

WARRANTY INSPECTION CHECKLIST STAGE 7

This checklist shall be completed by Developer's Representative prior to City Engineering's warranty inspection.

This completed checklist shall be submitted prior to warranty inspection expiration.

(This list is not all inclusive, other information may also be required)

Project Name: _____
 City File No.: _____
 Developer's Representative: _____
 Date Submitted: _____

All submitted construction drawings must include and reference the current version / latest revision of any / all applicable City of Missoula Standard Drawings (STD-*nnn*). Prior to submittal, please review the City of Missoula website for current standard drawings;

[Standard Drawings](#)

STANDARD DRAWING SECTION	STANDARD DRAWING NUMBER
Curbs, Sidewalks and Driveways	STD-1nn
Streets	STD-2nn
Sanitary Sewer	STD-3nn
Miscellaneous	STD-4nn
ADA and Parking	STD-5nn
Storm Drainage	STD-6nn
Traffic Control Plans	TC- <i>nnn</i>

(All efforts are made to communicate revisions; however, standard drawings may be revised with or without notice.)

STAGE #	STAGE PROCESS
1	Sewer Availability
2	Sufficiency Review Checklist
3	Preliminary Construction Plan Review Checklist
4	Release For Construction (RFC) Plan Checklist
5	Final Construction and Inspection Checklist
6	Documentation, As-Built and Testing Checklist
7	<i>Warranty Inspection Checklist</i>

**DEVELOPER REPRESENTATIVE'S WARRANTY
INSPECTION RESULTS**

Warranty Expiration Date: _____

Developer Representative's Warranty Inspection Date: _____

Warranty Issues: _____

Mitigation/Corrective Action: _____

(Attach Deficiency List)

SURFACE INFRASTRUCTURE

STREETS & ALLEYS – Paving (including; Private Roads, Short Courts, Cul-de-sacs)

Stage 2, 3, 4, 5, 7

Refer to Article 3 of the City Subdivision Regulations or the Missoula City Public Works Standard Specifications for other projects

- _____ Public street / roadway
- _____ Private street / roadway / drive – shall be curbed
 - _____ Surface; sealed, honeycombed (open-graded), flushing, roller-marks, uniformity, clean, ponding
 - _____ Seams / Joints; visible, adequate compaction, workmanship, expansion joint placement
 - _____ Edge Grade; flush with concrete gutter – three-eighths (3/8”) inch maximum tolerance, must be flush at ADA accessible ramps
 - _____ Edge Alignment; flush with concrete gutter – three-eighths (3/8”) inch maximum tolerance
 - _____ Edge Alignment (no curb); shouldering
- _____ Cul-de-sac – verify constructed as per submitted and approved plans
- _____ Short court – verify constructed as per submitted and approved plans
- _____ Overflow parking – verify constructed as per submitted and approved plans
- _____ Sight obstruction / visibility triangles; NO structures permitted in visibility triangle
- _____ Bridges / Culverts – verify constructed as per submitted and approved plans
- _____ Temporary turn-around, required at phase break(s) – secured area; pin-down curbs, construction fencing, signage – see Signing and Striping Plan
- _____ Other

Comments

TRAFFIC MANAGEMENT -- (must fully conform with MUTCD, FHWA and MT DOT)

Stage 2, 3, 4, 5, 7

Must satisfy all requirements for; location, design criteria, minimum radii, landscaping and irrigation, signing and striping, pedestrian facilities and maintenance agreements

- _____ Round-a-bout(s); location, design, functional; ADA compliance
 - _____ Constructed as designed; width, length, landscaping, etc.
- _____ Traffic circle(s); location, design, functional; ADA compliance

- _____ Constructed as designed; width, length, landscaping, etc.
- _____ Bulb-out(s); location, design, functional; ADA compliance
- _____ Constructed as designed; width, length, etc.
- _____ Mid-block pedestrian crossing(s); location, design, functional; ADA compliance
- _____ Constructed as designed; width, length, signing / striping, etc.
- _____ Chicane(s); location, design, functional compliance
- _____ Constructed as designed; width, length, etc.
- _____ Medians / island(s); location, design, functional compliance
- _____ Constructed as designed; width, length, etc.
- _____ Raised crosswalk(s); location, design, functional; ADA compliance
- _____ Constructed as designed; width, length, etc.
- _____ Speed table(s); location, design, functional; ADA compliance
- _____ Constructed as designed; width, length, etc.
- _____ Other

Comments

SIGNING AND STRIPING --
(must fully conform with MUTCD, FHWA and MT DOT)
Stage 3, 4, 5, 7

- _____ Sign Plan; location, type, application, etc., per standard drawing
- _____ Sign material specifications; retro-reflectivity (high-intensity), dimensions - thickness, height, width, symbols, etc.
- _____ Sign mounting / base
- _____ Sign Text; wording / verbiage / message(s) / block numbers, etc.
- _____ Striping Plan; location, material, application, etc. – center line, fog line, skip line, stop bar, bicycle lane, messages, symbols, etc., per standard drawing
- _____ Striping Material Specifications; paint thickness (coverage), water-borne epoxy, retro-reflectivity, color, glass bead application, etc. – no runs, thin areas, etc.
- _____ Traffic Control Devices (traffic signals); signal type, location, material, application, etc. – LED, lighted, properly sequenced, etc.
- _____ Other

