

# DORAN

**ENGINEERING, PA**  
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**MEMO TO:** Northfield Planning Board/Zoning Board  
**FROM:** Matthew F. Doran, Board Engineer  
**DATE:** January 19, 2022 (Revised, March 28, 2022)  
**RE:** Webster Property Management  
Doran # 9700  
**LOCATION:** Northfield Avenue  
BLOCK: 106 LOT: 801  
**STATUS:** Major Preliminary & Final Site Plan (Revisions will be in parenthesis.)

**BASIS FOR REVIEW:** Plans Prepared by DeBlasio & Associates

Sheet 1 of 12, dated 12-14-21  
Sheet 2 of 12, dated 12-14-21  
Sheet 3 of 12, dated 12-14-21  
Sheet 4 of 12, dated 12-14-21  
Sheet 5 of 12, dated 12-14-21  
Sheet 6 of 12, dated 12-14-21  
Sheet 7 of 12, dated 12-14-21  
Sheet 8 of 12, dated 12-14-21  
Sheet 9 of 12, dated 12-14-21  
Sheet 10 of 12, dated 12-14-21  
Sheet 11 of 12, dated 12-14-21  
Sheet 12 of 12, dated 12-14-21

Property Survey and Topographic Survey  
Sheet 1 of 1, dated 3-31-21

Architectural Plans prepared by Fenwick Architects  
Sheet A-1, dated 12-1-21  
Sheet A-2, dated 12-1-21  
Sheet A-3, dated 12-1-21

Storm Water Management Plan prepared by DeBlasio & Assoc., dated 12-2021  
Storm Water Maintenance Manual prepared by DeBlasio & Assoc., dated 12-2021  
(Preliminary Site Plan- sketch, dated 3-22-22)

**USE:** Proposed 2-story Medical Office

**PROJECT DESCRIPTION:** The applicant has proposed a Minor Subdivision together with a Major Site Plan on one (1) of the subdivided lots. The existing Northfield Methodist Church will remain on part of the original lot to be subdivided.

A 5,116 SF, 2-story medical building with parking and other improvements are proposed for the second lot. Both properties will require “C” and “D” Variance relief. This particular review is for the proposed medical building.

(See attached review summary of the proposed changes as part of the revised plan.)

**ZONING REQUIREMENTS:** This property is located in the R-2 Zone, which allows primarily for Residential Uses. The following is a review of the bulk requirements for the proposed project:

ITEM	REQUIRED	PROPOSED LOT 4	CONFORMITY
LOT AREA	7,500 SF	32,300 SF	C
LOT WIDTH	70'	161.50'	C
<b>SETBACKS:</b>			
FRONT	25'	25'	C
SIDE	10'	31'	C
SIDE	15'	98.5'	C
REAR	25'	92'	C
HEIGHT	2 ½ STY/30'	2 STY/29'	C
<b>MIN.GROSS FLOOR AREA:</b>			
ONE STORY	1100 SF	-	-
TWO STORY	1250 SF	5,116 SF (4,100 SF) (2-STY)	C
BLDG COVERAGE	30%	7.9% (6.5%)	C
TOTAL COVERAGE	45%	49.1% (45%)	-
BUFFER	15'	0'	DNC

Note: The plan shows two (2) 10' side setback lines on the plan. One (1) side yard need to show 15'.

List of Variances associated with Lot 8.01

- 1) Use (“d”) Variance- A use not permitted in the zone.
- 2) “C” Variance- Total Coverage; 45% max is permitted, 49.1% is proposed. (45%) Conforms
- 3) No parking for a nonresidential use, shall be located closer than 50’ to a residential zone, 20’ is proposed. (50’ is now proposed) Conforms
- 4) Buffer- A 15’ planted buffer is required, no plantings are proposed.
- 5) Freestanding Sign- No sign is permitted in the R-2 zone, one (1) is proposed.

List of Waivers

- 1) Driveway width for Lot 8.01- 30’ to 46’ is permitted; 25’ is proposed.
- 2) Driveway width for Lot 8- 30’ to 46’ is permitted, 20’ is proposed.
- 3) Waiver from providing an Environmental Impact Statement.
- 4) Waiver from providing a loading area onsite.

## PLANNING REVIEW:

1. The applicant has requested a Use “d” Variance for a use not permitted in the R-2, together with “C” Variance relief for total coverage, where 45% maximum is permitted and 49.1% is proposed; and Buffer, where 50’ is required and 20’ is proposed.

