

1 2 3 4 5

D

C

B

A

GENERAL NOTES:

LEGEND:

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- +— CENTERLINE
- DETENTION BASIN
- DRAINAGE PIPE
- HPS HIGHPOINT OF SWALE
- LP LOW POINT
- RE RIM ELEVATION
- INV IN & OUT CATCHBASIN IN & OUT
- FFE FINISHED FLOOR ELEVATION
- PC POINT OF CURVE
- PT POINT OF TANGENT
- ▣ CATCH BASIN
- + 00.00 SPOT ELEVATION

Dan Zedick

UNIVERSITY OF ARIZONA
SITE ENGINEERING
LAR 554 . FALL 2016
KIRK DIMOND

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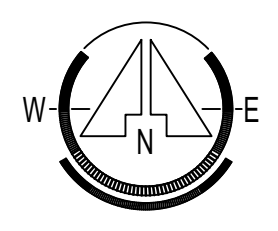
Final Assignment

REVISIONS

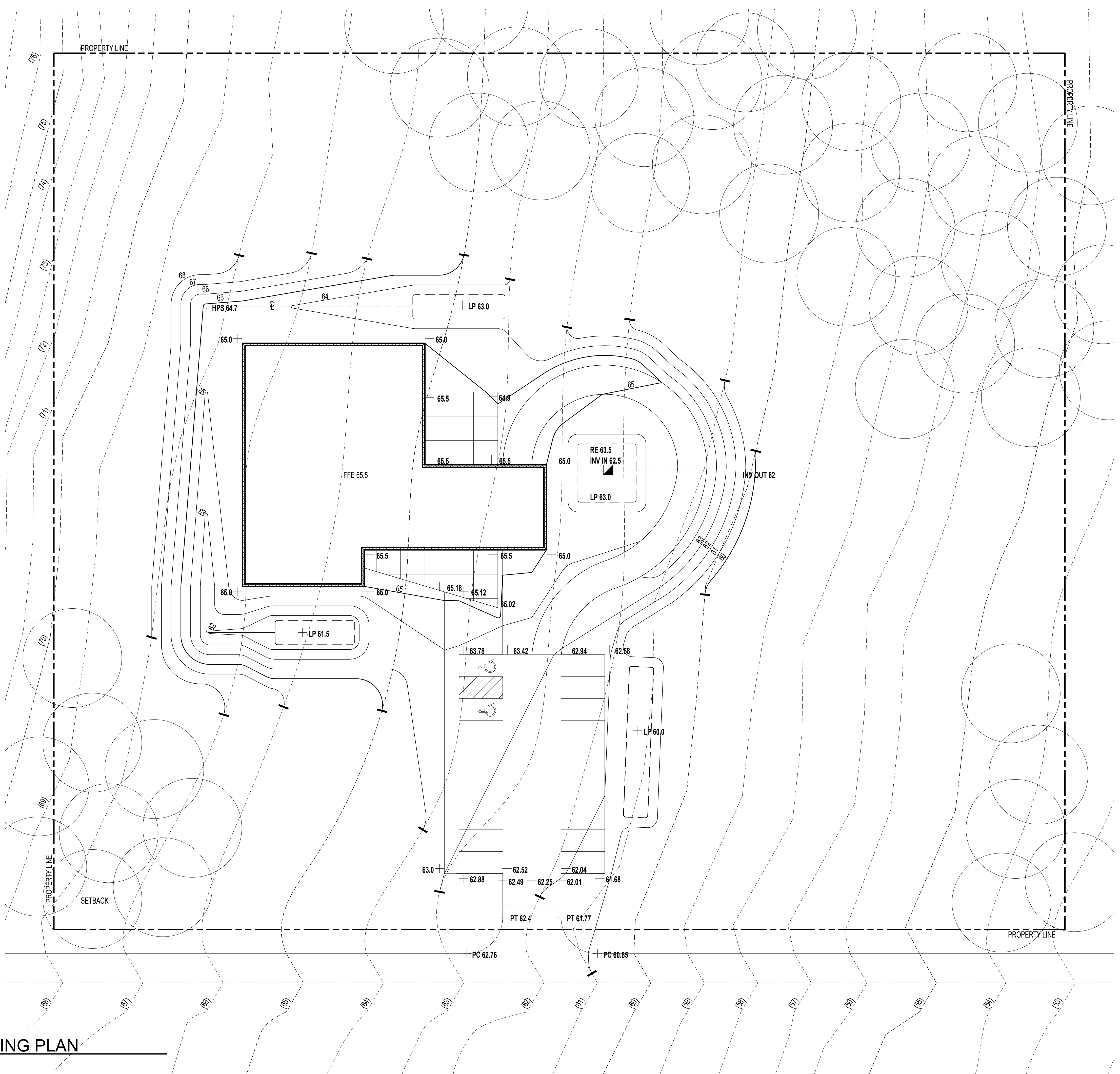
NO.	DATE	DESCRIPTION

PROJECT NO.: 11
CHECKED BY: KD
DRAWN BY: DZ
DATE: 12/12/2016

SHEET CONTENTS
GRADING PLAN



A1 GRADING PLAN
LG101 1" = 20'-0"



