SITE DEVELOPMENT PLAN

OXFORD SQUARE

"A Howard County Green Neighborhood"

LOTS 224-241, OPEN SPACE LOTS 242 & 243 AND PARCEL 'U'

(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)

ZONED: TOD

TAX MAP No. 38 GRID No. 20 PARCEL No. 1003

SHEET INDEX

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STREET SIGN CHART

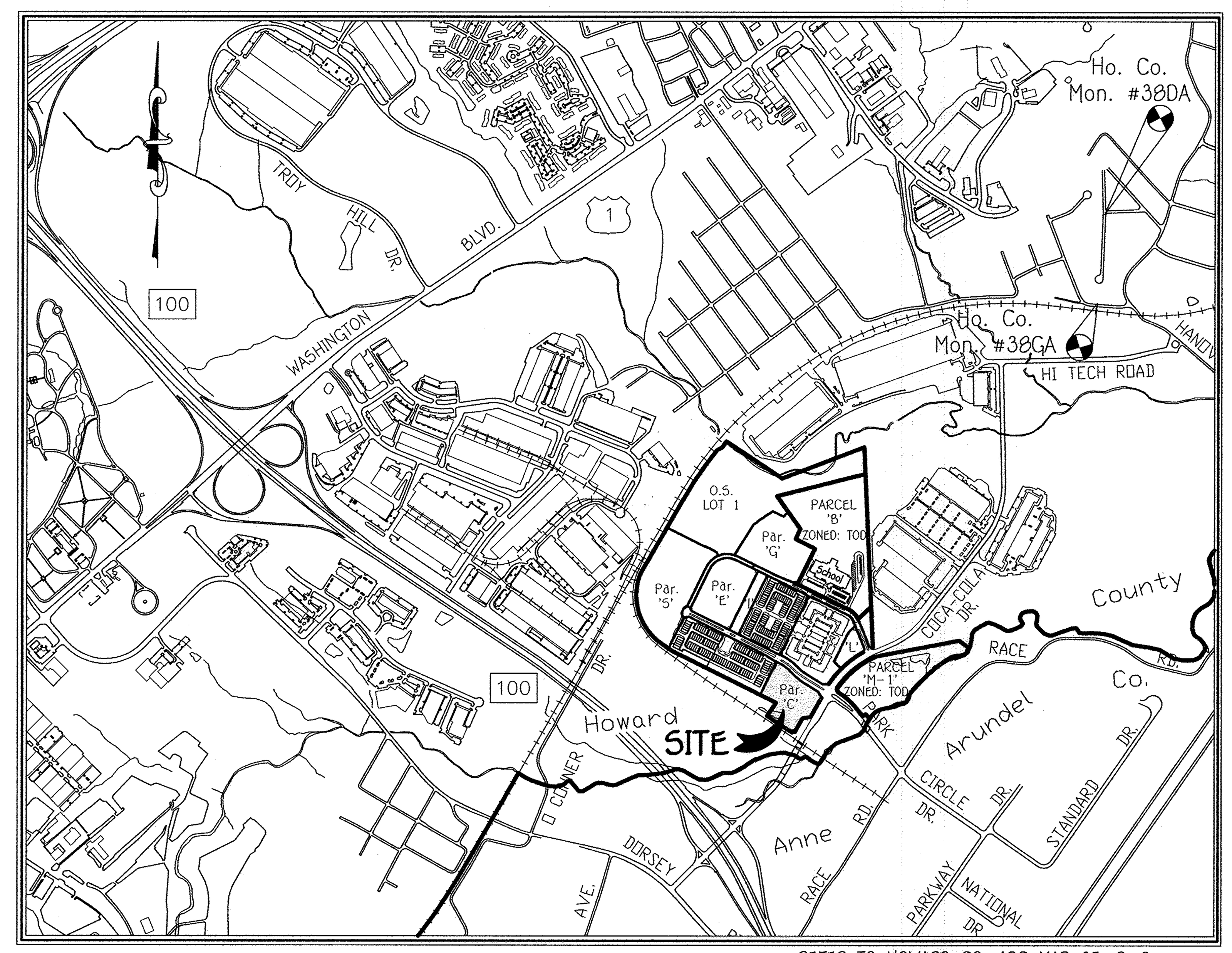
ROAD NAME	STATION/OFFSET	POSTED SIGN	SIGN CODE
STARWORT WAY	0+20 / 20'L	STOP	R1-1

STREET LIGHT CHART (PRIVATE)

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
SOUTHMOOR STREET	0+93	22' L	100 watt METAL HALIDE HAVRE DE GRACE ACORN POST TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS FLUTED POLE WITH SHROUD
	2+05	14' L	

STREET ADDRESS CHART

BLDG. No./LOT No.	STREET ADDRESS	
LOT 224	6974	SOUTHMOOR STREET
LOT 225	6976	SOUTHMOOR STREET
LOT 226	6978	SOUTHMOOR STREET
LOT 227	6980	SOUTHMOOR STREET
LOT 228	6982	SOUTHMOOR STREET
LOT 229	7227	THACKLEY WAY
LOT 230	7225	THACKLEY WAY
LOT 231	7223	THACKLEY WAY
LOT 232	7221	THACKLEY WAY
LOT 233	7208	THACKLEY WAY
LOT 234	7206	THACKLEY WAY
LOT 235	7204	THACKLEY WAY
LOT 236	7202	THACKLEY WAY
LOT 237	7201	THACKLEY WAY
LOT 238	7203	THACKLEY WAY
LOT 239	7205	THACKLEY WAY
LOT 240	7207	THACKLEY WAY
LOT 241	7209	THACKLEY WAY
CONDO BLDG. 1	7005	STARWORT WAY
	7007	
	7009	
	7011	
CONDO BLDG. 2	7015	STARWORT WAY
	7017	
	7019	
	7021	
CONDO BLDG. 3	7025	STARWORT WAY
	7027	
	7029	
	7031	



REFER TO HOWARD CO. ADC MAP 35, D-6

VICINITY MAP

SCALE: 1" = 1200'

GENERAL NOTES

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

2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.

3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

4. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 10-06-13 ZONING REGULATIONS PER COUNCIL BILL NO. 32-2013. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION.

5. COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 38DA AND NO. 38GA
Station No. 38DA N 556,796.3221 E 1,390,221.4576 Elev. = 126.08
Station No. 38GA N 555,897.3373 E 1,390,132.0933 Elev. = 80.78

6. SUBJECT PROPERTY ZONED TOD PER ZB-1086 M DATED 9/13/10, ZRA-140 DATED 8/1/12 and ZB-1102 M.

7. BACKGROUND INFORMATION:

a. SUBDIVISION NAME: OXFORD SQUARE
b. TAX MAP NO.: 38
c. PARCEL No.: 1003
d. ZONING: TOD
e. ELECTION DISTRICT: FIRST
f. GROSS AREA OF THIS SUBMISSION = 5.639 ACRES (PARCEL 'C')
g. NUMBER OF LOTS: 18
h. NUMBER OF OPEN SPACE LOTS: 2
i. NUMBER OF PARCELS: 1
j. AREA OF BUILDABLE LOTS: 0.683 AC.±
k. AREA OF OPEN SPACE LOTS = 3.895 AC.±
l. AREA OF PARCELS: 1.061 AC.±
m. AREA OF PUBLIC ROADWAY TO BE DEDICATED: 0.00 ACRES
n. PREVIOUS FILE NUMBERS: S-87-066, P-87-070, F-88-055, F-89-085, SDP-89-275, F-90-125, F-91-069, SDP-90-041, F-93-023, SDP-93-055, ZB-1086M, WP-11-130, F-11-057, WP-11-147, S-11-001, ECP-11-046, SDP-12-075, F-12-026, F-13-095, F-13-108, ZB-1102 M, S-14-001, SDP-13-068, F-14-011, SDP-14-019, SDP-14-027 & SDP-15-045
o. AREA OF FLOODPLAIN = 1.869 AC.± (THIS SUBMISSION)
p. AREA OF 25% OR GREATER SLOPES = 0.00 AC.± (THIS SUBMISSION)
q. "MODERATELY INCOME HOUSING UNITS" ARE REQUIRED WITH THIS SUBDIVISION.
r. TOTAL NUMBER OF "MODERATELY INCOME HOUSING UNITS" PROVIDED UNDER THIS PLAN (SDP 14-071) = 42 UNITS x 0.15 = 7 MIHU.
s. "THE MODERATE INCOME HOUSING UNIT (MIHU) DECLARATION OF COVENANTS AND RESTRICTIONS WAS RECORDED IN THE HOWARD COUNTY LAND RECORDS IN LIBER 16396, FOLIO 268. THE MIHU AGREEMENT WAS SIGNED BY THE DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT ON MAY 29, 2015".

8. AMENITY REQUIREMENTS: T.O.D. DEVELOPMENT SHALL INCLUDE AN AMENITY AREA PER SECTION 127.4.F.I. OF THE ZONING REGULATIONS AND THE ROUTE 1 MANUAL.
a. AMENITY AREA REQUIRED: 10.2 ACRES FOR THE ENTIRE PROJECT (101.689 x 10%)
b. TOTAL AMENITY AREA PROVIDED: = 1.72 ac. WITH THIS PLAN + 1.57 ac.± (SDP-13-068) + 1.07 AC.± (SDP-14-019) + 0.78 ac. (SDP-14-027) + 0.42 (SP 14-004) + **6.60 ac. (SDP-12-075) = 12.16 ac. total**

9. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180.

10. NOISE STUDY WAS PREPARED BY MARS GROUP DATED NOVEMBER, 2009 (S-11-001) AND UPDATED OCTOBER, 2013 (S-14-001). THE 65DBA NOISE CONTOUR LINE DRAWN ON THIS PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL. CHAPTER 5, REVISED FEBRUARY, 1992, AND CANNOT BE CONSIDERED TO EXACTLY LOCATE THE 65DBA NOISE EXPOSURE. THE 65DBA NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.

11. EXISTING WATER IS PUBLIC (CONTRACT NO. 14-4726-D) EXISTING SEWER IS PUBLIC (CONTRACT NO. 14-4726-D)

12. SOILS INFORMATION TAKEN ECS SOIL SURVEY DATED NOVEMBER 2, 2009. THE PROPERTY LIES WITHIN THE DEEP RUN TRIBUTARY TO THE PATAPSCO RIVER WATERSHED (2130906). MOST OF THE PARCEL 'Q' CONSISTS OF OVERGROWN FIELD HABITAT THAT DEVELOPED ON A PORTION OF THE SITE THAT WAS MASS GRADED IN THE LATE 1980'S. IT IS DUE TO THIS PREVIOUSLY MASS GRADED CONDITION THAT THE NORMAL HOWARD COUNTY SOIL SURVEY MAPS DATED JULY 1968 DO NOT APPLY. AS A RESULT OF THIS SITE CONDITION,THE OWNER/DEVELOPER HAVE CONTRACTED ECS-MID ATLANTIC, LLC OF HANOVER, MARYLAND. THE SOIL REPORT IS DATED NOVEMBER 2009 WITH AN ADDENDUM DATED FEBRUARY 2010 THAT SUMMARIZED THE SOIL GROUPS REQUIRED FOR THIS SWM REPORT.

13. BOUNDARY OUTLINE BASED ON FIELD RUN SURVEY PERFORMED BY FISHER COLLINS AND CARTER, INC. DATED OCTOBER, 2009.

14. TOPOGRAPHIC CONTOURS BASED ON AERIAL SURVEY PERFORMED BY HARFORD AERIAL SURVEYS, INC. DATED JANUARY, 2008 AND SUPPLEMENTED WITH FIELD RUN TOPOGRAPHY PREPARED BY FISHER, COLLINS AND CARTER, INC. DATED MAY, 2010.

15. THE MARYLAND AVIATION ADMINISTRATION (MAA) APPROVED THIS PLAN ON 04/03/15 FOR SEDIMENT AND EROSION CONTROL, STORMWATER MANAGEMENT AND LANDSCAPING. PRIOR TO THE ISSUANCE OF ANY BUILDING PERMIT, AN APPROVED AIRPORT ZONING PERMIT MUST BE OBTAINED. THE MAA ALSO DETERMINED THAT ALTHOUGH OUTSIDE THE AIRPORT NOISE ZONE, OCCUPANTS OF THIS SUBDIVISION WILL EXPERIENCE NOISE FROM AIRCRAFT OVERFLIGHTS AND OTHER OPERATIONS DUE TO THE PROXIMITY OF THIS SITE TO THE AIRPORT.

16. STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH THE 2007 MDE, CHAPTER 5 REGULATIONS AND THE LATEST HOWARD COUNTY DESIGN MANUAL, VOL. I, CHAPTER 5 ADOPTED ON OR AROUND MAY 4, 2010. RECHARGE VOLUME WILL BE PROVIDED THROUGH THE USE OF A STONE RESERVOIRS. WATER QUALITY AND CHANNEL PROTECTION VOLUME WILL BE PROVIDED BY PERMEABLE PAVEMENT & MICRO BIO-RETENTION FACILITIES. OVERBANK FLOOD PROTECTION VOLUME AND EXTREME FLOOD VOLUMES ARE NOT REQUIRED FOR THIS SITE. ALL STONE RESERVOIR, PERMEABLE PAVEMENT AND MICRO BIO-RETENTION STORMWATER MANAGEMENT FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE H.O.A. OR COMMERCIAL ASSOCIATION. THE STREET TREES, PERFORATED UNDERDRAINS, FEEDERS, PLANTINGS AND SWALES WILL BE PRIVATELY OWNED AND MAINTAINED BY OXFORD SQUARE COMMERCIAL ASSOCIATION. HOWARD COUNTY WILL ONLY MAINTAIN THE INLET STRUCTURE WITHIN THE MICRO BIO-RETENTION FACILITIES ADJACENT TO THE RIGHT-OF-WAY.

17. SEVERAL SPECIMEN TREES ARE KNOWN TO BE LOCATED WITHIN THE EXISTING FOREST; HOWEVER THEY WERE NOT SURVEYED BECAUSE THERE WILL BE NO PROPOSED DISTURBANCES WITHIN THE EXISTING FOREST. THERE ARE NO SPECIMEN TREES ON PARCEL 'C'.

18. FLOODPLAIN LIMITS SHOWN FOR THE OVERALL OXFORD SQUARE PROJECT WAS PREPARED BY WHITMAN REQUARDT AND ASSOCIATES AND IS DELINEATED ON PLAT 9924 (F-91-069). IN NOVEMBER, 2013, NEW FEMA FLOODPLAIN LIMITS WERE ISSUED. THE LIMITS OF THIS FEMA MAP ARE SHOWN ON THIS PLAN. A FORMAL FEMA LOMCs AMENDMENT HAS BEEN REQUESTED FOR THIS PARCEL.

19. THE FOREST CONSERVATION ACT REQUIREMENTS FOR THIS PROJECT HAVE BEEN MET WITH PHASE ONE OF THIS PROJECT (F-12-026).

20. THE FOREST STAND DELINEATION AND WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED MARCH 17, 2011 AND APPROVED UNDER S-11-001.

21. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.

22. NO CEMETERIES OR HISTORIC STRUCTURES EXIST WITHIN THIS SUBDIVISION.

23. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (2006), SECTION 5.5.A. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY STREET TREE.

24. TRAFFIC CONTROL DEVICES:

a) THE R1-1 (STOP) SIGNS AND THE STREET NAME SIGN (SNS) ASSEMBLIES FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
b) THE TRAFFIC CONTROL DEVICE LOCATIONS (SIGNS & PAVING MARKINGS) SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY THE HOWARD COUNTY TRAFFIC DIVISION (410-313-5752) PRIOR TO THE INSTALLATION OF ANY OF THESE TRAFFIC CONTROL DEVICES.
c) ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MdMUTCD).
d) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

25. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, DATED MARCH 2011 FOR S-11-001 AND AMENDED FOR S-14-001. PER THIS STUDY, ONCE THE TOTAL WEEKDAY EVENING PEAK HOUR TRIP GENERATION EXCEEDS 1100 TRIPS, THE ULTIMATE ROAD IMPROVEMENTS ARE NEEDED AT THE INTERSECTION OF COLA COLA DRIVE & PARK CIRCLE DRIVE. AN ADEQUATE ROAD RE-EVALUATION WILL BE PREFORMED FOR PARK CIRCLE DRIVE & COCA COLA DRIVE IN 2017 FOR EVENING PEAK HOUR.

26. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAMS, THEIR REQUIRED BUFFERS OR THEIR EXTENDED GREEN NEIGHBORHOOD BUFFERS, UNLESS THE ACTIVITIES ARE CONSIDERED NECESSARY OR WAIVERS ARE APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING. ACTIVITIES PROPOSED IN WETLANDS, STREAMS, THEIR BUFFERS, AND THEIR EXTENDED GREEN NEIGHBORHOOD BUFFERS AS PART OF THE APPROVED STREAM AND WETLAND RESTORATION AND HABITAT MANAGEMENT PLANS ARE CONSIDERED NECESSARY BY THE DEPARTMENT OF PLANNING AND ZONING.

27. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING TREES (35 SHADE, 6 EVERGREEN & 26 ORNAMENTAL TREES) SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $15,300.00. IN ADDITION, FINANCIAL SURETY FOR 10 SHADE & 3 ORNAMENTAL TREES SHALL ALSO BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $3,450.00 TO MEET THE GN CREDIT E-1.

28. ON JANUARY 13, 2012, A LETTER WAS RECEIVED FROM HOWARD COUNTY PLANNING AND ZONING REGARDING A DESIGN MANUAL WAIVER FOR THE FOLLOWING SECTIONS OF DMV III (AS IT PERTAINS TO S-11-001); 2.2.G (BUS STOP TURNOUT LANE), SECTIONS 2.3.A.1.a (MINIMUM RADIUS BASED ON DESIGN SPEED), 2.3.A.3.c (HORIZONTAL DESIGN/DIVIDED HIGHWAYS), 2.4.B.1&2 (RIGHT-OF-WAY WIDTH & PAVEMENT WIDTH AND CROSS SLOPE), 2.5.B.1&4 (INTERSECTION SPACING & MINIMUM CURVATURE), 2.6.D. (SPACING AND CORNER CLEARANCE), 2.9.B. (OVERFLOW GUEST PARKING), 2.9.C. (24' DIVE LANE WIDTH), AND 2.10.E. (REFUSE STORAGE AREA LOCATION). THE FOLLOWING ARE THE RESPONSES AND CONDITIONS OF APPROVAL FROM PUBLIC WORKS, LAND DEVELOPMENT AND DEVELOPMENT ENGINEERING:

(1) SECTION 2.2.G, BUS STOPS - APPROVED FOR STA. 7+00 (SAINT MARGARETS BLVD.) AND STA. 21+00 (BANBURY DRIVE)
(2) SECTION 2.3.A.1.a., DESIGN SPEED/MINIMUM RADII - REQUEST TO REDUCE THE DESIGN SPEED FROM 40 MPH TO 30 MPH (POSTED SPEED = 25 MPH) WAS APPROVED. THE REQUEST TO REDUCE MINIMUM CENTERLINE RADII WAS APPROVED FOR SAINT MARGARETS BLVD., STA. 3+20, 4+50 AND 19+50. FOR BANBURY DRIVE, STA. 4+00, THE SIGHT DISTANCE EASEMENT WAS ADDED, GIVING APPROVAL FOR THIS LOCATION. FOR BANBURY DRIVE, STA. 19+25, THE DECISION WAS APPROVED SUBJECT TO THE REQUIRED SIGHT DISTANCE EASEMENT BEING ADDED AS PART OF PHASE 2.
(3) SECTION 2.3.A.3.c., DIVIDED ROADWAYS - REQUEST MODIFICATIONS TO ALLOW DIVIDED ROADWAY ON A MAJOR COLLECTOR AND REDUCTION OF MEDIAN WIDTH FROM 16' TO 14'. THESE REQUESTS ARE ACCEPTABLE WITH THE SWM DEVICES WITHIN THE ISLANDS TO BE MAINTAINED BY HOA OR COMMERCIAL ASSOC. ALONG SAINT MARGARETS BLVD. THE MEDIAN FOR BANBURY DRIVE WAS APPROVED SUBJECT TO ADJUSTING MEDIAN GRADES TO PROVIDE A SUMP CONDITION. THIS WAS PROVIDED ON THE PLAN.
(4) SECTION 2.4.B.1., RIGHT-OF-WAY WIDTHS-REQUEST A VARIABLE RIGHT-OF-WAY WIDTH TO EXTEND ONE FOOT BEHIND FACE OF CURB. THIS WAS APPROVED CONTINGENT ON PROVIDING AN EASEMENT ALONG SAINT MARGARETS BLVD. AND AN EASEMENT ALONG BANBURY DRIVE. THE EASEMENTS WERE PROVIDED.
(5) SECTION 2.4.B.2., PAVEMENT WIDTHS AND CROSS SLOPE-REQUEST THAT SAINT MARGARETS BLVD. HAVE LANE WIDTHS OF 16' AND ALL OTHER ROADS HAVE A TOTAL WITH OF 18' FOR ONE WAY AND 22' FOR TWO WAY TRAFFIC. APPROVED FOR ALL LOCATIONS EXCEPT THREE ALONG BANBURY DRIVE AT STA. 15+75, THE REFUGE ISLAND WAS PROVIDED. THE OTHER TWO LOCATIONS NEAR THE TRAFFIC CIRCLE AND COMMUNITY CENTER ARE DEFERRED UNTIL A FUTURE SITE PLAN PHASE, WHEN FINAL PLANS AND TURNING MOVEMENTS WILL BE PROVIDED.
(6) SECTION 2.5, TABLE 2.07, INTERSECTION SPACING-REQUEST A MINIMUM INTERSECTION SPACING OF 100 FEET. DPW RECOMMENDS APPROVAL OF THE ENTRANCES ALONG BANBURY DRIVE FOR FUTURE BUILDINGS 8, 29 & 30 (S-11-001). AND APPROVED.
(7) SECTION 2.5, TABLE 2.08, CURB FILLET RADIUS-REQUEST A REDUCTION IN THE MINIMUM CURB FILLET RADII WAS APPROVED FOR SAINT MARGARETS LANE AND BANBURY DRIVE.
(8) SECTION 2.6.D., DRIVEWAY SPACING AND CORNER CLEARANCE-REQUEST THAT THE CORNER CLEARANCE BE REDUCED FROM 75' TO 25' AND SPACING BETWEEN INTERSECTIONS BE REDUCED FROM 250' TO 100'. THE SPACING BETWEEN INTERSECTIONS REDUCTION TO 100' IS ACCEPTABLE. THE CORNER CLEARANCE REDUCTION TO 25' IS ACCEPTABLE.
(9) SECTION 2.9, TABLE 2.11, OVERFLOW/GUEST PARKING-REQUEST THAT OFF-SITE PARKING BE REDUCED FROM 2.3 SPACES PER DWELLING UNIT TO 2.0 SPACES PER DWELLING UNIT. THIS REQUEST WAS DEFERRED UNTIL FUTURE SITE PLAN PHASE ON A PARCEL BASIS.
(10) SECTION 2.10.E., SOLID WASTE STORAGE LOCATION-REQUEST THAT THE DISTANCE FROM A CENTRALIZED REFUSE STORAGE AREA TO A MULTI-FAMILY AREA BE INCREASED FROM 200' TO 300'. APPROVAL WAS GRANTED.
(11) SECTION 2.9.C., OFF STREET PARKING LOTS-REQUEST THAT THE MINIMUM AISLE WIDTHS BETWEEN ROWS OF PARKING BE REDUCED FROM 24' TO 22'. DED HAS DENIED THIS REQUEST.
(12) SECTION 5.5.A.2, STREET LIGHT LOCATION HAS BEEN APPROVED BASED ON MEETINGS WITH B.G.&E. AND HOWARD COUNTY DPW - TRAFFIC ENGINEERING.

29. IN ACCORDANCE WITH THE DESIGN MANUAL WAIVERS OUTLINED IN GENERAL NOTE No. 28 FOR REDUCED PUBLIC ROAD R/W, ALL PUBLIC ROADS SHALL PROVIDE A "PUBLIC SIGNAGE, STREET LIGHT AND UTILITY EASEMENT".

30. STREAM AND WETLAND RESTORATION AND THE HABITAT MANAGEMENT PLAN PER S-11-001 AND S-14-001 SHALL BE IMPLEMENTED WITHIN 3 YEARS OF FINAL APPROVAL OF SDP-14-019, THE SITE DEVELOPMENT PLAN ASSOCIATED WITH CONSTRUCTION OF THE 190th RESIDENTIAL UNIT. A COPY OF THE JOINT FEDERAL/STATE APPLICATION FOR AUTHORIZATION OF REGULATED ACTIVITIES ASSOCIATED WITH THE STREAM AND WETLAND RESTORATION AND HABITAT MANAGEMENT PLAN SHALL BE SUBMITTED TO DPZ AS PART OF THE SITE DEVELOPMENT PLAN APPLICATION ASSOCIATED WITH CONSTRUCTION OF THE 190th RESIDENTIAL UNIT.

31. THIS PLAN IS SUBJECT TO WAIVER PETITION WP-11-147 TO WAIVE SUBSECTIONS 16.144(g) AND 16.144(u) OF THE HOWARD COUNTY CODE. THIS ACTION RELIEVES THE REQUIREMENT TO SUBMIT A PRELIMINARY SUBDIVISION PLAN OR A PRELIMINARY EQUIVALENT SKETCH PLAN FOLLOWING S-11-001 IN ORDER TO RECEIVE A GREEN NEIGHBORHOOD ALLOCATION. WAIVER PETITION WP-11-147 WAS APPROVED ON APRIL 27, 2011 BY THE DEPARTMENT OF PLANNING AND ZONING.

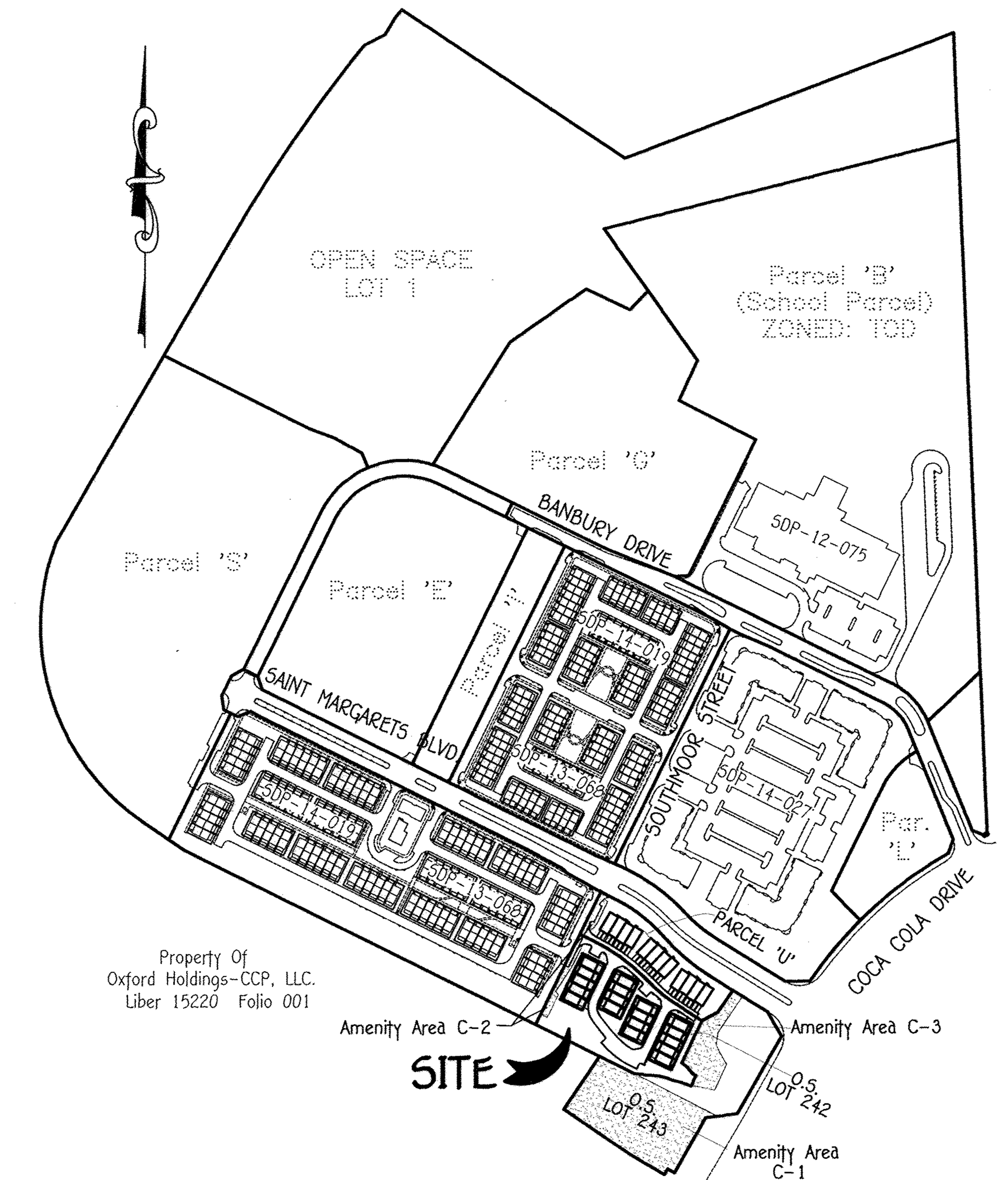
32. A PRIVATE ROAD STREET NAME SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATES.

33. UNDER SECTION 16.116.c.1.i OF THE HOWARD COUNTY SUBDIVISION REGULATIONS, GRADING AND DISTURBANCE WITHIN THE 100 YEAR FLOODPLAIN CAN BE CLASSIFIED AS A NECESSARY DISTURBANCE THUS ELIMINATING THE NEED FOR WAIVERS AND PERMITS. THE AREA OF DISTURBANCE SHOWN ON THIS PLAN HAS BEEN ASSOCIATED WITH THE PREVIOUS F-12-026 PLAN, WHICH WAS APPROVED PRIOR TO THE NOVEMBER 2013 FEMA MAPS.

34. THIS PLAN IS SUBJECT TO WP-15-060 TO WAIVE SUBSECTIONS 16.120(c)(4) AND 16.134(a)(1) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. APPROVAL OF THIS WAIVER IS SUBJECT TO THE FOLLOWING CONDITIONS:

1) THE PETITIONER SHALL REVISE THE RELATED PLANS TO IDENTIFY PRIVATE MEANS OF ACCESS CURRENTLY IDENTIFIED AS "ALLEYS" TO "PRIVATE STREETS."
2) THE PRIVATE ROADS SHALL BE CONSTRUCTED TO THE MINIMUM PUBLIC ROAD STANDARDS AS APPROVED BY THE DEVELOPMENT ENGINEERING DIVISION AND DEPARTMENT OF PUBLIC WORKS.
3) THE FOLLOWING ARE CONDITIONS OF APPROVAL BY THE DEVELOPMENT ENGINEERING DIVISION:
a. THE PRIVATE ROADWAY SERVING THESE LOTS WILL BE PRIVATELY OWNED AND MAINTAINED BY THE HOA.
b. ACCESS ONTO THIS PRIVATE ROAD SHALL BE GRANTED FOR ALL UNITS DEVELOPED UNDER PARCEL C, (SDP-14-071).

35. THIS PROPERTY IS SUBJECT TO A HABITAT MANAGEMENT AGREEMENT WHICH ALLOWS PERIODIC INSPECTIONS BY THE DEPARTMENT OF PLANNING AND ZONING.



SITE MAP

SCALE: 1" = 400'

LEGEND

SYMBOL	DESCRIPTION
---102---	EXISTING CONTOUR 2' INTERVAL
—100—	EXISTING CONTOUR 10' INTERVAL
—102—	PROPOSED CONTOUR 2' INTERVAL
—100—	PROPOSED CONTOUR 10' INTERVAL
—SF—SF—	SILT FENCE
	DRAINAGE LIMITS
L.O.D.	LIMIT OF DISTURBANCE
	EXISTING TREELINE
ESD #21	STORMWATER MANAGEMENT DEVICE
	STORM DRAIN
	STREET LIGHT (proposed) STREET LIGHT (existing)
	STREET TREE (proposed)
	STREET TREE (existing)
	PROPOSED GARDEN BENCH
	PROPOSED BRICK PEIR & SITE WALL
	PROPOSED MAILBOX BANK
B-1	BORING LOCATION

FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

PARKING REQUIREMENTS FOR PARCEL 'C'

LAND USE	MINIMUM PARKING REQUIRED	PARKING PROVIDED
SFA TOWNHOUSES	36 2 PARKING SPACES PER DWELLING UNIT (SFA) (18 UNITS x 2 SPACES = 36 SPACES)	72 GARAGE UNITS = 18 UNITS W/2 CAR GARAGE = 18
CONDOMINIUM TOWNHOUSES	48 (24 @ 2 SPACES / UNIT)	48
OVERFLOW PARKING (0.5 PARKING SPACES PER SFA UNIT)	18 x 0.5 = 9	20
(0.5 PARKING SPACES PER CONDO UNIT)	24 x 0.5 = 12	2 spaces Along Southmoor St. 18 spaces Within Parcel 'C'
TOTAL	105	140

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE

STATE OF MARYLAND ALDO MICHAEL VITUCCI No. 20748 PROFESSIONAL ENGINEER 6/16/15

AS-BUILT CERTIFICATION FOR PSWM
Note: There is no "AS-BUILT" information provided on this sheet.
ALDO M. VITUCCI NO. 20748 — 4/10/19 Date

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 9-23-15 Date

Chief, Development Engineering Division — 7.8.15 Date

Director - Department of Planning and Zoning — 9-24-15 Date

SUBDIVISION			PARCEL No.	LOT Nos.	
OXFORD SQUARE			'C'	LOTS 224-241 & CONDO. BLDGS. 1-3	
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

TITLE SHEET

OXFORD SQUARE
"A Howard County Green Neighborhood"
Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'
(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)
Zoned: TOD
Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
First Election District Howard County, Maryland
Scale: As Shown
Date: May 7, 2015
Sheet 1 Of 20

SDP-14-071

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

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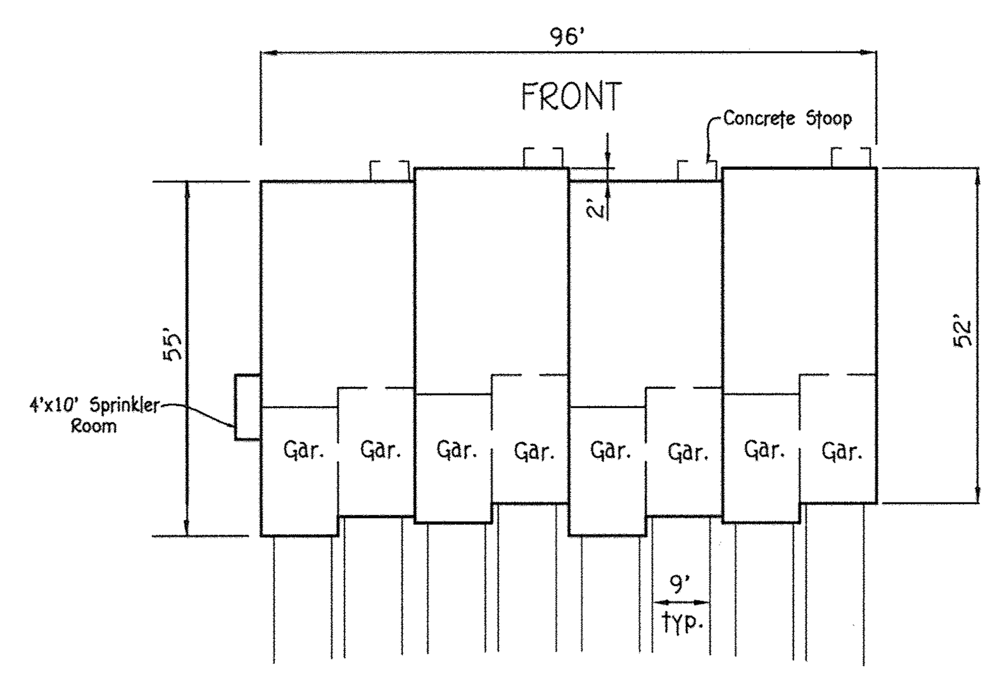
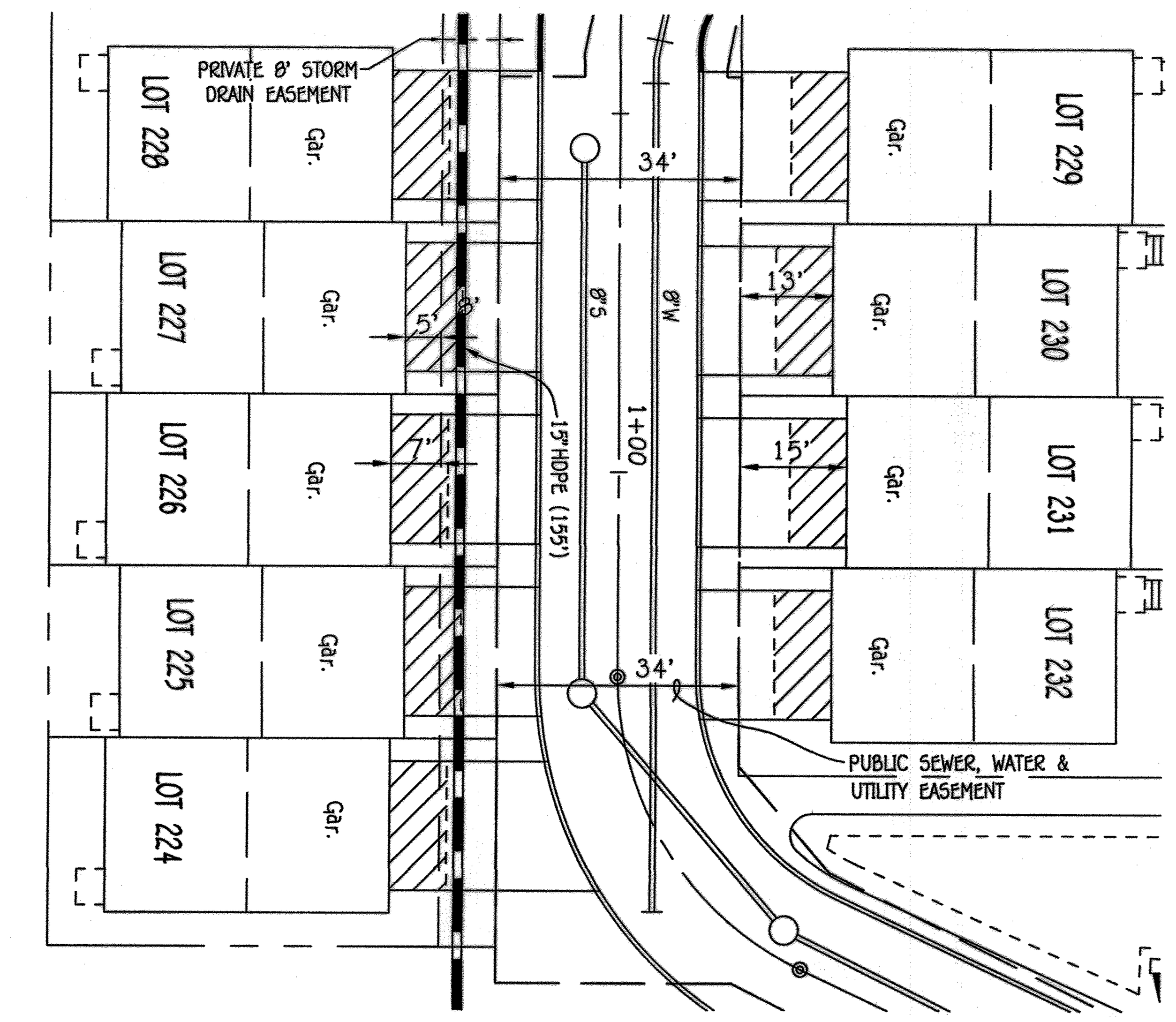


