

June 6, 2022

Mr. Michael F. Gagan, Chair Planning Board c/o Ms. Jen Hager Planning and Economic Development Director Municipal Building 4 Uxbridge Road Sutton, Massachusetts 01590

Re: Form C Application for a Definitive Plan-Residential Subdivision Responses to Department and Residents Written Comments 0 Mumford Street & 5 Forest Street, Douglas, MA 01516 61 Duval Road, Sutton, MA 01590

Dear Mr. Gagan, and Members of the Board:

On Behalf of the Applicant, Flynn Build & Develop, we are submitting herewith responses to written comments from the Town Departments and residents of both communities. For your convenience, we've presented the public comments in *"italics"* and the LDC responses in a conventional font. Please find the following:

Sutton Planning Department Comments Memorandum dated March 9, 2022, prepared by: Jen Hager, Planning & *Economic Development Director:*

General Comments

- Please explain the difference between the two different sizes of edge of vegetation symbols. One is defined as "Edge of Woods" but the smaller/tighter symbol is not defined- Sheet 2 of 14.
 The "Edge of Woods" depicts the tree-line (canopy later) while the smaller tighter tree-line line type represents brush, shrubs (shrub layer).
- A substantial amount of drainage basins infrastructure is located within the Town of Sutton which will require annual maintenance with little revenue incoming from new homes within this development. Stormwater runoff tributary to these basins is for the land located in Sutton with the exception of approximately 1,200± s.f. of Road A located in the Town of Douglas. We understand from our discussions with the Town of Douglas that they will be maintaining the roadways and associated stormwater infrastructure for the entire development.
- Basin system #1001 is split by town line, please shift, or indicate the agreement of Douglas to maintain the entire basin system.
 We understand from our discussions with the Town of Douglas that they will be maintaining the roadways and associated stormwater infrastructure for the entire development.

- Has the Town line been located on the ground? Please verify this is an actual location, not estimated. The Town Line was established on the ground locating 3 town bounds which like the subdivision, the coordinates are on the Mass State Plane Coordinate System.
- Roadway and sidewalk finish course timing isn't apparent in the phasing schedule on sheet #C-221. Sheet C-221 has been revised to include a note stating that the finish course will be applied for the roads and sidewalks for Phases 1-4 the spring following the completion of Phase 4.
- Sheet# C-351 Please explain the "ornamental stone grass" note near the proposed sign location on Duval. The "ornamental stone grass" is actually two callouts: "ornamental stone" and "grass". The graphic representation of the "ornamental stone" is now shown on the sheet to provide clarification.
- Specify minimum size and type of public shade trees to be added.
 Pursuant to the Town of Sutton Subdivision Rules & Regulations: all proposed public shade trees shall be a minimum of 1 1/2" 2" caliper with a minimum height of ten (10) feet at time of planting. Public shade trees shall be of a mixed variety found in section j "planting strips" of the Sutton Subdivision Rules & Regulations or acceptable to the Sutton Planning Board. Pursuant to the town of Douglas: all public shade trees must be hardwoods, 1 1/2" 2" caliper, ten (10) twelve (12) feet in height at time of planting.

Subdivision Rules & Regulations

- 3.C.I.f. The applicant has utilized an alternate scale of |" =1,000' for the locus plan that is adequate to show required details. <u>Waiver request required</u>.
 The Planning Board granted a waiver to this requirement.
- 3.C.2.f. Numerous temporary bench marks (TBM) are apparent, but I cannot find the three required permanent benchmarks.
 The plans have been revised to include both permanent and temporary benchmarks.
- 3.C.2.h. Easement areas may not be included in the required lot area calculation. Please confirm Lot 1 has a minimum of 80,000 s.f. NOT including easement areas by showing the calculation on the lots in Sutton on sheet C-102. Also show lot width per the zoning bylaw definition, upland area, and regularity fa;;tor for every lot in Sutton.
 The lots in Sutton (1&28) have been revised to comply with the zoning bylaws dimensional requirements. As required, both lots now depict the lot widths, irregularity factor and upland area.
- 3.C.2.j. Please revised the covenant note inserting in "Sutton Planning Board" where the second blank is and use "recorded" eliminate "registered".
 All sheets have been revised accordingly to comply with this requirement.
- *3.C.2.m. Please indicate the location of the error of closure note.* The Error of Closure Note has been added to the Plan Set on Sheet C-101 as Note 1.
- 3.C.7.c.Please submit a completed draft Covenant (form attached).A completed Draft Covenant will be issued under separate cover.

