

# ECOVILLAGE: SPECIAL USE PERMIT SUPPLEMENTARY EXHIBITS

02.04.2019

# CONTENTS

- ENTRANCE HAS BEEN RELOCATED 40’ TO REDUCE VDOT WAIVER
- FURTHER STUDY HAS BEEN DONE ON STORMWATER IMPROVEMENTS ALONG RIO RD.
- PARKING AREA HAS BEEN REDESIGNED TO REDUCE PROXIMITY TO PRESERVED SLOPES
- A SCHEMATIC/PRELIMINARY HABITAT DEVELOPMENT PLAN HAS BEEN INCLUDED
- ADDITIONAL INFORMATION HAS BEEN PROVIDED TO FURTHER EXPLAIN THE GREEN INFRASTRUCTURE BEING DEVELOPED ACROSS THE SITE.

CONTENTS

- EXHIBIT 1 : SITE PHOTOS
- EXHIBIT 2 : SITE REVISIONS
- EXHIBIT 3 : SITE SECTIONS
- EXHIBIT 4 : STORMWATER IMPROVEMENTS
- EXHIBIT 5 : HABITAT REDEVELOPMENT
- EXHIBIT 6 : SCHEMATIC GREEN INFRASTRUCTURE

# EXHIBIT 1

ECOVILLAGE CHARLOTTESVILLE  
SITE PHOTOS





EXISTING PRESERVED SLOPES ALONG ENTRANCE







EXISTING SLOPES ADJACENT TO HOUSE





# EXHIBIT 2

ECOVILLAGE CHARLOTTESVILLE  
SITE REVISIONS

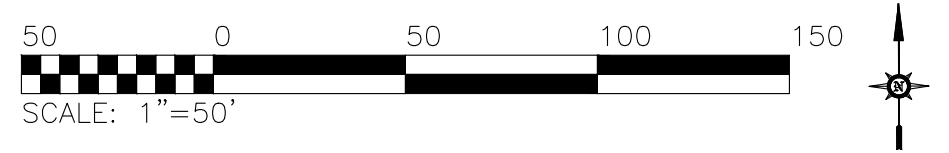
- RELOCATED ENTRANCE TO BETTER BALANCE SIGHT DISTANCE  
EASEMENTS AND GRADING
- REVISED PARKING TO REDUCE THE AMOUNT OF FILL
- REDUCTION OF ROAD IN FRONT OF EXISTING BUILDING  
REDUCED TO 16'







NOTES  
SOURCE OF TOPO: ALBEMARLE COUNTY GIS  
SOURCE OF BOUNDARY AND PHYSICAL FEATURES:  
ROGER W. RAY & ASSOC. SURVEY COMPLETED  
FEB. 28, 2018

