

MEMORANDUM
TO THE
RAPID CITY PLANNING COMMISSION

From: George Dunham

04/22/02

RECEIVED

APR 23 2002

Rapid City
Planning Department

Attached you will find my comments related to agenda items 45, 46, 58, 59, 60, and 61. Items 45, 59, and 60 relate to phase 1 of the project and 46, 58 and 61 relate to phase 2.

Several issues have been discussed, at length, with the city staff and we remain in disagreement. I therefore decided that I must present my side of these issues so you could make your decision in the most informed way.

The major issues, where I disagree with the staff recommendation, can be summarized as follows:

Phase 1

- **Agenda Item 45**
 - Any amendment of the city comprehensive land use plan should not delay my project.
 - In my opinion, some kind of traffic calming means must be planned to prevent the collector street through the sub-division from becoming a race track. In a residential area, pedestrian safety is the most important consideration. Early in the project, planting islands were planned to calm the traffic. They were abandoned because staff resisted their use.

- **Agenda Item 59**
 - Corrugated metal pipe should be allowed for the special application where it is applied.
 - The storm water retainage and metering means proposed should be accepted.
 - The sewer connection, as designed, should be accepted.
 - The revised overall sewer layout should be accepted.
 - A revised street design is being submitted. The street design scheme for the cul de sacs, as now proposed, should be accepted

- **Agenda Item 60**
 - A variance to delete the requirement for sidewalk along the south side of Nicklaus Drive and the east portion of Meadowbrook Drive should be allowed.

- The revised street design for Ward Court using standard curb with curbside sidewalk for the straight street where parking is allowed and roll curb with curbside sidewalk in the cul de sac bulb where parking is not allowed now meets all the requirements of the street design manual and a variance is not required.


Phase 2

- Agenda Item 46
 - Any amendment of the city comprehensive land use plan should not delay my project.
 - The revised road layout, as proposed, should be approved.
- Agenda Item 58
 - The storm water retainage and metering, as proposed, should be accepted.
 - We should not be required to do a complete design of the total subdivision sewer system at this time. The preliminary design, already submitted, should be accepted.
 - Street widths, as now proposed, should be accepted.
 - Temporary turnarounds should be required only where shown on our plans.
 - No design should be required for the offsite portion of Severson Drive.
 - Heidiway Lane improvements should be waived at this time.
- Agenda Item 61
 - The revised street design for Dixon Court using standard curb with curbside sidewalk for the straight portion of the street where parking is allowed and roll curb with curbside sidewalk in the cul de sac bulb where parking is not allowed meets all the requirements of the street design manual and a variance is not required.

I realize that some of these items are quite technical. I appreciate your efforts to study them so that your recommendation to the council will be a well informed one.

I thank you for your deliberation on these matters and for your service to Rapid City.

Respectfully Submitted



George F. Dunham, P.E.

MEMORANDUM
TO THE
RAPID CITY PLANNING COMMISSION
AGENDA ITEM #45

From: George Dunham
Phase 1
04/22/02

I request that this item not be continued, but be considered for action at this time.

COMMENTS ON:

STAFF REVIEW:

Under item #4, the amendment to the Comprehensive Land Use Plan seems to be an internal issue for the City. Hopefully this will not delay my project.

Under item #4, staff requested a revised road design layout and plat showing a continuous north-south road. That layout is being prepared and will be submitted to staff. I still have a major concern that this street should not become a race track, such as Park Drive. During the early stages of this project I proposed planting islands along the road to beautify the development and to calm the traffic, but abandoned them because they received too much staff resistance to their use. The design speed for the street is 25 MPH; and in an effort to keep the traffic speed near that level, I still have shown tee intersections in a future portion of that street. I believe that pedestrian safety should have the highest priority in a residential neighborhood. I ask approval for that layout.

MEMORANDUM
TO THE
RAPID CITY PLANNING COMMISSION
AGENDA ITEM #46

From: George Dunham
Phase 2
04/22/02

I request that this item not be continued, but be considered for action at this time.

