

within the drainage basins varies from open space, limited/general industrial and commercial, and residential in character. The natural grades convey storm water away from the subject property. Storm water is presently conveyed off-site through the previously discussed storm water sewer systems (See Exhibit 1-5).

D. Summary of runoff calculations

North Site Existing Conditions (24-Hour Storm)						North Site Proposed Conditions (24-Hour Storm)				
CN=		Area(Ac)=				CN=		Area(Ac)=		
2-Year	5-Year	10-Year	25-Year	100-Year	2-Year	5-Year	10-Year	25-Year	100-Year	
3.79	4.99	5.89	7.09	8.86	3.96	5.22	6.16	7.41	9.27	

East Site Existing Conditions (24-Hour Storm)					East Site Proposed Conditions (24-Hour Storm)				
CN=		Area(Ac)=			CN=		Area(Ac)=		
2-Year	5-Year	10-Year	25-Year	100-Year	2-Year	5-Year	10-Year	25-Year	100-Year
6.47	8.81	10.57	12.91	16.39	5.81	7.66	9.04	10.87	13.60

Southwest Site Existing Conditions (24-Hour Storm)					Southwest Site Proposed Conditions (24-Hour Storm)				
CN=		Area(Ac)=			CN=		Area(Ac)=		
2-Year	5-Year	10-Year	25-Year	100-Year	2-Year	5-Year	10-Year	25-Year	100-Year
4.88	8.32	11.13	15.11	21.44	14.11	19.73	23.99	29.69	38.21

Using the SCS Method, calculations were made to determine the existing flows from this site (the complete flow information shown on Exhibit 1-9 as the Return Period Recap attached herewith). Both the existing and proposed site drainage is split into three areas as shown on the attached Drainage Plan, Exhibit 1-5. Off-site drainage is not considered, and does not enter this study site. Each area is evaluated based on existing and proposed conditions.

On-site time of concentration is estimated to be 15 minutes for all separate drainage areas. The only exception is the southwest existing area in which T_c is estimated to be approximately 22 minutes based upon the TR-55 method. On-site detention that meet storage requirements as shown on the drainage plan shall be designed for the development. It is assumed that immediate downstream capacities are adequate to handle current flows leaving this site. The final design of on-site drainage systems shall comply with current City of Wichita design criteria.

E. Narrative description of permanent best management practices

The contractor shall provide stabilized construction entrance prior to any street paving. A buffer of 10 feet of undisturbed native vegetation shall be maintained around perimeter of site where possible. Earthwork stockpiles shall be maintained away from any ponds. Fuel storage and refueling of equipment shall not be allowed around any ponds, drainage channels, or other waterways. Sediment barriers will be placed at storm sewer inlets and rock rip-rap at outlets. Sediment barriers (type determined by owner or contractor) shall be used to prevent sediment from flowing off site. Disturbed earth shall be stabilized where construction activity ceases for at least 21 days with owner's choice of mulch, temporary seed (Rye grass) during the planting season or other suitable BMP device. BMP devices shall be in place until there is a good stand of grass. Disturbed portions of the site where construction activities permanently cease shall be stabilized with permanent seed no later

than 21 days after the last construction activity in that area (during the planting season only). The permanent seed shall consist of fescue or grass chosen by the owner. BMP devices shall be used at back of curb/edge of pavement until vegetation is 75% established.

F. Copy of plat

A copy of the proposed CUP is attached as Exhibit 1-7.

G. Preliminary grading plan

Grading Plans currently not established. The Drainage Plan is found on Exhibit 1-5.

H. Professional Engineer Seal

A signed and dated Professional Engineer's seal is located on the cover of this report.

I. CD of drainage plan

A CD of this report in full is attached herewith.