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## **Chapter 1 Goals and General Policy**

### **1.1 Goals**

This Design and Construction Standards Manual, for the City of Harrisonburg, Virginia was developed to promote and encourage orderly and quality development and redevelopment by establishing reasonable, technically accurate guidelines and standards for public facilities constructed in the City.

This Manual is intended to provide design and construction standards which promote an economical use of public and private funds while protecting environmental quality and the quality of life for the community. The City of Harrisonburg encourages innovative approaches to land development that support this Manual's broad goals of promoting the general welfare and protecting against water pollution, transportation danger and congestion, and loss of life health or property from fire or other dangers.

This Manual is intended to remain flexible and to be responsive to the needs and concerns of the public. Comments and recommendations for revisions to this Manual are encouraged. Included within the Appendix is a "Proposal for Change" form. An administrative committee shall review this Manual and all proposals for change on an annual basis. This committee may make recommendations to City Council for changes to the Manual, which are subject to adoption following a public hearing. The City Attorney may amend the Forms of Easement included in Appendix G on an as-needed basis.

### **1.2 General Policy**

#### **(1.2.1) Purpose**

The purpose of this manual is to establish standards for the design and construction of facilities intended to be publicly accepted as a portion of subdivision or development plans within the limits of the City of Harrisonburg, Virginia. Construction plans for water supply, fire protection, sanitary sewer, storm drainage, erosion and sediment control, streets, bridges, and other related items shall conform to the standards in this Manual.

These standards are intended to supplement and reinforce the City of Harrisonburg Subdivision Ordinance, Zoning Ordinance, The Erosion and Sediment Control Ordinance, the Stormwater Management Ordinance, Comprehensive Plan and other City Ordinances dealing with public facilities. In the event that these standards conflict with any other City Ordinance, State Statute or Federal regulation, the most stringent requirement shall apply. These standards establish the minimum requirements for design and construction of public facilities. The City Engineer, Director of Public Utilities or Director of Public Works may impose standards and/or requirements related to their specific area of expertise which are more stringent than those contained in this Manual, when required for critical areas or special conditions.

Criteria for private entrances, parking areas and drives, utility services, drainage, erosion control, stormwater management, retaining walls, lighting and other items is included to ensure adequate private facilities are provided as necessary for public safety and compliance with other City ordinances.

### **(1.2.2) Guidelines for Using Manual**

(1.2.2.1) This Design and Construction Standards Manual shall be read and applied in conjunction with the Harrisonburg Subdivision Ordinance and Zoning Ordinance, the most recent adopted Comprehensive Plan, and any other pertinent adopted planning and policy documents.

(1.2.2.2) Unless obvious construction of the wording indicates otherwise, words used in the present tense include the future tense, words used in the singular number include the plural number (and vice versa), and words in the masculine gender include the feminine.

(1.2.2.3) The word “shall” is mandatory.

(1.2.2.4) The word “may” is permissive at the discretion of the department head of the department from which the requirement originates.

(1.2.2.5) The word “development” when used alone shall mean subdivisions or development plans.

(1.2.2.6) Titles of City personnel used in this Manual are those at the time of adoption and are subject to periodic changes.

### **(1.2.3) Severability**

Should any section or provision of this Manual be decided by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the

Manual as a whole, or any section thereof, other than the section or part thereof so held to be unconstitutional or invalid.

### **1.3 Procedures**

#### **(1.3.1) Site Development Plan**

A complete site development plan is required for projects involving:

- (1.3.1.1) Extension or change of a public water or sewer main,
- (1.3.1.2) Installation or change of a public hydrant,
- (1.3.1.3) Installation or change of a public water or sewer pump facility,
- (1.3.1.4) Installation or change of a public water storage facility,
- (1.3.1.5) Installation or change of a public water or sewer treatment facility or installation or change of a private sewer pretreatment facility,
- (1.3.1.6) Grading or encroachment upon a public water or sewer main or respective easement,
- (1.3.1.7) Installation of service connections, which in the opinion of the Director of Public Utilities present atypical concerns such that an availability/connection certification cannot be obtained. Re: Appendix D
- (1.3.1.8) Extension or widening of an existing street,
- (1.3.1.9) Installation of a new street,
- (1.3.1.10) Extension of, modification of, or construction of a new storm drain system,
- (1.3.1.11) Installation of a storm water best management practice (i.e. detention pond, bioretention basin, special inlet, ditches, etc.),
- (1.3.1.12) Disturbed area greater than 10,000 square feet,
- (1.3.1.13) Construction, reconstruction, grading or other work proposed in any floodplain zoning district, regardless of project scope,
- (1.3.1.14) Utility installation within city right-of-way,

(1.3.1.15) Any combination of site, building and/or utility improvements deemed by the City Engineer, Zoning Administrator, Public Works Director or Public Utilities Director to be significant enough to warrant comprehensive review.