Comments

DRIVEWAYS – Access / Approaches

Stage 2, 3, 4, 5, 7

Refer to Article 3 of the City Subdivision Regulations or the Missoula City Public Works Standard Specifications for projects that are not subdivision related

- _____ Location (multiple / shared, public / private street / road / drive / alley, etc.)
- _____ Distance from intersection; minimum distance from intersection or crosswalk

- _____ Width of approach(es), curb cut, must be constructed perpendicular (ninety (90°) degrees) to the adjacent street
- _____ Grades; eight (8%) percent maximum
- _____ Cross-section; as applicable to driveways, drainage cuts / fills, base / asphalt / concrete depth
- _____ Construction cross-section specifications and design (curb thickness, base thickness, mix design, testing, type and location of pedestrian facilities / sidewalks)
- _____ Other

Comments

PEDESTRIAN ACCESS – Non-Motorized Facilities; Sidewalks, Trails, Bicycles

Stage 2, 3, 4, 5, 7

- _____ Sidewalk design
 - _____ Location; both / one side(s) of street, other / additional location(s)
 - _____ Width, cross-section, material, etc. – standard drawings
 - _____ Sidewalk and boulevard width per approved construction plans
 - _____ Construction cross-section specifications and design (concrete sidewalk thickness, base thickness, jointing, mix design, testing, type and location of pedestrian facilities / sidewalks)
 - _____ Backfill boulevard and adjacent to sidewalk
- _____ ADA compliance; location, width, ramps / grades, landings, cross-slope, detectible warning / truncated domes, etc.
- _____ Trail (width, location)
- _____ Connections; between on-site pedestrian facilities, parks, common area(s), with adjacent property(ies) / subdivision(s), etc.
- _____ Street-crossing (mid-block, bulb-out, etc.)
- _____ Bike lanes (width, location)
- _____ Bridges, non-motorized access; pedestrians, bicycles, trails, etc.
- _____ Other

Comments

PARKING – Overflow

Stage 2, 3, 4, 5, 7

- _____ Location; distance from intersections, access, type; parallel, head in / back in, angled: 90°, 60°, 45°
- _____ Dimensions; length, width
- _____ Grading and drainage
- _____ Parking signage
- _____ Pedestrian access; connection to sidewalks, trails, etc.

_____ ADA compliance; width, ramps / grades, landings, cross-slope, etc.
_____ Other

Comments

BUS STOPS

Stage 2, 3, 4, 5, 7

_____ Location; distance from intersections, signing, configuration, standard drawings
_____ Pedestrian Access; connection to sidewalk, trails, etc.
_____ ADA compliance; width, ramps / grades, landings, cross-slope, etc.
_____ Other

Comments

SURFACE DRAINAGE

Stage 2, 3, 4, 5, 7

_____ Natural drainage; existence both on-site and off-site
_____ Floodplain limits; as per current FIRM mapping
_____ Riparian areas / zones
_____ Storm drainage; calculations, on-site, off-site, collection / retention / detention, and source areas (see also 'STORM SEWER' section below in 'UTILITY INFRASTRUCTURE' review)
_____ Surface drainage – existing and proposed; calculations, cross-sections, overflow, crossings: culvert / bridge sizing, vegetation, etc.
_____ Surface drainage – project / development / subdivision / individual lots
_____ Swales: between lots and throughout project / development / subdivision
_____ Rain Gardens: between lots and throughout project / development / subdivision
_____ Shallow ground water storage systems: between lots and throughout project / development / subdivision
_____ Structures: inlets; beehive, grated, veined, etc.
_____ Covenants and maintenance agreements
_____ Building permit conditions / specific requirements for individual lots
_____ Other
_____ Foundation drains (separate system for foundation drains on hillside development)
_____ Maintenance; public / private, homeowner's association, agreement(s)
_____ Structures: inlets, sumps, manholes; location, design, capacity, etc.
_____ Other

Comments

EROSION CONTROL (must fully conform with EPA and MT DEQ)

Stage 2, 3, 4, 5, 7

Applies to and is required by MT DEQ and the City of Missoula on any / all projects greater than one (1) acre in size – include any / all access routes in calculation of the one (1) acre threshold. SWPPP Permit fees are based on acreage of disturbance.