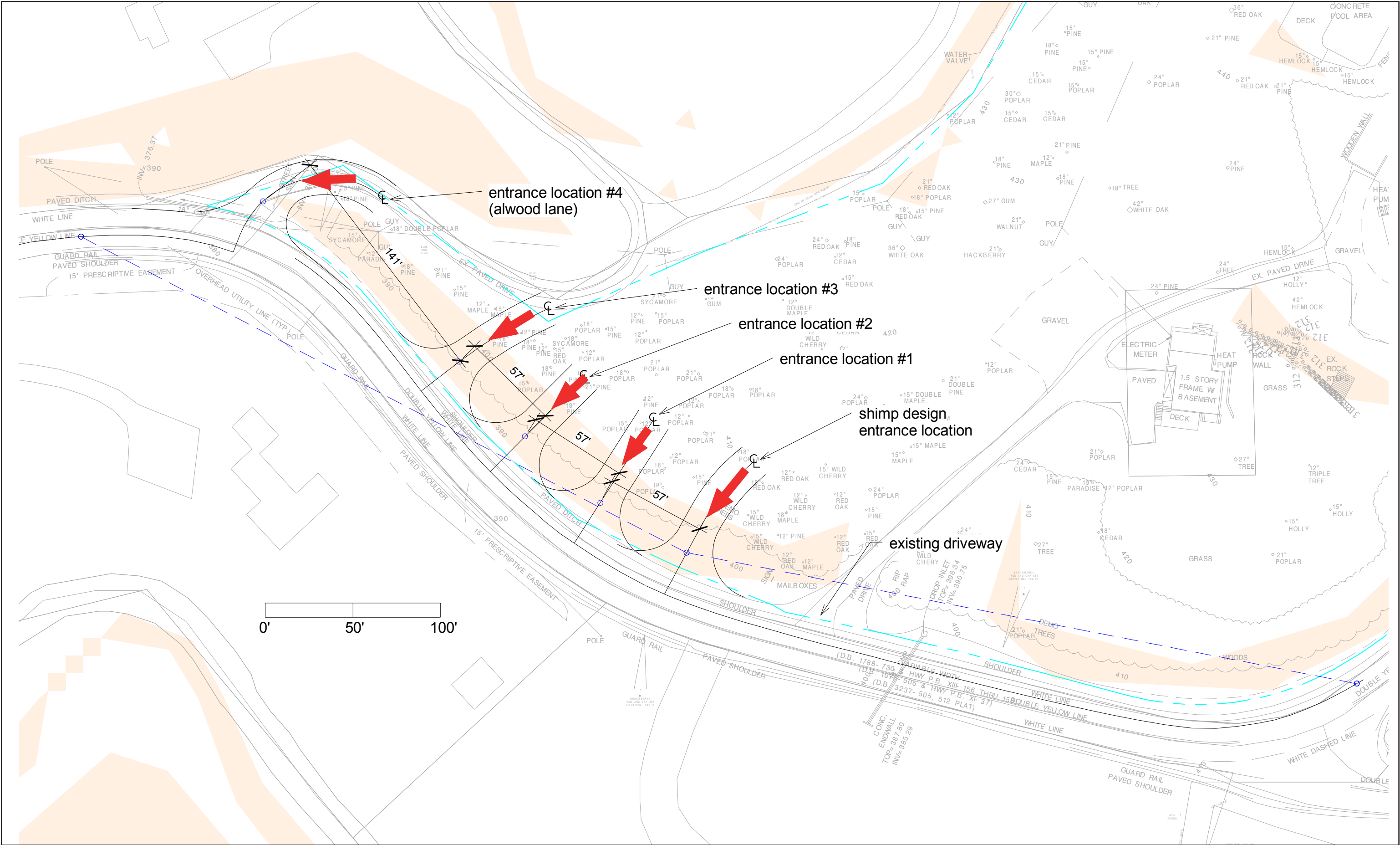


PREVIOUS PARKING LAYOUT

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ATTACHMENT G

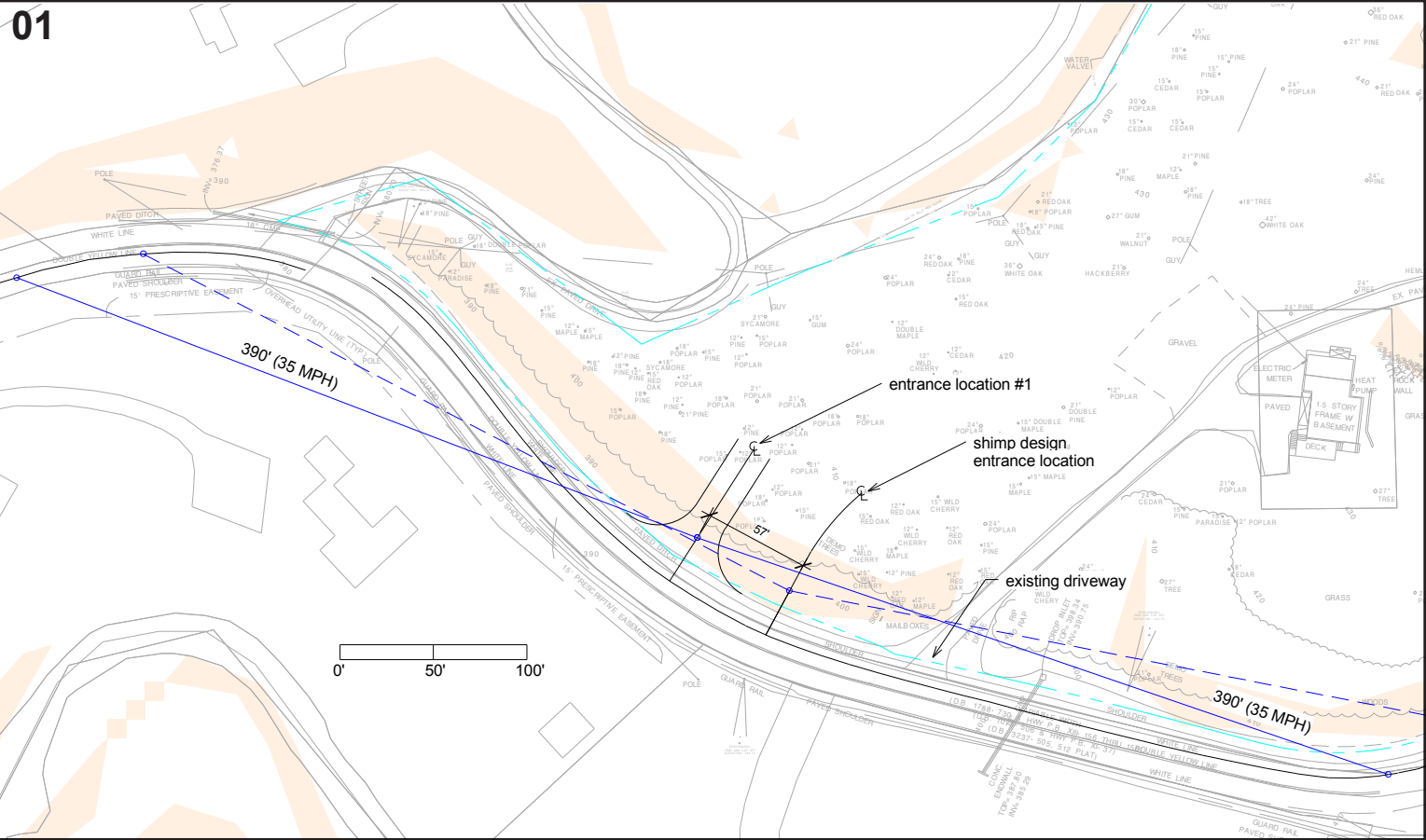




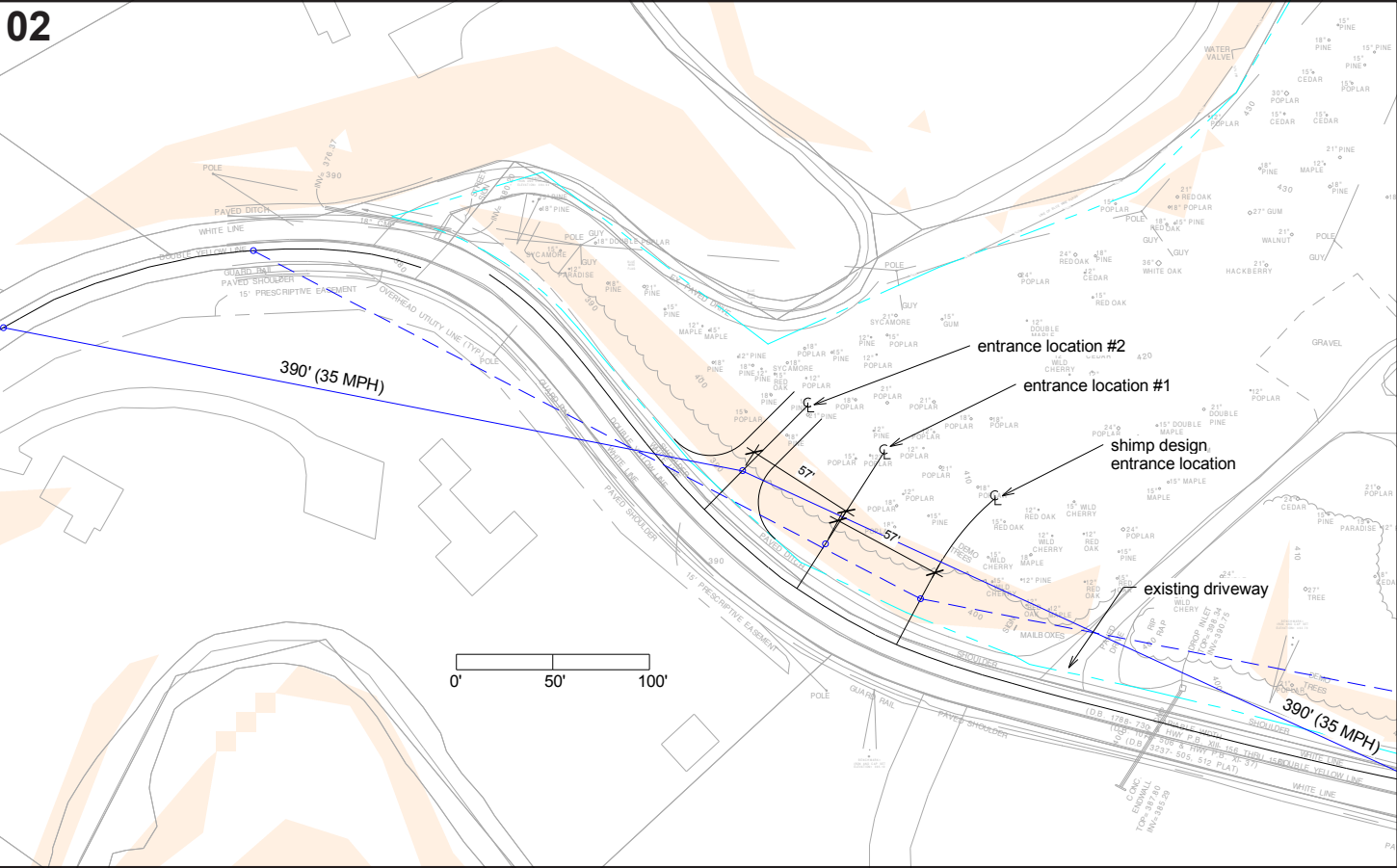
ENTRANCE RELOCATION STUDIES



