

DATE: December 22, 2006  
TO: Plan Commission  
FROM: Larry D. Nelson, P.E., City Engineer  
SUBJECT: 5901 South Highlands Avenue Certified Survey Map

The City Engineering Division has reviewed the subject development and has the following comments.

**MAJOR OR NON-STANDARD REVIEW COMMENTS** (Comments which are special to the project and/or may require additional work beyond a standard, more routine project.)

1. Each lot shall have a separate sanitary sewer lateral. If proposed Lot No. 1 intends to connect to the private sanitary sewer main on South Highlands, applicant shall provide evidence of permission of connection from the owner. If proposed Lot No. 1 intends to connect to the public sewer main on Old Middleton Road, dedicate appropriate easement across proposed Lot No. 2.
2. Confirm and identify NAD83(97) horizontal datum for coordinates shown on Certified Survey Map. Obtain City of Madison PLSS tie sheet for Southwest Corner Section 18-07-09 (City of Madison PLSS Corner No. 709079). Revise incorrect "Assumed" bearing reference to reflect City of Madison PLSS NAD83(97).

#### **GENERAL OR STANDARD REVIEW COMMENTS**

In addition, we offer the following General or Standard Review Comments:

#### **Engineering Division Review of Plats (Pre-Preliminary, Preliminary, Final) and Certified Survey Maps**

Name: 5901 South Highlands Avenue Certified Survey Map

#### **General**

- |                          |     |  |
|--------------------------|-----|--|
| <input type="checkbox"/> | 1.1 | The Developer shall enter into a City / Developer agreement for the installation of public improvements required to serve this plat/csm. The developer shall be required to provide deposits to cover City labor and materials and surety to cover the cost of construction. The developer shall meet with the City Engineer to schedule preparation of the plans and the agreement. The City Engineer will not sign off on this plat/csm without the agreement executed by the developer. |
| <input type="checkbox"/> | 1.2 | Two weeks prior to recording the final plat, a soil boring report prepared by a Professional Engineer, shall be submitted to the City Engineering Division indicating a ground water table and rock conditions in the area. If the report indicates a ground water table or rock condition less than 9' below proposed street grades, a restriction shall be added to the final plat, as determined necessary by the City Engineer.  |

## Right of Way / Easements

- ☐ 2.1 The Applicant shall Dedicate a \_\_\_\_\_ foot wide strip of Right of Way along \_\_\_\_\_.
- ☐ 2.2 The Applicant shall Dedicate a Permanent Limited Easement for grading and sloping \_\_\_\_\_ feet wide along \_\_\_\_\_.
- ☐ 2.3 It is anticipated that the improvements on [roadway name] \_\_\_\_\_ required to facilitate ingress and egress to the plat/csm will require additional right of way and/or grading easements located outside the plat/csm boundary. The developer shall acquire the right of way and/or sloping easements as required by the City at the developer's expense. In the event that the developer is unable to acquire the right of way and/or sloping easements required, the City shall assist the developer in acquiring the property and the developer shall pay the City for all costs associated with the acquisition.
- ☐ 2.4 The Developer shall petition for the street vacation of (roadway name) \_\_\_\_\_ and provide a legal description and sketch of the right of way to be vacated after consultation with the City Engineer.

### Are the following requirements met?

- \* Streets Intersect at right angles.
- \* A 15 foot minimum tangent at intersections from PC of curve to property line.
- \* Arterial intersection spacing generally greater than 1200 feet.
- \* Jogs are avoided at intersections. Arterial streets shall be adjusted to align if spacing less than 300 feet.
- \* Spacing of intersections on local streets shall be greater than 300 feet.
- \* Cul-de-sacs shall be less than 1000 feet long.
- \* 100 foot tangents between curves.

