



## **Attachment 1b**

Form I-8, Categorization of Infiltration Feasibility Condition

Categorization of Infiltration Feasibility Condition		Form I-8	
<b>Part 1 - Full Infiltration Feasibility Screening Criteria</b> <b>Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?</b> Note that it is not necessary to investigate each and every criterion in the worksheet if infiltration is precluded. Instead a letter of justification from a geotechnical professional familiar with the local conditions substantiating any geotechnical issues will be required.			
Criteria	Screening Question	Yes	No
1	Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour? The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.		✓
Provide basis:  Per the project Geotechnical Investigation, see Attachment 7, the site soils are unsuitable for infiltration of stormwater runoff. Additionally, soil conditions like those found at the site are prone to developing a perched groundwater condition, as such, infiltration should be avoided.  Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
2	Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.2.		✓
Provide basis:  Per the project Geotechnical Investigation, see Attachment 7, the site soils are unsuitable for infiltration of stormwater runoff. Additionally, soil conditions like those found at the site are prone to developing a perched groundwater condition, as such, infiltration should be avoided.  Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			

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Criteria	Screening Question	Yes	No
3	Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of groundwater contamination (shallow water table, storm water pollutants or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.3.		✓
<p>Provide basis:</p> <p>Per the project Geotechnical Investigation, see Attachment 7, the site soils are unsuitable for infiltration of stormwater runoff. Additionally, soil conditions like those found at the site are prone to developing a perched groundwater condition, as such, infiltration should be avoided.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>			
4	Can infiltration greater than 0.5 inches per hour be allowed without causing potential water balance issues such as change of seasonality of ephemeral streams or increased discharge of contaminated groundwater to surface waters? The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.3.		✓
<p>Provide basis:</p> <p>Per the project Geotechnical Investigation, see Attachment 7, the site soils are unsuitable for infiltration of stormwater runoff. Additionally, soil conditions like those found at the site are prone to developing a perched groundwater condition, as such, infiltration should be avoided.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</p>			
Part 1 Result *	<p>If all answers to rows 1 - 4 are “Yes” a full infiltration design is potentially feasible. The feasibility screening category is <b>Full Infiltration</b></p> <p>If any answer from row 1-4 is “No”, infiltration may be possible to some extent but would not generally be feasible or desirable to achieve a “full infiltration” design. Proceed to Part 2</p>		

\*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by Agency/Jurisdictions to substantiate findings

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<b>Part 2 – Partial Infiltration vs. No Infiltration Feasibility Screening Criteria</b>			
Would infiltration of water in any appreciable amount be physically feasible without any negative consequences that cannot be reasonably mitigated?			
Criteria	Screening Question	Yes	No
5	<b>Do soil and geologic conditions allow for infiltration in any appreciable rate or volume?</b> The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.		✓
<p>Provide basis:</p> <p>Per the project Geotechnical Investigation, see Attachment 7, the site soils are unsuitable for infiltration of stormwater runoff. Additionally, soil conditions like those found at the site are prone to developing a perched groundwater condition, as such, infiltration should be avoided.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.</p>			
6	<b>Can Infiltration in any appreciable quantity be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level?</b> The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.2.		✓
<p>Provide basis:</p> <p>Per the project Geotechnical Investigation, see Attachment 7, the site soils are unsuitable for infiltration of stormwater runoff. Additionally, soil conditions like those found at the site are prone to developing a perched groundwater condition, as such, infiltration should be avoided.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.</p>			

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Criteria	Screening Question	Yes	No
7	<p><b>Can Infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, storm water pollutants or other factors)?</b></p> <p>The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.3.</p>		✓
<p>Provide basis:</p> <p>Per the project Geotechnical Investigation, see Attachment 7, the site soils are unsuitable for infiltration of stormwater runoff. Additionally, soil conditions like those found at the site are prone to developing a perched groundwater condition, as such, infiltration should be avoided.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.</p>			
8	<p><b>Can infiltration be allowed without violating downstream water rights?</b> The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.3.</p>		✓
<p>Provide basis:</p> <p>Per the project Geotechnical Investigation, see Attachment 7, the site soils are unsuitable for infiltration of stormwater runoff. Additionally, soil conditions like those found at the site are prone to developing a perched groundwater condition, as such, infiltration should be avoided.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.</p>			
<p><b>Part 2</b></p> <p><b>Result*</b></p>	<p>If all answers from row 1-4 are yes then partial infiltration design is potentially feasible. The feasibility screening category is <b>Partial Infiltration</b>.</p> <p>If any answer from row 5-8 is no, then infiltration of any volume is considered to be <b>infeasible</b> within the drainage area. The feasibility screening category is <b>No Infiltration</b>.</p>		

\*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by Agency/Jurisdictions to substantiate findings

## **Attachment 1c**

DMA Exhibit

**Use this checklist to ensure the required information has been included on the DMA Exhibit:**

The DMA Exhibit must identify:

- ☒ Underlying hydrologic soil group
- ☒ Approximate depth to groundwater
- ☒ Existing natural hydrologic features (watercourses, seeps, springs, wetlands)
- ☐ Critical coarse sediment yield areas to be protected
- ☒ Existing topography and impervious areas
- ☒ Existing and proposed site drainage network and connections to drainage offsite
- ☒ Proposed demolition
- ☒ Proposed grading
- ☒ Proposed impervious features
- ☒ Proposed design features and surface treatments used to minimize imperviousness
- ☒ Drainage management area (DMA) boundaries, DMA ID numbers, and DMA areas (square footage or acreage), and DMA type (i.e., drains to BMP, self-retaining, or self-mitigating)
- ☒ Potential pollutant source areas and corresponding required source controls (see Chapter 4, Appendix E.1, and Step 3.5)
- ☒ Structural BMPs (identify location, structural BMP ID#, type of BMP, and size/detail)



