

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY STANDARDS AND SPECIFICATIONS...

4. SITE: TOTAL PROJECT AREA: 10.19 AC. PRESENT ZONING: R-20. APARTMENTS AND (28) RENTAL TOWNHOUSES BUILDING FLOOR AREAS: APARTMENT BUILDINGS A, C & D; TERRACE FLOOR: 8,254 GSF...

GENERAL NOTES CONTINUED

7. IN ACCORDANCE WITH ZONING REGULATIONS SECTION 1215.03 OF THE PLANING AND ZONING REGULATIONS AND OPEN SPACE SHALL BE MAINTAINED...

8. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY, PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.

11. TRAFFIC CONTROL DEVICES: A. BEFORE THE BASE PAVING IS COMPLETED. B. THE TRAFFIC CONTROL DEVICES LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION...

12. ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES. SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE REGISTERED GEOTECHNICAL ENGINEER...

26. PUBLIC WATER AVAILABLE THROUGH CONTRACT NO. 14-4083-W. THERE ARE NO STEEP SLOPES WITH A CONTIGUOUS AREA GREATER THAN 20,000 SF LOCATED ON PARCEL 'H'.

36. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR THIS SITE DEVELOPMENT PLAN IN THE AMOUNT OF \$250,000 FOR THE PROPOSED 101 SHADE TREES, 7 EVERGREENS, AND 322 SHRUBS.

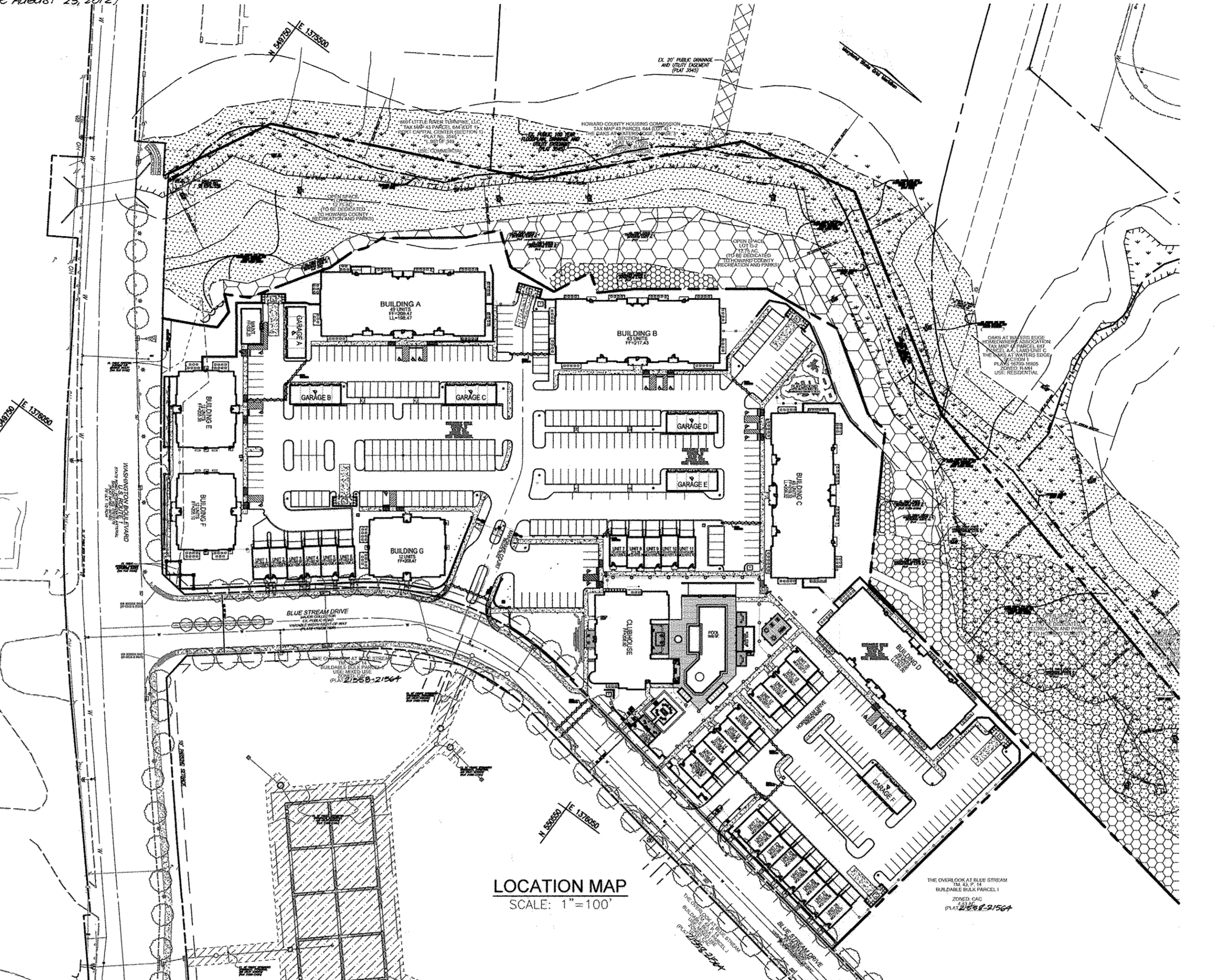
41. THIS PROJECT IS SUBJECT TO COMPLIANCE WITH THE AMENDED FIRST EDITION OF THE SUBDIVISION AND LAYOUT DEVELOPMENT REGULATIONS...

42. EXISTING BLUE STREAM DRAIN IS CLASSIFIED AS A MAJOR COLLECTOR, AND QUONDRILL LANE IS CLASSIFIED AS AN ACCESS STREET.

44. THE PROPOSED BUILDINGS WILL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.

53. NO GRADING, REMOVAL OF VEGETATIVE COVER OF TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAMS OR THEIR BUFFERS, FLOOD CONSERVATION AREAS AND 100 YEAR FLOODPLAIN.

GROSVENOR HOUSE APARTMENTS AND TOWNHOMES BLUE STREAM BUILDABLE BULK PARCEL H SITE DEVELOPMENT PLAN

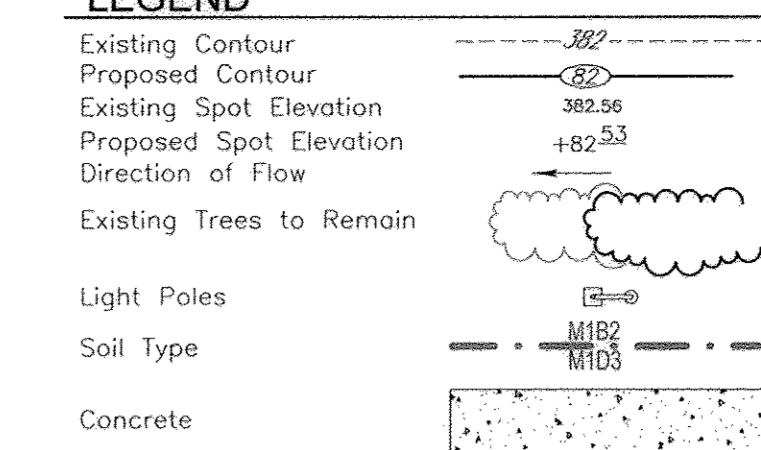


APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. CHIEF, DEVELOPMENT ENGINEERING DIVISION. DATE: 6/2/12.

CHIEF, DIVISION OF LAND DEVELOPMENT. DATE: 6/2/12. DIRECTOR.

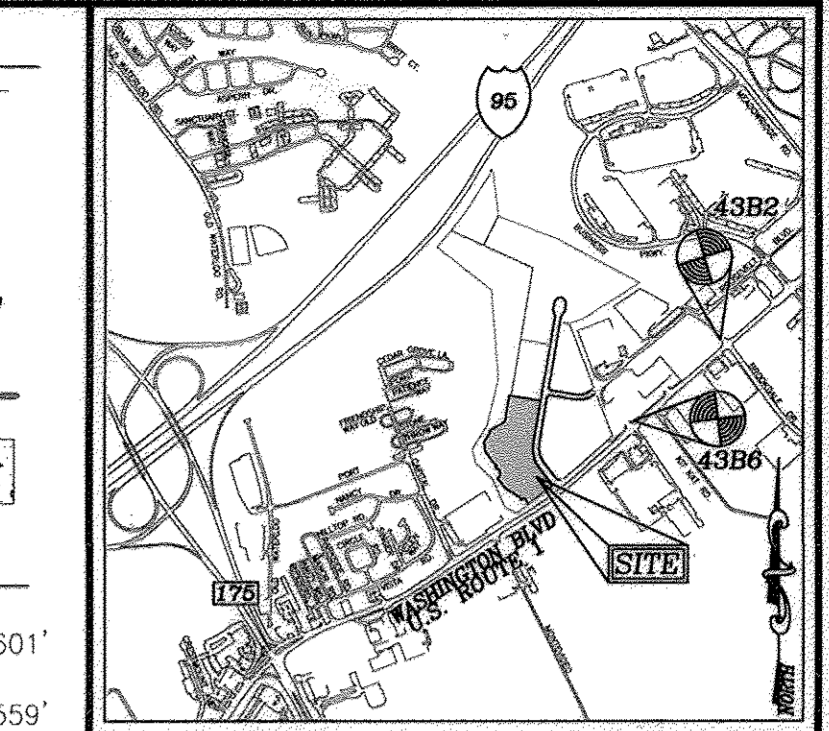
NO AS-BUILT INFORMATION THIS SHEET

LEGEND



BENCHMARKS

HOWARD COUNTY BENCHMARK 4382 N 551.654.993 E 1,378,176.951 ELEV.: 209.601' HOWARD COUNTY BENCHMARK 4386 N 550.601.597 E 1,376,866.072 ELEV.: 210.559'



SHEET INDEX

Table with 2 columns: DESCRIPTION and SHEET NO. Lists various sheets including COVER SHEET, LAYOUT SHEET, GRADING, SEDIMENT AND EROSION CONTROL PLAN, etc.

PARKING TABULATION

Table with 3 columns: REQUIRED, PROVIDED, and PROVIDED. Lists parking requirements for various building types and provides the total number of spaces available.

PARKING NOTES:

1. THE MAINTENANCE BUILDING IS PRIMARILY A STORAGE BUILDING AND THEREFORE DOES NOT REQUIRE PARKING. 2. GARAGES A-F SHALL BE MADE AVAILABLE AND USED FOR THE PARKING OF MOTOR VEHICLES AT ALL TIMES.

ADDRESS CHART

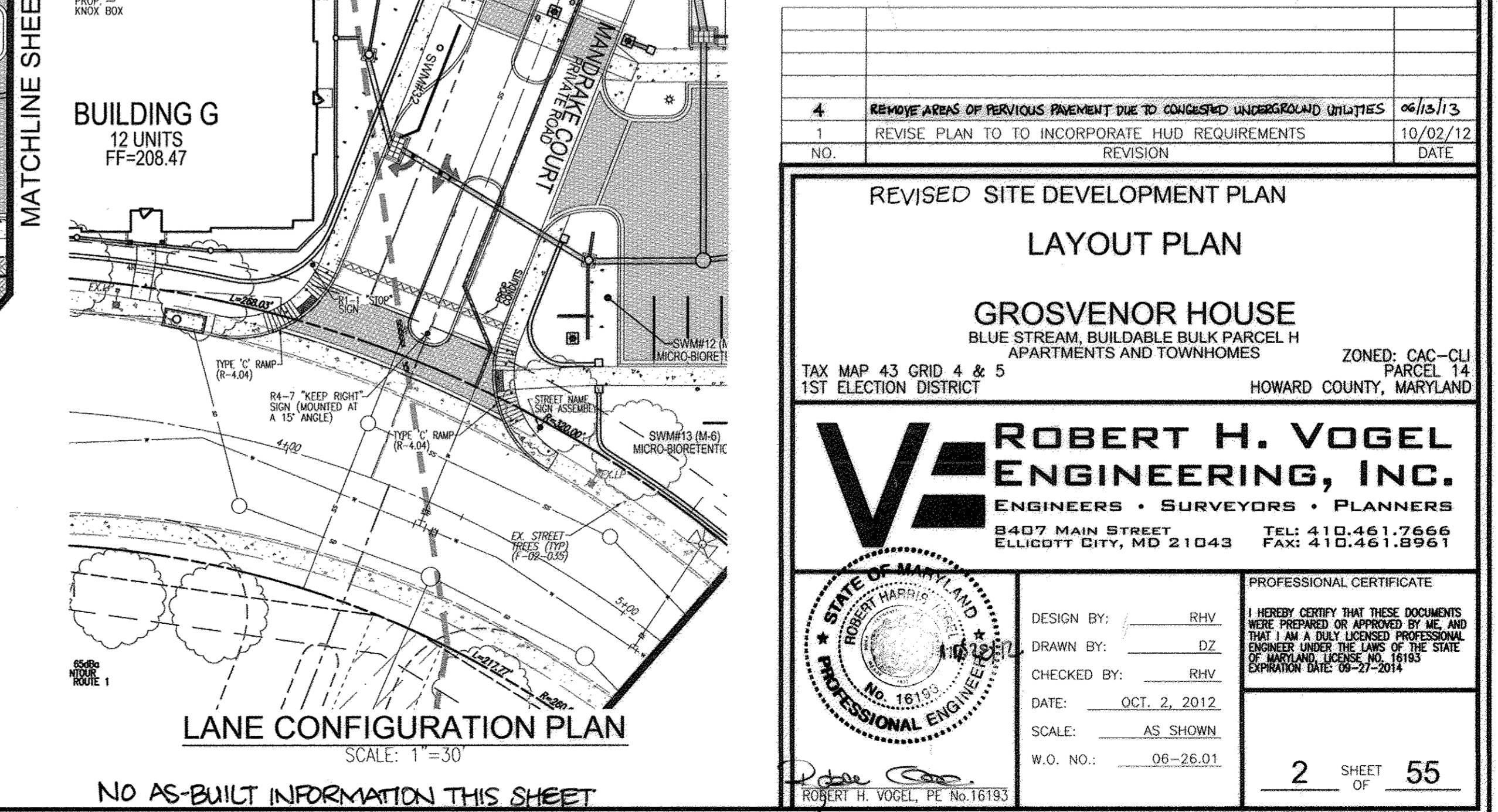
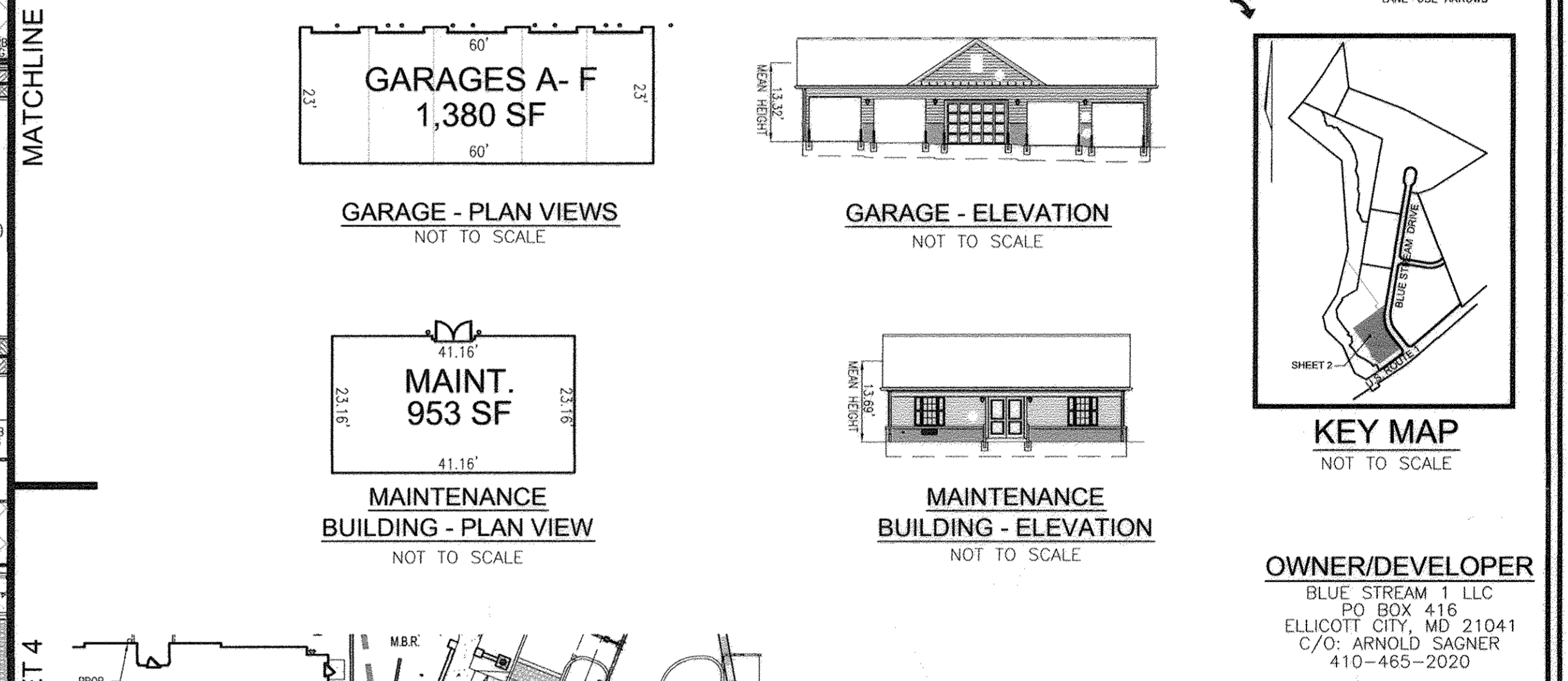
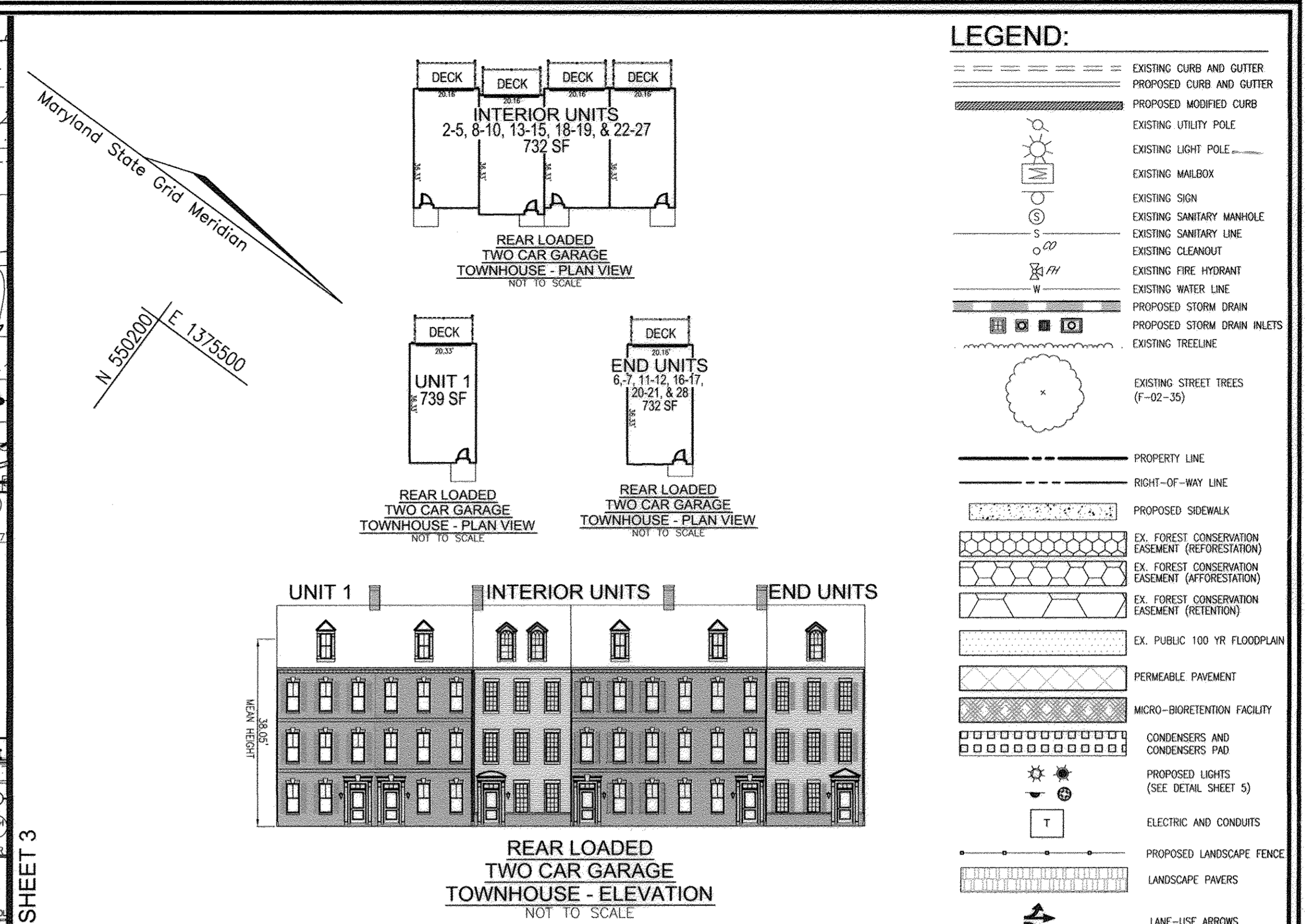
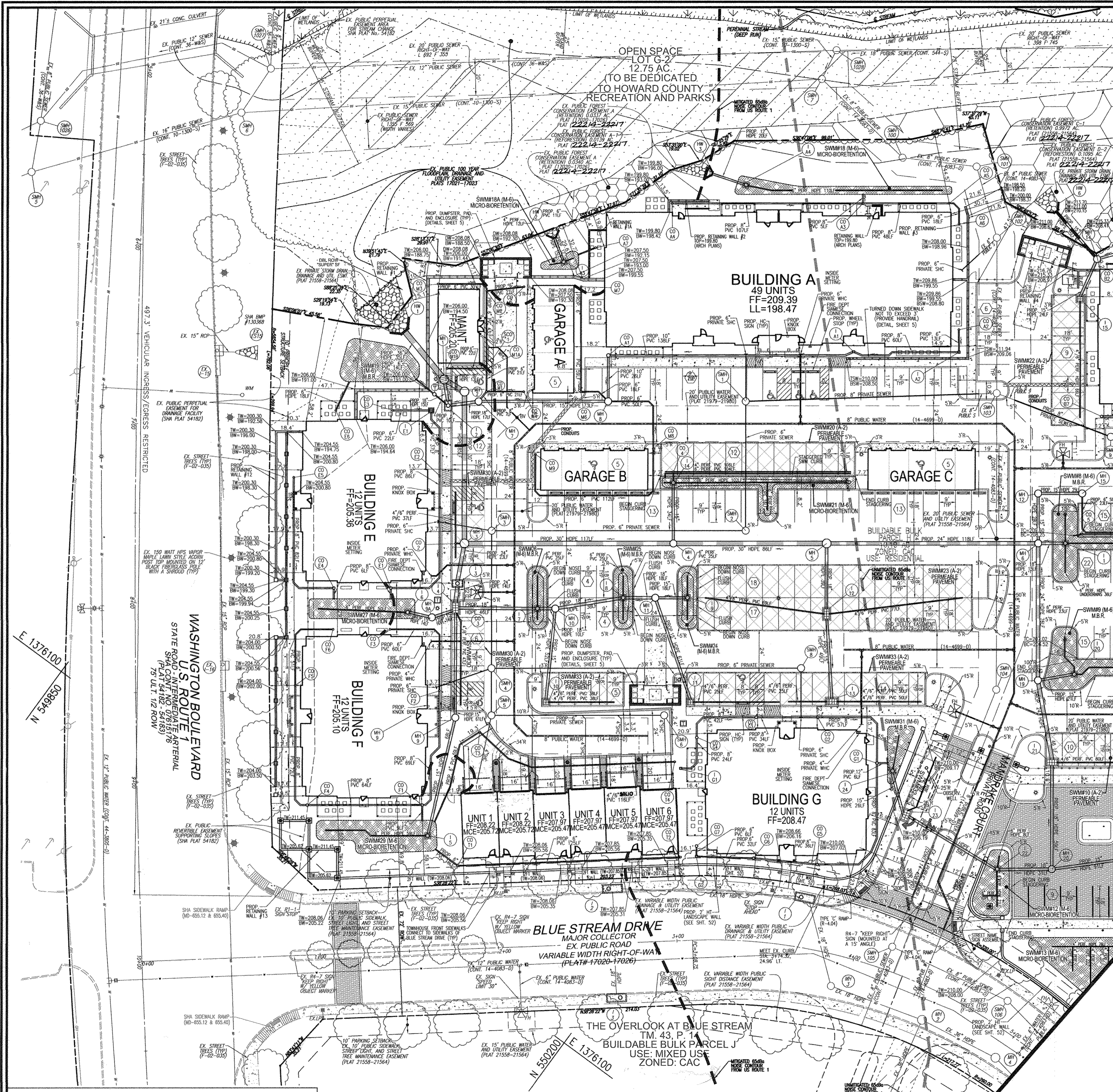
Table with 4 columns: UNIT/BUILDING, STREET ADDRESS, UNIT/BUILDING, STREET ADDRESS. Lists addresses for buildings B through G.

PERMIT INFORMATION CHART

Table with 4 columns: SUBDIVISION NAME, SECTION/AREA, LOTS/PARCEL #, and PERMIT #. Lists permit information for the project.

Site development plan cover sheet for Grosvenor House. Includes project name, location, date (FEB. 2, 2012), and contact information for Robert H. Vogel Engineering, Inc.

AS-BUILT 7/16/15. 1 SHEET OF 55. SDP-11-032

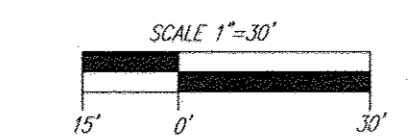


APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION    2/6/13    DATE

CHIEF, DIVISION OF LAND DEVELOPMENT    2/6/13    DATE

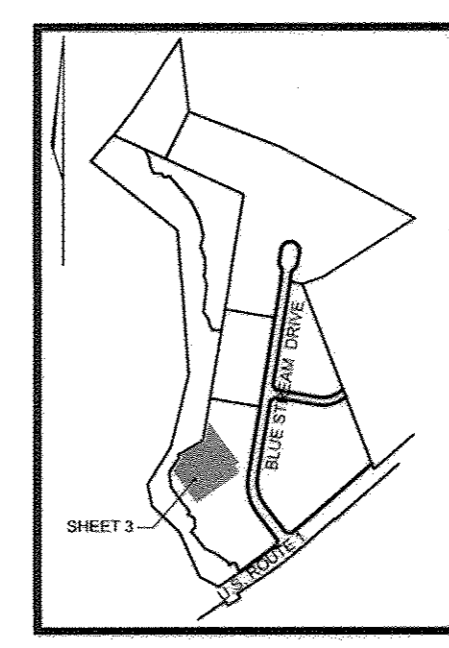
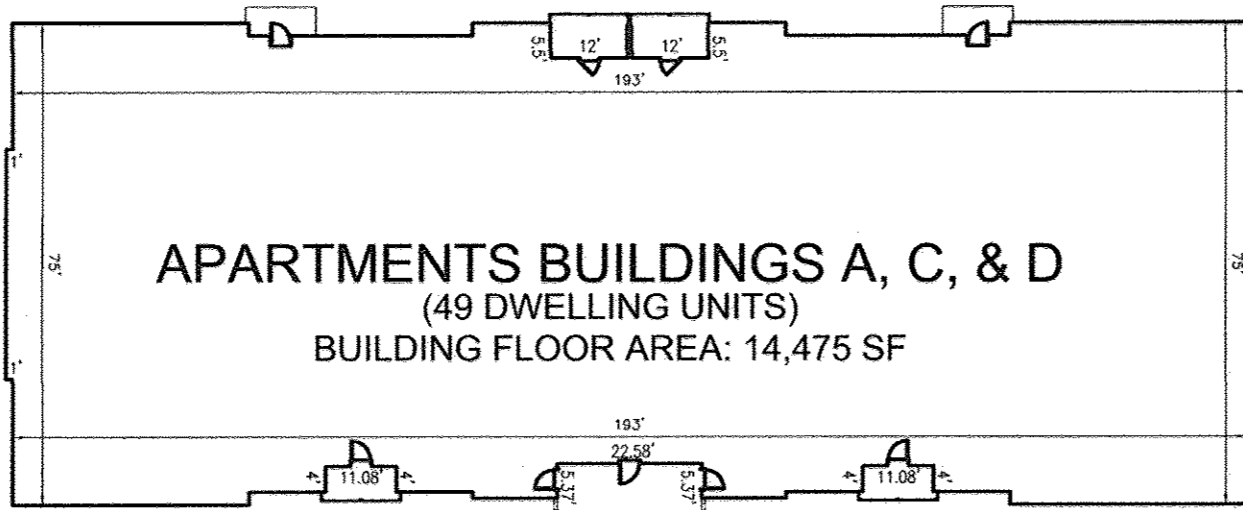
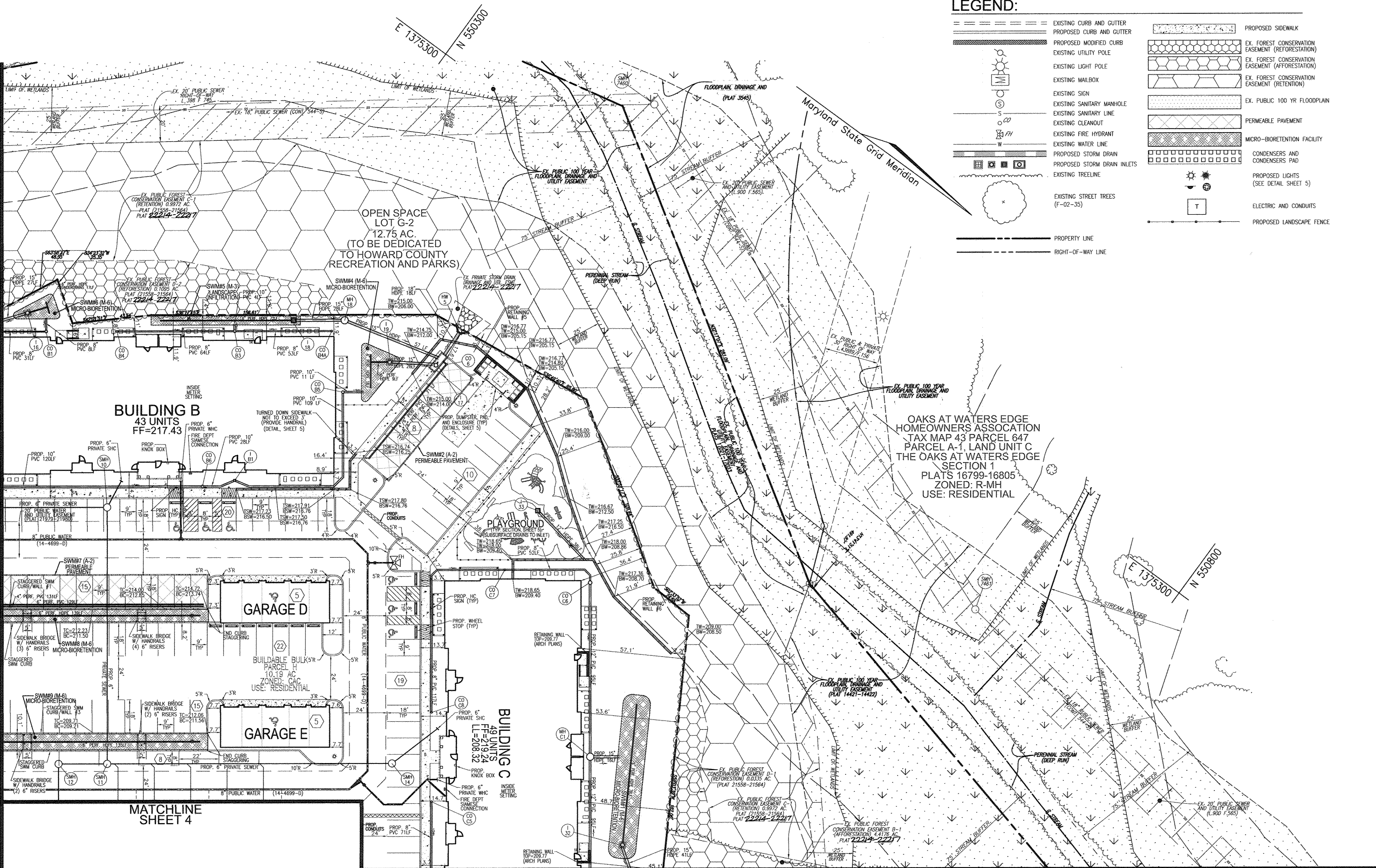
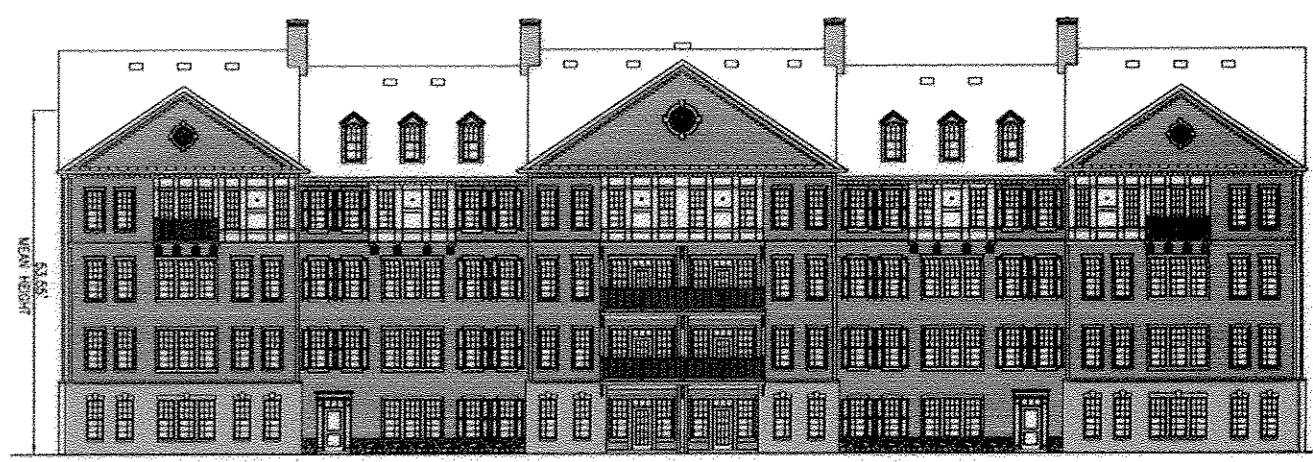
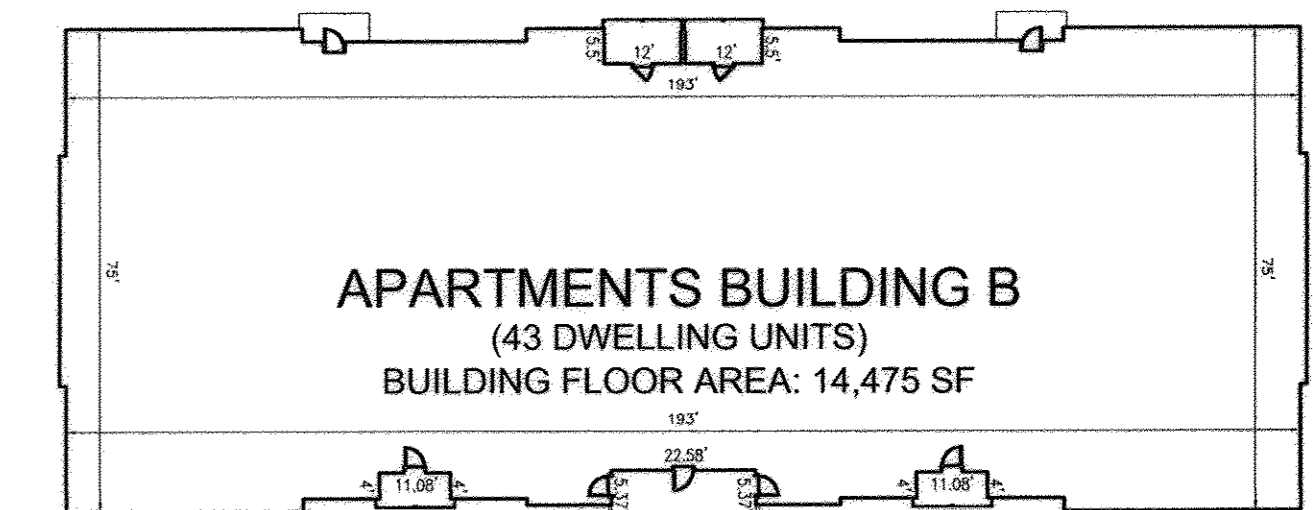
DIRECTOR    2/7/12    DATE



REVISED SITE DEVELOPMENT PLAN		
LAYOUT PLAN		
GROSVENOR HOUSE		
BLUE STREAM, BUILDABLE BULK PARCEL H		ZONED: CAC-CLU
APARTMENTS AND TOWNHOUSES		PARCEL 14
TAX MAP 43 GRID 4 & 5	1ST ELECTION DISTRICT	HOWARD COUNTY, MARYLAND
<b>ROBERT H. VOGEL ENGINEERING, INC.</b>		
ENGINEERS • SURVEYORS • PLANNERS		
8407 MAIN STREET    TEL: 410.461.7666		
ELLCOTT CITY, MD 21043    FAX: 410.461.8961		
PROFESSIONAL CERTIFICATE		
DESIGN BY: RHV	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. 16193, EXPIRATION DATE 08-27-2014.	
DRAWN BY: DZ		
CHECKED BY: RHV		
DATE: OCT. 2, 2012		
SCALE: AS SHOWN		
W.O. NO.: 06-26.01		
2		55
OF		SHEET

**LEGEND:**

- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- PROPOSED MODIFIED CURB
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANSOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLETS
- EXISTING TREE LINE
- EXISTING STREET TREES (T-02-35)
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- PROPOSED SIDEWALK
- EX. FOREST CONSERVATION EASEMENT (REFORESTATION)
- EX. FOREST CONSERVATION EASEMENT (AFFORESTATION)
- EX. FOREST CONSERVATION EASEMENT (RETENTION)
- EX. PUBLIC 100 YR FLOODPLAIN
- PERMEABLE PAVEMENT
- MICRO-BIORETENTION FACILITY
- CONDENSERS AND CONDENSER PAD
- PROPOSED LIGHTS (SEE DETAIL SHEET 5)
- ELECTRIC AND CONDUITS
- PROPOSED LANDSCAPE FENCE



**OWNER/DEVELOPER**  
BLUE STREAM 1 LLC  
PO BOX 416  
ELLCOTT CITY, MD 21041  
C/O: ARNOLD SAGNER  
410-465-2020

NO.	REVISION	DATE
1	REVISE PLAN TO TO INCORPORATE HUD REQUIREMENTS	10/02/12

**REVISED SITE DEVELOPMENT PLAN**  
**LAYOUT PLAN**  
**GROSVENOR HOUSE**  
BLUE STREAM, BUILDABLE BULK PARCEL H  
APARTMENTS AND TOWNHOMES  
TAX MAP 43 GRID 4 & 5  
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3 SHEET OF 55

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

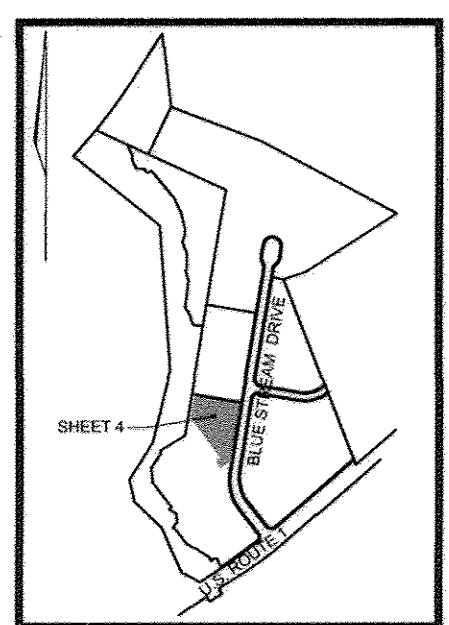
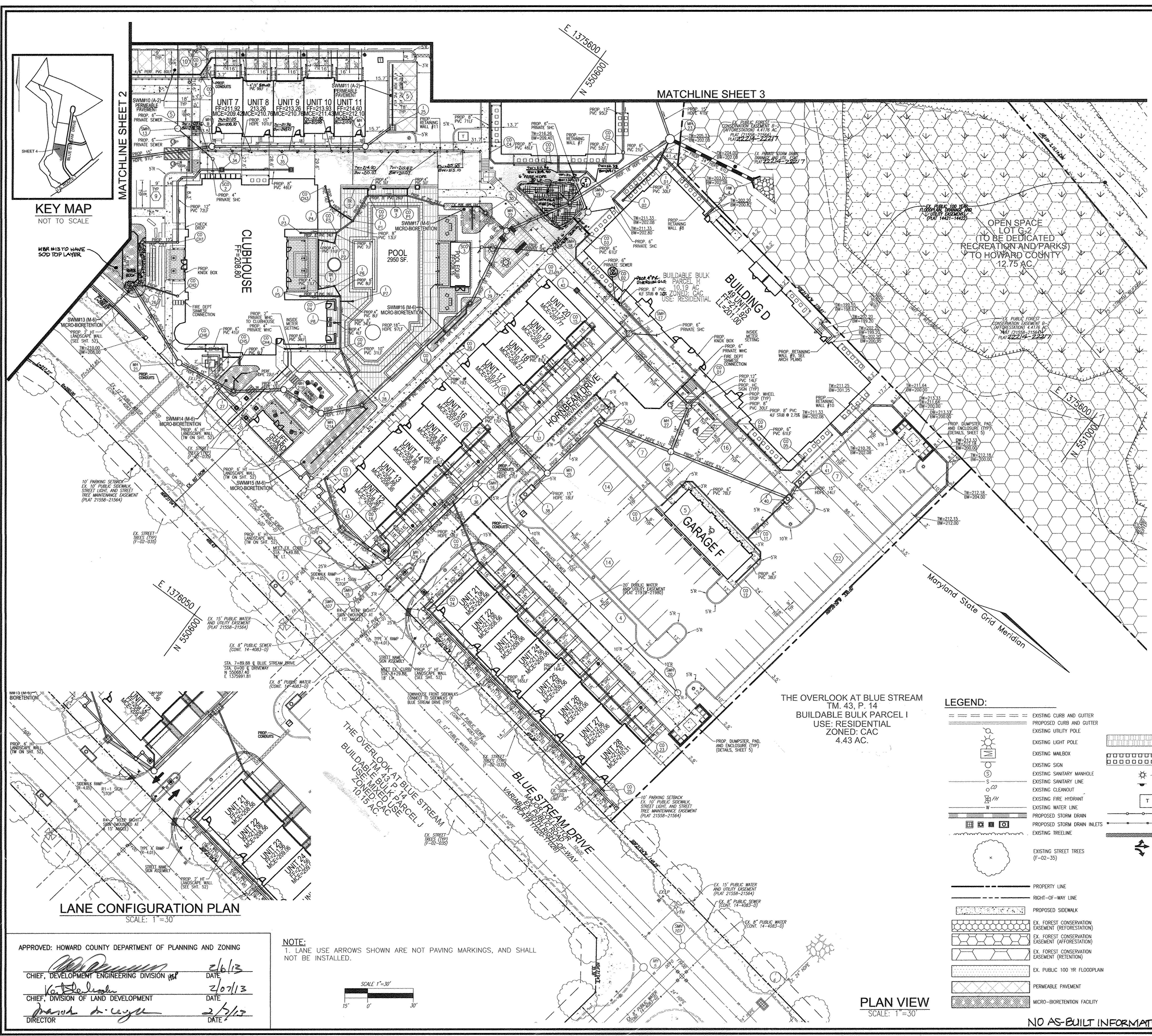
*[Signature]* 2/6/13  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 2/07/13  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 2/1/13  
DIRECTOR DATE

NO AS-BUILT INFORMATION THIS SHEET

AS-BUILT 7/16/15



KEY MAP  
NOT TO SCALE

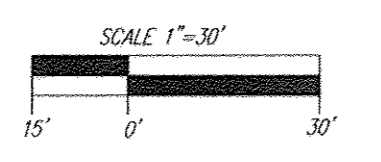
MEM THIS TO HAVE  
SOD TOP LAYER

LANE CONFIGURATION PLAN  
SCALE: 1"=30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 2/6/13 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 2/07/13 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 2/3/13 DATE  
 DIRECTOR

NOTE:  
1. LANE USE ARROWS SHOWN ARE NOT PAVING MARKINGS, AND SHALL NOT BE INSTALLED.



MATCHLINE SHEET 3

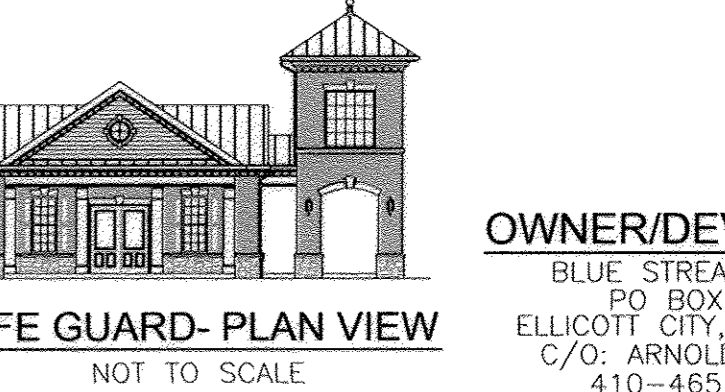
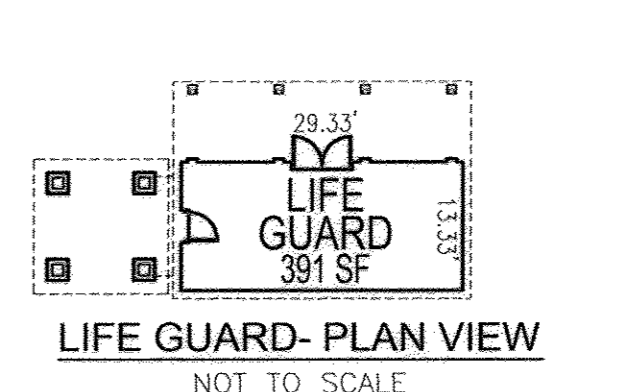
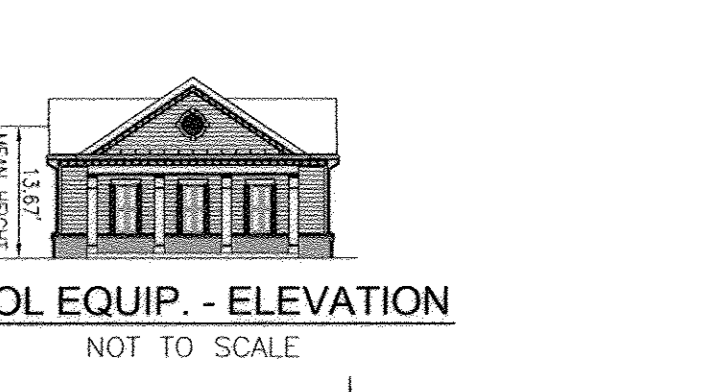
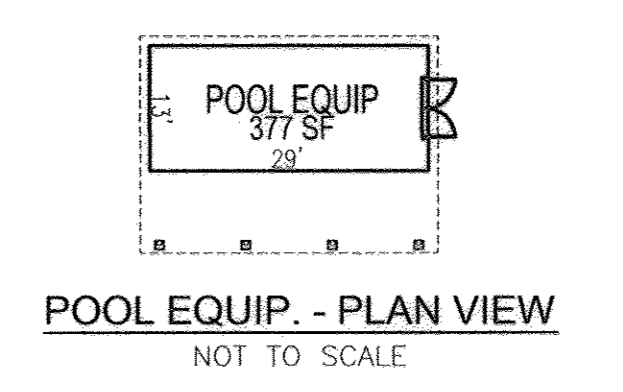
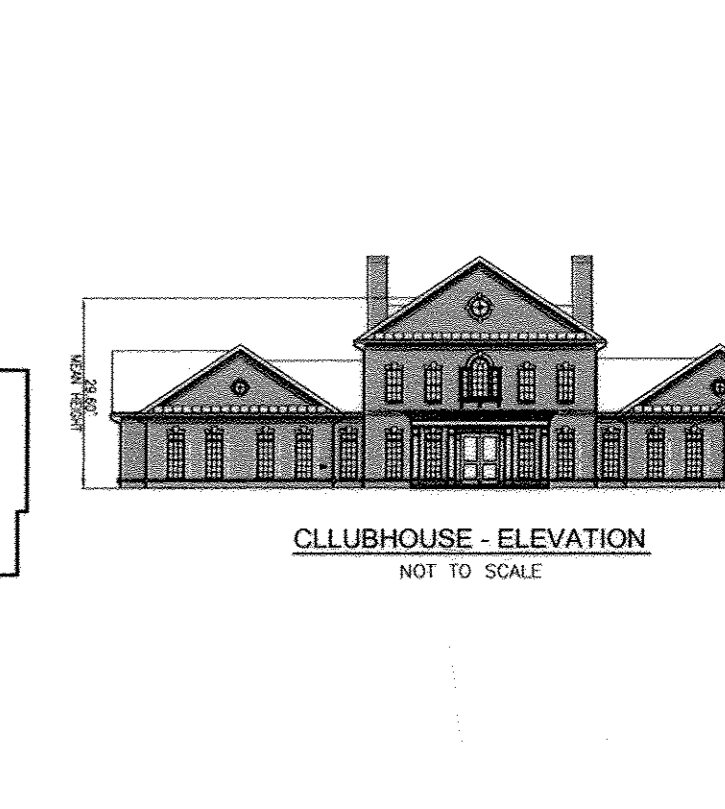
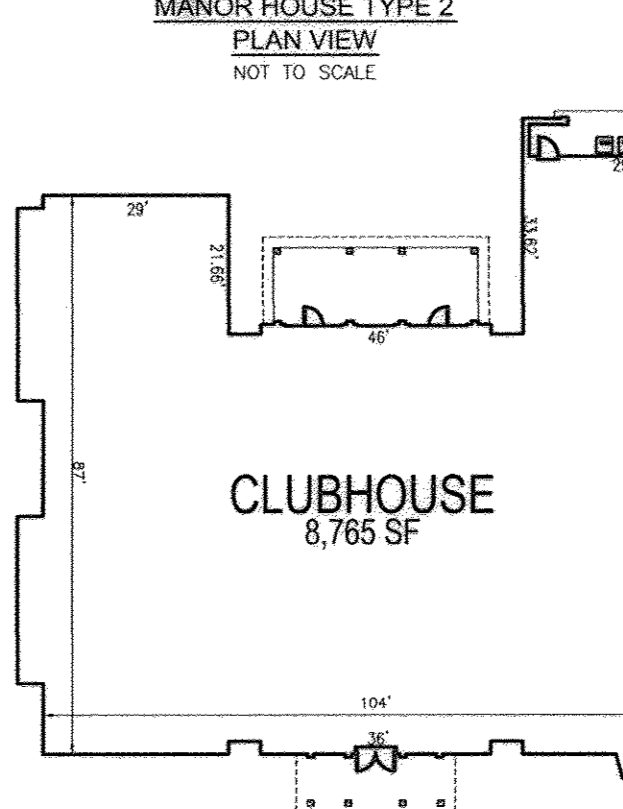
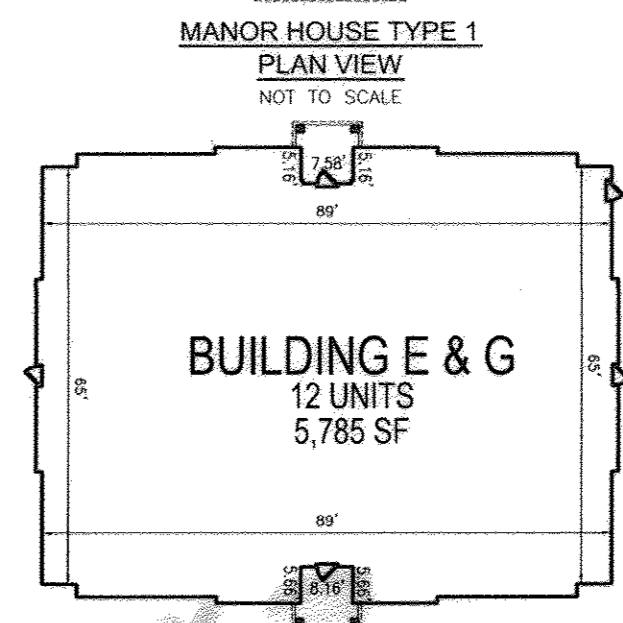
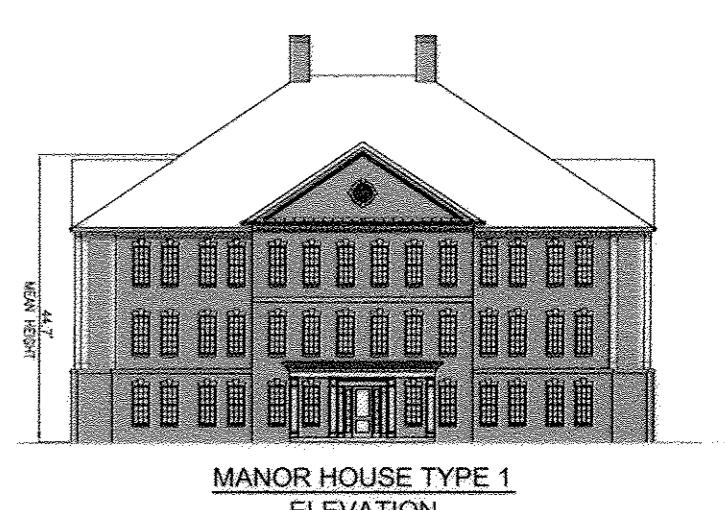
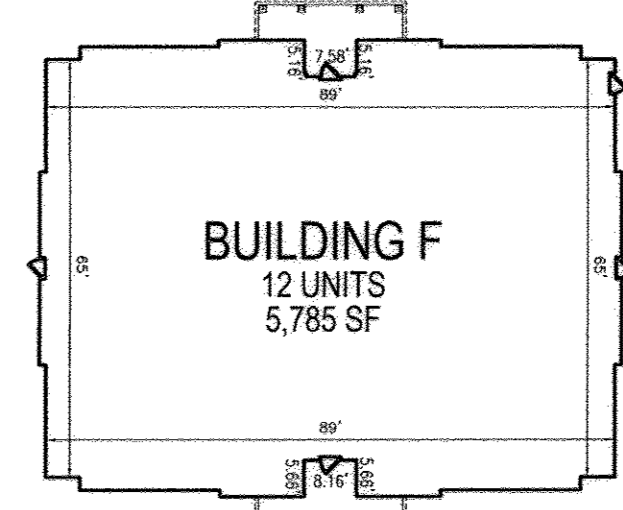
THE OVERLOOK AT BLUE STREAM  
TM. 43, P. 14  
BUILDABLE BULK PARCEL I  
USE: RESIDENTIAL  
ZONED: CAC  
4.43 AC.

LEGEND:

- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
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- LANDSCAPE PAVERS
- CONDENSERS AND CONDENSERS PAD
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- ELECTRIC AND CONDUITS
- PROPOSED POOL FENCE
- PROPOSED LANDSCAPE FENCE
- PROPOSED MODIFIED CURB
- LANE-USE ARROWS

PLAN VIEW  
SCALE: 1"=30'

NO AS-BUILT INFORMATION THIS SHEET



OWNER/DEVELOPER  
BLUE STREAM 1 LLC  
20 BOX 416  
ELLICOTT CITY, MD 21041  
C/O: ARNOLD SAGNER  
410-465-2020

4	REMOVE AREAS OF PERVIOUS PAVEMENT DUE TO CONSIDERED UNDERGROUND UTILITIES	06/18/13
3	REVISE PLAN FOR RELOCATED WALL #11	01-29-13
1	REVISE PLAN TO TO INCORPORATE HUD REQUIREMENTS	10/02/12
NO.	REVISION	DATE

REVISED SITE DEVELOPMENT PLAN  
LAYOUT PLAN

**GROSVENOR HOUSE**  
BLUE STREAM, BUILDABLE BULK PARCEL H  
APARTMENTS AND TOWNHOMES

TAX MAP 43 GRID 4 & 5  
1ST ELECTION DISTRICT

ZONED: CAC-CLU  
PARCEL 14  
HOWARD COUNTY, MARYLAND

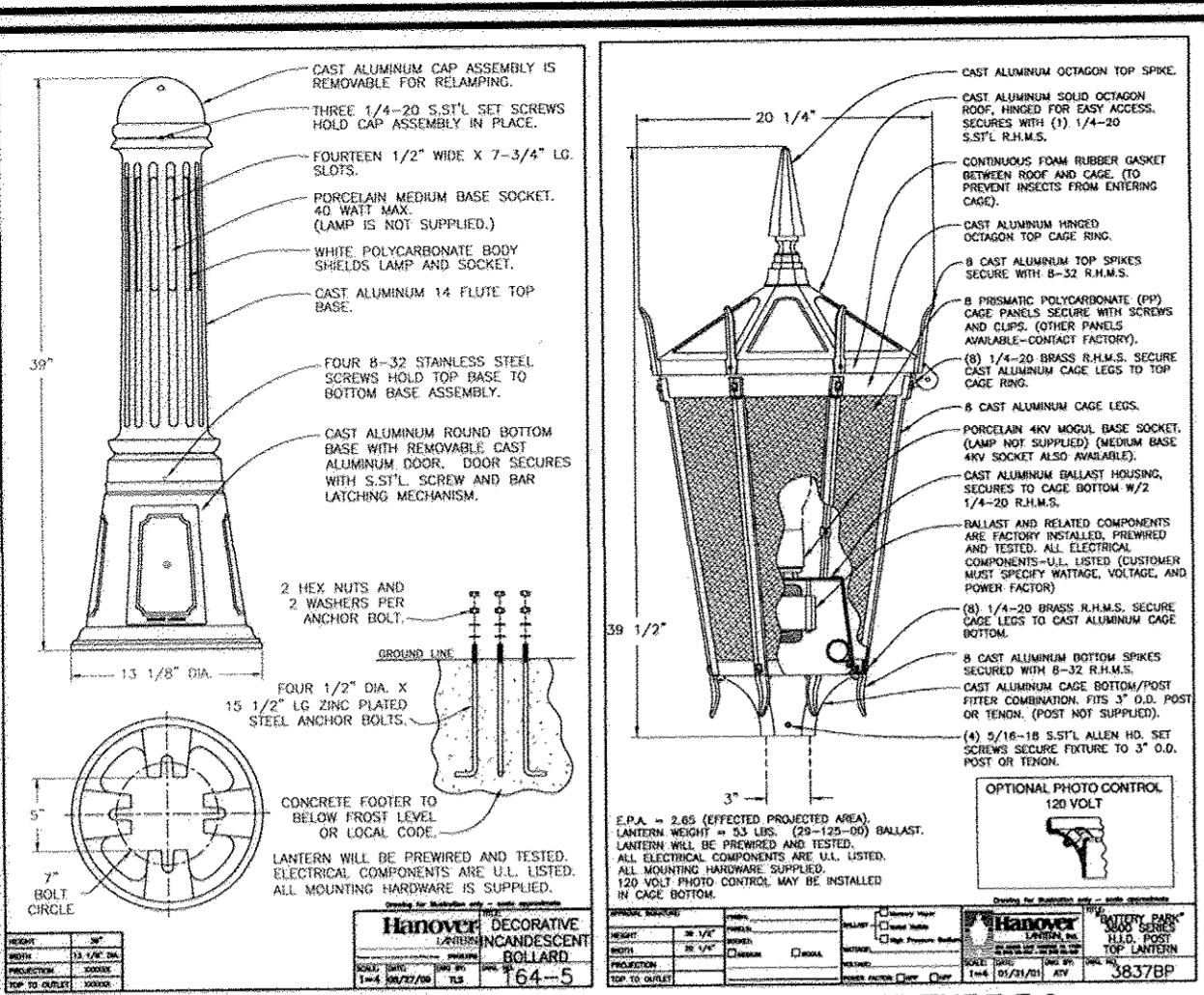
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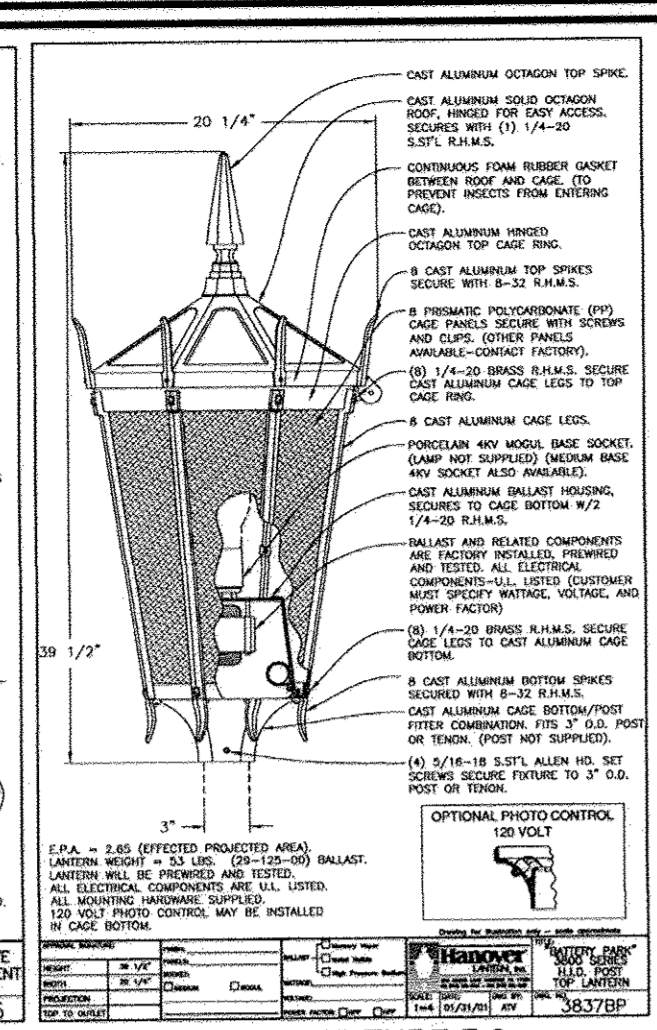
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DATE: OCT. 2, 2012  
SCALE: AS SHOWN  
W.O. NO.: 06-26.01

4 SHEET OF 55

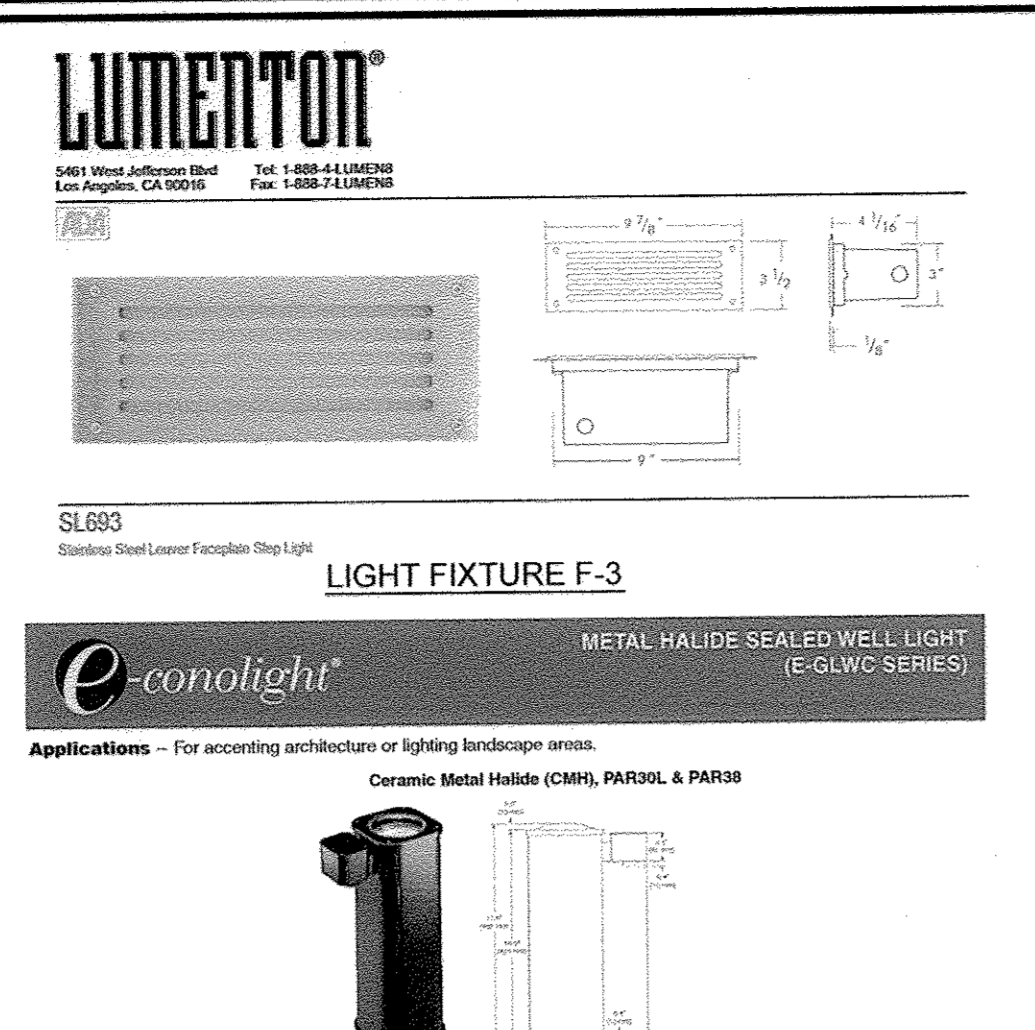
AS-BUILT 7/16/15



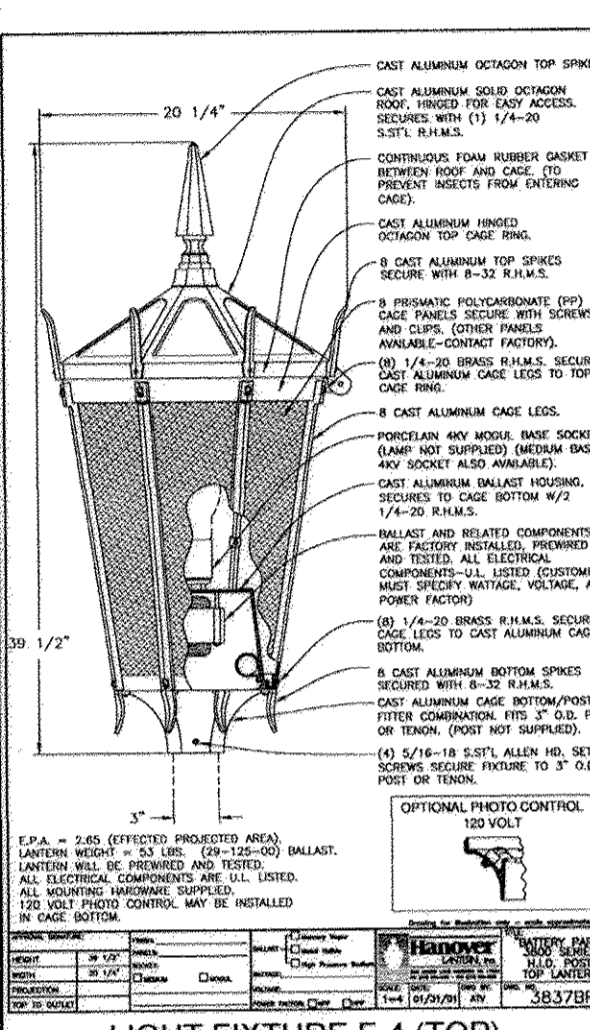
LIGHT FIXTURE F-1



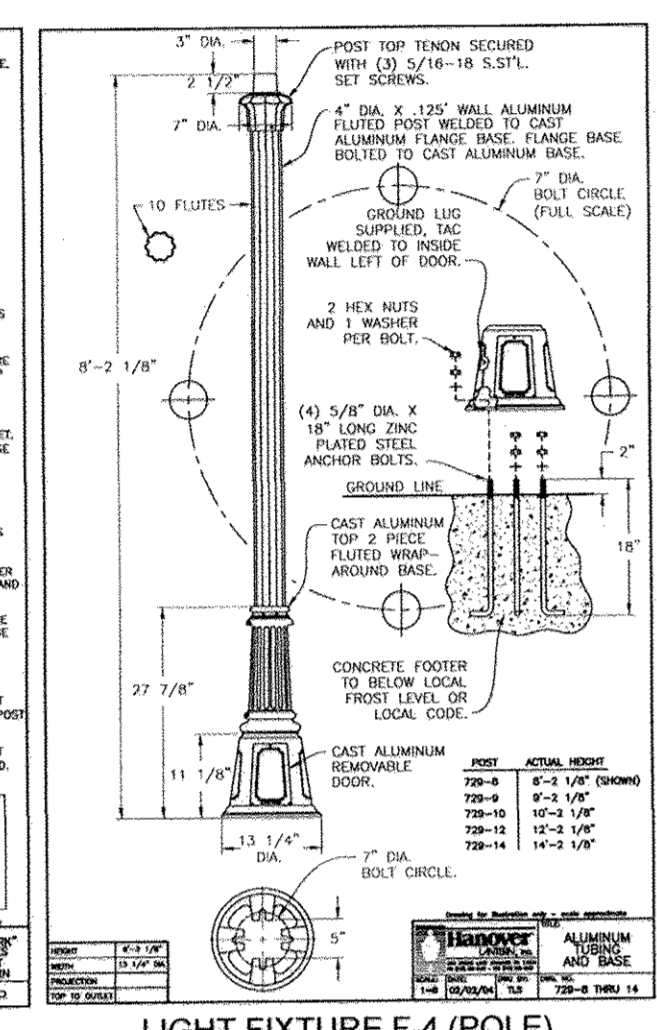
LIGHT FIXTURE F-2



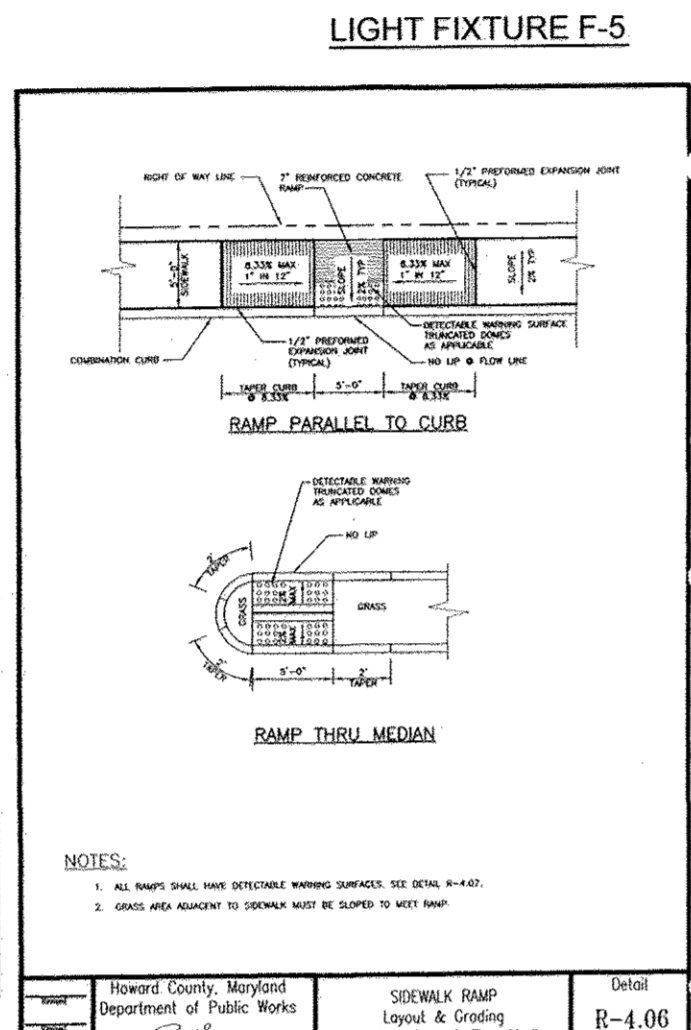
LIGHT FIXTURE F-3



LIGHT FIXTURE F-4 (TOP)



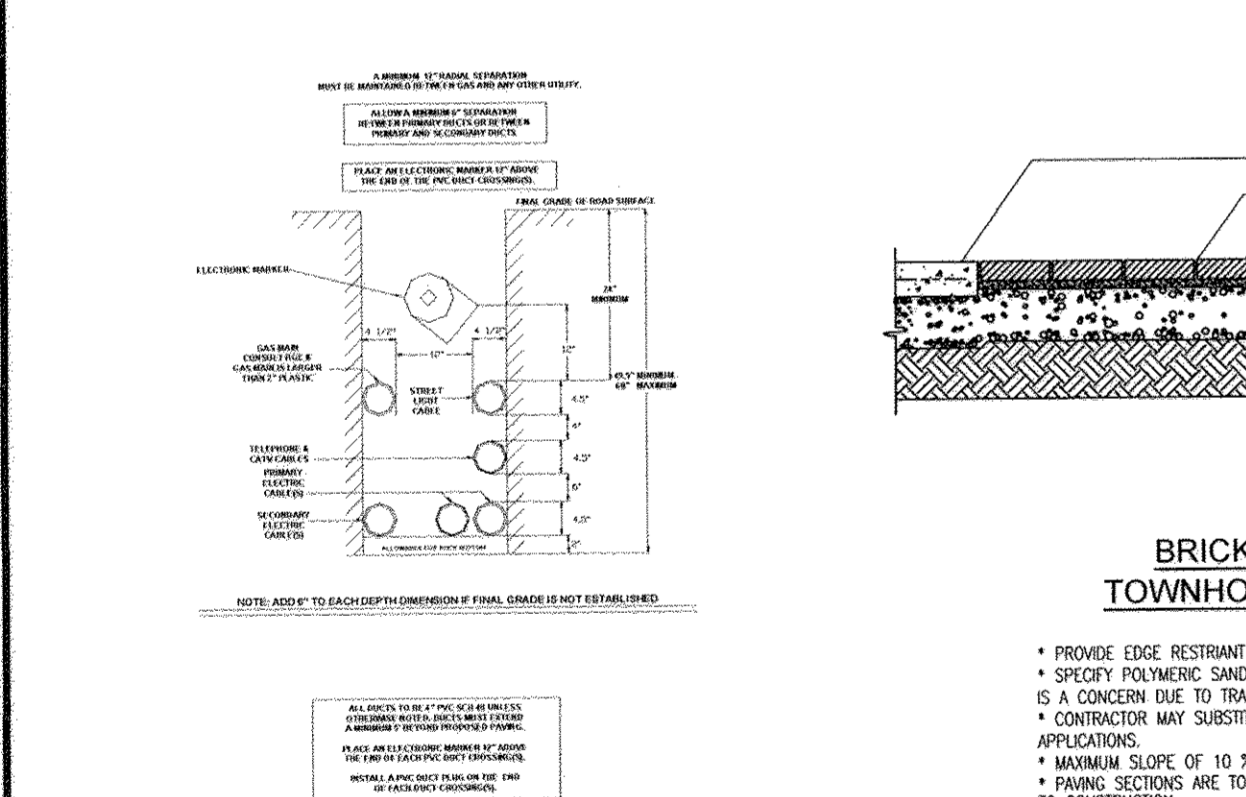
LIGHT FIXTURE F-4 (POLE)



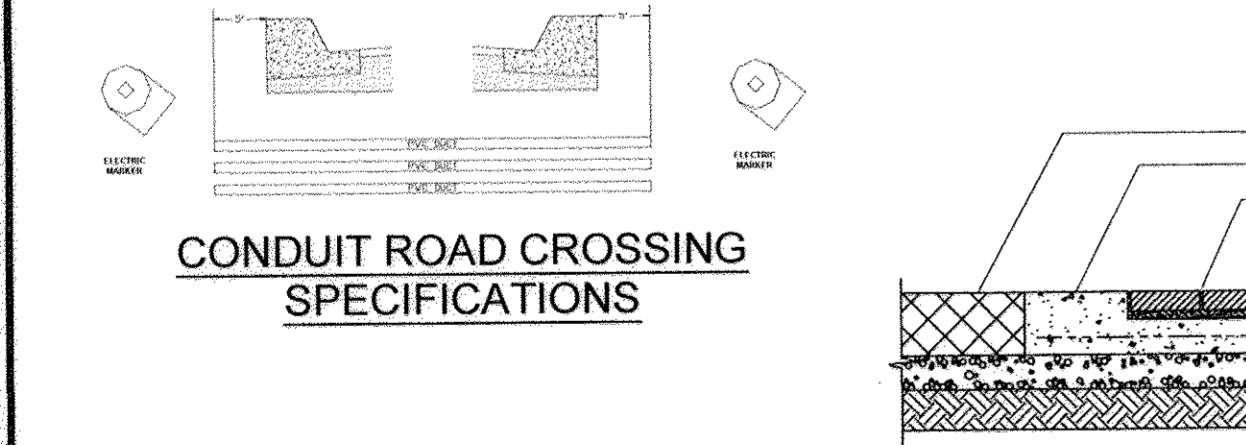
LIGHT FIXTURE F-5

**LIGHTING NOTE:**  
THE STANDARDS SHOWN ARE FOR PRIVATE INTERNAL SITE LIGHTING ONLY, AND SHALL NOT BE USED AS PUBLIC STREETS LIGHTS.

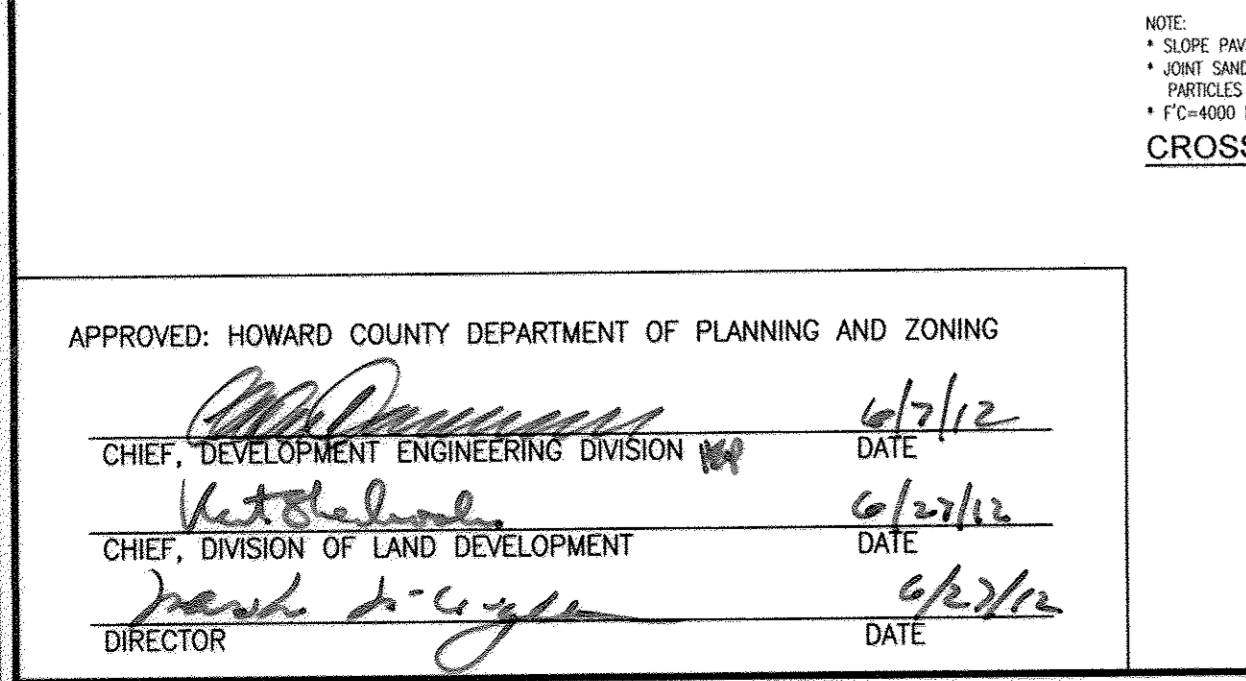
**Transformer Location Requirements-4**  
 (1) Alternate Method  
 When the preferred clearance cannot be achieved and where the building is underground, construct a barrier wall as shown. Barrier walls must meet the following requirements:  
 • Be separate from the building  
 • Have a fire resistance rating of 3 hours  
 • Protect all exposed combustible building components within the minimum distances specified in the Preferred Method  
 • Be constructed in one of the following ways:  
 a. Eight inches of brick (two courses)  
 b. Four inches of reinforced concrete  
 c. Eight inches of concrete block  
 d. Twelve inches of hollow tile



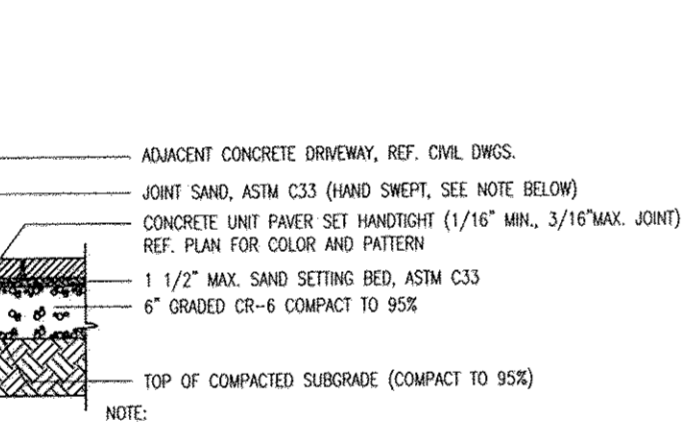
BRICK PAVING (BETWEEN TOWNHOUSES) - FLEXIBLE BASE



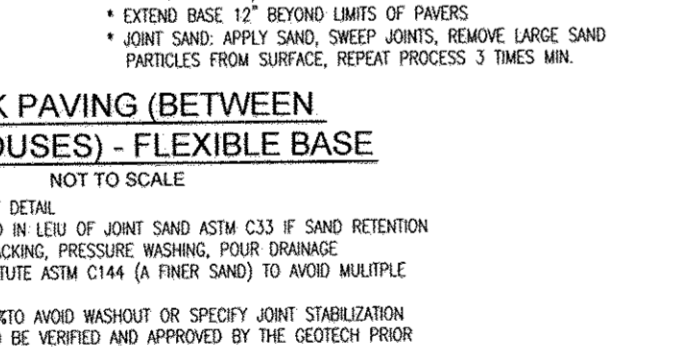
CONDUIT ROAD CROSSING SPECIFICATIONS



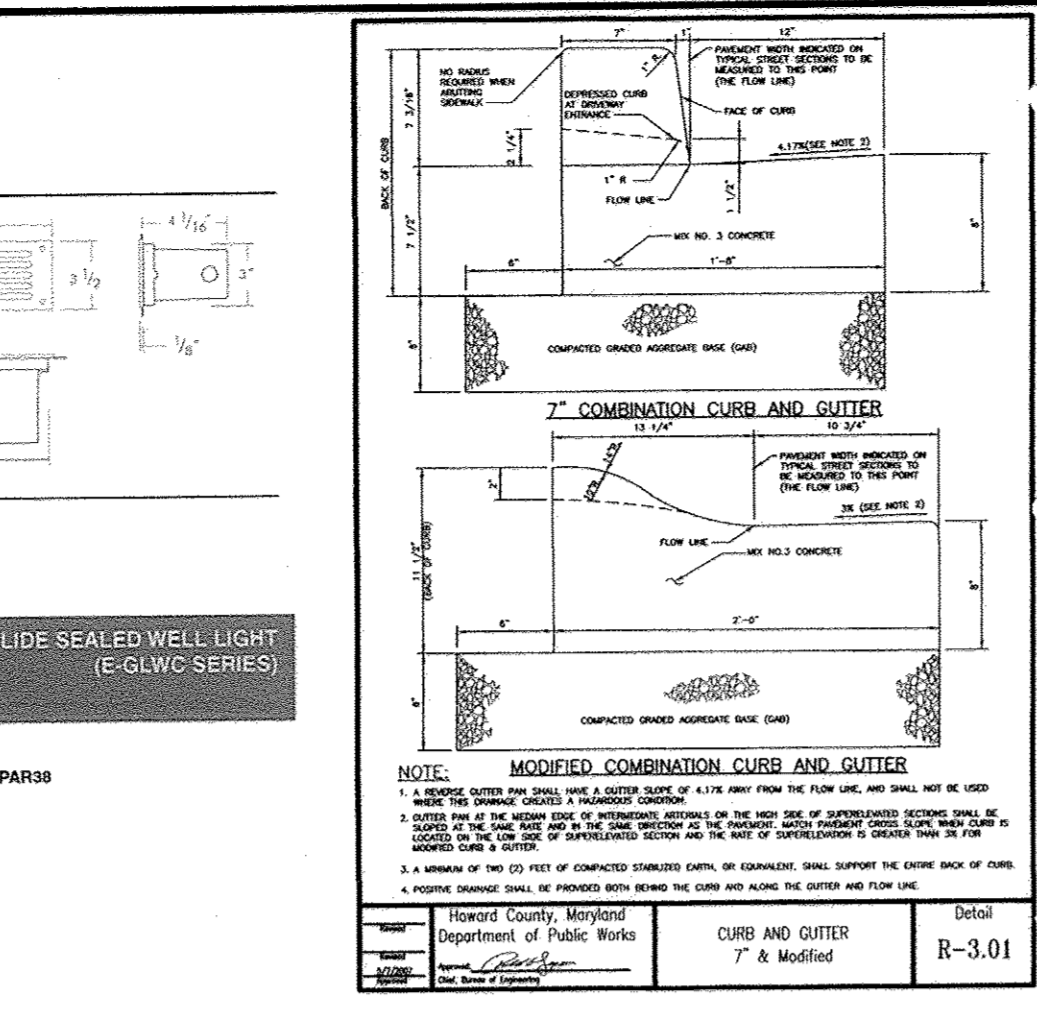
CROSSWALK PAVER DETAIL



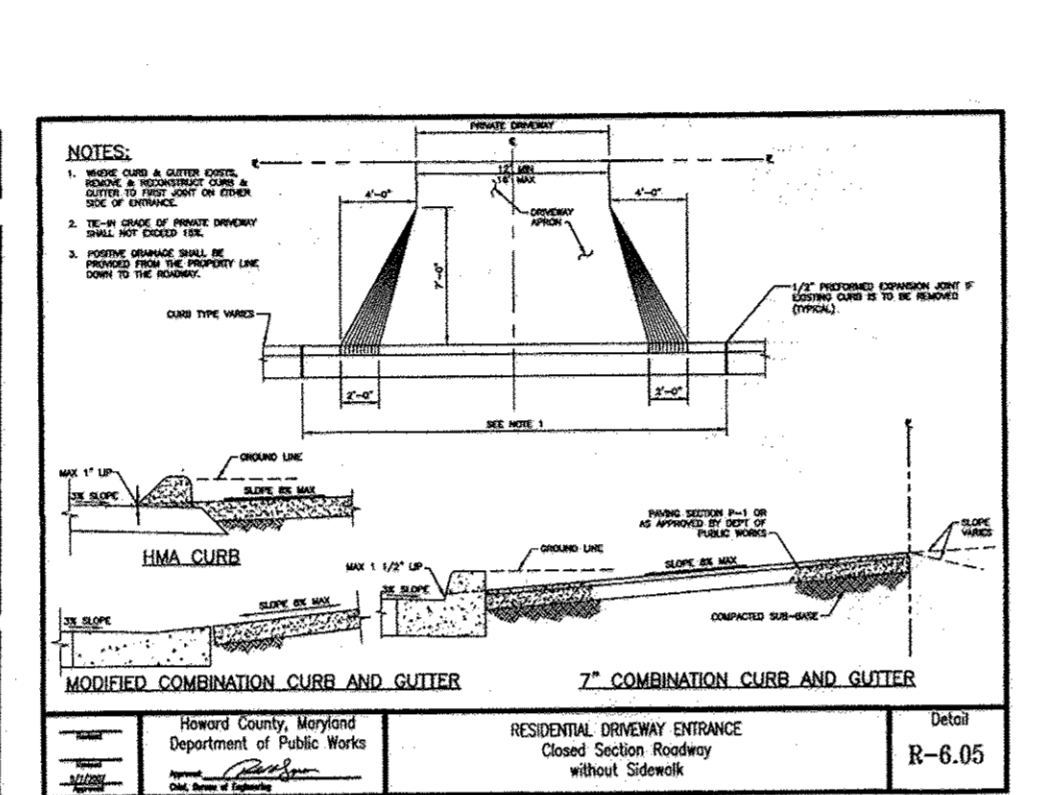
RAMP PARALLEL TO CURB



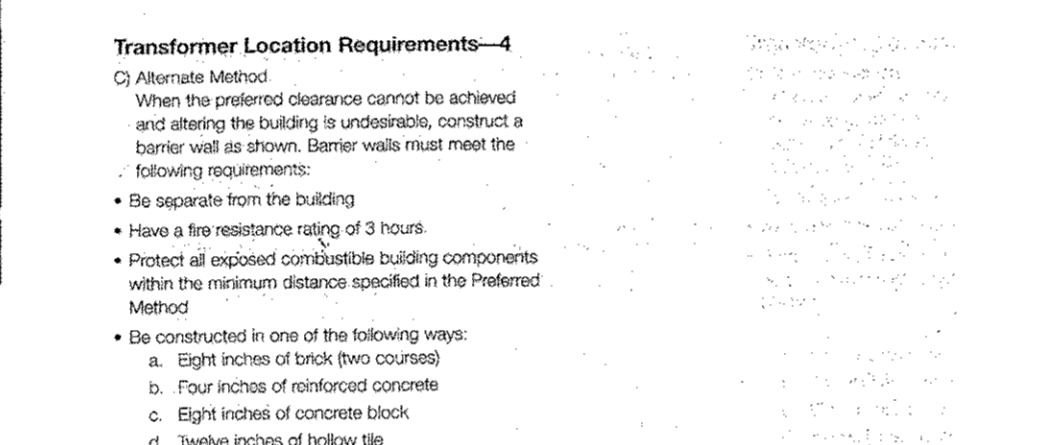
RAMP THRU MEDIAN



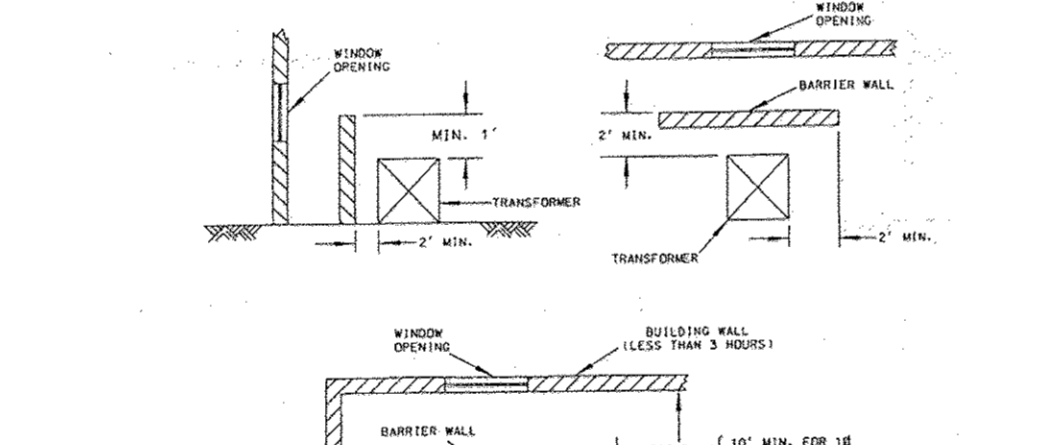
MODIFIED COMBINATION CURB AND GUTTER



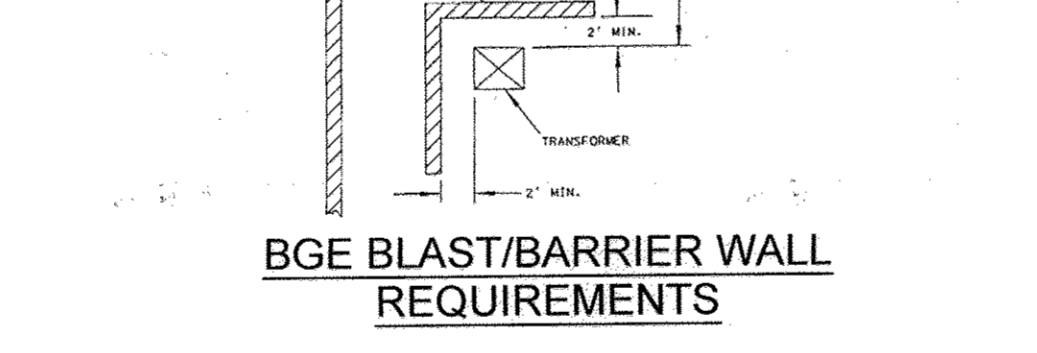
RESIDENTIAL DRIVEWAY ENTRANCE



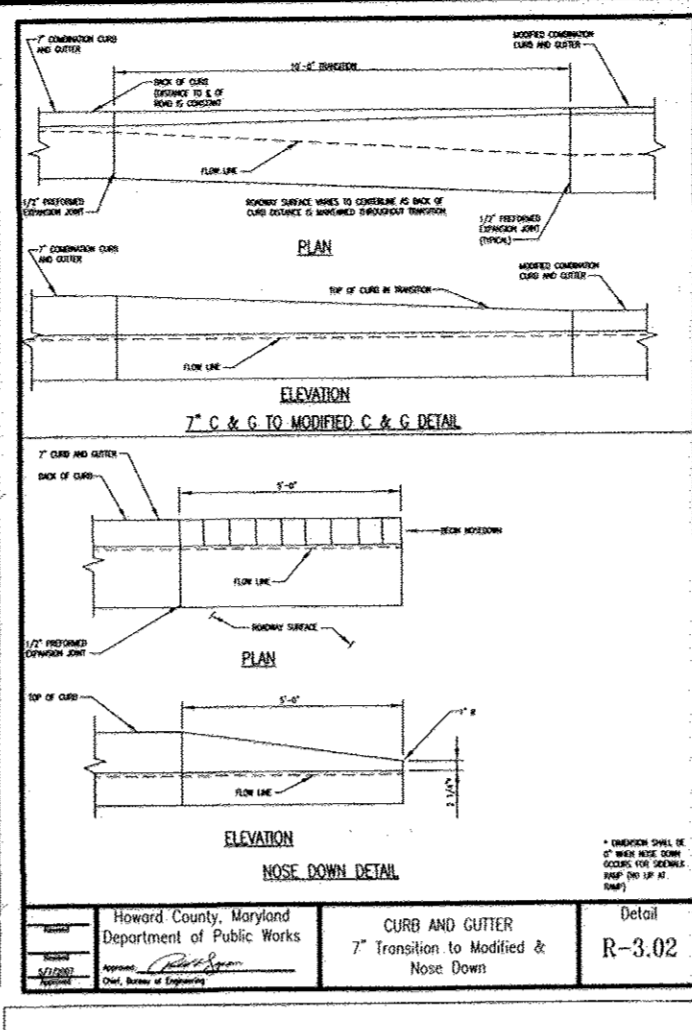
BGE BLAST/BARRIER WALL REQUIREMENTS



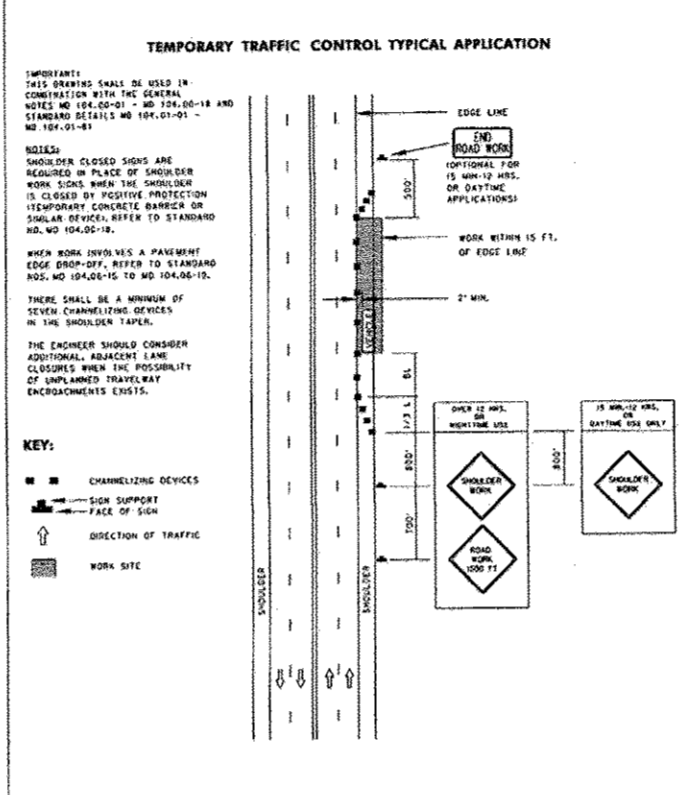
DUMPSTER ENCLOSURE - ELEVATION



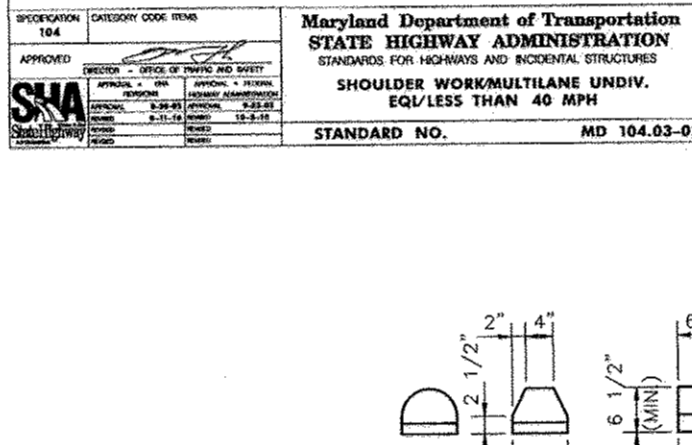
DUMPSTER ENCLOSURE - PLAN VIEW



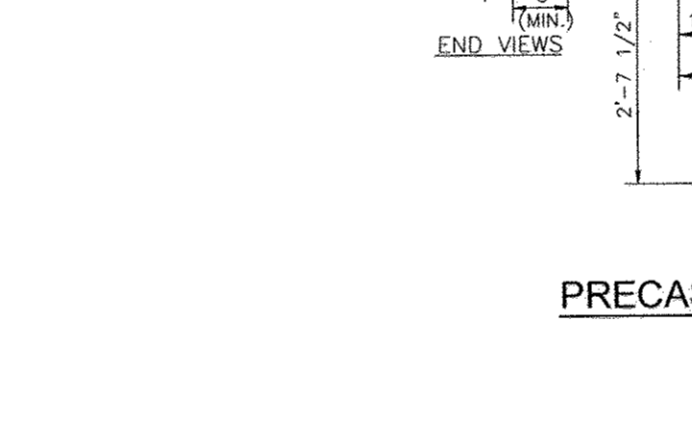
CURB AND GUTTER



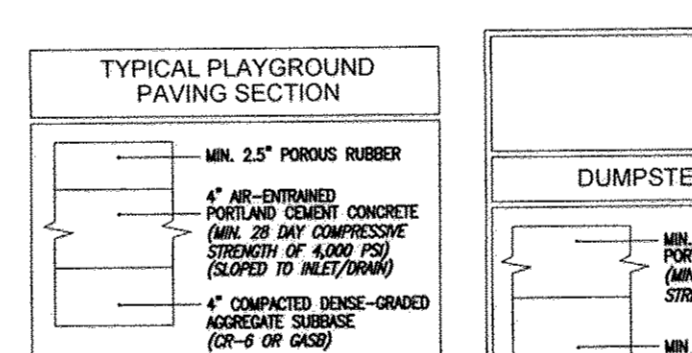
TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



