GENERAL STORMWATER POLLUTION PREVENTION:

Apply for and obtain all necessary permits for Construction Activity.

Stormwater Pollution Prevention Plan (SWPPP): The SWPPP includes this narrative, Plan Sheets SP3, SP3. and SP3.2, and the Stormwater Management Calculations. Keep a copy of the SWPPP, all changes to it, and inspections and maintenance records at the site during the construction. During the construction process the SWPP will have to be amended for all changes performed by the contractor. the owner shall be aware of the amendments prior to changes made to the SWPP plan. All notes, photographs, recorded dates, sketches, references, and diagrams will have to be recorded and made available as part of the SWPP permit.

Individual(s) preparing the SWPPP for the project, overseeing implementation of the SWPPP, revising and amending the SWPPP, and at least one individual on the project performing installation, inspection, maintenance, and repairs of BMP's must be trained. The training must be done by a local state federal agencies professional organization or other entitites with expertise in erosion prevention, sediment control, or permanent Stormwater management.

Responsible Parties: The contractor must designate a person knowledgeable and experienced in the application of erosion prevention and sediment control BMPs who will oversee the implementation of the SWPPP, and the installation, inspection, and maintenance of the erosion prevention and sediment control PMPs before and during construction.

The owner is responsible for identifying who will have responsibility for the long term operation and maintenance of the permanent stormwater management systems.

Owner contact:

Brad Fry Name:

Kwik Trip Inc. Company:

Kwik Trip, Inc. - Store Engineering Address: 1626 Oak Street, P.O. Box 2107

La Crosse, WI 54601-2107

(608) 783-8020 Telephone:

SITE INVESTIGATION, INSTALLATION, IMPLIMENTATION

- I. Prior to any work, contractor shall visit the site, document existing conditions as necessary(photos, notes, etc) and note existing drainage patterns on and off site that are related to the project. These notes shall be part of the SWPP.
- 1. Install all temporary erosion and sedement control measures including silt fence, rock construction entrance(s), eroson control berms, rock filters, silt sacks, rock /earth berms, and sedimentation basins. Protect all receiving waters, catch basins, ditches. inlets etc. in and around the site. All protective and preventative measures must be in place and inspected <u>prior</u> to beginning site clearing, grading, or other land-disturbing activity.
- 3. Prior to beginning site clearing and grading, protect all storm sewer inlets that receive runoff from disturbed areas. In order to prevent sediment from leaving the site and entering the downstream storm sewer system, seal all storm sewer inlets that are not needed for site drainage during construction. Protect all other storm sewer inlets by installing sediment control devices, such as silt sacks, or rocked filtration logs/wiers. Straw bales or fabric under the grates are not acceptable forms of inlet protection. Protect new storm sewer inlets as they are completed. Maintain storm sewer inlet protection in place until all sources with potential for discharging to the inlets are stabilized.
- 4. Before beginning construction, install a TEMPORARY ROCK CONSTRUCTION ENTRANCE at each point where vehicles exit the construction site When at all possible contractor shall designate only one access point for vehicles entering and exiting the site. The rock on the entrace will have to be inspected daily and replaced or rock supplemented by the contractor when over 50% of the voids in the rock are filled. A cleaning station should be made available to drivers and visably signed as such. Provide shovels, brooms and/or hose with a wash out area so soils can be removed from vehicles on site.
- 5. Avoid entire removal of trees and surface vegetation all at once whenever possible as this limits the amount of site subsceptable to erosion. Schedule construction zones and note this on the SWPP plan in order to expose the smallest practical area of soil at any given time. Utilize vegetation removed by on site grinding and mulching and using this material to protect the soil from eroision.
- 6. Following initial soil disturbance or redisturbance, complete permanent or temporary stabilization against erosion due to rain, wind, and running water within 7 calendar days on all disturbed or graded areas. This requirement does not apply to those areas that are currently being used for material storage on a daily basis or for those areas on which grading, site building, or other construction activities are actively underway. Provide temporary cover on all stacked topsoil piles, and other areas of stockpiled excavated material in order to prevent soil erosion and rapid runoff during the construction period Stockpiles can be mulched,covered with poly or fabric, and or seeded during prolonged exposure. Prolonged periods of open, bare earth without grass cover will not be permitted. Stabilize all disturbed greenspace areas with a minimum of 4" topsoil immediately after final subgrade completion. Seed and mulch, or sod and protect these areas within 48 hours after completion of final grading work (weather permitting). Stabilize all disturbed areas to be paved using early application of gravel base. Stabilize the normal wetted perimeter of any temporary or permanent drainage ditch that conveys water from the construction site, or diverts water around the construction site, within 200 lineal feet from the property edge, or within 200 feet from the point of discharge to any surface water. Stabilize temporary or permanent drainage ditches within 24 hours of connecting to a surface water. Protect outfalls minumum of 200 feet down stream and to the side of the discharge point. Additional settling "pots" achieved by filter logs or filtered stick bales staked in the channel will dissapate the water energy. Provide pipe outlets with temporary or permanent energy dissipation within 24 hours of connection to a surface water.
- 7. Receving Waters It is the contractors responsibility to inspect the site discharge point as well as downstream to the reciving body of water(pond, lake, stream, etc.) on a regular basis including after each storm event and document if any differences or changes in normal in discharge and if material is leaving the construction site. If so it shall be documented and removed immediately.

