Erosion and Sediment Control, Landscape Design Criteria

MARCH 2015

ILLINOIS STATE TOLL HIGHWAY AUTHORITY

The Erosion and Sediment Control, Landscape Design Criteria dated March 2015 replaces the March 2014 version.

- This manual is for general guidance purposes. If a Standard or Supplement Specification is not in agreement with this manual, the Standard or Supplemental Specification takes precedence.

- Temporary and permanent erosion control must be in compliance with all requirements of NPDES Permit No. ILR10 and NPDES Permit ILR40 issued by the Illinois Environmental Protection Agency. As new regulations are adopted, compliance with new requirements is mandatory, even if not specifically mentioned in this document.

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SECTION 1.0 GLOSSARY

AASHTO. American Association of State Highway Transportation Officials

BMPs. Best Management Practices, or the design, construction, and maintenance practices and criteria for developments that promote infiltration, minimize impacts from stormwater runoff rates and volume, prevent erosion, and capture pollutants.

CFR. Code of Federal Regulations

Community. Any municipality, or the unincorporated County, within Illinois acting as a unit of local government.

Clear Zone. The unobstructed, traversable area provided beyond the edge of the through traveled way for the recovery of errant vehicles.

Contract. The written agreement executed between the Tollway and the successful Bidder, establishing the terms and conditions for the performance and construction of a project.

CM. Construction Manager. The Engineer or firm of engineers and their duly authorized employees, agents and representatives engaged by the Tollway to observe the project work, in order to determine whether or not it is being performed and constructed in the compliance with the Contract.

CSMA. County Stormwater Management Agency

CSWCD. County Soil and Water Conservation District

Dam. Any obstruction, wall embankment, or barrier, together with any abutments and appurtenant works, constructed to store or direct water or to create a pool (not including underground water storage tanks).

DBH. Diameter at Breast Height

Designer. The person (or consultant team) responsible for performing a design task for a Tollway project. Although this is typically the Design Section Engineer (DSE), it can also include a person (or consultant team) hired by a Contractor to perform design as part of a Value Engineering Proposal or part of a Performance Based Design. This document will use the term “Designer” which covers anyone performing design and will only use the term “DSE” when discussing tasks specific to the DSE.

Detention. The storage and controlled release of stormwater following a precipitation event by means of excavated pond, enclosed depression, pipe or tank used for stormwater peak flow reduction, storage and pollutant removal. Both dry and wet detention facilities can be applied. Special conditions for wet detention ponds apply on the Tollway ROW.

Development. Any activity, excavation or fill, alteration, subdivision, change in land use, or practice, undertaken by private or public entities that affects the discharge of stormwater; or substantial improvement to any portion of a building in the flood plain. The term "development" does not include maintenance of stormwater facilities.

Drainage. The removal of excess surface or ground water from land or roadway pavement by means of surface or subsurface drains.

Drainage/Tributary Area. The area of land from which the water drains to a given point.

DSE. Design Section Engineer. The Engineer, or firm of engineers, and their duly authorized employees, agents, and representatives retained by the Tollway to prepare the Plans and Special Provisions for a Design Section.

EP. Environmental Planner

EPA. Environmental Protection Agency

Erosion Control. Measures proposed and provided to prevent or reduce the displacement of soil by the running water on road embankment fills, banks, and at various drainage structures (i.e. culvert inlets and outlets, channels, detention pond overflow areas, junctions, etc.).

ESCM. Erosion and Sediment Control Manager/Inspector

ESCP. Erosion and Sediment Control Plan

EVA. Existing Vegetative Assessment

Filter Strip. A vegetative planting used to retard or to collect sediment or pollutants for protection of diversions, drainage basins or other drainage structures.

Flood Plain. The area adjoining to the channel of a stream, which has been or may be subject of inundation by water exceeding a certain discharge.

Floodway. The channel and that portion of the flood plain adjacent to a stream or watercourse that is needed to convey the base flood.

Hydrology. The science of the behavior of water, including its dynamics, composition, and distribution in the atmosphere, on the surface of the earth, and underground.

IDOT. Illinois Department of Transportation

IEPA. Illinois Environmental Protection Agency

ILCS. Illinois Compiled Statutes

IOD. Issues and Opportunities Diagram. A diagram of the site and adjacent properties that delineates the existing landscape character, features, view sheds, aesthetic opportunities, natural plant divisions, historic features, topographic features and identification of agencies and municipalities to be coordinated with.

Landscape DSE. Landscape Design Section Engineer. The landscape architect or firm of consultants and their authorized employees, agents and representatives engaged by the Tollway to prepare plans and Special Provisions for the landscape design section of a project.

Landscape Materials List. A list of plant material to be installed on a site. It includes the item number and the quantity and description of plant material.

Maintenance. The selective removal of woody material and accumulated debris from, or repairs to, a stormwater facility so that such facility will perform its natural functions or the functions for which it was designed and constructed.

Mitigation. Any action taken to permanently eliminate or reduce the negative impacts caused by natural or technological hazards.

Municipality. Any community, or the unincorporated County, within Illinois acting as a unit of local government.

NOI. Notice of Intent

NOT. Notice of Termination

NPDES. National Pollutant Discharge Elimination System. A provision of the Clean Water Act that prohibits discharge of pollutants into waters of the United States unless a special permit is issued by the Environmental Protection Agency (EPA), a state or other designated regional agency.

NRCS. U.S. Department of Agriculture, Natural Resources Conservation Service

PM. Project Manager

PLP. Permanent Landscape Plan

PPM. Parts per million

ROW. right-of-way

Runoff. The waters derived from melting snow or rain falling within a tributary drainage basin that exceeds the infiltration capacity of the soils of that basin.

Sediment. Mineral or organic soil material that was removed from the surrounding landscape and carried away by flowing water.

Sheet Flow. Storm runoff flowing in a thin layer over the ground surface.

Special Provisions. Special clauses, directions and requirements supplemental to these Standard Specifications, setting forth requirements peculiar to the work included in the Bid Documents of a project.

Specifications. The general term comprising the directions, provisions, instructions, and requirements contained herein and labeled STANDARD SPECIFICATIONS, the Special Provisions, any Supplemental Specifications and Addenda.

Structure. Unless otherwise defined in the Specifications, structures shall comprise all objects constructed of materials other than earth and required by the contract to be built or to be removed, including without limitation: buildings, bridges, culverts, headwalls, sewers, constructed channels, outfalls, retaining walls, and their appurtenances..

Subgrade. The top surface of a roadbed upon which pavement and shoulders are constructed.

Sustainability. Design, construction, operations, and maintenance practices that meet the needs of the present without compromising the ability of future generations to meet their own needs.

SWPPP. Stormwater Pollution Prevention Plan

Tollway. The Illinois State Toll Highway Authority or Illinois Tollway

Tollway DDM. Illinois Tollway – *Drainage Design Manual*

Tree Preservation Plan. A plan delineating existing trees on-site that should be preserved and protected during the construction process.

Tree Stand Delineation. A general accounting of existing vegetation, both in quality and quantity on any project site. It should provide an overview of tree groupings and other natural attributes and limitations of the site.

Watershed. All land area drained by or contributing water to the same stream, lake, or stormwater facility.

Wetlands. Areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances, would support a prevalence of vegetation typically adapted for life in saturated soil conditions for growth and reproduction (i.e. swamps, marshes, sloughs, wet meadows, river overflows, mud flats and natural ponds).

USACE. The United States Army Corps of Engineers

Zone 1. The area of right-of-way directly adjacent to the roadway that will need special treatment due to increased salt pollutant exposure and proximity to traffic.

Zone 2. The area of right-of-way beyond Zone 1.

SECTION 2.0 INTRODUCTION

2.1 Purpose

The Illinois State Toll Highway Authority (Tollway) strives to lead the Industry in innovative and best practices, and to support a transportation system that preserves and enhances the environment. The Tollway also endeavors to design and build a more sustainable transportation infrastructure in Illinois. In support of these goals, the Tollway is committed to ensuring the protection of existing water resources and natural areas by implementing and maintaining an erosion and sediment control and landscape program as part of all Tollway projects.

This document provides the criteria, guidance, and general policies and procedures that need to be followed by the Design Section Engineers (DSE) or Designer for implementation of the erosion and sediment control and landscape measures for any construction on Tollway right-of-way (ROW), temporary easements, and borrow sites. These criteria, guidance, and general policies and procedures are intended to prevent erosion and sediment damage to the roadway, associated ROW, and adjacent properties; and to reduce impacts to water quality, aquatic ecosystems, and sensitive environmental resources; before, during, and after construction; and to provide a landscape that is both visually and environmentally compatible with the surrounding areas.

This manual provides general guidelines for plan preparation and for obtaining required permits for erosion and sedimentation control and landscape planning and design. It is the responsibility of the Designer to be familiar with the Tollway landscape management practices and to be knowledgeable in the principles of erosion and sediment control, roadside landscape design, and of current practices and regulations as they may affect Tollway projects. The Designer shall also be knowledgeable of the most cost-effective method for handling stormwater runoff in the project area in such a manner as to prevent erosion and sediment damages. The Designer shall ensure that the proposed grading and drainage designs for any project are coordinated with the landscape design in order to minimize conflicts and take full advantage of design opportunities and efficiencies.

The Construction Manager (CM) must be experienced in the development and implementation of erosion and sediment control plans that can be effectively applied by the Contractor during the construction phase of the project. In addition, it is the responsibility of the CM to ensure continuous monitoring of the effectiveness of the implemented erosion and sediment control measures throughout construction of the Tollway projects. Remedial measures shall be proposed and implemented if necessary.

The criteria, guidance, and general policies and procedures documented in this manual are for use in ensuring fulfillment of commitments for erosion and sediment control associated with Section 402 and Section 404 permits of the Clean Water Act issued by the U.S. Army Corps of Engineers (USACE), on such commitments made to the Illinois Environmental Protection Agency (IEPA), and other regulatory and natural resource agencies during project development. The National Pollutant Discharge Elimination System (NPDES) program of the Federal Clean Water Act imposes erosion and sediment control requirements on construction activities that involve a disturbance of 1 acre or more of the total land area. The IEPA has issued a statewide General Permit that details the NPDES requirements for construction projects.

2.2 General Information

2.2.1 Primary Documents

The primary documents developed through use of the criteria in this manual are:

- Special Provision 111 – Erosion and Sediment Control Stormwater Pollution Prevention Plan (SWPPP) Narrative,
- Erosion and Sediment Control Plan (ESCP),and
- Permanent Landscape Plan (PLP).

The SWPPP defines and describes the Best Management Practices (BMPs) for erosion and sediment control, good housekeeping, liquid and solid waste handling, spill prevention, and spill control measures to be used on the project site. The SWPPP includes a narrative, the ESCP, maintenance of the ESCP measures, and the PLP showing permanent ground cover.

The ESCP defines how properties and surface water/s located outside of the project area will be protected from erosion and sediment damage by the use of temporary control measures.

The PLP defines how the properties and surface water/s located outside of the project area will be permanently protected from erosion and sediment damage by the use of permanent ground cover and vegetation.

The temporary and permanent erosion control measures will function best when proper operation and maintenance of these measures are based on the following main elements:

- data collection and evaluation of the project vicinity to identify areas that are susceptible to erosion;
- assessment of the project site and determination of landscape requirements;
- review of the regulatory requirements for erosion and sediment control and landscape in the project area;
- planning and design for the most suitable and cost-effective erosion and sediment control and landscape measures; and
- proper installation and maintenance of the proposed erosion and sediment control and permanent landscape control measures coordinated with the construction schedule.

All Designer and CM personnel working on the preparation and implementation of the ESCP and PLP for a specific project shall be knowledgeable of the current Tollway design criteria in Roadway Erosion and Sediment Control and Landscape Design for highways. Improper design and installation of the sediment control measures can result in more severe problems than those that were intended to be avoided.

2.2.2 Projects Not Requiring Erosion and Sediment Control

Tollway projects which do not involve clearing and grubbing, excavation, stockpiling of soil and aggregate, borrow, or construction of embankment normally will not typically require erosion and sediment control measures. Tollway projects which involve only isolated excavation areas of less than 1 acre combined total disturbed area, likewise, will not normally require an ESCP. The following are examples of construction and maintenance operations that normally will not require erosion and sediment control measures:

- installation of lighting, signing, traffic signals, or guardrail;
- weed spraying;
- pavement marking;
- seal coating;
- pavement patching;
- planting of woody landscaping materials; and
- ditch and pond cleanings if the soil is not redeposited on the site.

If a single project involves a cumulative land disturbance of 1 acre or more, such as repair/replacement of guardrail at numerous locations, an ESCP plan and an NPDES permit is required.

Refer to Article 2.3 Policies and Regulations and the Tollway's Special Provision 111 Stormwater Pollution Prevention Plan.

2.3 Policies and Regulations

SWPPPs, including the development of ESCPs and control measures, are required on all Tollway projects that will expose areas of soil to potential displacement by precipitation events, wind, or other means, such that the sediment:

- could adversely affect traffic on the Tollway or associated ROW,
- could be conveyed into receiving natural streams or stormwater systems, or
- could affect adjacent properties or some sensitive environmental areas adjacent to the project site.

