

ECOVILLAGE: SPECIAL USE PERMIT SUPPLEMENTARY EXHIBITS

02.04.2019

CONTENTS

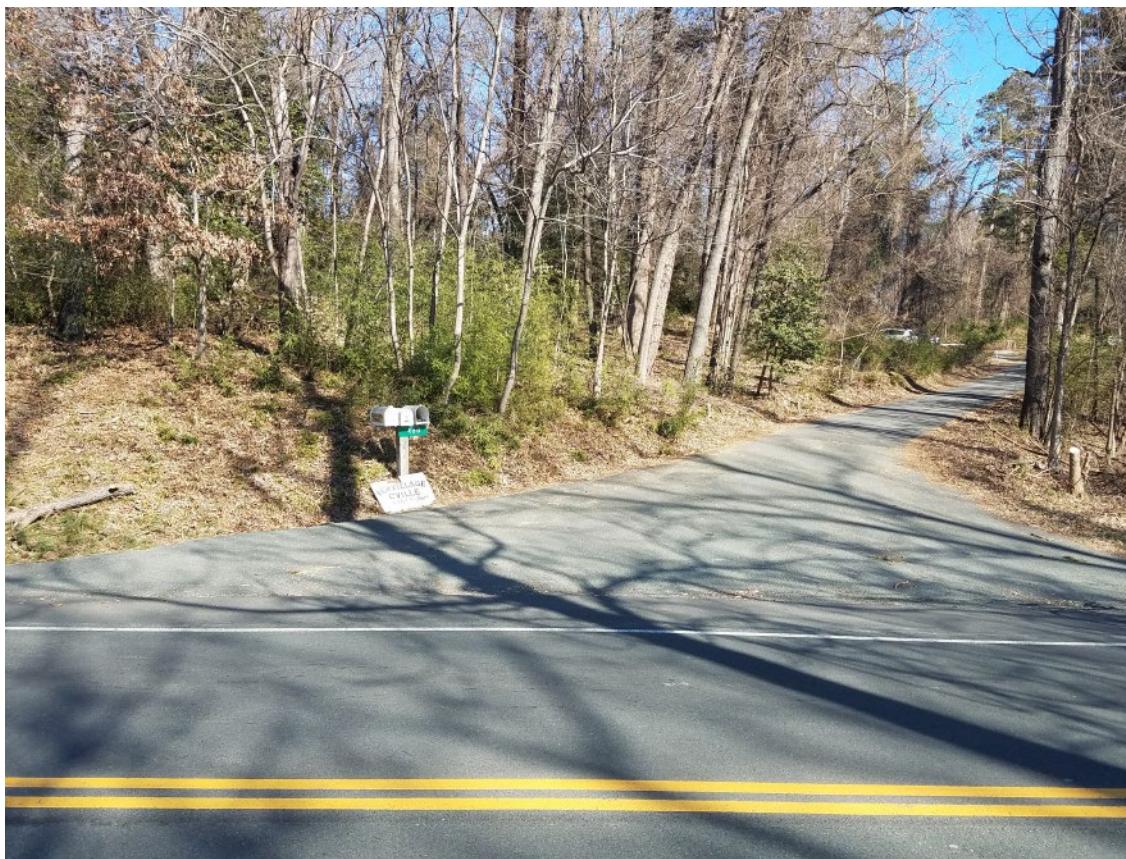
- ENTRANCE HAS BEEN RELOCATED 40' TO REDUCE VDOT WAIVER
- FURTHER STUDY HAS BEEN DONE ON STORMWATER IMPROVEMENTS ALONG RIO RD.
- PARKING AREA HAS BEEN REDESIGNED TO REDUCE PROXIMITY TO PRESERVED SLOPES
- A SCHEMATIC/PRELIMINARY HABITAT DEVELOPMENT PLAN HAS BEEN INCLUDED
- ADDITIONAL INFORMATION HAS BEEN 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

SITE PHOTOS



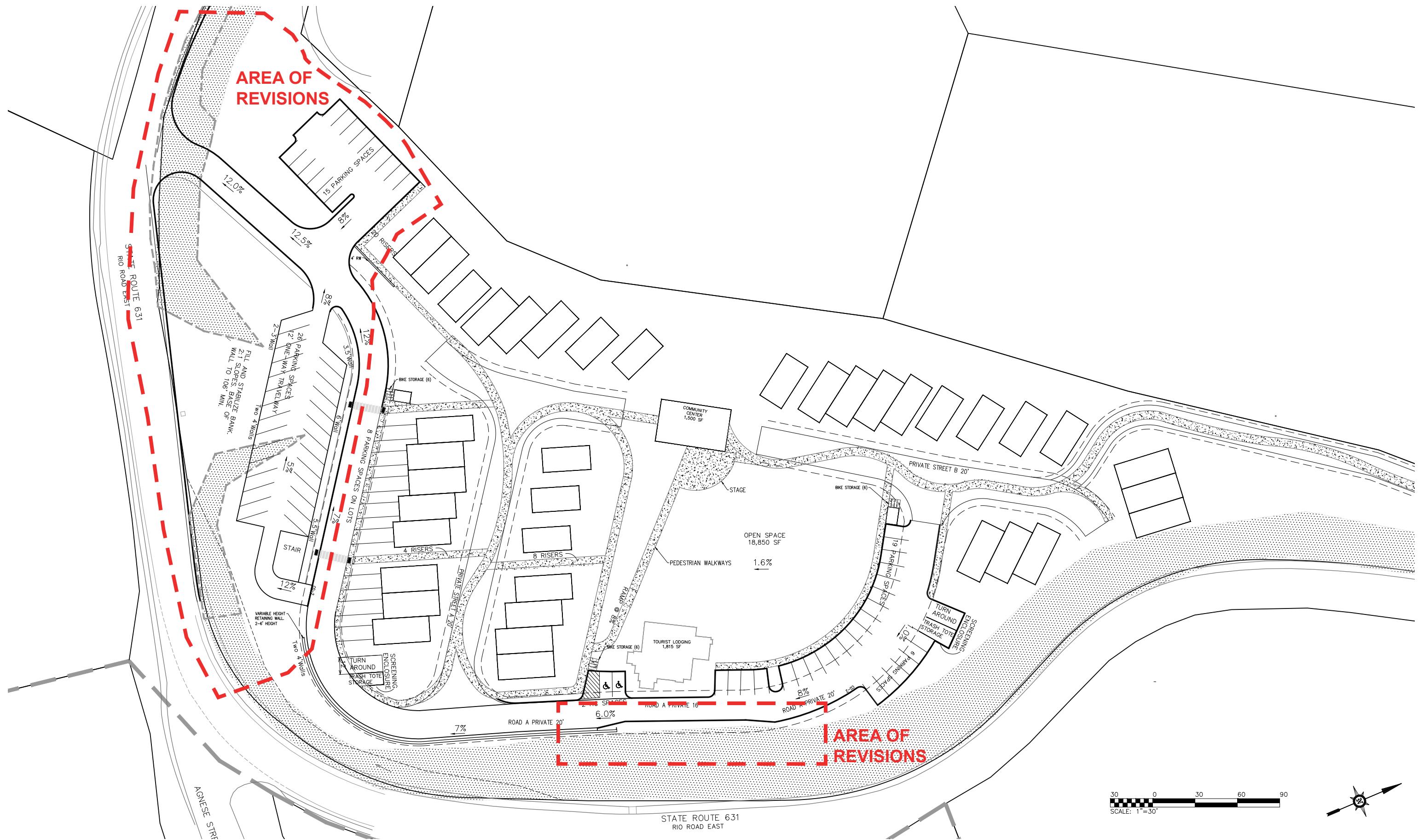
EXISTING SLOPES ADJACENT TO HOUSE



EXHIBIT 2

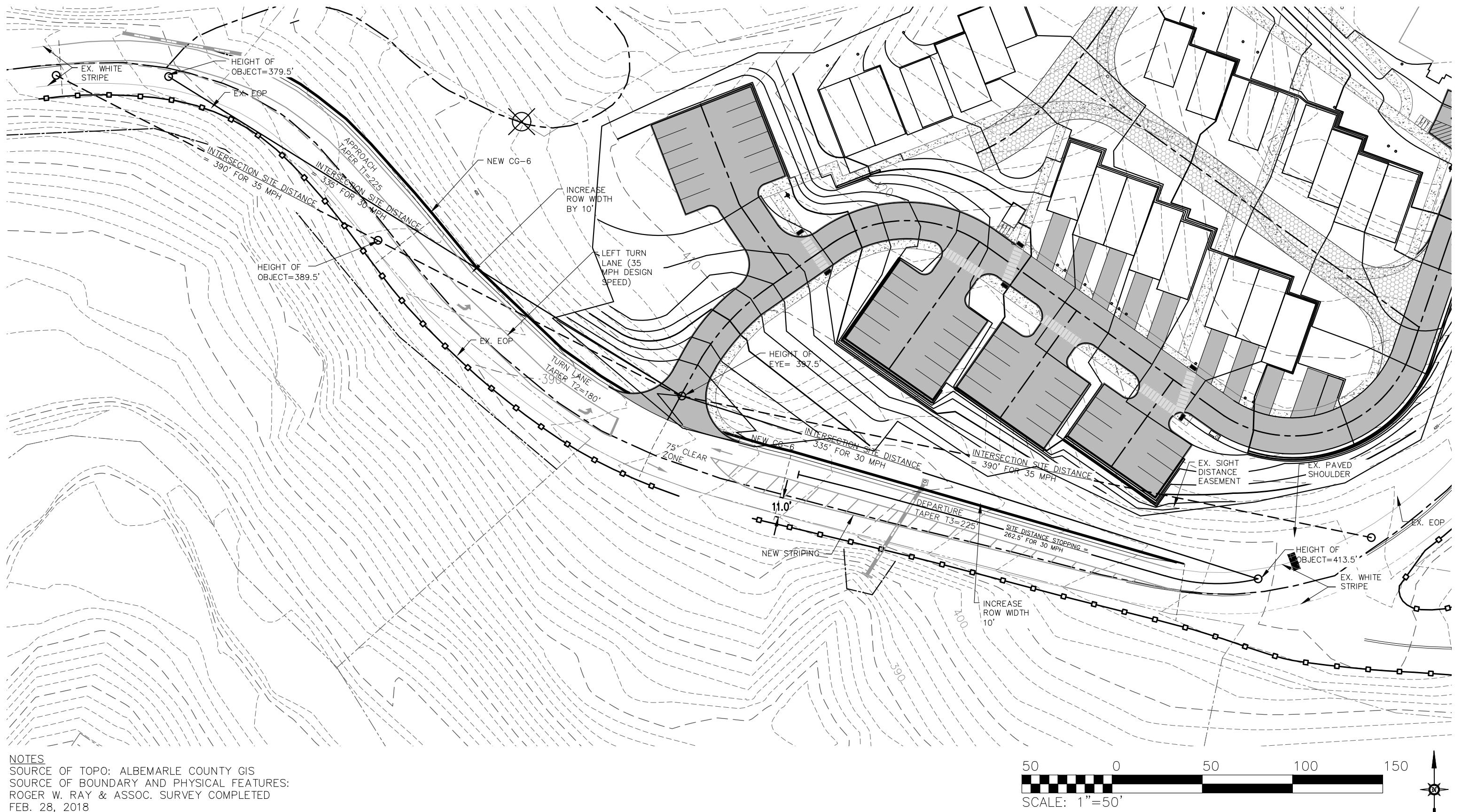
ECOVILLAGE CHARLOTTESVILLE
SITE REVISIONS

- 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'