8 UNIT CONDO BUILDING

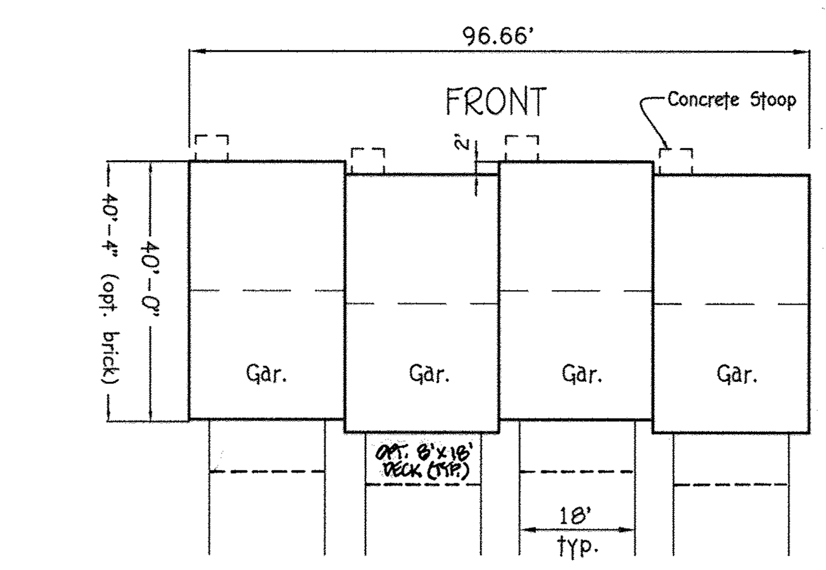
SIDE ELEVATION

NO SCALE

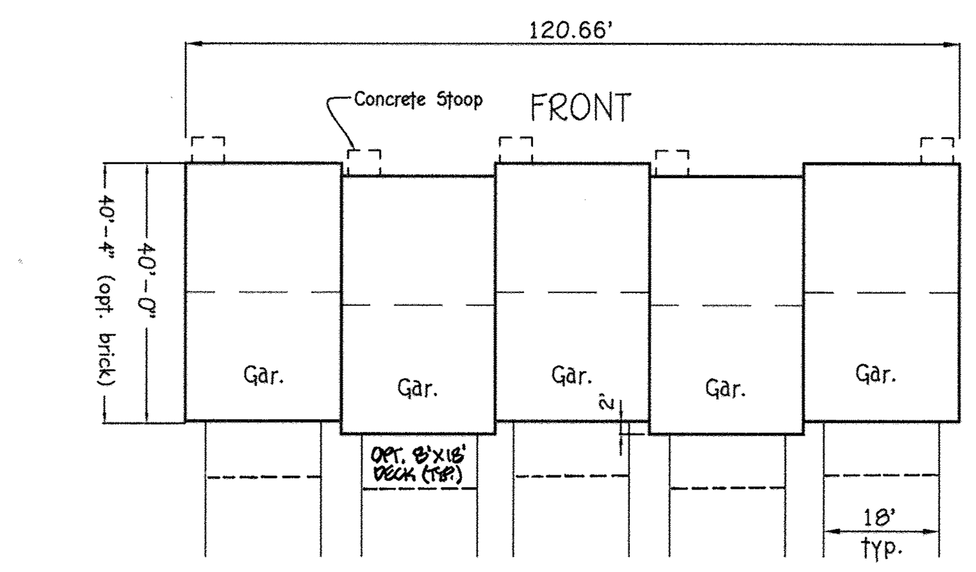


DECK LOCATION PLAN

SCALE: 1" = 20'



4 UNIT TOWNHOUSES



5 UNIT TOWNHOUSES

DECK LOCATION PLAN

SCALE: 1" = 20'

DENOTES 8'x18' DECK

SIDE ELEVATION

NO SCALE

NOTE: PROPOSED DECK SUPPORTS SHALL NOT BE LOCATED WITHIN A PRIVATE STORM DRAIN EASEMENT. (REFER TO SCALE PLAN VIEWS, THIS SHEET).

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE
1	ADDED OPTIONAL DECK TO TOWNHOUSE UNITS	1/10/17

STATE OF MARYLAND — ALDO MICHAEL VITUGGI — No. 20748 — PROFESSIONAL ENGINEER — 8/16/15

AS-BUILT CERTIFICATION FOR PSWM
Note: There is no "AS-BUILT" information provided on this sheet.
ALDO M. VITUGGI NO. 20748 — 4/10/19 Date

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 9-23-15

Chief, Development Engineering Division — Date 7.8.15

Director - Department of Planning and Zoning — Date 9-24-15

SUBDIVISION			PARCEL No.		LOT Nos.
OXFORD SQUARE			'C'		LOTS 224-241 & CONDO. BLDGS. 1-3
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

BUILDING ELEVATIONS

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'

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First Election District Howard County, Maryland
Scale: As Shown
Date: May 7, 2015
Sheet 2 Of 20

SDP-14-071

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PROPOSED ROAD ALIGNMENT CURVE TABLE						
CURVE #	STA. TO STA.	RADIUS	ARC LENGTH	TANGENT	CHORD	DELTA
C1	STA. 0+39.36 TO STA. 1+95.98	500.00'	156.62'	78.96'	S54° 44' 44"E 155.98'	17°56'50"
C2	STA. 2+36.52 TO STA.2+88.79	275.00'	52.27'	26.22'	S51° 13' 03"E 52.19'	10°53'28"
C3	STA. 1+28.55 TO STA.1+79.40	45.00'	50.85'	28.53'	S06° 05' 25"E 48.19'	64°44'32"
C4	STA. 2+30.34 TO STA.3+21.82	200.00'	91.48'	46.55'	S51° 33' 54"E 90.68'	26°12'25"

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE
1	REPLACED STONE WALL WITH FENCE ALONG ST. MARGARET'S BOULEVARD & ADDED OPTIONAL DECK TO TOWNHOUSE UNITS.	1/10/17

STATE OF MARYLAND · MICHAEL VITUCCI · No. 20748 · PROFESSIONAL ENGINEER 6/16/15

AS-BUILT CERTIFICATION FOR PSWM
Note: There is no "AS BUILT" information provided on this sheet.
ALDO M. VITUCCI NO. 20748 — Date 4/10/19

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 9-23-15
Chief, Development Engineering Division — Date 7-8-15
Director - Department of Planning and Zoning — Date 9-24-15

SUBDIVISION			PARCEL No.	LOT Nos.	
OXFORD SQUARE			'C'	LOTS 224-241 & CONDO. BLDGS. 1-3	
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

GEOMETRY PLAN

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'

(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)

Zoned: TOD
Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
First Election District Howard County, Maryland
Scale: As Shown
Date: May 7, 2015
Sheet 3 Of 20

SDP-14-071

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

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FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2055

NO.	REVISION	DATE
1	REPLACED STONE WALL WITH FENCE ALONG ST. MARGARETS BOULEVARD & ADDED OPTIONAL DECK TO TOWNHOUSE UNITS	1/10/17

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER 6/16/15

AS-BUILT CERTIFICATION FOR PSWM

I hereby certify that the facility shown on the plan was constructed as shown on the "AS BUILT" plans and complies with the approved plans and specifications. I have verified that the contributing drainage area is sufficiently stabilized to prevent clogging of the underground SWM facility.

ALDO M. VITUCCI NO. 20748 — 4/10/17 Date

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
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Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 9-23-15
Chief, Development Engineering Division — Date 12-8-15
Director - Department of Planning and Zoning — Date 9-24-15

SUBDIVISION			PARCEL No.		LOT Nos.
OXFORD SQUARE			'C'		LOTS 224-241 & CONDO. BLDGS. 1-3
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

SITE DEVELOPMENT PLAN

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'

(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M'" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)

Zoned: TOD
Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
First Election District Howard County, Maryland
Scale: As Shown
Date: May 7, 2015
Sheet 4 Of 20

SDP-14-071

"AS-BUILT"

I:\2009\09014\dwg\SDP (Lennar) Parcel 'C'\dec 17 2014 sdp per witmer changes\09014 Sheet 4 site plan.dwg, C-04_SDP-14-071 sheet 4, 5/8/2015 11:41:45 AM, 1:1

Operation And Maintenance Schedule For Rainwater Harvesting System (M-1)

THE RAINWATER HARVESTING SYSTEM (UNDERGROUND CHAMBERS) SHALL BE INSPECTED AT LEAST TWICE PER YEAR (ONCE EACH IN THE SPRING AND FALL) THE OWNER IS RESPONSIBLE FOR MAINTAINING A DETAILED LOG OF THE MAINTENANCE INSPECTION FINDINGS AND A HISTORY OF THE COMPLETED WORK. THE LOG SHALL BE MADE AVAILABLE TO HOWARD COUNTY DPZ AND/OR THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UPON REQUEST.

SPECIFIC COMPONENTS TO BE INSPECTED AND MAINTAINED INCLUDE THE ITEMS AS FOLLOWS:

1. REMOVE DEBRIS.
2. EXAMINE STRUCTURES FOR SIGNS OF STRUCTURAL ISSUES (DAMAGE, CORROSION, ETC).
3. REMOVE AND PROPERLY DISPOSE ACCUMULATED SEDIMENT GREATER THAN ONE (1) INCH.
4. THE HOMEOWNER SHALL VERIFY INTEGRITY OF LEAF SCREENS, GUTTERS & DOWNSPOUTS AND CLEAN AND REMOVE ANY DEBRIS.

NOTE:
1. THE RAINWATER HARVESTING STORAGE SHALL BE 80% EMPTIED MINIMUM) WHEN A 2" OR GREATER RAINFALL EVENT IS FORECASTED. THIS IS TO ALLOW STORAGE TO PROVIDE QUANTITY MANAGEMENT NEEDED TO PROTECT DOWNSTREAM WATERWAYS.

FILTERRA: Operation and Maintenance

- Annual maintenance consists of a maximum of (2) scheduled visits. The visits are scheduled seasonally; the spring visit aims to clean up after winter loads including salts and sands. The fall visit helps the system by removing excessive leaf litter.
- Each maintenance inspection consists of the following tasks:

1. Filterra unit inspection
2. Foreign debris, silt, mulch and trash removal
3. Filter media evaluation and recharge as necessary
4. Plant health evaluation and pruning or replacement as necessary
5. Replacement of mulch
6. Disposal of all maintenance refuse items
7. Maintenance records updated and stored

FILTERRA STANDARD PLAN NOTES

Construction & Installation

A. Each unit shall be constructed at the locations and elevations according to the sizes shown on the approved drawings. Any modifications to the elevation or location shall be at the direction of and approved by the Engineer.

B. If the Filterra® is stored before installation, the top slab must be placed on the box using the 2x4 wood provided, to prevent any contamination from the site. All internal fittings supplied (if any), must be left in place as per the delivery.

C. The unit shall be placed on a compacted sub-grade with a minimum 6-inch gravel base matching the final grade of the curb line in the area of the unit. The unit is to be placed such that the unit and top slab match the grade of the curb in the area of the unit. Compact undisturbed sub-grade materials to 95% of maximum density at +1- 2% of optimum moisture. Unsuitable material below sub-grade shall be replaced to the site engineer's approval.

D. Outlet connections shall be aligned and sealed to meet the approved drawings with modifications necessary to meet site conditions and local regulations.

E. Once the unit is set, the internal wooden forms and protective mesh cover must be left intact. Remove only the temporary wooden shipping blocks between the box and top slab. The top lid should be sealed onto the box section before backfilling, using a non-shrink grout, butyl rubber or similar waterproof seal. The boards on top of the lid and boards sealed in the unit's throat must NOT be removed. The Supplier (Americast or its authorized dealer) will remove these sections at the time of activation. Backfilling should be performed in a careful manner, bringing the appropriate fill material up in 6" lifts on all sides. Precast sections shall be set in a manner that will result in a watertight joint. In all instances, installation of Filterra® unit shall conform to ASTM specification C891 "Standard Practice for Installation of Underground Precast Utility Structures", unless directed otherwise in contract documents.

F. The contractor is responsible for inlet protection/sediment control and cleaning around each Filterra unit.

G. Curb and gutter construction (where present) shall ensure that the flow-line of the Filterra® units is at a greater elevation than the flow-line of the bypass structure or relief (drop inlet, curb cut or similar). Failure to comply with this guideline may cause failure and/or damage to the Filterra® environmental device.

H. Each Filterra® unit must receive adequate irrigation to ensure survival of the living system during periods of drier weather. This may be achieved through a piped system, gutter flow or through the tree grate.

Activation

A. Activation of the Filterra® unit is performed ONLY by the Supplier. Purchaser is responsible for Filterra® inlet protection and subsequent clean out cost. This process cannot commence until the project site is fully stabilized and cleaned (full landscaping, grass cover, final paving and street sweeping completed), negating the chance of construction materials contaminating the Filterra® system. Care shall be taken during construction not to damage the protective throat and top plates.

B. Activation includes installation of plant(s) and mulch layers as necessary.

Included Maintenance

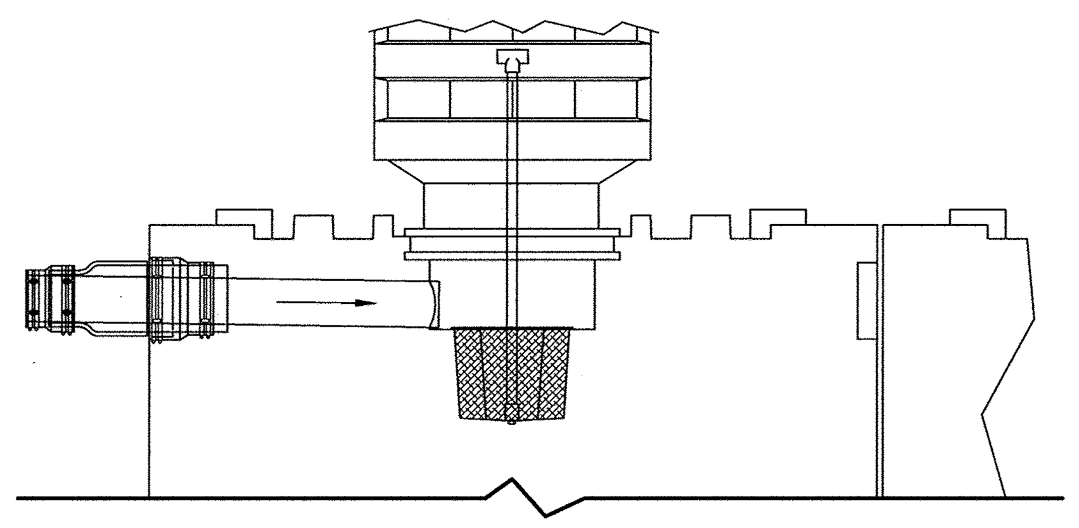
A. Each correctly installed Filterra® unit is to be maintained by the Supplier, or a Supplier approved contractor for a minimum period of 1 year. The cost of this service is to be included in the price of each Filterra® unit. Extended maintenance contracts are available at extra cost upon request.

B. Annual included maintenance consists of a maximum of (2) scheduled visits. The visits are scheduled seasonally; the spring visit aims to clean up after winter loads that may include salts and sands. The fall visit helps the system by removing excessive leaf litter.

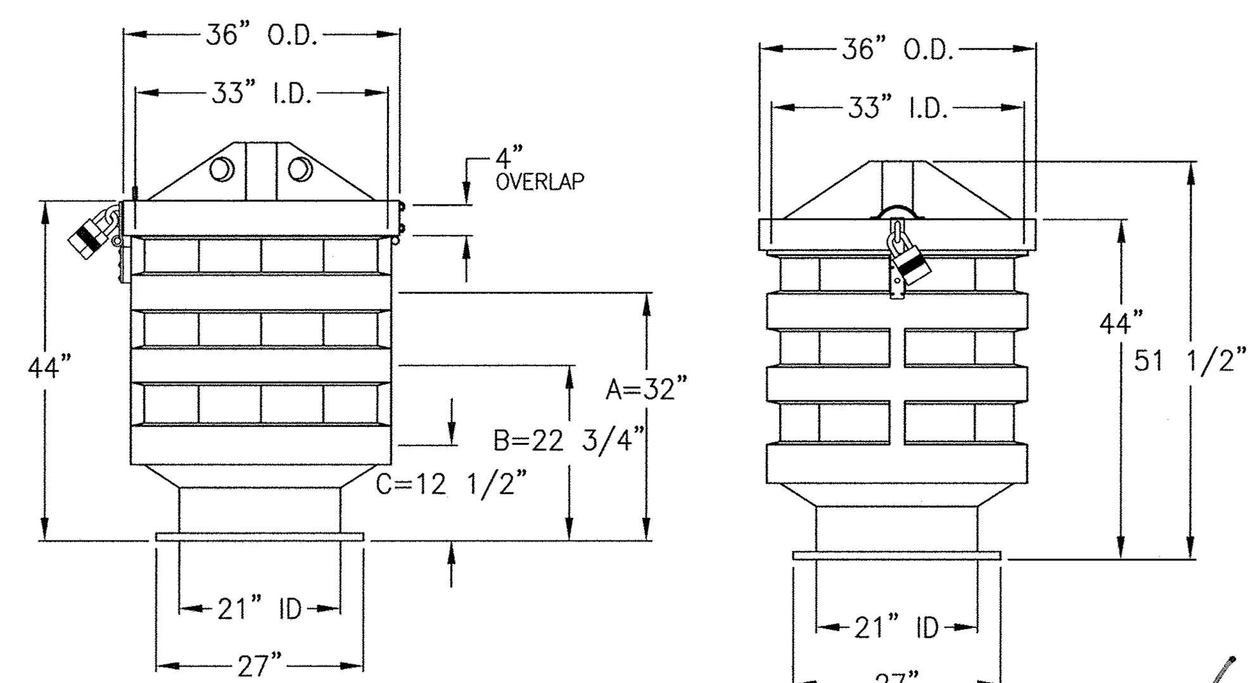
C. Each Included Maintenance visit consists of the following tasks.

1. Filterra® unit inspection
2. Foreign debris, silt, mulch & trash removal
3. Filter media evaluation and recharge as necessary
4. Plant health evaluation and pruning or replacement as necessary
5. Replacement of mulch
6. Disposal of all maintenance refuse items
7. Maintenance records updated and stored (reports available upon request)

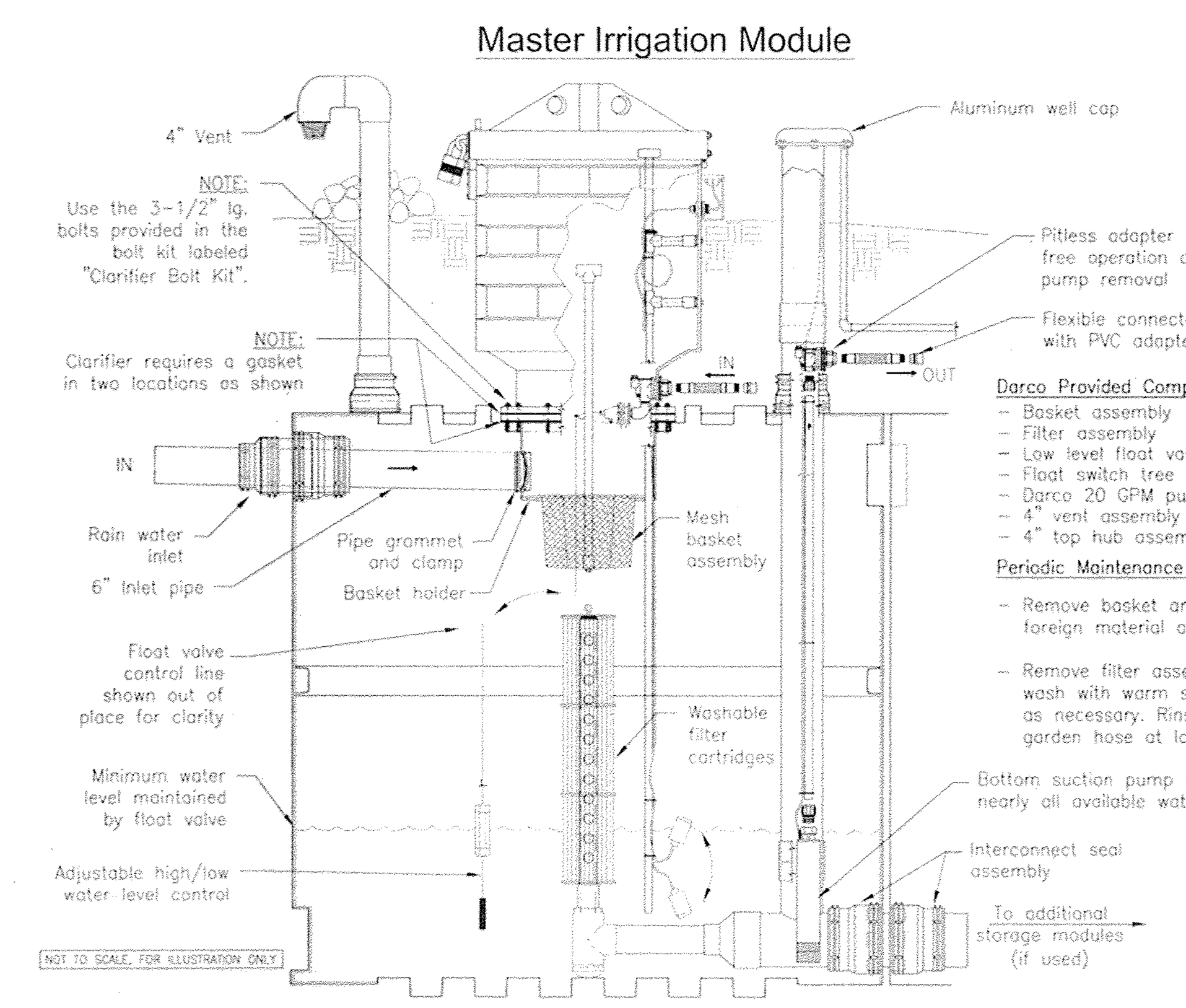
D. The beginning and ending date of Supplier's obligation to maintain the installed system shall be determined by the Supplier at the time the system is activated. Owners must promptly notify the Supplier of any damage to the plant(s), which constitute(s) an integral part of the bioretention technology.

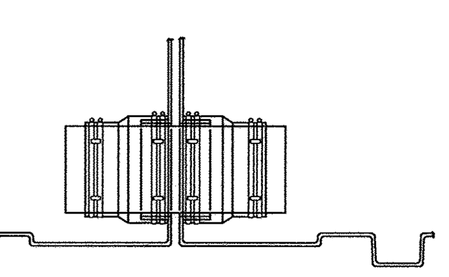


Clarifier with silt dam and debris basket



20" x 30" I.D. Polyethylene manway extension ✓



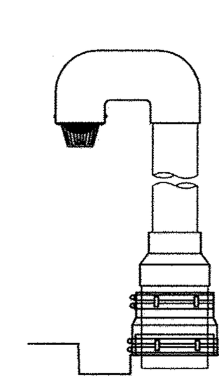


8" Interconnect fitting assembly

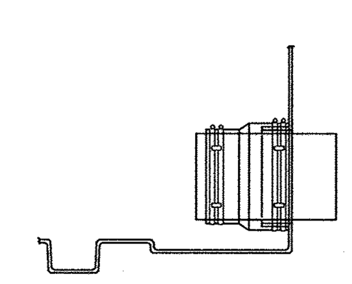
ACCESSORIES

Ⓐ – 20" I.D. POLYETHYLENE SPOOL TYPE MANWAY EXTENSION TO GRADE w/MESH BASKET ASSEMBLY AND INFLOW PIPE.

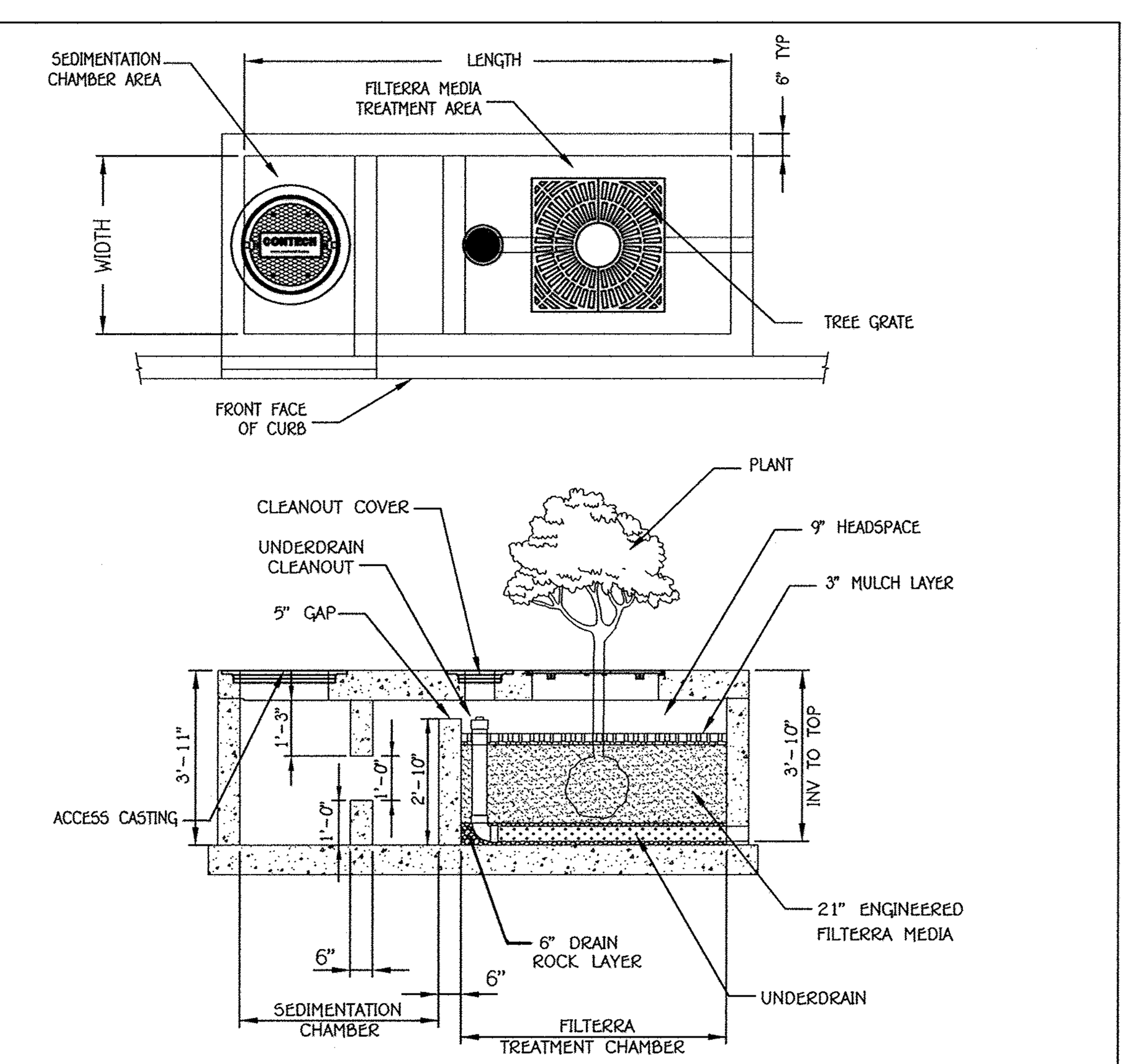
Ⓑ – PVC VENT WITH GUARD AND STAINLESS STEEL INSECT SCREEN.



✓4" PVC vent head with a 6" x 4" top hub adapter



8" Inlet/outlet



UNIT DESIGNATION	INSIDE VAULT DIMENSIONS	FILTERRA TREATMENT AREA	MAXIMUM DRAINAGE AREA TREATED (SF)	WQv STORAGE CAPACITY (CF)
FTSC 6' x 4'	12' x 4'	6' x 4'	5,216	103
FTSC 8' x 4'	16' x 4'	8' x 4'	7,141	141
FTSC 6' x 6'	12' x 6'	6' x 6'	7,847	155
FTSC 8' x 6'	16' x 6'	8' x 6'	10,734	212
FTSC 10' x 6'	19' x 6'	10' x 6'	12,638	250
FTSC 10' x 8'	20' x 8'	10' x 8'	18,178	360
FTSC 11' x 8'	22' x 8'	11' x 8'	20,000	398

NOTE:
1. MAXIMUM DRAINAGE AREA TREATED ASSUMES 25% WQv AND FILTER SURFACE AREA REQUIREMENTS ARE BOTH MET.
2. STORAGE CAPACITY ASSUMES 40% VOIDS IN UNDERDRAIN STONE AND 30% VOIDS IN MULCH AND MEDIA.
3. ALL INFORMATION IS BASED ON STANDARD 3.83' RIM TO OUTLET DEPTH. CONTACT CONTECH FOR CUSTOM SIZING IF DEPTH IS NOT 3.83'. ACCEPTABLE DEPTH IS 3.33' MIN. TO 5.00' MAX. RIM TO INVERT OUT.

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com

FILTERRA® WITH SEDIMENTATION CHAMBER

DESIGN GUIDELINES FOR USING FILTERRA

1. Do not place in a sump condition. The Standard Filterra® cannot be used as a stand alone inlet – it will need effective bypass during higher intensity rainfall events. For sump conditions please contact Filterra®.

Plans MUST show Filterra® Top Curb (TC) and Flow Line (FL) spot elevations and also bypass TC (where applicable) and bypass FL spot elevations.

The Filterra® TC and FL elevations MUST be higher than the bypass TC and FL elevations for effective bypass. Use Drawing FLP-2 (p.24) as a detail on the project plans.

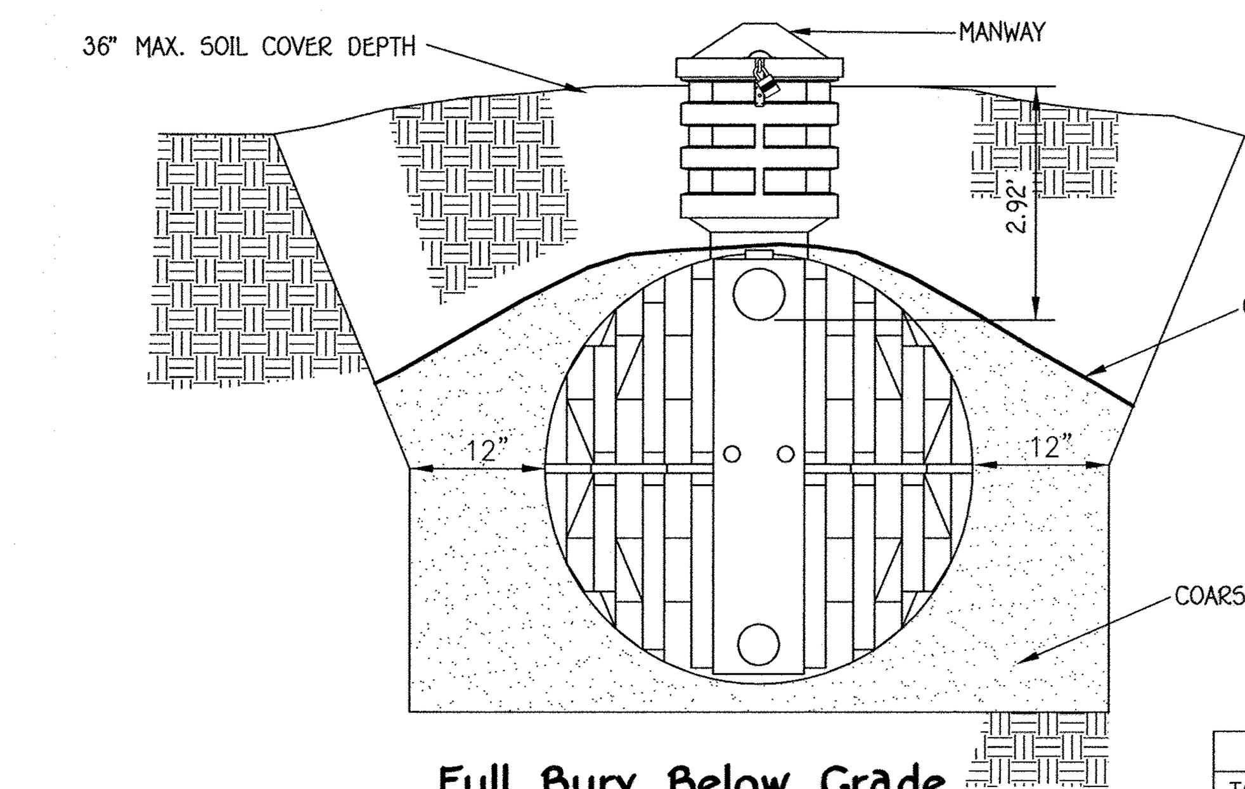
2. For proper trash collection ensure a minimum 4" and maximum 6" Filterra® throat opening depth and use Drawing CGT-5 (p.25) as a detail on the project plans.

3. Do not direct surface flow to the standard Filterra® in a "head-on" configuration. Refer to Guidelines GU1-A (p.13) and GU2 (p.18) for grading design that encourages flow to enter a Filterra® in a cross linear flow – left-to-right or right to-left in the gutter in front of the throat, as per a wet curb which prevents system damage. During extreme storm events the excess flow should continue past the Filterra® to a bypass inlet or other means of relief. Guideline GU3, Parking Lot Corners, shows common situations (p.19).

4. To calculate which size Filterra® is required, use Table 1, Filterra® Quick Sizing Table, appropriate to the project's geographical region and target treatment regime (p.12). The entire contributing drainage aread to the Filterra should be considered and the minimum allowable C factors noted. the maximum contributing drainage area iwll vary with site conditions. for further information relating to sizing please contact Filterra.

5. To ensure correct installation, include the Standard Filterra® Plan Notes (p.26-27) on your Filterra® detail project sheet, as well as detailed drawings FLP-2 and CGT-5 (p.24,25).

6. Positive drainage of each Filterra® unit's effluent treatment pipe is required to prevent free standing water from accumulating in the system or underdrain. This could occur due to tidal influences or improper connection of Filterra's effluent pipe to a bypass structure or other outfall.