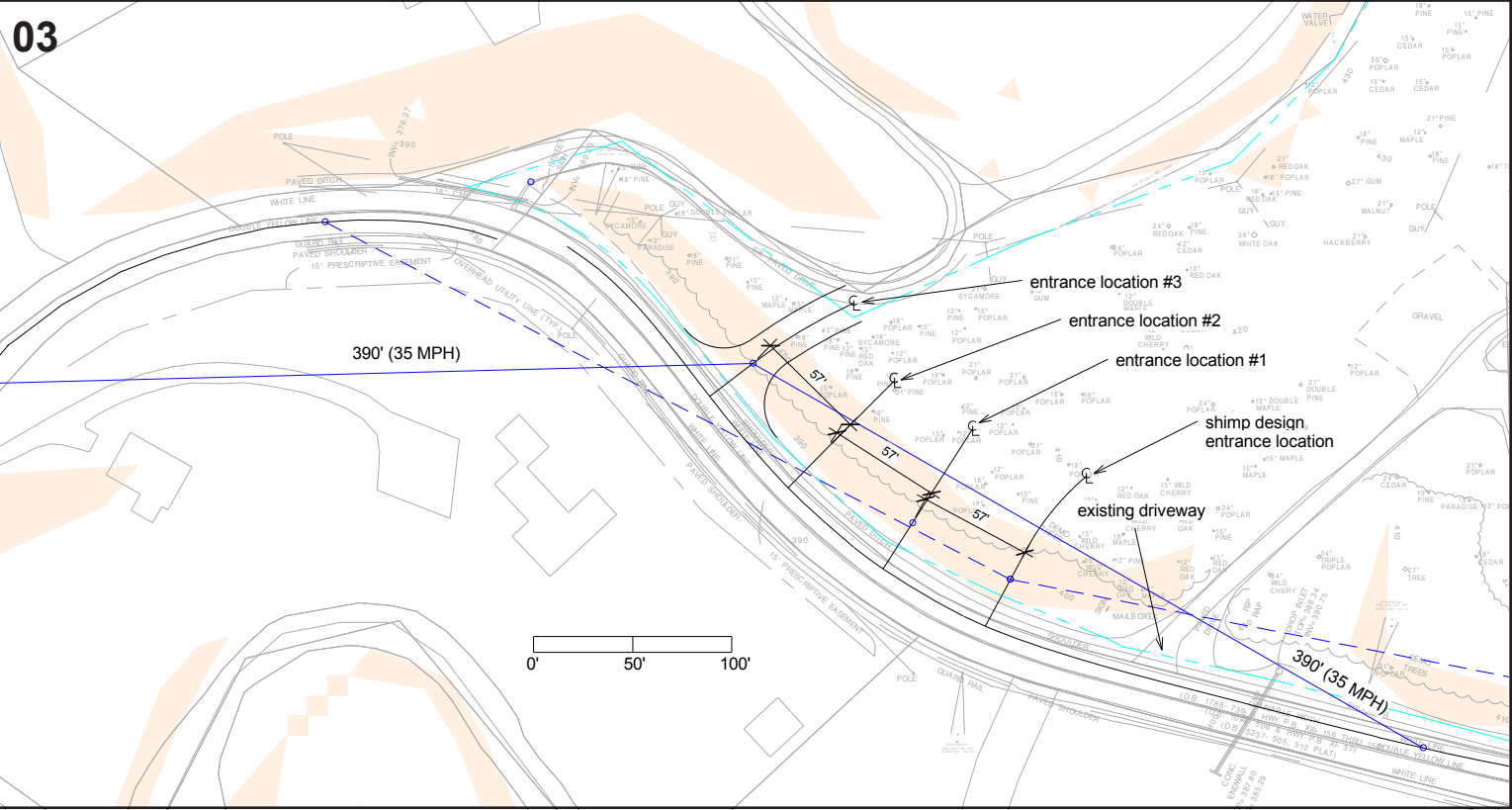
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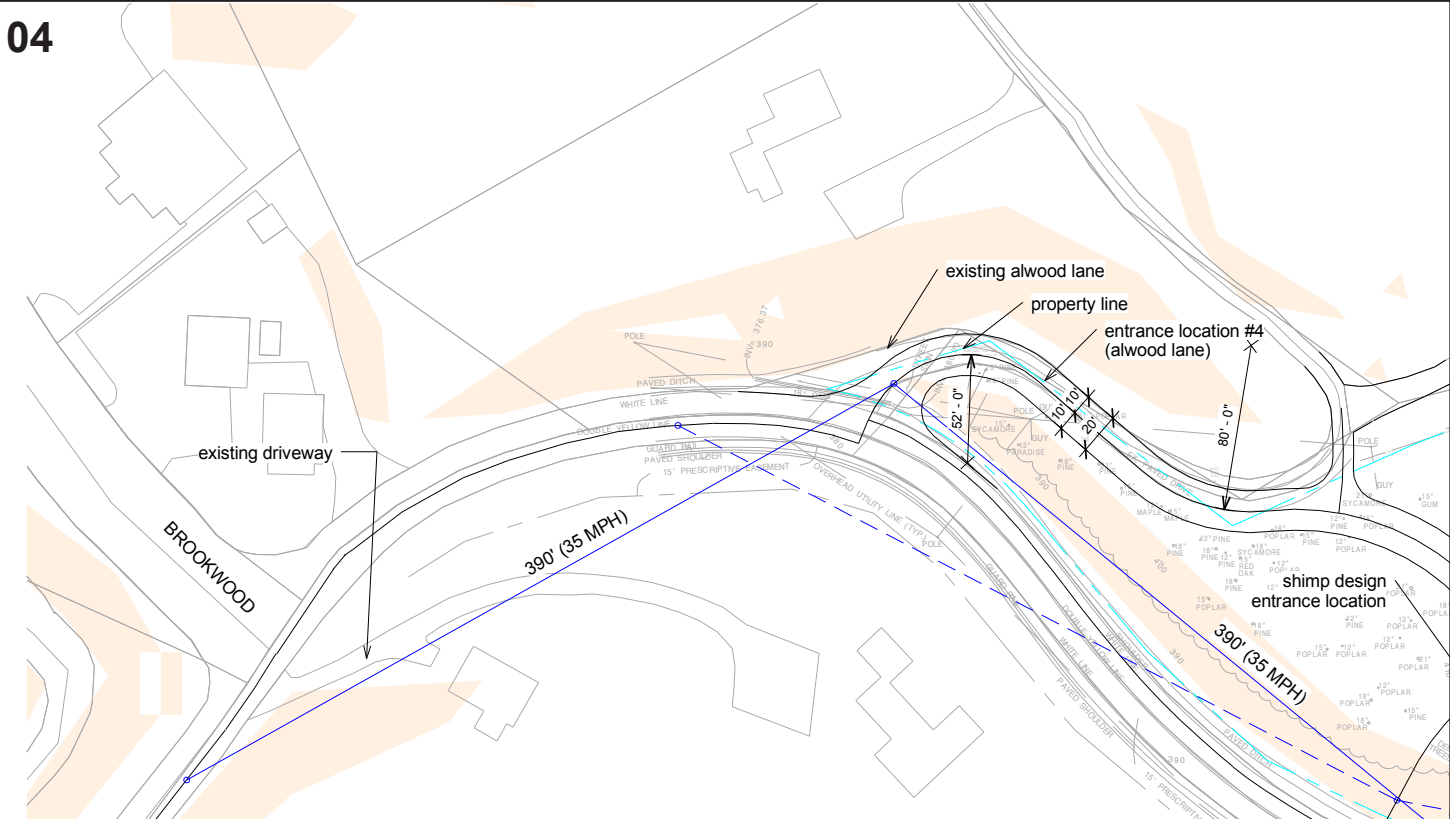
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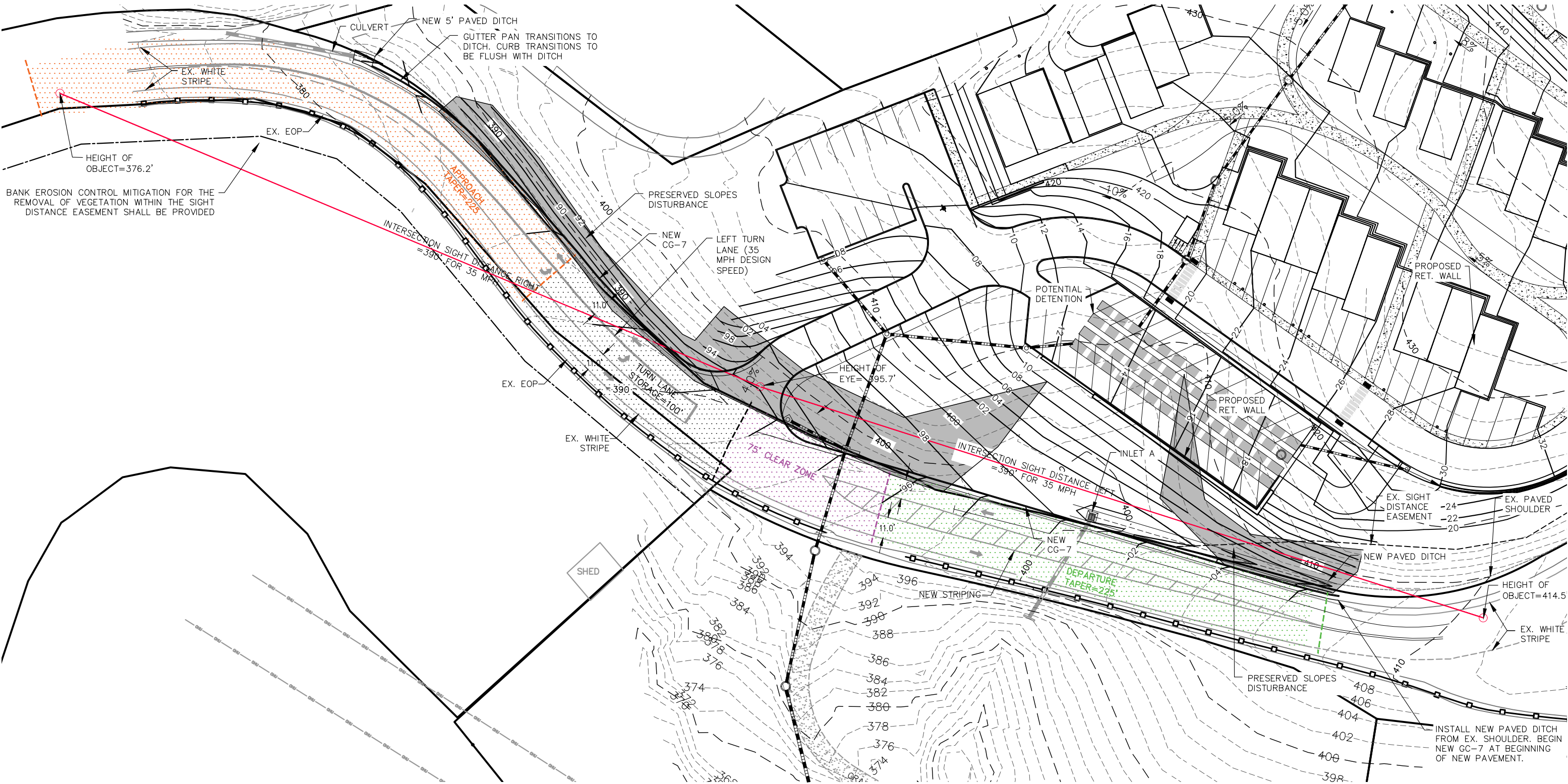
ENTRANCE RELOCATION STUDIES