The need for erosion and sediment control measures shall be evaluated in the early design stages, prior to the preparation of design plans, so that the identified needed measures can be accounted for later in the ESCP and PLP design phases. The ESCPs shall provide pre-construction/during construction drawings that include information identifying the types of erosion and sediment control practices/measures to be used, the locations where they will be applied, and when they shall be applied in relation to the sequence of construction operations that will expose soil. In some cases, the Designer may recommend specific sequences of construction in order to address the protection of a sensitive area from erosion and sediment damage. Permanent landscape features, such as proposed trees and shrubs, may also be provided on the PLP post construction drawings when included in the scope of work.

The ESCP and/or PLP should incorporate green infrastructure water management techniques where appropriate and practicable. Stormwater management should mimic natural processes whenever possible, such as directing stormwater to areas where infiltration, evapotranspiration, or water reclamation may be utilized.

The ESCPs and/or PLPs should attempt to incorporate one or more of the following strategies, in order of preference:

1. preservation of natural features of the site, including natural stormwater storage and infiltration characteristics

2. preservation of existing natural streams, channels, and drainage ways

3. minimization of new impervious surfaces or compressed soils

4. conveyance of stormwater in open vegetated channels

5. construction of structures that provide both water quality and water quantity control, with structures serving multiple sites preferable to those serving individual sites, and

6. construction of structures that provide only quantity control, with structures serving multiple sites being preferable to those serving individual sites.

The Designer shall collect and analyze the existing site conditions as described in Article 3.1 Planning, Design Guidelines, and Submittal Requirements. A summary of submittal requirements follows:

<u>Design Concept Submittal includes:</u>

- data collecting and inventory development including, but not limited to, an Existing Vegetative Assessment (EVA) and an Issues and Opportunities Diagram (IOD); and

- addressing the Environmental Studies Inventory Sheet and Erosion and Sediment Control Analysis Form in the Tollway's Environmental Studies Manual.

Preliminary Design Submittal includes:

- developing the SWPPP and narrative;
- interpreting, evaluating, and applying data; and
- developing preliminary plans.

Pre-Final Design Submittal includes:

- development of ESCP and
- development of PLP.

The following statutes, regulations, and references can be consulted to properly define the elements that must be incorporated in the SWPPP, the ESCP, and the PLP.

2.3.1 Federal Statutes, Regulations and Policies

There are federal regulations overseen by numerous agencies. These agencies are the U.S. Environmental Protection Agency (EPA), USACE, the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS), and the U.S. Fish and Wildlife Service.

Key regulations and policies written by these agencies include:

- National Environmental Policy Act
- Water Quality Act (Clean Water Act Amendments) (1987)
- Clean Water Act: Sections 309, 319, 401, 402, 404
- EPA – Office of Water: "Controlling Nonpoint Source Runoff Pollution from Roads, Highways and Bridges" (EPA-841-F-95-008a / 1995)
- United States Code Title 23: Highways - Section 319: Landscaping and Scenic Enhancement
- 23 CFR 650, Subpart B Erosion and Sediment Control on Highway Construction Projects
- 23 CFR 752: Landscape and Roadside Development
- 40 CFR 450: Effluent Limitation Guidelines and Standards for the Construction and Development Point Source Category

2.3.2 Illinois Statutes and Directives

A number of Illinois statutes and directives contain guidance for landscaping, erosion and sediment control measures, not limited to the following:

- 615 ILCS 5 Rivers, Lakes, and Streams Act
- 35 Illinois Adm. Code, Subtitle C, Chapter I

2.3.3 Guidance Documents

Several guidance documents are available to assist in planning, design, and implementation of the landscaping and erosion and sediment control measures for the Tollway projects (all documents shall be the latest revision or edition), including:

- AASHTO – Guide for Transportation Landscape and Environmental Design
- AASHTO – A Guide for Achieving Flexibility in Highway Design
- AASHTO – Roadside Design Guide
- Environmental Protection Agency (EPA) – Developing Your Stormwater Pollution Prevention Plan; A Guide for Construction Sites
- Tollway – Design Section Engineers Manual
- Tollway – Drainage Design Manual
- Tollway – Environmental Studies Manual
- Tollway – Design Guidelines (Architecture, Landscape, Signage, etc.)
- Tollway – Standard K Drawings and Section M Base sheets
- Tollway – Supplement Specifications to the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction
- Tollway – Criteria for Removal and Replacement of Trees
- Tollway – Roadside Mowing Policy
- Illinois Department of Transportation (IDOT) – *Bureau of Design and Environmental Manual*, Chapter 41 – Construction Site Storm Water Pollution Control
- Illinois Department of Transportation (IDOT) – *Bureau of Design and Environmental Manual*, Chapter 59 – Landscape Design and Erosion Control
- IDOT – Standard Specifications for Road and Bridge Construction
- IEPA/NRCS – *Illinois Urban Manual*

As manuals are updated and re-issued, please ensure that the most recent version of the document is being used for guidance.

If there is any conflict between this *Erosion and Sediment Control, Landscape Design Criteria* and any reference document or specification, The Designer shall discuss this conflict with the Tollway Project Manager (PM) before proceeding.

2.4 Coordination and Documentation

2.4.1 Coordination

Below is a discussion of coordination activities needed during the preparation of the soil erosion control and landscape plans.

A. Coordination of several disciplines (e.g., engineering, landscape architecture, biology, hydrology, and others) is needed during the project's design in order to meet the proper environmental requirements. This is necessary not only for large and complex projects but also for small and simple projects. The Designer shall obtain all available inputs to ensure a coordinated, environmentally-based, integrative design approach.

B. Coordination with other state and federal regulatory agencies is necessary where transportation projects involve wetlands, endangered species, Illinois natural areas, nature preserves, historic sites, naturally or culturally sensitive areas, or where the planned facility is adjacent to public natural resources such as streams, forests, or forest preserves. The design aspect of these projects shall be identified by the Designer and coordinated by the assigned Tollway PM/Coordinator.

C. The Designer shall support the Tollway PM/Coordinator when coordination is needed with local jurisdictional agencies or property/landowners adjacent to or affected by the Tollway projects. Coordination at the local level includes counties, municipalities, schools, park and forest preserve districts, chambers of commerce, residential and commercial developments, and other special districts. Coordination at the general public level may include groups that could have valuable input to the project or have special requirements.

D. The USACE has agreements with County Soil and Water Conservation Districts (CSWCD) to provide specific services related to the ESCPs. The review of the ESCPs by the CSWCD is required whenever a 404 Permit is involved. This will involve documentation and coordination between the Tollway, the Designer, and various state and local agencies.

E. The NPDES General Permit granted to the Tollway requires certain items be prepared and kept current by the CM. See Special Provisions 111.1 and 111.2 and Part IV of the NPDES General Permit for more details regarding the requirements for developing the NPDES SWPPP. Appendix 1 provides a summary of the various NPDES forms that may be applicable to a project.

2.4.2 Documentation

The Tollway's *Environmental Studies Manual* provides guidance on the necessary coordination and documentation for different types of projects. As mentioned in Section lV of that manual, there are three main action-levels regarding the potential adverse environmental impact of projects. The following is a brief description of each.

A. Level 1 may include any or all of the following:

- minor projects, limited to none or small alignment variations,
- no significant ROW acquisition,
- limited potential for involvement with resource or regulatory issues, and
- no major impact on adjacent areas.

B. Level 2 may include any or all of the following:

- major projects that increase the Tollway system capacity,
- potential for significant ROW acquisition,
- potential involvement with complex or multiple resource and regulatory issues, or
- potential impact to adjacent areas.

C. Level 3 may include any or all of the following:

- major projects that increase system capacity,
- significant ROW acquisition,
- known significant involvement with complex or multiple resource and regulatory issues, or
- identified adverse impact to adjacent areas.

As the levels increase, the amount of documentation and coordination required increases. Specifics for the types of documentation required for each level are detailed in the Tollway's *Environmental Studies Manual*.

Preparation of the documentation for ESCPs and/or PLPs involves the following steps.

A. Collection of data, including:

- topography,
- rainfall frequency and intensities,
- drainage pattern (overland watersheds and existing drainage systems),
- soil data and ground cover,
- adjacent area's conditions and land use,
- U.S. Geologic Survey Hydrologic Maps/hydraulic characteristics,
- wetlands and environmentally sensitive areas,
- flood elevations,
- vegetation surveys and requirements, and
- preparation of the Erosion and Sedimentation Control Analysis Form included in the Environmental Studies Manual.

B. Analyzation of the data, including:

- drainage areas, including areas where sheet or concentrated flows enter or leave Tollway property,
- vegetation,
- runoff calculations and detention requirements, and
- evaluation of the soil erosion potential and topography.

C. Development of project site plan, including the proposed drainage facilities.

D. Development of erosion and sediment control and landscape plans, including:

- applicable Section 4.0 requirements for PLP;
- narrative for ESCP, if required by the CSWCD;
- overview drawings, detailed plans, and staging sequence narrative;
- construction details; and
- supporting calculations.

2.4.3 Request for Design Deviation

If the landscape or erosion control designs submitted by the Designer are different than procedures used by the Tollway PM, the Designer shall prepare and submit the Tollway – Request for Design Deviation to Criteria Form. This form shall be submitted to the Tollway PM and deviations must be accepted prior to the Designer including the designs in the plans.

The Designer shall prepare documentation to be used to obtain local permits/approval if local agency requirements for landscaping or erosion and sediment control are more stringent than the Tollway's requirements; these requirements shall be considered in the development of the ESCP and the PLP. If the proposed ESCP or the PLP does not meet or exceed the local ordinances, the Designer shall summarize for the Tollway information and consideration for the differences and explain why the more stringent requirements cannot be met.

The Tollway will review the information submitted and direct the Designer on a course of action to continue development of contract documents and permit applications.

SECTION 3.0 EROSION AND SEDIMENT CONTROL

3.1 Planning, Design Guidelines, and Submittal Requirements

3.1.1 Planning

An effective ESCP must minimize the amount of sediment displacement and erosion due to construction activities. The success of the ESCP depends mainly on site planning, coordination, maintenance, and operation. The following outlines the main principles of planning a successful ECSP.

A. The Designer shall work with drainage engineers to understand overall drainage patterns tributary to and within the project limits. The Designer shall obtain previous delineations of drainage divides, tributary areas, and drainage flow routes from drainage reports (if available).

B. The Designer shall understand the erosion potential of existing soils, including classifications, slopes, stream corridors, and special management areas.

C. The Designer shall identify potential problem areas which will likely require the implementation of erosion and sediment control measures and identify potential solutions.

D. The Designer shall identify affected agencies that will require coordination meetings. The Designer shall prepare a listing of issues that will need to be discussed at the meeting and be prepared to present solutions to identified issues.

E. The Designer shall plan the use of appropriate erosion and sediment control measures. The CM will see that the erosion and sediment control is properly applied and easily maintained throughout all phases of construction, including shutdown periods.

F. Throughout all phases of design, the Designer shall implement a thorough review process involving both design and construction personnel. The Designer shall include a review program of the plans and specifications to assure that local concerns are addressed and regulatory requirements are met.

G. The Designer shall prepare the Environmental Studies Inventory Sheet and the Erosion and Sediment Control Analysis Form located in the Tollway *Environmental Studies Manual*.

Tollway Supplemental Specifications Section 280, Special Provision 111-Erosion and Sediment Control, Standard K1 Drawings and Section M Base sheets are available to the Designer. The most current versions shall be obtained from the Tollway's website. The information is to be used to identify the erosion and sediment control items and quantities to be included in the contract documents.

For further guidance see Appendix 2 for the EPA's *Stormwater Phase II Final Rule, Small Construction Program Overview*.

3.1.2 Design Guidelines

The Designer shall use the design guidelines provided to develop erosion and sediment control solutions to individual site conditions. Consideration must be given to erosion and sediment control early on in the design process to properly account for it in the design process. These guidelines are included to provide the Designer with a general sense of important factors that need to be accounted for throughout the design. The design guidelines are listed below by category:

A. General Design

1. Plan the construction to take advantage of existing topography, soils, drainage patterns, and natural vegetation.

2. Apply erosion control practices prior to construction to reduce on-site erosion and prevent off-site sediment damage.

3. Complete coordination meetings with affected agencies early on in the design process to solicit input and comments to be incorporated in the ESCP.

4. If the Designer determines that there is a need for additional measures not covered under Tollway guidelines, the Designer can use one of the drawings included in the *Illinois Urban Manual* or design details from *IDOT's Bureau of Design and Environmental Manual*, Chapter 41. The Designer may also provide a custom design based upon site specific requirements. The Designer shall submit the drawings to Tollway for review and acceptance.

5. Design erosion control features to facilitate timely maintenance, repair, and replacement of impaired measures.

6. The erosion of new embankment slopes is to be reduced by construction of temporary berms with temporary pipe slope drains at the end of each construction day. The size and distance between pipes are to be designed by the Designer in accordance with the *Illinois Urban Manual*. Calculations supporting non-standard spacing shall be submitted for review.

7. The Tollway has initiated a program that utilizes recycled concrete for roadway rehabilitation projects. Excavated concrete is broken up and crushed into smaller pieces, often in situ, to create an aggregate base for new pavement. The use of recycled or rubblized concrete creates unique challenges for erosion and sediment control design. The Designer must be mindful of the fine material that is washed away during storm events, often continuing beyond the completion of construction. In addition, the presence of limestone in the rubblized concrete can significantly alter the pH of the stormwater runoff. Where rubblization is to be utilized, the Designer shall investigate the current technology and identify locations and design devices that will allow for the remediation of rubblized concrete fines prior to discharging stormwater to outside of the ROW. In many instances the material can be removed via vegetated ditches as long as there is sufficient time and space for removal prior to the discharge of the stormwater to outside the ROW or to receiving waters. If stormwater will discharge to sensitive ecological systems, such as creeks or wetlands, or interfere with the growth of

adjacent plants and grasses, methods for neutralizing the pH shall also be assessed. The Designer shall identify methods for preventing impacts to stormwater discharging to outside the Tollway ROW from rubblized concrete, and provide plans to the Tollway for review and acceptance. Contract documents must incorporate appropriate BMPs into project plans to prevent these types of sediments from leaving Tollway ROW.