- ☐ 2.5 \_\_\_\_\_
- ☐ 2.6 Property lines at intersections shall be rounded with a 15 foot radius on \_\_\_\_\_
- ☐ 2.7 Property lines at intersections shall be rounded with a 25 foot radius on \_\_\_\_\_
- ☐ 2.8 The right of way width on \_\_\_\_\_ shall be \_\_\_\_\_ feet, on \_\_\_\_\_ shall be \_\_\_\_\_ feet and on \_\_\_\_\_ shall be \_\_\_\_\_ feet.
- ☐ 2.9 \_\_\_\_\_ shall have a minimum centerline radius of \_\_\_\_\_ feet and \_\_\_\_\_ shall have a minimum centerline radius of \_\_\_\_\_ feet and \_\_\_\_\_ shall have a minimum centerline radius of \_\_\_\_\_ feet.
- ☐ 2.10 The cul-de-sac on \_\_\_\_\_ shall have a minimum radius of \_\_\_\_\_ feet with a minimum reverse curve radius of \_\_\_\_\_ feet.
- ☐ 2.11 The plat/csm shall show a temporary limited easement for a temporary cul-de-sac on \_\_\_\_\_ having a radius of \_\_\_\_\_ feet and a reverse curve radius of \_\_\_\_\_ feet. The easement(s) shall expire when the streets are extended.
- ☐ 2.12 The developer shall show on the plat/csm a 40 foot utility easement adjacent to [roadway name] \_\_\_\_\_. The easement wording shall be approved by the City Engineer. The intent of the easement is to allow for the relocation of a major transmission line. The actual poles would remain on the right of way however major transmission lines require an easement beyond the space occupied by the poles for safety.
- ☐ 2.13 The City Engineer has reviewed the need for pedestrian and bicycle connections through the development and finds that no connections are required.
- ☐ 2.14 The Developer shall Dedicate a Permanent Limited Easement for a pedestrian / bicycle easement \_\_\_\_\_ feet wide from \_\_\_\_\_ to \_\_\_\_\_.
- ☐ 2.15 The Developer shall provide a private easement for public pedestrian and bicycle use through the property running from \_\_\_\_\_ to \_\_\_\_\_. The developer shall be responsible for the ongoing construction and maintenance of a path within the easement. The maintenance responsibilities shall include, but not be limited to, paving, repaving, repairing, marking and plowing. The developer shall work with the City of Madison Real Estate Staff to administer this easement. Applicable fees shall apply.

## Streets and Sidewalks

- ☐ 3.1 The Developer shall construct Madison Standard street improvements for all streets within the plat/csm.
- ☐ 3.2 The developer shall show a 30 40 (*Strike one, 30 collector, 40 Arterial*) foot building setback line on the plat/csm adjacent to [Roadway Name] \_\_\_\_\_ for all lots in the plat/csm adjacent to said roadway.
- ☐ *Note: No buffer strip shall be dedicated to the City as the City does not want the maintenance.*
- ☐ 3.3 Extensive grading may be required due to steep roadway grades.
- ☐ 3.4 The developer shall note that City funds for park frontage are limited and will be determined at the sole discretion of the City.
- ☐ 3.5 The developer shall construct sidewalk and record a waiver of their right to notice and hearings for the assessments for the improvement of [roadway] \_\_\_\_\_ in accordance with Section 66.0703(7)(b) Wisconsin Statutes and Section 4.09 of the MGO. Said sidewalk constructed in front of and waiver recorded to Lot(s) \_\_\_\_\_.
- ☐ 3.6 The Developer shall make the following improvement to [Roadway Name] \_\_\_\_\_. The Developer shall construct sidewalk and \_\_\_\_\_ feet of a future \_\_\_\_\_ foot roadway including curb and gutter on the \_\_\_\_\_ side of the roadway.
- ☐ 3.7 The Developer shall construct sidewalk to a plan approved by the City Engineer and complete ditching as required by the City Engineer along [Roadway Name] \_\_\_\_\_.
- ☐ 3.8 The Developer shall grade the right of way line to a grade established by the City Engineer and complete ditching along the roadway as specified by the city engineer along [Roadway Name] \_\_\_\_\_.
- ☐ 3.9 **Value of sidewalk installation over \$5000.** The Applicant shall Construct Sidewalk to a plan approved by the City Engineer along \_\_\_\_\_. (*Also require the City / Developer agreement line 1.1*)
- ☐ 3.10 **Value of sidewalk installation under \$5000.** The Applicant shall install public sidewalk along \_\_\_\_\_. The Applicant shall obtain a Street Excavation Permit for the sidewalk work, which is available from the City Engineering Division. The applicant shall pay all fees associated with the permit including inspection fees. All work must be completed within six months or the succeeding June 1, whichever is later.
- ☐ 3.11 The Applicant shall execute a waiver of their right to notice and hearings on the assessments for the installation of sidewalk along [roadway] \_\_\_\_\_ in accordance with Section 66.0703(7)(b) Wisconsin Statutes and section 4.09 of the MGO.
- ☐ 3.12 The Applicant shall grade the property line along \_\_\_\_\_ to a grade established by the City Engineer. The grading shall be suitable to allow the installation of sidewalk in the future without the need to grade beyond the property line. The Applicant shall obtain a Street Excavation permit prior to the City Engineer signing off on this development.
- ☐ 3.13 Developer shall make improvements to [Roadway Name] \_\_\_\_\_ considered temporary to facilitate ingress and egress to the plat/csm until such time as the ultimate improvement of the roadway is undertaken by the city.
- ☐ 3.14 The Developer shall make improvements to [Roadway Name] \_\_\_\_\_ to facilitate ingress and egress to the plat/csm.