- 4.A.2.k The roadway cross section is not like that in the appendix. Please increase sidewalk gravel base to 8". A <u>waiver must be requested</u> not only for pavement width (add this section number to the existing request) but also <u>for differing pavement course depths</u>. The sidewalk gravel base depth has been increased to 8" as shown on the Plans. The Planning Board granted a waiver to each of these requirements.
- 4.A.3. The width of roadway is proposed at 24' as opposed to 36' for a 60' ROW. Waiver requested.
 The Planning Board granted a waiver to this requirement.
- 4.B. Stormwater Management This will be reviewed in detail by the Town's consulting engineer. Acknowledged
- 4.D. Fire Protection As there has been discussion about the availability of an adequate supply of water for firefighting purposes and the current requirement for underground cisterns, the applicants will need to satisfy the Fire Department that individual sprinklers as proposed is an acceptable alternative. A <u>waiver request must be submitted for means differing from Requlations.</u>

A waiver request has been submitted under separate cover.

- 4.F. The square footage of easements cannot be counted toward required lot area. The plans have been revised to exclude easements from the lot areas.
- 4.F.3. Temporary construction easements are not shown. <u>Waiver request required</u>.The Planning Board granted a waiver to this requirement.
- 4.H. Removal Of trees over 12" shall be prohibited in the front setback of proposed lots unless otherwise allowed by the Board. Please specify if trees exist and how they will be maintained. The lots will be developed to minimize clearing in the front yard setbacks. As discussed with Boards, the design of the subdivision roads required waivers allowing the developer to reduce limits of clearing. The developer will limit lot clearing to the house site areas, septic system areas and lot access via a paved driveway.
- 4.1. Easement areas may not be included in the required lot area calculation. Please confirm Lot 1 has a minimum of 80,000 s.f. NOT including easement areas by showing the calculation on the lots in Sutton on sheet C-102. Also show lot width per the zoning bylaw definition, upland area, and regularity factor for every lot in Sutton.

The lots in Sutton (1&28) have been revised to comply with the zoning bylaws dimensional requirements. As required, both lots now depict the lot widths, irregularity factor and upland area.

- 5.B.See 4.D. aboveA waiver request has been submitted under separate cover.
- 5.F.3.The wearing surface shall be 1 ½"' base and 1 ½" finish course. Waiver request required.The Planning Board granted a waiver to this requirement.

5.G.1	Curbing shall be granite. Waiver requested for bituminous berm. The Planning Board granted a waiver to this requirement.
5.1.4.	Sidewalks require 8" of gravel base unless they are cement concrete. The sidewalk gravel base depth has been increased to 8" as shown on the Plans.
5.J.4.	Waiver requested for street trees only where remaining trees are not sufficient. The Planning Board granted a waiver to this requirement.
5.M.2.	An iron pipe or iron rod marker shall be installed at all lot corners and easements, please indicate this on the plans.

Proposed markers have been added to Lots 1 and 28 and shown on the plans

Traffic Study Comments:

Traffic will be reviewed by an independent peer reviewer.

2.3.2.1. Please explain: It's my understanding when a peaking factor is less than 1, then traffic volumes should be adjusted <u>upward</u> to meet 1, the average year-round volume. It makes sense that if you took counts in July, without school traffic and less commuting volume that effects the peak hours, that your counts would be less than the average count (.92) that is more heavily influenced by the other 9 months of the year.

