PATUXENT GREENS

ROUGH GRADING, DEMOLITION, EROSION AND SEDIMENT CONTROL PLAN

(SSC #210-18) PHASE 1 & 2

VICINITY MAP

1" = 2000'

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- FP-100 — EX. 100-YEAR FLOODPLAIN
- FP — FP — PROP. 100-YEAR FLOODPLAIN
- FP-500 — EX. 500-YEAR FLOODPLAIN
- EX. STREAM
- SB — SB — EX. STREAM VALLEY BUFFER
- T2B — T2B — EX. TIER II BUFFER
- WB — EX. WETLAND BUFFER
- SOIL TYPE BOUNDARY
- S — EX. SANITARY SEWER
- W — EX. WATER
- SD — EX. STORM DRAIN
- PROP. SANITARY SEWER
- PROP. WATER
- PROP. STORM DRAIN
- PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR
- LOD — PROP. LIMITS OF DISTURBANCE
- PROP. SUBMERGED GRAVEL WETLAND
- PROP. MICRO-BIORETENTION FACILITY
- SITE AREA OUTSIDE REQUESTED CONCEPT APPROVAL
- AREA OF EXISTING 15% TO 25% SLOPES
- AREA OF EXISTING 25% AND GREATER SLOPES
- EX. WETLAND
- EMBANKMENT BUFFER

WETLAND NOTE

IT IS THE APPLICANT'S RESPONSIBILITY TO OBTAIN ANY STATE PERMITS, IF REQUIRED, FOR ANY CONSTRUCTION ACTIVITY COVERED BY THIS PLAN WHICH IMPACTS A STATE REGULATED WETLAND. ANY CHANGES TO PLANS FOR THIS DEVELOPMENT WHETHER REQUIRED BY THE STATE OR INITIATED BY THE APPLICANT TO MEET STATE REQUIREMENTS, MUST BE APPROVED BY PGSCD.

OWNER'S/DEVELOPER'S CERTIFICATION

"I/WE HEREBY CERTIFY THAT I/WE HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN AND THAT ANY CLEARING, GRADING, DRAINAGE, CONSTRUCTION AND OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. PRINCE GEORGE'S SOIL CONSERVATION DISTRICT AND THE ENFORCEMENT AUTHORITY SHALL HAVE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATIONS."

Signature: _____ Date: 10-23-18

Name (Printed): Alan Cohen Title: Manager

Ph# (301) 692-4000 FIRM: CS Patuxent Greens, LLC

Complete Address: 6290 Montrose Road Rockville, MD 20852

Prince George's County, Maryland (MD033)

Map Unit Symbol	Map Unit Name	USDA Soil Group	PGSCD Soil Group	Acres Onsite	Percent of Acres Onsite
W	Water	-	-	4.1	2.2%
CF	Codorus and Hatboro soils, frequently flooded	C	D	98.0	51.0%
lu	Issue-Urban land complex, occasionally flooded	B/D	D	1.4	0.7%
SnB	Sassafras - Urban land complex, 0 to 5 percent slopes	B	D	3.6	1.9%
ZS	Zekiah and Issue soils, frequently flooded	B/D	D	85.2	44.3%

CALL "MISS UTILITY" AT 1-800-257-7777 48 Hours Before Start Of Construction

GRAPHIC SCALE

200' 0 100' 200' 400' 800'

1 INCH = 200 FT

NOTE: THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF THE PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR ADHERING TO APPLICABLE PRINCE GEORGE'S COUNTY CODES AND REGULATIONS.

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02	Sequence Of Construction & Narrative
03	Existing Conditions
04	Embankment Profile Sta 0+00 To 19+00
05	Embankment Profile Sta 19+00 To 36+00
06	Embankment Profile Sta 36+00 To 55+00
07	Embankment Profile Sta 55+00 To 60.57.11
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26	Phase 2 - Rough Grading
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28	Sediment Basin-Pond #1 Data Sheet
29	Details
30	Details
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ENGINEER'S CERTIFICATION

"I CERTIFY THAT THIS DESIGN PLAN FOR THE CONSTRUCTION OF THE EMBANKMENT AND/OR EXCAVATED POND REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY KNOWLEDGE OF THE SITE AND WAS DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCES CONSERVATION SERVICE / MARYLAND CONSERVATION STANDARD FOR PONDS (MD-378). I HAVE REVIEWED THIS PLAN WITH THE OWNER/DEVELOPER."

Signature: _____ Date: 05/03/2019

Name (Printed): Philip R. Hughes III, P.E. MD License Number: 32113

Address: 1101 Mercantile Lane, suite 280 Largo, MD 20774

Phone Number: (301) 948-4700

DRAINAGE CERTIFICATION

"I CERTIFY THAT I HAVE INSPECTED THIS SITE AND THAT DRAINAGE ONTO THIS SITE FROM PROPERTIES, AND FROM THIS SITE ONTO OTHER DOWNGRADE PROPERTIES, HAS BEEN ADDRESSED IN SUBSTANTIAL ACCORDANCE WITH APPLICABLE CODES."

Signature: _____ Date: 05/03/2019

Name (Printed): Philip R. Hughes III, P.E. MD License #: 32113

GRADING ORDINANCE CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN CONFORMS TO SUBTITLE 32, DIVISION 2 OF THE GRADING ORDINANCE OF PRINCE GEORGE'S COUNTY, MARYLAND."

Signature: _____ Date: 05/03/2019

Name (Printed): Philip R. Hughes III, P.E. MD License Number: 32113

CONSULTANT'S CERTIFICATION

"I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICABLE AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT THIS PLAN WAS DESIGNED AND PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE PRINCE GEORGE'S SOIL CONSERVATION DISTRICT AND 'STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.' I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER."

Signature: _____ Date: 05/03/2019

Name (Printed): Philip R. Hughes III, P.E. MD License Number: 32113

Address: 1101 Mercantile Lane, suite 280 Largo, MD 20774

Phone Number: (301) 948-4700

PRINCE GEORGE'S SOIL CONSERVATION DISTRICT

FINAL APPROVAL

GRADING, EROSION AND SEDIMENT CONTROL

FSC# 210-18

EXPIRATION DATE

POND (P#)

DISTRICT SIGNATURE APPROVAL DATE

PROFESSIONAL CERTIFICATION

"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No.32113, Expiration Date:9/15/19."

STATE OF MARYLAND — PHILIP R. HUGHES III — PROFESSIONAL ENGINEER

5/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

CS PATUXENT GREENS, LLC.
6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

RODGERS CONSULTING
1101 Mercantile Lane, Suite 280 Largo, Maryland 20774
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

	BY	DATE
BASE DATA	CADD	FEB 2018
DESIGNED	DKM	APR 2019
DRAWN	DKM	APR 2019
REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR

BY_____ DATE_____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Cover Sheet

SCALE: 1"=200'

JOB No. 1262A

DATE: SEPT 2018

FSC-01

SHEET No. 01 OF 31

SEQUENCE OF CONSTRUCTION

NO WORK, INCLUDING GRADING AND/OR BERM MODIFICATIONS IS TO BE PERFORMED WITHIN THE 150 FOOT WIDE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) TIER II BUFFER AS SHOWN ON THESE PLANS, EXCEPT CONSTRUCTION OF BASIN #1 DURING PHASE 1 (REMOVAL AND DEMOLITION WITHIN LOD AREA FOR CONSTRUCTION OF SEDIMENT BASIN/POND) WITHOUT A PERMIT FROM MDE DAM SAFETY.

PHASE 1 (REMOVAL AND DEMOLITION WITHIN LOD AREA FOR CONSTRUCTION OF SEDIMENT BASIN/POND)

1. 48 hours prior to clearing trees, installing sediment control measures, demolition, or grading; a pre-construction meeting shall be conducted on-site with the Department of permitting, Inspections and Enforcement (DPIE) Sediment Control Inspector (301) 883-5776. (Day 1)
2. The Phase 1 limits of disturbance must be field marked prior to installing sediment control measures, demolition, or any land disturbance activity. (Days 2-7)
3. Per MDE Tier II requirements, install signage and flags for Tier II buffer zone per Maryland Department of the Environment (MDE) requirements. Signage shall state, "Tier II Waters: High Quality Waters Erosion & Sediment Control Measures Strictly Enforced and Monitored." (Days 8-10)
4. Install Stabilized Construction Entrance (Detail B-1) or Stabilized Construction Entrance with Wash Rack Option (Detail B-2) per contractor preference as shown on the plan. Install perimeter sediment control devices (Silt Fence and Super Silt Fence) as shown on the plan. Clear as necessary to install these items. (Days 11-25)
5. Upon approval of perimeter controls by the DPIE Sediment Control Inspector, demolish existing landscape walls and concrete paths as necessary to facilitate construction and installation of Sediment Basin/Pond #1. (Days 25-32)
6. Begin installation of Sediment Basin/Pond #1. (Days 33-40)

PHASE 2 (REMOVAL AND DEMOLITION OUTSIDE OF SEDIMENT BASIN/POND & ROUGH GRADING)

1. The Phase 2 limits of disturbance must be field marked prior to installing sediment control measures, demolition, or any land disturbance activity. (Days 41-47)
2. Clear and grub site. Install stockpile and staging areas as shown in plan view. Note: Exact location and dimensions of staging and stockpile areas may be modified in the field with the approval of the DPIE Sediment Control Inspector. Note: Per MDE Tier II requirements, location of stockpiles shall be greater than 100 feet from any stream resources. (Days 48-80)
3. Upon approval by the DPIE Sediment Control Inspector, begin demolition of existing clubhouse, storage sheds, paving, and landscape walls as shown in plan view. Begin removal of storm drain pipes and structures, unless otherwise noted. (Days 81-101)
4. Begin site grading, no grading shall occur within 10 feet of the embankment, as shown within green shaded area on sheets 11-14 and sheets 16-27 of the Rough Grading, Demolition, Erosion and Sediment Control Plan (Permit No. FSC #210-18). Grading shall start within the compensatory storage area to elevations shown on sheets 19-22 and sheets 24-27 of the Rough Grading, Demolition, Erosion and Sediment Control Plan (Permit No. FSC #210-18). Steep slopes, between 15% and 25% and greater than 25% as shown by gray hatches on sheet 3, are present along the uncertified levee/berm along the Bear Branch and the Patuxent River. Super Silt Fence is provided adjacent to the Bear Branch and the Patuxent River as a redundant control. Note: Per MDE Tier II requirements, vehicles operating within the stream buffers adjacent to the Bear Branch and the Patuxent River shall carry oil/gas/grease clean up kits for spill accidents. Steep slopes, predominantly between 15% and 25%, are also present adjacent to existing golf course water hazards; these slopes will be regraded and stabilized immediately after grading per stabilization notes on Sheets 29-31 of the Rough Grading, Demolition, Erosion and Sediment Control Plan (Permit No. FSC #210-18). (Days 102-190)
5. As site grading progresses, continually maintain positive drainage to Sediment Basin/Pond #1. (Continuous)
6. As various areas of the site are brought to grade, provide temporary or permanent stabilization for all disturbed areas in accordance with the standard erosion and sediment control notes. Note: Per MDE Tier II requirements, permanent mulch application depth shall not exceed 6 inches. Temporary mulch spreading and matting to minimize compaction is allowable. (Continuous)

NARRATIVE

Patuxent Greens is located in the City of Laurel in Prince George's County, Maryland. The site is bounded by the Bear Branch to the north and northeast, the Patuxent River to the southeast, Greenview Drive to the west, and land owned by the Maryland National Capital Park and Planning Commission [M-NCPPC] to the south. Current access to the site is from Clubhouse Road.

The site currently is the Patuxent Greens Country Club golf course with associated parking lot, greens, clubhouse, and pro shop. The site is currently zoned PUD-E, Planned Unit Development Existing. The proposed use of this property is residential townhouse and single family detached.

In accordance with chapter 5 of the Maryland Stormwater Design Manual, Environmental Site Design (ESD) to the Maximum Extent Practicable (MEP) will be required. ESD to the MEP is being met through the use of three (3) submerged gravel wetlands, nine (9) micro-bioretention facilities, and disconnection of rooftop runoff. In the existing condition, the site drains south towards the Patuxent River. There is an existing pump at the southern end of the site that pumps water into the Patuxent River. In the existing conditions, there is also an existing berm / levee that is uncertified by FEMA. Under the proposed conditions, this existing berm / levee would be removed to provide compensatory storage. Under the proposed conditions, the site will drain east and west to a created channel running north to south through the middle of the site. This channel drains south to a compensatory storage area. This water would then drain through a weir to the Patuxent River, mimicking existing flow patterns. The site is adjacent to the Bear Branch and the Patuxent River. The Bear Branch and Patuxent River are in a tier II watershed and are impaired by sediment.

There are CF, Iu, SnB, and ZS soils onsite as identified by USDA Web Soil Survey. These soils are identified as hydraulic soil group D by Prince George's County Soil Conservation District. The site is also within the 100-Year floodplain. The development proposes to provide fill in the floodplain with compensatory storage provided adjacent to the Bear Branch and the Patuxent River. Erosion and Sediment Control devices such as earth dikes, swales, silt fence, portable pumping stations, and a sediment basin/sediment pond will be provided to keep sediment laden runoff onsite. Redundant controls in the form of super silt fence will be provided to ensure no sediment leaves the site since the site drains to an impaired watershed.

This project proposes an excavated basin/pond #1 for the purposes of sediment entrapment, conforming to standards specified in the USDA-Natural Resources Conservation Service, Conservation Practice Standard for Pond, Code 378 (MD-378). Basin/Pond #1 has a total drainage area of 205.9 acres (72.8 acres offsite) and shall be located at the southern edge of the site at the existing site outfall. In the existing conditions, the site outfalls at the south end of the property and flows overland to the Patuxent River. In the sediment control phase, Sediment Basin/Pond #1 would outfall at the same location through a rip-rap weir outfall and mimic existing flow patterns into the Patuxent River. The existing uncertified berm/levee along the Bear Branch and Patuxent River would be partially removed to the height of the proposed embankment. In the ultimate condition, Sediment Basin/Pond #1 would be converted into a compensatory storage area, the outfall enlarged, and the existing uncertified berm/levee along the Bear Branch and Patuxent River would be full removed. Sediment Basin/Pond #1 has a hazard classification of 'A' as failure of Sediment Basin/Pond #1 will result in runoff flowing into the existing floodplains adjacent to the Patuxent River. The site also has an existing stormwater management (SWM) pond. This pond currently has no designed outlet structure, therefore runoff in the pond either infiltrates and/or overtops and flows overland along the site's western boundary until it ultimately leaves the site at the south end of the property and flows overland to the Patuxent River. This existing pond is not being used for sediment control. The drainage area to the existing pond has been included in the drainage area to Sediment Basin/Pond #1. This project proposes to retrofit this existing SWM pond to provide water quality and quantity control in accordance with MD-378 specifications.

The total area of disturbance for this project is 136.7 acres.

NOTES

1. Proposed Limits of Clearing and Grading: 136.7 acres
2. Proposed Percent Impervious: 33.4 Ac
3. Existing Areas of 15% to 25% Slopes: 7.8 Ac
4. Existing Areas of 25% and Greater Slopes: 7.1 Ac
5. The site is within the Patuxent River Watershed
6. Site is recorded among the land records of Prince George's County in Plat Book ME251, p. 76-84.

CALL "MISS UTILITY" AT 1-800-257-7777 48 Hours Before Start Of Construction

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PROFESSIONAL CERTIFICATION

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STATE OF MARYLAND — PHILIP R. HUGHES III — PROFESSIONAL ENGINEER

5/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

CS PATUXENT GREENS, LLC.
6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

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REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR ☐
BY_____ DATE ____

Rough Grading, Demolition, Erosion And Sediment Control Plan Sequence Of Construction & Narrative

SCALE: NTS
JOB No. 1262A
DATE: SEPT 2018
FSC-02
SHEET No. 02 OF 31

DA TO POI-1 (SITE DISCHARGE POINT) = 206.5 ACRES (72.8 ACRES OFFSITE)

VICINITY MAP
1" = 2000'

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- FP-100 — EX. 100-YEAR FLOODPLAIN
- FP-500 — EX. 500-YEAR FLOODPLAIN
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- AREA OF EXISTING 15% TO 25% SLOPES
- AREA OF EXISTING 25% AND GREATER SLOPES
- EX. WETLAND
- EMBANKMENT BUFFER

N
Scale: 1" = 200'
NGVD: 29
NAD: 83

GRAPHIC SCALE
200' 0 100' 200' 400' 800'
1 INCH = 200 FT

CALL "MISS UTILITY" AT 1-800-257-7777
48 Hours Before Start Of Construction

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REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR
BY_____ DATE_____

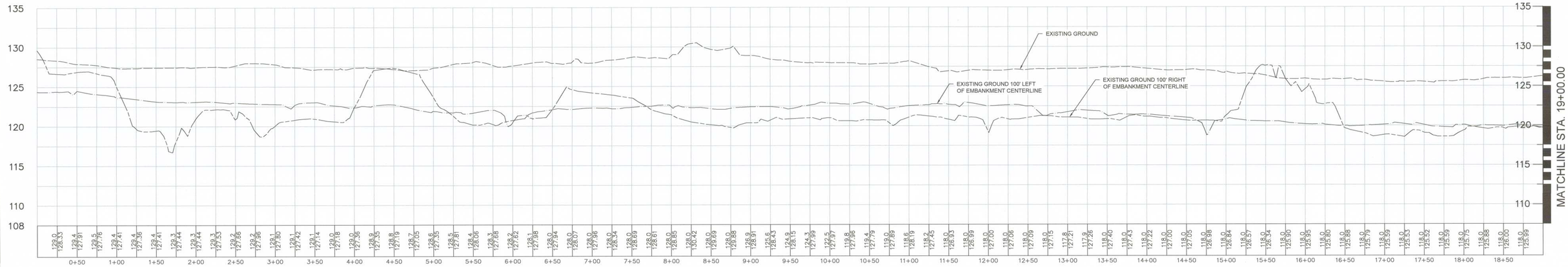
Rough Grading, Demolition, Erosion And Sediment Control Plan Existing Conditions

SCALE: NTS
JOB No. 1262A
DATE: SEPT 2018
FSC-03
SHEET No. 03 OF 31

PLAN VIEW
GRAPHIC SCALE

50' 0 25' 50' 100' 200'
1 INCH = 50 FT

Scale: 1" = 40'
NGVD 29
NAD 83



CENTERLINE EMBANKMENT
(STA. 0+00.00 TO 19+00.00)

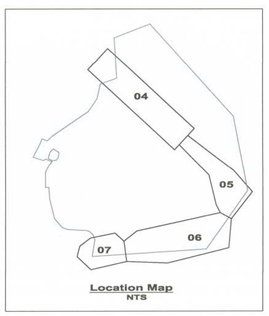
H: 1" = 50'
V: 1" = 5'

VERTICAL PROFILE
GRAPHIC SCALE
1 INCH = 5 FT

HORIZONTAL PROFILE
GRAPHIC SCALE
50' 0 25' 50' 100' 200'
1 INCH = 50 FT

PROFILE VIEW LEGEND

- EX. GRADE 100' LEFT OF EMBANKMENT CENTERLINE
- EX. GRADE 100' RIGHT OF EMBANKMENT CENTERLINE
- EX. GRADE AT CENTERLINE



Location Map
NTS

CALL "MISS UTILITY" AT 1-800-257-7777
48 Hours Before Start Of Construction

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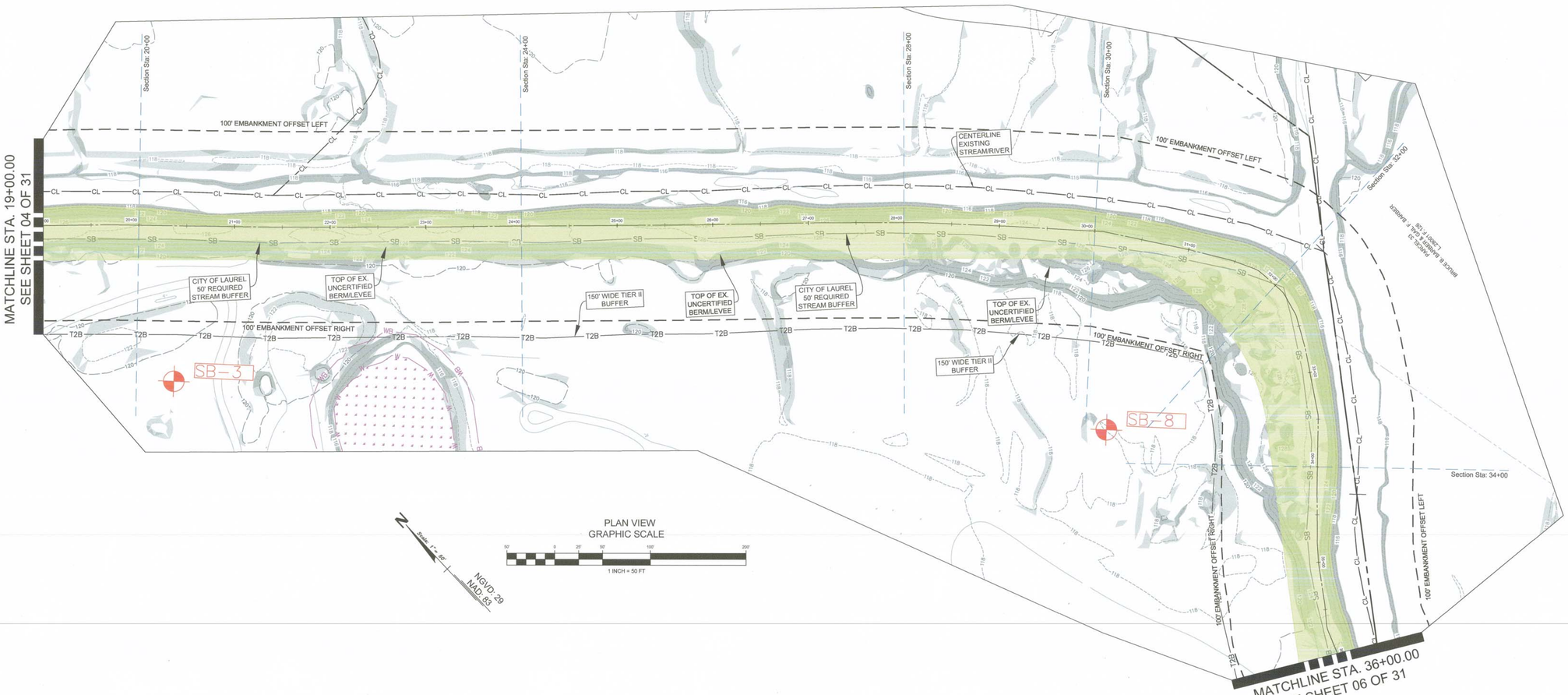
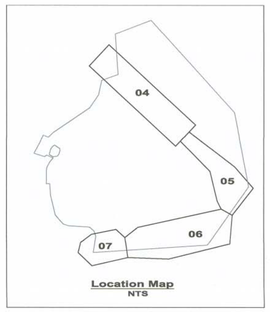
RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR
BY_____ DATE_____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Embankment Profile Sta 0+00 To 19+00