**State of Montana AND City of Missoula SWPPP Permit
are REQUIRED PRIOR to ANY
site (project / development / subdivision) disturbance**

- _____ Montana DEQ Notice of Termination (NOT); one (1) copy required – *if / when applicable*
- _____ Montana DEQ Permit Transfer Notice (PTN); one (1) copy required – *if / when applicable*
- _____ SWPPP (Storm Water Pollution Prevention Plan) and City of Missoula SWPPP permit required, annual renewal of State and City SWPPP permits is also required;
- _____ Reference to and include City of Missoula standard drawings, where applicable
- _____ Apply specific treatments
- _____ Apply to specific locations
- _____ Include design specifications
- _____ BMP (Best Management Practices); specifications
- _____ Maintenance responsibility(ies); must remain in place and be maintained throughout the duration of all site development and individual lot construction up to seventy (70%) percent construction and / or re-vegetation of disturbed area
- _____ Other

Comments

OTHER INFRASTRUCTURE REQUIREMENTS - (if applicable)

Stage 5, 6, 7

If applicable, documentation (letter, email, photographs, etc.) is attached / included, that the following additional City of Missoula agencies and related interested parties have approved the pertinent requirements, including but NOT limited to:

- _____ City Parks and Recreation Department (*boulevard trees, sprinkler systems, parks, open spaces, etc.*)
- _____ City Fire Department (*fire protection / combustible construction, hydrants, equipment / fire truck access, etc.*)
- _____ City Police Department (*life safety issues, emergency services access, property and structure(s) visibility, etc.*)
- _____ City Building Division (*structure / construction, code requirements, etc.*)

- _____ Office of Planning and Grants (OPG) (*zoning, subdivision regulations, conditions of approval, boulevard improvements, floodplain administrator, etc.*)
- _____ City-County Health Department (*air quality, water quality, food service, etc.*)
- _____ Missoula Parking Commission (*Central Business District [CBD], University Parking District*)
- _____ Missoula County Public Works Department (*overlapping projects, generally dry-laid sanitary sewer*)
- _____ Mountain Line (*bus structures and access*)
- _____ Missoula Redevelopment Agency [MRA]
- _____ Montana Department of Transportation [MDT] (*Federal and State motor vehicle / transportation routes*)
- _____ University of Montana [UM] (*University related projects*)
- _____ Montana Rail Link [MRL]
- _____ Irrigation / Ditch Company District
- _____ Other

UTILITY INFRASTRUCTURE

SANITARY SEWER

Stage 2, 3, 4, 5, 7

- _____ Type (Gravity, S.T.E.P., Force, Dry lay)
- _____ State D.E.Q. approval letter
- _____ County review for additional county rules and regulations
- _____ Conformance to City, County and State specifications and requirements; thrust restraint on mains over 20% grade, ownership, etc.
- _____ Structures; location, access, include easements
- _____ Manholes; location, access, type
- _____ Gravity mains; location, sizing, profile, separation, specifications, calculations, etc.
- _____ Lift stations; location, sizing, access both to site and internal, security, specifications, etc.
- _____ Force mains; location, sizing, profile, ports, valves, etc.
- _____ S.T.E.P. systems and appurtenances designed and engineered for commercial use
- _____ S.T.E.P. mains; location, sizing, profiles, ports, valves, etc.
- _____ S.T.E.P. Tanks and appurtenances; residential, commercial and community
- _____ Floodplain requirements
- _____ Shallow groundwater requirements
- _____ Stub-outs; location, property marked
- _____ Specifications; pipe type(s), sizing, bedding, gradations, marking and compaction
- _____ Number and location (by lot) of stub-outs for auditing and permitting purposes
- _____ Other

Comments

STORM SEWER

Stage 2, 3, 4, 5, 7

- _____ Type (Gravity, S.T.E.P., Force, Dry lay)
- _____ Conformance with current E.P.A. and state (MT D.E.Q.) rules, regulations and practices
- _____ Mains; location, sizing, profile, separation, specifications, calculations, etc.
- _____ Appurtenances; manholes, inlets, grates, outfalls, diffusers, beehives, etc.
- _____ Access; appurtenances, collection / retention / detention systems, etc.
- _____ Specifications; pipe type(s), sizing, bedding, gradations, marking and compaction
- _____ Shallow groundwater requirements
- _____ Other

Comments

WATER (reviewed by Mountain Water Company and City Fire Department)

Stage 2, 3, 4, 5, 7

- Conformance with current state (MT D.E.Q.) rules, regulations and practices
- Mains; size, location, valves, separation, etc.
- Stub-outs; location, property marked
- Fire protection; mains to structures: commercial, industrial and residential
- Hydrants; location within 500 feet, clear zone, charged, verified and approved by Fire Department
- Specifications; pipe type(s), sizing, bedding, gradations, marking and compaction
- Other

Comments

LIGHT UTILITIES

Stage 2, 3, 4, 5, 7

- Master Plan
- Gas; location, placement of related appurtenances, etc.
- Electric; location, placement of related appurtenances, street lights, etc.
- Communications – telephone, television, etc.; placement of related appurtenances
- Other

Comments

APPLICANT'S CERTIFICATION:

I have reviewed all information and to the best of my knowledge all requirements have been satisfied and this submittal is true and accurate.

Developer Representative's Signature

Date