



Planning Department

*Add. Item for
action*

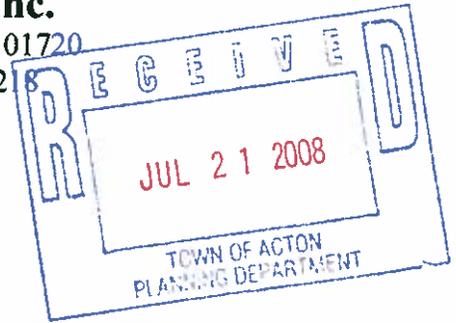
TOWN OF ACTON
472 Main Street
Acton, Massachusetts-01720
Telephone (978) 264-9636
Fax (978) 264-9630
planning@acton-ma.gov

MEMORANDUM

To: Grassy Pond Place Subdivision **Date:** July 22, 2008
From: Roland Bartl, AICP, Planning Director *RB.*
Subject: Red-line Change

The Engineering and Planning Departments recommend approval of the requested redline change as depicted on plan sheet dated July 17, 2008 and further described in memos by AS&E dated July 17, 2008 and July 21, 2008. These documents are attached together with additional back-up information.

Acton Survey & Engineering, Inc.
P.O. Box 666, 97 Great Rd. #6 • Acton, MA • 01720
Phone: (978) 263-3666 • Fax: (978) 635-0266
Email: actonsurvey@verizon.net



July 21, 2008

Acton Planning Board
472 Main Street
Acton, MA 01720

Re: Grassy Pond Place
53 Fort pond Road
6673

Dear Board Members:

We are in receipt of the Engineering Department's IDC of July 18th concerning our proposed Red-Lined Revisions to the proposed road at Grassy Pond Place and offer the following:

1. The road width is reduced to 12 feet and a cross sloped surface is more appropriate than a crowned surface as vehicle wheels and snow plows would be required to cross over the crown causing wear and possible unsafe conditions.

The installation of crowned pavements with a width of 12 feet presents difficulties in maintaining cross-section intergrities.

2. The Subdivision Regulations require that road pavements be cross sloped to the inside on certain curves. The curves are then "super-elevated", or banked, as on racetracks. The speed of vehicles on Grassy Pond Place does not warrant super-elevating the road pavement and we believe that decreasing the migration of snowmelt across the road, by cross sloping the road from the south side to the north, is an important safety consideration.

The road side faces of snow banks on the north side of a road are exposed to sun and warmth from the road and melt water might freeze on the road in late winter afternoons, if the road is sloped from the north side to the south side.

3. We believe that a single double grated catch basin instead of catch basins in series is the proper solution at this location as the size and nature of the tributary drainage does not require the unnecessary infrastructure provided by two catch basins and the possible discharge of petroleum products and sediment resulting from the concentrated discharge of water from the upper basin into the lower basin would be eliminated.

The road has been constructed to subgrade and the installation of the drainage system and underground utilities are schedule for next week.

Please contact us if the Board or the Engineering Department should desire to meet with us to discuss this matter.

Very truly yours,
Mark T. Donohoe, PE



for:
Acton Survey & Engineering, Inc.

cc: Westchester Corp., Inc.
Acton Engineering Department

Acton Survey & Engineering, Inc.
P.O. Box 666, 97 Great Rd. #6 • Acton, MA • 01720
Phone: (978) 263-3666 • Fax: (978) 635-0218
Email: actonsurvey@verizon.net

July 17, 2008

Acton Planning Board
472 Main Street
Acton, MA 01720

Re: Grassy Pond Place – Retaining Walls
53 Fort Pond Road
6673



Dear Board Members:

Please find enclosed our plan showing “red lined revisions” to Grassy Pond Place.

As discussed in previous letters it is proposed that a double grated catch basin be installed at the low point in the road as the drain pipes connecting the two catch basins to the drain manhole will intercept each other outside the manhole.

We propose that the catch basin be installed on the north side of the road and that the road be cross sloped to the north side from the point that it narrows to a pavement width of twelve feet to the catch basin. Cross sloping the road to the north side will eliminate the migration of snow melt from snow banks, exposed to sun and warmth from the road pavement, across the road.