SHIMP ENGINEERING P.C.

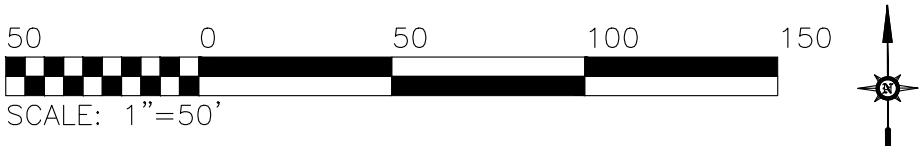
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ECOVILLAGE: PROPOSED ENTRANCE LAYOUT

02-04-2019



NOTES  
SOURCE OF TOPO: FIELD SURVEY BY  
ROGER W. RAY & ASSOC. SURVEY  
COMPLETED SEPTEMBER 7, 2018.  
AADT OF RIO ROAD EAST = 10,000  
TRIPS. RIO ROAD EAST IS A MAJOR  
URBAN COLLECTOR, GS-7.



REVISED PARKING LAYOUT



# EXHIBIT 3

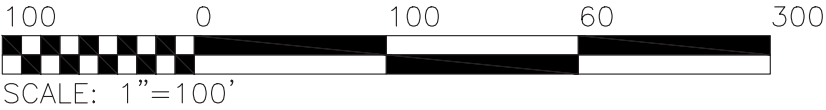
ECOVILLAGE CHARLOTTESVILLE  
SLOPE DISTURBANCE

- PROVIDED SECTIONS SHOW THE LEVEL OF GRADING THAT WILL TAKE PLACE ON THE PRESERVED SLOPES



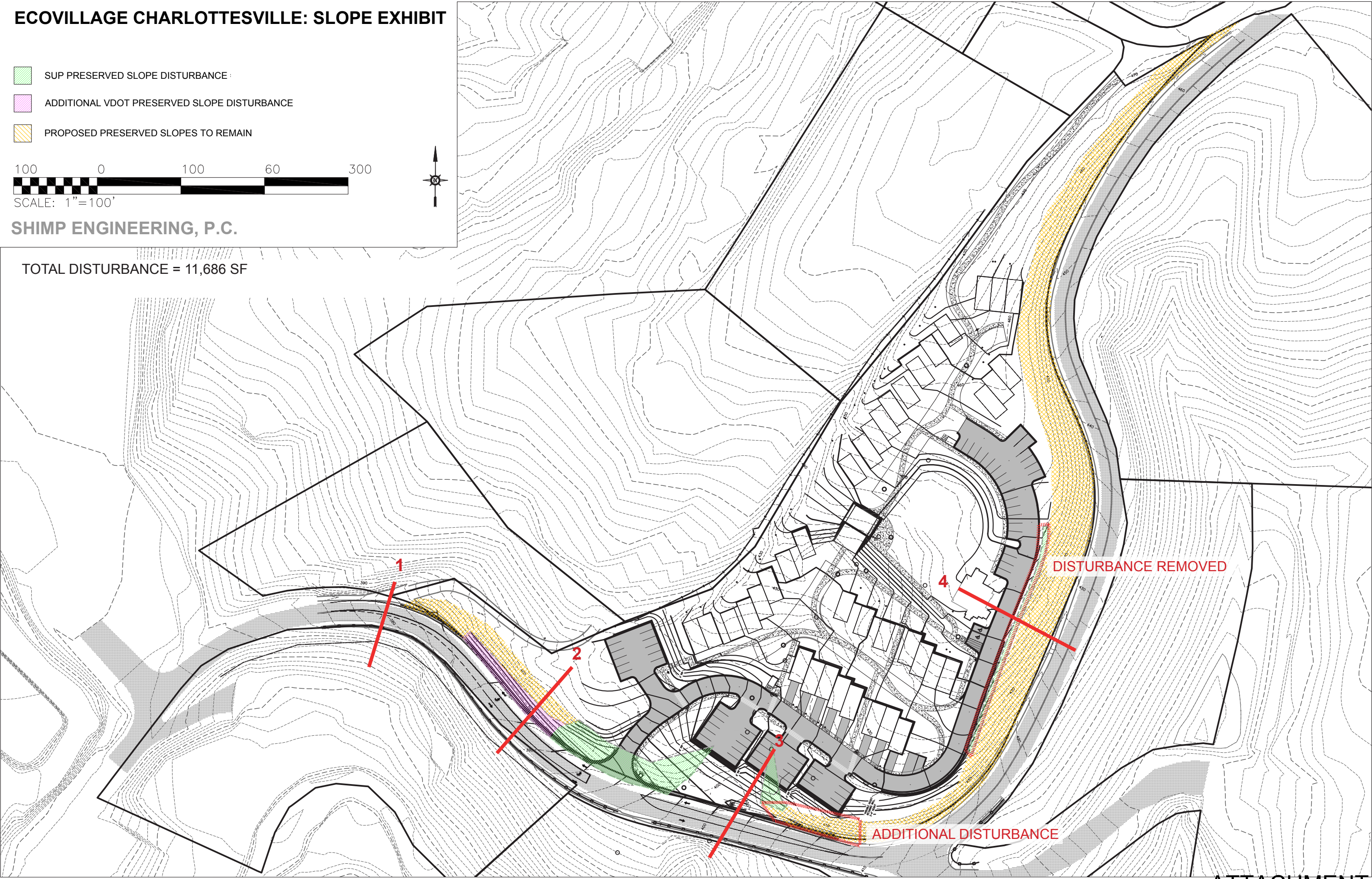
ECOVILLAGE CHARLOTTESVILLE: SLOPE EXHIBIT

- SUP PRESERVED SLOPE DISTURBANCE
- ADDITIONAL VDOT PRESERVED SLOPE DISTURBANCE
- PROPOSED PRESERVED SLOPES TO REMAIN



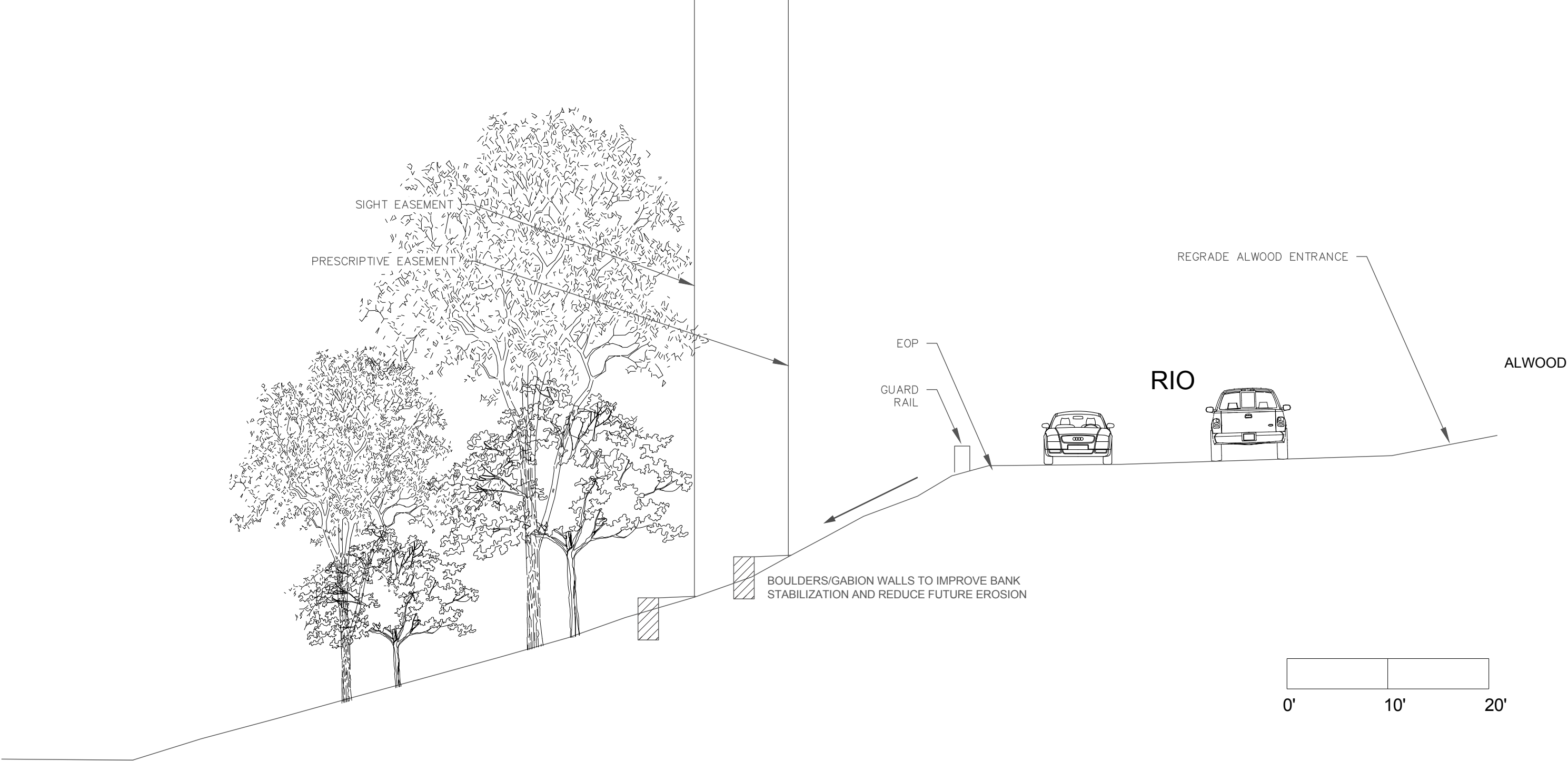
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TOTAL DISTURBANCE = 11,686 SF

