



## **COVER PAGE**

- n/a Project Name
- n/a Vicinity Map
- n/a Developer's Contact Information
- n/a Design Engineer's Contact Information
- n/a Design Engineer's Signature & Seal
- n/a List of Drawings
- n/a Utility Contact Information

## **STREETS (Technical Specifications ST-1)**

- n/a Overview sheet of entire project
- n/a All exposed concrete shall be KCMMB 4K mix
- n/a Plan and profile
  - n/a All street sections included
  - n/a Appropriate stationing and control points
- n/a Intersection details sheet
  - n/a ADA- accessible ramp design at each location (i.e., not generic details)
  - n/a ADA - accessible ramp standard details
- n/a Pavement
  - n/a Section view of pavement design
  - n/a Curb/gutter details
  - n/a Signage plan included

- n/a End of road markers at appropriate locations
- n/a City standard details for signs

- n/a Grading shown within right-of-way
- n/a Traffic control plan specific to the project

## **STORMWATER (Technical Specifications STM-1)**

- n/a Overview sheet of entire project
- n/a All exposed concrete shall be KCMMB 4K mix
- n/a Plan and profile
  - n/a Appropriate call-outs on the plan view showing type of storm inlet to be constructed, with appropriate reference to detail sheet number
  - n/a Hydraulic grade line of design storm shown in profile view
  - n/a Flowline elevations called-out on storm structures
- n/a Detention/Retention basin
  - n/a Detention basin design, including outlet structure details, anti-clogging Measures
  - n/a 40-hour extended detention within the detention basin
  - n/a Calculations for the 40-hour extended detention contained within the detention report
  - n/a Retention basin design, including emergency drawdown measures
- n/a Master Drainage Plan (MDP)
  - n/a MDP included
  - n/a Contour lines shown on the MDP at an appropriate contour interval
  - n/a Drainage flow arrows on MDP as appropriate
  - n/a Stream buffers shown on MDP, plans, and Plat
  - n/a Regulatory floodplain limits shown on MDP or plans
  - n/a Swales and diversion berms shown on MDP
  - n/a Minimum Building Opening Elevations (MBOEs) shown on the MDP
  - n/a MBOEs set at a minimum of 2.0 feet above the 100-year water surface Elevation
  - n/a Elevation of the 100-year water surface elevation within designated Swales
  - n/a Emergency overflow swales shown on the MDP
  - n/a Existing and finish lot corner elevations shown on the MDP

n/a Basement type shown on the MDP (standard, daylight, walk-out or walkout)

n/a Stormwater Design

n/a Stormwater conveyance system calculations provided within the plans (i.e., not a bound report)

n/a n/a Sufficient number of storm inlets in rear yards to capture no more than 2 acres

n/a Elevation of 100-year water surface elevation within designated swales

n/a Maximum of 400 feet spacing between curb inlets

n/a Culvert design calculations using appropriate modeling

n/a Box culvert design provided (i.e., designed to HL93 loading)

n/a Mud mat shown for cast-in-place box culverts

n/a Note stating the City to review shop drawing for box culvert prior to Approval

n/a Velocity calculations at discharge points

n/a No adverse impact on adjacent property owners

n/a Rip rap dimensions or other energy dissipation features

n/a Rip rap calculations included in plans (i.e., not a bound report)

n/a Floodplain development permit, if needed

n/a Standard Details

n/a Curb inlet

n/a Junction box

n/a Field inlet

n/a Grated inlet

n/a Other standard details as needed

## **WATER (Technical Specifications WAT-1)**

n/a Overview sheet of entire project

n/a Note stating no work will begin before MDNR permit received

n/a Plan and profile included

n/a Location

n/a Water mains contained within an easement

n/a Mains installed at 12" minimum from top of pipe

n/a No dead-end water mains greater than 700 feet in length

n/a Sufficient clearance between sanitary sewer mains

- \_\_\_ n/a Water line to be extended around the cul-de-sac to avoid water service lines beneath the cul-de-sac
- \_\_\_ n/a Opposite side of the street from the sidewalk, if practical
  
- \_\_\_ n/a Two valves at a tee, and three valves at a cross
  
- \_\_\_ n/a Bends shown at all locations to achieve the minimum radius of curvature
  
