



Project narrative:
 The site is located on north side of K-42 (Southwest Blvd.) between Maize and Tier. The site is partially developed with building, house and some parking area. The north half of the property is an open field covered by grass. The proposed site consists of addition of building near to the existing on south side. The existing drainage pattern indicated the site drains towards the southeast to the open channel along the K-42. The proposed drainage pattern follows the existing except routing the runoff from north open field to the K-42 open channel.

Water Quality and TSS Removal

Storm runoff treatment is not required for this site as the area of disturbance is expected to be less than an acre. However, water quality needs be addressed if the cumulative area of disturbance exceeds an acre in future. North open field will be protected by installing no disturbance fence.

Channel Protection

No extended detention for channel protection is required as the total site is less than 5.0 acres.

Flood Detention (2-, 5-, 10-, 25- and 100-yr)

No flood detention for this site is considered as the area of disturbance is expected to be less than an acre. The area of disturbance is expected to be 0.66 acres due to construction or construction activity. A surface or underground conveyance system will be built to drain the north open field in to the K-42 ditch as shown in plan. However, a detention system will be considered if the cumulative impervious area exceeds 1.0 acre in future. Following tables show the runoffs in existing and proposed condition.

EXISTING CONDITION:
 Total Site Area = 1.52 acres
 Impervious Area = 0.48 acres, Grass Area = 1.04 acres
 Hydrological Soil Group = C

EXISTING SITE									
DRAINAGE AREA	ACRES	Tc	CN	Q2	Q100	REMARKS			
		min							
Proposed Site Area	1.52	43	84	2.10	3.21	3.89	4.81	6.40	Entire site in undeveloped condition

DEVELOPED CONDITION:
 Total Site Area = 1.52 acres
 Impervious Area = 0.62 acres, Grass Area = 0.90 acres
 Hydrological Soil Group = C

DEVELOPED SITE									
DRAINAGE AREA	ACRES	Tc	CN	Q2	Q100	REMARKS			
		min							
Proposed Site Area	1.52	15	88	3.26	4.76	5.66	3.26	8.94	Fully developed commercial site

Engineer's Notes:

- Site drainage calculations were developed using the SCS Method for peak flow. Highlighted CN and Tc values were established based on existing and proposed site conditions.
- The site drainage will be maintained to the ditch on K-42.
- Future grading plan shall follow the drainage pattern as shown on plan.
- The impervious 2' bottom width is to carry the 100-yr flow from open space on north.
- There is no sign of wetland and the property is not in the floodplain. (FIRM from 201205040E, February, 2 2007).
- The drainage plan is developed based on site disturbance from an acre. After quality and detention needs to be addressed if cumulative disturbance results more than an acre. The north K-42 ditch may need to be expanded for the on-site detention in such situation.

Area of no disturbance

Dugan Industrial 3rd Addition
Drainage Plan
 Wichita, Kansas

Scale: 1 inch = 40 feet

Legend: (30 FEET)

Project Information:
 PROJECT NUMBER: _____
 FILE: _____
 DATE: 03/20/12
 DESIGN: _____
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