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## **City of Hudson Department of Public Works Retaining Wall Policy**

### **1. Purpose**

The purpose of this policy is to state the criteria for maintenance of existing retaining walls and construction of new retaining walls. This policy applies to retaining walls wholly within private property, walls on or parallel to lot lines between private properties, walls on or parallel to public right of way or City property boundaries, walls wholly within City right of way not parallel to right of way boundaries, and walls wholly within City property not parallel to property boundaries. Retaining walls existing at the time of adoption of this policy shall not be grandfathered in unless written agreements are in place between applicable parties prior to the adoption of this policy.

### **2. Background**

In the City of Hudson, homeowners, developers, and contractors have built many retaining walls along sidewalks, alleys, and between private property to create means of access and develop property for construction. Eventually, even well-built retaining walls need maintenance. When maintenance is needed, some types of repairs are very expensive and require engineered documents and skilled craftsmanship. With the span of years between initial construction and the time when repairs to retaining walls are necessary, the property owner and the City of Hudson are often faced with the need to determine the ownership of the walls and maintenance responsibilities.

### **3. Summary of Allowable Wall Types and Cost/Maintenance Responsibilities**

The following tables summarize some of the major items contained in this policy for ease of understanding. Information provided in the summary tables do not supersede the information in the remainder of this policy document, and the information in the remainder of the document shall resolve any potential discrepancies.

**Table 1: Summary of Allowed Retaining Wall Types by Location**

Where Allowed *	Cast-In-Place Concrete Walls	Gabion Baskets	Precast Concrete Modular Block Walls	Stone or Boulder Walls	Wood/Timber Walls	Other Wall Types
Allowed Wholly Within Private Property	X	X	X	X	X	X
Allowed Parallel to Lot Lines of Private Properties	X	X	X	X	X	X
Allowed Fronting City Right of Way or City Property	X	X	X			
Allowed Wholly Within City Property	X	X	X			

\* Assumes all proper permitting, engineering, and other applicable details in this policy are followed

**Table 2: Summary of Cost Share Responsibility for Retaining Walls Parallel to City Right of Way or City Property**

Type of Activity	Cause of Activity	Cost Share*
New Retaining Wall Construction	Changes in City's Fronting Street	100% City Cost
	Changes in Private Property	100% Private Property Cost
Reconstruction of Existing Retaining Wall	City Reconstruction Projects & Meeting Section 7.C	50% to Property on Top of Wall & 50% to Property on Bottom of Wall When Retaining Wall Is Unable to Be Removed  100% to City When Retaining Wall Is Removed/Regraded At A Maintainable Slope
	Outside of City Projects & Meeting Section 7.A	75% to Property on Top of Wall & 25% to Property on Bottom of Wall When Retaining Wall Is Unable to Be Removed  50% to Property on Top of Wall When Retaining Wall Is Removed/Regraded At A Maintainable Slope
	Outside of City Projects & Not Meeting Section 7.A	100% Private Property Cost (City will not pursue replacement in these situations)
Maintenance of Existing Retaining Wall	All	100% to Owner of Wall

\* A written agreement between parties will supersede the cost share percentages shown

**4. Definitions**

- A. Cast-In-Place Concrete Retaining Walls: Retaining walls that are formed and concrete poured on-site to retain earth above the wall, including any incidental materials and

construction activities. Cast-In-Place Concrete Retaining Walls shall use air-entrained concrete.

- B. Gabion Baskets: Wire baskets filled with rocks that are used to retain earth, including any incidental materials and construction activities.
- C. Maintenance: Maintenance of retaining walls consists of preventative maintenance (keeping walls that are in good condition in that condition) and reactive maintenance (bringing walls in marginal or poor condition to good condition). Since retaining walls can be a safety hazard when in poor shape, retaining walls should be kept in good shape as much as feasible for the welfare of the general public.
- D. Owner: The person or entity owning the wall. Unless a signed agreement between the applicable parties say otherwise, the owner shall be the original constructor of the wall. When the original constructor of the wall is unknown, the owner shall be assumed to be the owner of the property on top of the wall, or, in the case the wall is constructed fully on City right of way or property but likely by the private property owner whose property is held up by the wall, the owner shall be assumed to be the private property owner whose property is being held up by the wall.
- E. Parallel: Generally following the same direction as an adjacent property line or meandering slightly along the property line, as determined by the City Engineer. Any part of the wall, including blocks or other wall materials, foundations, tiebacks, and other permanent structures, must be within 5 feet of the property line, except as described in Section 5.C.1 for retaining walls constructed on City right of way or City property by private property owners. Examples of parallel walls are as follows:



\* See Section 5.C.1 for walls constructed on City right of way or City property by private property owners.