LG101

1

2

3

4

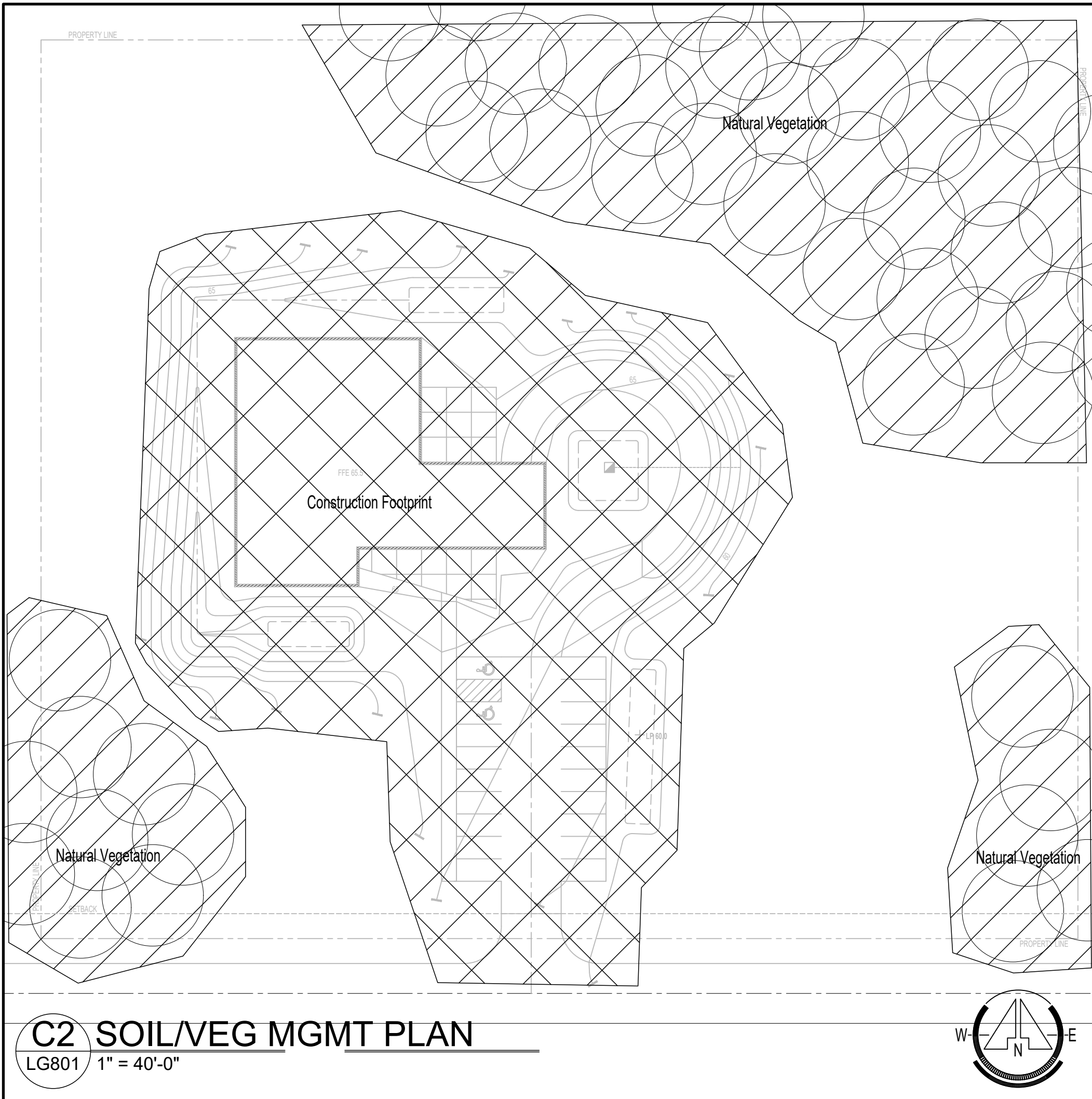
