

**DETAILED GRADING PLAN CHECKLIST
(TEARDOWN/REDEVELOPMENT)**

Updated: 2/6/2023



Address:
Permit #:

Date:
Review #:

<u>Sat.</u>	<u>Not</u>	<u>GENERAL</u>
<input type="checkbox"/>	<input type="checkbox"/>	1. A disposition of comments should be included in all subsequent submittals.
<input type="checkbox"/>	<input type="checkbox"/>	2. Plan is signed and sealed by an Illinois registered professional engineer including date signed and license expiration date.
<input type="checkbox"/>	<input type="checkbox"/>	3. A North arrow is included, and the drawing is at a 1:10 scale.
<input type="checkbox"/>	<input type="checkbox"/>	4. The City requires NAVD 1988 vertical datum and NAD83 horizontal datum. At least one City of Naperville benchmark must be referenced. The benchmarks are available at www.naperville.il.us/surveymonuments.aspx .
<input type="checkbox"/>	<input type="checkbox"/>	5. Development of properties adjacent to a river or creek is subject to review and permitting by other agencies, including DuPage County, the Illinois Department of Natural Resources and the US Army Corps of Engineers.
<input type="checkbox"/>	<input type="checkbox"/>	6. Mapped floodplain and wetlands should be shown on the plan.
<input type="checkbox"/>	<input type="checkbox"/>	7. A Legal description is included.
<input type="checkbox"/>	<input type="checkbox"/>	8. The dimensions of the home to the property lines must be shown. The required setbacks (front, sides and rear) must be shown or provided in a table.
<input type="checkbox"/>	<input type="checkbox"/>	9. A 10-foot easement must be shown along the rear property line and a 5-foot easement must be shown along at least one side property line. Final decision will be made by DPU-E.
<input type="checkbox"/>	<input type="checkbox"/>	10. Known hardscape features (i.e. decks, patios, sidewalks, etc.) should be shown on the detailed grading plan. If unknown, please note that a permit may be required for certain installations.

Sat.

Not

DRIVEWAY

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| <input type="checkbox"/> | <input type="checkbox"/> | 1. Concrete, asphalt, and brick pavers (including permeable) are acceptable driveway materials; gravel may not be used. A right-of-way covenant is required for any material other than conventional concrete or asphalt, including but not limited to stamped concrete, stamped asphalt and brick pavers. A signed right-of-way covenant must be submitted to the City prior to the final inspection. <ul style="list-style-type: none">○ If the material is called out as standard asphalt or concrete, provide comment that a right-of-way covenant is required if material is changed.○ If the material is called out as a non-standard material, provide comment that a right-of-way covenant is required.○ If the material is unknown, provide comment that a right-of-way covenant is required if material is non-standard. |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. The driveway slopes must be between 2% and 10% and direct water away from the house. Permeable pavements are allowed to have slopes less than 2%. If the surrounding terrain is flat, slopes as low as 1% are allowed for concrete driveways. |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. The apron slopes must be between 2% and 6%. Permeable pavements are allowed to have slopes less than 2%. If the surrounding terrain is flat, slopes as low as 1% are allowed for concrete driveways. |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. The driveway width at the right-of-way line must be between 9 and 20 feet. The driveway width should flare such that the width at the curb is increased by 2 feet on each side. Refer to Standard Detail 590.06 – Typical Residential Driveway. |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. Driveways shall not encroach over the property line extension in the parkway. |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. Where a driveway is located close to a property line (within 5 feet), a curb may be needed along the property line unless written approval is granted by the adjacent property owner. |
| <input type="checkbox"/> | <input type="checkbox"/> | 7. Where an existing driveway that has depressed curb is relocated, the depressed curb must be replaced with a curb of like kind. |
| <input type="checkbox"/> | <input type="checkbox"/> | 8. Where a driveway width exceeds 20 feet at the garage doors, a driveway must taper down to 20 feet wide at the property line. The taper must begin no further than fifteen feet from the front yard setback line (away from the house). A curvilinear taper may be used provided that all driveway pavement is located within an area formed by a straight line between the start and end of the taper (Ordinance 07-032). |
| <input type="checkbox"/> | <input type="checkbox"/> | 9. Circular driveways on corner lots are constructed in accordance with the requirements of Section 9-11-3 of the Municipal code, including proximity to intersections and allowance of one driveway per street. |
| <input type="checkbox"/> | <input type="checkbox"/> | 10. If there is more than one driveway entrance onto the street, the lot frontage must exceed 75' and the sum of the driveway widths at the property line can not exceed 26.7% of the lot frontage ($W1 + W2 \leq F/75*20$). |

