INTEROFFICE CORRESPONDENCE
DEPARTMENT OF PUBLIC WORKS

TO: Keith R. Sbiral, AICP, Planning & Community Development
FROM: David H. Barber, P.E., Director of Public Works DHB
BY: Michael D. Millette, P.E., Asst. Director of Public Works – Engineering MDM
Jonathan C. Hall, P.E., Development Engineer JH
DATE: July 5, 2005
RE: Planning / Zoning Request
Proposed Nelson Meadow Subdivision
Public Works Department – **3rd Review**

Documents Reviewed:

- Letter dated June 3, 2005 from CM Lavoie & Associates, Inc. to Mr. Keith Sbiral with attachments of Storm Sewer Computation Sheet, Stormwater Facilities Engineer's Opinion of Probable Cost Final Engineering, Letter dated June 1, 2005 to CM LaVoie from Luay Aboona
- Final Plat of Subdivision dated June 2, 2005
- Site Improvement Plans dated June 2, 2005

Attachments:

- CBBEL review dated June 29, 2005
- Outlet Control Structure Detail (Dwg. No. ST-1)

Public Works Review Summary:

Division	Representative	Date	Conclusion	Comments included
Engineering	M. Millette	6-30-05	See Updated Comments	X
Stormwater	J. Hall	6-30-05	See Updated Comments	X
Water	D. Bird	6-29-05	See Updated Comments	X
Traffic	D. Fera	5-06-05	See Comments	X
Forestry	K. von der Heide	7-01-05	See Comments	X
Drainage /Pavement	J. Tucker	7-01-05	No Comment	-

Findings:

The Public Works Department recommends that the petition be revised prior to placement on the Plan Commission agenda.

Public Works Department Review Details (from 7/1/05):
(Updated status in bold italics)

Engineering Review Comments:

1. Update benchmarks.
   Accepted

2. Provide existing site plan showing easements, R.O.W, property line, utilities, contours, house structures, trees, and rim/invert elevations.
   Accepted

3. General Notes:

   - Should be specific to Village Of Downers Grove standards and specifications.
     Accepted

   - Storm Sewer and Storm Water Detention:
     i. General numbers 2, 3, and 4 are unclear.
     Accepted

     ii. Sewer Pipe Class is incorrect.
     Accepted

     iii. "ABS" pipe is no longer appropriate to use for Material Specification
     Accepted

     iv. Added Comments
     - In section, Sewer Pipe Joints of Storm Sewer and Strom Water Detention, use "self locking" pre-formed rubber gasket joints.
       Accepted

     - In section, Sewer Pipe of Storm Sewer and Storm Water Detention, note the use of SDR26 for sump pumps placed in R.O.W.
       Accepted

   - Fire Hydrants general notes are unclear.
     Accepted

4. Details:

   - Update PCC sidewalk detail to state ADA.
     Accepted

   - Wire mesh is not needed in drive entrance detail.
     Accepted

   - Update restrictor detail.
     Not Accepted – Utilize standard design detail Dwg. ST-1 (attached)

   - Typical pavement section number 4 should be extended to show prime coat to be placed between 3 and 5.
     Accepted

   - Plugged Tee and plugged cross thrust block installation details are to be changed.
     Not Accepted – Thrust block details need to be included with a change in the original Plugged "Tee" Thrust Block detail submitted

   - Water and sewer separation detail in the vertical direction should be excluded. This should only be used as a last case scenario, which isn't the case for this project.
     Accepted

   - Fire hydrant and valve details are not up to date.
     Accepted

   - Retaining wall details need to be included
     Accepted

   - Casing detail needed for watermain when crossing sewer lines.
     Accepted

   - Need Street light detail.
     Not Accepted – Eliminate decorative light fixture, ladder rest and flag holder. Replace light fixture with one that does not emit light 360 degrees. Provide photometrics and specifications.

5. Separate Lot 8 from the detention basin.
   Not Accepted

6. Show details / profiles for water / sanitary / storm pipe crossings.
   Not Accepted – Revise "Lower" with "Encase" in your utility separation information in the plan. (e.i. – Change "Lower watermain 10' either side of crossing. Provide watermain encasement." with "Encase watermain 10'...")