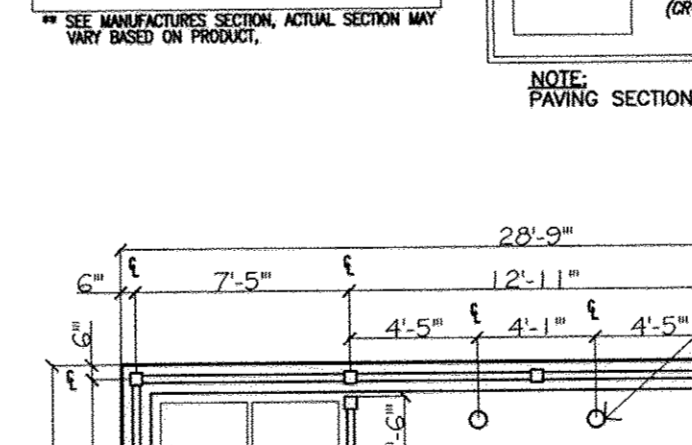
PRECAST CONCRETE WHEEL STOP DETAILS



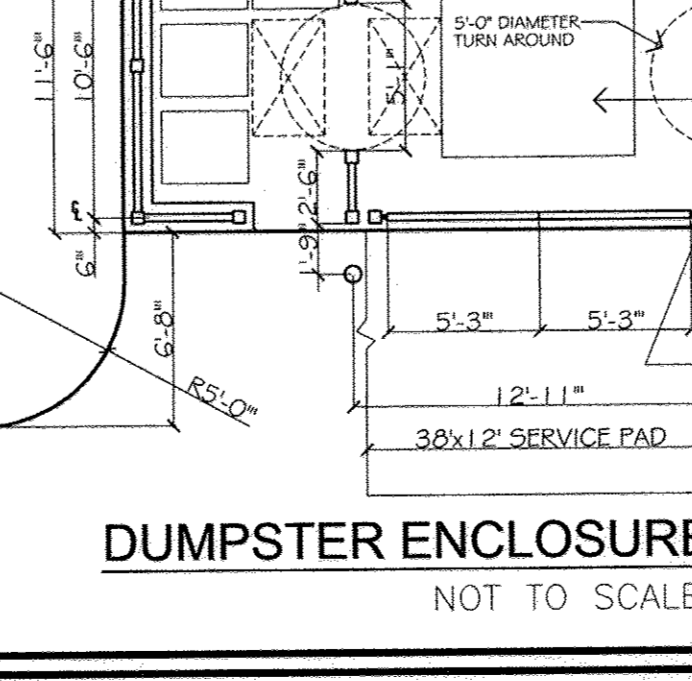
CONCRETE PAVING SECTIONS



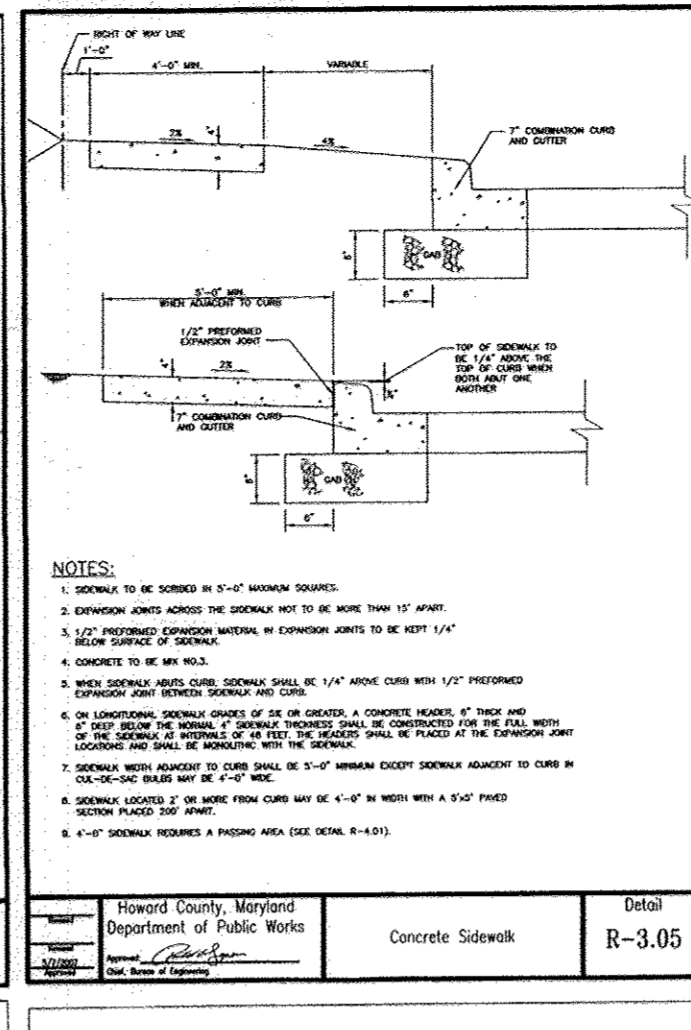
HANDICAP PARKING SIGNS



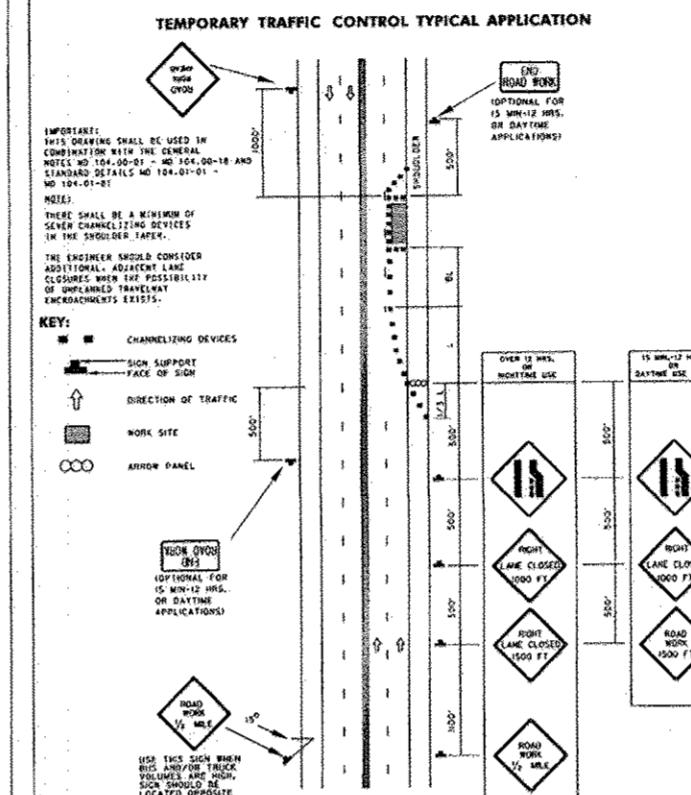
HANDICAP PARKING SIGNS



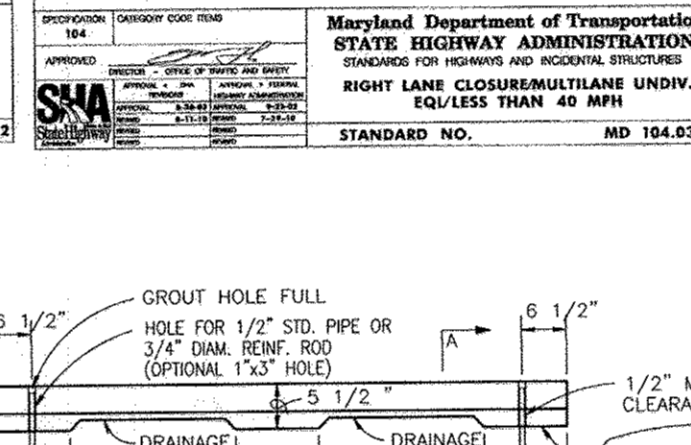
TURN DOWN SIDEWALK TYPICAL DETAIL



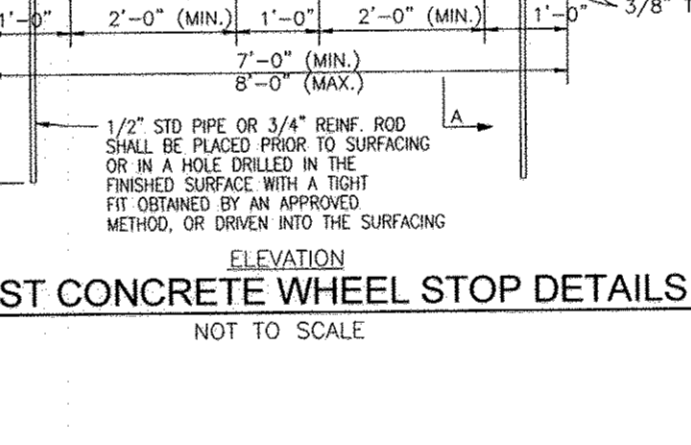
SIDEWALK RAMP



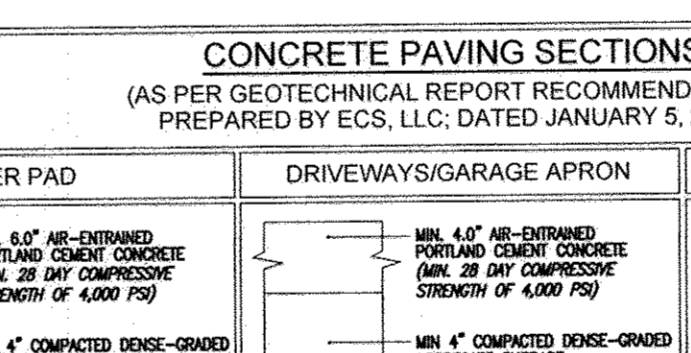
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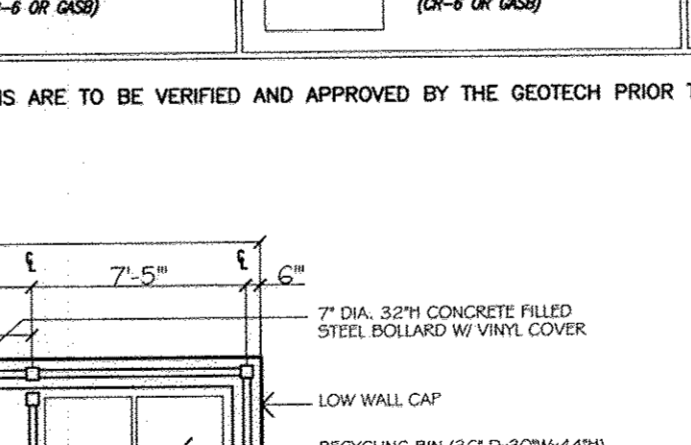
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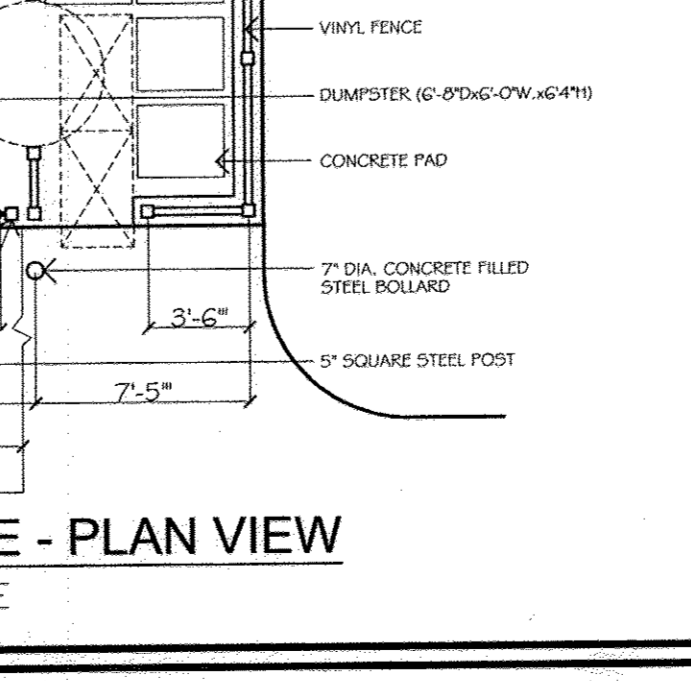
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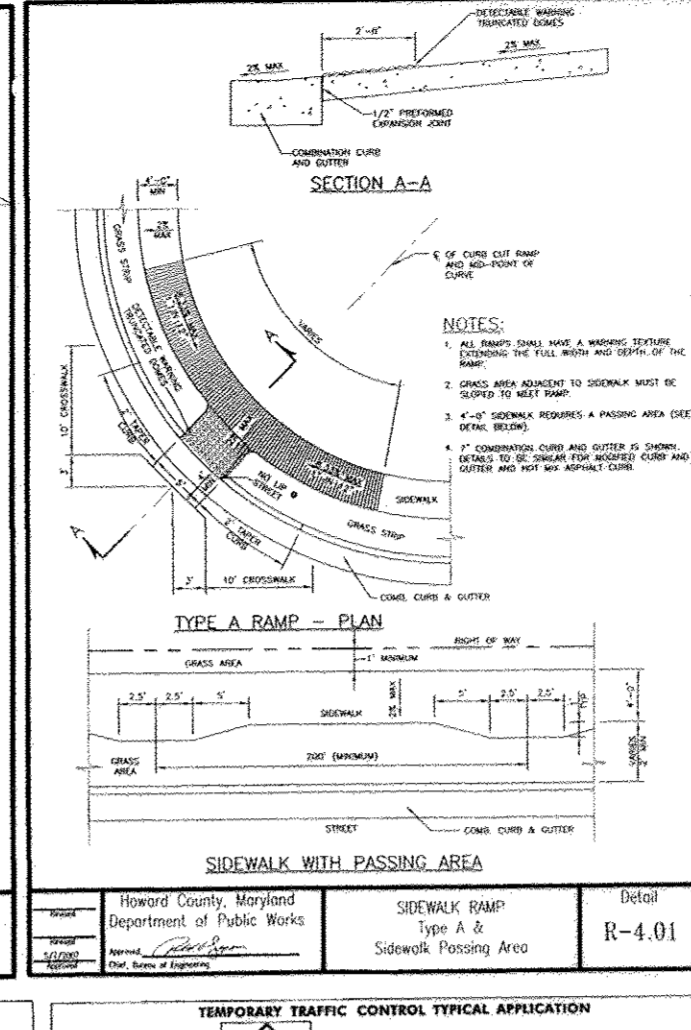
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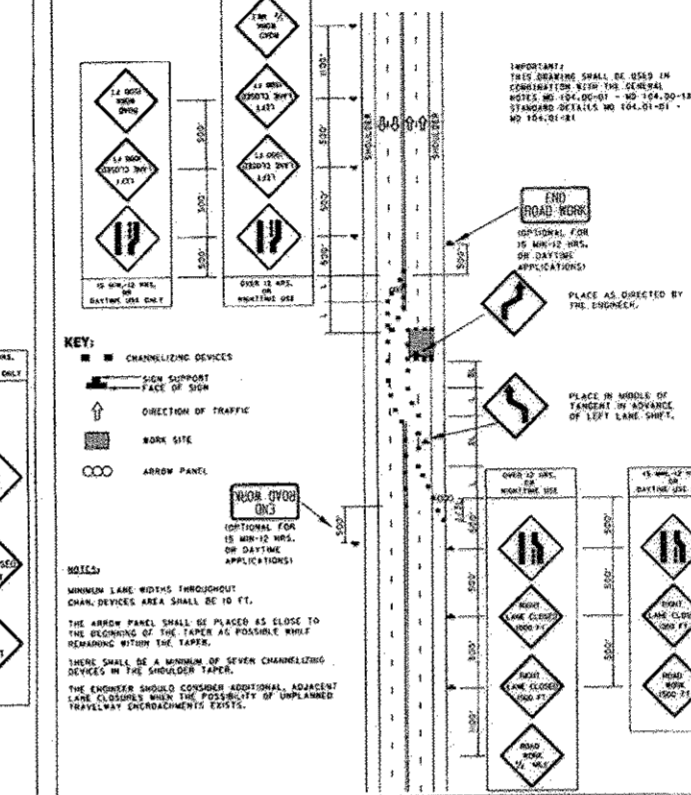
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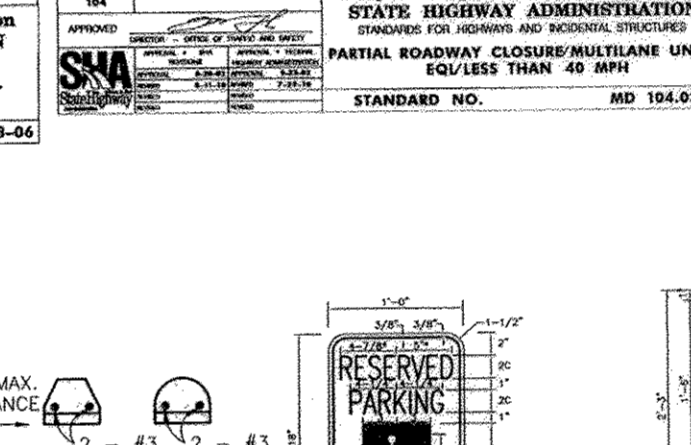
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SIDEWALK RAMP



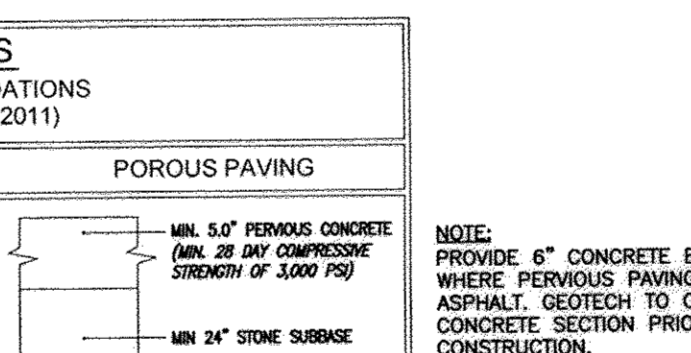
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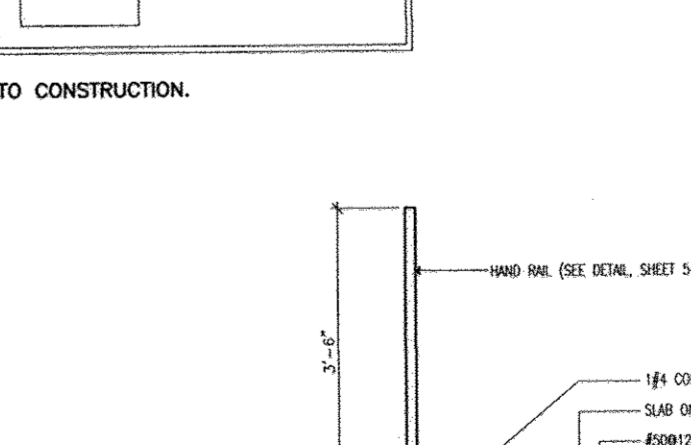
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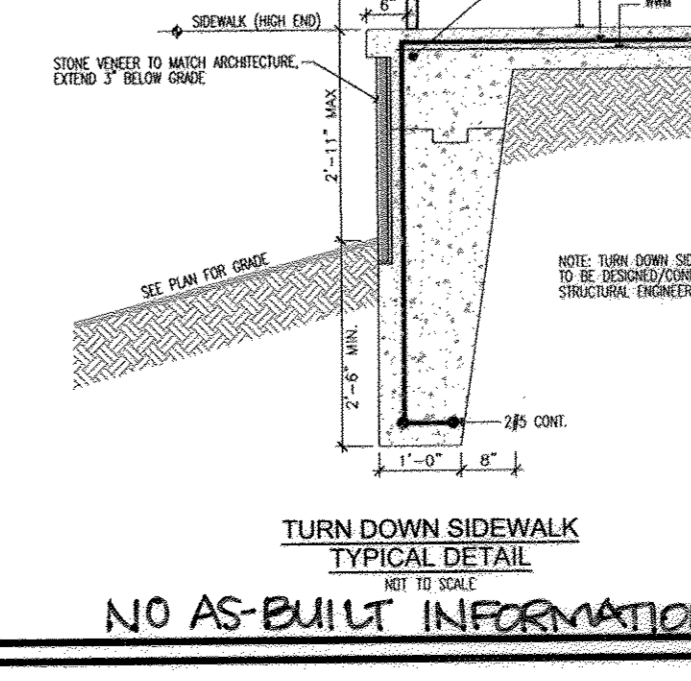
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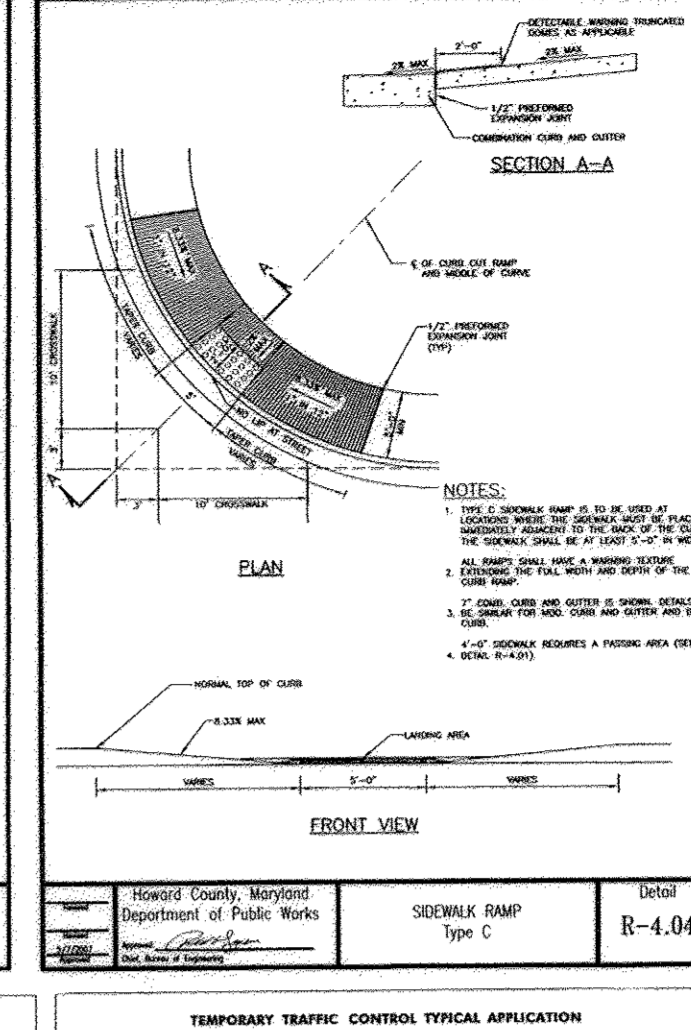
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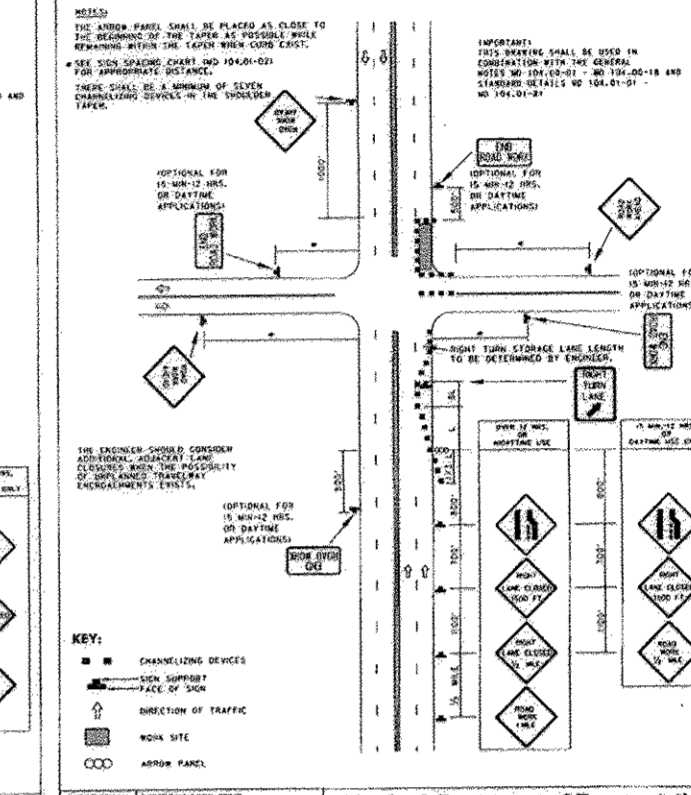
SIDEWALK RAMP



SIDEWALK RAMP



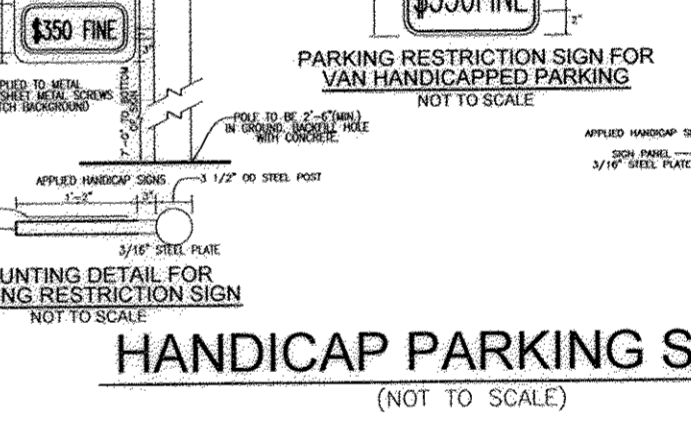
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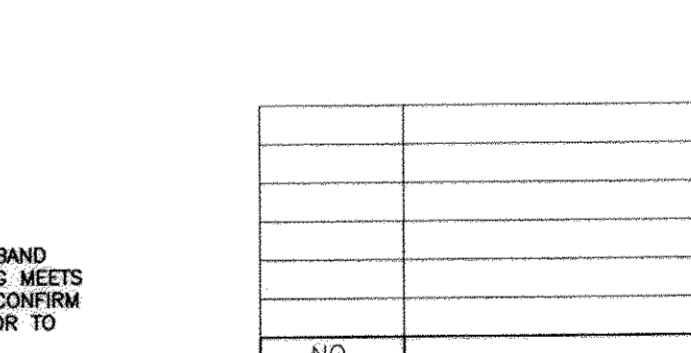
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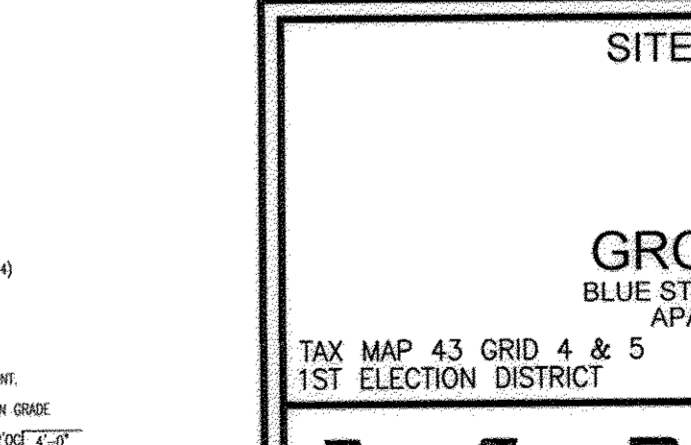
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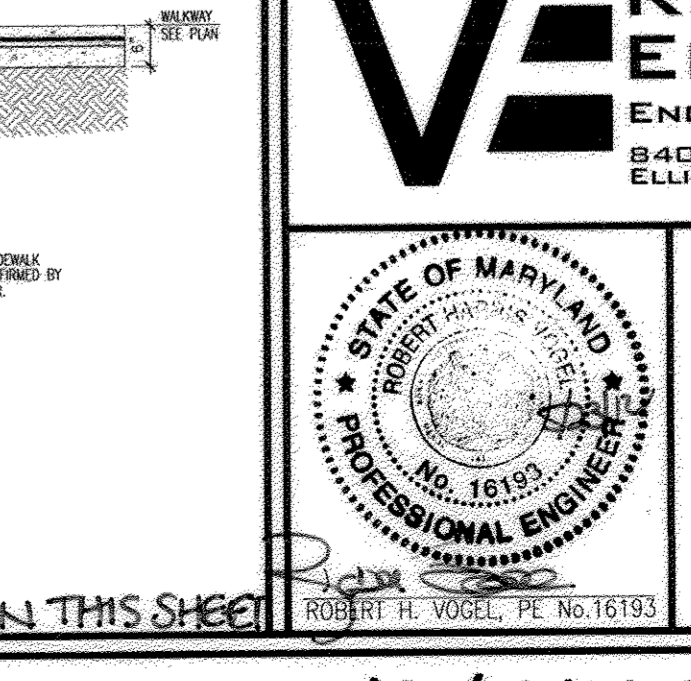
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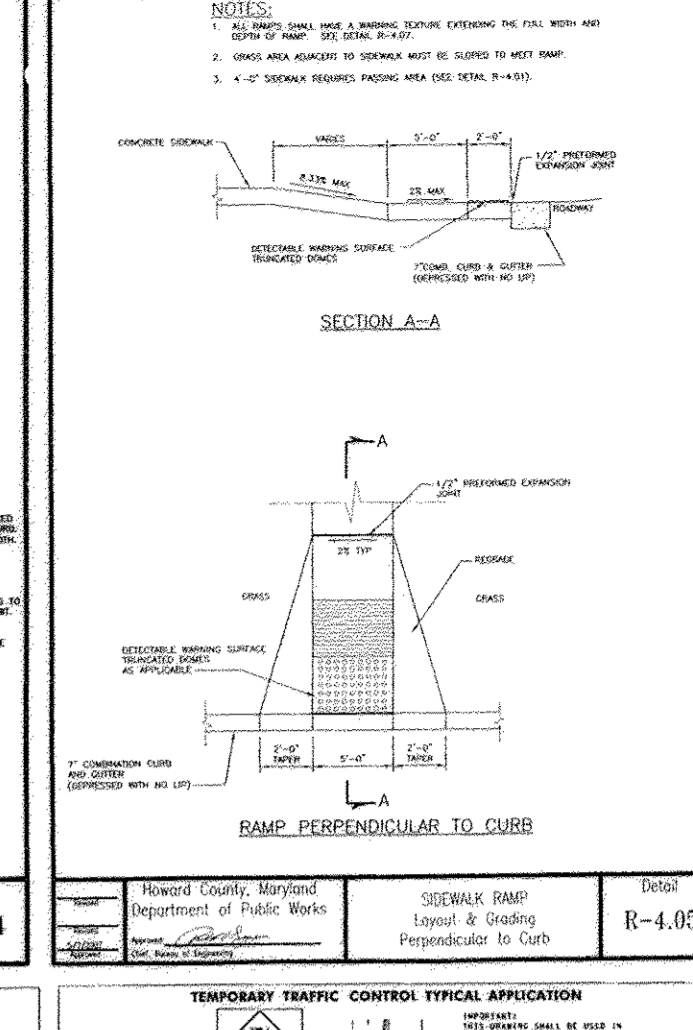
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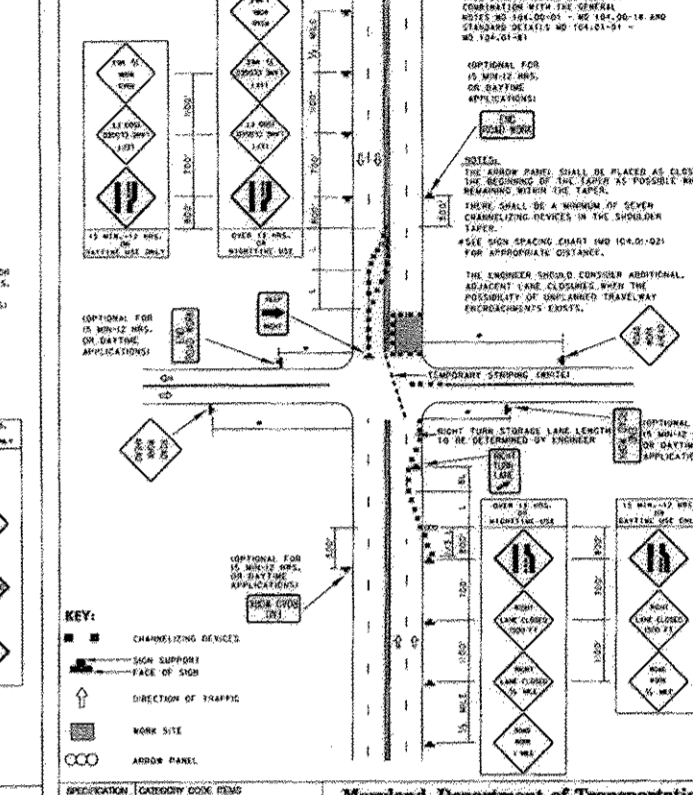
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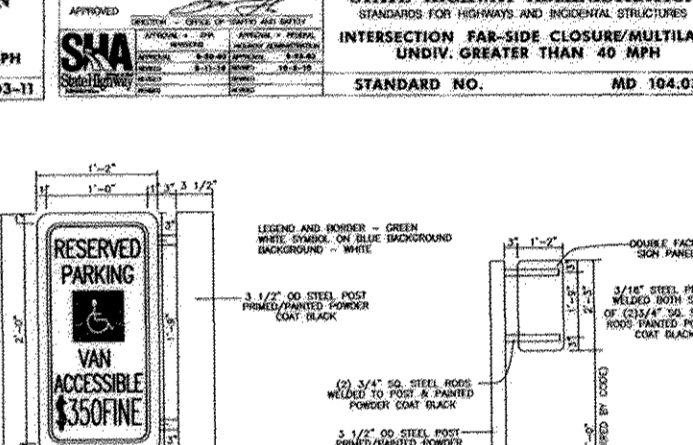
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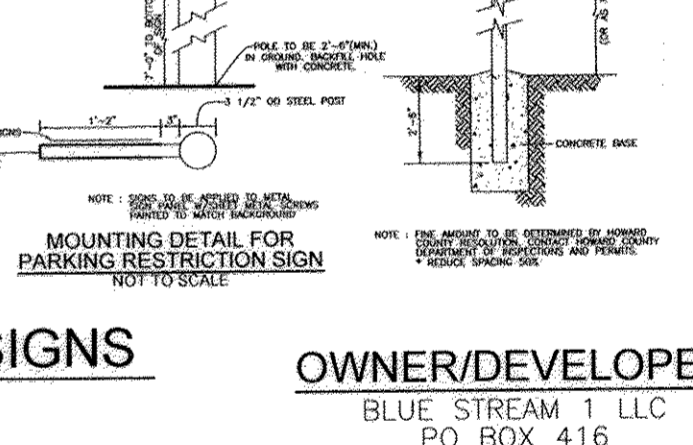
SIDEWALK RAMP



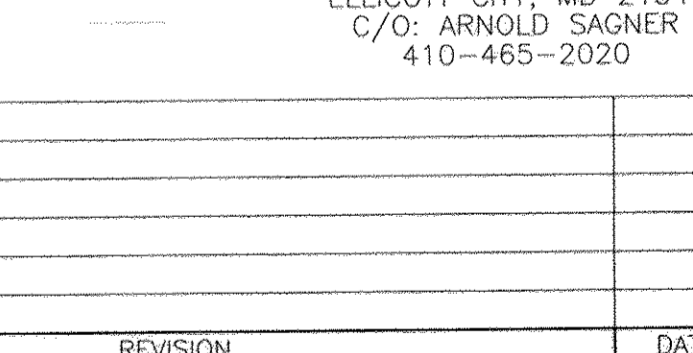
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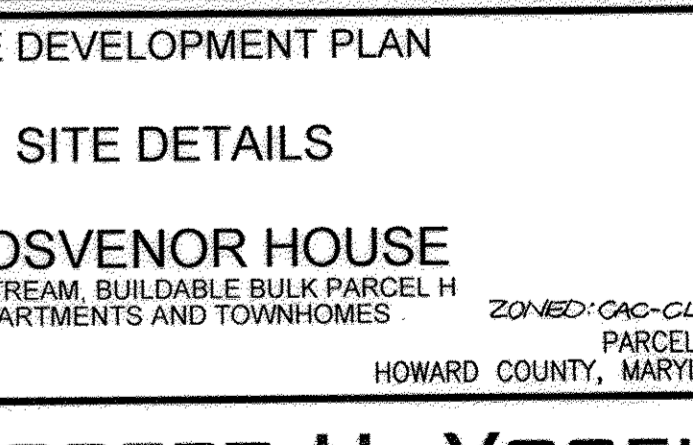
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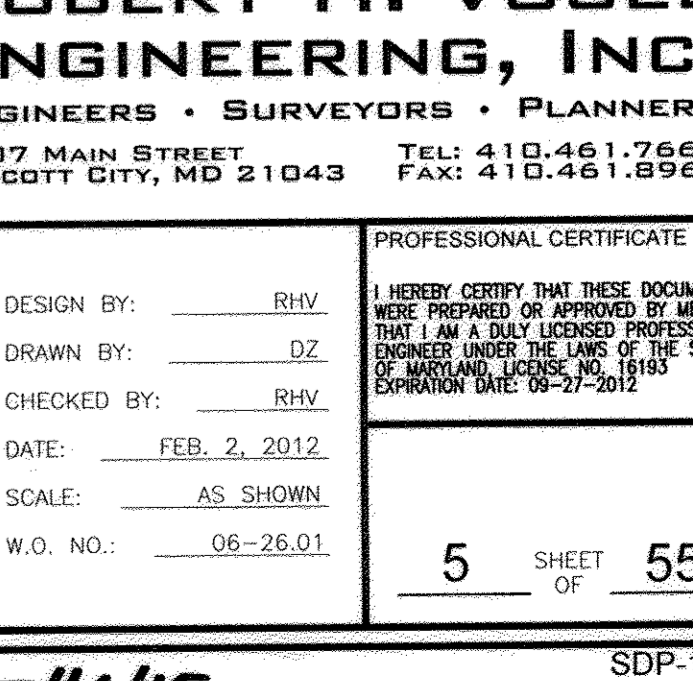
SIDEWALK RAMP



SIDEWALK RAMP



SIDEWALK RAMP



SIDEWALK RAMP

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 6/27/12

CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 6/27/12

DIRECTOR  
 DATE: 6/27/12

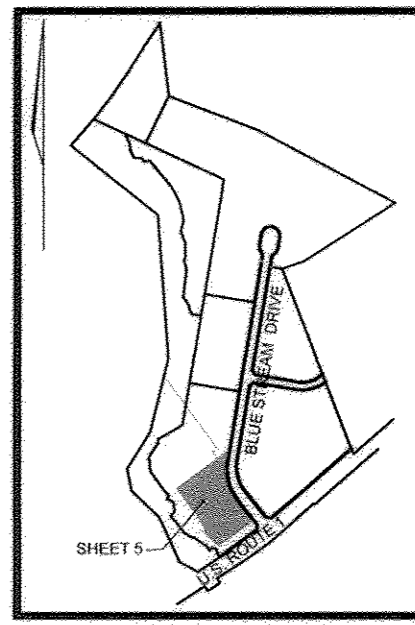
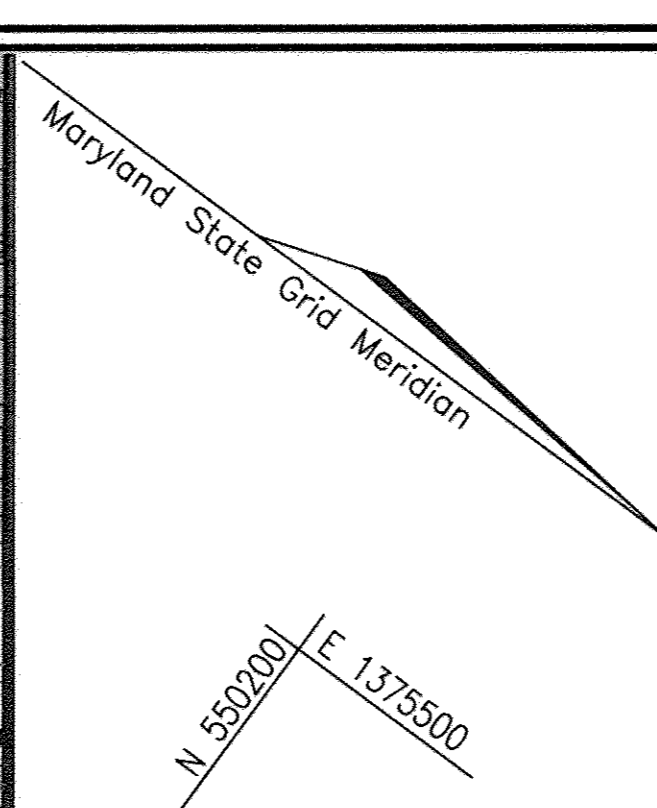
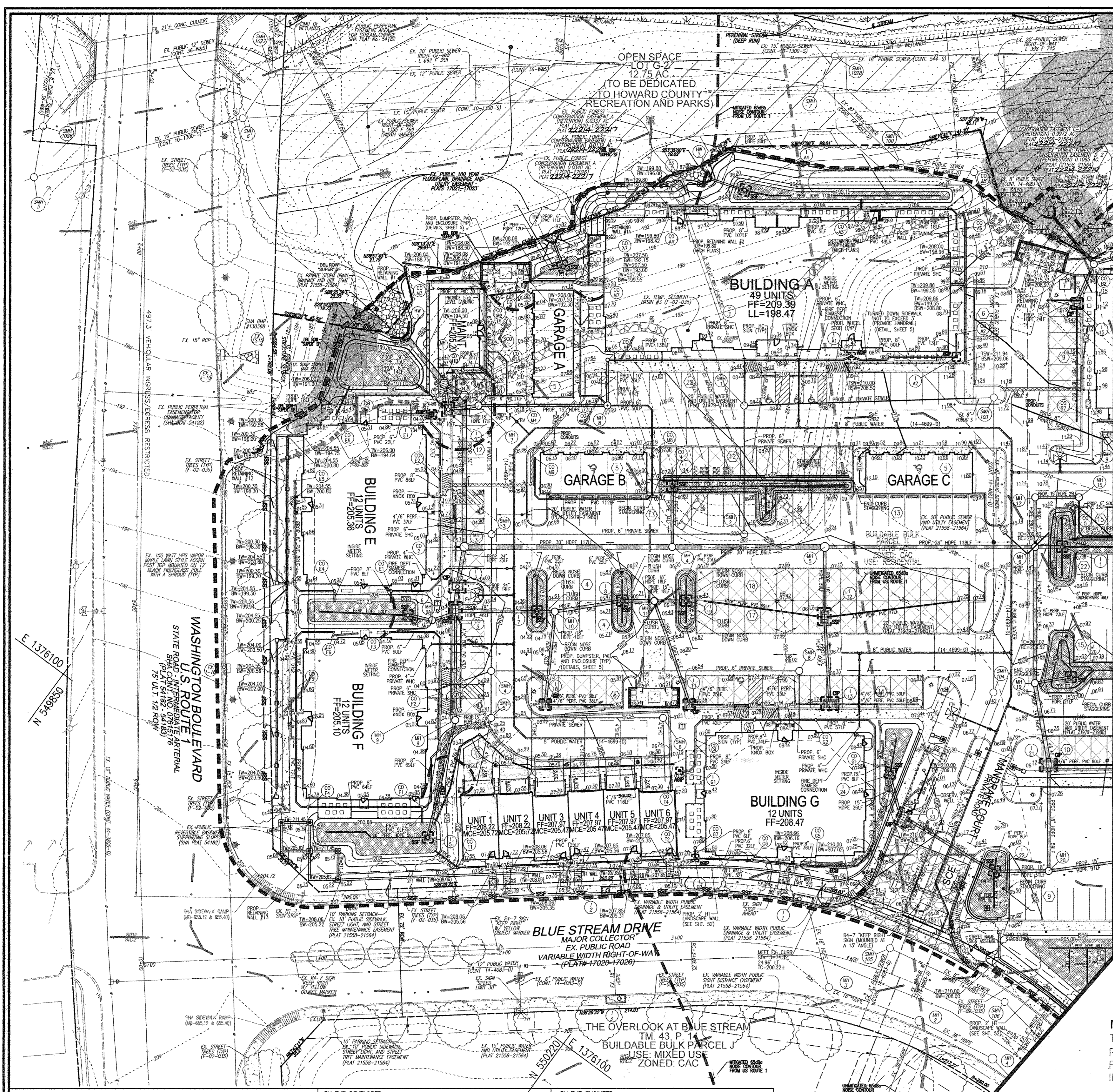
**SITE DEVELOPMENT PLAN**  
**SITE DETAILS**  
**GROSVENOR HOUSE**  
 BLUE STREAM, BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES  
 ZONED: CAC-CL1  
 PARCEL 14  
 TAX MAP 43 GRID 4 & 5  
 1ST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 8407 MAIN STREET  
 ELLICOTT CITY, MD 21043  
 TEL: 410.461.7666  
 FAX: 410.461.8951

PROFESSIONAL CERTIFICATE  
 DESIGN BY: RHV  
 DRAWN BY: DZ  
 CHECKED BY: RHV  
 DATE: FEB. 2, 2012  
 SCALE: AS SHOWN  
 W.O. NO.: 06-26.01

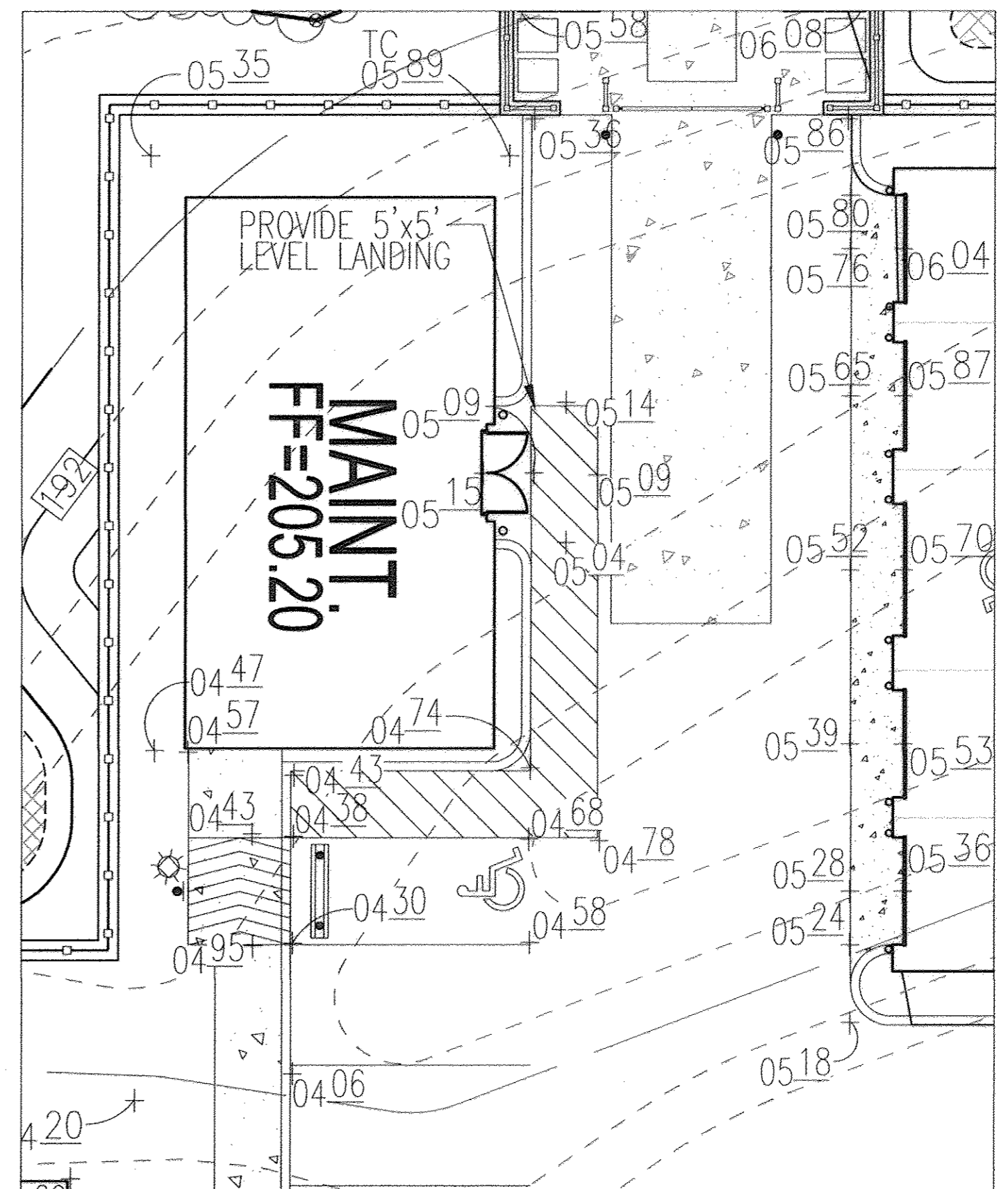
5 SHEET OF 55

AS-BUILT 7/16/15



KEY MAP  
NOT TO SCALE

- LEGEND:**
- EXISTING CONTOUR
  - PROPOSED CONTOUR
  - PROPOSED SPOT ELEVATION
  - EXISTING SPOT ELEVATION
  - EXISTING CURB AND GUTTER
  - PROPOSED CURB AND GUTTER
  - PROPOSED MODIFIED CURB
  - EXISTING UTILITY POLE
  - EXISTING LIGHT POLE
  - EXISTING MAILBOX
  - EXISTING SIGN
  - EXISTING SANITARY MANHOLE
  - EXISTING SANITARY LINE
  - EXISTING CLEANOUT
  - EXISTING WATER LINE
  - PROPOSED STORM DRAIN
  - PROPOSED STORM DRAIN INLETS
  - EXISTING TREELINE
  - EXISTING STREET TREES (F-02-35)
  - PROPERTY LINE
  - RIGHT-OF-WAY LINE
  - SOILS BOUNDARY
  - PROPOSED SIDEWALK
  - EX. FOREST CONSERVATION EASEMENT (REFORESTATION)
  - EX. FOREST CONSERVATION EASEMENT (AFFORESTATION)
  - EX. FOREST CONSERVATION EASEMENT (RETENTION)
  - MODERATE SLOPES (15% - 24.99%)
  - STEEP SLOPE (>25%)
  - EX. PUBLIC 100 YR FLOODPLAIN
  - SILT FENCE
  - SUPER SILT FENCE
  - LIMIT OF DISTURBANCE
  - CIP CURB INLET PROTECTION
  - AGIP AT GRADE INLET PROTECTION
  - STABILIZED CONSTRUCTION ENTRANCE
  - PERMEABLE PAVEMENT
  - MICRO-BIORETENTION FACILITY
  - CONDENSERS AND CONDENSERS PAD
  - PROPOSED LIGHTS (SEE DETAIL SHEET 5)
  - ELECTRIC AND CONDUITS
  - PROPOSED LANDSCAPE FENCE



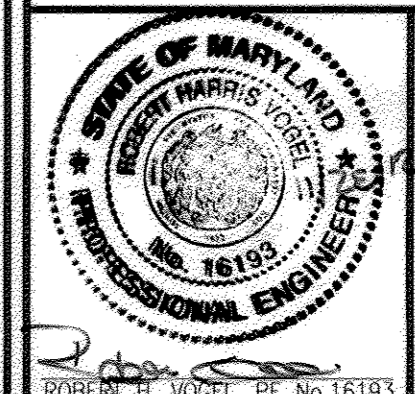
HANDICAP PARKING @ MAINTENANCE BUILDING  
SCALE: 1"=10'

**OWNER/DEVELOPER**  
BLUE STREAM 1 LLC  
PO BOX 416  
ELLCOTT CITY, MD 21041  
C/O ARNOLD SAGNER  
410-465-2020

4	REVISE AREAS OF PREVIOUS PLAN DUE TO CORRECTED UNDERGROUND UTILITIES	02/14/15
1	REVISE PLAN TO INCORPORATE HUD REQUIREMENTS	10/02/12
NO.	REVISION	DATE

**REVISED SITE DEVELOPMENT PLAN**  
**SITE GRADING, SEDIMENT AND EROSION CONTROL PLAN**  
**GROSVENOR HOUSE**  
BLUE STREAM, BUILDABLE BULK PARCEL H  
APARTMENTS AND TOWNHOMES  
TAX MAP 43 GRID 4 & 5  
1ST ELECTION DISTRICT  
ZONED: CAC-CLJ  
PARCEL 14  
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET  
ELLCOTT CITY, MD 21043  
TEL: 410.461.7666  
FAX: 410.461.8961



**PROFESSIONAL CERTIFICATE**  
DESIGN BY: RHV  
DRAWN BY: DZ  
CHECKED BY: RHV  
DATE: OCT. 2, 2012  
SCALE: AS SHOWN  
W.O. NO.: 06-28.01  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. EXPIRATION DATE: 09-27-2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DIRECTOR

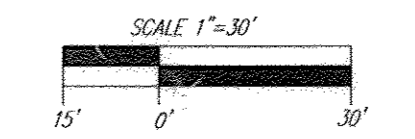
BY THE DEVELOPER:  
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING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

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

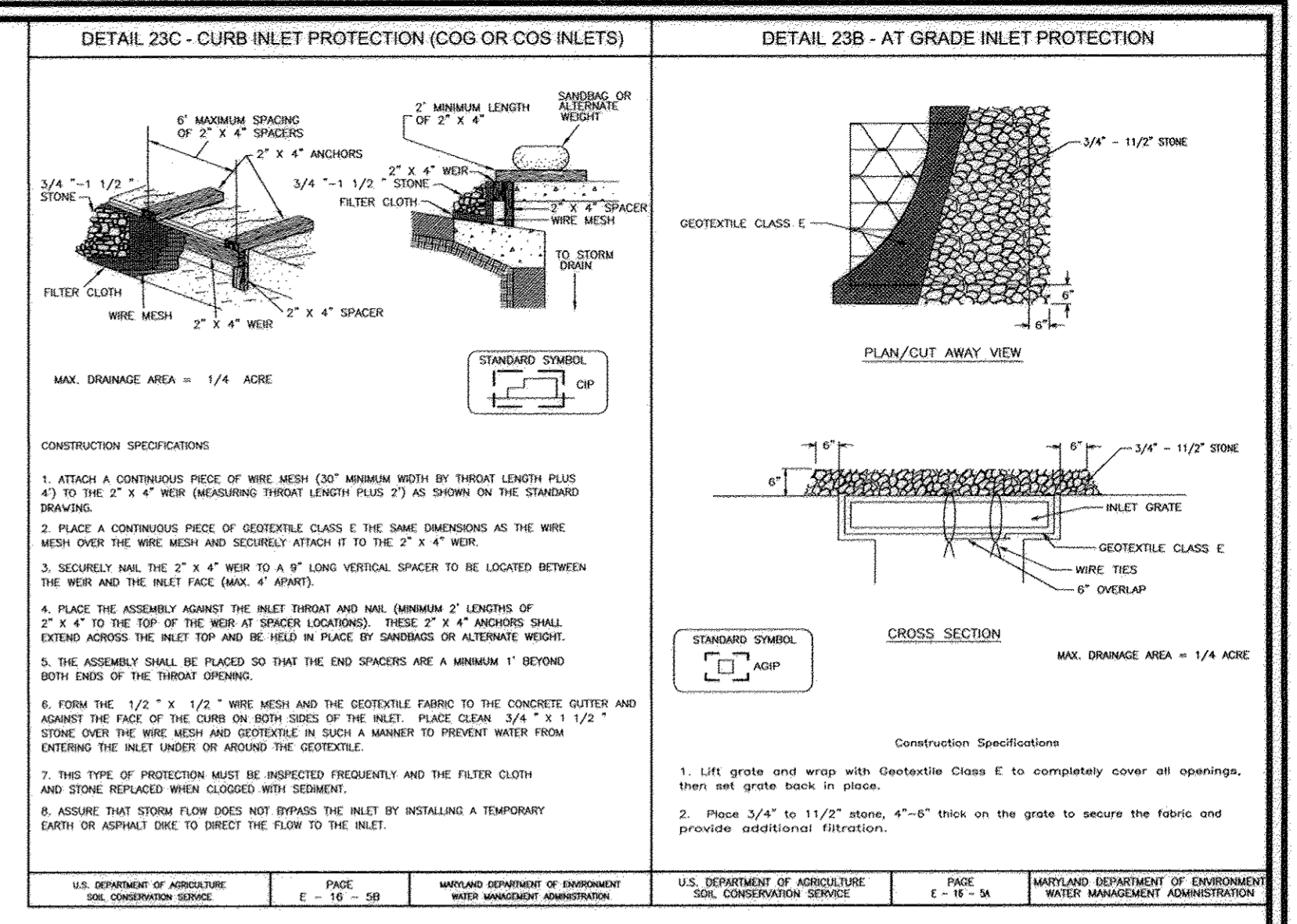
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

PLAN VIEW  
SCALE: 1"=30'

NOTE:  
THE LOTS FRONTING BLUE STREAM DRIVE AND INTERIOR ROADWAYS ARE TO BE UPGRADED TO "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.



NO AS-BUILT INFORMATION THIS SHEET



MATCHLINE SHEET 6

E 1375750  
N 550000

E 1375500  
N 550000

**OWNER/DEVELOPER**  
BLUE STREAM 1 LLC  
PO BOX 416  
ELLCOTT CITY, MD 21041  
C/O: ARNOLD SAGNER  
410-465-2020

NO.	REVISION	DATE
1	REVISE PLAN TO TO INCORPORATE HUD REQUIREMENTS	10/02/12

**REVISED SITE DEVELOPMENT PLAN**

**SITE GRADING, SEDIMENT AND EROSION CONTROL PLAN**

**GROSVENOR HOUSE**  
BLUE STREAM, BUILDABLE BULK PARCEL H  
APARTMENTS AND TOWNHOMES

TAX MAP 43 GRID 4 & 5  
1ST ELECTION DISTRICT

ZONED: CAC-CU  
PARCEL 14  
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET  
ELLCOTT CITY, MD 21043  
TEL: 410.461.7666  
FAX: 410.461.8961

**PROFESSIONAL CERTIFICATE**

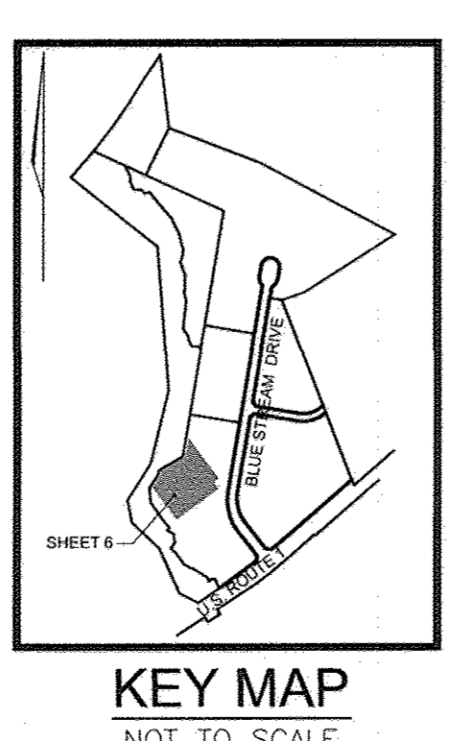
DESIGN BY: RHY  
DRAWN BY: DZ  
CHECKED BY: RHY  
DATE: OCT. 2, 2012  
SCALE: AS SHOWN  
W.O. NO.: 06-26.01

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE 08-27-2014.

7 SHEET OF 55

**LEGEND:**

---	EXISTING CONTOUR	---	PROPOSED SIDEWALK
---	PROPOSED CONTOUR	---	EX. FOREST CONSERVATION EASEMENT (REFORESTATION)
---	PROPOSED SPOT ELEVATION	---	EX. FOREST CONSERVATION EASEMENT (AFFORESTATION)
---	EXISTING CURB AND GUTTER	---	EX. FOREST CONSERVATION EASEMENT (RETENTION)
---	PROPOSED MODIFIED CURB	---	MODERATE SLOPES (15% - 24.99%)
---	EXISTING UTILITY POLE	---	STEEP SLOPE (>25%)
---	EXISTING LIGHT POLE	---	EX. PUBLIC 100 YR FLOODPLAIN
---	EXISTING MAILBOX	---	SILT FENCE
---	EXISTING SIGN	---	SUPER SILT FENCE
---	EXISTING SANITARY MANHOLE	---	LIMIT OF DISTURBANCE
---	EXISTING SANITARY LINE	---	CIP CURB INLET PROTECTION
---	EXISTING CLEANOUT	---	AGIP AT GRADE INLET PROTECTION
---	EXISTING FIRE HYDRANT	---	PERMEABLE PAVEMENT
---	EXISTING WATER LINE	---	MICRO-BIORETENTION FACILITY
---	PROPOSED STORM DRAIN	---	PROPOSED LANDSCAPE FENCE
---	PROPOSED STORM DRAIN INLETS	---	CONDENSERS AND CONDENSERS PAD
---	EXISTING TREELINE	---	PROPOSED LIGHTS (SEE DETAIL SHEET 5)
---	EXISTING STREET TREES (F=02-35)	---	ELECTRIC AND CONDUITS
---	PROPERTY LINE	---	
---	RIGHT-OF-WAY LINE	---	
---	M1B2	---	
---	M1D3	---	
---	SOILS BOUNDARY	---	



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* 2/6/13  
Chief, Division of Land Development: *[Signature]* 2/27/13  
Director: *[Signature]* 2/7/13

BY THE DEVELOPER:

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

*[Signature]* 1/21/13  
SIGNATURE OF DEVELOPER DATE

BY THE ENGINEER:

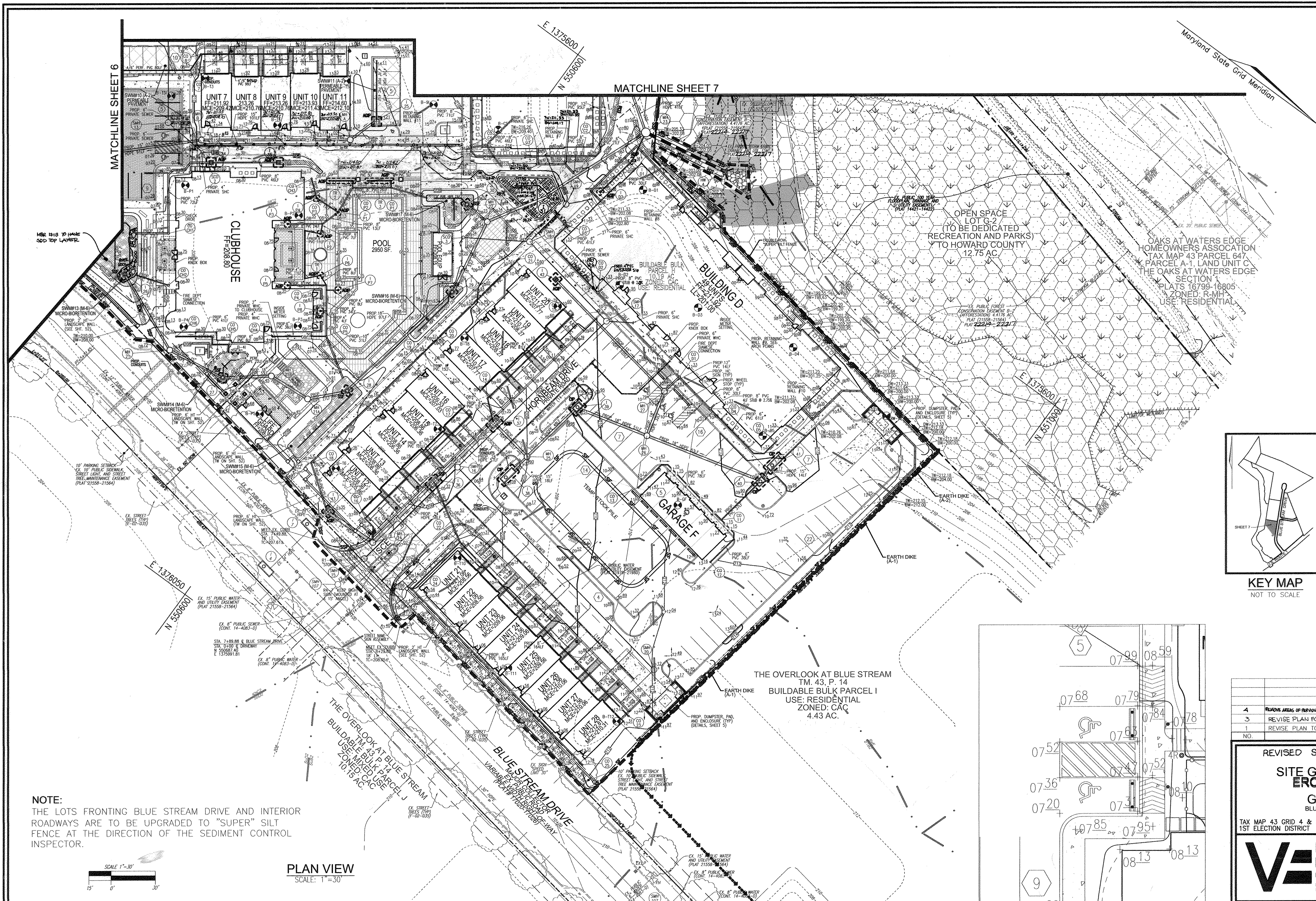
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 1/28/12  
SIGNATURE OF ENGINEER DATE

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

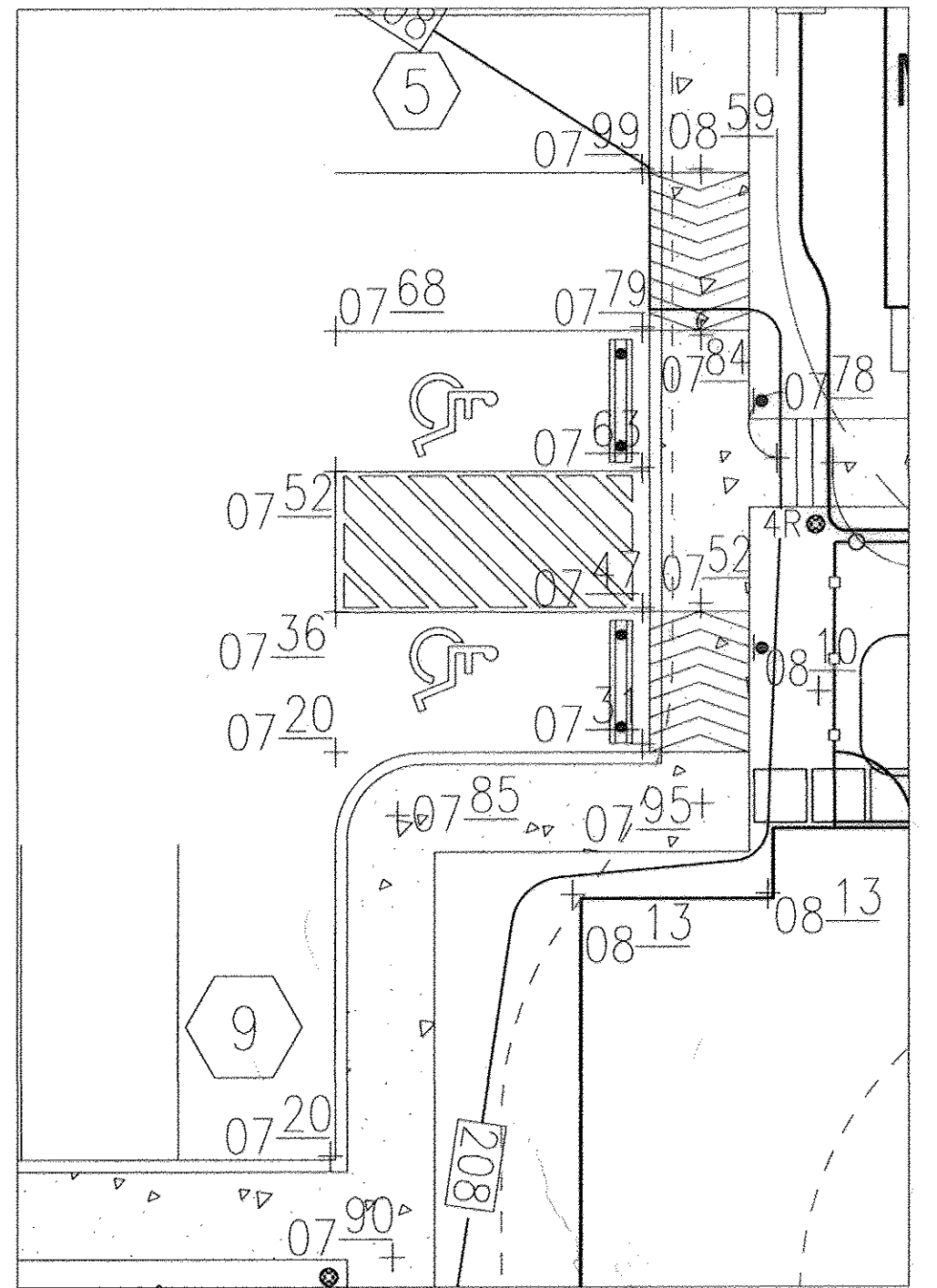
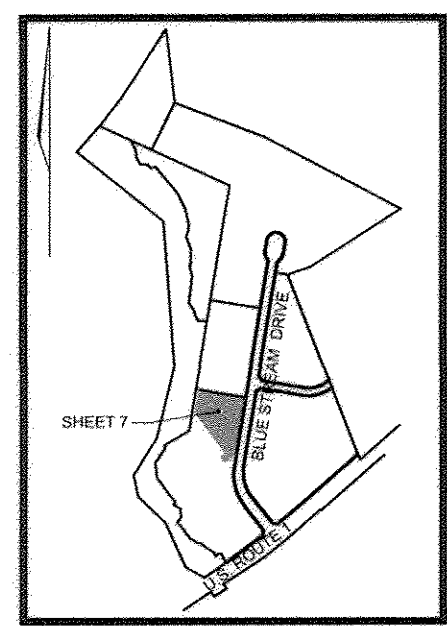
*[Signature]* 1/13/13  
HOWARD S.C.D. DATE

NO AS-BUILT INFORMATION THIS SHEET

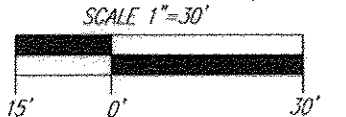


**LEGEND:**

	EXISTING CONTOUR
	PROPOSED SPOT ELEVATION
	EXISTING SPOT ELEVATION
	EXISTING CURB AND GUTTER
	PROPOSED MODIFIED CURB
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLETS
	EXISTING TREE LINE
	EXISTING STREET TREES (T-02-35)
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY M1B2
	SOILS BOUNDARY M1D3
	PROPOSED SIDEWALK
	EX. FOREST CONSERVATION EASEMENT (REFORESTATION)
	EX. FOREST CONSERVATION EASEMENT (AFFORESTATION)
	EX. FOREST CONSERVATION EASEMENT (RETENTION)
	MODERATE SLOPES (15% - 24.99%)
	STEEP SLOPE (>25%)
	EX. PUBLIC 100 YR FLOODPLAIN
	SILT FENCE
	SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	CURB INLET PROTECTION CIP
	AT GRADE INLET PROTECTION AGIP
	STABILIZED CONSTRUCTION ENTRANCE
	PERMEABLE PAVEMENT
	MICRO-BIORETENTION FACILITY
	CONDENSERS AND CONDENSERS PAD
	PROPOSED LIGHTS (SEE DETAIL SHEET 5)
	ELECTRIC AND CONDUITS
	PROPOSED POOL FENCE
	PROPOSED LANDSCAPE FENCE



**NOTE:**  
THE LOTS FRONTING BLUE STREAM DRIVE AND INTERIOR ROADWAYS ARE TO BE UPGRADED TO "SUPER" SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.



**PLAN VIEW**  
SCALE: 1"=30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 2/6/13  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 2/7/13  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 2/7/13  
DIRECTOR DATE

BY THE DEVELOPER:

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

*[Signature]* AUTHORIZED PERSON 1/21/13  
SIGNATURE OF DEVELOPER DATE

BY THE ENGINEER:

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

*[Signature]* 1/22/13  
SIGNATURE OF ENGINEER DATE

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

*[Signature]* 1/13/13  
HOWARD S.C.D. DATE

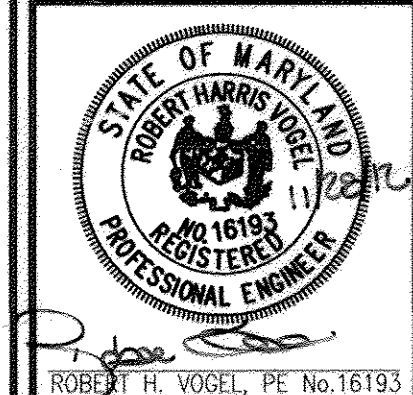
NO AS-BUILT INFORMATION THIS SHEET

**OWNER/DEVELOPER**  
BLUE STREAM 1 LLC  
PO BOX 416  
ELLCOTT CITY, MD 21041  
C/O: ARNOLD SAGNER  
410-465-2020

NO.	REVISION	DATE
4	REMOVE AREAS OF PERVIOUS PAVEMENT DUE TO CONFLICTED UNDERGROUND UTILITIES	06/13/13
3	REVISE PLAN FOR RELOCATED WALL # 11	01/29/13
1	REVISE PLAN TO INCORPORATE HUD REQUIREMENTS	10/02/12
NO.	REVISION	DATE

REVISED SITE DEVELOPMENT PLAN  
**SITE GRADING, SEDIMENT AND EROSION CONTROL PLAN**  
**GROSVENOR HOUSE**  
BLUE STREAM, BUILDABLE BULK PARCEL H  
APARTMENTS AND TOWNHOMES  
ZONED: CAC-CL1  
PARCEL 14  
TAX MAP 43 GRID 4 & 5  
1ST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET  
ELLCOTT CITY, MD 21043  
TEL: 410.461.7666  
FAX: 410.461.8961



PROFESSIONAL CERTIFICATE

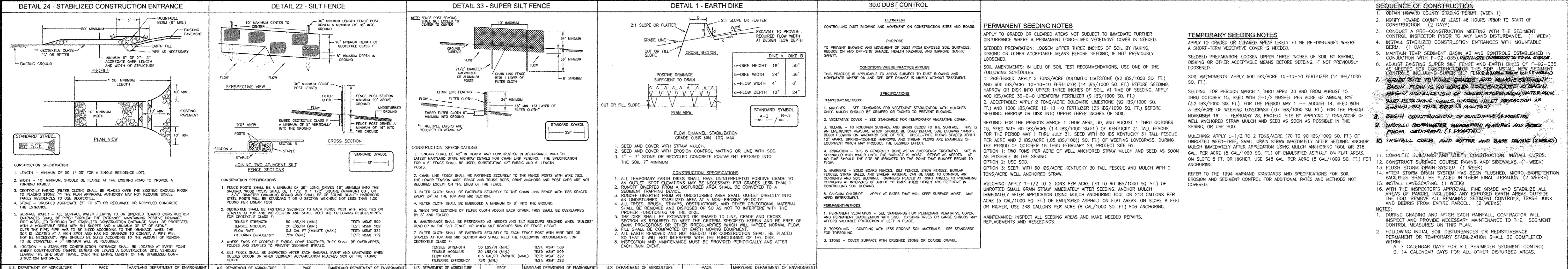
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRES ON 06-29-2014.

DESIGN BY: RHW  
DRAWN BY: DZ  
CHECKED BY: RHW  
DATE: OCT. 2, 2012  
SCALE: AS SHOWN  
W.O. NO.: 06-26.01

8 SHEET OF 55

AS-BUILT 7/16/15





**21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL**

**DEFINITION**  
 PLACEMENT OF TOPSOIL OVER A PREPARED SUBGRADE PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

**PURPOSE**  
 TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, AND ARE SUBJECT TO EROSION, WIND, AND/OR UNACCEPTABLE SOIL GRAIN DISTRIBUTION.

**CONSTRUCTION SPECIFICATIONS**

- TOPSOIL SHALL BE LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES. EXCEPT AS SPECIFIED OTHERWISE, THE FOLLOWING SHALL APPLY TO ALL AREAS HAVING SLOPES STEEPER THAN 2:1. EXCEPT AS SPECIFIED OTHERWISE, THE FOLLOWING SHALL APPLY TO ALL AREAS HAVING SLOPES STEEPER THAN 2:1.
- FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL BE CONSIDERED AREAS HAVING SLOPES STEEPER THAN 2:1.

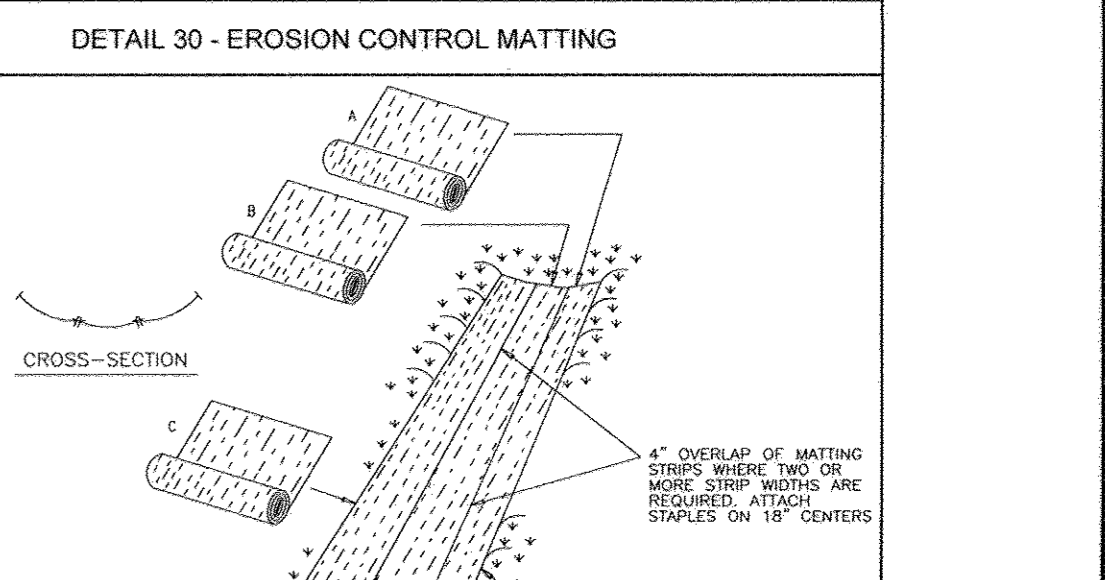
**FOUNDATION ANALYSIS AND EVALUATIONS (RECOMMENDATIONS)**  
 Based upon our understanding of the anticipated construction, mass grading will be required across the site to achieve planned grades. The proposed grading information indicates that cuts of up to approximately 20 ft and fills of up to approximately 15 ft are anticipated to achieve final grades. The majority of Building A, Building D, Maintenance Building, Garage A, Garage F and the planned walkways in the vicinity of Buildings T-1 and T-2 will be located within cuts. The remainder of the site development, including Buildings B, C, E, F, G, and G, as well as the Poolhouse, Garages B through E and the majority of the planned walkways, will be located within cuts.

**FOUNDATION ANALYSIS AND EVALUATIONS (RECOMMENDATIONS)**  
 Based on the results of the test borings, most of the sites soils in the cut areas are considered suitable to reuse as structural fill, however, the natural moisture content may be above the optimum moisture level, and therefore, mechanical dewatering of soil may be required. In addition, the encountered soil conditions are not considered suitable for structural fill without chemical (lime) treatment. We recommend that caution be taken when excavating to and mix the MH soils with otherwise suitable structural fill. The laboratory test indicates that this includes the MH soils, including the MH soils, exhibited high moisture content of up to 65 percent.

**FOUNDATION ANALYSIS AND EVALUATIONS (RECOMMENDATIONS)**  
 Based on the results of the test borings, most of the sites soils in the cut areas are considered suitable to reuse as structural fill, however, the natural moisture content may be above the optimum moisture level, and therefore, mechanical dewatering of soil may be required. In addition, the encountered soil conditions are not considered suitable for structural fill without chemical (lime) treatment. We recommend that caution be taken when excavating to and mix the MH soils with otherwise suitable structural fill. The laboratory test indicates that this includes the MH soils, including the MH soils, exhibited high moisture content of up to 65 percent.

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**SEDIMENT CONTROL NOTES**

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1855).
- ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. AREAS WHERE VEGETATION IS DISTURBED SHALL BE RESTORED TO ORIGINAL CONDITION WITHIN 90 CALENDAR DAYS FOR ALL DISTURBED AREAS.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RESTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS FOR ALL DISTURBED AREAS.
- 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. PERMANENT VEGETATION SHALL BE COMPLETED WITHIN 90 CALENDAR DAYS FOR ALL DISTURBED AREAS. VEGETATIVE STABILIZATION METHODS AND MATERIALS SHALL BE APPROVED BY THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS SEDIMENT CONTROL DIVISION.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS SEDIMENT CONTROL DIVISION.

**OWNER/DEVELOPER**  
 BLUE STREAM 1 LLC  
 PO BOX 416  
 ELICOTT CITY, MD 21041  
 C/CO: RYNDL ENGINEER  
 410-465-2020

By the Developer: [Signature]

By the Engineer: [Signature]

1. I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING DIVISION.

2. I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION WILL BE TRAINED AND EDUCATED ACCORDING TO THE ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION.

