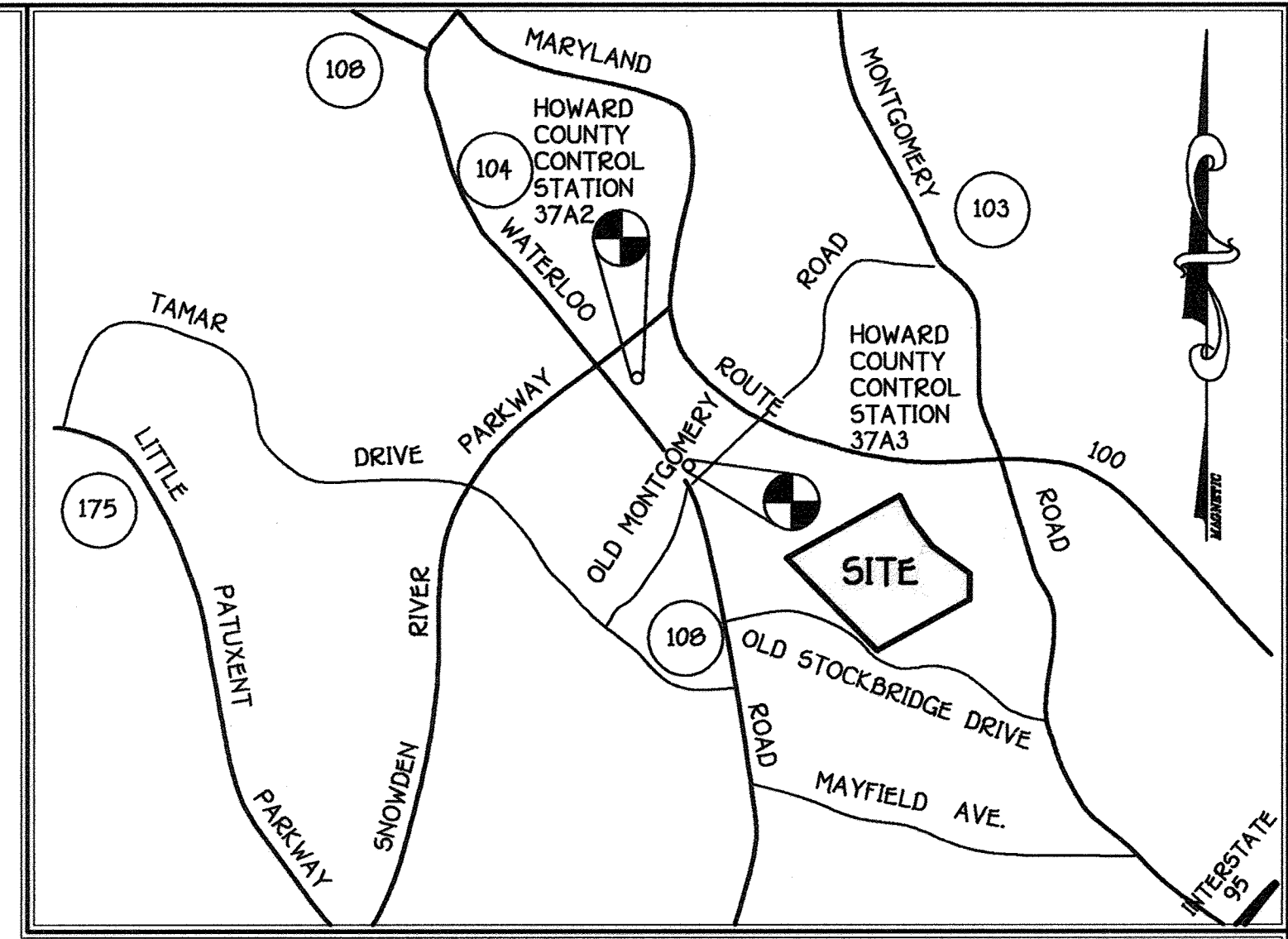


SHEET INDEX	
SHEET NUMBER	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	SITE DEVELOPMENT PLAN
4	SITE DEVELOPMENT PLAN
5	SITE DETAILS
6	SITE DETAILS
7	SITE DEVELOPMENT PLAN
8	DETAIL SHEET AND BORING LOGS
9	HANDICAPPED PLAN
10	ACCESS ROAD PROFILE
11	DIAPHRAGM AREA MAP
12	STORM DRAIN PROFILES
13	STORM DRAIN PROFILES
14	8" PRIVATE SEWER MAIN PROFILES
15	FINAL FOREST CONSERVATION PLAN
16	FINAL FOREST CONSERVATION PLAN
17	FINAL FOREST CONSERVATION PLAN
18	FINAL FOREST CONSERVATION PLAN
19	SEDIMENT AND EROSION CONTROL PLAN
20	SEDIMENT AND EROSION CONTROL PLAN
21	SEDIMENT AND EROSION CONTROL PLAN
22	LANDSCAPE PLAN
23	LANDSCAPE PLAN
24	LANDSCAPE PLAN
25	LANDSCAPE PLAN
26	STORMWATER MANAGEMENT NOTES AND DETAILS - BWP FACILITY NO. 1
27	STORMWATER MANAGEMENT NOTES AND DETAILS - BWP FACILITY NO. 1
28	BRIDGE DETAIL AND ROAD CROSS SECTION AT EX. GAS MAIN
29	SEDIMENT CONTROL NOTES AND DETAILS
30	SEDIMENT CONTROL NOTES AND DETAILS
31	GENERAL PLAN AND ELEVATION
32	GEOMETRIC LAYOUT
33	ABUTMENT B
34	ABUTMENT B
35	PILE PLAN
36	ABUTMENT DETAILS - I
37	ABUTMENT DETAILS - II
38	ABUTMENT AND WINGWALL CORNER REINFORCEMENT DETAILS
39	WINGWALL DETAILS
40	END POST DETAILS - I
41	END POST DETAILS - II
42	TYPICAL SECTION
43	FRAMING PLAN
44	CORNER DETAILS
45	SLOPE PROTECTION PLAN
46	FINISH ROADWAY ELEVATIONS
47	STANDARD DETAILS
48	STANDARD DETAILS
49	STANDARD DETAILS
50	STANDARD DETAILS
51	STANDARD DETAILS
52	STANDARD DETAILS
53	STANDARD DETAILS
54	STANDARD DETAILS
55	STANDARD DETAILS
56	WALKWAY PLAN TO THE WEXLEY AT 100

# SITE DEVELOPMENT PLAN

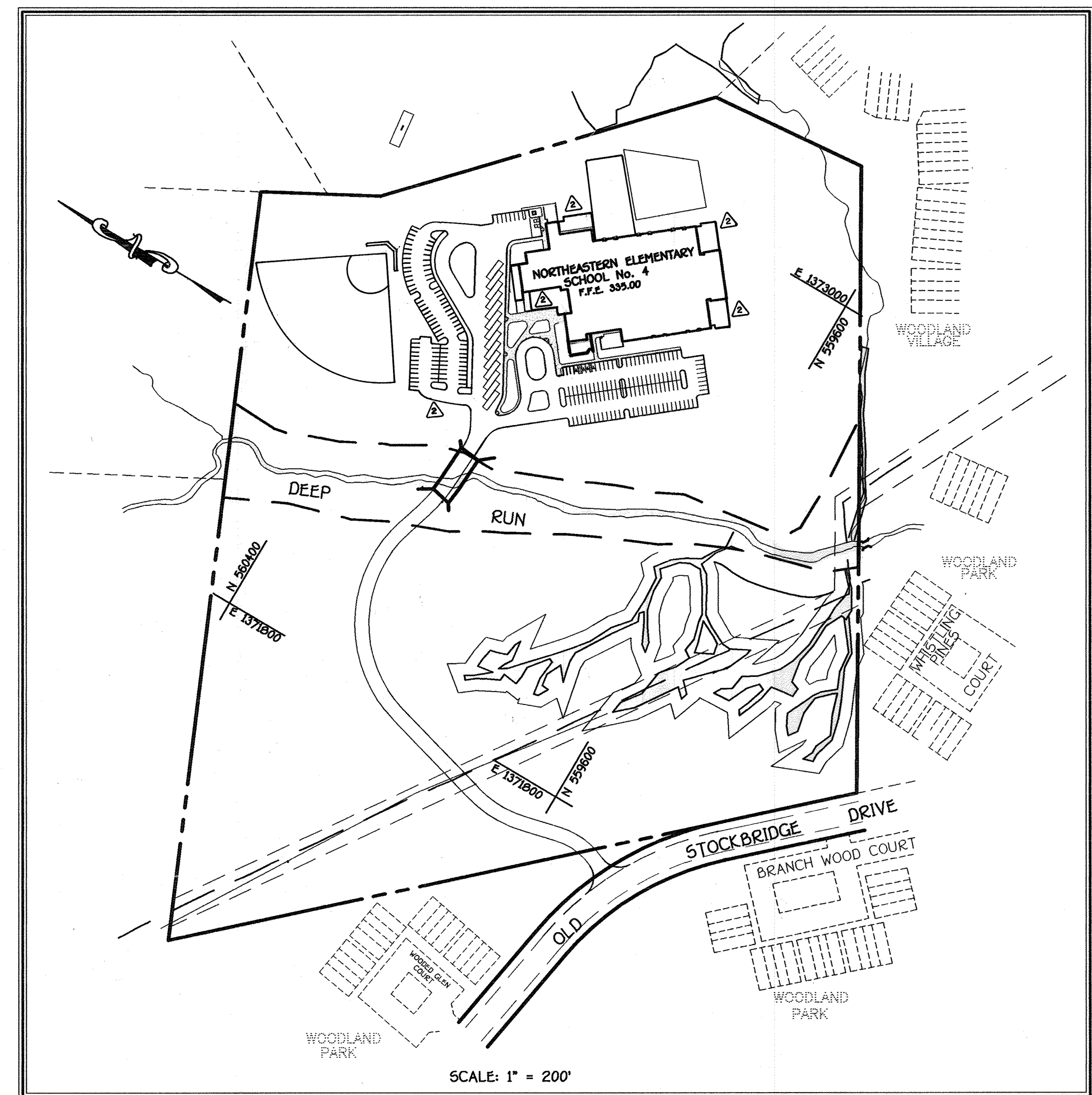
## NORTHEASTERN ELEMENTARY SCHOOL NO. 4

BELLOWS SPRING ELEMENTARY  
TAX MAP No.: 37      PARCEL No.: 670  
FIRST ELECTION DISTRICT      HOWARD COUNTY, MARYLAND



### BEST MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS AND 100 YEAR FLOODPLAINS

- No excess fill construction material or debris shall be stockpiled or stored in non-tidal wetlands, non-tidal wetland buffers, waterways, or the 100 year floodplain.
- Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of non-tidal wetland buffers, waterways or the 100 year floodplain.
- Do not use the excavated material as backfill if it contains waste metal products, unsightly debris, toxic material or any other deleterious substance. If additional backfill is required use clean material free of waste products, unsightly debris, toxic material or any other deleterious substance.
- Place heavy equipment on mats or suitably material to operate the equipment to prevent damage to non-tidal wetland buffers, waterways or 100 year floodplain.
- Replenish and maintain any servicable structure or fill so there is no permanent loss of non-tidal wetlands, non-tidal wetland buffers, waterways or permanent modification of the 100 year floodplain in excess of that lost under the original authorized structure or fill.
- Rectify any non-tidal wetlands, wetland buffers, waterways or 100 year floodplain temporarily impacted by any construction.
- All stabilization in the non-tidal wetland and non-tidal wetland buffer shall consist of the following species: Annual Rye grass (*Lolium Multiflorum*), Millet (*Seteria Italica*), Brome (*Bromus sp.*), Oats (*Avena sp.*), and/or Rye (*Cynoda ciliaris*). These species will allow for stabilization of the site while also allowing for the voluntary revegetation of natural wetland species. Other non-persistent vegetation may be acceptable, but must be approved by the Non-tidal Wetlands and Waterways Division. Kentucky 31 fescue shall not be utilized in wetland or wetland buffers areas. The area should be seeded and mulched to reduce erosion after construction activities have been completed.
- After installation has been completed, make post-construction grades and elevations the same as the original grades and elevations in temporarily impacted areas.
- To protect aquatic species, in-stream work is prohibited as determined by the classification of the stream.
- Use 1 water. In-stream work shall not be conducted during the period of March 1 through June 15, inclusive during any year.
- Siltwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into waterway.
- Culverts shall be constructed and any rip-rap placed so as not to obstruct the movement of aquatic species, unless the purpose of the activity is to impound water.



### LEGEND

Description	Symbol
Existing Contour	---322---
Proposed Contour	---322---
Existing Curb Line	---32.25---
Proposed Curb Line & Flow Line Elev.	---32.50---
Existing water Line	---32.50---
Proposed water Line	---32.50---
Proposed Fire Hydrant	Ex. MH 7149
Existing Sewer Line	---
Proposed Sewer Line	---
Existing Storm Drain Line	---
Proposed Storm Drain Line	---
Proposed Sidewalk	---
Existing Tree & Tree Line	---
Proposed Tree Line	---
Existing Street Light	---
Proposed Street Light	---
Number of Parking Spaces	---
Fence Line	---
100 Yr. Floodplain	---
Stream Buffer	---
Wetland Area	---
Wetland Buffer	---
Limit of Grading Disturbance (L.O.D.)	---

### General Notes

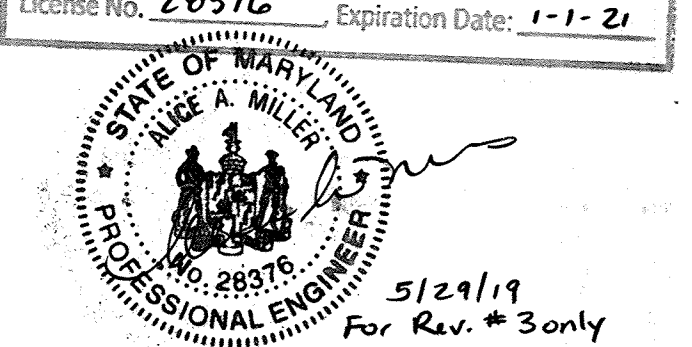
- All construction shall be accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.
- The contractor shall notify the Bureau of Engineering/Construction Inspection Division at 410-313-1800 at least five working days prior to start of work.
- The contractor shall notify Miss Utility at 1-800-257-7777 at least 48 hours prior to any digging and excavation work.
- Project Background: Location: Tax Map 37, Grid 8/9, Parcel 670. Zoning: This project is zoned R-5C per the 10/18/93 comprehensive zoning plan. Elevation District: First. Section/Area: 105. Site Area: 46.412 Ac.
- Traffic control devices, markings and signing shall be in accordance with the latest edition of the manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to placement of any asphalt.
- All plan dimensions are to the face of curb or face of building unless otherwise noted. Dimensions are measured perpendicular or parallel between items unless otherwise noted.
- Existing topography and features were derived from survey by Fisher, Collins and Carter Inc. and Maryland Aerial Surveys, Inc. Dated April 3, 2001.
- Coordinates are based on NAD 83 Maryland Coordinates System as projected by Howard County Geodetic Control Stations. 37A2 N 562120.845 E 1369933.224. 37A3 N 561302.798 E 1369933.224.
- Public water and sewer is to be utilized for this project. Contract #44-007-D and # 544-5 10. Stormwater management is provided by on-site private facilities that are privately owned and maintained.
- All on-site storm drains under this site development plan are private.
- The existing utilities shown hereon were derived from available public records. The contractor must dig test pits by hand at all utility crossings and connection points to verify the exact location.
- All proposed ramps shall be in accordance with current A.D.A. Standards. Maximum sidewalk cross slope shall be two percent. Provide a 10'-0" five foot by five foot level landing (slope 2% at the top and bottom of all ramps and building entrances and exits).
- All driveways and parking to be owned and maintained by the Howard County Public School System.
- Any damage to County and or State owned right-of-way to be corrected at the contractor's expense.
- Trench bedding for storm drains structures shall be in accordance with Howard County Standard (2.0) Class C bedding unless otherwise noted.
- Gutter pan of curbs shall be pitched to conform to the adjacent drainage patterns of the adjoining paving for vehicular use. See detail 6/3.
- All curb fillets are 5' radius unless noted otherwise. Curb spot elevations under curb line are at the flow line unless noted otherwise.
- For details of building profile, parking, road section, handicap, curb and gutter see sheets 5 and 6.
- There are no known grave sites or cemeteries on this site.
- Other topics related to this site: Traffic Study prepared by The Traffic Group Dated July 5, 2001. Forest Stand Delineation Prepared by Eco-Science Professionals Inc. Dated October 8, 2001. Wetland Delineation prepared by Eco-Science Professionals Inc. Dated October 10, 2001. 100 year floodplain based on the Deep Run Watershed Study Capital Project No. 0-1094 Dated January 1997.
- Soils Analysis prepared by Engineering Consulting Services, LTD. Dated August 23, 2001.
- All outside lighting shall comply with Zoning Regulations Section 134 which requires lights to be installed to direct/reflect light downwards and inward on the site and away from all public streets and residential areas.
- The water meter will be installed inside the building. The building shall be equipped with an automatic fire prevention sprinkler system.
- This plan is subject to water petition WP-02-36 approved on December 28, 2001 to allow an access road and bridge crossing within the 100 year flood plain, stream and stream buffer Section 18.05 (a)(2).
- No work may be done on flood plain land except that work which is required or authorized by the Department of Planning and Zoning upon the advice of the Department of Public Works and the Department of Recreation and Parks, the Soil Conservation District, or Maryland Department of the Environment. Section 18.06 (a)(2)(i).
- Grading, removal of vegetative cover shall not be permitted within 75 feet of a perennial stream in Residential Zoning District.
- No clearing, grading or construction is permitted within wetlands, stream or their required buffers, 100 year flood plain and stream conservation easement areas, except as approved by DP in accordance with WP-02-36.
- The project complies with the requirements of section 18.1200 of the Howard County Code for forest conservation with a break-even retention obligation of 0.27 Acreal which has been met by reforestation of 10.52 acres of forest conservation easement area of Part of Forest Conservation Easement, Part No. 152491-152491 on 3-1-02.
- Public water and sewer to be utilized.
- Area Tabulation: Total project area: 46.412 Ac.; Area of this plan submission: 46.412 ac. is the limit of submission and grading disturbance for the construction of the elementary school. However, the entire site is submitted for forest conservation.
- Impervious Coverage: Building 89025 s.f. (2.04 ac.) or 44% of gross site area; Paved Areas: parking, driveways, play courts: 116,906 s.f. (4.518 ac.).
- Open Space Data: A. Open space required: n/a; B. Open space provided: n/a.
- Parking Space Data: A. Number of parking space required by zoning regulations: n/a; B. Total number of parking spaces provided on site: 210 (including handicap parking) per the Public School Systems Parking Requirements; C. Number of Handicapped parking spaces provided: 7.

### B.G.E. RIGHT-OF-WAY GUIDELINES (B.G. & E. Job No. 5E01-011)

- Typical Terms - Conditions and Limitations Governing Construction on Property and Right-of-way of B.G.E.
- Access to and from the grantor's facilities must be maintained at all times. If existing access to and along the grantor's fee simple and/or easement right of way or access to the grantor's facilities is denied due to the grantor's construction, the grantee will provide temporary access during construction and permanent access thereafter or reimburse the grantor for access obtained by the grantor after approval by the grantor of said cost and where applicable, the approval of other governmental agencies, where any access road is relocated and/or disturbed, the road shall be thoroughly compacted and restored to a condition equal to or better than its present condition.
  - Hard excavation shall be required when working within three feet of any of Grantor's underground facilities.
  - No change in grade is to be made that will reduce the cover over the underground facilities of the Grantor to less than three feet or increase it to more than five feet without requiring rearrangement of the said facilities or as otherwise approved by the Grantor.
  - Clearance between the Grantor's underground facilities shall be maintained in conformity with accepted good engineering practice to avoid damage during construction and provide clearance for future maintenance. A minimum horizontal clearance of five (5) feet and a vertical clearance of twelve (12) inches must be maintained with underground facilities, unless greater clearances or special protective measures are stipulated.
  - No blasting will be permitted within the Grantor's right of way and/or within forty feet of the Grantor's facilities without prior approval and under arrangements satisfactory to the Grantor. The Grantor shall be fully reimbursed in the event any damages occur as the result of such operations. The Grantor must be notified as provided for in Section 13 at least three working days in advance of any blasting in the vicinity of the Grantor's right of way in order that it may arrange to have a representative on the job site.
  - Any undesirable sediment, erosion and/or drainage conditions or ponding of water on the Grantor's fee simple and/or easement right-of-way caused by acts of the Grantor, its agents and employees which will adversely affect the Grantor's right-of-way or facilities shall be the responsibility of the Grantor to correct.
  - Five (5) working days notice must be given before the start of the work of construction and of any future maintenance which will affect the Grantor's fee simple or easement right-of-way or the Grantor's facilities by telephoning 410-597-6953 between the hours of 7:00 am and 3:30 pm, so that arrangements can be made to send Grantor's representative to the site of such work when the Grantor's Agents, servants, employees and/or contractors call for this notification please be sure to refer to this job number 5E 01 011.
  - No heavy equipment is to be moved over the Grantor's underground facilities without its approval. See temporary crossing detail on sheet.
  - The contractor shall notify Miss Utility at 1-800-257-7777 at least 48 hours before any digging and excavation in the BGE right of way.

U.S. EQUIVALENT COORDINATE TABLE		
POINT	NORTH	EAST
100	560059.7855	1373239.0546
101	559721.9854	1373271.0130
104	559057.6413	1372129.8604
116	56048.9455	1371122.5362
200	560785.1461	1372578.1235
751	560562.7576	1372698.7147

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 20376      Expiration Date: 1-1-21



**GENERAL NOTE:**  
The Building Permit for the new building addition must be applied for with the Department of Inspections, Licenses and Permits within one year from the approval date of the red line revisions

NO	REVISIONS	DATE
3	REVISED BY SHEET ADDITION TO DOCUMENT WALKWAY ADDITION TO THE WEXLEY AT 100	3-28-19
2	Added Building Additions and Parking Lot	12-1-00
1	Added building addition	10-19-07

### SITE ANALYSIS DATA

- General Site Data: A. Present Zoning: R-5C; B. Proposed use of site or structure: institutional (public school); C. Public water and sewer to be utilized.
- Area Tabulation: Total project area: 46.412 Ac.; Area of this plan submission: 46.412 ac. is the limit of submission and grading disturbance for the construction of the elementary school. However, the entire site is submitted for forest conservation.
- Impervious Coverage: Building 89025 s.f. (2.04 ac.) or 44% of gross site area; Paved Areas: parking, driveways, play courts: 116,906 s.f. (4.518 ac.).
- Open Space Data: A. Open space required: n/a; B. Open space provided: n/a.
- Parking Space Data: A. Number of parking space required by zoning regulations: n/a; B. Total number of parking spaces provided on site: 210 (including handicap parking) per the Public School Systems Parking Requirements; C. Number of Handicapped parking spaces provided: 7.

### ENGINEER'S CERTIFICATE

I hereby certify that this Plan for Erosion and Sediment Control Represents a Practical and Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.  
Signature of Engineer: *John K. Roberts*      Date: 2/27/02  
Reviewed For Howard County Soil Conservation District And Meets Technical Requirements: *John K. Roberts*      Date: 2/27/02  
U.S.D.A. - National Resources Conservation Service

### DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."  
Signature of Developer: *John K. Roberts*      Date: 2/25/02  
Approved This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District: *John K. Roberts*      Date: 2/27/02

### APPROVED DEPARTMENT OF PLANNING AND ZONING

Director: *Angela Butler*      Date: 3/8/02  
Chief, Division of Land Development: *Cindy Amadio*      Date: 3/7/02  
Chief, Development Engineering Division: *Thomas Clark*      Date: 3/5/02

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young

THOMAS CLARK ASSOCIATES  
2661 Riva Road, Suite 120  
Annapolis Maryland 21401  
301-261-8700

### Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4	---	---
DEED REF.	BLOCK NO.	ZONE
2387/562	8.9	R-5C
WATER CODE	ELEC. DIST.	CENSUS TR.
D 05	37	6011
SEWER CODE	2650000	

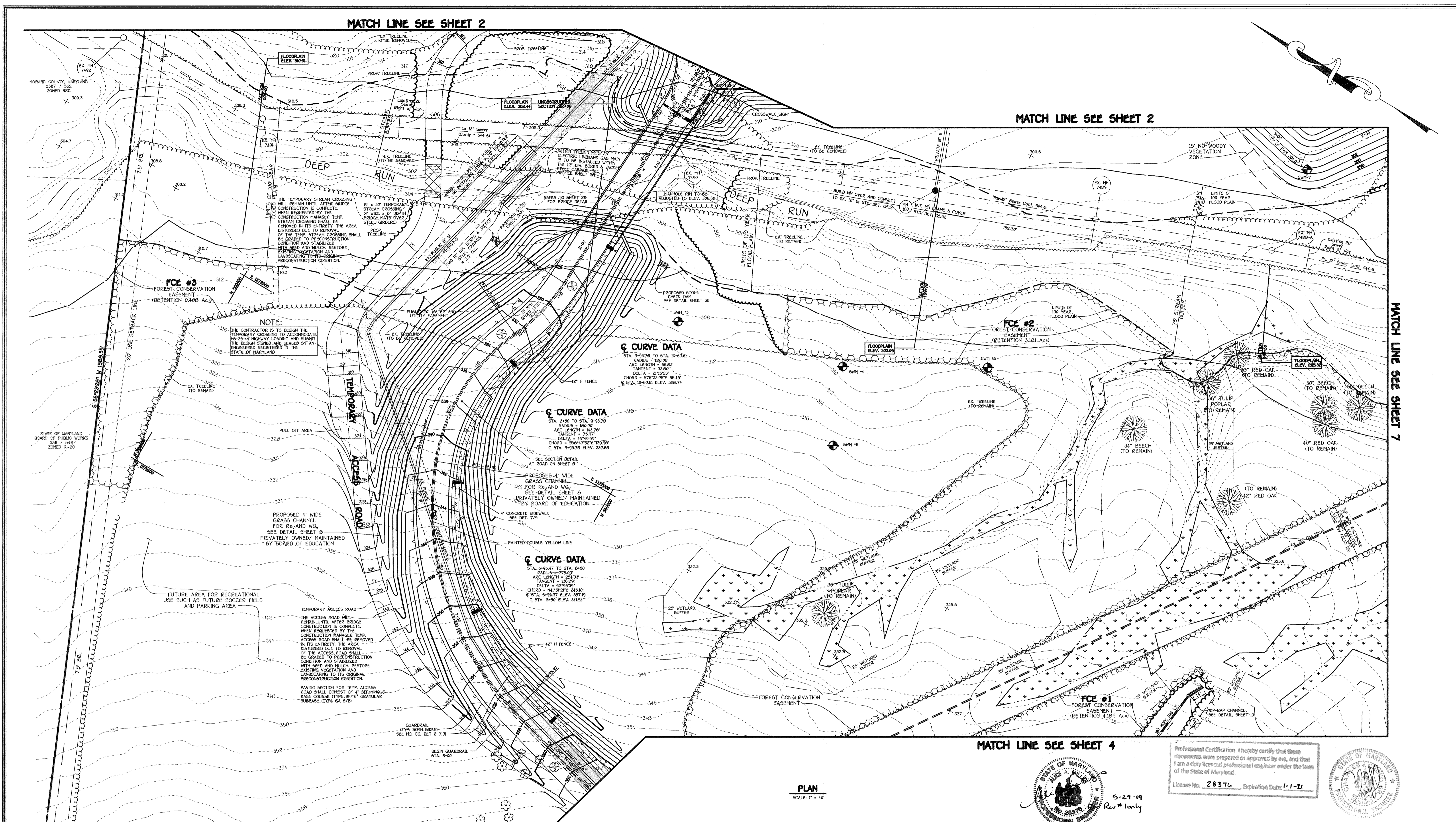
### TITLE SHEET

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**  
TAX MAP No.: 37      PARCEL No.: 670  
FIRST ELECTION DISTRICT      HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN      DATE: 15 OCTOBER 2001  
BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
"BID & CONSTRUCTION 14 JANUARY 02"  
SHEET 1 OF 56









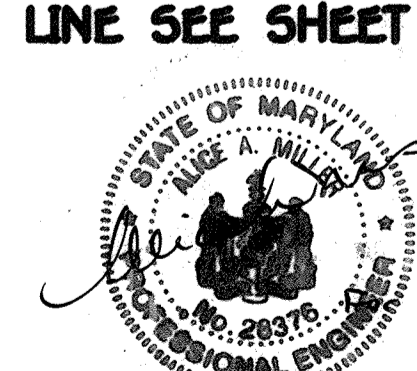
**NOTE:**  
 THE CONTRACTOR IS TO DESIGN THE TEMPORARY CROSSING TO ACCOMMODATE HS-25+44 HIGHWAY LOADING ANYWAY. THE DESIGN SHALL BE SEIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF MARYLAND.

**ε CURVE DATA**  
 STA. 9+27.0 TO STA. 10+60.0  
 RADIUS = 180.0'  
 ARC LENGTH = 66.83'  
 TANGENT = 33.00'  
 DELTA = 27°10'23"  
 CHORD = 276.97'  
 @ STA. 10+60.0 ELEV. 329.74

**ε CURVE DATA**  
 STA. 8+50 TO STA. 9+43.76  
 RADIUS = 180.0'  
 ARC LENGTH = 143.78'  
 TANGENT = 75.57'  
 DELTA = 45°45'50"  
 CHORD = 267.97'  
 @ STA. 9+43.76 ELEV. 332.60

**ε CURVE DATA**  
 STA. 5+95.97 TO STA. 8+50  
 RADIUS = 279.00'  
 ARC LENGTH = 294.03'  
 TANGENT = 136.99'  
 DELTA = 92°52'39"  
 CHORD = 511.52'  
 @ STA. 8+50 ELEV. 341.51

**PLAN**  
 SCALE: 1" = 40'



Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 28376 Expiration Date: 5-29-19



MATCH LINE SEE SHEET 4

MATCH LINE SEE SHEET 4

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 18772 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-2955

**By The Engineer:**  
 I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature Of Engineer: *Charles J. Crovo Sr.*  
 Printed Name Of Engineer: **CHARLES J. CROVO SR.**  
 Date: 2/27/02

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Signature: *John W. Myers*  
 Printed Name Of Engineer: **John W. Myers**  
 Date: 2/27/02

**By The Developer:**  
 I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature Of Developer: *Dr. William Brown*  
 Printed Name Of Developer: **DR. WILLIAM BROWN**  
 Date: 2/27/02

Signature: *John K. Edwards*  
 Printed Name Of Developer: **John K. Edwards**  
 Date: 2/27/02

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

Signature: *[Signature]*  
 Director, Department of Planning and Zoning  
 Date: 3/8/02

Signature: *[Signature]*  
 Chief, Division of Land Development  
 Date: 3/7/02

Signature: *[Signature]*  
 Chief, Development Engineering Division  
 Date: 3/5/02

**PREPARED FOR**  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 108  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young

**THOMAS CLARK ASSOCIATES**  
 2661 Riva Road, Suite 120  
 Annapolis Maryland 21401  
 301-261-8700

Address Chart	
Parcel Number	Street Address
670	8125 Old Stockbridge Drive

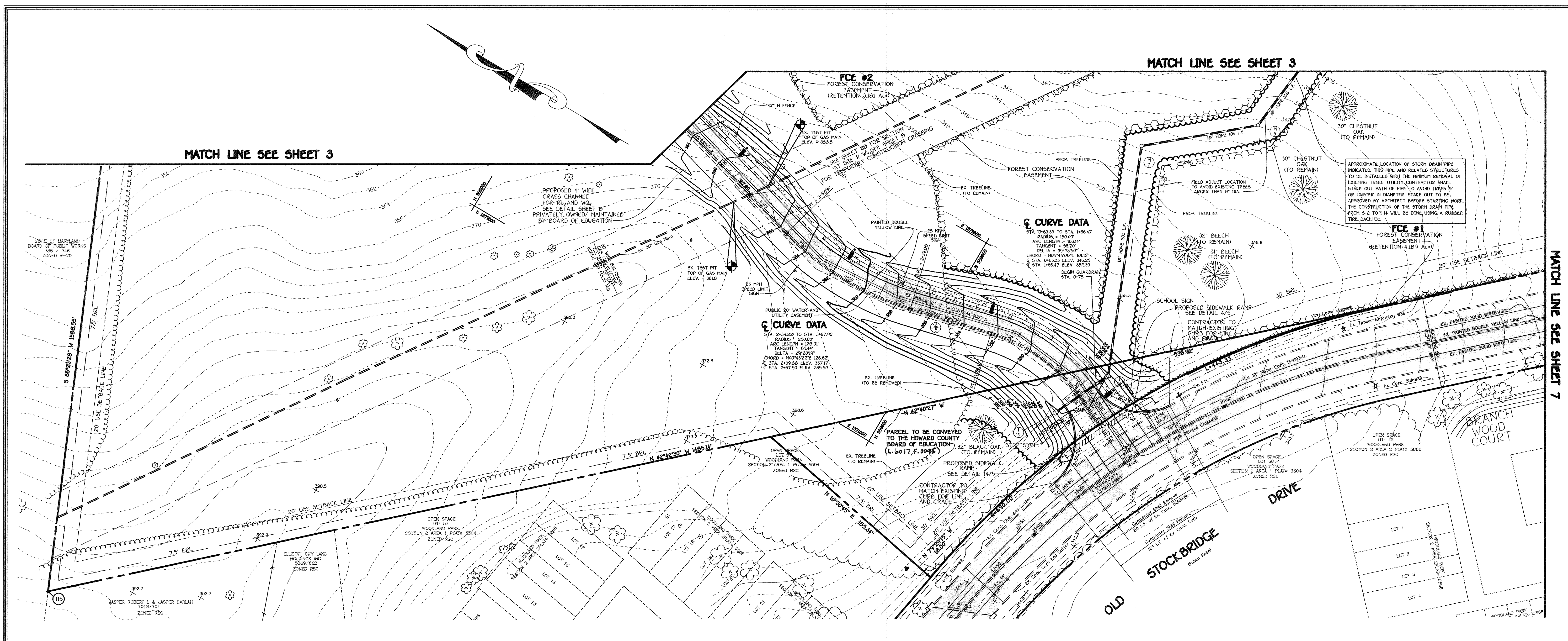
PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No.4		
DEED REF. 2387/562	BLOCK NO. 8,9	ZONE R-5C
TAX/ZONE	TAX/ZONE 37	ELEC. DIST. First
CENSUS TR. 6011	SEWER CODE	
WATER CODE D 05		2650000

**SITE DEVELOPMENT PLAN**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No.: 37 PARCEL No.: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
 BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
 "BID & CONSTRUCTION 14 JANUARY 02"  
 SHEET 3 OF 56

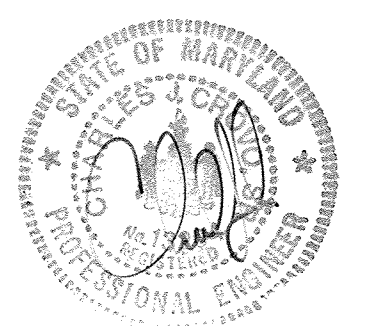




PLAN  
SCALE: 1" = 40'



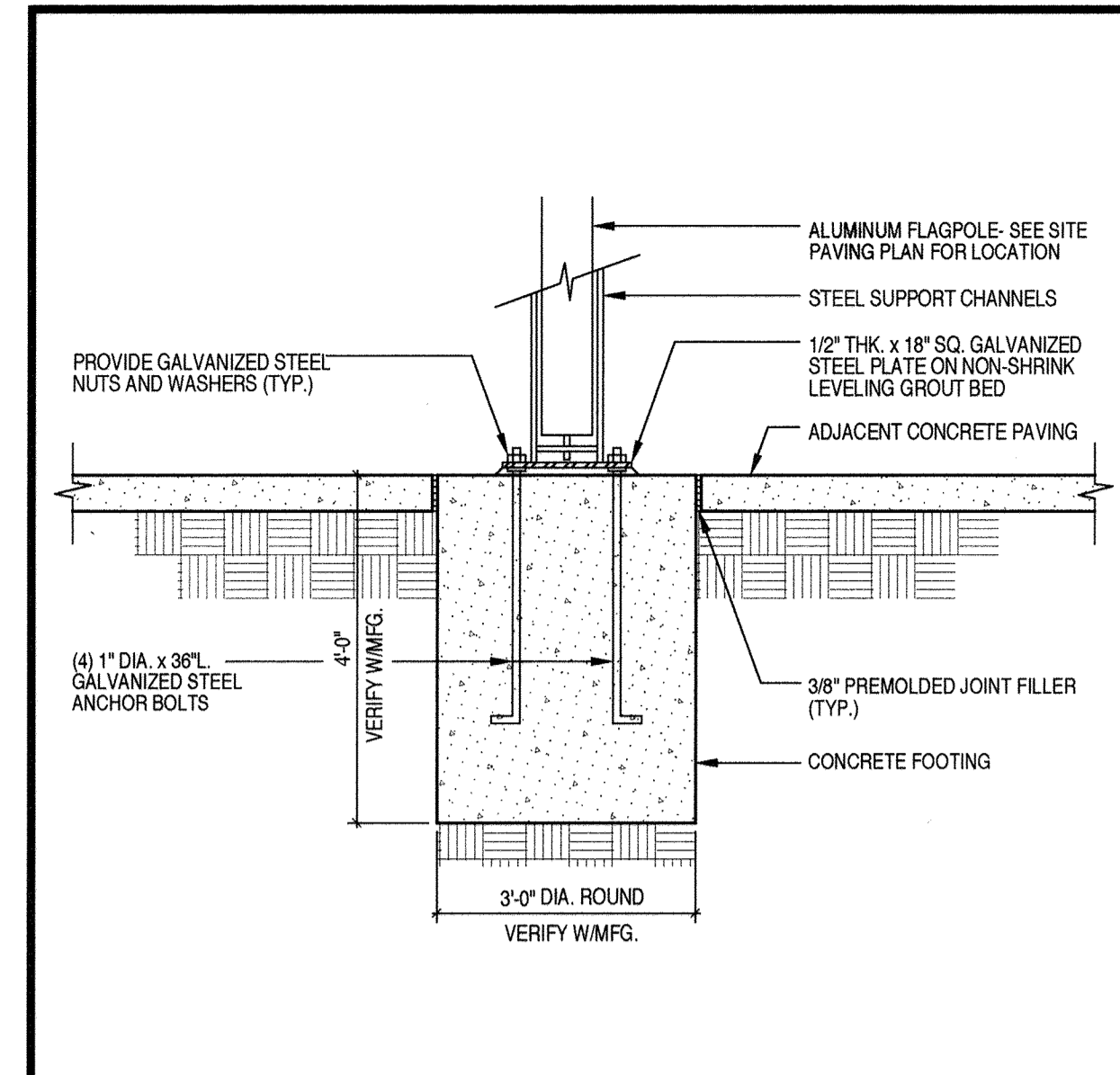
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 28376 Expiration Date: 1-1-21



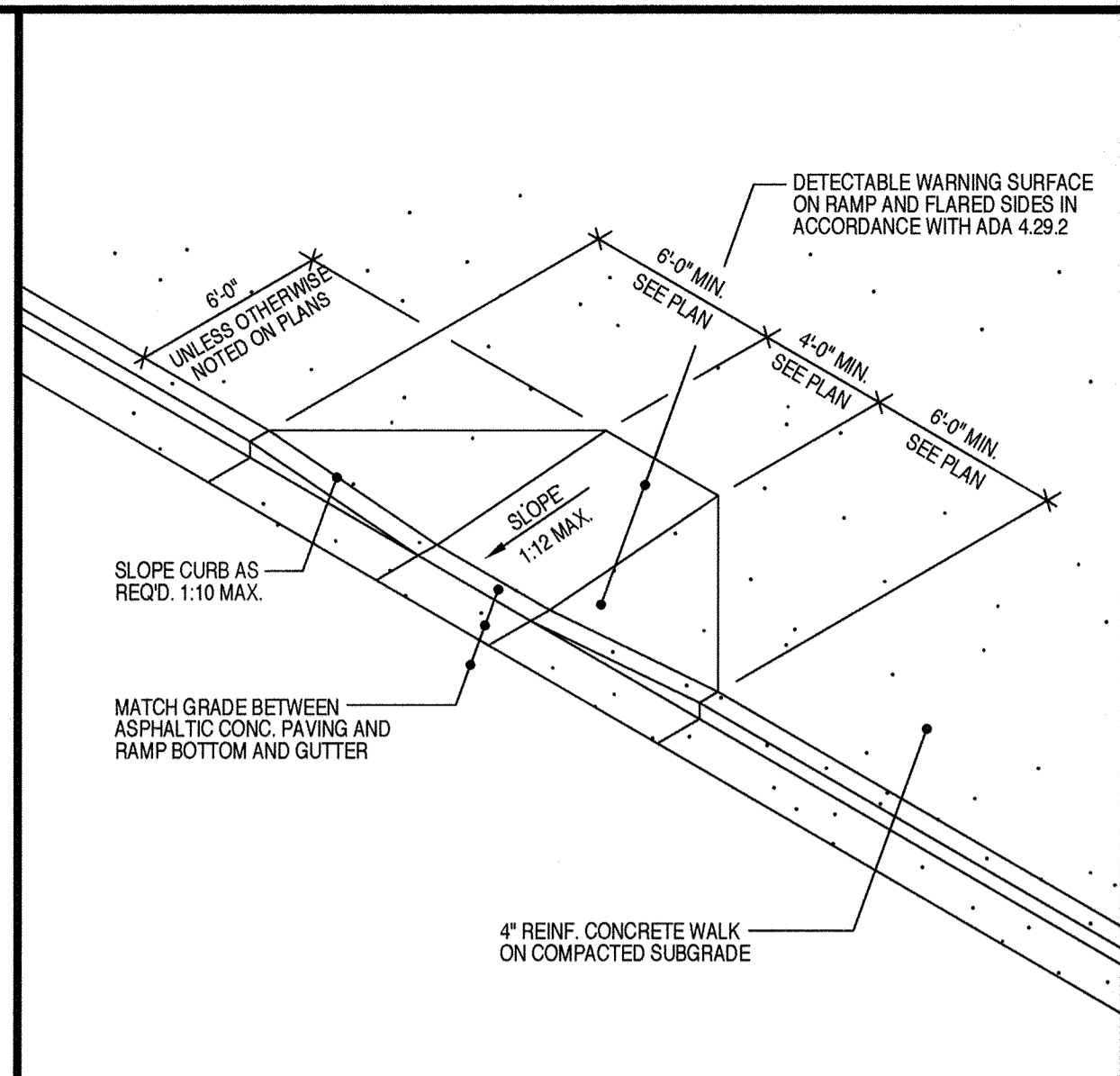
Revision #1 5-29-18 Change Sheet Number

<p><b>FISHER, COLLINS &amp; CARTER, INC.</b> CIVIL ENGINEERING CONSULTANTS &amp; LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL FREE ELICOTT CITY, MARYLAND 21114 (410) 461-2955</p>	<p>By The Engineer: I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.</p> <p>Signature Of Engineer: <i>Charles J. Cravo</i> Date: <i>2/27/02</i></p> <p>CHARLES J. CRAVO SR. Printed Name Of Engineer</p>	<p>By The Developer: I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.</p> <p>Signature Of Developer: <i>Dr. William Brown</i> Date: <i>2/27/02</i></p> <p>DR. WILLIAM BROWN Printed Name Of Developer</p>	<p>APPROVED: DEPARTMENT OF PLANNING AND ZONING</p> <p>Signature: <i>James R. [unclear]</i> Date: <i>3/8/02</i> Director, Department of Planning and Zoning</p> <p>Signature: <i>Carly [unclear]</i> Date: <i>3/7/02</i> Chief, Division of Land Development</p> <p>Signature: <i>William [unclear]</i> Date: <i>3/6/02</i> Chief, Development Engineering Division</p>	<p>PREPARED FOR HOWARD COUNTY PUBLIC SCHOOL SYSTEM 10910 Maryland Route 108 Ellicott City, Maryland 21042 Attention Cathleen Young</p> <p>THOMAS CLARK ASSOCIATES 2661 Riva Road, Suite 120 Annapolis Maryland 21401 301-261-8700</p>	<p>Address Chart</p> <table border="1"> <tr> <th>Parcel Number</th> <th>Street Address</th> </tr> <tr> <td>670</td> <td>8125 Old Stockbridge Drive</td> </tr> </table>	Parcel Number	Street Address	670	8125 Old Stockbridge Drive	<p><b>SITE DEVELOPMENT PLAN</b></p> <p><b>NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)</b></p> <p>TAX MAP No.: 37 PARCEL No.: 670 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: 15 OCTOBER 2001 BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01 "BID &amp; CONSTRUCTION 14 JANUARY 02" SHEET 4 OF 56</p>							
	Parcel Number	Street Address															
670	8125 Old Stockbridge Drive																
<p>These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.</p> <p>Signature: <i>John M. [unclear]</i> Date: <i>2/27/02</i> USDA-Natural Resources Conservation Service</p>	<p>These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.</p> <p>Signature: <i>John K. Roberts</i> Date: <i>2/27/02</i> Howard Soil Conservation District</p>	<table border="1"> <tr> <th>PROJECT</th> <th>SECTION/AREA</th> <th>LOT NO.</th> </tr> <tr> <td>Northeastern Elementary School No. 4</td> <td></td> <td></td> </tr> <tr> <td>DEED REF. 2387/562</td> <td>BLOCK NO. 89 ZONE R-SC</td> <td>TAX/ZONE 37</td> </tr> <tr> <td>WATER CODE D 05</td> <td>ELEC. DIST. First</td> <td>CENSUS TR. 6011</td> </tr> <tr> <td></td> <td>SEWER CODE</td> <td>2650000</td> </tr> </table>	PROJECT	SECTION/AREA	LOT NO.	Northeastern Elementary School No. 4			DEED REF. 2387/562	BLOCK NO. 89 ZONE R-SC	TAX/ZONE 37	WATER CODE D 05	ELEC. DIST. First	CENSUS TR. 6011		SEWER CODE	2650000
PROJECT	SECTION/AREA	LOT NO.															
Northeastern Elementary School No. 4																	
DEED REF. 2387/562	BLOCK NO. 89 ZONE R-SC	TAX/ZONE 37															
WATER CODE D 05	ELEC. DIST. First	CENSUS TR. 6011															
	SEWER CODE	2650000															

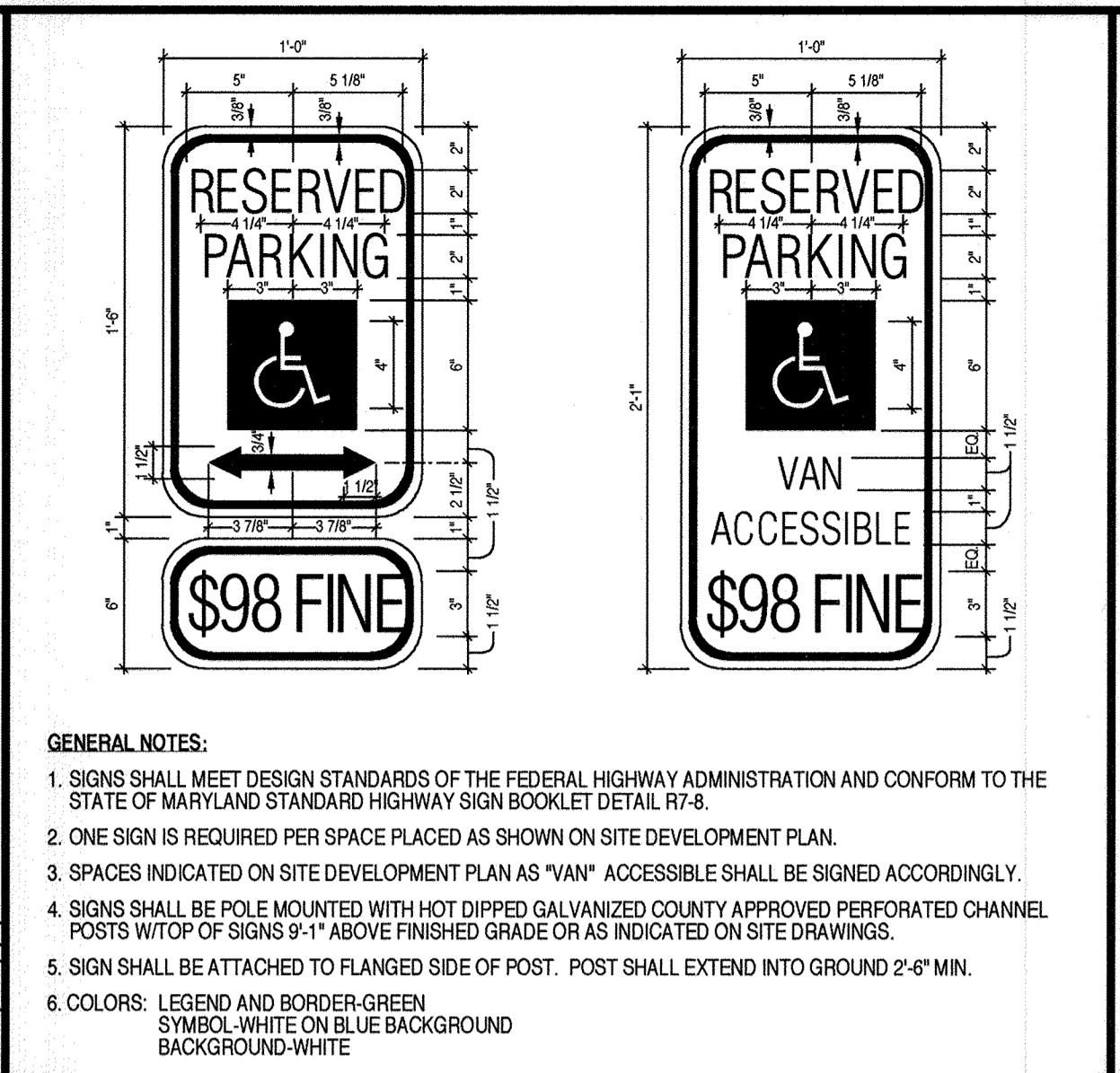




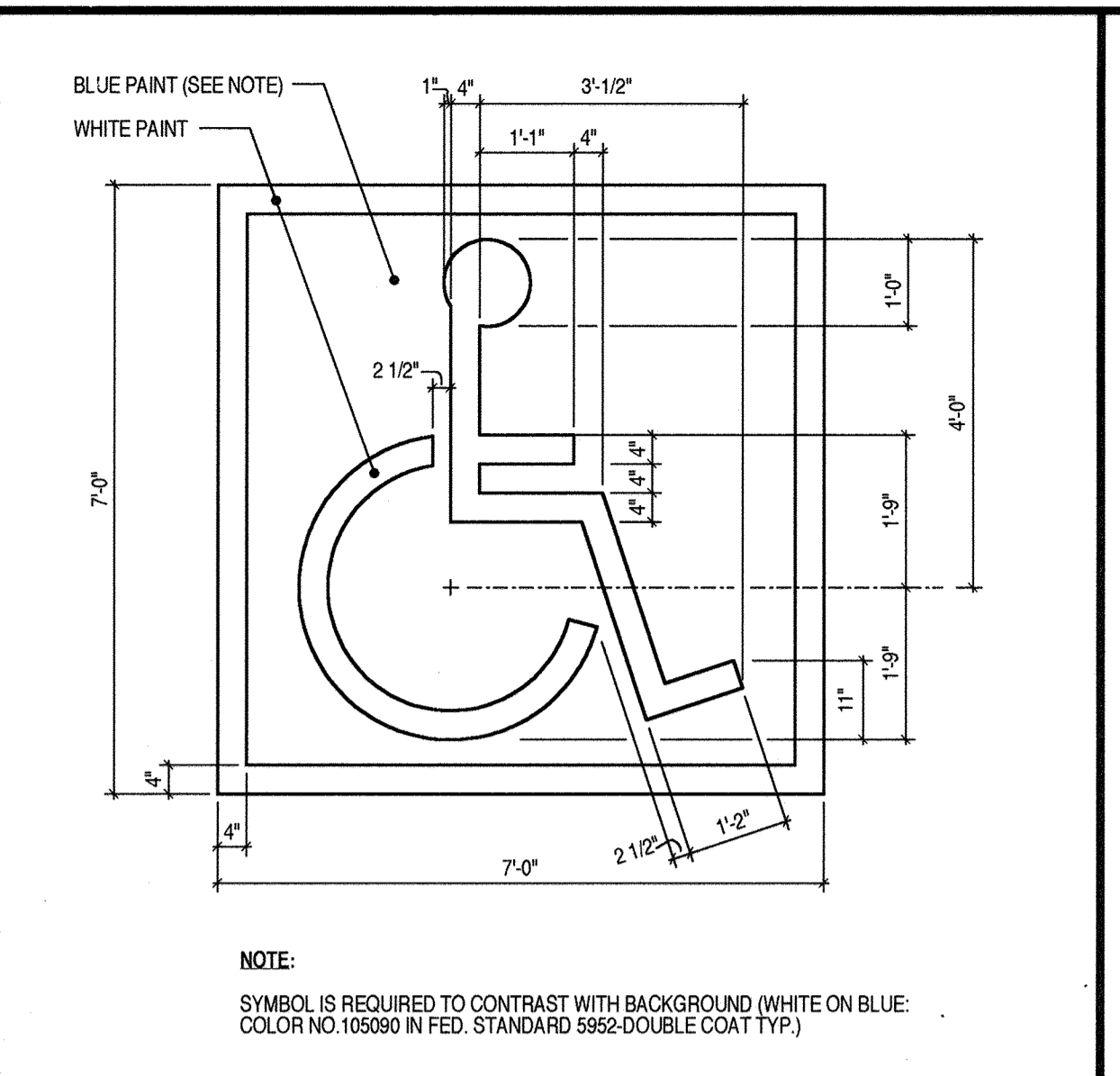
**5** TILT FLAGPOLE DETAIL **1/2**



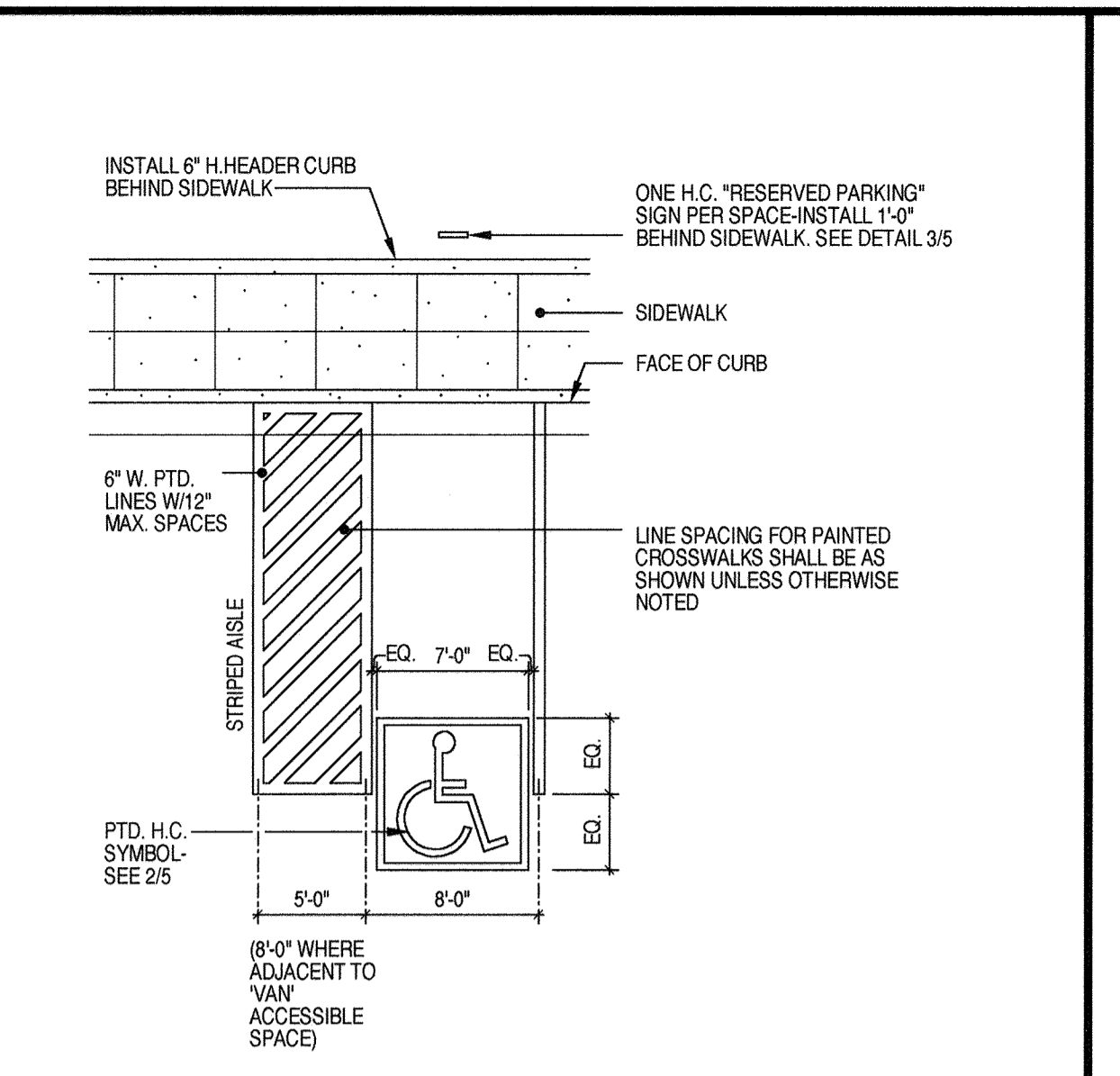
**4** TYPE A CURB RAMP DETAIL **1/2**



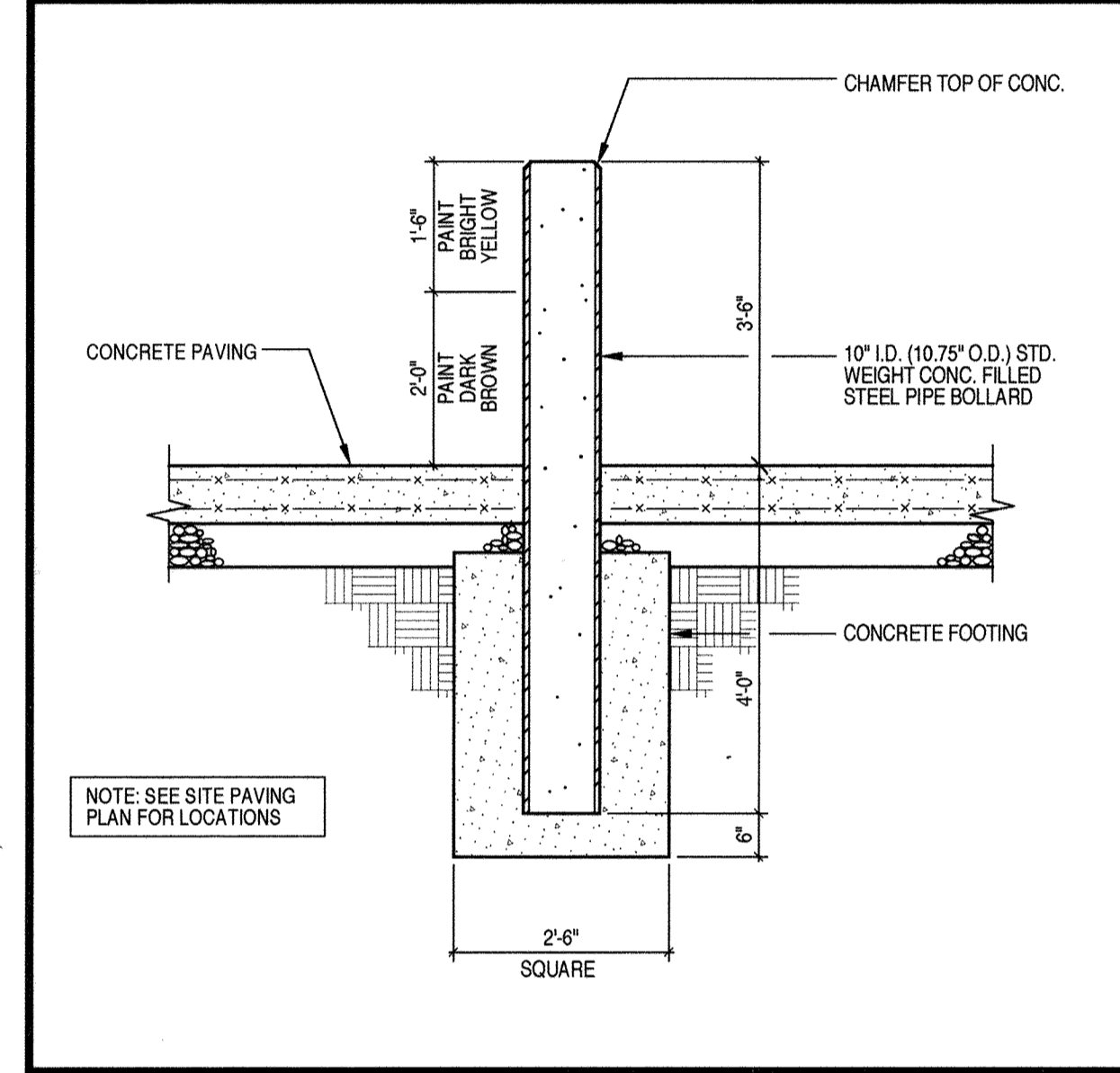
**3** HANDICAP PARKING SIGNS DETAIL **2/5**



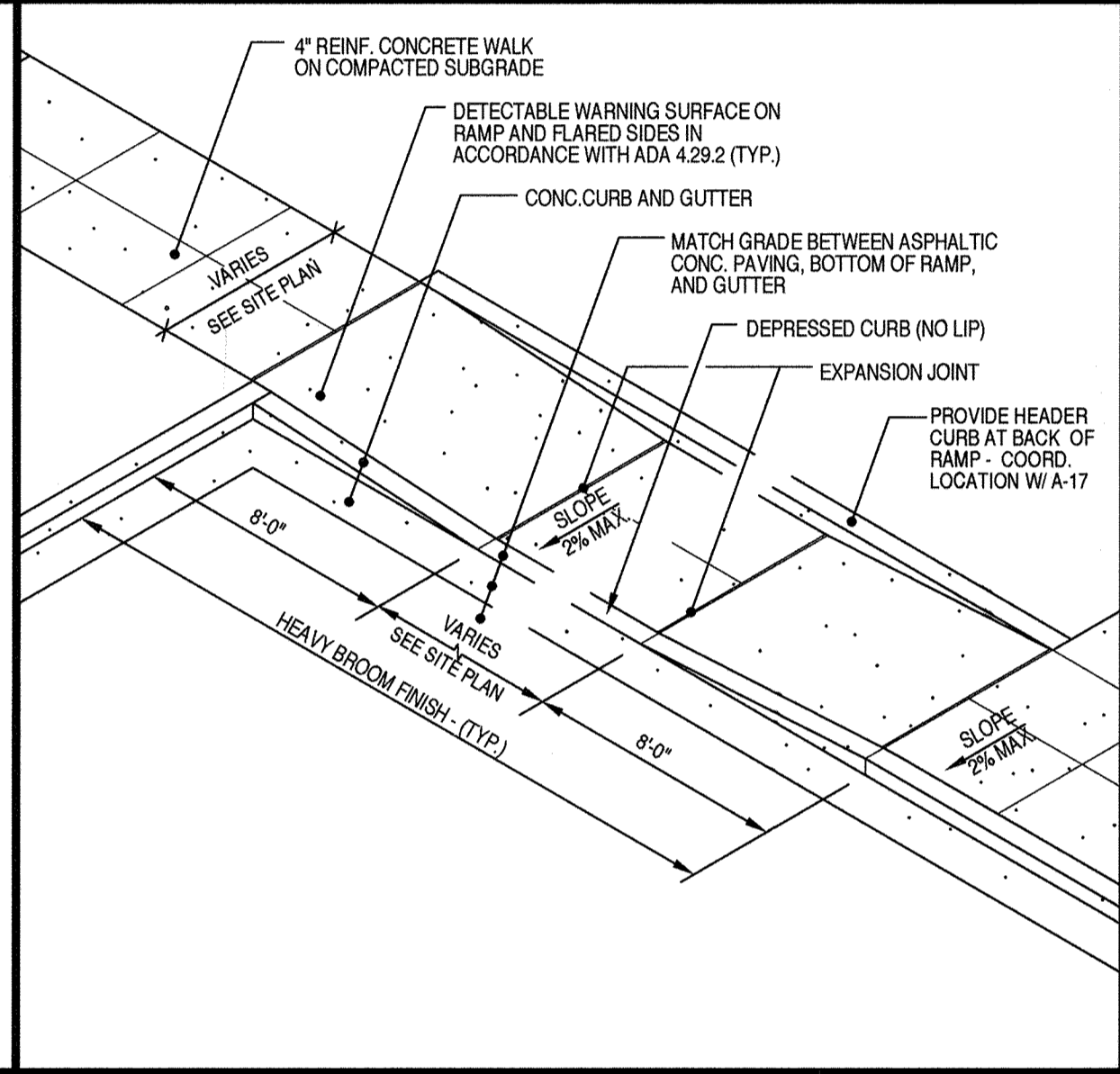
**2** ACCESSIBLE SPACE STENCIL LAYOUT **1/2**



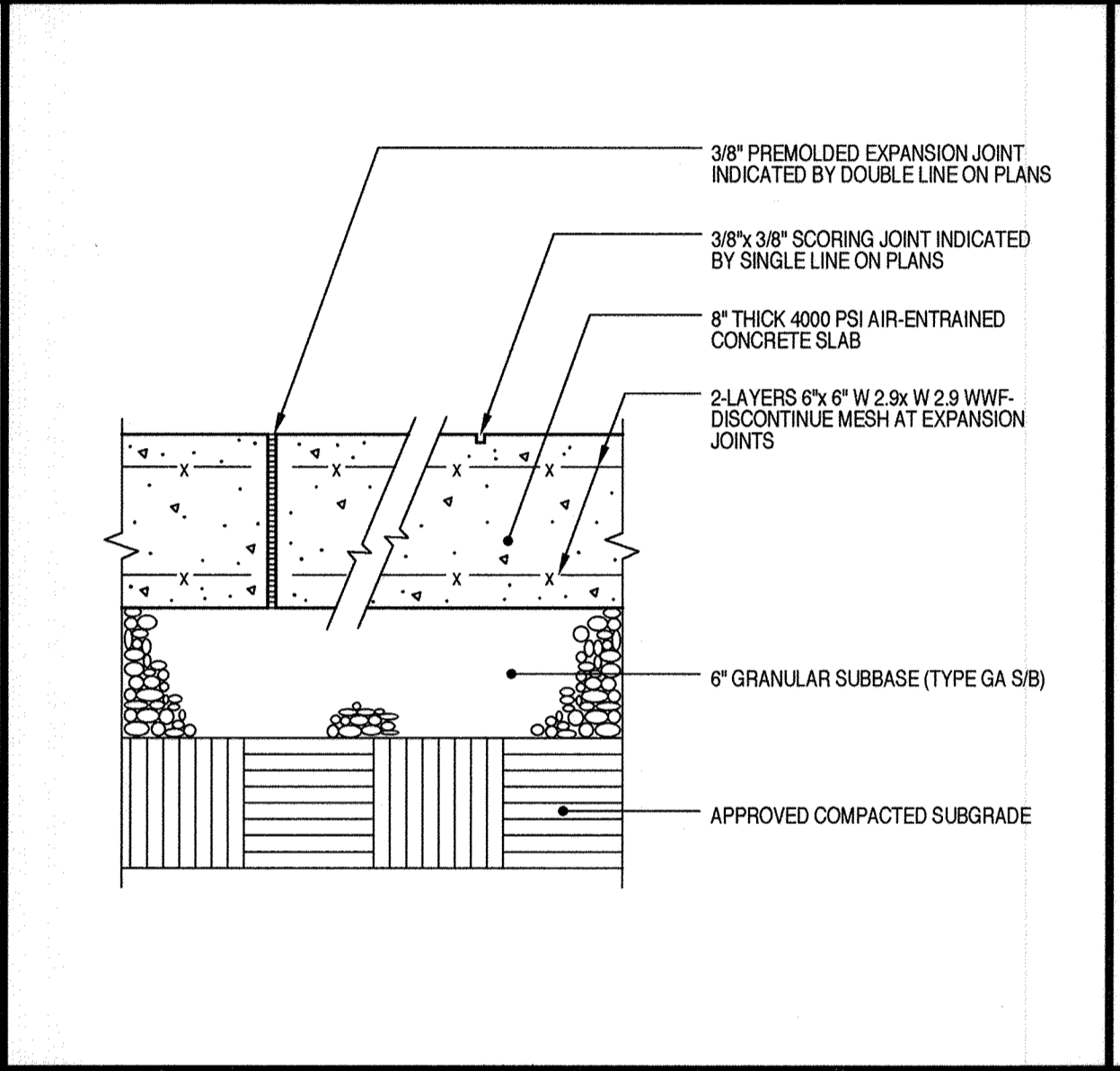
**1** ACCESSIBLE SPACE LAYOUT **1/8**



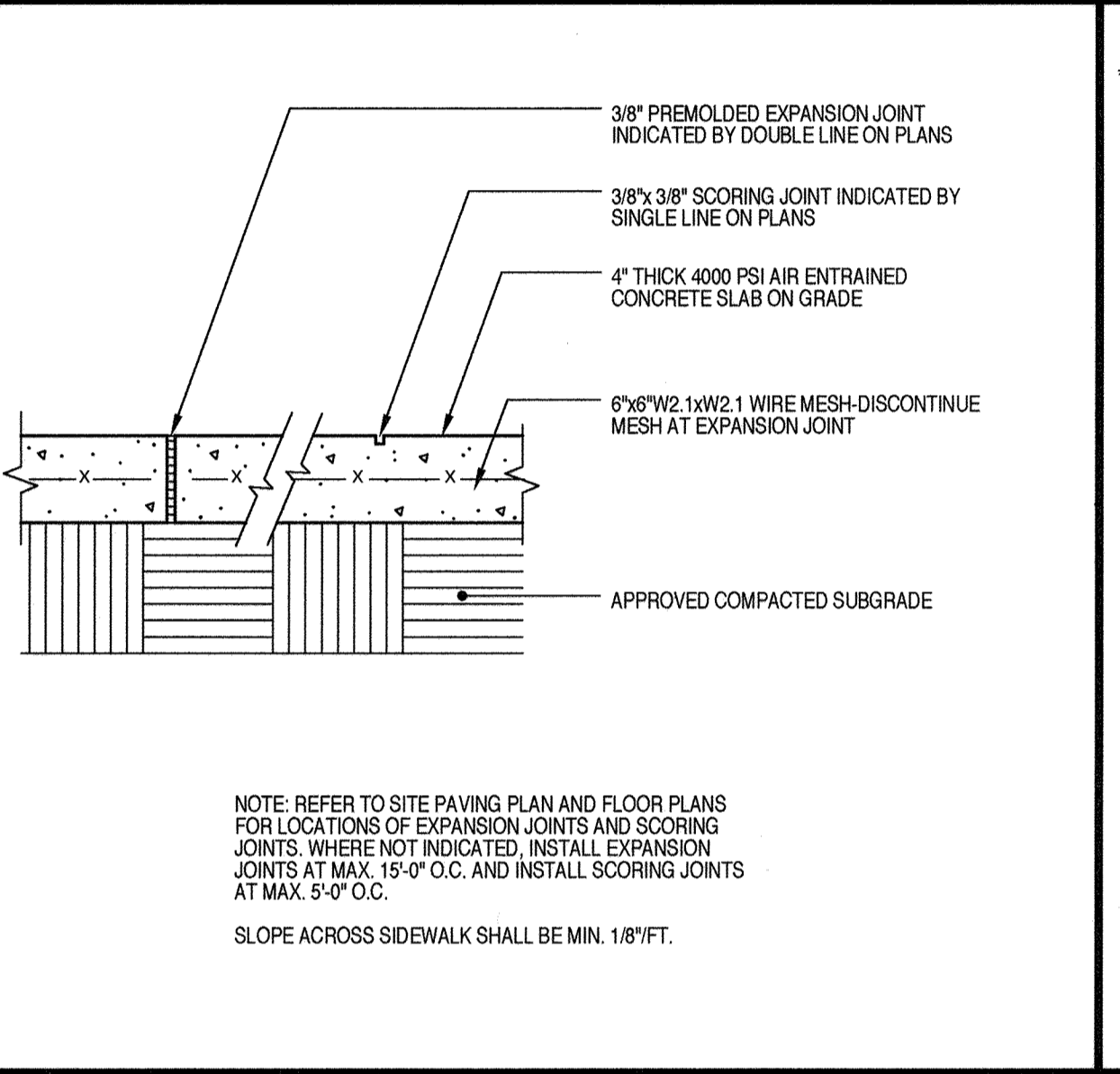
**10** PIPE BOLLARD DETAIL **1/2**



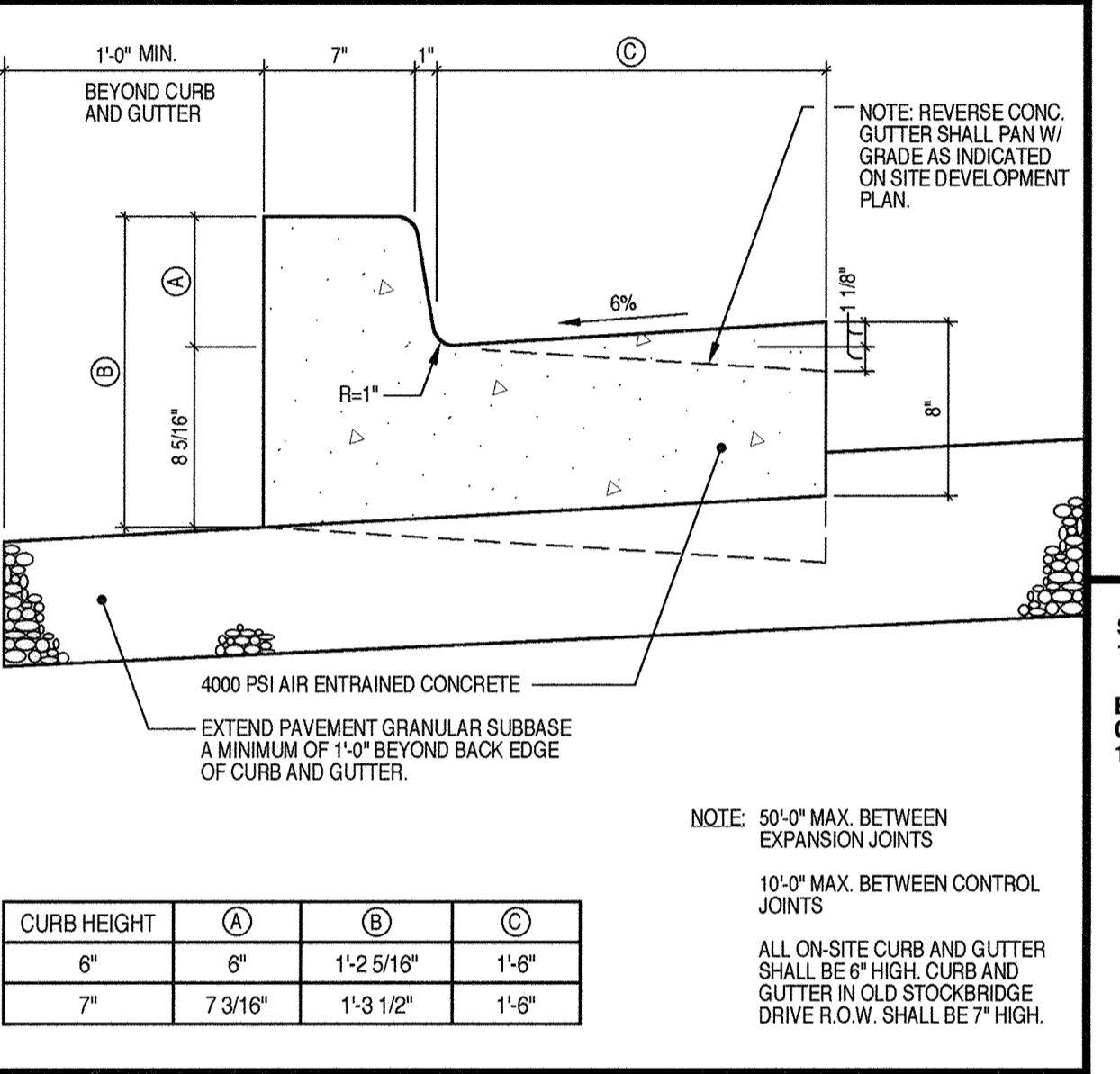
**9** TYPE C CURB RAMP DETAIL **1/2**



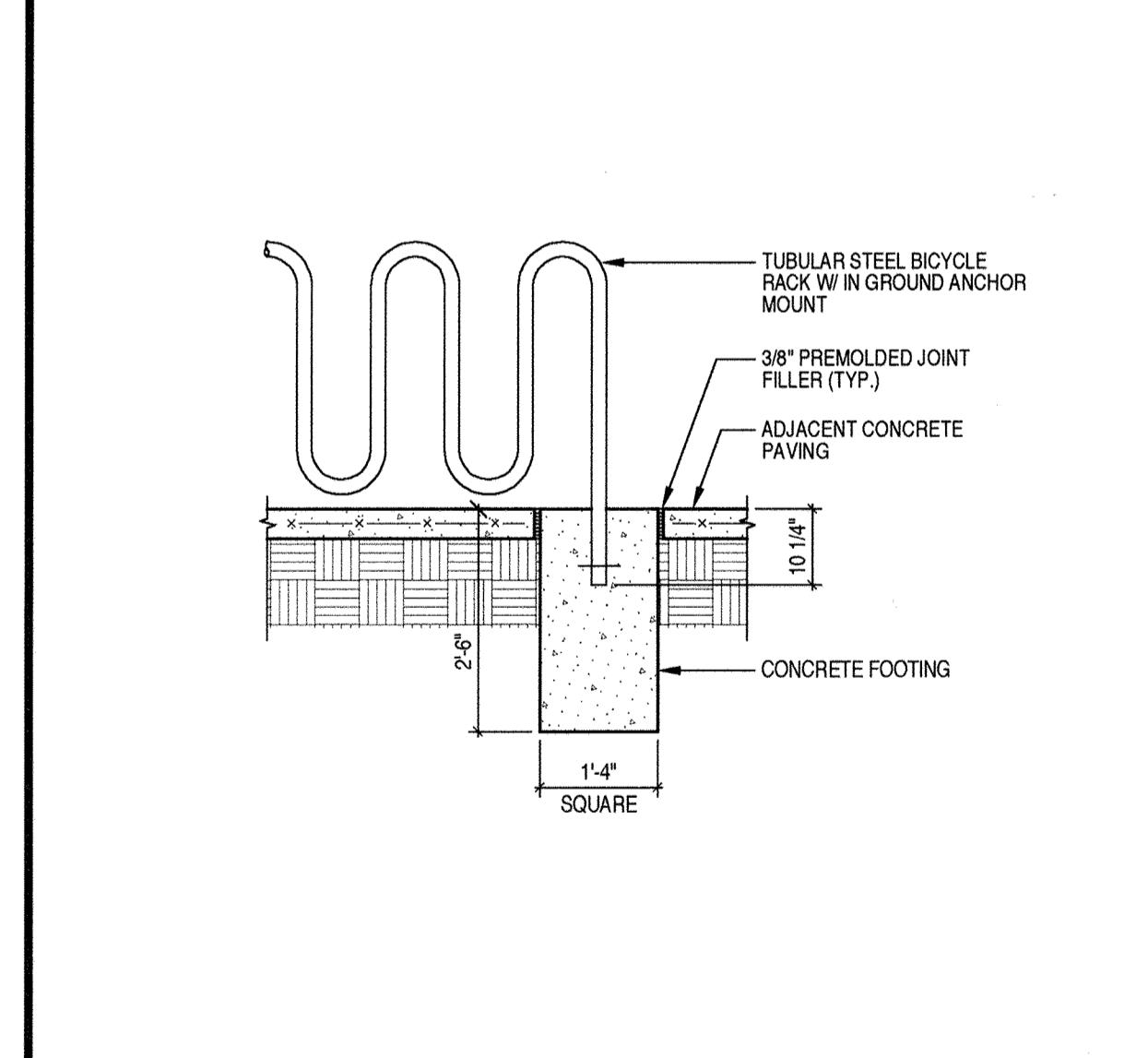
**8** HEAVY DUTY CONCRETE PAVING DETAIL **1/2**



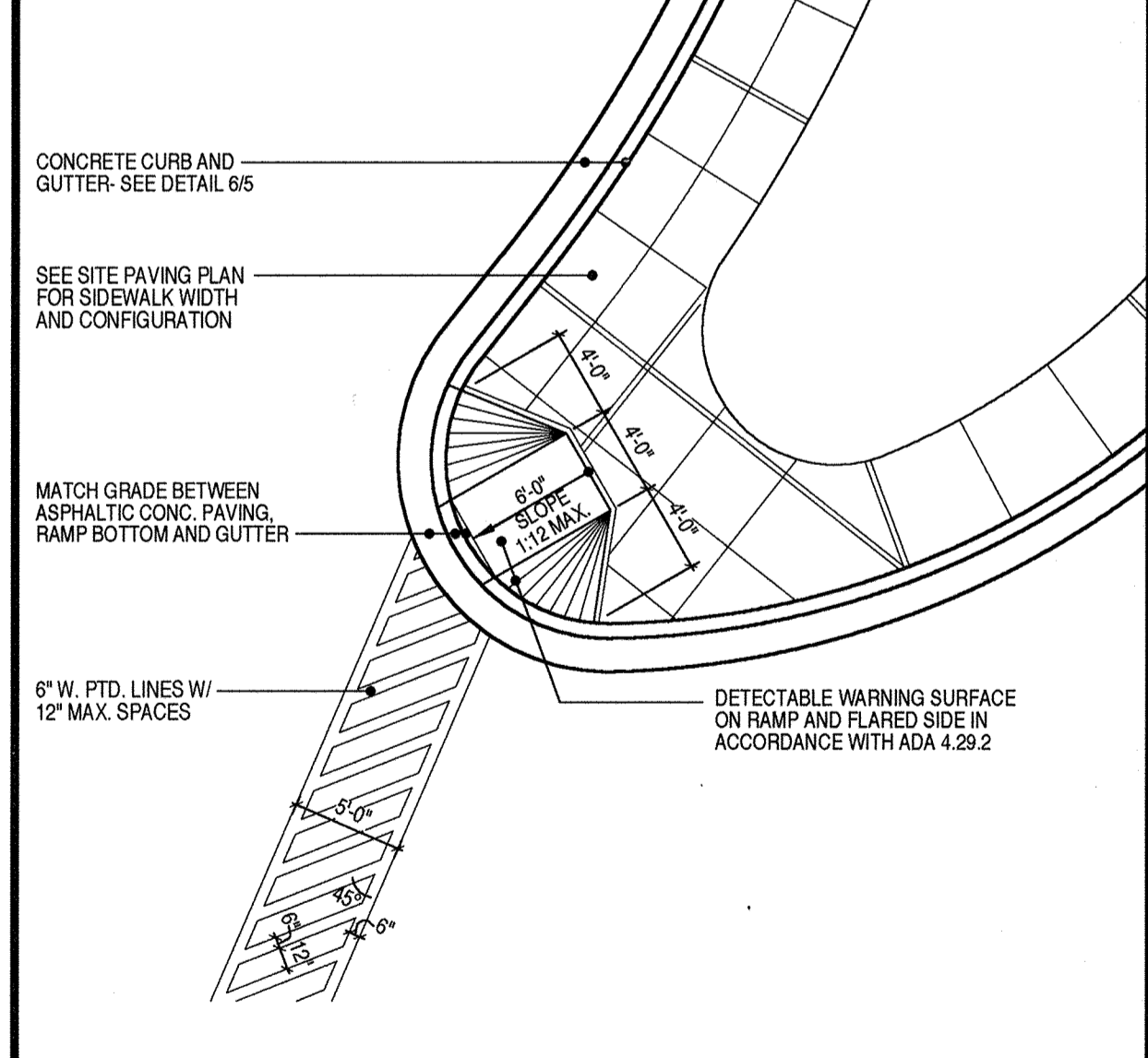
**7** CONCRETE WALK DETAIL **1/2**



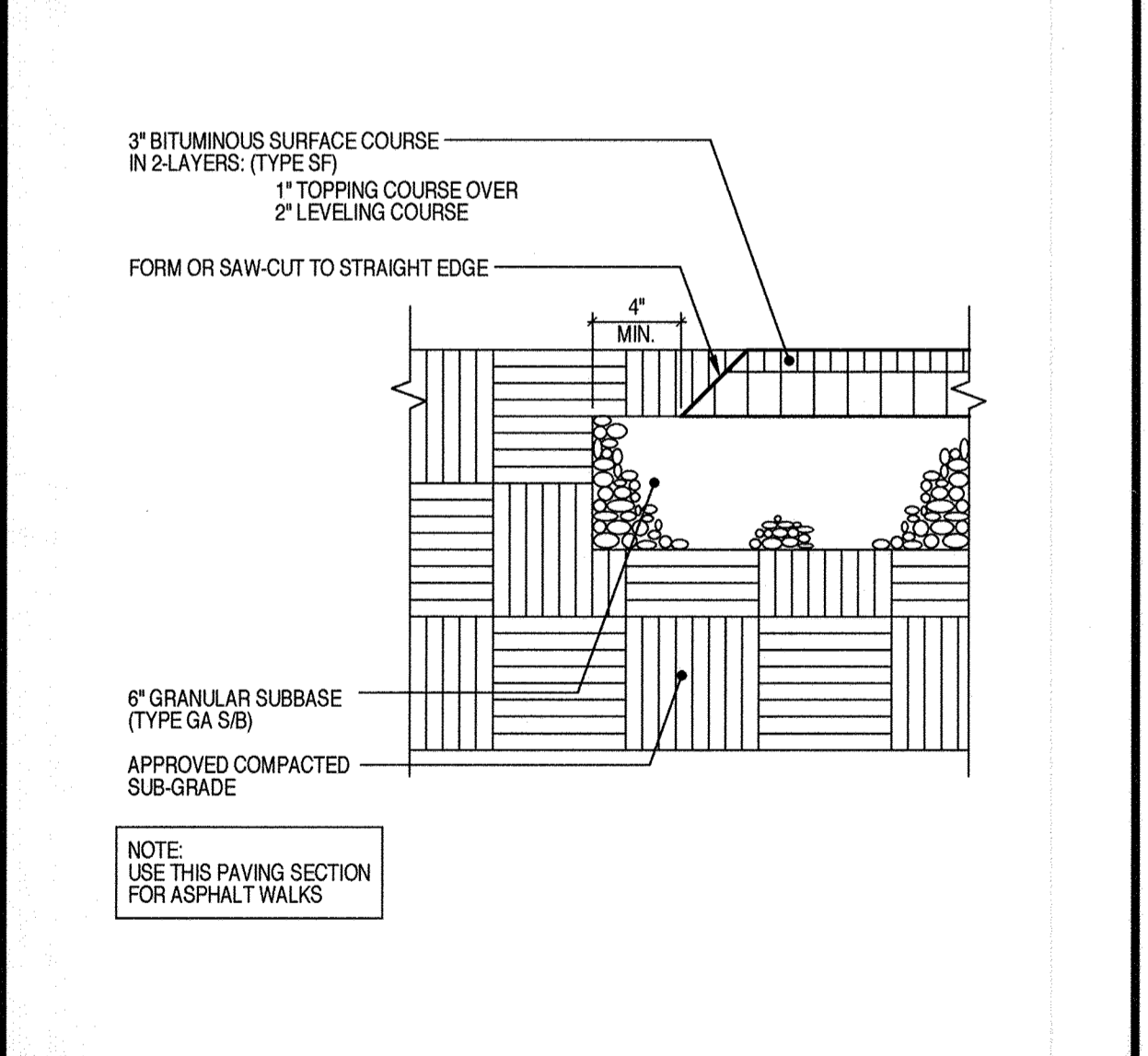
**6** CONCRETE CURB AND GUTTER DETAIL **1/2**



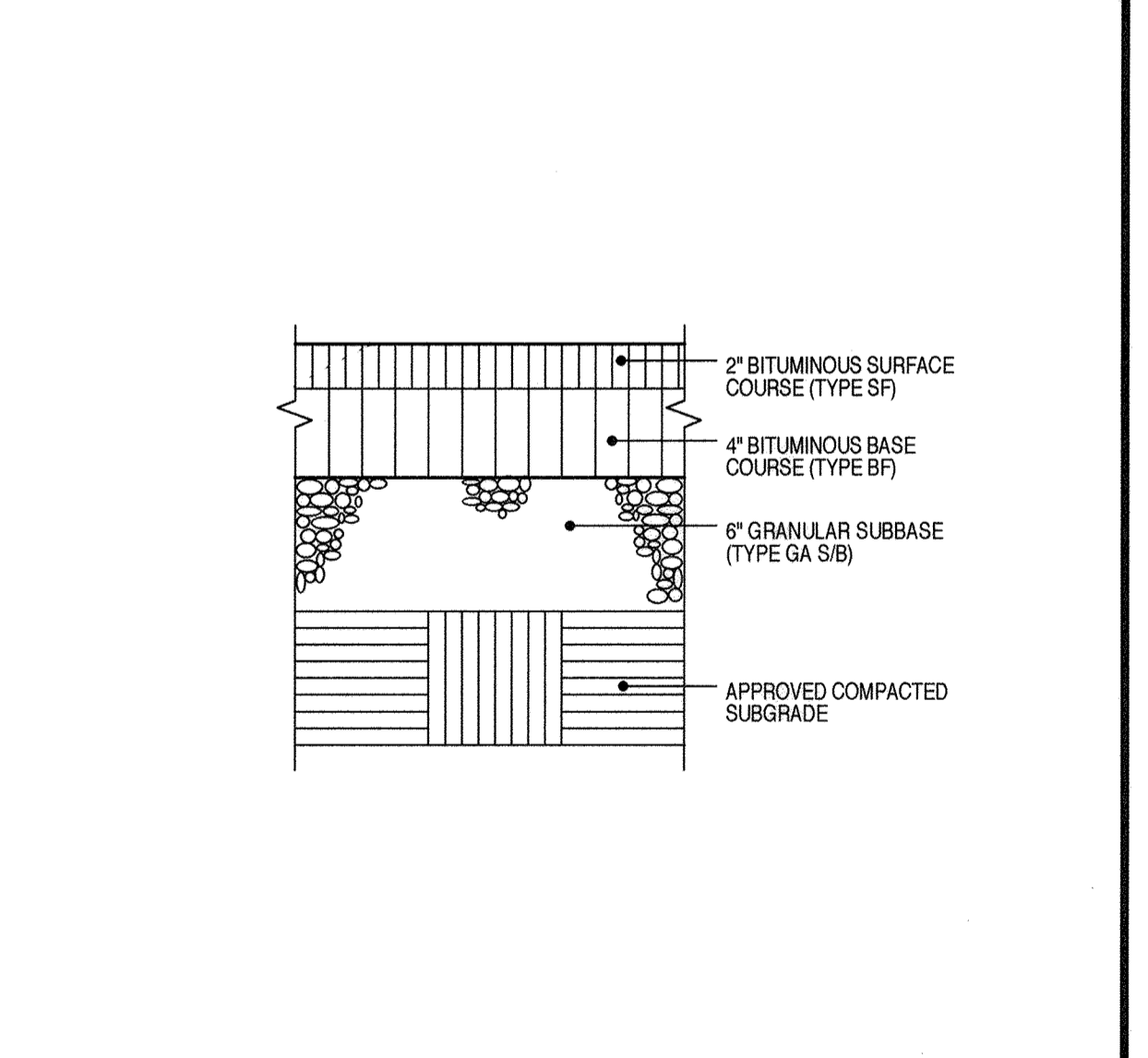
**15** BICYCLE RACK DETAIL **1/2**



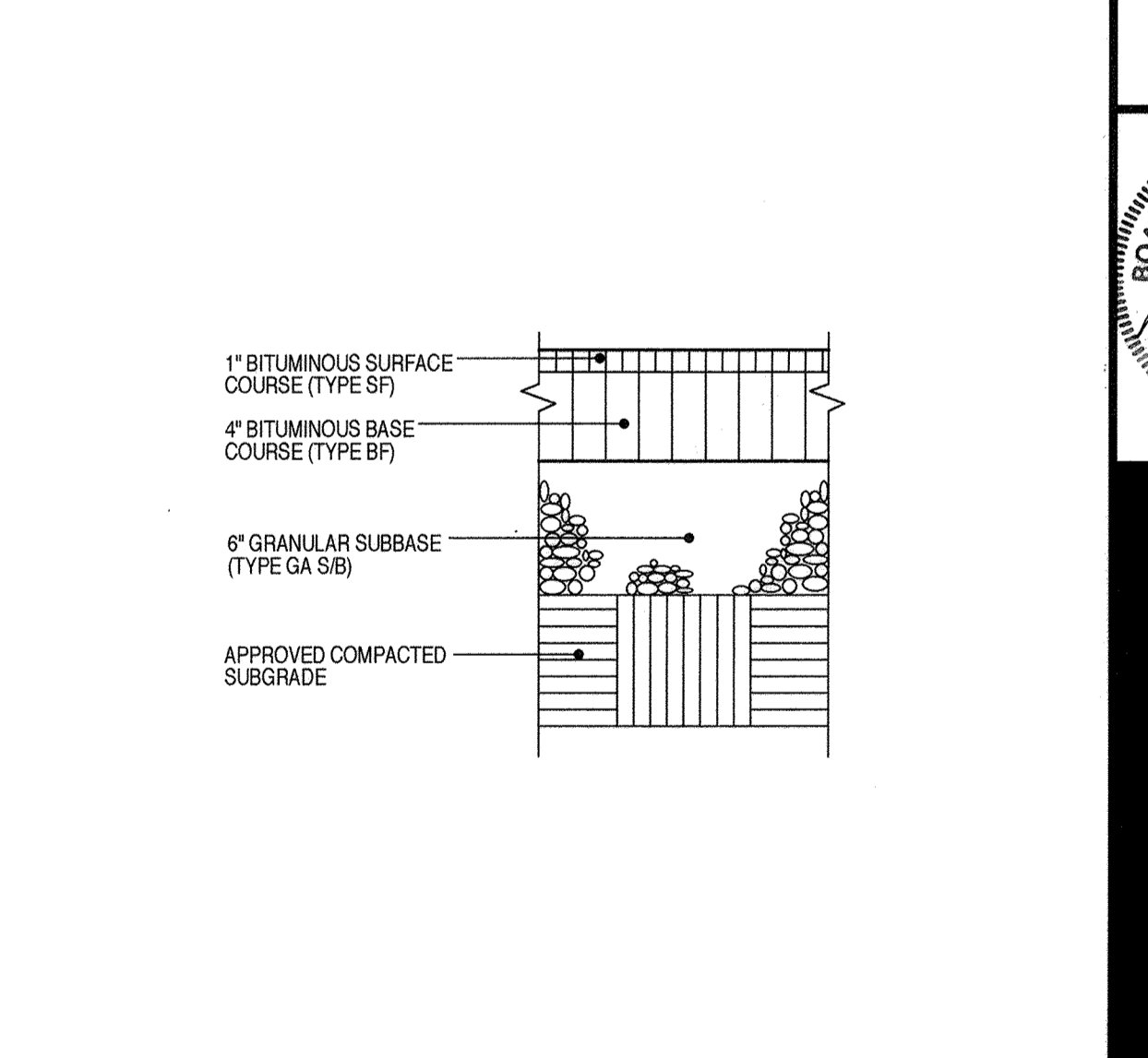
**14** TYPE A CURB RAMP DETAIL **1/2**



**13** PAVED PLAY AREA ASPHALTIC PAVING DETAIL **1/2**



**12** HEAVY DUTY ASPHALTIC PAVING DETAIL **1/2**



**11** LIGHT DUTY ASPHALTIC PAVING DETAIL **1/2**

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 28376, Expiration Date: 1-1-21  
 For Revision #1 only 5-29-19

**tca architects**  
 2681 RIVA ROAD, SUITE 120  
 ANNAPOLIS, MARYLAND 21401  
 410-841-6205

**OWNER**  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 ROUTE 108  
 ELLICOTT CITY, MARYLAND 21043

**Revision #1 Change Sheet Number 5-29-19**

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*James R. Rutter* 3/8/02  
 DIRECTOR DATE

*Guido Hamilton* 3/7/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Michael J. ...* 2/5/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**SITE DETAILS**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP NO. 37 PARCEL NO. 670  
 LIBER 2387 FOLIO 562  
 1ST ELECTION DISTRICT: HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN

**NORTHEASTERN ELEMENTARY SCHOOL NO.4**  
 Howard County, Maryland  
 Howard County Public School System

SDP PERMIT 15 OCTOBER 01  
 BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01

BOARD OF ARCHITECTS  
 6149  
 CAROL REED BEYOND  
 STATE OF MARYLAND

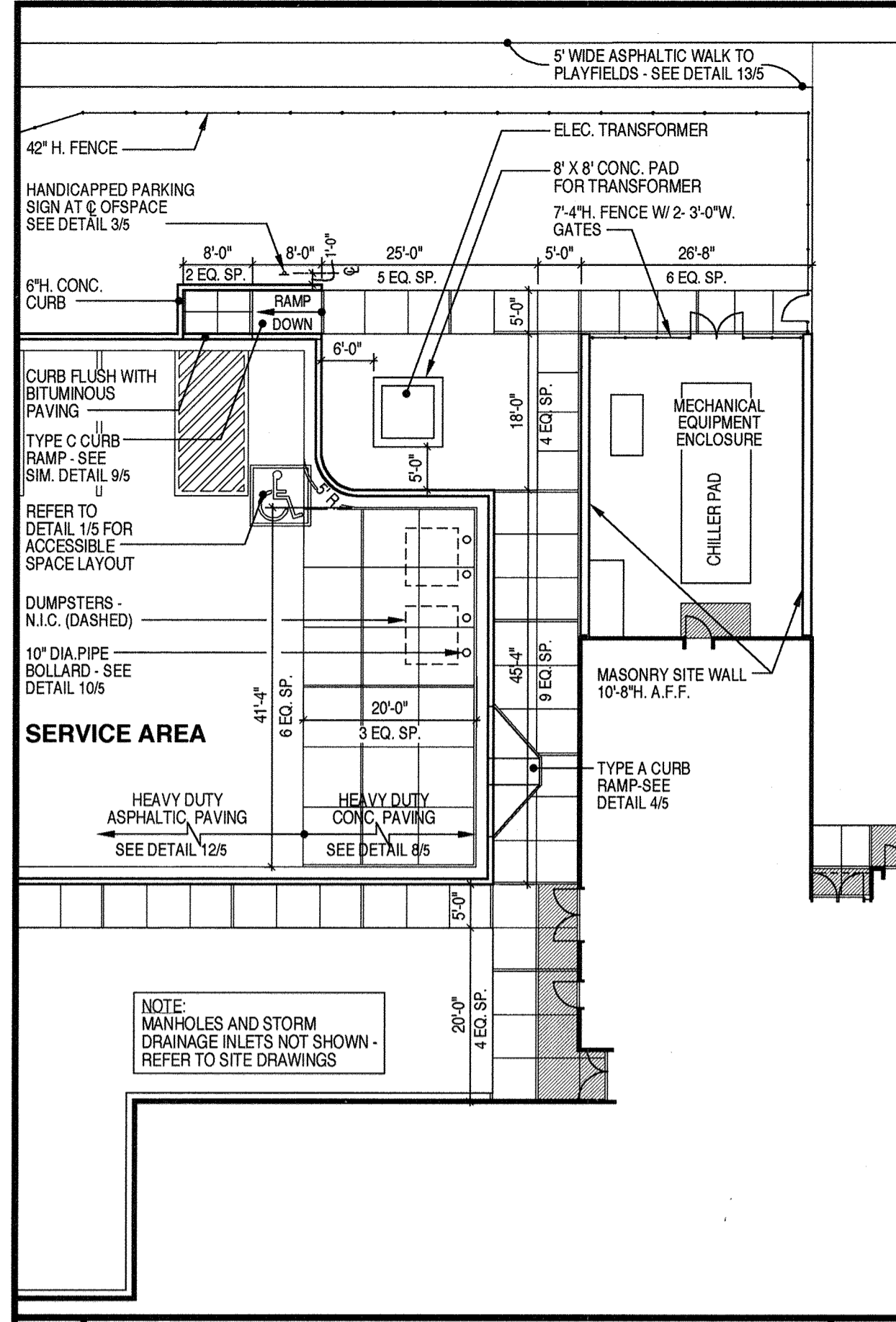
**tca architects**  
 Annapolis, Maryland

BID & CONSTRUCTION 14 JANUARY 02

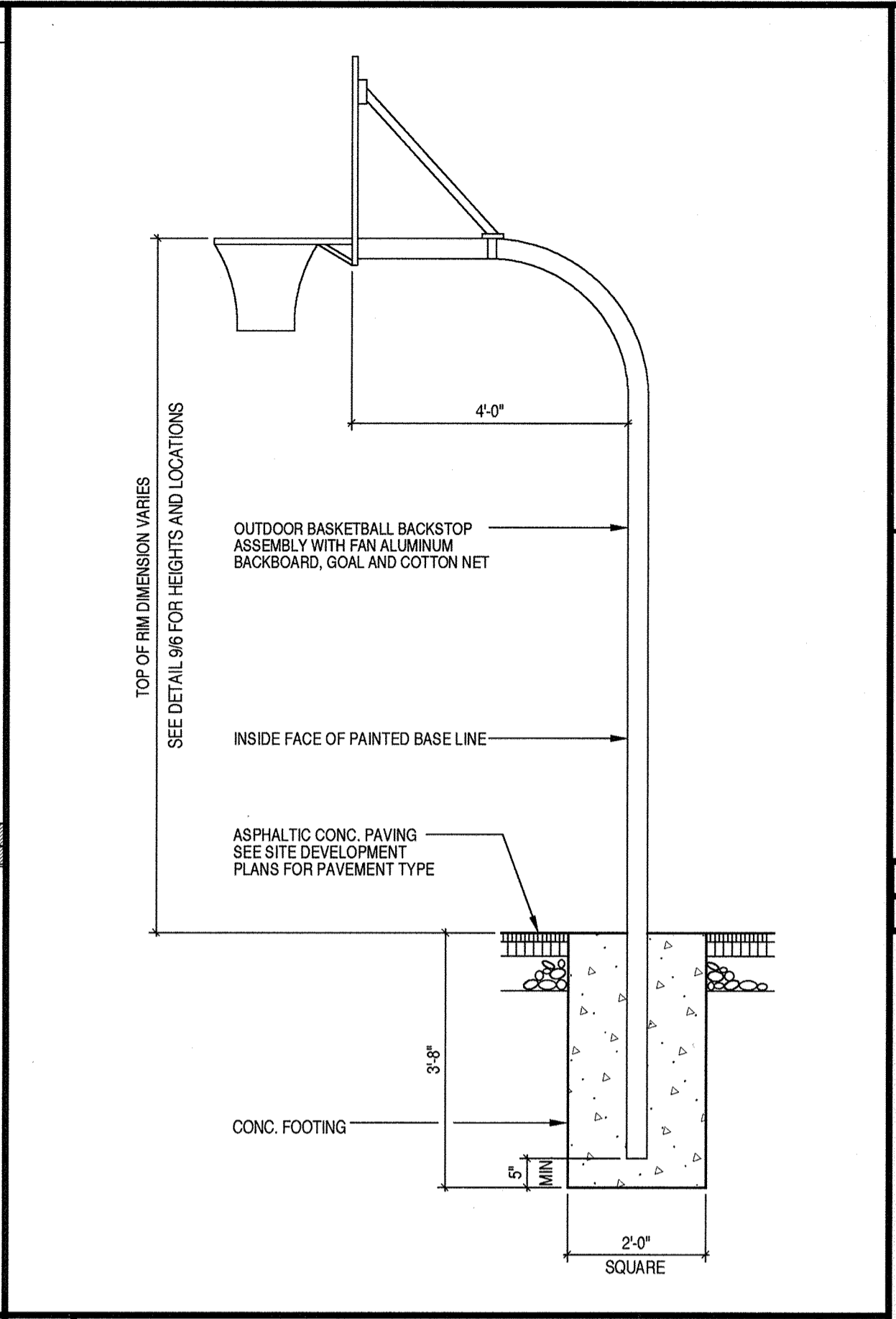
**5 of 56**

project no. 2002  
 SDP 02-36

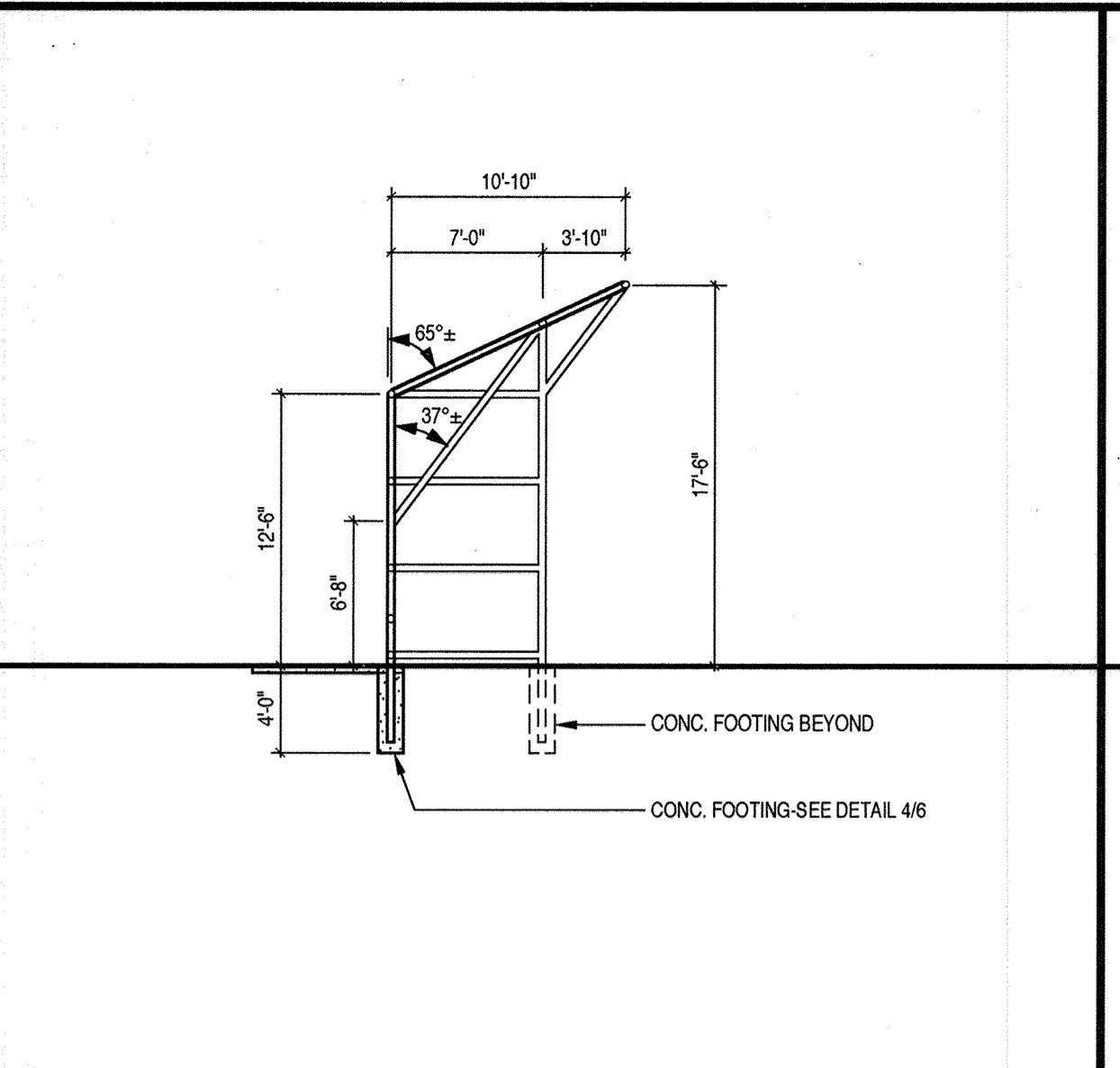




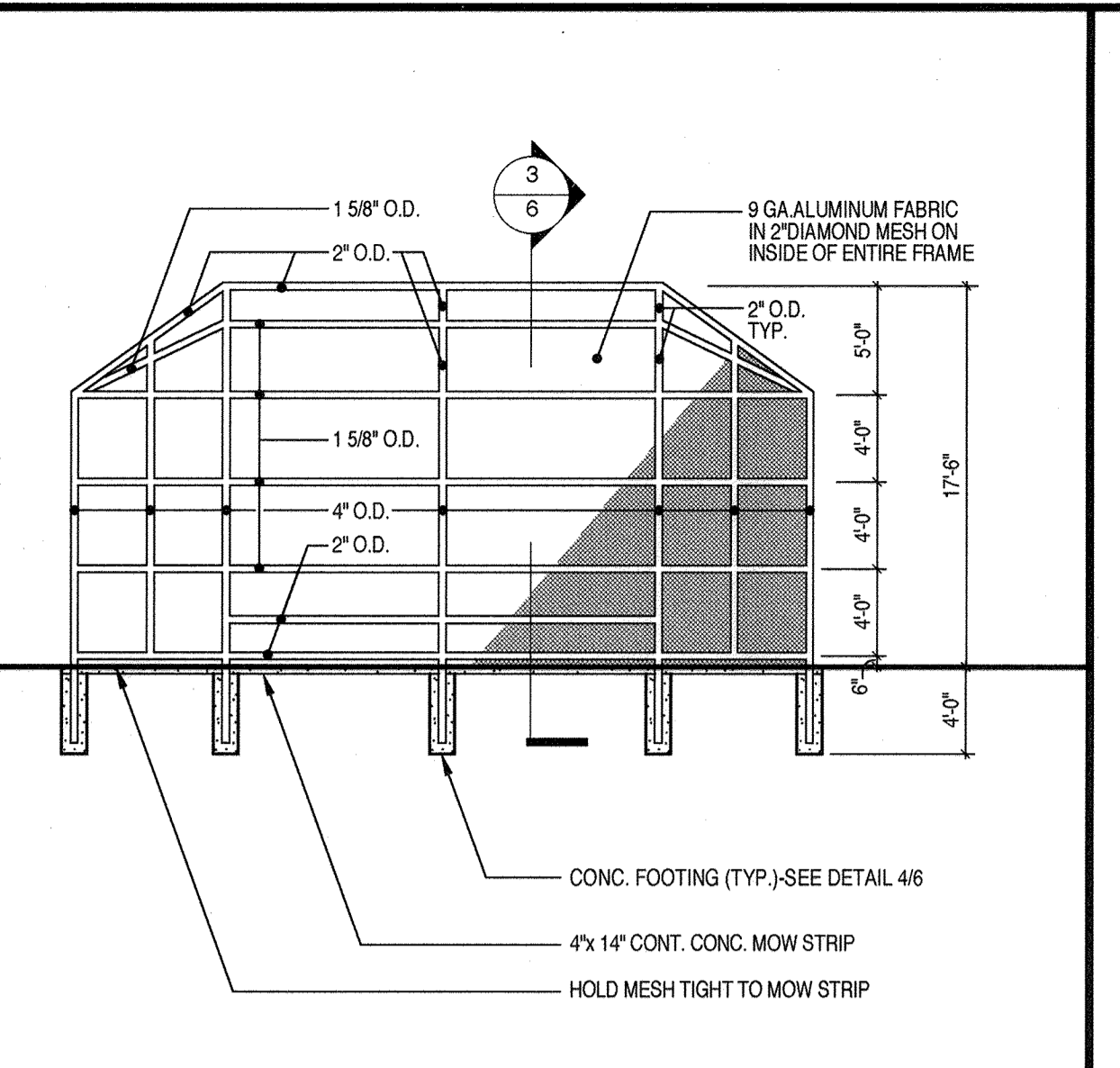
8  
6 SERVICE AREA DETAIL 1" 7  
16 6



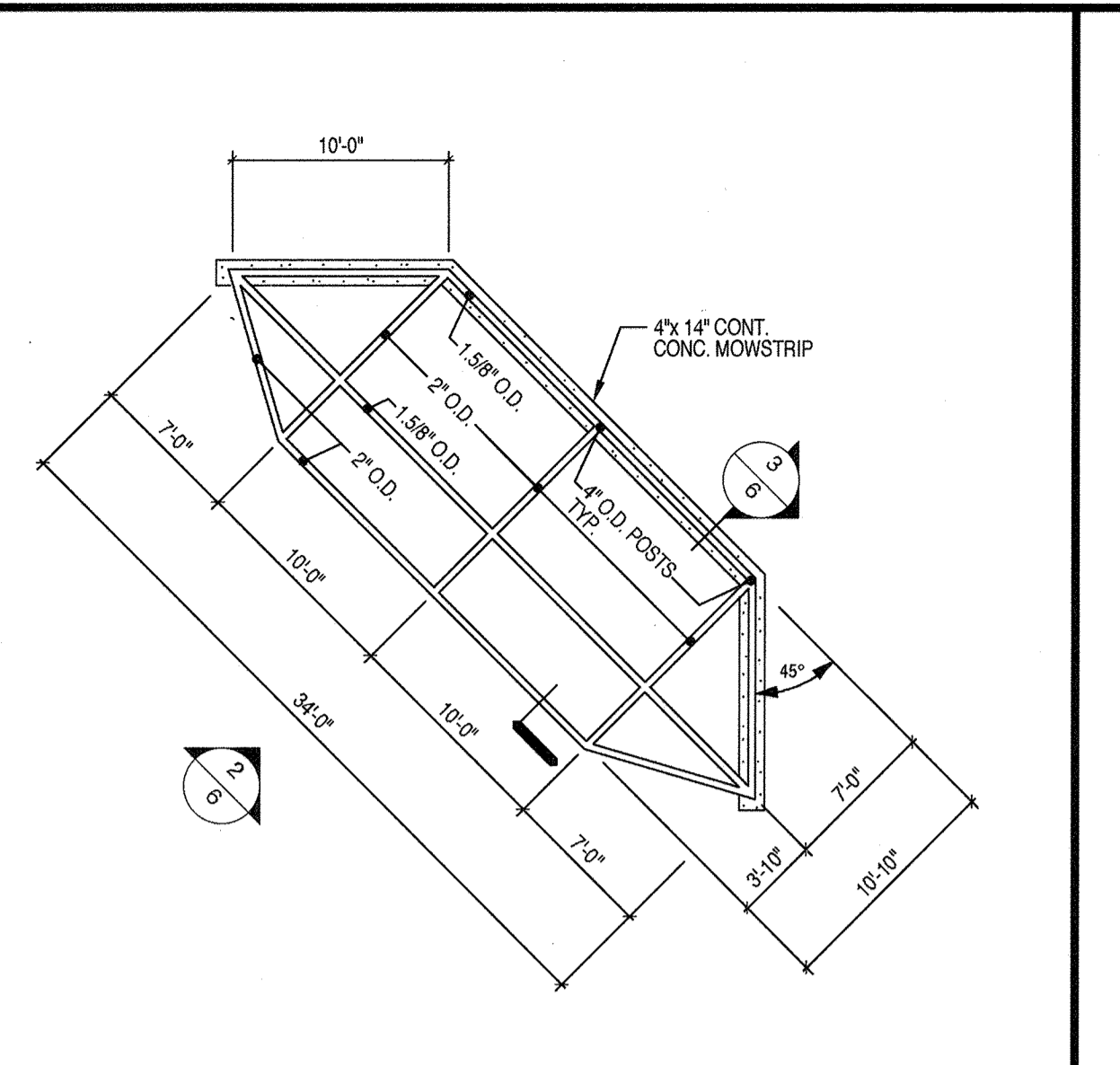
1" 7  
16 6 BACKBOARD DETAIL 1" 2



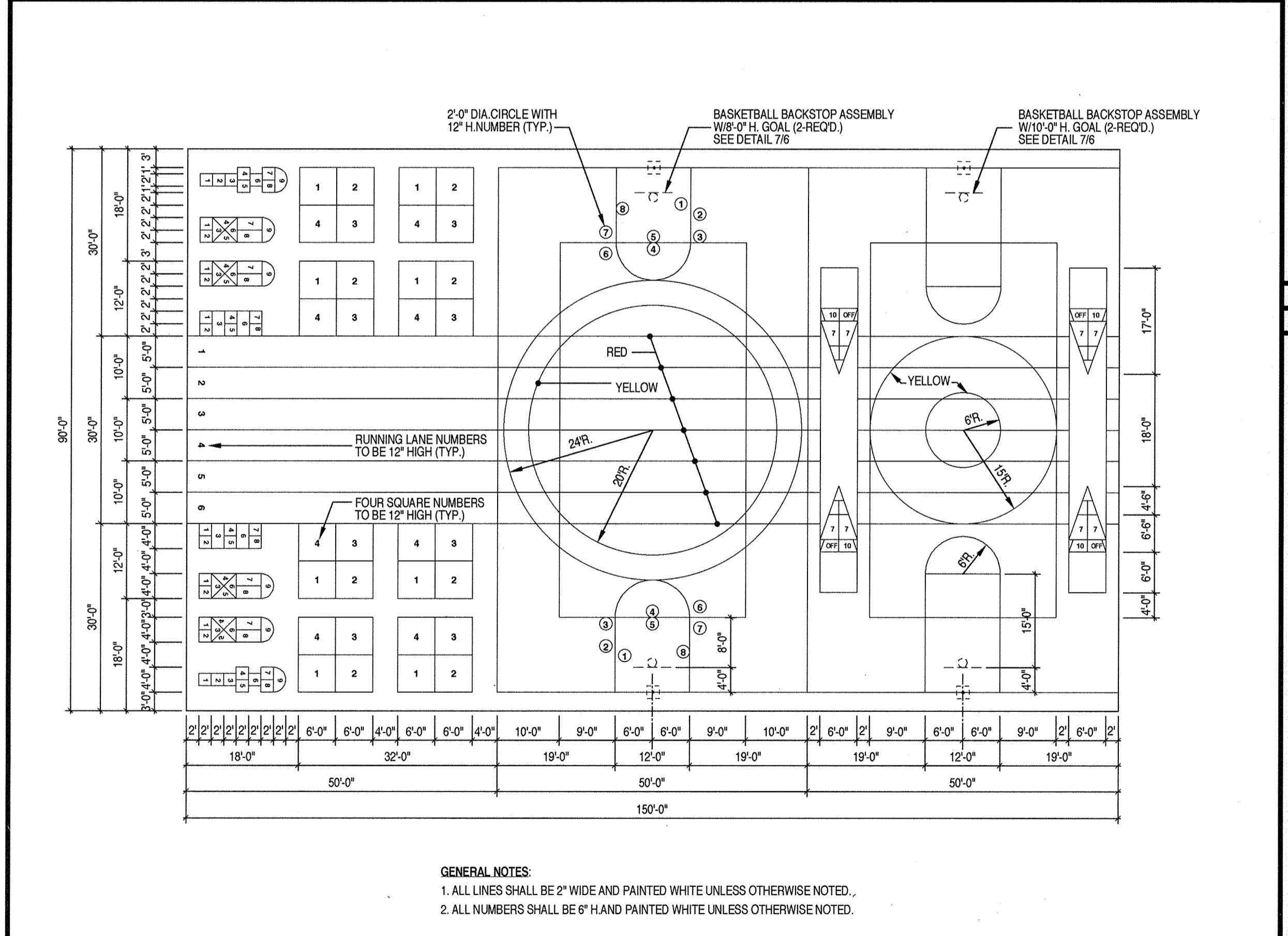
3  
6 SOFTBALL BACKSTOP SECTION 1" 8



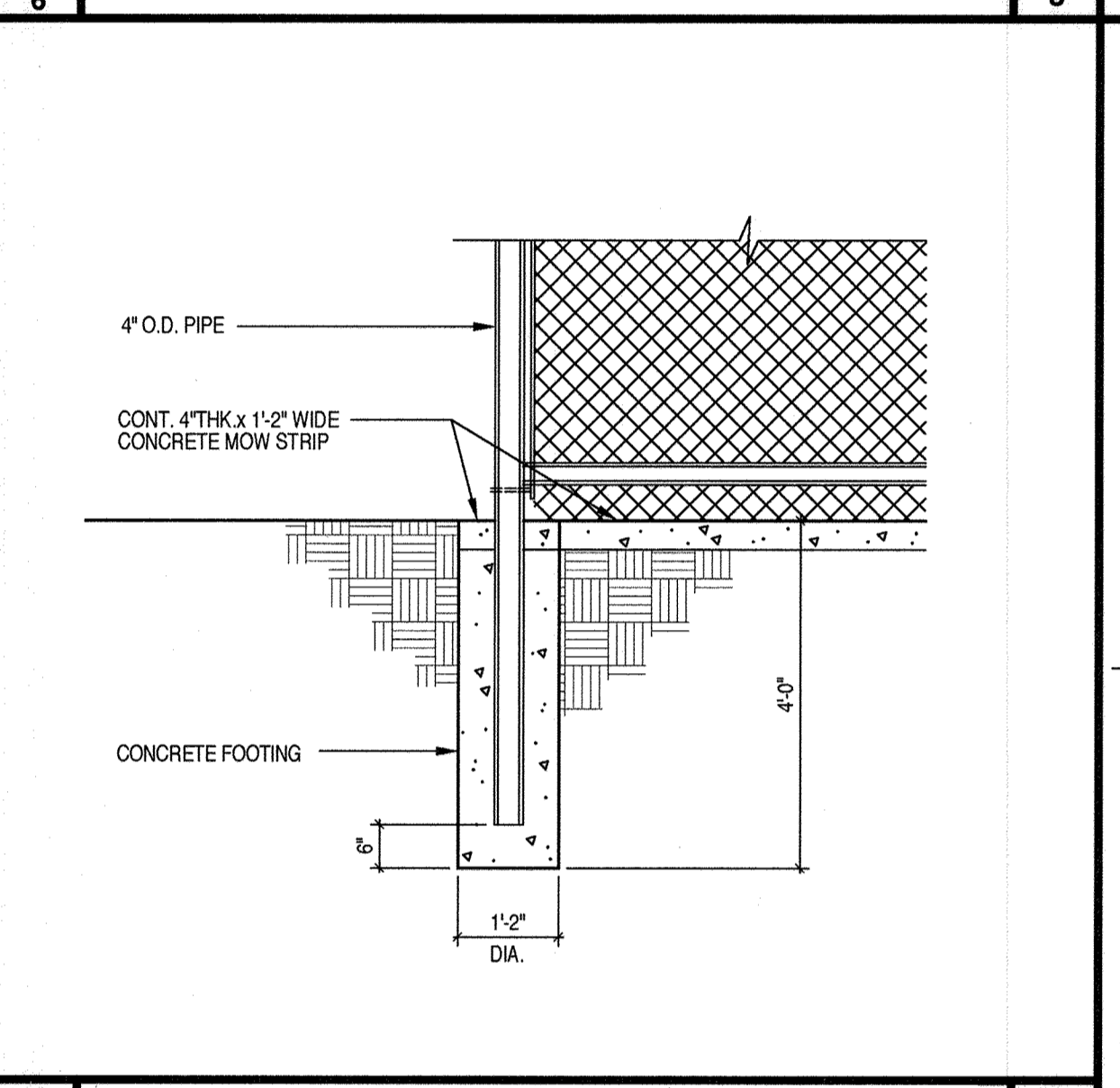
2  
6 SOFTBALL BACKSTOP ELEVATION 1" 8



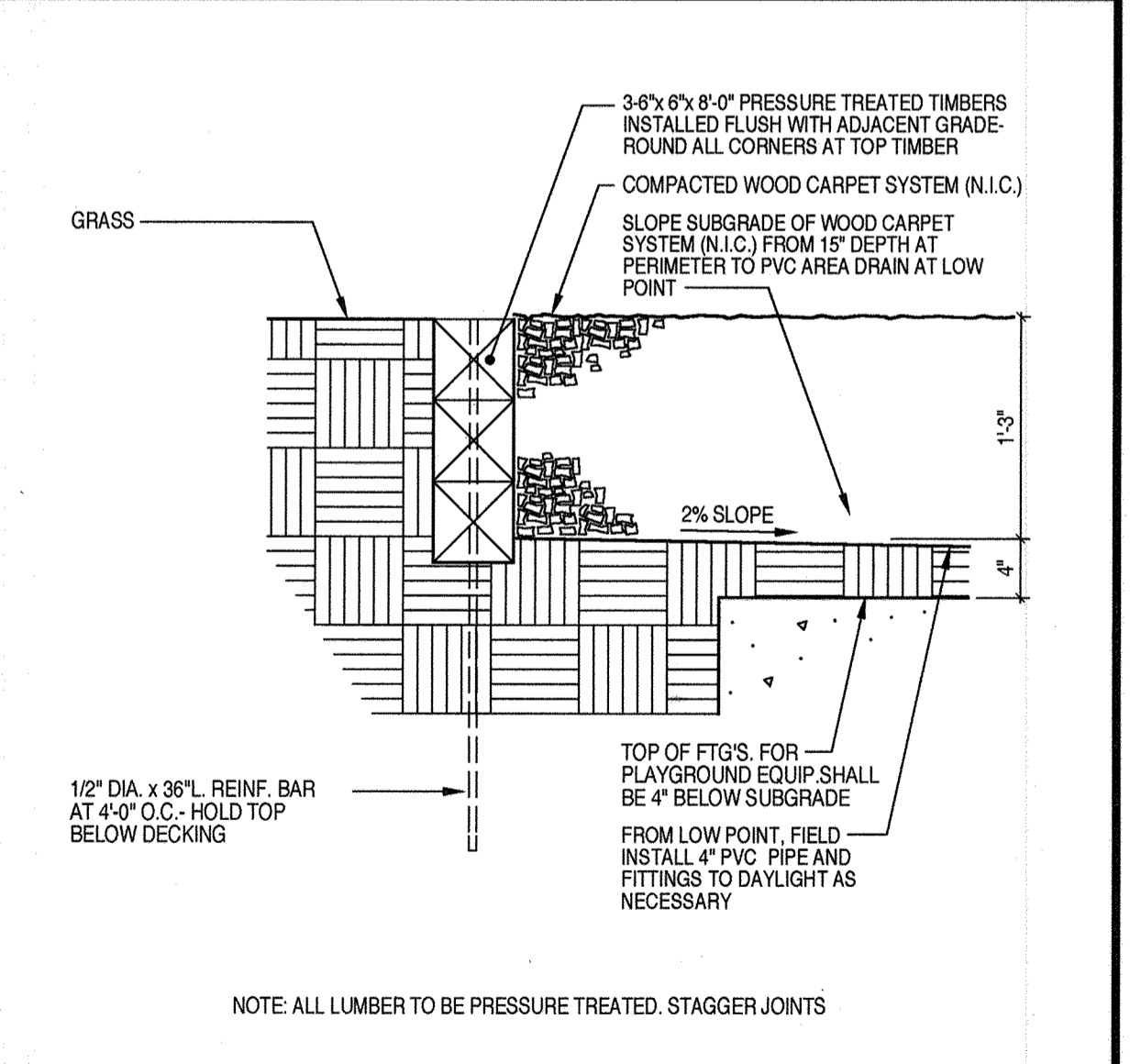
1  
6 SOFTBALL BACKSTOP PLAN 1" 8



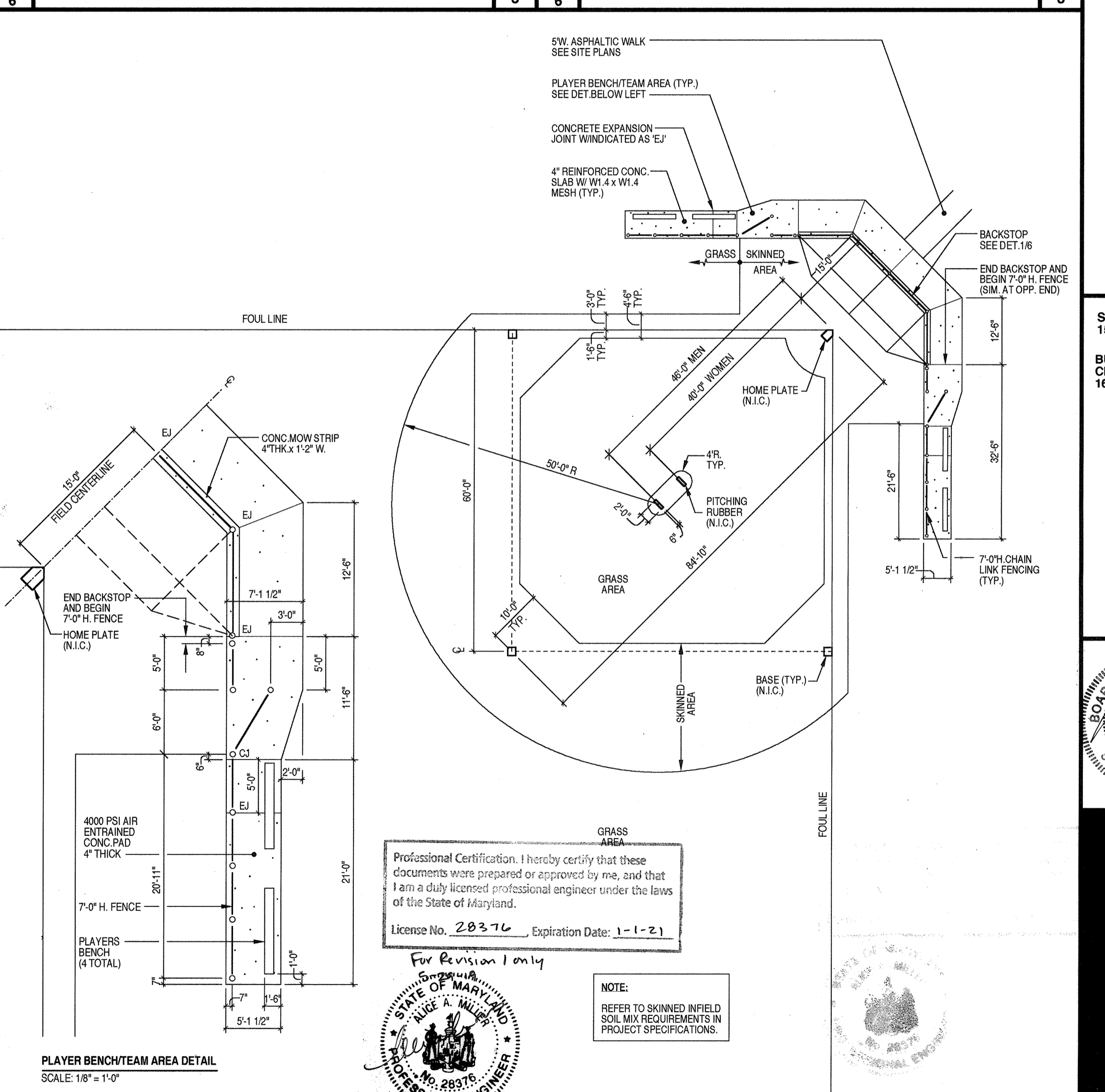
9  
6 PAVED PLAY AREA STRIPING DETAIL 1" 6  
16 6