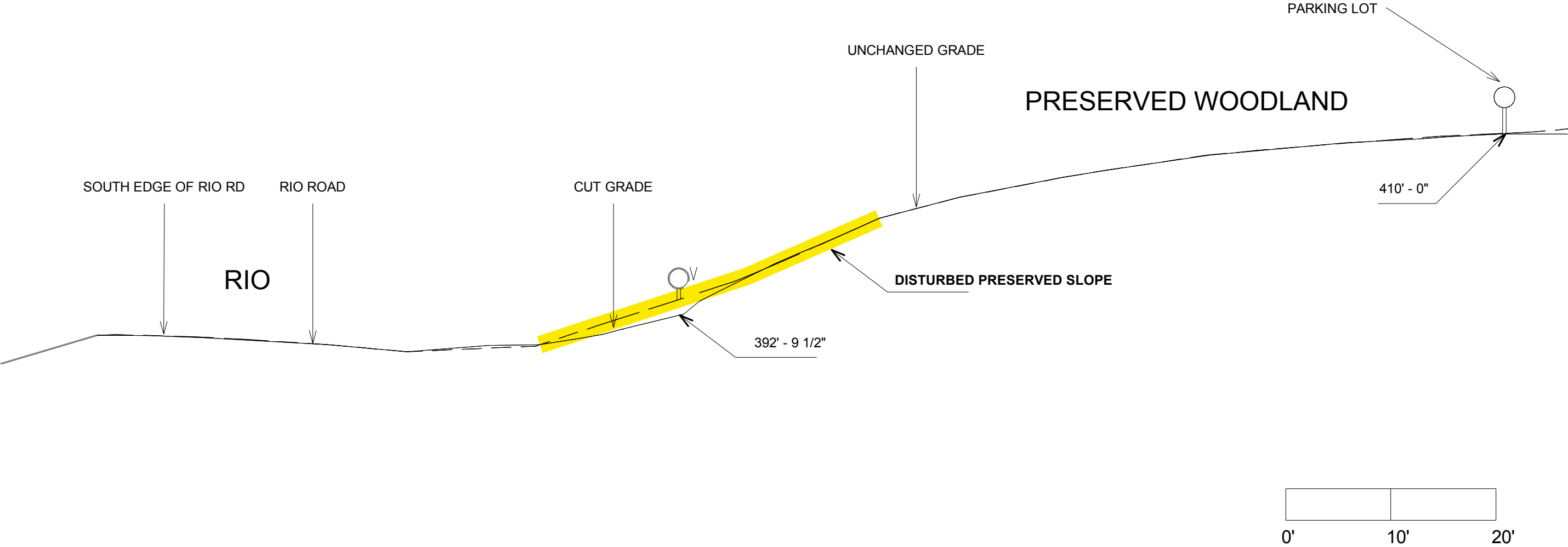




# 1) RIO ACROSS FROM ALWOOD

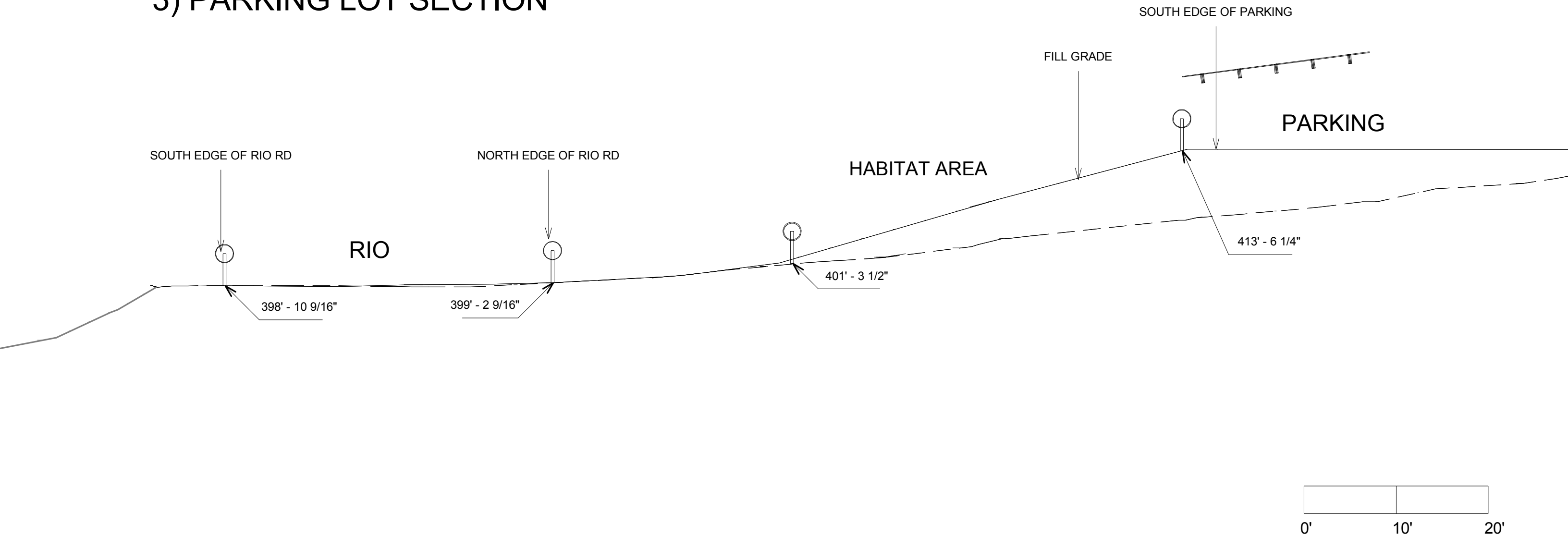


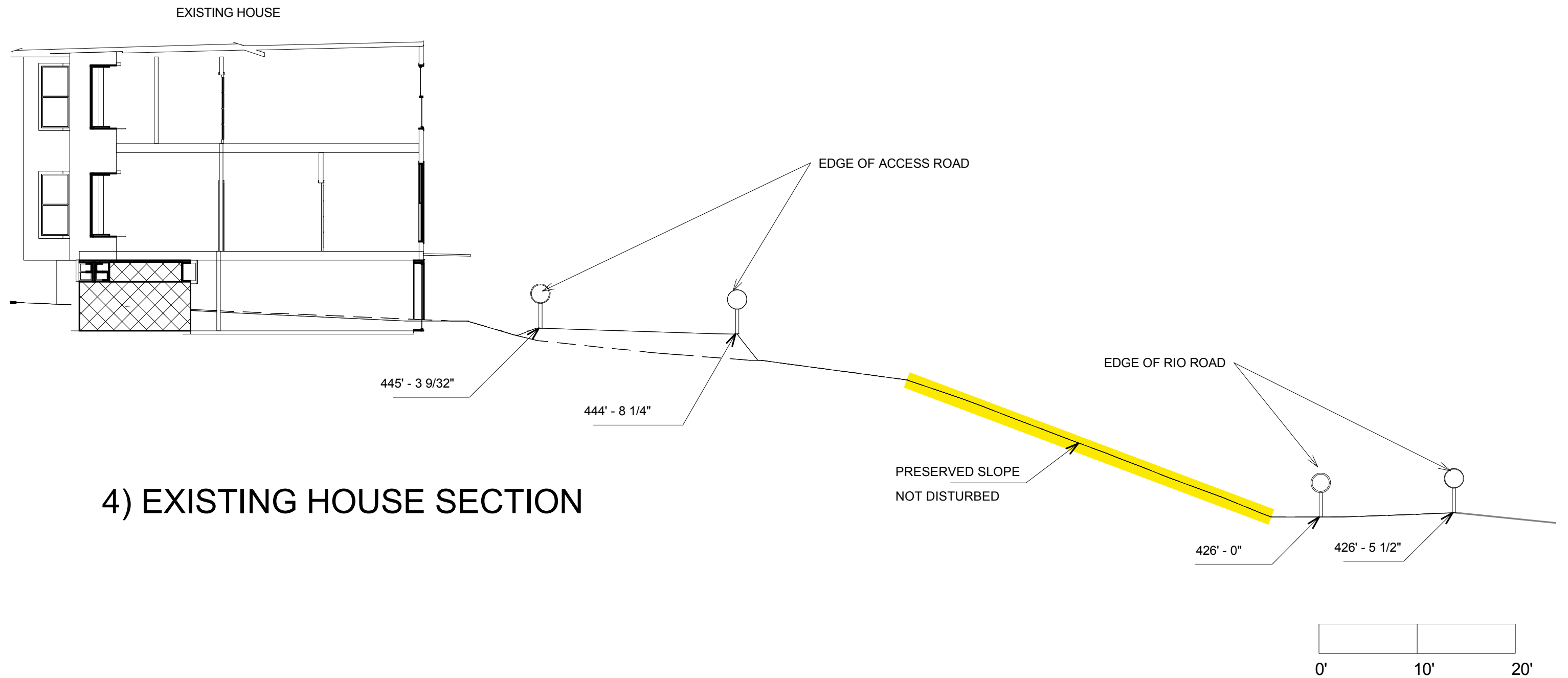
2) WEST SIGHT LINE RETAINING SECTION





3) PARKING LOT SECTION

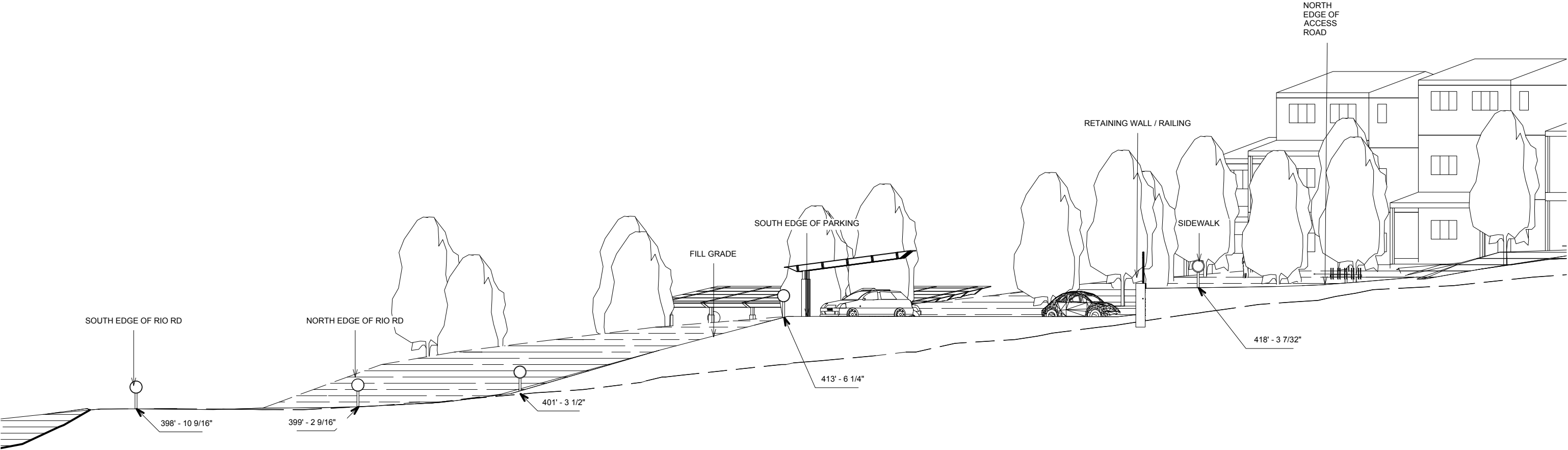




#### 4) EXISTING HOUSE SECTION







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**SITE TRANSECT: CLOSE-UP**



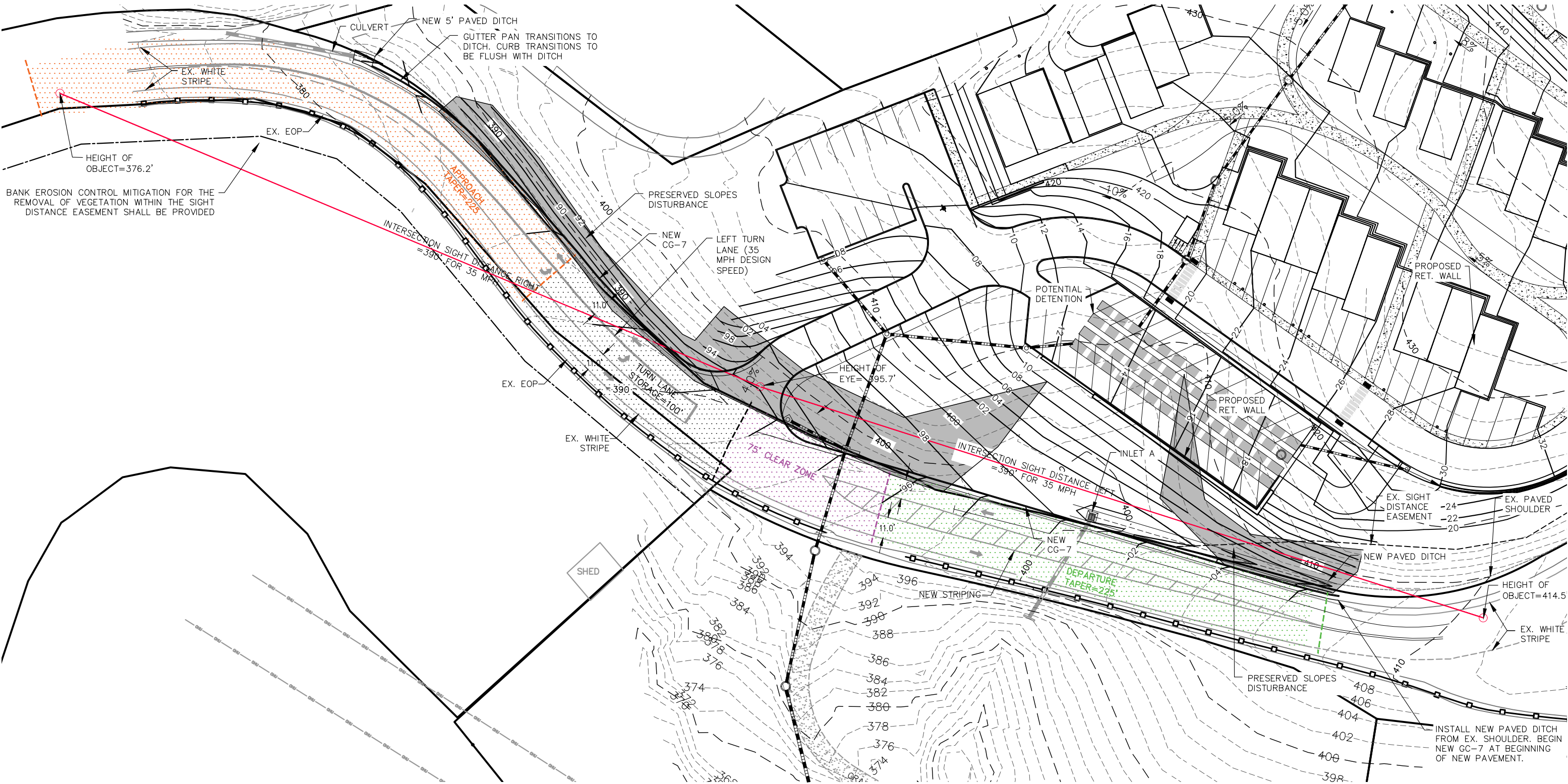
# EXHIBIT 4

ECOVILLAGE CHARLOTTESVILLE  
STORMWATER IMPROVEMENTS

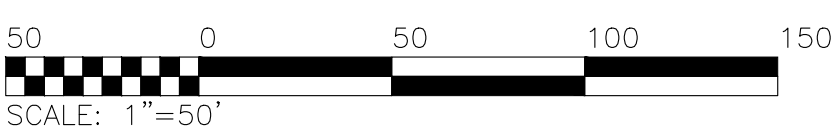
- IMPROVED DRAINAGE ALONG RIO RD. EAST WITH ADEQUATE GUTTERS AND DITCHES
- NEW STORM DRAIN UNDER RIO RD EAST TO CAPTURE ADDITIONAL RUNOFF
- BOULDERS/GABIONS ALONG ADJACENT PROPERTY TO REDUCE POTENTIAL EROSION

ECOVILLAGE: PROPOSED ENTRANCE LAYOUT

02-04-2019



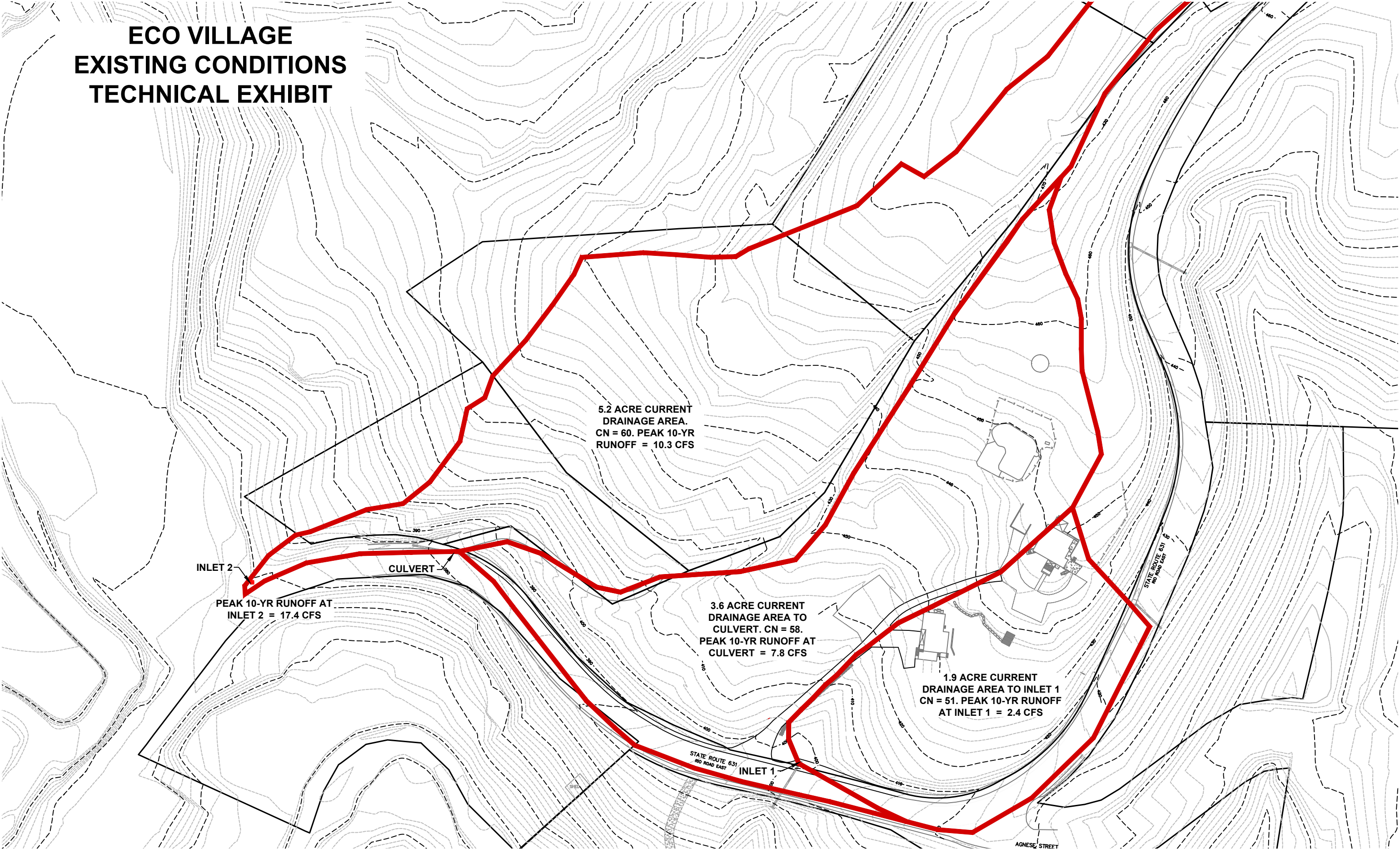
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STORMWATER IMPROVEMENTS ALONG RIO RD. EAST



