

**DATE:** February 15, 2017

**TO:** Michael O. Geisel, P.E.  
City Administrator

**FROM:** James A. Eckrich, P.E.  
Public Works Director / City Engineer

**RE:** Public Works Policies 30-44



*Please forward to  
PPW. mwg  
2/15/2017*

As you have directed, the City Staff has begun the process of comprehensively reviewing all City Council policies to ensure those policies are current and followed. There are 53 policies in the Public Works and Parks portion of the City Policy Manual. City Council has previously reviewed and approved, deleted, or modified Policies 1 – 29. I am hereby submitting my recommendations for Policies 30 – 44. A summary of the recommendations for each policy is as follows:

- 30-32) Subdivision Escrow and Inspection Procedure, Escrow Release, and Escrow Management: The requirements for Escrows are detailed in Section 31-02-12 of the Unified Development Code. The Public Works Department and Planning and Development Services Departments have internal procedures which ensure compliance with the Code. These are not "Policies" and should be deleted.
- 33) Required Information of Plot Plans: Plan requirements are detailed within Section 31-02-11 of the Unified Development Code. This is an internal checklist and not a "Policy". It should be deleted.
- 34) Vertical Curbs: This policy is not current and should be deleted. Rolled curbs are allowed.
- 35) Sidewalk Widths: These requirements for sidewalk are contained in the Unified Development Code Section 31-04-08(G). This Policy should be deleted.
- 36) Street Cross Sections: Requirements for streets are detailed within Section 31-04-09 of the Unified Development Code. This Policy should be deleted.
- 37) Streambank Erosion Assistance: An updated Policy, including the current brochure, is attached. Recommend replacing the existing Policy with the proposed Policy, which details how Staff assists residents with erosion problems on private property.
- 38) Street Snow Removal Recoupment Program: The existing Policy is current for the most part and has gone through several revisions, the most recent of which occurred in 2013. However, the Policy should be revised to reflect that the program is submitted to the Planning and Public Works Committee each fall for a funding recommendation, and then to City Council for approval.

- 39)Parks Rules and Regulations: This Policy is being removed from the Public Works section of City Policies and will be located in the Parks, Recreation and Arts section. A revised Policy was approved at the February 6, 2017 City Council meeting, as recommended by the Parks, Recreation, and Arts Committee.
- 40)Vertical Curbs: This Policy is not current and should be deleted. Similar to Policy 34, rolled curbs are allowed.
- 41)Sanitary Sewer Lateral Tax Refund Program: This Policy is current. Recommend no changes.
- 42)Pavement Specifications and Acceptance Policy: This Policy is current. Recommend no changes.
- 43)City Employee Admission to the Family Aquatic Center: This Policy is being removed from the Public Works section of City Policies and will be located in the Parks, Recreation, and Arts section. A revised Policy was approved at the February 6, 2017 City Council meeting, as recommended by the Parks, Recreation, and Arts Committee.
- 44)City Hall Rental and Use Policy. This Policy was updated in 2013 and is current. Recommend no changes.

A summary of the Staff's recommendation for policy revisions is as follows: **The City Staff recommends that Policies 30-36 and 40 are deleted, 37 and 38 are revised, 39 and 43 are removed from the Public Works section, and 41, 42, and 44 are retained with no changes.**

Should you have questions or need additional information, please let me know.

### **Action Recommended**

These fifteen policies should be presented to the Planning and Public Works Committee for consideration. Should PPW concur with Staff's recommendation, it should vote to authorize Staff to submit these policies to City Council for approval. The next set of policies will be submitted to PPW in the near future for a similar review. That submittal should include all of the remaining policies and conclude the review of Public Works policies.

CITY OF CHESTERFIELD  
POLICY STATEMENT

<b>PUBLIC WORKS</b>		<b>NO.</b>	30
<b>SUBJECT</b>	Subdivision Escrow and Inspection Procedure	<b>INDEX</b>	PW
<b>DATE ISSUED</b>	9/9/1997	<b>DATE REVISED</b>	6/7/2004

**POLICY**

Developers are required to post escrow guaranteeing the installation and maintenance of subdivision improvements. The Department of Planning handles the establishment of escrows and maintenance deposits; the Department of Public Works manages escrows and maintenance deposits and inspects construction.

1. The Department of Public Works prepares and updates a unit cost schedule for items typically required in escrow. Data is generally updated on an annual basis; however, adjustments are made as needed. The cost schedule is maintained in the g:\escrow\origesc.xls file.
2. The developer submits record plats to the Department of Planning and escrow quantities to the Department of Public Works for verification of quantities and calculation of required escrows.
3. The Civil Engineers prepare itemized cost estimates and the escrow card for the subdivision and forward the escrow card to Planning. Information is stored in the g:\escrow directory and is identified by subdivision identification code number and escrow (plat); typically in the form of 113escrow. or 113esc\_p11.

The Civil Engineers also estimate the number of hours required for inspection of the subdivision improvements, advise the developer of the amount of deferred inspection fees required to be deposited, and collect the fees prior to approval of the record plat.

4. The Director of Planning or the Director of Public Works may require any specific improvement to be installed prior to approval of the record plat where failure to install such improvement prior to further development could result in damage to the site or surrounding properties.

5. The Department of Planning sends the escrow information along with standard escrow agreement and maintenance deposit agreement forms to the developer. At least 10 days prior to the City Council meeting at which the record plat is to be approved, the developer returns four (4) originals of each form, executed by the escrow holder and the developer.
6. After the plat is approved, the Department of Planning has all forms fully executed by the City and sends one fully executed original each to the escrow holder, the developer, the Department of Public Works (Supt. Of Engineering) and the subdivision file.
7. The Superintendent of Engineering enters the escrow, maintenance, developer and escrow holder data into the Escrow Tracking System. The Superintendent also enters plat approval information into the record plat spreadsheet that is used to track new infrastructure and complete financial reports related to GASB34.
8. The Department of Planning prepares a reduced copy of the address plat, updates the address plat binders, and inputs the lot information into the Chesterfield Information Database (CID) within 2 weeks after the record plat is approved by City Council.
9. The developer submits two (2) recorded copies of the record plat to the Department of Planning within one month of approval. Zoning authorizations will not be issued until the two (2) copies of the recorded plat are provided to the City.
10. Engineering Construction Inspectors are responsible for the daily inspections and operations of their assigned projects. Routine site inspections are conducted. Every attempt is made to view each site at least every 2 weeks.
11. The Engineering Construction Inspectors are required to record each inspection on a standard form. The completed inspection form is turned into the Public Works clerical staff to input into the Inspection Record System database. Inspection hours are billed to each project in accordance with City Policy Statement Public Works 20. The developer is advised if inspection costs exceed the original estimate and required to deposit additional funds to keep a positive balance of fees.
12. At a minimum, the Engineering Construction Inspectors complete siltation and erosion control inspections once every other month - more frequently if weather or site conditions necessitate. Sites are inspected to ensure adequate installation and maintenance of erosion and siltation control measures. Deficiencies are noted and a corrective notice sent to the developer/builder. Standard notice forms can be found in the g:\pub\_work\wp50\siltation directory.

13. For subdivisions initiated after January 1, 1996, the Department of Planning collects \$1,500 lot escrows prior to issuing zoning approvals for construction of homes. These escrows guarantee the proper grading of the lot, installation of sidewalk and street trees, and establishment of vegetation. Cash escrows may be submitted for each lot or an account may be established for the subdivision.
14. The Engineering Construction Inspectors generally inspect or re-inspect all unapproved lots monthly. The Inspectors enter the results of these inspections into CID (Chesterfield Information Database), and forward a report to the developer/builder. Only after all lot related items (grading, vegetation, sidewalk and street trees) are completed shall developers make requests for lot related escrow releases. Inspections should be completed within 2 weeks of receipt of notice of final completion.

After all lot related improvements are completed, the Engineering Construction Inspectors indicate approval on the standard lot cash escrow form or lot escrow account form for the lot. The approved form is forwarded to the Civil Engineer handling the subdivision for further approval. The form is then attached to a request to pay for refunding the cash escrow or crediting the account the developer has established for the subdivision. A record of releases made is kept in the lot escrow release spreadsheet, g:\pub\_work\excel\escrows\lot escrow releases.xls.
15. After occupancy permits are received from St. Louis County, the Department of Planning updates the original lot data in CID and issues a temporary occupancy permit, valid for a specific time, not in excess of 6 months. Site improvements need to be completed, and approved by the City, within this time frame in order for a final occupancy permit to be issued. The Director of Planning may grant the temporary occupancy permit time extensions upon demonstration of extenuating circumstances.
16. After the inspector approves site related improvements, the Department of Planning issues the final occupancy permit to the permitted site address with a copy to the contractor. If the site is not owner occupied, a copy is also sent to the owner.
17. Developers/builders submit written inspection and escrow release requests to the Superintendent of Engineering. Requests are date stamped, logged into the Inspection Record System, copied and distributed to the Superintendent of Engineering and proper Engineer, Engineering Construction Inspector and inspection file. Inspections for escrow releases are generally performed within 2 weeks after receipt of the written request. Deficiencies identified during inspections, including any need for deposit of

additional inspection fees, are recorded and a written deficiency list is sent to the developer, with copies to the Deputy Director of Public Works/Ass't. City Engineer, Superintendent of Engineering, Civil Engineer and inspection file. A record of the response to requests is maintained in the Inspection Record System. Punchlists are, in most cases, valid for 90 days after the inspection date. After this time, significant additional deficiencies may have developed and the project may require additional inspection.

18. The Engineering Construction Inspectors conduct a detailed inspection of the storm sewer system after the developer requests construction approval. As-built drawings (on mylar) are also required. The deficiency list is sent to the developer and contractor and MSD. After construction approval by the City, later deficiencies identified in the dedication inspection phase of the project will be handled by the Metropolitan St. Louis Sewer District (MSD). Within 21 days of any notification by MSD of their receipt of a request for a dedication inspection of storm sewers, the Engineering Construction Inspectors complete an inspection and fax any deficiencies noted to MSD. MSD will review the deficiencies cited and include them in the MSD deficiency list as they deem appropriate.
19. After the developer has received a punchlist, repairs are to be scheduled and the Engineering Construction Inspector notified of the date that remedial activities are to begin. Re-inspections are performed to ensure that noted deficiencies are corrected and that all work conforms to City codes and standards. Any request for additional inspection fees that is not paid within 30 days is forwarded to the Department of Finance & Administration for collection.
20. Once the required improvement meets the standards of the City and/or the appropriate agency, the Engineering Construction Inspector generates a memorandum to the Civil Engineer recommending escrow releases.
21. The Civil Engineer processes escrow release recommendations in accordance with City Policy Statement Public Works 31, and based upon the inspection recommendations of the Engineering Construction Inspectors and outside agencies. The escrow card is updated to determine the amount of the escrow release. The Civil Engineer generates a release authorization letter and signs it for the Director of Public Works. Letters are generated using the Escrow Tracking Database. A copy of the post release escrow card is attached to the release authorization. The authorization is sent to the escrow holder with copies to the developer, Director of Public Works/City Engineer, Deputy Director of Public Works/Ass't City Engineer, Superintendent of Engineering, Engineering Construction Inspector and the inspection file.



22. If the developer fails to pay sums due or make repairs in a timely fashion, or if there are persistent problems regarding installation or maintenance of improvements, the developer may be in default and the City may issue stop work orders for the subdivision or have work completed in accordance with the Subdivision Ordinance and City Policy Statement Public Works 32.
23. If a development cannot be completed within the term of the escrow, the developer requests that the Director of Public Works extend the term of the escrow. Time extensions are granted in accordance with the Subdivision Ordinance and City Policy Statement Public Works 32.
24. All required improvements must be complete and approved prior to issuance of more than 85% of the building permits for lots in the plat.
25. After a subdivision is 80% occupied, or at such time as the Developer requests final release of escrows, the Department of Public Works solicits concerns about street improvements from property owners. Informational signs are erected at each subdivision entrance indicating that the developer has requested final escrow releases and advising residents that they can send written comments\concerns to the Director of Public Works. Signs are posted for 30 days. Any concerns are forwarded to the Engineering Construction Inspector who notifies the property owner in the writing of all action taken in response to the concern.
26. The City has a policy that permits the City to provide snow removal services in subdivisions that are substantially completed and at least 50% occupied, but in which the public streets have not yet been accepted. In August of each year, the Engineering Construction Inspectors review the subdivisions for which they are responsible and notify the developers of subdivisions that may be eligible under the policy. The policy and form letter are in the g:\pub\_work\wp50\forms\snow directory.
27. When the subdivision is substantially complete, at least 80% occupied, and the public street improvements are complete and acceptable, the Engineering Construction Inspectors prepare a street acceptance memo for the Deputy Director of Public Work's signature and forwards it to the Superintendent of Engineering. The public street acceptance form can be found under g:\pub\_work\wp50\street info\st\_acceptance memo. The Superintendent of Engineering prepares an ordinance and forwards both to the Deputy Director. The ordinance form can be found in the same directory. The memo and ordinance are sent to the City Administrator for final Council approval.

