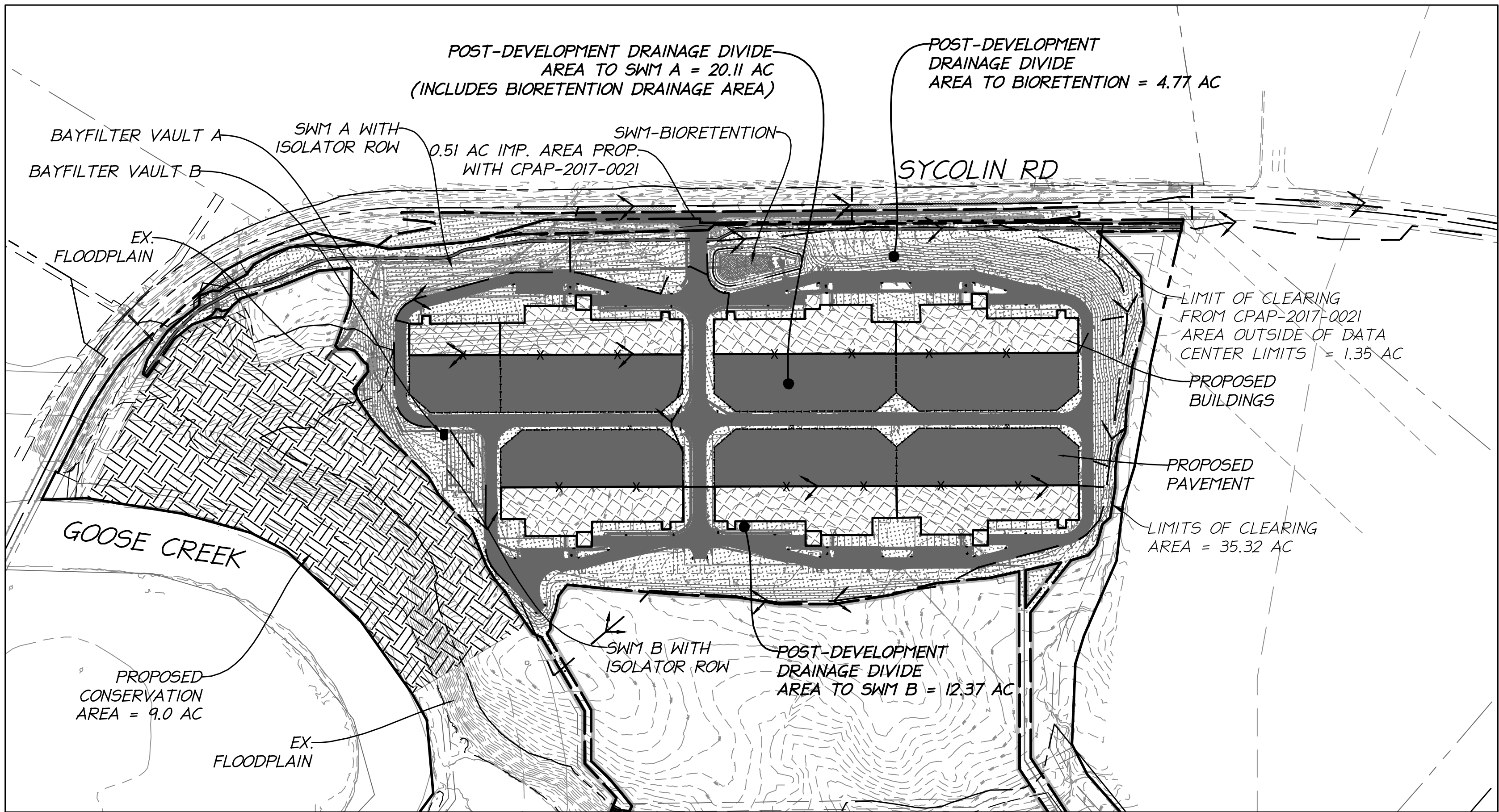
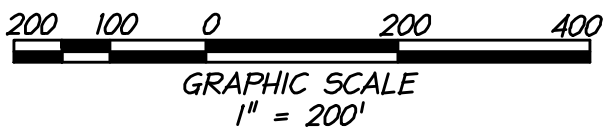


P:\Projects\17034\00102\107723 Site Plan-Data Center\49-55-BMP-MAP & COMPUTATIONS.dwg, 10/30/2017 9:35:13 AM, larspetersen, 1:1, christopher consultants, ltd



OVERALL BMP MAP



BMP NARRATIVE

THIS SITE PLAN PROPOSED THE DEVELOPMENT OF A DATA CENTER CAMPUS ON AN UNDEVELOPED LOT THAT DRAINS TO ON SITE STREAMS WHICH LEAD DIRECTLY TO GOOSE CREEK. THIS PROJECT USES THE VIRGINIA RUN OFF REDUCTION METHOD (VRRM) FOR NEW DEVELOPMENT SPREADSHEET TO CALCULATE THE WATER QUALITY DESIGN CRITERIA AND REQUIREMENTS.