AREA OF REVISIONS

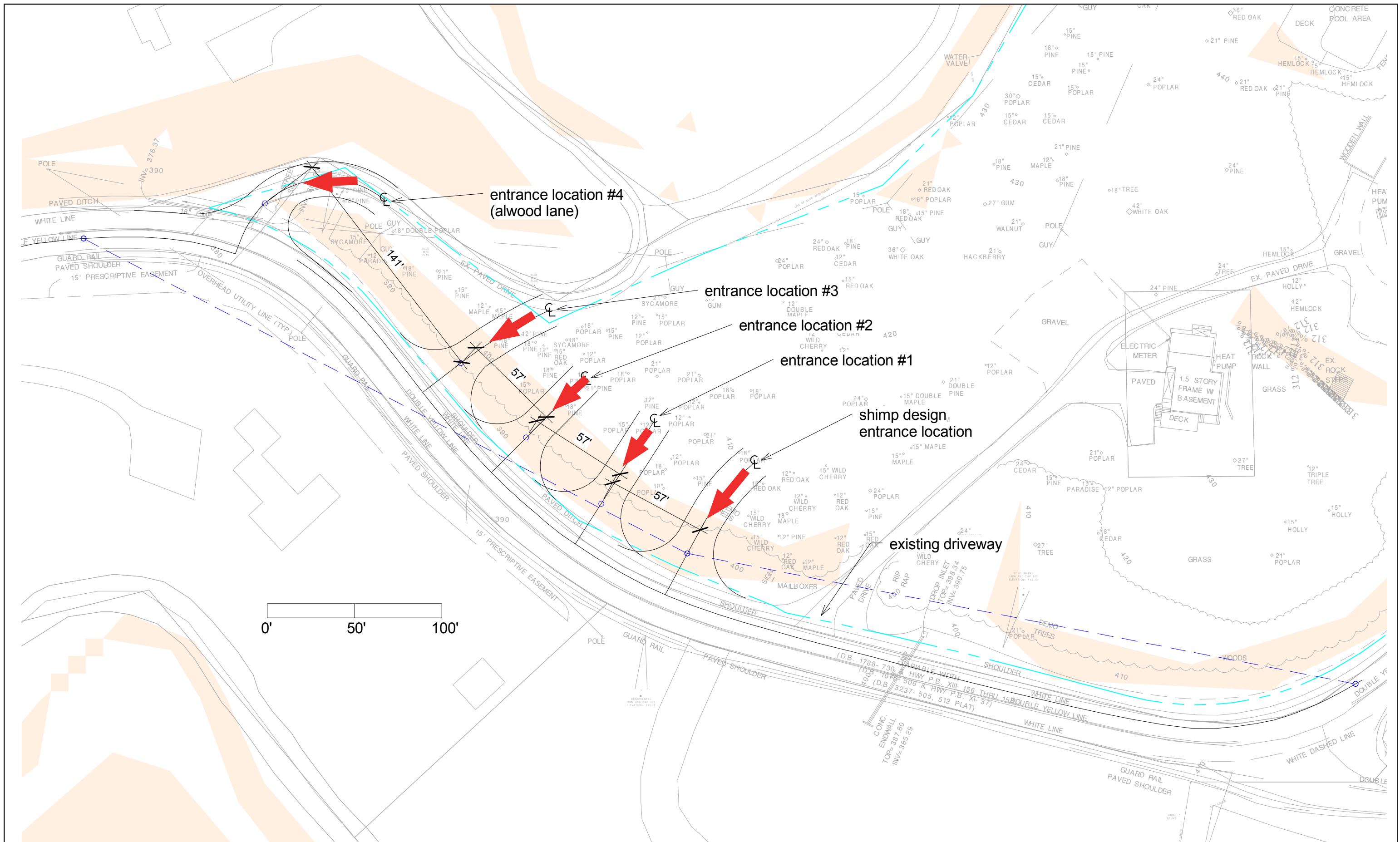
ATTACHMENT G



PREVIOUS PARKING LAYOUT

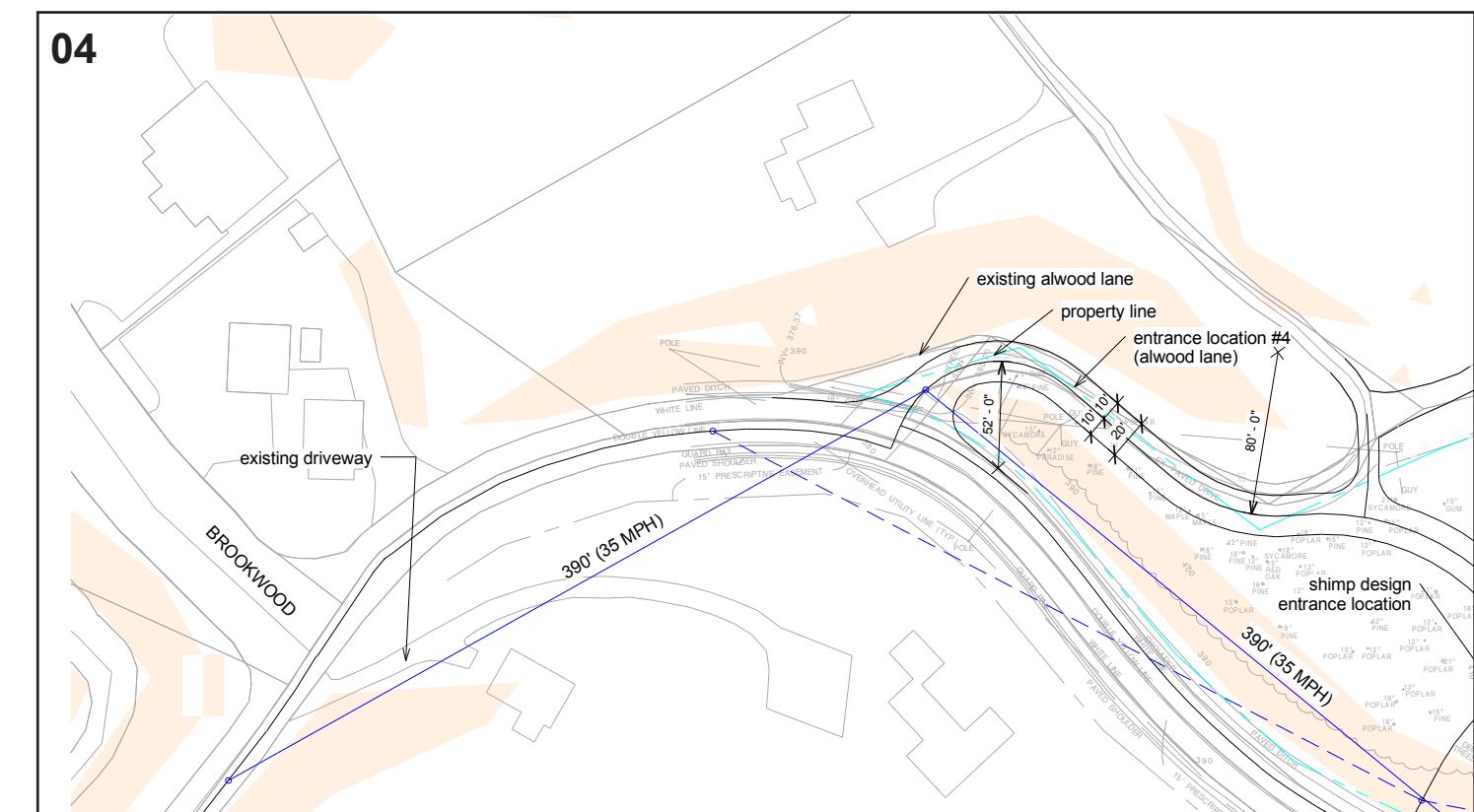
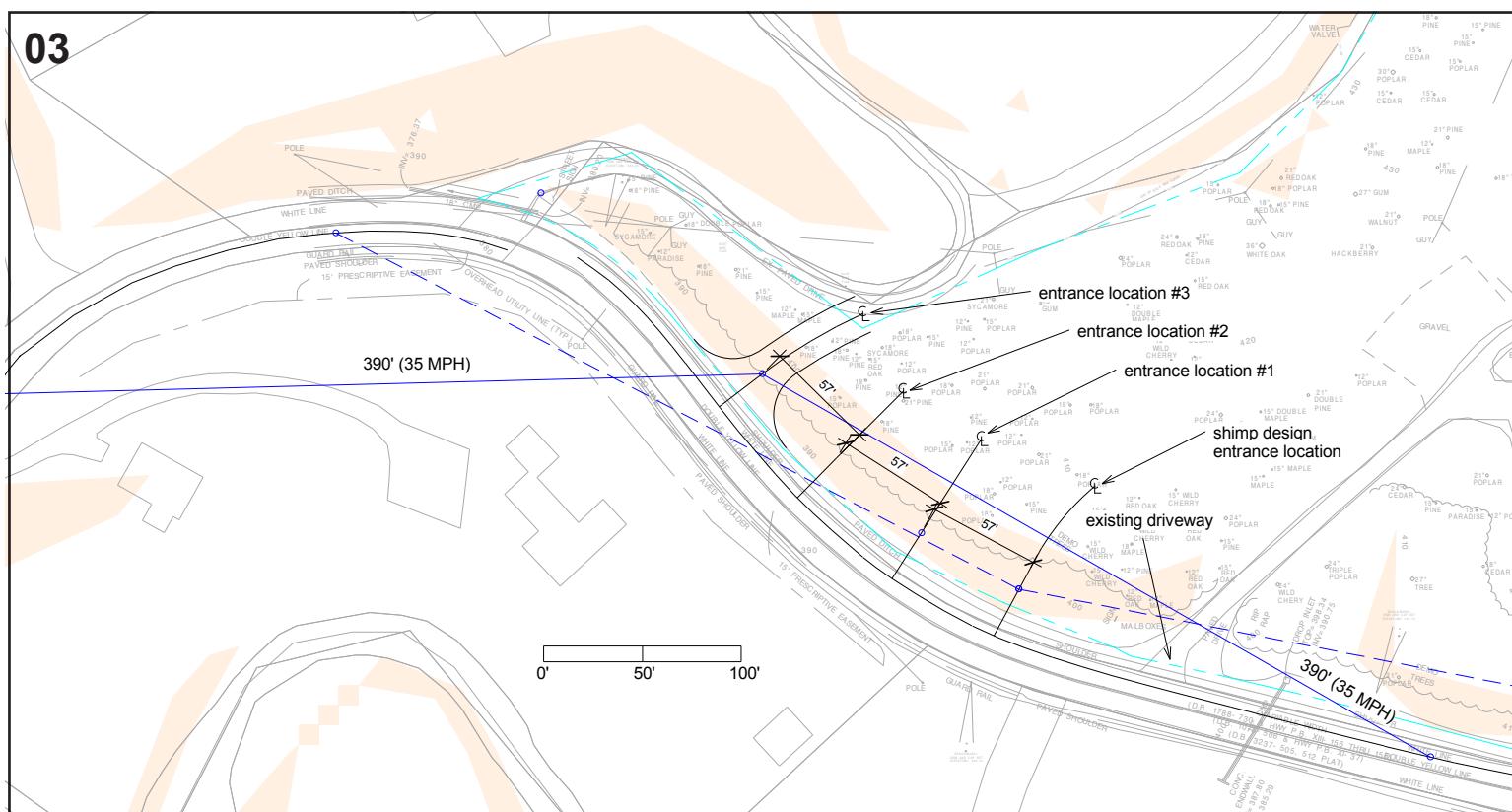
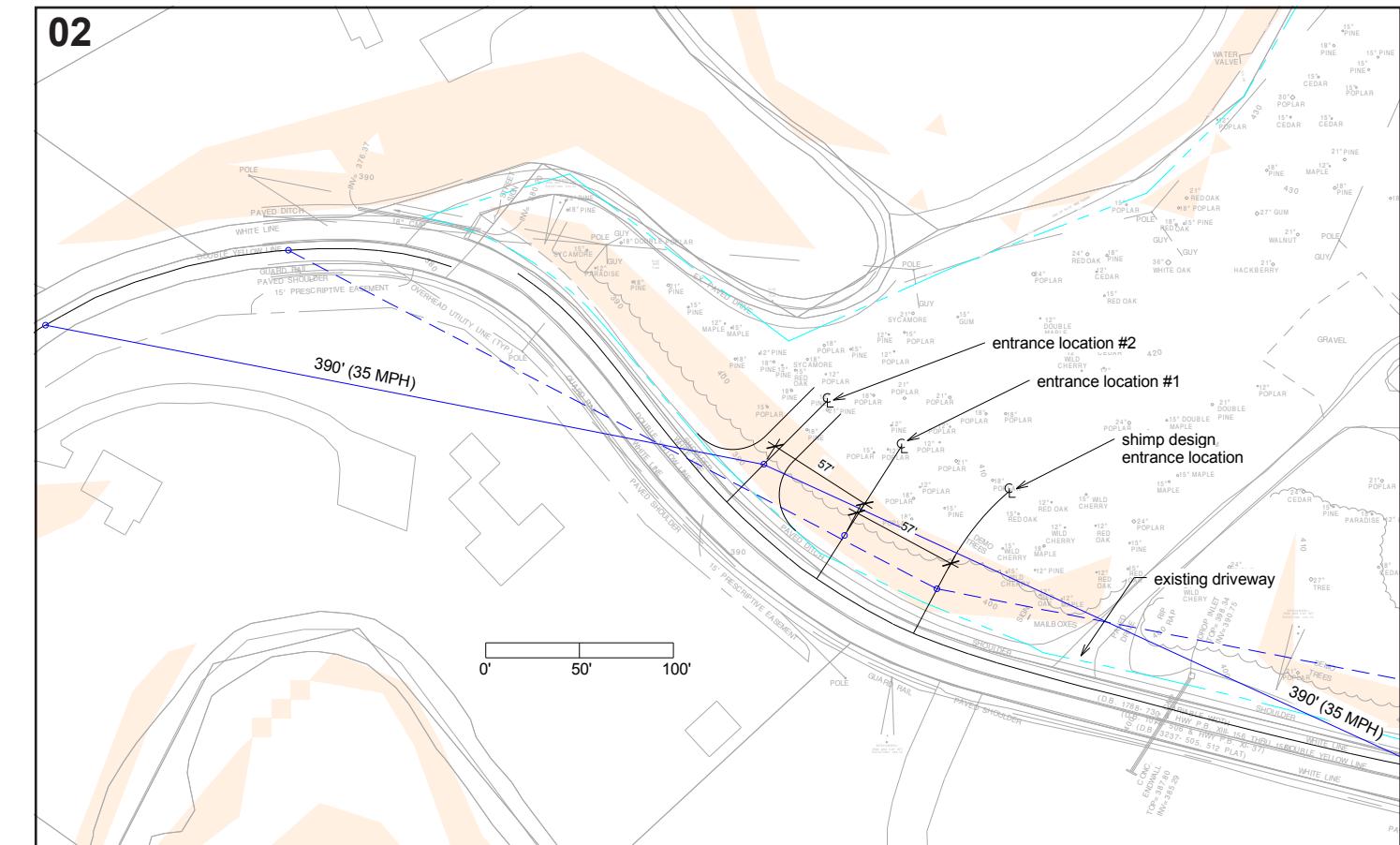