7. Provide missing north arrow and scale on Sheet 8 of 10.
   Accepted

8. Provide a Plat of Subdivision for review.
   Accepted

Additional Engineering Comments

9. Verify minimum setbacks with Planning Department.
   Accepted

10. Provide sidewalk along the East side of Brookbank Road.
    Accepted

11. Add lot numbers to Plat of Subdivision.
    Accepted

12. ***Provide detailed design for sidewalk connection for Jefferson Av. to Carpenter St and provide easement of 7.5' by moving retaining wall a few feet to the north.***

13. ***Change the 7.5' drainage and utility easement on the east side of Brookbank Rd. to 10' as it is drawn on the plat.***

Stormwater Review Comments:

1. Consider a terraced retaining wall design for safety.
   Accepted (Applicant chose not to implement.)

2. Revise overflow weir to provide for at least one (1) foot freeboard during an overflow condition (1.0 cfs per acre flow through weir):

   [TOP OF BERM ELEV] – [HWL + FLOW DEPTH ABOVE WEIR] >= 1.0 FEET
   Accepted

3. Provide easement for storm sewers and overland drainage along property lines (generally 10 feet along rear and 5 feet along side property lines in addition to easements required for stormwater detention, overland stormwater conveyance, and general utility service).
   Accepted

4. Provide outlot for detention basin, with provisions on the Plat for maintenance by the property owner (homeowners association).
   Not Accepted

5. Relocate house on Lot 8 a reasonable distance away from the high water level extent of the detention basin. Follow FEMA Bulletin 10-01 guidelines to ensure a basement that is reasonably safe from flooding. The simplified method requires a 20-foot setback; a lesser setback will require engineered fill and the engineer's certification of design and as-built construction. Zoning code side yard setbacks will also apply with the creation of an outlot.
Not Accepted – Provide additional design details and applicable professional and structural engineer's certifications.

6. Redesign overland drainage swales to be contained within easements.
Not Accepted

7. Provide notes detailing embankment construction specifications for the detention basin.
Accepted

8. Identify on the grading plan and on the erosion control plan all trees which may be considered worth saving by the owner / developer. Clearly delineate a "no-disturbance" zone around each tree that is appropriate for the size and species and consistent with Village forestry standards. For example, the existing mature tree line along the southern property line could be incorporated to enhance the site's landscaping, but this would require grading plan revisions in the vicinity of the detention basin.
Not Accepted – Address tree protection south of the detention basin

9. Revise grading south of the detention basin to create a smoother transition from the proposed berm to the existing neighboring lot.
Accepted

10. Provide ditch checks along Carpenter Street.
Accepted

11. Provide narrative of permanent water quality BMPs.
Accepted

12. Provide seeding / planting plan for the detention basin.
Accepted

Additional Stormwater Review Comments

13. ***Eliminate sump from SA7.***

14. ***Change SA5 to a catch basin with open grate.***

15. ***Change structure SA6 to open grate to intercept drainage and lower rim elevation to capture overland flow.***

16. ***Reduce height of detention basin for safety.***

17. ***Show proposed finished grades of all structures foundation corners.***

18. ***Provide water quality best management practice for Brookbank Rd. and Jefferson Av. runoff in the parkway south of EX1.***

19. ***In detention a basin extend the rock swale to inflow and outflow structures and provide cross-section detail for this rock swale.***

Grading Comments

20. ***Storm water detention basin slope appears to be 3:1, this may be to steep for maintenance. We recommend a slope of no less than 4:1 for mow able turf.***

21. ***Slope East of Brookbank Rd. Shall not exceed 25% (for maintenance purposes).***

22. **Longitudinal** ***slop of sidewalk on Brookbank Rd. should not exceed 5%.***

23. ***Around the perimeter of each structure there must be a minimum area of 5' in width to drain away from structure (specific areas to be looked at are: north of lots 1, 3,4, 6, 11, northwest of 5, west of 8, and between 1 &2).***

24. ***Add swales between lot 2 & 3 and 5 & 4.***

Refer to CBBEL review for additional stormwater review comments. Advise the petitioner that building permits shall not be issued prior to completion of the stormwater detention and conveyance systems (as-built survey and volume calculations required).