LEGEND

PROPOSED LOT NUMBER

1 THRU 30

SUBDIVISION BOUNDARY

---

PROPOSED LOT LINE

---

PROPOSED RIGHT-OF-WAY

---

EXISTING CONTOUR

630

PROPOSED CONTOUR

630

PROPOSED STORM DRAIN

SD

PROPOSED STORM DRAIN INLET/  
CATCH BASIN

PROPOSED STORM DRAIN CLEANOUT

PROPOSED STORM DRAIN HEADWALL/  
ENERGY DISSIPATOR

RUNOFF FLOW DIRECTION

BIOFILTRATION/STORM WATER DETENTION  
FACILITY (FACILITIES WILL CONTAIN  
PLANTS TOLERANT OF SATURATED SOIL  
CONDITIONS)

BF-1

DRAINAGE MANAGEMENT AREA  
BOUNDARY AND LABEL

SELF-MITIGATING AREA

**S-BMPs - DEVELOPMENT OF THE UNITS:**  
DEVELOPMENT PROPOSED ON THE ROUGH GRADED PADS WILL BE REQUIRED TO PROVIDE STORM WATER MITIGATION AT THAT TIME, CONSISTENT WITH ALL APPROPRIATE POLICIES AND PERMITS APPLICABLE AT THE TIME OF DEVELOPMENT. TREATMENT STRATEGIES WILL BE DETERMINED DURING THE SITE PLAN REVIEW PERFORMED PRIOR TO THE DEVELOPMENT OF EACH LOT, AS MANDATED BY THE SPECIFIC PLAN.

**NOTE:**  
FOR ROUGH GRADED PADS CONSTRUCTED PER THIS PROJECT, CONSTRUCTION GENERAL PERMIT REQUIREMENTS APPLY TO THESE AREAS, INCLUDING BUT NOT LIMITED TO THE INSTALLATION AND ONGOING MAINTENANCE OF CONSTRUCTION BMPs. FUTURE IMPROVEMENTS PER SEPARATE PERMIT AND ASSOCIATED PDP SWQMP.

**SELF-MITIGATING DMAS (PER BMP DESIGN MANUAL):**  
SELF-MITIGATING DMAS CONSIST OF NATURAL OR LANDSCAPED AREAS THAT DRAIN DIRECTLY OFFSITE OR TO THE PUBLIC STORM DRAIN SYSTEM. SELF-MITIGATING DMAS MUST MEET ALL OF THE FOLLOWING TO BE ELIGIBLE FOR EXCLUSION:

- VEGETATION IN THE NATURAL OR LANDSCAPED AREA IS NATIVE AND/OR NON-NATIVE/NON-INVASIVE DROUGHT TOLERANT SPECIES THAT DO NOT REQUIRE REGULAR APPLICATION OF FERTILIZERS AND PESTICIDES.
- SOILS ARE UNDISTURBED NATIVE TOPSOIL, OR DISTURBED SOILS THAT HAVE BEEN AMENDED AND AERATED TO PROMOTE WATER RETENTION CHARACTERISTICS EQUIVALENT TO UNDISTURBED NATIVE TOPSOIL.
- THE INCIDENTAL IMPERVIOUS AREAS ARE LESS THAN 5 PERCENT OF THE SELF-MITIGATING AREA.
- IMPERVIOUS AREA WITHIN THE SELF-MITIGATED AREA SHOULD NOT BE HYDRAULICALLY CONNECTED TO OTHER IMPERVIOUS AREAS UNLESS IT IS A STORM WATER CONVEYANCE SYSTEM (SUCH AS A BROW DITCH).
- THE SELF-MITIGATING AREA IS HYDRAULICALLY SEPARATE FROM DMAS THAT CONTAIN PERMANENT STORM WATER POLLUTANT CONTROL BMPs.