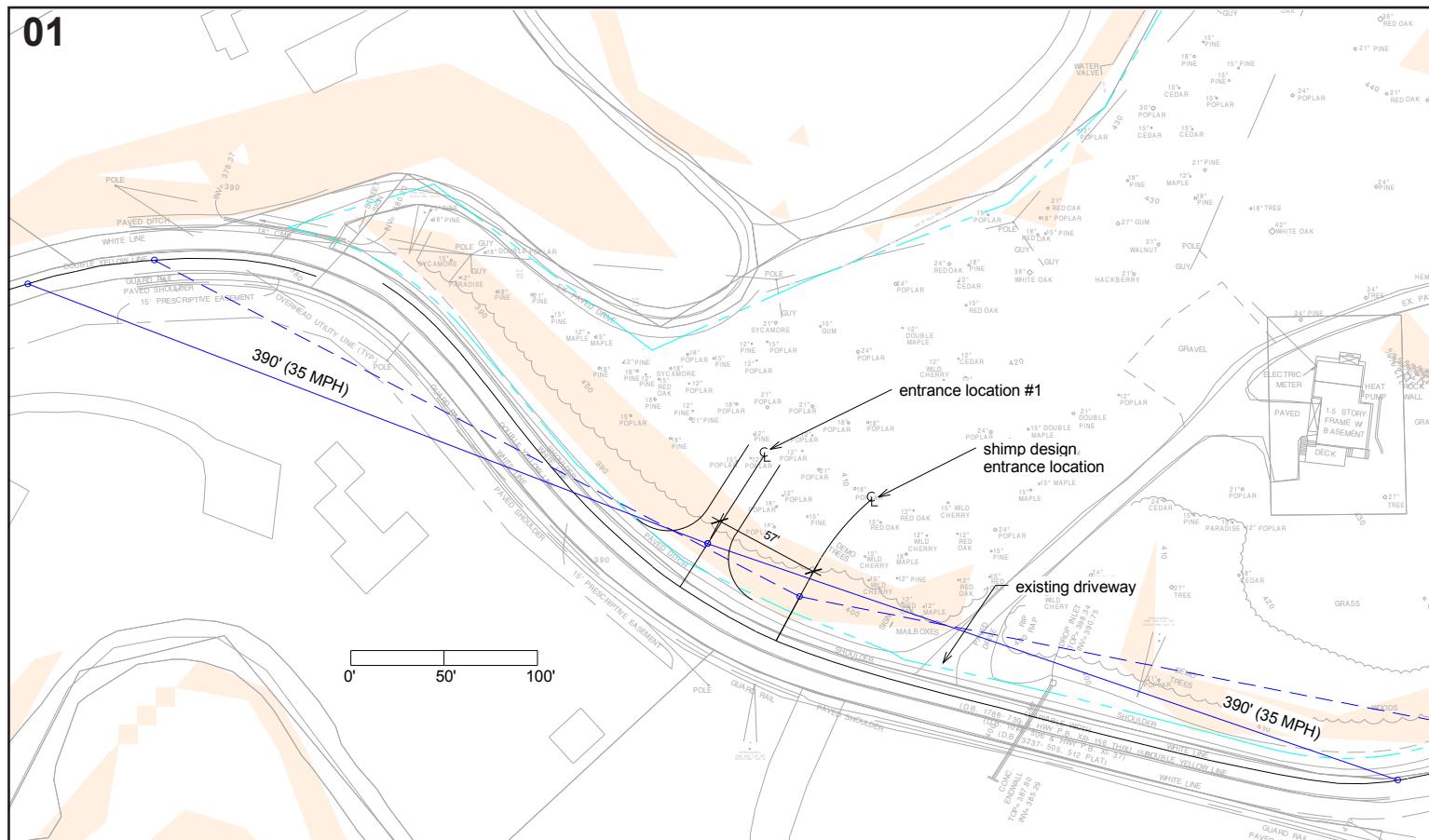
SHIMP ENGINEERING P.C.

ATTACHMENT G



ENTRANCE RELOCATION STUDIES

ATTACHMENT G



NOT TO SCALE

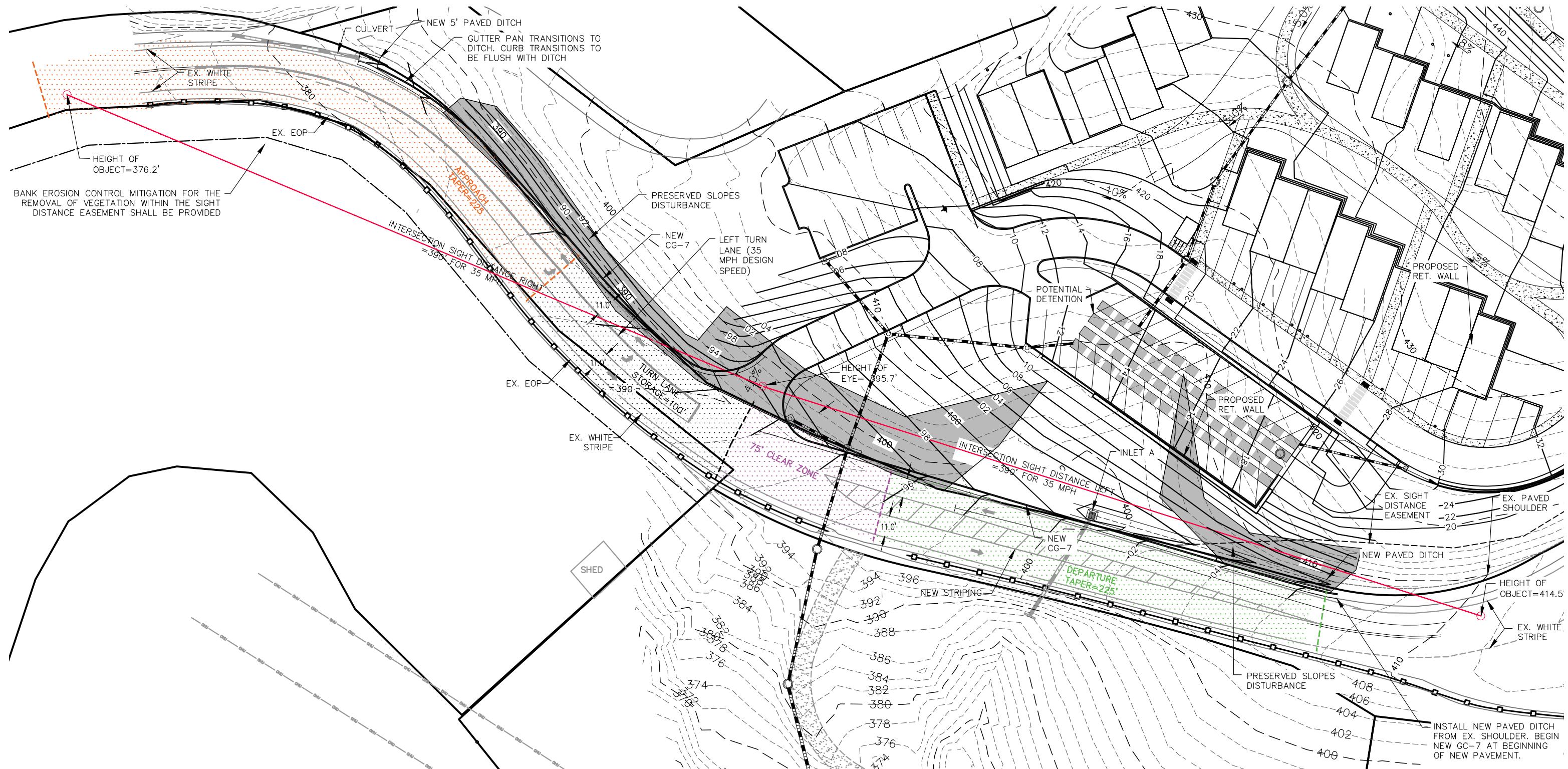
ENTRANCE RELOCATION STUDIES

SHIMP ENGINEERING P.C.