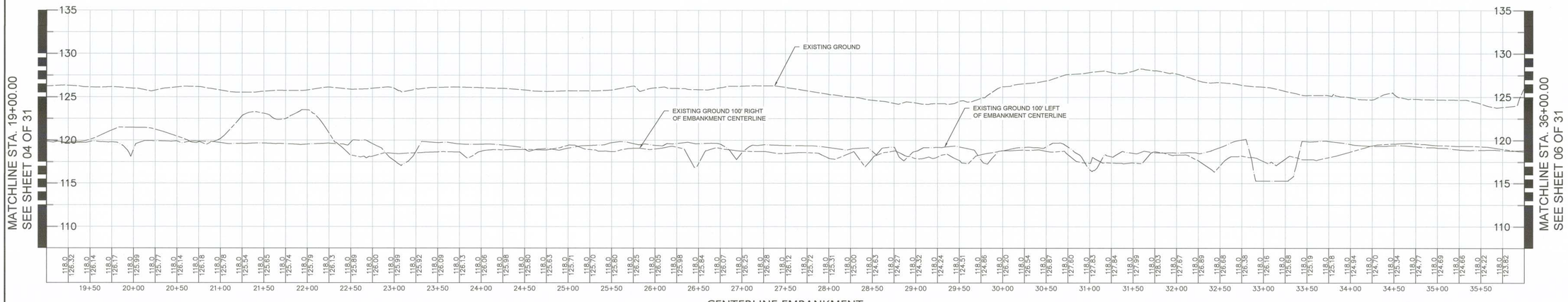
SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-04
SHEET No. 04 OF 31





PLAN VIEW
GRAPHIC SCALE
1 INCH = 50 FT

NGVD-29
NAD-83



CENTERLINE EMBANKMENT
(STA. 19+00.00 TO 36+00.00)
H: 1" = 50'
V: 1" = 5'

VERTICAL PROFILE
GRAPHIC SCALE
1 INCH = 5 FT

PROFILE VIEW LEGEND

- EX. GRADE 100' LEFT OF EMBANKMENT CENTERLINE
- EX. GRADE 100' RIGHT OF EMBANKMENT CENTERLINE
- EX. GRADE AT CENTERLINE

HORIZONTAL PROFILE
GRAPHIC SCALE
1 INCH = 50 FT

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6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

RODGERS CONSULTING
1101 Mercantile Lane, Suite 280 Largo, Maryland 20774
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

	BY	DATE
BASE DATA	CADD	FEB 2018
DESIGNED	DKM	APR 2019
DRAWN	DKM	APR 2019
REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR
BY_____ DATE ____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Embankment Profile Sta 19+00 To 36+00

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-05
SHEET No. 05 OF 31

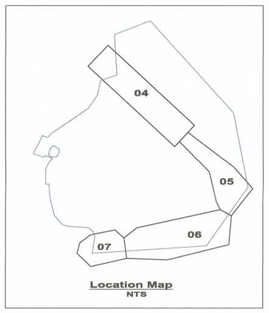
PLAN VIEW
GRAPHIC SCALE

50' 0 25' 50' 100' 200'

1 INCH = 50 FT

NAD 83 Scale: 1" = 50'

N



Location Map
NTS

MATCHLINE STA. 36+00.00
SEE SHEET 05 OF 31

MATCHLINE STA. 55+00.00
SEE SHEET 07 OF 31

CITY OF LAUREL 50' REQUIRED STREAM BUFFER

CENTERLINE EXISTING STREAM/RIVER

100' EMBANKMENT OFFSET LEFT

100' EMBANKMENT OFFSET RIGHT

150' WIDE TIER II BUFFER

PARCEL 74
THE MARYLAND NATIONAL CAPITAL PARK AND PLANNING COMISSION
L.3812 F.736

WARREN, BARBARA E ETAL
9128 BRIARCHIP STREET
LAUREL, MD 20708
L.3158 F.565

N35°15'06"E 1166.87'

N86°16'27"E 1864.69'

Section Sta: 40+00

Section Sta: 44+00

Section Sta: 48+00

Section Sta: 52+00

SB-13

SB-19

SB-18

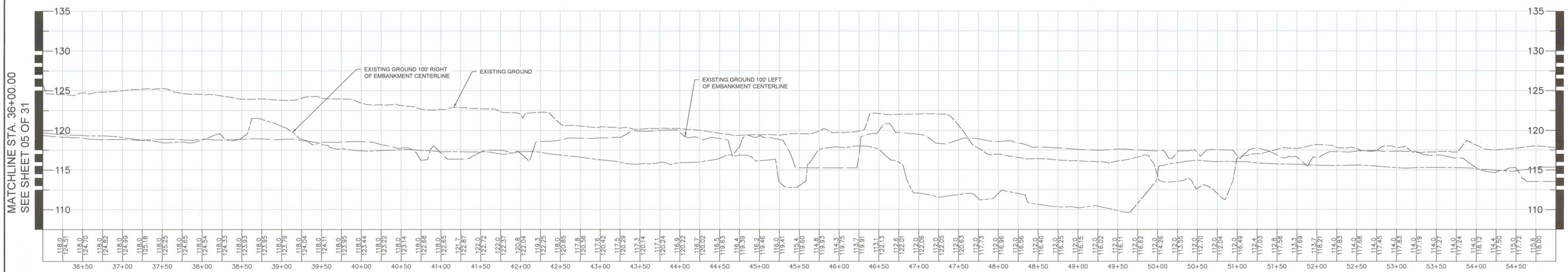
SB-17

SB-16

SB-15

SB-14

SB-12



CENTERLINE EMBANKMENT
(STA. 36+00.00 TO 55+00.00)
H: 1" = 50'
V: 1" = 5'

PROFILE VIEW LEGEND

- EX. GRADE 100' LEFT OF EMBANKMENT CENTERLINE
- EX. GRADE 100' RIGHT OF EMBANKMENT CENTERLINE
- EX. GRADE AT CENTERLINE

CALL "MISS UTILITY" AT 1-800-257-7777
48 Hours Before Start Of Construction

NOTE: THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF THE PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR ADHERING TO APPLICABLE PRINCE GEORGES COUNTY CODES AND REGULATIONS.

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STATE OF MARYLAND — PHILLIP R. HUGHES III — 32113 — PROFESSIONAL ENGINEER

5/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

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RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR

BY_____ DATE ____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Embankment Profile Sta 36+00 To 55+00

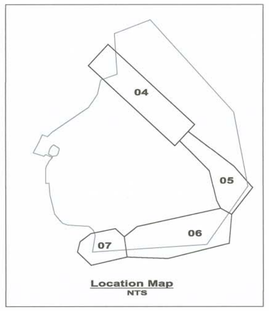
SCALE: 1"=50'
JOB No.: 1262A
DATE: SEPT 2018
FSC-06
SHEET No. 06 OF 31

PLAN VIEW
GRAPHIC SCALE

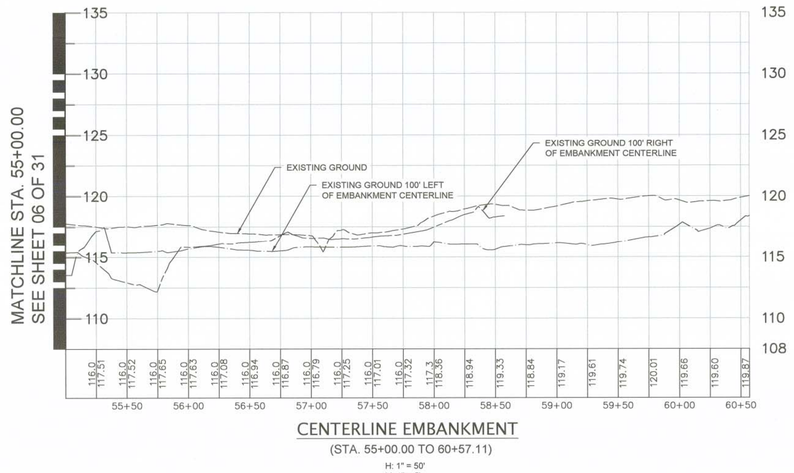
50' 0 25' 50' 100' 200'

1 INCH = 50 FT

NGVD 29
NAD 83



Location Map
NTS



CENTERLINE EMBANKMENT
(STA. 55+00.00 TO 60+57.11)

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

PROFILE VIEW LEGEND

- EX. GRADE 100' LEFT OF EMBANKMENT CENTERLINE
- EX. GRADE 100' RIGHT OF EMBANKMENT CENTERLINE
- EX. GRADE AT CENTERLINE

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48 Hours Before Start Of Construction

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STATE OF MARYLAND · PHILIP R. HUGHES III · PROFESSIONAL ENGINEER

5/31/19

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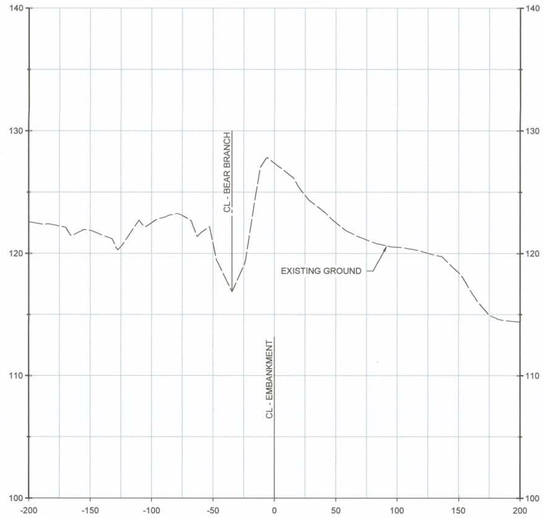
RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR ☐
BY_____ DATE ____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Embankment Profile Sta 55+00 To 60.57.11

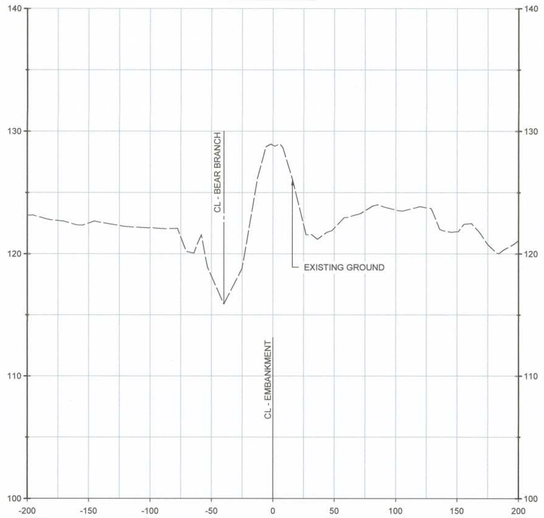
SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-07
SHEET No. 07 OF 31

4+00.00



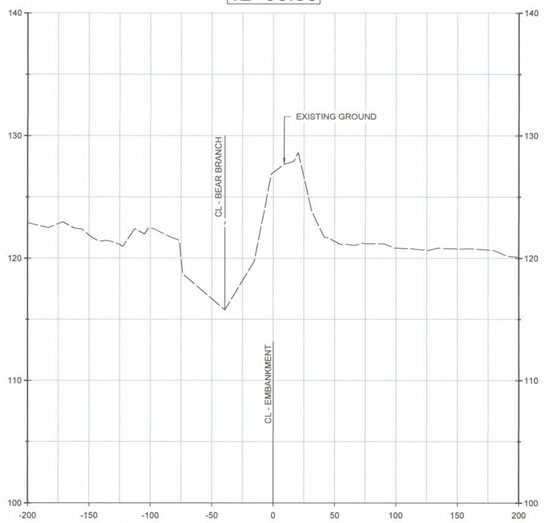
SCALE: H: 1" = 50'
V: 1" = 5'

8+00.00



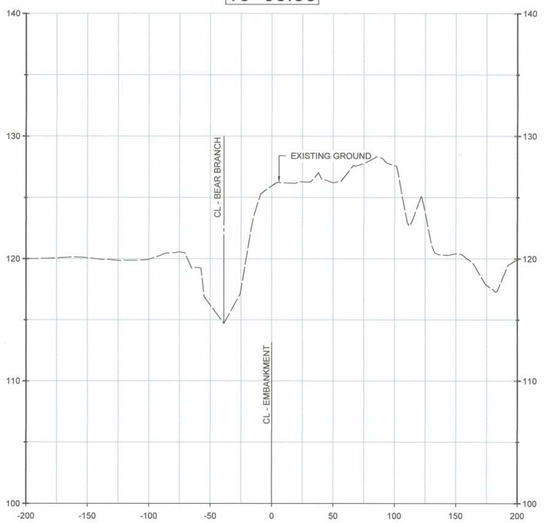
SCALE: H: 1" = 50'
V: 1" = 5'

12+00.00



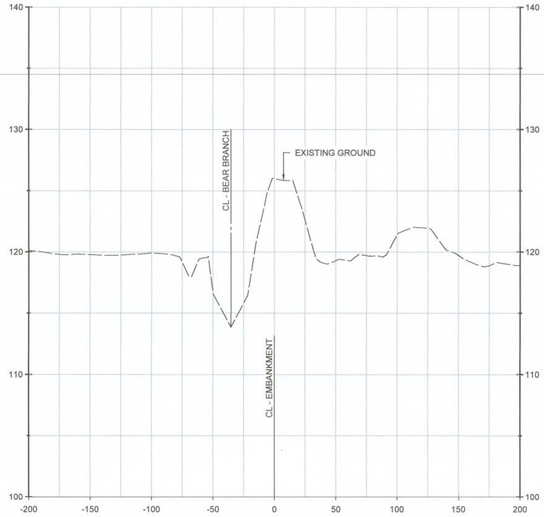
SCALE: H: 1" = 50'
V: 1" = 5'

16+00.00



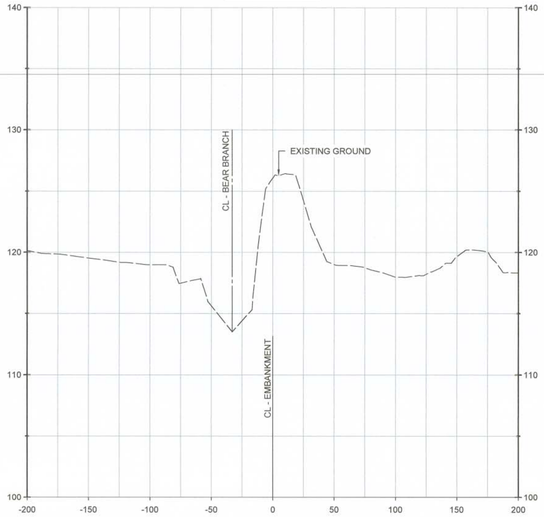
SCALE: H: 1" = 50'
V: 1" = 5'

20+00.00



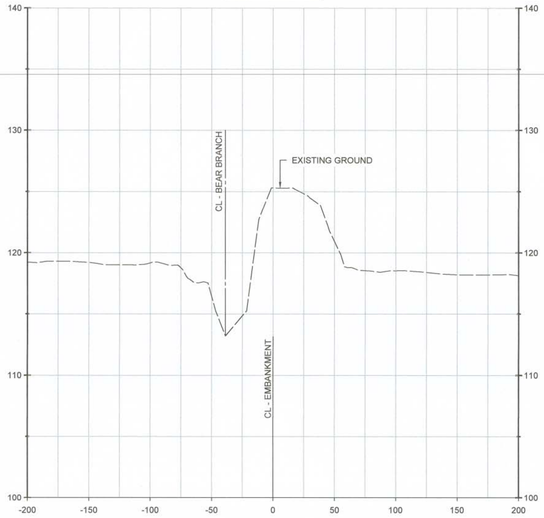
SCALE: H: 1" = 50'
V: 1" = 5'

24+00.00



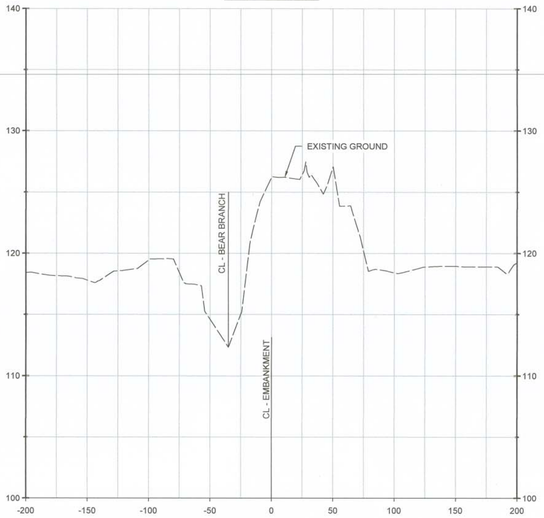
SCALE: H: 1" = 50'
V: 1" = 5'

28+00.00



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

30+00.00



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

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48 Hours Before Start Of Construction

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STATE OF MARYLAND
PHILIP R. HUGHES III
PROFESSIONAL ENGINEER
5/31/19

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L.6008 F.266
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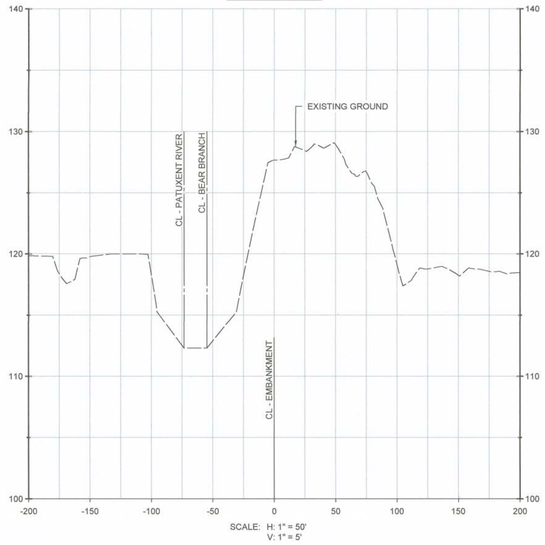
RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR ☐
BY_____ DATE_____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Existing Embankment Sections

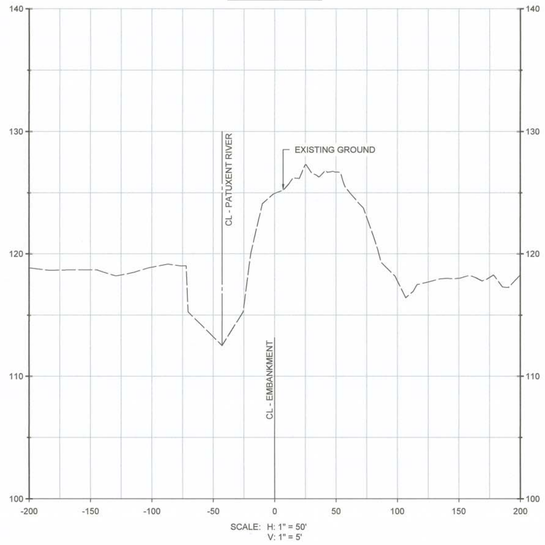
SCALE: AS SHOWN
JOB No. 1262A
DATE: SEPT 2018
FSC-08
SHEET No. 08 OF 31

32+00.00



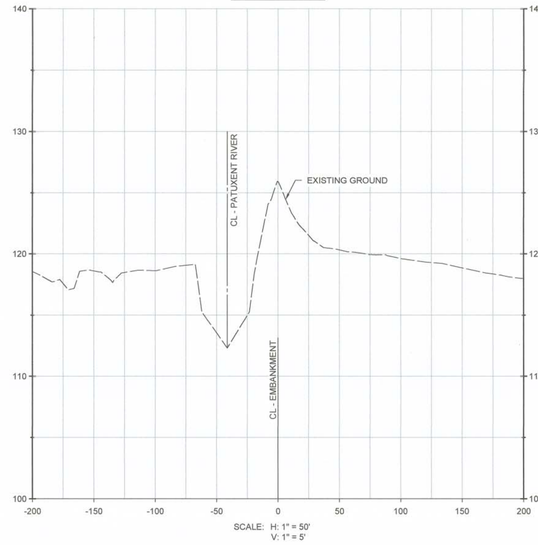
SCALE: H: 1" = 50'
V: 1" = 5'

34+00.00



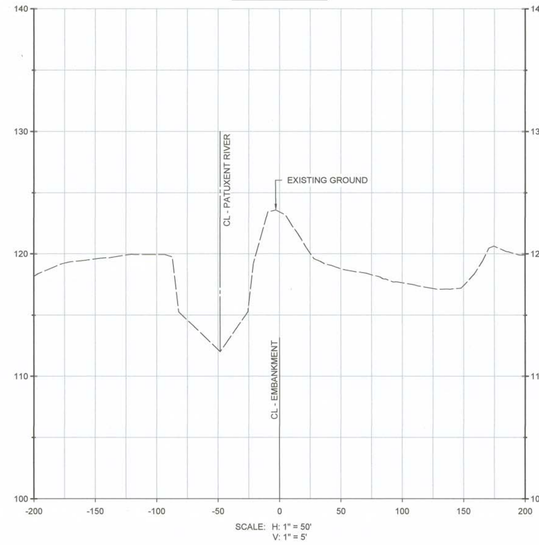
SCALE: H: 1" = 50'
V: 1" = 5'