[Select one of the below comments for either of the above or leave general]

- ☐ The above improvement will consist of acceleration and deceleration tapers.
- ☐ The above improvement consists of rights turn lanes.
- ☐ The above improvement will consist of passing lanes.
- ☐ The above improvement will consist of median openings.
- ☐ *Caution – The improvements indicated above may require right of way outside of the plat/csm. See comment 2.3 to require additional right of way for this purpose.*
- ☐ 3.15 The developer shall note the AASHTO design standards for intersection sight distance will be applied during the design of the streets within this plat/csm.
- ☐ 3.16 The developer shall confirm that adequate sight distance exists on \_\_\_\_\_ where public streets intersect. If adequate sight distance does not exist, the developer shall change the location of the street intersection or agree to make improvements to the roadways such that the sight distance is achieved or make other mitigating improvements as required by the City.

- ☐ 3.17 All proposed street names shall be approved by the City Engineer. Applicant shall contact Lori Zenchenko (608-266-5952) with street name requests.
- ☐ 3.18 Installation of "Private" street signage in accordance with 10.34 MGO is required.

#### Storm Water Management

- ☐ 4.1 An erosion control plan and land disturbing activity permit shall be submitted to the Engineering Division for review and approval prior to grading or any other construction activities. The Preconstruction Meeting for Public Improvements shall not be scheduled prior to issuance of this permit. The applicant shall demonstrate compliance with Section 37.07 and 37.08 of the Madison General Ordinances regarding permissible soil loss rates. The erosion control plan shall include Universal Soil Loss Equation (USLE) computations for the construction period. Measures shall be implemented in order to maintain a soil loss rate below 7.5-tons per acre per year.
- ☐ 4.2 The following notes shall be included on the final plat:
  - a. All lots within this plat are subject to public easements for drainage purposes which shall be a minimum of 6-feet in width measured from the property line to the interior of each lot except that the easements shall be 12-feet in width on the perimeter of the plat. For purposes of two (2) or more lots combined for a single development site, or where two (2) or more lots have a shared driveway agreement, the public easement for drainage purposes shall be a minimum of six (6) feet in width and shall be measured only from the exterior property lines of the combined lots that create a single development site, or have a shared driveway agreement, except that the easement shall be twelve (12) feet in width along the perimeter of the plat. Easements shall not be required on property lines shared with greenways or public streets. No buildings, driveways, or retaining walls shall be placed in any easement for drainage purposes. Fences may be placed in the easement only if they do not impede the anticipated flow of water.

**NOTE: IN THE EVENT OF A CITY OF MADISON PLAN COMMISSION AND/OR COMMON COUNCIL APPROVED REDIVISION OF A PREVIOUSLY SUBDIVIDED PROPERTY, THE UNDERLYING PUBLIC EASEMENTS FOR DRAINAGE PURPOSES ARE RELEASED AND REPLACED BY THOSE REQUIRED AND CREATED BY THE CURRENT APPROVED SUBDIVISION.**

- b. The intra-block drainage easements shall be graded with the construction of each principle structure in accordance with the approved storm water drainage plan on file with the City Engineer and the Zoning Administrator, as amended in accordance with the Madison General Ordinances.

Information to Surveyor's: In addition to notes such as this, WI State Plat Review now enforces the requirement that easements or other reference lines/areas be graphically shown, dimensioned and tied when they represent fixed locations. They will accept a "typical detail" when the easement or restriction can be effectively described and retraced from the typical detail.

- ☒ 4.3 Arrows shall be added to the certified survey map indicating the direction of drainage for each property line not fronting on a public street. In addition, the certified survey map shall include lot corner elevations, for all lot corners, to the nearest 0.25-foot. The following notes shall be added to the certified survey map.
  - a. Arrows indicate the direction of surface drainage swale at individual property lines. Said drainage swale shall be graded with the construction of each principal structure and maintained by the lot owner unless modified with the approval of the City Engineer. Elevations given are for property corners at ground level and shall be maintained by the lot owner.
  - b. All lots within this certified survey are subject to public easements for drainage purposes which shall be a minimum of 6-feet in width measured from the property line to the interior of each lot except that the easements shall be 12-feet in width on the perimeter of the certified survey. For purposes of two (2) or more lots combined for a single development site, or where two (2) or more lots have a shared driveway agreement, the public easement for drainage purposes shall be a minimum of six (6) feet in width and shall be measured only from the exterior property lines of the combined lots that create a single development site, or have a shared driveway agreement, except that the easement shall be twelve (12) feet in width along the perimeter of the certified survey. Easements shall not be required on property lines shared with greenways or public streets. No buildings, driveways, or retaining walls shall be placed in any easement for drainage purposes. Fences may be placed in the easement only if they do not impede the anticipated flow of water.