ATTACHMENT G

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.

50 0 50 100 150
 SCALE: 1"=50'

EXHIBIT 3

ECOVILLAGE CHARLOTTESVILLE
SLOPE DISTURBANCE

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

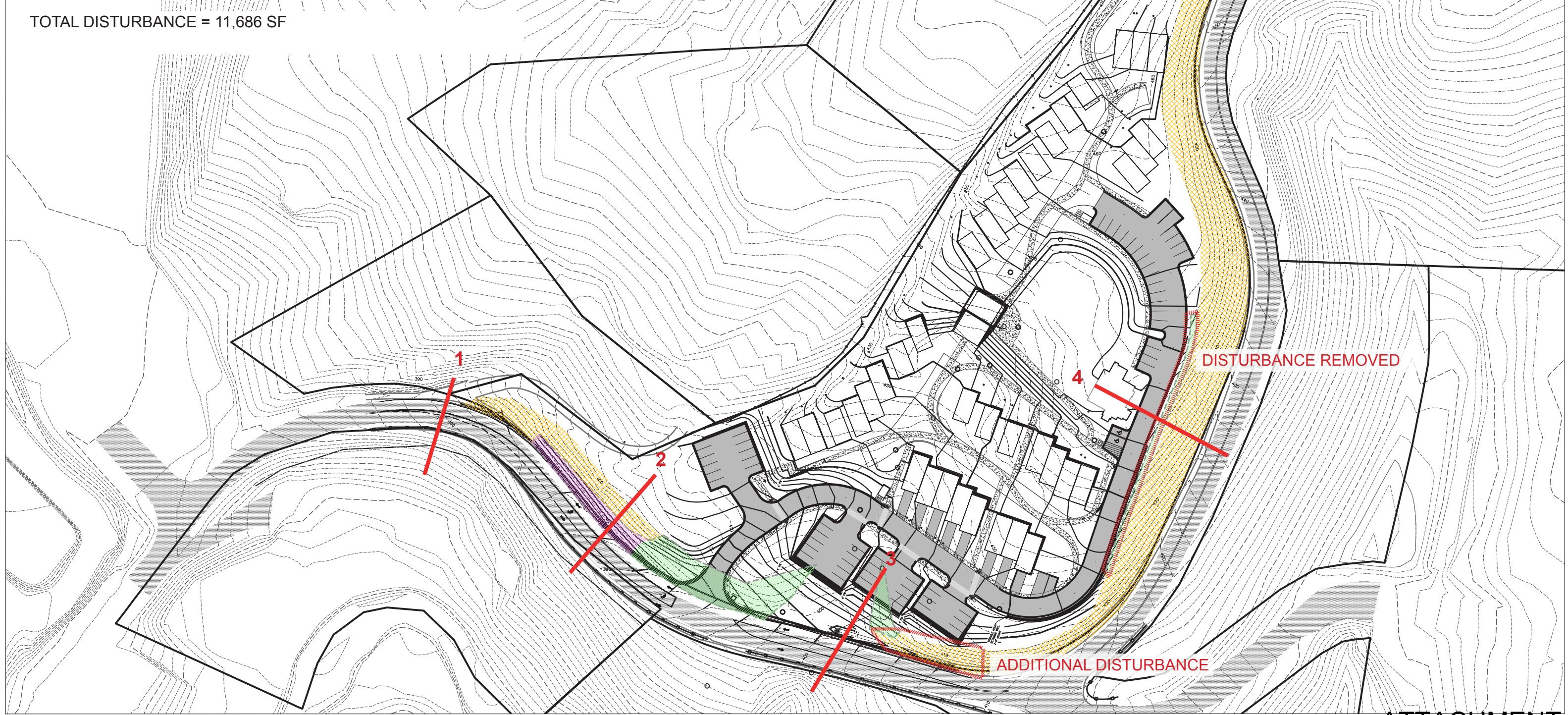
ECOVILLAGE CHARLOTTESVILLE: SLOPE EXHIBIT

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

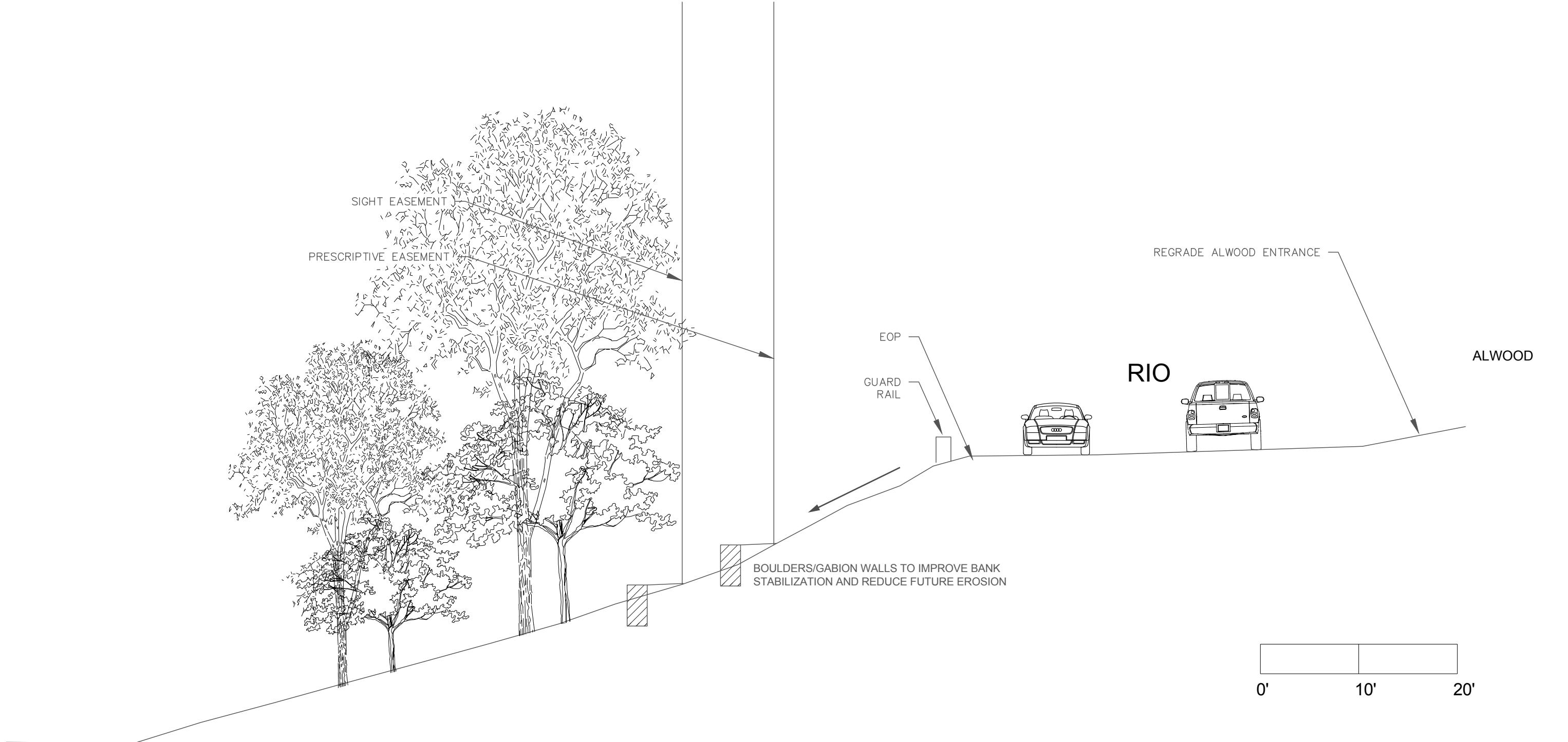
100 0 100 60 300
SCALE: 1"=100'

SHIMP ENGINEERING, P.C.