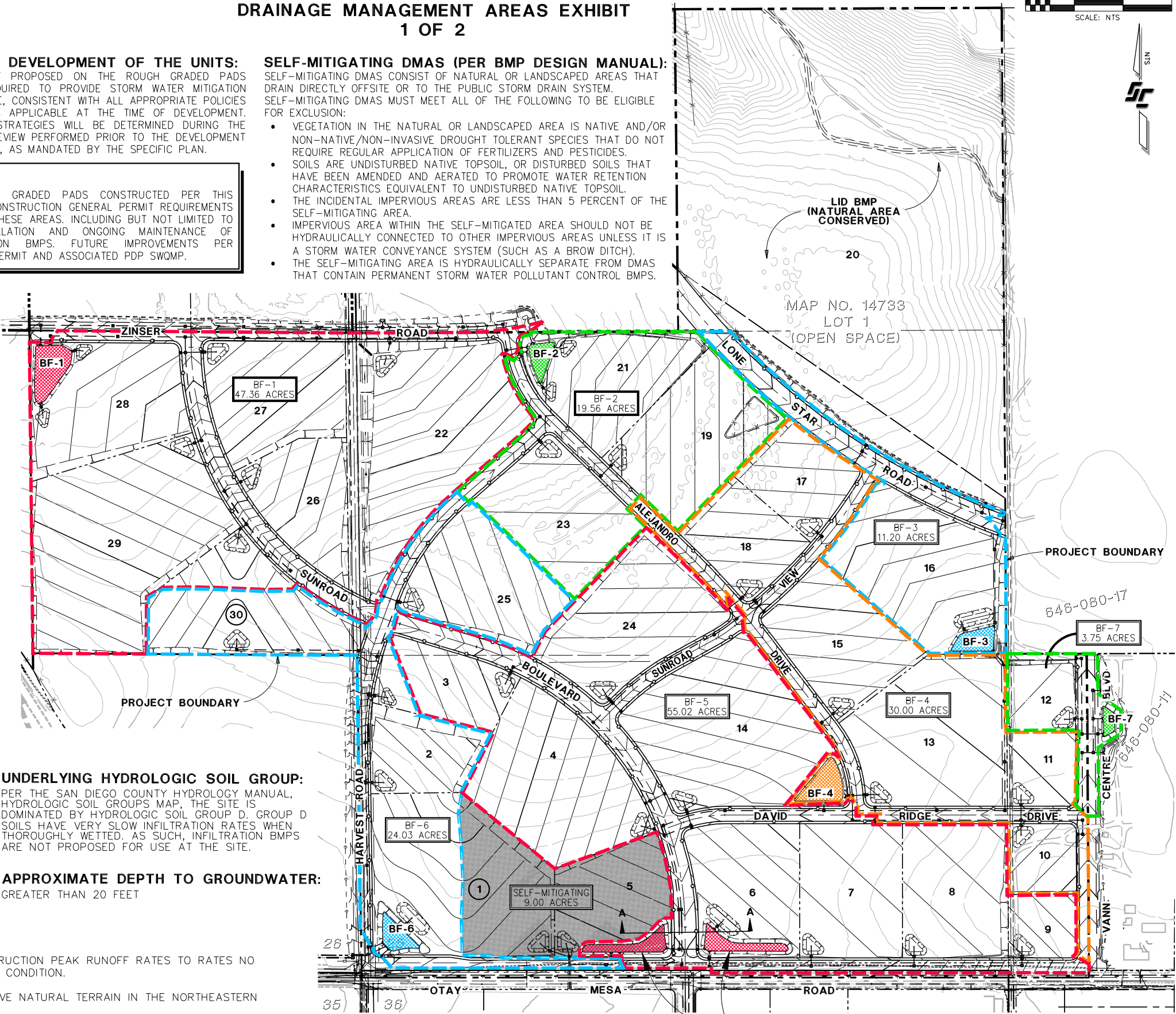
DMA ID	AREA (SF)	TYPE
BF-1	2,063,006	201,983 SF ROADWAY 22,442 SF ROADWAY PERVIOUS AREA 25,000 SF BIOFILTRATION 1,813,581 SF ROUGH GRADED PADS
BF-2	852,104	80,445 SF ROADWAY 8,938 SF ROADWAY PERVIOUS AREA 10,000 SF BIOFILTRATION 752,721 SF ROUGH GRADED PADS
BF-3	487,888	124,435 SF ROADWAY 13,826 SF ROADWAY PERVIOUS AREA 13,000 SF BIOFILTRATION 336,627 SF ROUGH GRADED PADS
BF-4	1,306,833	229,767 SF ROADWAY 25,530 SF ROADWAY PERVIOUS AREA 21,000 SF BIOFILTRATION 1,030,536 SF ROUGH GRADED PADS
BF-5	2,396,818	377,008 SF ROADWAY 41,889 SF ROADWAY PERVIOUS AREA 32,300 SF BIOFILTRATION 1,945,621 SF ROUGH GRADED PADS
BF-6	1,046,933	152,441 SF ROADWAY 16,288 SF ROADWAY PERVIOUS AREA 13,150 SF BIOFILTRATION 865,054 SF ROUGH GRADED PADS
BF-7	163,525	49,262 SF ROADWAY 5,473 SF ROADWAY PERVIOUS AREA 4,800 SF BIOFILTRATION 103,990 SF ROUGH GRADED PADS
SELF-MITIGATING	392,033	392,033 SF ROUGH GRADED PADS
TOTAL	10,930,000	1,215,341 SF ROADWAY 134,386 SF ROADWAY PERVIOUS AREA 119,250 SF BIOFILTRATION 7,240,163 SF ROUGH GRADED PADS 2,221,560 SF OPEN SPACE

LID TREATMENT BMPs:

- 1) BIORETENTION/DETENTION WILL BE UTILIZED TO LIMIT POST-CONSTRUCTION PEAK RUNOFF RATES TO RATES NO GREATER THAN THOSE GENERATED BY THE PROJECT IN THE EXISTING CONDITION.
- 2) THE PROJECT HAS ESTABLISHED AN OPEN SPACE LOT TO PRESERVE NATURAL TERRAIN IN THE NORTHEASTERN CORNER OF THE SITE.
- 3) THOUGH THE PROPOSED PROJECT WILL EMPLOY LID SITE DESIGN PRINCIPALS TO THE MAXIMUM EXTENT PRACTICABLE (MEP), LID DESIGN OPTIONS ARE LIMITED AT THIS STAGE IN DEVELOPMENT SINCE THE PROJECT WILL ONLY CONSTRUCT STREETS AND ROUGH GRADED PADS. ULTIMATE LID SITE DESIGN STRATEGIES WILL BE IMPLEMENTED DURING THE DEVELOPMENT OF EACH LOT AND WILL BE DETERMINED DURING THE SITE PLAN REVIEW PERFORMED PRIOR TO THE DEVELOPMENT OF EACH LOT, AS MANDATED BY THE SPECIFIC PLAN.

**UNDERLYING HYDROLOGIC SOIL GROUP:**  
PER THE SAN DIEGO COUNTY HYDROLOGY MANUAL, HYDROLOGIC SOIL GROUPS MAP, THE SITE IS DOMINATED BY HYDROLOGIC SOIL GROUP D. GROUP D SOILS HAVE VERY SLOW INFILTRATION RATES WHEN THOROUGHLY WETTED. AS SUCH, INFILTRATION BMPs ARE NOT PROPOSED FOR USE AT THE SITE.