NO.	REVISION	DATE
1	REVISE GRADING AT REAR OF BUILDINGS TO ACCOMMODATE THE HUD REQUIREMENTS.	10-02-12

**SITE DEVELOPMENT PLAN**  
**SEDIMENT AND EROSION CONTROL**  
**NOTES AND DETAILS**  
**GROSVENOR HOUSE**  
 BLUE STREAM, BUILDABLE PLOT PARCEL # 1  
 APARTMENTS AND TOWNHOUSES  
 ZONED GAC-C/L  
 EILICOTT CITY, MD 21041  
 1ST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

TAX MAP 43 GRID 4 & 5  
 1ST ELECTION DISTRICT

**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 8407 MAIN STREET  
 ELICOTT CITY, MD 21043  
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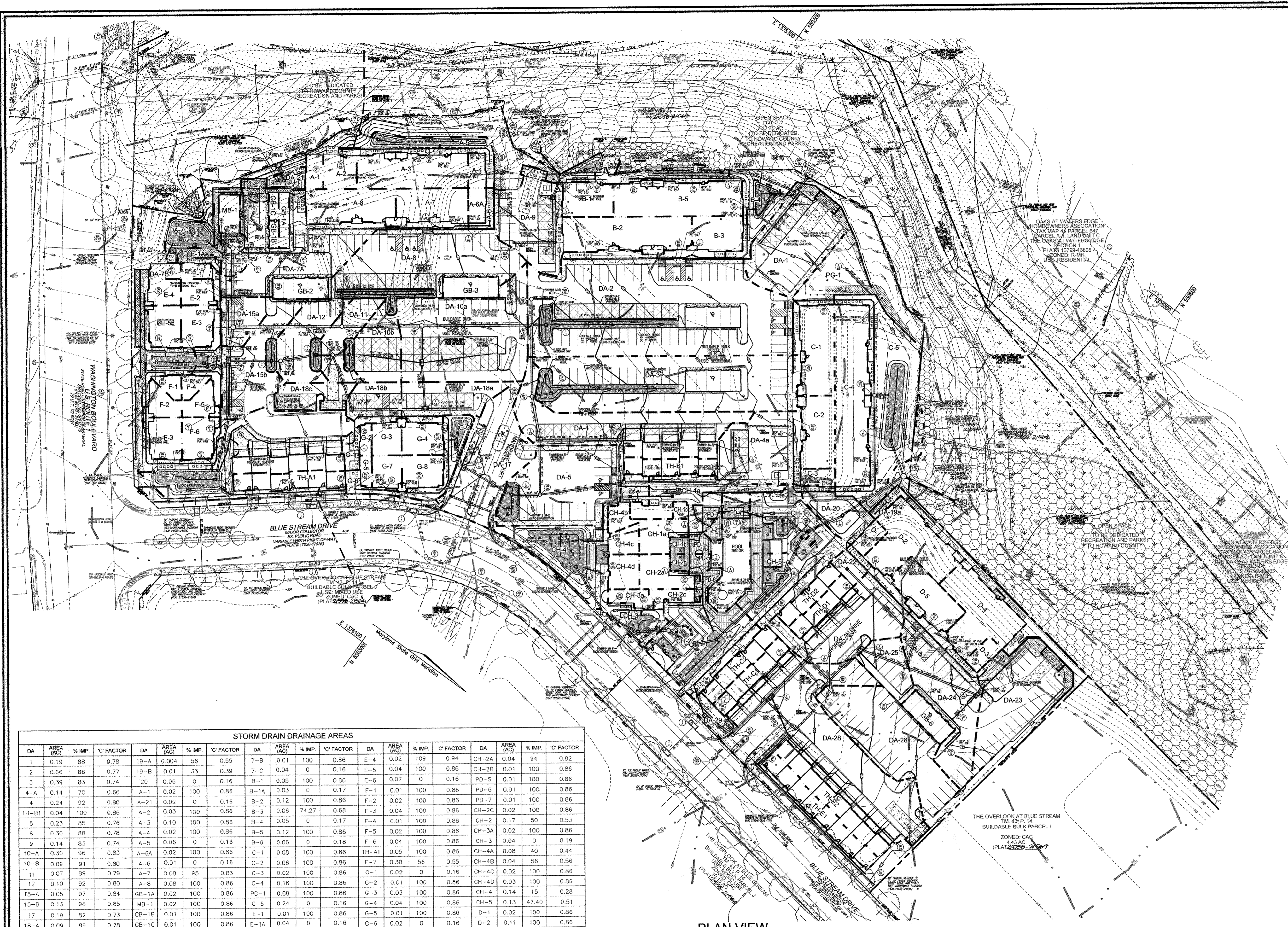
**PROFESSIONAL CERTIFICATE**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR SUPERVISED BY ME OR BY AN INDIVIDUAL WHOSE PROFESSIONAL EXPIRATION DATE IS 08-27-2012  
 ROBERT H. VOGEL, PE No.16193

DESIGN BY: RHY  
 DRAWN BY: DZ  
 CHECKED BY: RHY  
 DATE: FEB. 2, 2012  
 SCALE: AS SHOWN  
 W.O. NO.: 06-26.01  
 9 SHEET OF 55  
 SDP-11-032

**AS-BUILT 7/16/15**

**NO AS-BUILT INFORMATION THIS SHEET**

U.S. DEPARTMENT OF AGRICULTURE PAGES 2-22-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



- LEGEND:**
- EXISTING CONTOUR
  - - - - PROPOSED CONTOUR
  - +0.00 EXISTING SPOT ELEVATION
  - +0.00/0.00 PROPOSED SPOT ELEVATION
  - EXISTING CURB AND GUTTER
  - PROPOSED CURB AND GUTTER
  - PROPOSED MODIFIED CURB
  - EXISTING UTILITY POLE
  - EXISTING LIGHT POLE
  - EXISTING MAILBOX
  - EXISTING SIGN
  - EXISTING SANITARY MANHOLE
  - EXISTING SANITARY LINE
  - EXISTING CLEANOUT
  - EXISTING FIRE HYDRANT
  - EXISTING WATER LINE
  - PROPOSED STORM DRAIN
  - PROPOSED STORM DRAIN INLETS
  - EXISTING TREE LINE
  - EXISTING STREET TREES (F-02-35)
  - PROPERTY LINE
  - RIGHT-OF-WAY LINE
  - SOILS BOUNDARY
  - PROPOSED SIDEWALK
  - EX. FOREST CONSERVATION EASEMENT (REFORESTATION)
  - EX. FOREST CONSERVATION EASEMENT (AFFORESTATION)
  - EX. FOREST CONSERVATION EASEMENT (RETENTION)
  - EX. PUBLIC 100 YR FLOODPLAIN
  - SILT FENCE
  - SUPER SILT FENCE
  - LIMIT OF DISTURBANCE
  - PERMEABLE PAVEMENT
  - MICRO-BORRETION FACILITY
  - PROPOSED POOL FENCE
  - PROPOSED LANDSCAPE FENCE
  - CONDENSERS AND CONDENSERS PAD
  - PROPOSED LIGHTS (SEE DETAIL SHEET 5)
  - ELECTRIC AND CONDUITS

**SOILS LEGEND**

SYMBOL	NAME / DESCRIPTION	GROUP
CnD3	CHILLON CARBON LOAM, 5 TO 15 PERCENT SLOPES	C
KkC2	KEPONT SILT LOAM, 3 TO 10 PERCENT SLOPES, MODERATELY ERODED	C
LmB	LUKA LOAM, 15 TO 30 PERCENT SLOPES, SEVERELY ERODED	C
MmF	MONTALTO AND REALLY VERY STONY SILT LOAMS, 25 TO 60 PERCENT SLOPES	B
StB2	SASSAFRAS LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
ScE	SANDY AND CLAYEY LAND, MODERATELY STEEP	B
SfB2	SASSAFRAS GRAVELY SANDY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
SkC2	SASSAFRAS GRAVELY SANDY LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
SfD2	SASSAFRAS GRAVELY SANDY LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
SsE	SASSAFRAS SOIL, 15 TO 40 PERCENT SLOPES	B
Sub2	SUNNYSIDE FINE SANDY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B

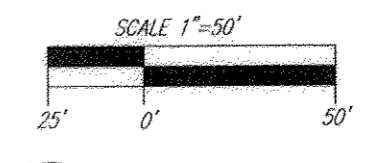
NOTE: BASED ON HOWARD SOIL SURVEY

**OWNER/DEVELOPER**  
 BLUE STREAM 1 LLC  
 PO BOX 416  
 ELLICOTT CITY, MD 21041  
 C/O: ARNOLD SAGNER  
 410-465-2020

**STORM DRAIN DRAINAGE AREAS**

DA	AREA (AC)	% IMP.	C' FACTOR	DA	AREA (AC)	% IMP.	C' FACTOR	DA	AREA (AC)	% IMP.	C' FACTOR	DA	AREA (AC)	% IMP.	C' FACTOR
1	0.19	88	0.78	19-A	0.004	56	0.55	7-B	0.01	100	0.86	E-4	0.02	109	0.94
2	0.66	88	0.77	19-B	0.01	33	0.39	7-C	0.04	0	0.16	E-5	0.04	100	0.86
3	0.39	83	0.74	20	0.06	0	0.16	B-1	0.05	100	0.86	E-6	0.07	0	0.16
4-A	0.14	70	0.66	A-1	0.02	100	0.86	B-1A	0.03	0	0.17	F-1	0.01	100	0.86
4	0.24	92	0.80	A-21	0.02	0	0.16	B-2	0.12	100	0.86	F-2	0.02	100	0.86
TH-B1	0.04	100	0.86	A-2	0.03	100	0.86	B-3	0.06	74.27	0.68	F-3	0.04	100	0.86
5	0.23	85	0.76	A-3	0.10	100	0.86	B-4	0.05	0	0.17	F-4	0.01	100	0.86
8	0.30	88	0.78	A-4	0.02	100	0.86	B-5	0.12	100	0.86	F-5	0.02	100	0.86
9	0.14	83	0.74	A-5	0.06	0	0.16	B-6	0.06	0	0.18	F-6	0.04	100	0.86
10-A	0.30	96	0.83	A-6A	0.02	100	0.86	C-1	0.08	100	0.86	TH-A1	0.05	100	0.86
10-B	0.09	91	0.80	A-6	0.01	0	0.16	C-2	0.06	100	0.86	F-7	0.30	56	0.55
11	0.07	89	0.79	A-7	0.08	95	0.83	C-3	0.02	100	0.86	G-1	0.02	0	0.16
12	0.10	92	0.80	A-8	0.08	100	0.86	C-4	0.16	100	0.86	G-2	0.01	100	0.86
15-A	0.05	97	0.84	GB-1A	0.02	100	0.86	PG-1	0.08	100	0.86	G-3	0.03	100	0.86
15-B	0.13	98	0.85	MB-1	0.02	100	0.86	C-5	0.24	0	0.16	G-4	0.04	100	0.86
17	0.19	82	0.73	GB-1B	0.01	100	0.86	E-1	0.01	100	0.86	G-5	0.01	100	0.86
18-A	0.09	89	0.78	GB-1C	0.01	100	0.86	E-1A	0.04	0	0.16	G-6	0.02	0	0.16
18-B	0.06	81	0.73	GB-2	0.03	100	0.86	E-2	0.02	100	0.86	G-7	0.03	100	0.86
18-C	0.05	99	0.85	7-A	0.29	85	0.76	E-3	0.04	100	0.86	G-8	0.04	100	0.86
												G-9	0.05	0	0.16
												D-22	0.02	17	0.28
												D-23	0.20	80.80	0.73
												GB-6	0.03	100	0.93
												D-24	0.19	84	0.75
												D-25	0.06	76	0.70
												D-26	0.21	94	0.82
												D-27	0.03	100	0.86
												D-28	0.41	92	0.81
												D-29	0	0	0.19
												TH-E1	0.07	100	0.86
												TH-E2	0.07	100	0.86
												TH-C1	0.04	100	0.86
												TH-D1	0.03	100	0.86
												TH-D2	0.03	100	0.86
												TH-C2	0.04	100	0.86
												D-29	0	0	0.19

PLAN VIEW  
SCALE: 1"=50'



NO AS-BUILT INFORMATION THIS SHEET

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*[Signature]* 6/2/12  
 DATE: 6/2/12

CHIEF, DIVISION OF LAND DEVELOPMENT  
*[Signature]* 6/2/12  
 DATE: 6/2/12

DIRECTOR

**SITE DEVELOPMENT PLAN**  
**STORM DRAIN DRAINAGE AREA MAP AND SOILS MAP**  
**GROSVENOR HOUSE**  
 BLUE STREAM, BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES  
 ZONED: CAC-C/LI  
 TAX MAP 43 GRID 4 & 5  
 1ST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 8407 MAIN STREET  
 ELLICOTT CITY, MD 21043  
 TEL: 410.461.7666  
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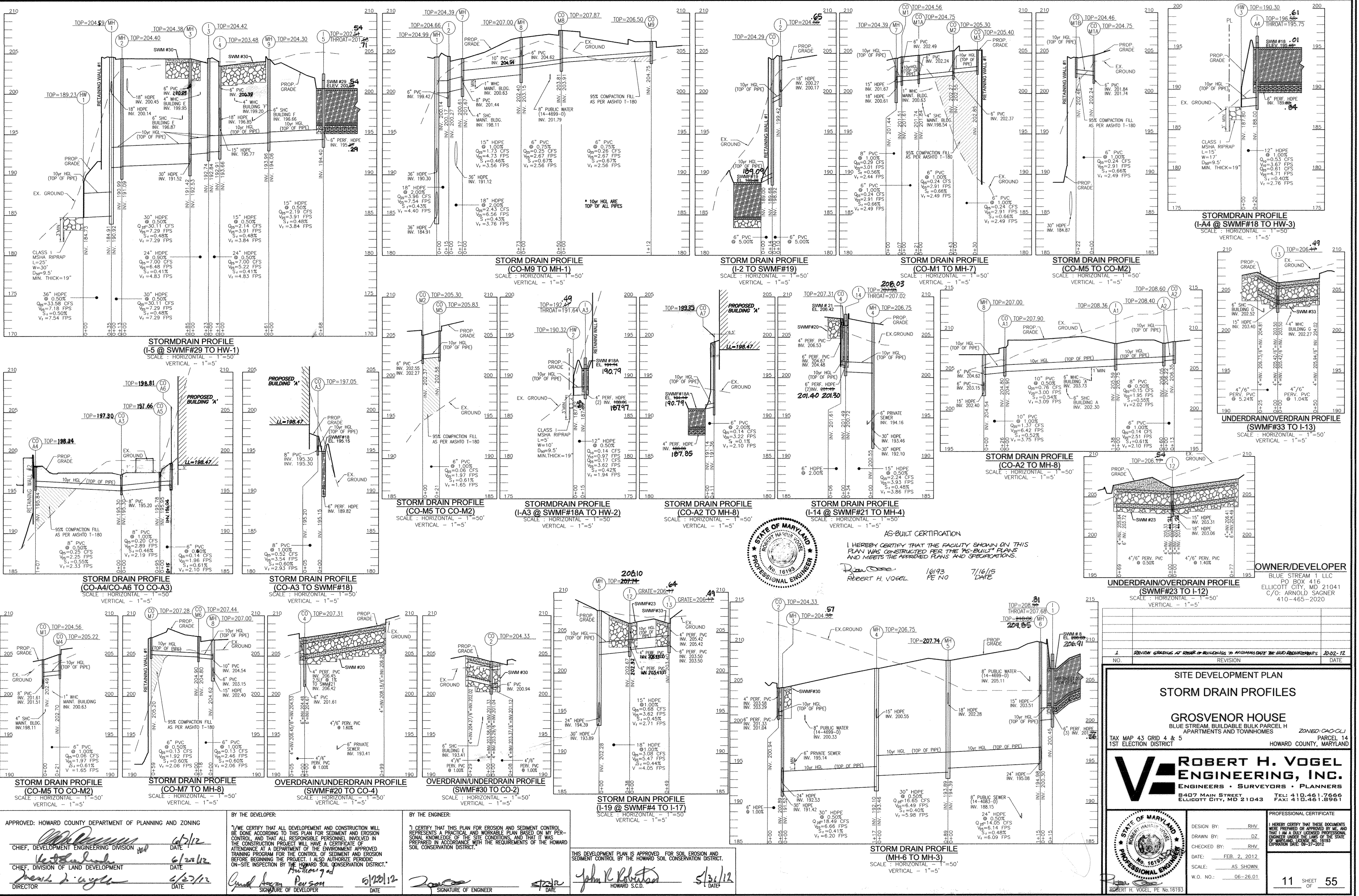
PROFESSIONAL CERTIFICATE

DESIGN BY: RHV  
 DRAWN BY: DZ  
 CHECKED BY: RHV  
 DATE: FEB. 2, 2012  
 SCALE: AS SHOWN  
 W.O. NO.: 06-26-01

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. 16193  
 EXPIRATION DATE: 06-27-2012

10 SHEET OF 55

AS-BUILT 7/16/15



AS-BUILT CERTIFICATION  
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED PER THE AS-BUILT PLANS AND MEETS THE APPLICABLE STANDARDS AND SPECIFICATIONS.  
 Robert H. Vogel 16193 PE NO 7/16/15 DATE

OWNER/DEVELOPER  
 BLUE STREAM 1 LLC  
 PO BOX 416  
 ELLICOTT CITY, MD 21041  
 C/O: ARNOLD SAGNER  
 410-465-2020

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division  
 Chief, Division of Land Development  
 Director

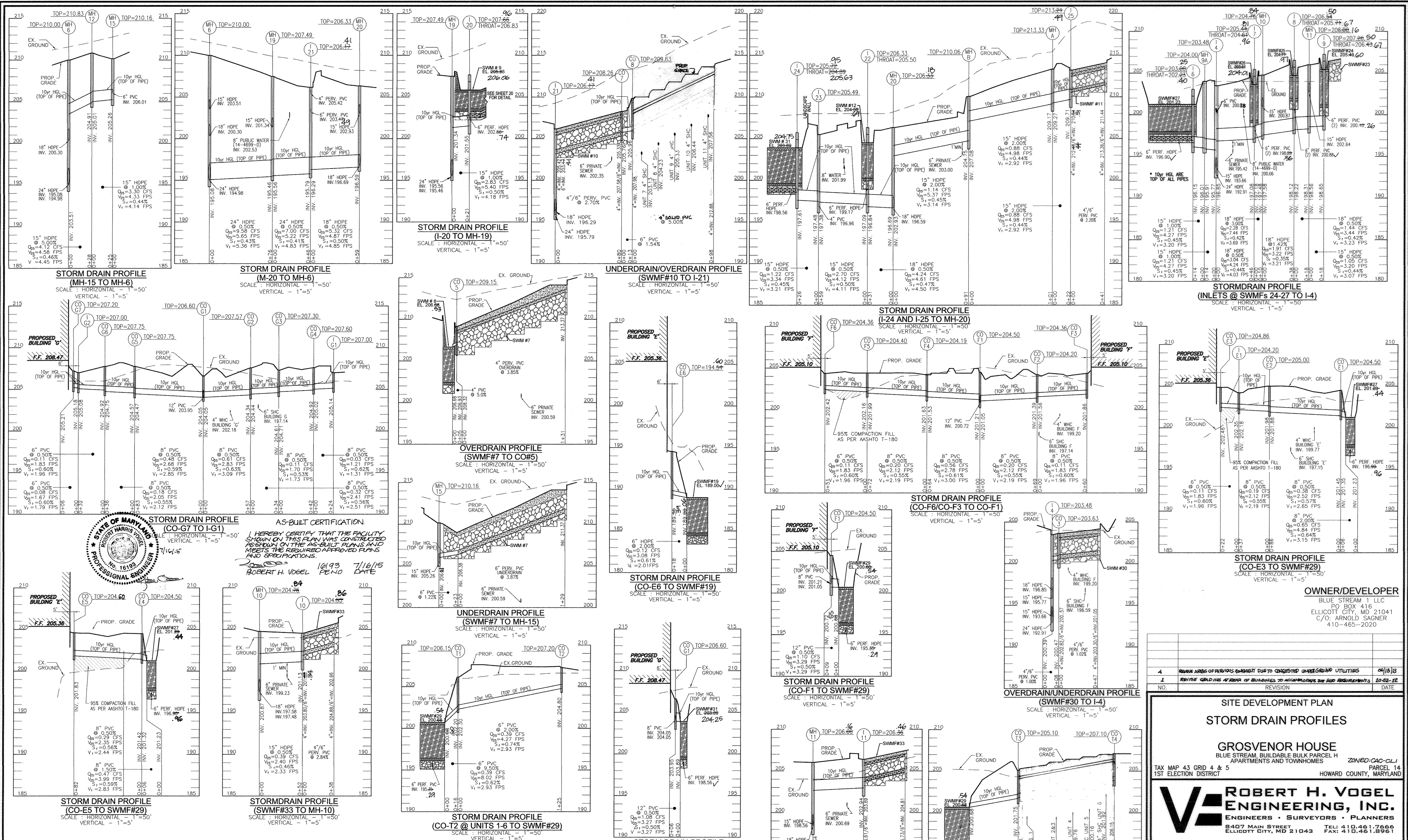
BY THE DEVELOPER:  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL NECESSARY PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING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

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

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 John R. Robinson  
 HOWARD S.C.D.

DESIGN BY: RHV  
 DRAWN BY: DZ  
 CHECKED BY: RHV  
 DATE: FEB. 2, 2012  
 SCALE: AS SHOWN  
 W.O. NO.: 06-26.01

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. 16193, EXPIRATION DATE 09-27-2012.



**AS-BUILT CERTIFICATION**

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

ROBERT H. VOGEL 10/93 7/16/15  
P.E. NO. 16193 DATE

**OWNER/DEVELOPER**

BLUE STREAM 1 LLC  
PO BOX 416  
ELLICOTT CITY, MD 21041  
C/O: ARNOLD SAGNER  
410-465-2020

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION 6/2/12

CHIEF, DIVISION OF LAND DEVELOPMENT 6/2/12

DIRECTOR 6/2/12

BY THE DEVELOPER:

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

6/2/12

BY THE ENGINEER:

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

6/2/12

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

6/2/12

NO.	REVISION	DATE
4	REMOVE AREAS OF PARVOSIS ELEMENT DUE TO CHANGED UNDERGROUND UTILITIES	06/18/12
1	REVISE GRADING AT REAR OF BUILDINGS TO ACCOMMODATE THE NEW REQUIREMENTS	10-02-12

**SITE DEVELOPMENT PLAN**

**STORM DRAIN PROFILES**

**GROSVENOR HOUSE**  
BLUE STREAM, BUILDABLE BULK PARCEL H  
APARTMENTS AND TOWNHOMES

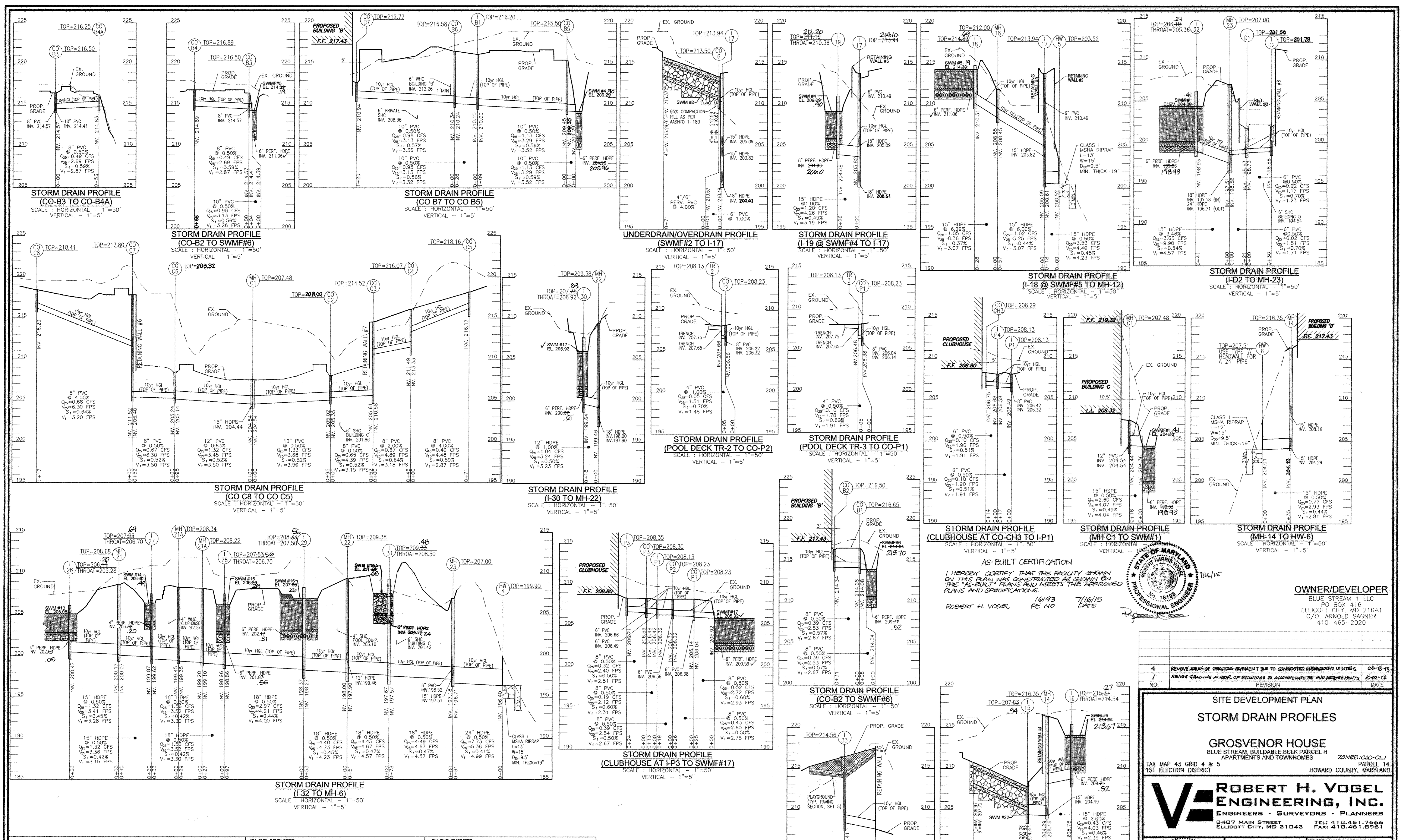
TAX MAP 43 GRID 4 & 5  
1ST ELECTION DISTRICT

ZONED: GAO-CL1  
PARCEL 14  
HOWARD COUNTY, MARYLAND

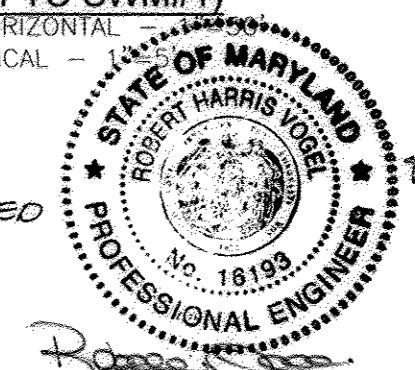
**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET  
ELLICOTT CITY, MD 21043  
TEL: 410.461.7666  
FAX: 410.461.8961

DESIGN BY: RHV  
DRAWN BY: DZ  
CHECKED BY: RHV  
DATE: FEB. 2, 2012  
SCALE: AS SHOWN  
W.O. NO.: 06-26.01

12 SHEET 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.  
 ROBERT H. VOGEL 1/6/13 7/16/15  
 PE NO. DATE



OWNER/DEVELOPER  
 BLUE STREAM 1 LLC  
 PO BOX 416  
 ELLICOTT CITY, MD 21041  
 C/O: ARNOLD SAGNER  
 410-465-2020

NO.	REVISION	DATE
4	REMOVE AREAS OF PREVIOUS EMENT DUE TO CONGESTED UNDERGROUND UTILITIES	06-13-13
1	REVISE GRADING AT REAR OF BUILDINGS TO ACCOMMODATE THE HUD REQUIREMENTS	10-02-12

**SITE DEVELOPMENT PLAN**  
**STORM DRAIN PROFILES**  
**GROSVENOR HOUSE**  
 BLUE STREAM, BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES ZONED: OAC-CL-1  
 TAX MAP 43 GRID 4 & 5  
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 8407 MAIN STREET TEL: 410.461.7666  
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 6/7/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 6/29/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 6/29/12  
 DIRECTOR

BY THE DEVELOPER:  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 [Signature] 5/28/12  
 SIGNATURE OF DEVELOPER DATE

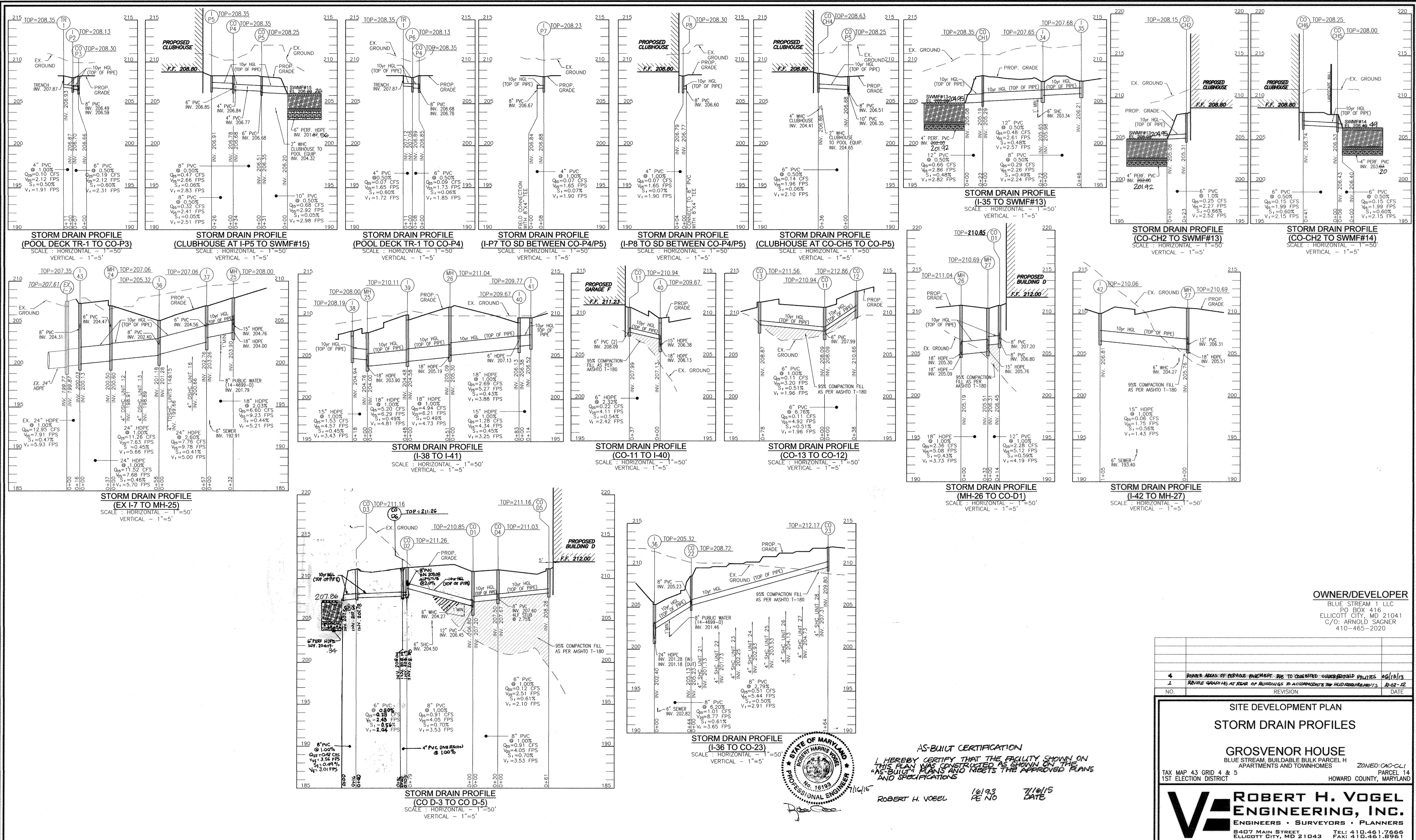
BY THE ENGINEER:  
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 [Signature] 5/13/12  
 SIGNATURE OF ENGINEER DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 [Signature] 5/13/12  
 HOWARD S.C.D. DATE

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. 16193, EXPIRATION DATE 08-27-2012.  
 [Signature] 7/16/15  
 ROBERT H. VOGEL, PE NO. 16193

DESIGN BY: RHV  
 DRAWN BY: DZ  
 CHECKED BY: RHV  
 DATE: FEB. 2, 2012  
 SCALE: AS SHOWN  
 W.O. NO.: 06-26-01

13 SHEET OF 55



**OWNER/DEVELOPER**  
BLUE STREAM 1 LLC  
PO BOX 416  
ELLCOTT CITY, MD 21041  
C/O: ARNOLD SAGNER  
410-465-2020

NO.	REVISION	DATE
4	REMOVE AREAS OF PERMANENT EROSION TO CONSIDER UNDERGROUND UTILITIES	06/13/13
1	REVISE GRADING AT REAR OF BUILDINGS TO ACCOMMODATE THE HUD REQUIREMENTS	10-02-12

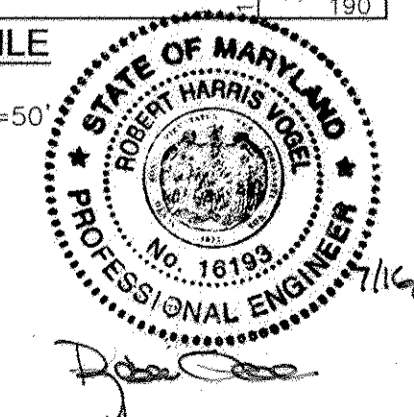
**SITE DEVELOPMENT PLAN**  
**STORM DRAIN PROFILES**

**GROSVENOR HOUSE**  
BLUE STREAM, BUILDABLE BULK PARCEL H  
APARTMENTS AND TOWNHOMES

TAX MAP 43 GRID 4 & 5  
1ST ELECTION DISTRICT

ZONED: CAC-CL1  
PARCEL 14  
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET  
ELLCOTT CITY, MD 21043  
TEL: 410.461.7666  
FAX: 410.461.8961



**AS-BUILT CERTIFICATION**  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS

ROBERT H. VOGEL  
16193  
PE NO  
7/16/15  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 6/12/12

CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 6/20/12

DIRECTOR  
DATE: 6/27/12

BY THE DEVELOPER:

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

DATE: 5/29/12

BY THE ENGINEER:

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

DATE: 5/29/12

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

DATE: 5/29/12

PROFESSIONAL CERTIFICATE

DESIGN BY: RHV  
DRAWN BY: DZ  
CHECKED BY: RHV  
DATE: FEB. 2, 2012  
SCALE: AS SHOWN  
W.O. NO.: 06-26.01

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. 16193 EXPIRATION DATE: 09-27-2012

14 SHEET OF 55

STORM DRAIN STRUCTURE SCHEDULE

Table with columns: NO., TYPE, LOCATION, TOP ELEV., THROAT ELEV., INV. IN, INV. OUT, COMMENTS. Lists various storm drain structures including inlets, manholes, and catch basins with their respective elevations and locations.

NOTE: 1. TOP ELEVATIONS ARE AT CENTER TOP OF HEADPIPE FOR TYPE 'A-5', 'A-10', TOP OF GRADE FOR ALL TYPE 'S' INLETS, AND TOP OF MANHOLE COVER FOR 'D' INLETS AND PRECAST MANHOLES.

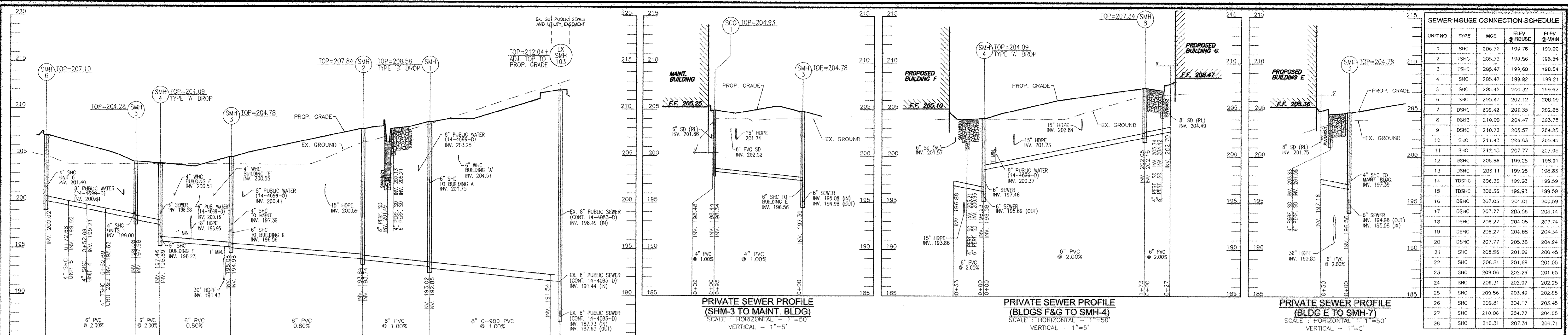
2. FOR TOP SLAB SLOPES SEE GRADING PLAN. 3. SEE ARCHITECTURAL PLAN FOR MANHOLE AND ROOF DRAIN DETAILS. 4. ALL CUSTOM AND NON-STANDARD STRUCTURES TO BE DESIGNED BY A QUALIFIED STRUCTURAL ENGINEER.

PIPE SCHEDULE table with columns: SIZE, TYPE, LENGTH, SIZE, TYPE, LENGTH. Lists pipe specifications for various sizes and materials like PVC, HDPE, and WPC.

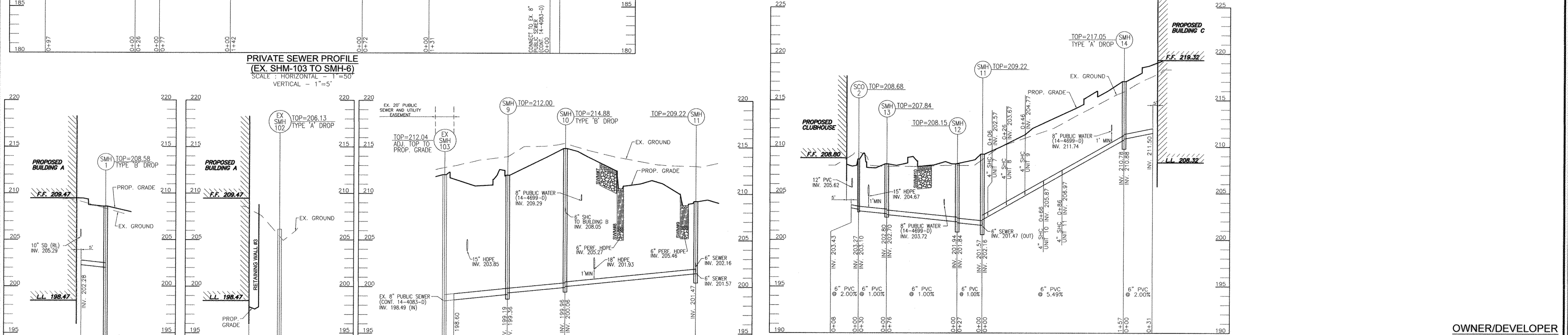
Approval and signature section. Includes 'APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING' and signatures of the Chief, Development Engineering Division and the Director, Division of Land Development. Also includes developer and engineer signatures.

Main site plan area. Includes amenity area charts (Amenity Area #1 @ Building E & F, #2 @ Front of Clubhouse, #3 @ Pool Area, #4 @ Building C) with scales of 1"=20'. Features a large site plan showing Clubhouse, Pool, and various amenity areas. Includes a SWM Pipe Schedule table, a Grosvenor Amenity Area Chart, and a title block with project information, owner/developer details, and professional engineer certification.

AS-BUILT 7/16/15 SDP-11-032



SEWER HOUSE CONNECTION SCHEDULE					
UNIT NO.	TYPE	MCE	ELEV. @ HOUSE	ELEV. @ MAIN	
1	SHC	205.72	199.76	199.00	
2	TSHC	205.72	199.56	198.54	
3	TSHC	205.47	199.60	198.54	
4	SHC	205.47	199.92	199.21	
5	SHC	205.47	200.32	199.62	
6	SHC	205.47	202.12	200.09	
7	DSHC	209.42	203.33	202.65	
8	DSHC	210.09	204.47	203.75	
9	DSHC	210.76	205.57	204.85	
10	SHC	211.43	206.63	205.95	
11	SHC	212.10	207.77	207.05	
12	DSHC	205.86	199.25	198.91	
13	DSHC	205.71	199.25	198.83	
14	TDSHC	206.36	199.63	199.59	
15	TDSHC	206.36	199.93	199.59	
16	DSHC	207.03	201.01	200.59	
17	DSHC	207.77	203.56	203.14	
18	DSHC	208.27	204.08	203.74	
19	DSHC	208.77	204.68	204.34	
20	DSHC	208.77	205.36	204.94	
21	SHC	208.56	201.09	200.45	
22	SHC	208.81	201.69	201.05	
23	SHC	209.06	202.29	201.65	
24	SHC	209.31	202.97	202.25	
25	SHC	209.56	203.49	202.85	
26	SHC	209.81	204.17	203.45	
27	SHC	210.06	204.77	204.05	
28	SHC	210.31	205.37	204.61	



**OWNER/DEVELOPER**  
BLUE STREAM 1 LLC  
PO BOX 416  
ELLCOTT CITY, MD 21041  
C/O: ARNOLD SAGNER  
410-465-2020

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 6/7/12

CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 6/26/12

DIRECTOR: *[Signature]* DATE: 6/27/12

**NO AS-BUILT INFORMATION THIS SHEET**

**SEWER PROFILES**

**GROSVENOR HOUSE**  
BLUE STREAM BUILDABLE BULK PARCEL H  
APARTMENTS AND TOWNHOMES ZONED: CAC-OU  
TAX MAP 43 GRID 4 & 5  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

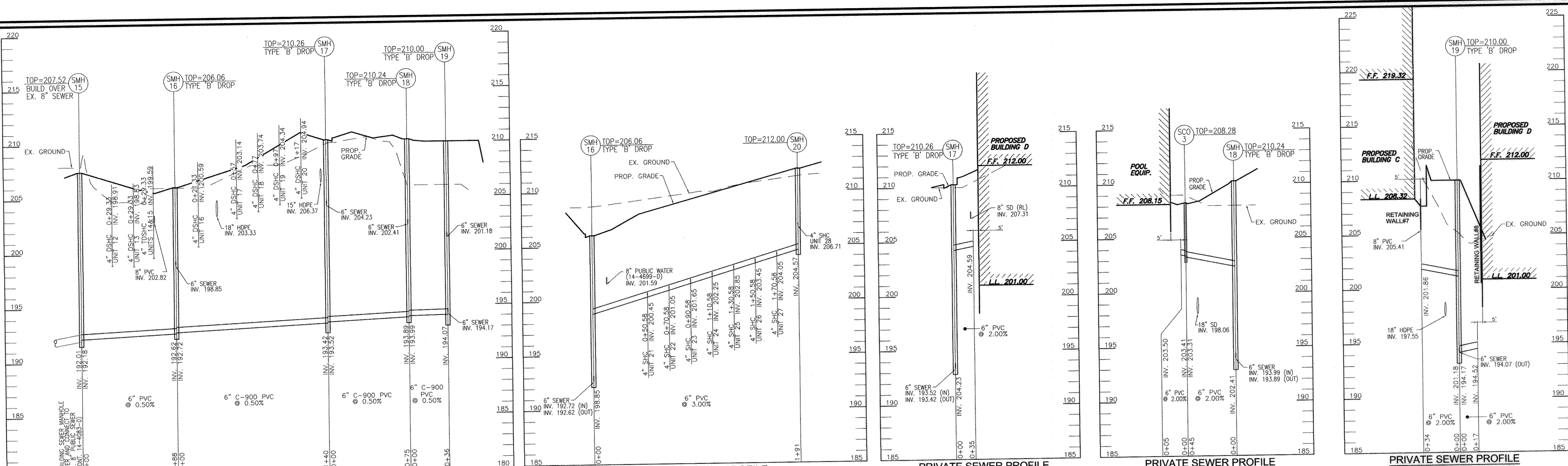
**ROBERT H. VOGEL ENGINEERING, INC.**  
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TEL: 410.461.7666  
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DESIGN BY: RHV  
DRAWN BY: DZ  
CHECKED BY: RHV  
DATE: FEB. 2, 2012  
SCALE: AS SHOWN  
W.O. NO.: 06-26.01

PROFESSIONAL CERTIFICATE  
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16 SHEET OF 55



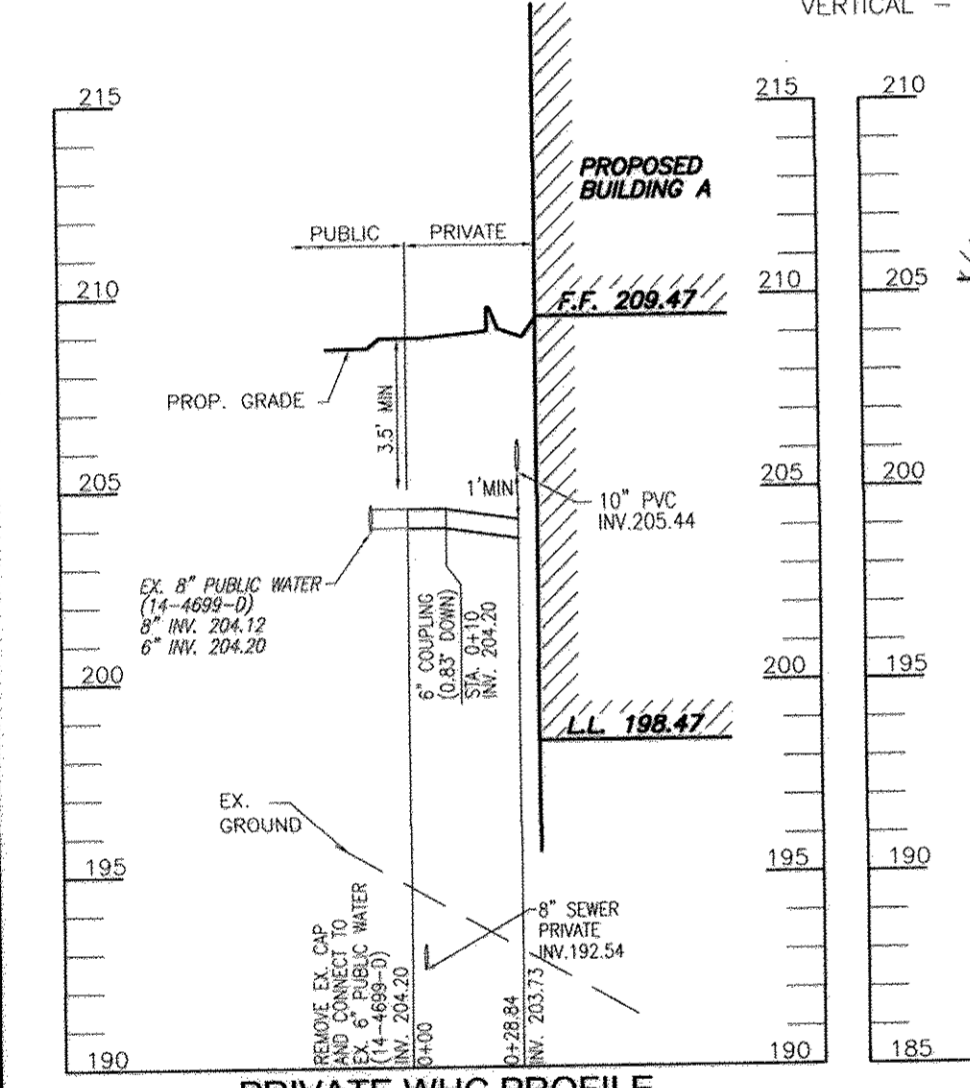


**PRIVATE SEWER PROFILE (SHM-15 TO SMH-19)**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'

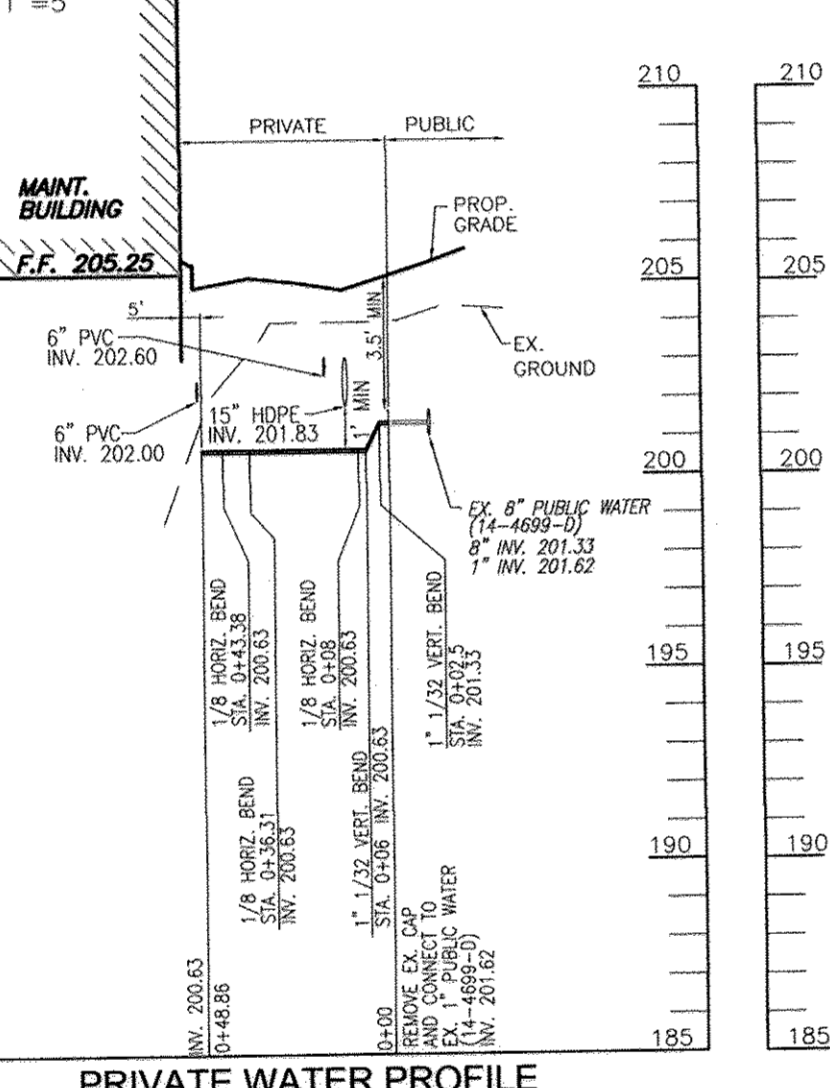
**PRIVATE SEWER PROFILE (SHM-17 TO BLDG. D)**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'

**PRIVATE SEWER PROFILE (POOL EQUIP TO SMH-18)**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'

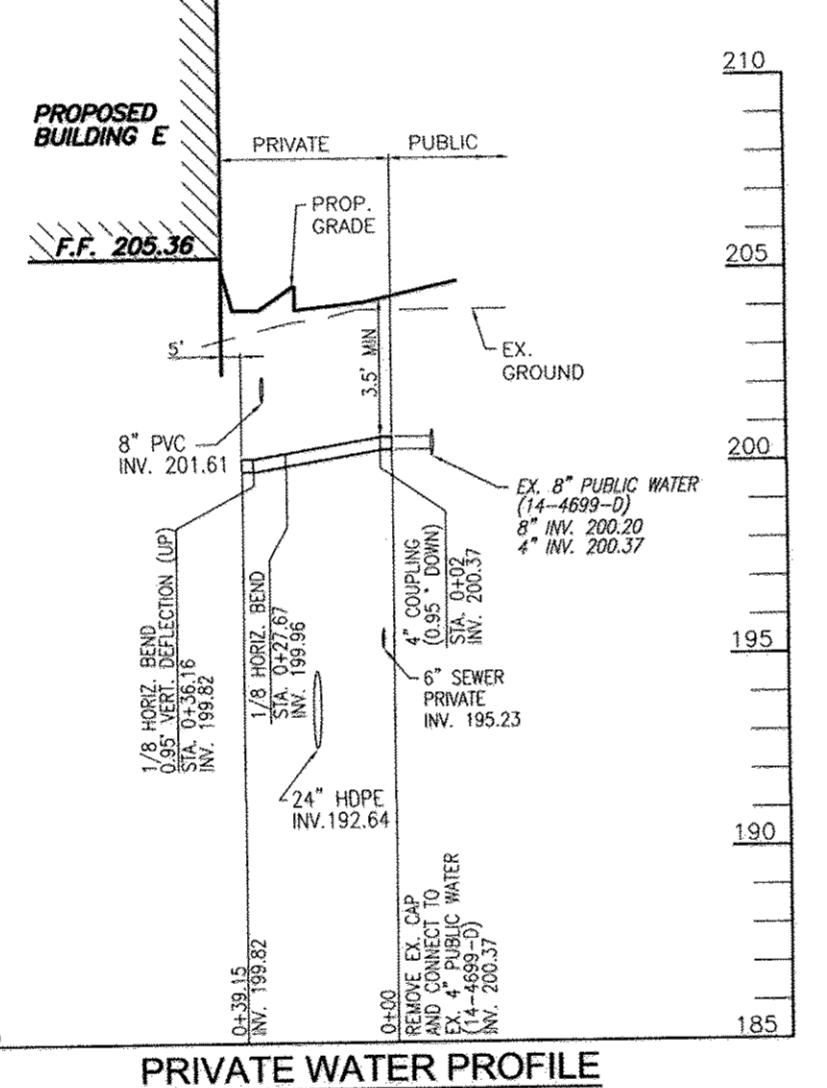
**PRIVATE SEWER PROFILE (BLDGS C&D TO SMH-19)**  
SCALE: HORIZONTAL - 1"=50'  
VERTICAL - 1"=5'



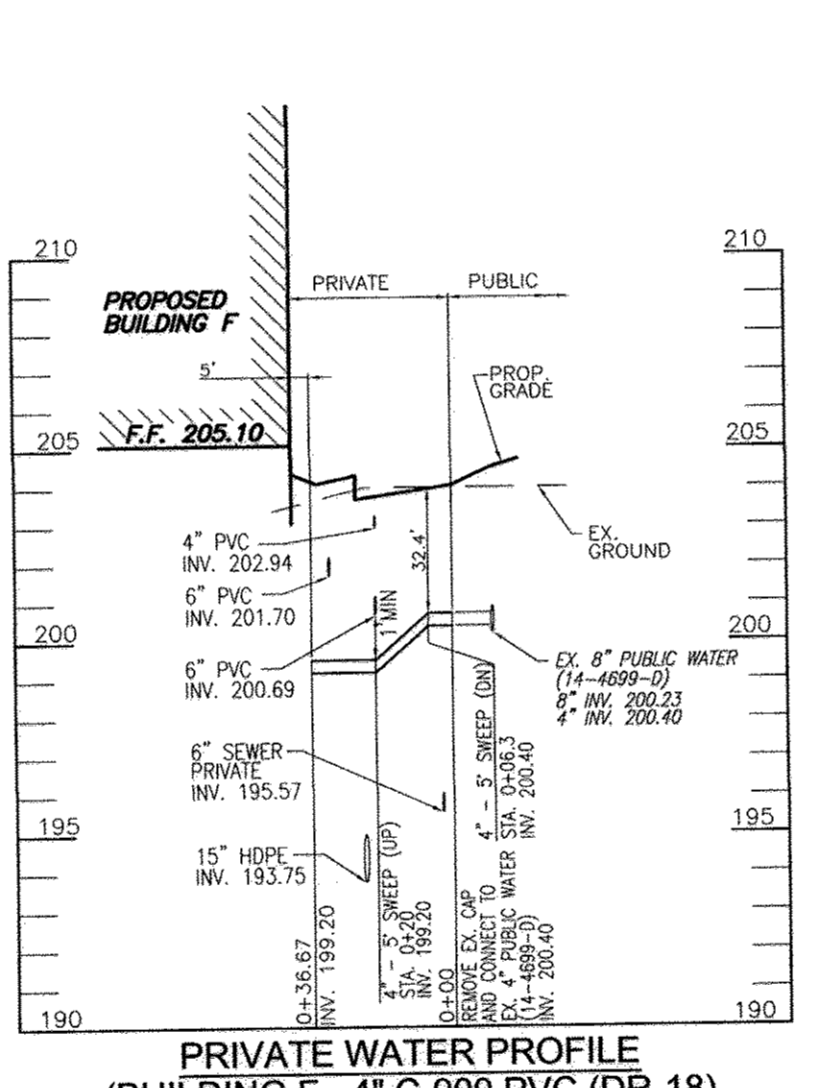
**PRIVATE WHC PROFILE (BUILDING A - 6\"/>**



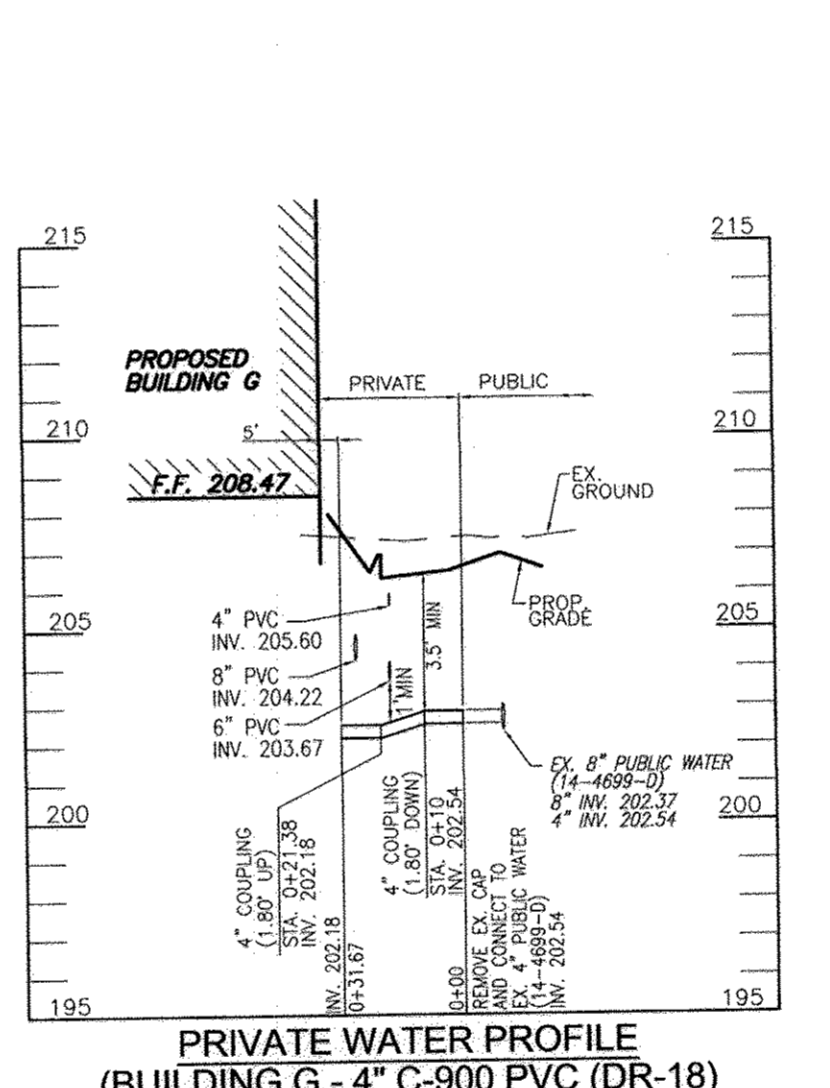
**PRIVATE WATER PROFILE (MAINTENANCE BUILDING - 1\"/>**



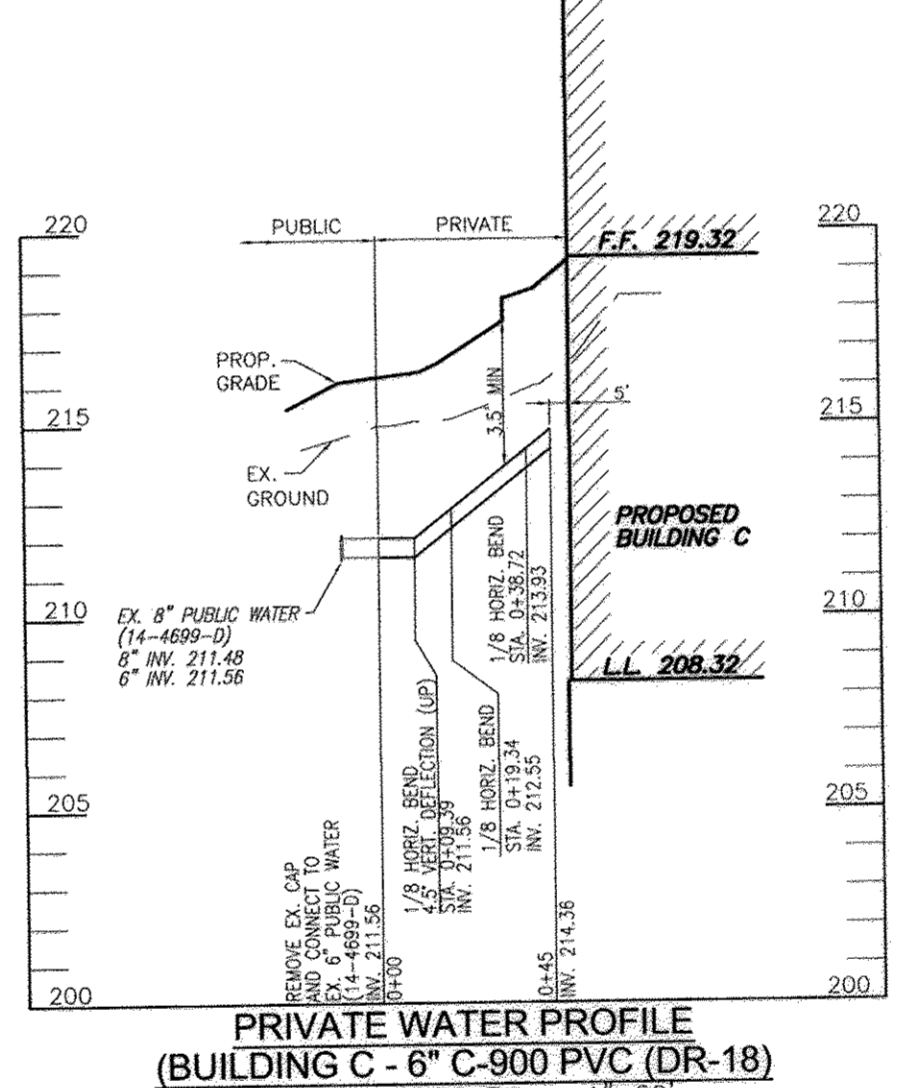
**PRIVATE WATER PROFILE (BUILDING E - 4\"/>**



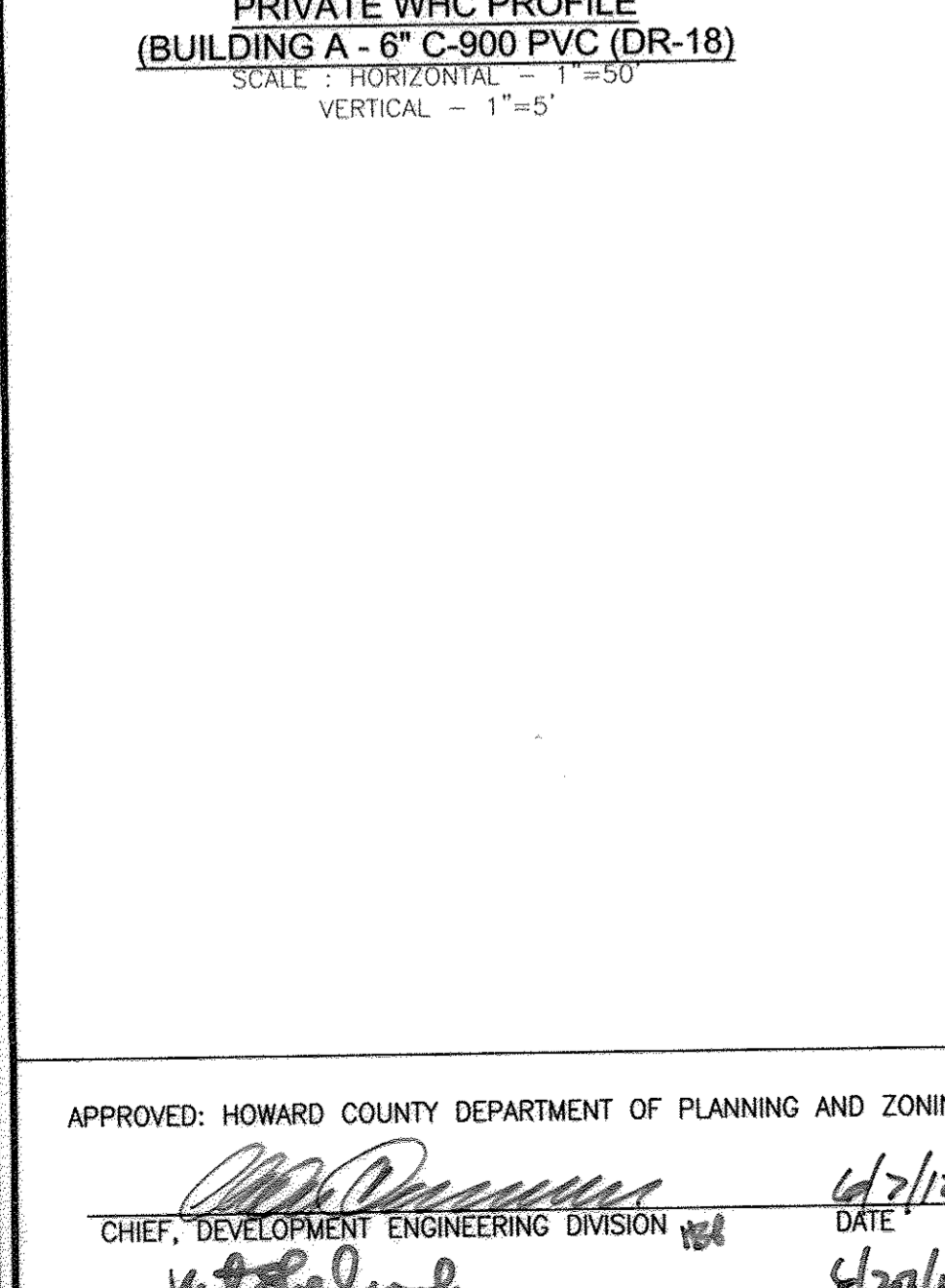
**PRIVATE WATER PROFILE (BUILDING F - 4\"/>**



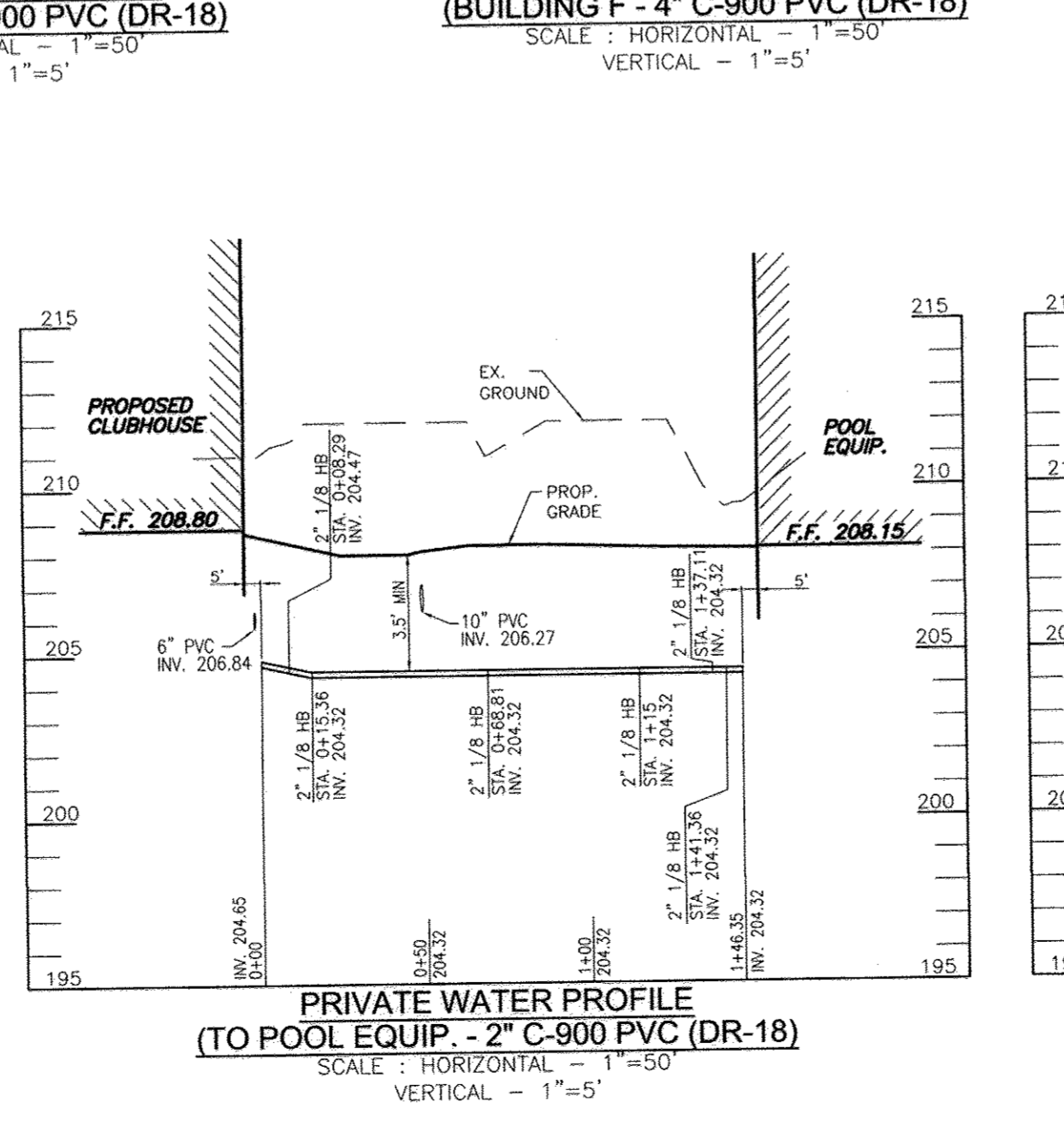
**PRIVATE WATER PROFILE (BUILDING G - 4\"/>**



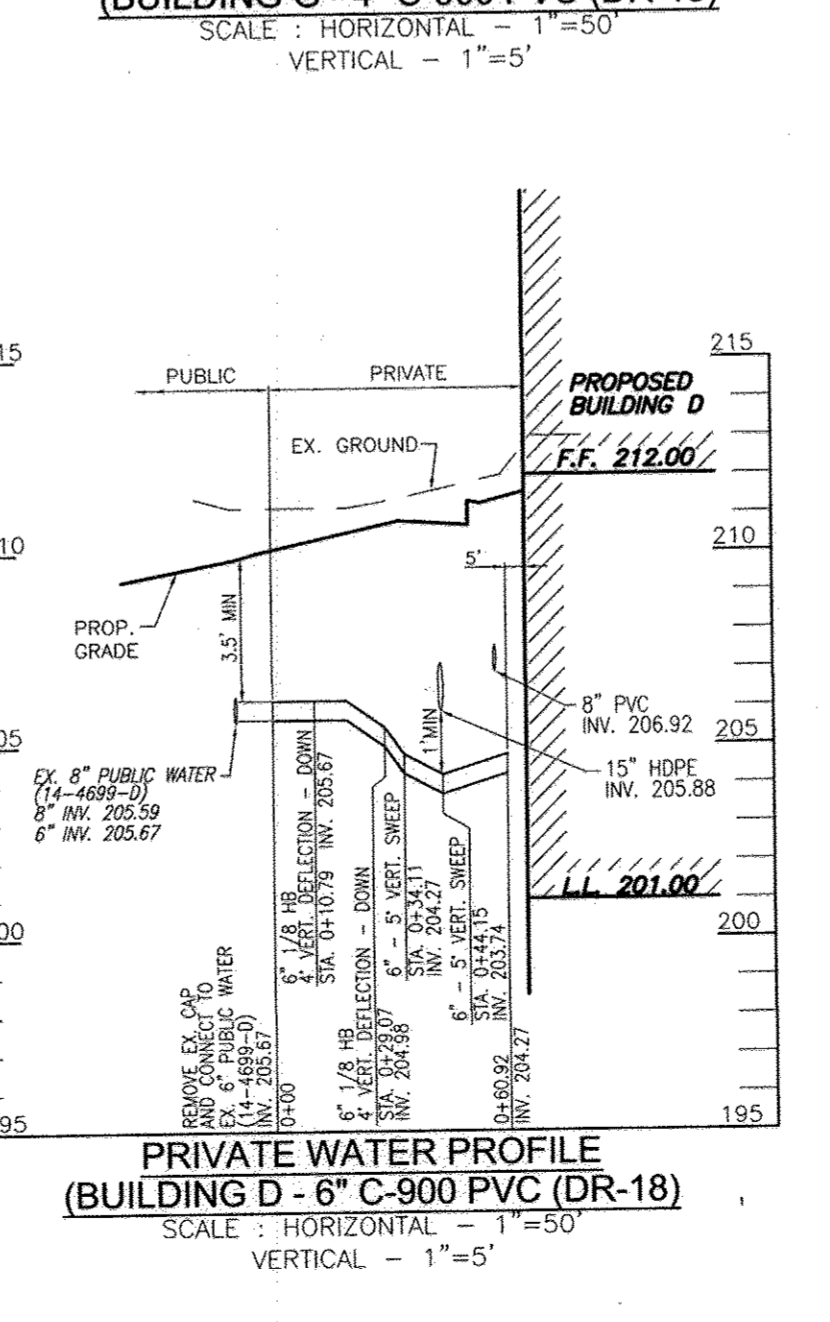
**PRIVATE WATER PROFILE (BUILDING C - 6\"/>**



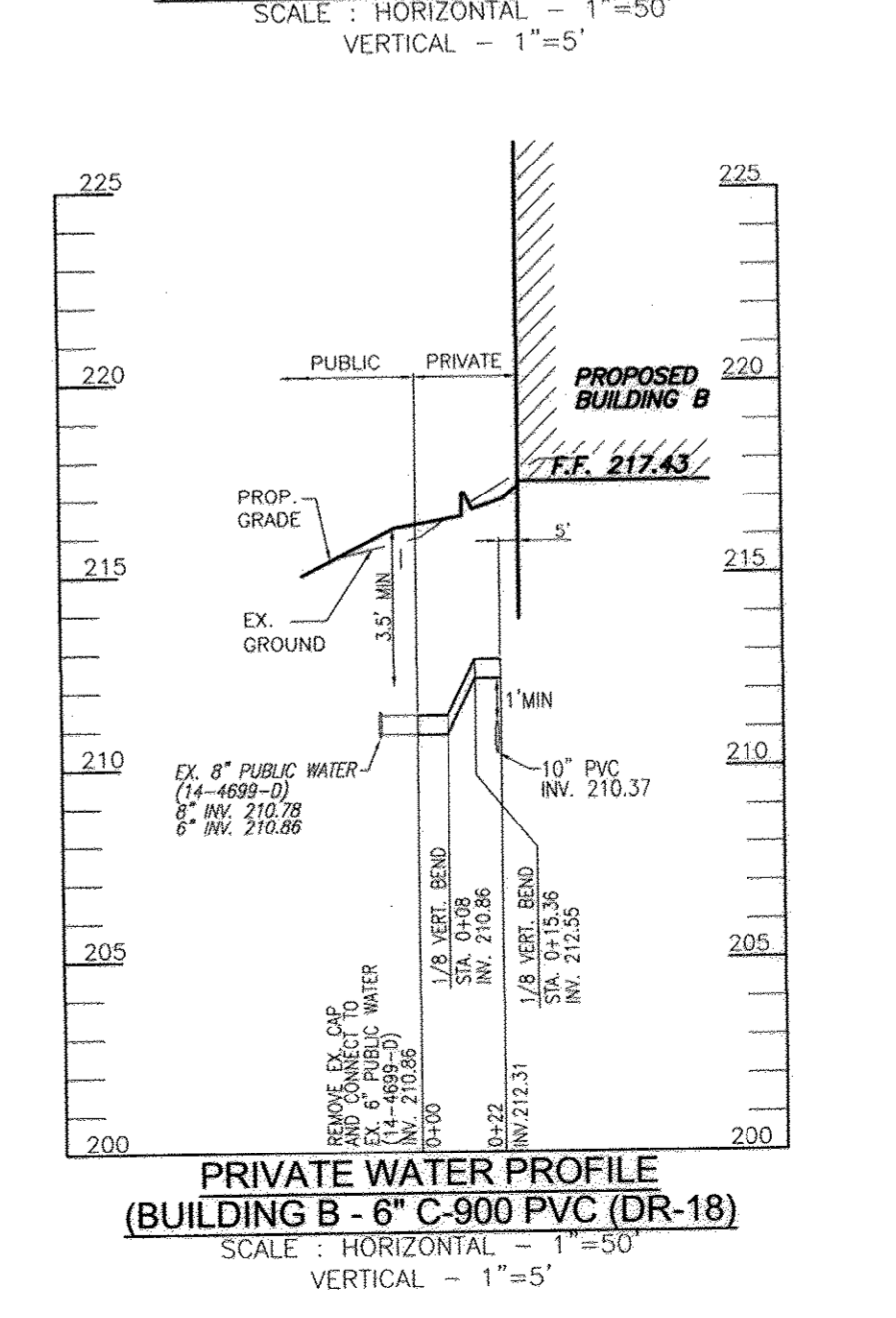
**PRIVATE WATER PROFILE (CLUBHOUSE - 4\"/>**



**PRIVATE WATER PROFILE (TO POOL EQUIP - 2\"/>**



**PRIVATE WATER PROFILE (BUILDING D - 6\"/>**



**PRIVATE WATER PROFILE (BUILDING B - 6\"/>**

**OWNER/DEVELOPER**  
BLUE STREAM 1 LLC  
PO BOX 416  
ELLCOTT CITY, MD 21041  
C/O: ARNOLD SAGNER  
410-465-2020

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**WATER AND SEWER PROFILES**

**GROSVENOR HOUSE**  
BLUE STREAM, BUILDABLE BULK PARCEL H  
APARTMENTS AND TOWNHOMES ZONED CAG-CL1 PARCEL 14  
TAX MAP 43 GRID 4 & 5 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: RHY  
DRAWN BY: DZ  
CHECKED BY: RHY  
DATE: FEB. 2, 2012  
SCALE: AS SHOWN  
W.D. NO.: 06-26.01

17 SHEET OF 55

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

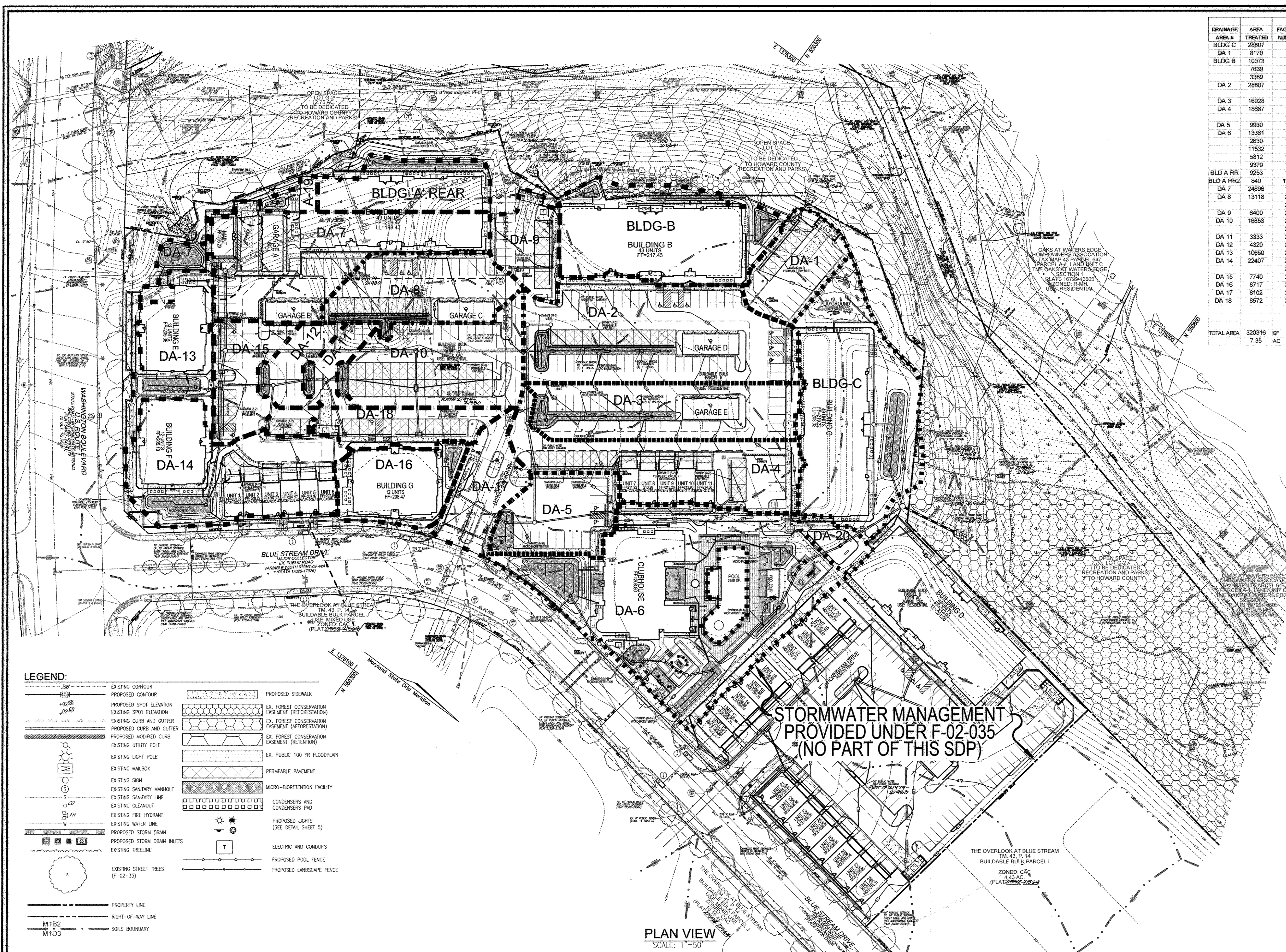
*[Signature]* 4/2/12  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 4/2/12  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 4/2/12  
DIRECTOR DATE

NO AS-BUILT INFORMATION THIS SHEET

**AS-BUILT 7/16/15**



DRAINAGE AREA #	AREA TREATED	FACILITY NUMBER	ENVIRONMENTAL SITE DESIGN PRACTICE							ESDv VOLUME	
			PERMEABLE PAVEMENT	MICRO BIO RETENTION	LANDSCAPE INFILTRATION	GREEN ROOF	BIO SWALE	GRAVEL TRENCH	X X		
BLDG C	28907	1	0	3453	0	0	0	0	0	0	3453
DA 1	8170	2	643	0	0	0	0	0	0	0	643
BLDG B	10073	4	0	876	0	0	0	0	0	0	876
	7639	5	0	371	0	0	0	0	0	0	371
	3389	6	0	371	0	0	0	0	0	0	371
DA 2	28907	7	476	0	0	0	0	0	0	0	476
		8	0	3900	0	0	0	0	0	0	3900
DA 3	16928	9	0	3204	0	0	0	0	0	0	3204
DA 4	18667	10	1925	0	0	0	0	0	0	0	1925
		11	0	0	0	0	0	0	0	0	0
DA 5	9930	12	0	1534	0	0	0	0	0	0	1534
DA 6	13361	13	0	0	1200	0	0	0	0	0	1200
	2630	14	0	356	0	0	0	0	0	0	356
	11532	15	0	1370	0	0	0	0	0	0	1370
	5812	16	0	574	0	0	0	0	0	0	574
	9370	17	0	993	0	0	0	0	0	0	993
BLD A RR	9253	18	0	1419	0	0	0	0	0	0	1419
BLD A RFR2	840	18A	0	195	0	0	0	0	0	0	195
DA 7	24896	19	0	2259	0	0	0	0	0	0	2259
DA 8	13118	20	381	0	0	0	0	0	0	0	381
		21	0	2011	0	0	0	0	0	0	2011
DA 9	6400	22	772	0	0	0	0	0	0	0	772
DA 10	16853	23	2402	0	0	0	0	0	0	0	2402
		24	0	918	0	0	0	0	0	0	918
DA 11	3333	25	0	705	0	0	0	0	0	0	705
DA 12	4320	26	0	918	0	0	0	0	0	0	918
DA 13	10650	27	0	1496	0	0	0	0	0	0	1496
DA 14	22407	28	517	0	0	0	0	0	0	0	517
		29	0	2722	0	0	0	0	0	0	2722
DA 15	7740	30	1019	0	0	0	0	0	0	0	1019
DA 16	8717	31	0	798	0	0	0	0	0	0	798
DA 17	8102	32	0	0	0	0	756	0	0	0	756
DA 18	8572	33	1283	0	0	0	0	0	0	0	1283
											0
TOTAL AREA	320316	SF									
	7.35	AC									
TOTAL ESDv PROVIDED										41980	

- LEGEND:**
- EXISTING CONTOUR
  - PROPOSED CONTOUR
  - PROPOSED SPOT ELEVATION
  - EXISTING SPOT ELEVATION
  - EXISTING CURB AND GUTTER
  - PROPOSED CURB AND GUTTER
  - PROPOSED MODIFIED CURB
  - EXISTING UTILITY POLE
  - EXISTING LIGHT POLE
  - EXISTING MAILBOX
  - EXISTING SIGN
  - EXISTING SANITARY MANHOLE
  - EXISTING SANITARY LINE
  - EXISTING CLEANDOUT
  - EXISTING FIRE HYDRANT
  - EXISTING WATER LINE
  - PROPOSED STORM DRAIN
  - PROPOSED STORM DRAIN INLETS
  - EXISTING TREELINE
  - EXISTING STREET TREES (F-02-35)
  - PROPERTY LINE
  - RIGHT-OF-WAY LINE
  - M1B2
  - M1D3
  - SOILS BOUNDARY
  - PROPOSED SIDEWALK
  - EX. FOREST CONSERVATION EASEMENT (REFORESTATION)
  - EX. FOREST CONSERVATION EASEMENT (AFFORESTATION)
  - EX. FOREST CONSERVATION EASEMENT (RETENTION)
  - EX. PUBLIC 100 YR FLOODPLAIN
  - PERMEABLE PAVEMENT
  - MICRO-BIORETENTION FACILITY
  - CONDENSERS AND CONDENSERS PAD
  - PROPOSED LIGHTS (SEE DETAIL SHEET 5)
  - ELECTRIC AND CONDUITS
  - PROPOSED POOL FENCE
  - PROPOSED LANDSCAPE FENCE

STORMWATER MANAGEMENT PROVIDED UNDER F-02-035 (NO PART OF THIS SDP)

PLAN VIEW SCALE: 1"=50'

**OWNER/DEVELOPER**  
 BLUE STREAM 1 LLC  
 PO BOX 416  
 ELLICOTT CITY, MD 21041  
 C/O: ARNOLD SAGNER  
 410-465-2020

NO. \_\_\_\_\_ REVISION \_\_\_\_\_ DATE \_\_\_\_\_

**SITE DEVELOPMENT PLAN**  
**STORMWATER MANAGEMENT DRAINAGE AREA MAP**  
**GROSVENOR HOUSE**  
 BLUE STREAM, BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES  
 TAX MAP 43 GRID 4 & 5 PARCEL 14  
 1ST ELECTION DISTRICT ZONED: CAC-C/L1  
 HOWARD COUNTY, MARYLAND

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 DATE: FEB. 2, 2012  
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18 SHEET OF 55

ROBERT H. VOGEL, PE No.16193

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DIRECTOR

DATE: 6/12/12  
 DATE: 6/27/12  
 DATE: 6/27/12

BY THE DEVELOPER:  
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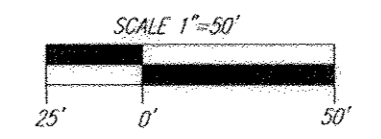
DATE: 5/22/12  
 SIGNATURE OF DEVELOPER

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DATE: 5/26/12  
 SIGNATURE OF ENGINEER

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

DATE: 5/26/12  
 HOWARD S.C.D.



NO AS-BUILT INFORMATION THIS SHEET

AS-BUILT 7/16/15

**APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS**

**1. MATERIAL SPECIFICATIONS**  
 THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

**2. FILTERING MEDIA OR PLANTING SOIL**  
 THE SOIL SHALL BE A LOAMY MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVIDE AN OBSTACLE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BEDWORM GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.  
 THE PLANTING SOIL SHALL MEET THE FOLLOWING CRITERIA:  
 • SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURE CLASSIFICATION)  
 • ORGANIC CONTENT - MINIMUM 1.0% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).  
 • CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.  
 • PH RANGE - SHOULD BE BETWEEN 6.5 - 7.0. ADJUSTMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED IN TO THE SOIL TO INCREASE OR DECREASE PH.  
 THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER AND SOLUBLE SALTS. A TEXTURE ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

**3. COMPACTION**  
 IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACK OR WASH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURTLE TYRE TREADS. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.  
 COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO RESTRUCTURE THE SOIL PROFILE THROUGHOUT THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REMOVE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT. ROTOTILL TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE.  
 WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.  
 WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A GRADER/LOADER WITH WASH TRACKS.

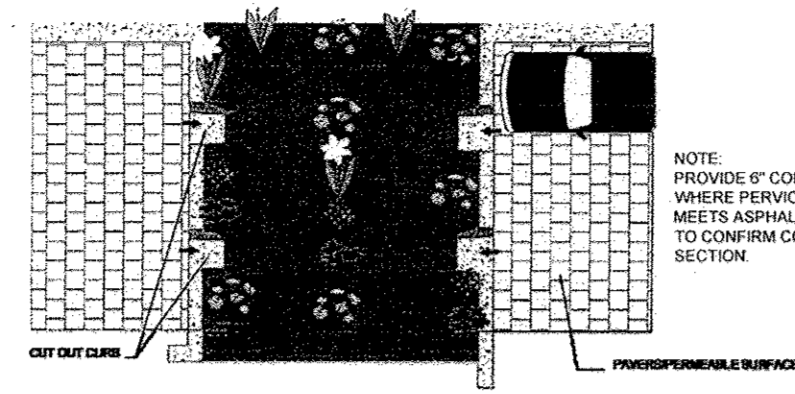
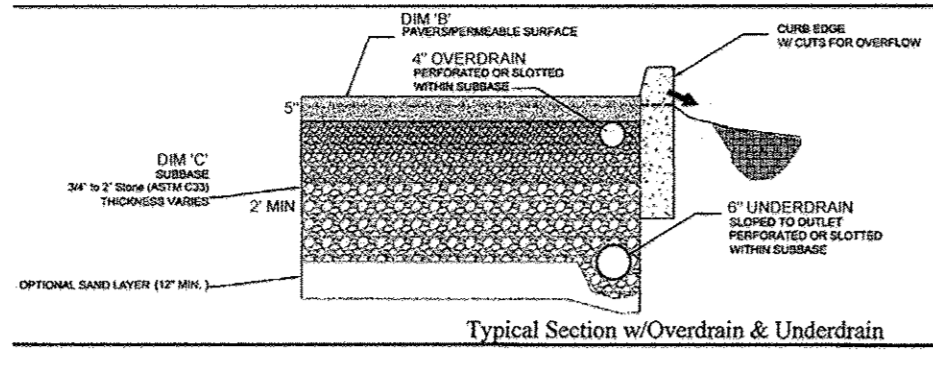
**4. PLANT MATERIAL**  
 RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

**5. PLANT INSTALLATION**  
 COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3", SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.  
 ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/3RD OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION. TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE. BALL GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLOWS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

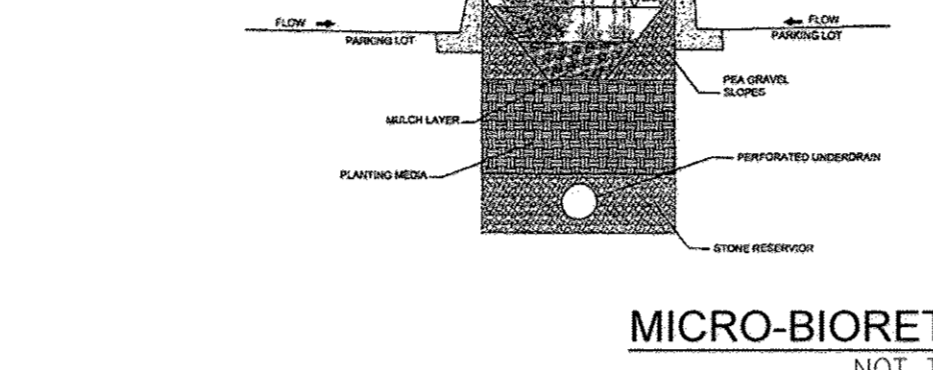
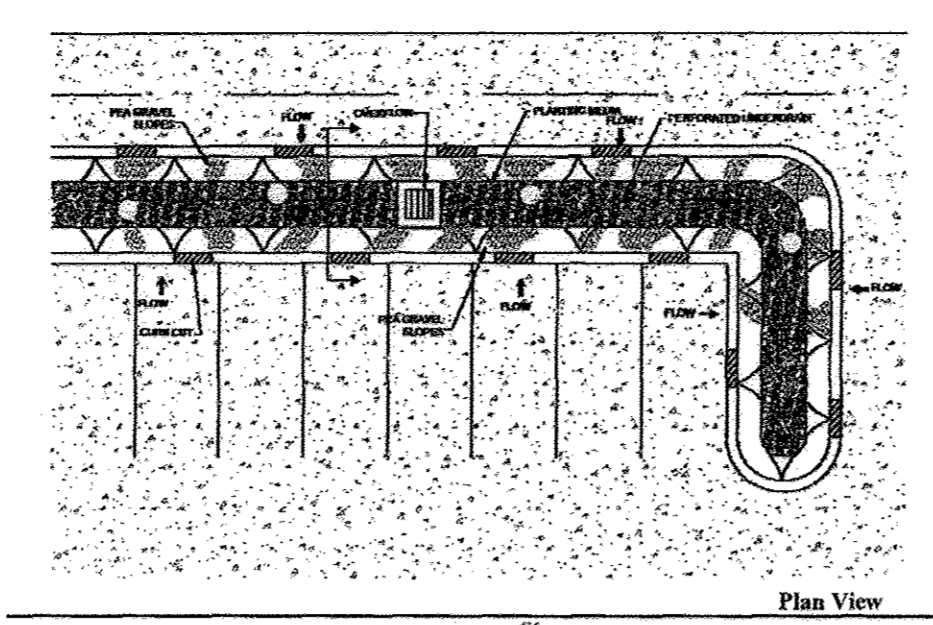
THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ACQUISITELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEVIATES, OR AT A MINIMUM, IMPEDS THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL LIME FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

**6. UNDERDRAINS**  
 UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:  
 • PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 758, TYPE PE 28, OR AASHTO M-278) IN A GRAVEL LAYER. THE PERFORATED MATERIAL IS SLOTTED. 4" RIGID PIPE (E.G. PVC OF HOPE).  
 • PERFORATIONS - IF USED, PERFORATIONS SHALL BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 17/8" (NO. 4 OR 4V4) GALVANIZED HARDWARE CLOTH.  
 • GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.  
 • THE MAIN COLLECTION PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.  
 • A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.  
 • A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MOVEMENT OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".  
 THIS MAIN COLLECTION PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1,000 SQUARE FEET OF SURFACE AREA).

