



BALZER
& ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

80 College Street
Suite H
Christiansburg, VA,
24073
540.381.4290
www.balzer.cc

Roanoke
Richmond
New River Valley
Shenandoah Valley

May 2, 2023

Kinsey O'Shea
Town Planner
Planning and Building Department
300 South Main Street
Blacksburg, VA 24060

RE: SUB 23-0001 – Northside Park Revised Section XII - Major Subdivision Preliminary Plat Review for 51 lots on 36.00 acres at 2150 Progress Street NW (Tax Map Numbers 166-10A; 166-10B; 166-17A; 166-17B; 166-A 4C) by Jeanne Stosser of CC&B Development, LLC (property owner)
Balzer Job #24220049.00

Dear Kinsey,

The following letter hereby addresses the comments provided to our office dated April 14, 2023 for the above project. Please find our responses to your comments below in **bold**.

ARTICLE IV APPROVAL OF PLATS

DIVISION 2 PRELIMINARY PLATS

§ 4-200(c) 24: The plat provides a Progress Street typical street section detail on Sheet 12 showing sidewalks and bike lanes. The applicant should revise the bike lane width to 5'.

Response: Progress Street has been widened to accommodate for the increased bike lane width of 5'. Bike lane callouts have also been updated on Sheet 15. Please see updated Progress Street Cross section detail on Sheet 12. It is noted that the wider street section still fell within the bounds of the impervious area assumptions for the right-of-way, therefore no changes to the stormwater concept plan were warranted from this.

§ 4-200(c) 29: The plat does contain topographical information, but an enlarged Phase II grading plan is needed to confirm feasibility of construction for future Progress Street. This is further detailed in the transportation engineering memo.

Response: Additional information has been provided. See response in transportation memo section.

ARTICLE V REQUIREMENTS FOR DESIGN STANDARDS, PUBLIC IMPROVEMENTS, AND RESERVATION OF LAND FOR PUBLIC PURPOSES

DIVISION 2 LOT CHARACTERISTICS

§§ 5-200-204: *Lots shall have appropriate building sites; shall comply with minimum lot size; shall be served by a public street; additional considerations for common area and residual land.*

A lot table has been provided on Sheet 1 and indicates that proposed lots range in size from 0.23 acres (9,999 square feet) to 0.88 acres (38,396 square feet), with the exception of Lot 67, which is noted as 54,724 square feet. *Lot 67 appears to have been inconsistently identified as either a buildable lot or an open space lot; the lot table and plan sheets should be revised accordingly.* Per §5-201, when "lots are more than double the minimum required area for the zoning district, the



PC or agent may require that those lots be arranged so as to allow further subdivision and the opening of future streets where they would be necessary to serve potential lots...”

Seven lots (Lots 18-19, 21, 28, 30-32) are more than double the minimum lot size. However, these lots are along Craig Drive, which directly connects to Progress Street, and the lot layout is logical along the street. Lots utilizing the Open Space Overlay district standards are clearly identified.

Response: The incorrect labeling of the Open Space area was corrected. Lot 67 is now correctly labeled. These corrections are also reflected in the Lot Area Table on Sheet 1.

DIVISION 3 STREETS

§5-313 (a)—*Street grades may not exceed 10% nor be less than 0.5%.*

An enlargement of the Phase II Grading Plan is needed to ensure constructability for future Progress Street, including whether or not retaining walls may be needed and what grading will be required along the rear of proposed lots. ***Further review of the grading for future Progress Street construction is required in order for Staff to better determine and/or minimize/mitigate the potential impacts to the right-of-way and private property.***

Response: A larger scale of Progress Street Phase II grading has been provided on Sheet 22. Additionally, a cross section of grading in the area of concern has been provided. See Transportation Memo responses for additional information.

§5-318 (d)—*Driveways shall be no closer than fifty (50) feet to an intersection with a public street.* The plat shows hatched areas on lots 13, 22, and 63, where driveways cannot be constructed due to the minimum distance requirement. Several of the hatched areas do not show the appropriate 50 foot restricted area. ***The plat will have to be revised to show the full 50 foot restricted area.***

Response: The driveway zones show 50’ from end of radius to end of no driveway zone on all lots except for Lots 13 and 22, which show 75’ from end of radius of back of curb to end of no driveway zone per Blacksburg Zoning Ordinance, Sec. 5-318. After conversation with Town staff, it was determined that the minimum driveway distance from intersection is measured in the field from the back of curb. This point of measurement is now reflected on sheets 15 and 19.