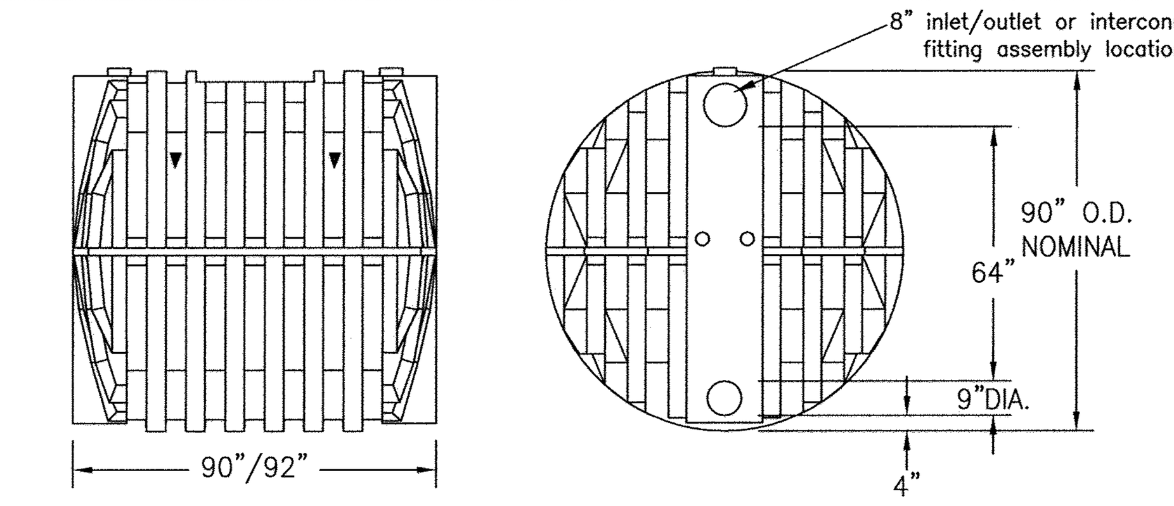


Full Bury Below Grade

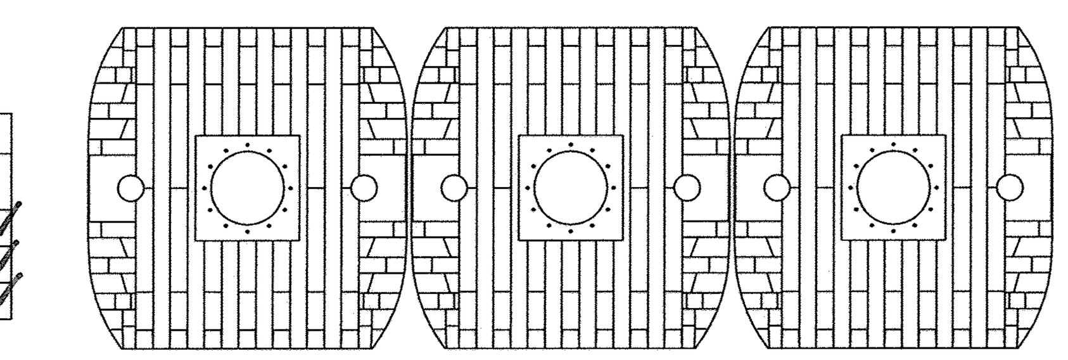
TANK NO.	MANWAY ELEVATION	INLET/OUTLET ELEVATION	SIZE (Gallons)
#1	95.4 ✓	92.48	6,000 ✓
#2	91.0 ✓	88.08	6,000 ✓
#3	88.0 ✓	85.08	6,000 ✓

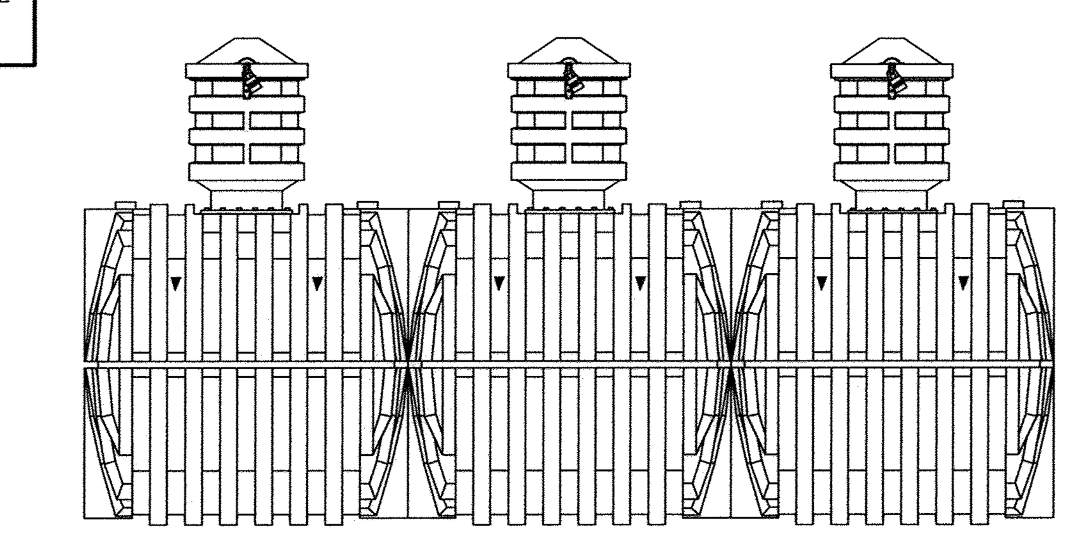
RAINWATER HARVESTING DATA

NOTE: EACH DOWNSPOUT THAT IS CONNECTED TO THE OCTANKS SHALL HAVE AN OVERFLOW AND HAVE AN GUTTER DRAIN FILTER.



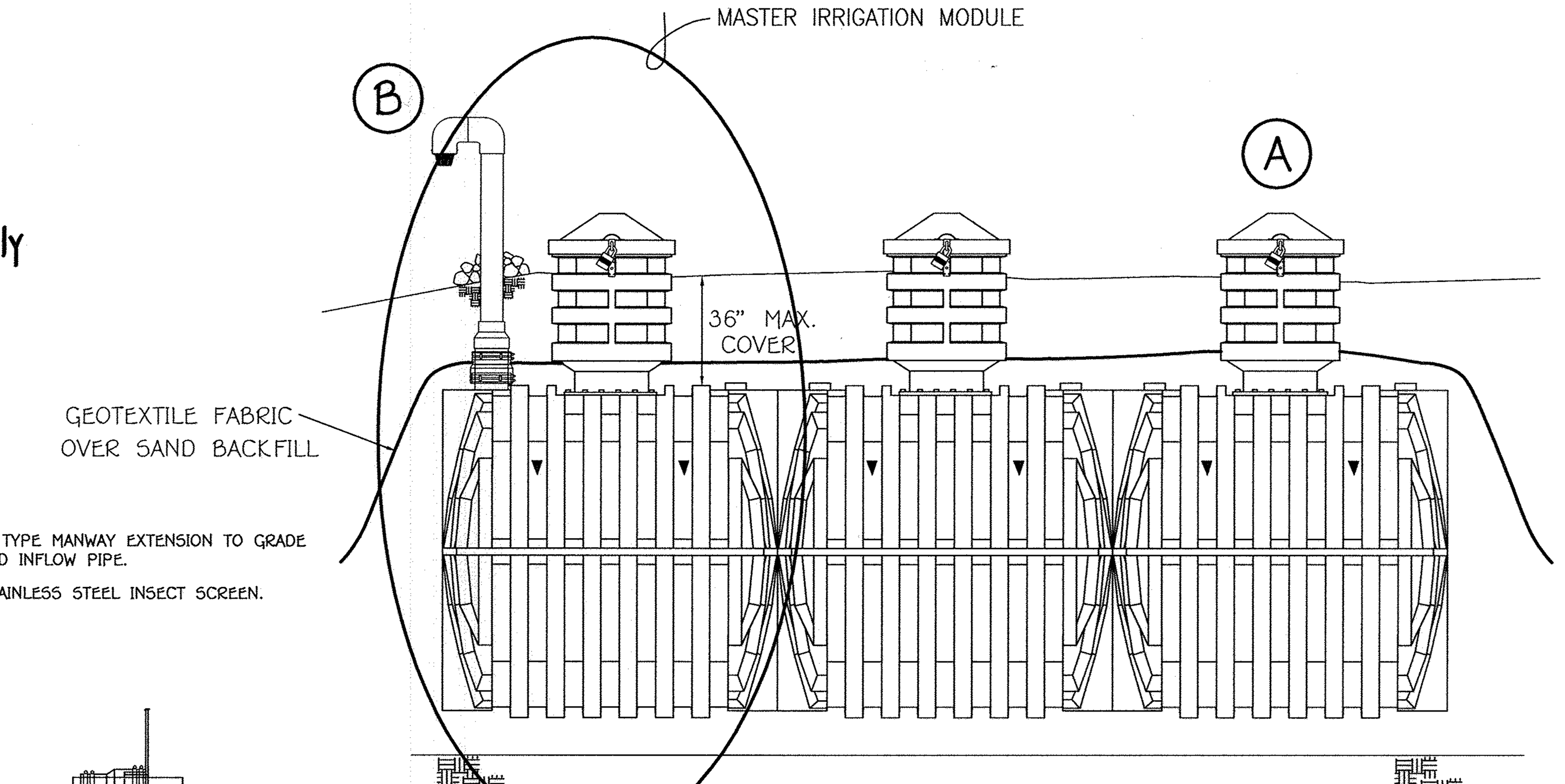
SINGLE 2,000 GAL. MODULE





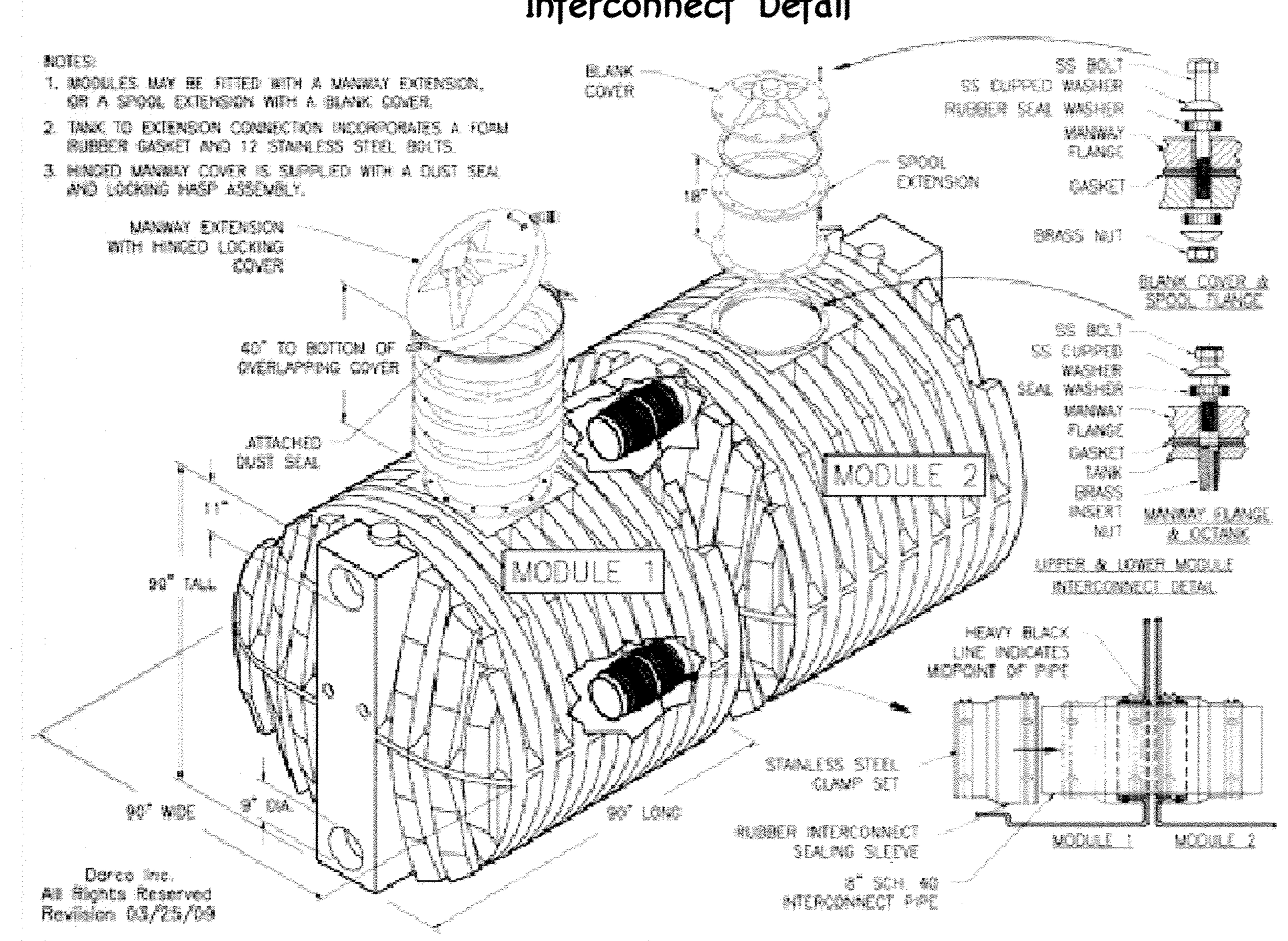
6,000 GAL. OCTANK CONFIGURATION

6000 Gallon OcTank Configuration ✓
(shown with manway extension)



6000 Gallon OcTank Configuration

Manway Extensions, Blank Cover, & Interconnect Detail



Darco Inc.
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Revision 03/25/09

SPECIFICATIONS FOR POLYETHYLENE UNDERGROUND WATER TANKS QUALITY ASSURANCE

Manufacturer: Darco Inc. Or Equal.

Darco Inc. 980 Darco Dr. – P.O. Box 779 – Bennett, CO. 80102.
Phone: 800-232-8660, Fax: 303-644-5001, Internet: www.darcoinc.com

GENERAL GOVERNING STANDARDS

1. ASTM 1998-93, Polyethylene Storage Tanks, those specific sections considered germane and prudent as applied to underground water storage tanks only.

- Section 4 : Type 2 high density virgin linear polyethylene resin
- Section 5 : Material standards for food contact grade polyethylene resin
- Section 7 : Fittings for polyethylene water tanks
- Section 8 : Performance requirements based on impact testing
- Section 9 : Dimensions and tolerances
- Section 10 : Workmanship

DESIGN STANDARDS / DARCO MODULAR POLYETHYLENE OCTANK SYSTEMS

1. External Hydrostatic Loading : The empty tank system with manway risers, when anchored into a sand backfilled excavation at a 3 foot bury depth and flooded with water to spring line, must maintain its structural shape and 100% water tightness.

2. Traffic Loading : Tank systems, when properly installed and incorporating an approved concrete surface slab, must withstand automotive and H20 truck traffic loads.

3. Dry Bury Installation : Tank systems must have sufficient wall strength and structural integrity to be installed and completely backfilled to a 3 foot bury depth without the addition of water during the backfill process. Furthermore, tank systems must maintain their structural shape and full storage capacity when left empty for extended periods.

TANK FITTINGS

All fittings shall be of polyolefin or PVC construction and incorporate only 300 series stainless steel hardware. Compatible and warranted tank-to-pipe flexible couplers must be made available along with the tank system at the time of purchase. Fittings, gaskets, and hardware must be available specifically for domestic water use.

POTABLE WATER APPLICATIONS

The virgin polyethylene resin used for construction of potable water storage tanks must be NSF listed and comply with FDA Title 21 when in contact with drinking water.

ACCESSORIES

The accessory package provided with any storage tank system must contain only fully approved accessories and appurtenances which meet all performance standards and warranty coverage guidelines of tank manufacturer.

CAPACITY AND SIZE REQUIREMENTS

1. The nominal volume of the tank system shall be ______ gallons.

2. The nominal tank diameter shall be ______ feet by a nominal length of ______ feet.

LIMITED WARRANTY
A standard 2 year structural and corrosion warranty shall become effective upon tank delivery. An optional extended warranty program must be available at time of purchase.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

NO.	REVISION	DATE

STATE OF MARYLAND – MICHAEL VITUCCI – No. 20748 – PROFESSIONAL ENGINEER 6/16/15

AS-BUILT CERTIFICATION FOR PSWM
I hereby certify that the facility shown on the plan was constructed as shown on the "AS BUILT" plans and complies with the approved plans and specifications. I have verified that the contributing drainage area is sufficiently stabilized to prevent clogging of the underground SWM facility.
ALDO M. VITUCCI NO. 20748 — 4/10/19 Date

SCALE: 1" = 4'

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 9-23-15 Date
Chief, Development Engineering Division — 9.8.15 Date
Director – Department of Planning and Zoning — 9-24-15 Date

SUBDIVISION	PARCEL No.	LOT Nos.
OXFORD SQUARE	'C'	LOTS 224-241 & CONDO. BLDGS. 1-3

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

STORMWATER MANAGEMENT NOTES & DETAILS

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'

(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)

Zoned: TOD
Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
First Election District Howard County, Maryland
Scale: As Shown
Date: May 7, 2015
Sheet 5 Of 20

SDP-14-071

"AS-BUILT"

I:\2009\09014\dwg\SDP (Lennar) Parcel 'C'\dec 17 2014 sdp per witmer changes\09014 Sheet 5 -6 swm details.dwg, 5/18/2015 9:20:29 AM, 1:1

Infiltration and Filter System Construction Specifications

Infiltration and filter systems either take advantage of existing permeable soils or create a permeable medium such as sand for WC), and Re v. In some instances where permeability is great, these facilities may be used for Qp as well. The most common systems include infiltration trenches, infiltration basins, sand filters, and organic filters.

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are bound with phosphorous and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide arteries for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide aesthetic value and wildlife habitat making these facilities more desirable to the public.

Design Constraints:

> Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching the facility, thereby reducing the possibility of clogging.
> Determine areas that will be saturated with water and water table depth so that appropriate plants may be selected (hydrology will be similar to bioretention facilities, see figure A.5 and Table A.4 for planting material guidance).
> Plants known to send down deep taproots should be avoided in systems where filter fabric is used as part of facility design.
> Test soil conditions to determine if soil amendments are necessary.
> Plants shall be located so that access is possible for structure maintenance.
> Stabilize heavy flow areas with erosion control mats or sod.
> Temporarily divert flows from seeded areas until vegetation is established.
> See Table A.5 for additional design considerations.

Bio-retention

Soil Bed Characteristics

The characteristics of the soil for the bioretention facility are perhaps as important as the facility location, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through the media, while having characteristics suitable to promote and sustain a robust vegetative cover crop. In addition, much of the nutrient pollutant uptake (nitrogen and phosphorus) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support biotic communities above and below ground.

The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume [Environmental Quality Resources (EQR), 1996; Engineering Technology Inc. and Biohabitats, Inc. (ETAB), 1993]. Soils should fall within the SM, ML, SC classifications or the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.5"/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or seeds from noxious weeds (e.g., Johnson Grass, Mugwort, Nutsedge, and Canada Thistle or other noxious weeds as specified under COMAR 15.08.01.05.) should not be present in the soils. Placement of the planting soil should be in 12 to 18 lifts that are loosely compacted (tamped lightly with a backhoe bucket or traversed by dozer tracks). The specific characteristics are presented in Table A.3.

Table A.3 Planting Soil Characteristics

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P205)	75 lbs. per acre, minimum
Potassium (potash -1(K20)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	10 to 25 %
Silt	30 to 55 %
Sand	35 to 60%

Mulch Layer

The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability. Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary pretreatment.

The mulch layer should be standard landscape style, single or double shredded hardwood mulch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a mulch material.

Planting Guidance

Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects, disease, drought, temperature, wind, and exposure.
The proper selection and installation of plant materials is key to a successful system. There are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge
is the highest elevation and generally supports plants adapted to dryer conditions. For appropriate plant materials for bioretention facilities, Refer To MAA Approved Species List. The layout of plant material should be flexible, but should follow the general principals described in Table A.5. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ETAB, 1993 or Claytor and Schueler, 1997.

Operation And Maintenance Schedule For Commercial Association Owned & Maintained Bio-Retention Areas (M-6)

1. The owner shall maintain the plant material, mulch layer and soil layer annually. maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland stormwater design manual volume II, table A.4.1 and 2.

2. The owner shall perform a plant in the spring and in the fall each year. during the inspection, the owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material, Treat diseased trees and shrubs and replace all deficient stakes and wires.

3. The owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years, The previous mulch layer shall be removed before the new layer is applied.

4. The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.

5. The owner shall maintain all observation wells, clean-outs and perforated underdrains.

6. Filter material must be replaced when water remains on the surface of the filter bed for more than 24 hours following a 1 or 2 year storm event or more than 48 hours following a 10 year storm event.

B.4.C Specifications for Micro-Bioretention. Rain Gardens, Landscape Infiltration & Infiltration Berms

1. Material Specifications

The allowable materials to be used in these practices are detailed in Table B.4.1.

2. Filtering Media or Planting Soil

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the micro-bioretention practice that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.

The planting soil shall be tested and shall meet the following criteria:

Soil Component - Loamy Sand or Sandy Loam (USDA Soil Textural Classification)

Organic Content - Minimum 10% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand (60%-65%) and compost (35% to 40%) or sandy loam (30%), coarse sand (30%), and compost (40%).

Clay Content - Media shall have a clay content of less than 5%.

pH Range -Should be between 5.5 - 7.0. Amendments (e.g., lime, iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.

There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

3. Compaction

It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation hoes to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high-pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

4. Plant Material

Recommended plant material for micro-bioretention practices can be found in Appendix A, Section A.2.3.

5. Plant Installation

Compost is a better organic material source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3". Shredded or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8 th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

6. Underdrains

Underdrains should meet the following criteria:

Pipe- Should be 4?to 6?diameter, slotted or perforated rigid plastic pipe (ASTMF 758, Type PS 28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).

Perforations - If perforated pipe is used, perforations should be 3/8" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a 1/4" (No. 4 or 4x4) galvanized hardware cloth.

Gravel - The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.

The main collector pipe shall be at a minimum 0.5% slope.

A rigid, non-perforated observation well must be provided (one per every 1,000 square feet) to provide a clean-out port and monitor performance of the filter.

A 4" layer of pea gravel (1/4" to 3/8" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".

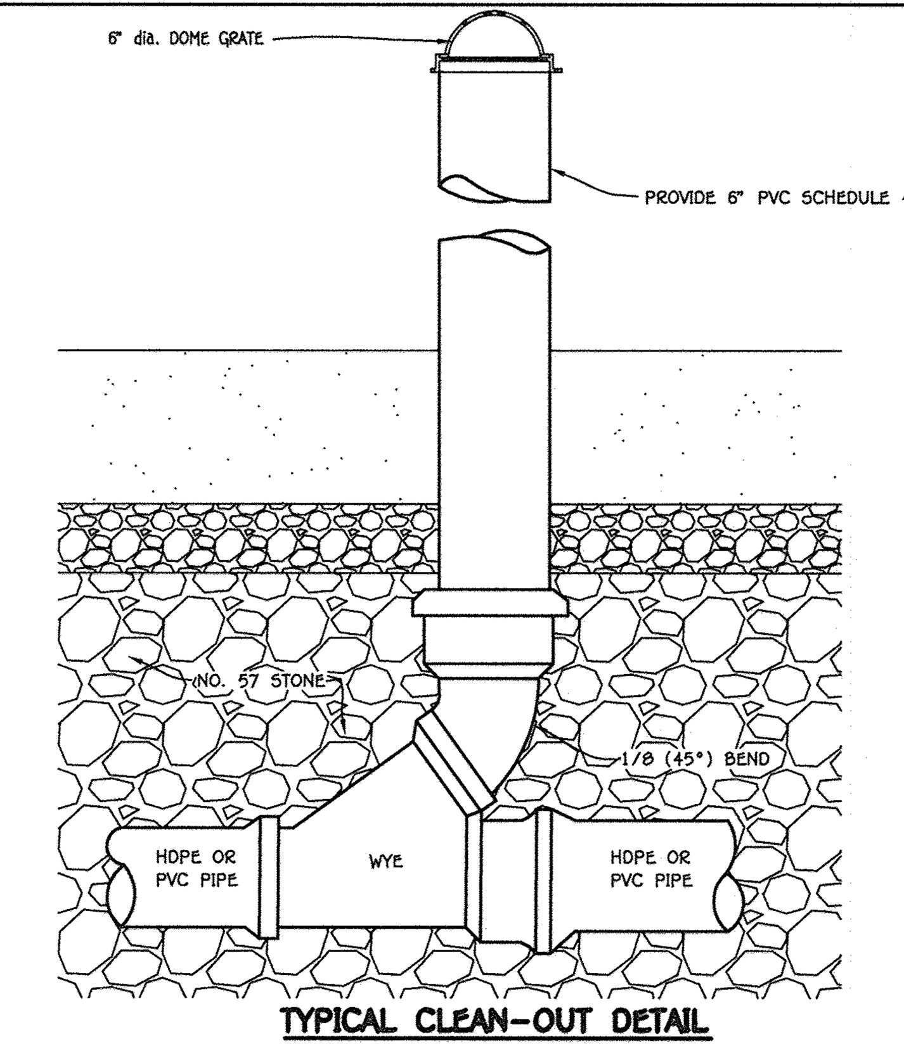
The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

7. Miscellaneous

These practices may not be constructed until all contributing drainage area has been stabilized

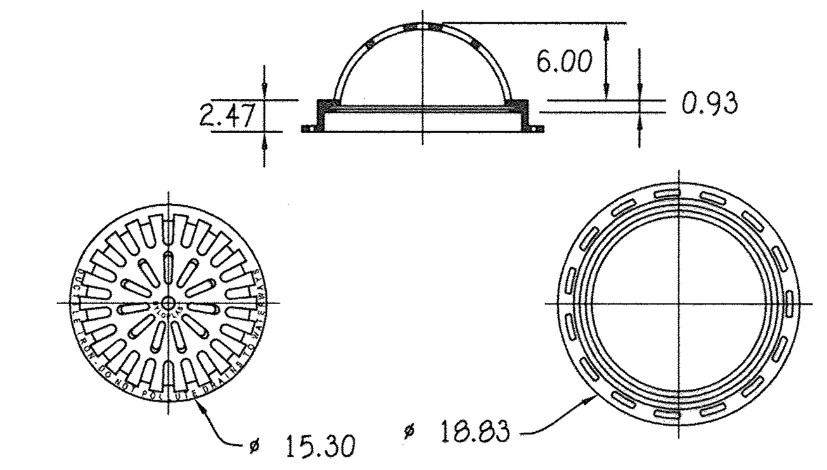
STORMWATER MANAGEMENT MAINTENANCE NOTE

ALL STORMWATER MANAGEMENT FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION, INC. THE STREET TREES, PERFORATED UNDERDRAINS, FEEDERS, PLANTINGS AND SWALES WILL ALSO BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION. HOWARD COUNTY WILL ONLY MAINTAIN THE INLET STRUCTURE WITHIN THE MICRO BIO-RETENTION FACILITIES ADJACENT TO THE RIGHT-OF-WAY.



TYPICAL CLEAN-OUT DETAIL

NO SCALE

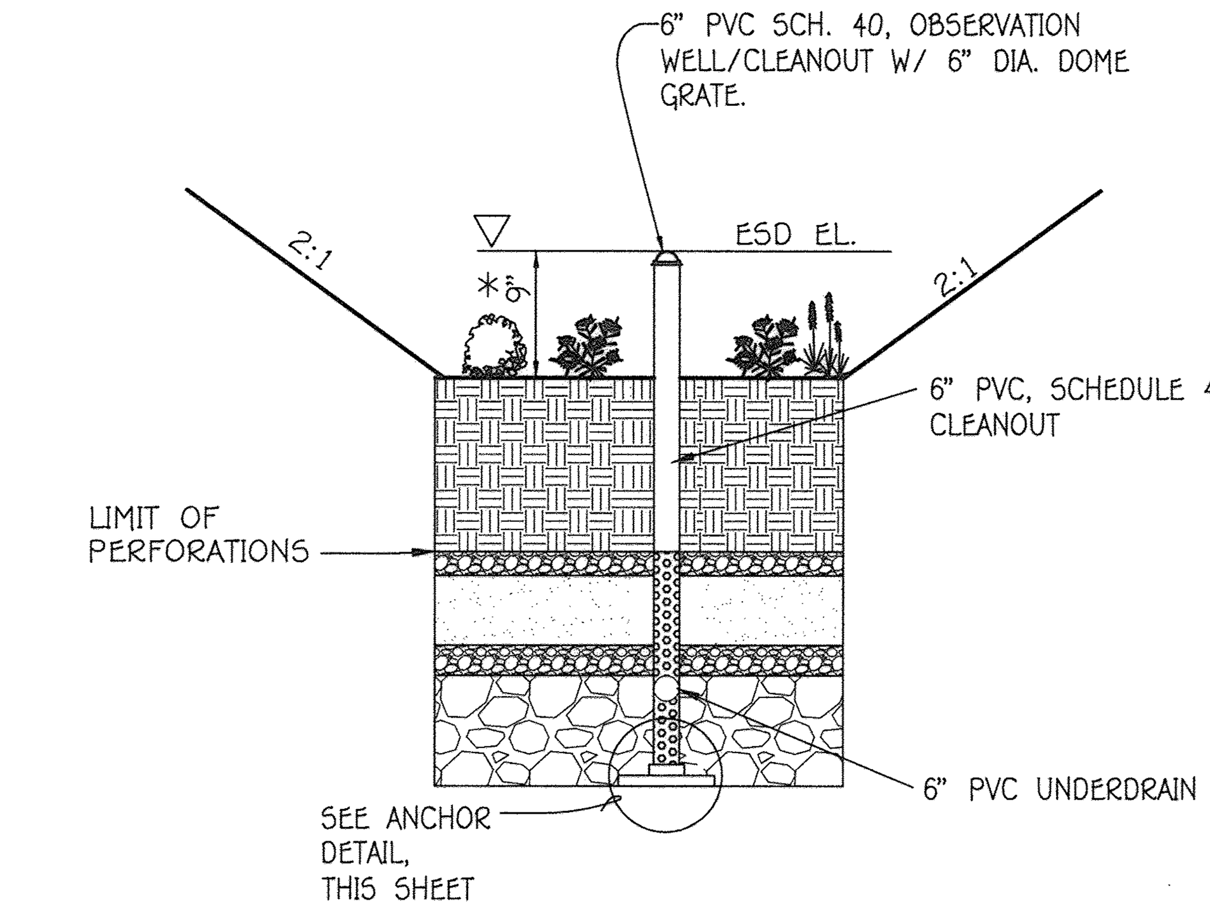


ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE
QUALITY: MATERIAL SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST
SEE DRAWING NO. 7001-110-230

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

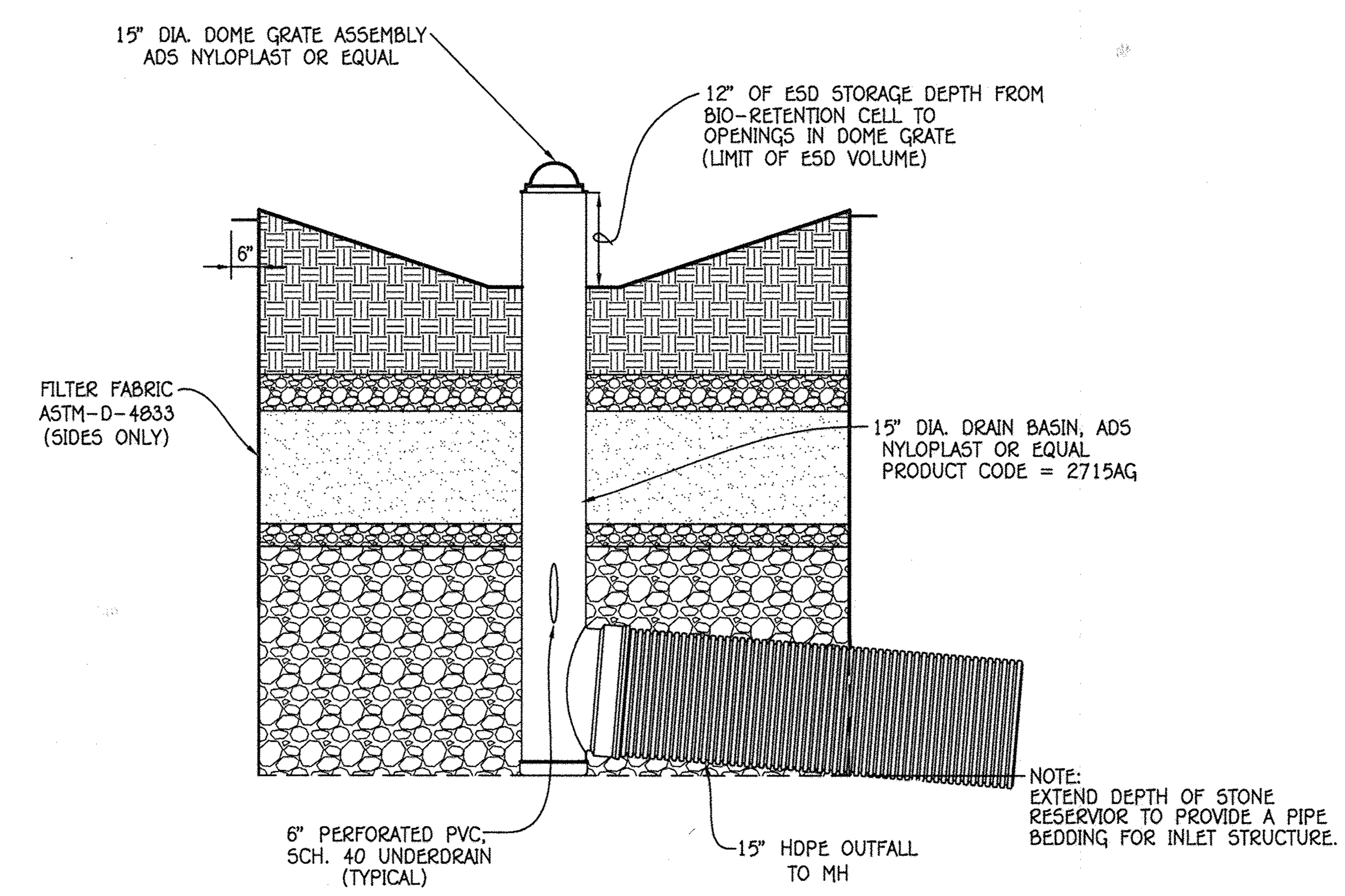
15" DOME GRATE ASSEMBLY

NYLOPLAST OR EQUAL



SECTION @ OBSERVATION WELL LOCATION

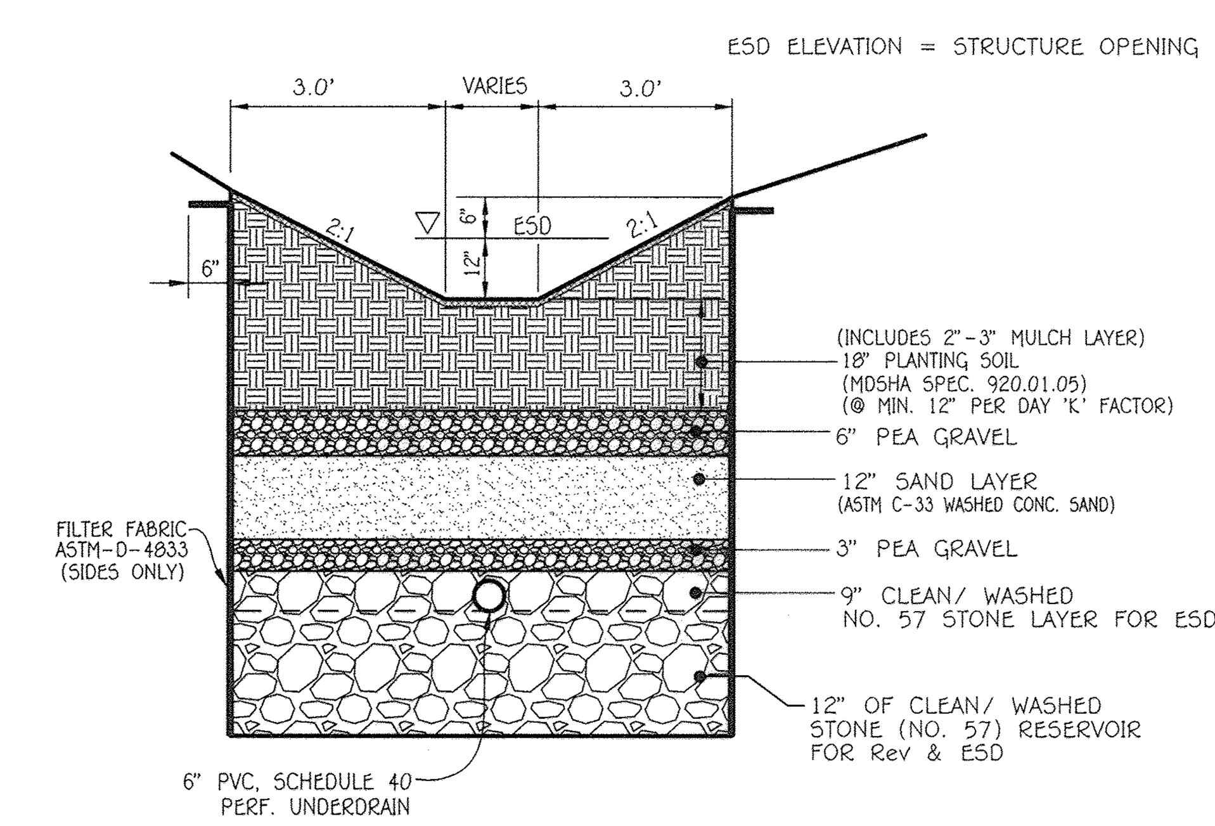
NOT TO SCALE



TYPICAL INLET STRUCTURE DETAIL @ MICRO BIO-RETENTION

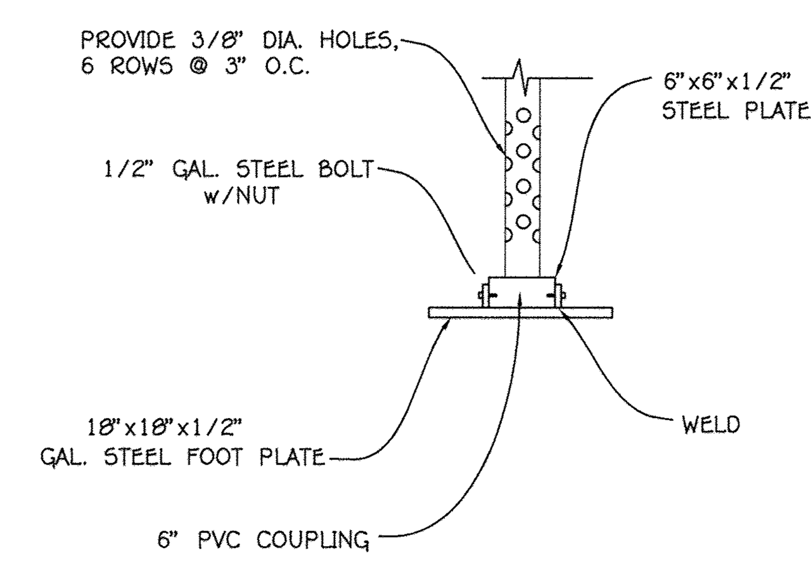
NO SCALE

NOTE: SEE SHEET 12 FOR PLANTING SCHEDULE FOR MICRO BIO-RETENTION FACILITES.