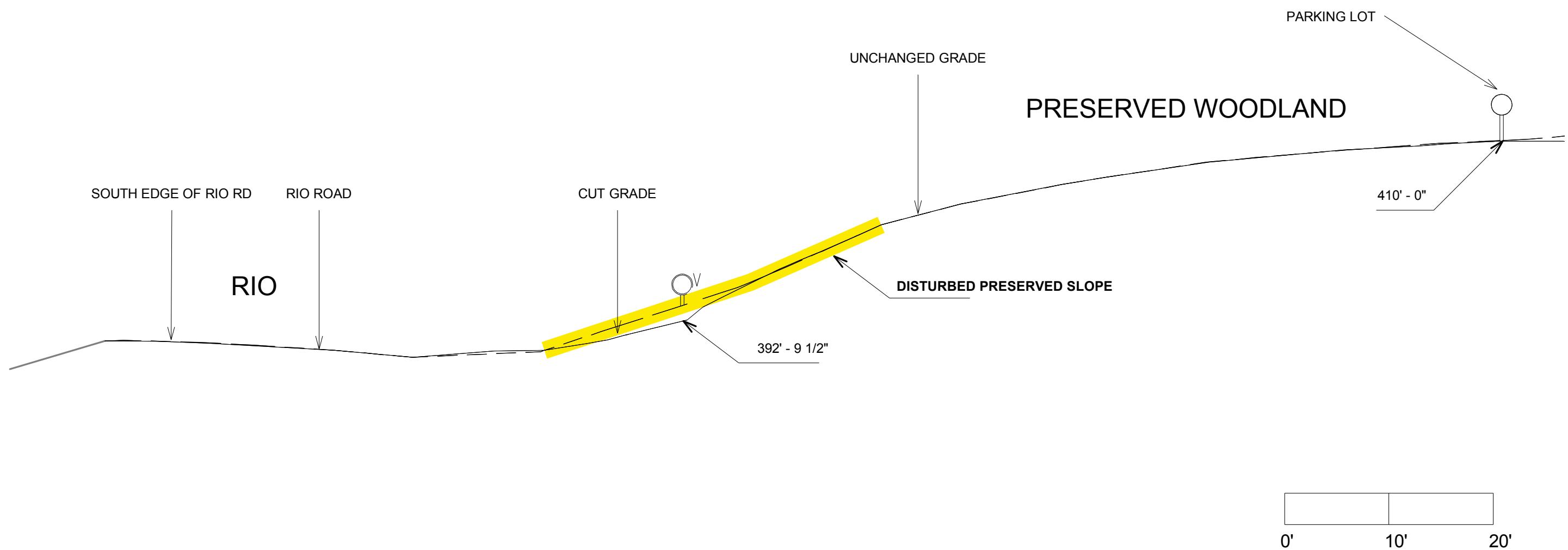
TOTAL DISTURBANCE = 11,686 SF



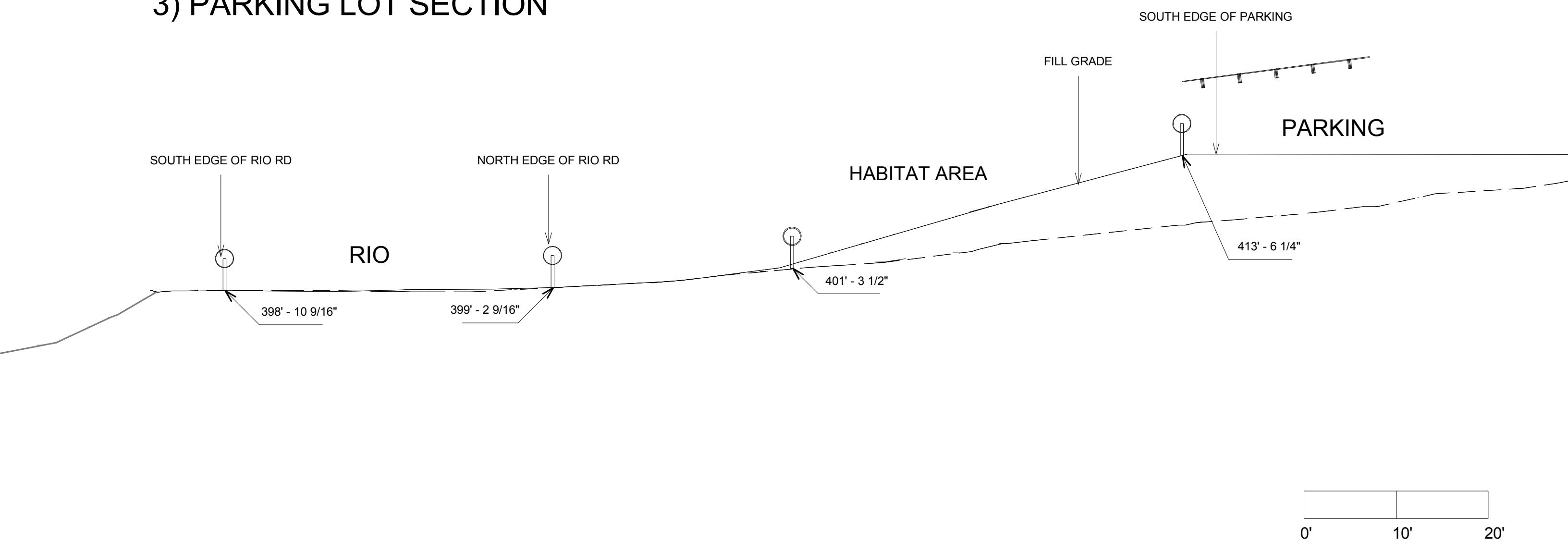
1) RIO ACROSS FROM ALWOOD

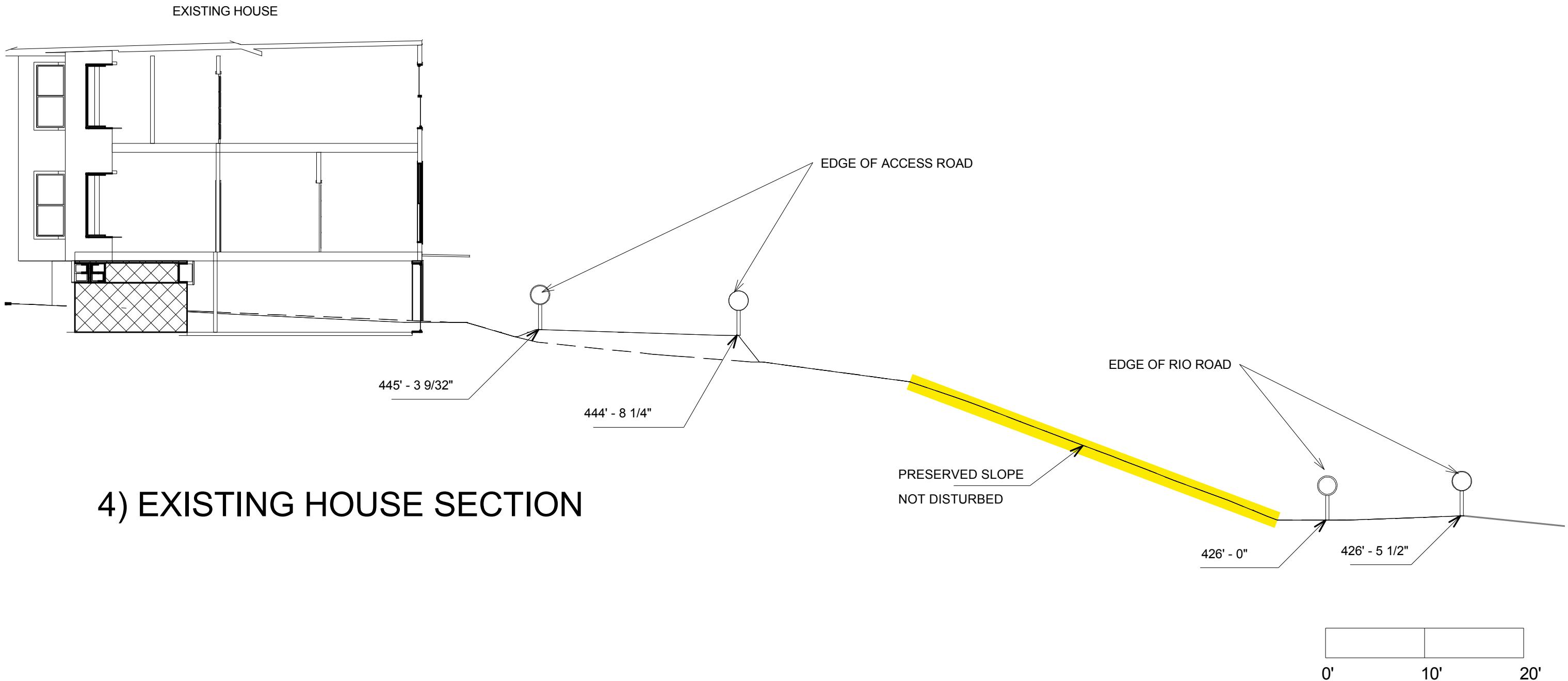


2) WEST SIGHT LINE RETAINING SECTION



3) PARKING LOT SECTION





AREA OF CLOSE-UP

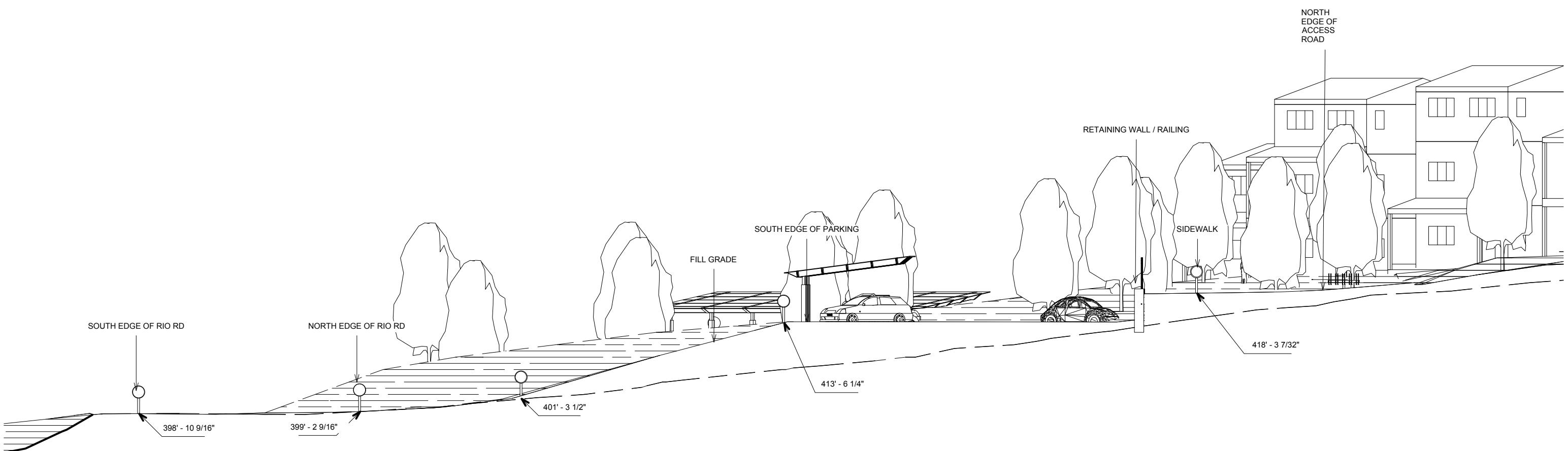


NOT TO SCALE

SITE TRANSECT

SHIMP ENGINEERING P.C.