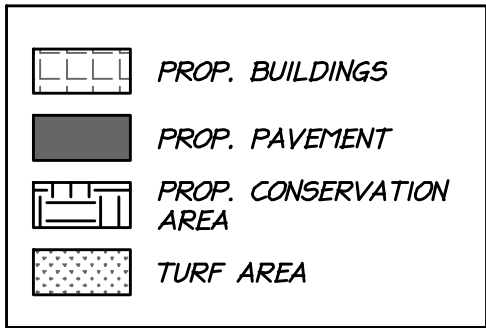
THE TOTAL DISTURBED AREA ASSOCIATED WITH THIS PLAN INCLUDE THE 35.32 AC OF DISTURBANCE PROPOSED WITH THIS PLAN AND 1.35 AC OF DISTURBANCE FROM CPAP-2017-0021 THAT IS OUTSIDE OF THE DATA CENTER LIMITS OF DISTURBANCE. THE TOTAL NEW IMPERVIOUS AREA PROPOSED IS 20.71 AC WHICH INCLUDED THE 0.51 AC OF IMPERVIOUS AS A RESULT OF THE SITE ENTRANCE AND TURN LANES PROPOSED WITH CPAP-2017-0021. THIS TOTAL PHOSPHOROUS REDUCTION REQUIREMENT GENERATE AS A RESULT OF THE DEVELOPMENT IS OF 35.38 lbs/yr. A BMP TREATMENT NETWORK IS PROPOSED THAT CONSISTS OF TWO UNDERGROUND SWM FACILITIES, SWM A & B, THAT ARE EQUIPPED WITH ISOLATOR ROWS AND OUTFALL THROUGH BAYFILTER VAULTS FOR TREATMENT, A BIORETENTION BASIN IN SERIES WITH SWM A, AND 9 AC OF DEDICATION CONSERVATION AREA TO MEET COUNTY AND STATE REQUIREMENTS. (SEE THIS SHEET FOR VRRM COMPUTATIONS.)

BMP NETWORK AREAS & MEASURES:

- 4.77 AC (2.45 AC IMPERVIOUS) DRAINS TO A PROPOSED BIORETENTION BASIN WITH A TREATMENT VOLUME OF 10,365 CF AND PHOSPHOROUS REMOVAL REDUCTION RATE OF 3.58 lbs/yr. THE BIORETENTION BASIN DRAINS TO SWM A. (SEE SHEET 51 FOR BIORETENTION DESIGN.)
- 20.11 AC (12.15 AC IMPERVIOUS-INCLUDING BIORETENTION AREA) DRAINS TO SWM A WITH A TREATMENT VOLUME OF 44,327 CF AND PHOSPHOROUS REMOVAL REDUCTION RATE OF 18.79 lbs/yr. (SEE SHEET
- 12.37 AC (8.16 AC IMPERVIOUS) DRAINS DIRECTLY TO SWM B WITH A TREATMENT VOLUME OF 31,616 CF AND PHOSPHOROUS REMOVAL REDUCTION RATE OF 13.93 lbs/yr.

THE RESULTING PHOSPHOROUS LOAD REDUCTION FOR SITE THROUGH THE PROPOSED BMP NETWORK TREATMENT MEASURES IS 36.26 lbs/yr WHICH EXCEEDS THE REQUIREMENT REMOVAL RATE BY 0.68 lbs/yr.