When a subdivision with private streets is ready for approval, the Engineering Construction Inspectors prepare a street approval memo for the Superintendent of Engineering's signature and forward it to the Superintendent of Engineering. The private street approval form can be found under g:\pub\_work\wp50\street info directory also. The memo is sent to the Director of Public Works for consideration by the PW/P Committee. Final escrow releases are held until approval by the Public Works\ Parks Committee

- 28. For 12 months after the later of the issuance of 80% of the occupancy permits in the subdivision (plat) or completion of the subdivision/approval of all required improvements, the developer is responsible for repair or replacement of all defects, deficiencies, and damage. During this period, the developer shall be notified in writing of the need to perform work. One month prior to termination of this obligation, the Engineering Construction Inspector shall perform an inspection to identify items that need to be addressed, and notify the developer to perform required work within a specific timeframe. After any required work is performed within that timeframe, the maintenance deposit is released.
- 29. After release of the maintenance deposit and approval of construction of homes on all lots in the subdivision, any remaining balance of inspection fees is refunded to the developer.

RECOMMENDED BY:

*MO [Signature]*

\_\_\_\_\_  
Department Head/Council Committee (if applicable)

Date

*6-10-04*

APPROVED BY:

\_\_\_\_\_  
City Administrator

*[Signature]*

\_\_\_\_\_  
City Council (if applicable)

Date

*6/11/04*

Date

*6/7/04*



**CITY OF CHESTERFIELD  
POLICY STATEMENT**

<b>PUBLIC WORKS</b>		<b>NO.</b>	31
<b>SUBJECT</b>	Escrow Release – Construction and Maintenance Deposits	<b>INDEX</b>	PW
<b>DATE ISSUED</b>	9/9/1998	<b>DATE REVISED</b>	6/7/2004

**POLICY**

Developers/builders submit written requests for inspection and escrow releases to the Superintendent of Engineering after completion of categories of required improvements. The requests are processed in accordance with City Policy Statement Public Works 30, Subdivision Escrow and Inspection Procedure.

Partial releases may be made from the deposits; however, no partial releases will be made from the escrow after the remaining balance is reduced to 5% of the original estimated cost of improvements. There is one adjustment made to this number due to arrangements made with the Metropolitan St. Louis Sewer District (MSD), which holds a 10% escrow for sewers. MSD has agreed to notify the City when a developer requests a dedication inspection and to accept inspection reports from the City of Chesterfield prior to release of their escrow for storm sewers. Accordingly, after MSD grants construction approval, the entire escrow for storm and sanitary sewers is released and the required retainage for the subdivision is reduced by an amount equal to 5% of the cost of the sewers.

The final escrow release for the subdivision will be made when all required improvements are constructed and approved. Release of funds as to any component, line item or category of the escrow shall not be deemed to be City approval of the improvement or otherwise release the developer of his obligation relating to completion of improvements until the final escrow release and release of maintenance deposit is issued.

The maintenance deposit shall be released after a final inspection indicates that all maintenance obligations have been met and all sums due the City have been paid. The developer is generally responsible for maintenance of improvements until 12 months after the later of the issuance of 80% of the occupancy permits or completion and approval/acceptance of all required improvements.

In General, partial or progress releases will be made from deposits as follows. There are only a few items for which partial release of the maintenance deposit will be made, and the amount of release indicated for those items may be reduced if it is determined that additional sums are needed for other items.

#### Streets and Medians

- 95% release after proper installation under the supervision of Chesterfield personnel, or their agents; and verification of proper strength gain and thickness. Cores will be taken to verify thickness of pavements.
- Pavement will be repaired/replaced in accordance with City Policy Statement Public Works 42.
- Maintenance deposit for improvements to existing public streets already maintained by the City will be released after the work is accepted by the City. There will be no early release of maintenance deposits for new streets.

#### Street Signs

- Street signs must be erected, in place, prior to occupancy of any structures within the plat and maintained throughout construction. It is necessary to have signs in place in order to assure quick and easy access by emergency service providers.
- 95% release after construction approval of street improvements by City. Defective, damaged or missing sign installations will be repaired or replaced prior to the acceptance/final approval of streets.

#### Barricades/End of Pavement Markers

- 95% release after inspection.
- Repair requirements same as street signs.

#### Guard Rail

- 95% release after inspection
- Defective or damaged guard rail will be repaired or replaced prior to the acceptance/final approval of streets.

### Street Trees

- 95% release after inspection.

### Sidewalks

- 95% release after inspection

### Sanitary Sewers

- 10% release after notification by the MSD that 10% is being held in escrow by MSD. If the notification is received prior to the escrow amount being established, only 90% will be escrowed with the City of Chesterfield, with notation of same on the escrow card.
- Up to 100% release for pump stations upon notification by the MSD that a given percentage is being held in escrow by MSD.
- 100% release after construction acceptance by MSD.
- Maintenance deposit for sanitary sewers will be released at the same time as the construction deposit.

### Storm Sewers

- 10% release after notification by the MSD that 10% is being held in escrow by MSD. If the notification is received prior to the escrow amount being established, only 90% will be escrowed with the City of Chesterfield, with notation of same in the escrow spreadsheet.
- 100% release after construction acceptance by MSD and the City of Chesterfield, and receipt of as-built drawings on mylar.
- Maintenance deposit for storm sewers will be released at the same time as the construction deposit.

### Valley Stormwater Channels

- 50% release after completion of grading and establishment of vegetation.
- 95% release after substantial completion of development, when there is not addition siltation anticipated, and receipt of as-built drawings on mylar and the engineer's certification that the channels have been surveyed, were constructed in accordance with approved plans and will function as designed. Vegetation must be fully established.

### Detention

- 50% release after completion of rough grading and concurrent with construction acceptance of the storm sewer system.
- 95% release after substantial completion of development, when there is no additional siltation anticipated, and the City has been provided an engineer's certification that they have completed field grid calculations and the basin will perform as designed. The basin must be fully vegetated.

### Siltation Control and Erosion Control

- 50% release after initial and proper installation of required erosion control and siltation control devices, including standpipes, silt fence, settling ponds, and/or check dams.
- 95% release after substantial completion, satisfactory ground cover throughout development, and removal of siltation control features.

### Common Ground Seeding and Island Sodding

- 95% release after inspection.

### Fence

- 95% release after inspection.

### Grading, Sink Hole Treatment, and Permanent Lake

- 95% release after inspection.

### Monumentation

- 95% release after receipt of engineer's certification of monument installation in accordance with recorded plats, and field verification by Engineering Construction Inspector. Any exceptions should be noted on the certification and should be set as required by State law.

### Retaining Walls

- 95% release after inspection of proper grading (swales at top of wall) and receipt of approved certificate of final inspection from St. Louis County.

### Street Lights

- 95% release upon acknowledgement from Ameren/UE of an executed contract for installation and payment of fees; or proper installation of lights and copy of paid electric or utility bill for service.
- Maintenance deposit for street lights will be released after written acknowledgment is received from AmerenUE that they have assumed responsibility for maintenance and repair of all street lights.

### Turnaround

- 95% release after inspection
- 100% release after establishment of an escrow for a street extension which precludes the need for installation of the turnaround.

### Removal of Turnaround (incl. replacement of sidewalk, and re-vegetation)

- 95% release after inspection
- 100% release after establishment of a special cash escrow for this item.

### Water Mains

- 95% release after acknowledgement from Missouri American Water Company of an executed contract for installation and payment of fees, or acceptance of improvements.
- Maintenance deposit for water main will be released after Missouri American Water Company accepts the main as part of its system.

### Emergency Access

- 95% release after inspection

### Miscellaneous Improvements Required (Club House, Swimming Pool, Gates)

- 95% after inspection and receipt of occupancy permit from St. Louis County for structural items.

LOMR and Elevation Certificates

- 100% release after receipt of required LOMR or Elevation Certificate(s).
- The costs of these items will not be included in the maintenance deposit.

Other Agency Improvements

Improvements that are escrowed for the benefit of other agencies such as arterial street improvements or other off-site facilities, will be released on a proportional basis after written authorization is received from the appropriate agency.

Maintenance deposit for facilities accepted into other agency's systems will be released after acceptance by the appropriate agency.

RECOMMENDED BY:

*McTeig*

\_\_\_\_\_  
Department Head/Council Committee (if applicable)

6-10-04  
Date

APPROVED BY:

\_\_\_\_\_  
City Administrator

*Michael J. Hoffman*

\_\_\_\_\_  
City Council (if applicable)

*6/7/04*

\_\_\_\_\_  
Date

6/11/04  
Date

CITY OF CHESTERFIELD  
POLICY STATEMENT

**PUBLIC WORKS**

**NO.** 32

**SUBJECT** Escrow Management  
(formerly Procedure for Escrow Extension / Attachment)

**INDEX** PW

**DATE ISSUED** 9/9/1998

**DATE REVISED** 6/7/2004

The Department of Public Works is responsible for management of subdivision construction and maintenance deposits, including extensions of terms, enforcement actions and attachment of escrows. All deposit agreements, extensions and releases must be in a form acceptable to the City Attorney. Deposit agreements and obligations thereunder are not assignable by the developer.

- I. Construction escrows are generally approved for an initial term of 2 years; however, the Director of Public Works may recommend a shorter term.
  - A. The developer is responsible for assuring that the improvements are completed within the term of the escrow.
  - B. The developer is solely responsible to timely request an extension - at least 60 days in advance of the expiration of the term of the escrow - if improvements cannot be completed within the term of the escrow
  - C. No right to any extension shall exist or be assumed.
  - D. The Department of Public Works may send an advisory notice of the pending expiration, but failure to receive such notice does not relieve the developer of his responsibility to request an extension.
  - E. A non-refundable fee of \$100 is collected for any amendment or extension to a letter of credit.
  - F. If a letter of credit is allowed to expire, the remaining balance shall immediately be payable to the City of Chesterfield, without condition.
  
- II. The Department of Public Works may grant an extension to the term of a construction deposit for a period of up to one year.
  - A. The City Attorney must approve the extension of all guarantees
  - B. The Director of Public Works may require certain actions as a condition of any extension.
    - 1. Completion of certain items
    - 2. Execution of a new agreement
    - 3. Recalculation of deposit amounts
    - 4. Payment of sums due the City
    - 5. Satisfaction of new code requirements
    - 6. Other reasonable conditions as needed to comply with Section 1005.080 of the Zoning Ordinance



- III. The scope of maintenance deposits begins upon commencement of installation of required improvements and endures until the latter of 12 months after the occupancy permits have been issued on 80% of the lots in the subdivision plat or 12 months after completion of the subdivision and acceptance/approval of all required improvements.
  - A. Maintenance includes repair or replacement of all defects, deficiencies and damage to the improvements that may exist or arise, abatement of nuisances caused by such improvements, removal of mud and debris from construction, erosion control, grass cutting, removal of construction materials (other than materials to be used for construction on the lot on which they are located or as permitted by the site plan) and snow removal.
  - B. Maintenance obligations for required improvements to existing public roads or other existing public infrastructure already maintained by a public governmental entity shall terminate on and after the date such improvement is accepted by the City or appropriate agency for dedication.
  - C. Irrespective of other continuing obligations, the developer's snow removal obligations terminate on the date a street is accepted by the City for public maintenance.
  - D. Maintenance deposits are subject to the immediate order of the Director of Public Works to defray or reimburse any cost to the City of maintenance or repair of improvements the developer fails to perform.
  - E. Where the maintenance deposit has been drawn upon by the City of Chesterfield for maintenance or where the amount remaining is determined to be insufficient, the Director of Public Works may require the maintenance deposit to be replaced or replenished by the developer.
  - F. In determining the amount of maintenance deposit that shall continue to be held, portions of the deposit amount that were attributable to improvements that have been accepted by any third-party governmental entity or utility legally responsible for maintenance of the improvement shall not be included.
  
- IV. Failure to complete and/or maintain the improvements in a timely and professional manner or provide schedules or other information requested may result in the developer being declared in default.
  - A. In emergency circumstances or where action is otherwise required before written notice can be provided, the Director of Public Works may have maintenance work performed without written notice to the developer.
    - 1. If possible, the developer should be given the opportunity to perform any maintenance within a stated timeframe before the City has such maintenance performed.