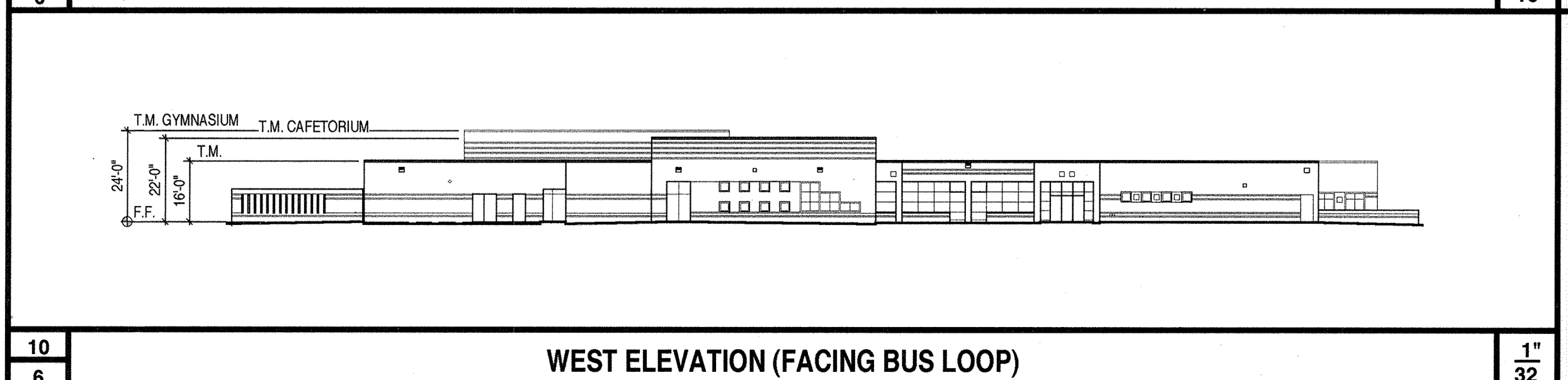
4  
6 BACKSTOP FOOTING DETAIL 1" 2



6  
6 PLAY AREA SURFACE/DRAINAGE DETAIL 1" 5  
16 6



6  
6 SOFTBALL FIELD DETAIL 1" 16



10  
6 WEST ELEVATION (FACING BUS LOOP) 1" 32

**tca architects**  
2861 RIVA ROAD, SUITE 120  
ANNAPOLIS, MARYLAND  
21401  
410-841-6205

**OWNER**  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 ROUTE 108  
ELICOTT CITY, MARYLAND 21043

Revision 1 5-29-19 Change Sheet Number

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director: *[Signature]* DATE: 3/6/12

Chief, Division of Land Development: *[Signature]* DATE: 3/7/12

Chief, Development Engineering Division: *[Signature]* DATE: 3/8/12

**SITE DETAILS**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP NO. 37 PARCEL NO. 670  
LIBER 2387 FOLIO 582  
1ST ELECTION DISTRICT: HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN

**NORTHEASTERN ELEMENTARY SCHOOL NO.4**  
Howard County, Maryland  
Howard County Public School System

SDP PERMIT  
15 OCTOBER 01

BUILDING PERMIT/  
CD REVIEW  
16 NOVEMBER 01

BOARD OF ARCHITECTS  
6149  
STATE OF MARYLAND

Annapolis, Maryland

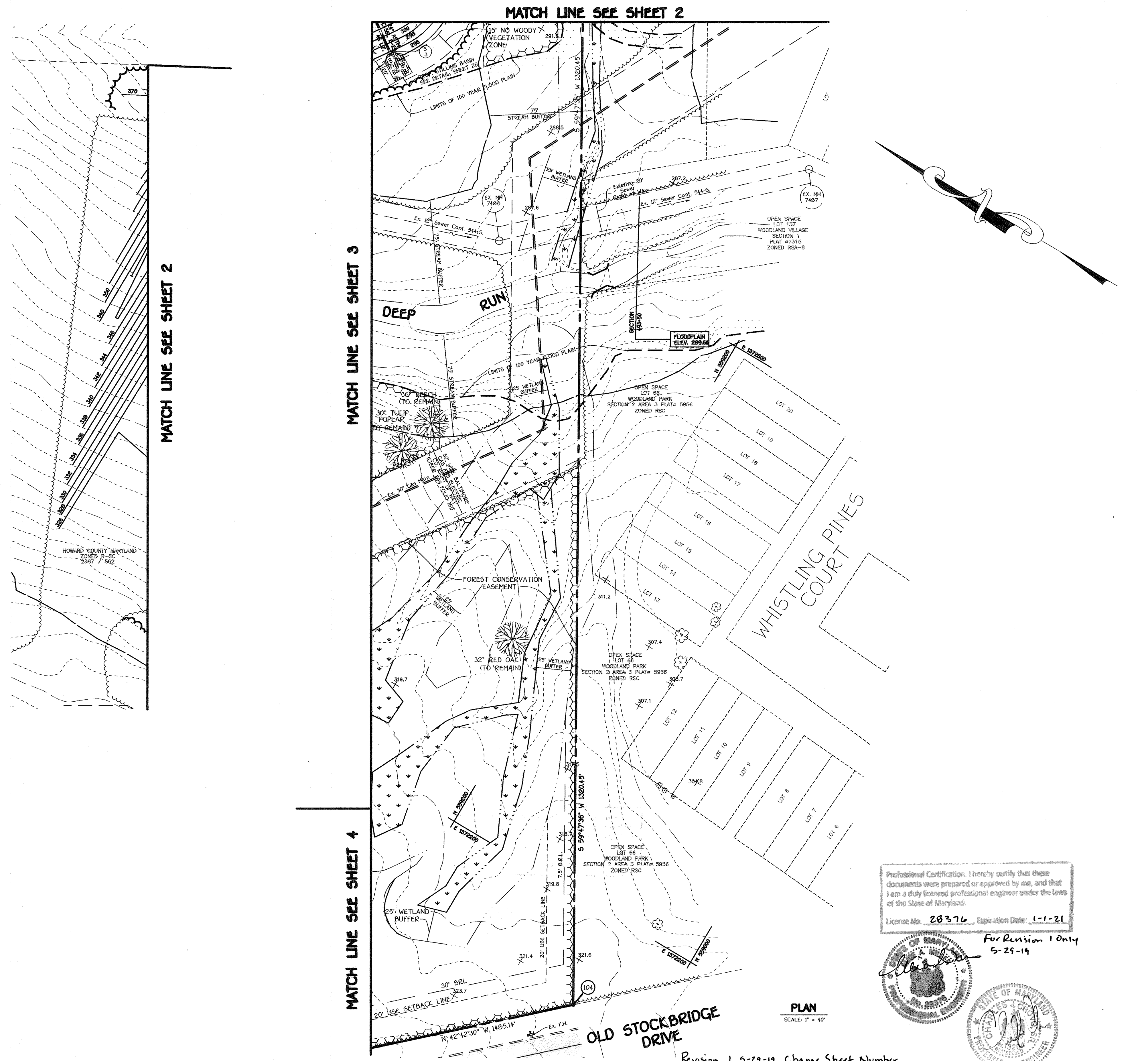
**tca architects**

BID & CONSTRUCTION  
14 JANUARY 02

6 of 56

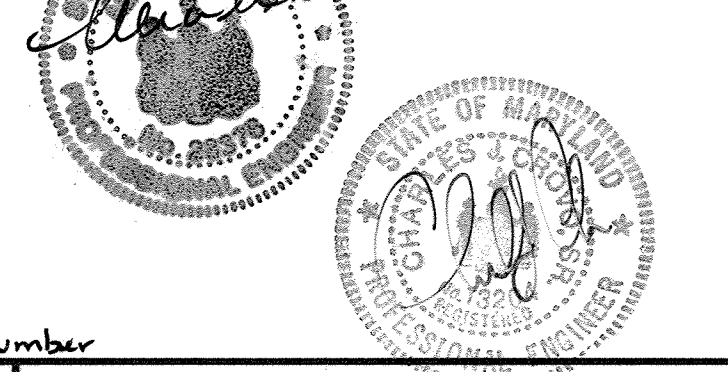
project no. 2002  
SDP 02-36





Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 28376, Expiration Date: 1-1-21

For Revision 1 Only  
 5-29-19

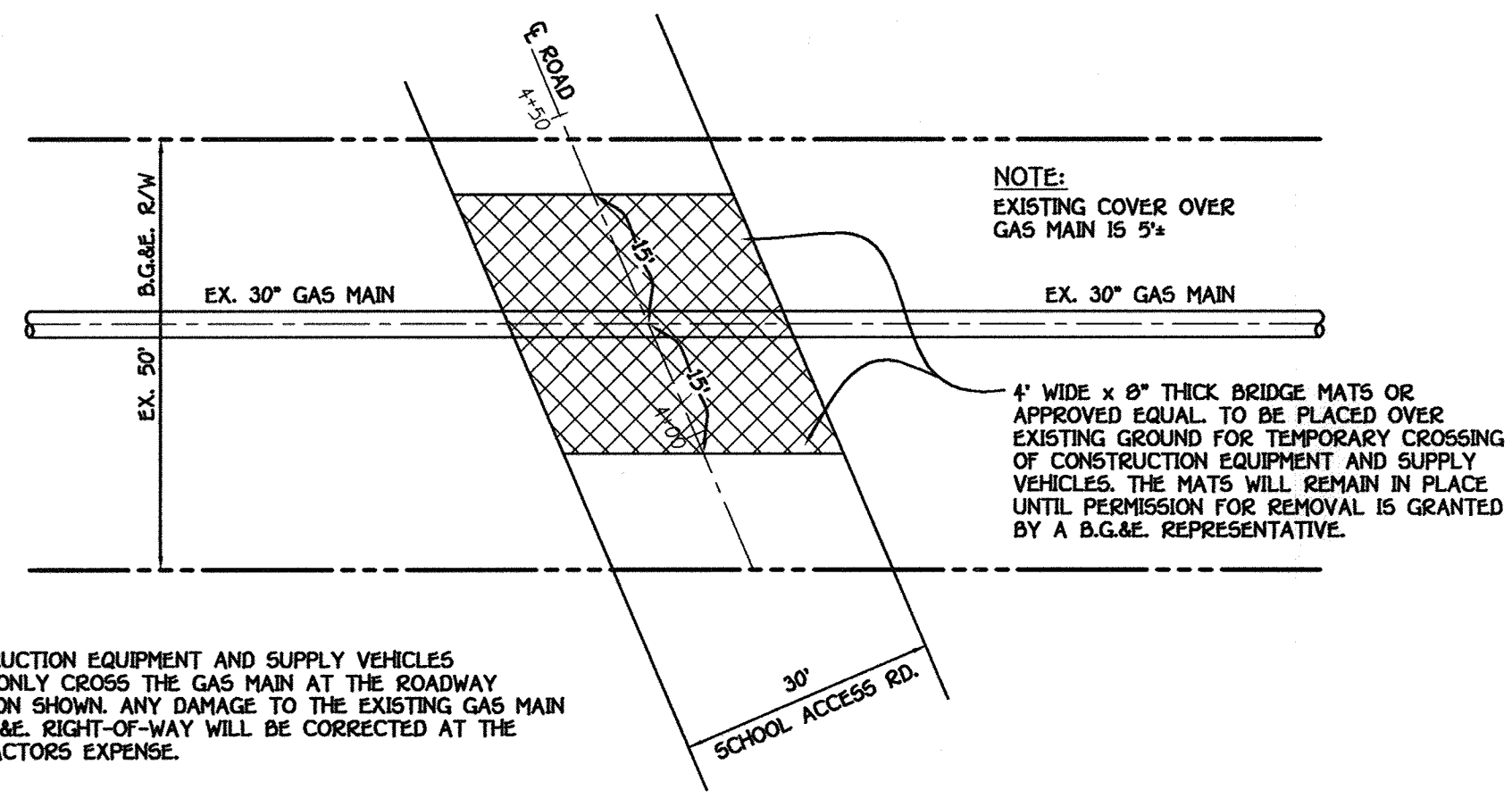
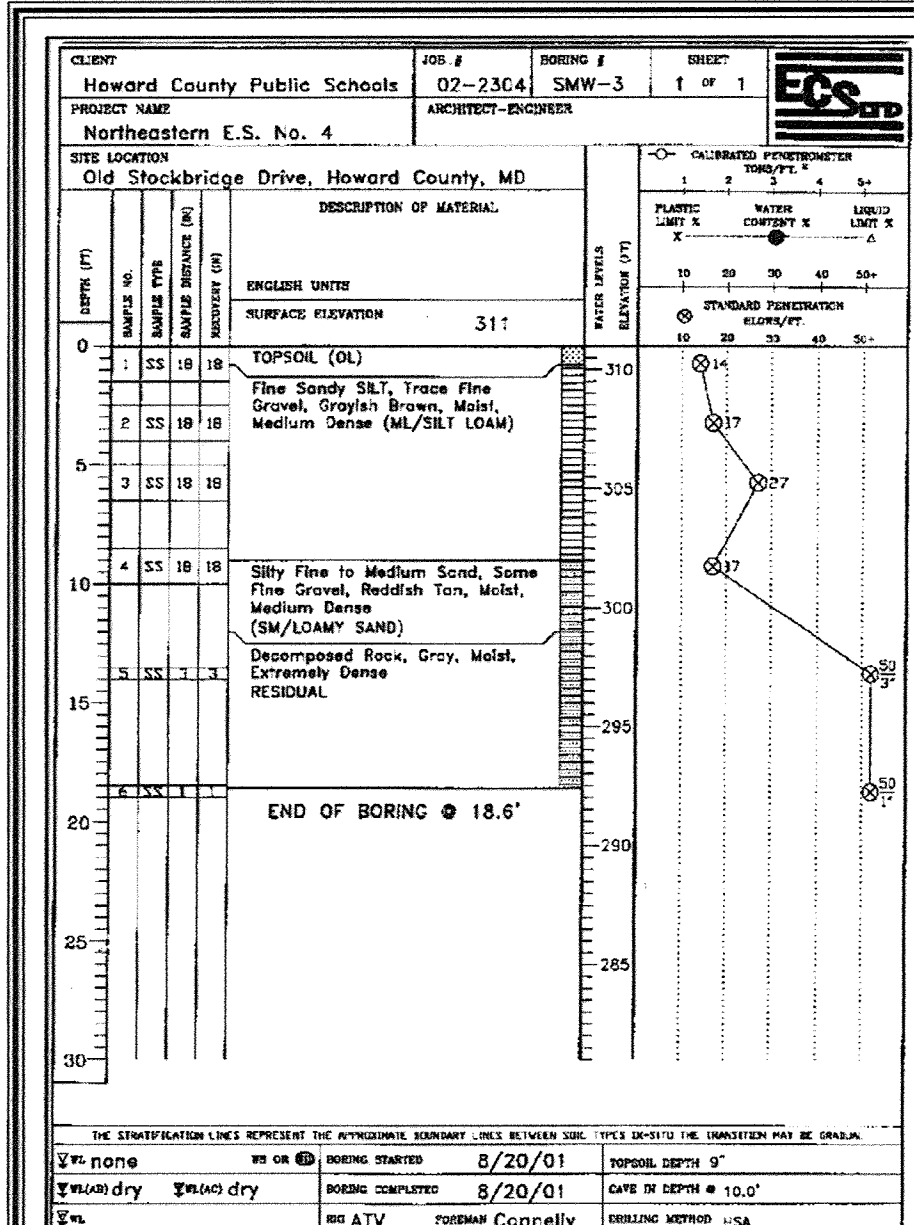


PLAN  
 SCALE 1" = 40'

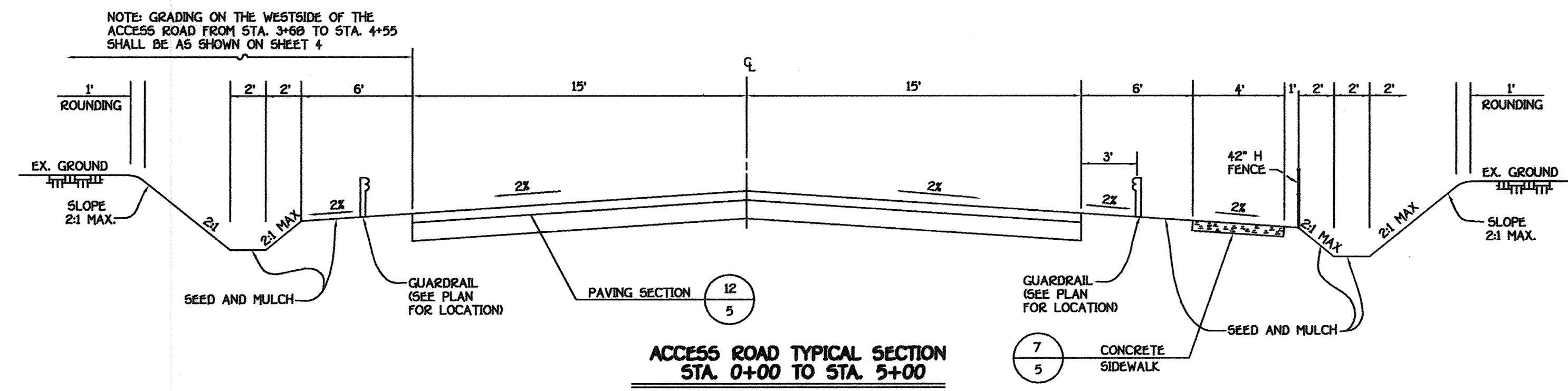
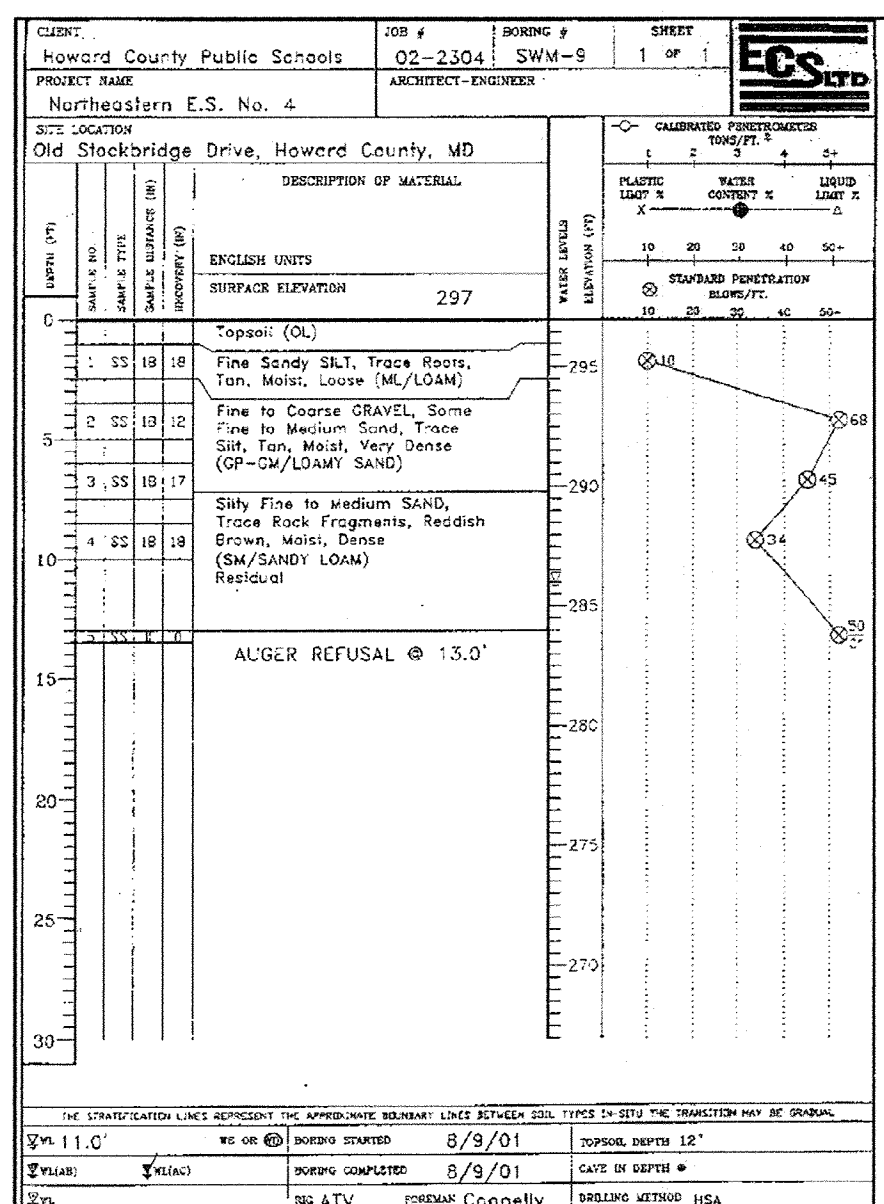
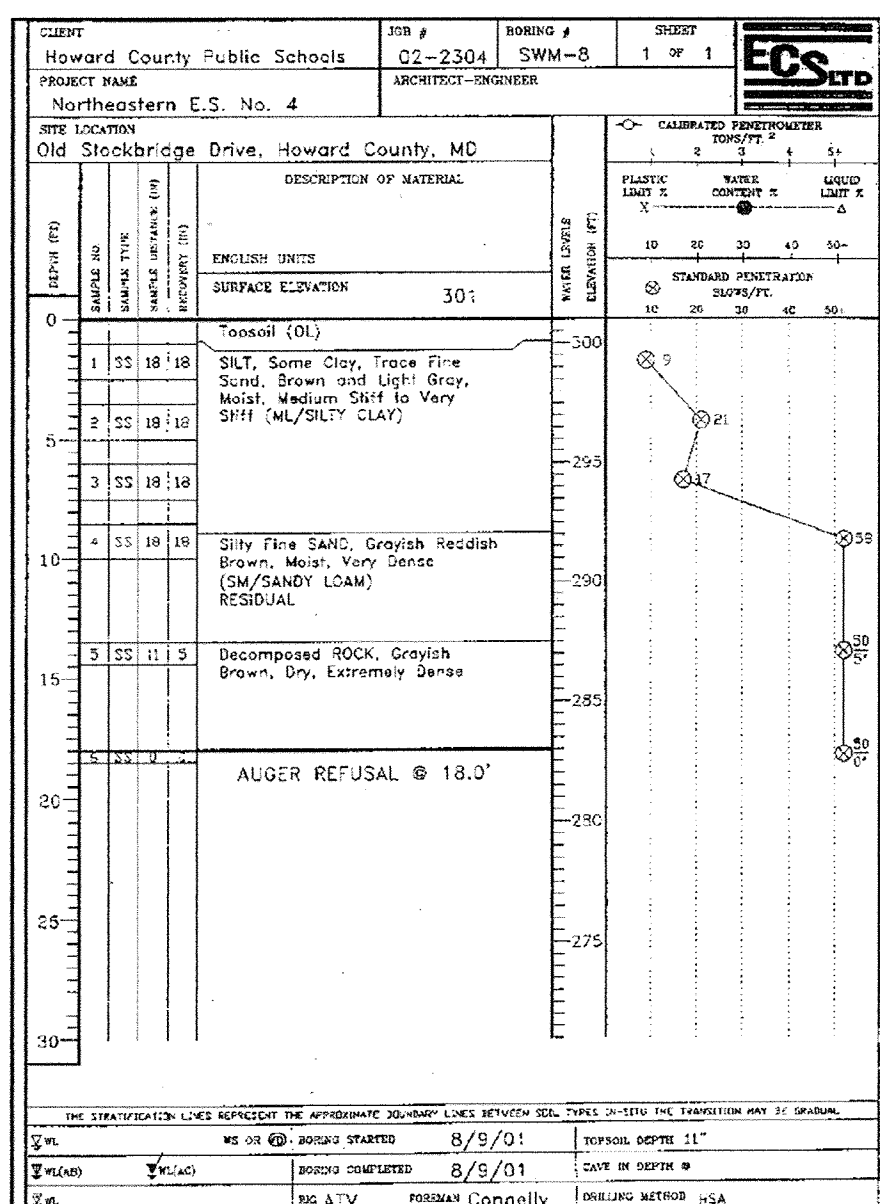
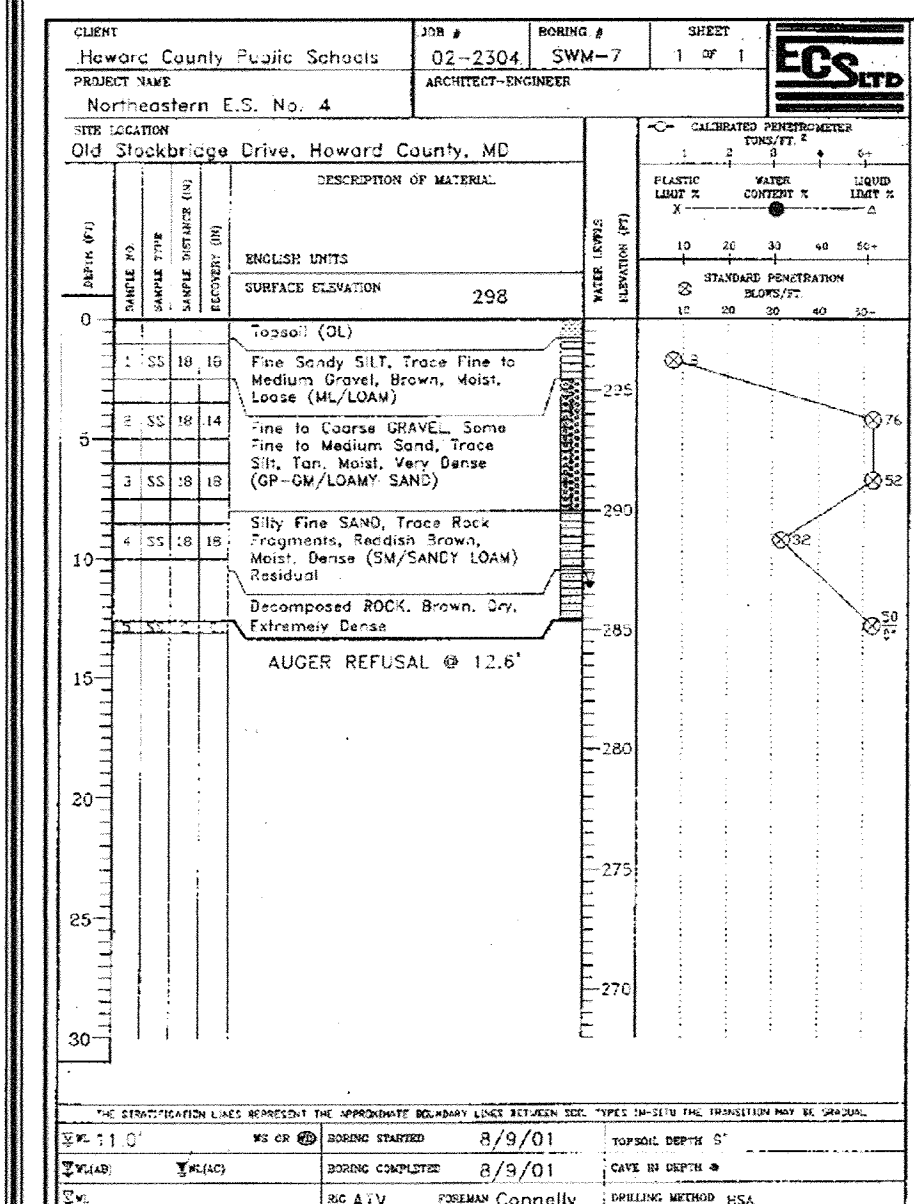
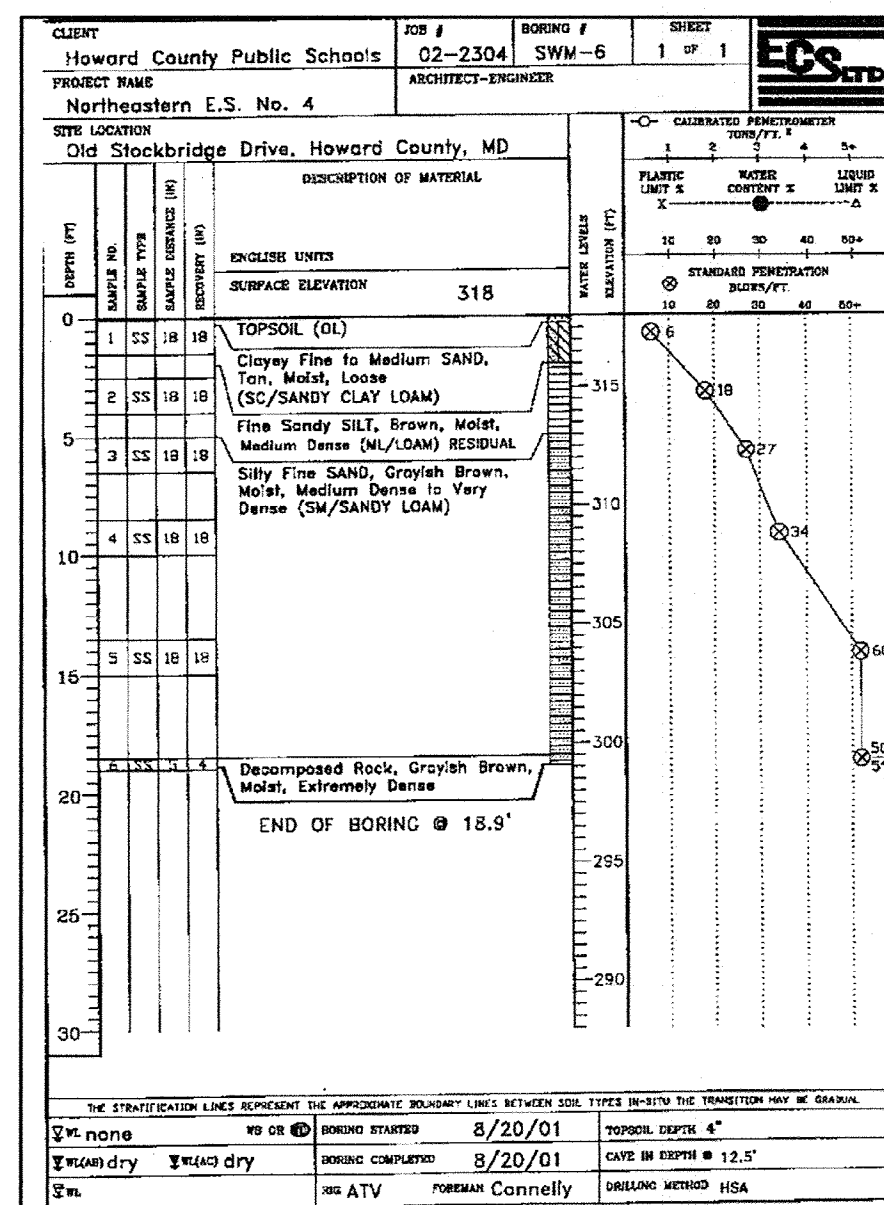
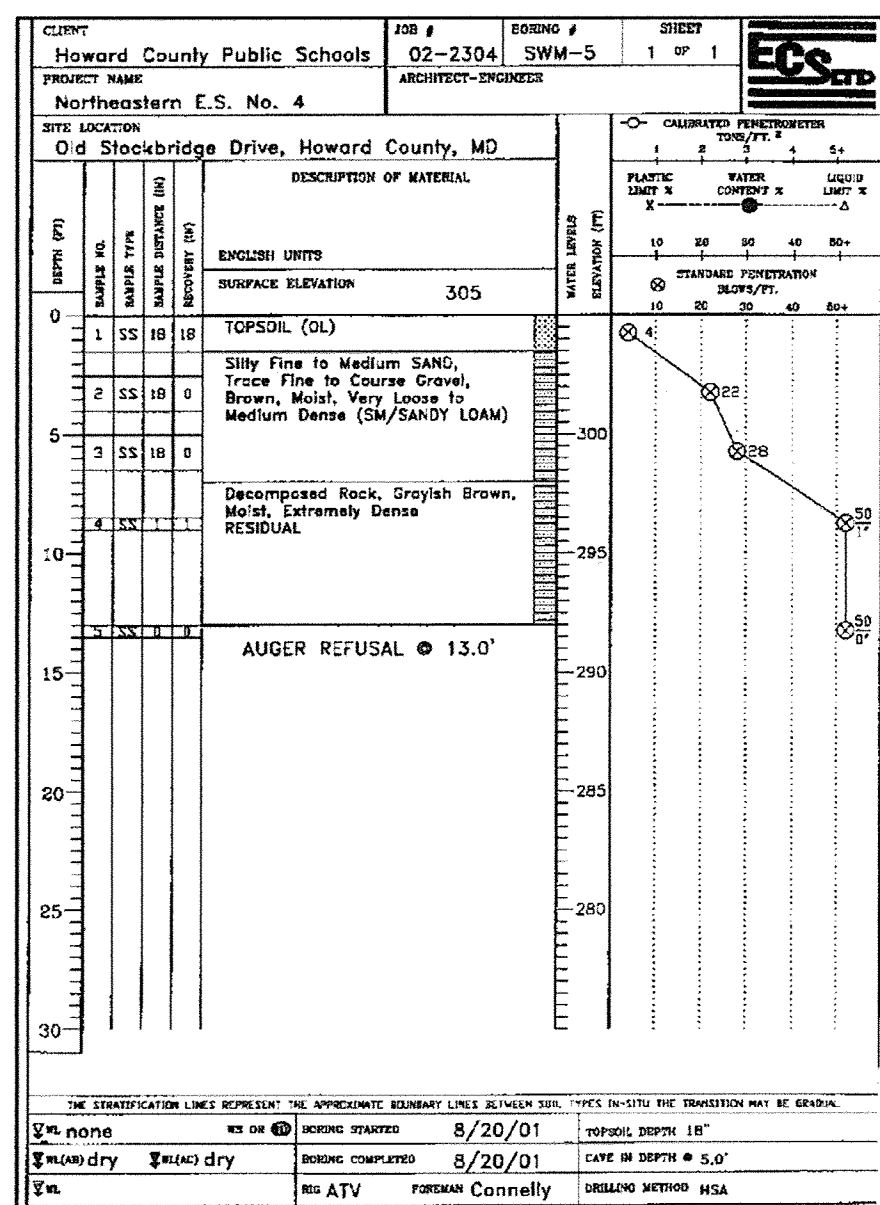
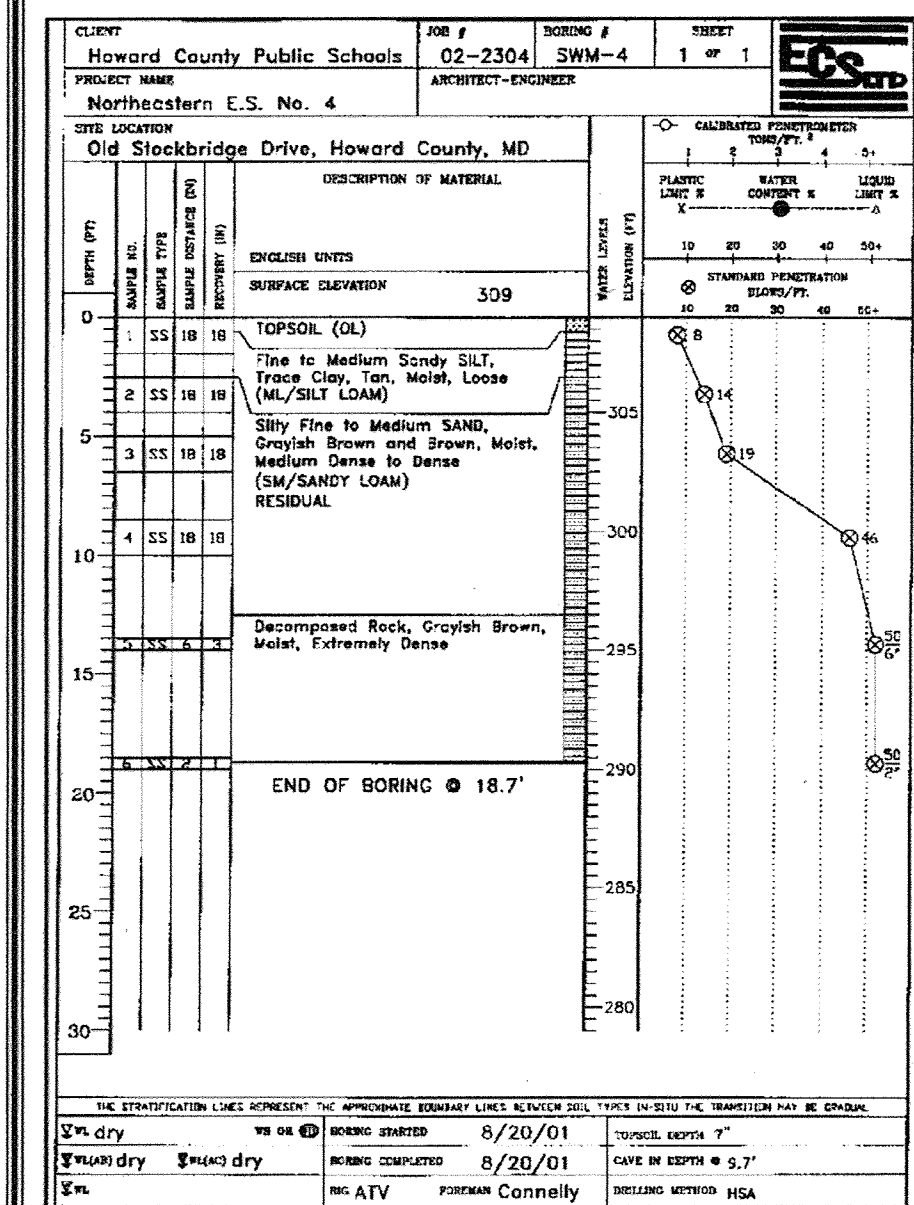
Revision 1 5-29-19 Change Sheet Number

<b>FISHER, COLLINS &amp; CARTER, INC.</b> CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PKWY ELICOTT CITY, MARYLAND 21042 (410) 481-2955	By The Engineer: I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. Signature Of Engineer: <i>[Signature]</i> Date: 2/21/02 <b>CHARLES J. CROVO SR.</b> Printed Name Of Engineer	By The Developer: I/We Certify That All Development And/Or Construction Will Be Done According To These Plans And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District. Signature Of Developer: <i>[Signature]</i> Date: 2/25/02 <b>DR. WILLIAM BROWN</b> Printed Name Of Developer	APPROVED: DEPARTMENT OF PLANNING AND ZONING <i>[Signature]</i> Date: 3/2/02 Director, Department of Planning and Zoning <i>[Signature]</i> Date: 3/1/02 Chief, Division of Land Development <i>[Signature]</i> Date: 3/5/02 Chief, Development Engineering Division	PREPARED FOR <b>HOWARD COUNTY PUBLIC SCHOOL SYSTEM</b> 10910 Maryland Route 108 Ellicott City, Maryland 21042 Attention Cathleen Young  THOMAS CLARK ASSOCIATES 2661 Riva Road, Suite 120 Annapolis Maryland 21401 301-261-0700	Address Chart <table border="1"> <tr> <th>Parcel Number</th> <th>Street Address</th> </tr> <tr> <td>670</td> <td>8125 Old Stockbridge Drive</td> </tr> </table>	Parcel Number	Street Address	670	8125 Old Stockbridge Drive	SITE DEVELOPMENT PLAN <b>NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)</b> TAX MAP No.: 37 PARCEL No.: 670 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: 15 OCTOBER 2001 BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01 "BID & CONSTRUCTION 02" 14 JANUARY 02" SHEET 7 OF 56
	Parcel Number	Street Address								
670	8125 Old Stockbridge Drive									
These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control. Signature: <i>[Signature]</i> Date: 2/27/02 USDA Natural Resources Conservation Service	These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District. Signature: <i>[Signature]</i> Date: 2/27/02 Howard Soil Conservation District	PROJECT: Northeastern Elementary School No. 4 DEED REF. 2387/562 BLOCK NO. 09 ZONE R-SC TAX/ZONE 37 ELEC. DIST. First CENSUS TR. 6011 WATER CODE D 05 SEWER CODE 2650000								

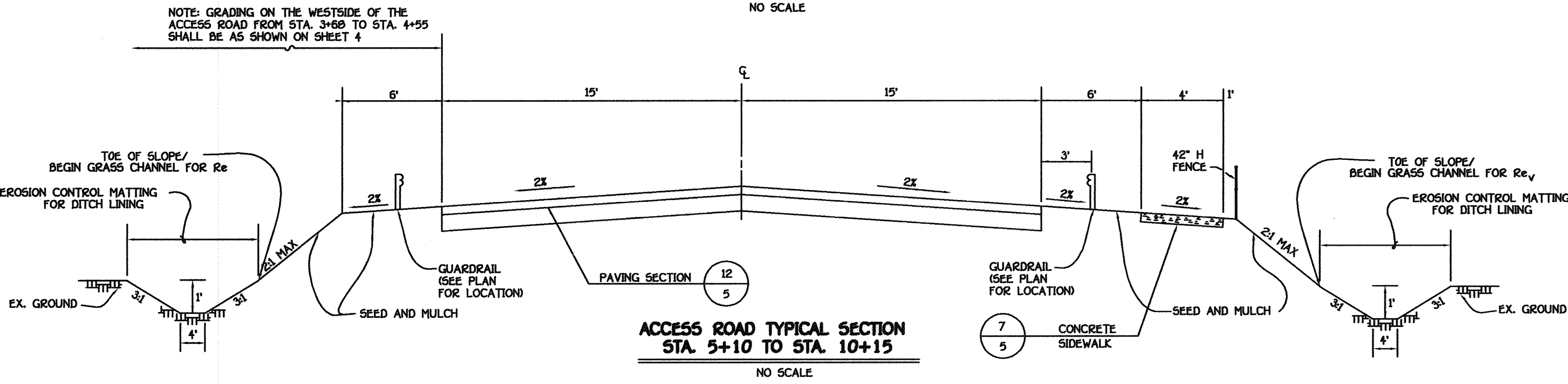




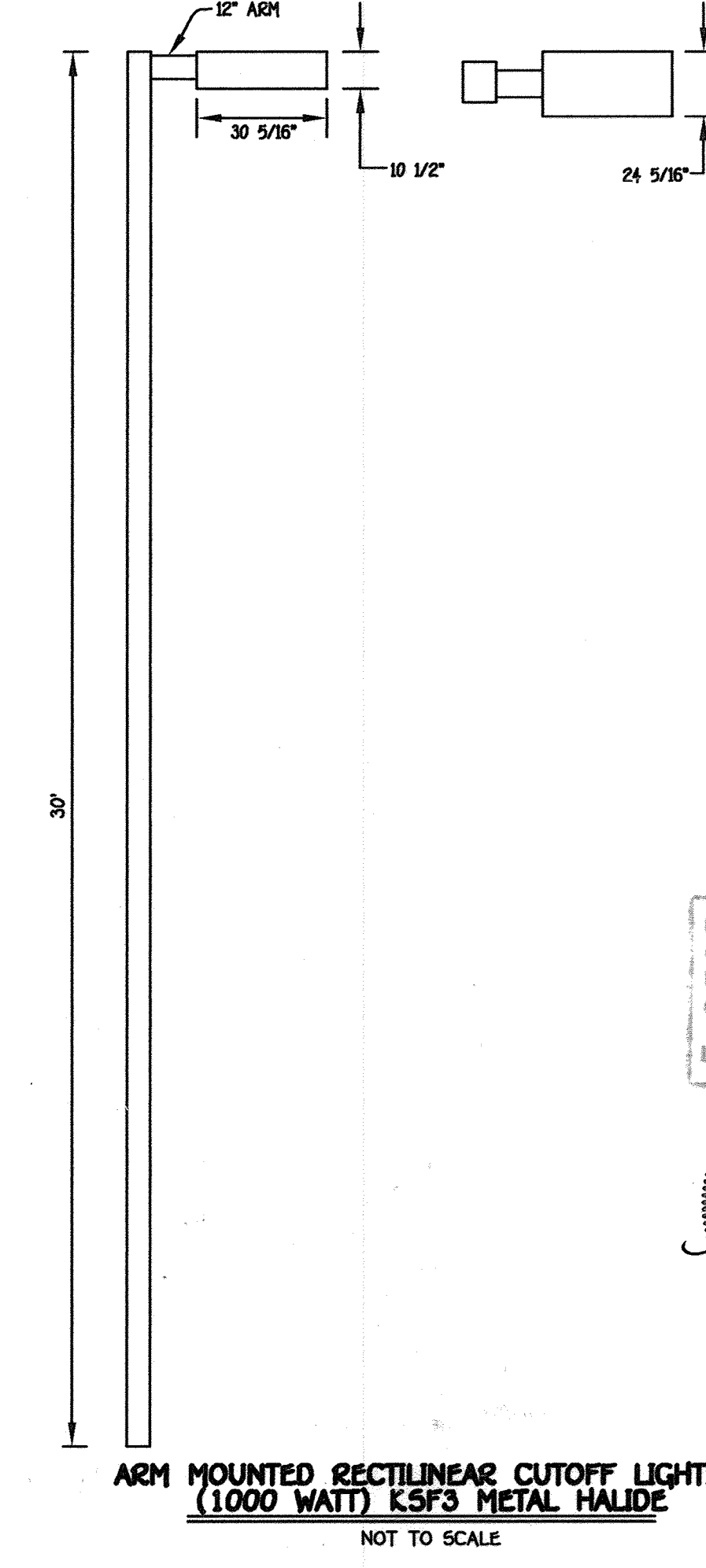
**TEMPORARY CROSSING DETAIL AT EXISTING 30" GAS MAIN**  
NOT TO SCALE



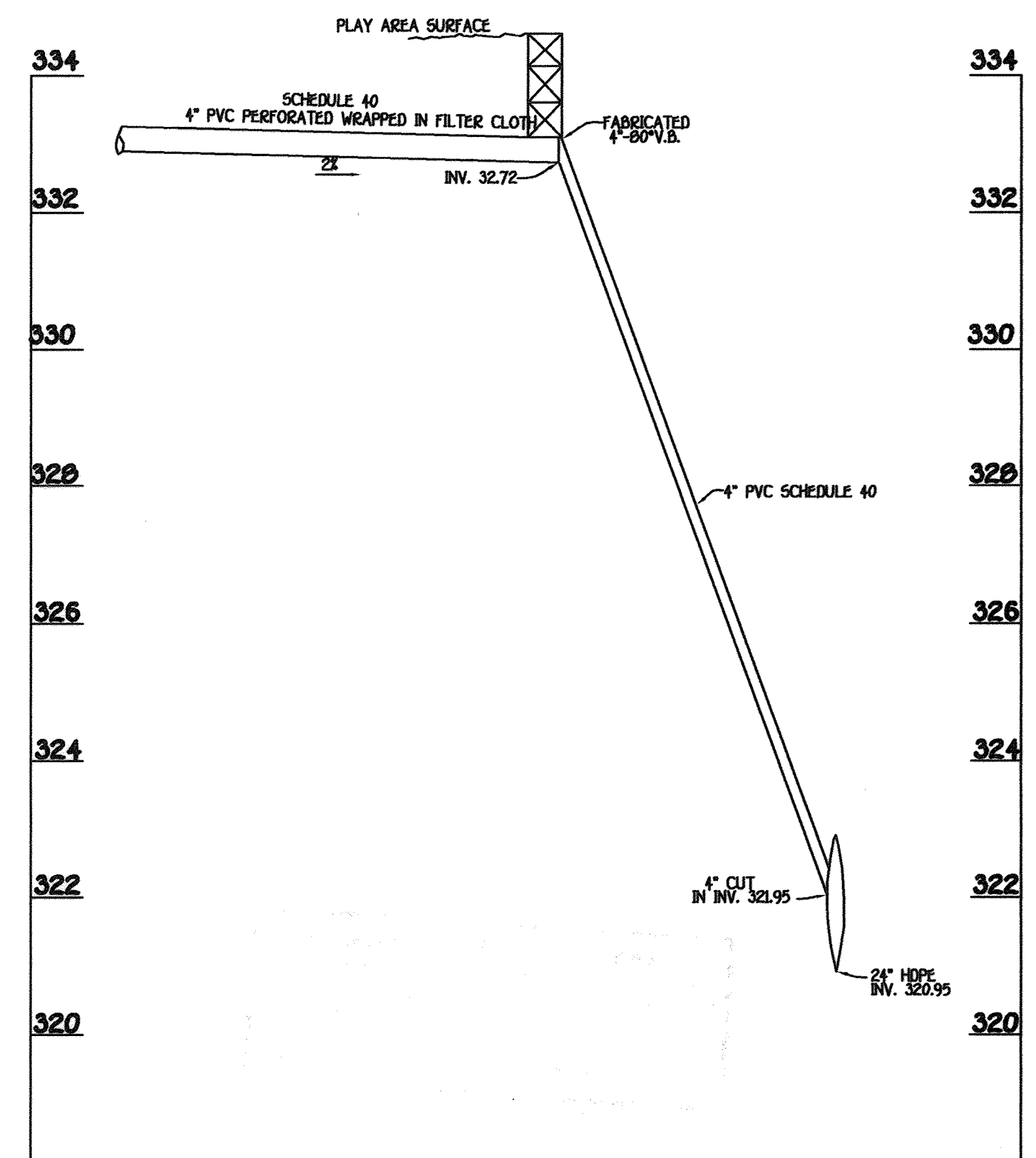
**ACCESS ROAD TYPICAL SECTION STA. 0+00 TO STA. 5+00**  
NO SCALE



**ACCESS ROAD TYPICAL SECTION STA. 5+10 TO STA. 10+15**  
NO SCALE



**ARM MOUNTED RECTILINEAR CUTOFF LIGHTING (1000 WATT) K5F3 METAL HALIDE**  
NOT TO SCALE



**4" PVC PROFILE @ PLAYAREA SURFACE**  
SCALE: 1" = 2' VERT  
SCALE: 1" = 2' HOR.

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 28376 Expiration Date 1-1-21  
For Reissuance Only 5-21-19



Revision 1 5-21-19 Change Street Number

**ENGINEER'S CERTIFICATE**

I hereby certify that this Plan for Erosion and Sediment Control Represents a Practical and Workable Plan Based on My Personal Knowledge of the Site Condition and That It Was Prepared in Accordance with the Requirements of The Howard Soil Conservation District.

Signature of Engineer: *Jim Myers* Date: 2/27/02

Reviewed For Howard County Soil Conservation District and Meets Technical Requirements: *Jim Myers* Date: 2/27/02

**DEVELOPER'S CERTIFICATE**

"I do Certify That All Development And Construction Will Be Done According To This Plan of Development And Plan for Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

Signature of Developer: *John R. Hunter* Date: 2/27/02

Approved This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District: *John R. Hunter* Date: 2/27/02

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director: *John R. Hunter* Date: 3/2/02  
Chief, Division of Land Development: *Andy Hamble* Date: 3/2/02  
Chief, Development Engineering Division: *John R. Hunter* Date: 3/5/02

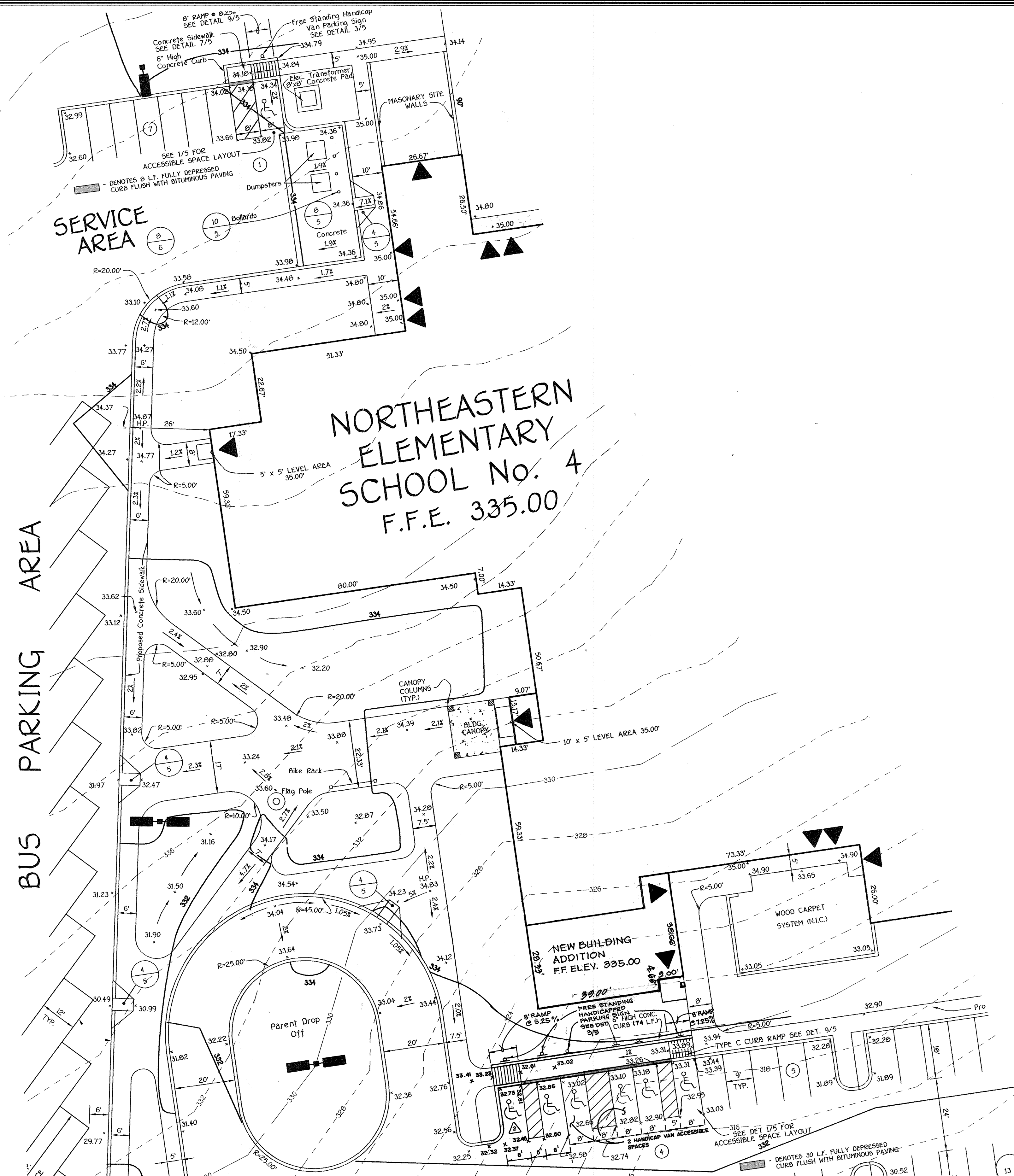
PREPARED FOR:  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 100  
Ellicott City, Maryland 21042  
Attention Cathleen Young

THOMAS CLARK ASSOCIATES  
2661 Riva Road, Suite 120  
Annapolis Maryland 21401  
301-261-8700

Address Chart	
Parcel Number	Street Address
670	8125 Old Stockbridge Drive
PROJECT	SECTION/AREA
Northeastern Elementary School No. 4	
DEED REF.	BLOCK NO.
2387/562	8,9
WATER CODE	SEWER CODE
D 05	2650000

DETAIL SHEET AND BORING LOGS	
<b>NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)</b>	
TAX MAP No.: 37	PARCEL No.: 670
FIRST ELECTION DISTRICT	HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN	DATE: 15 OCTOBER 2001
BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01	"BID & CONSTRUCTION 14 JANUARY 02"
SHEET 8 OF 56	





**CONSTRUCTION SEQUENCE FOR CLASSROOM ADDITION**

1. Obtain grading permit
2. Notify "Miss Utility" at least 48 hours before beginning any work at 1-800-257-7777. Notify the Howard County Office of Construction/Inspection at 410-313-1330, 24 hours before starting work.
3. Install sediment control measures shown on the plan 1 week
4. Grade to subgrade classroom addition area.
5. Construct classroom addition: 9 months.
6. Fine grade disturbed areas and stabilize with permanent seeding.
7. Notify Howard County Office of Construction/Inspection for permission for removal of sediment control measures and stabilize disturbed areas with permanent seeding.

NO	REVISION	DATE
3	Revised Sheet Number	5-29-19
2	Added 2 Handicap Spaces And Revised Sidewalk Ramp	12-1-09
1	Added building addition	10-19-07

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 20376 Expiration Date: 1-1-21  
 For Revision Only 5-29-19



**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21114  
 (410) 461-2955

**ENGINEER'S CERTIFICATE**  
 I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site condition and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 Signature of Engineer: *[Signature]* Date: 2/27/02  
 Reviewed For Howard County Soil Conservation District And Meets Technical Requirements:  
 Signature: *[Signature]* Date: 2/27/02  
 U.S.D.A. Natural Resources Conservation Service

**DEVELOPER'S CERTIFICATE**  
 I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a certificate of attendance at a department of natural resources approved training program for the control of sediment and erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.  
 Signature of Developer: *[Signature]* Date: 2/27/02  
 Approved This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District:  
 Signature: *[Signature]* Date: 2/27/02  
 District: Howard Soil Conservation District

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Director: *[Signature]* Date: 3/8/02  
 Chief, Division of Planning and Zoning  
 Chief, Division of Land Development: *[Signature]* Date: 3/7/02  
 Chief, Development Engineering Division: *[Signature]* Date: 3/5/02

PREPARED FOR  
**HOWARD COUNTY PUBLIC SCHOOL SYSTEM**  
 10910 Maryland Route 108  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young  
 THOMAS CLARK ASSOCIATES  
 2661 Riva Road, Suite 120  
 Annapolis Maryland 21401  
 301-261-8700

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

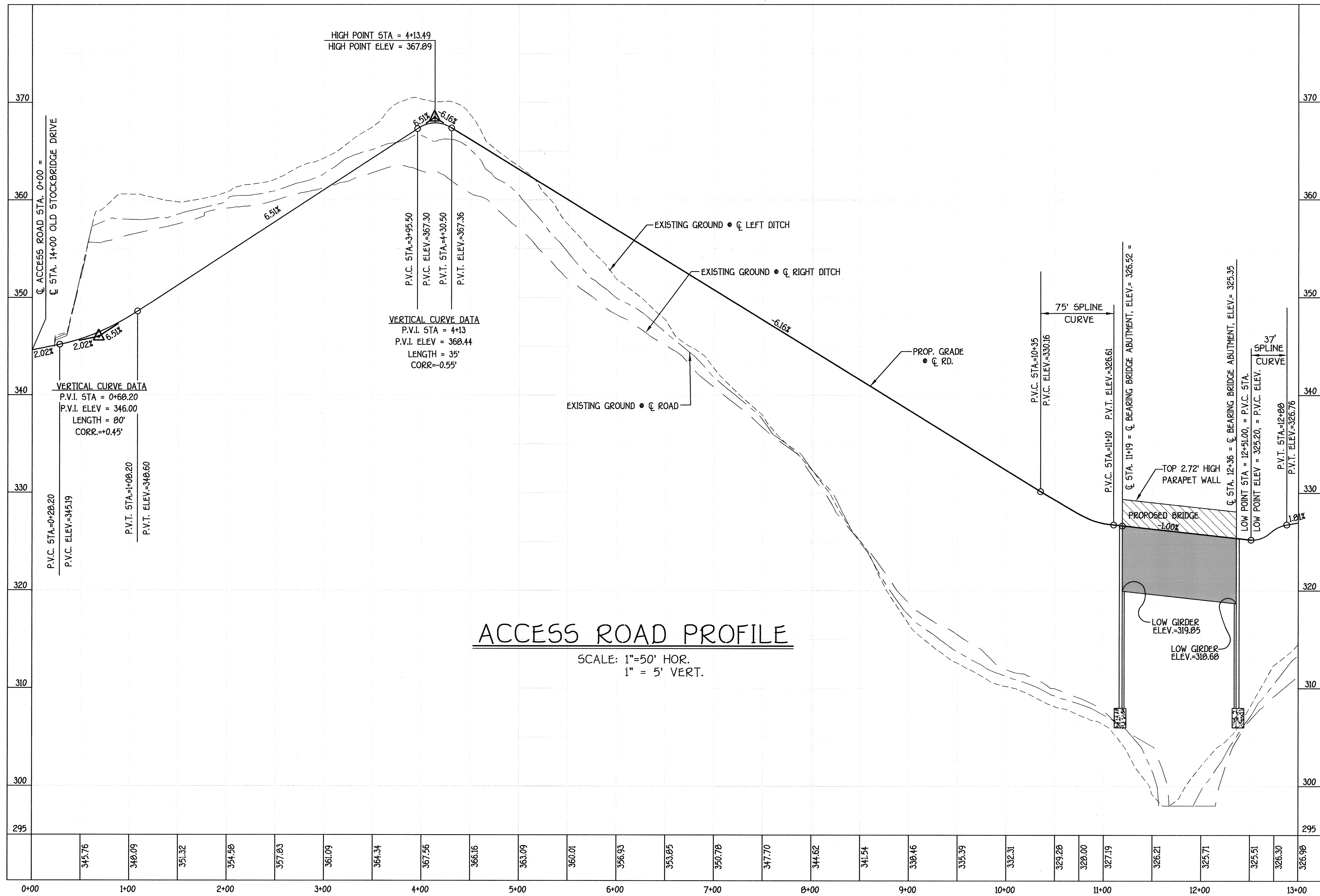
PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2307/562	8,9	R-5C	37	First	6011

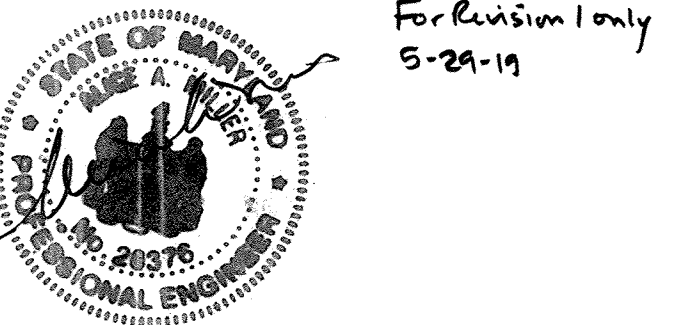
WATER CODE	SEWER CODE
D 05	2650000

**HANDICAPPED PLAN**  
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**  
 TAX MAP No.: 37 PARCEL No.: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 20' DATE: 15 OCTOBER 2001  
 BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
 "BID & CONSTRUCTION"  
 14 JANUARY 02"  
 SHEET 9 OF 56

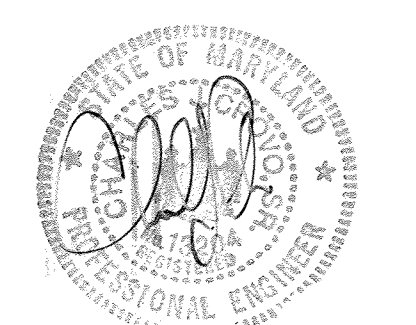




Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 20376 Expiration Date 1-1-21



For Revision 1 only  
5-29-19



**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 18772 BALTIMORE NATIONAL PRZ  
ELICOTT CITY, MARYLAND 21042  
(410) 461-2955

**ENGINEER'S CERTIFICATE**  
I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
Signature of Engineer: *[Signature]* Date: 2/21/02

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.  
Signature: *[Signature]* Date: 2/27/02

**DEVELOPER'S CERTIFICATE**  
I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a certificate of attendance at a department of natural resources approved training program for the control of sediment and erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.  
Signature of Developer: *[Signature]* Date: 2/25/02

Approved This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.  
Signature: *[Signature]* Date: 2/12/02

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Director: *[Signature]* Date: 3/8/02  
Chief, Division of Land Development: *[Signature]* Date: 3/7/02  
Chief, Development Engineering Division: *[Signature]* Date: 3/5/02

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young

THOMAS CLARK ASSOCIATES  
2661 Riva Road, Suite 120  
Annapolis Maryland 21401  
301-261-8700

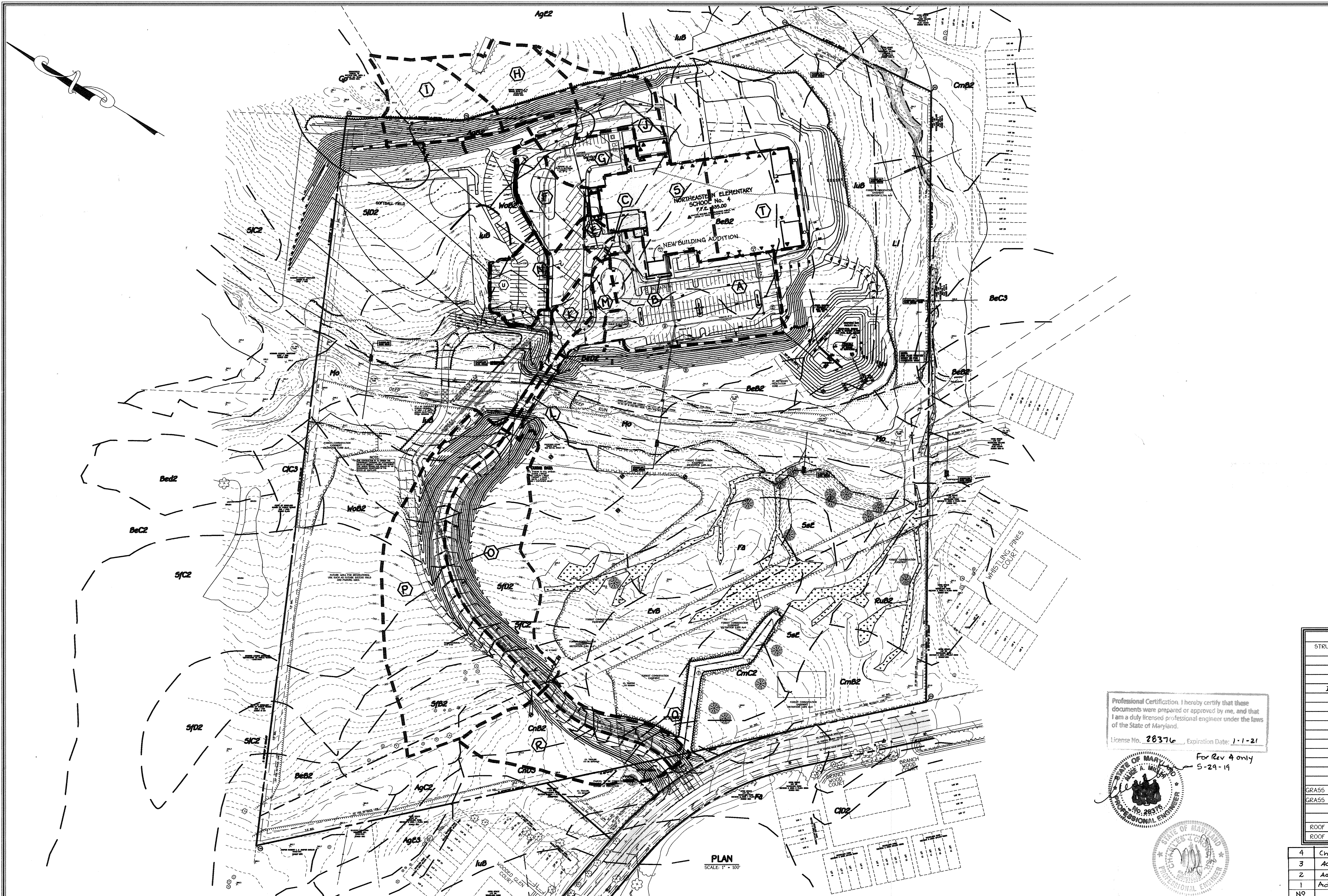
Revision 1 5-29-19 Change Sheet Number

Address Chart					
Parcel Number	Street Address				
670	8125 Old Stockbridge Drive				
PROJECT					
Northeastern Elementary School No. 4					
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	8,9	R-SC	37	First	6011
WATER CODE		SEWER CODE			
D 05		2650000			

**ACCESS ROAD PROFILE**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**  
TAX MAP No.: 37 PARCEL No.: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
"BID & CONSTRUCTION"  
14 JANUARY 02"  
SHEET 10 OF 56





SOILS LEGEND		
Soil Type	Description	Soil Group
AgB2	Aurá gravelly loam, 1 to 5 percent slopes, moderately eroded	B
AgC3	Aurá gravelly loam, 10 to 30 percent slopes, severely eroded	B
BeB2	Beltville silt loam, 1 to 5 percent slopes, moderately eroded	C
BeC2	Beltville silt loam, 5 to 10 percent slopes, moderately eroded	C
** BeC3	Beltville silt loam, 5 to 10 percent slopes, severely eroded	C
BeD2	Beltville silt loam, 10 to 15 percent slopes, moderately eroded	C
CIC3	Chilum gravelly loam, 5 to 10 percent slopes, severely eroded	C
CID2	Chilum gravelly loam, 10 to 15 percent slopes, moderately eroded	C
CnB2	Chilum silt loam, 1 to 5 percent slopes, moderately eroded	B
CnD2	Chilum-Fairfax loams, 1 to 5 percent slopes, moderately eroded	C
CnD3	Chilum-Fairfax loams, 5 to 15 percent slopes, severely eroded	C
EvB	Evesboro loamy sand, 1 to 5 percent slopes,	A
Fa	Fallsington loam	D
Gp	Gravel pits and quarries	C
luB	luka loam, local alluvium, 1 to 5 percent slopes	C
** LI	Leonardtown silt loam	D
Mo	Mixed alluvial sand	C
RuB2	Rumford loamy sand, 1 to 5 percent slopes, moderately eroded	B
SfB2	Sassafras gravelly sandy loam, 1 to 5 percent slopes, moderately eroded	B
SfC2	Sassafras gravelly sandy loam, 1 to 5 percent slopes, moderately eroded	B
SfC3	Sassafras gravelly sandy loam, 5 to 10 percent slopes, moderately eroded	B
SfD2	Sassafras gravelly sandy loam, 10 to 15 percent slopes, moderately eroded	B
SK2	Sassafras loam, 5 to 10 percent slopes, moderately eroded	B
SD2	Sassafras loam, 10 to 15 percent slopes, moderately eroded	B
SoE	Sassafras soils, 15 to 40 percent slopes	B
WoB2	Woodstown sandy loam, 1 to 5 percent slopes, moderately eroded	C

DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	'C'	ZONED	% IMP.
I-1	A	1.56 AC.	0.92	R5C	95%
I-2	B	0.06 AC.	0.25	R5C	0%
I-3	C	0.05 AC.	0.55	R5C	43%
I-16	U	0.41 AC.	0.83	R5C	95%
I-5	E	0.09 AC.	0.84	R5C	85%
I-6	F	0.52 AC.	0.72	R5C	67%
I-7	G	0.47 AC.	0.78	R5C	74%
I-8	H	0.74 AC.	0.28	R5C	5%
I-9	I	0.85 AC.	0.25	R5C	0%
I-10	J	0.74 AC.	0.26	R5C	2%
I-11	K	0.24 AC.	0.85	R5C	85%
I-11A	L	0.09 AC.	0.77	R5C	74%
I-12	M	0.25 AC.	0.84	R5C	84%
I-13	N	0.42 AC.	0.60	R5C	50%
GRASS CHANNEL	O	1.71 AC.	0.30	R5C	18%
GRASS CHANNEL	P	2.81 AC.	0.28	R5C	11%
I-14	Q	0.33 AC.	0.56	R5C	44%
I-15	R	1.09 AC.	0.32	R5C	11%
ROOF LEADER	S	0.92 AC.	0.95	R5C	100%
ROOF LEADER	T	0.92 AC.	0.95	R5C	100%

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 28376, Expiration Date: 1-1-21



For Rev 4 only  
5-29-19

REVISIONS		
NO	REVISIONS	DATE
4	Changed Sheet Number	5/29/19
3	Added Roof Drains	4/23/10
2	Added Building Additions and Parking Lot	12-1-09
1	Added building addition	10-19-07
N9		

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CONTONIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELK COTT CITY, MARYLAND 21042  
 (410) 461-2995

**ENGINEER'S CERTIFICATE**  
 I hereby certify that this Plan for Erosion and Sediment Control Represents a Practical and Workable Plan Based on the Personal Knowledge of the Site Condition and that it was prepared in accordance with the Requirements of the Howard Soil Conservation District.  
 Signature of Engineer: *Jim Meyer* Date: 2/27/02  
 Reviewed For Howard County Soil Conservation District and Meets Technical Requirements: *Jim Meyer* Date: 2/27/02

**DEVELOPER'S CERTIFICATE**  
 I/We Certify that All Development and Construction will be Done According to This Plan of Development and Plan for Erosion and Sediment Control and that All Responsible Personnel Involved in the Construction Project will Have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion Before Beginning the Project. I also Authorize Periodic On-Site Inspection by the Howard Soil Conservation District or their Authorized Agents, as are Deemed Necessary.  
 Signature of Developer: *John R. Robertson* Date: 2/25/02  
 Approved This Development is Approved For Erosion and Sediment Control by the Howard Soil Conservation District: *John R. Robertson* Date: 2/27/02

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Director: *Paul Rott* Date: 3/8/02  
 Chief, Division of Land Development: *Cindy Howard* Date: 3/7/02  
 Chief, Development Engineering Division: *Chris Dammann* Date: 3/5/02

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 108  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young  
 THOMAS CLARK ASSOCIATES  
 2661 Riva Road, Suite 120  
 Annapolis Maryland 21401  
 301-261-8700

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		
DEED REF.	BLOCK NO.	ZONE
2387/562	8,9	R-SC
TAX/ZONE	ELEC. DIST.	CENSUS TR.
37	First	6011
WATER CODE	SEWER CODE	
D 05	2650000	

**DRAINAGE AREA MAP**  
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**  
 TAX MAP No: 37 PARCEL No: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
 BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
 "BID & CONSTRUCTION 14 JANUARY 02"  
 SHEET 11 OF 56



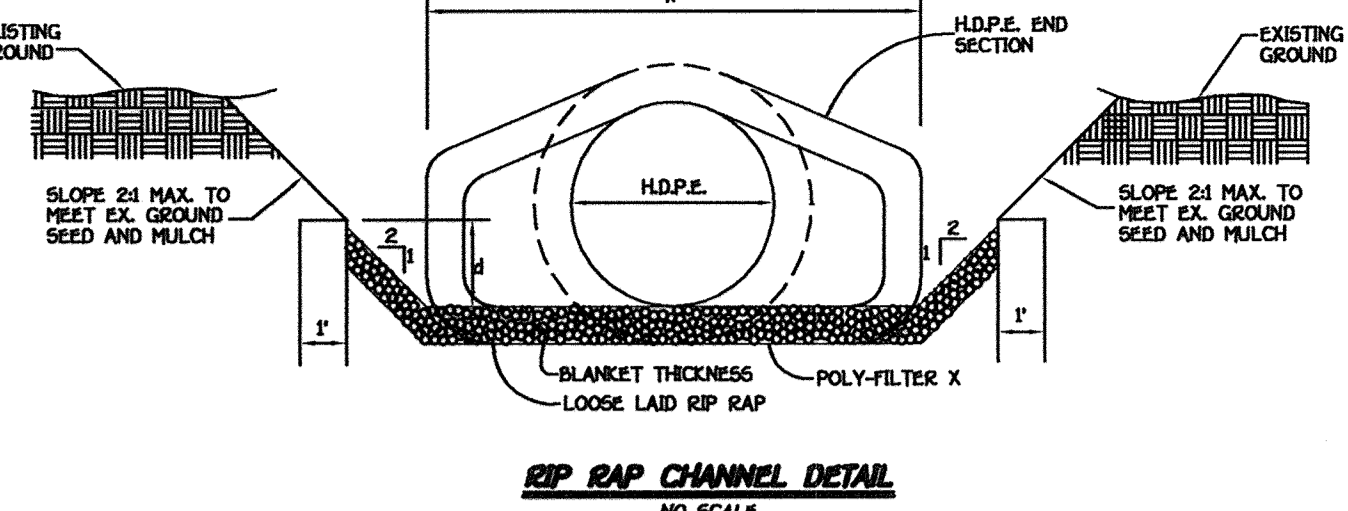
**CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS**

- The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.
- Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.
- Stone for the riprap or gabion outlets may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will insure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.

PIPE SCHEDULE		
PIPE SIZE	MATERIAL	LENGTH
12"	H.D.P.E.	45'
15"	H.D.P.E.	623'
18"	H.D.P.E.	1420'
24"	H.D.P.E.	491'

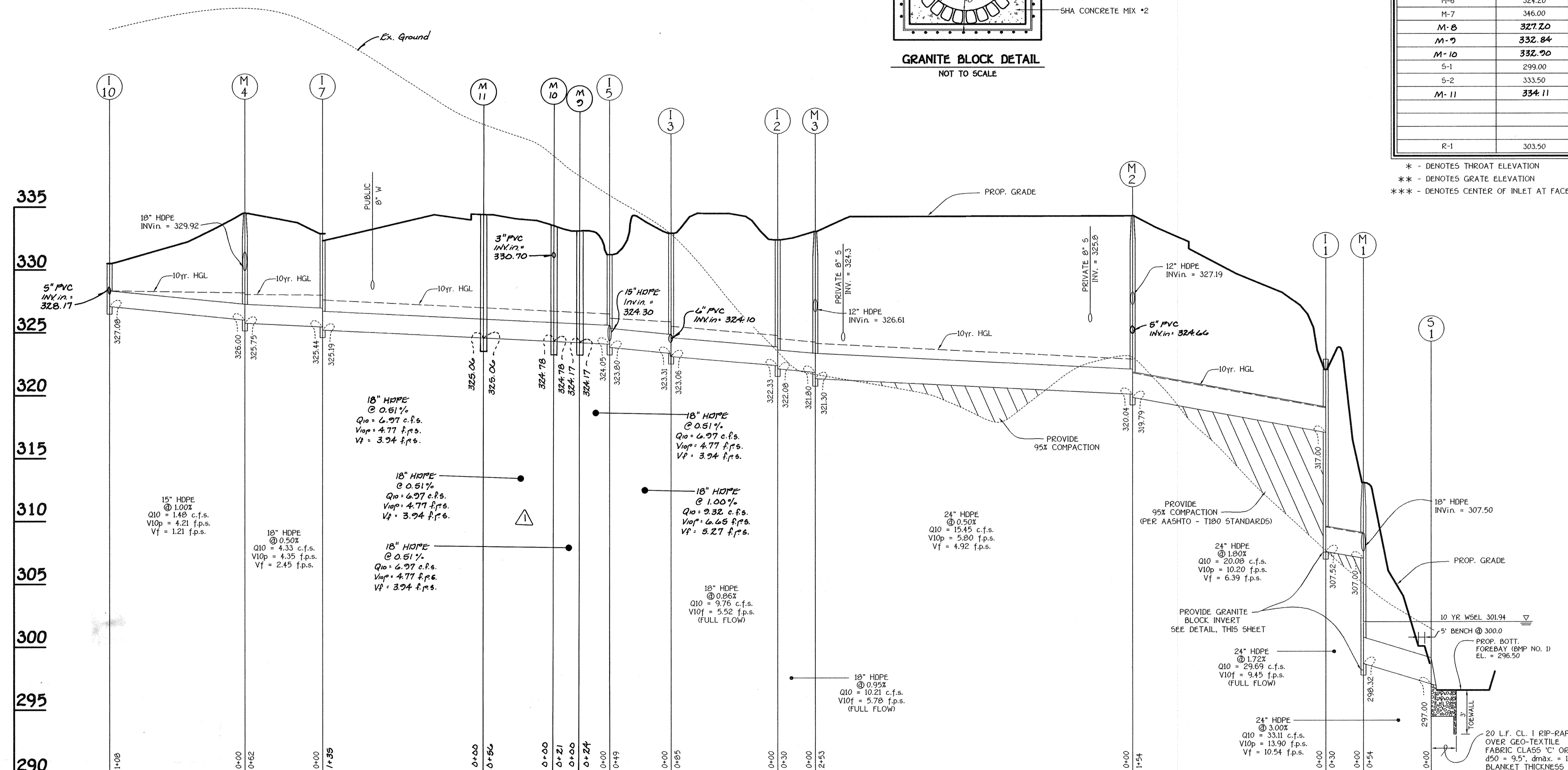
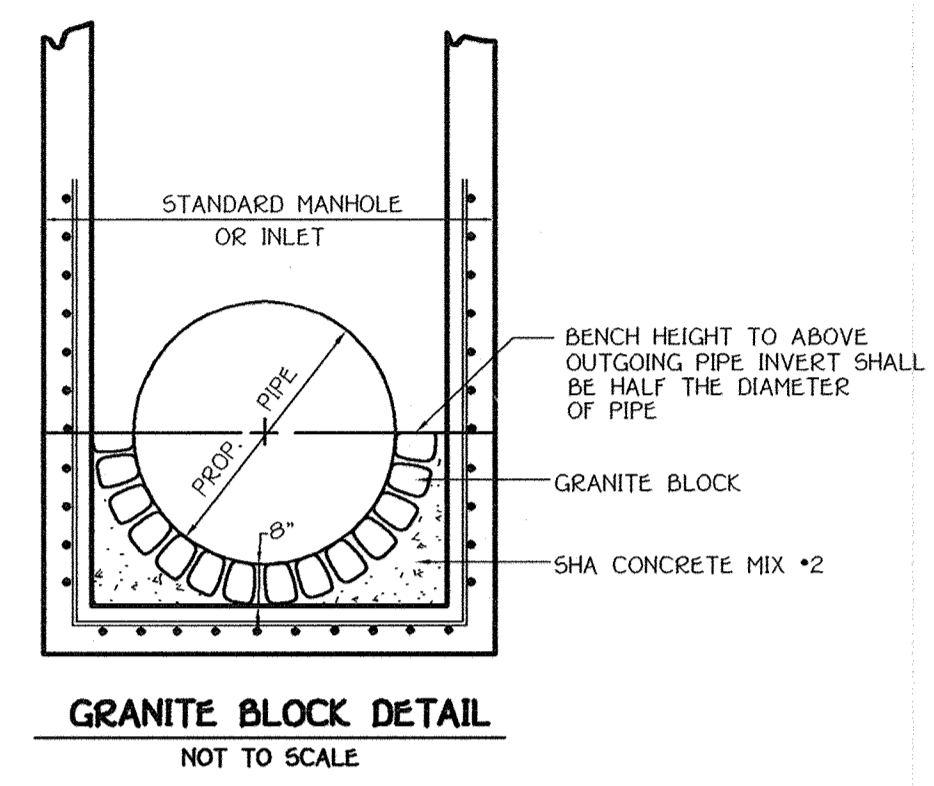
**STRUCTURE SCHEDULE**

STRUCTURE NO.	TOP ELEVATION	INV.IN	INV.OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS
I-1	** 332.00	317.00	307.52		N 599,736.89		MOD. 'S' INLET	SEE DETAIL SHEET 13
I-2	** 332.08	322.33	322.08		N 560,253.31		MOD. 'S' INLET	SEE DETAIL SHEET 13
I-3	** 332.87	324.10, 323.31	323.06		N 560,131.48 E 1,372,639.94		MOD. 'S' INLET	SEE DETAIL SHEET 13
I-5	** 331.00	324.30, 324.05	323.80		N 560,705.87 E 1,372,610.35		MOD. 'S' INLET	SEE DETAIL SHEET 13
I-6	330.95	---	325.36		N 560,253.31 E 1,372,639.94		A-5 W-2.5'	S.D. 4.41
I-7	332.87	325.44	325.19		N 560,333.68 E 1,372,770.54		A-5 W-2.5'	S.D. 4.41
I-8	* 339.83	334.00	333.75		N 560,131.48 E 1,372,639.94		MOD. 'S' INLET	SEE DETAIL SHEET 13
I-9	* 345.85	---	338.77		N 560,131.48 E 1,372,639.94		MOD. 'S' INLET	SEE DETAIL SHEET 13
I-10	* 330.50	328.17	327.08		N 560,253.31 E 1,372,639.94		MOD. 'S' INLET	SEE DETAIL SHEET 13
I-11	325.40	---	321.00	SCHOOL ACCESS ROAD	C.L. STA. 12+51	15'L	A-10 W-2.5'	S.D. 4.41
I-11A	325.40	320.70	320.45	SCHOOL ACCESS ROAD	C.L. STA. 12+51	15'R	A-5 W-2.5'	S.D. 4.40
I-12	327.16	319.32, 319.57	319.07	SCHOOL ACCESS ROAD	C.L. STA. 12+49	15'R	A-10 W-2.5'	S.D. 4.41
I-13	328.32	---	320.60		N 560,131.48 E 1,372,639.94		A-10 W-2.5'	S.D. 4.41
I-14	* 345.05	342.02	341.77	SCHOOL ACCESS ROAD	C.L. STA. 0+71	29'R	MOD. 'S' INLET	SEE DETAIL SHEET 13
I-15	* 345.15	---	342.57	SCHOOL ACCESS ROAD	C.L. STA. 0+71	24'L	MOD. 'S' INLET	SEE DETAIL SHEET 13
I-16	327.68	---	321.21		N 560,253.31 E 1,372,639.94		A-5 W-2.5'	D-4.01
M-1	313.00	307.50, 307.00	298.32		N 599,705.15 E 1,372,658.09		STD. MANHOLE	G - 5.01 OR G - 5.12
M-2	334.20	327.19, 320.04	319.79		N 599,335.01 E 1,372,784.70		STD. MANHOLE	G - 5.01 OR G - 5.12
M-3	333.00	326.61, 321.80	321.30		N 560,333.68 E 1,372,639.94		STD. MANHOLE	G - 5.01 OR G - 5.12
M-4	334.50	329.92, 326.00	325.75		N 560,333.68 E 1,372,639.94		STD. MANHOLE	G - 5.01 OR G - 5.12
M-5	342.50	335.25	335.00		N 599,480.60 E 1,372,008.79		STD. MANHOLE	G - 5.01 OR G - 5.12
M-6	324.20	317.82	317.57		N 560,131.48 E 1,372,639.94		STD. MANHOLE	G - 5.01 OR G - 5.12
M-7	346.00	337.65	337.00		N 599,335.01 E 1,372,784.70		STD. MANHOLE	G - 5.01 OR G - 5.12
M-8	327.20	320.12, 320.02	320.02		N 560,131.48 E 1,372,639.94		STD. MANHOLE	G - 5.12
M-9	332.84	324.17	324.17		N 560,131.48 E 1,372,639.94		STD. MANHOLE	G - 5.12
M-10	332.90	330.70, 324.78	324.78		N 560,131.48 E 1,372,639.94		STD. MANHOLE	G - 5.12
S-1	299.00	297.00	297.00		N 560,131.48 E 1,372,639.94		H.D.P.E. END SECTION	A.D.S. FLARED END SECTION
S-2	333.50	332.00	331.73		N 560,131.48 E 1,372,639.94		H.D.P.E. END SECTION	A.D.S. FLARED END SECTION
M-11	334.11	328.06	328.06		N 560,131.48 E 1,372,639.94		STD. MANHOLE	G - 5.12
R-1	303.50	296.00	296.00		N 599,335.01 E 1,372,639.94		CONC RISER	



**RIP-RAP CHANNEL DESIGN DATA**

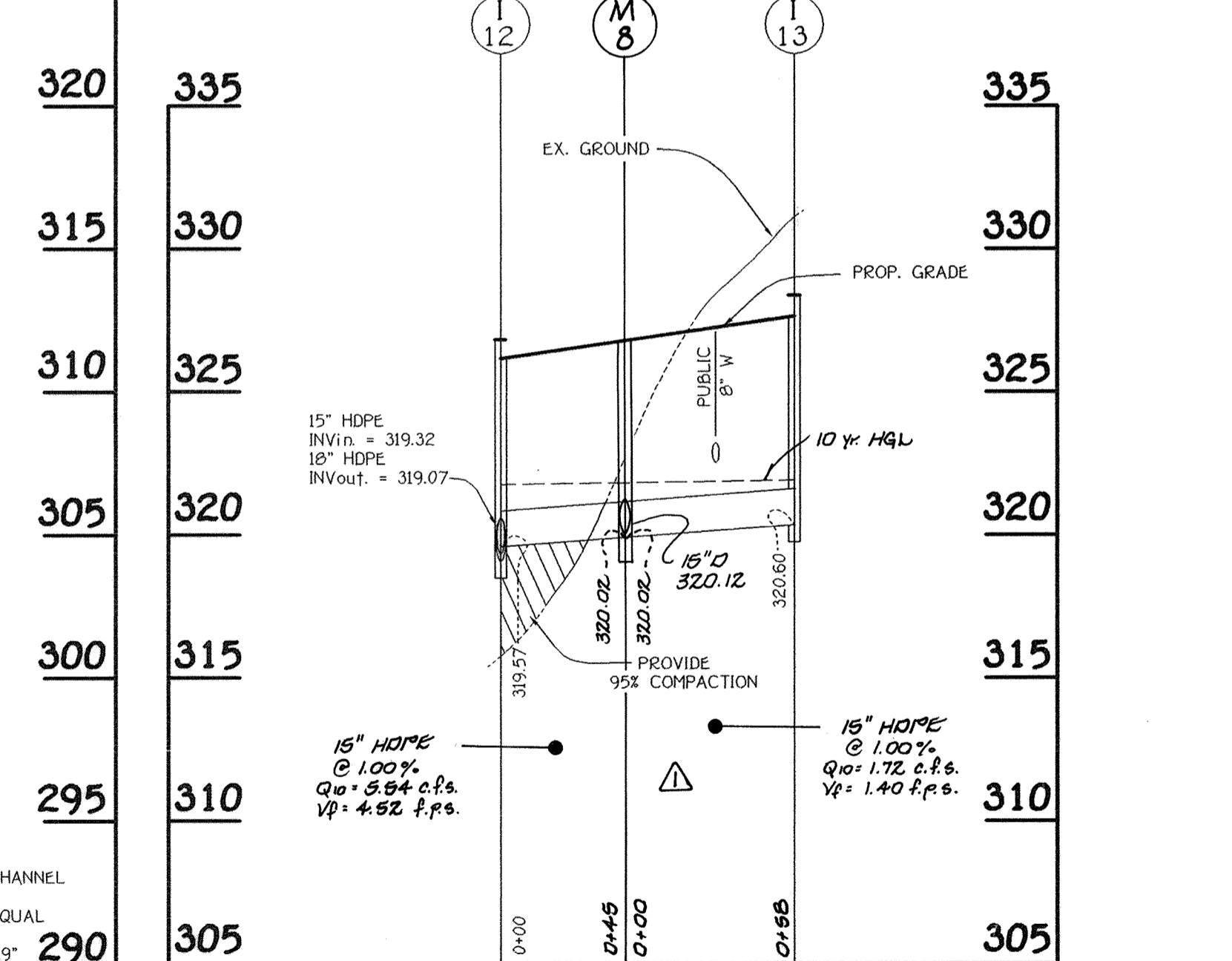
STRUCTURE	AREA	WETTED PERIMETER	R	R <sup>2/3</sup>	S	S <sup>1/2</sup>	W	d	N	V (f.p.s.)	Q (c.f.s.)	SP-RAP SIZE	BLANKET THICKNESS
S-1	12.7872	12.4399	1.0279	1.0866	0.0050	0.0707	6.0	1.44	0.04	2.68	33.1	9.5"	15" MIN.
S-2	2.8672	6.5044	0.4408	0.5776	0.0050	0.0707	4.0	0.56	0.04	1.52	4.8	5.5"	7" 15" MIN.



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 28316 Expiration Date: 1-1-21

For Revision 3 only 5-29-19



No.	REVISION	DATE	BY
1	Revised Storm Drain Profiles and Structure Schedule	12-1-09	
2	Added Roof Drains & Revised Structure Schedule	4/23/10	
3	Change Sheet Number	5/21/19	

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 1072 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21114  
 410-461-2995

Signature of Engineer: *[Signature]* Date: 2/27/02

**ENGINEER'S CERTIFICATE**

I hereby certify that this plan for Erosion and Sediment Control Represents A Practical and Workable Plan Based on My Personal Knowledge of the Site Condition and That It was Prepared in Accordance With the Requirements of The Howard Soil Conservation District.

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements: *[Signature]* Date: 2/27/02

**DEVELOPER'S CERTIFICATE**

I/We Certify That All Development and Construction Will Be Done According To This Plan of Development and Plan for Erosion and Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary.

Approved: *[Signature]* Date: 2/27/02

Approved: *[Signature]* Date: 2/27/02

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* Director, Department of Planning and Zoning Date: 3/8/02

*[Signature]* Chief, Division of Land Development Date: 3/7/02

*[Signature]* Chief, Development Engineering Division Date: 3/5/02

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 108  
 Elllicott City, Maryland 21042  
 Attention Cathleen Young

THOMAS CLARK ASSOCIATES  
 2661 Riva Road, Suite 120  
 Annapolis Maryland 21401  
 301-261-8700

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT: Northeastern Elementary School No. 4

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2307/562	8,9	R-SC	37	First	6011

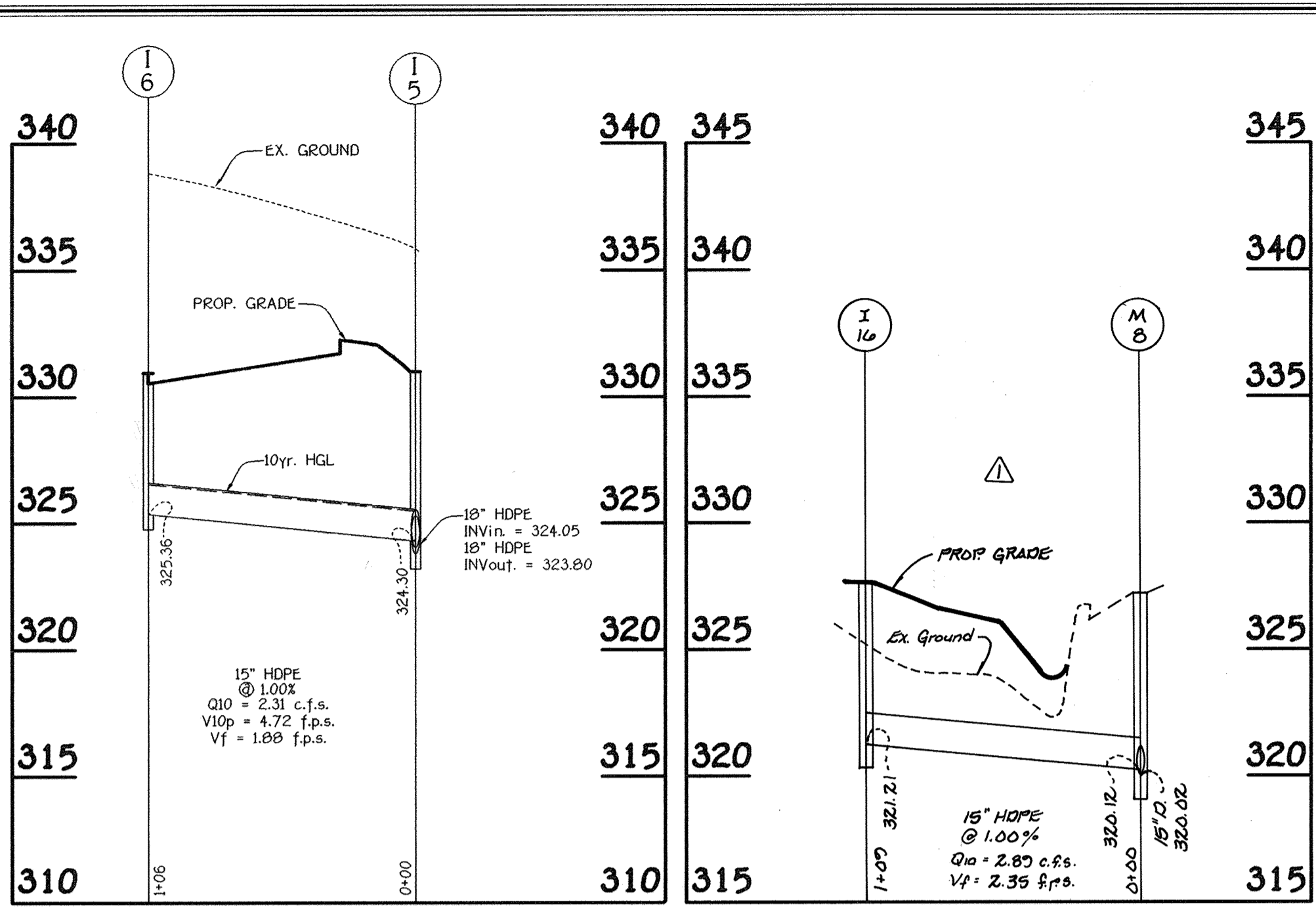
WATER CODE: D 05 SEWER CODE: 2650000

**STORM DRAIN PROFILES**

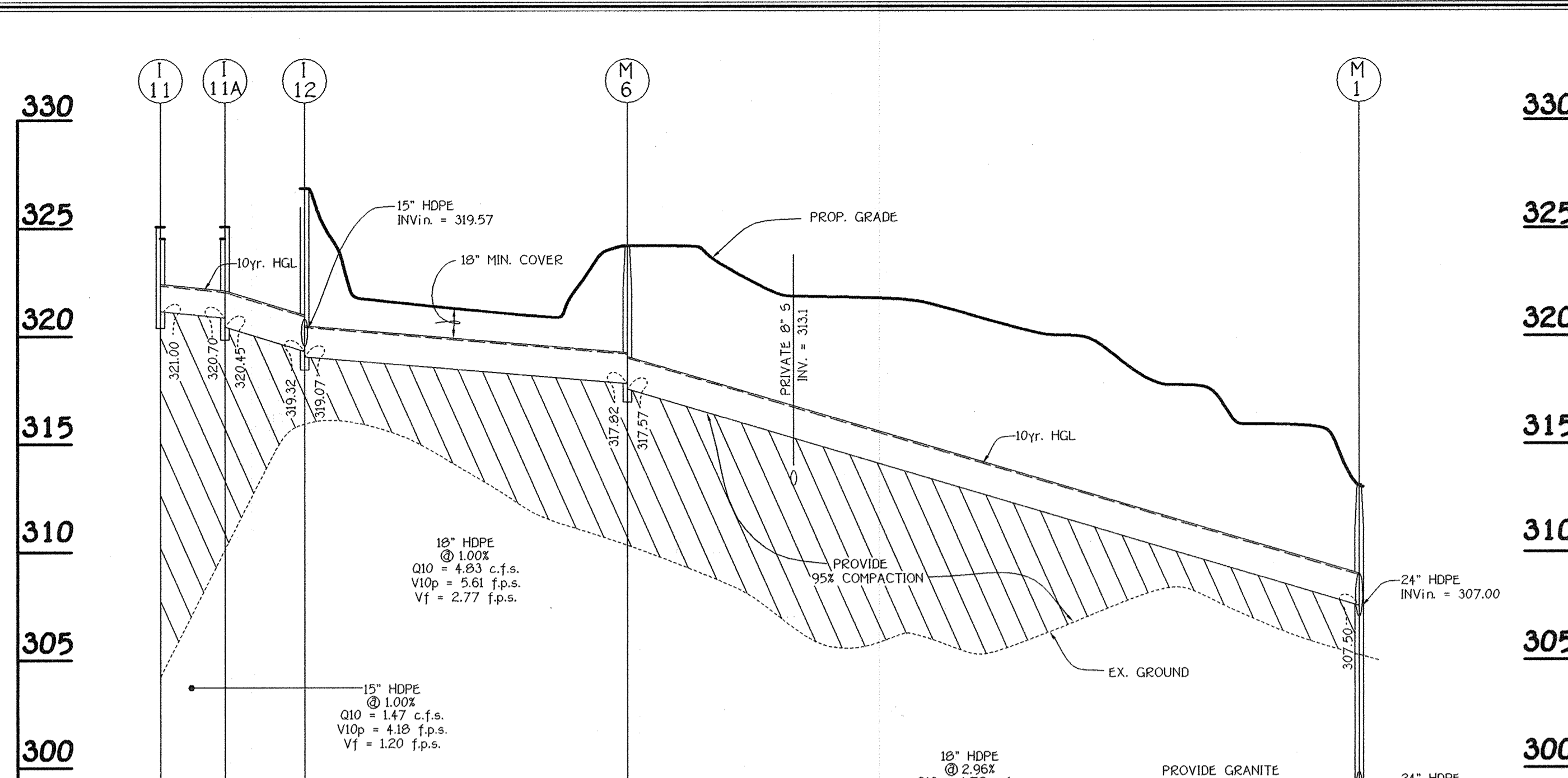
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No: 37 PARCEL No: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
 BUILDING PERMIT/CD REVIEW 15 NOVEMBER 01  
 "BID & CONSTRUCTION"  
 14 JANUARY 02  
 SHEET 12 OF 56

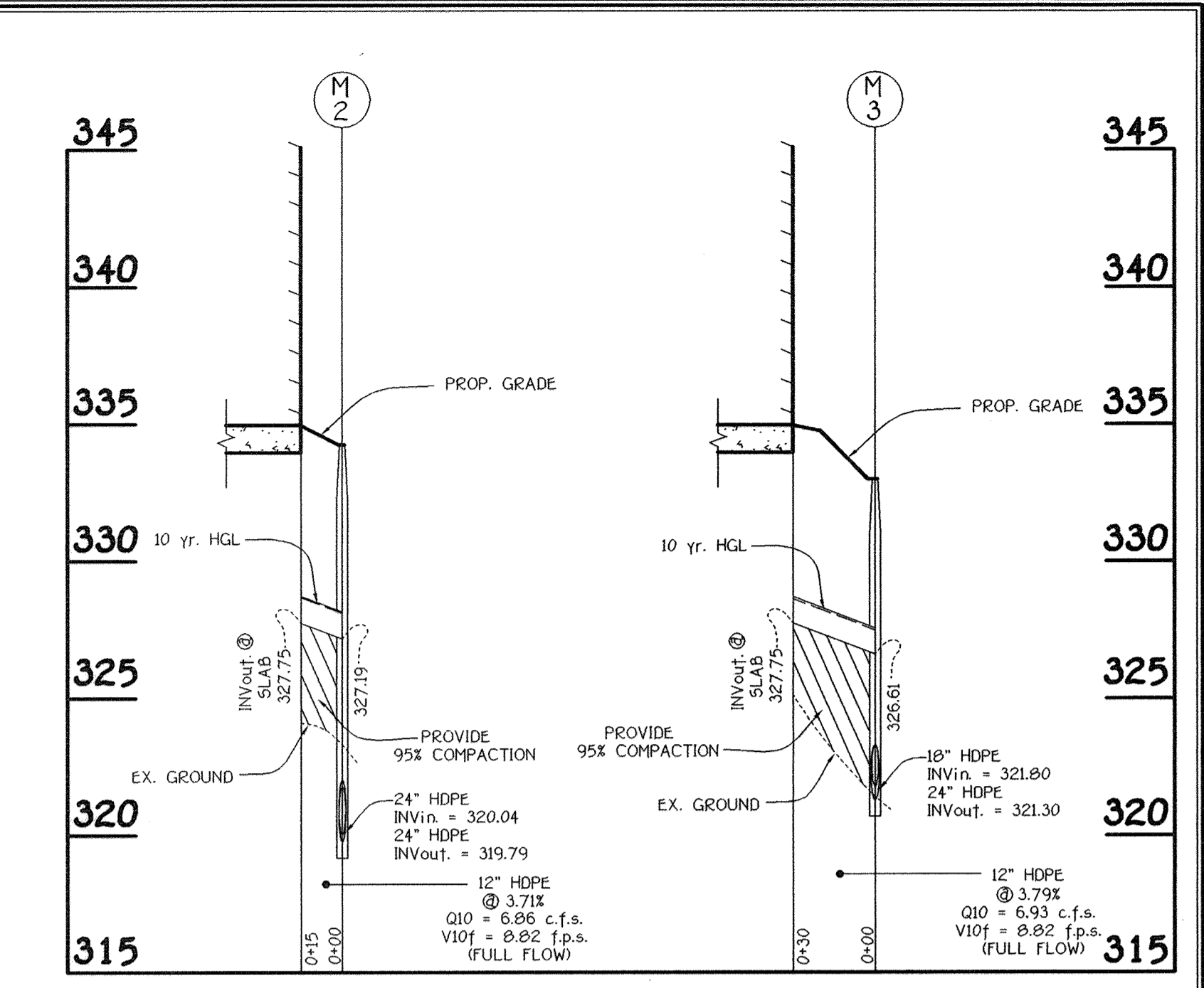




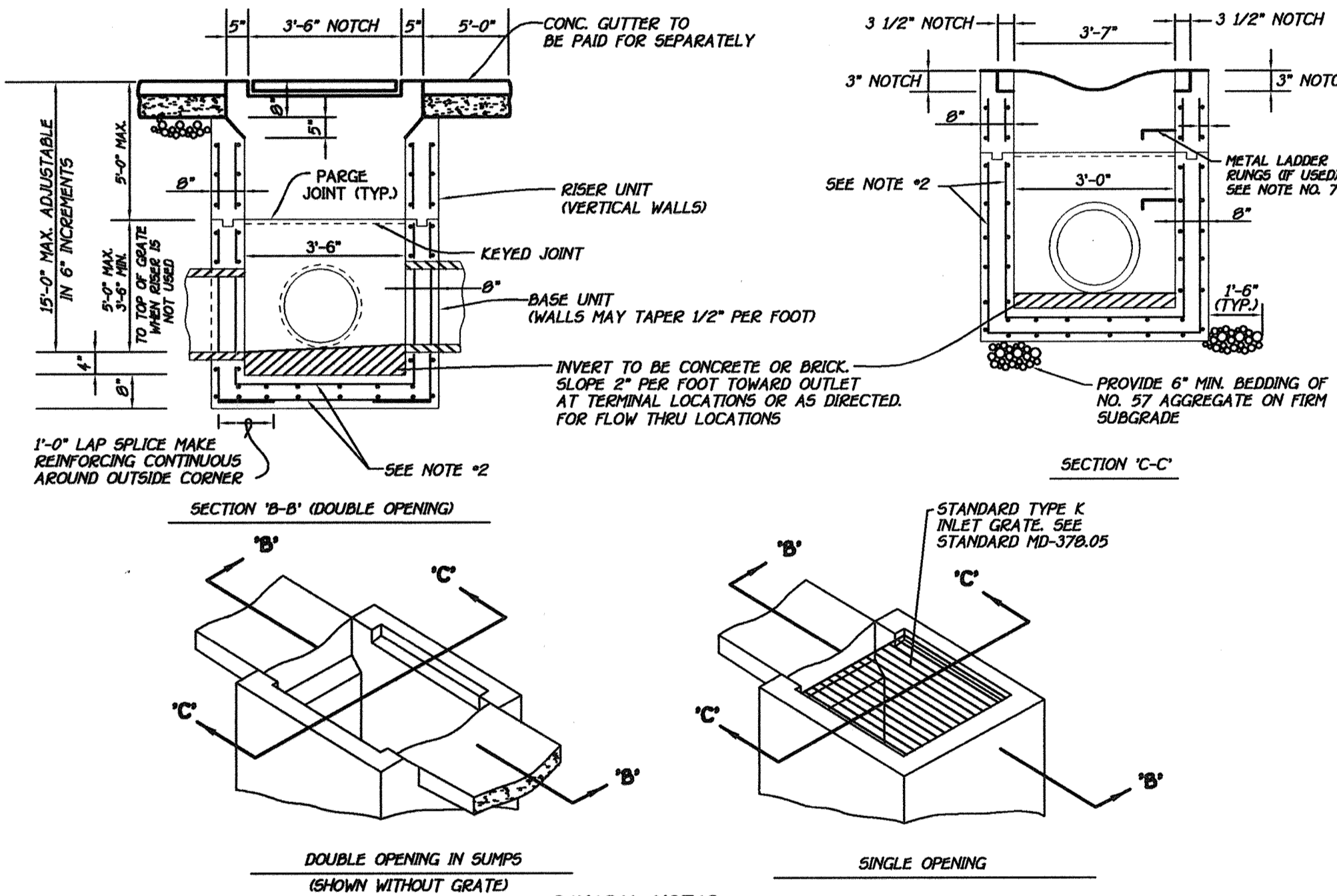
**PROFILE**  
SCALE: HORIZ. : 1" = 50'  
VERT. : 1" = 5'



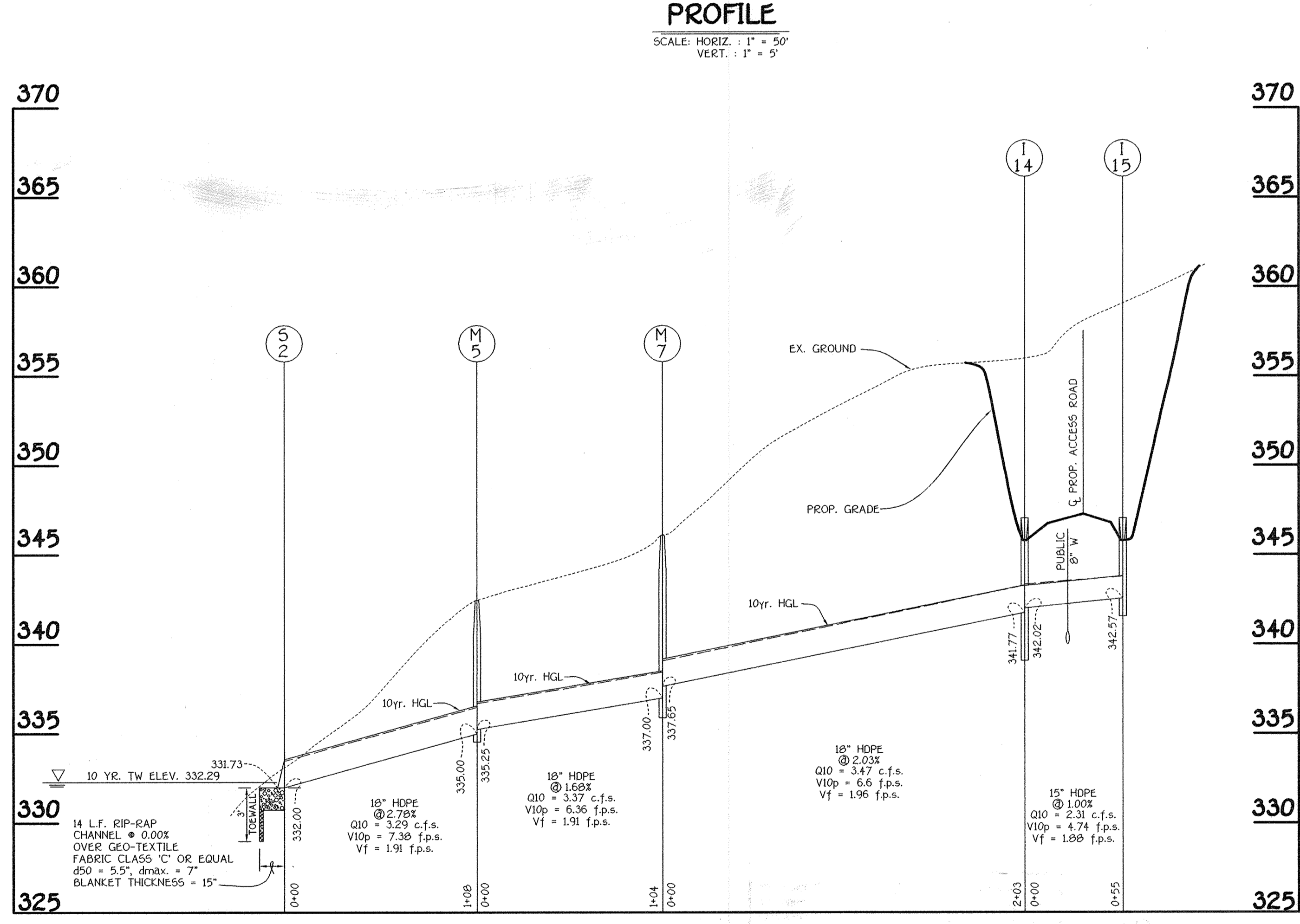
**PROFILE**  
SCALE: HORIZ. : 1" = 50'  
VERT. : 1" = 5'



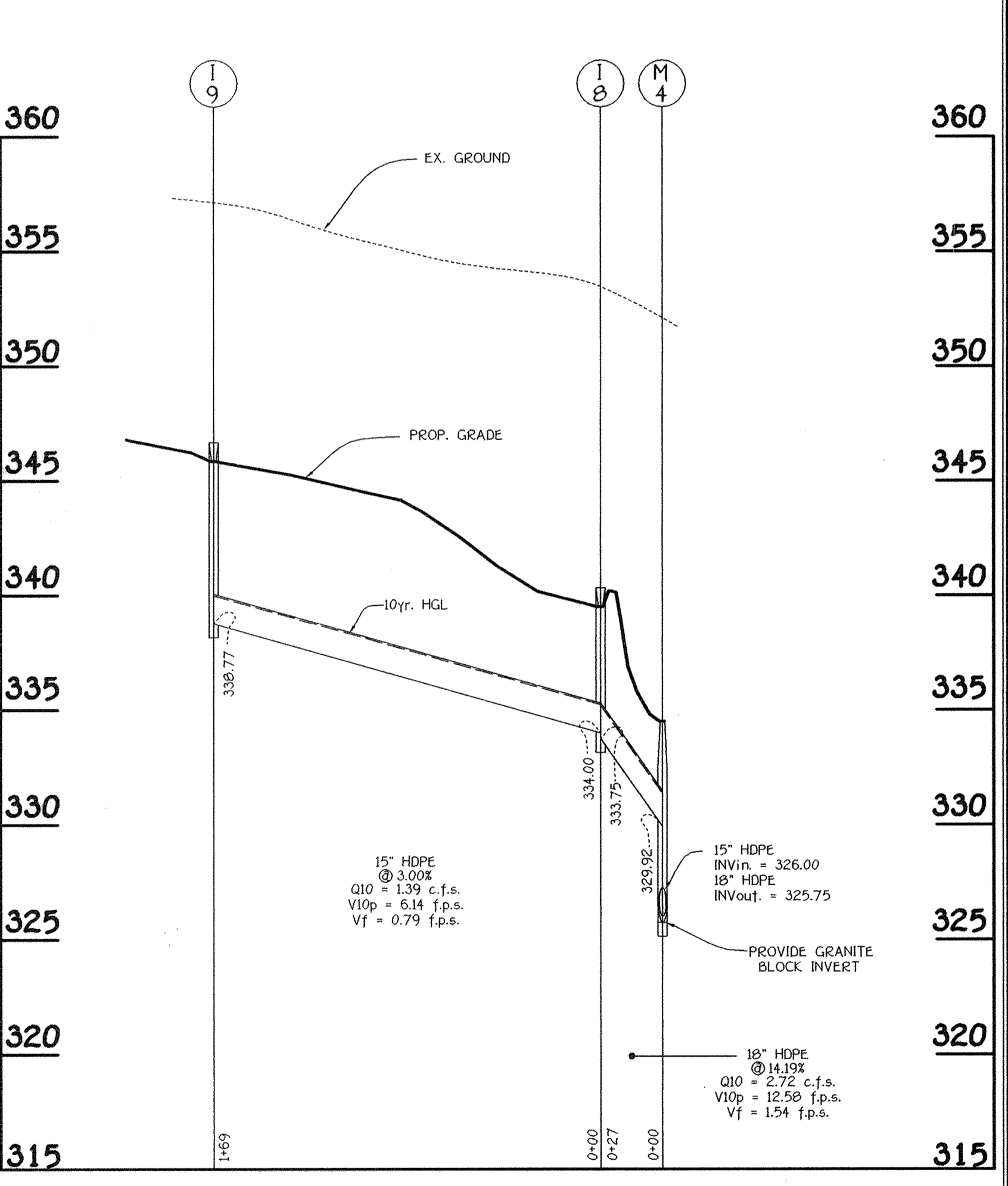
**ROOF LEADER PROFILES**  
SCALE: HORIZ. : 1" = 50'  
VERT. : 1" = 5'



- GENERAL NOTES:**
- CONCRETE TO BE MIX NO. 6 (4500 PSI).
  - REINFORCING - 2 LAYERS OF 4 x 4 - W 4.0 x W 4.0 WELDED WIRE FABRIC.
  - THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
  - FOR GRATE DETAILS SEE STANDARD MD - 378.05. GRATE TO BE AS SHOWN OR FURNISH APPROVED EQUIVALENT.
  - PIPE OPENINGS TO BE PROVIDED AS REQUIRED, FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO CONSTRUCTION PLANS.
  - PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE CONSTRUCTION PLANS.
  - LADDER RUNGS SHALL BE IN ACCORDANCE WITH STANDARD MD - 303.91, AS SHOWN OR AS DIRECTED BY THE ENGINEER.
  - MINIMUM DEPTH PAYMENT PER "EACH" INLET INCLUDES DEPTHS UP TO 3'-6". VERTICAL DEPTH PAYMENT PER LINEAR FOOT INCLUDES DEPTHS IN EXCESS OF 3'-6".
  - FOR USE IN NON-TRAFFIC LOCATIONS ONLY.



