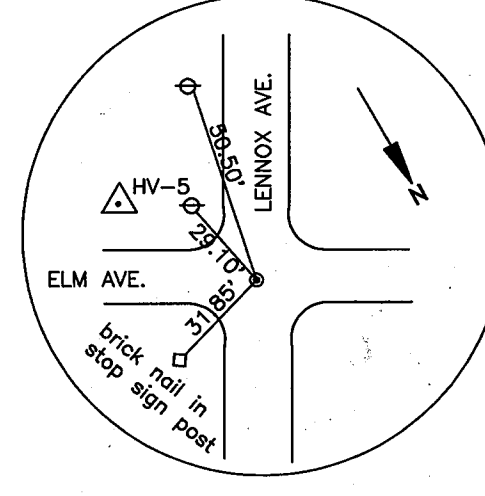
P.I. #7 AND P.I. #8  
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STA. 7+07.31 @ LINDEN AVE.=  
STA. 3+73.99 @ CEDAR AVE.=  
STA. 7+03.79 @ LINDEN AVE.



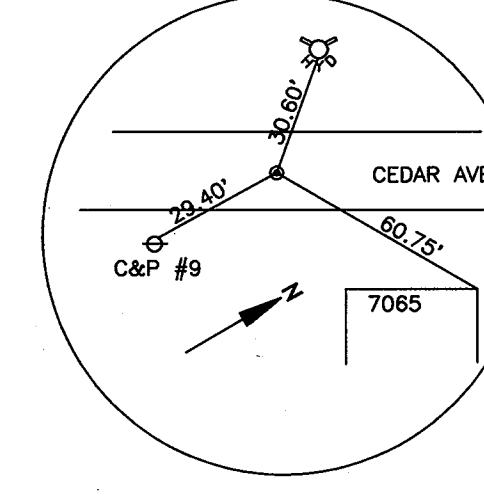
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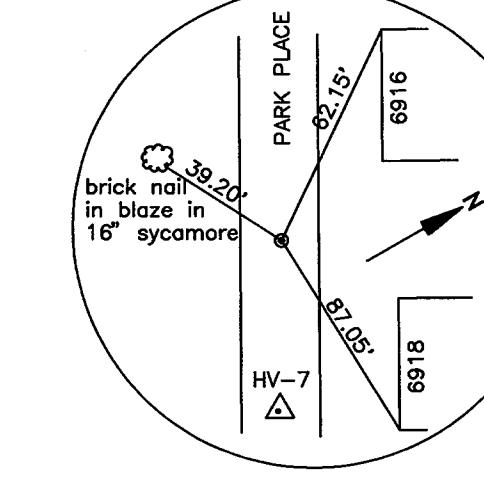
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STA. 0+00 @ ELM AVE.=  
STA. 6+59.80 @ CEDAR AVE.=  
STA. 0+00 @ PARK PLACE



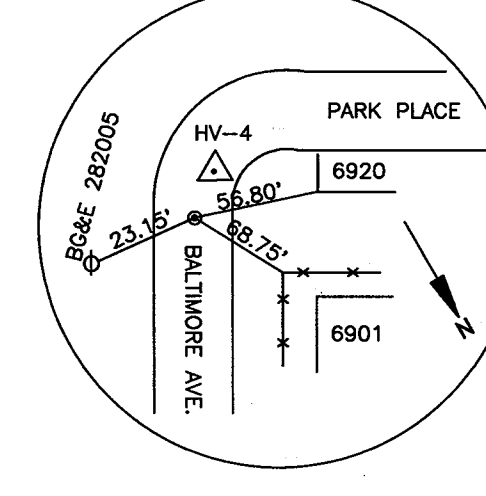
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STA. 8+32.37 @ LENNOX AVE.



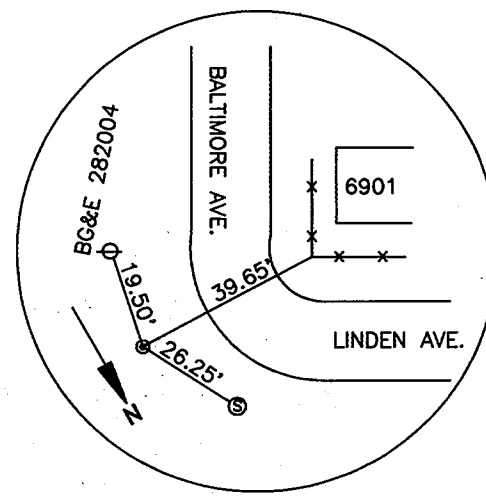
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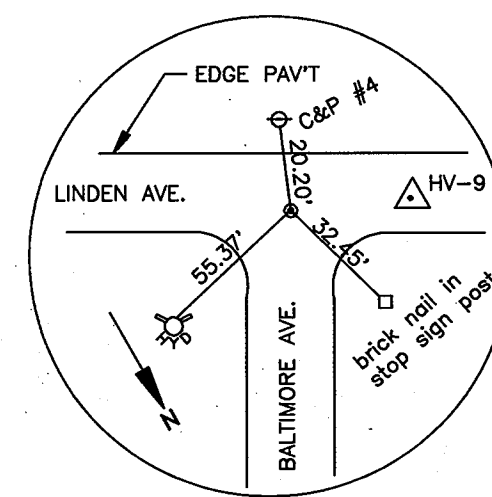
P.I. #14  
STA. 4+01.88 @ PARK PLACE



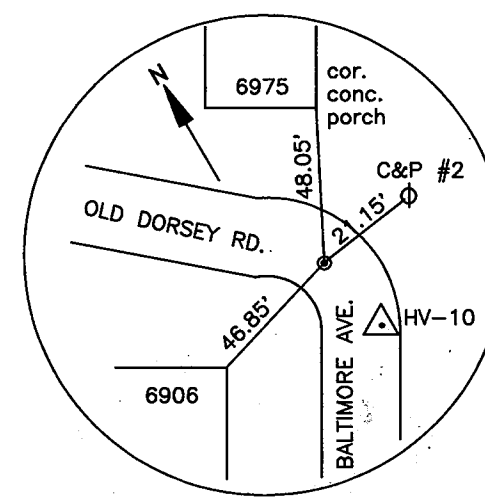
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STA. 1+86.66 @ BALTIMORE AVE.



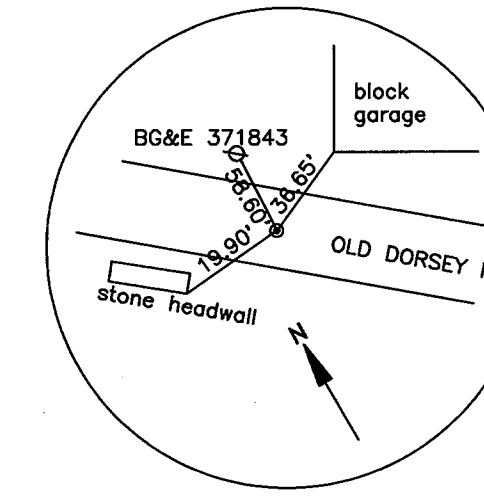
P.I. #16  
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STA. 13+06.96 @ LINDEN AVE.



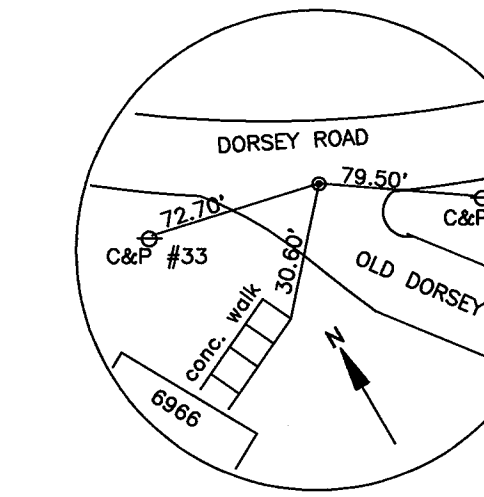
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STA. 11+83.52 @ LINDEN AVE.



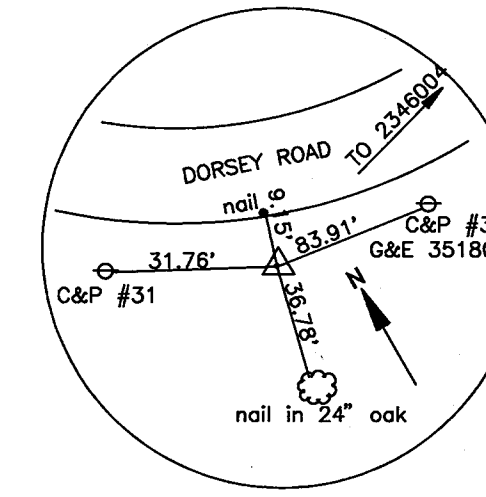
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STA. 0+00 @ OLD DORSEY RD.



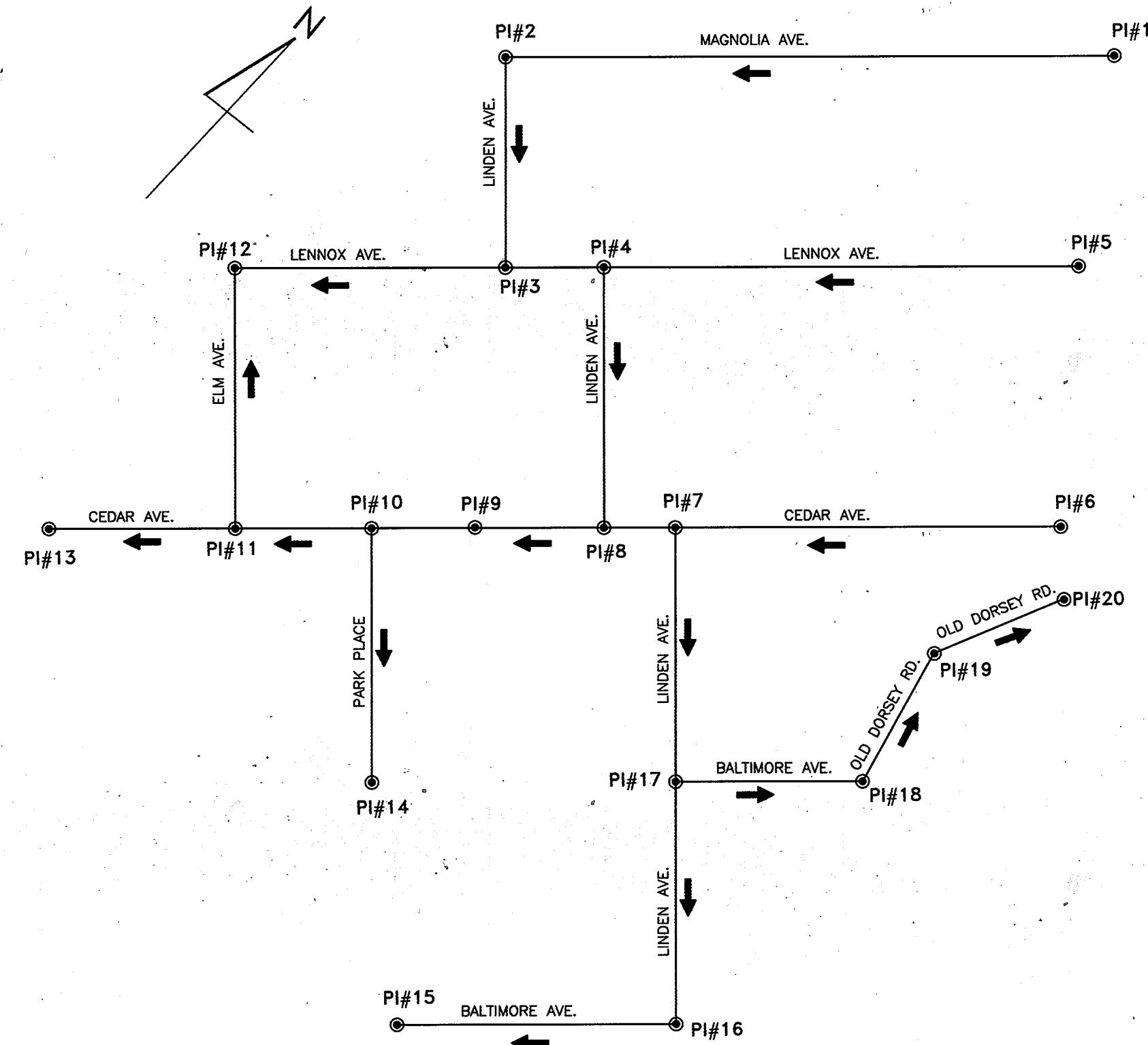
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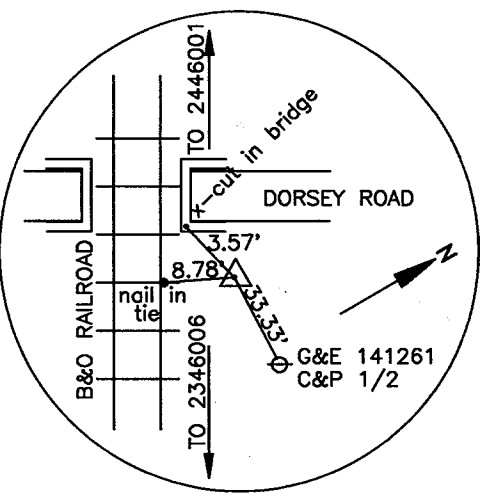
P.I. #20  
STA. 3+33.73 @ OLD DORSEY RD.



COUNTY BENCH MARK  
#2346005  
ELEV. 129.96



BASELINE OF CONSTRUCTION SCHEMATIC  
N.T.S.



COUNTY BENCH MARK  
#2346004  
ELEV. 123.40

02/21/86 13752010

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Lawrence A. Lewis*  
DIRECTOR OF PUBLIC WORKS - DATE

*Richard J. Sporn*  
CHIEF, BUREAU OF ENGINEERING - DATE

*Shirley Anderson*  
CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*Richard J. Sporn*  
CHIEF, BUREAU OF HIGHWAYS - DATE

**acer**  
Acer Engineers & Consultants, Inc.  
201 South Cleveland Avenue, Suite 304  
Hagerstown, Maryland 21740  
Tel 301-791-1100



DES: R.D.P.  
DRN: A.C.M.  
CHK: R.D.P.  
DATE: 01/93

| BY | NO | REVISION | DATE |
|----|----|----------|------|
|    |    |          |      |
|    |    |          |      |
|    |    |          |      |

LENNOX PARK  
A RESIDENTIAL COMMUNITY

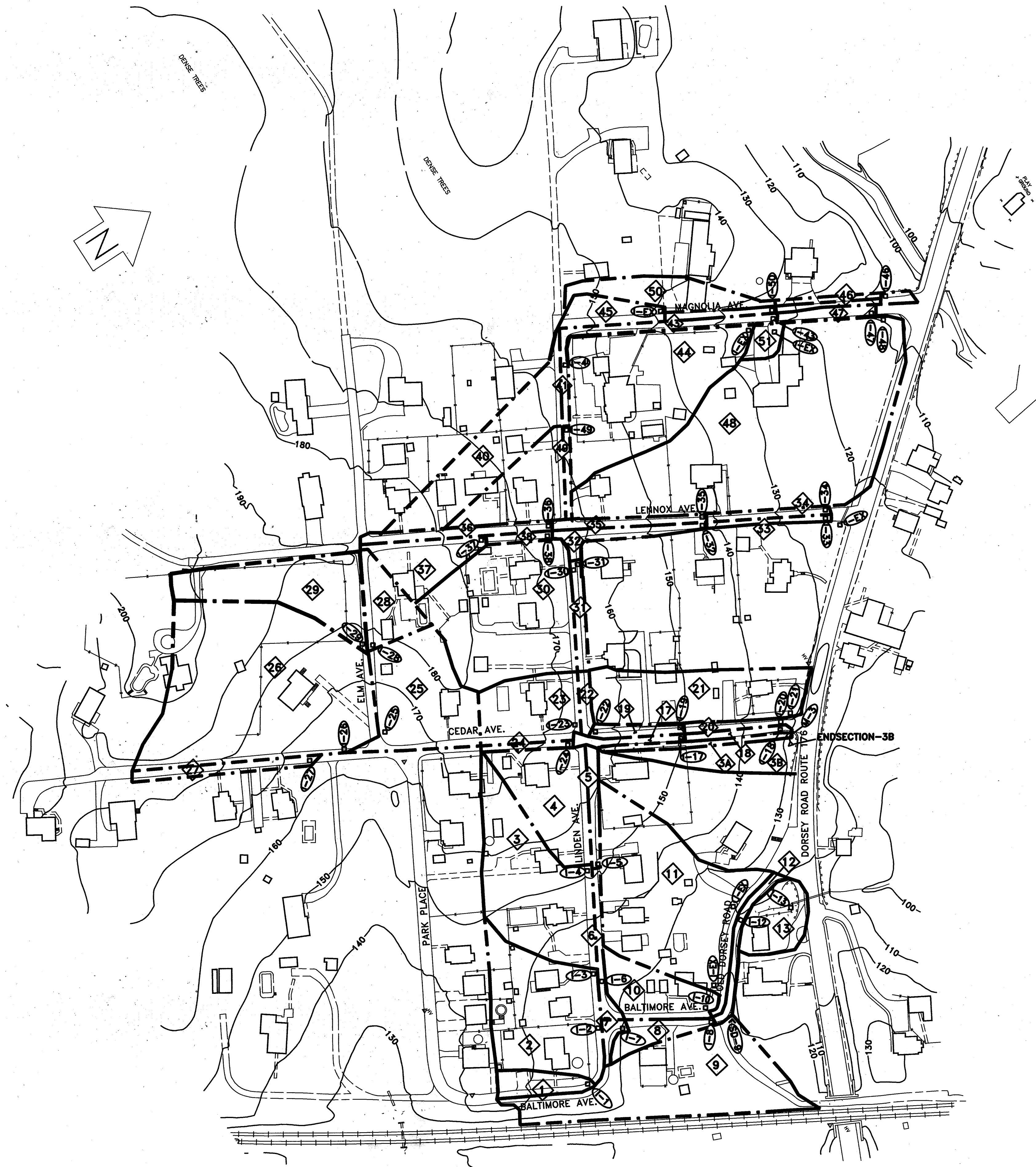
CAPITAL PROJECT NO. D-1100  
LENNOX PARK  
STORM DRAINAGE IMPROVEMENTS  
SURVEY CONTROL DATA

SCALE  
NONE

SHEET  
5 OF 24

DWG. NO.  
C-4

600' SCALE MAP NO. 43 BLOCK NO. 6



**STORM DRAINAGE DATA**

| AREA NO. | DESCRIPTION    | DRAINAGE AREA (ACRES) | COMPOSITE 'C' FACTOR | Tc(MIN) | I <sub>10</sub> (IN./HR.) | Q <sub>10</sub> (CFS) |
|----------|----------------|-----------------------|----------------------|---------|---------------------------|-----------------------|
| 1        | 'D' INLET      | 0.12                  | 0.60                 | 5       | 8.5                       | 0.61                  |
| 2        | WR INLET       | 0.45                  | 0.36                 | 12      | 6.1                       | 1.00                  |
| 3        | 'D' INLET      | 1.20                  | 0.34                 | 14      | 5.6                       | 2.28                  |
| 4        | 'D' INLET      | 0.35                  | 0.38                 | 13      | 5.8                       | 0.77                  |
| 5        | WR INLET       | 0.05                  | 0.87                 | 5       | 8.5                       | 0.37                  |
| 6        | WR INLET       | 0.05                  | 0.87                 | 5       | 8.5                       | 0.37                  |
| 7        | WR INLET       | 0.07                  | 0.87                 | 5       | 8.5                       | 0.52                  |
| 8        | WR INLET       | 0.10                  | 0.60                 | 5       | 8.5                       | 0.51                  |
| 9        | 'E' HEADWALL   | 1.00                  | 0.32                 | 18      | 5.0                       | 1.60                  |
| 10       | 'D' INLET      | 0.25                  | 0.32                 | 15      | 5.4                       | 0.40                  |
| 11       | EXIST. WR      | 1.25                  | 0.32                 | 13      | 5.8                       | 2.32                  |
| 12       | WR INLET       | 0.08                  | 0.87                 | 5       | 8.5                       | 0.59                  |
| 13       | 'D' INLET      | 0.12                  | 0.32                 | 6       | 8.2                       | 0.31                  |
| 17       | WR INLET       | 0.08                  | 0.66                 | 5       | 8.5                       | 0.45                  |
| 18       | WR INLET       | 0.08                  | 0.66                 | 5       | 8.5                       | 0.45                  |
| 19       | WR INLET       | 0.06                  | 0.87                 | 5       | 8.5                       | 0.44                  |
| 20       | WR INLET       | 0.06                  | 0.87                 | 5       | 8.5                       | 0.44                  |
| 21       | 'D' INLET      | 0.15                  | 0.32                 | 13      | 5.8                       | 0.28                  |
| 22       | WR INLET       | 0.04                  | 0.87                 | 5       | 8.5                       | 0.30                  |
| 23       | 'D' INLET      | 0.40                  | 0.44                 | 13      | 5.8                       | 1.02                  |
| 24       | WR INLET       | 0.04                  | 0.87                 | 5       | 8.5                       | 0.30                  |
| 25       | 'D' INLET      | 0.60                  | 0.38                 | 10      | 6.6                       | 1.50                  |
| 26       | 'D' INLET      | 1.60                  | 0.36                 | 14      | 5.6                       | 3.23                  |
| 27       | WR INLET       | 0.08                  | 0.87                 | 5       | 8.5                       | 0.59                  |
| 28       | 'D' INLET      | 0.20                  | 0.43                 | 8       | 7.2                       | 0.62                  |
| 29       | 'D' INLET      | 0.60                  | 0.34                 | 15      | 5.4                       | 1.10                  |
| 30       | 'D' INLET      | 1.20                  | 0.32                 | 13      | 5.8                       | 2.23                  |
| 31       | WR INLET       | 0.05                  | 0.87                 | 5       | 8.5                       | 0.37                  |
| 32       | WR INLET       | 0.15                  | 0.58                 | 5       | 8.5                       | 0.74                  |
| 33       | WR INLET       | 0.35                  | 0.42                 | 5       | 8.5                       | 1.25                  |
| 34       | WR INLET       | 0.06                  | 0.87                 | 5       | 8.5                       | 0.44                  |
| 35       | WR INLET       | 0.08                  | 0.87                 | 5       | 8.5                       | 0.59                  |
| 36       | WR INLET       | 0.10                  | 0.87                 | 5       | 8.5                       | 0.74                  |
| 37       | 'D' INLET      | 0.22                  | 0.45                 | 9       | 6.8                       | 0.67                  |
| 38       | WR INLET       | 0.04                  | 0.87                 | 5       | 8.5                       | 0.30                  |
| 41       | WR INLET       | 0.04                  | 0.87                 | 5       | 8.5                       | 0.30                  |
| 43       | WR INLET       | 0.10                  | 0.87                 | 5       | 8.5                       | 0.74                  |
| 44       | 'D' INLET      | 0.45                  | 0.32                 | 13      | 5.8                       | 0.84                  |
| 45       | EXIST. GRATE   | 0.10                  | 0.32                 | 8       | 7.2                       | 0.23                  |
| 46       | WR INLET       | 0.13                  | 0.87                 | 5       | 8.5                       | 0.96                  |
| 47       | WR INLET       | 0.06                  | 0.87                 | 5       | 8.5                       | 0.44                  |
| 48       | 'D' INLET      | 3.15                  | 0.32                 | 25      | 4.1                       | 4.13                  |
| 49       | WR INLET       | 0.04                  | 0.87                 | 5       | 8.5                       | 0.30                  |
| 50       | WR INLET       | 0.40                  | 0.45                 | 9       | 6.8                       | 1.22                  |
| 54       | MH W/SLOT. DR. | 0.13                  | 0.32                 | 5       | 8.5                       | 0.35                  |
| 51       | EX. INLET      | 0.05                  | .087                 | 5       | 8.5                       | 0.37                  |

- LEGEND**
- 4 DRAINAGE AREA NO.
  - I-10 PROPOSED INLET NO.
  - DRAINAGE AREA BOUNDARY
  - I<sub>10</sub> RAINFALL INTENSITY (in./hr.) FOR 10 YEAR STORM
  - T<sub>c</sub> TIME OF CONCENTRATION IN MINUTES
  - Q<sub>10</sub> FLOW - CUBIC INCHES PER SECOND
  - EXISTING CONTOUR OR ELEVATION

SCALE: 1" = 100'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

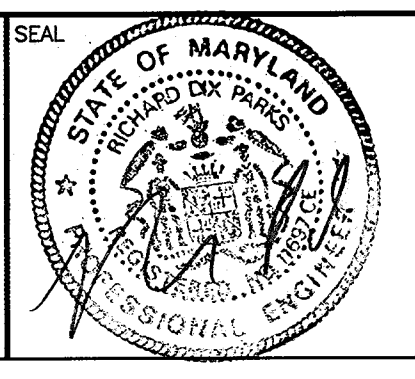
*Cam McLean* 6/15/96  
DIRECTOR OF PUBLIC WORKS - DATE

*Elizabeth Anderson* 6/15/96  
CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*Paul S. ...* 6/15/96  
CHIEF, BUREAU OF ENGINEERING - DATE

*...* 6/15/96  
CHIEF, BUREAU OF HIGHWAYS - DATE

**acer**  
Acer Engineers & Consultants, Inc.  
201 South Cleveland Avenue, Suite 304  
Hagerstown, Maryland 21740  
Tel 301-791-1100



|             |    |          |      |                       |             |
|-------------|----|----------|------|-----------------------|-------------|
| DES: R.D.P. |    |          |      |                       |             |
| DRN: A.C.M. |    |          |      |                       |             |
| CHK: R.D.P. |    |          |      |                       |             |
| DATE: 01/93 |    |          |      |                       |             |
| BY          | NO | REVISION | DATE | 600' SCALE MAP NO. 43 | BLOCK NO. 6 |

LENNOX PARK  
A RESIDENTIAL COMMUNITY

CAPITAL PROJECT NO. D-1100

LENNOX PARK  
STORM DRAINAGE IMPROVEMENTS  
DRAINAGE AREA AND DATA

SCALE  
1" = 100'

SHEET  
6 OF 24

DWG. NO.  
G-2



**NOSE DOWN CURB (SEE DETAIL SHT. 3)**  
 MAGNOLIA AVE.: STA. 0+40, 13' LT.  
 STA. 0+20, 13' RT.  
 STA. 6+03, 17' RT.  
 LINDEN AVE.: STA. 0+13, 12' RT.

**ADJUST EXISTING UTILITY STRUCTURES TO GRADE**  
 MAGNOLIA AVE. STA. 2+35 LT. WATER METER  
 MAGNOLIA AVE. STA. 2+52 LT. STORM DRAIN INLET (SEE DETAIL, SHT. 4)  
 MAGNOLIA AVE. STA. 4+24.5 RT. SAN. SEWER MANHOLE

NOTE: GAS MAINS TO BE RELOCATED BY OTHERS

**REMOVE EXISTING CATCH BASIN**

STA. 0+45.5, 16' LT. BASELINE MAGNOLIA AVE.  
 STA. 2+86, 16' LT. BASELINE MAGNOLIA AVE.

**MODIFY EXISTING CATCH BASIN TO MANHOLE (SEE DETAIL SHT. 4)**  
 STA. 2+52, 14' LT. MAGNOLIA AVE.: CONSTRUCT TOP OF MANHOLE  
 TO FINISH GRADE AT HEIGHT OF PROPOSED CURB

**RELOCATE EXISTING WATER MAIN (SEE DETAIL SHT. 4) - TEST PITS TO CONFIRM**  
 STA. 2+40 LT. MAGNOLIA AVE. TO STA. 2+60 LT. MAGNOLIA AVE. 20 LF 8"  
 STA. 4+25 LT. MAGNOLIA AVE. TO STA. 4+45 LT. MAGNOLIA AVE. 20 LF 8"

**REMOVE EXISTING HEADWALL**  
 STA. 3+51.5, 10' RT. BASELINE MAGNOLIA AVE.

**REMOVE EXISTING PIPE CULVERT**

STA. 5+92 TO STA. 6+23 RT. MAGNOLIA AVE. 31 LF 15" RCCP  
 STA. 5+31 TO STA. 5+45 LT. MAGNOLIA AVE. 14 LF 8" CMP  
 STA. 0+45, 16' LT. TO STA. 0+23, 32' RT. MAGNOLIA AVE. 50 LF 18" CMP  
 STA. 3+50 TO STA. 3+68 LT. LENNOX AVE. 18 LF 8" VCP  
 STA. 6+23 RIGHT AND LEFT MAGNOLIA AVE. 25 LF 12" RCP  
 STA. 2+86 TO STA. 2+52 LT. MAGNOLIA AVE. 34 LF 12" VCP

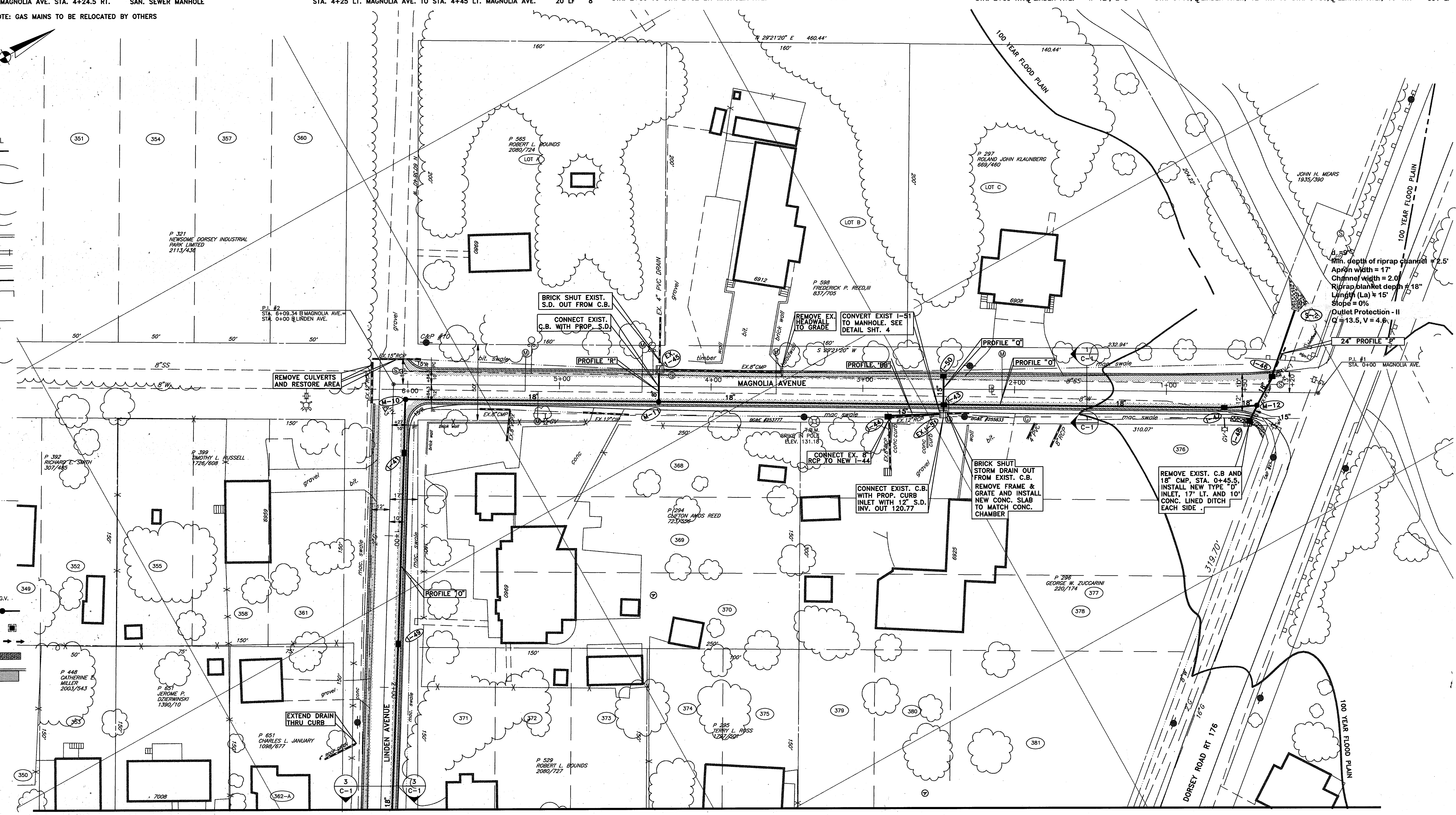
**CONSTRUCT DEPRESSED BITUMINOUS CURB AND TRANSITION BIT. PAVEMENT TO EXIST. DRIVEWAY**

STA. 0+64.5 RT. @ LINDEN AVE. - W=15', L=5'  
 STA. 2+00 RT. @ MAGNOLIA AVE. - W=56', L=5'  
 STA. 2+12 LT. @ MAGNOLIA AVE. - W=29', L=7'  
 STA. 2+69 LT. @ MAGNOLIA AVE. - W=24', L=7'  
 STA. 3+78 RT. @ MAGNOLIA AVE. - W=32', L=5'  
 STA. 4+20 RT. @ MAGNOLIA AVE. - W=14', L=7'  
 STA. 4+85 LT. @ MAGNOLIA AVE. - W=20', L=7'  
 STA. 2+03 RT. @ LINDEN AVE. - W=12', L=5'

**CONSTRUCT 6 1/2" BITUMINOUS CURB AND 4" ROAD WIDENING/RECONSTRUCTION**  
 STA. 0+40, @ MAGNOLIA AVE., 13' LT. TO STA. 0+10, @ LENNOX AVE., 10' RT. 1338 LF  
 STA. 0+20, @ MAGNOLIA AVE., 13' RT. TO STA. 6+03, 17' RT. 583 LF  
 STA. 0+13, @ LINDEN AVE., 12' RT. TO STA. 5+80, @ LENNOX AVE., 16' RT. 391 LF

LEGEND AND SYMBOL

- IND-CONTOUR
- SUP-CONTOUR
- SPOT-ELEV
- ROAD-PAVED
- ROAD-UNPAVED
- EX. CURB
- RAIL-ROAD
- SIDEWALK
- RETAININGWALL
- BUILDING
- TANK
- FENCE
- CONTROL
- TREE OR BRUSH
- STREAM
- LIGHTPOLE
- UTILITYPOLE
- SIGN
- POLE
- TRAFFICLIGHT
- EX. SAN. MH
- EX. FIRE HYD.
- POST
- INLET, GRATING TYPE
- DITCH OR SWALE
- SAN. CLEANOUT
- GAS METER
- P.I.
- B.M.
- WATER METER
- WATER VALVE
- GAS VALVE
- PROP. STORM DRAIN AND MANHOLE
- PROP. INLET AND PROTECTION
- PROP. TRI. GRASS DITCH
- PROP. CONC. DITCH
- AREA OF PAYT. RECONSTRUCTION AND NEW BIT. CURB



MATCHLINE - FOR CONTINUATION, SEE DWG. P-3

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*Robert E. Wilson*  
 DIRECTOR OF PUBLIC WORKS - DATE

*Elizabeth Anderson*  
 CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*Robert E. Wilson*  
 CHIEF, BUREAU OF ENGINEERING - DATE

*Robert E. Wilson*  
 CHIEF, BUREAU OF HIGHWAYS - DATE

**acer**  
 Acer Engineers & Consultants, Inc.  
 201 South Cleveland Avenue, Suite 304  
 Hagerstown, Maryland 21740  
 Tel 301-791-1100



|             |    |          |      |  |
|-------------|----|----------|------|--|
| DES: R.D.P. |    |          |      |  |
| DRN: A.C.M. |    |          |      |  |
| CHK: R.D.P. |    |          |      |  |
| DATE: 03/93 |    |          |      |  |
| BY          | NO | REVISION | DATE |  |

LENNOX PARK  
 A RESIDENTIAL COMMUNITY

60' SCALE MAP NO. 43 BLOCK NO. 6

CAPITAL PROJECT NO. D-1100  
 LENNOX PARK  
 STORM DRAINAGE IMPROVEMENTS  
 STORM DRAIN AND ROAD IMPROVEMENTS

SCALE  
 1" = 30'

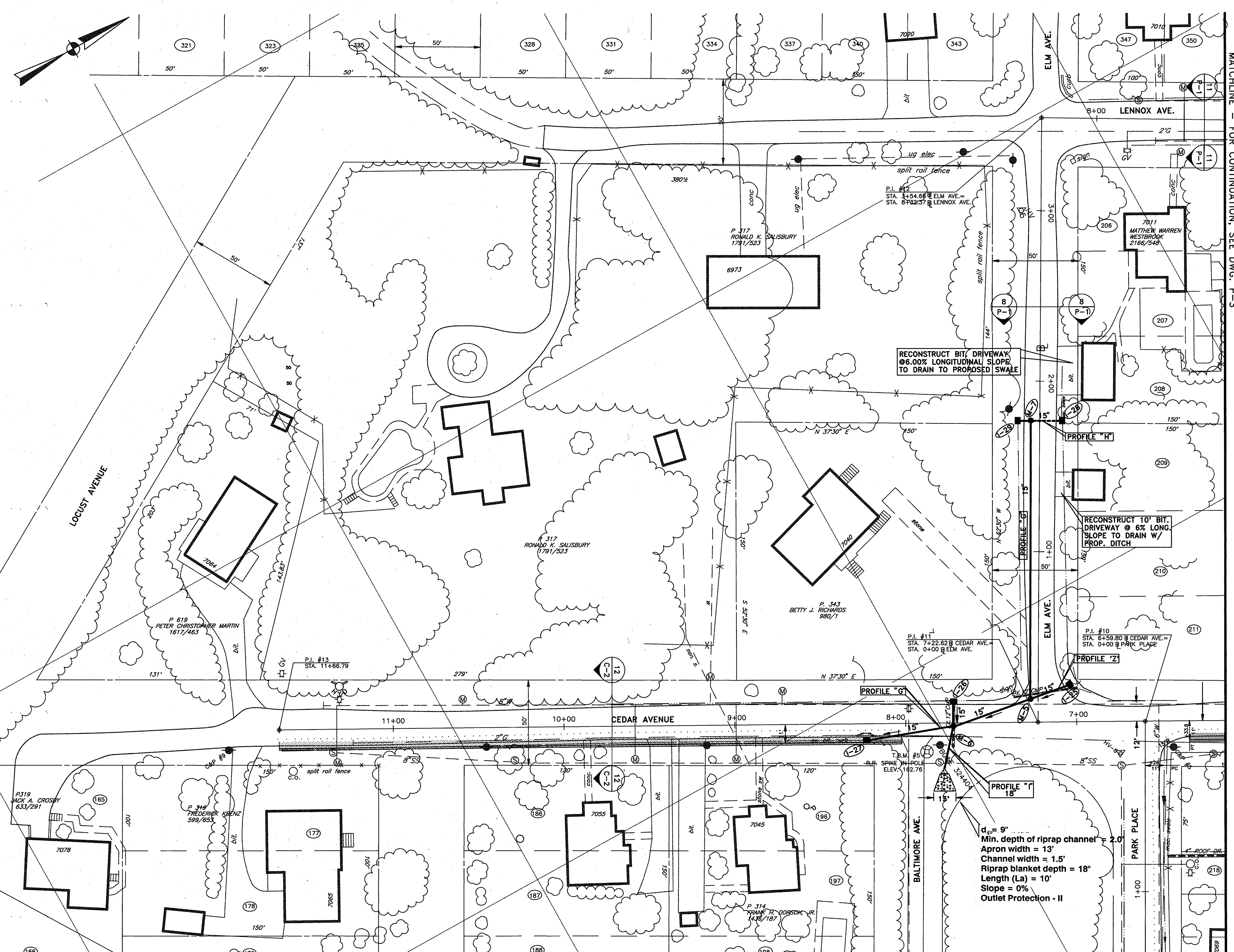
SHEET NO.  
 7 OF 24

DWG. NO.  
 P-1



LEGEND AND SYMBOL

- IND-CONTOUR
- SUP-CONTOUR
- SPOT-ELEV  $\times 20.0$
- ROAD-PAVED
- ROAD-UNPAVED
- EX. CURB
- RAIL-ROAD
- SIDEWALK
- RETAINING WALL
- BUILDING
- TANK
- FENCE
- CONTROL
- TREE OR BRUSH
- STREAM
- LIGHTPOLE
- UTILITYPOLE
- SIGN
- POLE
- TRAFFICLIGHT
- EX. SAN. MH
- EX. FIRE HYD.
- POST
- INLET, GRATING TYPE
- DITCH OR SWALE
- SAN. CLEANOUT
- GAS METER
- P.I.
- B.M.
- WATER METER
- WATER VALVE
- GAS VALVE
- PROP. STORM DRAIN
- PROP. INLET AND PROTECTION
- PROP. TRI. GRASS DITCH
- PROP. CONC. DITCH
- AREA OF PAYT. RECONSTRUCTION AND NEW BIT. CURB



- NOSE DOWN CURB (SEE DETAIL SHEET 3)**  
 STA. 8+00 @ CEDAR AVE., LT.  
 STA. 11+66.79 @ CEDAR AVE., LT.  
 STA. 6+53.8 @ CEDAR AVE., LT.
- RELOCATE EXISTING GAS MAIN (TO BE RELOCATED BY OTHERS)**  
 STA. 8+15 LT. CEDAR AVE. TO STA. 8+35 LT. CEDAR AVE. 20 LF 2"
- RELOCATE EXIST. WATER MAIN - TEST PIT TO CONFIRM**  
 STA. 7+25 RT. CEDAR AVE. TO STA. 7+45 RT. CEDAR AVE. 20 LF 8"
- CONSTRUCT 6 1/2" BITUMINOUS CURB AND 4' ROAD WIDENING/RECONSTRUCTION**  
 STA. 8+00 @ CEDAR AVE., 11' LT. TO STA. 11+66.79 @ CEDAR AVE., 11' LT. 367 LF
- REMOVE EXISTING BITUMINOUS CURB**  
 STA. 8+00 LT. CEDAR AVE. TO STA. 11+66 LT. LINDEN AVE. 366 LF
- REMOVE EXISTING PIPE CULVERT**  
 STA. 0+13 15' LT. ELM AVE. TO STA. 0+17 25' RT. ELM AVE. 40 LF 12" CMP  
 STA. 7+73 LT. CEDAR AVE. TO STA. 7+73 RT. CEDAR AVE. 33 LF 12" CMP
- CONSTRUCT DEPRESSED CURB AND DRIVEWAY ENTRANCE WITH BITUMINOUS CURB AND PAVEMENT**  
 STA. 9+25 LT. CEDAR AVE. W=15' L=8'  
 STA. 9+42 LT. CEDAR AVE. W=13' L=8'  
 STA. 1+45 LT. PARK PLACE W=18' L=5'

