

Engineering Services • 8500 Santa Fe Drive
Overland Park, Kansas 66212
eod@opkansas.org • 913-895-6223
www.opkansas.org

COMMERCIAL SITE CONSTRUCTION PLAN REVIEW CHECKLIST

This checklist is not intended to be a complete listing of all applicable requirements but is only a collection of the most commonly required items for civil/site plans for commercial development sites. It is the responsibility of the design engineer to obtain all applicable design standards and use good engineering judgment in preparing construction plans.

(Revised June 2017)

PROJECT INFORMATION	
Permit No.	
Review Date	
Reviewer	

1. Studies and Calculations

Y	N	NA	Description	Notes
			Stormwater management study - See ES Policy 3-01	
			Flood study - See ES Policy 3-01	
			Retaining wall calculations	

2. Legal Documents

Y	N	NA	Description	Notes
			Private Parking Lot Maintenance Agreement	
			Stormwater Treatment Maintenance Agreement (Single Owner) or Stormwater Treatment Maintenance Agreement (Association Maintained)	
			Stream Corridor Maintenance Agreement	
			Private Lake Agreement	

3. Other Permits

Y	N	NA	Description	Notes
			Notice of Intent (NOI) if disturbance >1 acre	
			Floodplain Development Permit	
			404 permit for work in jurisdictional waters	
			KDHE-DWR permit for work in streams with 240+ acre watershed	

4. Plans

4.1. General

Y	N	NA	Description	Notes
			Signed and sealed by civil engineer registered in the State of Kansas	
			Legal description of property	
			City standard General Notes	
			Benchmark information and datum	
			Developer / owner contact information	
			Utility contacts and phone numbers	
			Legends when applicable	
			ESC General Notes	
			City of OP Standard Details provided where applicable	

4.2. Cover Sheet

Y	N	NA	Description	Notes
			Project title	
			Plat name	
			Permit number	
			General location map	

			Sheet index	

4.3. Grading Plan

4.3.1. General

Y	N	NA	Description	Notes
			Existing and proposed contours at minimum 2 foot intervals	
			Unpaved slopes 2.5% minimum	
			Unpaved slopes 33% maximum	
			Asphalt 1% minimum	
			Concrete 0.5% minimum	
			Contours extend beyond property line as needed to show drainage patterns	
			Spot elevations, high points, and low points as needed	
			Grading in ROW is ¼ to ½ inch per foot toward public street	
			Dry curb indicated	

4.3.2. Overflow Swale

Y	N	NA	Description	Notes
			Beginning / ending location shown	
			EGL on plan where crossing property lines	
			Designed to contain Q1% - Q10% with 1 foot of freeboard if over storm sewer. If no storm sewer, designed to contain Q1% with 1 foot of freeboard	
			MLO of adjacent structures are 1 ft above	

			overflow swale EGL	
			Cross section provided with WSEL, EGL, side slopes, bottom width, and longitudinal slopes	

4.3.3. Overflow Weir

Y	N	NA	Description	Notes
			Three spot elevations provided with center 6 inches above inlet top	
			Designed for Q1% - Q10% over storm sewer. If no storm sewer, designed for Q1%	
			Weir cross section provided with WSEL, side slopes, and bottom width	
			MLO of adjacent structures are 1 ft above weir WSEL	

4.3.4. Adjacent to waterways including stream corridors, lakes, and ponds

Y	N	NA	Description	Notes
			Q1% EGL and WSEL of waterway provided at property corners and perpendicular to structures	
			Designed for Q1% - Q10% over storm sewer. If no storm sewer, designed for Q1%	
			Weir cross section provided with WSEL, side slopes, and bottom width	
			MLO of adjacent structures are 1 ft above ESL or 2 ft above WSEL, whichever is greater	

4.3.5. Grading adjacent to unimproved thoroughfares

Y	N	NA	Description	Notes
			Show existing and proposed spot elevations at 50 ft intervals with final elevations matching Preliminary Engineering Study	
			Grading of interim ditch / shoulder when required and according to standard details	

4.3.6. Commercial drive

Y	N	NA	Description	Notes
			Elevations of quarter points, high points, low points shown	
			Slopes ¼ to ½ inch per foot to ROW	
			Concrete drive approach in Public ROW in accordance with standard details.	

4.3.7. ADA compliance

Y	N	NA	Description	Notes
			Enlarged details of each ADA ramp provided with slopes and spot elevations called out for critical points	
			Spot elevations and slopes given for ADA parking areas	
			Site is ADA compliant for all pedestrian walkways	

4.4. Drainage Map

4.4.1. General

Y	N	NA	Description	Notes
			Existing / proposed contours at maximum 2 foot intervals	
			Drainage to each structure delineated with drainage area, "C" value, and receiving structure given	
			Existing / proposed drainage network shown and labeled	

4.5. Drainage Calculation Table

4.5.1. General

Y	N	NA	Description	Notes
			Storm frequency provided. Q10% required for storm sewer, Q1% required if overflow swales are used	
			Drainage area and total drainage area to each structure	
			"C" value for each structure	
			Time of concentration and total time of concentration for each structure (calculation required for Tc > 5 minutes)	
			Rainfall intensity for each structure	
			Discharge and total discharge to each structure	
			Pipe capacity	
			HGL at each structure	