**ECO VILLAGE  
EXISTING CONDITIONS  
TECHNICAL EXHIBIT**



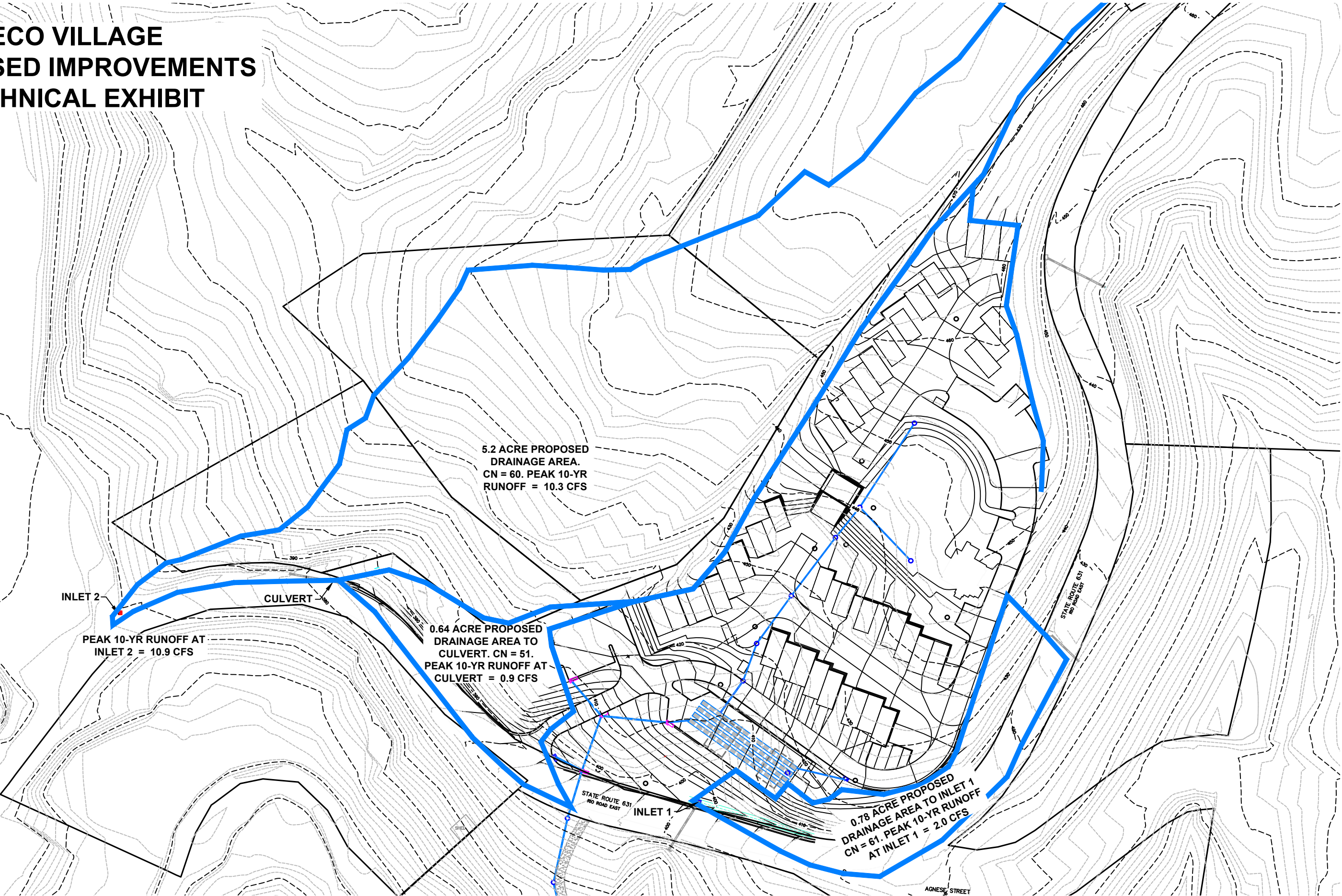
**STORMWATER: PRE-DEVELOPMENT**

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**ECO VILLAGE  
PROPOSED IMPROVEMENTS  
TECHNICAL EXHIBIT**



**STORMWATER: POST-DEVELOPMENT**






# EXHIBIT 5






ECOVILLAGE CHARLOTTESVILLE  
HABITAT REDEVELOPMENT AREA






- NATIVE PLANT COMMUNITY MODELED AFTER MESIC MIXED HARDWOOD FOREST
- INTEGRATE PLANTING INTO PRESERVED WOODLAND TO CREATE A CONTINUOUS PLANT COMMUNITY
- PLANTING ORGANIZED BY STRATA TO PROVIDE CANOPY, SUB-CANOPY, SHRUB, AND HERBACEOUS LAYERS



LANDSCAPING NOTES:  
HABITAT REDEVELOPMENT  
SPECIES MODELED AFTER MESIC MIXED HARDWOOD FOREST PLANT COMMUNITY AS DEFINED BY VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION  
-ALL SPECIES IN LANDSCAPE PLAN ARE NATIVE, CONFIRMED ON 'VIRGINIA DEPARTMENT OF CONSERVATION & RECREATION'  
DOCUMENTATION WITHIN THE 50% PERCENTILE OF RECORDED PLOTS SAMPLES.  
-A VARIETY OF HERBACEOUS AND SHRUBS TO ESTABLISH A VARIED AND MORE NATURAL HABITAT FOR NATIVE WILDLIFE SPECIES

LANDSCAPE SCHEDULE: TREES					
Plant Symbol	Planting Type	Botanical Name	Common Name	Min. Cal./Height	Quantity
	Large Shade Tree	Fagus grandifolia	American Beech	1" Cal.	TBD
	Large Shade Tree	Liriodendron tulipifera	Tulip Poplar	1" Cal.	TBD
	Large Shade Tree	Quercus alba	White Oak	1" Cal.	TBD
	Evergreen	Ilex opaca	American Holly	4-5' Ht.	TBD
	Small Tree	Carpinus caroliniana	American Hornbeam	4-5' Ht.	TBD

LANDSCAPE SCHEDULE: SHRUB						
Symbol	Planting Type	Botanical Name	Common Name	Height	Spacing	Quantity
	Deciduous Shrub	Viburnum acerifolium	Mapleleaf viburnum	24" Ht./Plug	AS SHOWN	TBD
	Deciduous Shrub	Viburnum prunifolium	Blackhaw	24" Ht.	AS SHOWN	TBD
	Deciduous Shrub	Rhododendron periclymenoides	Pinxterbloom azalea	24" Ht.	AS SHOWN	TBD
	Deciduous Shrub	Euonymus americanus	Strawberry bush	24" Ht.	AS SHOWN	TBD
	Broadleaf Evergreen	Kalmia latifolia	Mountain laurel	24" Ht.	AS SHOWN	TBD

LANDSCAPE SCHEDULE: GROUNDCOVER						
Symbol	Planting Type	Botanical Name	Common Name	Seed	Spacing	Quantity
	Herbaceous	Polygonatum biflorum	Solomon's Seal	Var.	2' O.C.	TBD
	Herbaceous	Sanguinaria canadensis	Bloodroot	Var.	2' O.C.	TBD
	Herbaceous	Symphytrichum cordifolium	Blue wood-aster	Var.	2' O.C.	TBD
	Herbaceous	Eurybia divaricata	White wood-aster	Var.	2' O.C.	TBD
	Fern	Polystichum acrostichoides	Christmas Fern	Var.	2' O.C.	TBD



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CHARLOTTEVILLE, VA 22902  
PHONE: (434) 207-6086  
JUSTIN@SHIMP-ENGINEERING.COM




HABITAT REDEVELOPMENT			
Rev. #	Date	Description	
1	08/20/2018	POST PRE-APP EDITS	
INITIAL SITE DEVELOPMENT PLAN FOR ECOVILLAGE CHARLOTTEVILLE ALBEMARLE COUNTY, VIRGINIA			
Date	07/16/18	Scale	1" = 30'
Sheet No.	C7 OF 8	File No.	16.009

# Ecovillage Habitat Redevelopment: Landscape Section

Vegetate slopes along Rio Rd Corridor to improve habitat and runoff

## Local Wildlife



**Birds of Prey**

Utilize larger trees to survey area





**Song Birds**

Feed on insects and fruiting trees



**Insects**

Local pollinators





**Critters**

Utilize ground cover for protection



## Native Planting List

### Forest Type: Mesic Hardwood Forest

Planting strata modeled of native plant species community

TREE	
Planting Type	Botanical Name
Large Shade Tree	Fagus grandifolia
Large Shade Tree	Liriodendron tulipifer
Large Shade Tree	Quercus alba
Broadleaf Evergreen	Ilex opaca
Small Tree	Carpinus caroliniana
SHRUB	
Planting Type	Botanical Name
Deciduous Shrub	Viburnum acerifolium
Deciduous Shrub	Viburnum prunifolium
Deciduous Shrub	Rhododendron periclymenoide
Deciduous Shrub	Euonymus americanus
Broadleaf Evergreen	Kalmia latifolia
GROUNDCOVER/ HERBACEOUS	
Planting Type	Botanical Name
Herbaceous	Polygonatum biflorum
Herbaceous	Sanguinaria
Herbaceous	Symphyotrichum cordifolium
Herbaceous	Eurybia divaricata
Fern	Polystichum acrostichoides