MATCHLINE - FOR CONTINUATION, SEE DWG. P-4

03/14/98 LENNOX 13750344

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

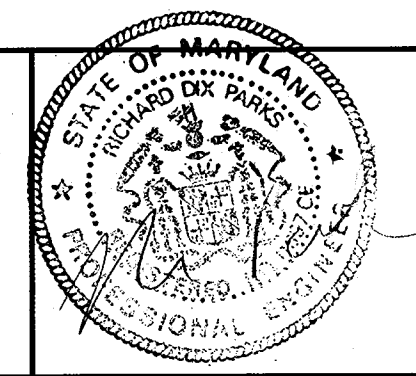
*John W. Lewis*  
 DIRECTOR OF PUBLIC WORKS - DATE

*Paul P. Brown* 6/5/20  
 CHIEF, BUREAU OF ENGINEERING - DATE

*Elizabeth Anderson* 6/14/98  
 CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*Robert M. ...*  
 CHIEF, BUREAU OF HIGHWAYS - DATE

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|             |    |          |      |  |  |
|-------------|----|----------|------|--|--|
| DES: R.D.P. |    |          |      |  |  |
| DRN: A.C.M. |    |          |      |  |  |
| CHK: R.D.P. |    |          |      |  |  |
| DATE: 01/93 |    |          |      |  |  |
| BY          | NO | REVISION | DATE |  |  |

LENNOX PARK  
 A RESIDENTIAL COMMUNITY

600' SCALE MAP NO. 43 BLOCK NO. 6

CAPITAL PROJECT NO. D-1100  
 LENNOX PARK  
 STORM DRAINAGE IMPROVEMENTS  
 STORM DRAIN AND ROAD IMPROVEMENT

SCALE  
 1" = 30'

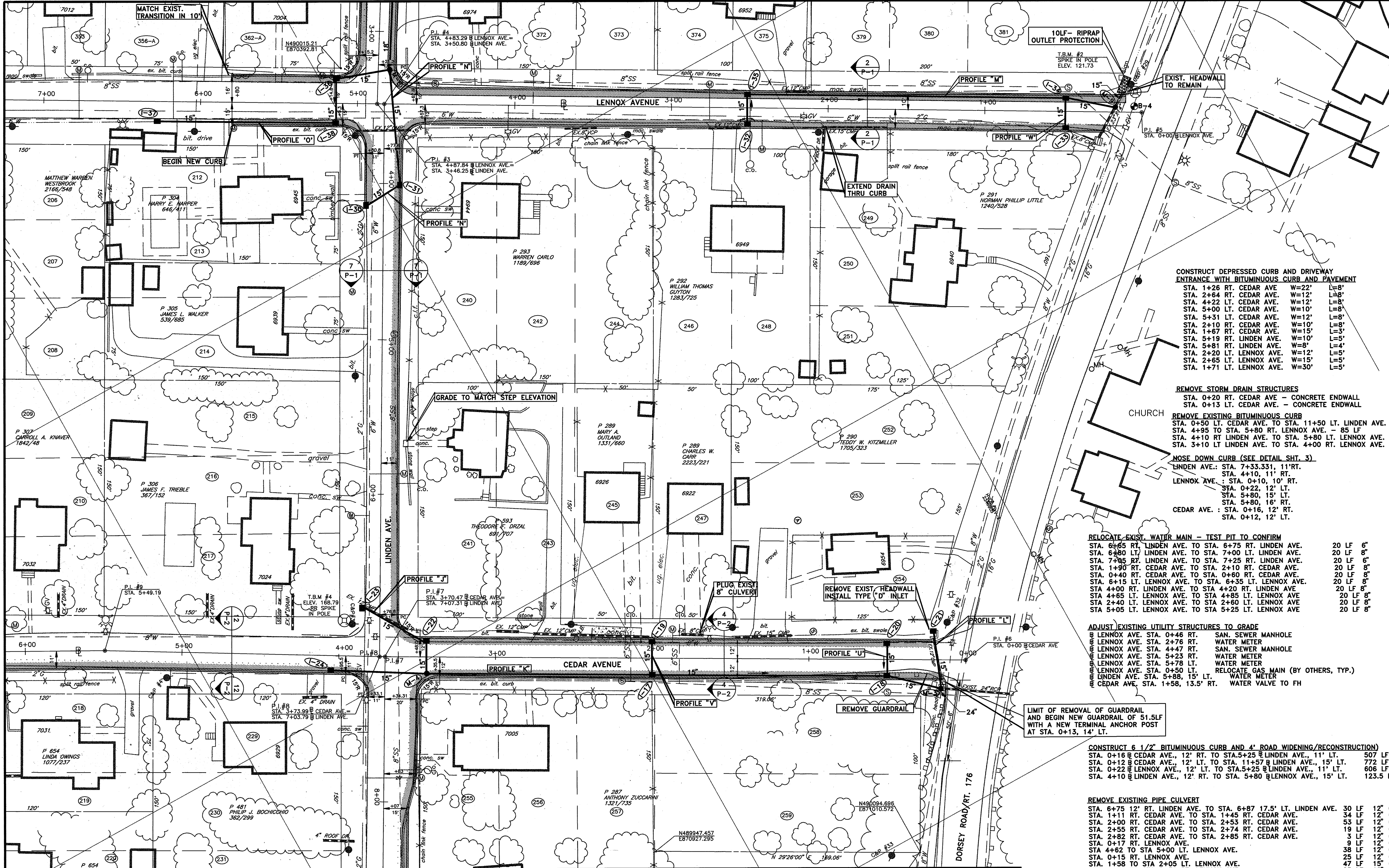
SHEET NO.  
 8 OF 24

DWG. NO.  
 P-2

MATCHLINE - FOR CONTINUATION, SEE DWG. P-3



MATCHLINE - FOR CONTINUATION, SEE DWG. P-1



LEGEND AND SYMBOL

- IND-CONTOUR
- SUP-CONTOUR
- SPOT-ELEV
- ROAD-PAVED
- ROAD-UNPAVED
- EX. CURB
- RAIL-ROAD
- SIDEWALK
- RETAININGWALL
- BUILDING
- TANK
- FENCE
- CONTROL
- TREE OR BRUSH
- STREAM
- LIGHTPOLE
- UTILITYPOLE
- SIGN
- POLE
- TRAFFICLIGHT
- EX. SAN. MH
- EX. FIRE HYD.
- POST
- INLET, GRATING TYPE III
- DITCH OR SWALE
- SAN. CLEANOUT
- GAS METER
- P.I.
- B.M.
- WATER METER
- WATER VALVE
- GAS VALVE
- PROP. STORM DRAIN AND MANHOLE
- PROP. INLET PROTECTION
- PROP. TRI. GRASS DITCH
- PROP. CONC. DITCH
- AREA OF PAVT. RECONSTRUCTION AND NEW BIT. CURB

**CONSTRUCT DEPRESSED CURB AND DRIVEWAY ENTRANCE WITH BITUMINOUS CURB AND PAVEMENT**

|                          |       |      |
|--------------------------|-------|------|
| STA. 1+26 RT. CEDAR AVE  | W=22' | L=8' |
| STA. 2+64 RT. CEDAR AVE  | W=12' | L=8' |
| STA. 4+22 LT. CEDAR AVE  | W=12' | L=8' |
| STA. 5+00 LT. CEDAR AVE  | W=10' | L=8' |
| STA. 5+31 LT. CEDAR AVE  | W=12' | L=8' |
| STA. 2+10 RT. CEDAR AVE  | W=10' | L=8' |
| STA. 1+67 RT. CEDAR AVE  | W=15' | L=3' |
| STA. 5+19 RT. LINDEN AVE | W=10' | L=5' |
| STA. 5+81 RT. LINDEN AVE | W=8'  | L=4' |
| STA. 2+20 LT. LENNOX AVE | W=12' | L=5' |
| STA. 2+65 LT. LENNOX AVE | W=5'  | L=5' |
| STA. 1+71 LT. LENNOX AVE | W=30' | L=5' |

**REMOVE STORM DRAIN STRUCTURES**

|   |  |
|---|--|
| STA. 0+20 RT. CEDAR AVE - CONCRETE ENDWALL  |  |
| STA. 0+13 LT. CEDAR AVE. - CONCRETE ENDWALL |  |

**REMOVE EXISTING BITUMINOUS CURB**

|   |  |
|---|--|
| STA. 0+50 LT. CEDAR AVE. TO STA. 11+50 LT. LINDEN AVE. - 700 LF   |  |
| STA. 4+95 TO STA. 5+80 RT. LENNOX AVE. - 85 LF                    |  |
| STA. 4+10 RT. LINDEN AVE. TO STA. 5+80 LT. LENNOX AVE. - 123.5 LF |  |
| STA. 3+10 LT. LINDEN AVE. TO STA. 4+00 RT. LENNOX AVE. - 100 LF   |  |

**NOSE DOWN CURB (SEE DETAIL SHT. 3)**

|                                     |  |
|-------------------------------------|--|
| LINDEN AVE.: STA. 7+33.331, 11' RT. |  |
| STA. 4+10, 11' RT.                  |  |
| LENNOX AVE.: STA. 0+10, 10' RT.     |  |
| STA. 0+22, 12' LT.                  |  |
| STA. 5+80, 15' LT.                  |  |
| STA. 5+80, 16' RT.                  |  |
| CEDAR AVE.: STA. 0+16, 12' RT.      |  |
| STA. 0+12, 12' LT.                  |  |

**RELOCATE EXIST. WATER MAIN - TEST PIT TO CONFIRM**

|  |          |
|--|----------|
| STA. 6+65 RT. LINDEN AVE. TO STA. 6+75 RT. LINDEN AVE. | 20 LF 6" |
| STA. 6+80 LT. LINDEN AVE. TO STA. 7+00 LT. LINDEN AVE. | 20 LF 8" |
| STA. 7+85 RT. LINDEN AVE. TO STA. 7+25 RT. LINDEN AVE. | 20 LF 6" |
| STA. 1+90 RT. CEDAR AVE. TO STA. 2+10 RT. CEDAR AVE.   | 20 LF 8" |
| STA. 0+40 RT. CEDAR AVE. TO STA. 0+60 RT. CEDAR AVE.   | 20 LF 8" |
| STA. 6+15 LT. LENNOX AVE. TO STA. 6+35 LT. LENNOX AVE. | 20 LF 8" |
| STA. 4+00 RT. LINDEN AVE. TO STA. 4+20 RT. LINDEN AVE. | 20 LF 8" |
| STA. 4+65 LT. LENNOX AVE. TO STA. 4+85 LT. LENNOX AVE. | 20 LF 8" |
| STA. 2+40 LT. LENNOX AVE. TO STA. 2+60 LT. LENNOX AVE. | 20 LF 8" |
| STA. 5+05 LT. LENNOX AVE. TO STA. 5+25 LT. LENNOX AVE. | 20 LF 8" |

**ADJUST EXISTING UTILITY STRUCTURES TO GRADE**

|   |  |
|---|--|
| LENNOX AVE. STA. 0+46 RT. SAN. SEWER MANHOLE                  |  |
| LENNOX AVE. STA. 2+76 RT. WATER METER                         |  |
| LENNOX AVE. STA. 4+47 RT. SAN. SEWER MANHOLE                  |  |
| LENNOX AVE. STA. 5+23 RT. WATER METER                         |  |
| LENNOX AVE. STA. 5+78 LT. WATER METER                         |  |
| LENNOX AVE. STA. 0+50 LT. RELOCATE GAS MAIN (BY OTHERS, TYP.) |  |
| LINDEN AVE. STA. 5+88, 15' LT. WATER METER                    |  |
| CEDAR AVE. STA. 1+58, 13.5' RT. WATER VALVE TO FH             |  |

**CONSTRUCT 6 1/2" BITUMINOUS CURB AND 4" ROAD WIDENING/RECONSTRUCTION)**

|  |          |
|--|----------|
| STA. 0+16 @ CEDAR AVE., 12' RT. TO STA. 5+25 @ LINDEN AVE., 11' LT.  | 507 LF   |
| STA. 0+12 @ CEDAR AVE., 12' LT. TO STA. 11+57 @ LINDEN AVE., 15' LT. | 772 LF   |
| STA. 1+22 @ LENNOX AVE., 12' LT. TO STA. 5+25 @ LINDEN AVE., 11' LT. | 606 LF   |
| STA. 4+10 @ LINDEN AVE., 12' RT. TO STA. 5+80 @ LENNOX AVE., 15' LT. | 123.5 LF |

**REMOVE EXISTING PIPE CULVERT**

|  |               |
|--|---------------|
| STA. 6+75 12' RT. LINDEN AVE. TO STA. 6+87 17.5' LT. LINDEN AVE. | 30 LF 12" CMP |
| STA. 1+11 RT. CEDAR AVE. TO STA. 1+45 RT. CEDAR AVE.             | 34 LF 12" CMP |
| STA. 2+43 RT. CEDAR AVE. TO STA. 2+53 RT. CEDAR AVE.             | 53 LF 12" CMP |
| STA. 2+55 RT. CEDAR AVE. TO STA. 2+74 RT. CEDAR AVE.             | 19 LF 12" CMP |
| STA. 2+82 RT. CEDAR AVE. TO STA. 2+85 RT. CEDAR AVE.             | 3 LF 12" CMP  |
| STA. 0+17 RT. LENNOX AVE.  | 9 LF 12" CMP  |
| STA. 4+62 TO STA. 5+00 LT. LENNOX AVE.                           | 38 LF 12" CMP |
| STA. 0+15 RT. LENNOX AVE.  | 25 LF 12" CMP |
| STA. 1+58 TO STA. 2+05 LT. LENNOX AVE.                           | 47 LF 15" CMP |
| STA. 2+06 TO STA. 2+31 RT. LENNOX AVE.                           | 25 LF 12" RCP |
| STA. 2+63 TO STA. 2+81 LT. LENNOX AVE.                           | 18 LF 12" RCP |
| STA. 3+50 TO STA. 3+88 LT. LENNOX AVE.                           | 18 LF 8" VCP  |

MATCHLINE - FOR CONTINUATION, SEE DWG. P-2

MATCHLINE - FOR CONTINUATION, SEE DWG. P-4

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

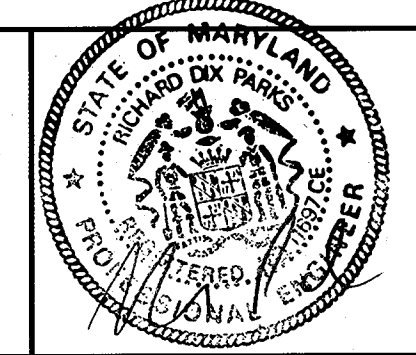
*James J. Brown* 6/5/93  
DIRECTOR OF PUBLIC WORKS - DATE

*John Pagan* 6/5/93  
CHIEF, BUREAU OF ENGINEERING - DATE

*Charles H. Anderson* 6/5/93  
CHIEF, (ROADS, BRIDGES, & STORM DRAINAGE DIV.) - DATE

*Richard J. Boichovich* 6/5/93  
CHIEF, BUREAU OF HIGHWAYS - DATE

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201 South Cleveland Avenue, Suite 304  
Hagerstown, Maryland 21740  
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|-------------|----|----------|------|--|--|
| DES: R.D.P. |    |          |      |  |  |
| DRN: A.C.M. |    |          |      |  |  |
| CHK: R.D.P. |    |          |      |  |  |
| DATE: 05/93 |    |          |      |  |  |
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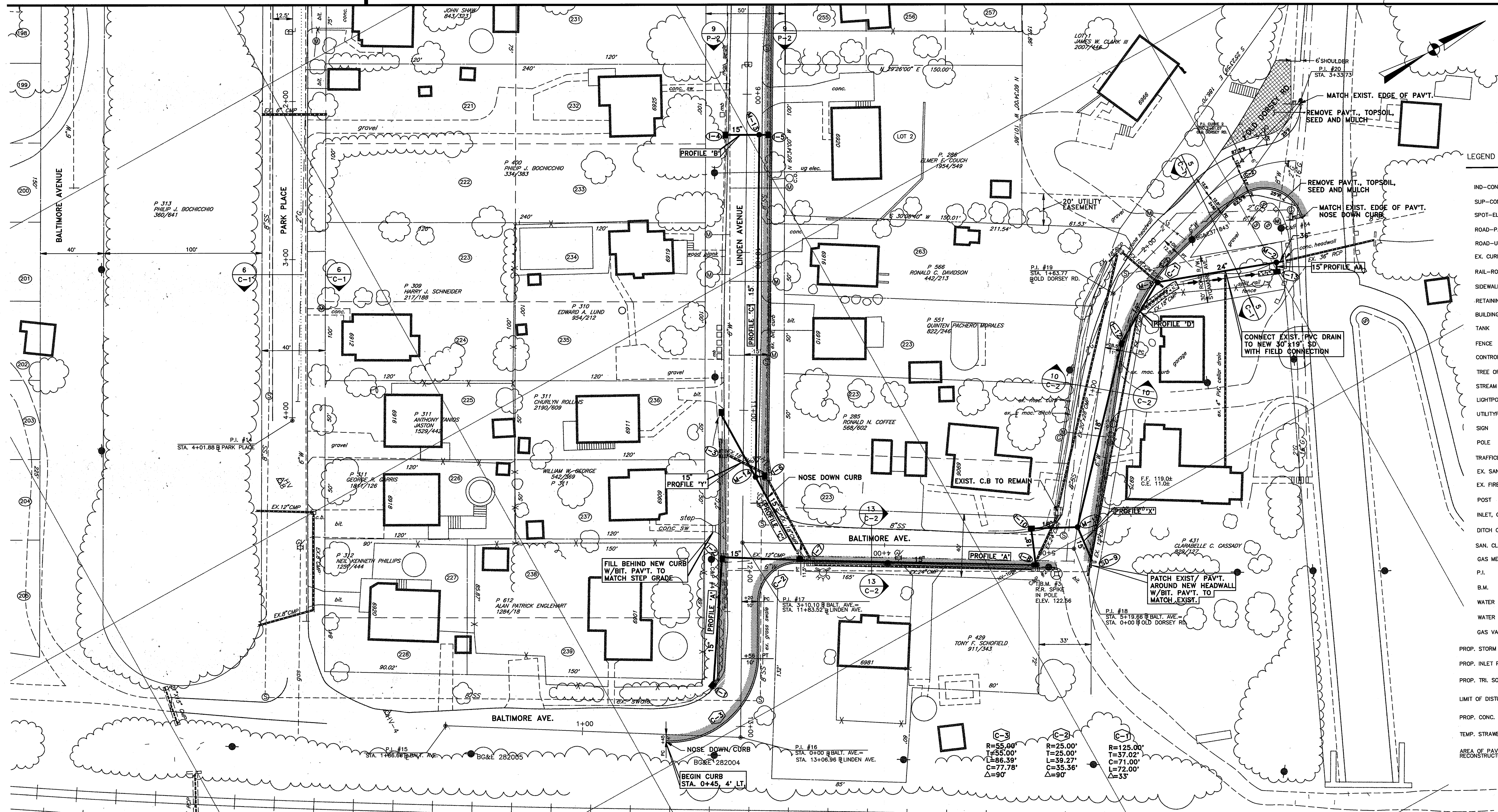
LENNOX PARK  
A RESIDENTIAL COMMUNITY

60' SCALE MAP NO. 43 BLOCK NO. 6

CAPITAL PROJECT NO. D-1100  
LENNOX PARK  
STORM DRAINAGE IMPROVEMENTS  
STORM DRAIN AND ROAD IMPROVEMENT PLAN

SCALE  
1" = 30'  
SHEET NO.  
9 OF 24  
DWG. NO.  
P-3





**LEGEND AND SYMBOL**

- IND-CONTOUR
- SUP-ELEV
- SPOT-ELEV
- ROAD-PAVED
- ROAD-UNPAVED
- EX. CURB
- RAIL-ROAD
- SIDEWALK
- RETAINING WALL
- BUILDING
- TANK
- FENCE
- CONTROL
- TREE OR BRUSH
- STREAM
- LIGHTPOLE
- UTILITYPOLE
- SIGN
- POLE
- TRAFFICLIGHT
- EX. SAN. MH
- EX. FIRE HYD.
- POST
- INLET, GRATING TYPE
- DITCH OR SWALE
- SAN. CLEANOUT
- GAS METER
- P.I.
- B.M.
- WATER METER
- WATER VALVE
- GAS VALVE
- PROP. STORM DRAIN
- PROP. INLET PROTECTION
- PROP. TRI. SOD DITCH
- LIMIT OF DISTURBANCE
- PROP. CONC. DITCH
- TEMP. STRAWBALE DIKE
- AREA OF PAVT. RECONSTRUCTION

**ADJUST UTILITIES TO GRADE**  
 LINDEN AVE. STA. 8+75, 12' LT. SEWER MANHOLE  
 LINDEN AVE. STA. 10+58, 17' LT. WATER METER  
 LINDEN AVE. STA. 10+67, 13' LT. SAN SEWER MH

**NOSE DOWN CURB (SEE DETAIL SHEET 3)**  
 STA. 11+57 @ LINDEN AVE. LT.  
 STA. 0+08 @ OLD DORSEY RD., RT.  
 STA. 2+74 @ OLD DORSEY RD., RT.  
 STA. 0+48 @ BALTIMORE AVE., LT.  
 STA. 5+08 @ BALTIMORE AVE., RT.  
 STA. 12+72 @ LINDEN AVE., RT.  
 STA. 11+18 @ LINDEN AVE., RT.  
 STA. 6+33.8 @ CEDAR AVE., LT.

**RELOCATE EXISTING GAS MAIN (TO BE RELOCATED BY OTHERS)**  
 STA. 2+00 LT. PARK PLACE TO STA. 2+20 LT. PARK PLACE  
 STA. 9+15 LT. LINDEN AVE. TO STA. 9+35 LT. LINDEN AVE. 20 LF  
 STA. 10+90 RT. LINDEN AVE. TO STA. 11+10 RT. LINDEN AVE. 20 LF  
 STA. 11+80 RT. LINDEN AVE. TO STA. 12+00 RT. LINDEN AVE. 20 LF

**RELOCATE EXIST. WATER MAIN - TEST PIT TO CONFIRM**  
 STA. 1+02 RT. OLD DORSEY RD. TO STA. 1+45 RT. OLD DORSEY RD. 20 LF  
 STA. 11+05 RT. LINDEN AVE. TO STA. 11+25 RT. LINDEN AVE. 20 LF  
 STA. 11+80 RT. LINDEN AVE. TO STA. 12+00 RT. LINDEN AVE. 20 LF  
 STA. 2+00 LT. PARK PLACE TO STA. 2+20 LT. PARK PLACE 20 LF  
 STA. 3+85 LT. PARK PLACE TO STA. 3+85 LT. PARK PLACE 20 LF  
 STA. 9+15 LT. LINDEN AVE. TO STA. 9+35 LT. LINDEN AVE. 20 LF  
 STA. 0+10 RT. OLD DORSEY RD. TO STA. 0+10 RT. OLD DORSEY RD. 20 LF  
 STA. 11+00 RT. TO STA. 12+00 RT. LINDEN AVE. 20 LF

**CONSTRUCT DEPRESSION CURB AND DRIVEWAY ENTRANCE WITH BITUMINOUS CURB AND PAVEMENT**  
 STA. 9+01 LT. LINDEN AVE. W=12.5' L=4'  
 STA. 9+90 LT. LINDEN AVE. W=19' L=4'  
 STA. 10+40 LT. LINDEN AVE. W=20' L=4'

**CONSTRUCT 1/2" BITUMINOUS CURB AND 4" ROAD WIDENING/RECONSTRUCTION**  
 STA. 0+08 @ OLD DORSEY ROAD, 11' RT. TO DORSEY RD. 340 LF  
 STA. 0+45 @ BALTIMORE AVE., 4' LT. TO STA. 5+08 @ BALTIMORE AVE., 11.5' RT. 350 LF  
 STA. 12+72 @ LINDEN AVE., 18' RT. TO STA. 11+18 @ LINDEN AVE., 14' RT. 180 LF  
 STA. 6+33.8 @ CEDAR AVE., 11' LT. TO STA. 7+33.8 @ LINDEN AVE., 10' RT. 280 LF

**REMOVE EXISTING BITUMINOUS CURB**  
 STA. 12+00 RT. LINDEN AVE. TO STA. 12+25 RT. LINDEN AVE. 25 LF  
 STA. 0+00 RT. OLD DORSEY RD. TO STA. 1+50 RT. OLD DORSEY RD. 150 LF

**REMOVE EXISTING PIPE CULVERT**  
 STA. 3+51 TO STA. 4+95 RT. BALTIMORE AVE. 144 LF  
 STA. 4+95 RT. BALTIMORE AVE. TO STA. 0+20 LT. OLD DORSEY RD. 36 LF  
 STA. 2+08 LT. PARK PLACE TO STA. 2+08 RT. PARK PLACE 24 LF  
 STA. 11+27 RT. LINDEN AVE. TO STA. 11+41.5 LT. LINDEN AVE. 30 LF  
 STA. 11+95 RT. LINDEN AVE. TO STA. 3+51 RT. BALTIMORE AVE. 58 LF  
 STA. 11+41.5 LT. LINDEN AVE. TO STA. 3+51 RT. BALTIMORE AVE. 60 LF  
 STA. 1+80 RT. OLD DORSEY RD. TO STA. 1+80 RT. OLD DORSEY RD. 30 LF  
 STA. 0+10 RT. OLD DORSEY RD. - AS REQ'D. TO INSTALL SD-9 20 LF

**CONSTRUCT CONCRETE TRIANGULAR CHANNEL**  
 STA. 1+58, 20' RT. OLD DORSEY RD. TO STA. 1+90, 25' RT. OLD DORSEY RD. 25 LF  
 INLET CHANNEL TO I-13 - OLD DORSEY RD., RT. 10 LF

**REMOVE STORM DRAIN STRUCTURES**  
 STA. 11+27, 14.5' RT. LINDEN AVE. - STORM DRAIN CATCH BASIN  
 STA. 11+41.5, 15' LT. LINDEN AVE. - STORM DRAIN CATCH BASIN  
 STA. 11+95, 12' RT. LINDEN AVE. - STORM DRAIN CATCH BASIN  
 STA. 4+88, 13.8' RT. BALTIMORE AVE. - STORM DRAIN CATCH BASIN  
 STA. 3+51, 9.5' RT. BALTIMORE AVE. - STORM DRAIN CATCH BASIN

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

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**LENNOX PARK**  
 A RESIDENTIAL COMMUNITY

**CAPITAL PROJECT NO. D-1100**  
 LENNOX PARK  
 STORM DRAINAGE IMPROVEMENTS  
 STORM DRAIN AND ROAD IMPROVEMENTS

**SCALE**  
 1" = 30'

**SHEET NO.**  
 10 OF 24

**DWG. NO.**  
 P-4

02/23/96 LENNOX 1350504

Director of Public Works - DATE  
 Chief, Bureau of Engineering - DATE  
 Chief, Bureau of Highways - DATE

DES: R.D.P.  
 DRN: A.C.M.  
 CHK: R.D.P.  
 DATE: 03/93

| BY | NO | REVISION | DATE |
|----|----|----------|------|
|    |    |          |      |
|    |    |          |      |

600' SCALE MAP NO. 43 BLOCK NO. 6

6" SHOULDER P.I. #20 STA. 3+33.73  
 MATCH EXIST. EDGE OF PAVT.  
 REMOVE PAVT., TOPSOIL, SEED AND MULCH  
 MATCH EXIST. EDGE OF PAVT.  
 REMOVE PAVT., TOPSOIL, SEED AND MULCH  
 MATCH EXIST. EDGE OF PAVT.  
 NOSE DOWN CURB  
 15' PROFILE 'A'  
 CONNECT EXIST. PVC DRAIN TO NEW 30"x19" SD WITH FIELD CONNECTION  
 PATCH EXIST. PAVT. AROUND NEW HEADWALL W/BIT. PAVT. TO MATCH EXIST.  
 EXIST. C.B. TO REMAIN  
 NOSE DOWN CURB  
 BALTIMORE AVE.  
 PROFILE 'A'  
 PROFILE 'B'  
 PROFILE 'C'  
 PROFILE 'D'  
 PROFILE 'Y'  
 PROFILE 'X'  
 P.I. #14 STA. 4+01.88 @ PARK PLACE  
 P.I. #15 STA. 1+86.88 @ BALT. AVE.  
 P.I. #16 STA. 0+00 @ BALT. AVE. STA. 13+06.96 @ LINDEN AVE.  
 P.I. #17 STA. 3+10.10 @ BALT. AVE. STA. 11+83.52 @ LINDEN AVE.  
 P.I. #18 STA. 5+19.86 @ BALT. AVE. STA. 0+00 @ OLD DORSEY RD.  
 P.I. #19 STA. 1+83.77 @ OLD DORSEY RD.  
 P.I. #20 STA. 3+33.73



**CONSTRUCT TEMPORARY INLET PROTECTION FOR SEDIMENT AND EROSION CONTROL**  
 I-48, EXIST. INLET STA. 2+86, 15' LT. MAGNOLIA AVE., EXIST. I-45, I-46,

**CONSTRUCT TEMPORARY IN-STREAM STONE DIKE FOR SEDIMENT CONTROL**  
 L=17', STA. 0+15, 55' RT. @ MAGNOLIA AVE.

**CONSTRUCT STRAW BALE DIKE IN SWALE FOR SEDIMENT CONTROL**  
 L=6', STA. 6+23, 25' RT. @ MAGNOLIA AVE.  
 L=6', STA. 1+25, 16' RT. @ MAGNOLIA AVE.

**CONSTRUCT SILT FENCE FOR TEMPORARY SEDIMENT CONTROL**  
 15 LF- STA. 0+25, 60' RT. TO STA. 0+25, 75' RT. @ MAGNOLIA AVE.

**CONSTRUCT RIPRAP LINED OUTLET PROTECTION**  
 15 LF- MAGNOLIA AVE.: STA. 0+20, 40' RT. TO STA. 0+15, 55' RT.  $d_{50}=6'$ ,  $Q=13.5$ ,  $V=4.6$

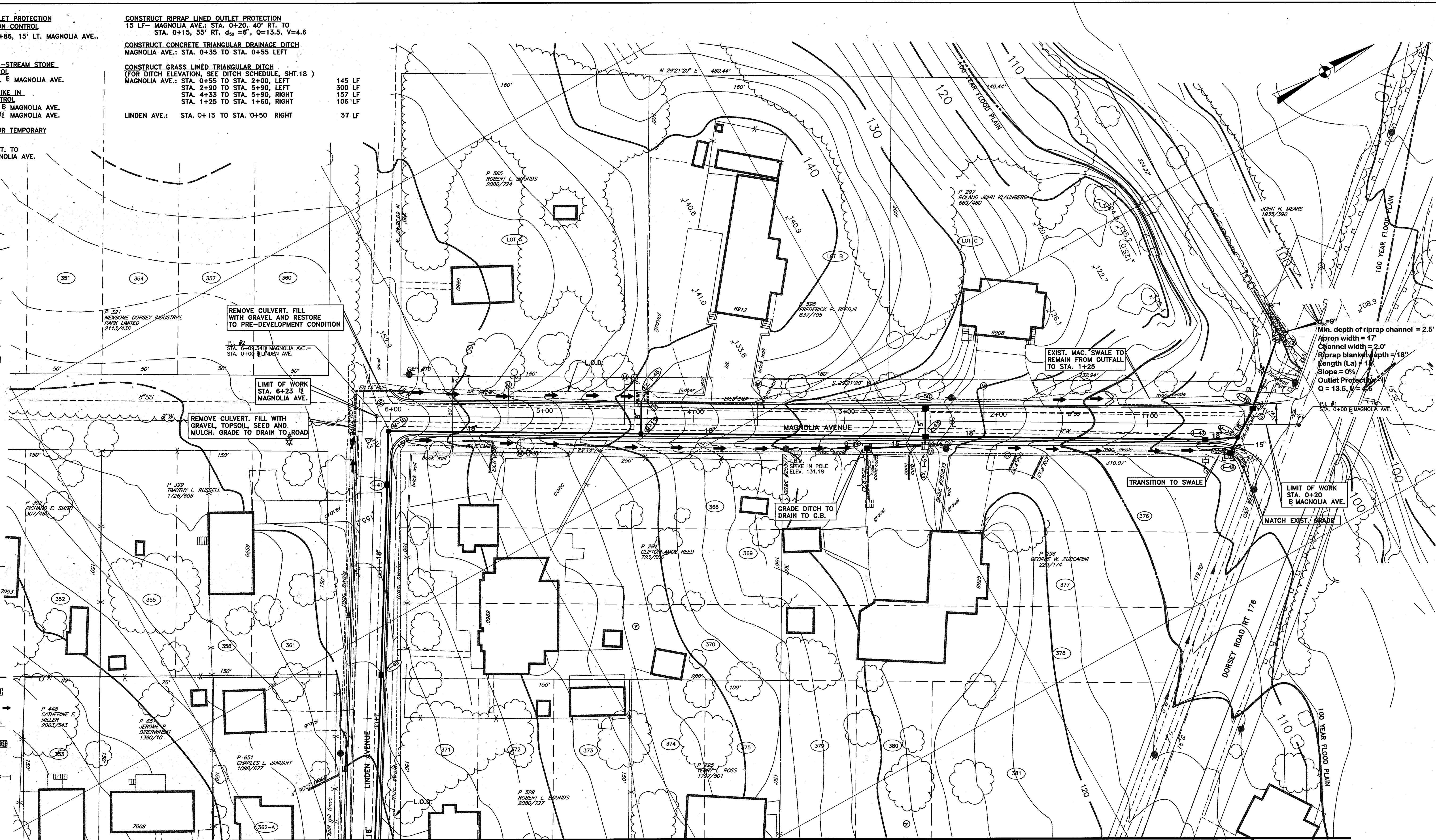
**CONSTRUCT CONCRETE TRIANGULAR DRAINAGE DITCH**  
 MAGNOLIA AVE.: STA. 0+35 TO STA. 0+55 LEFT

**CONSTRUCT GRASS LINED TRIANGULAR DITCH**  
 (FOR DITCH ELEVATION, SEE DITCH SCHEDULE, SHT.18)  
 MAGNOLIA AVE.: STA. 0+55 TO STA. 2+00, LEFT  
 STA. 2+90 TO STA. 5+90, LEFT  
 STA. 4+33 TO STA. 5+90, RIGHT  
 STA. 1+25 TO STA. 1+60, RIGHT

LINDEN AVE.: STA. 0+13 TO STA. 0+50 RIGHT 37 LF

**LEGEND AND SYMBOL**

- IND-CONTOUR
- SUP-CONTOUR
- SPOT-ELEV
- ROAD-PAVED
- ROAD-UNPAVED
- EX. CURB
- RAIL-ROAD
- SIDEWALK
- RETAININGWALL
- BUILDING
- TANK
- FENCE
- CONTROL
- TREE OR BRUSH
- STREAM
- LIGHTPOLE
- UTILITYPOLE
- SIGN
- POLE
- TRAFFICLIGHT
- EX. SAN. MH
- EX. FIRE HYD.
- POST
- INLET, GRATING TYPE
- DITCH OR SWALE
- SAN. CLEANOUT
- GAS METER
- P.I.
- B.M.
- WATER METER
- WATER VALVE
- GAS VALVE
- PROP. STORM DRAIN
- PROP. INLET AND PROTECTION
- PROP. TRI. GRASS DITCH
- LIMIT OF DISTURBANCE
- PROP. CONC. DITCH
- TEMP. STRAWBALE DIKE
- SILT FENCE



Min. depth of riprap channel = 2.5'  
 Apron width = 17'  
 Channel width = 2.0'  
 Riprap blanket depth = 18"  
 Length (L) = 16'  
 Slope = 0%  
 Outlet Protection  
 $Q = 13.5$ ,  $V = 4.6$

MATCHLINE - FOR CONTINUATION, SEE DWG GR-3

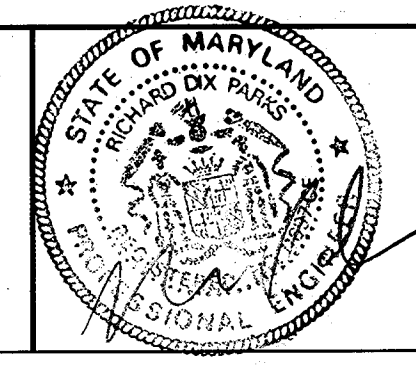
DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS - DATE  
*Charles Linderman* 6/5/96  
 CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

CHIEF, BUREAU OF ENGINEERING - DATE  
*Richard E. Miller* 6/5/96

CHIEF, BUREAU OF HIGHWAYS - DATE

**acer**  
 Acer Engineers & Consultants, Inc.  
 201 South Cleveland Avenue, Suite 304  
 Hagerstown, Maryland 21740  
 Tel 301-791-1100



|             |    |    |          |      |  |
|-------------|----|----|----------|------|--|
| DES: R.D.P. |    |    |          |      |  |
| DRN: A.C.M. |    |    |          |      |  |
| CHK: R.D.P. |    |    |          |      |  |
| DATE: 03/93 | BY | NO | REVISION | DATE |  |

LENNOX PARK  
 A RESIDENTIAL COMMUNITY

600' SCALE MAP NO. 43 BLOCK NO. 6

CAPITAL PROJECT NO. D-1100  
 LENNOX PARK  
 STORM DRAINAGE IMPROVEMENTS

GRADING, SEDIMENT AND EROSION CONTROL PLAN

SCALE  
 1" = 30'

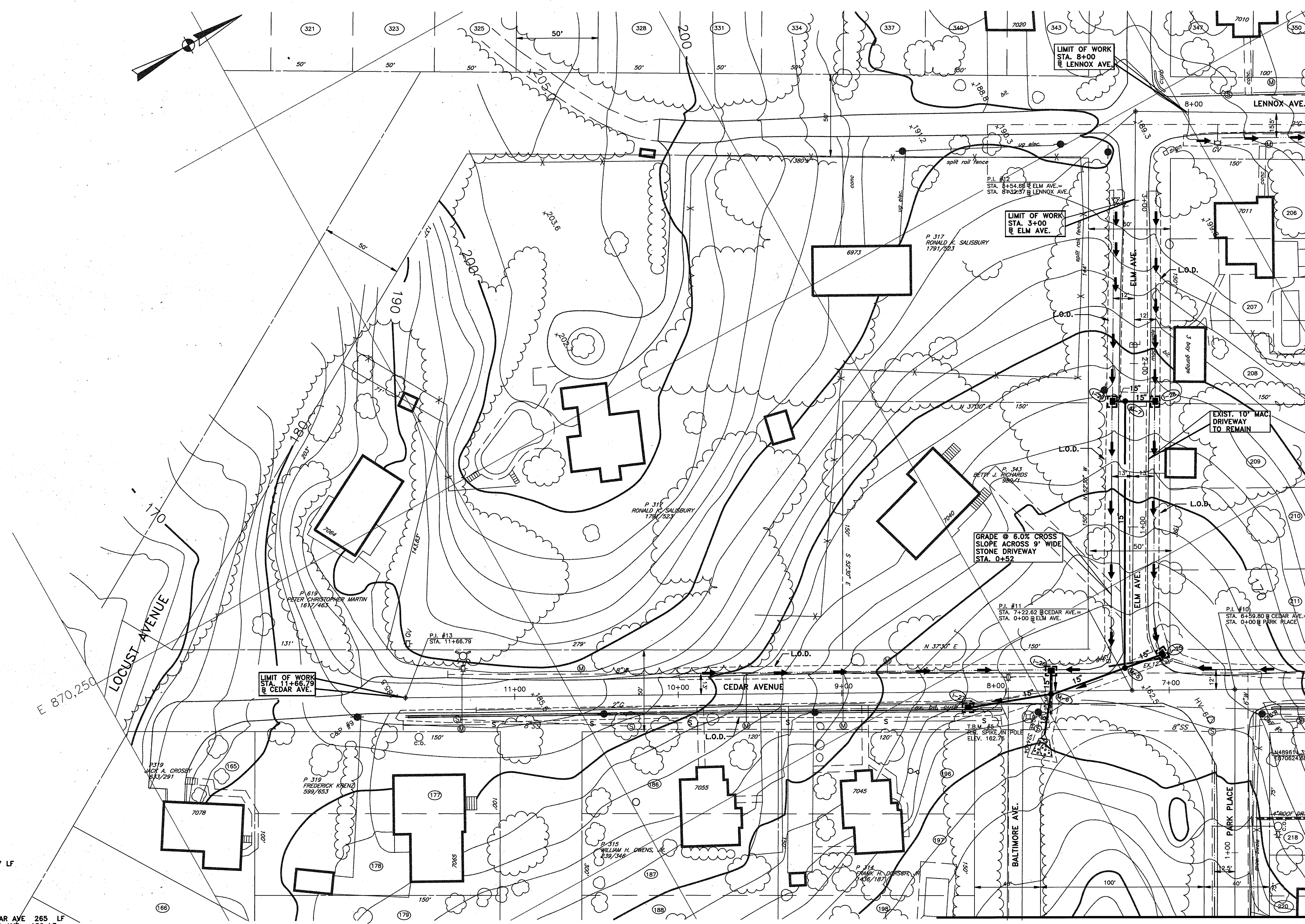
SHEET NO.  
 11 OF 24

DWG. NO.  
 GR-1



LEGEND AND SYMBOL

- IND-CONTOUR
- SUP-CONTOUR
- SPOT-ELEV
- ROAD-PAVED
- ROAD-UNPAVED
- EX. CURB
- RAIL-ROAD
- SIDEWALK
- RETAININGWALL
- BUILDING
- TANK
- FENCE
- CONTROL
- TREE OR BRUSH
- STREAM
- LIGHTPOLE
- UTILITYPOLE
- SIGN
- POLE
- TRAFFICLIGHT
- EX. SAN. MH
- EX. FIRE HYD.
- POST
- INLET, GRATING TYPE
- DITCH OR SWALE
- SAN. CLEANOUT
- GAS METER
- P.I.
- B.M.
- WATER METER
- WATER VALVE
- GAS VALVE
- PROP. STORM DRAIN
- PROP. INLET AND PROTECTION
- PROP. TRI. GRASS DITCH
- LIMIT OF DISTURBANCE
- PROP. CONC. DITCH
- TEMP. STRAWBALE DIKE
- SILT FENCE