NOTE: ALL EROSION AND SEDIMENT CONTROL DEVICES WILL BE CHECKED BY THE CONTRACTOR AFTER EACH STORM EVENT AND BE MAINTAINED, OR IMPROVED UPON AFTER EVERY STORM EVENT TO ENSURE ADEQUATE PERFORMANCE.

POLLUTION CONTROL:

. Designate a Concrete Wash-out and truck wash area:

Make it visible in the field to vehicle operators and note this on the SWPP plan.

a. When washouts occur on the site, concrete washout water must be contained in a leak-proof containment facility or impermeable liner. Liquid and solid wastes may not touch the ground and there must not be runoff from the concrete washout operations or

b. On sites where Concrete Washout areas are not feasible as shown on the Detail Sheet, above ground methods and/or off-site methods can be utilized as approved by ρ wner.

c. Concrete washout may be provided off-site by Concrete Contractor or Concrete Supplier, at an approved washout disposal area. Concrete Supplier may provide Concrete Washout Areas on-board their transports for disposal off-site Concrete Contractor shall verify with Supplier in regards to provided Concrete Washout areas on and off-site, as necessary.

d. Limit external washing of trucks and other construction vehicles to a defined area preferably before the construction access/exit point. Wash vehicles only on an area stabilized with stone that drains into an approved sediment trapping device. Contain runoff and properly dispose of waste. Engine degreasing is prohibited.

- 2. <u>Solid Waste</u>: Properly dispose of collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris, and other wastes in compliance with State requirements.
- 3. <u>Hazardous Materials</u>: Properly dispose of all waste and unused building materials (including garbage debris, cleaning wastes, oil, gasoline, paint, wastewater, toxic materials, and hazardous materials) off-site. Do not allow waste and unused building materials to be carried by runoff into a receiving channel or storm sewer system. Properly store oil, gasoline, paint, and other hazardous materials in order to prevent spills, leaks, or other discharge. Include secondary containment. Restrict access to storage areas in order to prevent vandalism. Storage and disposal of hazardous materials must be in compliance with regulations.
- 4. Machinery: and mechanicalized eqiupment that leaks waste shall have a protective barrier or containment under the device adequate to contain the waste. Properly dispose of the waste.
- 5. Emergency spill station: Contractor shall locate and sign an emergency spill station that has necessary containment or cleanup devices for all workers to access.

EROSION CONTROL

Apply necessary moisture to the construction area and haul roads to prevent the spread of dust.

Contractor shall utilize coarsely ground wood and tree mulches to cover exposed soils. Mulches shall be spored on site to supplement and use in problem areas during all phazes of the construction project.

Contractor shall uses star tack or other organic substances in situations to prevent soil from eroding away by wind or rain.

Whenever possible contractor shall grade areas of soil to limit potential of erosion, to include tracking perpedicular to fall line of grades as well as diverting water flows from problematic areas on the site.