The Tollway Drainage Design Manual (Tollway DDM) has additional requirements for subsurface drainage design in areas constructed with rubblized concrete See Article 10.7.2 of the Tollway DDM for additional information.

B. Basic Principles

Overview

Construction activities involving earthwork (e.g., clearing and grubbing, grading, importing fill material, utility installation) disturb the soil such that when the vegetation is removed, the soil becomes exposed and vulnerable to excessive erosion. This results in sediment being the most common pollutant associated with construction activities. Sediment can be detrimental to aquatic life by interfering with photosynthesis, respiration, growth, reproduction, and oxygen exchange in waterways. In addition, sediment particles can transport other pollutants that are attached to them, including nutrients, trace metals, and hydrocarbons. Sediment particles (e.g, silts and clays) are the primary components of total suspended solids, a common water quality parameter.

Construction activities involving building materials, vehicular use, and landscaping have the potential to contribute pollutants to stormwater. Common pollutants related to these construction activities include vehicle fluids, curing compounds, solvents, paints, emulsions, oil and grease, metals, organics, pesticides, nutrients, trash, debris, and floatables, as well as other miscellaneous waste.

Erosion and Sedimentation

Erosion is the process of soil particle detachment from the land surface by the forces of wind, water, or gravity. After the soil particles have been detached (eroded), the suspended soil particles in transport are referred to as sediment. Sedimentation occurs where suspended sediment settles out and is deposited. Note that gravels and sands tend to drop out of suspension more rapidly than finer particles (e.g., silts and clays) due to differences in size, density, and shape.

Where soil is cleared or disturbed, erosion occurs at a much higher rate due to direct exposure to erosive forces (e.g., raindrop impacts, sheet erosion, rill erosion). Land clearing disturbances can also alter the natural structure of soil and weaken the reinforcing matrix of plant roots and organic compounds. The EPA estimates that unprotected construction sites can experience erosion at over 100 times the natural rate. As result, primary emphasis should be placed on erosion control practices as they are preventative source controls, while sediment control practices are secondary measures designed to contain sediment after it is in transport, preventing it from leaving the site.

Types of Erosion

1. Erosion from Raindrop Impact. The dislodgement of soil particles by falling raindrops is a primary agent of erosion, particularly on soils with sparse vegetative cover. Individual soil particles can be splashed over 1.5 feet in height and 5 feet to the side.

2. Sheet Erosion. Splashed soil particles are moved in a semi-suspended layer uniformly over the land surface. The distance of sheet flow depends on slope, soil roughness, type of vegetative cover, and rainfall intensity.

3. Rill and Gully Erosion. As runoff concentrates, tiny channels form called rills. Rill erosion is the form that produces the greatest amount of soil loss worldwide. Rills are channels small enough to be smoothed by normal tillage. As the runoff accumulates in the rills, they erode further, causing gullies to form. Gullies are so large that they cannot be smoothed by normal tillage. The rate of rill erosion can easily be 100 times greater than that of sheet flow, and the rate of gully erosion can easily be 100 times greater than rill erosion. Due to the significant amount of sediment generated by rill and gully erosion, these types of erosion must be given top priority for elimination, reduction, and control.

4. Ditch and channel erosion is produced by concentrated flow moving within a ditch or channel. This type of erosion can undermine channel banks and erode ditch/channel bottoms. Depending on the channel capacity, this form of erosion can do severe damage to a drainage system.

The following basic variables are to be considered during the preparation of the ESCP.

1. The soil erosion hazard varies with soil type, soil surface conditions, the slope of the lands (S), and the length of the slope exposed to the stormwater runoff (L). General guidelines are as follows:

   Low Erosion Hazard: for S = < 4% and L < 300 feet

   Moderate Erosion Hazard: for S = 4 to 7% and L < 150 feet

   High Erosions Hazard: for S = > 7%

   The higher the erosion hazard, the more critical the design, practice, installation, and maintenance of the erosion and sediment control measures. Table 1 below demonstrates this principle.

Table 1:
Influence of Environmental Conditions on Erosion*

Soil Conditions vs. Erosion

Soil Conditions vs. Erosion	
If soil is:	***Erosion will be:***
Compacted and smooth	30 percent more
Tracks across slopes	20 percent more
Tracks up & down slopes	10 percent less
Rough and irregular	10 percent less
Rough & loose to 12" deep	20 percent less

Slope Angle and Soil Type vs. Erodibility

Slope angle	Erodibility	Soil type
50%	Very high	Silt
40%		Silty sand
30%		Clayey sand
20%		Organic soil
15%		Clays
10%		Silty gravel
5%		Sand
< 5%		Gravel
	Very Low	

*Table above used with permission, courtesy of the Kentucky Division of Water's *Kentucky Best Management Practices (BMPs) for Controlling Erosion, Sediment, and Pollutant Runoff from Construction Sites Planning and Technical Specifications Manual*, (undated), Tetra Tech, Inc.

2. Locate and identify any wetlands or special management areas for protection.

3. Determine if rubblized or recycled concrete will be used. If so, identify locations where Tollway stormwater leaves the ROW and affects stormwater quality and/or plantings.

4. Evaluation for control of erosion must include the changes in drainage patterns for various construction phases, time of year, and site conditions.

5. Divert off-site runoff flowing through the site away from disturbed areas.

6. Use construction phases and clearing limits to maintain the natural vegetation for as long as possible on the site.

7. Attempt to prevent erosion, and consider trapping sediments from unavoidable erosion.

8. Stabilize and protect disturbed areas as soon as possible. Retain any released sediment within the construction area and reduce tracking off-site.

9. Reflect in the construction plans and specifications that permanent erosion and sediment control measures will be implemented as quickly as practical.

10. Develop a thorough monitoring/inspection, maintenance, and follow-up program.

C. Drainage and Runoff Control

1. Understand existing drainage patterns within the project limits and offsite flows tributary to the project area.

2. When possible, keep off-site runoff from entering the construction site through the use of diversion ditches and channels.

3. Keep runoff velocities low and retain sediment loaded runoff on the construction site.

4. Temporary ditch checks or rock check dams shall be used in all proposed or temporary ditches to reduce velocity and to prevent excessive erosion in a ditch or swale. These devices are not to be used as a substitute for sediment trapping devices, such as sediment traps or basins. Spacing between devices shall be determined from Figure 1, Ditch Check Spacing (next page).

5. Super silt fence should be considered when slope angle and/or the contributing slope results in concentrated flows, and/or the design life of the silt fence is greater than 6 months.

6. Neither silt fence nor super silt fence barriers are designed for drainage channels where concentrated flows will occur, such as ditches, channels, or streams. The fences may be undercut and damaged by the impact of concentrated channel flow.

FIGURE 1 – DITCH CHECK SPACING

% SLOPE	HT. AT CENTER/ OVERFLOW PT. OF DITCH CHECK	SPACING OF DITCH CHECK IN FT.
8%	1.0’	13’
	1.5’	20’
	2.0’	26’
7%	1.0’	14’
	1.5’	21’
	2.0’	28’
6%	1.0’	17’
	1.5’	26’
	2.0’	34’
5%	1.0’	20’
	1.5’	30’
	2.0’	40’
4%	1.0’	25’
	1.5’	38’
	2.0’	50’
3%	1.0’	33’
	1.5’	50’
	2.0’	66’
2%	1.0’	50’
	1.5’	75’
	2.0’	100’
1% & BELOW	1.0’	100’
	1.5’	150’
	2.0’	200’

1. Chart indicates recommended spacing of rock check dams and urethane triangular foam ditch checks; based upon the percent of slope.

2. Rolled excelsior log ditch checks and synthetic porous runoff control structures shall utilize spacing in accordance with manufacturer’s requirements.

3. For applications not addressed in this figure, spacing should be equal to the height of the ditch check divided by the slope. This ensures that the base of the upstream check is at the same elevation as the crest of the downstream check.

4. The spacing requirements indicated in this figure are for guidance only. The Designer shall take into consideration all variables in the design and selection of the type of ditch checks used, including but not limited to soil types, surface water flow, and other construction activities unique to the individual project with may impact erosion and sediment control structures.

5. Adapted from the *Illinois Urban Manual*.

D. Soils, Excavation, and Disturbed Areas

1. Understand soil conditions within the project limits.

2. Minimize the extent of area exposed at any one time, and the duration of the exposure.

3. Use perimeter control practices to protect disturbed areas from off-site runoff and prevent sedimentation damage to areas located downstream of the disturbed areas.

4. Disturbed areas are to be protected from erosion in a timely manner and erosion stabilization measures shall be initiated as soon as practicable in all portions of the site.

   For portions of the site where construction activities have temporarily ceased and will not resume within 14 days (e.g. the total time period that construction activity is temporarily ceased is less than 14 days), stabilization measures shall be initiated within 1 day from the time activities have ceased. In portions of the site where construction activities have permanently ended, erosion stabilization measures should immediately take place and final erosion measures used whenever possible.

   Any adjacent sediment control measures should continuously remain in place while construction has temporarily or permanently ended and until final erosion stabilization is complete.

Same day stabilization is to be implemented as outlined in the Tollway Supplemental Specification Article 280.15(c). Same day stabilization is typically used to minimize erosion and the movement of soils at those areas shown on the plans, as directed by the CM, or where construction activity will temporarily cease for 14 days.. The primary method to perform same day stabilization is through the use of Temporary Stabilization with Straw Mulch with permanent measures installed at the earliest opportunity. This item generally provides for the additional labor that may be required to perform the continuous soil stabilization work needed to reduce sediment loss where limited space is available for sediment control measures.

E. Construction Practices and Issues

1. All temporary diversions, swales, ditches, etc. shall be installed in a manner that protects these areas from erosion during construction.

2. Apply and maintain the appropriate erosion and sediment control measures on the project site during all phases of construction, including construction shut down periods.

3. Clearly define wherever dewatering is expected to be needed, pointing out the need to pass the sediment laden water through a sediment trapping device prior to leaving the construction site.

4. Any silt fence constructed in an area where ponding depth may exceed 18" shall be constructed as a super silt fence.

5. Super silt fence should be used when the contributing slope is longer than 100', the slope is greater than 3%, and/or the design life of the silt fence is greater than 6 months.

6. Neither silt fence nor super silt fence barriers are designed for drainage channels where concentrated flows will occur, such as ditches, channels, or streams. The fences may be undercut and damaged by the impact of concentrated channel flow.

7. Clearly define ways that the Contractor can ensure all sediment laden water originating on the site will flow through sediment control devices prior to leaving the site.

8. Upon completion of construction and/or permanent stabilization, temporary erosion and sediment control measures must be removed. Temporary erosion control measures may be left in place for a period of time following construction if construction included rubblized/recycled concrete. Under these circumstances, temporary erosion and sediment control measures shall be left in place until fines from the rubblized/recycled concrete are no longer being washed out from the underpavement. Temporary erosion and sediment control measures cannot be left in place on a permanent basis, however, unless consistent with standards from the Illinois Tollway Drainage Design Manual. In no instance may riprap or ditch checks be left in place unless the CM gets written acceptance from the Tollway Environmental Unit and it does not pose a hazard to the motorist.

Refer to the Tollway's Standard K1 and Section M Base sheet Drawings for information regarding various erosion and sediment control measures and the applications to which each of them is best suited for Tollway projects. For further guidance see the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Construction Sites*.

3.1.3 Design Concept Submittal

The design concept shall be developed in conjunction with the overall design team, following the guidelines provided. The primary focus of this submittal will be to understand the existing conditions, plan the overall erosion and sediment control concept, and define the permit requirements. Coordination with all project disciplines including, Landscape Architect, Drainage Engineer, Environmental Planner, and governmental and regulatory agencies will be critical during this phase of the project. The Designer shall be required to identify any special requirements that need to be met and any additional ROW needs. The following elements need to be addressed and included in the design concept narrative and plan.

A. Perform a Project Site Evaluation

1. Define project boundaries and identify adjacent land uses and soil types to gain a basic understanding of the site topographic features.

2. Define the existing drainage network, including storm sewers; culverts; ditches; swales; channels; streams; and rivers that enter, cross, or may be impacted by the construction of the project. Obtain previous delineations of drainage divides, tributary areas, and drainage flow routes from drainage reports (if available) so that the drainage plan and ESCP designs match.

3. Determine the amount of runoff from the project area and tributary watershed areas.

4. Identify all locations where existing ditches, swales, channels, streams, and rivers will need to be diverted to facilitate construction.

5. Define areas where protection of existing vegetation will be required.

6. Identify type and location of any special management areas.

7. Define additional ROW or construction easements necessary to accommodate the implementation of the erosion and sediment control measures.