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| <input type="checkbox"/> | <input type="checkbox"/> | 11. Refer to Standard Detail 590-06 – Typical Residential Driveway for additional requirements pertaining to circular driveways and driveways located near intersections. |
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<u>Sat.</u>	<u>Not</u>	<u>SIDEWALKS</u>
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| <input type="checkbox"/> | <input type="checkbox"/> | 1. Sidewalk must be provided along all street frontages. |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. Sidewalk must be five feet wide and located within the public right-of-way, one foot off the property line. Sidewalk location may vary in order to save mature parkway trees, unless the City Forester recommends removal of the tree. |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. Carriage walks are not permitted. Where a carriage walk currently exists, the sidewalk must be removed and relocated such that the front edge is a minimum of three feet from the back of curb. In these instances, the sidewalk width may be reduced to four feet if the standard width cannot be accommodated. |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. Any portion of the sidewalk which cannot be accommodated within the public right-of-way shall be located on the subject property and a sidewalk easement must be dedicated. |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. Sidewalks must be constructed through driveways. Refer to Standard Detail 590.06 – Typical Residential Driveway. |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. The cross-slope of the public sidewalk does not exceed 2% even through the driveway. Spot grades should be provided at the four corners of sidewalk where it intersects with the driveway. A design of 1.5% is preferred to ensure that the slope is less than or equal to 2% when constructed. |
| <input type="checkbox"/> | <input type="checkbox"/> | 7. Any sidewalk that is damaged or not ADA compliant, including sidewalk ramps, must be replaced prior to final inspection approval. |
| <input type="checkbox"/> | <input type="checkbox"/> | 8. Accessible curb ramps must be provided at intersections. Follow current IDOT standard details for curb ramps. |

<u>Sat.</u>	<u>Not</u>	<u>GRADING</u>
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| <input type="checkbox"/> | <input type="checkbox"/> | 1. Existing spot grade elevations must be shown at the location where the building setback line intersects with the side property line. |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. The proposed top of foundation for the subject lot and existing top of foundations for the adjacent houses must be shown. <ul style="list-style-type: none"> ○ The top of foundation should be a minimum of 6 inches higher than grading around the structure. Where there is more than 6 inches of exposed foundation, dropped siding should be specified. ○ The lowest opening in the foundation must be a minimum of 18 inches above a high-water line or BFE when the home is adjacent to an overland flow route, detention basin, or floodplain. ○ Provide the basement floor elevation. If the basement is greater than 8 feet, extra consideration should be given to the foundation drainage. The City recommends connecting sump pumps to the public storm sewer if readily available. |

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| <input type="checkbox"/> | <input type="checkbox"/> | 3. One-foot contours must be provided. |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. Grading should allow existing drainage patterns to be maintained such that additional flows are not directed onto neighboring properties. Enough neighboring grades should be provided for this to be confirmed. |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. Slopes within landscape areas should be between 2 and 25 percent, with 20 percent being the preferred maximum slope where space allows. |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. Swales must be provided to facilitate proper drainage. Swales must be completely contained on the subject property unless neighboring property owners provide written permission to allow grading to be completed on their property. |
| <input type="checkbox"/> | <input type="checkbox"/> | 7. Spot elevations should be indicated at break points. |
| <input type="checkbox"/> | <input type="checkbox"/> | 8. Proposed retaining walls must be shown, with the top and bottom of the wall elevations called out. Walls greater than 3 feet in height require structural calculations prepared and signed and sealed by an IL registered Structural Engineer. |
| <input type="checkbox"/> | <input type="checkbox"/> | 9. Where the minimum yard slopes cannot be achieved, a private storm sewer system must be installed in accordance with Ordinance 01-014. The private storm sewer must be connected to an available public storm sewer when one is available. See the Utilities section below for the storm sewer requirements. |
| <input type="checkbox"/> | <input type="checkbox"/> | 10. Window wells must be shown on the plan and meet the following requirements: <ul style="list-style-type: none"> ○ The elevations for the tops of the window wells must be shown. ○ Window wells may not encroach into any easements. ○ Window wells may not be located adjacent to an overland flow route or floodplain. |
| <input type="checkbox"/> | <input type="checkbox"/> | 11. If the property has an overland overflow route, the black arrow and typical cross-section should be shown. |

<u>Sat.</u>	<u>Not</u>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

UTILITIES

1. All existing utilities must be shown on the plan, including but not limited to storm sewer and structures, water main and structures, sanitary sewers and manholes, electric, and street lighting. All structures must be shown including poles and overhead wires. Where existing overhead facilities are to remain, code clearances must be maintained.
2. The proposed water service and sanitary service must be shown, including the connection points and details.
 - All new services must connect to the main unless the Department of Public Utilities confirms that the existing services are suitable for reuse.
 - New water service line, service size, and b-box location must be shown on the plans.
 - Sanitary sewer clean-out location must be shown on the plans. Clean-out shall be of the same size and material as the new sewer service pipe. Any cleanouts shall be the ‘Tee’ type, located outside of the building, and easily accessible.