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- ☐ 4.4 Prior to the issuance of building permits, the Developer shall submit a master stormwater drainage plan to the City Engineering Division for review and approval which shows lot corner elevations to the nearest 0.25-foot. For purposes of the plan, it shall be assumed that grading shall be done on a straight line grade between points unless other information is provided. The proposed slope between points shall always be greater than or equal to .0075 ft/ft. If a break in grade is required between lot corners a shot shall be taken at that break in grade to provide the Engineer with enough information to interpret the plan. The Developer shall also show proposed drainage arrows on the plan to indicate the proposed direction of drainage.

The master storm water drainage plan shall be submitted to City Engineering in digital format with elevations/grades/contours shown on the recorded plat map of the development. The digital record shall be provided using the state plane coordinate system – NAD 27.

The following note shall accompany the master storm water drainage plan:

- a. For purposes of this plan, it is assumed that grading shall be a straight line grade between points unless otherwise indicated. All slopes shall be 0.75% or steeper. Grade breaks between lot corners are shown by elevation or through the use of drainage arrows.

No building permits shall be issued prior to City Engineering's approval of this plan.

- ☐ 4.5 If the lots within this certified survey map are inter-dependent upon one another for storm water runoff conveyance, and/or a private drainage system exists for the entire site an agreement shall be provided for the rights and responsibilities of all lot owners. Said agreement shall be reviewed and placed on file by the City Engineer, referenced on the certified survey map and recorded at the Dane Co Register of Deeds.
- ☐ 4.6 The following note shall be added to the certified survey map. "All lots created by this certified survey map are individually responsible for compliance with Chapter 37 of the Madison General Ordinances in regard to storm water detention at the time they develop."
- ☐ 4.7 This plat/csm could affect a flood plain, wetland or other sensitive areas. As such, it shall be reviewed by the Commission on the Environment. Contact Mike Dailey at 266-4058 for further details. The proposed plat/csm may be considered a major change to the environmental corridor and be subject to a public hearing and approval of the Dane County Regional Plan Commission.
- ☐ 4.8 A portion of this plat/csm may come under the jurisdiction of the US Army Corp of Engineers and Wisconsin Department of Natural Resources for wetland or flood plain issues or navigable waterway. A permit for those matters may be required prior to construction on any of the lots currently within the plat/csm. Contact the WDNR & USACOE for a jurisdictional determination.
- ☐ 4.9 Prior to recording the plat/csm, the applicant shall comply with Chapter 37 of the Madison General Ordinances regarding stormwater management. Specifically, this development is required to:
- ☐ Detain the 2 & 10-year storm events.
  - ☐ Detain the 2, 10, & 100-year storm events.
  - ☐ Control 40% TSS (20 micron particle).
  - ☐ Control 80% TSS (5 micron particle).
  - ☐ Provide infiltration in accordance with NR-151.
  - ☐ Provide substantial thermal control.
  - ☐ Provide oil & grease control from the first 1/2" of runoff from parking areas.

Stormwater management plans shall be submitted and approved by City Engineering prior to signoff.

- ☐ 4.10 This site is greater than one (1) acre and the applicant is required by State Statute to obtain a Notice of Intent Permit (NOI) from the Wisconsin Department of Natural Resources. Contact Jim Bertolacini of the WDNR at 275-3201 to discuss this requirement.
- ☐ 4.11 NR-151 of the Wisconsin Administrative Code will be effective on October 1, 2004. Future phases of this project shall comply with NR 151 in effect when work commences. Specifically, any phases not covered by a Notice of Intent (NOI) received from the WDNR under NR-216 prior to October 1, 2004 shall be responsible for compliance with all requirements of NR-151 Subchapter III. As most of the requirements of NR-151 are currently implemented in Chapter 37 of the Madison General Ordinances, the most significant additional requirement shall be that of infiltration.

NR-151 requires infiltration in accord with the following criteria. For the type of development, the site shall comply with one of the three (3) options provided below:

Residential developments shall infiltrate 90% of the predevelopment infiltration amount, 25% of the runoff from the 2-year post development storm or dedicated a maximum of 1% of the site area to active infiltration practices.