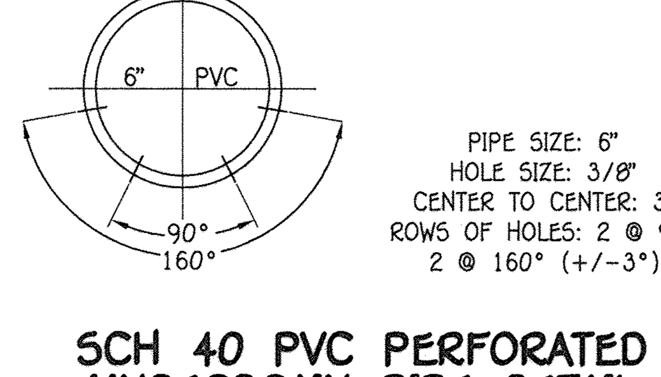
TYPICAL MICRO BIO-RETENTION (M-6) (WITHIN PARCEL)

NO SCALE



ANCHOR DETAIL

NO SCALE



SCH 40 PVC PERFORATED UNDERDRAIN PIPE DETAIL FOR HORIZONTAL DRAIN PIPE

NO SCALE

NOTES:
UNDERDRAIN PIPE SHALL BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 758, TYPE PS 28 OR AASHTO-M- 278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED 4" RIGID PIPE (e.g., PVC OR HDPE).

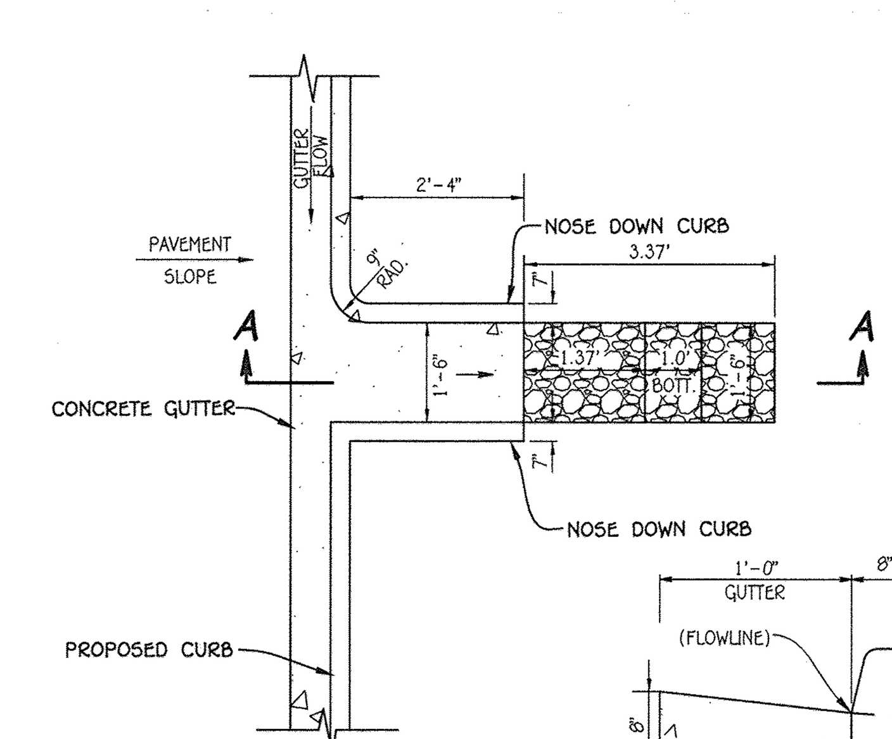
PERFORATIONS SHALL BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (No. 4 OR 4 x 4) GALVANIZED HARDWARE CLOTH.

GRAVEL LAYER SHALL BE (No. 57 STONE PREFERRED) AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.

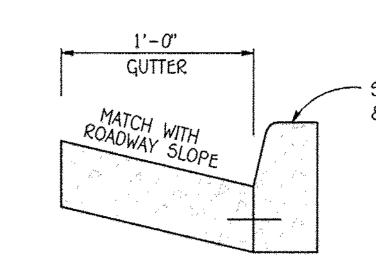
THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.

A RIGID, NON PERFORATED OBERSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQ.FT.) TO PROVIDE A CLEANOUT PORT AND MONITOR PERFORMANCE OF THE FILTER.

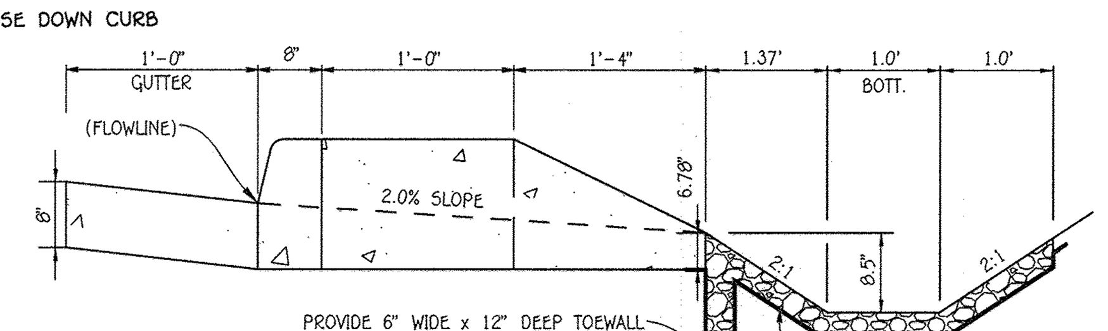
A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".



PLAN



CURB SECTION



SECTION A-A

CURB OPENING DETAIL 'A' FOR STD. 7" CONCRETE CURB & GUTTER ALONG ROADWAY

NO SCALE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE

STATE OF MARYLAND — MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER 6/16/15

AS-BUILT CERTIFICATION FOR PSWM
Note: There is no "AS BUILT" information provided on this sheet.
ALDO M. VITUCCI NO. 20748 4/10/19
Date

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 9-23-15
Chief, Development Engineering Division — Date 7-8-15
Director - Department of Planning and Zoning — Date 9-24-15

SUBDIVISION			PARCEL No.		LOT Nos.
OXFORD SQUARE			'C'		LOTS 224-241 & CONDO. BLDGS. 1-3
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

STORMWATER MANAGEMENT NOTES & DETAILS

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'

(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)

Zoned: TOD

Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003

First Election District Howard County, Maryland

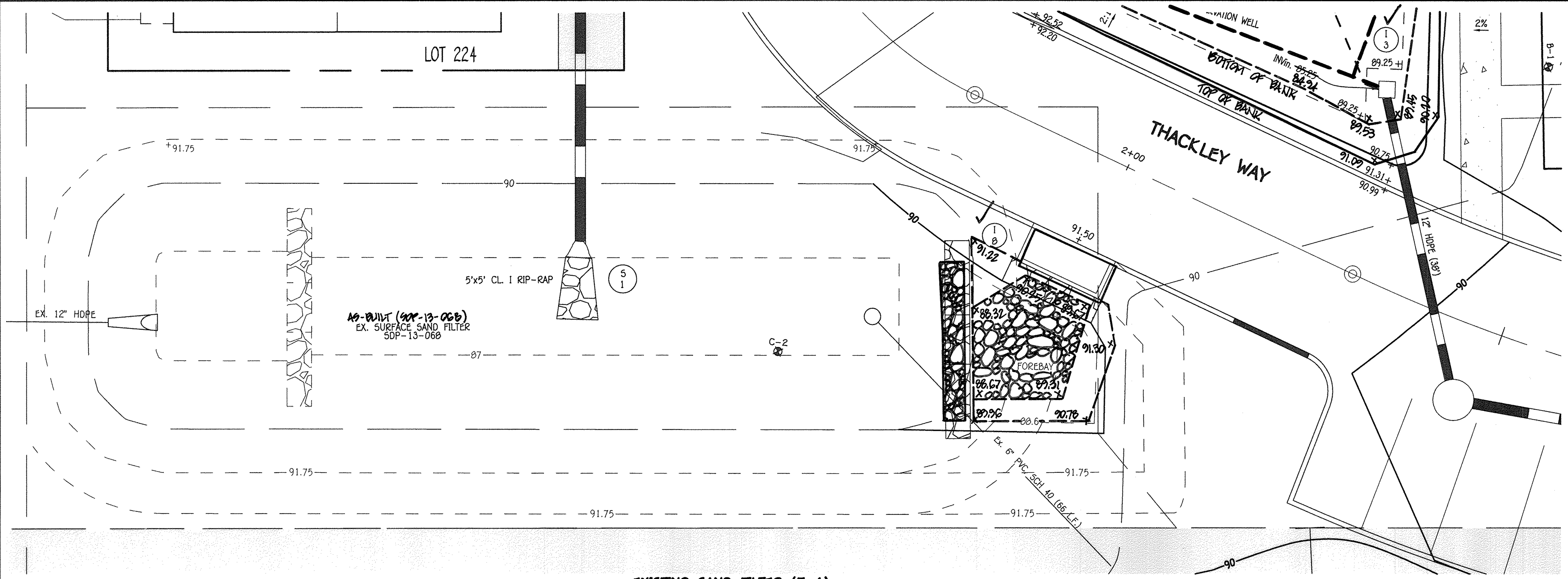
Scale: As Shown

Date: May 7, 2015

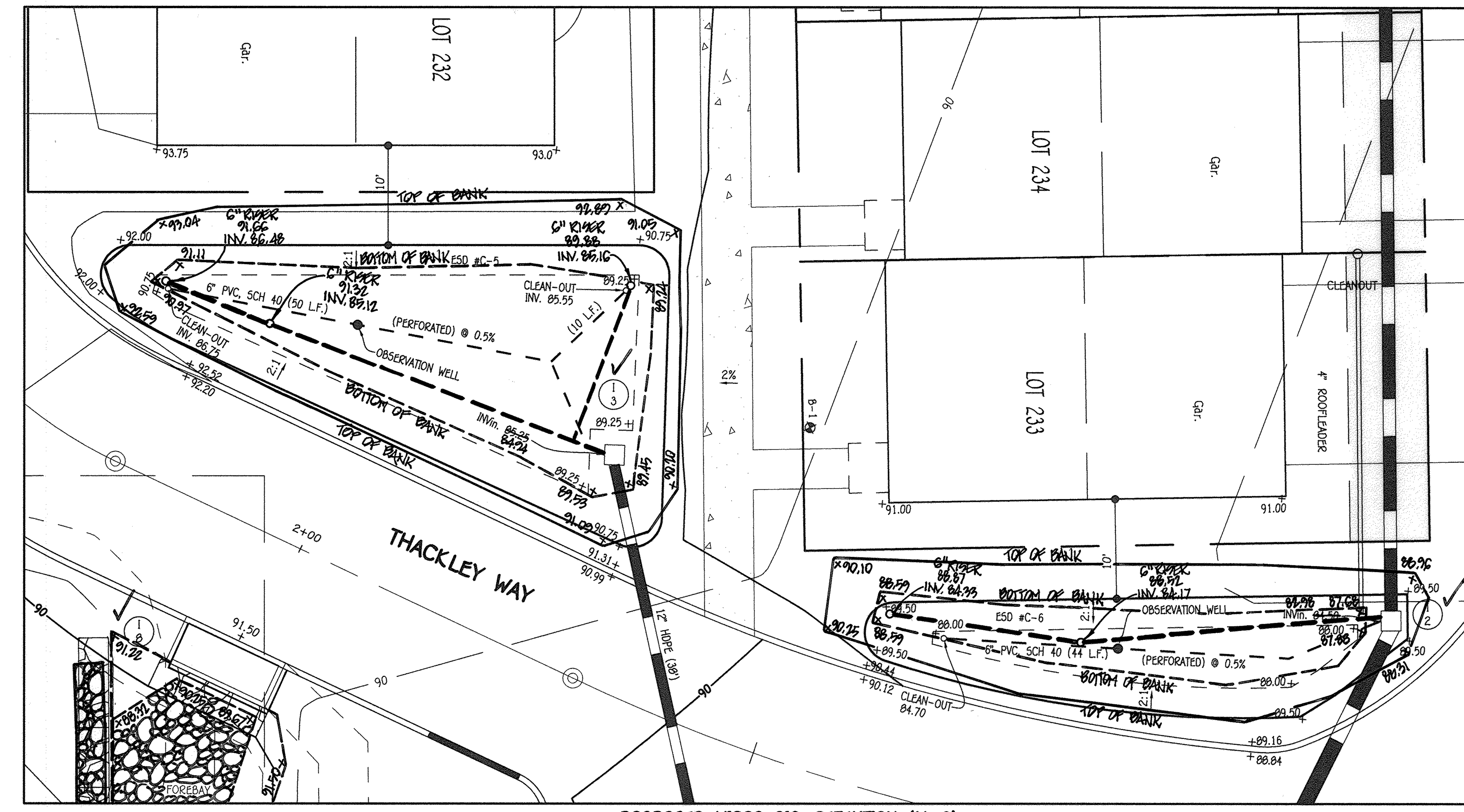
Sheet 6 Of 20

SDP-14-071

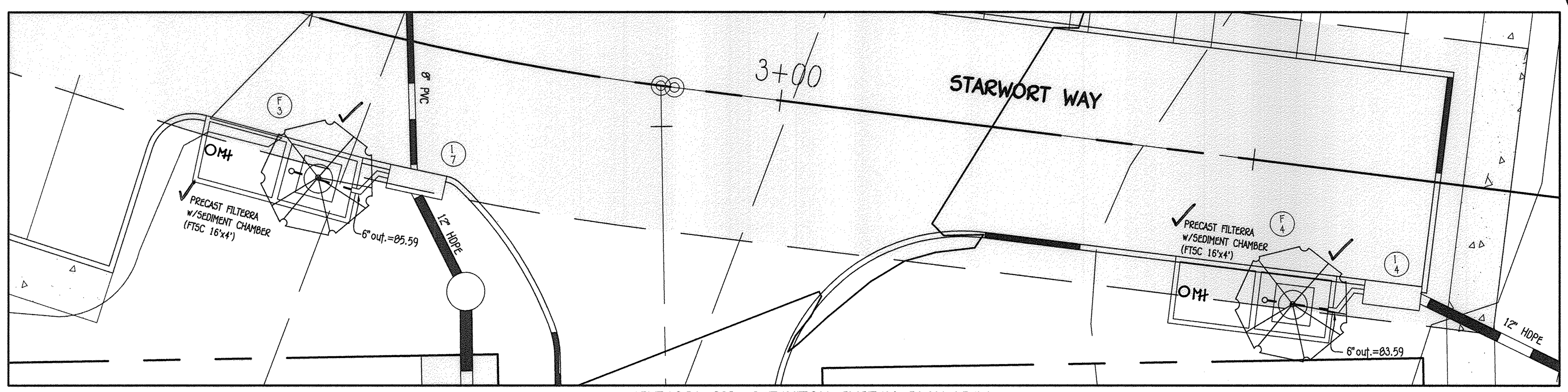
THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET



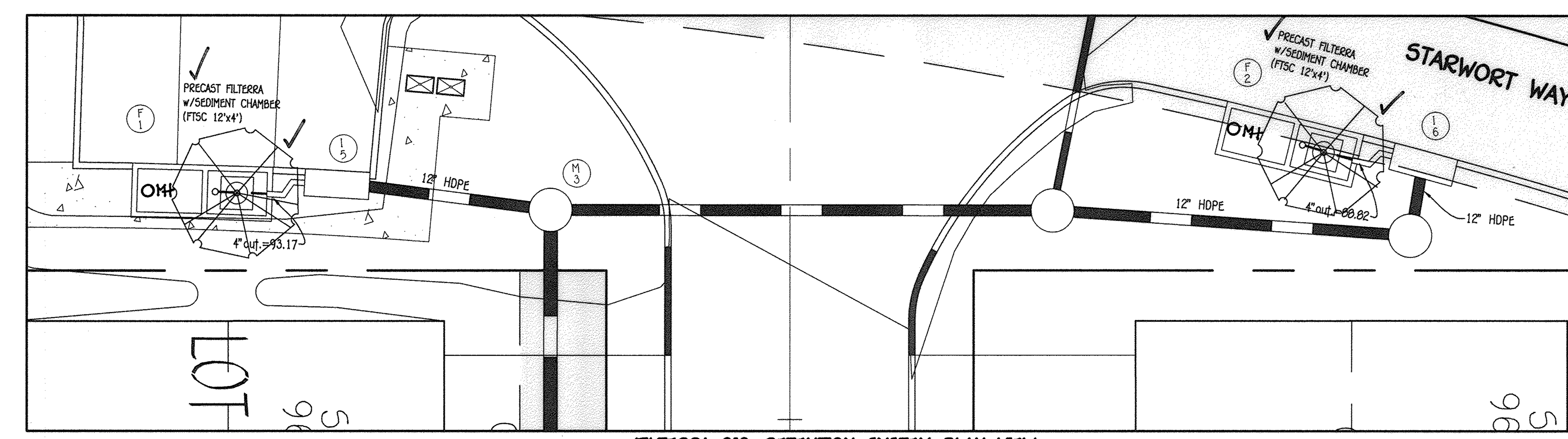
EXISTING SAND FILTER (F-1)
(SDP-13-068) FOREBAY PLAN VIEW
SCALE: 1" = 10'



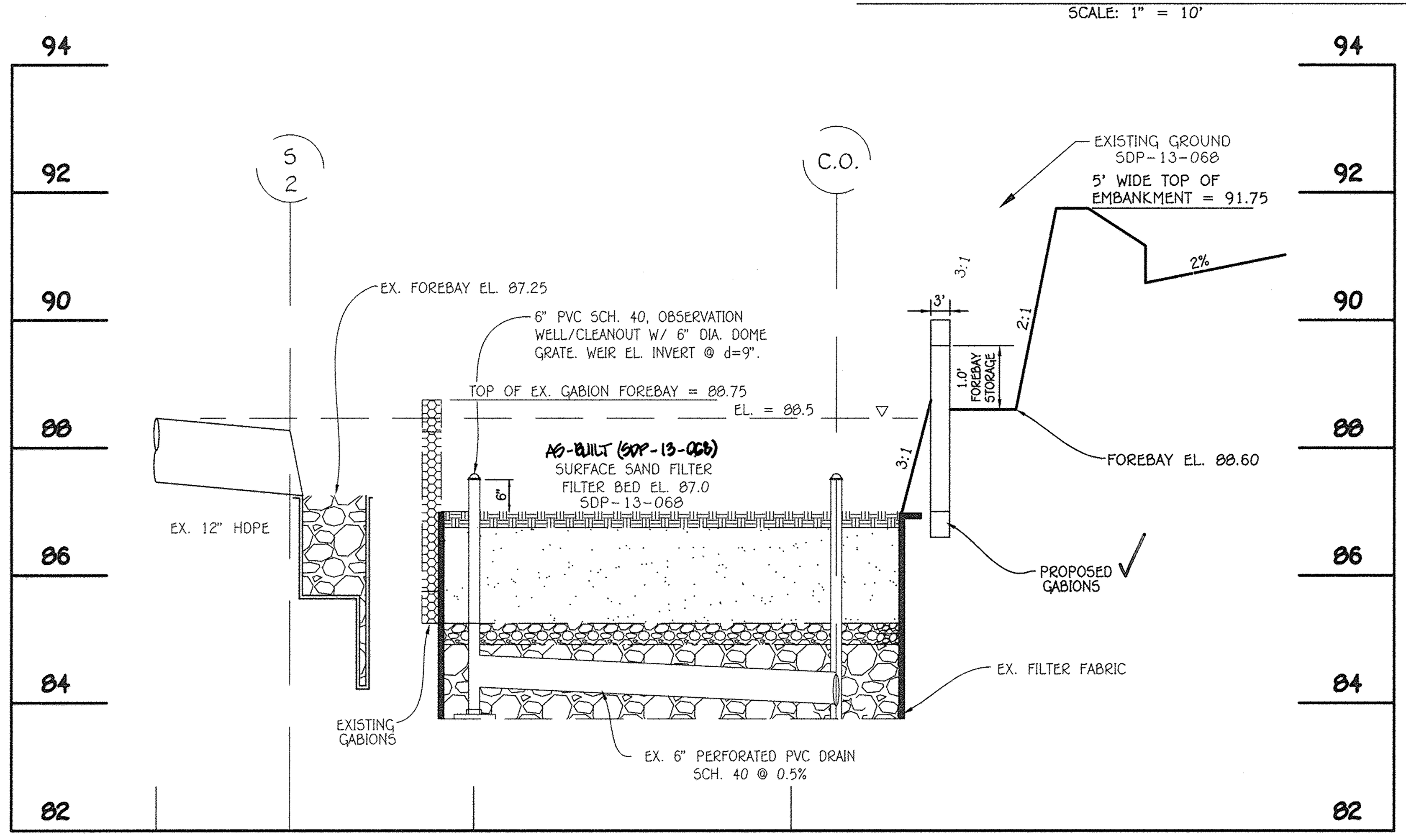
PROPOSED MICRO BIO-RETENTION (M-6)
FACILITY #C-5 & #C-6 PLAN VIEW
SCALE: 1" = 10'



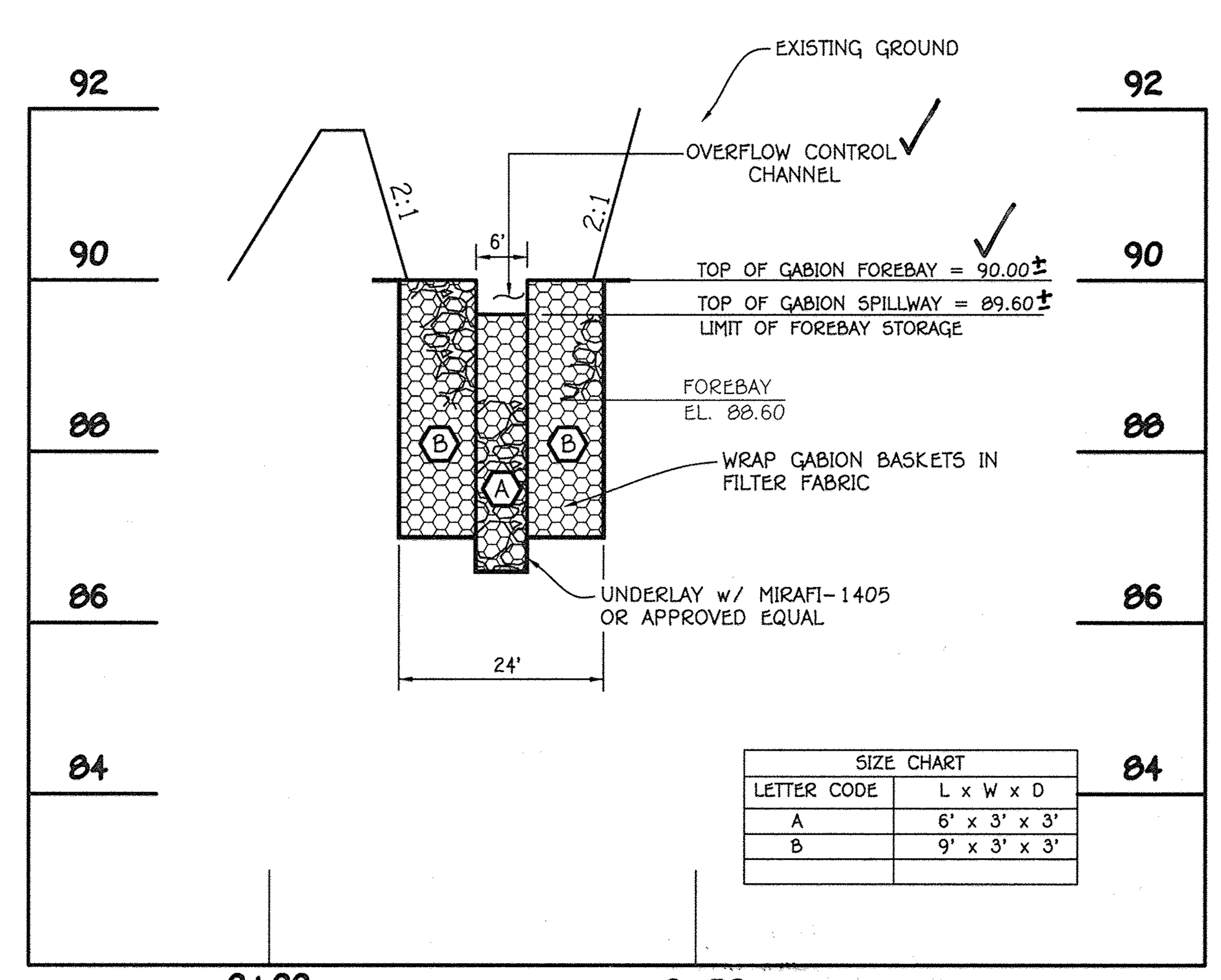
FILTERRA BIO-RETENTION SYSTEM PLAN VIEW
SCALE: 1" = 10'



FILTERRA BIO-RETENTION SYSTEM PLAN VIEW
SCALE: 1" = 10'

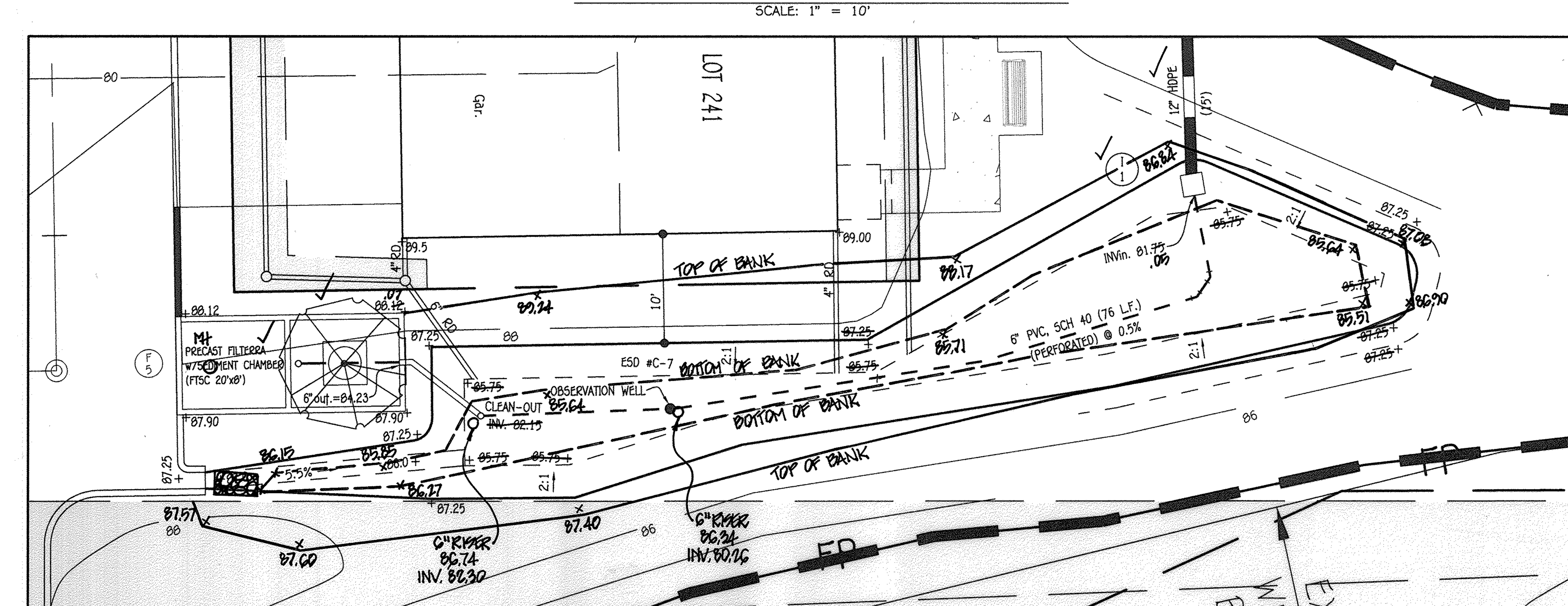


SECTION THRU EXISTING SAND FILTER (F-1)
SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'



SIZE CHART	
LETTER CODE	L x W x D
A	6' x 3' x 3'
B	9' x 3' x 3'

GABION FOREBAY FOR SAND FILTER PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'



PROPOSED MICRO BIO-RETENTION (M-6)
FACILITY #C-7 PLAN VIEW
SCALE: 1" = 10'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

NO.	REVISION	DATE

STATE OF MARYLAND · MICHAEL VITUCCI · No. 20748 · PROFESSIONAL ENGINEER 6/16/15

AS-BUILT CERTIFICATION FOR PSWM

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ALDO M. VITUCCI NO. 20748 — 4/10/19 Date

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Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 9-23-15 Date

Chief, Development Engineering Division — 7-8-15 Date

Director – Department of Planning and Zoning — 9-24-15 Date

SUBDIVISION			PARCEL No.		LOT Nos.
OXFORD SQUARE			'C'		LOTS 224-241 & CONDO. BLDGS. 1-3
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

STORMWATER MANAGEMENT PLANS

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224-241, Open Space Lots 242 & 243
And Parcel 'U'

(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)

Zoned: TOD
Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
First Election District Howard County, Maryland
Scale: As Shown
Date: May 7, 2015
Sheet 7 Of 20

SDP-14-071

"AS-BUILT"

SEDIMENT CONTROL LEGEND

Symbol	Description
—SSF—SSF—SSF—	SUPER-SILT FENCE
— SF — SF — SF —	SILT FENCE
S.C.E.	STABILIZED CONSTRUCTION ENTRANCE
C.I.P.	CURB INLET PROTECTION
S.I.P.	STANDARD INLET PROTECTION
L.O.D.	LIMIT OF DISTURBANCE

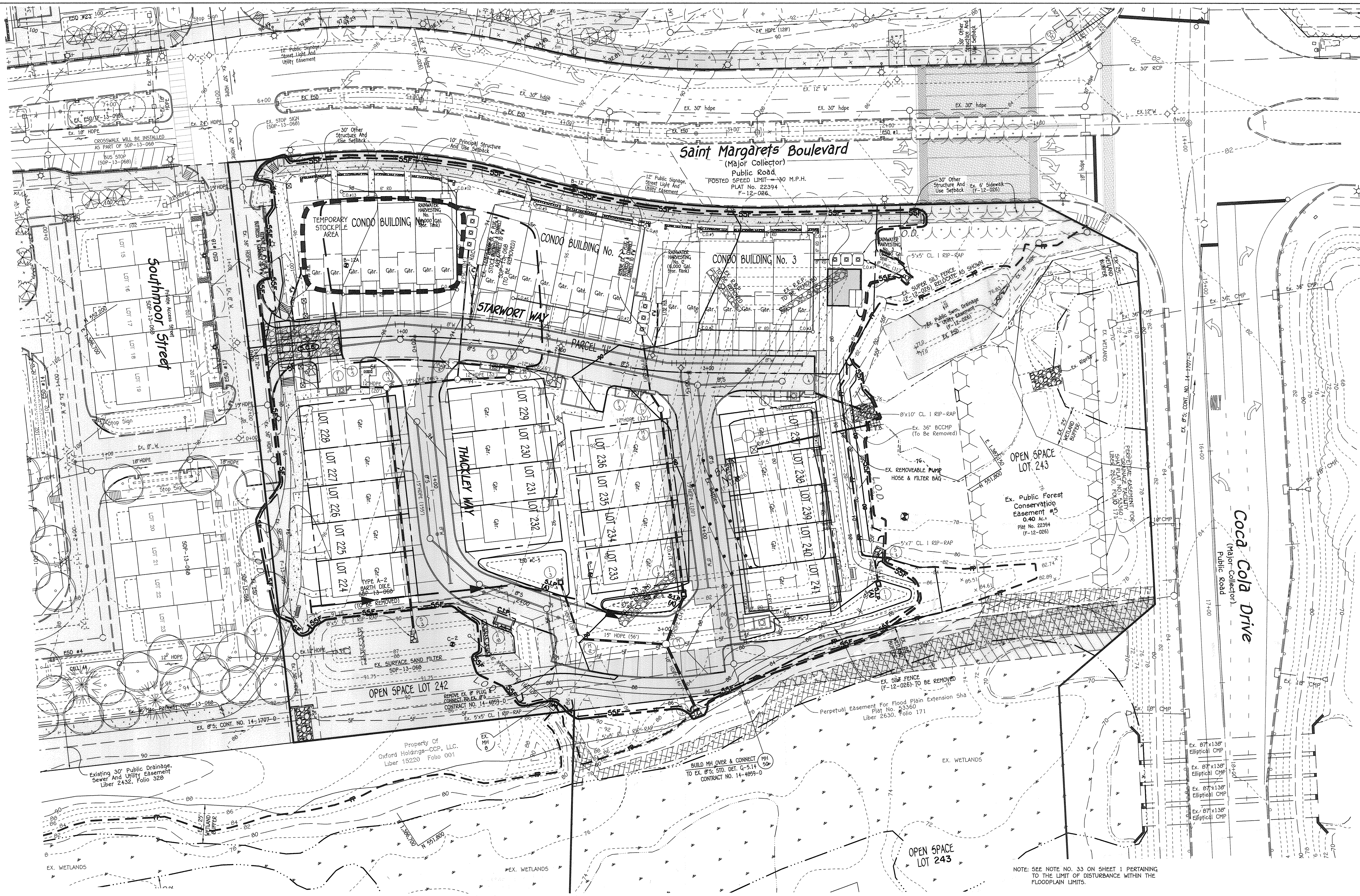
CONTRACTOR NOTES:

1. CONTRACTOR SHALL PUMP THE EXISTING BASIN No. 1 COMPLETELY DRY THROUGH A FILTERING DEVICE TO A CLEAN WATER OUTFALL BEFORE BACKFILLING.
2. CONTRACTOR SHALL REMOVE ANY AND ALL JUNK, DEBRIS AND TRASH FROM WITHIN THE FLOODPLAIN, STREAMS, WETLANDS & THEIR BUFFERS.

NOTE:
CONTRACTOR TO REPAIR ANY SEDIMENT CONTROL DEVICES INTERRUPTED BY THE INSTALLATION OF STORM DRAINS ARE TO BE REPAIRED IMMEDIATELY.

NOTE:
THOSE BUILDINGS AFFECTED BY THE INSTALLATION OF THE SHOWN SEDIMENT CONTROLS MAY NOT BEGIN UNTIL PERMISSION IS RECEIVED FROM THE SEDIMENT CONTROL INSPECTOR.

AS-BUILT CERTIFICATION FOR PSWM
Note: There is no "AS BUILT" information provided on this sheet.
ALDO M. VITUCCI NO. 20748 — 4/10/17 Date



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

NO.	REVISION	DATE

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER — 6/16/15

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
Approved: Howard SCD 6/23/15

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 9-23-15
Chief, Development Engineering Division — Date 7.8.15
Director – Department of Planning and Zoning — Date 9-24-15

SUBDIVISION			PARCEL No.	LOT Nos.	
OXFORD SQUARE			'C'	LOTS 224-241 & CONDO. BLDGS. 1-3	
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

SEDIMENT & EROSION CONTROL PLAN

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224–241, Open Space Lots 242 & 243 And Parcel 'U'

(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)

Zoned: TOD
Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
First Election District Howard County, Maryland
Scale: As Shown
Date: May 7, 2015
Sheet 8 Of 20

SDP-14-071

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

I:\2009\09014\dwg\SDP (Lennar) Parcel "C"\dec 17 2014 sdp per witmer changes\09014 Sheet 8 sec plan.dwg, C-08_SDP-14-071 sheet 8, 5/8/2015 11:56:51 AM, 1:1

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

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 1 1/2 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.

