

Storm Water Pollution Prevention Plan

For

The Townhomes of Chapel Ridge-2nd Plat

Lee's Summit, Jackson County, Missouri

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Project Description

Project Location

The site is located off NE Chapel Ridge Place and NE Lone Hill Drive, Section 8, Township 48 North, Range 31 West in Lee's Summit, Jackson County, Missouri. The construction site consists of 18.83 acres. This proposed site is being developed by Chapel Ridge Residential LLC, 3170 NE Carnegie Drive # 400, Lee's Summit, Jackson County, Missouri. Below in Figure 1 is a vicinity map indicating the location of The Trails of Park Ridge 4th Plat.

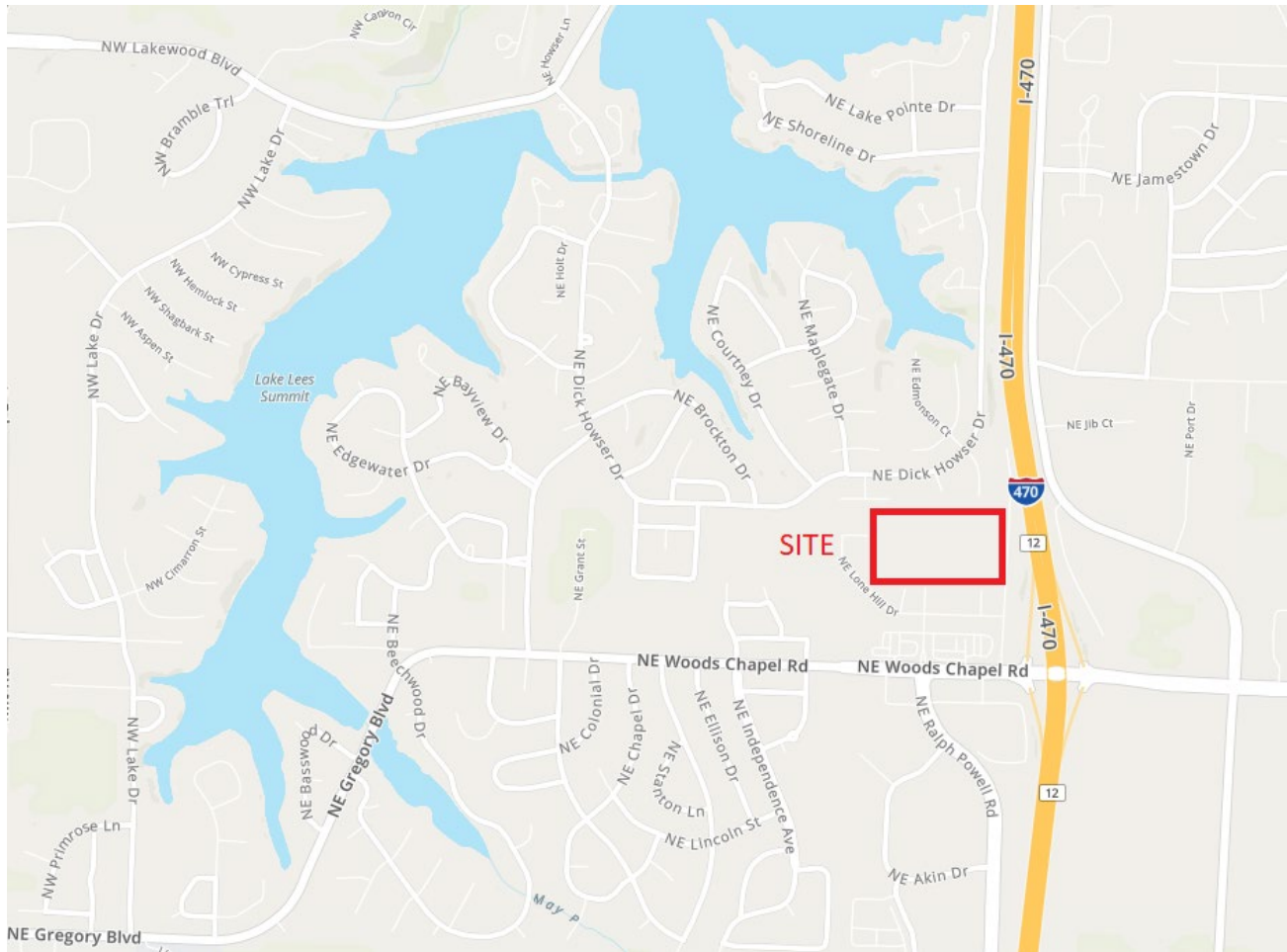


Figure 1: The Townhomes of Chapel Ridge-2nd Plat

Construction Type

The project will consist of 11 residential lots and the associated roadways and site utilities..

Existing Site Conditions

The existing site generally drains from West to East into an existing unnamed tributary that drains into Lakewood Lakes that serves as a regional detention facility for the watershed.

Timing Schedule

Clearing and excavating operations are expected to start June, 2020. Completion of the project is expected by January, 2021.

Areas

The disturbed area for the site is approximately 18.83 acres.

Runoff Coefficient

Existing area is open space a run-off coefficient of $C = 0.30$. The run-off coefficient for the project is estimated to be 0.51. All disturbed areas not containing parking lot will have a final stabilization of grass.

Receiving Waters

Surface water that does not infiltrate into the ground will drain into the development detention basin then into an unnamed tributary of Lakewood Lakes.

Construction Plans

The construction plans, located in Appendix A, shows the existing and proposed grading of the site, the location of controls and the location of where stabilization is expected to occur. As the project's demands change, the site map shall be manually updated by the on-site contractor.

Storm Water Management Controls

Erosion and Sediment Controls

Structural controls are designed to divert flows away from disturbed areas, to store flows, or to limit the discharge of pollutants from the site to the degree attainable. The site maps, located in Appendix A, show locations of each control, the size of the control, the required materials, and methods of installation and use.

Structural Practices