4.6. Storm Sewer Network

4.6.1. General

Y	N	NA	Description	Notes
			2 acre maximum drainage area to structure	
			Extended to undeveloped upstream property lines for future service as needed	
			Public vs private system clearly labeled	
			Public system minimizes length under pavement	
			Must discharge to appropriate downstream system - cannot shift, concentrate, or increase drainage areas to adjoining property unless adequate storm sewer systems available	
			Enclosed system designed for Q10%	
			Q1% overflow system provided	
			7 inch maximum depth in parking lots and private drives for Q1%	
			Cannot cause backwater onto adjacent property for Q1%	
			Maximum 500 foot pipe runs	

4.6.2. Structures

Y	N	NA	Description	Notes
			Minimum 4' width, length, and depth	
			Set back curb inlets not allowed adjacent to parking areas	
			Adequate side clearance for pipes (see KDOT inlet box sizing chart)	
			HDPE pipe allowed for private system for diameters 24" and less, RCP for all other sizes	
			Private box culverts built to public standards (see Public Improvements checklist)	
			8-foot maximum curb inlet width	
			If L+H or W+H > 20 ft, a structural design is required	

4.6.3. Storm Sewer Profiles

Y	N	NA	Description	Notes
			Profiles given for structures with two or more pipe runs	
			Existing and proposed grade provided	
			Structures labeled	
			Structure sizes given	
			Structure rim elevation provided	
			Top of pipe does not encroach into inlet throat	
			Pipe size and material given	
			Pipe inverts, length, and slope given	
			Minimum 18" cover over pipe	

			Cover exceeding 12 ft. - check if class IV RCP is required	
			Vertical drop is 0.2 ft for < 22 degree flows and 0.5 ft for other conditions including multi- inflow pipes and size transitions	
			Grade for positive drainage shown at outlets	
			Flowline indicated for end of pipe and end section	
			Last pipe section at lowest grade possible to reduce outlet velocity (3 fps minimum velocity, 0.5% minimum slope)	

4.6.4. Outlets

Y	N	NA	Description	Notes
			Adequate outlet protection given; see City standard detail	
			Discharge to natural streams meets APWA 5605.6 requirements	
			Discharges to lakes / ponds at normal pool elevation (no submerged or elevated outlets)	
			Safety handrails provided for pipe inlets / outlets 42" and larger	
			Toewall detail for outlet structure or City standard design	
			Protection grate provided for inlets 24" or larger. Protection grate not required if single pipe run, such as a culvert.	

4.7. Site Plan

4.7.1. General

Y	N	NA	Description	Notes
			All necessary dimensions and radii provided	
			Dry curbs indicated	
			Curb types indicated	
			Easements shown	
			Pavement markings shown	
			Storm sewer network provided and labeled	

4.7.2. Drive entrances

Y	N	NA	Description	Notes
			Width labeled	
			Conforms with City standard detail	
			Curb radii provided	

4.7.3. ADA compliance

Y	N	NA	Description	Notes
			ADA ramps and parking areas shown	
			Truncated domes not provided when crossing commercial entrance	
			Truncated domes not required when outside of Public Street ROW	

4.8. Erosion Sediment Control Plan

4.8.1. General

Y	N	NA	Description	Notes
			Disturbed area delineated	
			Disturbed area in acres	
			Project narrative	
			Existing and proposed contours and maximum 2 foot intervals	
			Drainage areas delineated with area in acres given	
			Total area at outlet points given	
			Legends provided	
			BMPs identified on plan with BMP #s	
			Phasing and staging chart provided. (Example Staging Chart)	
			Phasing and staging chart provided on each ESC phasing sheet	
			Adequate number of ESC plan sheets to show Phasing	
			Final STFs indicated on plan and noted in phasing and staging chart to be placed after final stabilization (as applicable)	

4.8.2. Sediment basins and traps

Y	N	NA	Description	Notes
			Sediment traps provided for outlet points receiving greater than 2 acres	
			Sediment basins provided for outlet points receiving greater than 10 acres	
			Standard detail with information tables filled out for each sediment basin and trap	
			Specific enlarged grading details given for each sediment basin and trap	

4.9. Traffic Control Plan

4.9.1. General

Y	N	NA	Description	Notes
			Site specific plan given for during work hours	
			Site specific plan given for after work hours	
			Conforms with MUTCD and City of Overland Park Traffic Control Handbook	
			City standard traffic control details given	
			Accessible pedestrian traffic control/detour provided when closing sidewalks.	

4.10. Stormwater Treatment Facility Plan

4.10.1. General

Y	N	NA	Description	Notes
			Proposed contours at maximum 2 foot intervals	
			Drainage areas to each STF delineated with acres and "C" value given	
			Each STFs labeled per STF drawing requirements	
			STF table given with each STF or treatment train and corresponding drainage areas, value ratings, and overall level of service given	
			Unique or specific requirements to individual STFs given	
			STF Certification and Inspection Log required following construction and prior to CO or release of performance surety.	
			See STF Construction Plan Review Checklist for additional detail	

4.11. Detention and Retention Ponds

4.11.1. General

Y	N	NA	Description	Notes
			Shown on grading and drainage plans	
			Pond detail given with information filled out and hydrographs provided	
			See Detention Plan Review Checklist for additional requirements	
			Detention Pond Certification required following construction	