

RECEIVED

OCT 12 2022

Vanderburgh County Engineering

Letter of Transmittal

Regarding: Final Drainage
Family Bible Church
15515 HUSKY WAY

To: John Stoll
Vanderburgh County Engineer
201 NW Fourth St, Old
Courthouse Suite 306
Evansville, IN 47708

Project No: 8964.1.003-B

Date: October 12, 2022

We are sending you by: Messenger

We are sending:

COPIES	DOC. DATE	DESCRIPTION
1		Drainage Letter
1		Civil Plans

*SEE REVISIONS RECEIVED 10/24/22
\$ 10/25/22 D.B. APPROVAL*

These are transmitted: For Approval Choose an item.

Remarks:

Please call if you have any questions.

Copies to: FILE

Signed:

Alejandro Mojica C.
Alejandro Mojica, PE

October 11, 2022

County Surveyor's Office
Attn: Linda Freeman
Civic Center Complex – Room 325
Evansville, IN 47708

**Re: Final Drainage Amendment
Family Bible Church - 15515 Husky Way
Morley Project No. 8964.1.003-B**

Dear Linda,

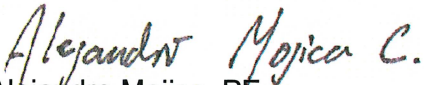
On behalf of Family Bible Church, we are requesting that this letter be sufficient for the amendment of the final drainage report submitted by Cash Waggner and Associates on August 21, 2015. The approved drainage report was prepared for the construction of the church and its associated infrastructure. The proposed improvements will consist of approximately 10,813 SF of building addition and approximately 2,424 SF of sidewalk and patio installation. The improvements will have similar drainage pattern as shown in the approved drainage report. The downspouts of the building will be routed to existing or proposed swales that will convey stormwater to the existing wet detention basin.

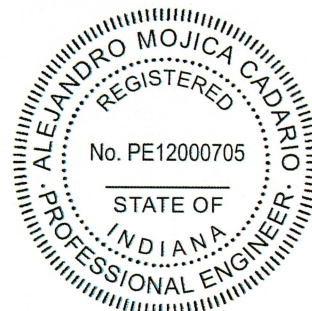
As survey of the existing detention basin indicates that the detention basin was built 1 foot lower than the design elevations. The outlet pipe was installed at 450.0, and the top of bank was built at 452.00. The difference between the outlet pipe and the top of bank are still the same. The storage capacity of the existing basin was calculated to be 19,383 CF at 451.00. The required storage per the approved drainage report is 16,395 CF. Therefore, the existing basin has enough capacity for the existing conditions.

In order to accommodate the building addition and new sidewalk, the C value of Subbasin #4 from the approved drainage report was updated to 0.287. In a similar way, the C value for the overall drainage area to the existing basin was updated to 0.358. These changes resulted in a minor increase in the required storage to 16,398 CF. Therefore, the existing basin has enough capacity to accommodate the proposed improvements.

If you should have any questions or need further information, please contact our office as soon as possible.

Sincerely,


Alejandro Mojica, PE,



cc : File Enclosed: Civil Plans, Calculations

8964 Drainage Letter.Docx



POST-DEVELOPED WEIGHTED RUNOFF COEFFICIENTS

Project: **Family Bible Church** County: **Vanderburgh**
 Project #: **8964** Date: **10/11/22**
 Engineer: **AMC**

SUB-BASINS (S.F.)

Surface	C	#1	#2	#3	#4
Structures & Pavement (<2%)	0.92				2,424
Structures & Pavement (2-5%)	0.94				
Structures & Pavement (5-10%)	0.96				
Structures & Pavement (>10%)	0.98				18,088
Gravel (10 yr storm)	0.50				
Gravel (25 yr storm)	0.60				
Gravel (50-100 yr storm)	0.65				
Lawn (<2%)	0.15				95,511
Lawn (2-5%)	0.25				
Lawn (5-10%)	0.40				
Lawn (>10%)	0.55				4,000
Woodland Flat (<2%)	0.12				
Woodland Flat (2-5%)	0.24				
Woodland Rolling (5-10%)	0.36				
Woodland Hilly (>10%)	0.48				
Pasture Flat (<2%)	0.12				
Pasture Flat (2-5%)	0.25				
Pasture Rolling (5-10%)	0.36				
Pasture Hilly (>10%)	0.48				
Cultivated Flat (<2%)	0.20				149,250
Cultivated Flat (2-5%)	0.35				54,858
Cultivated Rolling (5-10%)	0.50				
Cultivated Hilly (>10%)	0.65				
Bare Soil	0.72				
Water	1.00				10,390
Overall Drainage to Basin					

Reference Final Drainage
Report dated 8-21-15

Total SF	22,893	23,944	8,937	334,521	390,295
Total Acres	0.53	0.55	0.21	7.68	8.96
Weighted C	0.839	0.817	0.572	0.287	0.358

BASIN STORAGE VOLUME

Stage Storage: Existing Basin

Stage	Surface Area (S.F.)	Cum. Storage Vol. (C.F.)	Notes	
450.00	15,118		Pool	
450.50	17,732	8,213		
451.00	26,951	11,171	Storage	
451.50			EO	
452.00			TOB	
	Available Storage:	19,383	0.44	AC-FT
	Required Storage:	16,398	0.38	AC-FT
		85%	Basin Capacity	

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