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



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

Professional Certification I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 28376, Expiration Date: 1-1-21

For Revision 2 only  
5-29-19

**MODIFIED OPEN END GRATE**  
NOT TO SCALE

No.	REVISION	DATE
2	Change Sheet Number	5-29-19
1	Revised Storm Drain Profile	12-1-09

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042  
4100 461 - 2095

Signature of Engineer: *[Signature]* Date: 2/27/02

**ENGINEER'S CERTIFICATE**

I Herby Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

Signature of Developer: *[Signature]* Date: 2/27/02

**DEVELOPER'S CERTIFICATE**

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

Signature of Developer: *[Signature]* Date: 2/27/02

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director: *[Signature]* Date: 3/8/02

Chief, Division of Land Development: *[Signature]* Date: 3/7/02

Chief, Development Engineering Division: *[Signature]* Date: 3/5/02

PREPARED FOR  
**HOWARD COUNTY PUBLIC SCHOOL SYSTEM**  
10910 Maryland Route 109  
Ellicott City, Maryland 21042  
Attention Cathleen Young

THOMAS CLARK ASSOCIATES  
2661 Riva Road, Suite 120  
Annapolis Maryland 21401  
301-261-8700

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No.4		

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2307/562	8,9	R-5C	37	First	6011

WATER CODE	SEWER CODE
D 05	2650000

**STORM DRAIN PROFILES**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No: 37 PARCEL No: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
"BID & CONSTRUCTION"  
14 JANUARY 02  
SHEET 13 OF 56

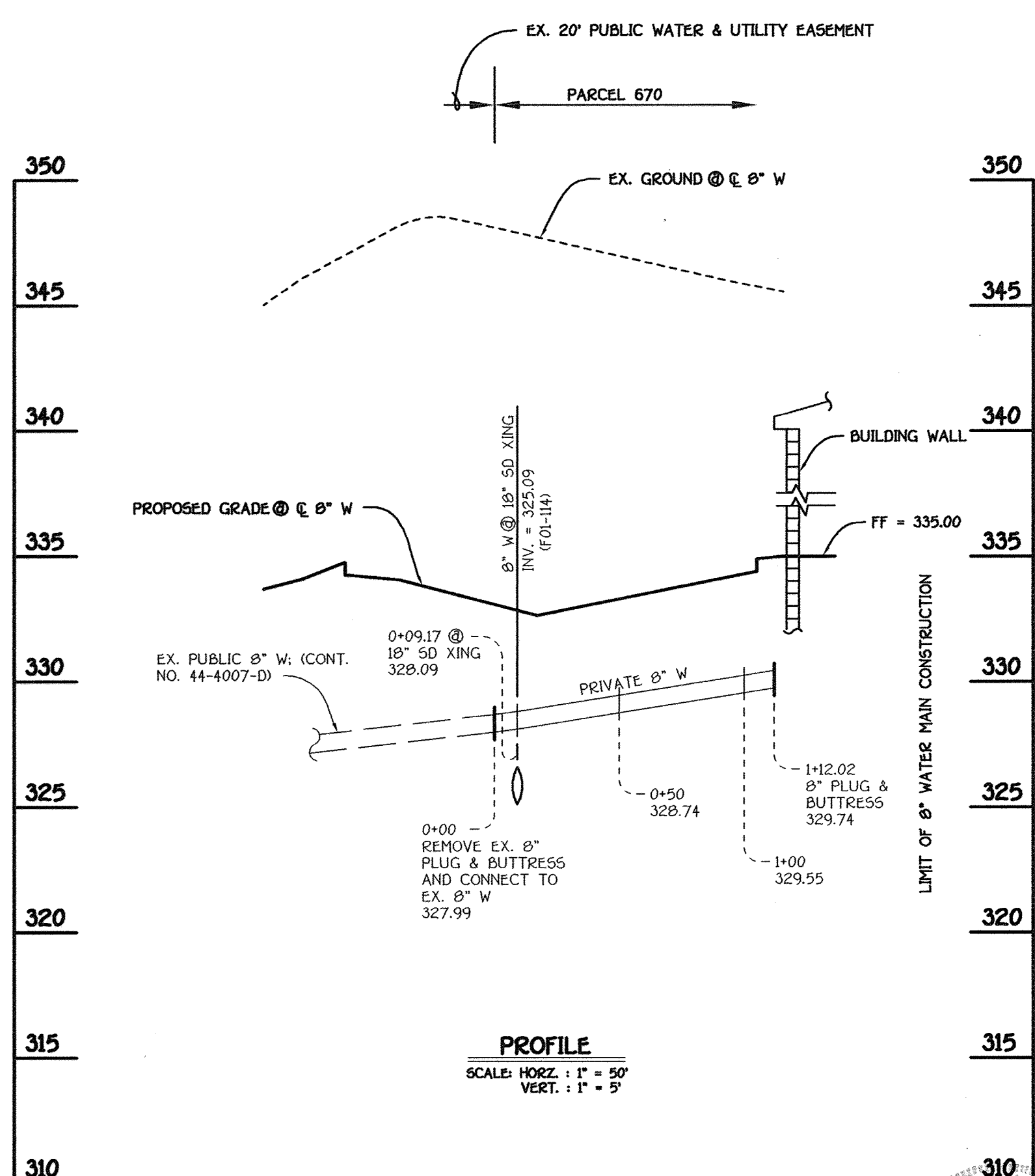


MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
100**	599802.78	1372399.22	301.75
105*	599914.53	1372403.57	315.81
110*	599940.23	1372551.06	329.21
115*	599789.63	1372673.89	328.65

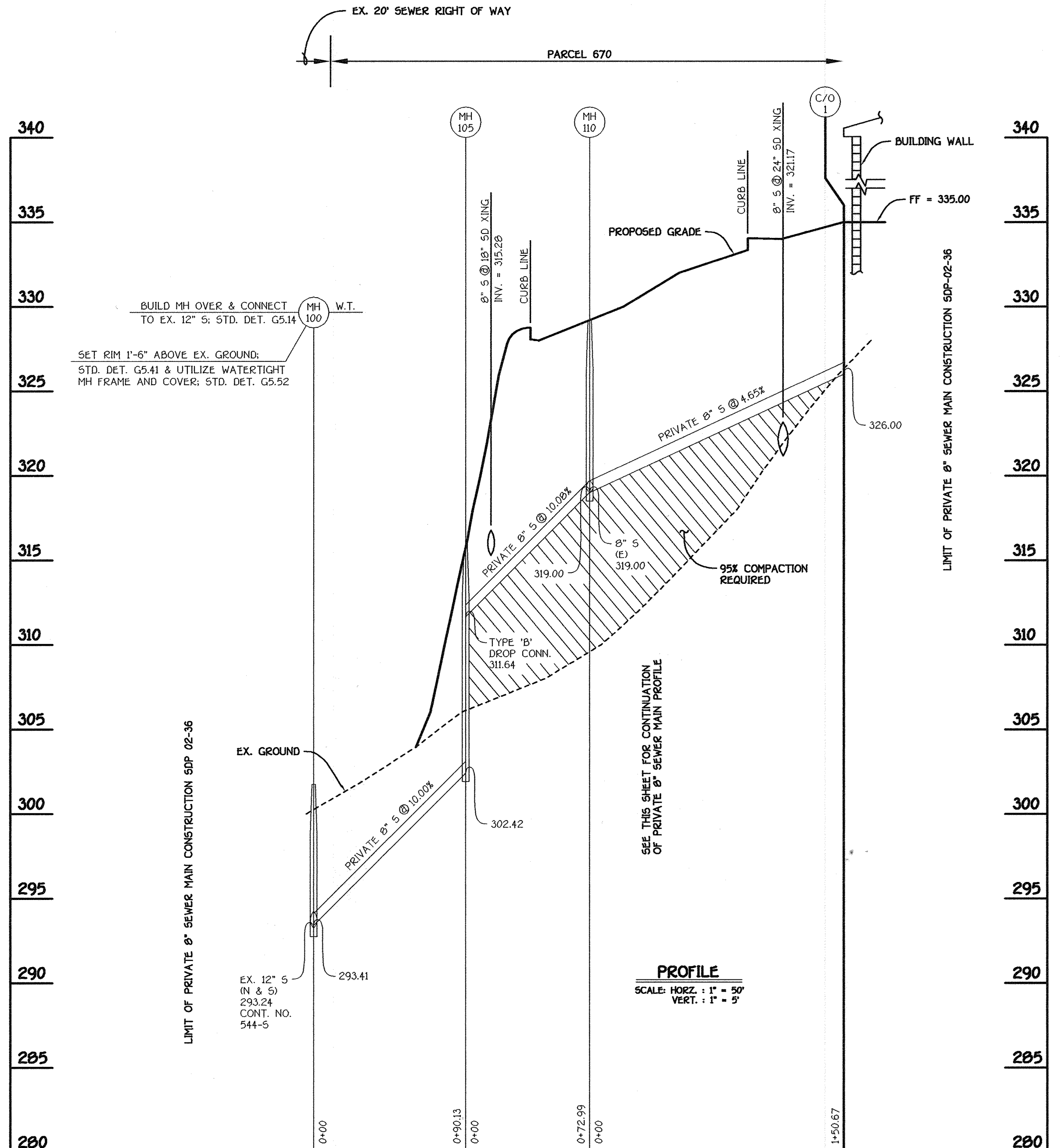
\* SET MH RIMS FLUSH W/ PROPOSED FINISHED GRADE  
 \*\* SET MH RIMS 1'-6" ABOVE EXISTING GROUND, STD. DET. G5.52

WATER MAIN TABULATION CHART			
W.M. STATION	APPURTENANCE	NORTHING	EASTING
8" PRIVATE WATER MAIN			
0+00.00	CONNECT TO EX. 8" W	560323.70	1372752.48
1+12.02	8" PLUG & BUTTRESS	560236.66	1372822.99

SEE THIS SHEET FOR WATER MAIN TABULATION CHART

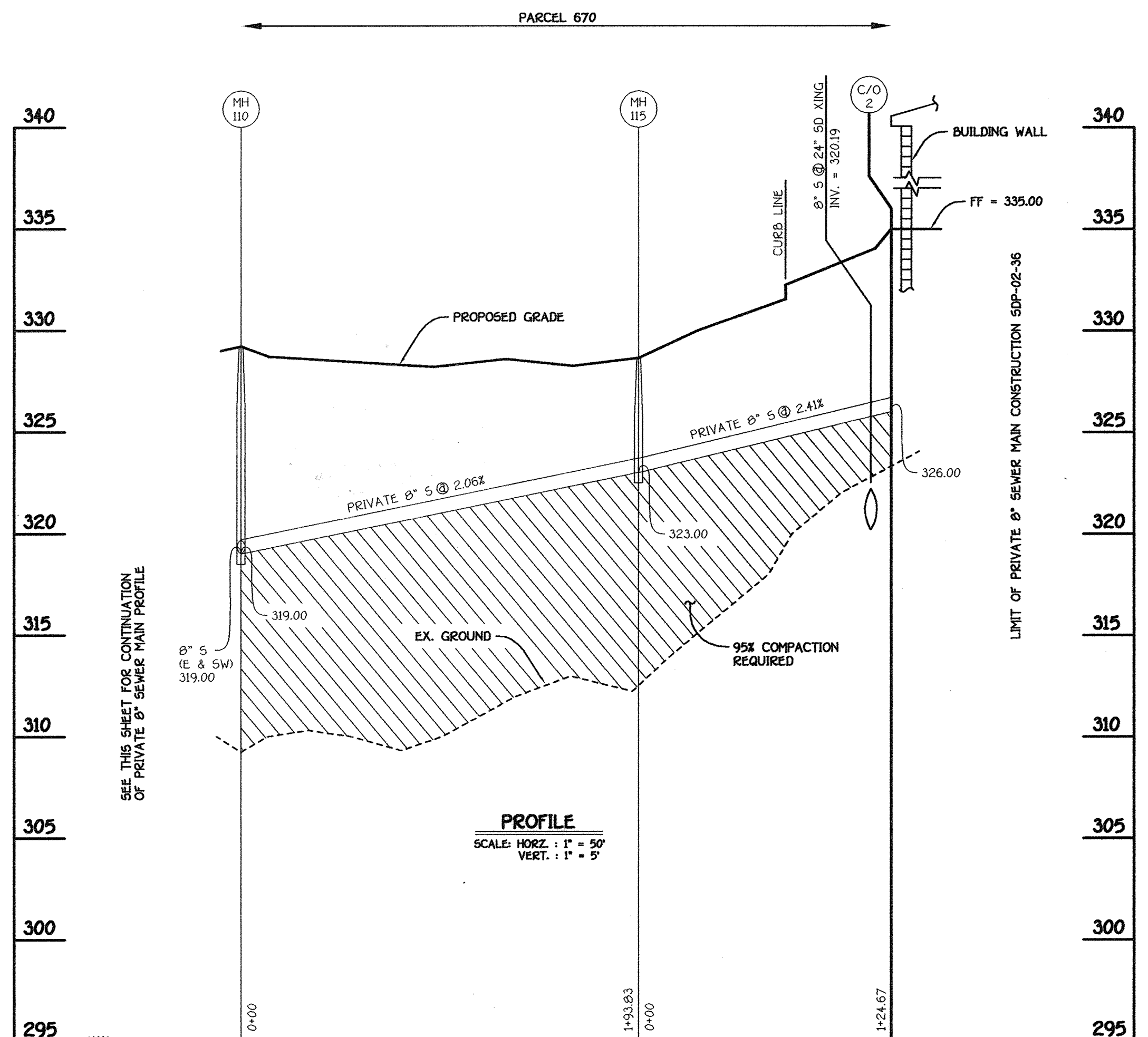


8" PRIVATE WATER MAINS



8" PRIVATE SEWER MAINS

NOTE: SET RIMS OF MANHOLE Nos. 105, 110 & 115 FLUSH W/ PROPOSED GROUND; SEE MANHOLE TABULATION CHART THIS SHEET.



8" PRIVATE SEWER MAINS

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 20376 Expiration Date: 1-1-21  
 For Revision 1 only 5-24-19



**ENGINEER'S CERTIFICATE**  
 I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site condition and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 Signature of Engineer: *[Signature]* Date: *2/27/02*

**DEVELOPER'S CERTIFICATE**  
 I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a certificate of attendance at a department of natural resources approved training program for the control of sediment and erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.  
 Signature of Developer: *[Signature]* Date: *2/27/02*

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Director: *[Signature]* Date: *3/8/02*  
 Chief, Division of Land Development: *[Signature]* Date: *3/7/02*  
 Chief, Development Engineering Division: *[Signature]* Date: *3/5/02*

PREPARED FOR:  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 108  
 Ellicott City, Maryland 21042  
 Attention: Cathleen Young  
 THOMAS CLARK ASSOCIATES  
 2661 Riva Road, Suite 120  
 Annapolis, Maryland 21401  
 301-261-8700

Address Chart	
Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	8,9	R-SC	37	First	6011

WATER CODE	SEWER CODE
D 05	2650000

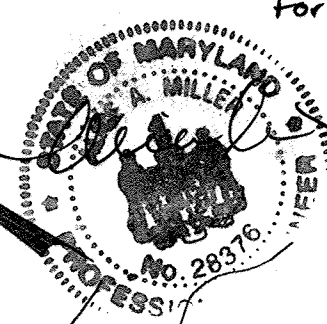
**PRIVATE WATER AND SEWER MAINS PROFILES**  
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**  
 TAX MAP No.: 37 PARCEL No.: 670  
 FIRST ELECTION DISTRICT: HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
 BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
 "BID & CONSTRUCTION 14 JANUARY 02"  
 SHEET 14 OF 56



Professional Certification, I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 28376 Expiration Date: 1-1-21

For Revision 3 only  
5-29-19



MATCH LINE SEE SHEET 18

MATCH LINE SEE SHEET 16

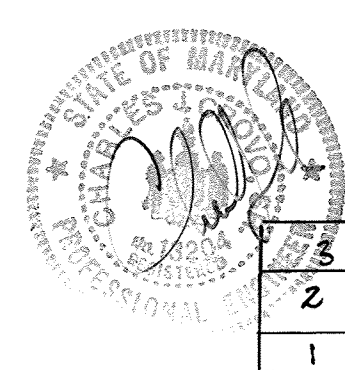
MATCH LINE SEE SHEET 16

MATCH LINE SEE SHEET 18

3 Added Roof Drains & Building Dimensions 4/23/10

**Eco-Science Professionals, Inc.**  
CONSULTING ECOLOGISTS

MD DNR Qualified Professional  
USACOE Wetland Delineator  
Certification WDCP93MD06100448  
JOHN P. CANOLES



PLAN		Change Sheet Number	5-26-19
2	Added Building Additions, Parking Lot, Revised Storm Drain And Moved Softball Field	DATE	12-1-09
1	Added building addition	DATE	10-19-07
REVISIONS		DATE	

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
4100 481 - 3300

**ENGINEER'S CERTIFICATE**  
I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site condition and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
Signature of Engineer: *[Signature]* Date: 2/27/02

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.  
Signature: *[Signature]* Date: 2/27/02

**DEVELOPER'S CERTIFICATE**  
"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a certificate of attendance at a Department of Natural Resources approved training program for the control of sediment and erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."  
Signature of Developer: *[Signature]* Date: 2/27/02

Approved: This Development Is Approved For Erosion And Sediment Control By the Howard Soil Conservation District.  
Signature: *[Signature]* Date: 2/27/02

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: *[Signature]* Date: 3/6/02  
Director, Department of Planning and Zoning

Signature: *[Signature]* Date: 3/7/02  
Chief, Division of Land Development

Signature: *[Signature]* Date: 3/5/02  
Chief, Development Engineering Division

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 109  
Ellicott City, Maryland 21042  
Attention Cathleen Young

THOMAS CLARK ASSOCIATES  
2661 Riva Road, Suite 120  
Annapolis Maryland 21401  
301-261-8700

Address Chart	
Parcel Number	Street Address
670	8125 Old Stockbridge Drive
PROJECT	
Northeastern Elementary School No. 4	SECTION/AREA
DEED REF. 2307/562	BLOCK NO. 8,9
ZONE R-5C	TAX/ZONE 37
ELEC. DIST. First	CENSUS TR. 6011
WATER CODE	
D 05	SEWER CODE 2650000

**FINAL FOREST CONSERVATION PLAN**

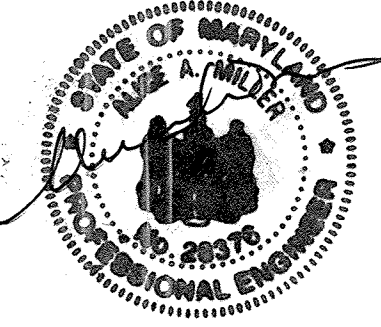
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELL OWNS SPRING)**

TAX MAP No. 37 PARCEL No. 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
"BID & CONSTRUCTION"  
14 JANUARY 02  
SHEET 15 OF 56



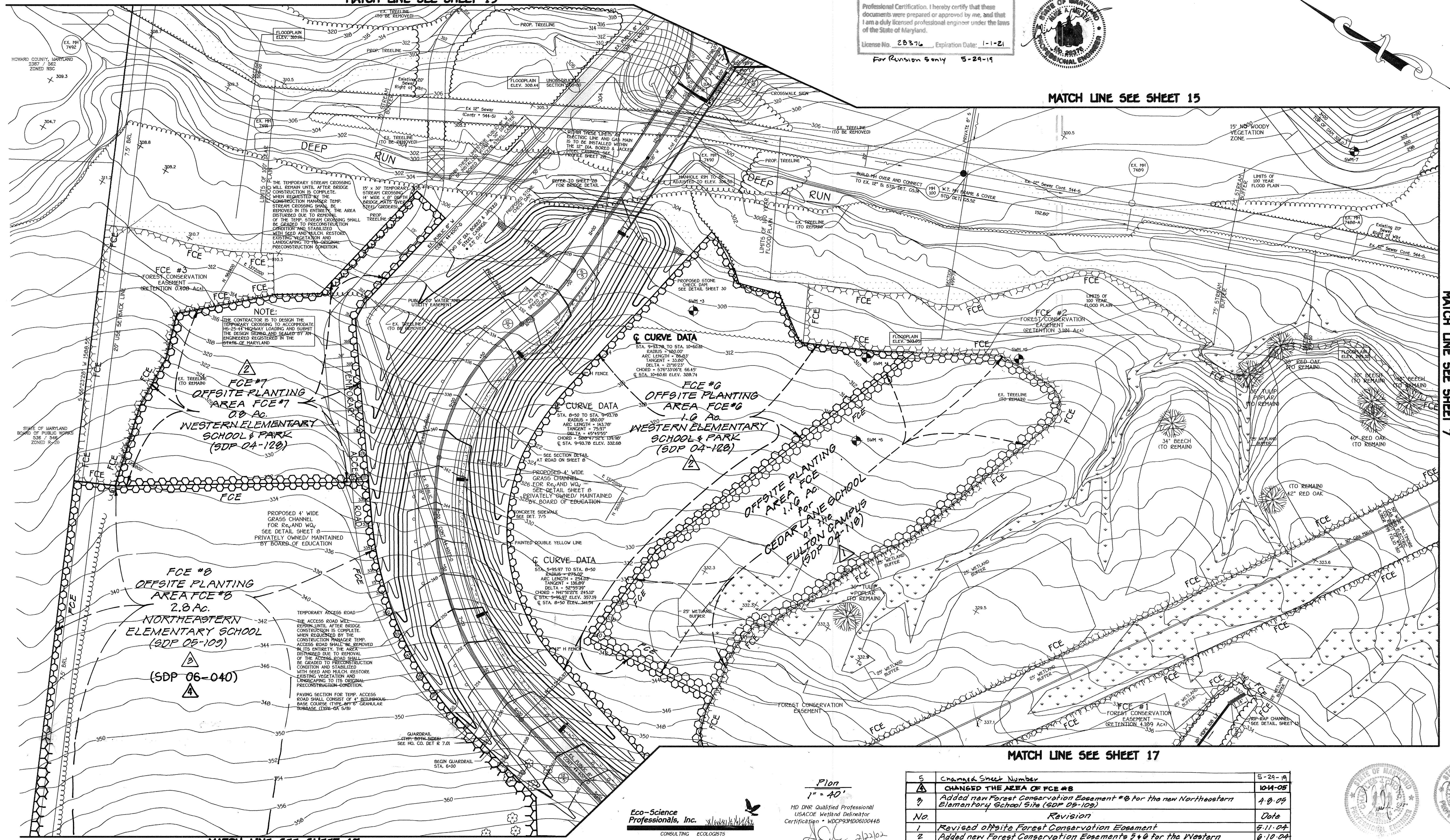
MATCH LINE SEE SHEET 15

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 28376 Expiration Date: 1-1-21  
For Revision Only 5-29-19



MATCH LINE SEE SHEET 15

MATCH LINE SEE SHEET 7



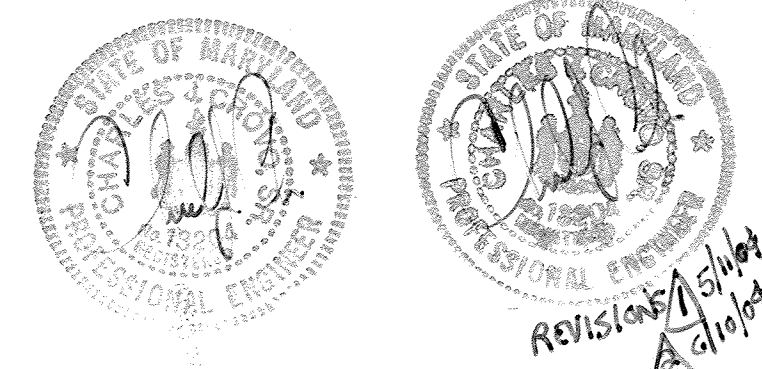
MATCH LINE SEE SHEET 17

MATCH LINE SEE SHEET 17

Eco-Science Professionals, Inc. CONSULTING ECOLOGISTS

John P. Candles  
MD DNR Qualified Professional  
USACOE Wetland Delimitator  
Certification # WDCPS3M006100418  
2/27/02

No	Revision	Date
5	Changed Sheet Number	5-29-19
4	CHANGED THE AREA OF FCE #8	10-14-05
3	Added new Forest Conservation Easement #8 for the new Northeastern Elementary School Site (SDP 05-109)	4-8-05
2	Added new Forest Conservation Easements #4 & 6 for the Western Elementary School Site (SDP 04-128)	8-10-04
1	Revised offsite Forest Conservation Easement	5-11-04
No	Revision	Date



**ENGINEER'S CERTIFICATE**

I hereby certify that this Plan for Erosion and Sediment Control Represents a Practical and Workable Plan Based on My Personal Knowledge of the Site Condition and That It was Prepared in Accordance with the Requirements of The Howard Soil Conservation District.

Signature of Engineer: *John P. Candles* Date: 2/27/02

**DEVELOPER'S CERTIFICATE**

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

Signature of Developer: *John P. Candles* Date: 2/27/02

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Leah Roth* 3/8/02  
Director, Department of Planning and Zoning

*Cindy Rando* 3/7/02  
Chief, Division of Land Development

*John P. Candles* 2/27/02  
Chief, Development Engineering Division

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young

THOMAS CLARK ASSOCIATES  
2661 Riva Road, Suite 120  
Annapolis Maryland 21401  
301-261-8700

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No.4		
DEED REF. 2307/562	BLOCK NO. 8,9 ZONE R-5C	TAX/ZONE 37
ELEC. DIST. First	CENSUS TR. 6011	
WATER CODE D 05	SEWER CODE 2650000	

**FINAL FOREST CONSERVATION PLAN**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No: 37 PARCEL No: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
"BID & CONSTRUCTION"  
14 JANUARY 02  
SHEET 16 OF 56

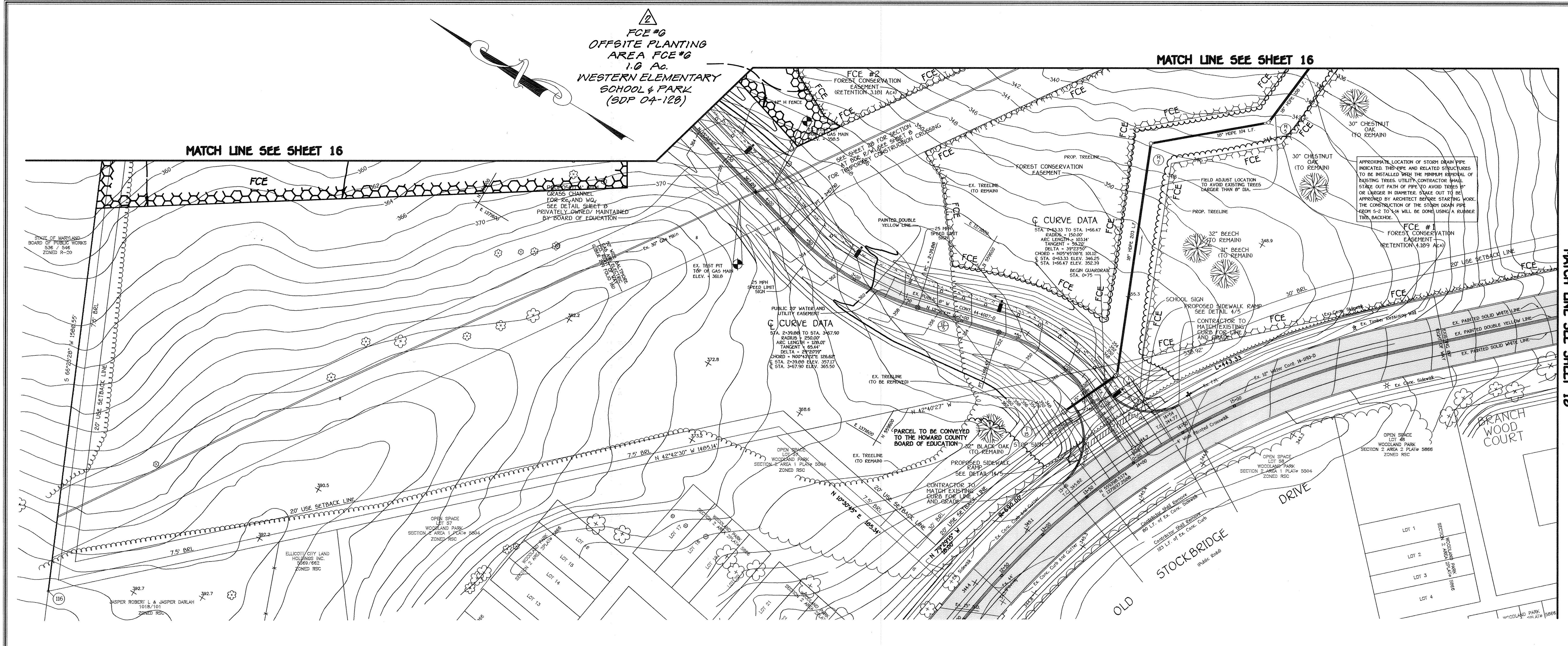
K: Drawings 4/6/05 Northeastern School SDP 04-128 Forest Conservation Plan.dwg 02/27/02 10:22:14 PM

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL FREE  
ELLCOTT CITY, MARYLAND 21042  
4101 481 - 3355

Reviewed For Howard County Soil Conservation District And Meets Technical Requirement  
*John P. Candles* 2/27/02  
U.S.D.A. Natural Resources Conservation Service

Approved: This Development is Approved For Erosion And Sediment Control By Howard Soil Conservation District  
*John P. Candles* 2/27/02  
District Howard Soil Conservation District





PLAN  
SCALE: 1" = 40'

**Eco-Science Professionals, Inc.**  
CONSULTING ECOLOGISTS

MD DNR Qualified Professional  
USACOE Wetland Delineator  
Certification # WDCP93MD06100418  
JOHN P. CANDLES

The project complies with the requirements of section 16.1200 of the Howard County Code for forest conservation with a break-even retention obligation of (9.7 acres) which has been met by recordation of 102.2 acres of forest conservation easement area of Plat of Forest Conservation Easement, Plat No. 15,291 - 15,294 of 5-1-02.  
The Forest Conservation Easements on this plan have been established to fulfill the requirements of Section 16.1200 of the Howard County Code, Forest Conservation Act. No clearing, grading or construction is permitted within the Forest Conservation Easement, however, forest management practices as defined in the Deed of Forest Conservation Easement are allowed.



No.	Revision	Date
1	CHANGED THE AREA OF FCE #8	10-14-05
2	Added new Forest Conservation Easements @ 6 & 7 for the Western Elementary School Site (SDP 04-120)	6-10-04
3	Changed Sheet Number	5/29/14

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 20376, Expiration Date: 5-29-14

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
410.463.2055

**ENGINEER'S CERTIFICATE**  
I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site condition and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
Signature of Engineer: *[Signature]* Date: 2/27/02

**DEVELOPER'S CERTIFICATE**  
I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a certificate of attendance at a Department of Natural Resources approved training program for the control of sediment and erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.  
Signature of Developer: *[Signature]* Date: 2/27/02

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Director: *[Signature]* Date: 3/8/02  
Chief, Division of Land Development: *[Signature]* Date: 3/7/02  
Chief, Development Engineering Division: *[Signature]* Date: 3/5/02

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young  
  
THOMAS CLARK ASSOCIATES  
2661 Riva Road, Suite 120  
Annapolis Maryland 21401  
301-261-8700

Address Chart	
Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		
DEED REF. 2307/562	BLOCK NO. 0,9	ZONE R-5C
TAX/ZONE 37	ELEC. DIST. First	CENSUS TR. 6011
WATER CODE D 05	SEWER CODE 2650000	

**FINAL FOREST CONSERVATION PLAN**  
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**  
TAX MAP No.: 37 PARCEL No.: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
"BID & CONSTRUCTION"  
14 JANUARY '02  
SHEET 17 OF 56

K:\Drawing\440557 Northeastern School\SDP\04120\FORREST CONSERVATION PLAN.dwg, 02/20/02, 06:19:35 PM



**FOREST CONSERVATION EASEMENT**

UNAUTHORIZED DISTURBANCE OF VEGETATION IS PROHIBITED. VIOLATORS SUBJECT TO PENALTIES UNDER THE HOWARD COUNTY FOREST CONSERVATION ACT OF 1993.

TREES FOR YOUR FUTURE

11" MINIMUM

**FOREST DATA**

	ACRES
GROSS AREA:	46.41
NET TRACT AREA (NTA):	39.6
EXISTING FOREST ON NTA:	16.9
AFFORESTATION THRESHOLD:	9.7
REFORESTATION THRESHOLD:	7.9
BREAK-EVEN POINT:	9.7
FOREST TO BE CLEARED:	6.39
FOREST TO BE RETAINED IN FCE:	10.52

**SOIL PROTECTION AREA (The Critical Root Zone)**

The soil protection area (Critical Root Zone) of a tree is the zone in which the majority of a tree's roots lay. Ninety-five percent of the roots of most trees will be found in the upper 12-18 feet of the soil. The majority of the roots that supply the nutrients and water to the tree are found just below the soil surface. The total amount of a tree's roots are generally proportional to the volume of the tree's canopy. Therefore, if the roots only penetrate a thin layer of soil, then the roots must spread far from the tree, beyond the extension of the canopy.

When delineating forest retention lines in the field, one must consider not only the visible portion of the tree (the trunk and canopy) but the below ground portion as well. On all forest conservation plan sheets, isolated specimen trees should be noted with their critical root zones and all forest stands to be saved should be noted by the edges of their critical root zones and not just by the extent of their canopies.

The true size of the critical root zone is determined by the species and size of the tree as well as the conditions of the soil (including texture and moisture level). It is difficult to generalize for all trees but also difficult to field examine the root systems of all of the trees in question.

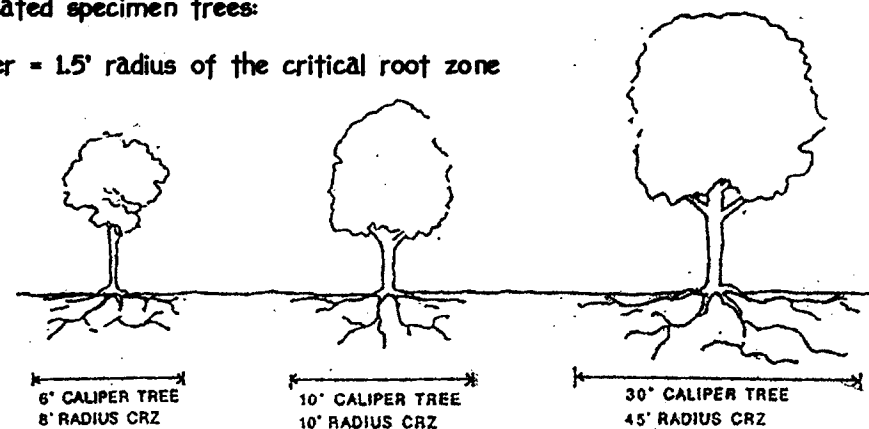
There are several ways to estimate the size of the critical root zone without examining the roots in the field. The following calculation is suggested but other methods may be accepted if shown to protect the complete root zone.

For the edge of large areas, use the greater of the two choices below:

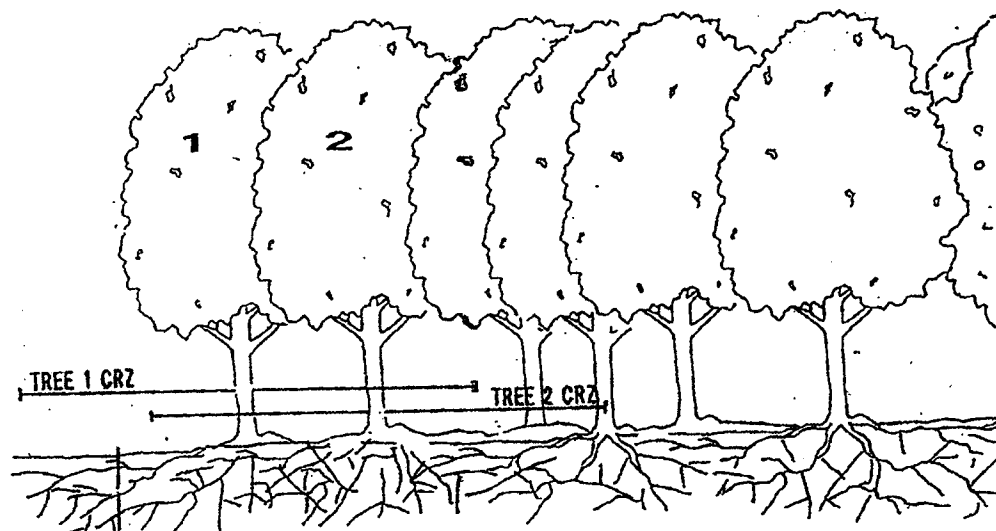
1' caliper of the tree = 1' radius of the critical root zone, or 8 ft. radius circle around the trunk of the tree

For isolated specimen trees:

1' caliper = 1.5' radius of the critical root zone



Forest Retention Critical Root Zone/Tree Retention



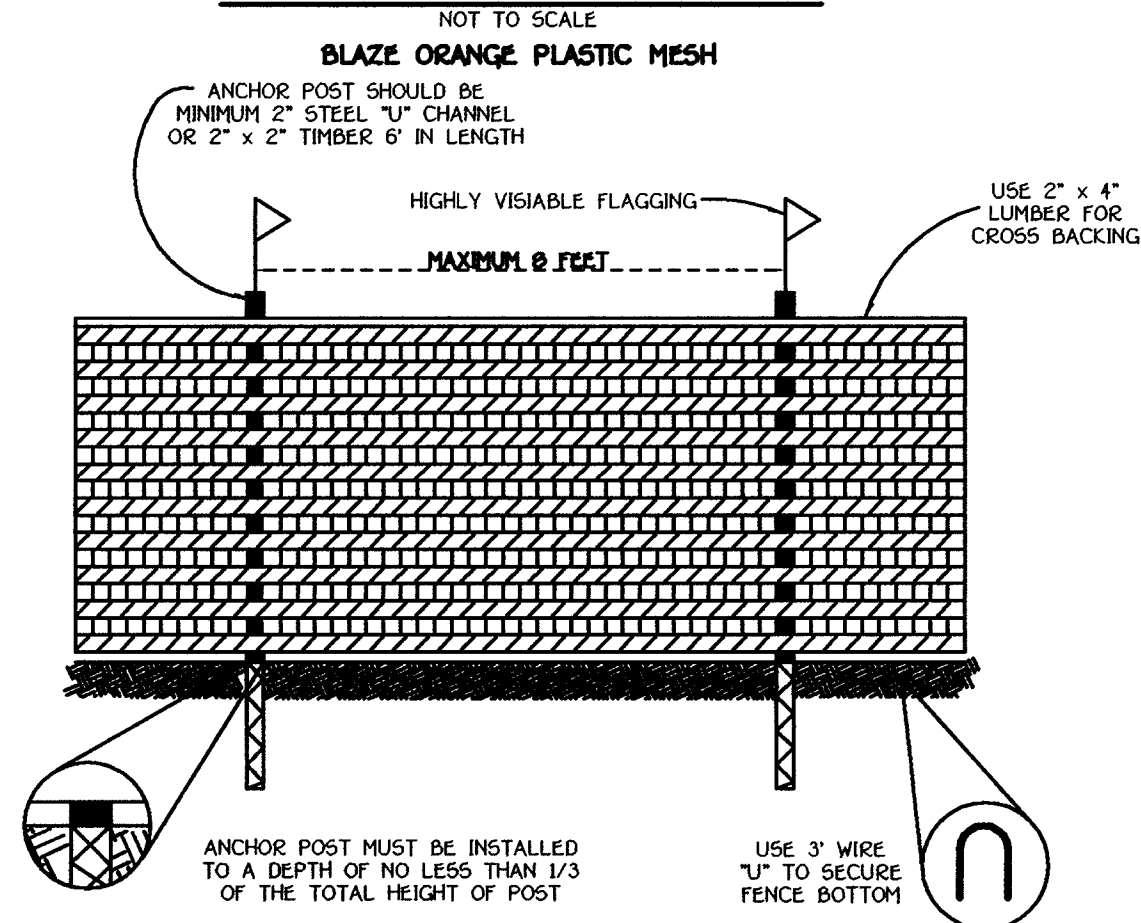
Example of tree retention along FCE boundary.

Since the critical root zone (CRZ) of tree 1 extends beyond the FCE limits this tree, though retained during development process, is not considered part of the FCE. Tree 2 and its entire CRZ are part of the FCE.

Eco-Science Professionals, Inc. CONSULTING ECOLOGISTS

MD DNR Qualified Professional USACOE Wetland Delineator Certification WDCPS31006100448 JOHN P. CANOLES

**TREE PROTECTION DETAIL**



- NOTES:
- FOREST PROTECTION DEVICE ONLY.
  - RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
  - BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
  - ROOT DAMAGE SHOULD BE AVOIDED.
  - PROTECTIVE SIGNAGE MAY ALSO BE USED.
  - DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

**FCP NOTES**

- THE FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 161202 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
- TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. THE FENCING SHALL BE PLACED ALONG ALL FCE BOUNDARIES WHICH OCCUR WITHIN 15 FEET OF THE PROPOSED LIMITS OF DISTURBANCE.
- PERMANENT SIGNAGE SHALL BE PLACED 50 - 100' APART ALONG THE BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS.
- THE FOREST CONSERVATION OBLIGATIONS INCURRED BY THIS SITE DEVELOPMENT PLAN OF 10.4 ACRES OF RETENTION HAVE BEEN MET BY PLACEMENT OF 10.52 ACRES OF EXISTING FOREST IN A FOREST CONSERVATION EASEMENT.

**FSD NOTES**

- NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THE PROPERTY.
- SURROUNDING LAND USE IS LOW-MEDIUM DENSITY RESIDENTIAL DEVELOPMENT.
- ALL FOREST ON THE SITE IS WITHIN STAND F-1.
- INDICATES PUBLIC FOREST CONSERVATION EASEMENT. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 161202 OF THE HOWARD COUNTY CODE FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

**FOREST CONSERVATION WORKSHEET**

BASIC SITE DATA	ACRES
GROSS SITE AREA:	46.41
AREA WITHIN 100 YEAR FLOODPLAIN:	4.3
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL:	1.9
AREA WITHIN OVERHEAD TRANSMISSION LINES:	1.9
NET TRACT AREA (NTA):	39.6
LAND USE CATEGORY:	R-20
<b>INFORMATION FOR CALCULATIONS</b>	
NET TRACT AREA (NTA):	39.6
FOREST CONSERVATION THRESHOLD (GROSS x NTA):	7.9
AFFORESTATION THRESHOLD (GROSS x NTA):	9.7
EXISTING FOREST ON NTA:	16.9
EXISTING FOREST ABOVE CONSERVATION THRESHOLD:	9.0
EXISTING FOREST ABOVE AFFORESTATION THRESHOLD:	—
BREAK-EVEN POINT (if applicable):	9.7
<b>PROPOSED FOREST CLEARING</b>	
TOTAL AREA OF FOREST TO BE CLEARED:	6.39
TOTAL AREA OF FOREST TO BE RETAINED:	10.52
<b>AFFORESTATION CALCULATIONS</b>	
NO FOREST CLEARING AFFORESTATION THRESHOLD - EXISTING FOREST	—
FOREST CLEARING (AFF. THRESH. - EX. FOREST) + FOREST TO BE CLEARED x 2)	—
<b>REFORESTATION CALCULATIONS</b>	
<b>CLEARING ABOVE THRESHOLD</b>	
a. FOREST CLEARED ABOVE THRESHOLD (2.34 x 1/4):	1.595
b. FOREST RETAINED ABOVE CONSERVATION THRESHOLD:	2.82
REFORESTATION REQUIRED (a - b):	-1.025
<b>CLEARING BELOW THRESHOLD</b>	
a. FOREST CLEARED ABOVE THRESHOLD x 1/4:	—
b. FOREST CLEARED BELOW THRESHOLD x 2:	—
REFORESTATION REQUIRED (a + b):	—

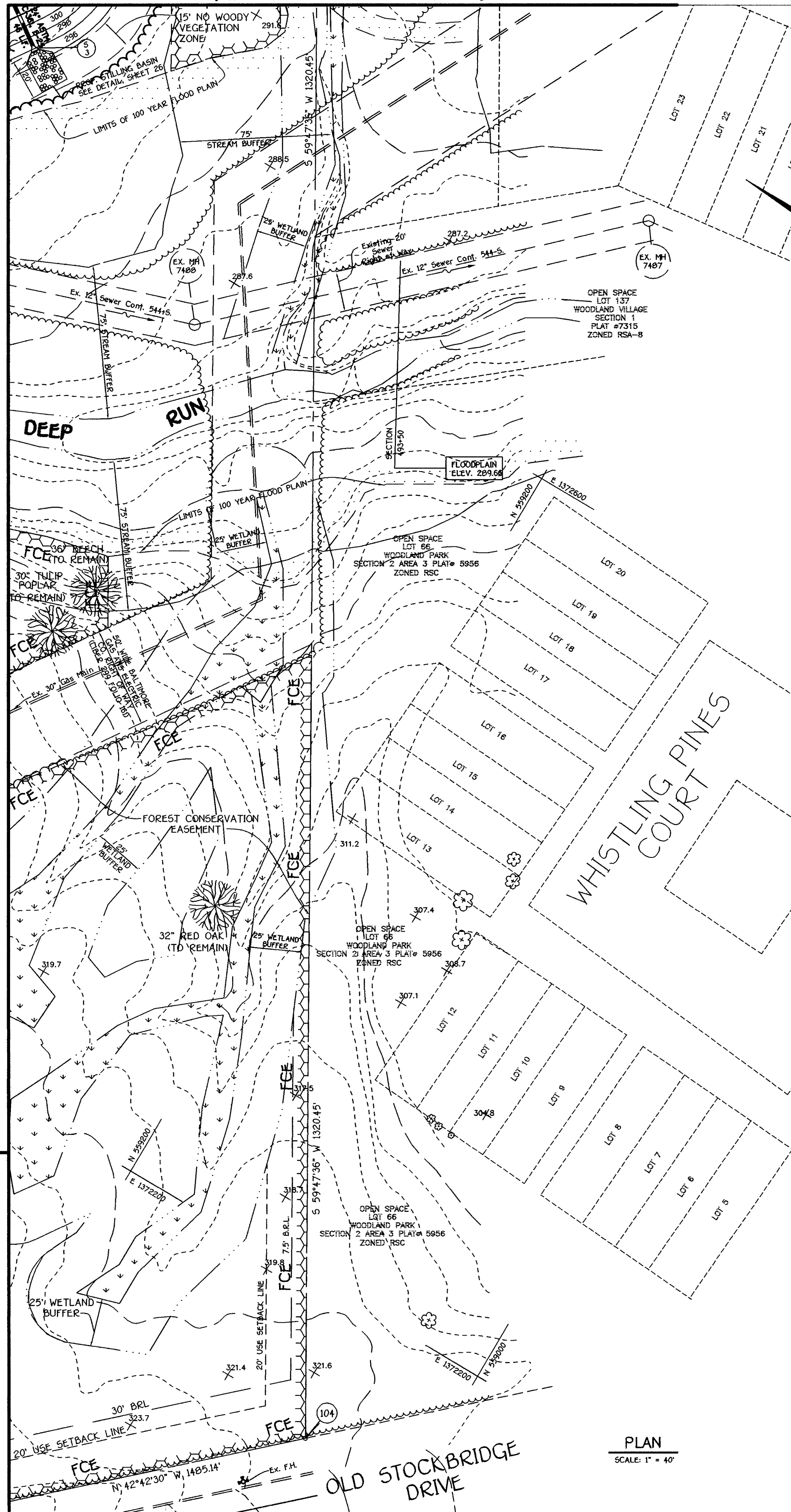
**FCP NOTES**

- Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
- Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
- Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
- A soil protection area for the proposed forest retention area should be field located with the critical root zone shown on the site development plan. Please refer to the "Critical Root Zone" detail provided herein.
- This project complies with the requirements of Section 161202 of the Howard County Code for forest conservation with a break-even retention obligation of 9.7 acres which has been met by recordation of 10.52 acres of forest conservation easement area on a Plat of Forest Conservation Easement, Plat No. 15241 - 15244 00 3-1-02.

NOTE: THE BEARINGS AND DISTANCES FOR THE FOREST CONSERVATION EASEMENT BOUNDARIES ARE SHOWN ON THE PLAT OF FOREST CONSERVATION EASEMENT.



MATCH LINE SEE SHEET 15



**FCP LEGEND**

- EXISTING CONTOURS
- PROPOSED CONTOURS
- FOREST TO BE RETAINED/LIMITS OF FCE
- EX. SPECIMEN TREE
- TEMPORARY PROTECTIVE FENCING
- FCE PERMANENT PROTECTIVE SIGNAGE

PLAN SCALE: 1" = 40'

MATCH LINE SEE SHEET 15

MATCH LINE SEE SHEET 16

MATCH LINE SEE SHEET 17

**ENGINEER'S CERTIFICATE**

I hereby certify that this Plan for Erosion and Sediment Control Represents a Practical and Workable Plan Based on My Personal Knowledge of the Site Condition and That It Was Prepared in Accordance with the Requirements of The Howard Soil Conservation District.

Signature of Engineer: *John P. Canoles* Date: *2/27/02*

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements

Signature: *John P. Canoles* Date: *2/27/02*

U.S.D.A. Natural Resources Conservation Service

**DEVELOPER'S CERTIFICATE**

"I/We Certify That All Development And Construction Will Be Done According To This Plan of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

Signature of Developer: *Thomas Clark* Date: *2/27/02*

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

Signature: *John P. Canoles* Date: *2/27/02*

District of Howard Soil Conservation Dist.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: *Paul R. ...* Date: *3/8/02*

Signature: *...* Date: *3/7/02*

Signature: *...* Date: *3/5/02*

PREPARED FOR HOWARD COUNTY PUBLIC SCHOOL SYSTEM 10910 Maryland Route 109 Ellicott City, Maryland 21042 Attention Cathleen Young

THOMAS CLARK ASSOCIATES 2661 Riva Road, Suite 120 Annapolis Maryland 21401 301-261-8700

**Address Chart**

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		
DEED REF. 2307/562	BLOCK NO. 8,9	ZONE R-5C
TAX/ZONE 37	ELEC. DIST. First	CENSUS TR. 6011
WATER CODE D 05	SEWER CODE 2650000	

**FINAL FOREST CONSERVATION PLAN**

**NORTHEASTERN ELEMENTARY SCHOOL No. 4**

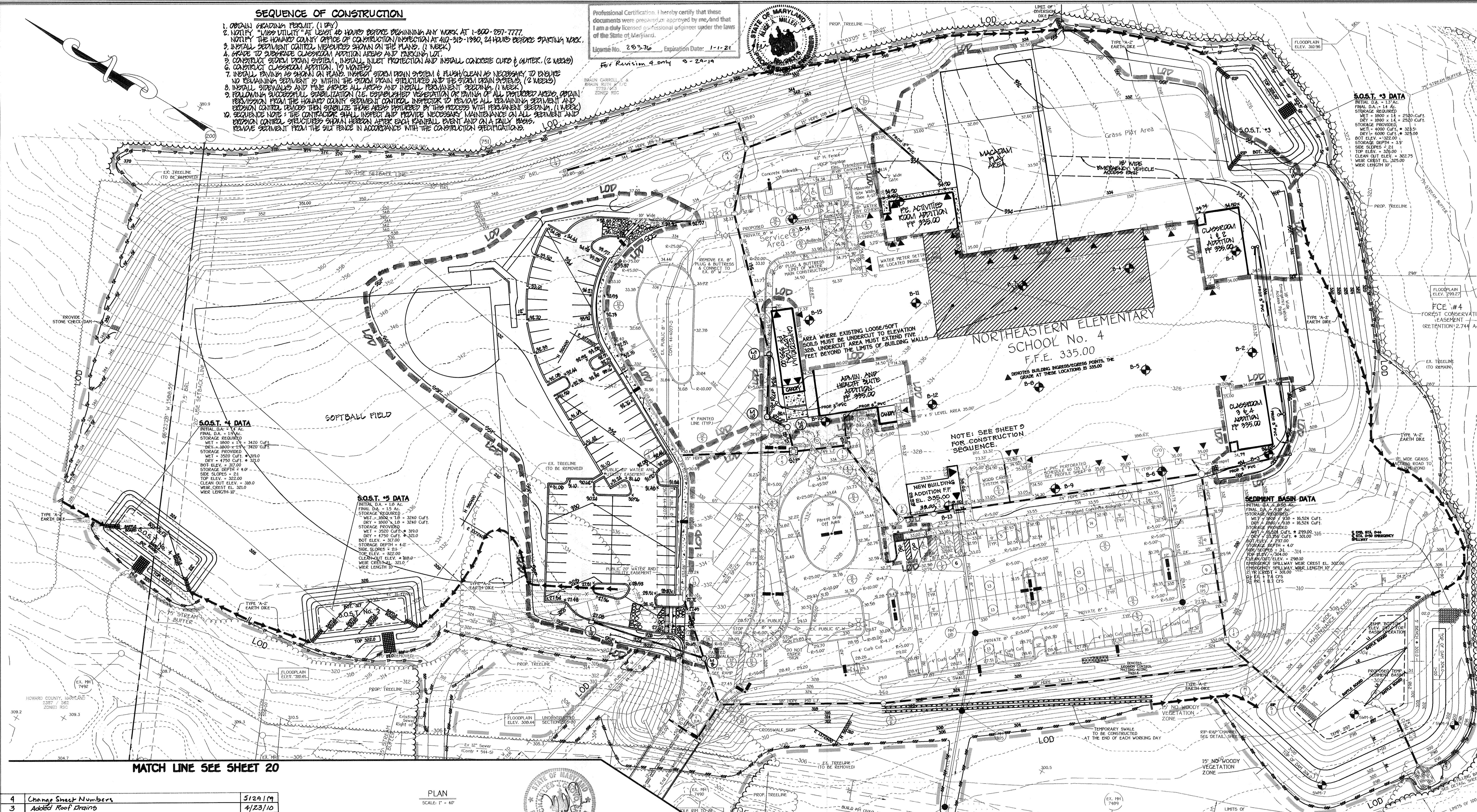
TAX MAP No.: 37 PARCEL No.: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
 BUILDING PERMIT/CO REVIEW 16 NOVEMBER 01  
 "BID & CONSTRUCTION 14 JANUARY 02"  
 SHEET 18 OF 55



**SEQUENCE OF CONSTRUCTION**

1. OBTAIN GRADING PERMIT (1 DAY)
2. NOTIFY "LINES UTILITIES" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777.
3. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-310-1990, 24 HOURS BEFORE STARTING WORK.
4. INSTALL PERMANENT CONTROL MEASURES SHOWN ON THE PLANS (1 WEEK)
5. GRADE TO SUBGRADE CLASSROOM ADDITION AREAS AND PARKING LOT.
6. CONSTRUCT STORM DRAIN SYSTEM, INSTALL INLET PROTECTION AND INSTALL CONCRETE CURB & GUTTER. (2 WEEKS)
7. CONSTRUCT CLASSROOM ADDITION (10 MONTHS)
8. INSTALL PAVING AS SHOWN ON PLANS. INSERT STORM DRAIN SYSTEM & FLUSH/CLEAN AS NECESSARY TO ENSURE NO REMAINING SEDIMENT IS WITHIN THE STORM DRAIN STRUCTURES AND THE STORM DRAIN SYSTEM. (2 WEEKS)
9. INSTALL SIDEWALKS AND FINE GRADE ALL AREAS AND INSTALL PERMANENT SEEDING. (1 WEEK)
10. FOLLOWING PROPOSED FULL STABILIZATION (IE: ESTABLISH VEGETATION OR BANKS OF ALL DISTURBED AREAS, OBTAIN PERMISSION FROM THE HOWARD COUNTY PERMITTING OFFICER TO REMOVE ALL REMAINING SEDIMENT AND EROSION CONTROL DEVICES THEN STABILIZE THESE AREAS PROVIDED BY THIS PROCESS WITH PERMANENT SEEDING. (1 WEEK)
11. SEQUENCE NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL PERMANENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL EVENT AND ON A DAILY BASIS. REMOVE SEDIMENT FROM THE SILT FENCE IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS.

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 26576 Expiration Date: 1-1-21  
 For Revision 4 only 8-2-19



**S.O.S.T. #4 DATA**  
 INITIAL D.A. = 1.14 AC  
 FINAL D.A. = 1.14 AC  
 STORAGE REQUIRED  
 WET = 1800 x 1.14 = 2052 CU FT  
 DRY = 1800 x 1.14 = 2052 CU FT  
 STORAGE PROVIDED  
 WET = 3520 CU FT  
 DRY = 4750 CU FT  
 BOT. ELEV. = 317.00  
 STORAGE DEPTH = 4.0'  
 SIDE SLOPES = 2:1  
 TOP ELEV. = 322.00  
 CLEAN CUT ELEV. = 319.0  
 WEIR CREST EL. 321.0  
 WEIR LENGTH 10'

**S.O.S.T. #5 DATA**  
 INITIAL D.A. = 1.0 AC  
 FINAL D.A. = 1.0 AC  
 STORAGE REQUIRED  
 WET = 1800 x 1.0 = 1800 CU FT  
 DRY = 1800 x 1.0 = 1800 CU FT  
 STORAGE PROVIDED  
 WET = 3520 CU FT  
 DRY = 4750 CU FT  
 BOT. ELEV. = 317.00  
 STORAGE DEPTH = 4.0'  
 SIDE SLOPES = 2:1  
 TOP ELEV. = 322.00  
 CLEAN CUT ELEV. = 319.0  
 WEIR CREST EL. 321.0  
 WEIR LENGTH 10'

**SEDIMENT BASIN DATA**  
 INITIAL D.A. = 0.25 AC  
 FINAL D.A. = 0.25 AC  
 STORAGE REQUIRED  
 WET = 1800 x 0.25 = 450 CU FT  
 DRY = 1800 x 0.25 = 450 CU FT  
 STORAGE PROVIDED  
 WET = 2500 CU FT  
 DRY = 3500 CU FT  
 BOT. ELEV. = 317.00  
 STORAGE DEPTH = 4.0'  
 SIDE SLOPES = 2:1  
 TOP ELEV. = 322.00  
 CLEAN CUT ELEV. = 319.0  
 WEIR CREST EL. 321.0  
 WEIR LENGTH 10'

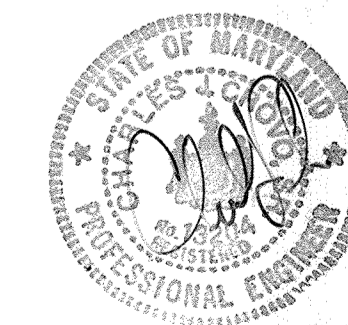
**S.O.S.T. #3 DATA**  
 INITIAL D.A. = 1.1 AC  
 FINAL D.A. = 1.1 AC  
 STORAGE REQUIRED  
 WET = 1800 x 1.1 = 1980 CU FT  
 DRY = 1800 x 1.1 = 1980 CU FT  
 STORAGE PROVIDED  
 WET = 3520 CU FT  
 DRY = 4750 CU FT  
 BOT. ELEV. = 317.00  
 STORAGE DEPTH = 4.0'  
 SIDE SLOPES = 2:1  
 TOP ELEV. = 322.00  
 CLEAN CUT ELEV. = 319.0  
 WEIR CREST EL. 321.0  
 WEIR LENGTH 10'

MATCH LINE SEE SHEET 20

MATCH LINE SEE SHEET 20

NO	REVISIONS	DATE
4	Change Sheet Numbers	5/29/19
3	Added Roof Drains	4/23/10
2	ADDED BUILDING ADDITIONS & PARKING LOT	10/1/09
1	Added building addition	10-19-07

PLAN  
 SCALE: 1" = 40'



**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 468-2855

By The Engineer:  
 I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.  
 Signature Of Engineer: *Charles J. Crono Sr.*  
 Printed Name Of Engineer: **CHARLES J. CRONO SR.**  
 Date: 5/27/02

By The Developer:  
 I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.  
 Signature Of Developer: *Dr. William Brown*  
 Printed Name Of Developer: **DR. WILLIAM BROWN**  
 Date: 5/25/02

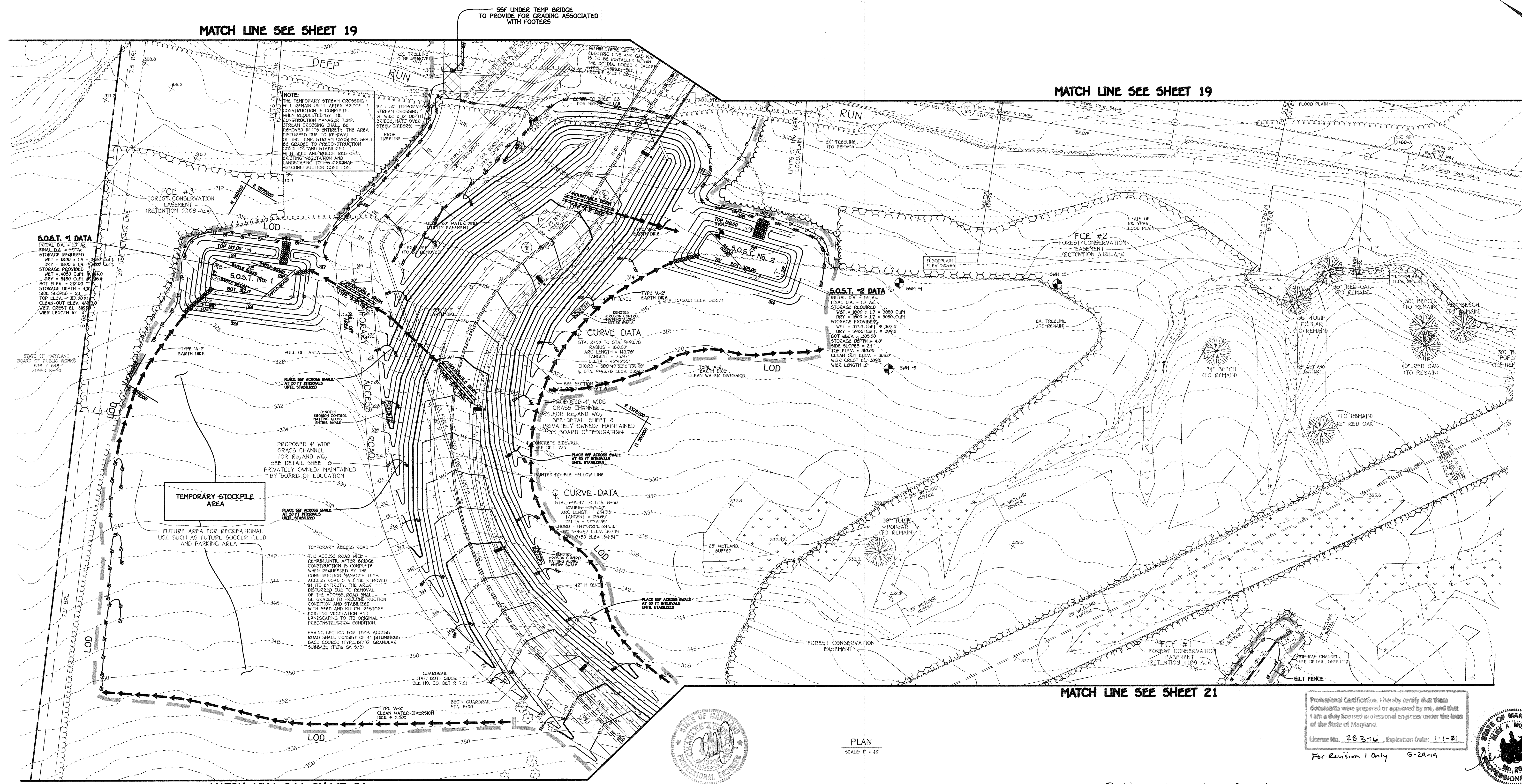
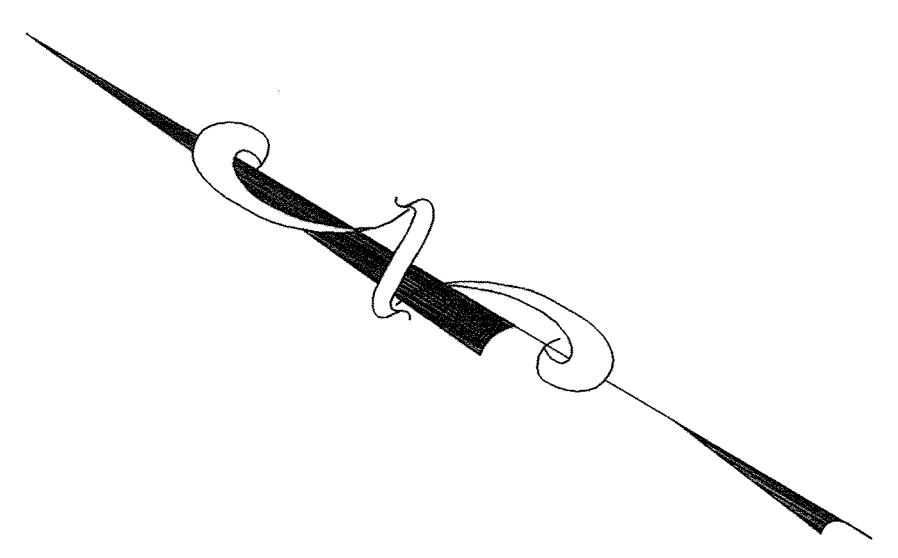
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Director: Department of Planning and Zoning  
 Date: 3/8/02  
 Chief, Division of Land Development  
 Date: 3/5/02  
 Chief, Development Engineering Division  
 Date: 3/5/02

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 108  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young  
 THOMAS CLARK ASSOCIATES  
 2661 Riva Road, Suite 120  
 Annapolis Maryland 21401  
 301-261-8700

Address Chart	
Parcel Number	Street Address
670	8125 Old Stockbridge Drive
PROJECT	Northeastern Elementary School No. 4
DEED REF.	2387/562
BLOCK NO.	09
ZONE	R-SC
TAX/ZONE	37
ELEC. DIST.	First
CENSUS TR.	6011
WATER CODE	D 05
SEWER CODE	2650000

**SEDIMENT AND EROSION CONTROL PLAN**  
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**  
 TAX MAP No: 37 PARCEL No: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
 BUILDING PERMIT/CD REVIEW 15 NOVEMBER 01  
 "BID & CONSTRUCTION 14 JANUARY 02"  
 SHEET 19 OF 52





MATCH LINE SEE SHEET 19

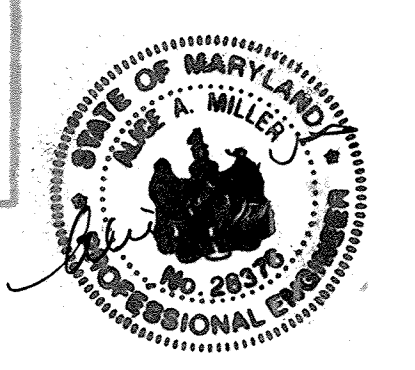
MATCH LINE SEE SHEET 19

MATCH LINE SEE SHEET 21



PLAN  
SCALE: 1" = 40'

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 28376, Expiration Date: 1-1-21  
For Revision 1 Only 5-29-19

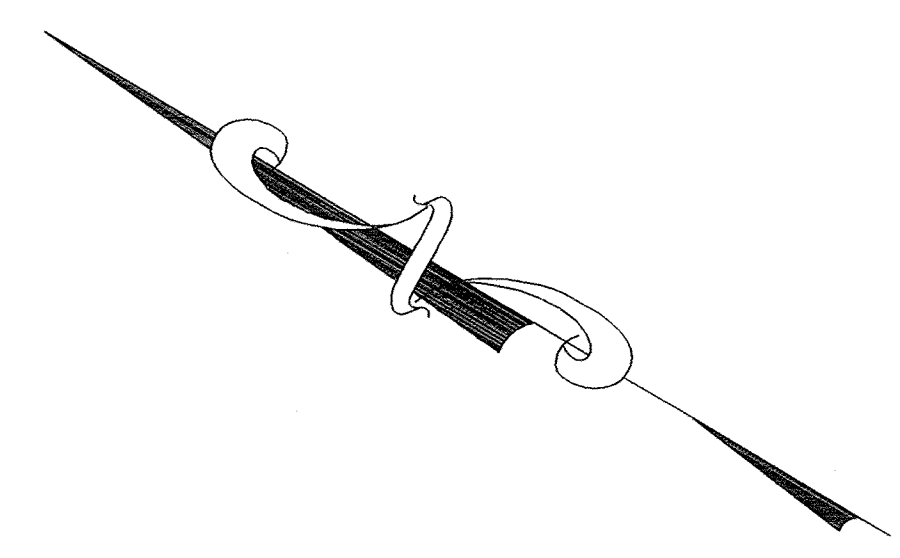


MATCH LINE SEE SHEET 21

Revision 1 5-29-19 Change Sheet Number

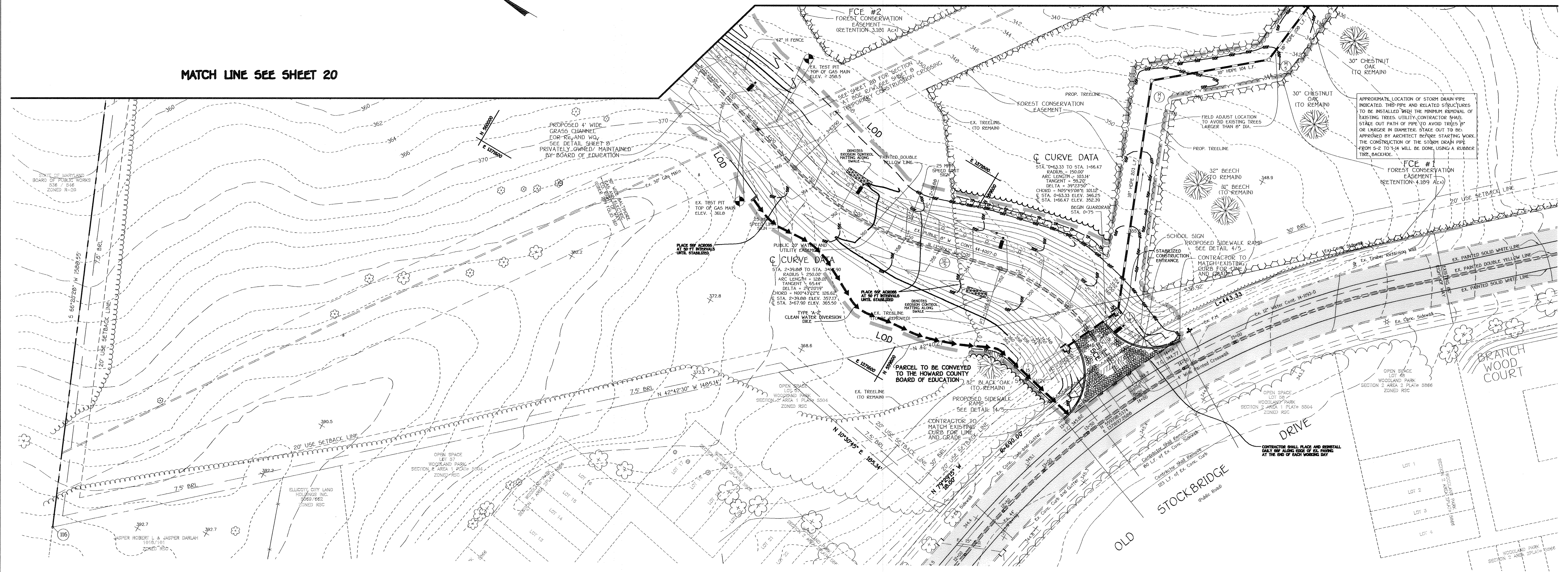
<p><b>FISHER, COLLINS &amp; CARTER, INC.</b> CIVIL ENGINEERING CONSULTANTS &amp; LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK - 10272 DALLWOOD NATIONAL FREE ELICOTT CITY, MARYLAND 21042 4100 461 - 2955</p>	<p>By The Engineer: I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.</p> <p>Signature of Engineer: <i>Charles J. Crono</i> Date: 2/12/12</p> <p>CHARLES J. CRONO SR. Printed Name Of Engineer</p>	<p>By The Developer: I/We Certify That All Development And/or Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.</p> <p>Signature of Developer: <i>William Brown</i> Date: 2/27/12</p> <p>DR. WILLIAM BROWN Printed Name Of Developer</p>	<p>APPROVED: DEPARTMENT OF PLANNING AND ZONING</p> <p>Signature: <i>Leah Rutz</i> Date: 2/8/12 Director, Department of Planning and Zoning</p> <p>Signature: <i>Chris Hantz</i> Date: 2/9/12 Chief, Division of Land Development</p> <p>Signature: <i>Thomas Clark</i> Date: 2/5/12 Chief, Development Engineering Division</p>	<p>PREPARED FOR HOWARD COUNTY PUBLIC SCHOOL SYSTEM 10910 Maryland Route 108 Ellicott City, Maryland 21042 Attention Cathleen Young</p> <p>THOMAS CLARK ASSOCIATES 2661 Riva Road, Suite 120 Annapolis Maryland 21401 301-261-8700</p>	<p>Address Chart</p> <table border="1"> <tr> <th>Parcel Number</th> <th>Street Address</th> </tr> <tr> <td>670</td> <td>8125 Old Stockbridge Drive</td> </tr> </table>	Parcel Number	Street Address	670	8125 Old Stockbridge Drive	<p>SEDIMENT AND EROSION CONTROL PLAN</p> <p><b>NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)</b></p> <p>TAX MAP No: 37 PARCEL No: 670 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: 15 OCTOBER 2001 BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01 "BID &amp; CONSTRUCTION" 14 JANUARY 02 SHEET 20 OF 56.</p>		
	Parcel Number	Street Address										
670	8125 Old Stockbridge Drive											
<p>These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.</p> <p>Signature: <i>Jim Meyer</i> Date: 2/12/12 USDA Natural Resources Conservation Service</p>	<p>These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.</p> <p>Signature: <i>John Robertson</i> Date: 2/27/12 Howard Soil Conservation District</p>	<p>PROJECT: Northeastern Elementary School No. 4 DEED REF: 2307/562 WATER CODE: D 05</p> <table border="1"> <tr> <th>BLOCK NO.</th> <th>ZONE</th> <th>TAX/ZONE</th> <th>ELEC. DIST.</th> <th>CENSUS TR.</th> </tr> <tr> <td>09</td> <td>R-5C</td> <td>37</td> <td>First</td> <td>6011</td> </tr> </table> <p>SEWER CODE: 2650000</p>	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.	09	R-5C	37	First	6011
BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.								
09	R-5C	37	First	6011								





MATCH LINE SEE SHEET 20

MATCH LINE SEE SHEET 20

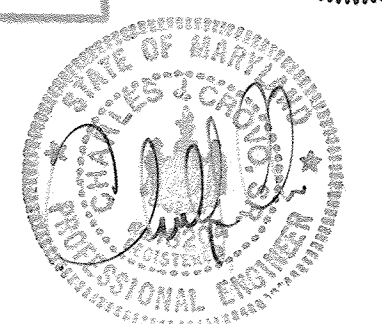


PLAN  
SCALE: 1" = 40'

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 28376 Expiration Date: 1-1-21



For Revision 1 only  
5-29-19



Revision 1 5-29-19 Change Sheet Number

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 3022 BALTIMORE NATIONAL FREE  
ELICOTT CITY, MARYLAND 21042  
(410) 461-2955

By The Engineer:  
I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.  
Signature Of Engineer: *Charles J. Crono*  
Date: 2/27/02  
Printed Name Of Engineer: CHARLES J. CRONO GR.

By The Developer:  
I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.  
Signature Of Developer: *William Brown*  
Date: 2/25/02  
Printed Name Of Developer: DR. WILLIAM BROWN

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Director, Department of Planning and Zoning: *Paul Brown* Date: 3/6/02  
Chief, Division of Land Development: *Cathy Smith* Date: 3/7/02  
Chief, Development Engineering Division: *William Brown* Date: 3/5/02

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young  
  
THOMAS CLARK ASSOCIATES  
2661 Riva Road, Suite 120  
Annapolis Maryland 21401  
301-261-0700

Address Chart	
Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	8,9	R-SC	37	First	6011

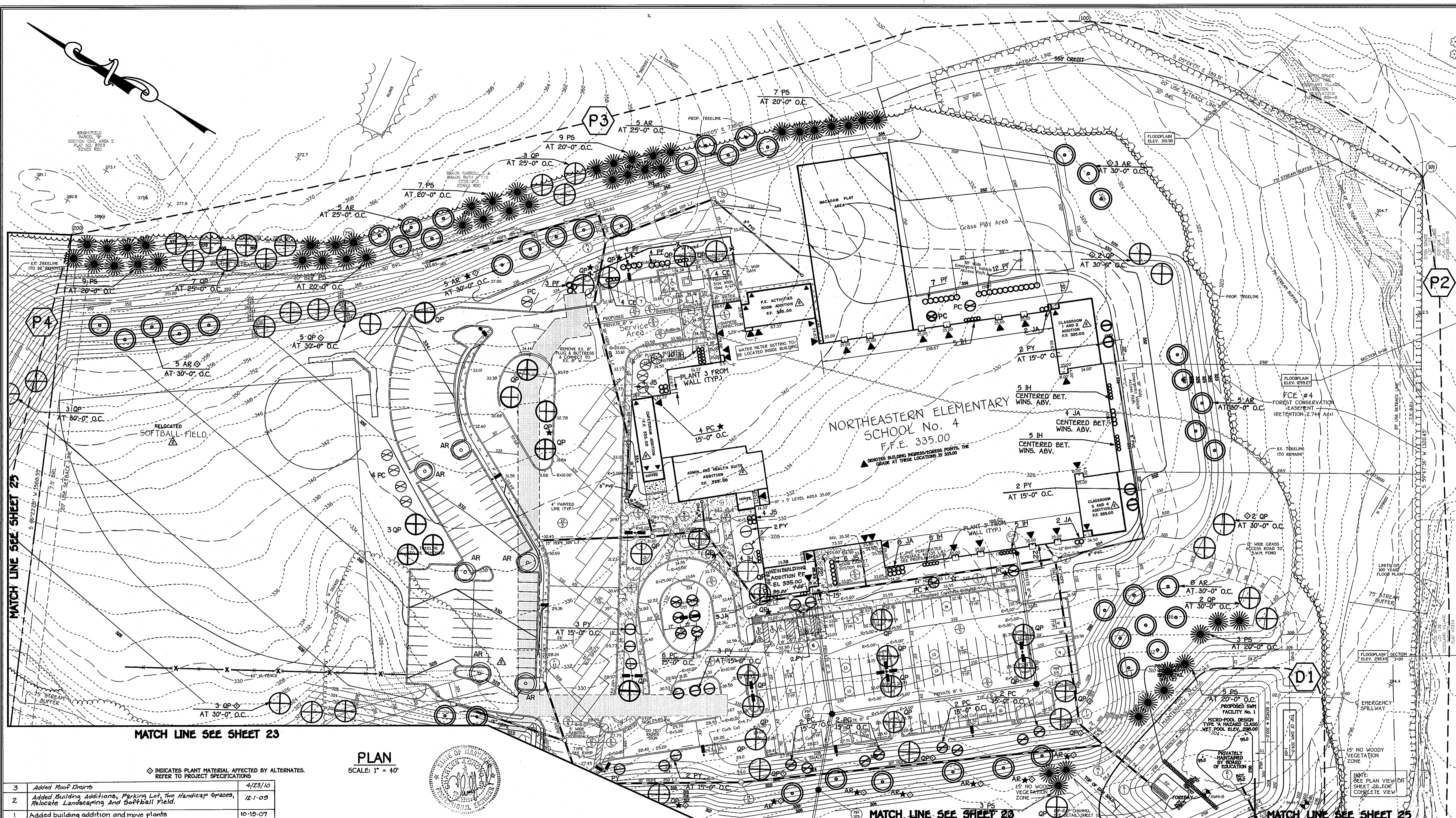
  

WATER CODE	SEWER CODE
D 05	2650000

SEDIMENT AND EROSION CONTROL PLAN  
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**  
TAX MAP No: 37 PARCEL No: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
"BID & CONSTRUCTION 14 JANUARY 02"  
SHEET 21 OF 56

SOP02-36





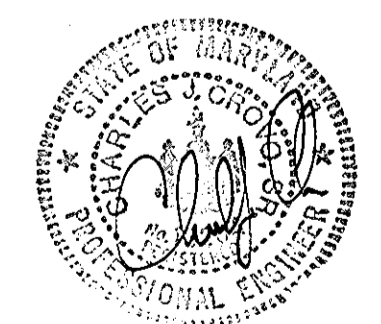
MATCH LINE SEE SHEET 23

MATCH LINE SEE SHEET 24

MATCH LINE SEE SHEET 25

◇ INDICATES PLANT MATERIAL AFFECTED BY ALTERNATES. REFER TO PROJECT SPECIFICATIONS

PLAN  
SCALE: 1" = 40'



NO	REVISIONS	DATE
3	Added Roof Drains	4/23/10
2	Added Building Additions, Parking Lot, Two Handicap Spaces, Relocate Landscaping And Softball Field.	12-1-09
1	Added building addition and move plants	10-10-07

**ENGINEER'S CERTIFICATE**

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

*[Signature]*  
Signature of Engineer  
Date: 2/12/10

**DEVELOPER'S CERTIFICATE**

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

*[Signature]*  
Signature of Developer  
Date: 2/25/10

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 3/8/02  
Director, Department of Planning and Zoning  
*[Signature]* 3/1/02  
Chief, Division of Land Development  
*[Signature]* 6/5/02  
Chief, Development Engineering Division

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 109  
Ellicott City, Maryland 21042  
Attention Cathleen Young

THOMAS CLARK ASSOCIATES  
2661 Riva Road, Suite 120  
Annapolis Maryland 21401  
301-261-8700

Address Chart	
Parcel Number	Street Address
670	8125 Old Stockbridge Drive
PROJECT	
Northeastern Elementary School No. 4	SECTION/AREA
DEED REF. 2387/562	BLOCK NO. 8.9
WATER CODE D 05	ZONE R-SC
	TAX/ZONE 37
	ELEC. DIST. First
	SEWER CODE
	CENSUS TR. 6011
	LOT NO. 2650000

**LANDSCAPE PLAN**

**NORTHEASTERN ELEMENTARY SCHOOL No. 4**

TAX MAP No: 37 PARCEL No: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
"BID & CONSTRUCTION"  
14 JANUARY 02"  
SHEET 22 OF 55

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
410-418-3229

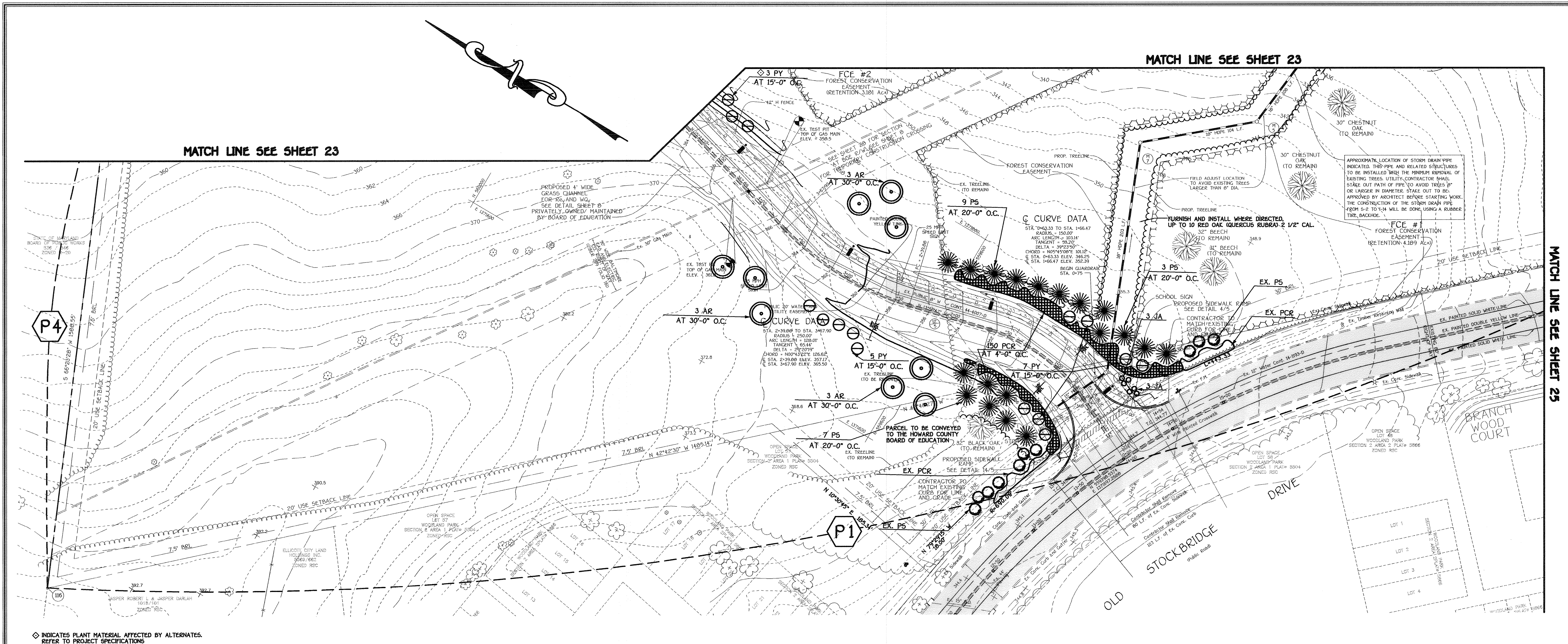
Reviewed for Howard County Soil Conservation District And Meets Technical Requirements.  
*[Signature]* 2/12/10  
U.S. Forest Service

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard County Soil Conservation District.  
*[Signature]* 2/12/10  
District Howard Soil Conservation Dist.



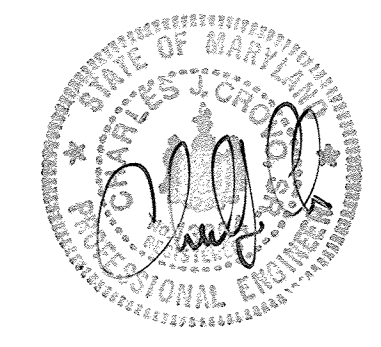






**PLAN**  
SCALE: 1" = 40'

◆ INDICATES PLANT MATERIAL AFFECTED BY ALTERNATES. REFER TO PROJECT SPECIFICATIONS

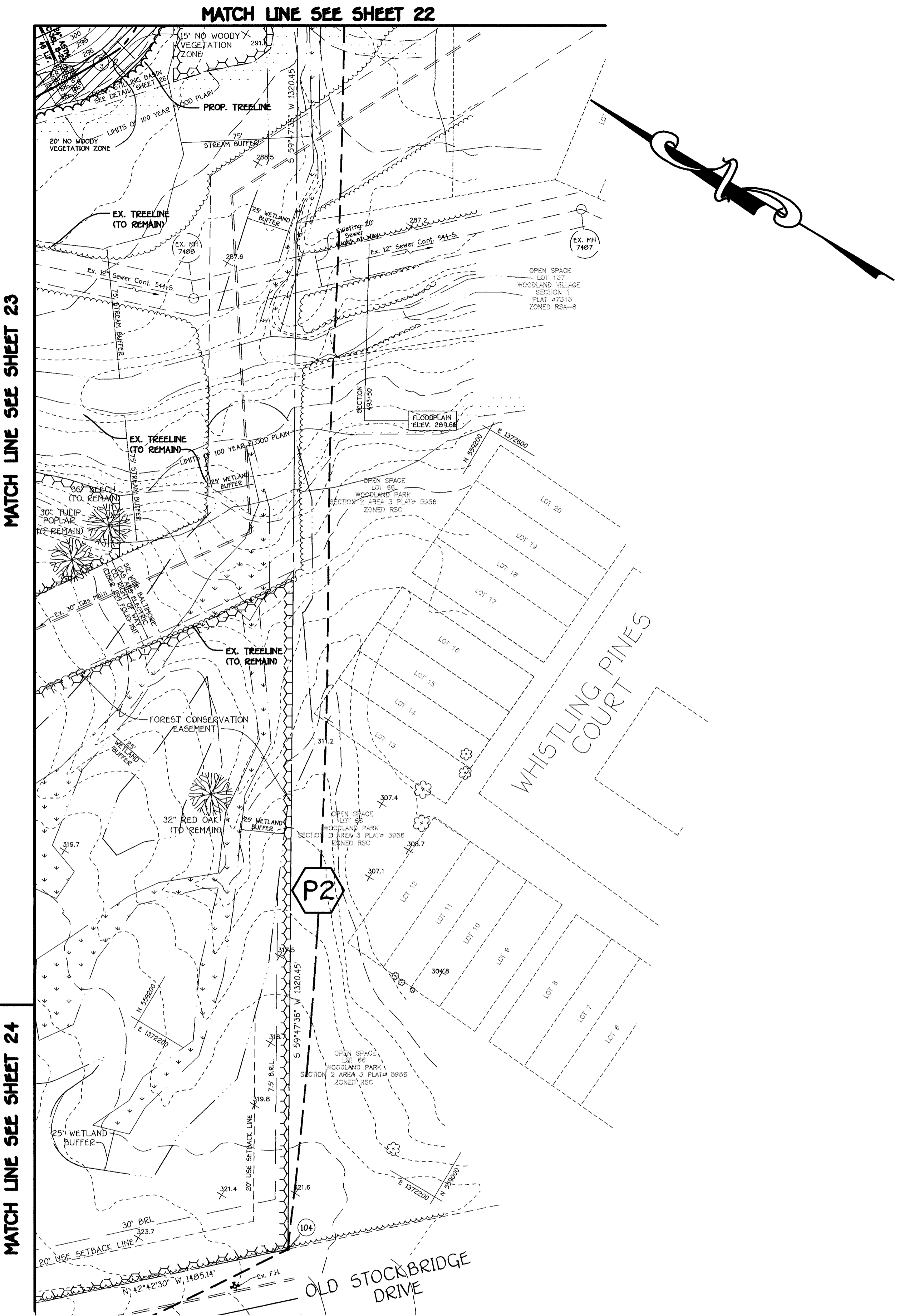
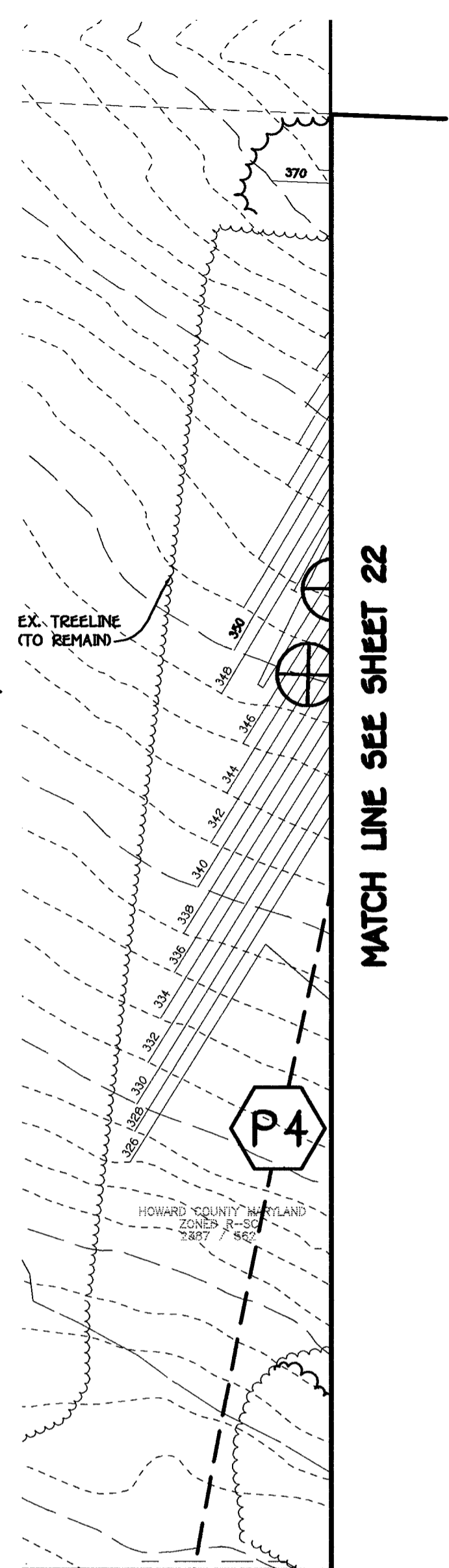
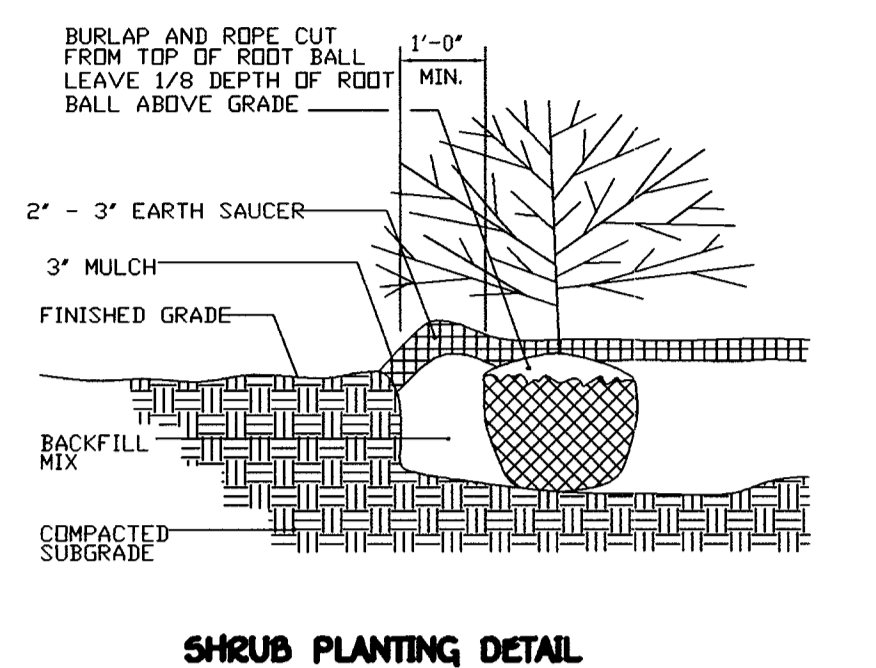
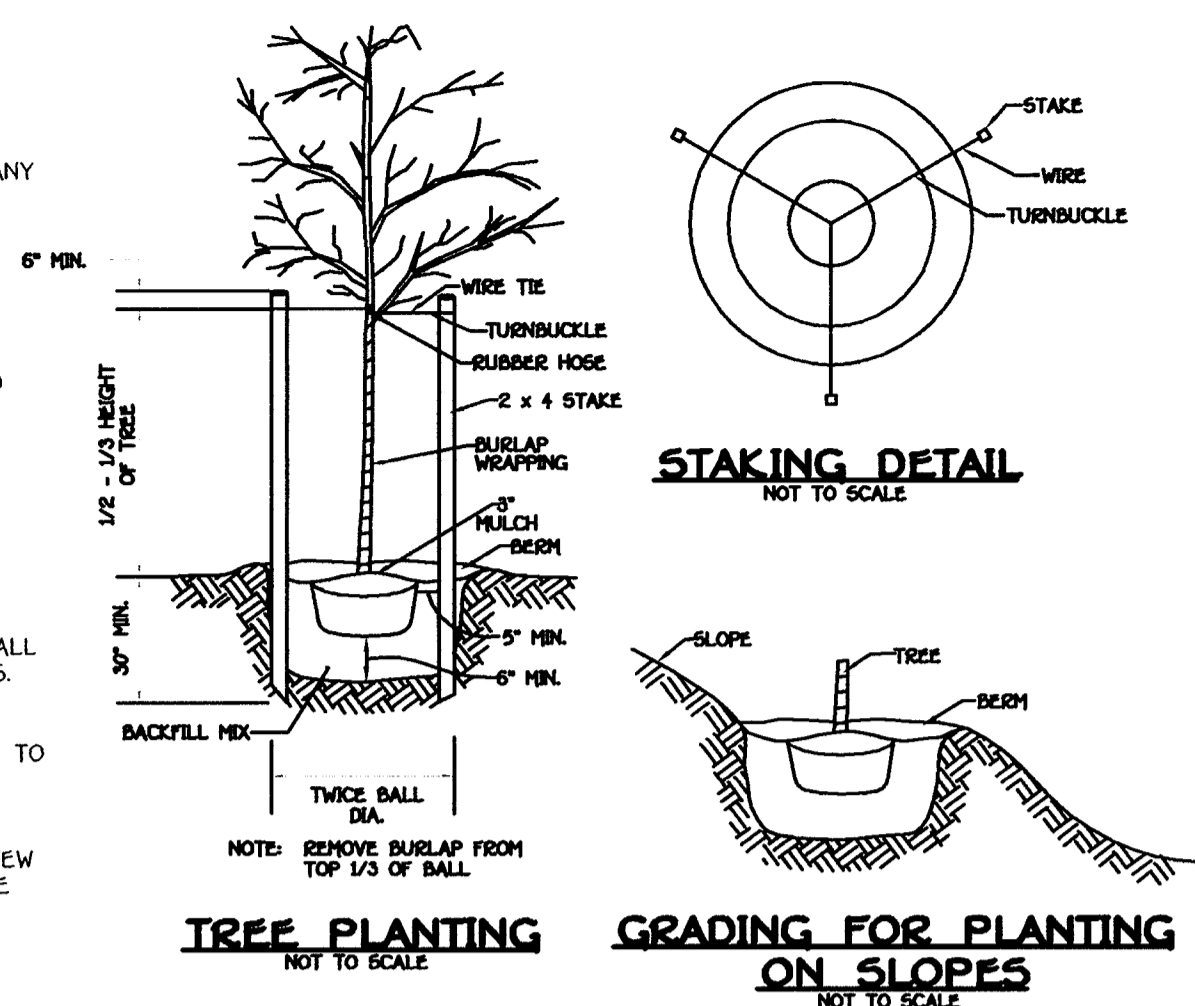


I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 28376, Expiration Date: 10-15-02  
For Revision only

<b>FISHER, COLLINS &amp; CARTER, INC.</b> CIVIL ENGINEERING, CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK - 18272 BALDWIN NATIONAL PIKE ELLICOTT CITY, MARYLAND 21114 (410) 461-2955	<b>ENGINEER'S CERTIFICATE</b> I hereby certify that this Plan for Erosion and Sediment Control Represents a Practical and Workable Plan Based on My Personal Knowledge of the Site Condition and That It Was Prepared in Accordance with the Requirements of The Howard Soil Conservation District.  Signature of Engineer Date: 2/17/02	<b>DEVELOPER'S CERTIFICATE</b> "I/We Certify That All Development and Construction Will be Done According to This Plan of Development and Plan for Erosion and Sediment Control and That All Responsible Personnel Involved in the Construction Project Will Have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion Before Beginning the Project. I Also Authorize Periodic On-Site Inspection by the Howard Soil Conservation District or Their Authorized Agents, as Are Deemed Necessary."  Signature of Developer Date: 2/17/02	APPROVED: DEPARTMENT OF PLANNING AND ZONING  Director, Department of Planning and Zoning Date: 3/8/02  Chief, Division of Land Development Date: 3/7/02  Chief, Development Engineering Division Date: 3/5/02	PREPARED FOR HOWARD COUNTY PUBLIC SCHOOL SYSTEM 10910 Maryland Route 108 Ellicott City, Maryland 21042 Attention Cathleen Young  THOMAS CLARK ASSOCIATES 2661 Riva Road, Suite 120 Annapolis Maryland 21401 301-261-8700	Revision 1 52A-19 Changed Sheet Number Address Chart <table border="1"> <tr> <th>Parcel Number</th> <th>Street Address</th> </tr> <tr> <td>670</td> <td>8125 Old Stockbridge Drive</td> </tr> </table>	Parcel Number	Street Address	670	8125 Old Stockbridge Drive	<b>LANDSCAPE PLAN</b> <b>NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)</b> TAX MAP No.: 37 PARCEL No.: 670 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: 15 OCTOBER 2001 BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01 "BID & CONSTRUCTION" 14 JANUARY 02 SHEET 24 OF 56																						
	Parcel Number	Street Address																														
670	8125 Old Stockbridge Drive																															
Reviewed For Howard County Soil Conservation District and Meets Technical Requirements.  U.S.D. Natural Resource Conservation Service Date: 2/17/02	Approved: This Development is Approved For Erosion and Sediment Control by The Howard Soil Conservation District.  District Howard Soil Conservation Dist. Date: 2/17/02	<table border="1"> <tr> <th>PROJECT</th> <th>SECTION/AREA</th> <th>LOT NO.</th> </tr> <tr> <td>Northeastern Elementary School No.4</td> <td>---</td> <td>---</td> </tr> <tr> <th>DEED REF.</th> <th>BLOCK NO.</th> <th>ZONE</th> <th>TAX/ZONE</th> <th>ELEC. DIST.</th> <th>CENSUS TR.</th> </tr> <tr> <td>2387/562</td> <td>8,9</td> <td>R-SC</td> <td>37</td> <td>First</td> <td>6011</td> </tr> <tr> <th>WATER CODE</th> <th>SEWER CODE</th> <td colspan="4"></td> </tr> <tr> <td>D 05</td> <td>2650000</td> <td colspan="4"></td> </tr> </table>	PROJECT	SECTION/AREA	LOT NO.	Northeastern Elementary School No.4	---	---	DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.	2387/562	8,9	R-SC	37	First	6011	WATER CODE	SEWER CODE					D 05	2650000				
PROJECT	SECTION/AREA	LOT NO.																														
Northeastern Elementary School No.4	---	---																														
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.																											
2387/562	8,9	R-SC	37	First	6011																											
WATER CODE	SEWER CODE																															
D 05	2650000																															



- PLANTING NOTES:
- LANDSCAPE PLANS ARE TO BE USED FOR PLANTING ONLY.
  - CONTRACTOR SHALL NOTIFY ALL UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK. ALL GENERAL NOTES, ESPECIALLY THOSE REGARDING UTILITIES ON SHEET 1, SHALL APPLY.
  - FIELD VERIFY UNDERGROUND UTILITY LOCATIONS AND EXISTING CONDITIONS BEFORE STARTING PLANTING WORK. EVEN WHERE PLANT LOCATIONS ARE DIMENSIONED, CONTACT CONSTRUCTION MANAGER IF ANY RELOCATIONS ARE REQUIRED.
  - PLANT QUANTITIES SHOWN ON PLANT LIST ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IF DISCREPANCIES EXIST BETWEEN QUANTITIES SHOWN ON THE PLAN AND THOSE SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN SHALL TAKE PRECEDENCE.
  - ALL PLANT MATERIAL SHALL BE FULL AND HEAVY, BE WELL-FORMED AND SYMMETRICAL, CONFORM TO THE A.A. SPECIFICATIONS, AND BE INSTALLED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
  - ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES BUT NOT OTHERWISE PLANTED, PAVED OR MULCHED SHALL BE SEEDED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
  - ALL NON-PAVED AREAS SHALL BE SEEDED.
  - ALL EXPOSED EARTH WITHIN THE LIMITS OF THE PLANTING BEDS SHALL BE MULCHED WITH SHREDDED HARDWOOD MULCH PER PLANTING DETAILS.
  - THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING IF SOIL OR DRAINAGE CONDITIONS ARE ENCOUNTERED WHICH MAY BE DETRIMENTAL TO THE GROWTH OF PLANTS.
  - ANY EXISTING PLANT MATERIAL INDICATED TO REMAIN, WHICH IS DAMAGED BY CONSTRUCTION OPERATIONS, SHALL BE REPLACED WITH NEW PLANT MATERIAL OF SAME SPECIES AND SIZE. NEW MATERIAL SHALL BE SUBJECT TO SAME GUARANTEE AS ALL NEW PLANT MATERIAL.
  - REFER TO OTHER SITE DRAWINGS FOR ADDITIONAL SEEDING REQUIREMENTS.



KEY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE & CONDITION	REMARKS	QUANTITY
PCR	⊗	PYRACANTHA COCCINEA 'RUTGERS'	'RUTGERS' FIRETHORN	18" - 24" SPREAD	AT 4'-0" O.C.	150
AR	⊕	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2 1/2" - 3" CAL. 12" - 14" B & B	30' O.C. U.O.N.	70
QP	⊕	QUERCUS PALUSTRIS	PIN OAK	2 1/2" - 3" CAL. 12" - 14" B & B	30' O.C. U.O.N.	52
PY	⊕	PRUNUS YEDOENSIS	YOSHINO CHERRY	1 1/2" - 2" CAL. 8" - 10" HT. B & B	MATCHED IN GROUPS	47
PC	⊕	PRUNUS CERASIFERA 'THUNDERCLOUD'	PURPLELEAF FLOWERING PLUM	1 1/2" - 2" CAL. 8" - 10" HT. B & B	MATCHED IN GROUPS	27
PS	⊕	PINUS STROBUS	EASTERN WHITE PINE	10" - 12" B & B	AT 20' O.C. U.O.N.	28
CE	⊕	ALATUS COMPACTUS	DWARF-WINGED EUONYMUS	30"-36" B & B	AT 3'-0" O.C.	23
IH	⊕	ILEX CRENATA 'HETZLI'	HETZ JAPANESE HOLLY	24" - 30" HT. B & B CONT.	AT 3'-0" O.C.	54
JA	⊕	JUNIPERUS ANDORRA	ANDORRA JUNIPER	18"-24" CONT.	AT 4'-0" O.C.	51
JS	⊕	JUNIPERUS CHINENSIS 'SARGENTI'	SARGENT'S JUNIPER	18"-24" CONT.	AT 4'-0" O.C.	14
PF	⊕	PHOTINIA FRASERI	FRASER'S RED TIPPED PHOTINIA	30"-36" CONT.	AT 5'-0" O.C.	49

INDICATES EXISTING TREES TO REMAIN

U.O.N. = UNLESS OTHERWISE NOTED

★ INDICATES LOCATIONS WHERE CONTRACTOR MUST HAND DIG FOR NEW TREES AND SHRUBS AFTER VERIFYING LOCATION OF UTILITIES.

⊕ INDICATES PLANT MATERIAL AFFECTED BY ALTERNATE (S). REFER TO PROJECT SPECIFICATIONS

⊕ FURNISH AND INSTALL WHERE DIRECTED, UP TO 10 RED OAK (QUERCUS RUBRA) 2 1/2" CAL.

SCOPE INCLUDES REMOVAL (TO GROUND LEVEL OR PRUNING AS DIRECTED) OF UP TO FIFTY (50) EXISTING TREES IN THE EXISTING TREE MASSES THAT REMAIN AFTER CLEARING. TREES AND BRANCHES RESULTING FROM THIS OPERATION SHALL BE REMOVED FROM SITE.

PERIMETER	CATEGORY (PROPERTIES/ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF ROADWAY FRONTAGE PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NET REMAINING PERIMETER LENGTH	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	SHADE TREES	EVERGREEN TREES	SHRUBS	SHADE TREES	EVERGREEN TREES	SHRUBS
P-1	ADJACENT TO ROADWAY	B	1405.14'	YES (0405.14')	-	NO	-	-	-	-	-	-
P-2	ADJACENT TO PERIMETER	A	1320.45'	YES (0320.45')	-	NO	-	-	-	-	-	-
P-3	ADJACENT TO PERIMETER	C	1330.49'	YES (0533)	777.49'	NO	20	39	-	20***	39	PS
P-4	ADJACENT TO PERIMETER	A	1500.55'	YES (0500.55')	-	NO	-	-	-	-	-	-

PERIMETER P-4 IS ADJACENT TO THE STATE OF MARYLAND PROPERTY WHICH HAS CREDITED EXISTING VEGETATION

PERIMETER P-4 IS ALSO ADJACENT TO HOWARD COUNTY MARYLAND PROPERTY WHICH ALSO HAS CREDITED EXISTING VEGETATION.

\*\*\* ALTERNATIVE COMPLIANCE LANDSCAPING IS BEING PROVIDED AT THE SITE ENTRANCE FOR PERIMETER P-1

\*\*\* THE 20 SHADE TREES ARE 10 QP AND 10 AR.

LINEAR FEET OF PERIMETER	DL: 600'
NUMBER OF TREES REQUIRED:	
SHADE TREES	14
EVERGREEN TREES	17
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	YES 187'
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO
NUMBER OF TREES PROVIDED:	
SHADE TREES	9
EVERGREEN TREES	17
OTHER TREES (21 SUBSTITUTION)	-

QTY.	KEY	NAME	SIZE
3	⊕	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	12"-14" HT.
6	⊕	QUERCUS PALUSTRIS PIN OAK	12"-14" HT.
17	⊕	PINUS STROBUS EASTERN WHITE PINE	6'-8" HT.

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF PARKING SPACES	121
NUMBER OF SHADE TREES REQUIRED	6
LANDSCAPED PARKING LOT ISLAND PER 20 PARKING SPACES	
NUMBER OF SHADE TREES PROVIDED	11

**LANDSCAPE DEVELOPER'S CERTIFICATE**

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a Certification of Landscape Installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

Name: *DR. WILLIAM BROWN* Date: *2/27/02*

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PLACE  
ELICOTT CITY, MARYLAND 21042  
410.461.2000

**ENGINEER'S CERTIFICATE**

I hereby certify that this Plan for Erosion and Sediment Control Represents a Practical and Workable Plan Based on My Personal Knowledge of the Site Condition and That It was Prepared in Accordance with the Requirements of The Howard Soil Conservation District.

Signature of Engineer: *[Signature]* Date: *2/27/02*

Reviewed For Howard County Soil Conservation District and Meets Technical Requirements.  
Signature: *[Signature]* Date: *2/27/02*

**DEVELOPER'S CERTIFICATE**

I/We Certify That All Development and Construction will be Done According to This Plan of Development and Plan for Erosion and Sediment Control and That All Responsible Personnel Involved in the Construction Project will Have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion Before Beginning the Project. I Also Authorize Periodic On-Site Inspection by the Howard Soil Conservation District or Their Authorized Agents, As Are Deemed Necessary.

Signature of Developer: *[Signature]* Date: *2/27/02*

Approved: This Development is Approved for Erosion and Sediment Control by the Howard Soil Conservation District.  
Signature: *[Signature]* Date: *2/27/02*

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: *[Signature]* Date: *3/8/02*  
Director, Department of Planning and Zoning

Signature: *[Signature]* Date: *3/7/02*  
Chief, Division of Land Development

Signature: *[Signature]* Date: *3/5/02*  
Chief, Development Engineering Division

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 109  
Ellicott City, Maryland 21042  
Attention: Cathleen Young

THOMAS CLARK ASSOCIATES  
2661 Riva Road, Suite 120  
Annapolis Maryland 21401  
301-261-8700

Address Chart	
Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	8,9	R-5C	37	First	6011

WATER CODE	SEWER CODE
D 05	2650000

**LANDSCAPE PLAN**

**NORTHEASTERN ELEMENTARY SCHOOL No. 4**

TAX MAP No: 37 PARCEL No: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
"BID & CONSTRUCTION"  
14 JANUARY 02"  
SHEET 25 OF 55



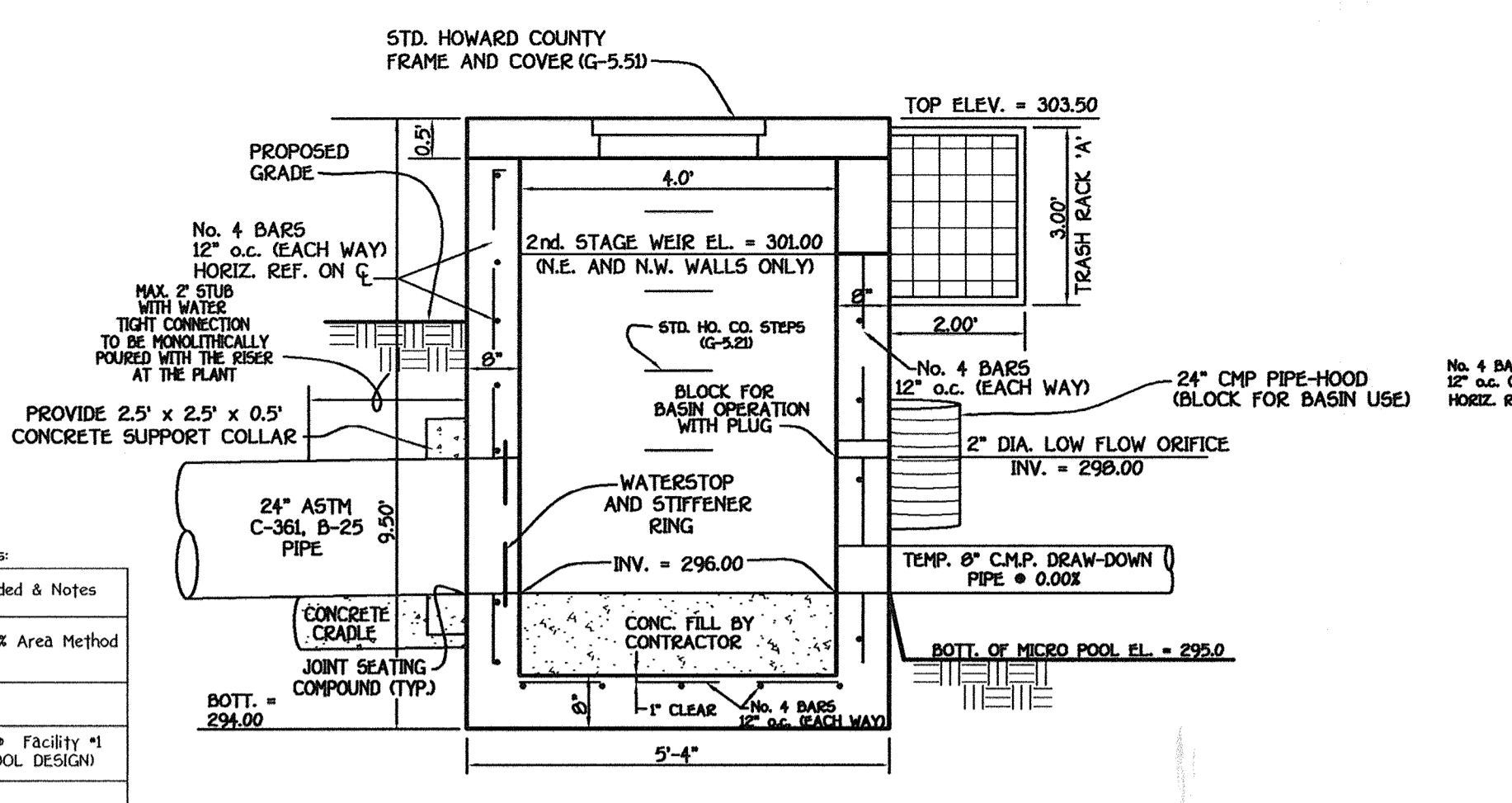
AS-BUILT CERTIFICATION  
I hereby certify that the Facility shown on this Plan was constructed as shown on the "As-Built" Plans and Meets the Approved Plans and Specifications.

Signature: \_\_\_\_\_ P.E. No. \_\_\_\_\_  
Date: \_\_\_\_\_  
Certify Means to State or Declare a Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean or Imply a Guarantee by the Engineer for the Engineer's Certification. Relieve Any Other Party from Meeting Requirements Imposed by Contract, Employment, or Other Means, Including Meeting Commonly Accepted Industry Practices.

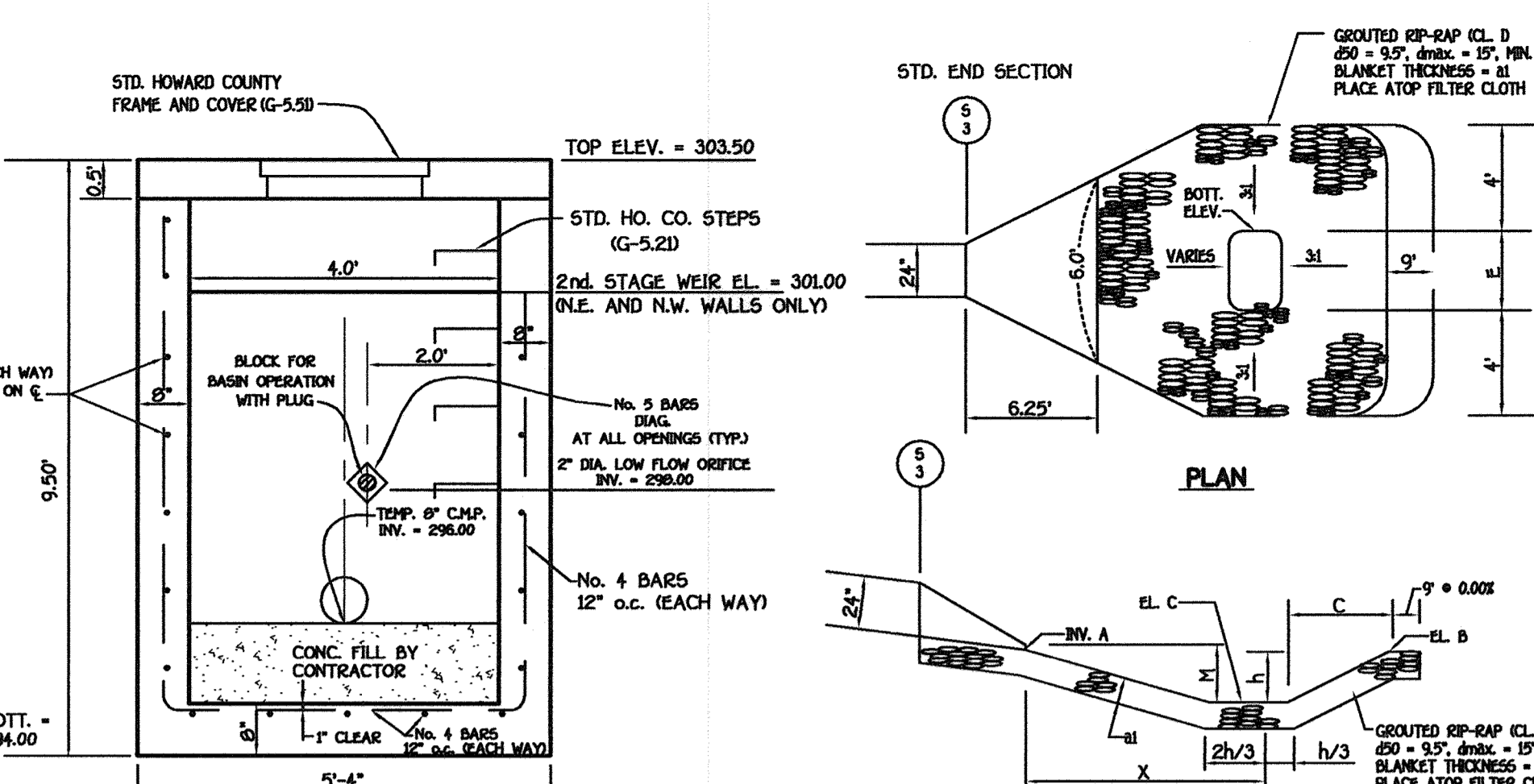
**SUMMARY TABLE #1**  
The following is a summary of the Revol, WQOL, and CPV Requirements:

Type of Requirement	Volume Required	Volume Provided & Notes
Revol (Recharge Vol. for Entire Site)	1.039 Acres or 0.114 acre-feet	1.13 Acres w/ X Area Method
WQOL	Study Point #1 0.364 acre-feet	0.364 ac. Ft. o Facility #1 (WVA MICRO-POOL DESIGN)
CPV	Study Point #1 0.633 acre-feet	0.633 ac. Ft. o BMP Facility #1 (VIA EXTENDED DETENTION)

Note: Both Qp/Ovcrbank Flood Protection or 10-year storm and Qp/Ovcrbank Flood Volume or 100-year storm are not required for this site since this watershed area is not classified as one of the sensitive watershed areas for Howard County.



PROFILE VIEW A  
CONCRETE RISER DETAIL  
SCALE: 1" = 2'



PROFILE VIEW B  
CONCRETE RISER DETAIL  
SCALE: 1" = 2'

**STORM WATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS**

These specifications are applicable to all ponds within the scope of the standard for practice MD-376. All references to ASTM and AASHTO specifications apply to the most recent editions.

**Site Preparation**  
Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of vegetation. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and steep banks shall be cleared of vegetation. All trees, brush, and stumps shall be cut and grubbed within 15 feet of the toe of the embankment.

**Area to be covered by the reservoir will be cleared of all trees, brush, logs, stumps, rocks and other objectionable material. The area to be covered by the reservoir will be cleared of all trees, brush, logs, stumps, rocks and other objectionable material. The area to be covered by the reservoir will be cleared of all trees, brush, logs, stumps, rocks and other objectionable material.**

**EARTH FILL**  
Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6" from or other objectionable material. Fill material for the center of the embankment, and cut-off trench shall conform to Unified Soil Classification GC, SC, CL or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in embankment if approved by the engineer. Such special design must have construction supervised by a geotechnical engineer. Material used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

**Compaction** - Areas on which fill to be placed shall be identified prior to placement. The fill material shall be placed in maximum 8-inch thick compacted layers which are to be continuous over the entire length of the fill. The most permeable material shall be placed in the down-slope portions of the embankment. The principal splices shall be installed consecutively with fill placement and not excavated into the embankment.

**Construction** - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one track tread of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tire or vibratory roller. Fill material shall contain sufficient moisture and the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will crumble, yet not be so wet that water can be squeezed out.

**When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within +/-2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All construction is to be in accordance with AASHTO Method T-99 (Standard Practice).**

**Cut Off Trench** - The cut-off trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for construction with the minimum width being four feet. The side slopes shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be placed in maximum 6-inch compacted layers, rollers, or hand tampers to assure maximum density and minimum permeability.

**Embankment Core** - The core shall be placed in the centerline of the embankment as shown on the plans. The core shall be placed in a minimum of four feet. The height shall extend up to at least the 10 year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed consecutively with the outer shell of the embankment.