Silt fences will be installed along the contours within the grading area following site grading. The erosion control measures will be placed perpendicular to flow and parallel to the contours. Fabric for silt fences will be fastened to the upslope side of the fence posts in accordance with industry standards. The fabric will be trenched into the ground to a minimum of six inches and will be backfilled with tamped natural soil. Sediment trapped by silt fence will be removed when it accumulates to 1/3 the height of the silt fence. High velocity, high erosive flow is not expected on the project site due to the relatively gentle grades. In addition to the gentle grades, much of the site's southern portion will be surfaced with crushed stone, thereby reducing sediment loss.

Concrete trucks will be allowed to discharge excess concrete and drum wash water on the site, in such a manner as to allow the material to flow into the excavation stockpile or into a setting basin installed for this purpose.

Prior to site excavation a temporary sedimentation basin will be constructed on the South side of the site to collect sediment from the disturbed earthen areas. The temporary sedimentation basin, approximately 40 feet by 95 feet with a depth approximately 3 feet, will be built by over digging the proposed detention facility. A standpipe will be placed inside the basin allowing decanted water to be piped directly into the unnamed tributary by means of a gravity drain pipe. A discharge pit detail can be found in Appendix B.

Stabilization Practices

Where possible, vegetated strips will be left along both edges of the construction limits to trap suspended solids before storm water leaves the site. In addition, trees and other plant material, which are not in conflict with the proposed construction, will be left in place. All disrupted areas of the site will be finish-graded and stabilized with permanent seeding as soon as the weather permits.

Stabilization controls are designed to control erosion from disturbed areas. The disturbed areas of the construction site that will not be re-disturbed for 21 days or more must initiate stabilization measures by the 14th day after the last disturbance, except as precluded by snow cover. These disturbed areas shall be landscaped with seed or hydro seed and mulched with a minimum of 2 tons of straw per acre to achieve final stabilization of the site.

Storm Water Management

As mentioned above, disturbed areas at the construction site that are not covered by crushed stone will be seeded and mulched. The intent is to return all surface areas to a condition which provides a run-off coefficient equal to or less than that which existed prior to construction. To the extent possible, final site grading will be conducted such that storm water runoff does not exceed erosive velocities of grassed surfaces (preconstruction levels).