**CONSTRUCT TEMPORARY INLET PROTECTION FOR SEDIMENT AND EROSION CONTROL**  
 I-26, I-27, I-25, I-28, I-29

**CONSTRUCT RIPRAP OUTLET PROTECTION**  
 STA. 7+75 LT. CEDAR AVE. - 10 LF

**CONSTRUCT SILT FENCE**  
 STA. 8+00 LT. CEDAR AVE. TO STA. 11+67 LT. CEDAR AVE. - 367 LF

**CONSTRUCT GRASS LINED TRIANGULAR DITCH**  
 (FOR DITCH ELEVATION, SEE DITCH SCHEDULE, SHT. 18 )  
 LENNOX AVE.: STA. 0+16 TO STA. 3+00, LEFT 284 LF  
 LENNOX AVE.: STA. 0+16 TO STA. 3+00, RIGHT 284 LF  
 ELM AVE.: STA. 0+16 LT. ELM AVE. TO STA. 10+00, RT CEDAR AVE 265 LF  
 STA. 0+16 RT. ELM AVE. TO STA. 5+75 RT CEDAR AVE. 180 LF

MATCHLINE - FOR CONTINUATION, SEE DWG. GR-4

MATCHLINE - FOR CONTINUATION, SEE DWG. GR-3

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

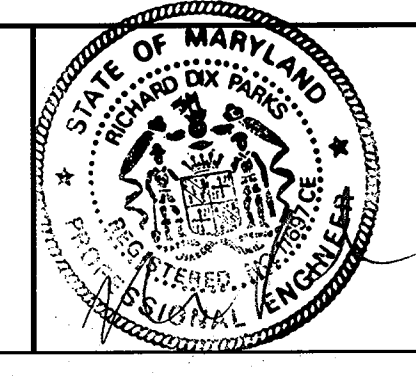
*James P. Wilson* 6/5/93  
 DIRECTOR OF PUBLIC WORKS - DATE

*John W. Brown* 6/5/93  
 CHIEF, BUREAU OF ENGINEERING - DATE

*Samuel Anderson* 6/5/93  
 CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*Joseph L. ...* 6/5/93  
 CHIEF, BUREAU OF HIGHWAYS - DATE

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 Hagerstown, Maryland 21740  
 Tel 301-791-1100



|             |    |    |          |      |  |
|-------------|----|----|----------|------|--|
| DES: R.D.P. |    |    |          |      |  |
| DRN: A.C.M. |    |    |          |      |  |
| CHK: R.D.P. |    |    |          |      |  |
| DATE: 05/93 | BY | NO | REVISION | DATE |  |

LENNOX PARK  
 A RESIDENTIAL COMMUNITY

600' SCALE MAP NO. 43 BLOCK NO. 6

CAPITAL PROJECT NO. D-1100  
 LENNOX PARK  
 STORM DRAINAGE IMPROVEMENTS

GRADING, SEDIMENT AND EROSION CONTROL PLAN

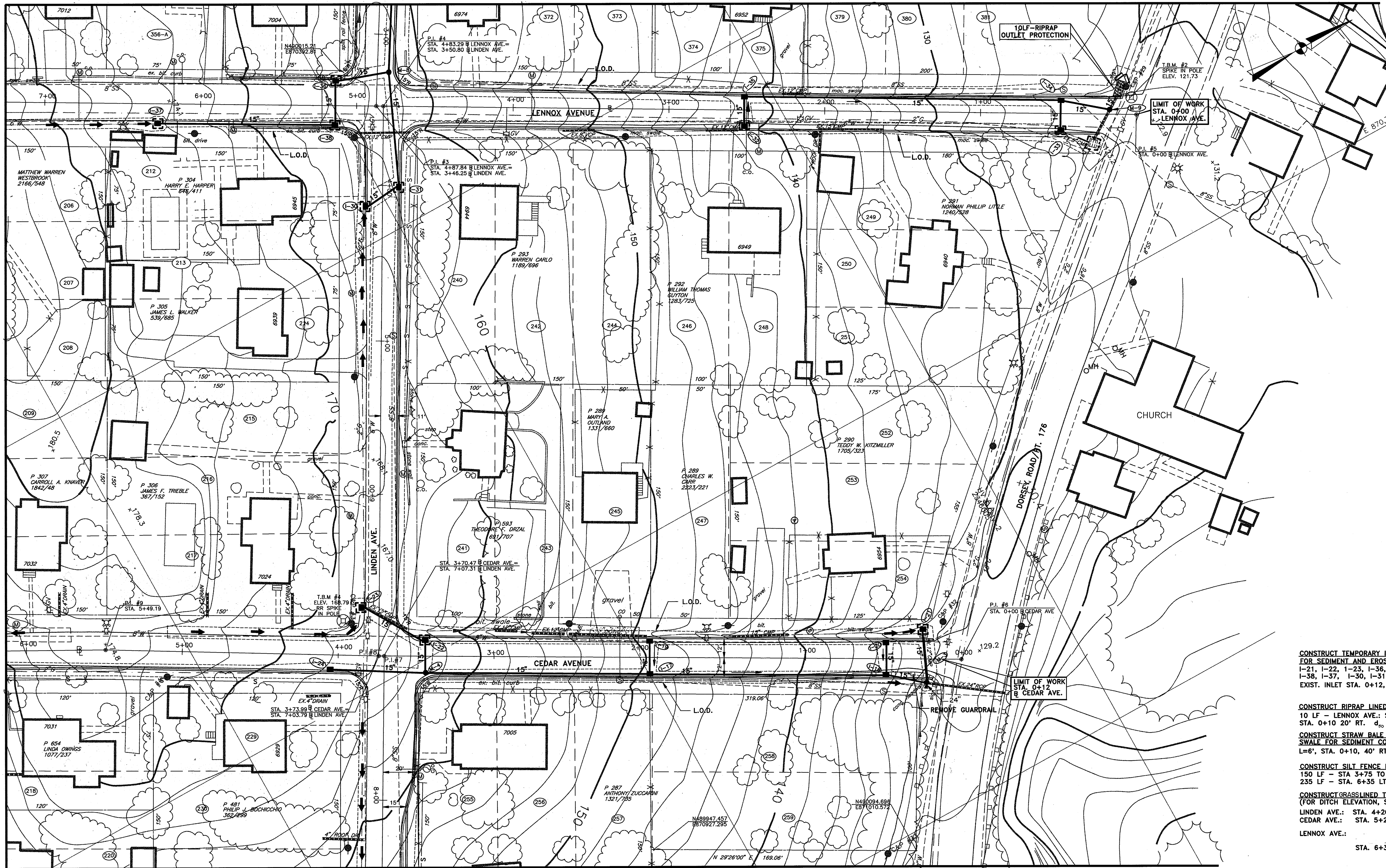
SCALE  
 1" = 30'

SHEET NO.  
 12 OF 24

DWG. NO.  
 GR-2



MATCHLINE - FOR CONTINUATION, SEE DWG. GR-1



LEGEND AND SYMBOL

|                        |          |
|------------------------|----------|
| IND-CONTOUR            | (Symbol) |
| SUP-CONTOUR            | (Symbol) |
| SPOT-ELEV              | (Symbol) |
| ROAD-PAVED             | (Symbol) |
| ROAD-UNPAVED           | (Symbol) |
| EX. CURB               | (Symbol) |
| RAIL-ROAD              | (Symbol) |
| SIDEWALK               | (Symbol) |
| RETAININGWALL          | (Symbol) |
| BUILDING               | (Symbol) |
| TANK                   | (Symbol) |
| FENCE                  | (Symbol) |
| CONTROL                | (Symbol) |
| TREE OR BRUSH          | (Symbol) |
| STREAM                 | (Symbol) |
| LIGHTPOLE              | (Symbol) |
| UTILITYPOLE            | (Symbol) |
| SIGN                   | (Symbol) |
| POLE                   | (Symbol) |
| TRAFFICLIGHT           | (Symbol) |
| EX. SAN. MH            | (Symbol) |
| EX. FIRE HYD.          | (Symbol) |
| POST                   | (Symbol) |
| INLET, GRATING TYPE    | (Symbol) |
| DITCH OR SWALE         | (Symbol) |
| SAN. CLEANOUT          | (Symbol) |
| GAS METER              | (Symbol) |
| P.I.                   | (Symbol) |
| B.M.                   | (Symbol) |
| WATER METER            | (Symbol) |
| WATER VALVE            | (Symbol) |
| GAS VALVE              | (Symbol) |
| SOIL BORING            | (Symbol) |
| TEST PIT               | (Symbol) |
| PROP. STORM DRAIN      | (Symbol) |
| PROP. INLET PROTECTION | (Symbol) |
| PROP. TRI. SOD DITCH   | (Symbol) |
| LIMIT OF DISTURBANCE   | (Symbol) |
| PROP. CONC. DITCH      | (Symbol) |
| TEMP. STRAWBALE DIKE   | (Symbol) |
| SILT FENCE             | (Symbol) |

MATCHLINE - FOR CONTINUATION, SEE DWG. GR-2

MATCHLINE - FOR CONTINUATION, SEE DWG. GR-4

- CONSTRUCT TEMPORARY INLET PROTECTION FOR SEDIMENT AND EROSION CONTROL  
I-21, I-22, I-23, I-36, I-38, I-37, I-30, I-31, I-32, I-33.  
EXIST. INLET STA. 0+12, 21' LT. LENNOX AVE.
- CONSTRUCT RIPRAP LINED OUTLET PROTECTION  
10 LF - LENNOX AVE.: STA. 0+10, 10' RT. TO STA. 0+10 20' RT.  $Q_{50} = 9'$ ,  $Q = 13.0$ ,  $V = 4.9$
- CONSTRUCT STRAW BALE DIKE IN SWALE FOR SEDIMENT CONTROL  
L=6', STA. 0+10, 40' RT. @ LENNOX AVE.
- CONSTRUCT SILT FENCE FOR TEMPORARY SEDIMENT CONTROL  
150 LF - STA 3+75 TO STA 5+25, LT @ LINDEN AVE.  
235 LF - STA. 6+35 LT. CEDAR AVE. TO STA. 4+00 LT. CEDAR AVE.
- CONSTRUCT GRASSLINED TRIANGULAR DITCH (FOR DITCH ELEVATION, SEE DITCH SCHEDULE, SHT. 18)  
LINDEN AVE.: STA. 4+20 TO STA. 5+25, RIGHT 105 LF  
CEDAR AVE.: STA. 5+25 TO STA. 3+90, RIGHT 135 LF  
LENNOX AVE.: STA. 6+30 TO STA. 8+00, LEFT 170 LF

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

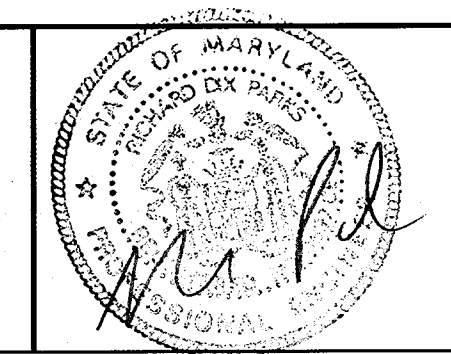
*James A. Larson* 6/5/96  
DIRECTOR OF PUBLIC WORKS - DATE

*Paul J. Sisson* 6/5/96  
CHIEF, BUREAU OF ENGINEERING - DATE

*Edward H. Anderson* 6/16/96  
CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*James M. ...* 5-96  
CHIEF, BUREAU OF HIGHWAYS - DATE

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201 South Cleveland Avenue, Suite 304  
Hagerstown, Maryland 21740  
Tel 301-791-1100



|             |  |          |  |      |
|-------------|--|----------|--|------|
| DES: R.D.P. |  |          |  |      |
| DRN: A.C.M. |  |          |  |      |
| CHK: R.D.P. |  |          |  |      |
| DATE: 03/93 |  |          |  |      |
| BY: NO      |  | REVISION |  | DATE |

LENNOX PARK  
A RESIDENTIAL COMMUNITY

60' SCALE MAP NO. 43 BLOCK NO. 6

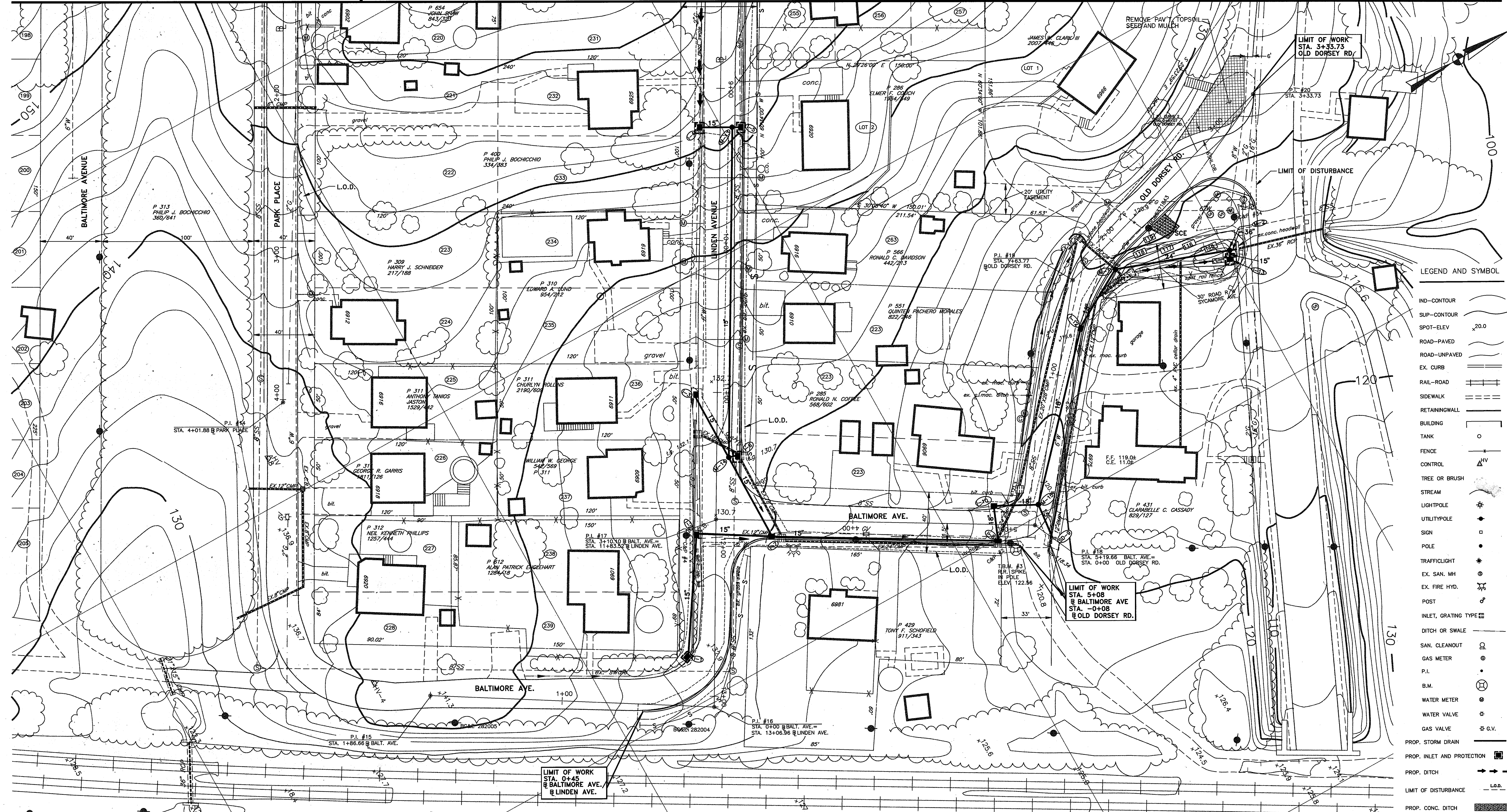
CAPITAL PROJECT NO. D-1100  
LENNOX PARK  
STORM DRAINAGE IMPROVEMENTS  
GRADING, SEDIMENT AND EROSION CONTROL PLAN

SCALE  
1" = 30'  
SHEET NO.  
13 OF 24  
DWG. NO.  
GR-3



MATCHLINE - FOR CONTINUATION, SEE DWG GR-2

MATCHLINE - FOR CONTINUATION, SEE DWG GR-3



LEGEND AND SYMBOL

- IND-CONTOUR
- SUP-CONTOUR
- SPOT-ELEV 20.0
- ROAD-PAVED
- ROAD-UNPAVED
- EX. CURB
- RAIL-ROAD
- SIDEWALK
- RETAININGWALL
- BUILDING
- TANK
- FENCE
- CONTROL
- TREE OR BRUSH
- STREAM
- LIGHTPOLE
- UTILITYPOLE
- SIGN
- POLE
- TRAFFICLIGHT
- EX. SAN. MH
- EX. FIRE HYD.
- POST
- INLET, GRATING TYPE
- DITCH OR SWALE
- SAN. CLEANOUT
- GAS METER
- P.I.
- B.M.
- WATER METER
- WATER VALVE
- GAS VALVE
- PROP. STORM DRAIN
- PROP. INLET AND PROTECTION
- PROP. DITCH
- LIMIT OF DISTURBANCE
- PROP. CONC. DITCH
- TEMP. STRAWBALE DIKE
- STAB. CONSTRUCTION ENTRANCE
- SILT FENCE

CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE  
STA. 2+25 RT OLD DORSEY ROAD

CONSTRUCT TEMPORARY INLET PROTECTION  
FOR SEDIMENT AND EROSION CONTROL  
1-16, 1-4, 1-5, 1-6, 1-1, 1-13

CONSTRUCT SILT FENCE FOR TEMPORARY SEDIMENT CONTROL  
STA. 12+00 LT. LINDEN AVE. TO STA. 0+65 LT. BALTIMORE AVE.  
STA. 8+00 LT. LINDEN AVE. TO STA. 11+50 LT. LINDEN AVE.

CONSTRUCT STRAW BALE DIKE IN  
SWALE FOR SEDIMENT CONTROL  
STA. 2+08, 50' RT. PARK PLACE  
STA. 3+75, 40' RT. PARK PLACE

CONSTRUCT GRASS LINED TRIANGULAR CHANNEL WITH SOIL STABILIZATION MATTING  
STA. 7+50 RT., LINDEN AVE. TO STA. 10+60 RT. LINDEN AVE. 310 LF  
STA. 1+95 RT., OLD DORSEY RD. TO STA. STA. 2+35 OLD DORSEY RD. 50 LF

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

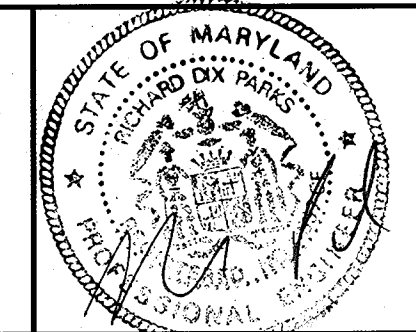
*Robert J. Anderson* 6/5/96  
DIRECTOR OF PUBLIC WORKS - DATE

*Robert J. Anderson* 6/5/96  
CHIEF, BUREAU OF ENGINEERING - DATE

*Robert J. Anderson* 6/5/96  
CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*Robert J. Anderson* 6/5/96  
CHIEF, BUREAU OF HIGHWAYS - DATE

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Hagerstown, Maryland 21740  
Tel 301-791-1100



|             |    |          |      |  |  |
|-------------|----|----------|------|--|--|
| DES: R.D.P. |    |          |      |  |  |
| DRN: A.C.M. |    |          |      |  |  |
| CHK: R.D.P. |    |          |      |  |  |
| DATE: 03/93 |    |          |      |  |  |
| BY          | NO | REVISION | DATE |  |  |

LENNOX PARK  
A RESIDENTIAL COMMUNITY

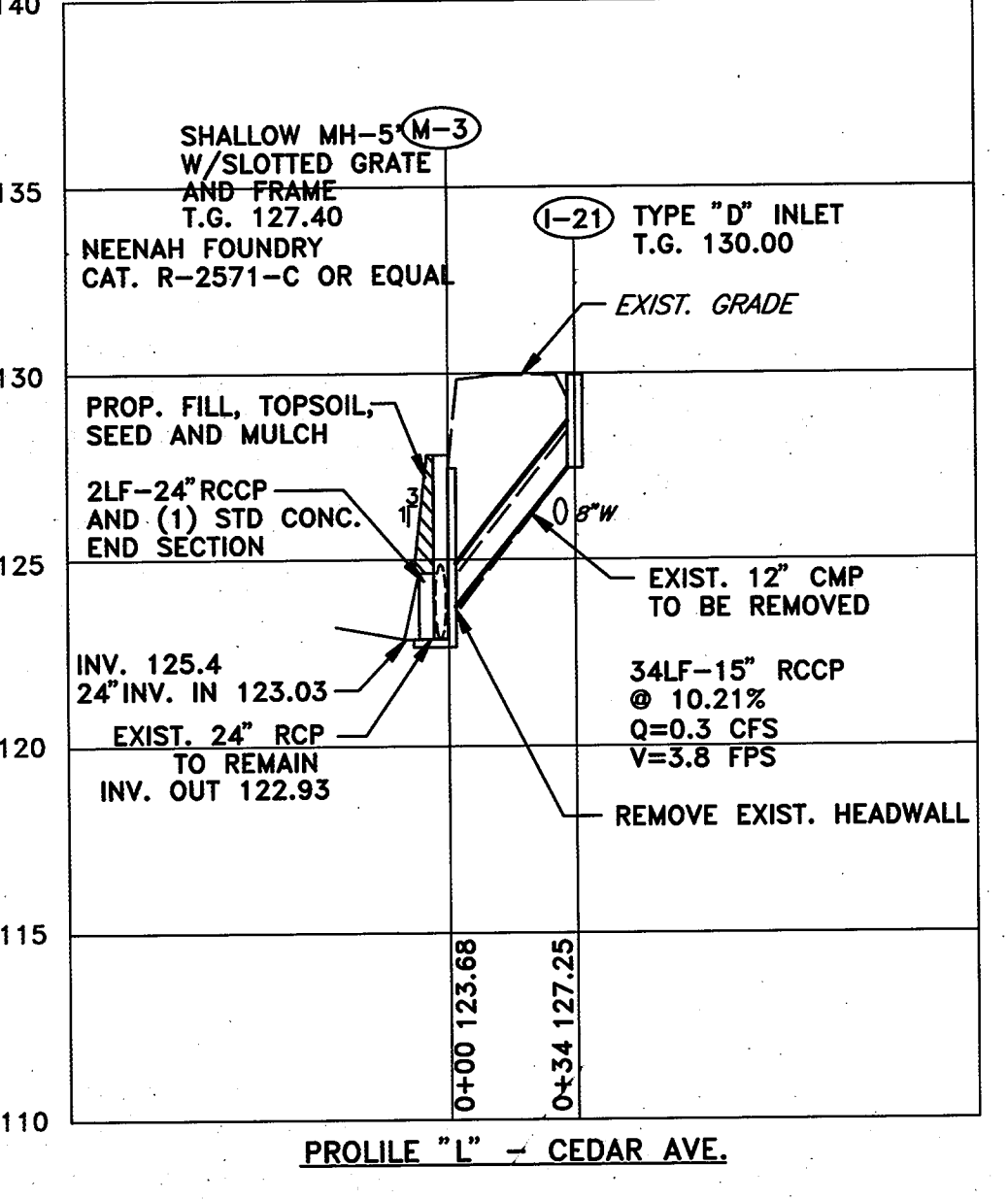
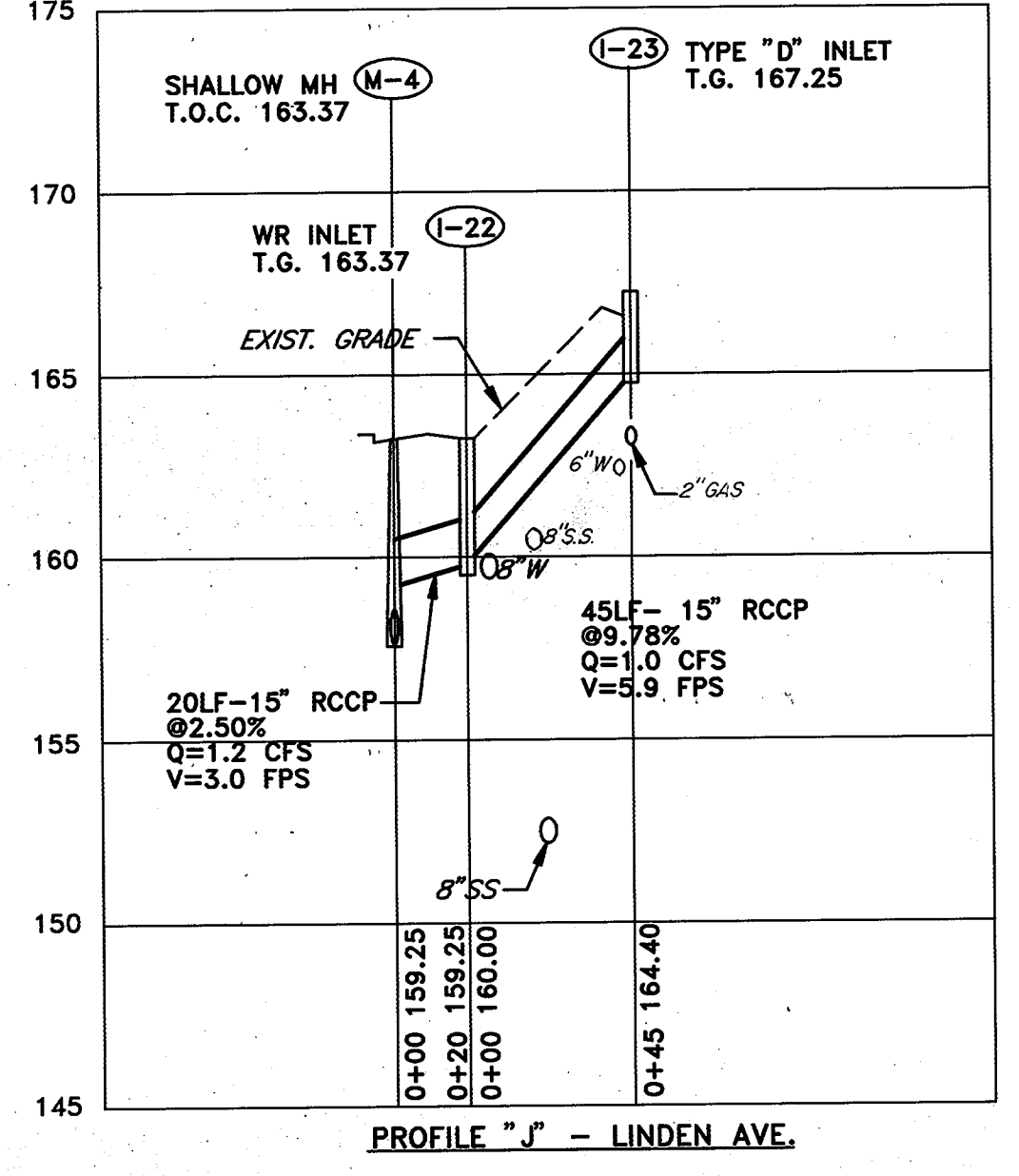
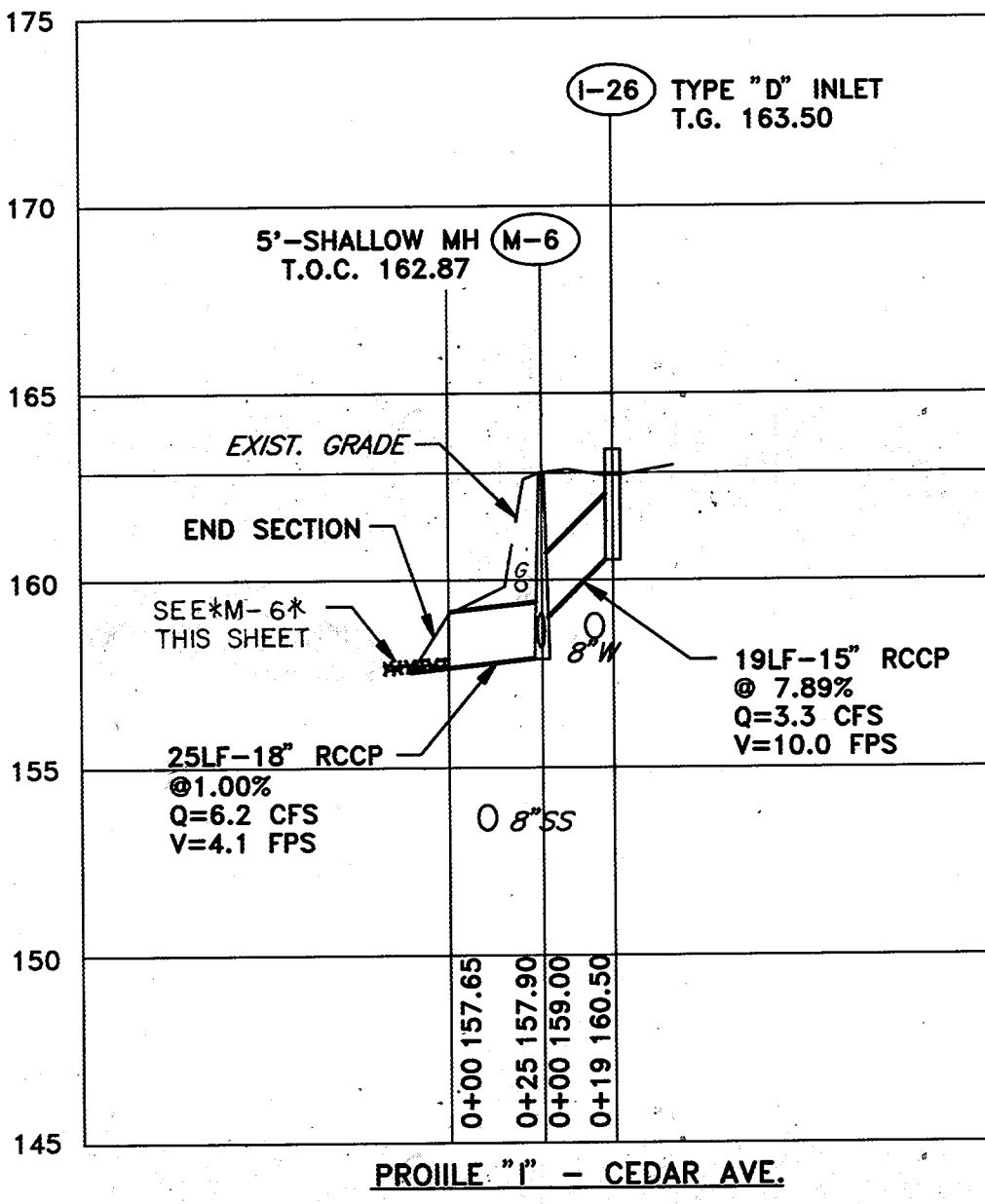
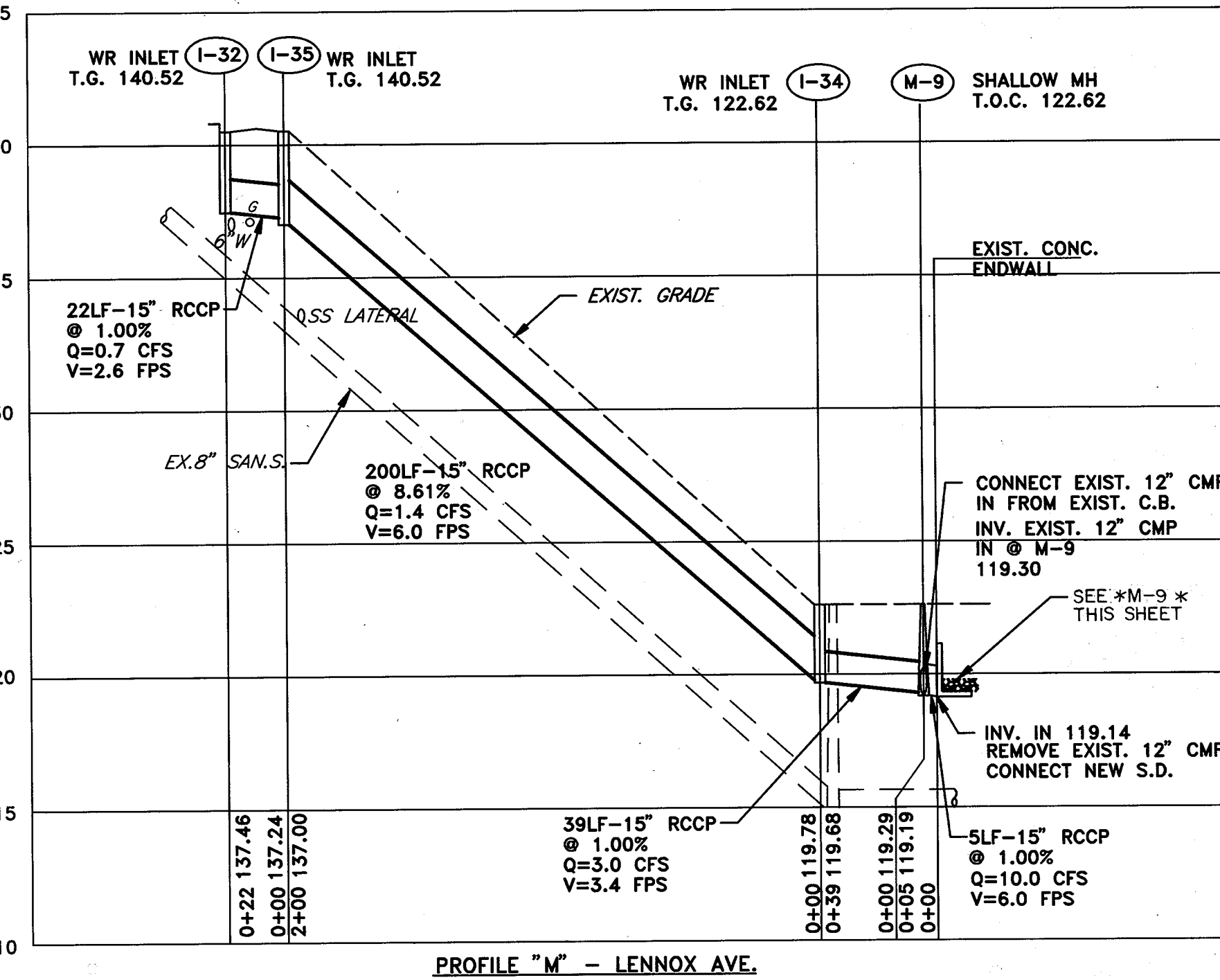
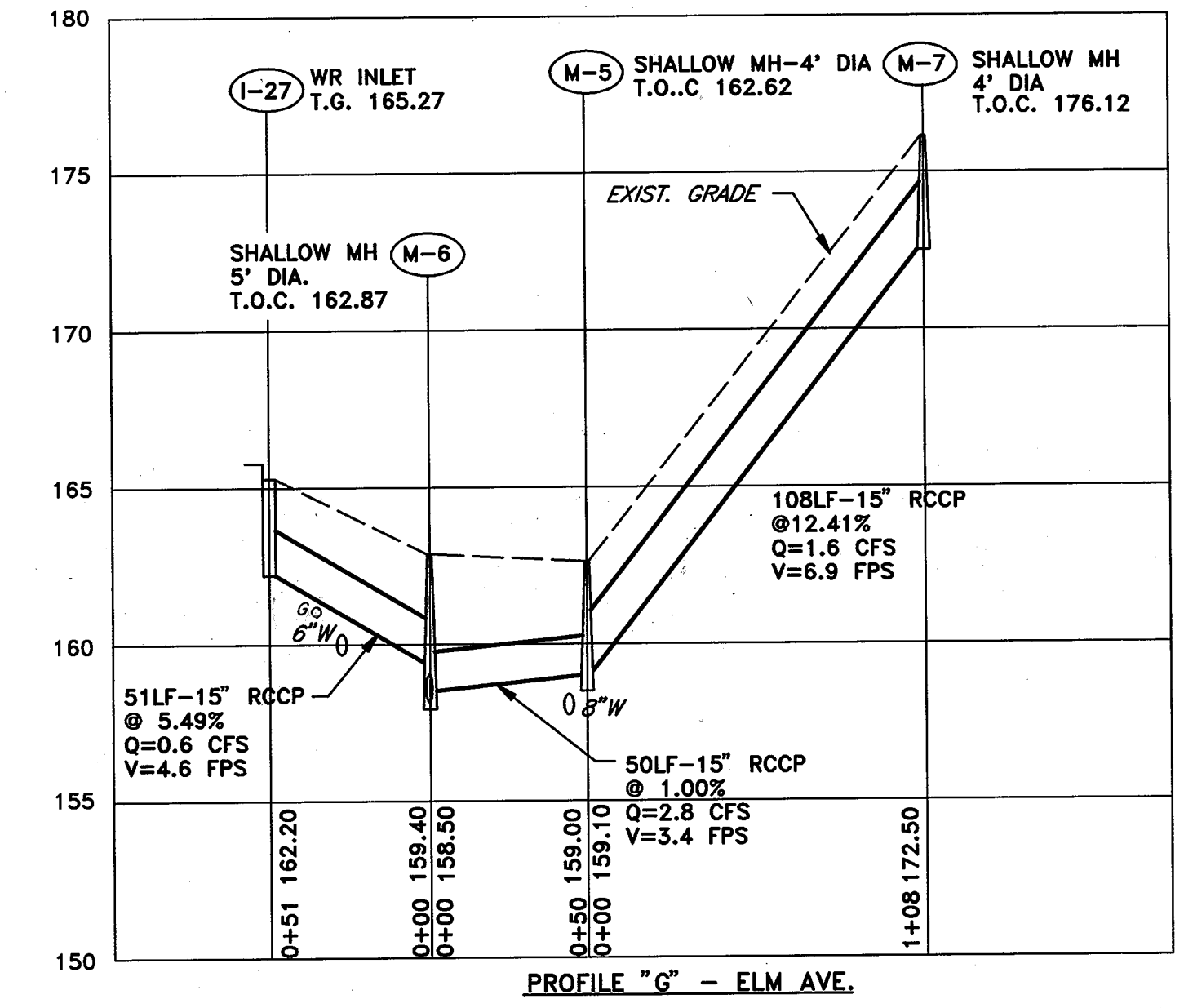
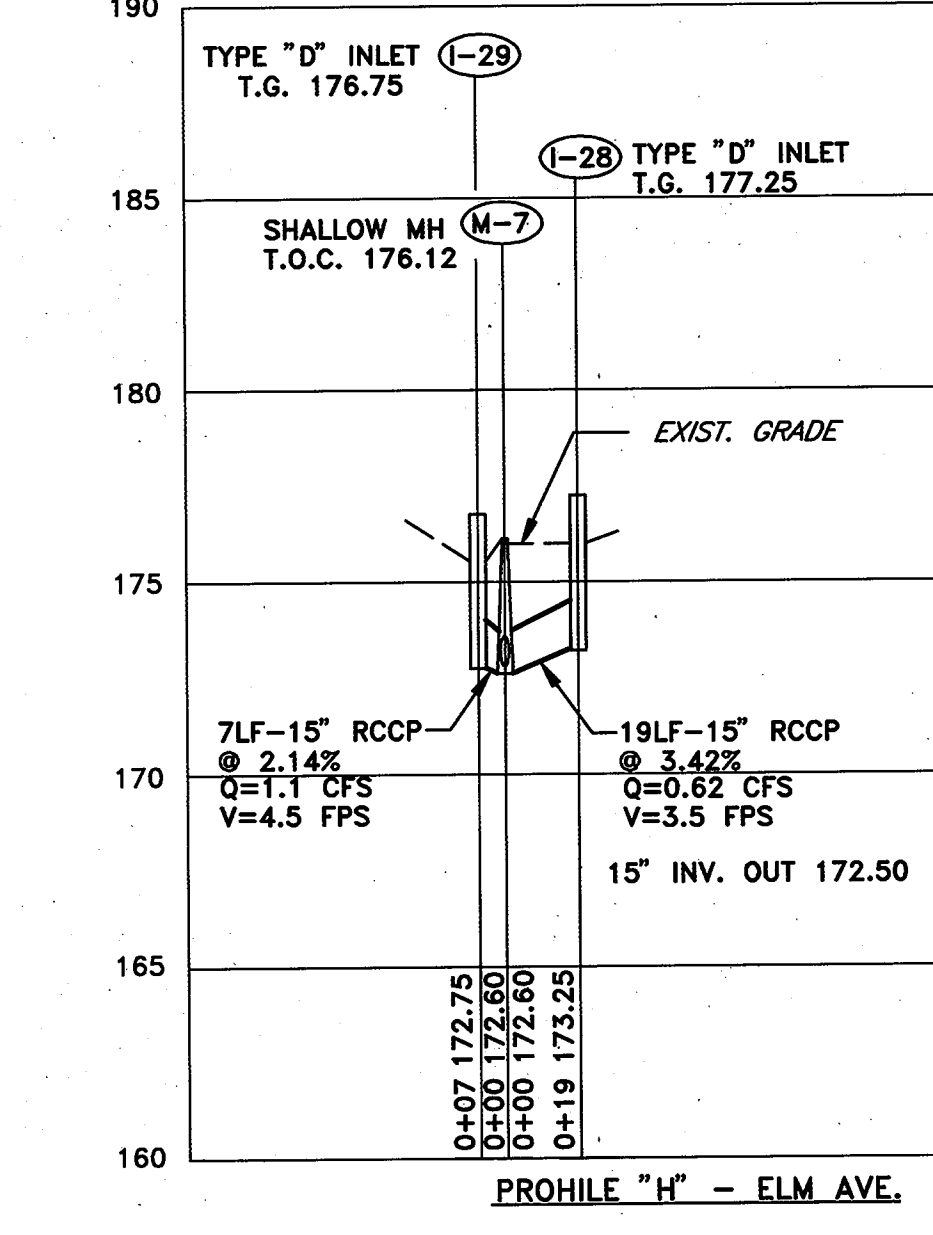
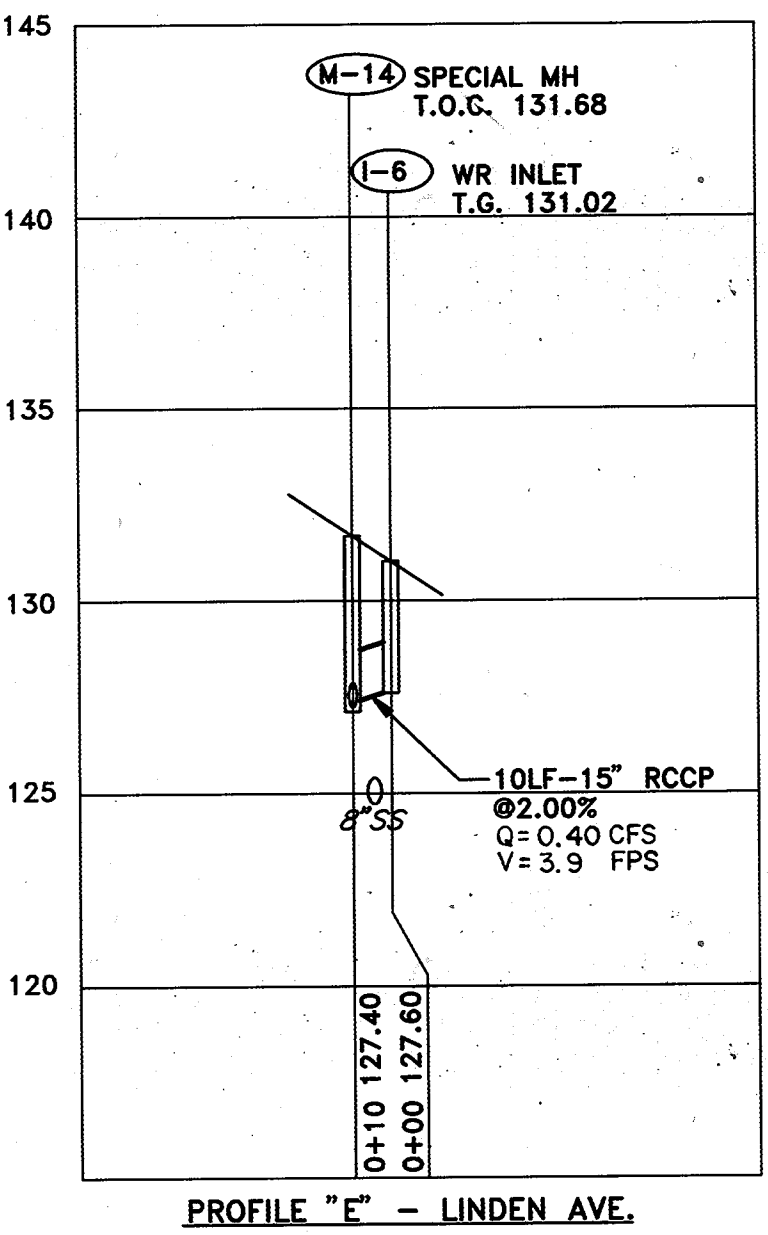
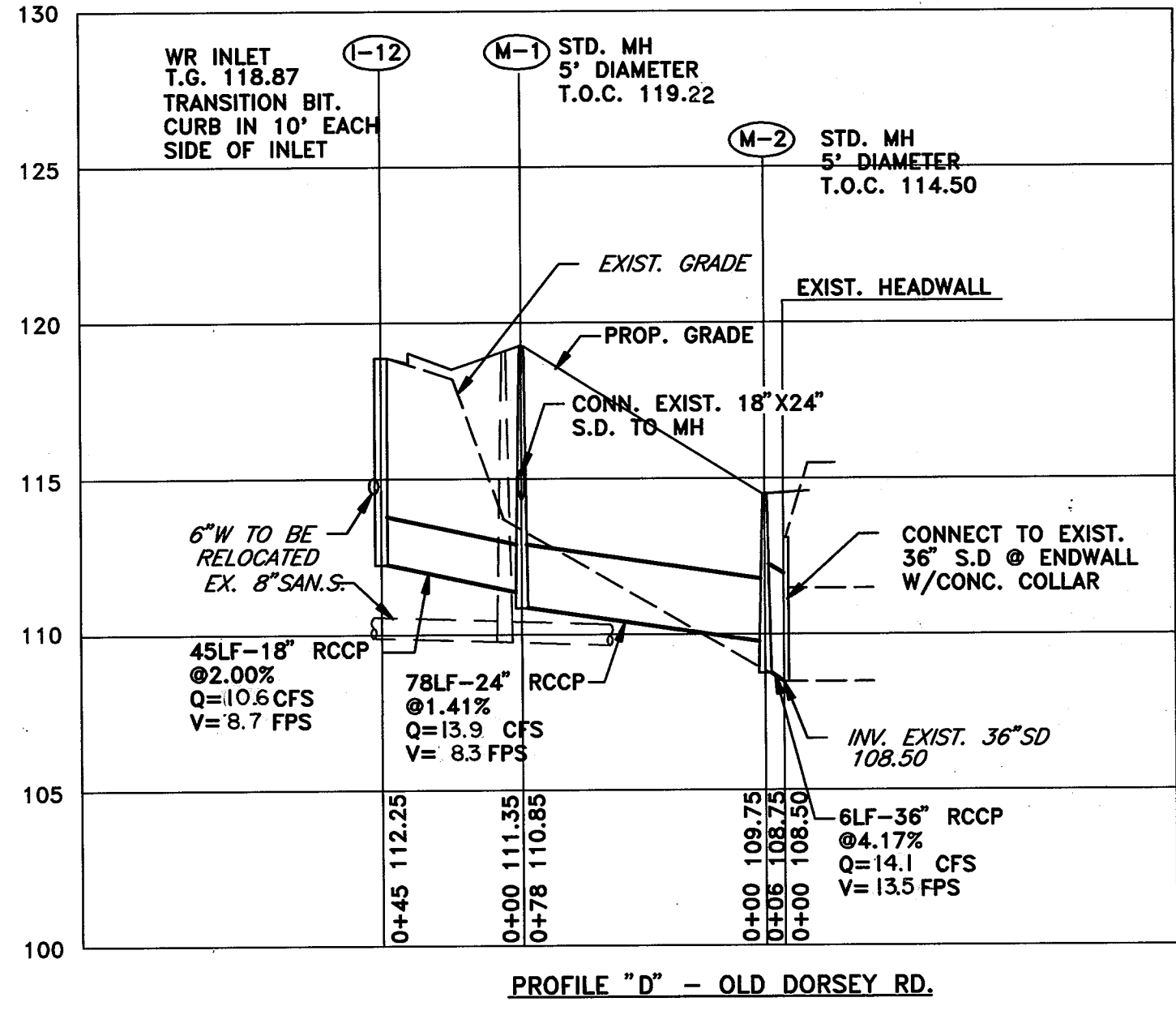
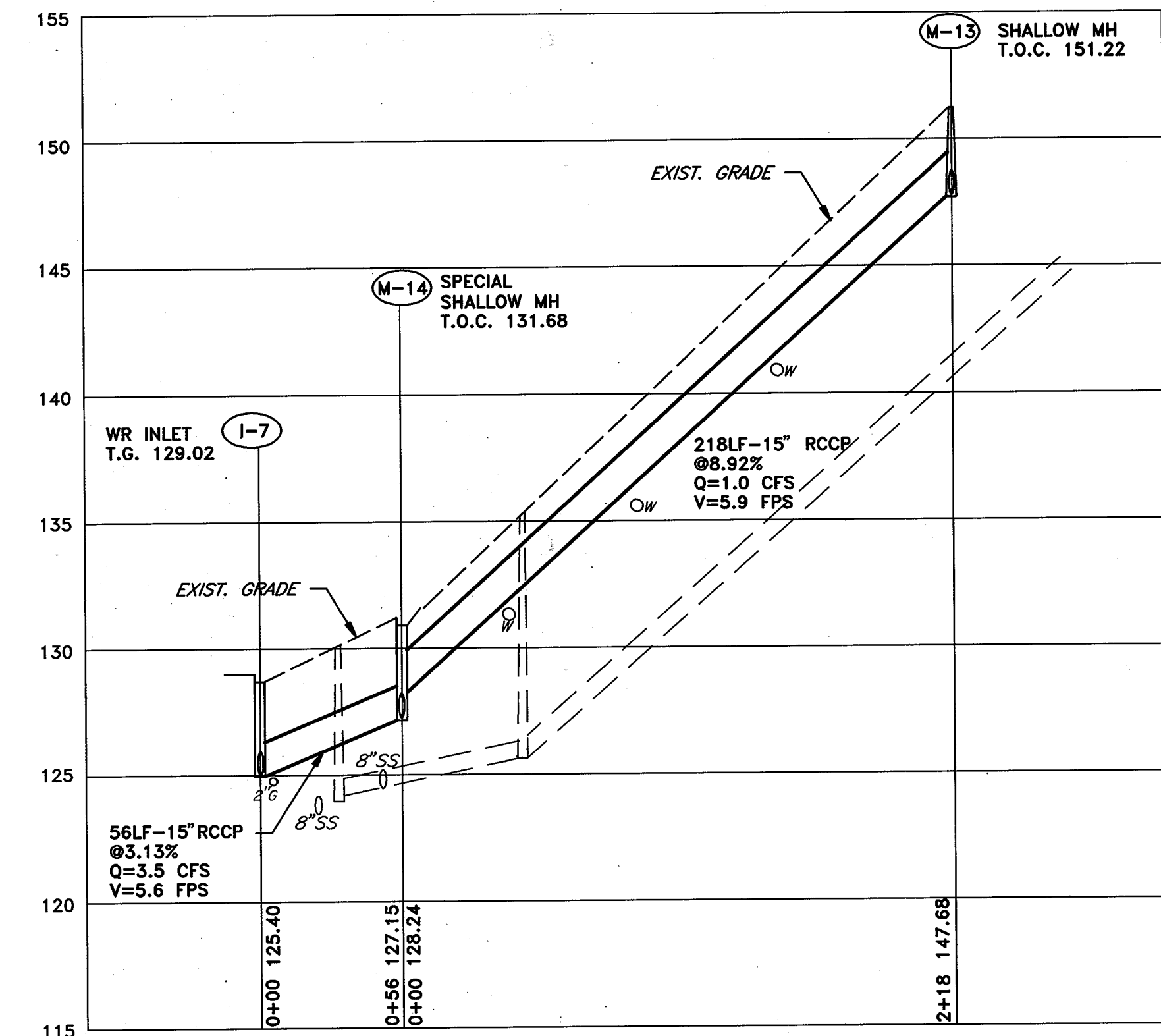
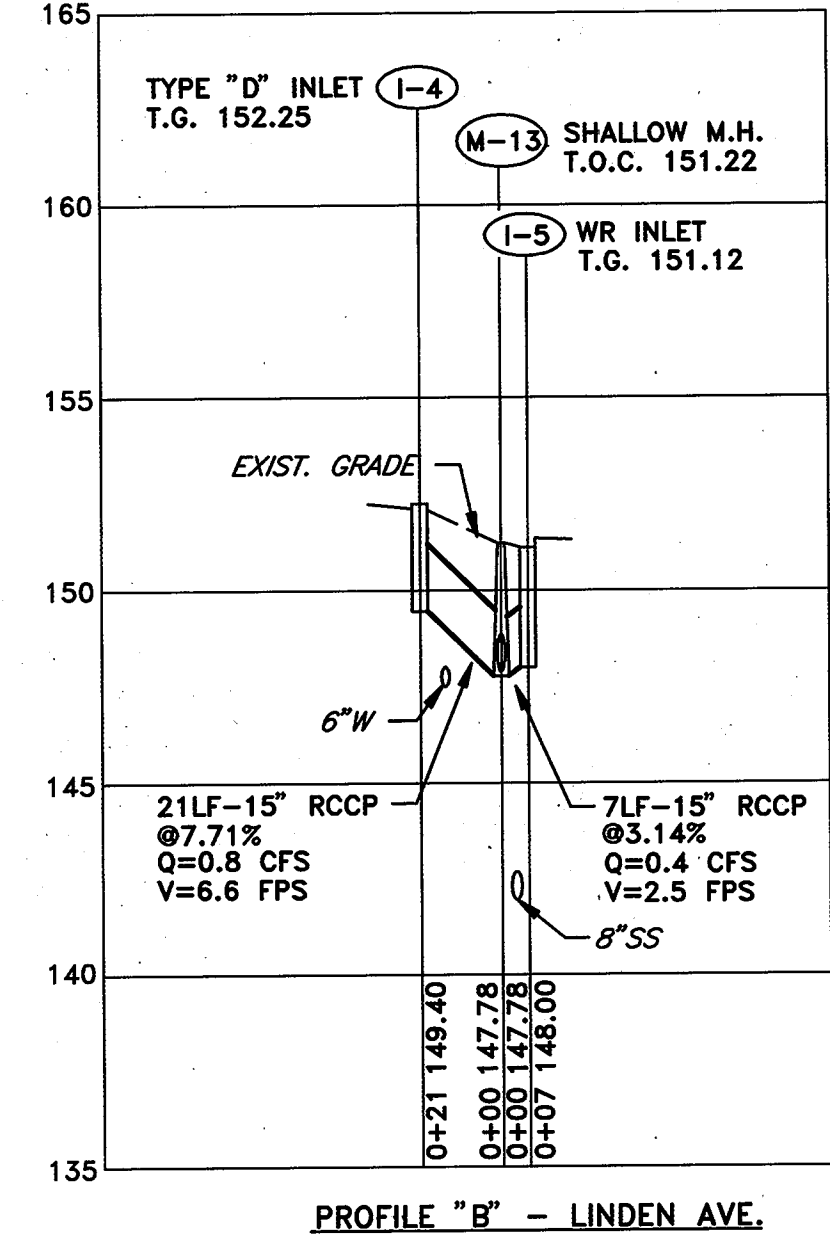
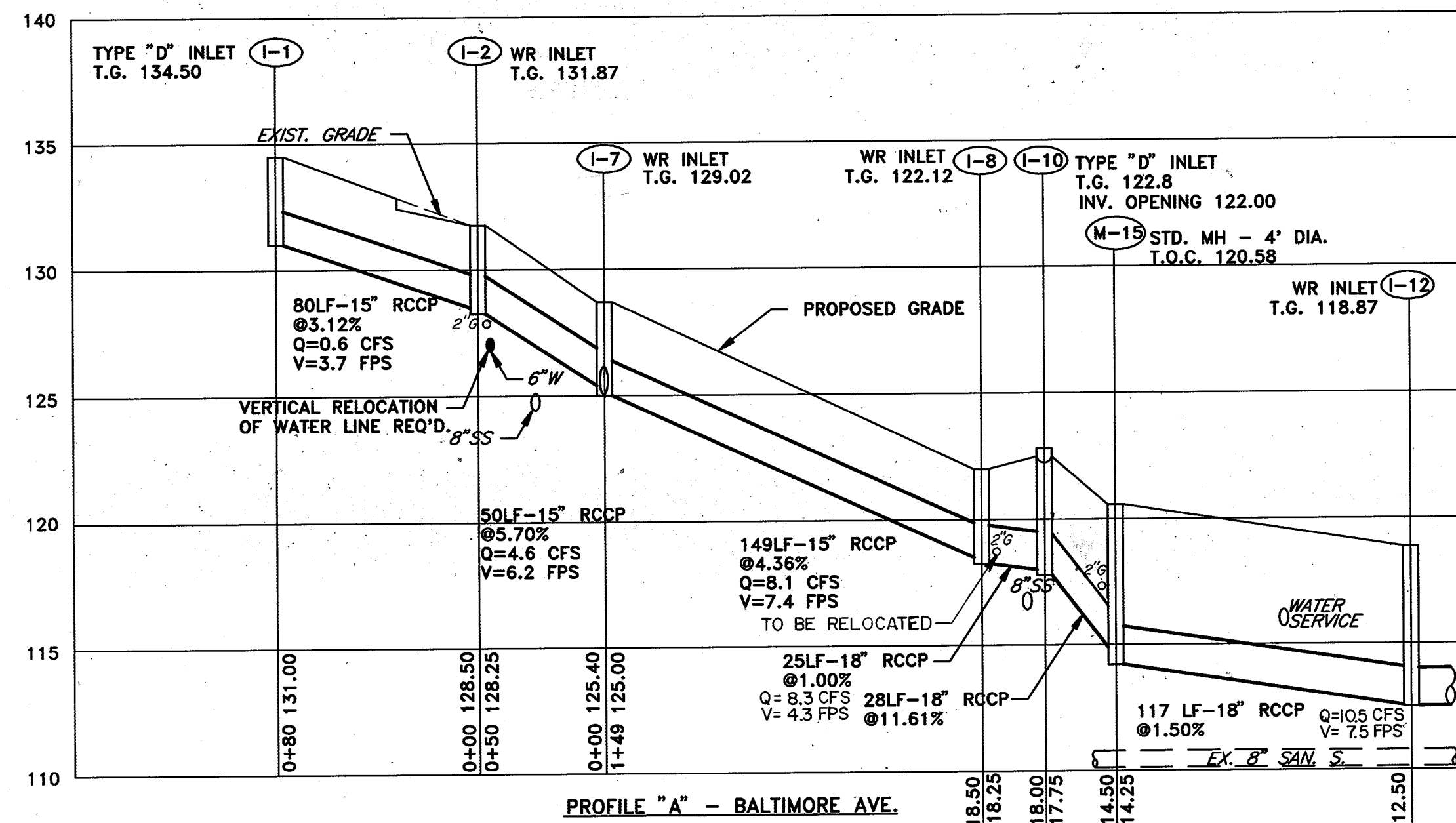
600' SCALE MAP NO. 43 BLOCK NO. 6