DIVISION 7 SANITARY SEWER

§§ 5-700-701 *Sanitary sewer required if available; construction and design standards*

The applicant has shown the proposed layout of the public sewer infrastructure on the preliminary plat set. In review of the submitted information, the applicant has shown graphically on the preliminary plat the proposed connections to the existing sanitary sewers as required in §4-200(c), but there are deficiencies noted regarding grading, slope, and cover that may not comply with §5-701. ***The preliminary plat is not compliant with §4-200(c)(31) because it does not meet all the standards in Subdivision Ordinance Division 7 Sanitary Sewer. Specific reasons for disapproval are provided in the attached sanitary sewer services memo.***

Response: See sanitary memo responses below.

DIVISION 8 STORMWATER MANAGEMENT

§§ 5-800-806 *Stormwater management required; capacity standards for SWM facilities; use of watercourses and low-lying lands; maintenance of SWM facilities; drainage easements*

Section 4-200 states that “provisions for stormwater management” must be shown on the preliminary plat, but no further information regarding the level of detail required has been provided in the ordinance. In evaluating “provisions for stormwater management” it is necessary to understand the full impact of the design of the development on the surrounding drainage area and whether or not there are upstream or downstream impacts. The Town stormwater engineer has reviewed the plat and submitted documents and has provided a memo, which is attached, detailing the deficiencies in the stormwater provisions including locations for proposed stormwater management facilities, conflicts between stormwater conveyances and buffer yards, width of drainage easements, and locations of proposed ditches. ***The preliminary plat is not compliant with §4-200(c)(35) because it does not meet all the standards in Subdivision Ordinance Division 8 Stormwater Management. Specific reasons for disapproval are provided in the attached stormwater engineering memo.***

Response: See response in Stormwater Management Memo below.

STORMWATER MEMORANDUM

Stormwater Management Required §5-800 – The stormwater management proposed for this subdivision is designed to be met with the use of three traditional detention ponds, 4 bioretention facilities and a Manufactured Treatment Device. Water quality requirements for this subdivision is 25.84 lb/year of phosphorus treatment. The plan is proposing to meet this requirement by treating 75% of the requirement on-site with the installation of 5 bio-retention facilities and a manufactured treatment device (MTD). The remaining 25% of the water quality will be met through the purchase of 6.42 lbs of off-site nutrient credits. The Town **recommends** that this development provide more on-site stormwater quality treatment instead of using off-site methods for 25% of the treatment. Additional on-site treatment will provide lasting beneficial water quality value to the Toms Creek watershed, whereas the current layout may degrade our local water quality.

Response: Noted. The final percentage of on-site vs off-site treatment may be subject to change will be coordinated as part of the final site design.

Items noted on this concept plan that will need to be resolved at preliminary plat phase are the following:

- Bioretention #2 is placed in such a way that it will be obliterated when Progress Street is developed, as shown on Plat sheet 21. Please adjust location so that this water quality feature will remain through complete build-out.

Response: Bioretention #2 has been shifted away from the Progress Street right-of-way and the grading associated with the facility is now shown.

- No stormwater management facility is to be placed in the public ROW.

Response: Bioretention #2 has been shifted away from the Progress Street right-of-way.

- Show and label all proposed SWM facilities on the appropriate sheets of the preliminary plat. Facilities are shown and labeled on the stormwater concept plan that are not shown on the preliminary plat.

Response: The stormwater facilities are now labeled on the preliminary plat. See Sheets 15, 17, and 19.

Storm Drainage Design and Construction §5-805:

Sufficient information is not available at this time to determine adequacy of a complete drainage design. Some of this design will occur during the site plan development process while other items are expected to be available now at the preliminary plat phase.

Items noted on this concept plan that will need to be resolved at preliminary plat phase are the following:

- Drainage easements are either not shown along public pipes, or shown as 10-ft. A minimum of 15-ft public drainage easement shall be shown on all public storm drain structures and conveyances if they enter into private or HOA property. The stormwater facilities are the only exception as these facilities are privately maintained by the HOA.