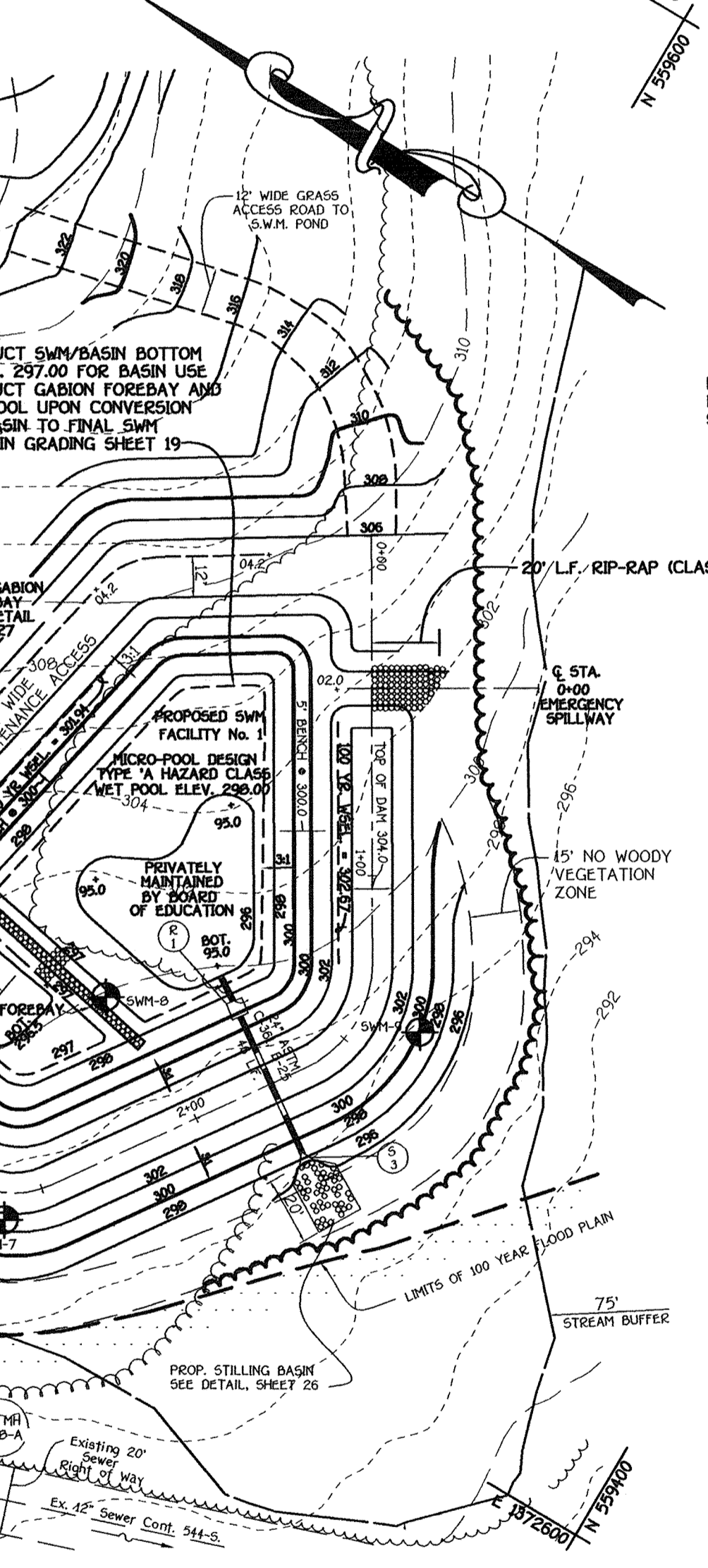
**Structure Backfill**  
Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material made to fill completely all spaces under and adjacent to the pipe. At no time during the building operation shall surface equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure. Under no circumstances shall equipment be driven over any part of a structure. Under no circumstances shall equipment be driven over any part of a structure. Under no circumstances shall equipment be driven over any part of a structure.

**Pipes Conduits**  
All pipes shall be circular in cross section.

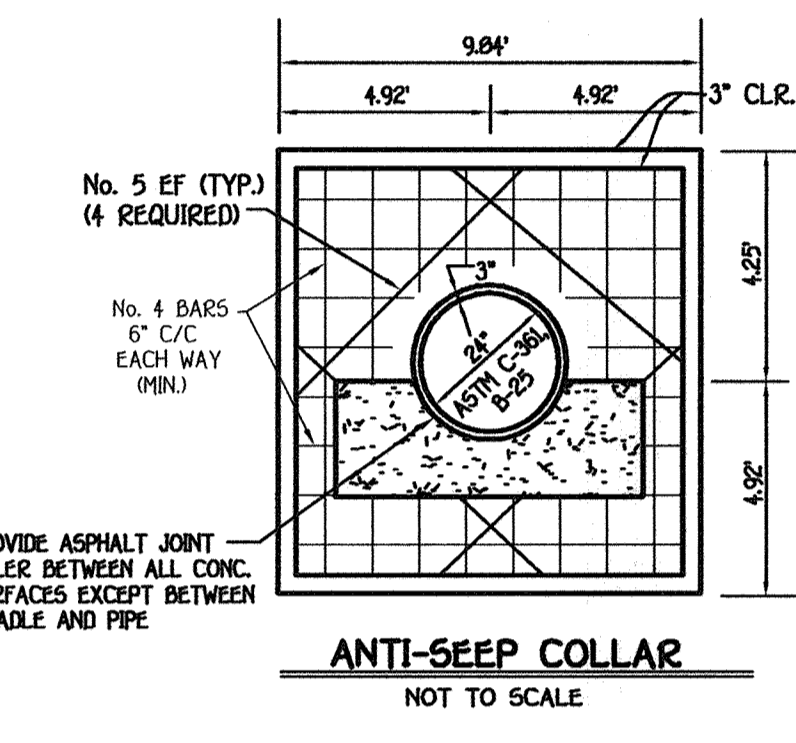
**Corrugated Metal Pipes**  
Corrugated Metal Pipes - All of the following criteria shall apply for corrugated metal pipes:  
1. Material - Galvanized steel pipe - 60 inch pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch on both sides of the pipe. The pipe and its appurtenances shall conform to the requirements of AASHTO Specifications H-245 & H-246 with watertight coupling bands or flanges.  
Material - Aluminum Coated Steel Pipe - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification H-245 with watertight coupling bands or flanges. Aluminum pipes, when used with flexible fill or when soil and/or water conditions warrant the use for increased durability, shall be fabricated in accordance with the requirements of AASHTO Specification H-245. Any aluminum coating damaged or otherwise removed shall be replaced with the same material and coating as the original. Aluminum surfaces that are to be in contact with concrete shall be primed with one coat of zinc chromate primer or two coats of sealant.  
2. Coupling bands, anti-seep collars, end sections, etc. must be composed of the same material and coating as the pipe. Metals must be treated from electrolytic materials with use of rubber or plastic insulating materials at least 24 inch in thickness.  
3. Connections - All connections with pipes must be completely watertight. The steel pipe or lateral connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Simple bands are not considered to be watertight.

**STILLING BASIN DATA**

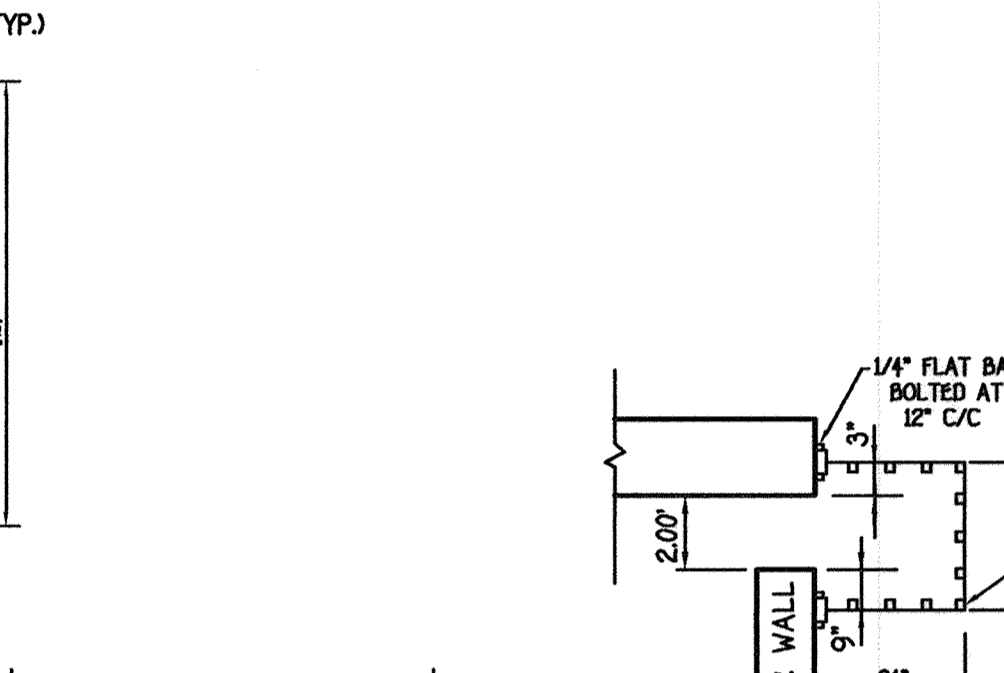
STRUCTURE NO.	B.W.	E.L.	C	D	E	F	h	M	U	X	
S-3	295.4	295.0	293.40	4.0'	2.0'	6.0'	14.0'	1.60'	2.00'	19'	0.0'



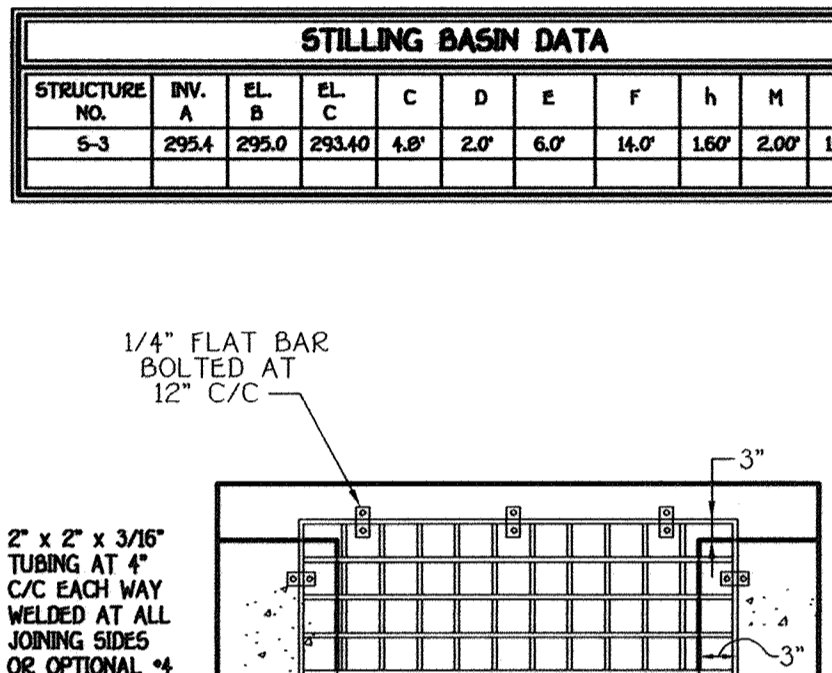
TYPE 'A' HAZARD CLASSIFICATION  
B.M.P. FACILITY NO. 1 - PLAN VIEW  
SCALE: 1" = 40'



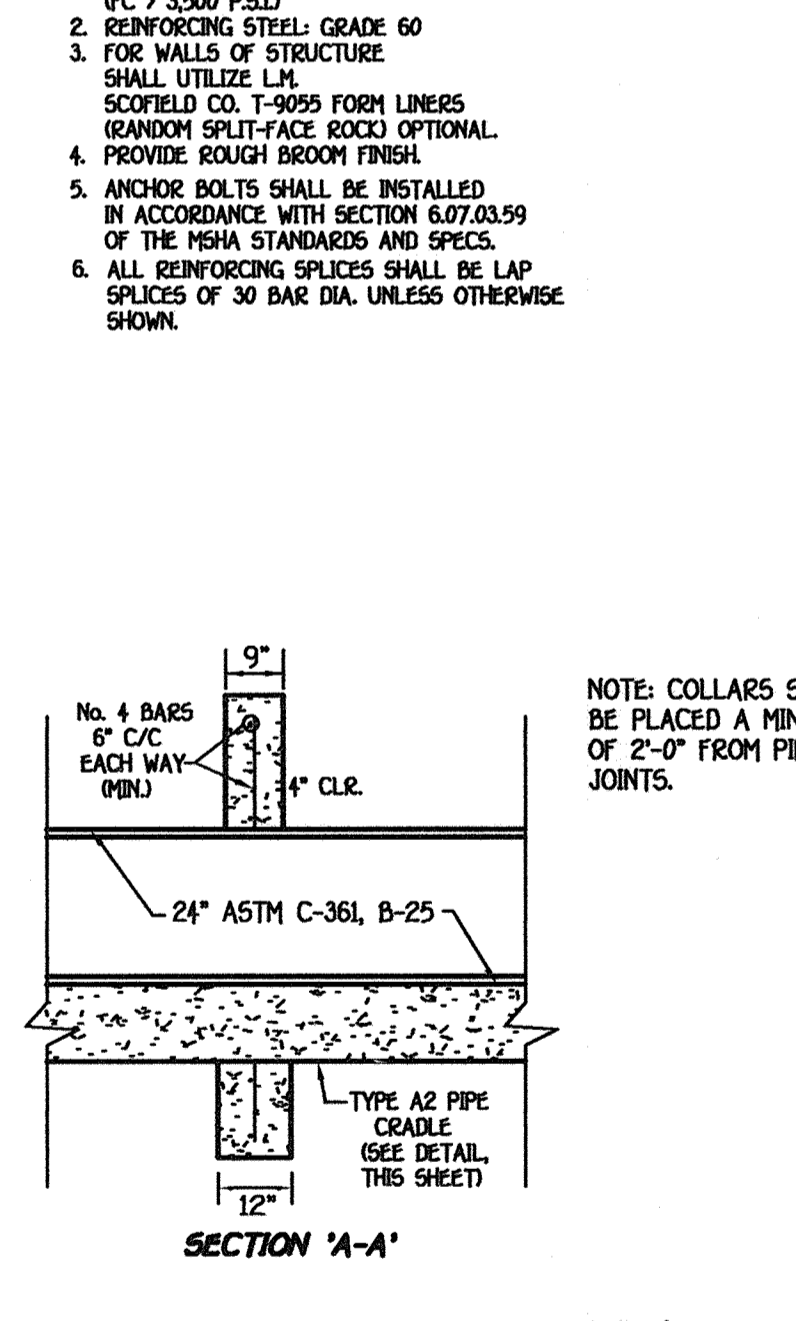
ANTI-SEEP COLLAR  
NOT TO SCALE



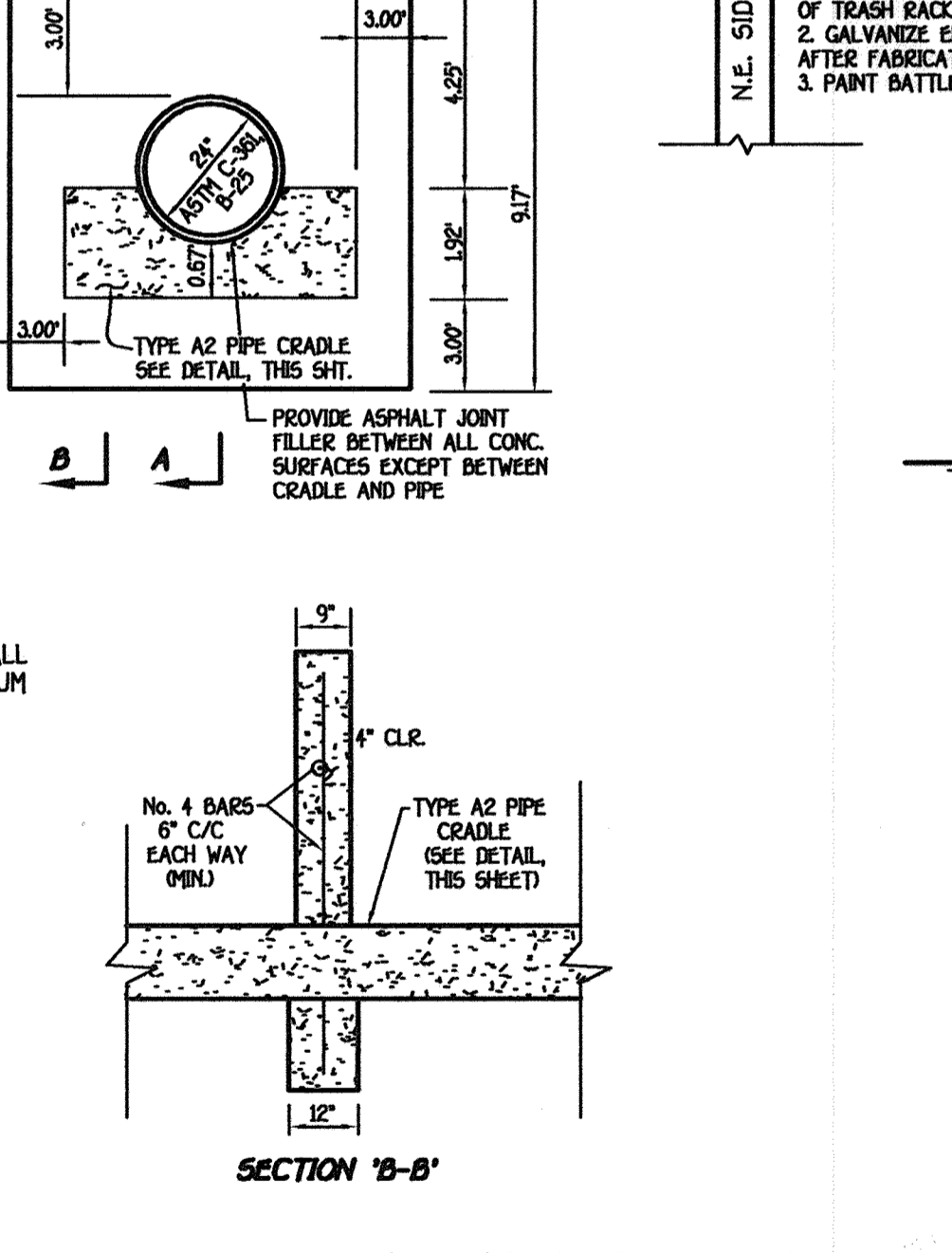
TRASH RACK 'A' DETAIL  
NOT TO SCALE



CORE TRENCH DETAIL  
NOT TO SCALE



TYPICAL SECTION THROUGH BARREL, CRADLE AND ANTI-SEEP COLLAR  
NOT TO SCALE



TYPICAL SECTION THROUGH BARREL, CRADLE AND ANTI-SEEP COLLAR  
NOT TO SCALE

By The Engineer:  
I certify that this Plan for Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature Of Engineer: \_\_\_\_\_  
Date: \_\_\_\_\_  
CHARLES J. ORTOLANO  
Printed Name Of Engineer

By The Developer:  
I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature Of Developer: \_\_\_\_\_  
Date: \_\_\_\_\_  
DR. WILLIAM BRONN  
Printed Name Of Developer

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Jim Meyer  
Natural Resources Conservation Service

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Director - Department of Planning and Zoning

Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Chief, Division of Land Development

Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Chief, Development Engineering Division

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 28316, Expiration Date: 1-1-21

Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
3/6/02

Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
3/7/12

Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
3/5/02

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young

THOMAS CLARK ASSOCIATES  
2661 Riva Road, Suite 120  
Annapolis Maryland 21401  
301-261-8700

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT: Northeastern Elementary School No. 4  
DEED REF. 2307/562  
BLOCK NO. 09  
WATER CODE D 05

SECTION/AREA: TAX ZONE R-5C  
ELEC. DIST. 37  
SEWER CODE 2650000

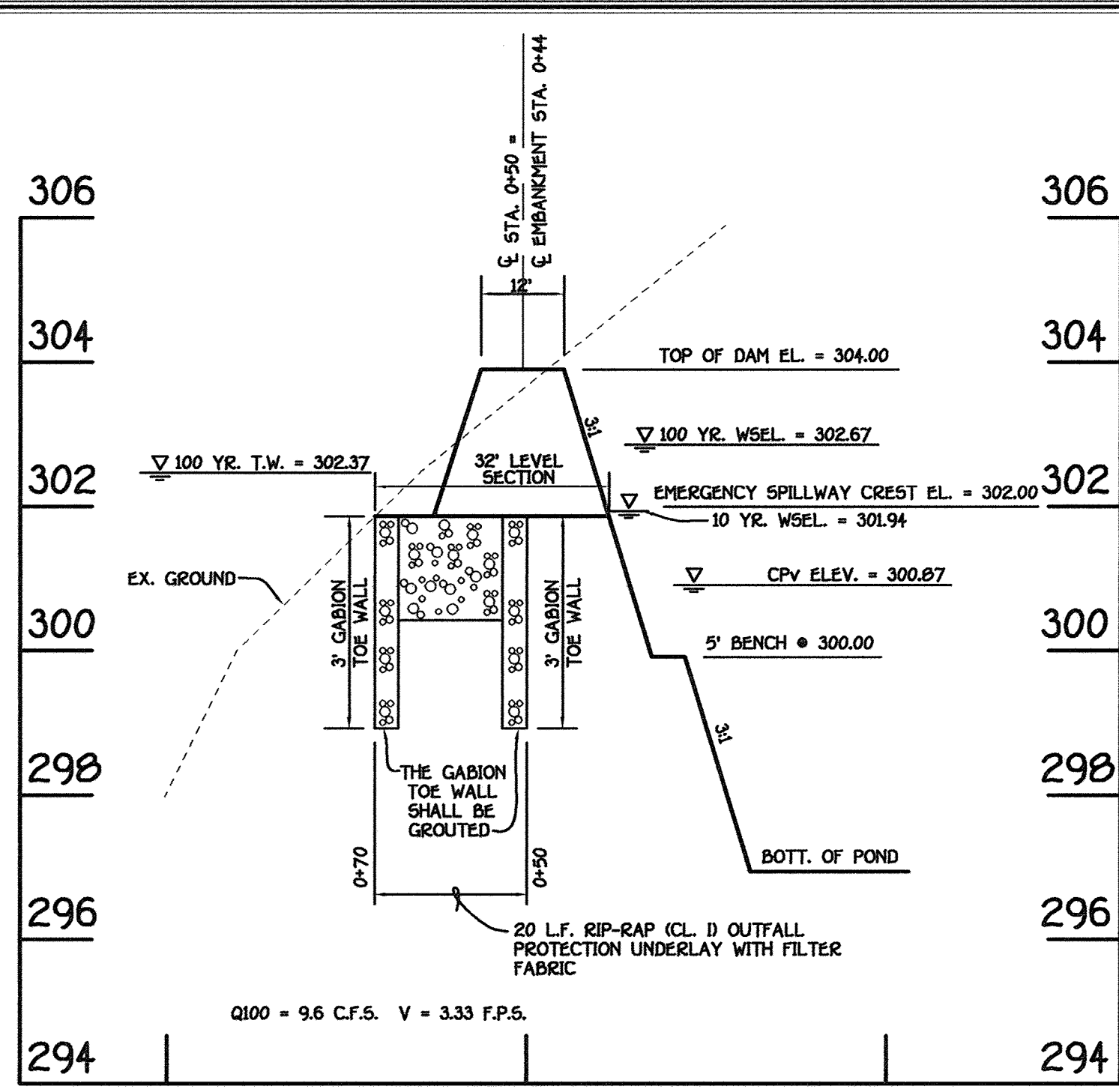
**STORMWATER MANAGEMENT NOTES AND DETAILS - BMP FACILITY NO. 1**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP NO: 37 PARCEL NO: 670  
FIRST ELECTION DISTRICT: HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
BUILDING PERMIT/CD REVIEW: 16 NOVEMBER 01

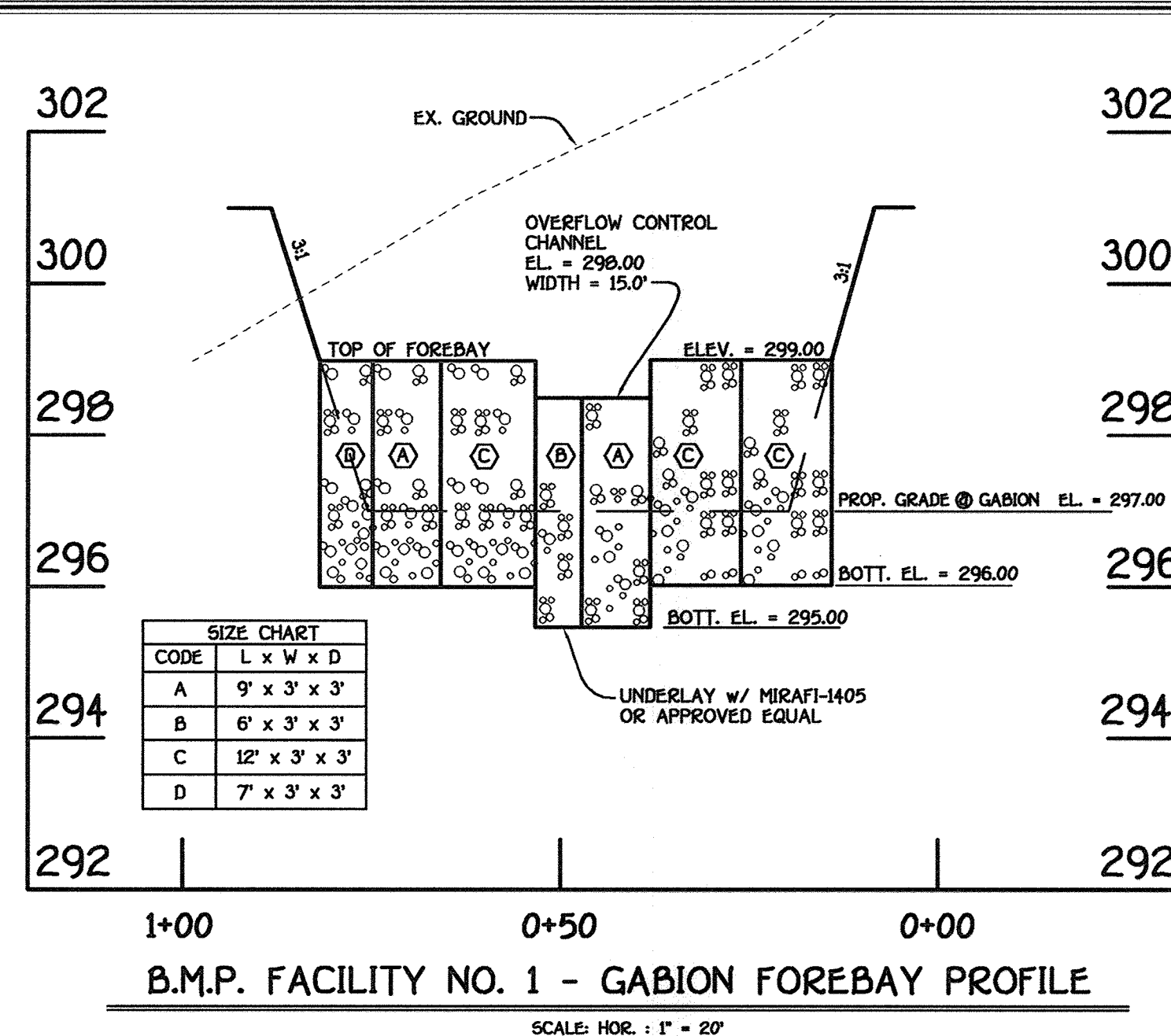
"BID & CONSTRUCTION 14 JANUARY '02"  
SHEET 26 OF 56





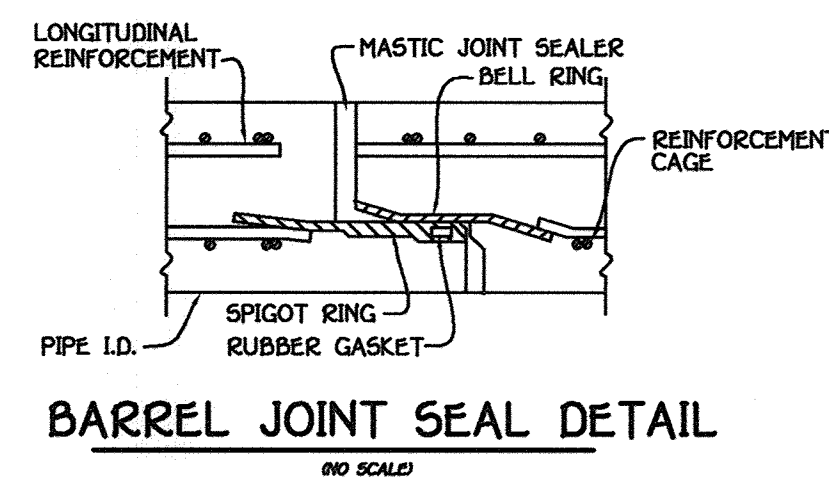
B.M.P. FACILITY NO. 1 - EMERGENCY SPILLWAY PROFILE

SCALE: HOR. 1" = 20'  
VERT. 1" = 2'

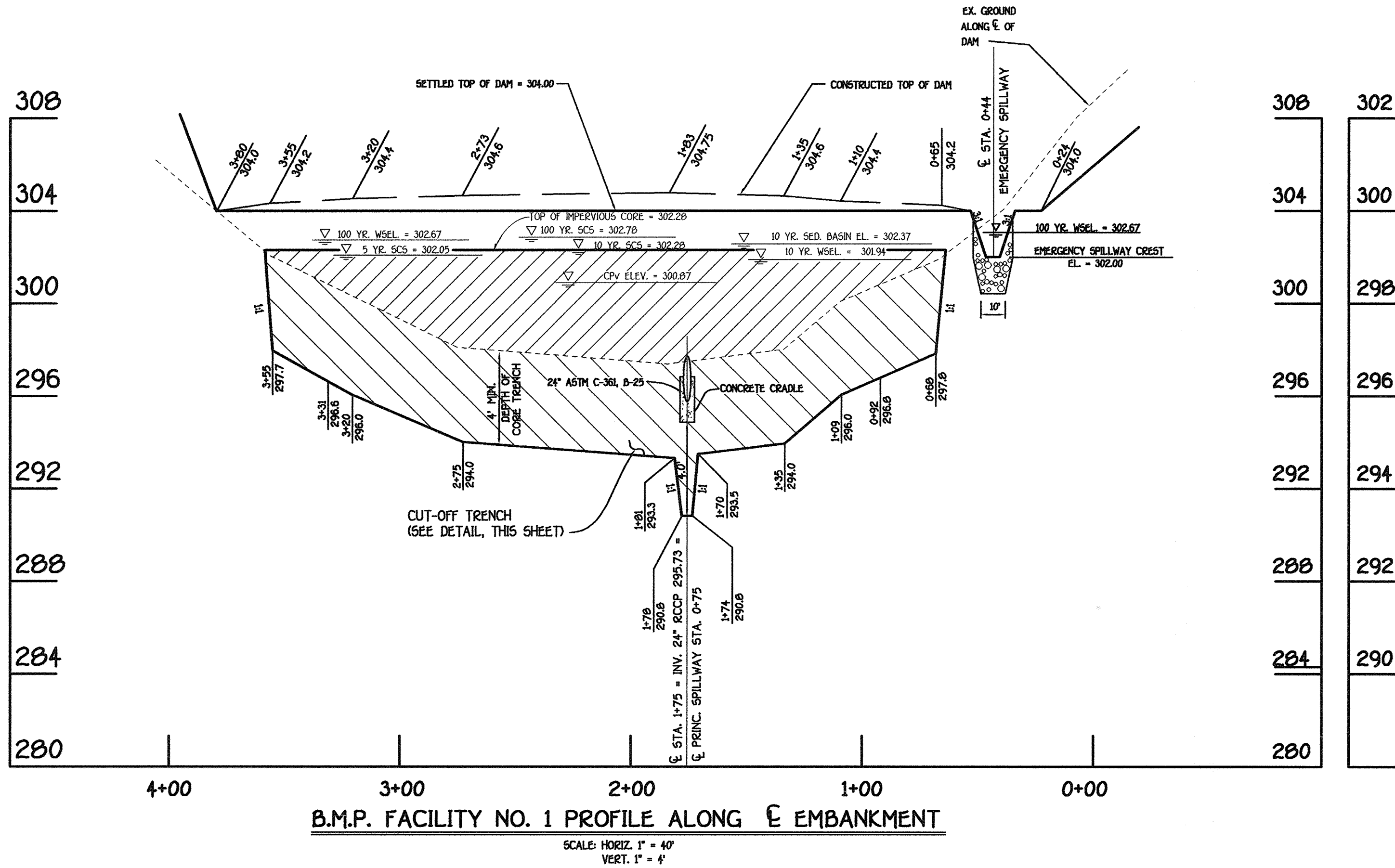


B.M.P. FACILITY NO. 1 - GABION FOREBAY PROFILE

SCALE: HOR. 1" = 20'  
VERT. 1" = 2'

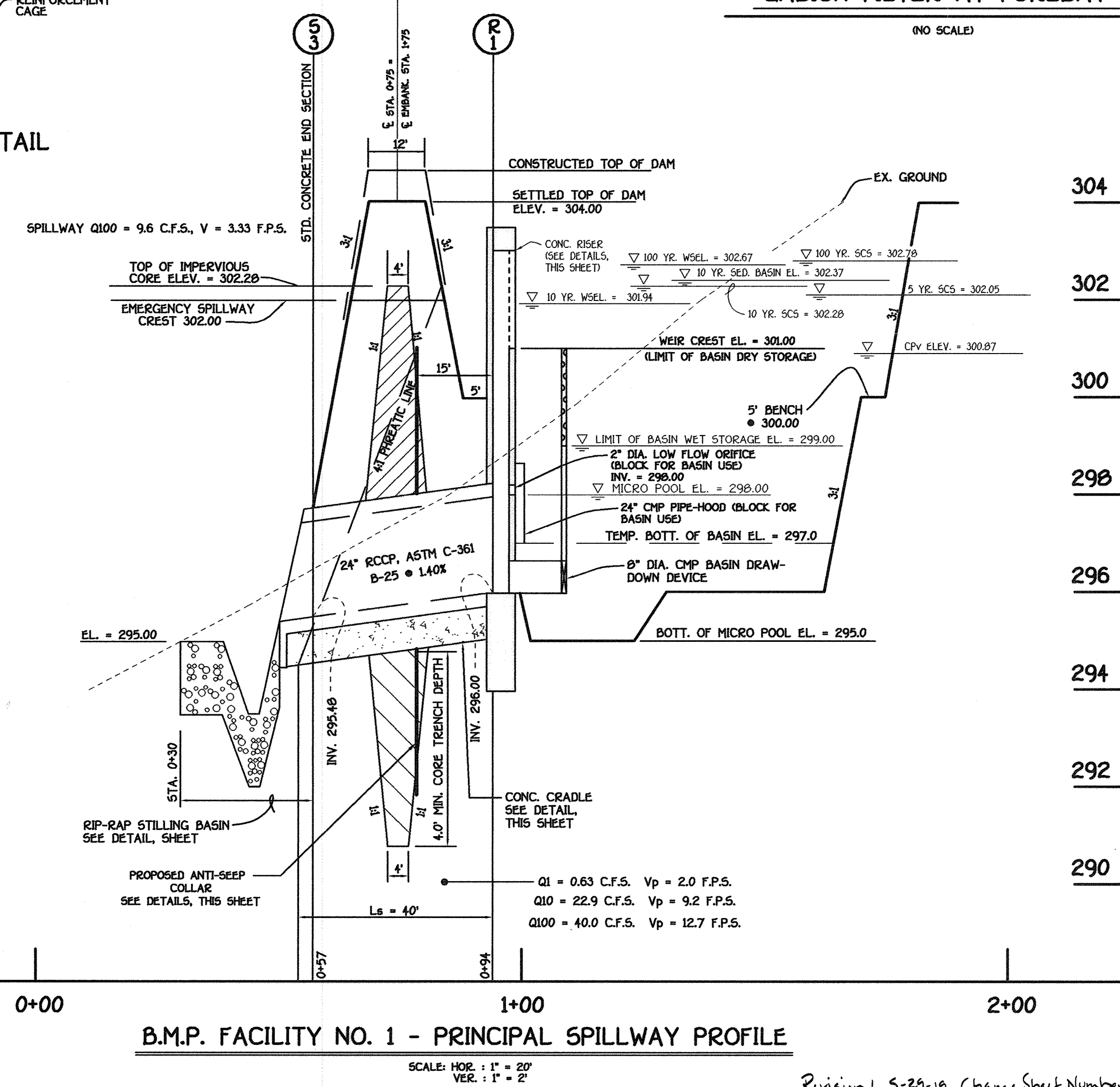


BARREL JOINT SEAL DETAIL



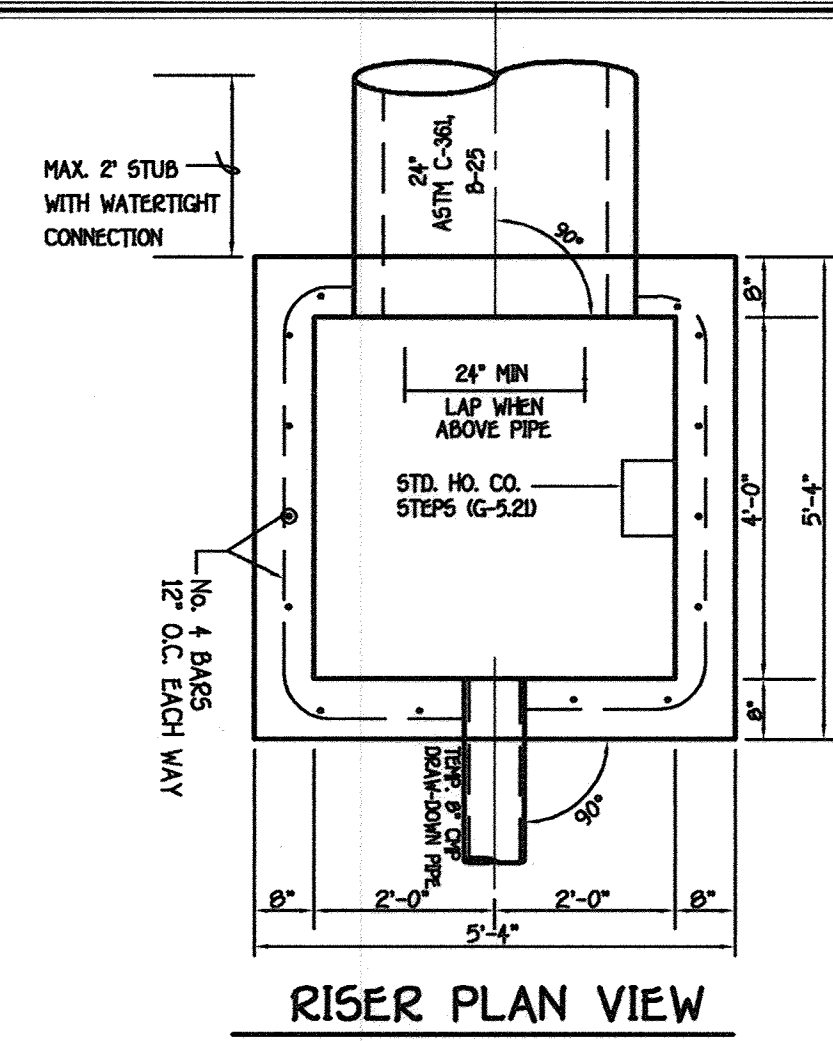
B.M.P. FACILITY NO. 1 PROFILE ALONG EMBANKMENT

SCALE: HORIZ. 1" = 40'  
VERT. 1" = 4'

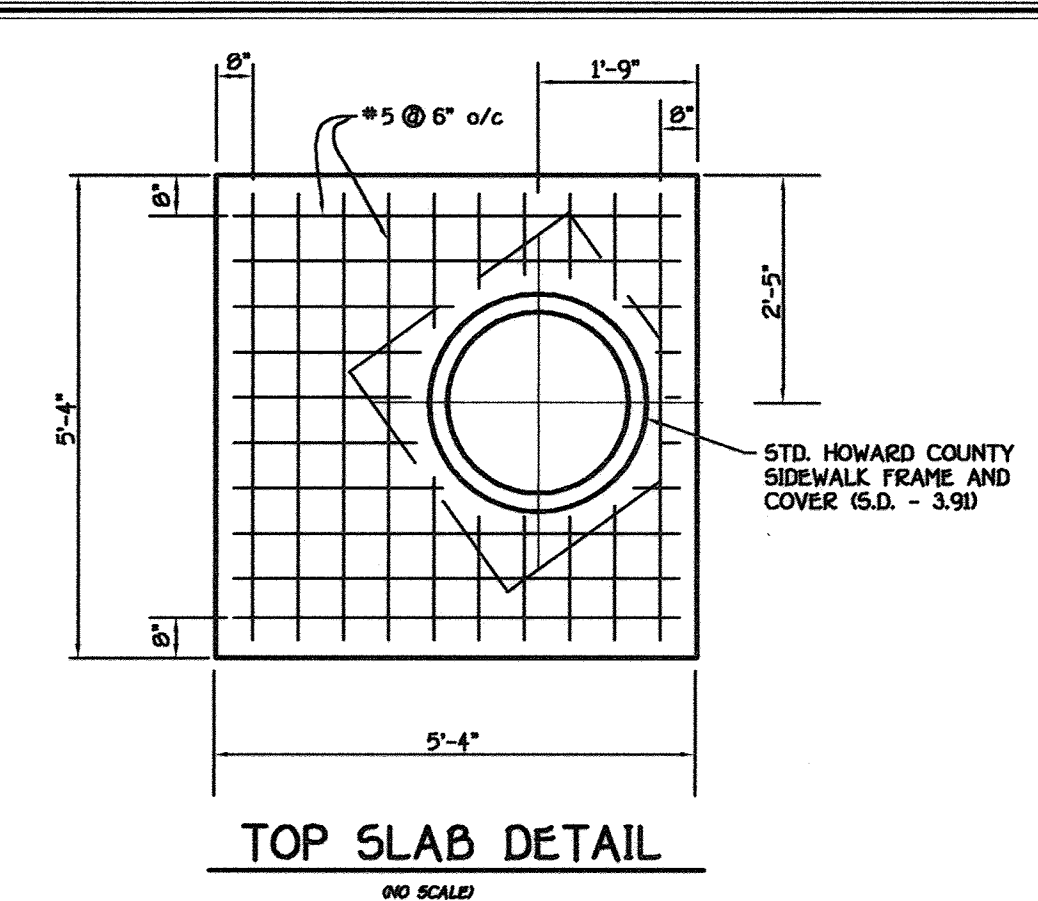


B.M.P. FACILITY NO. 1 - PRINCIPAL SPILLWAY PROFILE

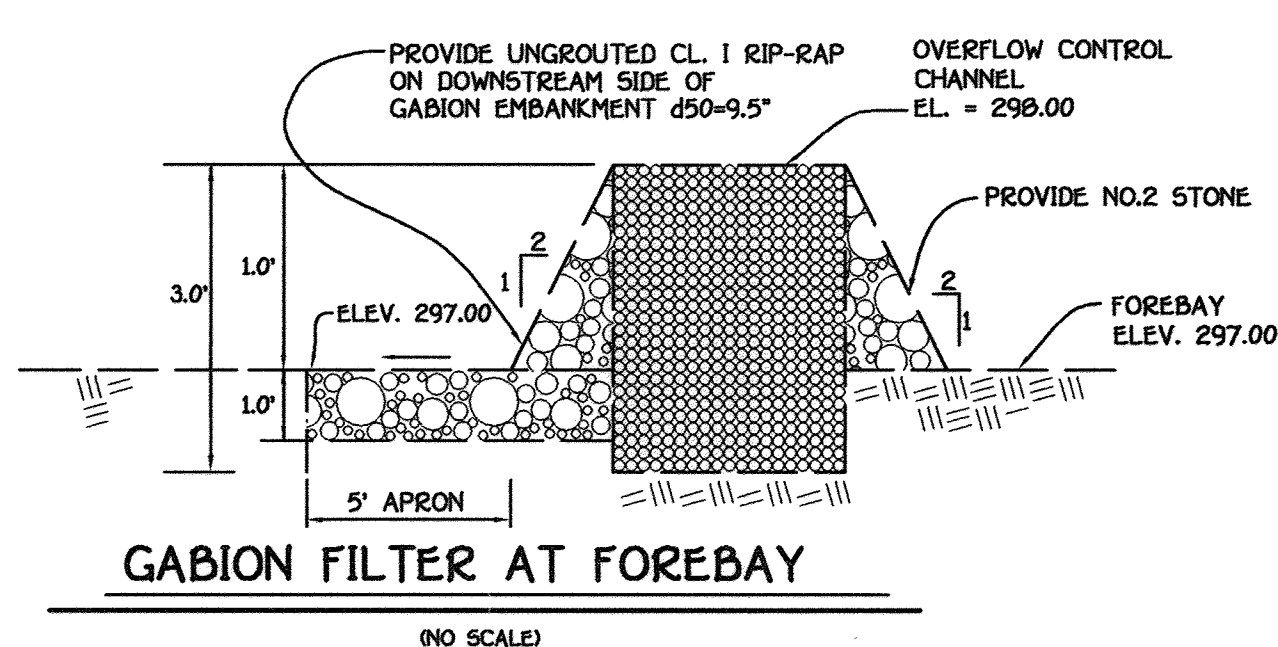
SCALE: HOR. 1" = 20'  
VERT. 1" = 2'



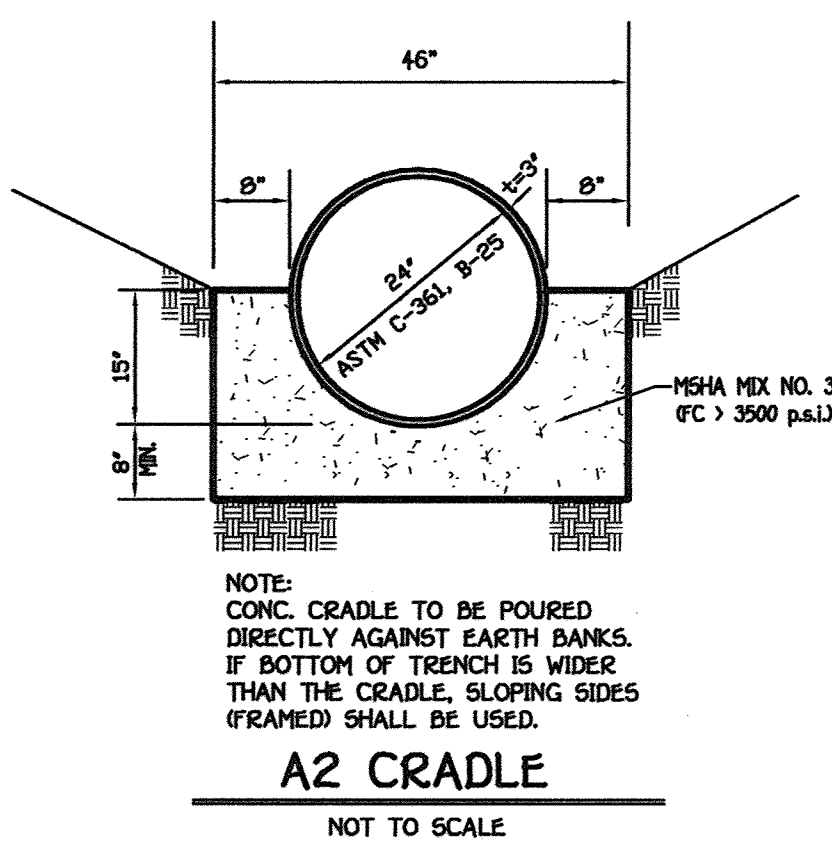
RISER PLAN VIEW



TOP SLAB DETAIL

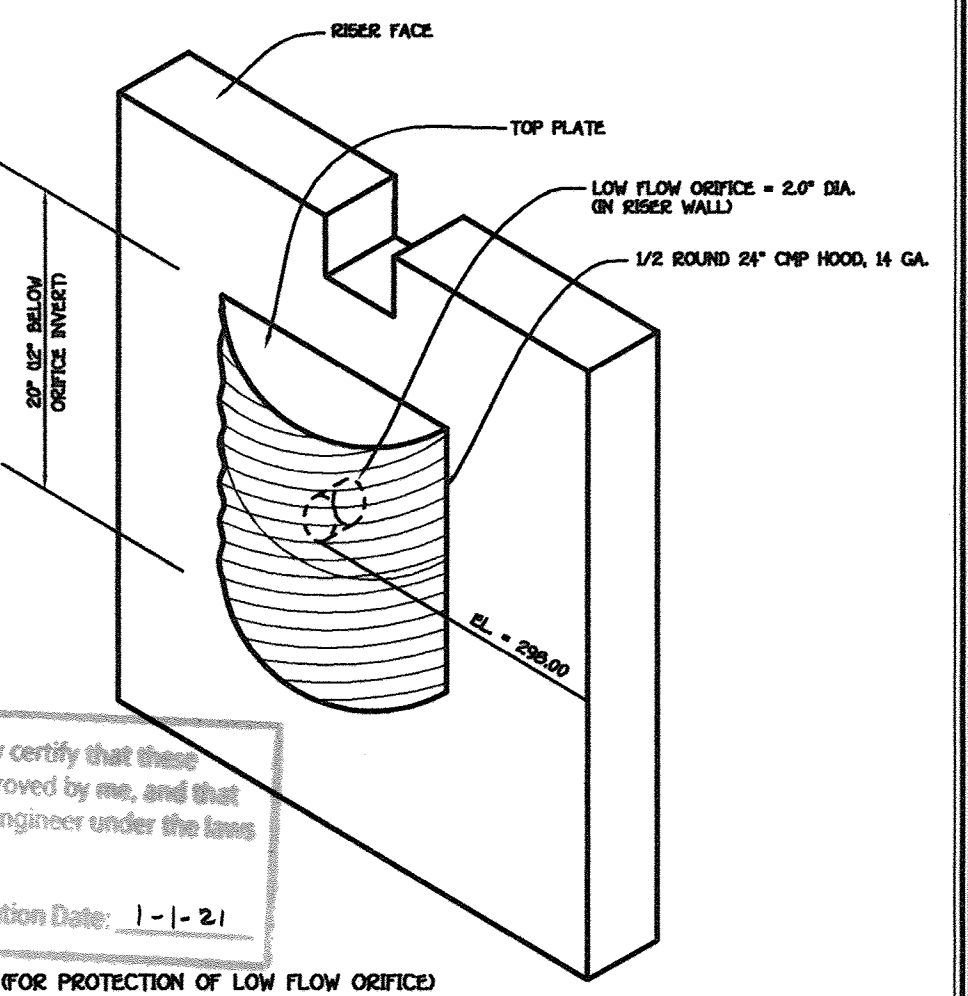


GABION FILTER AT FOREBAY



A2 CRADLE

NOT TO SCALE



HALF ROUND CMP PIPE-HOOD

NOT TO SCALE

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 28376 Expiration Date: 1-1-21



STORMWATER MANAGEMENT POND MAINTENANCE SCHEDULE

**ROUTINE MAINTENANCE**  
Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.  
Top and Side Slopes of the Embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.  
Debris and Litter Next to the Outlet Structure shall be removed during regular mowing operations and as needed.  
Visible Signs of Erosion in the Pond as well as Rip-Rap Outlet Area shall be repaired as soon as it is noticed.

**B. NON-ROUTINE MAINTENANCE**  
Structural Components of the pond such as the Dam, Riser Structure and the Pipes shall be repaired upon the detection of any damage. The Components should be inspected during routine maintenance operations.  
Sediment should be removed when its accumulation significantly reduces the Design Storage, Interferes with the Function of the Riser, when Deemed Necessary for Aesthetic Reasons, or when Deemed Necessary by the Howard County Department of Public Works.

By The Engineer:  
I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature of Engineer: *Charles J. Catoe*  
Date: 2/27/02

Printed Name of Engineer: CHARLES J. CATOE, P.E.

By The Developer:  
I/We Certify That All Development And/or Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature of Developer: *John R. Klotz*  
Date: 2/27/02

Printed Name of Developer: JOHN R. KLOTZ

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Signature of Reviewer: *John R. Klotz*  
Date: 2/27/02

Printed Name of Reviewer: JOHN R. KLOTZ

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: *James J. Ryan*  
Date: 3/8/02  
Title: Director, Department of Planning and Zoning

Signature: *Cindy Hantz*  
Date: 3/7/02  
Title: Chief, Division of Land Development

Signature: *John R. Klotz*  
Date: 3/5/02  
Title: Chief, Development Engineering Division

PREPARED FOR:  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young

THOMAS CLARK ASSOCIATES  
2651 Riva Road, Suite 120  
Annapolis Maryland 21401  
301-261-8700

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT: Northeastern Elementary School No. 4

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2307/562	8,9	R-5C	37	First	6011

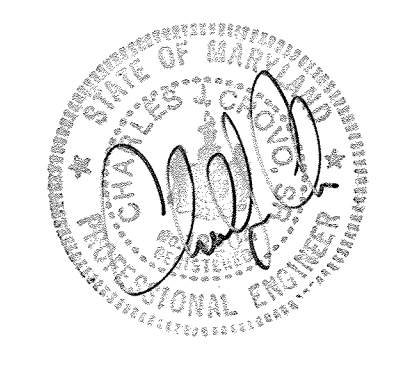
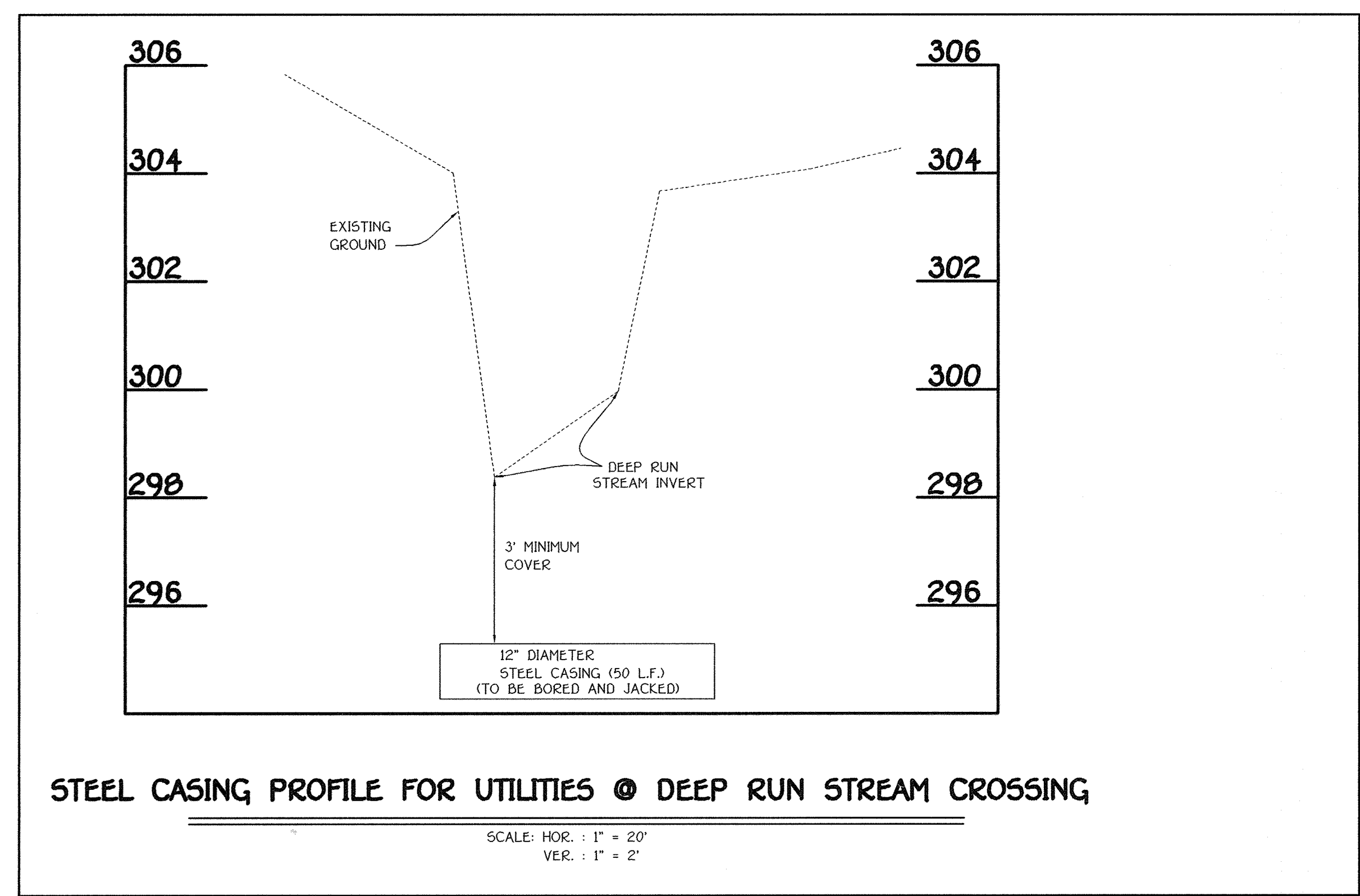
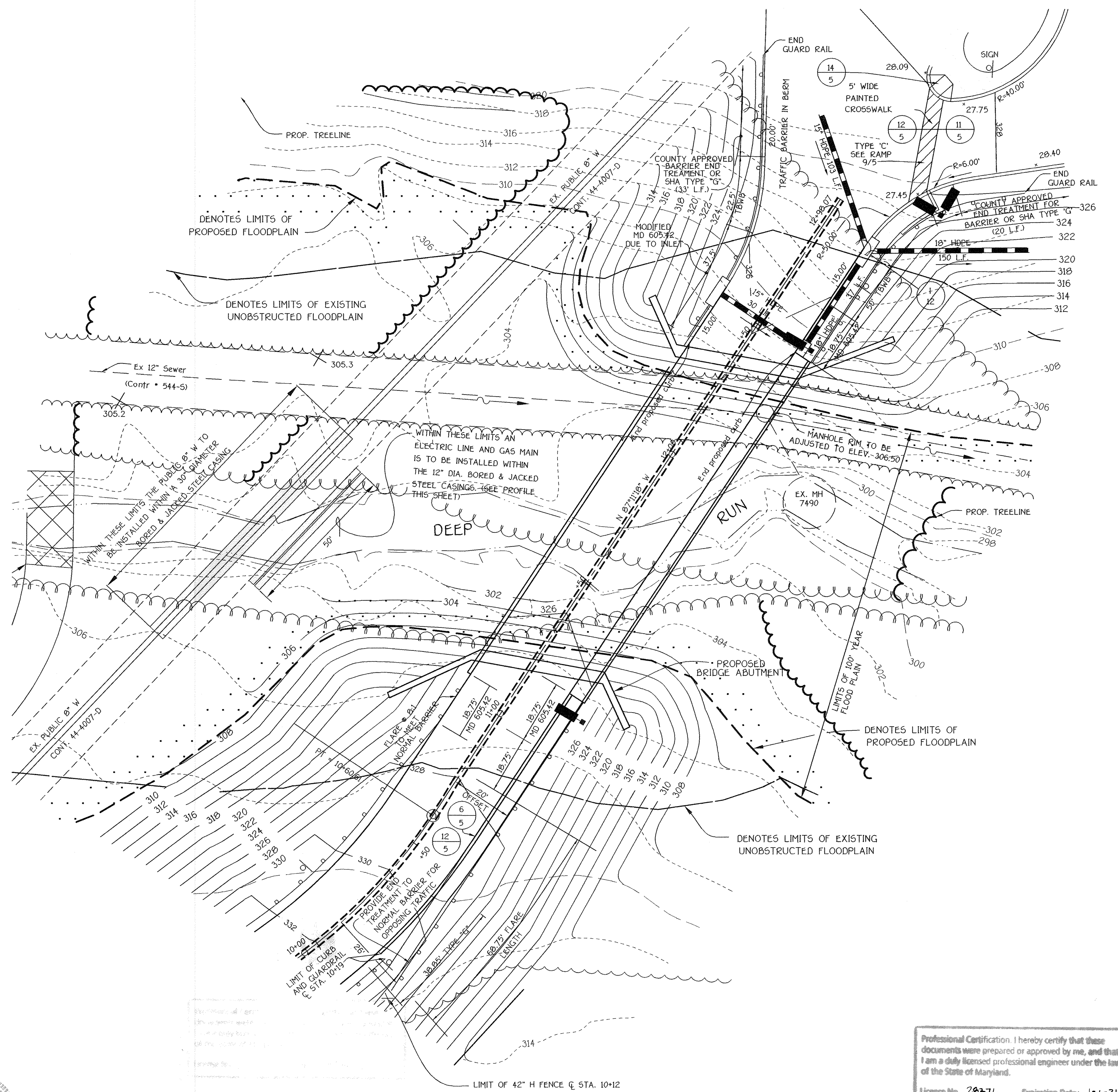
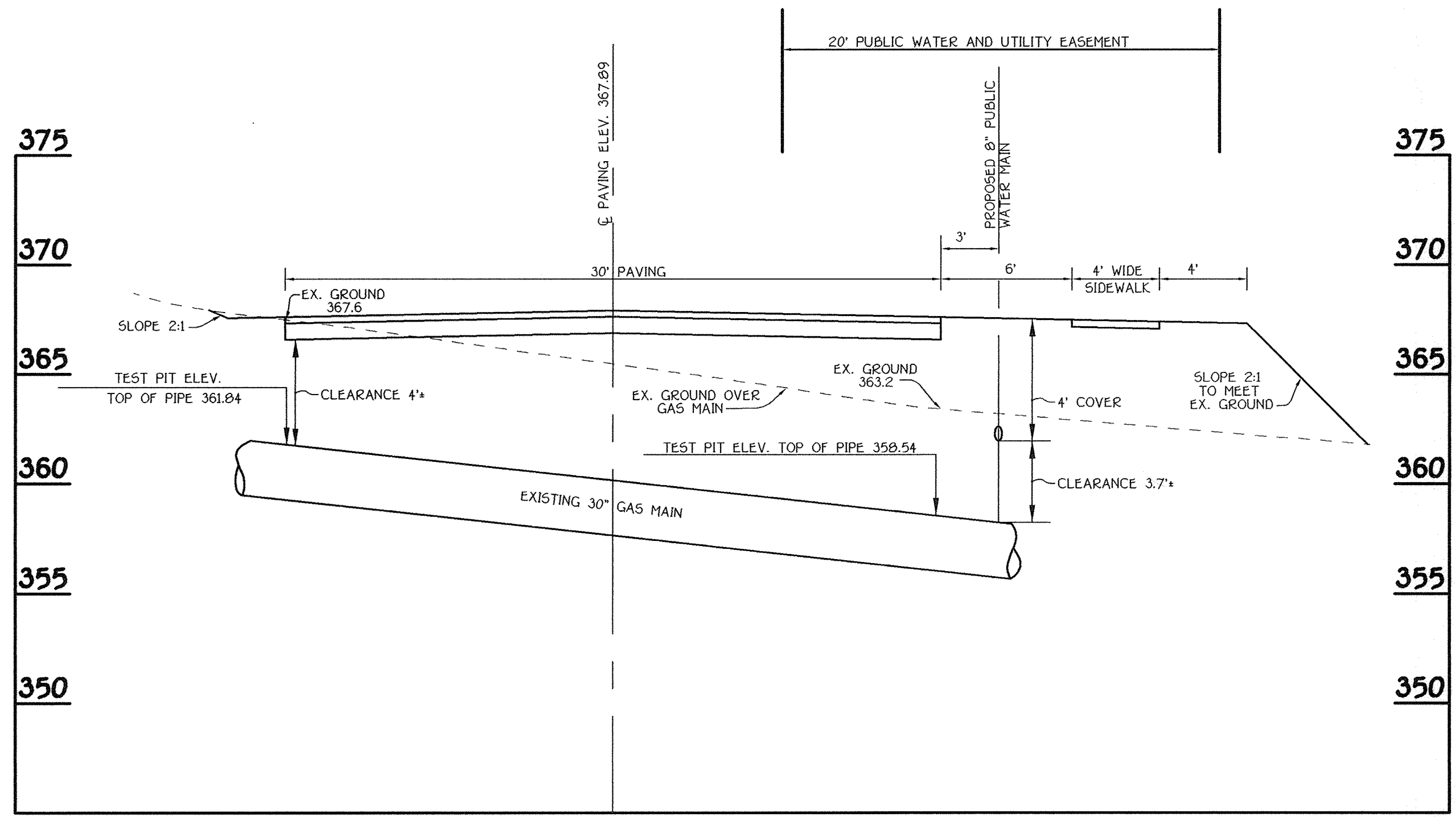
WATER CODE: D 05  
SEWER CODE: 2650000

STORMWATER MANAGEMENT NOTES AND DETAILS - BMP FACILITY NO. 1

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No.: 37  
PARCEL No.: 670  
FIRST ELECTION DISTRICT: HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN  
DATE: 15 OCTOBER 2001  
BUILDING PERMIT/CD REVIEW: 16 NOVEMBER 01  
"BID & CONSTRUCTION"  
14 JANUARY 02  
SHEET 27 OF 56





Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 28576 Expiration Date: 1-1-21



**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENAL SQUARE OFFICE PARK - 16077 BALTIMORE NATIONAL FREE  
 ELLETTT CITY, MARYLAND 21042  
 (410) 466-2855

**By The Engineer:**  
 I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature Of Engineer: *Charles J. Crovo Sr.* Date: 2/12/02  
 Printed Name Of Engineer: **CHARLES J. CROVO SR.**

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.  
 Signature: *John M. Johnson* Date: 2/12/02  
 USA - Natural Resources Conservation Service

**By The Developer:**  
 I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That Any Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature Of Developer: *Dr. William Brown* Date: 2/25/02  
 Printed Name Of Developer: **DR. WILLIAM BROWN**

Signature: *John M. Johnson* Date: 2/27/02  
 Howard Soil Conservation District

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

Signature: *Joseph B. Burt* Date: 3/8/02  
 Director, Department of Planning and Zoning

Signature: *Cathy Burt* Date: 3/7/02  
 Chief, Division of Land Development

Signature: *William Dammann* Date: 3/5/02  
 Chief, Development Engineering Division

**PREPARED FOR**  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 108  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young

**THOMAS CLARK ASSOCIATES**  
 2661 Riva Road, Suite 120  
 Annapolis Maryland 21401  
 301-261-8700

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT: Northeastern Elementary School No. 4  
 SECTION/AREA: 09  
 LOT NO.: 37

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	09	R-5C	37	First	6011

WATER CODE: D 05 SEWER CODE: 2650000

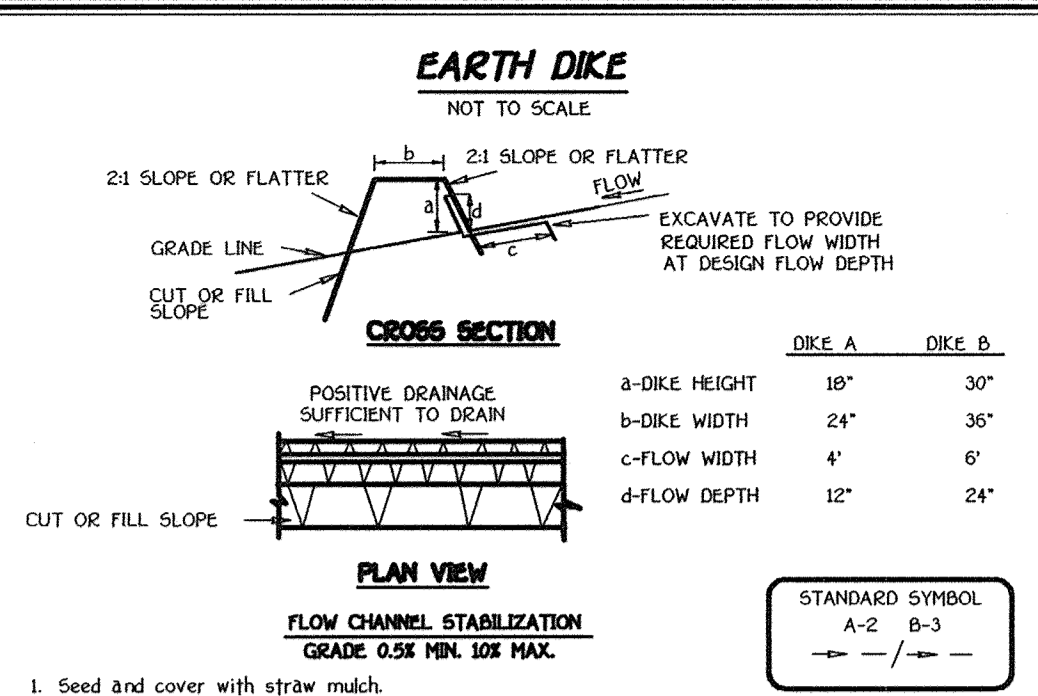
**BRIDGE DETAIL AND ROAD CROSS SECTION AT EX. GAS MAIN**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

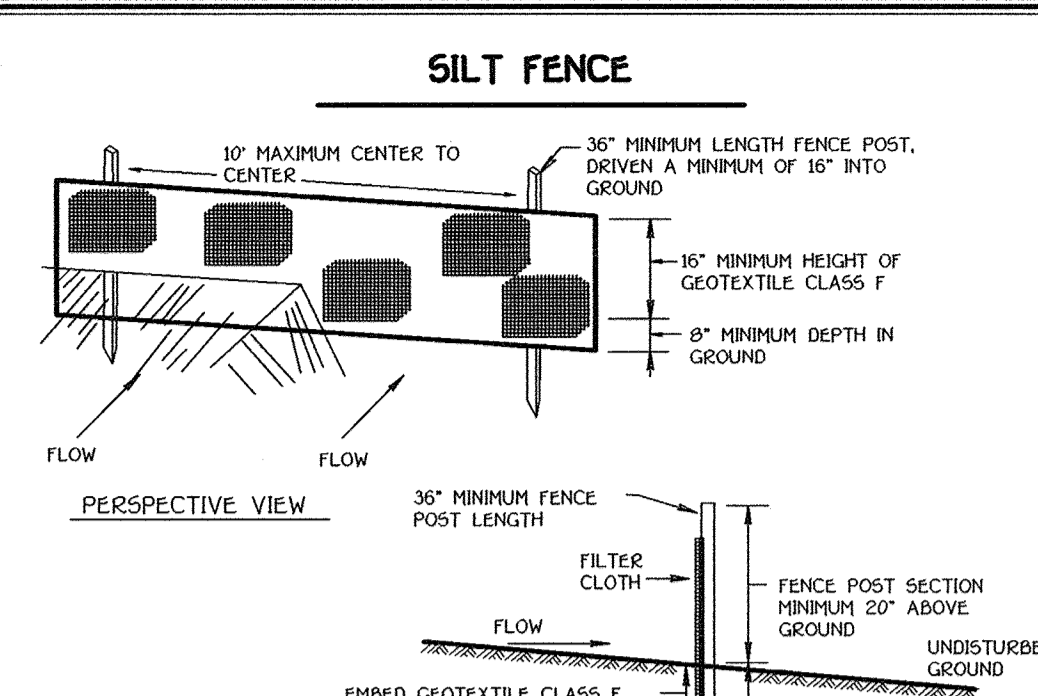
TAX MAP No.: 37 PARCEL No.: 670  
 FIRST ELECTION DISTRICT: HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
 BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
 "BID & CONSTRUCTION" 14 JANUARY 02  
 SHEET 28 OF 56

Revision 1 5-29-19 Changed Sheet Number





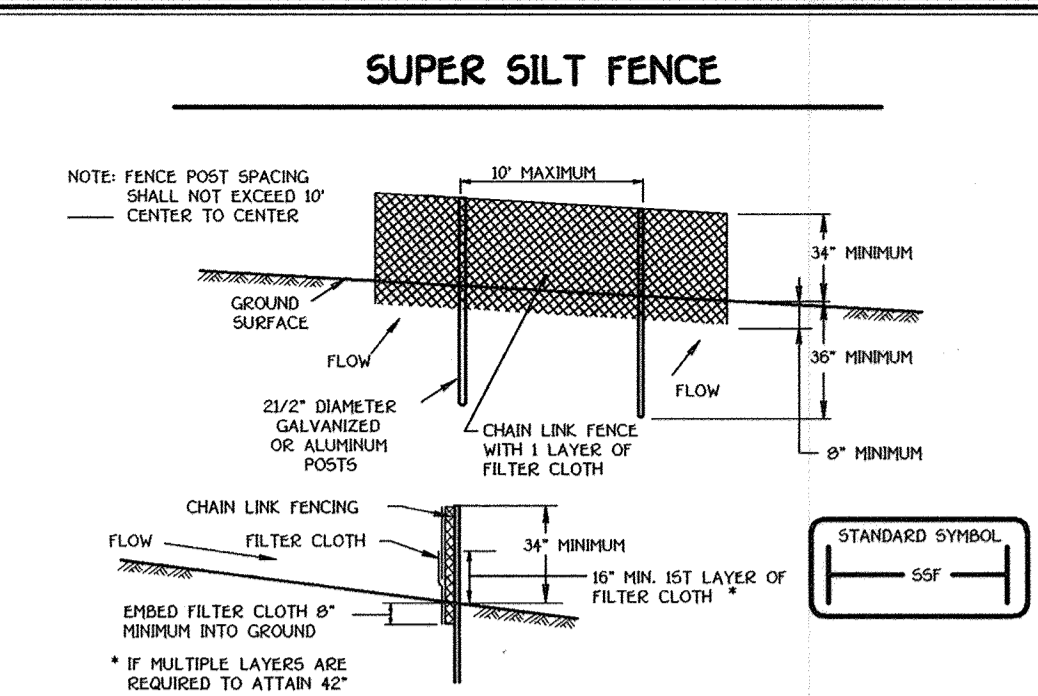
1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or tie with sod.
3. 4" - 7" stone or recycled concrete equivalent placed into the soil 7" minimum.
- Construction Specifications**
- All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
  - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
  - Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
  - All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
  - The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
  - Fill shall be compacted by earth moving equipment.
  - All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
  - Inspection and maintenance must be provided periodically and after each rain event.



Tensile Strength	50 lbs/in (min)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min)	Test: MSMT 509
Flow Rate	0.3 gpl / ft / minute (max)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322

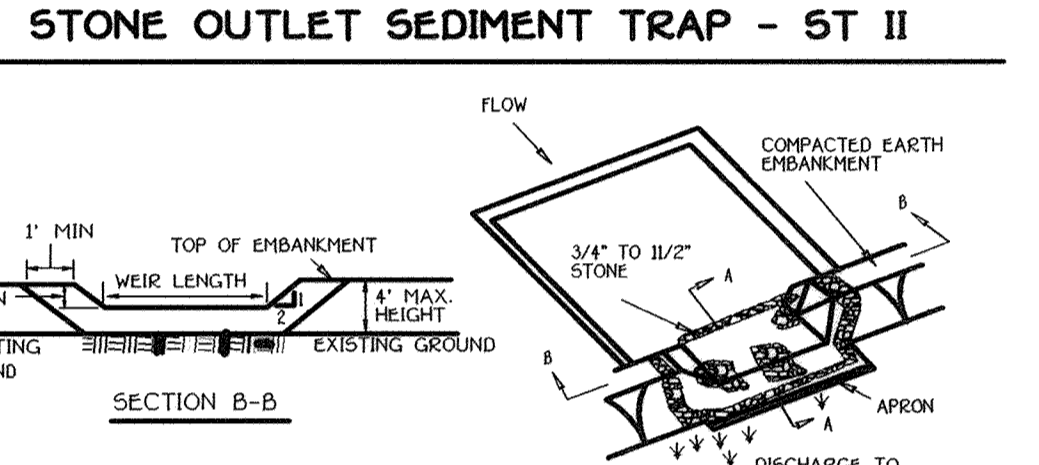
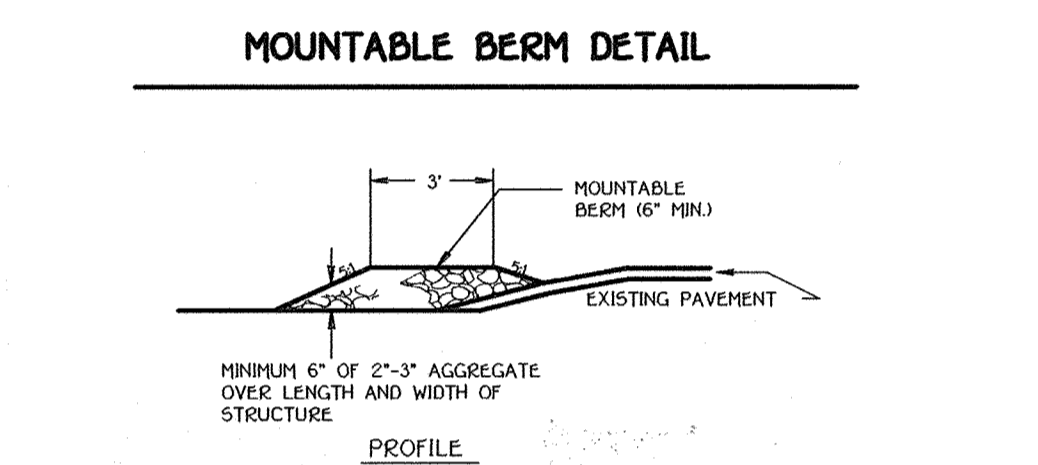
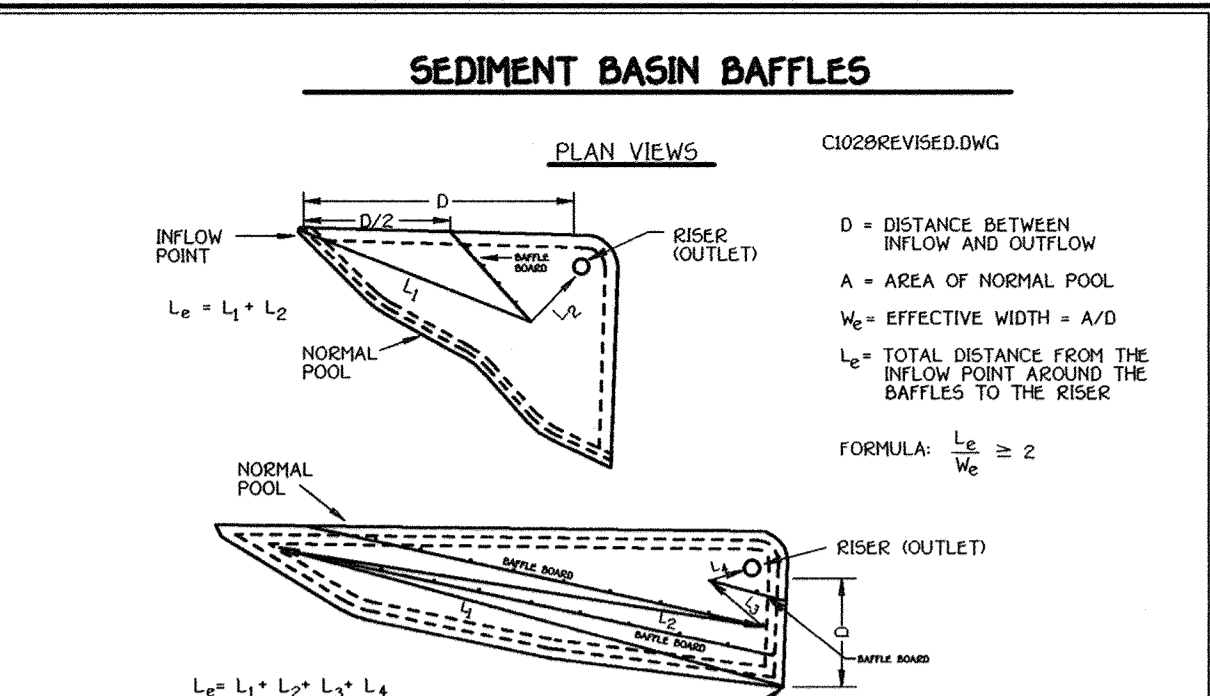
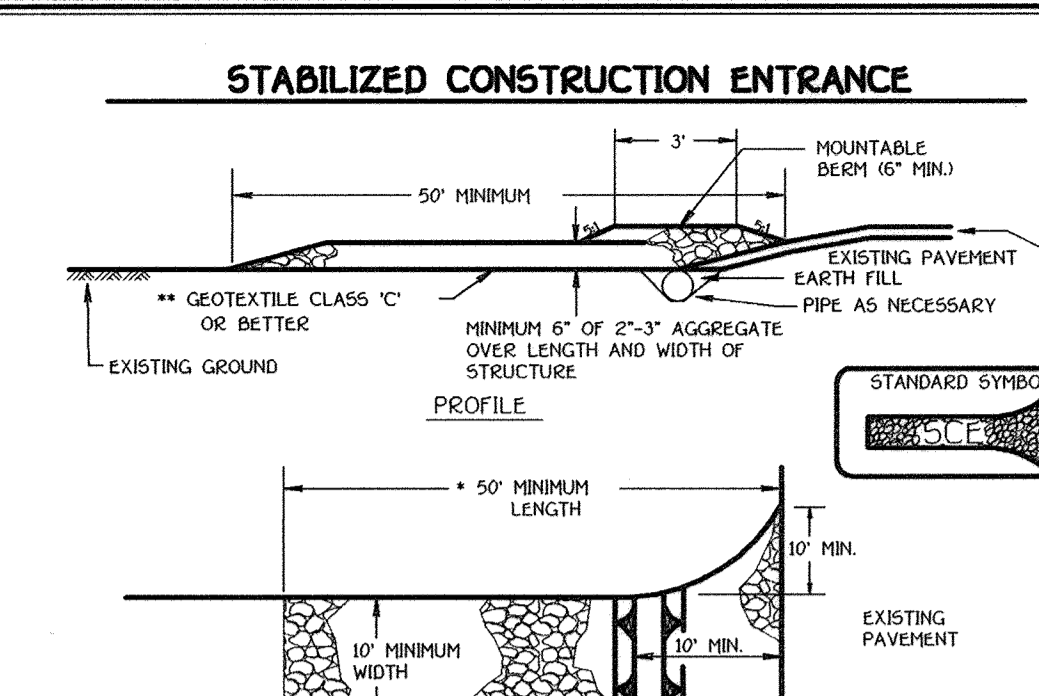
Slope	Slope (steepness)	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1500 feet
20 - 33%	5:1 - 3:1	100 feet	1000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet



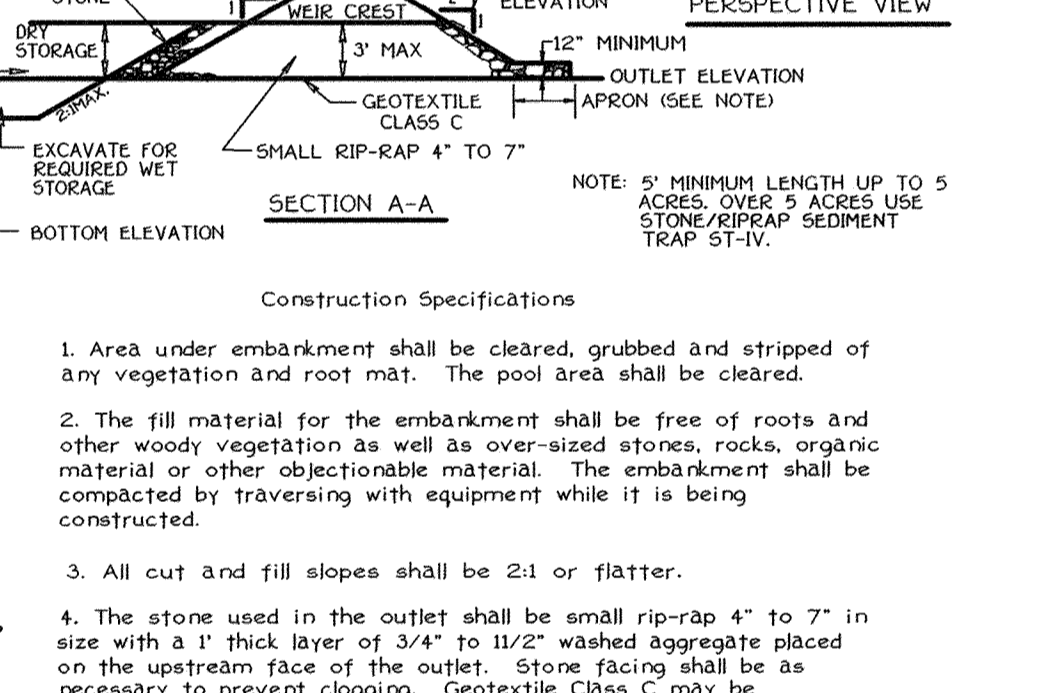
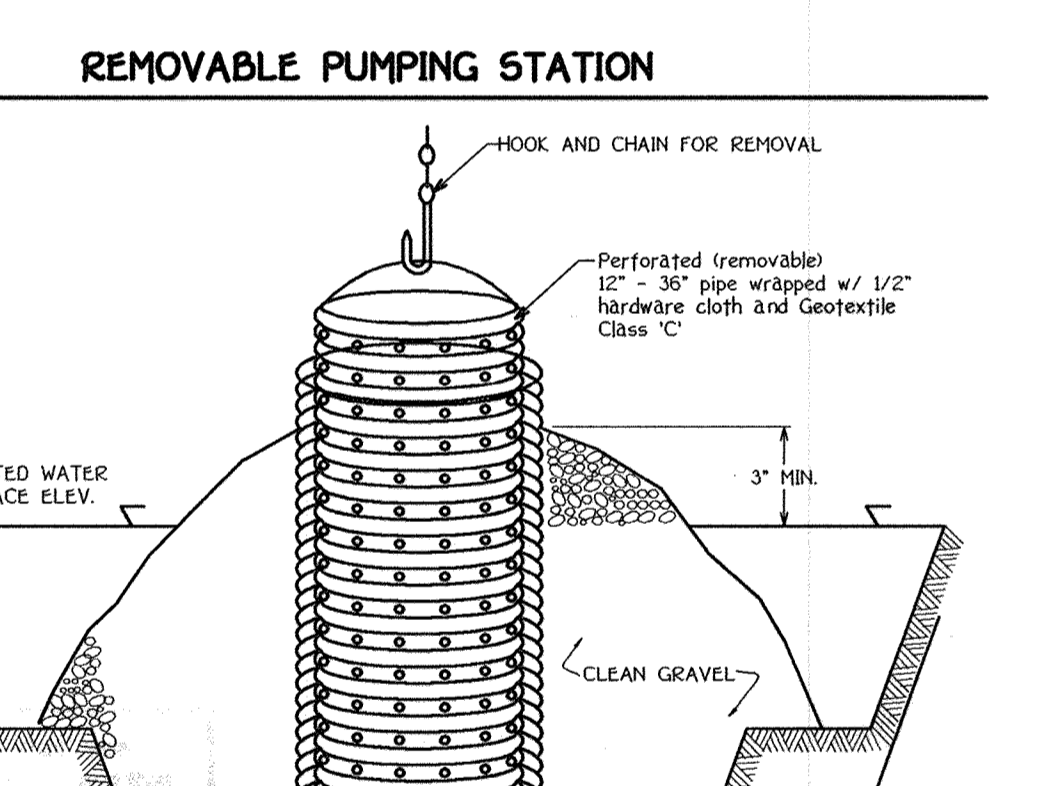
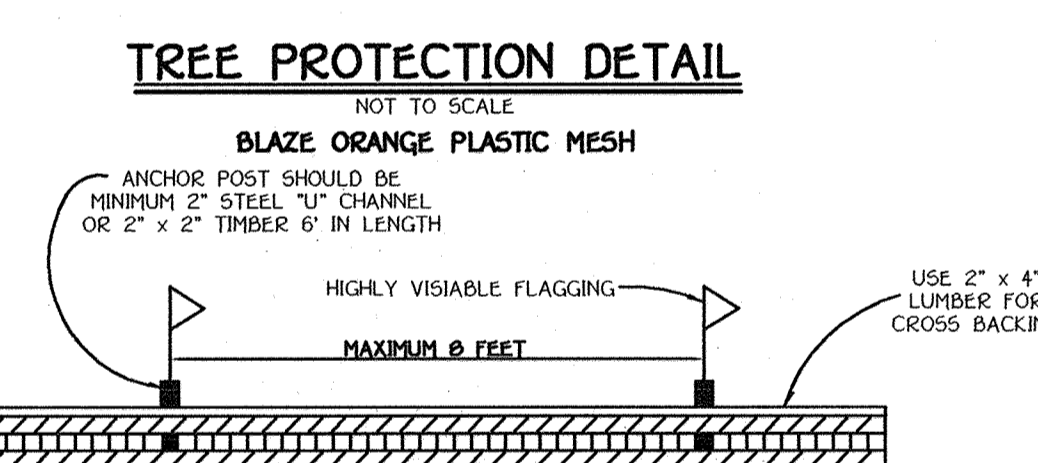
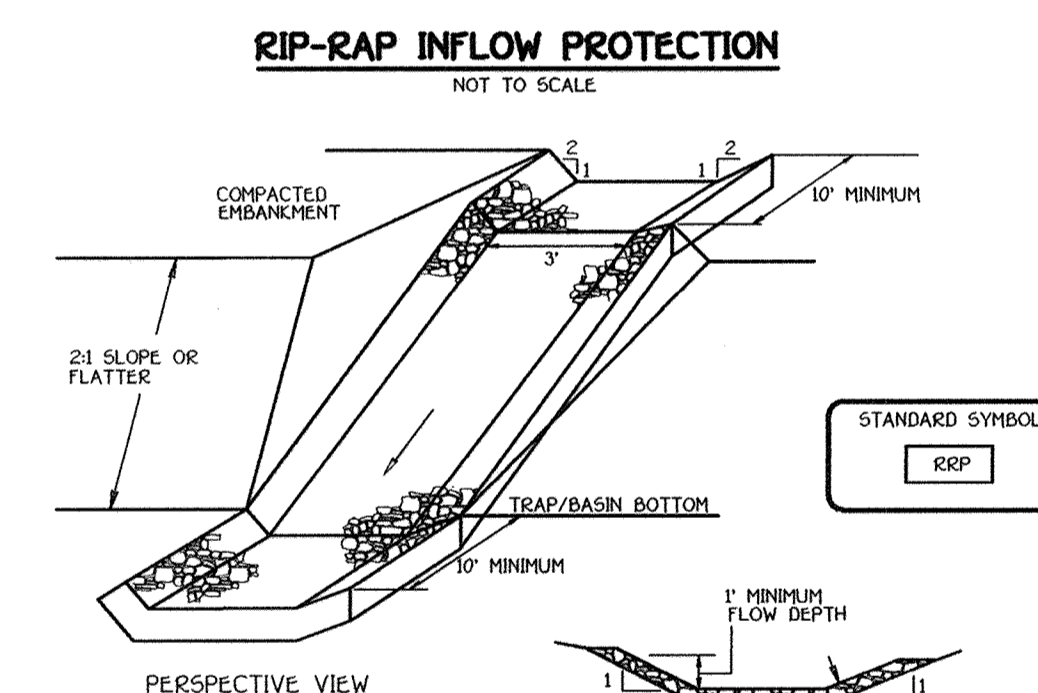
Tensile Strength	50 lbs/in (min)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min)	Test: MSMT 509
Flow Rate	0.3 gpl / ft / minute (max)	Test: MSMT 322
Filtering Efficiency	75% (min)	Test: MSMT 322

Slope	Slope (steepness)	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1500 feet
20 - 33%	5:1 - 3:1	100 feet	1000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet



D	25	50	50	25
A	2250	1875	2125	2075
W	90	37.5	43	83
Le	180	75	86	166
Le	18	80	90	166



**ENGINEER'S CERTIFICATE**

I hereby certify that this Plan for Erosion and Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

*[Signature]* 2/27/02  
Signature Of Engineer Date

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements  
*[Signature]* 2/27/02  
U.S.D.C. - Natural Resources Conservation Service Date

**DEVELOPER'S CERTIFICATE**

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

*[Signature]* 2/25/02  
Signature Of Developer Date

Approved For Howard County Soil Conservation District By  
*[Signature]* 2/27/02  
District Howard Soil Conservation District Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 3/8/02  
Director, Department of Planning and Zoning Date

*[Signature]* 3/1/02  
Chief, Division of Land Development Date

*[Signature]* 3/5/02  
Chief, Development Engineering Division Date

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 28371, Expiration Date: 1-1-21

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young

THOMAS CLARK ASSOCIATES  
2661 Riva Road, Suite 120  
Annapolis Maryland 21401  
301-261-8700

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.			
Northeastern Elementary School No.4					
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	8,9	R-5C	37	First	6011
WATER CODE	SEWER CODE				
D 05	2650000				

**SEDIMENT CONTROL NOTES AND DETAILS**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No.: 37 PARCEL No.: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
BUILDING PERMIT/CD REVIEW 16 NOVEMBER 01  
"BID & CONSTRUCTION 14 JANUARY 02"  
SHEET 29 OF 56

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 18272 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21040  
(410) 461-2955

Revision 1 6-29-19 Changed Sheet Number

SDP 02-36



**20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION**

Using vegetation as cover for barren soil to protect it from forces that cause erosion. PURPOSE: Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is established with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES: This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are: Temporary Soil Stopples, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are: berms, dikes, cut and fill slopes and other areas at final grade, former stalling and staging areas, etc.

EFFECTS ON WATER QUALITY AND QUANTITY: Planting vegetation in disturbed areas will have an effect on the water budget, especially on volume and rates of runoff. Infiltration, evaporation, transpiration, percolation, and groundwater recharge will increase, causing water content and improve the water holding capacity of the soil and subsequent plant growth. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals caused by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during seeding, seeding operations, seeding, and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

**SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS**

A. Site Preparation

1. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
2. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
3. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed areas over 5 acres.

B. Soil Amendment (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
2. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Fertilizer may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall be delivered to the site fully labeled according to the applicable state fertilizer law and shall bear the name, trade name or trademark and warranty of the producer.
3. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 90-100% will pass through a #20 mesh sieve.
4. Fertilizer and lime shall be applied to the top 3-5" of soil by disk or other suitable means.

C. Seeded Preparation

1. Temporary Seeding
  - a. Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of rippers, harrows or construction equipment, such as disc harrows or chain drives or rippers mounted on construction equipment. After the soil is loosened it should be rolled or dragged smooth, but left in the roughened condition. Sloped areas greater than 3:1 should be packed leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
  - b. Apply fertilizer and lime as prescribed on the plans.
  - c. In erodible lime and fertilizer into the top 3-5" of soil by disk or other suitable means.
  - d. Planting Seedings
    1. Soil shall be between 60° and 70°.
    2. Seeding shall be less than 500 sharp per million (sharp).
    3. The soil shall contain less than 40% clay, but enough fine grained material (less than 40% clay) to provide the capacity to hold moderate amount of moisture. An exception is if lowgrass or species susceptible to be planted, then a sandy soil (50% clay) would be acceptable.
    4. Soil shall contain 1.5% minimum organic matter by weight.
    5. Soil must contain sufficient pore space to permit adequate root penetration.
    6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 23 Standards and Specifications for Topsoil.
  - e. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
  - f. Right soil amendments as per soil test or as included on the plans.
  - g. Mix soil amendments into the top 3-5" of topsoil by disk or other suitable means. Lawn areas should be rolled to remove large objects like stones and branches, and ready the area for seed and application. Where site conditions will not permit normal seeded application, loose soil by dragging or surface soil by disk or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.

D. Seed Specifications

1. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to retesting by a recognized seed laboratory. All seed shall have been tested within 6 months immediately preceding the date of sowing such material on this job.
2. Note: Seed tags shall be made available to the inspector to verify the name and rate of seed used.
3. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the legume. Inoculant shall be used in the ratio indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate where seed is to be sown in a very fertile soil. Inoculant shall be possible to use in a soil with a pH above 7.0. It is very important to know the soil pH as it is possible to use in a soil with a pH above 7.0. It is very important to know the soil pH as it is possible to use in a soil with a pH above 7.0.
4. Methods of Seeding
  - a. Broadcast seed uniformly with hydroseeder (seeds and fertilizer) broadcast or drop spreader, or a backpack spreader.
  - b. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen maximum of 100 lbs. per acre total of soluble nitrogen (20% N); phosphorus maximum of 50 lbs. per acre total of soluble phosphorus (20% P); lime - use only ground agricultural limestone, up to 3 tons per acre may be applied by hydroseeder. However, more than 2 tons may be applied by hydroseeder at any one time. Do not use burnt or hydrated lime when hydroseeding.
  - c. Seed and fertilizer shall be mixed and applied in one operation. Do not apply fertilizer without interruption.
  - d. Dry Seeding - This includes use of conventional drop or broadcast spreaders.
    1. Seed spread dry shall be incorporated into the soil at the rates prescribed on the temporary or permanent Seeding Summary or Table 20.0. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
    2. Broadcast seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
  - e. Hydroseeding - Hydroseeding methods that apply and cover seed with soil.
  - f. Catapulting seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after seeding.
  - g. Where practical seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

F. Muck Specifications (in order of preference)

1. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be matted, moldy, decayed or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
2. Wood Cellulose Fiber Muck (WCFM)
  - a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous pulp.
  - b. WCFM shall be dry, green or contain a green dye in the package that will provide visible evidence of the material's condition.
  - c. WCFM including dye, shall contain no ornamentation or growth inhibiting factors.
  - d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber muck will remain in uniform suspension in water under agitation and will blend with seed and fertilizer and other additives to form a homogeneous mixture. The muck material shall form a blotter-like ground cover, on application, having moisture retention and retention properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
  - e. WCFM shall contain no harmful or toxic substances. Concentration levels that will be phytotoxic.
  - f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm, diameter approximately 1 mm, pH range of 4.0 to 6.5, ash content of 10% maximum and water holding capacity of 10% minimum.

G. Mending Seeded Areas - Muck shall be applied to all seeded areas immediately after seeding.

1. If grading is completed outside of the seeding season, muck shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
2. When straw muck is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Muck shall be applied to a uniform loose depth of between 1" and 2". Muck applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If muck breaking tool is to be used, the rate shall be increased to 2.5 tons/acre.
3. Wood cellulose fiber used as a muck shall be applied at a net dry weight of 1,000 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

H. Securing Straw Muck (Anchoring) - Muck anchoring shall be performed immediately following muck application to minimize loss by wind or water. This shall be done by one of the following methods listed by preference, depending upon size of area and erosion hazard:

1. A muck anchoring tool is a tractor-drawn implement designed to punch and anchor muck into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is impractical for smaller areas. If used on mowing, this practice should be used on the contour if possible.
2. Wood cellulose fiber may be used for muck anchoring. Fiber binder shall be applied at a rate of 10 lbs. per 100 gallons of water. The mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
3. Application of liquid binders should be heavier at the edges where wind catches muck, such as in valleys, steep slopes of berms. The remainder of the muck should be applied uniformly after binder application. Synthetic binders - such as Acrylic Ure (Ago-Tack), TCA-70 Permaco, Terra Tax II, Terra Tack and other approved equal may be used at rates recommended by the manufacturer to anchor muck.
4. Lightweight plastic netting may be stapled over the muck according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' wide and 300 to 3,000 feet long.

I. Incremental Stabilization - Cut Slopes

1. All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.
2. Construction sequence refer to Figure 3 below:
  - a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convert runoff from the excavation.
  - b. Perform Phase 1 excavation, dress and stabilize.
  - c. Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as necessary.
  - d. Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.

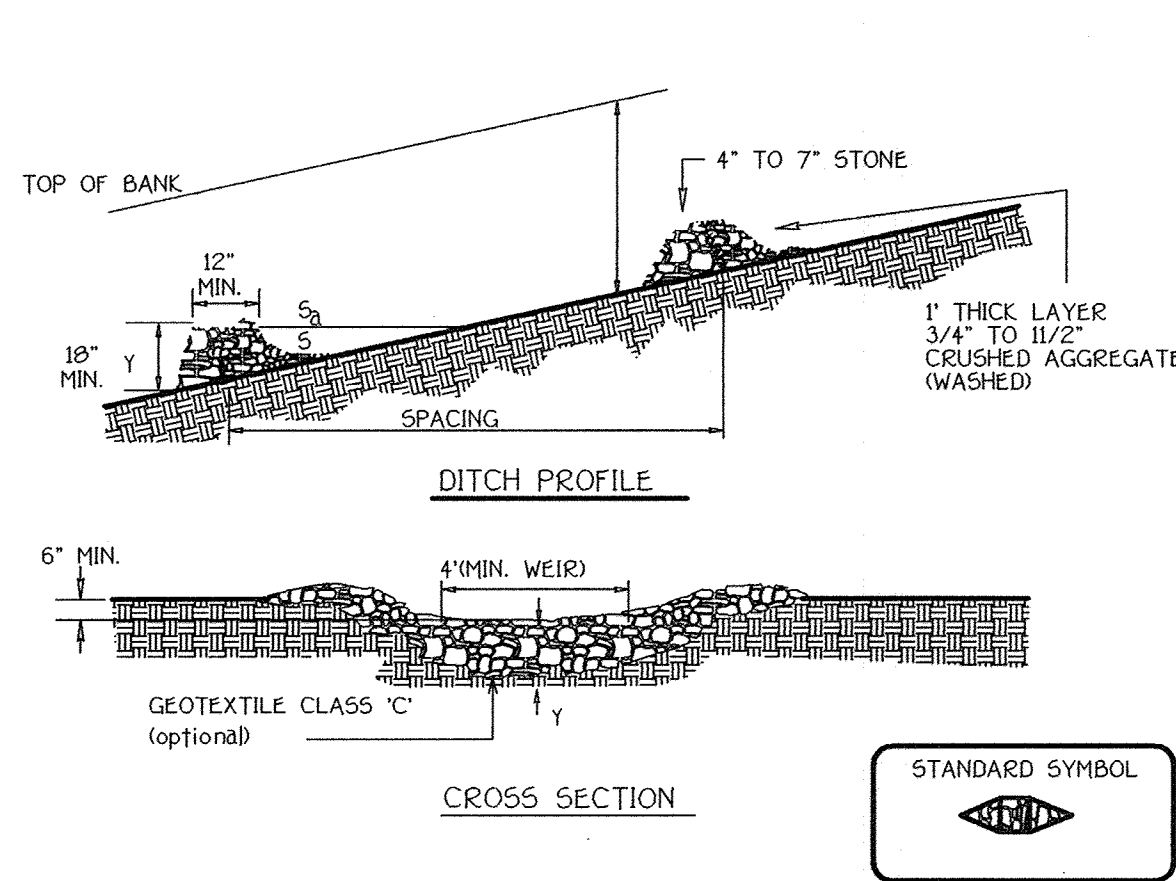
Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil if required and permanent seed and muck. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

J. Incremental Stabilization of Embankments - Fill Slopes

1. Embankments shall be constructed in the locations described on the plans.
2. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches the top of the embankment to prevent erosion.
3. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to intercept runoff and convey it down the slope in a non-erosive manner to a sediment trapping device.
4. Construction sequence refer to Figure 4 below:
  - a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convert runoff from the excavation.
  - b. To divert runoff around the fill, construct a pipe slope drain on the side of fill shown in Figure 2, unless other methods shown on the plans address this area.
  - c. Perform Phase 1 excavation, dress and stabilize.
  - d. Place Phase 2 embankment, dress and stabilize.
  - e. Perform final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil if required and permanent seed and muck. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

**STONE CHECK DAM**

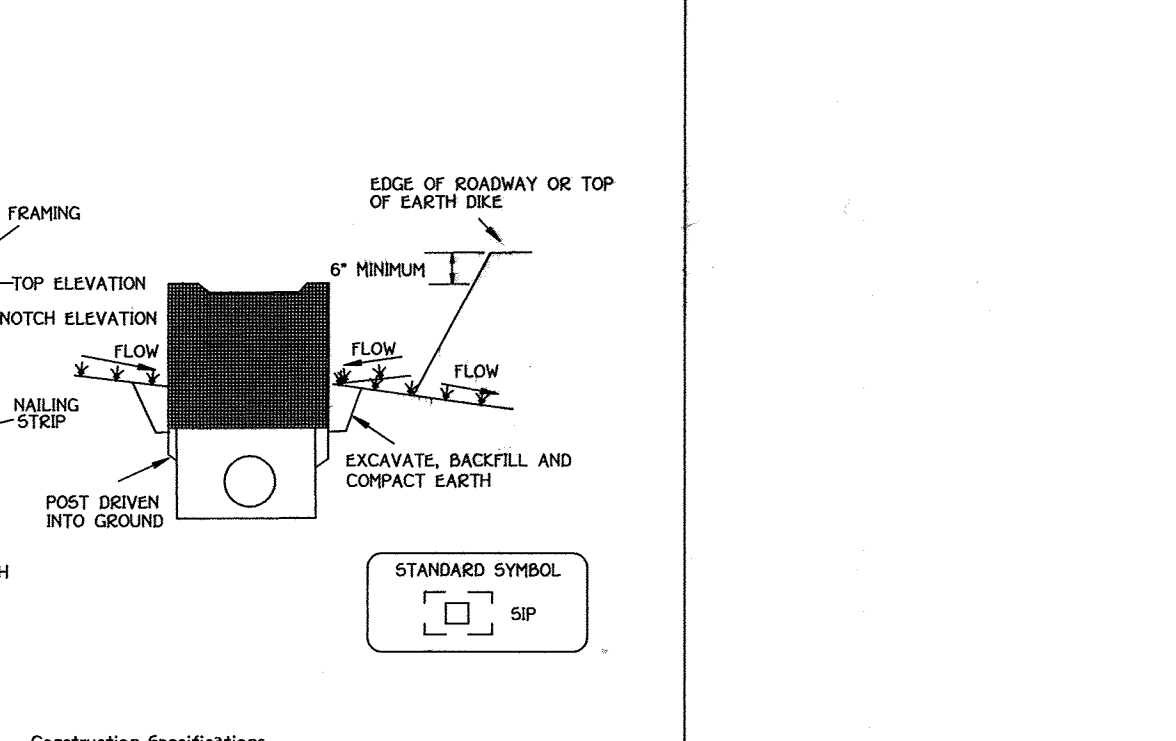


**STANDARD STONE CHECK DAM DESIGN**

SLOPE	SPACING
2X or less	80'
2 1/2 to 4:1	40'
4:1 to 7:1	20'
7:1 to 10:1	15'
over 10:1	use lined waterway design

Construction Specifications

1. Swales and ditches shall be prepared in accordance with the construction specifications described in Section A-2, Standards and Specifications for Temporary Swales.
2. The check dam shall be constructed of 4"-7" stone. The stone shall be placed so that it completely covers the width of the channel and keyed into the channel banks.
3. The top of the check dam shall be constructed so the center is approximately 6" lower than the outer edges, forming a weir that water can flow across.
4. The maximum height of the check dam at the center shall not exceed 2'.
5. The upstream side of the check dam shall be lined with approximately 1" of 3/4" to 1 1/2" crushed aggregate.

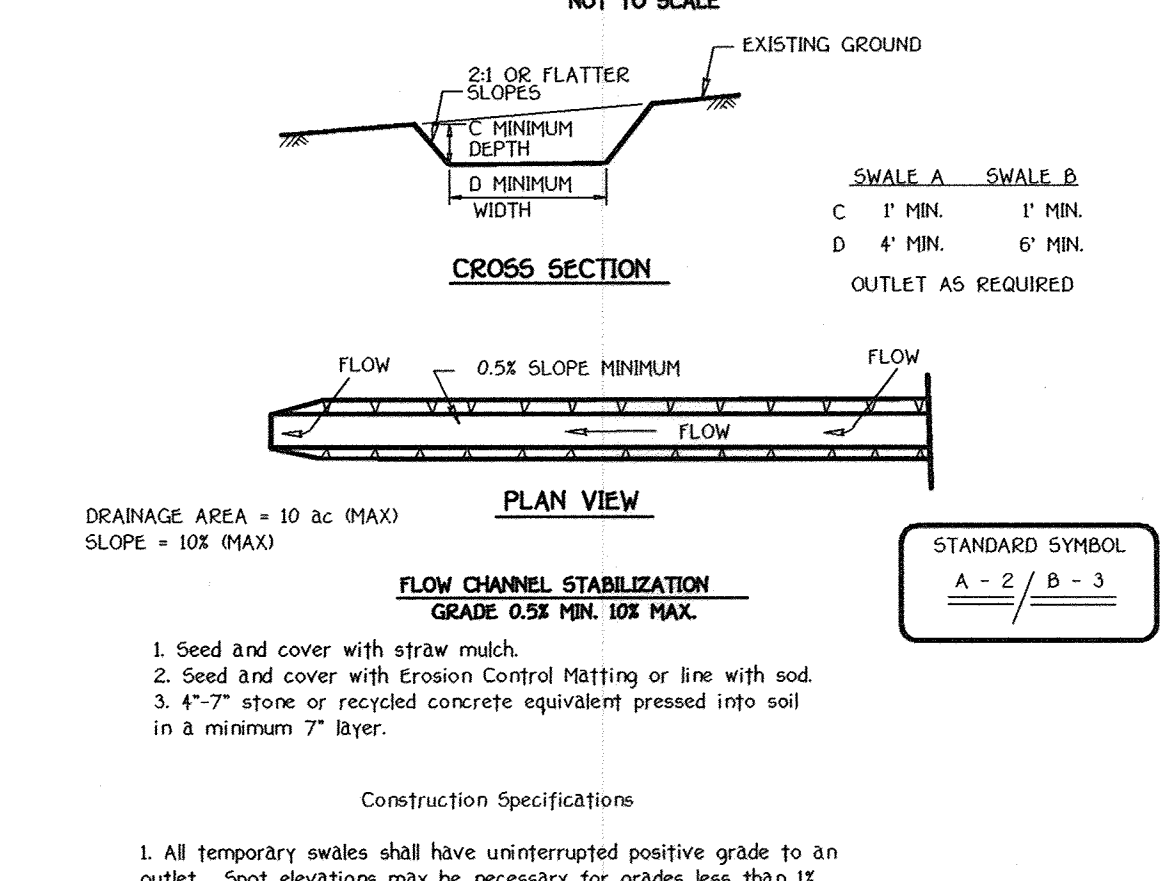


Construction Specifications

1. Excavate completely around the inlet to a depth of 18" below the notch elevation.
2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on detail 20A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
4. Stretch the Geotextile Class C tightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame.
5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the post.
6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

NOTE: THESE SEEDING SPECIFICATIONS ARE THE MINIMUM REQUIRED FOR SEDIMENT CONTROL. REFER TO PROJECT SPECIFICATIONS FOR SEEDING REQUIREMENTS FOR OTHER AREAS OF THE SITE.

**TEMPORARY SWALE**



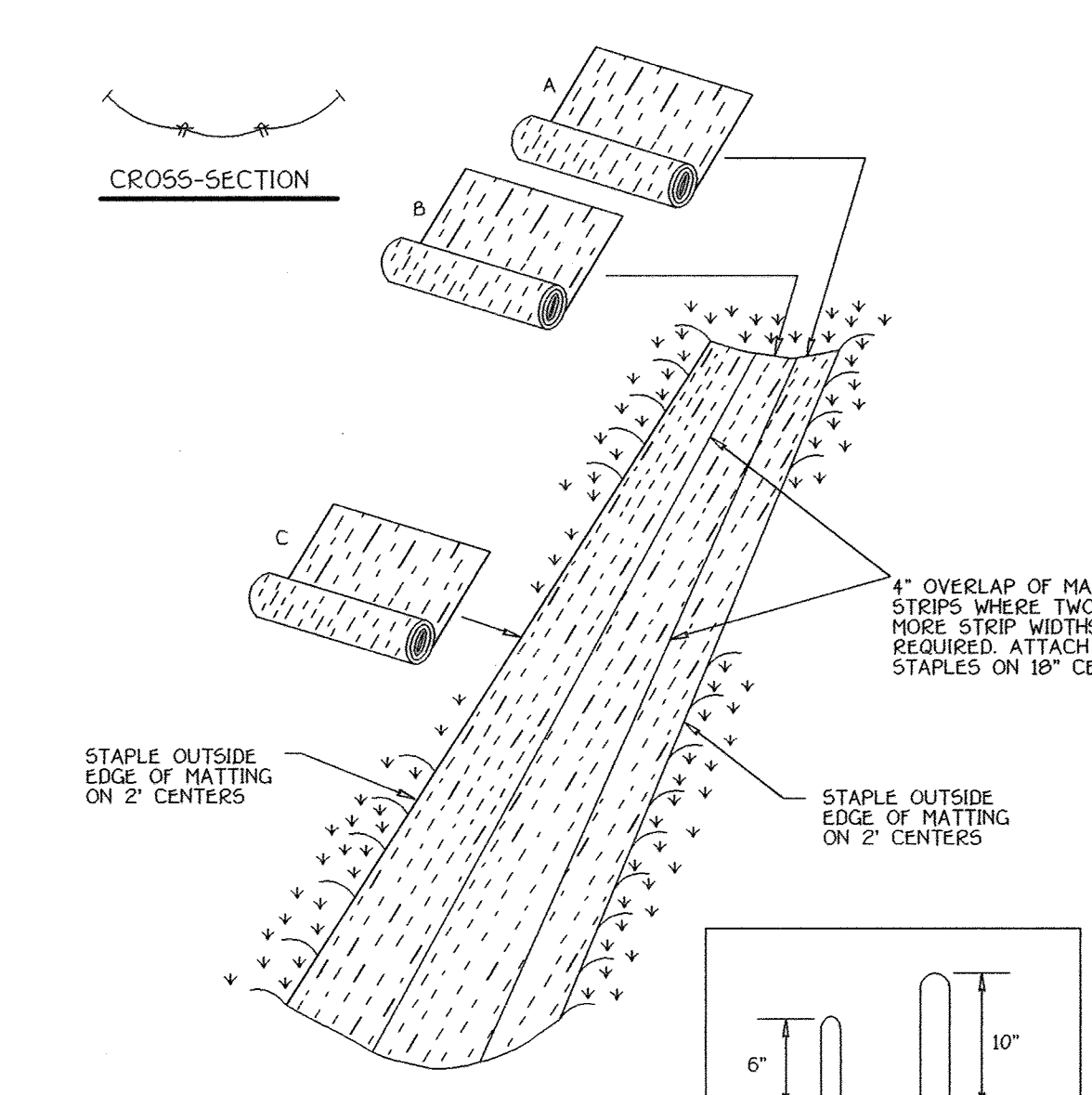
Construction Specifications

1. All temporary swales shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed stabilized area at a non-erosive velocity.
4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.
5. The swale shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
6. Fill, if necessary, shall be compacted by earth moving equipment.
7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the swale.
8. Inspection and maintenance must be provided periodically and after each rain event.

Construction Specifications

1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with soil.
3. 4"-7" stone or recycled concrete equivalent pressed into soil in a minimum 7" layer.

**EROSION CONTROL MATTING**



Construction Specifications

1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4' down slope from the trench. Spacing between staples is 6'.
2. Staple the 4" overlap in the channel center using an 18" spacing between staples.
3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shingle fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow enter from the edge of the matting then the area affected by the flow must be keyed-in.

NOTE: ALL SWALES SHALL BE STABILIZED WITH EROSION CONTROL MATTING

**SEQUENCE OF CONSTRUCTION**

1. OBTAIN A GRADING PERMIT.
2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK. AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 24 HOURS BEFORE STARTING WORK. NOTIFY THE BALTIMORE GAS AND ELECTRIC COMPANY AT 410-997-6953 FIVE WORKING DAYS BEFORE STARTING WORK.
3. INSTALL ALL TREE PROTECTION FENCE FOR TREES TO BE UNDISTURBED AS INDICATED ON THE PLANS (2 DAYS). CLEAR AND GRUB FOR SEDIMENT CONTROL MEASURES ONLY. INSTALL STABILIZED CONSTRUCTION ENTRANCE. (2 WEEKS)

NOTE: CONTRACTOR SHALL BE ADVISED THAT WORK ASSOCIATED WITH THE MDE WATERWAY CONSTRUCTION PERMIT ALONG DEEP RUN WILL NOT BE PERMITTED BETWEEN MARCH 1st TO JUNE 15th.

4. THE ACCESS ROAD AND ASSOCIATED CONTROL MEASURES SHALL BE GRADED TO THE PROPOSED BRIDGE LOCATION ALONG WITH THE TEMPORARY ACCESS ROAD AND TEMPORARY STREAM CROSSING BEING CONSTRUCTED FOR CONSTRUCTION ACCESS. STABILIZE WITH TEMP. SEEDING (2 WEEKS).
5. CONSTRUCT STORM OUTLET SEDIMENT TRAPS, SEDIMENT BASIN AND EARTH DIKES. STABILIZE WITH TEMPORARY SEEDING. (2 WEEKS)
6. INSTALL REMAINING SILT FENCE AND SUPER SILT FENCE (2 WEEKS)
7. CLEAR AND GRUB THE REMAINDER OF THE SITE. (2 WEEKS)
8. GRADE SITE TO SUBGRADE (5 WEEKS) AS THE FILL OPERATION PROCEEDS ALONG THE SLOPE ADJACENT TO THE PROPOSED PARKING AREA, A TEMPORARY SWALE SHALL BE INSTALLED AT THE END OF EACH WORKING DAY FOR CONVEYANCE OF STORM WATER RUNOFF TO THE SEDIMENT BASIN. STABILIZE ALL SLOPES IMMEDIATELY UPON COMPLETION OF GRADING.

9. THE CONTRACTOR SHALL CONSTRUCT THE PERMANENT SWALE ADJACENT TO THE PROPOSED PARKING AREA WHEN THE FILL SLOPE HAS BEEN GRADED AS SHOWN ON THE SITE DEVELOPMENT PLAN. CONSTRUCT STORM DRAIN SYSTEM FROM S-1 TO I-1 TO CONVEY STORM WATER RUNOFF TO THE SEDIMENT BASIN (1 WEEK)
10. CONSTRUCT THE SCHOOL BUILDING, SITE UTILITIES, CONCRETE CURB, BASE PAVING AND SIDEWALKS. (12 MONTHS)
11. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON. AFTER EACH RAINFALL AND ON A DAILY BASIS, REMOVE SEDIMENT FROM THE BASIN AND TRAPS WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED. ALL SEDIMENT MUST BE PLACED UPSTREAM OF THE APPROVED TRAPPING DEVICE.
12. STABILIZE ALL DISTURBED AREAS AND OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO PROCEED.

13. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE DEVICES MAY BE REMOVED AND/OR BACKFILLED AND THE REMAINING AREAS BROUGHT TO FINAL DESIGN GRADE. STABILIZE ALL REMAINING AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. CONVERT THE SEDIMENT CONTROL BASIN TO A STORM WATER MANAGEMENT FOND. (2 WEEKS)
14. NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT.

**SEDIMENT CONTROL NOTES**

- 1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (3:30-10:55).
- 2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
- 3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 30 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, BY 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- 4) 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 (ISC. 50), SOO (ISC. 54), TEMPORARY SEEDING (ISC. 50) AND MULCHING (ISC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- 5) 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.
- 6) SITE ANALYSIS:
 

TOTAL AREA OF SITE	46.4 ACRES
AREA DISTURBED	23.2 ACRES
AREA TO BE ROOFED OR PAVED	7.2 ACRES
AREA TO BE VEGETATIVELY STABILIZED	16.0 ACRES
TOTAL CUT	122312 CU.YDS.
TOTAL FILL	122312 CU.YDS.
- 7) OFFSITE WASTE/BORROW AREA LOCATION N/A CU.YDS.
- 8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR REPLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- 9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 10) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERMANENT EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- 11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

**SEDIMENT CONTROL NOTES AND DETAILS**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS-SPRING)**

TAX MAP No: 37 PARCEL No: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 15 OCTOBER 2001  
 BUILDING PERMIT/CDD REVIEW 16 NOVEMBER 01  
 "BID & CONSTRUCTION  
 14 JANUARY 02"  
 SHEET 30 OF 56

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No.4		
DEED REF. BLOCK NO. ZONE TAX/ZONE ELEC. DIST. CENSUS TR.		
2307/562 8,9 R-5C 37 First 6011		
WATER CODE SEWER CODE		
D 05 2650000		

**ENGINEER'S CERTIFICATE**

I hereby Certify That This Plan For Erosion And Sediment Control - Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

*[Signature]*  
 Signature Of Engineer  
 Date: 2/27/02

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.  
*[Signature]*  
 Date: 2/27/02

**DEVELOPER'S CERTIFICATE**

I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary.