B. Complete Governmental and Regulatory Agency Coordination.

1. Evaluate project requirements for USACE 404 Permit and review of the ESCP by the CSWCD.

2. Evaluate project site requirements for NPDES permit.

3. Evaluate project site requirements for County Stormwater Management Agency permit (CSMA).

C. Submittal Requirements

1. Provide a narrative summarizing the project site evaluation, governmental and regulatory agency coordination, and the overall erosion and sediment control concept. The narrative shall include a thorough explanation of the conclusions reached from the project site evaluation and governmental and regulatory agency coordination.

2. Provide overview drawings at a scale of 1 inch =100 feet with text and symbols at a size to be read clearly at 11 inches x 17 inches reduced plan size. See Appendix 3 for an example. These drawings shall:

   - show project centerline, stationing, and ramp baselines as applicable**;**
   - show existing and proposed roadway geometry;
   - show ROW limits;
   - show existing contours (half tone);
   - show all drainage areas tributary to the project and within the project limits;
   - show existing drainage network, including storm sewers, culverts, bridges, swales, ditches, channels, creeks, streams, rivers, and waterway names;
   - show flood plain and floodway limits, with elevations clearly noted;
   - label size of bridges, storm sewers, culverts, and existing outlets;
   - label type and location of any special management areas; and
   - show location, size, and I.D. number of existing wetland areas, other environmentally sensitive areas, and which portions of these areas will be impacted.
   - Provide work stage drawing(s) that define the suggested sequencing of construction to limit the size of the area disturbed at one time to 20 acres. Refer to Article 3.2 Design Criteria for detailed information.
   - Provide cost estimates, including costs associated with any additional ROW needed for erosion and sediment control, for implementing the ESCP. This will be used in updating the initial planning cost estimate.
   - Submit the Environmental Studies Inventory Sheet and the Erosion and Sediment Control Analysis Form contained in the Tollway *Environmental Studies Manual*.

- Prepare and submit the Erosion and Sediment Control Technical Review Checklist, Section A, Design Concept Submittal, located in Appendix 4.

- Provide any additional information required by the project.

3.1.4 Preliminary Design Submittal

A. The preliminary design of an ESCP begins with a project site analysis. The purpose of this analysis is to take information obtained in the project site evaluation and define efficient and practical erosion and sediment control measures for the project site. At this phase in the design, sufficient information should be available to begin detailing the ESCP. The Designer shall work with all disciplines including the Landscape Architect, the Drainage Engineer, and the Environmental Planner to resolve all issues identified in the Design Concept Phase and layout the overall design concept. Plans shall be prepared showing a basic layout of all erosion and sediment control measures. The Designer shall not be required to fully detail the plans for this submittal, however, it shall be the Designer's responsibility to insure that the measures proposed will work within the ROW and construction sequencing will work as proposed. In preparing the ESCP, erosion control shall be considered initially with sediment control designed as secondary control measures. At a minimum, this submittal shall contain the following.

1. Based on soils report information, refine soil classifications and adjust ESCP concept as necessary. Any new information revealed in the soils report that would require significant changes to the ESCP shall be discussed with the Tollway PM prior to initiating changes.

2. Address, in writing, all Tollway comments from previous submittal.

3. Provide overview drawings reflecting any revisions called for in the previous review.

B. Provide erosion and sediment control drawings at a scale of 1 inch -"= 50 feet showing a basic layout of all measures to be installed, before and during construction, with text and symbols at a size to be read clearly at 11 inches x 17 inches reduced plan size. See Appendix 3 for an example. These drawings shall:

1. Show all information provided on overview drawings, including existing contours at half tone.

2. Provide plan sheet EC-1, Erosion and Sediment Control Plan's and Standard Symbols and Details, as shown on the Standard K1 Drawings and Section M Base sheets. Show standard symbols, nonstandard symbols, abbreviations and special construction details if necessary.

3. Provide plan sheet EC-2, the Erosion and Sediment Control Schedule. Summarize, by drawing number, the measures to be installed, pay items, pay item numbers, and quantities. Include a column for Record Quantities for use by the CM. See Appendix 3 for an example.

4. Provide additional quantities over and above the plan quantities for use “At Engineers Discretion”. Coordinate these additional quantities with Tollway PM prior to submitting plans. See Appendix 3 for an example.

5. Provide plan sheet with the Erosion and Sediment Control Sequences and General Notes. Show the maintenance schedule for each erosion and sediment control practice with parties responsible for maintenance, i.e. Landscape Contractor and/or General Contractor. Show construction sequences for installing control measures in relation to specific stages of construction and earth disturbance activities. Include the following general notes and details applicable to the project:

    a. For erosion and sediment control general notes see Standard K1 and Section M Base sheet Drawings.

    b. The permanent vegetative plan shall be used on all disturbed areas whenever possible. A quantity for temporary stabilization with straw mulch should also be provided for all anticipated disturbed areas.

    c. Same day stabilization is to be implemented as outlined in the Tollway Supplemental Specification Articles 280.15(c). Same day stabilization is typically used to minimize erosion and the movement of soils at those areas shown on the plans or directed by the CM. Same day stabilization is typically performed each day any soil disturbance occurs as a result of Contractor’s operations. The primary method to perform same day stabilization is through the use of Temporary Stabilization with Straw Mulch with permanent measures installed at the earliest opportunity. This item generally provides for the additional labor that may be required to perform the continuous soil stabilization work needed to reduce sediment loss where limited space is available for sediment control measures.

    d. Temporary sediment basin #____ and temporary sediment traps #____ and #____ have been sized using 1800 cubic feet/acre storage and may need more frequent cleaning than traps sized to the standard 3600 cubic feet/acre criteria.

    e. Stabilized construction entrances at Contractor’s access to work areas. See Appendix 5 and Tollway – Supplemental Specification Article 280.07 for additional direction.

    f. Identify the vehicle washout areas.

6. Delineate disturbed area and provide drainage patterns for proposed conditions. Make special note of drainage areas used to size the perimeter controls, sediment traps, or retention basins.

7. Show the direction runoff flows prior to construction, during construction, and after construction is completed. This may require duplicate drawings in some situations.

8. Identify reaches that will require the use of staged construction, with temporary or permanent stabilization of slopes, before additional excavation or placement of fill. Label how many stages/phases of construction will be needed, with the slope length (50 feet) and/or 15 feet fill or cut limitations shown on the Tollway Standard Drawing Section K1, at representative (20 acre) locations along the route.

9. Show borrow sites and topsoil stockpile locations with erosion and sediment control measures around the perimeter of the stockpiles.

10. Identify and quantify all tree protection and sediment control measures that must be in place prior to initial grading. These include sediment basins, sediment traps, and silt fences. These practices shall be identified on the plan as Initial Construction.

11. Show all locations where temporary stream diversions will be needed for installation of culverts or bridges. These measures shall be identified on the plan as Initial Construction.

12. Identify and quantify the permanent and temporary stormwater management measures that must be in place before grading occurs in each specific area along the route. These include stormwater detention sites, stabilized channel outlets, stabilized temporary swales or diversion dikes, and any needed stream diversions. Notes shall be placed on the drawings identifying which of the runoff control practices and sediment control measures are to be installed prior to the start of grading. Most of these will fall in the category of perimeter controls. These measures shall be identified on the Plans as Initial Construction.

13. Identify reaches that will have temporary pipe slope drains and temporary berms (fill areas/embankments).

14. Show the area, in acres, controlled by each temporary sediment basin, sediment trap, temporary diversion, temporary swale, or other temporary measure.

15. Show location, size, and storage capacity of all detention basins to be constructed for stormwater management. Note and identify any portion of the basin which is designed to serve as a sediment trap/basin.

16. Layout the ESCP showing the type and location of erosion and sediment control practices to be used. Annotate as needed to clearly define design intent. Complete detailing is not required at this phase.

17. Provide provisions for dust control watering and maintaining clean roadways inside and outside the project limits. The following table may be referenced for dust control measures.

Table 2:
Applicability of Dust Control Measures for Various Site Conditions

Disturbed Area No Traffic	Disturbed Area With Traffic	Soil Stockpiles	Clearing/ Excavating	Site Exit to Road
• Seeding • Mulching • Watering •Chemical Application	• Watering •Chemical Application •Temporary Gravel or Paved Road	• Seeding • Mulching •Watering •Chemical Application	•Seeding •Mulching •Watering •Chemical Application	•Temporary Gravel or Paved Entrance •Truck Washdown Area •Daily Roadway Sweeping/ Cleaning

18. Provide preliminary cost estimate.

19. Provide preliminary Special Provisions.

20. Provide any additional information required by the project.

21. Prepare and submit the Erosion and Sediment Control Technical Review Checklist, Section B, Preliminary Design Submittal, located in Appendix 4.

22. Provide Permanent Landscape Plans at 1 inch =50 feet showing all landscape, post construction features, and permanent seeding. Refer to Section 4.0 of this Manual, for requirements.

For general design information, responsibilities, and permits refer to Articles 2.2, 2.3 and 2.4.

3.1.5 Pre-Final Design Submittal

The erosion and sediment control submittal for this phase shall include the plans, specifications, and cost estimate submitted at the Preliminary Design Phase developed to a 99% level of completeness. Submit permit applications and backup data, including NPDES Notice of Intent (NOI), CSWCD permit, and CSMA (if required) submittal at 100% level for use by Tollway in permit submittals. Items to be addressed or included in this submittal are:

A. Address, in writing, all Tollway comments from previous submittal.

B. Identify any erosion or sediment control measure that will serve as a permanent erosion or sediment control measure after construction is complete.

C. Identify number, volume, length, width, bottom elevation, and cleanout elevation of sediment traps and sediment basins. These shall be shown on the drawings.

D. Include sediment traps, sediment basins, dewatering basins, temporary swales, and temporary channel diversions drawings on the cross sections. Submit these for review to verify that the devices will fit in the intended area.

E. Label the specific location(s), size, and length of all erosion and sediment control measures shown of the drawings.

F. Provide the dimension, material, and installation details for all erosion and sediment control measures and facilities not covered by the Standard Drawings.

G. Provide a maintenance schedule on sheet EC-3 for any special measures not covered in the standard drawings and specifications.

H. Provide Pre-Final cost estimate.

I. Provide Pre-Final Special Provisions.

J. Prepare SWPPP. The SWPPP shall not be considered complete until the Designer has prepared the site description, along with identification, implementation, and maintenance of BMPs to reduce pollutants in stormwater discharges. This is required to comply with the provisions of the NPDES Permit Number ILR 10 issued by the IEPA for stormwater discharges from construction site activities. The Designer shall modify Special Provision 111.2 to satisfy this requirement.

K. Provide any additional information required by the project.

L. Provide the NPDES NOI form.

M. Provide the CSWCD form, checklists, and narrative (if required because of 404 permit). Include two full size sets of Erosion and Sediment Control Plans, one reduced size set, and three sets of submittal documents.

N. Provide CSMA submittal (if required). Include two full size sets of Erosion and Sediment Control Plans, one reduced size set, and three sets of submittal documents.

O. Prepare and submit the Erosion and Sediment Control Technical Review Checklist, Section C, Pre-Final Design Submittal, located in Appendix 4.

For detailed design information, responsibilities and permits refer to Article 2.2, 2.3 and 2.4 of this Manual.

3.1.6 Final Design Submittal

The erosion and sediment control submittal for this phase shall include the plans, specifications, and cost estimate developed to a 100% level of completeness. Items to be addressed or included in this submittal are:

A. Address, in writing, all Tollway comments from previous submittal.

B. Provide final Overview and ESCP Drawings.

C. Provide final Special Provisions and SWPPP in Special Provision 111.2.

D. Provide final cost estimate.

E. Provide Professional Engineer's seal and signature on the plans.

F. Provide any additional information required by the project.

G. Prepare and submit the Erosion and Sediment Control Technical Review Checklist, Section D, Final Design Submittal, located in Appendix 4.

3.1.7 References

Please refer to the Tollway's website for the most recent guidance documents, including Tollway Standard K1 and applicable Section M Base sheet Drawings and Specifications.

IEPA's National Pollutant Discharge Elimination System (NPDES) Stormwater Permit No. ILR10, - General Permit for Stormwater Discharges Associated with Construction Sites.

Illinois Urban Manual, IEPA and NRCS

Illinois Department of Transportation (IDOT) – *Bureau of Design and Environmental Manual*, Chapter 41 – Construction Site Storm Water Pollution Control

Appendix 4, Tollway Erosion and Sediment Control Plan Technical Review Checklist.

3.2 Design Criteria

All runoff, erosion, and sediment control measures must be reviewed to ensure that roadside hazards are not created. In no instance shall control measures be located in or near the clear zone.

3.2.1 Runoff Control

Runoff plays an important role in soil and sediment erosion, as well as collecting and moving the chemicals (i.e. nutrients and pesticides) from soil and vegetative cover. Runoff control applies both to the on-site and off-site runoff.

A. On-site runoff is generally either conveyed through the site or stored on-site.

- Runoff conveyance is generally done through temporary or permanent ditches, swales, or channels, and is intended to convey the runoff generated within the project area through the site. The conveyance facilities shall be designed according to the Tollway DDM and protected against erosion, using temporary and/or permanent erosion control measures.

- Storage of on-site runoff can be done using temporary or permanent detention basins.

B. Off-site runoff shall be generally diverted from the construction site using diversion dikes and diversion channels. The diversion shall not cross the watershed drainage boundaries for the site. If diversion is not possible, the off-site runoff is to be conveyed through the site in such manner that untreated on-site runoff does not mix with the off-site runoff. Generally, the off-site runoff shall outlet into an undisturbed or a stabilized area, at a non-erosive velocity. The diversion channels shall be designed and constructed to withstand the expected velocity for the 25 year, 24 hour frequency storm without erosion. All constructed or modified channels shall be stabilized within 48 hours. If separation of on-site and off-site runoff is not possible, size sediment traps, basins, and other measures for both on-site and off-site runoff.