Water Division Review Comments:

1. General Notes:
   - Fire Hydrant should be noted as a Waterous WB-67
     Accepted

   - Curb box should be noted as a Tyler 95-E
     Accepted

2. Details:
   - Plugged tee and plugged cross thrust block installation details are to be changed eliminated.
     Not Accepted – Thrust block details need to be included with a change in the original Plugged Tee Thrust Block detail submitted

- Water and sewer separation detail in the vertical direction should be excluded. This should only be used as a last case scenario, which isn't the case for this project.
  Accepted

- Fire hydrant and valve details are to up to date.
  Accepted

- Casing detail needed for watermain when crossing sewer lines.
  Accepted

3. Utility Plan:
   - All new water main installed must be a minimum of 8" ductile iron.
     Accepted

   - Replace valve at the End of Brookbank to pressure test against.
     Accepted

   - Install new 8" water main from Brookbank South to Jefferson.
     Accepted

   - Connection at Carpenter will have to be cut in. No pressure tap.
     Accepted

   - Install new 8" main from Jefferson East to Carpenter Street.
     Accepted

   - There should be an additional valve at the tee at Brookbank & Jefferson.
     Accepted

   - A piece of 8" water main should be extended across the intersection of Jefferson & Brookbank for future replacement of the Brookbank main.
     Accepted

   - Install 8" main into cul-de-sac in a straight line to eliminate bends.
     Accepted

   - All valves should be installed in 5' valve vaults with marked lid.
     Accepted

   - Hydrants must be installed every 300' apart.
     Accepted

- One hydrant will be required in the cul-de-sac. Note locations of all B-Boxes.
  Accepted

- Circle and note all water & sewer crossings where casing is required.
  Accepted

- All water services should be stubbed out with 1.5" K Copper.
  Accepted

Additional Water Division Comments

- Add gate valve at the North end of Brookbank and South end of Carpenter in 5'valve vaults.
  Accepted

- Replace 6" watermain along Jefferson to 8" connecting Brookbank to Carpenter.
  Accepted

- Add another valve at the Tee of Brookbank and Jefferson on the East side.
  Accepted

- Change clow with the word waterous in the Material Specifications and Details, number 10.
  Accepted

- Change 60" to 72" in the Material Specifications and Details, number 11.
  Accepted

- ***All water services should be stubbed out to 1 ½" Type K Copper and noted on plan showing all B-Box locations.***

- ***All water services along Jefferson should be installed as 1 ½" K Copper with a new Roundway and B-Box and be noted on the plan.***

Traffic Review Comments:

1. Extend Brookbank Road South to Jefferson Avenue.
   Accept

2. Sidewalk fee is to be applied to Carpenter Street frontage unless otherwise constructed concurrently with the home developments.
   Accept

3. Provide ramps needed for sidewalks in truncated dome.
   Accepted

4. More streetlights are required.
   Not Accepted – Provide photometrics to determine if the proposed numbers of streetlights are adequate

5. Street widths are incorrect.
   Accepted

6. Consider adding island in cul-de-sac.
   Accepted

7. Cut the South cul-de-sac out making only a 90° turn.
   Accepted

8. Manhole elevations along Jefferson and Carpenter are questionable.
   Accepted

Additional Traffic Comments:

1. Suggested handhole on the Southeast side of Brookbank and Jefferson connection to existing street light controller on the Southwest side of intersection.
   Accepted

Forestry Review Comments:

1. ***Revised plan sheets indicate which trees will be preserved and which ones will be removed. Currently along Carpenter Street there are two silver maples in acceptable condition in the parkway. These will both need protection and fencing installed around their stem per Municipal Code 24-7. The grading plan on page 8 shows that essentially the grade will remain the same around these trees and with adequate fencing and no soil disturbance around their stems, these 2 trees can be preserved. New water and sanitary connection will both need to be outside the tree protection fencing. As permits for each house are applied for, staff will review water and sanitary locations in relation to the 2 existing trees and the dimensions of the tree protection fence before a permit is issued.***

2. ***Revised plans now show which trees will be preserved and which will be removed where Brookbank is to be a through street, and tree locations are included on the grading plan on page 8. Along Brookbank, most of the trees are black locust in fair to poor condition with stem decay and obvious deadwood. If the street were installed in the middle of the proposed right-of-way, most of the trees would need to be removed. Any trees listed as being preserved may not realistically survive depending on the exact position of the***

road edge and the amount of root severing which will occur when the road and curb are installed. Two hawthorns currently listed as being preserved (trees 774 and 775) should also be removed due to their poor form, decay and closeness to the curb where it appears they will need to be pruned back sharply to clear the new road. From a forestry prospective, black locust is not one of the greatest trees, and when combined with existing decay and branch problems, removal and replanting with superior tree specimens is a better alternative than preserving the black locust. As a compromise, staff would like to observe the trees proposed for preservation in the middle of Brookbank first before requiring their removal. If as construction progresses and tree preservation looks unlikely, then removal would be needed. For the north and south portions of the west side of Brookbank where trees will be removed, 6 additional tree plantings will be required in addition to the 30 new tree plantings mentioned in previous plan reviews (discussed in number 3).