*[Signature]*  
 Signature Of Developer  
 Date: 2/25/02

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.  
*[Signature]*  
 Date: 2/27/02

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 3/6/02  
 Director - Department of Planning and Zoning  
 Date

*[Signature]* 2/7/02  
 Chief, Division of Land Development  
 Date

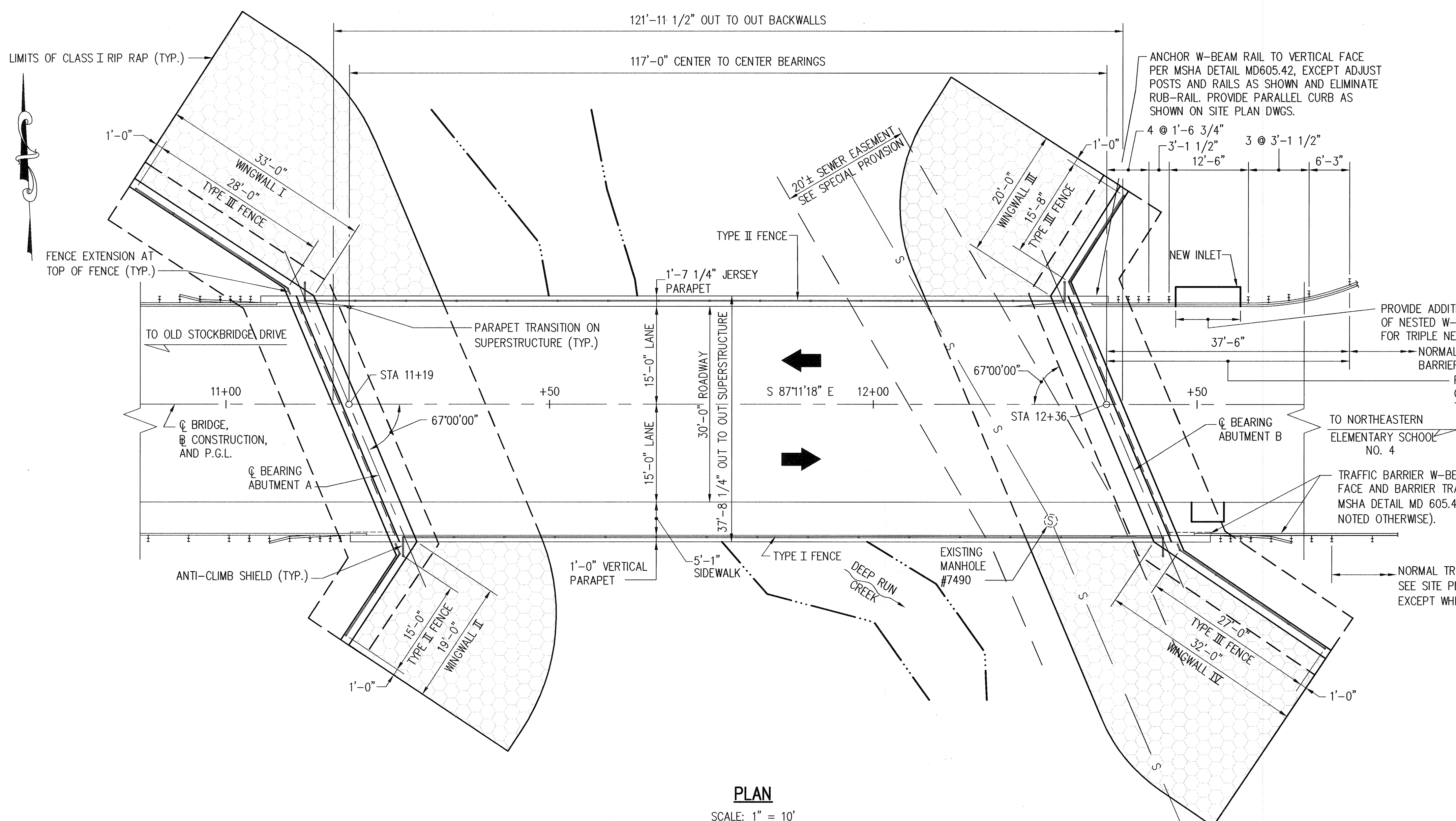
*[Signature]* 3/5/02  
 Chief, Development Engineering Division  
 Date

PREPARED FOR:  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 109  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young

THOMAS CLARK ASSOCIATES  
 2661 Riva Road, Suite 120  
 Annapolis Maryland 21401  
 301-261-8700

2 Changed Street Number 5-25-19  
 1 Added inlet protection detail 10-19-07  
 NO REVISIONS Date

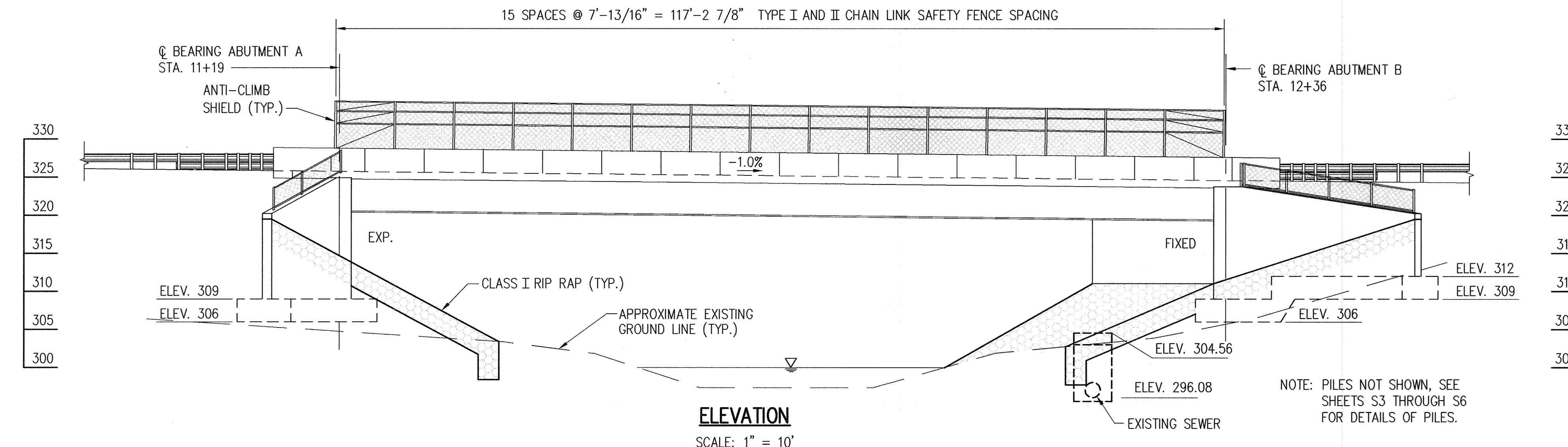




**PLAN**

SCALE: 1" = 10'

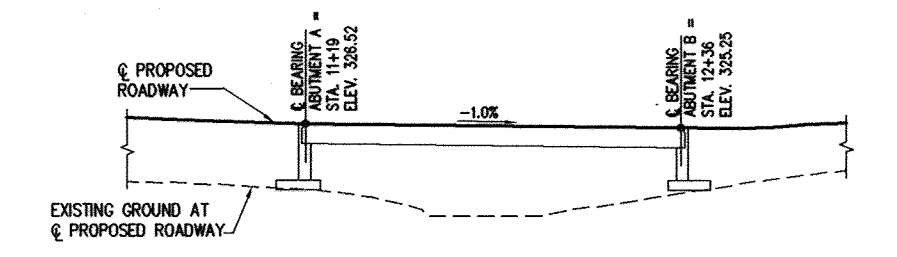
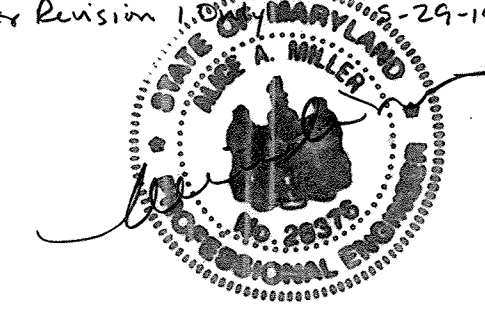
- GENERAL NOTES**
- SPECIFICATIONS:**
- SHA SPECIFICATIONS DATED JANUARY, 2001 REVISIONS THEREOF AND ADDITIONS THERETO AND SPECIAL PROVISIONS FOR MATERIALS AND CONSTRUCTION.
  - HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (VOLUME IX DESIGN MANUAL).
  - AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 1996 FOR DESIGN INCLUDING ALL INTERIM SPECIFICATIONS.
  - CONCRETE DESIGN: SERVICE LOAD DESIGN METHOD  $f_c = 1200$  PSI EXCEPT THAT IN BRIDGE DECK SLABS SUPPORTED BY STRINGERS IT SHALL BE 1350 PSI.
  - REINFORCING STEEL DESIGN:  $f_s = 24,000$  PSI.
  - STRUCTURAL STEEL DESIGN: ELASTIC DESIGN METHOD
- LOADING:**
- HS 25-44 WITH PROVISIONS FOR FUTURE 2" WEARING SURFACE AND 15 LB/FT<sup>2</sup> FOR USE OF STEEL BRIDGE DECK FORMS WHICH REMAIN IN PLACE.
- CONCRETE:**
- ALL CONCRETE FOR ABUTMENT BACKWALLS, SIDEWALK AND PARAPETS AT ABUTMENTS AND ENTIRE SUPERSTRUCTURE SHALL BE MIX NO. 6 (4500 PSI). ALL OTHER STRUCTURE CONCRETE SHALL BE MIX NO. 3 (3500 PSI).
- REINFORCING STEEL:**
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60. ALL SPLICES, NOT SHOWN, SHALL BE LAPPED AS PER BAR CHARTS. MINIMUM COVER FOR ANY BAR SHALL BE 2" UNLESS OTHERWISE NOTED, WITH THE EXCEPTION OF BARS AT THE BOTTOM AND SIDES OF ALL FOOTINGS WHICH SHALL HAVE 3" MINIMUM COVER.
- FOR TIES AND STIRRUPS: STANDARD ACI BENDING TOLERANCES ARE MODIFIED TO PLUS (+) ZERO INCHES, MINUS (-) NORMAL ACI BENDING TOLERANCES.
- ONLY GRADE 60 CAN BE USED ON THIS PROJECT**
- REINFORCING STEEL IN THE FOLLOWING AREAS SHALL BE EPOXY COATED:
- ENTIRE SUPERSTRUCTURE INCLUDING PARAPETS AND SIDEWALK
  - ABUTMENT BACKWALLS
  - ALL BEARING SEAT PADS
  - ABUTMENT BRIDGE SEAT AREAS
  - PARAPET PORTION OF END POSTS
- KEYS:**
- ALL KEYS ARE NOMINAL SIZE.
- STRUCTURAL STEEL:**
- STRUCTURAL STEEL SHALL CONFORM TO A.S.T.M A 709 GRADE 50W, INCLUDING THE ADDITIONAL REQUIREMENTS FOR CHARPY V-NOTCH TESTING OF AASHTO M 270 FOR PRIMARY LOAD CARRYING MEMBERS. STRUCTURAL STEEL SHALL BE WEATHERING STEEL WITH 10 FOOT ENDS OF GIRDS AND STRUCTURAL STEEL IN THESE AREAS TO BE PAINTED IN ACCORDANCE WITH PAINT SYSTEM B OF SECTION 435 OF THE MSHA SPECIFICATIONS.
- NOTES:**
- THE LOCATION OF EXISTING AND PROPOSED UTILITIES SHOWN ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF SAID LOCATION.
  - FOR DETAILS OF CLASS I RIP RAP SLOPE PROTECTION SEE SHEET NO. S15.
  - FOR DETAILS OF TYPE I, II AND III CHAIN LINK SAFETY FENCING, SEE DETAIL NOS. BR-SS(3.01)-75-21, BR-SS(3.02)-75-22, BR-SS(3.03)-75-23, BR-SS(3.04)-75-24, BR-SS(3.05)-75-25, BR-SS(3.11)-96-317 AND BR-SS(3.12)-96-318 ON SHEET NOS. S17-S19.
  - FOR DETAILS OF APPROACH ROADWAYS, SEE SITE PLAN DRAWINGS.
  - THE APPROACH ROADWAY SHOULDER AND SIDE SLOPES SHALL BE TRANSITIONED TO MEET THE SLOPES OF THE STRUCTURE BEGINNING A MINIMUM DISTANCE OF FIFTY (50) FEET FROM THE ENDS OF THE STRUCTURE.
  - PROVIDE TYPE III SAFETY FENCE AT TOP OF ALL WINGWALLS TO LIMITS SHOWN ON THE PLAN. TOP AND BOTTOM RAILS OF FENCE SHALL BE PARALLEL TO THE TOP OF WINGWALLS. POST SPACING SHALL NOT EXCEED 8'-0" ON CENTER. ALSO PROVIDE FENCE EXTENSION, WITH FRAME, AT THE TOP POST ON EACH WINGWALL PLACED PARALLEL TO THE BACK FACE OF WINGWALL, TO FILL IN THE GAP TO THE FACE OF THE BRIDGE PARAPETS. THE CLEAR DISTANCE FROM THE END OF THE FENCE AND FRAME EXTENSION TO THE FACE OF THE BRIDGE PARAPET SHALL NOT EXCEED 4 INCHES.



**ELEVATION**

SCALE: 1" = 10'

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 20376 Expiration Date: 1-1-21  
 For Revision 1, 01/20/2002, 01/29/19



NOTE: FOR COMPLETE ROADWAY PROFILE, SEE SITE PLAN DRAWINGS

**ROADWAY PROFILE AT BRIDGE**

SCALE: 1"=60'

S1 OF S25

**NOLAN Associates, Inc.**  
 Engineers - Civil/Structural/Inspections  
 4785 Dorsey Hall Drive  
 Suite 124  
 Ellicott City, Maryland 21042  
 Phone: (410) 995-3651 Fax: (410) 995-1363

DATE	DESCRIPTION / REVISION
2/01/2002	REVISION # 2



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Charles S. Nolan* 3/8/02  
 Director - Department of Planning and Zoning Date

*Cindy Hanna* 3/7/02  
 Chief, Division of Land Development Date

*Michael Damann* 2/5/02  
 Chief, Development Engineering Division Date

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 108  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

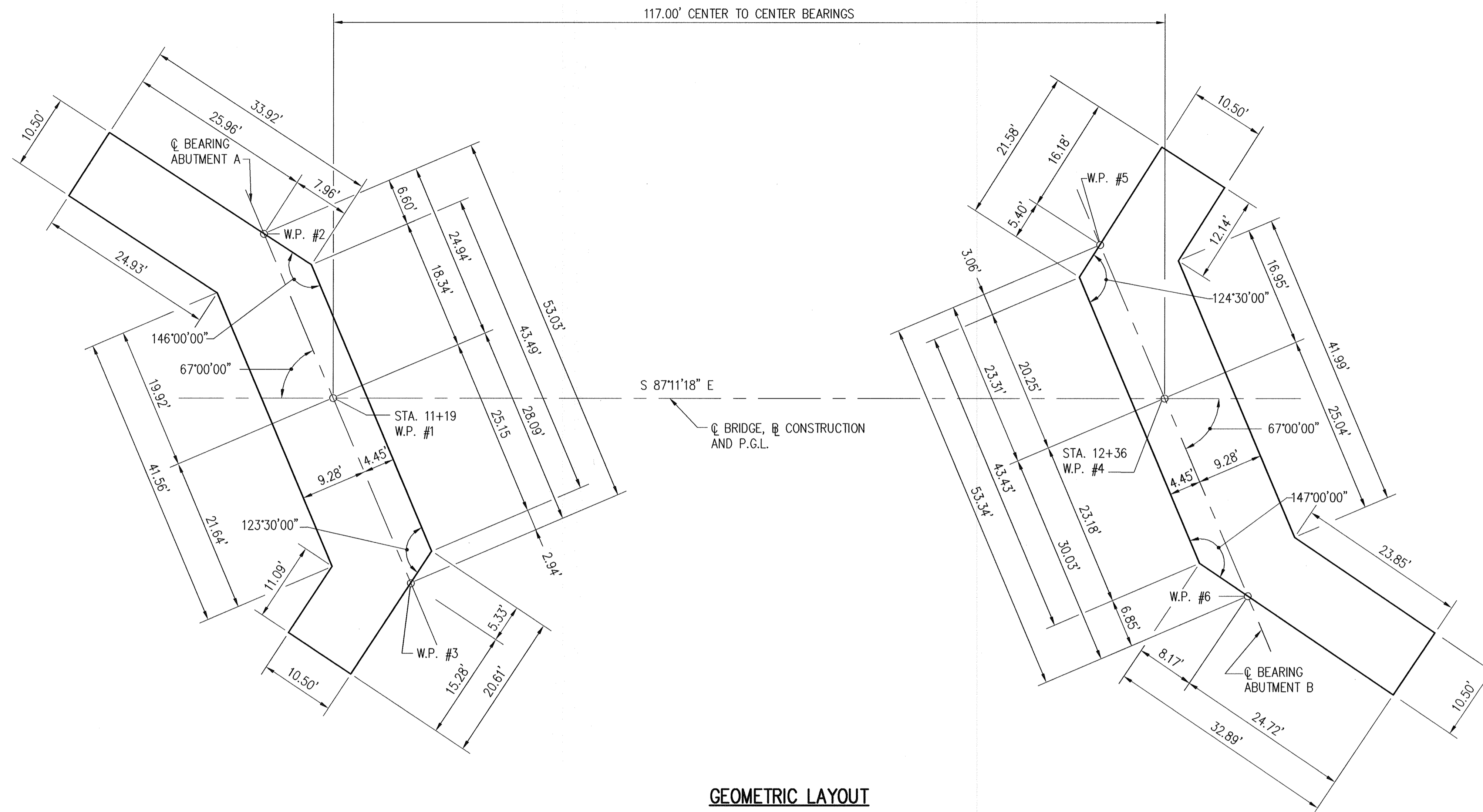
PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		
DEED REF. 2387/562	BLOCK NO. 09	TAX/ZONE R-5C
WATER CODE D 05	SEWER CODE 2650000	ELEC. DIST. 6011
		CENSUS TR. 6011

**GENERAL PLAN AND ELEVATION**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No.: 37 PARCEL No.: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 2 JANUARY 2002  
 BID AND CONSTRUCTION 14 JANUARY 2002  
 SHEET 31 OF 56





**GEOMETRIC LAYOUT**  
SCALE: 1" = 10'

	COORDINATES	
	NORTHING	EASTING
W.P. #1	560135.3845	1372205.4208
W.P. #2	560158.7898	1372196.8147
W.P. #3	560109.0152	1372215.1167
W.P. #4	560129.6454	1372322.2799
W.P. #5	560151.5218	1372314.2360
W.P. #6	560101.4581	1372332.6444

- NOTES:
1. W.P. =WORKING POINT
  2. FOR SURVEY CONTROL POINTS SEE SITE PLAN DRAWINGS.

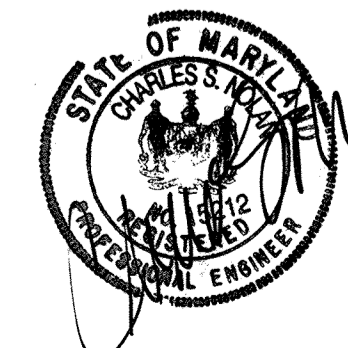
Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 282516 Expiration Date: 1-1-21  
For Renewal 5-29-19



Revision 1 5-29-19 Changed Sheet Number

**NOLAN**  
Associates, Inc.  
Engineers - Civil/Structural/Inspections  
4785 Dorsey Hall Drive  
Suite 124  
Ellicott City, Maryland 21042  
Phone: (410) 995-3651 Fax: (410) 995-1363

DATE	DESCRIPTION	REVISION BLOCK



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul R. Smith*  
Director, Department of Planning and Zoning 3/8/02  
Date

*Cindy H. Brown*  
Chief, Division of Land Development 3/7/02  
Date

*Chris D. ...*  
Chief, Development Engineering Division 3/5/02  
Date

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young

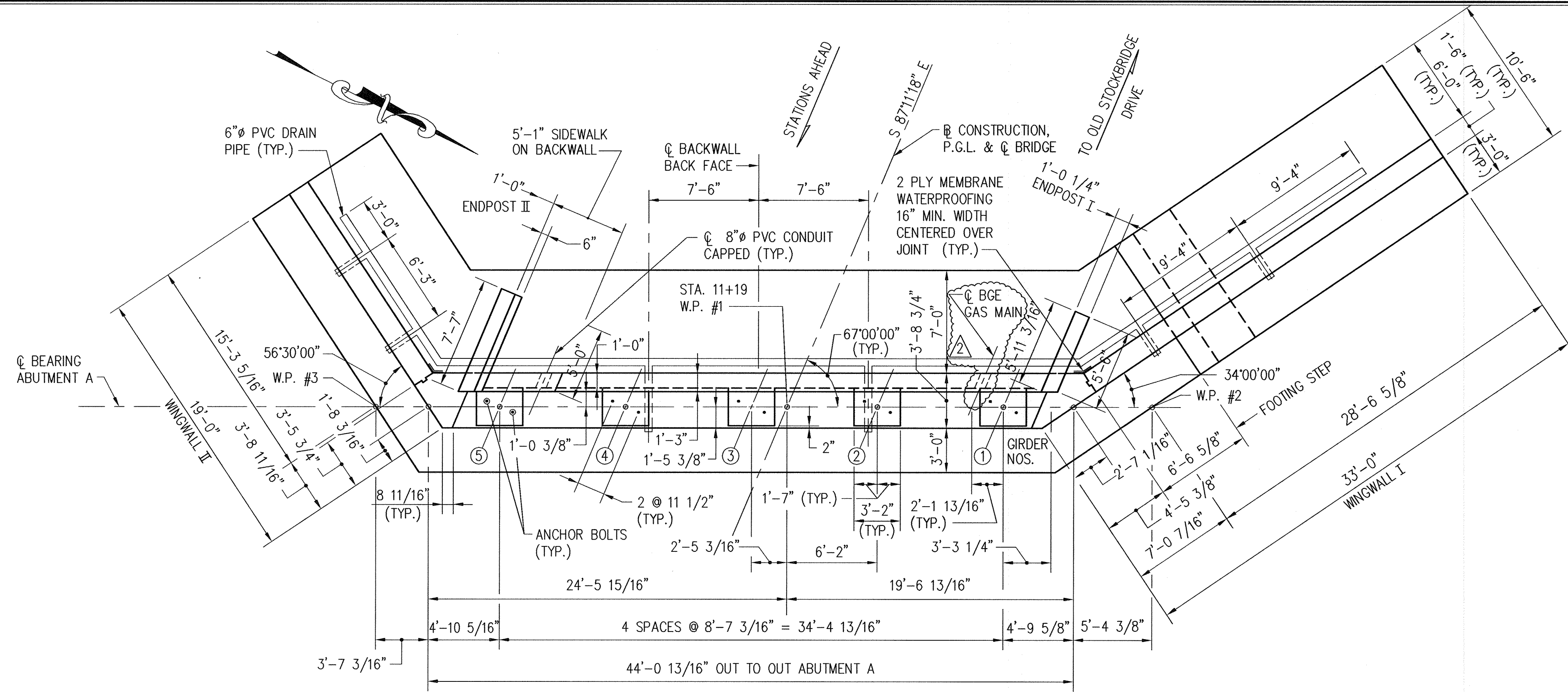
Address Chart					
Parcel Number	Street Address				
670	8125 Old Stockbridge Drive				
PROJECT	BLOCK NO.	ZONE	TAX/ZONE	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4	09	R-5C	37	First	6011
DEED REF.	WATER CODE	SEWER CODE			
2387/562	D 05	2650000			

**GEOMETRIC LAYOUT**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELOW'S SPRING)**

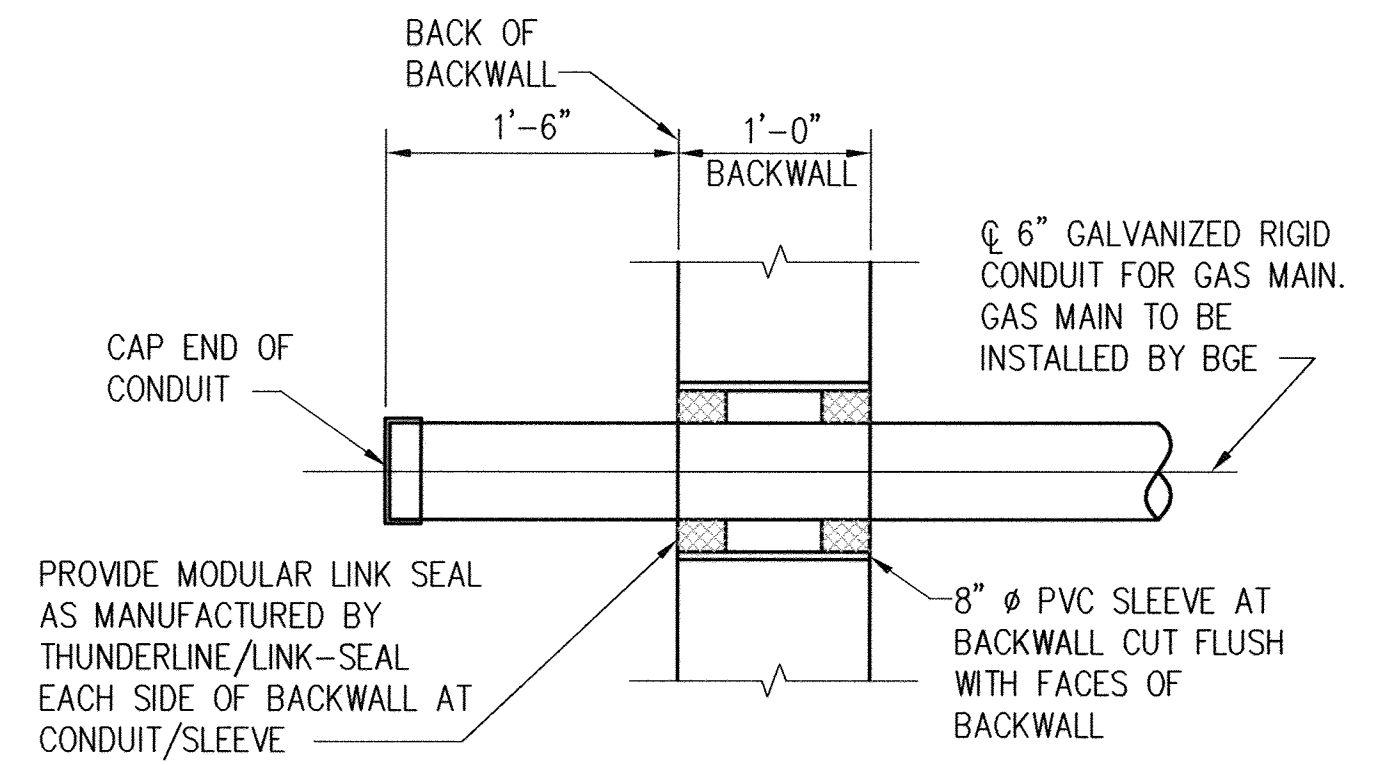
TAX MAP No.: 37 PARCEL No.: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 2 JANUARY 2002  
BID AND CONSTRUCTION 14 JANUARY 2002  
SHEET 32 OF 56





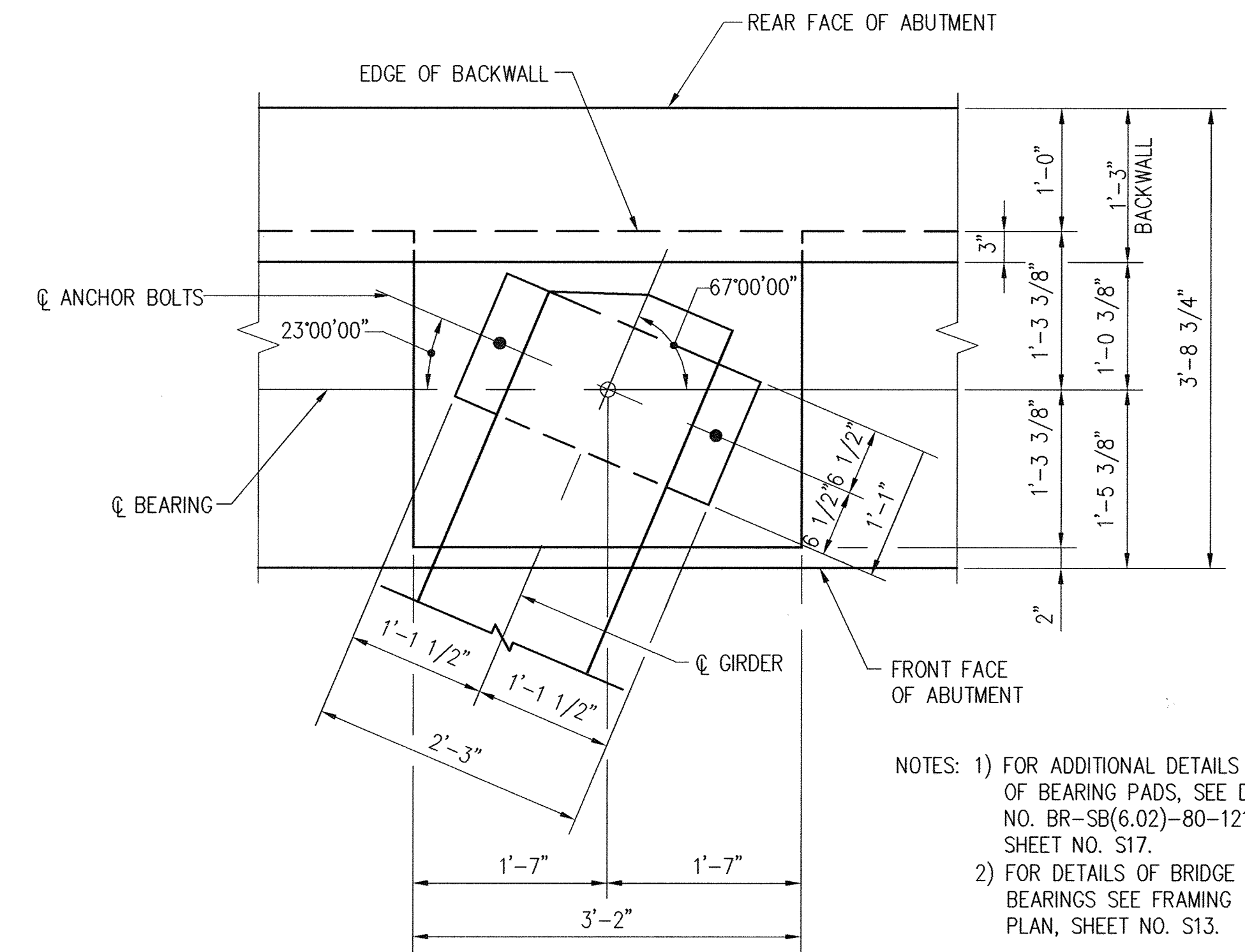
**PLAN**

SCALE: 3/16" = 1'-0"



**CONDUIT AND SLEEVE DETAIL AT ABUTMENTS**

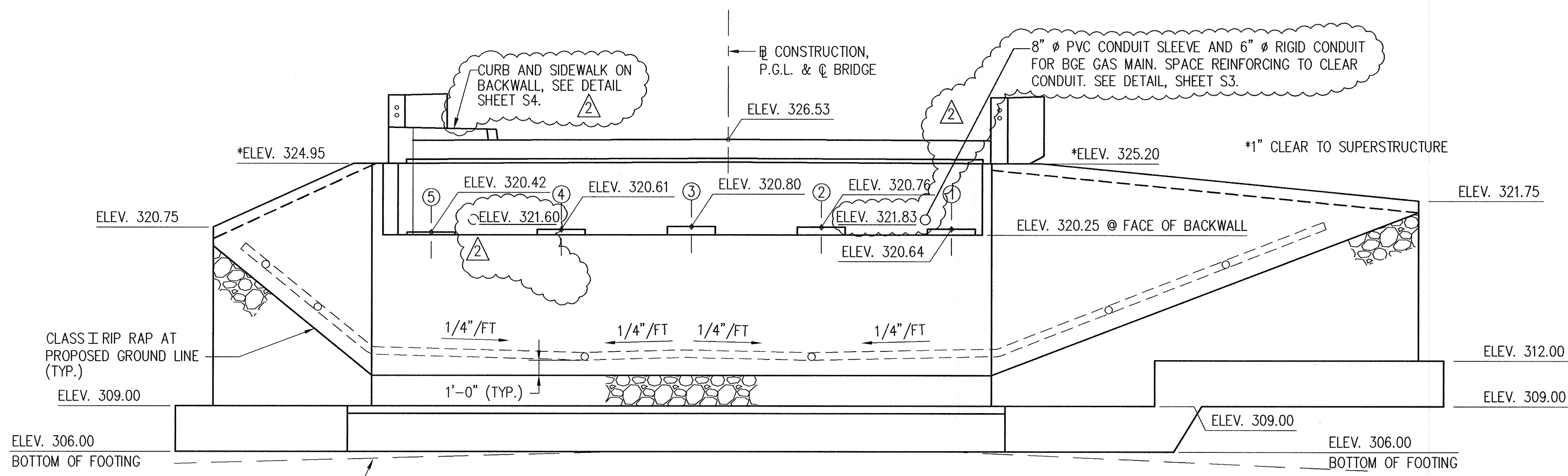
NOT TO SCALE



**CONCRETE BEARING PADS AT ABUTMENTS**

SCALE: 1" = 1'-0"

- NOTES:
1. TYPE III FENCING NOT SHOWN ON WING WALLS. FOR DETAILS SEE SHEET NO.
  2. PILING NOT SHOWN. FOR DETAILS SEE SHEET NO. S5.
  3. FOR DETAILS OF ABUTMENT AND WING WALL SECTIONS, SEE SHEET NOS. S4 AND S9.
  4. FOR DETAILS OF ENDPOSTS SEE SHEET NOS. S10 AND S11.
  5. TROUGH DETAILS LAYOUT NOT SHOWN. FOR DETAILS SEE DETAIL BR-SS(7.17)-95-313 ON SHEET NOS. S21 AND S22.



**ELEVATION**

SCALE: 3/16" = 1'-0"

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.



**NOLAN Associates, Inc.**  
 Engineers - Civil/Structural/Inspections  
 4785 Dorsey Hall Drive  
 Suite 124  
 Ellicott City, Maryland 21042  
 Phone: (410) 995-3651 Fax: (410) 995-1383

DATE	DESCRIPTION	REVISION BLOCK
2/01/2002	REVISION - 2	
5/29/19	3 - Changed Sheet Number	



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul R. ...* 3/8/02  
 Director - Department of Planning and Zoning

*Chris ...* 3/1/02  
 Chief, Division of Land Development

*Mike ...* 2/5/02  
 Chief, Development Engineering Division

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 100  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young

Address Chart					
Parcel Number	Street Address				
670	8125 Old Stockbridge Drive				
PROJECT	SECTION/AREA	LOT NO.			
Northeastern Elementary School No. 4					
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2307/562	8,9	R-SC	37	First	6011
WATER CODE			SEWER CODE		
D 05			2650000		

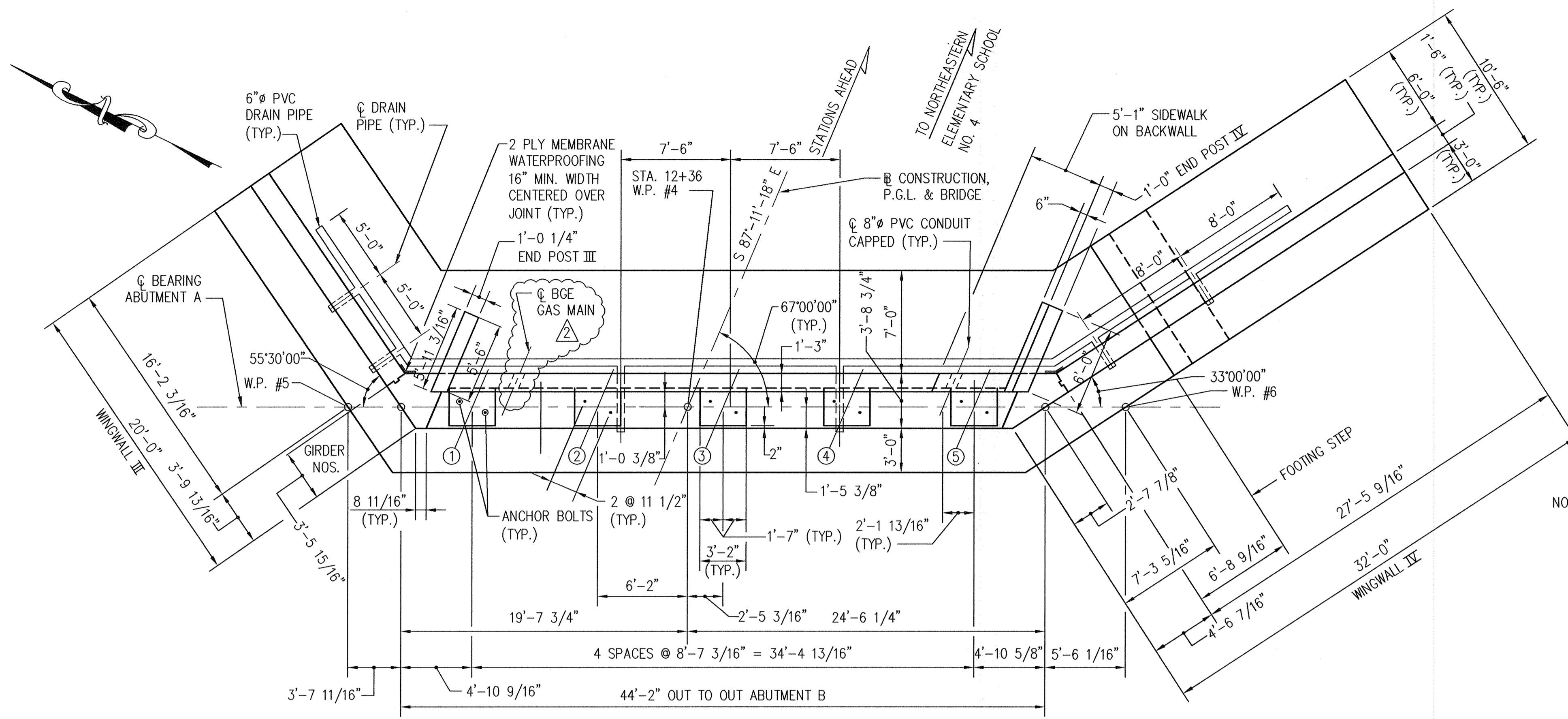
**ABUTMENT A**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

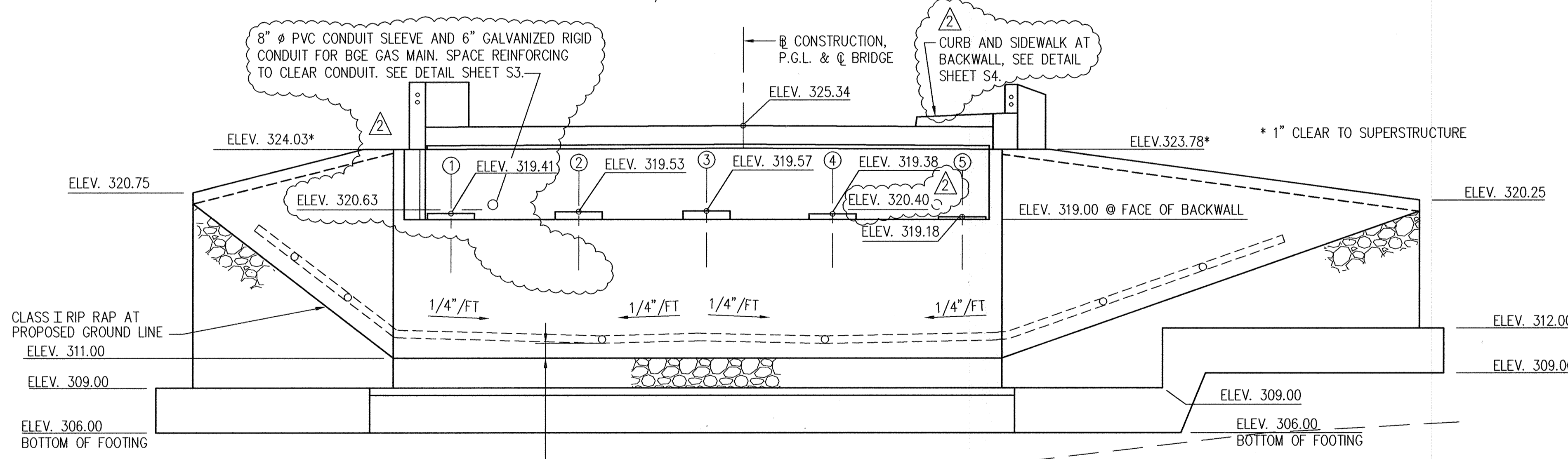
TAX MAP No: 37 PARCEL No: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: 2 JANUARY 2002  
 BID AND CONSTRUCTION 14 JANUARY 2002  
 SHEET 33 OF 56



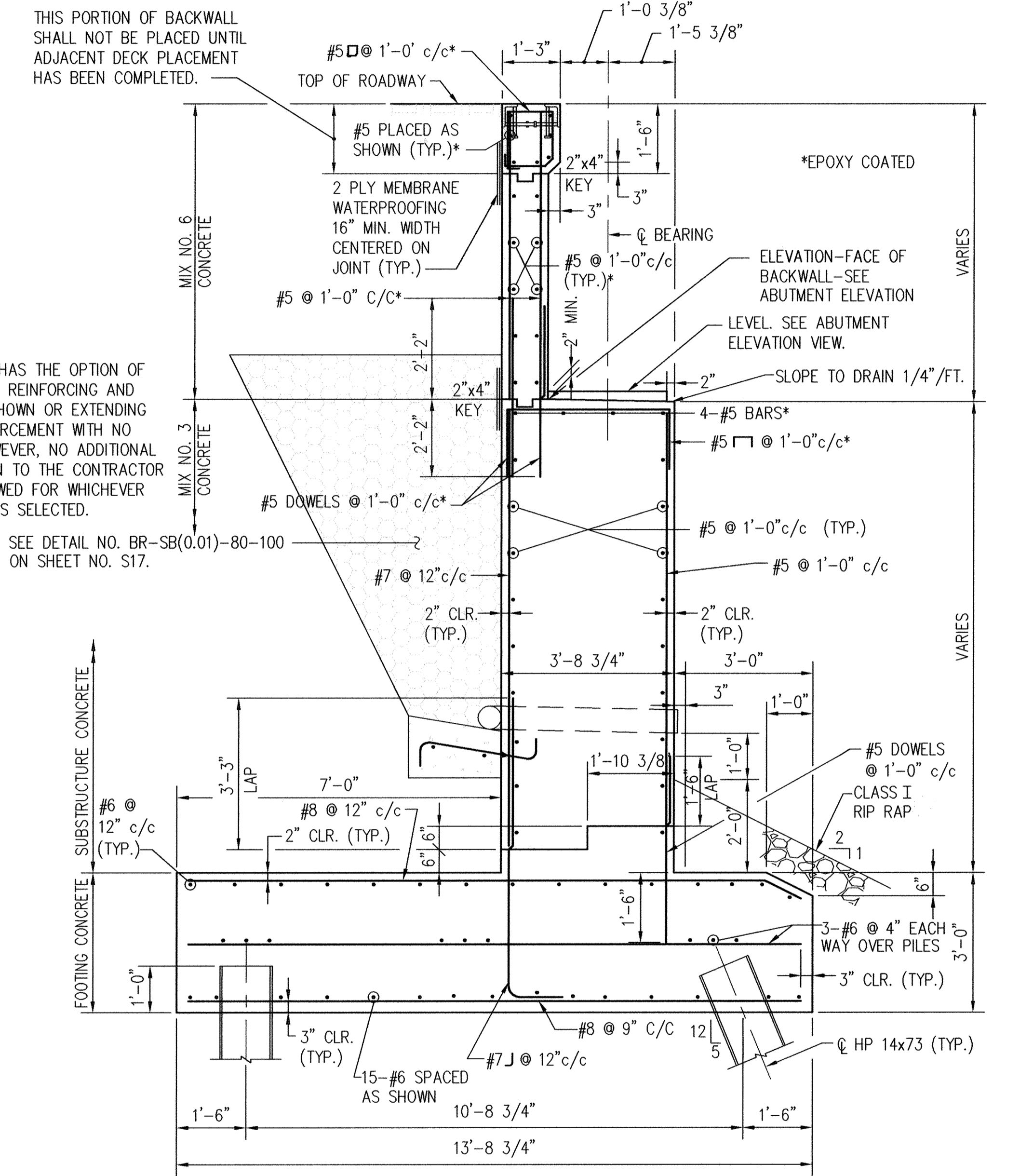


**PLAN**  
SCALE: 3/16" = 1'-0"



**ELEVATION**  
SCALE: 3/16" = 1'-0"

NOTE: FOR DETAILS OF BACKWALL NOT SHOWN SEE DETAIL BR-SS(7.02)-79-64 ON SHEET NO. S21.



**TYPICAL ABUTMENT SECTION**  
SCALE: 1/2" = 1'-0"

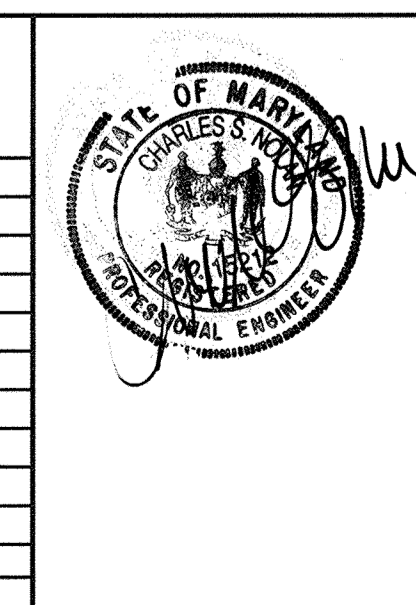
NOTE: CONTRACTOR HAS THE OPTION OF LAPPING STEM REINFORCING AND DOWELS AS SHOWN OR EXTENDING DOWEL REINFORCEMENT WITH NO SPLICING. HOWEVER, NO ADDITIONAL COMPENSATION TO THE CONTRACTOR WILL BE ALLOWED FOR WHICHEVER ALTERNATIVE IS SELECTED.

SEE DETAIL NO. BR-SB(0.01)-80-100 ON SHEET NO. S17.

- NOTES:
1. TYPE III FENCING ON WING WALLS NOT SHOWN. FOR DETAILS SEE SHEET NOS. S9 AND S19.
  2. PILING NOT SHOWN ON ELEVATION. FOR DETAILS SEE SHEET NO. S5.
  3. FOR DETAILS OF WING WALL SECTION, SEE SHEET NO. S9.
  4. FOR DETAILS OF END POSTS SEE SHEET NOS. S10 AND S11.
  5. TROUGH DETAIL LAYOUT NOT SHOWN. FOR DETAILS SEE DETAIL BR-SS(7.17)-95-313 ON SHEET NOS. S21 AND S22.

**NOLAN Associates, Inc.**  
Engineers - Civil/Structural/Inspections  
4785 Dorsey Hall Drive  
Suite 124  
Ellicott City, Maryland 21042  
Phone: (410) 995-3851 Fax: (410) 995-1363

DATE	DESCRIPTION	REVISION BLOCK
2/01/2002	REVISION # 2	
5/24/16	3 Changed Sheet Number	



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul R. [Signature]* 3/8/02  
Director, Department of Planning and Zoning Date

*Cindy [Signature]* 3/2/02  
Chief, Division of Land Development Date

*[Signature]* 2/5/02  
Chief, Development Engineering Division Date

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young

Address Chart	
Parcel Number	Street Address
670	8125 Old Stockbridge Drive

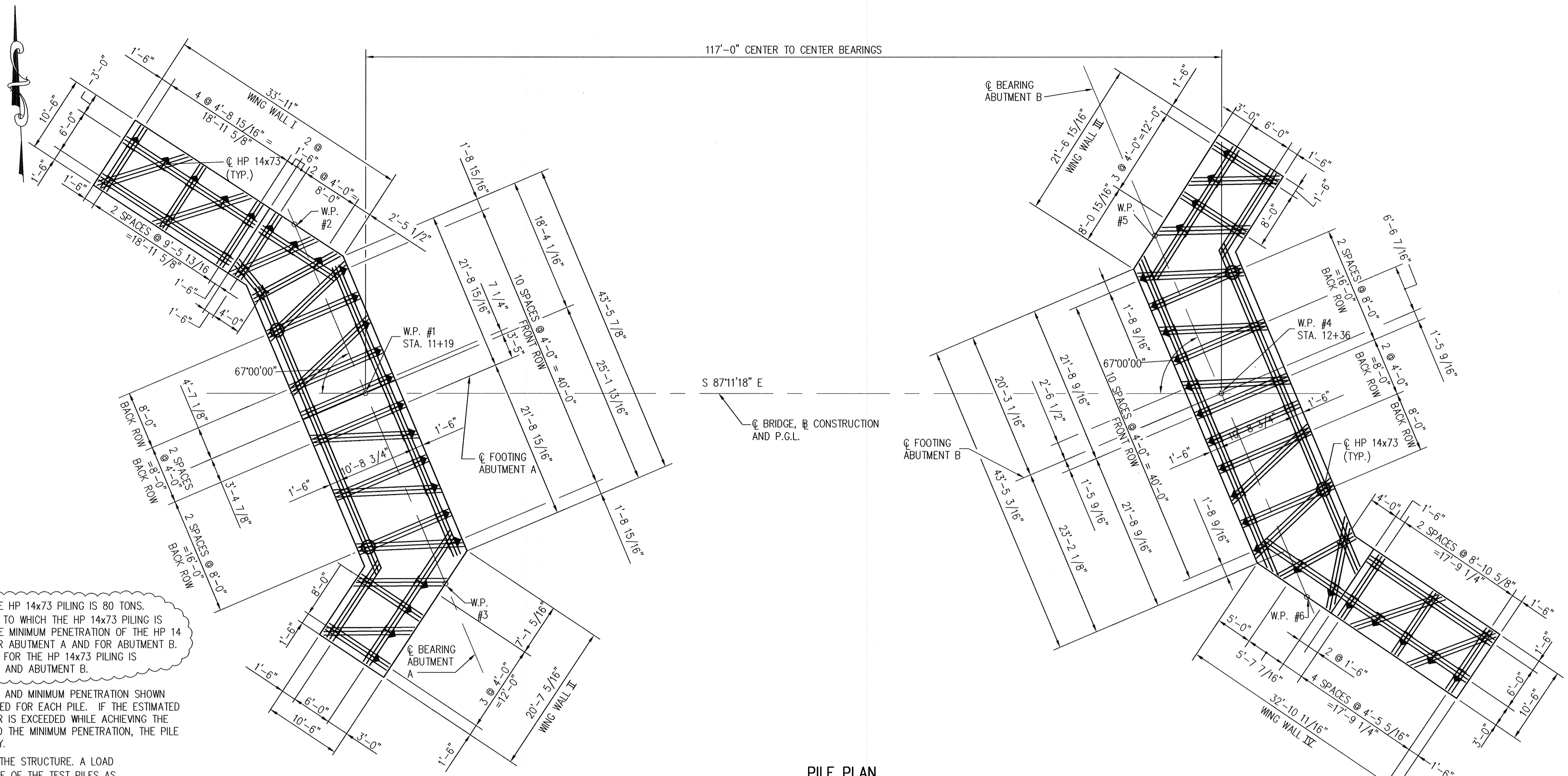
PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		
DEED REF. 2387/562	BLOCK NO. 8,9 ZONE R-SC TAX/ZONE 37 ELEC. DIST. First CENSUS TR. 6011	
WATER CODE D 05	SEWER CODE 2650000	

**ABUTMENT B**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No: 37 PARCEL No: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 2 JANUARY 2002  
BID AND CONSTRUCTION 14 JANUARY 2002  
SHEET 34 OF 56





117'-0" CENTER TO CENTER BEARINGS

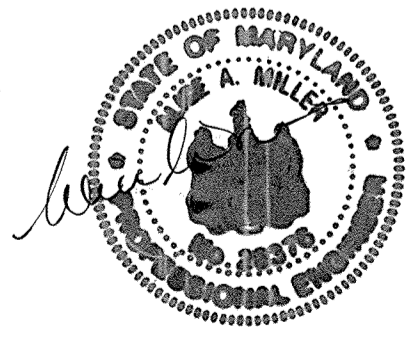
S 87°11'18" E  
 BRIDGE, CONSTRUCTION AND P.G.L.

**PILE PLAN**  
 SCALE: 1/8" = 1'-0"

- NOTES:**
1. THE DESIGN BEARING VALUE OF THE HP 14x73 PILING IS 80 TONS. THE MINIMUM SAFE BEARING VALUE TO WHICH THE HP 14x73 PILING IS TO BE DRIVEN TO IS 96 TONS. THE MINIMUM PENETRATION OF THE HP 14 x73 PILING IS ELEVATION 280.0 FOR ABUTMENT A AND FOR ABUTMENT B. THE ESTIMATED PILE TIP ELEVATION FOR THE HP 14x73 PILING IS ELEVATION 278.0 FOR ABUTMENT A AND ABUTMENT B.
  2. THE MINIMUM SAFE BEARING VALUE AND MINIMUM PENETRATION SHOWN ON THESE PLANS MUST BE ACHIEVED FOR EACH PILE. IF THE ESTIMATED TIP ELEVATION IS NOT REACHED OR IS EXCEEDED WHILE ACHIEVING THE MINIMUM SAFE BEARING VALUE AND THE MINIMUM PENETRATION, THE PILE WILL BE CONSIDERED SATISFACTORY.
  3. THERE ARE FOUR TEST PILES FOR THE STRUCTURE. A LOAD TEST SHALL BE PERFORMED ON ONE OF THE TEST PILES AS DESIGNATED BY THE GEOTECHNICAL ENGINEER.
  4. ALL PILES SHALL HAVE TOOTHED PILE POINTS. FOR DETAILS SEE DETAIL NO. BR-FD(0.09)-79-86 ON SHEET NO. S17.
  5. ALL REINFORCING SHOWN IS 3-#6 @ 4" c/c SPACED EACH WAY OVER PILES.
  6. SHOP PLAN SHALL SHOW HOW REINFORCING IS TO BE TIED AS WELL AS HOW THEY WILL BE HELD IN PLACE ABOVE PILING WHILE POUR IS BEING MADE.
  7. FOR ADDITIONAL DETAILS OF FOOTINGS, AND ABUTMENT DETAILS, SHEETS S6 AND S7. SEE GEOMETRIC LAYOUT, SHEET NO. S2.

- LEGEND**
- HP 14 x 73 PLUMB PILE
  - HP 14 x 73 PILE BATTERED 5" HORIZONTAL TO 12" VERTICAL IN DIRECTION SHOWN
  - TEST PILE-SEE NOTE 3.

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 28376, Expiration Date: 1-1-21  
 For Revision 3 only 5-29-19



SUBSTRUCTURE UNIT	DESIGN DATA		ACTUAL FIELD DATA	
	MINIMUM TIP ELEVATION	ESTIMATED TIP ELEVATION	MINIMUM TIP ELEVATION	AVERAGE ACTUAL MAXIMUM TIP ELEVATION
ABUTMENT A	280.0	278.0		
ABUTMENT B	280.0	278.0		

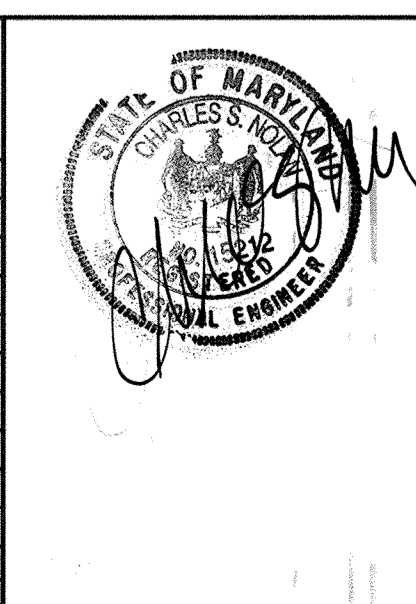
**PILE DRIVING INFORMATION**

PILE SIZE AND TYPE : \_\_\_\_\_  
 ACTUAL BEARING OBTAINED : \_\_\_\_\_  
 HAMMER TYPE : \_\_\_\_\_  
 AVERAGE ACTUAL BLOWS/FT. : \_\_\_\_\_  
 PILE HAMMER ENERGY : \_\_\_\_\_  
 SPECIAL DRIVING CONDITIONS AND COMMENTS : \_\_\_\_\_

S5 OF S25

**NOLAN Associates, Inc.**  
 Engineers - Civil/Structural/Inspections  
 4785 Dorsey Hall Drive  
 Suite 124  
 Ellicott City, Maryland 21042  
 Phone: (410) 995-3651 Fax: (410) 995-1363

DATE	DESCRIPTION	REVISION BLOCK
2/01/2002	REVISION # 2	
5/24/19	3 Changed Sheet Number	



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul R. Smith*  
 Director, Department of Planning and Zoning  
 Date: 3/8/02

*Charles A. Williams*  
 Chief, Division of Land Development  
 Date: 3/2/02

*William J. ...*  
 Chief, Development Engineering Division  
 Date: 3/5/02

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 108  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young

**Address Chart**

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	0,9	R-5C	37	First	6011

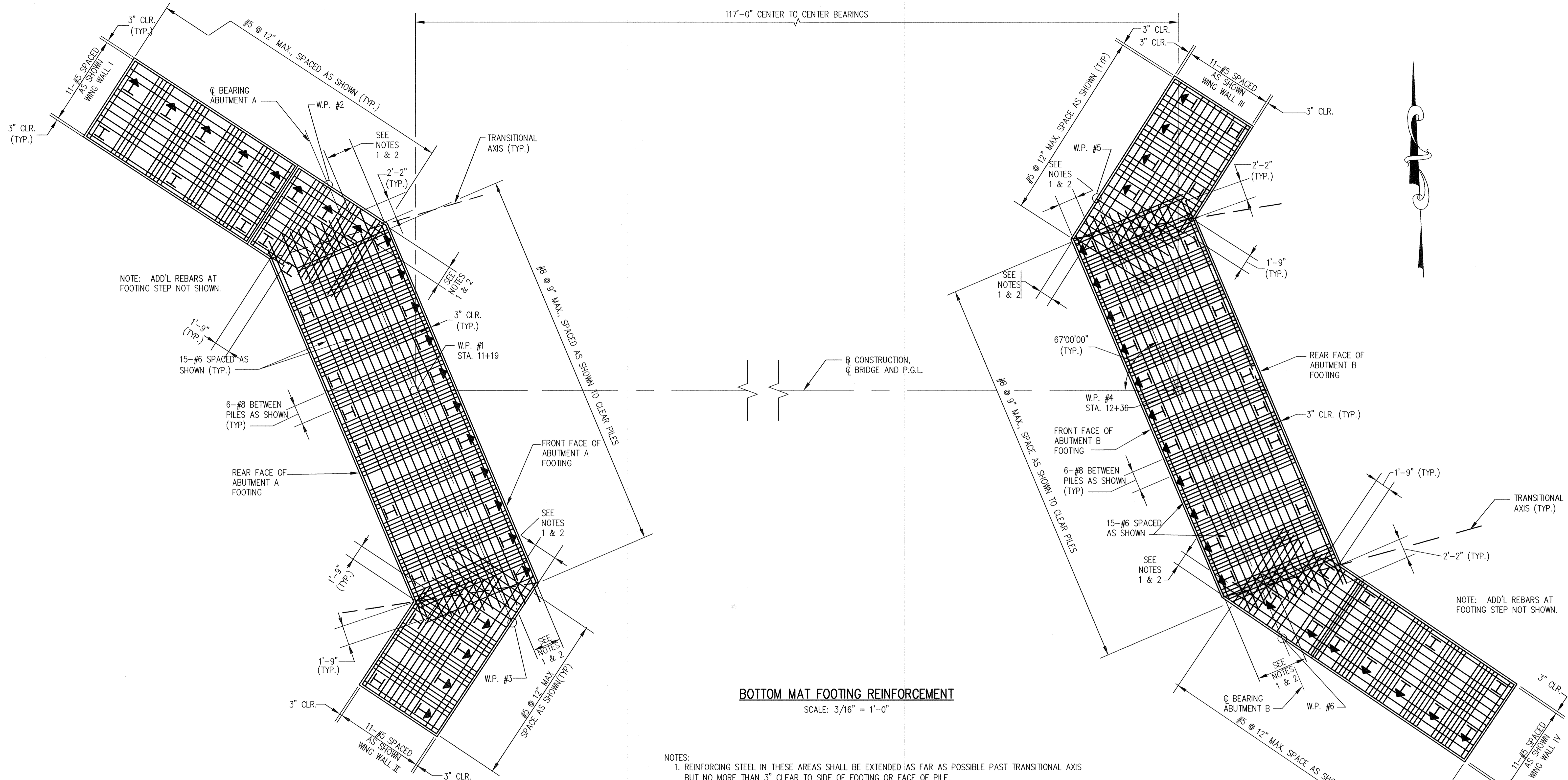
WATER CODE	SEWER CODE
D 05	2650000

**PILE PLAN**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No.: 37 PARCEL No.: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 2 JANUARY 2002  
 BID AND CONSTRUCTION 14 JANUARY 2002  
 SHEET 35 OF 56





**BOTTOM MAT FOOTING REINFORCEMENT**  
SCALE: 3/16" = 1'-0"

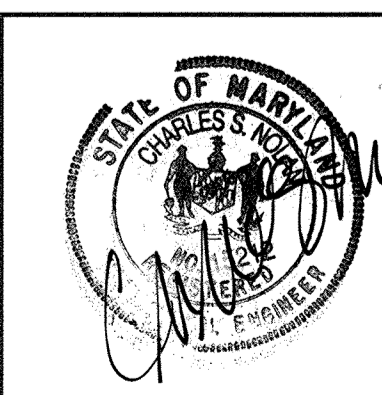
- NOTES:
1. REINFORCING STEEL IN THESE AREAS SHALL BE EXTENDED AS FAR AS POSSIBLE PAST TRANSITIONAL AXIS BUT NO MORE THAN 3" CLEAR TO SIDE OF FOOTING OR FACE OF PILE.
  2. THE CONTRACTOR HAS THE OPTION OF USING LAPPED BARS IN THE TRANSITIONAL AREAS INSTEAD OF PROVIDING UNEQUAL LENGTH BARS PROVIDED THE LAPS ARE IN ACCORDANCE WITH THE LAP CHARTS SHOWN ON SHEET NO. HOWEVER, NO ADDITIONAL COMPENSATION TO THE CONTRACTOR WILL BE ALLOWED FOR WHICHEVER ALTERNATIVE IS USED.
  3. MAIN STEM OF ABUTMENT AND WING WALL STEMS NOT SHOWN FOR CLARITY.
  4. FOR ADDITIONAL DETAILS OF FOOTINGS AND PILES, SEE GEOMETRIC LAYOUT, SHEET NO.2 AND PILE PLAN, SHEET NO. 55.

Professional Certification: I, the undersigned, certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 26376 Expiration Date: 1-1-21

*Handwritten signature*  
For Reuse in Only  
5-29-19

**NOLAN Associates, Inc.**  
Engineers - Civil/Structural/Inspections  
4785 Dorsey Hall Drive  
Suite 124  
Ellicott City, Maryland 21042  
Phone: (410) 995-3851 Fax: (410) 995-1363

DATE	DESCRIPTION	REVISION BLOCK
5-29-19	Revision 1	Changed Sheet Number



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul R. Roth*  
Director, Department of Planning and Zoning  
Date: 3/8/02

*Candy Krantz*  
Chief, Division of Land Development  
Date: 2/7/02

*Chris DeCunzio*  
Chief, Development Engineering Division  
Date: 2/5/02

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young

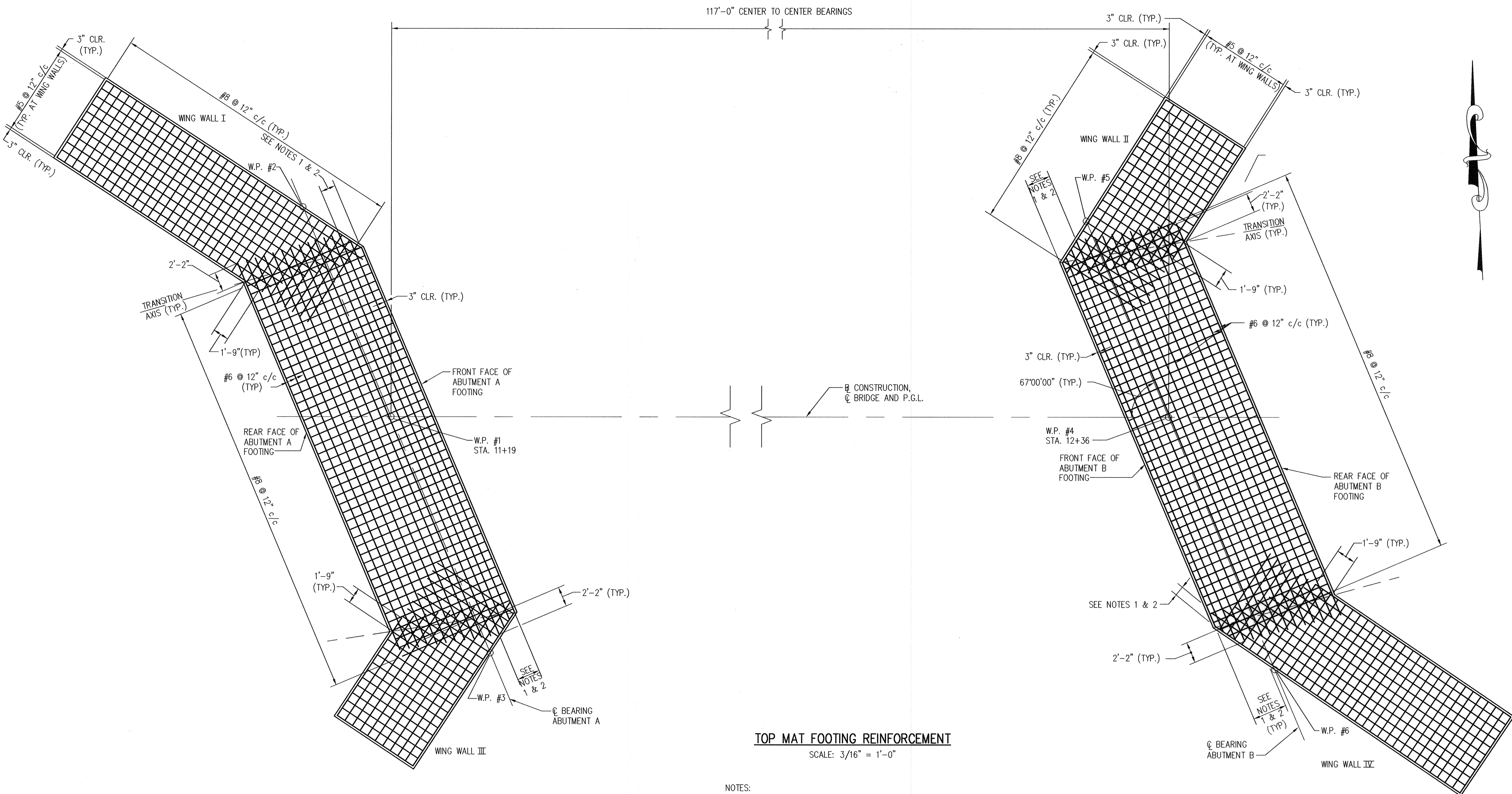
Address Chart					
Parcel Number	Street Address				
670	8125 Old Stockbridge Drive				
PROJECT			SECTION/AREA	LOT NO.	
Northeastern Elementary School No. 4					
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	8,9	R-5C	37	First	6011
WATER CODE			SEWER CODE		
D 05			2650000		

**ABUTMENT DETAILS-I**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No: 37 PARCEL No: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 2 JANUARY 2002  
BID AND CONSTRUCTION 14 JANUARY 2002  
SHEET 36 OF 56





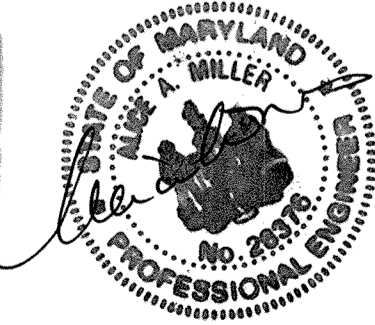
**TOP MAT FOOTING REINFORCEMENT**

SCALE: 3/16" = 1'-0"

**NOTES:**

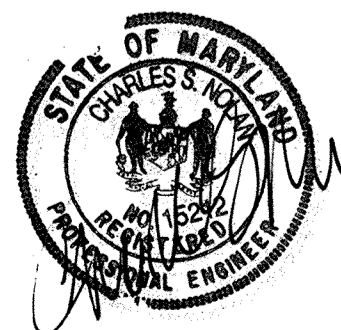
1. THE REINFORCING STEEL IN THESE AREAS SHALL BE EXTENDED AS FAR AS POSSIBLE PAST THE TRANSITION AXIS BUT NO MORE THAN 3" CLEAR TO THE SIDE OF FOOTING.
2. THE CONTRACTOR HAS THE OPTION OF USING LAPPED BARS IN THESE AREAS INSTEAD OF PROVIDING UNEQUAL LENGTH BARS PROVIDED THE LAPS ARE IN ACCORDANCE WITH THE LAP CHARTS SHOWN ON SHEET NOS. S23 AND S24 HOWEVER, NO ADDITIONAL COMPENSATION TO THE CONTRACTOR WILL BE ALLOWED FOR WHICHEVER ALTERNATIVE IS USED.
3. MAIN STEM OF ABUTMENT, WING WALL STEMS AND DOWEL BARS FOR STEM REINFORCING NOT SHOWN FOR CLARITY.
4. FOR ADDITIONAL DETAILS OF FOOTINGS, SEE GEOMETRIC LAYOUT, SHEET NO. S2.

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 28576 Expiration Date: 1-1-21  
 For Revision Only 5-29-19



**NOLAN Associates, Inc.**  
 Engineers - Civil/Structural/Inspections  
 4785 Dorsey Hall Drive  
 Suite 124  
 Ellicott City, Maryland 21042  
 Phone: (410) 995-3851 Fax: (410) 995-1383

DATE	DESCRIPTION	REVISION BLOCK
5-29-18	Revision 1	Changed Sheet Number



APPROVED: DEPARTMENT OF PLANNING AND ZONING

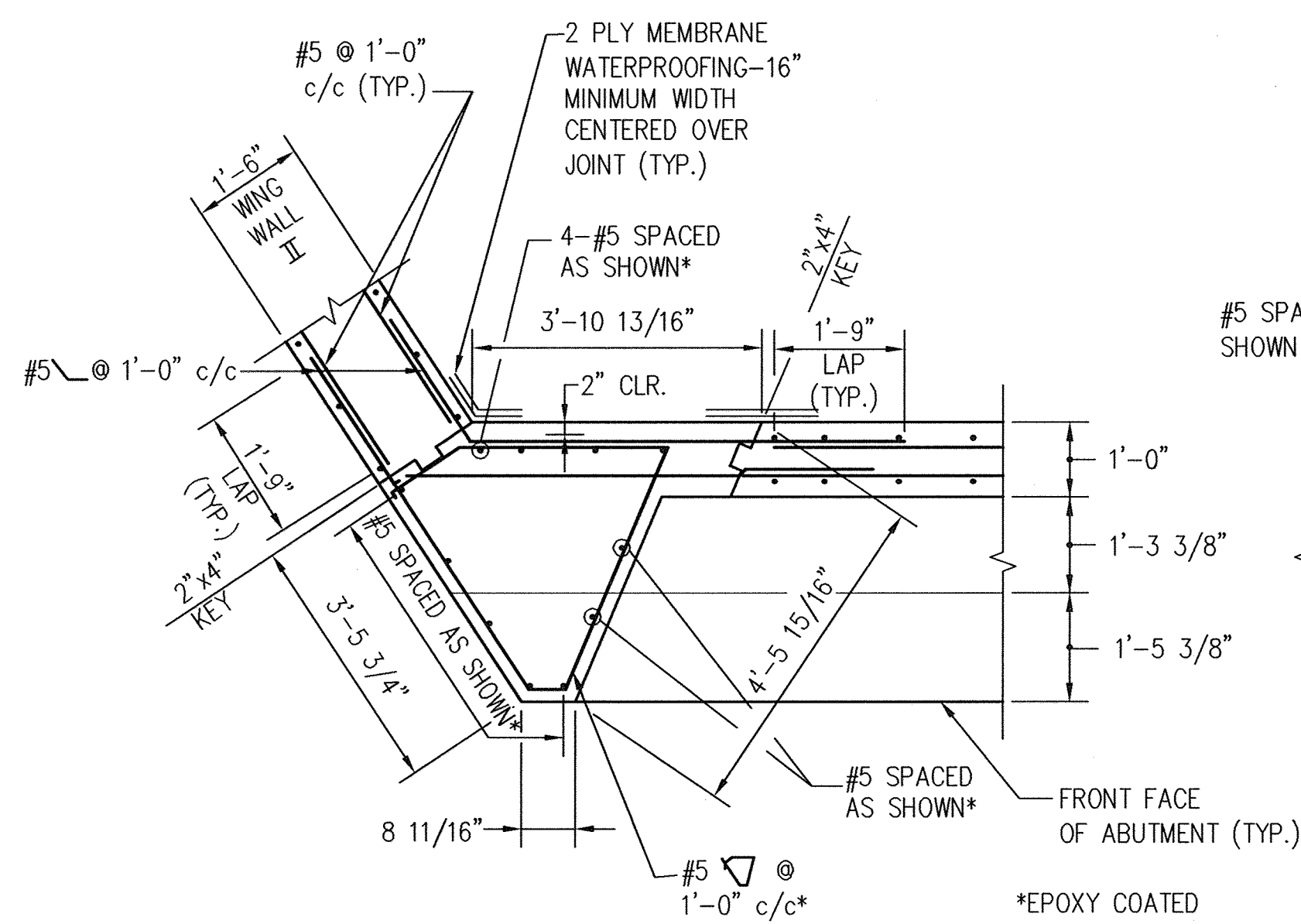
*Paul S. Rantz* 3/8/02  
 Director, Department of Planning and Zoning  
*Cindy Heath* 2/1/02  
 Chief, Division of Land Development  
*Mark DeMunn* 2/5/02  
 Chief, Development Engineering Division

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 108  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young

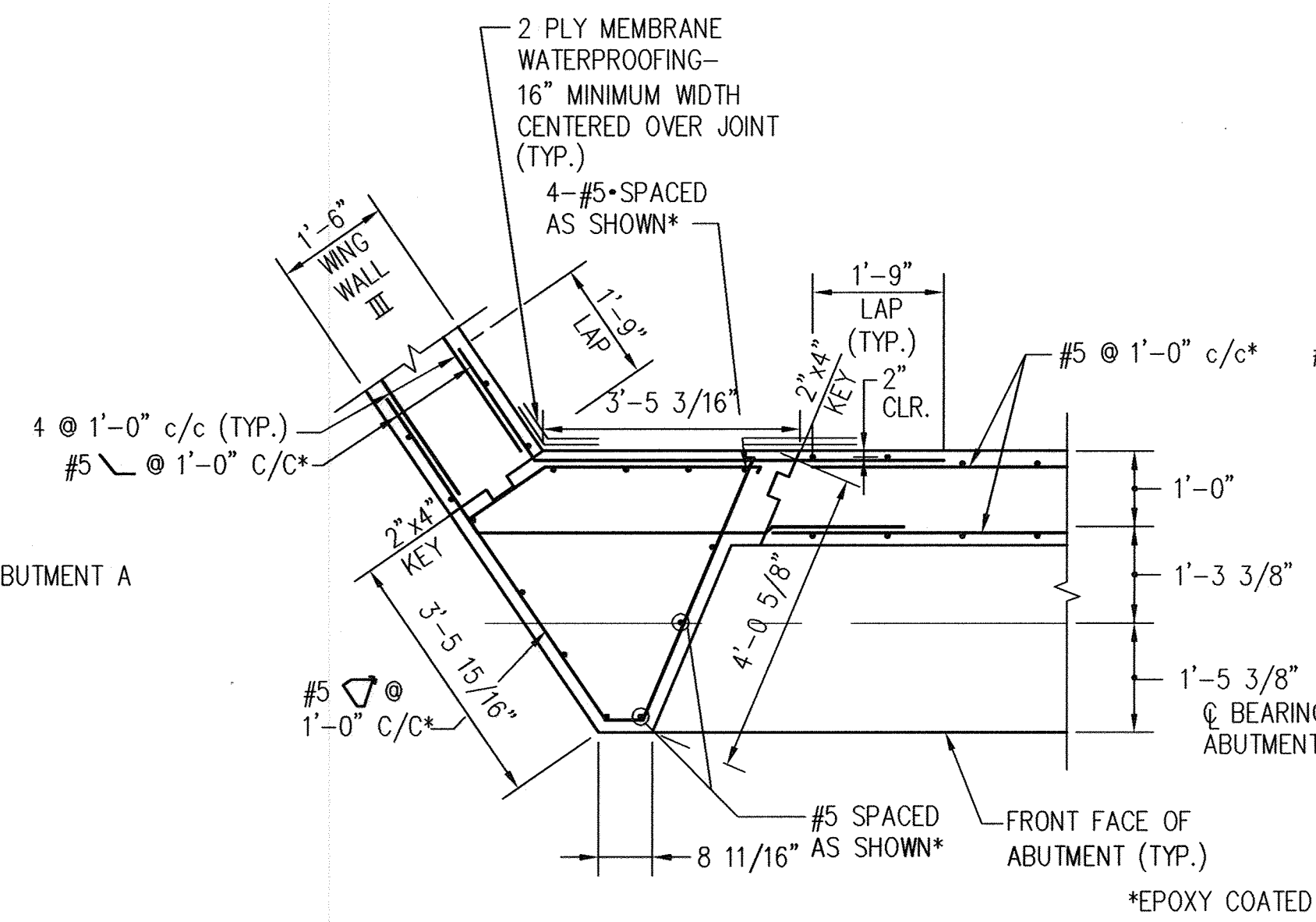
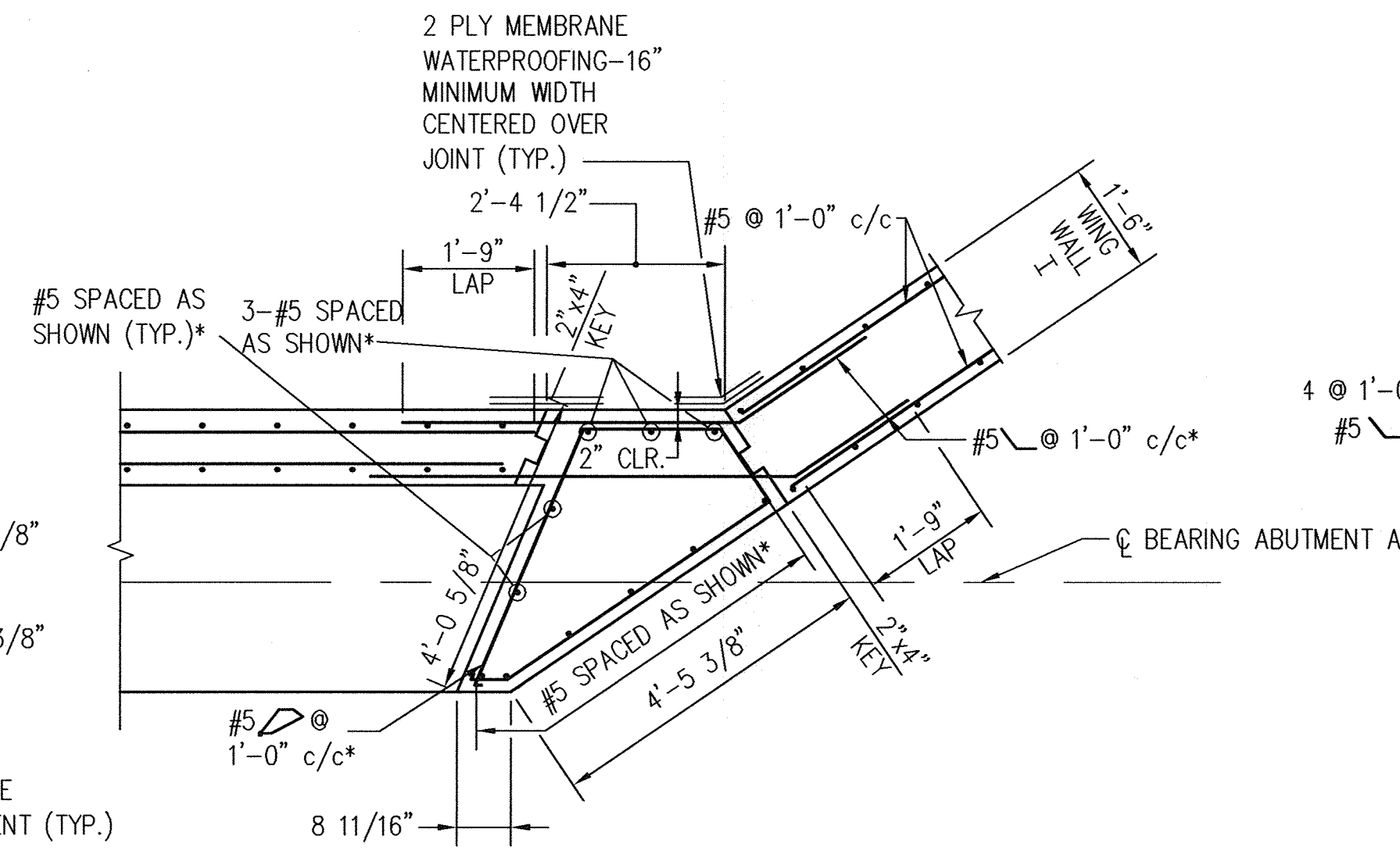
Address Chart					
Parcel Number	Street Address				
670	8125 Old Stockbridge Drive				
PROJECT	SECTION/AREA	LOT NO.			
Northeastern Elementary School No. 4					
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	8,9	R-5C	37	First	6011
WATER CODE	SEWER CODE				
D 05	2650000				

**ABUTMENT DETAILS-II**  
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**  
 TAX MAP No.: 37 PARCEL No.: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 2 JANUARY 2002  
 BID AND CONSTRUCTION 14 JANUARY 2002  
 SHEET 37 OF 56



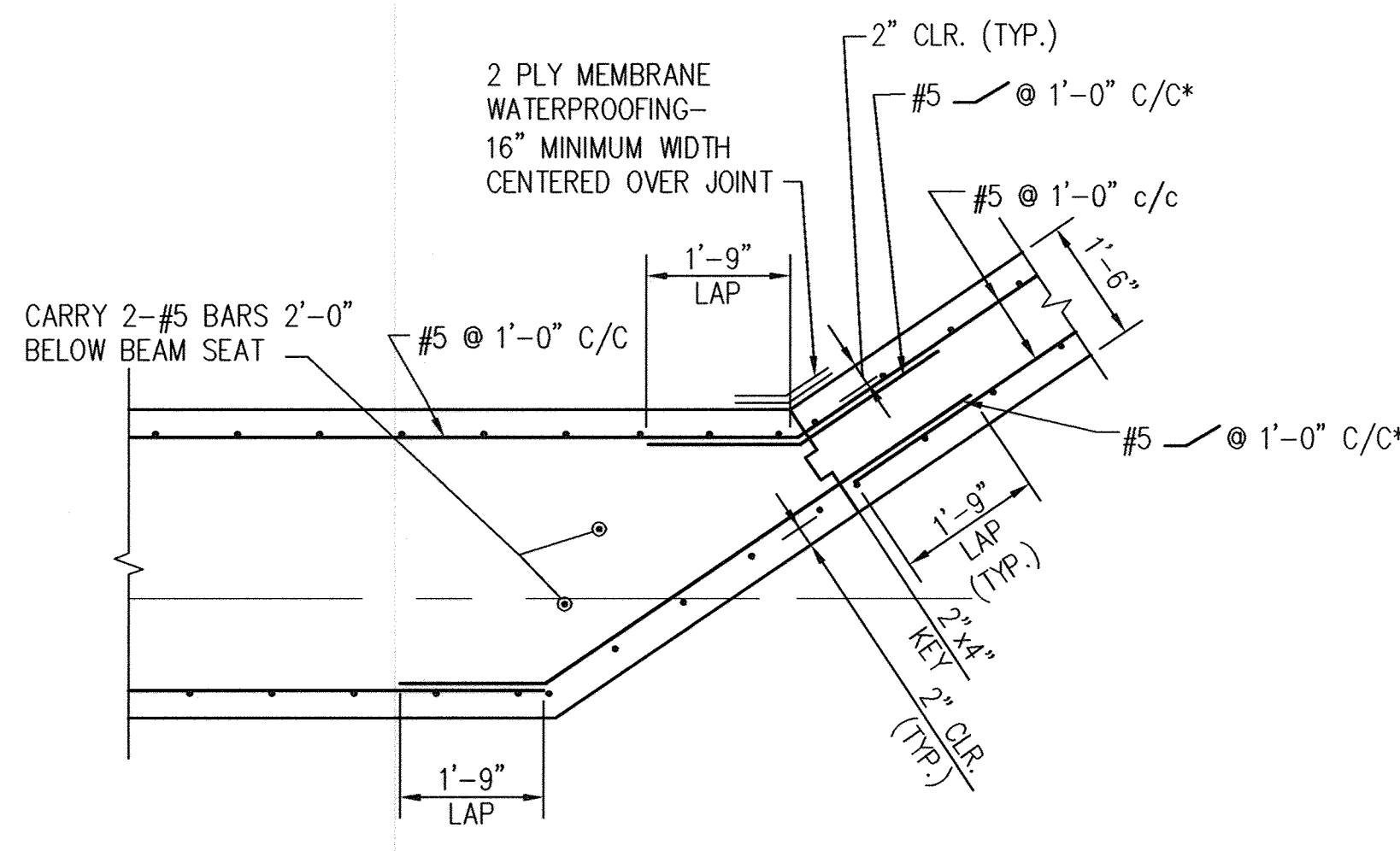
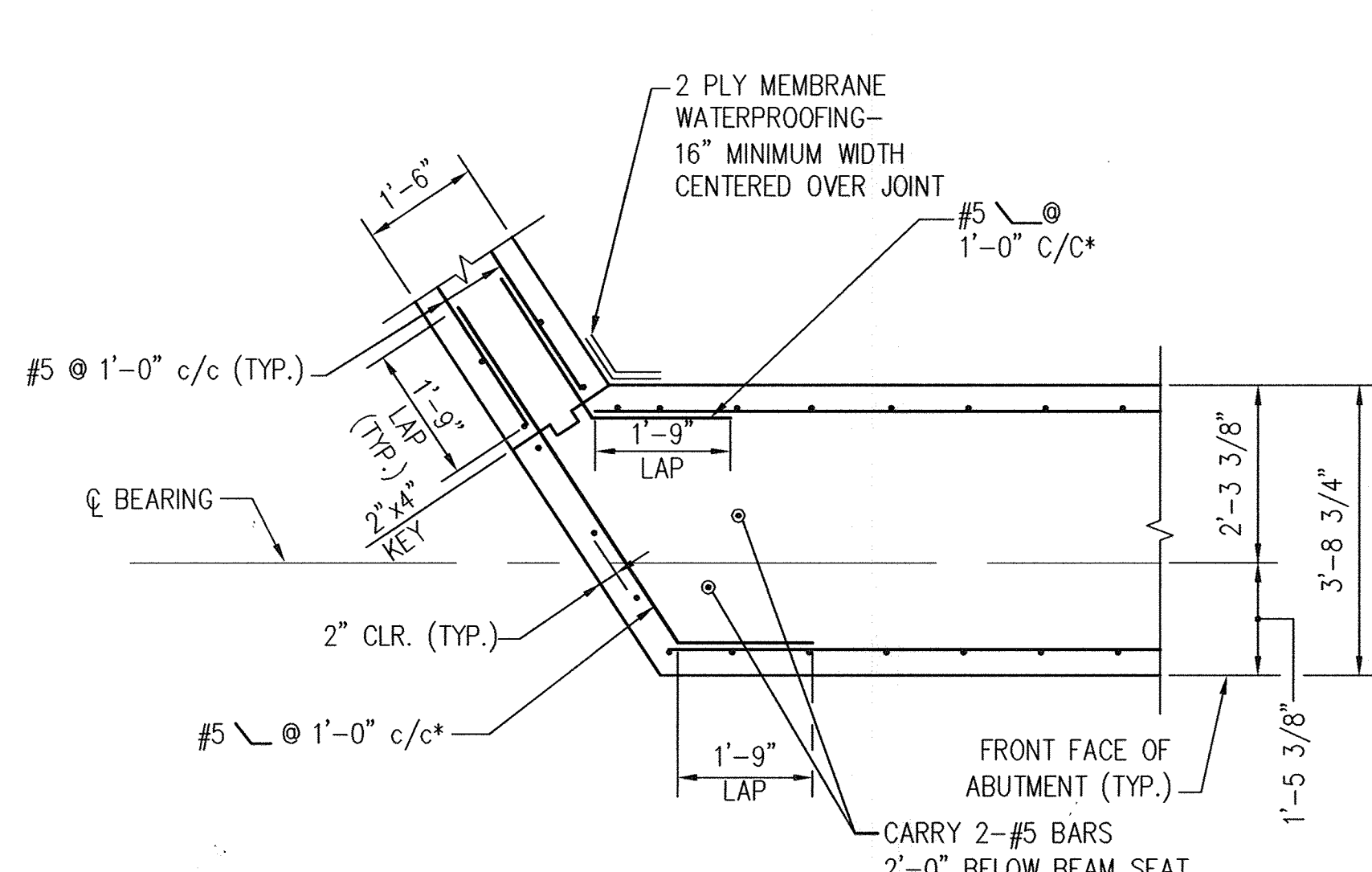


SECTION ABOVE BEAM SEAT-ABUTMENT A



SECTION ABOVE BEAM SEAT-ABUTMENT B

NOTE:  
 1. FOR DETAILS OF REINFORCING IN BACKWALL AND MAIN STEM ABUTMENT, SEE SHEET NO. S4.  
 2. FOR DETAILS OF REINFORCING IN WING WALLS SEE SHEET NO. S9.



SECTION BELOW BEAM SEAT ABUTMENTS A & B

ABUTMENT CORNER REINFORCEMENT DETAILS

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

\*CONTRACTOR HAS THE OPTION OF EXTENDING REINFORCING IN WING WALL AND ABUTMENT, PLACING LAP AND ELIMINATING THIS BAR (TYP.). HOWEVER, NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR WHICHEVER ALTERNATIVE IS ALLOWED.

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 28376 Expiration Date: 1-1-21

**NOLAN Associates, Inc.**  
 Engineers - Civil/Structural/Inspections  
 4785 Dorsey Hall Drive  
 Suite 124  
 Ellicott City, Maryland 21042  
 Phone: (410) 995-3651 Fax: (410) 995-1363

DATE	DESCRIPTION	REVISION BLOCK
5-29-19	Revision 1 Changed Sheet No.	

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning: *Leah K. ...* 3/8/02  
 Chief, Division of Land Development: *Crinda Handley* 2/6/02  
 Chief, Development Engineering Division: *Chris Pennington* 2/5/02

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 100  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young

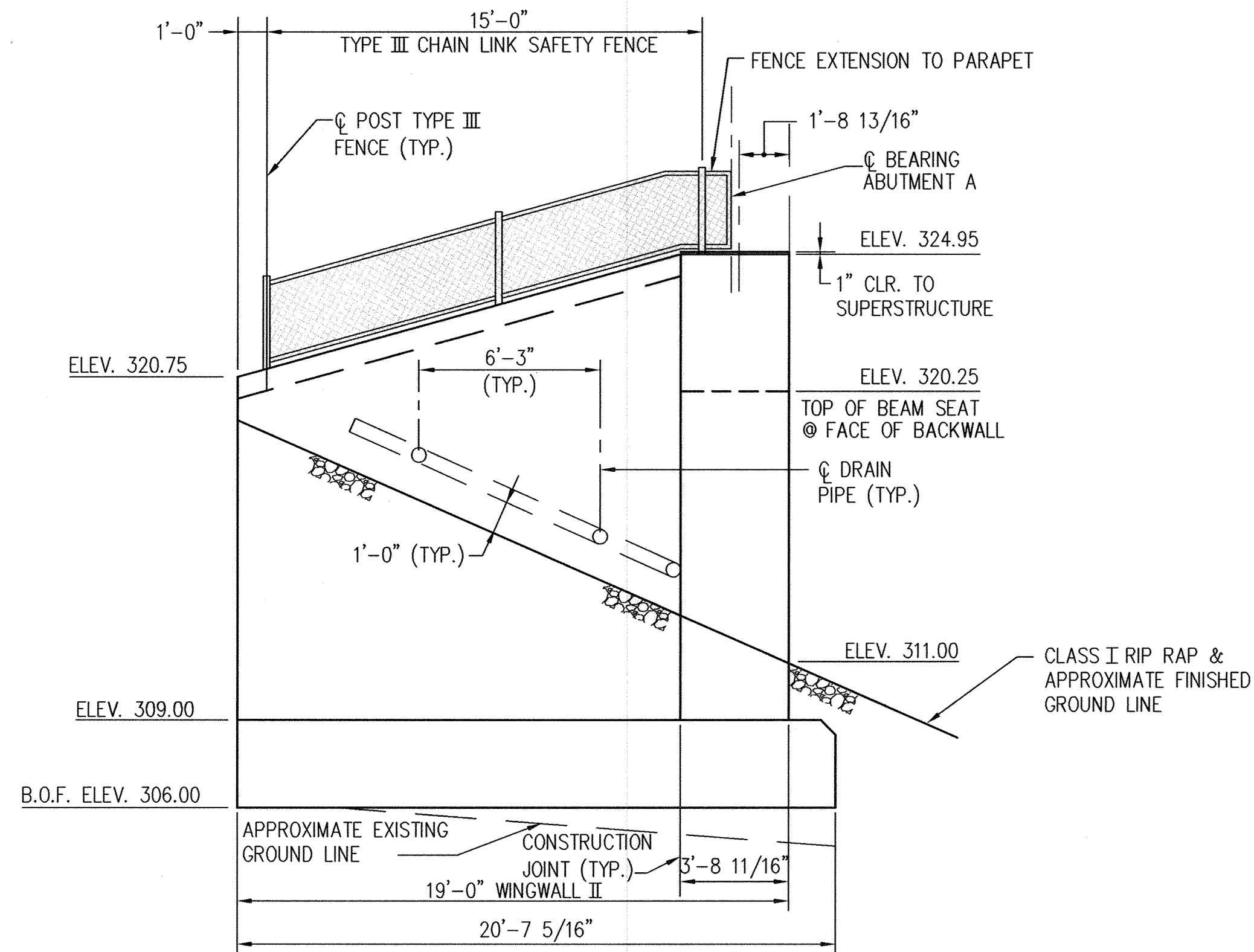
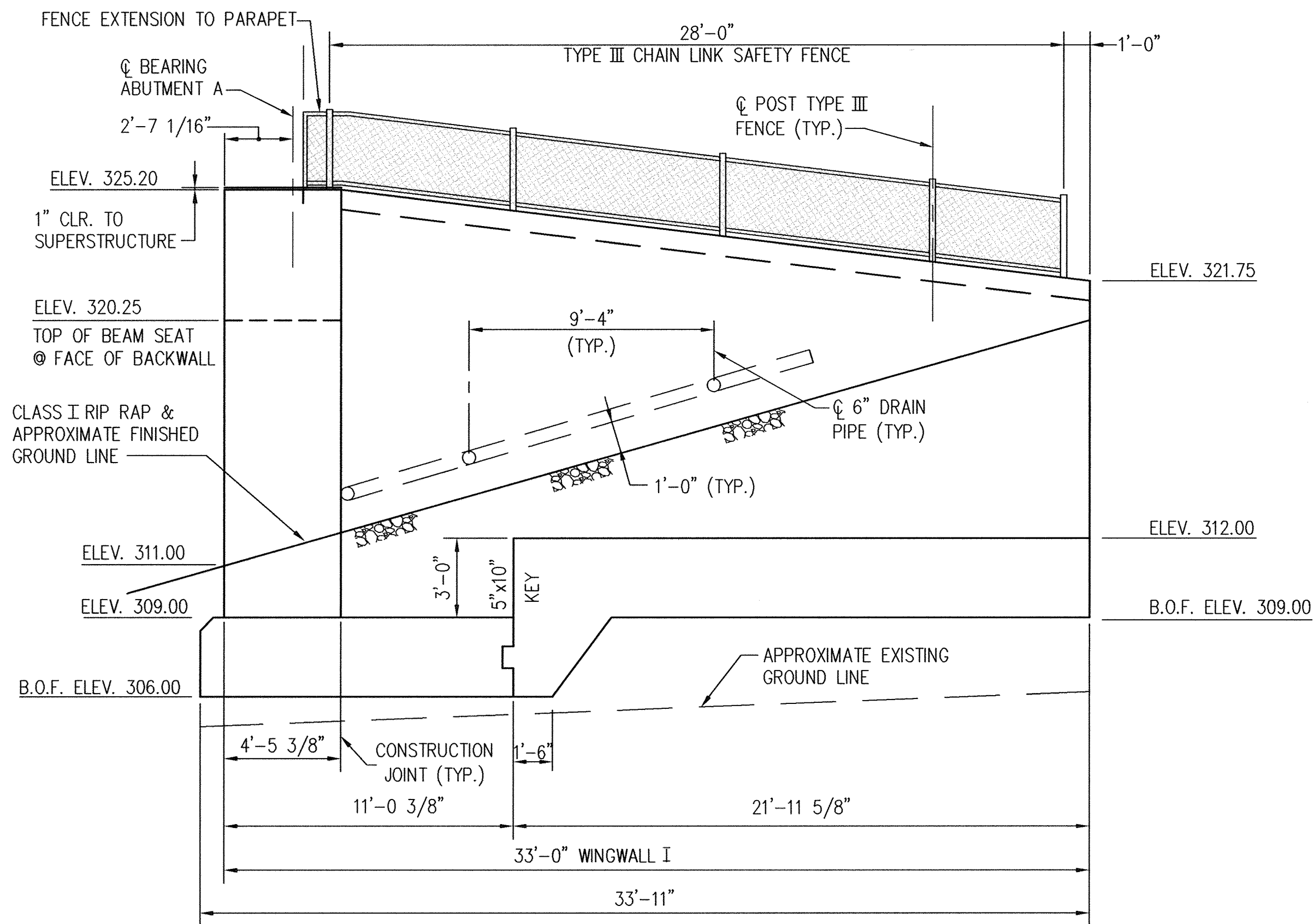
Address Chart					
Parcel Number	Street Address				
670	8125 Old Stockbridge Drive				
PROJECT	SECTION/AREA	LOT NO.			
Northeastern Elementary School No. 4					
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	B-9	R-5C	37	First	6011
WATER CODE		SEWER CODE			
D 05		2650000			

ABUTMENT AND WINGWALL CORNER REINFORCEMENT DETAILS

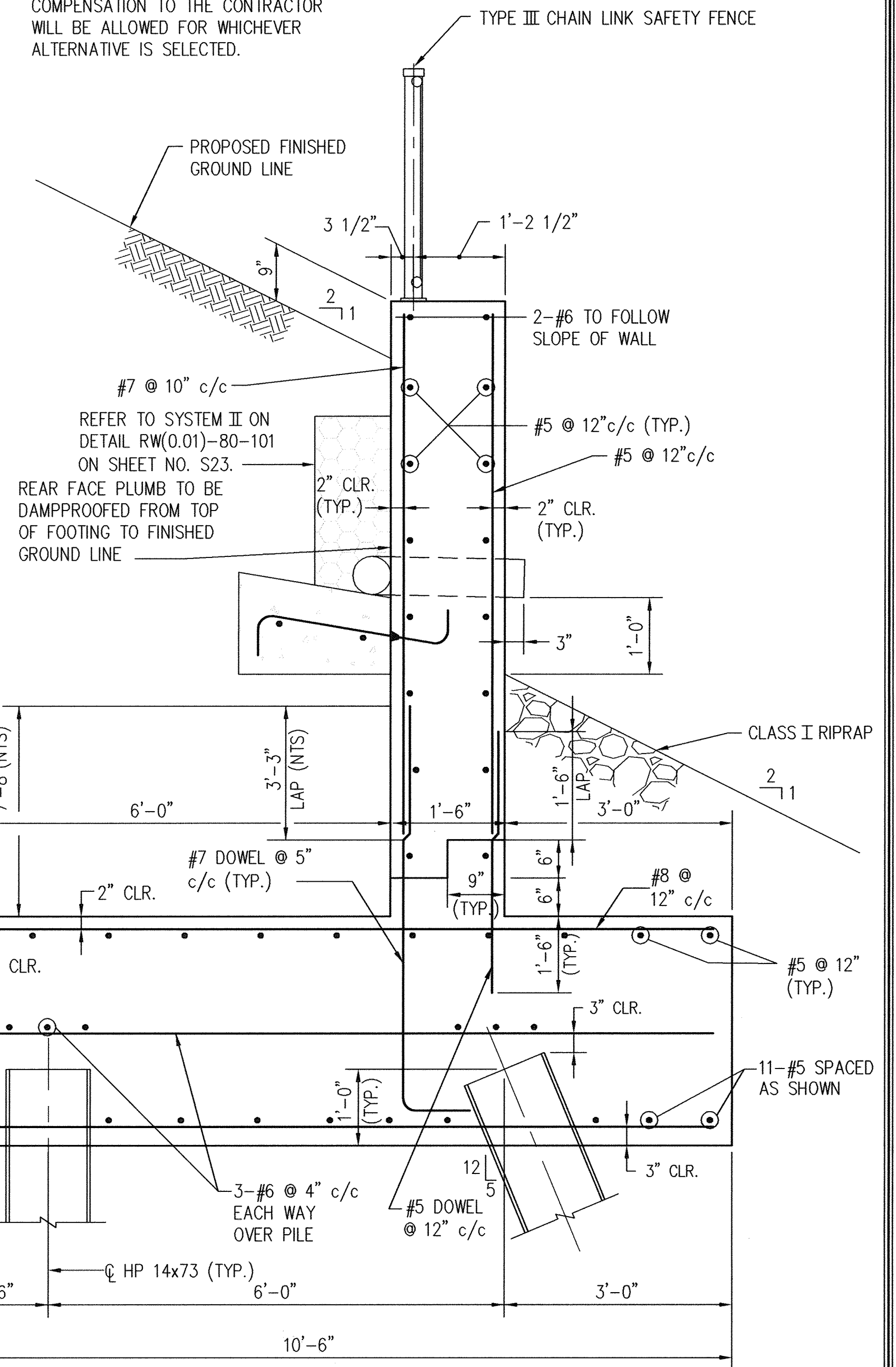
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No.: 37 PARCEL No.: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 2 JANUARY 2002  
 BID AND CONSTRUCTION 14 JANUARY 2002  
 SHEET 38 OF 56





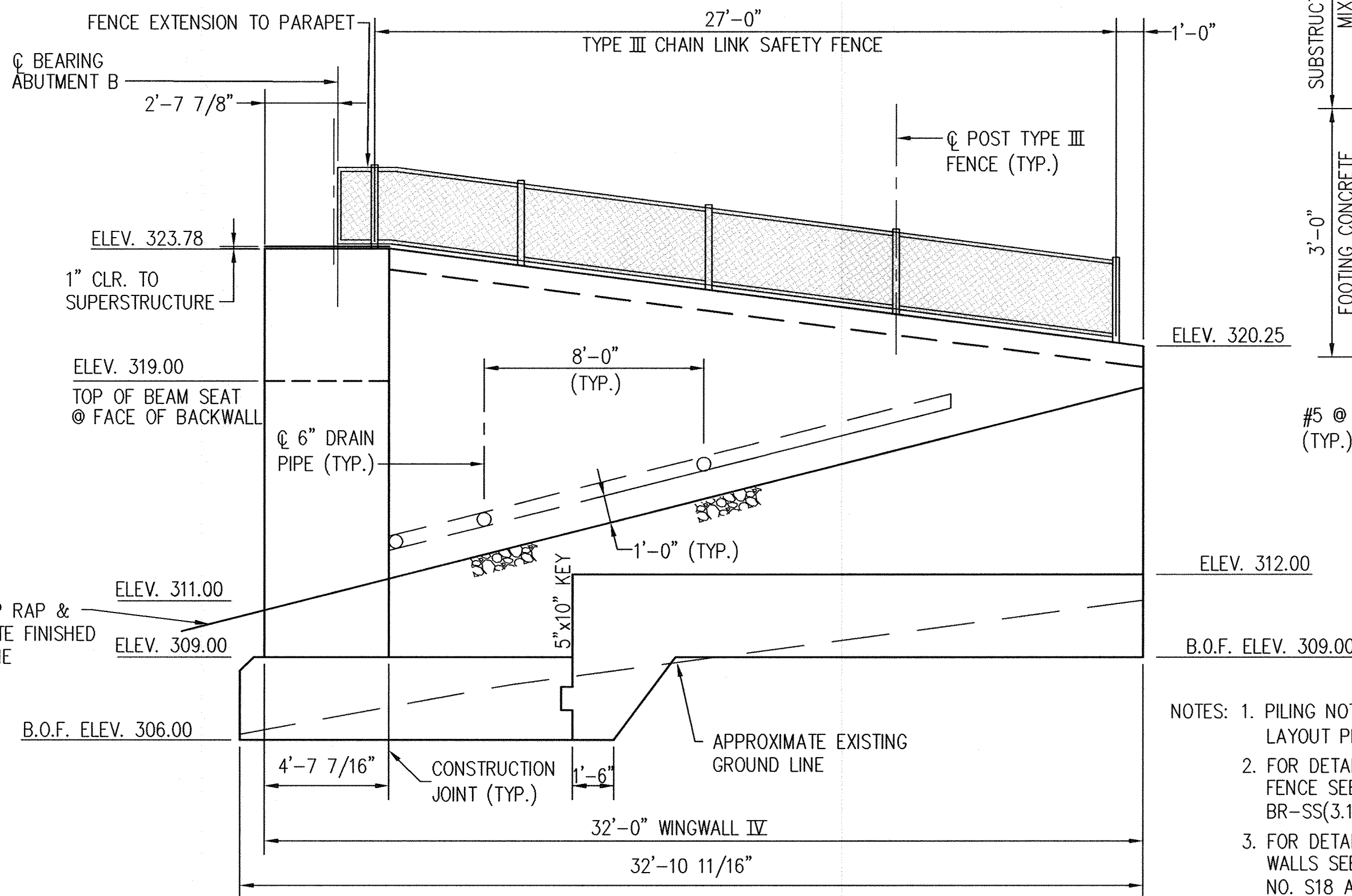
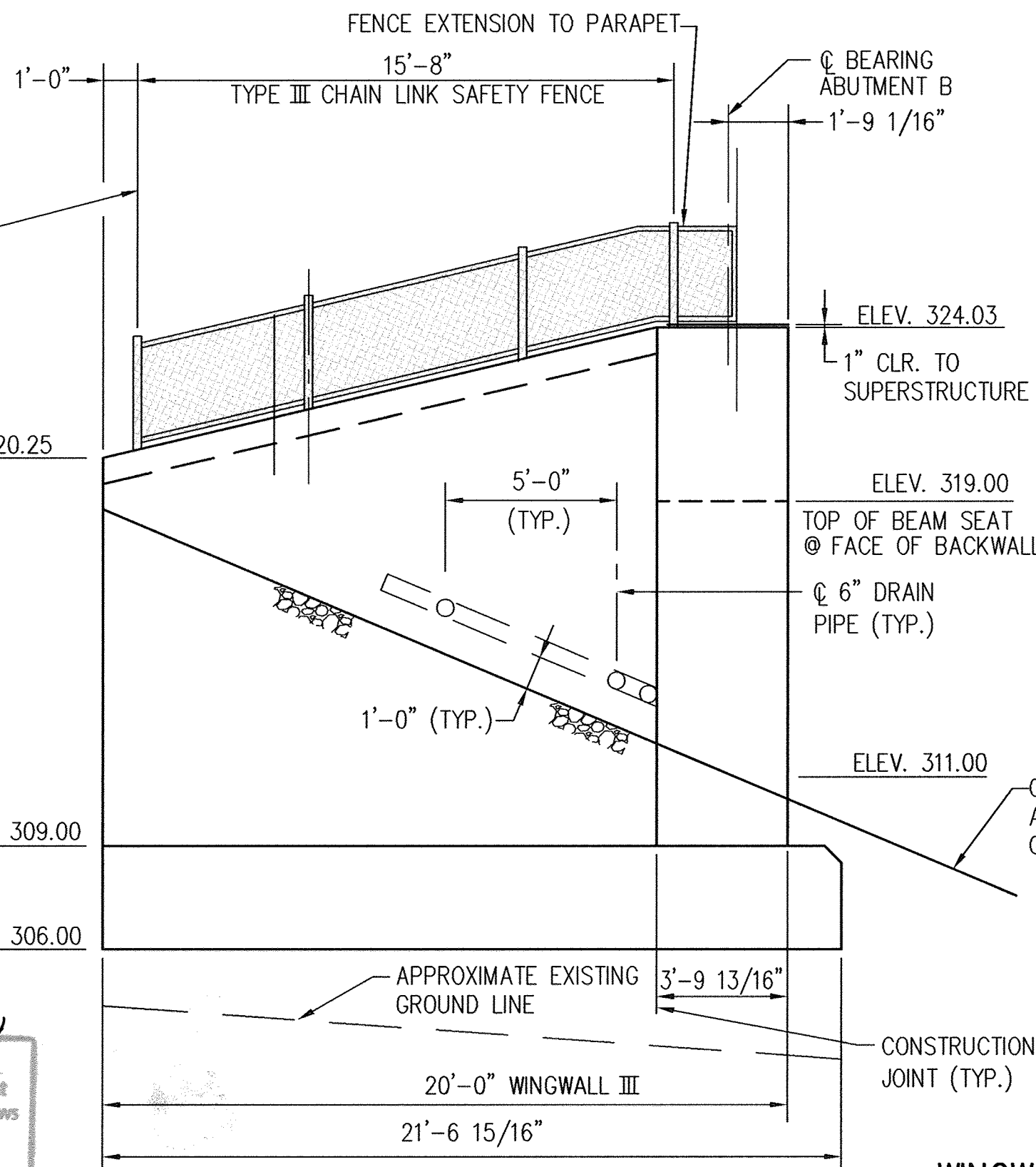
NOTE: CONTRACTOR HAS THE OPTION OF LAPPING STEM REINFORCING AND DOWELS AS SHOWN OR EXTENDING DOWEL REINFORCEMENT WITH NO SPLICING. HOWEVER, NO ADDITIONAL COMPENSATION TO THE CONTRACTOR WILL BE ALLOWED FOR WHICHEVER ALTERNATIVE IS SELECTED.



- NOTES:
1. PILING NOT SHOWN. FOR SPACING SEE PILING LAYOUT PLAN ON SHEET NO. S5.
  2. FOR DETAILS OF TYPE III CHAIN LINK SAFETY FENCE SEE DETAILS BR-SS(3.11)-96-137 AND BR-SS(3.12)-96-318 ON SHEET NO. S19.
  3. FOR DETAILS OF ANTI-CLIMB SHIELDS AT WING WALLS SEE DETAIL BR-SS(3.05)-75-25 ON SHEET NO. S18 AND S19.
  4. FOR DETAILS OF REINFORCING IN STEPPED FOOTING, SEE RW(6.11)-89-201 ON SHEET NO. S23.

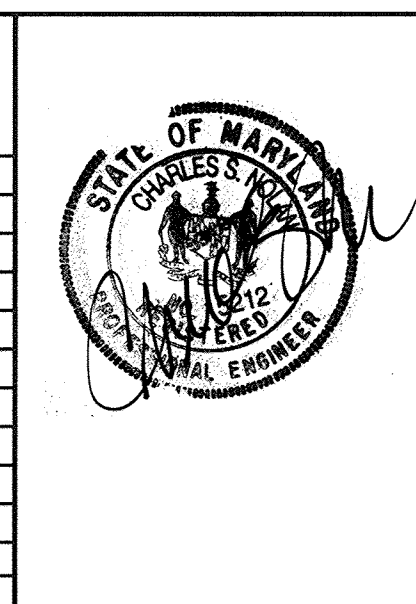
S9 OF S25

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland.  
License No. 28376 Expiration Date: 1-1-21



**NOLAN Associates, Inc.**  
Engineers - Civil/Structural/Inspections  
4785 Dorsey Hall Drive  
Suite 124  
Ellicott City, Maryland 21042  
Phone: (410) 995-3651 Fax: (410) 995-1363

DATE	DESCRIPTION	REVISION
5-29-19	Revision 1	Changed Sheet Number



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul Roth* Director, Department of Planning and Zoning Date: 3/8/02

*Cindy Hamilton* Chief, Division of Land Development Date: 3/1/02

*Mike P... ..* Chief, Development Engineering Division Date: 3/5/02

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 100  
Ellicott City, Maryland 21042  
Attention Cathleen Young

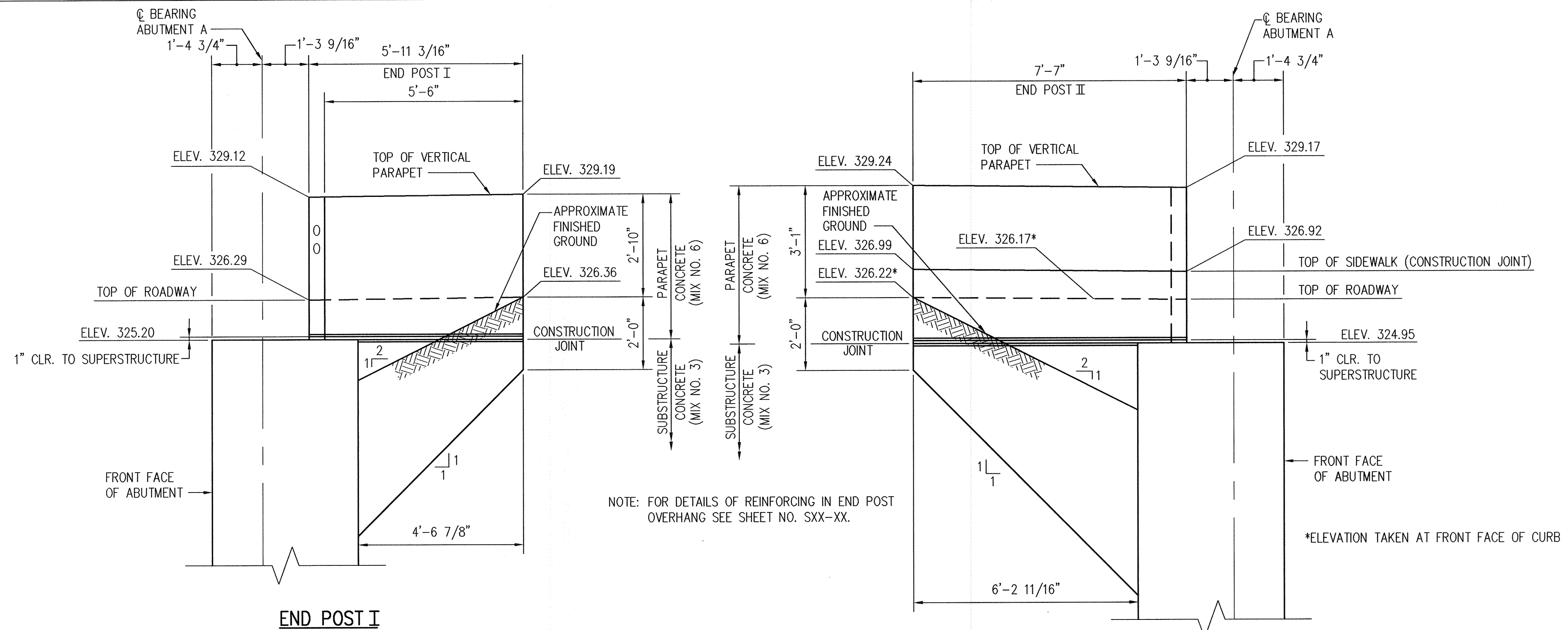
Address Chart					
Parcel Number	Street Address				
670	8125 Old Stockbridge Drive				
PROJECT	SECTION/AREA	LOT NO.			
Northeastern Elementary School No. 4					
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	09	R-5C	37	First	6011
WATER CODE	SEWER CODE				
D 05	2650000				

**WINGWALL DETAILS**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

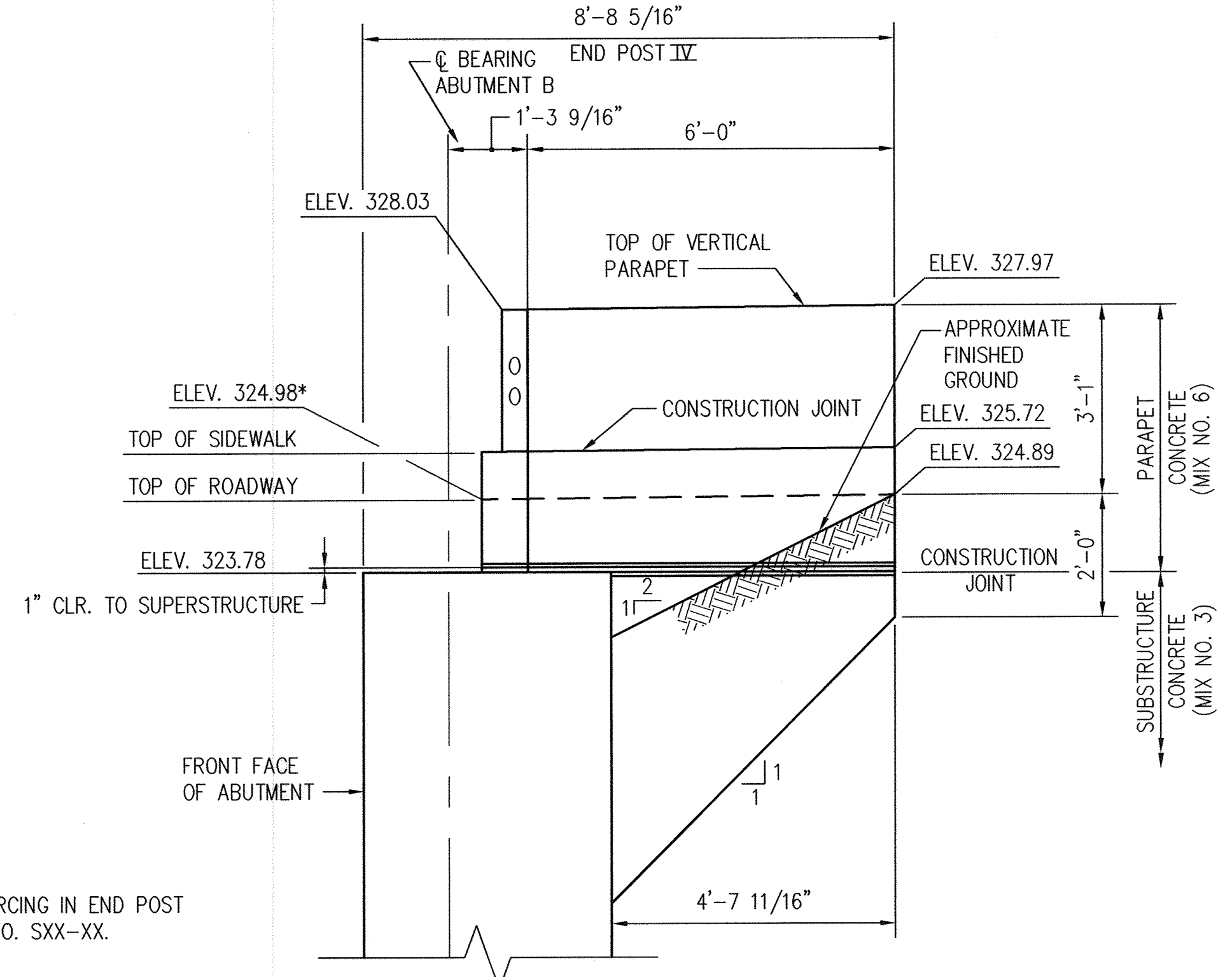
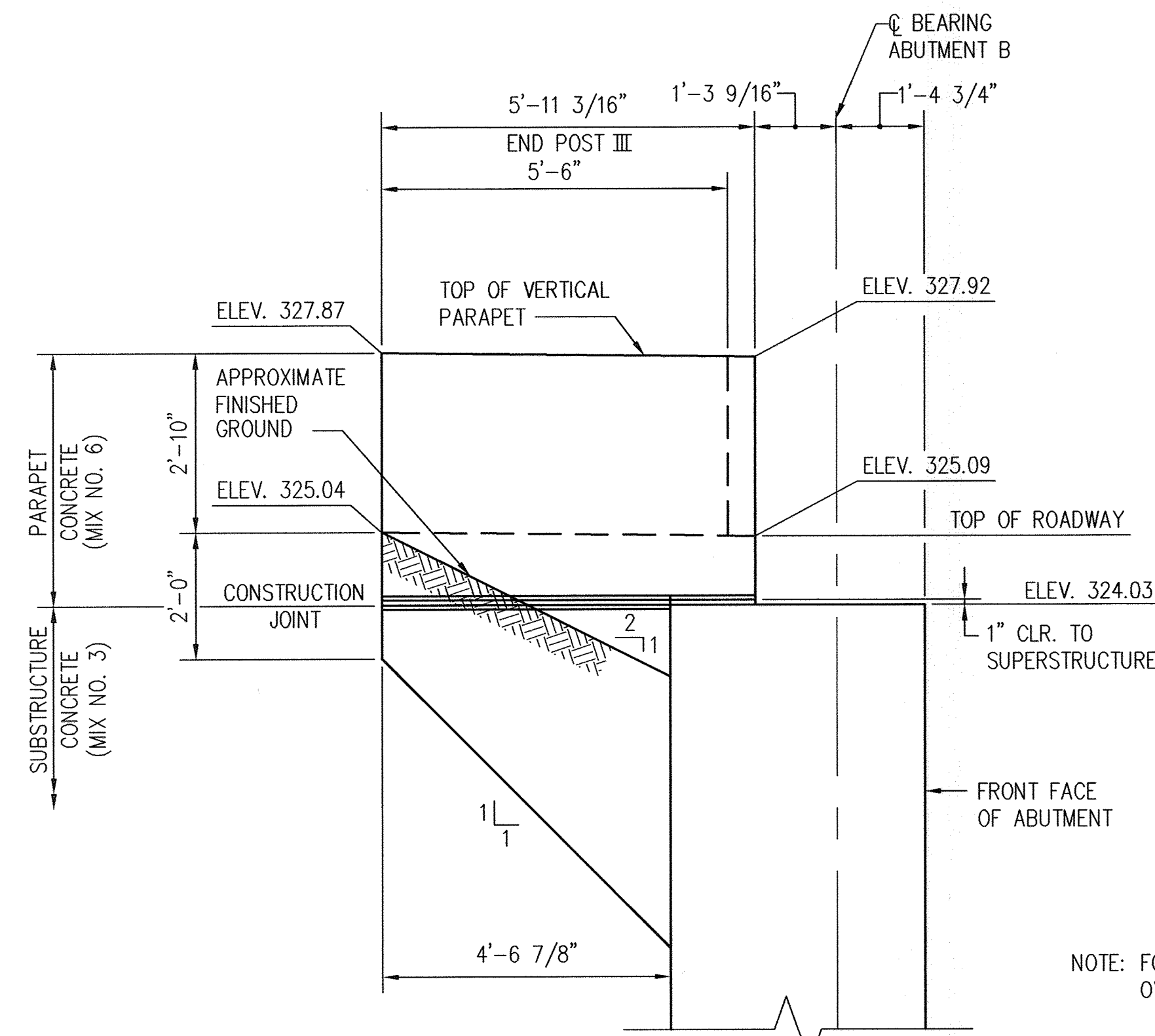
TAX MAP No. 37 PARCEL No. 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 2 JANUARY 2002  
BID AND CONSTRUCTION 14 JANUARY 2002  
SHEET 39 OF 56





NOTE: FOR DETAILS OF REINFORCING IN END POST OVERHANG SEE SHEET NO. SXX-XX.

\*ELEVATION TAKEN AT FRONT FACE OF CURB

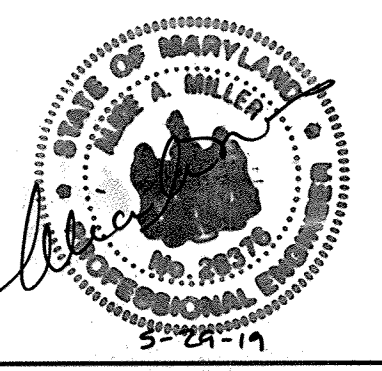


NOTE: FOR DETAILS OF REINFORCING IN END POST OVERHANG SEE SHEET NO. SXX-XX.

- NOTES:
1. GUARD RAIL ATTACHMENT TO END POSTS NOT SHOWN. FOR DETAILS SEE DETAIL MD 605.42.
  2. FOR DETAILS OF REINFORCING IN END POSTS SEE SHEET NO. S11.
  3. JUNCTION BOXES IN PARAPET NOT SHOWN. FOR DETAILS SEE DETAIL BR-SS(6.37)-91-247 ON SHEET . PLACE BOXES TO AVOID CONFLICTS WITH W-BEAM RAIL ATTACHMENTS.

