



**PUBLIC IMPROVEMENTS
PLAN REVIEW CHECKLIST
January 2009**

Office Use: ESR No: _____
 Review Date: _____
 Reviewer: _____

Public Improvement Plan Review Checklist

This Plan Review Checklist is designed as a tool to assist the design engineer and review engineer in submitting a complete set of plans for issuance of public improvement permits. 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. It is the responsibility of the design engineer to obtain all applicable design standards and use good engineering judgment in preparing construction plans.

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SECTION 1 – DESIGN STANDARDS

The following is a listing of applicable design standards for typical residential subdivisions in Overland Park. Depending on project specific circumstances, other standards may apply:

Overland Park Municipal Code:

- Title 13 – Streets and Sidewalks (OPMC 13)
- Chapter 15.10 – Stormwater Management Program – Standards and Permitting (OPMC 15.10)
- Chapter 16.200 – Erosion and Sediment Control (OPMC 16.200)
- Chapter 16.210 – Stormwater Treatment
- Chapter 18.460 – Subdivisions and Lot Splits (OPMC 18.460)

Other City Standards and Policies:

- Design Criteria – Stormwater Treatment Facilities – City of Overland Park
- Design Criteria – Stormwater Conveyance Facilities
- City Engineers Erosion and Sediment Control Standards
- Manual of Infrastructure Standards
- Overland Park Traffic Control Handbook
- Overland Park Standard Details
- Stormwater Management Studies (ES Policy #3-01)
- Stream Corridor Development Plan Requirements
- US Army Corp of Engineers Section 404 Permitting Requirements
- As-built Grading Plans for Residential Subdivisions

Referenced Standards:

- KC Metro Chapter APWA - Division V – Design Criteria Section 5100 – Erosion and Sediment Control (APWA 5100)
- KC Metro Chapter APWA - Division V – Design Criteria Section 5600 – Storm Drainage Systems and Facilities (APWA 5600)
- MARC / KC Metro Chapter APWA Manual of Best Management Practices for Stormwater Quality, March 2008

Other Standards:

- [Manual of Uniform Traffic Control Devices \(MUTCD\)](#)
- AASHTO “Policy on Geometric Design of Highways and Streets – latest edition (AASHTO Green book)
- Roadside Design Guide

SECTION 2 – SUBMITTALS

2.1 Initial Submittals:

- ___ Application for Public Improvement Permit required for initial submittal
- ___ Construction Plans – 3 sets required on 22”x36” or 24”x36” sheets
- ___ Stormwater Detention Plans (if required) must be on SEPARATE plan set
- ___ Other items stipulated with development plan approval
- ___ [Final Stormwater Report](#) (Sealed) – 2 sets (unless previously submitted with other plans)
- ___ Flood Study (HEC-RAS) – when required – 2 sets with data CD’s
- ___ Work in Special Flood Hazard Areas – submit separate application/checklist for a [Floodplain Development Permit](#)

2.2 Final Submittals and Administrative Items for Permitting (all items must be addressed prior to permitting – See ES Policy 2-105 and 2-02 for additional information on administrative item review responsibilities):

- ___ Land Disturbance Permit Obtained (see [Application for Land Disturbance Permit for information](#)).
- ___ Final Plat recorded prior to permit issuance
- ___ Preconstruction meeting held prior to permit issuance
- ___ Construction Plans – 7 full-sized and 2 half-sized sealed sets (KS PE seal required – except for unmodified City Standard Details)
- ___ [Geotech Report](#) 2 copies – (must be approved and recommendations incorporated into construction drawings regarding subgrade treatment.)
- ___ Review Engineer verification that Summary of Quantities is complete and accurate

2.21 Legal Documents provided by Engineer/Developer (when required for specific projects):

- ___ [Long Term Temporary Construction Easements](#) – dedicated to City(Adjacent to unimproved thoroughfares – check with Planning Technician to verify if obtained)

- ___ Temporary Construction Easements – dedicated to developer (for subdivision grading etc on other private property not owned by Developer).
- ___ [Permanent Drainage Easements](#) – dedicated to City (for any enclosed/improved public drainage systems where easements not dedicated on Final Plat)
- ___ Stormwater Treatment Facility Easement – dedicated to City, either by Maintenance Agreement or by plat.
- ___ Stormwater Treatment Facility Maintenance Agreement
- ___ [Stream Corridor Maintenance Agreement](#) (when development includes a stream corridor)
- ___ [Right of Way Maintenance Agreement](#) (when development includes islands in pavement)
- ___ [Private Lake Agreement](#) (when private lake is included on development)
- ___ Other stipulated agreements/documents
 - ✓ _____
 - ✓ _____