Seeding, fiber blankets, poly/tarps or cover mulches, disked mulches and compost can be used to cover temporarily exposed areas from wind and rain. Other methods by the contractor shall be documented in the

SEDIMENT CONTROL:

Inlet Sediment Control Protection Devices:

The following are approved Inlet Sediment Control Devices:

a. Road Drain Top Slab Model RD 23 (fits rough opening for 2'x3' inlet), Road Drain Top Slab Model RD 27 (fits rough opening for 27" inlet), or Road Drain Top Slab Model CG 3067 (fits Neenah Casting with 35-1/4"x17-3/4" dimensions) manufactured by WIMCO, 799 Theis Drive, Shakopee, MN, 55379, Phone (952) 233-3055. or approved equal

b. Silt Sack manufactured by ACF ENVIRONMENTAL, 2831 Cardwell Road, Richmond, VA, 23234, Phone (800) 448—3636. or

c. InfraSafe Sediment Control Barrier. Install geotextile sock on the outside of the barrier in order to trap additional fines. Standard frames are available to fit 24" to 30" diameter and 2'x3' openings. Distributed by ROYAL ENTERPRISES AMERICA, 30611 Forest Boulevard, Stacy, MN, 55079, Phone (651) 461-2130. or approved equal

d. Ridge Bag Rock Log. Use rock logs only for curb inlets after pavement is in place. Manufactured by RED BARN RIDGE, 3|35 County Road |36, Saint Cloud, MN, 3530|, Phone (320) 253-3744. or approved equal

e. Inflatable drain plugs by Interstate Products www.interstateproducts.com or approved equal

Place a 450 mm (18 inch) thick layer of riprap onto a 225 mm (9 inch) thick layer of granular filter material at locations indicated on the plan in accordance with WIDOT Specification 606. Install two layers of medium duty Geotextile fabric (WIDOT HR, section 645.3.7) beneath the granular filter material. At pipe outfalls configure the installation as shown on detail sheet for the size of pipe indicated and extend the geotextile fabric under the culvert apron a minimum of 3 feet. For pipe sizes smaller than 300 mm (12 inch) diameter, the minimum quantity of riprap and filter blanket shall be no less than that required for 300 mm (12 inch) diameter pipes.

Install and maintain per WIDNR Conservation Practice Standard 1056.

Install silt fence along the contour (on a level horizontal plane) with the ends turned up (J-hooks) in order to help pond water behind the fence. Install the silt fence on the uphill side of the support posts. Provide a post spacing of 1,2 m (4 feet) or less. Drive posts at least 06 m (2 feet) into the ground. Anchor the silt fence fabric in a trench at least 152 mm (6 inches) deep and 152 mm (6 inches) wide dug on the upslope side of the support posts. Lay the fabric in the trench and then backfill and compact with a vibratory plate compactor. Make any splices in the fabric at a fence post. At splices, overlap the fabric at least 152 mm (6 inches), fold it over, and securely fasten it to the fence post. Silt fence supporting posts shall be 5 mm (2 inch) square or larger hardwood, pine, or standard T- or U-section steel posts. T- or U-section steel posts shall weigh not less than 18601 kg per meter (1.25 lb per lineal foot). Posts shall have a minimum length of 1524 mm (5 feet). Posts shall have projections to facilitate fastening the fabric and prevent slippage. Geotextile fabric shall meet the requirements of WIDOT Standard Specification 628 for preassembled silt fence, furnished in a continuous roll in order to avoid splices. Geotextile fabric shall be uniform in texture and appearance and have no defects, flaws, or tears. The fabric shall contain sufficient ultraviolet (W) ray inhibitor and stabilizers to provide a minimum two-year service life outdoors. Fabric color shall be international orange in high traffic greas contractor shall reinforce silt fence with wire fencing and metal posts, extreme circumstances will require temporary concrete median sections to support material backing of stock piled soil or filled earth.

Install siltfence, or other effective sediment controls, around all temporary soil stockpiles. Locate soil or dirt stockpiles containing more than arrho cubic yards of material such that the downslope drainage length is no less than 8 m (25 feet) from the toe of the pile to a roadway or drainage channel. If remaining for more than seven days, stabilize the stockpiles by mulching, vegetative cover, tarps, or other means. Control erosion from all stockpiles by placing silt fence barriers around the piles. During street repair, cover construction soil or dirt stockpiles located closer than $\mathcal B$ m (25 feet) to a roadway or drainage channel with tarps, and protect storm sewer inlets with silt sacks or staked siltfence. Do not stock pile soil or material near catch basins or drainage ways.