36+00.00



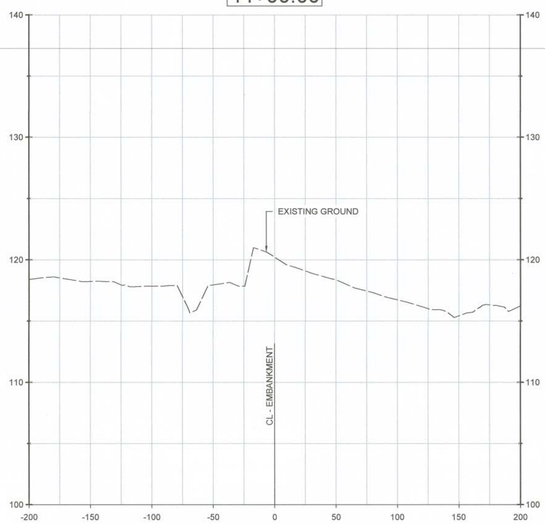
SCALE: H: 1" = 50'
V: 1" = 5'

40+00.00



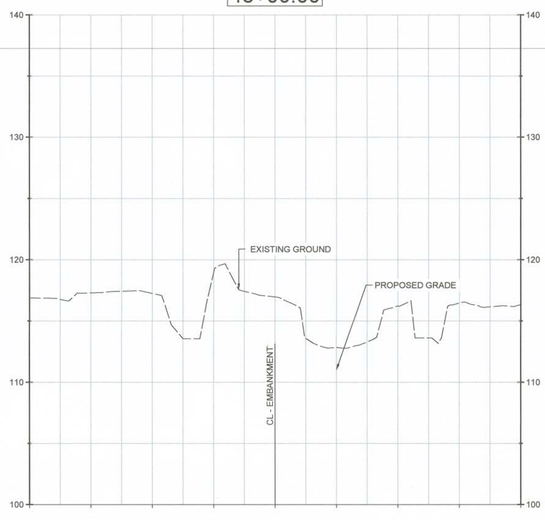
SCALE: H: 1" = 50'
V: 1" = 5'

44+00.00



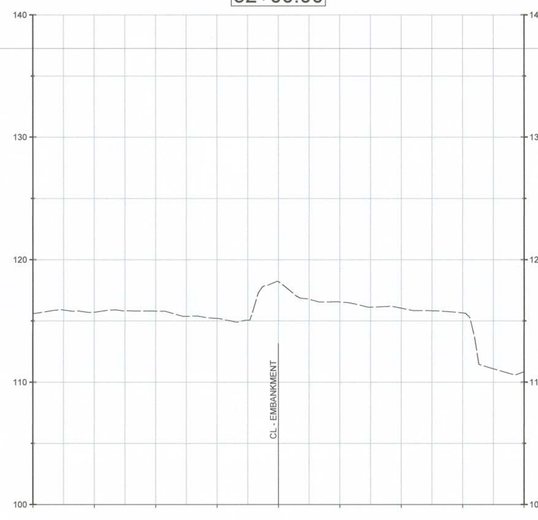
SCALE: H: 1" = 50'
V: 1" = 5'

48+00.00



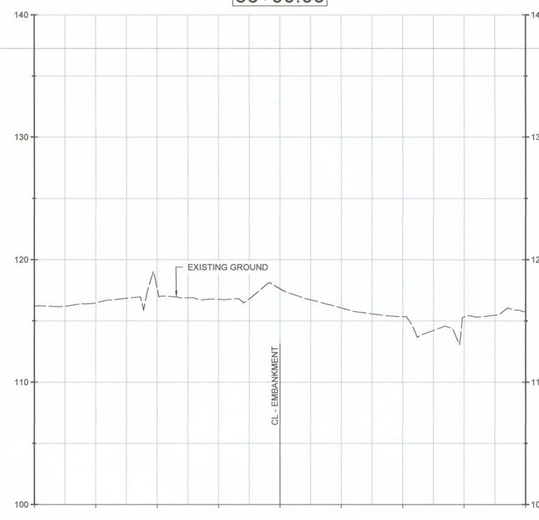
SCALE: H: 1" = 50'
V: 1" = 5'

52+00.00



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

56+00.00



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PHILIP R. HUGHES III
No. 32113
PROFESSIONAL ENGINEER

5/31/19

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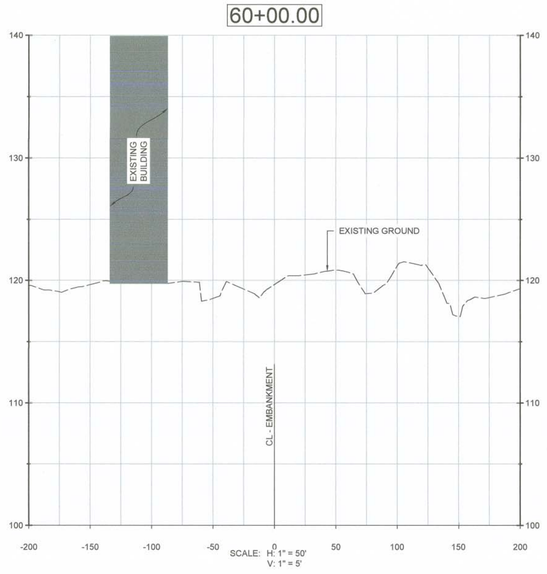
RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR ☐

BY_____ DATE_____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Existing Embankment Sections

SCALE: AS SHOWN
JOB No. 1262A
DATE: SEPT 2018
FSC-09
SHEET No. 09 OF 31



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Rough Grading, Demolition, Erosion And Sediment Control Plan
Existing Embankment Sections

SCALE: AS SHOWN
JOB No. 1262A
DATE: SEPT 2018
FSC-10
SHEET No. 10 OF 31

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RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR ☐
BY_____ DATE_____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Phase 1 - Rough Grading Composite

SCALE: 1"=200'
JOB No. 1262A
DATE: SEPT 2018
FSC-11
SHEET No. 11 OF 31

PARCEL B-3
"STEWART MANOR"
P.B.166 PG.85

N68°55'22"E 626.09'

N03°50'01"W 662.96'

N42°01'18"W 2029.95'

SITE AREA OUTSIDE
OF REQUESTED
CONCEPT APPROVAL

MAYOR AND CITY COUNCIL OF LAUREL
PARK DEDICATION
"PLAT FOUR, THE GREENS OF PATUXENT"
P.B.124 PG.83

PARCEL 147
LEANDER L. SMITH & SANDRA LENOIX
L.8799 F.596

MATCHLINE SEE SHEET 13 OF 31

MATCHLINE SEE SHEET 14 OF 31

SHEET 12
SHEET 13
SHEET 14
SHEET 15
SHEET 16
SHEET 17
SHEET 18

COMPOSITE KEY

CALL "MISS UTILITY" AT
1-800-257-7777
48 Hours Before Start Of Construction

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EX. 100-YEAR FLOODPLAIN
- PROP. 100-YEAR FLOODPLAIN
- EX. 500-YEAR FLOODPLAIN
- EX. STREAM
- EX. STREAM VALLEY BUFFER
- EX. WETLAND BUFFER
- SOIL TYPE BOUNDARY
- EX. SANITARY SEWER
- EX. WATER
- EX. STORM DRAIN
- PROP. SANITARY SEWER
- PROP. WATER
- PROP STORM DRAIN
- PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR

- PROP. LIMITS OF DISTURBANCE
- EX. FENCE
- PROP. FENCE
- EX. SILT FENCE
- PROP. SILT FENCE
- EX. SUPER SILT FENCE
- PROP. SUPER SILT FENCE
- EX. TIER II BUFFER
- SITE AREA OUTSIDE REQUESTED CONCEPT APPROVAL

- AREA OF EXISTING 15% TO 25% SLOPES
- AREA OF EXISTING 25% AND GREATER SLOPES
- PROP. STABILIZED CONSTRUCTION ENTRANCE
- PROP. REMOVABLE PUMP STATION
- EX. WETLAND
- EMBANKMENT BUFFER

GRAPHIC SCALE
50' 0 25' 50' 100' 200'
1 INCH = 50 FT

N
Scale: 1"=40'
NGVD:29
NAD:83

NOTE: THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF THE PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR ADHERING TO APPLICABLE PRINCE GEORGE'S COUNTY CODES AND REGULATIONS.

PROFESSIONAL CERTIFICATION

"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No.32113, Expiration Date:9/15/19."

STATE OF MARYLAND
PHILIP R. HUGHES III
32113
PROFESSIONAL ENGINEER
3/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

CS PATUXENT GREENS, LLC.
6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

RODGERS CONSULTING
1101 Mercantile Lane, Suite 280 Largo, Maryland 20774
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

	BY:	DATE
BASE DATA	CADD	FEB 2018
DESIGNED	DKM	APR 2019
DRAWN	DKM	APR 2019
REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR
BY_____ DATE____

Rough Grading, Demolition, Erosion And Sediment Control Plan Phase 1 - Rough Grading

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-12
SHEET No. 12 OF 31

MATCHLINE SEE SHEET 12 OF 31

MATCHLINE SEE SHEET 14 OF 31

MATCHLINE SEE SHEET 15 OF 31

MATCHLINE SEE SHEET 16 OF 31

SPRING HOUSE LANE
GOLF CREST DRIVE
GREENVIEW DRIVE
NICKLAUS LANE
PALMER PLACE
PARKVIEW WAY
TREVINO TERRACE
PLAYER DRIVE
SNEAD COURT
BEAR BRANCH

MAYOR AND CITY COUNCIL OF LAUREL PARK DEDICATION "PLAT FOUR-THE GREENS OF PATUXENT" P.B.124 PG.83

PHASE 3C (CONDO'S) "THE VILLAGE OF PATUXENT" P.B.134 PG.67

PHASE 3B (CONDO'S) "THE VILLAGE OF PATUXENT" P.B.134 PG.54

PHASE 3A (CONDO'S) "THE VILLAGE OF PATUXENT" P.B.133 PG.81

PHASE 4A (CONDO'S) "THE VILLAGE OF PATUXENT" P.B.135 PG.22

PHASE 4B (CONDO'S) "THE VILLAGE OF PATUXENT" P.B.136 PG.29

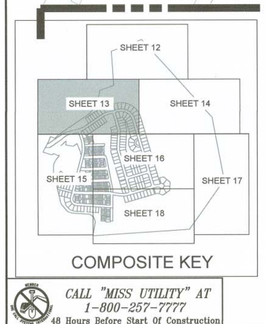
PHASE 4C (CONDO'S) "THE VILLAGE OF PATUXENT" P.B.137 PG.55

PHASE 4D (CONDO'S) "THE VILLAGE OF PATUXENT" P.B.138 PG.7

N70°32'38"E 282.53'
N12°27'40"E 243.01'
N34°11'28"E 255.77'
N55°48'07"E 720.45'

CENTERLINE EXISTING STREAM/RIVER
SITE AREA OUTSIDE OF REQUESTED CONCEPT APPROVAL
150' WIDE TIER II BUFFER
CITY OF LAUREL 50' REQUIRED STREAM BUFFER
EX. STORM DRAIN TO REMAIN
EX. SEWER TO REMAIN
EX. GAS LINE TO REMAIN
EX. STORM DRAIN TO REMAIN
EX. SEWER TO REMAIN

RD-3
ECS-16
ECS-17
RD-2
ECS-15
ECS-40



COMPOSITE KEY

CALL "MISS UTILITY" AT 1-800-257-7777
48 Hours Before Start Of Construction

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EX. 100-YEAR FLOODPLAIN
- PROP. 100-YEAR FLOODPLAIN
- EX. 500-YEAR FLOODPLAIN
- EX. STREAM
- EX. STREAM VALLEY BUFFER
- EX. WETLAND BUFFER
- SOIL TYPE BOUNDARY
- EX. SANITARY SEWER
- EX. WATER
- EX. STORM DRAIN
- PROP. SANITARY SEWER
- PROP. WATER
- PROP STORM DRAIN
- PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR
- PROP. LIMITS OF DISTURBANCE
- EX. FENCE
- PROP. FENCE
- EX. SILT FENCE
- PROP. SILT FENCE
- EX. SUPER SILT FENCE
- PROP. SUPER SILT FENCE
- EX. TIER II BUFFER
- SITE AREA OUTSIDE REQUESTED CONCEPT APPROVAL
- AREA OF EXISTING 15% TO 25% SLOPES
- AREA OF EXISTING 25% AND GREATER SLOPES
- PROP. STABILIZED CONSTRUCTION ENTRANCE
- PROP. REMOVABLE PUMP STATION
- EX. WETLAND
- EMBANKMENT BUFFER

GRAPHIC SCALE
1 INCH = 50 FT

N
Scale: 1" = 50'
NGVD: 29
NAD: 83

NOTE: THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF THE PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR ADHERING TO APPLICABLE PRINCE GEORGES COUNTY CODES AND REGULATIONS.

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STATE OF MARYLAND · PHILIP R. HUGHES III · 32113 · PROFESSIONAL ENGINEER
5/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

CS PATUXENT GREENS, LLC.
6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

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RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR
BY_____ DATE ____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Phase 1 - Rough Grading

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-13
SHEET No. 13 OF 31

MATCHLINE SEE SHEET 12 OF 31

MATCHLINE SEE SHEET 13 OF 31

PARCEL 147
LEANDER L. SMITH & SANDRA LENOIX
L.8799 F.596

MAYOR AND CITY COUNCIL OF LAUREL
PARCEL 152
L.38065 F.400

PATUXENT RIVER

CENTERLINE EXISTING STREAM/RIVER

SITE AREA OUTSIDE OF REQUESTED CONCEPT APPROVAL

CITY OF LAUREL 50' REQUIRED STREAM BUFFER

SB-1

BEAR BRANCH

150' WIDE TIER II BUFFER

CENTERLINE EXISTING STREAM/RIVER

CENTERLINE EXISTING STREAM/RIVER

MAYOR AND CITY COUNCIL OF LAUREL
PARCEL 50
"FAIRLAWN ACREAGE"
L.32426 F.157

CITY OF LAUREL 50' REQUIRED STREAM BUFFER

SB-2

MATCHLINE SEE SHEET 16 OF 31

MATCHLINE SEE SHEET 17 OF 31

SHEET 12
SHEET 13
SHEET 14
SHEET 15
SHEET 16
SHEET 17
SHEET 18

COMPOSITE KEY

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EX. 100-YEAR FLOODPLAIN
- PROP. 100-YEAR FLOODPLAIN
- EX. 500-YEAR FLOODPLAIN
- EX. STREAM
- EX. STREAM VALLEY BUFFER
- EX. WETLAND BUFFER
- SOIL TYPE BOUNDARY
- EX. SANITARY SEWER
- EX. WATER
- EX. STORM DRAIN
- PROP. SANITARY SEWER
- PROP. WATER
- PROP STORM DRAIN
- PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR
- PROP. LIMITS OF DISTURBANCE
- EX. FENCE
- PROP. FENCE
- EX. SILT FENCE
- PROP. SILT FENCE
- EX. SUPER SILT FENCE
- PROP. SUPER SILT FENCE
- EX. TIER II BUFFER
- SITE AREA OUTSIDE REQUESTED CONCEPT APPROVAL
- AREA OF EXISTING 15% TO 25% SLOPES
- AREA OF EXISTING 25% AND GREATER SLOPES
- PROP. STABILIZED CONSTRUCTION ENTRANCE
- PROP. REMOVABLE PUMP STATION
- EX. WETLAND
- EMBANKMENT BUFFER

GRAPHIC SCALE
1 INCH = 50 FT

N
Sheet 1"=50'
NGVD: 29
NAD: 83

CALL "MISS UTILITY" AT 1-800-257-7777
48 Hours Before Start Of Construction

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STATE OF MARYLAND — DAVID K. MOORE — PROFESSIONAL ENGINEER
3/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

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6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

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RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR
BY_____ DATE: ____

Rough Grading, Demolition, Erosion And Sediment Control Plan Phase 1 - Rough Grading

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-14
SHEET No. 14 OF 31

SHEET 12
SHEET 13
SHEET 14
SHEET 15
SHEET 16
SHEET 17
SHEET 18

COMPOSITE KEY

CALL "MISS UTILITY" AT 1-800-257-7777
48 Hours Before Start Of Construction

LEGEND

EX. MAJOR CONTOUR	PROP. LIMITS OF DISTURBANCE
EX. MINOR CONTOUR	EX. FENCE
PROPERTY BOUNDARY	PROP. FENCE
ADJACENT PROPERTY BOUNDARY	EX. SILT FENCE
EX. 100-YEAR FLOODPLAIN	PROP. SILT FENCE
PROP. 100-YEAR FLOODPLAIN	EX. SUPER SILT FENCE
EX. 500-YEAR FLOODPLAIN	PROP. SUPER SILT FENCE
EX. STREAM	EX. TIER II BUFFER
EX. STREAM VALLEY BUFFER	SITE AREA OUTSIDE REQUESTED CONCEPT APPROVAL
EX. WETLAND BUFFER	
SOIL TYPE BOUNDARY	
EX. SANITARY SEWER	
EX. WATER	
EX. STORM DRAIN	
PROP. SANITARY SEWER	
PROP. WATER	
PROP STORM DRAIN	
PROP. MAJOR CONTOUR	
PROP. MINOR CONTOUR	

	AREA OF EXISTING 15% TO 25% SLOPES
	AREA OF EXISTING 25% AND GREATER SLOPES
STABILIZED CONSTRUCTION ENTRANCE	PROP. STABILIZED CONSTRUCTION ENTRANCE
	PROP. REMOVABLE PUMP STATION
	EX. WETLAND
	EMBANKMENT BUFFER

NGVD: 29
NAD: 83
Scale: 1" = 50'

GRAPHIC SCALE
50' 0 25' 50' 100' 200'
1 INCH = 50 FT

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STATE OF MARYLAND — PHILIP R. HUGHES III — 32113 — REGISTERED PROFESSIONAL ENGINEER

5/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

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6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

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RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR
BY_____ DATE_____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Phase 1 - Rough Grading

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-15
SHEET No. 15 OF 31

MATCHLINE SEE SHEET 13 OF 31

MATCHLINE SEE SHEET 14 OF 31

MATCHLINE SEE SHEET 15 OF 31

MATCHLINE SEE SHEET 17 OF 31

ECS-1
ECS-2
ECS-3
ECS-4
ECS-5
ECS-6
ECS-7
ECS-8
ECS-18
ECS-19
ECS-20
ECS-21
ECS-23
ECS-24
ECS-25
ECS-28
ECS-30
ECS-31
ECS-33
ECS-34
ECS-43
RD-5
RD-6
RD-9
SB-3
SB-4
SB-5
SB-6
SB-

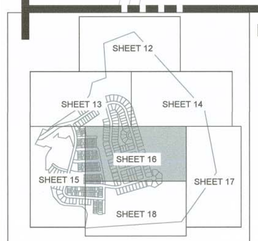
BEAR BRANCH

150' WIDE TIER II BUFFER
SITE AREA OUTSIDE OF REQUESTED CONCEPT APPROVAL
CITY OF LAUREL 50' REQUIRED STREAM BUFFER
EXISTING WETLAND BUFFER
EXISTING WETLAND
DRY STORAGE ELEV=115
DRY STORAGE ELEV=

MATCHLINE SEE SHEET 18 OF 31

MATCHLINE SEE SHEET 18 OF 31

MATCHLINE SEE SHEET 18 OF 31



COMPOSITE KEY

CALL "MISS UTILITY" AT 1-800-257-7777
48 Hours Before Start Of Construction

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EX. 100-YEAR FLOODPLAIN
- PROP. 100-YEAR FLOODPLAIN
- EX. 500-YEAR FLOODPLAIN
- EX. STREAM
- EX. STREAM VALLEY BUFFER
- EX. WETLAND BUFFER
- SOIL TYPE BOUNDARY
- EX. SANITARY SEWER
- EX. WATER
- EX. STORM DRAIN
- PROP. SANITARY SEWER
- PROP. WATER
- PROP STORM DRAIN
- PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR
- PROP. LIMITS OF DISTURBANCE
- EX. FENCE
- PROP. FENCE
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- PROP. SUPER SILT FENCE
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- AREA OF EXISTING 15% TO 25% SLOPES
- AREA OF EXISTING 25% AND GREATER SLOPES
- PROP. STABILIZED CONSTRUCTION ENTRANCE
- PROP. REMOVABLE PUMP STATION
- EX. WETLAND
- EMBANKMENT BUFFER

GRAPHIC SCALE
50' 0 25' 50' 100' 200'
1 INCH = 50 FT

N
Scale: 1" = 50'
NGVD: 29
NAD: 83

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STATE OF MARYLAND — PHILIP R. HUGHES III — 32113 — PROFESSIONAL ENGINEER

5/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

CS PATUXENT GREENS, LLC.
6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

RODGERS CONSULTING
1101 Mercantile Lane, Suite 280 Largo, Maryland 20774
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

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RODGERS CONSULTING CONTACT: Philip R. Hughes III

RELEASE FOR ☐
BY_____ DATE ____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Phase 1 - Rough Grading

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-16
SHEET No. 16 OF 31

MATCHLINE SEE SHEET 18 OF 31

MATCHLINE SEE SHEET 16 OF 31

MATCHLINE SEE SHEET 16 OF 31

MATCHLINE SEE SHEET 14 OF 31

PARCEL 1
MARYLAND STATE HIGHWAY ADMINISTRATION
L.18898 F.735

PATUXENT RIVER

CITY OF LAUREL 50' REQUIRED STREAM BUFFER

150' WIDE TIER II BUFFER

CENTERLINE EXISTING STREAM/RIVER

N35°15'06"E 1166.87'

SB-8

BEAR BRANCH

SITE AREA OUTSIDE OF REQUESTED CONCEPT APPROVAL

N10°45'11"W 1234.74'

PARCEL 33
BRUCE B. BARBER & GAIL F. BARBER
L.28001 F.126

MAYOR AND CITY COUNCIL OF LAUREL
PARCEL 50
"FAIRLAWN ACREAGE"
L.32426 F.157

SHEET 12
SHEET 13
SHEET 14
SHEET 15
SHEET 16
SHEET 17
SHEET 18

COMPOSITE KEY

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EX. 100-YEAR FLOODPLAIN
- PROP. 100-YEAR FLOODPLAIN
- EX. 500-YEAR FLOODPLAIN
- EX. STREAM
- EX. STREAM VALLEY BUFFER
- EX. WETLAND BUFFER
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- EX. WETLAND
- EMBANKMENT BUFFER