2.22 Fees paid by engineer/developer:

- ___ Easement/legal document recording fees
- ___ Street name sign fees
- ___ Street Escrow funds (when required)

2.23 Contractor Provided Information for Storm Sewer, Street, and Street Light Contractors :

- ___ [Contractor Applications for Public Improvement Permit](#)
- ___ Bid Tabulation
- ___ [Two Year Performance and Maintenance Bonds](#)
- ___ [Street Light Performance and Maintenance Bond](#)
- ___ Public Improvement Permit Fee (based on % of Bond amount)
- ___ Contractor's Certificate of Insurance on file - meeting [Minimum City Insurance Requirements](#)

SECTION 3 – CONSTRUCTION PLANS

3.1 COVER SHEET

- ___ Project Title

- Must match final plat name
- Signature Block - “Administrator, Engineering Services Division, Date”
- ESR/PIP Case Number - “ESR200_ - _____” Number provided by plan reviewer
- Index of sheets
- General Location Map
- [City standard general notes](#)
- Benchmark information and datum
- Developer/Owner Contact Information (name/address/phone)
- Utility contacts and phone #'s
- Summary of Quantities
 - Verify that sidewalks/ramps in common areas included
 - Fly ash included when required by geotech report
 - Flowable fill included for storm sewer under pavement/sidewalks
- Legend

3.2 DRAINAGE PLAN, MAP, AND CALCULATIONS

- Scale: 1"=100' or larger for onsite areas (smaller scale allowed for large offsite drainages)
- Existing/proposed storm sewers shown
- Existing/proposed contours shown
- All onsite/offsite drainage areas shown
 - No Significant drainage basin shifting allowed
- Storm sewer system extended appropriately
 - 2 acres or 6 whole or partial platted lots (whichever is less) maximum drainage area tributary to first uppermost inlets in system
 - 450 foot maximum flow path to first inlet or to street gutter (single family residential only)
 - Sump at intersection return – 1 cfs maximum (approx ¼ acre drainage area) crossing street
 - Extended to undeveloped upstream property lines for future service
 - Public Storm sewer system minimizes length under pavement
 - Must discharge to appropriate downstream drainage system – cannot shift, concentrate, or increase drainage area to adjoining property unless adequate storm sewer facilities are available

- Storm sewer structures
 - ✓ Structure Numbers labeled
 - ✓ Stationing shown
 - ✓ Adequate side clearance for pipes (see [Inlet Box Sizing Chart](#))
 - ✓ 4 foot minimum length, width, and depth.

- Natural Conveyance Swales
 - ✓ 10% design storm minimum capacity set aside in dedicated tract (residential only) (minimum 30-foot wide)
 - ✓ 1% design storm overflow system provided
 - ✓ Drainage Area is between 2-25 Ac
 - If DA<5Ac, swale may discharge into enclosed system
 - If DA>25Ac, stream corridor requirements exist
 - ✓ A minimum of 1.0 foot freeboard between the lowest opening into a building and the EGL of the adjacent flow shall be provided
 - Accessory buildings are sometimes afforded less protection as approved by the City of Overland Park
 - Setbacks in accordance with **Design Criteria – Stormwater Treatment – City of Overland Park** (Item D.4.b)

- Street Crossings Storm Sewer Design (APWA 5601.8B)
 - ✓ Residential Streets – 10 Year (10%) design storm – enclosed downstream system
 - ✓ Residential Streets – 25 Year (4%) design storm – open downstream system
 - ✓ Collectors - 25-year (4%) design storm
 - ✓ Thoroughfares - 50-year (2%) design storm
 - ✓ All Streets:
 - 7-inch maximum depth at highest point in roadway
 - 14-inch maximum depth at deepest point in roadway
 - Guardrail required 100-yr design flow >250 cfs AND street overtops

- Drainage Table
 - ✓ 10 year (10%) design storm
 - ✓ 100 year (1%) design storm overflow system (1 ft freeboard (EGL) required to any building openings)
 - ✓ Maximum gutter width of spread per APWA Section 5604.2
 - ✓ Tc based on 100-ft maximum overland flow length (Calcs req'd for Tc> 5 min)
 - ✓ Runoff Coefficient "C" conforms with APWA Section 5602.3
 - ✓ Undeveloped areas - use City "Future Development Plan" land uses to determine future runoff conditions
 - ✓ Pipe System design storm Hydraulic Grade Line (HGL) at each inlet shown – HGL must remain 0.5 ft below bottom of throat opening for 10% design storm.