Stone Tracking Pad (Temporary Rock Construction Entrance:

Install and maintain per WIDNR Conservation Practice Standard 1057. Use 3 inch to 6" diameter rock. Place the aggregate in a layer at least 300 mm (12 inches) thick across the entire width of the entrance. Extend the rock entrance at least 15 m (50 feet) into the construction zone. Use a WIDOT Type R permeable geotextile fabric material beneath the aggregate in order to prevent migration of soil into the rock from below. Maintain the entrance in a condition that will prevent tracking or flowing of sediment onto paved roadways. Provide periodic top dressing with additional stone as required. Close entrances not protected by temporary rock construction entrances to all construction traffic.

Temporary Sediment Basins

In the construction process or if noted on the plan the contractor shall construct temporary sediment basin(s). As per general rule the sediment basin shall be sized appropriately to a copacity reletated to the drainage area on a ratio of 3,600 cubic feet per acre of drainage zone entering the basin. Pasins shall be inspected after every rainfall event, material removed and stabilized. If changes to the basin are made, document and amend the SWPP plan.

DEWATERING:

If dewatering is required and sump pumps are used, all pumped water must be discharged through an erosion control facility (temporary sedimentation basin, grit chamber, sand filter, upflow chamber, hydro-cyclone, swirl concentrator, dewatering bag or other appropriate facility) prior to leaving the construction site. Proper energy dissipation must be provided at the outlet of the pump system. Discharge clear water only. To achieve better separtion of the material suspended in the water a biodegradable not toxic flocculant agent may be required. For more information and materials go to by Interstate Products www.interstateproducts.com

Geotextile dewatering bags shall meet requirements of DNR Technical Standard 1061. The footprint of geotextile bags shall be no smaller than 100 square feet, and shall be secureely attached to the discharae pipe. Polymers can be used to enhance the efficiency of geotextile bags. If used, polymers shall meet the criteria within DNR Technical Standard 1051.

INSPECTIONS-MAINTENANCE-DAILY RECORD-AMEND THE SWPP PLA

- Contractor shall inspect all erosion and sediment control devices, stabilized areas, and infiltration areas on a <u>daily basis</u> until land-disturbing activity has ceased. Thereafter, inspect at least on a <u>weekly basis</u> until vegetative cover is established. Inspect all erosion and sediment control devices, stabilized areas, and infiltration areas within 24 hours after a rainfall event greater than 05 inches in 24 hours. Remove accumulated sediment deposits from behind erosion and sediment control devices as needed. Do not allow sediment to accumulate to a depth of more than one—third of the height of the erosion and sediment control devices. Immediately replace deteriorated, damaged, rotted, or missing erosion control devices. Document inspections and dates of rainfall events. Maintain a written log of all inspection, maintenance, and repair activities related to erosion and sediment control facilities. All nonfunctional BMPs must be repaired, replaced, or supplemented with functional BMPs within 24 hours after discovery, or as soon as field conditions allow access.
- 2. All inspections and maintenance activities must be recorded in writing DALY in a detailed record(notes, photographs, sketches, etc, and kept with the SWPPP by the contractor.
- 3. Contractor shall remove all soils and sediments tracked or otherwise deposited onto adjacent property, pavement areas, sidewalks, streets, and alleys. Removal shall be on a <u>daily basis</u> throughout the duration of the construction and/or as directed by the City. Clean paved roadways by shoveling or wet-sweeping. Po not dry sweep. If necessary, scrape paved surfaces in order to loosen compacted sediment material prior to sweeping. Haul sediment material to a suitable disposal area. Street washing is allowed only after sediment has been removed by shoveling or
- 4. All soil hauled from the site shall be accounted for and documented in the SWPP by the contractor. Its final destination and how the soil has been stored and stabilized.
- 5. Contractor shall maintain all temporary erosion and sediment control devices in place until the contributing drainage area has been stabilized (hard-surfaced areas paved and vegetation established in greenspace). Repair any rilling, gully formation, or washouts. After final establishment of permanent stabilization, remove all temporary synthetic, structural, and nonbiodegradable erosion and sediment control devices and any accumulated sediments. Dispose-of off site. Restore permanent sedimentation basins to their design condition immediately following stabilization of the site.
- 6. Contractor shall clean sedimentation basins, storm sewer catchbasins, ditches, and other drainage facilities as required in order to maintain their effectiveness. Temporary and permanent sedimentation basins must be drained and the sediment removed when the depth of sediment collected in the basin reaches 1/2 of the storage volume. Drainage and removal must be completed within 72 hours, or as soon as field condiditons allow access.
- 7. Contractor shall inspect infiltration areas to ensure that no sediment from ongoing construction activities is accumulating. Remove sedement immediately ensuring subsoils are not compaced by
- B. Every vehilcle shall not track material off-site. Clean the wheels of construction vehicles in order to remove soils before the vehicles leave the construction site. Wash vehicles only on an area stabilized with stone that drains into an approved sediment trapping device.
- 9. Contractor shall reinforce erosion control facilities in areas where concentrated flows occur (such as swales, ditches, and areas in front of culverts and catchbasins) by backing them with snow fence, wire mesh, or stiff plastic mesh reinforcement until paving and turf establishment operations have been completed. Posts for the reinforcing fence shall be 100 mm (4 inch) diameter wood posts, or standard steel fence posts weighing not less than 0.59 kg (1.3 lbs) per lineal foot, with a minimum length of 762 mm (30 inches) plus burial depth. Space posts for the reinforcing fence at intervals of 3 m (10 feet) or less. Prive posts for the reinforcing fence at least 06 m (2 feet) into the ground.