CAPITAL PROJECT NO. D-1100  
LENNOX PARK  
STORM DRAINAGE IMPROVEMENTS

GRADING, SEDIMENT AND EROSION CONTROL PLAN

SCALE  
1" = 30'  
SHEET NO.  
14 OF 24  
DWG. NO.  
GR-4





\*M-6\*  
 d<sub>s</sub> = 9"  
 Min. depth of riprap channel = 2.0'  
 Apron width = 13'  
 Channel width = 1.5'  
 Riprap blanket depth = 18"  
 Length (La) = 10'  
 Slope = 0%  
 Outlet Protection - II

\*M-9\*  
 d<sub>s</sub> = 9"  
 Min. depth of riprap channel = 2.25'  
 Apron width = 12'  
 Channel width = 1.5'  
 Riprap blanket depth = 18"  
 Length (La) = 10'  
 Slope = 0%  
 Outlet Protection - II

NOTE: 1. ADJUST FINAL MANHOLE AND GRATE ELEVATIONS TO MATCH FINAL PAVEMENT GRADE. NEW INLETS AND MANHOLES IN PAVED AREAS ARE DESIGNED TO ACCOMMODATE FUTURE 1 1/2" PAVEMENT OVERLAY  
 2. TYPE 'D' INLETS SHALL ONLY HAVE OPENINGS ON SIDE(S) WHICH RECEIVE DRAINAGE.

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*James A. Lewis* 6/16/96  
 DIRECTOR OF PUBLIC WORKS - DATE

*Paul J. Brown* 6/15/96  
 CHIEF, BUREAU OF ENGINEERING - DATE

*William B. Anderson* 6/16/96  
 CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*William B. Anderson* 6/15/96  
 CHIEF, BUREAU OF HIGHWAYS - DATE

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 201 South Cleveland Avenue, Suite 304  
 Hagerstown, Maryland 21740  
 Tel 301-791-1100



|             |    |  |          |
|-------------|----|--|----------|
| DES: R.D.P. | RD | ADDED EXISTING GAS LINES TO PROFILES "A", "I", "G", "J", "M" | 8/15/96  |
| DRN: A.C.M. |    |  |          |
| CHK: R.D.P. |    |  |          |
| DATE: 01/93 | BY | NO   | REVISION |

LENNOX PARK  
 A RESIDENTIAL COMMUNITY

600' SCALE MAP NO. 43 BLOCK NO. 6

CAPITAL PROJECT NO. D-1100

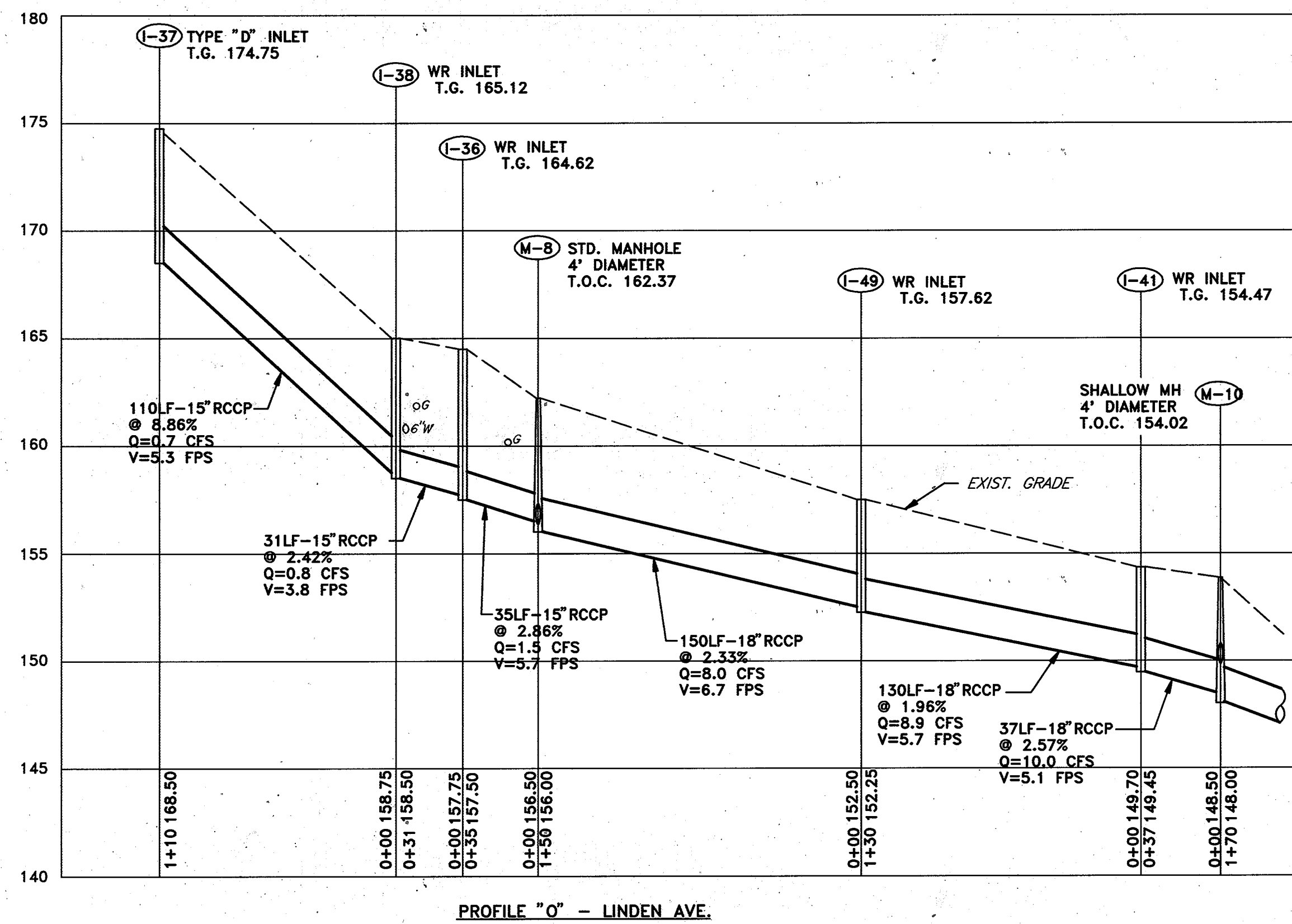
LENNOX PARK  
 STORM DRAINAGE IMPROVEMENTS

STORM DRAIN PROFILES

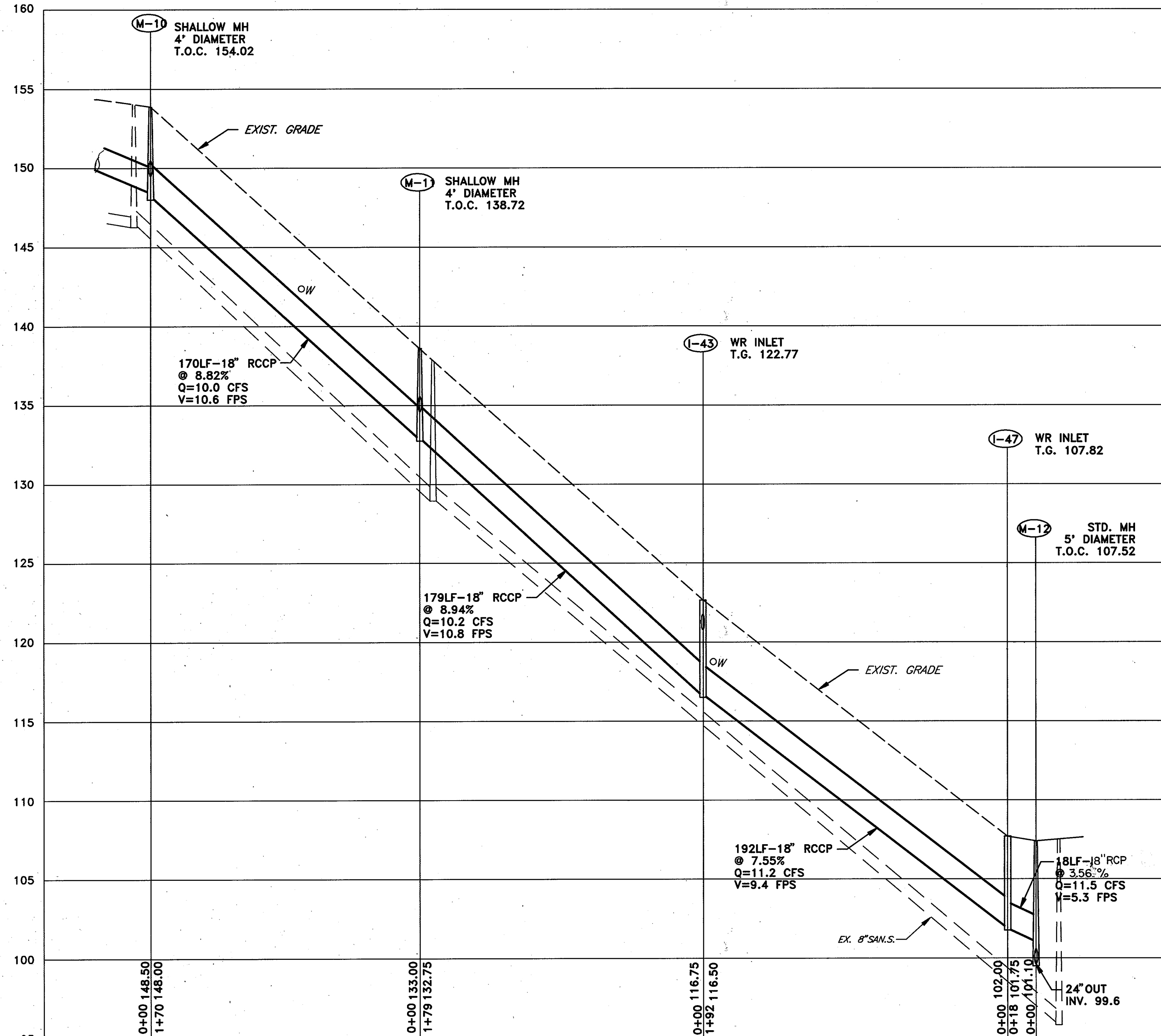
SCALE  
 H:1"=50' V:1"=5'

SHEET  
 15 OF 24

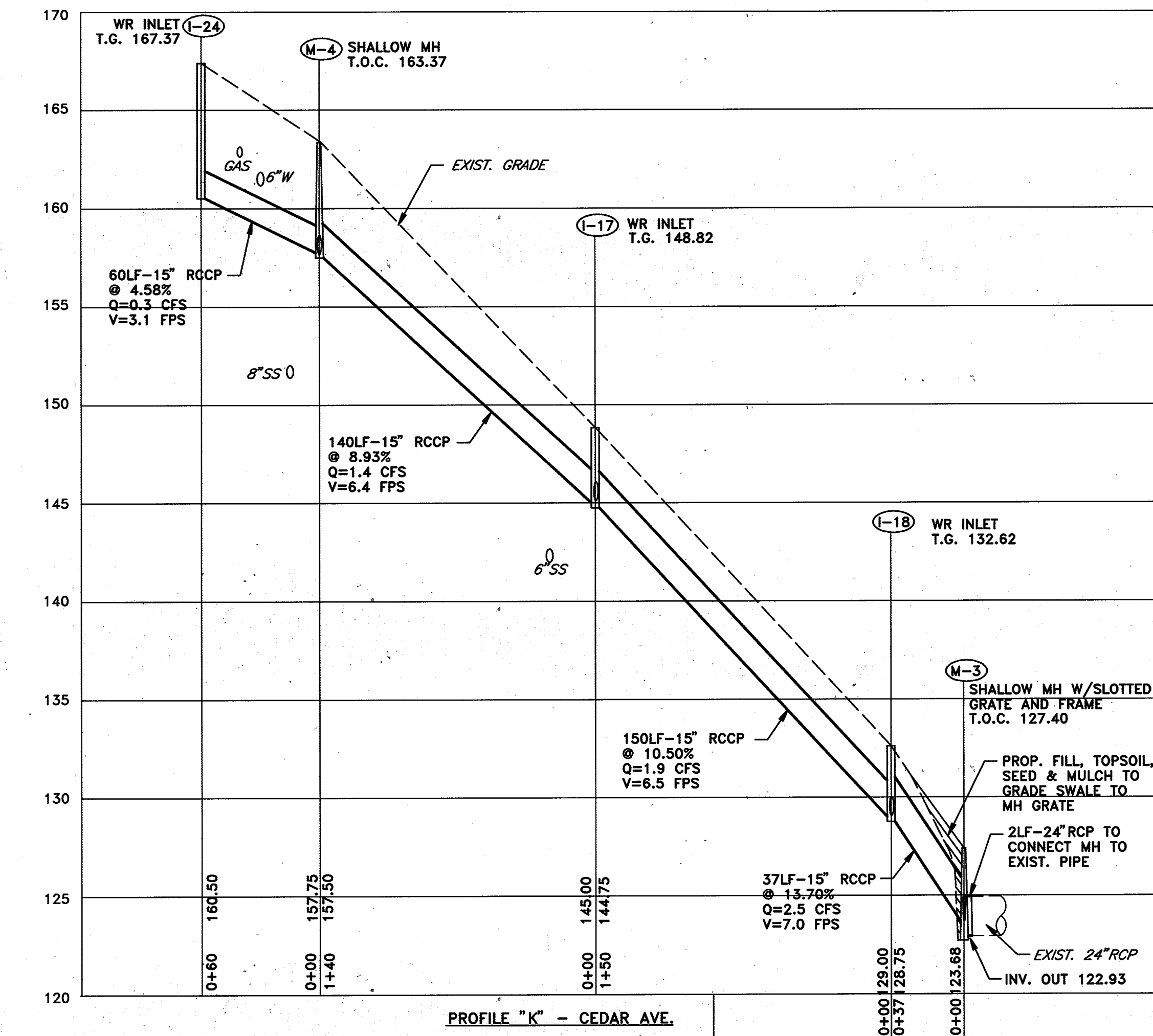
DWG. NO.  
 PR-1



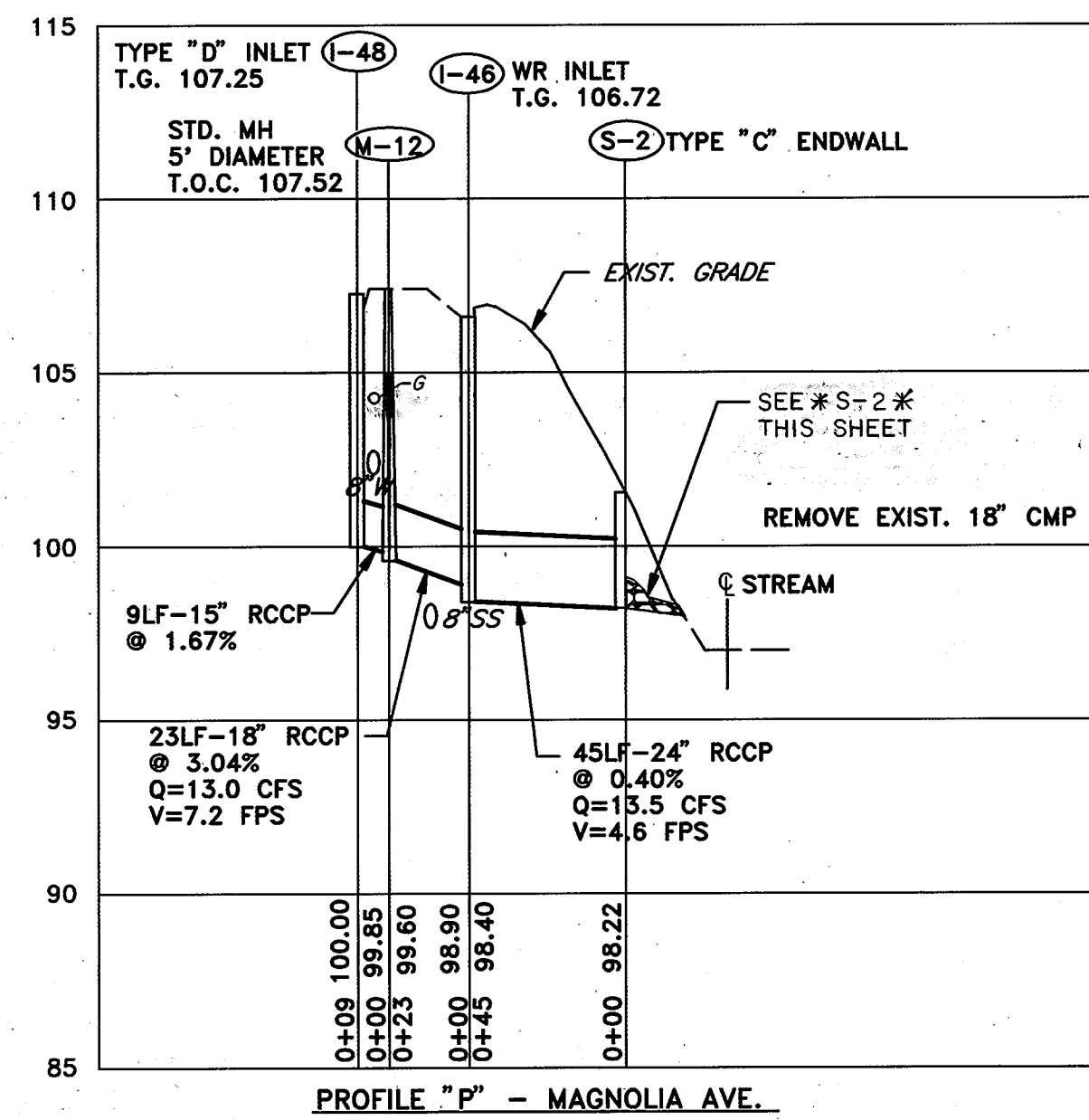
PROFILE "O" - LINDEN AVE.



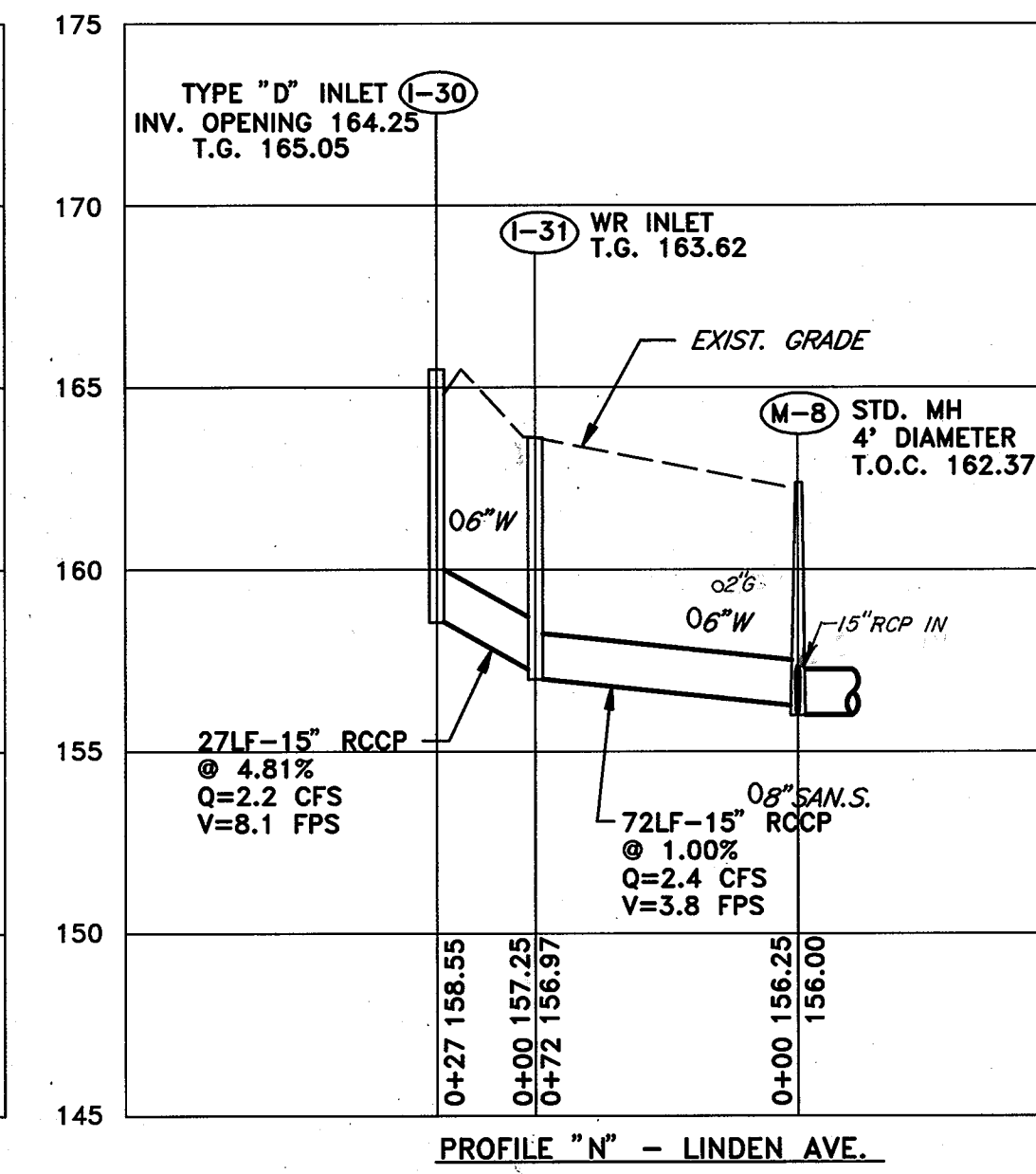
PROFILE "O" - MAGNOLIA AVE. (CON'T)



PROFILE "K" - CEDAR AVE.



PROFILE "P" - MAGNOLIA AVE.



PROFILE "N" - LINDEN AVE.

\*S-2\*  
 d = 9"  
 Min. depth of riprap channel = 2.5'  
 Apron width = 17'  
 Channel width = 2.0'  
 Riprap blanket depth = 18"  
 Length (L<sub>a</sub>) = 15'  
 Slope = 0%  
 Outlet Protection - II

NOTE: 1. ADJUST FINAL MANHOLE AND GRATE ELEVATIONS TO MATCH FINAL PAVEMENT GRADE. NEW INLETS AND MANHOLES IN PAVED AREAS ARE DESIGNED TO BE 1 1/2" ABOVE EXISTING GRADE TO ACCOMMODATE FUTURE 1 1/2" PAVEMENT OVERLAY.  
 2. TYPE 'D' INLETS SHALL ONLY HAVE OPENINGS ON SIDE(S) THAT RECEIVE DRAINAGE.