C. The following is a brief description of possible erosion control measures that will achieve runoff control.

- Temporary ditch checks or rock check dams shall be used in the existing, proposed, and temporary ditches to control velocity. These types of erosion control practices are not intended to trap sediment, but are used as a temporary measure to control velocity. The spacing between ditch checks and rock check dams shall be determined as shown in Figure 1-Article 3.1.2C or according to manufacturer's requirements.

- Diversion dikes shall be used to route off-site flows away from disturbed areas. The diverted runoff from an undisturbed area shall outlet into an undisturbed or a stabilized area at non-erosive velocities.

- Temporary channel diversion shall be used to carry existing stream flow through or around the construction site. A dewatering discharge basin shall be provided with either a minimum storage capacity (in cubic feet) equal to the dewatering pump capacity (in gallons per minute) times 32, or a minimum size of 0 feet' x 10 feet x 3 feet in depth, whichever is more stringent.

3.2.2 Erosion Control

A. Erosion control can be done through several measures that:

- limit the exposure duration of the unprotected soil to the erosion factors, and/or

- ensure the proper temporary and permanent soil protection; i.e., through vegetative measures or structural measures.

B. The following general criteria shall be used for the design of vegetative and structural erosion control measures as part of Tollway projects.

1. All necessary erosion and sediment control measures shall be constructed and functional prior to initiating clearing, grading, stripping, excavating, or fill activities. Tollway Standard K1 and Section M Base sheet Drawings contain the general rules that shall be followed and the standard symbols that shall be used for the erosion and sediment control measures.

2. Disturbed areas are to be protected from erosion in a timely manner. Erosion stabilization measures shall be initiated within 1 day, in portions of the site where construction activities have temporarily or permanently ceased, except portions of the construction site where activities will resume within 14 days (e.g. the total time period that construction activity is temporarily ceased is less than 14 days). Adjacent sediment control measures should continuously remain in place during construction.

   Same day stabilization is to be implemented as outlined in the Tollway Supplemental Specification Article 280.15(c). Same day stabilization is typically used to minimize erosion and the movement of soils at those areas shown on the plans or directed by the CM. Same day stabilization is typically performed each day any soil disturbance occurs as a result of Contractor's operations. The primary method to perform same day stabilization is through the use of Temporary Stabilization with Straw Mulch with permanent measures installed at the earliest opportunity. This item generally provides for the additional labor that may be required to perform the continuous soil stabilization work needed to reduce sediment loss where limited space is available for sediment control measures.

3. Site plans shall show the existing vegetation that is to be preserved where possible, and disturbed portions of the site that shall be stabilized. Stabilization practices may include temporary seeding, permanent seeding, mulching, geo-textiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate non-vegetative measures.

4. Areas having slopes greater than 1:10 (V:H) shall be stabilized with erosion blankets in combination with permanent seeding as soon as possible. Provide temporary seeding and appropriate mulch or erosion control blanket control measures on all slopes if permanent seeding is not immediately installed.

5. Channel lining shall be provided where the design discharge velocity exceeds the scour velocity of the soil. Ditch slope shall not be less than 0.3% without review and acceptance from Tollway PM. See Article 4.2.10 B. Treatment of Drainage Channels and Ditches for guidance.

6. Permanent riprap protection and fabric formed concrete mats shall be avoided on Tollway drainage facilities due to maintenance difficulties. Open cell, articulated concrete block mats or other environmentally friendly and cost effective products shall be considered. Refer to Tollway DDM, *Ditch and Channel Design* for permanent erosion control measures.

7. Each site shall have stabilized construction entrance(s).

8. In some cases, when there is limited space available for sediment traps or other control measures, "same day stabilization" shall apply.

3.2.3 Sediment Control

Sediment is the most common non-point source of pollutants. The design of Tollway sediment control measures shall consider the following general principles.

A. For disturbed areas draining less than 1 acre, filter barriers (including silt fences, or equivalent control measures) shall be constructed to control all runoff leaving the site. Generally, these are appropriate sediment control measures for small drainage areas where concentrated flow is not present. Vegetative filter strips, with a minimum width of 25 feet, may be used as an alternative in areas where only sheet flow runoff is expected. In areas of high environmental significance, concentrated flow, or where the ponded water depth may exceed 18 inches, a super silt fence shall be provided.

B. For disturbed areas draining more than 1 acre but less than 5 acres, a sediment trap or sediment basin shall be constructed at the down-slope point of the disturbed area. Sediment traps will normally adequately control the sediment in areas where concentrated flow is likely to be present. See paragraph C below for sizing guidance.

C. For disturbed areas draining more than five (5) acres, a sediment basin shall be provided at the down-slope point of the disturbed area. A maximum of 20 acres may be disturbed at a single time. The sediment traps or basins shall be designed to store 3600 cubic feet per acre for the entire on-site and off-site drainage area tributary to the basin. In restrictive ROW areas, the traps and basins can be designed to store 1800 cubic feet per acre of contributing area. Where reduced sized basins will be used, a general note needs to be added on the erosion control plans indicating that these traps/basins shall need to be cleaned out more frequently. This shall be properly reflected in the quantity estimate for “Erosion and Sediment Control – Clean-out”.

D. Design of any stormwater detention basin shall be coordinated with the need for sediment traps or basins. If properly designed, located, and maintained, the permanent detention basins can be easily modified to serve as temporary sediment basins until the project area is stabilized.

E. Temporary pipe slope drains shall be used to convey runoff from the top of fill slopes to conveyance systems at the base of slopes as the embankments are constructed. Pipe slope drains are to remain in place until gutters or shoulders are constructed and the slopes are seeded and mulched, or otherwise stabilized.

F. Flocculent polymers may also be applied where extreme turbidity exists and/or as a pre-treatment for sediment laden water, before draining into sediment traps or basins.

All temporary and permanent erosion and sediment control measures must be inspected, maintained, and repaired as needed to assure effective performance of their intended function. At a minimum, contractor must inspect measures weekly and within 24 hours of a rainfall event with 0.5 inch or greater of precipitation (5 inches of snow).

Upon completion of construction and/or permanent stabilization, temporary erosion and sediment control measures must be removed. (Temporary erosion control measures may be left in place for a period of time following construction if construction included rubblized/recycled concrete.) Temporary erosion and sediment control measures cannot be left in place on a permanent basis unless consistent with standards from the Tollway DDM. In no instance may riprap or ditch checks be left in place unless the CM gets written acceptance from the Tollway Environmental Unit and it is not a hazard to the motorist.

3.2.4 Control Practices and Applications

For the ESCP to be implemented correctly, practices need to be applied within their intended use. The following is provided to help guide the Designer and CM.

Refer to the latest Tollway Supplemental Specifications Section 280 for detailed descriptions of control practices and pay items. Refer to Standard K1 and applicable Section M Base sheet Drawings for control device details and construction notes. The *Illinois Urban Manual* (IEPA/NRCS) and *Bureau of Design and Environmental Manual*, Chapter 41 (IDOT) may also be used for reference.

A. Dust Control

Pay items:

JS107361 - APPLY DUST SUPPRESSION AGENTS
JS107362 - SOIL STABILIZERS

Description and Purpose:

This item, discussed in Article 107.36 of the Tollway Supplemental Specifications, consists of applying water or chemical products to exposed soil surfaces to prevent the movement of dust that may be harmful to human health or the environment. Dust controls reduce the surface and air transport of dust, thereby preventing pollutants from infiltrating into stormwater.

Application:

- This item is to be used to control dust resulting from construction operations exclusively.
- The Designer shall prepare a Dust Control Plan in accordance with Article 107.36 of the Tollway Supplemental Specifications. The Plans and Special Provisions must be coordinated with this Dust Control plan.
- Dust Control Watering can provide onsite control of fugitive dust on haul roads and disturbed surfaces on an as-needed basis. The frequency of watering depends on several factors, including weather, soil type, and construction traffic. Water treatment is typically only effective for 0.5 hour to 12 hours. Water should be applied at a rate so that the soil surface is wet, but not saturated or muddy. If watering is to be employed, conditions should be monitored to prevent mud from being spread on local streets.

- Dust Control Watering shall consist of the uniform application of sprinkled water, and shall be applied only when directed and in a manner accepted by the CM.

- The Dust Control Watering pay item shall not be used in the compaction of earth embankments.

- Dust Suppression Agents are a mid to long term measure, often requiring only 1 to 2 applications per year. They should be applied according to manufacturers' recommendations, and according to the guidance in the IDOT *Bureau of Design and Environmental Manual*, Article 41-2.03.

- Gypsum or Plaster-type sprayable mulches cannot be used without prior acceptance from the Tollway Environmental Unit.

- Chloride type Stabilizers, such as calcium chloride, magnesium chloride, or sodium chloride, should be avoided in instances where runoff from the stabilized areas can discharge onto vegetated areas, or streams.

Also see Section 4 of this Manual – Landscape, for the following items:

- Standard and Tollway Supplemental Specifications Section 250 – Seeding

- Standard and Tollway Supplemental Specification Section 251 – Mulch

B. Management of Erosion and Sediment Control

Pay Item:

JS280020 - MANAGEMENT OF EROSION AND SEDIMENT CONTROL

Description and Purpose:

This item, described in Article 280.02 of the Tollway Supplemental Specifications, consists of the management and maintenance of erosion and sediment control aspects of the project. This item includes inspections, meetings, schedule adherence, maintenance, and repair of erosion and sediment control items. It generally requires no action by the Designer, unless there are unique project conditions requiring a Special Provision.

Application:

- This item is to be used for all projects requiring erosion and sediment control measures for the duration necessary to ensure compliance with NPDES permit, contract plans, and specifications.

C. Erosion and Sediment Control – Excavation

Pay Item:

JS280030 - EROSION AND SEDIMENT CONTROL-EXCAVATION

Description and Purpose:

This item, described in Article 280.03 of the Tollway Supplemental Specifications, is comprised of earth and rock excavation associated with erosion control construction.

Application:

- This item to be used for excavation of sediment basins, sediment traps, dewatering basins, temporary swales, and temporary channel diversions.
- This item does not include excavation of permanent ditches parallel to the roadway, at the toe of embankments, or at the top of cuts.

D. Erosion and Sediment Control – Cleanout

Pay Item:

JS280040 - EROSION AND SEDIMENT CONTROL-CLEANOUT

Description and Purpose:

This item, described in Article 280.04 of the Tollway Supplemental Specifications, consists of the excavation required for the removal of accumulated sediment. Sediment must be removed from devices when 50% full or when 50% of the device height is reached.

Application:

- Use this item whenever Erosion and Sediment Control – Excavation is used.

E. Silt Fence

Pay Item:

JS280050 - SILT FENCE

Description and Purpose:

A silt fence is a temporary, linear sediment barrier of permeable fabric designed to intercept and slow the flow of sediment-laden sheet flow runoff. Silt fences allow sediment to settle from runoff before water leaves the construction site. This item is described in Article 280.05 of the Tollway Supplemental Specifications.

Application:

- Silt fences should be employed:
- below the toe of exposed and erodible slopes,
- down-slope of exposed soil areas,
- around temporary stockpiles, and
- along streams and channels.
- Silt fences serve little purpose as perimeter fencing, unless they are emplaced to intercept off-site sediment from entering the project. In those cases, permanent sediment interception and control measures should be considered.
- Silt fences help contain water to allow sediment to deposit, they do not filter sediment from runoff water.
- This device is to be used to control sheet flow only, do not use for concentrated flows, drainage channels, or above or below drainage pipes.
- Maximum drainage area for sheet flow shall not exceed ½ acre per 100 feet of silt fence.
- To function properly, silt fences should be constructed along the contour lines to prevent concentration of flow, which increases the likelihood of silt fence failure.
- When silt fence is used to create a small containment system, the end posts must be turned uphill to prevent water from flowing around the ends.
- Silt fence barriers should not be used as mid-slope protection where slopes are steeper than 1:4 (V:H). Excelsior Rolls should be used under those conditions.
- Silt fence barriers should not be employed where water ponding behind the silt fence may cause flooding or fence failure, or where washout of the silt fence may cause damage.
- Silt build up against the fence is to be inspected within 24 hours of rainfall event with 0.5 inch or greater of precipitation (5 inches of snow) and removed when bulges develop in the fence, or when silt reaches 50% of fence height.
- Reference Standard Drawing K1 for additional information.
- Additional reference on silt fencing can be found in Section 41-3.01(b) of the IDOT *Bureau of Design and Environmental Manual*, Chapter 41.

F. Re-Erect Silt Fence

Pay Item:

JS280051 - RE-ERECT SILT FENCE

Description and Purpose:

This item, described in Article 280.05(b) of the Tollway Supplemental Specifications, consists of re-erecting silt fencing damaged by natural causes.

Application:

- This item to be used for replacement of the silt fence that has become damaged or ineffective as a result of natural forces.
- Silt fence damaged by the Contractor's operations or negligence shall not be re-erected under this item.
- If damage to silt fence has been caused by high flow volumes, or if damage is anticipated from heavy containment, replacement with super silt fence should be considered.

