

TOWN OF CANANDAIGUA
CANANDAIGUA, NEW YORK 14424

August 8, 1989

Mr. David Matthews
MRB Group
2180 Browncroft Blvd.
Rochester, New York 11625

Re: ~~Fox Ridge Subdivision~~ Preliminary Approval

Dear Mr. Matthews:

The Town of Canandaigua Planning Board, at their meeting held on July 25, 1989, granted preliminary approval to the above subject project as follows:

Resolved that the Town of Canandaigua Planning Board give preliminary approval to the Fox Ridge Subdivision, being 146 lots on approximately 117.2 acres with 24 lots being clustered in Phase II, lots 18 - 41, under New York State Town Law 281 on the North side of Butler Road subject to the following conditions:

Final Plans must have satisfactory answers to the preliminary plan comments made by the reviewing engineer, Larsen Engineers, in their letter dated June 26, 1989, and the Planning Board's comments made at the preliminary public hearing.

Final plans include complete details for the installation of public sewer.

Final plans include complete details for installation of public water.

Final plans include complete details for installation of erosion control measures.

Final plans include a timing schedule for installation of passing lanes.

The developer and his engineer, in conjunction with the reviewing engineer, and the Town Board, establish an amount for a Letter of Credit for all public utilities for the final plans.

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With regard to the open space areas, a Homeowners Association be created to cover the following provisions:

- A. Membership is mandatory for each property owner within the entire development.
- B. All restrictions on the ownership, use and maintenance must be permanent.
- C. The association is responsible for liability insurance, local taxes and maintenance of conserved areas including any active recreational areas and related facilities.
- D. Each property owner must pay his proportionate share of the association's costs and the assessment levied by the association can become a lien on his property if not paid.
- E. The association must be able to adjust the assessment to meet changing needs.

That it is understood by the Developer that if the final plans are acceptable to this Board, that they must also be accepted by all other interested agencies including:

N.Y.S. Dept. of Health
N.Y.S. Dept. of Env. Cons. (DEC)
Canandaigua Lake Sewer Agency
Canandaigua Town Highway Department
Canandaigua Town Water Department
Canandaigua Town Engineers/Town Attorney

That the Planning Board's Stamp of Approval on the final plans will be contingent upon receipt of the letters of approval from these agencies and the Town Board's acceptance of the Letter of Credit.

Also, it is understood by the Developer that if any zoning variance is required this will have to be submitted to the Planning Board and/or Z.B.A. for the approval of the variances, based on the type of variance required.

Should you have any questions with regard to the above, please don't hesitate to call.

Very truly yours,

CANANDAIGUA TOWN
PLANNING BOARD



Colleen J. White
Planning Board Secretary

/cjlw

XC: Planning Board Members



LARSEN

ENGINEERS
ARCHITECTS
PLANNERS
SURVEYORS

June 26, 1989

02-2-3700-451

Mr. Glenn Brockett, Chairman
and Planning Board Members
Town of Canandaigua
5440 Routes 5 & 20 West
Canandaigua, NY 14424

RE: FOX RIDGE SUBDIVISION

Dear Planning Board Members:

The following are our preliminary review comments. We have met with the developer's engineer and will work with him to resolve these concerns.

Zoning Compliance

Lot sizes not checked for compliance; Note that Dwg. Sheet #1 requests a considerable number of variances, apparently, and is proposing a Sec. 281 usage accordingly, in the Bramblewood Trail area, Lots 18-41. We would request the Developer submit the calculations he used in establishing his Sec. 281 proposal, to justify to the Planning Board and its Attorney that the 'trade-off' satisfies the requirements of the law. (For example, some Towns do not permit the developer to include detention pond areas in the calculation).

Roads

1. The Town Code indicates that cul-de-sacs shall not exceed 500 feet in length. If this measurement is to the far end of the turn around then Fox Hollow is 600 feet in length and Bramblewood Trail is 760 feet.
2. Several 10% grades are shown on the plans: on Ridge Run near Fox Hollow, and on the north and south legs of Crescent View. We believe this violates the Town Subdivision Regulations, and therefore, if the Board consents to these, it should be so noted in the minutes.
3. Due to the grades of the roads we would recommend the use of modified gutter inlets for road grades greater than 6%.
4. The centerline of Sunrise Circle should be located on the road profile for Bramblewood Trail.