- F. Precast Concrete Modular Block Retaining Walls: Retaining walls made using precast or “manufactured” concrete blocks arranged in rows to retain earth above the wall, including any incidental materials and construction activities. These walls may utilize tie-back systems or anchors, or they may be designed as “gravity” walls not needing tie-backs or anchors. Installation of precast concrete modular block retaining walls must follow all installation requirements from the manufacturer.
- G. Stone or Boulder Retaining Walls: Retaining walls made using stones or boulders arranged to retain earth above the wall, including any incidental materials and construction activities.
- H. Wood/Timber Retaining Walls: Retaining walls made using wood or timber planks or logs arranged in rows to retain earth above the wall, including any incidental materials and construction activities.

## 5. Standards, Maintenance, and Cost Responsibility Requirements for Retaining Walls

This section details the various construction and maintenance standards for retaining walls, the maintenance responsibility for such walls, and the cost responsibility requirements for such walls.

A written agreement, such as an easement, between affected property owner(s) and/or the City, as applicable, shall supersede the cost and maintenance responsibilities detailed in this policy. Construction standards may not be superseded by a written agreement.

Construction of new retaining walls and replacement of existing retaining walls shall follow all applicable City Ordinances as well as the standards contained in this policy.

#### A. Retaining Walls Wholly Within Private Property

##### 1) General

Section 5.A applies to all retaining walls within private property and not along a property line (either between two private properties or between one private property and City right of way or City property). For walls running generally parallel to or straddling a property line, see Section 5.B or 5.C as appropriate.

Retaining walls being newly constructed or reconstructed on property parallel to areas to be dedicated as City right of way or City property shall follow Section 5.C. Retaining walls being newly constructed or reconstructed on property wholly within areas to be dedicated as City right of way or City property shall follow Section 5.D.

A property boundary survey may be required to determine whether a wall in question applies to this section.

##### 2) Construction Standards

Where a retaining wall is wholly within private property, the retaining wall shall be of any type of material or design as determined by the design engineer (if needed for necessary permits) and the property owner.

Stone or Boulder Retaining Walls shall be grouted so that any voids are filled with concrete to avoid future erosion through the void spaces.

Wood or Timber Retaining Walls shall not exceed 4 feet in height.

Weep holes, drain tile, and associated bedding and other materials shall be provided where determined by the design engineer (if necessary for permitting).

All areas adjacent to the top and bottom of any retaining wall shall be established with vegetation or impervious surfaces to minimize the potential for erosion and to control stormwater runoff.

In new developments and redevelopments, any existing retaining walls shall be replaced at the time of development or redevelopment unless otherwise allowed by the City Engineer.

Fall protection is required on top of all retaining walls three feet in height or higher and may be provided for retaining walls of any height.

Construction of all retaining walls shall require the applicant to construct the retaining wall to meet the requirements of any applicable approved plans, specifications, permit conditions, policy requirements, and all other applicable requirements. All retaining walls not built according to the approved plans, specifications, permit conditions, policy requirements, and all other applicable requirements shall be removed and replaced to meet such requirements at the expense of the applicant.

Any turf disturbed by the new construction of a retaining wall, reconstruction of a retaining wall, or any maintenance activity related to a retaining wall shall be restored as soon as possible to minimize the potential for erosion.

3) Maintenance

Maintenance of retaining walls wholly on private property shall be the responsibility of the property owner on whose property the wall is located.

4) Cost and Assessment Policies

The costs for all construction, reconstruction, maintenance, surveying, and removal of retaining walls wholly on private property shall be the responsibility of the property owner on whose property the wall is located. These costs are not eligible for special assessments unless otherwise approved by the Common Council of the City of Hudson.