2. Any costs to the City shall be reimbursed from the deposit as outlined under Section III-D.
  3. If remaining sums in deposit are determined to be insufficient, the deposit shall be replaced or replenished as outlined under Section III-E.
- B. In non-urgent circumstances, the Director of Public Works will provide the developer with written demand and opportunity to perform maintenance or to show cause within not less than 10 days why he should not be declared in default.
- C. If the developer is declared in default, any one or more of the following actions may be taken.
1. No building or other permit shall be issued to the developer in the subdivision.
  2. The Director of Public Works may suspend the right of anyone to build in the subdivision by issuance of a stop work order (SWO) stating the provisions of the Subdivision Ordinance being violated.
    - a. Also suspended - issuance of building permits and occupancy permits on any portion of the site, and all inspections and plan review related to any work on the site
    - b. Except in emergency situations, 10 days written notice of an order under this subsection shall be given (may be concurrent with notice under B above)
      1. Copies to all know sureties as appropriate
      2. Record affidavit of such notice with Recorder of Deeds
    - c. Final order served upon developer
      1. Copies to issuer/holder of surety as appropriate
      2. Copy recorded with the Recorder of Deeds
      3. Conspicuously and prominently posted at the subdivision
      4. Minimum language below may be supplemented:  
 THIS SUBDIVISION, (name of subdivision), HAS BEEN DECLARED IN DEFAULT BY THE CITY OF CHESTERFIELD DIRECTOR OF PUBIC WORKS. NO DEVELOPMENT, CONSTRUCTION, BUILDING OR DEMOLITION IN ANY MANNER SHALL TAKE PLACE WITHIN THE LIMITS OF THIS SUBDIVISION UNTIL SUCH TIME AS THE CITY OF CHESTERFIELD DIRECTOR OF PUBLIC WORKS REMOVES THIS PROHIBITION. ANY DEVELOPMENT, CONSTRUCTION, BUILDING OR DEMOLITION IN ANY MANNER WHILE THIS PROHIBITION IS IN EFFECT IS ILLEGAL AND SHALL BE ENFORCED PURSUANT TO THE SUBDIVISION ORDINANCE SECTION 1005.080, CITY OF CHESTERFIELD REVISED ORDINANCES.
  - d. Order may be rescinded in whole or in part

3. The developer may be required to submit additional cash sums guaranteeing the completion and/or maintenance of improvements after recalculation to allow for any inflated or increased costs of constructing, maintaining, and/or redesigning the improvements.
4. The balance of the deposit agreement may be required to be forfeited and paid to the City, placed in a trust and agency account, and used to complete and/or maintain improvements per the approved improvement plans or other appropriate purpose in the interest of public safety, health and welfare. See Section VI regarding attachment of escrows below for procedure.
5. The Director of Public Works may suspend the rights of the developer, or any related entity, to construct structures in any development platted after the effective date of such suspension throughout the City.
  - a. A developer is a related entity of another if 1) either has a principal or controlling interest in the other, or 2) any person, firm, corporation, association, partnership, or other entity with a controlling interest in one has a principal or controlling interest in the other. ID shall be supported by documentation from Secretary of State.
  - b. 10 days written notice of an order under this subsection shall be given
    1. Copies to all know sureties as appropriate
    2. Record affidavit of such notice with Recorder of Deeds
  - c. Final order served upon developer
    1. Copy to surety as appropriate
    2. Copy recorded with the Recorder of Deeds
6. The Director may recommend that the City Attorney take appropriate legal action and may also withhold any building or occupancy permits to this developer or related entities until such noncompliance is cured.
7. The City shall also have the right to partially or wholly remedy the deficiencies or breached obligations by set-off of any funds or assets otherwise held by the City of the developer to the maximum extent permitted by law.
  - a. Written notice shall be provided to the developer by the Director of Planning or Director of Public Works
  - b. Developer shall pay the City's costs, including reasonable attorney's fees, of enforcing such agreement in the event he is judicially determined to have violated any provision of the subdivision ordinance or agreement
  - c. Developer may file an appeal to any decision under the City's administrative review procedure

- D. Any developer, or related entity, that has a subdivision improvement guarantee that is in default, including escrow, fees, or bond shall be subject to:
  - 1. The provisions of items C2 and C5 above
  - 2. Suspension of rights of the developer, or any related entity, to receive development approval, including, but not limited to, approval of any plat or deposit agreement for new or further development in the City. The suspension will be rescinded only when the Director of Public Works is convinced that completion and maintenance of the improvements is adequately assured.
  
- V. Failure to complete the improvement obligations within the time provided by the agreement, including payment of funds to the City due to such failure, or expiration of a letter of credit, shall be deemed an automatic act of default entitling the City to all remedies without further or prior notice.
  
- VI. If, in the opinion of the Director of Public Works the developer has not proceeded to complete the required improvements in a conscientious, expeditious, and professional manner and/or the developer has not responded to requests for schedules, information, or other related information relative to the completion of improvements, the Department of Public Works will forward a recommendation to the Public Works/Parks Committee to attach escrows.
  - A. The Director of Public Works prepares and forwards a memo to Committee, recommending the City attach the escrow.
  - B. The list of deficiencies is forwarded to the Committee at this time. The Director of Public Works will provide information to the Committee as to the current level of funds escrowed and a preliminary opinion of the adequacy of remaining escrowed funds to complete the required improvements. Inasmuch as the Department may have to complete engineering designs, and review construction alternatives, it is recognized that these cost estimates are preliminary and are dependent upon the final design and construction methods employed.
  - C. Attach escrow, if approved by PW/P Committee
    - 1. Finalize scope of work and estimate of cost
    - 2. If required, notify developer to deposit additional funds in escrow. Copy surety. Developer should be given 30 calendar days to comply. The Department of Public Works should anticipate taking action within 45 calendar days of the original notification.
    - 3. Notify surety by certified mail to pay the estimated amount.

- D. Have work completed by City forces or contract to have it completed.
1. Develop appropriate plans
  2. Follow City procurement guidelines to contract for work, if needed
  3. If previously approved by the Public Works/Parks Committee, and it becomes necessary to expedite all of, or certain portions of the required construction, the Department of Public Works may contract for services, equipment, materials, and labor on a time and materials basis, foregoing the advertising and bidding which would otherwise be required. Efforts should be made to secure competitive pricing for services, equipment, materials, and labor whenever practical. It is recognized that certain improvements are weather dependent and the purpose of this section is to provide relief whenever delays associated with the standard City procurement process would result in an undue hardship to the City and its residents.

E. Important notes

1. If actual costs exceed the estimate, the City is responsible for the difference.
2. The surety is liable for the amount of funds in escrow and then no longer responsible.
3. If the developer does not make the deposit required, the City sues him, not the surety, for that difference.
4. This can be a time consuming process.

RECOMMENDED BY:

*Mo Lewis*

Department Head/Council Committee (if applicable)

*6-10-04*

Date

APPROVED BY:

City Administrator

*Michael P. Fleming*

City Council (if applicable)

*6/7/04*

Date

*6/11/04*

Date

Recommend Delete

CITY OF CHESTERFIELD  
POLICY STATEMENT

<b>PUBLIC WORKS</b>		<b>NO.</b>	33
<b>SUBJECT</b>	Required Information of Plot Plans	<b>INDEX</b>	PW
<b>DATE ISSUED</b>	2/1/1999	<b>DATE REVISED</b>	

**POLICY**

Required information for the submission of plot plans. See attached checklist and review criteria.

**RECOMMENDED BY:**

*M. G. Lewis*  
 Department Head/Council Committee (if applicable)

3/10/99  
 Date

**APPROVED BY:**

*Michael S. Jennings*  
 City Administrator

3-10-99  
 Date

\_\_\_\_\_  
 City Council (if applicable)

\_\_\_\_\_  
 Date



# PLOT PLAN REVIEW

SUBDIVISION:	
LOT:	

Submittal Date:		Reviewed by:		Date:	
-----------------	--	--------------	--	-------	--

		Yes	No	N/A	Comments
1.	Detention Basin				
a.	Less than 60% of zoning authorizations issued				
b.	More than 60% issued, and detention basin is operational				
c.	No additional permits authorized				
2.	Easements				
3.	Storm Sewers				
4.	Spot Elevations				
	Retaining Walls				
6.	Top of Foundation				
7.	Driveways				
8.	Drainage				
9.	Driveway Apron Location				
10.	Sight Distance Triangle				
11.	Detention Basin Highwater				
12.	Plot Plan to Scale				
13.	Record Plat on File				
14.	Silt Control/Grading Permit				

If all items listed above are marked yes or N/A, sign and date the plot plan and return to the Planning Dept. Also, record the date of approval in the blue, "zoning authorizations" file on the form stapled to the inside of the file folder.

If any item listed above is marked no, write "REJECTED", the date and list the reasons for rejection on the plot plan. Return the plan to the Planning Dept.



## PLOT PLAN REVIEW

### 1) DETENTION BASIN:

No more than 60% of lots may be built if the corresponding detention basin is not finished. In this situation, return the unreviewed plot plan with the comment, "No additional permits can be authorized in this watershed until the detention basin is operational."

### 2) EASEMENTS:

Check that the easements on the record plat match those shown on the plot plan. No structures are allowed in easements.

### 3) STORM SEWERS:

Record storm sewers from the Improvement plans onto the plot plan.

### 4) SPOT ELEVATIONS:

Verify that the elevations shown on the grading plan correspond reasonably (1 to 2 ft., with allowance for overdig of foundation) to those shown on the plot plan.

### 5) RETAINING WALLS:

Check that any proposed retaining walls are in accordance with comment 40.70.8 (page 40.70-4) of the St. Louis County Design Criteria for the Preparation of Improvement Plans.

### 6) TOP OF FOUNDATION:

Check that the TF given on the plot plan corresponds reasonably to the proposed TF from the Improvement plan.

### 7) DRIVEWAYS:

Check that the proposed driveway slope is less than 15%, and that storm water runoff is not directed toward the structure.

### 8) DRAINAGE:

Check that the planned drainage routes on the plot plan agree with the drainage area plan. If the proposed house is within a drainage area that drains away from the street, add the standard comment, "Do not direct roof drains to street."

### 9) DRIVEWAY APRON LOCATION:

Verify that the driveway apron is no less than 5 ft. from any street sewer inlet. In addition, check that the driveway width, at the R.O.W. line, is no more than 25 ft (for a 2-car garage) or 31 ft. (for a 3-car garage). Also check that the driveway width, at the R.O.W. line, is no less than 10 ft. (12 ft. if the distance between the sidewalk and street is less than 4 ft.).

### 10) SIGHT DISTANCE TRIANGLE:

For corner lots, check that the proposed house and driveway do not cross the sight distance triangle. A picture of the sight distance triangle may be found on page 40.35-1 of the St. Louis County Design Criteria for the Preparation of Improvement Plans. In addition, verify that the driveway apron is no less than 10 ft. from a street corner radius point.

### 11) DETENTION BASIN HIGHWATER:

The proposed inhabitable structure must be at least 30 ft. horizontally from the 100 year high-water and the lowest sill must be 2 ft. vertically from the 100 year high-water.

FOR ISOLATED LOTS IN PREVIOUSLY DEVELOPED SUBDIVISIONS, ADD A NOTE TO THE PLAN REQUIRING SILTATION CONTROL MEASURES AS A CONDITION OF APPROVAL. ALSO DETERMINE IF MORE THAN 5,000 SF OF AREA OUTSIDE THE BUILDING WILL BE DISTURBED. IF SO, A GRADING PERMIT APPLICATION AND \$1,500 SURETY ARE REQUIRED FOR A GRADING PERMIT TO BE ISSUED.

\*Skip numbers 4,6,7, and 8 if no elevations are shown on the plot plan.

CITY OF CHESTERFIELD  
POLICY STATEMENT

<b>PUBLIC WORKS</b>		<b>NO.</b>	34
<b>SUBJECT</b>	Vertical Curbs	<b>INDEX</b>	PW
<b>DATE ISSUED</b>	2/1/1999	<b>DATE REVISED</b>	

**POLICY**

All new streets, where curbs are required, shall be constructed with integral vertical curbing, in lieu of rolled curbing.