COMMENTS ON:

STAFF REVIEW:

Under item #4, the amendment to the Comprehensive Land Use Plan seems to be an internal issue for the City. Hopefully that will not delay my project.

Under item #4, staff requested a revised road design layout and plat showing a continuous north-south road. That layout is being prepared and will be submitted to staff. I still have a major concern that this street should not become a race track, such as Park Drive. During the early design stages I proposed planting islands to beautify the area and to calm the traffic, but abandoned them because of staff resistance to their use. The design speed for the street is 25 MPH; and in an effort to keep the traffic speed near that level, I still have shown tee intersections in a future portion of that street. I believe that pedestrian safety should have the highest priority in a residential neighborhood. I ask approval of that layout.

MEMORANDUM
TO THE
RAPID CITY PLANNING COMMISSION
AGENDA ITEM #58

From: George Dunham
Phase 2
04/22/02

I request that this item not be continued, but be considered for action at this time.

PROPOSED LEGAL DESCRIPTION:

The street name "Dixon Drive" should be "Dixon Court".

COMMENTS ON:

STAFF REVIEW:

Drainage: The development as proposed has a very low density and creates a very small change in the storm drainage flows in the area. However staff required us to try to evaluate the impact of the change to some indeterminate location, downstream in the drainage basin. Staff stated that detention of the drainage flow was an acceptable alternative. This whole matter is perplexing to me when the change in drainage flows from my development is much less than the change created by projects up stream, such as Coral Park apartments, Autumn Hills, or Stoney Creek. Yet we seem to be singled out to mitigate our change. I came to the conclusion that trying to do the analysis was an effort that would be impractical and costly from an engineering standpoint and would be an exercise in futility. Therefore, in an effort to deal with the staff concerns about drainage impact, we are designing a means of detaining the added storm drainage flows and metering their delivery to the drainage basin. The detention pond will be located in the southeast corner of the project. The detention design will be submitted to the staff as soon as it is done. I request approval. I do ask that the city go on record that they will operate and maintain the detention facility.

Sanitary Sewer: We believe that the requirement to accomplish a complete design for the future sewer work is unreasonable. We have already done a preliminary design to show the proposed route of future sewer and have verified that the sewer flows can be achieved. Doing additional design work would be a waste of engineering time and money as the final design should only be done when the final lot layout is done. The lot layout for future phases will change and any sewer design will also change. We believe that the preliminary design, already done, satisfies the need to show the feasibility of the proposed sewer route.

We accept the fact that the phase immediately north of this current phase may not be practical unless or until a sewer is run in Heidiway Lane. Our alternate plan for that area, if sewer is not run in Heidiway Lane, is not to develop that phase of the overall project or to run a sewer across our property to the east and make a connection across Arrowhead country club. I hold an easement allowing me to cross Arrowhead to make such a connection.

Non-Access Easements: Non-access easements have been added to the plat and will be submitted to staff.

Street Widths: The proposed street design, as revised, meets the city street design manual requirements. The straight portion of the street leading into the cul de sac is wide enough to allow parking on both sides. That parking meets the "on-street" parking requirement for the development. This section of street will have a standard curb. The street design manual allows curbside sidewalk for a local street with standard curb and parking on both sides. The cul de sac bulb is designed at the minimum diameter allowed in the design manual and no parking is planned in that area of the street. The design manual allows curbside sidewalk to be used with roll curb when no parking is allowed. I would like to point out that parking is unlikely in a cul de sac such as this in the first place, because most of the perimeter is used up by the driveway accesses. As an example, over 160 feet of the 245 foot perimeter is used for street and driveway access leaving only about 85 feet of curb. That means that for every one foot of curb there are two feet of space with no curb. Also, such a detail is presently used elsewhere in the city, Elks Country Estates, Broadmoor, and Parkridge Village are a few examples. Many others exist.

I request that the design as presented be allowed since it meets the requirements of the street design manual.