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Director of Public Works - DATE  
 Chief, Bureau of Engineering - DATE  
 Chief, Roads, Bridges, & Storm Drainage Div. - DATE  
 Chief, Bureau of Highways - DATE

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 Acer Engineers & Consultants, Inc.  
 201 South Cleveland Avenue, Suite 304  
 Hagerstown, Maryland 21740  
 Tel 301-791-1100



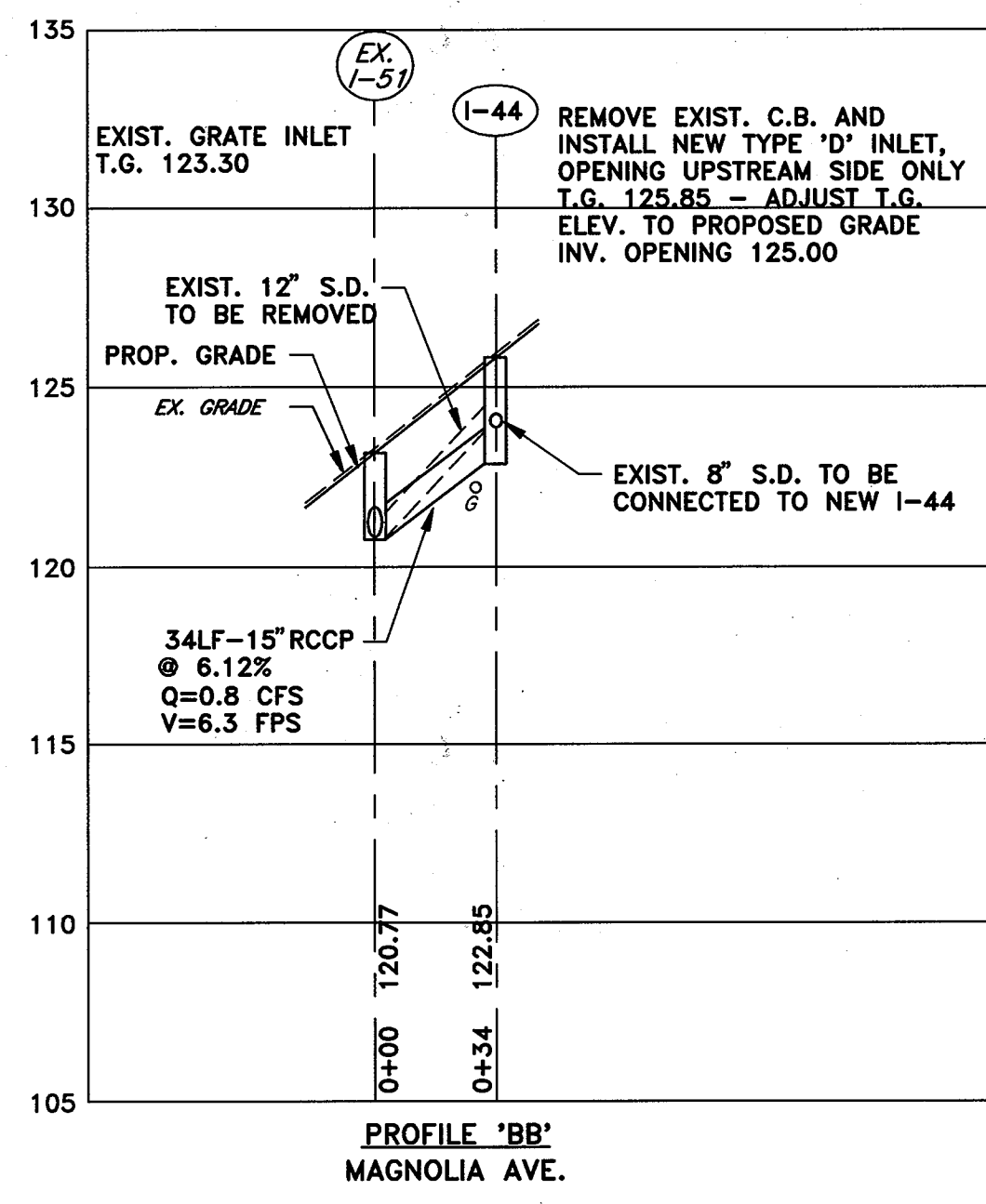
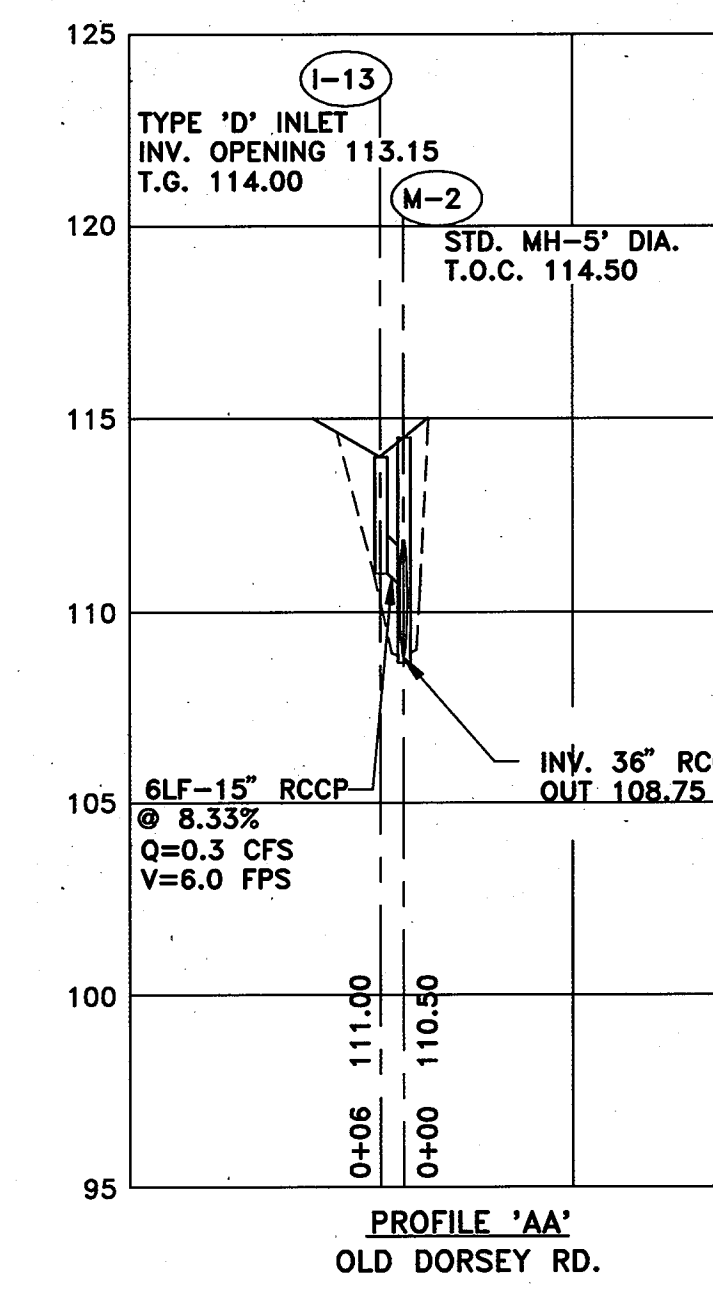
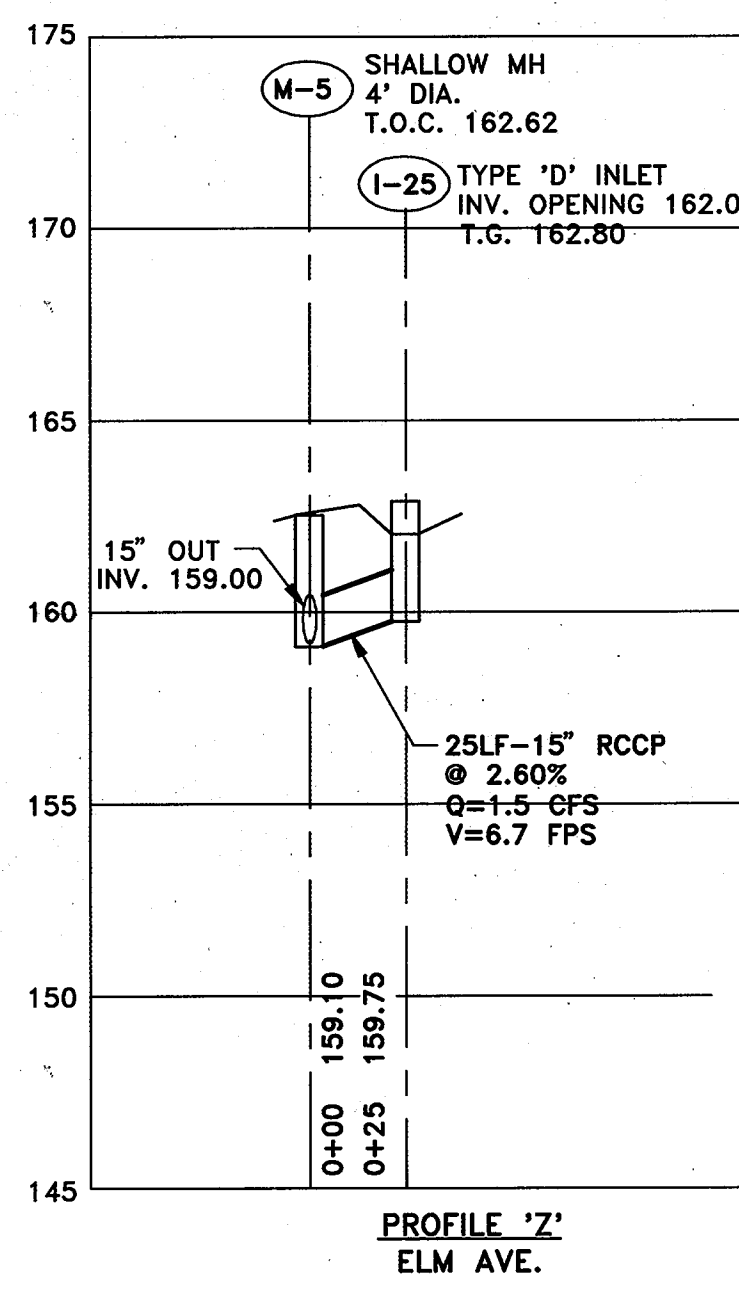
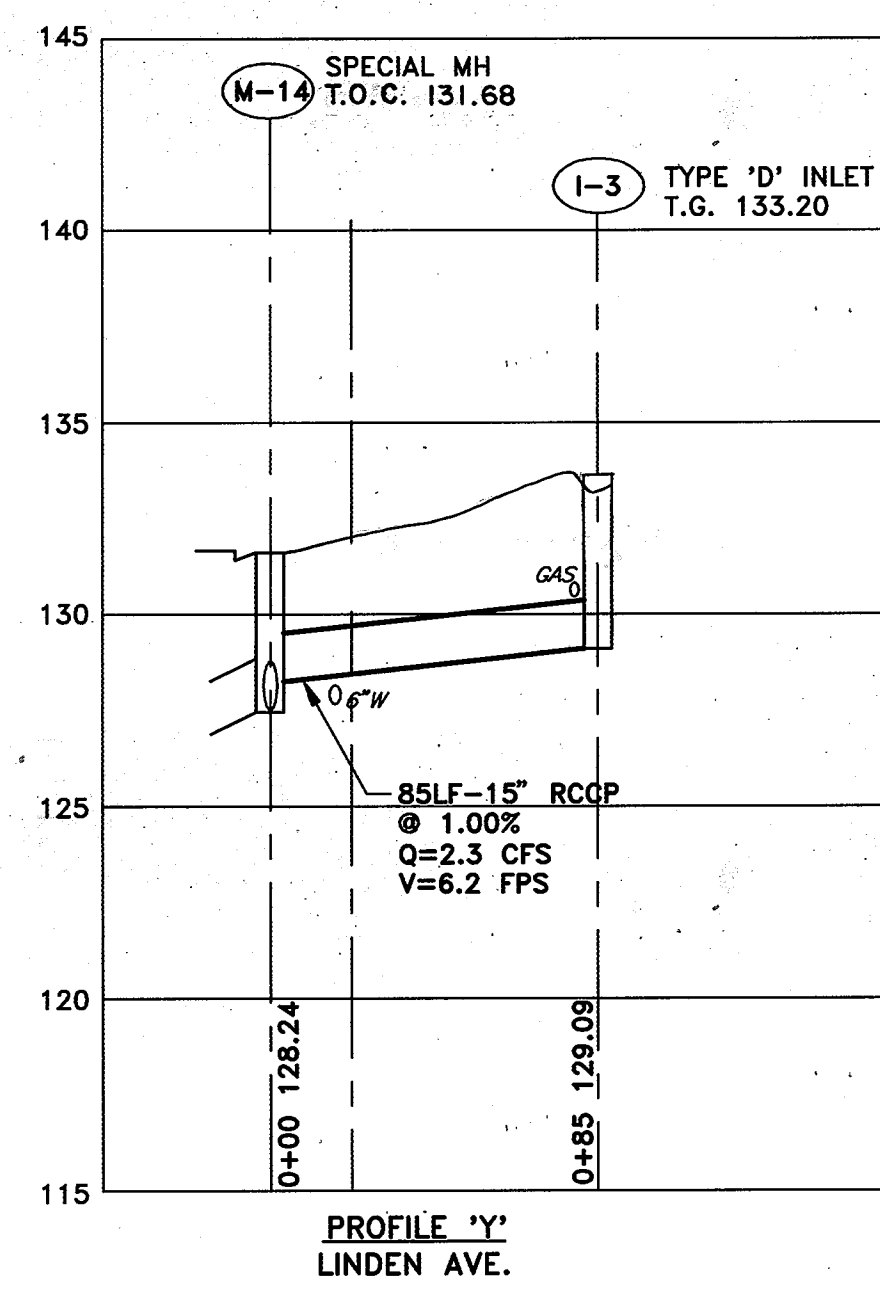
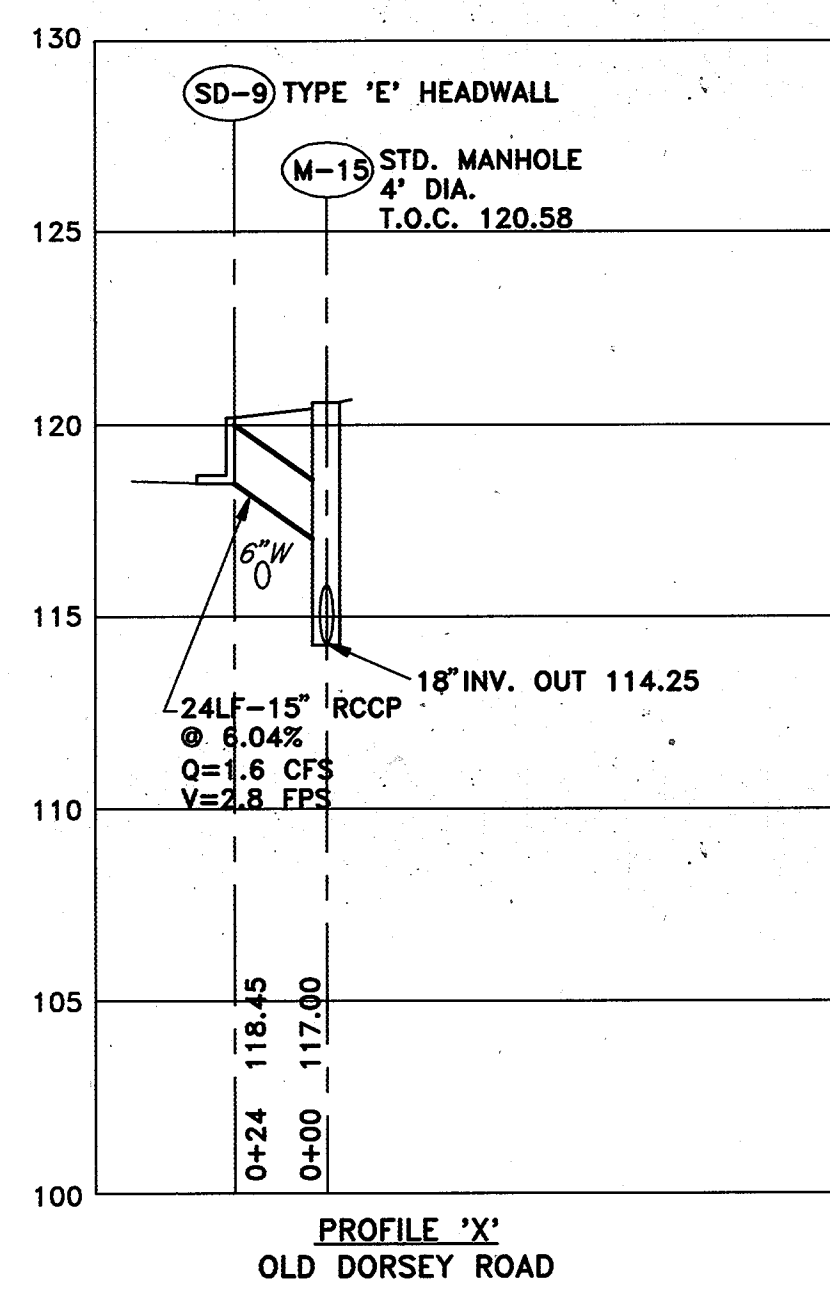
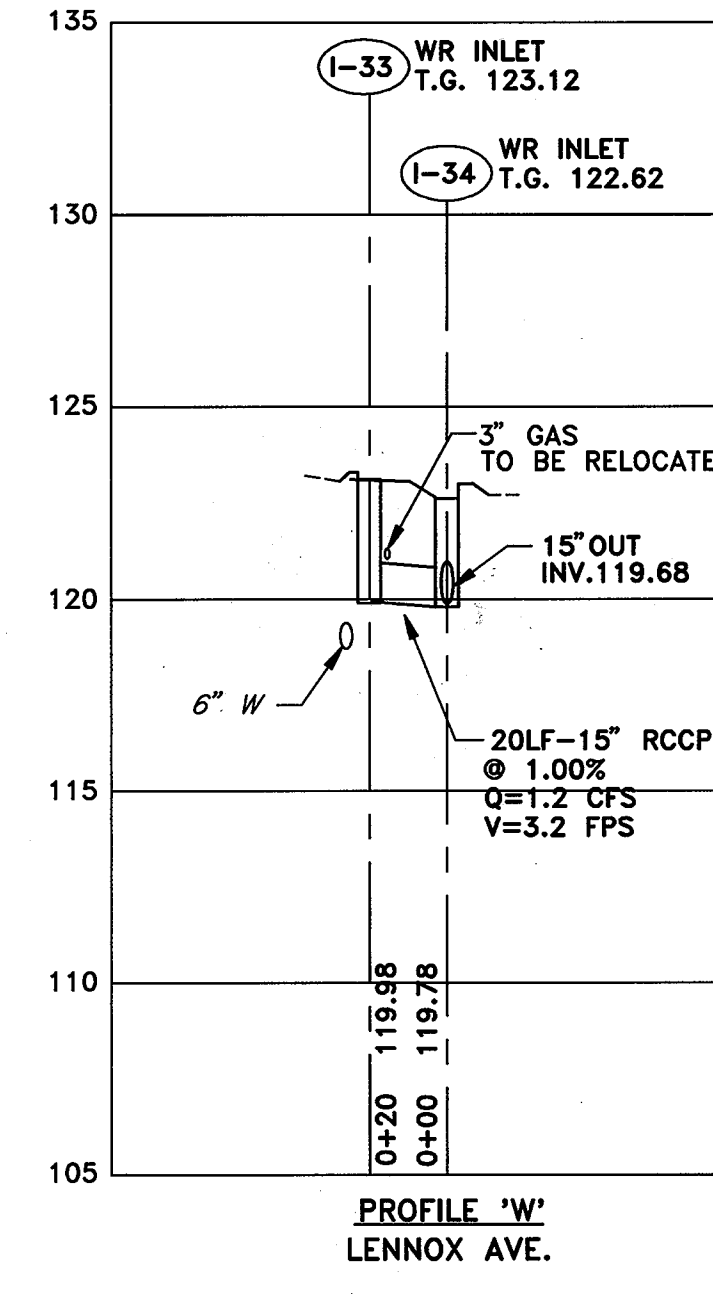
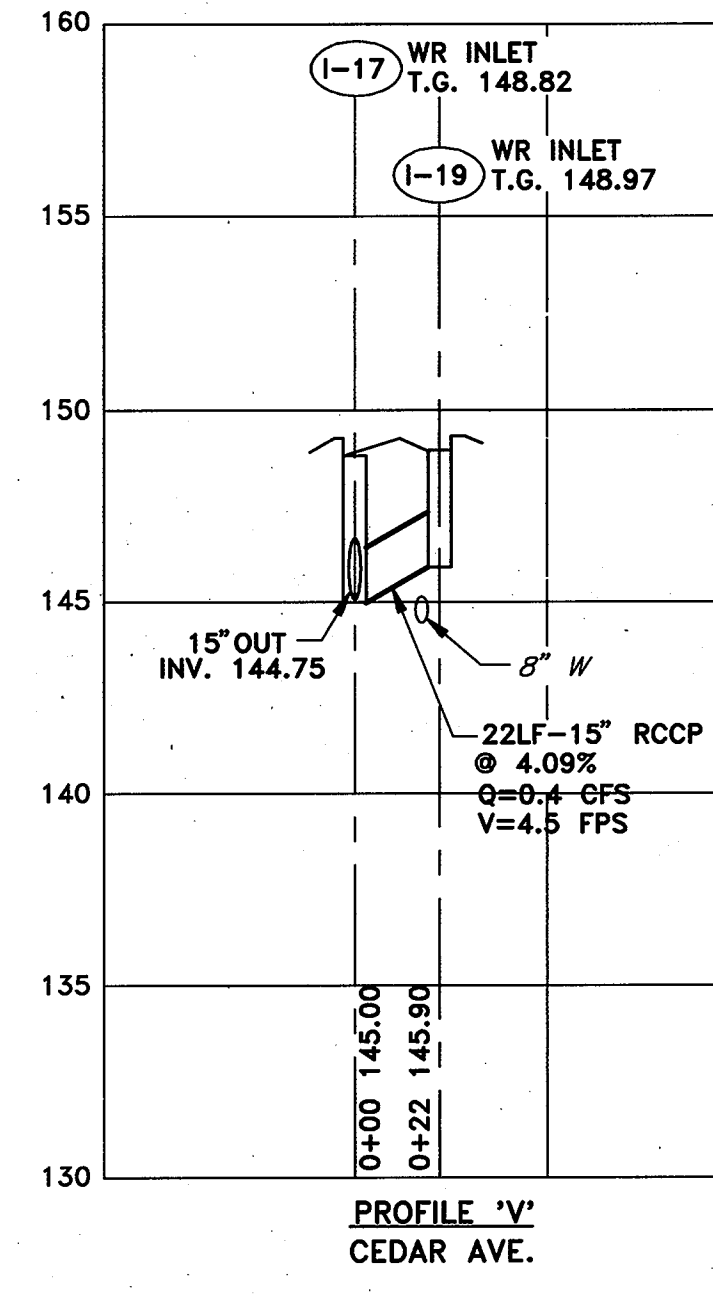
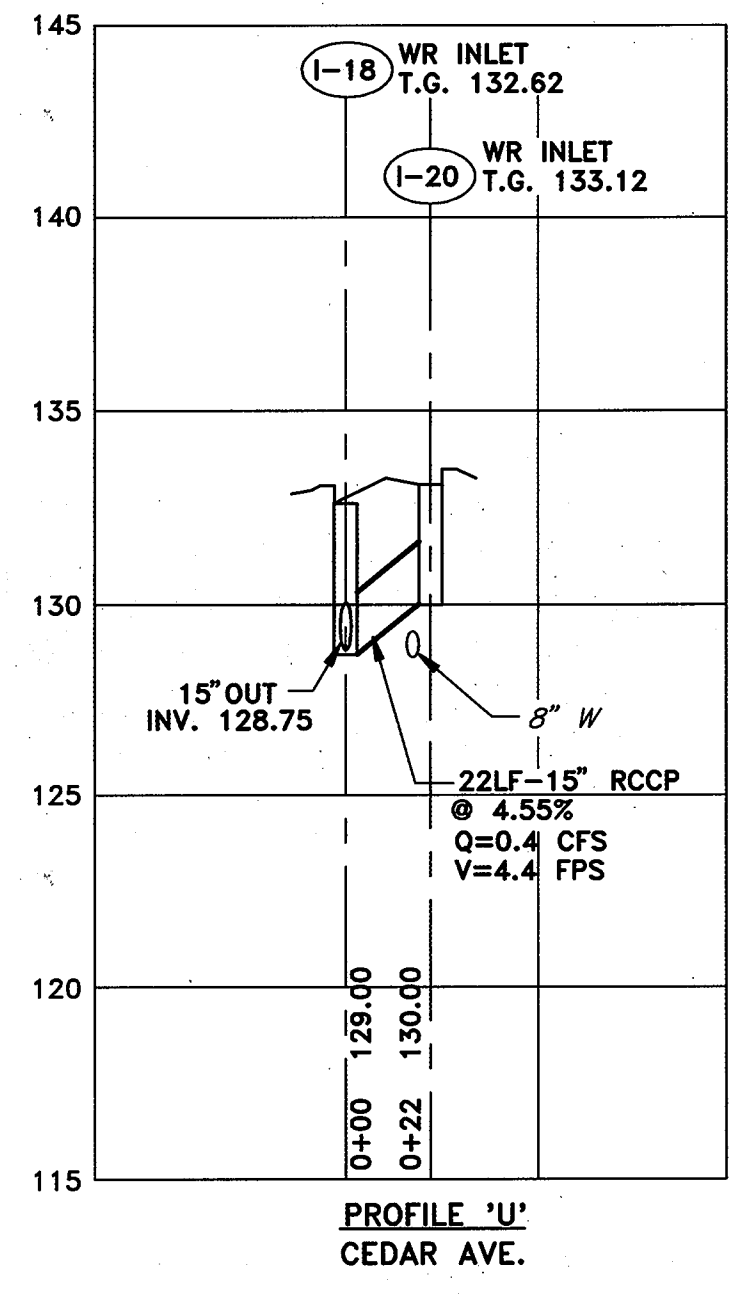
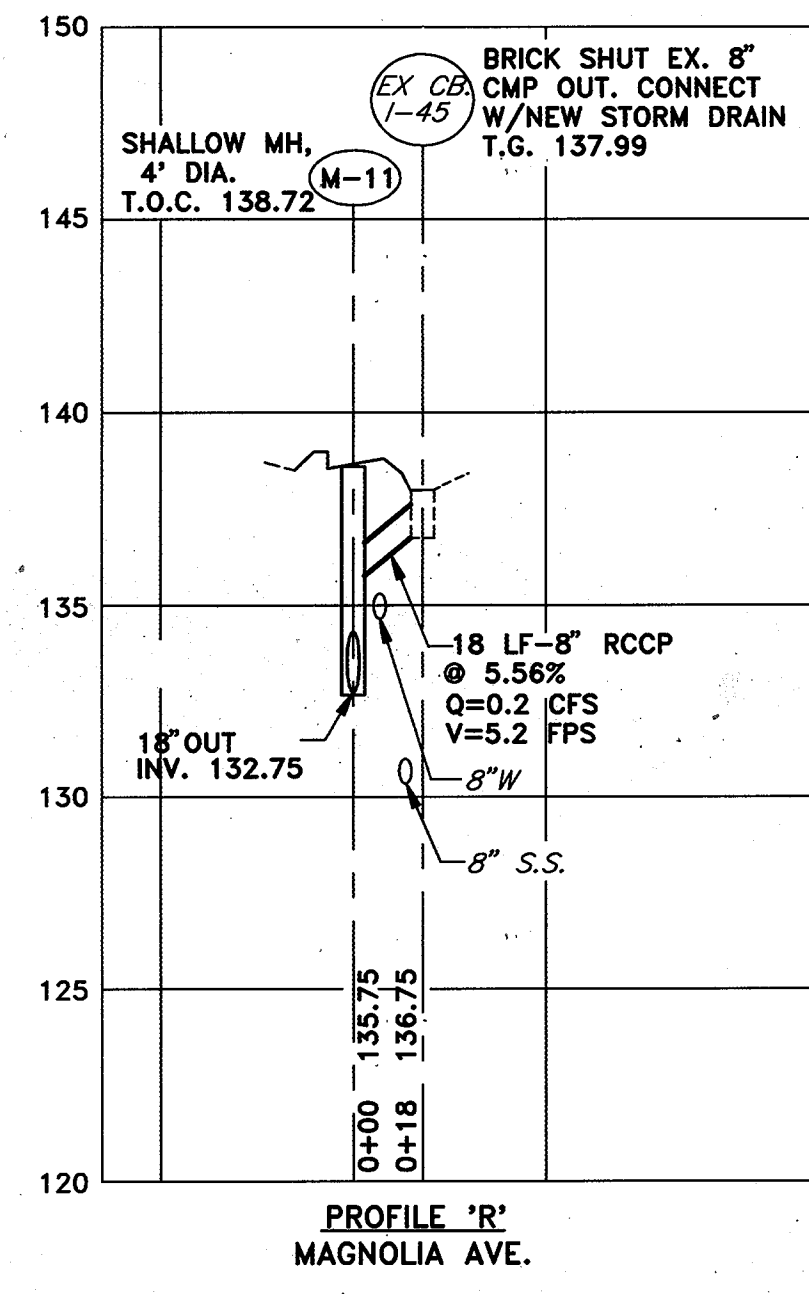
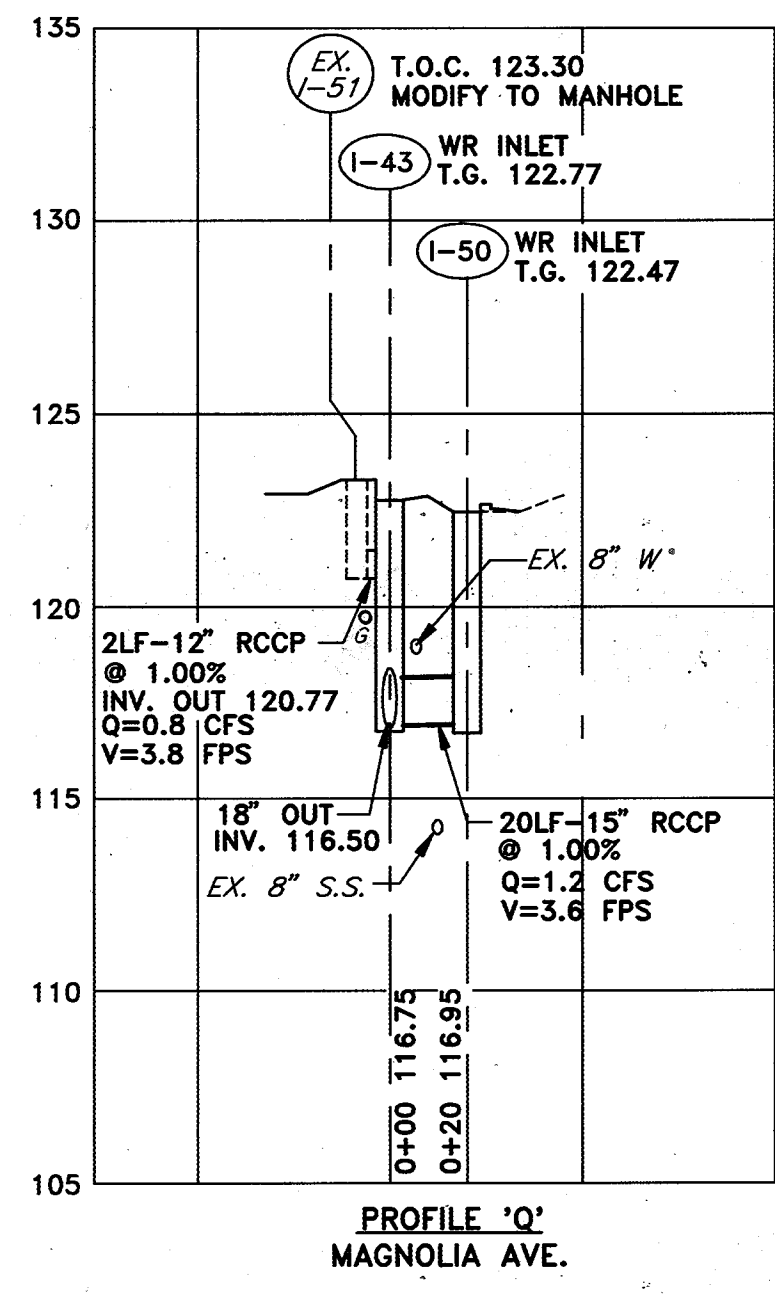
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|-------------|-----|--|----------|
| DES: R.D.P. | RDP | ADDED EXISTING GAS LINES TO PROFILES "N, O, P" | 8/15/96  |
| DRN: A.C.M. |     |  |          |
| CHK: R.D.P. |     |  |          |
| DATE: 01/93 | BY  | NO   | REVISION |

LENNOX PARK  
 A RESIDENTIAL COMMUNITY  
 600' SCALE MAP NO. 43 BLOCK NO. 6

CAPITAL PROJECT NO. D-1100  
 LENNOX PARK  
 STORM DRAINAGE IMPROVEMENTS  
 STORM DRAIN PROFILES

SCALE  
 H:1"=50' V:1"=5'  
 SHEET  
 16 OF 24  
 DWG. NO.  
 PR-2





**NOTE:** 1. ADJUST FINAL MANHOLE AND GRATE ELEVATIONS TO MATCH FINAL PAVEMENT GRADE. NEW INLETS AND MANHOLES IN PAVED AREAS ARE DESIGNED TO BE 1 1/2" ABOVE EXISTING GRADE TO ACCOMMODATE FUTURE 1 1/2" PAVEMENT OVELAY.  
2. TYPE 'D' INLETS SHALL ONLY HAVE OPENINGS ON THE SIDE(S) WHICH RECEIVE DRAINAGE.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

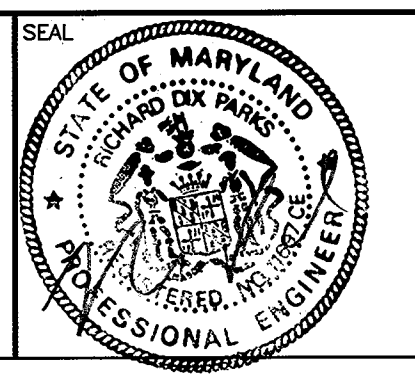
*[Signature]*  
DIRECTOR OF PUBLIC WORKS - DATE

*[Signature]* 6/5/96  
CHIEF, BUREAU OF ENGINEERING - DATE

*[Signature]* 6/4/96  
CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*[Signature]* 6/5/96  
CHIEF, BUREAU OF HIGHWAYS - DATE

**acer**  
Acer Engineers & Consultants, Inc.  
201 South Cleveland Avenue, Suite 304  
Hagerstown, Maryland 21740  
Tel 301-791-1100



|       |        |     |    |  |        |
|-------|--------|-----|----|--|--------|
| DES:  | R.D.P. | RDP | △  | ADDED EXISTING GAS LINES TO PROFILES "Q, BB" | 8/5/96 |
| DRN:  | A.C.M. |     |    |  |        |
| CHK:  | R.D.P. |     |    |  |        |
| DATE: | 01/93  | BY  | NO | REVISION                                     | DATE   |