G. Temporary Swales

Pay Items:

JS280060 - TEMPORARY SWALE, TREATMENT TYPE I
JS280061 - TEMPORARY SWALE, TREATMENT TYPE II
JS280062 - TEMPORARY SWALE, TREATMENT TYPE III

Description and Purpose:

A temporary swale is an excavated drainage way designed to prevent runoff from entering disturbed areas by intercepting and diverting it to a stabilized outlet, or to intercept sediment laden water and divert it to a sediment-trapping device. This item is described in Article 280.06 of the Tollway Supplemental Specifications. This measure requires the Designer to prepare a design plan detail; reference Tollway applicable Base sheet in Section M.

Application:

- To intercept and divert runoff from one undisturbed area to another undisturbed stabilized area at non-erosive velocity.
- To transport off-site flows across disturbed areas such as rights-of-way.
- All temporary swales shall have uninterrupted positive grade to an outlet.

- To intercept sediment laden water from a disturbed area and divert it to a sediment trapping device.

- Diverted runoff from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.

- Hydraulic design of temporary swales should accommodate a 25-year, 24-hour storm frequency. In cases where temporary swale failure would endanger the roadway or other Tollway facilities, hydraulic design should accommodate the 50-year event. The lining design should accommodate a 10-year, 24-hour storm.

- For Temporary Swale, Treatment Type I, consisting of temporary ground cover and a heavy duty erosion control blanket, the maximum channel velocity should not exceed the manufacturer's recommended velocity for the erosion blanket. Generally, channel slope should not exceed 3%.

- For Temporary Swale, Treatment Type II, consisting of course aggregate CA3 for ditch lining, 3 inches in thickness over a geotextile filter fabric (for use with riprap), pressed into the soil with construction equipment, the maximum channel velocity should not exceed 3 feet per second. Generally, channel slope should not exceed 5%.

- For Temporary Swale, Treatment Type III, consisting of gradation RR3 riprap in a layer at least 8 inches thick over a geotextile filter fabric (for use with riprap), pressed into the soil, the maximum channel velocity should not exceed 4.5 feet per second. Temporary Swales may require the design of a velocity dissipation device at their outlet, to prevent localized erosion. Generally, channel slope should not exceed 8%.

- Temporary swales may require the design of a velocity dissipation device at their outlet, to prevent localized erosion.

- Swales collecting runoff from disturbed areas should be specified to remain in place until the disturbed areas are permanently stabilized.

- The use of Type II and Type III Treatments must be approved by the Tollway Environmental Unit.

- Additional reference on drainage swales can be found in Section 41-2.04(a) of the IDOT *Bureau of Design and Environmental Manual*, Chapter 41

H. Stabilized Construction Entrance

Pay Item:

JS280070 - STABILIZED CONSTRUCTION ENTRANCE

Description and Purpose:

A stabilized construction access, described in Article 280.07 of the Tollway Supplemental Specifications, is defined as a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles. Tire wash stations should be considered where stabilized exits may not sufficiently remove sediment. See Appendix 5 for additional details.

Application:

- Place stabilized entrance at all points of construction ingress and egress.
- Reference Standard Drawing K1 for additional information.
- Additional reference on stabilized construction entrances can be found in Section 41-3.06(a) of the IDOT *Bureau of Design and Environmental Manual*, Chapter 41

I. Flotation Boom

Pay Item:

JS280080 - FLOTATION BOOM

Description and Purpose:

A flotation boom, described in Article 280.08 of the Tollway Supplemental Specifications, is designed specifically to contain and control the dispersion of turbidity and silt in a water body caused by marine construction, pile driving, dredging activities, and other site work. Floating turbidity barriers consist of a top flotation boom, an impervious fabric curtain extending downward under water, and a heavy galvanized steel chain sealed into a hem along the bottom of the curtain to provide ballast.

Application:

- This item to be used to control turbidity and debris encountered during construction when working in a stream or waterway.
- Install and anchor floatation boom to one shoreline of stream or waterway in accordance with manufacturer's recommendations, to prevent drift shoreward or downstream. Booms shall not be perpendicular to the flow of a flowing body of water.

- Bottom of boom shall be weighted to reach the bottom of the waterway.
- Reference Standard Drawing K1 for additional information.

J. Super Silt Fence

Pay Item:

JS280100 - SUPER SILT FENCE

Description and Purpose:

A super silt fence, described in Article 280.10 of the Tollway Supplemental Specifications, is designed to handle a higher amount of water and silt runoff in sensitive areas. It features a permeable fabric and chain link fence. Super silt fence is capable of withstanding more severe erosion conditions while providing maximum protection in critical landscapes.

Application:

- This item to be used to protect wetlands and other environmentally sensitive areas.
- This item is to be used to control high sheet flow volumes. Maximum drainage area shall not exceed 1/2 acre per 100 feet of fence. Under sheet flow conditions, Super Silt Fence should be constructed along the contour lines (as with silt fence installation).
- This item should not be used in ditches.
- Reference Standard Drawing K1 for additional information.
- Silt build up against fence shall be inspected within 24 hours of rainfall event with 0.5 inch or greater of precipitation (or 5 inch of snow) and removed when bulges develop in the fence, or when silt reaches 50% of fence height.

K. Temporary Pipe Slope Drain

Pay Item:

JS280110 - TEMPORARY PIPE SLOPE DRAINS

Description and Purpose:

A slope drain, described in Article 280.11 of the Tollway Supplemental Specifications, is a pipe used to intercept and direct surface runoff or groundwater down the face of unstabilized slopes in order to minimize erosion on the slope face. Slope Drains discharge into a stabilized watercourse, trapping device, or stabilized area. Slope drains are used with lined ditches to intercept and direct surface flow away from slope areas to protect cut or fill slopes.

Slope Drains are generally used in conjunction with earth dikes (berms) that direct the runoff to the temporary pipe slope drain with flared end section. This measure requires the Designer to prepare a design plan detail, reference Tollway Base sheet in Section M.

Application:

- This item shall be used to control erosion on the embankment slope face during construction of the embankment.
- Maintain device in place until shoulders are constructed and embankment slopes are seeded and mulched.
- At the end of each day of embankment construction, temporary pipe slope drain shall be extended to the top of the embankment.
- Discharge from pipe slope drain shall release into sediment trap, into sediment basin, or to a stabilized ditch discharging to a trap or basin.
- Design criteria for capacity, dike, pipe size, spacing, inlet and outlet shall be in accordance with the *Illinois Urban Manual*.
- Additional reference on slope drains can be found in Section 41-2.04(b) of the IDOT *Bureau of Design and Environmental Manual*, Chapter 41.

L. Tree Protection

Pay Item:

JS280120 - TREE PROTECTION

Description and Purpose:

A tree protection zone, described in Article 280.12 of the Tollway Supplemental Specifications, is established using temporary fencing in order to protect the critical root area important to the trees' health.

Application:

- This item to be used to protect trees from disturbance and from equipment traveling over the root zone. It shall be used for trees identified to be protected in the Tree Preservation Plans.
- Tree protection may be erected for single trees, or around groups of trees, according to the judgment of the Designer.
- Fence may be silt fence, plastic fence, wood lath snow fence, or chain link fence.
- Construct as part of Initial Construction prior to starting grading.

- Locate fence outside the drip line of the tree or trees to be saved, and in no case closer than 5 feet to the trunk of any tree.

- Reference Standard Drawing K1 for additional information.

- See Standard Specifications Section 201 – Clearing, Tree Removal and Protection, Care and Repair of Existing Plant Material.

M. Temporary Riprap

Pay Items:

JS280140 - TEMPORARY RIPRAP
JS280190 - GEOTEXTILE FABRIC, CLASS C

Description and Purpose:

Riprap, described in Article 280.14 of the Tollway Supplemental Specifications, is a layer of large stones used to protect soil from erosion in areas of concentrated runoff. Riprap can also be used on slopes that are unstable because of seepage problems. This item consists of placing a geotextile fabric and a protective coating of dumped or hand-laid stone or broken concrete riprap for rock check dams, stone outlet structure sediment traps, dewatering basins, temporary swales, diversion dikes, aggregate berms as shown on the Plans, and the removal of the riprap and geotextile upon completion of the need for these temporary facilities. Temporary erosion control measures cannot be left in place on a permanent basis unless consistent with standards from the Drainage Design Manual and it is not a hazard to the motorist. In addition, the CM must obtain written acceptance from the Tollway's Environmental Unit.

Application:

- Use riprap to stabilize cut-and-fill slopes; channel side slopes and bottoms; inlets and outlets for culverts, bridges, slope drains, grade stabilization structures, storm drains; streambanks and grades; and as rock check dams.

- Temporary erosion control measures cannot be left in place on a permanent basis unless consistent with standards from the Drainage Design Manual.

- In no instance may riprap or ditch checks be left in place unless the CM gets written approval from the Tollway Environmental Unit. In no instance shall riprap be located in the clear zone.

- Riprap installations should be designed to accommodate the flow velocity, and should be designed in accordance with Article 41-2.05(a) of the IDOT *Bureau of Design and Environmental Manual*, Chapter 41, and the IDOT *Drainage Manual*.

- Geotextile Fabric Class C is to be installed under all riprap.

N. Temporary Stabilization with Straw Mulch

Pay Item:

JS280150 - TEMPORARY STABILIZATION WITH STRAW MULCH

Description and Purpose:

Seed stabilization with straw mulch and tackifier, described in Article 280.15 of the Tollway Supplemental Specifications, consists of placing temporary seed followed by a uniform layer of straw and anchoring it with a stabilizing emulsion. This method is used to stabilize the soil and reduce erosion caused by wind and water.

Application:

- This item is for the combination of both temporary seed and temporary mulching of areas that cannot at the time be stabilized with permanent vegetative measures.
- This item should be used where slopes are 1:3 (V:H), or flatter.
- Gypsum or Plaster-type sprayable tackifiers shall not be used without prior approval from the Tollway Environmental Unit.
- This item should not be used in areas where concentrated flows occur. In those cases, consider the use of Erosion Blanket, Turf Reinforcement Mat, Sodding, or sediment control devices.
- Provide if a portion of the work is to be exposed without activity for more than 7 days. (See Article 3.1.2 D. Soils, Excavation, and Disturbed Areas.)
- Additional reference on straw mulch can be found in Section 41-2.02(a) of the IDOT *Bureau of Design and Environmental Manual*, Chapter 41.

O. Same Day Stabilization

Pay Item:

JS280151 - SAME-DAY STABILIZATION

Description and Purpose:

Same day stabilization is to be implemented as outlined in the Tollway Supplemental Specification Article 280.15(c). Same day stabilization is typically used to minimize erosion and the movement of soils at those areas shown on the plans or directed by the CM. Same day stabilization is typically performed each day for any area of soil disturbed as a result of Contractor's operations. The primary method to perform same day stabilization is through the use of Temporary Stabilization with Straw Mulch with permanent measures installed at the earliest opportunity. This item generally provides for the additional labor that may be required to perform the continuous soil stabilization

work needed to reduce sediment loss where limited space is available for sediment control measures.

Application:

- Same day stabilization is to be implemented when perimeter and secondary controls are not in place due to limited available work space or in environmentally sensitive areas.

- Same day stabilization may consist of either temporary erosion control measures or the permanent landscaping indicated on the plan. The permanent landscaping shall be implemented as the same day stabilization whenever possible. This means that the Contractor must stage his work so that portions of the slopes and ditches can be brought to finished grade, topsoiled, and landscaped prior to the end of the workday.

- When permanent landscaping is not possible, due either to construction staging or specification constraints, same day stabilization shall consist of temporary erosion control measures. The primary erosion control method used along with same day stabilization during grading operations shall be Temporary Stabilization with Straw Mulch.

- The Designer should indicate on the plans which specific items or limits are subject to Same Day Stabilization.

P. Diversion Dike

Pay Items:

JS280160 - DIVERSION DIKE, TREATMENT TYPE I
JS280161 - DIVERSION DIKE, TREATMENT TYPE II
JS280162 - DIVERSION DIKE, TREATMENT TYPE III

Description and Purpose:

A diversion dike, described in Article 280.16 of the Tollway Supplemental Specifications, is an earthen perimeter control consisting of a ridge of compacted soil, often accompanied by a ditch or swale at the top or base of a sloping disturbed area, constructed to control the velocity or route sediment-laden stormwater runoff. This measure requires the Designer to prepare a design plan detail, reference Tollway Base sheet in Section M.

When on the upslope side of a site, earthen perimeter controls help to prevent surface runoff from entering a disturbed construction site. An earthen structure located upslope can improve working conditions on a construction site. It can prevent an increase in the total amount of sheet flow runoff traveling across the disturbed area and thereby lessen erosion on the site.

Earthen perimeter control structures also can be located on the downslope side of a site. They divert sediment-laden runoff created onsite to onsite sediment-trapping devices, preventing sediment from leaving the disturbed area.

