Economy Prairie Seed Mix JFNew Nursery, 708 Roosevelt Road, Walkerton, IN 46574 (574)586-3400

Common Milkweed 0.5 Smooth Blue Aster 0.25 Sand Coreopsis Little Bluestem 32.0 Indian Grass 12.0 Braod-leaved Purple False Sunflower Wild Lupine Common Mountain Temporary Cover Common Oat 3 Black-eyed Susan Annual Rye Total

Stormwater Seed Mix JFNew Nursery, 708 Roosevelt Road, Walkerton, IN 46574 (574)586-3400 Oz/Acre Oz/Acre Permanent Grasses/Sedges/Rushes 360.0 Common Oat Crested Oval Sedge Annual Rye Bristly Cattail Sedge Total Bottlebrush Sedge Rough-Clustered Sedge Oz/Acre Name Brown Fox Sedge Blunt Spike Rush Water Plantain 12.0 Virginia Wild Rye Swamp Milkweed Fowl Manna Grass Bidens (Various Mix) Common Rush Torrey's Rush Monkey Flower Rice Cut Grass Ditch Stonecrop Switch Grass Dark Green Rush Sweet Black-eyed Susar Wool Grass Common Arrowhead River Bulrush

S75 Erosion Control Blanket Area Straw erosion control blanket shall be S75 as manufactured by North American Green or equivalent. MONITORING AND MANAGEMENT PROGRAM FOR ECONOMY PRAIRIE AND STORMWATER SEED MIX

1. Qualified contractors for native plant installation shall have experience in the restoration, installation and management of said areas and a minimum of five years experience in the field. A supervisor is to be onsite at all time during landscape work for native areas that can identify non-native and native plants by genus and species.

PLS testing. Seed must meet a minimum 75 percent PLS per species as verified by independent laboratory test results no more than one year old. All native seed and plant materials shall be obtained from sources within 200 miles of the project site to maintain local ecotypes.

2. Seed supplied to the site should be tagged with seed species, weights, and documentation of

Seedbed Preparation: Existing vegetative growth should be removed or killed with herbicides. Surface till the seedbed to a depth of two to four inches. If the ground is wet, delay tilling until the soil dries enough to break apart when tilled. Lightly compact the tilled soil with a roller, cultipacker or similar implement. Tilling can usually be omitted if using a no-till seed drill.

4. Optimum seeding time: October 1 (fall) to May 15 (Late Spring)

5. Fertilizer are not to be used in areas of native landscaping.

THREE-YEAR/NEAR-TERM MONITORING AND MANAGEMENT PROGRAM FOR ECONOMY PRAIRIE AND STORMWATER SEED MIX

1. The developer will provide the Village with notification 24-hours prior to the start of planting

2. Following substantial completion, the developer will submit documentation that natural area landscape revegetation has been completed. Nursery packing lists indicating the species and quantities of materials installed will accompany this notice.

3. The annual report will include a location map, a summary of annual monitoring observations, a description of management performed during the year, a tabular summary of annual progress relative to acceptance standards, representative photographs, and a list of recommendations for management during the upcoming year.

Naturalized Landscape Acceptance Criteria

1. Within three months of seed installation (or three months after the start of the growing season following dormant seeding), at least 90 percent of the seeded area, as measured by aerial cover, will be vegetated or otherwise stabilized against erosion.

2. Naturalized landscapes shall have no more than 0.25 square-meter devoid of vegetation, as measured by aerial coverage.