TEMPORARY SEEDING NOTES (B-4-4)

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): 6b Seed Mixture (from Table B.1):				Fertilizer Rate (10-20-20)	Lime Rate
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1"	436 lb/ac (10 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
OATS	72	3/1 - 5/15, 8/15 - 10/15	1"		
RYE	112	3/1 - 5/15, 8/15 - 10/15	1"		

PERMANENT SEEDING NOTES (B-4-5)

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 1/2 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: 1 1/2 to 3 pounds per 1000 square feet.

Notes:
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 1 1/2 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 (1/2 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

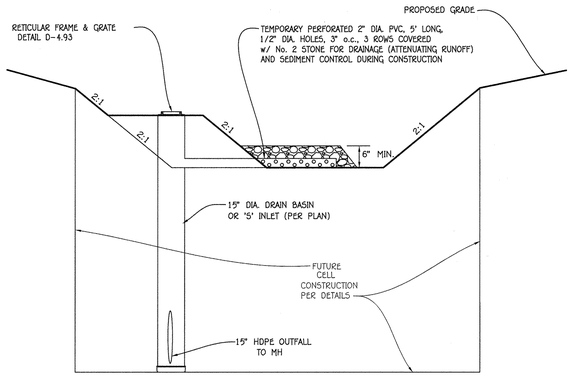
Hardiness Zone (from Figure B.3): 6b Seed Mixture (from Table B.3): 8					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P_2O_5	K_2O	
8	TALL FESCUE	100	Mar. 1-May 15 Aug. 1-Oct. 15	1/4-1/2 in.	45 lbs. per Acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

a.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

b.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.



TYPICAL MICRO BIO-RETENTION CELL DURING INITIAL CONSTRUCTION PHASE PRIOR TO DRAINAGE AREA BEING STABILIZED

NO SCALE

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.

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 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.

AS-BUILT CERTIFICATION FOR PSWM

Note: There is no "AS BUILT" information provided on this sheet.

ALDO M. VITUCCI NO. 20748 — 4/6/15 Date

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.

Criteria

A. Seeding
1. Specifications
   a. All seed must meet the requirement 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 keetp inoculant as cook 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 weedcontrol 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 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; P_2O_5 (phosphorus), 200 pounds per acre; K_2O (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.

B. Mulching
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 uniform fibrous physical state.
      i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate colot 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 by 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 to 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 4-15 feet wide and 300 to 3,000 feet long.

SEQUENCE OF CONTSRUCTION

1. OBTAIN GRADING PERMITS. (2 WEEKS)
2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE ANY WORK AT 1-800-257-7777. NOTIFY HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION AT 410-313-1870 AT LEAST 24-HOURS BEFORE STARTING ANY WORK.
3. INSTALL THE STABILIZED CONSTRUCTION ENTRANCES, PERIMETER SUPER SILT AS SHOWN ON THE PLANS. CLEAR AND GRUB WHERE NECESSARY FOR THE REMOVAL/BACKFILL OF SEDIMENT BASIN #1. REMOVE THE ASSOCIATED RIP RAP PROTECTION AS WELL UPON FILLING OR BACKFILLING THE EXISTING SEDIMENT BASIN #1. (3 DAYS)
4. GRADE SITE TO MASS GRADING CONTOURS FOR BOTH THE PARKING LOTS AND BUILDING PADS. THE CONTRACTOR SHALL HAVE THE OPTION TO GRADE SOME AREAS PRIOR TO OTHERS TO ALLOW FOR FLEXIBILITY ON WHICH PORTION OF THE PARKING LOT OR WHICH CONDO BUILDING IS TO BE CONSTRUCTED FIRST. OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR BEFORE PROCEEDING. (2 WEEKS)
5. INSTALL THE PROPOSED RETAINING WALL AS GRADES ARE BROUGHT UP IN ELEVATION ALONG THE EASTERN PART OF THE PARCEL. (2 WEEKS)
6. INSTALL THE PROPOSED STORM DRAIN SYSTEMS INCLUDING CONNECTIONS FOR EACH OF THE SWM-ESD FACILITIES. INSTALL PUBLIC WATER MAINS AND PUBLIC/PRIVATE SEWER MAINS AS SHOWN ON THE PLANS. AS FOR THE SWM BIO-RETENTION CELLS, THE CONSTRUCTION OF THE FILTER MEDIA, STONE LAYERS, UNDERDRAIN AND PLANTINGS FOR EACH BIO-RETENTION CELL SHALL BE DELAYED UNTIL THE CONTRIBUTING DRAINAGE AREA FOR EACH FACILITY IS PERMANENTLY STABILIZED. (4 WEEKS)
7. INSTALL THE PROPOSED SEWER AND WATER MAINS IN CONJUNCTION WITH THE ABOVE STORM DRAIN SYSTEM.
8. INSTALL CONCRETE CURB AND GUTTER, BASE COURSE PAVING. (1 WEEK)
9. INSTALL INLET PROTECTION ON THOSE INLETS AS INTENDED TO PROTECT EACH SWM FACILITY. BEGIN CONSTRUCTION OF THE CONDO BUILDINGS WITH THE ORDER OF CONSTRUCTION BEING UP TO THE DEVELOPER/CONTRACTOR. ONCE THE CONTRIBUTING DRAINAGE AREA TO THE PERIMETER DEVICES IS CONSTRUCTED AND STABILIZED THE SUPER SILT FENCE CAN BE REMOVED.
10. STABILIZE ALL REMAINING AREAS DISTURBED AREAS ONSITE WITH PERMANENT SEEDING OR OPTIONAL SODDING. REMOVE THE CONSTRUCTED EARTH DIKES, ONCE ALL THE AREAS UPSTREAM HAVE BEEN STABILIZED. THE FINAL CONSTRUCTION OF THE BIO-RETENTION FACILITIES CAN BE COMPLETED WITH THE FILTER MEDIA AND PLANTINGS. (1 WEEK)
11. WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR START REMOVING THE PERIMETER SEDIMENT CONTROL MEASURES AND STABILIZE WITH PERMANENT SEEDING OR OPTIONAL SODDING. THIS TASK SHOULD BE COORDINATED WITH THE PHASED CONSTRUCTION OF EACH OF THE FOUR BUILDINGS.
12. STANDARD NOTE: THE CONTRACTOR SHALL COORDINATE WITH THE INSPECTOR IN REGARDS TO THE REQUIREMENT THAT NO MORE THAN 20-ACRES OF "OPEN" GROUND SHALL BE DISTURBED AT ANY GIVEN TIME, IF REQUIRED. THIS PARCEL "C" IS LESS THAN 20-ACRES IN SIZE.
13. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS.
14. GREEN NEIGHBORHOOD NOTE: ALL CONSTRUCTION WASTE WILL BE MANAGED IN ACCORDANCE WITH THE APPROVED GREEN NEIGHBORHOOD WASTE MANAGEMENT PLAN.

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1855).
2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, b) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
5) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
6) SITE ANALYSIS:

TOTAL AREA OF SITE (PARCEL 'C')	5.639 ACRES
AREA DISTURBED	2.96 ACRES
AREA TO BE ROOFED OR PAVED	1.97 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.99 ACRES
TOTAL CUT	2,200 CU.YDS.
TOTAL FILL	10,900 CU.YDS.
ONSITE BORROW AREA LOCATION	WITHIN OXFORD SQUARE

7) ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIMTY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
8) ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
9) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
10) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
11) ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.
12) A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 ACRE PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PROCEEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

ENGINEER'S CERTIFICATE

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

Signature of Engineer (print name below signature) — 6/16/15 Date

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

U.S. Home Corp

Signature of Developer (print name below signature) — 6/9/2015 Date

JOSEPH GRZAN

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — 6/23/15 Date

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 9-23-15 Date

Chief, Development Engineering Division — 7.9.15 Date

Director - Department of Planning and Zoning — 9-24-15 Date

SUBDIVISION			PARCEL No.	LOT Nos.
OXFORD SQUARE			'C'	LOTS 224-241 & CONDO. BLDGS. 1-3
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

SEDIMENT AND EROSION CONTROL NOTES & DETAILS

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'

(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M' And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)

Zoned: TOD

Tax Map No.: 30 Grid No.: 20 Parcel No.: 1003

First Election District Howard County, Maryland

Scale: As Shown

Date: May 7, 2015

Sheet 9 Of 20

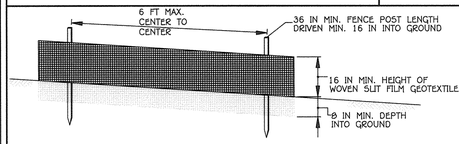
SDP-14-071

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

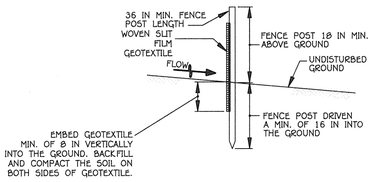
I:\2009\09014\dwg\SDP (Lennar) Parcel 'C'\dec 17 2014 sdp per winmar changes\09014 Sheet 9-10 sec details.dwg, C-09, SDP-14-071 sheet 9, 3/8/2015 12:00:50 PM, 1:1

DETAIL E-1 SILT FENCE

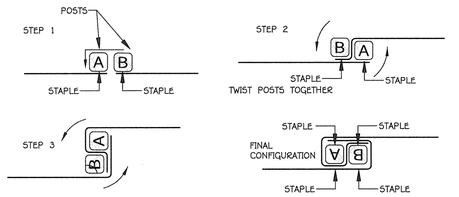
STANDARD SYMBOL: SF



ELEVATION



CROSS SECTION



JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

CONSTRUCTION SPECIFICATIONS

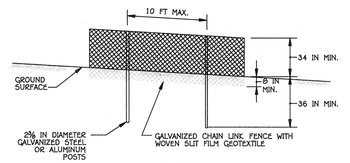
1. USE WOOD POSTS 1¾ X 1¾ x 1⅛ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. 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.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

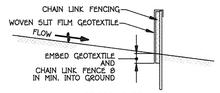
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



ELEVATION



CROSS SECTION

CONSTRUCTION SPECIFICATIONS

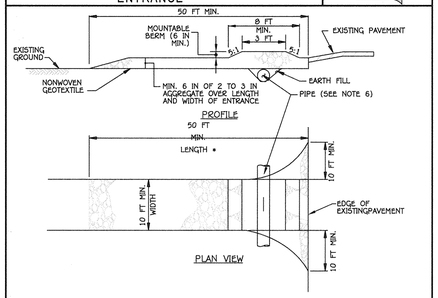
1. INSTALL 2½ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅝ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HOG 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 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 10 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.

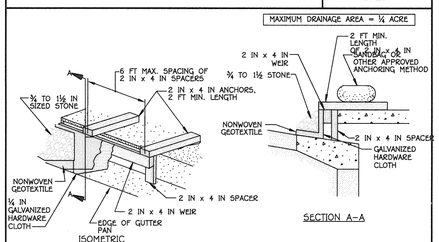
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

MAXIMUM DRAINAGE AREA = ¼ ACRE



CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH x 4 INCH LUMBER
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
3. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
4. ATTACH A CONTINUOUS PIECE OF ½ INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
6. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
7. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
8. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
9. AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
10. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

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-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

TYPE A MAXIMUM DRAINAGE AREA = ¼ ACRE
TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE

ISOMETRIC VIEW

SECTION FOR TYPE A AND B

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-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

CONSTRUCTION SPECIFICATIONS

1. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
3. FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH ½ INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.

   FOR TYPE B, USE 2½ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
4. BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
5. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

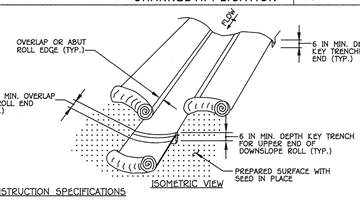
2 OF 2

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

DETAIL B-4-6-A TEMPORARY SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL: TSSMC – * lb/ft² (* INCLUDE SHEAR STRESS)



ISOMETRIC VIEW

CONSTRUCTION SPECIFICATIONS

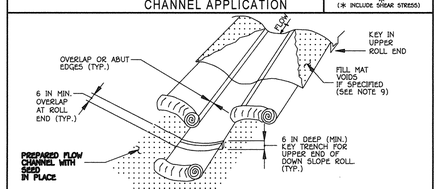
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 1¿ TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. KEY-IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMUM) TRENCH AT THE UPSTREAM END OF THE MATTING, PLACING THE ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END.
7. OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

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-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL: PSSMC – * lb/ft² (* INCLUDE SHEAR STRESS)



ISOMETRIC VIEW

CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 1¿ TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
7. **KEY IN** THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

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

AS-BUILT CERTIFICATION FOR PSWM

Note: There is no "AS BUILT" information provided on this sheet.

ALDO M. VITUCCI NO. 20140 PROFESSIONAL ENGINEER

Aldo M. Vitucci 4/16/19
ALDO M. VITUCCI NO. 20140 Date

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE

STATE OF MARYLAND ALDO MICHAEL VITUCCI 20140 PROFESSIONAL ENGINEER

ENGINEER'S CERTIFICATE

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

Aldo M. Vitucci 6/16/15
Signature of Engineer (print name below signature) Date

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

V.P. Homes 6/9/2015
Signature of Developer (print name below signature) Date
Joseph Bottino

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

John R Robertson 6/23/15
Howard SCD Date

Owner/Builder	Developer
Lennar 10211 Wincopin Circle, Suite 180 Columbia, Maryland 21044 Ph# 410-423-0460	Lennar 10211 Wincopin Circle, Suite 180 Columbia, Maryland 21044 Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	9-23-15 Date
Chief, Development Engineering Division	11-3-15 Date
Director - Department of Planning and Zoning	9-24-15 Date

SUBDIVISION	PARCEL No.	LOT Nos.
OXFORD SQUARE	'C'	LOTS 224-241 & CONDO. BLDGS. 1-3

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

SEDIMENT AND EROSION CONTROL NOTES & DETAILS

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'

(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M' And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)

Zoned: TOD

Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003

First Election District Howard County, Maryland

Scale: As Shown

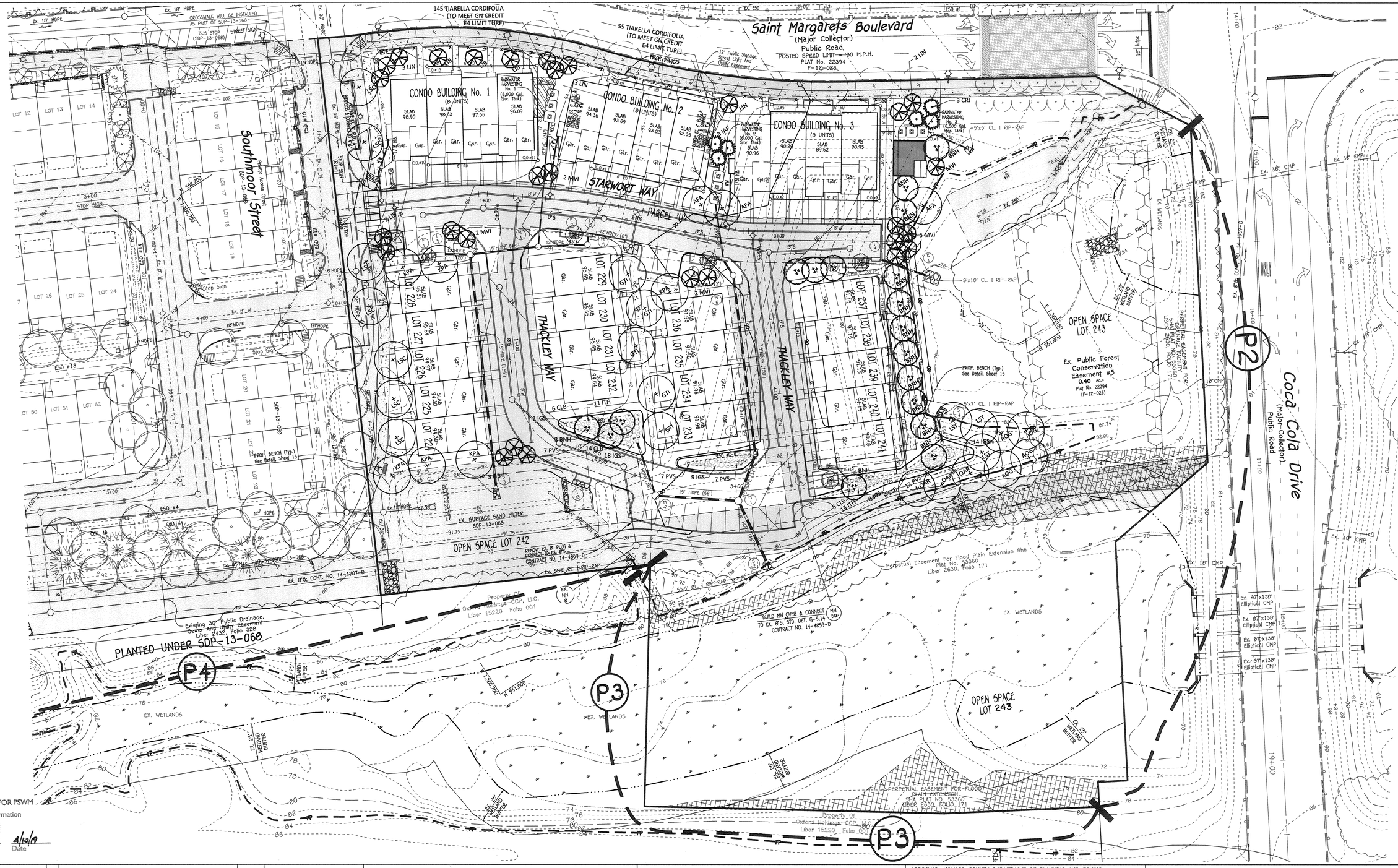
Date: May 7, 2015

Sheet 10 Of 20

SDP-14-071

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

I:\2009\09014\dwg\SDP (Lennar) Parcel 'C'\doc 17 2014 sdp per winner changes\09014 Sheet 9-10 xsc details.dwg, C-10_SDP-14-071 sheet 10, 5/8/2015 12:01:56 PM, 1:1



AS-BUILT CERTIFICATION FOR PSWM

Note: There is no "AS BUILT" information provided on this sheet.

ALDO M. VITUCCI NO. 20740 — 4/10/19 Date

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE
1	REPLACED STONE WALL WITH FENCE ALONG ST. MARGARETS BOULEVARD	1/10/17

STATE OF MARYLAND — MICHAEL PAUL GALLAGHER — No. 21748 — PROFESSIONAL ENGINEER — 6/16/15

LANDSCAPE DEVELOPER'S CERTIFICATE

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

U.S. HOME CORP. — Name — 6/9/2015 Date

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 9-23-15 Date
Chief, Development Engineering Division — 9.8.15 Date
Director - Department of Planning and Zoning — 9-24-15 Date

SUBDIVISION	PARCEL No.	LOT Nos.
OXFORD SQUARE	'C'	LOTS 224-241 & CONDO. BLDGS. 1-3

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

LANDSCAPE PLAN

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'

(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M' And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859.)

Zoned: TOD

Tax Map No.: 30 Grid No.: 20 Parcel No.: 1003

First Election District Howard County, Maryland

Scale: As Shown

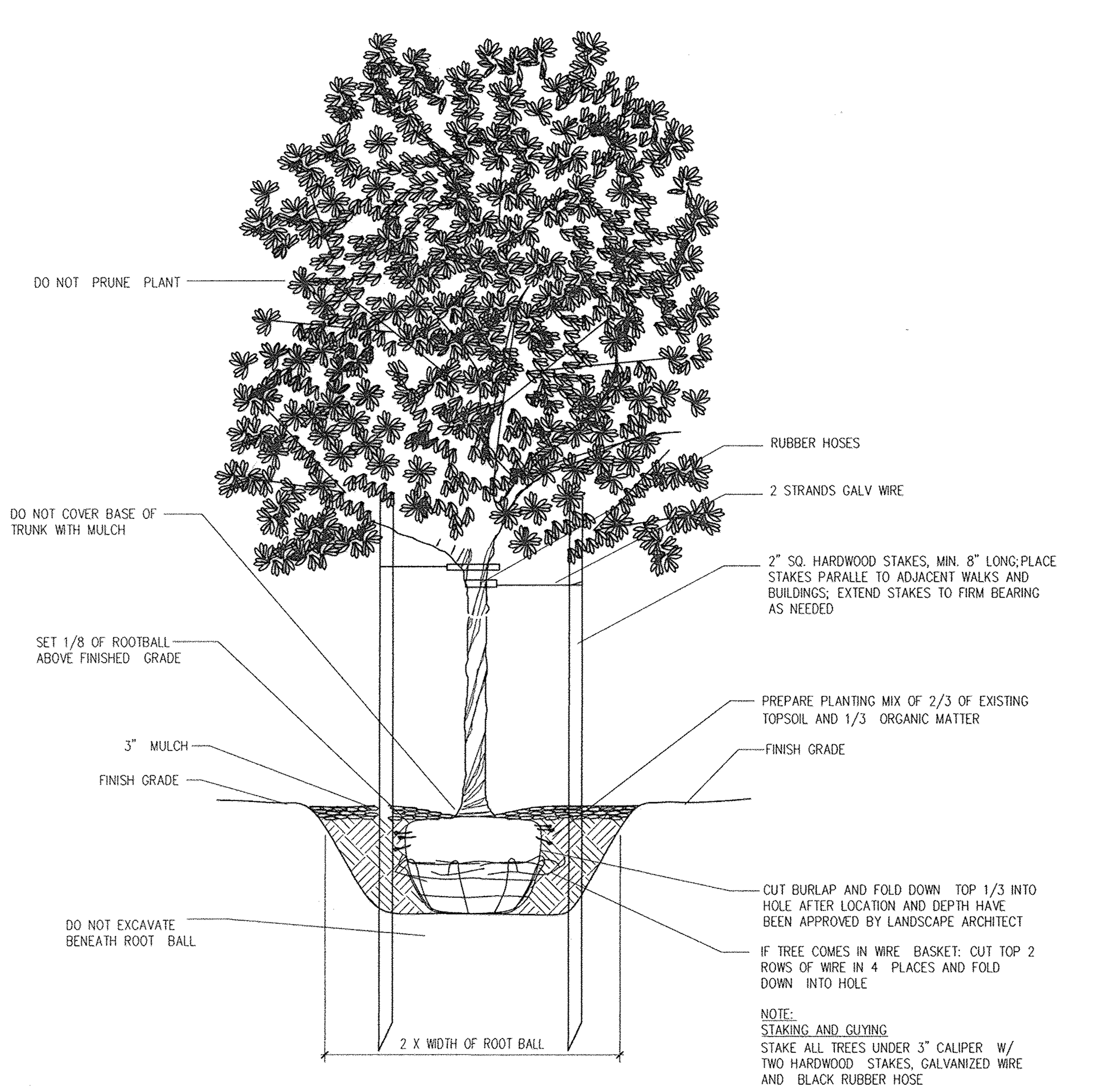
Date: May 7, 2015

Sheet 11 Of 20

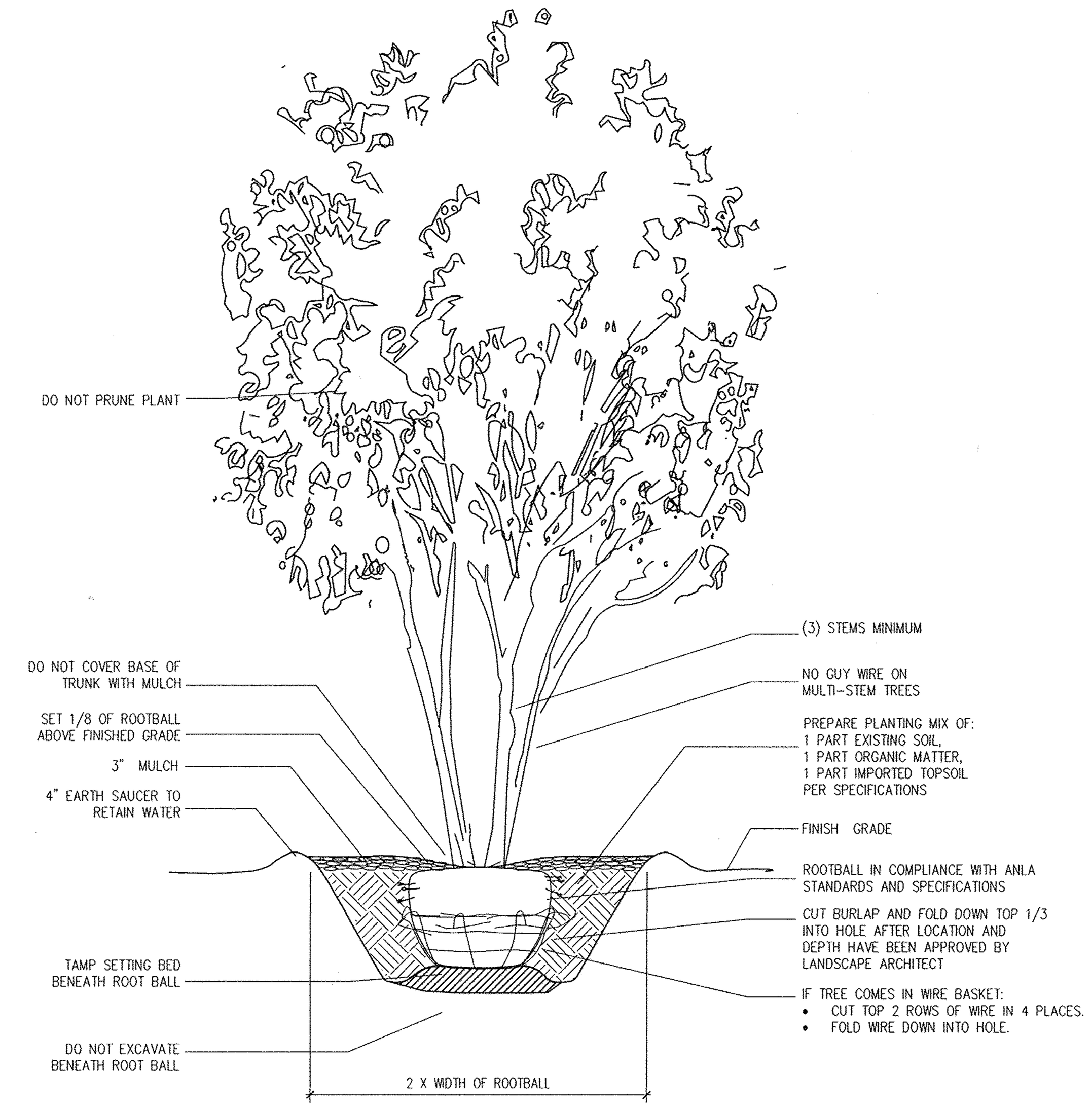
SDP-14-071

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

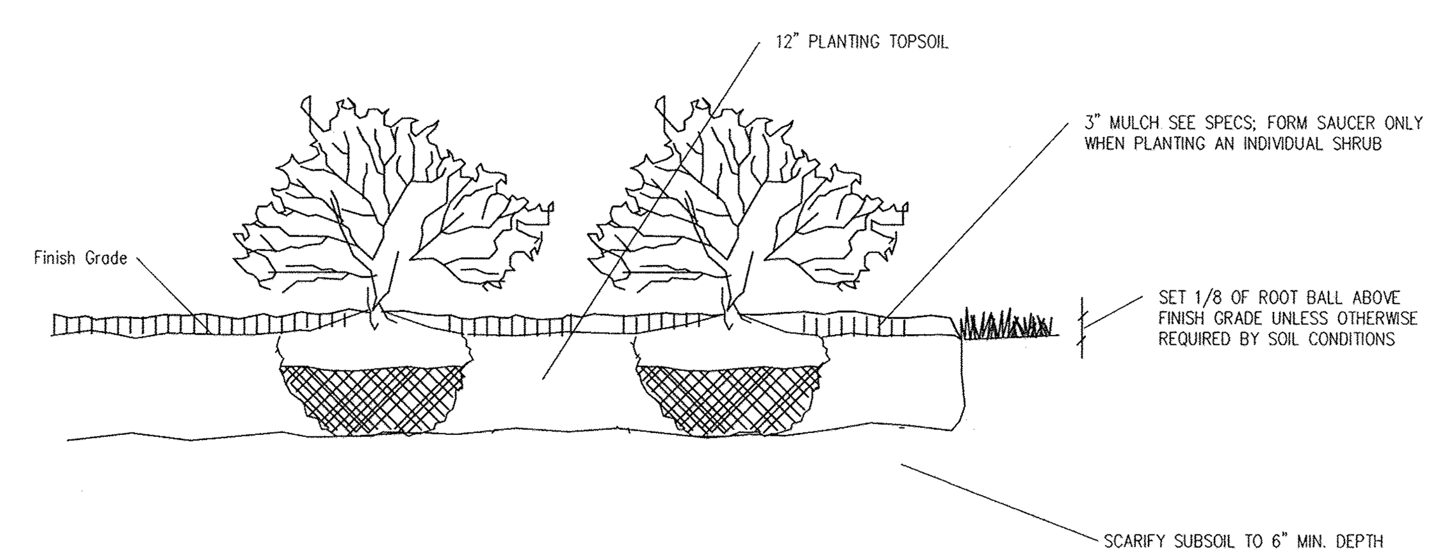
I:\2009\09014\dwg\SDP (Lennar) Parcel 'C'\dec 17 2014 sdp per winner changes\09014 Sheet 11-12 landscape plans.dwg, C+11_SDP-14-071 sheet 11, 5/8/2015 1:03:19 PM, 1:1



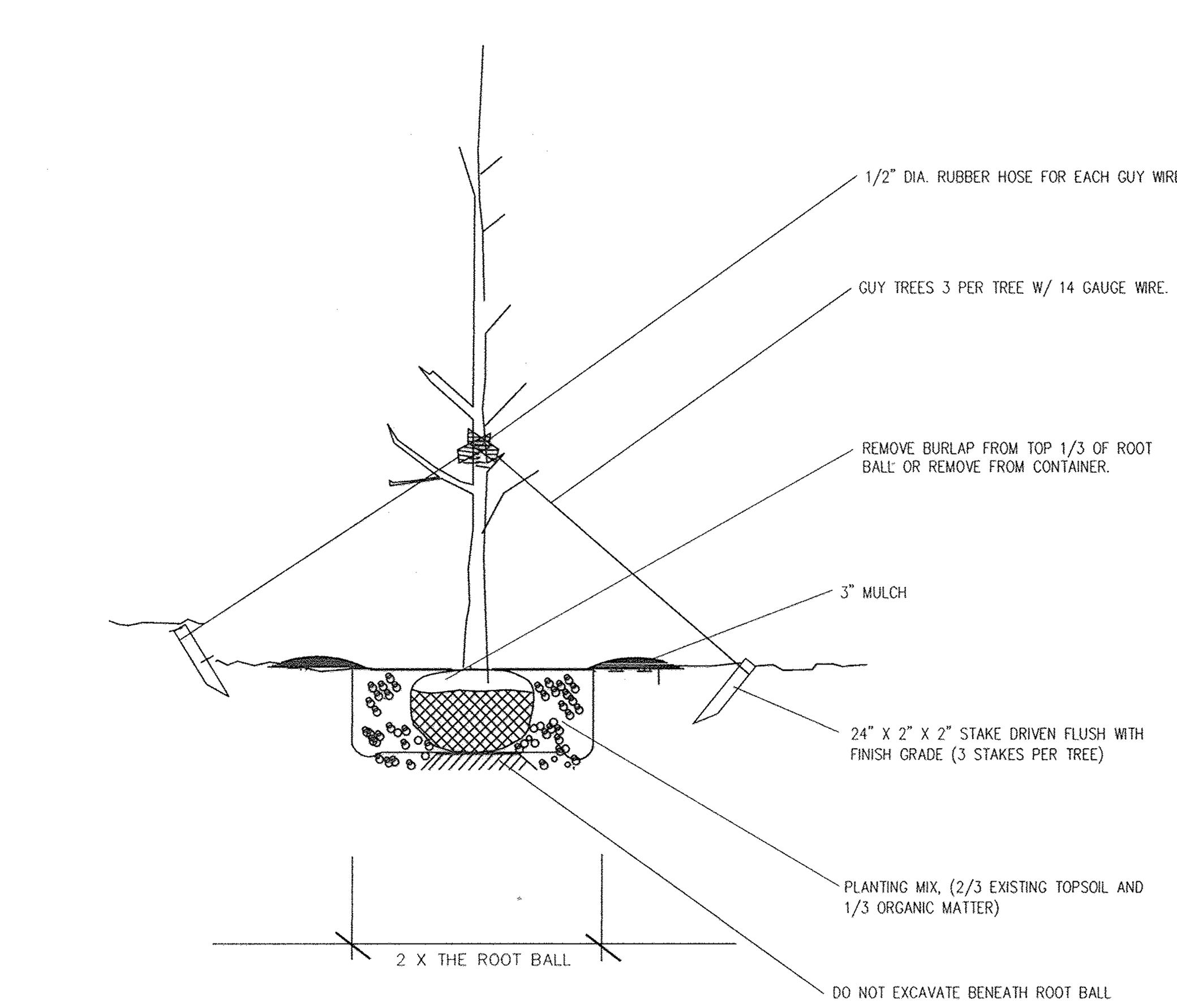
DECIDUOUS TREE - TYPICAL PLANTING DETAIL



MULTISTEM TREE - TYPICAL PLANTING DETAIL



SHRUB AND HEDGEROW - TYPICAL PLANTING DETAIL



EVERGREEN TREE - TYPICAL PLANTING DETAIL

PLANTING SPECIFICATIONS

1. CLEAR & GRUB ALL PLANTING AREAS AS INDICATED ON THE DRAWINGS.
2. PROVIDE PROTECTION FOR TREES, SHRUBS, AND PERENNIALS/GROUND COVERS THAT ARE TO BE PRESERVED.
3. CONTRACTOR SHALL VERIFY THE CORRECT LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO INSTALLATION OF ANY PLANT MATERIALS.
4. ALL PLANTING SHALL BE DONE AS PER PLANTING DETAILS AND SPECIFICATIONS.
5. NO CHANGES SHALL BE MADE WITHOUT WRITTEN CONSENT OF THE OWNER OR LANDSCAPE ARCHITECT.
6. PRIOR TO CONSTRUCTION OF PLANTING BEDS, THE CONTRACTOR SHALL STAKE OUT PLANTING BED LINES IN THE FIELD FOR REVIEW BY THE LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT SHALL MAKE ADJUSTMENTS IN THE FIELD AS NECESSARY. ALL FINAL PLANTING BED LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT. FOR LAYOUT REVIEW, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT A MINIMUM OF THREE DAYS IN ADVANCE.
7. INSTALL ALL REQUIRED PLANTING AND LAWN SOILS AS PER DETAILS AND SPECIFICATIONS, AND ALL SHRUBS, GROUND COVERS, AND PERENNIALS SHALL BE PLANTED IN PLANTING BEDS PREPARED AS REQUIRED BY THE DETAILS AND SPECIFICATIONS.
8. MAINTAIN POSITIVE DRAINAGE OUT OF PLANTING BEDS AT A MINIMUM 2% SLOPE AND MAINTAIN POSITIVE DRAINAGE OF ALL LAWN AREAS, UNLESS OTHERWISE NOTED ON DRAWINGS. ALL GRADES, DIMENSIONS, AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR ON SITE BEFORE CONSTRUCTION BEGINS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OR OWNER.
9. ALL PLANT BEDS SHALL BE CONTAINED WITH A SPADED EDGE UNLESS OTHERWISE NOTED ON DRAWINGS.
10. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE DRAWINGS AND QUANTITIES SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE DRAWINGS SHALL APPLY. REPORT DISCREPANCIES TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING.
11. ALL PLANTS SHALL CONFORM TO THE SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION.
12. PLANTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS. PRIOR TO PLANTING, THE CONTRACTOR SHALL STAKE OUT THE LOCATIONS OF ALL PLANTS IN THE FIELD FOR REVIEW BY THE LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT SHALL MAKE ADJUSTMENTS IN THE FIELD AS NECESSARY. ALL FINAL PLANT LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT. FOR LAYOUT REVIEW, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT A MINIMUM OF THREE DAYS IN ADVANCE.
13. ALL DISTURBED AREAS SHALL BE FINE GRADED AND SEEDED OR SODDED; SEE PLAN FOR LOCATIONS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AND MAINTAINING ALL PLANTS DURING THE WARRANTY PERIOD; REFER TO SPECIFICATIONS.

AS-BUILT CERTIFICATION FOR PSWM

Note: There is no "AS BUILT" information provided on this sheet.

ALDO M. VITUCCI NO. 20748 — 4/10/17
Date

SCHEDULE C RESIDENTAL DEVELOPMENT INTERNAL LANDSCAPING

NUMBER OF DWELLING UNITS (SFA) (CONDOS)	 18 24
NUMBER OF TREES REQUIRED (1:DU SFA) (1:3 DU CONDOS)	 18 8
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	 26 –

STREET TREE SCHEDULE

SYMBOL	QTY.	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
LSC	4	Liquidambar styraciflua 'Cherokee' Cherokee Sweetgum (seedless only)	2½" CAL. min.	ALONG PRIVATE ROAD SOUTHMOOR STREET (SEE PLAN)

NOTE: FINAL PLACEMENT OF STREET TREES WILL OCCUR IN THE FIELD AND BE PLACED A MINIMUM OF 30 FEET FROM ALL SIGNS AND INTERSECTIONS WHEN PLANTED BETWEEN SIDEWALK AND CURB, BE LOCATED WITH CONSIDERATION OF UNDERGROUND UTILITIES AND STRUCTURES AND MAINTAIN A MINIMUM 5 FEET DISTANCE ON CENTER FROM A DRAIN INLET STRUCTURE, 5 FEET FROM AN OPEN SPACE ACCESS STRIP AND 10 FEET FROM A DRIVEWAY.