**APPROXIMATE DEPTH TO GROUNDWATER:**  
GREATER THAN 20 FEET



**BF-5:**  
THE TWO BIOFILTRATION BASINS  
WILL FUNCTION AS A SINGLE BMP,  
SEE DETAIL ON SHEET 2

STEVENSON CRESTO ENGINEERING, INC.

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FAX: 858.694.5661  
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OTAY 250, TRACT 5607  
OTAY MESA, CALIFORNIA

ATTACHMENT 1c  
DRAINAGE MANAGEMENT AREAS  
EXHIBIT

DATE: 12/12/16

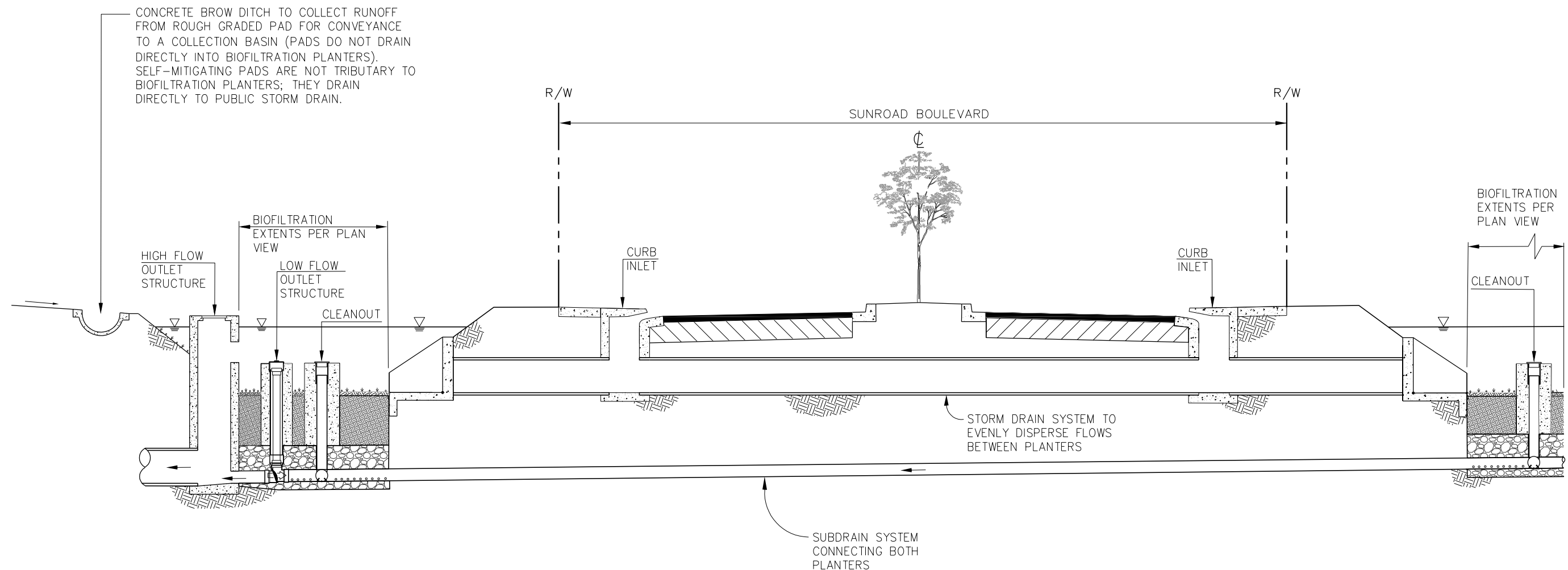