3. Seeded areas shall have no more rills or gullies greater than for inches wide by four inches deep, and basin shorelines shall not have more than six inches of cut as a result of erosion. 4. Areas seeded to turfgrass or low-maintenance turf shall have 95 percent ground cover. 5. Emergent areas shall have minimum of 35 percent ground cover (avg. 50 percent) and other wetland and prairie areas shall have a minimum of 35 percent ground cover (avg. 60 percent) by species in the approved plant list and/or native species with native coefficient of conservation (C-) values of at least 2 (per Swink and Wilhelm 1994 or more current version) 6. Naturalized landscape shall have a minimum 30 percent presence by species seeded or planted for the permanent matrix and/or native species with C-value of at least 2 (per Swink and Wilhelm 1994 or more current version) 7. Installed woody materials shall be alive, in healthy condition, and representative of the

8. No more than 25 percent of any specific plant community shall be individually or collectively

dominated by non-native or weedy species. 9. None of the three-most dominant species may be non-native or weedy, including but not limited to Canada thistle (Cirsium arvense), common reed (Phragmites australis), reed canarygrass (Phalaris arundinacea), sweetclover (Melilotus spp.), Kentucky bluegrass (Echinochloa crus-galli)

or sandbar willow (Salix interior) unless otherwise indicated on the approved planting plan. 10. Cattails (*Typha spp.*) do not count towards the 25 percent weed criterion provided they represent no more than 20 percent cover. 11. A long-term Operation and Maintenance plan will be submitted for Village review and

approval as a condition or landscape acceptance.

THESE NOTES HAVE BEEN PREPARED WITH THE ASSISTANCE OF

PLANNING RESOURCES, INC

ON BEHALF OF THE VILLAGE OF ORLAND PARK.

PLANNING RESOURCES, INC

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1. The permittee will be responsible for ensuring vegetation establishment is progressing and for funding and implementing the minimum three-year 'near-term' management and maintenance plan for establishing a naturalized landscape management and maintenance services to a third party to ensure proper implementation.

Monitoring Methodology

1. Monitoring shall be performed for a minimum of three years after planting is substantially complete, and until acceptance standards are met, subject to acceptance by the Village of Orland Park.

2. Annual vegetation monitoring will occur in August, September or early October. Meander survey methodology will involve taking five to ten representative site photographs (total) and a review of at least 20 percent of each vegetative community to identify the following:

a. the limits of all vegetation areas by general community type and dominant species within each planting zone (e.g., wetland and prairie zones),

 b. all plant species (native and non-native) in each planting zone, c. the five most dominant species within each planting zone d. the percent survival of planted species

e. the approximate percent ground cover by native species within each planting zone f. the percent ground cover by non-native or invasive species in each planting zone, g. erosion and sedimentation problems, h. water level or drainage problems,

i. areas of bare soil larger than 0.25 square meter, and j. observation on specific management strategies necessary to achieve acceptance requirements.

Near-term Management

1. Undesirable Plant Control -- Various means of weed control will be employed, as appropriate, and may include mechanical control, chemical control, and/or biological control. a. Mechanical Control: Mechanical control of nuisance plant species typically includes cutting, mowing and/or the digging up individual plants by hand. In many cases, cutting or mowing a plant before its seeds mature will minimize further spread. For general mowing of swaths of vegetation, mowers should be set to a height of 12+ inches above the ground surface or to a height that treats weedy species yet

minimizes impacts on desirable plants. b. Chemical Control: For aggressive weeds, an appropriate herbicide will be applied. Because of the potential for damage to native plant communities, the use of preventative herbicides will be limited to problem areas and problem species for which manual control is ineffective. Aquatic herbicides will not be used to treat algal blooms. Herbicide use will be in strict compliance with all application rates, procedures, warning labels and applicable codes, standards and best management

c. Biological Control: An alternative to chemical treatment, use of biological controls for purple loosestrife will be considered provided site conditions are appropriate to support and maintain the insect population.

a. Pesticides will not be used broadly or routinely at the mitigation site other than for mosquito abatement (should that be necessary). Pesticides will be used only for specific and localized problem areas as determined by a Village-approved landscape restoration specialist with experience in installation and development of native plant communities, should such areas occur. Standard application procedures and precautions for chemical application in wetland areas will be followed.

b. Control of nuisance species such as geese and ducks may be performed if monitoring indicates such species are responsible for poor plant establishment and performance. The method will be determined by a Village-approved landscape restoration specialist.

3. Debris Mangement -- Debris (e.g., paper, plastic, metal, concrete, etc.) will be removed from the developed area every other month between March and November. Debris will be disposed of at an appropriate off-site trash receptacle or hauled to an approved dumpsite.