5) Permit Needed

New construction, reconstruction, and major maintenance of retaining walls wholly on private property that are three feet or more in height at its maximum height shall require a permit. Major maintenance consists of activities that involve impacts to the structural capacity of the wall. Minor maintenance to retaining walls, such as tuck pointing and grouting, do not require a permit. The City Engineer shall determine whether a maintenance activity is considered major or minor. Property owners wishing to provide maintenance to a retaining wall are required to contact the City Engineer to determine whether a permit is needed for the proposed maintenance work.

When a permit is needed, see Section 6 for additional information on permitting requirements.

B. Retaining Walls Parallel to Boundary Between Two Private Properties

1) General

Section 5.B applies to all retaining walls running generally parallel to (as defined in Section 4) or on a property boundary between two private properties.

Disputes regarding property boundaries and the ownership of retaining walls between two properties shall be settled by the property owners involved in the property

boundary dispute. The City suggests that property owners settle all property disputes amicably and that the property owners hire a land surveyor licensed in the State of Wisconsin to perform a boundary survey in order to determine ownership. As a last resort, property owners may settle property boundary disputes in the applicable court as a civil case. The City will not be involved in property boundary disputes between two property owners.

The requirements of Section 5.B, except for the construction standards in Section 5.B.2, may be superseded by a written agreement between the owners of the subject properties.

## 2) Construction Standards

Stone or Boulder Retaining Walls shall be grouted so that any voids are filled with concrete to avoid future erosion through the void spaces.

Wood or Timber Retaining Walls shall not exceed 4 feet in height.

Weep holes, drain tile, and associated bedding and other materials shall be provided where determined by the design engineer (if necessary for permitting).

All areas adjacent to the top and bottom of any retaining wall shall be established with vegetation or impervious surfaces to minimize the potential for erosion and to control stormwater runoff.

In new developments and redevelopments, any existing retaining walls shall be replaced at the time of development or redevelopment unless otherwise allowed by the City Engineer.

Fall protection is required on top of all retaining walls three feet in height or higher and may be provided for retaining walls of any height.

Construction of all retaining walls shall require the applicant to construct the retaining wall to meet the requirements of any applicable approved plans, specifications, permit conditions, policy requirements, and all other applicable requirements. All retaining walls not built according to the approved plans, specifications, permit conditions, policy requirements, and all other applicable requirements shall be removed and replaced to meet such requirements at the expense of the applicant.

The location of a newly constructed retaining wall or reconstructed retaining wall shall not straddle the border of two private properties. Unless superseded by a written agreement between the applicable property owners, all parts of the retaining wall, including any tie-backs and drainage systems located behind the wall, shall be located solely on the property owned by the property owner installing the retaining wall.

Unless otherwise superseded by a written agreement between the subject property owners, where a retaining wall is parallel to or on the boundary between two private properties the retaining wall shall be of any type of material or design as determined by the design engineer (if needed for necessary permits) and the property owner installing the retaining wall.

Removal of an existing retaining wall and sloping the ground to create a maintainable slope is encouraged wherever possible to minimize future maintenance and reconstruction efforts. Unless otherwise superseded by a written agreement between the subject property owners, where a retaining wall is parallel to or on the boundary between two private properties removal of a retaining wall and sloping the ground shall be the responsibility of the property owner responsible for maintenance of the retaining wall per Section 5.B.3. Regrading and sloping activities must be contained to the property whose owner is removing the retaining wall unless otherwise agreed to in writing between the applicable property owners. The turf on the newly sloped ground must be restored as soon as possible to minimize the potential for erosion.

### 3) Maintenance

Maintenance of a retaining wall on or parallel to a lot line shall be determined by the applicable property owners.

The City strongly suggests that property owners record a written agreement between the applicable property owners establishing cost responsibility for maintenance of retaining walls to avoid future disputes. Such an agreement will be required for all new developments and redevelopments constructing or reconstructing retaining walls.

### 4) Cost and Assessment Policies

The costs contained in this section are not eligible for special assessments unless otherwise approved by the Common Council of the City of Hudson.

All costs for new construction, reconstruction, or removal of retaining walls parallel to the property boundary between two properties shall be determined through an agreement between the applicable property owners.

The City strongly suggests that property owners record a written agreement between the applicable property owners establishing cost responsibility for new construction, reconstruction, or removal of retaining walls to avoid future disputes. Such an agreement will be required for all new developments and redevelopments constructing or reconstructing retaining walls.

