

Table 3.9 Downstream Assessment Report Minimum Requirements Checklist

A. General Site Location Map containing the following:		Comment
	1) Project boundaries	
	2) City limits	
	3) Streets, roadways, highways	
	4) Surrounding or adjacent existing developments within zone of influence	
	5) Surrounding or adjacent proposed developments within zone of influence	

B. Pre-Development Drainage Area Map(s) containing the following:		Comment
	1) Project boundaries overlaid on recent (<5 years) pre-development aerial imagery	
	2) Existing topography (1- or 2-foot contours)	
	3) On-site and off-site drainage basin delineations with flow arrows	
	4) Land Use and Zoning	
	5) Soil types	
	6) Perennial and intermittent stream centerlines	
	7) Location of wetlands	
	8) Location of dams and impoundments	
	9) FEMA FIRM with project boundary overlaid	
	10) Location and dimension of existing channels, bridges and culverts	
	11) Delineation of longest flow paths (segments identified as sheet flow, shallow concentrated flow, or open channel)	

C. Post-Development Drainage Area Map(s) containing the following:		Comment
1)	Project boundaries overlaid on recent (<5 years) pre-development aerial imagery	
2)	Existing topography and proposed grading contours (1- or 2-foot contours)	
3)	Perennial and intermittent stream centerlines	
4)	Proposed zoning or land use	
5)	Proposed modifications to watershed boundaries	
6)	On-site and off-site drainage basin delineations with flow arrows	
7)	Delineation of longest flow paths (segments identified as sheet flow, shallow concentrated flow, or open channel)	
8)	Location and dimension of existing channels, bridges and culverts	
9)	Location of wetlands	
10)	Location of dams and impoundments	
11)	Proposed storm drain system	
12)	Location of all proposed site outfalls or locations where runoff leaves the site	
13)	Show how off-site areas are collected and directed through/around the site	
14)	Existing vs Proposed 100-yr floodplain boundaries	
15)	Cross sections used for analysis to define limits of flooding	
16)	Zone of influence delineation	

D. Hydrologic and Hydraulic Analysis		Comment
	1) Drainage areas	
	2) Composite runoff coefficient or CN calculations (Pre- and Post- development)	
	3) Time of concentration calculations (Pre- and Post- development)	
	4) Relationship between HEC-HMS elements and flow change locations in HEC-RAS	
	5) Peak discharge comparison for all design storms (do not use FEMA flows)	
	6) Georeferenced HEC-RAS model with the following:	
	a) Model general description	
	b) Plan descriptions	
	c) All modeled structures clearly identified	
	d) Elevation source data for each cross section	
	7) Table of Pre- and Post- development WSE showing difference to 2 decimal places for all design storms	
	8) Cross section plots comparing Pre- and Post- development geometry and 100-yr WSE	
	9) Table of Pre- and Post- development channel velocities showing difference and percent change for all design storms	
	10) Valley storage calculations (100-yr)	
	11) Detention/Retention pond elevation-storage-discharge curves (if applicable).	

E.	Written Narrative	Comment
	1) General project description	
	a) Project description	
	b) Location	
	c) Proposed land use	
	d) Total disturbed area	
	e) Submittal date and revision dates as applicable	
	2) Description of applicable Special Flood Hazard Areas (SFHA)	
	3) Description of existing stormwater conveyance facilities that will be incorporated in the design	
	4) Description of existing stormwater storage facilities that will be incorporated in the design	
	5) Conceptual discussion of proposed drainage patterns	
	6) Conveyance of off-site runoff	
	7) Discussion of proposed drainage improvements	
	8) Discussion of proposed floodplain alterations	
	9) H&H analysis - methodology and results	
	10) List of other proposed or approved developments within zone of influence and how they were taken into consideration in the H&H analysis	
	11) Preliminary Environmental Permitting Evaluation	
	12) Conclusion stating how the proposed project meets all criteria set forth on Section 3 of the City of Celina Engineering Standards	

F. Digital Data		Comment
	1) GIS or CAD files:	
	a) Project boundaries	
	b) Drainage areas (on- and off-site)	
	c) Existing and proposed hydraulic model cross sections	
	d) Existing topography	
	e) Proposed grading plan	
	f) Existing and proposed 100-yr floodplain boundaries	
	2) Hydrologic model (if applicable)	
	3) Hydraulic model (if applicable)	