FINANCIAL SURETY FOR THE 4 STREET TREES SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $1,200.00

SCHEDULE A PERIMETER LANDSCAPE EDGE

PERIMETER	P2	P3	P4
CATEGORY	Adjacent to Roadway (Residential)	Res. Adjacent to Other	Res. Adjacent to Other
LANDSCAPE TYPE	B	A	A
LINEAR FEET OF PERIMETER	506.98'	470.63'	1188.54'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	600' (SDP-13-068) 588.54' (SDP-14-019)
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE IF NEEDED)	NO	NO	NO
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	 10 13 –	 8 – –	 0 0 –
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES ORNAMENTAL TREES SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	 10 13 – – –	 8 – – – –	 – – – – –

PLANT LIST (SDP-14-071)

QTY.	SYM.	BOTANICAL/COMMON NAME	SIZE	CONT.	REMARKS
DECIDUOUS TREES					
3	AFA	Acer x Freemanii 'Autumn Blaze' Autumn Blaze Freeman Maple	2-1/2" cal. min.	B&B	Seedless Only
18	BNH	Betula nigra 'Heritage' River Birch	2-1/2" cal. min.	B&B	Multistem/4 canes min.
5	GTI	Gleditsia triacanthos var. inermis 'Skyline' Skyline Honeylocust	2-1/2" cal. min.	B & B	Thornless
6	KPA	Koelreuteria paniculata Goldenraintree	2-1/2" cal. min.	B&B	
7	LSC	Liquidambar styraciflua 'Cherokee' Sweetgum	2-1/2" cal. min.	B&B	Seedless/Street Tree
3	LST	Liquidambar styraciflua Sweetgum	2-1/2" cal. min.	B&B	
4	AOG	Acer rubrum 'October Glory' Red Maple	2-1/2" cal. min.	B&B	
3	OAR	Oxydendrum arboreum Sourwood	2-1/2" cal. min.	B&B	
ORNAMENTAL TREES					
8	LIB	Lagerstroemia x 'Biloxi' Biloxi Crapemyrtle	8'-10' ht. min.	B & B	Multistem/4 canes min.
9	LIN	Lagerstroemia indica x fauriei 'Natchez' Natchez Crapemyrtle	8'-10' ht. min.	B & B	Multistem/4 canes min.
12	MVI	Magnolia virginiana Sweetbay Magnolia	8'-10' ht. min.	B & B	Multistem/4 canes min.
EVERGREEN TREES					
3	CRJ	Cryptomeria japonica Japanese Cryptomeria	6'-8' ht. min.	B & B	
3	IAF	Ilex x attenuata 'Fosteri' Foster's Holly	6'-8' ht. min.	B & B	
ESD SHRUBS					
33	CLB	Caryopteris x clandonensis 'Longwood Blues' Caryopteris	#1	Cont.	30" O.C.
51	IGS	Ilex glabra 'Shamrock' Inkberry	24"-30" Ht.	Cont.	30" o.c./Male Cultivar
24	ITH	Itea virginica 'Little Henry' Dwarf Virginia Sweetspire	18" - 24" Ht.	3 Gal.	36" o.c. min.
33	PVS	Panicum virgatum 'Shenandoh' Switchgrass	18" - 24" Ht.	3 Gal.	36" o.c. min.
PERENNIALS					
200	TRC	Tiarella cordifolia Foamflower	#1	Cont.	18" o.c. min.

FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING TREES (35 SHADE, 6 EVERGREEN & 26 ORNAMENTAL TREES) SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $15,300.00

IN ADDITION, FINANCIAL SURETY FOR THE 10 SHADE TREES & 3 ORNAMENTAL TREES SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $3,450.00 TO MEET THE GN CREDIT E-1.

THE DEVELOPER IS PROPOSING 49 SHADE, 29 ORNAMENTAL & 6 EVERGREEN TREES.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE

6/16/15

LANDSCAPE DEVELOPER'S CERTIFICATE

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

U.S. HOME CORP.
Name — 6/9/2015 Date

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 9-23-15 Date
Chief, Development Engineering Division — 9.8.15 Date
Director - Department of Planning and Zoning — 9-24-15 Date

SUBDIVISION			PARCEL No.	LOT Nos.
OXFORD SQUARE			'C'	LOTS 224-241 & CONDO. BLDGS. 1-3
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	38	1st.	601101

LANDSCAPING NOTES & DETAILS

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'

(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M' And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)

Zoned: TOD
Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
First Election District Howard County, Maryland
Scale: As Shown
Date: May 7, 2015
Sheet 12 Of 20

SDP-14-071

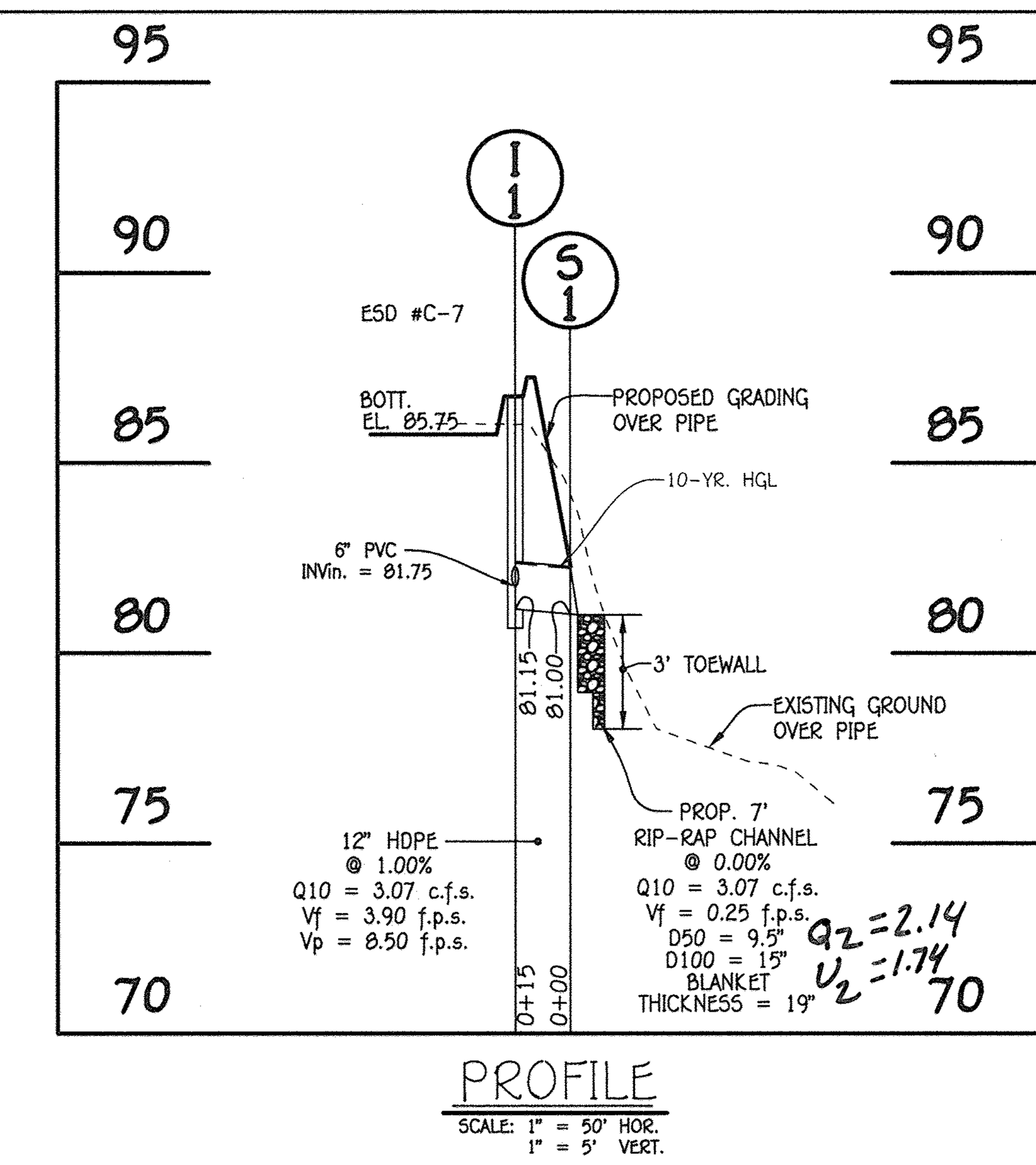
THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

I:\2009\09014\dwg\SDP (Lennar) Parcel 'C'\dec 17 2014 sdp per witmer changes\09014 Sheet 11-12 landscape plans.dwg, 6/16/2015 11:46:19 AM, 1:1

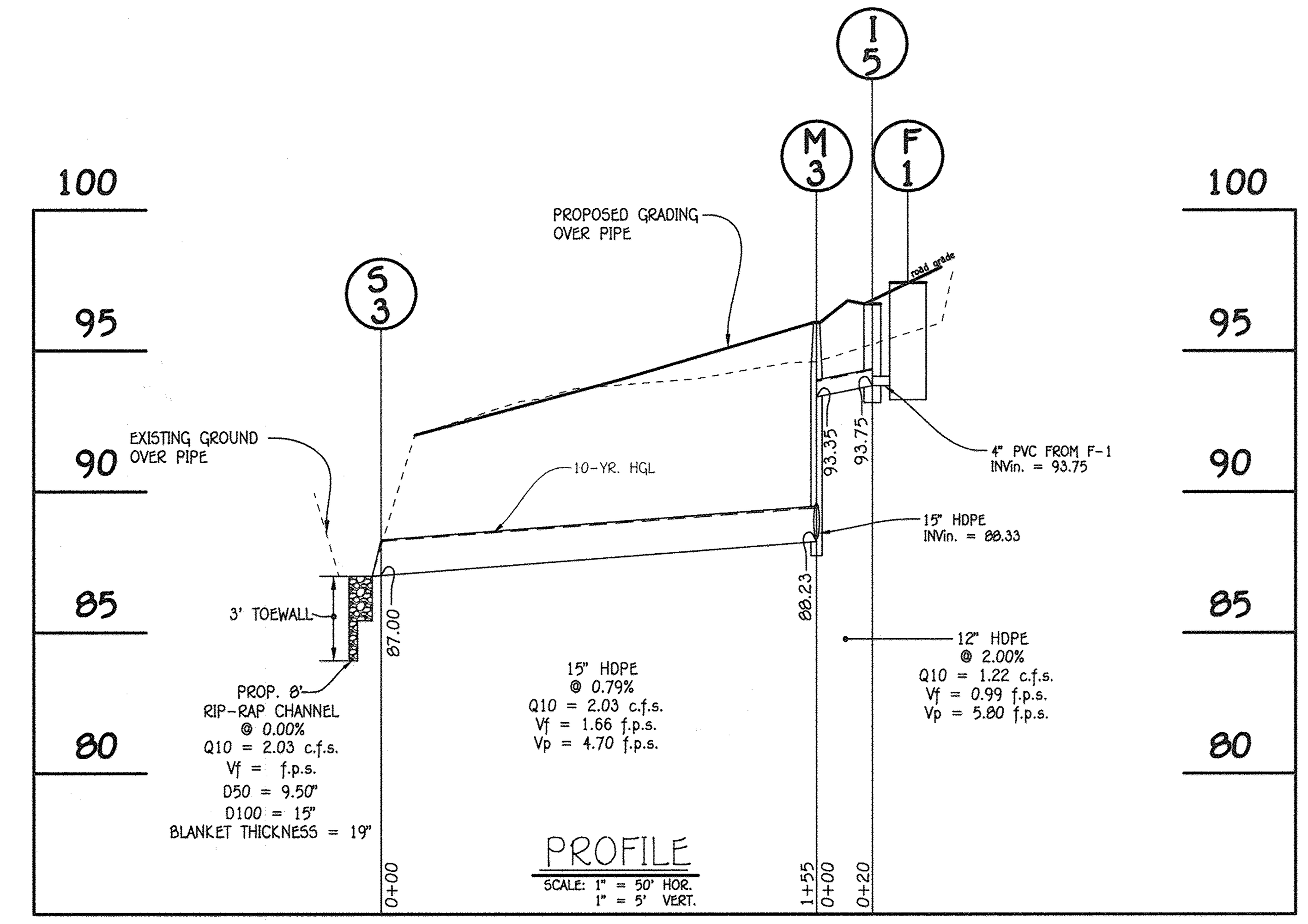
STRUCTURE SCHEDULE-PRIVATE OWNERSHIP

STRUCTURE NO.	TOP ELEVATION	INV.IN	INV.OUT	LOCATION NORTH	LOCATION EAST	ROAD STA.	OFFSET	TYPE AND WIDTH	REMARKS
I-1	86.75	81.75 (6")	81.15 (12")	N:551780.88	E:1387042.86	---	---	'S' INLET	D-4.22
I-2	89.00	84.50 (6"), 81.40 (15")	81.30 (15")	N:551843.46	E:1386932.76	---	---	'S' INLET	D-4.22
I-3	90.25	85.25 (6")	84.75 (12")	N:551892.96	E:1386869.93	---	---	A-5 INLET	D-4.01
I-4	87.49	84.19 (6")	77.40 (12")	N:551908.95	E:1387071.91	---	---	A-5 INLET	D-4.01
I-5	96.66	93.75 (4")	93.75 (12")	N:552071.33	E:1386826.47	---	---	A-5 INLET	D-4.01
I-6	92.49	89.39 (4")	89.39 (12")	N:552028.06	E:1386916.87	---	---	A-5 INLET	D-4.01
I-7	89.55	86.17 (6"), 84.67 (8")	83.67 (12")	N:551964.56	E:1386985.53	---	---	A-5 INLET	D-4.01
I-8	92.17	-----	-----	N:551892.22	E:1386825.29	---	---	COG/COS OPENING	MD-374.68
M-1	88.49	82.11 (15"), 80.59 (15")	80.34 (18")	N:551822.55	E:1386905.75	---	---	4' DIA. MANHOLE	G - 5.12
M-2	90.06	84.37 (12")	82.67 (15")	N:551855.88	E:1386860.64	---	---	4' DIA. MANHOLE	G - 5.12
M-3	96.10	93.35 (12"), 88.33 (15")	88.23 (15")	N:552060.32	E:1386842.85	---	---	4' DIA. MANHOLE	G - 5.12
M-4	94.50	88.92 (12"), 89.24 (8")	88.67 (15")	N:552039.71	E:1386884.74	---	---	4' DIA. MANHOLE	G - 5.12
M-5	93.90	89.33 (12")	89.23 (12")	N:552023.03	E:1386913.09	---	---	4' DIA. MANHOLE	G - 5.12
M-6	89.75	83.41 (12")	83.16 (15")	N:551952.12	E:1386985.03	---	---	4' DIA. MANHOLE	G - 5.12
S-1	82.00	81.00	---	N:551794.50	E:1387048.91	---	---	FLARED END SECTION	ADS OR EQUAL
S-2	81.57	80.07	---	N:551778.70	E:1386899.75	---	---	FLARED END SECTION	ADS OR EQUAL
S-3	88.25	87.00	---	N:551920.14	E:1386773.77	---	---	FLARED END SECTION	ADS OR EQUAL
E-1	77.75	76.00	---	N:551881.84	E:1387094.06	---	---	TYPE 'C' ENDWALL	D - 5.21
F-1	97.42	---	93.75 (4")	N:552074.46	E:1386817.63	---	---	FILTERRA BIO-RETENTION SYSTEM - 5' x 13'	
F-2	93.06	---	89.39 (4")	N:552033.28	E:1386909.47	---	---	FILTERRA BIO-RETENTION SYSTEM - 5' x 13'	
F-3	89.84	---	86.17 (6")	N:551969.55	E:1386976.43	---	---	FILTERRA BIO-RETENTION SYSTEM - 7' x 17'	
F-4	87.86	---	84.19 (6")	N:551912.50	E:1387062.24	---	---	FILTERRA BIO-RETENTION SYSTEM - 7' x 17'	
F-5	87.90	---	84.23 (6")	N:551800.60	E:1386965.71	---	---	FILTERRA BIO-RETENTION SYSTEM - 9' x 21'	

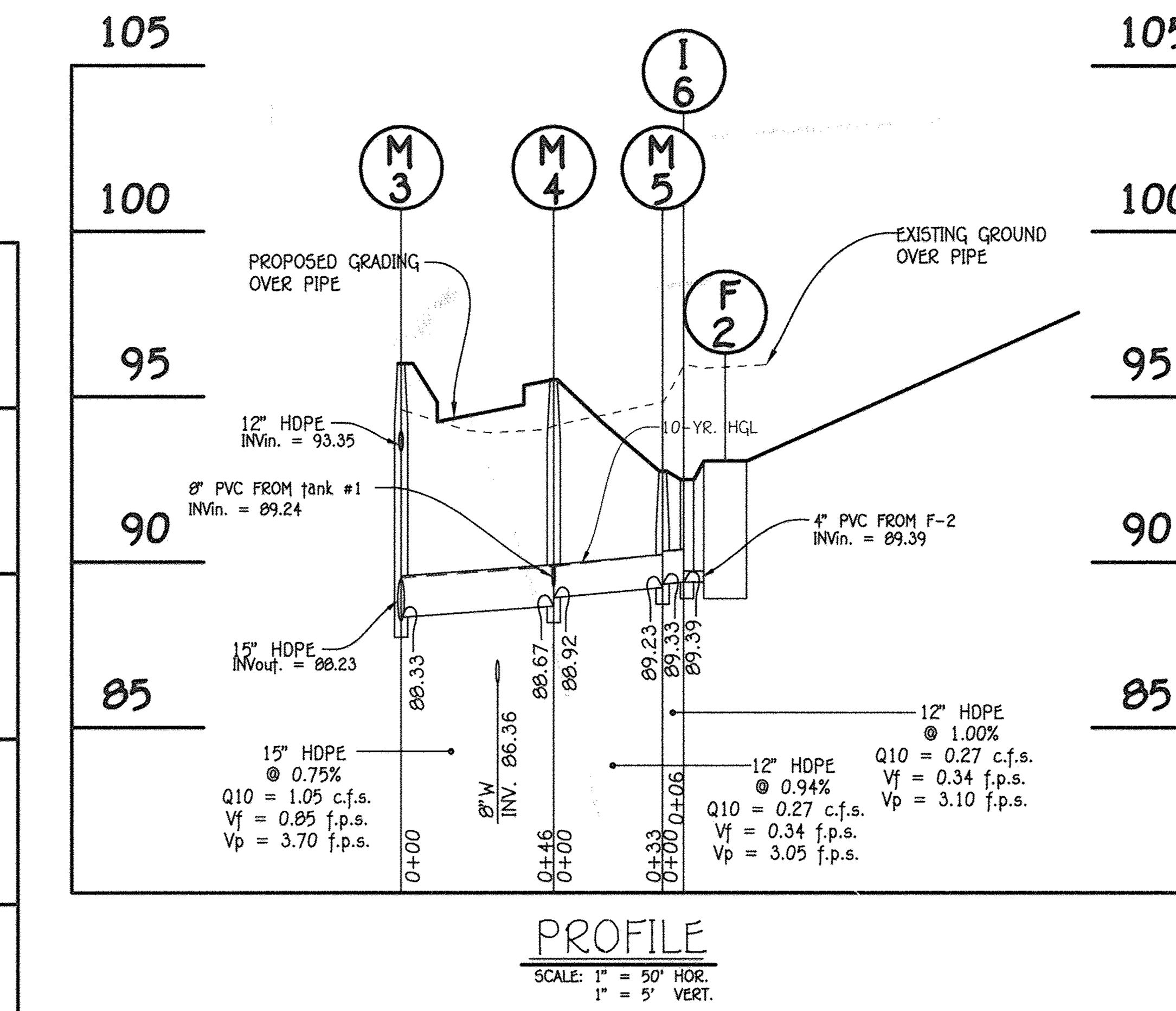
15" BASIN TOP ELEVATION IS TOP OF STRUCTURE BEFORE THE DOME CAP IS INSTALLED.
'S' INLET TOP ELEVATION IS TOP OF STRUCTURE BEFORE GRATE IS INSTALLED.



PROFILE
SCALE: 1" = 50' HOR. 1" = 5' VERT.



PROFILE
SCALE: 1" = 50' HOR. 1" = 5' VERT.



PROFILE
SCALE: 1" = 50' HOR. 1" = 5' VERT.

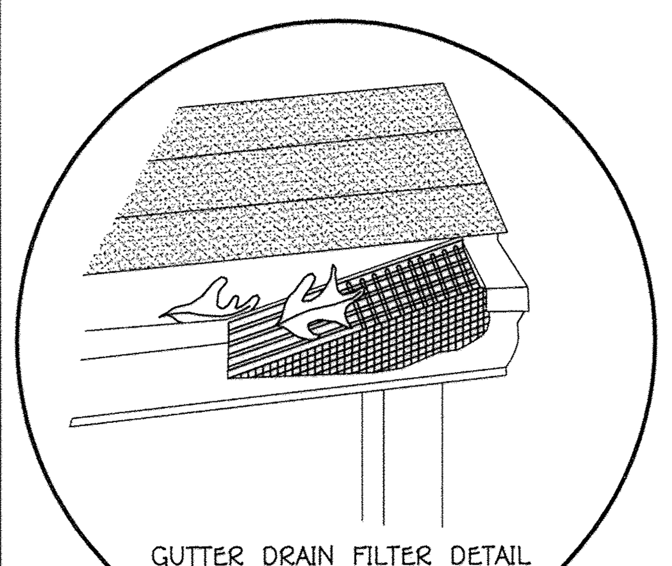
PIPE SCHEDULE

SIZE	CLASS	LENGTH
4"	PVC, SCH. 40	49 L.F.
6"	PVC, SCH. 40 (PERFORATED)	336 L.F.
6"	PVC, SCH. 40	846 L.F.
8"	PVC, SCH. 40	202 L.F.
12"	HDPE	144 L.F.
15"	HDPE	460 L.F.
18"	HDPE	46 L.F.

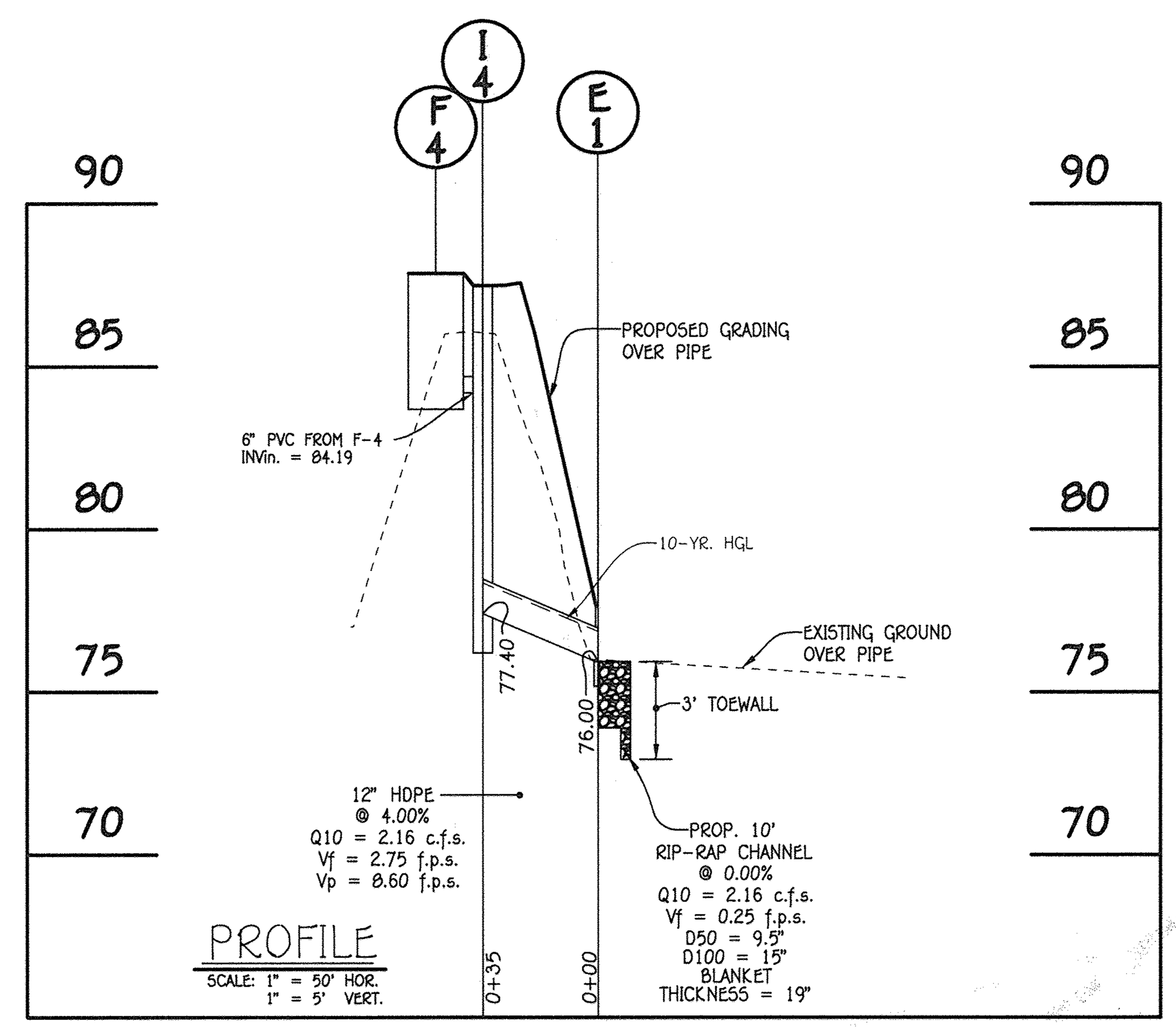
NOTE: HDPE PIPE MAY BE SUBSTITUTED WITH RCCP, CL. IV PIPE.

ROOFDRAIN CLEAN-OUT DATA

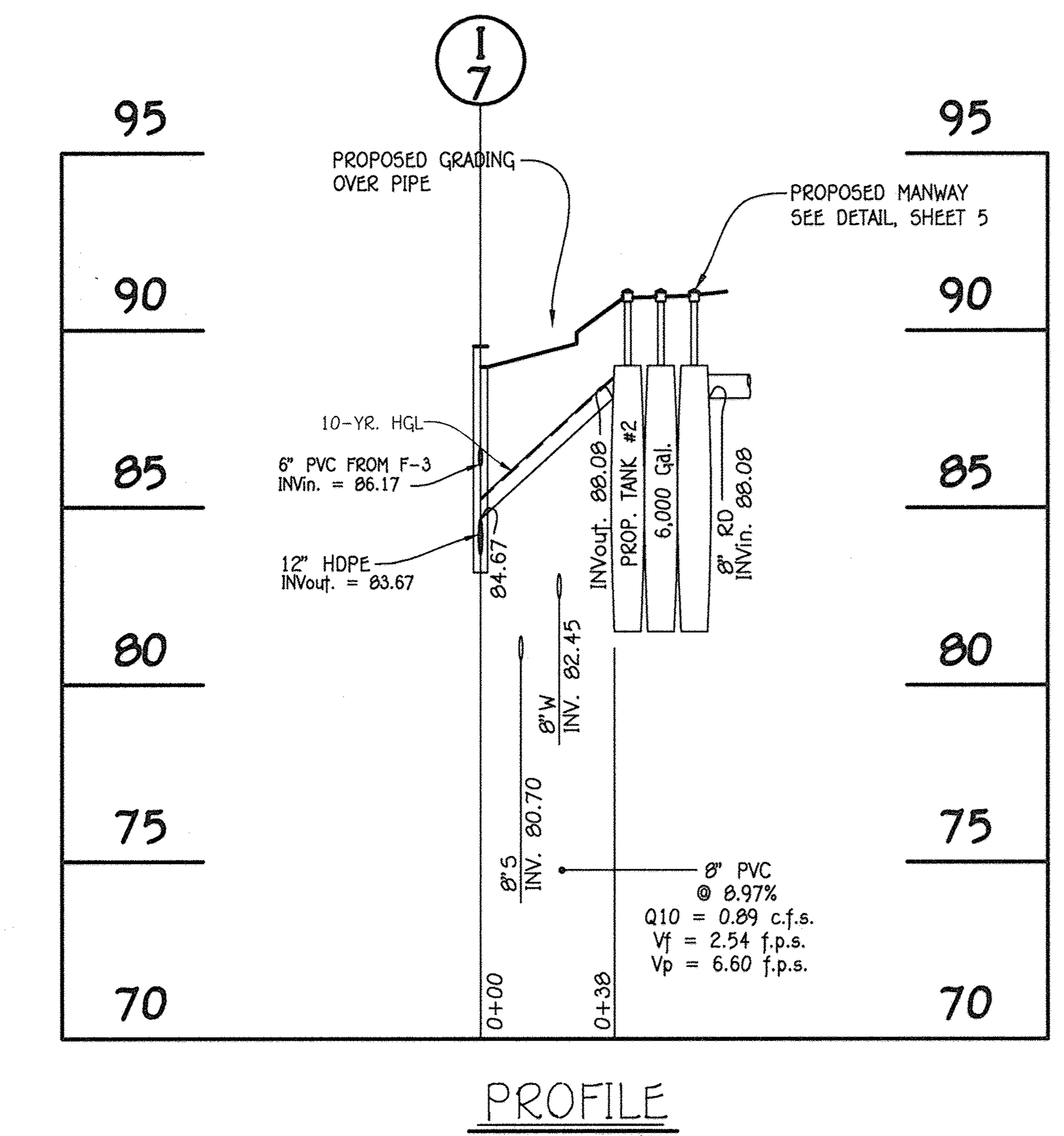
STRUCTURE NO.	TOP ELEVATION	INVERT
C.O. #1	87.5	85.0
C.O. #2	90.0	87.0
C.O. #3	88.4	85.6
C.O. #4	88.4	85.3
C.O. #5	90.8	87.8
C.O. #6	93.2	90.2
C.O. #7	91.6	88.6
C.O. #8	91.8	89.0
C.O. #9	94.2	91.0
C.O. #10	98.0	95.0
C.O. #11	96.0	93.0
C.O. #12	96.0	93.0
C.O. #13	98.5	95.5
C.O. #14	91.2	88.5
C.O. #15	89.5	87.0
C.O. #16	89.5	86.3
C.O. #17	87.9	86.4
C.O. #18	88.0	85.9



GUTTER DRAIN FILTER DETAIL

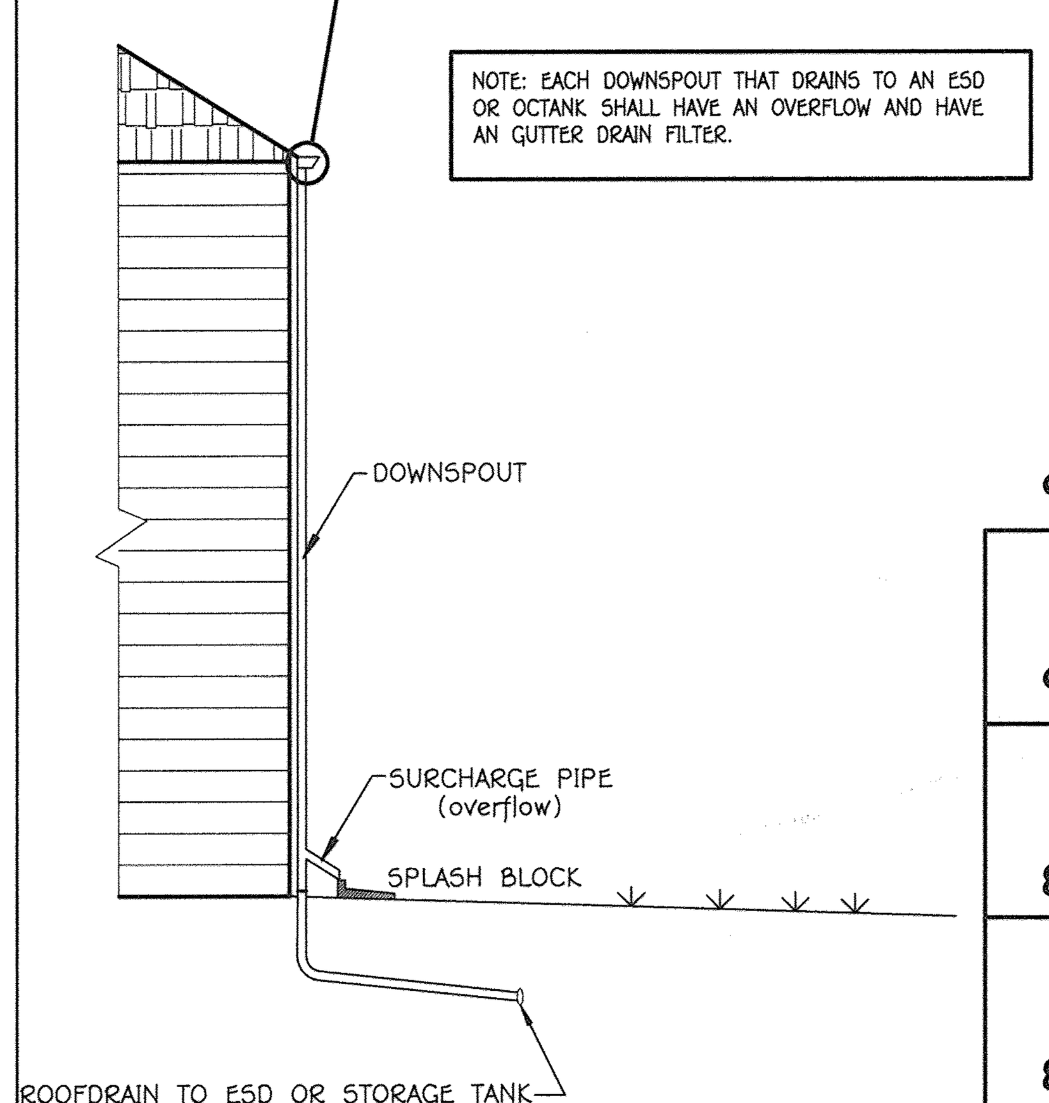


PROFILE
SCALE: 1" = 50' HOR. 1" = 5' VERT.



PROFILE
SCALE: 1" = 50' HOR. 1" = 5' VERT.

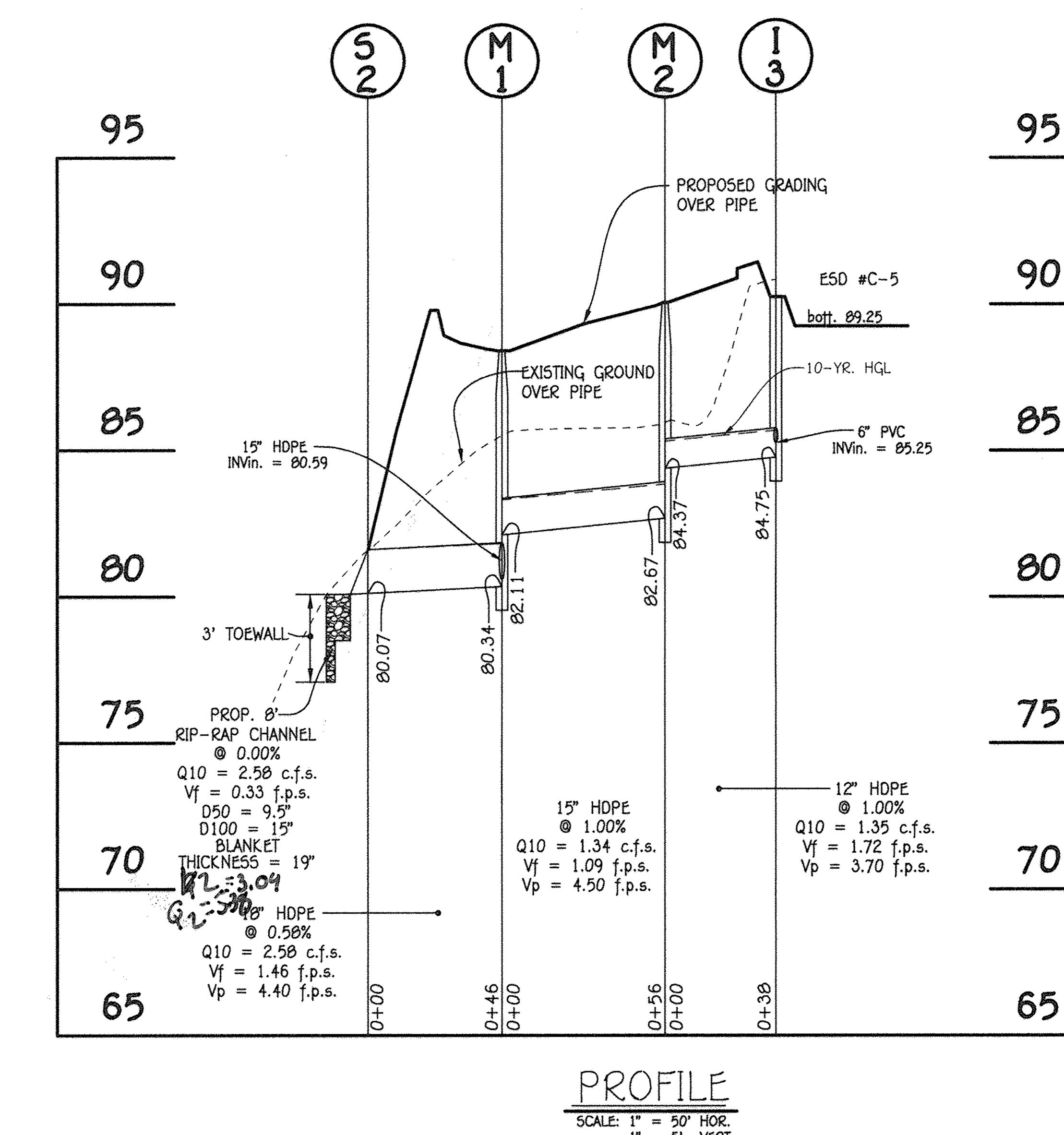
NOTE: EACH DOWNSPOUT THAT DRAINS TO AN ESD OR OCTANK SHALL HAVE AN OVERFLOW AND HAVE AN GUTTER DRAIN FILTER.