RECOMMENDED BY:

*M. O'Leary*  
 Department Head/Council Committee (if applicable)

3/10/99  
 Date

APPROVED BY:

*Michael Sperry*  
 City Administrator

3-10-99  
 Date

\_\_\_\_\_  
 City Council (if applicable)

\_\_\_\_\_  
 Date

Recommend Delete

CITY OF CHESTERFIELD  
POLICY STATEMENT

<b>PUBLIC WORKS</b>		<b>NO.</b>	35
<b>SUBJECT</b>	Sidewalk Widths	<b>INDEX</b>	PW
<b>DATE ISSUED</b>	2/1/1999	<b>DATE REVISED</b>	

**POLICY**

All sidewalks shall be a minimum of four feet wide. However, wider sidewalk widths will be required on high volume streets and at locations adjacent to obstructions.

**RECOMMENDED BY:**

*MO. [Signature]*  
 Department Head/Council Committee (if applicable)

3/10/99  
 Date

**APPROVED BY:**

*[Signature]*  
 City Administrator

3-10-99  
 Date

\_\_\_\_\_  
 City Council (if applicable)

\_\_\_\_\_  
 Date

Recommend Delete

**CITY OF CHESTERFIELD  
POLICY STATEMENT**

**PUBLIC WORKS**

**NO. 36**

**SUBJECT** Street Cross Section

**INDEX PW**

**DATE ISSUED** 2/1/1999

**DATE REVISED**

**POLICY**

For those specific instances where the Fire District requires a 32-foot wide street due to singular ingress and egress, a seven (7) foot separation between the sidewalk and curb shall be required and the right-of-way shall be a minimum of 56 feet wide.

In addition, as an alternative, divided boulevard style streets with separate travel lanes designed independently, shall be allowed to better accommodate existing topography.

**RECOMMENDED BY:**

*M. J. [Signature]*  
Department Head/Council Committee (if applicable)

3/10/99  
Date

**APPROVED BY:**

*Michael [Signature]*  
City Administrator

3-10-99  
Date

\_\_\_\_\_  
City Council (if applicable)

\_\_\_\_\_  
Date



**CITY OF CHESTERFIELD  
POLICY STATEMENT**

**PUBLIC WORKS**

**NO.** 37

**SUBJECT** Streambank Erosion Assistance

**INDEX** PW

**DATE  
ISSUED** 2/1/1999

**DATE  
REVISED** 2/15/2017

**POLICY**

Most creeks and streams are located on private property or common ground. While the City of Chesterfield will not directly address erosion problems on private property, the City will assist residents in the following manner:

- **Meetings** – a City representative (generally the City Engineer, a Civil Engineer, or a Senior Engineering Inspector) will meet with residents who report an erosion concern. During that meeting the City representative will review the site / property, explain what is occurring, and identify the public agency or agencies, if any, having jurisdiction over the problem area.
- **Information** – the City representative will provide the resident a standard brochure which explains how erosion occurs, who is responsible for addressing erosion problems, the negative consequences associated with inappropriate erosion control efforts, and a list of effective erosion control products.
- **Articles** – the City Engineer shall periodically prepare articles for the Citizen newsletter to assist and direct residents with these problems.

**RECOMMENDED BY:**

<b>Department Head/Council Committee (if applicable)</b>	<b>Date</b>

**APPROVED BY:**

<b>City Administrator</b>	<b>Date</b>

<b>City Council (if applicable)</b>	<b>Date</b>



## WHO IS RESPONSIBLE FOR A CREEK OR STREAM?

Every stream has two components: the water flowing in it, and the land beneath and around it.

Private individuals own the land that forms the stream channel on their property. However, the water in the stream is a benefit to everyone. Accordingly, there are agencies which protect that water and ensure that nothing is done which would harm the water or negatively affect those downstream of the water.

These agencies include the following:

- ▶ The City of Chesterfield
- ▶ The Metropolitan St. Louis Sewer District (MSD)
- ▶ The United States Army Corp of Engineers (USACE)
- ▶ The Department of Natural Resources (DNR)
- ▶ The Environmental Protection Agency (EPA)

Property owners can use the water on their property, but not in ways that infringe on the rights of others. Many property owners may not realize that what they do on their property can affect the water in the stream.

For example, if a landowner decides to armor the stream bank or remove natural creek bed materials, these alterations can affect how the stream flows, what materials the stream contains and transports, erosion rates downstream, and whether the stream's inhabitants remain healthy, or can even exist.

Prior to grading, filling, or otherwise modifying the area near the stream, the property owner must check with the agencies listed above to see what permits are necessary.

These permits can include a floodplain development permit (issued by the City of Chesterfield), a stream disturbance permit (issued by MSD) or a Section 404 permit (issued by the USACE).

## DON'T DUMP!

It's unacceptable to dump anything (tires, debris, plastic, trash, and other debris) into our waterways. This includes "organic" material such as rock, leaves, and grass. When yard waste (grass, leaves, pet waste, etc.) is deposited near the stream, it begins to rob the water of critical, life-giving oxygen. As a result, fish kills can occur while the stream becomes unsightly and foul smelling. Further, the yard waste material will suffocate grass and vegetation attempting to grow along the stream bank, exacerbating erosion problems.

Dumping concrete and rocks in the stream to build artificial walls can accelerate stream bank erosion!

## DID YOU KNOW?

- ▶ Over 65% of our drinking water comes from streams and rivers.
- ▶ From space, rivers and streams look like veins on the Earth's surface.
- ▶ Rivers and streams have many purposes. Farmers sometimes build canals and dams to catch the water and use it for crops.



# INTRODUCTION TO STREAM MANAGEMENT



CITY OF CHESTERFIELD  
PUBLIC WORKS DIVISION

P/636.537.4000

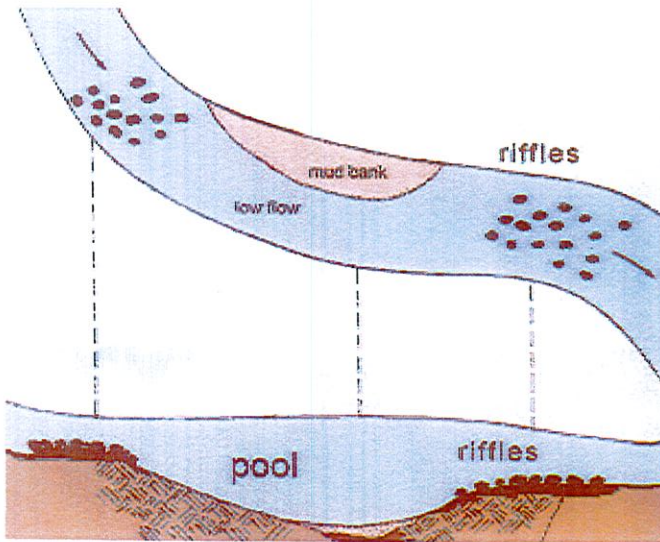
F/636.537.4796

[chesterfield.mo.us](http://chesterfield.mo.us)



## HOW STREAMS WORK

In our area, undisturbed streams are comprised of alternately spaced, deep and shallow areas called pools and riffles. Pools are deep areas that often contain fine materials such as sand, and a perfect resting spot for fish! Riffles are shallow, fast moving areas that often contain larger materials like cobbles and boulders. These areas provide important habitat for small aquatic animals and bugs, as well as areas for fish spawning. Another important component of streams is an active floodplain.



Graphic courtesy of manucleus.org

## ACTIVE FLOODPLAINS:

- > Reduce downstream flooding by storing excess storm water.
- > Recharge and filter groundwater so streams can maintain flow in dry weather.
- > Reduce pollution by allowing sediment, bacteria, and fertilizers to settle out and be utilized by plants.
- > Reduce stream bank erosion by relieving energy in the channel.

## WHY DO STREAMS MEANDER?

It's a balancing act! All streams transport water along with bed materials like soil and rocks. By meandering, streams can balance the work involved in carrying the bed materials and the energy of transporting the water.

## HOW MUCH WILL A STREAM MEANDER?

The size of the meander is related to the slope of the stream and the size of the watershed (area of land draining to the stream). Steep mountain streams hardly meander at all, while large rivers in flat valleys often have large meanders.

*Even water flowing through a pipe at low flow will meander!*

## WHAT HAPPENS WHEN A STREAM IS STRAIGHTENED AND CANNOT MEANDER?

Streams are not pipes. When we eliminate natural meanders in streams and attempt to "confine" the stream into a straight line, the effects are often dramatic. Excessive energy often becomes trapped in the stream channel. Erosion increases as the stream attempts to recreate the missing meanders. Floodplains often become disconnected from the stream and downstream landowners are at a greater risk of flooding and erosion.

## IS STREAM BANK EROSION NATURAL?

Even streams in balance erode, but usually not in a way that degrades the stream. In a healthy stream, the amount of material eroded equals the amount of material deposited. If a stream begins to erode excessively, it may be out of balance. Increased storm water runoff upstream may start a downward cutting process which leads to unstable, eroding stream banks.

## DON'T MOW IN THE BUFFER ZONE

A stream's Buffer Zone (also called a Riparian Buffer Area) is the strip of natural vegetation along the banks that separates the stream from developed areas (farm fields, lawns, fences, buildings, driveways, etc.). Mowing right to the stream edge may look nice and neat, but it actually increases the rate of erosion. You may be able to get away with it for a while, but it will catch up with you. If you eliminate a Buffer Zone's natural plants and shrubs, you lose the valuable root systems that hold the soil in place. The result: The banks erode faster, de-stabilize, then crumble and cave in.

Water can move mountains! Consider that the Appalachia Mountains were once higher than the Rockies! Maintaining healthy buffer along the stream is insurance, protecting you from changes in the watershed upstream of your property.

## HOW WIDE IS A HEALTHY BUFFER ZONE?

Ideally, a healthy buffer zone should be large enough to accommodate a naturally meandering stream for many years to come, regardless of upstream changes in the watershed. Streams tend to meander within a predictable width, otherwise known as their "belt width." The size of the belt width is related to the size of the watershed draining to the stream.

Unfortunately, in urban areas, these recommended buffer widths often exceed the entire width of our properties! Or rule of thumb often used in identifying a recommended buffer width is three times the width of the stream.

## HEALTHY BUFFER ZONES:

- > Stabilize stream banks
- > Reduce erosion
- > Increase property values
- > Increase beauty
- > Provide wildlife habitat
- > Reduce sediment
- > Provide shade to keep the stream at cooler temperatures for healthy aquatic communities.



Exhibit Policy  
Recommended Replate

**CITY OF CHESTERFIELD  
POLICY STATEMENT**

**PUBLIC SERVICES**

**NO. 38**

**SUBJECT** Street Snow Removal Recoupment  
Program - Eligible Cost Formula

**INDEX PW**

**DATE**  
**ISSUED** 8/16/1999 (original)

**DATE**  
**REVISED** 10/21/2013

---

**POLICY**

Owners of un-gated, improved and platted private streets in subdivided developments are eligible for reimbursement of expenses incurred for snow removal.

This program is based upon private streets located within non-gated, single family residential developments, and condominium developments. It does not include commercial subdivisions or apartments. Within these developments, City staff will distinguish between private streets, alleys, and parking areas.

The funding formula is intended to provide reimbursement for reasonable and customary expenses for snow removal and deicing efforts on private streets, for participating subdivisions during a typical winter season.

Reimbursements will be limited based on a formula of \$40 per residential unit or \$4,500 per centerline mile of private street, whichever is larger.

The Snow Removal Reimbursement Program will be funded annually, in the amount of \$145,000 from the General Fund, subject to annual appropriation by City Council.

In the event of a "severe season", defined as a season during which the City of Chesterfield receives thirty or more inches of snow, as measured by the National Oceanic and Atmospheric Administration (NOAA), City Staff will provide City Council information as to the amount of supplemental funding necessary to provide for reimbursement at the 80<sup>th</sup> percentile value for each category of reimbursement.

**CITY OF CHESTERFIELD  
POLICY STATEMENT (continued)**

**PUBLIC SERVICES**

**NO. 38**

**SUBJECT** Street Snow Removal Recoupment  
Program - Eligible Cost Formula

**INDEX PW**

**DATE  
ISSUED** 8/16/1999 (original)

**DATE  
REVISED** 10/21/2013


---

City Council would subsequently decide what level of supplemental funding would be provided through a Fund Transfer from the General Fund - Fund Reserves, if any.

**RECOMMENDED BY:**

Recommended by the Planning and Public Works Committee 10/10/2013 \_\_\_\_\_  
Department Head/Council Committee (if applicable) Date

**APPROVED BY:**

\_\_\_\_\_  
City Administrator Date  
  
Approved by City Council 10/21/2013 \_\_\_\_\_  
City Council (if applicable) Date

**CITY OF CHESTERFIELD  
POLICY STATEMENT**

**PUBLIC SERVICES**

**NO.** 38

**SUBJECT** Street Snow Removal Recoupment  
Program - Eligible Cost Formula

**INDEX** PW

**DATE ISSUED** 8/16/1999 (original)  
10/21/2013 (most recent revision)

**DATE REVISED** 2/15/2017

---

**POLICY**

Owners of un-gated, improved and platted private streets in subdivided developments are eligible for reimbursement of expenses incurred for snow removal.