Temporary Turnarounds: We have already provided temporary turn arounds where the distance from the dead-end of the street and the nearest turn around point is excessive. A turn around is being designed at the southeast corner of the site, in conjunction with the storm water detention facility. We have canvassed several other developments, which are in progress, and have found that the dead-end distance without a turn around is often as much as 200 feet. Elks Country Estates has dead-end conditions where the street extends without a turn around. Stoney Creek also has such a dead end; however it appears that a turn around may be intended. All weather surfacing has not been placed, so the turn around is functional only in dry weather. The end of Severson Street, just south of this proposed development, has a dead-end which is in excess of 210 feet. Other dead end conditions exist at Red Rock, Mountain Shadows, Skyline Pines, and nearly every other development in the city. My proposed dead-end is just 170 feet and is in an area where no lot is developed which is not accessible before the dead-end. The road is also quite flat in that area with a grade of about 5% making the maneuvering of a vehicle easier than if the grade were steep.

I request approval of the design as it is presented.

Severson Street/Dunham Drive Intersection: A revised design has been submitted to staff.

Road Connection to Coral Drive: I believe that the direction given in the 5th line of the staff review is wrong. "East-west" should be "north-south".

First, I would like to point out that there is precedent to make a connection to a street that may not meet all current street design standards. Again I use Elks Country Estates as an example. Both Jolly Lane, which provides access from the East, and South Valley Drive, which provides access from the West are hard surfaced streets with a narrow street surface and no curb, gutter or sidewalk. I believe that Heidiway Lane is a better street than either of these and will not be required to handle nearly the amount of traffic that either of the Elks Country Estates streets must handle.

Connection to Severson Street is my ultimate goal; however that completion is dependent on when the intervening property owner decides to develop his property. Why should I be required to design a road for property that I do not own; a road which may never be built as I design it to be built?

I request approval of the layout as it is presented.

Heidiway improvements: A variance application will be submitted on April 26 requesting waiver for the improvements on Heidiway Lane. If improvements were done at this time, the improvements would be along only a very short portion of the entire road. It seems unusual to do the improvements on less than 20% of a road. Such improvements have obviously been waived for other developments. We ask that you go on record supporting such a request.

I request that the variance be granted.

Utility Easement: A utility easement exists and has been submitted to staff. We have asked that the city attorney draft the required wording for an amendment to the easement so that we may go to the property owner and obtain the amended easement. It is my understanding from my attorney, that the city attorney may not require any significant amendment to the existing easement.

Street Lights: Revised design plans showing the street light locations will be submitted to staff. The design will show street lights at the street intersections and at the end of cul de sacs. We request approval of these locations as the only required light locations.

MEMORANDUM
TO THE
RAPID CITY PLANNING COMMISSION
AGENDA ITEM #59

From: George Dunham
Phase 1
04/22/02

I request that this item not be continued, but be considered for action at this time.

COMMENTS ON:

STAFF REVIEW:

Drainage: The development as proposed has a very low density and creates a very small change in the storm drainage flows in the area. However staff required us to try to evaluate the impact of the change to some indeterminate location, downstream in the drainage basin. Staff did say that a storm water detention pond would be an acceptable alternative. The whole matter is perplexing to me when the change in flows created by my project is much less than the change created by projects up stream such as Coral Park apartments, Autum Hills, or Stoney Creek. Yet my project seems to be singled out to mitigate my change in flows. I came to the conclusion that doing such an analysis would be an effort that would be impractical and time consuming from an engineering standpoint and would be an exercise in futility. Therefore, in an effort to deal with the staff concerns about drainage impact, we are designing a means of detaining the added drainage flows and metering their delivery to the drainage basin. The detention pond will be located in lot 3 of block 1. However the final design will be dependent upon whether or not we are required to build sidewalk on the south side of Nicklaus. The fill required for the sidewalk would fill the area intended for the detention pond. The detention design will be submitted to the staff. We request approval. I do ask that the city go on record agreeing that they will operate and maintain the facility.

A standard within the engineering profession and throughout South Dakota, including on state DOT projects, is to use corrugated metal pipe for storm drain pipes where the pipe must be installed at a steep slope. The CMP slows the water velocity. We have two locations on this project where storm drains are installed at a steep pitch and we believe it to be good engineering practice to use CMP pipe for steep slope applications. The city has used CMP in similar steep locations along Catron Boulevard. I request your approval to apply our engineering judgment in this matter.