SCE NO. 14009.01

SHEET

1c

1 OF 2 SHEETS

DRAINAGE MANAGEMENT AREAS EXHIBIT  
2 OF 2



BIOFILTRATION PLANTER BF-5  
SECTION A-A  
NO SCALE

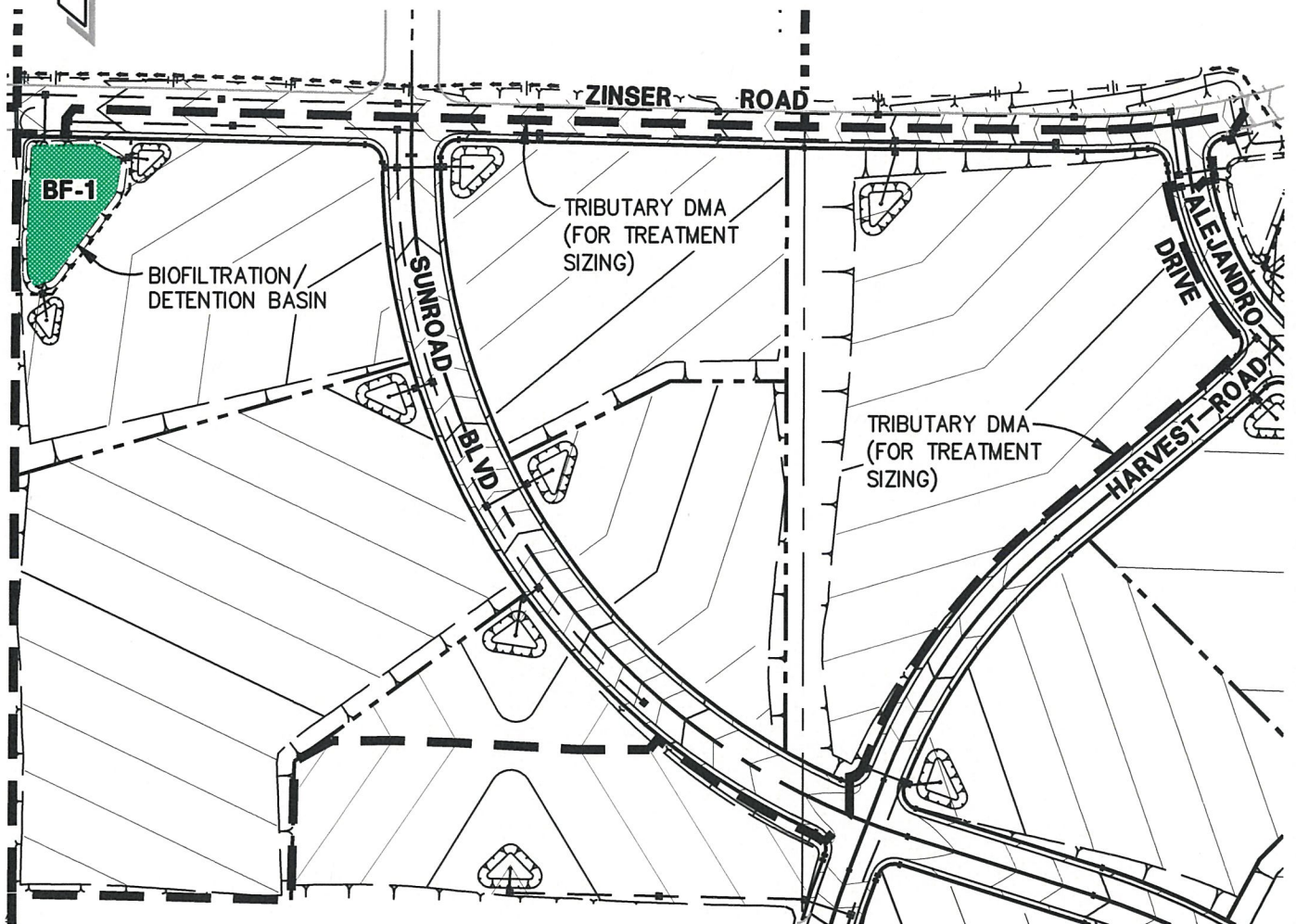
NOTE: CONCEPTUAL DESIGN SHOWN,  
CONSTRUCTION DETAILS TO BE  
PROVIDED AT FINAL ENGINEERING

## **Attachment 1d**

Individual Structural BMP DMA Mapbook



# ATTACHMENT 1d

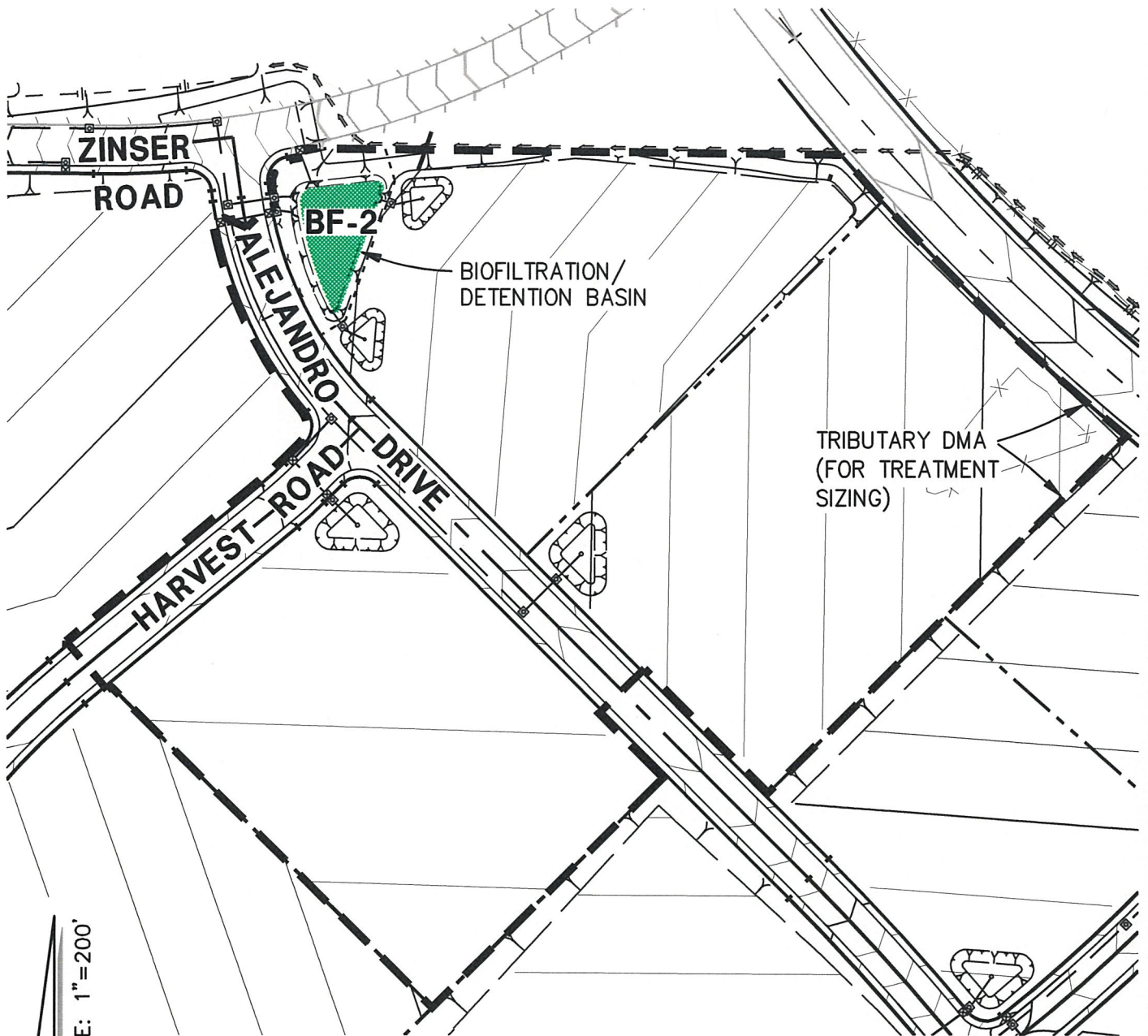


## BF-1 BMP DMA MAPBOOK

SCALE: 1"=300'