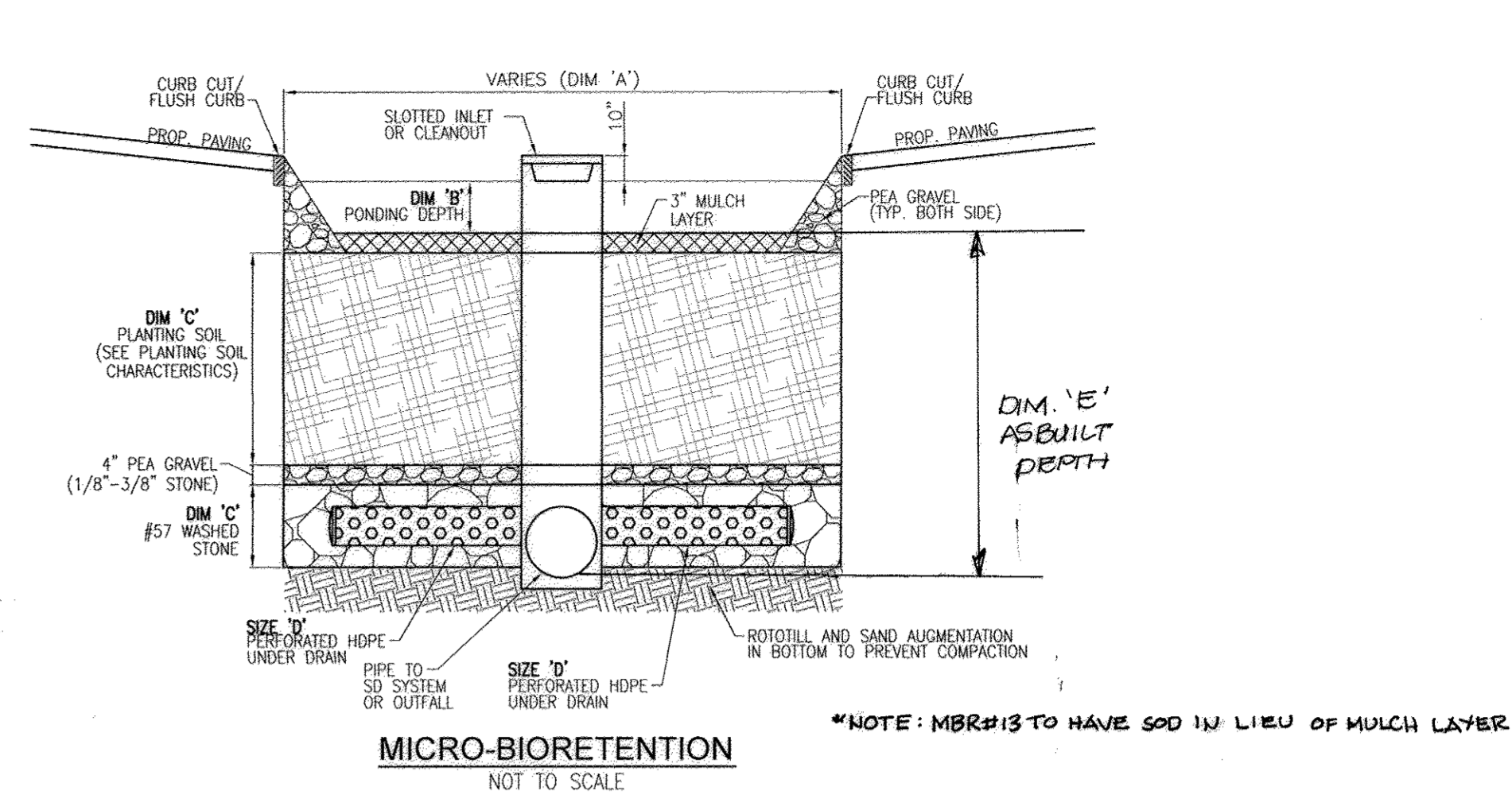
**7. MISCELLANEOUS**  
 THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.



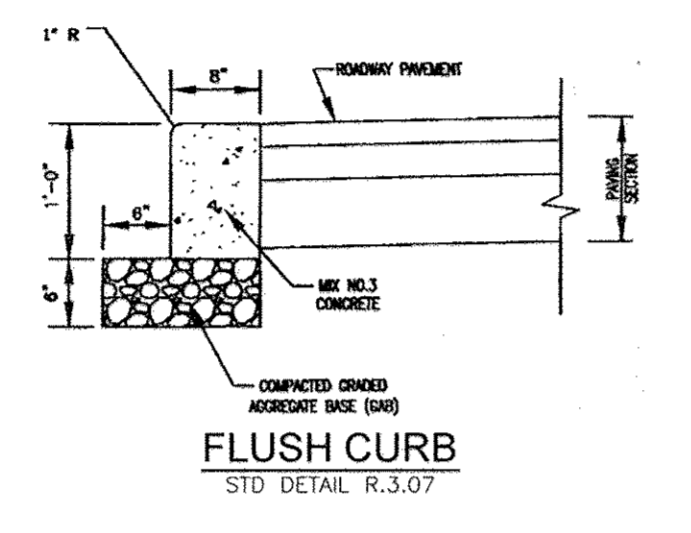
Permeable Pavement w/Micro-Bioretention - Plan View  
 NOT TO SCALE



MICRO-BIORETENTION DETAILS  
 NOT TO SCALE



MICRO-BIORETENTION  
 NOT TO SCALE



STUD DETAIL R.3.07

**OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIRETENTION SWALE (M-8), AND ENHANCED FILTERS (M-9)**

1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE A.4.1 AND 2.

2. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT. REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.

3. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.

4. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES (I-1), AND DRY WELLS (M-5)**

1. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT.

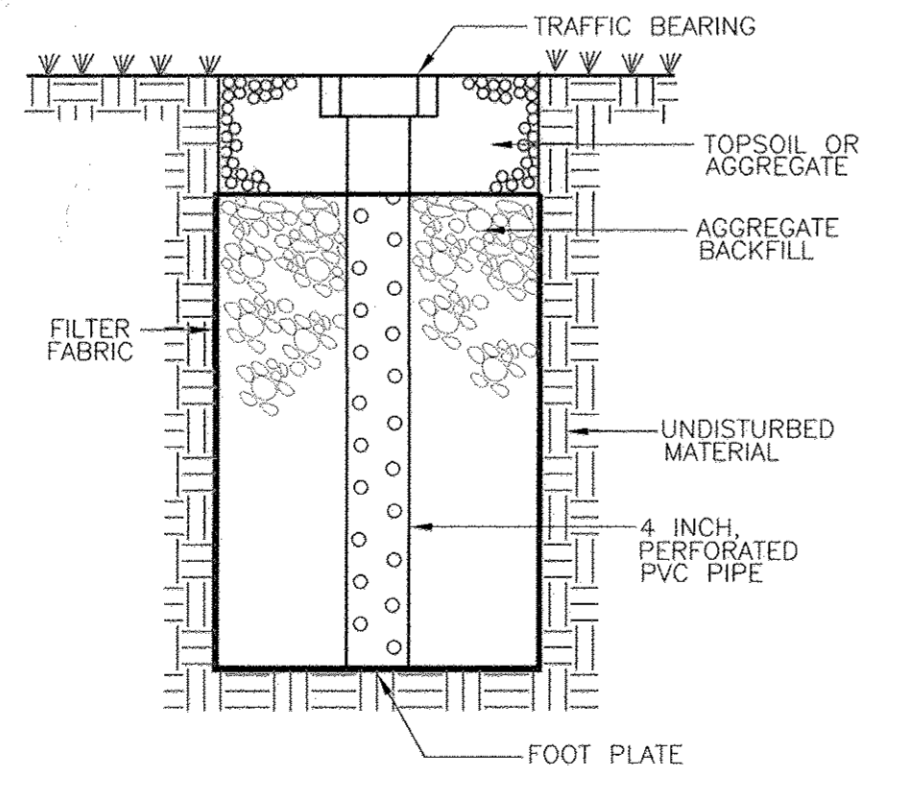
2. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.

3. THE OWNER SHALL MAINTAINED A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.

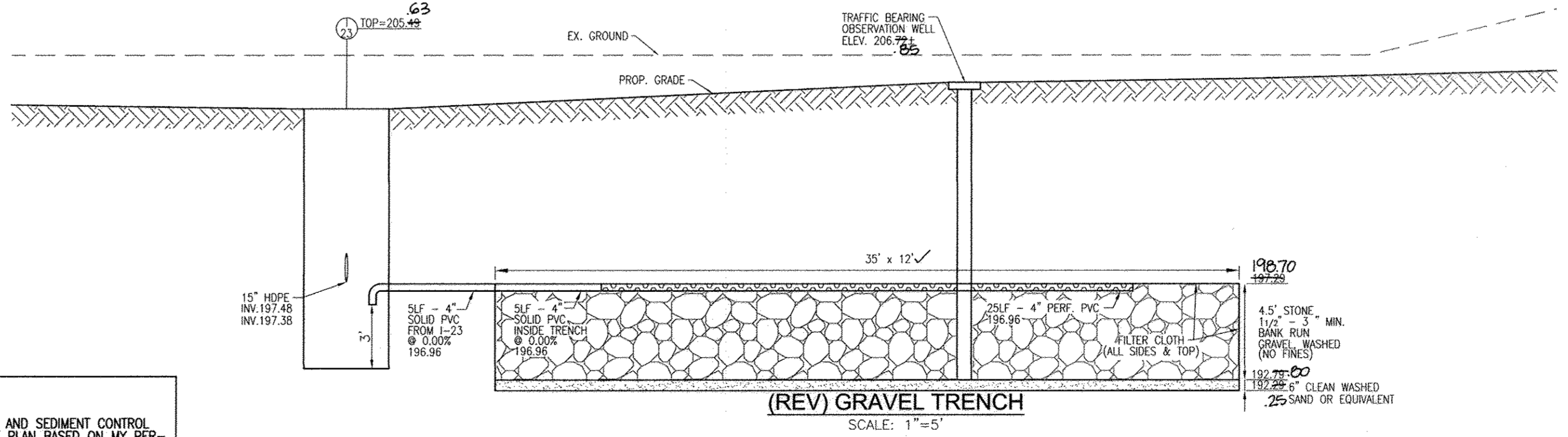
4. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.

5. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.

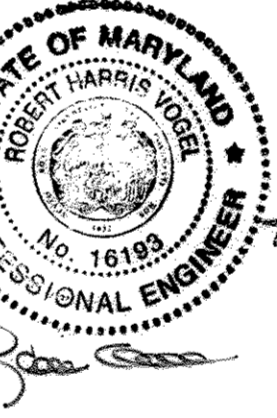
6. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.



OBSERVATION WELL DETAIL  
 NOT TO SCALE



(REV) GRAVEL TRENCH  
 SCALE: 1"=5'

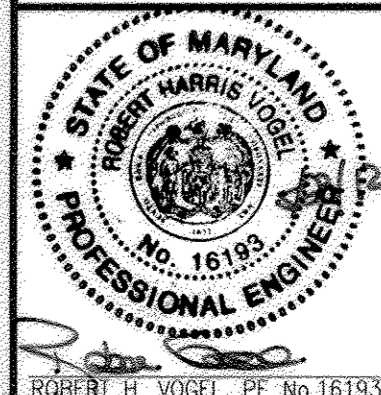


**AS-BUILT CERTIFICATION**  
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.  
 ROBERT H. VOGEL  
 16193 P.E.  
 7/16/15 DATE

**OWNER/DEVELOPER**  
 BLUE STREAM 1 LLC  
 PO BOX 416  
 ELLICOTT CITY, MD 21041  
 C/O: ARNOLD SAGNER  
 410-465-2020

**SITE DEVELOPMENT PLAN**  
**STORMWATER MANAGEMENT NOTES AND DETAILS**  
**GROSVENOR HOUSE**  
 BLUE STREAM, BUILDABLE BULK PARCEL H APARTMENTS AND TOWNHOMES  
 TAX MAP 43 GRID 4 & 5 PARCEL 14  
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 8407 MAIN STREET ELLICOTT CITY, MD 21043  
 TEL: 410.461.7666 FAX: 410.461.8961



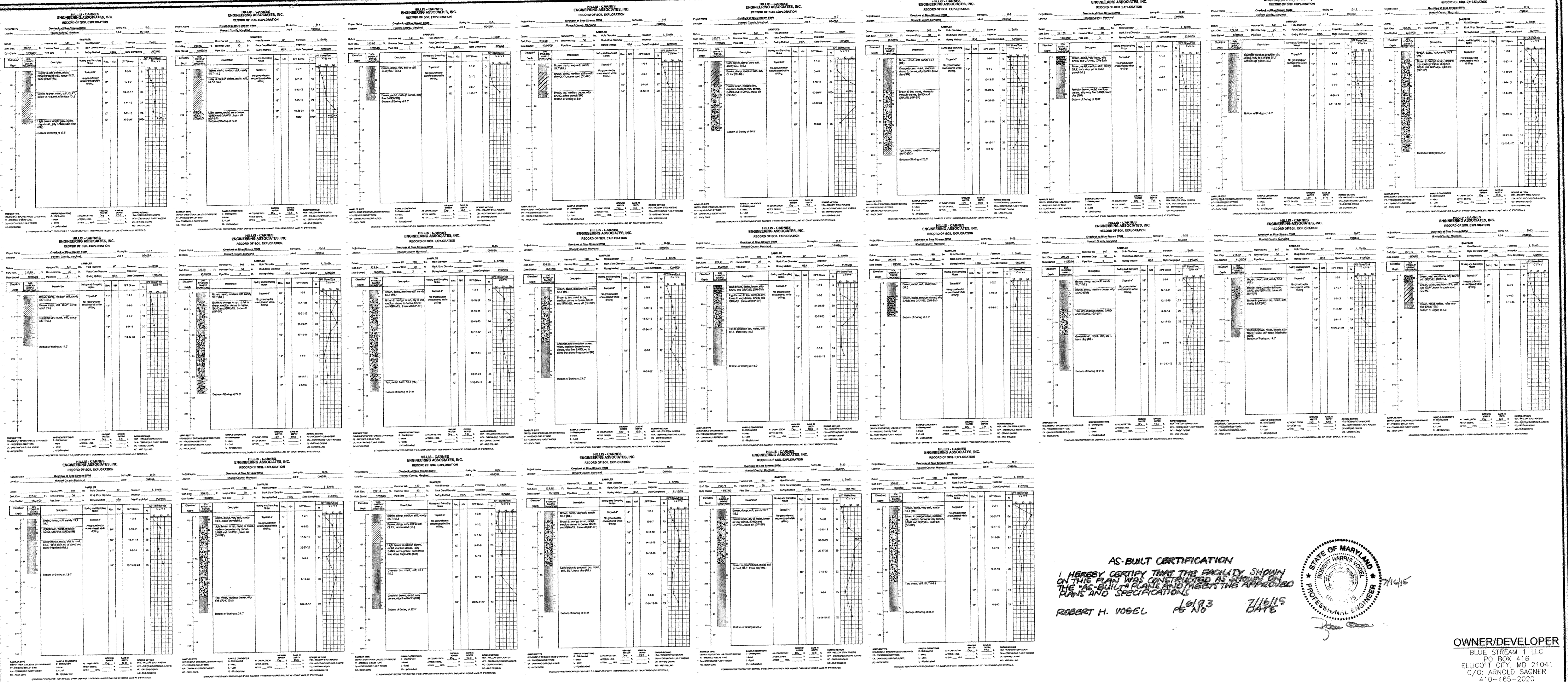
**PROFESSIONAL CERTIFICATE**  
 DESIGN BY: RHV  
 DRAWN BY: DZ  
 CHECKED BY: RHV  
 DATE: FEB. 2, 2012  
 SCALE: AS SHOWN  
 W.O. NO.: 06-26.01  
 19 SHEET OF 55

**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING**  
 [Signature] 6/7/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 6/20/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 6/23/12  
 DIRECTOR

**BY THE DEVELOPER:**  
 [Signature] 6/23/12  
 SIGNATURE OF DEVELOPER  
 DATE

**BY THE ENGINEER:**  
 [Signature] 6/23/12  
 SIGNATURE OF ENGINEER  
 DATE

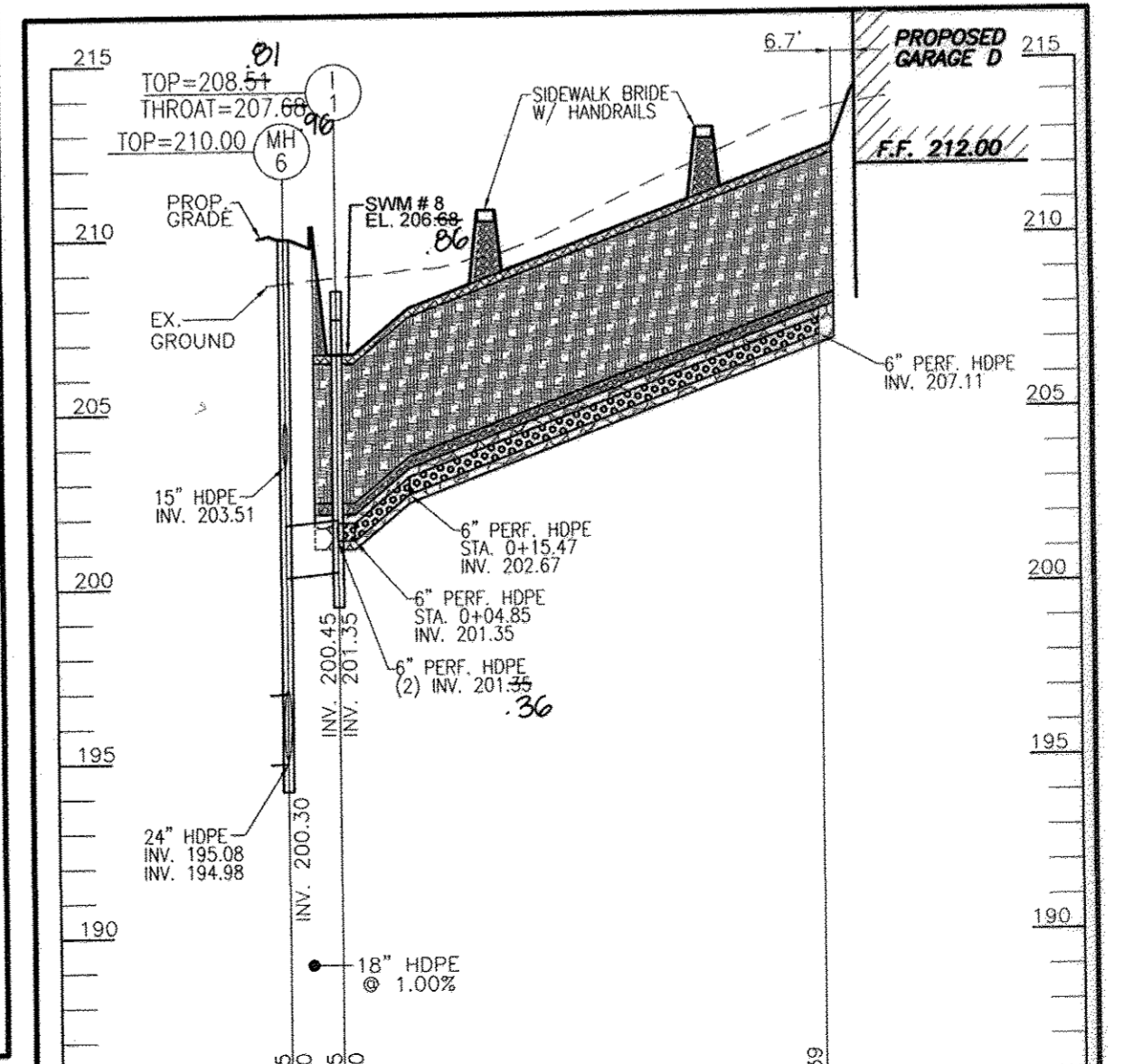
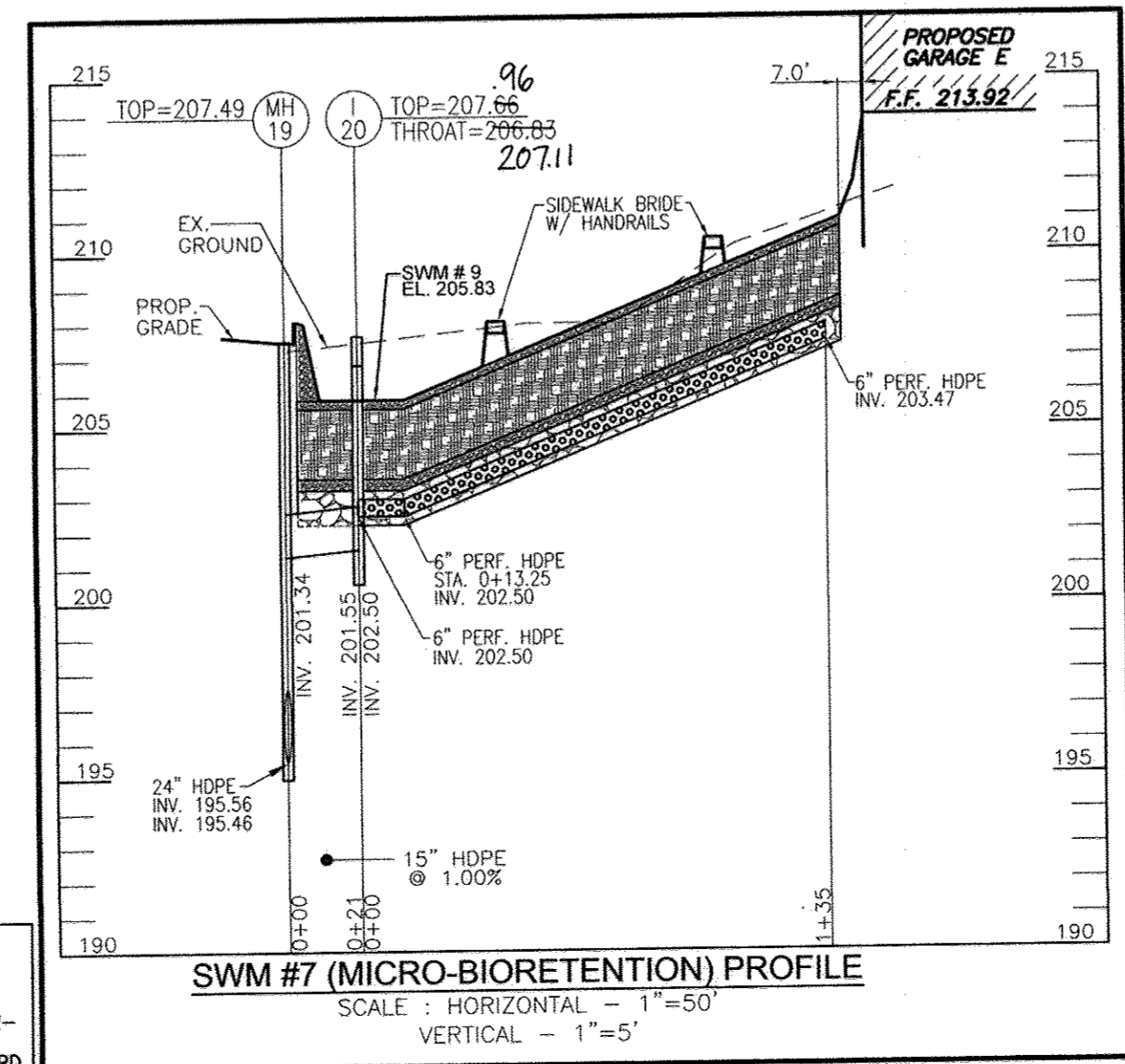
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
 [Signature] 6/23/12  
 HOWARD S.C.D. DATE



AS-BUILT CERTIFICATION  
 I HEREBY CERTIFY THAT THE FACILITY SHOWN  
 ON THIS PLAN WAS CONSTRUCTED AS SHOWN  
 TO THE BUILDING PLANS AND THE APPROVED  
 PLANS AND SPECIFICATIONS  
 ROBERT H. VOGEL 10/19/13 7/16/15



OWNER/DEVELOPER  
 BLUE STREAM 1 LLC  
 PO BOX 416  
 ELLICOTT CITY, MD 21041  
 C/O: ARNOLD SAGNER  
 410-465-2020



THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 John P. Roberts 5/23/12  
 HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division  
 Chief, Division of Land Development  
 Director

BY THE DEVELOPER:  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 Signature of Developer: [Signature] DATE: 6/27/12

BY THE ENGINEER:  
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 Signature of Engineer: [Signature] DATE: 5/23/12

NO. REVISION DATE

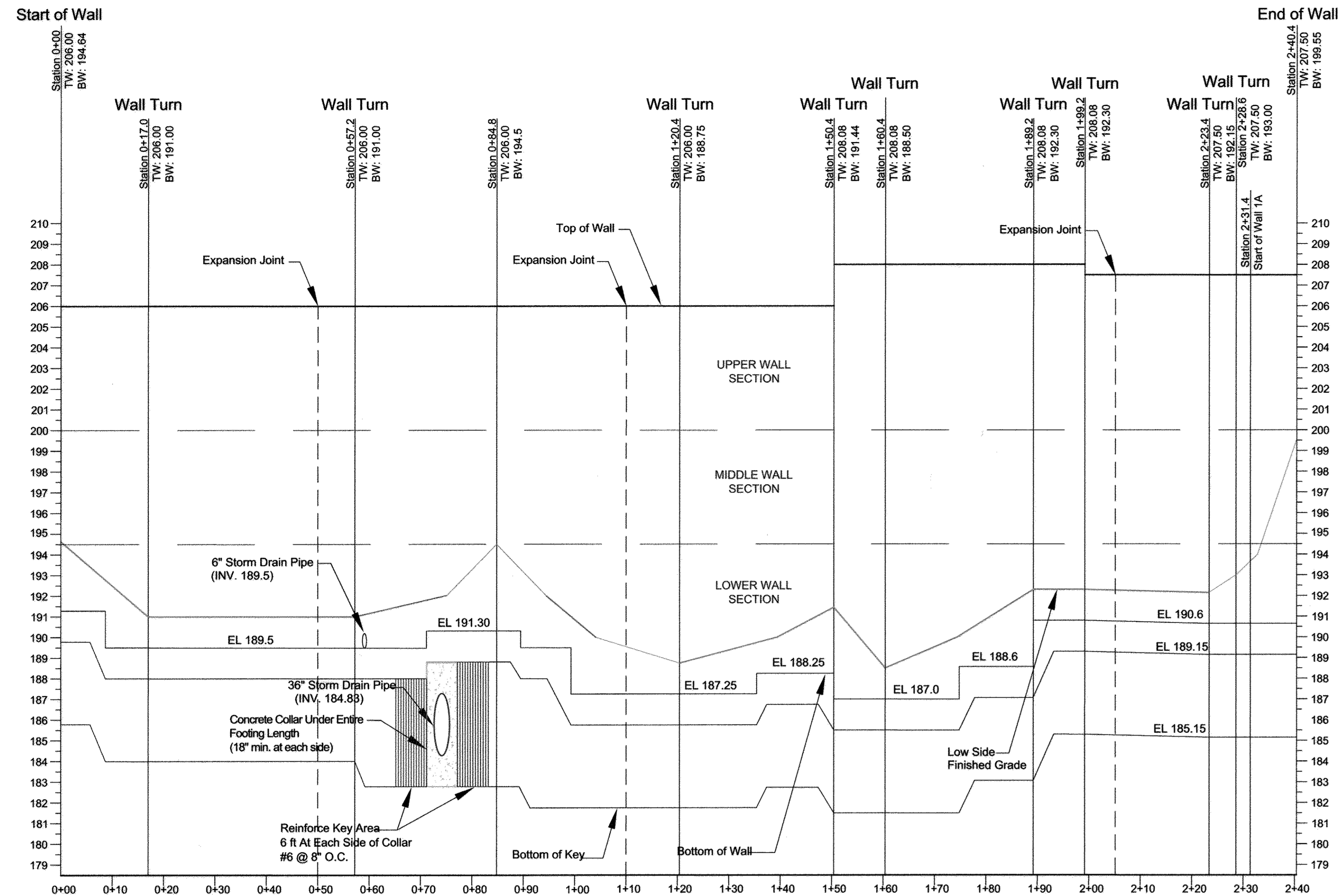
SITE DEVELOPMENT PLAN  
 STORMWATER MANAGEMENT BORINGS  
 GROSVENOR HOUSE  
 BLUE STREAM, BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES ZONED: CAG-CL1 PARCEL 14  
 TAX MAP 43 GRID 4 & 5 HOWARD COUNTY, MARYLAND  
 1ST ELECTION DISTRICT

**ROBERT H. VOGEL**  
 ENGINEERS • SURVEYORS • PLANNERS  
 8407 MAIN STREET TEL: 410.461.7666  
 ELLICOTT CITY, MD 21043 FAX: 410.461.8951

PROFESSIONAL CERTIFICATE  
 DESIGN BY: RHV  
 DRAWN BY: DZ  
 CHECKED BY: RHV  
 DATE: FEB. 2, 2012  
 SCALE: AS SHOWN  
 W.O. NO.: 06-26.01

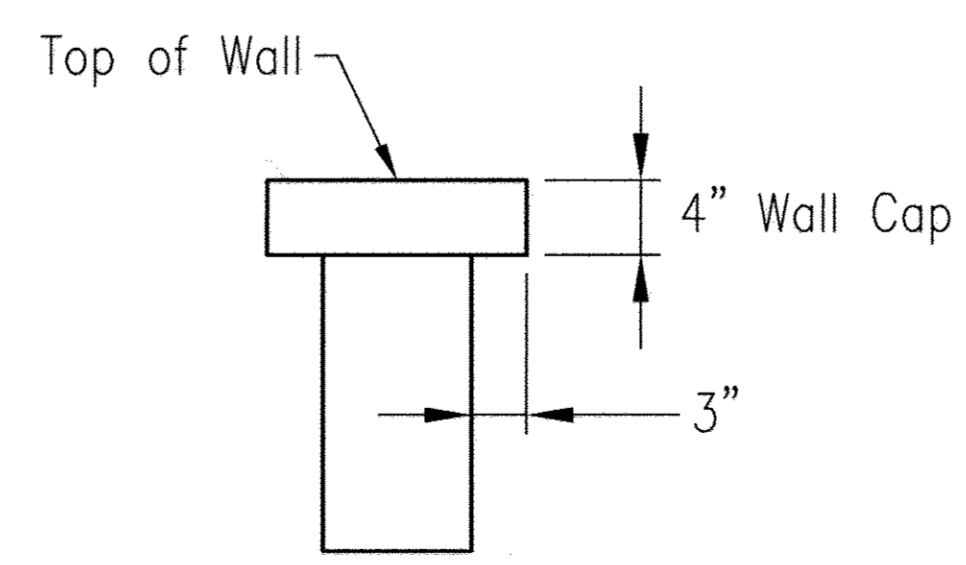
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AS-BUILT 7/16/15

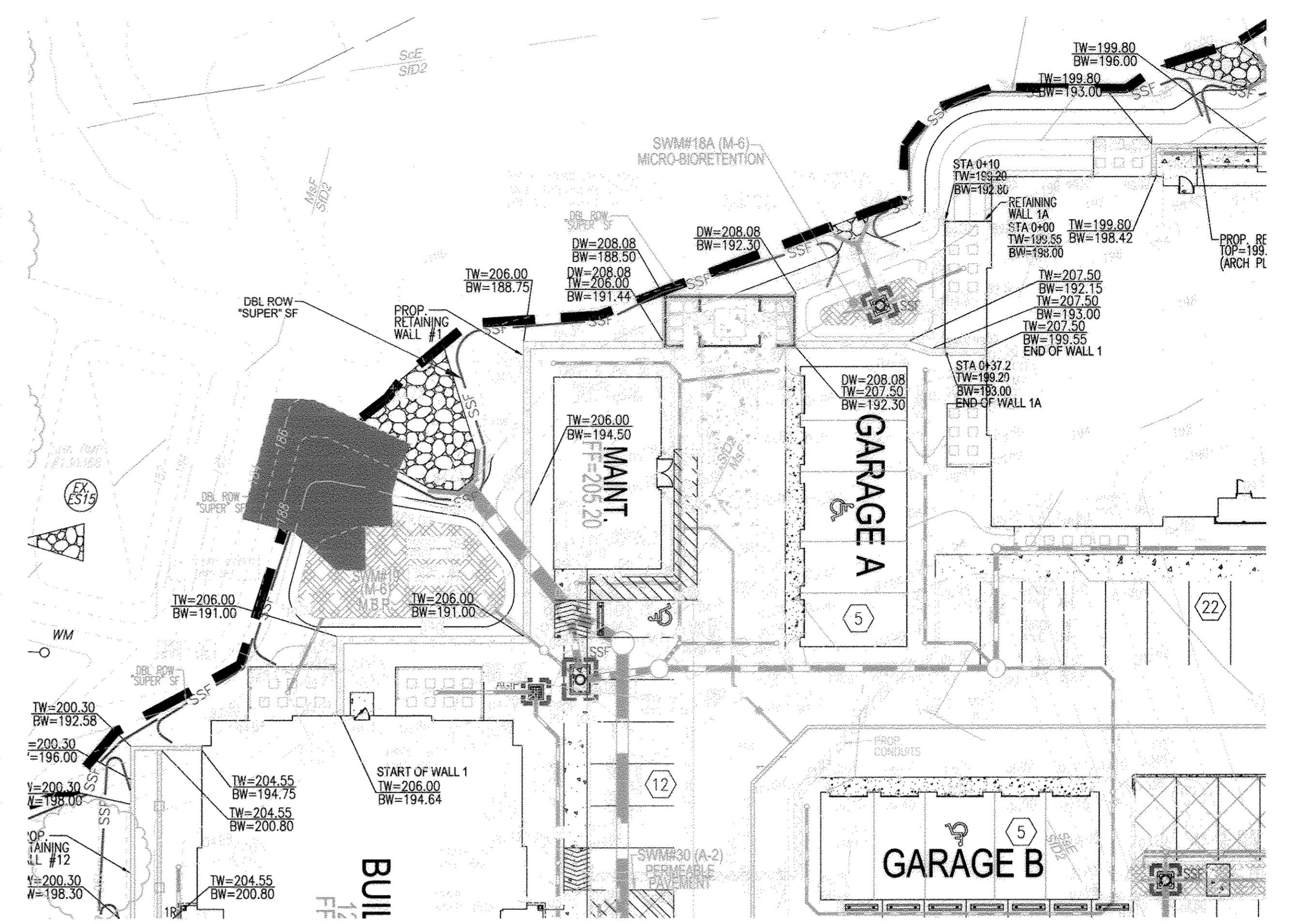


Wall # 1

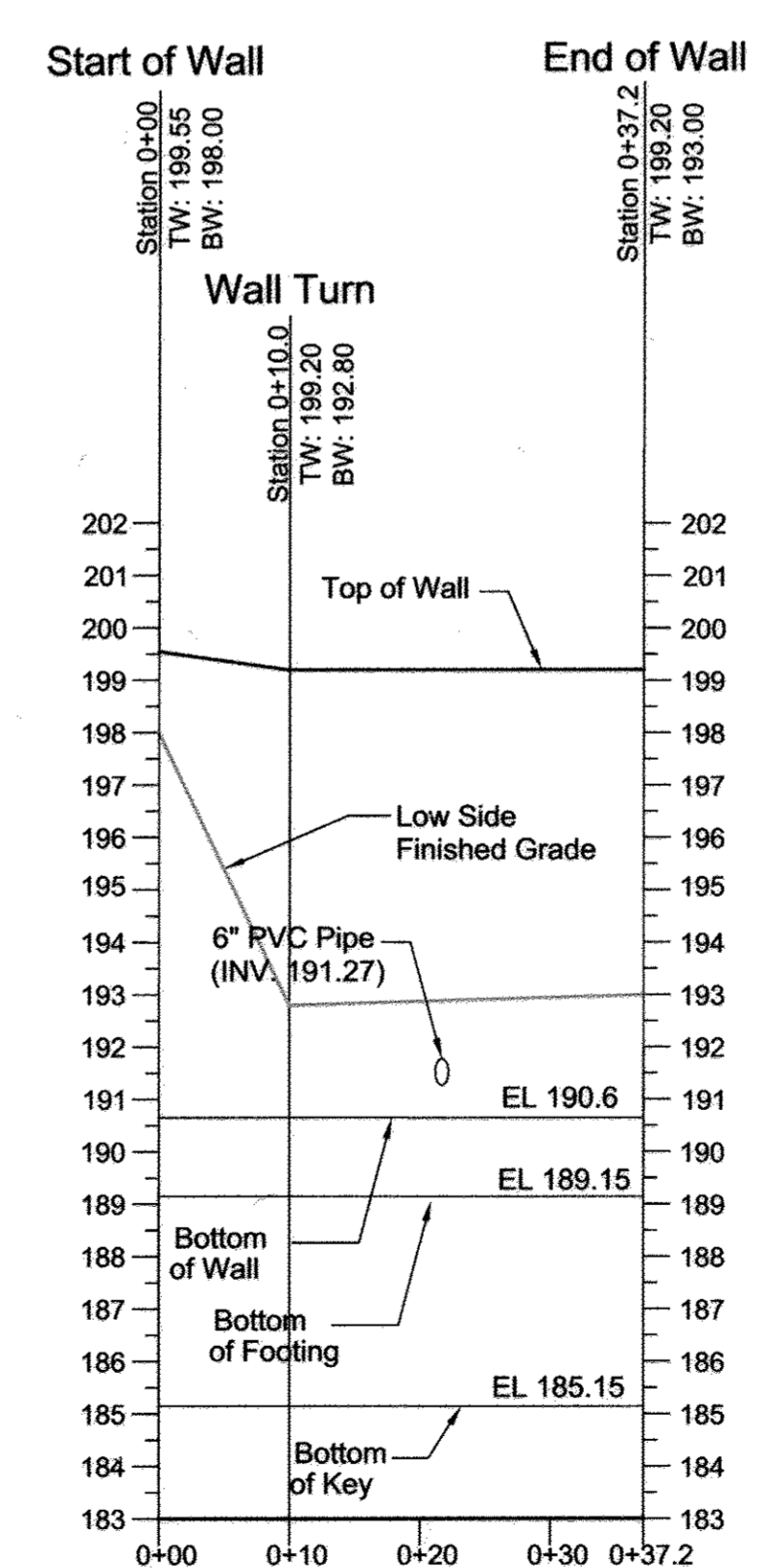
Wall 1 Finish: Cultured Stone to match buildings.  
Design & Color to be determined in the field and approved by the Owner.



Top of Cultured Stone Wall Profile



Plan View (based on Site Plan by Vogel Engineering)  
Scale: 1"=20'



Wall # 1A

NO AS-BUILT INFORMATION THIS SHEET

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 12/4/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 12/4/12  
 [Signature] 12/4/12  
 DIRECTOR

OWNER/DEVELOPER  
 BLUE STREAM 1 LLC  
 P.O. BOX 416  
 ELLICOTT CITY, MD 21041  
 C/O: ARNOLD SAGNER  
 410-465-2020

2	REVISED RETAINING WALL DRAWINGS	10/18/12
NO.	REVISION	DATE

SITE DEVELOPMENT PLAN  
 RETAINING WALL REDESIGN  
 GROSVENOR HOUSE  
 BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES  
 TAX MAP 43 GRID 4 & 5  
 1ST ELECTION DISTRICT  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND

1340 CHARWOOD ROAD  
 SUITE A  
 HANOVER, MARYLAND 21076  
 PHONE: (410) 858-4500  
 FAX: (410) 858-4324

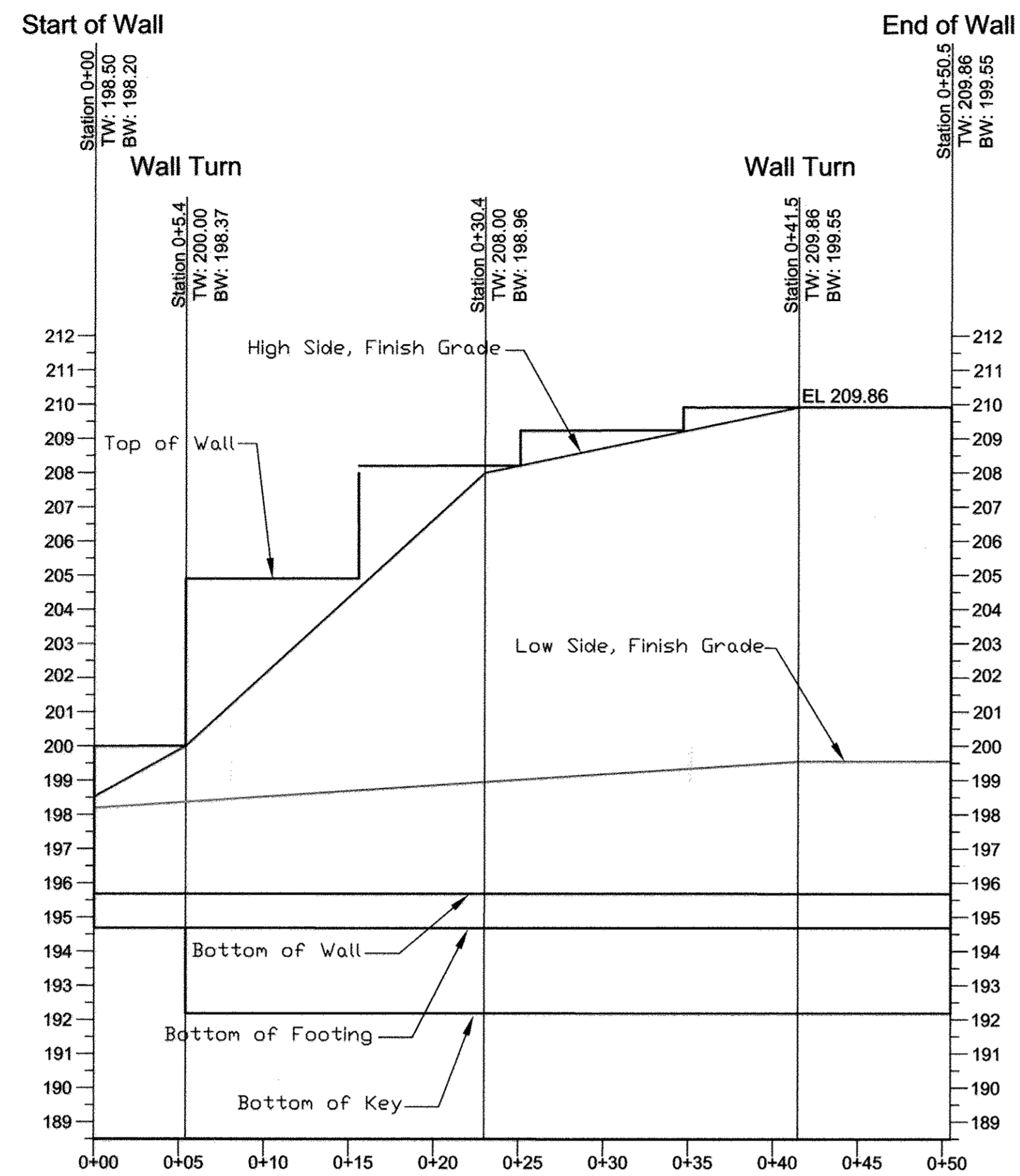
ECs LLC  
 MD-ATLANTIC

PROFESSIONAL CERTIFICATE  
 I HEREBY CERTIFY THAT THESE DOCUMENTS  
 WERE PREPARED OR APPROVED BY ME AND  
 THAT I AM A FULLY LICENSED PROFESSIONAL  
 ENGINEER UNDER THE LAWS OF THE STATE  
 OF MARYLAND LICENSE NO. 98847  
 EXPIRES DATE 12/31/15

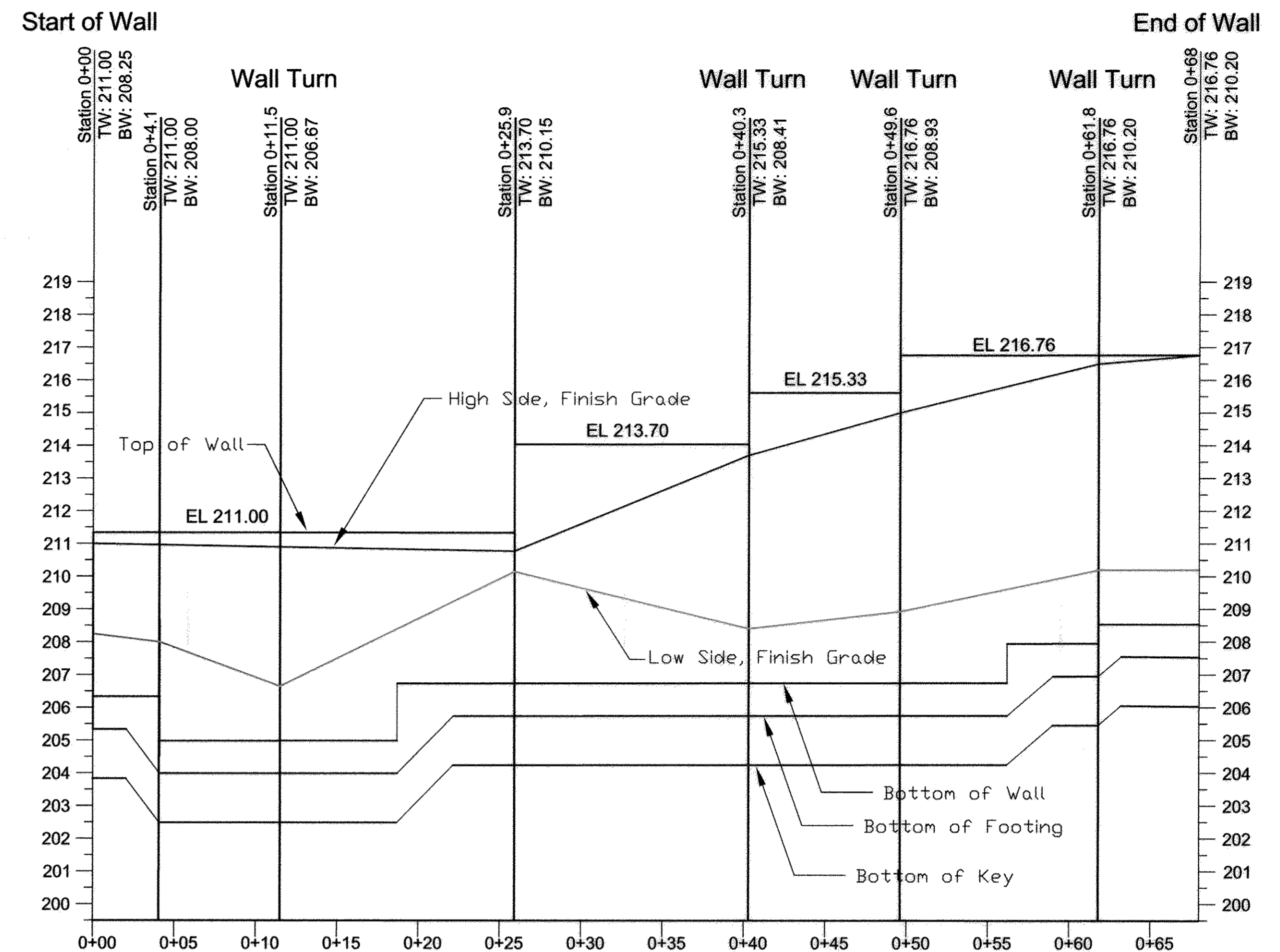
DESIGN BY: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 DATE: NOV. 23, 2011  
 SCALE: AS SHOWN  
 W.C. NO.: 08-25.01

21 SHEET OF 55

AS-BUILT 7/16/15



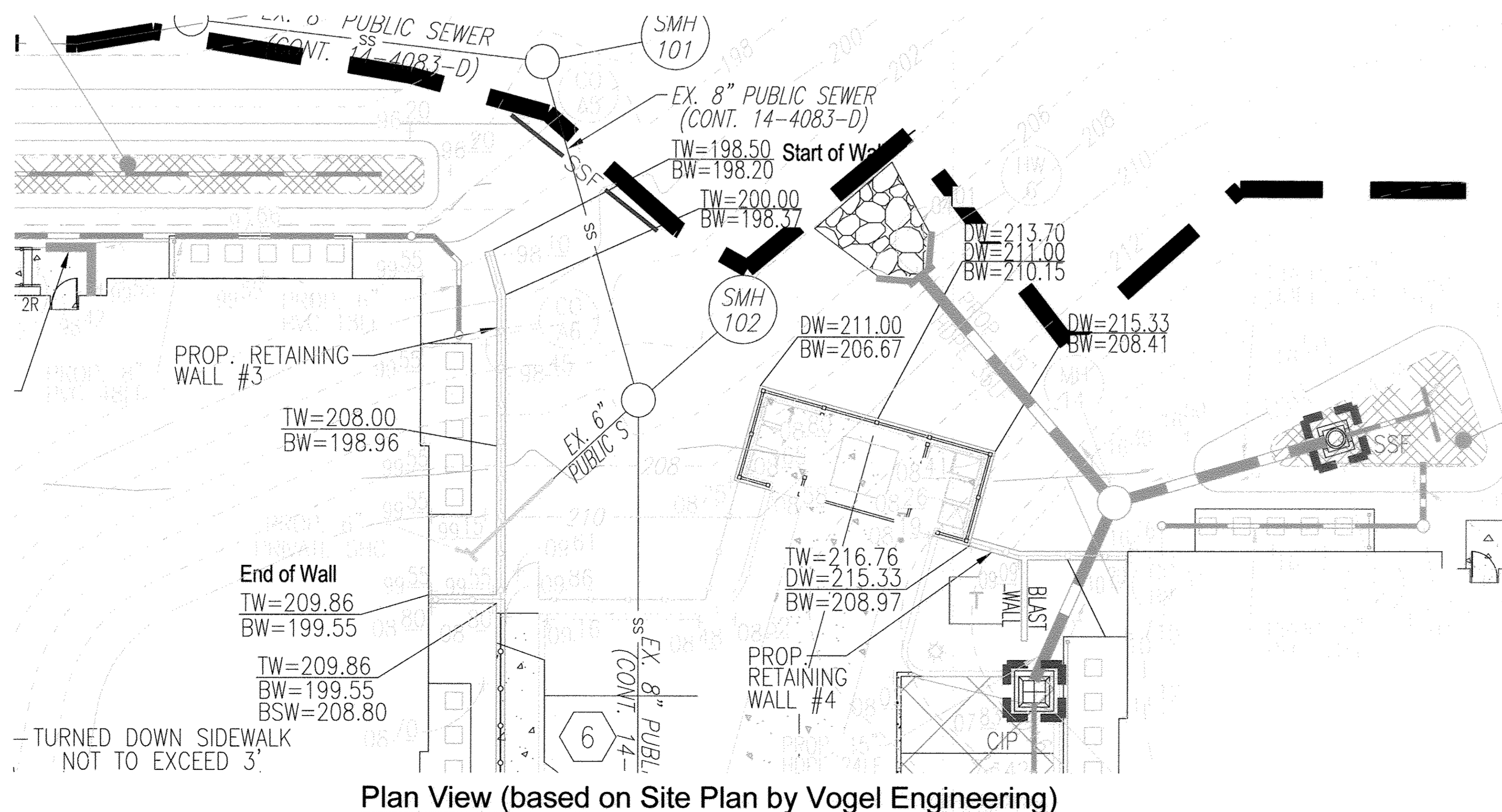
Wall #3



Wall #4

Wall 3 Finish: Cultured Stone to match buildings. Design & Color to be determined in the field and approved by the Owner.

Wall 4 Finish: Cultured Stone to match buildings. Design & Color to be determined in the field and approved by the Owner.


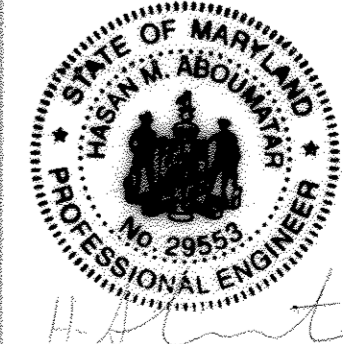


Plan View (based on Site Plan by Vogel Engineering)


Scale: 1"=10'


NO AS-BUILT INFORMATION THIS SHEET


OWNER/DEVELOPER  
 BLUE STREAM 1 LLC  
 P.O. BOX 416  
 ELLICOTT CITY, MD 21041  
 C/O: ARNOLD SOGNER  
 410-465-2020

2	REVISED RETAINING WALL DRAWINGS	10/18/12
NO.	REVISION	DATE
SITE DEVELOPMENT PLAN		
RETAINING WALL REDESIGN		
GROSVENOR HOUSE		
BLUE STREAM BUILDABLE BULK PARCEL H		
APARTMENTS AND TOWNHOMES		
TAX MAP 43 GRID 4 & 5	PARCEL 14	HOWARD COUNTY, MARYLAND
		
1340 CHARWOOD ROAD SUITE A HANOVER, MARYLAND 21076 PHONE: (410) 859-4300 FAX: (410) 859-4324		
	DESIGN BY: _____	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. 29959 EXPIRATION DATE: 12/31/15
	DRAWN BY: _____	
	CHECKED BY: _____	
	DATE: NOV. 23, 2011	
SCALE: AS SHOWN	W.O. NO.: 08-28.01	22 SHEET OF 55

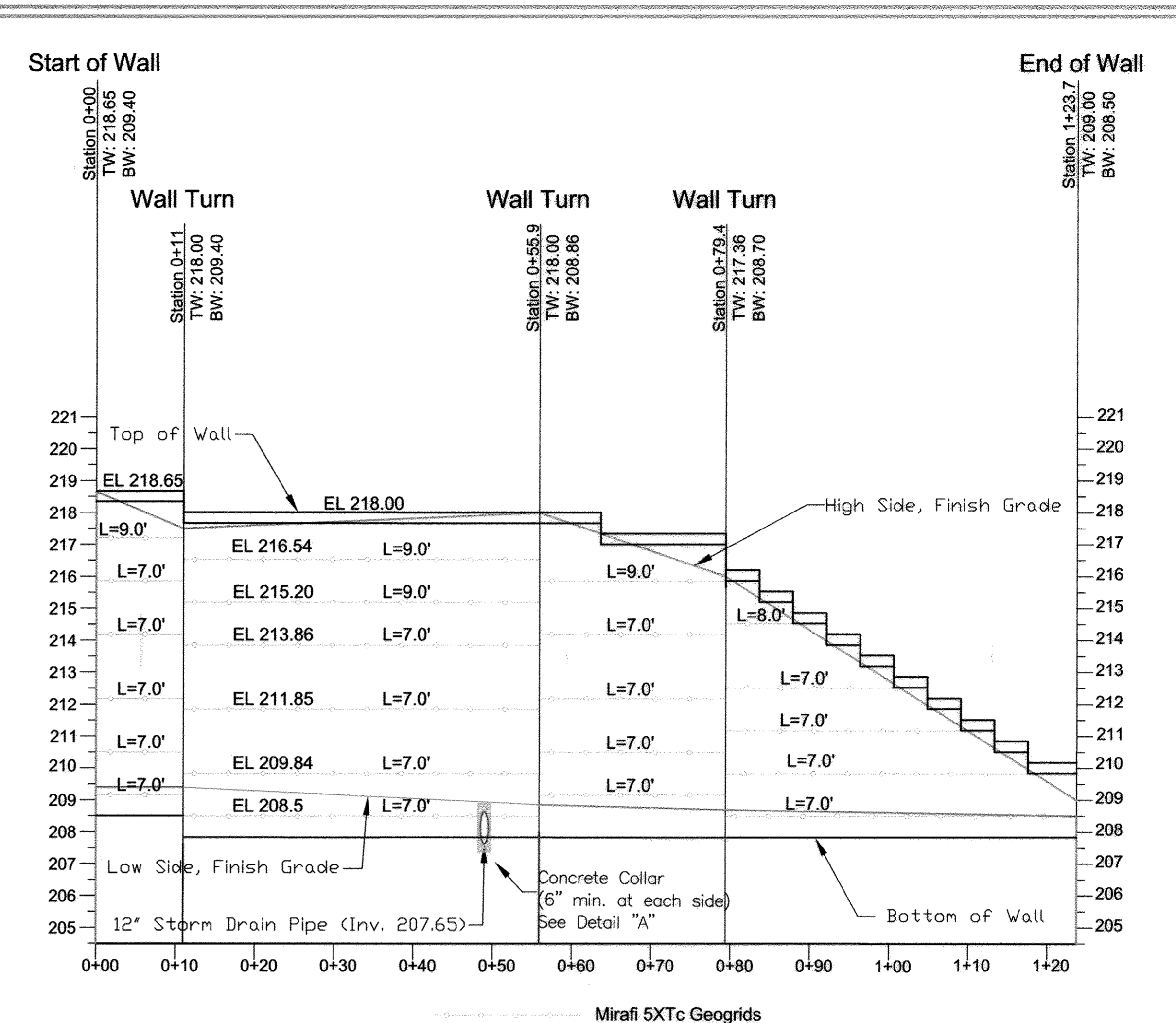
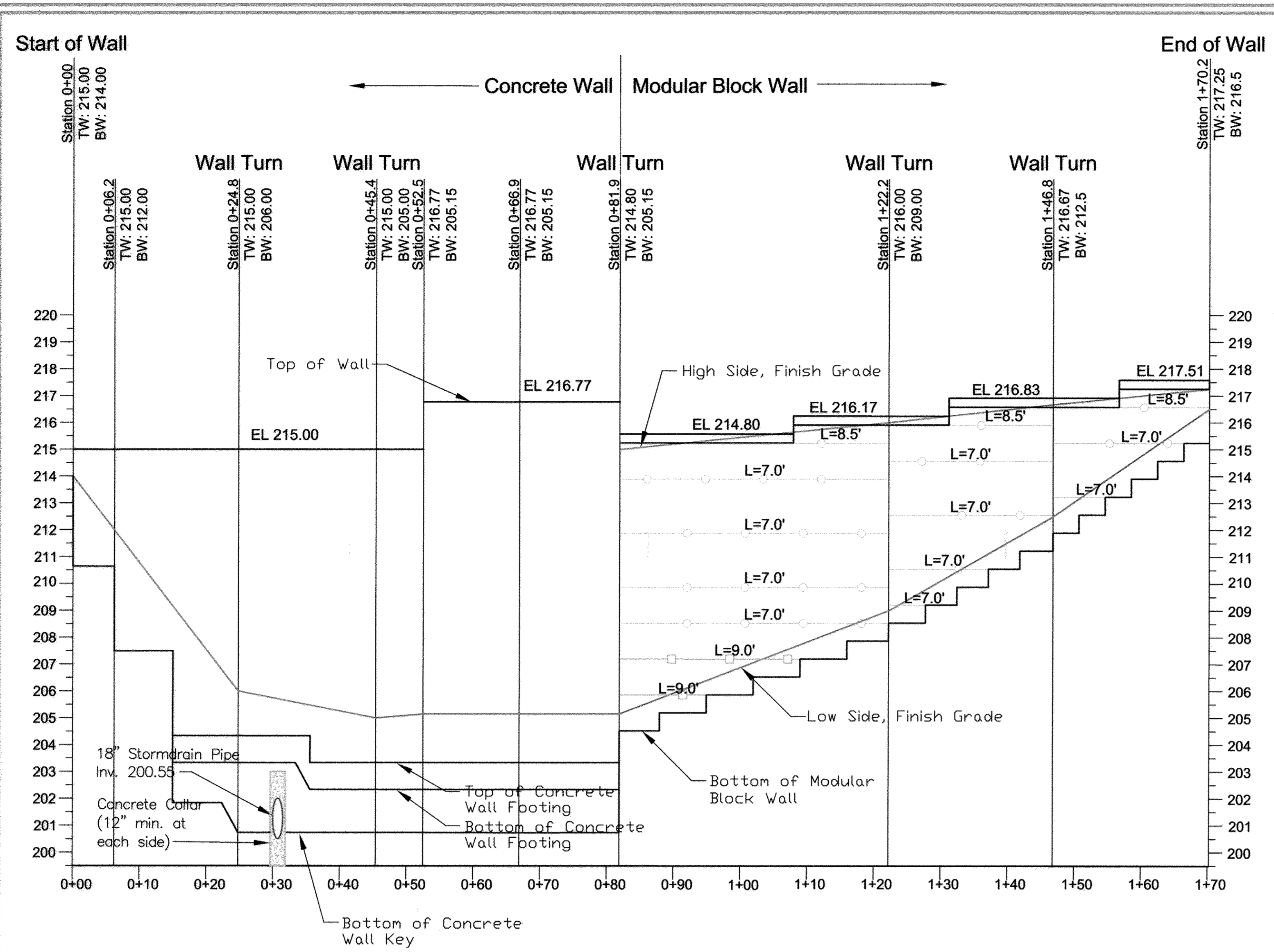
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 12/14/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

 12/14/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT

 12/14/12  
 DIRECTOR

AS-BUILT 7/16/15

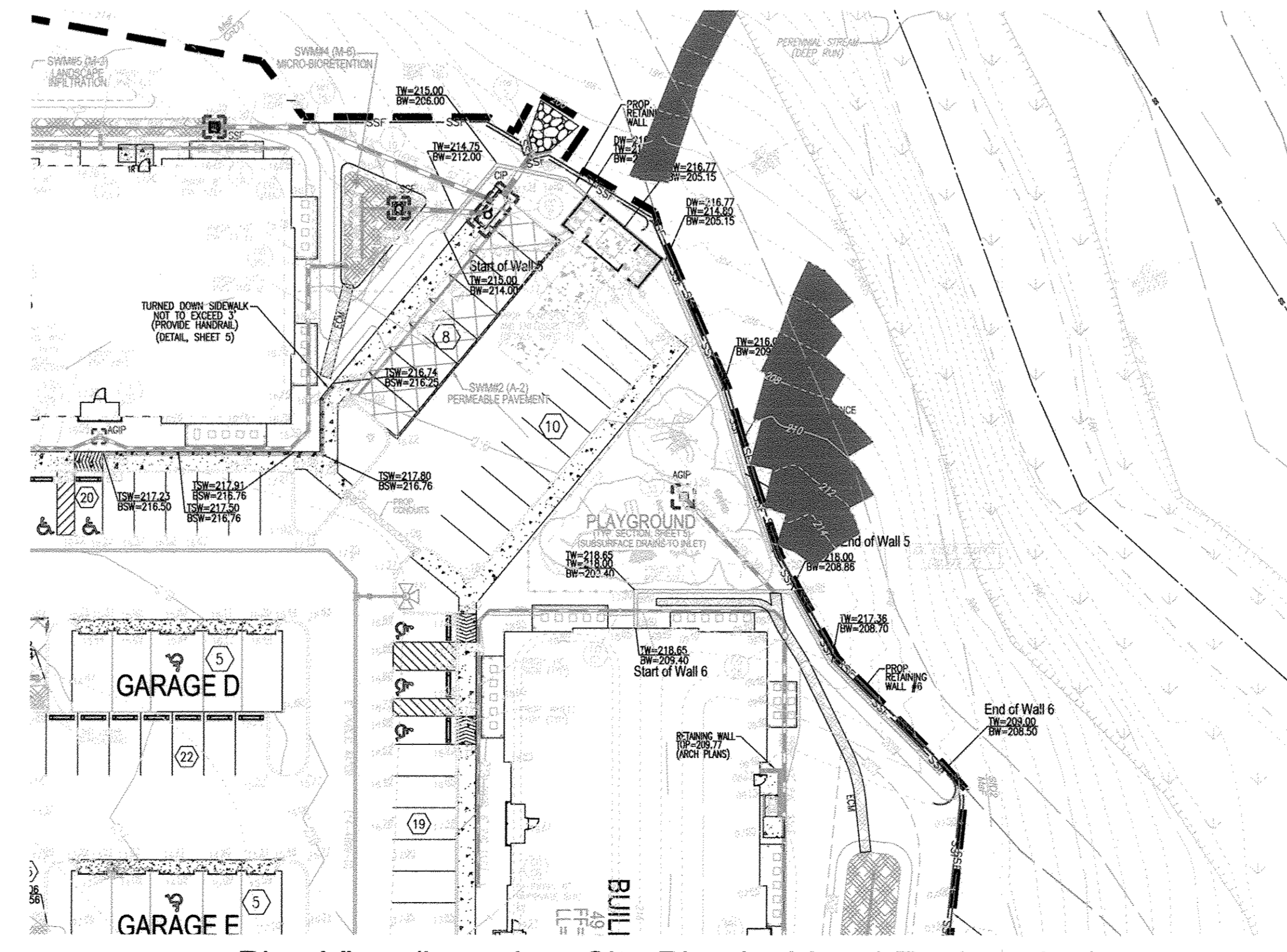


Wall # 6

**Wall # 5**

- Mirafi 7XTc Geogrids
- Mirafi 5XTc Geogrids

Concrete portion of Wall 5 Finish:  
Cultured Stone to match buildings.  
Design & Color to be determined in  
the field and approved by the Owner.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* 12/1/12

Chief, Division of Land Development: *[Signature]* 12/04/12

Director: *[Signature]* 12/1/12

**OWNER/DEVELOPER**  
BLUE STREAM 1 LLC  
P.O. BOX 416  
ELLICOTT CITY, MD 21041  
C/O: ARNOLD SAGNER  
410-465-2020

2	REVISED RETAINING WALL DRAWINGS	10/18/12
NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**

**RETAINING WALL REDESIGN**

**GROSVENOR HOUSE**  
BLUE STREAM, BUILDABLE BULK PARCEL H  
APARTMENTS AND TOWNHOMES

TAX MAP 43 GRID 4 & 5  
1ST ELECTION DISTRICT

PARCEL 14  
HOWARD COUNTY, MARYLAND

**ECS LLC**  
MID-ATLANTIC

1340 CHARWOOD ROAD  
SUITE A  
HANOVER, MARYLAND 21076  
PHONE: (410) 858-4300  
FAX: (410) 858-4324

**PROFESSIONAL CERTIFICATE**

STATE OF MARYLAND  
W. SKAI W. ABOU-SAYED  
PROFESSIONAL ENGINEER  
NO. 29553

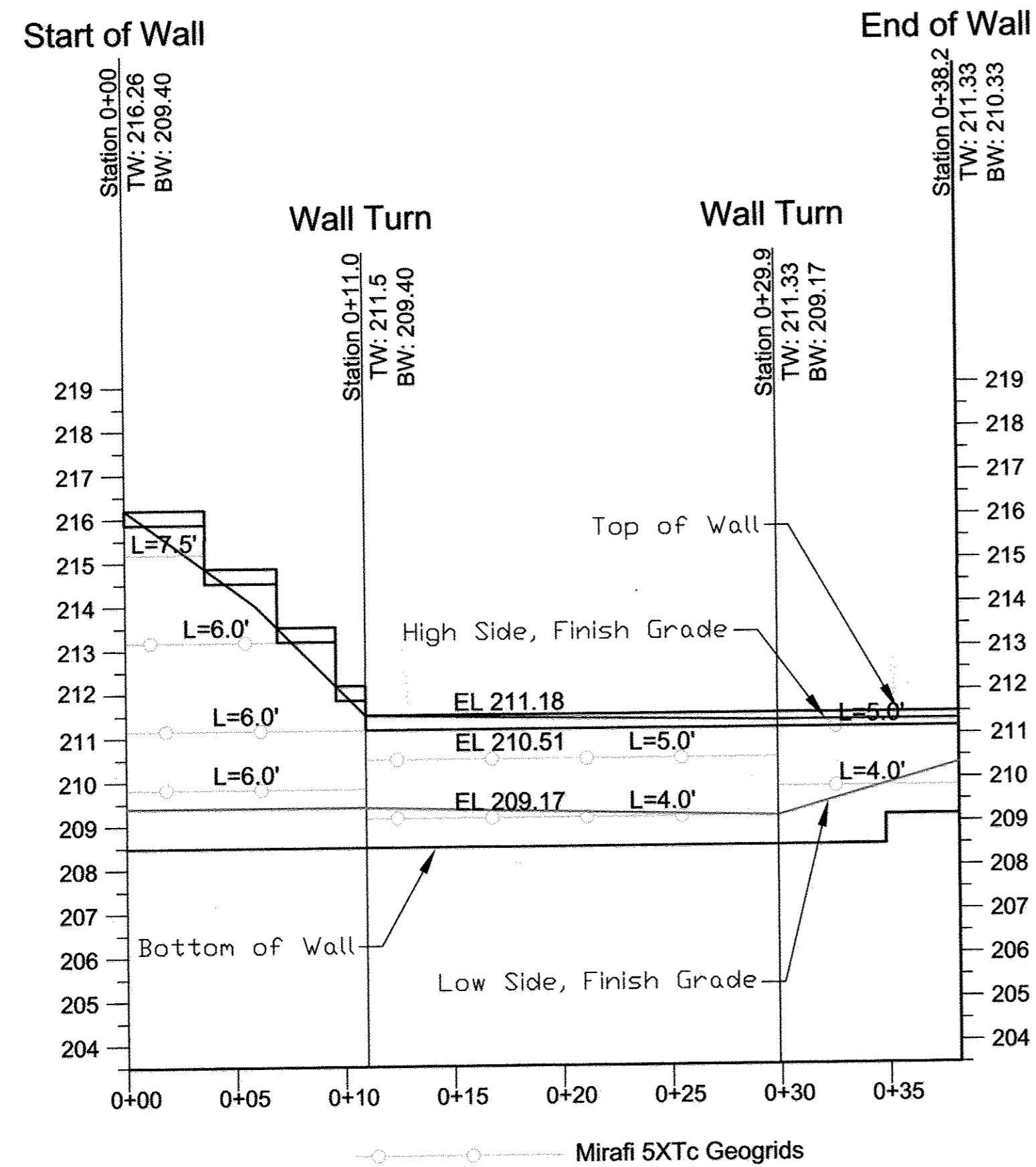
DESIGN BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
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DATE: NOV. 23, 2011  
SCALE: AS SHOWN  
W.O. NO.: 05-26.81

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. 29553, EXPIRATION DATE: 12/31/15

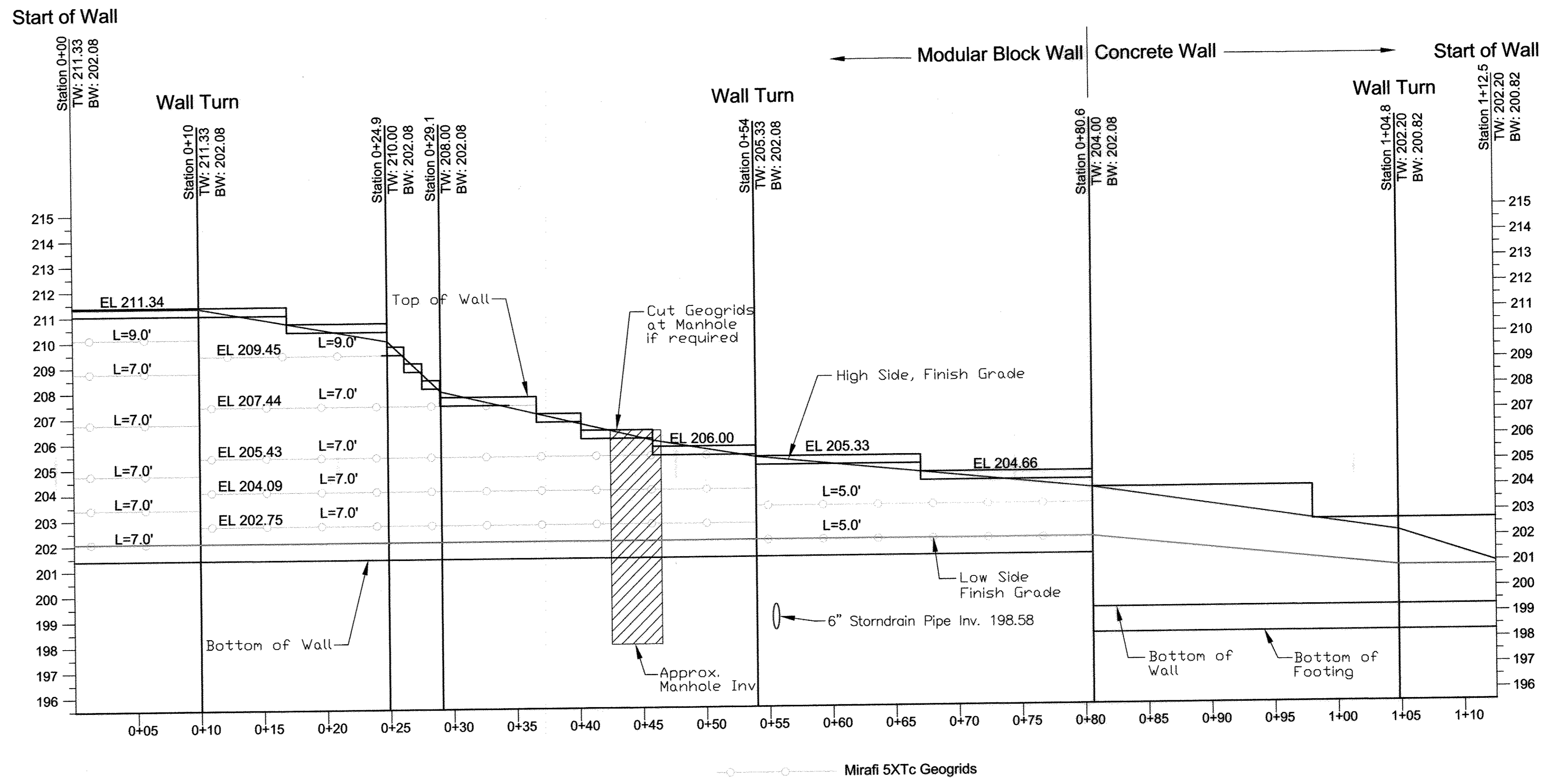
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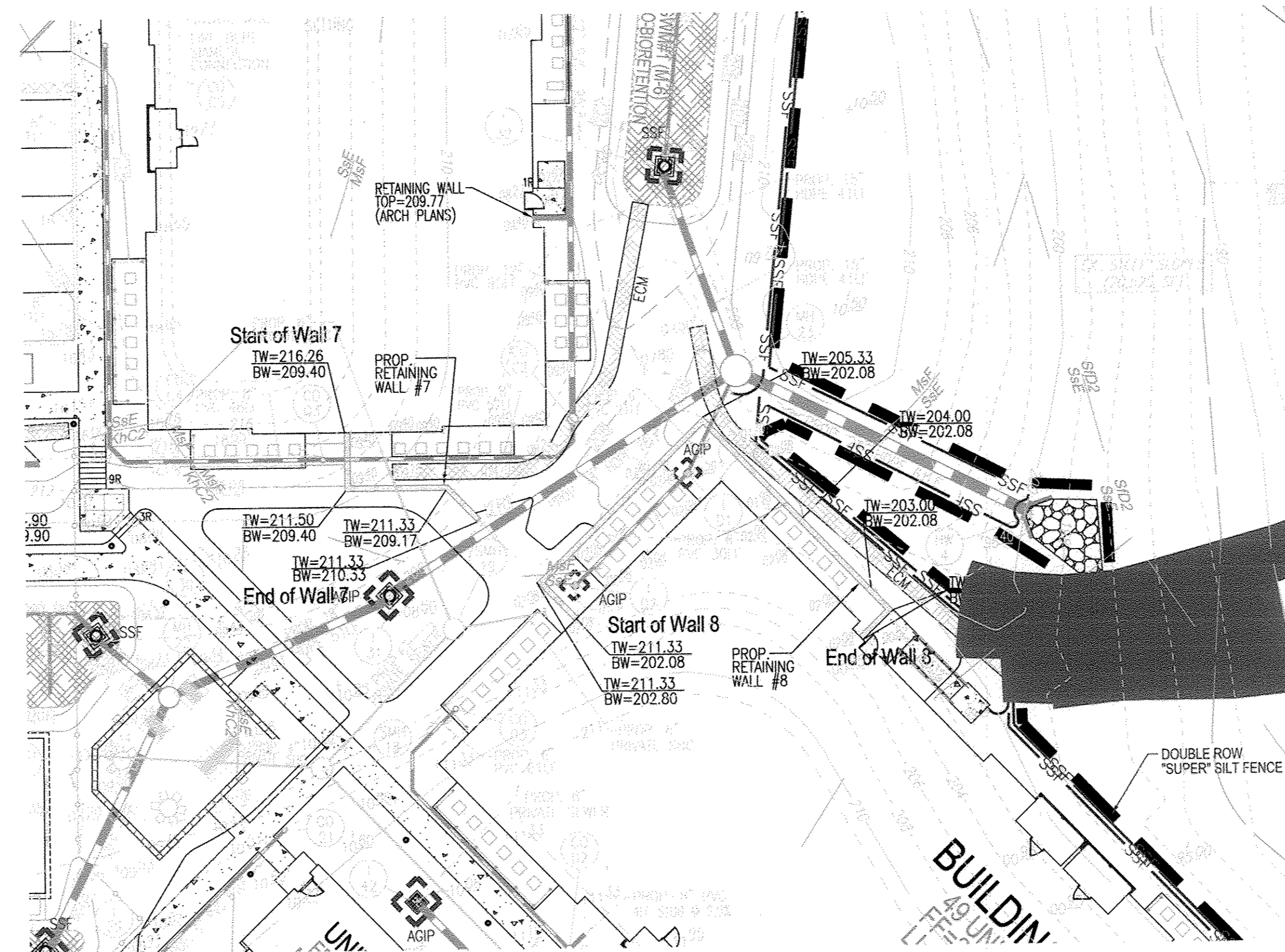
AS-BUILT 7/16/15



**Wall #7**



**Wall #8**



**Plan View (based on Site Plan by Vogel Engineering)**  
Scale: 1"=20'

**OWNER/DEVELOPER**  
BLUE STREAM I LLC  
P.O. BOX 416  
ELLCOTT CITY, MD 21041  
C/O: ARNOLD SAGNER  
410-465-2020

2	REVISED RETAINING WALL DRAWINGS	10/18/12
NO.	REVISION	DATE
SITE DEVELOPMENT PLAN		
<b>RETAINING WALL REDESIGN</b>		
<b>GROSVENOR HOUSE</b>		
BLUE STREAM, BUILDABLE BULK PARCEL H APARTMENTS AND TOWNHOMES		
TAX MAP 43 GRID 4 & 5 1ST ELECTION DISTRICT	PARCEL 14 HOWARD COUNTY, MARYLAND	
<b>ECS LLC</b> LAND-ATLANTIC		
1340 CHARWOOD ROAD SUITE A HANOVER, MARYLAND 21076 PHONE (410) 859-4300 FAX (410) 859-4324		
DESIGN BY: _____		PROFESSIONAL CERTIFICATE I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 29553 (EXPIRES DATE: 12/31/13)
DRAWN BY: _____		
CHECKED BY: _____		
DATE: NOV. 23, 2011		
SCALE: AS SHOWN		
W.D. NO.: 08-28.01		
24 SHEET OF 55		

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 12/4/12  
CHIEF, ENGINEERING DIVISION

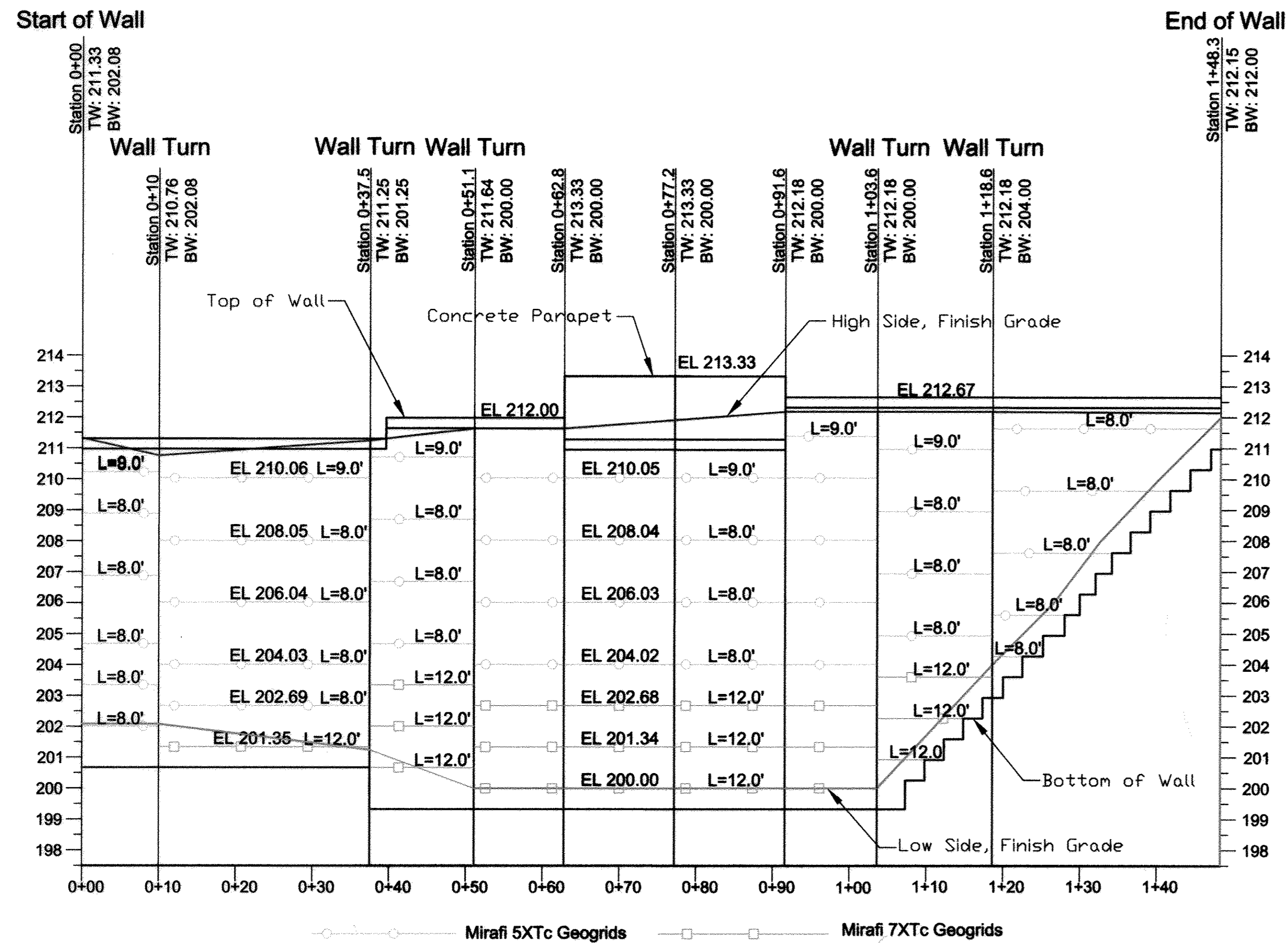
*[Signature]* 12/04/12  
CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 12/4/12  
DIRECTOR

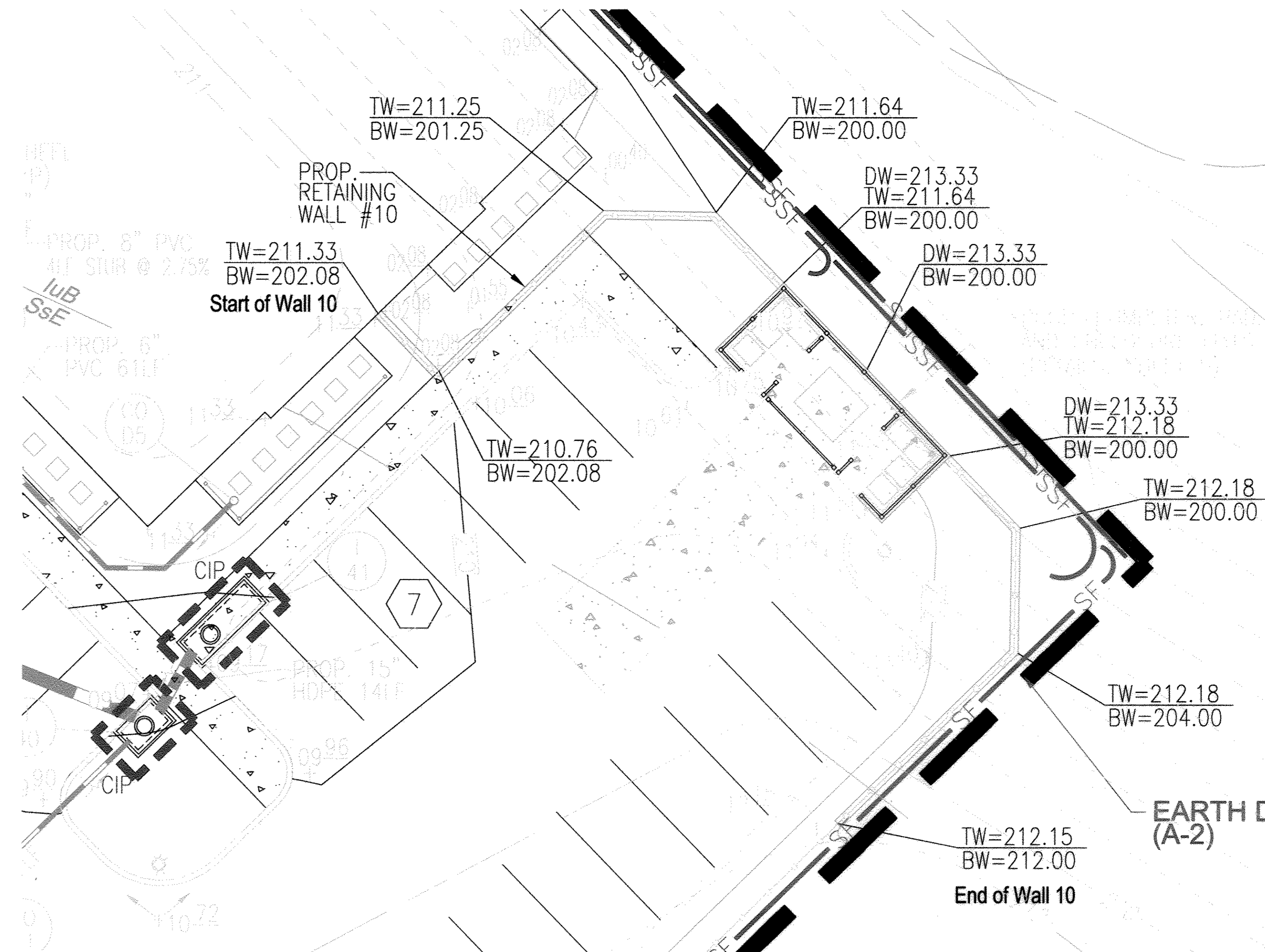
NO AS-BUILT INFORMATION THIS SHEET

**AS-BUILT 7/16/15**

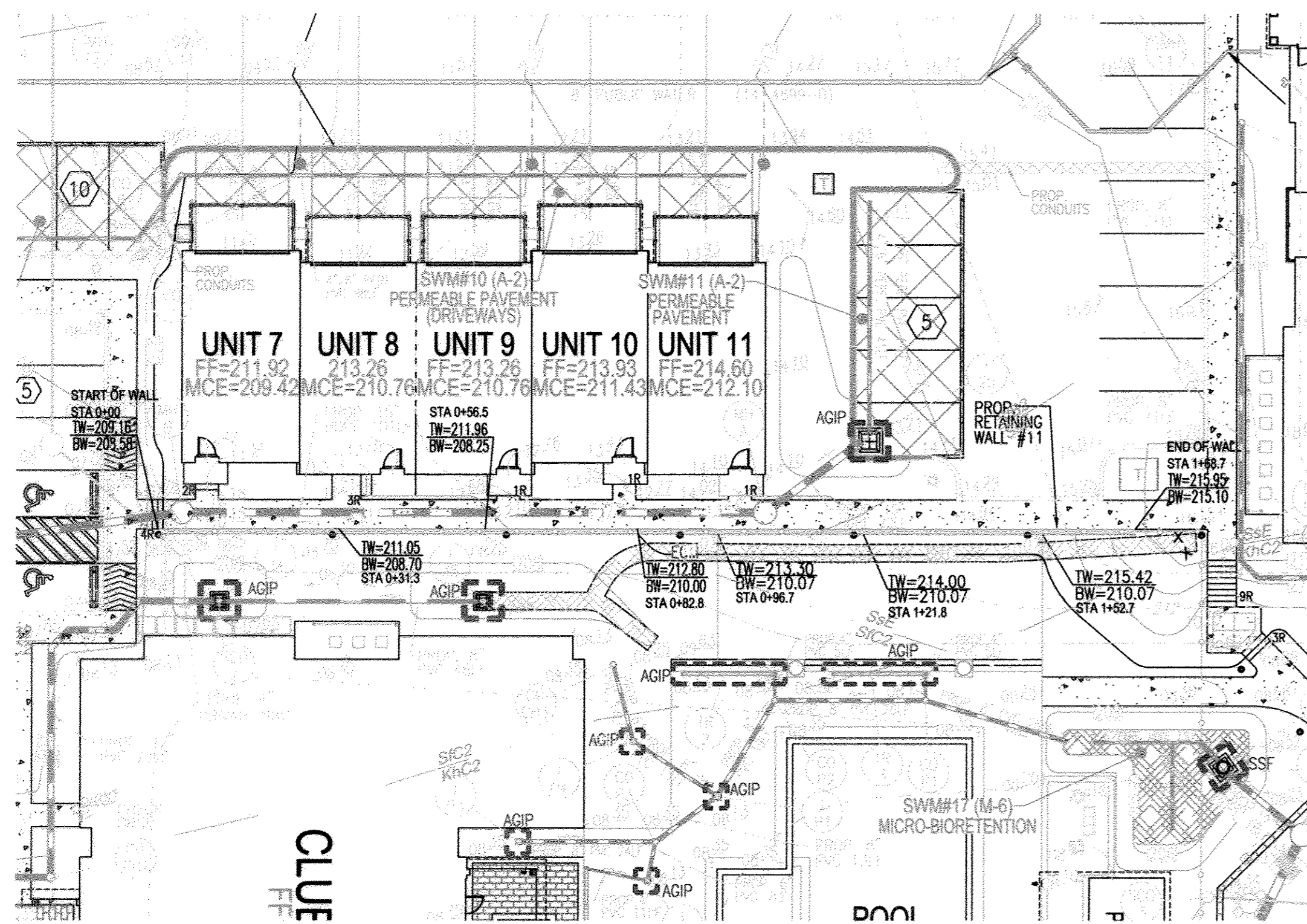




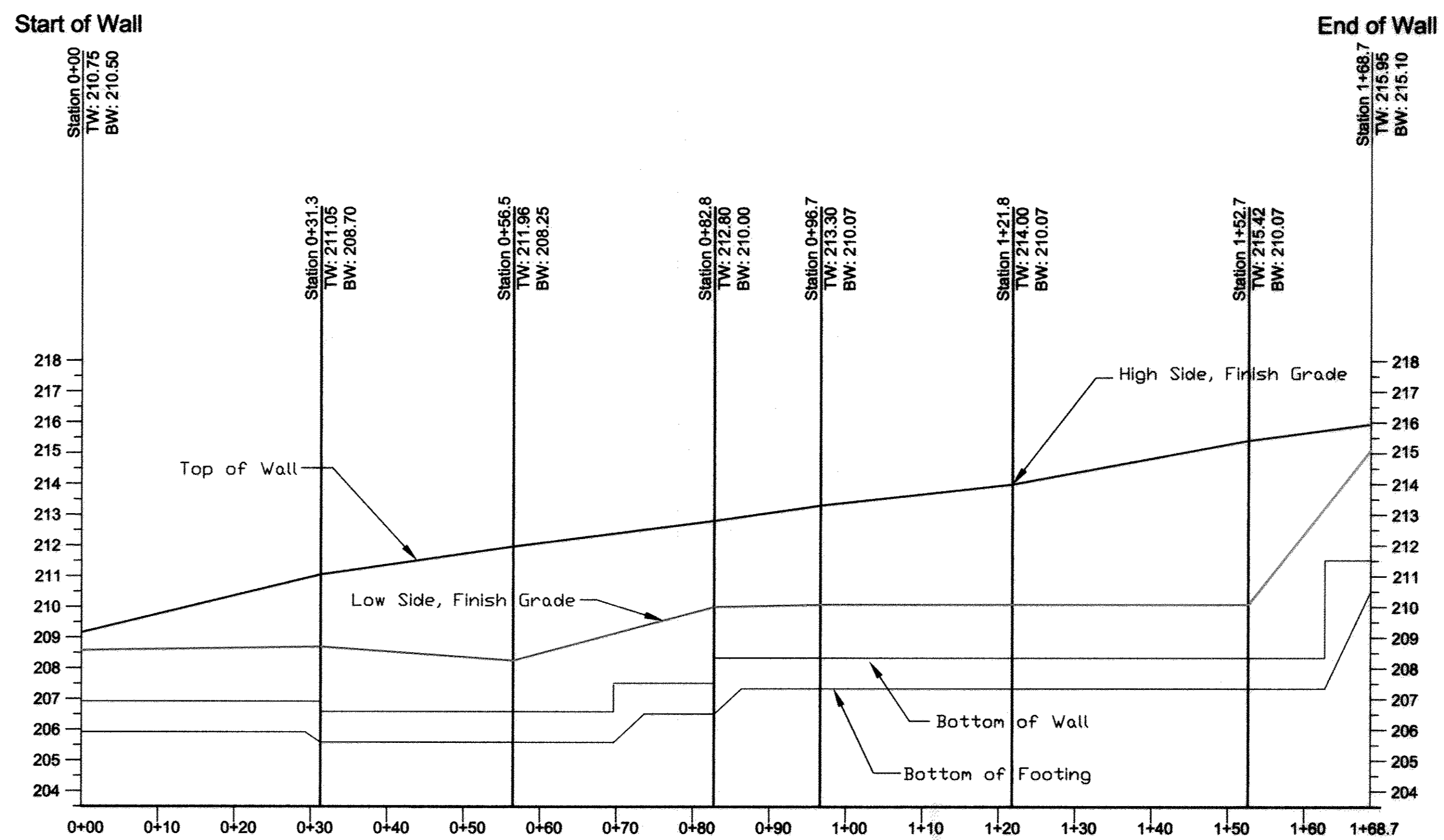
**Wall # 10**



**Plan View (based on Site Plan by Vogel Engineering)**  
Scale: 1"=10'



**Plan View (based on Site Plan by Vogel Engineering)**  
Scale: 1"=20'



**Wall #11**

NO AS-BUILT INFORMATION THIS SHEET

**OWNER/DEVELOPER**  
BLUE STREAM 1 LLC  
P.O. BOX 416  
ELLCOTT CITY, MD 21041  
C/O: ARNOLD SAGNER  
410-465-2020

NO.	REVISION	DATE
3	REVISED RETAINING WALL #11	01/22/13
2	REVISED RETAINING WALL DRAWINGS	10/18/12
1	REVISION	DATE

**REVISED SITE DEVELOPMENT PLAN**  
**RETAINING WALL REDESIGN**

**GROSVENOR HOUSE**  
BLUE STREAM BUILDABLE BULK PARCEL H  
APARTMENTS AND TOWNHOMES

TAX MAP 43 GRID 4 & 5      PARCEL 14  
1ST ELECTION DISTRICT      HOWARD COUNTY, MARYLAND



1346 CHARWOOD ROAD  
SUITE A  
HANOVER, MARYLAND 21075  
PHONE: (410) 869-4300  
FAX: (410) 869-4324

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION      3/14/13  
 DATE  
  
 3/18/13  
 DATE  
  
 3-19-13  
 DATE

 DESIGN BY: _____ DRAWN BY: _____ CHECKED BY: _____ DATE: NOV. 23, 2011 SCALE: AS SHOWN W.O. NO.: 05-26-01	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. 26853 EXPIRATION DATE: 12/31/13
	25 SHEET OF 55 SDP-11-032

**AS-BUILT 7/16/15**

**RETAINING WALL SPECIFICATION GUIDELINES**

**PART 1: GENERAL**  
**1.01 Description**  
 A. Retaining walls must be constructed under the supervision of a Maryland Registered Professional Engineer.  
 B. Work includes furnishing and installing concrete modular block retaining wall units to the lines and grades shown on the construction drawings and as specified herein.  
 C. Work includes preparing foundation soil, furnishing and installing leveling pad, unit fill and reinforced backfill to the lines and grades shown on the construction drawings.  
 D. Work includes furnishing and installing all related materials required for construction of the retaining wall as shown on the construction drawings.