### 5) Permit Needed

New construction, reconstruction, and major maintenance of retaining walls parallel to a boundary between two private properties that are three feet or more in height at its maximum height shall require a permit. Major maintenance consists of activities that involve impacts to the structural capacity of the wall. Minor maintenance to retaining walls, such as tuck pointing and grouting, do not require a permit. The City Engineer shall determine whether a maintenance activity is considered major or minor. Property owners wishing to provide maintenance to a retaining wall are required to contact the City Engineer to determine whether a permit is needed for the proposed maintenance work.

The property owner responsible per Section 5.B.4 for the costs of the new construction, reconstruction, or major maintenance activity shall be responsible for acquiring and following any needed permit.

When a permit is needed, see Section 6 for additional information on permitting requirements.

### C. Retaining Walls Parallel to City Right of Way or City Property

#### 1) General

Section 5.C applies to all retaining walls running generally parallel to (as defined in Section 4) or on a property boundary between a private property and City right of way or City property.

Unless otherwise agreed upon in a written agreement between the City and the property owner, retaining walls built entirely on City right of way or City property by a private property owner shall be considered as parallel to City right of way or City property and subject to this section.

A property boundary survey will be required to determine whether a wall in question applies to this section unless undisturbed property corner irons are able to be located at each change in the property boundary (such as property corners, angle points in the property boundary, and the beginning or end of an arc in the property boundary).

The City Engineer will resolve any disputes on whether a retaining wall is subject to this subsection upon completion of the property boundary survey.

#### 2) Construction Standards

Construction of retaining walls parallel to City right of way or City property boundaries shall meet all City aesthetic, functional, and other requirements in this policy. Retaining walls constructed parallel to City right of way or City property boundaries shall be made of one of the following materials unless otherwise allowed by the City Engineer due to site constraints:

- Precast Concrete Modular Block (gravity or anchored/tied back)
- Cast-In-Place Concrete
- Gabion Baskets

Precast concrete modular block walls shall be made of materials that are resistant to road salt in areas parallel to public or private streets or alleys. The design shall be aesthetically pleasing as determined by the Community Development Director or his/her designee where any portion of the retaining wall is visible to the general public.

In places where any portion of a cast-in-place concrete wall is visible to the general public, cast-in-place concrete walls shall be faced with aesthetically pleasing materials, such as brick, blocks, or stone, or formed and colored in such a way as to mimic a block



wall, brick wall, stone wall, or other type of wall as approved by the Community Development Director or his/her designee.

Gabion baskets are only allowed in areas that are not visible to the general public.

Retaining walls constructed parallel to City right of way or City property must be installed completely within private property and not encroach onto City property.

Fall protection shall be of an aesthetically pleasing design, such as a split-rail fence, decorative guard or handrail, or other protection as approved by the Community Development Director or his/her designee.

The City Engineer, Building Inspector, and Public Works Director shall have the authority to determine the suitability of any proposed design, fall protection, plans, specifications, calculations, computations, or anything else submitted in regards to the retaining wall.

Weep holes, drain tile, and associated bedding and other materials shall be provided where determined by the design engineer (if necessary for permitting).

All areas adjacent to the top and bottom of any retaining wall shall be established with vegetation or impervious surfaces to minimize the potential for erosion and to control stormwater runoff.

In new developments and redevelopments, any existing retaining walls shall be replaced at the time of development or redevelopment unless otherwise allowed by the City Engineer.

Fall protection is required on top of all retaining walls three feet in height or higher and may be provided for retaining walls of any height.

Construction of all retaining walls shall require the applicant to construct the retaining wall to meet the requirements of any applicable approved plans, specifications, permit conditions, policy requirements, and all other applicable requirements. All retaining walls not built according to the approved plans, specifications, permit conditions, policy requirements, and all other applicable requirements shall be removed and replaced to meet such requirements at the expense of the applicant.

Removal of an existing retaining wall and sloping the ground to create a maintainable slope is encouraged wherever possible to minimize future maintenance and reconstruction efforts. Regrading and sloping activities must be contained to the private property side of the retaining wall unless otherwise agreed to in writing between the City and property owner. The turf on the newly sloped ground must be restored as soon as possible to minimize the potential for erosion.