3. *Along the north side of Jefferson and the cul-de-sac, the east and west sides of Brookbank and the west side of Carpenter, new parkway tree plantings shall be required. To complete the subdivision, the number of parkway trees required is 36. For simplicity and to ensure acceptable tree selections, the Forestry Division will install the trees as the lots are completed provided the developer pays for the trees in advance. Tree costs have been calculated based on 2005 Suburban Tree Consortium prices plus an administrative charge, and are listed below. Subject to availability and planting season, the Forestry Division may choose to substitute other appropriate tree species for approximately the same cost.*

Species (size 2" B&B)	*Quantity*	*Unit Cost*	*Extended Cost*
Freeman Maple	*7*	*$270.60*	*$1894.20*
Pear	*7*	*$263.40*	*$1843.80*
Hackberry	*7*	*$270.60*	*$1894.20*
Honeylocust	*7*	*$265.80*	*$1860.60*
Swamp White Oak	*8*	*$293.40*	*$2347.20*
Total Cost			*$9840.00*

4. South of the property line south of the detention area is a row of black walnuts which are in good condition. To ensure survival, all work must remain north of the property line and not trespass at anytime.

Pavement Division Review Comments:
No comments or concerns at this time.

c: PW Division Managers
D. Rosenthal, Director of Code Services
A. Hightower, Stormwater Management Engineer
S. Connell, Administrative Secretary
L. Sup, CBBEL (*via fax*)

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 West Higgins Road • Suite 600 • Rosemont, Illinois 60018-4920 • TEL (847) 823-0500 • FAX (847) 823-0520

June 29, 2005

Village of Downers Grove
Public Works Department - Engineering
5101 Walnut Ave.
Downers Grove, IL 60515

Attention: Jon Hall, PE

Subject: 3rd Stormwater Management Review for Nelson Meadow Subdivision (CBBEL Project No. 01-528B263)

Dear Mr. Hall:

Christopher B. Burke Engineering, Ltd. (CBBEL) has reviewed the following documents:

1. Stormwater Permit Application for Nelson Meadow, prepared by C.M. Lavoie & Associates, Inc., dated January 24, 2005, revised April 12, 2005.
2. Proposed Site Improvements for Nelson Meadow, prepared by C.M. Lavoie & Associatees, Inc.,dated January 24, 2005, revised April 12, 2005, revised June 2, 2005.
3. Comment Response Letter for Nelson Meadow Subdivision, prepared by C.M. Lavoie & Associates, Inc., dated June 3, 2005.

Project Description

The proposed project consists of building a 12-lot subdivision with a dry-bottom detention basin. The project site is approximately 4.8 acres.

CBBEL has reviewed the plans and offers the following comments that need to be addressed to make the stormwater permit application in conformance with the Downers Grove Stormwater and Flood Plain Ordinance (Ordinance #4271). This review did not include the review of utility installations or connections. The site improvement area does not contain Localized Poor Drainage Area (LPDA). Floodplain and riparian area are located just southeast of the property site with a 100-year Base Flood Elevation (BFE) of 744. A wetland was identified more than 100 feet south of the property. The proposed project does not disturb this wetland or floodplain. The site runoff does not overflow to the wetland.

CBBEL Comments

1. There is no outlot for the detention basin (it is still shown as part of Lot 8 with a drainage easement), although it is our understanding that municipal code does not require the basin to be a separate lot.

2. It is our understanding that soils information for Lot 8 will be submitted under separate cover. Please be advised that a permit for Lot 8 will not be issued until this fill has been certified.

3. The hydraulic gradeline calculations show that the water surface profile is above the rim elevations in the catch basins for the storm sewer line SB1 to SB4. In addition, catch basins SB2 and SB3 have rim elevations below the detention pond HWL of 750.66. This is not acceptable. The rims must be elevated to at least the HWL of 750.66. If this is not possible, any area where the water surface profile will be above grade must be included under a drainage easement and limited to a ponding depth of 6 inches.

After these comments are addressed, calculations and a revised site plan should be delivered to Thomas Burke at CBBEL AND to Jon Hall at the Village of Downers Grove.

An advance copy of this letter may be provided to a permit applicant as a Village service to expedite the review and response process, but it does not include a comprehensive review from the Village of Downers Grove.

The applicant should be reminded that certain issues are reviewed only by the Village, and that the final responsibility for interpretation of the Village Code rests with the Village. The applicant should expect to receive additional review comments from the Public Works Department, Code Services Department, and the Planning and Community Development Department as applicable.