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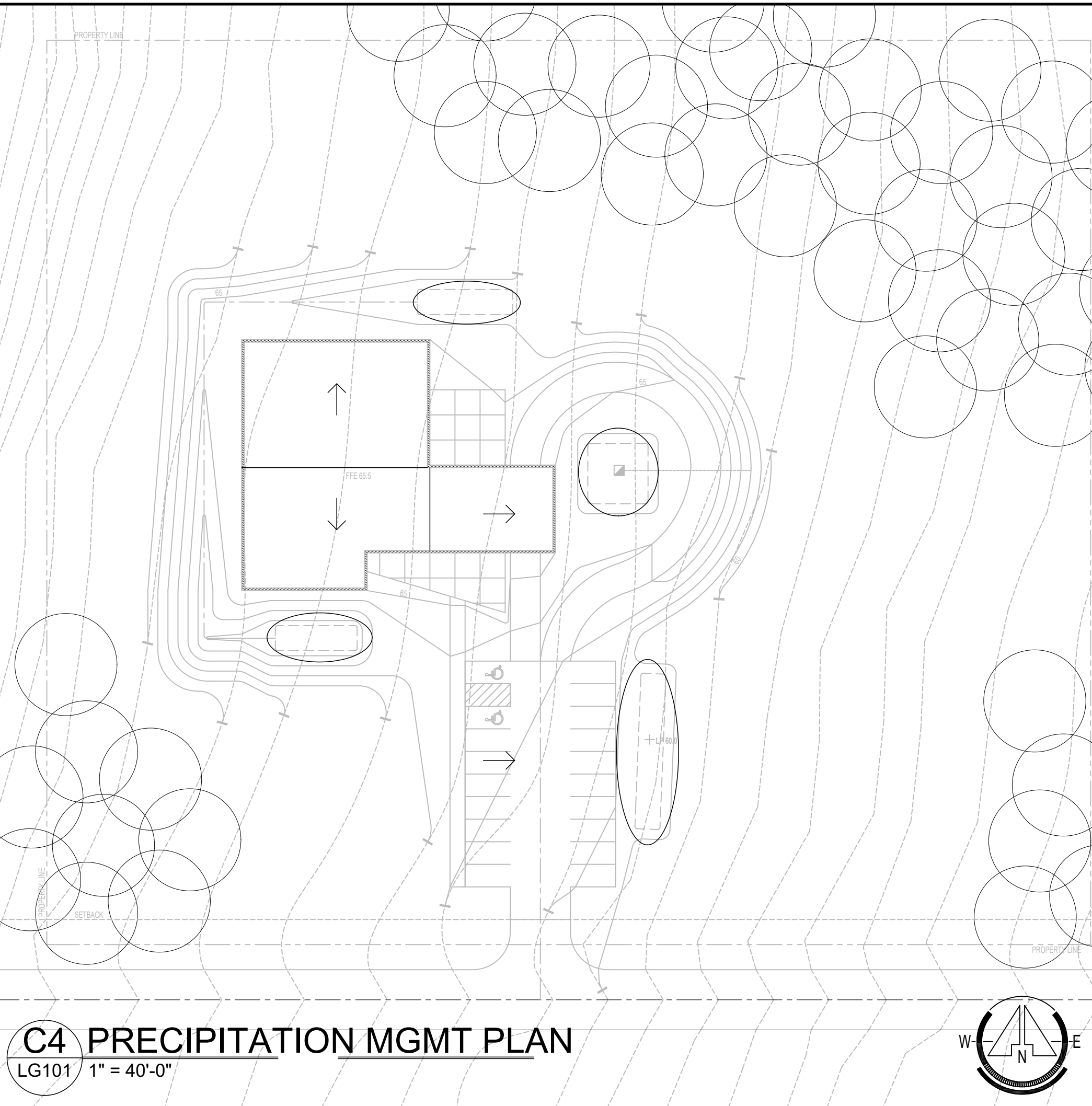