**1.02 Reference Standards**  
 A. ASTM C 90  
 B. ASTM C 140  
 C. ASTM D 445  
 D. ASTM D 698

**1.03 Delivery, Storage and Handling**  
 A. Contractor shall check the materials upon delivery to assure that proper materials have been received.  
 B. Contractor shall prevent excessive mud, wet cement, epoxy, and similar materials (which may affect themselves) from coming in contact with the materials.  
 C. Contractor shall protect the materials from damage and exposure to sunlight. Damaged materials shall not be incorporated into the retaining wall structure and backfill.

**1.04 Quality Assurance**  
 A. Owner will be responsible for soil testing and construction observations for quality control during earthwork and retaining wall construction operations.

**PART 2: MATERIALS**  
**2.01 Definitions**  
 A. Modular Wall Units - KEYSTONE Units, machine made from portland cement, water, and mineral aggregates.  
 B. Structural Geogrid - a structural geogrid formed by a regular network of integrally connected tensile elements with openings of sufficient size to allow interlocking with surrounding soil, rock, or earth and function primarily as reinforcement.  
 C. Unit Fill/Drainage Aggregate - drainage aggregate, such as No. 57 Stone, which is placed within the cells of the modular concrete units and immediately behind the units to a depth of at least 12 inches.  
 D. Reinforced Backfill - compacted soil which is within the reinforced soil volume as shown on the plans.  
 E. Excavation Face - the interface between the reinforced backfill and the retained fill. During construction, measures shall be taken to avoid developing a shear plane at this interface.  
 F. Retained Backfill - On-site material located behind the reinforcement zone of soil.

**2.02 Concrete Units**  
 A. Concrete segmental units shall conform to the requirements of NEMA TEK 2-4 and have a minimum 28-day compressive strength of 4,000 psi. The units shall also pass 150 freeze thaw cycles in water with less than 15 weight loss for samples tested in accordance with ASTM C-1202.  
 B. Wall Face Units for general wall construction shall be KEYSTONE Compac II Units. Sculptured face or straight (flat) face may be used.  
 C. Top of wall Cap Units shall be KEYSTONE Cap Units with fiberglass connecting pins.

**2.03 Fiberglass Connecting Pins**  
 A. Connecting pins shall be 1/2" diameter thermoset isophthalic polyester resin-pultruded fiberglass reinforcement rods supplied by the unit manufacturer.

**2.04 Construction Adhesive**  
 A. Construction adhesive for top of wall cap blocks shall be KEYSTONE Kapseal™ construction adhesive. Material shall conform to ASTM 2339 and shall be supplied by the block unit supplier.

**2.05 Drainage Pipe**  
 A. Continuous collection pipe shall consist of 4-inch diameter slotted or perforated PVC pipe (Schedule 40).  
 B. Outlet (discharge) pipe shall consist of 4-inch diameter solid PVC pipe (Schedule 40).  
 C. All pipe fittings shall be appropriate for the pipe size and schedule used.

**2.06 Soil Fill Materials**  
 A. Base Leveling and Pad Material  
 1. Material shall consist of crushed stone (GA S/3) as shown on the construction drawing. The leveling pad shall be at a minimum, 6-inches thick. MSHA No. 57 Stone or geo gravel is not permitted.  
 B. Unit Fill/Drainage Aggregate  
 1. Fill for units shall be free draining crushed stone or gravel, with a maximum aggregate size of 1/2" to 3/4" and no more than 5% passing the No. 50 sieve and conforming to ASTM D 4458. Gradation of the unit fill shall be approved by the Geotechnical Engineer. Geo gravel shall not be used. MSHA No. 57 stone may be used.  
 C. Reinforced Backfill  
 1. Material shall consist of soil classified as SM, SC or more granular soils per USCS with minimum soil parameters as indicated under design parameters. The backfill material shall contain no particles greater than 2.5 inches in diameter. The backfill material shall contain at least 30 percent by weight retained on the US Standard No. 200 sieve. Other backfill materials may be approved by the Geotechnical Engineer.  
 D. Impervious Soil  
 1. Material may be imported or site excavated soils exhibiting a USCS designation of a lean clay (CL) or clayey sand (SC). The material shall contain no less than 40 percent by weight passing the US Standard No. 200 sieve and exhibit a plasticity index no less than 4 and no greater than 20. Other materials may be approved by the Geotechnical Engineer.  
 E. Sample Submittal  
 1. The contractor shall submit samples and material specifications of the proposed backfill soils (unit fill, pad material, reinforced backfill) to the Geotechnical Engineer for approval.  
 2. Soil must meet or exceed the friction angle specified in design parameters.  
 3. Direct shear testing is required for all soil samples used for Reinforced Backfill.

**PART 3: INSTALLATION**  
**3.01 Excavation**  
 A. Contractor shall excavate to the lines and grades shown on the construction drawings. Contractor shall be responsible to disturb and remove foundation materials beyond lines shown.  
 B. All existing topsoil, rootmats and other soft or unsuitable materials shall, at a minimum, be removed from the foundation of the retaining wall.  
 C. If groundwater is encountered during the excavation of the backstop, a backstop drainage system shall be utilized. The system shall tie into the lateral wall drainage system to provide adequate release of any water which accumulates behind the reinforced zone.

**3.02 Foundation Preparation**  
 A. Foundation shall be excavated as required for leveling pad dimensions shown on the construction drawings, or as directed by the Geotechnical Engineer.  
 B. The required bearing pressure beneath the footing of the wall must be verified in the field by a Geotechnical Engineer.  
 C. Unsuitable soils shall be removed and replaced with approved material.  
 D. Over-excavated areas shall be backfilled with approved, compacted backfill material or as approved by the Geotechnical Engineer.

**3.03 Base Leveling Pad**  
 A. Leveling pad materials shall be placed upon an approved foundation as shown on the construction drawings to a minimum thickness of 6 inches.  
 B. Aggregate material shall be compacted to provide a dense, level surface on which to place the first course of modular units. Compaction shall be to at least 95% of the maximum dry density as determined by the Standard Proctor Compaction Test (ASTM D 698). Leveling pad shall be prepared and leveled to ensure complete contact of retaining wall unit with base.

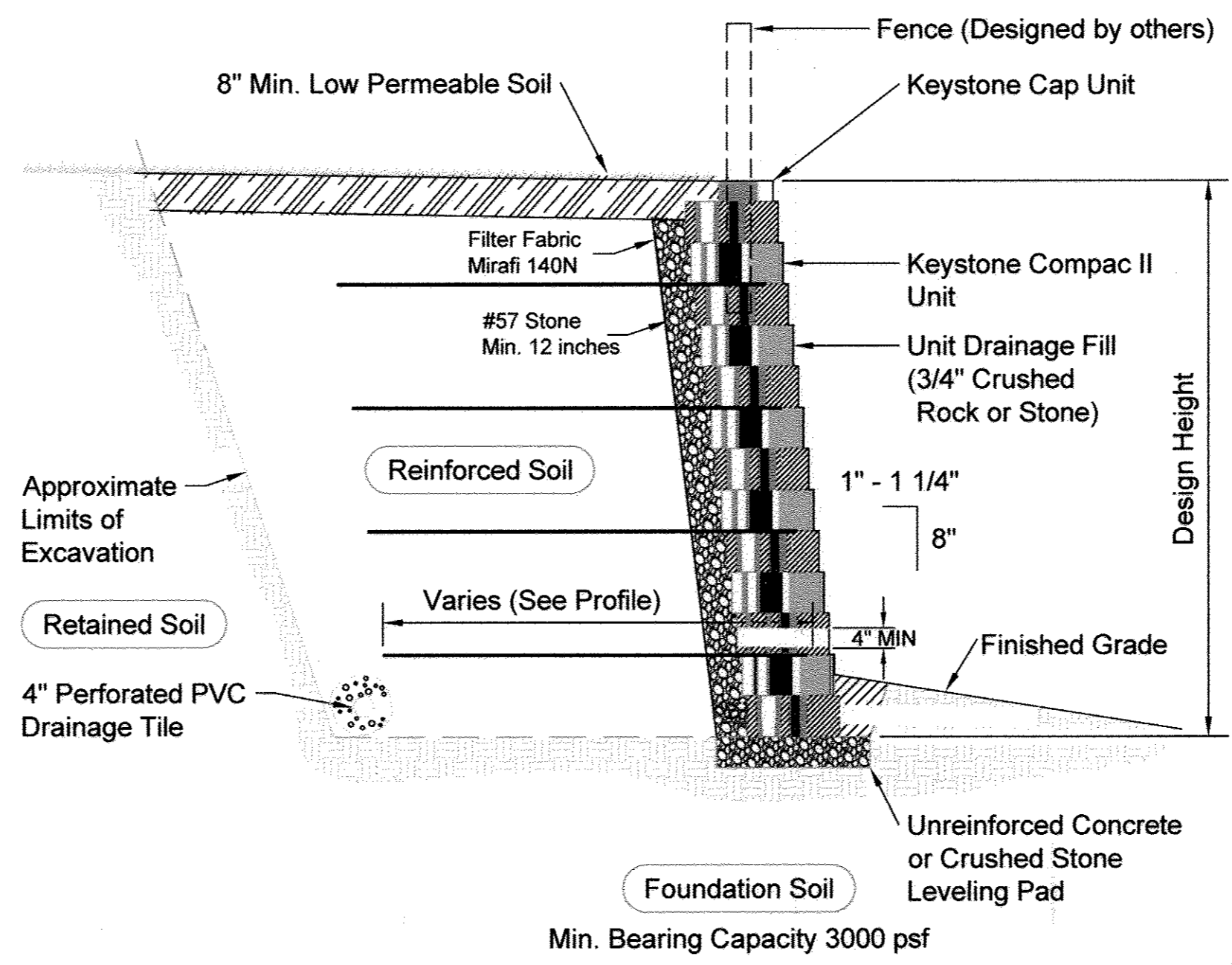
**3.04 Unit Installation**  
 A. The first course of concrete modular units shall be carefully placed on the base leveling pad. Each unit shall be checked for level (in both directions) and alignment.  
 B. Install fiberglass connecting pins and fill voids in and around the modular units with unit fill material.  
 C. Tamp or rod unit fill to ensure that all voids are completely filled.  
 D. Sweep excess material from top of units and install the next course. Ensure that the units of each course are completely filled, backfilled and compacted prior to proceeding to next course.  
 E. Place each subsequent course, ensuring that pins protrude into adjoining courses a minimum of 1 inch. Two pins are required per unit. Pull each unit forward to obtain the desired offset (as noted on the plans).  
 F. Repeat procedure to the extent of wall height. Wall construction shall not exceed 2 courses in height before reinforced backfill is placed.  
 G. Follow wall erection and unit fill placement closely with any other backfilling required. Compaction of all soils shall be to 95% of the maximum dry density as determined in accordance with ASTM D 698.  
 H. As appropriate where the wall changes elevation, units can be stepped with the grade or turned into the embankment with a convex return end. Provide appropriate backfill units on compacted leveling pad in area of convex return end.

**3.05 Geogrid Installation**  
 A. The geogrid type and length (direction perpendicular to the wall face) shall conform to those indicated on the construction drawings. Geogrid shall be laid continuously at the proper elevations and orientation as shown on the construction drawings or as directed by the Geotechnical Engineer.  
 B. Correct orientation (roll direction) of the geogrid shall be verified by the Contractor.  
 C. The geogrid shall be connected to the modular wall units by placing the geogrid over fiberglass pins and tying the grid back to the fill zone.  
 D. A filtering, non-woven geotextile shall be located between the drainage aggregate/unit fill and the reinforced backfill. The geotextile shall be folded back parallel, above and below the geogrid as necessary to ensure continuous grid placement.  
 E. The geogrid shall be pulled taut to set the geogrid against the fiberglass pins and to eliminate loose folds in the material. The fill surface shall be level. To install the geogrid, backfill shall be placed over the geogrid from immediately behind the wall to the back end of the geogrid.  
 F. No geogrid overlaps will be allowed in any length of geogrid perpendicular to the wall face except at corners or angled locations. The geogrid shall overlap rather than provide no coverage. A minimum of 4 inches of soil cover is required between overlapping layers of geogrid.

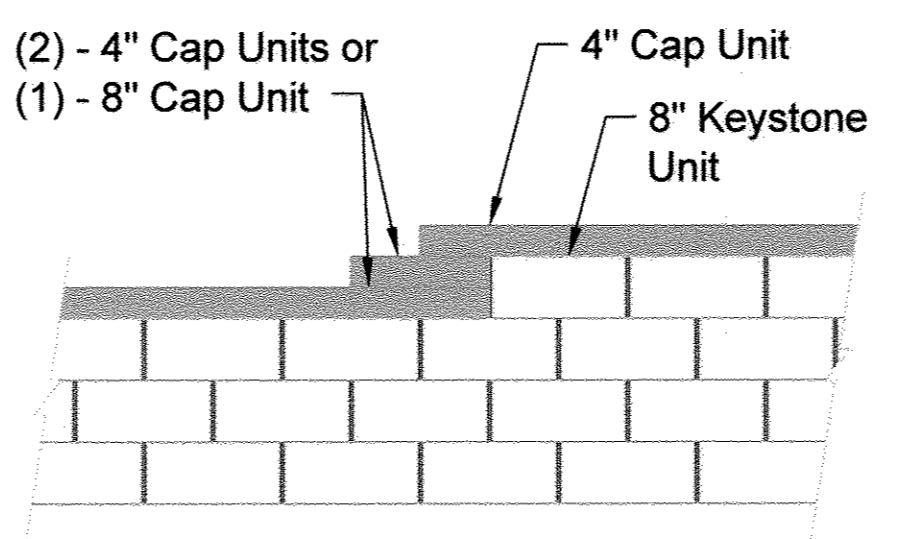
**3.06 Drainage Installation**  
 A. Provide continuous 4-inch slotted or perforated PVC pipe behind the wall, no greater than 4 inches above finished grade at the bottom of the wall.  
 B. Provide 4-inch solid PVC pipe outlets every 10 feet along the wall, and at each end of the wall.

**3.07 Fill Placement**  
 A. Backfill material shall be placed in 8 inch loose lifts and compacted to at least 95% of the maximum dry density as determined by ASTM D 698. The in-place moisture content shall be in the range of at the optimum moisture content to 2 percentage points higher than the optimum moisture content, as determined in accordance with ASTM D 698.  
 B. Backfill shall be placed, spread and compacted in such a manner that minimizes the development of slick or loss of penetration of the geogrid. Backfill shall be placed in horizontal layers. The excavation face shall be stepped or notched to provide a rough surface for the geogrid to increase the interlock between the retained soils and the reinforced backfill.  
 C. Only hand-operated compaction equipment shall be allowed within 5 feet of the back surface of the KEYSTONE units.  
 D. Backfill shall be placed from immediately behind the wall towards the excavation face/retained soils and compacted to the specifications presented herein with appropriate compaction equipment.  
 E. Tracked construction equipment shall not be operated directly on the geogrid. A minimum backfill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Turning of tracked vehicles shall not be permitted over the geogrid.  
 F. Rubber-tired equipment may pass over the geogrid reinforcement at slow speeds (less than 10 mph). Avoid sudden braking and sharp turning.  
 G. The suitability of the fill material must be confirmed by a Geotechnical Engineer.  
 H. The upper 8 inches of wall backfill shall consist of impervious soil, compacted to at least 95% of the maximum dry density as determined by ASTM D 698. The in-place moisture content shall be in the range of at the optimum moisture content to 2 percentage points higher than the optimum moisture content, as determined in accordance with ASTM D 698.

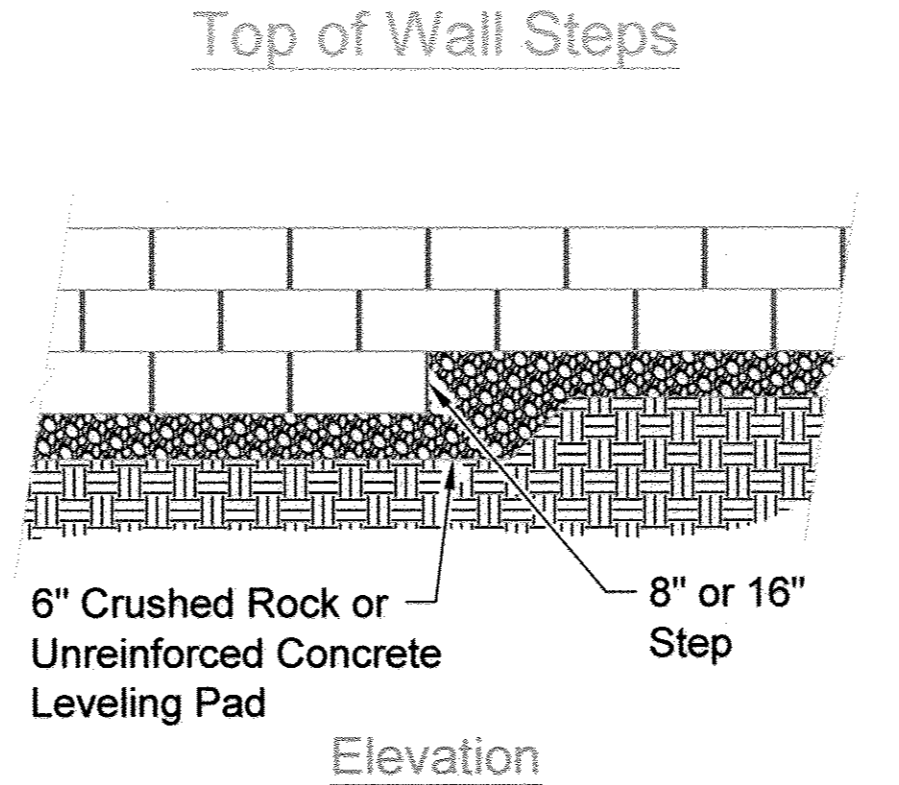
**3.08 Cap Installation**  
 A. Provide permanent mechanical connection to wall units with KEYSTONE Kapseal™ construction adhesive. Apply adhesive to top surface of lower unit and place cap unit atop adhesive.  
 B. Place Cap Units over projecting pins from the units below. Pull forward to setback position.  
 C. Backfill and compact to finished grade.



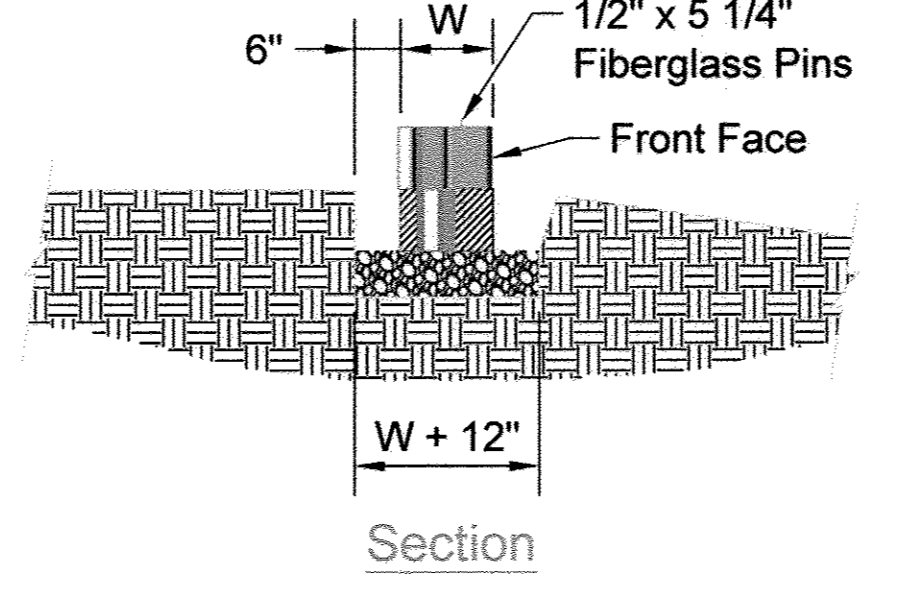
**Typical Reinforced Wall Section**  
 Standard Unit - 1" Setback



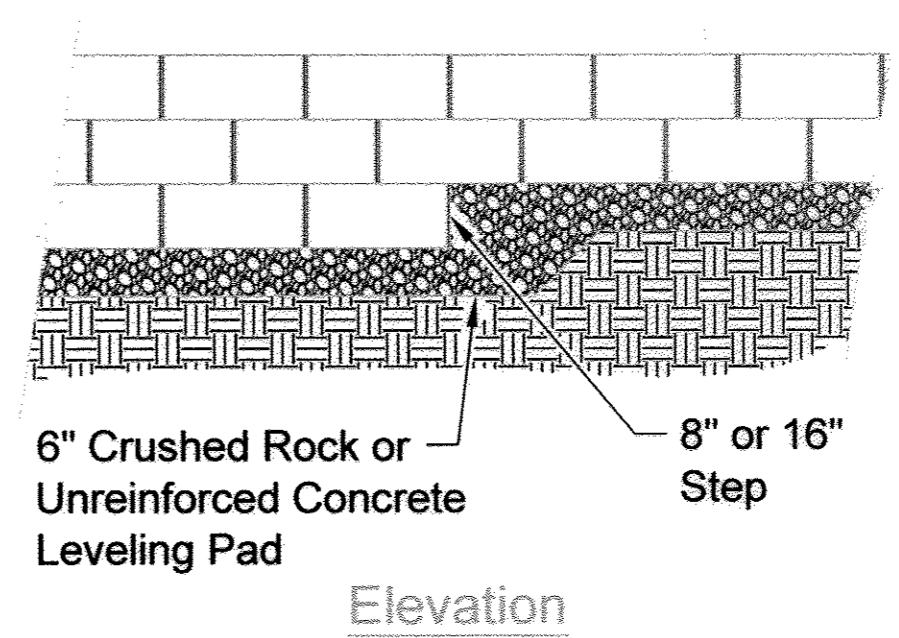
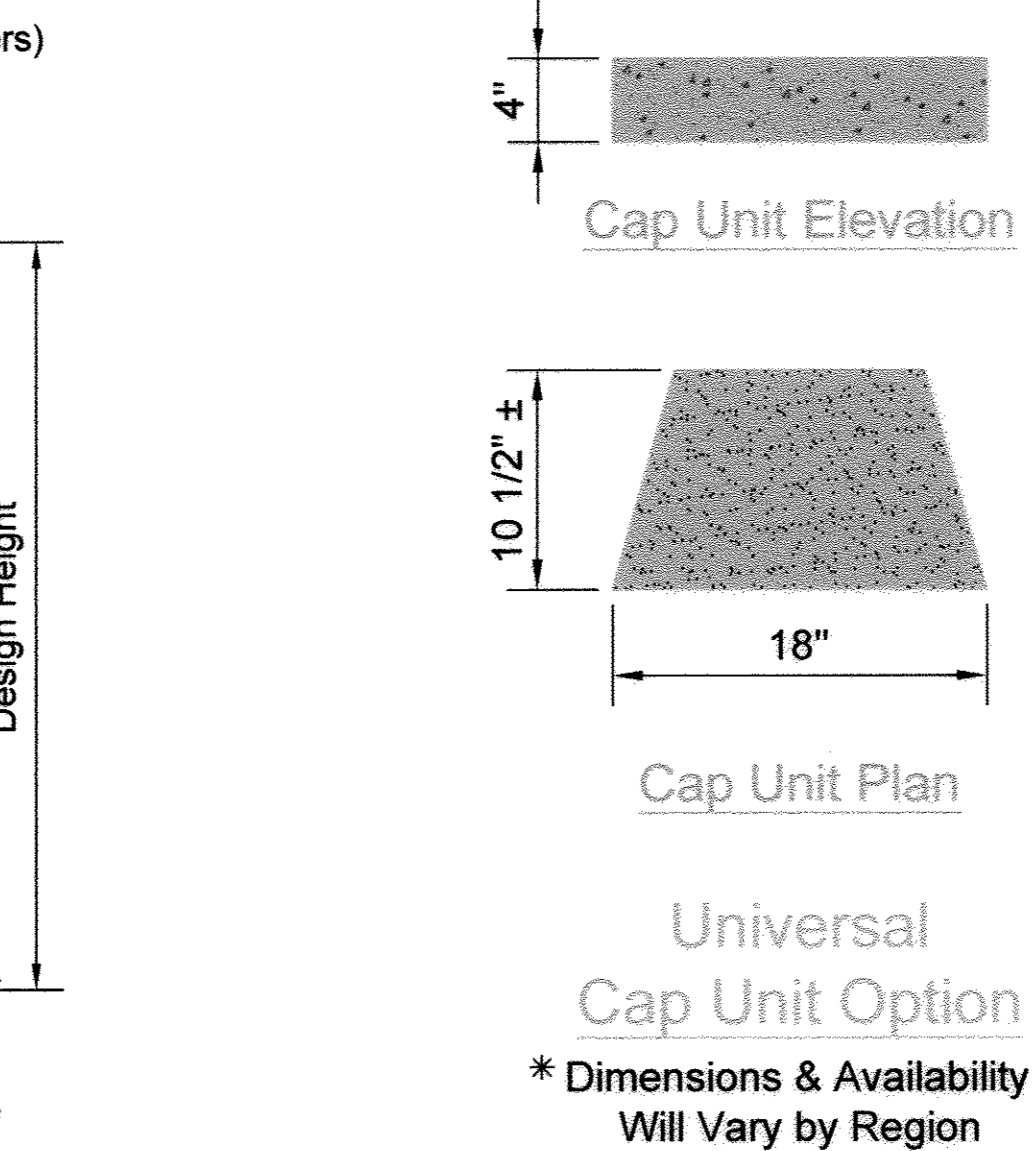
**Top of Wall Steps**  
 Note:  
 1. Secure all cap units with Keystone Kapseal or equal.



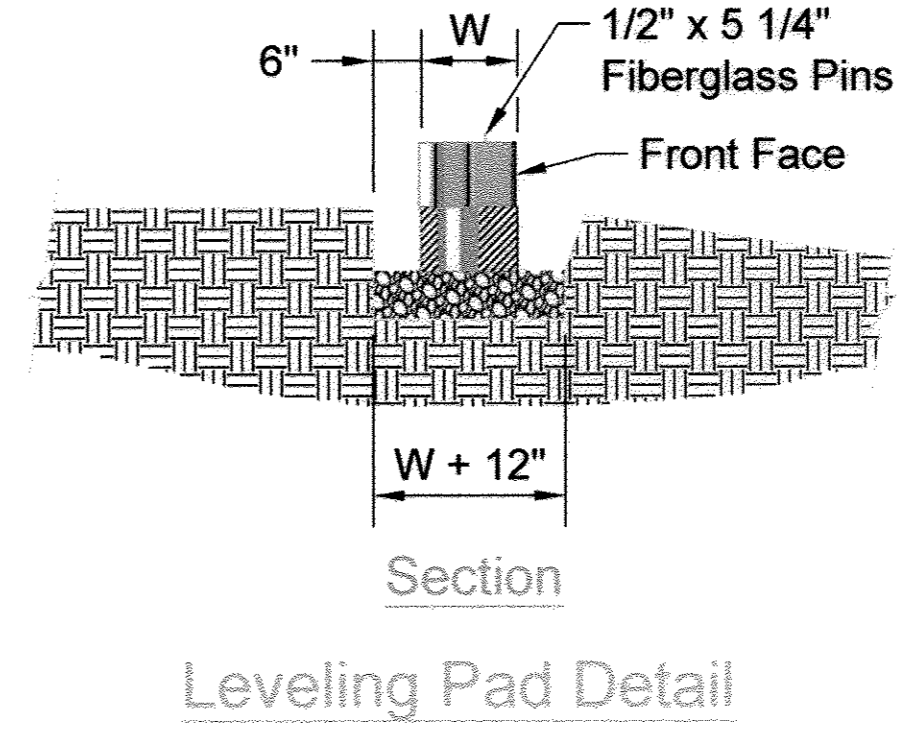
**Leveling Pad Detail**  
 Note:  
 1. The leveling pad is to be constructed of crushed stone or 2000 psi ± unreinforced concrete.



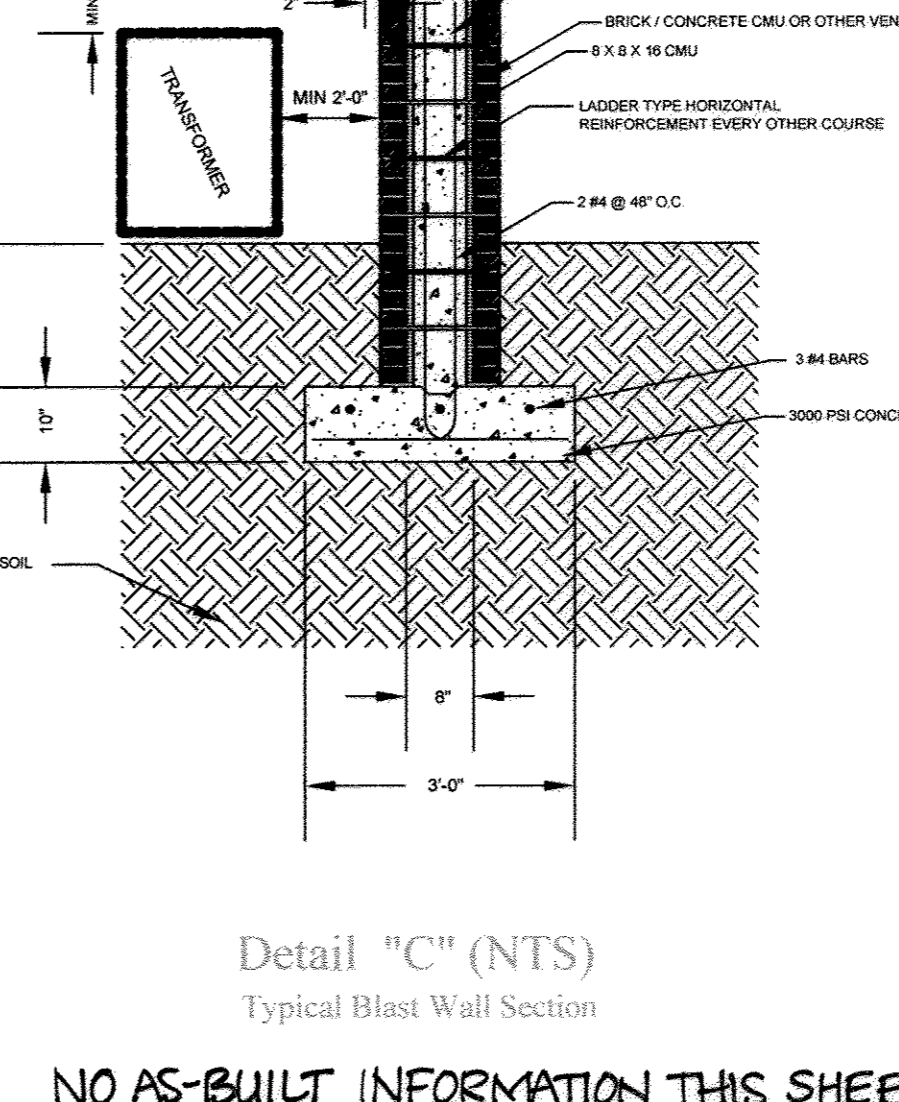
**Leveling Pad Detail**



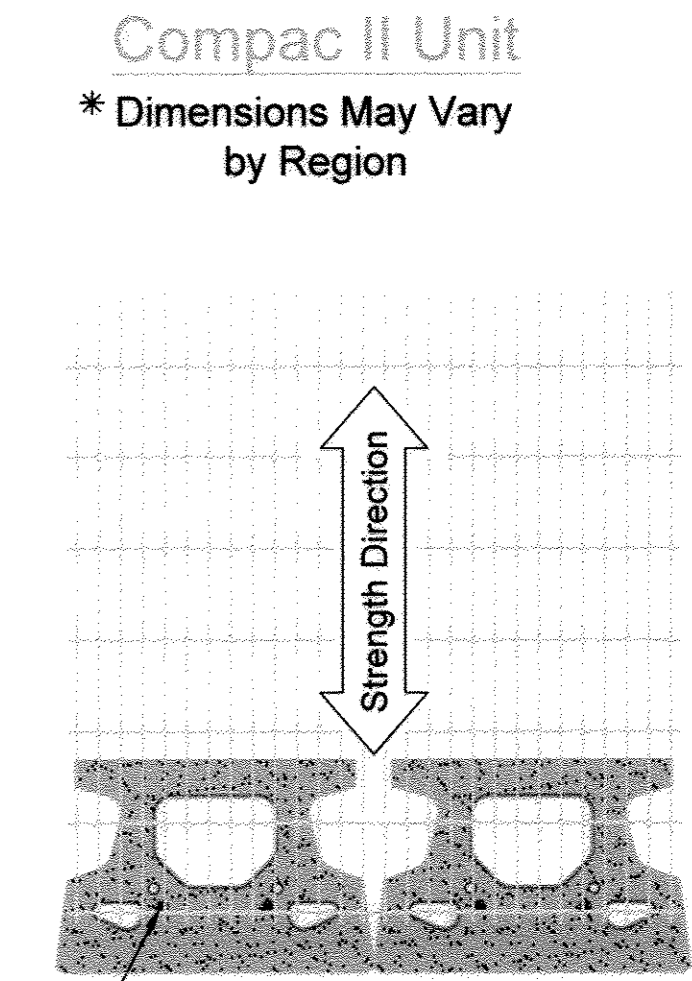
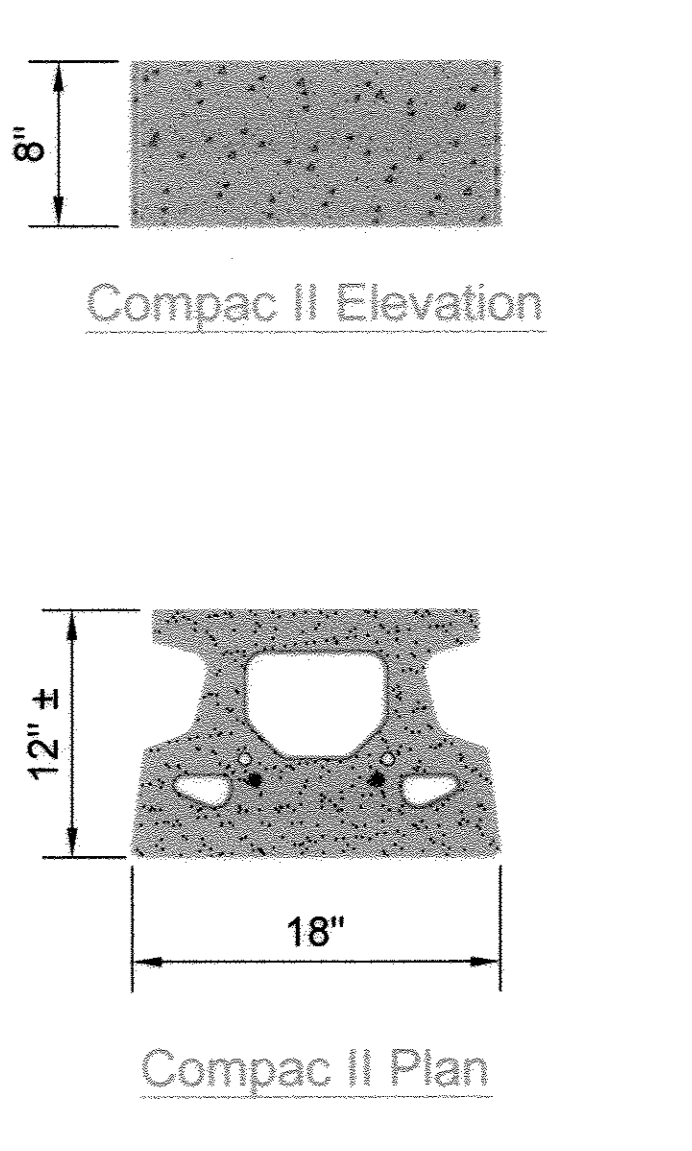
**Leveling Pad Detail**  
 Note:  
 1. The leveling pad is to be constructed of crushed stone or 2000 psi ± unreinforced concrete.



**Leveling Pad Detail**



**Detail "C" (NTS)**  
 Typical Blast Wall Section  
 NO AS-BUILT INFORMATION THIS SHEET



**Compac II Unit**  
 \* Dimensions May Vary by Region



**Grid & Pin Connection**

**OWNER/DEVELOPER**  
 BLUE STREAM 1 LLC  
 P.O. BOX 416  
 ELLICOTT CITY, MD 21041  
 C/O: ARNOLD SAGNER  
 410-465-2020

2	REVISED RETAINING WALL DRAWINGS	10/18/12
NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**RETAINING WALL REDESIGN**  
**GROSVENOR HOUSE**  
 BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES

TAX MAP 43 GRID 4 & 5  
 1ST ELECTION DISTRICT

PARCEL 14  
 HOWARD COUNTY, MARYLAND

**ECS LLC**  
 MID-ATLANTIC

1340 CHARWOOD ROAD  
 SUITE A  
 HANOVER, MARYLAND 21076  
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 FAX: (410) 859-4324

PROFESSIONAL CERTIFICATE  
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DESIGN BY: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
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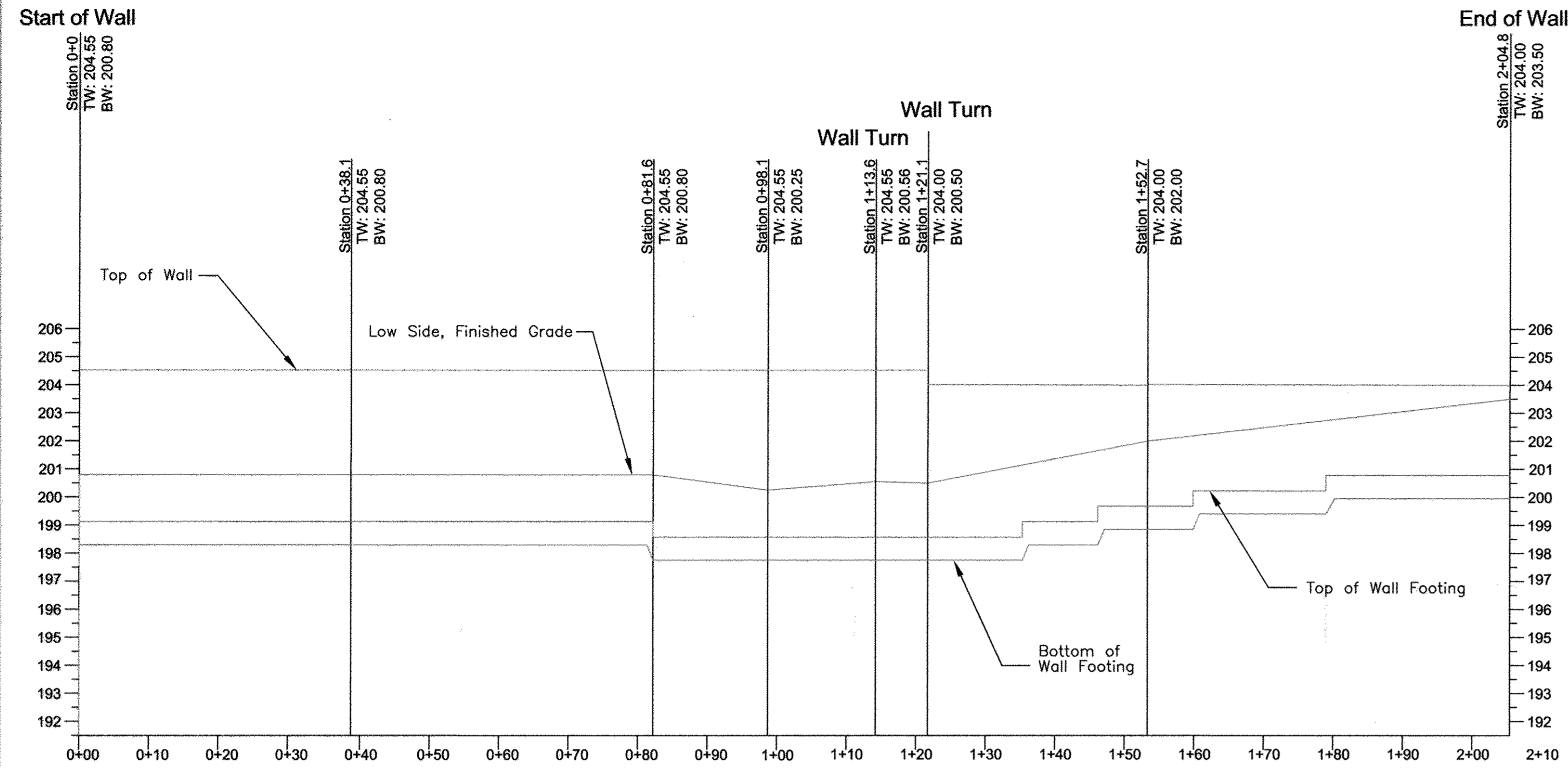
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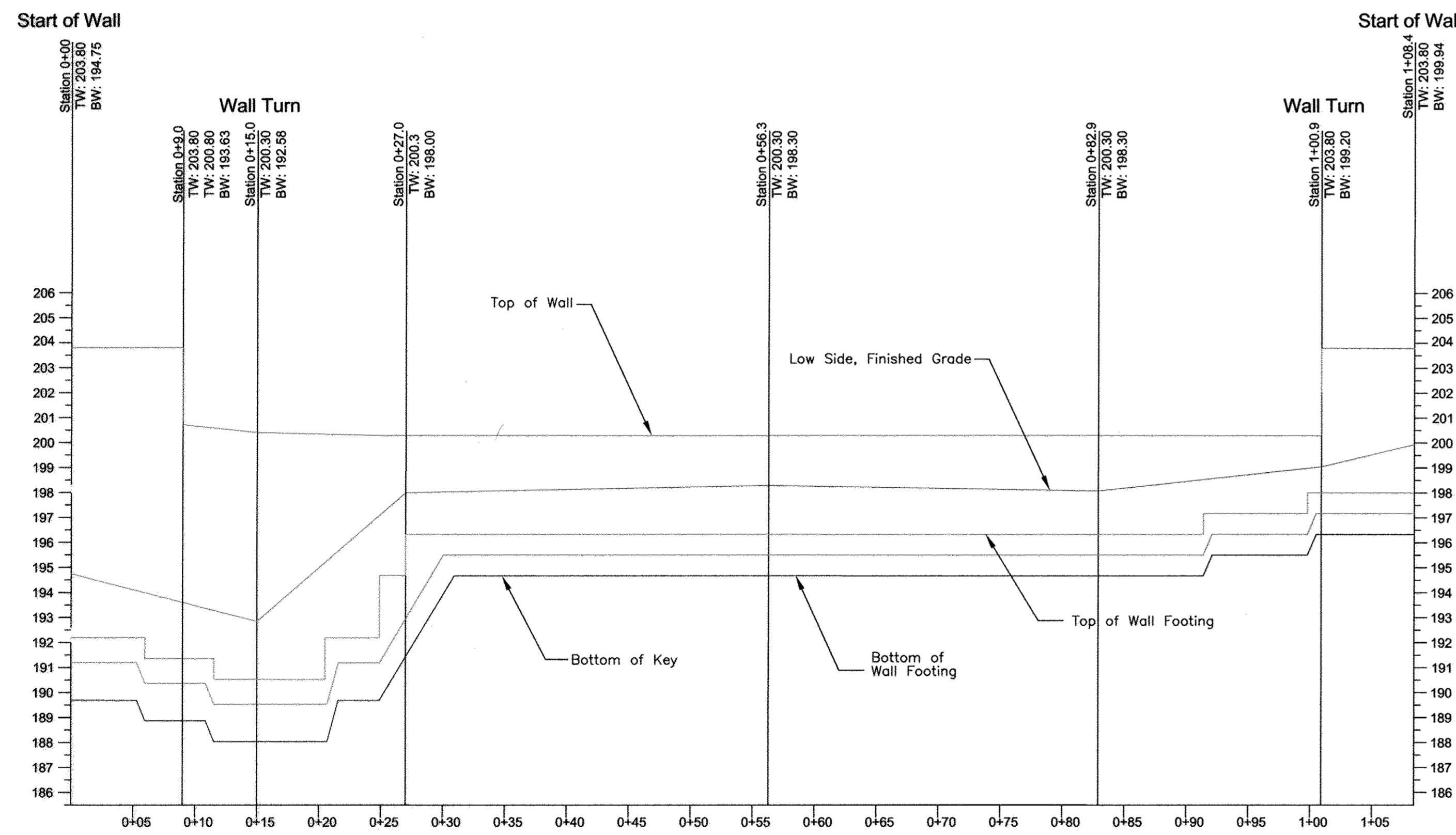
*John J. ...* 12/4/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

*Kevin ...* 12/04/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT

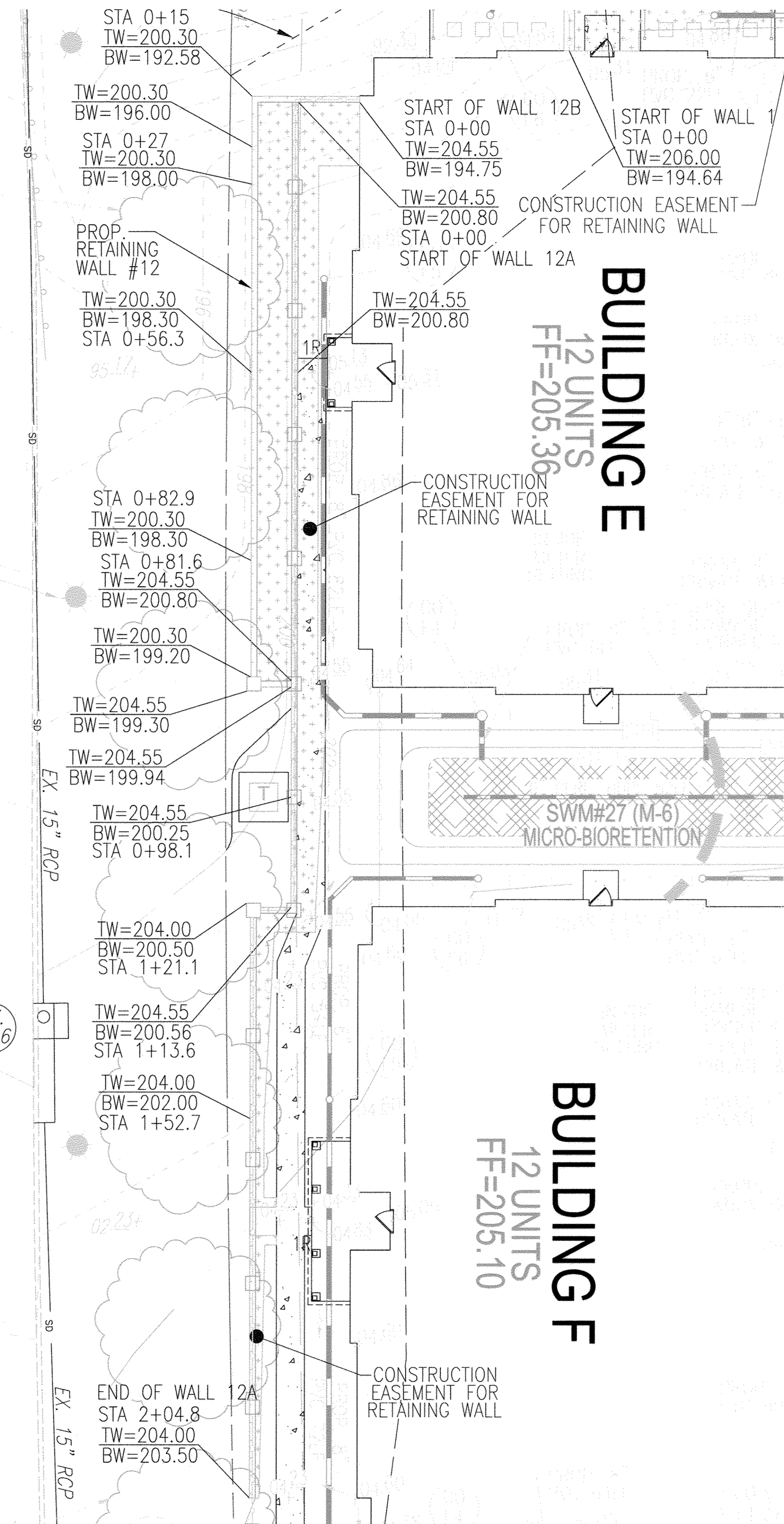
*Wanda ...* 12/1/12  
 DIRECTOR



Wall # 12A

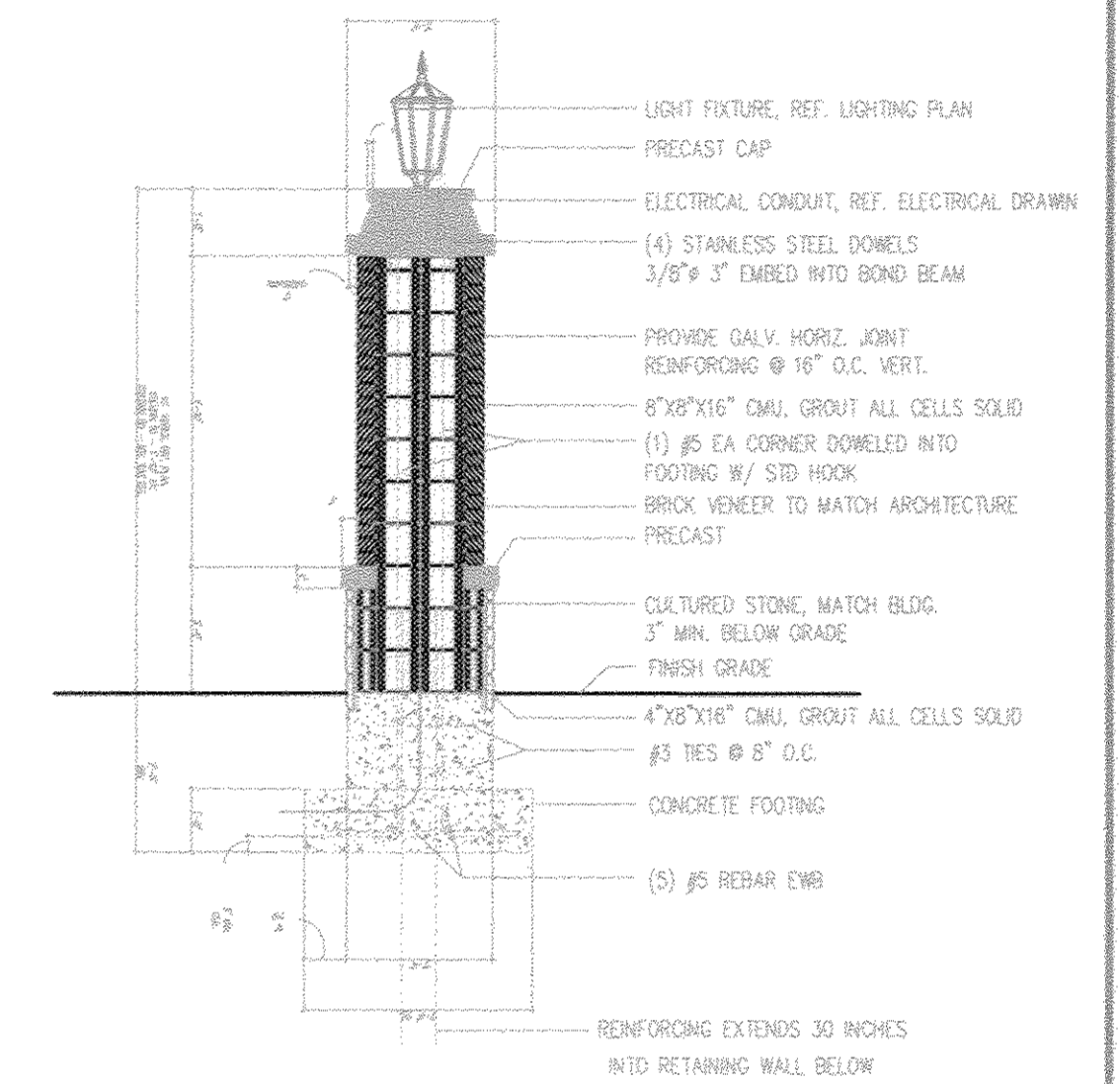


Wall #12B



Plan View (based on Site Plan by Vogel Engineering)  
Scale: 1"=10'

Wall 12 Finish: See Architectural / Landscape Plans for Finish Details.



Wall 12 Column Detail

OWNER/DEVELOPER  
BLUE STREAM 1 LLC  
P.O. BOX 416  
ELLCOTT CITY, MD 21041  
C/O. ARNOLD SAGNER  
410-465-2020

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SITE DEVELOPMENT PLAN  
**RETAINING WALL REDESIGN**  
**GROSVENOR HOUSE**  
BLUE STREAM, BUILDABLE BULK PARCEL H  
APARTMENTS AND TOWNHOMES  
TAX MAP 43 GRID 4 & 5 PARCEL 14  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

340 CHARWOOD ROAD  
SUITE A  
HANOVER, MARYLAND 21076  
PHONE: (410) 858-4300  
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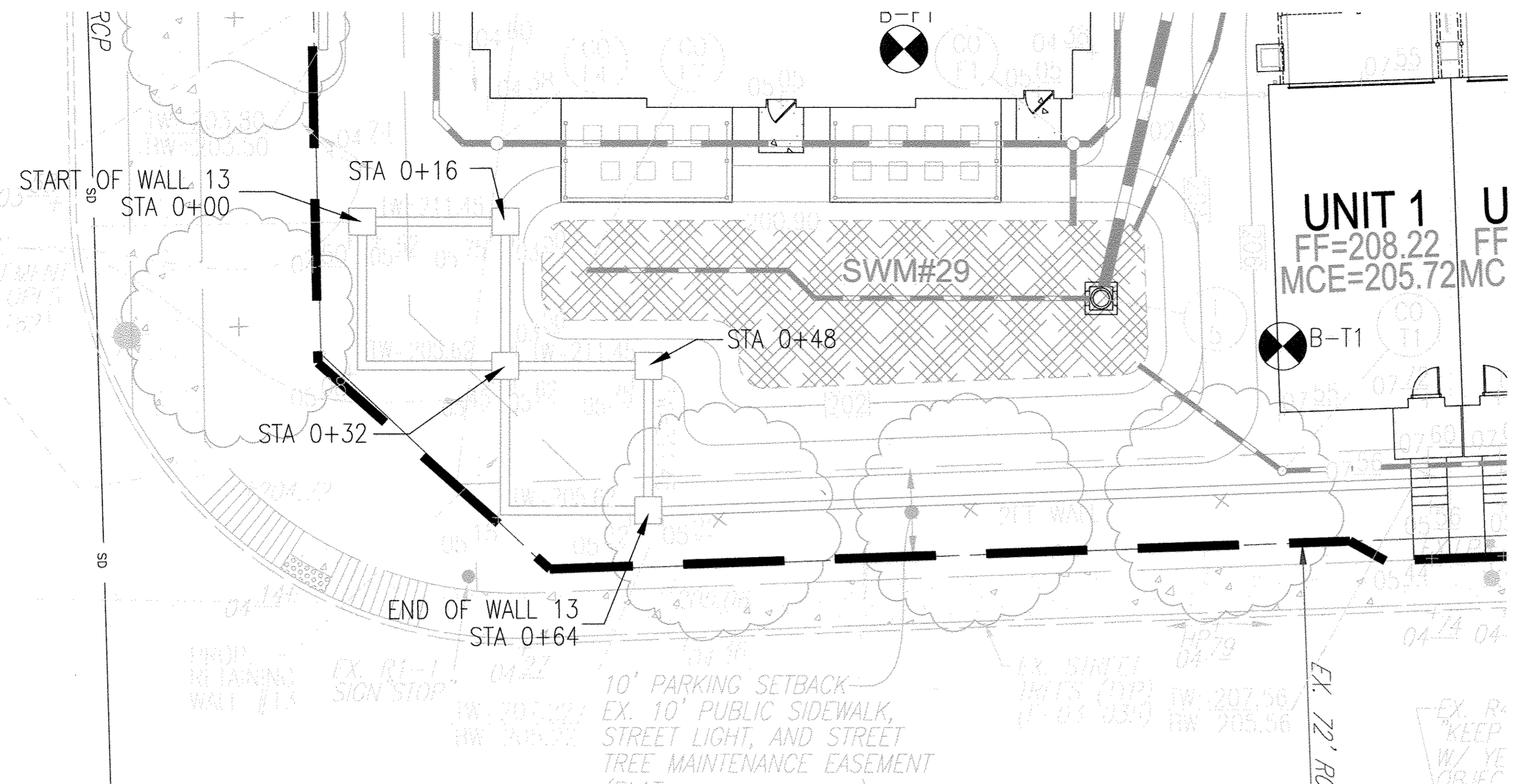


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	DRAWN BY: _____	
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SCALE: AS SHOWN	W.D. NO.: 05-26.01	27 SHEET OF 55

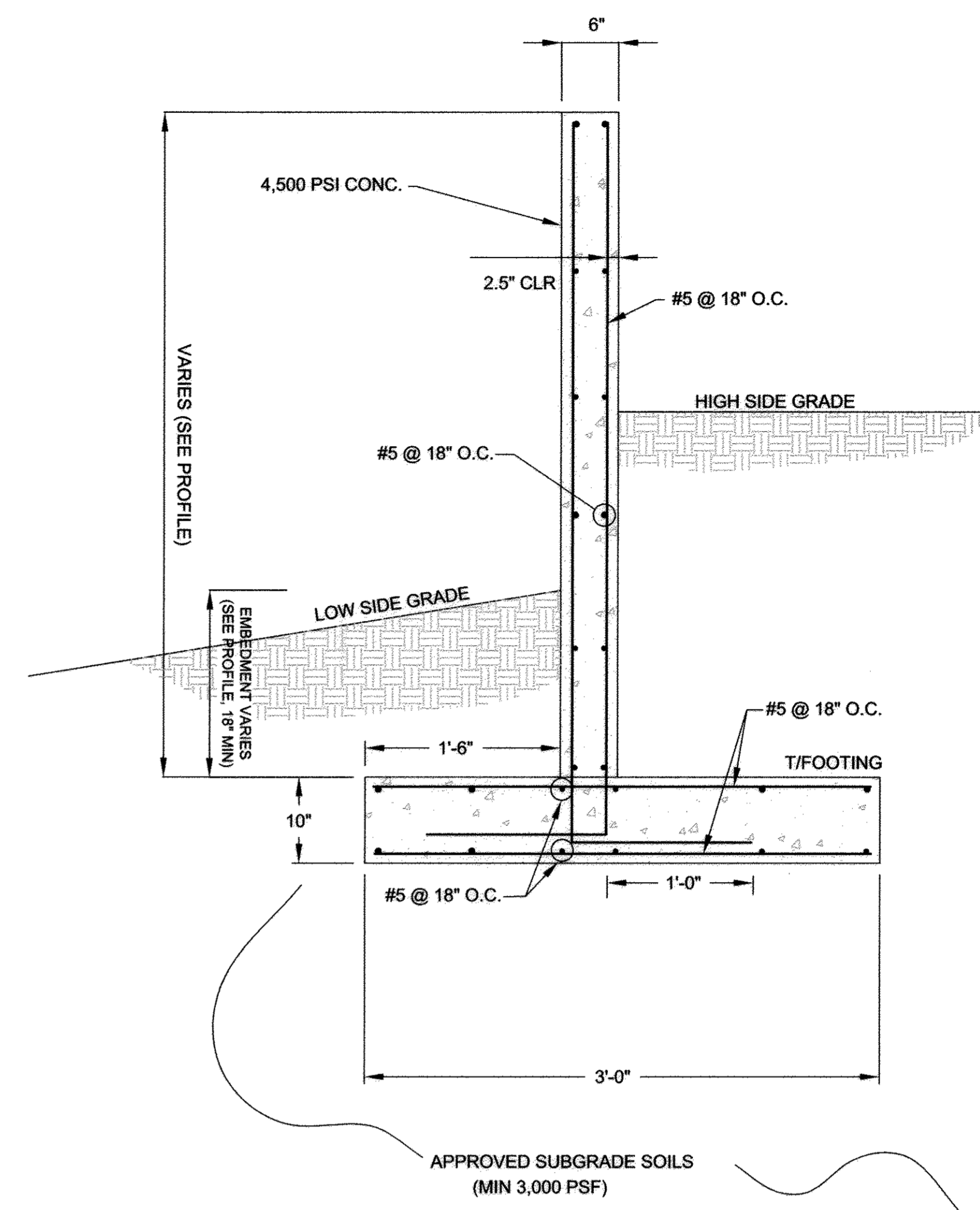
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 \_\_\_\_\_ 12/4/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 \_\_\_\_\_ 12/04/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 \_\_\_\_\_ 12/4/12  
 DIRECTOR

NO AS-BUILT INFORMATION THIS SHEET

AS-BUILT 7/16/15

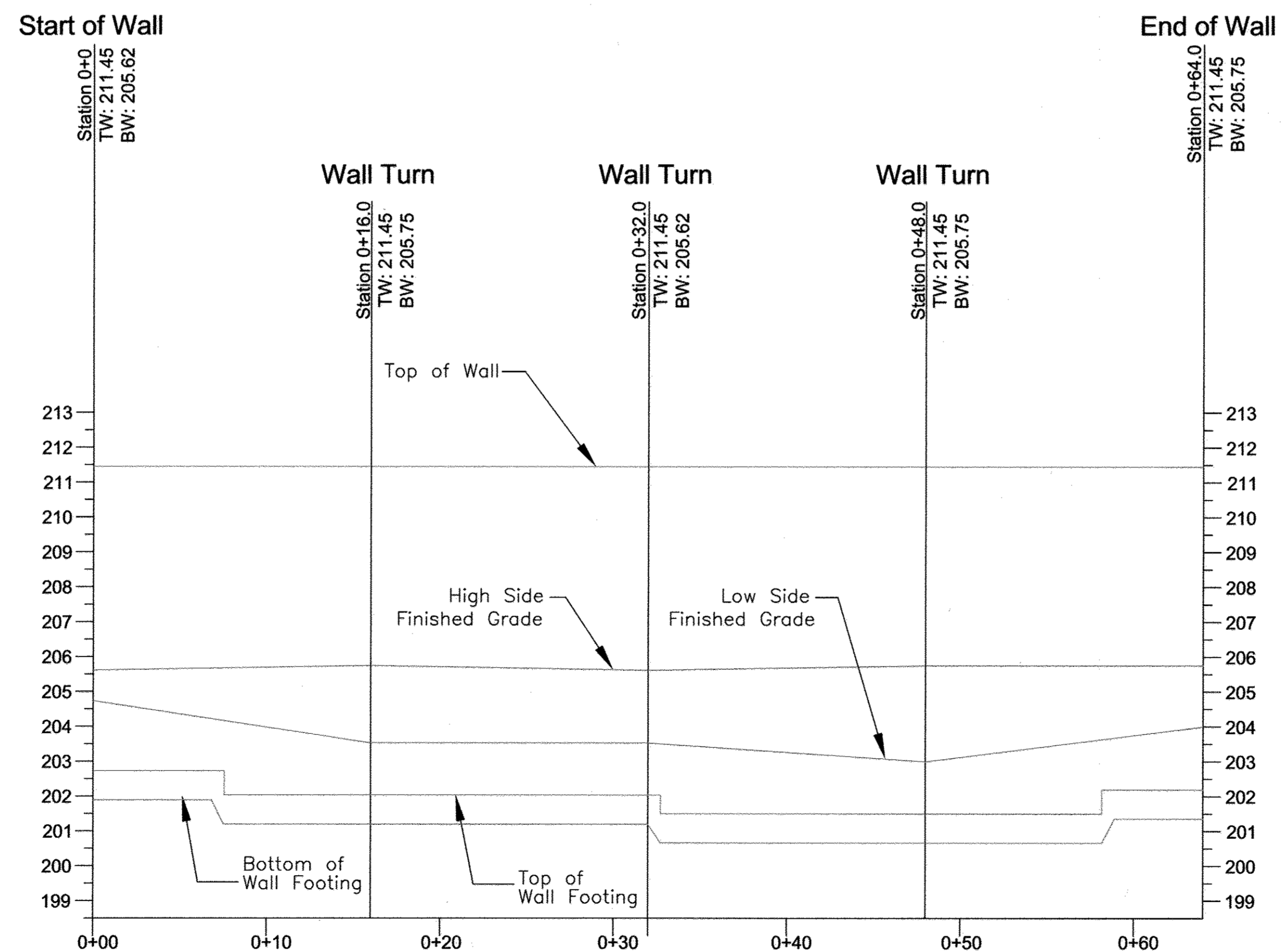


Plan View (based on Site Plan  
by Vogel Engineering)  
Scale: 1"=10'



WALL 13 TYPICAL SECTION  
NTS

Wall 13: See  
Architectural /  
Landscape Plans for  
Finish Details

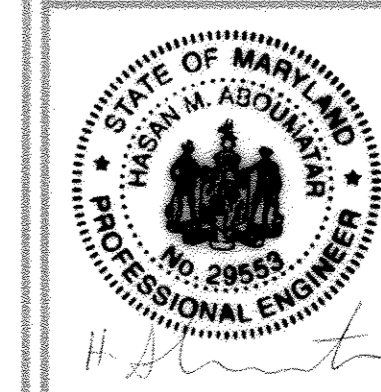


Wall # 13

OWNER/DEVELOPER  
BLUE STREAM 1 LLC  
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ELLCOTT CITY, MD 21041  
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BUILDABLE BULK PARCEL H  
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TAX MAP 43 GRID 4 & 5 PARCEL 14  
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND



DESIGN BY: \_\_\_\_\_  
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THAT I AM A FULLY LICENSED PROFESSIONAL  
ENGINEER UNDER THE LAWS OF THE STATE  
OF MARYLAND LICENSE NO. 29553  
EXPIRES DATE: 12/31/13

28 SHEET OF 55

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 12/4/12  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]* 12/04/12  
CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 12/4/12  
DIRECTOR

NO AS-BUILT INFORMATION THIS SHEET

AS-BUILT 7/16/15

**Retaining Wall Specifications and Guidelines**

**Part 1: General**

**1.01 Description**

- A. Retaining walls must be constructed under the supervision of a Maryland Registered Professional Engineer.
- B. Work includes preparation of foundation soils, furnishing all materials, and installing all materials to the lines and grades shown on the construction drawings.

**1.02 Codes and Standards**

- A. International Building Code - 2006, International Code Council, Inc.
- B. ACI Manual of Concrete Practice - Parts 1 Through 5 - 2001
- C. Manual of Standard Practice - Concrete Steel Reinforcing Institute
- D. American Society for Testing and Materials

**1.03 Damage, Storage, and Handling**

- A. The Contractor shall check the materials upon delivery to assure that the proper materials have been received.
- B. The Contractor shall properly handle and store the materials to prevent damage to the materials. Damaged materials shall not be incorporated into the wall.

**1.04 Quality Assurance**

- A. The Owner shall engage a qualified testing agency to provide observation and testing services as described below.
- B. Concrete Placement
  - 1. The agency shall inspect the formwork and reinforcing steel placement for compliance with the contract documents. Reinforcing steel should be inspected for correct size, quantity, and spacing.
  - 2. Fresh concrete shall be sampled in accordance with ASTM C 172, and tested for slump, air entrainment, and temperature.
  - 3. Test cylinders shall be molded in accordance with ASTM C 31. Four test cylinders shall be molded for each day's pour, or for every 50 cubic yards of concrete placed, whichever is greater.
- C. Fill Placement
  - 1. All soil fills shall be tested in accordance with ASTM D 2922.
  - 2. A minimum of one compaction test per lift should be made per 2,500 square feet of fill lift area, but not fewer than two tests per lift should be made.
  - 3. The elevations and locations of the field density tests should be clearly identified at the time of fill placement and compaction.

**Part 2: Materials**

**2.01 Concrete**

- A. Concrete shall conform to Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414
- B. Concrete shall have a minimum 28-day compressive strength of 4,500 psi.
- C. Concrete shall have a maximum slump of 6 inches and shall be air entrained at 6.1% by volume.
- D. Concrete shall have a minimum density of 145 pcf and a maximum water-to-cement ratio of 0.50

**2.02 Steel Reinforcement**

- A. Steel reinforcing shall conform to ASTM A-615, Grade 60.
- B. Submit shop drawings at least 15 business days before date reviewed submittals will be needed. Shop drawings shall bear the contractor's stamp of approval which shall constitute that he has verified all field measurements, construction criteria, materials, and similar data, and has checked each drawing for completeness, coordination, and compliance with contract documents.

**2.03 Soil Backfill**

- A. Material should consist of soil classified as SM, SC, or more granular, in accordance with ASTM D 2487.
- B. Material should have no particle larger than 2.5 inches and shall contain at least 30 percent, by weight, retained on the U.S. No. 200 sieve.
- C. Materials should have a Liquid Limit less than 40, and a Plasticity Index less than 12.
- D. Material should have a minimum friction angle of 30 degrees.
- E. The Contractor should submit samples of the proposed backfill soils to the Geotechnical Engineer of Record for approval prior to their use.

**2.04 Drainage Board**

- A. Drainage board used behind the walls shall consist of Miradrain 9900.

**Part 3: Construction**

**3.01 General**

- A. All existing underground utilities shall be properly marked, and relocated if necessary, prior to construction.
- B. All proposed underground utilities or structures in the general wall area shall be completely installed prior to the construction of the wall.
- C. Protect all existing and/or new structures from damage by construction equipment. Immediately repair any damage that may occur.

**3.02 Foundation**

- A. The wall foundation shall be excavated to the grades and lines as shown on the construction drawings. Contractor should take care not to disturb foundation soils beyond the lines and grades shown.
- B. The Foundation shall bear at the minimum embedment depths indicated, as measured from the final grade at the front of the wall.
- C. The Foundation subgrade soils shall be tested by a qualified representative of the Geotechnical Engineer to verify the availability of the design bearing pressure of 4,000 psf.
- D. If unsuitable soils are encountered at design Foundation levels, the unsuitable soils shall be removed and the over-excavated areas shall be replaced with compacted structural fill.

**3.03 Steel Reinforcement**

- A. All steel reinforcing shall have a minimum clear cover of 3 inches unless otherwise noted on the contract documents.
- B. Where applicable, splices for reinforcing steel shall be made by contact tension lap splices.
- C. Welding and field-bending of reinforcing steel is not permitted.
- D. Furnish all accessories, chairs, space bars, supports, etc. necessary to secure reinforcing.

**3.04 Cast-In-Place Concrete**

- A. Footing Concrete
  - 1. The vertical faces of the footing and key excavation may be used as forms for placement of foundation concrete.
  - 2. Foundation concrete, or protective mud mats, should be placed the same day that the foundation subgrade is approved.
  - 3. Provide concrete protection against freezing during placement and for 5 days thereafter.
- B. Wall Concrete
  - 1. Furnish and erect concrete forms to the lines and grades shown on the construction drawings.
  - 2. Locate expansion joints as to not impair the strength of the structure, but not more than 60 feet in any direction. Provide continuous bentonite waterstrip at all expansion joints.
  - 3. Make stops in concrete pours using vertical bulkheads.
  - 4. All reinforcing shall be continuous through joints and bulkheads.
  - 5. Chamfer exposed concrete corners 3/4" by 3/4" minimum.
  - 6. Provide 4" diameter weep holes every 8 feet along the bottom of the wall and at wall ends. The weep holes should be formed in place prior to concrete placement by using PVC pipe. Weep hole locations must not interfere with steel reinforcing, and shall be no greater than 4 inches above final grade at the front of the wall.
  - 7. Where a fence is required, it is recommended that the fence posts be installed during wall concrete placement. The fence posts shall have a minimum of 24 inches of embedment into the wall, and be located along the center of the wall. Alternatively, provide 4 inch diameter by 24 inch deep post holes at the designated fence post locations along the centerline of the wall. The post holes should be formed in place prior to concrete placement by using PVC pipe.

**3.05 Backfilling**

- A. All soil backfill shall conform to the material requirements of section 2.03.
- B. Backfill shall be moisture conditioned to within 2 percentage points of the optimum moisture content, as determined in accordance with ASTM D-698.
- C. Backfill shall be placed in loose lifts, not exceeding 8 inches in thickness, and then compacted to at least 95 percent of the maximum dry density, as determined in accordance with ASTM D-698.
- D. Backfilling shall not occur against the wall until the wall concrete has attained at least 75 percent of the 28-day design strength, and no earlier than 3 days after placement.
- E. Where feasible, maintain equal grades on each side of the wall during backfilling to prevent over-turning and lateral movement. When the grade differential at the wall exceeds 12 inches, only hand-operated compaction equipment shall be allowed.
- F. Drainage boards shall be placed against the wall, extending from the weep hole up within 12 inches of final grade at the top of the wall.

**3.06 Finish**

- A. Final grades at the wall shall be established by the Contractor in accordance with the most recent site grading plans.
- B. Final grades shall be stabilized and seeded per the approved civil plans unless noted otherwise on the site grading plans.
- C. Install fence at the top of the wall in accordance with project documents. If fence posts are installed subsequent to wall construction, the fence posts shall be grouted into the PVC post holes using 3,000 psi non-shrink grout.
- D. See Architectural or Landscape plans and specifications for additional fence details, column details and wall finish details.