Commercial development shall infiltrate 60% of the predevelopment infiltration amount, 10% of the runoff from the 2-year post development storm or dedicate a maximum of 2% of the site area to active infiltration practices.

- ☒ 4.12 A minimum of two (2) working days prior to requesting City Engineering signoff on the plat/csm the applicant shall contact Janet Dailey (608-261-9688) to obtain the final stormwater utility charges that are due and payable prior to sub-division of the properties. The stormwater utility charges (as all utility charges) are due for the previous months of service. All charges shall be cleared prior to the land division (and subsequent obsolesces of the existing parcel).

#### Sanitary Sewer

- ☒ 5.1 All outstanding Madison Metropolitan Sewerage District (MMSD) and City of Madison sanitary sewer connection charges are due and payable prior to connection to the public sewerage system.
- ☐ 5.2 Each unit of a duplex building shall be served by a separate and independent sanitary sewer lateral.

- ☐ 5.3 This land division contains or is adjacent to facilities of MMSD. Prior to approval, applicant shall provide evidence that MMSD has reviewed and approved the proposed land division.

#### Mapping / Land Records

- ☒ 6.1 Wisconsin Administrative Code A-E 7.08 identifies when Public Land System (PLS) tie sheets must be filed with the Dane County Surveyor's office. The Developer's Surveyor and/or Applicant must submit copies of required tie sheets or condition reports for all monuments, including center of sections of record, used in this survey, to Eric Pederson, City Engineering. If a new tie sheet is not required under A-E 7.08, Engineering requests a copy of the latest tie sheet on record with Dane County Surveyor's office. The Applicant shall identify monument types on all PLS corners included on the Plat or CSM. **Note: Land tie to two PLS corners required.**
- ☐ 6.2 In accordance with Section s. 236.18(8), Wisconsin Statutes, the Applicant shall reference **City of Madison WCCS Dane Zone, 1997 Coordinates** on all PLS corners on the Plat or Certified Survey Map in areas where this control exists. The Surveyor shall identify any deviation from City Master Control with recorded and measured designations. City of Madison has established WCCS, Dane Zone Coordinates on all PLS corners within its corporate boundary. Visit the City of Madison Engineering Division web address [http://gis.ci.madison.wi.us/Madison\\_PLSS/PLSS\\_TieSheets.html](http://gis.ci.madison.wi.us/Madison_PLSS/PLSS_TieSheets.html) for current tie sheets and control data. If a surveyor encounters an area without a published WCCS Dane Zone 1997 value, contact Engineering Division for this information.
- ☐ 6.3. The Applicant shall submit to Eric Pederson, prior to Engineering sign-off of the subject plat, two (2) digital and one (1) hard copy of the **final plat/CSM** to the Mapping/GIS Section of the Engineering Division. **The digital copies shall be submitted in both NAD27 & WIDOT County Coordinate System, Dane County Zone datums in either Auto CAD Version 2001 or older, MicroStation Version J or older or Universal DXF Formats and contain the minimum of the following, each on a separate layer**
- name/level number:
- a. Right-of-Way lines (public and private)
  - b. Lot lines
  - c. Lot numbers
  - d. Lot/Plat dimensions
  - e. Street names
  - f. Easement lines (i.e. street, sanitary, storm (including wetland & floodplain boundaries) water, pedestrian/bike/walkway, or any public and/or private interest easement except **local service** for Cable TV, gas, electric and fiber optics).
- NOTE: This transmittal is a separate requirement than the required submittals to Engineering Streets Section for design purposes.
- NOTE: New electronic final plat transmittals and notification of changes which occur to the final plat during the time the Engineering Division signs off and receives the digital copies of said plat and the recording thereof, are the responsibility of the Developer/Surveyor.
- ☐ 6.4 In accordance with Section s.236.34(1) (c) which says a CSM shall be prepared in accordance with s.236.20(2) (c) & (f), Wisconsin Statutes, the Applicant must show type, location and width of any and all easements. Clearly identify the difference between existing easements (site Register of Deeds recording data) and easements which are being conveyed by the Plat/CSM. Identify the owner and/or benefiting interest of all easements.
- ☒ 6.5 Prior to Engineering final sign-off by main office for Certified Survey Maps (CSM), final CSM must be submitted to Engineering Division Surveyor / Land Records Coordinator for final technical review and approval. This submittal must occur a minimum of two working days prior to final Engineering Division sign-off. Electronic mail submittal of the FINAL CSM in PDF form is preferred. Transmit to [epederson@cityofmadison.com](mailto:epederson@cityofmadison.com)