ATTACHMENT G



NOT TO SCALE

SITE TRANSECT: CLOSE-UP

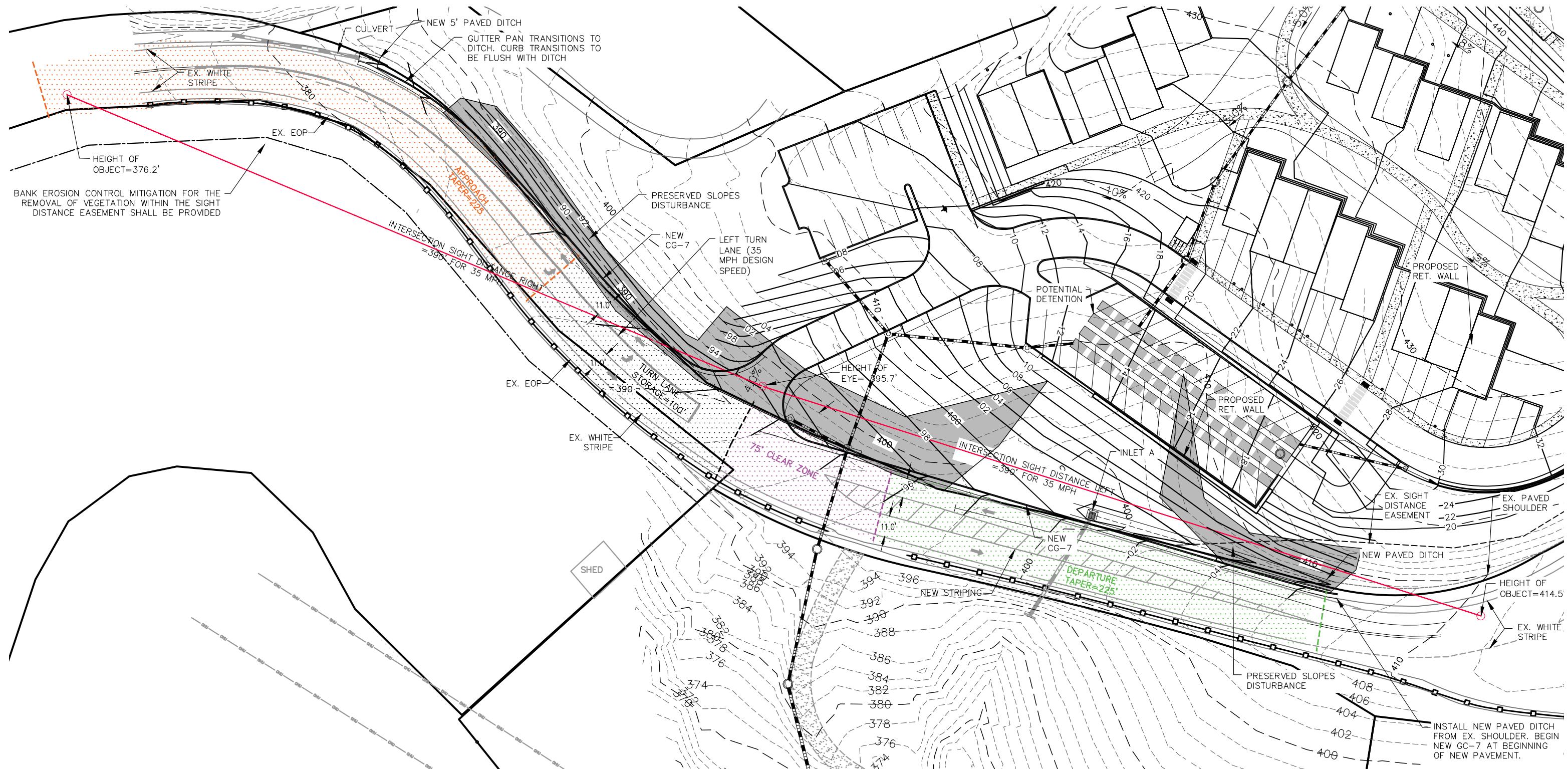
EXHIBIT 4

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

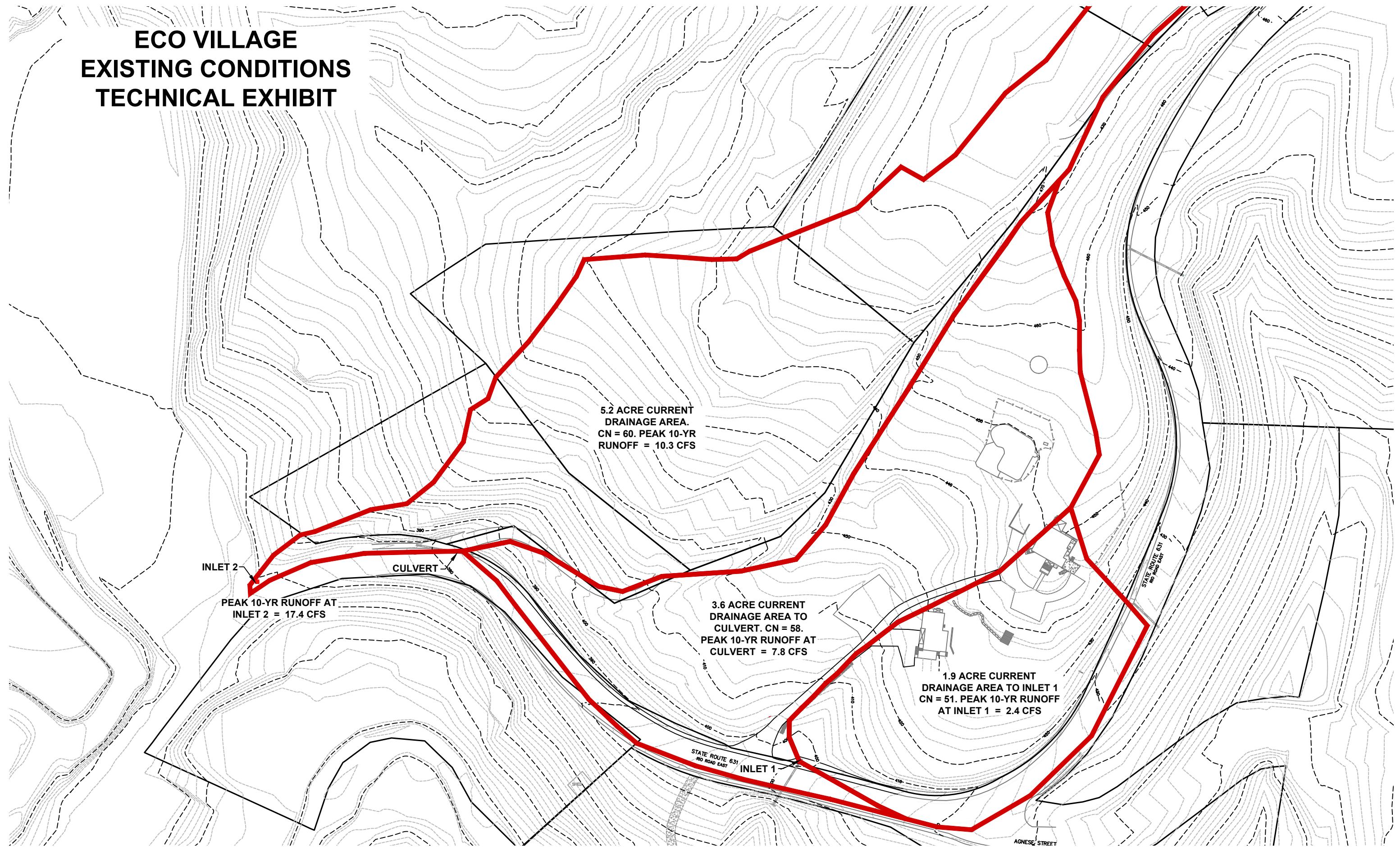
02-04-2019



50 0 50 100 150
 SCALE: 1"=50'



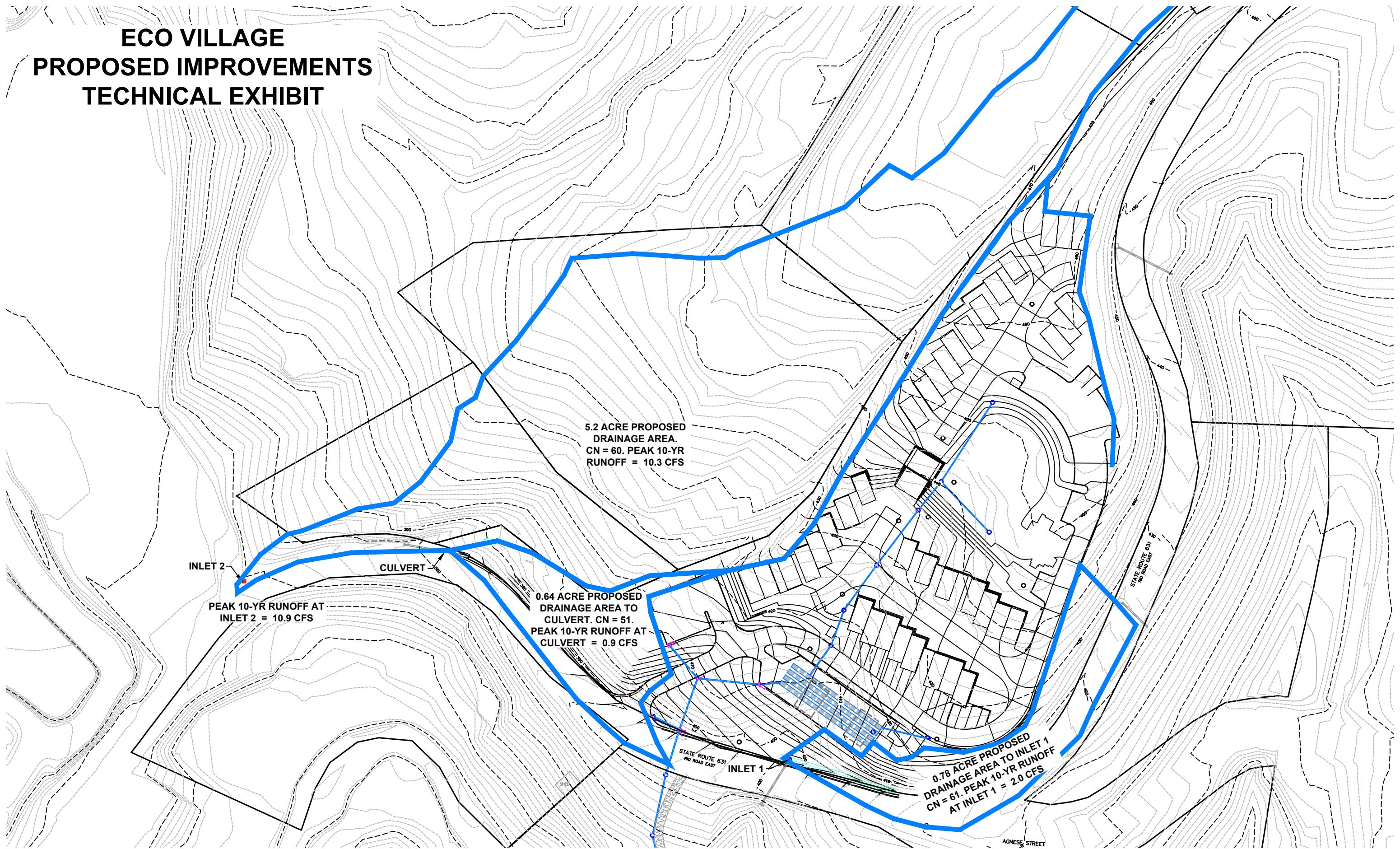
**ECO VILLAGE
EXISTING CONDITIONS
TECHNICAL EXHIBIT**



STORMWATER: PRE-DEVELOPMENT

SHIMP ENGINEERING P.C.
ATTACHMENT G

**ECO VILLAGE
PROPOSED IMPROVEMENTS
TECHNICAL EXHIBIT**



STORMWATER: POST-DEVELOPMENT

ATTACHMENT G

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

NOTES:
1. Contractor to apply wood chip bedding around all proposed trees and shrubs.
2. All site plantings of trees and shrubs shall be allowed to reach, and be maintained at, mature height; the topping of trees is prohibited. Shrubs and trees shall be pruned minimally and only to support the overall health of the plant.
3. Groundcovers are to be planted up to the edge of the rootball. Rootballs to be covered in mulch. Not mulch to be placed against the trunk of the tree.