This program is based upon private streets located within non-gated, single family residential developments, and condominium developments. It does not include commercial subdivisions or apartments. Within these developments, City staff will distinguish between private streets, alleys, and parking areas.

The funding formula is intended to provide reimbursement for reasonable and customary expenses for snow removal and deicing efforts on private streets, for participating subdivisions during a typical winter season.

Reimbursements will be limited based on a formula of \$40 per residential unit or \$4,500 per centerline mile of private street, whichever is larger.

The Snow Removal Reimbursement Program will be presented to the Planning and Public Works Committee each fall to determine the amount to be funded for the upcoming winter season. The recommended allocation will subsequently be submitted to the full City Council for authorization.

Once the winter season has concluded, the City Staff shall determine if the season qualifies as a "severe season", defined as a season during which the City of Chesterfield receives thirty or more inches of snow, as measured by the National Oceanic and Atmospheric Administration (NOAA). If a "severe season" has occurred, City Staff will provide City Council information as to the amount of supplemental funding necessary to provide for reimbursement at the 80<sup>th</sup> percentile value for each category of reimbursement.

**CITY OF CHESTERFIELD  
POLICY STATEMENT (continued)**

**PUBLIC SERVICES**

**NO.** 38

**SUBJECT** Street Snow Removal Recoupment  
Program - Eligible Cost Formula

**INDEX** PW

**DATE  
ISSUED** 8/16/1999 (original)  
10/21/2013 (most recent revision)

**DATE  
REVISED** 2/15/2017

---

City Council would subsequently decide what level of supplemental funding would be provided through a Fund Transfer from the General Fund – Fund Reserves, if any.

**RECOMMENDED BY:**

\_\_\_\_\_  
**Department Head/Council Committee (if applicable)**

\_\_\_\_\_  
**Date**

**APPROVED BY:**

\_\_\_\_\_  
**City Administrator**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**City Council (if applicable)**

\_\_\_\_\_  
**Date**

CITY OF CHESTERFIELD  
POLICY STATEMENT

PARKS AND RECREATION

NO. 39

SUBJECT Park Rules and Regulations

INDEX PW

DATE  
ISSUED 5/3/1999

DATE  
REVISED 8/3/2009

POLICY

See attached Park Rules and Regulations

RECOMMENDED BY:

Department Head/Council Committee (if applicable)

8/10/09

Date

APPROVED BY:

City Administrator

8/12/09

Date

City Council (if applicable)

Date

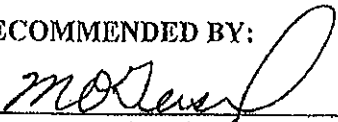
CITY OF CHESTERFIELD  
POLICY STATEMENT

<b>PUBLIC WORKS</b>		<b>NO.</b>	40
<b>SUBJECT</b>	Vertical Curbs	<b>INDEX</b>	PW
<b>DATE ISSUED</b>	10/25/1999	<b>DATE REVISED</b>	

**POLICY**

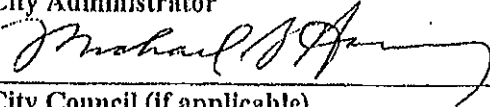
In conjunction with residential slab replacement projects, median/island rolled curbs shall be replaced with vertical curbs. City staff will notify trustees of the conversion prior to construction, so they will have an opportunity to voice any objections or concerns.

**RECOMMENDED BY:**

  
 \_\_\_\_\_  
 Department Head/Council Committee (if applicable)

10/28/99  
 \_\_\_\_\_  
 Date

**APPROVED BY:**

City Administrator  
  
 \_\_\_\_\_  
 City Council (if applicable)

\_\_\_\_\_  
 Date  
10/18/99  
 \_\_\_\_\_  
 Date



Existing Policy  
Recommend NO change

**CITY OF CHESTERFIELD  
POLICY STATEMENT**

<b>PUBLIC WORKS</b>		<b>NO.</b>	41
<b>SUBJECT</b>	Sanitary Sewer Lateral Tax Refund Program	<b>INDEX</b>	PW
<b>DATE ISSUED</b>	11/06/2000	<b>DATE REVISED</b>	

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**POLICY**

The Sanitary Sewer Lateral Repair Program only applies to those buildings with six (6) or less units. The St. Louis County Department of Revenue has included the \$28 per year fee in the real estate tax bill for all property assessed as residential whether they qualify for the program, or not. The City of Chesterfield will refund the \$28 fee to those residents who have paid the fee, but are not eligible for the program.

**RECOMMENDED BY:**

  
\_\_\_\_\_  
Department Head/Council Committee (if applicable)

12/4/00  
Date

**APPROVED BY:**

\_\_\_\_\_  
City Administrator

  
\_\_\_\_\_  
City Council (if applicable)

\_\_\_\_\_  
Date

12/5/00  
Date

CITY OF CHESTERFIELD  
POLICY STATEMENT

Existing Policy  
Recommend no change

<b>PUBLIC WORKS</b>		<b>NO.</b>	42
<b>SUBJECT</b>	Pavement Specification & Acceptance Policy	<b>INDEX</b>	PW
<b>DATE ISSUED</b>	2/5/2001	<b>DATE REVISED</b>	01/17/2007

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**POLICY**

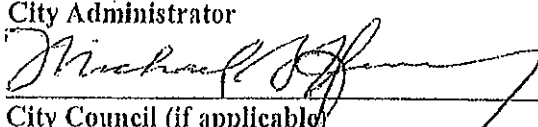
Two policy statements dated 01/17/2007, related to Pavement Specifications and acceptance are attached: one for New Development and one for Work Contracted by the City.

RECOMMENDED BY:

  
\_\_\_\_\_  
Department Head/Council Committee (if applicable)

1/17/07  
Date

APPROVED BY:

City Administrator  
  
\_\_\_\_\_  
City Council (if applicable)

\_\_\_\_\_  
Date  
1/17/07  
Date

**City of Chesterfield**  
**Pavement Specification & Acceptance Policy**  
for  
**New Development**

<b>Section</b>	<b>Page</b>
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2. Concrete	1
3. Bituminous Pavements	2
4. Rock Base (4" thick)	3
5. Fabric	3
6. Underdrains	3
7. Concrete Placement	3
8. Joints	4
9. Concrete Finishing	4
10. Saw Cutting	5
11. Curing	5
12. Joint Sealing	5
13. Weather Conditions	6
14. Opening to Traffic	6
15. Testing and Acceptance	6
16. Judgement	9

**SECTION 1. INTRODUCTION**

- A. In the following sections, provisions apply to both concrete and bituminous pavements unless otherwise stated. The provisions for concrete apply equally to concrete pavement and concrete curb and gutter constructed as part of asphalt pavement.

**SECTION 2. CONCRETE**

- A. Concrete shall have a minimum of 6.00 sacks (565 lbs.) of Portland Cement (ASTM C 150, Type I) per cubic yard of concrete.
- B. Concrete coarse aggregate shall consist of limestone aggregate from a MoDOT inspected and approved source. Limestone aggregate for pavement concrete shall be in accordance with Section 1005 of the "Missouri Standard Specifications for Highway Construction, 2004". Coarse aggregates containing in excess of 6% total deleterious material are prohibited.

- C. Concrete fine aggregate shall be Class A sand in accordance with Section 501.2.2.2.1 and Section 1005.2 of the "St. Louis County Standard Specifications for Highway Construction, January 1, 1997." Note that fine aggregates for concrete to be used in sidewalks and drive approaches shall, in addition to meeting the requirements of section 1005.2, be free from coal and lignite materials as determined by AASHTO 113.
- D. Approved Class C or F fly ash may be used to replace up to 15 percent of the cement on a pound for pound basis in all concrete except concrete designed for high early strength. Fly ash shall not exceed 15 percent by weight of the total cementitious material (fly ash and cement).
- E. Water to cement ratio shall not exceed 0.47. The water to cement ratio shall be calculated using the total weight of cementitious material. No water shall be added to the concrete mix once it leaves the batch plant without the City's approval.
- F. Maximum three-inch (3") slump when placed with a slip-form paver and maximum four-inch (4") slump when placed using forms, per ASTM C-143.
- G. Concrete shall have 5% to 8% air content (by volume).
- H. Hand mixing of concrete will not be permitted.
- ~~L. The use of an approved admixture may be permitted upon written request by the Developer.~~  
The use of any admixture will be by approval of the Director of Public Works/City Engineer and contingent upon satisfactory performance of the work; permission for its use may be withdrawn at any time satisfactory results are not obtained.
- J. All streets within a development shall be constructed in accordance with the approved improvement plans for that development. All residential streets shall be constructed to the minimum required thickness, unless the approved improvement plans indicate a greater thickness.

### SECTION 3. BITUMINOUS PAVEMENTS

- A. Bituminous pavements and base courses, except as modified herein, shall be constructed in accordance with "St. Louis County Standard Specifications for Highway Construction, January 1, 1997."
- B. The final surface layer shall be laid in a continuous sequence over the entire project constructed in a single operating day. The contractor shall arrange operations in such a manner to avoid cold joints, either transverse or longitudinal. When cold joints cannot be prevented, transverse cold joints should be constructed as opposed to longitudinal cold joints.

#### SECTION 4. ROCK BASE

- A. During excavation for the rock base, the grade shall be scarified to facilitate drying or moistened as necessary to permit proper compaction. Prior to placement of the geotextile fabric and rock base, the grade shall be uniform, rolled and compacted to not less than ninety percent (90%) of the maximum density as determined by the Modified Proctor Test AASHTO T-99 (ASTM D-1557-78). The City may, at its sole discretion, accept proof rolling as evidence of compactive effort in lieu of in place density tests.
- B. Rock base shall be Type 5 Aggregate, per Section 1007 of the "St. Louis County Standard Specifications for Highway Construction, January 1, 1997." The rock base shall be placed on the graded and compacted subgrade, then shaped and compacted to not less than ninety percent (90%) of the maximum density as determined by the Modified Proctor Test AASHTO T-99 (ASTM D-1557-78). Soft spots and unstable areas resulting from the contractor's operation and sequence of work shall be removed and replaced with an approved material.

#### SECTION 5. FABRIC

- A. Geotextile fabric shall be rolled out in the direction of the traffic lane with all edges overlapping by at least eighteen inches (18") under the 4" compacted rock base.
- B. Fabric specifications and characteristics shall be determined and approved by the Director of Public Works/ City Engineer.

#### SECTION 6. UNDERDRAINS

- A. Install and connect four-inch (4") diameter perforated drains at all inlets to provide a way for water to exit from beneath the pavement. Underdrains help prevent prolonged pavement exposure to water, pumping, deflection cracking, faulting and frost action. Underdrain details are to be approved by the Director of Public Works/City Engineer.

#### SECTION 7. CONCRETE PLACEMENT

- A. Concrete shall not be placed until rock base and/or forms have been checked for line and grade. Vertical control stakes set by a registered land surveyor are required on each side of the proposed pavement. Cut sheets shall be provided to the City.
- B. Steel tie bars (epoxy coated deformed steel bars, ASTM A 615, Grade 40 or 60, 5/8" diameter, 30" long, @ 30" centers) shall be installed at longitudinal joints.
- C. Steel dowel pins (epoxy coated smooth steel bars, ASTM A 615, Grade 40 or 60, 5/8" diameter, 16" long, @ 18" centers) shall be installed at transverse cold joints and where new pavement ties to existing pavement.

- D. Moisten rock base if necessary, to provide a uniform dampened condition at time concrete is placed. Place concrete on the prepared rock base in a manner to avoid segregation and contamination. Concrete vibrators of an internal type shall be used to consolidate concrete. The vibrators shall be capable of providing a minimum of 4,500 impulses per minute.
- E. A construction joint must be installed if concrete placement is interrupted for more than ½ hour or if, in the opinion of the City's inspector, a cold joint has formed.
- F. The paving contractor shall be responsible for all layouts and placement work necessary to maintain positive and proper drainage of the finished pavement.

#### SECTION 8. JOINTS

- A. All joints shall conform to Drawing C502.01, C502.02 and C502.03 of the Design Criteria for the Preparation of Improvement Plans - St Louis County Department of Highways and Traffic. All transverse joints shall be spaced a maximum of 15 feet apart.
- B. The maximum joint spacing for curb and gutter sections shall be ten (10) feet.
- C. All catch basins and sills shall be separated from the pavement by ½ inch pre-molded expansion joint material extending completely through the curb and pavement slab. If sump is blocked out, it must be tied back into the pavement slab. Steel tie bars and their placement shall be in accordance with Section 7 of this policy.
- D. Full-depth expansion joints shall be installed between the curb and driveway approaches.
- E. A tied keyway shall be provided along the centerline joint unless the pavement is poured full width. See Section 7 for information on bars required along all longitudinal joints.