Application:

- To intercept and divert runoff from an undisturbed area to an undisturbed stabilized area at non-erosive velocity.
- To intercept sediment laden water and divert it to a sediment trapping device.
- All dikes shall have positive drainage to an outlet.
- Design criteria shall be in accordance with the *Illinois Urban Manual*.
- Dike and embankment flow stabilization dimensioning to be sized for the drainage area.
- Design capacity to carry the peak runoff for a 100-year, 24-hour storm frequency.
- Earth dikes shall have an outlet that functions with a minimum of erosion. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike is adequately stabilized.
- Diverted runoff from an undisturbed area shall outlet to an undisturbed, stabilized area at a non-erosive velocity.
- For Diversion Dike, Treatment Type I, consisting of temporary ground cover and a heavy duty erosion control blanket, the maximum channel velocity should not exceed the manufacturer's recommended velocity for the erosion blanket.
- For Diversion Dike, Treatment Type II, consisting of course aggregate CA3 for ditch lining, 3 inches in thickness over a geotextile filter fabric (for use with riprap), pressed into the soil with construction equipment, the maximum channel velocity should not exceed 3 feet / second.
- For Diversion Dike, Treatment Type III, consisting of gradation RR3 riprap in a layer at least 8 inches thick over a geotextile filter fabric (for use with riprap), pressed into the soil, the maximum channel velocity should not exceed 4.5 feet / second.
- The use of Type II and Type III Treatments must be approved by the Tollway Environmental Unit.
- Diversion dikes may require the design of a velocity dissipation device at their outlet, to prevent localized erosion.
- Additional reference on diversion dikes can be found in Section 41-2.04(a) of the IDOT *Bureau of Design and Environmental Manual*, Chapter 41.

Q. Dewatering Basins

Pay Items:

JS280030 - EROSION AND SEDIMENT CONTROL-EXCAVATION
JS280040 - EROSION AND SEDIMENT CONTROL-CLEANOUT
JS280140 - TEMPORARY RIPRAP
JS280190 - GEOTEXTILE FABRIC, CLASS C

Description and Purpose:

Dewatering basins, described in Article 280.17 of the Tollway Supplemental Specifications, are structures designed to settle sediment from stormwater before it enters receiving waters. This measure requires the Designer to prepare a design plan detail, reference Tollway Base sheet in Section M.

Application:

- A dewatering basin shall be installed wherever the Contractor is removing and discharging water from excavated areas on the construction site and the water is not being routed through an adequately sized sediment trap or sediment basin. The purpose of the basin is to temporarily store the discharged water and to release it in a manner that causes the sediment laden water to be filtered prior to release into a natural drainage way or stabilized conveyance.

- The minimum storage capacity of the Dewatering Basin in cubic feet shall be the dewatering pump capacity in gallons per minute times 32 or the minimum size: 10 feet x 10 feet x 3 feet in depth, whichever is more stringent.

- Sediment to be removed when the basin is 50% full.

R. Rectangular Inlet Protection

Pay Item:

JS280180 - RECTANGULAR INLET PROTECTION

Description and Purpose:

Rectangular Inlet Protection, described in Article 280.18 of the Tollway Supplemental Specifications, is used at storm drain inlets, located in unpaved areas, that are subject to runoff from construction activities. They are used to detain and/or filter sediment-laden runoff to allow sediment to settle and/or to filter prior to discharge into storm drainage systems or watercourses.

Application:

- This device is to be used to protect existing and new inlets, catch basins, and manholes with open lids in non-paved areas.

- Maximum drainage area to each rectangular inlet protection device shall not exceed 1 acre.
- If Contractor prefers, super silt fence can be constructed around the inlet.
- Sediment shall be removed when silt reaches 50% of fence height.
- Reference Standard Drawing K1 for additional information.

S. Geotextile Fabric

Pay Item:

JS280190 - GEOTEXTILE FABRIC, CLASS C

Description and Purpose:

Geotextile fabric, described in Article 280.19 of the Tollway Supplemental Specifications, is an engineered textile designed to reinforce soil structures, to separate fine grained from coarse grained materials, and to act as a filter.

Application:

- This item is to be used as a filter beneath temporary riprap and to face temporary dams.
- Filter fabric placed atop the ground surface is used to increase soil stability and provide for slope and fill erosion control.
- Filter fabric placed beneath riprap is used for protecting the stone units from sinking into the often unstable subsoils. High puncture resistance, tensile strength, and filtering efficiency are of critical importance and shall be selected based upon riprap gradation, soil characteristics, and anticipated water flow.
- Geoweb is a cellular confinement structure used to stabilize infill and controls shearing, as well as lateral and vertical movement for a load support system. Acting like a semi-rigid slab, it provides a stable base for unpaved surfaces for construction equipment loading.
- Filter fabric wrapped around a standpipe can be used to filter particles from water to ensure clean water discharge.
- Additional reference on Filter Fabric can be found in Standard Specifications Article 1080.02 -1080.03.

T. Filter Fabric Inlet Protection

Pay Item:

JS280200 - FILTER FABRIC INLET PROTECTION

Description and Purpose:

Fabric Filter Protection devices, described in Article 280.20 of the Tollway Supplemental Specifications, are used at storm drain inlets in paved areas that are subject to runoff from construction activities to detain and/or to filter sediment-laden runoff and to allow sediment to settle and/or to filter sediment prior to discharge into storm drainage systems or watercourses. The device consists of inlet basket and fabric insert, or inlet dam placed in front of curb inlet.

Application:

- Inlet dam shall not be used at pavement sags.
- This device shall be used to protect existing and new inlets, catch basins, and manholes with open lids in paved areas only.
- Use only within paved areas if disturbed areas drain to paved areas. Use in conjunction with additional upstream protective measures, such as silt fence.
- Sediment shall be removed from fabric inlet basket and insert when 50% of capacity is reached.
- Sediment shall be removed from the perimeter of inlet dam when 50% of dam height is reached.
- Field expedient inlet filters comprising a layer of geofabric laid under the inlet cover shall be prohibited by Special Provision.
- Reference Standard Drawing K1 for additional information.
- Additional reference on inlet filter bags can be found in Section 41-3.02(a) and (b) of the IDOT *Bureau of Design and Environmental Manual*, Chapter 41.

U. Stone Outlet Structure Sediment Trap

Pay Items:

JS280030 - EROSION AND SEDIMENT CONTROL-EXCAVATION
JS280040 - EROSION AND SEDIMENT CONTROL-CLEANOUT
JS280140 - TEMPORARY RIPRAP
JS280190 - GEOTEXTILE FABRIC, CLASS C

Description and Purpose:

A sediment trap, described in Article 280.21 of the Tollway Supplemental Specifications, is a containment area where sediment laden runoff is temporarily detained under inactive conditions, allowing sediment to settle out before the runoff is discharged. Sediment traps are formed by excavating or constructing an earthen embankment across a low drainage area. This measure requires the Designer to prepare a design plan detail, reference Tollway Base sheet in Section M.

Application:

- This practice is to be used to collect sediment laden water in existing, proposed, and temporary ditches/swales of all types.
- Design criteria shall be in accordance with the *Illinois Urban Manual*.
- The detention storage shall be composed of equal volumes of “wet” and “dry” detention storage.
- The wet and dry storage areas shall each be sized according to guidance provided by the *Illinois Urban Manual* or the IDOT *Bureau of Design and Environmental Manual*.
- The minimum length to width ratio for a sediment trap shall be 2:1.
- The spillway weir length shall be determined based on drainage runoff from the contributing areas.
- Maximum drainage area allowed per trap is 5 acres, including both on-site and off-site tributary areas.
- If drainage area is over 5 acres, use a sediment basin or sediment traps in series.
-
- Sediment shall be removed when the trap is 50% full.
- This work to be paid for as; Erosion and Sediment Control – Excavation, Erosion And Sediment Control-Cleanout, and Temporary Riprap.

V. Sediment Basin

Pay Items:

JS280030 - EROSION AND SEDIMENT CONTROL-EXCAVATION
JS280040 - EROSION AND SEDIMENT CONTROL-CLEANOUT
JS280220 - SEDIMENTATION BASIN DEWATERING DEVICE
JS280140 - TEMPORARY RIPRAP
JS280190 - GEOTEXTILE FABRIC, CLASS C

Description and Purpose:

A sediment basin, described in Article 280.22 of the Tollway Supplemental Specifications, is a temporary basin formed by excavating and/or constructing an embankment so that sediment-laden runoff is temporarily detained under inactive conditions, allowing sediment to settle out before the runoff is discharged. This measure requires the Designer to prepare a design plan detail, reference Tollway Base sheet in Section M.

Application:

- Sediment basins are to be used to collect sediment laden water while allowing sediments to settle out.

- When discharging from the sediment basin, utilize outlet structures that withdraw water from the surface in order to minimize the discharge.

- Prevent erosion of the sediment basin using stabilization controls, at the inlet and outlet using erosion controls and velocity dissipation devices.

- Sediment basins shall be designed to facilitate maintenance, including sediment removal from the basins, as necessary.

- The difference between a stone outlet structure sediment trap and a sediment basin is that the former discharges over a riprap weir, while the latter employs a floating outlet structure. The Designer shall select the appropriate type structure based on the project characteristics.

- When a sediment basin aggregate berm is used for outlet control, the detention storage shall be composed of equal volumes of “wet” and “dry” storage.

- Provide storage capacity according to guidance provided by the *Illinois Urban Manual* or the IDOT *Bureau of Design and Environmental Manual*. In restrictive ROW areas, the trap can be designed for less storage per acre of runoff with more frequent cleanout of sediment.

- Runoff area includes both on-site and off-site tributary areas.

- Sediment basin shall be used when drainage area exceeds 5 acres.

- Sediment basin aggregate berm shall be used when existing or proposed detention basin or infield area is used for a sediment basin.

- Sediment basins may be designed as temporary basins to provide sediment control during construction, and/or may be designed as permanent sediment controls to remove sediment from stormwater before discharging to outside Tollway ROW.

- Detention basins shall have an emergency outlet designed to release water levels that exceed basin capacity. This emergency outlet should still allow

sediment to be filtered from stormwater prior to release. Temporary Sediment basin emergency outlets should be designed to pass the 25-year, 24-hour storm. Permanent Sediment basin emergency outlets should be designed to pass the 25-year, 24-hour storm.

- Additional reference on sediment basins can be found in Section 41-3.04(b) of the IDOT *Bureau of Design and Environmental Manual*, Chapter 41.

W. Temporary Ditch Check Urethane Foam/Geotextile

Pay Item:

JS280230 - TEMPORARY DITCH CHECK, URETHANE FOAM / GEOTEXTILE

Description and Purpose:

A urethane foam ditch check, described in Article 280.23 of the Tollway Supplemental Specifications, is a small barrier composed of filter fabric wrapped around a triangular urethane foam section, constructed across a swale or drainage ditch to reduce the velocity of flowing water, thereby allowing sediment to settle and reducing erosion.

Application:

- Ditch checks shall be used in permanent or temporary ditches.
- This item shall be used to control flow in existing, proposed, or temporary ditches. Maintain in place until seeding is established.
- Because they are somewhat resilient, consider the use of Temporary Ditch Check Urethane Foam/Geotextile where they might be subject to damage by pedestrians or construction equipment.
- Ditch checks shall be placed upstream of sediment basins or sediment traps.
- Spacing (L) between ditch checks shall be determined from the following formula: L= Minimum Height (Feet) / Ditch Grade (%) x 100. (See Figure 1-Article 3.1.2B)
- Bottom of ditch check on side slopes shall be a minimum of 12 inches higher than the top of the ditch check in the center of ditch.
- Reference Standard Drawing K1 for additional information.
- Sediment shall be removed when it reaches 50% of ditch check height.
- Note that pay item is for each 7 foot unit, and each location will require more than one pay unit.
- Additional reference on temporary ditch and slope checks can be found in Section 41-3.03 of the IDOT *Bureau of Design and Environmental Manual*, Chapter 41.

X. Synthetic Porous Runoff Control Structure

Pay Item:

JT280510 - SYNTHETIC POROUS RUNOFF CONTROL STRUCTURE

Description and Purpose:

A synthetic porous runoff control structure is a small barrier made from a screen type plastic, constructed across a swale or drainage ditch to reduce the velocity of flowing water, thereby allowing sediment to settle and reducing erosion.

Application:

- This item is to be used to control flow in existing, proposed, or temporary ditches. Maintain in place until seeding is established.
- This item, when used as a ditch check, is to be placed upstream of sediment basins or sediment traps.
- Spacing (L) between control structures to be determined from the following formula:
  L= Minimum Height (Feet) / Ditch Grade (%) x 100. (See Figure 1-Article 3.1.2B)
- Bottom of the structure on side slopes to be a minimum of 12 inches higher than top of structure in center of ditch.
- Reference Standard Drawing K1 for additional information.
- Sediment to be removed when it reaches 50% of ditch check height.

Y. Temporary Ditch Check Rolled Excelsior Log

Pay Item:

JS280240 - TEMPORARY DITCH CHECK, ROLLED EXCELSIOR LOG

Description and Purpose:

A rolled excelsior log ditch check, described in Article 280.24, is a small barrier composed of a cylindrical section of packed excelsior wrapped in biodegradable netting, constructed across a swale or drainage ditch or along the contour lines of slopes to reduce the velocity of flowing water, thereby allowing sediment to settle.

Application:

- Ditch checks shall be used in permanent or temporary ditches.
- Excelsior log ditch checks shall be used to control flow in existing, proposed, or temporary ditches. Maintain in place until seeding is established.
- Excelsior Log Ditch Checks must be emplaced in shallow trenches in accordance with Manufacturer's requirements. The 20 inch diameter log is generally appropriate for this application.
- Because of their rigid configuration, avoid using Rolled Excelsior Log ditch checks in existing, irregular channels.
- Excelsior log slope checks are appropriate to control erosion on sensitive slopes. The 10 inch diameter logs are generally preferable for this task.
- Ditch checks shall be placed upstream of sediment basins or sediment traps.
- Spacing (L) between ditch checks shall be determined from the following formula: L= Minimum Height (Feet) / Ditch Grade (%) x 100. (See Figure 1-Article 3.1.2B)
- Bottom of the ditch check on side slopes shall be a minimum of 12 inches higher than the top of the ditch check in center of the ditch.
- Reference Standard Drawing K1 for additional information.
- Sediment shall be removed when it reaches 50% of ditch check height.
- Note that pay item is for each 10 foot unit, and each location may contain more than one pay unit.
- Additional reference rolled barrier slope checks can be found in Section 41-3.03(c) of the IDOT *Bureau of Design and Environmental Manual*, Chapter 41.