### **(1.3.2) Certification**

Plans for all public facilities shall be prepared by a licensed professional certified to perform the work in the Commonwealth of Virginia. The submitted checklist, the cover sheet, and each plan sheet or calculation package shall bear the professional seal and signature of the design professional of record. Each shall be appropriately dated.

### **(1.3.3) Costs**

The developer is responsible for all costs incurred in planning, constructing, installing and testing of all public facilities required to complete the proposed project. Before site plan review begins, the developer shall pay all fees applicable for the review by the City Staff or State or Federal Agencies.

The maintenance of public facilities shall be the responsibility of the developer until such time as the completed facilities have been accepted by the City and appropriate maintenance bond has been posted.

### **(1.3.4) Compliance**

Designs submitted for all erosion control and public facilities shall be in compliance with the standards cited in this Manual unless otherwise approved by City staff. Justifications for any deviations from these standards shall be provided. The City may require changes in designs which are not in substantial compliance with this Manual and which are not adequately justified by the engineer/owner.

Should the applicant and City plan review staff disagree on the application of a standard, the applicant may appeal to the City Council to render a decision.

### **(1.3.5) Approval Required**

Prior to beginning any project including work listed in 1.3.1 above, plans must be approved by the City Engineer as meeting the requirements contained in this Manual, and applicable permits issued.

Included within the Appendix of this Manual is a checklist of site plan requirements. The purpose of the checklist is to identify minimum requirements of prepared drawings, which must be present during preliminary screening to initiate a comprehensive review.

### **(1.3.6) Plan Review and Approval**

After submission of plans to the Department of Community Development, prepared in accordance with the requirements of this Manual, and upon submission of the certified checklist and appropriate fees, the plans will be reviewed by the City. Plans, together with accompanying specifications, shall contain sufficient drawings, details, dimensions, profiles and notes to adequately describe and delineate the location of the site, the existing topography of the site and the extent and nature of the work to be done. Such plans will be approved if they demonstrate substantial compliance with the design criteria set forth in this Manual and if the public and private facilities as constructed or modified will be able to function. Refer to separate site plan review policy for additional information. Noted below are requirements for submission of appropriate bonds required for plan approval.

Under certain conditions, approval by others shall be a prerequisite to approval by the City:

Virginia Department of Health:	Section 4.2
Virginia Dept. of Environmental Quality	Section 4.2
Virginia Dept. of Transportation	Section 4.4.1 & 4.4.11.2
VA Dept. of Conservation & Recreation	Section 2.5
Railroads	Section 4.4.11.3
Private Property	Section 4.4.2

After receiving notification of approval of plan requirements, the requested number of plans shall be submitted to the City Engineer, together with the required bond and other prerequisite documentation, for signature of acceptance. All sets of approved plans will be stamped by the City Engineer and distributed upon release of Land Disturbing Permit. The approved plans shall allow for the permitting process to continue and shall be valid for five years, otherwise requiring re-submittal for approval if construction has not started or becomes inactive. Specific language in the Code of Virginia determines the validity and schedule for previously-approved plans.

### **(1.3.7) Bonding Procedure**

#### **(1.3.7.1) Construction bond cost estimate**

The Developer or his agent shall submit a detailed, itemized cost estimate of all erosion control, stormwater management and public facilities required for the proposed project to the Department of Community Development with the final construction plans. Cost estimate for bonding shall be based upon City standard unit prices, a listing of which is available from the City Engineer or from the Department of Community Development website.

### (1.3.7.2) Performance (Construction) Bond

Before final construction plans will be approved by the City Engineer, or before issuance of a Land Disturbing Permit for any project, the Developer or his agent shall submit a performance bond with surety, irrevocable letter of credit, cashier's check or any surety form approved by the City Attorney to ensure that measures could be taken by the City at the developer's expense should he fail to complete the public facilities, stormwater management and erosion control measures required for the project within the specified time frame.

For such surety that contains an expiration date, the permittee will be notified by the City Engineer 45 calendar days prior to that expiration date that an approved extension or new bond will be required. If the Department of Community Development does not receive an extension or new bond within 20 calendar days prior to the original's expiration, action will be taken to draw upon the original to allow the City to complete the installation of erosion control and public works facilities. At that time, all construction permits will be revoked and continued work at the project will place the Developer, the contractor or other associated parties in violation of City Code.