END POST DETAILS-ELEVATIONS  
SCALE: 1/2" = 1'-0"

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 28376 Expiration Date: 1-1-21



For Revision 1 only

**NOLAN Associates, Inc.**  
Engineers - Civil/Structural/Inspections  
4785 Dorsey Hall Drive  
Suite 124  
Ellicott City, Maryland 21042  
Phone: (410) 995-3651 Fax: (410) 995-1363

DATE	DESCRIPTION	REVISION BLOCK
5/29/19	Revision 1	Changed Sheet Number

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul Ratten*  
Director, Department of Planning and Zoning  
Date: 3/8/02

*Cindy Hendrick*  
Chief, Division of Land Development  
Date: 3/7/02

*Mike Dammann*  
Chief, Development Engineering Division  
Date: 3/5/02

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 100  
Ellicott City, Maryland 21042  
Attention Cathleen Young

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	8,9	R-5C	37	First	6011

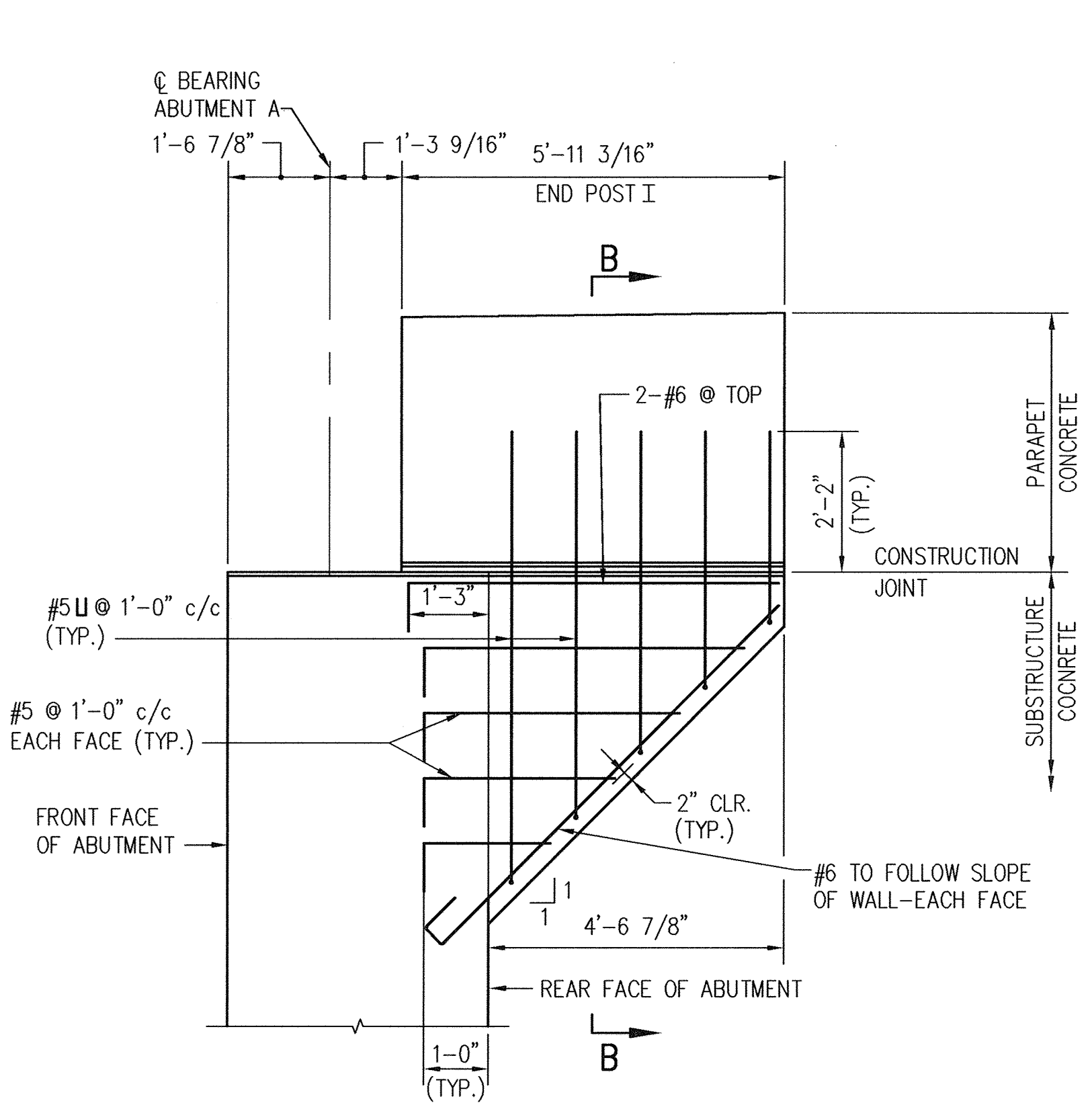
WATER CODE	SEWER CODE
D 05	2650000

END POST DETAILS-I

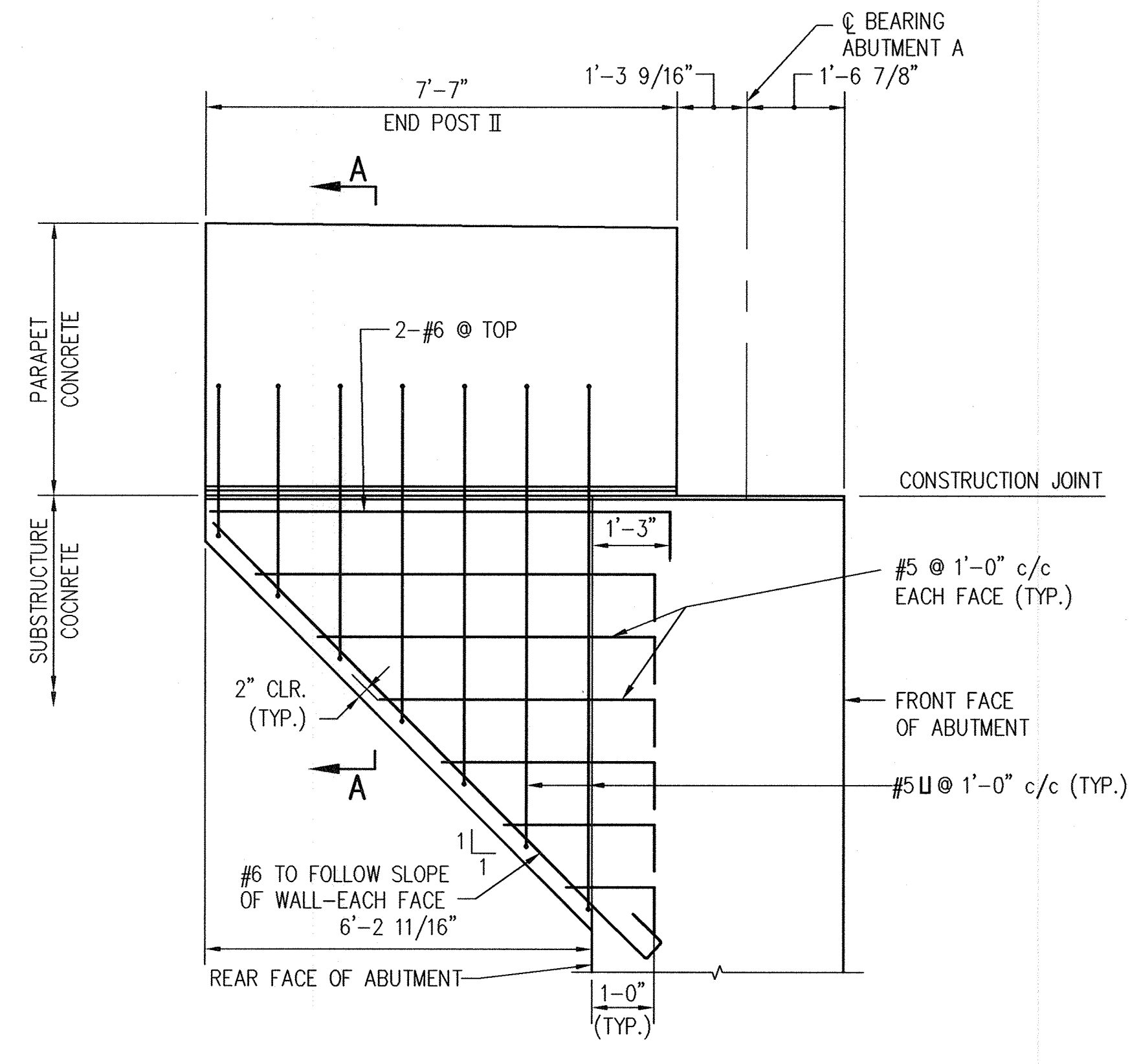
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No: 37 PARCEL No: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 2 JANUARY 2002  
BID AND CONSTRUCTION 14 JANUARY 2002  
SHEET 40 OF 56

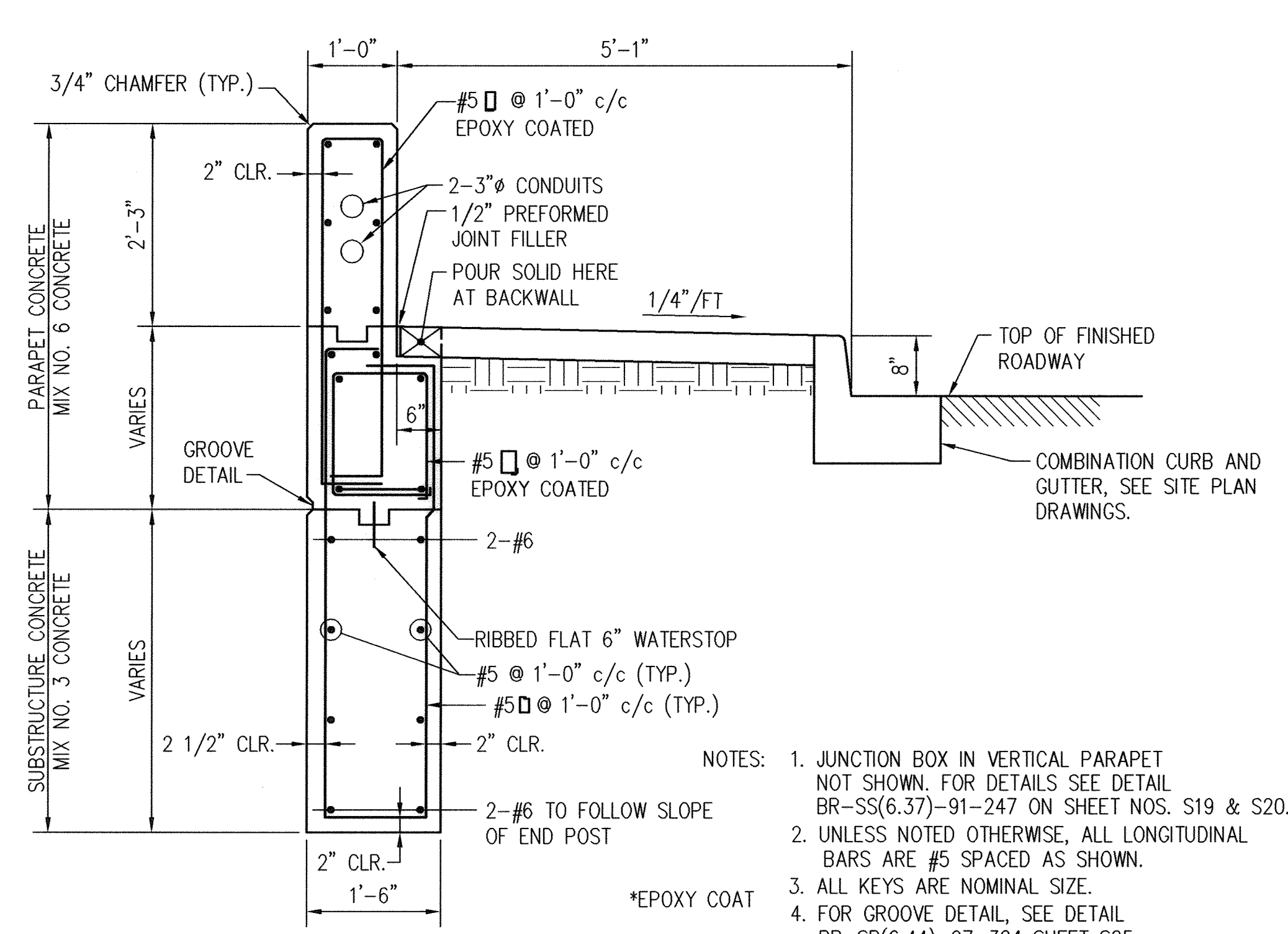




**END POST I**

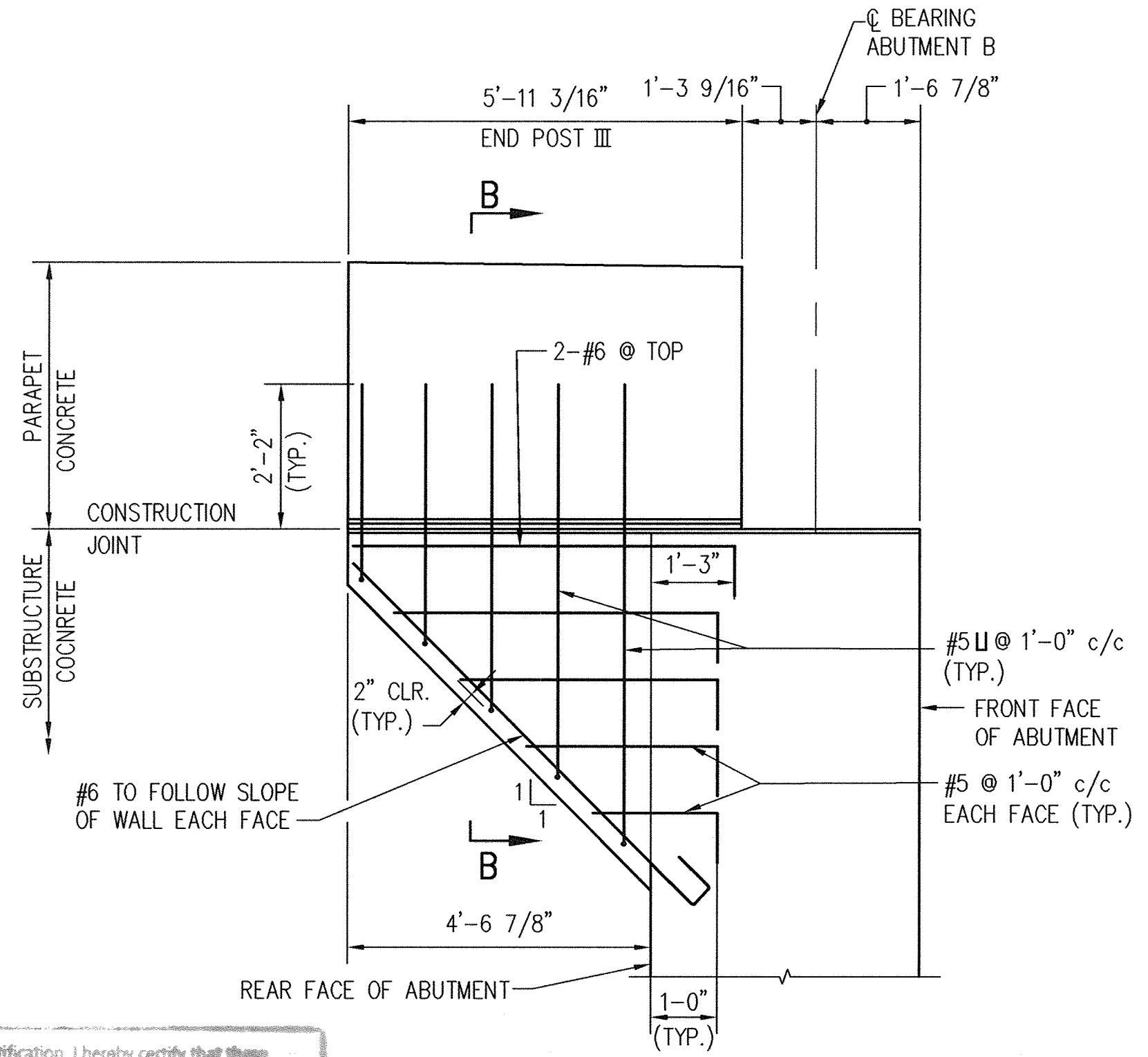


**END POST II**

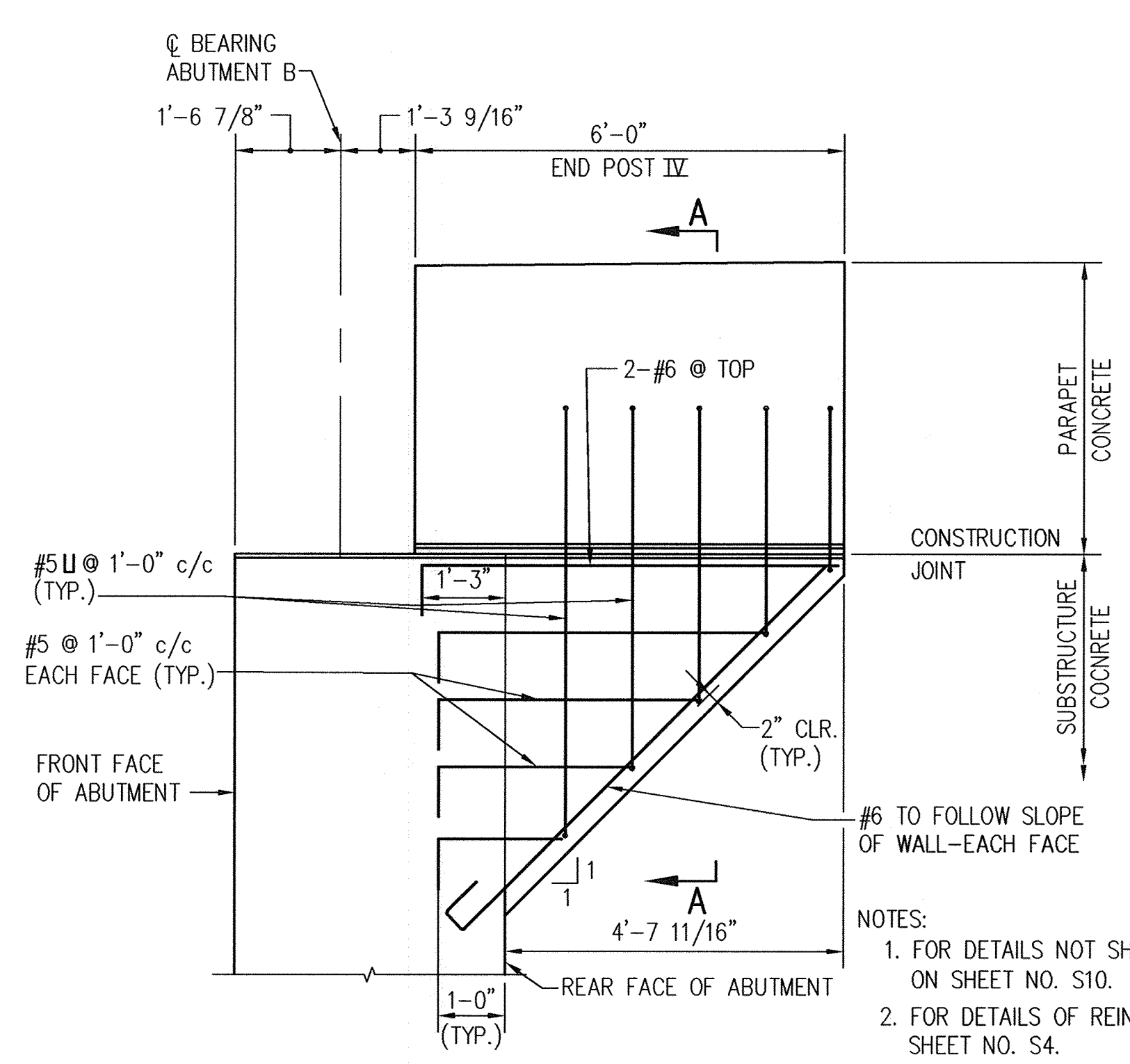


**END POST II & IV  
SECTION A-A**  
SCALE: 3/4" = 1'-0"

- NOTES:
1. JUNCTION BOX IN VERTICAL PARAPET NOT SHOWN. FOR DETAILS SEE DETAIL BR-SS(6.37)-91-247 ON SHEET NOS. S19 & S20.
  2. UNLESS NOTED OTHERWISE, ALL LONGITUDINAL BARS ARE #5 SPACED AS SHOWN.
  3. ALL KEYS ARE NOMINAL SIZE.
  4. FOR GROOVE DETAIL, SEE DETAIL BR-SB(6.44)-97-324 SHEET S25.

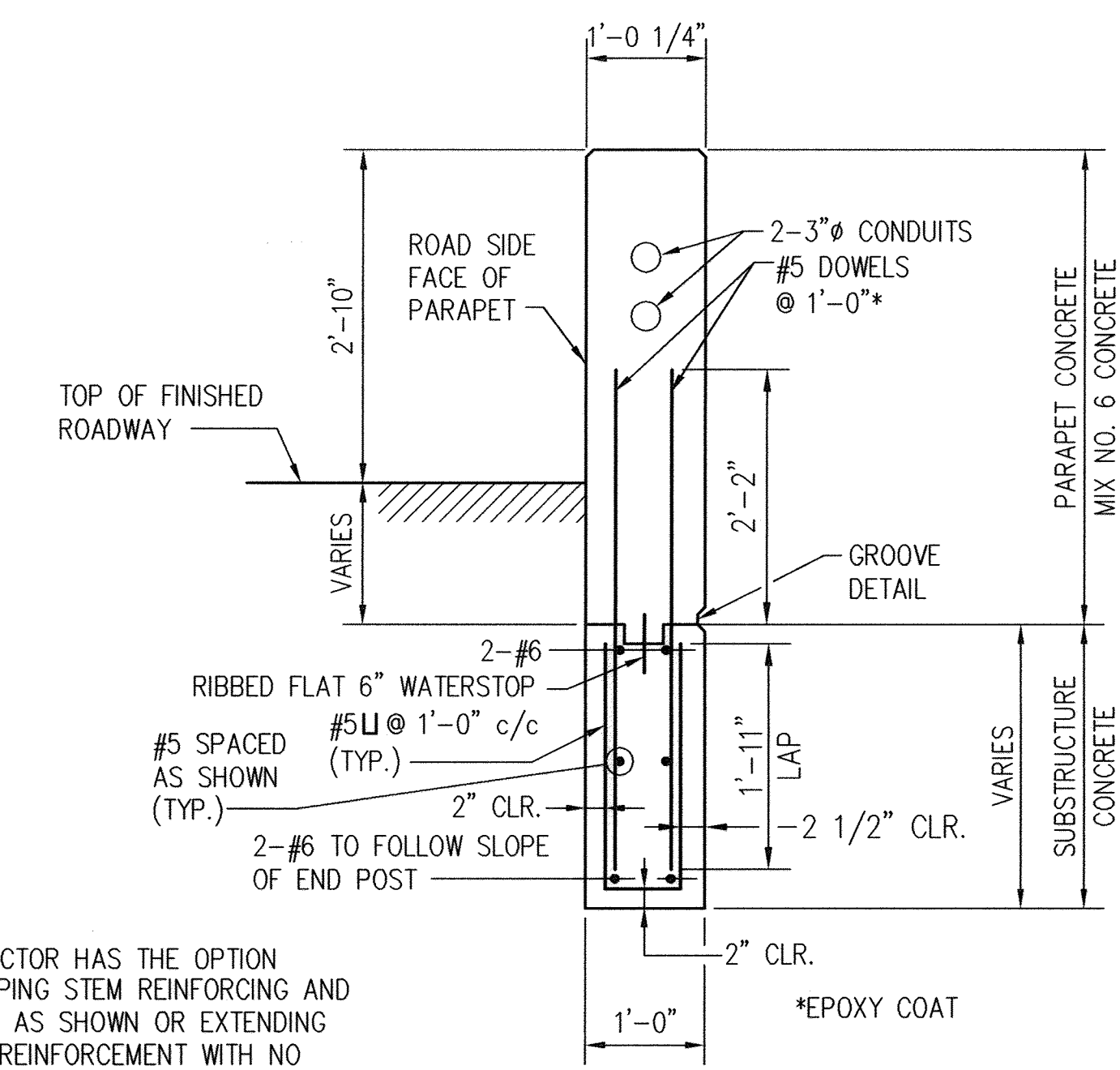


**END POST III**



**END POST IV**

- NOTES:
1. FOR DETAILS NOT SHOWN SEE END POST DETAILS-I ON SHEET NO. S10.
  2. FOR DETAILS OF REINFORCING IN ABUTMENT SEE SHEET NO. S4.

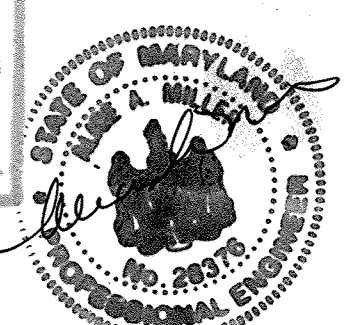


**END POST I & III  
SECTION B-B**  
SCALE: 3/4" = 1'-0"

- NOTES:
1. FOR DETAILS OF PARAPET REINFORCING SEE DETAIL BR-SB(6.44)-97-324 ON SHEET NO. S25.
  2. FOR DETAILS OF JUNCTION BOX IN VERTICAL PARAPET SEE DETAIL BR-SS(6.37)-91-247, ON SHEET NO. S19 AND S20.
  3. 7'-6" PARAPET TRANSITION TAPER TO BE PLACED ON SUPERSTRUCTURE. SEE DETAIL BR-SB(6.44)-97-324 ON SHEET NO. S25.

NOTE: CONTRACTOR HAS THE OPTION OF LAPPING STEM REINFORCING AND DOWELS AS SHOWN OR EXTENDING DOWEL REINFORCEMENT WITH NO SPLICING. HOWEVER, NO ADDITIONAL COMPENSATION TO THE CONTRACTOR WILL BE ALLOWED FOR WHICHEVER ALTERNATIVE IS SELECTED.

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 28376 Expiration Date: 1-1-21  
 For Revision Only 5-29-19



**REINFORCING IN END POSTS**  
SCALE: 1/2" = 1'-0"

DATE	DESCRIPTION / REVISION BLOCK
5/29/19	Revision 1 Changed Sheet Number



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul Ruff* 3/8/02  
 Director - Department of Planning and Zoning Date

*Cindy Hamer* 3/2/02  
 Chief, Division of Land Development Date

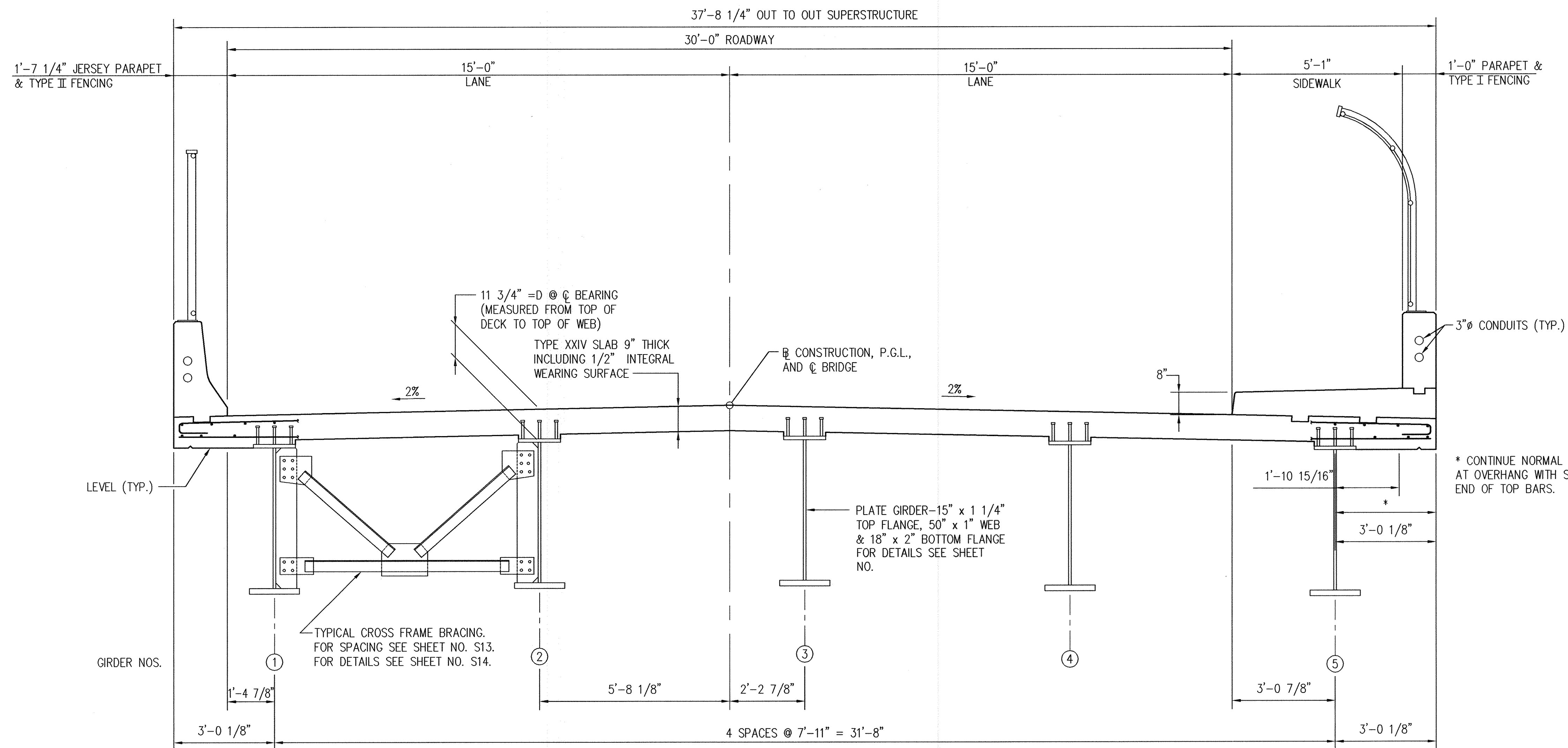
*Chris Dammann* 3/5/02  
 Chief, Development Engineering Division Date

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 100  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young

Address Chart	
Parcel Number	Street Address
670	0125 Old Stockbridge Drive
PROJECT	Northeastern Elementary School No. 4
DEED REF.	2307/562
BLOCK NO.	0,9
ZONE	R-5C
TAX/ZONE	37
SECTION/AREA	First
LOT NO.	6011
WATER CODE	D 05
SEWER CODE	2650000

END POST DETAILS II	
<b>NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)</b>	
TAX MAP No.: 37	PARCEL No.: 670
FIRST ELECTION DISTRICT	HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN	DATE: 2 JANUARY 2002
BID AND CONSTRUCTION	14 JANUARY 2002
SHEET 41 OF 56	



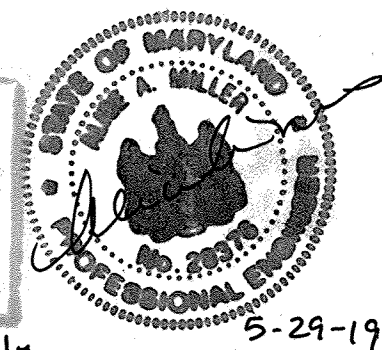


TYPICAL SECTION  
SCALE: 1/2" = 1'-0"

- NOTES:
1. FOR DETAILS OF JERSEY TYPE PARAPET SEE DETAIL NO. BR-SS(6.02)-75-27 ON SHEET NO. S20.
  2. FOR DETAILS OF SIDEWALK AND PARAPET SEE DETAIL NO. BR-SS(6.21)-80-106 ON SHEET NO. S20.
  3. FOR DETAILS OF STEEL STUD SHEAR DEVELOPERS SEE DETAIL BR-SS(8.05)-75-30 ON SHEET NO. S22.
  4. FOR DETAILS OF TYPE I AND II CHAIN LINK SAFETY FENCE SEE DETAILS BR-SS(3.01)-75-21, BR-SS(3.02)-75-22, BR-SS(3.03)-75-23, BR-SS(3.04)-75-24 AND BR-SS(3.05)-75-25 ON SHEET NOS. S17-S19.
  5. FOR DETAILS OF TYPE XXIV SLAB SEE DETAIL NO. BR-SS(6.33)-89-210 ON SHEET NO. S20.

\* CONTINUE NORMAL SLAB STEEL PATTERN AT OVERHANG WITH STANDARD HOOK AT END OF TOP BARS.

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 28376 Expiration Date: 1-1-21



For Revision only

S12 OF S25

**NOLAN Associates, Inc.**  
Engineers - Civil/Structural/Inspections  
4785 Dorsey Hall Drive  
Suite 124  
Ellicott City, Maryland 21042  
Phone: (410) 995-3651 Fax: (410) 995-1363

DATE	DESCRIPTION	REVISION BLOCK
5/29/19	Revision 1	Changed Sheet Number

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Carol R. Smith*  
Director, Department of Planning and Zoning  
Date: 3/8/02

*Carole H. Hunter*  
Chief, Division of Land Development  
Date: 2/2/02

*Chris D. Williams*  
Chief, Development Engineering Division  
Date: 2/5/02

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young

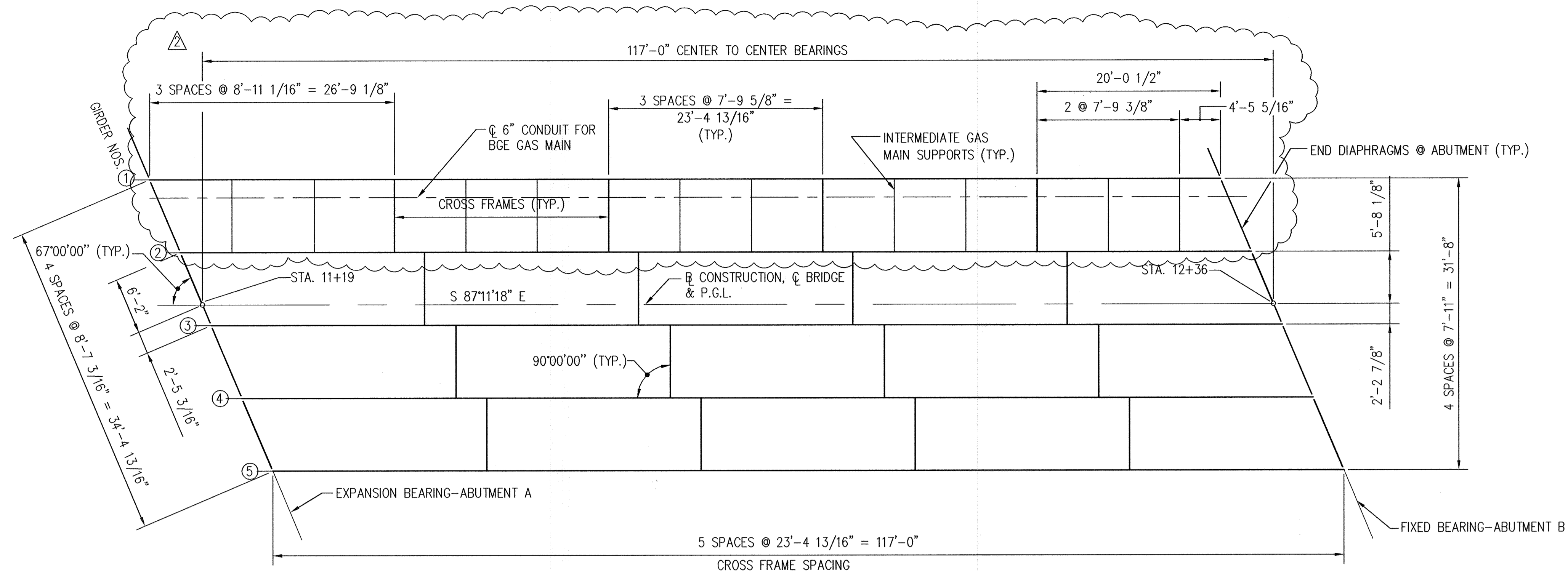
Address Chart					
Parcel Number	Street Address				
670	8125 Old Stockbridge Drive				
PROJECT	SECTION/AREA	LOT NO.			
Northeastern Elementary School No. 4					
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	8,9	R-SC	37	First	6011
WATER CODE			SEWER CODE		
D 05			2650000		

TYPICAL SECTION

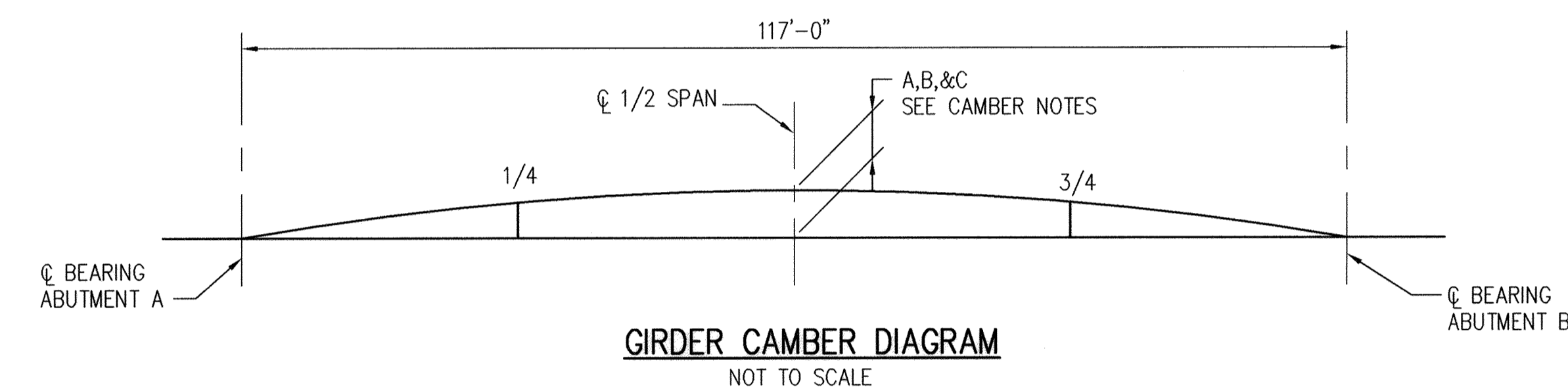
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No.: 37 PARCEL No.: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 2 JANUARY 2002  
BID AND CONSTRUCTION 14 JANUARY 2002  
SHEET 42 OF 56

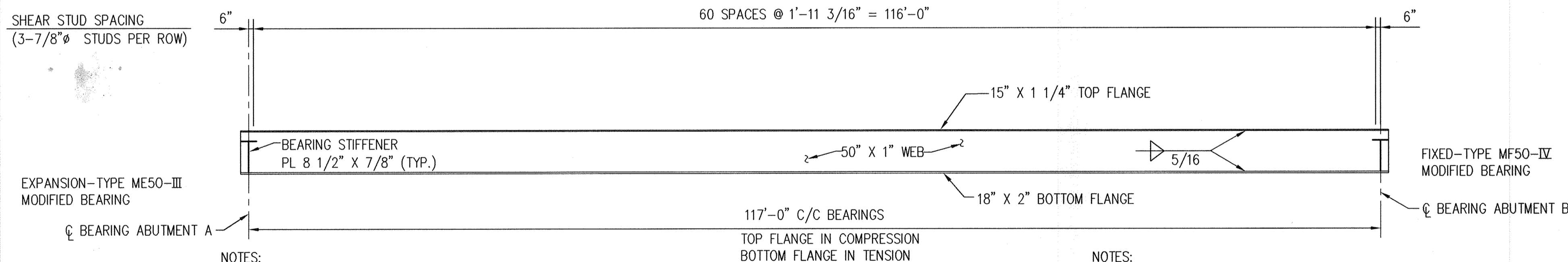




**FRAMING PLAN**  
SCALE 1/8" = 1'-0"



**GIRDER CAMBER DIAGRAM**  
NOT TO SCALE



**GIRDER ELEVATION**  
SCALE 1/8" = 1'-0"

- NOTES:
- FOR DETAILS OF TYPE ME50-III MODIFIED BEARING SEE DETAIL NO. BR-SS(9.05)-99-335 ON SHEET NO. 22.
  - FOR DETAILS OF TYPE MF50-IV MODIFIED BEARING SEE DETAIL NO. BR-SS(9.06)-99-336 ON SHEET NOS. S22 AND S23.

- NOTES:
- BEARING STIFFENERS TO BE PLACED PLUMB. THE ESTIMATED NUMBER OF SHEAR STUDS FOR THE BRIDGE IS 915.
  - NO SPLICES WILL BE ALLOWED IN GIRDER.

		SPAN 1														
		1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16
GIRDER NOS. 1&5	A	1/4	7/16	5/8	13/16	15/16	1 1/16	1 1/8	1 1/8	1 1/8	1 1/16	15/16	13/16	5/8	7/16	1/4
	B	5/8	1 3/16	1 11/16	2 3/16	2 1/2	2 13/16	3	3	3	2 13/16	2 1/2	2 3/16	1 11/16	1 3/16	5/8
	C	1/8	1/4	5/16	7/16	1/2	9/16	9/16	9/16	9/16	9/16	1/2	7/16	5/16	1/4	1/8
TOTAL DEFLECTION		1	1 7/8	2 5/8	3 7/16	3 15/16	4 7/16	4 11/16	4 11/16	4 11/16	4 7/16	3 15/16	3 7/16	2 5/8	1 7/8	1

		SPAN 1														
		1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16
GIRDER NOS. 2&4	A	1/4	7/16	5/8	13/16	15/16	1 1/16	1 1/8	1 1/8	1 1/8	1 1/16	15/16	13/16	5/8	7/16	1/4
	B	5/8	1 1/4	1 7/8	2 3/8	2 3/4	3 1/16	3 1/4	3 5/16	3 1/4	3 1/16	2 3/4	2 3/8	1 7/8	1 1/4	5/8
	C	1/8	1/4	5/16	7/16	1/2	9/16	9/16	9/16	9/16	9/16	1/2	7/16	5/16	1/4	1/8
TOTAL DEFLECTION		1	1 15/16	2 13/16	3 9/16	4 3/16	4 5/8	4 15/16	5 1/4	4 15/16	4 5/8	4 3/16	3 9/16	2 13/16	1 15/16	1

CAMBER NOTES:  
 A = DEFLECTION DUE TO WEIGHT OF STEEL GIRDER, STIFFENERS, CONNECTIONS, DIAPHRAGMS (INCHES)  
 B = DEFLECTION DUE TO WEIGHT OF CONCRETE SLAB AND FORMS (INCHES)  
 C = DEFLECTION DUE TO WEIGHT OF PARAPETS, SIDEWALK AND FENCING, WITHOUT FUTURE WEARING SURFACE (INCHES)  
 POSITIVE DEFLECTION IS IN THE DOWNWARD DIRECTION.  
 POSITIVE CAMBER IS IN THE UPWARD DIRECTION.  
 ALL BEAMS SHALL BE CAMBERED FOR DEAD LOAD DEFLECTION TO THE DIMENSIONS SHOWN ON THESE PLANS.  
 THE CAMBER TOLERANCE IS NOTHING UNDER TO THREE-QUARTER INCH (3/4") OVER.

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 28376, Expiration Date: 1-1-21



For Revision 3 only  
5-29-19

**NOLAN Associates, Inc.**  
 Engineers - Civil/Structural/Inspections  
 4785 Dorsey Hall Drive  
 Suite 124  
 Ellicott City, Maryland 21042  
 Phone: (410) 985-3651 Fax: (410) 985-1363

DATE	DESCRIPTION	REVISION BLOCK
2/01/2002	REVISION - 2	
5/29/19	Revision 3 Changed Sheet Number	

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul R. Smith* 3/8/02  
 Director, Department of Planning and Zoning

*Wanda Howard* 3/7/02  
 Chief, Division of Land Development

*Chris D. Williams* 3/5/02  
 Chief, Development Engineering Division

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 108  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.			
Northeastern Elementary School No. 4					
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2307/562	8,9	R-5C	37	First	6011
WATER CODE	SEWER CODE				
D 05	2650000				

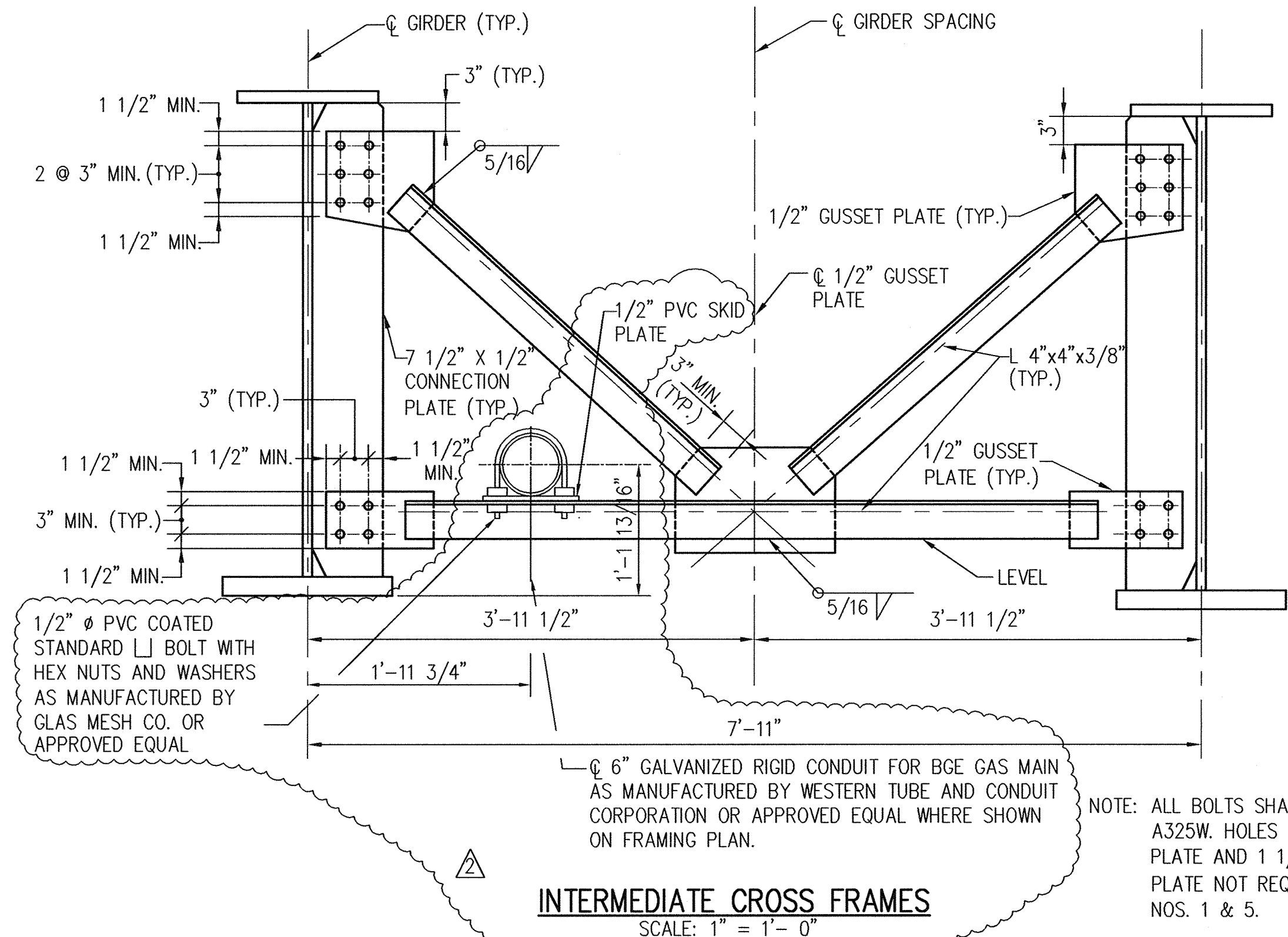
**FRAMING PLAN**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

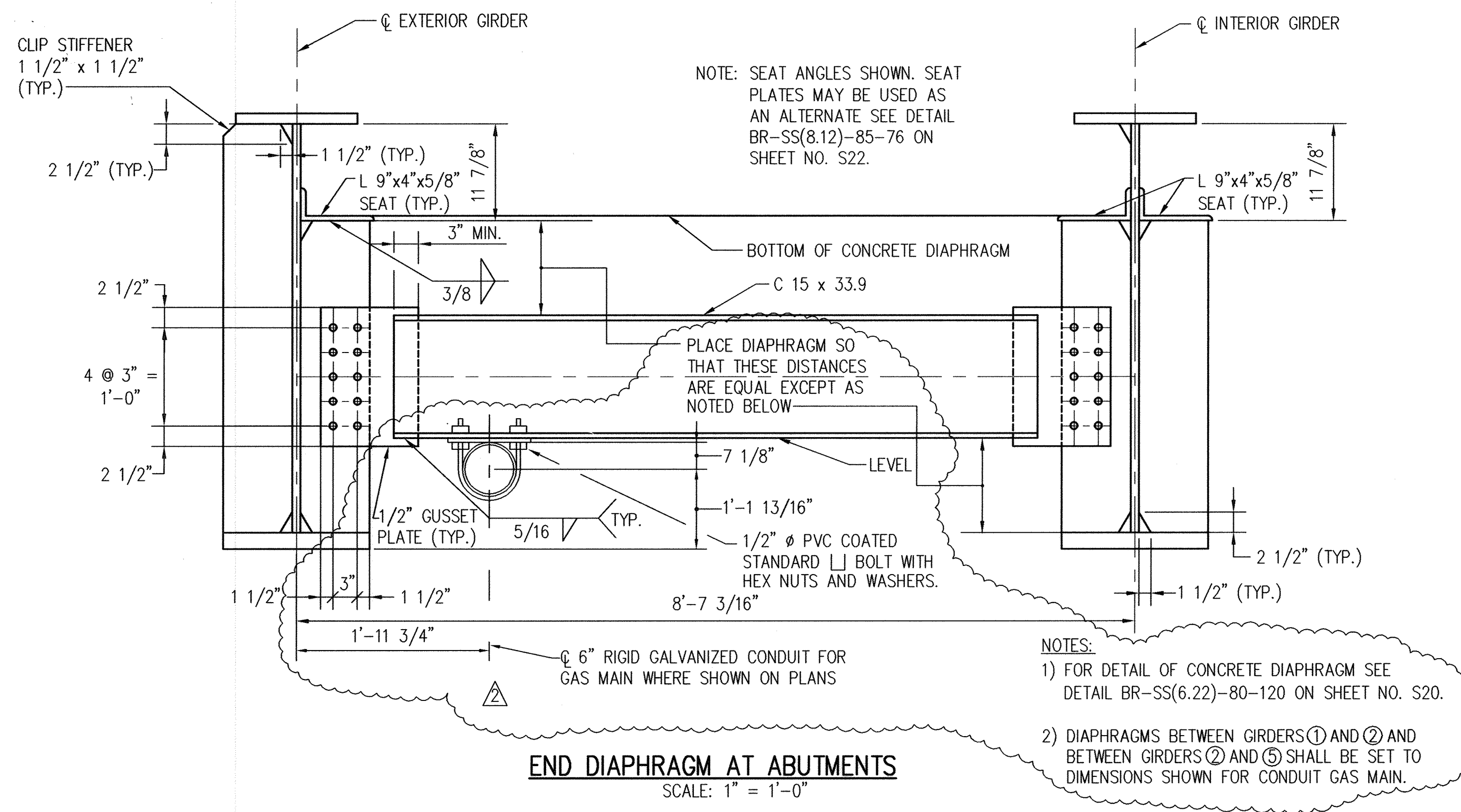
TAX MAP No.: 37 PARCEL No.: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 2 JANUARY 2002  
 BID AND CONSTRUCTION 14 JANUARY 2002  
 SHEET 43 OF 56



NOTE: FOR DETAIL OF STIFFENER WELDS AT FLANGE AND WEB SEE DETAIL NO. BR-SS(8.10)-83-154 ON SHEET NO. S22.



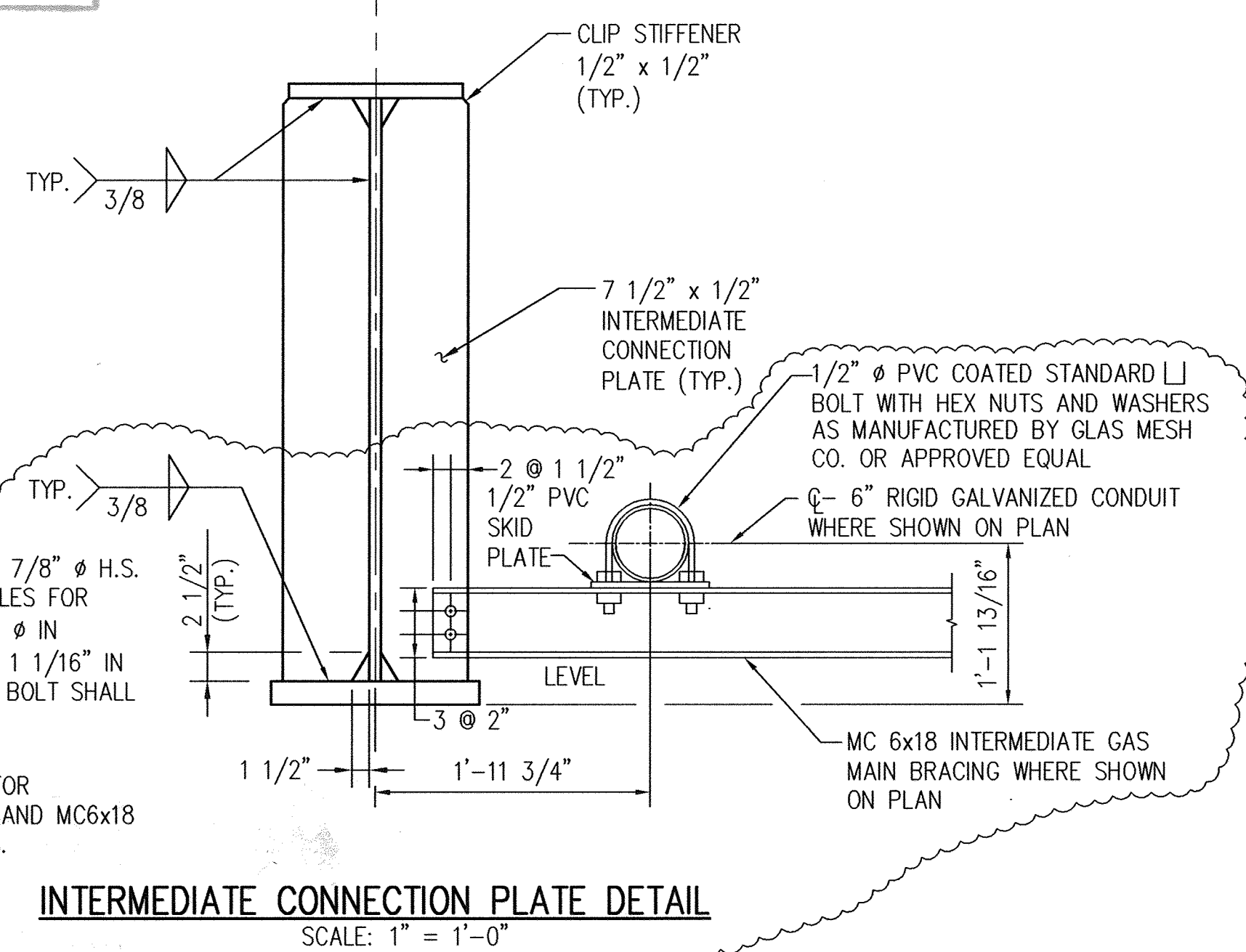
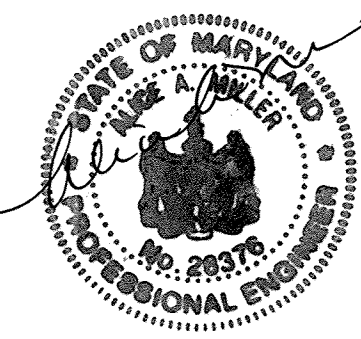
INTERMEDIATE CROSS FRAMES  
SCALE: 1" = 1'-0"



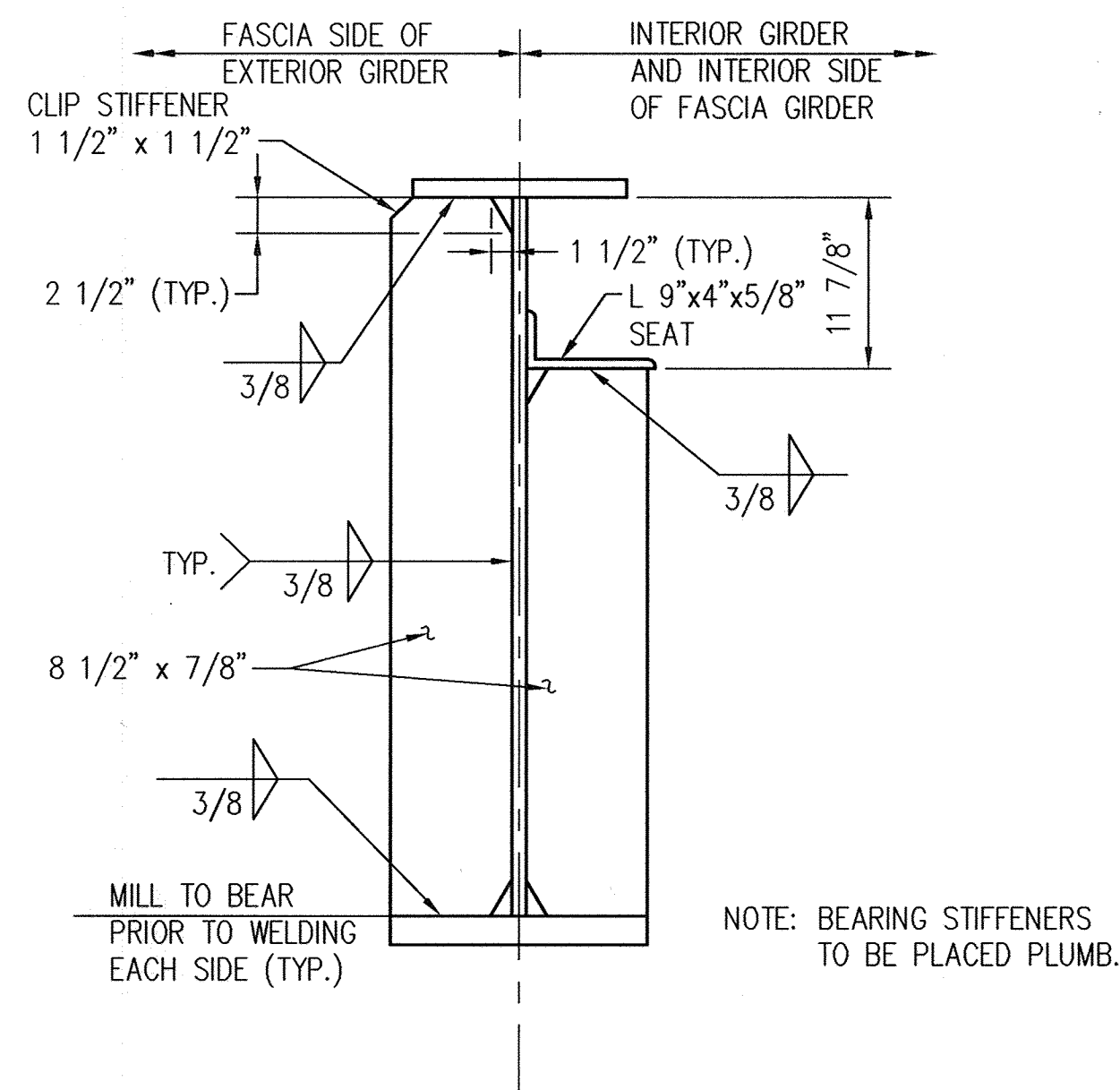
END DIAPHRAGM AT ABUTMENTS  
SCALE: 1" = 1'-0"

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 20376 Expiration Date: 1-1-21

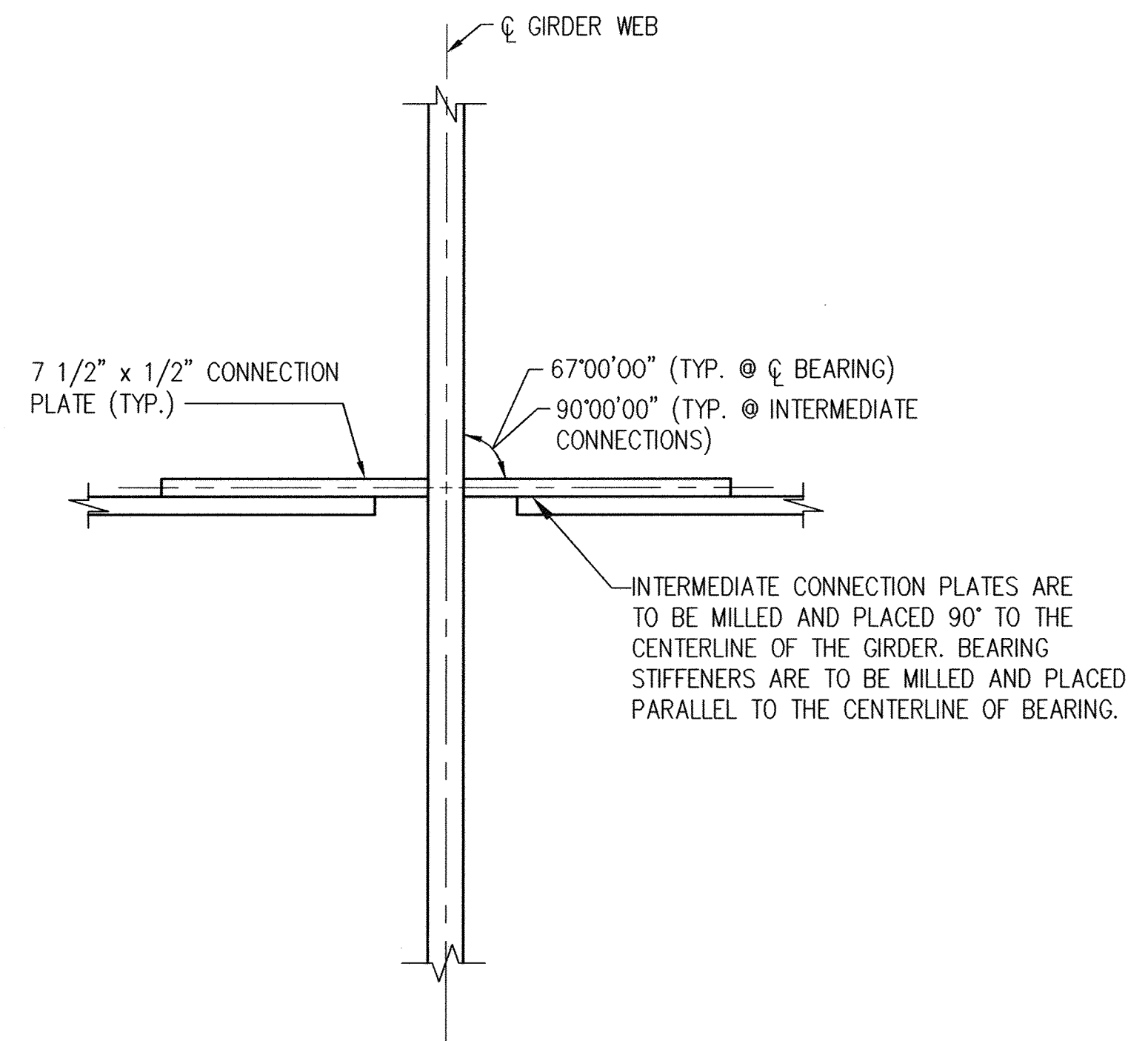
For Revision 3 only  
5-29-19



INTERMEDIATE CONNECTION PLATE DETAIL  
SCALE: 1" = 1'-0"



BEARING STIFFENER @ ABUTMENT  
SCALE: 1" = 1'-0"



SECTION THROUGH GUSSET PLATE  
SCALE: 3" = 1'-0"

**NOLAN**  
Associates, Inc.  
Engineers - Civil/Structural/Inspections  
4785 Dorsey Hall Drive  
Suite 124  
Ellicott City, Maryland 21042  
Phone: (410) 995-3851 Fax: (410) 995-1363

DATE	DESCRIPTION REVISION BLOCK
2/01/2002	REVISION - 2
5-29-19	Revision 3 Changed Sheet Number



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul R. Smith*  
Director, Department of Planning and Zoning  
Date: 3/8/02

*Andy Horvath*  
Chief, Division of Land Development  
Date: 3/7/02

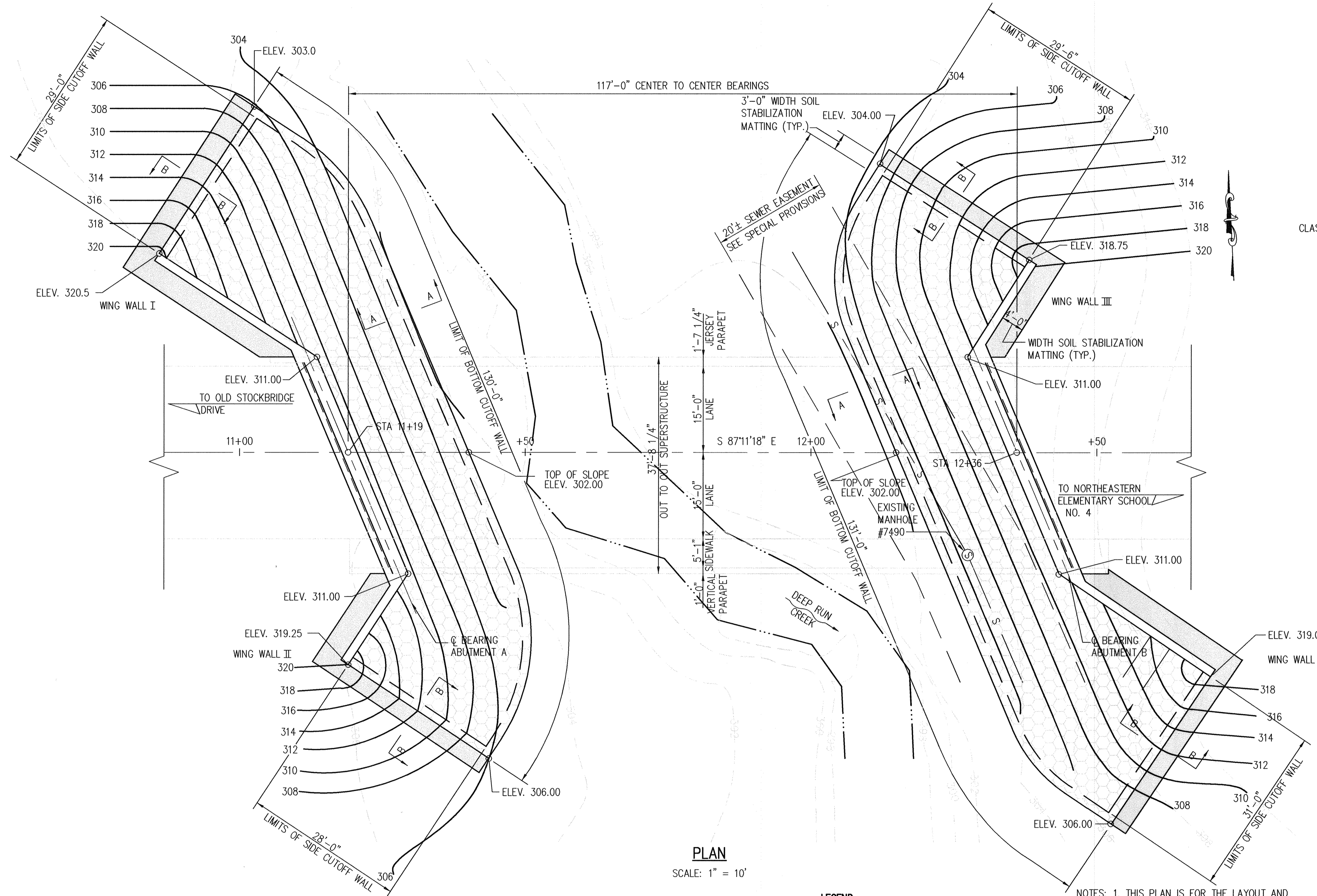
*Chris Dammann*  
Chief, Development Engineering Division  
Date: 3/5/02

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 100  
Ellicott City, Maryland 21042  
Attention Cathleen Young

Address Chart					
Parcel Number	Street Address				
670	8125 Old Stockbridge Drive				
PROJECT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	LOT NO.
Northeastern Elementary School No. 4	09	R-5C	37	First	6011
DEED REF.	WATER CODE	SEWER CODE			
2307/562	D 05	2650000			

**GIRDER DETAILS**  
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**  
TAX MAP No: 37 PARCEL No: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 2 JANUARY 2002  
BID AND CONSTRUCTION 14 JANUARY 2002  
SHEET 44 OF 56



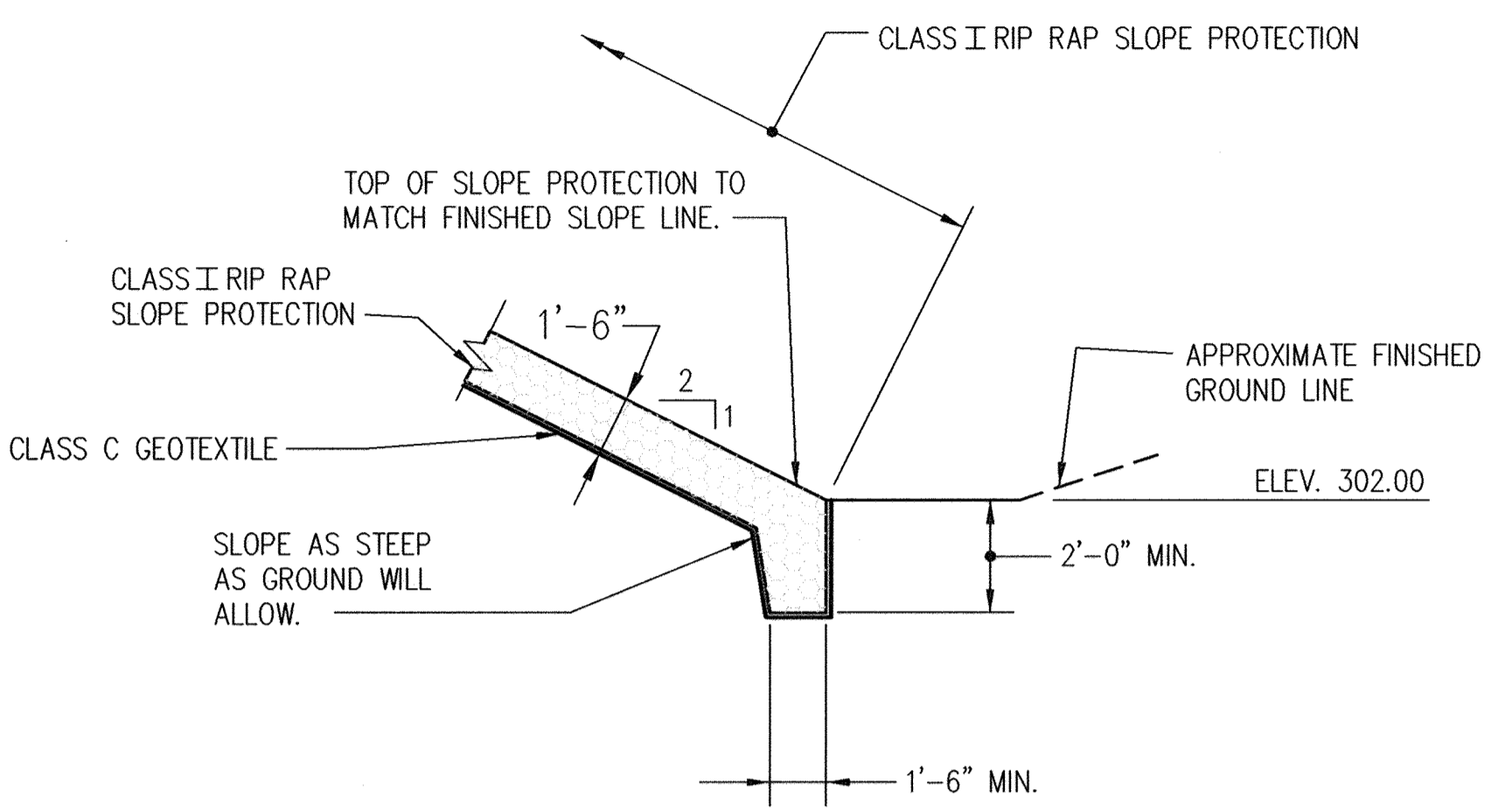


**PLAN**  
SCALE: 1" = 10'

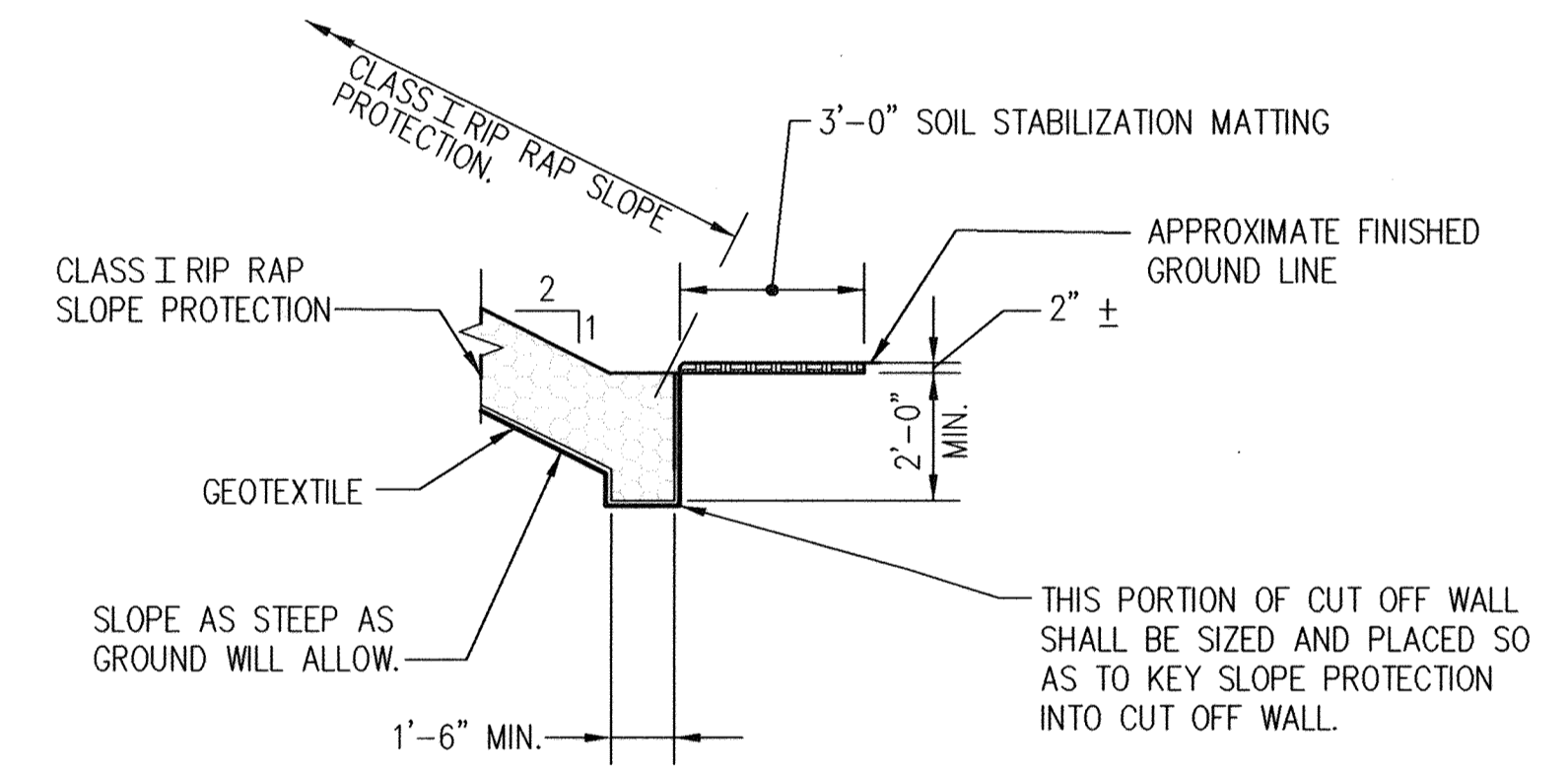
**LEGEND**  

 SOIL STABILIZATION MATTING  
 LIMITS OF CLASS I RIP RAP

NOTES: 1. THIS PLAN IS FOR THE LAYOUT AND PLACEMENT OF CLASS I RIP RAP SLOPE PROTECTION AT ABUTMENTS ONLY. REFER TO OTHER ROADWAY AND STRUCTURE PLANS FOR DETAILS NOT SHOWN.  
 2. ELEVATIONS SHOWN ARE AT TOP OF RIP RAP.



**SECTION A-A BOTTOM CUTOFF WALL**  
NOT TO SCALE



**SECTION B-B SIDE OF CUTOFF WALL**  
NOT TO SCALE

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 28376 Expiration Date: 1-1-19  
 For Revision / only 5-29-19



**NOLAN Associates, Inc.**  
 Engineers - Civil/Structural/Inspections  
 4785 Dorsey Hall Drive  
 Suite 124  
 Ellicott City, Maryland 21042  
 Phone: (410) 985-3651 Fax: (410) 985-1363

DATE	DESCRIPTION / REVISION BLOCK
5/29/18	Revision 1 Changed Sheet Number



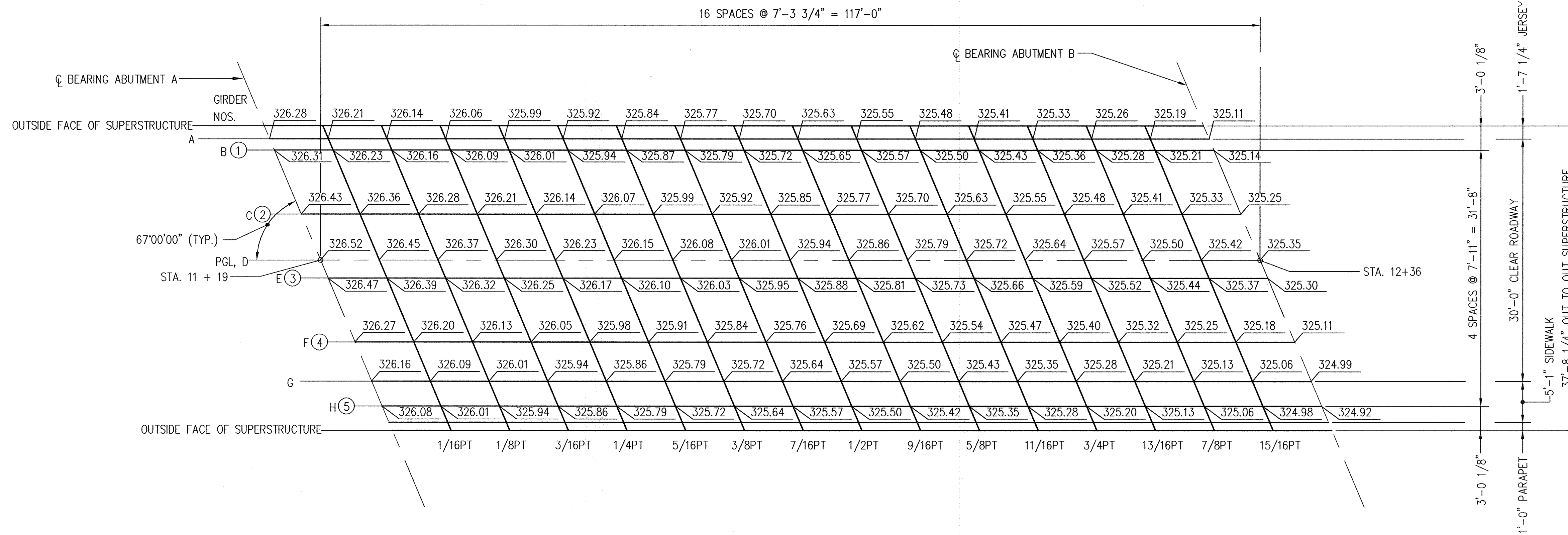
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*James R. Kutt* 3/8/02  
 Director, Department of Planning and Zoning  
*Carole K. Kutt* 3/1/02  
 Chief, Division of Land Development  
*Chris Dammann* 3/5/02  
 Chief, Development Engineering Division

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 108  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young

Address Chart					
Parcel Number	Street Address				
670	8125 Old Stockbridge Drive				
PROJECT	SECTION/AREA	LOT NO.			
Northeastern Elementary School No. 4					
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23077562	09	R-SC	37	First	6011
WATER CODE			SEWER CODE		
D 05			2650000		

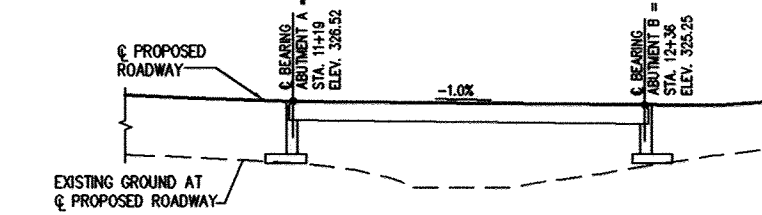
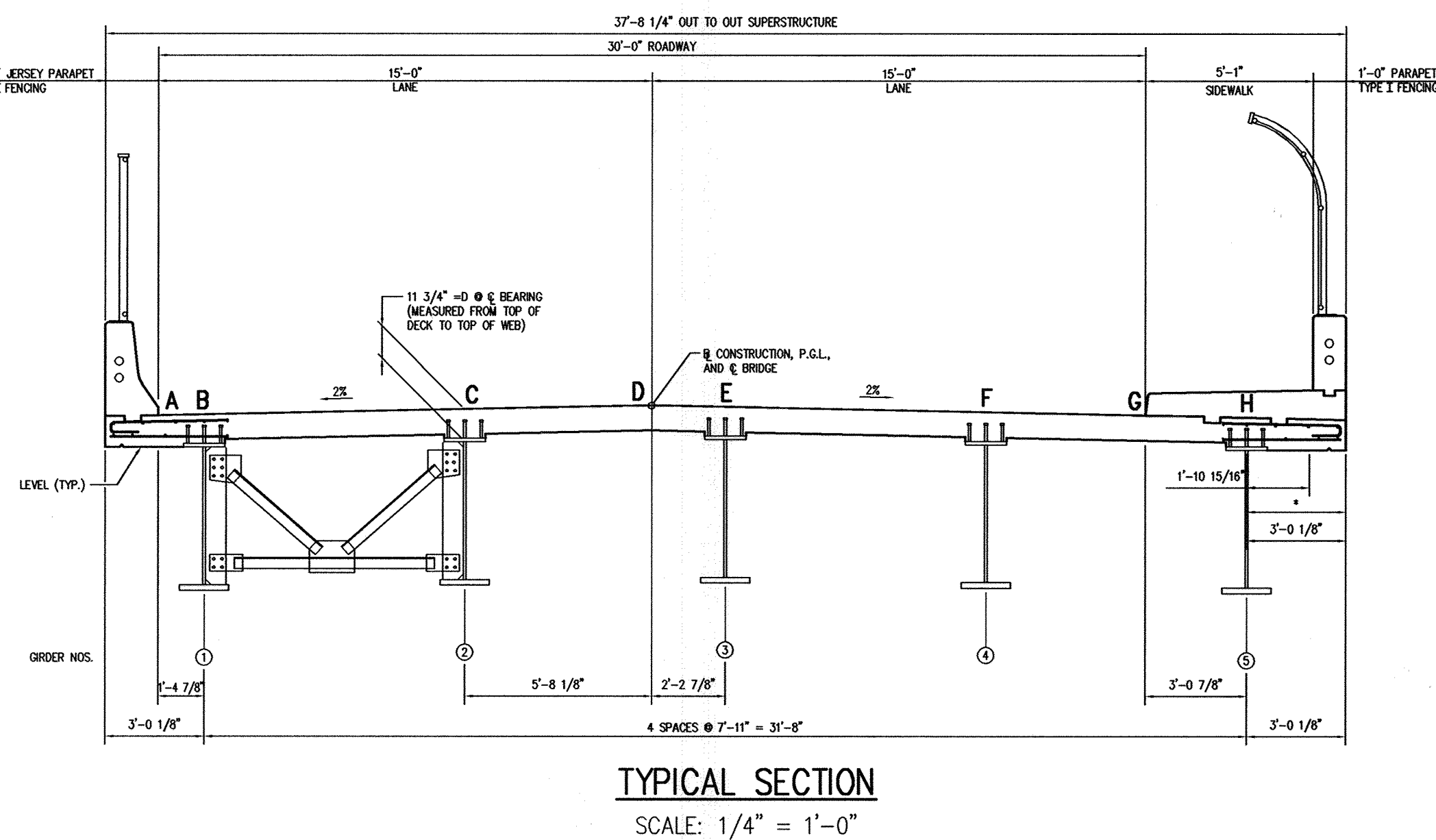
**SLOPE PROTECTION PLAN**  
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**  
 TAX MAP No: 37 PARCEL No: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 2 JANUARY 2002  
 BID AND CONSTRUCTION 14 JANUARY 2002  
 SHEET 45 OF 56





**FINISHED ROADWAY ELEVATIONS**  
SCALE: 1/8" = 1'-0"

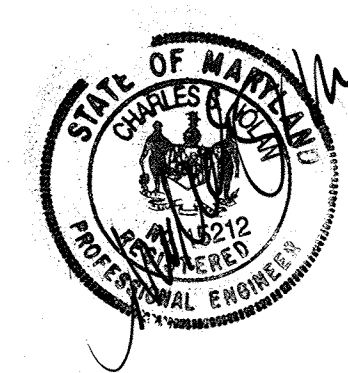
NOTES: 1. FINISHED ROADWAY ELEVATIONS ARE AT TOP OF PROPOSED DECK.  
2. NO SPECIAL POURING SEQUENCE IS REQUIRED FOR THIS BRIDGE. NO CONSTRUCTION JOINTS IN DECK ALLOWED. ONE POUR WILL BE MADE FOR THE DECK SLAB SIMULTANEOUSLY FROM THE CENTER OF THE STRUCTURE TO EACH ABUTMENT, ALL AS DIRECTED BY THE ENGINEER.



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 28376 Expiration Date: 1-1-19



For Revision Only		5-29-19	Revision 1	Change Sheet Number
DATE	DESCRIPTION	REVISION	BLOCK	



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul R. Rutter*  
Director - Department of Planning and Zoning  
Date: 3/8/02

*Cindy Harmon*  
Chief, Division of Land Development  
Date: 3/7/02

*Chris Dammann*  
Chief, Development Engineering Division  
Date: 3/5/02

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 100  
Ellicott City, Maryland 21042  
Attention Cathleen Young

Address Chart					
Parcel Number	Street Address				
670	8125 Old Stockbridge Drive				
PROJECT	SECTION/AREA	LOT NO.			
Northeastern Elementary School No. 4					
DEED REF.	BLOCK NO.	ZONE	TAX ZONE	ELEC. DIST.	CENSUS TR.
2307/562	09	R-SC	37	First	6011
WATER CODE			SEWER CODE		
D 05			2650000		

**FINISHED ROADWAY ELEVATIONS**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No: 37 PARCEL No: 670

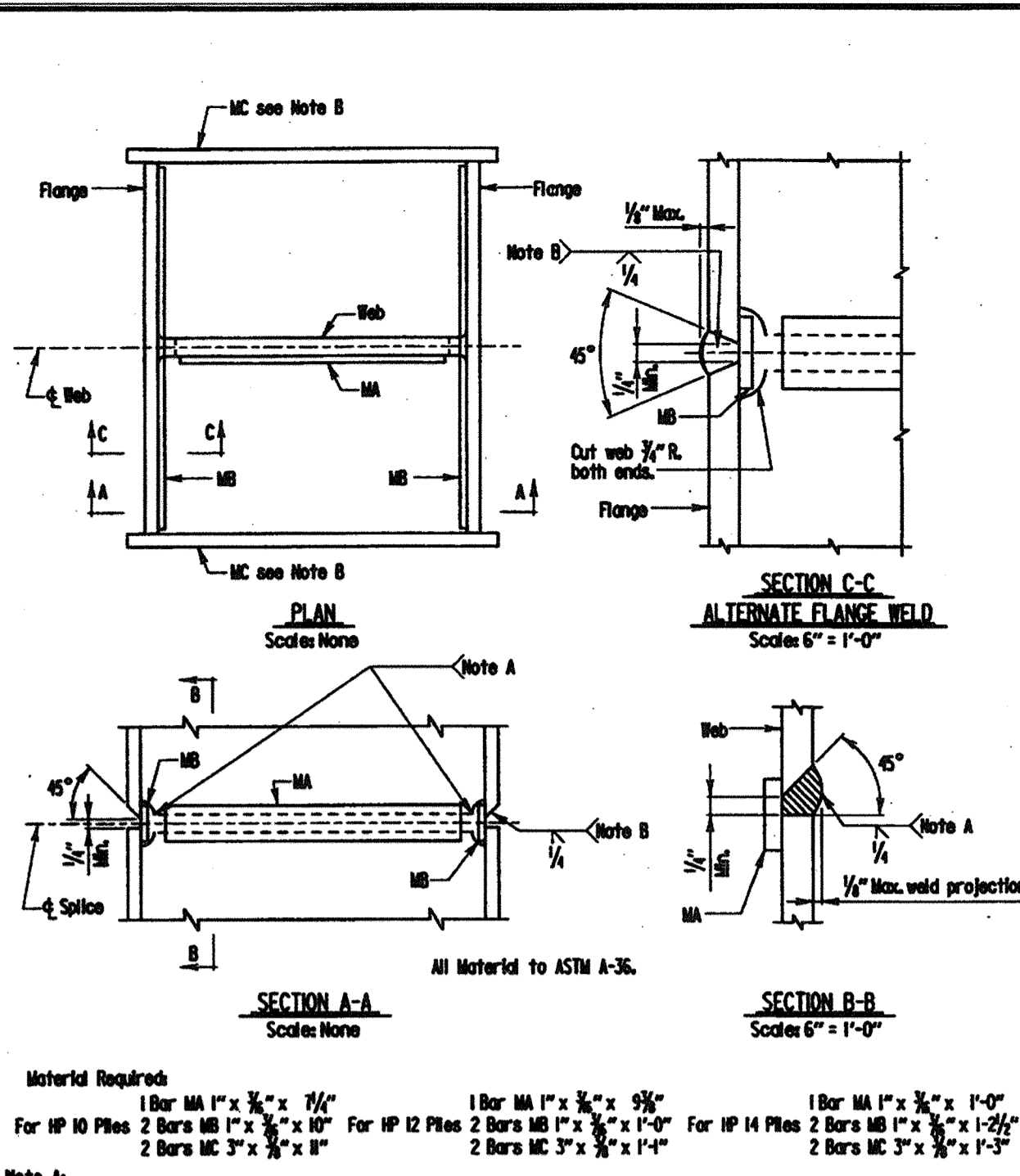
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: 2 JANUARY 2002

BID AND CONSTRUCTION 14 JANUARY 2002

SHEET 46 OF 56

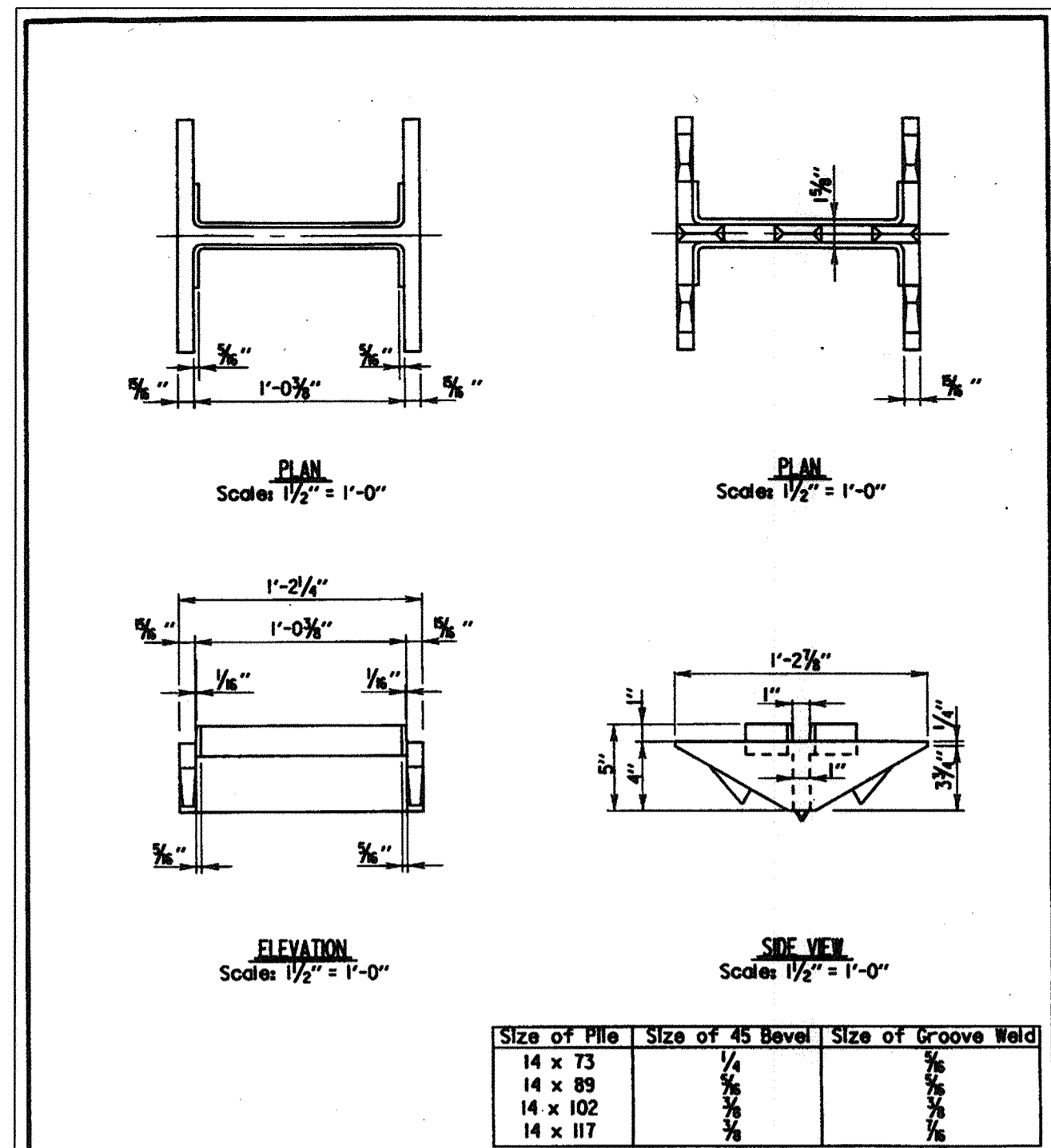




**Material Required**  
 1 Bar MA 1" x 3/4" x 1/4"  
 2 Bars MB 1" x 3/4" x 1/4"  
 2 Bars MC 3/4" x 3/4" x 1/4"  
 1 Bar MA 1" x 3/4" x 1/4"  
 2 Bars MB 1" x 3/4" x 1/4"  
 2 Bars MC 3/4" x 3/4" x 1/4"  
 1 Bar MA 1" x 3/4" x 1/4"  
 2 Bars MB 1" x 3/4" x 1/4"  
 2 Bars MC 3/4" x 3/4" x 1/4"

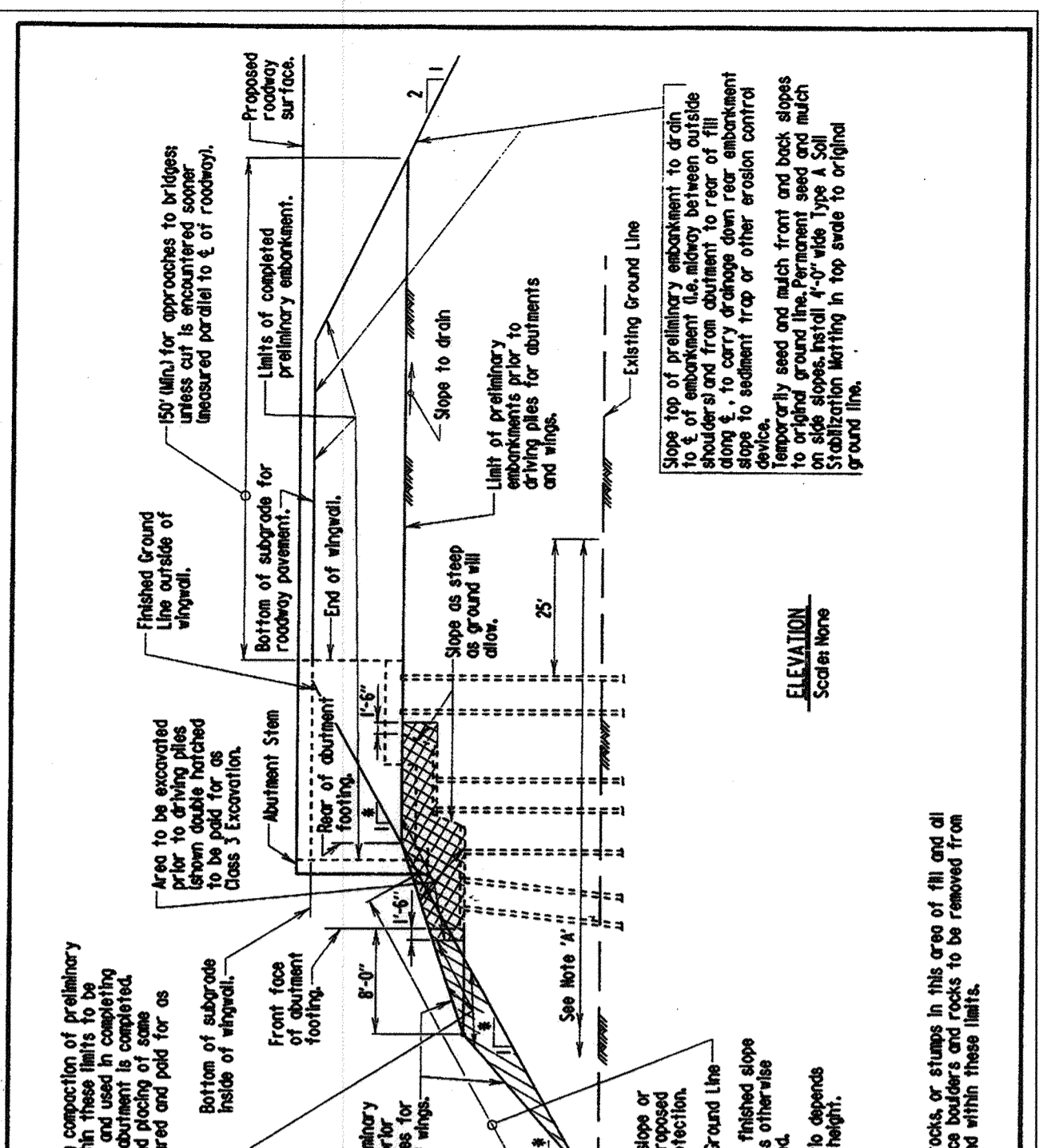
**Notes:**  
 Note A: End of weld to be smooth and flush with web cut, 1/4" min. effective throat.  
 Note B: Bar MC to be tack welded to flange of splice to back up end of flange weld. Remove MC after weld is completed. End of weld must be smooth and flush with edge of flange. Grind weld smooth with edge of flange if pile is unsupported in weld area such as in air, water, or soft mud, 1/4" min. effective throat.  
 Note C: Let welds cool to air temperature before driving piles.  
 Note D: No pile splicing to be allowed on any portion of pile that is to remain exposed or to be above finished ground line in completed structure.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**STEEL H PILE SPLICE DETAILS**  
 BR-FD00-075-15 SHEET 1 OF 1



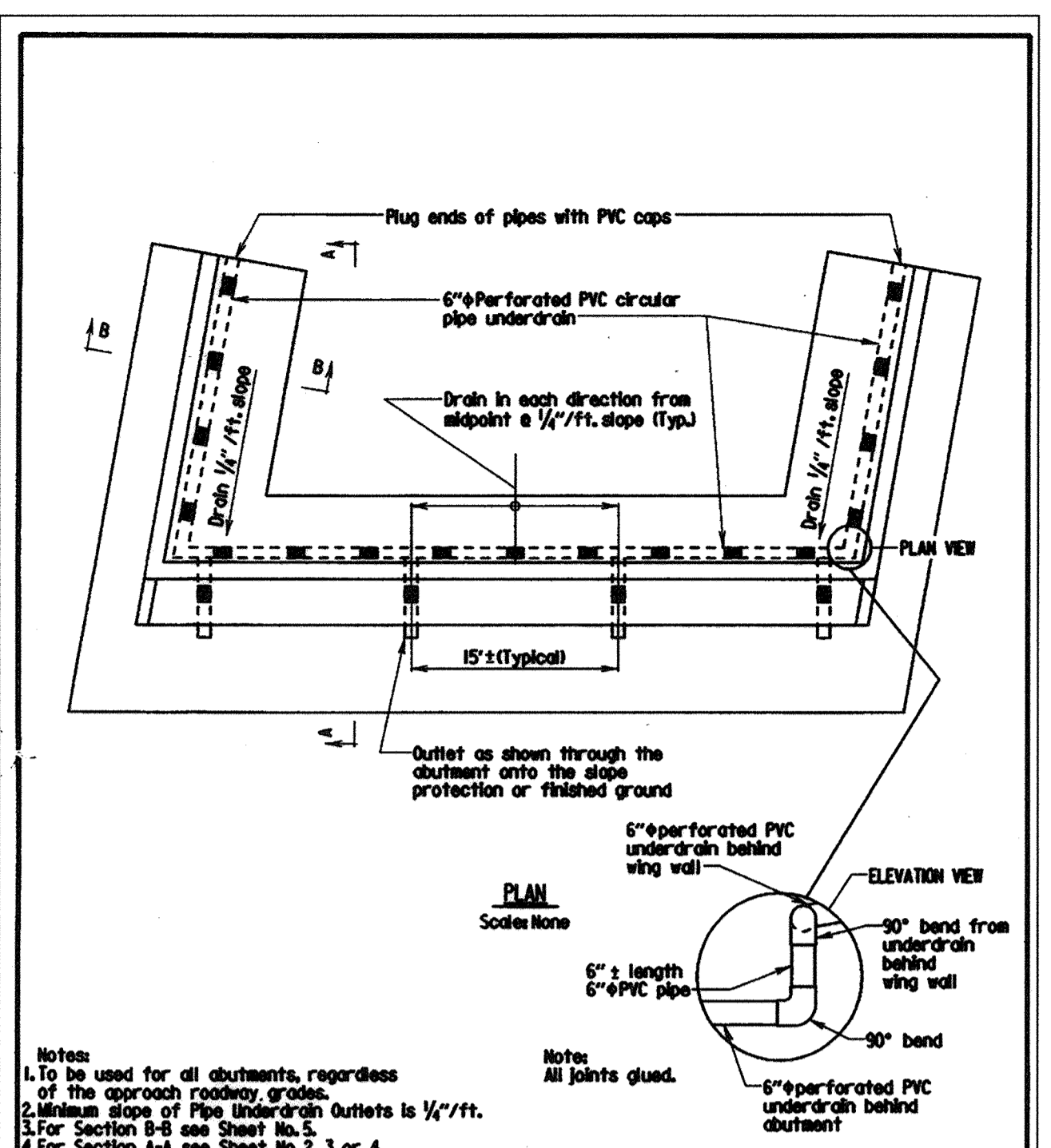
**Notes:**  
 1. Material: Cost Steel A.S.T.M. A27 65/35.  
 All fillets 3/8".  
 2. Point to be welded to pile with a continuous single bevel groove weld along outside face of flange. Exterior face of flange to be flame cut beveled at 45° prior to welding.  
 3. For each shipment of points a laundry certificate verifying material meets the Specifications is required.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**TOOTHED PILE POINT FOR 14" H PILE**  
 BR-FD00-097-89 SHEET 1 OF 1



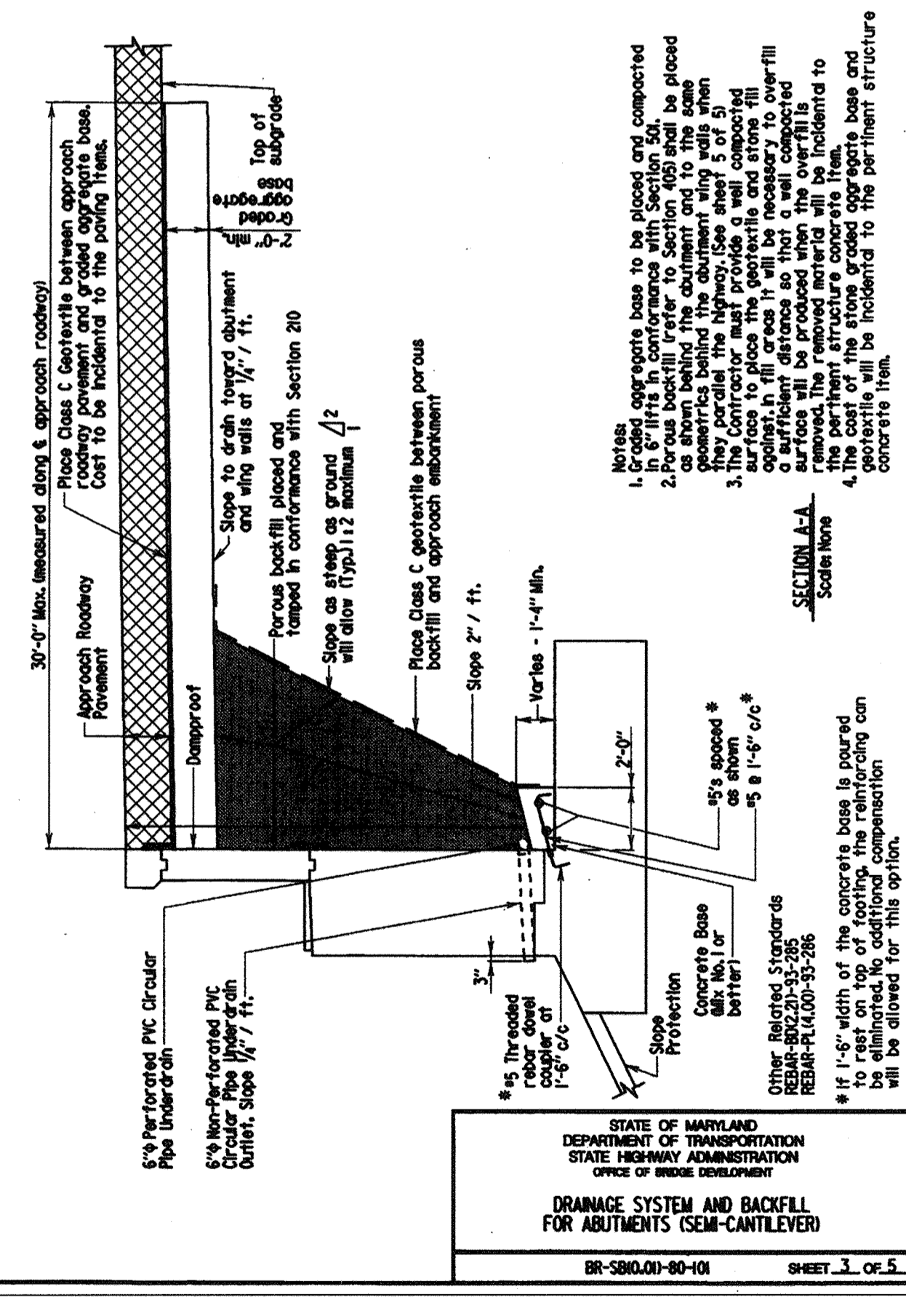
**Notes:**  
 Limits of temporary fill: 1. Any temporary fill shall be compacted to 95% of maximum dry density. 2. Temporary fill shall be removed to finished grade line and used in compacting embankment. 3. Backfill shall be compacted to 95% of maximum dry density. 4. Backfill shall be placed in lifts not exceeding 12" maximum. 5. Backfill shall be placed in lifts not exceeding 12" maximum. 6. Backfill shall be placed in lifts not exceeding 12" maximum.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**PRELIMINARY EMBANKMENT FOR SEMI-CANTILEVER TYPE ABUTMENTS ON PILES WITH STEPPED WING WALL FOOTERS**  
 BR-FD00-097-89 SHEET 1 OF 1



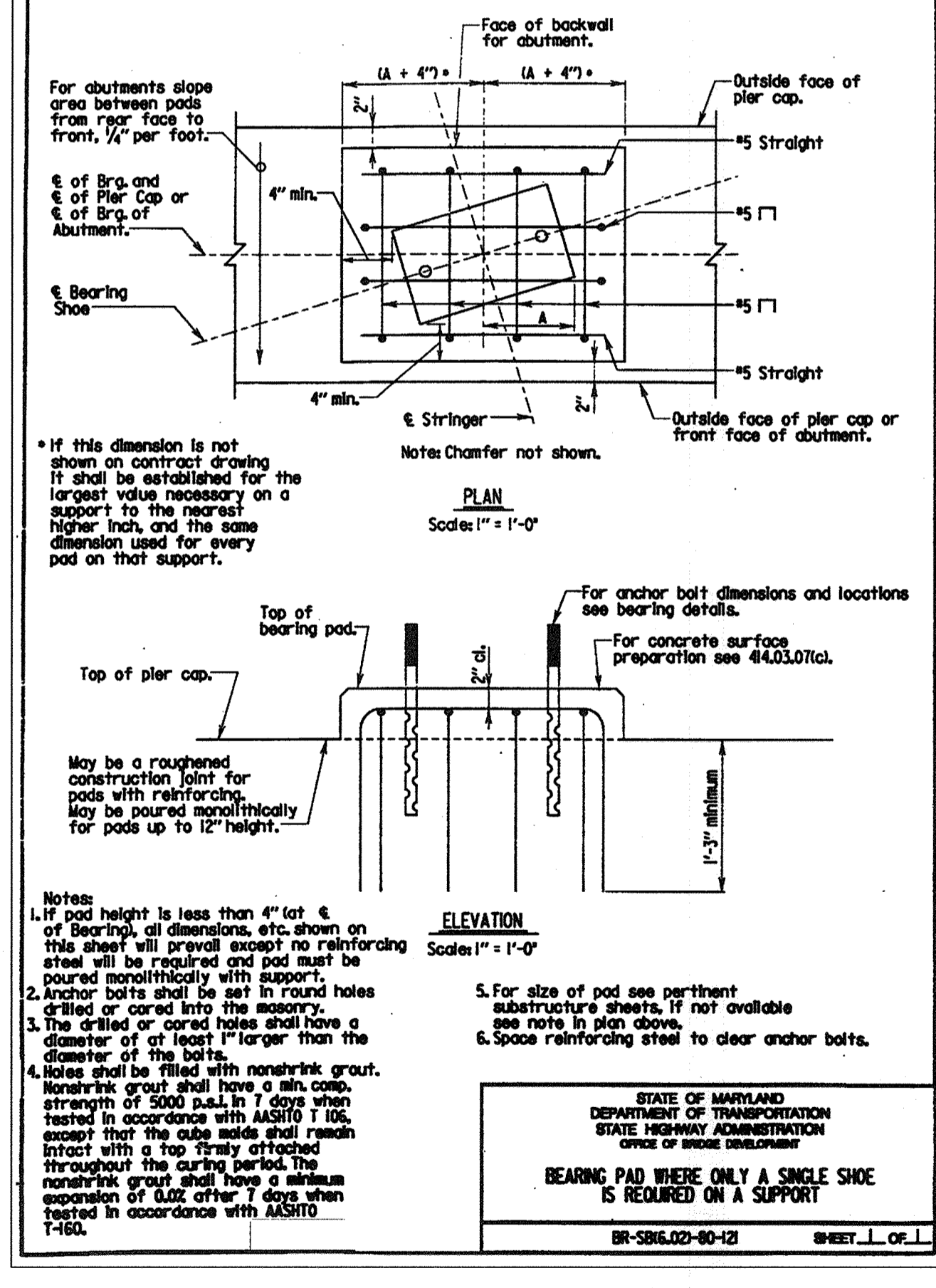
**Notes:**  
 1. To be used for all abutments, regardless of the approach roadway grades.  
 2. Minimum slope of Pipe Underdrain Outlets is 1/4"/ft.  
 3. For Section B-B see Sheet No. 2.  
 4. For Section A-A see Sheet No. 3 or 4.  
 5. The drainage system behind each wing wall can be connected to the drainage system behind the abutment using 2 - 30' bands and a short length of pipe. This will necessitate the drainage system behind the wing wall be slightly higher.  
 6. For wing walls over 15 ft. long, the drainage system behind them may be independent of the drainage system behind the abutment. They can be outletted directly through the wing wall.  
 7. The cost of the PVC underdrain, complete in place, will be incidental to the substructure concrete item.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**DRAINAGE SYSTEM AND BACKFILL FOR ABUTMENTS**  
 BR-SB00-01-80-10 SHEET 1 OF 5



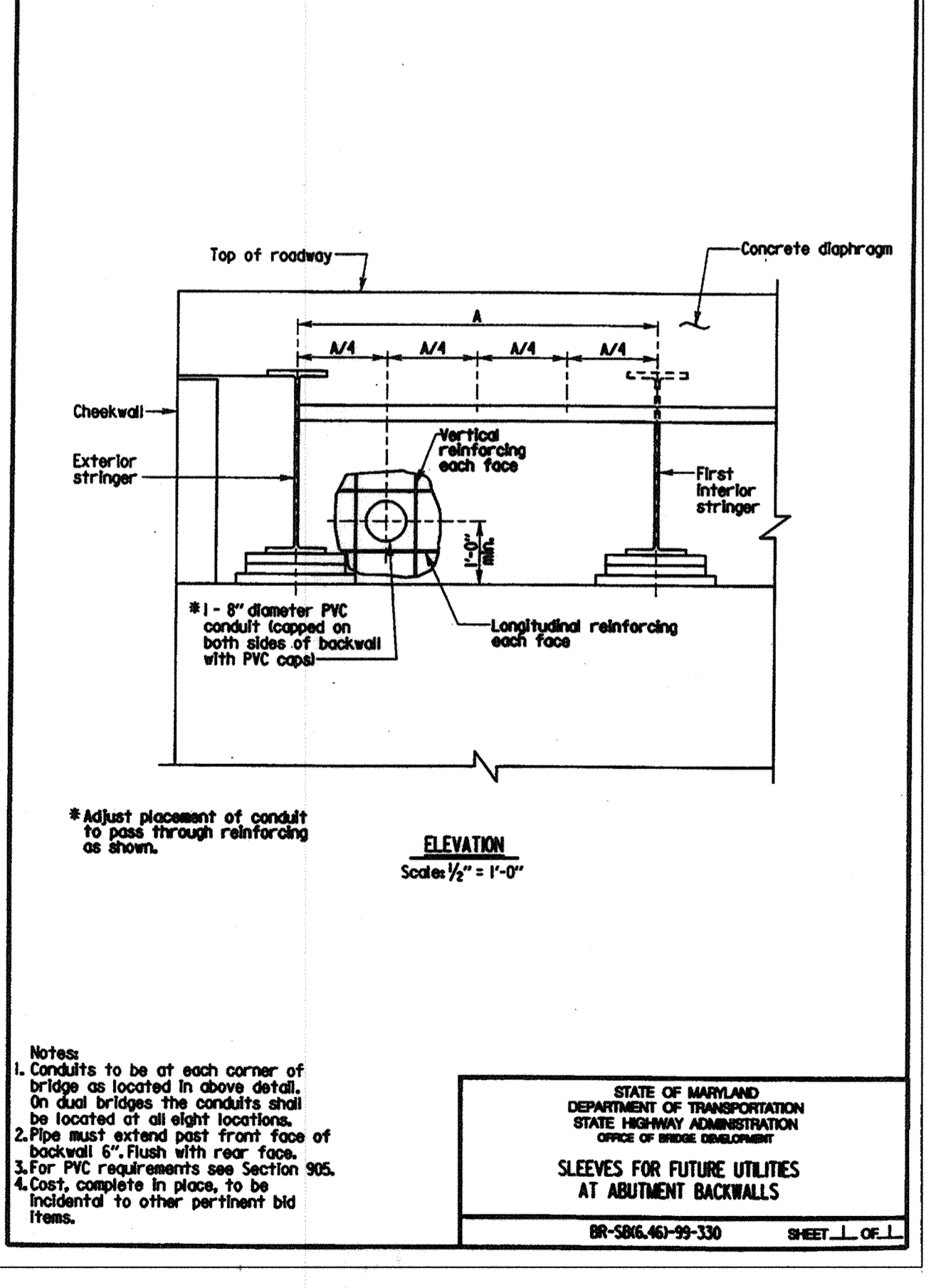
**Notes:**  
 1. Graded aggregate base to be placed and compacted in 6" lifts in accordance with Section 501. 2. The aggregate base shall be placed and compacted in 6" lifts in accordance with Section 501. 3. The contractor shall provide a well compacted aggregate base that will be necessary to overfill a 12" diameter hole in the concrete base. 4. The cost of the stone covered aggregate base and concrete will be incidental to the permanent structure concrete item.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**DRAINAGE SYSTEM AND BACKFILL FOR ABUTMENTS (SEMI-CANTILEVER)**  
 BR-SB00-01-80-10 SHEET 3 OF 5



**Notes:**  
 1. If pad height is less than 4" (at 4" of bearing), all dimensions, etc. shown on this sheet will prevail except no reinforcing steel will be required and pad must be poured monolithically with support.  
 2. Anchor bolts shall be set in round holes drilled or cored into the masonry.  
 3. The drilled or cored holes shall have a diameter of at least 1/8" larger than the diameter of the bolts.  
 4. Holes shall be filled with nonshrink grout. Nonshrink grout shall have a min. comp. strength of 5000 p.s.i. in 7 days when tested in accordance with ASTM T 105, except that the cube sides shall remain intact with a top freely attached throughout the cure period. The nonshrink grout shall have a minimum expansion of 0.02 after 7 days when tested in accordance with ASTM T-160.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**BEARING PAD WHERE ONLY A SINGLE SHOE IS REQUIRED ON A SUPPORT**  
 BR-SB00-02-80-12 SHEET 1 OF 1



**Notes:**  
 1. Conduits to be at each corner of bridge as located in above detail. On dual bridges the conduits shall be located at all eight locations.  
 2. Pipe must extend past front face of backwall 6". Flush with rear face.  
 3. For PVC requirements see Section 505.  
 4. Cost, complete in place, to be incidental to other pertinent bid items.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**SLEEVES FOR FUTURE UTILITIES AT ABUTMENT BACKWALLS**  
 BR-SB00-02-80-12 SHEET 1 OF 1

**GENERAL NOTES**

**Specifications:** Latest SMA Specifications and Special Provisions for materials and construction. Latest ASHTO Standard Specifications for Highway Bridges for design.

**Materials:** Posts and rolls shall meet the requirements of F-1083, Schedule 80. Fabric shall be 6 gauge, 2" PVC coated mesh conforming to 94.01. All posts, braces, fittings and hardware shall be PVC coated. Coating shall conform to 94.03 except that nuts, bolts and washers shall also be PVC coated and touched up after installation. All plates shall be steel conforming to A 709 Grade 36. Anchor studs or anchor bolts shall conform to A 216, Type 430 or Type 304 stainless steel, annealed, hot-finished, ultimate strength 70 000 psi min., 20% min. elongation. Threads may be rolled or cut. Epoxy grout for anchor studs in cored holes shall conform to 902.1d. PVC color for all elements of fence shall be black unless otherwise noted. All longitudinal rolls shall be parallel to top of parapet. All posts shall be set normal to top of parapet for roadway grades 6% or less. For grades over 6% posts shall be set plumb. The chain link fence shall be true to line, taut, tight fit to top of parapet, with 1/2" min. to 1" max. gap, and shall comply with the best practice for fence construction of this type. Post and rolls shall be permanently positioned before fabric is placed. For post spacing see pertinent structure sheets. Precoated longitudinal rolls, if cut, shall have the cut end coated with PVC touch up material supplied by the manufacturer prior to erection. If Contractor elects to place anchor studs after placing concrete parapet, newly placed rebar shall be located so that curing does not damage same, all holes shall be cored (not drilled) and the diameter of the cored holes for the anchor studs shall be 1/2".