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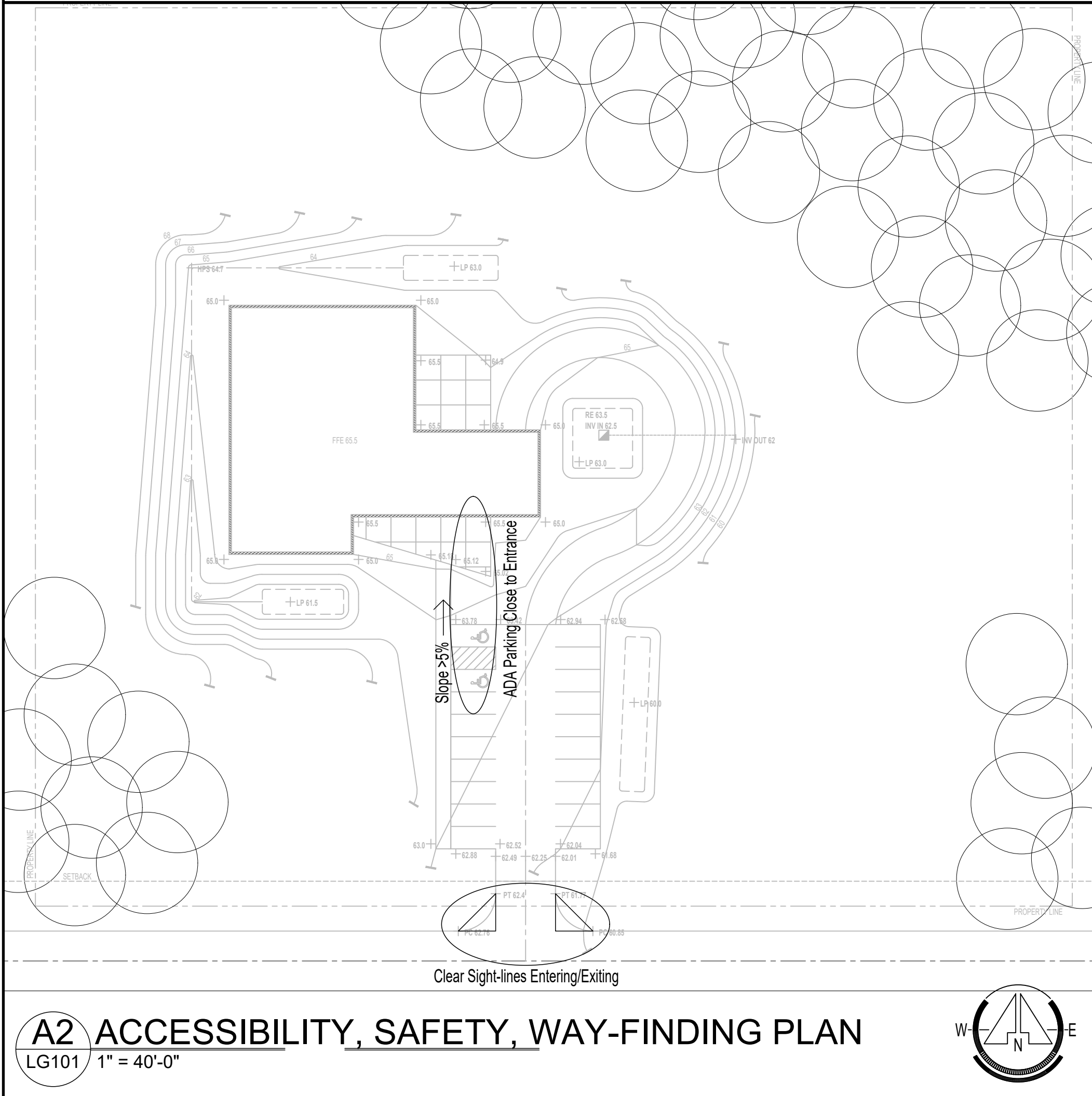
A



