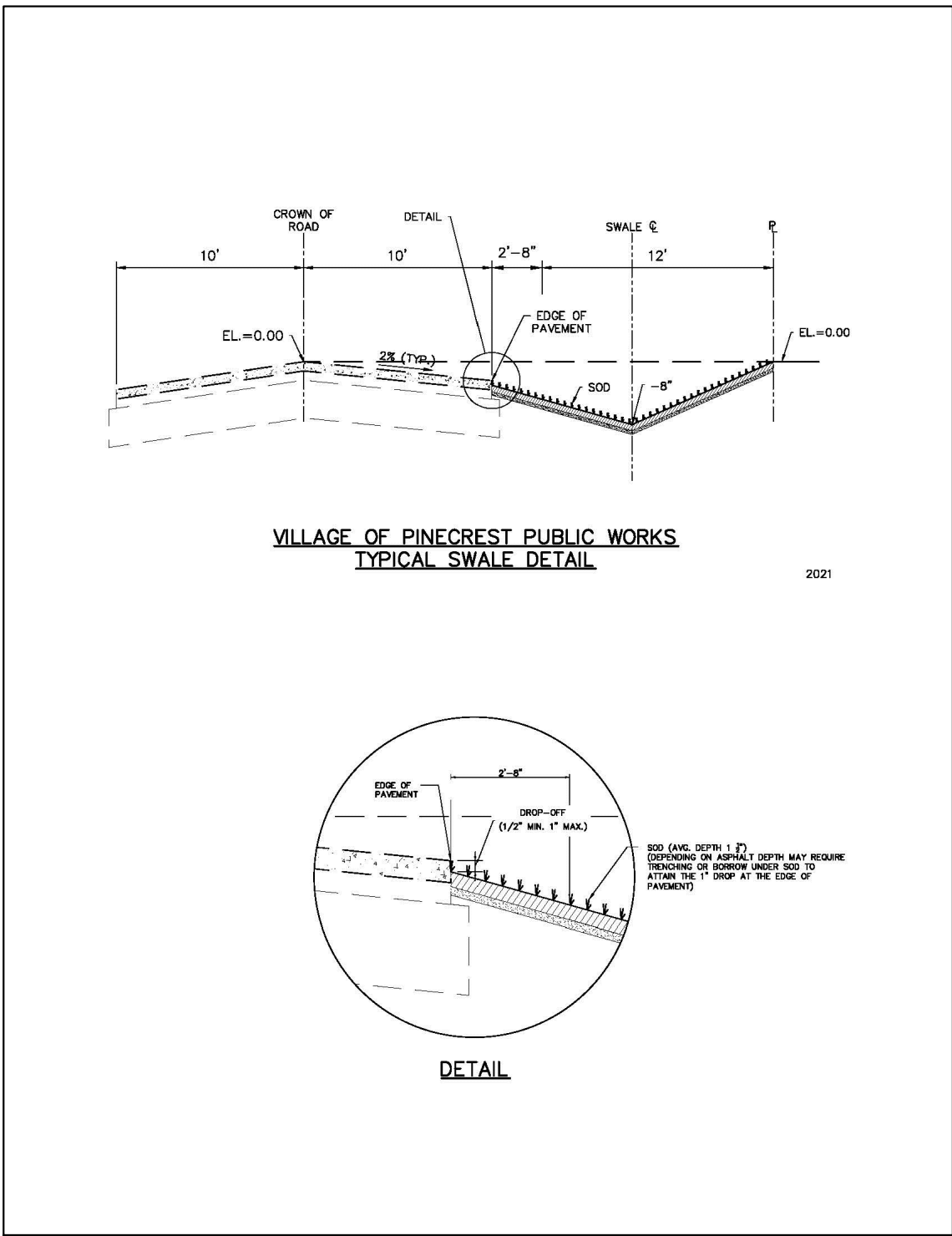




Date: 4/10/2023
Document: 7725 SW 114TH ST., VILLAGE OF PINECREST, FL
Project Manager: CMB
Project Name: 7725 SW 114TH ST., VILLAGE OF PINECREST, FL

PRE-DEVELOPMENT CONDITION			
Summary			
	Definitions	Project Information	Comments
I	Rainfall produced during 10 years, 24 hour storm event (Per Figure C-3 SFWMD) - (in)	8.75	(with 1.25 Safety Factor)
S	Soil storage capacity (in)		
A	Site total area (sf)	39,493	
Per _v	Pervious area - grass, gravel... - (sf)		
Imp	Impervious area - roof, pavement, walkways, decks,		
R	Run off depth (in)		
V	Volume of runoff (cubic feet)		
WE	Compacted water storage (in)		
AEPA	Average elevation of Pervious Areas (ft)	11.50	
HGWE	High ground water elevation (ft)	4.50	Also check the geotechnical engineer's report
DW	Distance between Avg Elevation of Pervious Areas and the High Ground Water Elevation	7.00	AEPA - HGWE = Depth to Water table - DW