Response: Drainage easements have been increased to 15'. Any public storm entering private or HOA property will have a 15' public drainage easement except for the stormwater facilities servicing the site. The public drainage easement is proposed to end at the end of the pipe carrying "public water" per direction from Staff, where the drainage easement will then become private where applicable. Many conveyances are aligned with property lines, making the easement align with lot public utility easements. These will be referenced as public utility and drainage easements on the preliminary plat.

- Drainage easements for proposed public ditches should also be considered. None are illustrated on the grading plan and while it is understood that some grading will change, the overall path of these drainage easements are unclear since none are shown at this point.

Response: Notes regarding additional public and private drainage easements have been added to the plat sheet 15-20.

- All potential ditches must stay out of the future Progress Street ROW.

Response: All portions of ditches previously located in the right-of-way have been adjusted to stay outside of the Progress Street right-of-way.

- Public drainage systems shall not cross private drainage easements (aka stormwater management easements).

Response: The central stormwater management area has been revised to show a public easement along the public line running through the area. This is shown and noted separately from the private stormwater management area. See sheets 15, 17, and 19.

- Stormwater conveyances shall not be placed in the required buffer yards. Specifically adjacent to lot 33, the drainage easement would take up the entire architectural buffer. This would prohibit the Town from maintaining this section of storm drainage.

Response: The storm conveyance adjacent to Lot 33 has been relocated so that it is not in the architectural buffer zone.

Items noted on this concept plan that will need to be resolved at final plat & site plan phase are the following:

- Notes or an agreement will need to be codified at time of final plat to clarify the shared temporary use of the Future Progress Street ROW. Beginning with the development of these parcel up until the future Progress Street Road is constructed, this ROW is planned for the public and private uses defined here: Town access to the public pump station and Private access to the stormwater management facilities between Claire Dr. and Craig Dr.
- Highly erodible soils exist on large areas of this development. All channels and stormwater conveyances within these areas must be designed accordingly.
- Access to all stormwater facilities must be addressed at site/engineering plan stage.

Response: Noted. These items will be addressed at the final plat and design plan phase.

TRANSPORTATION MEMORANDUM

Future Progress Street Construction

- Staff does have concerns about the proposed Phase I and Phase II site grading plans and the impact on the construction of future Progress Street where the plans show grading extending into the Progress Street right of way. The Progress Street profile that was proposed in the approved 2011 preliminary plat is provided with the resubmittal as well as a new proposed profile. While it appears there is some revision to the centerline profile elevations, it appears that the revision does not significantly impact the Town's ability to transition future Progress Street into the existing intersections at Carroll Drive/Progress Street and Walnut Drive/Progress Street. There may be some slight adjustments required to the final elevation of these intersections from the original preliminary design but the Town should be able to accommodate those adjustments with the final design of Progress Street. However, the proposed grading into the Progress Street right of way that is shown is of concern to Staff. It appears the Phase I grading plans will accomplish the grading for the proposed lots. The applicant should confirm that a proposed location for the houses was considered in developing the Phase I grading plan. The Phase I grading is shown extending into the Progress Street right of way and will create the slope from the lots down to future Progress Street. The Phase II

grading plan shows a possible grading plan to construct Progress Street. The construction of future Progress Street will most likely occur after the subdivision lots are sold. It appears that this plan creates a situation where the Town will have to perform earthwork along the bottom of the slopes on several lots and construct a new slope, or construct retaining walls, in order to construct Progress Street. In order for the Town to accomplish the necessary grading for future Progress Street construction, the applicant is proposing to dedicate a 20 foot wide grading easement across Lots 42 through 45 for the Phase II grading. While this grading easement may be necessary and it is best to dedicate this as a permanent easement now, it is the Town's preference to not have to construct retaining walls in the right of way nor perform additional grading into the private lots (Lots 26 and 27, Lots 42 through 45) in order to construct future Progress Street. Therefore, in order for Staff to fully evaluate the impacts of the grading, Staff requests that the applicant provide an enlargement of the Phase II grading plan between Progress Street Station 18+00 to Station 30+00 for further review. The proposed and existing contouring is difficult to separate at the scale of the drawings as submitted. Further review of the grading for future Progress Street construction is required in order for Staff to better determine and/or minimize/mitigate the potential impacts to the right of way and private property.