Sincerely,

Thomas T. Burke, PhD, PE
Head, Water Resources Section III

Cc: Brad Hartjes, C.M. Lavoie & Associates, Inc. – Applicant
Joel Anderson – Joel Anderson Homes
Alicia Humphries – Village of Downers Grove – Public Works

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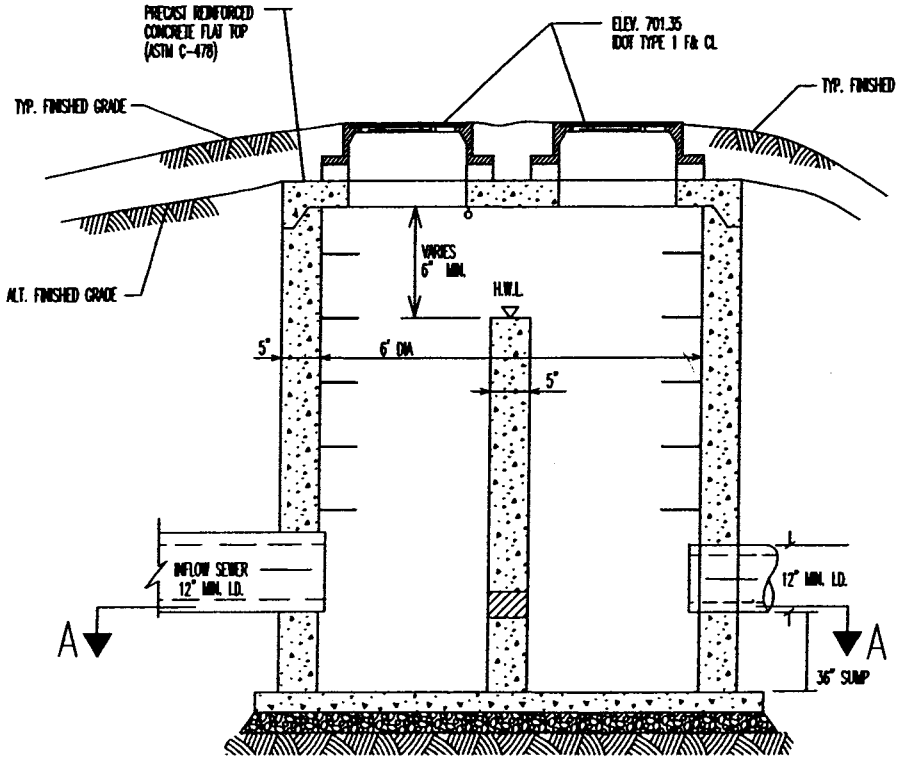
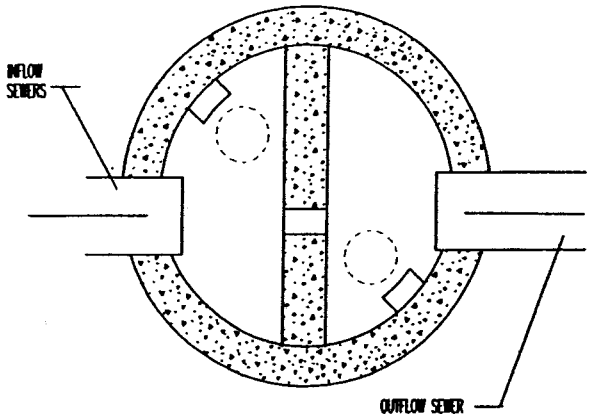


OUTLET CONTROL STRUCTURE RESTRICTOR SIZES			
BASIN #	OCS #	100-YR RESTRICTOR	100 YR HWL
1	1	DIA/INV	

NOTES:

1. STRUCTURAL DESIGN DETAILS TO BE PROVIDED BY MANUFACTURER'S LICENSED STRUCTURAL ENGINEER, INCLUDING PROVISIONS FOR TRUCK LOADING AND HYDRAULIC FORCES.

2. CONTRACTOR MUST VERIFY ELEVATIONS AND DIMENSIONS. ANY DISCREPANCY FROM PLAN ELEV. AND DIMENSIONS SHALL BE CORRECTED AT CONTRACTOR COST.



SECTION A-A

OUTLET CONTROL STRUCTURE DETAIL

STANDARD DESIGN DETAIL

Village of DOWNERS GROVE

DRAWING NO. ST-1

DATE: 10/30, 2003