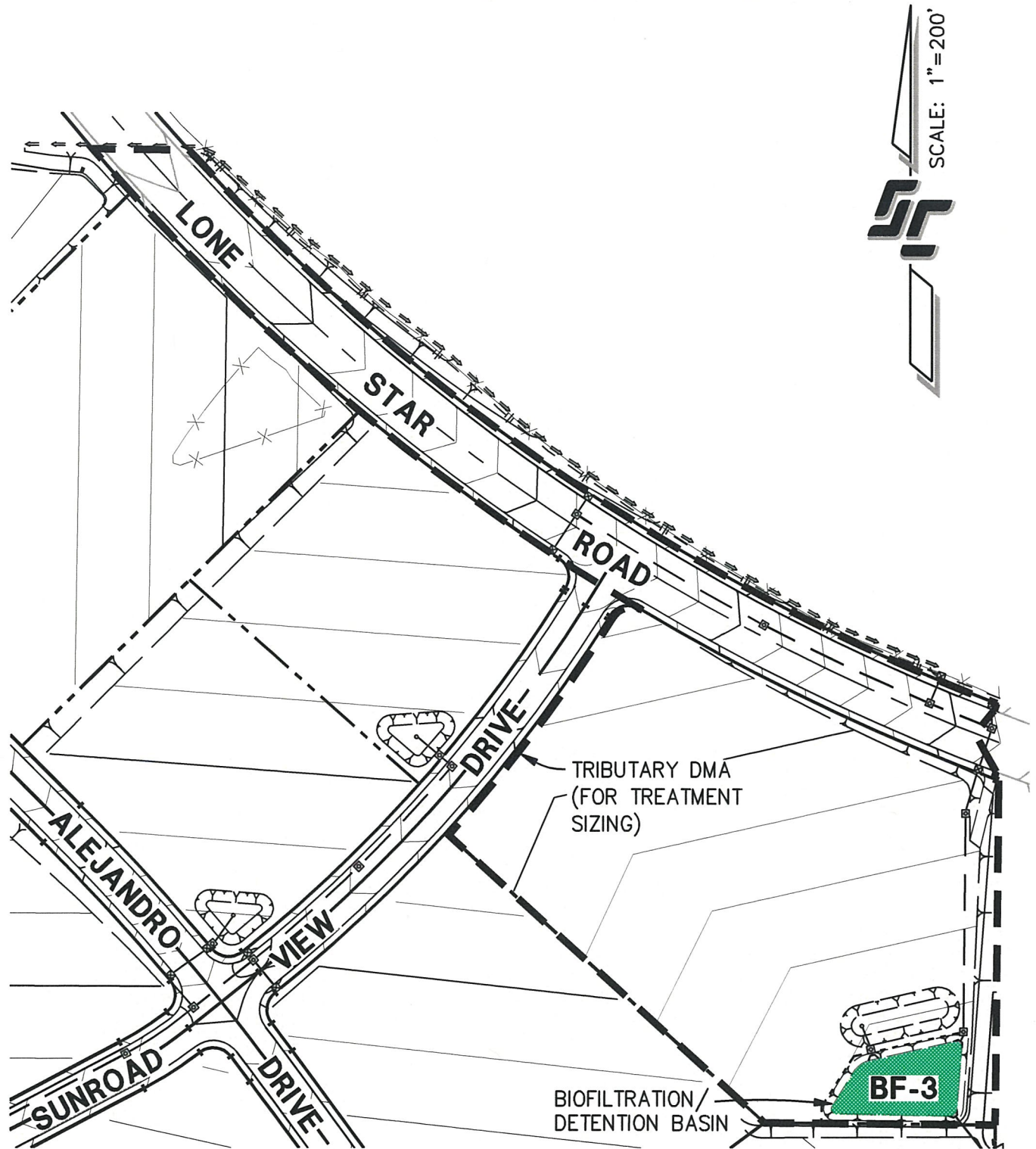
# ATTACHMENT 1d



## BF-2 BMP DMA MAPBOOK

SCALE: 1"=200'

# ATTACHMENT 1d



SCALE: 1" = 200'