5. Will pavement underdrains should be provided for the proposed roads at low points where water may collect under the pavement.
6. The road details on the preliminary plan do not indicate the specific materials and material thickness. These should be indicated.
7. The developer's engineer should provide sight distance calculations for the 8%/8% crest at Sta. 5+0 on Ridge Run (easterly portion) to insure compliance with the Town Standard and AASHTO (Pg. 726/84 edition).
8. Since there is no inner gutter at the Summit Circle Cul-De-Sac, we recommend that the inner lawn area be "dished" (concave) to keep runoff and snow-melt from entering the pavement area. A catch basin and appropriate piping should be provided.
9. Two points of access are proposed: Hunter's Run exiting on to Butler Road, and Ridge Run exiting on to Middle Cheshire Road. In addition, provision has been made for future extension of Ridge Run into the property (yet undeveloped) to the north. The question is raised as to the desirability of providing for additional access to the north property via an opening in the vicinity of lot 107. Otherwise, traffic from the north property (if it develops by the extension of Ridge Run) will be forced to make a long loop before heading westerly to Middle Cheshire Road. It seems that better circulation (future) is desirable from the Town's point of view.
10. Field inspection indicates, preliminarily, that sight distance at the two points of access is satisfactory with the caveat that traffic emerging from the development on to Middle Cheshire Road has somewhat limited sight distance to the south, the adequacy of which is dependent upon legal speed limit and customary usage speed.
11. The continually increasing traffic load on Middle Cheshire Road causes us to recommend that a passing lane be built on Middle Cheshire Road at the Ridge Run entrance. This will involve discussions with the Town Planning Board and the County Highway Superintendent. However, it should be built at the time this entrance is opened, and therefore there is

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adequate planning time.

Likewise consideration should be given by the Planning Board and the Highway Superintendent as to the desirability of a passing lane at the Butler Road entrance. It is important to recognize the location of the Hunter's Run entrance in relation to the hills on Butler Road and the fact that there will be a continually increasing traffic load as this development continues on up the hill to the north and west. Icy conditions, fairly steep grades, increased truck traffic, etc. all of these cause us to urge consideration of a passing (safety) lane at this location.

Erosion

General: (1) It is important to note that specifications for an undertaking can be on (a) descriptive basis (specifying types of material and method of construction) or (b) performance basis, stipulating results, but leaving methods and materials up to the discretion of the developer and/or contractor. However, as a practical matter, specifications for an undertaking are usually a "mix" of the two methods.

In the case of an Erosion Control Plan (ECP) possibly for the first time in New York State, it appears to be to the benefit of all parties to assemble a Quality Assurance Criteria (i.e. "specification") consisting of minimum structural standards (i.e., materials and workmanship) as well as performance standards (i.e. water quality and quantity [rate]) leaving the development site.

The measure of structural standards consists of the proper usage and adaptation of the information in the Guidelines for Urban Erosion and Sediment control prepared by the Soil Conservation Service, and adopted by the Town of Canandaigua. Like any other guidelines, this document's usage depends upon sound engineering interpretation and judgement.

However, performance standards in this instance are critical in order to (1) protect the Lake, and (2) establish a precedent for the fast-moving pace of watershed development. Urban development can have two decided effects on Canandaigua Lake water quality, short term and long term:

Short term: Sediment transport and deposition in the Lake, caused by destruction of existing ground cover.

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Long term: After ground cover is restored, there will be a long term and on-going addition of nutrient from suburban lawn-care practices, the effect of which will be to accelerate eutrophication of Canandaigua Lake, especially along the shoreline.

This review addresses only the short term effect of sediment migration, since the addressing of the long-term effect is a far-ranging policy matter involving several towns who must take the initiative.

Accordingly, considering only sediment migration, it is recommended that some measure of performance be adopted by the Town, in order that the Developer and his Engineer can plan and design accordingly. The common measure of soil-fines in water, in civil engineering, is known as "turbidity", for which there is an acceptable known standard method of measurement. However, as a practical matter, the use of this method does not lend itself to this situation. Instead, it is recommended that the Town establish either visual standards of compliance or some similar method which is simple and practical in the field. This may require gravity settling (of gross soil particles) and mechanical straining (filtration).

The establishment of this standard will then establish the structural standards to be utilized by the developer and his engineer for compliance.

(2) The second general point to make, prior to a discussion of specifics, is that of relating the Phase II Erosion Control Plan to the Preliminary Plans for the entire Fox Ridge project. In this instance, the Perimeter Reconnaissance (on paper) establishes approximately 16 low points along the property perimeter where runoff currently leaves the development site. Seven of these appear in Phase II. It would appear appropriate in both the Preliminary Review of the entire project and the more detailed review of Phase II, to establish the short-term and long-term significance of water leaving the site at these points. In some cases, plans have been made to intercept this runoff, while in other instances the question has not been addressed in the submitted drawings.

Specifics: The following specific items are raised for discussion and response, relative to the Erosion Control Plan, in addition to the above.