LENNOX PARK  
A RESIDENTIAL COMMUNITY

600' SCALE MAP NO. 43 BLOCK NO. 6

CAPITAL PROJECT NO. D-1100

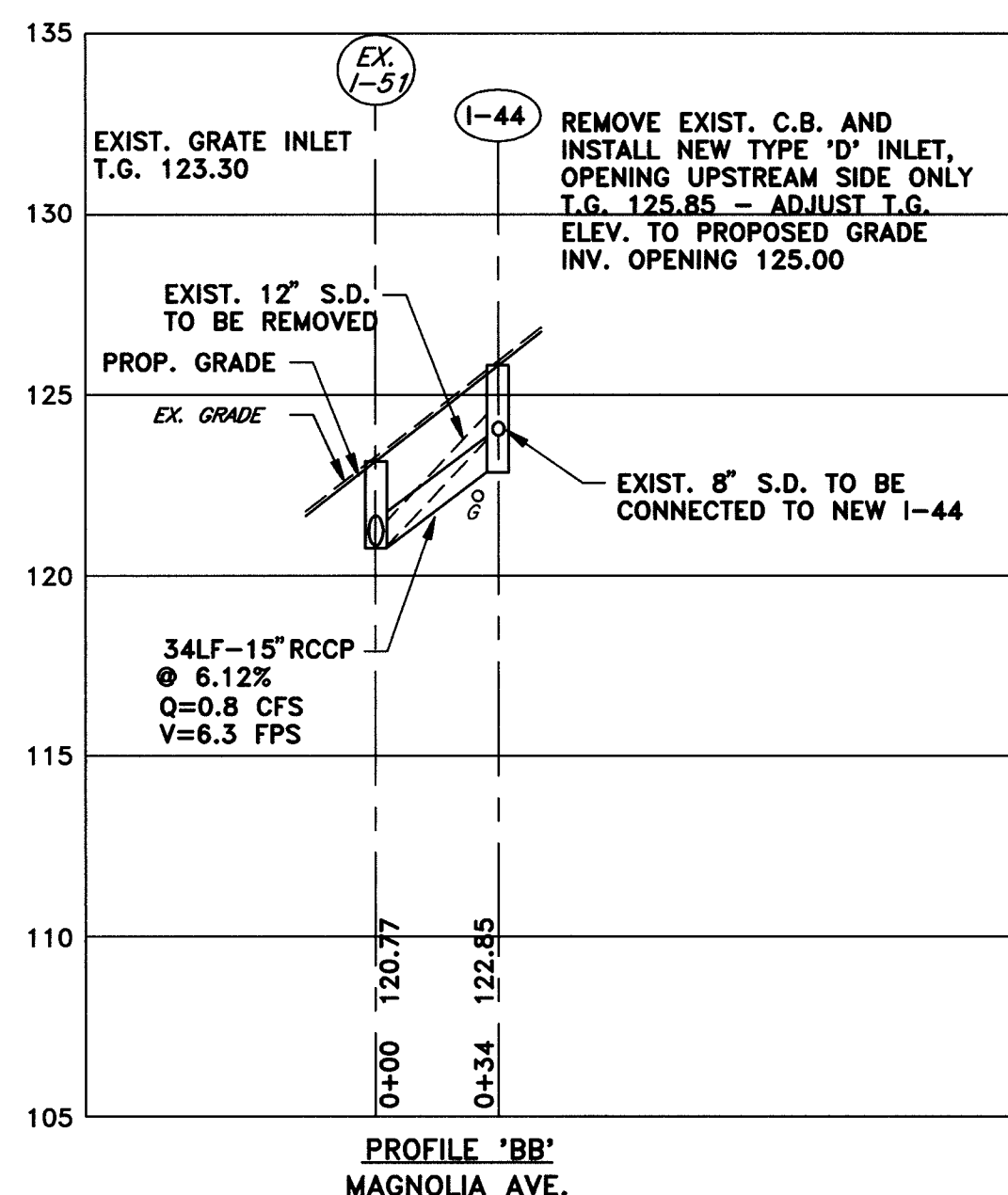
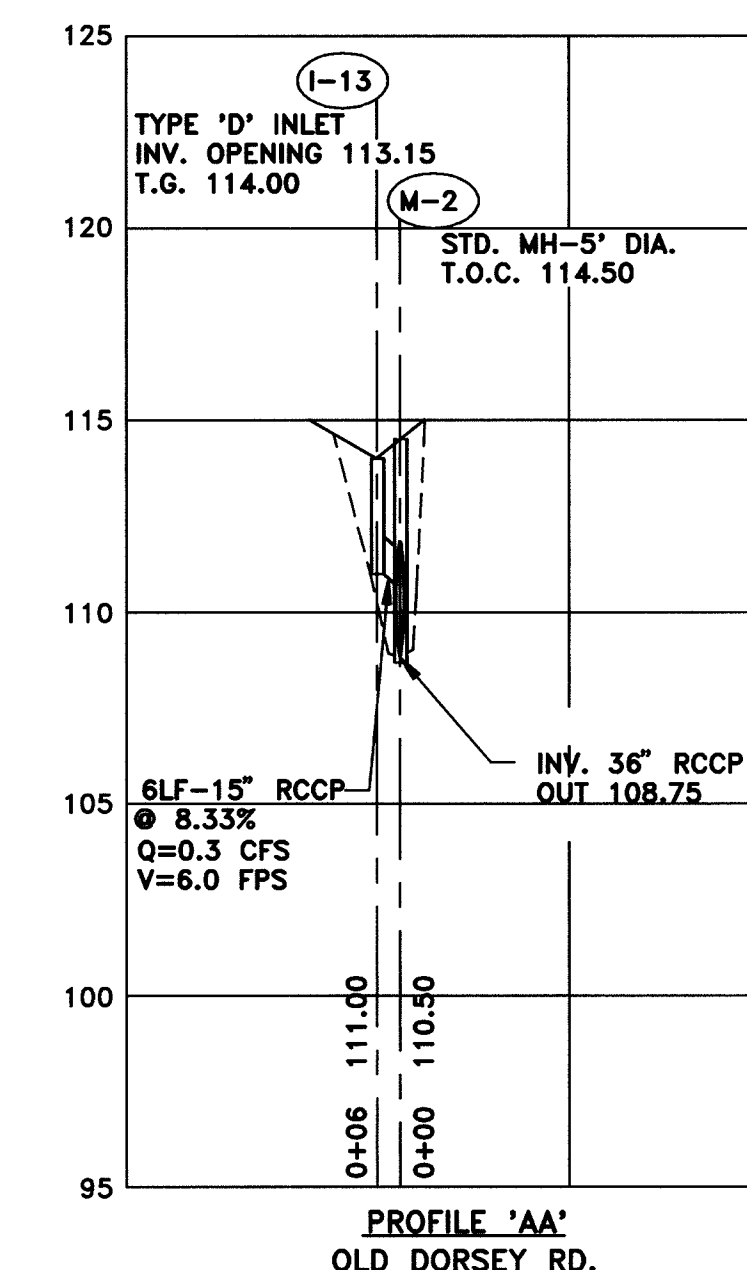
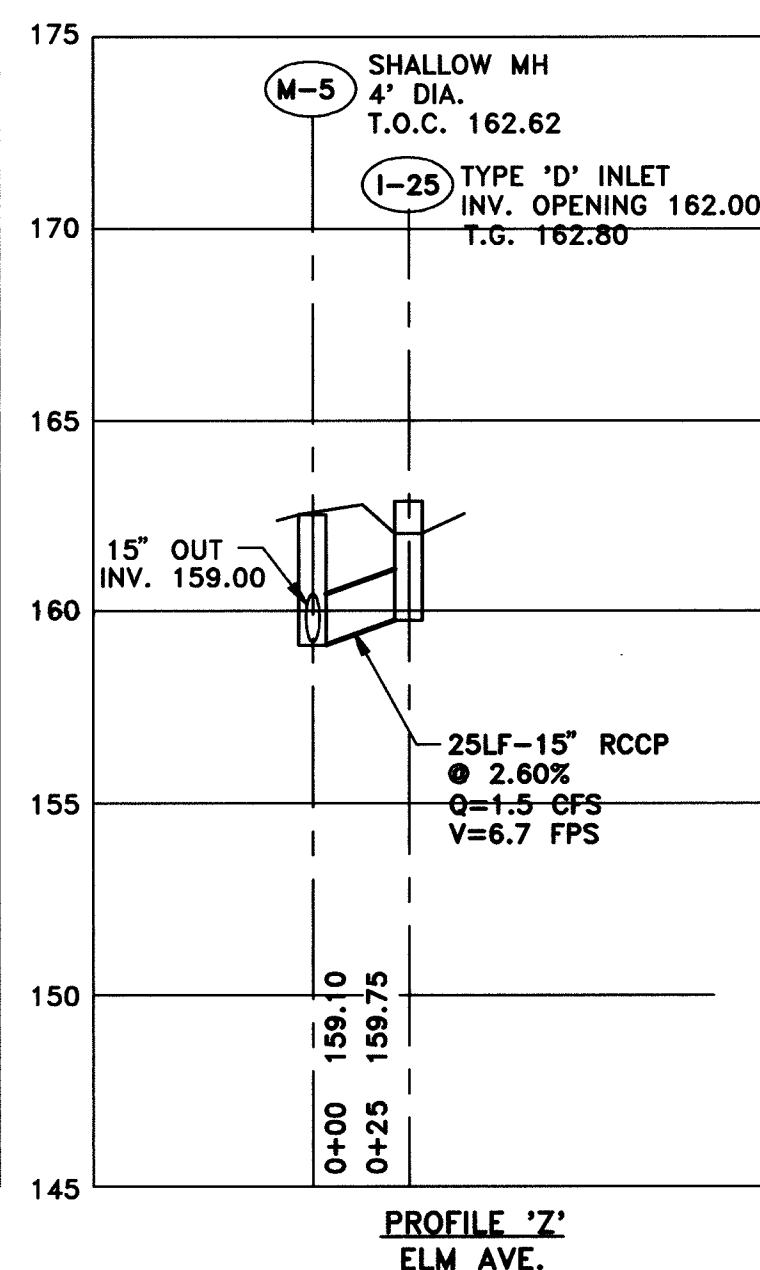
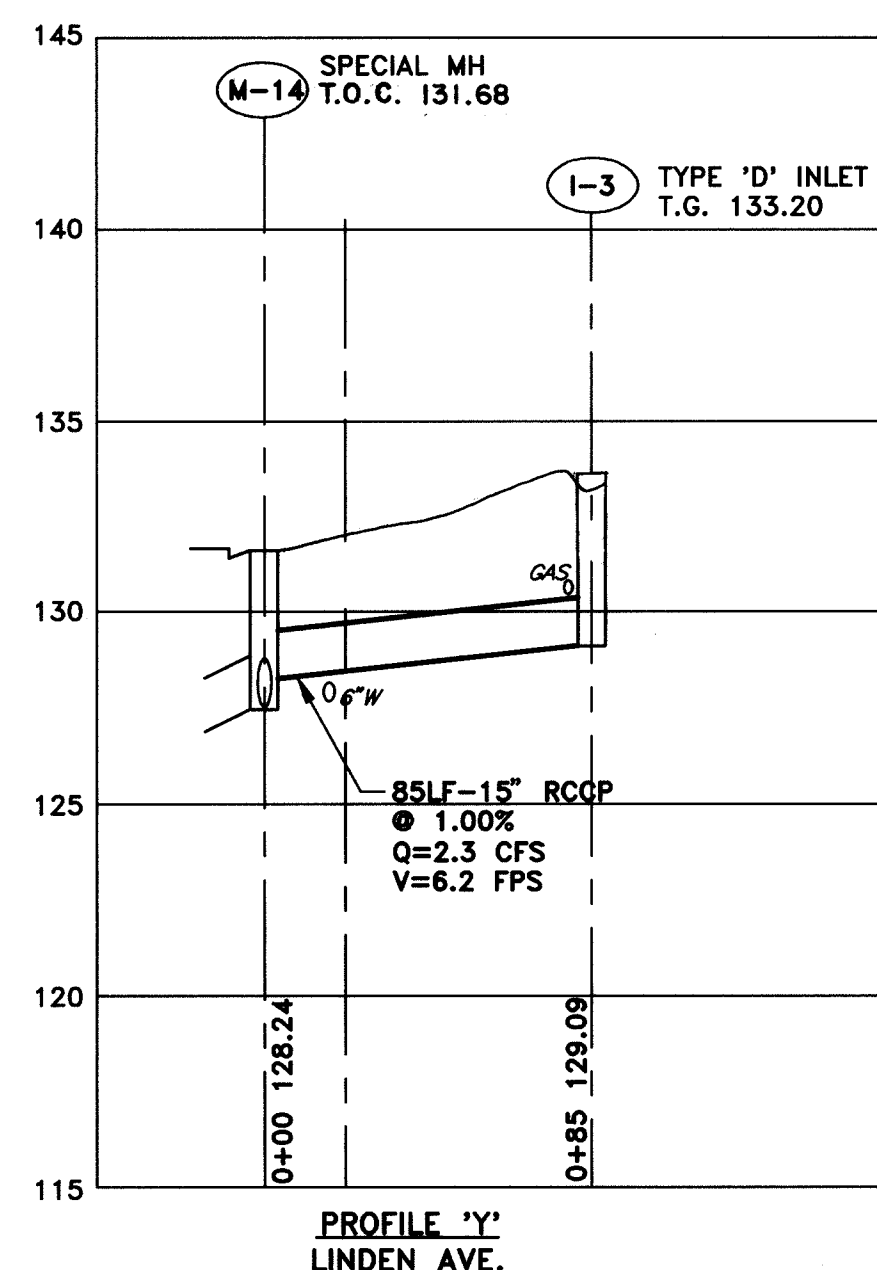
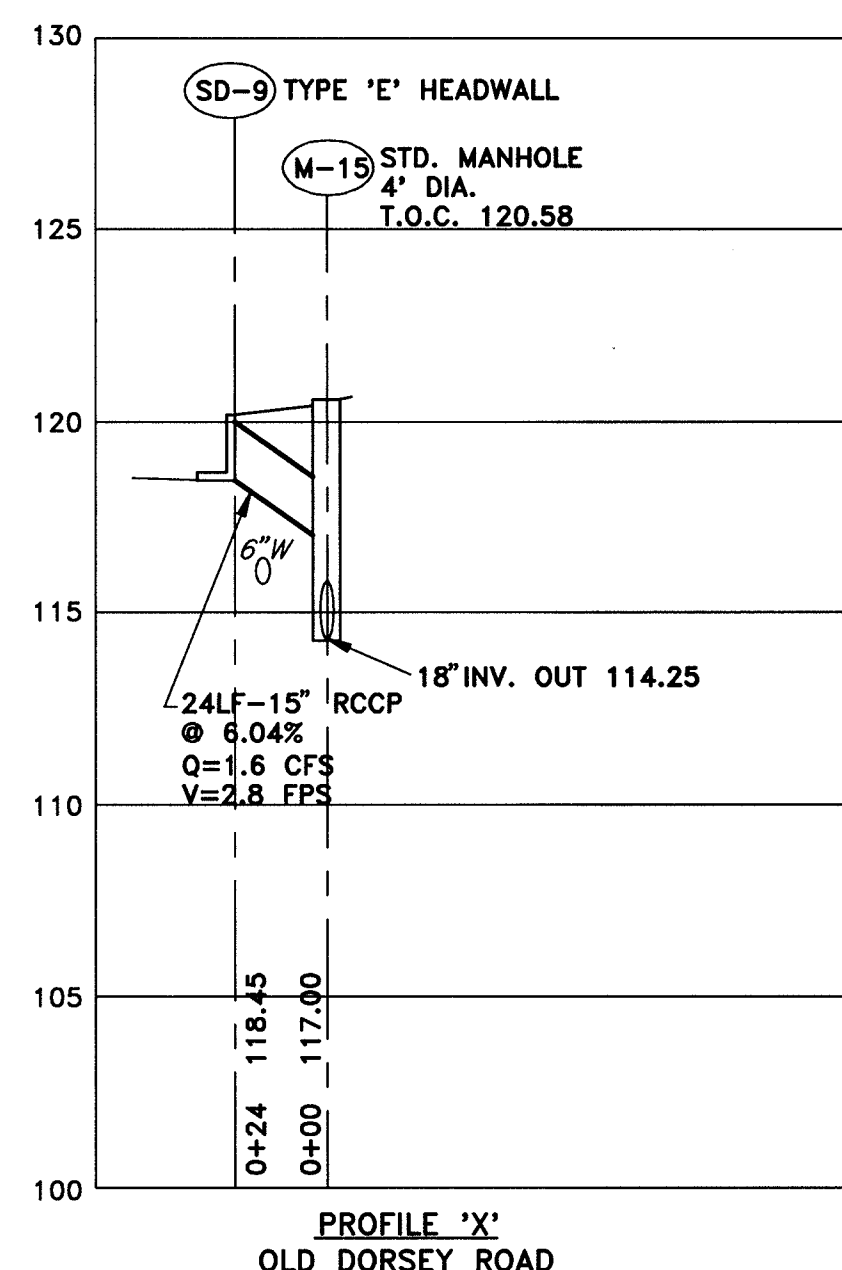
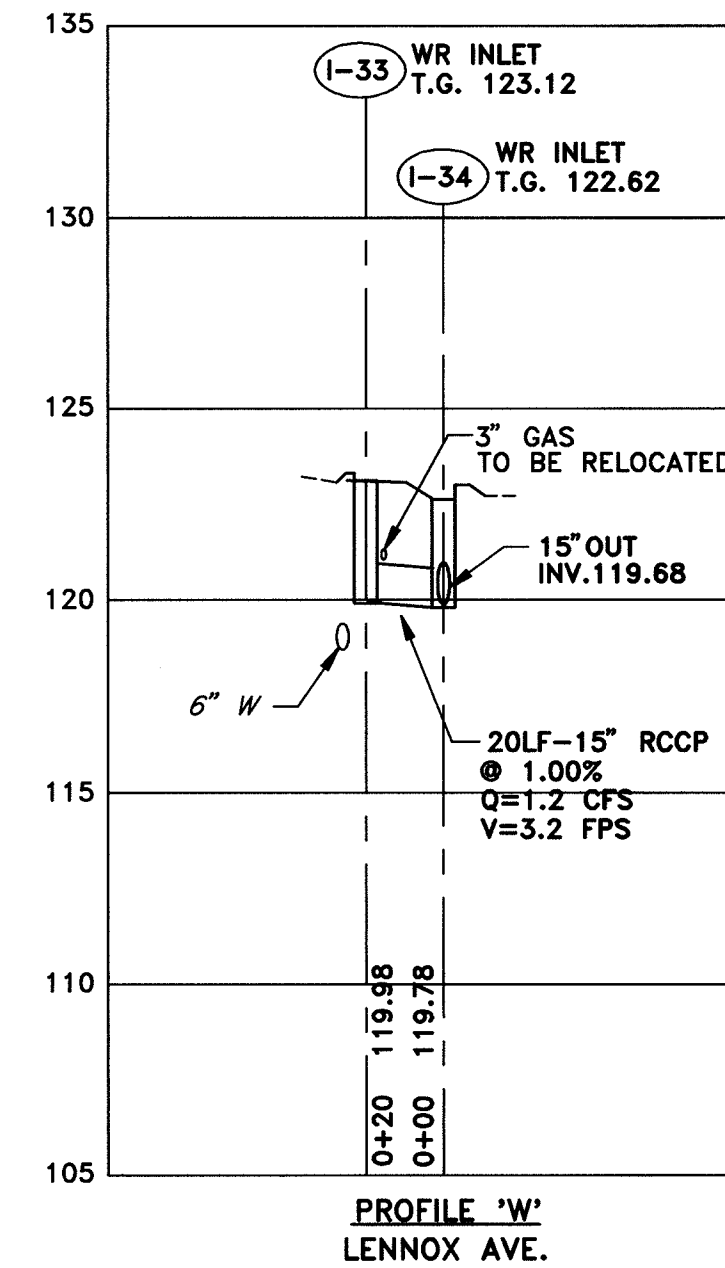
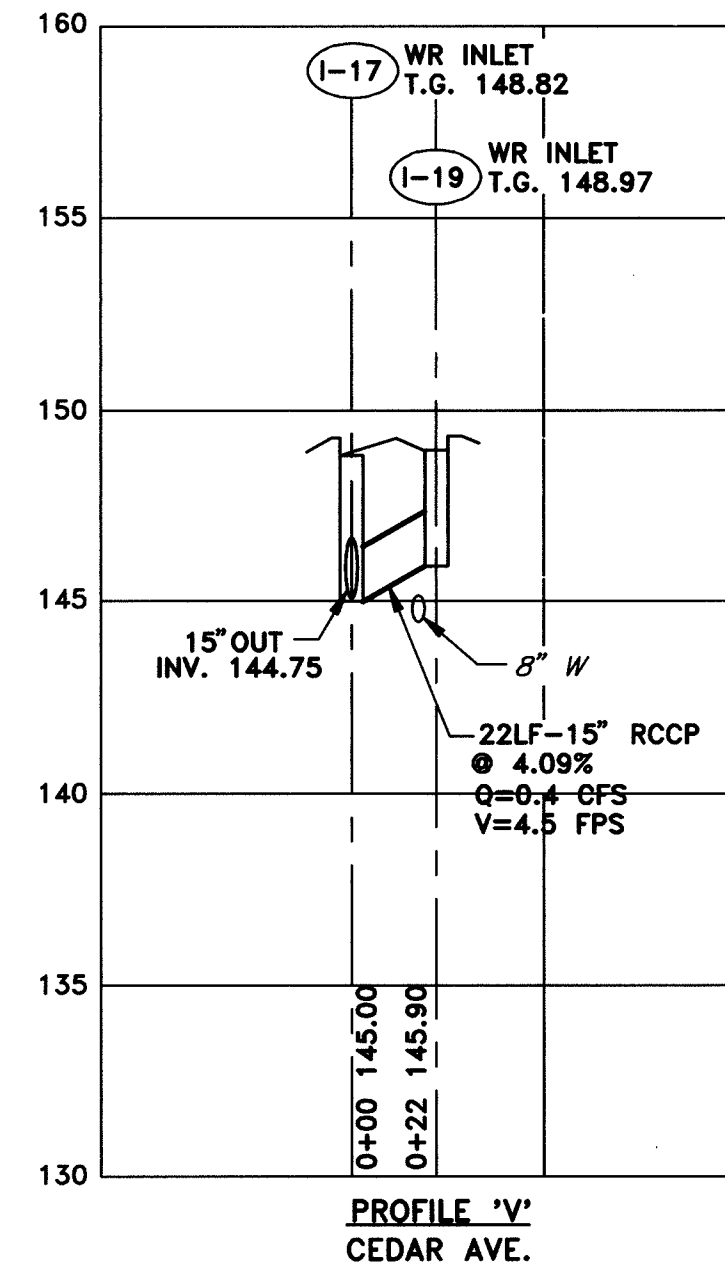
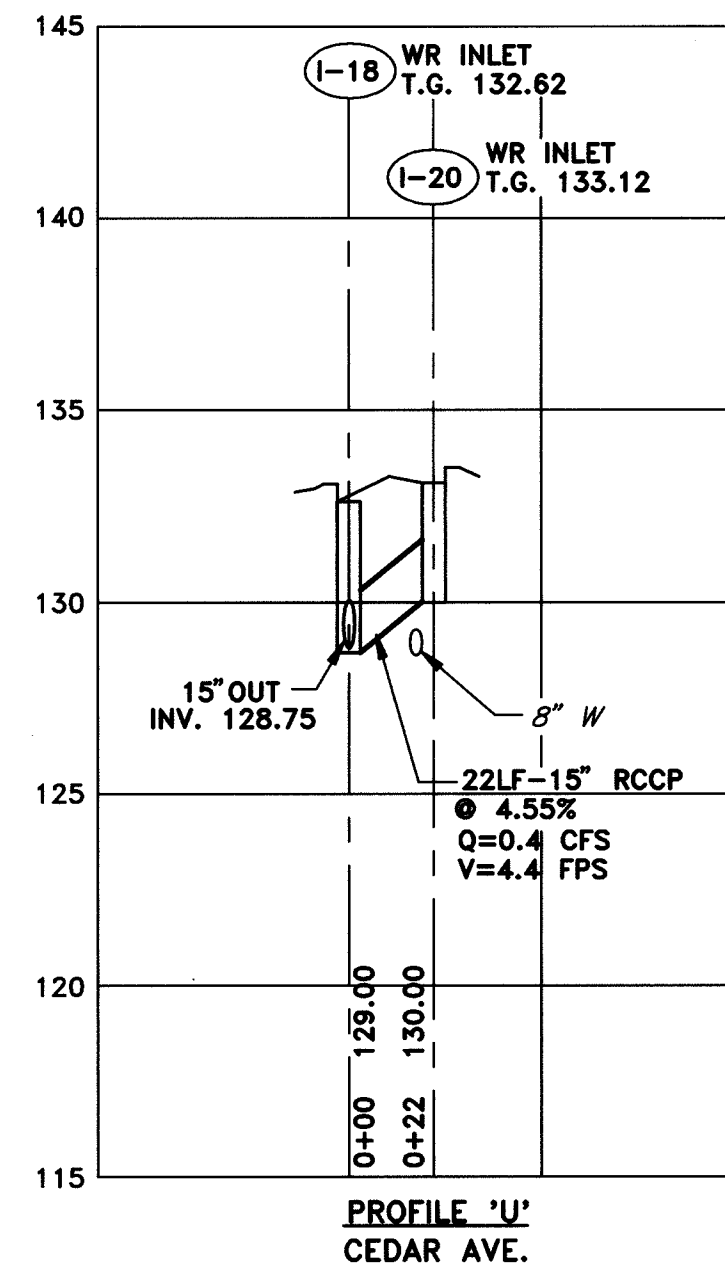
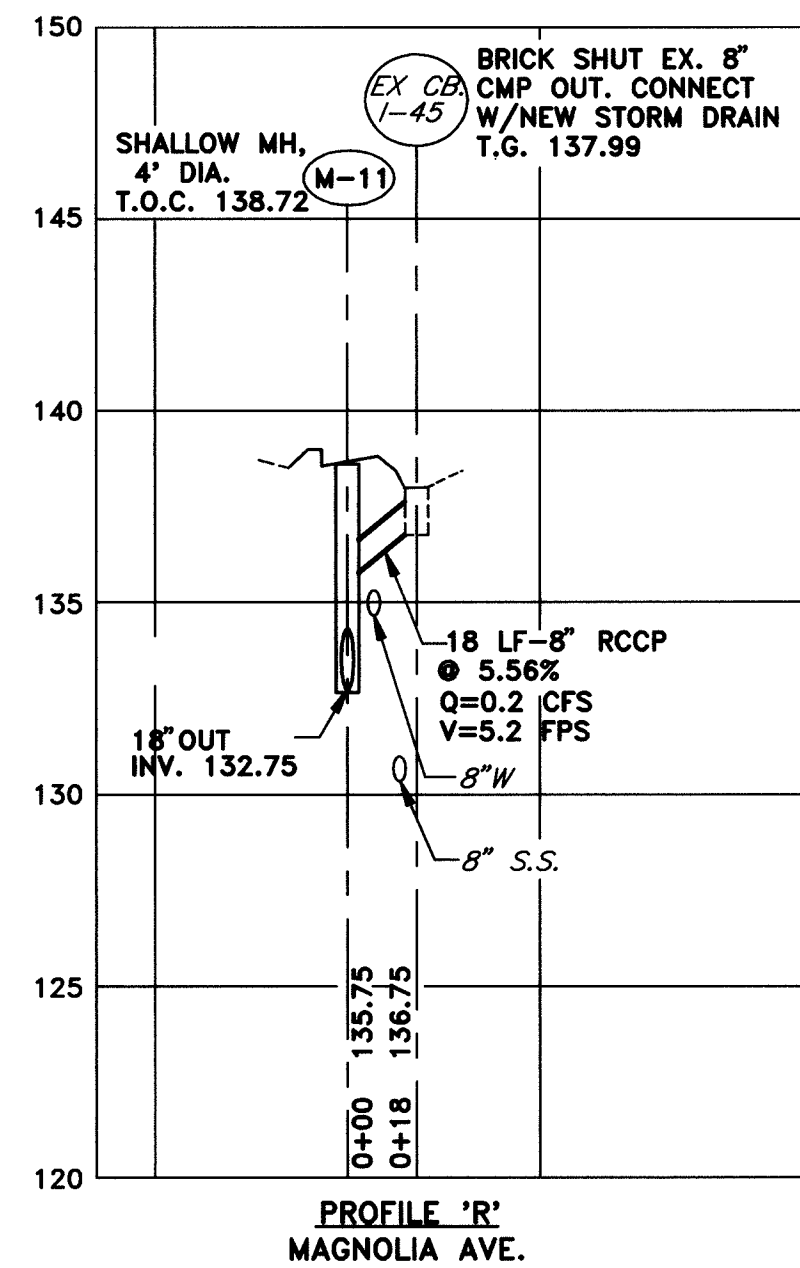
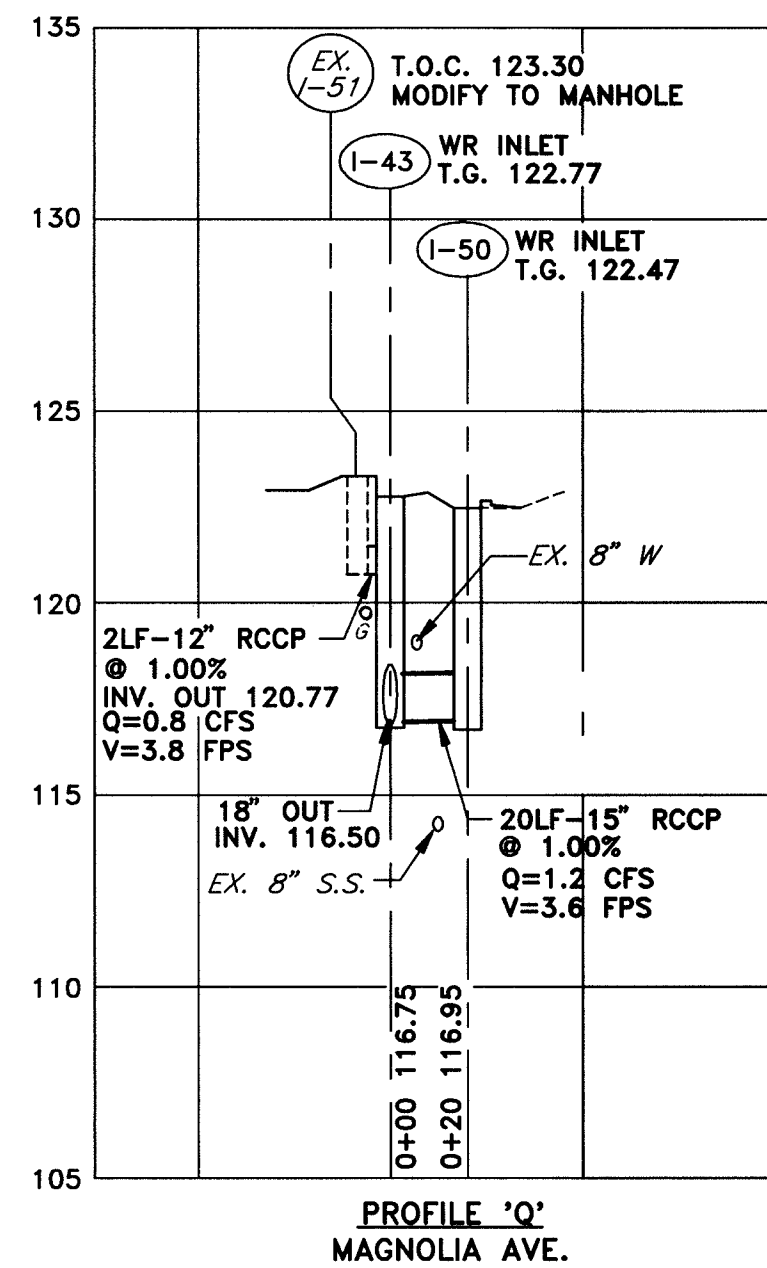
LENNOX PARK  
STORM DRAIN IMPROVEMENTS  
STORM DRAIN PROFILES

SCALE  
H:1"=50', V:1"=5'

SHEET  
17 OF 24

DWG. NO.  
PR-3





NOTE: 1. ADJUST FINAL MANHOLE AND GRATE ELEVATIONS TO MATCH FINAL PAVEMENT GRADE. NEW INLETS AND MANHOLES IN PAVED AREAS ARE DESIGNED TO BE 1 1/2" ABOVE EXISTING GRADE TO ACCOMMODATE FUTURE 1 1/2" PAVEMENT OVERLAY.  
2. TYPE 'D' INLETS SHALL ONLY HAVE OPENINGS ON THE SIDE(S) WHICH RECEIVE DRAINAGE.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Robert A. ...*  
DIRECTOR OF PUBLIC WORKS - DATE

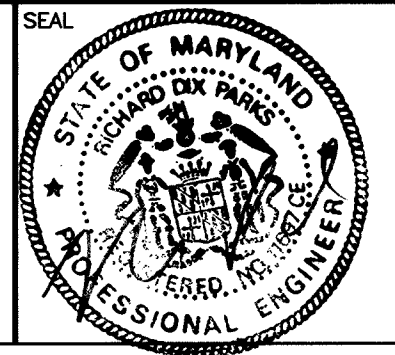
*Paul ...*  
CHIEF, BUREAU OF ENGINEERING - DATE

*Edward ...*  
CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*Michael ...*  
CHIEF, BUREAU OF HIGHWAYS - DATE

**acer**  
Acer Engineers & Consultants, Inc.

201 South Cleveland Avenue, Suite 304  
Hagerstown, Maryland 21740  
Tel 301-791-1100



|       |        |     |  |          |
|-------|--------|-----|--|----------|
| DES:  | R.D.P. | ROP | ADDED EXISTING GAS LINES TO PROFILES "Q, BB" | 8/15/96  |
| DRN:  | A.C.M. |     |  |          |
| CHK:  | R.D.P. |     |  |          |
| DATE: | 01/93  | BY  | NO   | REVISION |

LENNOX PARK  
A RESIDENTIAL COMMUNITY

600' SCALE MAP NO. 43 BLOCK NO. 6

CAPITAL PROJECT NO. D-1100

LENNOX PARK  
STORM DRAIN IMPROVEMENTS  
STORM DRAIN PROFILES

SCALE  
H:1"=50', V:1"=5'

SHEET  
17 OF 24

DWG. NO.  
PR-3



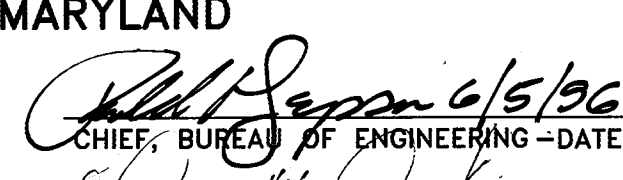

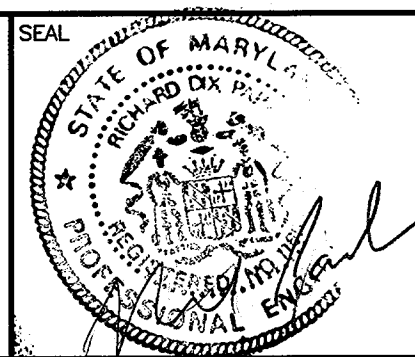
| PROPOSED TRIANGULAR DITCH SCHEDULE (HOWARD COUNTY STANDARD) |         |                      |       |                        |        |                                   |
|---|---------|----------------------|-------|------------------------|--------|-----------------------------------|
| LOCATION  | STATION | OFFSET FROM BASELINE |       | DITCH INVERT ELEVATION |        | DITCH LINING                      |
|   |         | LEFT                 | RIGHT | LEFT                   | RIGHT  |                                   |
| MAGNOLIA AVENUE   | 0+35    |                      | 29.0' |                        | 106.7  | CONCRETE                          |
| "   | 0+45    |                      | 16.0' |                        | 106.5  | CONCRETE                          |
| "   | 0+55    |                      | 17.0' |                        | 106.7  | CONCRETE                          |
| "   | 1+00    |                      | 18.0' |                        | 109.4  | GRASS                             |
| "   | 1+25    |                      | 18.0' | 16.0'                  | 111.2  | GRASS                             |
| "   | 1+50    |                      | 18.0' | 15.0'                  | 113.0  | GRASS                             |
| "   | 2+00    |                      | 16.0' |                        | 117.4  | GRASS                             |
| "   | 3+00    |                      | 18.5' |                        | 126.1  | GRASS                             |
| "   | 3+50    |                      | 17.5' |                        | 130.0  | GRASS                             |
| "   | 4+00    |                      | 18.0' |                        | 134.1  | GRASS                             |
| "   | 4+50    |                      | 17.5' | 15.0'                  | 139.4  | GRASS                             |
| "   | 5+00    |                      | 17.0' | 15.5'                  | 143.8  | GRASS                             |
| "   | 5+50    |                      | 17.5' | 16.0'                  | 148.6  | GRASS                             |
| LINDEN AVENUE   | 0+50    |                      | 16.5' |                        | 154.9  | GRASS                             |
| "   | 4+50    |                      | 12.0' |                        | 165.3  | GRASS                             |
| "   | 5+00    |                      | 12.0' |                        | 166.3  | GRASS                             |
| LENNOX AVENUE   |         |                      |       |                        |        |                                   |
| "   | 6+50    | 14.0'                |       | 175.3                  |        | GRASS                             |
| "   | 7+00    | 15.5'                |       | 179.5                  |        | GRASS                             |
| "   | 7+50    | 15.0'                |       | 184.0                  |        | GRASS                             |
| "   | 8+00    | 17.0'                |       | 187.2                  |        | GRASS                             |
| ELM AVENUE  | 0+50    | 10.0'                | 17.0' | 163.2                  | 162.8  | GRASS 6% @ DRIVEWAY 9' WIDE STONE |
| "   | 1+00    | 10.0'                | 14.0' | 167.0                  | 167.2  | GRASS                             |
| "   | 1+50    | 11.0'                | 13.0' | 172.0                  | 172.5  | GRASS                             |
| "   | 2+00    | 12.0'                | 12.0' | 177.7                  | 179.18 | GRASS MAC. DRIVEWAY TO REMAIN     |
| "   | 2+50    | 12.0'                | 11.5' | 183.4                  | 184.3  | EX. BIT. DRIVEWAY TO REMAIN       |
| "   | 3+00    | 12.0'                | 12.0' | 188.3                  | 189.0  | GRASS                             |
| CEDAR AVENUE  | 0+25    | 19.0'                | 14.0' | 128.25                 | 130.00 | GRASS                             |
| "   | 0+50    |                      | 16.0' | 133.5                  |        | GRASS                             |
| "   | 4+00    |                      | 12.0' | 167.00                 |        | GRASS                             |
| "   | 4+50    |                      | 12.0' | 170.2                  |        | GRASS                             |
| "   | 5+00    |                      | 12.0' | 172.7                  |        | GRASS                             |
| "   | 5+25    |                      | 12.0' | 174.0                  |        | GRASS                             |
| "   | 5+75    |                      | 12.0' | 173.6                  |        | GRASS                             |
| "   | 6+00    |                      | 12.0' | 172.0                  |        | GRASS                             |
| "   | 6+50    |                      | 12.0' | 164.4                  |        | GRASS                             |
| "   | 7+00    |                      | 12.0' | 162.4                  |        | GRASS                             |
| "   | 7+75    |                      | 12.0' | 161.0                  |        | GRASS                             |
| "   | 8+23    |                      | 12.0' | 165.0                  |        | GRASS                             |
| "   | 8+73    |                      | 12.0' | 168.8                  |        | GRASS                             |
| "   | 9+22    |                      | 13.0' | 173.8                  |        | GRASS                             |
| "   | 9+75    |                      | 12.0' | 179.0                  |        | GRASS                             |
| LINDEN AVENUE   | 8+10    |                      | 12.0' | 159.7                  |        | GRASS                             |
| "   | 8+57    |                      | 12.0' | 157.0                  |        | GRASS                             |
| "   | 9+07    |                      | 12.0' | 153.2                  |        | GRASS                             |
| "   | 9+57    |                      | 12.0' | 146.5                  |        | GRASS                             |
| "   | 10+07   |                      | 12.5' | 139.0                  |        | GRASS                             |
| "   | 10+57   |                      | 12.0' | 134.0                  |        | GRASS                             |
| "   | 10+65   |                      | 12.0' | 133.8                  |        | GRASS                             |

NOTE: FOR DITCH ELEVATIONS AT STORM DISCHARGE ON OLD DORSEY ROAD, SEE GRADING PLAN, SHEET 4 OF 24

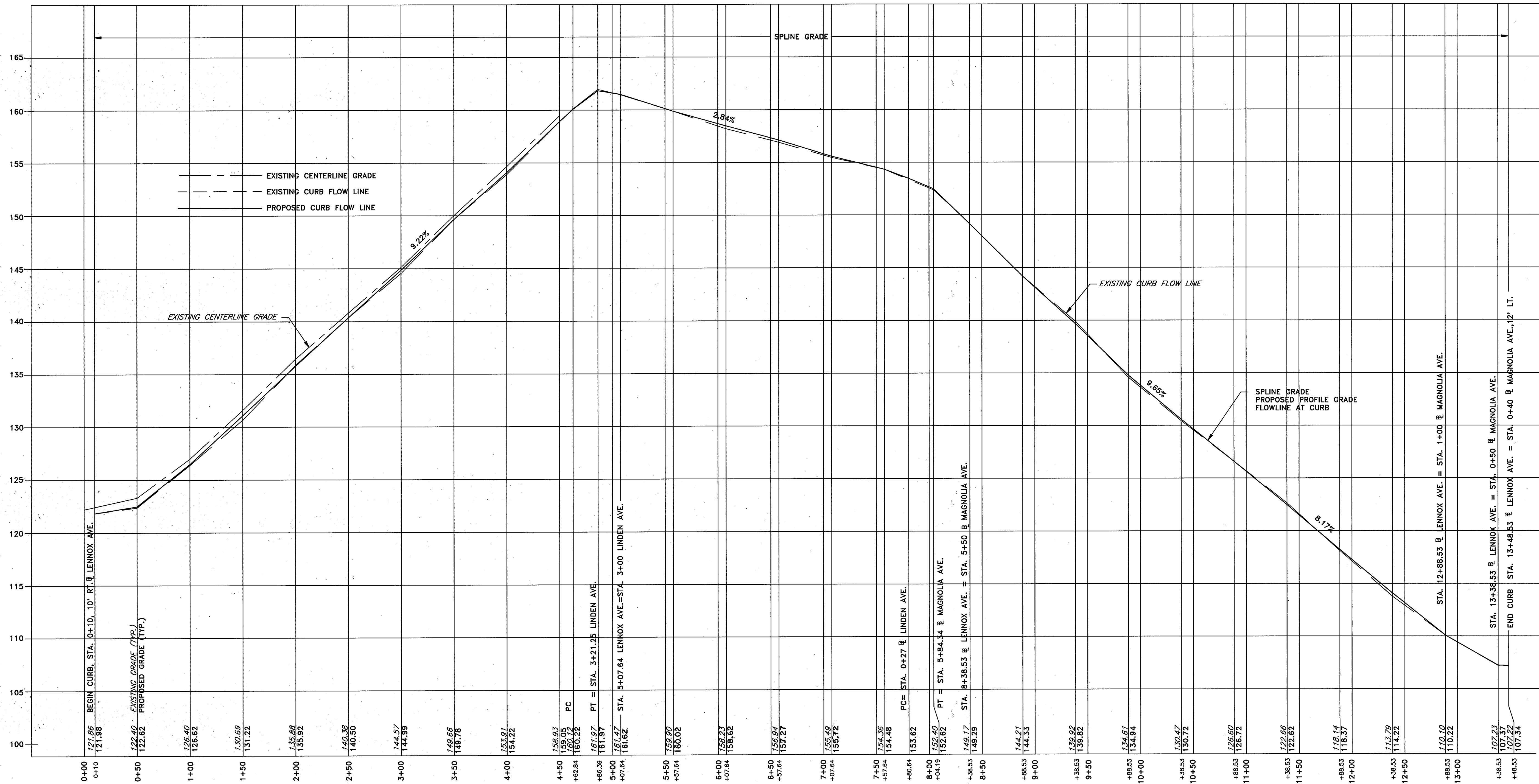
| SUMMARY OF NEW STRUCTURES |         |                      |               |  |        |        |       |
|---------------------------|---------|----------------------|---------------|--|--------|--------|-------|
| LOCATION                  | STATION | OFFSET FROM BASELINE | STRUCTURE NO. | STRUCTURE TYPE   |        |        |       |
| LINDEN AVE.               | 12+75   | 18' RT               | I-1           | TYPE 'D' INLET   | 134.50 | 131.00 | 3.50' |
| LINDEN AVE.               | 11+95   | 14' RT               | I-2           | WR INLET   | 131.87 | 128.25 | 3.62' |
| LINDEN AVE.               | 11+03   | 17.5 RT              | I-3           | TYPE 'D' INLET   | 133.20 | 129.09 | 4.11' |
| LINDEN AVE.               | 9+27    | 13' RT               | I-4           | TYPE 'D' INLET   | 152.25 | 149.40 | 2.85' |
| LINDEN AVE.               | 9+27    | 15' LT               | I-5           | WR INLET   | 151.12 | 148.00 | 3.12' |
| LINDEN AVE.               | 11+41.5 | 15' LT               | I-6           | WR INLET   | 131.02 | 127.60 | 3.42' |
| BALTIMORE AVE.            | 3+47    | 11.5' RT             | I-7           | WR INLET   | 129.02 | 125.00 | 4.02' |
| BALTIMORE AVE.            | 4+95    | 11.5 RT              | I-8           | WR INLET   | 122.12 | 118.25 | 3.87' |
| LINDEN AVE.               | 9+27    | 8' LT                | M-13          | SHALLOW MH-4'  | 151.22 | 147.68 | 3.54' |
| LINDEN AVE.               | 11+45   | 7' LT                | M-14          | SPECIAL MANHOLE  | 131.68 | 127.15 | 4.53' |
| BALTIMORE AVE.            | 4+92    | 14 LT                | I-10          | TYPE 'D' INLET   | 122.80 | 117.75 | 5.05' |
| OLD DORSEY ROAD           | 1+88    | 15' RT               | M-1           | STD. MH-5'   | 119.22 | 110.85 | 8.37' |
| OLD DORSEY ROAD           | 2+49    | 61' RT               | M-2           | STD. MH-5'   | 114.50 | 108.75 | 5.75' |
| CEDAR AVE.                | 8+20    | 11' LT               | I-27          | WR INLET   | 165.27 | 162.20 | 3.07' |
| CEDAR AVE.                | 7+73    | 6' LT                | M-6           | SHALLOW MH-5'  | 162.87 | 157.90 | 4.97' |
| ELM AVE.                  | 5+90    | 6' RT                | M-5           | SHALLOW MH-4'  | 162.62 | 159.00 | 3.62' |
| ELM AVE.                  | 4+82    | 6' RT                | M-7           | SHALLOW MH-4'  | 176.12 | 172.50 | 3.62' |
| ELM AVE.                  | 4+82    | 13' RT               | I-29          | TYPE 'D' INLET   | 176.75 | 172.75 | 4.00' |
| ELM AVE.                  | 4+82    | 13' LT               | I-28          | TYPE 'D' INLET   | 177.25 | 173.25 | 4.00' |
| CEDAR AVE.                | 6+97    | 22' RT               | I-25          | TYPE 'D' INLET   | 162.8  | 159.75 | 3.05' |
| CEDAR AVE.                | 7+73    | 13' RT               | I-26          | TYPE 'D' INLET   | 163.50 | 160.50 | 3.00' |
| OLD DORSEY ROAD           | 1+32    | 11.5 RT              | I-12          | WR INLET   | 118.87 | 112.25 | 6.62' |
| OLD DORSEY ROAD           | 2+47    | 65' RT               | I-13          | TYPE 'D' INLET   | 114.00 | 111.00 | 3.00' |
| BALTIMORE AVE.            | 5+32    | 8' RT                | SD-9          | TYPE 'E' HEADWALL (15" ROUND)                          | 118.45 |        |       |
| LINDEN AVE.               | 6+75    | 13' RT               | I-23          | TYPE 'D' INLET   | 167.25 | 164.40 | 2.85' |
| CEDAR AVE.                | 3+40    | 12' RT               | I-22          | WR INLET   | 163.37 | 159.75 | 3.62' |
| CEDAR AVE.                | 3+40    | 8' LT                | M-4           | SHALLOW MH-4'  | 163.37 | 157.50 | 5.87' |
| CEDAR AVE.                | 4+00    | 11' LT               | I-24          | WR INLET   | 167.37 | 160.50 | 6.87' |
| CEDAR AVE.                | 2+00    | 12' LT               | I-17          | WR INLET   | 148.82 | 144.75 | 4.07' |
| CEDAR AVE.                | 2+00    | 12' RT               | I-19          | WR INLET   | 148.97 | 145.90 | 3.07' |
| CEDAR AVE.                | 0+50    | 12' LT               | I-18          | WR INLET   | 132.62 | 128.75 | 3.87' |
| CEDAR AVE.                | 0+50    | 12' RT               | I-20          | WR INLET   | 133.12 | 129.00 | 4.12' |
| CEDAR AVE.                | 0+15    | 19' LT               | M-3           | SHALLOW MH-5' W/SLOT COVER                             | 127.40 | 122.93 | 4.47' |
| CEDAR AVE.                | 0+20    | 14' RT               | I-21          | TYPE 'D' INLET   | 130.00 | 127.15 | 2.85' |
| LENNOX AVE.               | 2+50    | 12' LT               | I-32          | WR INLET   | 140.52 | 137.46 | 3.06  |
| LENNOX AVE.               | 2+50    | 10' RT               | I-35          | WR INLET   | 140.52 | 137.00 | 3.52' |
| LENNOX AVE.               | 0+50    | 10' RT               | I-34          | WR INLET   | 122.62 | 119.68 | 2.94' |
| LENNOX AVE.               | 0+50    | 12' LT               | I-33          | WR INLET   | 123.12 | 119.98 | 3.14' |
| LENNOX AVE.               | 0+12    | 6' RT                | M-9           | SHALLOW MH-4'  | 122.62 | 119.19 | 3.43' |
| LINDEN AVE.               | 4+12    | 13' LT               | M-12          | TYPE 'D' INLET   | 165.05 | 158.55 | 6.50' |
| LINDEN AVE.               | 3+96    | 11' RT               | I-31          | WR INLET   | 163.62 | 156.97 | 6.65' |
| LINDEN AVE.               | 3+25    | 6' LT                | M-8           | STD. MH-4'   | 162.37 | 156.00 | 6.37' |
| LENNOX AVE.               | 6+25    | 15.5' LT             | I-37          | TYPE 'D' INLET   | 174.75 | 168.50 | 6.25' |
| LENNOX AVE.               | 5+15    | 14' LT               | I-38          | WR INLET   | 165.12 | 158.50 | 6.62' |
| LENNOX AVE.               | 5+15    | 17' RT               | I-36          | WR INLET   | 164.62 | 157.50 | 7.12' |
| LINDEN AVE.               | 1+75    | 10' LT               | I-49          | WR INLET   | 157.62 | 152.25 | 5.37' |
| LINDEN AVE.               | 0+45    | 10' LT               | I-41          | WR INLET   | 154.47 | 149.45 | 5.02' |
| LINDEN AVE.               | 0+08    | 8' LT                | M-10          | SHALLOW MH-4'  | 154.02 | 148.00 | 6.02' |
| MAGNOLIA AVE.             | 4+31    | 8' LT                | M-11          | SHALLOW MH-4'  | 138.72 | 132.75 | 5.97' |
| MAGNOLIA AVE.             | 2+52    | 12' LT               | I-43          | WR INLET   | 122.77 | 116.50 | 6.27  |
| MAGNOLIA AVE.             | 0+60    | 12' LT               | I-47          | WR INLET   | 107.70 | 103.75 | 3.95' |
| MAGNOLIA AVE.             | 0+33    | 13' RT               | I-46          | WR INLET   | 106.72 | 98.40  | 8.32' |
| MAGNOLIA AVE.             | 0+42    | 8' LT                | M-12          | STD. MH-5'   | 107.52 | 99.60  | 7.92' |
| MAGNOLIA AVE.             | 0+45    | 16' LT               | I-48          | TYPE 'D' INLET   | 107.25 | 100.00 | 7.25' |
| MAGNOLIA AVE.             | 0+23    | 32' RT               | S-2           | TYPE 'C' ENDWALL (24")                                 |        | 98.22  |       |
| MAGNOLIA AVE.             | 2+86    | 18' LT               | I-44          | TYPE 'D' INLET   | 125.85 | 122.85 | 3.00' |
| MAGNOLIA AVE.             | 2+52    | 10' RT               | I-50          | WR INLET   | 122.47 | 116.95 | 5.52' |
| MAGNOLIA AVE.             | 2+52    | 14' LT               | EX. 1-51      | EXIST. C.B. TO BE MODIFIED PER DETAIL ON SHEET 4 OF 24 | 123.30 | 120.70 | 2.5'  |
| OLD DORSEY ROAD           | 0+15    | 0' RT                | M-15          | STD. MANHOLE - 4'                                      | 120.58 | 114.25 | 6.33' |
| CEDAR AVE.                | 7+77    | 25' LT               |               | END SECTION - 18" RCCP                                 |        | 157.65 |       |
| CEDAR AVE.                | 0+15    | 23' LT               |               | END SECTION - 24" RCCP                                 |        | 125.4  |       |