Detailed Project Information:			
Impervious areas	Description	Pervious areas	Description
Imp_1	30,977 bldg, driveway & decks	Per_1	8,516 grass
Imp_2		Per_2	pool
Tot_Imp =	30977	Tot_Per =	8516

Soil Storage Capacity Calculations (S)			
Depth to Water Table	WE Compacted Water Storage (in)		
1	0.45	S= Pervious Area * WE Site Total Area	
2	1.88		
3	4.95		
4	8.18	S= 8516	8.18
		39493	
WE = 8.18		S= 1.76	

Runoff Depth Calculation (R)

$$R = \frac{(L - 0.2 * S)^{0.48}}{(1 + 0.8 * S)}$$

R= 6.94 in

Pre-Development Total Runoff Volume (V)

$$V = A * R / 12$$

PRE-DEV. Vol.= 22,839 Cubic feet

Date: 4/11/2023
Document: 7725 SW 114TH ST.
Project Manager: CMB
Project Name: 7725 SW 114TH ST.

POST DEVELOPMENT CONDITION			
Summary			
	Definitions	Project Information	Comments
I	Rainfall produced during 10 years, 24 hour storm event (Per Figure C-3 SFWMD) - (in)	8.75	(with 1.25 Safety Factor)
S	Soil storage capacity (in)		
A	Site total area (sf)	39,493	
Per _v	Pervious area - grass, gravel... - (sf)		
Imp	Impervious area - roof, pavement, walkways, decks,		
R	Run off depth (in)		
V	Volume of runoff (cubic feet)		
WE	Compacted water storage (in)		
AEPA	Average elevation of Pervious Areas (ft)	11.50	
HGWE	High ground water elevation (ft)	4.50	Also check the geotechnical engineer's report
DW	Distance between Avg Elevation of Pervious Areas and the High Ground Water Elevation	7.00	AEPA - HGWE = Depth to Water table - DW

Detailed Project Information:			
Impervious areas	Description	Pervious areas	Description
Imp_1	- bldg, driveway & decks	Per_1	21,789 grass
Imp_2	17704 85' x 4' exf. trench area outside court	Per_2	
Tot_Imp =	17704	Tot_Per =	21789

Soil Storage Capacity Calculations (S)			
Depth to Water Table	WE Compacted Water Storage (in)		
1	0.45	S= Pervious Area * WE Site Total Area	
2	1.88		
3	4.95		
4	8.18	S= 21789	8.18
		39493	
WE = 8.18		S= 4.51	

Runoff Depth Calculation (R)

$$R = \frac{(L - 0.2 * S)^{0.48}}{(1 + 0.8 * S)}$$

R= 4.98 in

Volume of Runoff (V)

NOTE: During the Post-Development condition, the volume of runoff generated during the 10-year, 24-hour storm (V) is shown below.

$$V = A * R / 12$$

V= 16,397 Cubic feet

Volume of retention provided					
Volume of swales					
Retention	A1 (Ft*2)	Ao (Ft*2)	A average (Ft)	h (ft)	Volumen (Ft*3)
N	3879	3507	3693.00	1.5	5540
S	5443	4190	4816.50	1.5	7225
E	2539	1917	2228.00	1.5	3342
W	2590	2172	2381.00	1.5	3572
	0	0	0.00	0	0
Total					19678

Volume of runoff > Volume of Retention

Conclusion			
Volume of runoff retained by the retention areas (cf) =		19,678	
Volume of runoff retained by the Exfiltration Trench (cf) =		13,283	
Total runoff volume retained (cf) =		16,397	

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Professional Engineer
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Project No.: 22_0012

**DRAINAGE
DETAILS & CALCULATION**

DATE : 03/23/2023
SCALE : AS SHOWN
DRAWN :
CHECK BY:
JOB NO. : 23_0012

SD-2

SHEET NO. :

NEW CONSTRUCTION AT PINECREST RESIDENCE:
BY HERITAGE HOME BUILDERS, LLC.
7725 SOUTHWEST 114 STREET
VILLAGE OF PINECREST, FL 33156

SEAL:

OWNER:
HERITAGE HOME BUILDERS, LLC
9350 SOUTH DIXIE HIGHWAY
SUITE 1500
MIAMI, FL 33156
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