**OWNER/DEVELOPER**  
 BLUE STREAM 1 LLC  
 P.O. BOX 416  
 ELLICOTT CITY, MD 21041  
 C/O: ARNOLD SAGNER  
 410-465-2020

2	REVISED RETAINING WALL DRAWINGS	10/18/12
NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**RETAINING WALL REDESIGN**  
**GROSVENOR HOUSE**  
 BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES  
 TAX MAP 43 GRID 4 & 5  
 1ST ELECTION DISTRICT  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND

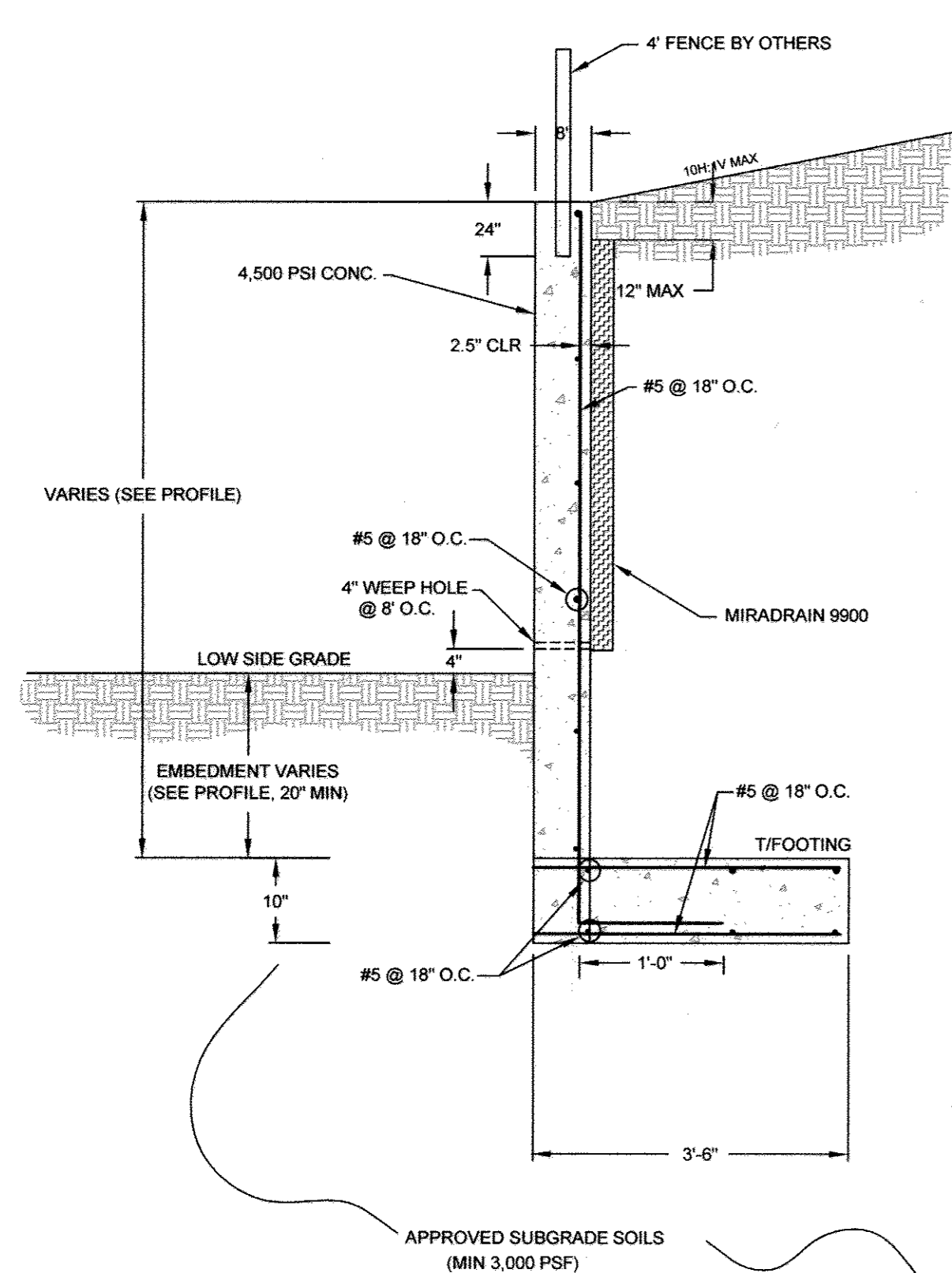
**ECS LLC**  
 MID-ATLANTIC  
 1340 CHARWOOD ROAD  
 SUITE A  
 HANOVER, MARYLAND 21076  
 PHONE: (410) 859-4300  
 FAX: (410) 859-4324

**PROFESSIONAL CERTIFICATE**  
 DESIGN BY: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 DATE: NOV. 23, 2011  
 SCALE: AS SHOWN  
 W.O. NO.: 98-26.01

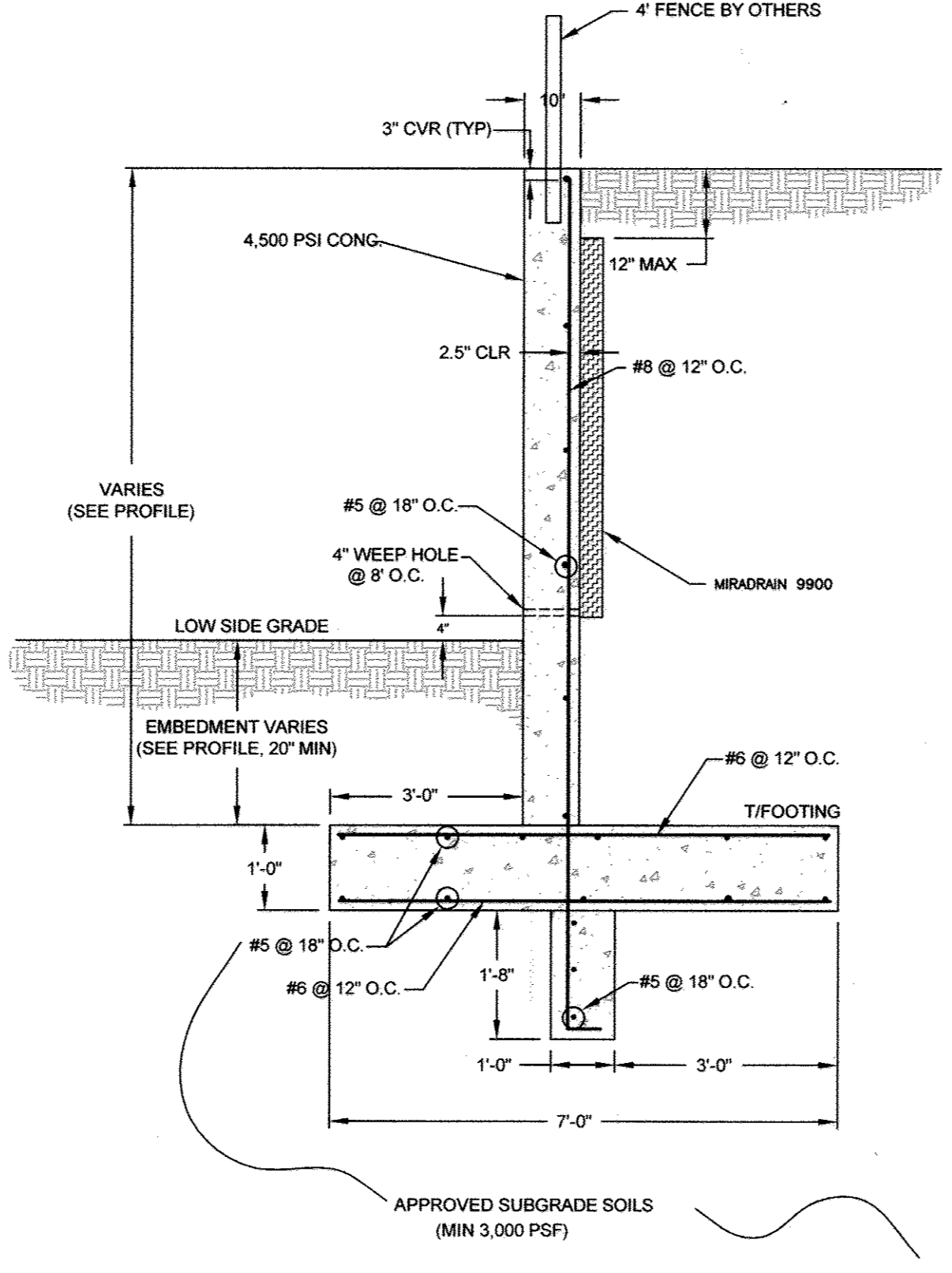
STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 No. 29553

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 UNDER NO. 29553 EXPIRATION DATE 12/31/13

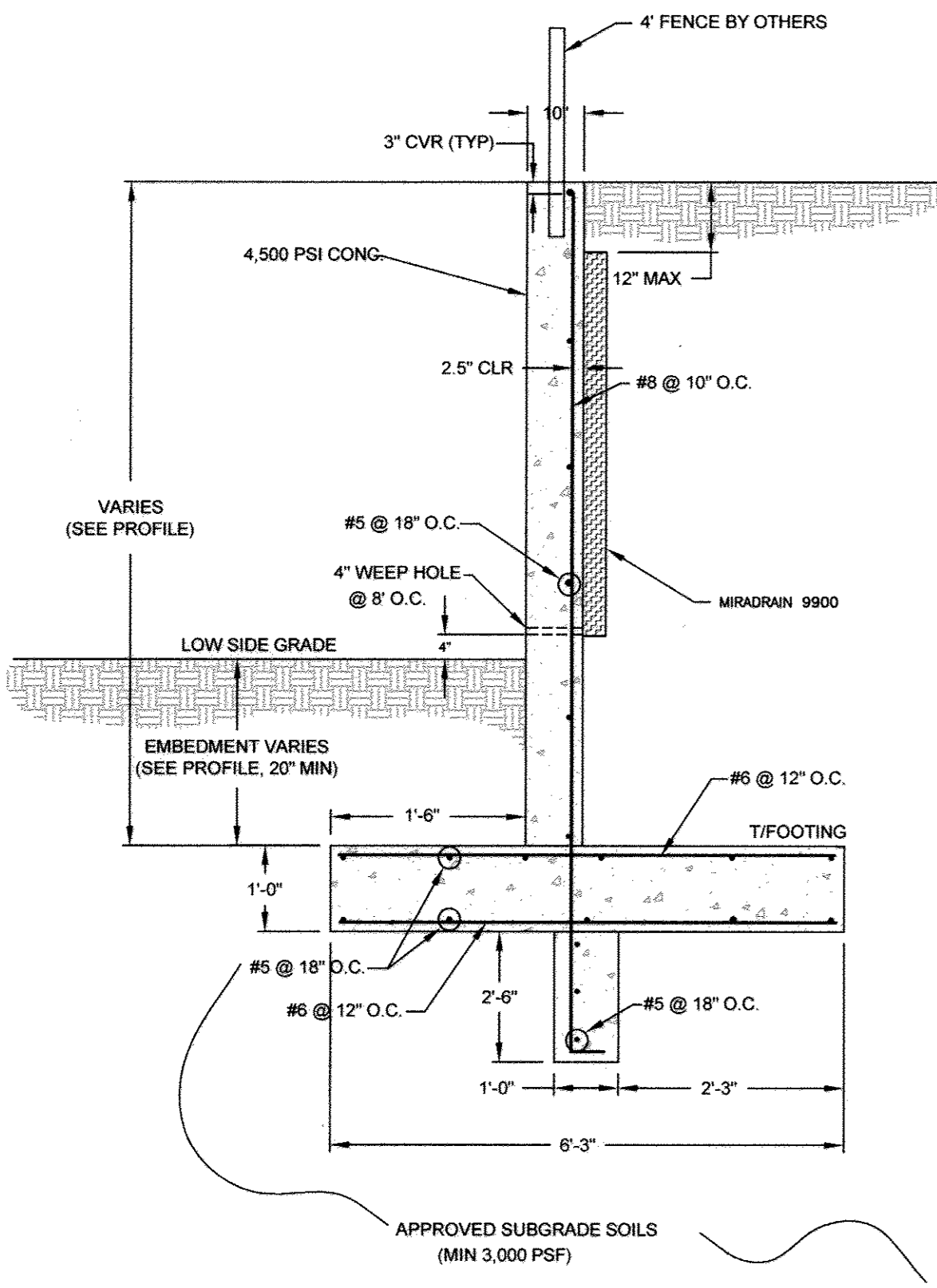
29 SHEET OF 55



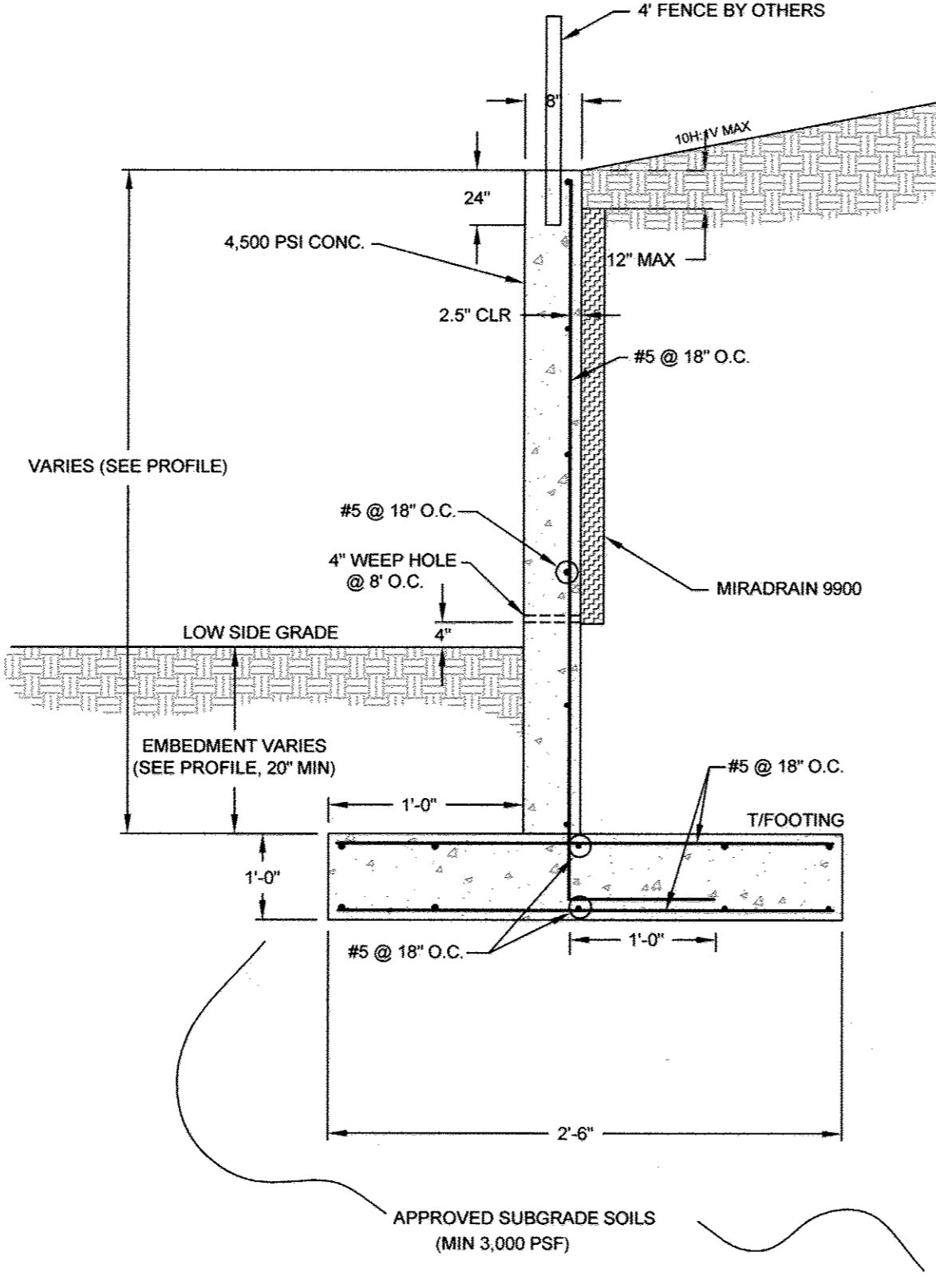
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 NTS



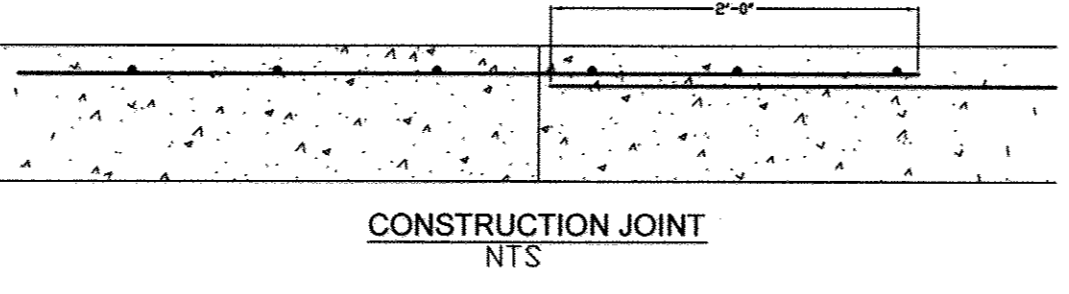
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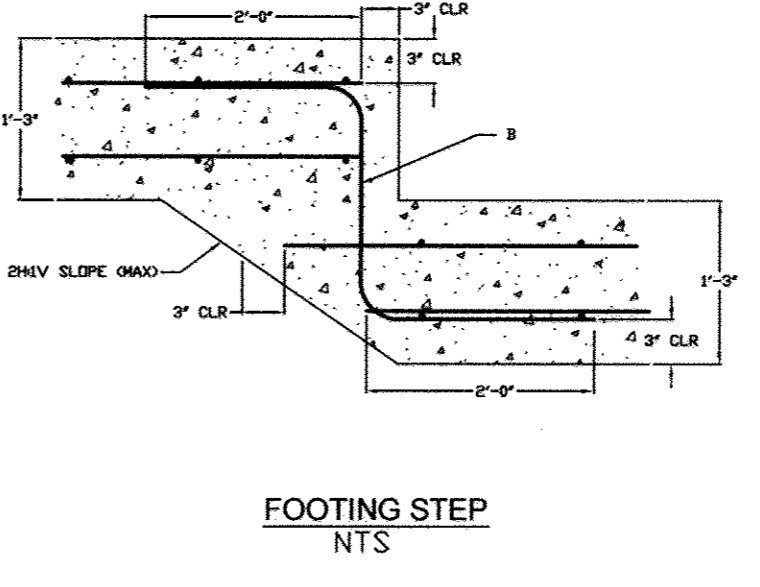
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 NTS



**WALL 8 TYPICAL SECTION (STA 0+80 to END OF WALL)**  
 NTS



**CONSTRUCTION JOINT**  
 NTS



**FOOTING STEP**  
 NTS

NO AS-BUILT INFORMATION THIS SHEET

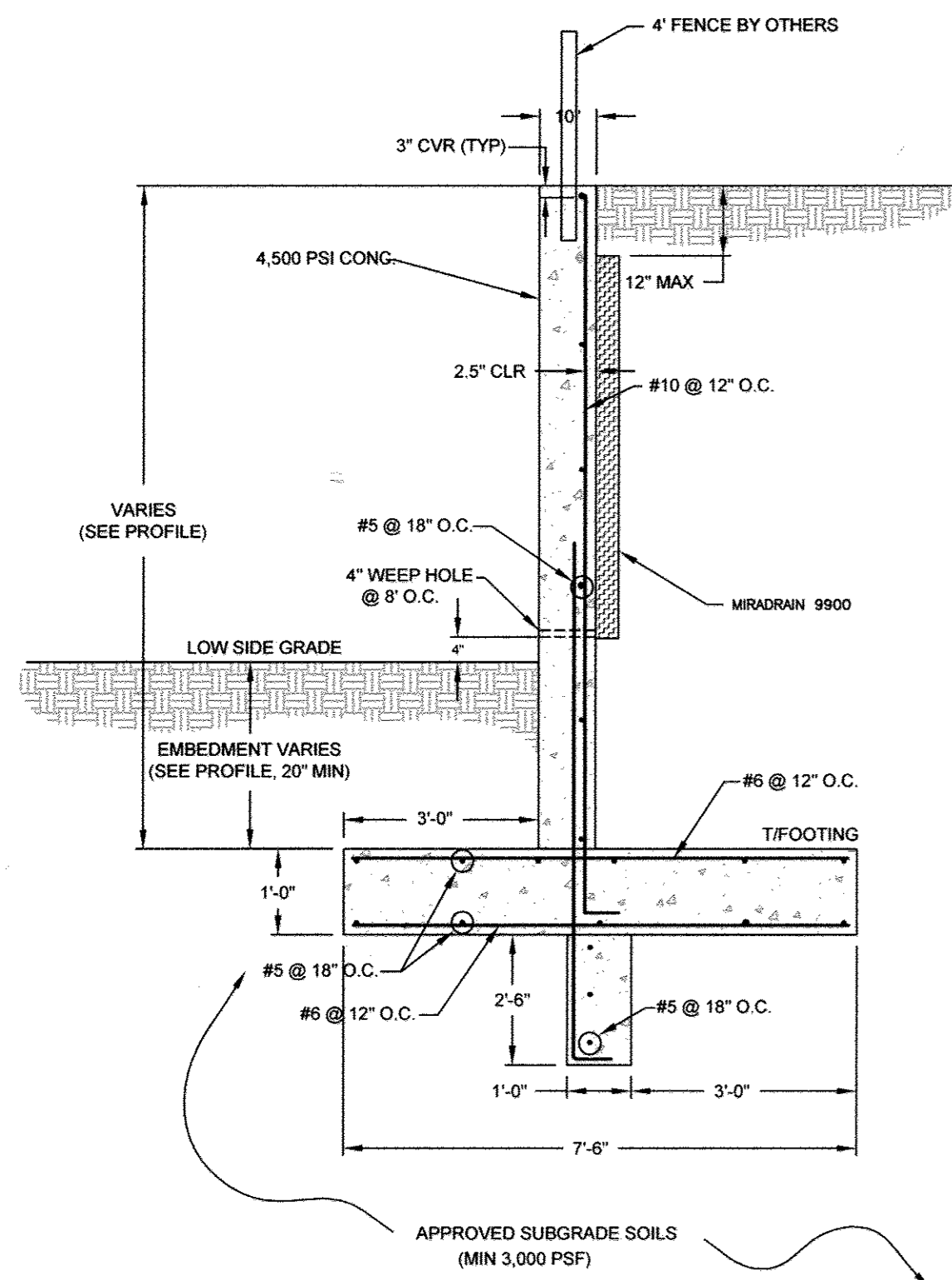
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Michael J. ...* 12/4/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

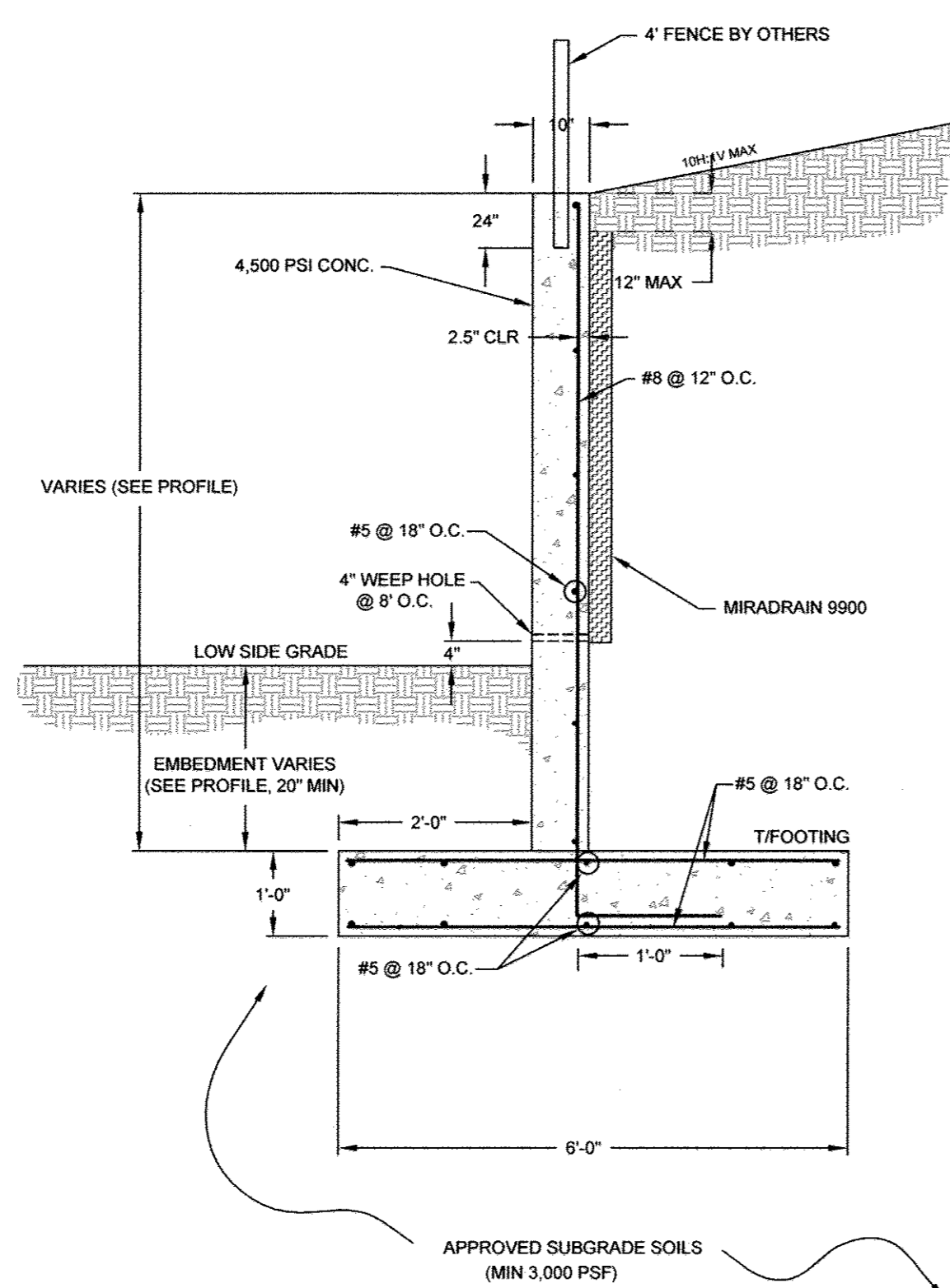
*Keith ...* 12/04/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*Barbara ...* 12/4/12  
 DIRECTOR

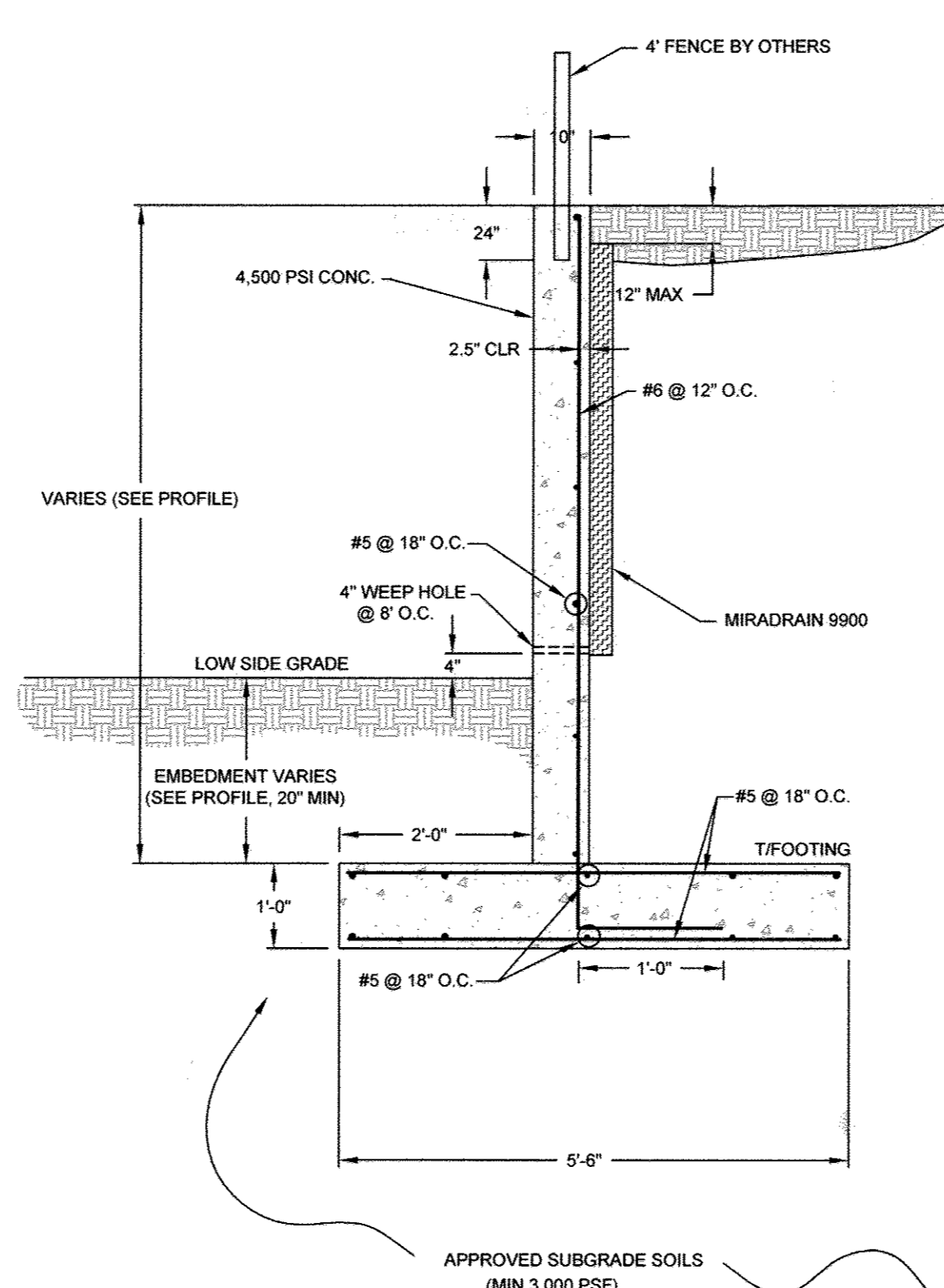
AS-BUILT 7/16/15



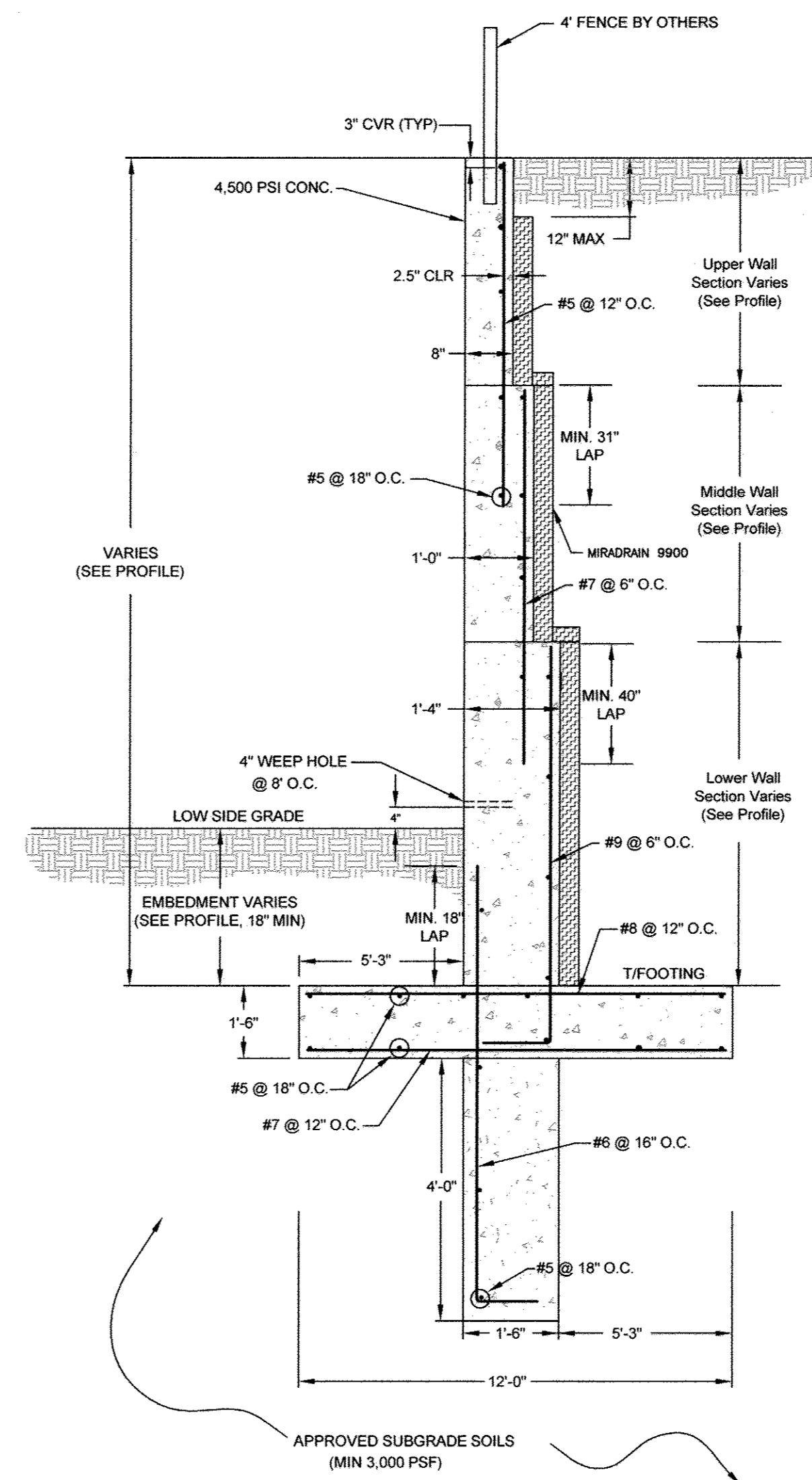
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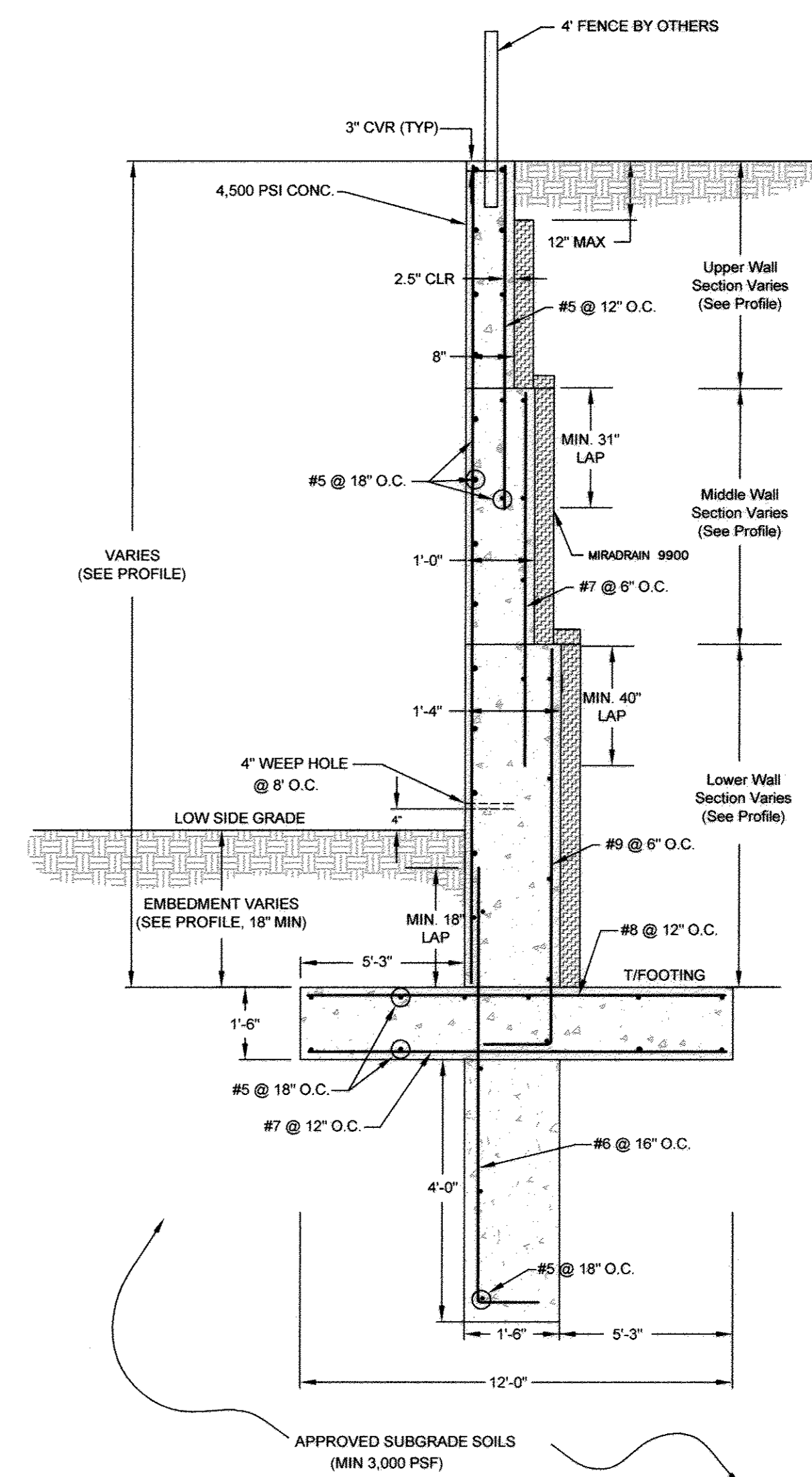
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NTS



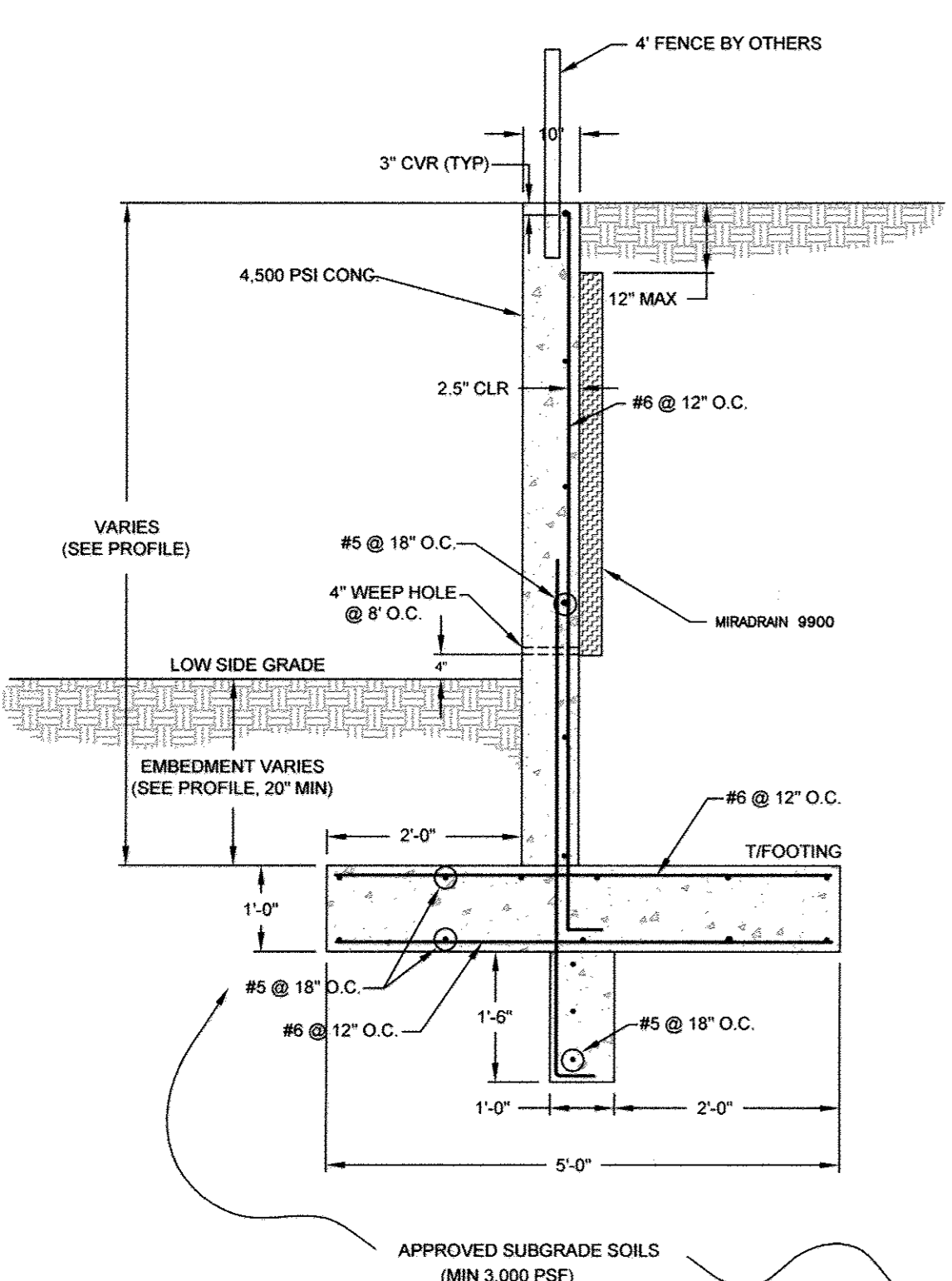
WALL 11 TYPICAL SECTION  
NTS



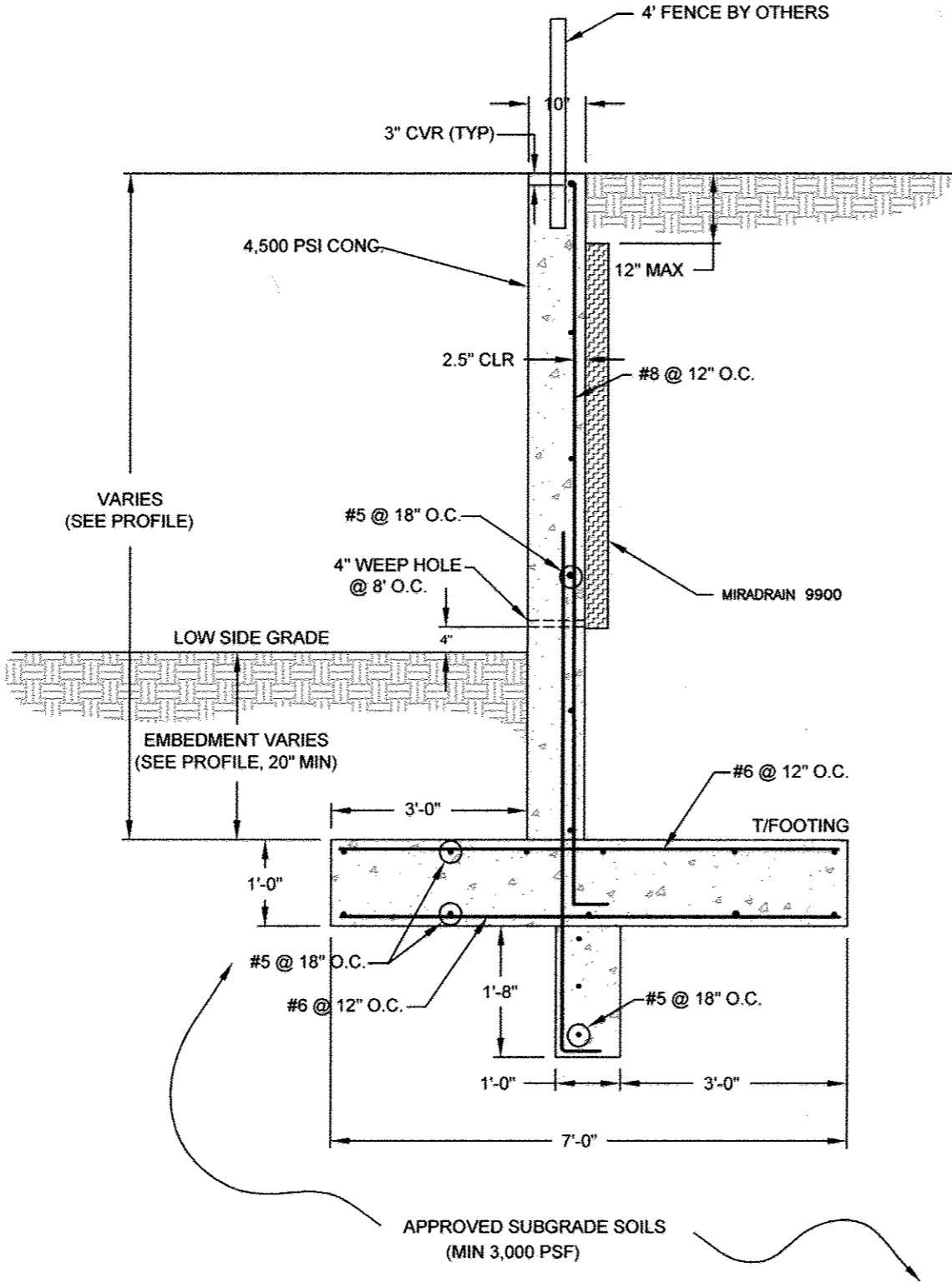
WALL 1 TYPICAL SECTION  
(START OF WALL TO STA 2+23.4)  
NTS



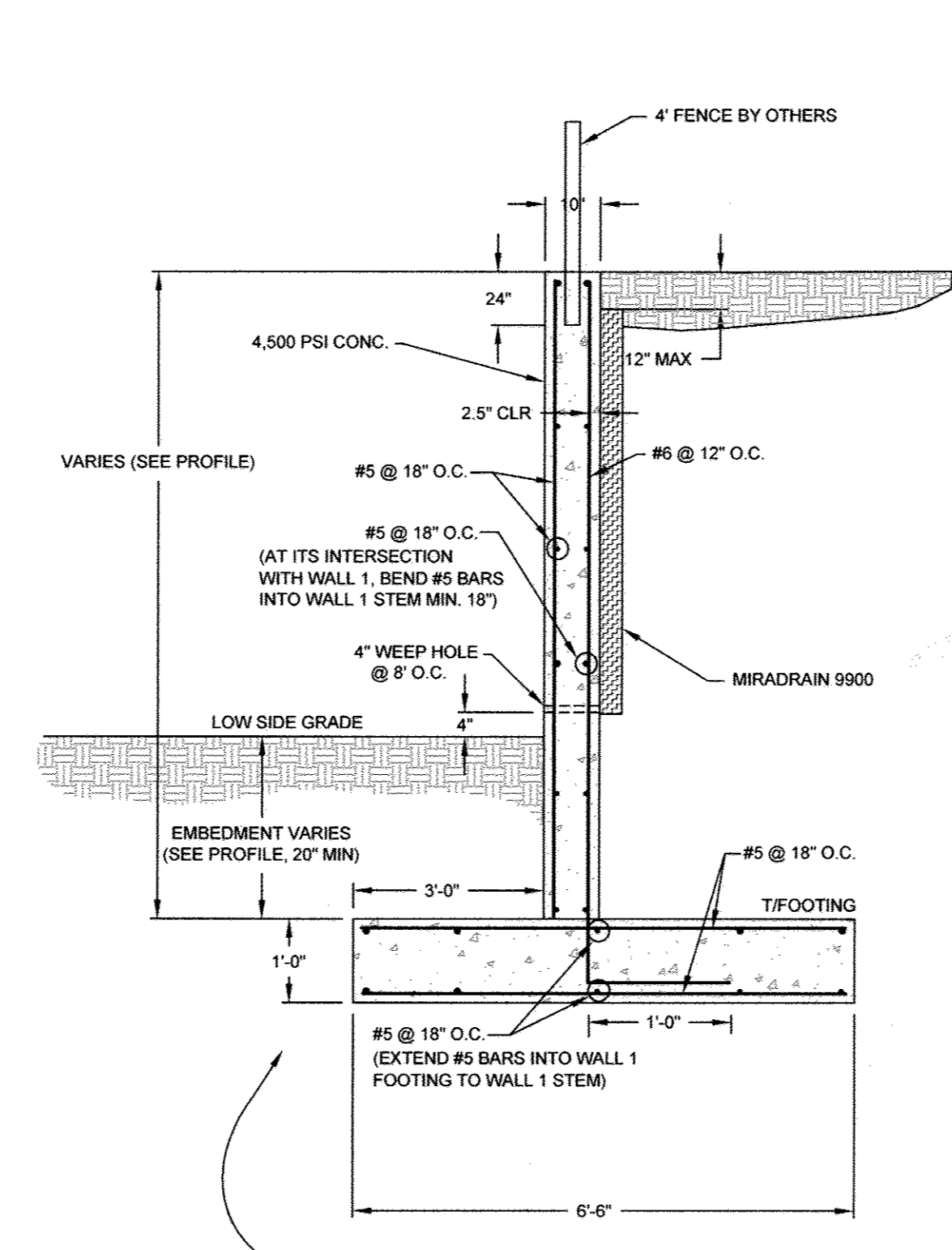
WALL 1 TYPICAL SECTION  
(STA 2+23.4 TO END OF WALL)  
NTS



WALL 4 TYPICAL SECTION  
NTS



WALL 5 TYPICAL SECTION (STA 0+15 - STA 0+52.5)  
NTS



WALL 1A TYPICAL SECTION  
NTS

OWNER/DEVELOPER  
BLUE STREAM 1 LLC  
P.O. BOX 416  
ELLCOTT CITY, MD 21041  
C/O: ARNOLD SACNER  
410-465-2020

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 12/4/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 12/01/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 12/4/12  
 DIRECTOR

NO AS-BUILT INFORMATION THIS SHEET

2	REVISED RETAINING WALL DRAWINGS	10/18/12
NO.	REVISION	DATE

SITE DEVELOPMENT PLAN  
**RETAINING WALL REDESIGN**  
**GROSVENOR HOUSE**  
 BUILDABLE BULK PARCEL #  
 APARTMENTS AND TOWNHOMES

TAX MAP 43 GRID 4 & 5  
 1ST ELECTION DISTRICT

PARCEL 14  
 HOWARD COUNTY, MARYLAND

**ECs** LLC  
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1340 CHARWOOD ROAD  
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 PHONE: (410) 859-4300  
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PROFESSIONAL CERTIFICATE  
 I HEREBY CERTIFY THAT THESE DOCUMENTS  
 WERE PREPARED OR APPROVED BY ME, AND  
 THAT I AM A SEELY LICENSED PROFESSIONAL  
 ENGINEER UNDER THE LAWS OF THE STATE  
 OF MARYLAND, LICENSE NO. 29553  
 EXPIRATION DATE: 12/31/13

DESIGN BY: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 DATE: NOV. 23, 2011  
 SCALE: AS SHOWN  
 W.O. NO.: 05-26.91

30 SHEET OF 55

AS-BUILT 7/16/15

SCHEDULE A - PERIMETER LANDSCAPE EDGE						
CATEGORY		B1, B2, B3, B4	B5	C1, C2	C3	E
PERIMETER FRONTAGE DESIGNATION						
LANDSCAPE TYPE						
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER		697'	70'	68'	92'	88'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)		NO	NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET)		NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED						
SHADE TREES		1:50 (1)	1:40 (2)	1:40 (2)	1:40 (2)	5
EVERGREEN TREES		1:40 (2)	1:30 (6)	1:40 (2)	1:40 (2)	7
SHRUBS		1:4 (37)	1:4 (37)	1:4 (37)	1:4 (37)	37
NUMBER OF PLANTS PROVIDED						
SHADE TREES		(17)	(21)	(21)	(21)	5
EVERGREEN TREES		(21)	(6)	(6)	(6)	7
OTHER TREES (2:1 SUBSTITUTION)		(21)	(6)	(6)	(6)	7
SHRUBS (10:1 SUBSTITUTION)		(37)	(37)	(37)	(37)	37
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED						

(\*) PERIMETER LANDSCAPE EDGE TYPE B1 THRU B4 AND C1 CREDITED (NOT REQUIRED) AS A RESULT OF THE ORNAMENTAL WALL/FENCE PROVIDED ALONG ROUTE 1 AND BLUESTREAM DRIVE.  
 (\*\*) PERIMETER LANDSCAPE EDGE TYPE B5 AND C3 REQUIRED PLANTING LOCATED ALONG P1, P2 PERIMETER.

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF PARKING SPACES	400
NUMBER OF TREES REQUIRED (1 TREE PER 10 SPACES)	41
NUMBER OF TREES PROVIDED	38
SHADE TREES	38
OTHER TREES (2:1 SUBSTITUTION)	6(3)
ISLAND REQUIREMENT - 200 SF MIN. - (41 TREES @ 200 SF)	
ISLAND SPACE PROVIDED - 9874 SF = 220 SF PER TREE	

SCHEDULE C - RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING				
CATEGORY	SINGLE FAMILY ATTACHED	APARTMENT	APARTMENT	TOTAL
NUMBER OF DWELLING UNITS	28	226	226	254
NUMBER OF TREES / ISLANDS REQUIRED	1:1 DU 28	1:3 DU 75	1:3 DU 75	103
NUMBER OF PLANTS PROVIDED				
SHADE TREES	20	38	38	58
EVERGREEN TREES (2:1 SUB)	16 (8)	28 (13)	28 (13)	42 (21)
OTHER TREES (2:1 SUB)				
SHRUBS (10:1 SUB)		263 (26)	263 (26)	263 (26)

**LANDSCAPE EDGE TYPE**

- A LANDSCAPE EDGE TYPE A
- B LANDSCAPE EDGE TYPE B
- C LANDSCAPE EDGE TYPE C
- E LANDSCAPE EDGE TYPE E
- N LANDSCAPE EDGE TYPE - NONE REQUIRED

**LANDSCAPE EDGE TYPE - LENGTHS**

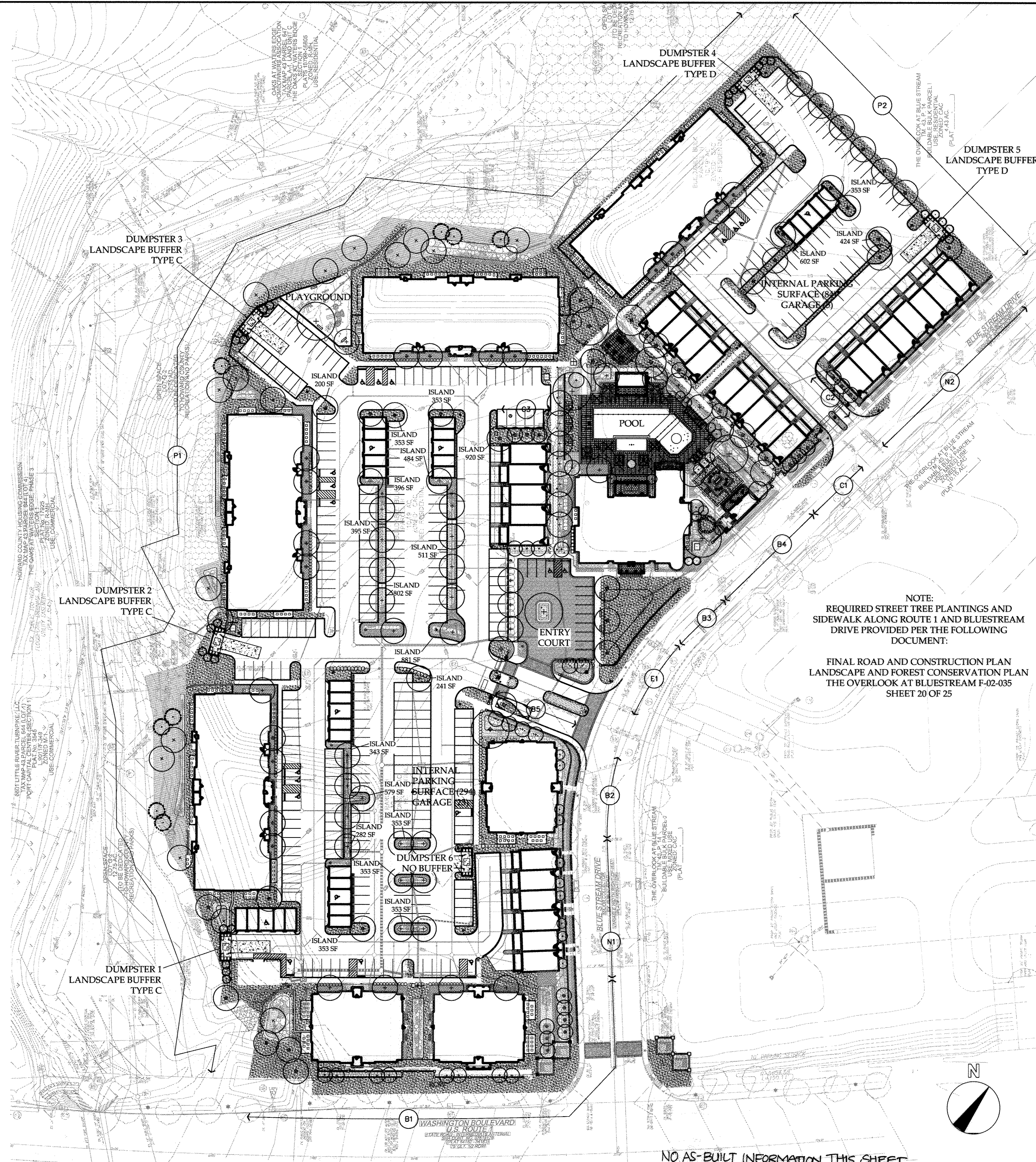
- B1 LENGTH = 405'
- B2 LENGTH = 102'
- B3 LENGTH = 70'
- B4 LENGTH = 120'
- B5 LENGTH = 70'
- C1 LENGTH = 68'
- C2 LENGTH = 46'
- C3 LENGTH = 46'
- E1 LENGTH = 88'
- N1 LENGTH = 138'
- N2 LENGTH = 196'

**LANDSCAPE SCHEDULE NOTE:**

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

**GENERAL NOTES:**

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE BONDED PER THIS SUBMISSION.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPERS AGREEMENT IN THE AMOUNT OF \$46,860 FOR THE REQUIRED 149 SHADE TREES - REQUIRED (\$300ea), 7 EVERGREEN TREES (\$150ea), AND 37 SHRUBS (\$30ea).
- MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS LISTED HEREWITH AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
- THERE ARE NO WETLANDS, STREAMS, OR 100YR FLOODPLAIN ON SITE.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION 07/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT 6/20/12  
 DIRECTOR 6/23/12

**DEVELOPER'S/BUILDER'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 (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
 SIGNATURE OF DEVELOPER: *Carol Kayser* DATE: 5/23/12

NO AS-BUILT INFORMATION THIS SHEET

AS-BUILT 7/16/15

**HENNEMAN + ASSOCIATES ARCHITECTS & PLANNERS**  
 10785 Charter Drive, Suite 400  
 Columbia, Maryland 21044  
 Tel: 410-992-4411 • Fax: 410-992-4497  
 www.hennemans.com

**DESIGN COLLECTIVE**  
 ARCHITECTURAL, PLANNING, INTERIOR DESIGN  
 315 BACHTHALL STREET, SUITE 200  
 DUMMERS, MARYLAND 21044  
 Tel: 410-992-4411 • Fax: 410-992-4497  
 www.designcollective.com

**GROSVENOR HOUSE**  
 BLUE STREAM BUILDABLE BULK PARCEL #1  
 APARTMENTS AND TOWNHOMES  
 TAX MAP 43 GRID 4 & 5  
 1ST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416  
 ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

**MINIMUM LANDSCAPE PLAN**

PROJECT NO.: 2010.16.1  
 SCALE:  
 DATE: FEB. 2, 2012  
 SHEET 31 OF 55  
 SDP-11-032

**PLANT LIST**

**SHADE TREES**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
2	AG	Acer griseum Paperbark Maple	2.5" Cal.	B&B	
43	AR	Acer rubrum 'October Glory' October Glory Red Maple	2.5" Cal.	B&B	Matched
1	AS	Acer saccharum 'Green Mountain' Green Mountain Sugar Maple	2.5" Cal.	B&B	
4	BN	Betula nigra 'Heritage' Heritage Clump Birch	12' Ht.	B&B	
23	CC	Carpinus caroliniana American Hornbeam	1.5"-2" Cal.	B&B	
1	CV	Crataegus viridis 'Winter King' Winter King Hawthorn	1.5" Cal.	B&B	
2	FG	Fagus grandifolia American Beech	2.5" Cal.	B&B	
1	MS	Magnolia x soulangiana Saucer Magnolia	16' Ht.	B&B	Specimen
4	MV	Magnolia virginiana Sweet Bay Magnolia	10' Ht.	B&B	Specimen
1	NS	Nyssa sylvatica Black Gum	2.5" Cal.	B&B	
13	TT	Tilia tomentosa Silver Linden	2.5" Cal.	B&B	
3	PA	Platanus x acerifolia 'Bloodgood' London Plane Tree	2.5" Cal.	B&B	Specimen Quality Straight Leader
5	PA2	Platanus x acerifolia 'Bloodgood' London Plane Tree	4" Cal.	B&B	Specimen Quality Straight Leader
3	PA3	Platanus x acerifolia 'Bloodgood' London Plane Tree	5" Cal.	B&B	Specimen Quality Straight Leader
3	QP	Quercus palustris Pin Oak	2.5" Cal.	B&B	
7	QR	Quercus rubra Red Oak	2.5" Cal.	B&B	
7	UA	Ulmus americana 'Valley Forge' Valley Forge American Elm	2.5" Cal.	B&B	
6	UA2	Ulmus americana 'Valley Forge' Valley Forge American Elm	4" Cal.	B&B	

TOTAL SHADE TREES: 129

**FLOWERING TREES**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
9	AC	Amelanchier canadensis Shadblow Serviceberry	8-10' Ht.	B&B	
1	CF	Cornus florida White Flowering Dogwood	10' Ht.	B&B	
17	CO	Cercis canadensis 'Oklahoma' Oklahoma Red Bud	8' Ht.	B&B	
1	CK	Cornus kousa Kousa Dogwood	8' Ht.	B&B	Specimen
4	LI	Lagerstramia indica x faueri 'Acoma' Acoma Crape Myrtle	6' Ht.	B&B	
27	PY	Prunus yedoensis 'Akebono' Akebono Yoshino Cherry	12' Ht.	B&B	Specimen Quality Matched
3	SM	Syringa vulgaris 'Monore' Blue Skies Lilac	6' Ht.	B&B	Matched, Specimen

TOTAL FLOWERING TREES: 61 (30)

**EVERGREEN TREES**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
2	IO	Ilex opaca American Holly	6' Ht.	B&B	Matched
26	PN	Pinus nigra Austrian Pine	8' Ht.	B&B	Matched
7	PS	Pinus strobus White Pine	8' Ht.	B&B	Matched

TOTAL EVERGREEN TREES: 35 (17)

**SHRUBS**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
18	CF	Cornus sericea 'Flaviramea' Yellow Twiggged Dogwood	4' Ht.	Cont.	Specimen Quality Straight Leader
304	PO	Prunus laurocerasus 'Otto Luyken' Otto Luyken Cherry Laurel	5 Gal.	Cont.	30" O.C.

TOTAL SHRUBS: 322 (32)

**NOTE:**

ABOVE QUANTITIES ARE FOR CONVENIENCE OF CONTRACTOR. FINAL QUANTITIES TO BE GENERATED FROM PLANS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

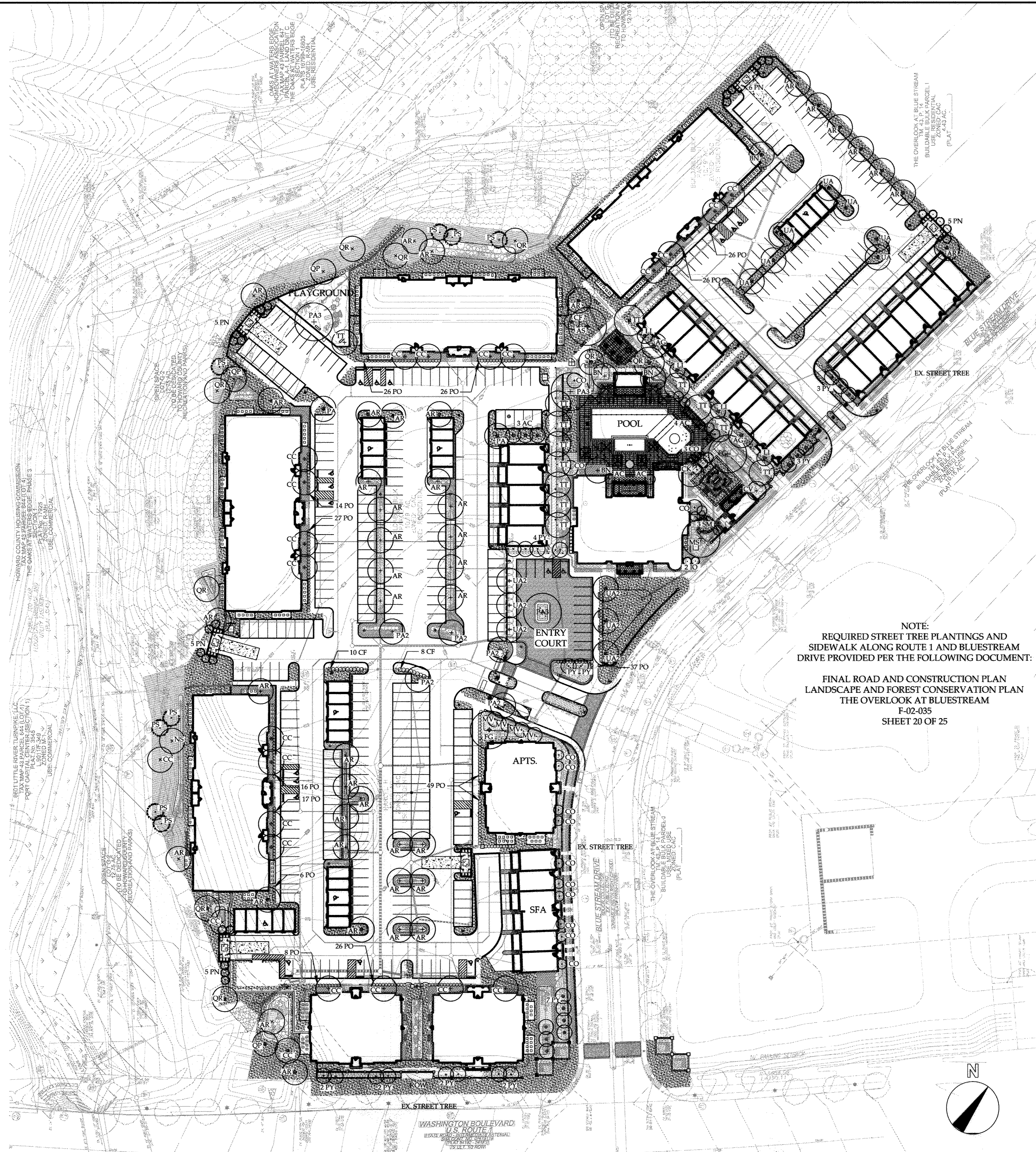
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DIRECTOR

DATE: 6/7/12  
 DATE: 6/20/12  
 DATE: 6/20/12

**DEVELOPER'S/BUILDER'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 (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

SIGNATURE OF DEVELOPER: *Carol Kayan* DATE: 6/20/12



NOTE:  
 REQUIRED STREET TREE PLANTINGS AND  
 SIDEWALK ALONG ROUTE 1 AND BLUESTREAM  
 DRIVE PROVIDED PER THE FOLLOWING DOCUMENT:  
 FINAL ROAD AND CONSTRUCTION PLAN  
 LANDSCAPE AND FOREST CONSERVATION PLAN  
 THE OVERLOOK AT BLUESTREAM  
 F-02-035  
 SHEET 20 OF 25

NO AS-BUILT INFORMATION THIS SHEET

AS-BUILT 7/16/15



**HENNEMAN + ASSOCIATES**  
 ARCHITECTS ■ PLANNERS  
 10705 Charter Drive, Suite 400  
 Columbia, Maryland 21044  
 Tel: 410.992.4417 ■ Fax: 410.992.4497  
 www.hennemans.com

HHA

DESIGN COLLECTIVE

GROSVENOR HOUSE  
 BLUE STREAM BULK PARCEL H  
 APARTMENTS AND TOWNHOMES  
 TAX PLOT 03, DISTRICT 5  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND

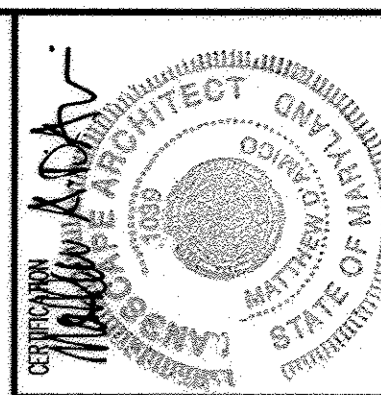
OWNER/DEVELOPER: BLUE STREAM 1 LLC, PO BOX 416,  
 ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

MINIMUM LANDSCAPE PLAN

PROJECT NO.: 2010.16.1  
 SCALE:  
 DATE: FEB. 2, 2012

L102  
 SHEET 32 OF 55  
 SDP-11-032





**HENNEMAN + ASSOCIATES ARCHITECTS & PLANNERS**  
 10705 Charter Drive, Suite 400  
 Columbia, Maryland 21044  
 Tel: 410.992.4417 • Fax: 410.992.4497  
 • www.hennemans.com

**DESIGN COLLECTIVE**  
 CONSULTANT  
 601 EAST FERRY PARKWAY, SUITE 300  
 ANNAPOLIS, MARYLAND 21403  
 T: 410.261.5655 F: 410.261.9215  
 WWW.DESIGNCOLLECTIVE.COM

**GROSVENOR HOUSE**  
 BLUE STREAM BUILDABLE BULK PARCEL H  
 APPLICABLE TO THE GROSVENOR HOUSE  
 TAX MAP 3, 2ND EDITION  
 1ST ELECTION DISTRICT  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND

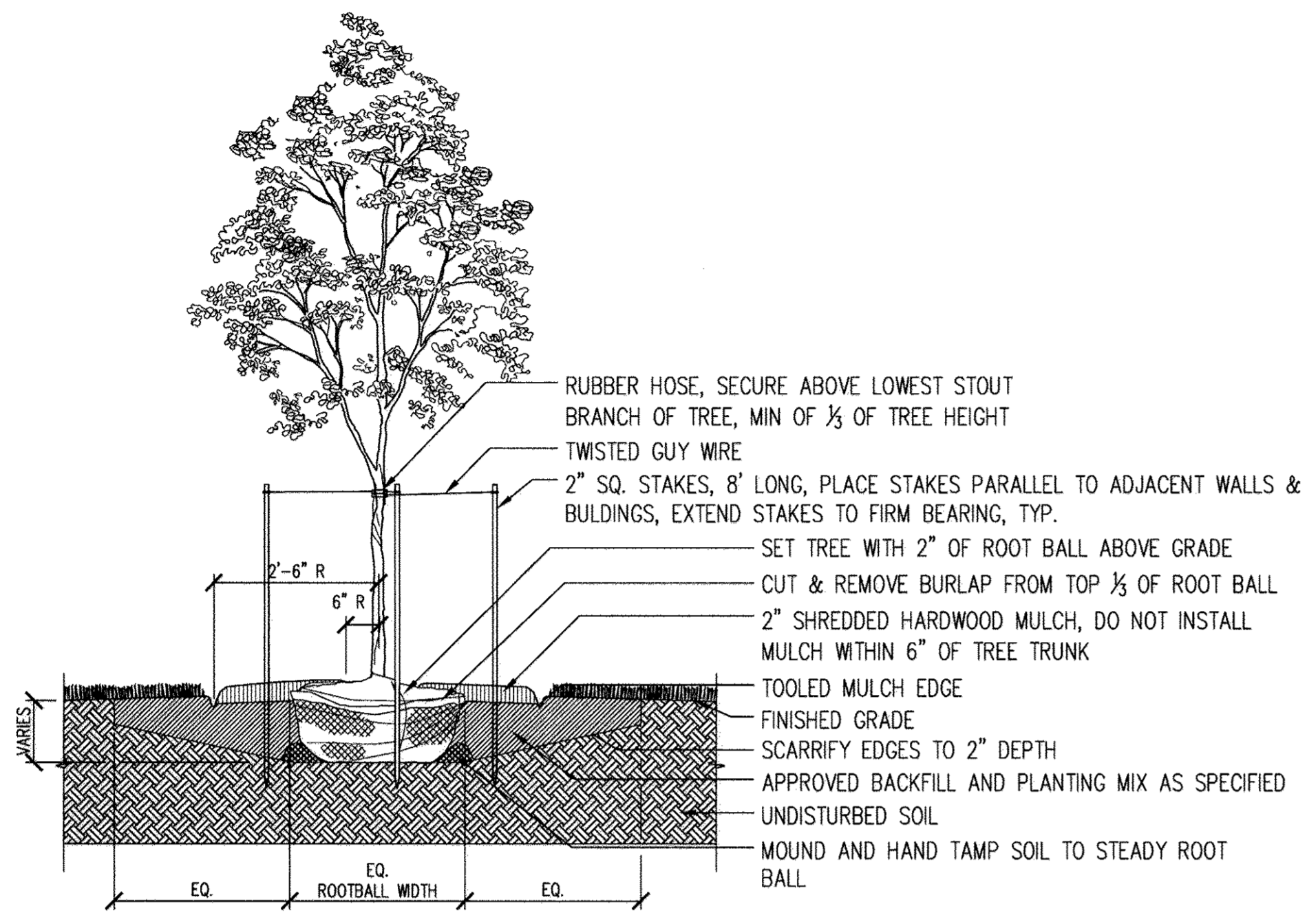
**OWNER/DEVELOPER:** BLUE STREAM 1 LLC PO BOX 416, ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

**PLANTING DETAILS**

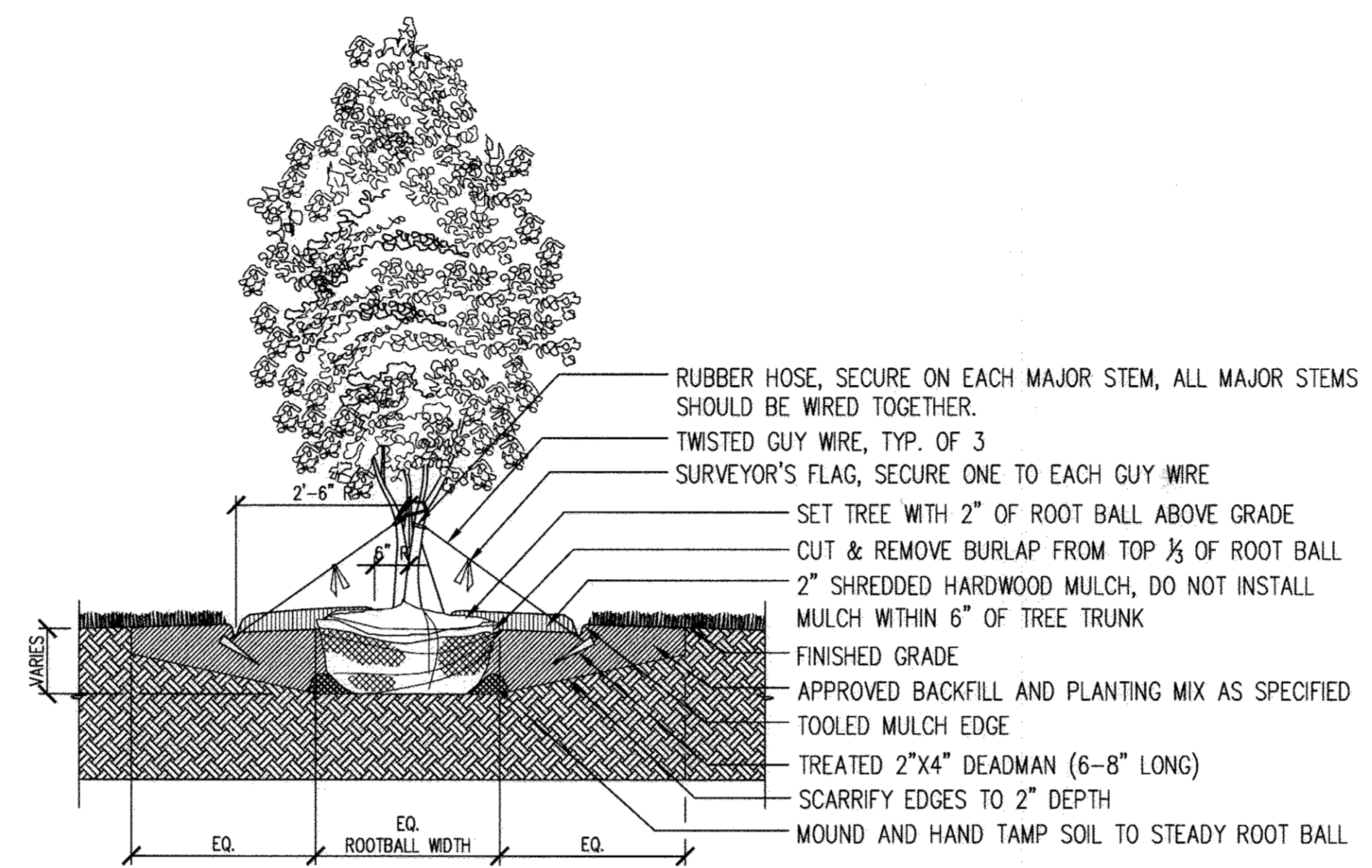
PROJECT NO.: 2010.16.1  
 SCALE:  
 DATE: FEB. 2, 2012

**L103**  
 SHEET 33 OF 55

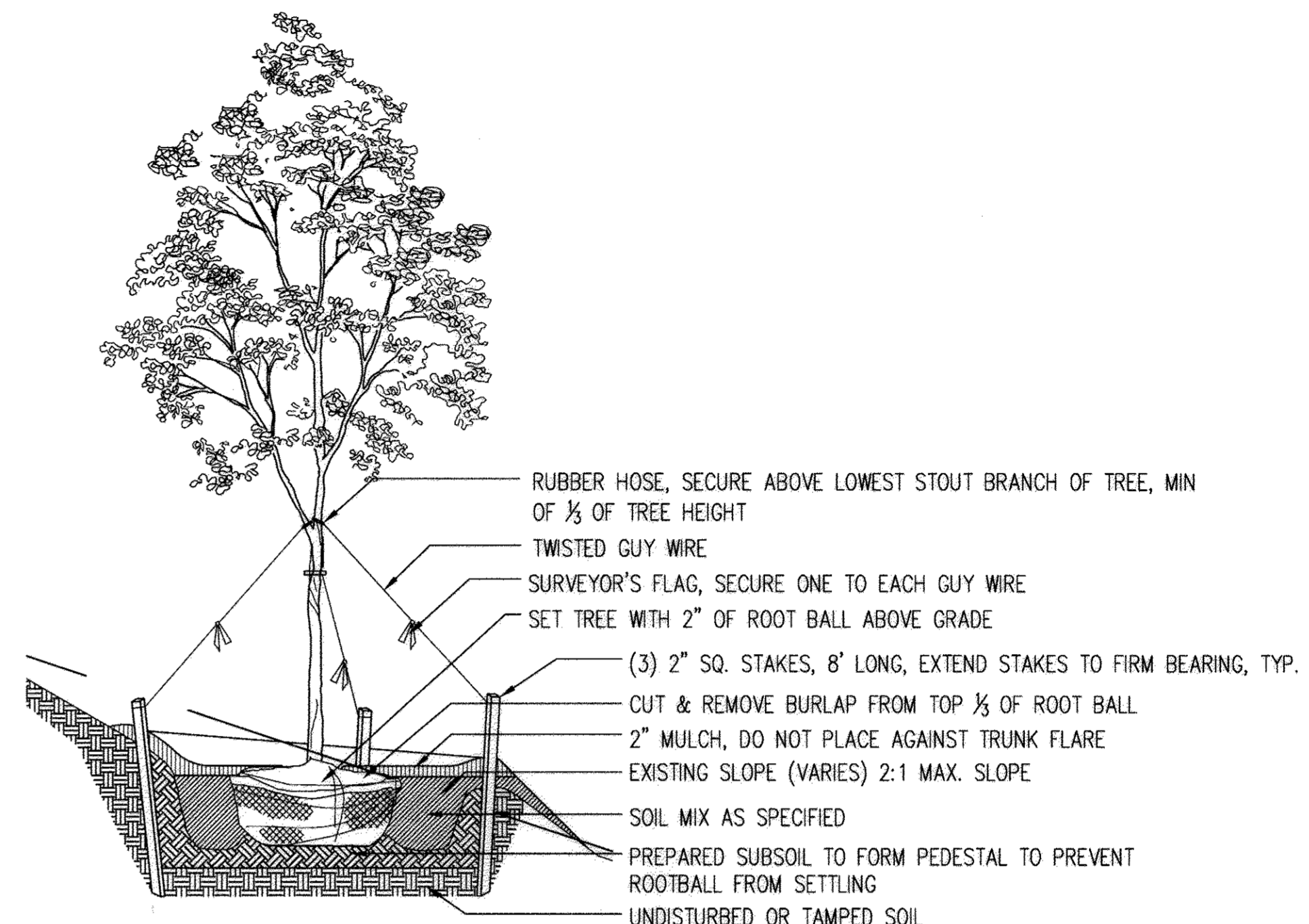
SDP-11-032



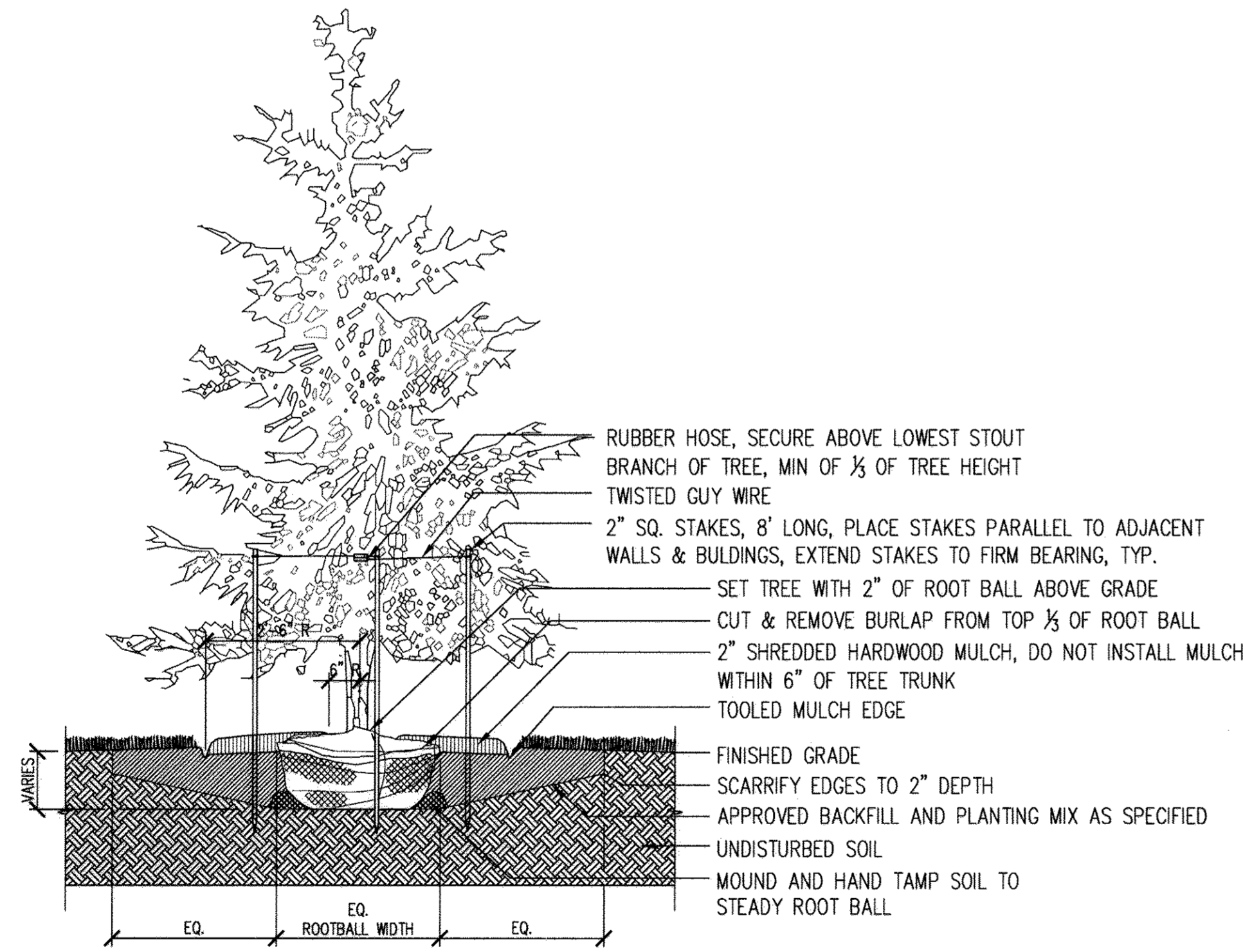
**1 TYPICAL DEDICUOUS TREE PLANTING**  
 SCALE: 1/2" = 1'-0"



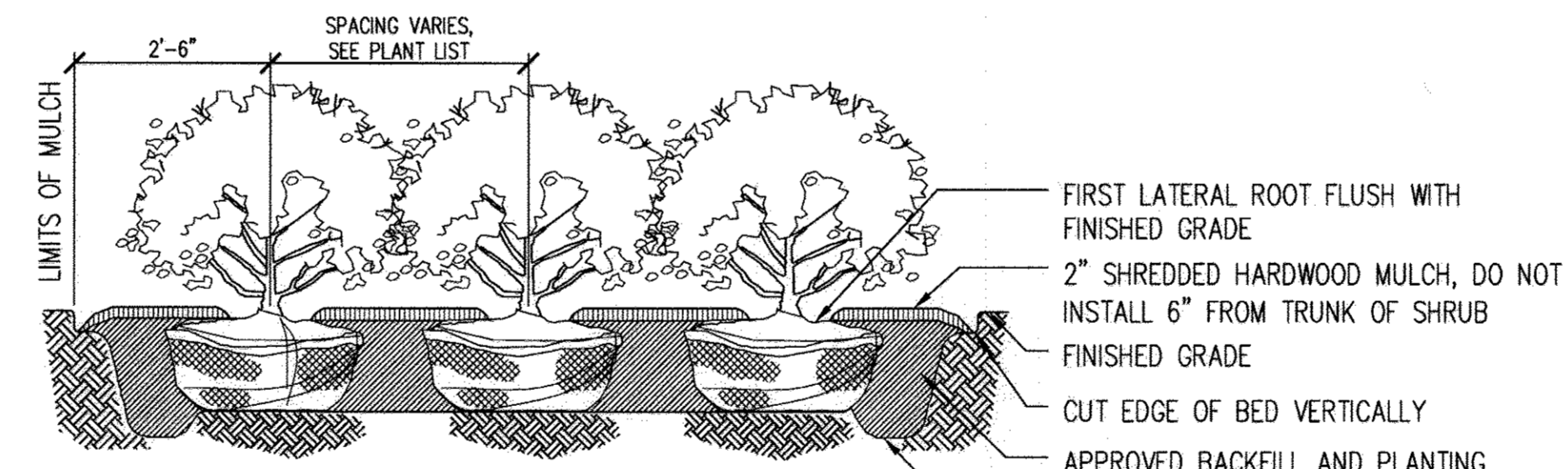
**2 TYPICAL MULTI-STEM TREE PLANTING**  
 SCALE: 1/2" = 1'-0"



**3 TREE PLANTING ON SLOPE**  
 SCALE: 1/2" = 1'-0"



**4 TYPICAL EVERGREEN TREE PLANTING**  
 SCALE: 1/2" = 1'-0"



- NOTES:**
1. CUT AND REMOVE BURLAP FROM THE TOP 1/2 OF THE ROOT BALL
  2. MIN. ROOT SPREAD TO BE IN ACCORDANCE WITH AMERICAN STANDARDS FOR NURSERY STOCK.
  3. PRUNE ALL DAMAGED, DISEASED, OR WEAK LIMBS AND ROOTS.
  4. CLEANLY PRUNE ALL DAMAGED ROOT ENDS.
  5. DO NOT ALLOW ROOTS TO DRY OUT DURING INSTALLATION PROCESS.
  6. SOAK ROOTS IN WATER OVERNIGHT BEFORE PLANTING.

**5 TYPICAL SHRUB PLANTING**  
 SCALE: 1/2" = 1'-0"

- TREE PLANTING NOTES:**
1. NEVER CUT CENTRAL LEADER.
  2. TREE SHALL STAND PLUMB.
  3. COMPLETELY REMOVE WIRE BASKETS BEFORE INSTALLATION. BASKETS SHOULD BE CUT IN A MINIMUM OF 4 PLACES.
  4. MULCH SHOULD NOT BE PLACED AGAINST TRUNK FLARE.
  5. WATER THOROUGHLY TWICE WITHIN THE FIRST 48 HOURS.
  6. FILL MUST NOT BE COMPACTED.
  7. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING.
  8. PRUNING AFTER PLANTING SHOULD BE LIMITED TO DEAD OR DAMAGED BRANCHES, OR THOSE THAT THREATEN THE APPEARANCE AND BRANCHING STRUCTURE OF THE TREE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 6/7/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 6/27/12  
 DIRECTOR *[Signature]* 6/27/12

**DEVELOPER'S/BUILDER'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 (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

*[Signature]* AUTHORIZED PERSON 5/23/12  
 SIGNATURE OF DEVELOPER DATE

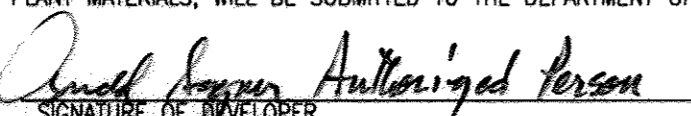
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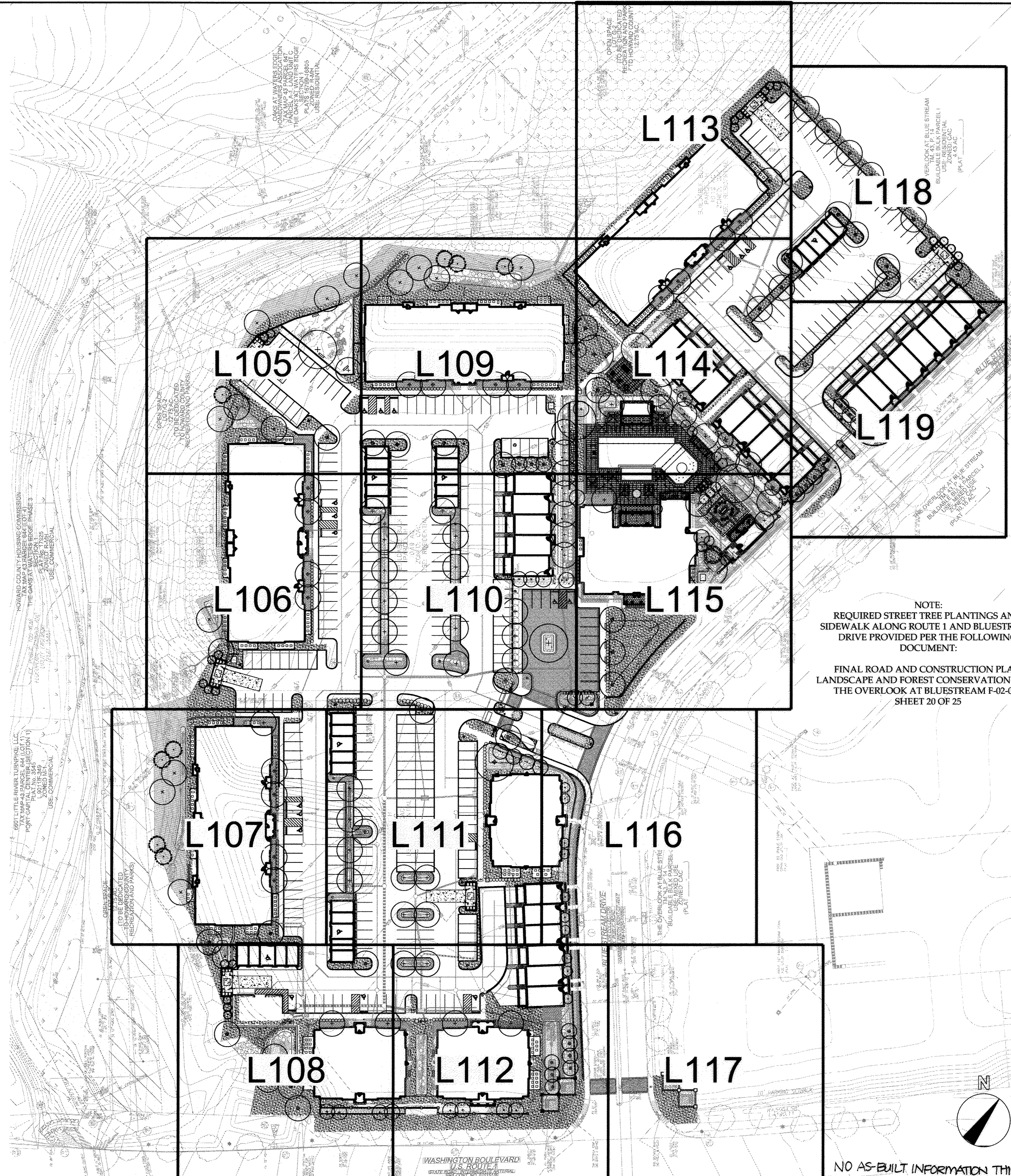
**AS-BUILT 7/16/15**

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 6/7/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 6/27/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 6/23/12  
 DIRECTOR

**DEVELOPER'S/BUILDER'S CERTIFICATE**

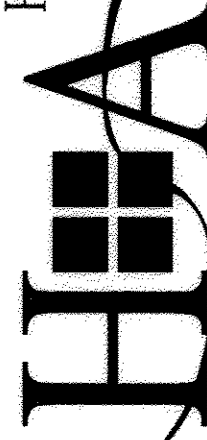
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 5/23/12  
 SIGNATURE OF DEVELOPER DATE



NOTE:  
 REQUIRED STREET TREE PLANTINGS AND  
 SIDEWALK ALONG ROUTE 1 AND BLUESTREAM  
 DRIVE PROVIDED PER THE FOLLOWING  
 DOCUMENT:  
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 LANDSCAPE AND FOREST CONSERVATION PLAN  
 THE OVERLOOK AT BLUESTREAM F-02-035  
 SHEET 20 OF 25

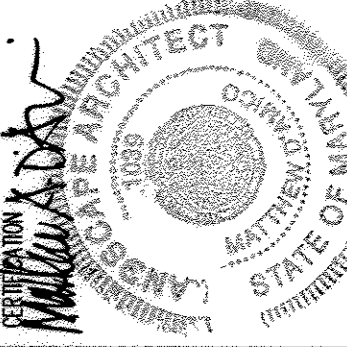
NO AS-BUILT INFORMATION THIS SHEET

AS-BUILT 7/16/15



**HENNEMAN + ASSOCIATES**  
ARCHITECTS ■ PLANNERS

10705 Charter Drive, Suite 400  
Columbia, Maryland 21044  
Tel: 410.992.4417 ■ Fax: 410.992.4977  
www.hennemanarchitects.com



CONSULTANT

**DESIGN COLLECTIVE**

ARCHITECTURE, PLANNING, INTERIOR  
313 BACOWELL STREET, SUITE 200  
DUMMERSVILLE, MARYLAND 20756  
Tel: 410.497.1111 ■ Fax: 410.497.1111  
www.designcollective.com

OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416  
ELLCOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

DATE

ISSUES/REVISIONS

PROJECT NO.: 2010.16.1

SCALE:

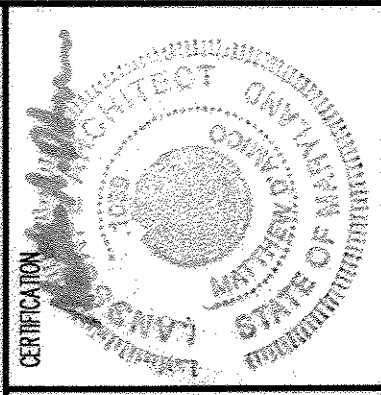
DATE: FEB. 2, 2012

UNDERSTORY PLANTING KEY

**L104**

SHEET 34 OF 55

SDP-11-032



**HENNEMAN + ASSOCIATES ARCHITECTS & PLANNERS**  
 10700 Charter Drive, Suite 400  
 Columbia, Maryland 21044  
 Tel: 410.992.4417 • Fax: 410.992.4497  
 www.hennemanhassociates.com

**DESIGN COLLECTIVE CONSULTANT**  
 10700 Charter Drive, Suite 400  
 Columbia, Maryland 21044  
 Tel: 410.992.4417 • Fax: 410.992.4497  
 www.designcollective.com

**GROSVENOR HOUSE**  
 BLUE STREAM SUBDIVISION BULK PARCEL  
 APPROXIMATELY 12.75 AC. ±  
 TAX MAP 43, GRID 4 & 5  
 1ST ELECTION DISTRICT  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND  
 ZONED: GAG-C-4

**OWNER/DEVELOPER:** BLUE STREAM 1 LLC PO BOX 416, ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

**PLANTING ENLARGEMENT**  
 DATE: \_\_\_\_\_  
 ISSUES/REVISIONS: \_\_\_\_\_

PROJECT NO.: 2010.16.1  
 SCALE: \_\_\_\_\_  
 DATE: FEB. 2, 2012

**L105**  
 SHEET 35 OF 55

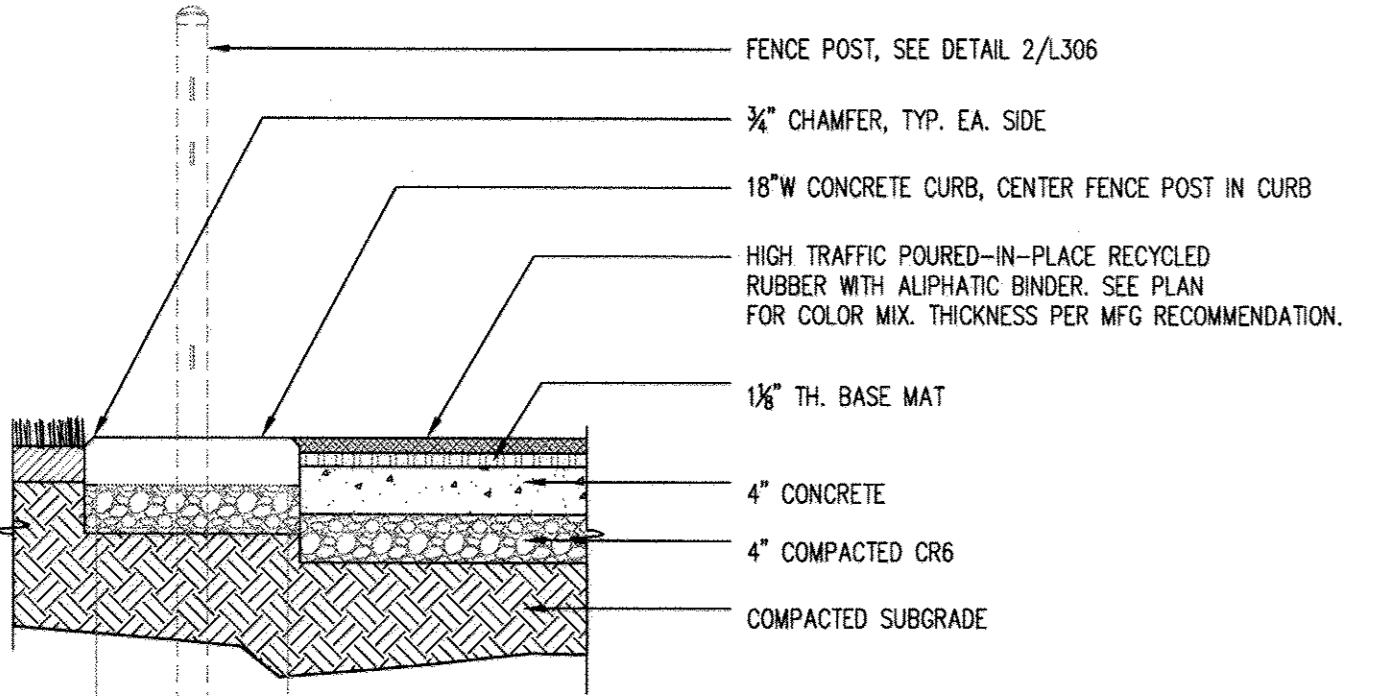
SDP-11-032

NOTE:  
 REF. DWGS. L101, L102 FOR MINIMUM LANDSCAPE REQUIREMENTS

**PLANT LIST**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
120	AG	Acorus gramineus 'Ogon' Golden Variegated Sweet Flag	1 Qt.	Cont.	12" O.C.
6	CF	Cornus sericea 'Flaviramea' Yellow Twiggged Dogwood	4' Ht.	Cont.	Specimen Quality Straight Leader
110	CM	Convallaria majalis Lily-of-the-valley	1 Qt.	Cont.	12" O.C.
27	HP	Hemerocallis x 'Prairie Blue Eyes' Prairie Blue Eyes Day Lily	1 Gal.	Cont.	30" O.C.
29	IS	Iris siberica 'Bennerup Blue' Bennerup Blue Siberian Iris	1 Gal.	Cont.	18" O.C.
100	LS	Liriope spicata Creeping Lilyturf	1 Qt.	Cont.	18" O.C.

NOTE:  
 ABOVE QUANTITIES ARE FOR CONVENIENCE OF CONTRACTOR. FINAL QUANTITIES TO BE GENERATED FROM PLANS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.