GENERAL SOIL STABILIZATION: (SEE LANDSCAPE PLAN FOR MORE INFORMATION)

Establishment of lawn, prairie/wildflower and/or plant bed areas will be noted on the landscape plan

to ensure stabililization of soils, restaking of sod where applicable, proper watering and mulch maintenance will be requied Inspect seeded or sodded areas on a timely day-to-day basis. In the event of a seeding failure, reseed and remulch the areas where the original seed has failed to grow and perform additional watering as necessary at no additional cost to the $extcolor{O}$ wner. Special maintenance provisions for wild and praire grass seeded greas as noted in the landscape plan. Promptly replace all sod that dries out to the point where it is presumed dead and all sod that has been damaged, displaced, weakened, or heavily infested with weeds at no additional cost to the $m \emph{O}$ wner.

In areas to be <u>temporarily</u> seeded, use <u>introduced</u> seed mixture equivalent to WIPOT #10 or #20. Apply seed mixture per WIPOT 630.3.3.5. Incorporate a fertilizer (slow release type with 10 week residual) consisting of 23-0-30 (%N-P-K) into the soil at an application rate of 224 kg per hectare (200 lbs per acre) by disking prior to seeding. In problematic areas it may be necessary to use a low phosphorus organic fertilizer in cases where seeds may not germinate. If this is the case, seed and fertilizer shall be disked into the surface and mulched properly to ensure germination and uptake of the Phoshorus by the seed.

To ensure adequate aermination of the seed the work will be performed as follows: Spring- from April | through May 5. Fall- from August 15 to September 20.

After September 20, wait until October 30 to perform dormant seeding. Dormant seeding will only be allowed if the maximum soil temperature at a depth of 25 mm (| inch) does not exceed 4.44 degrees 6 (40 degrees F) in order to prevent germination.

In seeded areas with slopes steeper than 3:1 and lengths less than 15 meters (50 feet), install biodegradable erosion control blankets uniformly over the soil surface by hand within 24 hours after seeding in accordance with manufacturers recommendations. Use WIPOT Urban Type $\mathcal B$ or owner appproved

In areas where irrigation is to be installed, contractor shall work in zones to finish grade and install the system in zones. Note- Erosion control measures shall remain in place until soils have been stabilized with sod or seeded areas that exibit minimum of 70% lawn vegetative coverage. If silt fence has to be removed to install the irrigation system, it shall be reinstalled at the end of each work day or use bio rolls to provide protection during the installation process until lawn areas have sod and/or plant beds are mulched.

In areas to be sodded, silt fence can be removed short term for working, but exposed soil areas shall be sodded or erosion control measures shall be reinstalled at the end of each work day.

NOTE: THE PROJECT'S LANDSCAPE PLAN IS PART OF THE SWPP FOR SOIL STABILIZATION. REFERENCES SHALL BE MADE TO THE APPROVED LANDSCAPE PLAN. AMENDMENTS TO THE LANDSCAPE PLAN SHALL BE APPROVED BY THE OWENER AND DOCUMENTED AS PART OF THE SWPP



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EROSION CONTROL DETAILS	CONVENIENCE STORE WITH DIESEL CITY OF WAUKESHA, WISCONSIN
<u>NO.</u> <u>PATE</u> 	DESCRIPTION
DRAWN BY	RASN
SCALE PROJ. NO.	6RAPHIC 3 404 0

SHEET