3.3 BOX CULVERTS

- Box Culvert Plan
 - ✓ Bridge analysis if span under street is >20 feet (total span including center divider walls). Bridge information must be completed to the City of Overland Park Bridge SOP requirements
 - ✓ Minimum interior dimensions 5 foot height and width for maintenance access
 - ✓ Boxes under public/private streets – Provide street/box intersection station and skew angle.

- ✓ Bridge Plans will include structure # (to be assigned by Public Works) on box as a plaque and submit bridge registration paperwork

— Hand Rails Provided

- ✓ Chain Link Fence acceptable in lieu of handrail
- ✓ Vertical pickets only (Horizontal prohibited) Rail must not pass 4-inch sphere – see IBC for additional guidance

— Maintenance access

- ✓ Path to entrance on traversable slope (5:1 or flatter) and 15-foot wide
- ✓ Easement provided for maintenance access
- ✓ Inlet and outlet of box accessible during low flow conditions (submerged culverts not allowed)
- ✓ Energy dissipation pool (when provided) is below flowline of the culvert.
- ✓ Provide access every 1000 feet or bend.

— Box Culvert Details

- ✓ KDOT details for box acceptable
- ✓ KDOT details for wingwall not acceptable – required to be independent structure from box.
- ✓ [KCMMB 5K Concrete Mix Designs Required](#)
- ✓ Wing wall footings below grade frost line (3-6" min depth)
- ✓ Provide weepholes for long culvert runs only.
- ✓ Expansion joint required between box/wingwall
- ✓ Provide external sealing band at precast box joints that meets ASTM 877

— Construction Issues

- ✓ Provisions for re-routing live streams around box during construction.
- ✓ Stream temporary re-routing includes non-erodible materials.
- ✓ Temporary culverts sized/placed to not flood upstream property – 50% design storm minimum
- ✓ Construction inventory for bridges

3.4 STORM SEWER PROFILES

— Structures:

- ✓ Inverts/top elevations indicated
- ✓ 4-foot minimum length and width
- ✓ 4-foot minimum structure depth (top to lowest invert out).
- ✓ Top of pipe doesn't encroach into inlet throat
- ✓ If L+H or W+H >20 feet a structural design required
- ✓ Adequate vertical drop (0.2 ft min for straight through (<22 degrees) flows, 0.5' min for other conditions including multi-inflow pipes, size transitions etc)
- ✓ 8-foot maximum curb inlet width.

— Pipe profiles:

- ✓ Minimum 10%-design storm HGL contained; 1%-design checked for overflow path
- ✓ Profile required for storm sewers with two or more pipe runs
- ✓ Line length, slope, inverts, and top elevations indicated
- ✓ For structures with two or more pipe connections – provide pipe orientation
- ✓ Existing/proposed ground line indicated
- ✓ Minimum cover – 18 inches (APWA 5606.6)

- ✓ Class III RCP pipe required - CMP/HDPE not allowed
- ✓ Cover exceeding 12-feet – check if Class IV pipe is required for due to earth loads
- ✓ Maximum pipe run length 500 ft (APWA 5604.5)
- ✓ End sections draining into enclosed system include protection grate for pipes 24-inch and larger
- ✓ Trench detail provided
- ✓ Flowable fill required for under pavement in ROW – limits shown on pipe profile

— Outlets

- ✓ Grade for positive drainage shown
- ✓ Flowline indicated for end of pipe AND end section
- ✓ Outlet protection adequate (see [Riprap Design Chart](#))
- ✓ Last pipe section at the smallest grade possible to reduce outlet velocity (3 fps minimum velocity, 0.5% min slope)
- ✓ Discharges to natural streams meets APWA 5605.6 requirements (location/skew etc)
- ✓ Discharges to streams/lakes/ponds at normal pool elevation (no submerged/elevated outlets)
- ✓ Safety Handrails provided for pipe inlets/outlets larger than 42" height pipe. See handrail design requirement on box culvert checklist.
- ✓ Toewall detail for outlet structures

