From:	Sheila Johnson
To:	Harmon Rita T.; Shaw, Kellie R.
Cc:	Eric Froberg (eric.froberg@tylin.com); Howard Cake
Subject:	RE: 98th St. Widening 6795.91 and 6795.92 - hydrology review
Date:	Monday, November 03, 2014 2:54:21 PM
Attachments:	Interim Ditch Sta12+74 to 19+91 90 ft LT.pdf

Hello Rita

Thanks for meeting with me to discuss your comments. I have responded below – in blue.

Please let me know if you need any additional information of clarification.

Sincerely,

Sheila Johnson, PE, CFM | Civil Engineer

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From: Harmon Rita T. [mailto:rharmon@cabq.gov]
Sent: Monday, October 27, 2014 3:50 PM
To: Shaw, Kellie R.; Sheila Johnson
Subject: 98th St. Widening 6795.91 and 6795.92 - hydrology review

Kellie, Sheila,

I have reviewed the above referenced project for Hydrology and have some questions and comments. I took some time since I understood that this project is not a rush and there is time.

Major comments:

1) All the inlets have to reference a modified grate detail, similar to the modified Type A inlets. Do you have that detail? If not, I can email to you.
   I received the grate detail "2220-Modified" via e-mail and it will be incorporated in the plan set along with additions to the inlet notes referring to it.
2) Project is in a floodplain, and therefore requires a floodplain permit
   Floodplain permit will be submitted to Rudi Rael, at City Planning in the Plaza Del Sol Building
3) A swale along the West side of 98th street, from South of Colobel to the culvert crossing, conveys 40 cfs of undeveloped flow. Is the swale sized for this capacity?
   Yes, the swale is sized for the 40 cfs and a calculation sheet is attached.
4) At 98th and Amole Mesa intersection (Sheet 1-17), SE corner shows a 7.4% drop around the corner. Isn't this outside of ADA guidelines? I see from previous plan sets it was increased in this latest revision. Along the same note, on sheet 1-18 Pnt 74 is

not shown on the Point table.

I asked Howard Cake, the WHPacific Project Manager and transportation engineer about this situation. Amole Mesa is paved at the intersection and some distance to the east. While the 7.4% is steep it allows for the connection without extensive reconstruction of Amole Mesa. The following was received from Howard to address the ADA question. The design is governed by Public Right of Way Accessibility Guidelines (PROWAG).

> *Per the guidelines, the slope of a ramp is limited to 8.3% and the roadway drops 7.6% so once we add in the curb ramps, the drop will be much greater than 8.3% for a ramp.*
>
> *That said per PROWAG the sidewalk grade can follow the grade of the roadway; so if the roadway is sloped at 7.6% the sidewalk is allowed to slope at 7.6%. It is not a ramp. To design this segment of sidewalk as a ramp, which is limited to 8.3%, including the 8" curb would take about 95'.*
>
> *Obviously this makes no sense so PROWAG has stipulation that the ramp max length will be 15'. If the 8.3% grade requires a ramp longer than 15' than we adjust the grade to make the ramp 15'. Therefore the ramp grade may end up being 12% and still be legal in PROWAG. Based on all of this the ramp will meet PROWAG but I had to tweak a few things.*

I passed the comment about the missing data for point 74 to transportation to be added.

5) Several times it is noted in report that surge inlet in the median (just south of Colobel) is to provide relief to the existing system. Is the current system under capacity for the 100 yr storm? Page 8 of Drainage Report states that quantifying flows and limits of ponding is outside the scope of the report. However, if current system is under capacity, and ponding limits are unknown, then flooding into the future developments is a possibility. This seems rather serious. What is DMD's position on this?

The proposed system under this project is designed to contain the 100 year flow from 98th Street ROW within the area of concern. Under low flow conditions flow drains in the storm drain line northward as designed. In larger storms, if the line becomes surcharged, some flow will discharge from the inlet grate in the median, draining south – over a small weir – through a swale to an inlet at approximately Sta 12+45. All the surge facilities, (grate, weir, and swale) are designed to convey the full 100 year flow from the road and median.

In the existing storm drain system (analysis of which was beyond the project scope), the main 60-inch line in 98th Street draining north was designed to convey the 100 year flow from 98th Street as described in *Tracts 29,30, 31 at Arrowwood Drainage Master Plan*, by Wilson & Company, dated October 11,2004. Subsequent construction of a 24-inch/18-inch storm drain segment south of Colobel appears to be a limiting component of the line, and it is possible that flow from the 100-year storm may not be contained within the existing

system.

Additional discussion

Intersection of 98th Street and Amole Mesa, Sheet 1-17 – it appears that flow in the roadway gutter near the median nose (Sta 33+09.46, 28.14 ft Lt) could drain into the pedestrian walkway.

Transportation engineer will add a high point with the walkway on the north side (approximately 5-6 feet east of the curb) to keep any runoff from draining this way.

Also – TL does mean Total Length .

Please call me if you have any questions, and Sheila, I need to get your references back to you soon. Will you be available sometime this week?

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