The road should remain cross sloped to its end to eliminate possible puddles at intersections of driveways with the road surface.

Cross sloping of road pavements is required by the subdivision regulations for super-elevated curves.

It is expected by next Monday the wall will be completed and we have elected to use a top course with sockets capable of receiving a “chain link fence”. A fence was not shown on the approved plans and our client believes that a barrier should be placed along the top of the wall.

A wall composed of large precast concrete units was utilized, for reasons of aesthetics, to speed construction and decrease the possibility of wetland alterations. The utilization of this type of wall and site construction requirements is best served by installing the base course level and installing the wall with a uniform and level top course.

Preliminary measurements, to be confirmed next Monday, indicate that the road slope from Fort Pond Road can be lessened and the location of the road’s low point shifted to Station 2+25. This will offset the catch basin further from the culvert under the road.

It is also proposed that the vertical curve be reduced from 200 feet to 150 feet to eliminate the length in which the curve approaches a zero slope to decrease the possible formation of puddles.

The proposed change is shown on the red lined revision plan

We have also added a note to highlight and insure that a highpoint in Grassy Pond Place, near Fort pond Road is provided to preclude runoff from Fort Pond down Grassy Pond

Please call if you should have any questions, or if you desire for us to meet with you.

Thank you for any considerations you may give this matter.

Very truly yours,
Mark T. Donohoe, PE
for:



Acton Survey & Engineering, Inc.

cc: Westchester Corp, Inc
Acton Engineering Department
G. Nichols Construction, Inc.

TOWN OF ACTON
472 Main Street
Acton, Massachusetts, 01720
Telephone (978) 264-9628
Fax (978) 264-9630

Engineering Department

INTERDEPARTMENTAL COMMUNICATION

To: Planning Department

Date: July 18, 2008

From: Engineering Department

**Subject: Grassy Pond Place Definitive Subdivision - Red-Line Revision
Combine into one double grate catch basin**

We have reviewed the Red-Lined Plan dated July 17, 2008 to eliminate replace the two proposed single grate catch basins with one (1) double-grate catch basin. The engineer originally stated that he would be locating the catch basin in the center of the road. The main reasons for the changes were due to the following:

- The pre-cast concrete blocks for the retaining wall conflict with the locations of the two catch basins
- The two outlet drain pipes conflict at the drain manhole structure.

The Red-Lined Plan submitted for our review on Thursday (July 17th) shows the new catch basin on the left (northerly) side of the road with this section of the roadway super-elevated toward the catch basin. Based on the horizontal road curve, the super-elevation should be pitched in the opposite direction toward the right (southerly) side of the road to be consistent with our design standards. The engineer has also modified the profile of the road to relocate the low point from Station 1+99.76 to about Station 2+25. I assume by relocating the low point to Station 2+25 that it eliminates the conflict with the pre-cast concrete block retaining walls. Now that the low point in the road has relocated away from the retaining walls, the engineer could maintain a normal crown throughout the road with two catch basins connected in series so that there is only one outlet pipe.

Let me know if you need any additional information.

TOWN OF ACTON
472 Main Street
Acton, Massachusetts, 01720
Telephone (978) 264-9628
Fax (978) 264-9630

Engineering Department

INTERDEPARTMENTAL COMMUNICATION

**To: Planning Department
Conservation Commission**

July 14
Date: May 14, 2008

From: Engineering Department

**Subject: Grassy Pond Place Definitive Subdivision - Red-Line Revision
Combine into one double grate catch basin**

We have reviewed the request dated June 17, 2008 to eliminate replace the two proposed single grate catch basins with one (1) double-grate catch basin in the center of the road. The engineer explains that there is a conflict with the location of the catch basin structures relative to the footings for the retaining walls. He also stated that there is a conflict with the two (2) outlet pipes just prior to the manhole.

According to the original drainage calculations, the double grate catch basin with a single 12-inch diameter outlet should still be sufficient to handle the 10-year design storm peak flow. The engineer will need to re-grade the driveway in order to insure the runoff is directed to this catch basin structure.

We do not foresee a problem with granting this request.