The location of a newly constructed retaining wall or reconstructed retaining wall shall not straddle the border of two properties. Unless superseded by a written agreement between the City and the property owner, all parts of the retaining wall, including any tie-backs and drainage systems located behind the wall, shall be located solely on the property being held up by the retaining wall.

New retaining walls and reconstruction of existing retaining walls shall be at least 1.5 feet from the closest edge of an adjacent sidewalk or trail.

3) Maintenance

The following maintenance responsibilities apply unless otherwise agreed upon in writing by the City and the applicable property owner(s).

For walls whose ownership is disputed or unknown, maintenance of the retaining wall parallel to City right of way or City property shall be the responsibility of the party whose property is being held up by the wall.

For walls whose ownership is not disputed, maintenance of the retaining wall parallel to City right of way or City property shall be the responsibility of the owner of the wall.

The City will periodically check retaining walls parallel to its right of way and properties for needed maintenance. Where private property owners are responsible for maintenance, the City shall contact the appropriate property owners and arrange for the required maintenance to be done within a time determined by the City Engineer based on the severity of the needed maintenance and the time of year.

4) Cost and Assessment Policies

The following cost and assessment policies are applicable unless superseded by a written agreement between the City and the applicable property owner(s) or per the requirements in Section 10.

a) Maintenance

Maintenance costs shall be paid for by the owner of the wall except per the requirements in Section 10.

b) New construction

For new construction of retaining walls due to a City project on the City right of way or City property, the City shall pay 100% of the cost of construction.

For new construction of retaining walls due to a change in elevation or cross section of the adjacent private property, the private property owner shall pay 100% of the cost of construction. New construction of retaining walls applicable to this paragraph are not eligible for special assessments.

The cost of new construction includes all costs associated with planning, design, permitting, and actual construction of the wall, including, but not limited to, costs for boundary surveying, preparation of engineered drawings, bidding of the work, wall and foundation materials, equipment, labor, inspection, and restoration costs.

c) Removal or reconstruction of existing walls

The cost of reconstruction includes all costs associated with planning, design, permitting, removal of the existing wall, grading of earth, turf restoration, and actual construction of the wall, including, but not limited to, costs for boundary surveying, preparation of engineered drawings, bidding of the work, excavation and disposal of the existing wall, wall and foundation materials, equipment, labor, inspection, and restoration costs.

Any private property owner cost for reconstruction of existing retaining walls parallel to City right of way or City property per this section is eligible for special assessments.

For any work required to replace retaining walls on adjacent private property, the adjacent private property owner must give consent for the City or City's contractor to complete any work on the adjacent private property owner's property through a temporary construction easement, right of entry, or other satisfactory written permission. Failure to grant such consent to the work will result in the adjacent private property owner being responsible for the entire cost of the wall replacement, and such work will not be eligible for special assessments.

- i. For retaining walls that meet Section 7.C that cannot be fully removed and the earth behind regraded at a maintainable slope, the property on top of the wall shall pay 50% of the cost of the reconstruction of the wall to minimum height needed for maintainability. The property owner on the bottom of the wall shall pay 50% of the cost of the reconstruction of the wall to the minimum height needed for maintainability. The cost of the reconstruction includes any regrading and restoration behind the wall. If one of the property owners requests a wall height greater than the minimum height, that property owner will be responsible for 100% of the cost of the extra height.

For the purposes of this section, the minimum height for maintainability is the minimum height of wall that would allow for the earth behind the wall to be graded to a 4 horizontal to 1 vertical slope preferred or 2 horizontal to 1 vertical slope maximum slope while still leaving 10 feet of relatively flat space between the top of the slope and any adjacent structures.

For retaining walls in locations with unique site conditions that require additional retaining wall height beyond the minimum requirements for the maintenance and structure offset requirements as determined by the City Engineer, the additional cost to accommodate such site conditions shall be paid for by the City. Examples of such conditions may include tying into existing retaining walls and matching existing steps.

- ii. For retaining walls that meet Section 7.C that can be fully removed and the earth behind regraded at a maintainable slope, the City shall pay 100% of the cost of such work.