## HABITAT REDEVELOPMENT SECTION SCHEMATIC

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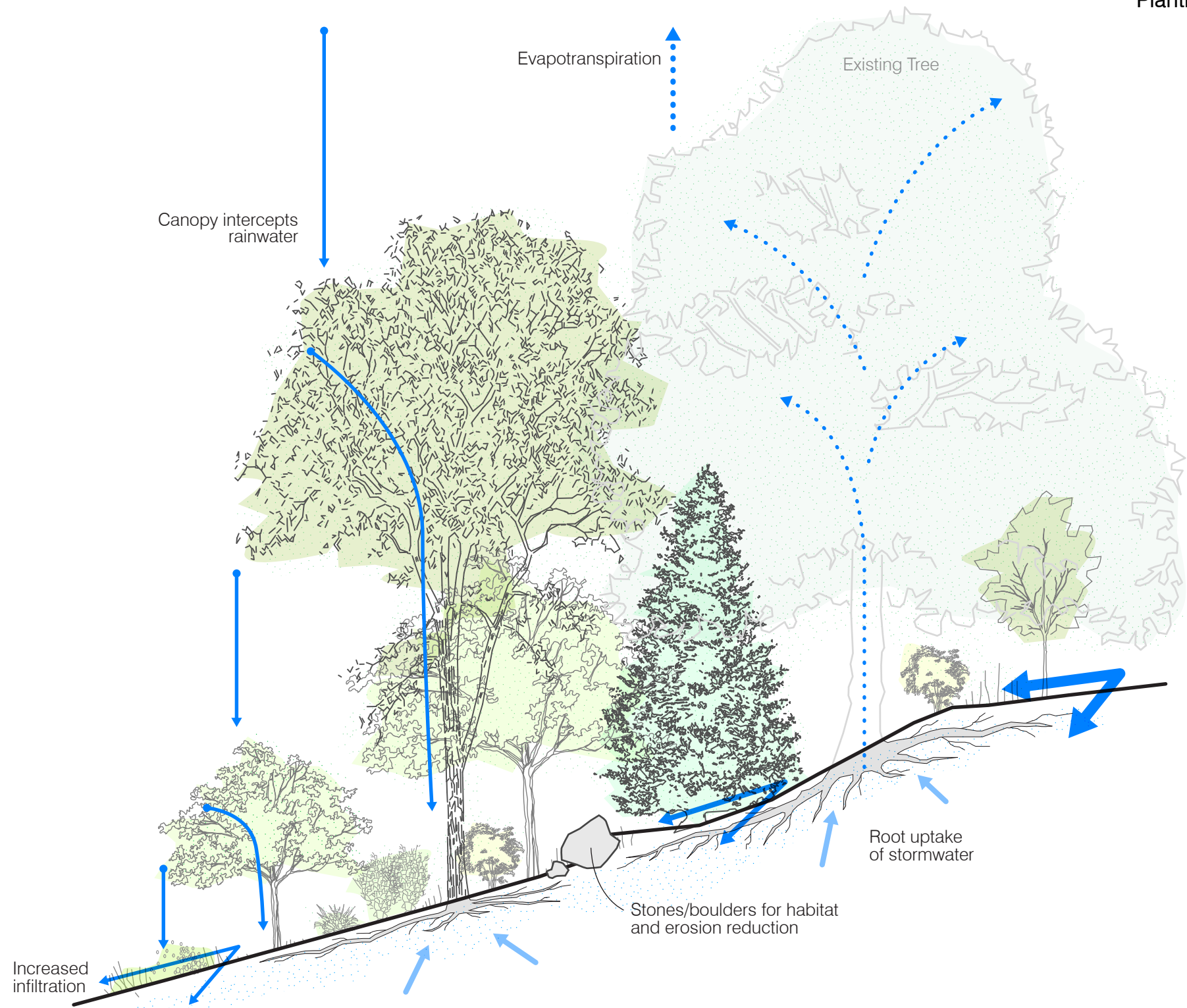
# Ecovillage Habitat Redevelopment: Landscape Section

Vegetate slopes along Rio Rd Corridor to improve habitat and runoff

## Stormwater

### Forest as green infrastructure

- Roots retain and uptake stormwater
- Decrease erosion
- Encourage infiltration



## Native Planting List

### Forest Type: Mesic Hardwood Forest

Planting strata modeled of native plant species community

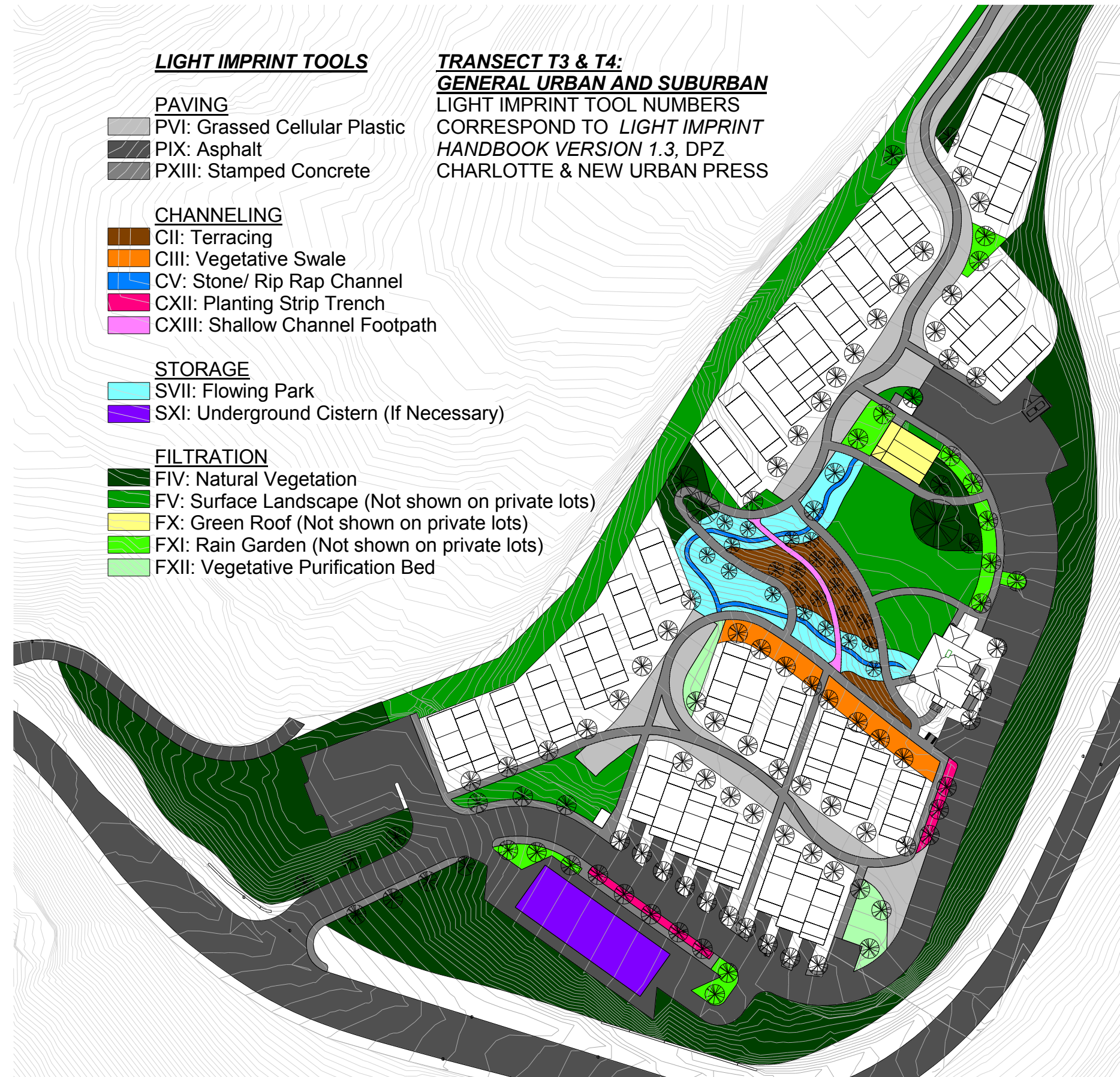
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Herbaceous	Symphyotrichum cordifolium
Herbaceous	Eurybia divaricata
Fern	Polystichum acrostichoides



# EXHIBIT 6

ECOVILLAGE CHARLOTTESVILLE  
SCHEMATIC GREEN INFRASTRUCTURE

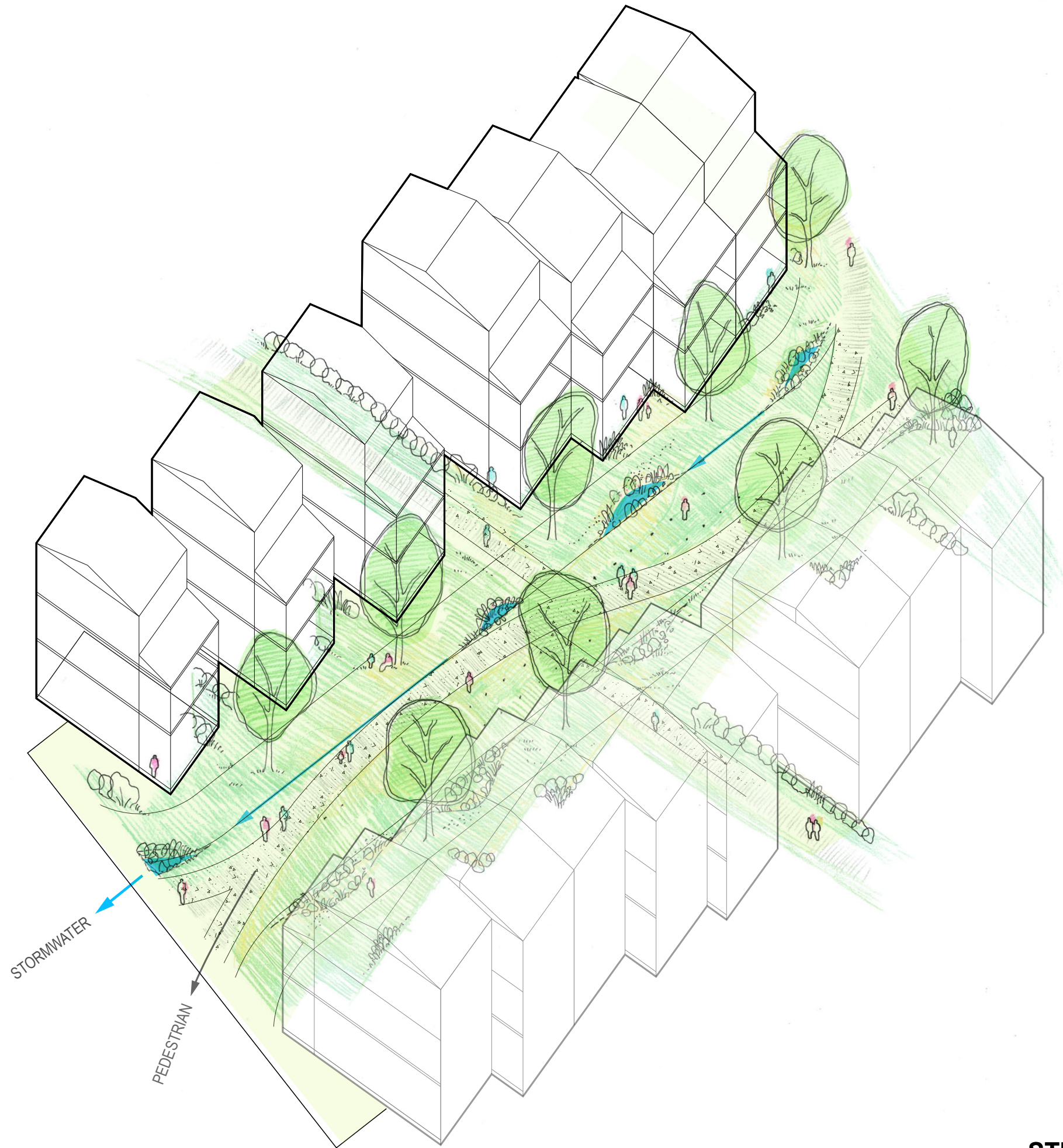
- GREEN INFRASTRUCTURE IS BEING EXPLORED ACROSS THE WHOLE ECOVILLAGE SITE
- VEGETATED STREET VISUALIZATION
- CASE STUDY: RETAINING WALLS INTEGRATED INTO THE LANDSCAPE
- CASE STUDY: BIOFILTERS IMPLEMENTED THROUGHOUT THE SITE
- CASE STUDY: WATER SAVING STRUCTURES FOR THE HOMES
- CASE STUDY: GREEN ROOF FOR THE COMMON AREA