The seasonal adjustment factor of 0.92 that was reported in the traffic impact and access study (TIAS) was based on MassDOT seasonal adjustment factors for roadways in Massachusetts with the same functional classification as Duval Road. The MassDOT factors are reported as the factor you apply directly to observed traffic volumes. So, in this case, a factor of 0.92 means that the observed volumes should be multiplied by 0.92 (or reduced by 8%). To present a conservative analysis, the traffic volumes used for analysis in the TIAS were not adjusted downward to an average condition. After the preparation of the TIAS, the Town's traffic peer review consultant, MDM Transportation Consultants, recommended that the observed traffic volumes be reduced by 8 percent to reflect average season conditions and then increased by 20 percent to account for COVID-related traffic volume fluctuations in the region. Tetra Tech provided this additional analysis in a memo dated April 28, 2022 which indicated that the study intersections operate well below capacity with minimal delay with or without the project. Furthermore, Tetra Tech is in the process of preparing a memo that documents peak season conditions which also indicates that the study intersections operate well below capacity with minimal delay with or without the project.

• The Board must decide if advance warning signage is an acceptable substitute for the 60-85' the sight distance for stopping and intersection visibility is short based on 85% percentile speeds.

Acknowledged

• It appears there is a typo on page 12 or 13. Is one of these tables supposed to be PM counts?

Table 7 on page 13 represents the PM peak hour condition. The title of the table should have read "Unsignalized Intersection Capacity Analysis Summary – Weekday PM Peak Hour."

Public Written Comments

- 1. I believe Joe, the hydrogeologist, mentioned this in his previous presentation to the Douglas board that this particular study he did was enough to determine that this development and construction would not affect the aquifer/water supply for surrounding residents or residents of said development. He mentioned that there was a more extensive and expensive study, but felt it wasn't necessary to perform that given his results. Should the boards deem it necessary whether a more extensive study be performed considering the safety and quality of the resident's well water could be significantly impacted? Joe's study indicated that the likelihood of the impact to abutting wells outside of the subdivision is very unlikely as there is 40-50 times the amount of water needed in the bedrock aquafer. I believe a more expansive study would have been needed if there was found to be an impact and the referenced study would
- 2. Following one of the board members comments, if a well IS impacted where water supply is affected (runs dry), who would be liable for correcting said issue?

be to see the extent of the found effect followed by recommended modifications.

If it is demonstrated that the project directly results in the depletion of a well, the developer has stated that he would work toward a solution with an abutter.

3. Joe also mentioned that the probability is low for the intersection of a seep or spring - what would/could happen if it did intersect one of these? Seeps and springs occurring would result in a field decision during construction to mitigate the temporary occurrence.

4. Also, the estimations for water usage are based on the current homes in this area? The 30 homes are projected to be 4 bedroom homes (larger than what is the average in the area). Wouldn't this impact the amount of estimated water usage (given there are more people per home)? The estimation was based off the proposed use taking into consideration the published historical data in the surrounding area. The range of usage for a proposed home is based on the number of occupants in the home as he indicated and not the number of bedrooms, consistent with the published data methodology.

5. The "extensive" study was performed in July of 2021. Considering about 100% of construction traffic will be on Duval, it would make sense to reevaluate the statistics given the campgrounds were not opened during that time. Traffic increases significantly during the summer months due to the campgrounds as well as Breezy Waterslides, and Lake Manchaug. FB&D is sensitive to the construction traffic concerns raised on the neighboring roads and will consider

measures to alleviate concerns to reduce impacts during peak times.*Given Duval Rd will take approximately all of the wear and tear in Phase I of their construction, did the town*

- B. Given Duval Ra will take approximately all of the wear and tear in Phase 1 of their construction, all the town perform a cost analysis of what projected costs we will incur to maintain and repair our roadways? Prior to construction, FB&D will document the physical conditions of the roads that will be subject to construction vehicle haul routes prior to and following construction to determine what, if any impacts, exist due to the project.
- 7. What is the ratio of tax money from the one home in Sutton to what it will cost the town? The developer's understanding, and as discussed with the Town of Douglas DPW, there will be little to no impact to the town of Sutton DPW as the Town of Douglas will be maintaining the roadways and infrastructure upon acceptance of the roads.