Sanitary Sewer: We believe that the requirement to accomplish a complete design for the future sewer work is unreasonable. We have already done a preliminary design to show the proposed route of future sewer and have verified that the sewer flows can be achieved. Doing additional design work would be a waste of engineering time and money as the final design should only be done when the final lot layout for the future phases is done. The lot layout for future phases will change and any sewer design will also change. We believe that the preliminary design, already done, satisfies the need to show the feasibility of the proposed sewer route.

We do not have a "parallel sewer" designed for the project. A parallel sewer is an installation where two pipes, carrying the same sewage, run parallel to each other. **We do not have that condition.**

We have a situation where the sewer from the sub-division is too low in elevation to connect to the sewer main in Nicklaus Drive at the location where the street intersects Nicklaus. If we could offset the street intersection, we would do that to a location down the hill and the problem would be solved. However, we cannot do that because we cannot gain the required intersection separation and still maintain a reasonable grading within our street.

So, the street intersection must remain where it is shown, but the sewer must connect down the hill. Two ways exist to make that happen. One is to offset the new sewer to the east somewhere before it enters Nicklaus so that the new sewer invert matches the invert of the sewer main in Nicklaus. That offset could be made several hundred feet to the south of Nicklaus. Then the sewer could proceed to the north and connect to the sewer main in Nicklaus. The terrain is hilly and such an offset is not practical until the sewer is close to Nicklaus. We therefore opted to make the offset next to Nicklaus within a dedicated utility easement. This pipe happens to parallel the pipe in Nicklaus, but **IS NOT** a parallel sewer because it is carrying different sewage than the pipe in Nicklaus. The sewage in the pipe is still on its way to be input into the Nicklaus line.

A second way to make the connection is to dig up and replace the sewer main in Nicklaus from the street intersection going to the east until the main is deepened enough so the new sewer from the sub-division can be connected to it.

The first solution has been chosen for cost, time and disturbance reasons:

- Cost: Our choice will cost between \$15,000 and \$20,000 less than the second choice. The cost difference is because choice two requires digging up about 140 feet of Nicklaus Drive, temporarily plugging the flow in the existing sewer main, temporarily pumping that sewage flow around the work area, providing traffic control for the entire construction period as a large excavation will be open, and providing temporary sewer connections for the houses that front on the replacement area.

- Time: Our choice has a much shorter construction time. Digging into the street to install the required manhole can be done in about two days. The second choice will take up to two weeks to finish; because all the work is done in the street, the street must be torn up and replaced, and traffic control must be asserted.
- Disturbance: The work in choice one is substantially done off the street. In choice one, the disturbance in the street happens only to install the new manhole and make the required connection. Even then, the traffic can use one half of the street. Then remainder of the work is done on our property, in the utility easement. Choice two required 140 feet of sewer line, in the middle of the street be torn up. Because the new line must be lower than the existing line, the sewage flow in the pipe must be diverted for the entire construction period and the existing pipe must be removed before the new pipe can be installed. The fact that the line is in the middle of the street, and because an excavator takes a 14 foot wide placement, the entire street probably will be blocked for the entire construction period. A contractor has estimated that the pipe replacement would take up to two weeks, depending on the problems encountered, notably rock or gypsum.

Choice one is clearly the best choice under the special circumstances of this project and I ask approval of the design as it is now presented.

As with all construction items for this project, we are required to furnish surety to the city. The surety remains in force until required construction is complete. I assume the service lines fall into this category.

The cost estimate is being revised and will be submitted to staff.

Water Main: This staff statement is noted, but I cannot see how it affects the project at this time. I assume that any construction within the project limits will proceed in a timely manner and any work outside the project limits will be done at some future time when a future phase of my project is accomplished.