For the purposes of this section, a maintainable slope is defined as a 4 horizontal to 1 vertical slope preferred or 2 horizontal to 1 vertical slope

maximum slope while still leaving 10 feet of relatively flat space between the top of the slope and any adjacent structures.

- iii. For retaining walls that do not fall under Section 5.C.4(c)i or Section 5.C.4(c)ii but are being reconstructed due to a change in the elevation or cross section of the City right of way or City property, the City shall pay 100% of the cost of construction.
- iv. For retaining walls that do not fall under Section 5.C.4(c)i or Section 5.C.4(c)ii but are being reconstructed due to a change in the elevation or cross section of the adjacent private property, the adjacent private property owner shall pay 100% of the cost of construction.
- v. For retaining walls meeting Section 7.A that are replaced outside of an adjacent street reconstruction project, replacement of such walls shall be done initially at the sole expense of the adjacent private property owner. The property owner may then petition the City to reimburse the private property owner for up to 25% of the cost of the replacement of a wall at the minimum height needed for maintainability or 50% of the cost of removal and regrading in the case the wall is completely removed and the earth behind regraded at a maintainable slope, and the City will upon approval of the City Council include such reimbursement on the next Capital Improvement Plan. The remaining portion of the cost of the wall replacement may be placed on special assessments for a period of time as described in the City's Special Assessment Policy if approved by the City Council.

For the purposes of this section, the minimum height for maintainability is the minimum height of wall that would allow for the earth behind the wall to be graded to a 4 horizontal to 1 vertical slope preferred or 2 horizontal to 1 vertical slope maximum slope while still leaving 10 feet of relatively flat space between the top of the slope and any adjacent structures.

## 5) Permit Needed

Where private property owners are responsible for the costs associated with new construction, reconstruction, and major maintenance of retaining walls parallel to City right of way or City property, such activities shall require a permit. Major maintenance consists of activities that involve impacts to the structural capacity of the wall. Minor maintenance to retaining walls, such as tuck pointing and grouting, do not require a permit. The City Engineer shall determine whether a maintenance activity is considered major or minor. Property owners wishing to provide maintenance to a retaining wall are required to contact the City Engineer to determine whether a permit is needed for the proposed maintenance work.

The property owner responsible per Section 5.C.4 for the costs of the new construction, reconstruction, or major maintenance activity shall be responsible for acquiring and following any needed permit.

See Section 6 for additional information on permitting requirements.

#### D. Retaining Walls Wholly Within City Right of Way or City Property

##### 1) General

Section 5.D applies to all retaining walls wholly contained within City right of way or City property that are not covered by Section 5.C. Section 5.D does not apply to retaining walls constructed by private property owners on City property (see Section 5.C).

##### 2) Construction Standards

Construction standards for retaining walls applicable to Section 5.D shall be subject to all applicable standards of Section 5.C.2.

All retaining walls applicable to Section 5.D shall be designed by a professional engineer licensed in the State of Wisconsin (the “design engineer”). Plans, specifications, calculations, computations, and all else used to determine the design of the retaining wall shall be submitted to the City Engineer by the design engineer at the time of development of the project and shall be accepted by the City Engineer prior to construction.

All retaining walls requiring a permit shall be inspected by the City during construction. No construction activities shall occur on such walls without a City inspector present unless specific activities are allowed by the City inspector without inspection. The City reserves the right to hire a consultant to inspect such work rather than utilize City staff.

##### 3) Maintenance

Maintenance of retaining walls applicable to Section 5.D shall be the responsibility of the City of Hudson.

##### 4) Cost and Assessment Policies

All costs associated with retaining walls applicable to Section 5.D shall be the responsibility of the City of Hudson.

##### 5) Permit Required

No permits are required for retaining walls applicable to Section 5.D.

#### 6. Permit Needed

Retaining walls requiring permits as described in Section 5 shall be subject to Section 6.

The City Engineer shall require preparation of plans and specifications by a professional engineer licensed in the State of Wisconsin (the “design engineer”). Plans, specifications, calculations, computations, and all else used to determine the design of the retaining wall shall be submitted to the City Engineer at the time of application or prior to issuance of the permit for construction of the retaining wall. The City Engineer reserves the right to request any additional

information from the applicant prior to issuance of the permit. The City Engineer and Building Inspector or their designee(s) shall review all proposed walls for structural integrity. Any necessary engineering fees incurred by the City in review of the application shall be split according to the Section 8 of this policy for retaining walls, and any property owner responsibility for those costs may be rolled into the special assessment amount for the construction of the retaining wall.