3.5 GRADING PLAN

— Scale: 1"=50' or larger

— North Arrow shown

— Slopes:

- ✓ contour interval for existing/proposed – 2 ft maximum
- ✓ minimum slope – 2.5%
- ✓ maximum slope – 33% (3:1)
- ✓ Fill slopes must be set back at least 12 inches from any property line

— Monument Box detail required if removing / replacing existing monument

— Contours extended 50-ft beyond project/watershed limits – or as necessary to show drainage patterns

— Spot elevations at all lot corners, high and low points as needed

— Overflow swale Information

- ✓ Flowline information at property line crossings
- ✓ Required for all storm sewer systems regardless of pipe capacity
- ✓ May be required in some locations upstream from public system (flat areas and to divert drainage from existing developments)
- ✓ Design Flow (Q-1% minus Q-10% if storm sewer exists – otherwise Q-1%)
- ✓ For pipe systems designed to carry Q1% - an Overflow Swale IS required and must be sized to carry the Q-10% flow.
- ✓ Cross sections – show flow depth, energy grade depth, side slopes, width and longitudinal slope.
- ✓ Centered on property lines when feasible
- ✓ Beginning/ending location shown on plan

- ✓ Berms on downhill side of area inlets: Show 3 spot elevations with the center overflow elevation set at 6-inch above inlet top
- ✓ No drainage easements for overflow swales – pipe system only

- ___ Overflow weirs
- ✓ Flow depth
 - ✓ Cross Section at Weir
 - ✓ MLO's upstream

- ___ Sites adjacent to major drainageways, stream corridors, lakes, and ponds
- ✓ 1% storm (100 year) information shown on adjoining property corners:
 - Energy Grade Line
 - Water Surface Elevation
 - Minimum Low Opening (min 1 ft above ultimate EGL or 2 ft above FEMA BFE - whichever is greater)
 - For lots adjacent to major drainageways but not SFHA's, MLO's are required when the lowest corner of the lot will be less than 3 feet above the ultimate EGL. MLO's will always be required for lots abutting the SFHA.

- ___ Grading adjacent to Unimproved Thoroughfares
- ✓ Check the width/condition of the unimproved thoroughfare to determine if street widening/overlay is required (OPMC 18.460.260)
 - ✓ Match approved [Preliminary Engineering Study](#) for future thoroughfare grade at right of way line.
 - ✓ Coordinate with Public Works for Final Design grades if thoroughfare is under design (may make preliminary studies obsolete).
 - ✓ Show existing/proposed spot elevations at ROW line – 50 ft intervals - stationing coordinated with thoroughfare plan
 - ✓ Provide interim ditch/shoulder when required in accordance with Standard Details
 - ✓ For street widening > 3 feet, provide table showing elevations for centerline, edge existing pavement, edge proposed pavement.
 - ✓ Street widening requires 3-inch overlay of entire street in most cases.

For Residential Subdivisions Only: - Grading Plan Must Include the Following:

- ___ Lots labeled F.I.R. (Foundation Investigation Required) for building lots with:
- ✓ Building area has 6+ feet of fill
 - ✓ Slopes > 4:1
 - ✓ Pre-existing stream or water body

- ___ Drainage arrows and house footprints shown on each lot

3.6 STREET PLAN AND PROFILES

Plan View:

- ___ Scale: 1"=50' or larger
- ___ Street and right of way widths dimensioned
- ___ Sawcut existing pavement to extend existing street (5 ft or true section)

- ___ Islands and medians
 - ✓ Type B curb used in islands/medians

- ___ “Dry” curb indicated where necessary

- ___ Adjacent to unimproved thoroughfares – for the last 10 feet of the curb, flatten or eliminate curb beyond mid-point of curb return per the Standard Detail