NGVD: 29
NAD: 83

Scale: 1" = 60'

GRAPHIC SCALE
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1 INCH = 50 FT

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STATE OF MARYLAND
PHILIP R. HUGHES III
32113
PROFESSIONAL ENGINEER
5/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

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PATUXENT GREENS

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RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR
BY_____ DATE_____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Phase 1 - Rough Grading

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-17
SHEET No. 17 OF 31

MATCHLINE SEE SHEET 16 OF 31

MATCHLINE SEE SHEET 16 OF 31

MATCHLINE SEE SHEET 16 OF 31

MATCHLINE SEE SHEET 15 OF 31

MATCHLINE SEE SHEET 17 OF 31

ECS-36 RD-8 ECS-37 ECS-44 ECS-22 ECS-11 ECS-12 ECS-46 SB-11 SB-9

EXISTING WETLAND BUFFER

EXISTING WETLAND

TC PATH

DRY STORAGE ELEV=115

ECS-39 ECS-9 RD-10 ECS-10 ECS-45

4' HIGH SAFETY FENCE

SB-12

BASIN #1
DA= 205.9 AC
WET STORAGE ELEV = 114
DRY STORAGE ELEV = 115
100-YEAR WSEL = 116.83
POND HAZARD CLASSIFICATION= 'A'

PROPOSED BAFFLE BOARD TOP = 115.50

61'

60'

43'

10" HDPE

12" HDPE

6" HDPE

PROPOSED 10" PVC HORIZONTAL DRAW-DOWN DEVICE INV. = 114.00

37.50' WEIR

LIMIT OF WEIR IN CMI WALL

LIMIT OF CMI WALL

PROPOSED COFFERDAM

PROPOSED CMI WALL

EX. STORM DRAIN TO REMAIN

N19°50'51"W 90.25'

N09°20'14"E 275.39'

SB-10 SB-13 SB-19 SB-16 SB-17 SB-18 SB-14 SB-15

LIMIT OF CMI WALL

EXISTING PUMP HOUSE TO REMAIN

SECTION A-A SEE SHEET 27 OF 31 FOR DETAILS

SECTION B-B SEE SHEET 27 OF 31 FOR DETAILS

PROP. SILT FENCE

150' WIDE TIER II BUFFER

CITY OF LAUREL 50' REQUIRED STREAM BUFFER

SITE AREA OUTSIDE OF REQUESTED CONCEPT APPROVAL

N35°15'06"E 1166.67'

N86°16'27"E 1864.69'

PATUXENT RIVER

WARREN, BARBARA E ETAL
9128 BRIARCHIP STREET
LAUREL, MD 20708
L.3156 F.565

PARCEL 74
THE MARYLAND NATIONAL CAPITAL PARK AND PLANNING COMISSION
L.3812 F.736

PARCEL 1
MARYLAND STATE HIGHWAY ADMINISTRATION
L.18898 F.735

SHEET 12
SHEET 13
SHEET 14
SHEET 15
SHEET 16
SHEET 17
SHEET 18

COMPOSITE KEY

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EX. 100-YEAR FLOODPLAIN
- PROP. 100-YEAR FLOODPLAIN
- EX. 500-YEAR FLOODPLAIN
- EX. STREAM
- EX. STREAM VALLEY BUFFER
- EX. WETLAND BUFFER
- SOIL TYPE BOUNDARY
- EX. SANITARY SEWER
- EX. WATER
- EX. STORM DRAIN
- PROP. SANITARY SEWER
- PROP. WATER
- PROP. STORM DRAIN
- PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR
- PROP. LIMITS OF DISTURBANCE
- EX. FENCE
- PROP. FENCE
- EX. SILT FENCE
- PROP. SILT FENCE
- EX. SUPER SILT FENCE
- PROP. SUPER SILT FENCE
- EX. TIER II BUFFER
- SITE AREA OUTSIDE REQUESTED CONCEPT APPROVAL
- AREA OF EXISTING 15% TO 25% SLOPES
- AREA OF EXISTING 25% AND GREATER SLOPES
- PROP. STABILIZED CONSTRUCTION ENTRANCE
- PROP. REMOVABLE PUMP STATION
- EX. WETLAND
- EMBANKMENT BUFFER

GRAPHIC SCALE
50' 0 25' 50' 100' 200'
1 INCH = 50 FT

N
Scale: 1"=50'
NGVD 29
NAD 83

CALL "MISS UTILITY" AT 1-800-257-7777
48 Hours Before Start Of Construction

NOTE: THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF THE PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR ADHERING TO APPLICABLE PRINCE GEORGE'S COUNTY CODES AND REGULATIONS.

PROFESSIONAL CERTIFICATION

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STATE OF MARYLAND — PHILIP R. HUGHES III — 32113 — PROFESSIONAL ENGINEER

5/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

CS PATUXENT GREENS, LLC.
6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

RODGERS CONSULTING
1101 Mercantile Lane, Suite 280 Largo, Maryland 20774
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

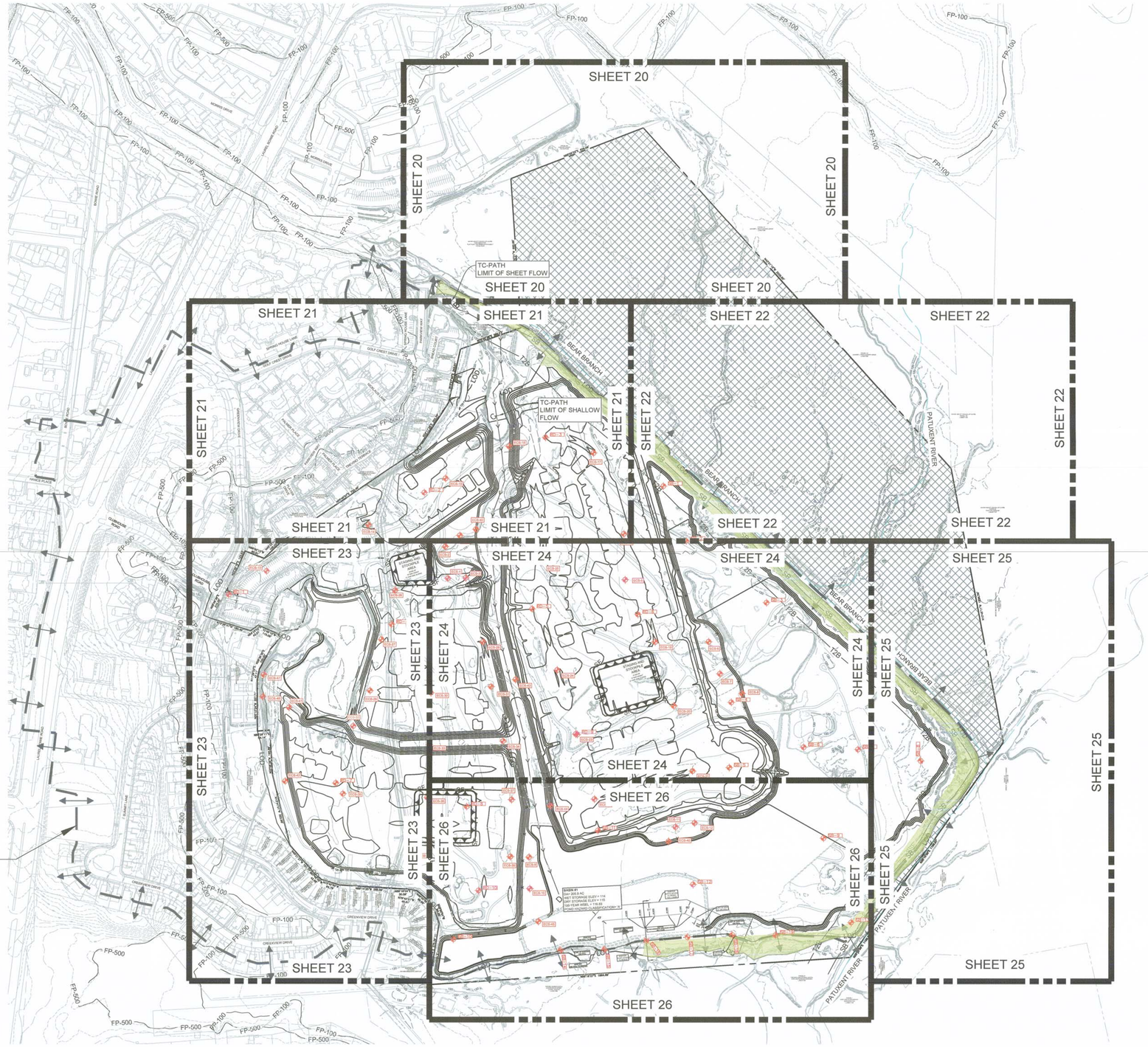
	BY	DATE
BASE DATA	CADD	FEB 2018
DESIGNED	DKM	APR 2019
DRAWN	DKM	APR 2019
REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR
BY_____ DATE____

Rough Grading, Demolition, Erosion And Sediment Control Plan Phase 1 - Rough Grading

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-18
SHEET No. 18 OF 31



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48 Hours Before Start Of Construction

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STATE OF MARYLAND — PHILIP R. HUGHES III — 32113 — PROFESSIONAL ENGINEER

5/31/19

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L.6008 F.266
ELECTION DISTRICT No. 10
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	BY	DATE
BASE DATA	CADD	FEB 2018
DESIGNED	DKM	APR 2019
DRAWN	DKM	APR 2019
REVIEWED	PRH	APR 2019

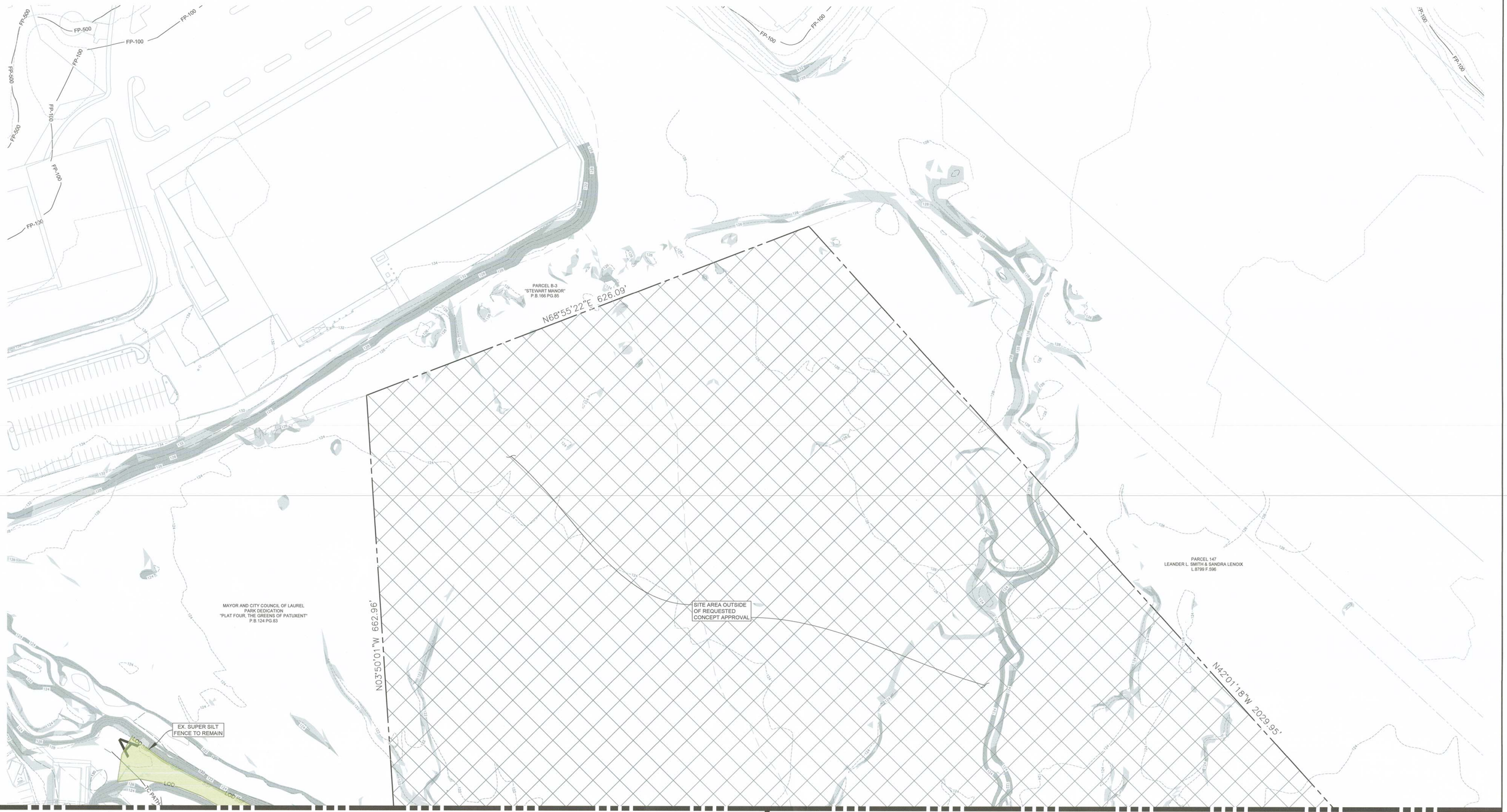
RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR

BY_____ DATE_____

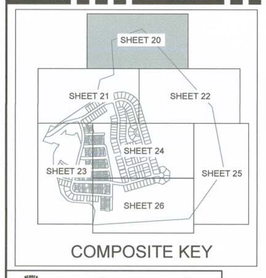
Rough Grading, Demolition, Erosion And Sediment Control Plan
Phase 2 - Rough Grading Composite

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-19
SHEET No. 19 OF 31



MATCHLINE SEE SHEET 21 OF 31

MATCHLINE SEE SHEET 21 OF 31



COMPOSITE KEY

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EX. 100-YEAR FLOODPLAIN
- PROP. 100-YEAR FLOODPLAIN
- EX. 500-YEAR FLOODPLAIN
- EX. STREAM
- EX. STREAM VALLEY BUFFER
- EX. WETLAND BUFFER
- SOIL TYPE BOUNDARY
- EX. SANITARY SEWER
- EX. WATER
- EX. STORM DRAIN
- PROP. SANITARY SEWER
- PROP. WATER
- PROP STORM DRAIN
- PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR

- PROP. LIMITS OF DISTURBANCE
- EX. FENCE
- PROP. FENCE
- EX. SILT FENCE
- PROP. SILT FENCE
- EX. SUPER SILT FENCE
- PROP. SUPER SILT FENCE
- PROP. SEDIMENT BASIN DRAINAGE DIVIDE
- EX. TIER II BUFFER
- SITE AREA OUTSIDE REQUESTED CONCEPT APPROVAL

- AREA OF EXISTING 15% TO 25% SLOPES
- AREA OF EXISTING 25% AND GREATER SLOPES
- PROP. STABILIZED CONSTRUCTION ENTRANCE
- PROP. REMOVABLE PUMP STATION
- EX. WETLAND
- EMBANKMENT BUFFER

GRAPHIC SCALE

50' 0 25' 50' 100' 200'

1 INCH = 50 FT

N

Scale: 1"=50'

NGVD 29
NAD 83

CALL "MISS UTILITY" AT
1-800-257-7777
48 Hours Before Start Of Construction

NOTE: THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF THE PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR ADHERING TO APPLICABLE PRINCE GEORGE'S COUNTY CODES AND REGULATIONS.

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STATE OF MARYLAND
PHILIP R. HUGHES III
32113
REGISTERED
PROFESSIONAL ENGINEER

9/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

CS PATUXENT GREENS, LLC.
6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

RODGERS CONSULTING
1101 Mercantile Lane, Suite 280 Largo, Maryland 20774
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

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REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR

BY_____ DATE_____

Rough Grading, Demolition, Erosion And Sediment Control Plan Phase 2 - Rough Grading

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-20
SHEET No. 20 OF 31

MATCHLINE SEE SHEET 20 OF 31

MATCHLINE SEE SHEET 22 OF 31

SPRING HOUSE LANE
GOLF CREST DRIVE
GREENVIEW DRIVE
PALMER PLACE
PARKVIEW WAY
TREVINO TERRACE
PLAYER DRIVE
NICKLAUS LANE
SNEAD COURT
BEAR BRANCH
MAYOR AND CITY COUNCIL OF LAUREL PARK DEDICATION "PLAT FOUR, THE GREENS OF PATUXENT" P.B.124 PG.83
CENTERLINE EXISTING STREAM/RIVER
SITE AREA OUTSIDE OF REQUESTED CONCEPT APPROVAL
150' WIDE TIER II BUFFER
CITY OF LAUREL 50' REQUIRED STREAM BUFFER
PHASE 3C (CONDO'S) "THE VILLAGE OF PATUXENT" P.B.134 PG.67
PHASE 3B (CONDO'S) "THE VILLAGE OF PATUXENT" P.B.134 PG.54
PHASE 3A (CONDO'S) "THE VILLAGE OF PATUXENT" P.B.133 PG.81
PHASE 4A (CONDO'S) "THE VILLAGE OF PATUXENT" P.B.135 PG.22
PHASE 4B (CONDO'S) "THE VILLAGE OF PATUXENT" P.B.136 PG.29
PHASE 4C (CONDO'S) "THE VILLAGE OF PATUXENT" P.B.137 PG.55
PHASE 4D (CONDO'S) "THE VILLAGE OF PATUXENT" P.B.138 PG.7
N70°32'38"E 282.59'
N12°27'40"E 243.01'
N34°11'28"E 255.77'
N55°48'07"E 720.45'
EX. STORMDRAIN TO REMAIN
EX. SILT FENCE TO REMAIN
EX. STORM DRAIN TO REMAIN
EX. SEWER TO REMAIN
EX. STORAGE SHED TO BE REMOVED
EX. GAS LINE TO REMAIN
PROP. STORMDRAIN PIPE
ACCESS ROAD
RD-2
RD-3
ECS-15
ECS-16
ECS-17
ECS-40
A
B
C
D
14

MATCHLINE SEE SHEET 23 OF 31

MATCHLINE SEE SHEET 24 OF 31

SHEET 20
SHEET 21
SHEET 22
SHEET 23
SHEET 24
SHEET 25
SHEET 26

COMPOSITE KEY

CALL "MISS UTILITY" AT 1-800-257-7777
48 Hours Before Start Of Construction

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EX. 100-YEAR FLOODPLAIN
- PROP. 100-YEAR FLOODPLAIN
- EX. 500-YEAR FLOODPLAIN
- EX. STREAM
- EX. STREAM VALLEY BUFFER
- EX. WETLAND BUFFER
- SOIL TYPE BOUNDARY
- EX. SANITARY SEWER
- EX. WATER
- EX. STORM DRAIN
- PROP. SANITARY SEWER
- PROP. WATER
- PROP STORM DRAIN
- PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR
- PROP. LIMITS OF DISTURBANCE
- EX. FENCE
- PROP. FENCE
- EX. SILT FENCE
- PROP. SILT FENCE
- EX. SUPER SILT FENCE
- PROP. SUPER SILT FENCE
- PROP. SEDIMENT BASIN DRAINAGE DIVIDE
- EX. TIER II BUFFER
- SITE AREA OUTSIDE REQUESTED CONCEPT APPROVAL
- AREA OF EXISTING 15% TO 25% SLOPES
- AREA OF EXISTING 25% AND GREATER SLOPES
- PROP. STABILIZED CONSTRUCTION ENTRANCE
- PROP. REMOVABLE PUMP STATION
- EX. WETLAND
- EMBANKMENT BUFFER

GRAPHIC SCALE
50 0 25 50 100 200
1 INCH = 50 FT

N
Scale: 1"=50'
NGVD: 29
NAD: 83

NOTE: THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF THE PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR ADHERING TO APPLICABLE PRINCE GEORGE'S COUNTY CODES AND REGULATIONS.

