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LETTER OF TRANSMITTAL

PROJECT: Cedar View Addition
PROJECT NO: MKEC 96037
DATE: August 24, 2000

TO: Vicky Huang, PE
 City of Wichita, 7th Floor
 455 N. Main
 Wichita, KS 67202

We are sending you the following items: Attached
 Under separate cover
 Via _____

Drawings Specifications Computer _____
 Maps Petitions

*SUBDIVISIONS
 CEDAR
 VIEW
 ADDITION
 DWG*

COMMENTS: Would you check to see if the dete is being done? This at least helps s the school site view Addition.

For Your Approval As Requested
 For Your Use For Your Files
 Approved As Noted For Review and Comment

REMARKS: Reference: attached letter to you dated September 1, 1998.

Signed: Kenneth H. Bengtson
 Kenneth H. Bengtson, PE

KHB/dm
 c: Chris Carrier, COW



September 1, 1998

Ms. Vicki Huang, P.E.
 City Engineer's Office
 City of Wichita
 455 N. Main
 Wichita, Kansas 67202

Reference: Cedar View Addition Off-site Drainage
 MKEC Project 96037

Dear Ms. Huang:

Enclosed is a revised Drainage and Utility Plan for the subdivision referenced above.

The site is in the Spring Branch watershed (a tributary of Fourmile Creek), and lies about ½ mile north of the Spring Branch bridge at Greenwich, at the northeast corner of Greenwich and Lincoln. Problem areas include the following:

- ▶ A 42 inch culvert passes under I-35 just east of Greenwich. This flows into the east right of way ditch. Downstream culverts under Lincoln and at two driveways are 24 inch CMPs. The upstream (I-35) culvert capacity is approximately 75 cfs. This is also the approximate 100-year peak flow from the upper watershed north of I-35. Pre-development runoff from the Cedar View site is calculated as 22 cfs and 120 cfs for the 2-year and 100-year events, respectively. The downstream 24 inch culverts have capacities of approximately 25 cfs. Consequently, the Greenwich Road system is inadequate for even the 2-year event under existing conditions.
- ▶ A culvert (2-5x4 RCB and 1-57x37 CMP) passes under Greenwich approximately 350 ft south of Lincoln. Flow to this crossing originates north west of Greenwich and Kellogg on Raytheon property. Our preliminary analyses indicate that the culvert capacity is approximately 300 cfs, which is less than a 5-year event. Our preliminary HEC-1 analysis (which does not include detention on Raytheon property) calculates the 100-year flow as approximately 840 cfs.
- ▶ Just a few hundred feet downstream of the Greenwich Road culvert, the channel feeds a fishing lake in the Windsor Park area. The culverts under Bayley were analyzed using HY8. This road section appears likely to affect tail water conditions for future improvements to Greenwich Road.

These off-site conditions result in extensive street flooding along Greenwich at and below Lincoln under current conditions.

Ms. Vicky Huang
September 1, 1998

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Improvements we propose in the Cedar View Addition Drainage Report will not significantly alleviate flooding caused by regional conditions. As we will maintain peak flows from the site at or below pre-construction levels, the development will not aggravate flooding conditions. To keep the area's contribution to peak flow rates below pre-development levels, two detention areas are planned. One of these will lie on the proposed school parcel near the center of the plat.

Our preliminary model for the school parcel includes a single detention basin with a minimum of 1.3 acre feet of storage, coupled with an outlet structure that allows a maximum discharge of 65 cfs. If the school site design does not conform to these criteria, alternate detention configurations should be prepared by the designer and evaluated using our hydrologic model of the area. (Please pass this information to the firm designing the school site, and help us stay informed regarding their site drainage plans).

A second detention basin is planned for Reserve "A" at the southeast ^{west} corner of the plat. Discharge from this detention basin will enter the ditch just east of Greenwich and upstream of the culvert under Lincoln. Because the downstream culverts are inadequate, the tailwater for the Reserve "A" discharge structure is high. We expect that future changes will include modifying Greenwich Road to an urban section, and that drainage improvements associated with this change may provide improved tailwater conditions for the detention pond.

Before Greenwich Road improvements are designed, we recommend that the City re-evaluate the Reserve "A" detention in conjunction with a more comprehensive hydrologic evaluation of the watersheds along Greenwich and north of Spring Branch. Detention outlet facilities might need to be coordinated with roadway drainage facilities to ensure a balanced, well-designed ultimate system.

I hope this information is helpful. Please call if you'd like to discuss this further.

Very truly yours,

MID-KANSAS ENGINEERING CONSULTANTS, INC.


Gregory J. Allison, P.E.

GJA:TKW/dm

c: Kenton Cox, SJCF