- ___ Street curve radii dimensioned per Table 18.460.110

- ___ Sidewalk locations shown
 - ✓ Conforms with location shown on preliminary plat
 - ✓ Same side of street as streetlights when feasible
 - ✓ Wraps at least ½ distance around cul-de-sacs
 - ✓ Local streets– 4-foot sidewalk one side
 - ✓ Collectors – 4 foot sidewalk – both sides
 - ✓ Thoroughfares – 5 foot walk both sides
 - ✓ 4-foot walks only – passing squares shown maximum 200-foot spacing
 - ✓ Sidewalks across islands as necessary shown as constructed by developer

- ___ Allowances for future bike/hike trails (see greenway linkages plan for locations)
 - ✓ Curb drops installed at width needed for bike/hike trails
 - ✓ ADA ramp installed for future tie-in of bike trails
 - ✓ Trail shifted close to roadway at intersections – (3 ft minimum greenspace, 6 ft desirable, 10 ft maximum).
 - ✓ Parks Department approval of alignment

- ___ Street light poles and conduit sleeves for street crossings shown

- ___ Easements shown
 - ✓ Access Easements shown
 - ✓ Bike/Hike Trail Easements shown
 - ✓ Sidewalks in easements shown as constructed by developer
 - ✓ Storm Sewer Drainage Easements – 20-ft min or Pipe O.D. + 15 feet rounded up to nearest 5 foot
 - ✓ Verify that easement locations on Final Plat conform with construction plans
 - ✓ Storm Sewers located in either a Drainage Easement or combination/overlapping Drainage and Utility Easement.

- ___ Storm sewer structures
 - ✓ Structure Numbers labeled
 - ✓ Stationing shown
 - ✓ Adequate side clearance for pipes ([see design chart](#))
 - ✓ 4 foot minimum length, width, and depth

- ___ Traffic barriers at dead ends
 - ✓ Type III barricades at hazardous locations (i.e. drainageways, embankments, obstructions, etc)
 - ✓ End of road markers for non-hazardous locations
 - 28-ft street: 3 required
 - 36-ft street: 4 required

— Pavement Marking Plan

- ✓ For Thoroughfare Pavement Marking:
 - Include the following note in a prominent location on Sheet :
 - At least 24 hours prior to the installation of the pavement markings in the public right-of-way, contact the project Engineering Services Construction Inspector or Engineering Services at 913-895-6223.
- ✓ For Residential/Collector Pavement Marking:
 - Include the following note in a prominent location on Sheet :
 - At least 24 hours prior to the installation of the pavement markings in the public right-of-way, contact the project Engineering Services Construction Inspector or Engineering Services at 913-895-6223.

— Drive Entrances to Public Streets

- ✓ Width labeled
- ✓ Concrete driveway in conformance with Commercial Driveway Standard detail
- ✓ Address any conflicts with existing traffic signal loops or street lighting conduit
- ✓ Elevations of quarterpoints, highpoints, lowpoints shown – Drive slopes of $\frac{1}{4}$ to $\frac{1}{2}$ inch/ft towards the public street in the right of way.
- ✓ Curb radii shown

— ADA Ramps – Required on Public Streets to Public Streets

- ✓ ADA ramps shown with elevation callouts
- ✓ Truncated Domes for private driveways provided as follows:
 - For private driveways that are signalized, or expected to be signalized in the future - Truncated Domes are required.
 - For private drives that connect to public streets and utilize a standard concrete commercial drive approach - Truncated Domes are Prohibited (unless signalized – previous bullet)
 - For private drives that connect to public streets and do not have a concrete drive approach Truncated Domes are required.

Profile View:

— Profile Information

- ✓ Existing/Proposed Elevations at 25-ft intervals
- ✓ Street slopes shown. 1% min grade, Max grades – see UDO 18.030.080 and OPMC 18.460.110
- ✓ Profile Grade should be street centerline – noted on typical street cross section detail.