#### SECTION 9. CONCRETE FINISHING

- A. Under normal working conditions, moisture shall not be applied to the surface of the pavement in any form. Added finishing water shall be applied only as approved by the City inspector and only in the form of a fine pressure spray by hand methods.
- B. After surface irregularities have been removed, the finished concrete surface shall be given a uniformly roughened surface finish by the use of a broom. Brooms shall be drawn across the surface from the centerline towards each edge with the broom held perpendicular to the surface, with adjacent strokes slightly overlapping. The brooming operation shall be executed so that the corrugations will be uniform in appearance and not more than 1/8 of an inch in depth. Brooming shall be completed before the concrete is in a condition that it will be torn or unduly roughened and before the concrete has attained its initial set. Brooms shall be cleaned or replaced as often as necessary to attain the required surface texture. Upon completion of brooming, the surface shall be uniform in appearance and shall be free from

surplus water, rough or porous spots, irregularities, depressions, and other objectionable features.

#### SECTION 10. SAW CUTTING

- A. All transverse contraction joints and all longitudinal joints in concrete pavement shall be initially sawed with powered saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut joints into hardened concrete as soon as surface will not be torn, abraded, or otherwise damaged by cutting action. Joints shall be cut to a depth equal to at least 1/3 of the concrete thickness and a maximum width of 1/8".
- B. Full depth sawcutting is required at limits of pavement removal. Extreme care shall be exercised to avoid damage to adjacent concrete to remain.

#### SECTION 11. CURING

- A. Concrete shall be cured with a white pigmented membrane curing material, at a minimum rate of 150 square feet per gallon to completely cover the concrete surface. Curing compound shall be applied as soon as possible without damaging or marring the surface.

#### SECTION 12. JOINT SEALING

- A. Joints shall be sealed with materials that conform to ASTM D3405 for rubberized joint sealer, Federal specification SSS1401C. The sealing material shall be heated to the pouring temperature specified by the manufacturer, and any material which has been heated above the maximum safe heating temperature will be rejected. Prior to the placement of any joint seal material, the contractor shall provide a bill of material certification that the material meets the appropriate specification.
- B. Prior to sealing, all joints between concrete slabs shall be resawed to a 3/8" width by 1" depth. This sawing shall be done wet. The 3/8" cut shall be centered on the original 1/8" cut. The joints shall be pressure washed to remove all latency and foreign debris from the entire depth of the joint.
- C. Joints between concrete curb and gutter, sumps, etc., and asphalt pavement shall be sealed as directed by the City inspector.
- D. Immediately prior to crack sealing, all joints shall be dry and clean of dust and contaminants for proper adhesion of joint material.
- E. Joints shall be uniformly filled to a level just below the adjacent pavement surface. Care should be taken not to overfill the joints; any excess material shall be removed from the concrete surface.

- F. All joints are to be filled. This includes: 1) transverse joints, 2) longitudinal joints, 3) joints between the drive aprons and back of curb, 4) joints at storm sewers, and 5) joints between sidewalks and curbs.
- G. All joints shall be sealed before the pavement is open to traffic, including construction traffic, and as soon after completion of a minimum curing period of 48 hours, providing vehicles are not placed on the pavement when performing the sealing operation.

### SECTION 13. WEATHER CONDITIONS

- A. Concrete operations shall not continue: (1) when either the air temperature or the temperature of the surface on which is to be placed is below 40 degrees F, unless authorized by the Director of Public Works/City Engineer, (2) on any frozen surface, or (3) when weather conditions prevent the proper handling or finishing of the mixture.
- B. If approval has been granted by the Director of Public Works/City Engineer for concrete paving below 40 degrees F, the contractor shall perform paving operations in accordance with Public Works City Policy #11 (Winter Paving), which is hereby incorporated into this specification and acceptance policy.
- C. The weather limitations in section 404.6 of the "St. Louis County Standard Specifications for Highway Construction, January 1, 1997." shall be used for bituminous paving.

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### SECTION 14. OPENING TO TRAFFIC

- A. Concrete pavement shall not be opened to normal traffic until the concrete has attained a minimum compressive strength of 3,500 psi, and is at least 120 hours old. Compressive strength will be determined by tests made in accordance with ASTM C-31 and C-39. Pavement shall be cleaned and joints sealed prior to opening to traffic.
- B. Opening of bituminous pavement shall be in accordance with section 404.9.4 of "St. Louis County Standard Specifications for Highway Construction, January 1, 1997."

### SECTION 15. TESTING AND ACCEPTANCE.

- A. **Smoothness** – As soon as practicable, the center of each lane, parallel to the direction of travel, will be thoroughly straightedged by the City's inspector. All variations exceeding 3/8 in./10 ft. will be plainly marked, and those slabs shall be considered defective. Corrective action shall be accomplished by longitudinally diamond grinding or by use of an approved device designed for that purpose. The device shall be designed to improve the profile of the riding surface. The use of a bush hammer or other impact device will not be permitted. All corrective work shall be completed prior to determination of pavement thickness. However, removal and replacement will be required, if in the judgement of the Director of Public Works/City Engineer, an inordinate amount of defective slabs are found.



B. **Thickness** – Cores shall be taken from the newly placed pavement to determine thickness. For the purpose of determining constructed thickness of the pavement, cores will be taken at random intervals in each traffic lane at a minimum rate of one core per 400 lineal feet. In addition, cores will be taken at all locations where thickness measurements taken during construction indicate a thickness deficiency sufficient to justify a penalty, or at any other locations where, in the judgement of the City's inspector, a thickness deficiency may exist.

When the measurement of any core is deficient, additional cores will be taken ahead and back of the affected location until the extent of the deficiency has been determined. The thickness of any core taken shall be considered representative of the thickness of the monolithic pavement for a distance extending one-half the distance to the next core, measured along centerline, or in the case of a beginning or ending core, the distance will extend to the end of the monolithic pavement section. In any case, distance shall be adjusted to the nearest transverse joint.

If any core measurement is less than the thickness indicated on the construction plans, the developer will remove and replace the pavement at the developer's expense, or will be required to pay a penalty, as a special escrow, to the City for the deficiencies in thicknesses as noted on the following schedule. The choice of the alternate penalty under category 4 below will be at the sole discretion of the City. Penalties will be determined based on the escrow amount for "Streets", for that area of pavement represented by the failing core.

category 1	0.1 inch – 10% of the S.Y. of "Streets".
category 2	0.2 inch to 0.4 inch - 20% of the S.Y. of "Streets".
category 3	0.5 inch to 0.9 inch - 40% of the S.Y. of "Streets".
category 4	1.0 inch or more - remove and replace, or 100% S.Y. of "Streets".

C. **Concrete Compressive Strength** – sets of concrete test cylinders will be prepared and tested in conformance with ASTM C-31 and C-39 at regular intervals by City personnel, or designated representatives, to verify that the concrete as placed meets the City's specifications. The curing and testing of concrete cylinders will be done at the St. Louis County Department of Highways and Traffic Materials Testing Laboratory and will be considered the official test results. For the purpose of this section, test cylinders prepared on a Friday and taken to the testing lab on the following Monday will be considered as complying with the ASTM standards and procedures. Test results from other laboratories, from samples made by the developer's contractor or from samples taken at other locations will not be considered.

Sets of concrete test cylinders shall be taken at regular intervals and be representative of all concrete placed during the interval. If the locations of each set can be identified, the set will represent that area of pavement bounded by one-half (½) the distance to the adjacent sets. If locations of sets are unable to be determined, each set will represent an equivalent percentage of the area poured that day (e.g. if 1,000 S.Y. of pavement are cast and 4 sets of cylinders are made, each set will represent 250 S.Y. of pavement.).

Deductions for deficient concrete strength will only be imposed if any one of the following conditions is met:

- 1) Average strength below 4,000 psi,
- 2) Any two (2) sets or 5% or more of the total sets, whichever greater, fail to exceed a twenty-eight (28) day strength of 3,250 psi,
- 3) Any three (3) sets or 10% or more of the total sets, whichever greater, fail to exceed a twenty-eight (28) day strength of 3,500 psi, and
- 4) Any five (5) sets or 15% or more of the total sets, whichever greater, fail to exceed a twenty-eight (28) day strength of 3,750 psi.

Should deductions be required because any of the above criteria are met, the deductions will be imposed on all concrete failing to meet the specifications. The Developer will be required to pay a penalty, as a special escrow, to the City for that area of pavement represented by the failing test. The penalty shall be a linear penalty varying from no (0) penalty at 4,000 psi to seventy-five percent (75%) of the escrow amount for "Streets" at 3,000 psi and a one-hundred percent (100%) penalty for any test result less than 3,000 psi.

The square yardage price will be determined from the escrow amount for "Streets".

**Under no circumstance will strength testing of field cores be allowed as a substitute for lab specimens.** Cores that have been taken for verification of pavement thickness and may be tested for field strength for informational purposes only. No core strengths will be used for the purpose of complying with the specified strength.

D. **Concrete Defects** – Prior to final acceptance of any streets within a development the City of Chesterfield will conduct a thorough inspection of said streets. The following defects will require full slab removal and replacement from joint to joint, at the sole expense of the developer/contractor:

- Differential settlement or movement that has occurred at a joint.
- Depressions holding water more than 1/8" deep (the City has the option to permit isolated grinding of small areas of up to 1/4" deep to promote drainage).
- Overbreakage.
- Any damage resulting from negligence on the part of the developer's contractor.
- Rain damage.
- Cracks-- a temperature/shrinkage crack that forms in the center of a slab and is perpendicular to the center line of the street may be acceptable as long as no differential settlement or movement has occurred at the crack and the crack is not located over a utility trench. Multiple adjacent cracked slabs, in the direction of travel are not acceptable and must be removed and replaced. In addition, not more than 5% of the slabs within a street segment may have a temperature/shrinkage crack.

A street segment is defined as a section of street that is between intersections, or a section of street as measured by the change in the characteristics of the street, i.e. width. A street segment may also be identified by the sequence of the paving operation. Slabs above this threshold must be removed and replaced. No other types of cracks are acceptable, including but not limited to, longitudinal and diagonal cracks. Slabs with unacceptable cracks must be removed and replaced.

- Vandalized pavement resulting in an unacceptable final product. Examples include, racist or vulgar marking, deep foot prints (generally ¼" or more), and vehicle damage.

E. **Half Slab Replacements** – Half slab replacement, patching or grouting will not be allowed as a form of corrective measure.

F. **Marred Surfaces** – For marred surface areas of slightly damaged concrete, as determined by the Director of Public Works/City Engineer, that remain in the completed project, a minimum penalty of twenty percent (20%) of the escrow amount for "Streets" will be assessed for the slabs affected. The developer will be required to pay the penalty as a special escrow, to the City. All penalties must be paid before escrows are released.

- A marred surface is defined as having any of the following characteristics: 1) pavement that has been rained on, 2) pavement that has not reached its initial set and has had water flow on its surface, washing away cement, 3) pavement that has had plastic placed on it wherein the plastic has actually caused indentations and random patterns, 4) pavement that has been walked on by humans or animals or driven on by any type of vehicle, 5) pavement that has had curing compound sprayed on it before the initial set, resulting in pitting marks, 6) pavement that has been vandalized in any way. Under no circumstances shall concrete surfaces be re-finished with additional cement or other materials as a method to repair damaged or marred surfaces.

G. **Acceptance** – The City of Chesterfield will not accept streets for maintenance within subdivisions until all development is completed, or until construction within the subdivision has been substantially completed, as outlined in Public Works City Policy #1 (Acceptance of Streets Within Residential Developments), which is hereby incorporated into this pavement and acceptance policy.

## SECTION 16. JUDGEMENT

A. The Director of Public Works/City Engineer is authorized to use judgement in the application of provisions of this policy to achieve the most beneficial results of these pavement acceptance guidelines. It is recognized that physical conditions may warrant site specific determinations or unusual applications of the guidelines herein specified. The Director of Public Works/City Engineer is hereby instructed to use the pavement acceptance policy as a general directive and to prepare general regulations governing the construction, reconstruction or reparation of pavements consistent with this policy.