- 8. We have farm animals on our property who are not used to construction noise and the stress may impact them. Is there a sound barrier that could be put into place prior to the work beginning? The distance from the limits of the cleared area on this property to the proposed road is somewhere in the order of 360' which is vegetated, and we believe is favorable to your concern. Based on the timing of construction, the developer intends to begin construction of Phase I this summer with the closest point of the road falling within the time frames of that phase.
- 9. Where is the water going to go, my property in the past 3 years has become wet along with the property to the left and right of me. There has been some digging in Douglas to get water off the road way @ the corner of Fairfax way. The water then gets in to Stevens pond from this area. As was asked by a person in at the meeting Who is going to be the run off police?

As required by the state and local regulations, stormwater runoff peak rates and flow paths must be consistent with those of existing conditions. The stormwater management system was designed to comply with these requirements.

- 10. With 50% or more of the residential traffic coming from the west off Duval road and my house is # 59 I would like to see the first 75 feet from the town road line lined tightly at 5-6' distance with the fast growing and used for noise, shade and privacy the "THUJA Giant Green Pine trees installed as soon as the road construction is started. My reason is my bedrooms are on that side of my house for the last 50 years. As discussed with the landowner and Sutton Planning Board, Skyrocket Junipers are to be planted to provide screening as shown on the plans.
- Exiting A Road to Duval is going to be a bit tight on both directions.
 Granite curbing with 30' radii are proposed at the roadway entrance providing ample turning radii to make maneuvers to and from the site.
- 12. I have been here 50 years and my well has been great, What is in the future with 30 new wells and the areas water aquifer?Refer to response to Comment #1.
- 13. What is the future of my septic with 30 new systems? There will be no impact to any existing septic systems as a result of an introduction of the new septic systems.
- 14. Is there going to be a dust and noise regulations put on the processing of soils located on the present property as they indicated.

Typical of subdivisions, the Planning Board will include a condition in their Decision regarding dust control. The noise associated with the processing will be limited to the demands of processed material for construction, and not be a continual process during construction. The Board will also include a condition governing hours of operation.

15. I hope the time of work is 07:00 AM to 5:00 PM 5 days a week with no equipment early start time and or weekend work.
The Decendential class includes a condition according because of execution.

The Board will also include a condition governing hours of operation.

16. Duval road was just resurfaced in last 2021 and who is going to be responsible to maintain the road so it dose not get like it did in 2011 when it was last resurfaced after the 6 months of forestry removal work in Douglas, using Duval road to travel over and broke it all up. Will there be some type of bond for the roadway. Prior to construction, FB&D will document the physical conditions of the roads that will be subject to construction vehicle haul routes prior to and following construction to determine what, if any impacts, exist due to the project.

- 17. The proper new house count is 30 because # 61 Duval road house owner was part of this property ownership and has been there for many years, as a good neighbor. Acknowledged
- 18. Suttons Cost, what is the real cost to the town of Sutton to allow this S/D LLC to take access from #61 Duval Road, Will the property tax for the 1 new houses cover it? The developer's understanding, and as discussed with the Town of Douglas DPW, there will be little to no impact to the town of Sutton DPW as the Town of Douglas will be maintaining the roadways and infrastructure upon acceptance of the roads.
- 19. Area abutters, also have two zip codes 01590 for RFD & 01526 Post Box. Acknowledged
- 20. It appears that you've used TP40 as your design storms, which is very outdated. The dataset used to compile these storms is limited in scope and was published in the 1960s. Since then there have been several other studies of more broad historic data to create design storms that are more representative of our historic precipitation events including NOAA Atlas 14 and Cornell. Numerous consulting agencies are independently using these higher design standards, and several other communities have changed local regulations ahead of DEP to require them, including within Worcester's conservation regulations.

The stormwater management system was designed in accordance with the local and state requirements and thoroughly reviewed by the town's peer review consultant.

21. While this is not required by state regulation at this time, a stormwater task force at DEP has recommending NOAA Atlas 14+, which takes the NOAA numbers' 90th percentile of the upper confidence. See attached presentation of this information.