When the City Engineer has received all applicable information for the design of the retaining wall, the City Engineer will meet with the Building Inspector, Public Works Director, and Community Development Director, or each respective designee, to determine whether the proposed retaining wall meets the requirements of this policy.

For proposed retaining walls requiring a permit that are not parallel to City right of way or City property, a permit will be issued for such construction if the proposed retaining wall design meets the requirements of this policy.

For proposed retaining walls parallel to City right of way or City property, the City Engineer reserves the right to refuse issuance of a permit for construction of a retaining wall if, upon consultation with the Building Inspector, Public Works Director, Community Development Director, or their designees, such a retaining wall is not deemed to be in the best interest of the City. Reasons for such a decision include, but are not limited to, future roadway widening, future sidewalk or trail construction, potential redevelopment of the property, or other reasons not otherwise listed. If City staff determines that the wall construction is in the best interest of the City and the proposed retaining wall design meets the requirements of this policy, a permit will be issued for such construction.

Construction of a retaining wall may not begin until a permit is issued for such work. Failure to comply with this section shall incur penalties as proscribed in City Ordinances or under any applicable local, state, or federal law.

All retaining walls requiring a permit shall be inspected by the City during construction. No construction activities shall occur on such walls without a City inspector present unless specific activities are allowed by the City inspector without inspection. The City reserves the right to hire a consultant to inspect such work rather than utilize City staff.

## **7. Standards for Requiring Replacement or Maintenance of a Retaining Wall**

### **A. Determination of a failing retaining wall**

The City of Hudson considers a retaining wall to be failing and an imminent safety hazard if any of the following conditions are met as determined by the City Engineer:

- Lean or bowing of at least 1 inch horizontally per foot of wall height away from the weight load
- Cracks in the retaining wall which have horizontally separated one section of a cast-in-place wall from another section by more than 1 inch
- Apparent movement in the wall that has caused modular materials to no longer be installed level
- Evidence of retained earth no longer being effectively retained by the wall (such as sinkholes present on the top of the retaining wall)

- Significant parts of the retaining wall are able to be moved without use of mechanical equipment
- Other imminent safety hazards not otherwise listed as determined by the City Engineer

B. Determination of retaining walls requiring major maintenance

Retaining walls requiring major maintenance are walls which exhibit any of the following conditions:

- Lean or bowing of greater than zero and less than 1 inch horizontally per foot of wall height away from the weight load
- Loss of, spalling, or significant cracking in 5% or more of blocks, bricks, stones, or other modular block materials
- Cracks in the retaining wall which have horizontally separated one section of a cast-in-place wall from another section by 1 inch or less
- Degradation of mortar materials that is not able to be fixed by tuckpointing or similar maintenance activity
- Other degradation not otherwise listed but deemed necessary for continued structural integrity and not deemed an immediate safety hazard as determined by the City Engineer

C. Requiring removal or reconstruction of retaining wall during adjacent street reconstruction project

Retaining walls parallel to City right of way or City property that meet the standard of a failing retaining wall or a wall requiring major maintenance according to this section shall be removed or replaced during an adjacent street reconstruction project. Cost responsibility of removal or replacement of such walls shall follow Section 5.C.4.

Exceptions may be allowed by the City Engineer if requested in advance of the adjacent reconstruction project and may be subject to additional terms as deemed in the best interest to the City by the City Engineer. Such terms may include, but are not limited to, necessitating that any imminently needed structural improvements are made at the time of the adjacent project and/or requiring that the wall be reconstructed within 5 years after the conclusion of the adjacent reconstruction project. The City Engineer is under no obligation to grant exceptions to the requirement of reconstruction during an adjacent street reconstruction project. Any exceptions must be recorded in an official recorded agreement between the City and property owner. Exceptions for retaining walls wholly or partially under the maintenance responsibility of the City shall be granted by the Common Council of the City of Hudson.