C2 SOIL/VEG MGMT PLAN
 LG801 1" = 40'-0"



C4 PRECIPITATION MGMT PLAN
 LG101 1" = 40'-0"



A2 ACCESSIBILITY, SAFETY, WAY-FINDING PLAN
 LG101 1" = 40'-0"

KEY NOTES:

LEGEND:

- EXISTING MAJOR CONTOUR
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FINAL ASSIGNMENT

QUESTIONS:

DESCRIBE 1) HOW YOUR GRADING PLAN LIMITS SOIL AND VEGETATION DISTURBANCE, AND 2) WHAT DIFFERENCE DID IT MAKE?:

1. The proposed grading plan limits soil and vegetation disturbance by keeping the perimeter/boundary of development as small as possible, and by not developing into the surrounding plant communities.
2. The difference that this made was a resulting steeper slope, 25-33%, depending on the area, but kept the development footprint smaller and didn't require the removal of any of the vegetation.

DESCRIBE 1) HOW YOUR GRADING PLAN OPTIMIZES ACCESSIBILITY, SAFETY, AND WAY-FINDING, 2) WHAT DIFFERENCE DOES IT MAKE, AND 3) CAN THESE DIFFERENCES BE DESCRIBED IN TERMS OF QUALITATIVE OR QUANTITATIVE METRICS?:

1. The plan optimizes accessibility and wayfinding by keeping all pathway slopes under 5%, also by placing the ADA parking closest to the building entrance. Additionally, there is a 45' line of sight radius for optimal vision and safety around the transition zone.
2. The difference is that the paths were marginally longer due to the smaller slope, and the transition zone was slightly wider to accommodate the clear sight lines.
3. The quantitative measurements that would correspond to the differences would be in slope and distance, with the less accessible pathways being steeper but shorter, and the transition zone with a smaller radius of sight would cut less into the adjacent earth.

DESCRIBE 1) HOW YOUR GRADING PLAN MANAGES PRECIPITATION ON SITE, 2) WHAT DIFFERENCE DOES IT MAKE, AND 3) HOW DO YOU KNOW?:

1. The grading plan manages precipitation on-site by being equipped, through appropriately sized basins, to handle a rain event in the 95th percentile. Based on calculations of impervious surface on-site, and the amount of water that can be expected as runoff in a 95th percentile rain event, the basins would need to be able handle 1760 cubic feet of rain water. The basins can handle almost 1900 cubic feet of water. This ensures that the site can easily manage any storm event.
2. The difference that this makes is that rather than simply disregarding the disturbance that runoff and rainwater can have on the adjacent areas, the proposed grading takes this into account by going above and beyond to deal with high intensity rain events.
3. Based on water quality volume calculations, as well as calculations of area and depth, the basins are the appropriate size for high intensity storms.

HOW DID CONSIDERING LANDSCAPE PERFORMANCE AFFECT YOUR GRADING DESIGN DECISIONS?:

Having to consider landscape performance required that the project have a certain amount of accountability. By having stricter metrics regarding building footprint, slopes, water quality volume, accessibility, and others, it made the grading take on a more inviting and also sustainable approach, as opposed to the alternative of doing the easiest option available.

REVISIONS

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 DRAWN BY: DZ
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SHEET CONTENTS
 GRADING
 DIAGRAMS

LG801