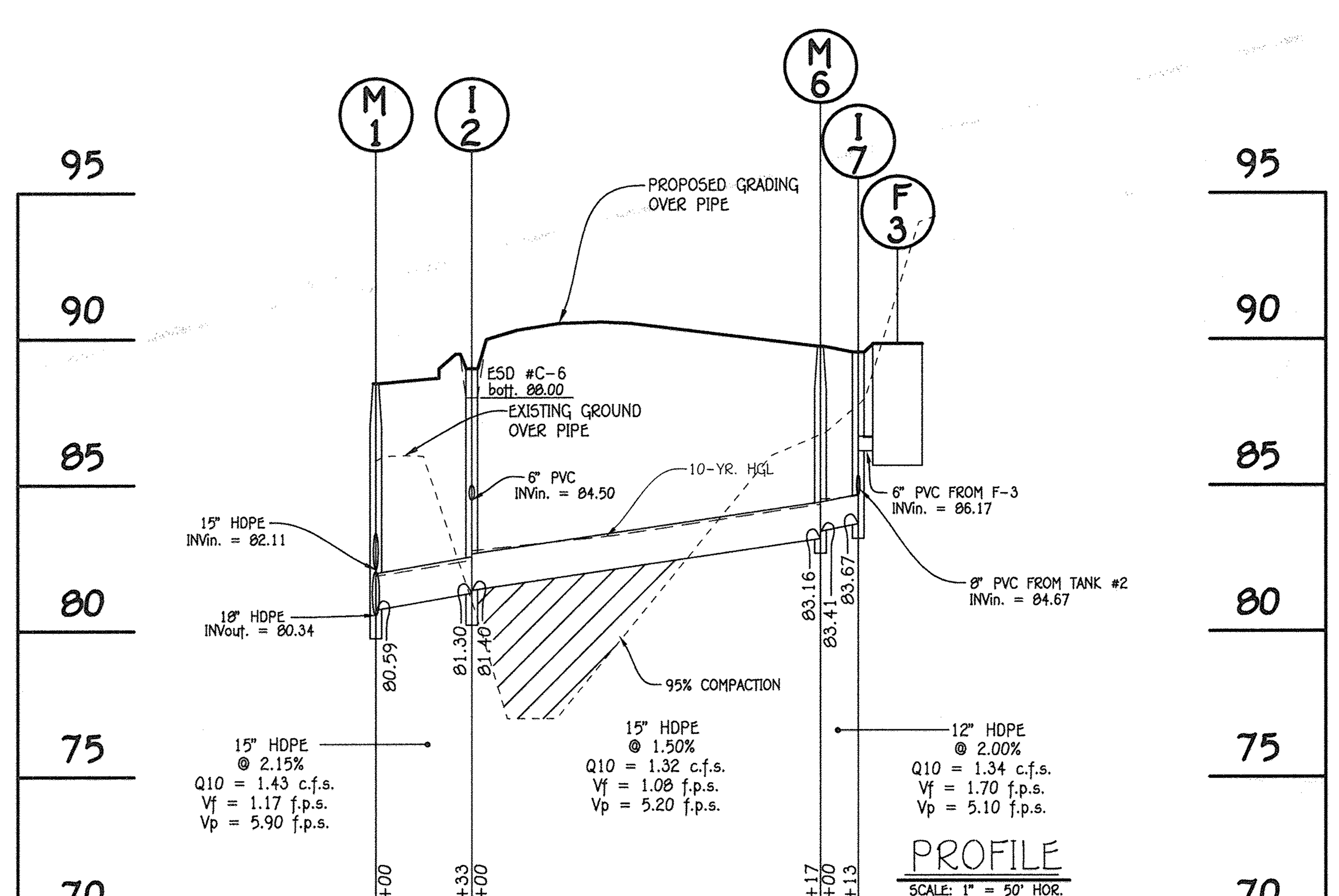
TYPICAL DOWNSPOUT FOR UNITS USING A ROOFDRAIN

NO SCALE

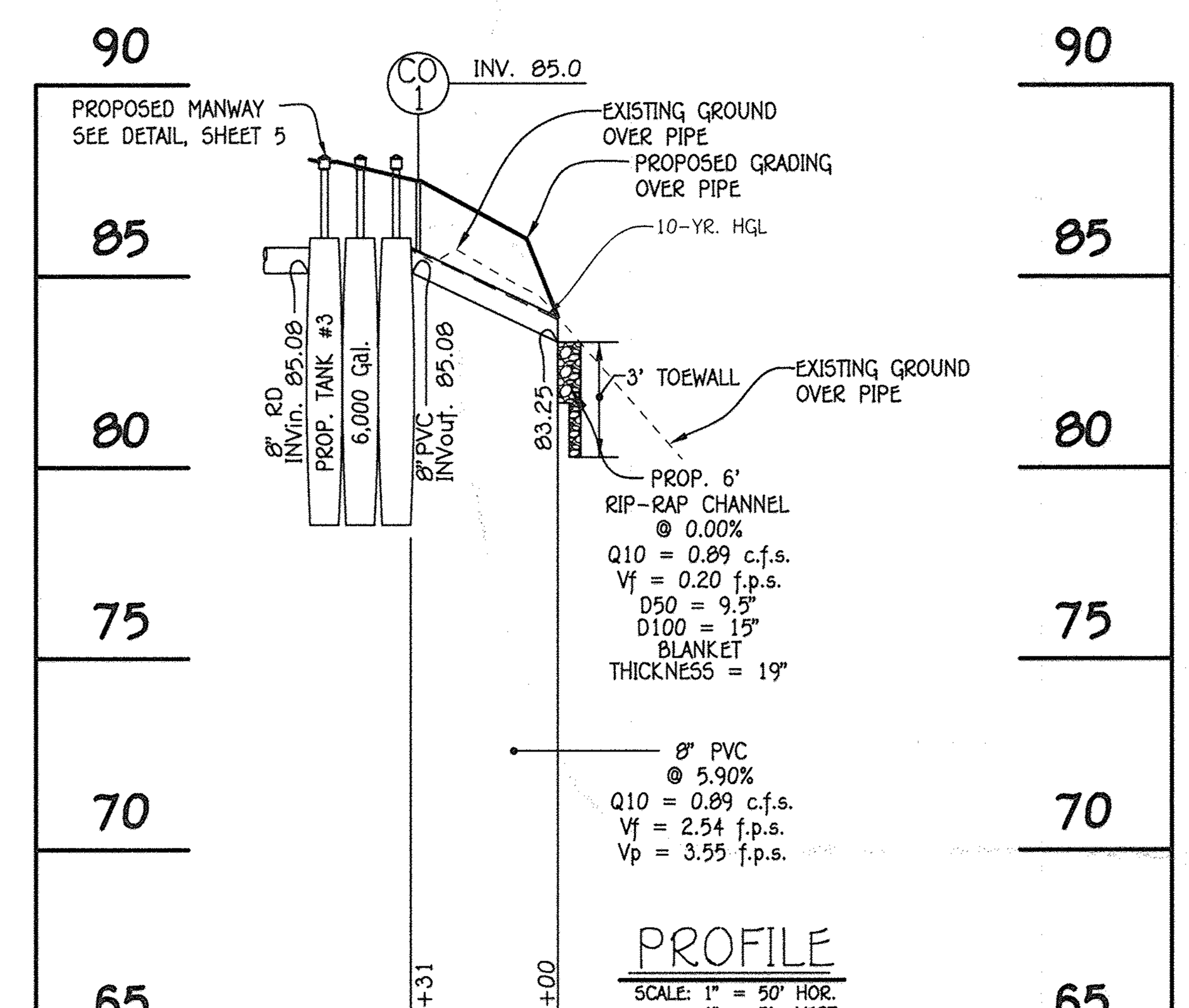
Scale: 1" = 50'



PROFILE
SCALE: 1" = 50' HOR. 1" = 5' VERT.



PROFILE
SCALE: 1" = 50' HOR. 1" = 5' VERT.



PROFILE
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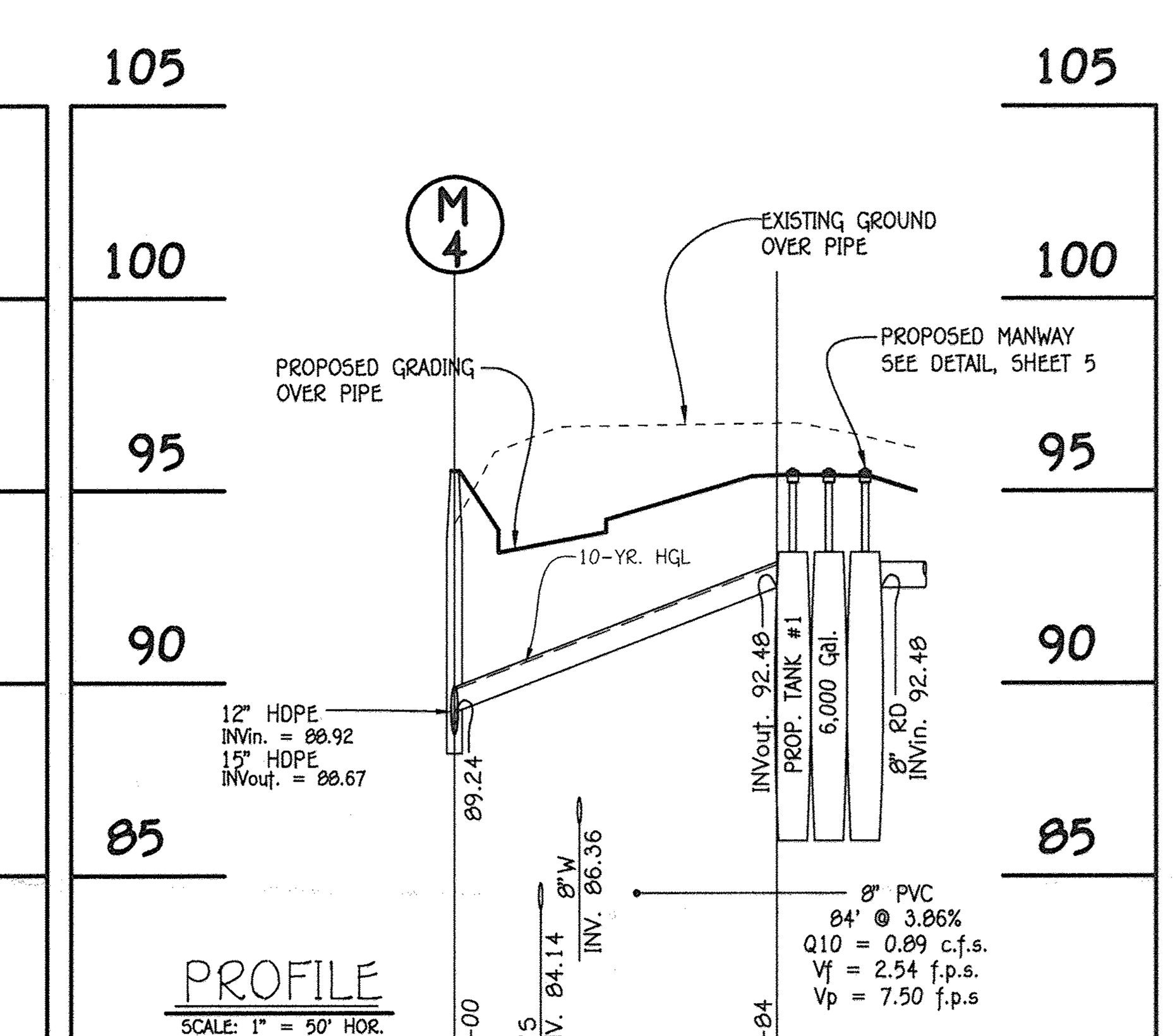


PROFILE
SCALE: 1" = 50' HOR. 1" = 5' VERT.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE

AS-BUILT CERTIFICATION FOR PSWM
Note: There is no "AS-BUILT" information provided on this sheet.
ALDO M. VITUCCI NO. 20748 4/10/19 Date

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 9-23-15
Chief, Development Engineering Division — Date 7-8-15
Director - Department of Planning and Zoning — Date 9-24-15

SUBDIVISION			PARCEL No.	LOT Nos.	
OXFORD SQUARE			'C'	LOTS 224-241 & CONDO. BLDGS. 1-3	
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

STORM DRAIN PROFILES

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'

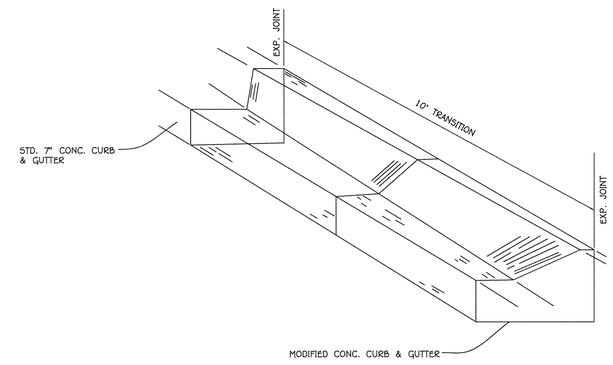
(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)

Zoned: TOD
Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
First Election District Howard County, Maryland
Scale: As Shown
Date: May 7, 2014
Sheet 13 Of 20

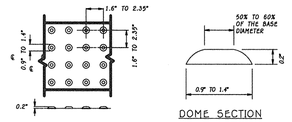
SDP-14-071

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

(MATT DETAILS OR OPTIONAL 12"x12" TILE TECH PAVERS(RED))



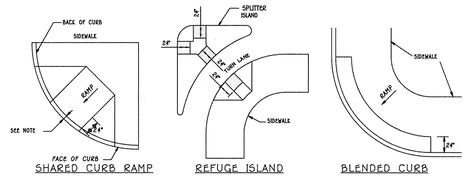
CONCRETE CURB & GUTTER TRANSITION
NO SCALE



DOME SPACING

DOME SECTION

PLACEMENT GUIDELINES



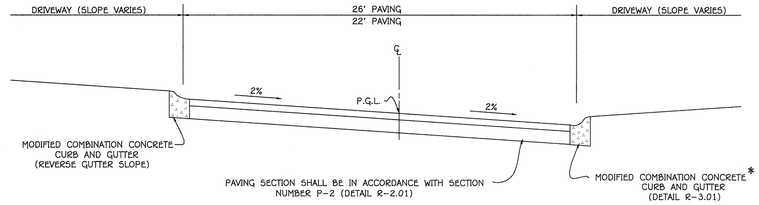
SHARED CURB RAMP — REFUGE ISLAND — BLENDED CURB

WHERE ISLANDS OR MEDIANS ARE LESS THAN 6 FEET WIDE, THE DETECTABLE WARNING SHOULD EXTEND ACROSS THE FULL LENGTH OF THE CUT THROUGH THE ISLAND OR MEDIAN

NOTES

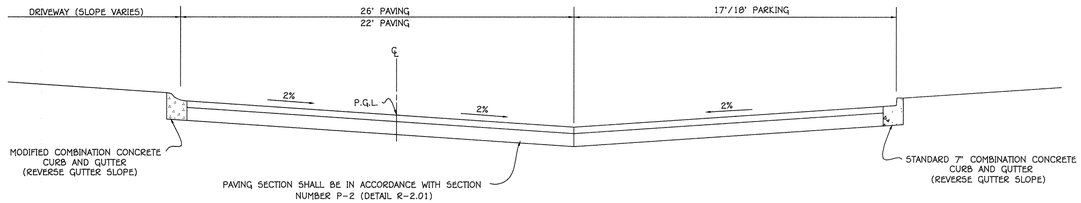
1. THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 TO 8 INCHES FROM THE FACE OF CURB.
2. FOR SKEWED APPLICATIONS DETECTABLE WARNING SHALL BE PLACED SUCH THAT THE DOMES CLOSEST TO THE BACK OF CURB ARE NO LESS THAN 0.5" AND NO MORE THAN 3.0" FROM THE BACK OF CURB. TRUNCATED DOME SURFACES SHALL BE FABRICATED TO PROVIDE FULL DOMES ONLY.
3. DETECTABLE WARNING SURFACE SHALL BE PAID FOR IN ACCORDANCE WITH SECTION 611 OF THE SPECIFICATIONS.
4. DETECTABLE WARNING SURFACES ARE REQUIRED AT STREET CROSSING & SIGNALIZED INTERSECTIONS.

DETECTABLE WARNING SURFACE GUIDELINES
STD. DETAIL NO. 655-40

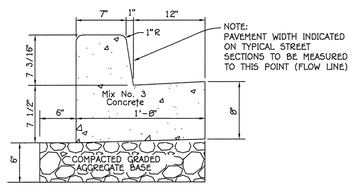


TYPICAL PRIVATE ACCESS STREET
NO SCALE

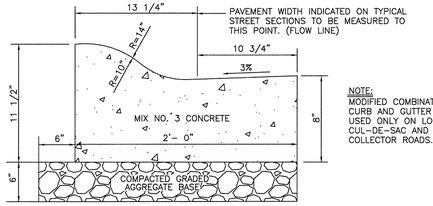
*STANDARD 7" COMBINATION CONCRETE CURB AND GUTTER (SEE SHEET 3)



TYPICAL PRIVATE ACCESS STREET
NO SCALE

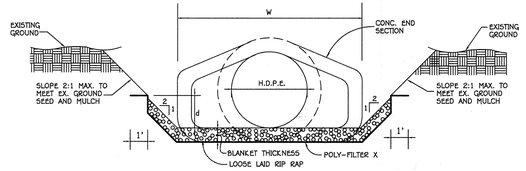


STD. 7" CONC. CURB AND GUTTER
NO SCALE DETAIL R-3.01



NOTE: MODIFIED COMBINATION CURB AND GUTTER TO BE USED ONLY ON LOCAL, CUL-DE-SAC AND MINOR COLLECTOR ROADS.

MODIFIED COMBINATION CURB AND GUTTER
NO SCALE DETAIL R-3.01



RIP RAP CHANNEL DETAIL
NO SCALE

RIP-RAP CHANNEL DESIGN DATA

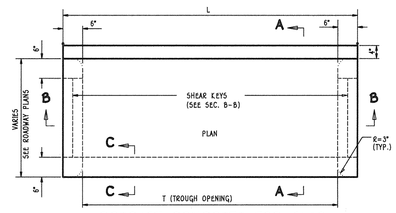
STRUCTURE	AREA	WETTED PERIMETER	R	R 2/3	S	S 1/2	W	d	N	V (f.p.s.)	Q (c.f.s.)	RIP-RAP SIZE D_{50}	RIP-RAP SIZE D_{MAX}	BLANKET THICKNESS	LENGTH	PIPE SIZE
S-1	22.50	6.676	3.36	2.252	0.05	0.0707	6'	0.30'	0.04	3.55	6.60	9.5"	15"	19"	5'	15"
S-2	22.50	6.309	3.57	2.346	0.05	0.0707	6'	0.13'	0.04	2.16	1.81	9.5"	15"	19"	9'	18"

CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS

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

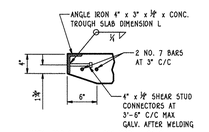
DETAIL R-2.01

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	3 TO <5	5 TO <7	≥7	3 TO <5	5 TO <7	≥7
		PAVEMENT MATERIAL (INCHES)	MIN HMA WITH GAB			HMA WITH CONSTANT GAB		
P-1	PARKING BAYS: RESIDENTIAL AND NON-RESIDENTIAL PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	HMA SUPERPAVE FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5
		HMA SUPERPAVE INTERMEDIATE SURFACE N/A	N/A	N/A	N/A	N/A	N/A	N/A
		HMA SUPERPAVE BASE 19.0 MM. PG 64-22, LEVEL 1 (ESAL)	2.0	2.0	2.0	3.5	3.0.	2.5
		GRADED AGGREGATE BASE (GAB)	8.5	7.0	5.0	4.0	4.0	4.0
P-2	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS: ACCESS PLACE, ACCESS STREET CUL-DE-SACS: RESIDENTIAL	HMA SUPERPAVE FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5
		HMA SUPERPAVE INTERMEDIATE SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.0	1.0	1.0	1.0	1.0	1.0
		HMA SUPERPAVE BASE 19.0 MM. PG 64-22, LEVEL 1 (ESAL)	2.0	2.0	2.0	3.5	2.0	2.0
		GRADED AGGREGATE BASE (GAB)	8.0	4.0	3.0	4.0	4.0	4.0



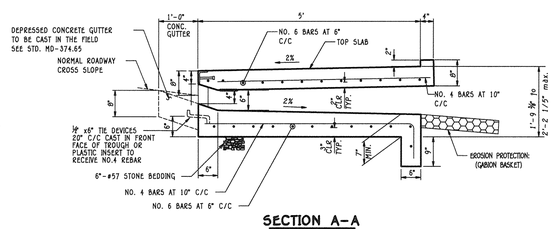
SLAB TYPE	L	T
II	11'-0"	10'-0"

PRECAST CONCRETE TOP SLAB

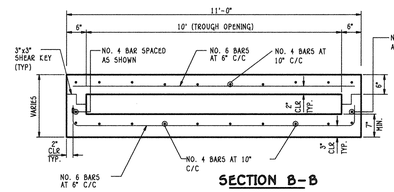


NOTE: FOR 6" CURB, SEE NOTE 4 BELOW.

SECTION C-C



SECTION A-A



SECTION B-B

NOTES:

1. CONCRETE SHALL BE MIX # 6 (4500 PSI).
2. REINFORCEMENT STEEL SHALL MEET THE REQUIREMENTS OF ASTM A615, GRADE 60.
3. ANGLE IRON AND SHEAR STUD CONNECTORS SHALL BE GALVANIZED AFTER WELDING IN ACCORDANCE WITH ASTM A 123.
4. FOR 6" CURB, REFER TO MD 374.55-01, SECTIONS C-C AND D-D.
5. EROSION PROTECTION TO BE PAID FOR SEPARATELY.

COG/COS OPENING DETAIL (1-8)
NO SCALE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE

STATE OF MARYLAND — REGISTERED PROFESSIONAL ENGINEER — No. 22736 — 6/16/15

AS-BUILT CERTIFICATION FOR PSWM
Note: There is no "AS BUILT" information provided on this sheet.
ALDO M. VITUCCI NO.10746 — 4/10/19 Date

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 9-22-15 Date
Chief, Development Engineering Division — 9.8.15 Date
Director - Department of Planning and Zoning — 9-24-15 Date

SUBDIVISION	PARCEL No.	LOT Nos.
OXFORD SQUARE	'C'	LOTS 224-241 & CONDO. BLDGS. 1-3

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

DETAIL SHEET

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'

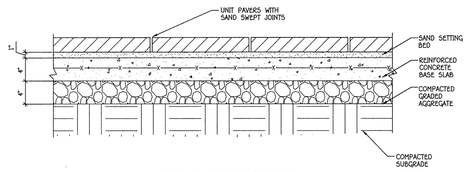
(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M' And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859.)

Zoned: TOD
Tax Map No.: 38 Grid No.: 1003 Parcel No.:
First Election District Howard County, Maryland
Scale: As Shown
Date: May 7, 2014
Sheet 14 Of 20

SDP-14-071

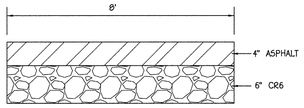
THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

I:\2009\09014\dwg\SDP (Lennar) Parcel 'C'.dgn 17 2014 sdp per svitmer changes\09014 Sheet 14 roadway details.dwg, C-14, SDP-14-071 sheet 14, 5/8/2015 1:10:11 PM, 1:1



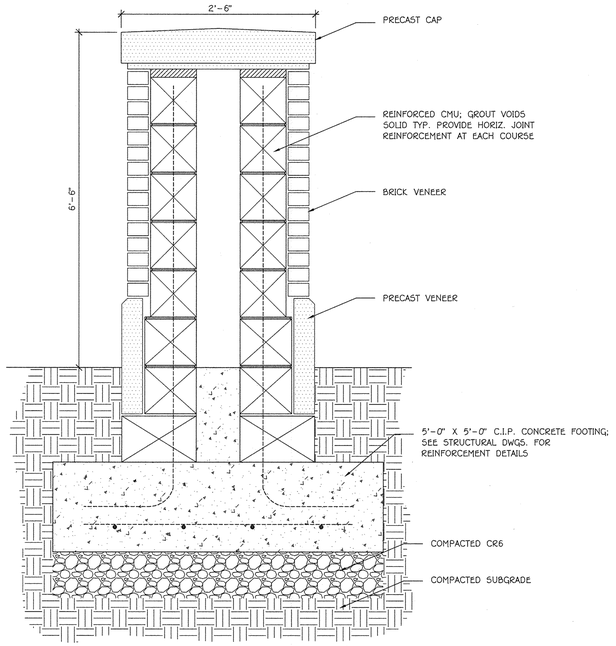
UNIT PAVING SECTION

NO SCALE



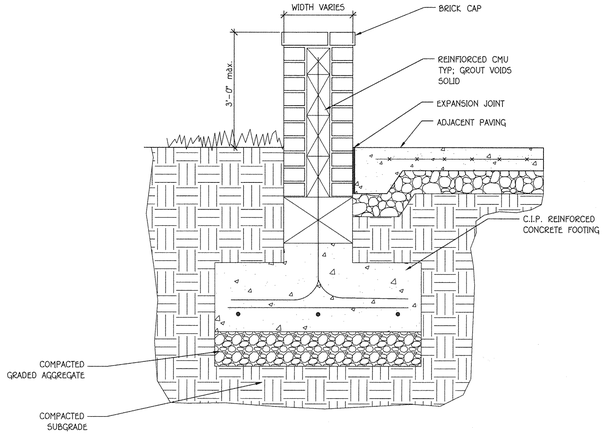
MACADAM PATHWAY DETAIL

NO SCALE



BRICK PIER - TYPICAL SECTION

NO SCALE

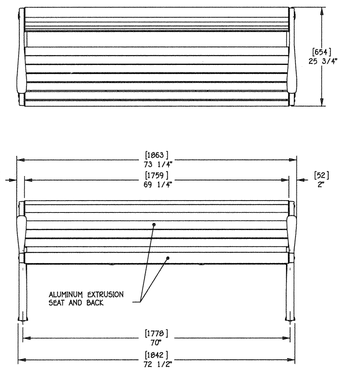


SITE WALL - TYPICAL SECTION

NO SCALE

Plainwell™ Product Drawing landscapeforms®

Bench, 72" Length, with Aluminum Seat, Freestanding / Surface Mount www.landscapeforms.com Ph: 800.521.2546

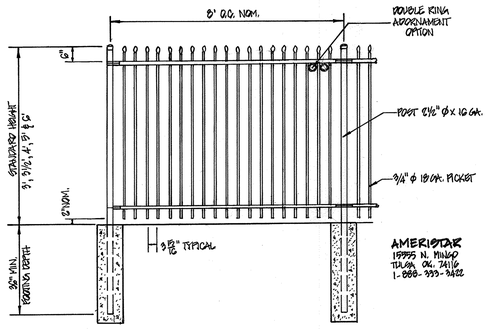


NOTE:
FREESTANDING OR SURFACE MOUNT OPTIONS. CORROSION-RESISTANT ANCHORING HARDWARE SUPPLIED BY OTHERS. Ø13/32" HOLES WITH COUNTERBORE PROVIDED FOR SOCKET HEAD CAP SCREWS.

Drawing: PL271-01
Date: 4/9/2010
Dimensions are in Inches[mm]
U.S. Patent No. D419,341

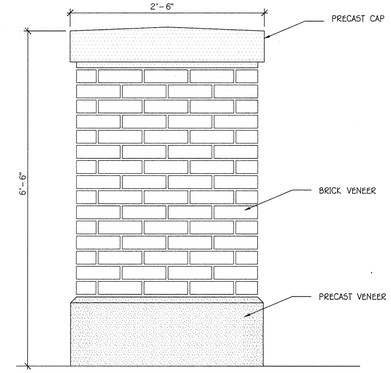
GARDEN BENCH DETAIL

NO SCALE



MONTAGE PLUS CLASSIC 2/3-RAIL FENCE DETAIL

NO SCALE



BRICK PIER - TYPICAL SECTION

NO SCALE

WATER MAIN NOTES:

1. ALL WATER MAINS SHALL BE AWWA C900 PVC PIPE; DR-18.
2. ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV - WATER AND SEWER STANDARDS FOR AWWA C900 PVC WATER PIPE INSTALLATION.
3. DEFLECTION COUPLINGS SHALL BE CERTAIN-TEED PVC HIGH DEFLECTION COUPLINGS.
4. ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SADDLE.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE
2	ADD RAIL FENCE DETAIL	1/10/17
1	ADD 4" WATER MAIN PROFILES, FOR BUILDING NO'S. 1, 2 & 3, (3 TOTAL)	3/17/15

STATE OF MARYLAND — MICHAEL V. VITUCCI — No. 20748 — PROFESSIONAL ENGINEER — 8/16/15

AS-BUILT CERTIFICATION FOR PSWM

Note: There is no "AS BUILT" information provided on this sheet.

ALDO M. VITUCCI NO. 20748 — 4/10/19 Date

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 9-23-15 Date

Chief, Development Engineering Division — 9.8.15 Date

Director - Department of Planning and Zoning — 9-24-15 Date

SUBDIVISION	PARCEL No.	LOT Nos.
OXFORD SQUARE	"C"	LOTS 224-241 & CONDO. BLDGS. 1-3

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

SITE DETAILS

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'

(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M' And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)

Zoned: TOD

Tax Map No.: 30 Grid No.: 20 Parcel No.: 1003

First Election District Howard County, Maryland

Scale: As Shown

Date: May 7, 2014

Sheet 15 Of 20

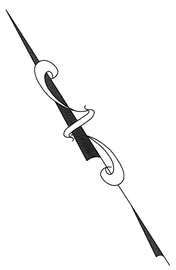
SDP-14-071

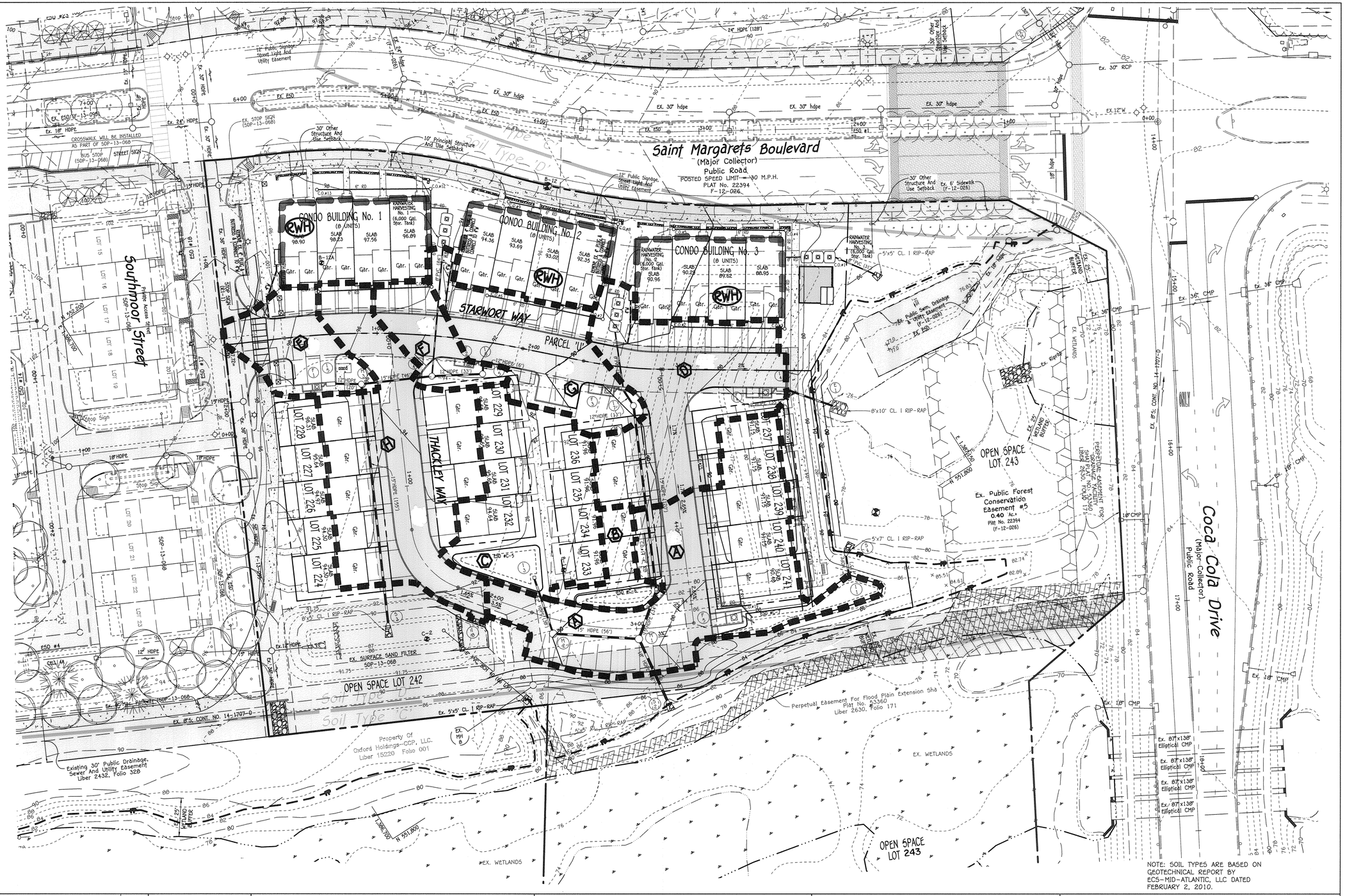
THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

I:\2009\09014\dwg\SDP (Lennar) Parcel 'C'.dgn- 17 2014 sdp per wilmer changes\09014 Sheet 15 site details.dwg, C-15_SDP-15-071 sheet 15, 5/8/2015 1:14:08 PM, 1:1

DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	'C'	ZONED	% IMP.
I-1	A	0.34 AC.	0.92	TOD	96%
I-2	B	0.05 AC.	0.58	TOD	47%
I-3	C	0.23 AC.	0.61	TOD	52%
I-4	D	0.31 AC.	0.71	TOD	70%
I-5	E	0.17 AC.	0.75	TOD	71%
I-6	F	0.34 AC.	0.83	TOD	90%
I-7	G	0.07 AC.	0.67	TOD	60%
I-8	H	0.10 AC.	0.70	TOD	64%

RWH – DENOTES RAINWATER HARVESTING AREA





NOTE: SOIL TYPES ARE BASED ON GEOTECHNICAL REPORT BY ECS-MID-ATLANTIC, LLC DATED FEBRUARY 2, 2010.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

NO.	REVISION	DATE

STATE OF MARYLAND – MICHAEL VINCENT VITUCCI – No. 20748 – PROFESSIONAL ENGINEER – 6/16/15

AS-BUILT CERTIFICATION FOR PSWM

Note: There is no "AS BUILT" information provided on this sheet.