Additional bonding requirements are included in Section 1.3.8 of this Manual.

### (1.3.7.3) Maintenance Bond

Prior to the release of the performance bond or the acceptance of public facilities by the City, the Developer or Owner shall submit a maintenance bond in the amount of ten percent (10%) of the construction costs of the public works and water and sewer facilities. The maintenance bond shall run for one year from date of acceptance of the facilities and shall be used by the City to pay repair expenses of latent defects discovered during said year. In a non-emergency situation, the bond holder will be given a reasonable time to make any necessary repairs prior to the City making claim to the bond.

## **(1.3.8) Construction Schedule**

(1.3.8.1) Prior to accepting a bond for public improvements, developers will be required to sign an agreement with the City that establishes a fixed construction schedule. Such schedule shall be set assuming a diligent effort will be made to complete the project or project phase. This agreement must be co-signed by person named as the responsible party on the bond if other than developer

(1.3.8.2) Projects must be phased, and individual bonds and schedules provided, to reduce the potential for occupied houses or businesses along

incomplete or unaccepted streets. Construction plans must provide for delineation of phased construction per Section 2.2 of this Manual.

(1.3.8.3) Time periods for bonds shall be set based on established schedules for the project, and must be acceptable to the City.

(1.3.8.4) Notice will be given to the developer within 30 days of the established completion date if the construction remains incomplete at that time. Where extreme weather or other unforeseen circumstances occur, beyond the developer's control, a time extension will be considered. Status of lot development or building completion will not be considered. If approved, the agreement will be amended to reflect a revised completion date.

(1.3.8.5) The notice in 1.3.8.4 will include a statement that the City will make claim on the bond, letter of credit, etc. should the project remain incomplete on the established (or revised) completion date. The notice will be copied to the surety company or bank as appropriate.

(1.3.8.6) Project (or project phase) will be considered complete only when all public facilities are accepted, and critical disturbed areas are stabilized.

(1.3.8.7) The developer will be responsible to schedule work to allow the City inspectors (and other staff as appropriate) to develop a "punch list" of items remaining to be completed. This must be done far enough in advance to allow time for completing these items by the established completion date. However, it should not be at any time before the contractor considers the project substantially completed.

(1.3.8.8) The developer will be responsible for maintenance of all public facilities until such time as they are accepted by the City. This includes responsibility for removing snow and ice from streets where any businesses, houses or other dwellings are under construction or have been occupied. Failure to do so may cause the developer to be charged should the City be forced to provide this service in the interest of public safety.

(1.3.8.9) Bond reductions will be granted as work progresses. However, such reductions will be on the unit price items only. The total Engineering & Administrative Contingency will be held until project is completed and remaining bond released.

(1.3.8.10) The required one-year maintenance bond for public facilities may be provided separately or by addendum to the public facilities bond. In either case, it shall be accepted only after the project or project phase



is completed and accepted, so that the bond expiration date can be set accordingly.

(1.3.8.11) The City will expect that agents, other than the owner or developer, who are the responsible party named on the surety (bond, letter of credit, escrow, etc.) are aware that in doing so they accept the responsibility to complete the project. The City will not delay or withdraw claiming of the surety because of any third party, private contractual arrangement.

### **(1.3.9) Pre-Construction Conference(s)**

Prior to the issuance of an Land Disturbance Permit and the start of construction of any project involving proposed erosion control or public facilities, a pre-construction conference(s) shall be held.

The purpose of the meeting(s) shall be to discuss implementation of erosion control measures, coordinate the construction plan and schedule, and review traffic control plan for work within city right-of-way.

The developer, the contractor, affected public works department representatives and the City's Public Works Inspector may be requested to attend this conference. Arrangements for this conference shall be made through the office of the City Engineer. If all requirements have been met, the LandDisturbing Permit may be released at the close of this meeting.

Should a significant amount of time pass between the issuance of the land disturbing permit and construction start date, it is recommended that the aforementioned parties hold a second pre-construction conference to reconfirm project specifics.

### **(1.3.10) Revisions to Approved Plans**

Any significant deviation from approved plans and specifications must be approved in writing by the City of Harrisonburg and other agencies, if applicable, by written change order format. Requests for such deviations shall be presented to the City Engineer and be accompanied by revised plans. The City Engineer shall determine which departments are required to review the requested modifications and will oversee the implementation of this process. Substantial change may justify resubmission of the plans into the site plan review process.