Other Controls

At the southwest corner of the project site, an area will be designated for equipment maintenance, repair, refueling, tool trailers and equipment lay down. The fuel tank will be kept on its own spill containment with extra storage. The fuel tank will be stored on the protected side of the tool trailer allowing access by equipment and trucks. Therefore, the fuel tank will never be placed directly on the ground surface. Spill kits will be maintained in each piece of equipment on site. Any chemicals, paints, solvents, or other potentially toxic materials will be properly stored. An office trailer will be located at west side of the project site. Portable toilets will be located near the office trailer. The portable toilets will be pumped out regularly and the waste hauled off site, by a licensed independent contractor, to an approved treatment facility. A dumpster for trash and rubbish will be located at the construction site. The dumpster will be emptied regularly by a waste disposal contractor that will haul the waste to an approved landfill. Steps will be taken to minimize off-site tracking of sediments. Any sediment tracked onto roads or streets will be removed before they become distributed along the pavement.

Non-Storm Water Discharges

The following types of non-storm water discharges will occur on the site during construction:

- Groundwater pumped from excavations
- Flush water for pipe testing
- Wash water for concrete trucks

Maintenance and Inspection Procedures

Maintenance Plan

The maintenance practices that will be used to maintain erosion and sediment controls are, but not limited to the following:

- All measures and equipment will be maintained in good working order; if a repair is necessary, it will be repaired in an appropriate and timely manner.
- Identification of equipment, controls and site areas that should be inspected
- A maintenance inspection report will be made after each inspection and will stay on-site throughout the entire construction project.
- Clean silt control devices should begin when the features have lost 50% of their capacity.

Inspection Plan

The inspection practices that will be used to maintain erosion and sediment controls are, but not limited to the following:

- Inspection is required every 7 days and within 24 hours of the end of any precipitation event. The contractor shall also inspect and assure that all sediment control devices are in working condition prior to any forecasted rainfall.
- Built up sediment will be removed from silt fencing when it has reached 1/3 the height of the fence
- Silt fences will be inspected for depth of sediment, torn fabric, proper attachment to fence post, and to see that the fence posts are firmly in the ground.
- Temporary and permanent seeding will be inspected for bare spots, washouts and healthy growth.

Inspection and maintenance logs will be maintained with the SWPPP in Appendix D. Silverstone Development Company will be responsible for placement and maintenance of all control measures until final stabilization.

Employee Training

An employee training program will be developed and implemented to educate employees about the requirements of the SWPPP. This education program will include background on the components and goals of the SWPPP and hands-on training in erosion controls, spill prevention and response, good housekeeping, proper material handling, disposal and control of waste equipment fueling, and proper storage, washing, and inspection procedure. All employees will be trained prior to their first day on the site.

Certifications

The project owner will need to sign the Project Owner Certification prior to the start of clearing and excavating. The contractors will need to complete a Contractor Certificate Form. At the discretion of the owner, other contractors and subcontractors may be asked to complete Contractor Certificate Forms. Upon signing the certificate, the contractor or sub-contractor is a co-permittee with the owner and other co-permittee contractors. All certificates must be maintained with the SWPPP. All certificates can be found in Appendix D.

Conclusion

Sediment control measures shall be removed once 70% of the permanent cover is established over 100% of the tributary area. Within 30 days after final stabilization of the project site the owner shall submit a Notice of Termination to the Missouri Department of Natural Resources.

The owner shall retain copies of the SWPPP, all reports required by this permit and records of all data used to complete the SWPPP and the inspection forms for at least three years from the date of final stabilization.

Appendix A – Site Drawings

Appendix B – Erosion Control Details

Appendix C – Permits

Appendix D – Certifications

Project Owner Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature

Date

Contractor Certification (_____) CONTRACTOR COMPANY NAME

I certify under penalty of law that I understand the terms and conditions of this SWPPP and all procedures of storm water discharges associated activities from the construction site identified as part of this certification

Name

Title

Date

Appendix E – Inspection and Maintenance Logs