ALDO M. VITUCCI NO. 20748 — 4/6/19 Date

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 9-23-15
Chief, Development Engineering Division — Date 7.8.15
Director – Department of Planning and Zoning — Date 9-24-15

SUBDIVISION	PARCEL No.	LOT Nos.
OXFORD SQUARE	'C'	LOTS 224-241 & CONDO. BLDGS. 1-3

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

STORM DRAIN DRAINAGE AREA MAP

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Zoned: TOD
Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
First Election District Howard County, Maryland
Scale: As Shown
Date: May 7, 2014
Sheet 16 Of 20

SDP-14-071

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

I:\2009\09014\dwg\SDP (Lennar) Parcel 'C'\dec 17 2014 sdp per wittner changes\09014 Sheet 16 da map.dwg, C-16_SDP-14-071 sheet 16, 5/8/2015 1:16:11 PM, 1:1

FISHER, COLLINS & CARTER, INC.
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NO.	REVISION	DATE

STATE OF MARYLAND — MICHAEL VITTUCCI — No. 20748 — PROFESSIONAL ENGINEER
6/16/15

AS-BUILT CERTIFICATION FOR PSWM
Note: There is no "AS-BUILT" information provided on this sheet.
ALDO M. VITUCCI NO. 20748 — 4/10/19
Date

Owner/Builder
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Columbia, Maryland 21044
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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 9-23-15
Chief, Development Engineering Division — Date 9-8-15
Director – Department of Planning and Zoning — Date 9-24-15

SUBDIVISION			PARCEL No.		LOT Nos.
OXFORD SQUARE			'C'		LOTS 224–241 & CONDO. BLDGS. 1–3
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

METES & BOUNDS

OXFORD SQUARE

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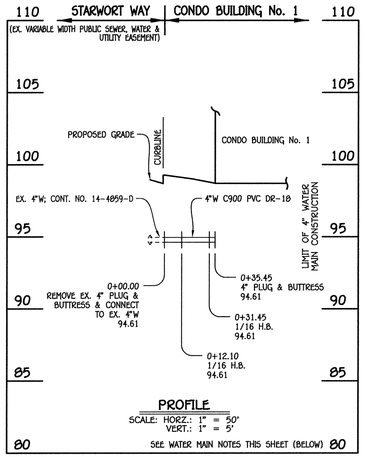
Zoned: TOD
Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
First Election District Howard County, Maryland
Scale: As Shown
Date: May 7, 2015
Sheet 17 Of 20

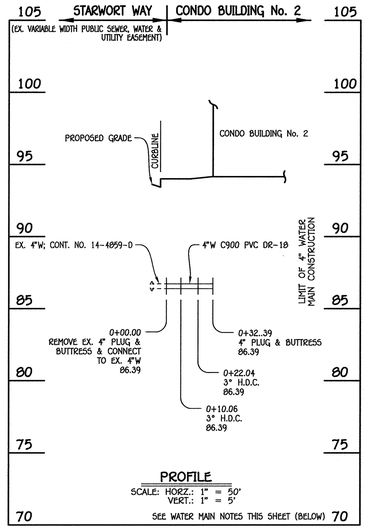
SDP-14-071

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET



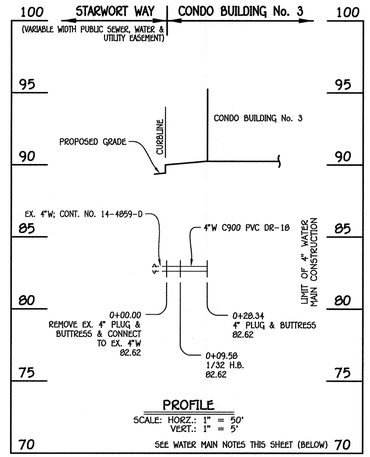
4" WATER MAIN: CONDO BUILDING No. 1

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
4" WATER MAIN: CONDO BUILDING No. 1			
0+00.00	EX. 4" PLUG & BUTTRESS	552129.47	1386615.60
0+12.10	1/16 H.B.	552140.31	1386620.95
0+31.45	1/16 H.B.	552152.19	1386636.24
0+35.45	4" PLUG & BUTTRESS	552155.61	1386638.32



4" WATER MAIN: CONDO BUILDING No. 2

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
4" WATER MAIN: CONDO BUILDING No. 2			
0+00.00	EX. 4" PLUG & BUTTRESS	552070.37	1386914.80
0+10.06	3" H.D.C.	552078.33	1386920.95
0+22.04	3" H.D.C.	552087.38	1386928.80
0+32.39	4" PLUG & BUTTRESS	552094.80	1386936.02



4" WATER MAIN: CONDO BUILDING No. 3

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
4" WATER MAIN: CONDO BUILDING No. 3			
0+00.00	EX. 4" PLUG & BUTTRESS	551980.09	1387003.48
0+09.58	1/32 H.B.	551994.95	1387010.16
0+28.34	4" PLUG & BUTTRESS	552010.63	1387020.47

WATER MAIN NOTES:

1. ALL WATER MAINS SHALL BE AWWA C900 PVC PIPE; DR-18.
2. ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV - WATER AND SEWER STANDARDS FOR AWWA C900 PVC WATER PIPE INSTALLATION.
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(410) 461 - 2855

NO.	REVISION	DATE

STATE OF MARYLAND — ALDO M. VITUCCI — No. 20746 — PROFESSIONAL ENGINEER — 4/16/15

AS-BUILT CERTIFICATION FOR PSWM

Note: There is no "AS BUILT" information provided on this sheet.

ALDO M. VITUCCI NO. 20746 — 4/16/19 Date

Owner/Builder

Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer

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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 9-23-15 Date

Chief, Development Engineering Division — 9-8-15 Date

Director - Department of Planning and Zoning — 9-24-15 Date

SUBDIVISION			PARCEL No.		LOT Nos.
OXFORD SQUARE			'C'		LOTS 224-241 & CONDO. BLDGS. 1-3
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

WATER MAIN EXTENSIONS PROFILES, CHARTS & NOTES

OXFORD SQUARE

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Zoned: TOD

Tax Map No.: 30 Grid No.: 20 Parcel No.: 1003

First Election District Howard County, Maryland

Scale: As Shown

Date: May 7, 2015

Sheet 18 Of 20

SDP-14-071

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

GREEN NEIGHBORHOOD CHECKLIST:

Credit No.	Credit	Champion (Name, Role)	Requirement	Site Development Plan GN Strategies	Documentation Location	Max Points	Requested Points
A	**Innovative / Integrated Design Process**					**4**	**4**
A-1	Green Development Plan	PCM/Petitoner; HCM/Planners	Show s how plans meet criteria, includes checklist, natural resource inventory and energy analysis	Provide documentation	GN Report GN Plan	REQ'D	
A-2	Interdisciplinary Project Team	PCM/Petitoner	Includes U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Accredited professional, ecologist / environmental professional / landscape architect, and engineer	The design team includes a LEED AP professional, an ecologist, a civil engineer, an architect and landscape architect.	GN Plan	REQ'D	
A-3	Third Party Certification	PCM/Petitoner	Certification of credits by independent LEED accredited professional	Alexander Design Studio	GN Plan	REQ'D	
A-4a	Innovative Design A	HCM/Planners	Green Streets	Green Streets	GN Report SDP (SDP-14-071) Sheet 3, 14 Reference: Sketch Plan (S-14-001)	1	1
A-4b	Innovative Design B	HCM/Planners	Priority Parking for Fuel Efficient Cars	Reserve 5% for Priority Parking for Fuel Efficient Cars	GN Plan SDP (SDP-14-071) Sheet 3, 14 References: Sketch Plan (S-14-001)	1	1
A-4c	Innovative Design C	HCM/Planners	Compact Development	Residential Development w ill exceed 20 DU /AC	GN Report GN Plan References: Sketch Plan (S-14-001)	1	1
A-4d	Innovative Design D	HCM/Planners	Walkable Streets	More than 80% building frontage oriented tow ards public spaces; Less than 20% service and garage openings to public spaces.	GN Plan GN Report Reference: Sketch Plan (S-14-001)	1	1
B	**Location, Linkages & Community Context**					**27**	**8**
B-1a	Redevelopment Site	HCM/Planners FCC/Civil	Reuse of previously developed site (minimum 25% existing impervious, w ith sliding scale for credits based on amount or % impervious)	More than 25% area previously developed (former sand and gravel operation).	GN Plan Reference: Sketch Plan (S-14-001)	4	2
B-1b	Redevelopment Site (Brow nfield)	N/A	Brow nfield cleanup of redevelopment site	N/A	N/A	8	0
B-2	Historic Buildings	N/A	Preserve, restore or rehabilitate historic properties.	N/A	N/A	4	0
B-3a	Transit Access & Amenities for Reduced Auto Dependence (Stop)	HCM/Planners	Site is served by transit stop w ithin 1/2 mile (1 point) or 1/4 mile (2 points) w alk from property	Private Shuttle Service w ith 2 stops (100% DU w ithin 1/4 mile w alking distance)	GN Plan Reference: Sketch Plan (S-14-001) and F Plan (F-13-095)	2	2
B-3b	Transit Access & Amenities for Reduced Auto Dependence (Shelter)	HCM/Planners	Provide county-specified transit shelter w ith benches and lighting at transit stop w ithin 1/2 mile of property and provided pedestrian link to stop if none currently exists	Provide HoCo transit approved shelter for private shuttle service	Reference: Sketch Plan (S-14-001) SDP (SDP-13-068)	4	4
B-4	Proximity to Community Resources	N/A	Credit for 1/2 mile proximity to existing or proposed community resources such as schools, parks, library, post office, etc.	N/A	N/a	5	0
C	**Compact, Complete & Connected Development**					**27**	**25**
C-1	Diversity of Uses	HCM/Planners	1 point per different landuse; minimum 100 sf for ech non-residential per DU. Minimmum of 148,900 SF each of office, instituional and civic use, per 1,489 DU	Provide 3 Uses: Institutional, Civic and Office	GN Plan References: Sketch Plan (S-14-001) SDP (SDP-12-075)	3	3
C-2	Planned Service Area	HCM/Planners	Locate the project w ithin the Planned Service Area	The project is w ithin the Planned Service Area	GN Plan	5	5
C-3a	Pedestrian System (Path)	HCM/Planners	Provide an off-site pathw ay/trail system w ith 2 connections to internal or external sidew alks, w ith minimal environmental impacts, long-term maintenance	Provide a shared use path system.	GN Plan GN Report SDP (SDP-14-071) Sheet 3,4 References: Sketch Plan (S-14-001) SDP (SDP-13-068) SDP (SDP-14-019) SDP (SDP-12-075)	2	2
C-3b	Pedestrian System (Connections)	N/A	Provide an off-site pathw ay/trail connection	N/A	N/A	2	0
C-3c	Pedestrian System (Amenities)	HCM/Planners	Provide at least tw o different pedestrian experience features	Provide pedestrian amenities at trailheads, the law n, school and residential mew s	GN Plan SDP (SDP-14-071) Sheet 11 References: Sketch Plan (S-14-001)	2	2
C-4	Connected On-site Street Netw ork	HCM/Planners	Provide a gridded street netw ork	More than 75% connected streets	GN Plan References: Sketch Plan (S-14-001)	2	2
C-5	Parking does not exceed Required Minimum	HCM/Planners	Surface parking lots do not exceed required parking ratios (1 point); plan takes advantage of shared parking provisions parking structure provided (in deck or beneath building; does not include garages w ithin individual units) (4 points)	Provide common parking structures (4 points)	GN Plan References: Sketch Plan (S-14-001)	4	4
C-6	Exceed Minimum Open Space Requirements	HCM/Planners	1 point for every 5% above required minimum open space for the TOD zone. 1 point for every 10% of non-buildable HOA parcels above 50% of the site (up tp 3 points).	Provide more than 25% increase in amenity space above the required minimum amenity space (TOD zoning regulations)	GN Plan SDP (SDP-14-071) Sheets3, 19 References: Sketch Plan (S-14-001)	5	5
C-7	Green Spaces and Amenity Areas	HCM/Planners	Open space along public/private roads available for public use	Publically accessible open space w ill be provided at the nature trail and clubhouse and pool.	GN Plan References: Sketch Plan (S-14-001) SDP (SDP-13-068)	2	2
D	**Environmental Preservation**					**52**	**39**
D-1	Stream Restoration or Wetland Creation or Restoration	EcoScience	Restoration of degraded on-site stream channel; on-site restoration of degraded w etland or creation of additional w etlands (sliding scale based on % or length of stream restored and % or acres of w etland created or restored)	Provide w etland restoration for 91,000 SF and Stream restoration for intermittent stream segment ST-2 (100-120 FT of channel).	References: Sketch Plan (S-14-001) Skech Plan (S-11-001) SDP (SDP-14-019)	16	16
D-2	Habitat Management Plan	EcoScience	Prepare and implement plan that identifies, conserves and enhances natural resources and ecological communities (may include clean up of debris, removal of invasives, etc.)	Provide Habitat Management Plan	Reference: Sketch Plan (S-14-001) Sketch Plan (S-11-001) SDP (SDP-14-019)	4	4
D-3	25% Steep Slope Preservation	N/A	Protect all existing steep slopes as defined by County regulations required; provide 25' minimum buffer at top of 25% slope (2 points)	N/A	N/A	2	0
D-4	15% Slope Preservation	FCC/Civil; HCM/Planners	Protect existing 15%+ slopes (protect minimum 1/2 acre, w ith sliding scale based on area or % protected)	Preserve betw een 51-75% of 15%-24.9% slopes	GN Plan GN Report References: Sketch Plan (S-14-001)	4	3
D-5	Minimize Grading and Site Disturbance	FCC/Civil; HCM/Planners	Minimize limit of disturbance: leave at least 20% of site undisturbed (1 point), 30% (2 points), 40% (3 points); balancecut and fill on site (2 points); retaining w alls 3-5.9' (deduct 1 point) retaining w alls 6-8.9' (deduct 2 points), w alls 9' and higher (deduct 3 points), no new created steep slopes over 25% (1 point); amend soil nutrients in turf and planting areas (1 point)	Balance Cut and Fill on entire site-- 2 points Minimize Retaining Walls-- 0 points No new > 25% Steep slopes- 1 point Leave more than 30% of site undisturbed -- 2 points	GN Plan GN Report References: Sketch Plan (S-14-001)	5	5
D-6	Exceed Minimum Forest Conservation Requirements	EcoScience FCC/Civil; HCM/Planners	1 point for every 10% of existing forest retained above break even point; 1 point for every 10% of on-site forest planted in excess of afforestation obligation	Provide 5.25 acres of planting area (50% over afforestation obligation)	Reference: Sketch Plan (S-14-001) Final Plan (F-12-026)	5	5
D-7	Save Trees above 12" Minimum Caliper	N/A	1 point for protecting each 25% of all specimen trees (does not include specimen trees w ithin forest conservation area or w ithin forests that are being cleared)	N/A	N/A	4	0
D-8a	Exceed Minimum Stream Buffer Requirements	FCC/Civil;	75' buffer required for perennial and intermittent streams inside PSA, 100' buffer required for perennial and intermittent streams outside PSA	75' buffer required for perennial and intermittent streams inside PSA,	Reference: Sketch Plan (S-14-001) Final Plan (F-12-026)	REQ'D	
D-8b	Exceed Minimum Stream Buffer Requirements	EcoScience FCC/Civil; HCM/Planners	2 points for each additional 25' of buffer provided in excess of requirements in D-8a outside w etland buffer or floodplain	Provide 150 FT Stream Buffer (75 FT enhanced buffer)-- 6 points	Reference: Sketch Plan (S-14-001) Final Plan (F-12-026)	6	6
D-9	Exceed Minimum Wetland Buffer Requirements	EcoScience FCC/Civil; HCM/Planners	2 points for each additional 25' of w etland buffer buffer outside stream buffer or floodplain	N/A	N/A	4	0
D-10	Floodplain Buffer	N/A	1 point for each 25' of buffer to floodplain outside required or provided w etland or stream buffer	N/A	N/A	2	0
E	**Site Landscape Improvements**					**10**	**3**
E-1	Landscaping exceeds Minimum Requirements and Reduces Heat Island Effect	N/A	1 point for each 10% increase in number of plants (must be native plants) provided above total minimum required in Landscape Manual; retain or plant trees on south and w est sides of buildings and increase trees w ithin parking areas and along sidew alks and paths	Provide 20% increase in Landscape Requirements	GN Plan GN Report SDP (SDP-14-071) Sheets 11, 12	5	2
E-2	Native Plants	N/A	1 point for 80%, 2 points for 90%, 3 points for 100% of all plants native to w ithin 200 miles of site	N/A	N/A	3	0
E-3	No Invasive Plants	HCM/Planners	No plants that are on DNR, USDA or Cooperative Extension Service lists of invasive plants	Will not plant invasive plants	GN Plan SDP (SDP-14-071) Sheets 11 & 12	REQ'D	
E-4	Limit Turf	HCM/Planners	Turf does not exceed 30% of unpaved site (1 point); no turf on new created steep slopes 25%+ or in densely shaded areas (1 point); nonturf areas must be planted in native vegetation	Will not plant conventional turf in densely shaded areas and on new ly created >25% steep slopes	GN Plan GN Report SDP (SDP-14-071) Sheets 11 & 12 References: Sketch Plan (S-14-001)	2	1
F	**Water Conservation / Efficiency / Management**					**17**	**11**
F-1	Rainw ater Harvesting System	Straughan	Collect and make use of w ater runoff from minimum 50% of roof area; provide storage system and monitoring device and maintenance / management program	Provide rainw ater harvesting for school and recreational fields	Reference: SDP (SDP-12-075)	5	5
F-2	Water-Permeable Walkw ays	N/A	Use w ater-permeable materials in 50% or more of pathw ays; provide maintenance program	N/A	N/A	4	0
F-3a	Low Impact Development (LID) Stormw ater Treatment	FCC/Civil	Meets minimum Design Manual requirements; no dry ponds allow ed	No dry ponds	GN Plan SDP (SDP-14-071) Sheets 5-6 Reference: Sketch Plan (S-14-001)	REQ'D	
F-3b	Low Impact Development (LID) Stormw ater Treatment	FCC/Civil	Exceeds Design Manual requirements; maximize use of bioretention (esp. for parking lots), rain gardens, rain barrels, stormw ater w etlands, green roof, etc.	Will provide 51% w ater quality volume stored and infiltrated/re-used On-Site	GN Plan GN Report SDP (SDP-14-071) Sheets 5-6 Reference: Sketch Plan (S-14-001)	8	6
G	**Energy Efficiency**					**13**	**0**
G-1	Light Pollution Reduction	FCC/Civil; HCM/Planners	Shield all site lighting fixtures to reduce light and spillover below county code requirements; install sensors or timers on all exterior site lighting fixtures	N/A	N/A	4	0
G-2	Solar Orientation	N/A	Orient 50% (1 point) or 75% (2 points) or 100% (3 points) of buildings to make available for solar strategies	N/A	N/A	3	0
G-3	Infrastructure Energy Efficiency	N/A	Select high efficiency fixtures for parking lot and other site light fixtures	N/A	N/A	6	0
H	**Materials Beneficial to the Environment / Waste Management**					**17**	**7**
H-1	Environmentally Preferable Site Products	Straughan FCC/Civil; HCM/Planners	Select products from a list including: recycled materials (concrete, asphalt, tires, plastic, etc.), materials w ith recycled content, salvaged or engineered materials;	Use 26-50% environmentally preferrable materials	GN Report	8	0
H-2	Reduce Heat-Island Effect of Paving	N/A	Use light-colored or high albedo materials and/or porous paving w ith a minimum Solar Reflective Index of 0.6 or over for at least 30% of the site hardscape	N/A	N/A	2	0
H-3	Site Construction Waste Management	Straughan	Develop and implement a construction w aste management plan to divert, reuse, recycle or reduce the amount of site material sent to the landfill by 25% (2 points) or 50% (3 points) or 75% (4 points)	Divert 75% or more site construction w aste	GN Report	4	4
H-4	Regionally Provided Materials	Straughan FCC/Civil; HCM/Planners	20% of common and public infrastructure materials from w ithin 200 miles	Use regionally produced materials for 20% of total site materials	GN Report	3	3
I	**Operations and Maintenance Education**					**0**	**0**
I-1	HOA Documents	Straughan;	Include information about green site features and maintenance requirements in HOA documents	Provide HOA document	Under review w ith SDP-13-068	REQ'D	
I-2	Maintenance Manual for Ow ner / HOA / Manager	Straughan	Provide a manual that includes information on how to maintain the green features of the site, including paving materials, landscaping and stormw ater management LID and encourages additional green activities such as recycling, gardening, etc.	Provide manual	Under review w ith SDP-13-068	REQ'D	
I-3	Public Aw areness of Sustainable Community	Straughan; HCM	Develop a program to advertise the environmental benefits of the community	Implement public aw areness strategy	GN Report	REQ'D	
			TOTAL GREEN NEIGHBORHOOD SITE POINTS			**167**	97
			Number of points required to obtain Green Neighborhood Allocations			**90**	

Third Party Certification		
By affixing my signature below, the undersigned does hereby declare and affirm to How ard County that the targeted Green Neighborhood Site credits and point total, as specified in this Green Neighborhood Site Compliance Checklist, are reasonable and achievable.		
Signature: [signature]	Title: PRESIDENT No. 10439208	Date: 6.16.15
Name: CHARLES ALEXANDER	Organization: ALEXANDER DESIGN STUDIO	
Submission (mark "X" where applicable): ___ SDP (SDP-14-071)		

APPROVED
HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
GREEN NEIGHBORHOOD PLAN FOR SITES

[signature] 9.14.15
CHIEF, RESOURCE CONSERVATION DIVISION — DATE

LEED ACCREDITED PROFESSIONAL CERTIFICATE
GREEN NEIGHBORHOOD PLAN FOR SITES

I hereby certify that this plan represnets a practical and workable plan for achieving the targeted credits and point total shown on the Green Neighborhood for Sites Compliance Checklist.

[signature] 10007912 6.16.15
MATTHEW J FITZSIMMONS, LEED AP — LEED ACCREDITATION NUMBER — DATE

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410.837.7311 ¦ www.hcm2.com
Hord Coplan Macht, Inc. 2014

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CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE

AS-BUILT CERTIFICATION FOR PSWM
Note: There is no "AS BUILT" information provided on this sheet.
ALDO M. YNIGUEZ NO. 20746 — Date 4/19/19

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[signature] 9-23-15
Chief, Division of Land Development — Date

[signature] 7-8-15
Chief, Development Engineering Division — Date

[signature] 9-24-15
Director - Department of Planning and Zoning — Date

SUBDIVISION			PARCEL No.		LOT Nos.
OXFORD SQUARE			'C'		LOTS 224-241 & CONDO. BLDGS. 1-3
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	44	1st.	601101

GREEN NEIGHBORHOOD PLAN

OXFORD SQUARE

"A Howard County Green Neighborhood"

Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'

(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'I', 'J', 'K' And 'M" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)

Zoned: TOD
Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
First Election District Howard County, Maryland
Scale: As Shown
Date: May 7, 2015
Sheet 19 Of 20

SDP-14-071

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

GREEN NEIGHBORHOOD NOTES:

A-2 THE DESIGN AND DEVELOPMENT TEAM INCLUDES A LEED AP (MATTHEW FITZSIMMONS- HORD COPLAN MACHT), ENVIRONMENTAL PROFESSIONAL (JOHN CANOLES- ECO-SCIENCE PROFESSIONALS, INC.), LANDSCAPE ARCHITECT (JOSH KILRAIN- HORD COPLAN MACHT) AND AN ENGINEER (ALDO VITUCCI PE- FISHER COLLINS & CARTER)

A-3 THE THIRD PARTY CERTIFICATION IS PROVIDED BY CHARLES ALEXANDER, LEED-AP OF ALEXANDER DESIGN STUDIOS.

B-1a THE 111.1 ACRE DEVELOPMENT CONSISTS OF 28.4 ACRES OF PREVIOUSLY DEVELOPED LAND (25.6% OF THE OXFORD SQUARE DEVELOPMENT).

B-3a OXFORD SQUARE WILL PROVIDE TWO TRANSIT STOPS FOR THE PROPOSED PRIVATE SHUTTLE SERVICE CONNECTING OXFORD SQUARE TO THE DORSEY MARC COMMUTER RAIL STATION. THE STOPS WILL BE WITHIN 1/4 WALKING DISTANCE TO ALL DWELLING UNITS.

B-3b OXFORD SQUARE WILL PROVIDE ONE SHELTER AT ONE OF THE PRIVATE SHUTTLE STOPS. THE SHELTER WILL COMPLY WITH COUNTY -APPROVED CRITERIA INCLUDING BENCHES AND LIGHTING.

C-1 OXFORD SQUARE WILL PROVIDE THREE DIVERSE USES OTHER THAN RESIDENTIAL: INSTITUTIONAL (MIDDLE SCHOOL BUILDING AND OUTDOOR CLASSROOM SPACE, ELEMENTARY SCHOOL), CIVIC (SCHOOL'S RECREATIONAL PLAYING FIELDS AND SHARED-USE PATH) AND OFFICE.

C-2 OXFORD SQUARE IS LOCATED WITHIN THE EXISTING PLANNED WATER AND SEWER SERVICE AREA.

C-3c OXFORD SQUARE WILL PROVIDE A MINIMUM OF TWO PEDESTRIAN SYSTEM AMENITY EXPERIENCES: 1) SHARED USE PATH AND NATURE TRAIL (TRAIL SIGNS AND MARKERS, BENCHES, LITTER RECEPTACLES, INFORMATIONAL SIGNS, BIKE RACKS), 2) THE LAWN (BENCHES, EXTERIOR LIGHTING, SHADE TREES, INFORMATIONAL SIGNS), 3) RESIDENTIAL COURTYARDS AND MEWS (BENCHES), AND 4) SCHOOL SITES (PLAYING FIELDS, BENCHES, BIKE RACKS)

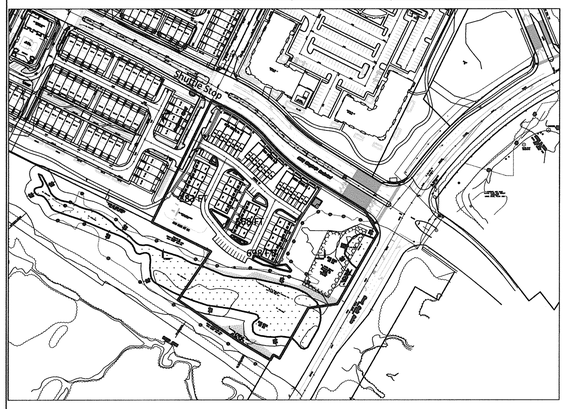
D-8b OXFORD SQUARE WILL PROVIDE A MINIMUM 75 FT ENHANCED STREAM BUFFER.

E-3 OXFORD SQUARE WILL NOT PLANT INVASIVE PLANTS.

E-4 OXFORD SQUARE WILL NOT PLANT TURF IN DENSELY SHADED AREAS.

F-3b OXFORD SQUARE WILL PROVIDE AT LEAST 51% WATER QUALITY VOLUME STORED AND INFILTRATED/RE-USED ON-SITE.

B-3a & B-3b VICINITY MAP (Scale: 1": 200')



GREEN NEIGHBORHOOD CALCULATIONS & TABLES:

A-4b Priority Parking for Low-Emitting and Fuel Efficient Vehicles

Total Number of Off-Street Parking Spaces:	18 Spaces
Total Number of Proposed Preferred Parking Spaces:	1 Spaces
Percent of Preferred Parking Spaces:	**5.6%**

A-4c Compact Development

	Complete Build-Out	SDP
Total Dwelling Units:	1,489 DU	42 DU
Residential Land Area:	42.1 AC	3.25 AC
Residential Density:	**35.37 DU/AC**	**12.92 DU/AC**

Note: This SDP expanded the Residential Land Area by 1.05 Acres in comparison to Sketch Plan (S-14-001). This increase in Residential Land Area does not expand the limits of disturbance on Parcel 'C'. This SDP reduced the quantity of units by 3 DU since Sketh Plan (S-14-001).

A-4d Walkable Streets

	Complete Build-Out	SDP
Length of Buildings Frontage Oriented Towards the Public Space:	11,021 FT	720 FT
Total Length of Building Frontage:	12,276 FT	720 FT
%of Building Frontage Oriented Towards the Public Spaces:	**89.8%**	**100.0%**
Length of Building Frontage with Service or Garage Openings:	754 FT	- FT
Length of Building Frontage Oriented Towards Public Spaces (including Service and Garage openings):	11,775 FT	720 FT
%of Building Frontage with Service or Garage Openings:	**6.4%**	**0.0%**

Note: In comparison to the Sketch Plan (S-14-001) this SDP provides 390 additional feet to the 'length of building frontage oriented towards the public space', 'total length of building frontage' and 'length of building frontage oriented towads the public sapce (including service and garage openings)' on Parcel 'C'.

B-1a Redevelopment Site

Gross Site Area (Parcel C):	111.1 Acres
Area of Existing Development (Acres):	28.4 Acres
Percent of Previously Developed:	**25.6%**

B-3a Transit Access & Amenities for Reduced Auto Dependence (Stop)

Residential Buildings within 1/4 Mile (~1,320 FT)	Total Number of Qualifying Units	Percent of all Units
All Buildings	1,489 DU	100%

C-1 Diversity of Uses

Residential Uses		Number of Units	Percent of Total Units
Apartments & Townhouses		1,489 DU	100%
Nonresidential Uses		**Area**	**SF per Dwelling Unit**
Office:		154,000 SF	103 SF/DU
Institutional:	Middle School[1]	95,747 SF	
	Middle School Outdoor ClassroomSpace[1]	2,500 SF	
	Elementary School	101,014 SF	
	Institutional Subtotal:	**199,261 SF**	**134 SF/DU**
Civic:	Recreational Playing Fields (School Site)[1]	236,139 SF	
	Northern Loop Shared-Use Path (8 FT wide)[2]	19,504 SF	
	Southern Loop Shared-Use Path (8 FT wide)[3]	8,016 SF	
	Civic Subtotal:	**263,659 SF**	**177 SF/DU**

Note: [1] Revised per the approved Middle School SDP (SDP-12-075)
[2] 12,801 SF of Shared-Use Path will be constructed on Middle School site (SDP-12-075)
[3] This SDP provides 224 SF of the southern shared use path.

C-3a Pedestrian System (Paths and Trails)

Northern Shared Use Path: Width of Path: 8 FT
Length: 2,438 FT (0.46 Miles)

Southern Shared Use Path: Width of Path: 8 FT
Length: 1,002 FT (0.19 Miles)

Mulch Nature Trail Width of Path: 5 FT
Length: 595 FT

Note: This SDP provides 28 linear feet of the southern shared use path.

C-4 Street Connections

Street Name / ID	Street Length	Qualifying Street
Saint Margarets Boulevard	1,684 FT	Yes
Banbury Drive	2,589 FT	Yes
Road A	220 FT	No
Road B	514 FT	No
Road C	228 FT	No
Road D	740 FT	Yes
Road E (North and South)	1,450 FT	Yes
Road F	1,016 FT	Partial
Road G	120 FT	No
Road H	120 FT	No
Road J	465 FT	Yes
Road I	245 FT	No

Summary	
Total Street Length:	9,391 FT
Total Connected Street Length:	7,393 FT
Percent Connected Streets:	**78.7%**

Note: This SDP completes improvements to Southmoor Street (formerly Road 'A').

C-6 Exceed Minimum Open Space

Net Acreage:	101.6 AC
Required Amenity Space (TOD: 10% of Net Acreage):	10.2 AC
Provided Amenity Space:	15.7 AC
Percent Increase above the Minimum Required:	**53.9 %**

Note: 1. This SDP submission contributes 1.72 Acres of Amenity Space to the Complete Build-Out goal .

C-7 Green Spaces and Amenity Areas

Parcel	Road Frontage	Amenity Type	Amenity Area
Open Space 1: The Nature Trail (future SDP)	160 FT	Nature Trail, Benches, Trail Signage, Educational Signage	31,266 SF (0.72 AC)
Open Space 2: Pool House and Pool (O.S. Lot #107 on SDP-13-068)	+/-138 FT (length along Private Road 'B'	Pool house, Pool, Fitness Room and Warming Kitchen	11282 SF (0.26 AC)

D-4 15% Slope Preservation

	GN Boundary
Total Area of Slopes 15-24.9%	504,072 SF
Area of Undisturbed Slopes 15-24.9%	289,178 SF
Percent of Undisturbed Slopes:	**57.4 %**

Note: The area of undisturbed slopes is the summation of slopes impacted by the greatest extent of LODs accumulated from the entire

Approved Sketch Plan (S-14-001), Approved Final Plan (F-12-026), Approved Middle School SDP (SDP-12-075) and future environmental restoration work.

D-5 Minimize Grading and Site Disturbance

	Complete Build Out
Gross Area of Site	111.1 AC
Existing Impervious Cover	28.4 AC
Area of Site	82.7 AC
Area of Site to Remain Undisturbed	28.4 AC
Precent of Site to Remain Undisturbed:	**34.3 %**
Ratio of Cut to Fill:	**1.13 Ratio**
Retaining Wall:	**0 FT**

Note: 1. Complete Build Out Calculations are based on the aggregate greatest extent of LOD's from the submitted Sketch Plan (S-14-001), Approved Final Plan (F-12-026) and Approved Middle School SDP (SDP-12-075).

2. SDP submission land area is located within the Complete Build Out LOD therefore there are no impacts to undisturbed areas.

3. No dirt was imported or exported from Oxford Square.

D-6 Exceed Minimum Forest Conservation Requirements

Afforestation Obligation:	3.50 AC
Afforestation Provided in Excess of Obligation:	1.75 AC
Percentage of Provided in Excess of Obligation:	**50.00 %**

D-8b Exceed Minimum Stream Buffer Requirements

Total Stream Buffer Width:	150 FT
Width of Buffer Exceeding Requirements:	75 FT
Total Length of Stream Buffer:	1,984.2 FT
Length of Stream Buffer Outside Other Buffers:	1,352.3 FT
Percent of Stream Buffer Outside Other Buffers:	**68.2 %**

APPROVED
HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
GREEN NEIGHBORHOOD PLAN FOR SITES

Beth Burgess — CHIEF, RESOURCE CONSERVATION DIVISION — 9.14.15 DATE

LEED ACCREDITED PROFESSIONAL CERTIFICATE
GREEN NEIGHBORHOOD PLAN FOR SITES

I hereby certify that this plan represents a practical and workable plan for achieving the targeted credits and point total shown on the Green Neighborhood for Sites Compliance Checklist.

Matthew J Fitzsimmons — 10007912 — 9.8.15
MATTHEW J FITZSIMMONS, LEED AP — LEED ACCREDITATION NUMBER — DATE

E-1 Landscaping

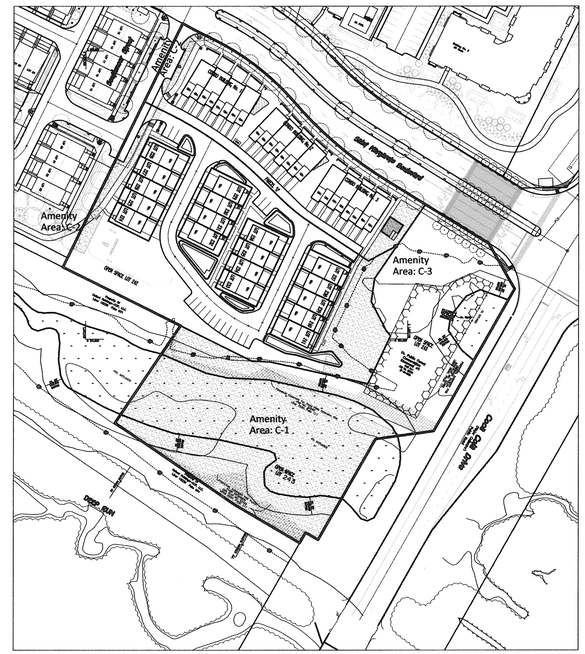
Plants Required	Shade Trees	Evergreen	Shrubs	Total	Percent
Number of Plants Required by Landscape Manual	48	13	0	61	
Number Excess Plants Required for GN Credit	10	3	0	13	21.3
Landscape Manual and GN Requirements	58	16	0	74	

Plants Provided

Plants Provided	Shade Trees	Shade Tree (Substitute)	Evergreen	Evergreen (Substitute)	Other Trees (Substitute)	Shrubs	Shrub (Substitute)	Total
Number of Plants Provided to Meet Landscape Manual	39	9	6	7			0	61
Number of Plants Provided to Meet GN Credits	10	–	0	3	0	0	0	13
Total Number of Plants Provided	49	9	6	10	0	0	0	74

Notes: 1. Shade Tree Substitution (19 Ornamental /2= 9 Required Shade Trees)
2. Evergreen Substitution (7 Ornamentals = 7 Required Evergreen)
3. Native Evergreen Substitution (3 IVM = 3 Native Evergreens)
4. Native Shade Trees: (18 BNH, 3 LST, 3 OAR= 24 Native Shade Trees)
5. Native Ornamental Trees: (12 MV)
6. This plan meets the project's goal to provide a 20% increase of native shade trees.

C-6 Green Spaces & Amenity Area (Scale: 1": 100')



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE

STATE OF MARYLAND — ALDO M. VITUCCI — No. 20780 — PROFESSIONAL ENGINEER — 7.9.15

AS-BUILT CERTIFICATION FOR PSWM
Note: There is no "AS BUILT" information provided on this sheet.
ALDO M. VITUCCI NO. 20780 — 4/10/19 Date

Owner/Builder
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

Developer
Lennar
10211 Wincopin Circle, Suite 180
Columbia, Maryland 21044
Ph# 410-423-0460

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 9-23-15 Date
Chief, Development Engineering Division — 9.16.15 Date
Director - Department of Planning and Zoning — 9-24-15 Date

SUBDIVISION			PARCEL No.	LOT Nos.
OXFORD SQUARE			'C'	LOTS 224-241 & CONDO. BLDGS. 1-3
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23450-23451	---	TOD	38	1st.	601101

GREEN NEIGHBORHOOD PLAN
OXFORD SQUARE
"A Howard County Green Neighborhood"
Lots 224-241, Open Space Lots 242 & 243 And Parcel 'U'
(Being A Resubdivision Of Parcel 'C', As Shown On Plats Entitled "Revision Plat, Oxford Square, "Green Neighborhood", Parcels 'C', 'E', 'F', 'G', 'J', 'K' And 'M' And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22856 Thru 22859)
Zoned: TOD
Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
First Election District Howard County, Maryland
Scale: As Shown
Date: May 7, 2015
Sheet 20 Of 20

SDP-14-071

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

I:\2009\09014\dwg\SDP (Lennar) Parcel 'C'\dec 17 2014 sdp per wittner changes\09014 Sheet 20 grn plans revised sept 2015.dwg, 9/8/2015 8:15:37 AM, 1:1