**City of Chesterfield**  
**Pavement Specification & Acceptance Policy**  
**for**  
**Work Contracted by the City**

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**SECTION 1. INTRODUCTION**

- A. In the following sections, provisions apply to both concrete and bituminous pavements unless otherwise stated. The provisions for concrete apply equally to concrete pavement and concrete curb and gutter constructed as part of asphalt pavement.

**SECTION 2. CONCRETE**

- A. Concrete shall have a minimum of 6.00 sacks (565 lbs.) of Portland Cement (ASTM C 150, Type I) per cubic yard of concrete.
- B. Concrete coarse aggregate shall consist of limestone aggregate from a MoDOT inspected and approved source. Limestone aggregate for pavement concrete shall be in accordance with Section 1005 of the "Missouri Standard Specifications for Highway Construction, 2004". Coarse aggregates containing in excess of 6% total deleterious material are prohibited.

- C. Concrete fine aggregate shall be Class A sand in accordance with Section 501.2.2.2.1 and Section 1005.2 of the "St. Louis County Standard Specifications for Highway Construction, January 1, 1997." Note that fine aggregates for concrete to be used in sidewalks and drive approaches shall, in addition to meeting the requirements of section 1005.2, be free from coal and lignite materials as determined by AASHTO 113.
- D. Approved Class C or F fly ash may be used to replace up to 15 percent of the cement on a pound for pound basis in all concrete except concrete designed for high early strength. Fly ash shall not exceed 15 percent by weight of the total cementations material (fly ash and cement).
- E. Water to cement ratio shall not exceed 0.47. The water to cement ratio shall be calculated using the total weight of cementitious material. No water shall be added to the concrete mix once it leaves the batch plant without the City's approval.
- F. Maximum three-inch (3") slump when placed with a slip-form paver and maximum four-inch (4") slump when placed using forms, per ASTM C-143.
- G. Concrete shall have 5% to 8% air content (by volume).
- H. Hand mixing of concrete will not be permitted.
- I. The use of an approved admixture may be permitted upon written request by the contractor. The use of any admixture will be by approval of the Director of Public Works/City Engineer and contingent upon satisfactory performance of the work; permission for its use may be withdrawn at any time satisfactory results are not obtained.
- J. All work shall be performed in accordance with the plans and specifications for each project.

### SECTION 3. BITUMINOUS PAVEMENTS

- A. Bituminous pavements and base courses, except as modified herein, shall be constructed in accordance with "St. Louis County Standard Specifications for Highway Construction, January 1, 1997."
- B. The final surface layer shall be laid in a continuous sequence over the entire project constructed in a single operating day. The contractor shall arrange operations in such a manner to avoid cold joints, either transverse or longitudinal. When cold joints cannot be prevented, transverse cold joints should be constructed as opposed to longitudinal cold joints.

### SECTION 4. ROCK BASE

- A. During excavation for the rock base, the grade shall be scarified to facilitate drying or moistened as necessary to permit proper compaction. Prior to placement of the geotextile

fabric and rock base, the grade shall be uniform, rolled and compacted to not less than ninety percent (90%) of the maximum density as determined by the Modified Proctor Test AASHTO T-99 (ASTM D-1557-78). The City may, at its sole discretion, accept proof rolling as evidence of compactive effort in lieu of in place density tests.

- B. Rock base shall be Type 5 Aggregate, per Section 1007 of the "St. Louis County Standard Specifications for Highway Construction, January 1, 1997." The rock base shall be placed on the graded and compacted subgrade, then shaped and compacted to not less than ninety percent (90%) of the maximum density as determined by the Modified Proctor Test AASHTO T-99 (ASTM D-1557-78). Soft spots and unstable areas resulting from the contractor's operation and sequence of work shall be removed and replaced with an approved material.

#### SECTION 5. FABRIC

- A. Geotextile fabric shall be rolled out in the direction of the traffic lane with all edges overlapping by at least eighteen inches (18") under the 4" compacted rock base.
- B. Fabric specifications and characteristics shall be determined and approved by the Director of Public Works/ City Engineer.

#### SECTION 6. UNDERDRAINS

- A. Install and connect four-inch (4") diameter perforated drains at all inlets to provide a way for water to exit from beneath the pavement. Underdrains help prevent prolonged pavement exposure to water, pumping, deflection cracking, faulting and frost action. Underdrain details are to be approved by the Director of Public Works/City Engineer.

#### SECTION 7. CONCRETE PLACEMENT

- A. Concrete shall not be placed until rock base and/or forms have been checked for line and grade.
- B. Steel tie bars (epoxy coated deformed steel bars, ASTM A 615, Grade 40 or 60, 5/8" diameter, 30" long, @ 30" centers) shall be installed at longitudinal joints.
- C. Steel dowel pins (epoxy coated smooth steel bars, ASTM A 615, Grade 40 or 60, 5/8" diameter, 16" long, @ 18" centers) shall be installed at transverse cold joints and where new pavement ties to existing pavement.
- D. Moisten rock base if necessary, to provide a uniform dampened condition at time concrete is placed. Place concrete on the prepared rock base in a manner to avoid segregation and contamination. Concrete vibrators of an internal type shall be used to consolidate concrete. The vibrators shall be capable of providing a minimum of 4,500 impulses per minute.

- E. A construction joint must be installed if concrete placement is interrupted for more than ½ hour or if, in the opinion of the City's inspector, a cold joint has formed.
- F. The paving contractor shall be responsible for all layouts and placement work necessary to maintain positive and proper drainage of the finished pavement.

#### SECTION 8. JOINTS

- A. All joints shall conform to Drawing C502.01, C502.02 and C502.03 of the Design Criteria for the Preparation of Improvement Plans - St Louis County Department of Highways and Traffic. All transverse joints shall be spaced a maximum of 15 feet apart.
- B. The maximum joint spacing for curb and gutter sections shall be ten (10) feet.
- C. All catch basins and sills shall be separated from the pavement by ½ inch pre-molded expansion joint material extending completely through the curb and pavement slab. If sump is blocked out, it must be tied back into the pavement slab. Steel tie bars and their placement shall be in accordance with Section 7, of this policy.
- D. Full-depth expansion joints shall be installed between the curb and driveway approaches.
- E. A tied keyway shall be provided along the centerline joint unless the pavement is poured full width. See Section 7 for information on bars required along all longitudinal joints.

#### SECTION 9. CONCRETE FINISHING

- A. Under normal working conditions, moisture shall not be applied to the surface of the pavement in any form. Added finishing water shall be applied only as approved by the City inspector and only in the form of a fine pressure spray by hand methods.
- B. After surface irregularities have been removed, the finished concrete surface shall be given a uniformly roughened surface finish by the use of a broom. Brooms shall be drawn across the surface from the centerline towards each edge with the broom held perpendicular to the surface, with adjacent strokes slightly overlapping. The brooming operation shall be executed so that the corrugations will be uniform in appearance and not more than 1/8 of an inch in depth. Brooming shall be completed before the concrete is in a condition that it will be torn or unduly roughened and before the concrete has attained its initial set. Brooms shall be cleaned or replaced as often as necessary to attain the required surface texture. Upon completion of brooming, the surface shall be uniform in appearance and shall be free from surplus water, rough or porous spots, irregularities, depressions, and other objectionable features.

## SECTION 10. SAW CUTTING

- A. All transverse contraction joints and all longitudinal joints in concrete pavement shall be initially sawed with powered saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut joints into hardened concrete as soon as surface will not be torn, abraded, or otherwise damaged by cutting action. Joints shall be cut to a depth equal to at least 1/3 of the concrete thickness and a maximum width of 1/8".
- B. Full depth sawcutting is required at limits of pavement removal. Extreme care shall be exercised to avoid damage to adjacent concrete to remain.

## SECTION 11. CURING

- A. Concrete shall be cured with a white pigmented membrane curing material, at a minimum rate of 150 square feet per gallon to completely cover the concrete surface. Curing compound shall be applied as soon as possible without damaging or marring the surface.

## SECTION 12. JOINT SEALING

- A. Joints shall be sealed with materials that conform to ASTM D3405 for rubberized joint sealer, Federal specification SSS1401C. The sealing material shall be heated to the pouring temperature specified by the manufacturer, and any material which has been heated above the maximum safe heating temperature will be rejected. Prior to the placement of any joint seal material, the contractor shall provide a bill of material certification that the material meets the appropriate specification.
- B. Prior to sealing, all joints between concrete slabs shall be resawed to a 3/8" width by 1" depth. This sawing shall be done wet. The 3/8" cut shall be centered on the original 1/8" cut. The joints shall be pressure washed to remove all latency and foreign debris from the entire depth of the joint.
- C. Joints between concrete curb and gutter, sumps, etc., and asphalt pavement shall be sealed as directed by the City inspector.
- D. Immediately prior to crack sealing, all joints shall be dry and clean of dust and contaminants for proper adhesion of joint material.
- E. Joints shall be uniformly filled to a level just below the adjacent pavement surface. Care should be taken not to overfill the joints; any excess material shall be removed from the concrete surface.
- F. All joints are to be filled. This includes: 1) transverse joints, 2) longitudinal joints, 3) joints between the drive aprons and back of curb, 4) joints at storm sewers, and 5) joints between sidewalks and curbs.



- G. When access to is not being limited, all joints shall be sealed before the pavement is open to traffic, including construction traffic, and as soon after completion of a minimum curing period of 48 hours, providing vehicles are not placed on the pavement when performing the sealing operation. In all cases the pavement should be sealed as soon as the entire width of the pavement can be sealed.

### SECTION 13. WEATHER CONDITIONS.

- A. Concrete operations shall not continue: (1) when either the air temperature or the temperature of the surface on which is to be placed is below 40 degrees F, unless authorized by the Director of Public Works/City Engineer, (2) on any frozen surface, or (3) when weather conditions prevent the proper handling or finishing of the mixture.
- B. If approval has been granted by the Director of Public Works/City Engineer for concrete paving below 40 degrees F, the contractor shall perform paving operations in accordance with Public Works City Policy #11 (Winter Paving), which is hereby incorporated into this specification and acceptance policy.
- C. The weather limitations in section 404.6 of the "St. Louis County Standard Specifications for Highway Construction, January 1, 1997." shall be used for bituminous paving.

### SECTION 14. OPENING TO TRAFFIC

- A. Concrete pavement shall not be opened to normal traffic until the concrete has attained a minimum compressive strength of 3,000 psi, and is at least 120 hours old. Newly constructed pavement may be opened to light traffic once a minimum compressive strength of 2,500 psi has been obtained. Compressive strength will be determined by tests made in accordance with ASTM C-31 and C-39. Pavement shall be cleaned prior to opening to traffic.
- B. Opening of bituminous pavement shall be in accordance with section 404.9.4 of "St. Louis County Standard Specifications for Highway Construction, January 1, 1997."

### SECTION 15. TESTING AND ACCEPTANCE.

- A. **Smoothness** – As soon as practicable, the center of each lane, parallel to the direction of travel, will be thoroughly straightedged by the City's inspector. All variations exceeding 3/8 in./10 ft. will be plainly marked, and those slabs shall be considered defective. Corrective action shall be accomplished by longitudinally diamond grinding or by use of an approved device designed for that purpose. The device shall be designed to improve the profile of the riding surface. The use of a bush hammer or other impact device will not be permitted. All corrective work shall be completed prior to determination of pavement thickness. However, removal and replacement will be required, if in the judgement of the Director of Public Works/City Engineer, an inordinate amount of defective slabs are found.

The following areas will be excluded from the smoothness determination:

- New slabs adjacent to existing slabs that are to remain.
- Areas that have less than five consecutive new slabs.

**B. Thickness** – Cores shall be taken from the newly placed pavement to determine thickness. For the purpose of determining constructed thickness of the pavement, cores will be taken at random intervals in each traffic lane at a minimum rate of one core per 400 lineal feet. In addition, cores will be taken at all locations where thickness measurements taken during construction indicate a thickness deficiency sufficient to justify penalty, or at any other locations where, in the judgement of the City's inspector, a thickness deficiency may exist.

When the measurement of any core is deficient additional cores will be taken ahead and back of the affected location until the extent of the deficiency has been determined. The thickness of any core taken shall be considered representative of the thickness of the monolithic pavement for a distance extending one-half the distance to the next core, measured along centerline, or in the case of a beginning or ending core, the distance will extend to the end of the monolithic pavement section.

If any core measurement is less than the thickness indicated on the construction plans, the Contractor will remove and replace the pavement at the Contractor's expense, or will be required to reimburse the City for the deficiencies in thicknesses as noted on the following schedule. The choice of the alternate penalty under category 4 below will be at the sole discretion of the City. A deduction will be made to the contract unit price for "Removal and Replacement of P.C.C. Pavement" or "Bituminous Pavement", as is appropriate, for that area of pavement represented by the failing core. The amounts due as penalties under this section shall be immediately withheld from any sums due the Contractor as soon as the extent of the deficiencies are determined.