| PIPE SCHEDULE |              |                  |            |              |
|---------------|--------------|------------------|------------|--------------|
| FROM          | TO           | SIZE (INCH DIA.) | TYPE       | LENGTH (FT.) |
| I-10          | M-15         | 18               | RCCP, CLIV | 28           |
| I-1           | I-2          | 15               | "          | 50           |
| I-2           | I-7          | 15               | "          | 15           |
| I-7           | I-8          | 15               | "          | 149          |
| I-8           | I-10         | 18               | "          | 25           |
| I-4           | M-13         | 15               | "          | 21           |
| I-5           | M-13         | 15               | "          | 7            |
| M-13          | M-14         | 15               | "          | 218          |
| M-14          | I-7          | 15               | "          | 56           |
| I-6           | M-14         | 15               | "          | 10           |
| I-12          | M-1          | 18               | "          | 45           |
| M-1           | M-2          | 24               | "          | 78           |
| M-2           | EX. HEADWALL | 36               | "          | 6            |
| I-29          | M-7          | 15               | "          | 7            |
| I-28          | M-7          | 15               | "          | 19           |
| I-27          | M-6          | 15               | RCCP, CLIV | 51           |
| M-7           | M-5          | 15               | "          | 108          |
| M-5           | M-6          | 15               | "          | 50           |
| I-32          | I-35         | 15               | "          | 22           |
| I-35          | I-34         | 15               | "          | 200          |
| I-34          | M-9          | 15               | "          | 39           |
| M-9           | EX. HEADWALL | 15               | "          | 5            |
| I-26          | M-6          | 15               | "          | 19           |
| M-6           | ENDSECTION   | 18               | "          | 25           |
| I-23          | I-22         | 15               | "          | 45           |
| I-22          | M-4          | 15               | "          | 20           |
| I-21          | M-3          | 15               | "          | 34           |
| I-37          | I-38         | 15               | "          | 110          |
| I-38          | I-36         | 15               | "          | 31           |
| I-36          | M-8          | 15               | "          | 35           |
| M-8           | I-49         | 18               | "          | 150          |
| I-49          | I-41         | 18               | RCCP, CLIV | 130          |
| I-41          | M-10         | 18               | "          | 37           |
| M-10          | M-11         | 18               | "          | 170          |
| M-11          | I-43         | 18               | "          | 179          |
| I-43          | I-47         | 18               | "          | 192          |
| I-47          | M-12         | 18               | "          | 18           |
| I-24          | M-4          | 15               | "          | 60           |
| M-4           | I-17         | 15               | "          | 140          |
| I-17          | I-18         | 15               | "          | 150          |
| I-18          | M-3          | 15               | "          | 37           |
| I-48          | M-12         | 15               | "          | 9            |
| M-12          | I-46         | 18               | "          | 23           |
| I-46          | ENDWALL(S-2) | 24               | "          | 45           |
| I-30          | I-31         | 15               | "          | 27           |
| I-31          | M-8          | 15               | "          | 72           |
| I-50          | I-43         | 15               | "          | 20           |
| EX. I-45      | M-11         | 8                | "          | 18           |
| I-33          | I-34         | 15               | "          | 20           |
| I-20          | I-18         | 15               | RCCP, CLIV | 22           |
| I-19          | I-17         | 15               | "          | 22           |
| I-3           | M-14         | 15               | "          | 85           |
| I-13          | M-2          | 15               | "          | 6            |
| EX. I-51      | I-43         | 12               | "          | 2            |
| I-44          | EX. I-51     | 15               | "          | 34           |
| SD-9          | M-15         | 15               | "          | 24           |
| I-25          | M-5          | 15               | "          | 25           |
| ENDSECTION    | M-3          | 24               | "          | 2            |
| M15           | I-12         | 18               | "          | 117          |

NOTE: 1. ALL PROPOSED CATCH BASINS SHALL RECEIIVE BICYCLE SAFE GRATES.  
 2. PIPE SCHEDULE AND SUMMARY OF NEW STRUCTURES SCHEDULE IS PROVIDED AS INFORMATION FOR THE CONTRACTOR AND SHALL NOT SUPERCEDE DESIGN INFORMATION SHOWN ON OTHER PLAN DRAWINGS OR THE SPECIFICATIONS AND SPECIAL PROVISIONS.

|  |   |   |   |                                      |
|--|---|---|---|--------------------------------------|
| DEPARTMENT OF PUBLIC WORKS<br>HOWARD COUNTY, MARYLAND<br><br>CHIEF, BUREAU OF ENGINEERING-DATE<br>CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV.-DATE | <br>Acer Engineers & Consultants, Inc.<br>201 South Cleveland Avenue, Suite 304<br>Hagerstown, Maryland 21740<br>Tel 301-791-1100 | <br>DES: R.D.P.<br>DRN: A.C.M.<br>CHK: R.D.P.<br>DATE: 01/93 | LENNOX PARK<br>A RESIDENTIAL COMMUNITY<br>CAPITAL PROJECT NO. D-1100<br>LENNOX PARK<br>STORM DRAINAGE IMPROVEMENTS<br>PIPE SCHEDULE, DITCH SCHEDULE,<br>SUMMARY OF NEW STRUCTURES | SCALE<br>NONE                        |
|  |   |   |   | SHEET<br>18 OF 24<br>DWG. NO.<br>C-5 |





FLOWLINE AT CURB - LENNOX AVE. RIGHT TO MAGNOLIA AVE. LEFT

HOR: 1" = 50'  
VER: 1" = 5'

NOTE: ALL ELEVATIONS SHOWN ARE TO FLOWLINE ASSUMING A 1 1/2" OVERLAY ON EXISTING ROAD SURFACE BY OTHERS

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James M. Lee* 6/5/96  
DIRECTOR OF PUBLIC WORKS - DATE

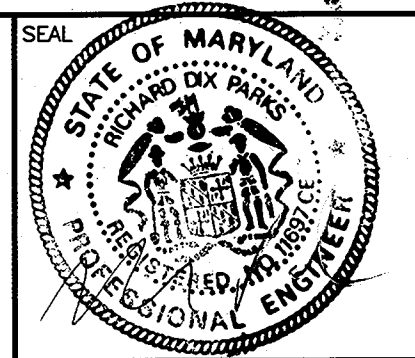
*Elizabeth Anderson* 6/5/96  
CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*Robert L. Anderson* 6/5/96  
CHIEF, BUREAU OF ENGINEERING - DATE

*John P. Brown* 6/5/96  
CHIEF, BUREAU OF HIGHWAYS - DATE

**acer**  
Acer Engineers & Consultants, Inc.

201 South Cleveland Avenue, Suite 304  
Hagerstown, Maryland 21740  
Tel 301-791-1100



|           |        |
|-----------|--------|
| DES:      | R.D.P. |
| DRN:      | A.C.M. |
| CHK:      | R.D.P. |
| DATE:     | 01/93  |
| BY:       | NO     |
| REVISION: |        |
| DATE:     |        |

LENNOX PARK  
A RESIDENTIAL COMMUNITY

600' SCALE MAP NO. 43 BLOCK NO. 6

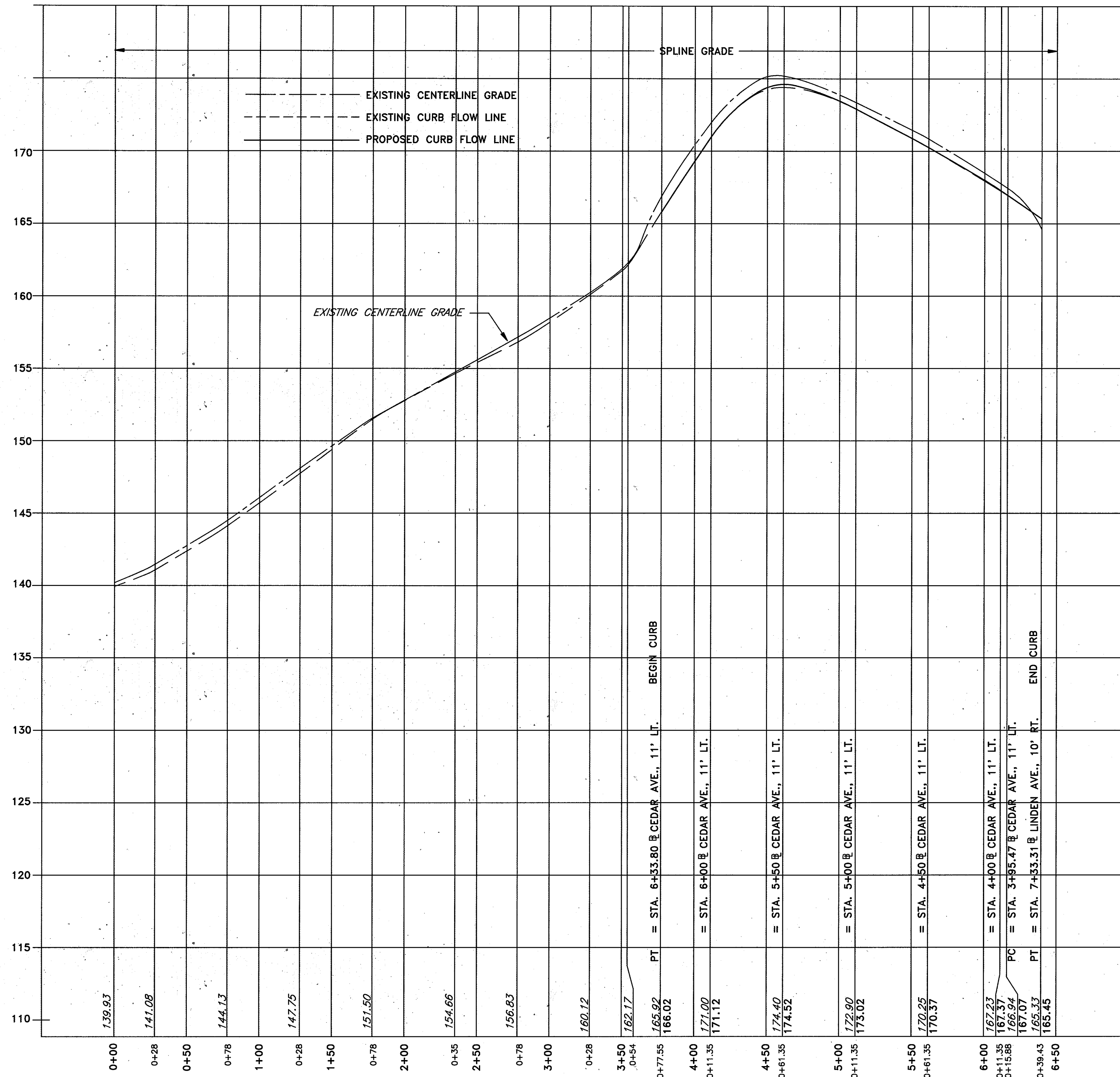
CAPITAL PROJECT NO. D-1100  
LENNOX PARK  
STORM DRAIN IMPROVEMENTS  
CURB FLOW LINE PROFILE

SCALE  
H:1"=50', V:1"=5'

SHEET  
19 OF 24

DWG. NO.  
PR-4

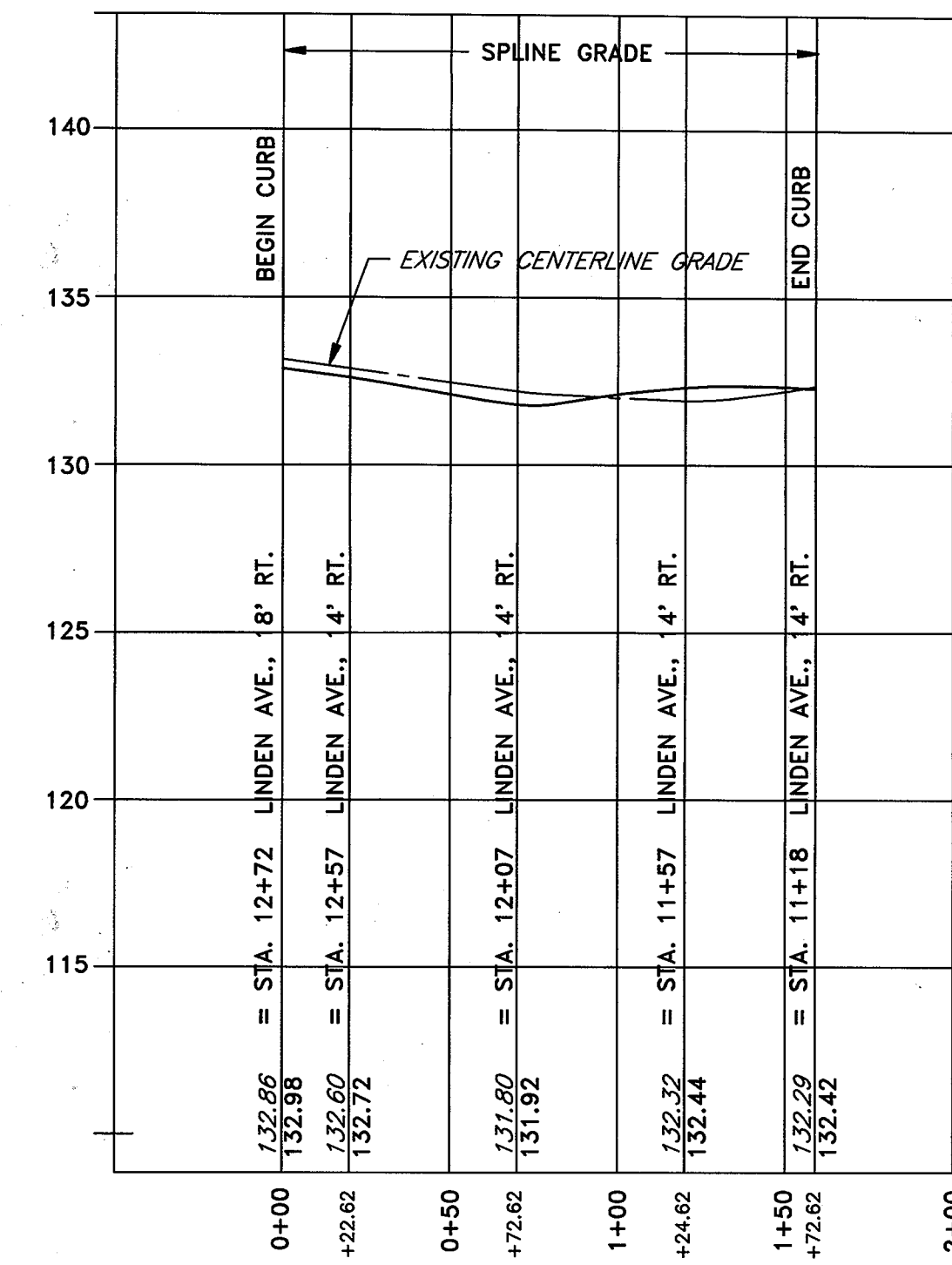




PROFILE - FLOWLINE AT CURB PARK PLACE LEFT TO CEDAR AVE. LEFT

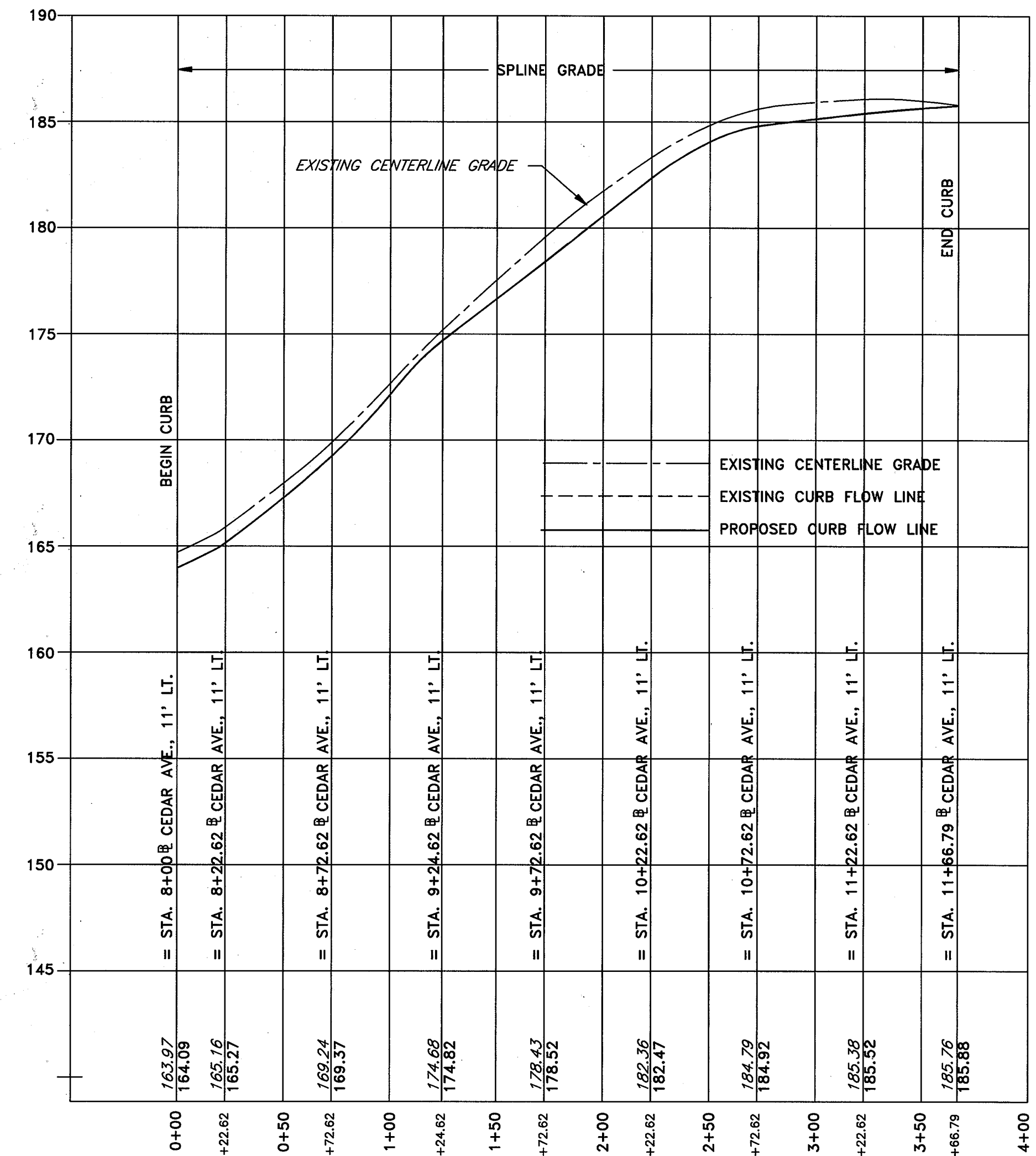
HOR: 1" = 50'  
 VER: 1" = 5'

NOTE: ALL ELEVATIONS SHOWN ARE TO FLOWLINE ASSUMING A 1 1/2" OVERLAY (BY OTHERS)



PROFILE - FLOWLINE AT CURB LINDEN AVE. RIGHT

HOR: 1" = 50'  
 VER: 1" = 5'



PROFILE - FLOWLINE AT CURB CEDAR AVE. LEFT

HOR: 1" = 50'  
 VER: 1" = 5'

02/29/98 13752054

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*James M. Lee* 6/5/98  
 DIRECTOR OF PUBLIC WORKS - DATE

*Elizabeth Anderson* 6/5/98  
 CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*Paul J. Ryan* 6/5/98  
 CHIEF, BUREAU OF ENGINEERING - DATE

*Andrew M. ...* 6/5/98  
 CHIEF, BUREAU OF HIGHWAYS - DATE

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 Hagerstown, Maryland 21740  
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| DRN:  | A.C.M. |          |      |  |
| CHK:  | R.D.P. |          |      |  |
| DATE: | 01/93  |          |      |  |
| BY:   | NO     | REVISION | DATE |  |

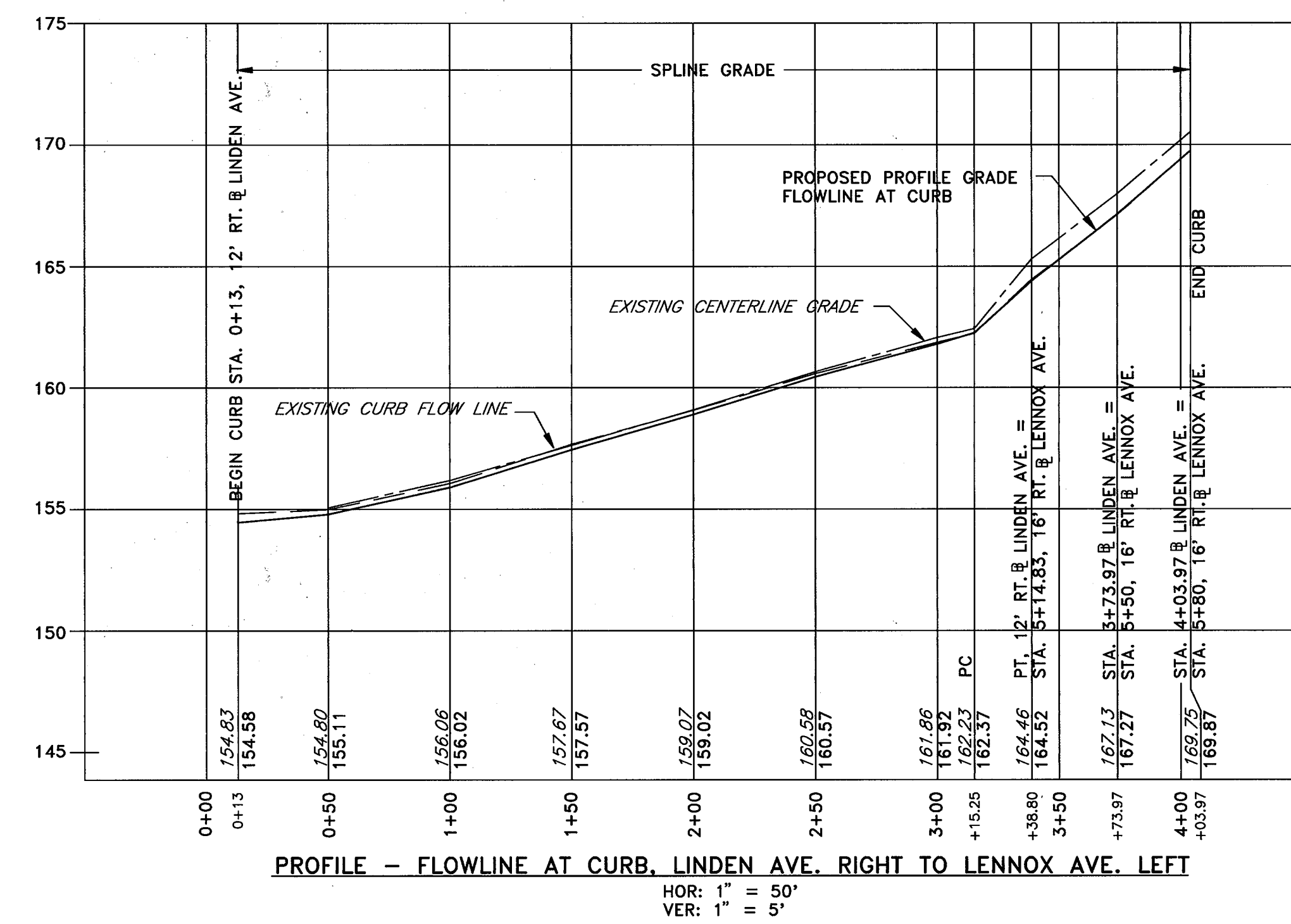
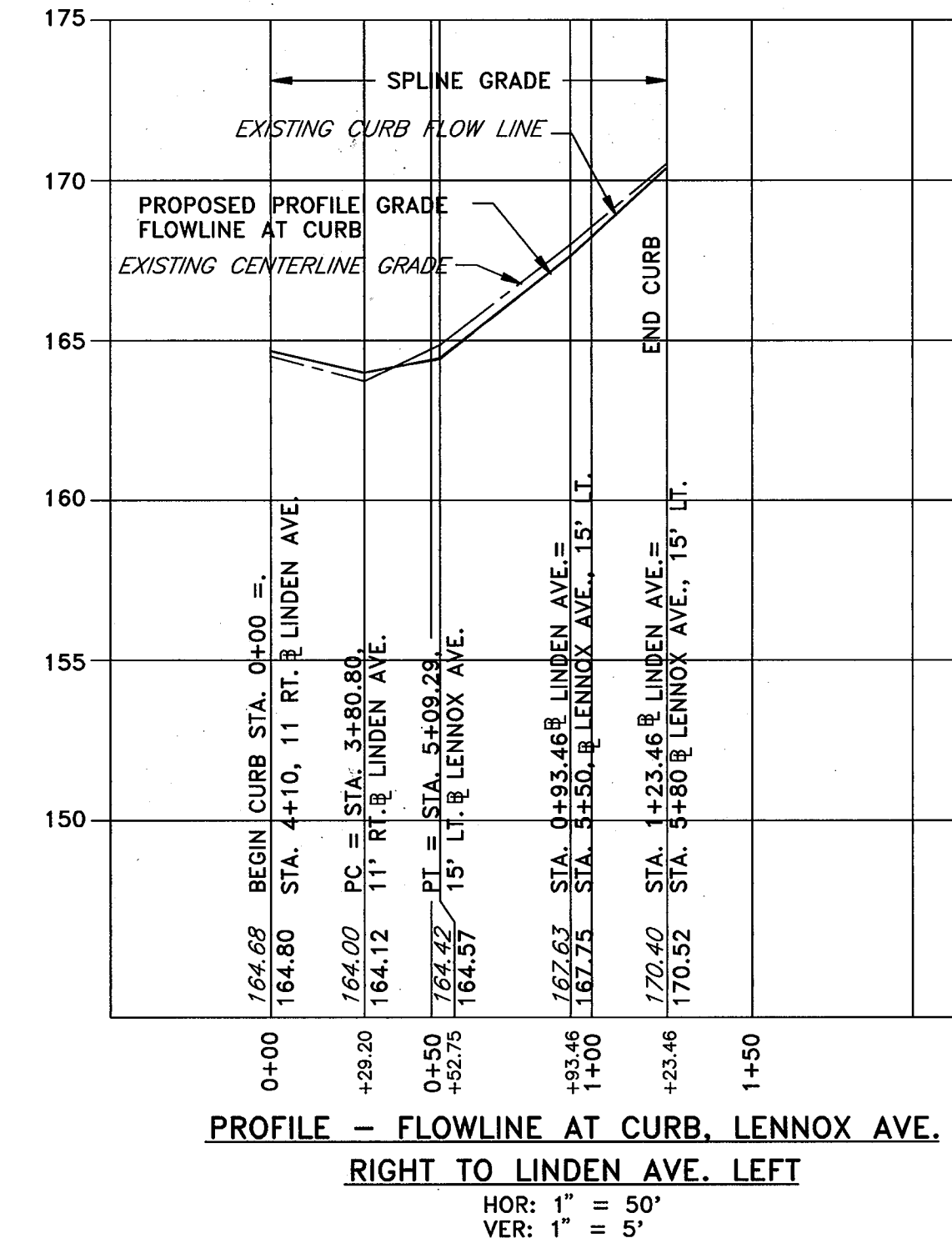
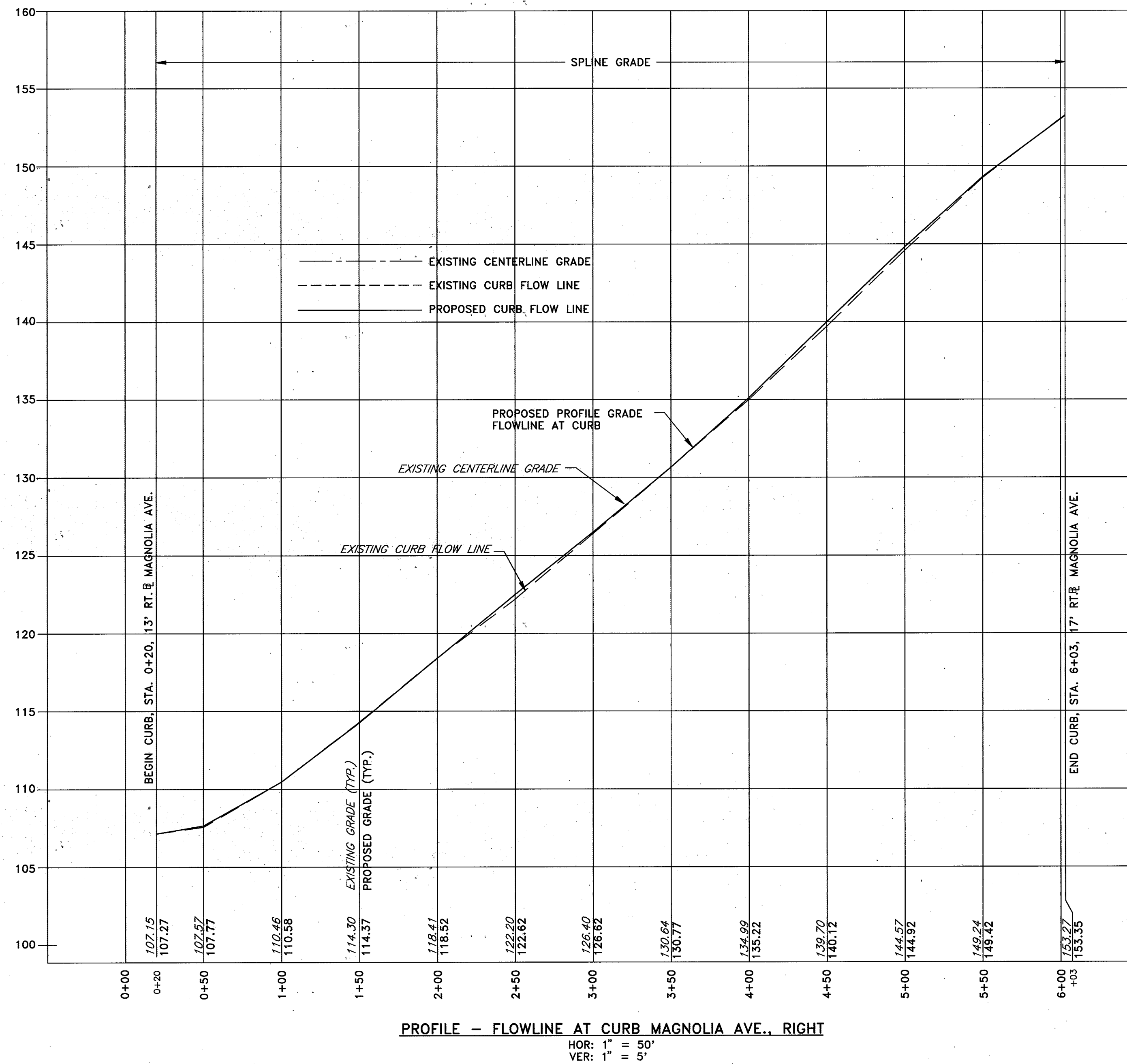
LENNOX PARK  
 A RESIDENTIAL COMMUNITY

600' SCALE MAP NO. 43 BLOCK NO. 6

CAPITAL PROJECT NO. D-1100

LENNOX PARK  
 STORM DRAIN IMPROVEMENTS  
 CURB FLOW LINE PROFILE

SCALE  
 H:1"=50', V:1"=5'  
 SHEET  
 20 OF 24  
 DWG. NO.  
 PR-5



NOTE: ALL ELEVATIONS SHOWN ARE TO FLOWLINE ASSUMING 1 1/2" OVERLAY BY OTHERS

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

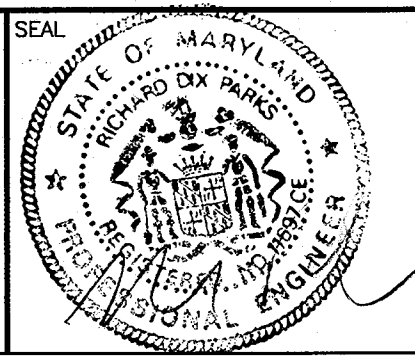
*James A. Kim* 6/15/06  
DIRECTOR OF PUBLIC WORKS - DATE

*Paul J. Papp* 6/15/06  
CHIEF, BUREAU OF ENGINEERING - DATE

*Elizabeth Anderson* 6/14/06  
CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*Michael J. Kato* 6-5-06  
CHIEF, BUREAU OF HIGHWAYS - DATE

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Hagerstown, Maryland 21740  
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|       |        |          |      |  |
|-------|--------|----------|------|--|
| DES:  | R.D.P. |          |      |  |
| DRN:  | A.C.M. |          |      |  |
| CHK:  | R.D.P. |          |      |  |
| DATE: | 01/93  |          |      |  |
| BY    | NO     | REVISION | DATE |  |

LENNOX PARK  
A RESIDENTIAL COMMUNITY

600' SCALE MAP NO. 43 BLOCK NO. 6

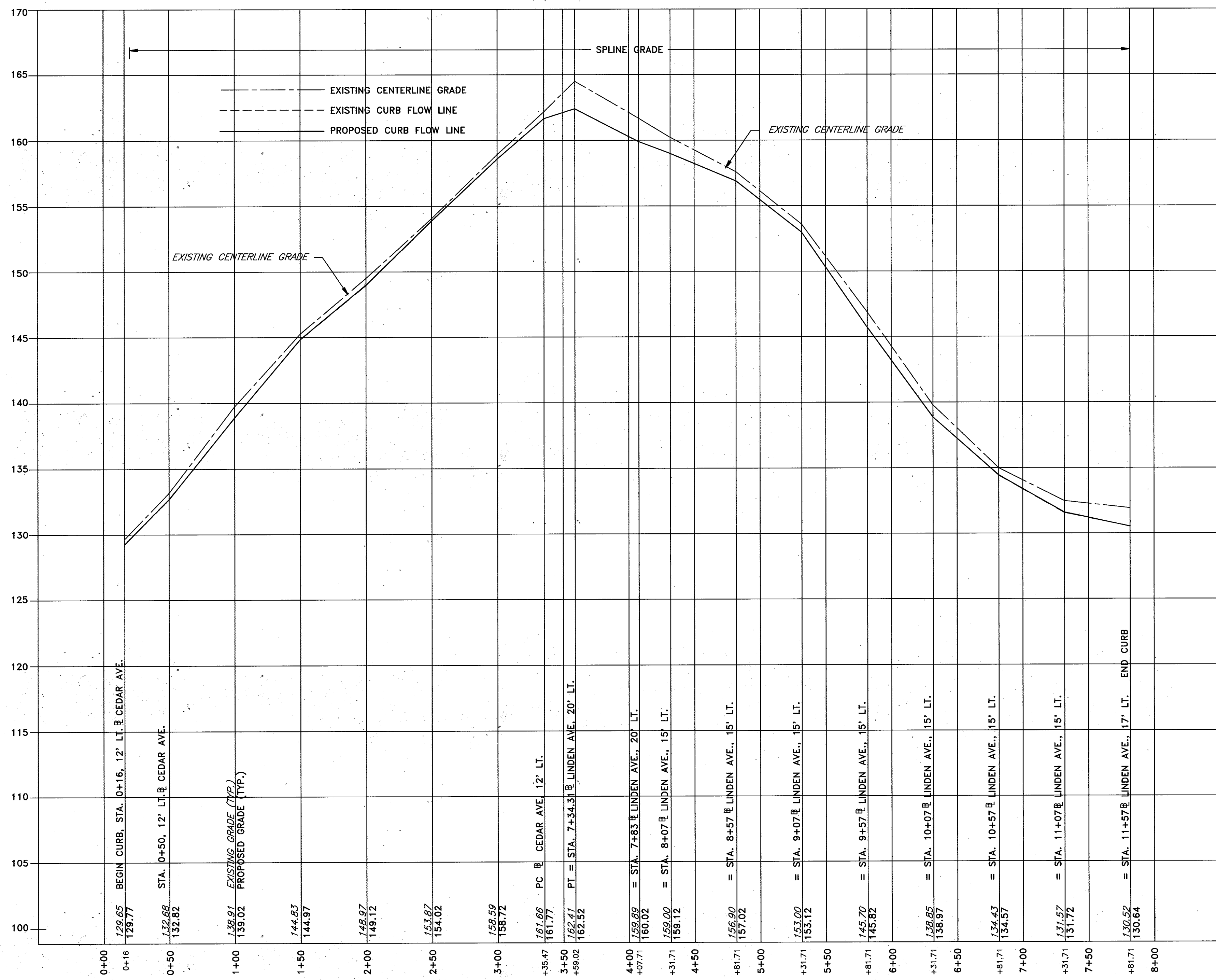
CAPITAL PROJECT NO. D-1100  
LENNOX PARK  
STORM DRAIN IMPROVEMENTS  
CURB FLOW LINE PROFILES

SCALE  
H:1"=50', V:1"=5'