4. Fertilizer Application -- Turf management chemicals will not be used within areas of naturalized plantings unless specifically prescribed by and per the direction of a Village-approved landscape restoration specialist. If used, special care will be take to not apply fertilizers when inclement weather is forecast.

Near-term Management Schedule

The following provides a general schedule of management and maintenance tasks for installation and establishment of naturalized landscapes. The actual schedule and tasks performed in any give year may differ based on specific recommendations from a Village-approved landscape

1. Year 1 Mangement Actions

a. Mowing to a height of 6 to 8 inches may be performed when vegetation reaches a height of 12 inches. (Note: Weekly mowing at turf lawn height will NOT be performed.) If clippings shade the ground or smother the remaining plants, they will be bagged for off-site disposal r otherwise diepersed. The last mow will be timed so that vegetation can grow to a height of 8 to 10 inches before winter.

b. Weeding will avoid damaging the native plantings and be timed to prevent development of weed seeds. For aggressive biennial and perennial weeds, herbicide will be selectively applied (e.g., wick application, not spraying). Turf management chemicals will not be used on native plantings except as directed by a Village-approved landscape restoration specialist.

c. Debris and litter (e.g., paper, plastic, metal, concrete, grass clippings, brush, etc.) will be removed every other month between 1 March to 31 October to prevent floating materials from clogging the outlet. Debris will be disposed of at an appropriate off-site trash receptacle.

d. Other potential responsibilites may include, but are not limited to, access restriction enforcement, insect/pest control, erosion repairs, and wildlife management (e.g., control of carp, muskrats, geese, etc. as needed). The need for other management actions will be determined on a quarterly basis when performing general maintenance visits for dam embankments and control structures.

a. Seeded area will be mowed close to the ground as possible in early spring and the cuttings raked or bagged. If annual weeds remain a problem, an additional mow will be performed during mid- to late June, with the mow height set to 12 inches. b. Weed management will emphasize control of biennial and perennial weeds. Biennial weeds targeted for control include sweetclovers (Melilotus spp.), Queen Anne's lace (Daucus carota), and teasel (Dipsacus spp.). Proper seed control may require multiple treatments and will be performed at times that will provide maximum treatment effectiveness.

c. Other management practices will include debris and litter removal, access restriction enforcement, and erosion control and repairs (as needed). Additional management tasks may include insect/pest control, reseeding/replanting in targeted areas, wildlife management as determined on a quarterly basis when performing general maintenance visits for dam embankments and control structures. d. If there is sufficient fuel, a prescribed burn may be attempted at the end of the second growing season, provided proper permits from the Illinois Environmental Protection Agency are obtained and notice is provided to the Village and local

Year 3 Management Actions (Note: Fire Management is Not Applicable to This Project Site) a. Typical management in the third growing season involves the use of prescribed fire in combination of mechanical and chemical methods for controlling aggressive biennial and perennial weeds.

b. Prescribed burns for naturalized landscapes require a permit from the Illinois Environmental Protection Agency and are typically conducted between mid-October and April as weather and site conditions permit. A permit will be obtained from the Illinois Environmental Protection Agency prior to conducting a prescribed burn. The Village and local authorities will be contacted prior to conducting a prescribed burn. If prescribed burning is not practical, mowing in late fall and very early spring will be substituted for burning. The burn-replacement mow will occur at a height of 2 inches, with cut material bagged for off-site disposal.

c. Mangement of aggressive weeds will continue. Other management practices will include debris and litter removal, access restriction enforcement, and erosion control and repairs (as needed). Additional management tasks may include insect/pest control, reseeding/replanting in targeted areas, wildlife management as determined on a quarterly basis when performing general maintenance visits for dam embankments and control structures.

SAS **ARCHITECTS** & PLANNERS

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NO. DESCRIPTION

REVISIONS



DRAWN BY APPROVED BY JOB NO. 06073 10-20-2008 SHEET NO.

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