The stormwater management system was designed in accordance with the local and state requirements and thoroughly reviewed by the town's peer review consultant.

22. As an example, your report used 7.00" for the 100 year design storm. NOAA Atlas 14 recommends 8.00" looking only at historic data, and to accommodate reasonable future projects of increased precipitation from climate change within the timeline this infrastructure you're proposing is meant to last, NOAA 14+ would be 9.99" (11.1*.9). You can see the attached graph for those numbers. This is a significant difference. Can you clarify how the proposed project seeks to ensure future residents would not have flooding challenges, or that Duval Rd is not impacted?

The stormwater management system was designed in accordance with the local and state requirements and thoroughly reviewed by the town's peer review consultant.

23. One way to increase the resilience of your project and protect private and public property would be to upsize your stormwater systems to account for this larger amount of water. I'd also appreciate your verbal description of the systems – can you describe the stormwater BMPs proposed to ensure water quality is maintained in the Mumford River and its tributaries? It looked like not all SW would flow to a BMP? The stormwater management system was designed in accordance with the local and state requirements and thoroughly reviewed by the town's peer review consultant.

24. Along the same line, it appears that your stormwater report shows you're meeting standards to the MEP based on the BMPs being located in C soils. Can you clarify the location of these practices? Are there opportunities to put basins in more accommodating soil locations in order to prevent flooding in these areas that are likely going to be stressed into the future based on this increased precipitation and their location near wetlands?

The stormwater management system was designed in accordance with the local and state requirements and thoroughly reviewed by the town's peer review consultant.

25. Lastly, can you clarify whether the stormwater ditch described meets the definition of a wetland? Is it vegetated/are there wetland plants present? Specifically, if that area is providing specific benefits described by the WPA, please describe how the project will prevent impact to those benefits (reduction of flooding, habitat, etc.).

The ditch was reviewed as part of an ANRAD process, from which an ORAD was issued by the Commission. The stormwater management system was designed in accordance with the local and state requirements and thoroughly reviewed by the town's peer review consultant.

- 26. Please also clarify which crossings are proposed under this project (assuming box culvert to meet crossing standards?) and how that was incorporated into the SW report.The filing under consideration is for the subdivision roads and stormwater infrastructure. All crossings for the lots will comply with the Stream Crossing Standards.
- 27. When creating this SW report, can you please clarify how you classified the land use for the house lots? As in, is the entire area cleared of vegetation? Are you retaining natural vegetation between lots for privacy and reduction of SW flow (lower CN)? Or is it assumed that the lots are entirely turf (higher CN) and impervious? CN's are based on the impervious areas, lawn areas on a per lot basis and a weighted CN is established.
- 28. Can you clarify how steep slopes were avoided in order to reduce the potential flow of SW from the potentially cleared areas? I don't have the plans to see this. The plans are public record and available for review.
- 29. Please clarify what low impact development principles are being proposed. The DEF filing dated 2/15 says that they were incorporated (pg 4), but the SW report does not appear to reflect this. Nature-based solutions such as low-impact development help to provide multiple co-benefits to the community in addition to their SW functionality. This includes decreasing mosquito breeding habitat, increasing pollinator habitat, and enhancing beauty for residents.

Low Impact Principles were employed to the greatest extent practicable. These include setting aside over 55 acres of open space, reducing pavement widths and clearing of vegetation.

30. I understand 55 acres are proposed to be conserved in their natural state. Can you clarify if this area is contiguous and whether the area chosen for conservation includes the most valuable resources such as wetlands, steep slopes, and any other critical habitat or cultural values such as connection to existing trails? Also, can you clarify whether any improvements such as a trail system is proposed? This area is fortunate to have many public trails, including the Douglas State Forest, and it would may be a nice amenity to link to these systems for both your residents and the community at large.

The area selected for open space is contiguous and contains the referenced resources. A series of trails was initially presented to the town of Douglas, however, the developer was instructed not to include a trail system in the open space.

31. Regarding the Duval/Mumford intersection the Guardrail needs to be fixed and I believe beefed up to keep vehicles from ending up in Rochelle's yard. The guard rail is currently partially connected to it's supports and partially sitting on the ground.