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STATE OF MARYLAND — PHILIP R. HUGHES III — PROFESSIONAL ENGINEER
5/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

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6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

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DRAWN	DKM	APR 2019
REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR
BY: DATE:

Rough Grading, Demolition, Erosion And Sediment Control Plan
Phase 2 - Rough Grading

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-21
SHEET No. 21 OF 31

MATCHLINE SEE SHEET 20 OF 31

MATCHLINE SEE SHEET 21 OF 31

PARCEL 147
LEANDER L. SMITH & SANDRA LENOIX
L.8799 F.596

MAYOR AND CITY COUNCIL OF LAUREL
PARCEL 152
L.38065 F.400

MAYOR AND CITY COUNCIL OF LAUREL
PARCEL 50
"FAIRLAWN ACREAGE"
L.32426 F.157

PATUXENT RIVER

BEAR BRANCH

CENTERLINE EXISTING STREAM/RIVER

SITE AREA OUTSIDE OF REQUESTED CONCEPT APPROVAL

EX. SUPER SILT FENCE TO REMAIN

CITY OF LAUREL 50' REQUIRED STREAM BUFFER

SB-1

150' WIDE TIER II BUFFER

4' HIGH SAFETY FENCE

CITY OF LAUREL 50' REQUIRED STREAM BUFFER

SB-2

CENTERLINE EXISTING STREAM/RIVER

EX. SUPER SILT FENCE TO REMAIN

MATCHLINE SEE SHEET 24 OF 31

MATCHLINE SEE SHEET 25 OF 31

SHEET 20
SHEET 21
SHEET 22
SHEET 23
SHEET 24
SHEET 25
SHEET 26

COMPOSITE KEY

CALL "MISS UTILITY" AT 1-800-257-7777
48 Hours Before Start Of Construction

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EX. 100-YEAR FLOODPLAIN
- PROP. 100-YEAR FLOODPLAIN
- EX. 500-YEAR FLOODPLAIN
- EX. STREAM
- EX. STREAM VALLEY BUFFER
- EX. WETLAND BUFFER
- SOIL TYPE BOUNDARY
- EX. SANITARY SEWER
- EX. WATER
- EX. STORM DRAIN
- PROP. SANITARY SEWER
- PROP. WATER
- PROP STORM DRAIN
- PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR
- PROP. LIMITS OF DISTURBANCE
- EX. FENCE
- PROP. FENCE
- EX. SILT FENCE
- PROP. SILT FENCE
- EX. SUPER SILT FENCE
- PROP. SUPER SILT FENCE
- PROP. SEDIMENT BASIN DRAINAGE DIVIDE
- EX. TIER II BUFFER
- SITE AREA OUTSIDE REQUESTED CONCEPT APPROVAL
- AREA OF EXISTING 15% TO 25% SLOPES
- AREA OF EXISTING 25% AND GREATER SLOPES
- PROP. STABILIZED CONSTRUCTION ENTRANCE
- PROP. REMOVABLE PUMP STATION
- EX. WETLAND
- EMBANKMENT BUFFER

GRAPHIC SCALE
50' 0 25' 50' 100' 200'
1 INCH = 50 FT

N
Sheet 1" = 50'
NGVD: 29
NAD: 83

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STATE OF MARYLAND · PHILIP R. HUGHES III · 32113 · PROFESSIONAL ENGINEER

5/31/19

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L.6008 F.266
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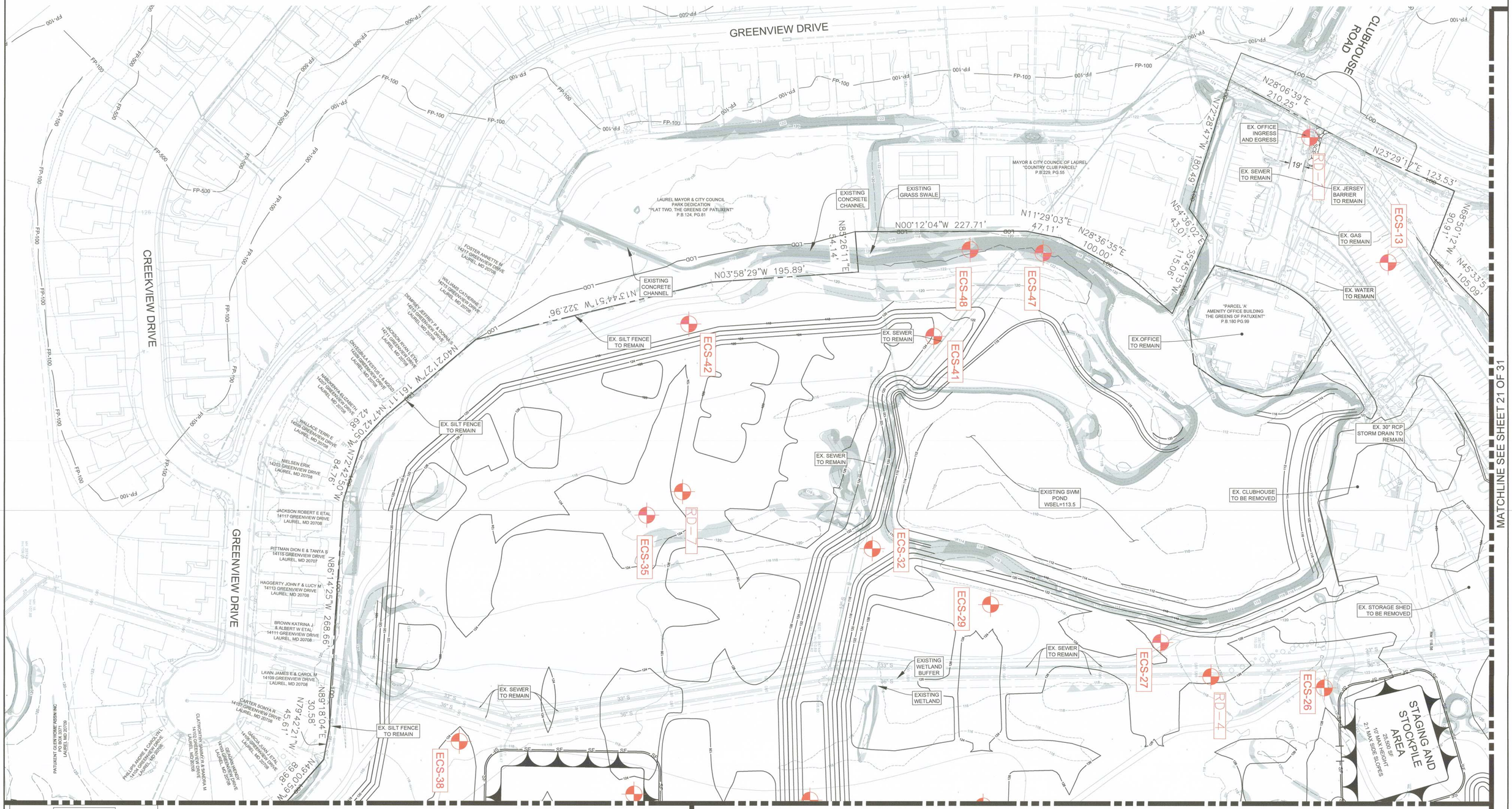
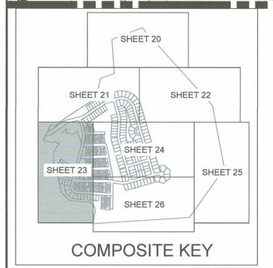
RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR
BY_____ DATE: ____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Phase 2 - Rough Grading

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-22
SHEET No. 22 OF 31





COMPOSITE KEY

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY BOUNDARY
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- EX. 100-YEAR FLOODPLAIN
- PROP. 100-YEAR FLOODPLAIN
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- EX. SANITARY SEWER
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- EX. STORM DRAIN
- PROP. SANITARY SEWER
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- PROP STORM DRAIN
- PROP. MAJOR CONTOUR
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- PROP. LIMITS OF DISTURBANCE
- EX. FENCE
- PROP. FENCE
- EX. SILT FENCE
- PROP. SILT FENCE
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- PROP. STABILIZED CONSTRUCTION ENTRANCE
- PROP. REMOVABLE PUMP STATION
- EX. WETLAND
- EMBANKMENT BUFFER

NGVD: 29
NAD: 83
Scale: 1" = 50'

GRAPHIC SCALE
50' 0 25' 50' 100' 200'
1 INCH = 50 FT

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48 Hours Before Start Of Construction

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STATE OF MARYLAND — PHILIP R. HUGHES III — 32113 — PROFESSIONAL ENGINEER
5/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

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PATUXENT GREENS

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REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR _____ ☐
BY _____ DATE _____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Phase 2 - Rough Grading

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-23
SHEET No. 23 OF 31

MATCHLINE SEE SHEET 21 OF 31

MATCHLINE SEE SHEET 22 OF 31

MATCHLINE SEE SHEET 23 OF 31

MATCHLINE SEE SHEET 25 OF 31

ECS-1
ECS-2
ECS-3
ECS-4
ECS-5
ECS-6
ECS-7
ECS-8
ECS-18
ECS-19
ECS-20
ECS-21
ECS-23
ECS-24
ECS-25
ECS-28
ECS-30
ECS-31
ECS-33
ECS-34
ECS-43
RD-5
RD-6
RD-9
SB-3
SB-4
SB-5
SB-6

10' TEMP ACCESS ROAD
TC PATH
T2B
SF
SSF
SB
WB
S
W
SD

STAGING AND STOCKPILE AREA
61,500 SF
10' MAX HEIGHT
2:1 MAX SIDE SLOPES

EXISTING WETLAND BUFFER
EXISTING WETLAND
150' WIDE TIER II BUFFER
4' HIGH SAFETY FENCE
EX. SUPER SILT FENCE TO REMAIN
SITE AREA OUTSIDE OF REQUESTED CONCEPT APPROVAL
CITY OF LAUREL 50' REQUIRED STREAM BUFFER
BEAR BRANCH

MATCHLINE SEE SHEET 26 OF 31

MATCHLINE SEE SHEET 26 OF 31

MATCHLINE SEE SHEET 26 OF 31

SHEET 20
SHEET 21
SHEET 22
SHEET 23
SHEET 24
SHEET 25
SHEET 26

COMPOSITE KEY

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EX. 100-YEAR FLOODPLAIN
- PROP. 100-YEAR FLOODPLAIN
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- EX. WETLAND
- EMBANKMENT BUFFER

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1 INCH = 50 FT

N
Scale: 1" = 50'
NGVD: 29
NAD: 83

CALL "MISS UTILITY" AT 1-800-257-7777
48 Hours Before Start Of Construction

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STATE OF MARYLAND — PHILIP R. HUGHES III — 32113 — PROFESSIONAL ENGINEER
5/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

CS PATUXENT GREENS, LLC.
6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

RODGERS CONSULTING
1101 Mercantile Lane, Suite 280 Largo, Maryland 20774
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

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DESIGNED	DKM	APR 2019
DRAWN	DKM	APR 2019
REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR
BY_____ DATE_____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Phase 2 - Rough Grading

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-24
SHEET No. 24 OF 31

MATCHLINE SEE SHEET 26 OF 31

MATCHLINE SEE SHEET 24 OF 31

MATCHLINE SEE SHEET 24 OF 31

MATCHLINE SEE SHEET 22 OF 31

PARCEL 1
MARYLAND STATE HIGHWAY
ADMINISTRATION
L.18898 F.735

PATUXENT RIVER

EX. SUPER SILT FENCE TO REMAIN

CITY OF LAUREL 50' REQUIRED STREAM BUFFER

150' WIDE TIER II BUFFER

CENTERLINE EXISTING STREAM/RIVER

N35°15'06"E 1166.87'

SB-8

PARCEL 1
MARYLAND STATE HIGHWAY
ADMINISTRATION
L.18898 F.735

BEAR BRANCH

CITY OF LAUREL 50' REQUIRED STREAM BUFFER

150' WIDE TIER II BUFFER

EX. SUPER SILT FENCE TO REMAIN

CENTERLINE EXISTING STREAM/RIVER

CENTERLINE EXISTING STREAM/RIVER

SITE AREA OUTSIDE OF REQUESTED CONCEPT APPROVAL

EX. SUPER SILT FENCE TO REMAIN

N10°45'11"W 1234.74'

MAYOR AND CITY COUNCIL OF LAUREL
PARCEL 50
"FAIRLAWN ACREAGE"
L.32426 F.157

PARCEL 33
BRUCE B. BARBER & GAIL F. BARBER
L.28001 F.126

CENTERLINE EXISTING STREAM/RIVER

NGVD: 29
NAD: 83

Scale: 1" = 50'

GRAPHIC SCALE

50' 0 25' 50' 100' 200'

1 INCH = 50 FT

SHEET 20
SHEET 21
SHEET 22
SHEET 23
SHEET 24
SHEET 25
SHEET 26

COMPOSITE KEY

CALL "MISS UTILITY" AT 1-800-257-7777
48 Hours Before Start Of Construction

LEGEND

EX. MAJOR CONTOUR	PROP. LIMITS OF DISTURBANCE
EX. MINOR CONTOUR	EX. FENCE
PROPERTY BOUNDARY	PROP. FENCE
ADJACENT PROPERTY BOUNDARY	EX. SILT FENCE
EX. 100-YEAR FLOODPLAIN	PROP. SILT FENCE
PROP. 100-YEAR FLOODPLAIN	EX. SUPER SILT FENCE
EX. 500-YEAR FLOODPLAIN	PROP. SUPER SILT FENCE
EX. STREAM	PROP. SEDIMENT BASIN DRAINAGE DIVIDE
EX. STREAM VALLEY BUFFER	EX. TIER II BUFFER
EX. WETLAND BUFFER	SITE AREA OUTSIDE REQUESTED CONCEPT APPROVAL
SOIL TYPE BOUNDARY	
EX. SANITARY SEWER	
EX. WATER	
EX. STORM DRAIN	
PROP. SANITARY SEWER	
PROP. WATER	
PROP STORM DRAIN	
PROP. MAJOR CONTOUR	
PROP. MINOR CONTOUR	

AREA OF EXISTING 15% TO 25% SLOPES	
AREA OF EXISTING 25% AND GREATER SLOPES	
PROP. STABILIZED CONSTRUCTION ENTRANCE	
PROP. REMOVABLE PUMP STATION	
EX. WETLAND	
EMBANKMENT BUFFER	

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REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR _____

BY_____ DATE _____

Rough Grading, Demolition, Erosion And Sediment Control Plan Phase 2 - Rough Grading

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-25
SHEET No. 25 OF 31

MATCHLINE SEE SHEET 24 OF 31
MATCHLINE SEE SHEET 24 OF 31
MATCHLINE SEE SHEET 24 OF 31
MATCHLINE SEE SHEET 23 OF 31
MATCHLINE SEE SHEET 25 OF 31

ECS-36
RD-8
ECS-37
EXISTING WETLAND BUFFER
EXISTING WETLAND
TC PATH
ECS-44
ECS-22
4' HIGH SAFETY FENCE
ECS-11
SB-11
ECS-12
ECS-46
SB-9
4' HIGH SAFETY FENCE
ECS-39
ECS-9
RD-10
ECS-10
SB-12
BASIN #1
DA= 205.9 AC
WET STORAGE ELEV = 114
DRY STORAGE ELEV = 115
100-YEAR WSEL = 116.83
POND HAZARD CLASSIFICATION= 'A'
EXISTING BAFFLE BOARD TO REMAIN TOP = 115.50
61'
60'
43'
10" HDDD
LIMIT OF WEIR IN CMI WALL
EX. SUPER SILT FENCE TO REMAIN
N19°50'51"W 90.25'
EX. SILT FENCE TO REMAIN
4' HIGH SAFETY FENCE
EX. STORM DRAIN TO REMAIN
ECS-45
PROP. 4' HIGH SAFETY FENCE
EXISTING COFFERDAM TO REMAIN
EXISTING 10" PVC HORIZONTAL DRAW-DOWN DEVICE INV. = 114.00
30' 50' WEIR
LIMIT OF EXISTING CMI WALL
150' WIDE TIER II BUFFER
CITY OF LAUREL 50' REQUIRED STREAM BUFFER
SB-13
SB-10
SB-19
EX. 4' HIGH SAFETY FENCE
EXISTING CMI WALL TO REMAIN
N09°20'14"E 275.39'
EX. STORM DRAIN TO REMAIN
LOD
SB-14
LIMIT OF EXISTING CMI WALL
SB-15
EXISTING PUMP HOUSE TO REMAIN
SB-16
SB-17
SB-18
EXISTING CMI WALL
EX. SUPER SILT FENCE TO REMAIN
N35°15'06"E 1166.87'
EX. SILT FENCE TO REMAIN
SITE AREA OUTSIDE OF REQUESTED CONCEPT APPROVAL
N86°16'27"E 1864.69'
PARCEL 74
THE MARYLAND NATIONAL CAPITAL PARK AND PLANNING COMISSION
L.3812 F.736
WARREN, BARBARA E ETAL
9128 BRIARCHIP STREET
LAUREL, MD 20708
L.3156 F.565
PATUXENT RIVER
PARCEL 1
MARYLAND STATE HIGHWAY ADMINISTRATION
L.18898 F.735

SHEET 20
SHEET 21
SHEET 22
SHEET 23
SHEET 24
SHEET 25
SHEET 26
COMPOSITE KEY

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EX. 100-YEAR FLOODPLAIN
- PROP. 100-YEAR FLOODPLAIN
- EX. 500-YEAR FLOODPLAIN
- EX. STREAM
- EX. STREAM VALLEY BUFFER
- EX. WETLAND BUFFER
- SOIL TYPE BOUNDARY
- EX. SANITARY SEWER
- EX. WATER
- EX. STORM DRAIN
- PROP. SANITARY SEWER
- PROP. WATER
- PROP STORM DRAIN
- PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR

- PROP. LIMITS OF DISTURBANCE
- EX. FENCE
- PROP. FENCE
- EX. SILT FENCE
- PROP. SILT FENCE
- EX. SUPER SILT FENCE
- PROP. SUPER SILT FENCE
- PROP. SEDIMENT BASIN DRAINAGE DIVIDE
- EX. TIER II BUFFER
- SITE AREA OUTSIDE REQUESTED CONCEPT APPROVAL

- AREA OF EXISTING 15% TO 25% SLOPES
- AREA OF EXISTING 25% AND GREATER SLOPES
- PROP. STABILIZED CONSTRUCTION ENTRANCE
- PROP. REMOVABLE PUMP STATION
- EX. WETLAND
- EMBANKMENT BUFFER

GRAPHIC SCALE
50' 0 25' 50' 100' 200'
1 INCH = 50 FT

N
(Scale: 1" = 50')
NGVD 29
NAD 83

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48 Hours Before Start Of Construction

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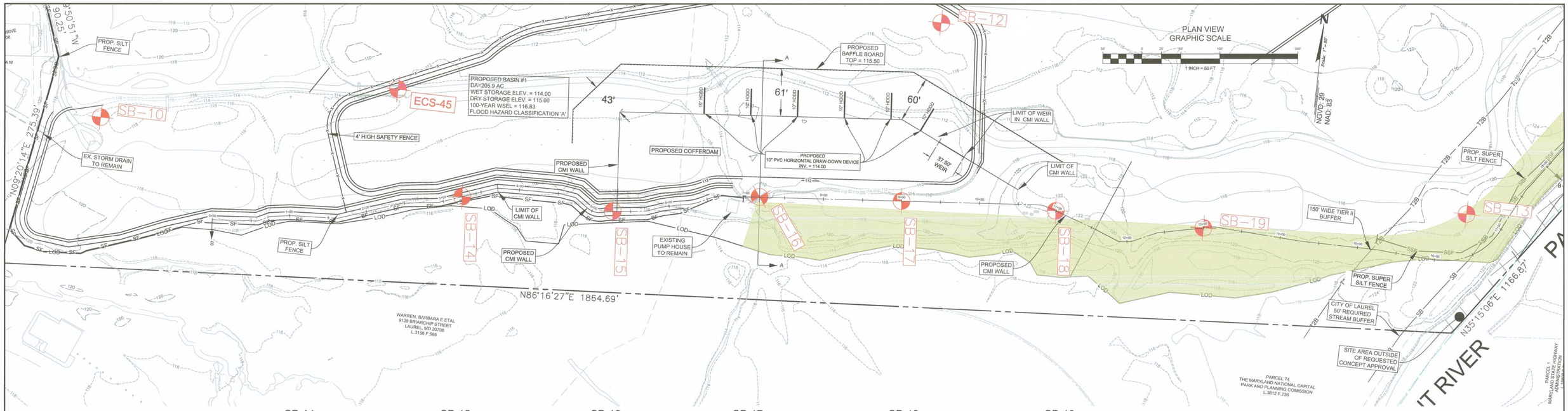
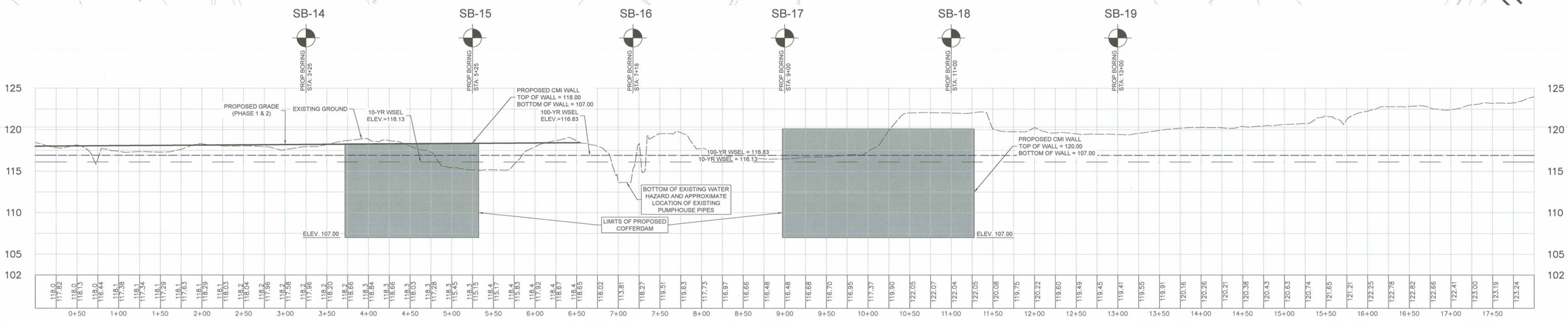
RODGERS CONTACT: Philip R. Hughes III
RELEASE FOR
BY_____ DATE_____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Phase 2 - Rough Grading

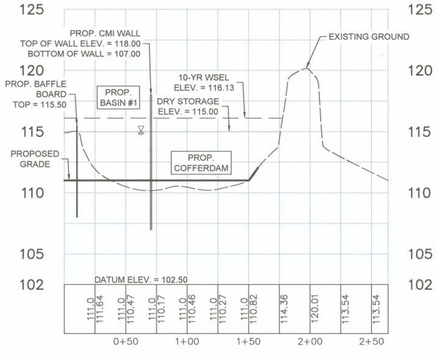
SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-26
SHEET No. 26 OF 31





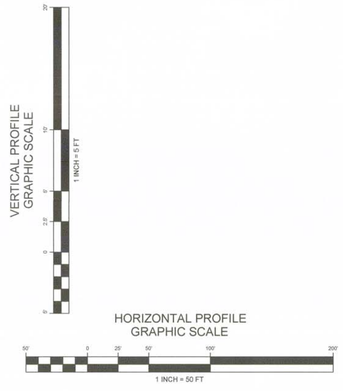
SECTION B-B

1" = 50' (HORIZONTAL)
1"=5' (VERTICAL)



SECTION A-A

1" = 50' (HORIZONTAL)
1"=5' (VERTICAL)



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PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

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DRAWN	DKM	APR 2019
REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR ☐
BY_____ DATE_____

Rough Grading, Demolition, Erosion And Sediment Control Plan
Sediment Basin/Pond #1 Profiles

SCALE: 1"=50'
JOB No. 1262A
DATE: SEPT 2018
FSC-27
SHEET No. 27 OF 31

1.0 Materials

1.1 Sheet Piling
All sheet piling shall be manufactured entirely from a rigid, high impact,, UV-inhibited, weather stbl-vinyl compound. All exposed surfaces of the sheet piling shall be UV resistant, and comprised of virgin material with a minimum ASTM D4216 Cell Classification of 1-42443-33 to ensure reliable performance and color consistency. Sheet pile material shall be ShoreGuard SG-825 vinyl sheet pile as detailed. Design stress for vinyl sheet pile shall not exceed 3,200 psi.