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1. Lot 63-west side yard drain: not shown on Preliminary Utility Drawing. Which drawing is correct?
2. Lot 59-58 yard drainage: Yard inlet location different than on Preliminary Utility Plan which shows it at Lots 60-61. Which is correct?
3. Recommend the use of Jute Mesh or equivalent in type I-A grassed permanent waterways to provide stability until vegetation takes hold.
4. Straw Bale Dam, Lot 10: what is intended when the water and sediment reach the low point? How is silt collected and water disposed of?
5. Lots 13-14, north edge of woods: recommend an interceptor swale to prevent a migration of sediment and water on to existing residential lot, because of the short distance (50') for attenuation and settling out by the forested area.
6. A basic design question: The "Guidelines" (as well as Developer's plans) indicate straw bale dams recessed into a 4" deep trench with vertical sides. As a practical matter, it has to be questioned whether rigorous construction standards will be used in such an installation, and, therefore, whether there is a "better way." The point is raised whether a swale (with the displaced material windrowed on the downhill side) lined with jute mesh might not be more economical and more positive and trouble-free.
7. Lots 55-63, toe of backyard slope: strongly recommend that toe-of-slope swales . . .
 - be clearly defined as to distance from house and grade,
 - be at least 30 feet from basement wall,
 - be at least 24" deep, invert-to-grade at rear wall, and
 - be re-shaped after slope is stabilized, to account for silting-in during stabilizing period
8. Are side lot-line swales proposed? Not clear, but should be provided.
9. There appears to be a proposed outflow from Stormwater detention basin #4 which contains runoff which did not come to this swale. Is this acceptable to the Town? We believe

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that this was discussed and a determination made to send this flow through piping "on-site" by Detention Basin #3. This should be resolved.

10. Design question: The Erosion Control Plan shows proposed volume of storage for Sinks #1 and 2. Is the engineering basis for this determination on file or was it arbitrary? This should be resolved to avoid future questions.
11. Concerning Detention Basins/Sediment Sinks: There is insufficient data portrayed to check designer's volumetrics, or to permit a contractor to build the structures. For example:
 - Specific elevation details on sinks,
 - Auxiliary (emergency) spillway information,
 - Inverts of dry-weather flow piping/outlet
 - Sink dimensions, and
 - Pipe and riser sizing

It would be appropriate at this time to raise the question as to dam embankment soils and compaction data and specifications.

12. Administratively, are steps being taken to create the Special Improvement District (drainage) that will be responsible for (1) enforcing construction standards, (2) accepting the facility when satisfactorily completed, and (3) financing maintenance and upkeep of the detention facilities?
13. There are two perimeter low points (east of Lots 29 and 31, at which development-site runoff will leave the site. Both appear to be (based upon the plans) in close proximity to existing buildings. Is there a concern about this runoff?
14. While the Guidelines do not include it, we would recommend that the temporary-riser-tube-wrapped-in-geotextile be replaced by the rock-crib-wrapped-in-geotextile type of design. The surface area for water passage is many times greater and will therefore not "blind" as fast. The geotextile is also more easily replaced when it does blind. And lastly, construction is probably faster and cheaper.

Sanitary

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1. The sanitary sewer should be extended to the limits of the project at the end of Ridge Run to service the Muehe property in the event this property is developed.
2. Profiles, details, and the necessary general notes for the sanitary sewer should be shown on the plans.
3. In several locations we note the sanitary sewer located in the road pavement area. We would recommend the sewer be located outside the pavement area to minimize the possibility of trench settlement under the roadway.
4. The sanitary sewer is shown passing through detention pond No. 2. These should be located outside of the detention area.
5. We note the eastern sewer connecting to the existing sewer on Butler Road. Details of this connection should be provided on the plans.
6. Approval for the sanitary sewers should be obtained from the Canandaigua Lake County Sewer District.

Water

The water will be supplied from an existing 12" watermain on Middle-Cheshire Road and an existing 8" watermain on Butler Road, thereby creating a looped watermain system. Internal loops in the watermain system have been provided where needed.

1. Calculations should be provided to insure the adequacy of this system to meet ISO recommended fire flows throughout the site and also provide the necessary domestic flows.
2. The valve locations should be checked. We would recommend additional valves be installed to minimize the number of homes without water in the event of a watermain break. Example: If a watermain break occurred at lot 79, 16 homes would be without water during the repair.
3. We would recommend the local Fire Marshall review the plans and approve the location of the proposed fire hydrants.
4. The necessary notes and details should be provided on the plans.

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5. Approval for the layout should be obtained from James Bell, Water Superintendent.
6. It is noted that dead-end blowoffs are shown at certain points in the proposed system. We would recommend that hydrants are more appropriate. The intended use of an end-of-line flushing mechanism is to attain high scouring velocities in the system, and this simply doesn't occur with blow-offs.