**Measurement and Payment:** The furnishing, fabricating, erecting, etc., of all new chain link fence on the bridges, complete in place, will be measured and paid for at the Contract unit prices per each of the Contract Item Safety Fence For Bridge Items. The furnishing, fabricating, erecting, etc., of all new chain link fence anti-climb shields, complete in place, will be measured and paid for at the Contract unit prices per each of the Contract Item Safety Fence Anti-Climb Shield Items. Any defects uncovered by the Inspection of welds on base plates and posts shall be repaired or replaced by new members at no additional cost to the Administration.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**CHAIN LINK SAFETY FENCE-NEW STRUCTURES**  
 GENERAL NOTES  
 BR-SB00-01-75-21 SHEET 1 OF 1

**NOLAN Associates, Inc.**  
 Engineers - Civil/Structural/Inspections  
 4785 Dorsey Hall Drive  
 Suite 124  
 Ellicott City, Maryland 21042  
 Phone: (410) 995-3651 Fax: (410) 995-1363

5-24-19 Revision 1 Change Sheet Number

DATE	DESCRIPTION	REVISION

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul B. Smith*  
 Director - Department of Planning and Zoning  
 Date: 3/2/02

*Wanda Hammonds*  
 Chief, Division of Land Development  
 Date: 3/1/02

*Chris Dammann*  
 Chief, Development Engineering Division  
 Date: 2/5/02

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 108  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

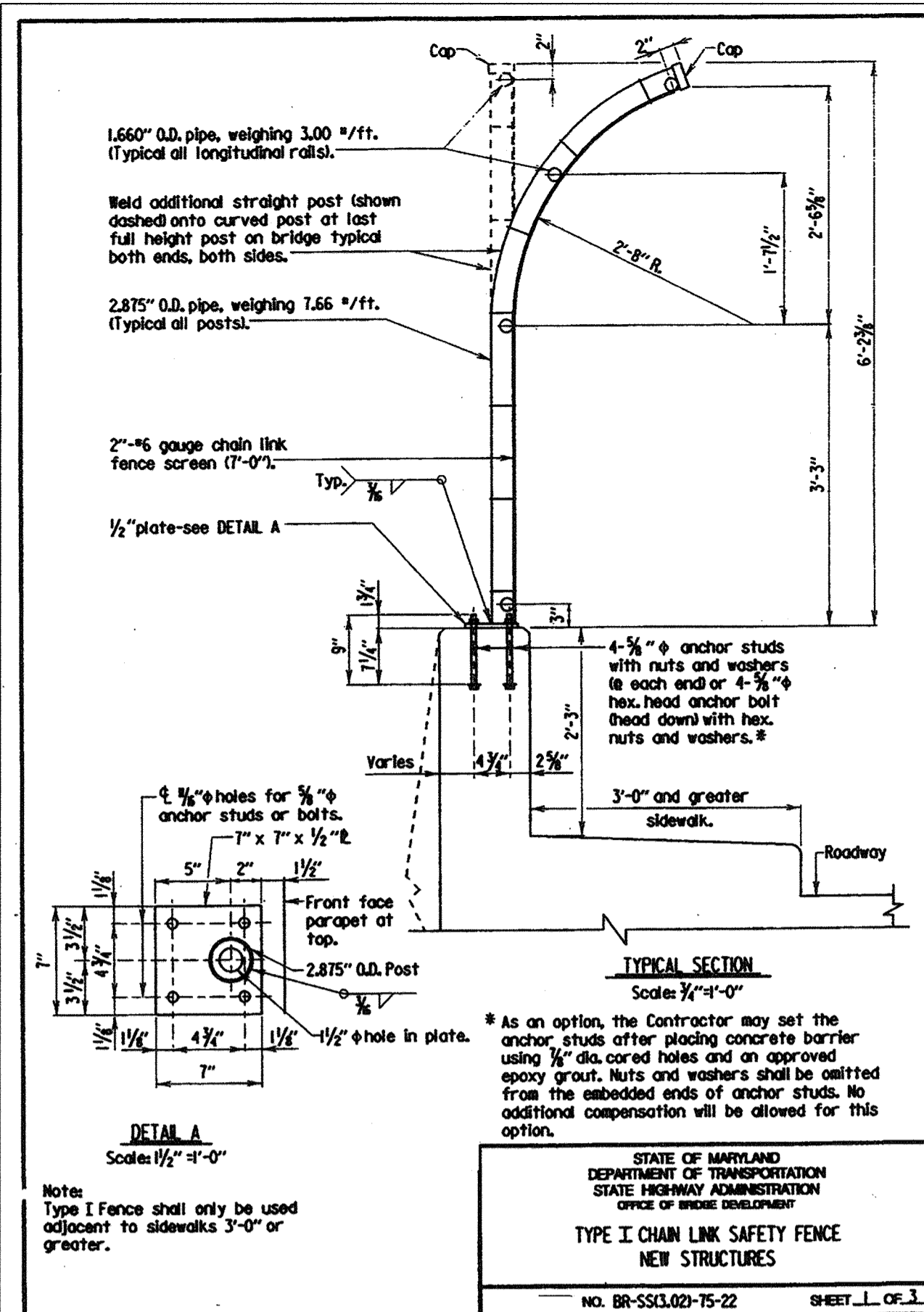
PROJECT: Northeastern Elementary School No. 4

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	0,9	R-6C	37	First	6011

WATER CODE: D 05 SEWER CODE: 2650000

TAX MAP No.: 37 PARCEL No.: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 2 JANUARY 2002  
 BID AND CONSTRUCTION 14 JANUARY 2002  
 SHEET 47 OF 56

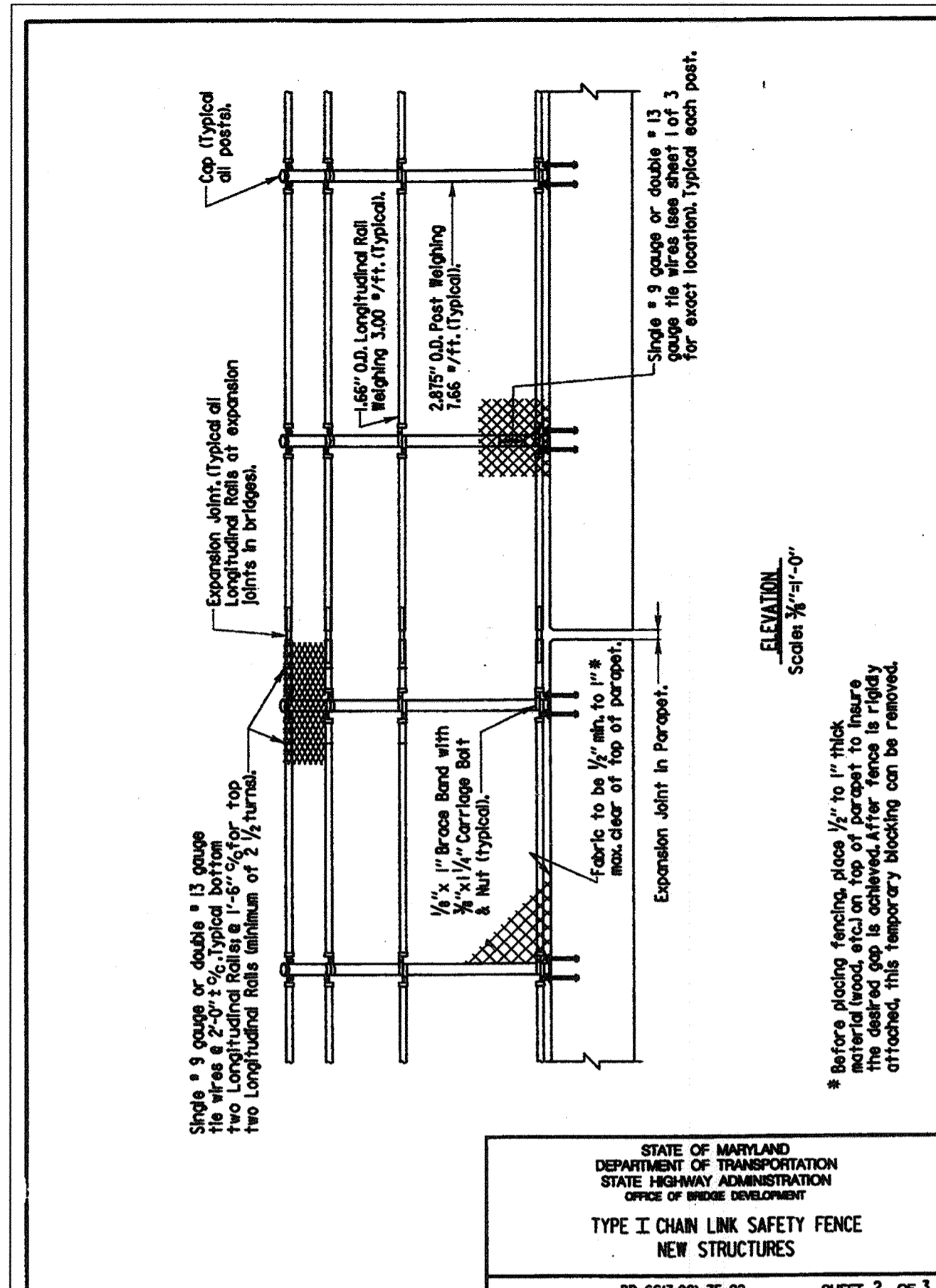




STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**TYPE I CHAIN LINK SAFETY FENCE  
NEW STRUCTURES**

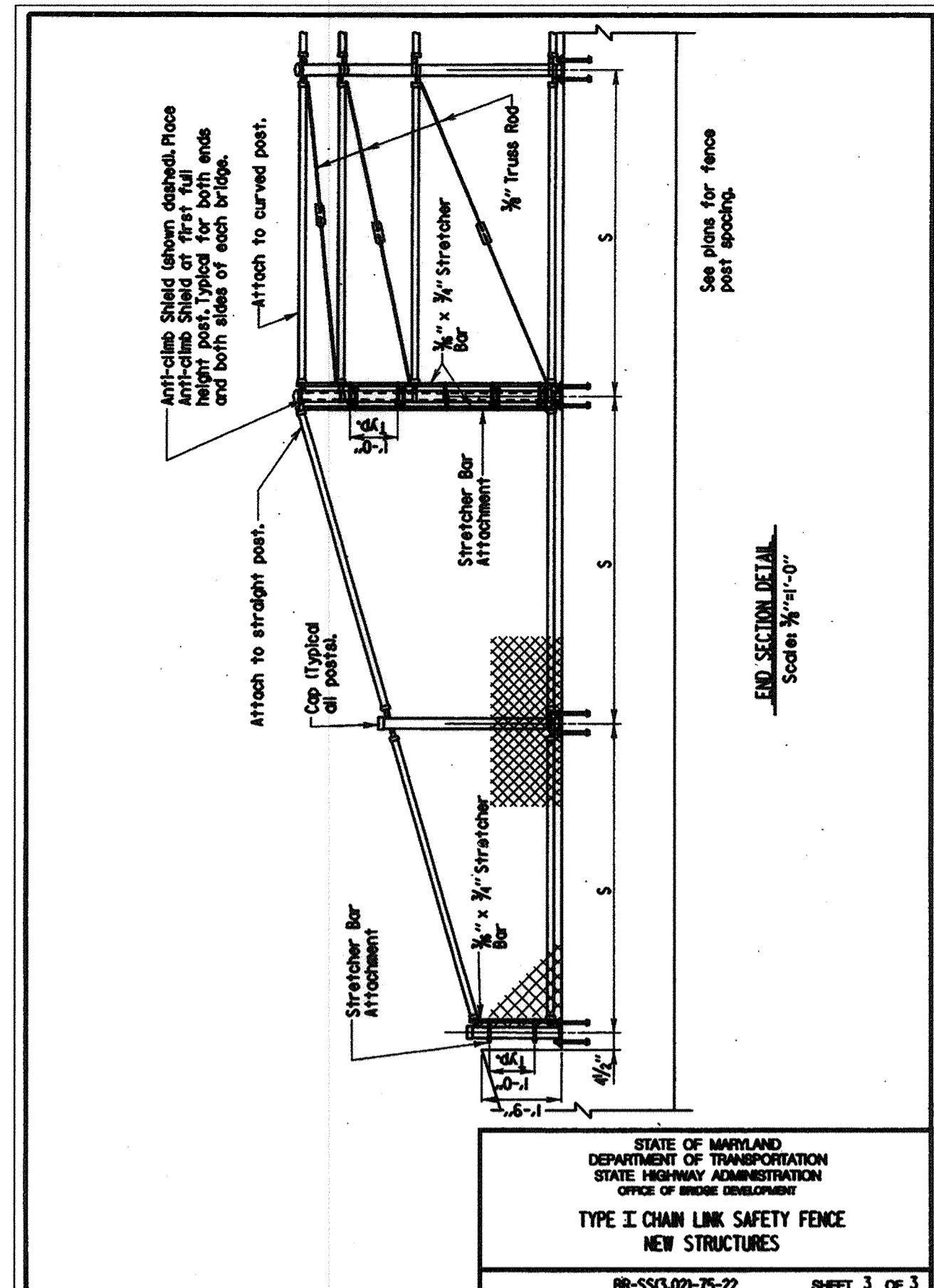
BR-SS3.02-75-22 SHEET 1 OF 3



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**TYPE I CHAIN LINK SAFETY FENCE  
NEW STRUCTURES**

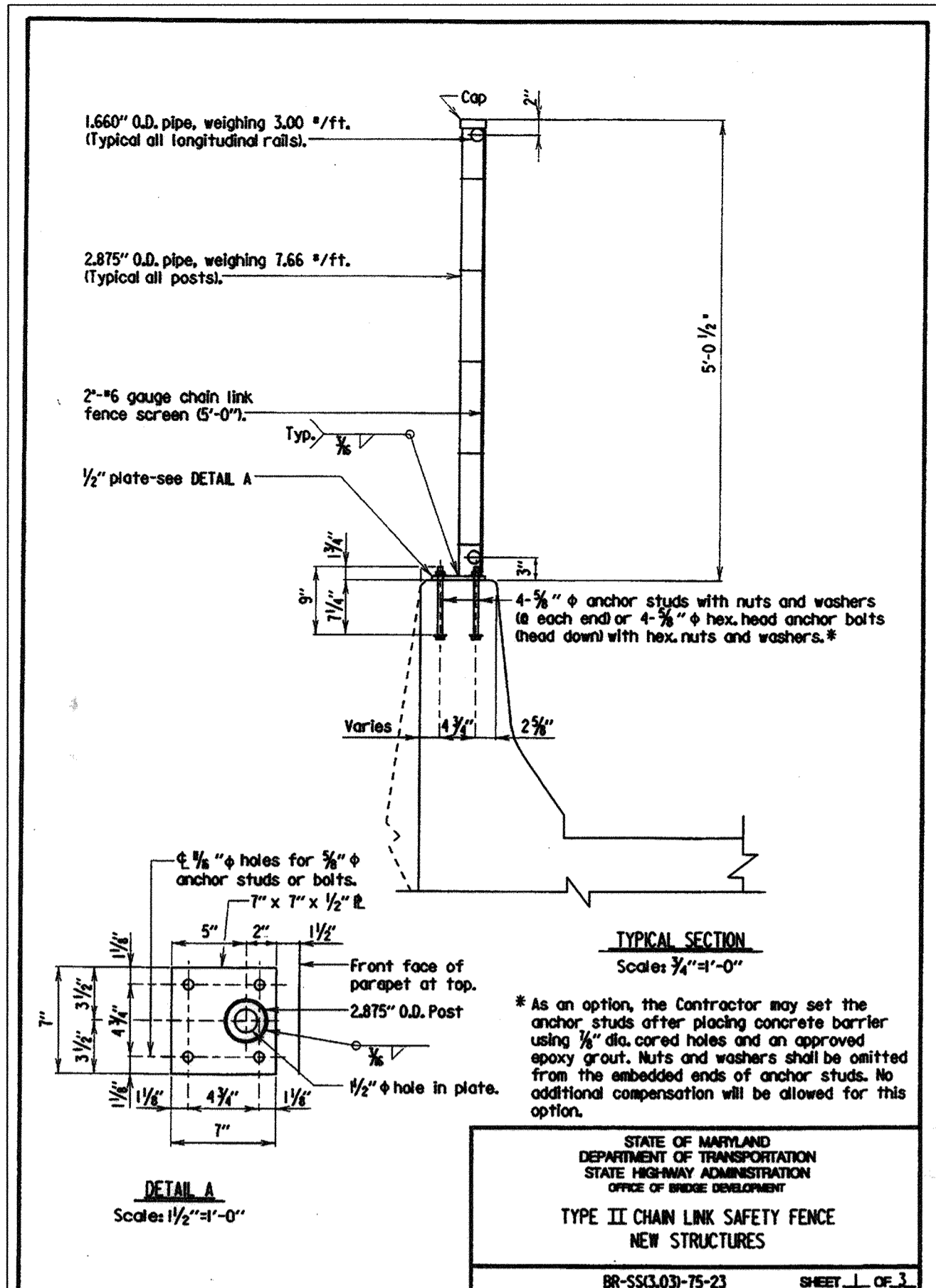
BR-SS3.02-75-22 SHEET 2 OF 3



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**TYPE I CHAIN LINK SAFETY FENCE  
NEW STRUCTURES**

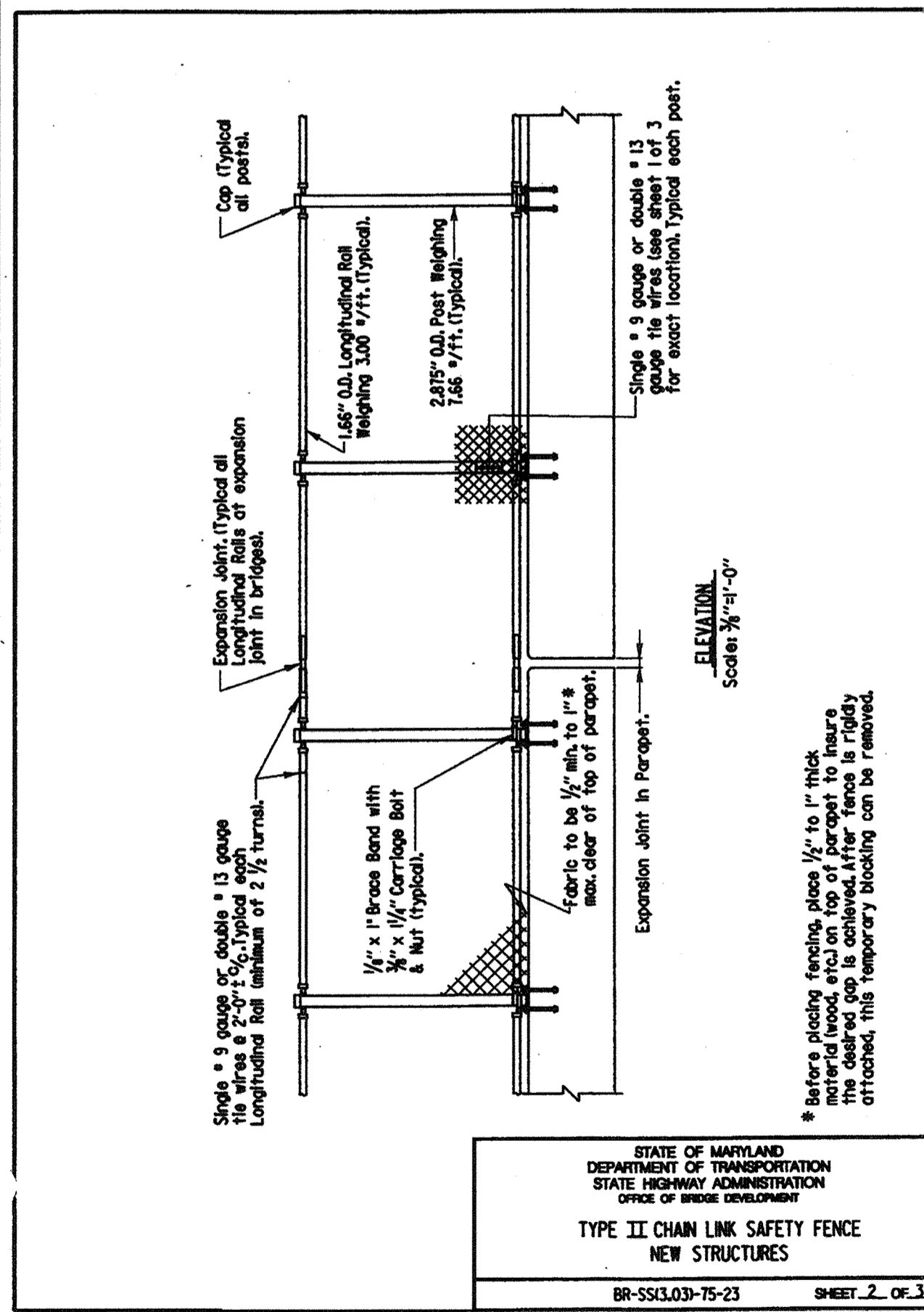
BR-SS3.02-75-22 SHEET 3 OF 3



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**TYPE II CHAIN LINK SAFETY FENCE  
NEW STRUCTURES**

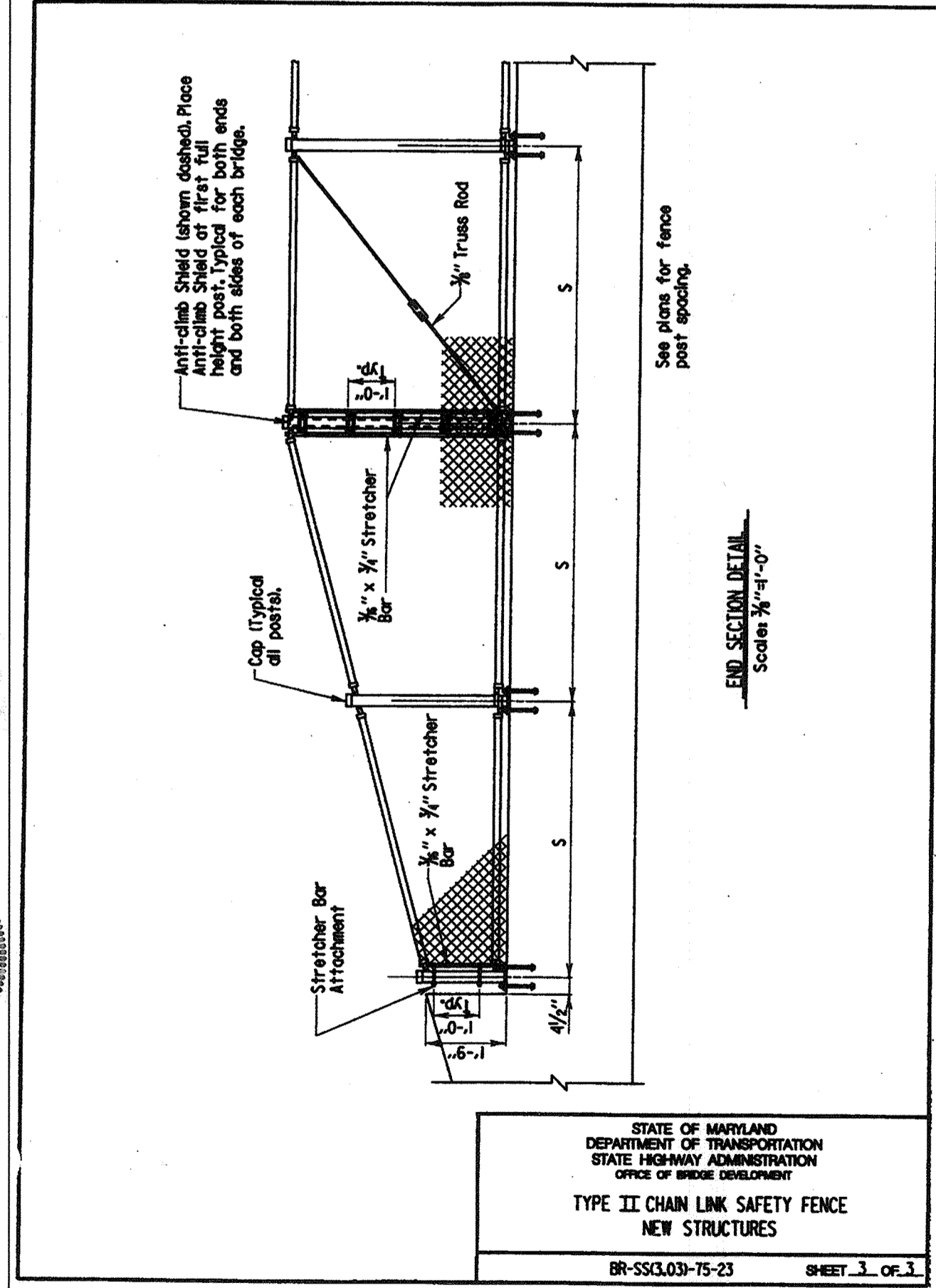
BR-SS3.03-75-23 SHEET 1 OF 3



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**TYPE II CHAIN LINK SAFETY FENCE  
NEW STRUCTURES**

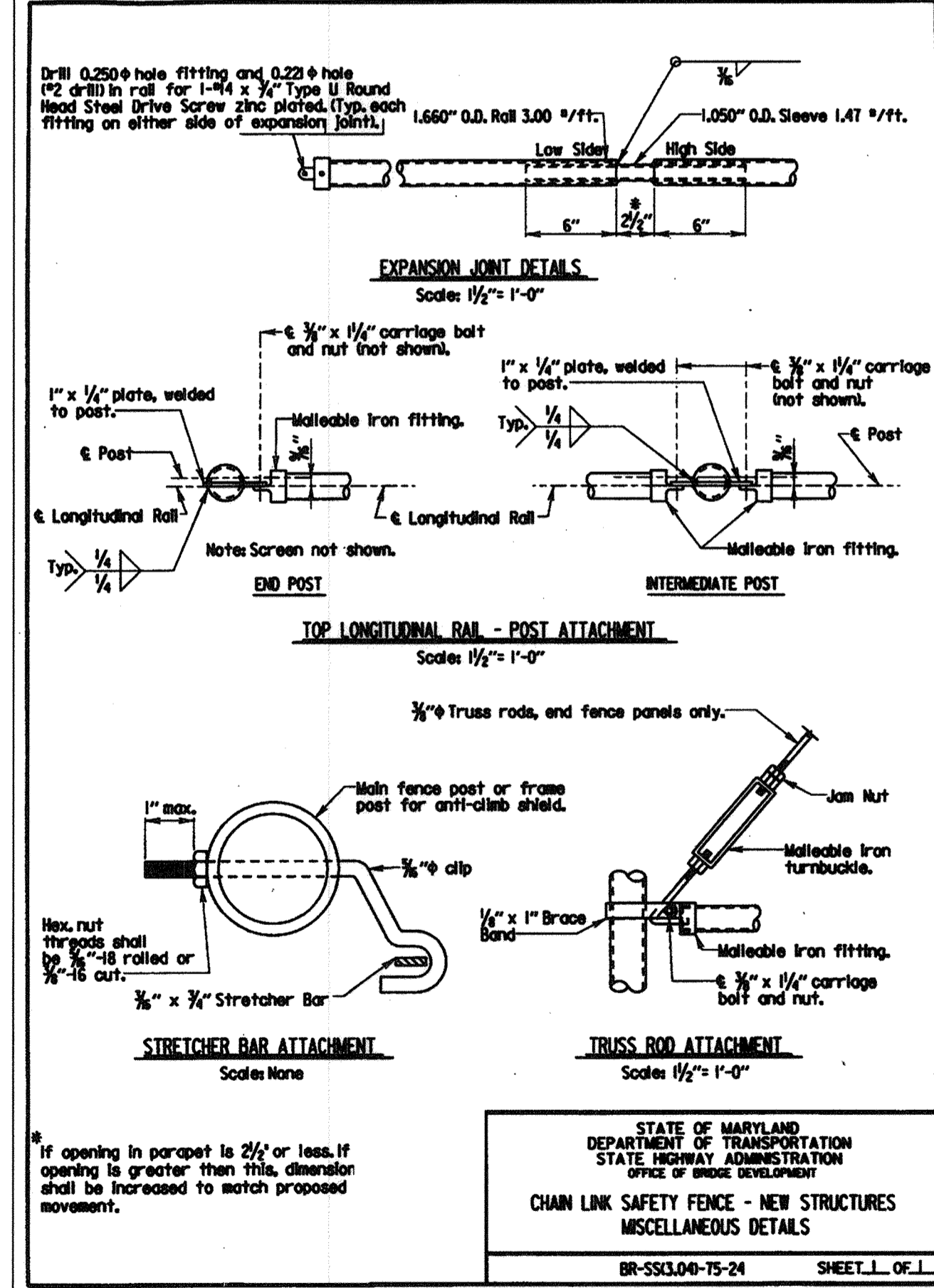
BR-SS3.03-75-23 SHEET 2 OF 3



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**TYPE II CHAIN LINK SAFETY FENCE  
NEW STRUCTURES**

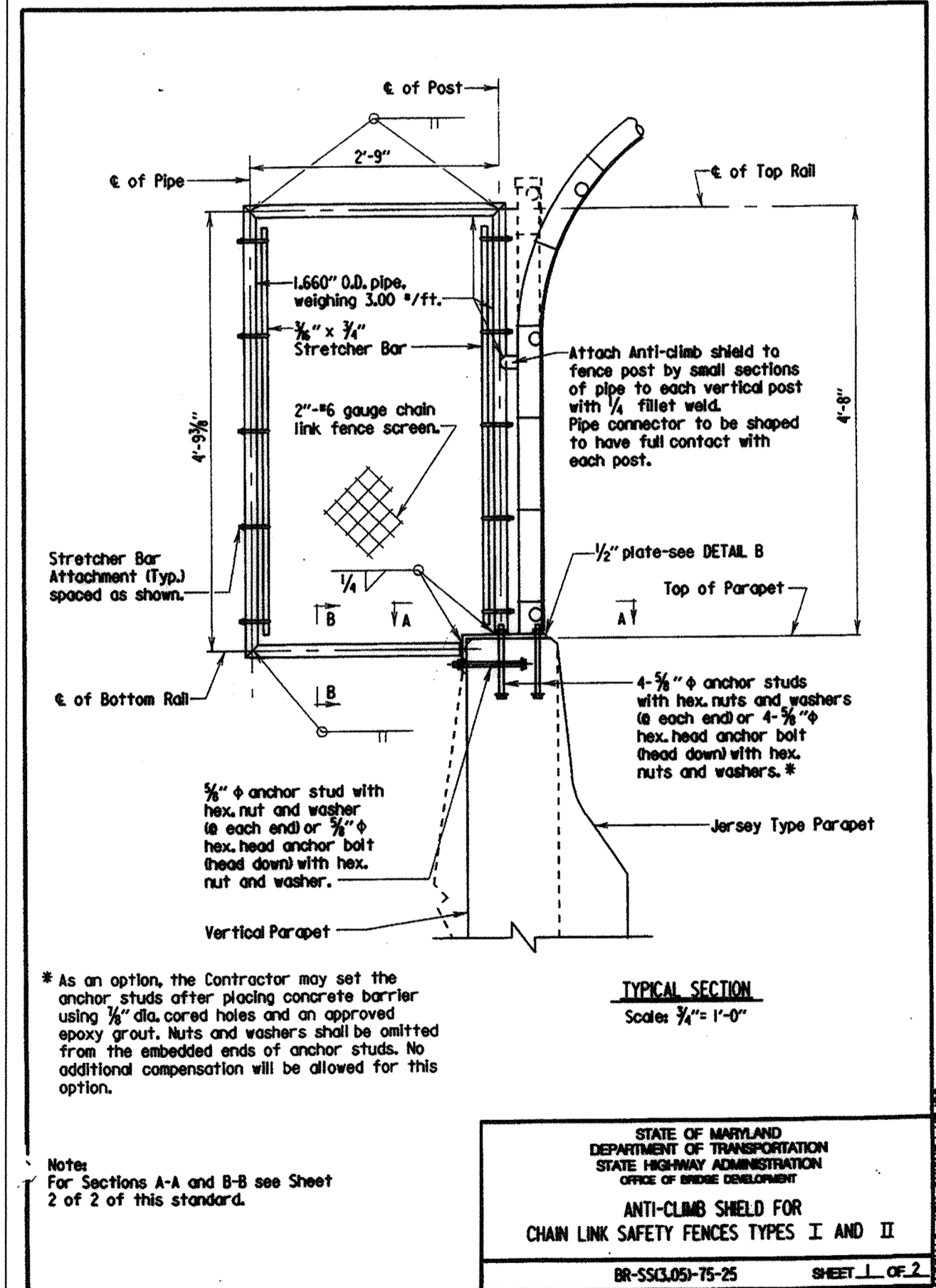
BR-SS3.03-75-23 SHEET 3 OF 3



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**CHAIN LINK SAFETY FENCE - NEW STRUCTURES  
MISCELLANEOUS DETAILS**

BR-SS3.04-75-24 SHEET 1 OF 1



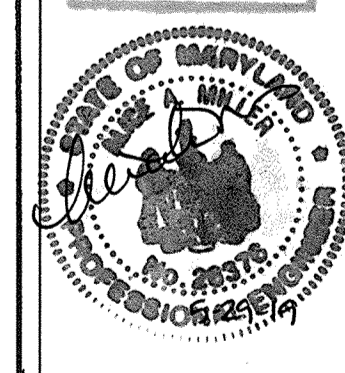
STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**ANTI-CLIMB SHIELD FOR  
CHAIN LINK SAFETY FENCES TYPES I AND II**

BR-SS3.05-75-25 SHEET 1 OF 2

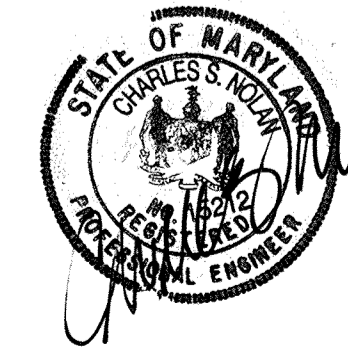
Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 20571C  
Expiration Date: 1-1-21  
For Revision Only



**NOLAN**  
Associates, Inc.  
Engineers - Civil/Structural/Inspections  
4785 Dorsey Hall Drive  
Suite 124  
Ellicott City, Maryland 21042  
Phone: (410) 995-3851 Fax: (410) 995-1363

DATE	DESCRIPTION	REVISION
5-29-19	Revision 1 Changed Sheet Number	



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 3/8/02  
Director, Department of Planning and Zoning Date

*[Signature]* 2/7/02  
Chief, Division of Land Development Date

*[Signature]* 2/5/02  
Chief, Development Engineering Division Date

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young

Address Chart	
Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	8,9	R-SC	37	First	6011

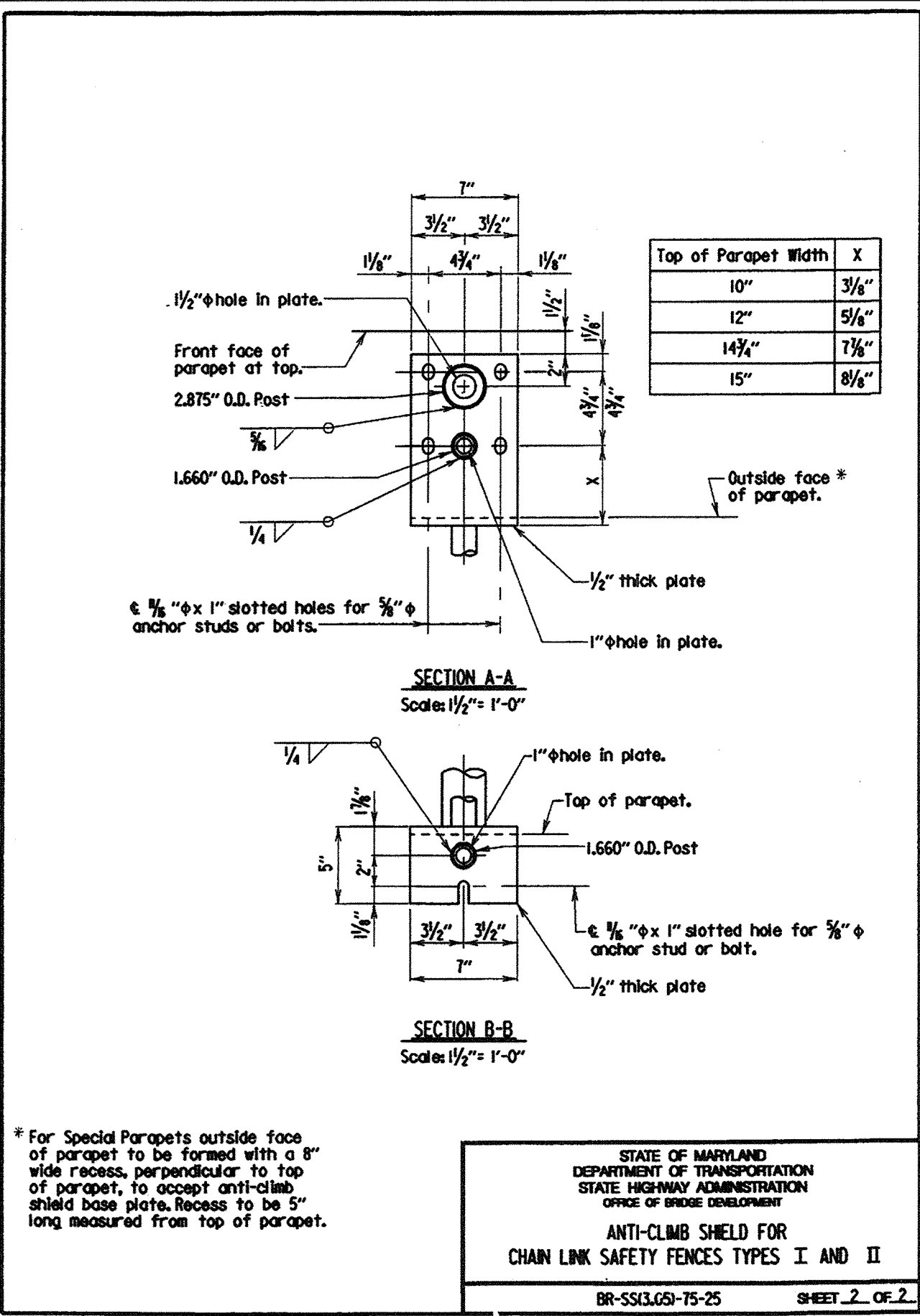
WATER CODE	SEWER CODE
D 05	2650000

**STANDARD DETAILS**

**NORTHEASTERN ELEMENTARY  
SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No: 37 PARCEL No: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 2 JANUARY 2002  
BID AND CONSTRUCTION 14 JANUARY 2002  
SHEET 48 OF 56





For Special Parapets outside face of parapet to be formed with a 8" wide recess, perpendicular to top of parapet, to accept anti-climb shield base plate. Recess to be 5" long measured from top of parapet.

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

ANTI-CLIMB SHIELD FOR  
CHAIN LINK SAFETY FENCES TYPES I AND II

BR-SS16J2-75-25 SHEET 2 OF 2

**GENERAL NOTES**

**Specifications:** Latest SIA Specifications and Special Provisions for materials and construction. Latest AASHTO Standard Specifications for Highway Bridges for design.

**Materials:** Posts and rails shall meet the requirements of F-1083, Schedule 80. Fabric shall be 6 gauge, 2" PVC coated mesh conforming to 94.00.

All posts, braces, fittings and hardware shall be PVC coated. Coating shall conform to 94.03 except that nuts, bolts and washers shall also be PVC coated and touched up after installation.

All plates shall be steel conforming to a 709 Grade 36.

Anchor studs or anchor bolts shall conform to a 276, Type 430 or Type 304 stainless steel annealed, hot-finished, ultimate strength 1000 psi min., 20% min. elongation. Threads may be rolled or cut.

Epoxy grout for anchor studs in bored holes shall conform to 902.1(d).

PVC color for all elements of fence shall be black unless otherwise noted.

**Construction:** All longitudinal rails shall be parallel to top of wall.

All posts shall be set normal to top of wall for roadway grades 6% or less. For grades over 6% posts shall be set plumb.

The chain link fence shall be true to line, taut, tight fit to top of wall 1/2" maximum gap and shall comply with the best practice for fence construction of this type.

Post and rails shall be permanently positioned before fabric is placed.

For post spacing see pertinent structure sheets.

Precasted longitudinal rails, if cut, shall have the cut end coated with PVC touch up material supplied by the manufacturer prior to erection.

If Contractor elects to place anchor studs after placing concrete wall, newly placed rebar shall be located so that coring does not damage same, all holes shall be cored that drilled and the diameter of the cored holes for the anchor studs shall be 1/2".

The furnishing, fabricating, erecting, etc., of all new chain link fence on the retaining wall or culvert headwalls and wing walls, complete in place, will not be measured for payment but all costs thereof shall be included in the Contract lump sum prices for the pertinent Retaining Wall or Box Culvert Details.

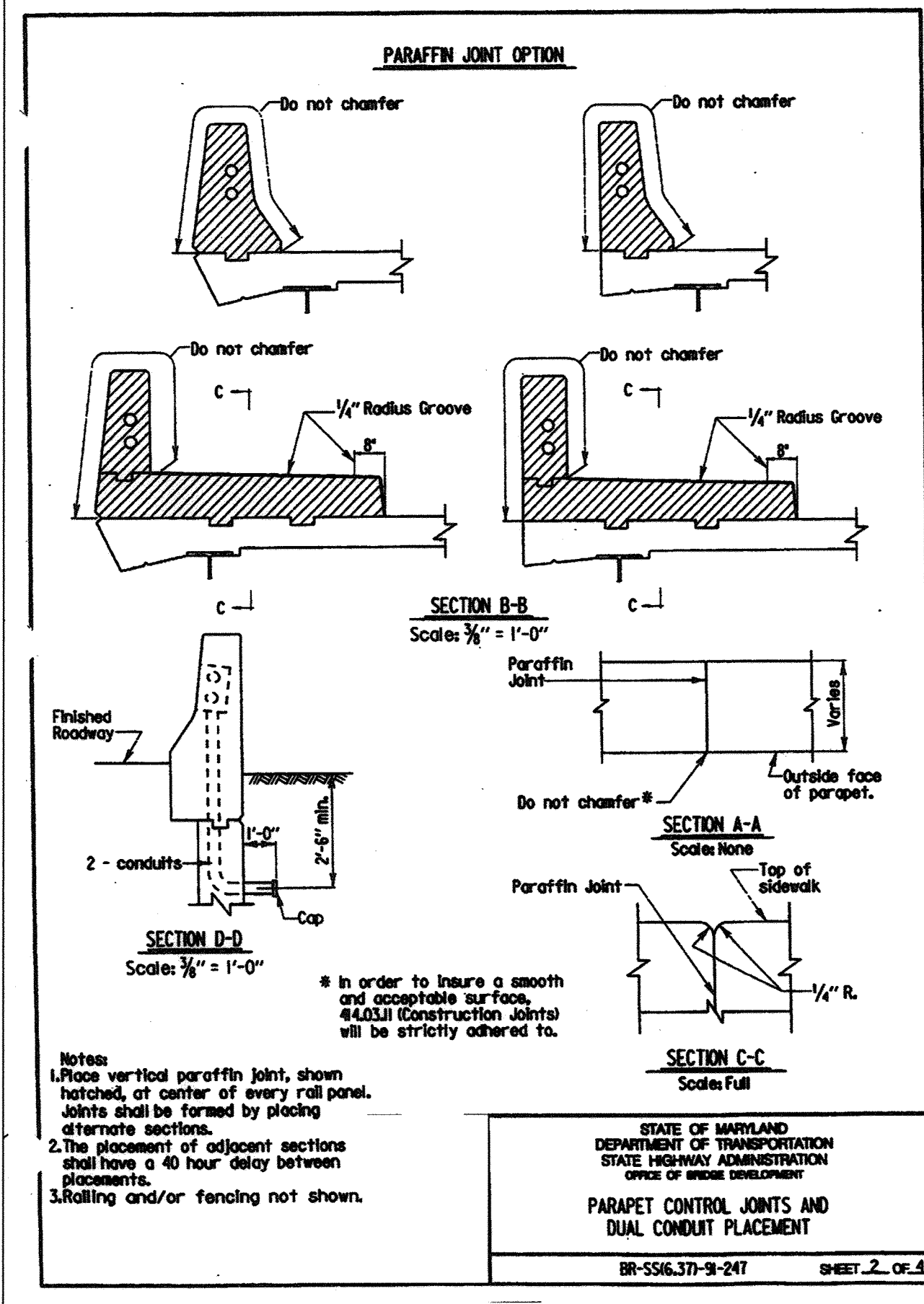
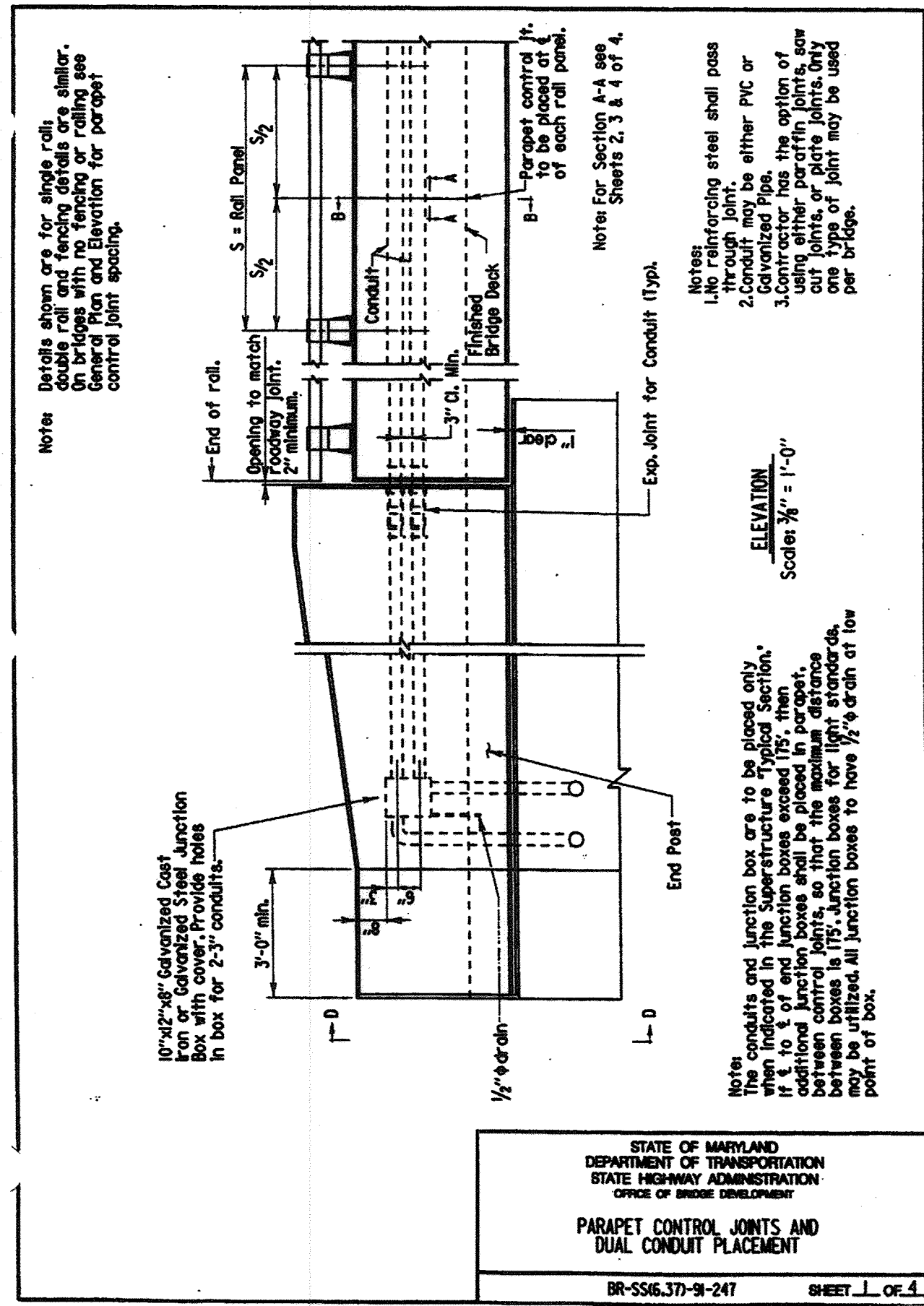
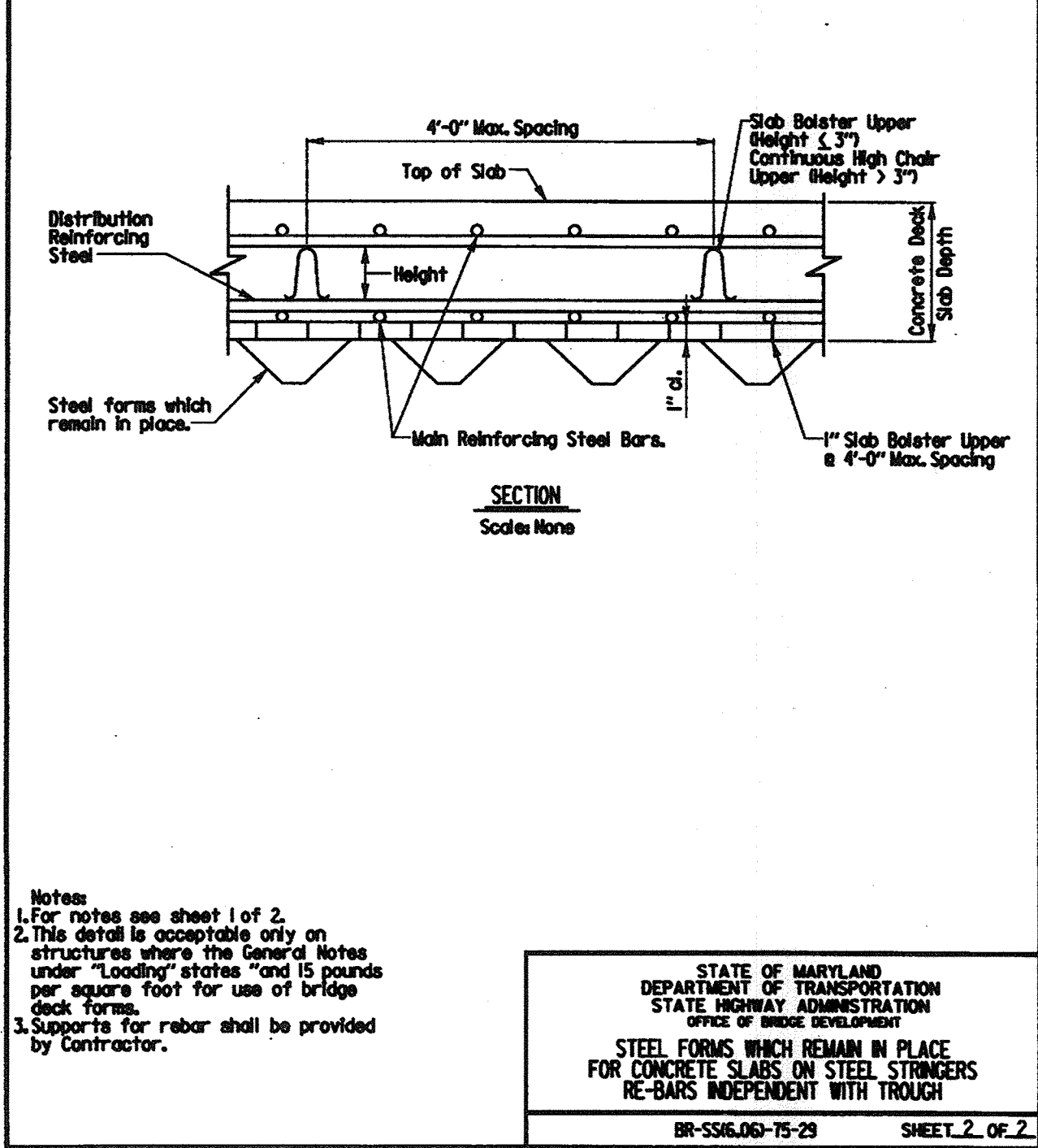
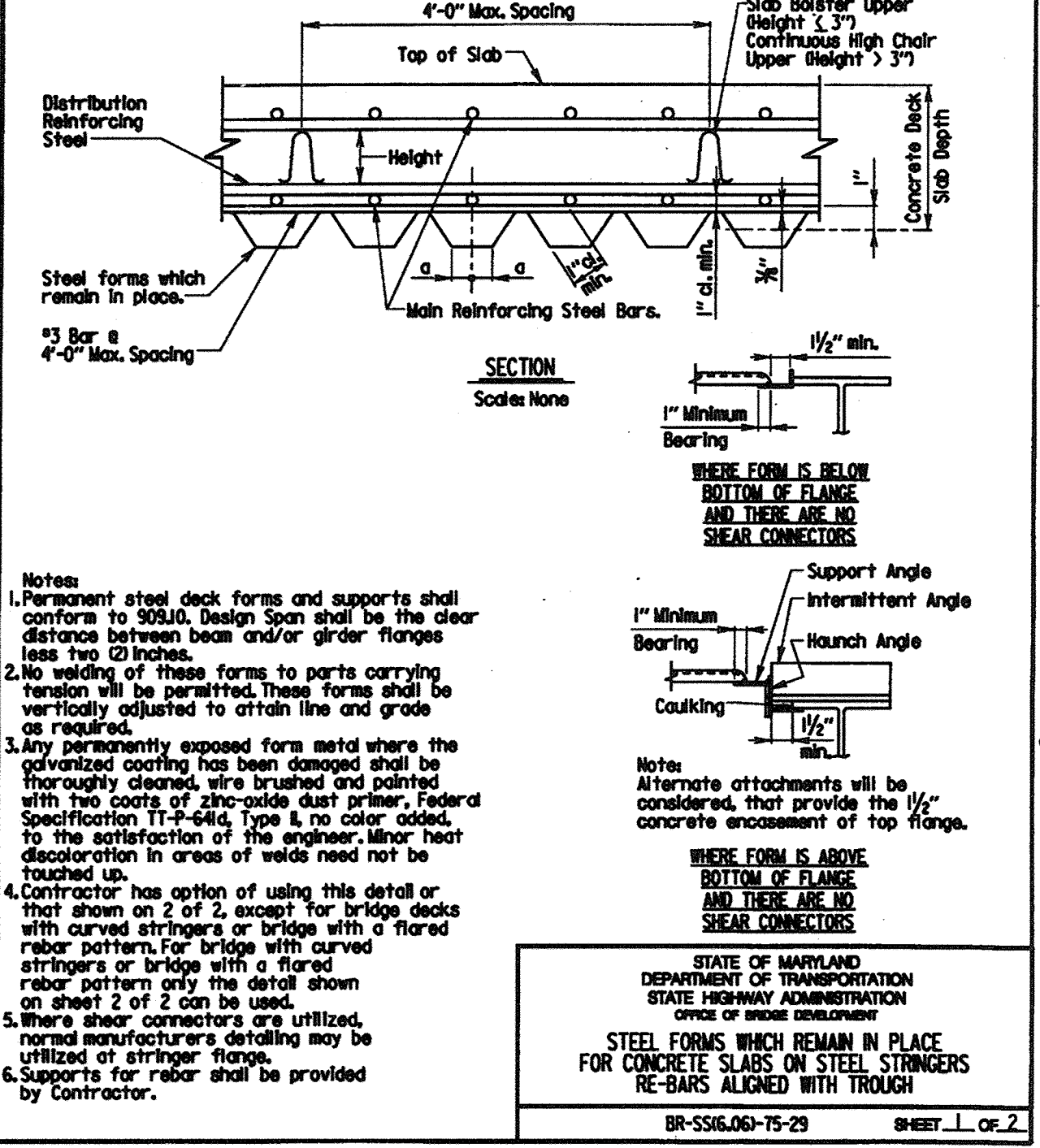
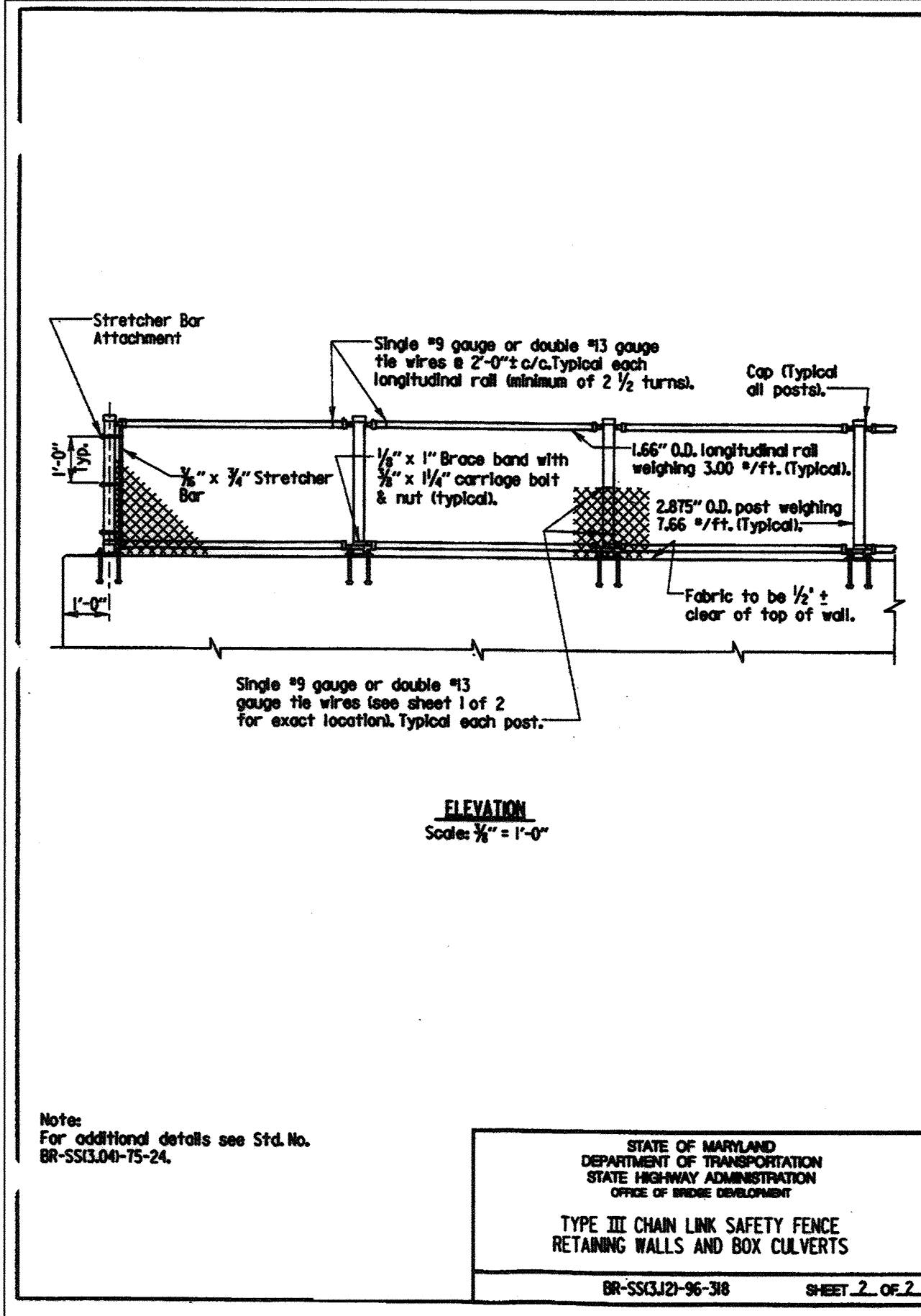
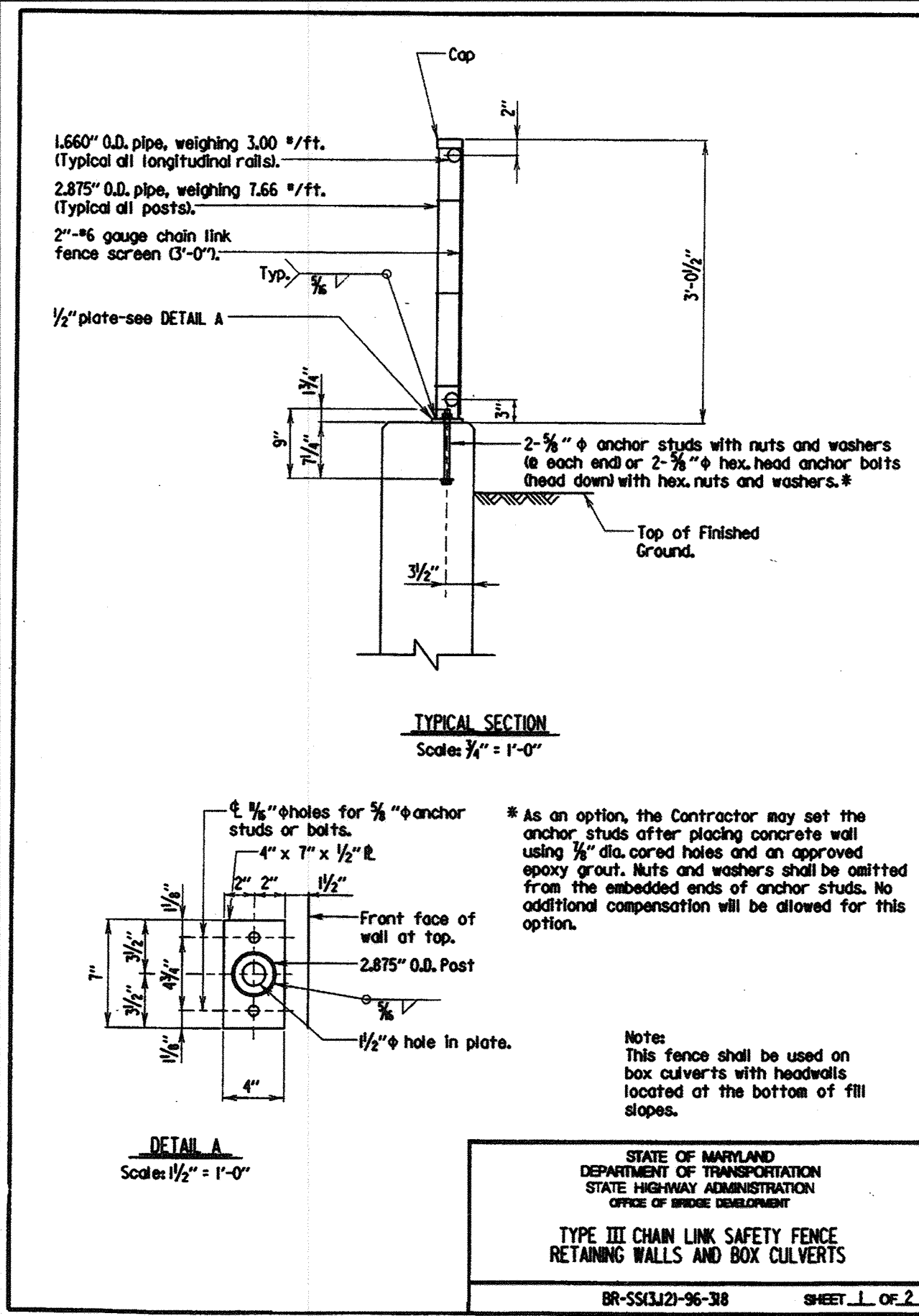
Any defects uncovered by the inspection of welds on base plates and poles shall be repaired or replaced by new members at no additional cost to the Administration.

**Measurement and Payment:**

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

CHAIN LINK SAFETY FENCE  
RETAINING WALLS AND BOX CULVERTS  
GENERAL NOTES

BR-SS16J2-96-37 SHEET 1 OF 1



DATE	DESCRIPTION	REVISION BLOCK
5-24-19	Revised 1 Changed Sheet Number	

**NOLAN Associates, Inc.**  
Engineers - Civil/Structural/Inspections  
4785 Dorsey Hall Drive  
Suite 124  
Ellicott City, Maryland 21042  
Phone: (410) 995-3651 Fax: (410) 995-1363

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Frank Rantz*  
Director, Department of Planning and Zoning  
Date: 3/8/02

*Cindy Humber*  
Chief, Division of Land Development  
Date: 3/2/02

*John O'Connell*  
Chief, Development Engineering Division  
Date: 3/5/02

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2307/562	B,9	R-SC	37	First	6011

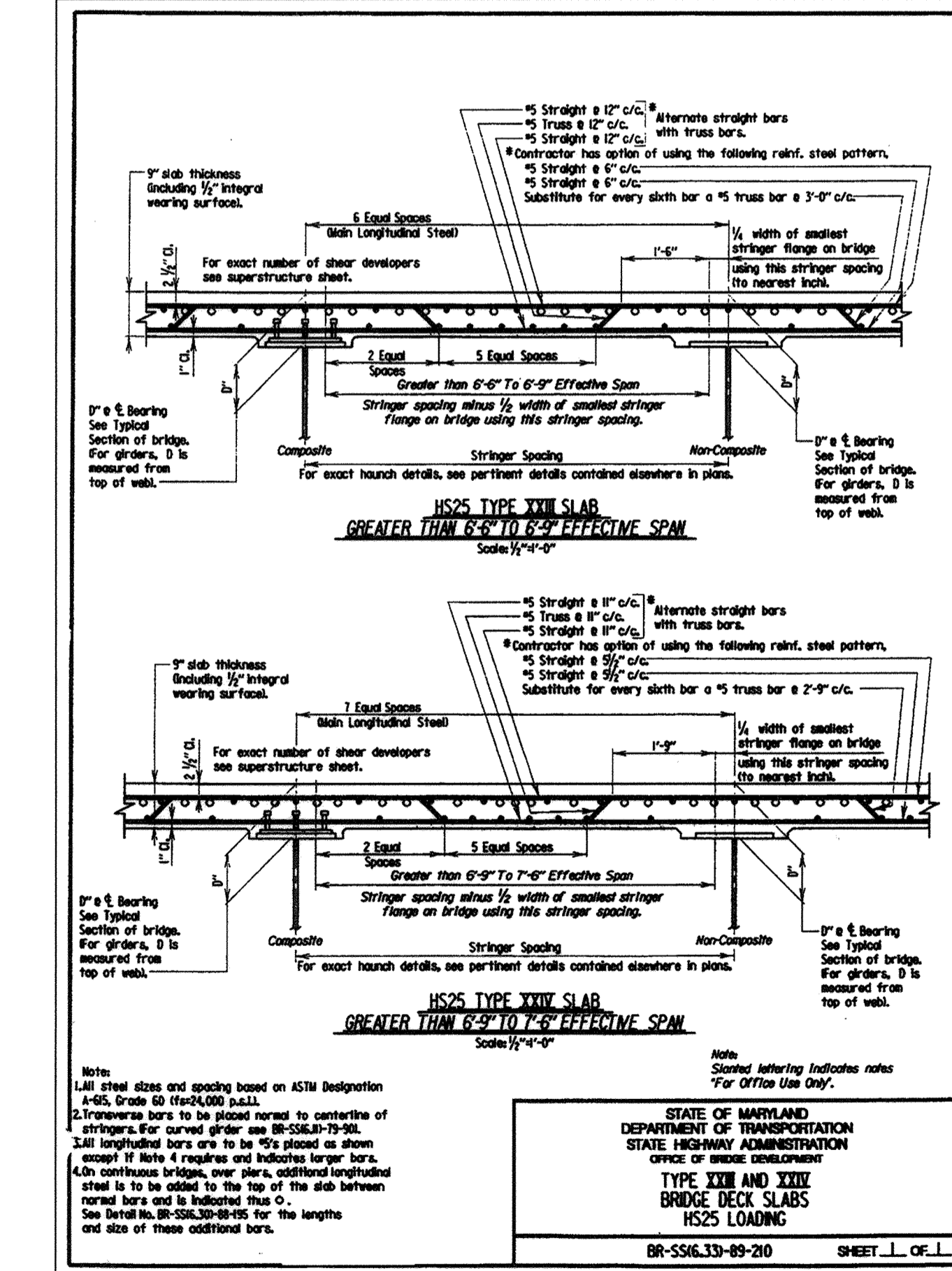
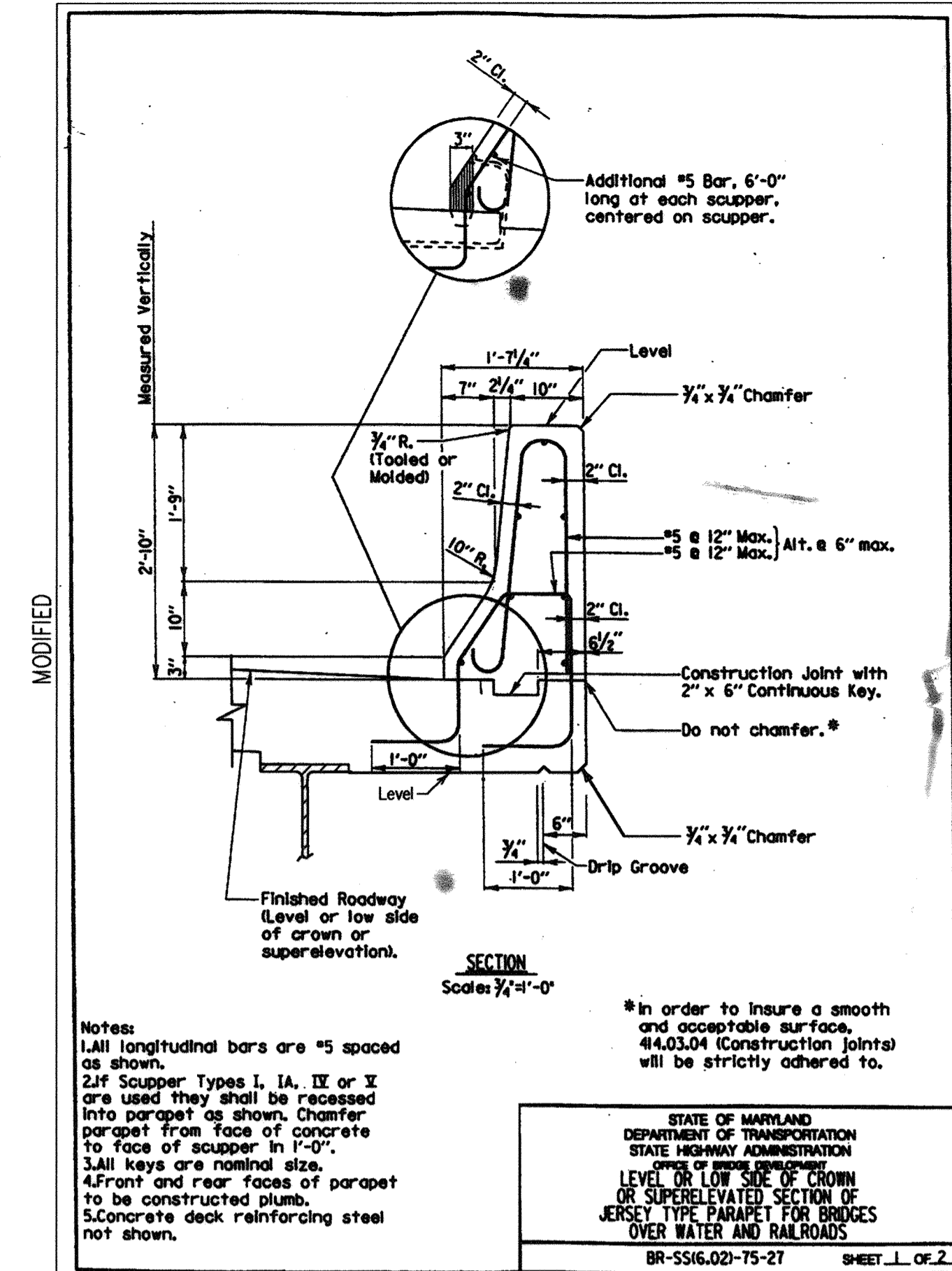
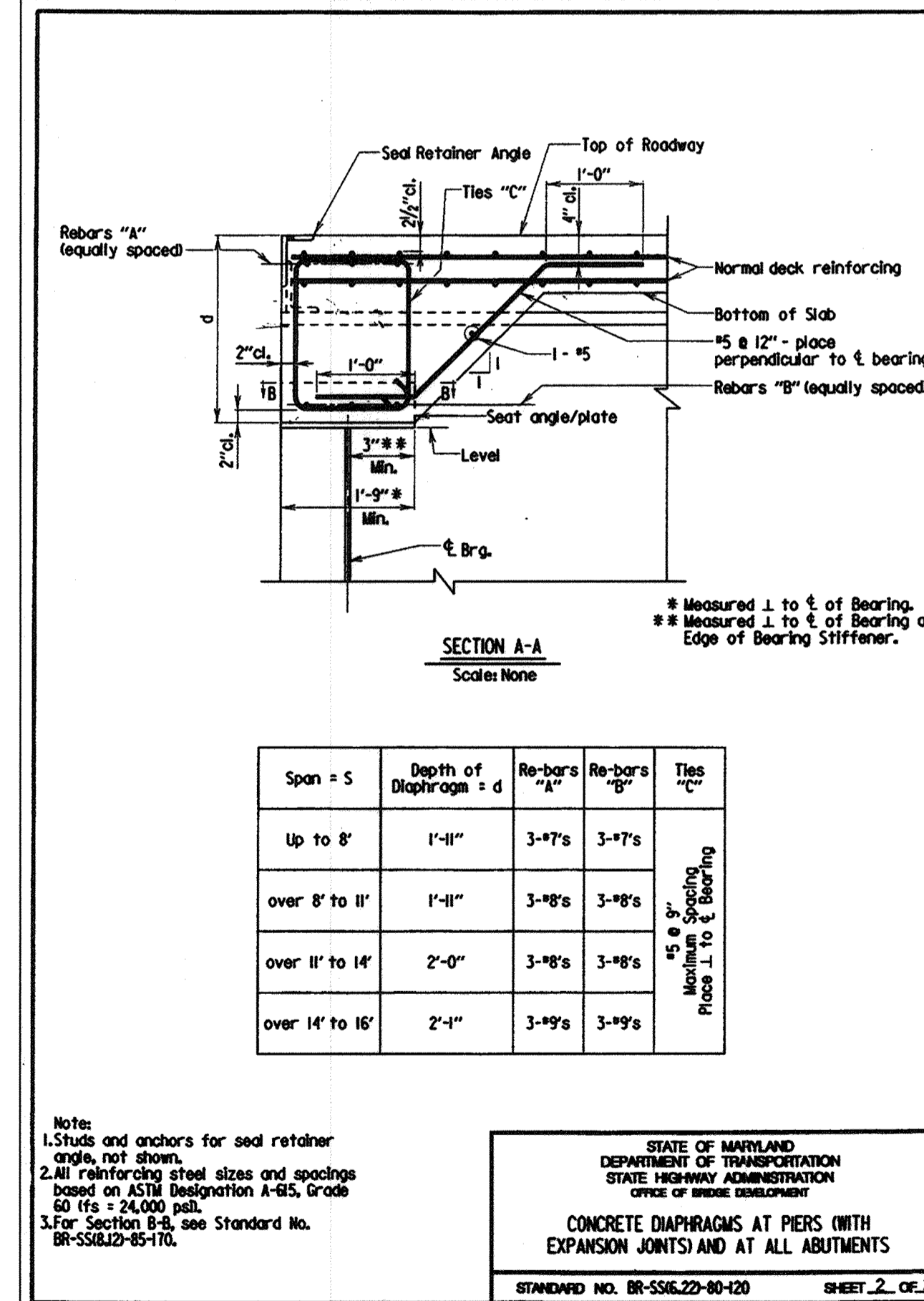
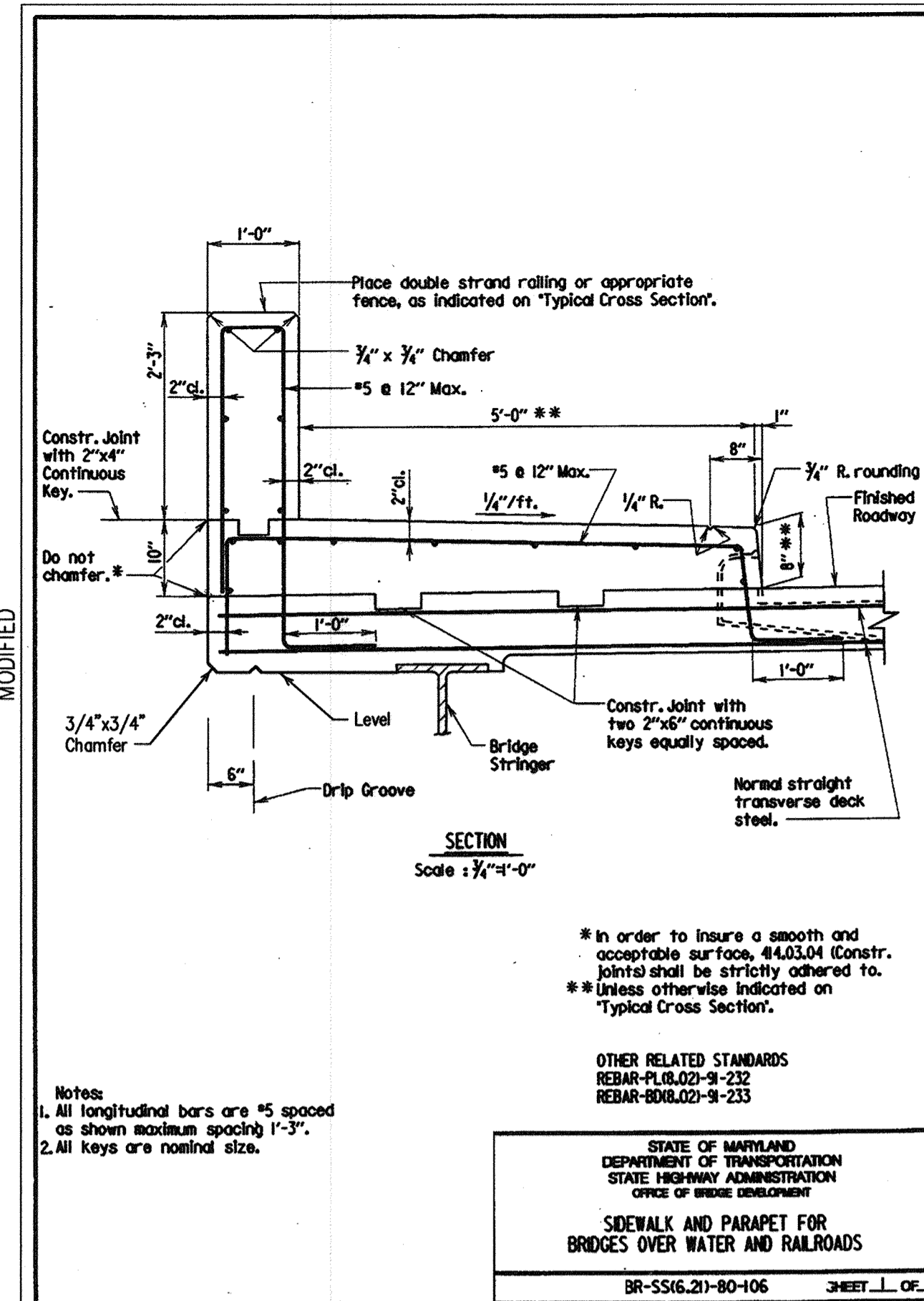
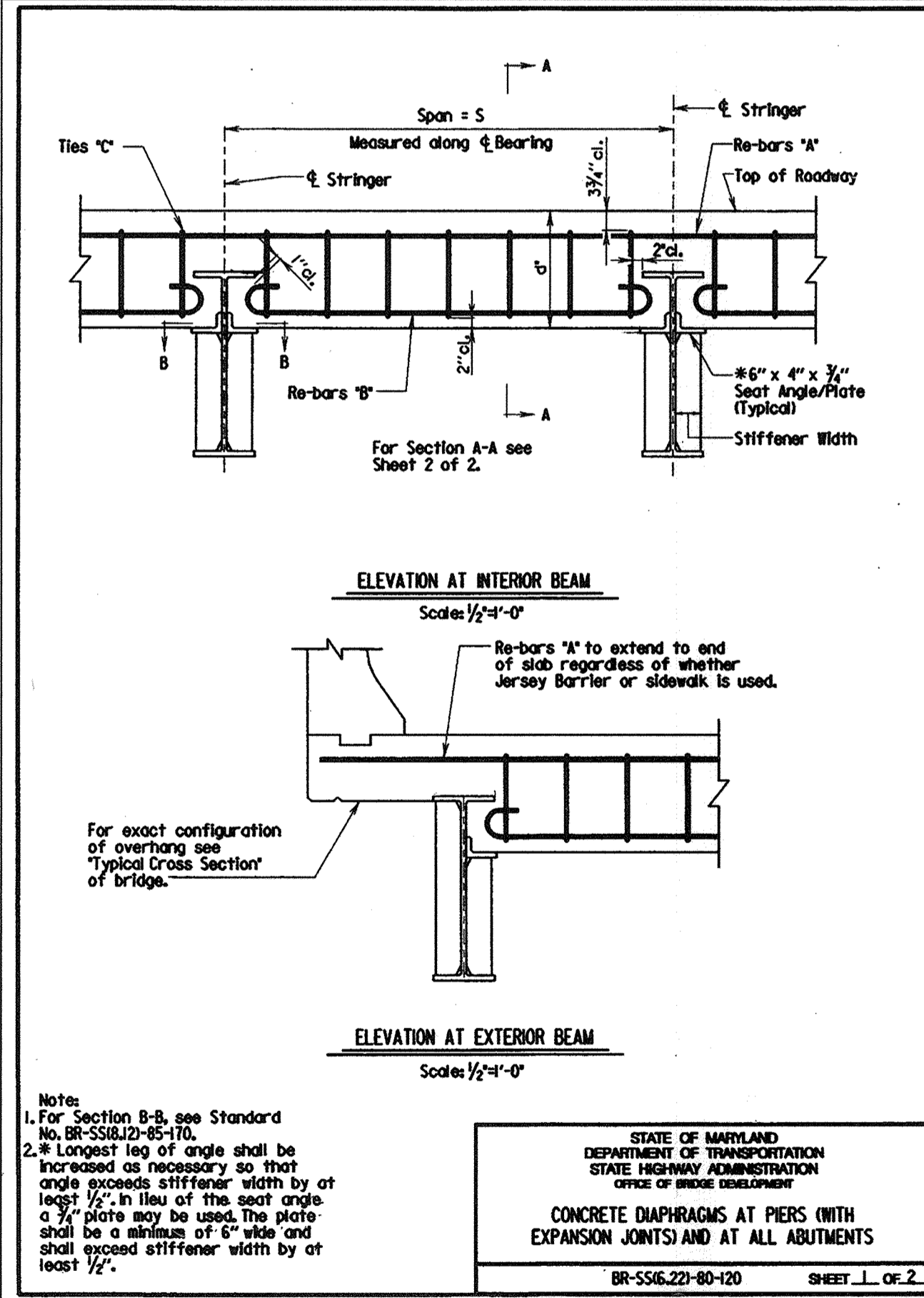
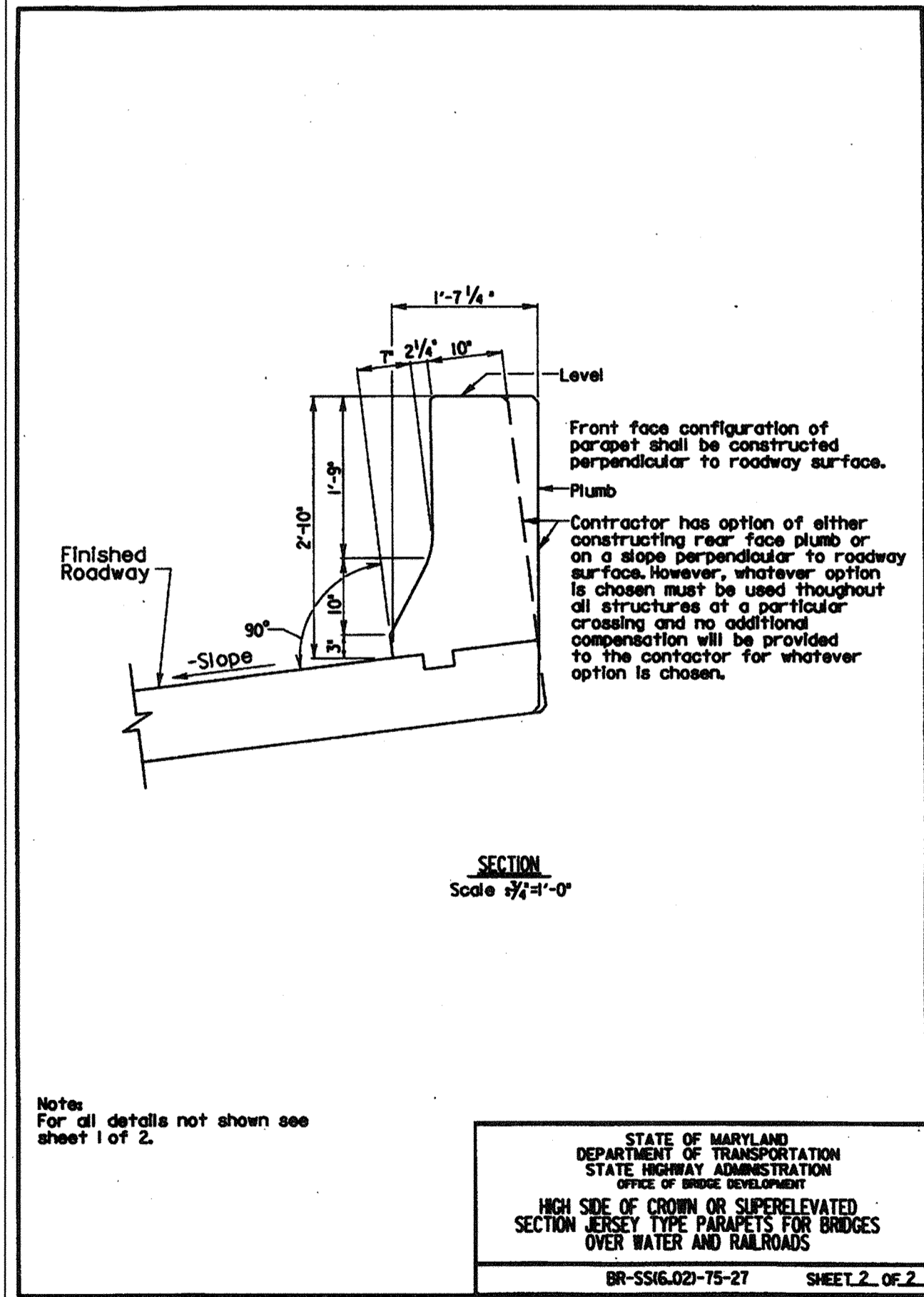
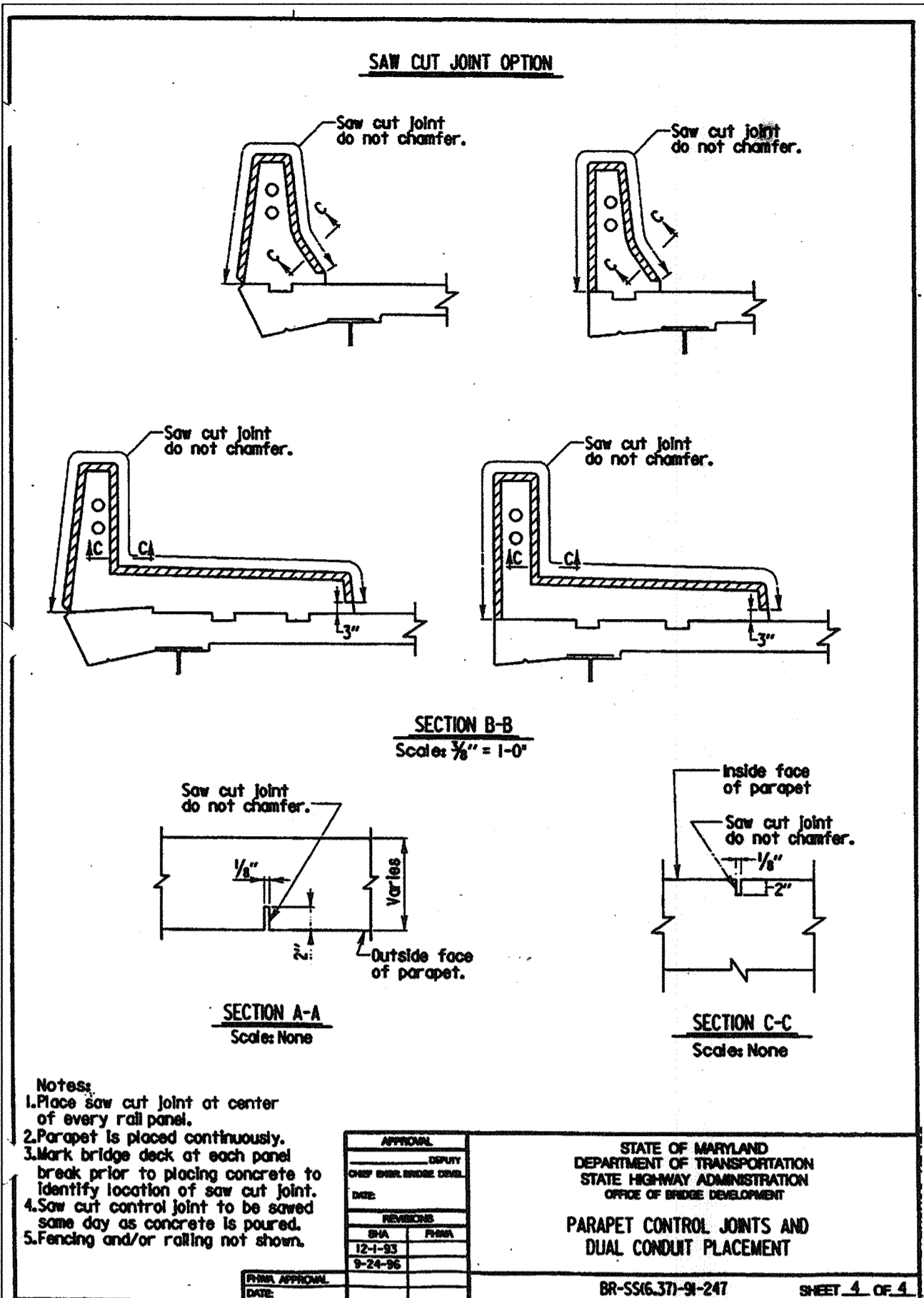
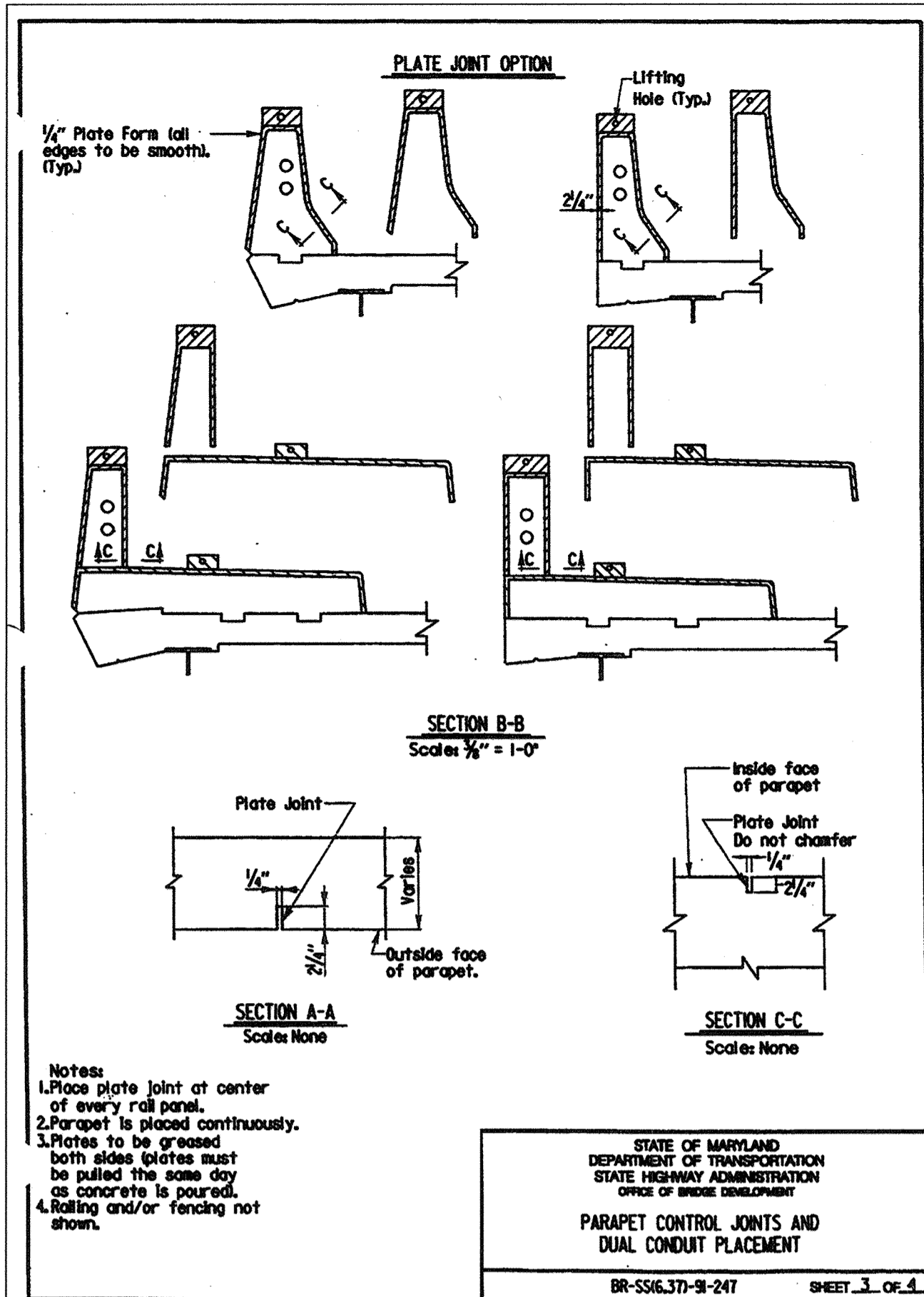
WATER CODE: D 05  
SEWER CODE: 2650000

STANDARD DETAILS

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No: 37 PARCEL No: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 2 JANUARY 2002  
BID AND CONSTRUCTION 14 JANUARY 2002  
SHEET 49 OF 36





**NOLAN Associates, Inc.**  
Engineers - Civil/Structural/Inspections  
4785 Dorsey Hall Drive  
Suite 124  
Ellicott City, Maryland 21042  
Phone: (410) 995-3651 Fax: (410) 995-1363

DATE	DESCRIPTION	REVISION BLOCK
3-29-19	Revision 1 Changed Sheet Number	



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul R. Keith*  
Director, Department of Planning and Zoning  
Date: 3/8/02

*Guidy Hamilton*  
Chief, Division of Land Development  
Date: 3/9/02

*Mark DeWitt*  
Chief, Development Engineering Division  
Date: 3/15/02

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 100  
Ellicott City, Maryland 21042  
Attention Cathleen Young

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	8,9	R-5C	37	First	6011

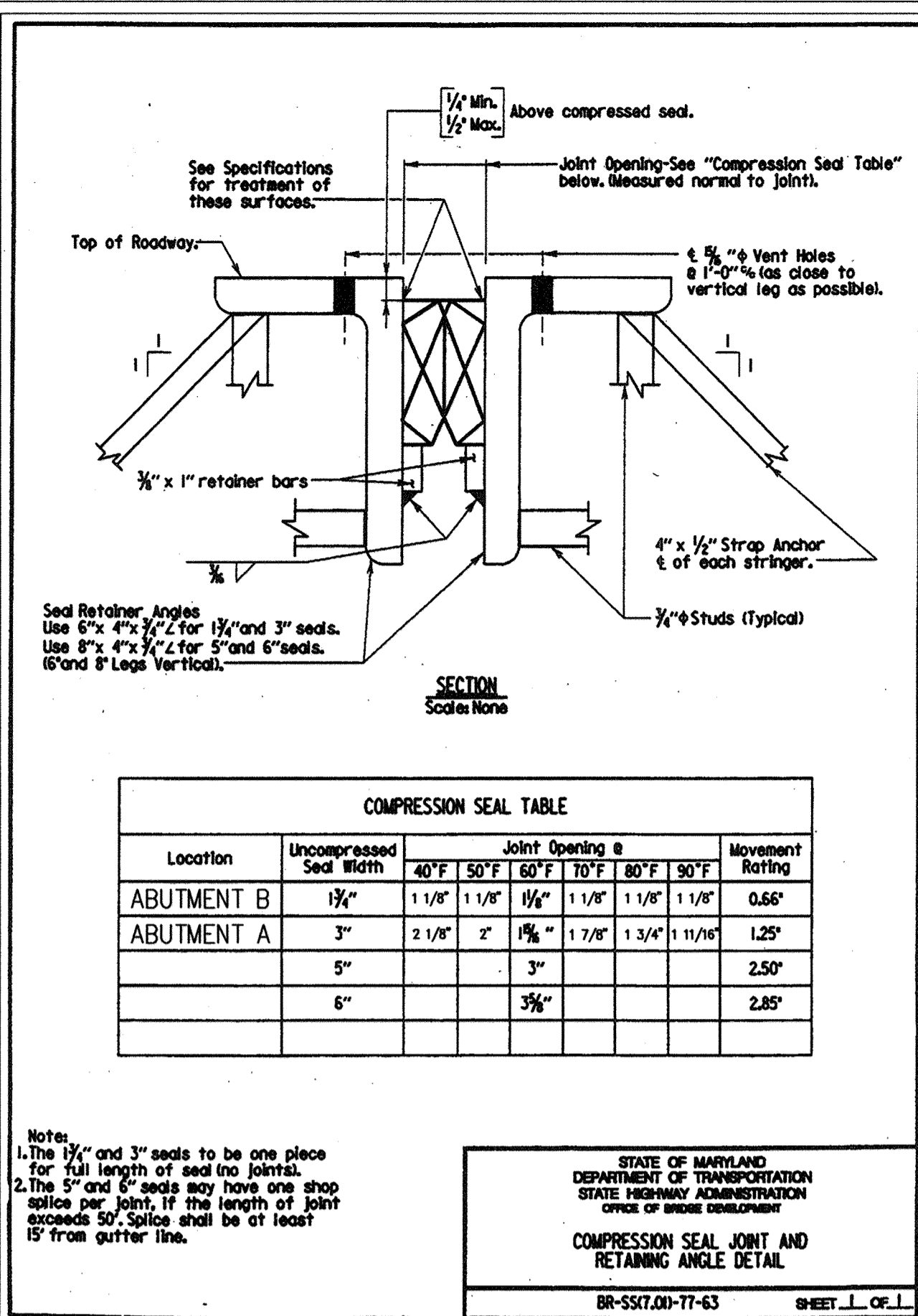
WATER CODE: D 05  
SEWER CODE: 2650000

STANDARD DETAILS

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No: 37 PARCEL No: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 2 JANUARY 2002  
BID AND CONSTRUCTION 14 JANUARY 2002  
SHEET 50 OF 56



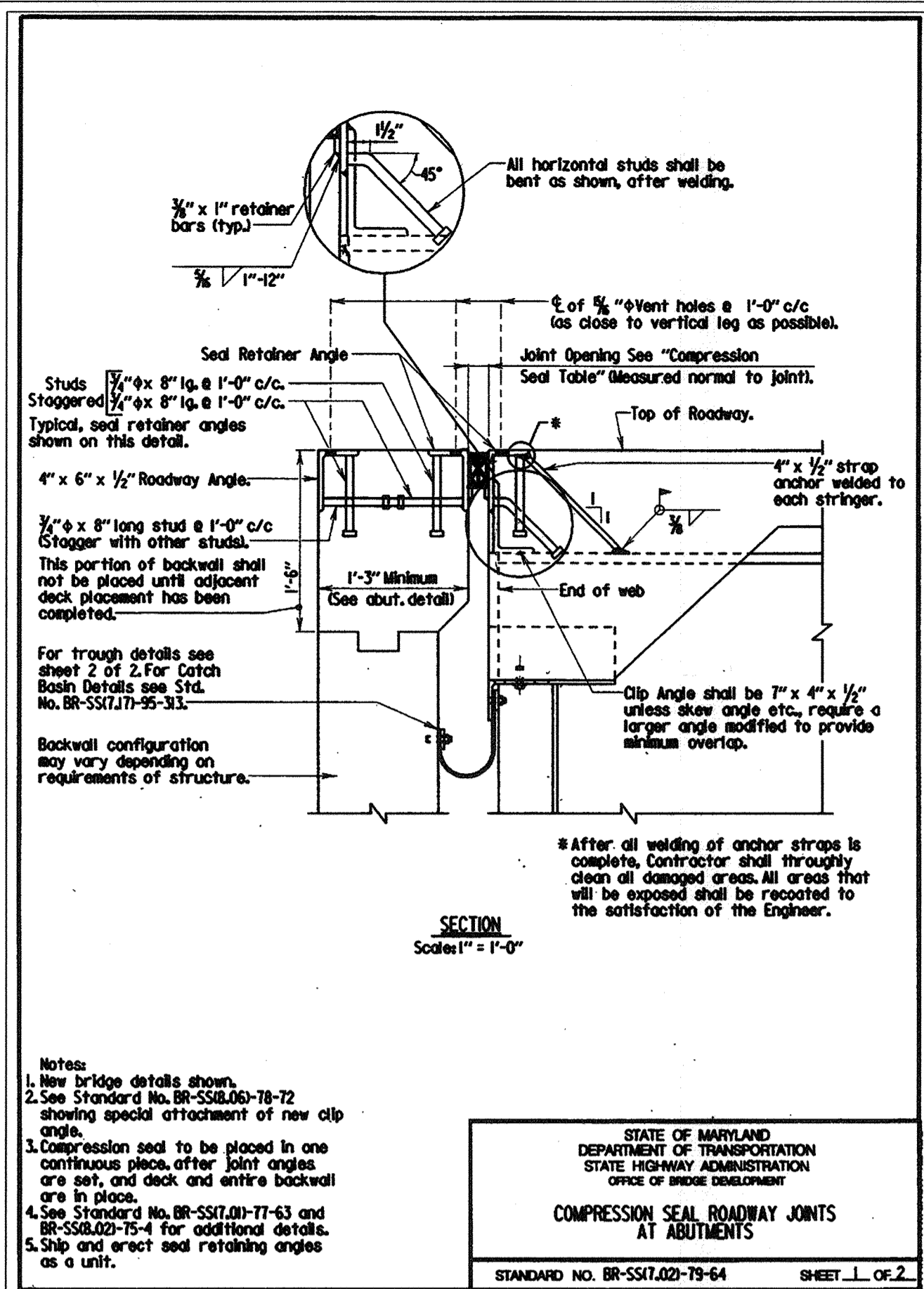


**COMPRESSION SEAL TABLE**

Location	Uncompressed Seal Width	Joint Opening @				Rating
		40°F   50°F   60°F   70°F	80°F   90°F			
ABUTMENT B	1 1/2"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	0.55"
ABUTMENT A	3"	2 1/8"	2"	1 3/4"	1 3/4"	1.25"
	5"					2.50"
	6"					2.85"

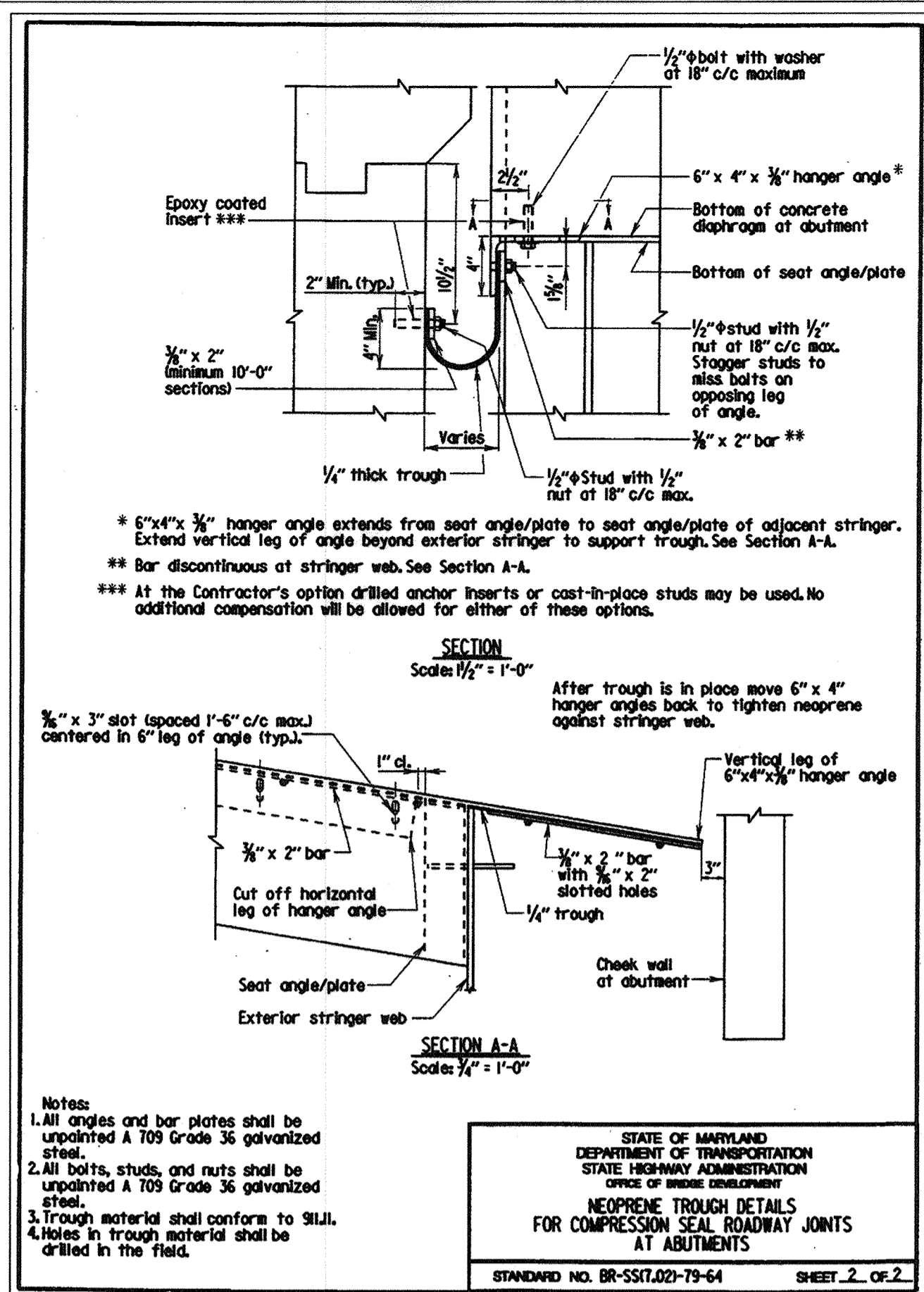
**Notes:**  
 1. The 1/2" and 3" seals to be one piece for full length of seal no joints.  
 2. The 5" and 6" seals may have one shop splice per joint, if the length of joint exceeds 50'. Splice shall be at least 15' from gutter line.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**COMPRESSION SEAL JOINT AND RETAINING ANGLE DETAIL**  
 BR-SS17.07-73-63 SHEET 1 OF 1



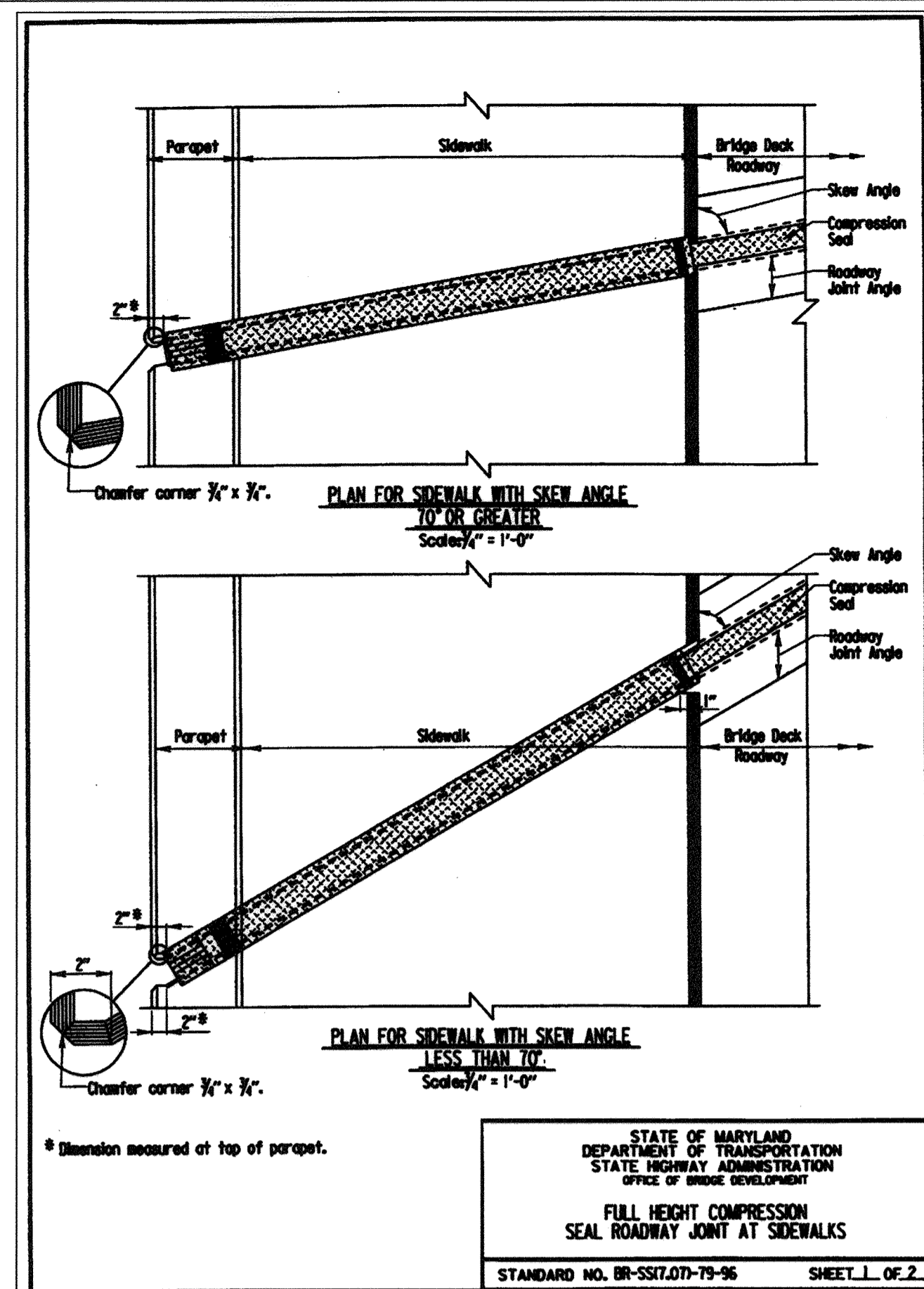
**Notes:**  
 1. New bridge details shown.  
 2. See Standard No. BR-SS18.06-78-72 showing special attachment of new clip angle.  
 3. Compression seal to be placed in one continuous piece, after joint angles are set, and deck and entire backwall are in place.  
 4. See Standard No. BR-SS17.07-73-63 and BR-SS18.02-75-4 for additional details.  
 5. Ship and erect seal retaining angles as a unit.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**COMPRESSION SEAL ROADWAY JOINTS AT ABUTMENTS**  
 STANDARD NO. BR-SS17.02-79-64 SHEET 1 OF 2

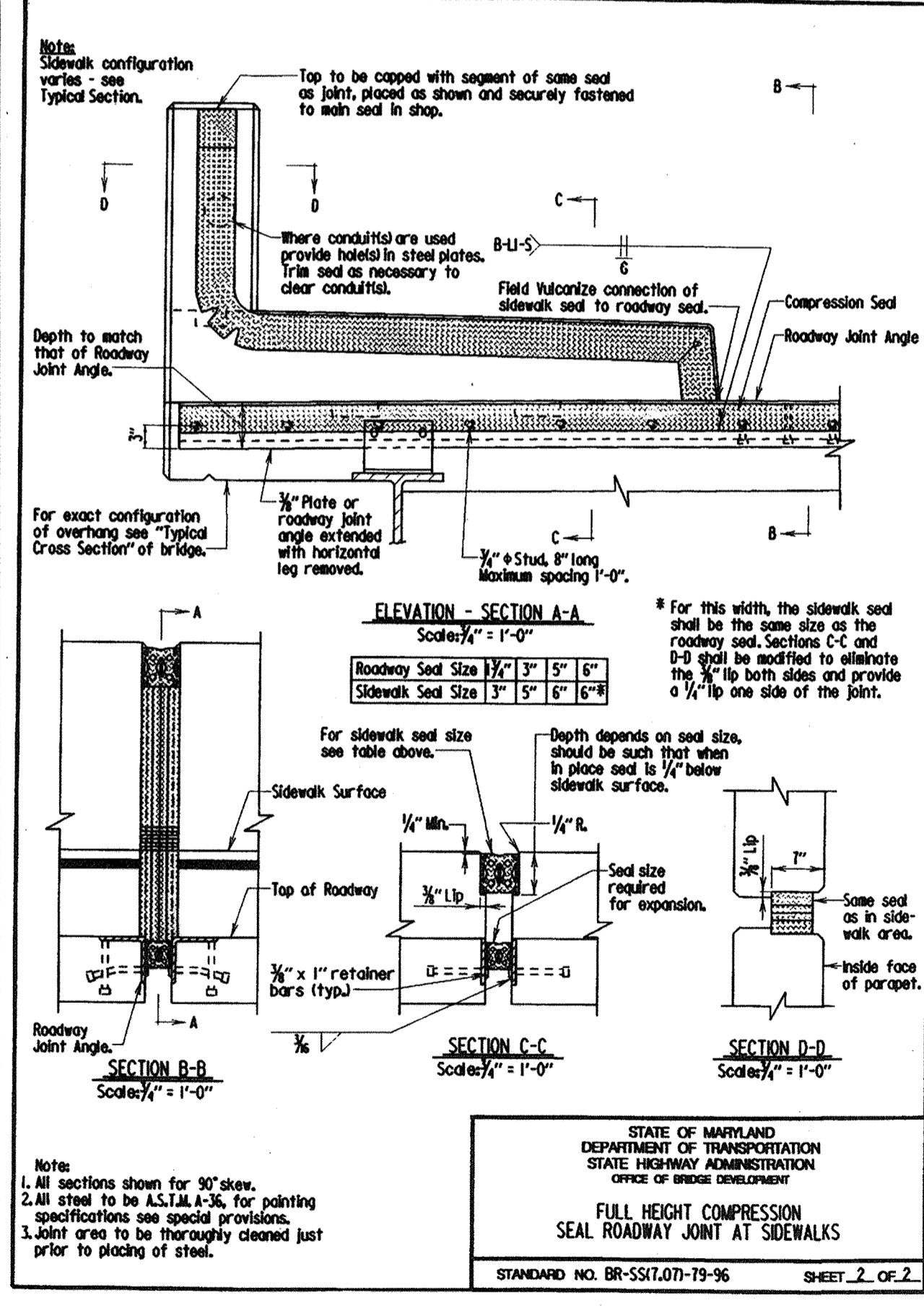


**Notes:**  
 1. All angles and bar plates shall be updated to A 709 Grade 36 galvanized steel.  
 2. All bolts, studs, and nuts shall be updated to A 709 Grade 36 galvanized steel.  
 3. Trough material shall conform to S21J. Holes in trough material shall be drilled in the field.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**NEOPRENE TROUGH DETAILS FOR COMPRESSION SEAL JOINTS AT ABUTMENTS**  
 STANDARD NO. BR-SS17.02-79-64 SHEET 2 OF 2

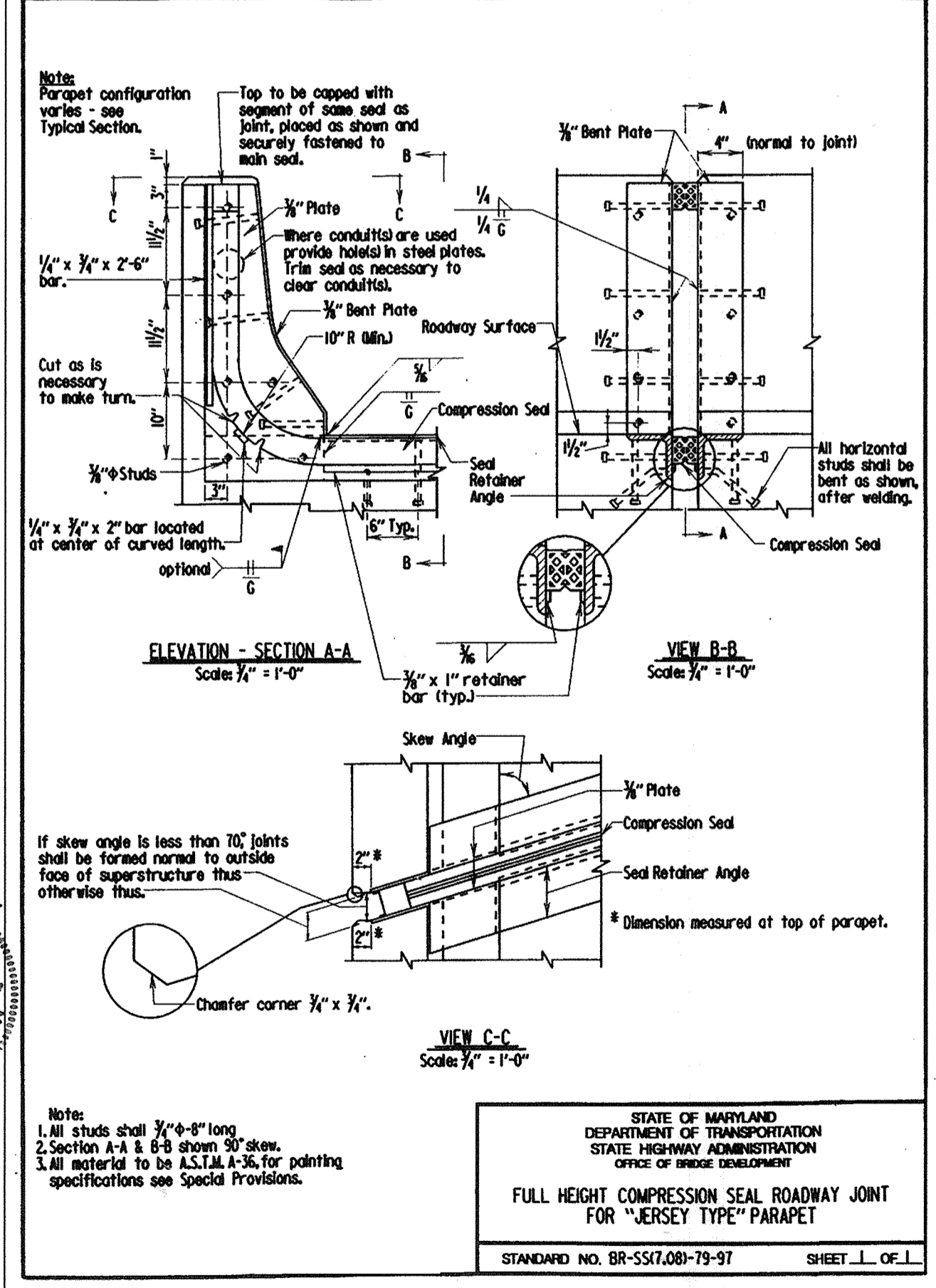


STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**FULL HEIGHT COMPRESSION SEAL ROADWAY JOINT AT SIDEWALKS**  
 STANDARD NO. BR-SS17.07-79-96 SHEET 1 OF 2



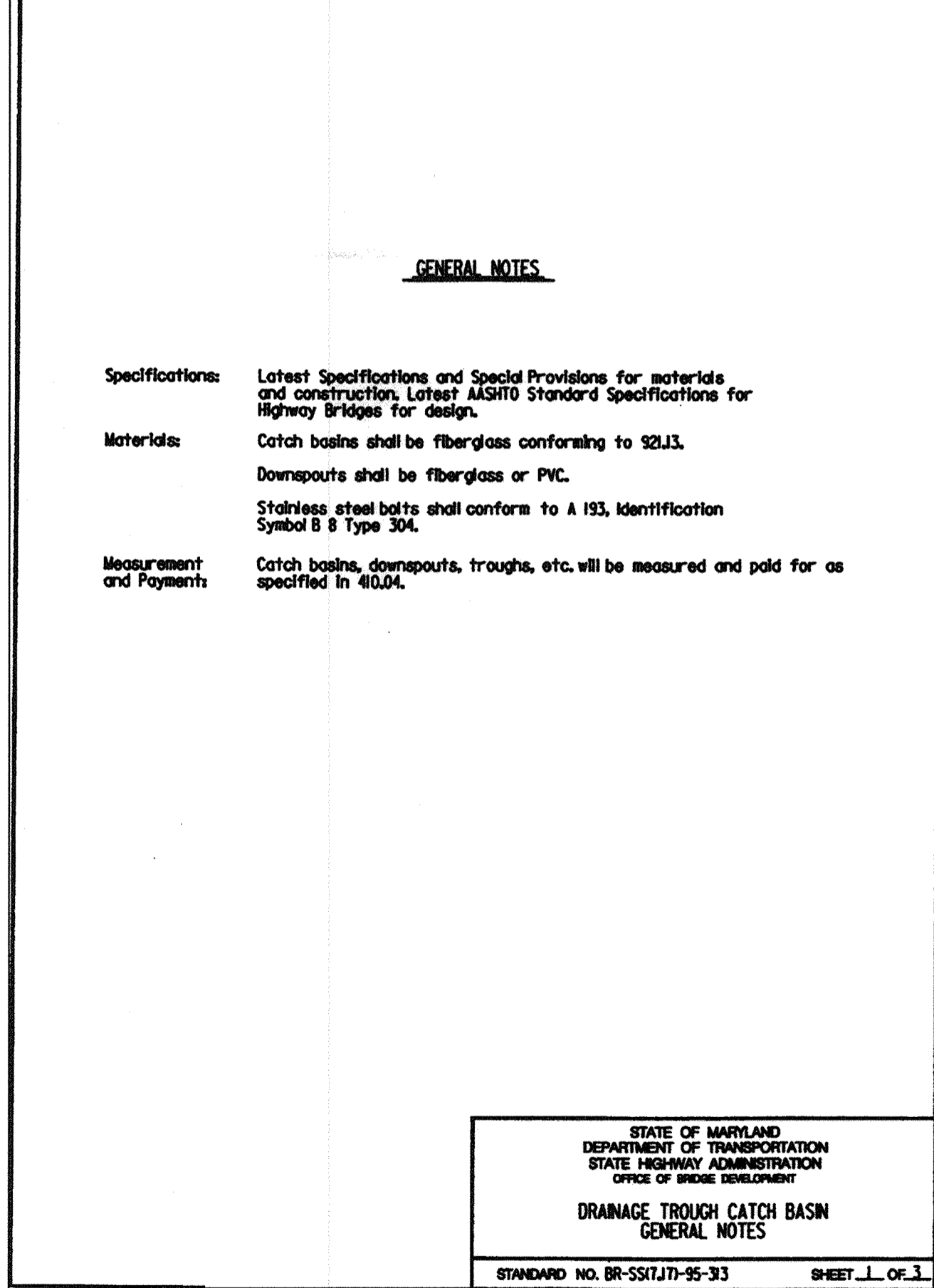
**Notes:**  
 1. All sections shown for 90° skew.  
 2. All steel to be A 36, for painting specifications see special provisions.  
 3. Joint area to be thoroughly cleaned just prior to placing of steel.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**FULL HEIGHT COMPRESSION SEAL ROADWAY JOINT AT SIDEWALKS**  
 STANDARD NO. BR-SS17.07-79-96 SHEET 2 OF 2



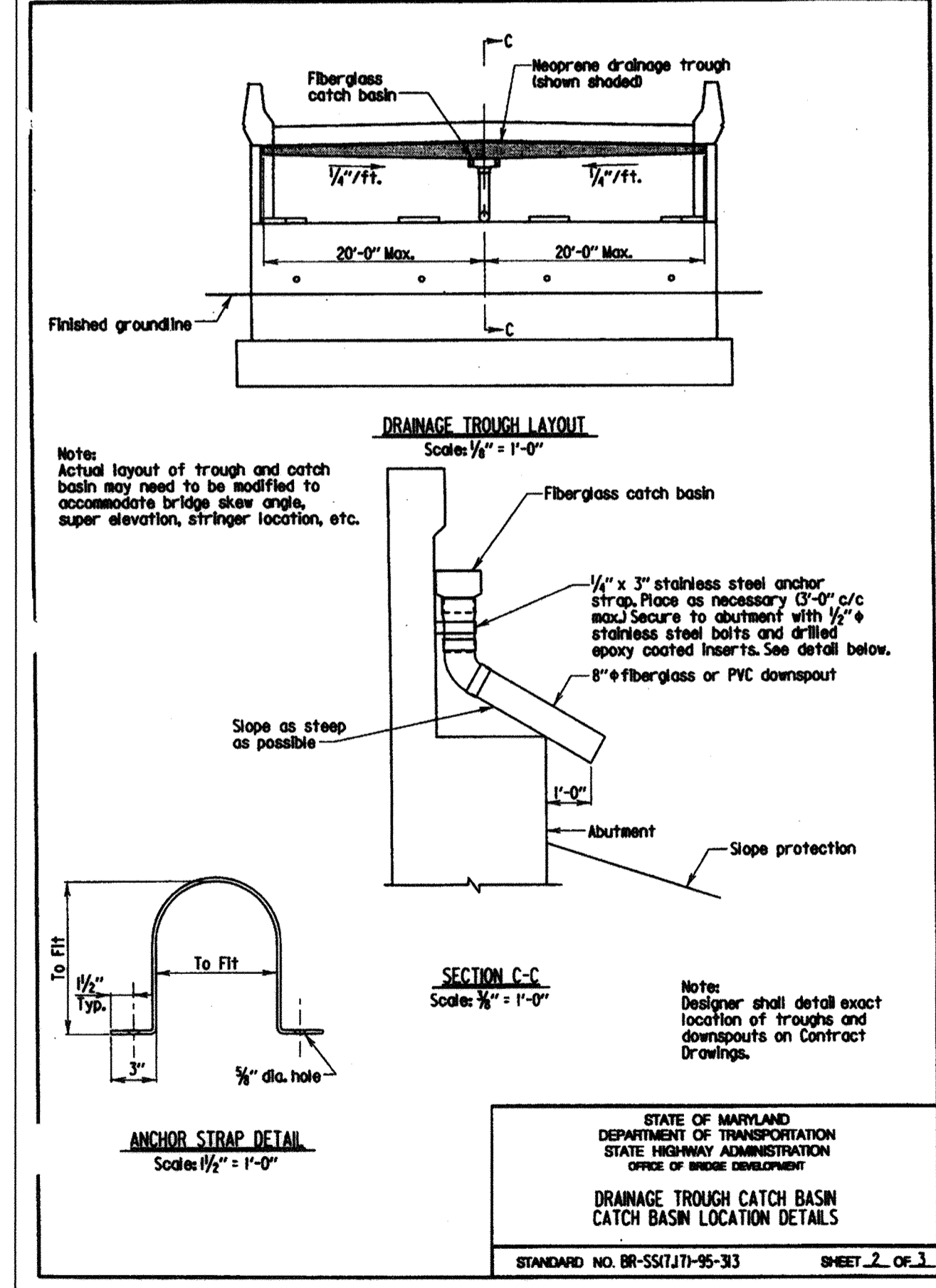
**Notes:**  
 1. All studs shall 1/2" x 8" long.  
 2. Section A-B shall be 30° skew.  
 3. All material to be A 36, for painting specifications see special provisions.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**FULL HEIGHT COMPRESSION SEAL ROADWAY JOINT FOR "JERSEY TYPE" PARAPET**  
 STANDARD NO. BR-SS17.08-79-97 SHEET 1 OF 1



**Notes:**  
 1. All angles and bar plates shall be updated to A 709 Grade 36 galvanized steel.  
 2. All bolts, studs, and nuts shall be updated to A 709 Grade 36 galvanized steel.  
 3. Trough material shall conform to S21J. Holes in trough material shall be drilled in the field.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**DRAINAGE TROUGH CATCH BASIN GENERAL NOTES**  
 STANDARD NO. BR-SS17.07-95-33 SHEET 1 OF 3



**Notes:**  
 1. All angles and bar plates shall be updated to A 709 Grade 36 galvanized steel.  
 2. All bolts, studs, and nuts shall be updated to A 709 Grade 36 galvanized steel.  
 3. Trough material shall conform to S21J. Holes in trough material shall be drilled in the field.

STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF BRIDGE DEVELOPMENT  
**DRAINAGE TROUGH CATCH BASIN CATCH BASIN LOCATION DETAILS**  
 STANDARD NO. BR-SS17.07-95-33 SHEET 2 OF 3

**NOLAN Associates, Inc.**  
 Engineers - Civil/Structural/Inspections  
 4785 Dorsey Hall Drive  
 Suite 124  
 Ellicott City, Maryland 21042  
 Phone: (410) 995-3651 Fax: (410) 995-1363

5-29-19 Revision 1 Changed Sheet Number

APPROVED DEPARTMENT OF PLANNING AND ZONING

*Paul Kutz*  
 Director, Department of Planning and Zoning  
 Date: 3/6/02

*Cindy Hamner*  
 Chief, Division of Land Development  
 Date: 3/7/02

*John D. ...*  
 Chief, Development Engineering Division  
 Date: 3/5/02

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 108  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young

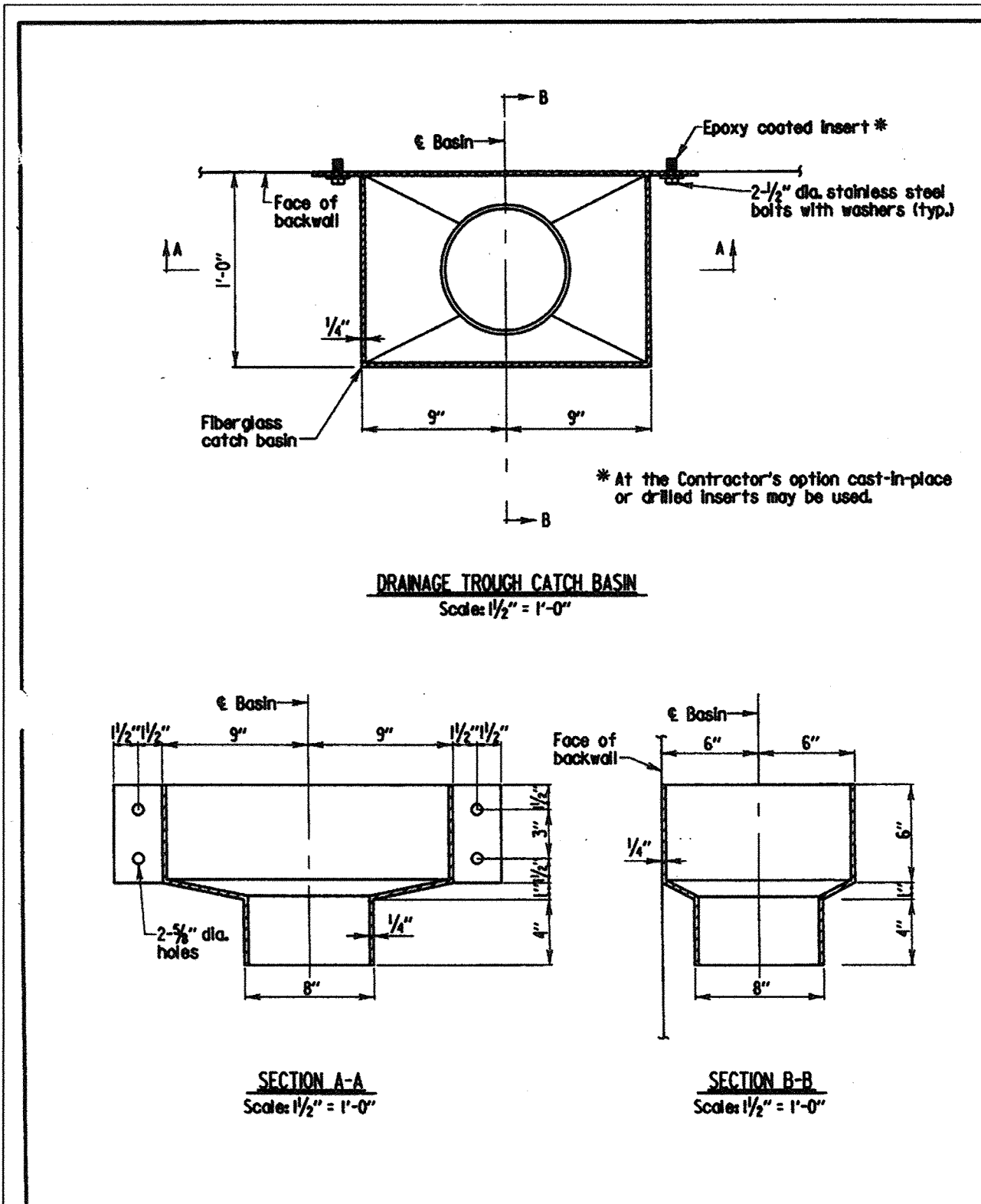
Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT: Northeastern Elementary School No. 4  
 DEED REF. 2307/562 BLOCK NO. B,9 ZONE R-SC TAX/ZONE 37 ELEC. DIST. First CENSUS TR. 6011  
 WATER CODE D 05 SEWER CODE 2650000

**STANDARD DETAILS**  
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**  
 TAX MAP No: 37 PARCEL No: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 2 JANUARY 2002  
 BID AND CONSTRUCTION 14 JANUARY 2002  
 SHEET 51 OF 56

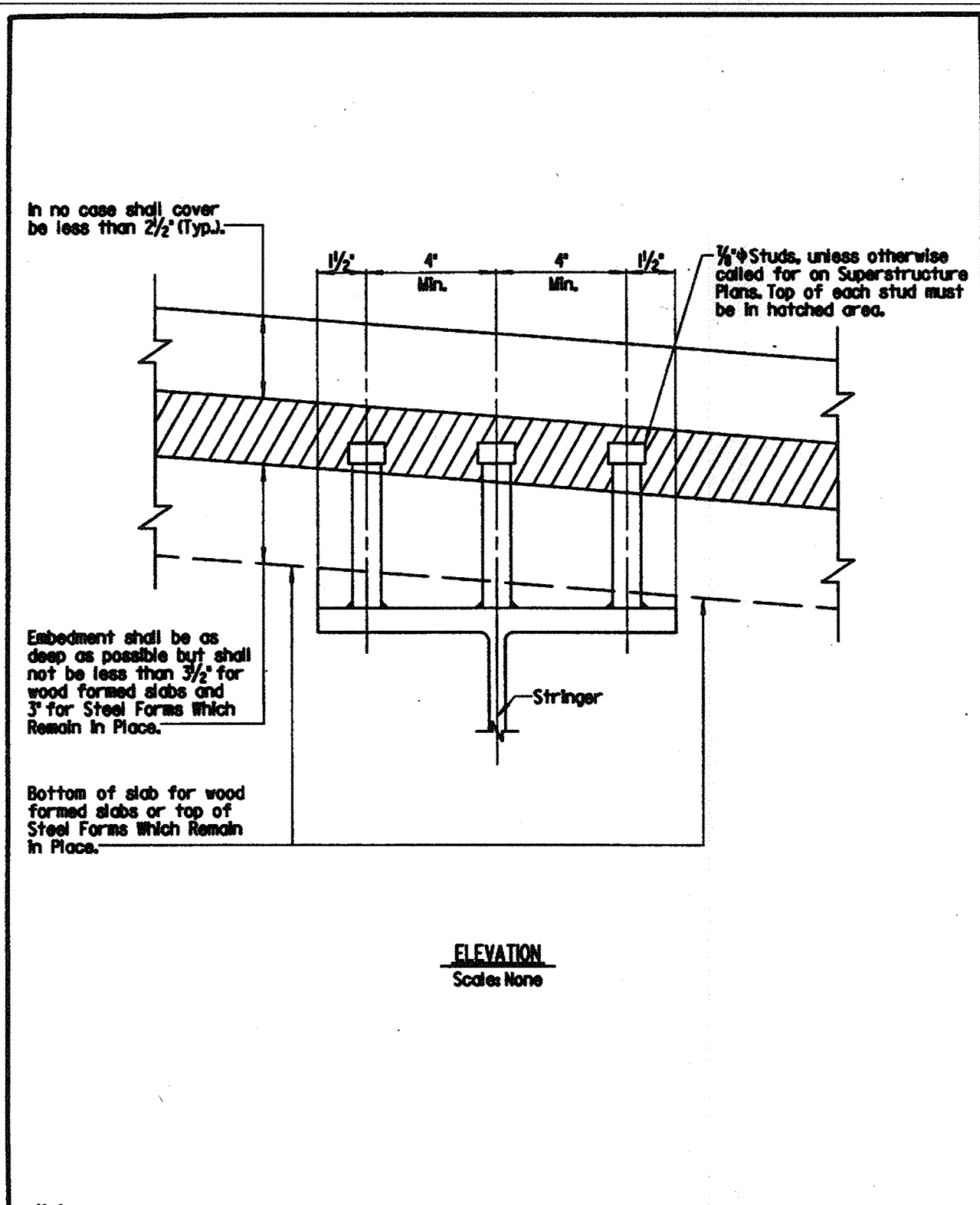




STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**DRAINAGE TROUGH CATCH BASIN DETAILS**

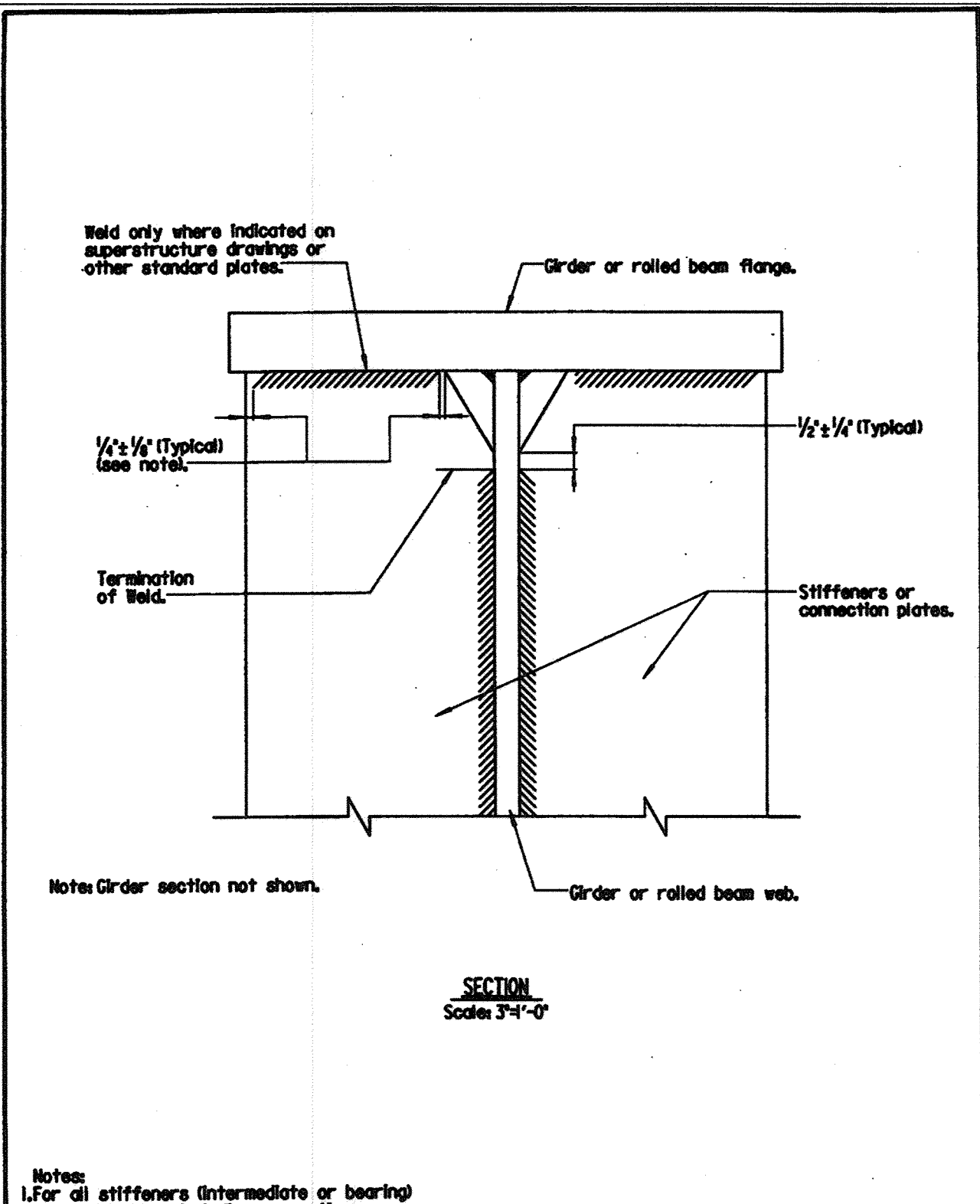
STANDARD NO. BR-SS1710-95-313 SHEET 3 OF 3



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**STEEL STUD SHEAR DEVELOPER EMBEDMENT DETAIL**

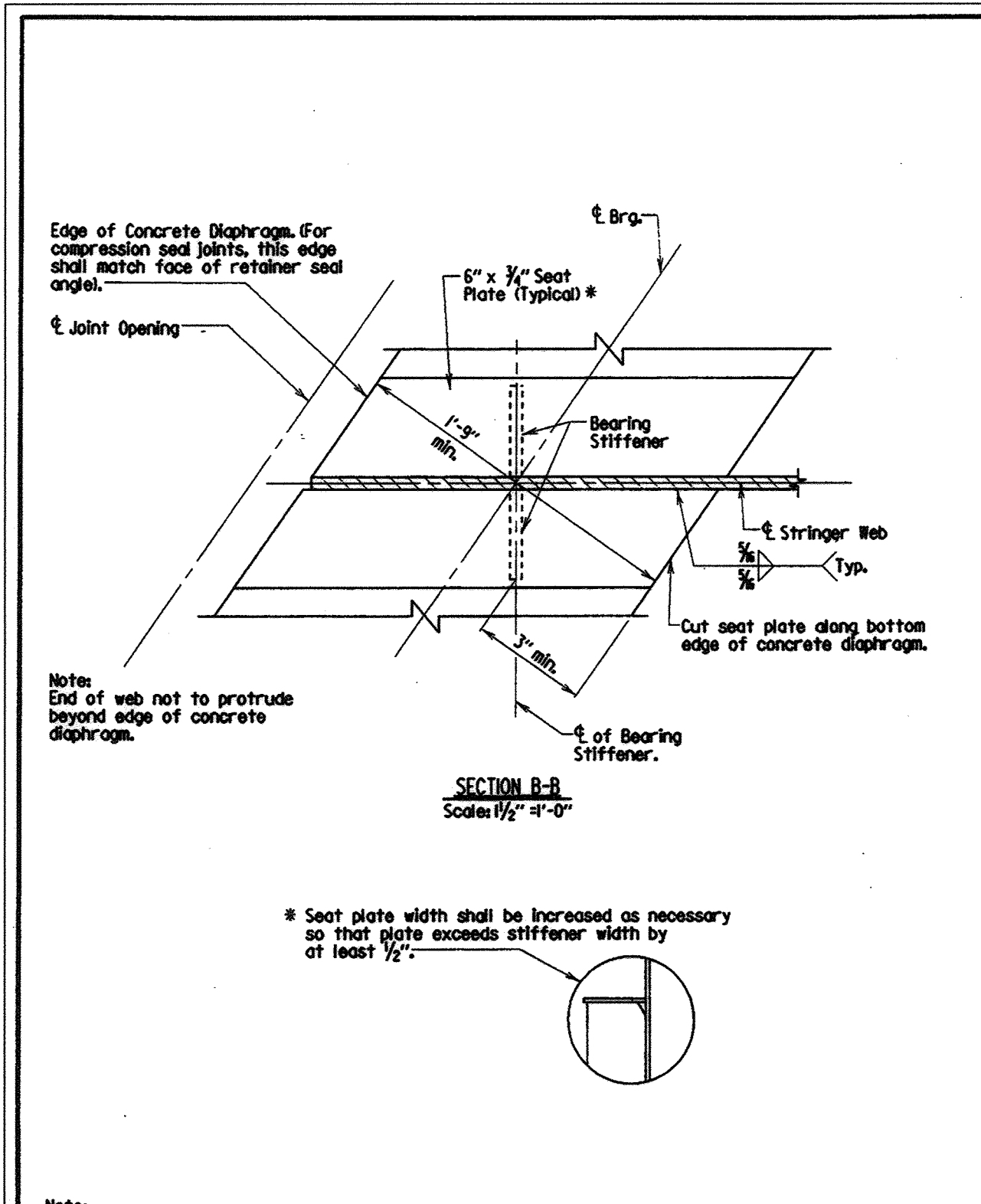
BR-SS1805-75-30 SHEET 1 OF 1



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**STIFFENER AND STRINGER CONNECTION PLATE WELD TERMINATION DETAIL**

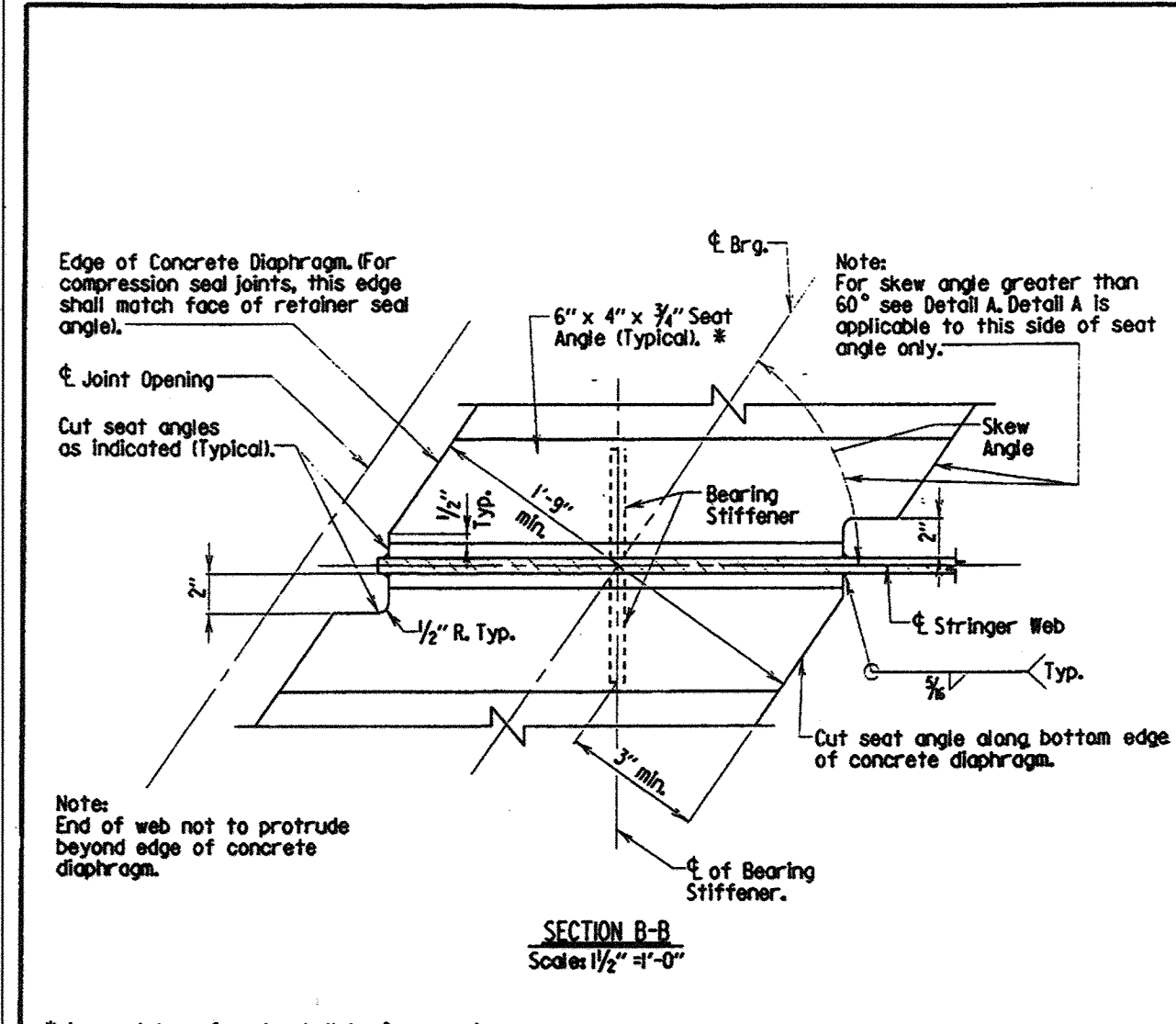
BR-SS1810-83-154 SHEET 1 OF 1



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**STEEL SEAT PLATES FOR SKEWED CONCRETE DIAPHRAGMS**

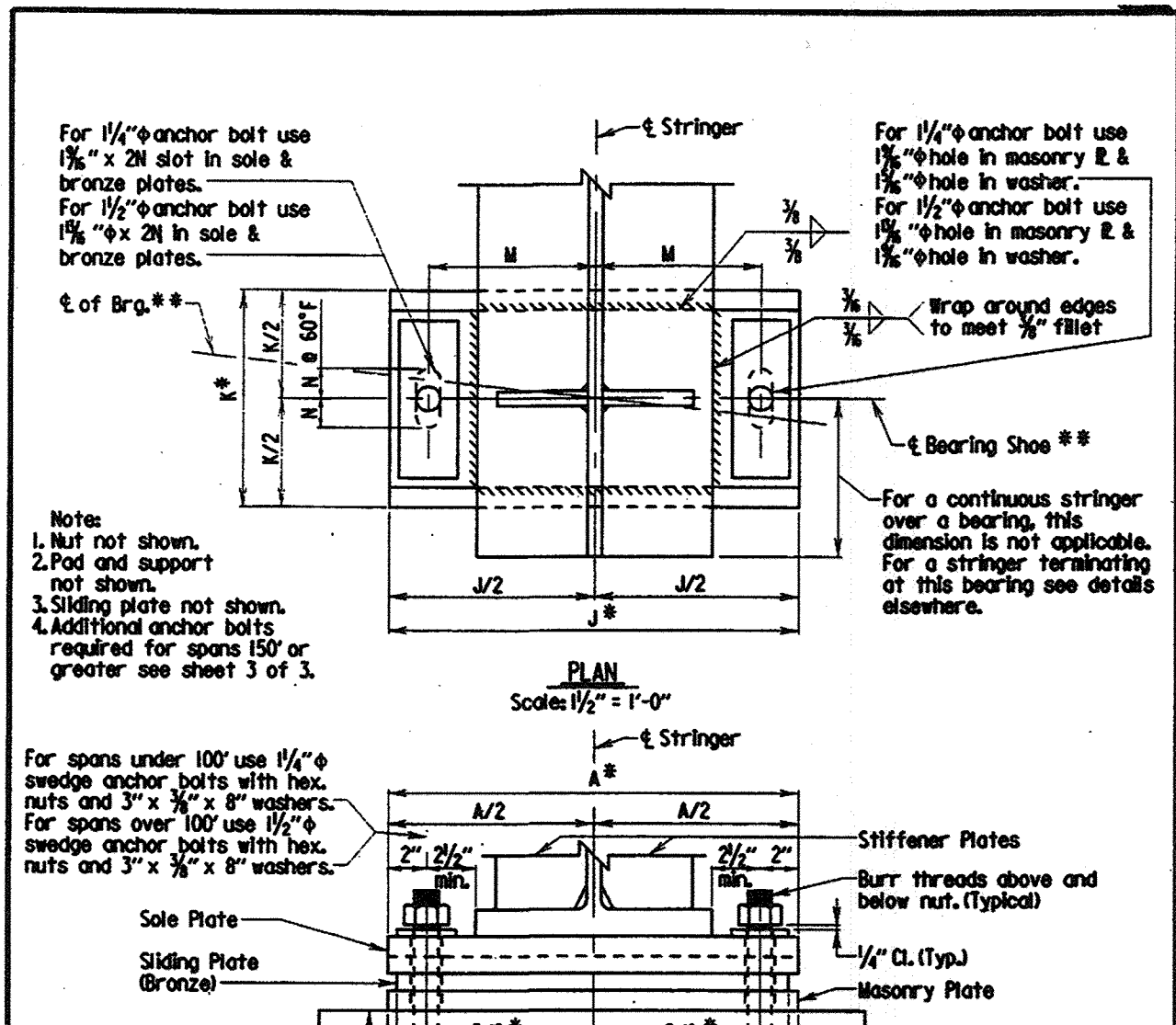
BR-SS1812-85-170 SHEET 1 OF 2



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**STEEL SEAT ANGLES FOR SKEWED CONCRETE DIAPHRAGMS**

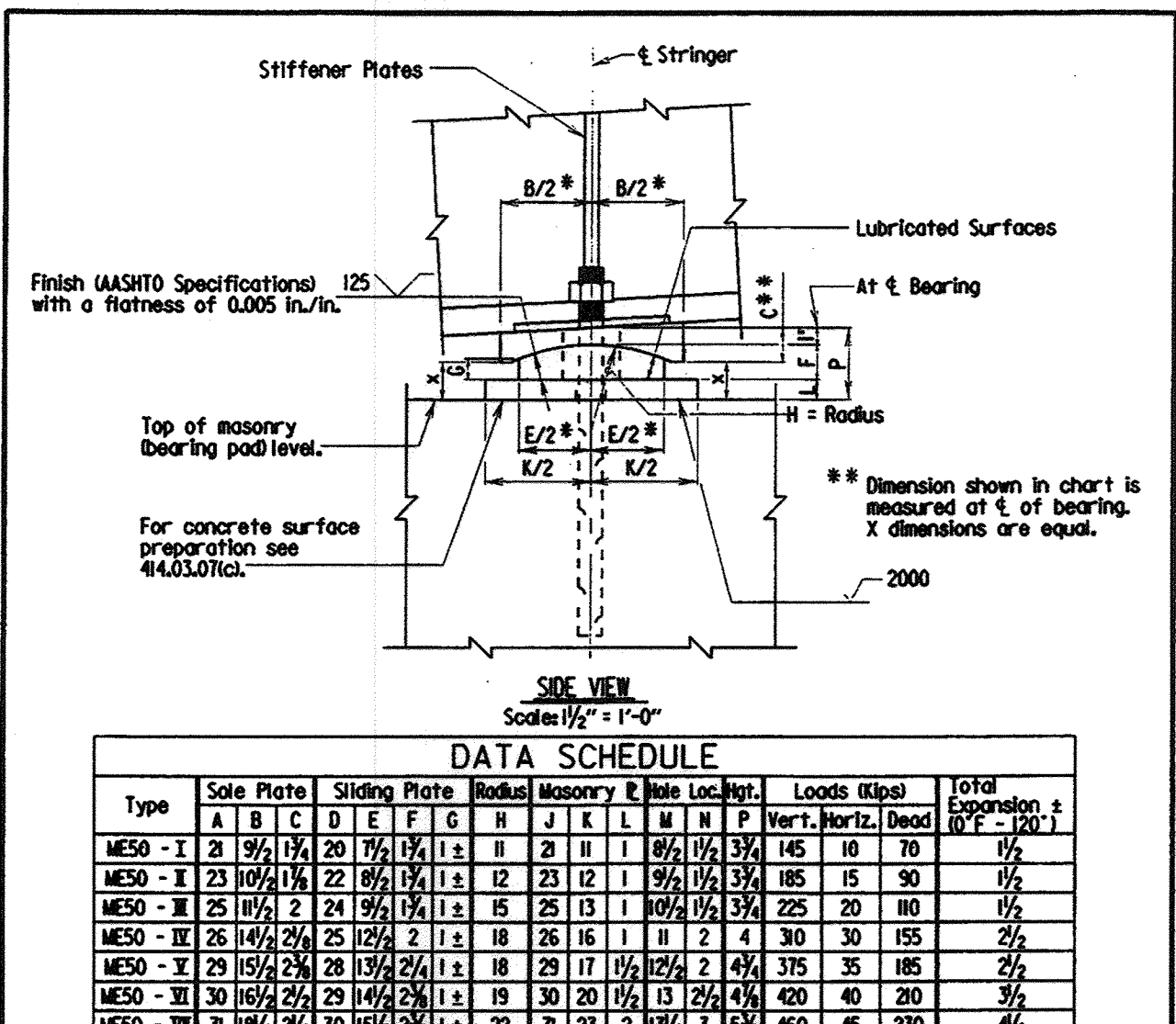
BR-SS1812-85-170 SHEET 2 OF 2



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**BRONZE EXPANSION BEARING MEDIUM LENGTH SPANS (GRADE 50 STEEL)**

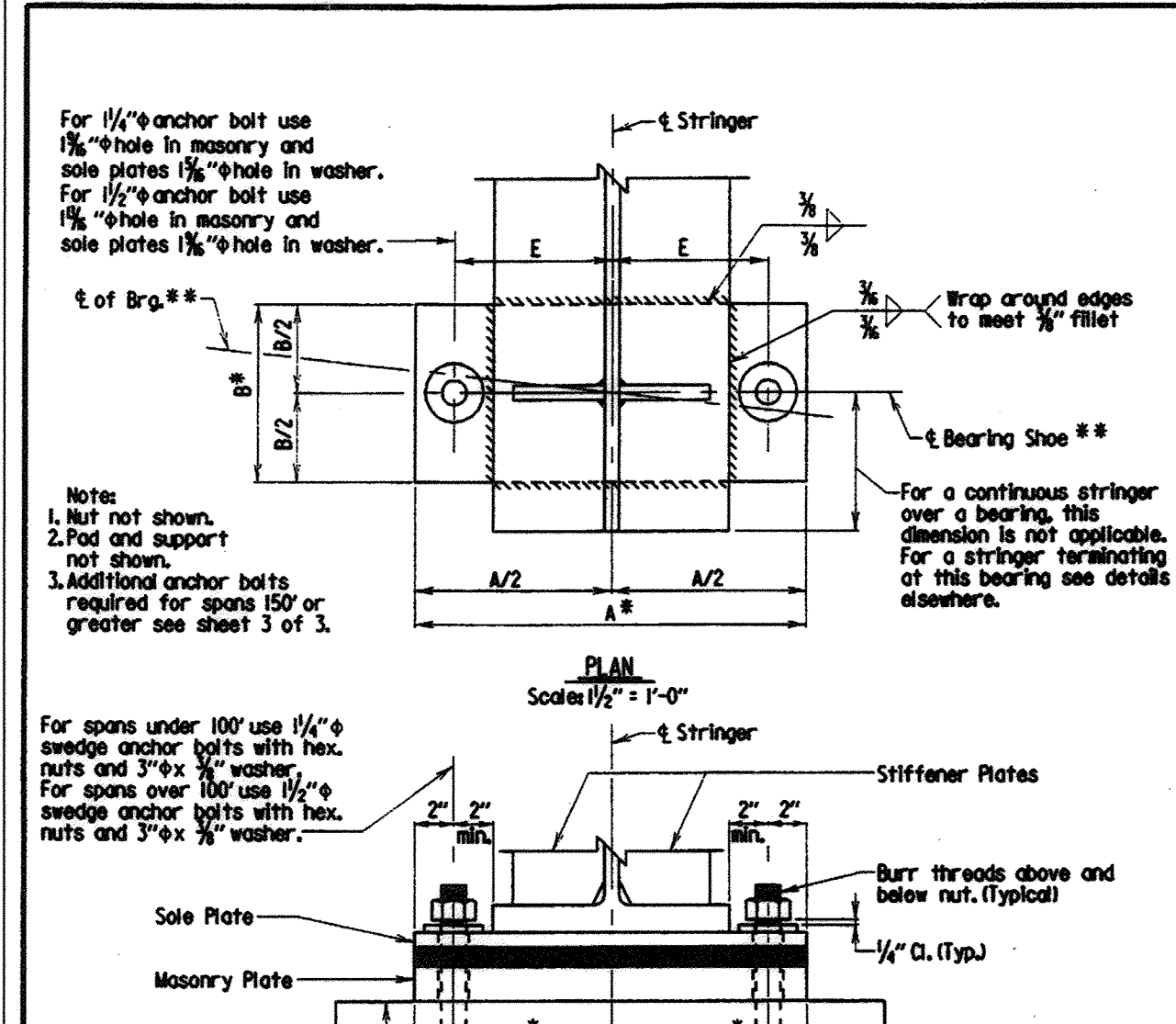
BR-SS1809-89-335 SHEET 1 OF 1



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

**BRONZE EXPANSION BEARING MEDIUM LENGTH SPANS (GRADE 50 STEEL)**

BR-SS1809-89-335 SHEET 2 OF 1



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

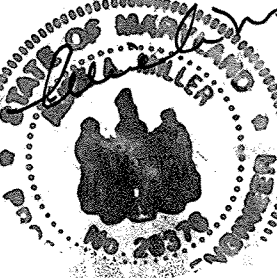
**FIXED BEARING MEDIUM LENGTH SPANS (GRADE 50 STEEL)**

BR-SS1806-99-336 SHEET 1 OF 1

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 28376  
Expiration Date: 1-1-24

For Revision only  
5-29-19



**NOLAN Associates, Inc.**  
Engineers - Civil/Structural/Inspections  
4785 Dorsey Hall Drive  
Suite 124  
Ellicott City, Maryland 21042  
Phone: (410) 985-3651 Fax: (410) 985-1383

DATE	DESCRIPTION	REVISION BLOCK
5-29-19	Revision 1 changed Sheet Number	



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul Kater* 3/8/02  
Director - Department of Planning and Zoning

*Cindy Hamilton* 3/2/02  
Chief, Division of Land Development

*John Dammann* 3/5/02  
Chief, Development Engineering Division

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT: Northeastern Elementary School No. 4

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2307/562	0,9	R-5C	37	First	6011

WATER CODE: D 05 SEWER CODE: 2650000

STANDARD DETAILS

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

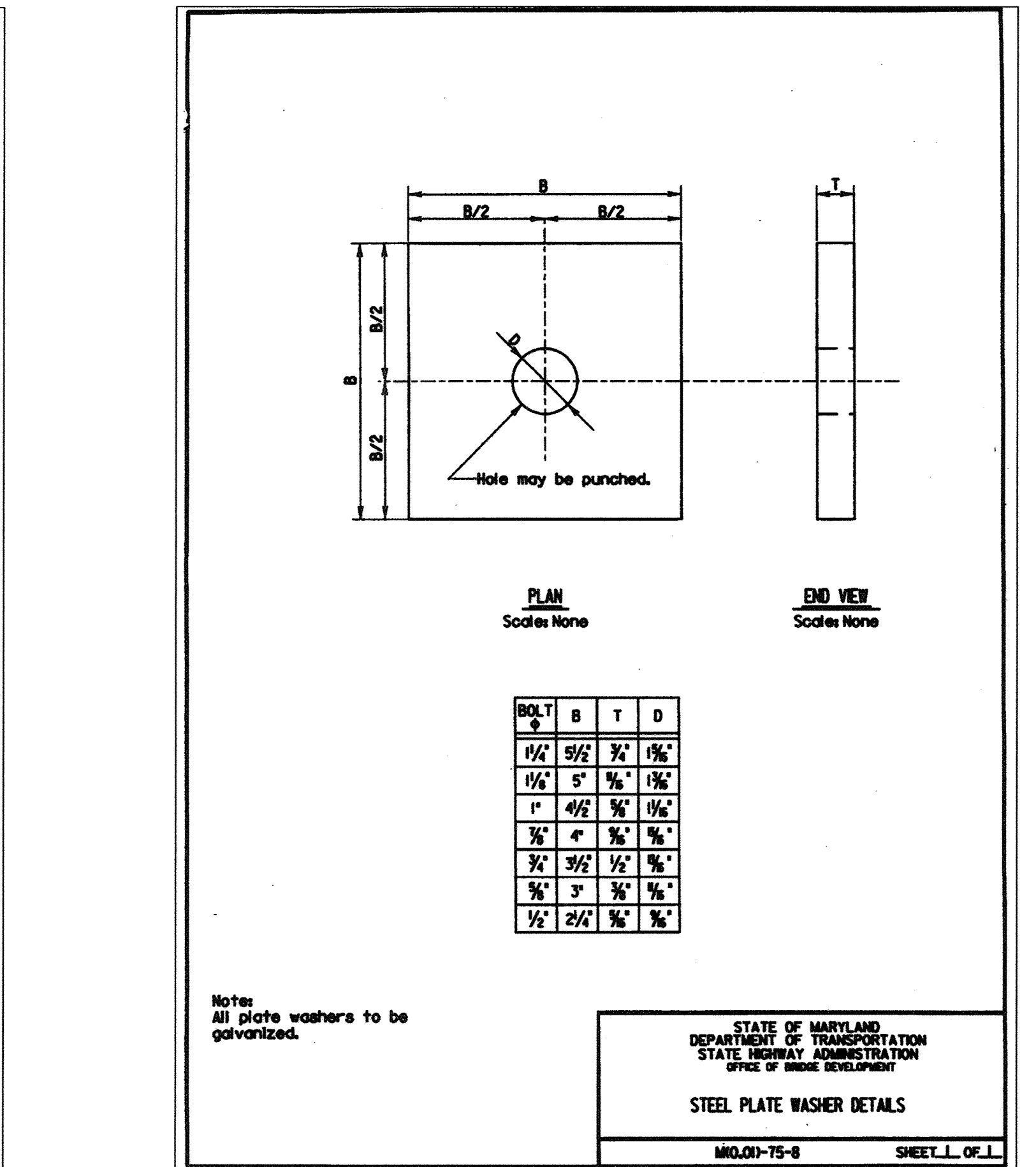
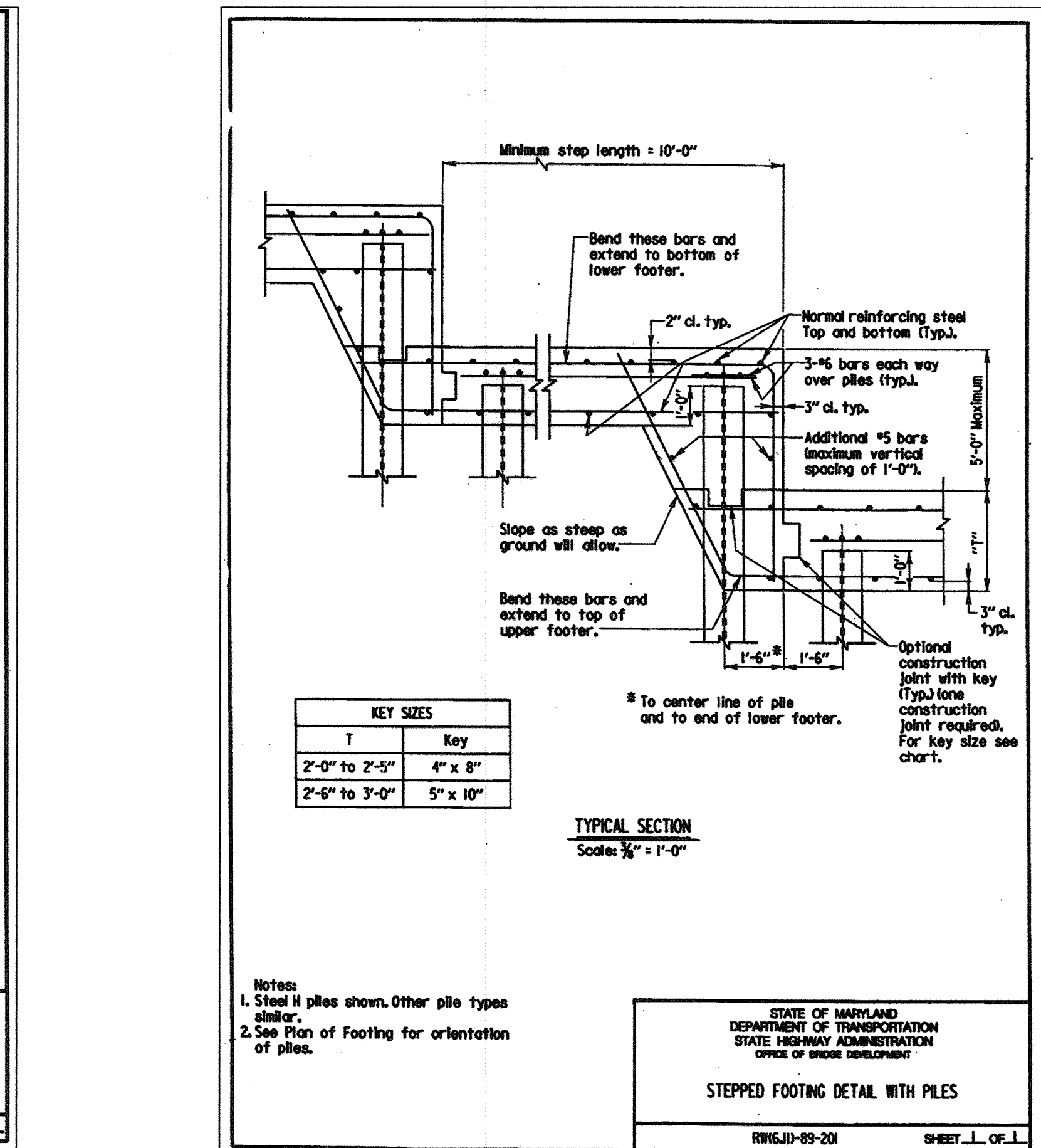
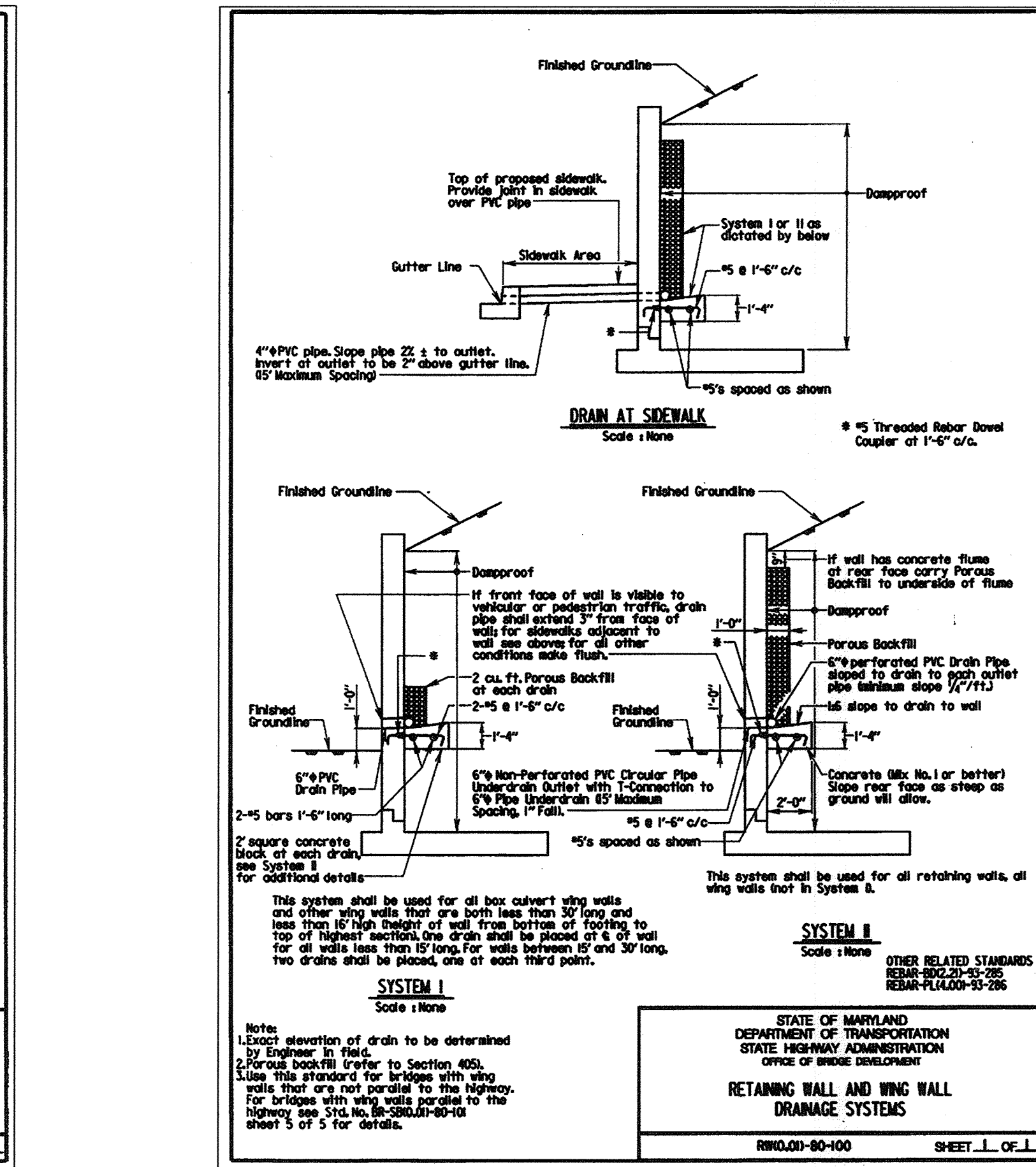
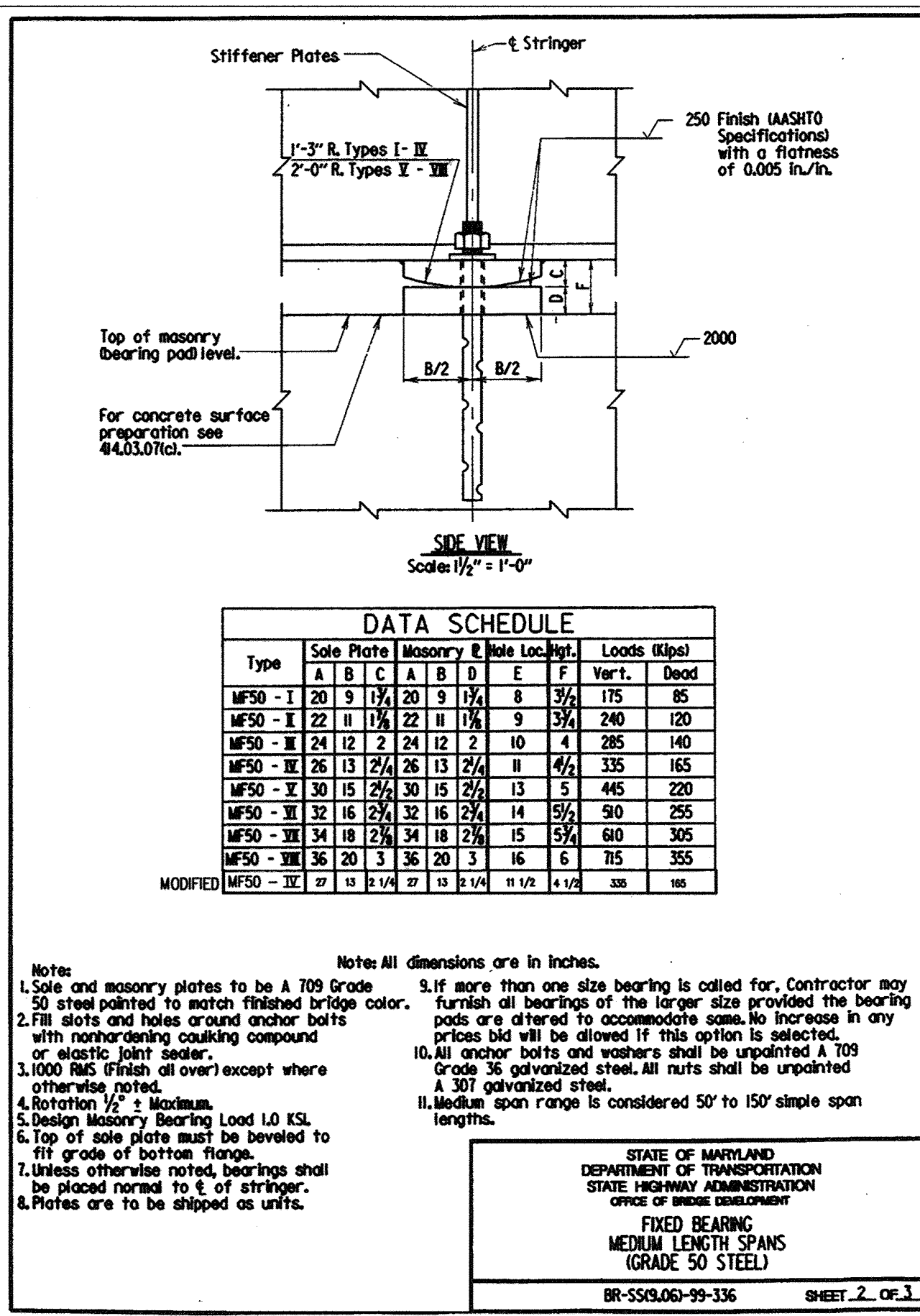
TAX MAP No: 37 PARCEL No: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: 2 JANUARY 2002  
BID AND CONSTRUCTION 14 JANUARY 2002

SHEET 52 OF 56



MODIFIED



**LOCATION CATEGORY**

BAR SIZE	LOCATION CATEGORY			3 Times Bar Diameter	6 Times Bar Diameter	c/c Spacing
	A	B	C			
#4	2'-11"	2'-7"	2'-4"	1/2"	3"	3 1/2"
#5	3'-8"	3'-3"	2'-7"	1 1/4"	3 3/4"	4 1/4"
#6	4'-5"	3'-10"	3'-1"	2 1/4"	4 1/2"	5 1/4"
#7	5'-3"	4'-7"	3'-8"	2 3/4"	5 1/4"	6 1/4"
#8	6'-0"	6'-1"	4'-10"	3"	6"	7"
#9	8'-8"	7'-8"	6'-4"	3 3/4"	6 3/4"	7 3/4"
#10	11'-0"	9'-8"	7'-9"	3 3/4"	7 3/4"	8 3/4"
#11	13'-6"	11'-11"	9'-6"	4 1/4"	8 1/2"	9 3/4"

**Notes:**  
 1. When bar lap is not specified on the plans, the above dimensions shall be used.  
 2. These bar laps do not apply when bar is in lightweight concrete. Greater lengths are required for this material.  
 3. These bar laps only apply where the General Notes indicate Reinforcing Steel Design, F= 24,000 p.s.i.

**LOCATION CATEGORY**

BAR SIZE	LOCATION CATEGORY			3 Times Bar Diameter	6 Times Bar Diameter	c/c Spacing
	A	B	C			
#4	2'-9"	2'-0"	1'-7"	1/2"	3"	3 1/2"
#5	3'-6"	2'-6"	2'-0"	1 1/4"	3 3/4"	4 1/4"
#6	4'-2"	3'-0"	2'-5"	2 1/4"	4 1/2"	5 1/4"
#7	4'-11"	3'-0"	2'-10"	2 3/4"	5 1/4"	6 1/4"
#8	6'-6"	Does Not Exist	3'-9"	3"	6"	7"
#9	8'-2"	Does Not Exist	4'-8"	3 3/4"	6 3/4"	7 3/4"
#10	10'-5"	Does Not Exist	6'-0"	3 3/4"	7 3/4"	8 3/4"
#11	12'-9"	Does Not Exist	7'-4"	4 1/4"	8 1/2"	9 3/4"

**Notes:**  
 1. When bar lap is not specified on the plans, the above dimensions shall be used.  
 2. These bar laps do not apply when bar is in lightweight concrete. Greater lengths are required for this material.  
 3. These bar laps only apply where the General Notes indicate Reinforcing Steel Design, F= 24,000 p.s.i.

**LOCATION CATEGORY**

BAR SIZE	LOCATION CATEGORY			3 Times Bar Diameter	6 Times Bar Diameter	c/c Spacing
	A	B	C			
#4	2'-5"	1'-9"	1'-5"	1/2"	3"	3 1/2"
#5	3'-0"	2'-2"	1'-9"	1 1/4"	3 3/4"	4 1/4"
#6	3'-7"	2'-7"	2'-1"	2 1/4"	4 1/2"	5 1/4"
#7	4'-0"	3'-6"	2'-10"	2 3/4"	5 1/4"	6 1/4"
#8	6'-5"	4'-7"	3'-8"	3"	6"	7"
#9	8'-1"	5'-9"	4'-8"	3 3/4"	6 3/4"	7 3/4"
#10	10'-3"	7'-4"	5'-11"	3 3/4"	7 3/4"	8 3/4"
#11	12'-7"	9'-0"	7'-3"	4 1/4"	8 1/2"	9 3/4"

**Notes:**  
 1. When bar lap is not specified on the plans, the above dimensions shall be used.  
 2. These bar laps do not apply when bar is in lightweight concrete. Greater lengths are required for this material.  
 3. These bar laps only apply where the General Notes indicate Reinforcing Steel Design, F= 24,000 p.s.i.

**LOCATION CATEGORY**

BAR SIZE	LOCATION CATEGORY			3 Times Bar Diameter	6 Times Bar Diameter	c/c Spacing
	A	B	C			
#4	2'-11"	2'-7"	2'-4"	1/2"	3"	3 1/2"
#5	3'-8"	3'-3"	2'-7"	1 1/4"	3 3/4"	4 1/4"
#6	4'-5"	3'-10"	3'-1"	2 1/4"	4 1/2"	5 1/4"
#7	5'-11"	5'-3"	4'-2"	2 3/4"	5 1/4"	6 1/4"
#8	7'-9"	6'-10"	5'-6"	3"	6"	7"
#9	9'-10"	8'-8"	6'-11"	3 3/4"	6 3/4"	7 3/4"
#10	12'-5"	11'-0"	8'-10"	3 3/4"	7 3/4"	8 3/4"
#11	15'-3"	13'-6"	10'-10"	4 1/4"	8 1/2"	9 3/4"

**Notes:**  
 1. When bar lap is not specified on the plans, the above dimensions shall be used.  
 2. These bar laps do not apply when bar is in lightweight concrete. Greater lengths are required for this material.  
 3. These bar laps only apply where the General Notes indicate Reinforcing Steel Design, F= 24,000 p.s.i.

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 20376  
 Expiration Date: 1-1-21

For Revision Only  
 5-2A-1A



**NOLAN Associates, Inc.**  
 Engineers - Civil/Structural/Inspections  
 4785 Dorsey Hall Drive  
 Suite 124  
 Ellicott City, Maryland 21042  
 Phone: (410) 995-3651 Fax: (410) 995-1363

DATE	DESCRIPTION
5/29/19	Revision 1 Changed Sheet Number

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*James A. Willett*  
 Director, Department of Planning and Zoning  
 Date: 3/8/02

*Condy Hamilton*  
 Chief, Division of Land Development  
 Date: 3/7/02

*Chris Dammann*  
 Chief, Development Engineering Division  
 Date: 3/5/02

PREPARED FOR:  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 Maryland Route 10B  
 Ellicott City, Maryland 21042  
 Attention Cathleen Young

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT: Northeastern Elementary School No. 4

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2387/562	B,9	R-5C	37	First	6011

WATER CODE: D 05  
 SEWER CODE: 2650000

**STANDARD DETAILS**

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No: 37 PARCEL No: 670  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: 2 JANUARY 2002  
 BID AND CONSTRUCTION 14 JANUARY 2002  
 SHEET 53 OF 56



BAR SIZE	* LOCATION CATEGORY		
	A	B	C
#4	2'-9"	2'-0"	1'-7"
#5	3'-6"	2'-6"	2'-0"
#6	4'-2"	3'-0"	2'-5"
#7	5'-7"		3'-3"
#8	7'-4"	Does Not Exist	4'-3"
#9	9'-4"		5'-4"
#10	11'-10"		6'-9"
#11	14'-6"		8'-3"

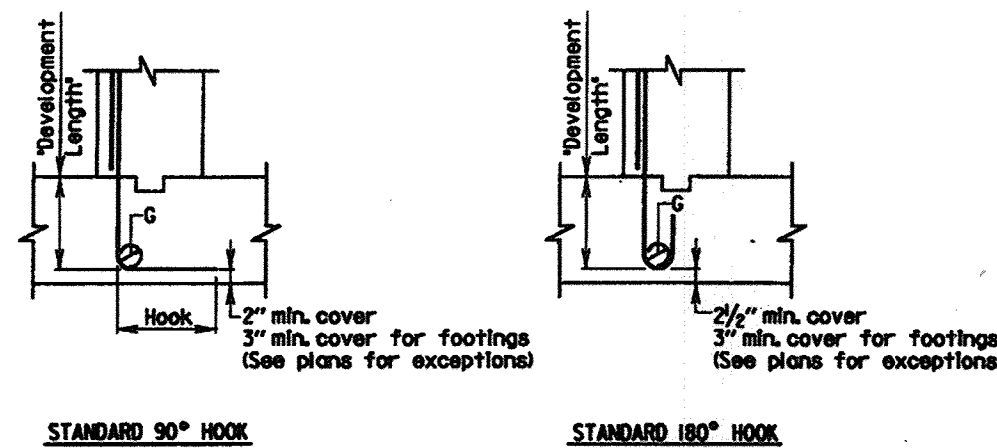
**\* LOCATION CATEGORY**

- A - Bars in horizontal layers in top of pour with 12" or more of concrete below them such as in footings, pier caps, etc.
- B - All bars not in Category A spaced less than 6 inches apart.
- C - All bars not in Category A spaced 6 inches or more apart.

- Notes**
- When bar lap is not specified on the plans, the above dimensions shall be used.
  - These bar laps do not apply when bar is in lightweight concrete. Greater lengths are required for this material.
  - These bar laps only apply where the General Notes Indicate Reinforcing Steel Design, fs=24,000 p.s.i.

CASE NO.2 - For bars coated with epoxy not in Case No.1.

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF SPECIAL DESIGN  
DEVELOPMENT LENGTH DIMENSIONS FOR  
GRADE 60 REINFORCING STEEL  
IN MIX NO.3 (3500 P.S.I.) CONCRETE  
EPOXY COATED REINFORCING CASE NO.2  
MSJ07-01-127 SHEET 3 OF 3



BAR SIZE	* LOCATION CATEGORY		
	D	E	F
#4	8"	11"	9"
#5	9"	12"	11"
#6	11"	14"	14"
#7	14"	16"	13"
#8	15"	19"	15"
#9	15"	21"	17"
#10	17"	22"	19"
#11	19"	25"	21"

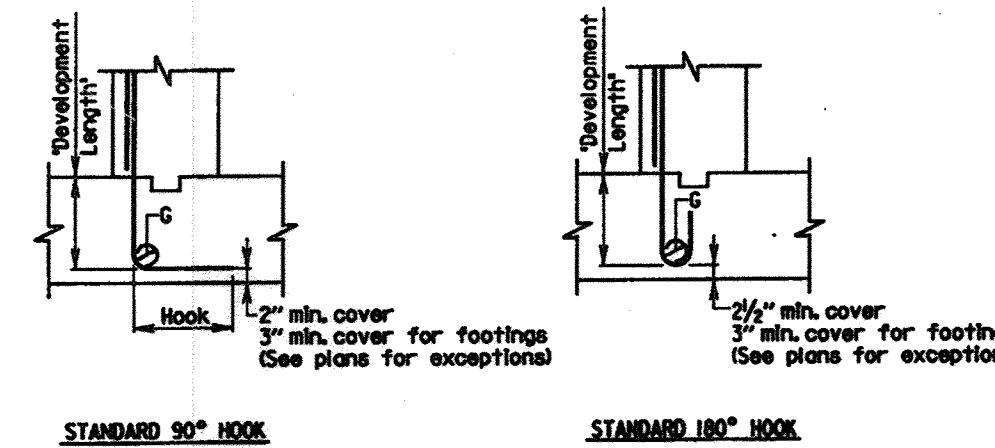
RECOMMENDED END HOOKS ALL GRADES			
BAR SIZE	Finished bar diameter d in.	180 Degree hooks	90 Degree hooks
#4	5"	6"	8"
#5	5 3/4"	7"	10"
#6	6 1/4"	8"	10"
#7	6 3/4"	10"	12"
#8	7 1/4"	11"	14"
#9	7 3/4"	12"	14"
#10	8 1/4"	13"	17"
#11	9 1/4"	15"	17"

**\* LOCATION CATEGORY**

- D - All bars terminating with a standard 180° hook with side cover (normal to plane of hook) not less than 2 1/2 in. and for 90° deg. hook, cover on bar extension beyond hook not less than 2 in.
- E - All bars not in Category D.
- F - All bars with hook enclosed vertically or horizontally within ties or stirrups spaced along the full development length not greater than 3d where d is the diameter of the hooked bar.

- Notes**
- When development length is not specified on the plans, the above dimensions shall be used.
  - These development lengths do not apply when bar is in lightweight concrete or any other strength of concrete.
  - These development lengths only apply where the General Notes Indicate Reinforcing Steel Design, fs=24,000 p.s.i.
  - If depth of member does not allow bar development length indicated in Categories A, B, and C, S.H.A. No. MSJ40-90-24 then hook shall be added to all bars not conforming, as per D, E & F.

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF SPECIAL DESIGN  
DEVELOPMENT LENGTH DIMENSIONS OF HOOKED  
BARS FOR GRADE 60 REINFORCING STEEL  
IN MIX NO.3 (3500 P.S.I.) CONCRETE  
MSJ08-06-178 SHEET 1 OF 1



BAR SIZE	* LOCATION CATEGORY		
	D	E	F
#4	8"	9"	8"
#5	8"	10"	9"
#6	10"	12"	11"
#7	11"	14"	14"
#8	14"	16"	13"
#9	15"	19"	15"
#10	17"	22"	17"
#11	19"	25"	19"

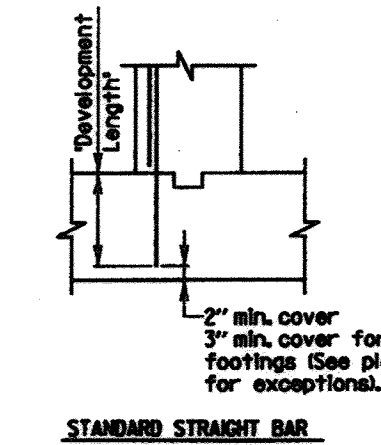
RECOMMENDED END HOOKS ALL GRADES			
BAR SIZE	Finished bar diameter d in.	180 Degree hooks	90 Degree hooks
#4	5"	6"	8"
#5	5 3/4"	7"	10"
#6	6 1/4"	8"	10"
#7	6 3/4"	10"	12"
#8	7 1/4"	11"	14"
#9	7 3/4"	12"	14"
#10	8 1/4"	13"	17"
#11	9 1/4"	15"	17"

**\* LOCATION CATEGORY**

- D - All bars terminating with a standard 180° hook with side cover (normal to plane of hook) not less than 2 1/2 in. and for 90° deg. hook, cover on bar extension beyond hook not less than 2 in.
- E - All bars not in Category D.
- F - All bars with hook enclosed vertically or horizontally within ties or stirrups spaced along the full development length not greater than 3d where d is the diameter of the hooked bar.

- Notes**
- When development length is not specified on the plans, the above dimensions shall be used.
  - These development lengths do not apply when bar is in lightweight concrete or any other strength of concrete.
  - These development lengths only apply where the General Notes Indicate Reinforcing Steel Design, fs=24,000 p.s.i.
  - If depth of member does not allow bar development length indicated in Categories A, B, and C, S.H.A. No. MSJ40-90-24 then hook shall be added to all bars not conforming, as per D, E & F.

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF SPECIAL DESIGN  
DEVELOPMENT LENGTH DIMENSIONS OF HOOKED  
BARS FOR GRADE 60 REINFORCING STEEL  
IN MIX NO.6 (4500 P.S.I.) CONCRETE  
MSJ10-06-180 SHEET 1 OF 1



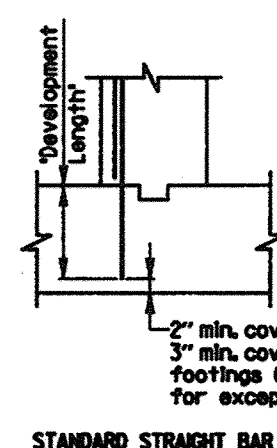
BAR SIZE	* LOCATION CATEGORY		
	A	B	C
#4	1'-5"	1'-0"	1'-0"
#5	1'-8"	1'-3"	1'-0"
#6	2'-2"	1'-6"	1'-3"
#7	3'-2"	2'-4"	1'-8"
#8	4'-9"	3'-5"	2'-9"
#9	6'-1"	4'-4"	3'-6"
#11	7'-5"	5'-4"	4'-3"

**\* LOCATION CATEGORY**

- A - Bars in horizontal layers in top of pour with 12" or more of concrete below them such as in footings, pier caps, etc.
- B - All bars not in Category A spaced less than 6' apart.
- C - All bars not in Category A spaced 6' inches or more apart.

- Notes**
- When development length is not specified on the plans, the above dimensions shall be used.
  - These development lengths do not apply when bar is in lightweight concrete or any other strength of concrete.
  - These development lengths only apply where the General Notes Indicate Reinforcing Steel Design, fs=24,000 p.s.i.
  - If depth of member does not allow bar development length indicated in Categories A, B, and C then hook shall be added to all bars not conforming, as per D, E, and F per Std. No. MSJ08-06-178.

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF SPECIAL DESIGN  
DEVELOPMENT LENGTH DIMENSIONS FOR  
GRADE 60 REINFORCING STEEL  
IN MIX NO.3 (3500 P.S.I.) CONCRETE  
NON-EPOXY COATED REINFORCING  
MSJ40-90-24 SHEET 1 OF 3



BAR SIZE	* LOCATION CATEGORY			3 Times Bar Diameter	6 Times Bar Diameter	c/c Spacing
	A	B	C			
#4	1'-9"	1'-6"	1'-3"	1 1/2"	3"	3 1/2"
#5	2'-2"	1'-8"	1'-6"	1 1/2"	3 1/4"	4 1/2"
#6	2'-7"	2'-3"	1'-10"	2 1/2"	4 1/2"	5 1/2"
#7	3'-6"	3'-4"	2'-6"	2 1/2"	5 1/2"	6 1/2"
#8	4'-7"	4'-4"	3'-3"	3"	6"	7"
#9	5'-9"	5'-4"	4'-4"	3 1/2"	6 1/2"	7 1/2"
#10	7'-4"	6'-6"	5'-2"	3 1/2"	7 1/2"	8 1/2"
#11	9'-0"	7'-11"	6'-4"	4 1/2"	8 1/2"	9 1/2"

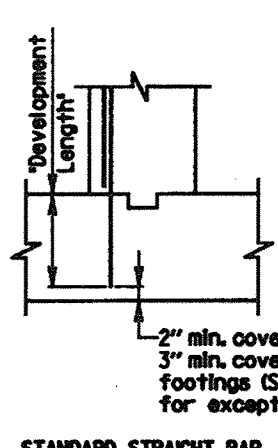
**\* LOCATION CATEGORY**

- A - Bars in horizontal layers in top of pour with 12" or more of concrete below them such as in footings, pier caps, etc.
- B - All bars not in Category A spaced less than 6' apart.
- C - All bars not in Category A spaced 6' inches or more apart.

- Notes**
- When development length is not specified on the plans, the above dimensions shall be used.
  - These development lengths do not apply when bar is in lightweight concrete or any other strength of concrete.
  - These bar laps only apply where the General Notes Indicate Reinforcing Steel Design, fs=24,000 p.s.i.

CASE NO.1 - For bars coated with epoxy with cover less than 3 times the bar diameter or clear spacing between bars less than 6 times the bar diameter.

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF SPECIAL DESIGN  
DEVELOPMENT LENGTH DIMENSIONS FOR  
GRADE 60 REINFORCING STEEL  
IN MIX NO.3 (3500 P.S.I.) CONCRETE  
EPOXY COATED REINFORCING CASE NO.1  
MSJ40-90-24 SHEET 2 OF 3



BAR SIZE	* LOCATION CATEGORY		
	A	B	C
#4	1'-8"	1'-2"	1'-0"
#5	2'-1"	1'-6"	1'-2"
#6	2'-5"	1'-9"	1'-5"
#7	3'-4"		1'-11"
#8	4'-4"	Does Not Exist	2'-6"
#9	5'-6"		3'-2"
#10	6'-11"		4'-0"
#11	8'-6"		4'-11"

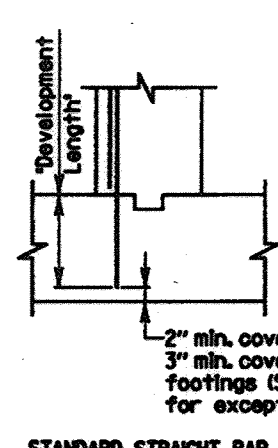
**\* LOCATION CATEGORY**

- A - Bars in horizontal layers in top of pour with 12" or more of concrete below them such as in footings, pier caps, etc.
- B - All bars not in Category A spaced less than 6' apart.
- C - All bars not in Category A spaced 6' inches or more apart.

- Notes**
- When development length is not specified on the plans, the above dimensions shall be used.
  - These development lengths do not apply when bar is in lightweight concrete or any other strength of concrete.
  - These bar laps only apply where the General Notes Indicate Reinforcing Steel Design, fs=24,000 p.s.i.

CASE NO.2 - For bars coated with epoxy not in Case No.1.

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF SPECIAL DESIGN  
DEVELOPMENT LENGTH DIMENSIONS FOR  
GRADE 60 REINFORCING STEEL  
IN MIX NO.3 (3500 P.S.I.) CONCRETE  
EPOXY COATED REINFORCING CASE NO.2  
MSJ40-90-24 SHEET 3 OF 3



BAR SIZE	* LOCATION CATEGORY			3 Times Bar Diameter	6 Times Bar Diameter	c/c Spacing
	A	B	C			
#4	1'-9"	1'-6"	1'-3"	1 1/2"	3"	3 1/2"
#5	2'-2"	1'-8"	1'-6"	1 1/2"	3 1/4"	4 1/2"
#6	2'-7"	2'-3"	1'-10"	2 1/2"	4 1/2"	5 1/2"
#7	3'-6"	3'-4"	2'-6"	2 1/2"	5 1/2"	6 1/2"
#8	4'-7"	4'-4"	3'-3"	3"	6"	7"
#9	5'-9"	5'-4"	4'-4"	3 1/2"	6 1/2"	7 1/2"
#10	7'-4"	6'-6"	5'-2"	3 1/2"	7 1/2"	8 1/2"
#11	9'-0"	7'-11"	6'-4"	4 1/2"	8 1/2"	9 1/2"

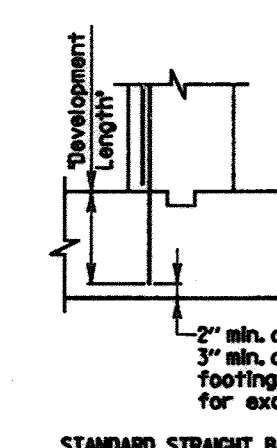
**\* LOCATION CATEGORY**

- A - Bars in horizontal layers in top of pour with 12" or more of concrete below them such as in footings, pier caps, etc.
- B - All bars not in Category A spaced less than 6' apart.
- C - All bars not in Category A spaced 6' inches or more apart.

- Notes**
- When development length is not specified on the plans, the above dimensions shall be used.
  - These development lengths do not apply when bar is in lightweight concrete or any other strength of concrete.
  - These development lengths only apply where the General Notes Indicate Reinforcing Steel Design, fs=24,000 p.s.i.

CASE NO.1 - For bars coated with epoxy with cover less than 3 times the bar diameter or clear spacing between bars less than 6 times the bar diameter.

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF SPECIAL DESIGN  
DEVELOPMENT LENGTH DIMENSIONS FOR  
GRADE 60 REINFORCING STEEL  
IN MIX NO.6 (4500 P.S.I.) CONCRETE  
EPOXY COATED REINFORCING CASE NO.1  
MSJ10-06-180 SHEET 2 OF 3



BAR SIZE	* LOCATION CATEGORY		
	A	B	C
#4	1'-8"	1'-2"	1'-0"
#5	2'-1"	1'-6"	1'-2"
#6	2'-5"	1'-9"	1'-5"
#7	3'-4"		1'-11"
#8	3'-10"	Does Not Exist	2'-3"
#9	4'-10"		3'-8"
#10	6'-2"		4'-6"
#11	7'-6"		4'-4"

**\* LOCATION CATEGORY**

- A - Bars in horizontal layers in top of pour with 12" or more of concrete below them such as in footings, pier caps, etc.
- B - All bars not in Category A spaced less than 6' apart.
- C - All bars not in Category A spaced 6' inches or more apart.

- Notes**
- When development length is not specified on the plans, the above dimensions shall be used.
  - These development lengths do not apply when bar is in lightweight concrete or any other strength of concrete.
  - These development lengths only apply where the General Notes Indicate Reinforcing Steel Design, fs=24,000 p.s.i.

CASE NO.2 - For bars coated with epoxy not in Case No.1.

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF SPECIAL DESIGN  
DEVELOPMENT LENGTH DIMENSIONS FOR  
GRADE 60 REINFORCING STEEL  
IN MIX NO.3 (3500 P.S.I.) CONCRETE  
EPOXY COATED REINFORCING CASE NO.2  
MSJ40-90-24 SHEET 3 OF 3

**NOLAN**  
Associates, Inc.  
Engineers - Civil/Structural/Inspections  
4785 Dorsey Hall Drive  
Suite 124  
Ellicott City, Maryland 21042  
Phone: (410) 995-3651 Fax: (410) 995-1363

DATE	DESCRIPTION
5-29-19	Revision 1 Changed Sheet Number



APPROVED: DEPARTMENT OF PLANNING AND ZONING

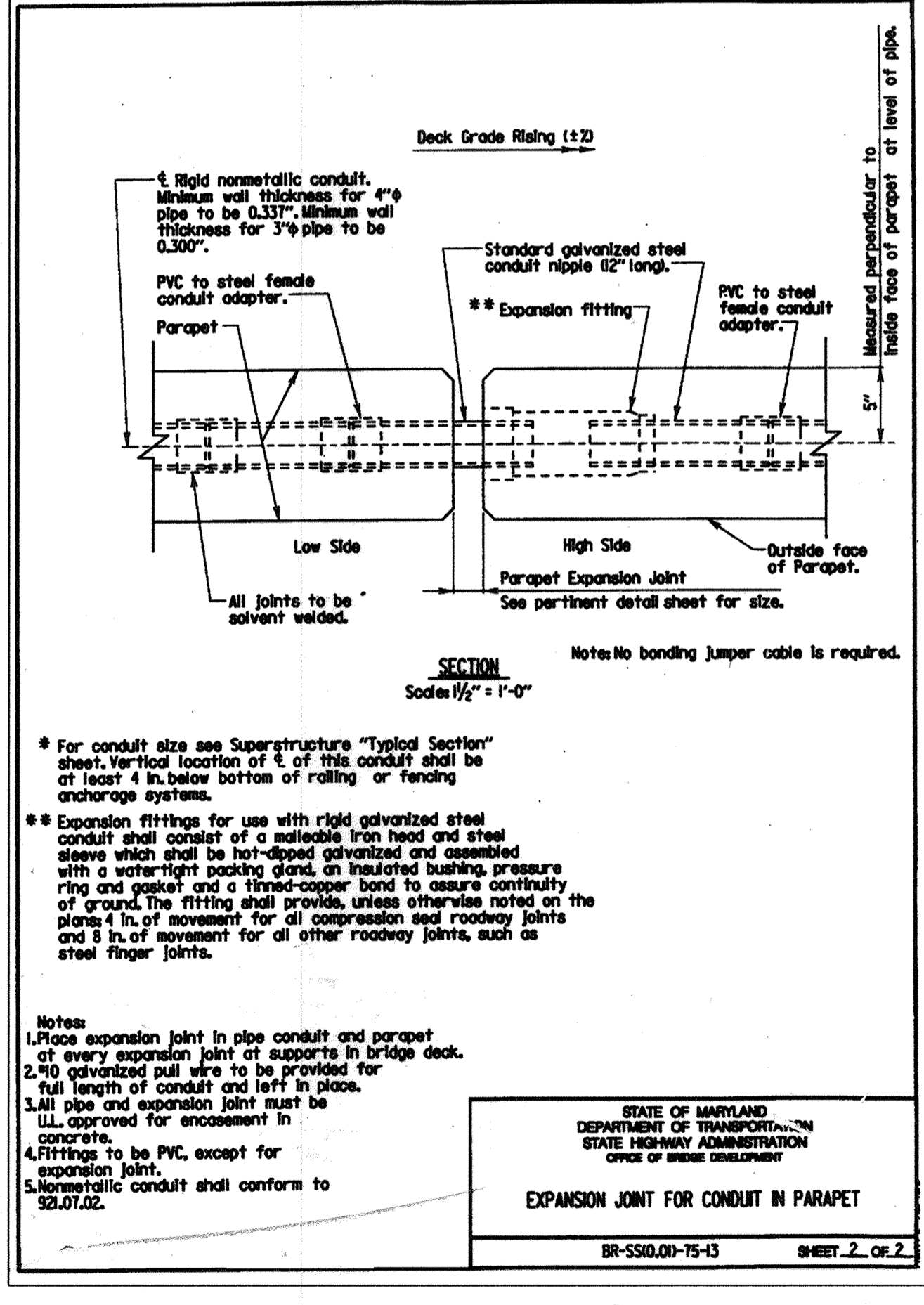
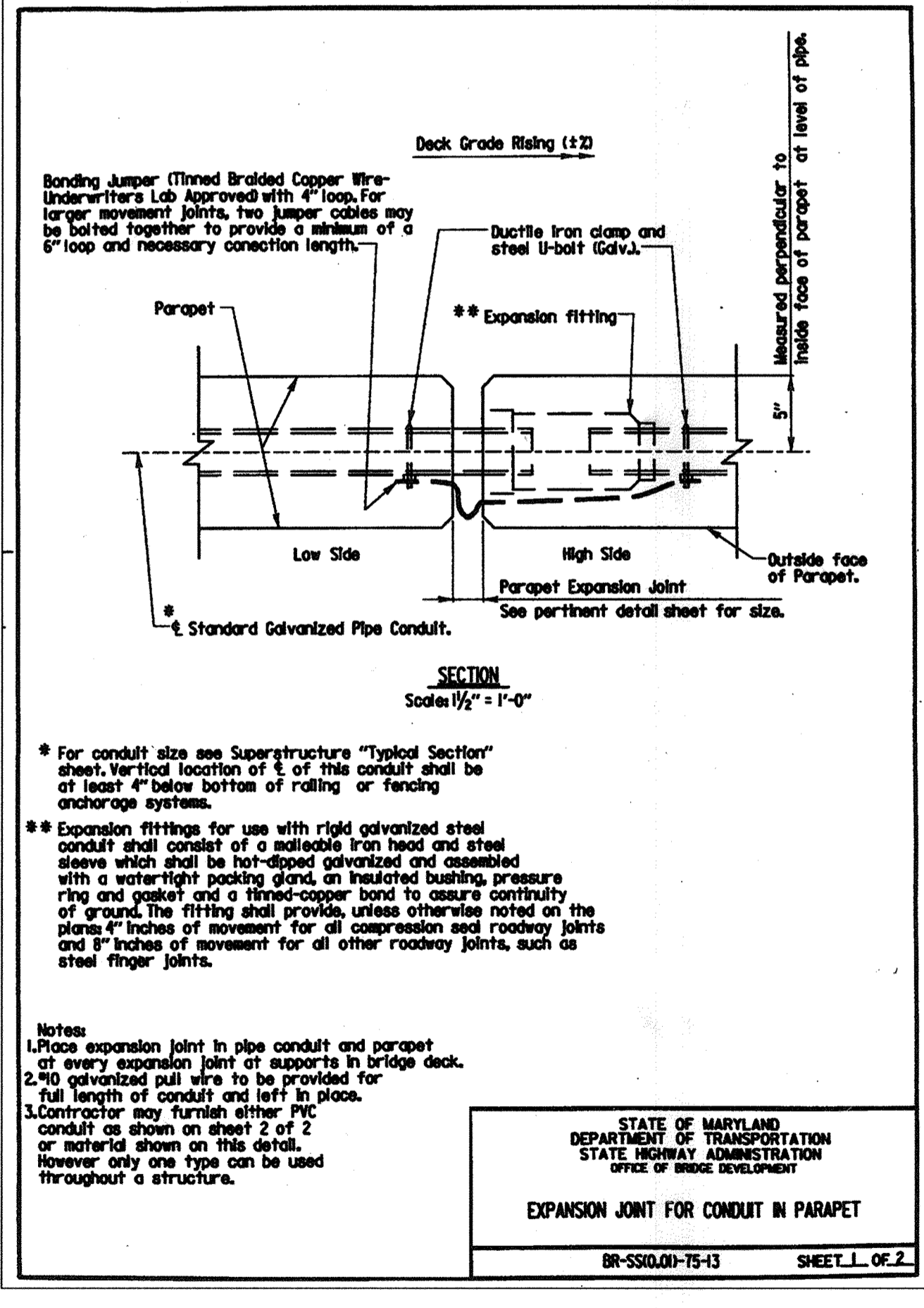
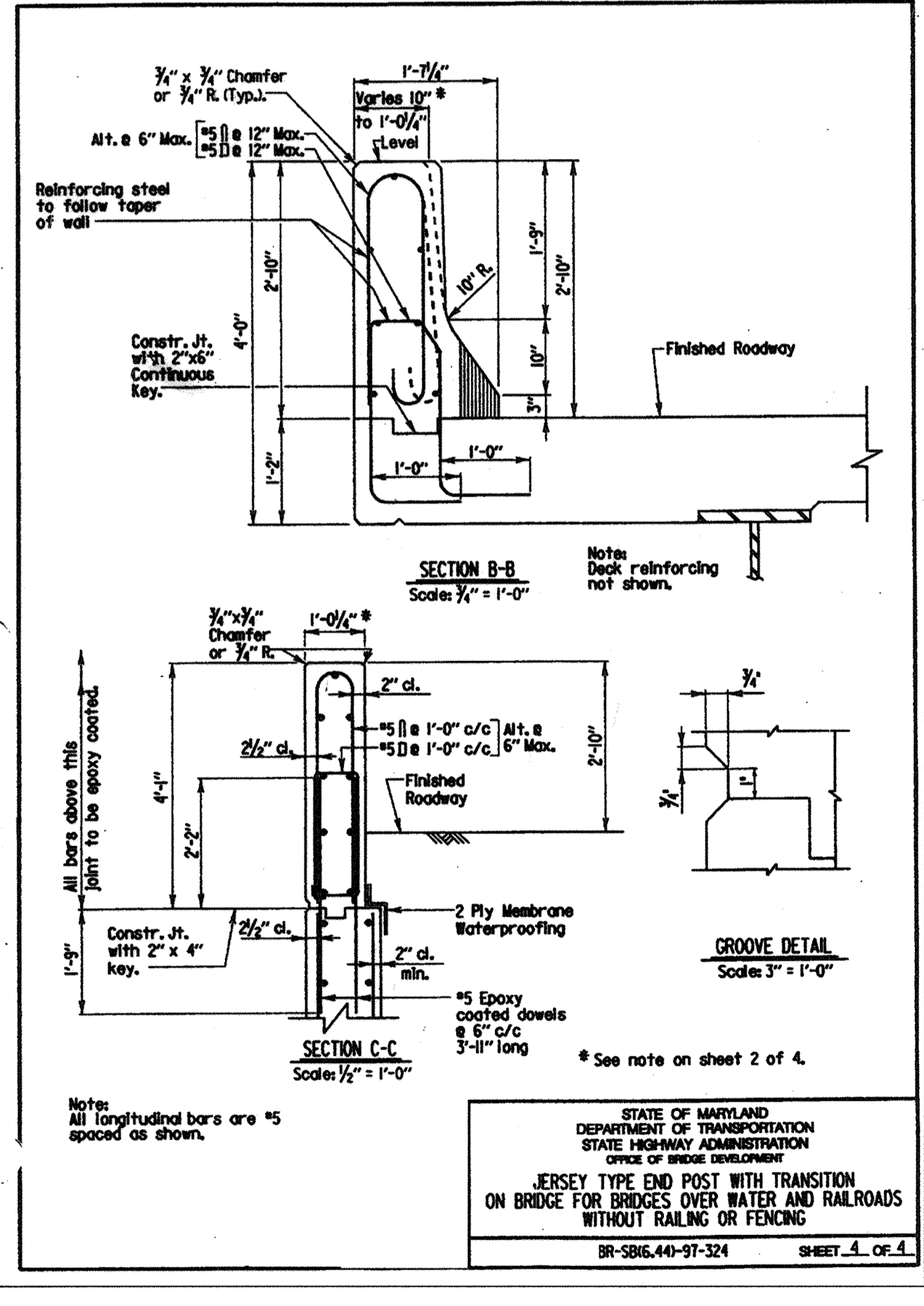
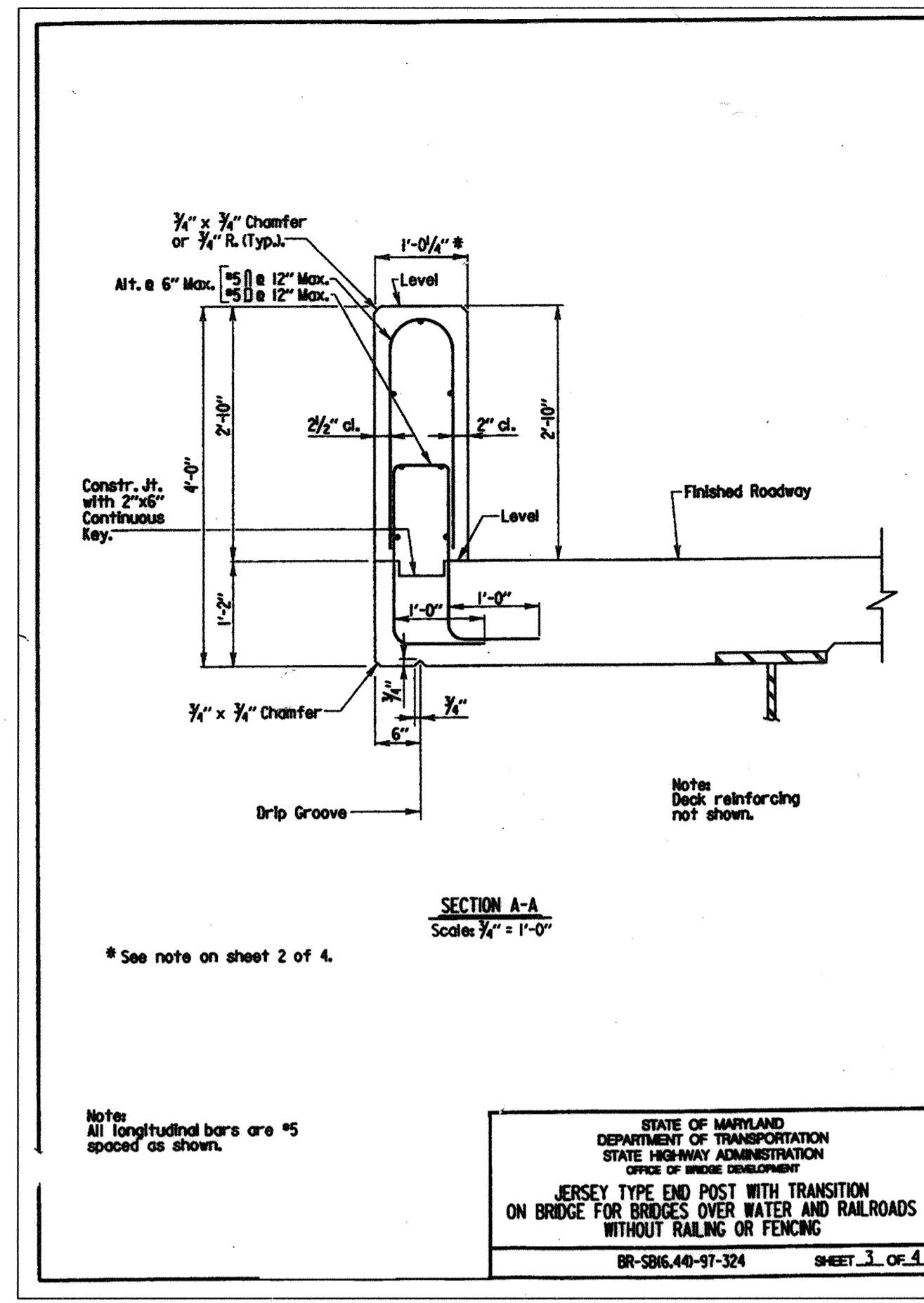
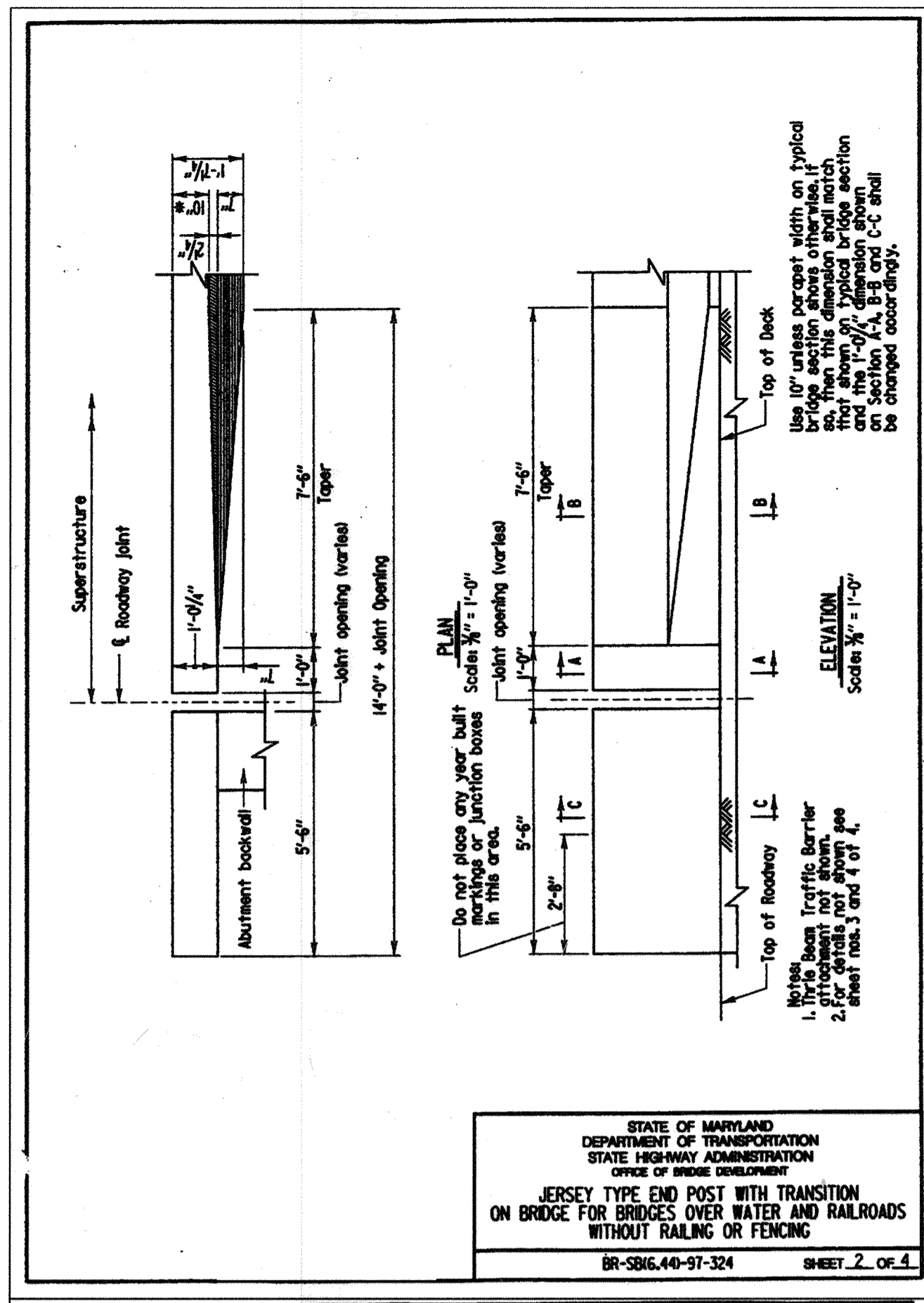
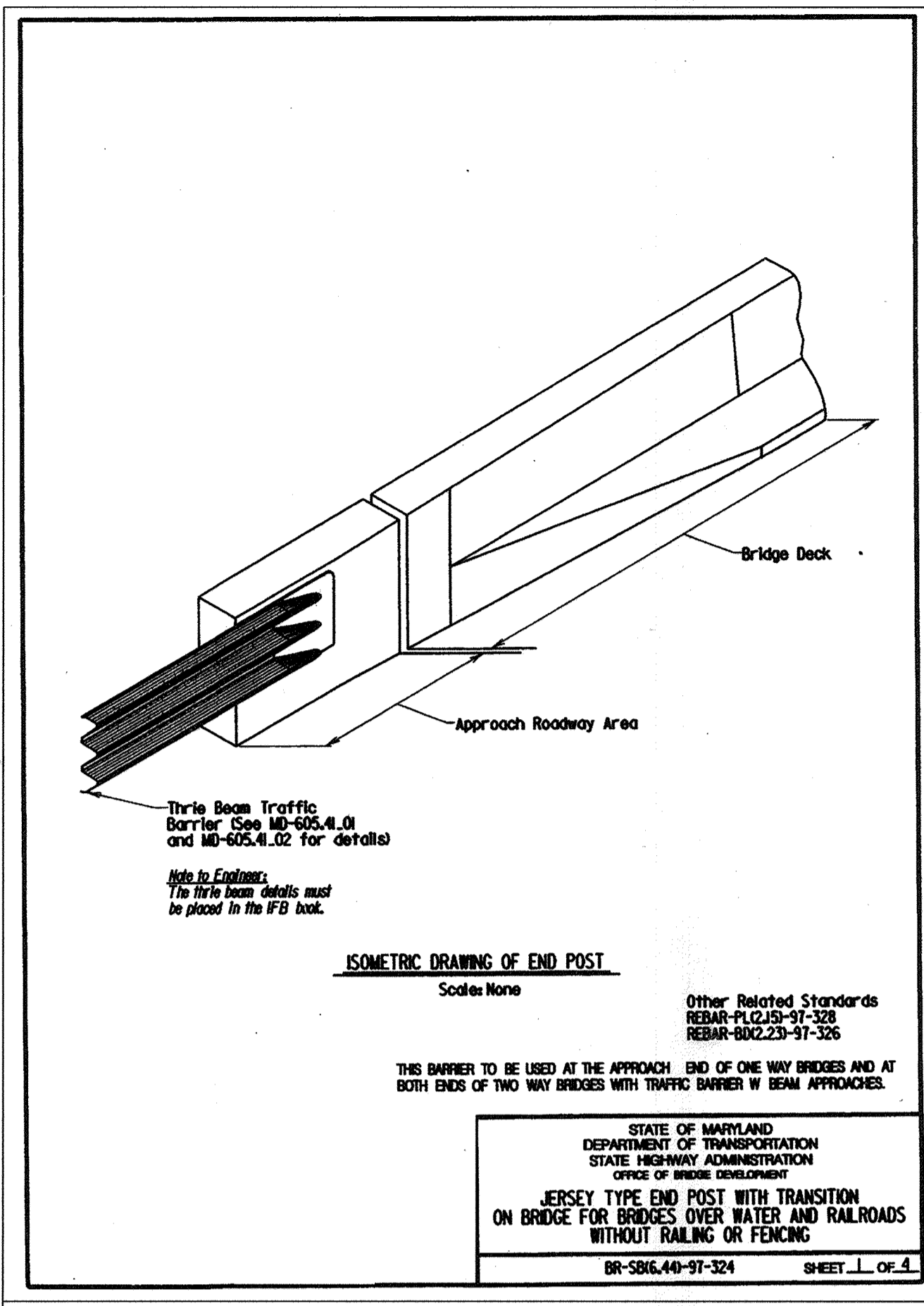
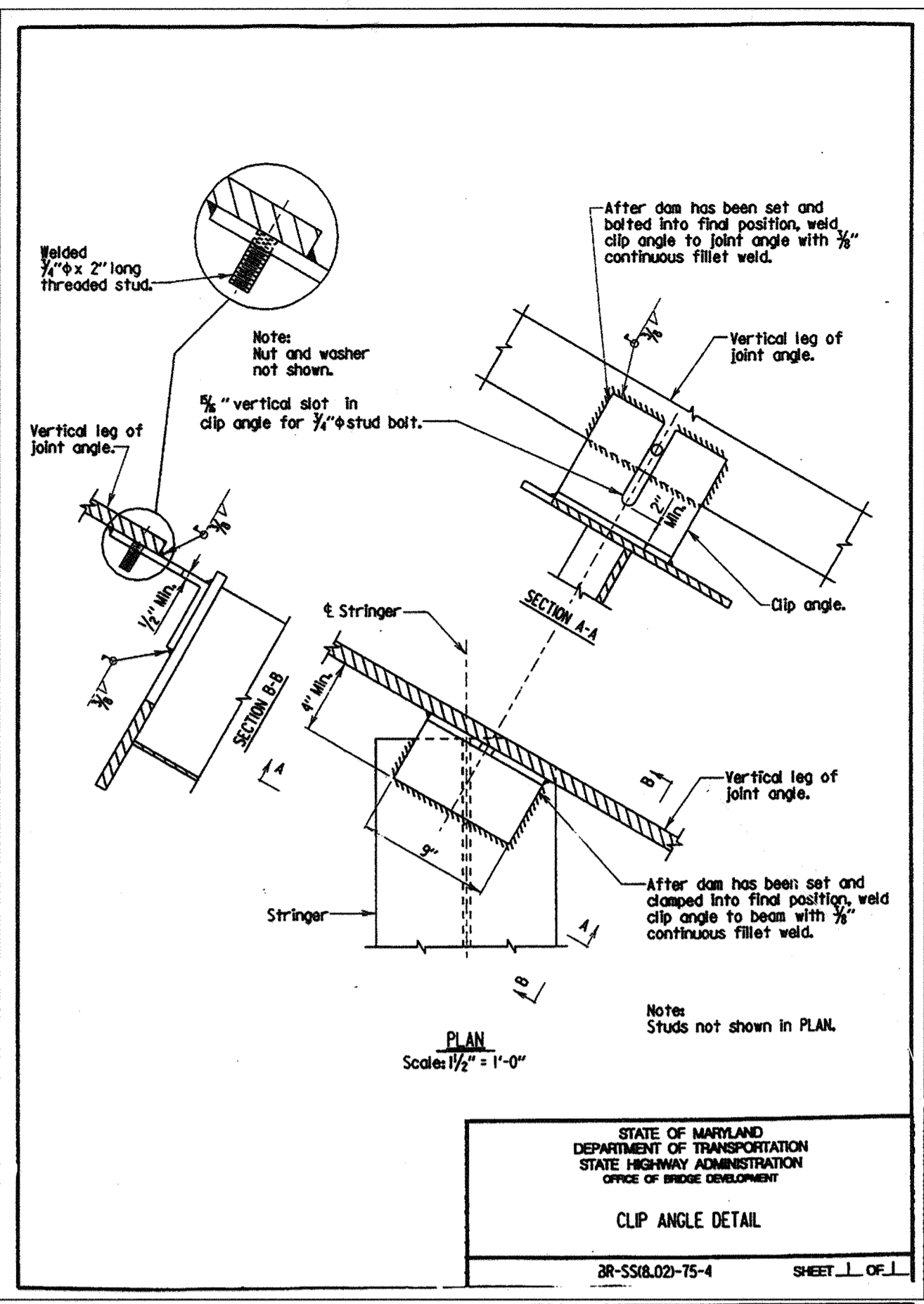
*Leah Roth* 3/8/02  
Director, Department of Planning and Zoning  
*Cindy Hamman* 2/7/02  
Chief, Division of Land Development  
*William D. ...* 2/5/02  
Chief, Development Engineering Division

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 100  
Ellicott City, Maryland 21042  
Attention Cathleen Young

Address Chart	
Parcel Number	Street Address
670	8125 Old Stockbridge Drive
PROJECT	Northeastern Elementary School No.4
DEED REF.	2307/562
BLOCK NO.	0,9
ZONE	R-5C
TAX/ZONE	37
ELEC. DIST.	6011
CENSUS TR.	6011
SECTION/AREA	2850000
LOT NO.	
SEWER CODE	
WATER CODE	D 05

**STANDARD DETAILS**  
**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**  
TAX MAP No. 37 PARCEL No. 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: 2 JANUARY 2002  
BID AND CONSTRUCTION 14 JANUARY 2002  
SHEET 54 OF 56





Professional Certificate I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 28376 Expiration Date: 1-1-21

For Revision 1 only 5-29-19

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

S25 OF S25

**NOLAN Associates, Inc.**  
Engineers - Civil/Structural/Inspections  
4785 Dorsey Hall Drive  
Suite 124  
Ellicott City, Maryland 21042  
Phone: (410) 985-3651 Fax: (410) 985-1363

DATE	DESCRIPTION
5/29/18	Revision 1 Change Sheet Number

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul Ryan* 3/8/02  
Director - Department of Planning and Zoning Date

*Condy Hamilton* 3/7/02  
Chief, Division of Land Development Date

*Mike Pannunzio* 3/5/02  
Chief, Development Engineering Division Date

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF BRIDGE DEVELOPMENT

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Maryland Route 108  
Ellicott City, Maryland 21042  
Attention Cathleen Young

Address Chart

Parcel Number	Street Address
670	8125 Old Stockbridge Drive

PROJECT	SECTION/AREA	LOT NO.
Northeastern Elementary School No. 4		

DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2307/562	8,9	R-5C	37	First	6011

WATER CODE: D 05  
SEWER CODE: 2550000

STANDARD DETAILS

**NORTHEASTERN ELEMENTARY SCHOOL #4 (BELLOWS SPRING)**

TAX MAP No: 37 PARCEL No: 670  
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: 2 JANUARY 2002  
BID AND CONSTRUCTION 14 JANUARY 2002  
SHEET 55 OF 56



**ACCESSIBLE WALK DAY-BY-DAY TIMELINE**

1. BEI STAKEOUT LIMIT OF DISTURBANCE.
2. PRE-CONSTRUCTION MEETING.
3. BEGIN CLEARING, INSTALLATION OF SEDIMENT CONTROLS AND SAFETY FENCING.
4. CLEARING AND SEDIMENT CONTROLS.
5. BEI STAKEOUT OF WALKWAY.
6. GRADING OF WALKWAY ALIGNMENT.
7. GRADING OF WALKWAY ALIGNMENT.
8. GRADING OF WALKWAY ALIGNMENT.
9. FINAL GRADE WALKWAY.
10. PLACE CONCRETE FORMS.
11. PLACE CONCRETE FORMS.
12. WALK PROJECT WITH BOARD OF EDUCATION TO CONFIRM WALKWAY LAYOUT.
13. PLACE CONCRETE WALK.
14. PLACE CONCRETE WALK.
15. INSTALL HANDRAILS ON BOTH SIDES OF ALL AREAS EXCEEDING 5%. HANDRAILS SHALL BE SET IN CONCRETE OUTSIDE OF THE 6' WALKWAY.
16. COMPLETE HANDRAIL INSTALLATION.
17. FINE GRADE AROUND WALKWAY.
18. WALK PROJECT WITH BOARD OF EDUCATION TO DISCUSS STABILIZATION METHODS. EVALUATE THE NEED FOR GRADING TO PROVIDE POSITIVE DRAINAGE (PH. 2, SDC #4).
19. STABILIZE IN ACCORDANCE WITH SEDIMENT NOTES AND BOARD OF EDUCATION REQUIREMENTS.
20. REMOVE SEDIMENT CONTROLS, COMPLETE ANY REMAINING STABILIZATION.
21. REMOVE SAFETY FENCE.

**SITE WORK NOTES:**

1. DISTURBED AREAS SHALL BE RESTORED WITH 4" OF TOPSOIL. SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH CURLEX, TALL FESCUE AND LESPEDEZA (SEE GRASS STABILIZATION MIX, THIS SHEET). FLAT LAWN AREAS MUST BE SOODED. IF SOD IS REQUIRED, THE CONTRACTOR SHALL PROVIDE IRRIGATION UNTIL SOD IS FULLY ESTABLISHED.
2. AN AS-BUILT SURVEY SHALL BE PROVIDED FOR VERIFICATION OF HANDICAP ACCESSIBILITY.
3. 28-DAY CONCRETE LABORATORY COMPRESSION TESTS SHALL BE PROVIDED FOR STRENGTH VERIFICATION.

**ACCESSIBLE WALK SEQUENCE OF CONSTRUCTION**

1. OBTAIN GRADING PERMIT USING HOWARD COUNTY SCD STANDARD SEDIMENT CONTROL PLAN AND REQUEST A PRECONSTRUCTION MEETING WITH THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR (INSPECTOR) 48 HOURS BEFORE ANY CONSTRUCTION ACTIVITIES. (DAY 1-2)
2. PHASE 1: INSTALL ALL SEDIMENT CONTROL PRACTICES. WITH APPROVAL OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, BEGIN WALK CONSTRUCTION. (DAY 3-17)
3. A MEETING SHALL BE HELD IN THE FIELD WITH THE OFFICE OF SCHOOL FACILITIES, GROUND SERVICES DIVISION, THREE (3) WORKING DAYS PRIOR TO ANY STABILIZATION MEASURES BEING DONE AT THE SITE. CONTACT GREG CONNOR 410-313-2577. (DAY 18)
4. PHASE 2: UPON COMPLETION OF WALKWAY CONSTRUCTION AND STABILIZATION, EVALUATE GRADING TO DETERMINE IF MINOR GRADING IS NEEDED TO FACILITATE DRAINAGE FROM SIDEWALK LOW POINT INTO THE PHASE 2 DISTURBANCE AREA. IF SO, PERFORM ONLY THE GRADING NEEDED TO PROVIDE POSITIVE DRAINAGE, AND STABILIZE IMMEDIATELY UPON COMPLETION. (DAY 19-20)
5. COMPLETE STABILIZATION OF DISTURBED AREAS. UPON APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES, AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEDIBED NOTES. (DAY 21-23)
6. UPON COMPLETION OF ALL WORK, A FINAL INSPECTION SHALL BE PERFORMED BY BOARD OF EDUCATION GROUND SERVICES. AN AS-BUILT OF THE WALKWAY SHOULD BE COMPLETED PRIOR TO THE RELEASE OF SURETIES. CONCRETE TEST RESULTS SHALL BE PROVIDED TO THE BOARD REPRESENTATIVE.

THIS PHASES OF THIS PROJECT SHALL BE COMPLETED SEQUENTIALLY AS A SINGLE PROJECT.

**ACCESSIBLE WALK GRASS STABILIZATION MIX**

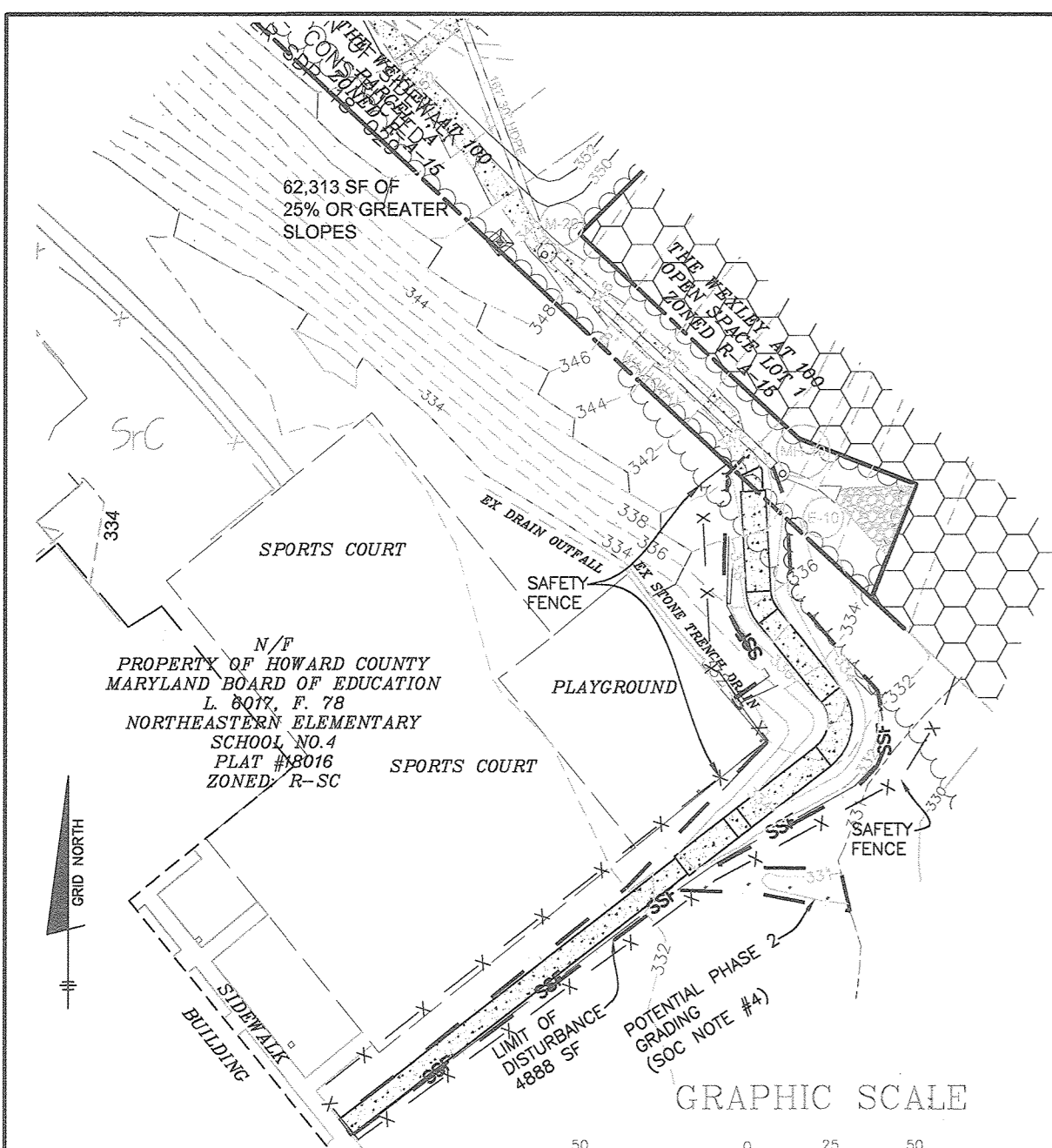
SEED MIX SPECIES	SEED MIX PERCENTAGES	SEED MIX RATE LB/AC	SEED MIX RATE LB/1,000 SQ FT	RECOMMENDED SEEDING DATES
TALL FESCUE	80-85%	135 LBS	3.1	3/15-10/1
SERECIA LESPEDEZ	15-20%	135 LBS	3.1	3/15-10/1

**TOPSOIL SPECIFICATIONS**

ALL TOPSOIL SHALL BE SCREENED UTILIZING A 1/2" SCREEN PRIOR TO PLACEMENT. IMPORTED TOPSOIL IS REQUIRED; IT SHALL CONSIST OF A NATURAL FRIABLE LOAM OF UNIFORM COMPOSITION, OBTAINED FROM AN AREA WHICH HAS NEVER BEEN STRIPPED, POSSESSING CHARACTERISTICS OF THE BEST SOILS OF THE VICINITY WHICH PRODUCE HEAVY GROWTHS OF CROPS, GRASS AND OTHER VEGETATION. ALL ON-SITE AND IMPORTED TOPSOIL SHALL BE OF UNIFORM COMPOSITION WITH NO SUBSOIL, CLAY LUMPS, STONES, STUMPS, ROOTS OR SIMILAR OBJECTS. TOPSOIL SHALL BE FREE OF ANY GLASS, METAL FRAGMENTS OR ANY PAINTS (SEED, RIZOMES, ROOTS ETC) OF JOHNSON GRASS, CANADA THISTLE, BERMUDA GRASS, POISON IVY, OR OTHER NOXIOUS WEEDS, AND LITTER OR ANY OTHER MATERIAL OR SUBSTANCES WHICH MAY BE HARMFUL TO PLANT GROWTH, OR A HINDRANCE TO PLANTING OR MAINTENANCE OPERATIONS. IMPORTED TOPSOIL SHALL CONTAIN 50-75% SAND, 15-20% SILT AND 10-20% CLAY ALL ON-SITE AND IMPORTED TOPSOIL SHALL HAVE A PH VALUE BETWEEN 5.8 AND 7.0. TOPSOIL SHALL CONTAIN NOT LESS THAN 2.5% ORGANIC MATTER BY WEIGHT. IN ACCORDANCE WITH MENT 603, SQUARE YARDS SHALL NOT EXCEED 500 PPM. CONTRACTOR SHALL HAVE ALL ON-SITE AND IMPORTED TOPSOIL TESTED BY THE RECOGNIZED APPROVED SOIL LAB FROM THE MARYLAND DEPARTMENT OF AGRICULTURE. TESTING CERTIFICATION SHALL ATTEST THAT TESTED SAMPLES OF TOPSOIL MEET ALL SPECIFICATION REQUIREMENTS. TEST SAMPLES SHALL BE TAKEN FOR EACH 100 CU. YARDS OF TOPSOIL. COST OF TESTING TOPSOIL SHALL BE PAID BY THE CONTRACTOR. ADD ORGANIC MATTER IF REQUIRED BY TEST RESULTS. CONTRACTOR SHALL DELIVER ONE CUBIC YARD OF PROPOSED IMPORTED TOPSOIL TO THE SITE FOR OWNERS APPROVAL AND LOCATION WHERE THE TOPSOIL IS COMING FROM BEFORE STARTING OF SPREADS. OWNERS EVALUATION OF SUITABILITY OF IMPORTED TOPSOIL SHALL BE FINAL.

**LEGEND**

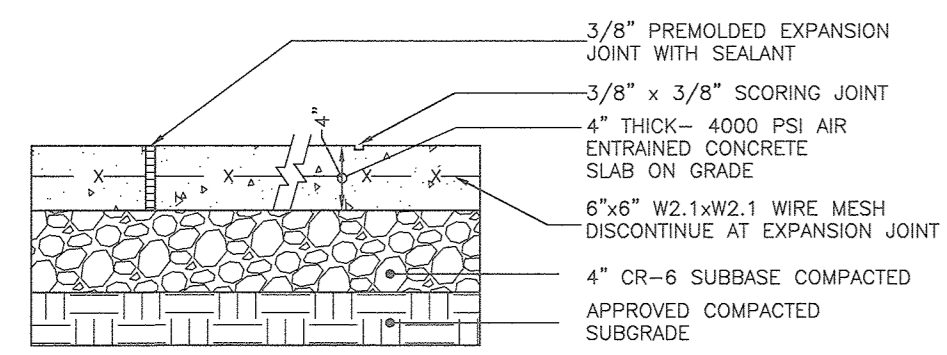
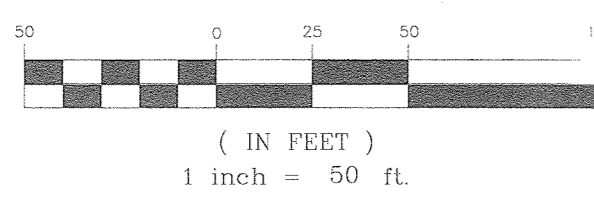
- EXISTING CONTOURS
- EXISTING WOODS LINE
- 25% AND GREATER SLOPES
- EX. FOREST CONSERVATION EASEMENT
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- 6' TEMPORARY CHAIN LINK FENCE



**SEC PLAN VIEW**

SCALE: 1" = 50'

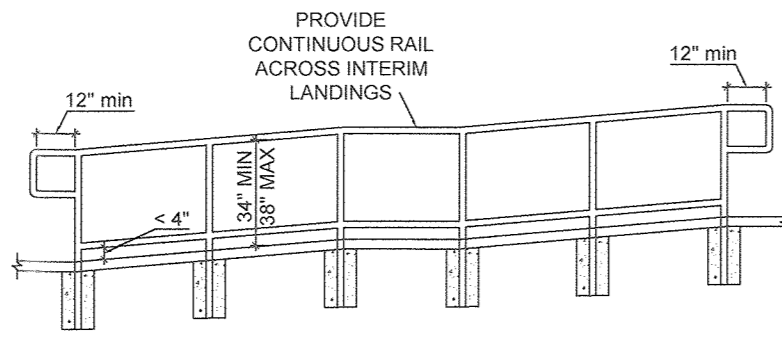
**GRAPHIC SCALE**



- NOTE:
  - INSTALL EXPANSION JOINTS AT MAX. 15'-0" O.C.
  - INSTALL SCORING JOINTS AT MAX 5'-0" O.C.
  - SLOPE ACROSS SIDEWALK SHALL BE MIN. 1/8" (1%)

**CONCRETE WALK DETAIL**

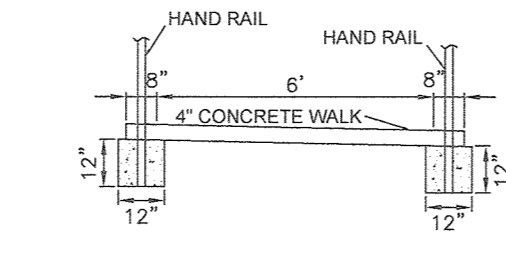
NOT TO SCALE



**ACCESSIBLE RAMP RAILING DETAIL**

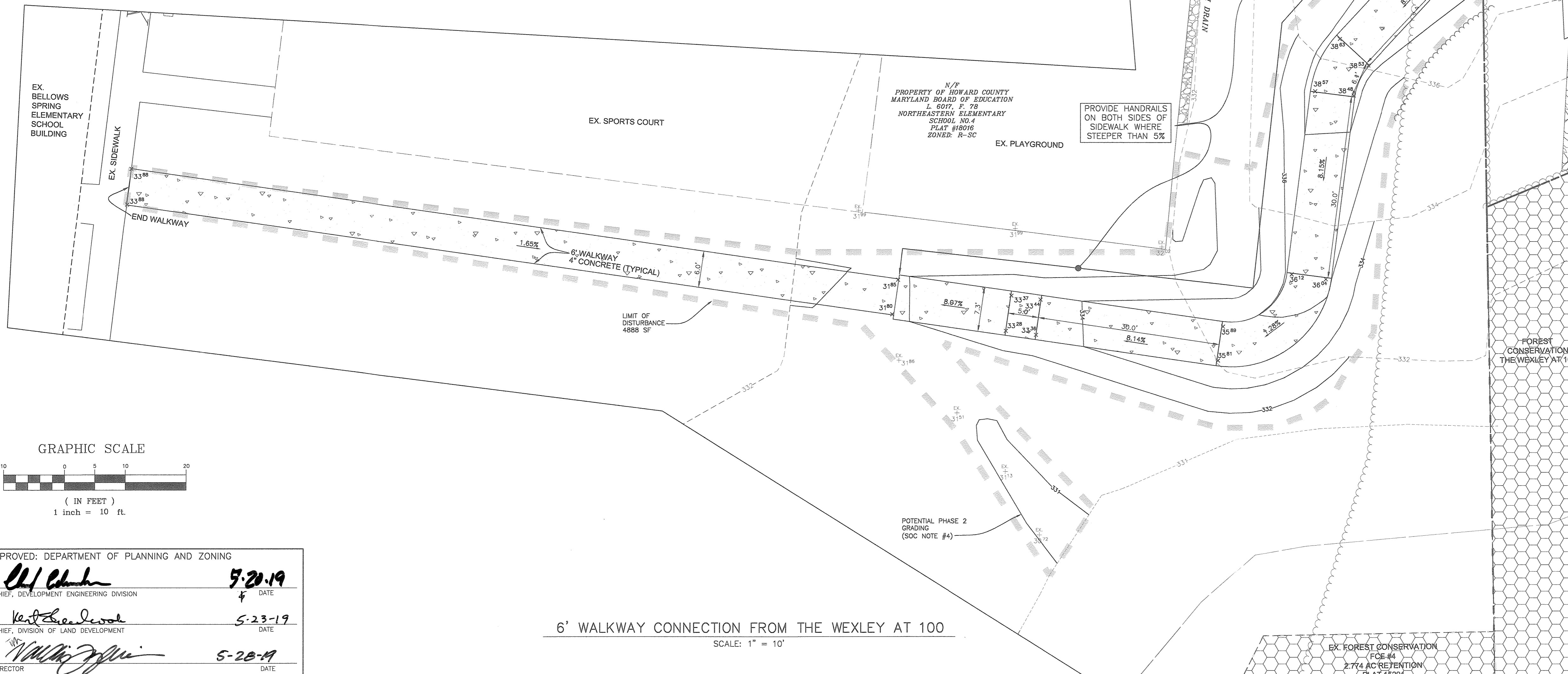
NOT TO SCALE

1. RAILING SHALL BE IN ACCORDANCE WITH CURRENT ADA ACCESSIBILITY REQUIREMENTS.
2. INTERIM POSTS SHALL BE A MAXIMUM 8' INTERVALS, AND POSTS SHALL BE SPACED EQUALLY BETWEEN END POSTS.
3. CONTRACTOR SHALL VERIFY EXACT SIZE AND RADI AND SPACING OF MEMBERS PRIOR TO FABRICATION.
4. HANDRAIL SHALL EXTEND HORIZONTALLY 1.0' PAST THE BEGINNING AND END OF THE RAMP, AND SHALL BE CONTINUOUS ACROSS INTERIM LANDINGS.
5. CONTRACTOR SHALL FIELD VERIFY AS BUILT RAMP CONDITION TO ENSURE CORRECT SLOPE AND EXTENSION OF HANDRAILS BEYOND END OF RAMP.
6. ALL RAIL POSTS TO BE SET IN CONCRETE IMMEDIATELY ADJACENT TO 6' WALK. CONCRETE SHALL BE A MINIMUM OF 8" DIAMETER AND 18" DEPTH.
7. HANDRAIL GRIPPING SURFACE SHALL HAVE A CIRCULAR CROSS SECTION WITH A MINIMUM DIAMETER OF 1.25" AND A MAXIMUM DIAMETER OF 2.0".
8. HANDRAIL MATERIAL SHALL BE STAINLESS STEEL OR HIGH-GRADE BRUSHED ALUMINUM.

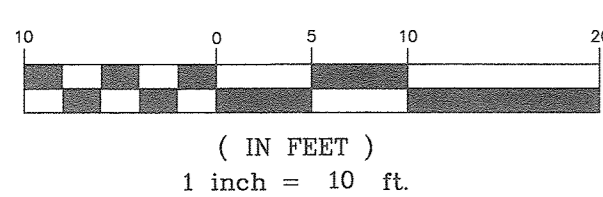


**SIDEWALK WITH HANDRAIL SECTION**

NOT TO SCALE



**GRAPHIC SCALE**



APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 5-20-19  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 5-23-19  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 5-28-19  
 DIRECTOR

**6' WALKWAY CONNECTION FROM THE WEXLEY AT 100**

SCALE: 1" = 10'

NOTE:  
PROPOSED DISTURBANCE FOR THE CONSTRUCTION OF THE 6' WALKWAY SHALL BE LESS THAN 5,000 SF. THEREFORE, A STANDARD EROSION AND SEDIMENT CONTROL PLAN FOR MINOR EARTH DISTURBANCES CAN BE USED WHEN APPLYING FOR THE GRADING PERMIT, AND NO STORMWATER MANAGEMENT IS REQUIRED.

1. THE PURPOSE OF THIS PLAN SHEET ADDITION IS TO DOCUMENT THE PROPOSED WALKWAY BETWEEN THE SCHOOL AND THE WEXLEY AT 100, TO BE CONSTRUCTED BY THE DEVELOPER.

NO.	DATE	REVISION
1	3-2019	REVISE SDP BY SHEET ADDITION TO DOCUMENT WALKWAY BETWEEN SCHOOL AND THE WEXLEY AT 100.

**BENCHMARK ENGINEERING, INC.**  
 ENGINEERS & LAND SURVEYORS & PLANNERS  
 8480 BALTIMORE NATIONAL PIKE A SUITE 315 A ELLICOTT CITY, MARYLAND 21043  
 (P) 410-465-9108 (F) 410-465-6944  
 WWW.BE-CVLENGINEERING.COM

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 28376, Expiration Date: 01-01-21.

STATE OF MARYLAND  
 JAMES A. MILLER  
 PROFESSIONAL ENGINEER  
 No. 28376  
 5-6-19

**OWNER:**  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 10910 MARYLAND ROUTE 108  
 ELLICOTT CITY, MARYLAND 21042

**DEVELOPER:**  
 LOCUST THICKET INVESTORS LLC  
 P.O. BOX 417  
 ELLICOTT CITY, MD 21041  
 410-465-4244

**NORTHEASTERN ELEMENTARY SCHOOL NO. 4**  
 BELLOWS SPRING ELEMENTARY SCHOOL

ZONED R-SC  
 TAX MAP 37, GRID 8, 9, PARCEL 670  
 1st ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**REVISED SITE DEVELOPMENT PLAN**  
 WALKWAY PLAN TO THE WEXLEY AT 100

DATE: MAY 2019 PROJECT NO. 0925  
 SCALE: AS SHOWN DRAWING 56 OF 56  
 DESIGN: AAM CHECKED: CAM