Response: Grading has been revised in this area to tie into final Progress Street grade at the property line of private lots to limit the amount of grading that will be necessary on private lots. Sheet 22 contains an exhibit of Lot 44 Cross Section Profile to show the relationship between this lot and Progress Street. Additionally, temporary construction easements have been proposed along the areas abutting Progress Street right-of-way in locations of concern as shown on Sheets 15, 17, and 19 as an added measure for future contingencies.

Street Landings

- Section 5-313 (2) of the Subdivision Ordinance states "Street intersections shall provide landings of not more than 5% grade for a distance of not less than 100 feet". The landing at the intersection of Claire Drive and Carroll Drive is shown as an 85 foot long landing at a 5% grade. The grade of the landing at 100 feet is approximately 6.5% grade. Staff requests the applicant revise the grading to meet the landing requirements.

Response: The Claire Drive and Carroll Drive Intersection has been revised to ensure that the landing distance meets the Town standard of 100' in length at a maximum of 5% slope. See Claire Drive (Stat. 119+00 to 130+75) Profile on Sheet 23 for the updated profile view.

SANITARY MEMORANDUM

- Sanitary sewer laterals and cleanouts are not shown for Lots 38 to 47, and Lot 63.

Response: Sanitary sewer laterals for Lots 38-47 and Lot 63 have been added. See Sheet 17 and Sheet 19.

- There is a substantial cut planned atop the existing sanitary sewer that is located to the rear of lots 49 and 50. The elevation of this sewer should be determined to verify that the proposed cut will not cause the cover over the sewer to be reduced to less than 3 feet (the minimum cover allowed by the Town of Blacksburg Sanitary Sewer Standards & Specifications)

Response: See Existing Sanitary Profile on Sheet 25 for profiled existing sanitary mains showing both existing and proposed topography. The grading was revised in this area to ensure minimum cover over existing sanitary sewer.

- The proposed slope at the rear of Lot 62 appears to be excessive and directs a substantial amount of surface flow to proposed lots 58 to 61.

Response: A stormwater conveyance channel is proposed along the rear of these lots and will be adequately sized to accommodate the stormwater runoff. The slope referenced is at a maximum of 2:1.

- The label for Lot 67 on Sheet 20 is incorrectly placed on the open space lands and the lot area shown is incorrect for actual Lot 67.

Response: The labeling for Lot 67 and the adjacent open space lot has been corrected.

- The Grading Plan for Claire Drive on Sheet 20 shows substantial grading over the existing sanitary sewer and forcemain between Lots 33 and 34. Verify that this grading will not cause the minimum or maximum cover over these utilities to be in violation of the Town of Blacksburg Sanitary Sewer Standards & Specifications.

Response: See Existing Sanitary Force Main Profile on Sheet 26 for profiled existing sanitary mains showing both existing and proposed topography.

- The Phase II Grading Plan on Sheet 21 appears to increase the cover over the existing sanitary sewer that crosses Progress Street at approximate Station 21+50 by 5 to 10 feet. Verify that the proposed grading will not cause the cover over the sewer to be exceed 12 feet (the maximum cover allowed by the Town of Blacksburg Sanitary Sewer Standards & Specifications).

Response: See Existing Sanitary Profile on Sheet 25 for profiled existing sanitary mains showing both existing and proposed topography. The maximum cover proposed over lines is 14.76'. Per the Town of Blacksburg Sanitary Sewer Standards & Specifications, the maximum cover is over lines 15'. No new or revised manholes are proposed at greater than 12' in height.

- The Phase II Grading Plan on Sheet 21 shows a substantial cut over the proposed sanitary sewers and manhole to the rear of Lots 26 and Lot 27. Verify that the amount of cut shown would not cause the cover over the sewer planned at this location to be reduced to less than 3 feet (the minimum cover allowed by the Town of Blacksburg Sanitary Sewer Standards & Specifications).



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Response: See proposed Sanitary Sewer F Profile on Sheet 28 for sanitary profiles in the referenced location.

If you have any additional questions or comments, please feel free to contact me.

Sincerely,
BALZER AND ASSOCIATES

James R. Taylor, P.E., M.ASCE
Associate