D. Replacing failing retaining walls prior to adjacent street reconstruction projects

Retaining walls meeting the criteria of Section 7.A are the sole responsibility of the property owner whose property is on top of the wall to maintain until such time as the wall is replaced. If the wall fully or partially collapses before it is replaced, the property owner whose property is on top of the wall is solely responsible for the replacement of the wall and any damages or injuries sustained by the collapse of the wall. Any collapsed wall shall be replaced fully from foundation to top and for the entire length of the wall as measured

from the transition point to another wall, the end of the wall, and/or the next property line, as applicable.

## **8. Assessment Policies**

Where allowed in Section 5.C.4 or when otherwise approved by the Common Council of the City of Hudson, property owners may elect to have the costs added to their property taxes via a Special Assessment or billed directly upon completion of the project. The costs for Special Assessments for retaining walls shall be computed per this policy, and the terms, interest rate, administrative rates, and other details of the Special Assessment shall follow the applicable sections of the current version of City of Hudson Special Assessment policy, except as noted in Section 9.

## **9. Enforcement of Retaining Wall Policies**

The City of Hudson will periodically inspect any retaining walls that the City is partially or fully responsible to replace or maintain per the requirements of this policy as well as any retaining walls parallel to City right of way or City property. The City will not enter private property to enforce retaining wall policy unless invited to do so by the owner of said property. The City will not intervene in disputes between private property owners in regards to retaining wall issues except to issue advice to interested parties and in cases of identifying failing retaining walls causing imminent safety hazards (see Section 7.A). Disputes between private property owners are advised to be resolved amicably between such owners or, as a last resort, as a civil case in an applicable court.

Any retaining wall deemed an imminent safety hazard per Section 7.A must be scheduled for replacement within 30 days of notification of the property owner by the City. Replacement of such walls shall be undertaken as promptly as possible based on the timeframe given by the contractor carrying out the work. Deficiencies in scheduling or executing replacement of failing retaining walls as determined by the City Engineer may result in the emergency replacement of such retaining wall by the City or its contractor with replacement and administration costs billed to the property owner. If the City replaces the retaining wall by its contractor due to failure of the property owner to promptly schedule such work, the work will be billed to the property owner immediately upon completion. If the property owner fails to pay the bill within the specified timeframe, the City may pursue any legal action available pursuant to Wisconsin State Statutes and City Ordinances to recover such costs.

For retaining walls parallel to City right of way or City property requiring replacement or maintenance work and that are partially or wholly the cost responsibility of a property owner, the property owner may contract with City or a City-hired consultant and/or contractor to provide the necessary design, inspection, and/or construction services.

## **10. Other Considerations and Miscellaneous Requirements**

Property owners should consider removal of retaining walls instead of extensive maintenance and repairs where applicable. Removal of retaining walls and regrading of slopes will in most cases result in fewer continued maintenance expenses.



City-owned retaining walls may be on private property by easement agreement or other recorded agreement. Where anything conflicts between the agreement and this policy, the agreement shall supersede this policy.

Where the City is responsible for the cost of new construction or reconstruction of a retaining wall, the City will determine the type of retaining wall material chosen (generally, the City will select the lowest cost wall that will suitably carry the loads sustained by the wall and is aesthetically pleasing). If the adjacent property owner wishes to “upsized” or “upgrade” the wall to a different height or type above and beyond the type the City is intending to construct, that property owner is responsible for the additional construction cost and will be responsible for maintenance of the retaining wall.

Where a private property owner is responsible for the replacement of a retaining wall during an adjacent street reconstruction project and the City also chooses to either lower the elevation of the adjacent street, sidewalk, or trail or change the cross section of the City right of way or property in a way that would make the reconstructed retaining wall taller than its existing height, the private property owner is responsible for the costs associated as if the existing retaining wall is replaced at its current height and location, and the City is responsible for any additional costs incurred by the change to the City right of way or property. In these cases, the City will determine the type of retaining wall material chosen.

Any material and debris from a retaining wall that falls onto City right of way or City property shall be removed and cleaned up as soon as possible by the party responsible for maintenance of the retaining wall.

Any special cases not otherwise identified in this policy shall be determined by the Common Council of the City of Hudson with input from the City Engineer and City Attorney.

No new retaining walls will be allowed to be constructed by a private property owner parallel to City property without a written agreement stating that the private property owner is responsible for all maintenance, construction, and reconstruction costs.