— Vertical Curve Information shown

- ✓ Station and elevation - PVI, PVC, PVT, G1, G2
- ✓ Stopping Sight Distance (SSD) and K values – Min SSD - see UDO 18.030.080 and OPMC 18.460.110
- ✓ Grade breaks at intersections (stop locations on local residential streets only) 5% algebraic grade difference
- ✓ Instantaneous slopes on vertical curves <0.5% for distances not to exceed: Sag curves – 25 ft, crest curves – 35 ft

— Future profile for intersections with unimproved thoroughfares

- ✓ Minimize future street tear-out/reconstruction
- ✓ Safe interim condition
- ✓ Minimize storm drainage system tear-out/reconstruction

3.7 INTERSECTION & CUL-DE-SAC DETAILS

- ___ Scale – 1" = 20' or larger
- ___ Curb return radii dimensioned
- ___ Curb returns
 - ✓ Quarter point station/elevations shown
 - ✓ Curb drops for ADA ramps stationed/elevations shown
 - ✓ 1.0% minimum grade crossing asphalt streets required
 - ✓ 0.5% minimum grade on curbs
 - ✓ Dry curb indicated where necessary
 - ✓ Curb types indicated (use Type B curb for islands)
- ___ ADA ramps – slopes/elevations shown – to top of landing
 - ✓ Verify positive drainage
 - ✓ Slopes conform with ADA ramp details
 - ✓ Verify cross slope from top of landing to adjacent curb
 - ✓ Dimension components of ramp
- ___ Drainage arrows shown

3.8 TURN LANES

- ___ Table of Elevations and Distances required for any curbed street including the following data:
 - ✓ Minimum Station Interval – 25 feet
 - ✓ Elevations and distances for:
 - Existing and proposed curb
 - Existing median curb
 - ✓ Existing cross slope shown
 - ✓ Proposed turn lane cross slope
 - ✓ Future overlay cross slope (Allowable range 3/16" to 1/2" per foot)
- ___ Reconstruction of median matches existing curb types
- ___ Street lighting cable locations shown to identify conflicts and necessary relocations
- ___ Grading of right of way behind curb at 1/4 to 1/2 inch per foot
- ___ For widening < 4 foot, construct concrete section with 2-inch asphalt overlay in lieu of full depth asphalt.
- ___ Pavement surface course joint lines offset minimum of 6-inches from lane lanes
- ___ Depth of Fly-Ash noted or flowable fill can be used
- ___ Curb removal detail provided
- ___ Match existing pavement section – including pavement thickness, relocation of underdrains (when existing), jointing pattern, and base material (OP Special)

3.9 EROSION AND SEDIMENT CONTROL PLAN

— ESC General Information –

- ✓ Project Narrative describes:
 - Existing site conditions
 - Identifies sensitive areas (stream corridor, trees, etc.) & areas of special concern
 - Describes phases
- ✓ General Location Map
- ✓ Nature of work
- ✓ Total disturbed acreage
- ✓ Phasing/sequence of work
- ✓ Identification of sensitive downstream waters (wetlands, streams, reservoirs, etc.)
- ✓ Identification of critical areas (high erosion potential, e.g. steep slopes, wet weather or intermittent streams, springs, etc))
- ✓ Description and implementation sequence of BMPs (interim and permanent)
 - Conforms with City of Overland Park Erosion and Sediment Control Notes and adopted KC Metro APWA Division 5100 design criteria

— Erosion and Sediment Control Plans

- ✓ All BMPs are on site. Written Permission must be granted for offsite BMPs.
- ✓ Plan Sheets show:
 - Disturbance Area (limits of clearing & grading)
 - Drainage Patterns:
 - Outlet points (total drainage area, total disturbed area to that point, type of structure)
 - Inlet points (show flow arrows and tributary acres)
 - Indicate high/low points of project site
 - Location & implementation schedule of ESC devices
 - Includes conditions for removal
 - Legend of proposed ESC devices
 - Standard ESC General Notes (1/1/07)
 - Staging Chart of sequence of all construction related BMP and vegetative activities
- ✓ Detail Sheets
 - Conform with City Standard Details and adopted KC Metro APWA Division III Standard ESC Details

— ESC measures prior to land disturbance complies with following minimum standards:

- ✓ Protection of undisturbed areas
- ✓ Perimeter controls
- ✓ Stabilized construction entrance
- ✓ Stabilized parking/delivery/staging Area
- ✓ Diversion of offsite water around disturbance for drainage areas > 0.5 acres
- ✓ Sediment basins (drainage areas ≥ 10 acres)
 - Basins must function in all phases of the project
- ✓ Other BMPs

— ESC measures during land disturbance and construction work comply with following minimum standards:

- ✓ Isolation of inactive areas
- ✓ Concrete washout location shown
- ✓ Soil stock piles, location, stabilization & protection
- ✓ Soil stabilization within 14 days after inactivity (seeding, mulch, hydraulic applications, sod, matting, blankets, plastic sheeting, dust control, etc.)
- ✓ Adequate selection of sediment control BMPs:
 - Silt Fence used as perimeter controls, internal controls, toe protection or interruption of long slopes
 - Other Linear sediment control devices that trap sediment as water passes through the medium (e.g. compost socks, compost berms, vegetative buffers, etc.)
 - Inlet Protection – except on thoroughfares
 - Sediment traps (if applicable)
 - Sediment basins (applicable only to drainage areas ≥ 10 acres)
 - Design information shown (chart filled out)
 - Emergency Spillway provided w/adequate protection
 - All inflow pipe flowlines ABOVE cleanout level
 - Riser pipe size/perforations indicated
 - Anti-flotation device sized indicated
 - Baffles provided when necessary
 - Plan shown for ultimate removal of basin
 - Notes about when basin CAN be removed
 - Notes about when basin MUST be cleaned out
- ✓ Adequate selection of erosion controls for runoff entering, crossing or exiting the site:
 - Minimize erosion of cut and fill slopes (terracing, slope drains, diversion dikes & swales, slope roughening, etc.)
 - Erosion Resistant conveyance through site (pipes, check dams, outlet protection, channel lining: sod, matting, rock-lined, etc.)
- ✓ Adequate measures for work in live watercourses (temporary stream crossings, stream diversion, etc)
- ✓ Adequacy of offsite receiving channels
- ✓ Post Construction ESC
 - BMPs left in place to become Stormwater Treatment Facilities (STF)
 - Reference to STF Plans, Maintenance Agreement

— ESC measures after land disturbance and construction work comply with following minimum standards:

- ✓ Permanent stabilization (seeding, sodding, etc.)
 - Planting schedule and layout
 - Completion certification if required
 - Long Term maintenance agreement for plantings if required
- ✓ Post Construction ESC
 - BMPs labeled on plans to become Stormwater Treatment Facilities (STF)
 - Reference to STF Plans, Maintenance Agreement
 - Sediment basins (applicable only to drainage areas ≥ 10 acres)
 - Criteria for removal of basin(s) from service
 - Notes on timing & methods for basin(s) clean out and area stabilization

3.10 STREET LIGHTS

Street Light Plan

- ___ Request of an overall conceptual street light design for sub-divisions with multiple plats.
- ___ City of Overland Park standard symbol legend (must match plan sheet)
- ___ Control Center address (Existing and Proposed) shown on bottom right corner of the sheet (address must have "LC" (lighting controller) attached, ex: 9705LC 120th)..
- ___ Date of preparation in the Title Block and revision dates
- ___ North Arrow and Scale (1"=50' or larger)
- ___ Plan View
 - ✓ Street names, right of way, and outlines
 - ✓ Sidewalk/trails (existing/proposed)
 - ✓ Easements and utilities
 - ✓ Storm sewer system
 - ✓ Adjacent subdivision names (existing or unplatted)
 - ✓ Existing streetlight equipment in adjacent subdivisions
 - ✓ Subdivision border, property and lot lines
- ___ Spacing/Type:
 - ✓ Local/Residential (28' b-b)
Spacing: 250'-280' (225' min. / 300' max.)
Pole: 100W post-top with 14' pole
Foundation: Type R screw-in foundation
 - ✓ Collector/Residential (36' b-b)
Approximate Spacing: 180-200'
Pole: 150W post top with 14' pole (Type R screw in foundation) for residential areas
 - ✓ Collector/Commercial (36'b-b)
Approximate Spacing: 180-200'
Pole: 150 W cobra-head with 30' pole (Type T1 screw-in or concrete foundation) for commercial areas
- ___ Connecting to existing system
 - ✓ Provide connection & location construction notes.
- ___ Equipment relocations/modification (median breaks, driveways, street entrances and turn lanes.
- ___ Proposed pole locations
 - ✓ at/near property lines
 - ✓ at intersections (on radius points is preferred)
 - ✓ at changes of alignment of 60 degrees or more
 - ✓ on cul-de-sacs longer than 200' *(at/near the bulb)

- ✓ on the sidewalk side
- ✓ 3' minimum setback
- ✓ proper clearance from overhead lines (field check)
**Residential Lighting*