- |            |   |
|------------|---|
| category 1 | 0.1 inch – 10% of the bid unit price.                                 |
| category 2 | 0.2 inch to 0.4 inch - 20% of the of the bid unit price.              |
| category 3 | 0.5 inch to 0.9 inch - 40% of the bid unit price.                     |
| category 4 | 1.0 inch or more - remove and replace, or 100% of the bid unit price. |

**C. Concrete Compressive Strength** – sets of concrete test cylinders will be prepared and tested in conformance with ASTM C-31 and C-39 at regular intervals by City personnel, or designated representatives, to verify that the concrete as placed meets the City's specifications. The curing and testing of concrete cylinders will be done at the St. Louis County Department of Highways and Traffic Materials Testing Laboratory and will be considered the official test results. Test cylinders prepared on a Friday and taken to the testing lab on the following Monday will be considered as complying with the ASTM standards and procedures. Test results from other laboratories, from samples made by the contractor's personnel or from samples taken at other locations will not be considered.

Sets of concrete test cylinders shall be taken at regular intervals and be representative of all concrete placed during the interval. If the locations of each set can be identified, the set will represent that area of pavement bounded by one-half ( $\frac{1}{2}$ ) the distance to the adjacent sets. If locations of sets are unable to be determined, each set will represent an equivalent percentage of the area poured that day (e.g. if 1,000 S.Y. of pavement are cast and 4 sets of cylinders are made, each set will represent 250 S.Y. of pavement.).

Deductions for deficient concrete strength will only be imposed if any one of the following conditions is met:

- 1) Average strength below 4,000 psi,
- 2) Any two (2) sets or 5% or more of the total sets, whichever greater, fail to exceed a twenty-eight (28) day strength of 3,250 psi,
- 3) Any three (3) sets or 10% or more of the total sets, whichever greater, fail to exceed a twenty-eight (28) day strength of 3,500 psi, and
- 4) Any five (5) sets or 15% or more of the total sets, whichever greater, fail to exceed a twenty-eight (28) day strength of 3,750 psi.

Should deductions be required because any of the above criteria are met, the deductions will be imposed on all concrete failing to meet the specifications. A deduction will be made to the contract unit price for "Removal and Replacement of P.C.C. Pavement" for that area of pavement represented by the failing test. The deduction shall be a linear deduction varying from no (0) deduction at 4,000 psi to seventy-five percent (75%) of the contract unit price at 3,000 psi and a one-hundred percent (100%) deduction for any test result less than 3,000 psi.

Under no circumstance will strength testing of field cores be allowed as a substitute for lab specimens. Cores that have been taken for verification of pavement thickness and may be tested for field strength for informational purposes only. No core strengths will be used for the purpose of complying with the specified strength.

D. Concrete Defects -- The following defects will require full slab removal and replacement from joint to joint, at the sole expense of the contractor:

- Differential settlement or movement that has occurred at a joint.
- Depressions holding water more than 1/8" deep (the City has the option to permit isolated grinding of small areas of up to 1/2" deep to promote drainage).
- Overbreakage.
- Damage to previously placed pavement during excavation of the second lane.
- Any damage resulting from negligence on the part of the Contractor.
- Rain damage.
- Cracks-- a temperature/shrinkage crack that forms in the center of a slab and is perpendicular to the center line of the street may be acceptable as long as no

differential settlement or movement has occurred at the crack and the crack is not located over a utility trench. Multiple adjacent cracked slabs, in the direction of travel are not acceptable and must be removed and replaced. In addition, not more than 5% of the slabs within a street segment may have a temperature/shrinkage crack. A street segment is defined as a section of street that is between intersections, or a section of street as measured by the change in the characteristics of the street, i.e. width. A street segment may also be identified by the sequence of the paving operation. Slabs above this threshold must be removed and replaced. No other types of cracks are acceptable, including but not limited to, longitudinal and diagonal cracks. Slabs with unacceptable cracks must be removed and replaced.

- Vandalized pavement resulting in an unacceptable final product. Examples include, racist or vulgar marking, deep foot prints (generally ¾" or more), and vehicle damage.

E. **Half Slab Replacements** – Half slab replacement, patching or grout will not be allowed as a form of corrective measure.

F. **Marred Surfaces** – For marred surface areas of slightly damaged concrete, as determined by the Director of Public Works/City Engineer, that remain in the completed project, a deduction of twenty percent (20%) of the unit bid price for "Removal and Replacement of P.C.C. Pavement" or "Bituminous Pavement", as is appropriate, will be made for the concrete slabs or asphalt area affected.

- A marred surface is defined as having any of the following characteristics: 1) pavement that has not reached its initial set and has had water flow on its surface, washing away cement, 2) pavement that has had plastic placed on it wherein the plastic has actually caused indentations and random patterns, 3) pavement that has been driven on by any type of vehicle, 4) pavement that has been walked on by humans that could have been prevented by the reasonable actions of the contractor, 5) pavement that has been chipped, gouged, or otherwise damaged by action of the contractor. Under no circumstances shall concrete surfaces be re-finished with additional cement or other materials as a method to repair damaged or marred surfaces.

## SECTION 16. JUDGEMENT

- A. The Director of Public Works/City Engineer is authorized to use judgement in the application of provisions of this policy to achieve the most beneficial results of these pavement acceptance guidelines. It is recognized that physical conditions may warrant site specific determinations or unusual applications of the guidelines herein specified. The Director of Public Works/City Engineer is hereby instructed to use the pavement acceptance policy as a general directive and to prepare general regulations governing the construction, reconstruction or reparation of pavements consistent with this policy.

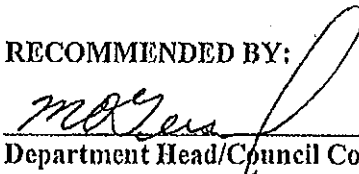
CITY OF CHESTERFIELD  
POLICY STATEMENT

<b>PUBLIC WORKS</b>		<b>NO.</b>	43
<b>SUBJECT</b>	City Employee Admission to the Family Aquatic Park	<b>INDEX</b>	PW
<b>DATE ISSUED</b>	6/1/1998	<b>DATE REVISED</b>	9/8/1998

**POLICY**

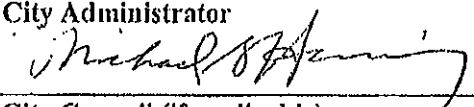
Free admission to the Family Aquatic Park will be given to year-round, full-time City employees and Police Reserve Officers. City employees and Police Reserve Officers may purchase a family pass for \$25. Elected officials are excluded from this policy.

RECOMMENDED BY:

  
 \_\_\_\_\_  
 Department Head/Council Committee (if applicable)

2/13/01  
 \_\_\_\_\_  
 Date

APPROVED BY:

City Administrator  
  
 \_\_\_\_\_  
 City Council (if applicable)

\_\_\_\_\_  
 Date  
2/13/01  
 \_\_\_\_\_  
 Date

Existing Policy  
Recommend no changes

**CITY OF CHESTERFIELD  
POLICY STATEMENT**

<b>PUBLIC WORKS</b>		<b>NO.</b>	<b>44</b>
<b>SUBJECT</b>	<b>City Hall rental and use policy</b>	<b>INDEX</b>	<b>PW</b>
<b>DATE</b>		<b>DATE</b>	<b>9/19/2002</b>
<b>ISSUED</b>	<b>5/17/99</b>	<b>REVISED</b>	<b>9/23/2013</b>

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**POLICY**

In all cases, meetings of City officials, boards and commissions take priority and will be scheduled without charge, regardless of time or day of the week. Events that are sponsored solely by the City, or where the City is identified as a co-sponsor are scheduled free of charge. The City Administrator is authorized to waive fees whenever it is in the City's best interest.

Free use of the building may be scheduled by resident, political and resident community groups but is limited to hours during the normal workweek, Monday through Thursday, 8:30 a.m. to 10 p.m., Friday, 8:30 a.m. to 5:00 p.m., Saturday 8:30 a.m. to 5:00 p.m., excluding official City Holidays. Community groups include, but are not limited to: Political forums, Subdivision meetings for the whole subdivision, Trustee meetings, School District functions, Ceremonial meetings of Boy\Girl Scouts, Junior Achievement, Jaycees, resident athletic associations, and other governmental agencies etc. Annual or semi-annual Subdivision meetings, where attendance is intended for the entire whole subdivision may also be scheduled on Saturdays without charge. Usage outside of these times may also be scheduled, as staff is available and a usage fee is charged. Specific and unique exceptions to this policy may be approved by the Planning and Public Works Committee of City Council.

Free use of the facility during normal business hours is predicated upon the condition that the proposed use does not require special set-up, arrangements, and that food and/or beverages will not be consumed. Such events will be scheduled, free of charge, subject to availability of space.

Similarly, the facilities are available to the aforementioned resident community users at other times, for a nominal fee, subject to availability of space and building maintenance personnel.

Non-resident groups may reserve the conference rooms, chambers, multi-purpose room or plaza, subject to availability, on a fee basis (8:30 a.m. -- 10 p.m.), and availability of building maintenance personnel. Two weeks advance notice is required to voluntarily schedule personnel.

Facility users are not allowed to dispense or consume alcoholic beverages. The City Administrator is authorized to approve specific events and individual circumstances where alcohol would be permitted.

Food and drink consumption is normally limited to the multi-purpose room, pre-function and plaza areas. Food is not permitted within conference rooms or Council Chambers, without specific approval by the City Administrator, prior to the event.

Smoking and other tobacco products are not allowed within the City Hall building, under any circumstances.

Facility users are not allowed to utilize the audio-visual systems. Users of the Council Chambers may be permitted use of the podium, fixed position microphone and overhead speakers. The audio-visual system is complex, expensive, and cannot be made available to untrained users.

Any use of the facility where food or beverages are offered or consumed, will require a security deposit (\$200). At completion of each use, prior to leaving the facility, building maintenance personnel will perform an inspection and room check-out to identify and note damage, if any.

All users are required to complete a rental application form describing the proposed use and must agree to indemnify the City.

Building usage is subject to availability.

Rental of one room does not give the renter or guests privileges in any other part of the building.

No person shall mark or deface the City Hall. Table decorations only. This means no tape, glue, tacks, pins or nails on the walls, floors, ceilings or any other surface.

The City Hall is not available for events that involve an admission charge.

Ending time of rental means that the renter is completely out of the building, which includes cleanup. At this time the Building Attendant on duty will then complete the appropriate room check-out procedure.

At no time will furniture or fixtures be moved, removed or rearranged without prior approval.

Room rentals must be a minimum of two hours. Fees are charged per two hour interval or fraction thereof.

Renter agrees to indemnify and hold harmless the City of Chesterfield, its officials, and employees from any claim or cause of action brought by renter, his agents, employees or guests arising from the usage of the facility.

Rental fee will be refunded in full if notice of cancellation is given to the City Clerk in writing at least 7 days prior to the event.

**Room Rental Workweek Rates Monday 8 a.m. through Friday 5 p.m.**

Conference Room, Plaza, Patio, multi-purpose room	<b>Non-Resident</b> \$70	<b>Resident</b> \$35 X _____	(per 2 hours) = \$ _____
Chambers	\$85	\$50 X _____	(per 2 hours) = \$ _____

**Rental Weekend Rates Friday after 5 p.m., Saturday and Sunday:**

Conference Room, Plaza, Patio, multi-purpose room	<b>Non-Resident</b> \$85	<b>Resident</b> \$55 X _____	(per 2 hours) = \$ _____
Chambers	\$100	\$70X _____	(per 2 hours) = \$ _____

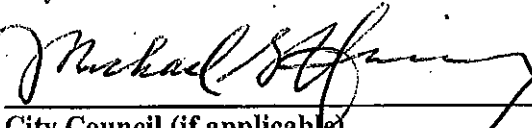
These rules and regulations are not intended to restrict or otherwise apply to the normal administrative use of the City Hall. As such, the aforesated building restrictions do not apply the normal administrative operation of the City, or to those events or uses in which the City is a sponsor or otherwise involved.

**RECOMMENDED BY:**

M. Geisel through PW/Parks Committee  
Department Head/Council Committee (if applicable)

Revised 9/19/2002  
Revised 9/24/2013  
Date

**APPROVED BY:**

\_\_\_\_\_  
City Administrator  
  
\_\_\_\_\_  
City Council (if applicable)

\_\_\_\_\_  
Date  
9/23/13  
\_\_\_\_\_  
Date