### **(1.3.11) Acceptance of Public Facilities**

#### **(1.3.11.1) Provisions:**

A “Certificate of Substantial Completion” shall be issued at such time that the City of Harrisonburg, Va. will commence perpetual maintenance of public facilities. Facilities as denoted refer to water, sanitary sewer, streets, drainage, erosion control and other construction which has been intended within the scope of work as determined by the contents of the approved drawings and other documents.

The City Engineer, the heads of departments of which the responsibilities for perpetual maintenance shall belong and the head of public works inspection may jointly declare a project as being substantially complete. This declaration shall include water, sewer and all public works facilities as proposed in its entirety. Water and sewer facilities, however, may be declared substantially complete prior to other public facilities as proposed.

Where construction requires water transmission mains of size greater than 12”, pumping, storage or treatment, the developer or his agent shall provide a “Certificate to Operate” as issued by the Virginia Department of Health.. In addition, approval shall be provided as issued by the City Building Inspections Office.

Where construction requires sewer transmission mains, forced sewer pumping or treatment, the developer or his agent may be required to provide a “Certificate to Operate” as issued by the Virginia Department of Health/Department of Environmental Quality-Water Division and/or the VADEQ as applicable. In addition, approval shall be provided as issued by the City Building Inspections Office. Where construction requires sanitary sewer pretreatment facilities, the developer or his agent shall provide a statement of acceptance by Harrisonburg-Rockingham Regional Sewer Authority.

All referenced certificates for water and sewer facilities shall be required as a prerequisite to establishing billing accounts and setting water meters.

#### **(1.3.11.2) Formal Procedure**

Upon completion and testing of all water and sewer mains and/or upon completion, testing and placing in service of all proposed public street facilities; upon dedication of all required right-of-way and easements, and upon stabilization of all disturbed areas in accordance with the approved erosion control plan, the Harrisonburg City Engineer, at the request of the developer or his agent, shall schedule a final inspection.

A “Final Inspection” shall be conducted within seven (7) working days of the submitted request.

Upon completion of a final inspection and the correction of deficiencies, if any, noted during the final inspection and prior to final acceptance, and upon submission of all required documents, (i.e. outside agency certificates, maintenance bond, easements and as-built documentation) the City Engineer may issue a formal acceptance of the completed public facilities. The City will accept ownership of any maintenance responsibilities for such facilities on the effective date of the Certificate of Substantial Completion.

(1.3.11.2) Interim Operation of Public Water & Sewer Utilities:

During construction but prior to formal acceptance of public facilities, the City may permit installed and tested (passed) water and sewer facilities to be put into service. In such cases the developer shall enter into a maintenance contract with the City, by which the developer agrees to reimburse the City for any operational, maintenance or repair fees associated with the facilities up to the date of formal acceptance. Said agreement shall be terminated upon issuance of the Certificate of Substantial Completion.

#### **1.4 Prerequisite of Building Permit**

Approval of development plans may be used as a conditional prerequisite for a building permit on individual sites within the project. Each Department Head may issue a statement that can be provided to the Building Permit Officer, if required, and will acknowledge the future availability of adequate public facilities. Such statements may be issued when the proposed work of approved plans will meet the specific public works requirements. This statement shall indemnify the City from the responsibility of completion schedule. The building permit applicant shall acknowledge the conditional provision in writing.

All Certificates of Occupancy for buildings located on streets not yet accepted into the City’s maintenance system will be held until the owner and/or contract purchaser provide a written statement acknowledging maintenance responsibilities and limitations on City service delivery until the street facility is accepted into the City system. This written statement submitted prior to issuance of the Certificate of Occupancy must be signed by the subdivision developer, contract purchaser and/or landowner (whichever parties are applicable) and the written statement shall read:

*“The undersigned hereby acknowledge they are aware that \_\_\_\_\_(address)\_\_\_\_\_ is located on a street which has not been accepted into the City’s maintenance system. Until the developer has completed all construction and the street has been inspected and accepted by the City, there will be services the City will not provide to this street, including maintenance and snow/ice removal. The provision of these services is the responsibility of parties other than the City (i.e., developer) until the street is accepted by the City.”*

### **1.5 Police and Fire Protection**

Police and fire protection will be provided to all persons and corporations within the City, however, such protection may be deemed somewhat less than adequate prior to the installation, testing and placing into service of the necessary fire protection water mains and the construction of all-weather access to the properties and structures for which such protection is required.