— Proposed control centers

- ✓ Location:
 - located in U/E out of the R/W (OPMC 18.180)
 - 5' setback from the back of curb to the center of the concrete foundation
 - out of the Sight Distance Triangle (OPMC 18.420.060)
 - at the property line or with respect to any structure and driveway conflict
 - maximizing the usage of all 4 circuits
- ✓ Consultant to provide approved KCPL power source for the proposed control center
- ✓ 2" PVC conduit w/pull string shown/noted from control center to power source
- ✓ Type II junction box next to the control center (at maintenances request) w/two 2" HDPE conduits from the control center
- ✓ size of pad, orientation of photocell (work pad to the right of the photo cell which is facing north or east)
- ✓ circuit number(s) noted

— Proposed Junction boxes

- ✓ locations (2' min setback from back of curb & from pole 1' min. from sidewalk and ramp).
- ✓ on both sides of street crossings
- ✓ designate Type I or II (if greater than 2 or more lines entering/existing cables then specify a Type II) Type I=12"x12", Type II=12" x18"

— 2" Schedule 40 HDPE Conduit - Gray

- ✓ installed throughout project unless otherwise noted

Street Light Details

— Details as Required:

- ✓ Breakaway Pole Base Details
- ✓ Controller Details
- ✓ Electrical Connector Details
- ✓ Pole and Luminaire Details
- ✓ Pole Foundation Details
- ✓ Standard Details/Bill of Materials
- ✓ General Notes & Legend

Special Street Light Details

— NON-TYPICAL details included where applicable

- ✓ Single Circuit Control Center – used only in temporary situations as approved by the City.
- ✓ On Commercial projects, involving streets over 45 mph, and putting in turn lanes or roadway widening, check for location of advanced detector loops. The 1st one will be approx. 210' from stop bar and 2nd is 110'. Anytime it is involving 300' from the stop bar check for loops.

- ___ Connection of a new system to an existing system (at a junction box, control center or light pole) shall be completed in the presence of the street light inspector for approval.
- ___ Type I junction boxes (supplied/installed by contractor) are to be used at the end of a platted street for future circuits. Junction box field marker will be provided by the City of Overland Park. 2" HDPE SCH.40 with/pullstring shall be installed from the last box/pole on the circuit to this box. The contractor for the next phase of construction will be responsible for pulling cable through the HDPE conduit for the connection at the existing light pole/junction box.
- ___ Modification...delivery of existing equipment to Traffic Services Maintenance facility. (see streetlight disassembly instruction)
- ___ Modification...disturbed grassy areas to be re-sodded, medians to be re-seeded.

Voltage Drop Calculations

- ___ voltage drop calculations required for all new circuits connecting to an existing circuit.

3.11 TRAFFIC CONTROL PLAN

- ___ Pavement connections or encroachments to Collectors and Thoroughfares require PROJECT SPECIFIC traffic control plan.
- ___ Conforms with [MUTCD](#) and [City of Overland Park Traffic Control Handbook](#)
- ___ Must include plan for non-work times (non-work periods)
- ___ Includes dimensions for distances between warning signs & channelizers
- ___ Type III barricades shown to keep proposed streets closed until street opened to public

3.12 DETAIL SHEETS

- ___ Entire detail must be included – do not re-arrange or piecemeal detail
- ___ Check for usage of current [Standard Details](#) – updated annually
- ___ Customized or non-standard details must be sealed by design engineer.
- ___ Customized or non-standard details must not use City title block
- ___ All PUBLIC INFRASTRUCTURE and PRIVATE STORM SEWERS require KCMMB concrete mix designs.

3.13 MISCELLANEOUS ITEMS/OTHER PERMITS

- ___ [KDHE Notice of Intent \(NOI\)](#) signed application must be submitted for projects >1 acre.
- ___ Kansas Dept of Agriculture Division of Water Resources ([KDA-DWR](#)) approved permit must be obtained for work in SFHA or streams with 240+ acre watershed
- ___ Corp of Engineers Section 404 Permit must be obtained for work in Jurisdictional Waters of the US.
- ___ KDOT right of way work permit required prior to work in state right of way
- ___ Reasonably Safe from Flooding criteria – Any buildings constructed in areas previously removed from the SFHA by fill must conform to [FEMA Tech Bulletin 10-01](#). See ES Policy 3-101 for information.