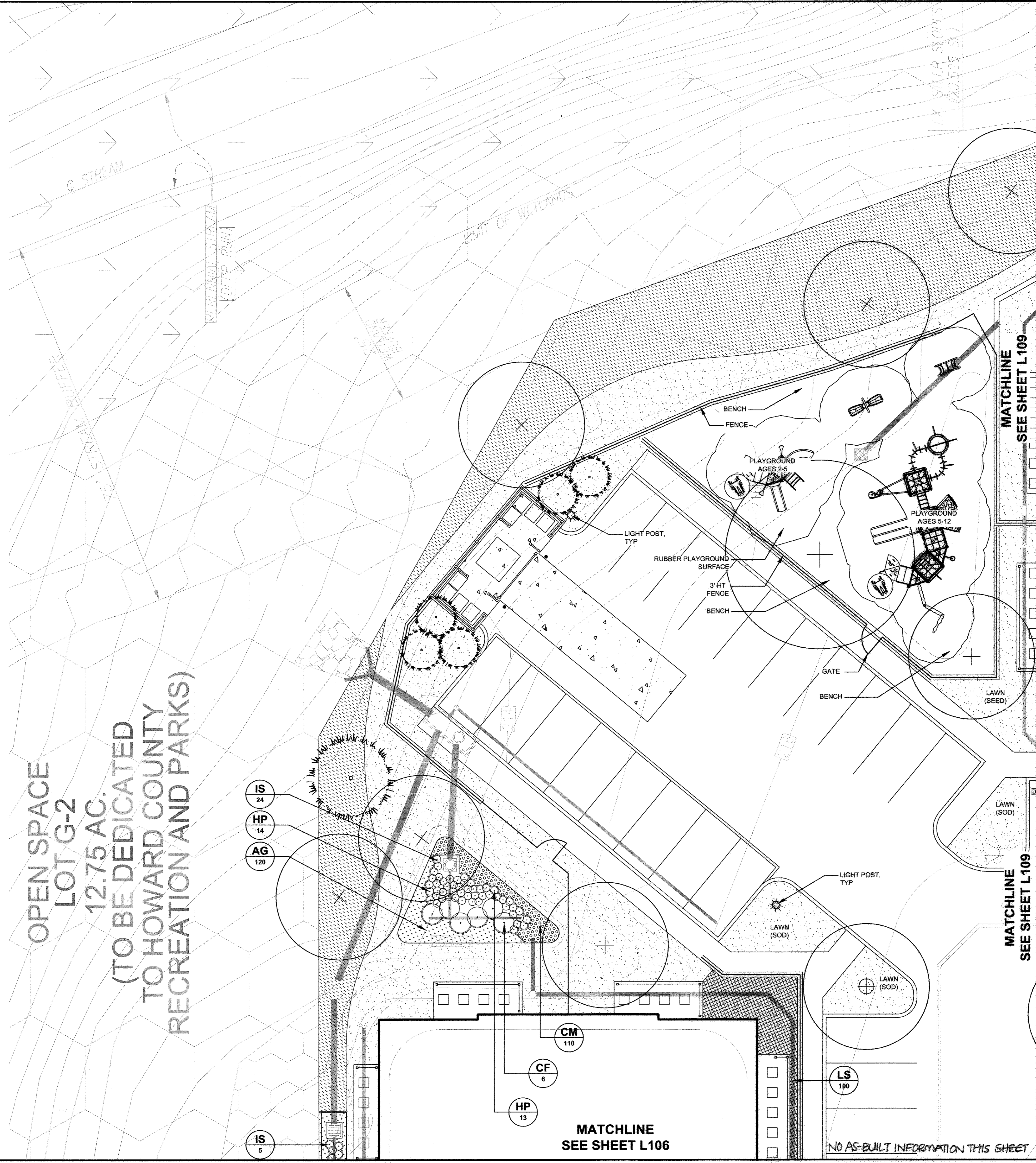


REFER TO MANUFACTURER FOR SOFT PLAY SURFACE INSTALLATION INSTRUCTIONS & FALL HEIGHT REQUIREMENTS. THIS SECTION IS FOR MAXIMUM 6 FOOT FALL HEIGHT.  
 CONTACT: BOB BENNETT W/I.B. PENICK & SONS @ 614.801.1844

**SOFTPLAY - PLAYGROUND SURFACE/CONCRETE BAND**  
 SCALE: 3/4"=1'-0"

**Material Spec. (Soft Play Surface):**  
 MANUFACTURER: VITRITURF HANOVER SPECIALTIES INC. HAUPPAUGE, NEW YORK 11788 631.231.1300 www.vitrirturf.com  
 PRODUCT: VITRITURF PLAYGROUND SYSTEM COLOR: ORANG/BLACK MIXTURE  
 OR APPROVED EQUALS

OPEN SPACE  
 LOT G-2  
 12.75 AC.  
 (TO BE DEDICATED TO HOWARD COUNTY RECREATION AND PARKS)



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] DATE: 10/2/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] DATE: 6/2/12  
 DIRECTOR: [Signature] DATE: 6/2/12

DEVELOPER'S/BUILDER'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 (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
 [Signature] DATE: 5/28/12

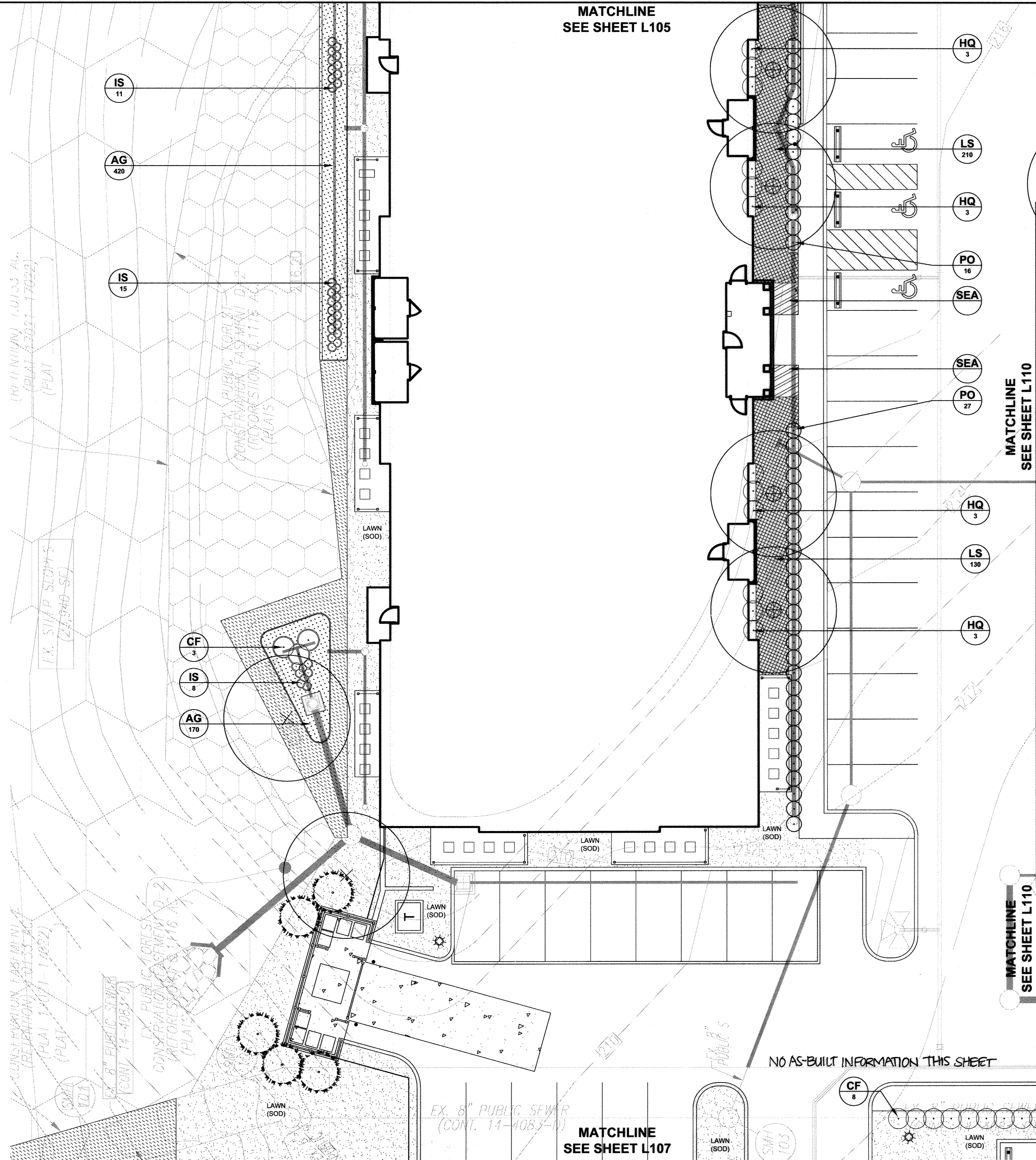
AS-BUILT 7/16/15

NOTE:  
REF. DWGS. L101, L102 FOR MINIMUM LANDSCAPE REQUIREMENTS

**PLANT LIST**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
<b>SHRUBS, PERENNIALS, GRASSES, GROUNDCOVERS</b>					
590	AG	Acorus gramineus 'Ogon' Golden Variegated Sweet Flag	1 Qt.	Cont.	12" O.C.
11	CF	Cornus sericea 'Flaviramea' Yellow Twigged Dogwood	4' Ht.	Cont.	Specimen Quality Straight Leader
12	HQ	Hydrangea quercifolia 'Alice' Alice Oakleaf Hydrangea	5 Gal.	Cont.	Matched
34	IS	Iris siberica 'Bennerup Blue' Bennerup Blue Siberian Iris	1 Gal.	Cont.	18" O.C.
340	LS	Liriope spicata Creeping Lilyturf	1 Qt.	Cont.	18" O.C.
43	PO	Prunus laurocerasus 'Otto Luyken' Otto Luyken Cherry Laurel	5 Gal.	Cont.	30" O.C.
	SEA	Seasonal Planting			

NOTE:  
ABOVE QUANTITIES ARE FOR CONVENIENCE OF CONTRACTOR. FINAL QUANTITIES TO BE GENERATED FROM PLANS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.



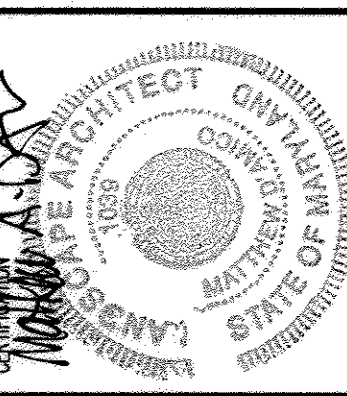
MATCHLINE  
SEE SHEET L105

MATCHLINE  
SEE SHEET L110

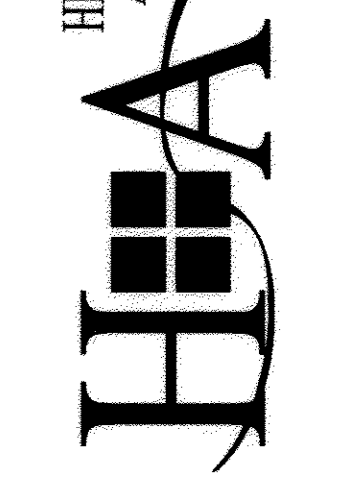
MATCHLINE  
SEE SHEET L110

MATCHLINE  
SEE SHEET L107

AS-BUILT 7/16/15



**HENNEMAN + ASSOCIATES**  
ARCHITECTS & PLANNERS  
10705 Charter Drive, Suite 400  
Columbia, Maryland 21044  
Tel: 410.992.4477 # Fax: 410.992.4497  
www.hennemansh.com



**DESIGN COLLECTIVE**  
CONSULTANT  
660 EAST PAVY STREET SUITE 300  
ANNAPOLIS, MARYLAND 21403  
TEL: 410.293.4444 FAX: 410.293.4444  
WWW.DESIGNCOLLECTIVE.COM

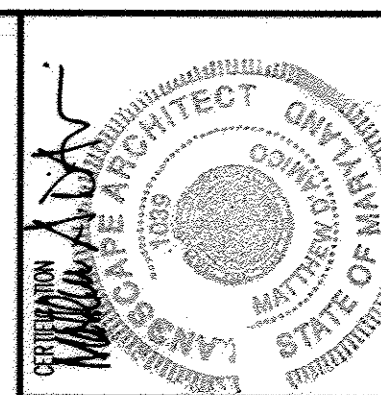
**GROSVENOR HOUSE**  
BLUE STREAM BUILDABLE BULK PARCEL H  
APPLICABLE TO THE 1ST ELECTION DISTRICT  
1ST ELECTION DISTRICT  
PARCEL 14  
HOWARD COUNTY, MARYLAND  
ZONING: CAC-C-14  
OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416,  
ELLCOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-485-2020

PROJECT NO.: 2010.16.1  
SCALE:  
DATE: FEB. 2, 2012  
**L106**  
SHEET 36 OF 55  
SDP-11-032

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DIRECTOR

**DEVELOPER'S/BUILDER'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 (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
SIGNATURE OF DEVELOPER: [Signature] DATE: 5/23/12

DATE: 2012  
DRAWN BY: [Name]  
CHECKED BY: [Name]  
SCALE: AS SHOWN



**HEA**  
**HENNEMAN + ASSOCIATES**  
 ARCHITECTS ■ PLANNERS  
 10705 Charter Drive, Suite 400  
 Columbia, Maryland 21044  
 Tel: 410.992.4417 ■ Fax: 410.992.4977  
 ■ www.hennemans.com

**DESIGN COLLECTIVE**  
 CONSULTANT  
 60 EAST FRANK STREET, SUITE 300  
 BALTIMORE, MARYLAND 21202  
 TEL: 410.528.1300 FAX: 410.528.1301  
 WWW.DESIGNCOLLECTIVE.COM

**GROSVENOR HOUSE**  
 BLUE STREAM, BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES  
 1ST ELECTION DISTRICT  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND  
 ZONING: C2B-C24  
 OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416,  
 ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

**PLANTING ENLARGEMENT**  
 DATE: \_\_\_\_\_  
 ISSUES/REVISIONS: \_\_\_\_\_

PROJECT NO.: 2010.16.1  
 SCALE: \_\_\_\_\_  
 DATE: FEB. 2, 2012  
**L107**  
 SHEET 37 OF 55

SDP-11-032

MATCHLINE  
 SEE SHEET L111

MATCHLINE  
 SEE SHEET L111

NOTE:  
 REF. DWGS. L101, L102 FOR MINIMUM LANDSCAPE REQUIREMENTS

**PLANT LIST**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
SHRUBS, PERENNIALS, GRASSES, GROUNDCOVERS					
565	AG	Acorus gramineus 'Ogon' Golden Variegated Sweet Flag	1 Qt.	Cont.	12" O.C.
14	HP	Hemerocallis x 'Prairie Blue Eyes' Prairie Blue Eyes Day Lily	1 Gal.	Cont.	30" O.C.
12	HQ	Hydrangea quercifolia 'Alice' Alice Oakleaf Hydrangea	5 Gal.	Cont.	Matched
50	IS	Iris siberica 'Bennerup Blue' Bennerup Blue Siberian Iris	1 Gal.	Cont.	18" O.C.
355	LS	Liriope spicata Creeping Lilyturf	1 Qt.	Cont.	18" O.C.
36	PO	Prunus laurocerasus 'Otto Luyken' Otto Luyken Cherry Laurel	5 Gal.	Cont.	30" O.C.
	SEA	Seasonal Planting			

NOTE:  
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MATCHLINE  
 SEE SHEET L106

(TO BE DEDICATED  
 TO HOWARD COUNTY  
 RECREATION AND PARKS)

NO AS-BUILT INFORMATION THIS SHEET  
 MATCHLINE  
 SEE SHEET L108

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DIRECTOR

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 SIGNATURE OF DEVELOPER: \_\_\_\_\_ DATE: 5/23/12

DATE: 7/16/15  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]  
 SCALE: AS SHOWN

SDP-11-032

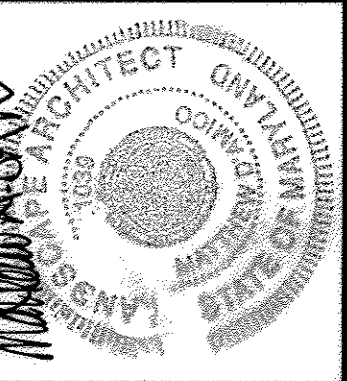
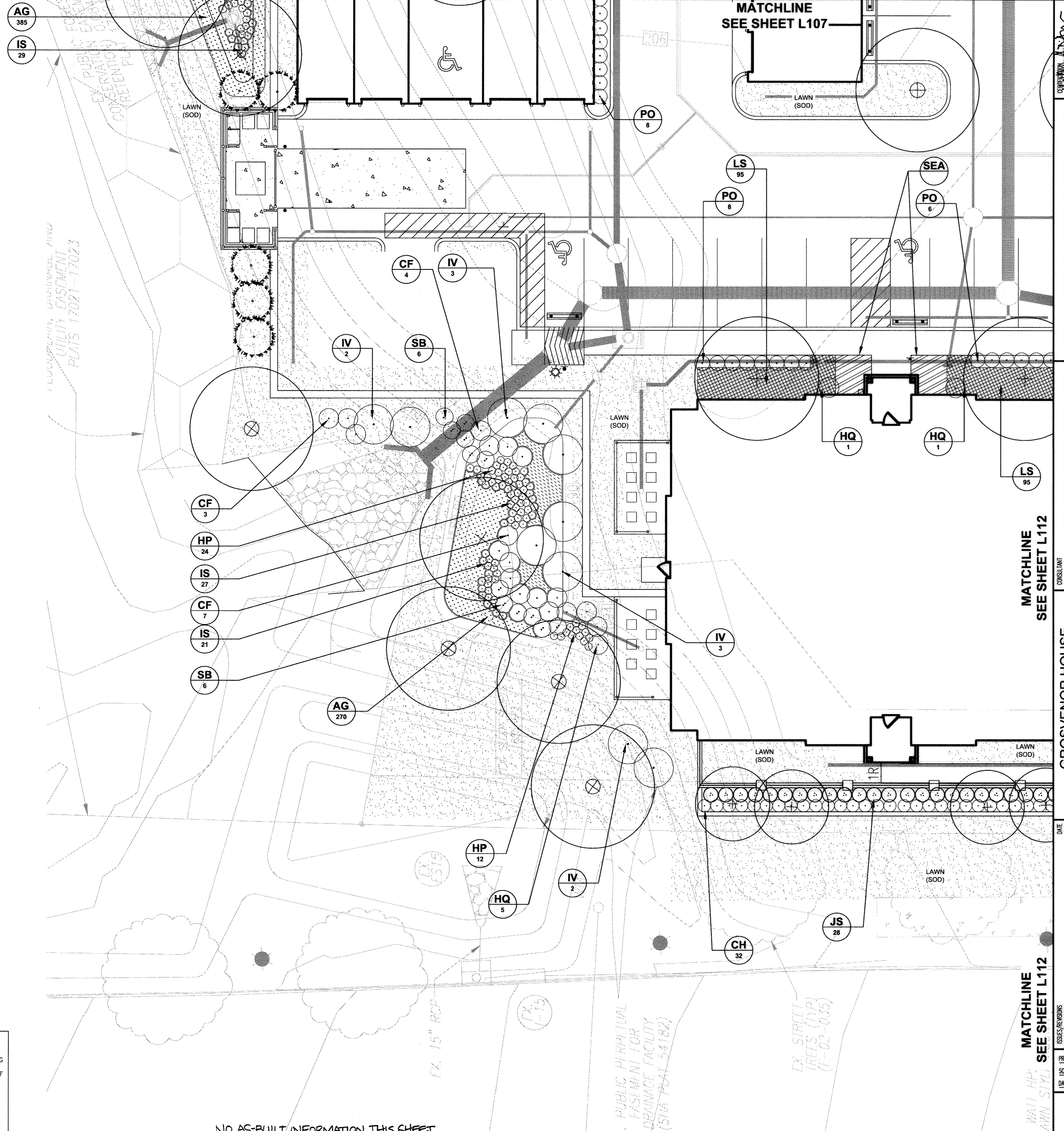
AS-BUILT 7/16/15

NOTE:  
REF. DWGS. L101, L102 FOR MINIMUM LANDSCAPE REQUIREMENTS

**PLANT LIST**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
SHRUBS, PERENNIALS, GRASSES, GROUNDCOVERS					
655	AG	Acorus gramineus 'Ogon' Golden Variegated Sweet Flag	1 Qt.	Cont.	12" O.C.
14	CF	Cornus sericea 'Flaviramea' Yellow Twigged Dogwood	4' Ht.	Cont.	Specimen Quality Straight Leader
32	CH	Cotoneaster horizontalis 'Perpusillus' Prostate Rock Cotoneaster	24" Ht./Spr.	Cont.	Matched 36" O.C.
36	HP	Hemerocallis x 'Prairie Blue Eyes' Prairie Blue Eyes Day Lily	1 Gal.	Cont.	30" O.C.
7	HQ	Hydrangea quercifolia 'Alice' Alice Oakleaf Hydrangea	5 Gal.	Cont.	Matched
77	IS	Iris siberica 'Bennerup Blue' Bennerup Blue Siberian Iris	1 Gal.	Cont.	18" O.C.
10	IV	Ilex verticillata 'Sparkleberry' Sparkleberry Winterberry	8' Ht.	Cont.	Matched
28	JS	Juniperus sabina 'Arcadia' Arcadia Juniper	24" Ht./Spr.	Cont.	36" O.C.
190	LS	Liriope spicata Creeping Lilyturf	1 Qt.	Cont.	18" O.C.
22	PO	Prunus laurocerasus 'Otto Luyken' Otto Luyken Cherry Laurel	5 Gal.	Cont.	30" O.C.
12	SB	Symphoricarpos 'Bakrabright' Bright Fantasy Snowberry	2 Gal.	Cont.	36" O.C.
	SEA	Seasonal Planting			

NOTE:  
ABOVE QUANTITIES ARE FOR CONVENIENCE OF CONTRACTOR. FINAL QUANTITIES TO BE GENERATED FROM PLANS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.



**HENNEMAN + ASSOCIATES**  
ARCHITECTS & PLANNERS  
10795 Charter Drive, Suite 440  
Columbia, Maryland 21044  
Tel: 410.992.4417 • Fax: 410.992.4497  
www.hennemanarchitects.com

**HA**  
**DESIGN COLLECTIVE**  
CONSULTANT  
661 EAST FRONT STREET, SUITE 500  
BALTIMORE, MD 21202  
TEL: 410.528.4444 FAX: 410.528.4444  
WWW.DESIGNCOLLECTIVE.COM

**GROSVENOR HOUSE**  
BLUE STREAM, BUILDABLE BULK PARCEL H  
APARTMENTS AND TOWNHOMES  
TOWNHOMES DISTRICT 5  
1ST ELECTION DISTRICT 5  
PARCEL 14  
HOWARD COUNTY, MARYLAND  
ZONED: CAC-CL

OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416,  
ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

PROJECT NO.: 2010.16.1  
SCALE:  
DATE: FEB. 2, 2012

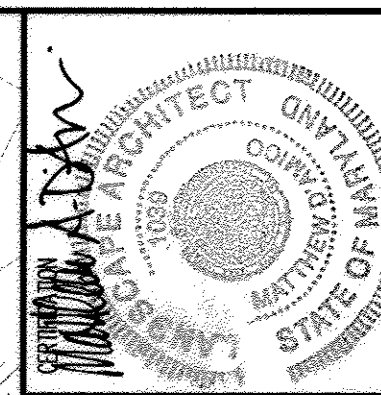
**L108**  
SHEET 38 OF 55  
SDP-11-032

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 6/27/12  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*[Signature]* 6/27/12  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*[Signature]* 6/27/12  
DIRECTOR

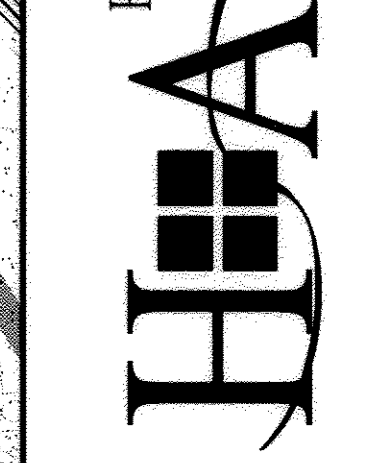
**DEVELOPER'S/BUILDER'S CERTIFICATE**  
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
*[Signature]* 5/23/12  
SIGNATURE OF DEVELOPER DATE

NO AS-BUILT INFORMATION THIS SHEET

**AS-BUILT 7/16/15**



**HENNEMAN + ASSOCIATES**  
 ARCHITECTS PLANNERS  
 10705 Charter Drive, Suite 400  
 Columbia, Maryland 21044  
 Tel: 410.992.4417 • Fax: 410.992.4497  
 www.hennemancollective.com



**DESIGN COLLECTIVE**  
 CONSULTANT  
 ARCHITECTURE, PLANNING, INTERIORS  
 66 EAST FAIRFAX STREET, SUITE 300  
 BALTIMORE, MARYLAND 21202  
 Tel: 410.527.7444  
 www.designcollective.com

**GROSVENOR HOUSE**  
 BLUE STREAM BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES  
 PARCELS 4, 5 & 6  
 1ST FLOOR DISTRICT  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416  
 ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

DATE: \_\_\_\_\_  
 PROJECT NO.: 2010.16.1  
 SCALE: \_\_\_\_\_  
 DATE: FEB. 2, 2012

**L109**  
 SHEET 39 OF 55  
 SDP-11-032

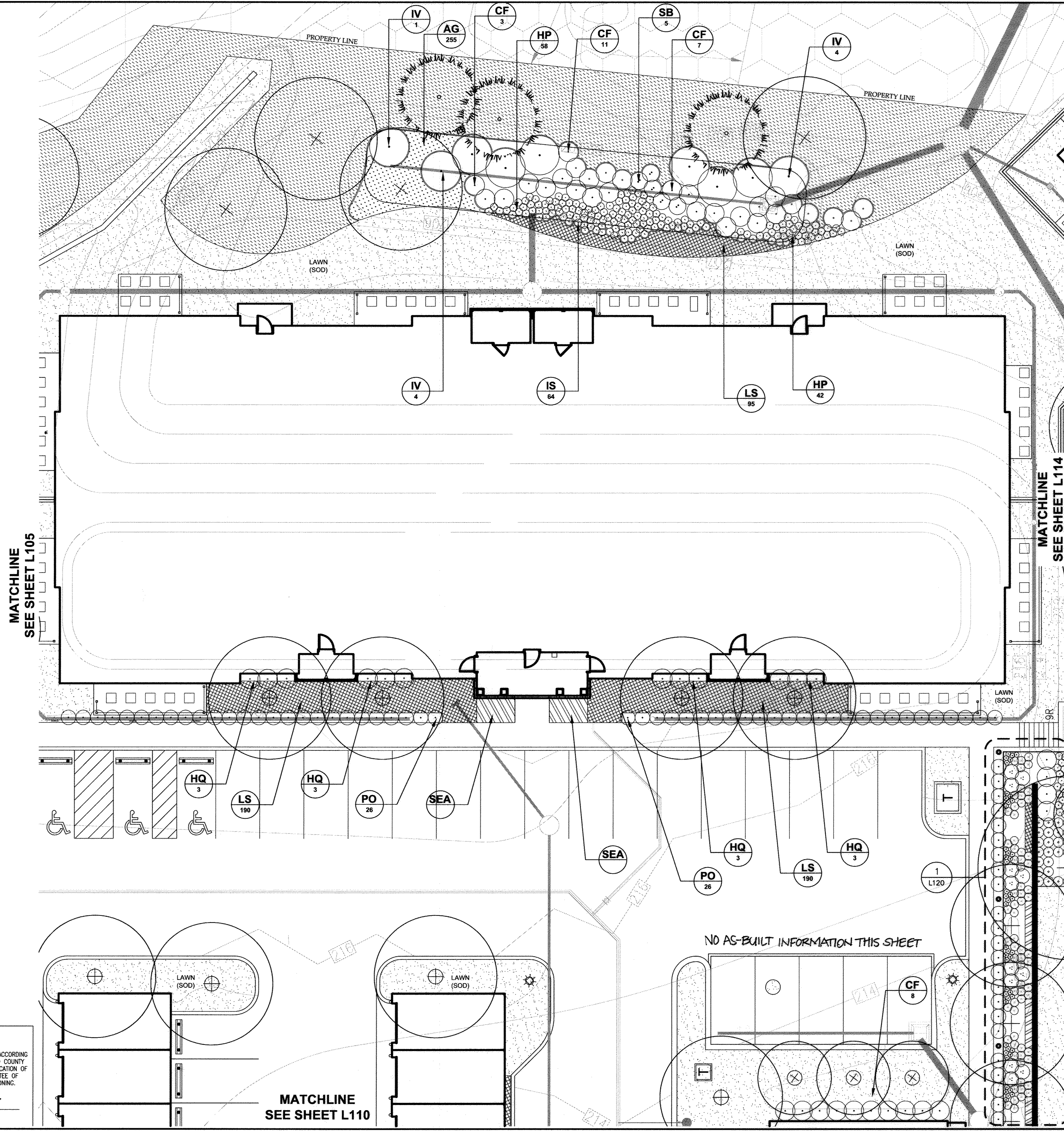
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NOTE:  
 REF. DWGS. L101, L102 FOR MINIMUM LANDSCAPE REQUIREMENTS

**PLANT LIST**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
SHRUBS, PERENNIALS, GRASSES, GROUNDCOVERS					
255	AG	Acorus gramineus 'Ogon' Golden Variegated Sweet Flag	1 Qt.	Cont.	12" O.C.
31	CF	Cornus sericea 'Flaviramea' Yellow Twigged Dogwood	4' Ht.	Cont.	Specimen Quality Straight Leader
100	HP	Hemerocallis x 'Prarie Blue Eyes' Prairie Blue Eyes Day Lily	1 Gal.	Cont.	30" O.C.
12	HQ	Hydrangea quercifolia 'Alice' Alice Oakleaf Hydrangea	5 Gal.	Cont.	Matched
64	IS	Iris siberica 'Bennerup Blue' Bennerup Blue Siberian Iris	1 Gal.	Cont.	18" O.C.
9	IV	Ilex verticillata 'Sparkleberry' Sparkleberry Winterberry	8' Ht.	Cont.	Matched
475	LS	Liriope spicata Creeping Lilyturf	1 Qt.	Cont.	18" O.C.
52	PO	Prunus laurocerasus 'Otto Luyken' Otto Luyken Cherry Laurel	5 Gal.	Cont.	30" O.C.
5	SB	Symphoricarpos 'Bakrabright' Bright Fantasy Snowberry	2 Gal.	Cont.	36" O.C.
	SEA	Seasonal Planting			

NOTE:  
 ABOVE QUANTITIES ARE FOR CONVENIENCE OF CONTRACTOR. FINAL QUANTITIES TO BE GENERATED FROM PLANS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 6/7/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 6/27/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 6/27/12  
 DIRECTOR DATE

**DEVELOPER'S/BUILDER'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 (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

[Signature] 5/23/12  
 SIGNATURE OF DEVELOPER DATE

MATCHLINE  
 SEE SHEET L110

AS-BUILT 7/16/15

**PLANT LIST**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
SHRUBS, PERENNIALS, GRASSES, GROUNDCOVERS					
20	AD	Azalea 'Delaware Valley'	5 Gal.	Cont.	Matched
		Delaware Valley Azalea			
915	AG	Acorus gramineus 'Ogon'	1 Qt.	Cont.	12" O.C.
		Golden Variegated Sweet Flag			
15	CB	Chrysanthemum x superbum 'Becky'	2 Gal.	Cont.	18" O.C.
		Becky Shasta Daisy			
24	CF	Cornus sericea 'Flaviramea'	4' Ht.	Cont.	Specimen Quality
		Yellow Twigged Dogwood			Straight Leader
86	CK	Calamagrostis x acutiflora 'Karl Foerster'	1 Gal.	Cont.	30" O.C.
		Karl Foerster Reed Grass			
505	CM	Convallaria majalis	2.5" Cal.	Cont.	
		Lily-of-the-valley			
122	HP	Hemerocallis x 'Prairie Blue Eyes'	1 Gal.	Cont.	30" O.C.
		Prairie Blue Eyes Day Lily			
8	HQ	Hydrangea quercifolia 'Alice'	5 Gal.	Cont.	Matched
		Alice Oakleaf Hydrangea			
80	IS	Iris siberica 'Bennerup Blue'	1 Gal.	Cont.	18" O.C.
		Bennerup Blue Siberian Iris			
620	LS	Liriope spicata	1 Qt.	Cont.	18" O.C.
		Creeping Lilyturf			
14	PF	Photinia x fraseri	8' Ht.	B&B	Matched
		Frasier's Photinia			
12	PO	Prunus laurocerasus 'Otto Luyken'	5 Gal.	Cont.	30" O.C.
		Otto Luyken Cherry Laurel			
10	SB	Symphoricarpos 'Bakrabright'	2 Gal.	Cont.	36" O.C.
		Bright Fantasy Snowberry			
	SEA	Seasonal Planting			

**NOTE:**

ABOVE QUANTITIES ARE FOR CONVENIENCE OF CONTRACTOR. FINAL QUANTITIES TO BE GENERATED FROM PLANS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.

**NOTE:**

REF. DWGS. L101, L102 FOR MINIMUM LANDSCAPE REQUIREMENTS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Michael R. Anderson* 6/27/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*Keith Schaefer* 6/27/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
*Paul D. Uglum* 6/27/12  
 DIRECTOR

**DEVELOPER'S/BUILDER'S CERTIFICATE**

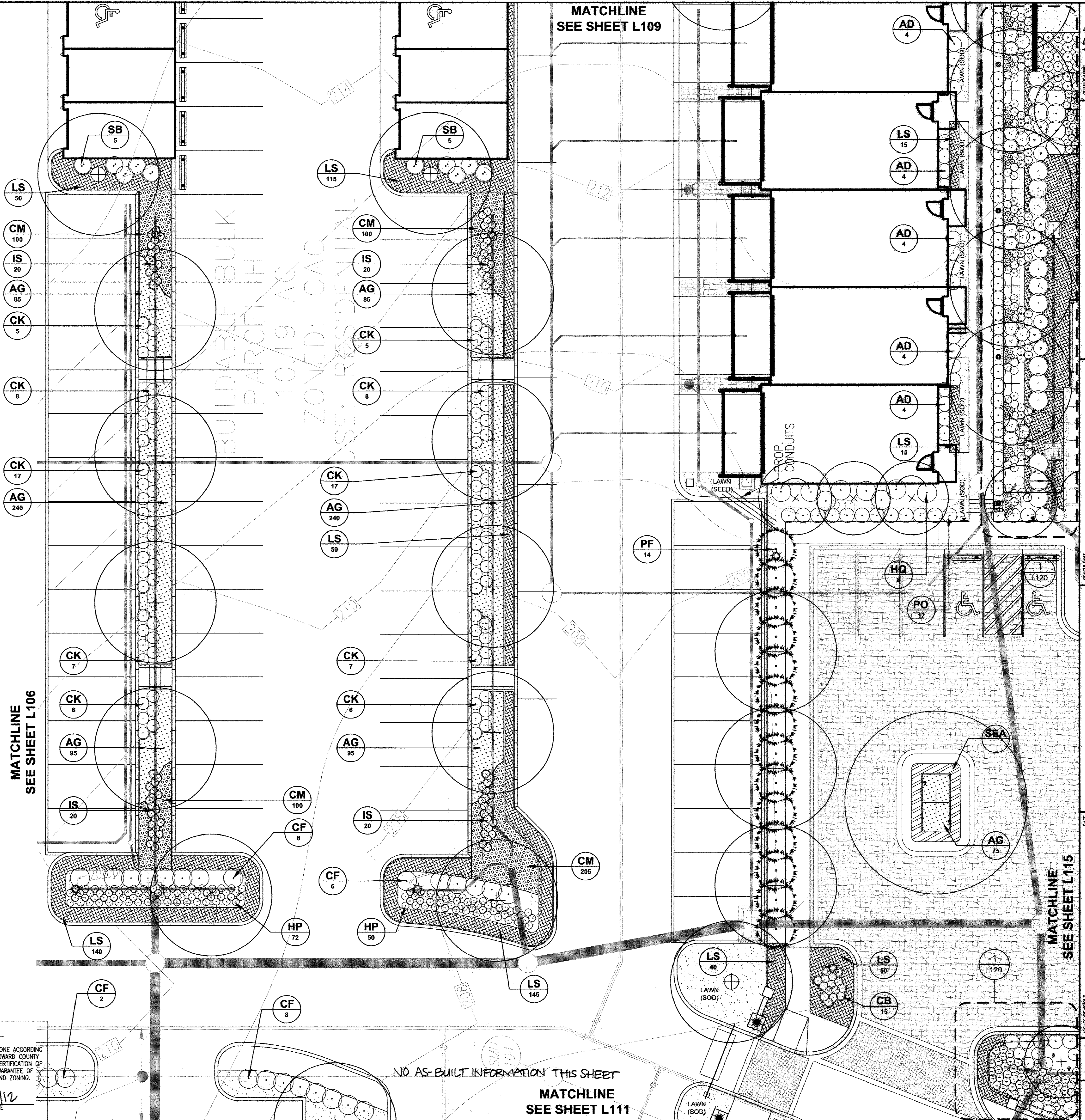
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

*Paul Ryan Christopher Parson* 6/27/12  
 SIGNATURE OF DEVELOPER  
 DATE

NO AS-BUILT INFORMATION THIS SHEET

MATCHLINE  
SEE SHEET L111

AS-BUILT 7/16/15



**HENNEMAN + ASSOCIATES**  
 ARCHITECTS & PLANNERS  
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 Columbia, Maryland 21044  
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 www.hennemansite.com

---

**DESIGN COLLECTIVE**

---

**GROSVENOR HOUSE**  
 BLUE STREAM BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES  
 1ST ELECTION DISTRICT 3  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND

---

OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416,  
 ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

---

PROJECT NO.: 2010.16.1  
 SCALE:  
 DATE: FEB. 2, 2012  
**L110**  
 SHEET 40 OF 55  
 SDP-11-032

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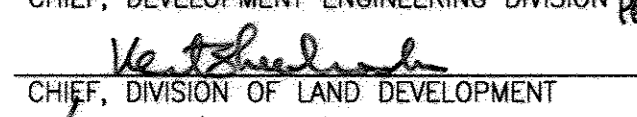
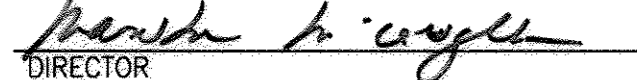
**PLANT LIST**

Qty.	Key	Botanical/Common Name	Size	Root	
SHRUBS, PERENNIALS, GRASSES, GROUNDCOVERS					
1330	AG	Acorus gramineus 'Ogon' Golden Variegated Sweet Flag	1 Qt.	Cont.	12" O.C.
72	CB	Chrysanthemum x superbum 'Becky' Becky Shasta Daisy	2 Gal.	Cont.	18" O.C.
73	CK	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Reed Grass	1 Gal.	Cont.	30" O.C.
275	CM	Convallaria majalis Lily-of-the-valley	2.5" Cal.	Cont.	
13	CS	Cornus sericea Redosier Dogwood	4' Ht.	Cont.	Specimen Quality Straight Leader
73	IS	Iris siberica 'Bennerup Blue' Bennerup Blue Siberian Iris	1 Gal.	Cont.	18" O.C.
196	LS	Liriope spicata Creeping Lilyturf	1 Qt.	Cont.	18" O.C.
57	PO	Prunus laurocerasus 'Otto Luyken' Otto Luyken Cherry Laurel	5 Gal.	Cont.	30" O.C.
10	SB	Symphoricarpos 'Bakrabright' Bright Fantasy Snowberry	2 Gal.	Cont.	36" O.C.
	SEA	Seasonal Planting			

NOTE:  
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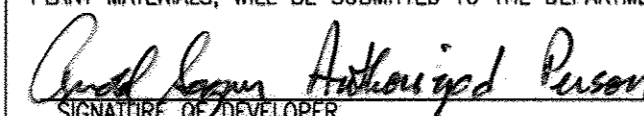
NOTE:  
REF. DWGS. L101, L102 FOR MINIMUM LANDSCAPE REQUIREMENTS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

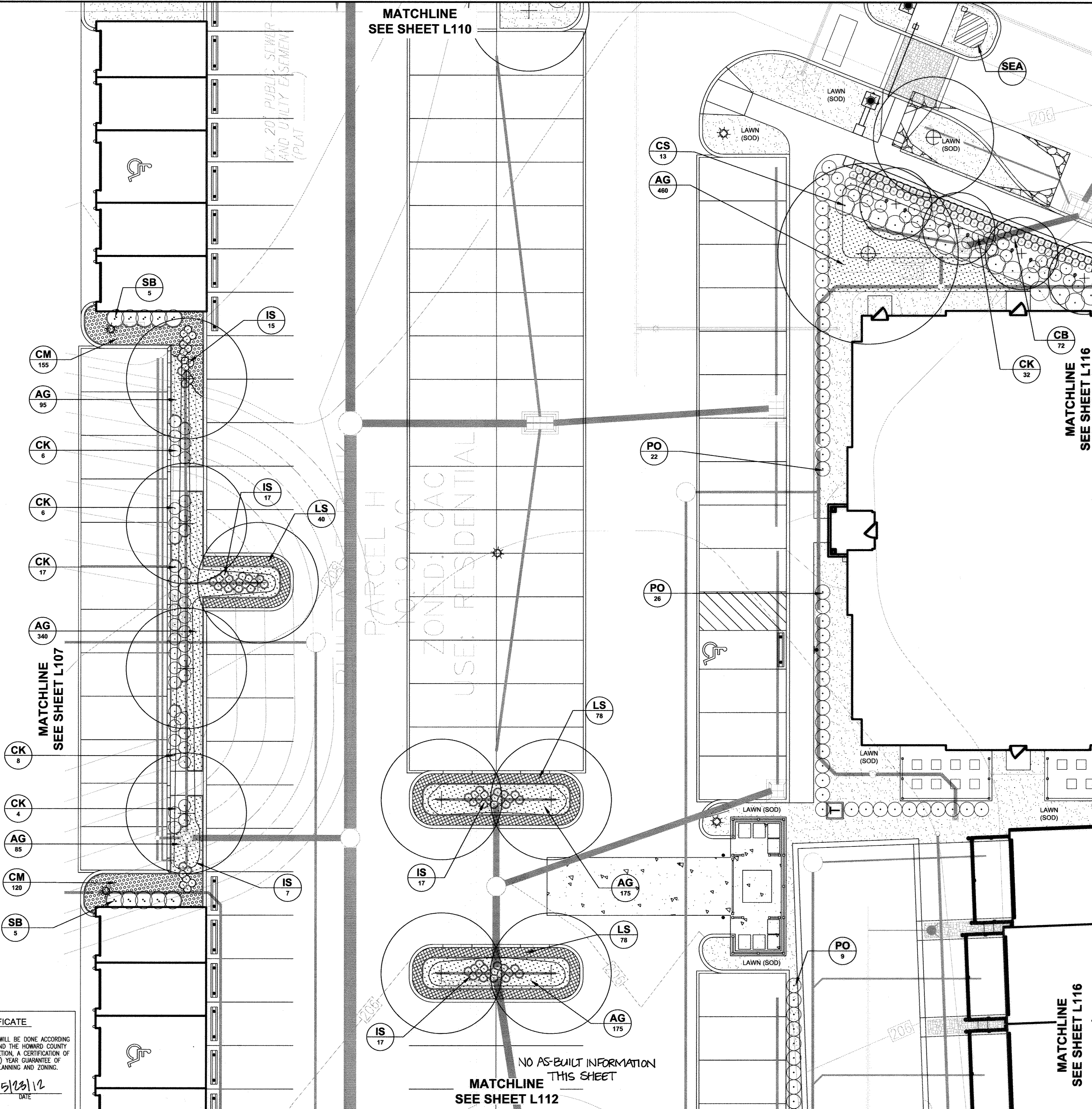
  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 6/7/12 DATE  
  
 CHIEF, DIVISION OF LAND DEVELOPMENT 6/27/12 DATE  
  
 DIRECTOR 6/27/12 DATE

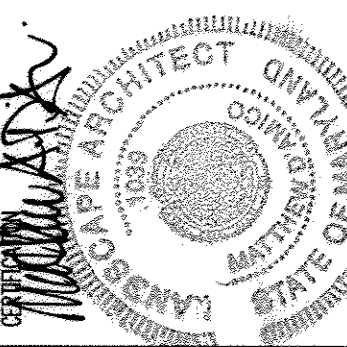
**DEVELOPER'S/BUILDER'S CERTIFICATE**

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 SIGNATURE OF DEVELOPER 5/23/12 DATE

Date: 6/27/12  
 Drawn by: JRM  
 Scale: 1/8" = 1'-0"  
 Job No: 2010.16.1





**HAA**  
HENNEMAN + ASSOCIATES ARCHITECTS & PLANNERS

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Columbia, Maryland 21044  
Tel: 410.992.4417 • Fax: 410.992.4497  
www.hennemanarchitects.com

---

**DESIGN COLLECTIVE**

CONSULTANT

---

**GROSVENOR HOUSE**  
BLUE STREAM, BUILDABLE BULK PARCEL H  
APARTMENTS AND TOWNHOMES  
141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

PROJECT NO.: 2010.16.1  
 SCALE:  
 DATE: FEB. 2, 2012  
**L111**  
 SHEET 41 OF 55  
 SDP-11-032

AS-BUILT 7/16/15

**PLANT LIST**

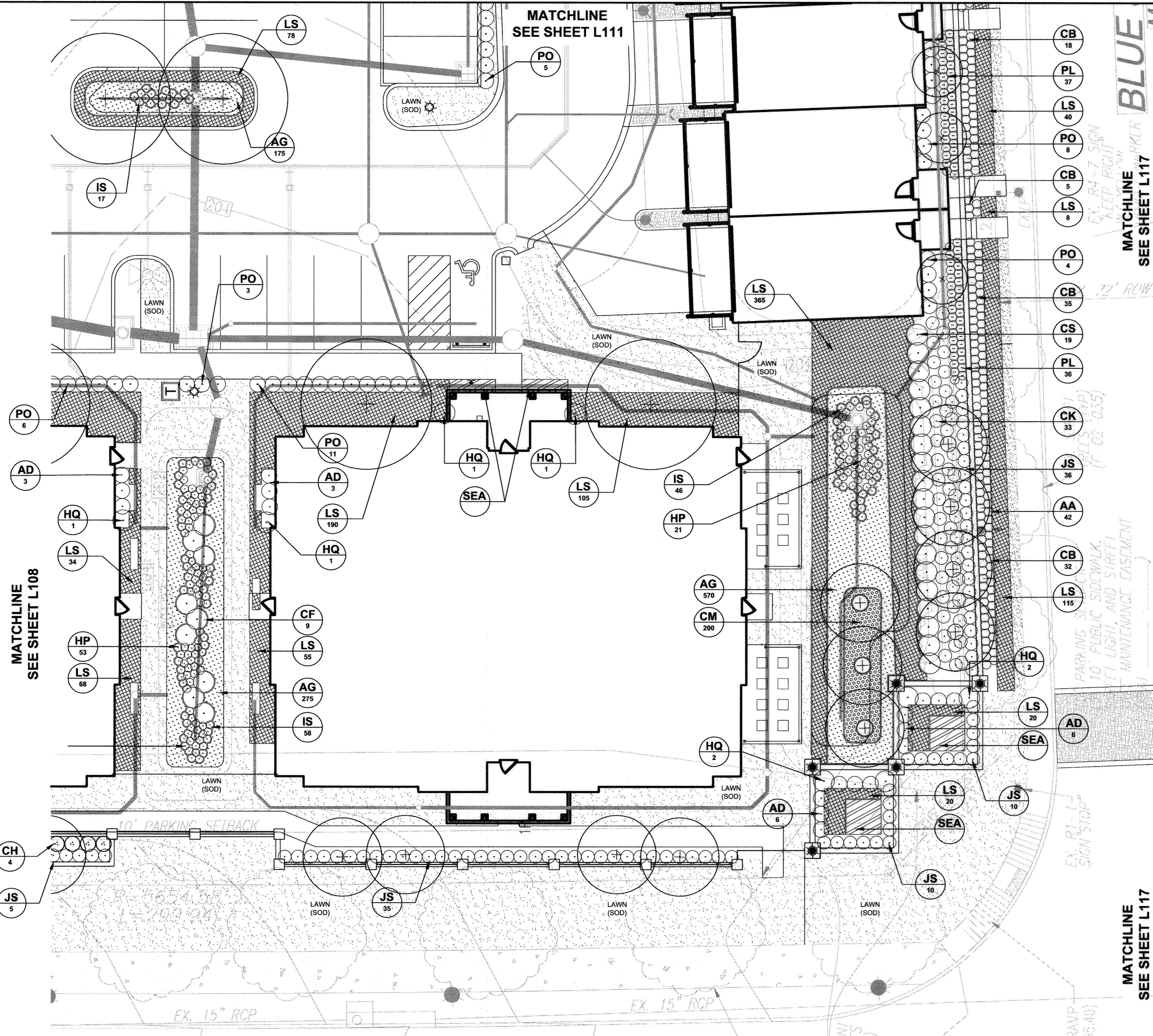
Qty.	Key	Botanical/Common Name	Size	Root	Comments
<b>SHRUBS, PERENNIALS, GRASSES, GROUNDCOVERS</b>					
42	AA	Aster alpeius 'Triumph' Triumph Aster	1 Gal.	Cont.	15" O.C.
18	AD	Azalea 'Delaware Valley' Delaware Valley Azalea	5 Gal.	Cont.	Matched
1020	AG	Acorus gramineus 'Ogon' Golden Variegated Sweet Flag	1 Qt.	Cont.	12" O.C.
90	CB	Chrysanthemum x superbum 'Becky' Becky Shasta Daisy	2 Gal.	Cont.	18" O.C.
9	CF	Cornus sericea 'Flaviramea' Yellow Twigged Dogwood	4' Ht.	Cont.	Specimen Quality Straight Leader
4	CH	Cotoneaster horizontalis 'Perpusillus' Prostate Rock Cotoneaster	18" Ht./24" Spant.		Matched 36" O.C.
33	CK	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Reed Grass	1 Gal.	Cont.	30" O.C.
200	CM	Convallaria majalis Lily-of-the-valley	2.5" Cal.	Cont.	
19	CS	Cornus sericea Redosier Dogwood	4' Ht.	Cont.	Specimen Quality Straight Leader
74	HP	Hemerocallis x 'Prairie Blue Eyes' Prairie Blue Eyes Day Lily	1 Gal.	Cont.	30" O.C.
8	HQ	Hydrangea quercifolia 'Alice' Alice Oakleaf Hydrangea	5 Gal.	Cont.	Matched
121	IS	Iris siberica 'Bennerup Blue' Bennerup Blue Siberian Iris	1 Gal.	Cont.	18" O.C.
96	JS	Juniperus sabina 'Arcadia' Arcadia Juniper	24" Ht./Spr.	Cont.	36" O.C.
1098	LS	Liriope spicata Creeping Lilyturf	1 Qt.	Cont.	18" O.C.
43	PL	Perovskia atriplicifolia 'Little Spire' Little Spire Russian Sage	2 Gal.	Cont.	
37	PO	Prunus laurocerasus 'Otto Luyken' Otto Luyken Cherry Laurel	5 Gal.	Cont.	30" O.C.
	SEA	Seasonal Planting			

**NOTE:**

ABOVE QUANTITIES ARE FOR CONVENIENCE OF CONTRACTOR. FINAL QUANTITIES TO BE GENERATED FROM PLANS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.

**NOTE:**

REF. DWGS. L101, L102 FOR MINIMUM LANDSCAPE REQUIREMENTS



MATCHLINE SEE SHEET L111

MATCHLINE SEE SHEET L117

MATCHLINE SEE SHEET L108

MATCHLINE SEE SHEET L117

**NOTE:**  
REQUIRED STREET TREE PLANTINGS AND SIDEWALK ALONG ROUTE 1 AND BLUESTREAM DRIVE PROVIDED PER THE FOLLOWING DOCUMENT:

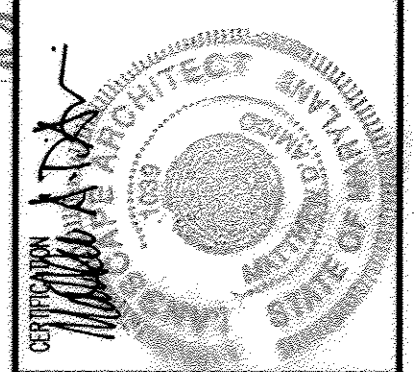
FINAL ROAD AND CONSTRUCTION PLAN  
LANDSCAPE AND FOREST CONSERVATION PLAN  
THE OVERLOOK AT BLUESTREAM F-02-035  
SHEET 20 OF 25

NO AS-BUILT INFORMATION THIS SHEET

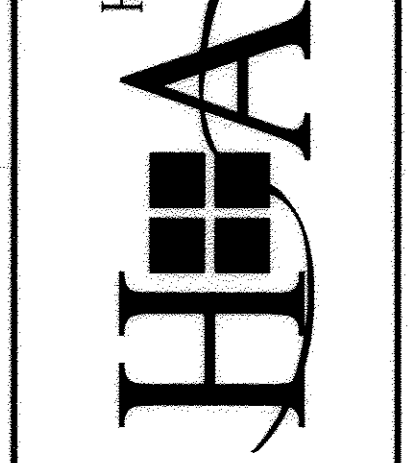
AS-BUILT 7/16/15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 6/27/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 6/27/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 6/27/12  
 DIRECTOR

**DEVELOPER'S/BUILDER'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 (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
 [Signature] 5/23/12  
 SIGNATURE OF DEVELOPER DATE



**HENNEMAN + ASSOCIATES ARCHITECTS & PLANNERS**  
 10705 Charter Drive, Suite 400  
 Columbia, Maryland 21044  
 Tel: 410.992.4417 • Fax: 410.992.4497  
 www.hennemans.com



**DESIGN COLLECTIVE**  
 CONSULTANT  
 661 EAST PAVETT STREET, SUITE 300  
 ANNAPOLIS, MARYLAND 21403  
 TEL: 410.293.9300 FAX: 410.293.9301  
 WWW.DESIGNCOLLECTIVE.COM

**GROSVENOR HOUSE**  
 BLUE STREAM, BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES  
 1ST ELECTION DISTRICT  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND  
 ZONING: CA-C-CL

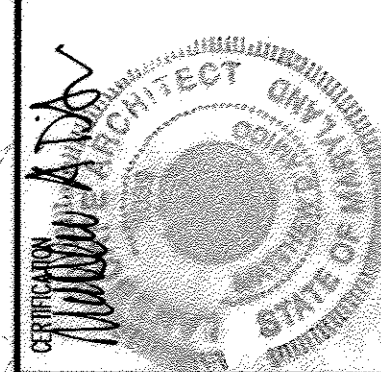
OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416, ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

PROJECT NO.: 2010.16.1  
 SCALE:  
 DATE: FEB. 2, 2012

PLANTING ENLARGEMENT

**L112**  
 SHEET 42 OF 55

SDP-11-032



**HENNEMAN + ASSOCIATES**  
 ARCHITECTS & PLANNERS  
 10705 Charter Drive, Suite 400  
 Columbia, Maryland 21044  
 Tel: 410.992.4417 • Fax: 410.992.4977  
 • www.hennemans.com

**DESIGN COLLECTIVE**  
 CONSULTANT  
 ARCHITECTURAL, PLANNING, INTERIOR  
 605 EAST PINE STREET SUITE 300  
 BALTIMORE, MD 21201  
 TEL: 410.528.4444 FAX: 410.528.4444  
 WWW.DESIGNCOLLECTIVE.COM

**GROSVENOR HOUSE**  
 BLUE STREAM BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES  
 1ST ELECTION DISTRICT 5  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND  
 ZONED: CAC-C2-1  
 OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416,  
 ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

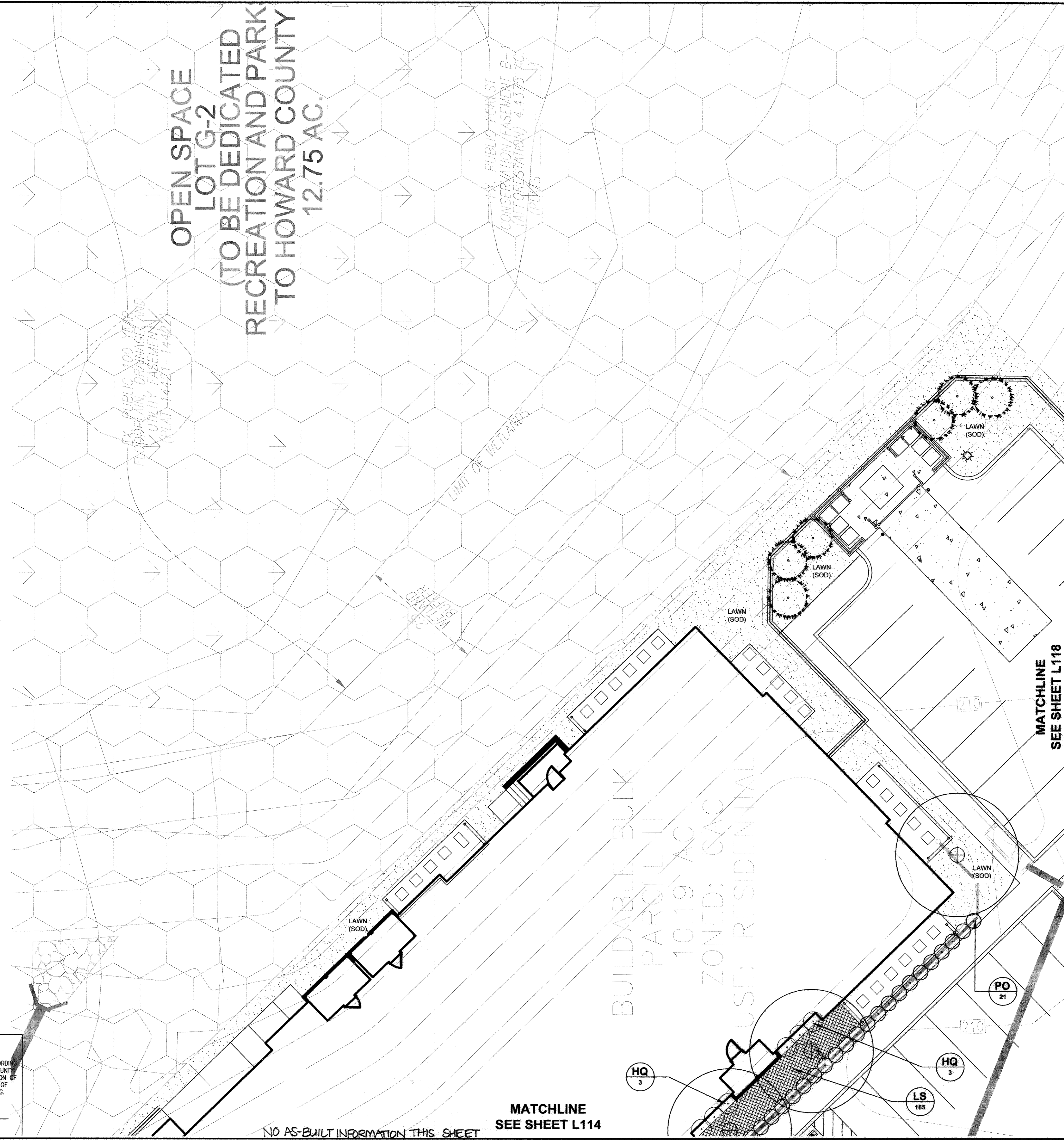
**PLANTING ENLARGEMENT**  
 PROJECT NO.: 2010.16.1  
 SCALE:  
 DATE: FEB. 2, 2012  
**L113**  
 SHEET 43 OF 55  
 SDP-11-032

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**PLANT LIST**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
SHRUBS, PERENNIALS, GRASSES, GROUNDCOVERS					
6	HQ	Hydrangea quercifolia 'Alice'	5 Gal.	Cont.	Matched
		Alice Oakleaf Hydrangea			
185	LS	Liriope spicata	1 Qt.	Cont.	18" O.C.
		Creeping Lilyturf			
21	PO	Prunus laurocerasus 'Otto Luyken'	5 Gal.	Cont.	30" O.C.
		Otto Luyken Cherry Laurel			
	SEA	Seasonal Planting			

**NOTE:**  
 ABOVE QUANTITIES ARE FOR CONVENIENCE OF CONTRACTOR. FINAL QUANTITIES TO BE GENERATED FROM PLANS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 6/7/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 6/2/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 6/2/12  
 DIRECTOR

**DEVELOPER'S/BUILDER'S CERTIFICATE**  
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 [Signature] 5/23/12  
 SIGNATURE OF DEVELOPER DATE

NO AS-BUILT INFORMATION THIS SHEET

**MATCHLINE**  
 SEE SHEET L114

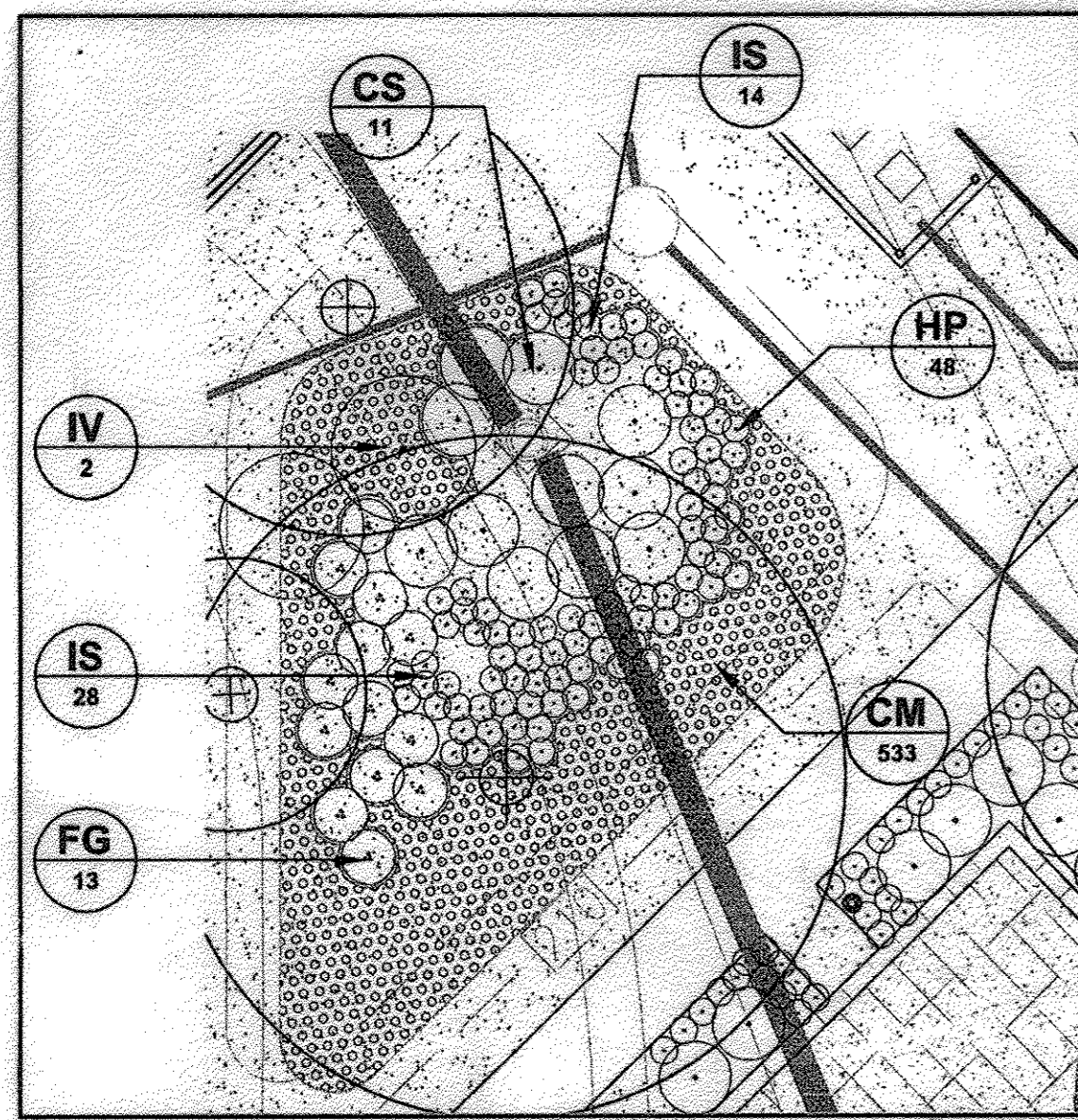
**MATCHLINE**  
 SEE SHEET L118

AS-BUILT 7/16/15

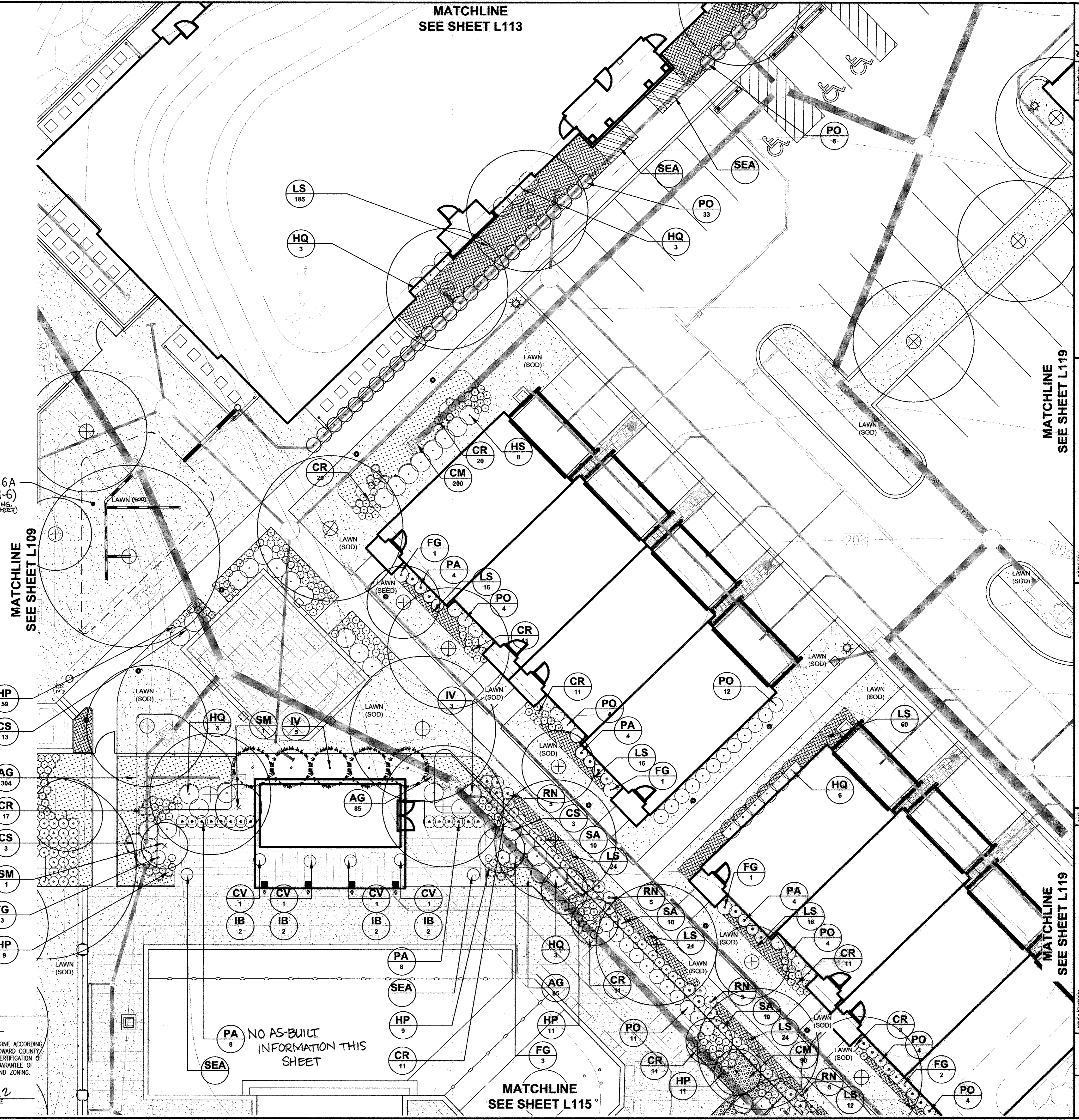
**PLANT LIST**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
<b>SHRUBS, PERENNIALS, GRASSES, GROUNDCOVERS</b>					
474	AG	Acorus gramineus 'Ogon' Golden Variegated Sweet Flag	1 Qt.	Cont.	12" O.C.
823	CM	Convallaria majalis Lily-of-the-valley	2.5" Cal.	Cont.	
126	CR	Careopsis rosea 'Sweet Dreams' Sweet Dreams Tickseed	1 Gal.	Cont.	30" O.C.
19	CS	Cornus sericea Redosier Dogwood	4' Ht.	Cont.	Specimen Quality Straight Leader
4	CV	Clematis viticella 'Alba Luxurians' Alba Luxurians Clematis	1 Gal.	Cont.	
24	FG	Fothergilla gardenii 'Blus Mist' Blue Mist Dwarf Fothergilla	4' Ht.	Cont.	36" O.C.
147	HP	Hemerocallis x 'Prairie Blue Eyes' Prairie Blue Eyes Day Lily	1 Gal.	Cont.	30" O.C.
8	HS	Hydrangea serrata 'Bluebird' Bluebird Lacecap Hydrangea	5 Gal.	Cont.	30" O.C.
18	HQ	Hydrangea quercifolia 'Alice' Alice Oakleaf Hydrangea	5 Gal.	Cont.	Matched
8	IB	Ipomoea batatas 'Margarita' Sweet Potato Vine 'Margarita'		Cont.	Matched
19	IV	Ilex verticillata 'Sparkleberry' Sparkleberry Winterberry	8' Ht.	Cont.	Matched
377	LS	Liriope spicata Creeping Lilyturf	1 Qt.	Cont.	18" O.C.
28	PA	Potentilla fruticosa 'Abbotswood' Abbotswood Potentilla	2 Gal.	Cont.	
82	PO	Prunus laurocerasus 'Otto Luyken' Otto Luyken Cherry Laurel	5 Gal.	Cont.	30" O.C.
20	RN	Rosa x 'Noara' Flower Carpet Red Groundcover Rose	2 Gal.	B&B	30" O.C.
30	SA	Spiraea x bumalda 'Anthony Waterer' Anthony Waterer Spiraea	2 Gal.	Cont.	12" O.C.
3	SM	Syringa meyeri 'Palibin' Dwarf Korean Lilac	6' Ht.	Cont.	Specimen
42	IS	Iris sibirica 'Benary Blue' Benary Blue Siberian Iris	1 Gal.	Cont.	18" O.C.
	SEA	Seasonal Planting			

NOTE:  
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**SWM#16A MBR (M-6)**



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 6/27/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 6/27/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 6/27/12  
 DIRECTOR

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 [Signature] 5/23/12  
 SIGNATURE OF DEVELOPER DATE

NO AS-BUILT INFORMATION THIS SHEET

**DESIGN COLLECTIVE**

**HENNEMAN + ASSOCIATES ARCHITECTS & PLANNERS**

10705 Charter Drive, Suite 400  
Columbia, Maryland 21044  
Tel: 410.992.4417 • Fax: 410.992.4497  
www.hennemanarchitects.com

**GROSVENOR HOUSE**  
 BLUE STREAM BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES  
 1ST ELECTION DISTRICT 5  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416  
 ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

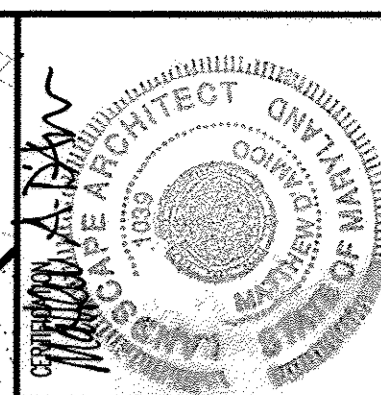
DATE: \_\_\_\_\_  
 SCALE: \_\_\_\_\_  
 DATE: FEB. 2, 2012

PROJECT NO.: 2010.16.1  
 SHEET 44 OF 55

**L114**

SDP-11-032

AS-BUILT 7/16/15



**HA**  
 HENNEMAN + ASSOCIATES  
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 Tel: 410-992-4417 • Fax: 410-992-4497  
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**DESIGN COLLECTIVE**  
 CONSULTANT  
 113 BLACKWELL STREET, SUITE 300  
 BALTIMORE, MARYLAND 21201  
 TEL: 410-528-1400  
 WWW.DESIGNCOLLECTIVE.COM

**GROSVENOR HOUSE**  
 BLUE STREAM, BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES  
 1ST ELECTION DISTRICT 5  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND  
 EX-260-00  
 EX-217-77

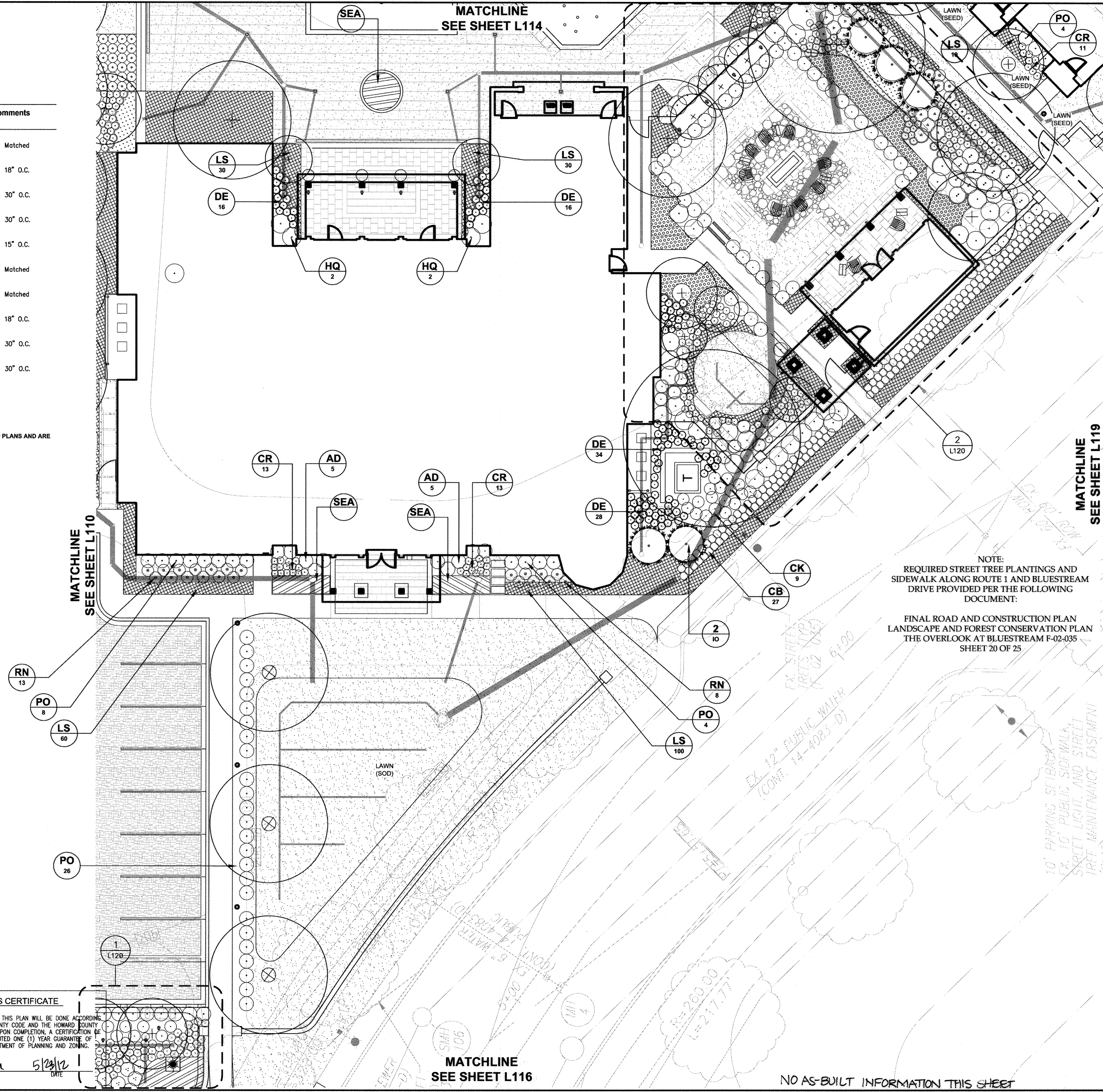
DATE: \_\_\_\_\_  
 PROJECT NO.: 2010.16.1  
 SCALE: \_\_\_\_\_  
 DATE: FEB. 2, 2012  
 PLANTING ENLARGEMENT

**L115**  
 SHEET 45 OF 55  
 SDP-11-032

**PLANT LIST**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
<b>SHRUBS, PERENNIALS, GRASSES, GROUNDCOVERS</b>					
10	AD	Azalea 'Delaware Valley' Delaware Valley Azalea	5 Gal.	Cont.	Matched
27	CB	Chrysanthemum x superbum 'Becky' Becky Shasta Daisy	2 Gal.	Cont.	18" O.C.
9	CK	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Reed Grass	1 Gal.	Cont.	30" O.C.
37	CR	Coreopsis rosea 'Sweet Dreams' Sweet Dreams Tickseed	1 Gal.	Cont.	30" O.C.
94	DE	Dryopteris erythrosora 'Brilliance' Brilliance Autumn Fern	1 Gal.	Cont.	15" O.C.
4	HQ	Hydrangea quercifolia 'Alice' Alice Oakleaf Hydrangea	5 Gal.	Cont.	Matched
2	IO	Ilex opaca American Holly	6' Ht.	B&B	Matched
230	LS	Liriope spicata Creeping Lilyturf	1 Qt.	Cont.	18" O.C.
42	PO	Prunus laurocerasus 'Otto Luyken' Otto Luyken Cherry Laurel	5 Gal.	Cont.	30" O.C.
21	RN	Rosa x 'Noara' Flower Carpet Red Groundcover Rose	2 Gal.	B&B	30" O.C.
	SEA	Seasonal Planting			

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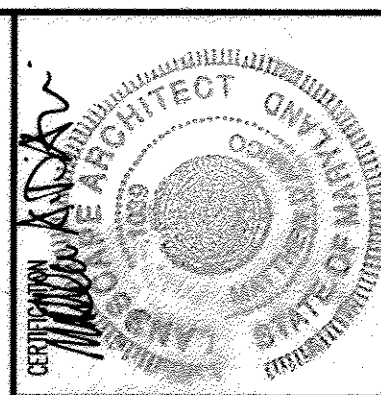


**NOTE:**  
 REQUIRED STREET TREE PLANTINGS AND  
 SIDEWALK ALONG ROUTE 1 AND BLUESTREAM  
 DRIVE PROVIDED PER THE FOLLOWING  
 DOCUMENT:  
 FINAL ROAD AND CONSTRUCTION PLAN  
 LANDSCAPE AND FOREST CONSERVATION PLAN  
 THE OVERLOOK AT BLUESTREAM F-02-035  
 SHEET 20 OF 25

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DIRECTOR

**DEVELOPER'S/BUILDER'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 AND LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
 SIGNATURE OF DEVELOPER: *Paula M. Coughlin*  
 DATE: 5/23/12

DATE: 2012  
 DRAWN BY: J. W. B. ST.  
 CHECKED BY: J. W. B. ST.  
 SCALE: AS SHOWN



**HENNEMAN + ASSOCIATES**  
**ARCHITECTS PLANNERS**  
 10705 Charter Drive, Suite 400  
 Columbia, Maryland 21044  
 Tel: 410.992.4417 • Fax: 410.992.4497  
 • www.hennemanarchitects.com

**DESIGN COLLECTIVE**  
 CONSULTANT  
 605 EAST FRANKLIN STREET, SUITE 300  
 BALTIMORE, MARYLAND 21202  
 T: 410.528.4444 F: 410.528.4444  
 WWW.DESIGNCOLLECTIVE.COM

**GROSVENOR HOUSE**  
 BLUE STREAM BUILDABLE BULK PARCEL H  
 APARTMENT BUILDING OWNERS  
 TAX MAP 33020000000000000000  
 1ST ELECTION DISTRICT 5  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND  
 ZONED: CAC-C-2L

OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416,  
 ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

DATE: \_\_\_\_\_  
 PROJECT NO.: 2010.16.1  
 SCALE: \_\_\_\_\_  
 DATE: FEB. 2, 2012

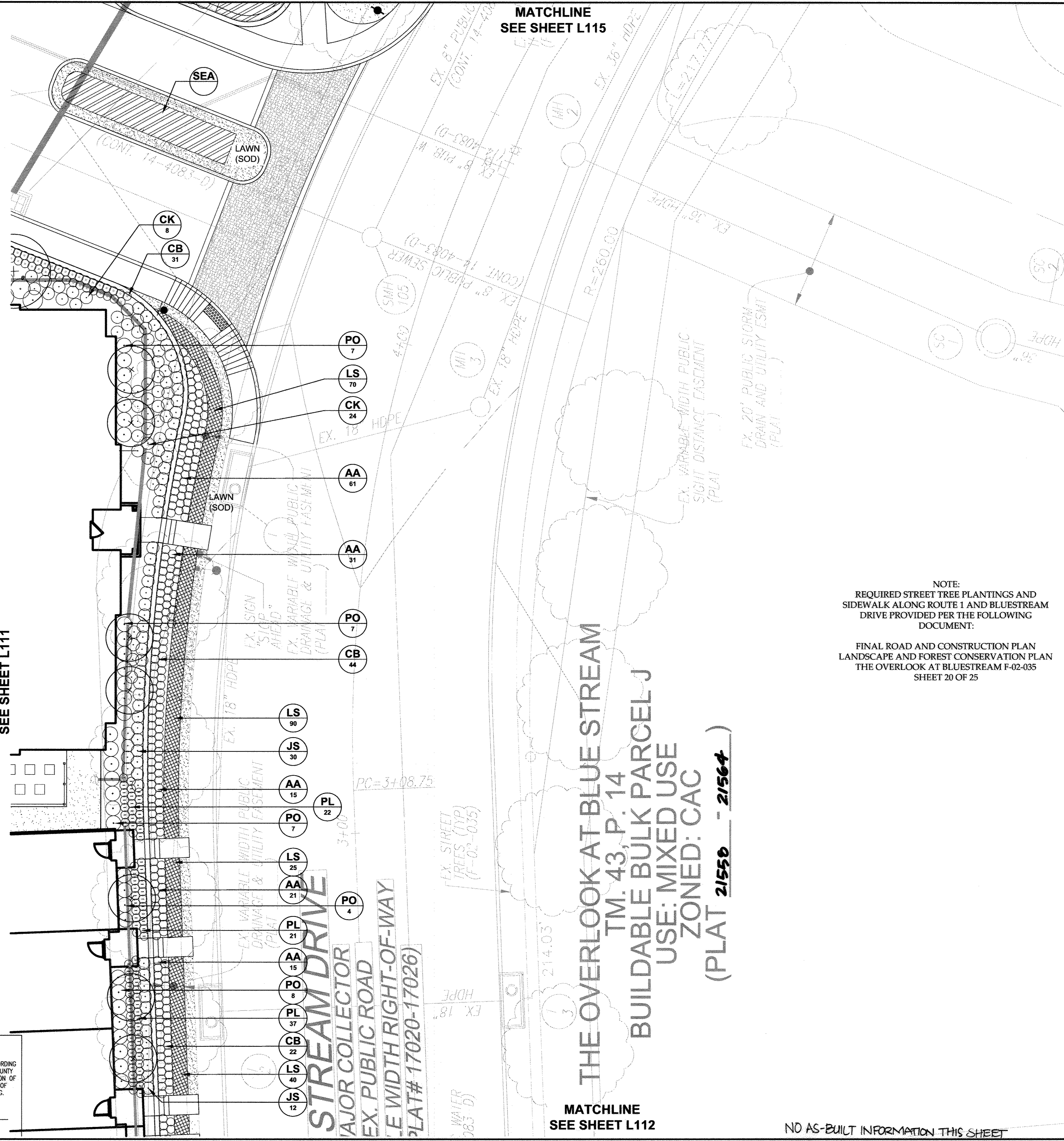
**L116**  
 SHEET 46 OF 55

SDP-11-032

**PLANT LIST**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
<b>SHRUBS, PERENNIALS, GRASSES, GROUNDCOVERS</b>					
143	AA	Aster alpeius 'Triumph' Triumph Aster	1 Gal.	Cont.	15" O.C.
97	CB	Chrysanthemum x superbum 'Becky' Becky Shasta Daisy	2 Gal.	Cont.	18" O.C.
32	CK	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Reed Grass	1 Gal.	Cont.	30" O.C.
42	JS	Juniperus sabina 'Arcadia' Arcadia Juniper	24" Ht./Spr.	Cont.	36" O.C.
225	LS	Liriope spicata Creeping Lilyturf	1 Qt.	Cont.	18" O.C.
80	PL	Perovskia atriplicifolia 'Little Spire' Little Spire Russian Sage	2 Gal.	Cont.	
33	PO	Prunus laurocerasus 'Otto Luyken' Otto Luyken Cherry Laurel	5 Gal.	Cont.	30" O.C.
	SEA	Seasonal Planting			

NOTE:  
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NOTE:  
 REQUIRED STREET TREE PLANTINGS AND SIDEWALK ALONG ROUTE 1 AND BLUESTREAM DRIVE PROVIDED PER THE FOLLOWING DOCUMENT:  
 FINAL ROAD AND CONSTRUCTION PLAN  
 LANDSCAPE AND FOREST CONSERVATION PLAN  
 THE OVERLOOK AT BLUESTREAM F-02-035  
 SHEET 20 OF 25

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 6/7/12

**DEVELOPER'S/BUILDER'S CERTIFICATE**  
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 SIGNATURE OF DEVELOPER: *Arnold Sagner* DATE: 6/23/12

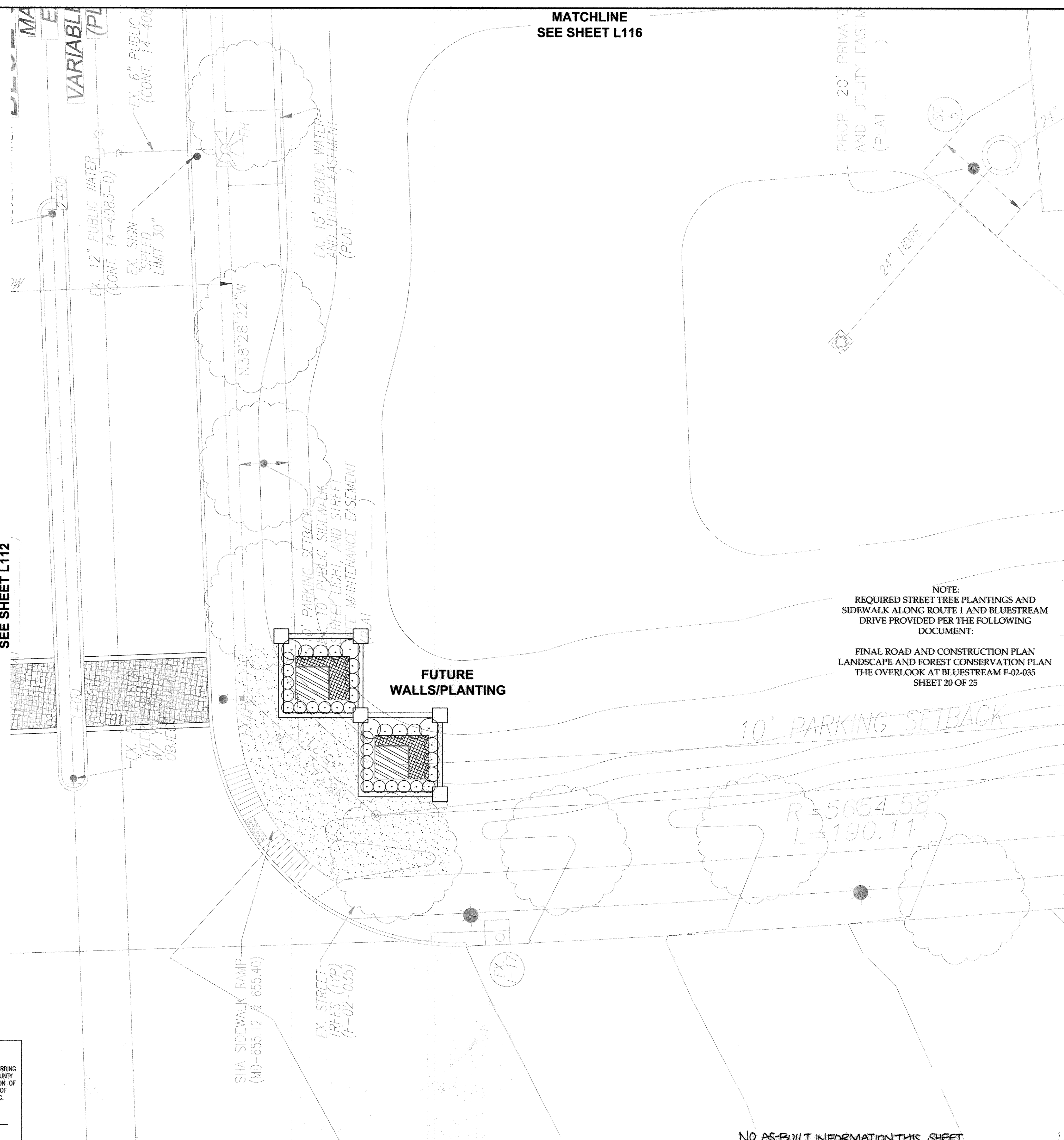
CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 6/27/12  
 DIRECTOR  
 DATE: 6/27/12

NO AS-BUILT INFORMATION THIS SHEET

AS-BUILT 7/16/15

MATCHLINE  
SEE SHEET L116

MATCHLINE  
SEE SHEET L112



NOTE:  
REQUIRED STREET TREE PLANTINGS AND  
SIDEWALK ALONG ROUTE 1 AND BLUESTREAM  
DRIVE PROVIDED PER THE FOLLOWING  
DOCUMENT:  
  
FINAL ROAD AND CONSTRUCTION PLAN  
LANDSCAPE AND FOREST CONSERVATION PLAN  
THE OVERLOOK AT BLUESTREAM F-02-035  
SHEET 20 OF 25

10' PARKING SETBACK

R=5654.58'  
L=190.11'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 6/7/12  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE

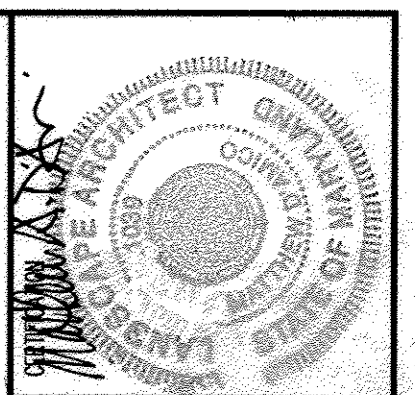
*[Signature]* 6/27/12  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE

*[Signature]* 6/27/12  
DIRECTOR  
DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

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*[Signature]* 5/29/12  
SIGNATURE OF DEVELOPER  
DATE



**H+A**  
HENNEHAN + ASSOCIATES  
ARCHITECTS & PLANNERS  
10705 Charter Drive, Suite 400  
Columbia, Maryland 21044  
Tel: 410.992.4477 • Fax: 410.992.4477  
www.hennehanarchitects.com

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CONSULTANT  
6600 EAST WISCONSIN AVENUE  
ANNAPOLIS, MARYLAND 21403  
TEL: 410.291.1000  
WWW.DESIGNCOLLECTIVE.COM

GROSVENOR HOUSE  
BLUE STREAM BUILDABLE BULK PARCEL H  
APPLICABLE ZONING DISTRICTS  
TAX MAP 43 GRID 4 & 5  
1ST ELECTION DISTRICT  
PARCEL 14  
HOWARD COUNTY, MARYLAND

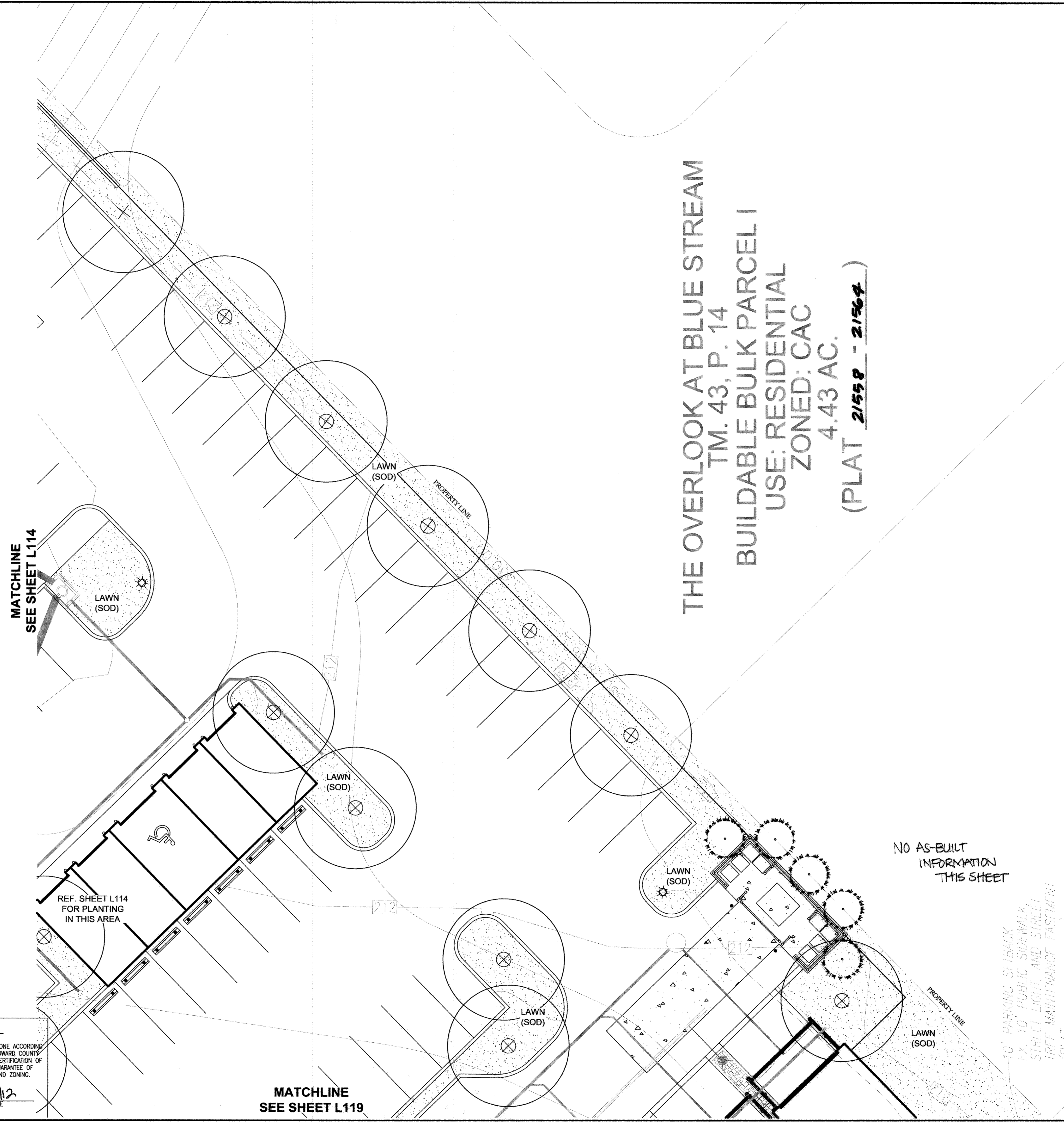
OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416,  
ELLCOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

PLANTING ENLARGEMENT

PROJECT NO.: 2010.16.1  
SCALE:  
DATE: FEB. 2, 2012

L117  
SHEET 47 OF 55  
SDP-11-032

NO AS-BUILT INFORMATION THIS SHEET  
AS-BUILT 7/16/15



THE OVERLOOK AT BLUE STREAM  
 TM. 43, P. 14  
 BUILDABLE BULK PARCEL I  
 USE: RESIDENTIAL  
 ZONED: CAC  
 4.43 AC.  
 (PLAT 21558 - 21564)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 6/1/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE

*[Signature]* 6/2/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE

*[Signature]* 6/2/12  
 DIRECTOR  
 DATE

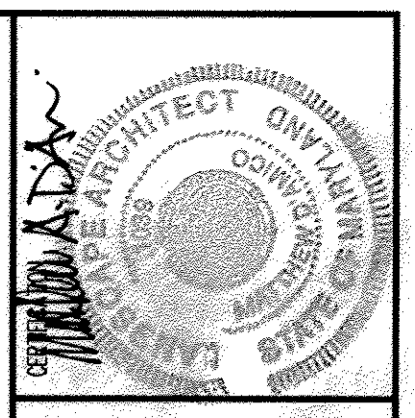
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*[Signature]* 5/23/12  
 SIGNATURE OF DEVELOPER  
 DATE

MATCHLINE  
 SEE SHEET L119

AS-BUILT 7/16/15



**H+A**  
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 ARCHITECTS ■ PLANNERS  
 10705 Charter Drive, Suite 440  
 Columbia, Maryland 21044  
 Tel: 410.992.4477  
 www.hennemancollective.com

CONSULTANT  
**DESIGN COLLECTIVE**  
 ARCHITECTURAL, PLANNING AND INTERIORS  
 www.designcollective.com  
 601 EAST FRONT STREET, SUITE 300  
 BALTIMORE, MD 21202  
 T: 410.528.4455 F: 410.528.4444

**GROSVENOR HOUSE**  
 BLUE STREAM, BUILDABLE BULK PARCEL I  
 APPLICABLE TO THE DEVELOPER'S  
 TAX MAP AND ZONING ORDINANCES  
 1ST ELECTION DISTRICT 3  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND  
 ZONED: CAC-CU

OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416,  
 ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

ISSUES/REVISIONS

DATE	
PROJECT NO.	2010.16.1
SCALE	
DATE	FEB. 2, 2012

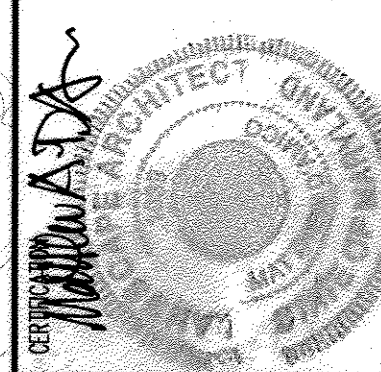
**L118**  
 SHEET 48 OF 55

PLANTING ENLARGEMENT

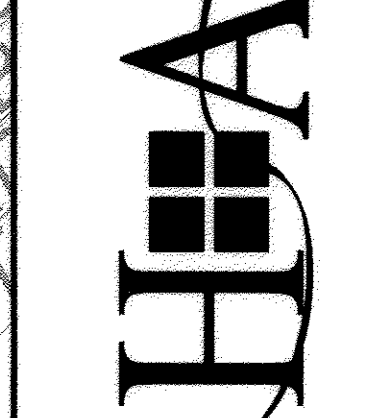
SDP-11-032

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**HENNEMAN + ASSOCIATES**  
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 Columbia, Maryland 21044  
 Tel: 410.992.4417 • Fax: 410.992.4497  
 • www.hennemanarchitects.com



**DESIGN COLLECTIVE**  
 CONSULTANT  
 605 WEST PARKWAY SUITE 200  
 ANNAPOLIS, MARYLAND 21403  
 TEL: 410.291.1111 FAX: 410.291.1112  
 WWW.DESIGNCOLLECTIVE.COM

**GROSVENOR HOUSE**  
 BLUE STREAM BUILDABLE BULK PARCEL H  
 APARTMENT BUILDING DEVELOPMENT  
 1411 BLUE STREAM DRIVE  
 1ST ELECTION DISTRICT  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND  
 E22-162-CAC-C-1

**OWNER/DEVELOPER:** BLUE STREAM 1 LLC PO BOX 416,  
 ELLICOTT CITY, MD 21104 C/O: ARNOLD SAGNER 410-465-2020

DATE: \_\_\_\_\_  
 PROJECT NO.: 2010.16.1  
 SCALE: \_\_\_\_\_  
 DATE: FEB. 2, 2012

**L119**  
 SHEET 49 OF 55  
 SDP-11-032

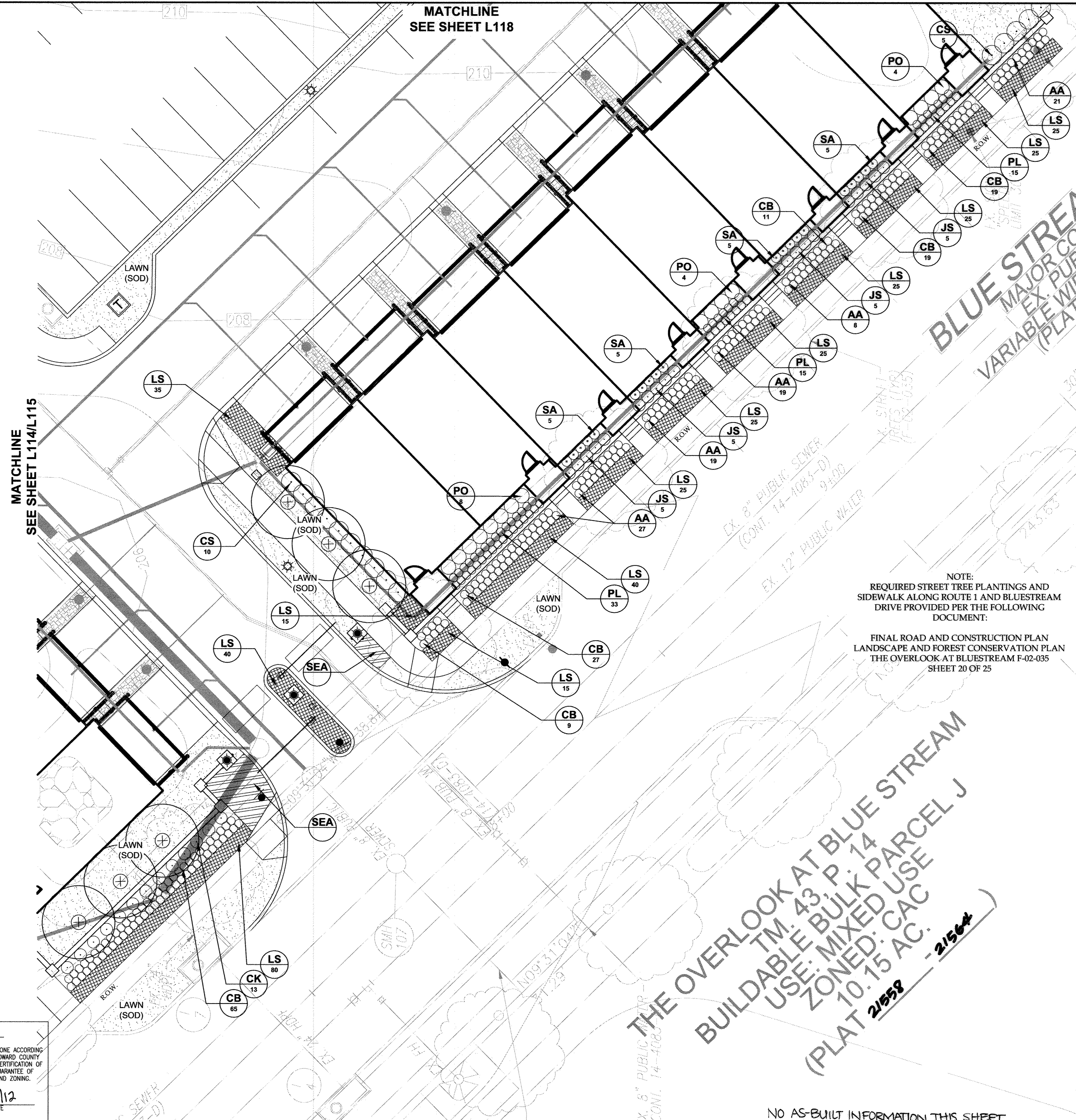
PLANTING ENLARGEMENT

THESE PLANS AND SPECIFICATIONS ARE PROTECTED UNDER FEDERAL COPYRIGHT LAWS. © 2010 HENNEMAN AND ASSOCIATES MAINTAIN UNIVERSITY OF SUCH RIGHTS AND PRIVILEGES.