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	Pinksterbloem 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	Sympyotrichum 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



SHIMP ENGINEERING, P.C.
ENGINEERING-LAND PLANNING-PROJECT MANAGEMENT
201 E. MAIN ST., SUITE M
CHARLOTTESVILLE, VA 22902
PHONE: (434) 207-8086
E-MAIL: JUSTIN@SHIMP.COM



INITIAL SITE DEVELOPMENT PLAN FOR	ECOVILLAGE CHARLOTTESVILLE
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



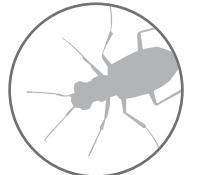
Birds of Prey
Utilize larger trees to survey area



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	<i>Fagus grandifolia</i>
Large Shade Tree	<i>Liriodendron tulipifera</i>
Large Shade Tree	<i>Quercus alba</i>
Broadleaf Evergreen	<i>Ilex opaca</i>
Small Tree	<i>Carpinus caroliniana</i>

SHRUB

Planting Type	Botanical Name
Deciduous Shrub	<i>Viburnum acerifolium</i>
Deciduous Shrub	<i>Viburnum prunifolium</i>
Deciduous Shrub	<i>Rhododendron periclymenoides</i>
Deciduous Shrub	<i>Euonymus americanus</i>
Broadleaf Evergreen	<i>Kalmia latifolia</i>

GROUNDCOVER/HERBACEOUS

Planting Type	Botanical Name
Herbaceous	<i>Polygonatum biflorum</i>
Herbaceous	<i>Sanguinaria</i>
Herbaceous	<i>Sympyotrichum cordifolium</i>
Herbaceous	<i>Eurybia divaricata</i>
Fern	<i>Polystichum acrostichoides</i>

HABITAT REDEVELOPMENT SECTION SCHEMATIC

SHIMP ENGINEERING P.C.

ATTACHMENT G

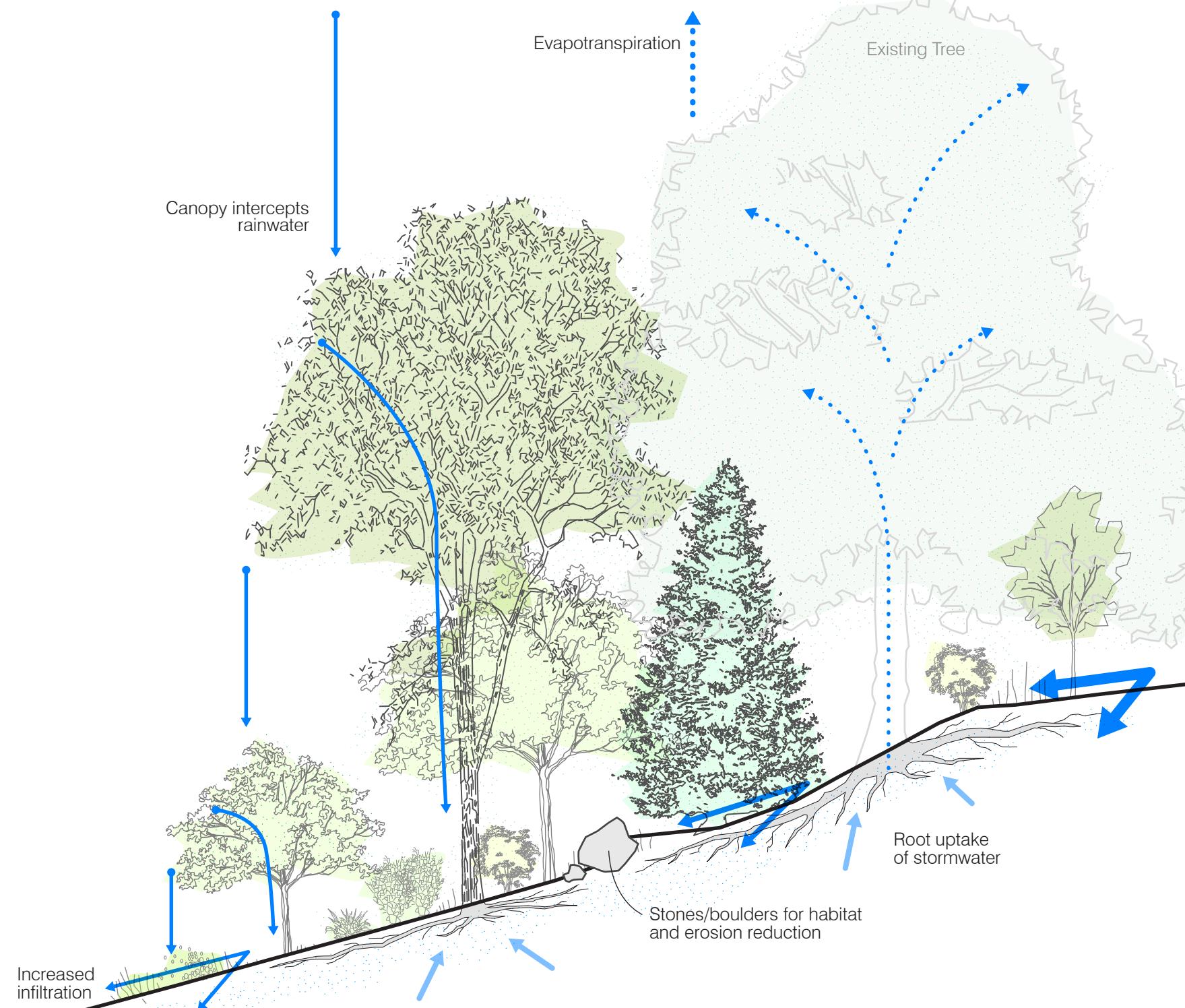
Ecovillage Habitat Redevelopment: Landscape Section

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



HABITAT REDEVELOPMENT SECTION SCHEMATIC

SHIMP ENGINEERING P.C.

Native Planting List

Forest Type: Mesic Hardwood Forest

Planting strata modeled of native plant species community

TREE

Planting Type	Botanical Name
Large Shade Tree	<i>Fagus grandifolia</i>
Large Shade Tree	<i>Liriodendron tulipifera</i>
Large Shade Tree	<i>Quercus alba</i>
Broadleaf Evergreen	<i>Ilex opaca</i>
Small Tree	<i>Carpinus caroliniana</i>

SHRUB

Planting Type	Botanical Name
Deciduous Shrub	<i>Viburnum acerifolium</i>
Deciduous Shrub	<i>Viburnum prunifolium</i>
Deciduous Shrub	<i>Rhododendron periclymenoides</i>
Deciduous Shrub	<i>Euonymus americanus</i>
Broadleaf Evergreen	<i>Kalmia latifolia</i>

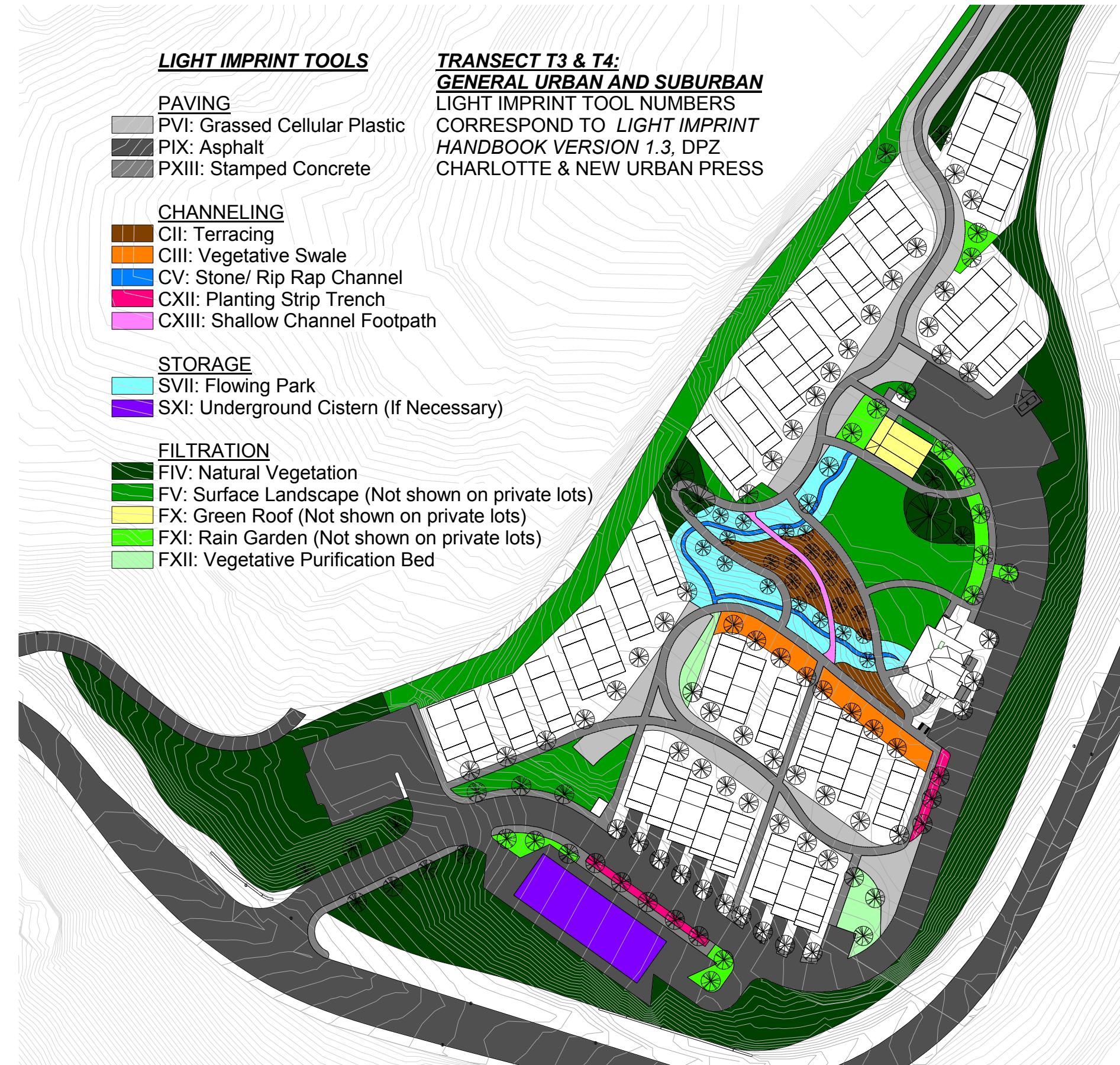
GROUNDCOVER/HERBACEOUS

Planting Type	Botanical Name
Herbaceous	<i>Polygonatum biflorum</i>
Herbaceous	<i>Sanguinaria</i>
Herbaceous	<i>Sympyotrichum cordifolium</i>
Herbaceous	<i>Eurybia divaricata</i>
Fern	<i>Polystichum acrostichoides</i>