NOT TO SCALE

## GREEN INFRASTRUCTURE SCHEMATIC





**STREET AXON: STREET STUDY**

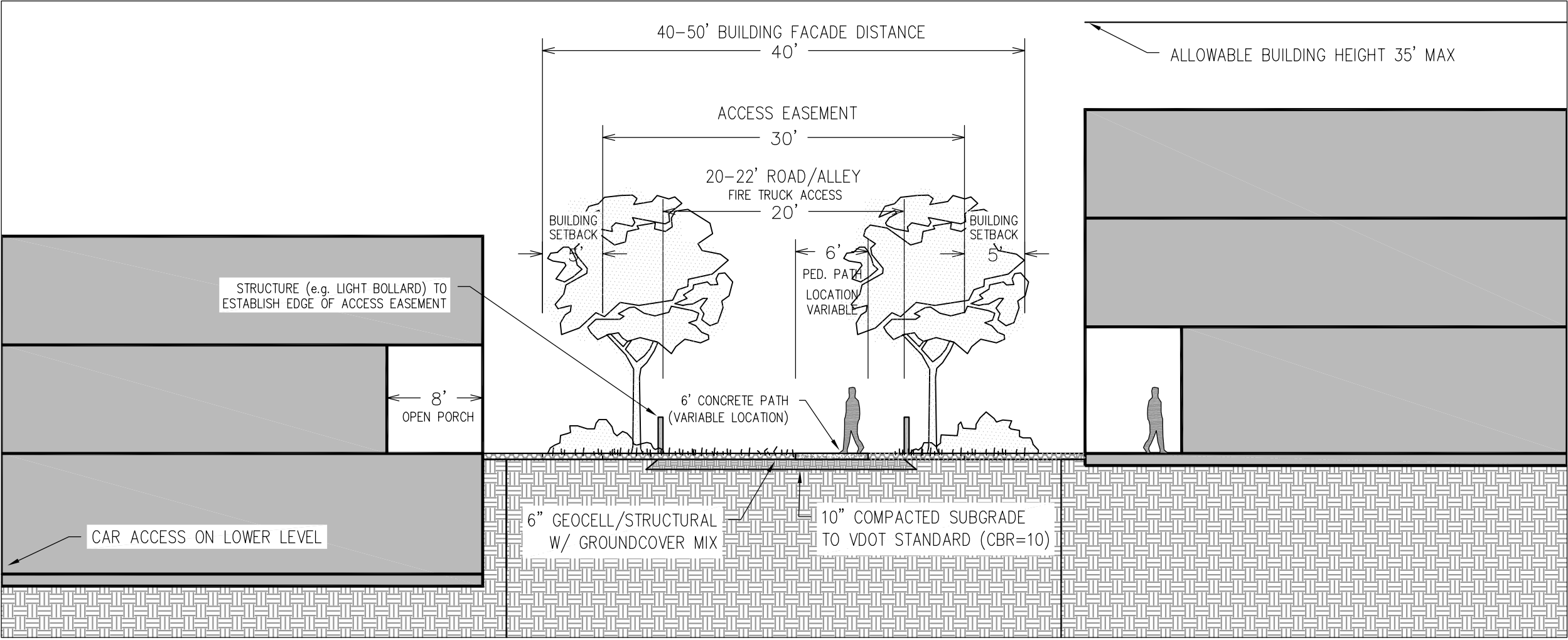
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**ATTACHMENT G**









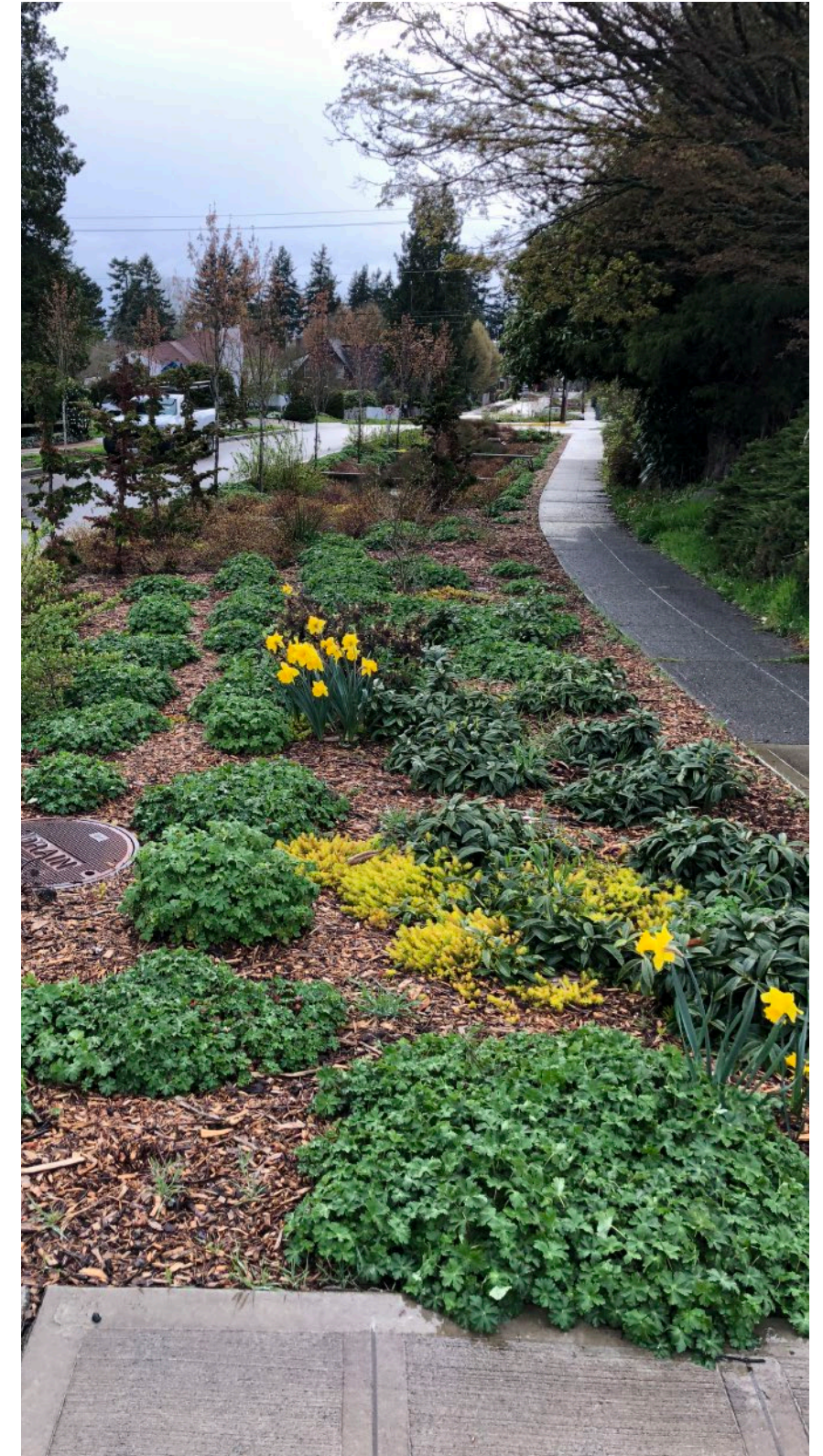




MAXIMIZE USE OF ON-SITE MATERIAL FROM EXCAVATION DUE TO GRADING

## PRECEDENTS: RETAINING WALLS





IMPLEMENTING STORMWATER INTO STREETSCAPE

## PRECEDENTS: STORMWATER BIOFILTERS

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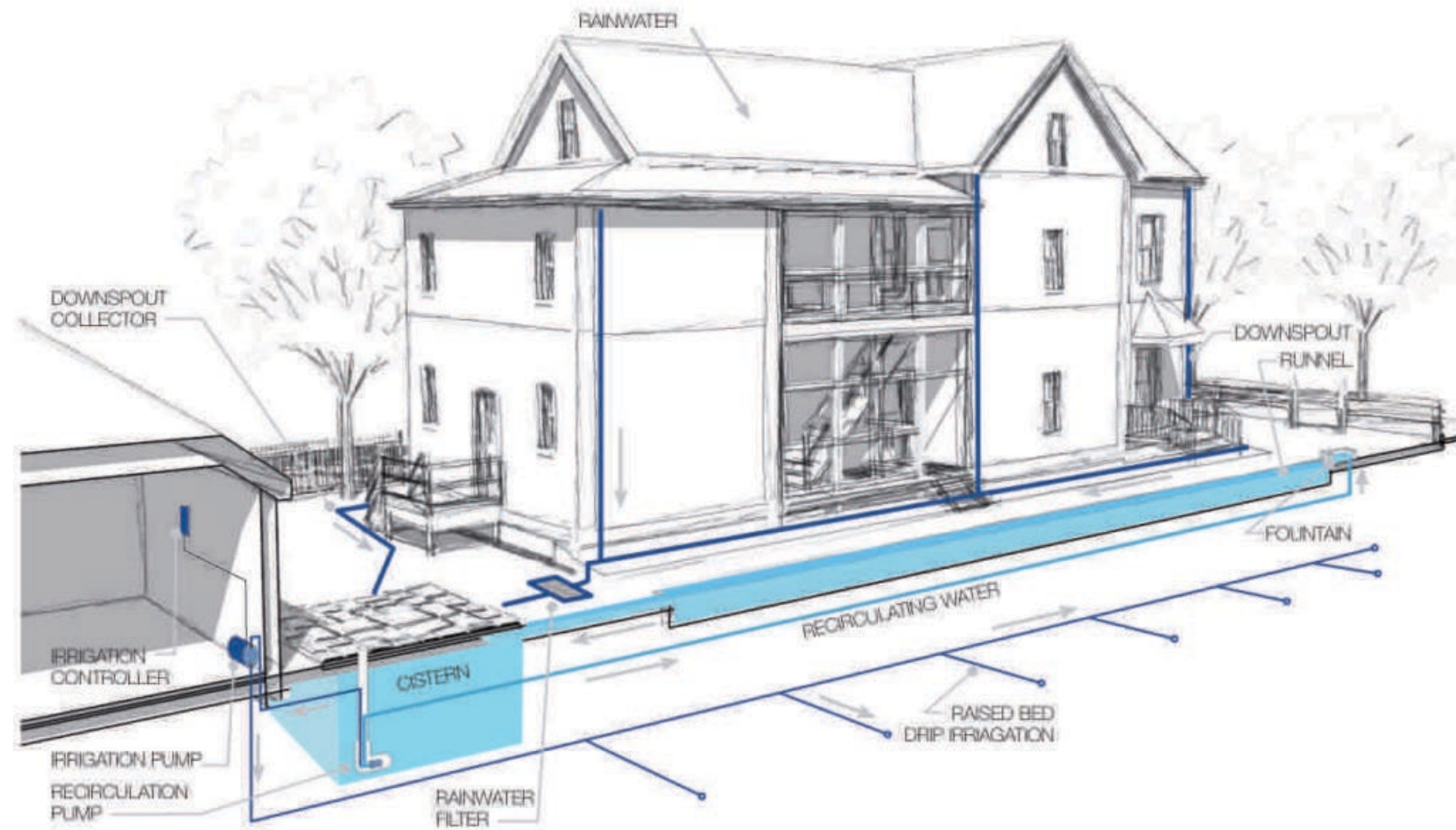




POSSIBLE GREEN ROOF FOR COMMON HOUSE







STORMWATER COLLECTION FOR IRRIGATION USE



## PRECEDENTS: STORMWATER STRUCTURES FOR HOMES