1.2 Steel Bolts.
Threaded steel bolts shall meet the requirements of ASTM A307, Grade A and shall be hot-dipped galvanized.

1.3 TimberGuard Lumber
HDPE encased dimensional lumber shall be provided in the sizes shown on the plans. The core material shall be No. 2 Southern Pine, pressure treated with CCA to a level of 0.80. All TimberGuard products shall be fully and seamlessly encapsulated with a UV resistant, colorfast polymer, comprised of HDPE virgin material. Polymer encapsulation shall not adhere to the internal lumber, allowing for independent expansion and contraction of the wood. Wrapped timber products shall not be considered as an acceptable alternate.

1.4 ArmorWare Cap
All aluminum caps shall meet the specifications of 6061-T6 marine grade aluminum and the requirements of ASTM B211.

1.5 Alternate Materials
Alternate products will not be allowed. Use of alternate sheet pile or other products specified will result in invalidation of this design and breach of contract.

1.6 Backfill
Backfill shall be free from all unsuitable and deleterious materials. Backfilling shall be done at the direction of the geotechnical engineer.

1.7 Sealant
Sealant should be Adeka Ultraseal P200. Sealant is required for all exposed portions of the sheet pile wall.

1.8 Acceptable Material Providers for Vinyl sheet piling.
CMI Limited Co.
1105 Northchase Pkwy
Suite 300
Marietta, GA 30067
Phone: 770-933-8166

2.0 Submittals
The contractor shall submit material certifications for all sheet piling to the engineer for approval prior to construction.

3.0 Drainage
3.1 The contractor will be responsible for surface water control during construction. The contractor will restore proper grading after construction to ensure proper surface water control.

4.0 Construction
4.1 The contractor shall be responsible for establishing the alignment of the wall.
4.2 Pulling and Splicing
Splicing of vinyl sheet piles will not be allowed. Filling may be pulled if necessary and may be re-used at the direction of the Engineer. Reuse of pulled vinyl sheet piling is generally discouraged.
4.3 Sheet piling shall be placed and driven to allow for interlock throughout their entire length. Filling shall be placed plumb and true to line.
4.4 Provide temporary wales, templates and other guide structures necessary to ensure piles are driven to the correct alignment. It may be necessary to employ leading edge guide piles to ensure correct alignment. Where possible drive sheet pile with the male edge leading.
4.5 The contractor shall submit records of the completed sheet piling operations, including a system of identification which shows the disposition of the approved piling in the work, driving equipment: performance data, piling penetration rate, piling dimensions and top and bottom elevations of installed piling.
4.6 If obstructions resistc driving of piling to the specified penetration, the obstructions shall be removed or penetrated. Pre-augering or spudding of piling may also be used.
4.7 The contractor will perform continuous inspection of the work to ensure proper alignment.

5.0 Measurement and Payment
Payment for the sheet piling wall will be made in accordance with the contract documents.

6.0 References
6.1 EM 1110-2-2504 Design of Sheet Pile Walls, US Army Corps of Engineers, 1994
6.2 TC 1180-2-606 Engineering and Design of I-Walls, US, prepared by Army Corps of Engineers, April 2011
6.3 Patuxent Greens – Sediment Basin/Pond #1 Embankment, prepared by Geo-Technology Associates, Inc., dated January 2019
6.4 Exhibit: Proposed Pond With CMI Wall Phase 1 (Rough Grading), prepared by Rodgers Consulting, dated April 2019

DRAFT

PROJECT: ShoreGuard CMI	CLIENT: CS PATUXENT GREENS LLC 6290 MONTROSE ROAD ROCKVILLE, MARYLAND 20852	PROJECT NAME: PATUXENT GREENS	SHEET TITLE: CONSTRUCTION REQUIREMENTS		
0 5/3/2019 ISSUED FOR REVIEW VRP	1101 NORTHCHASE PARKWAY, SUITE 300 MARIETTA, GEORGIA 30067 P:770.850.4909	F:770.933.8363 tofu@cmiltd.com	LOCATION: LAUREL, MD	DESIGNED: VRP 5/3/2019	JOB NO.: 2019MD01
			SHEET NO.: 2019MA01	DRAWN: VRP 5/3/2019	2019MD01.dwg 0
				REVIEWED: BRS 5/3/2019	B N/A 1 OF 5

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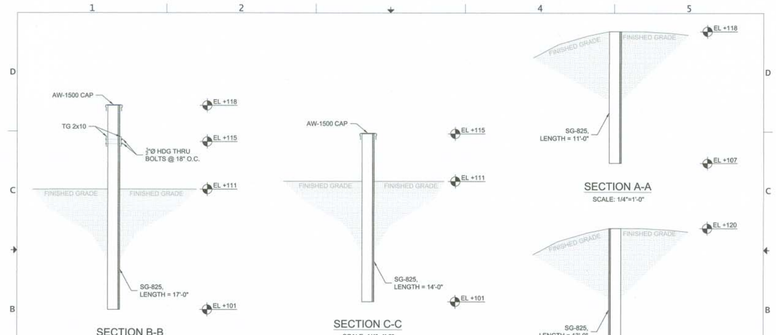

DRAFT

PROJECT: ShoreGuard CMI	CLIENT: CS PATUXENT GREENS LLC 6290 MONTROSE ROAD ROCKVILLE, MARYLAND 20852	PROJECT NAME: PATUXENT GREENS	SHEET TITLE: CROSS-SECTIONS		
0 5/3/2019 ISSUED FOR REVIEW VRP	1101 NORTHCHASE PARKWAY, SUITE 300 MARIETTA, GEORGIA 30067 P:770.850.4909	F:770.933.8363 tofu@cmiltd.com	LOCATION: LAUREL, MD	DESIGNED: VRP 5/3/2019	JOB NO.: 2019MD01
			SHEET NO.: 2019MA01	DRAWN: VRP 5/3/2019	2019MD01.dwg 0
				REVIEWED: BRS 5/3/2019	B 1/4"=1'-0" 3 OF 5

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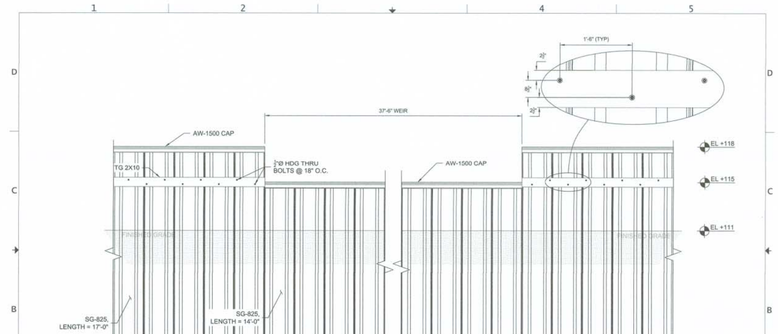

DRAFT

PROJECT: ShoreGuard CMI	CLIENT: CS PATUXENT GREENS LLC 6290 MONTROSE ROAD ROCKVILLE, MARYLAND 20852	PROJECT NAME: PATUXENT GREENS	SHEET TITLE: CROSS-SECTIONS		
0 5/3/2019 ISSUED FOR REVIEW VRP	1101 NORTHCHASE PARKWAY, SUITE 300 MARIETTA, GEORGIA 30067 P:770.850.4909	F:770.933.8363 tofu@cmiltd.com	LOCATION: LAUREL, MD	DESIGNED: VRP 5/3/2019	JOB NO.: 2019MD01
			SHEET NO.: 2019MA01	DRAWN: VRP 5/3/2019	2019MD01.dwg 0
				REVIEWED: BRS 5/3/2019	B 1/4"=1'-0" 4 OF 5

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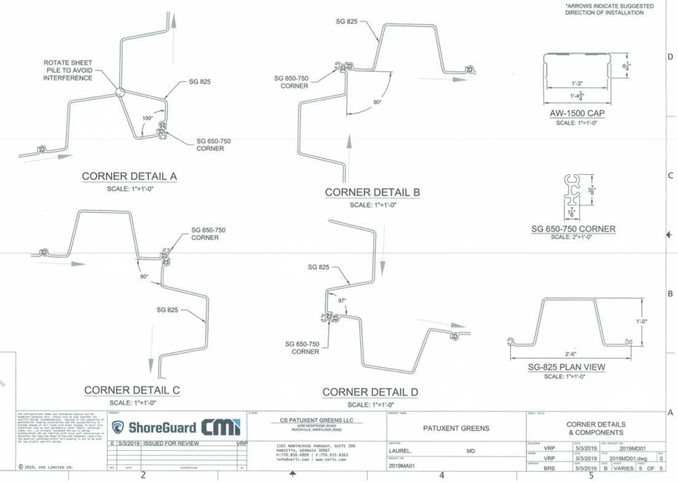
*ARROWS INDICATE SUGGESTED DIRECTION OF INSTALLATION



DRAFT

PROJECT: ShoreGuard CMI	CLIENT: CS PATUXENT GREENS LLC 6290 MONTROSE ROAD ROCKVILLE, MARYLAND 20852	PROJECT NAME: PATUXENT GREENS	SHEET TITLE: CORNER DETAILS & COMPONENTS		
0 5/3/2019 ISSUED FOR REVIEW VRP	1101 NORTHCHASE PARKWAY, SUITE 300 MARIETTA, GEORGIA 30067 P:770.850.4909	F:770.933.8363 tofu@cmiltd.com	LOCATION: LAUREL, MD	DESIGNED: VRP 5/3/2019	JOB NO.: 2019MD01
			SHEET NO.: 2019MA01	DRAWN: VRP 5/3/2019	2019MD01.dwg 0
				REVIEWED: BRS 5/3/2019	B VARIES 5 OF 5

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Table G.6: Temporary Sediment Basin Design Data Sheet
(Refer to instructions on pages G.27 through G.29)

Computed by: DKM Date: 05/24/2019 Checked by: IKN Date: 05/24/2019
Project name: PATUXENT GREENS Basin #: 1
Location:

Design Volumes and Elevations

1. Total area draining to basin = 206 acres (ac)
2. Required total storage volume = 3600 ft³/ac x 206 ac drainage area = 741,600 ft³
3. Required wet storage volume = 1800 ft³/ac x 206 ac drainage area = 370,800 ft³
4. Required dry storage volume = 1800 ft³/ac x 206 ac drainage area = 370,800 ft³
5. Basin bottom elevation = 111 ft
6. Riser or weir crest (total storage) elevation = 115 ft
7. Provided total storage volume = 836,785 ft³
8. Wet storage (permanent pool/draw-down) elevation 114 ft
9. Provided wet storage volume = 409,383 ft³
10. Provided dry storage volume = 427,402 ft³
11. Basin cleanout elevation (located at ½ wet storage depth) = 112.5 ft
12. Distance from riser crest elevation to cleanout elevation = 1.5 ft

Surface Area Design

13. Q_{10} = 526 cfs (peak inflow from 10-yr, 24-hr storm event; attach computations)
14. Minimum basin surface area ≥ 0.0035 x Q_{10} = 1.84 ac ≤ 3.12 ac
required provided

Principal Spillway (Q_{PS}) Emergency Spillway to be designed to pass Q_{10}
(See Figure G.1)

15. Design Q_{PS} for barrel = cfs (min. 10% of Q_{10}).
16. Barrel head, H = ft; Barrel length, L = ft
17. Barrel dia. = in (min. 10 inch); Q_{PS} = TQ-6on Table G.7 or G.8) x (length correction factor) = cfs. Note: **Q_{PS} must equal or exceed Design Q_{PS}.**
18. Riser dia. = in; Riser height = ft; Riser head (h) = ft
19. Trash rack dia. = in; Trash rack height = in

Emergency Spillway (Q_{ES})
(See Figures G.3 and G.4)

20. Emergency spillway capacity Q_{ES} = Q_{10} - Q_{PS} = 526 - 0 = 526 cfs
21. Width, b = 37.5 ft; Hp = 1.40 ft
22. Exit channel slope 0.00 %
23. Emergency Spillway Crest = 115.00 ft
24. Design High Water = 116.83 ft
25. Settled top of embankment elevation = 118.00 ft

Table G.6: Temporary Sediment Basin Design Data Sheet (continued)

Anti-Seep Collar Design (If Required) Not Required
(See Figures G.5 and G.6)

26. y = ft; z = :1; pipe slope = %; L_a = ft
27. Use collars, ft in. square; projection = ft

Draw-Down Device
(See Table G.10 and Details G-2-6 and G-2-7)

28. Q_{DD} = 1.72 cfs 6x 10" Horiz. Draw-Down Devices Proposed
29. Calculated A_o = 0.44 ft²
30. Calculated d_o = 8.95 in
31. Maximum diameter from Table G.10 = 8 in
32. Design d_o = smaller of line 30 or line 31 = 8 in
33. Draw-down device pipe diameter = 10 in
34. Minimum A_o = total area of perforations = 4A_o = 1.75 ft²
35. Perforation diameter = 1 in
36. Minimum number of perforations = 321
37. Number of longitudinal rows = 5
38. Perforated pipe length = 33 ft
39. Actual A_o = (0.0055 ft²) x (line 37 = 0.5 ft) x (line 38) = 1.80 ft² (must be ≥ line 34)

Baffle Board Design
(See Detail G-2-4)

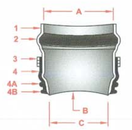
40. A = surface area at wet storage elevation = 143,886 ft²
41. Effective width, W_e = (A/2)' = 268 ft
42. Flow length from inflow point to outlet = 209 ft
43. If line 42 is less than W_e x 2, provide baffle boards to lengthen flow path
44. Effective flow length, L_e = L_1 + L_2 + L_3 = 651 ft (must be ≥ W_e x 2 = 536 ft)

IPS/SCH 40 GASKETED BELL GRAVITY APPLICATIONS

A. BELL END ACCEPTS PIPE WITH IPS/SCH 40 OR EQUIVALENT O.D. SPECIFICATION IN 4", 6", 8", 10" AND 12" SIZES

B. CURVATURE VARIES WITH MAINLINE DIAMETERS.

C. SPIGOT END PVC SDR 26, ASTM D3034 DIAMETERS: 4", 6", 8", 10", AND 12"



PART	PART NAME	MATERIALS
1	HUB ADAPTOR	SDR 26 HWS ASTM D3034
2	RUBBER GASKET	ASTM F477
3	SECURING CLAMP*	BAND SS #301 SCREW SS #305 HOUSING SS #301
4	RUBBER SLEEVE (AVAILABLE IN NITRILE AND EPDM BY SPECIAL ORDER)	ASTM F477
4A	UPPER SEGMENT**	
4B	LOWER SEGMENT***	

* OPTIONAL: #316 STAINLESS STEEL BAND, SCREW AND HOUSING
** DISTANCE BETWEEN 4A AND 4B WILL VARY BY PRODUCT TYPE
*** WILL NOT APPEAR ON RUBBER SLEEVES FOR CONCRETE OR CLAY PIPE

INSERTA TEE SIZE	HOLE DIAMETER
4" (100 mm)	4 ½" (114 mm)
6" (150 mm)	6 ½" (165 mm)
8" (200 mm)	8 ¾" (222 mm)
10" (250 mm)	10 ⅞" (276 mm)
12" (300 mm)	12 ⅞" (327 mm)

NOTE: RECOMMENDED METHOD OF CUTTING HOLE IS WITH HOLE SAW FOR PVC AND OTHER PLASTICS, AND DIAMOND BIT FOR CONCRETES, CLAY, FRP AND D.I. (SEE INSTALLATION INSTRUCTIONS. HOLE SAWS ARE AVAILABLE FOR PURCHASE OR RENT.)

INSERTA TEE | PO BOX 714 CORNELIUS, OR 97116 PH:(503) 357-2110 FAX:(503) 359-5417 SALES@INSERTATEE.COM

IPS/SCH 40 GASKETED BELL GRAVITY APPLICATION SPECIFICATIONS

SCALE: NTS
DATE: 9/12/2013
DRAWN BY: KLJ

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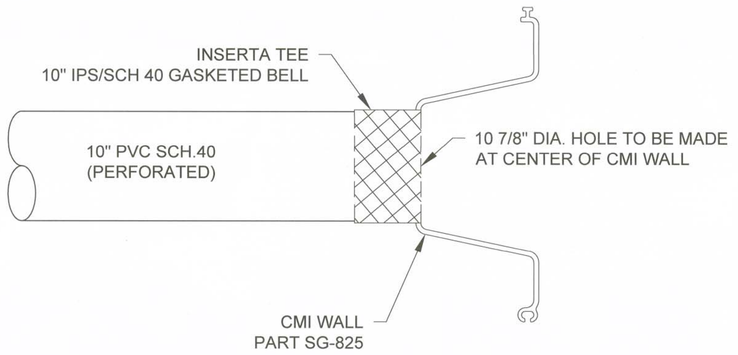


10" HORIZONTAL DRAW DOWN DEVICE
CONNECTION TO CMI WALL
SCALE: 1" = 0.5'

CALL "MISS UTILITY" AT 1-800-257-7777 48 Hours Before Start Of Construction

NOTE: THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF THE PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR ADHERING TO APPLICABLE PRINCE GEORGE'S COUNTY CODES AND REGULATIONS.

PROFESSIONAL CERTIFICATION

"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No.32113, Expiration Date:9/15/19."

STATE OF MARYLAND — PHILIP R. HUGHES III — 32113 — PROFESSIONAL ENGINEER

5/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

CS PATUXENT GREENS, LLC.
6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

RODGERS CONSULTING
1101 Mercantile Lane, Suite 280 Largo, Maryland 20774
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

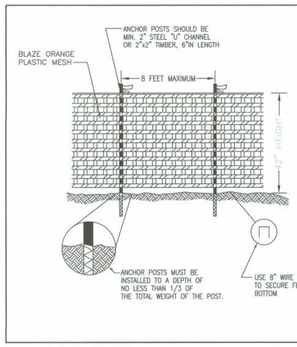
	BY	DATE
BASE DATA	CADD	FEB 2018
DESIGNED	DKM	APR 2019
DRAWN	DKM	APR 2019
REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR
BY DATE

Rough Grading, Demolition, Erosion And Sediment Control Plan
Sediment Basin-Pond #1 Data Sheet

SCALE: NTS
JOB No: 1262A
DATE: SEPT 2018
FSC-28
SHEET No: 28 OF 31

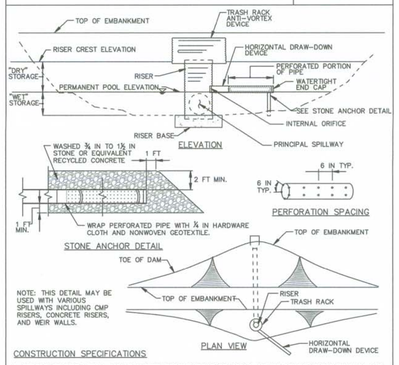


NOTES:
1. Device should be properly maintained during construction.

SAFETY FENCE DETAIL

DETAIL G-2-6 SEDIMENT BASIN SCHEMATIC HORIZONTAL DRAW-DOWN DEVICE

STANDARD SYMBOL: HDDD



CONSTRUCTION SPECIFICATIONS

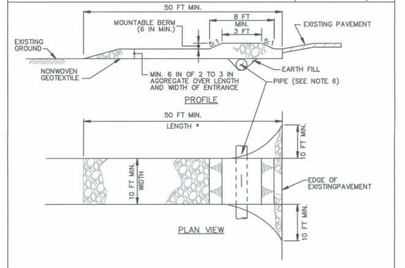
1. PERFORATE PIPE WITH 1 INCH DIAMETER PERFORATIONS SPACED 6 INCHES APART LONGITUDINALLY AND RADIALLY OR IN ACCORDANCE WITH APPROVED PLAN.
2. WRAP THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE FIRST WITH ¼ INCH GALVANIZED HARDWARE CLOTH, THEN WITH NONWOVEN GEOTEXTILE. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS. DO NOT WRAP WITH MORE THAN ONE LAYER OF GEOTEXTILE.
3. AS AN ALTERNATE TO STONE ANCHORING, SECURE DRAW–DOWN DEVICE WITH TWO 1 INCH STEEL ANGLES SET 3 FEET MINIMUM INTO THE GROUND ATTACHED TO DRAW–DOWN DEVICE BY A 1 INCH WIDE GALVANIZED STEEL STRAP OR 12 GAUGE OR HEAVIER WIRE.
4. REMOVE SEDIMENT WHEN IT ACCUMULATES TO CLEANOUT ELEVATION (50% OF THE WET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA IN A SUCH A MANNER THAT IT WILL NOT ERODE. MAINTAIN WATER TIGHT CONNECTIONS. REPLACE GEOTEXTILE AROUND PERFORATED RISER IF DRY STORAGE VOLUME DOES NOT DRAW DOWN WITHIN 10 HOURS.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

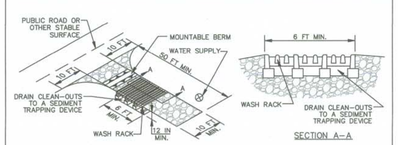
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE TO FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

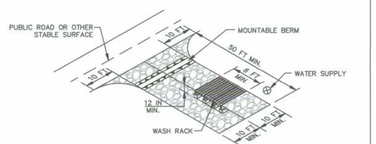
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-2 WASH RACK OPTION

STANDARD SYMBOL: WR



ISOMETRIC VIEW – WASH RACK IN SCE



ISOMETRIC VIEW– WASH RACK ALONG SCE

CONSTRUCTION SPECIFICATIONS

1. USE A WASH RACK DESIGNED AND CONSTRUCTED/MANUFACTURED FOR THE ANTICIPATED TRAFFIC LOADS. CONCRETE, STEEL, OR OTHER MATERIALS ARE ACCEPTABLE. PRE–FABRICATED UNITS SUCH AS CATTLE GUARDS ARE ACCEPTABLE. USE MINIMUM DIMENSION OF 6 FEET x 10 FEET. ORIENT DIRECTION OF RIBS AS SHOWN ON THE DETAIL.
2. INSTALL PRIOR TO, ALONG SIDE OF, OR AS PART OF THE SCE.
3. DIRECT WASH WATER TO AN APPROVED SEDIMENT TRAPPING DEVICE.
4. KEEP AREA UNDER WASH RACK FREE OF ACCUMULATED SEDIMENT. IF DAMAGED, REPAIR OR REPLACE WASH RACK.