Section Line Right of Way: It is correct that I am vacating a portion of the section line right of way. The revised overall land layout, submitted to staff, shows that the 25 foot strip is, at this time, considered to be a flag for a large future lot. The revised plat also shows the portion of the section line right of way that has already been vacated.

Street Widths: The proposed street design, as revised, meets the city street design manual requirements. The straight portion of the street leading into the cul de sac is wide enough to allow parking on both sides. That parking meets the "on-street" parking requirement. That section of street is designed using standard curb with curbside sidewalk which is allowed in the street design manual. The cul de sac bulb is designed at the minimum diameter allowed in the design manual and no parking is planned in that area of the street. The cul de

sac uses roll curb along with curbside sidewalk, which is also allowed in the street design manual. I would like to point out that parking is unlikely in a cul de sac such as this in the first place, because most of the perimeter is used up by the driveway accesses. As an example, over 160 feet of the 245 foot perimeter is used for the entry street and for driveway access. That leaves only about 85 feet of actual curb. For every one foot of curb, two feet of curb cut exists. Also, such a detail is presently used elsewhere in the city; Elks Country Estates, Broadmoor, and Parkridge Village are a few examples.

I request that the design as presented be allowed.

Wildland Fire Mitigation Plans: We have agreed to work with the Fire Department on any mitigation plans that they wish within the limits of this proposed project.

Street Lights: Revised design plans showing the street light locations are being submitted to staff. The design shows street lights at intersections and at the end of cul de sacs. We believe this to meet the city requirements.

MEMORANDUM
TO THE
RAPID CITY PLANNING COMMISSION
AGENDA ITEM #60

From: George Dunham
Phase 1
04/22/02

I request that this item not be continued, but be considered for action at this time.

COMMENTS ON:

STAFF REVIEW:

Reserve Strip: A revised master plan has been submitted.

Sidewalk along Nicklaus Drive and Meadowbrook Drive: Existing grades drop off very steeply along the south side of Nicklaus. The sidewalk is therefore very difficult and expensive to build. If sidewalk is required, fill must be added to the point that the fill will start filling the existing drainage way and the proposed location for the detention pond. It is therefore not practical to build the sidewalk on the south side of Nicklaus Drive. Sidewalk already exists on the north side of the street. Granting variance to allow sidewalk on only one side of a street is common in Rapid City.

I again ask approval of this variance request.

Roll curb and curbside sidewalk: I believe that the street in question in this item is "Ward Court".

Curbside sidewalk used in conjunction with roll curb is common in Rapid City. Three examples where such a detail is used are the existing Parkridge Village area, existing Broadmoor, and the detail is currently being used at Elks Country Estates. The requested location where we propose to use the detail is at the cul de sac bulb. The street design for the incoming street has been changed so that the curb there is a standard curb. These design sections meet the requirements of the street design manual. The drainage design meets all the city storm water design requirements, even for a 100 year storm.

In my opinion, the revised design meets the street design manual and a variance is no longer required.

MEMORANDUM
TO THE
RAPID CITY PLANNING COMMISSION
AGENDA ITEM #61

From: George Dunham
Phase 2
04/22/02

I request that this item not be continued, but be considered for action at this time.

COMMENTS ON:

STAFF REVIEW:

Roll curb and curbside sidewalk: Curbside sidewalk used in conjunction with roll curb is common in Rapid City. Three examples where such a detail is used are in the existing Parkridge Village area, Broadmoor, and the detail is currently being used at Elks Country Estates. The requested location where we propose to use the detail is at the cul de sac bulb. The design of the incoming street has been changed to use a standard curb with a curbside sidewalk. Both these sections meet the requirements of the street design manual. A 5% cross slope is allowed by the street design manual where the terrain is difficult, however Dixon Court is designed with only a 2% cross slope. Ward Court, at the other end of the development is designed with a 5% cross slope, but that still meets the street design manual. The drainage study shows that no storm water overtopping occurs on Dixon Court. Lots 8 and 9 of block 2 are at the other end of the development. The drainage design meets all the city storm water design requirements, even for a 100 year storm.

The revised design, in my opinion, meets all the requirements of the street design manual and a variance is no longer needed.