(45% coverage is now proposed.)

2. The applicant will be required to obtain a d (1) Use Variance for the application.

**A use variance falls under the jurisdiction of the Zoning Board as permitted in NJS 40:55D-60.a and 40:55D-70.d, the Board may “in particular cases and for special reasons grant a variance to allow departure from regulations pursuant to Article 8 of this act to permit; (1) a use or principal structure in a district restricted against such use or principal structure, (2) an expansion of a non-conforming use, (3) deviation from a specification or standard pursuant to Section C. 40:55D-67 pertaining solely to a conditional use, (4) an increase in the permitted floor area ratio as defined in Section 3.1 of P.L. 1975, C.291 (5) and increase in the permitted density as defined in Section 3.1 of P.L. 1975, C.291 (40:55D-4) excepts as applied to the required lot area for lot or lots detached one or two dwelling unit buildings, which lot or lots are either an isolated undersized lot or lots resulting from a minor subdivision or (6) a principal structure which exceeds by 10 feet or 10% the maximum height permitted in the district for a principal structure.**

The applicant must also show “special reasons” for the Board to grant this variance. Special reasons have been defined as those reasons that carry out a purpose of zoning.

**The applicant needs to provide additional testimony as to how the d (1) variance can be granted in accordance with the criteria outlined above and within the M.L.U.L.**

The Municipal Land Use Law (N.J.S.A. 40:55d-2) enumerates the Purpose of Zoning as:

- a To encourage municipal action to guide the appropriate use or development of all lands in this State, in a manner which will promote the public health, safety, morals, and general welfare;
- b To secure safety from fire, flood, panic and other natural and man-make disasters;
- c To provide adequate light, air and open space;
- d To ensure that the development of individual municipalities does not conflict with the development and general welfare of neighboring municipalities, the county and the State as a whole;

- e To promote the establishment of appropriate population densities and concentrations that will contribute to the well-being of persons, neighborhoods, communities and regions and preservation of the environment;
  - f To encourage the appropriate and efficient expenditure of public funds by the coordination or public development with land use policies;
  - g To provide sufficient space in appropriate locations for variety of agricultural, residential, recreational, commercial and industrial uses and open space, both public and private, according to their respective environmental requirements in order to meet the needs of all New Jersey citizens;
  - h To encourage the location and design of transportation routes which will promote the free flow of traffic while discouraging location of such facilities and routes which result in congestion or blight;
  - i To promote a desirable visual environment through creative development techniques and good civic design and arrangement;
  - j To promote the conservation of historic sites and districts, open space, energy resources and valuable natural resources in the State and to prevent urban sprawl and degradation of the environment through improper use of land;
  - k To encourage planned unit developments which incorporate the best features of design and relate the type, design and layout of residential, commercial, industrial and recreational development to the particular site;
  - l To encourage senior citizen community housing construction;
  - m To encourage coordination of the various public and private procedures and activities shaping land development with a view of lessening the cost of such development and to the more efficient use of land;
  - n To promote utilization of renewable energy resources;
  - o To promote the maximum practicable recovery and recycling of recyclable materials from solid waste through the use of planning practices designed to incorporate the State Recycling Plan goals and to complement municipal recycling programs.
3. Since it is determined that “C” Variance relief is needed for the project, the applicant should supply testimony, as outlined in the following criteria, as appropriate.
- a. By reason of exceptional narrowness, shallowness, or shape of a specific piece of property, or (b) by reason of exceptional topographic conditions or physical features uniquely affecting a specific piece of property or (c) by reason of extraordinary and exceptional situation uniquely affecting a specific piece of property or the structures lawfully existing thereon, the strict application of the zoning regulations would result in the peculiar and exceptional practical difficulties to or exceptional and undue hardship upon the development of the property. This is known as the C (1) Criteria.

- b. Where the purposes of the Municipal Land Use Law would be advanced by a deviation from the zoning ordinance requirements and the benefits of the deviation would substantially outweigh any detriment. This is known as the C (2) Variance.

It should be noted:

No variance may be granted without showing that such variance can be granted without substantial detriment to the public good and will not substantially impair the intent and the purpose of the zone plan and zoning ordinance.

This is also known as Negative Criteria.