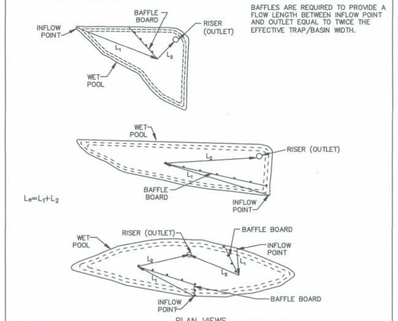
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL G-2-4 BAFFLE BOARDS *MODIFIED

STANDARD SYMBOL: BB

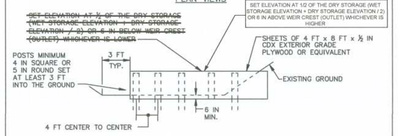
BAFFLES ARE REQUIRED TO PROVIDE A FLOW LENGTH BETWEEN INFLOW POINT AND OUTLET EQUAL TO TWICE THE EFFECTIVE TRAP/BASIN WIDTH.



PLAN VIEWS

~~SET ELEVATION AT ½ OF THE DRY STORAGE (WET STORAGE ELEVATION + DRY STORAGE ELEVATION / 2) OR 6 IN ABOVE WEIR CREST (OUTLET) WHICHEVER IS LOWER~~

SET ELEVATION AT 1/2 OF THE DRY STORAGE (WET STORAGE ELEVATION + DRY STORAGE ELEVATION / 2) OR 6 IN ABOVE WEIR CREST (OUTLET) WHICHEVER IS HIGHER



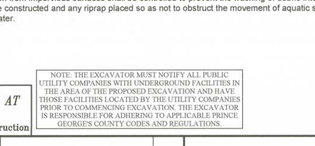
BAFFLE DETAIL

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



CONSTRUCTION SPECIFICATIONS

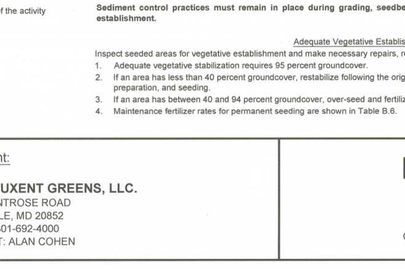
1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL F-1 REMOVABLE PUMPING STATION

STANDARD SYMBOL: RPS



CONSTRUCTION SPECIFICATIONS

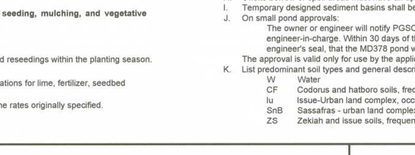
1. USE CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS 6 INCHES ON CENTER.
2. USE A MINIMUM 12 INCH DIAMETER INNER PIPE WITH AN OUTER PIPE A MINIMUM 6 INCHES LARGER IN DIAMETER. BOTTOM OF EACH PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.
3. WRAP EACH PIPE WITH ¼ INCH GALVANIZED HARDWARE CLOTH. ON INNER PIPE WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS, OVER THE HARDWARE CLOTH.
4. EXCAVATE 8 FEET X 8 FEET X 4 FEET DEEP PIT FOR PIPE PLACEMENT. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
5. SET TOP OF INNER AND OUTER PIPES MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION (OR RISER CREST ELEVATION WHEN DEWATERING A BASIN).
6. BACKFILL PIT AROUND THE OUTER PIPE WITH ¾ TO 1½ INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
7. DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
8. A REMOVABLE PUMPING STATION REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, PULL OUT INNER PIPE AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF



JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± 1/8 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID–SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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

1. No excess fill, construction material, or debris shall be stockpiled or stored in nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
2. Place materials in a location and manner which does not adversely impact surface of subsurface water flow into or out of nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
3. Do not use the excavated material as backfill if it contains waste metal products, unsightly debris, toxic material, or any other deleterious substance. If additional backfill is required, use clean material free of waste metal products, unsightly debris, toxic material, or any other deleterious substance.
4. Place heavy material on mats or suitably operate the equipment to prevent damage to nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
5. Repair and maintain and serviceable structure or fill so there is no permanent loss of nontidal wetlands, nontidal wetland buffers, or waterways, or permanent modification of the 100-year floodplain in excess of that lost under the originally authorized structure of fill.
6. Rectify and nontidal wetlands, wetland buffers, waterways, or 100-year floodplain temporarily impacted by any construction.
7. All stabilization in the nontidal wetland and nontidal wetland buffer shall consist of the following species: Annual Ryegrass (Lolium multiflorum), Millet (Setaria italica), Barley (Hordeum sp.), Oats (Unica sp.), and/or Rye (Secale cereale). These species will allow for the stabilization of the site while also allowing for the voluntary revegitation of more wetland species. Other non-persistant vegetation may be acceptable, but must be approved by the Nontidal Wetlands and Waterways Division. Kentucky 31 fescue shall not be utilized in wetland or buffer areas. The area should be seeded and mulched to reduce erosion after construction activities have been completed.
8. After installation has been completed, make post-construction grades and elevations the same as original grades and elevations in temporarily impacted areas.
9. To protect aquatic species, in-stream work is prohibited as determined by the classification of the stream:
   Use I waters: In-stream work is prohibited as determined by the classification of the stream.
   Use III waters: In-stream work shall not be conducted during the period October 1 through April 30, inclusive, during any year.
   Use IV waters: in-stream work shall not be conducted during the period March 1 through May 31, inclusive, during any year.
10. Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
11. Culverts shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species, unless the purpose of the activity is to impound water.

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Definition

Using vegetation as cover to protect exposed soil from erosion.

Purpose

To promote the establishment of vegetation on exposed soil.

Conditions Where Practice Applies

On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

Effects on Water Quality and Quantity

Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment

Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.

1. Adequate vegetative stabilization requires 95 percent groundcover.
2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

EROSION AND SEDIMENT CONTROL GENERAL NOTES

A. The developer is responsible for the acquisition of all required easement, right and/or rights-of-way pursuant to the discharge from the erosion and sediment control practices, stormwater management practices, and the discharge of stormwater onto or across and grading or other work to be performed on adjacent or downstream properties affected by this plan.
B. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed withing: a) three (3) calendar days as the surface of all perimeter controls , dikes, swales, ditches, perimeter slopes, and all slopes greater than three horizontal to one vertical (3:1) and b) seven (7) calendar days for all other disturbed or graded areas on the project site. THe in-place sediment control measures will be maintained on a continuing basis until the site is permanently stabilized and all permit requirements are met.
C. The owner/developer or representative shall request that the inspection authority approve work completed in accordance with the approved erosion and sediment control plan, the grading or building permit, and shall obtain written inspection approvals by the inspector at the following stages in the development of the site:
   1. Prior to the start of earth disturbance;
   2. Upon completion of installation of tree protection devices, followed by the installation of perimeter erosion and sediment controls, prior to proceeding with any other earth disturbance or grading. other building or grading inspection approvals may not be authorized until initial approval by the Inspector is made;
   3. Upon completion of stripping, the stockpiling of topsoil, the construction of temporary sediment and erosion control facilities, disposal of all waste material, and preparation of the ground;
   4. Upon completion of rough grading, but prior to placing topsoil, permanent drainage or other site development improvements and ground covers;
   5. Prior to the start of another phase of construction or opening of another grading unit;
   6. Prior to the removal of sediment control practices; and
   7. Upon completion of final grading, reforesting, permanent drainage and erosion control facilities including established ground covers and planting, and all other work of the building permits. Reference 29 c. in all sequence of construction.
D. Approval shall be requested upon final stabilization of all site with disturbed areas in excess of two (2) acres before removal of controls.
E. All permits under an erosion and sediment control plan must and can only be issued to the owner/developer that signs the certification on the plan. The owner/developer that signs the certification on an erosion and sediment control plan is the responsible party regardless of any sale of the property of work of subcontractors. Erosion and sediment control plans are approved for one owner/developer only.
F. PGSCD approval of an erosion and sediment control plan, pursuant to meeting local permit requirements for grading, building, or street permits, etc. is valid only when the work to be performed under the permit is the same as (no more/no less than) that contained in the plan as approved by the PGSCD.
G. Any changes or modifications to an approved erosion and sediment control plan, not approved by the PGSCD, shall invalidate the plan approval.
H. Offsite borrow or spoil areas must have an approved erosion and sediment control plan.
I. Temporary designed sediment basins shall be removed within 36 months after beginning of construction of the basin.
J. On small pond approvals:
   The owner or engineer will notify PGSCD promptly in writing when construction is begun and when construction is completed. The project shall be constructed under the supervision of the engineer-in-charge. Within 30 days of the completion of construction, the engineer-in-charge that designed the structure shall provide PGSCD with an as-built plan and shall certify, with the engineer's seal, that the MD378 pond was constructed as shown on the as-built plans.
   The approval is valid only for use by the applicant and may not be transferred to another unless written approval for such transfer is obtained from PGSCD.
K. List predominant soil types and general description per PGSCD soil survey: (See Sheet 1)
   W Water
   CF Codorus and hatboro soils, frequently flooded
   Iu Issue-Urban land complex, occasionally flooded
   SnB Sassafras - urban land complex, 0 to 5 percent slopes
   ZS Zekiah and issue soils, frequently flooded

CALL "MISS UTILITY" AT 1-800-257-7777 48 Hours Before Start Of Construction

NOTE: THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF THE PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR ADHERING TO APPLICABLE PRINCE GEORGE'S COUNTY CODES AND REGULATIONS.

PROFESSIONAL CERTIFICATION

"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No.32113, Expiration Date:9/15/19."

STATE OF MARYLAND — ROBERT P. HUGHES III — 32113 — REGISTERED PROFESSIONAL ENGINEER

3/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

CS PATUXENT GREENS, LLC.
6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

RODGERS CONSULTING
1101 Mercantile Lane, Suite 280 Largo, Maryland 20774
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

	BY	DATE
BASE DATA	CADD	FEB 2018
DESIGNED	DKM	APR 2019
DRAWN	DKM	APR 2019
REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR _____ ☐
BY_____ DATE _____

Rough Grading, Demolition, Erosion And Sediment Control Plan Details

SCALE: NTS
JOB No. 1262A
DATE: SEPT 2018
FSC-29
SHEET No. 29 OF 31

B-3 STANDARDS AND SPECIFICATIONS FOR LAND GRADING

Definition

Reshaping the existing land surface to provide suitable topography for building facilities and other site improvements.

Purpose

To provide erosion control and vegetative establishment for extreme changes in grade.

Conditions Where Practice Applies

Earth disturbances or extreme grade modifications on steep or long slopes.

Design Criteria

The grading plan should be based on the incorporation of building designs and street layouts that fit and utilize existing topography and desirable natural surroundings to avoid extreme grade modifications. Information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slope stability, adjacent properties, drainage patterns, measures for water removal, and vegetative treatment, etc.

Many jurisdictions have regulations and design procedures already established for land grading that must be followed. The plan must show existing and proposed contours for the area(s) to be graded including practices for erosion control, slope stabilization, and safe conveyance of runoff (e.g., waterways, lined channels, reverse benches, grade stabilization structures). The grading/construction plans are to include the phasing of these practices and consideration of the following:

1. Provisions to safely convey surface runoff to storm drains, protected outlets or stable water courses to ensure that surface runoff will not damage slopes or other graded areas.

2. Cut and fill slopes, stabilized with grasses, no steeper than 2:l. (Where the slope is to be mowed, the slope should be no steeper than 3:l, but 4:l is preferred because of safety factors related to mowing steep slopes.) Slopes steeper than 2:l require special design and stabilization considerations to be shown on the plans.

3. Benching per Detail B-3-1 whenever the vertical interval (height) of any 2:l slope exceeds 20 feet; for 3:l slopes, when it exceeds 30 feet; and for 4:l slopes, when it exceeds 40 feet. Locate benches to divide the slope face as equally as possible and to convey the water to a stable outlet. Soils, seeps, rock outcrops, etc. are to be taken into consideration when designing benches.

   a. Provide benches with a minimum width of six feet for ease of maintenance.

   b. Design benches with a reverse slope of 6:l or flatter to the toe of the upper slope and with a minimum of one foot in depth. Grade the longitudinal slope of the bench between 2 percent and 3 percent, unless accompanied by appropriate design and computations.

   c. The maximum allowable flow length within a bench is 800 feet unless accompanied by appropriate design and computations.

4. Diversion of surface water from the face of all cut and fill slopes using earth dikes or swales. Convey surface water down slope using a designed structure, and:

   a. Protect the face of all graded slopes from surface runoff until they are stabilized.

   b. Do not subject the slope's face to any concentrated flow of surface water such as from natural drainage ways, graded swales, downspouts, etc.

   c. Protect the face of the slope by special erosion control materials to include, but not be limited to, approved vegetative stabilization practices, riprap or other approved stabilization methods.

5. Serrated slope as shown in Detail B-3-2. The steepest allowable slope for ripable rock is 1.5:1. For non rock surfaces, the slopes are to be 2:1 or flatter. These steps will weather and act to hold moisture, lime, fertilizer and seed thus producing a much quicker and longer lived vegetative cover and better slope stabilization.

6. Subsurface drainage provisions. Provide subsurface drainage where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.

7. Proximity to adjacent property. Slopes must not be created close to property lines without adequate protection against sedimentation, erosion, slippage, settlement, subsidence, or other related damages.

8. Quality of fill material. Fill material must be free of brush, rubbish, logs, stumps, building debris, and other objectionable material. Do not place frozen materials in the fill nor place the fill material on a frozen foundation.

9. Stabilization. Stabilize all disturbed areas structurally or vegetatively in compliance with Section B- 4 Standards and Specifications for Stabilization Practices.

Maintenance

The line, grade, and cross section of benching and serrated slopes must be maintained. Benches and serrated slopes must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

Definition

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.
9. The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided with Section B-3 Land Grading.

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile area exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

A. Soil Preparation
   1. Temporary Stabilization
      a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
      b. Apply fertilizer and lime as prescribed on the plans.
      c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
   2. Permanent Stabilization
      a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
         i. Soil pH between 6.0 and 7.0.
         ii. Soluble salts less than 500 parts per million (ppm).
         iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
         iv. Soil contains 1.5 percent minimum organic matter by weight.
         v. Soil contains sufficient pore space to permit adequate root penetration.
      b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
      c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
      d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
      e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling
   1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
   2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
   3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
      a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
      b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
      c. The original soil to be vegetated contains material toxic to plant growth.
      d. The soil is so acidic that treatment with limestone is not feasible.
   4. Areas having slopes steeper than 2:1 require special consideration and design.
   5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
      a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
      b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
      c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
   6. Topsoil Application
      a. Erosion and sediment control practices must be maintained when applying topsoil.
      b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
      c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)
   1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
   2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
   3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
   4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
   5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Seeding Criteria

1. Specifications
   a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
   b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
   c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
   d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

2. Application
   a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
      i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
   b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
      i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
   c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
      i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorous), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
      ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
      iii. Mix seed and fertilizer on site and seed immediately and without interruption.
      iv. When hydroseeding do not incorporate seed into the soil.

Mulching Criteria

1. Mulch Materials (in order of preference)
   a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
   b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
      i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
      ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
      iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
      iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic.
      v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
2. Application
   a. Apply mulch to all seeded areas immediately after seeding.
   b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
   c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
3. Anchoring
   a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
      i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
      ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
      iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
      iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 7a Seed Mixture (from Table B.1): See species below				Fertilizer Rate (10-20-20)	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	
	Annual Ryegrass (*Lolium perenne ssp. multiflorum*)	40	Aug 15 - Nov 30	0.5"	436 lb/ac (10 lb /1000 sf)	2 tons/ac (90 lb /1000 sf)
	Annual Ryegrass (*Lolium perenne ssp. multiflorum*)	40	Feb 15 - Apr 30	0.5"		
	Pearl Millet	20	May - Aug 14	0.5"		

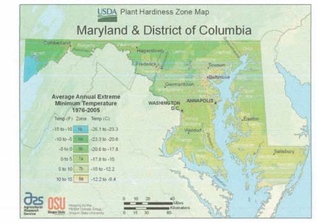


Figure B.3 USDA Plant Hardiness Zone Map

Table B.1: Temporary Seeding for Site Stabilization

Plant Species	Seeding Rate [1]		Seeding Depth [2] (inches)	Recommended Seeding Dates By Plant Hardiness Zone [3]		
	lb/ac	lb/1000 ft²		5b and 6a	6b	7a and 7b
Cool Season Grasses						
Annual Ryegrass (*Lolium perenne ssp. Multiflorium*)	40	1.0	0.5	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30
Barley (*Hordeum vulgare*)	96	2.2	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30
Oats (*Avena sativa*)	72	1.7	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30
Wheat (*Triticum aestivum*)	120	2.8	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30
Cereal Rye (*Secale cereale*)	112	2.8	1.0	Mar 15 to May 31; Aug 1 to Oct 31	Mar 1 to May 15; Aug 1 to Nov 15	Feb 15 to Apr 30; Aug 15 to Nov 30
Warm Season Grasses						
Foxtail Millet (*Setaria italica*)	30	0.7	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14
Pearl Millet (*Pennisetum glaucum*)	20	0.5	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14

NOTES:
1) Seeding rates for the warm-season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent seed germination and purity, as tested. Adjustments are usually not needed for the cool-season grasses.
   Seeding rates listed above are for the temporary seedings, when planted alone. When planted as a nurse crop with permanent seed mixes, use ½ of the seeding rate listed above for barley, oats, and wheat. For smaller-seeded grasses (annual ryegrass, pearl millet, foxtail millet), do not exceed more than 5% (by weight) of the overall permanent seeding mix. Cereal rye generally should not be used as a nurse crop, unless planting will occur in very late fall beyond the seeding dates for other temporary seedings. Cereal rye has allelopathic properties that inhibit the germination and growth of other plants. If it must be used as a nurse crop, seed at ½ of the rate listed above.
   Oats are the recommended nurse crop for warm season grasses.
2) For sandy soils, plant seeds at twice the depth listed above.
3) The planting dates listed are averages for each Zone and may require adjustment to reflect local conditions, especially near the boundaries of the zone.

CALL "MISS UTILITY" AT 1-800-257-7777
48 Hours Before Start Of Construction

NOTE: THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF THE PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR ADHERING TO APPLICABLE PRINCE GEORGE'S COUNTY CODES AND REGULATIONS.

PROFESSIONAL CERTIFICATION

"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No.32113, Expiration Date:9/15/19."

STATE OF MARYLAND — PHILIP R. HUGHES III — 32113 — PROFESSIONAL ENGINEER

5/31/19

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

CS PATUXENT GREENS, LLC.
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PATUXENT GREENS

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ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

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	BY	DATE
BASE DATA	CADD	FEB 2018
DESIGNED	DKM	APR 2019
DRAWN	DKM	APR 2019
REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR _____ ☐
BY_____ DATE: ____

Rough Grading, Demolition, Erosion And Sediment Control Plan Details

SCALE: NTS
JOB No. 1262A
DATE: SEPT 2018
FSC-30
SHEET No. 30 OF 31

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

Definition

To stabilize disturbed soils with permanent vegetation.

Purpose

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for 6 months or more.

Criteria

A. Seed Mixtures

1. General Use
   a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
   b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
   c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
   d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 ½ pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary .
2. Turfgrass Mixtures
   a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
   b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
      i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
      ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
      iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
      iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1½ to 3 pounds per 1000 square feet.

      Note: Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

      Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line
   c. Ideal Times of Seeding for Turf Grass Mixtures

      Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)

      Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)

      Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)
   d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1½ inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
   e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (½ to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Hardness Zone (from Figure B.3): _____ Seed Mixture (from Table B.3): _____					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P2O5	K2O	
	Tall Fescue (*Lolium arundinaceum*)	60	Aug 15 - Nov 30	1/4 - 1/2 in	45 pounds per acre (1.0 lb /1000 sf)	90 lb/ac (2 lb /1000 sf)	90 lb/ac (2 lb /1000 sf)	2 tons/ac (90 lb /1000 sf)
	Kentucky Bluegrass (*Poa pratensis*)	40	Aug 15 - Nov 30	1/4 - 1/2 in				
	Perennial Ryegrass (*Lolium perenne*)	20	Aug 15 - Nov 30	1/4 - 1/2 in				

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

1. General Specifications
   a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
   b. Sod must be machine cut at a uniform soil thickness of ¾ inch, plus or minus ¼ inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
   c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
   d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
   e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.

2. Sod Installation
   a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
   b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
   c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
   d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

3. Sod Maintenance
   a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
   b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
   c. Do not mow until the sod is firmly rooted. No more than ½ of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

Table B.2: Recommended Permanent Seeding Mixtures by Site Condition or Purpose

Site Condition or Purpose of the Planting	Recommended Mix (See Table B.3)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Steep Slopes, Roadsides	R	R	R	A	R	A				A	A	R	R
Sand and Gravel Pits, Sanitary Landfills	R	R	R	A	R	A				A	A	R	
Salt Damaged Areas	A												R
Mine Spoil, Dredged Material, and Spoil Banks	A		R	A	A								
Utility Rights-of-Way	R	R	R	R	R	R	A			R	R	R	
Dikes and Dams	A		R	A	A								
Berms and Low Embankments (not on Ponds)	R	R	R	R	R	R	A	A		R	R	R	A
Pond and Channel Banks, Streambanks	R	R	R	R	A	A	A			A	A		
Grassed Waterways, Diversions, Terraces, Spillways	A				A	R	R	A	R		R		A
Bottom of Drainage Channels, Swales, Detention Basins				A		R	A			A	R		R
Field Borders, Filter Strips, Contour Buffer Strips	R	R	R	A	A	R	A	R	R	R	R	R	A
Wastewater Treatment Strips and Areas								R	A	A			
Heavy Use Areas (Grass Loafing Paddocks for Livestock)								R					
Athletic Fields, Residential and Commercial Lawns							A	R	R		R		
Recreation Areas							R	R	R		R		

R = Recommended mix for this site condition or purpose.
A = Alternative mix, depending on site conditions.