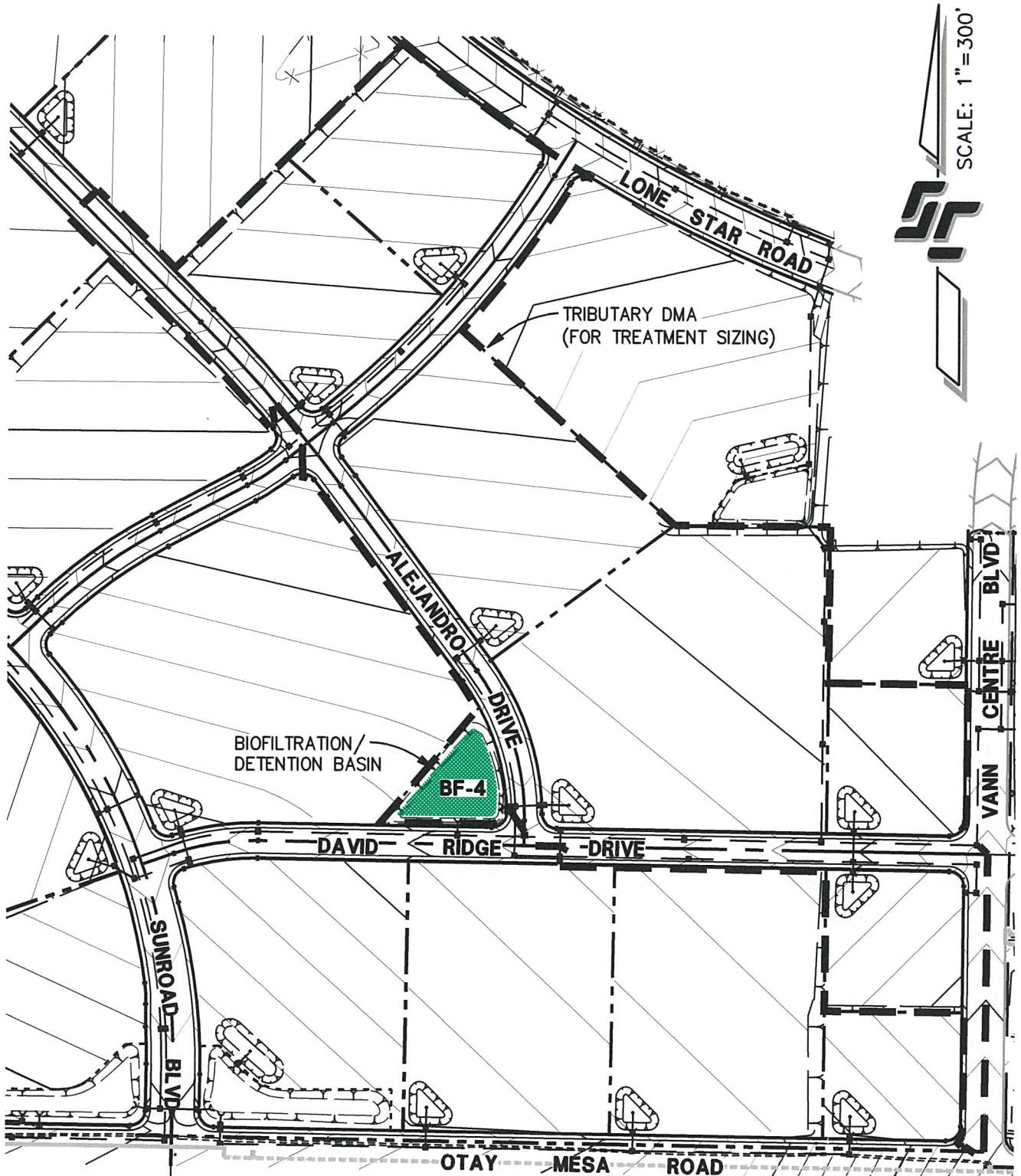


## BF-3 BMP DMA MAPBOOK

SCALE: 1" = 200'