**PLANT LIST**

Qty.	Key	Botanical/Common Name	Size	Root	Comments
SHRUBS, PERENNIALS, GRASSES, GROUNDCOVERS					
94	AA	Aster alpeius 'Triumph' Triumph Aster	1 Gal.	Cont.	15" O.C.
150	CB	Chrysanthemum x superbum 'Becky' Becky Shasta Daisy	2 Gal.	Cont.	18" O.C.
13	OK	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Reed Grass	1 Gal.	Cont.	30" O.C.
15	CS	Cornus sericea Redosier Dogwood	4' Ht.	Cont.	Specimen Quality Straight Leader
20	JS	Juniperus sabinia 'Arcadia' Arcadia Juniper	24" Ht./Spr.	Cont.	36" O.C.
400	LS	Liriope spicata Creeping Lilyturf	1 Qt.	Cont.	18" O.C.
63	PL	Perovskia atriplicifolia 'Little Spire' Little Spire Russian Sage	2 Gal.	Cont.	
16	PO	Prunus laurocerasus 'Otto Luyken' Otto Luyken Cherry Laurel	5 Gal.	Cont.	30" O.C.
20	SA	Spiraea x bumalda 'Anthony Waterer' Anthony Waterer Spiraea	2 Gal.	Cont.	12" O.C.
	SEA	Seasonal Planting			

NOTE:  
 ABOVE QUANTITIES ARE FOR CONVENIENCE OF CONTRACTOR. FINAL QUANTITIES TO BE GENERATED FROM PLANS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.



NOTE:  
 REQUIRED STREET TREE PLANTINGS AND  
 SIDEWALK ALONG ROUTE 1 AND BLUESTREAM  
 DRIVE PROVIDED PER THE FOLLOWING  
 DOCUMENT:  
 FINAL ROAD AND CONSTRUCTION PLAN  
 LANDSCAPE AND FOREST CONSERVATION PLAN  
 THE OVERLOOK AT BLUESTREAM F-02-035  
 SHEET 20 OF 25

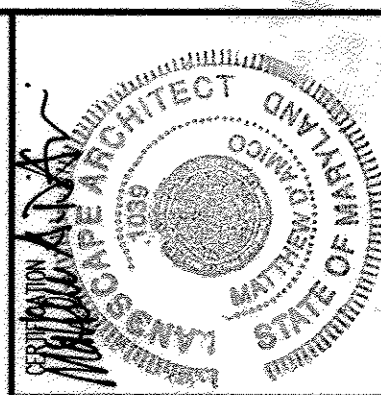
THE OVERLOOK AT BLUE STREAM  
 BUILDABLE BULK PARCEL J  
 USE: MIXED USE  
 ZONED: CAC  
 10.15 AC.  
 21558 - 21564

NO AS-BUILT INFORMATION THIS SHEET  
 AS-BUILT 7/16/15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 6/2/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 6/2/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 6/2/12  
 DIRECTOR

**DEVELOPER'S/BUILDER'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 (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
 [Signature] 5/23/12  
 SIGNATURE OF DEVELOPER DATE

DATE: 5/23/12  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 SCALE: AS SHOWN



**HENNEMAN + ASSOCIATES**  
 ARCHITECTS & PLANNERS  
 10705 Charter Drive, Suite 400  
 Columbia, Maryland 21044  
 Tel: 410.992.4417 • Fax: 410.992.4497  
 www.hennemancollective.com

**DESIGN COLLECTIVE**  
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 601 EAST PERRY STREET, SUITE 200  
 BALTIMORE, MARYLAND 21202  
 TEL: 410.542.4415 • FAX: 410.542.4412  
 www.designcollective.com

**GROSVENOR HOUSE**  
 BLUE STREAM BUILDABLE BULK PARCEL H  
 APPLICABLE TO THE 1ST ELECTION DISTRICT  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416,  
 ELLICOTT CITY, MD 21104 C/O: ARNOLD SAGNER 410-465-2020

DATE: \_\_\_\_\_  
 PROJECT NO.: 2010.16.1  
 SCALE: \_\_\_\_\_  
 DATE: FEB. 2, 2012

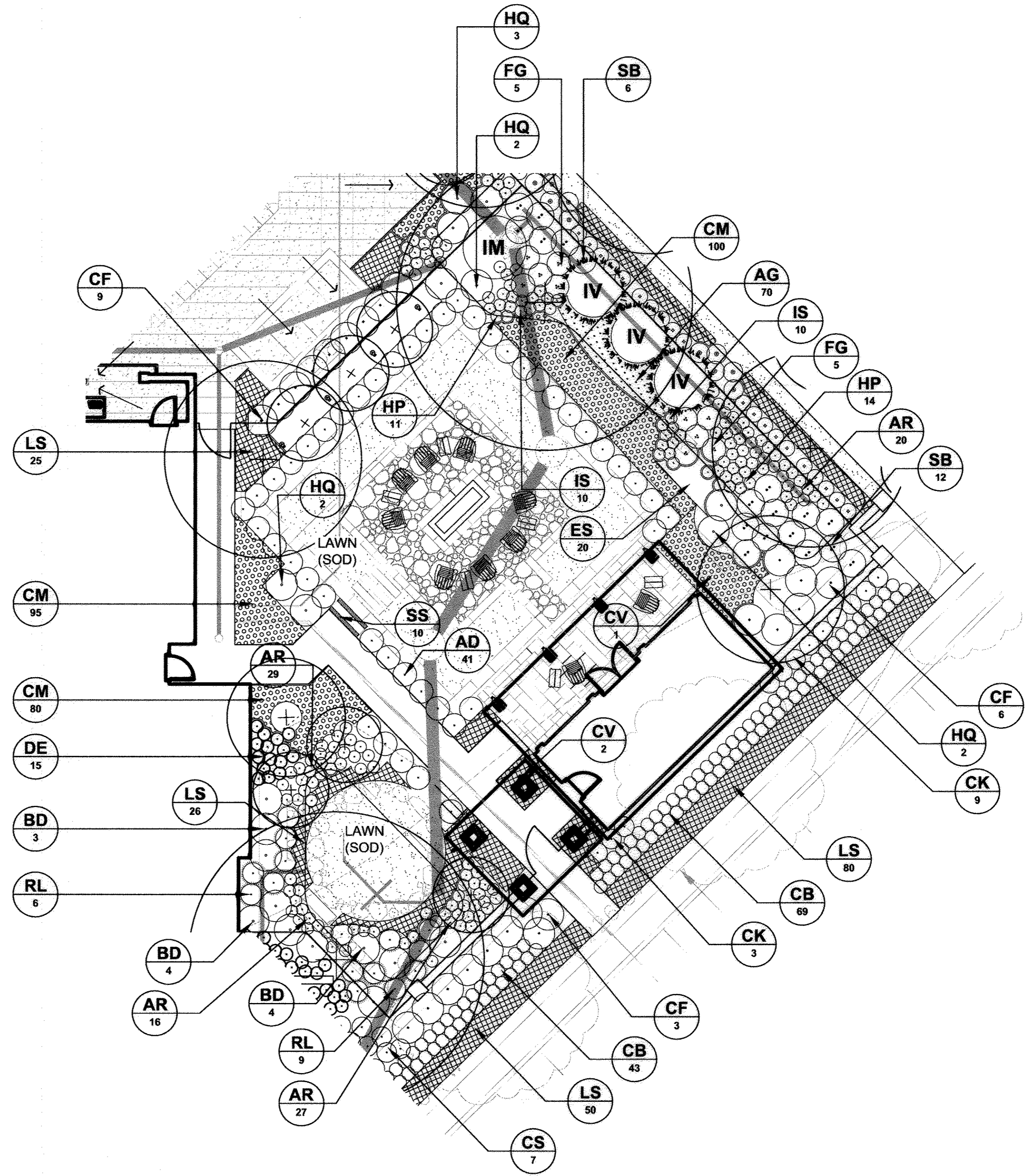
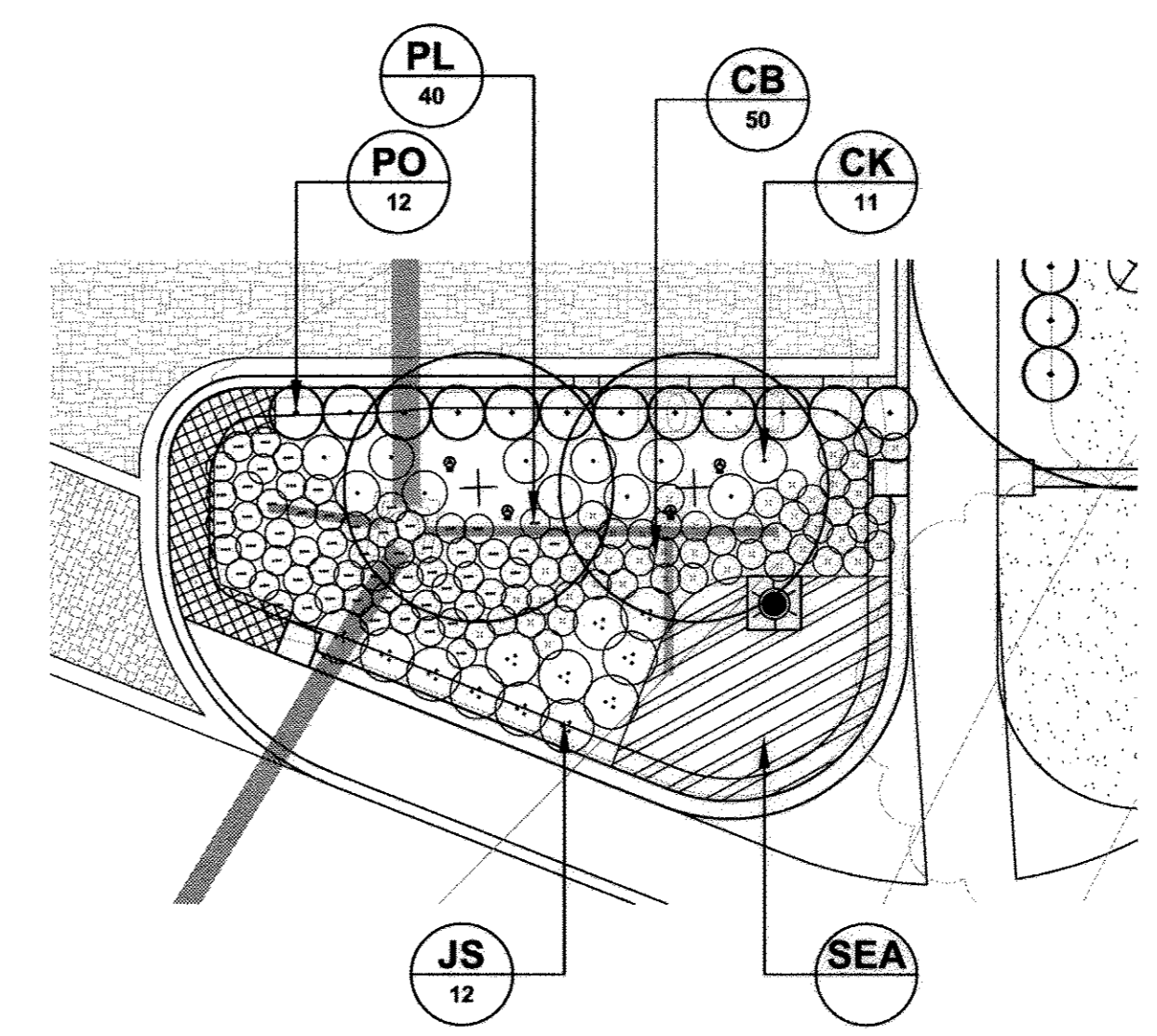
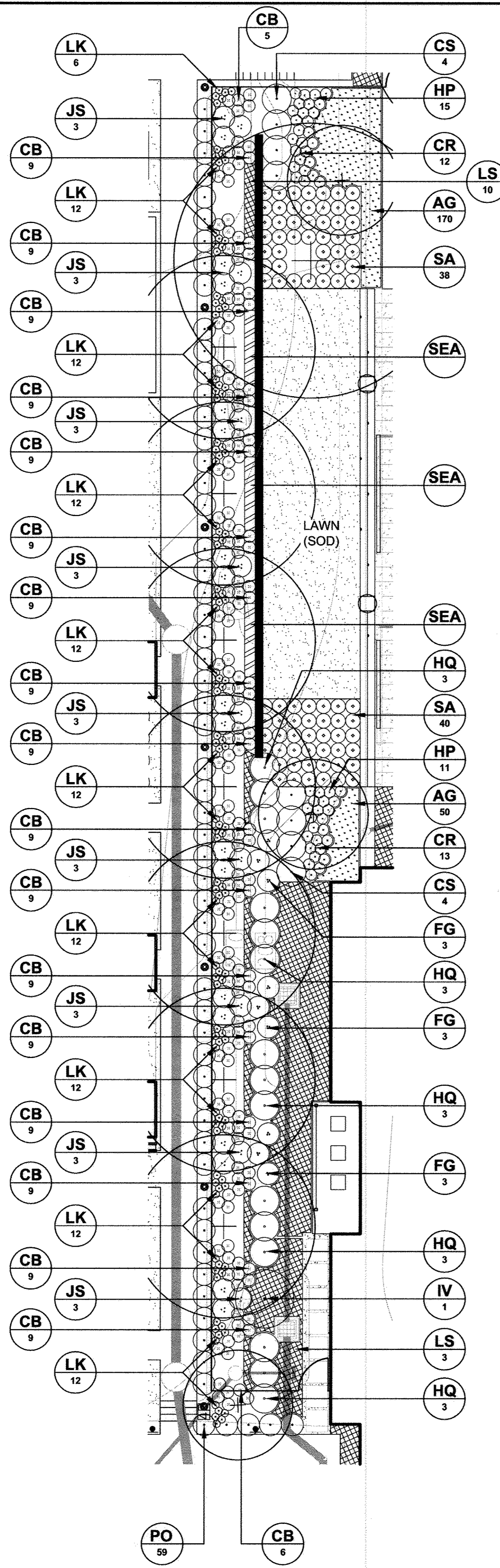
**L120**  
 SHEET 50 OF 55  
 SDP-11-032

PLANTING ENLARGEMENT

**PLANT LIST**

Qty.	Key	Botanical/Common Name SHRUBS, PERENNIALS, GRASSES, GROUNDCOVERS	Size	Root	Comments
41	AD	Azalea 'Delaware Valley' Delaware Valley Azalea	5 Gal.	Cont.	Matched
290	AG	Acorus gramineus 'Ogon' Golden Variegated Sweet Flag	1 Qt.	Cont.	12" O.C.
92	AR	Astilbe x arendsii 'Rheinland' Rheinland Astilbe	1 Gal.	Cont.	18" O.C.
11	BD	Buddleja davidii nanhoensis 'Monum' Petite Plum Dwarf Butterfly Bush	5 Gal.	Cont.	48" O.C.
326	CB	Chrysanthemum x superbum 'Becky' Becky Shasta Daisy	2 Gal.	Cont.	18" O.C.
18	CF	Cornus sericea 'Flaviramea' Yellow Twigged Dogwood	4' Ht.	Cont.	Specimen Quality Straight Leader
23	CK	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Reed Grass	1 Gal.	Cont.	30" O.C.
275	CM	Convallaria majalis Lily-of-the-valley	2.5" Cal.	Cont.	
25	CR	Coreopsis rosea 'Sweet Dreams' Sweet Dreams Tickseed	1 Gal.	Cont.	30" O.C.
15	CS	Cornus sericea Redosier Dogwood	4' Ht.	Cont.	Specimen Quality Straight Leader
3	CV	Clematis viticella 'Alba Luxurians' Alba Luxurians Clematis	1 Gal.	Cont.	
15	DE	Dryopteris erythrosora 'Brilliance' Brilliance Autumn Fern	1 Gal.	Cont.	15" O.C.
20	ES	Equisetum scirpoides Blue Mist Dwarf Horsetail		Cont.	8" O.C.
19	FG	Fothergilla gardenii 'Blus Mist' Blue Mist Dwarf Fothergilla	4' Ht.	Cont.	36" O.C.
26	HM	Helleborus 'Mardi Gras Bicolor Mix' Mardi Gras BiColor Mix Lenten Rose	1 Gal.	Cont.	18" O.C.
51	HP	Hemerocallis x 'Prairie Blue Eyes' Prairie Blue Eyes Day Lily	1 Gal.	Cont.	30" O.C.
24	HQ	Hydrangea quercifolia 'Alice' Alice Oakleaf Hydrangea	5 Gal.	Cont.	Matched
20	IS	Iris siberica 'Bennerup Blue' Bennerup Blue Siberian Iris	1 Gal.	Cont.	18" O.C.
1	IM	Ilex x meserveae 'Blue Girl' P.P.# 2434 Blue Girl Holly	6' Ht.	Cont.	Matched
3	IV	Ilex verticillata 'Sparkleberry' Sparkleberry Winterberry	8' Ht.	Cont.	Matched
39	JS	Juniperus sabinia 'Arcadia' Arcadia Juniper	24" Ht./Spr.	Cont.	36" O.C.
108	LK	Liatris spicata 'Kobold' Kobold Gayfeather	1 Qt.	Cont.	18" O.C.
565	LS	Liriope spicata Creeping Lilyturf	1 Qt.	Cont.	18" O.C.
71	PL	Perovskia atriplicifolia 'Little Spire' Little Spire Russian Sage	2 Gal.	Cont.	
12	PO	Prunus laurocerasus 'Otto Luyken' Otto Luyken Cherry Laurel	5 Gal.	Cont.	30" O.C.
14	RL	Rhododendron x 'Looking Glass' Looking Glass Rhododendron	2 Gal.	Cont.	30" O.C.
78	SA	Spiraea x bumalda 'Anthony Waterer' Anthony Waterer Spiraea	2 Gal.	Cont.	12" O.C.
18	SB	Symphoricarpos 'Bakrabright' Bright Fantasy Snowberry	2 Gal.	Cont.	36" O.C.
10	SS	Sagina Subulata Scotch Moss	1 Qt.	Cont.	12" O.C.
	SEA	Seasonal Planting			

NOTE:  
 ABOVE QUANTITIES ARE FOR CONVENIENCE OF CONTRACTOR. FINAL QUANTITIES TO GENERATED FROM PLANS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DIRECTOR

**DEVELOPER'S/BUILDER'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 (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
 SIGNATURE OF DEVELOPER: \_\_\_\_\_ DATE: 5/23/12

NO AS-BUILT INFORMATION THIS SHEET

AS-BUILT 7/16/15

OVERALL UNDERSTORY PLANT LIST

Qty. L105	Qty. L106	Qty. L107	Qty. L108	Qty. L109	Qty. L110	Qty. L111	Qty. L112	Qty. L113	Qty. L114	Qty. L115	Qty. L116	Qty. L117	Qty. L118	Qty. L119	Qty. L120	Qty.	Key	Botanical/Common Name	Size	Root	Comments	
																SHRUBS, PERENNIALS, GRASSES, GROUNDCOVERS						
							42				143			94		279	AA	Aster alpeus 'Triumph'	1 Gal.	Cont.	15" O.C.	
					20		18			10		12			36	96	AD	Azalea 'Delaware Valley'	5 Gal.	Cont.	Matched	
120	590	565	655	255	915	1330	1020		474						290	6214	AG	Acorus gramineus 'Ogon'	1 Qt.	Cont.	12" O.C.	
															92	92	AR	Astilbe x arendsii 'Rheinland'	1 Gal.	Cont.	18" O.C.	
															11	11	BD	Buddleja davidii nonhoensis 'Monum'	5 Gal.	Cont.	48" O.C.	
					15	72	90			27	97				150	326	777	CB	Chrysanthemum x superbum 'Becky'	2 Gal.	Cont.	18" O.C.
															1	1	CC	Corylus avellana 'Contorta'	5 Gal./4' Ht.	Cont.	Specimen	
6	11		14	31	24		9								15	110	CF	Cornus sericea 'Flaviramea'	4' Ht.	Cont.	Specimen Quality	
			32				4									48	CH	Cotoneaster horizontalis 'Perpusillus'	18" Ht./24" Spant.		Matched	
					86	73	33			9	32			13	23	246	CK	Calamagrostis x acutiflora 'Karl Foerster'	1 Gal.	Cont.	30" O.C.	
110					505	275	200		290						245	1625	CM	Convallaria majalis	2.5" Gal.	Cont.		
									126	37					25	188	CR	Coreopsis rosea 'Sweet Dreams'	1 Gal.	Cont.	30" O.C.	
							13	19		6				15	15	68	CS	Cornus sericea	4' Ht.	Cont.	Specimen Quality	
									4						3	7	CV	Clematis viticella 'Alba Luxurians'	1 Gal.	Cont.		
											94				15	109	DE	Dryopteris erythrosora 'Brilliance'	1 Gal.	Cont.	15" O.C.	
															20	20	ES	Equisetum scirpoides		Cont.	8" O.C.	
									11						19	30	FG	Fothergilla gardenii 'Blue Mist'	4' Ht.	Cont.	36" O.C.	
															26	26	HM	Helleborus 'Mardi Gras Bicolor Mix'	1 Gal.	Cont.	18" O.C.	
27		14	36	100	122		74		40						51	464	HP	Hemerocallis x 'Prairie Blue Eyes'	1 Gal.	Cont.	30" O.C.	
									8						8	8	HS	Hydrangea serrata 'Bluebird'	5 Gal.	Cont.	30" O.C.	
	12	12	7	12	8		8	6	18	4			4		24	111	HQ	Hydrangea quercifolia 'Alice'	5 Gal.	Cont.	Matched	
									8						8	8	IB	Ipomoea batatas 'Margarita'		Cont.	Matched	
															1	1	IM	Ilex x meserveae 'Blue Boy'	8' Ht.	B&B	Matched	
															2	2	IO	Ilex opaca	6' Ht.	B&B	Matched	
29	34	50	77	64	80	73	121								20	548	IS	Iris siberica 'Bennerup Blue'	1 Gal.	Cont.	18" O.C.	
			10	9					8						3	30	IV	Ilex verticillata 'Sparkleberry'	8' Ht.	Cont.	Matched	
			28				96			42	20			20	39	248	JS	Juniperus sabina 'Arcadia'	24" Ht./Spr.	Cont.	36" O.C.	
															108	108	LK	Liatris spicata 'Kobold'	1 Gal.	Cont.	18" O.C.	
100	340	355	190	475	620	196	1098	185	377	230	225	40		400	565	5396	LS	Liriope spicata	1 Qt.	Cont.	18" O.C.	
									28						28	28	PA	Potentilla fruticosa 'Abbotswood'	2 Gal.	Cont.		
					14										14	14	PF	Photinia x fraseri	8' Ht.	B&B	Matched	
							43			80				63	71	257	PL	Perovskia altiplicifolia 'Little Spire'	2 Gal.	Cont.		
43	36	26	52	12	57	37	21	82	42	33				16	12	533	PO	Prunus laurocerasus 'Otto Luyken'	5 Gal.	Cont.	30" O.C.	
															14	14	RL	Rhododendron x 'Looking Glass'	2 Gal.	Cont.	30" O.C.	
									20	21					41	41	RN	Rosa x 'Noara'	2 Gal.	B&B	30" O.C.	
									30					20	50	50	SA	Spirea x bumalda 'Anthony Waterer'	2 Gal.	Cont.	12" O.C.	
			12	5	10	10									18	65	SB	Symphoricarpos 'Bakrabright'	2 Gal.	Cont.	36" O.C.	
									3						3	3	SM	Syringa meyeri 'Palbin'	6' Ht.	Cont.	Specimen	
															34	34	SS	Sagina subulata	Pot		8" O.C.	

NOTE: ABOVE QUANTITIES ARE FOR CONVENIENCE OF CONTRACTOR. FINAL QUANTITIES TO BE GENERATED FROM PLANS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 6/27/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 6/27/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 6/27/12  
 DIRECTOR

DEVELOPER'S/BUILDER'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 (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
 [Signature] 5/28/12  
 SIGNATURE OF DEVELOPER  
 DATE

CONSULTANT  
**DESIGN COLLECTIVE**  
 ARCHITECTURAL, PLANNING, INTERIORS  
 66 WEST PRATT STREET, SUITE 200  
 BALTIMORE, MARYLAND 21201  
 T: 410.545.5555 F: 410.545.5555  
 WWW.DESIGNCOLLECTIVE.COM

CONTRACTOR  
**GROSVENOR HOUSE**  
 BLUE STREAM BUILDING BULK PARCEL 14  
 APARTMENTS AND TOWNHOMES  
 TAX MAP 43 GRID 4 & 5  
 1ST ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 (410) 545-5555

OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416,  
 ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

PROJECT NO.: 2010.16.1  
 SCALE:  
 DATE: FEB. 2, 2012

OVERALL PLANT LIST  
 SHEET 51 OF 55  
 SDP-11-032

NO AS-BUILT INFORMATION THIS SHEET  
 AS-BUILT 7/16/15

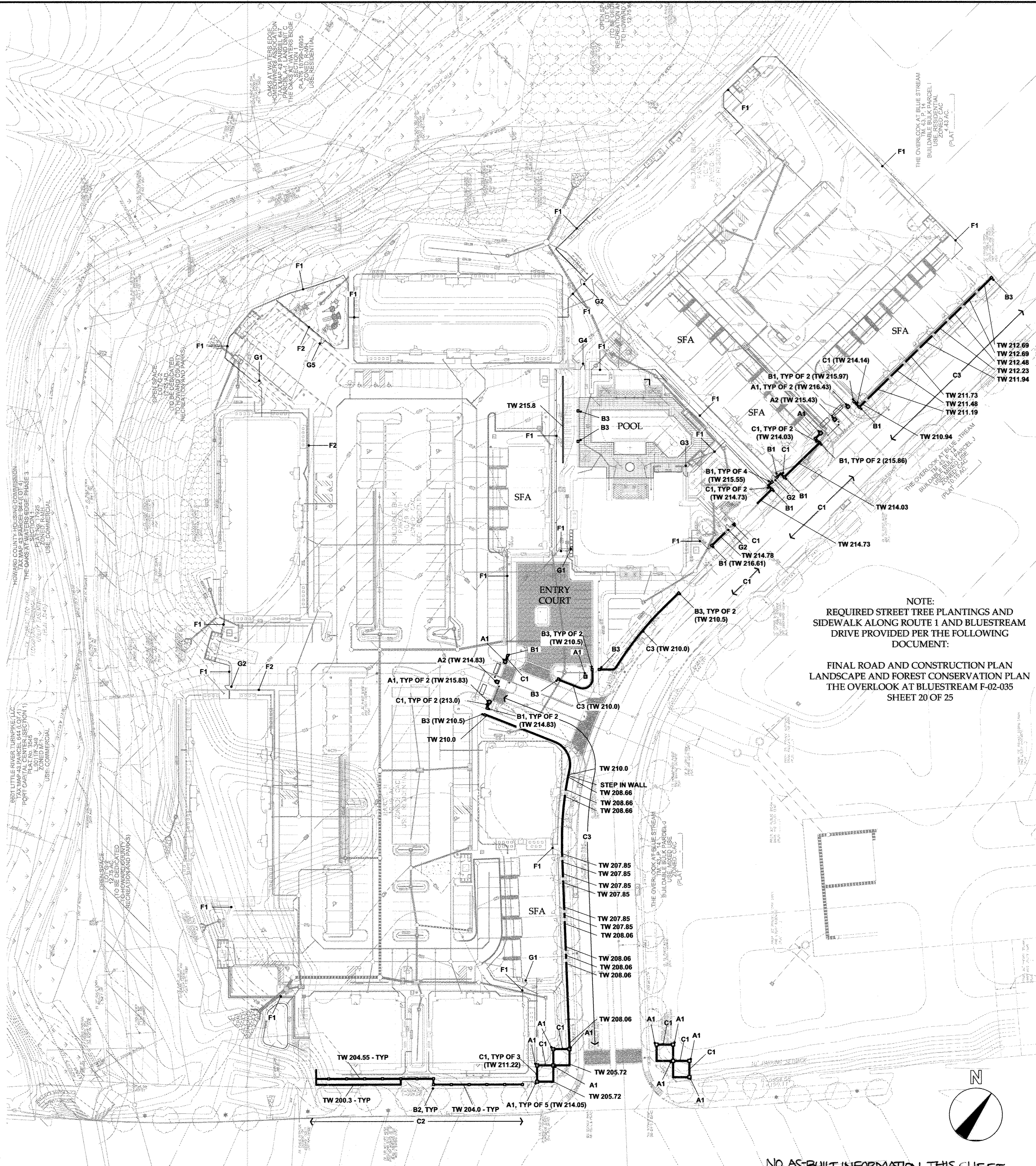
**HARDSCAPE LEGEND**

- A1 **1** COLUMN TYPE A1 (8'-10" HT.)
- L303
- A2 **1** COLUMN TYPE A2 (7'-10" HT.)
- L303
- B1 **2** COLUMN TYPE B1 (7'-10" HT.)
- L303
- B2 **2** COLUMN TYPE B2 (HT. VARIES - REF. PLAN/ELEVATIONS)
- L303
- B3 **3** COLUMN TYPE B3 (2'-6" HT.)
- L303
- C1 **4** WALL TYPE A (6'-0" HT. STONE/BRICK/PRECAST)
- L303
- C2 **4** WALL TYPE B (HT. VARIES, STONE W/ PRECAST CAP)
- L303
- C3 **5** WALL TYPE C (2'-0" HT. STONE W/ PRECAST CAP)
- L303
- F1 **2** ALUMINUM FENCE - 60" HT. (POOL AND REATINING WALLS)
- L305
- F2 **1** ALUMINUM FENCE - 36" HT. (PLAYGROUND)
- L306
- G1 **3** GATE TYPE A - 60" HT. (LOCK ANY KEY BY OWNER)
- L305
- G2 **3** GATE TYPE B - 60" HT. (KEY FOB HARDWARE)
- L305
- G3 **3** GATE TYPE C: POOL - SINGLE GATE - 60" HT. (LOCK ANY KEY BY OWNER - TO MEET ALL REQUIRED POOL CODES)
- L305
- G4 **4** GATE TYPE D: POOL - DOUBLE GATE - 60" HT. (LOCK ANY KEY BY OWNER - TO MEET ALL REQUIRED POOL CODES)
- L305
- G5 **2** GATE TYPE E: PLAYGROUND - 36" HT. (LOCK ANY KEY BY OWNER)
- L306

**NOTES:**

- REFERENCE HARDSCAPE ENLARGEMENTS FOR ADDITIONAL DETAIL REGARDING PERIMETER COLUMNS, WALLS, FENCES AND GATES.

- TOP OF WALL SPOT ELEVATIONS ARE APPROXIMATE AND ILLUSTRATE DESIGN INTENT. ANY FIELD CONDITIONS RESULTING IN A CHANGE TO THE PROPOSED TOP OF WALLS SHOULD BE APPROVED BY THE LANDSCAPE ARCHITECT.



**NOTE:**  
REQUIRED STREET TREE PLANTINGS AND SIDEWALK ALONG ROUTE 1 AND BLUESTREAM DRIVE PROVIDED PER THE FOLLOWING DOCUMENT:  
FINAL ROAD AND CONSTRUCTION PLAN LANDSCAPE AND FOREST CONSERVATION PLAN THE OVERLOOK AT BLUESTREAM F-02-035 SHEET 20 OF 25

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING		DEVELOPER'S/BUILDER'S CERTIFICATE	
<i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	6/7/12	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 (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.	
<i>[Signature]</i> CHIEF, DIVISION OF LAND DEVELOPMENT	6/27/12	<i>[Signature]</i> AUTHORIZED PERSON	5/23/12
<i>[Signature]</i> DIRECTOR	6/27/12		

NO AS-BUILT INFORMATION THIS SHEET  
**AS-BUILT 7/16/15**  
SDP-11-032

**HENNEMAN + ASSOCIATES ARCHITECTS & PLANNERS**  
1036 Clutter Drive, Suite 100  
Columbia, Maryland 21046  
Tel: 410.992.4417 • Fax: 410.992.4497  
www.hennemanchitects.com

**DESIGN COLLECTIVE**

**GROSVENOR HOUSE**  
BLUE STREAM 1 LLC  
APARTMENTS AND TOWNHOMES  
TAX MAP 43 GRID 4 & 5  
1ST ELECTION DISTRICT  
PARCEL 14  
HOWARD COUNTY, MARYLAND

**OWNER/DEVELOPER:** BLUE STREAM 1 LLC PO BOX 416, ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

PROJECT NO.: 2010.16.1  
SCALE:  
DATE: FEB. 2, 2012

**L201**  
SHEET 52 OF 55

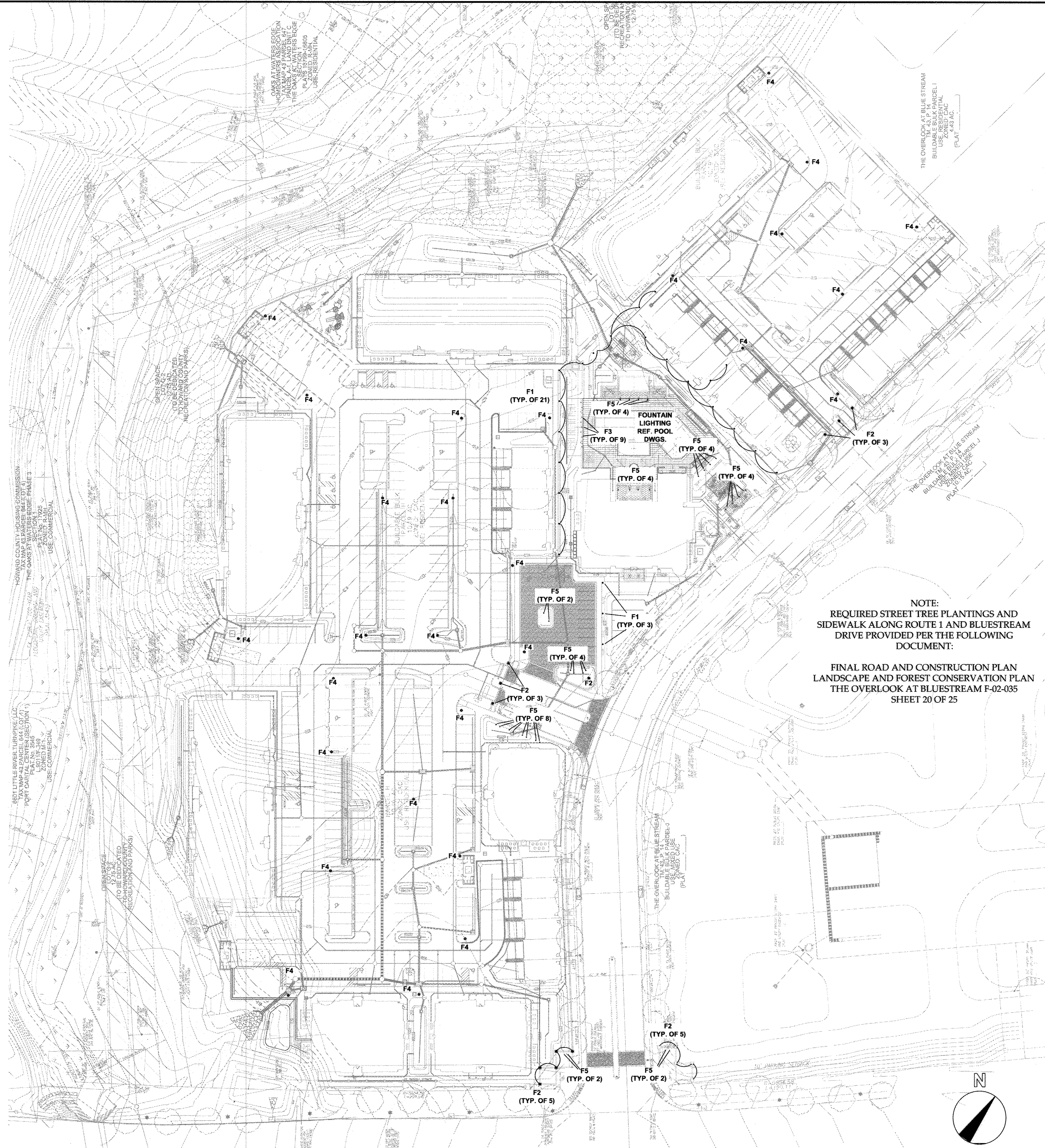
ISSUES/REVISIONS  
DATE

**LIGHTING LEGEND**

- F1 ILLUMINATED BOLLARD
- F2 PIER MOUNTED POST TOP
- F3 RECESS WALL LIGHT
- F4 ORNAMENTAL POST TOP/DECORATIVE POLE UPLIGHT
- F5 UPLIGHT

**LIGHTING NOTES**

REF. SHEET 5 OF 51 FOR LIGHTING DETAILS.



NOTE:  
 REQUIRED STREET TREE PLANTINGS AND  
 SIDEWALK ALONG ROUTE 1 AND BLUESTREAM  
 DRIVE PROVIDED PER THE FOLLOWING  
 DOCUMENT:  
 FINAL ROAD AND CONSTRUCTION PLAN  
 LANDSCAPE AND FOREST CONSERVATION PLAN  
 THE OVERLOOK AT BLUESTREAM F-02-035  
 SHEET 20 OF 25

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

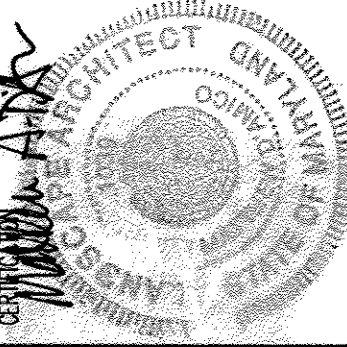
*[Signature]* 6/27/12  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*[Signature]* 6/27/12  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
*[Signature]* 6/27/12  
 DIRECTOR

**DEVELOPER'S/BUILDER'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 (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

*[Signature]* 5/23/12  
 SIGNATURE OF DEVELOPER DATE

DATE: 6/27/12  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 DATE: 6/27/12



**HENNEMAN + ASSOCIATES**  
 ARCHITECTS PLANNERS  
 10705 Charter Drive, Suite 400  
 Columbia, Maryland 21044  
 Tel: 410.992.4417 • Fax: 410.992.4497  
 www.hennemanarchitects.com

**DESIGN COLLECTIVE**  
 CONSULTANT  
 ARCHITECTURAL PLANNING, INTERIOR DESIGN, LANDSCAPE ARCHITECTURE  
 315 BLACKWATER STREET, SUITE 100  
 BALTIMORE, MD 21201  
 TEL: 410.538.9200 FAX: 410.538.9201  
 WWW.DESIGNCOLLECTIVE.COM

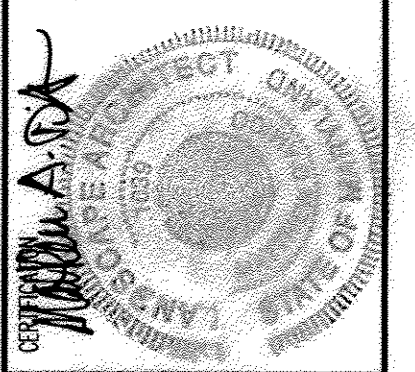
**GROSVENOR HOUSE**  
 BLUE STREAM, BUILDABLE BULK PARCEL H  
 APARTMENTS AND TOWNHOMES  
 1400 ROUTE 1, DISTRICT 5  
 1ST ELECTION DISTRICT  
 PARCEL 14  
 HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416,  
 ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

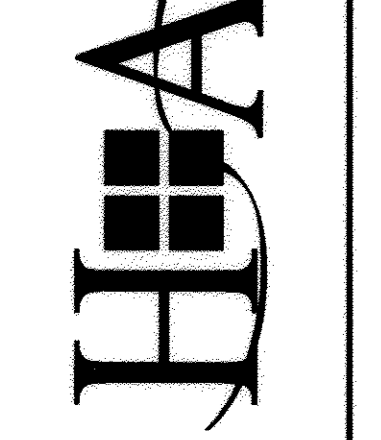
DATE	
ISSUES/REVISIONS	
PROJECT NO.	2010.16.1
SCALE:	
DATE:	FEB. 2, 2012

**L202**  
 SHEET 53 OF 55  
 SDP-11-032

NO AS-BUILT INFORMATION THIS SHEET  
 AS-BUILT 7/16/15



**H.A.A.**  
**HENNEMAN + ASSOCIATES**  
 ARCHITECTS & PLANNERS  
 10705 Charter Drive, Suite 400  
 Columbia, Maryland 21044  
 Tel: 410.992.4417 # Fax: 410.992.4697  
 www.hennemanassociates.com



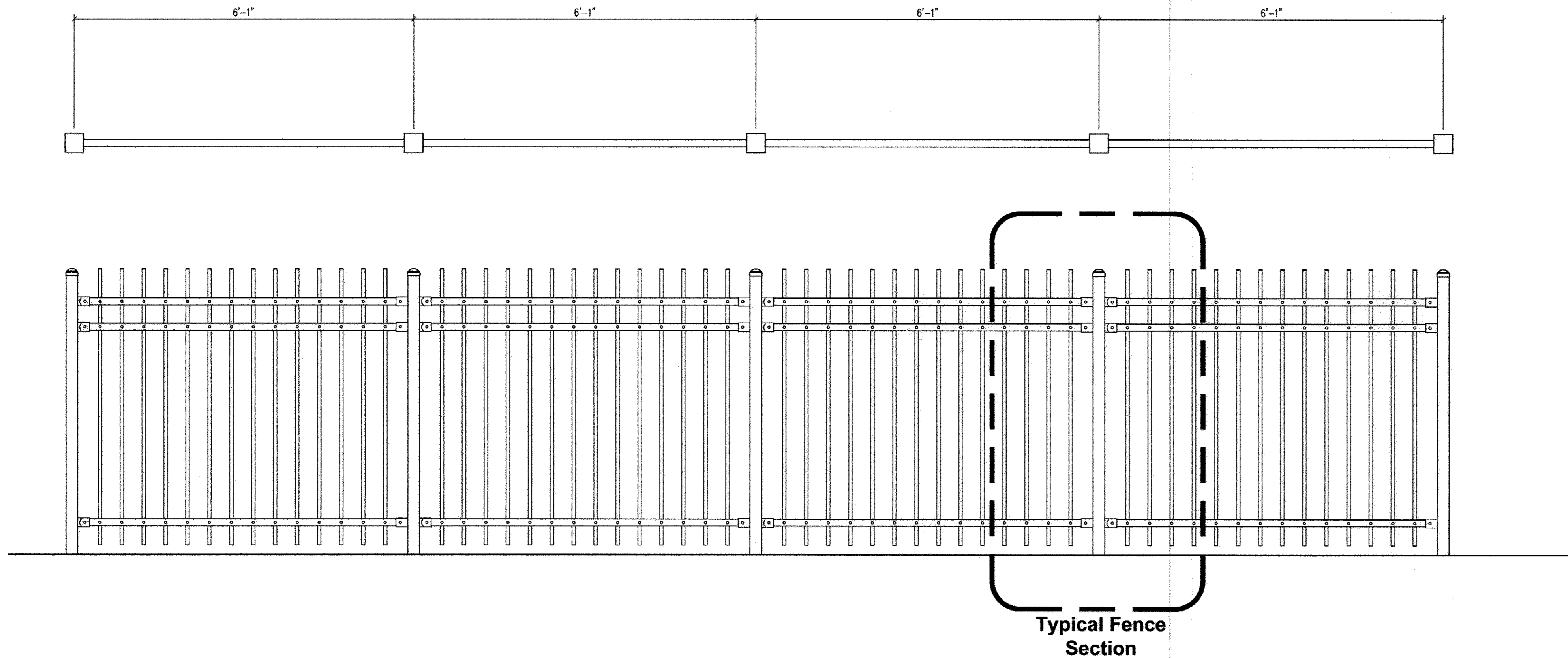
**DESIGN COLLECTIVE**  
 CONSULTANT  
 135 Backlicks Street, Suite 200  
 Annapolis, Maryland 21403  
 Tel: 410.293.4417 # Fax: 410.293.4697  
 www.designcollective.com

**GROSVENOR HOUSE**  
 BLUE STREAM 1 LLC PO BOX 416,  
 ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER  
 ZONED: C-30-C-1  
 HOWARD COUNTY, MARYLAND  
 PARCEL 14  
 1ST ELECTION DISTRICT  
 TAX MAP 43 GRID 4 & 5

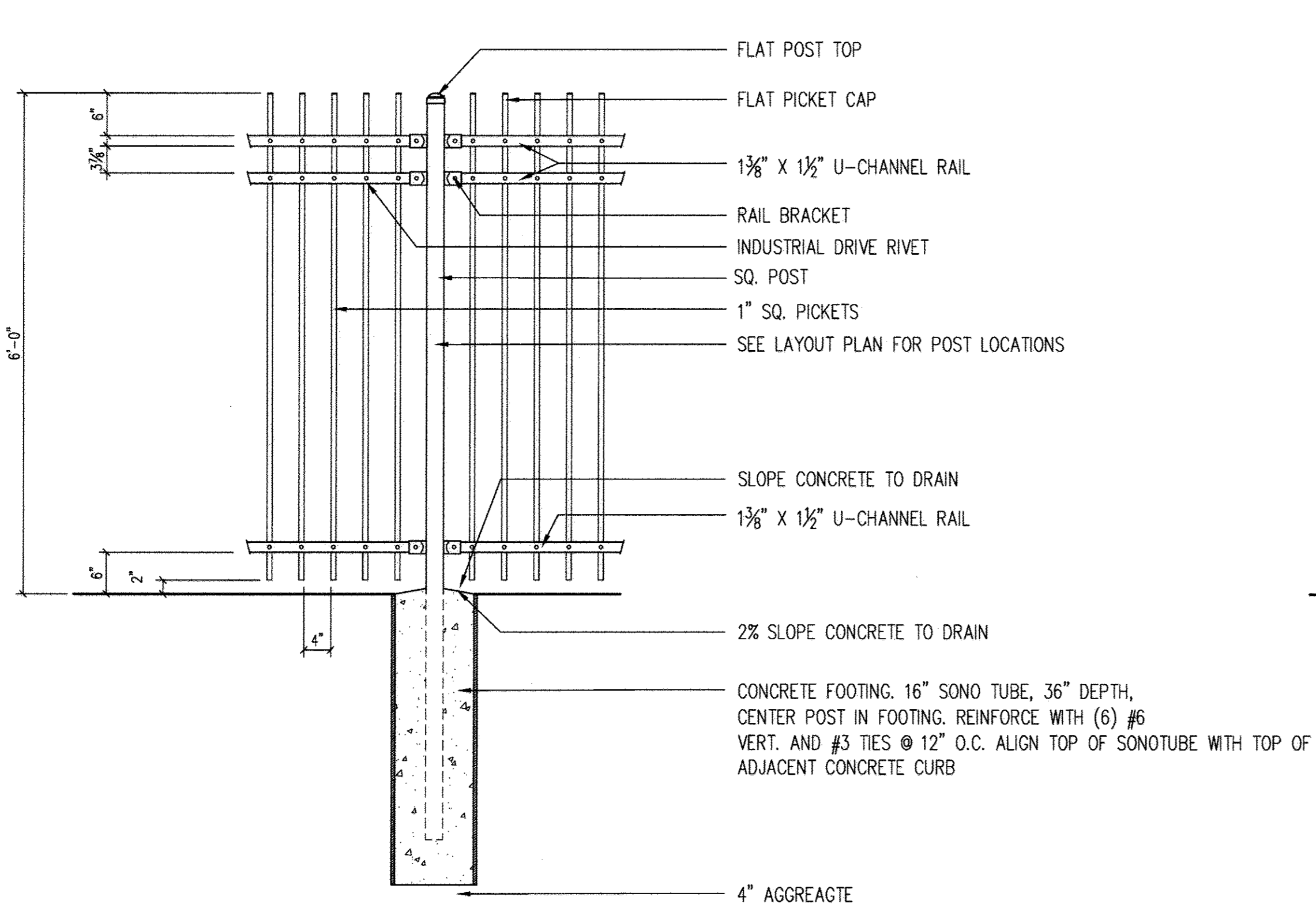
DATE: 04-11-2011  
 ISSUES/REVISIONS: HUD Third-party review revisions  
 OWNER/DEVELOPER: BLUE STREAM 1 LLC PO BOX 416,  
 ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020  
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PROJECT NO.: 2010.16.1  
 SCALE:  
 DATE: FEB. 2, 2012  
**L305**  
 SHEET 54 OF 55  
 SDP-11-032

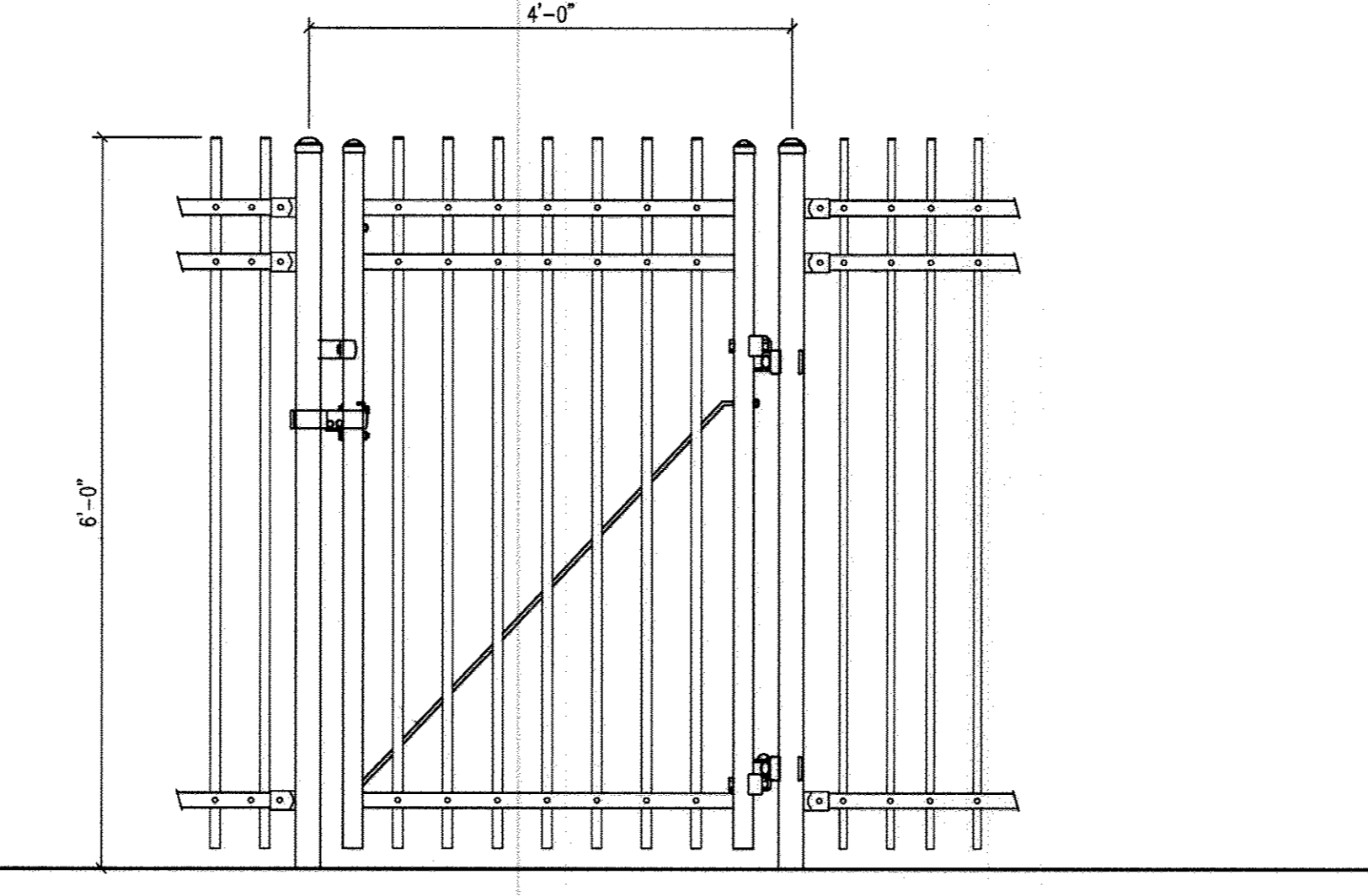
**Product Spec.  
 (Steel Fence):**  
 MANUFACTURER:  
 MASTER HALCO  
 4000 W. METROPOLITAN DR.,  
 SUITE 400  
 1.888.MH.FENCE  
 www.fenceonline.com  
 PRODUCT:  
 FORTRESS VERSAI ORNAMENTAL FENCE  
 EXTENDED PICKET PANEL  
 COLOR: BLACK



**1 FENCE - TYP. ELEVATION**  
 SCALE: 3/4"=1'-0"

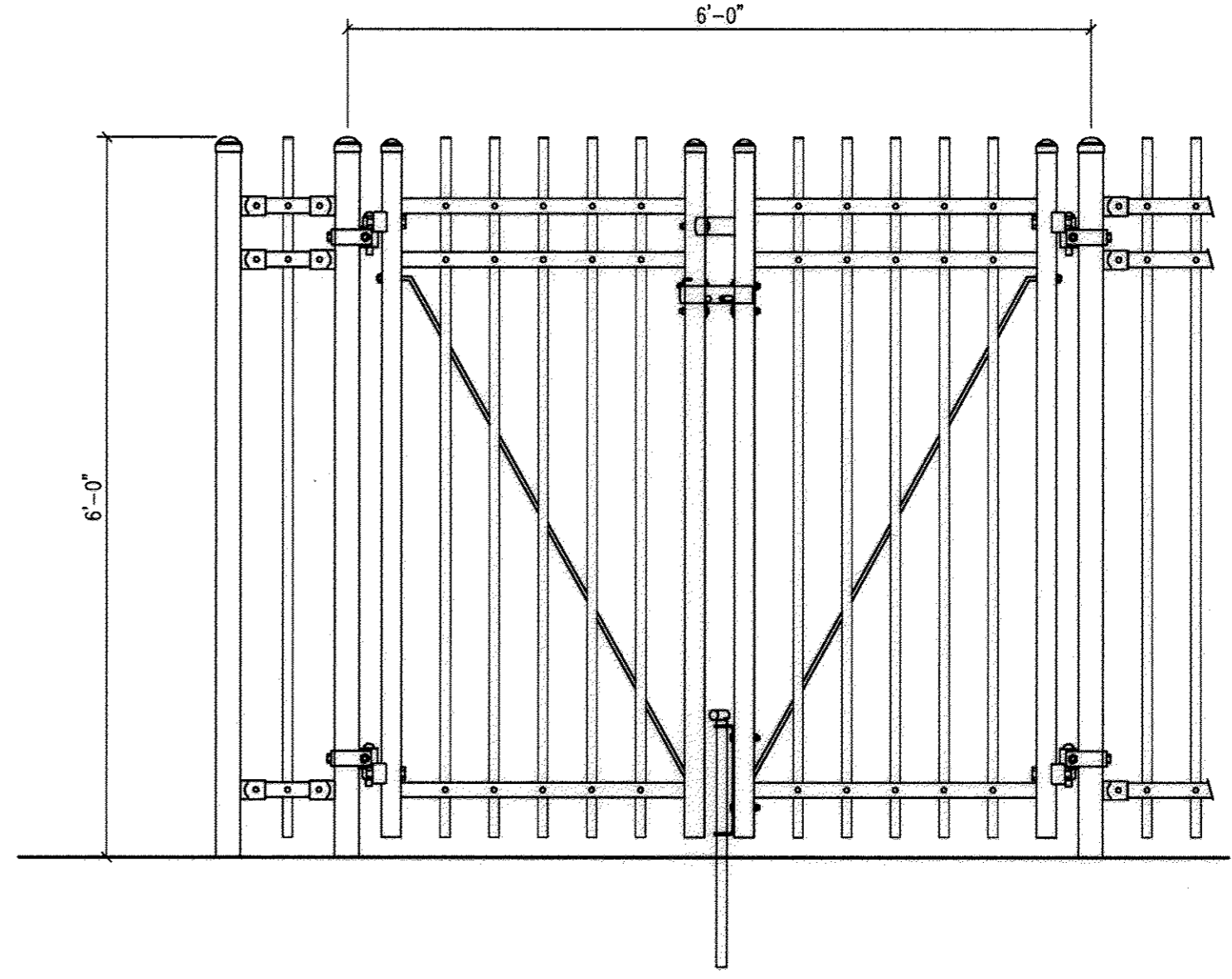


**2 FENCE TYPE A - 60" HT. - TYP. SECTION (F1)**  
 SCALE: 3/4"=1'-0"



**GATE TYPE A, B, C**  
 GATE TYPE A - 60" HT. - SINGLE - LOCK AND KEY BY OWNER  
 GATE TYPE B - 60" HT. - SINGLE - KEY FOB HARDWARE (BY OTHERS)  
 GATE TYPE C - 60" HT. - SINGLE - LOCK AND KEY BY OWNER - TO MEET ALL POOL REQUIREMENTS

**3 GATE TYPE A, B, C (SINGLE) - 60" HT. (G1)(G2)(G3)**  
 SCALE: 3/4"=1'-0"



**GATE TYPE D**  
 GATE TYPE D - 60" HT. - DOUBLE - LOCK AND KEY BY OWNER - TO MEET ALL POOL REQUIREMENTS

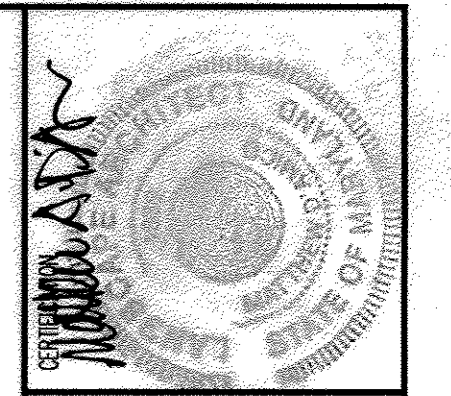
**4 GATE TYPE D (DOUBLE) - 60" HT. (G4)**  
 SCALE: 3/4"=1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 DEVELOPER'S/BUILDER'S CERTIFICATE  
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CHIEF, DEVELOPMENT ENGINEERING DIVISION <i>[Signature]</i> DATE: 6/1/12	CHIEF, DIVISION OF LAND DEVELOPMENT <i>[Signature]</i> DATE: 6/27/12
DIRECTOR <i>[Signature]</i> DATE: 6/27/12	SIGNATURE OF DEVELOPER <i>[Signature]</i> DATE: 5/23/12

NO AS-BUILT INFORMATION THIS SHEET

AS-BUILT 7/16/15

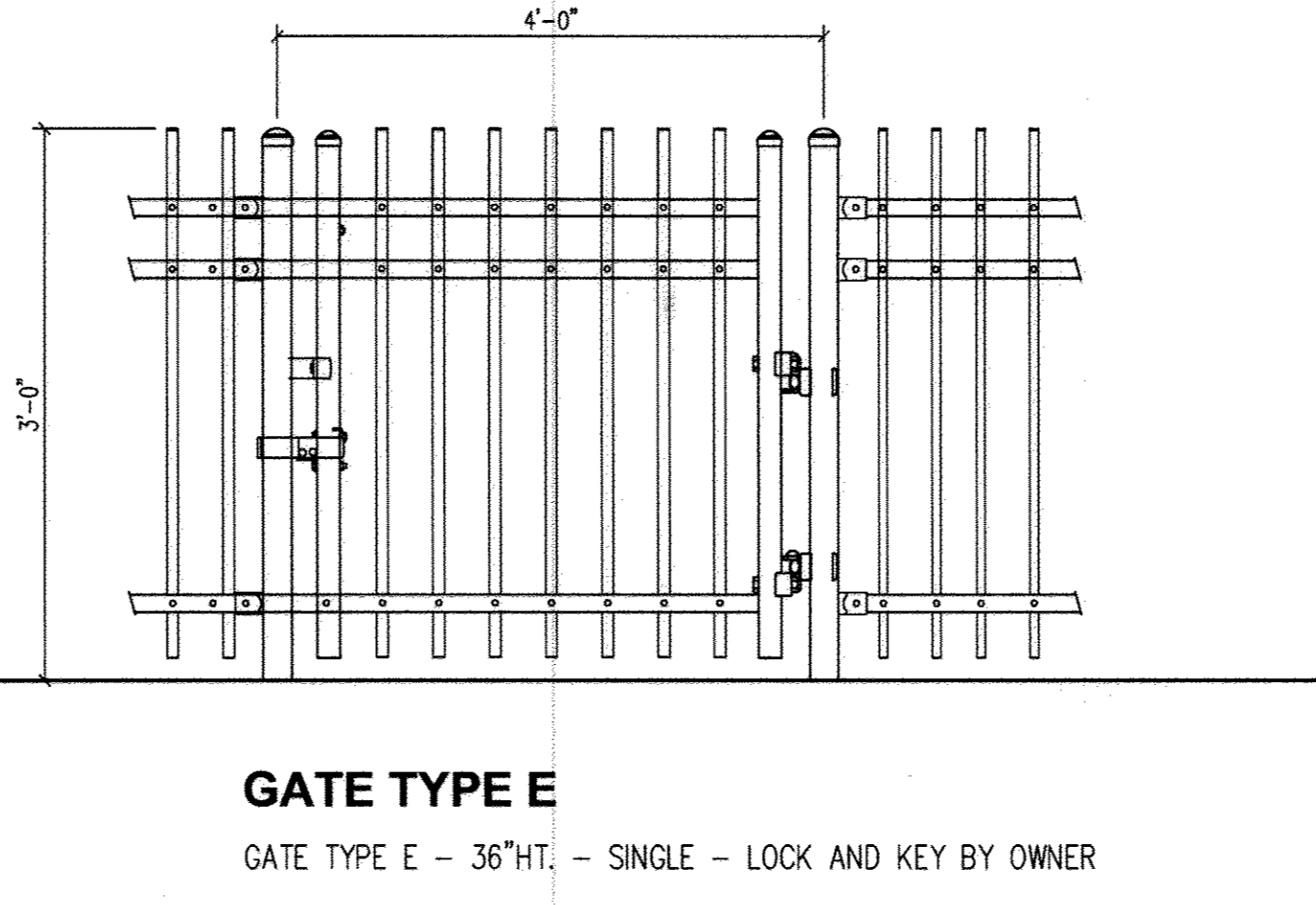
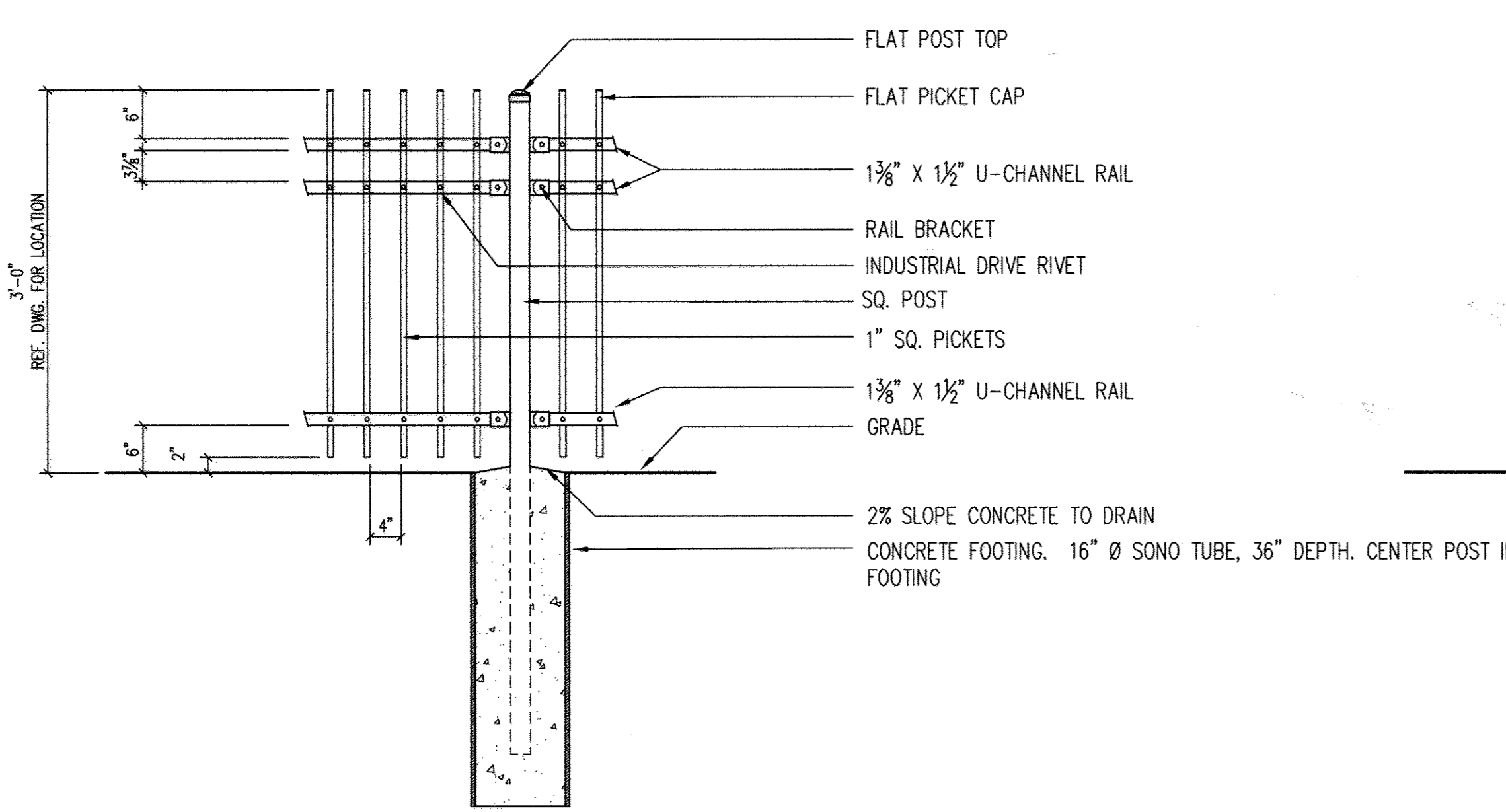


**Henneman + Associates**  
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**DESIGN COLLECTIVE**  
 CONSULTANT  
 461 EAST PATENT STREET, SUITE 200  
 BETHESDA, MARYLAND 20814  
 TEL: 301.229.1111 • FAX: 301.229.1112  
 WWW.DESIGNCOLLECTIVE.COM

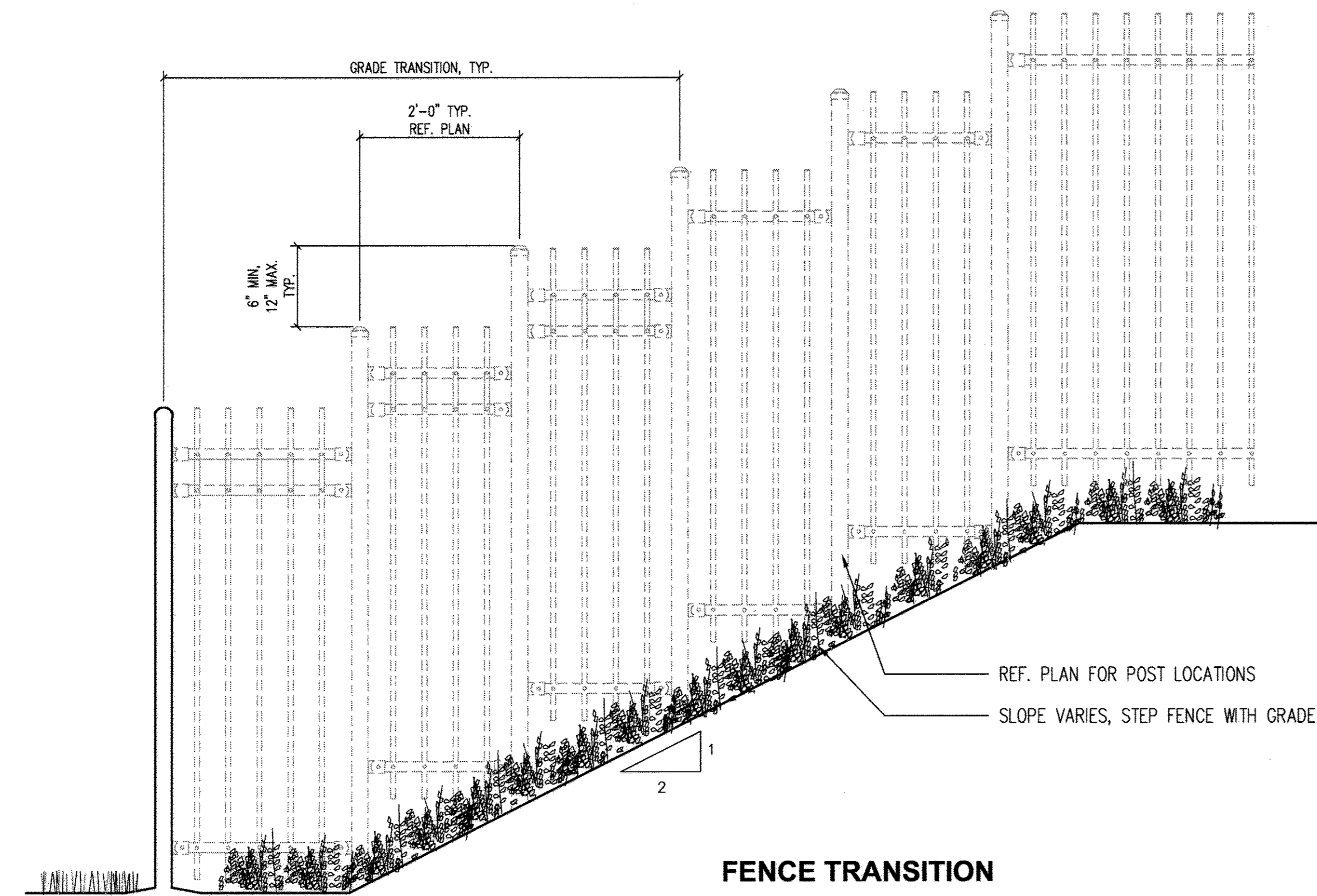
**GROSVENOR HOUSE**  
 BLUE STREAM BUILDABLE BULK PARCEL  
 APARTMENTS AND TOWNHOMES  
 TAX MAP 43 GRID 4 & 5  
 1ST ELECTION DISTRICT  
 BETHESDA, MARYLAND  
 HOWARD COUNTY, MARYLAND  
 DEVELOPER: BLUE STREAM 1, LLC PO BOX 416  
 ELLICOTT CITY, MD 21041 C/O: ARNOLD SAGNER 410-465-2020

ISSUES/REVISIONS: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 PROJECT NO.: 2010.16.1  
 SCALE: \_\_\_\_\_  
 DATE: FEB. 2, 2012  
**L306**  
 SHEET 55 OF 55  
 FENCE DETAILS

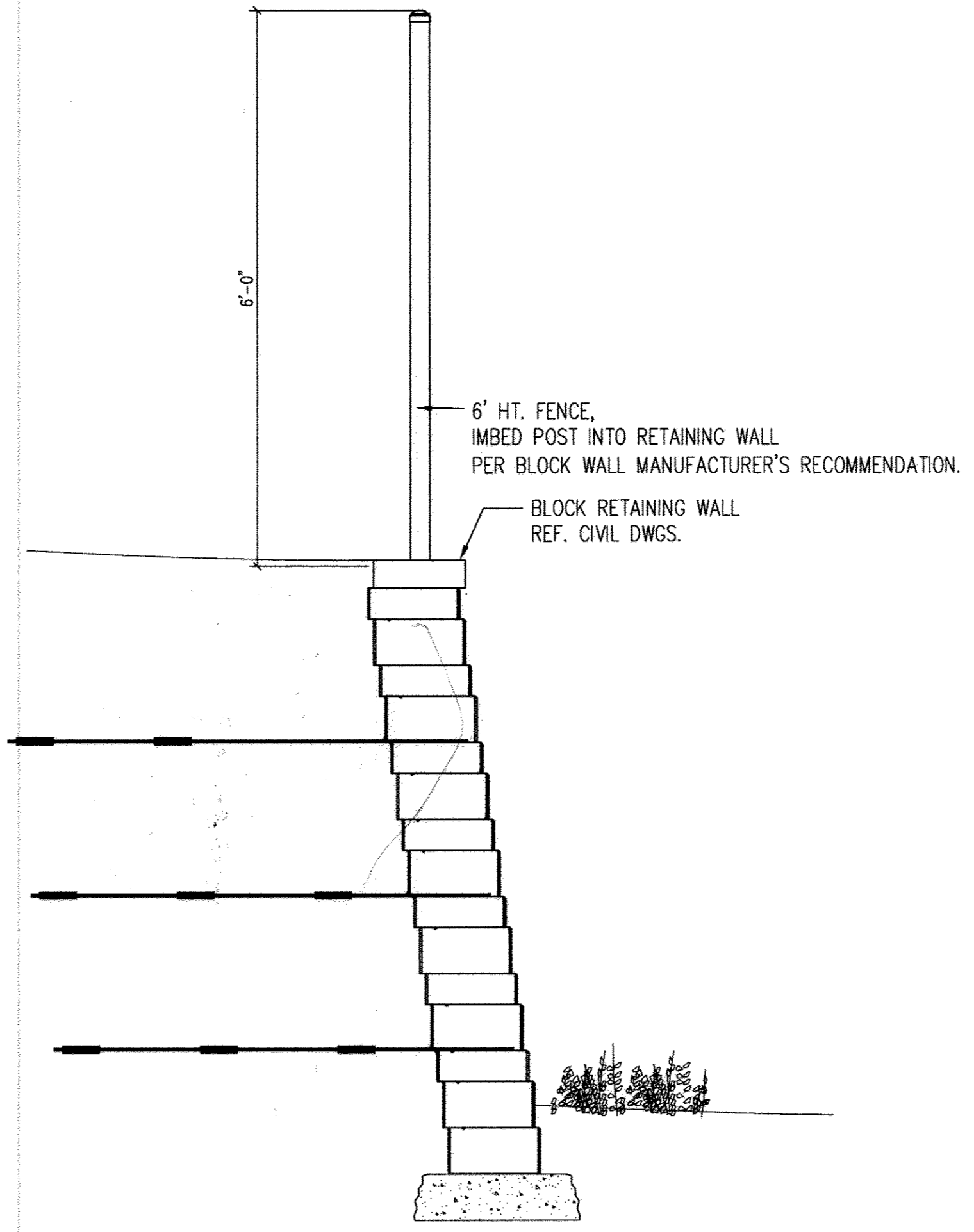


1 FENCE TYPE B - 36" HT. - TYP. SECTION (F2)  
 SCALE: 3/4"=1'-0"

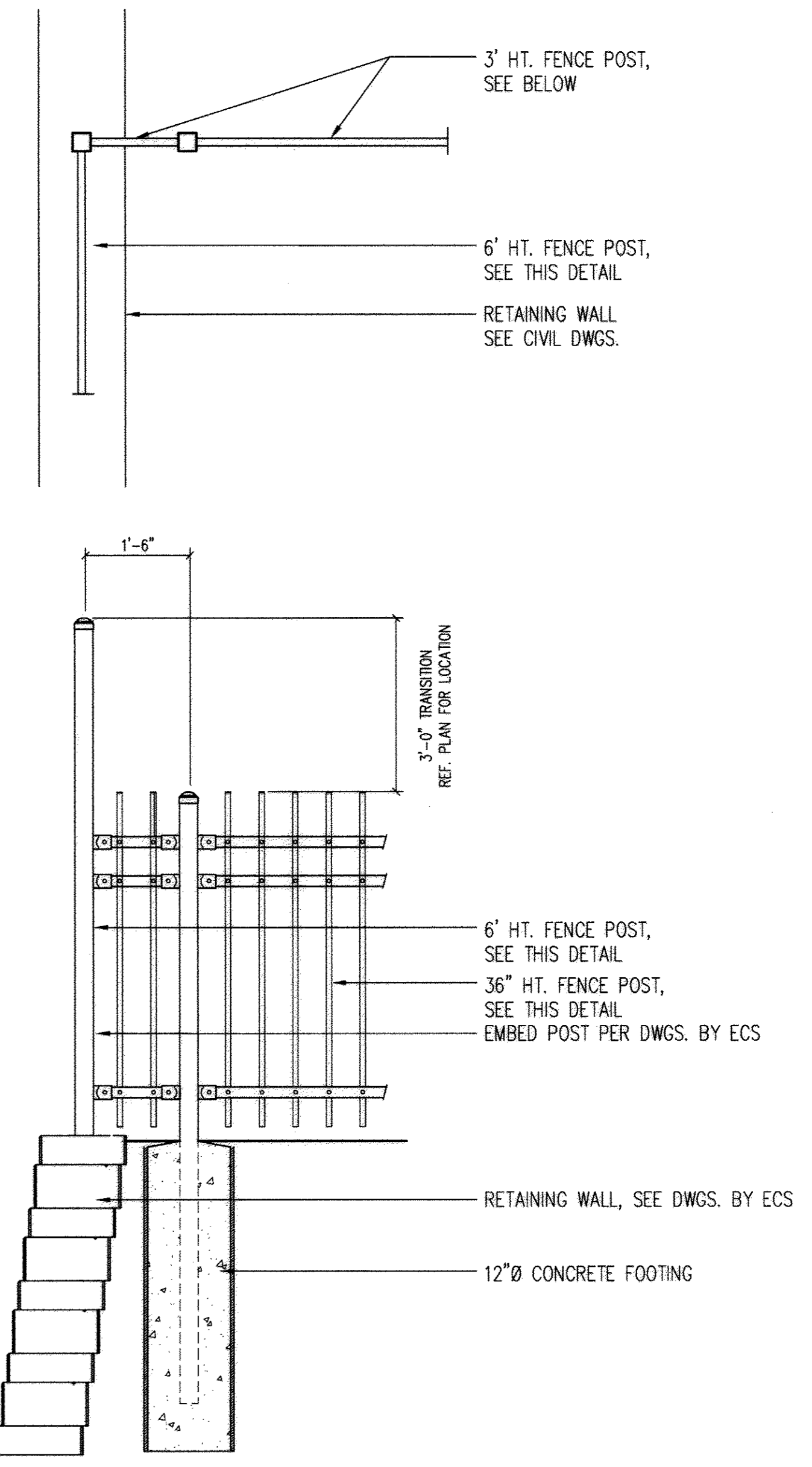
2 GATE TYPE D (SINGLE) - 36" HT. (G5)  
 SCALE: 3/4"=1'-0"



3 FENCE TRANSITION DETAIL  
 SCALE: 3/4"=1'-0"



4 FENCE @ BLOCK RETAINING WALL  
 SCALE: 3/4"=1'-0"



5 FENCE 6" HT. / 36" HT. TRANSITION  
 SCALE: 3/4"=1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	DEVELOPER'S/BUILDER'S CERTIFICATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 6/7/12	I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 18.124 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 (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 6/27/12	 SIGNATURE OF DEVELOPER DATE: 5/28/12
 DIRECTOR DATE: 6/27/12	

NO AS-BUILT INFORMATION THIS SHEET  
**AS-BUILT 7/16/12**  
 SDP-11-032