Table B.3: Selected List of Permanent Herbaceous Seeding Mixtures

Mix	Recommend Cultivar	Seeding Rate [1] lb/ac	Seeding Rate [1] lb/1000 ft²	Soil Drainage Class[2]	Max Height (inch)	Maint. Level[3]	Remarks
Warm-Season/Cool-Season Grass Mixes							
1. Select ONE Warm Season Grass:							All species are native to Maryland
Switch Grass (*Panicum virgatum*)	Blackwell, Carthage, Cave-in-Rock, or Shelter	10	0.23				Plant this mix with a regular glass drill.
OR							
Coastal Panic Grass (*Panicum amarum var. amarulum*	Atlantic	10	0.23				Coastal panicgrass is best adapted to Zones 7a and 7b.
AND ADD:							
Creeping Red Fescue (*Festuca rubra var. rubra*)	Dawson, Pennlawn, Flyer, Fortress, Ruby, or Salem	15	0.34	E-P	4-7	C-D	Creeping red fescue is a cool-season grass that will provide erosion protection while the warm season grass (switchgrass or coastal panicgrass) is becoming established.
PLUS ONE OF THE FOLLOWING LEGUMES:							
Patridge Pea (*Chamaecrista fasciculate*)	Common	4	0.09				Switchgrass, coastal panicgrass, the 'Dawson' variety of creeping red fescue, and patridge pea are moderately salt-tolerant. Do not use bush clover or wild indigo on wet sites.
Bush Clover (*Lespedeza capitata*)	Common	2	0.05				
Wild Indigo (*Baptisiatinctoria*)	Common	2	0.05				
2. Blue Bluestem (*Andropogon gerardi*)	Niagra or Rountree	6	0.14	E-MW	6-8	C-D	All species are native to Maryland
Indiangrass (*Sorghastrum nutans*)	Rumsey	6	0.14				The indiangrass and bluestems have fluffy seeds. Plant with a specialized native seed drill.
Little Bluestem (*Schizachyrium scoparium*)	Aldous or Blaze	4	0.09				Creeping red fescue is a cool-season grass that will provide erosion protection while the warm season grasses are becoming established.
Creeping Red Fescue (Festuca rubra var. rubra)	Dawson, Pennlawn, Flyer, Fortress, Ruby, or Salem	15	0.34				
PLUS ONE OF THE FOLLOWING LEGUMES:							
Patridge Pea (*Chamaecrista fasciculate*)	Common	4	0.09				
Bush Clover (*Lespedeza capitata*)	Common	2	0.05				
Wild Indigo (*Baptisiatinctoria*)	Common	2	0.05				
Showy Tick-Trefoil (*Desmodium canadense*)	Common	1	0.02				

Table B.3: Selected List of Permanent Herbaceous Seeding Mixtures (Continued)

Mix	Recommend Cultivar	Seeding Rate [1] lb/ac	Seeding Rate [1] lb/1000 ft²	Soil Drainage Class[2]	Max Height (inch)	Maint. Level[3]	Remarks
Warm-Season/Cool-Season Grass Mixes							
3. SELECT THREE GRASSES:							Excellent for excessively droughty, low pH soils
Deertongue (*Diachanthelium clandestinum*)	Tioga	20	0.46	E-MW	4-6	C-D	Sheep fescue, Canada wild rye, and redtop are cool-season grasses that will provide erosion protection while the warm-season grass (deertongue) is becoming established.
Sheep Fescue (*Festuca ovina*)	Common or Bighorn	20	0.46				
OR							
Canada Wild Rye (*Elymus canadensis*)	Common	3	0.07				
Redtop (*Argostis gigantean*)	Streaker	1	0.02				
PLUS ONE OF THE FOLLOWING LEGUMES:							Common lespedeza ('Kobe' variety) is more tolerant of low acidity and high manganese concentrations than Korean lespedeza. These lespedezas are reseeding annuals.
Common Lespedeza (*Lespedeza striata*)	Kobe	10	0.23				
Korean Lespedeza (*Lespedeza stipulacea*)	Climax or Rowan	10	0.23				
4. Deertongue (*Dichanthelium clandestinum*)	Tioga	15	0.34	W-P	2-3	C-D	Use Virginia wild rye on moist, shady sites.
Creeping Red Fescue (Festuca rubra var. rubra)	Dawson, Pennlawn, Flyer, Fortress, Ruby, or Salem	20	0.46				
Virginia Wild Rye (*Elymus virgincus*)	Common	5	0.11				
OR							Use Canada wild rye on droughty sites.
Canada Wild Rye (Elymus canadensis)	Common	5	0.11				

Table B.3: Selected List of Permanent Herbaceous Seeding Mixtures (Continued)

Mix	Recommend Cultivar	Seeding Rate [1] lb/ac	Seeding Rate [1] lb/1000 ft²	Soil Drainage Class[2]	Max Height (inch)	Maint. Level[3]	Remarks
Cool-Season Grass Mixes							
5. SELECT TWO GRASSES:				E-SP	2-3	B-D	Use creeping red fescue in heavy shade and on moiste sites.
Creeping Red Fescue (Festuca rubra var. rubra)	Tioga	20	0.46				
OR							
Hard Fescue (*Festuca trachyphylla*)	Common	20	0.46				
Perennial Ryegrass (*Lolium perenne*)	Streaker	10	0.23				Perennial ryegrass and redtop will establish more rapidly than either fescue. Redtop tolerates wet sites better than ryegrass.
OR							
Redtop (*Argostis gigantean*)	Kobe	1	0.02				
AND ADD THE FOLLOWING LEGUME							Flatpea will suppress woody vegetation. It should be planted in the spring, or as a dormant seeding in late fall or winter. It must be incorporated into the soil or covered with mulch. It may not be winter-hardy if planted late summer-fall. Caution: Flatpea can spread aggressively and can be toxic to livestock
Flatpea (*Lathyrus sylvestris*)	Lathco	15	0.34				
6. Tall Fescue (*Lolium arundinaceum*)	Recommended MD turf-types[4]	40	0.93	W-P	2-3	C-D	Birdsfoot trefoil is suitable for use only in Zones 5b and 6a.
Perennial Ryegrass (*Lolium perenne*)	Blazer (II), Pennfine	25	0.57				
PLUS ONE OF THE FOLLOWING LEGUMES:							
Birdsfoot Trefoil (*Lotus cornicultatus*)	Empire, Viking, Norcen, Leo	8	0.18				
White Clover (*Trifolium repens*)	Common	5	0.11				
7. Creeping Red Fescue (*Festuca rubra var. rubra*)	Dawson, Pennlawn, Flyer, Fortress, Ruby, or Salem	60	1.38	W-MW	1-2	C-D	This mix has good shade tolerance.
Kentucky Bluegrass (*Poa pratensis*)	Recommended MD turf-types[4]	15	0.34				

Table B.3: Selected List of Permanent Herbaceous Seeding Mixtures (Continued)

Mix	Recommend Cultivar	Seeding Rate [1] lb/ac	Seeding Rate [1] lb/1000 ft²	Soil Drainage Class[2]	Max Height (inch)	Maint. Level[3]	Remarks
8. Tall Fescue (*Lolium arundinaceum*)	Recommended MD turf-types[4]	100	2.3	E-SP	2-3	A-D	Tall fescue provides a dense turf if frequently mowed, but tends to be clumpy if mowed only occasionally. For best results, recommend using a blend of 3 cultivars. Use low-endophyte cultivars in areas where livestock may graze.
9. SELECT ONE SPECIES OF FESCUE:				W-SP	2-3	A-B	Good for highly managed athletic fields. Tall fescue is more suitable for compacted, high use areas and on moist sites. Hard fescue produces a finer-textured turf with more shade tolerance. Use tall fescue instead of high fescue for wastewater treatment strips and areas. For best results, recommend using a blend of 3 cultivars each for tall fescue and Kentucky bluegrass.
Tall Fescue (*Lolium arundinaceum*)	Recommended MD turf-types[4]	60	1.38				
OR							
Hard Fescue (*Festuca trachyphylla*)	Common	40	0.46				
AND ADD:							
Kentucky Bluegrass (Poa pratensis)	Recommended MD turf-types[4]	40	0.92				
Perennial Ryegrass (Lolium perenne)	Blazer (II), Pennfine	20	0.46				
10. Orchardgrass (*Dactylis glomerata*)	Any	25	0.57	W-SP	2-3	C-D	Low maintenance mix that is easy to establish
Creeping Red Fescue (*Festuca rubra var. rubra*)	Dawson, Pennlawn, Flyer, Fortress, Ruby, or Salem	10	0.23				
Redtop (*Argostis gigantean*)	Streaker	1	0.02				
Alsike Clover (*Trifolium hybridum*)	Streaker	8	0.18				Alsike clover can be toxic to horses
White Clover (*Trifolium repens*)	Common	5	0.11				Omit the clovers if using this mix for wastewater treatment strips and areas.
11. Creeping Red Fescue (*Festuca rubra var. rubra*)	Dawson, Pennlawn, Flyer, Fortress, Ruby, or Salem	30	0.69	E-MW	2-3	B-D	Homeowner mix of tall fescues and wildflowers for low maintenance conditions. Once well-established by broadcasting and cultipacking on a prepared seedbed. Drilling can also be used, but care must be taken so that seeds are not drilled too deep. Hydroseeding is not recommended for this mix if wildflowers are used. (They have very small seeds.)
Chewing Fescue (*Festuca rubra ssp. Commutata*)	Common	30	0.69				
Kentucky Bluegrass (Poa pratensis)	Recommended MD turf-types[4]	20	0.46				
OPTIONAL ADDITION							
Rough Bluegrass (*Poa trivialis*)	Common	15	0.34				Add rough bluegrass in moist, shady conditions.
12. Creeping Red Fescue (Festuca rubra var. rubra)	Dawson, Pennlawn, Flyer, Fortress, Ruby, or Salem	25	0.57	E-MW	2-3	C-D	
Hard Fescue (*Festuca trachyphylla*)	Atilla or Aurora	25	0.57				
Sheep Fescue (*Fetuca ovina*)	Common or Bighorn	20	0.57				
PLUS WILDFLOWER MIX:							
Black-eyed Susan (*Rudbeckia hirta*)	Common	2	0.05				
Lance-leaved Coreopsis (*Coreopsis lanceolata*)	Common	2	0.05				
Purple Coneflower (*Echinacea purpurea*)	Common	8	0.18				
Patridge Pea (*Chamaecrista fasiculate*)	Common	5	0.11				
OR ADD CLOVER MIX:							
White Clover (*Trifolium repens*)	Common	3	0.07				
Red Clover (*Trifolium pretense*)	Any	3	0.07				
13. Alkali Saltgrass (*Puccinellia distans*)	Fults or Salty	20	0.46	W-P	2-3	B-D	This is the recommended mix for saline sites. Saltgrass will persist only under saline conditions. For the best results, use only the 'Dawson' variety of creeping red fescue. It is a salt-tolerant variety. Add bentgrass for wetter conditions.
Creeping Red Fescue (*Festuca rubra var. rubra*)	Dawson	15	0.34				
Fowl Meadowgrass (*Poa palustris*)	Common	2	0.05				
OPTIONAL ADDITION							
Creeping Bentgrass (*Argostis stolonifera*)	Seaside	2	0.05				

NOTES:
1) Seeding Rates: Seeding rates for the warm-season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates must be adjusted to reflect percent seed germination and purity, as tested. Adjustments are usually not needed for the cool-season grasses, legumes, or wildflowers. All legume seeds must be inoculated before planting with the appropriate Rhizobium bacteria. When feasible, hard-seeded legumes should be scarified to improve germination.
2) Soil Drainage Class (refer to the county soil survey for further information):
   E- Excessively Drained; W- Well Drained; MW- Moderately Well Drained; SP- Somewhat Poorly Drained; P- Poorly Drained
3) Maintenance Level:
   A- Intensive mowing (every 2-4 days), fertilization, lime, insect and weed control, and watering (examples: high maintenance lawns and athletic fields).
   B- Frequent mowing (every 4-7 days), occasional fertilization, lime, pest control, and watering (examples: residential, school, and commercial lawns).
   C- Periodic mowing (every 7-14 days), occasional fertilization and lime (examples: residential lawns, parks).
   D- Infrequent or now mowing, fertilization, or lime after the first year of establishment (examples: wildlife areas, roadsides, steep banks).
4) Turf-type cultivars of tall fescue and Kentucky bluegrass must be selected based on recommendations of the University of Maryland Cooperative Extension Service, Agronomy Mimeo 77. Recommendations are as follows:
   A. Kentucky Bluegrass -
      1. The following Kentucky bluegrass cultivars are suitable for general use, and are also noted for shade tolerance:

American	Coventry	Quantum Leap
Ascot	Liberator	Showcase
Brilliant	Moonlight	SR 2000
Champagne	Nuglade	Unique
Compact	Princeton 105	

      2. The following Kentucky bluegrass cultivars are suitable for general use, and are also noted for tolerance of low maintenance conditions:

Barirus	Haga	Monopoly
Caliber	Livingston	Washington
Eagleton	Merit	
Freedom	Midnight	

   B. Tall Fescue - The following turf-type cultivars are suitable for general use:

Alamo E	Debutante	Micro DD	Scorpio
Apache II	Dominion	Millennium	Shenandoah
Avanti*	Duke	Olympic Gold	Shenandoah II
Axiom	Duster*	Oncue	Southern Choice*
Bandana	Eldorado*	Pixie	SR 8200
Barlexus	Empress*	Pixie E+	SR 8300
Barrington	Falcon II*	Plantation	Stetson
Bonanza*	Finelawn Petite*	Pyramid	Tarheel
Bonanza II	Genesis	Rebel 2000	TF6
Bulldawg	Good-En	Rebel 3D*	Titan 2
Chapel Hill	Grande	Rebel III*	Tomahawk*
Chieftain II*	Guardian	Rebel Jr.	Trailblazer II*
Chinook	Heritage	Rebel Sentry	Twilight II*
Cochise II	Houndog 5	Red Coat	Virtue*
Comstock	Jaguar III	Regiment*	Watchdog
Coyote	Lancer	Rembrandt	Wolfpack
Crossfire*	Leprechaun	Renegade	WPEZE
Crossfire II	Masterpiece	Reserve	Wyatt

Tall fescue cultivar names that are followed by an asterisk (*) have low endophyte levels (20% or lower based on seed analysis). To avoid livestock health problems due to to endophyte toxicity, use low-endophyte cultivars for critical area plantings where livestock may be allowed to graze (e.g., heavy use grass loafing paddocks). Please note that endophyte level in plantings can vary between varieties, between fields of the same variety, and with the time of the year. For areas where livestock will not have access, cultivars with higher endophyte levels are desirable because they tend to be more drought tolerant and more resistant to disease and insect damage.

Table B.4: Quality of Seed

Species	Minimum Seed Purity (%)	Minimum Seed Germination (%)	Species	Minimum Seed Purity (%)	Minimum Seed Germination (%)
Cool-Season Grasses			**Warm-Season Grass**		
Barley	98	85	Bluestem, Big	60	60
Bentgrass, Creeping	95	85	Bluestem, Little	55	60
Bluegrass, Canada	90	80	Deertongue	98	75
Bluegrass, Kentucky	97	80	Indiangrass	60	60
Bluegrass, Rough	95	80	Millet, Foxtail or Pearl	98	80
Fescue, Chewings	97	85	Panicgrass, Coastal	95	70
Fescue, Creeping Red	97	85	Switchgrass	95	75
Fescue, Hard	97	85	**Legumes/Forbs**		
Fescue, Sheep	97	85	Clover, Alsike	99	85
Fescue, Tall	97	85	Clover, Bush	--	--
Meadowgrass, Fowl	--	--	Clover, Red	99	85
Oats	98	85	Clover, White	98	90
Orchardgrass	90	80	Flatpea	98	75
Redtop	92	80	Indigo, Wild	--	--
Rye, Cereal	98	85	Lespedeza, Common	98	80
Ryegrass, Annual or Perennial	97	85	Lespedza, Korean	98	80
Saltgrass, Alkali	85	80	Pea, Patridge	98	70
Wheat	98	85	Tick-Trefoil, Showy	--	--
Wild Rye, Canada	85	70	Trefoil, Birdsfoot	98	85
Wild Rye, Virginia	--	--	Wildflowers	--	--

NOTE: All seed must comply with the Maryland State Seed Law. Seed must be free of prohibited or restricted noxious weeds, as currently listed by the Maryland Department of Agriculture, Turf and Seed Selection.

Table B.5: Recommended Planting Dates for Permanent Cover in Maryland[1]

Type of Plant Material	Plant Hardness zones		
	5b and 6a	6b	7a and 7b
Seeds - Cool-Season Grasses (includes mixes with forbs and/or legumes)	Mar 15 to May 31 Aug 1 to Sep 30	Mar 1 to May 15 Aug 1 to Oct 15	Feb 15 to Apr 30 Aug 15 to Oct 31 Nov 1 to Nov 30^
Seeds - Warm-Seaseon/Cool-Season Grass Mixes (includes mixes with forbs and/or legumes)	Mar 15 to May 31^^ Jun 1 to Jun 15*	Mar 1 to May 15^^ May 16 to Jun 15*	Mar 1 to May 30^^ May 1 to May 31*
Sod - Cool-Season	Mar 15 to May 31 Jun 1 to Aug 31* Sep 1 to Nov 15†	Mar 1 to May 15 May 16 to Sep 14* Sep 15 to Nov 15†‡	Feb 15 to Apr 30 May 1 to Sep 30* Oct 1 to Dec 1†‡
Unrooted Woody Materials; Bare-Root Plants; Bulbs, Rhizomes, Corms, and Tubers[2]	Mar 15 to May 31 Jun 1 to Jun 30*	Mar 1 to May 15 May 16 to Jun 30*	Feb 15 to Apr 3 May 1 to Jun 30*
Containerized Stock; Balled-and-Burlapped Stock	Mar 15 to May 31 Jun 1 to Jun 30* Sep 1 to Nov 15*†	Mar 1 to May 15 May 16 to Jun 30* Sep 15 to Nov 30*†	Feb 15 to Apr 30 May 1 to Jun 30* Oct 1 to Dec 15*†

NOTES:
1. The planting dates are listed as averages for each zone. These dates may require adjustment to reflect local conditions, especially near the boundaries of the zones. When seeding towards the end of the listed planting dates, or when conditions are expected to be less than optimal, select and appropriate nurse crop from Table B.1 Temporary Seeding for Site Stabilization and plant together with the permanent seeding mix.

2. When planted during the growing season, most of these materials must be purchased and kept in a dormant condition until planting. Bare-root grasses are the exception- they may be supplied as growing (non-dormant) plants.

^ Additional planting dates for lower Coastal Plain, dependent on annual rainfall and temperature trends. Recommend adding a nurse crop, as noted above, if planting during this period.

^^ Warm season grasses need a soil temperature of at least 50 degrees F in order to germinate. If soil temperatures are colder than 50 degrees, or moisture is not adequate, the seeds will remain dormant until conditions are favorable. In general, planting during the latter portion of this period allows more time for weed emergence and weed control prior to planting. When selecting a planting date, consider the need for weed control vs. the likelihood of having sufficient moisture for later plantings, especially on droughty sites.

* Additional planting dates during which supplemental waterings may be needed to ensure plant establishment.

† Frequent freezing and thawing of wet soils may result in frost-heaving of materials planted in late fall, if plants have not sufficiently rooted in place. Sod usually needs 4 to 6 weeks to become sufficiently rooted. Large containerized and balled-and-burlapped stock may be planted into the winter months as long as the ground is not frozen and soil moisture is adequate.

Table B.6: Maintenance Fertilization for Permanent Seeding

Seeding Mixture	Type	lb/ac	lb/1000 sf	Time	Mowing
Tall fescue makes up 70 percent or more of cover.	10-10-10 or 30-10-10	500 400	11.5 9.2	Yearly or as needed. Fall	Not closer than 3 inches, if occasional mowing is desired.
Birdsfoot Trefoil	0-20-0	400	9.2	Spring, the year following establishment, and every 4 to 5 years, thereafter.	Mow no closer than 2 inches.
Fairly uniform stand of tall fescue or birdsfoot trefoil	5-10-10	500	11.5	Fall, the year following establishment, and every 4 to 5 years, thereafter.	Not required, no closer than 4 inches in the fall after seed has matured.
Weeping lovegrass fairly uniform plant distribution	5-10-10	500	11.5	Spring, the year following establishment, and every 3 to 4 years, thereafter.	Not required, not closer than 4 inches in fall after seed has matured.
Red & chewing fescue, Kentucky bluegrass, hard fescue mixtures	20-10-10	500	5.8 2.3	September, 30 days later. December, May 20, June 30, if needed.	Mow no closer than 2 inches for red fescue and Kentucky bluegrass, 3 inches for fescue.

PROFESSIONAL CERTIFICATION

"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No.32113, Expiration Date:9/15/19."

STATE OF MARYLAND — PHILIP R. HUGHES III — 32113 — PROFESSIONAL ENGINEER

5/31/19

CALL "MISS UTILITY" AT 1-800-257-7777 48 Hours Before Start Of Construction

NOTE: THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF THE PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR ADHERING TO APPLICABLE PRINCE GEORGE'S COUNTY CODES AND REGULATIONS.

REVISION	DATE	REVISION	DATE	REVISION	DATE

Applicant:

CS PATUXENT GREENS, LLC.
6290 MONTROSE ROAD
ROCKVILLE, MD 20852
PHONE: 301-692-4000
CONTACT: ALAN COHEN

PATUXENT GREENS

PARCEL A, NLP 126 P.59
L.6008 F.266
ELECTION DISTRICT No. 10
CITY OF LAUREL, PRINCE GEORGE'S COUNTY, MARYLAND

RODGERS CONSULTING
1101 Mercantile Lane, Suite 280 Largo, Maryland 20774
Ph: 301.948.4700 Fx: 301.948.6256 www.rodgers.com

	BY	DATE
BASE DATA	CADD	FEB 2018
DESIGNED	DKM	APR 2019
DRAWN	DKM	APR 2019
REVIEWED	PRH	APR 2019

RODGERS CONTACT: Philip R. Hughes III

RELEASE FOR _____ ☐

BY_____ DATE _____

Rough Grading, Demolition, Erosion And Sediment Control Plan Details

SCALE: NTS
JOB No. 1262A
DATE: SEPT 2018
FSC-31
SHEET No. 31 OF 31