LEGEND



HOTSPOT INSPECTION AND MAINTENANCE:

OUTDOOR FUEL TANKS AND GENERATORS LOCATED IN THE EQUIPMENT YARDS IN THIS PROJECT ARE CONSIDERED HOTSPOTS DUE TO FUELING OPERATIONS AND ARE SUBJECT TO THE REQUIREMENTS OF FSM 3.20.E AND THE LOUDOUN COUNTY TECHNICAL MEMORANDUM DATED FEB. 22, 2012. THE GENERATORS WILL BE INSPECTED ANNUALLY TO ENSURE THEY FUNCTION PROPERLY. IN ADDITION, THE INSPECTION WILL LOOK FOR ANY BUILD UP OF OILS SLICKS AND/OR SLUDGE. IF FOUND, THESE WILL BE CLEANED UP AND IMMEDIATELY DISPOSED OF PROPERLY. THE FUEL TANKS WILL BE DOUBLE-WALLED WITH LOSS SENSOR OR TRADITIONAL SECONDARY CONTAINMENT DESCRIBED IN FSM 5.230.C.4.b.

EMERGENCY RESPONSE PLAN

THE APPLICANT SHALL PROVIDE A HYDROCARBON-TYPE "SPILL KIT" ADJACENT TO THE FUEL TANK AND GENERATOR INSTALLATIONS (A "MOBILE" SPILL KIT IS ACCEPTABLE) TO QUICKLY MITIGATE INCIDENTAL OR LARGE SPILLS SHOULD THEY OCCUR. THIS EMERGENCY RESPONSE PLAN IS SUBJECT TO APPROVAL OF THE LOUDOUN COUNTY DEPARTMENT OF FIRE AND RESCUE PRIOR TO OPERATION OF THE GENERATORS.

THIS APPLICATION SHALL BE IN COMPLIANCE WITH THE FOLLOWING LANGUAGE PER THE CURRENT @GENERAL PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES"

- E. RELEASES OF HAZARDOUS SUBSTANCE OR OIL IN EXCESS OF REPORTABLE QUANTITIES THE DISCHARGE OF HAZARDOUS SUBSTANCES OR OIL IN THE STORMWATER DISCHARGES FROM THE CONSTRUCTION SITE SHALL BE PREVENTED OR MINIMIZED IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN FOR THE SITE. THE PERMIT DOES NOT RELIEVE THE PERMITEE OF THE REPORTING REQUIREMENTS OF 40 CFR PART 110 (2002), 40 CFR PART 117 (2002), AND 40 CFR PART 302 (2002) OF THE CODE OF VIRGINIA.

WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCES OR OIL IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR PART 110 (2002), 40 CFR PART 117 (2002), 40 CFR PART 302 (2002), OR 62.1-44.34.19 OF THE CODE OF VIRGINIA OCCURS DURING A 24 HR. PERIOD.

- THE OPERATOR IS REQUIRED TO NOTIFY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AND THE PERMIT-ISSUING AUTHORITY IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION III G AS SOON AS HE HAS KNOWLEDGE OF THE DISCHARGE.
- WHERE A RELEASE ENTERS A MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4), THE OPERATOR SHALL ALSO NOTIFY THE OPERATOR OF THE MS4, AND
- THE STORMWATER POLLUTION PREVENTION PLAN REQUIRED UNDER SECTION II D OF THIS PERMIT MUST BE REVIEWED BY THE OPERATOR TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES A, AND THE PLAN MUST BE MODIFIED WHERE APPROPRIATE WITH SEVEN CALENDAR DAYS OF KNOWLEDGE OF A RELEASE.

- F. SPILLS. THIS PERMIT DOES NOT AUTHORIZE THE DISCHARGE OF HAZARDOUS SUBSTANCES OR OIL RESULTING FROM AN ON SITE OIL SPILL.
- G. TERMINATION OF PERMIT COVERAGE. COVERAGE UNDER THIS PERMIT MAY BE TERMINATED IN ACCORDANCE WITH 4VAC50-60-1160.

No.	DESCRIPTION	DATE
1	LOUDOUN COUNTY & LOUDOUN WATER COMMENTS	10/26/17

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT LOUDOUN COUNTY, LOUDOUN WATER AND VIRGINIA DEPT. OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.

christopher consultants
9301 innovation drive (suite 150) · manassas, va 20110
phone 703.393.9887 · fax 703.273.6820

BMP PLAN MAP
& NARRATIVE

TRUE NORTH DATA
PHASE I - SITE PLAN
CATOCTIN ELECTION DISTRICT
LOUDOUN COUNTY, VIRGINIA

PROJECT NO:17034.001.02
SCALE: NONE
DATE: 8/25/17
DESIGN: LEP
DRAWN: LEP
CHECKED: CHL
SHEET No. 49 OF 63