Summit Circle, Fox Hollow, and the north end of Ridge Run (easterly) are the locations noted in re: blow-offs. (Fox Hollow, Sta 4 hydrant, for example, can simply be moved to the end of the street with no additional cost, and the saving of the cost of the blow-off).

7. It is noted, in reviewing the plans, that the Developer proposes a two-zone pressure system, with isolation by a gate valve. This raises two questions:
 - a. Will the pipe-strength class for the lower elevation area be designed to withstand pressures when the valve is opened to the higher-elevation system?
 - b. Will fire flows in low-elevation area be adequate during peak domestic flow periods, and without benefit of augmenting feed from the high-elevation area? If not, it might be appropriate to provide a pressure regulating valve at this location, instead of a gate valve. This should be discussed with whomever is responsible for the operation of the Water District.

Drainage

1. We recommend antiseep collars for the outfall pipes through the detention pond berms.
2. What provisions have been made for emergency spillways for the detention facilities?
3. All detention ponds and outfall courses should be contained within a permanent easement.
4. We recommend that a low flow concrete channel be provided for all detention facilities.

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5. The engineer should supply storm sewer design calculations. The peak discharges into the detention facilities from the storm sewer system should be the same as those computed in the storm routing analysis.
6. The grading plan should show the correct volumes used in the hydrologic analysis for the detention ponds.
7. We note in several locations the storm sewer being placed in the pavement area. we would recommend these pipes be located outside the pavement area.
8. Channel sizing calculations should be provided for review and proposed channel sections should be on the plan for all main channels (spillway discharge and interceptor swales).
9. We would recommend any drainage carrying swales with a grade of less than 1.0% be paved.
10. We would recommend a maintenance road be provided to and around the detention ponds. This should be of a width to support maintenance vehicles and be on easements.
11. A section through the ponds should be provided. This should include:
 - A. Riser detail with all orifice size and elevations shown
 - B. Anti-seep collars
 - C. Pipe sizes, grades, and elevations
 - D. Emergency spillway
 - E. Slopes of berms
 - F. Maintenance road
 - G. Trash rack and anti-vortex device
12. We note the developer's engineer has routed the 10 year storm through the detention pond. How will the detention pond handle the lesser storms? This should be addressed. (i.e. is there an attenuation of lesser storms?)

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13. We recommend that, during the Construction Phase, there be an assigned "Responsibility" for the operation and maintenance of erosion-and-storm-water-runoff facilities. This responsibility should carry with it the authority to undertake additional work to assure that water quality leaving the site conforms with the needs and requirements for maintaining Lake quality on the receiving end.

Second, there should be vested in the Supervisor of the Town the right to draw from a letter of credit such funds as are necessary to undertake remedial work immediately and without other approvals, if the person or corporation primarily responsibility has not taken appropriate action in a timely manner.

Traffic Analysis

The traffic analysis uses previous counts and assumptions from the West Lakeview Estates project (1986). The Fox Ridge project is improved over the previous plan because of the additional entrance/exit road. The critical intersection for both studies was determined to be the Butler Road and West Lake Road. We agree with this conclusion and the conservative traffic distribution and assumptions made for the intersection. The counts taken at the intersection were made in 1986 and there are no significant changes to warrant an update of the count.

The report states the peak hour vehicles were calculated from the fourth edition of the ITE Trip Generation Manual. Our check calculations show slightly higher numbers. These differences are not significant since the calculated reserve capacity is above the level of service criteria for "A".

Calculations for West Lakeview Estates and Fox Ridge show a Level of Service of A, indicating little to no delay for turning vehicles in or out of the project and at the critical intersection. Fox Ridge is a relatively large residential project which has its greatest effect during the peak hours.

The project will have no significant effect on traffic because of the light existing traffic in the vicinity. The Town should keep in mind the cumulative effects of additional development in the area.

General

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1. At this time, the assessment of Special Improvement Districts (existing) should be made, both as to their legal boundaries and their ability to supply the needs of the newly developed areas. The establishment of these new Districts or Extensions may require public hearings to be held by the Town Board, and involving the State Health Department and Environmental Conservation Department. These would include normally include:
 - Drainage District
 - Water District
 - Sewer District
2. We note a City of Canandaigua 30" transmission watermain passing through the western portion of the site in a north-south direction. The watermain is shown passing through five lots limiting the house location especially on lot 97.
3. A construction sequence should be provided on the plans.
4. The proposed homes should be shown on the plans with the finished pad elevation and lot grading shown.

If you have any questions, please contact our office.

Very truly yours,

Richard N. Passero, P.E.

RNP:JF:sn

cc: Planning Board Members
James Holden, Supervisor
Warren Hart, Town Planner
James Bill, Water and Highway Supt.
Ronald Brand, Stu Brown Assoc.
Dave Matthews, MRB Group