This is an existing condition of which the Highway Department intends to make repairs.

32. Number 4 Mumford Road is continually pumping out water onto Mumford, This causes icy conditions in the winter.
This is an existing condition of which no runoff from the site is tributary.

This is an existing condition of which no runoff from the site is tributary.

33. This increased traffic on Duval is mostly headed to Exit 5 of RT146. To say that because it is a little farther away, they are not having a significant effect on the Intersection of Mumford/Main and Main/Whiting Rd is ludicrous. The Traffic Impact and Access Study was not reviewed by the Town's consultant.

The Traffic Impact and Access Study was peer reviewed by the Town's consultant.

- 34. At the intersection of Main St, Whitins Rd, Putnam Hill Rd, and Manchaug Rd. There needs to be work done to increase visibility when traveling from Rt 146. The Granite walls on the right side hide the traffic coming down Putnam Hill Rd. At the Minimum this intersection needs to become a 4 Way stop. Optimum the second section of granite wall on Putnam Hill should be lowered by about 4 or 5 feet. This an existing condition of which the town is aware.
- 35. The intersection of Mumford Rd and Main St needs to have its angle changed to be as close to 90 degrees as possible. Homeowner's fence (inside if the turn) blocks visibility of Northbound traffic. This is an existing condition for which FBD is performing and on the ground survey to generate an existing conditions base plan from which the town can determine how best they wish to address the issue.
- 36. Significant review needs to be done of the water runoff from properties on the West side of Mumford. The town needs to significantly improve the storm drains to catch it. We currently get significant ice on the Hill in the winter. Acknowledged
- 37. The town needs to look at the pavement on Torrey Road starting at the Douglas town line to about Carrier Lane as it is starting to disintegrate. Acknowledged
- 38. Please address the impact of headlights on the properties on Duval Road opposite the Road A entrance. The location of the Road A was determined based on optimizing the lines of sight to the east and west with its horizontal alignment to Duval Road nearly perpendicular to allow for the best possible sight lines. This location coupled with the opposite westerly driveway entrance to house # 66, does not allow for vegetative screening to effectively shield headlights from vehicles existing Road A, particularly performing a left turn (westerly) maneuver.

The frontage of both lots contain established screening consisting of mature deciduous trees and white pine saplings. Given the poor sunlight conditions at ground level due to the mature tree canopy, providing any evergreen plantings would result in a high mortality rate or stymied growth of the newly planted evergreens. To avoid this, it would be necessary to remove the mature trees, then plant evergreen trees. That said, the easterly driveway entrance to house # 60 is situated such that some screening can be provided, however, it would again require the removal for established mature trees to diminish the mortality rate.

39. It would appear there is at least 6' feet of unpaved public right of way along the north side of Duval and along the west side of Mumford at the intersection. Have you surveyed the inside of this corner to see exactly where the right of way line is? The question will be even if there is a few feet of right of way here wouldn't it be a benefit to widen the pavement through the intersection? Of course, I know related runoff will have to be dealt with but again I wanted to ask you to consider this ASAP.

A survey of the area was not performed as a plan was prepared by Lavallee Brothers in 2009 and recorded at the WDRD in Plan Book 818, Plan 86 showing the stone wall as the property line. Based on the plan and the information in the field, it appears that some very minor pavement widening is possible, however may restrict the ability for snow storage off the pavement given the relative elevation between the base of wall and edge of pavement on both roads. Additionally, it would reduce the hydraulic capacity of the roadside ditch as the ditch would be narrowed. FBD is proposing a monetary contribution for the Town's consideration to address this existing condition as they see fit.

We trust that you will find the enclosed information acceptable, and we thank you in advance for your review of the information. The final revised plans and supporting documentation will provided under separate cover. Please feel free to contact me should you have any questions or wish to discuss.

Sincerely,

LAND DESIGN COLLABORATIVE Wayne M. Belec, Project Manager Principal

cc: Mr. Timothy Flynn, Flynn Build & Develop