- 3. Private storm sewer systems must meet the following requirements:
 - Storm sewers must be a minimum of 6 inches or greater RCP, PVC SDR 26, ductile iron, or ADS N-12 or approved equal. The City recommends a minimum 8-inch diameter for maintenance.
 - Connection to the public storm sewer must be made at a structure (new or existing); blind connections are not permitted. Connections must be machined cored.
 - The private and public portions of the system must be clearly labeled.

- 4. Public storm sewer systems must meet the following requirements:
 - Storm sewers must be 10 inches or greater RCP, PVC SDR 26 or ductile iron.
 - Structures must follow the City of Naperville standard details. Rear yard structures should be located within the rear yard easement to allow for connection from adjacent properties.

- 5. Storm sewer work in the public right-of-way requires an inspection. Provide a note on the plan stating, “A public storm sewer inspection must be scheduled with the City of Naperville by calling (630) 420-6082.”

- 6. Dry wells may be permitted under special circumstances where a public storm sewer is not available. The following requirements must be met:
 - Inlets must be provided.
 - Dry wells and structures may not be located within any easement.
 - Sump pumps should ideally not be tied into dry wells.

- 7. Open cuts are not permitted within the street, except in special circumstances.

- 8. Stormwater should not be directed onto the adjacent properties. The City recommends tying sump pumps and downspouts into a public storm sewer system, private system or directing the flow away from the adjacent properties. Connections to a public structure require a permit from DPW.

- 9. A storm sewer may be required across the frontage of the property in accordance with Ordinance 04-198. Where this is the case, the City will provide the size and invert elevations required. If the storm sewer is located on a private property, an easement must be dedicated.

- 10. Bubbler outlets shall be a minimum of 15 feet from a sidewalk, 10 feet from a rear property line, and 3 feet from a side property line.

- 11. Existing services to be removed must be shown on the plan sheet with specific details regarding termination.

- 12. In certain poorly drainage areas, site specific storm study data is available. If the subject property is within the study limits, the lowest opening to the structure must be raised to an elevation that is 1.5 feet above the calculated high-water elevation. The City maintains a list of the properties within the study limits and will share this information when appropriate.

Sat. Not

EROSION CONTROL

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| <input type="checkbox"/> | <input type="checkbox"/> | 1. Perimeter erosion barrier (silt fence or other) must be shown. |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. Existing storm structures must be protected during construction. Filter baskets are the preferred method of protection. |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. A stabilized construction entrance must be called out. |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. Tree protection must be shown for any trees to be saved in the construction area or any trees across the roadway which may be impacted by utility connections. A tree removal permit is required for any tree removal in the public right-of-way. |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. Provide a note on the plan stating, "A concrete washout area should be provided on-site. Concrete cannot be washed out into the public right-of-way or storm sewer system." |

Sat. Not

BEST MANAGEMENT PRACTICES (BMPS)

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| <input type="checkbox"/> | <input type="checkbox"/> | 1. A table outlining the existing impervious area, the proposed impervious area and the calculated difference should be included on the detailed grading plan (see attached examples). A statement regarding whether Best Management Practices are required must accompany the table. |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. If BMPs are required, the following shall be provided on the detailed grading plan: <ul style="list-style-type: none">○ The location of the BMP(s) should be called out. BMPs should not be located in a Public Utility and Drainage Easement.○ Details of the BMP design should be included (type, dimensions, etc). |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. If BMPs are required, documentation will be required to be submitted with the Final Grading Survey to demonstrate that the BMP is restricted by an easement. |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. Stormwater BMPs require an inspection. Provide a note on the plan stating, "Inspection of the private stormwater best management practice facility must be scheduled with the City of Naperville by calling (630) 420-6082." |

<u>Sat.</u>	<u>Not</u>
<input type="checkbox"/>	<input type="checkbox"/>

DETAILS

1. Include the latest version of any applicable City standard details. PDF copies of the standard details are located at www.naperville.il.us/standspecdetails.aspx.

The following are commonly required:

- Typical Residential Driveway - 590.06 (2 Sheets)
- Sidewalk - 590.30
- Temporary Erosion Control Measure - Silt Fence - 790.03 (2 Sheets)
- Tree Protection – 790.10
- Sump Pump Connection - 290.30
- Sanitary Service Tap and Connection 490.20
- Water Rise for Service Lateral 390.20
- Appropriate drainage structures and storm sewer details
- Utility Trench Paving Section – Rigid Pavement 590.12
- Utility Trench Paving Section – Flexible Pavement 590.13
- Storm Sewer Trench Section in Non-Paved Areas 290.21
- Storm Sewer Trench Section in Paved Areas 290.20
- Other _____

<u>Sat.</u>	<u>Not</u>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

EASEMENTS/COVENANTS

1. Sidewalk easement required?
2. Driveway covenant required for brick pavers or other non-standard material?
3. Stormwater BMP easement or note to title required?