- \_\_\_ n/a Gate valves on mains less than 24"
  
- \_\_\_ n/a Butterfly valves on mains 24" and larger
  
- \_\_\_ n/a Water lines to be bored beneath street (i.e., no open-cuts \_ n/a allowed)
  
- \_\_\_ n/a Valves to be called-out along water main at lengths specified
  
- \_\_\_ n/a Fire lines
  - \_\_\_ n/a No more than 500-foot separation between fire hydrants
  - \_\_\_ n/a Fire hydrant assembly standard detail provided, Clow Medallion only brand accepted
  - \_\_\_ n/a Temporary in-line fire hydrant assemblies called-out for dead ends where future extension will occur
  - \_\_\_ n/a Fire hydrants located 20 feet beyond the radius of curvature at Intersections
  - \_\_\_ n/a Fire line to include a valve on the public main where a valve does not exist within 500 feet
  
- \_\_\_ n/a Standard Details
  - \_\_\_ n/a Valve and valve box
  - \_\_\_ n/a Trenching and backfill
  - \_\_\_ n/a Backflow vault and backflow assembly
  - \_\_\_ n/a Meter vault detail provided for meters 3" and larger
  - \_\_\_ n/a Standard water meter and vault
  - \_\_\_ n/a Thrust block
  - \_\_\_ n/a Manhole frame and lid standard details with standard lettering
  
- \_\_\_ n/a Water demand analysis, if required
  
- \_\_\_ n/a MDNR concurrence letter prepared for signature
  
- \_\_\_ n/a MDNR permit acquired

## **SANITARY SEWER (Technical Specifications SAN-1)**

- n/a Overview sheet of entire project
  
- n/a Plan and Profile
  - n/a All line segments included
  - n/a Minimum of 0.2 feet fall between manhole flowline in/out, or 0.5 where the deflection angle is excessive
  - n/a Pipe material called out
  - n/a Sanitary sewer manholes called out with appropriate references to sheet numbers
  - n/a All lots to be provided with sanitary sewer laterals and wyes. service lines can't cross property lines
  - n/a All sanitary sewer service laterals clearly shown on the plans, either on the plan view with sufficient notes, or tabature format
  - n/a Minimum pipe slopes for sanitary sewer lines shown
  - n/a Sanitary sewer mains to be shown with minimum of 36" cover
  
- n/a Design
  - n/a Sanitary sewer analysis, including off-site sanitary, on-site sanitary, hydraulic grade line, velocity, based on the peak base flow and peak infiltration and inflow in bound report form
  - n/a Maximum of 400 feet between manholes
  
- n/a Location
  - n/a Sanitary sewer mains to be extended to plat boundary
  - n/a Wyes 4 feet from manhole and each other
  
- n/a Standard details
  - n/a Sanitary sewer manhole
  - n/a Inside drop manhole standard
  - n/a Shallow manhole
  - n/a Manhole frame and lid standard details with standard lettering
  - n/a Trenching and backfill
  - n/a Wye and tracer wire
  - n/a Stream crossing detail in accordance with the specifications
  - n/a Trench check
  
- n/a Manholes within floodplain to be constructed with bolt-down lids
  
- n/a Dead end manholes to have 8' stub for future expansion. (where applicable)

n/a MDNR permit required prior to construction.

## **EROSION AND SEDIMENT CONTROL ( DCM Section 5100 )**

n/a ESC plan included

n/a Turf reinforcement mat where appropriate

n/a Restoration plan

n/a Temporary sediment basin or sediment traps

n/a Design of temporary sediment basins or sediment trap

n/a Calculations supporting the design of the temporary sediment basins or traps

n/a SWPPP

## **STREETLIGHTS**

n/a Is all conduit called out on the plans

n/a Are the photometrics and voltage drop shown

n/a Does the controller have a time delay/ light shield

n/a Is the pole 30' tall

n/a Is the light 4000K LED

## **MISCELLANEOUS**

n/a Easements shown on engineering plans match the plat

n/a Easements shown are minimum 15' wide.

n/a Off-site easements acquired or noted in approval letter