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

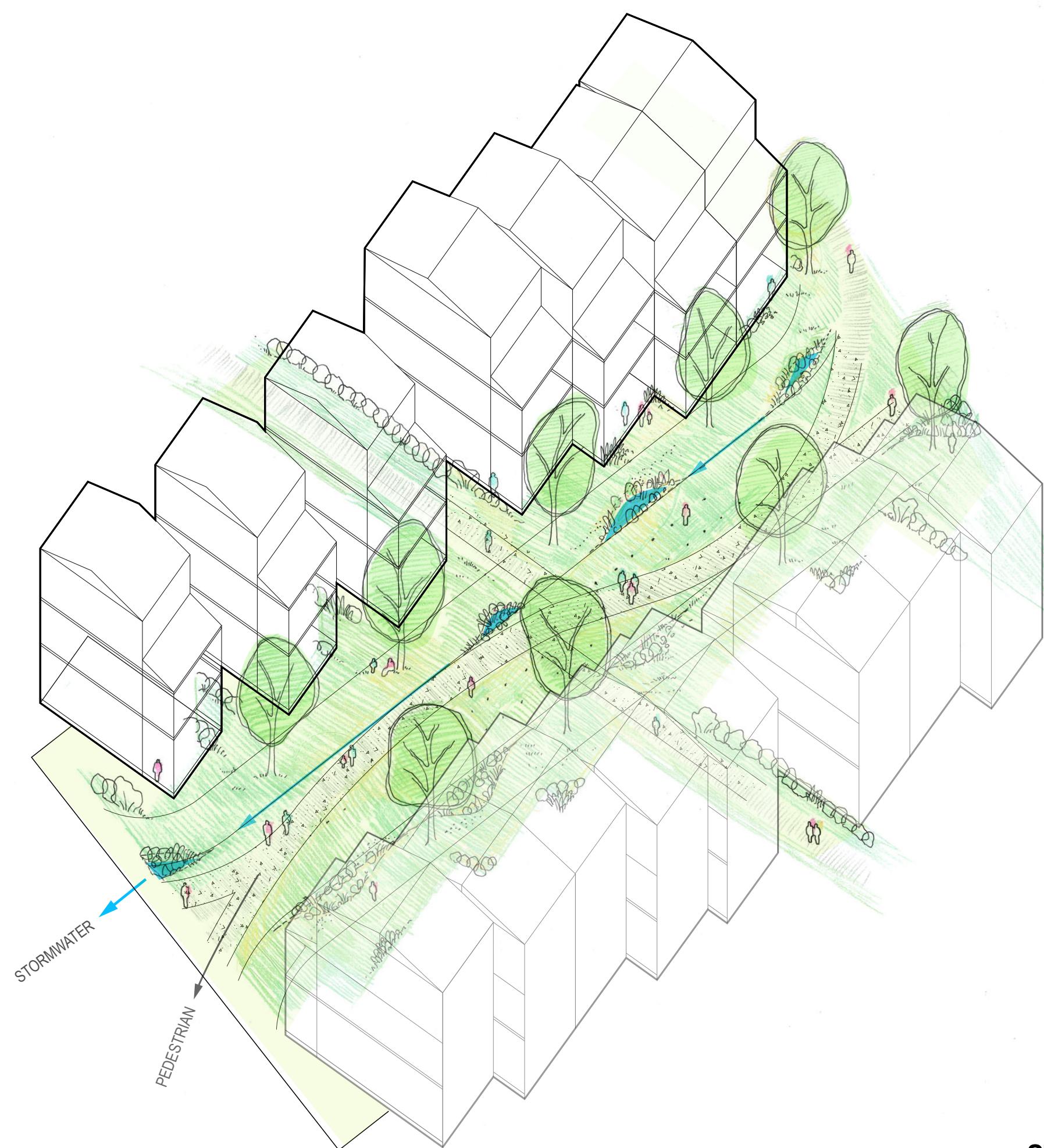


THE
HOUSING
LAB

NOT TO SCALE

GREEN INFRASTRUCTURE SCHEMATIC

ATTACHMENT G

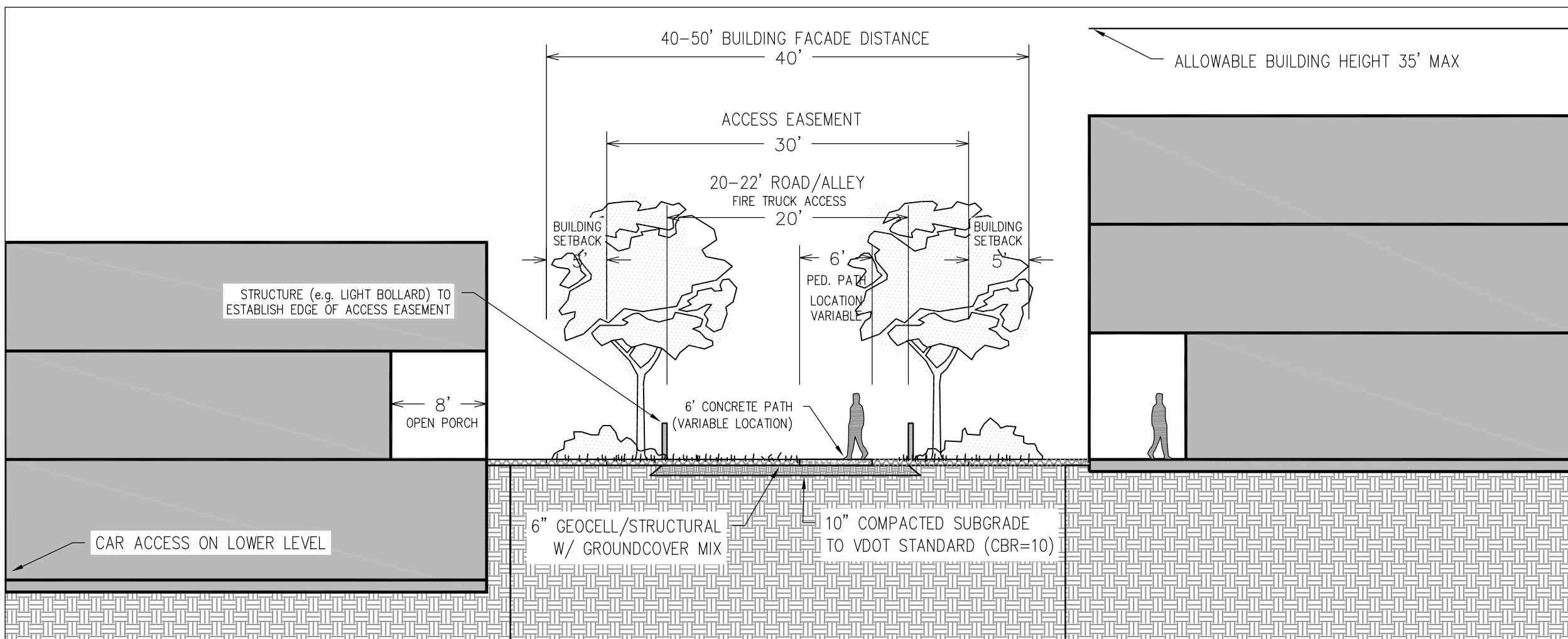


STREET AXON: STREET STUDY

SHIMP ENGINEERING P.C.
ATTACHMENT G



STREET AXON: STREET STUDY



STREET SECTION



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

PRECEDENTS: RETAINING WALLS



IMPLEMENTING STORMWATER INTO STREETSCAPE

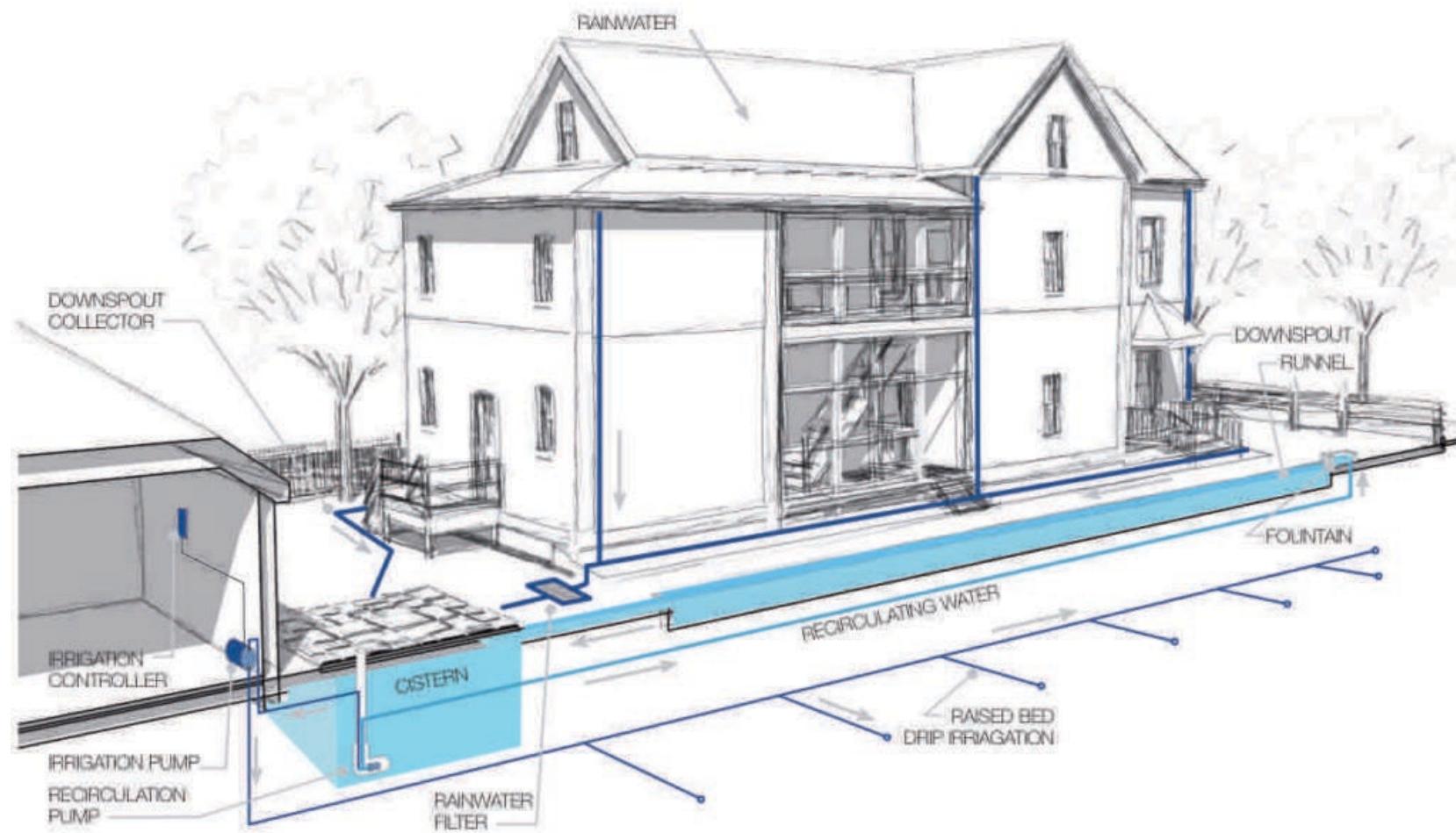
PRECEDENTS: STORMWATER BIOFILTERS



POSSIBLE GREEN ROOF FOR COMMON HOUSE



PRECEDENTS: GREEN ROOF



STORMWATER COLLECTION FOR IRRIGATION USE



PRECEDENTS: STORMWATER STRUCTURES FOR HOMES



**ECOVILLAGE: SPECIAL USE PERMIT
SUPPLEMENTARY EXHIBITS
02.04.2019**

SHIMP ENGINEERING P.C.

ATTACHMENT G