### **ENGINEERING REVIEW:**

1. The site plan will be reviewed with the assumption that the Minor Subdivision Approval, together with a Use “d” Variance for the United Methodist Church, was approved, or approved as part of this application.
2. All site plan improvements will be review for compliance to the requirements of Article VIII, “Design Standards and Improvement Specification,” and the “Residential Site Improvement Standards.”
3. The applicant has provided architectural building views and floor plans, as required by Section 215-83.
4. The ordinance requires a 15’ buffer along the rear property line. The plan shows a 20’ setback from the parking area, however, the area is a proposed drainage swale, with no plantings. A variance is required.

The applicant has proposed a 6’high vinyl privacy fence along the rear and Northwest side property line.

5. The applicant has supplied a clearing and grading plan with the site plan.

A permit from the Cape Atlantic Soil Conservation District is required prior to any clearing at the site.

6. The applicant has proposed curbing and sidewalk along the front of the property. The appropriate layouts and details have been provided on the plan, as required.
7. The plan has proposed concrete aprons, both on the new medical site and the exiting church driveway. This is acceptable. A detail of the proposed apron, showing a 6” concrete apron with a 6” x 6” – 10/10 wire mesh, should be provided on the plan.

8. The applicant has proposed one (1) 2-way driveway on the new medical site and one (1) 2-way driveway on the church site.

Following is a review of the driveways, as per Section 25-92 of the ordinance:

A) Medical Site

- 1) Curb cut- 30' to 50' is permitted; 47' is proposed.
- 2) Driveway width- 30' to 46' is permitted; 25' is proposed.  
A design wavier is required.

B) Church Site

- 1) Curb cut- 30' to 50' is permitted; 32' is proposed.
- 2) Driveway width- 30' to 46' is permitted; 20' is proposed.  
A design waiver is required.

9. The applicant has shown the required sight easement on the plan. The easement needs to be filed, prior to final signing of the plan.

I would suggest that the easement be shown on the minor subdivision plan, so it shows on a file document.

10. Section 215-94 allows the Board to require an Environmental Impact Statement, if the Board determines the site is environmentally sensitive. This should be addressed with the Board.
11. The applicant has proposed a 6' high white vinyl fence across the rear of the property and on the Northwest property line, to the front setback. This is acceptable.
12. The plan should be submitted to the Fire Chief for review, prior to Final Approval.
13. The applicant has submitted a Landscaping Plan as part of the application. Following are comments regarding the plan:
  - a) A note should be added to the plan view as to what type of ground cover for the non-shrub areas. There are general notes on the plan, however, it would be clearer if they were added to the plan view.
  - b) The detail for the grass area seeding should be revised. The topsoil and subgrade should be revised to comply with the requirements of the Cape Atlantic Soil Conservation guidelines. The requirements do not permit the compacting of the sub-grade.

- c) The plan calls for an automatic irrigation for all grass and planting areas. This is acceptable.
  - d) Section 215-100 (2) (b) The perimeter and yards of the building should be landscaped. Additional plantings should be added along the building perimeter, as required.
  - e) The plan shows two (2) 2” caliper shade trees, this ordinance requires ten (10) trees. The plan should be revised to show the trees.
  - f) Section 215-100 C (4) states that one (1) shade or ornamental plant should be planted for each ten (10) parking spaces; therefore four (4) trees are required. The plan should be revised to show the trees.
  - g) Street trees at 30’ on center are required along the front of the property, behind the sidewalk and out of the sight triangle.
14. The applicant has proposed eight (8) freestanding light poles and luminaires around the site.

The poles are proposed to be 24.4’ in height. A note has been shown on the plan that shields are proposed for each light that will shield the neighbors from additional light.

The plan shows the appropriate lighting levels on the site, as required by the ordinance.

15. Section 215-104 requires a permanent loading zone for buildings with a gross area over 5,000 SF. The applicant should show the location of a loading zone, or an appropriate design waiver should be requested.

16. The applicant has provided a parking layout plan with the application. Following is a review of the items outlined in Section 215-105 of the ordinance:

- B. (4)- Parking areas for non-residential uses shall be located within 50’ of any residential zone; 20’ is proposed. A variance is required.
- C. Parking stalls are required to be 9’ x 18’ in size. The plan complies.
- D. The applicant has proposed a paving cross section of 6” DGA, 2” asphalt base (19 M64) and 2” asphalt surface course (9.5 M64) which complies.
- E. The applicant has proposed concrete curbing around the parking area as required. Sidewalks have also been proposed between the parking area and the building, and are raised 6” above the parking by the use of the concrete curbing. This is acceptable.