SHEET  
21 OF 24

DWG. NO.  
PR-6

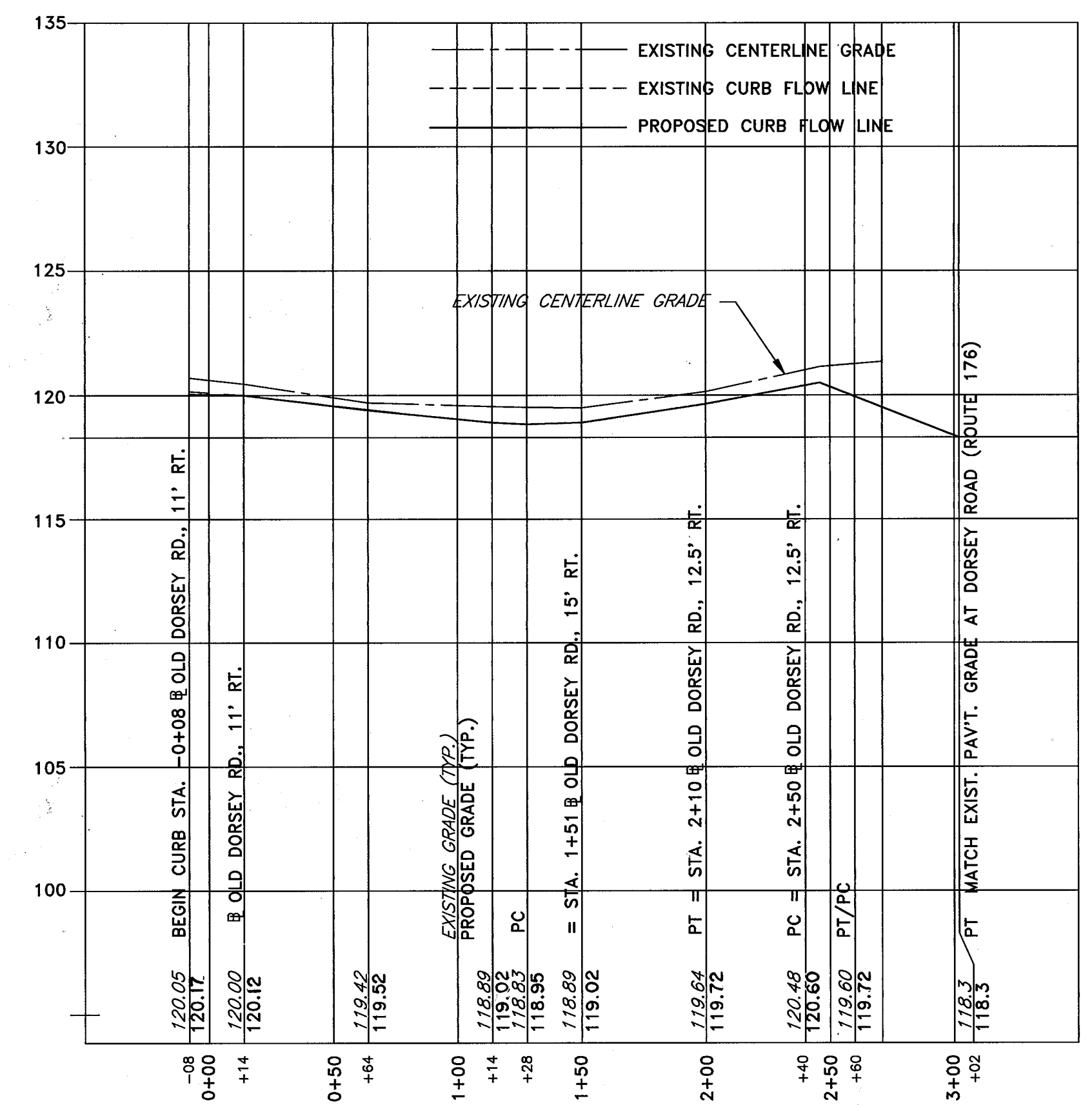




PROFILE - FLOWLINE AT CURB CEDAR AVE. LEFT TO LINDEN AVE. LEFT

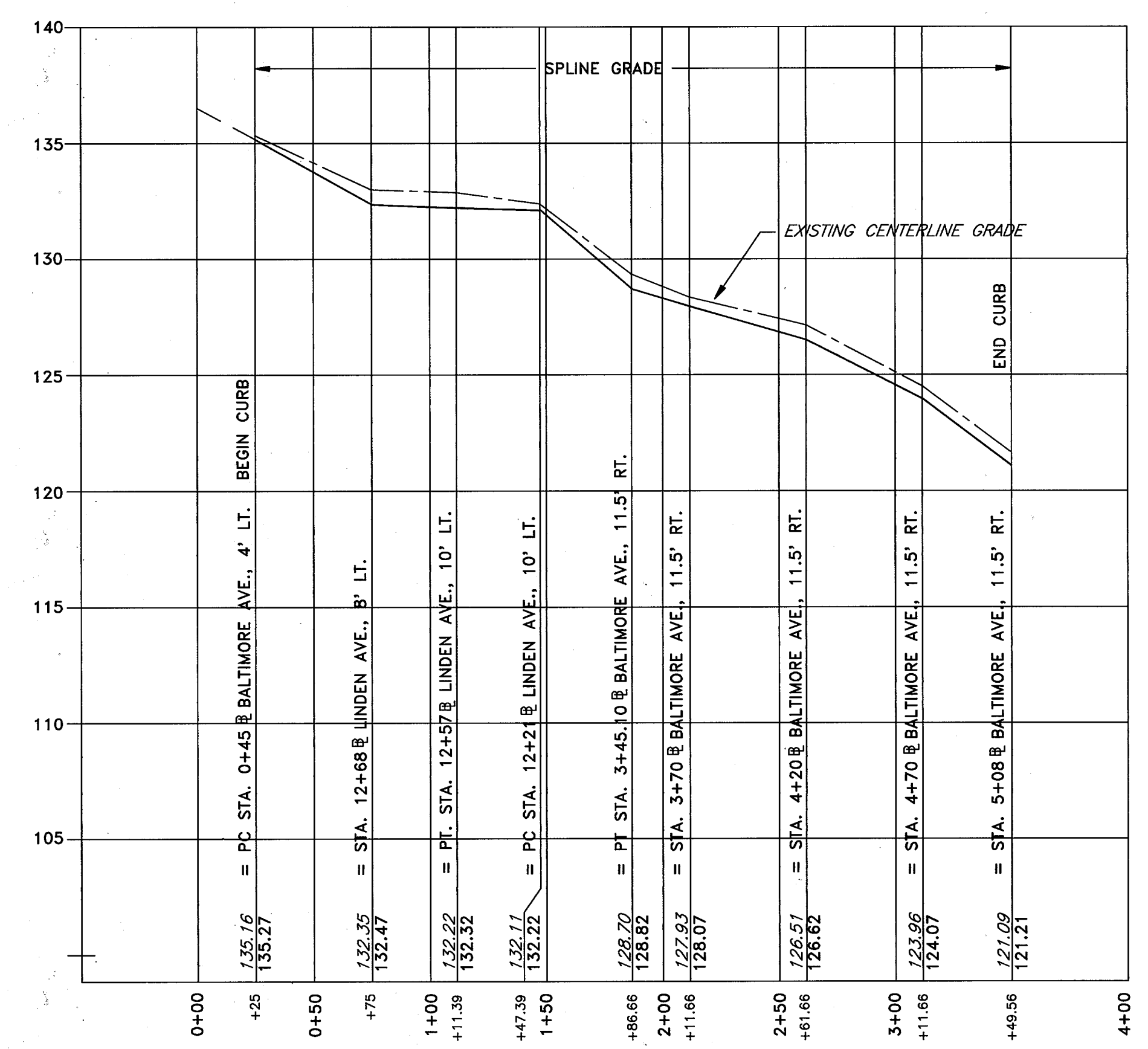
HOR: 1" = 50'  
VER: 1" = 5'

NOTE: ALL ELEVATIONS SHOWN ARE TO FLOWLINE ASSUMING A 1 1/2" OVERLAY BY OTHERS



PROFILE - FLOWLINE AT CURB OLD DORSEY ROAD RIGHT

HOR: 1" = 50'  
VER: 1" = 5'



PROFILE - FLOWLINE AT CURB BALTIMORE AVE. RT./LINDEN AVE. LT.

HOR: 1" = 50'  
VER: 1" = 5'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James M. ...*  
DIRECTOR OF PUBLIC WORKS - DATE

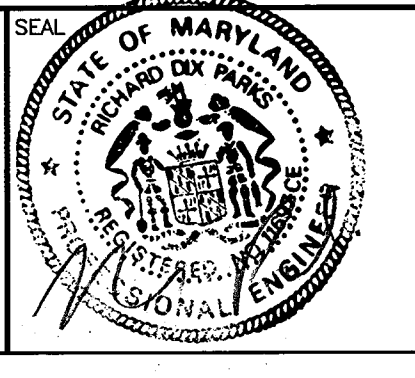
*Paul ...*  
CHIEF, BUREAU OF ENGINEERING - DATE

*Glenn ...*  
CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*...*  
CHIEF, BUREAU OF HIGHWAYS - DATE

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| DRN:  | A.C.M. |          |
| CHK:  | R.D.P. |          |
| DATE: | 01/93  |          |
| BY    | NO     | REVISION |
| DATE  |        |          |

LENNOX PARK  
A RESIDENTIAL COMMUNITY

600' SCALE MAP NO. 43 BLOCK NO. 6

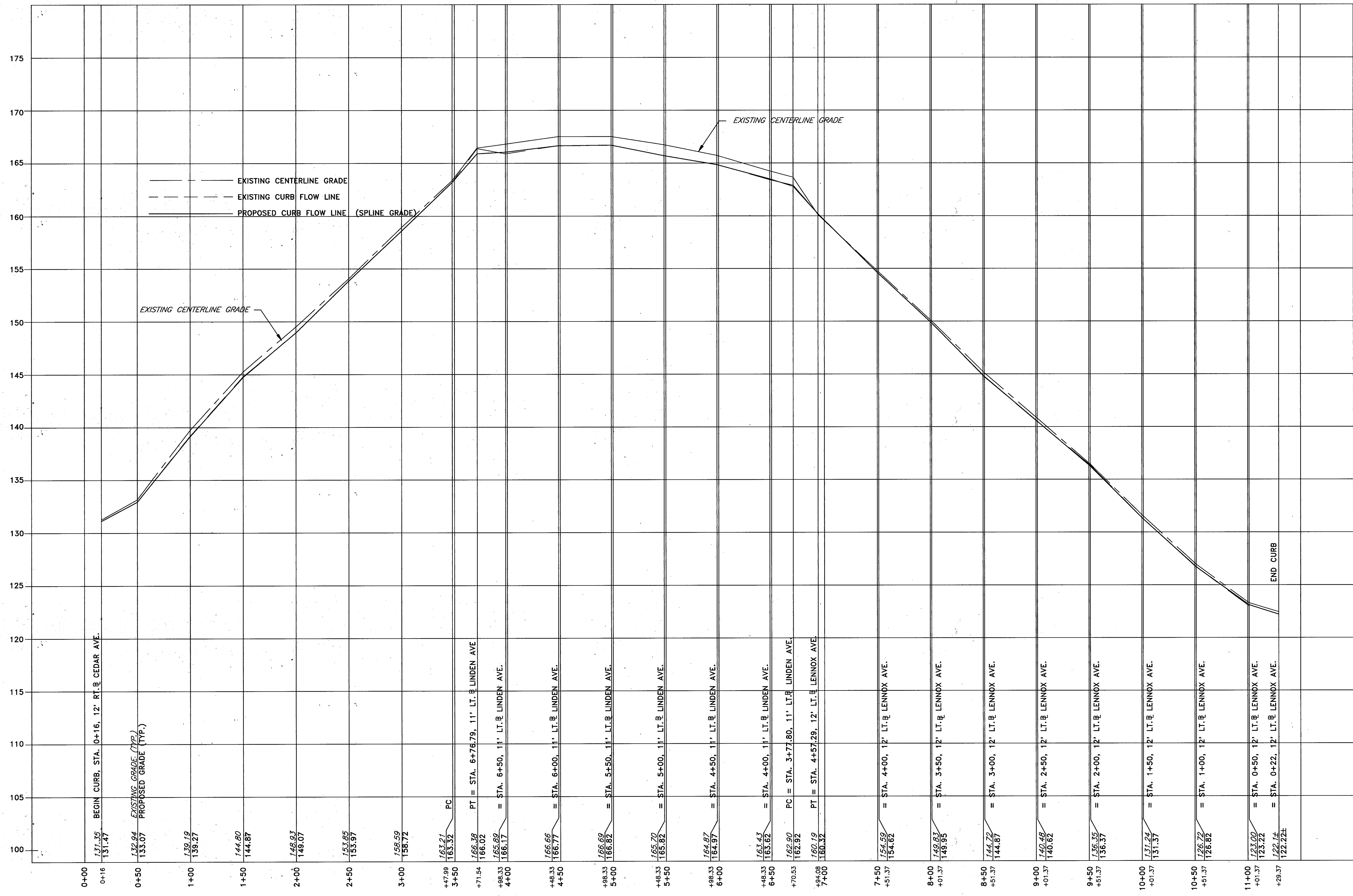
CAPITAL PROJECT NO. D-1100

LENNOX PARK  
STORM DRAIN IMPROVEMENTS  
CURB FLOW LINE PROFILE

SCALE  
H:1"=50', V:1"=5'

SHEET  
22 OF 24

DWG. NO.  
PR-7



PROFILE - FLOWLINE AT CURB CEDAR AVE. RIGHT TO LENNOX AVE. LEFT

HOR: 1" = 50'  
 VER: 1" = 5'

NOTE: ALL ELEVATIONS SHOWN ARE TO FLOWLINE ASSUMING 1 1/2" OVERLAY BY OTHERS

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*James R. Lewis* 6/5/96  
 DIRECTOR OF PUBLIC WORKS - DATE

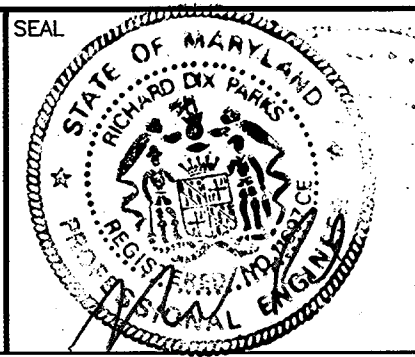
*Robert J. Brown* 6/5/96  
 CHIEF, BUREAU OF ENGINEERING - DATE

*Elizabeth Anderson-Cole* 6/4/96  
 CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE

*Robert M. Smith* 6-5-96  
 CHIEF, BUREAU OF HIGHWAYS - DATE

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 Hagerstown, Maryland 21740  
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| DES:  | R.D.P. |          |      |
| DRN:  | A.C.M. |          |      |
| CHK:  | R.D.P. |          |      |
| DATE: | 01/93  |          |      |
| BY:   | NO     | REVISION | DATE |

LENNOX PARK  
 A RESIDENTIAL COMMUNITY

600' SCALE MAP NO. 43 BLOCK NO. 6

CAPITAL PROJECT NO. D-1100

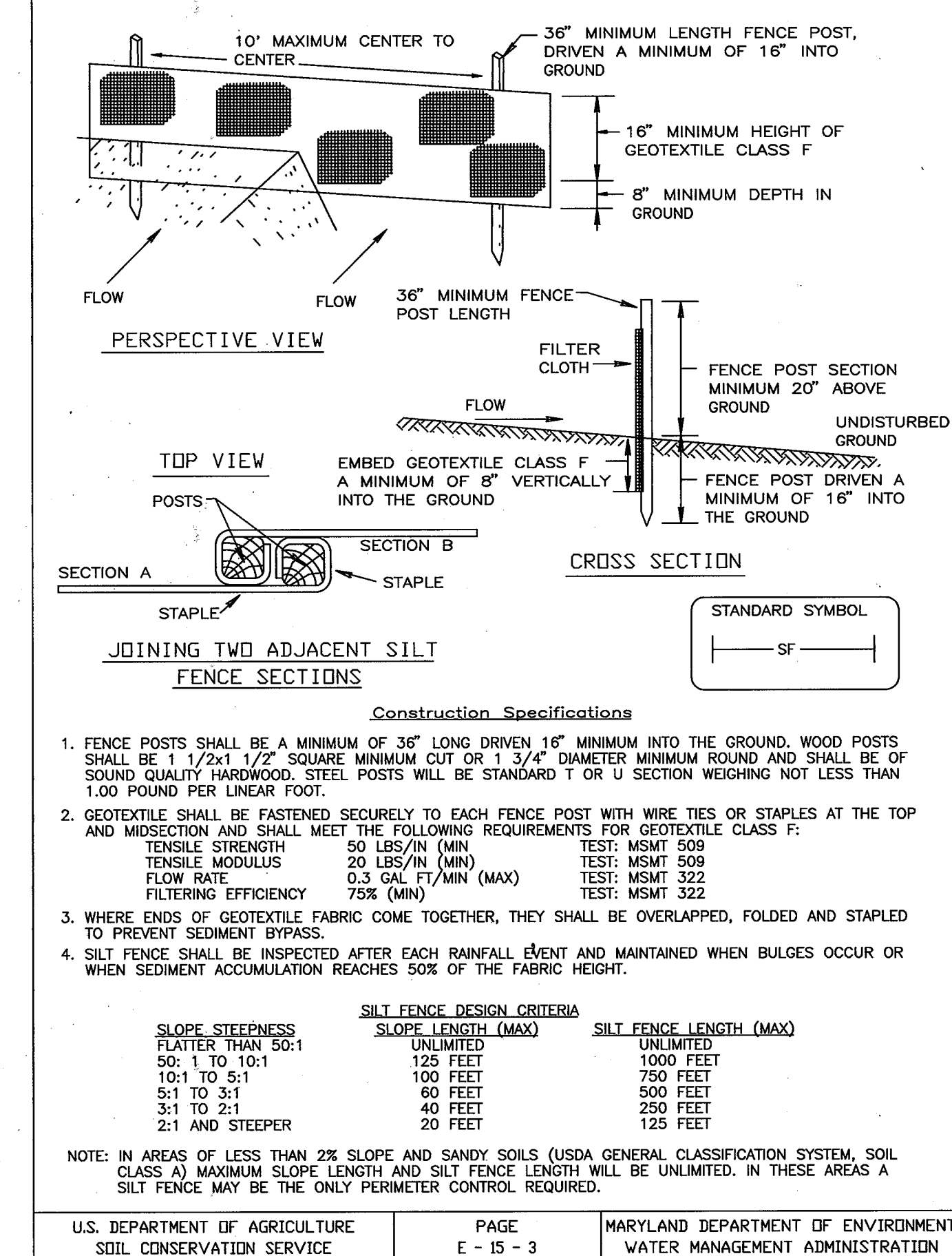
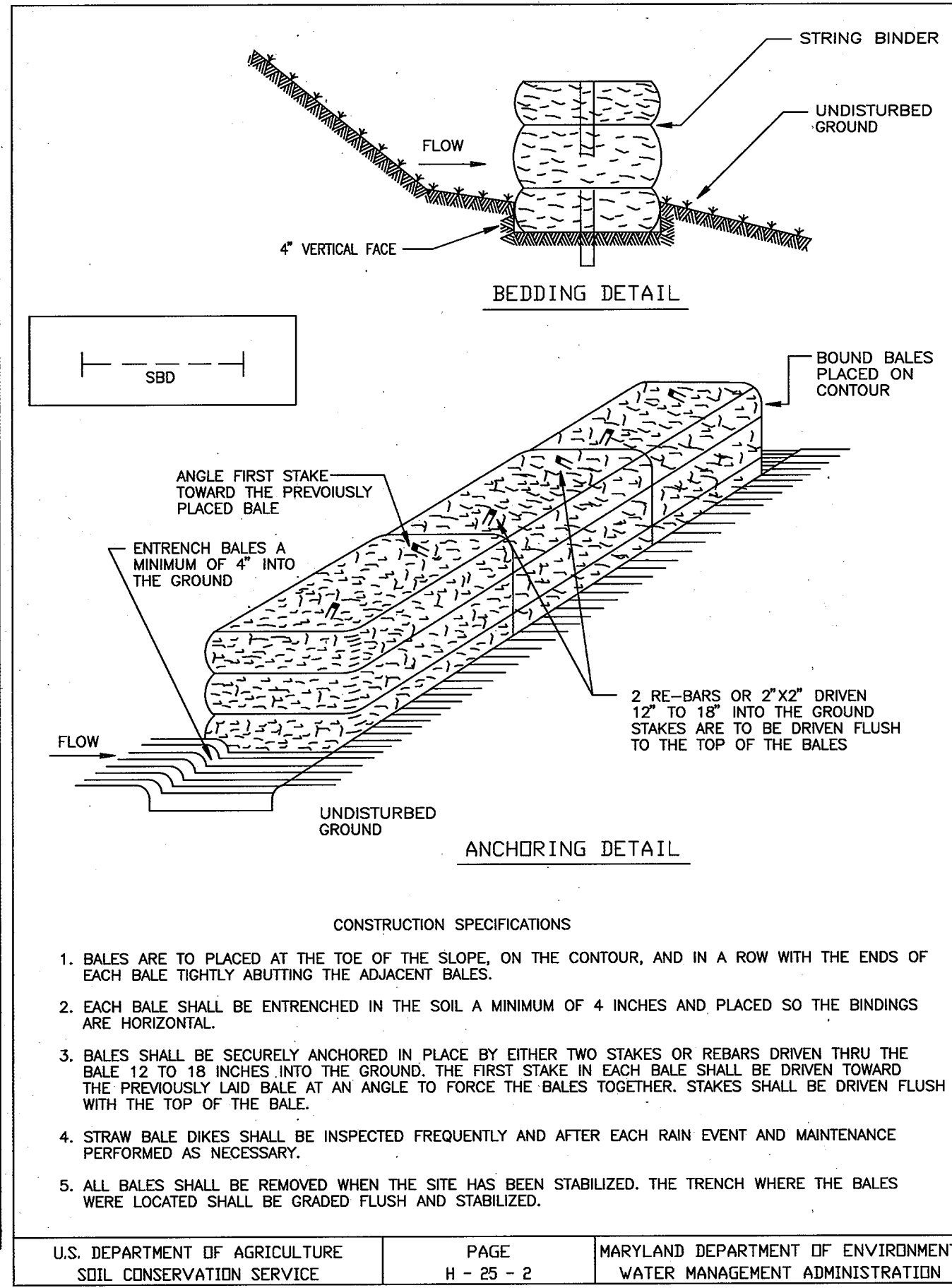
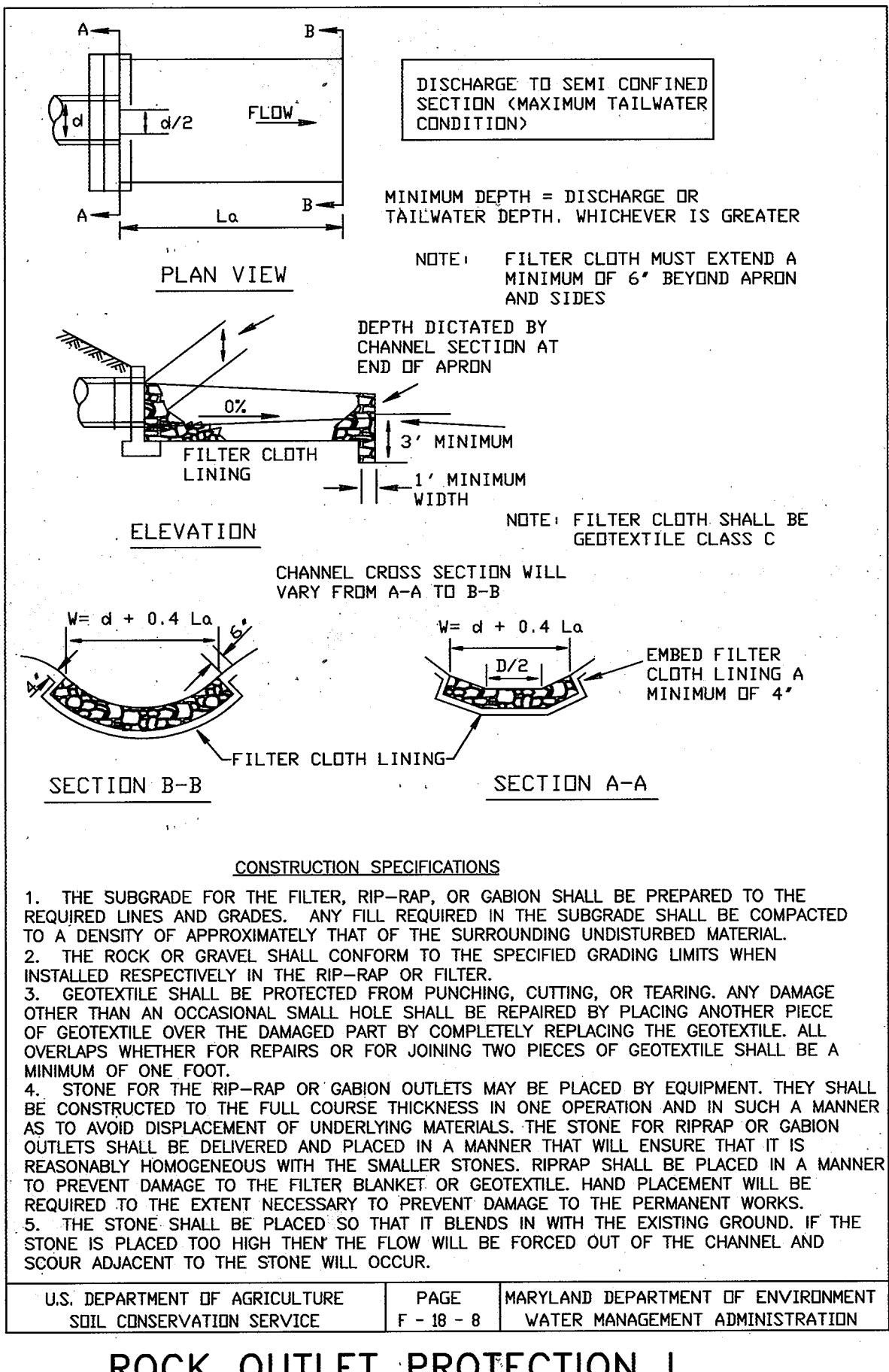
LENNOX PARK  
 STORM DRAIN IMPROVEMENTS  
 CURB FLOW LINE PROFILE

SCALE  
 H:1"=50', V:1"=5'

SHEET  
 23 OF 24

DWG. NO.  
 PR-8





**TEMPORARY SEEDING NOTES**

**SEEDBED PREPARATION:** LOOSEN UPPER 3 INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

**SOIL AMENDMENTS:** APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.).

**SEEDING:** FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2-1/2 LBS. PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (.07 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOIL.

**MULCHING:** APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL./1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 348 GALLON PER ACRE (8 GAL./1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

**PERMANENT SEEDING NOTES**

**SEEDBED PREPARATION:** LOOSEN UPPER 3 INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

**SOIL AMENDMENTS:** USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ.FT.).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIME STONE (92 LBS./1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

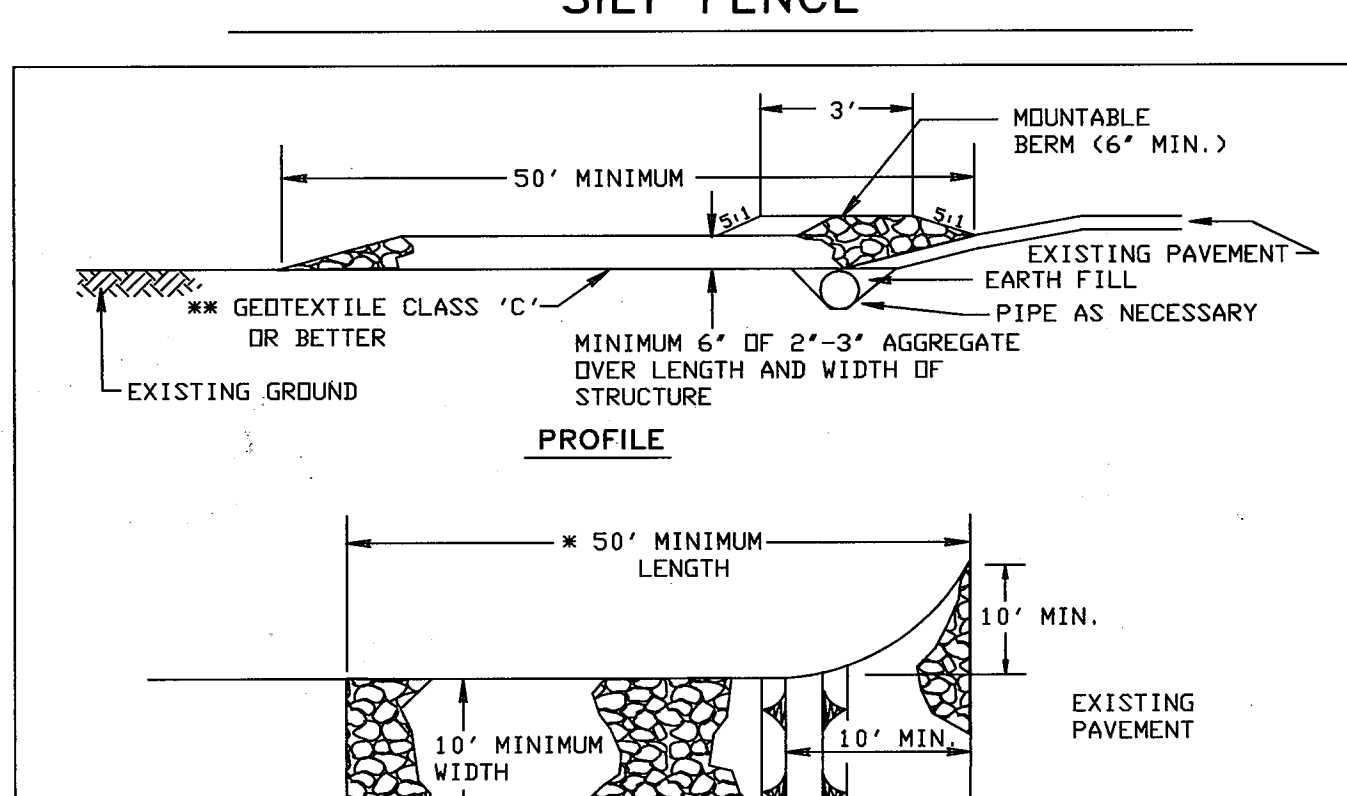
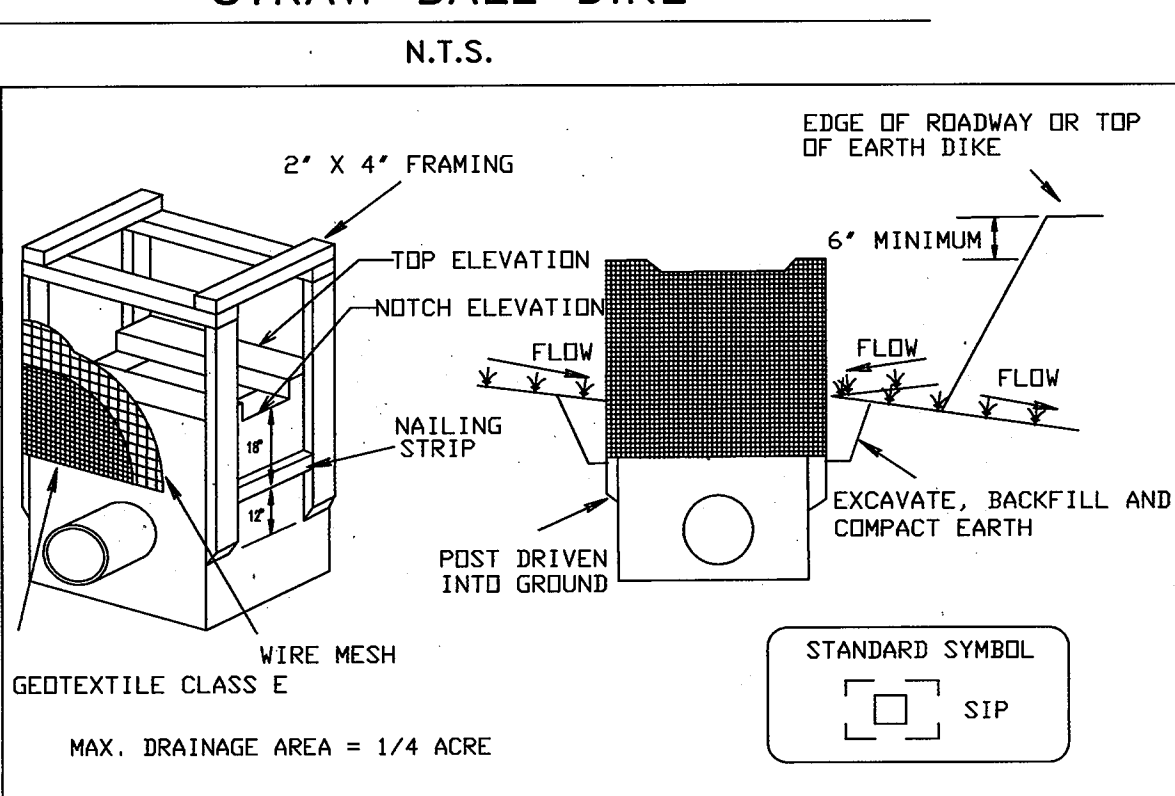
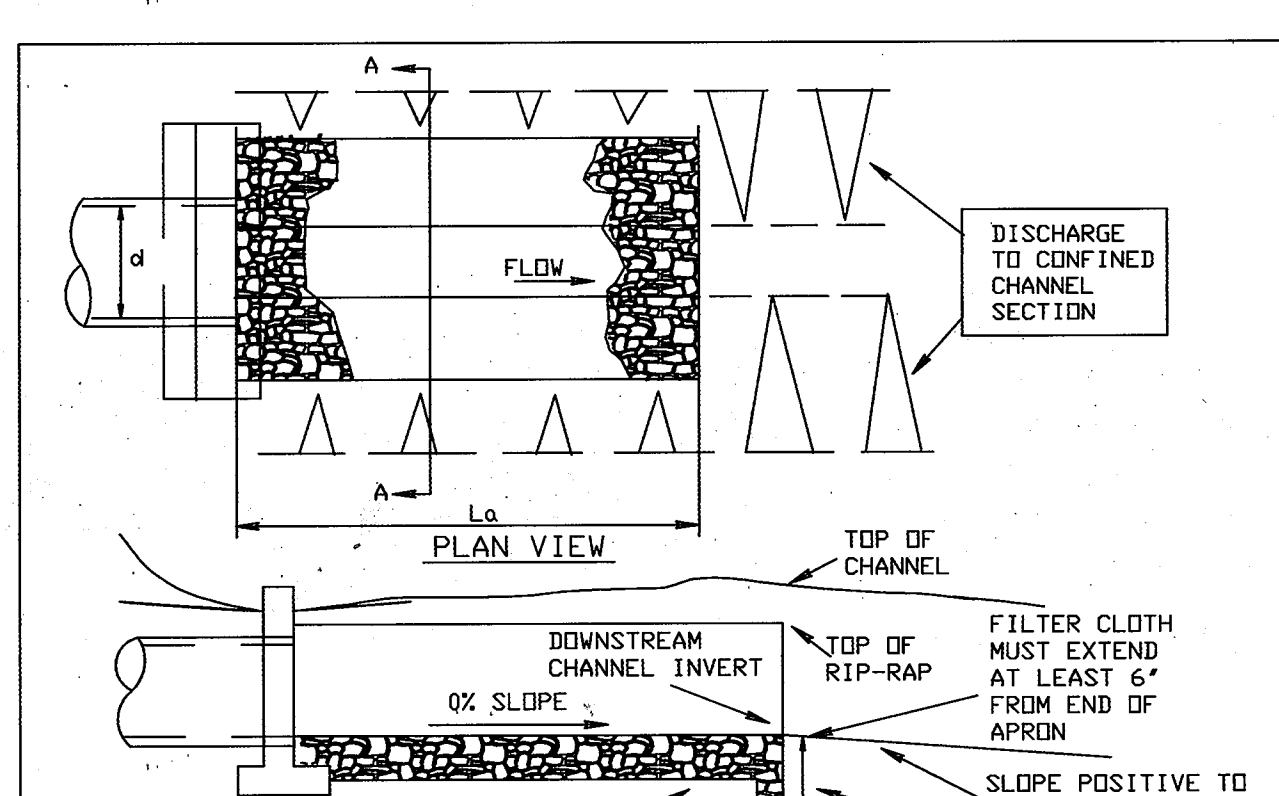
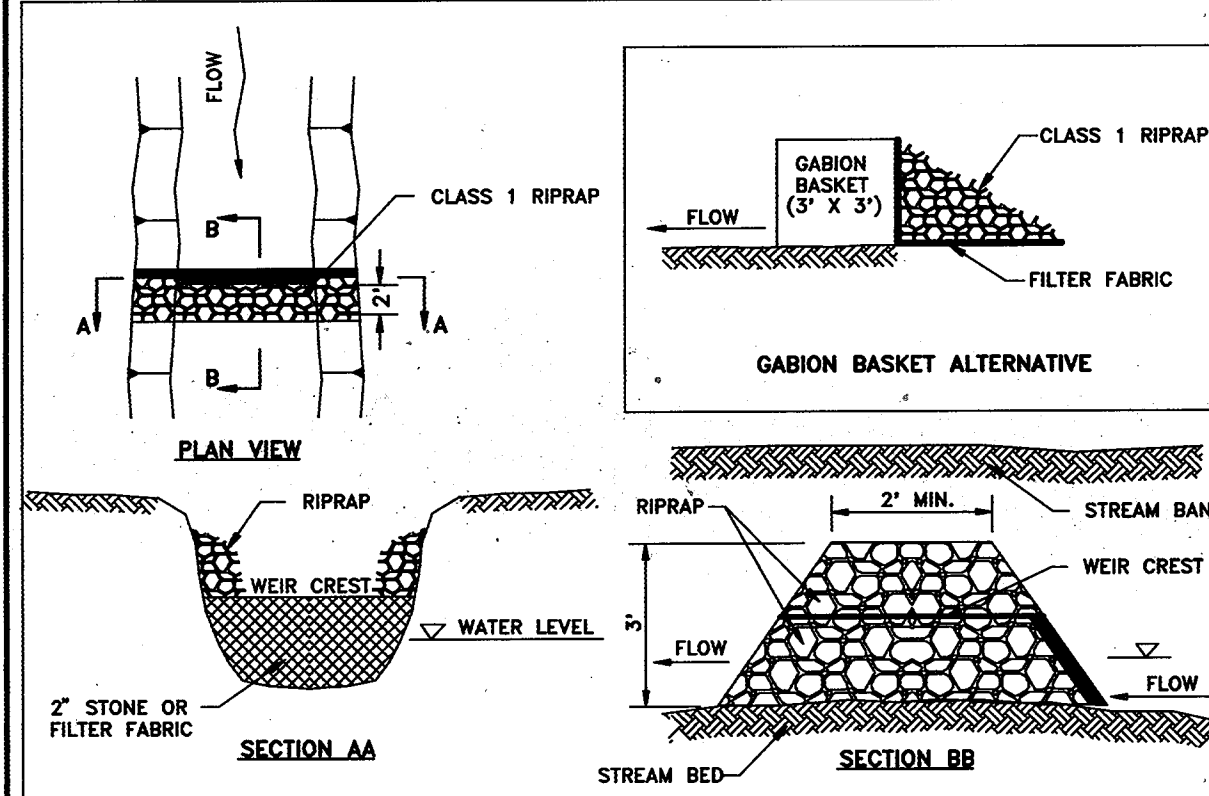
**SEEDING:** FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.5 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 19 LBS. PER ACRE OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY:

OPTION (1) - 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING.

OPTION (2) - SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

**MULCHING:** APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR WOOD CELLULOSE BINDERS.

**MAINTENANCE:** INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.



**SEDIMENT CONTROL NOTES**

- A MIN. OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD CO. OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MD. STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
  - 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND SLOPES GREATER THAN 3:1.
  - 14 DAYS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51), SOIL (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: 30 ACRES
  - AREA DISTURBED: 1.0 ACRES
  - AREA TO BE ROOFED OR PAVED: 0.2 ACRES
  - AREA TO BE VEGETATIVELY STABILIZED: 0.8 ACRES
  - TOTAL CUT: 2000 CUBIC YARDS
  - TOTAL FILL: 2000 CUBIC YARDS
  - OFFSITE WASTE/BORROW AREA LOCATION (BY CONTRACTOR)
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF THE DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 AC., APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

**SEQUENCE OF CONSTRUCTION**

- CONTRACTOR SHALL OBTAIN A GRADING PERMIT
- INSTALL SEDIMENT AND EROSION CONTROL DEVICES ACCORDING TO PLAN.
- CLEAR AND GRUB RIGHT-OF-WAY AHEAD OF CONSTRUCTION BY NO MORE THAN ONE PIPE LENGTH.
- INSTALL SILT FENCE DAILY ALONG THE LOW SIDE OF THE LIMITS OF CONSTRUCTION. THIS SILT FENCE SHALL BE REMOVED AS CONSTRUCTION PROCEEDS UPSTREAM WHEN THE DISTURBED AREA HAS BEEN STABILIZED AND WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. FILL MUST BE PLACED ON THE UPLAND SIDE OF THE TRENCH.
- COMPLETE CONSTRUCTION OF STORM SEWER IMPROVEMENTS, BEGINNING AT LOW END OF SYSTEM, LIMITING OPEN TRENCH TO ONE PIPE LENGTH AT A TIME.
- COMPLETE CONSTRUCTION OF ROAD IMPROVEMENTS, INCLUDING PAVEMENT RECONSTRUCTION AND NEW CURB.
- RESTALL ALL DISTURBED AREAS IN ACCORDANCE WITH PERM. SEEDING NOTES.
- UPON APPROVAL FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES.

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

Signature: J.G. Wadford, Jr. DATE: 6/5/93

U.S. NATURAL RESOURCES CONSERVATION SERVICE

**THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY CONSERVATION DISTRICT**

Signature: [Signature] DATE: 6/5/96

APPROVED: [Signature] DATE: 6/5/96

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-18-9 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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

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

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS - DATE: 6/5/96

CHIEF, BUREAU OF ENGINEERING - DATE: 6/5/96

CHIEF, ROADS, BRIDGES, & STORM DRAINAGE DIV. - DATE: 6/5/96

CHIEF, BUREAU OF HIGHWAYS - DATE: 6/5/96

**acer**  
Acer Engineers & Consultants, Inc.

201 South Cleveland Avenue, Suite 304  
Hagerstown, Maryland 21740  
Tel 301-791-1100

DES: R.D.P.

DRN: A.C.M.

CHK: R.D.P.

DATE: 01/93

BY: NO REVISION

LENNOX PARK  
A RESIDENTIAL COMMUNITY

600' SCALE MAP NO. 43 BLOCK NO. 6

CAPITAL PROJECT NO. D-1100

LENNOX PARK  
STORM DRAINAGE IMPROVEMENTS

SCALE NONE

SHEET 24 OF 24

SEDIMENT AND EROSION CONTROL NOTES AND DETAILS DWG. NO. SC-1