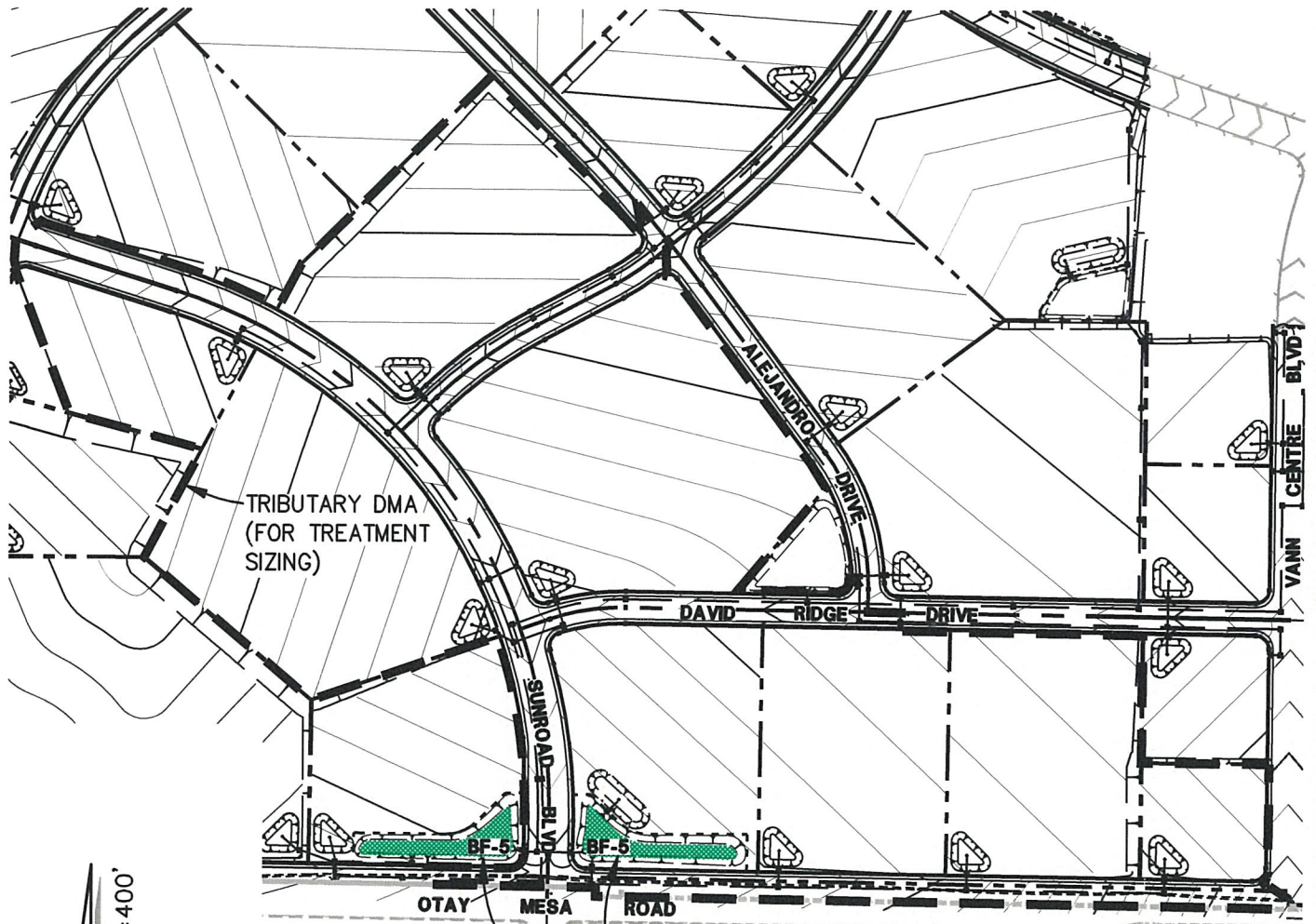
# ATTACHMENT 1d



## BF-4 BMP DMA MAPBOOK

SCALE: 1" = 300'

# ATTACHMENT 1d



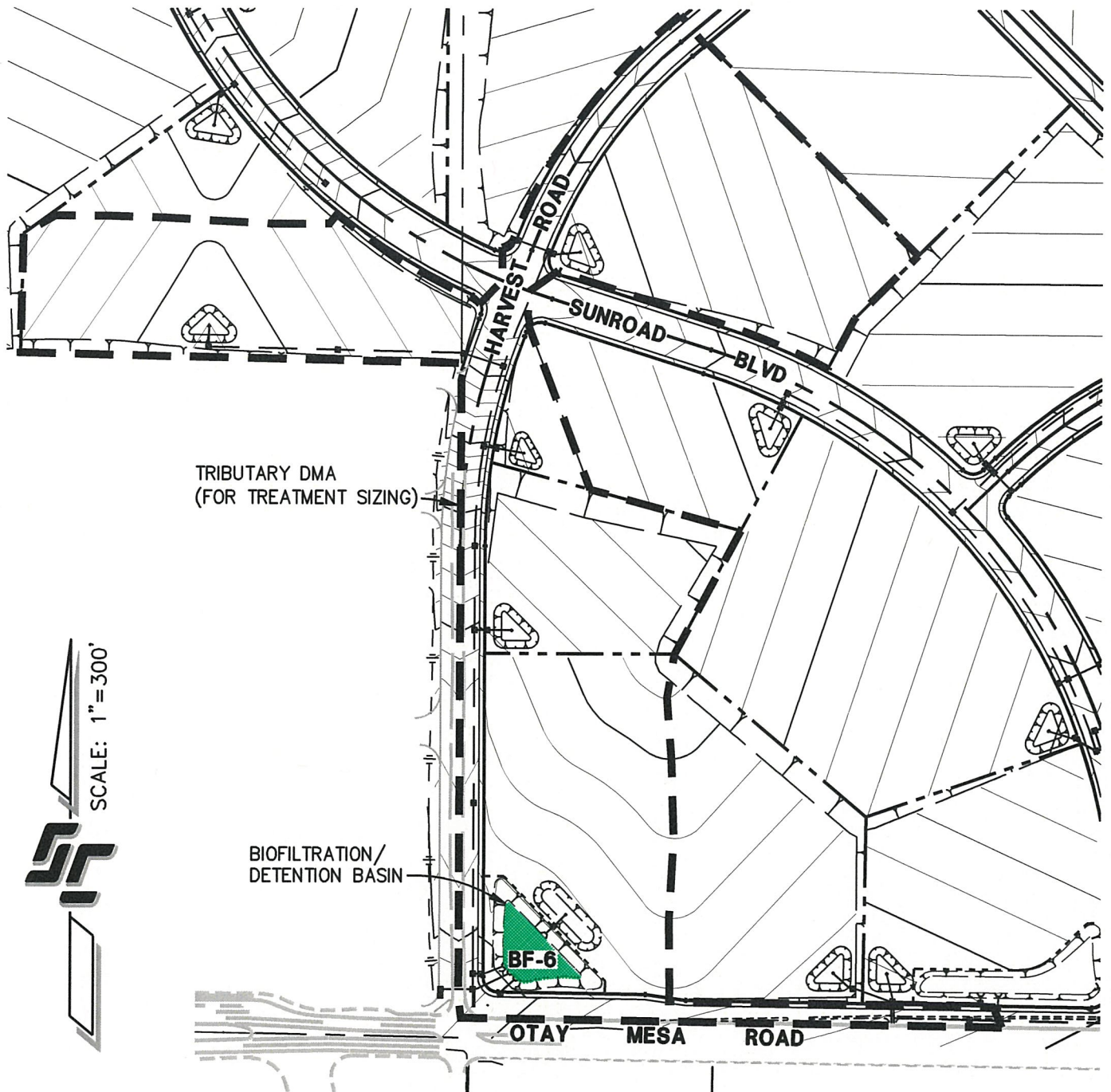
BIOFILTRATION/DETENTION BASIN  
PLANTERS WILL BE CONNECTED  
BY PIPE SYSTEMS TO FUNCTION  
AS A SINGLE BMP, SEE  
ATTACHMENT 1c, SHEET 2

## BF-5 BMP DMA MAPBOOK

SCALE: 1"=400'



# ATTACHMENT 1d



## BF-6 BMP DMA MAPBOOK

SCALE: 1" = 300'