N. The applicant has proposed two (2) ADA complaint parking spaces, which complies to the ordinance requirements. A final review of the ADA spaces is subject to review by the Building Department at the time of building permit request.

Q. Following is a review of the required number of parking spaces, as per Section 215-105 Q of the ordinance.

(13) Dental Medical offices: One (1) parking space for each 150 SF of gross floor area is required: therefore  $5,116 \text{ SF} / 150 = 34.12$  spaces are required, 36 spaces are proposed. The number of spaces comply to the ordinance.

17. A note should be added to the plan that all exterior mechanicals shall be screened from public view.

18. Application should be made to the City of Northfield Sewer Department for approval of a sewer tie-in. A letter of approval should be supplied for the file.

19. The applicant has proposed one (1) freestanding sign along Northfield Avenue. Following is a description of the sign:

- a) Setback- 12' is proposed.
- b) Size- 6.9' heigh, 7.75' wide = 53.48 SF

Please note that the details are not clear on the actual size of the sign face. The above dimensions were taken from the sign detail. The applicant should discuss with the board the actual sign face.

The applicant is also proposing to place the address on the sign. Since the project is not permitted in the zone.

A variance is required for the entire sign since commercial uses are not permitted in the R-2 Zone.

The applicant should discuss how the sign is to be lighted.

20. The applicant has proposed a 10' x 10' trash/recycling storage area, at the rear of the parking area. The area will be enclosed by a 6' white vinyl fence.

The plan should be revised to show a 5' wide landscaped area along the sides and rear of the trash area.

A note should also be added that the gate for the trash area will be solid.

21. The design engineer has provided a drainage plan and drain calculations for review.



Following is a review of the site drainage. The site is considered a major development. The drainage design will be reviewed using the New Jersey Best Practices Manual (BMP) as amended in March 2021 (Green Infrastructure).

A) Following is a list of items to be revised in order determine compliance with the BMP Manual:

- 1) Calculation method
- 2) Developing the proper CM.
- 3) Determining the proper Time of Concentration.
- 4) Verify the need for unconnected impervious surfaces.
- 5) Proper sizing of the swales and basins.

B) Soil Testing

- 1) Investigating the need for soil testing.
- 2) Soil testing requirements to be verified.

22. The design engineer should clarify the method utilized for the design. The Technical Release, "TR 55", (1980) has been superseded. The proposed identification of the method should be shown on the report. The acceptable methods would be the NEH, Part 630-Hydrology, or Delmarva Methodology.
23. Due to the size of the site, it will be reviewed as a small-scale infiltration basin.
24. When reviewing the drainage report, additional information should be supplied to show how the Curve Numbers (CN) were determined. Drainage flows from each type of surface (CN) should be provided. Weighted CN are not permitted.
25. The determination of the Time of Concentration (TC) for each route should be shown on the pre and post plan, as well as in the drainage report as a chart.

The type of flow, such as, sheet flow, shallow concentration flow and channel flow should be identified.

The minimum TC for any portion shall be six (6) minutes Time of Concentration, and should be determined to be in compliance with the BMP manual.

26. The applicant has proposed an inlet/perforated pipe system under the parking in order to add additional storm water storage onsite.

The plan shows details for the items as required.

- I would recommend that wider inlets be utilized, in order to accept the double pipe system. A two (2) pipe reducer would also provide for a better connection in order to utilize this type of system, pre-certified materials should be utilized.
27. The design engineer should supply charts and plan notions for showing how the CN and TC will be determined.
  28. When determining the pre and post hydrographs, the NOAA Region C rainfalls shall be utilized instead of the Type III Storm.
  29. The applicant has supplied soil borings at the site. The BMP requires that the first soil sample shall be a test pit, so that a clean cross section of the soil can be identified. I would recommend that the pit and subsequent borings be completed to a depth of 5' below to the bottom of the swale. The number of soil pits/borings shall be in compliance with the BMP manual.
  30. Test of the hydraulic conductivity shall be done by one (1) of the following tests:
    - A) Tube Permeameter Test
    - B) Percolation Test
    - C) Cased Borehole Infiltration Test
    - D) Single Ring Infiltration Test
  31. The design engineer has supplied pre and post construction plans, which identify the individual drainage areas. All the existing and proposed Time of Concentration, and flow paths shall be shown on bother pre and post plans.
  32. Items to be reviewed will be the BMP design details, hydraulic calculations, ground water recharge information, and ground water mounding analysis.
  33. Since this is a Major Subdivision with more than ¼ AC of new impervious areas are proposed, the following items will be reviewed for compliance:
    - A) Green Infrastructure
    - B) Storm Water Runoff Quality Control
    - C) Storm Water Runoff Quantity Control
    - D) Ground Water Recharge-This site is proposed to utilize all infiltration basins.
  34. Since the maximum contributory drainage area is less than 2.5 AC., small scale bioretention systems and infiltration basins are permitted.  
The plan should be clearly labeled with the location on design details for the above items.
  35. The project proposes a paved parking area, which will require some type of green infrastructure, prior to recharge of the water.

The design engineer shall address this in the report.

36. The site will require that minimum, one (1) soil pit, and four (4) soil borings be performed in the basin areas. Soil testing, as previously noted, needs to be performed.
37. All Time of Concentration and Curve Numbers shall be determined by the methods outlined in the BMP Manual. All information should be shown on the pre and post plans, as well as the drainage report.
38. A summary of the drainage review, the following items shall be provided on the plan and in the report:
  - A. Identify the TC for all sub areas for the pre and post construction conditions on the plan and in the report.
  - B. Provide the appropriate soil tests pits and borings, as required.
  - C. Provide the soil types onsite on the plan.
  - D. Provide the design calculations for each area of Curve Number on the site. CN for non-common coverage areas cannot be averaged.
  - E. All storm water runoff from parking areas, need some type of acceptable green infrastructure treatment.
  - F. The applicant has proposed total ground recharge (infiltration for drainage onsite) The design engineer shall supply the Ground Water Spread Sheet, as required. Maximum allowable water depth in the recharge swales two (2') foot deep for the design storm. It appears the swales as shown are slightly deeper.

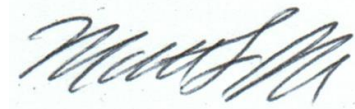
All swales shall be designed with a one (1') foot freeboard. The design of the recharge swale shall comply with the requirements of the BMP manual.
  - G. The applicant has supplied a ground water mounding calculation for the existing design. A revised calculations should be supplied if the design changes.
  - H. Since the systems is proposed as an infiltration basin, the water quality storm has been properly handled. All storm water from the parking areas need to flow thru a bioretention swale, prior to entering the ground recharge swale.
  - I. The applicant has supplied a Storm Water Maintenance Manual for review. The report shows the information for the site. Prior to Final Approval, the name,

address, title, and contact information for the person in charge of the drainage facilities, shall be provided in the manual.

- J. The drainage report should be modified to provide all the above information, prior to the final plan being signed.
  - K. The applicant has proposed an inlet and underground perforated pipe system in order to add storage volume to the swales. I would recommend that an acceptable green infrastructure system be utilized, in order for the system to comply to the BMP manual.
39. Any new openings in any street, will require a Road Opening Permit for the City of Northfield.
40. The applicant has provided a “STOP Sign” and painted “STOP Bar” at the driveway exit onto Northfield Avenue. The details provided are acceptable.
41. A note should be added to the plan that utilities are to be installed underground.
42. The following approvals/utility letter should be supplied prior to final signing of the plan:
- A) Cape Atlantic Soil Conservation District
  - B) City of Northfield
    - 1) Sewer Department
    - 2) Fire Chief
  - C) Letter of Availability of Service
    - 1) NJ American Water
    - 2) South Jersey Gas
    - 3) Atlantic City Electric
    - 4) Comcast (if applicable)
    - 5) Verizon (if applicable)
43. The applicant should provide and Engineer’s Estimate for all site related issues. An Inspection Escrow, equal to 5% of the Estimate, shall be posted with the City Clerk, prior to start of work. A Performance Guarantee for all offsite improvements and all perimeter fencing and buffers will be provided, prior to signing of the plan.

If you have any questions or require further information, please do not hesitate to contact me.

Very truly yours,



Matthew F. Doran, P.E., P.P., P.L.S, C.M.E.  
Engineer