Z. Temporary Rock Check Dam

Pay Item:

JS280140 - TEMPORARY RIPRAP

Description and Purpose:

Rock Check dams, described in Article 280.25, reduce scour and channel erosion by reducing flow velocity and encouraging sediment settlement. A check dam is a small structure constructed of riprap placed across a natural or man-made channel or drainage ditch.

Application:

- This item shall be used to control flow in existing, proposed, or temporary ditches. Maintain in place until permanent ground cover is established.

- Construct Temporary Rock Check Dam on a blanket of Geotextile Class B Filter Fabric. Blanket should extend 5 feet beyond upstream and downstream toes, to facilitate cleanup of the aggregate.

- Consider using other measures if access to the area of installation is difficult and/or cleanup of stone at end of construction will be difficult or will cause environmental damage.

- Spacing (L) between ditch checks to be determined from the following formula: L= Minimum Height (Feet) / Ditch Grade (%) x 100. (See Figure 1-Article 3.1.2B)

- Maximum drainage area shall not exceed 10 acres to each rock check dam.

- Top of the ditch check in the center of the ditch shall be a minimum of 6 inches lower than top of ditch check at side slope.

- Reference Standard Drawing K1 for additional information.

- Sediment shall be removed when it reaches 50% of the rock check dam height.

- Upon completion of construction and/or permanent stabilization, temporary rock check dam must be removed. In no instance may riprap or ditch checks be left in place unless the CM gets written acceptance from the Environmental Unit and it is not a hazard to the motorist.

- Additional reference on aggregate ditch checks can be found in Section 41-3.03(a) of the IDOT *Bureau of Design and Environmental Manual*, Chapter 41.

AA. Culvert Inlet Protection Fence

Pay Item:

JS280100 - SUPER SILT FENCE

Description and Purpose:

Culvert inlet protection is a protective barrier for the immediate area around the inlet of a pipe or culvert subject to erosion. It protects the inlet of the culvert from the transport and deposition of sediment. Culvert inlet protection fence is used to protect against sheet flows.

Application:

- This item to be used to protect culvert inlets from sediment carried by sheet flow.
- Do not use super silt fence in the flow channel.
- Maximum drainage area to the culvert being protected is 1 acre.
- Silt build up against fence shall be inspected within 24 hours of rainfall event with 0.5 inch or greater of precipitation (or 5 inches of snow) and removed when bulges develop in the fence, or when silt reaches 50% of fence height.
- Reference Standard Drawing K1 for additional information.

BB. Culvert Inlet Protection Stone

Pay Items:

JS280140 - TEMPORARY RIPRAP
JS280190 - GEOTEXTILE FABRIC, CLASS C

Description and Purpose:

Culvert inlet protection is a protective barrier for the immediate area around the inlet of a pipe or culvert subject to erosion. It protects the inlet of the culvert from the transport and deposition of sediment. Culvert inlet protection stone is used to protect against concentrated flows.

Application:

- This item to be used to protect culvert inlets from sediment carried by concentrated or channel flow.
- Design the structure to accommodate the 25-year, 24-hour storm.
- The maximum drainage area to the culvert being protected is 3 acres.
- Construct culvert inlet protection stone on a blanket of geotextile Class C filter fabric blanket; it should extend 5 feet beyond upstream and downstream toes, to facilitate cleanup of the aggregate.
- Consider using other measures if cleanup of stone at end of construction will be difficult or will cause environmental damage.
- Sediment shall be removed when it reaches 50% of the rock check dam height.
- Reference Standard Drawing K1 for additional information.

- Upon completion of construction and/or permanent stabilization, culvert inlet protection stone must be removed. In no instance may riprap or ditch checks be left in place unless the CM gets written approval from the Environmental Unit and it is not a hazard to the motorist.

- Additional reference on aggregate ditch checks can be found in Section 41-3.03(a) of the IDOT *Bureau of Design and Environmental Manual*, Chapter 41.

CC. Creek Buffer Strip and Silt Fence

Pay Items:

JS280100 - SUPER SILT FENCE
JS280240 - TEMPORARY DITCH CHECK, ROLLED EXCELSIOR LOG
Landscape Pay Items

Description and Purpose:

Creek buffer strips are densely vegetated areas that collect and slow runoff, filtering out sediments and insoluble pollutants, and encourage infiltration. Stormwater flows into a buffer strip through a silt fence, used as a device that converts concentrated flow into sheet flow. As the runoff flows through the vegetation, its velocity is reduced, releasing its load of suspended solids and promoting infiltration. Buffer strips are uniformly graded and are located down slope from disturbed or impervious areas, or adjacent to waterways.

Application:

- This item to be used to protect streams and wetlands from sediment carried by sheet flow.

- Ideally, buffer strips should be 25 feet wide, but they must be fit into the available space. Variations from the 25 foot dimension must be noted on the plans. Verify requirements with Local Approving Agency.

- Provide super silt fence along the edge of the wetland or along the stream bank. Provide 5 foot gaps in the Super Silt Fence, with Rolled Excelsior Ditch Check. The gaps are to allow floodwater to flow into the creek without damage to the silt fence.

- Grade the filter strip as uniformly as practical. Minimum slope along the fall line should be 1%.

- Provide permanent plantings in the buffer strip.

- Reference Standard Drawing K1 for additional information.

DD. Temporary Sediment Filter Bag

Pay Item:

JT280500 – TEMPORARY SEDIMENT FILTER BAG

Description and Purpose:

A Sediment Filter Bag is a.geotextile bag, fitted with a connection for a dewatering pump discharge hose. Discharge water is filtered through the bag wall, and the sediment is retained in the bag for disposal. This measure requires the Designer to prepare a design plan detail, reference Tollway Base sheet in Section M.

Application:

- Sediment Filter Bag to be considered an alternate for sites where sediment basin installation is problematic.
- Sediment Filter Bag is to be sized based on volume of water being pumped, quantity and type of sediment, and permittivity of the specific bag size.
- Sediment Filter Bags are best used as sediment filters on pump discharges, where the bag can be matched to the relatively low output of a pump.
- This item may be used where dewatering pumps are employed. Multiple discharges into a single bag are not permitted.
- Locate the Sediment Filter Bag in areas where discharge from the bag will not cause additional erosion or sediment transport.
- Sediment Filter Bag shall be replaced when it becomes ½ full of sediment or when sediment has reduced the discharge flow rate below design requirements.
- If possible, locate a ditch check downstream from the Sediment Filter Bag.

3.2.5 Permanent Erosion and Sediment Control

For permanent seeding, sodding, mulching, and erosion control blanket for disturbed areas, refer to Section 4 – Landscape Design. Install permanent measures as soon as site conditions allow.

For permanent erosion control measures including riprap, ditch linings, concrete ditch checks, and open cell articulated concrete block mats; see Tollway DDM.

3.3 Responsibilities

3.3.1 Illinois Tollway

A. Will facilitate the coordination necessary with EPA, USACE, regulatory agencies, and local governments after the Designer determines and identifies the need for permits.

B. Will provide Tollway Supplemental Specifications, which are to be used to prepare the ESCP, if requested. (The most recent Tollway Supplemental Specifications are available on the Tollway web site.)

C. Will review the plans prepared by the Designer for technical adequacy and confirm that the bid schedule includes the ESCP measures.

D. Tollway Staff Responsibilities:

(Description of staff responsibilities can vary by contract and is presented for guidance only.)

1. Tollway Project Manager – The Project Manager (PM) will be the primary point of contact with the Designer. The PM will be responsible for ensuring that the Designer complies with the directives of this section and for disseminating information and submittals to the appropriate individuals. Permit submittals shall be prepared by the Designer and submitted to the PM. The PM will submit permit applications to the appropriate agencies.

2. Tollway Environmental Planner – The Environmental Planner (EP) will be responsible for ensuring that the PM, and thus the Designer, is aware of how environmental concerns affect the project or study. The EP will review all related submittals, including permit applications, submitted to the Tollway by the Designer, and other reports and contract documents as necessary. The EP will be the primary point of contact with state and federal resource and regulatory agencies. The EP will be responsible for filing the NOI, IONs, and NOTs with the IEPA. Additionally, the EP will ensure that electronic copies of these documents are filed in the Tollway's web based project management system.

3. Tollway Landscape Architect – The Landscape Architect will primarily administer the Tollway policy and procedures for the application and planning of natural/constructed elements, vegetation impacts, and erosion/sediment control, with a concern for stewardship, green strategies, and conservation of natural resources.

E. Refer to Article 4.4.1 for additional responsibilities.

3.3.2 Designer:

A. Shall review current Tollway Standard Drawings, Specifications, and Supplemental Specifications for the latest criteria.

B. Shall define necessary control measures; design control measures utilizing Standard Specifications and Standard Drawings; and shall prepare Plans, Special Provisions, and special Drawings as required.

C. Shall prepare preliminary ESCP by describing the control measures and maintenance of controls for the project site.

D. Shall determine and identify the need for permits for compliance with Federal, County, or local agency requirements.

E. Shall incorporate any special requirements by the County or local agencies into the ESCP and SWPPP.

F. Shall prepare background documentation needed to submit permit applications and fill out the application forms that shall be submitted by Tollway. Background documentation and application forms shall be submitted to the Tollway at pre-final plan submittal for review.

G. Shall fill out and submit to the Tollway the Soil and Erosion Control Checklist Technical Review Form. See Appendix 4 for the form.

H. Shall attend the Erosion and Sediment Control Preconstruction Meeting and give a review of the ESCP. See the Tollway's web based project management system for the most recent A-40 form.

I. Shall start the NOI by completing the owner, construction site, type of construction, historic preservation and endangered species compliance, and receiving waters information sections.

J. Refer to Article 4.4.2 for additional responsibilities.

3.3.3 Construction Manager (CM):

A. Will be responsible for scheduling and holding the Erosion and Sediment Control Preconstruction Meeting. If the project involves an USACE 404 permit, notify the County Soil and Water Conservation District or, in Lake County, the Stormwater Management Commission. See Article 3.5.2, Preconstruction Meeting, for list of attendees. See the Tollway's web based project management system for the most recent version of form A-40.

B. Will be responsible for providing qualified personnel to inspect installation and maintenance of the measures identified in the ESCP until the site has been stabilized with final landscaping.

C. Will review final ESCP received from the Contractor, obtain the Contractor(s) signature on the SWPPP (Special Provision 111.2), and obtain credentials of the Contractor's Erosion and Sediment Control Manager at the preconstruction meeting.

D. Working in conjunction with the Contractor, will develop the finalized NOI and provide same to the Tollway's Environmental Unit. The NOI will be finalized by completing the contractor information, dates of construction start/end, and any missing information from the type of construction information sections.

E. Will ensure that the ESCP is installed in accordance with the plans and specifications and will consult with the Designer or other Tollway designated representative if the ESCP needs to be adjusted or modified.

F. Must review any proposed changes to the ESCP against the Erosion Control Manual and the Tollway DDM prior to approving any changes. The proposed changes must be consistent with Tollway standards. The CM must not approve nor permit leaving temporary erosion control measures in place on a permanent basis, unless consistent with standards from the Tollway DDM and it is not a hazard to the motorist. In no instance may riprap or ditch checks be left in place unless the CM gets written acceptance from the Environmental Unit.

G. Will inspect (or appoint a dedicated person to act in his stead) the installed measures in cooperation with the Contractor's Erosion and Sediment Control Manager/Inspector for necessary maintenance at least once every 7 calendar days and within 24 hours of a rainfall event with 0.5 inch of precipitation or greater (5 inches of snow). The CM, in conjunction with the Contractor's Erosion and Sediment Control Manager/Inspector, will prepare an inspection report after each inspection. A photographic log of these inspections will be maintained with the inspection forms. See the Tollway's web based project management system for the most recent version of the A-38 and A-39 inspection forms.

H. If the inspections determine concrete fines are discharging as a result of roadway reconstruction, the CM must ensure that the discharge does not exit the right-of-way. Additionally, the CM shall immediately test the pH levels of the affected discharge runoff to determine the average pH levels. Where pH levels exceed 9.0, the CM shall recommend remediation strategy to reduce the alkalinity to acceptable levels before allowing it to exit the ROW or discharge environmentally sensitive locations.

I. Will fill out any Incidence of Non-Compliance (ION) and the Notice of Termination (NOT) forms and provide to Tollway Environmental Unit for submittal to the IEPA. See Appendix 1 for forms.

J. Will provide the Tollway EP with an electronic copy of the completed NOI and SWPPP. These documents will be submitted a minimum of 35 days prior to start of construction.

K. Will provide the Tollway EP with a copy of the NOT when construction site has achieved 70% stabilization with permanent landscaping.

L. Will complete the A-40 form (Erosion and Sediment Control Preconstruction Meeting Agenda) and ensure that it is filed in the Tollway's web based project management system.

M. Will ensure that ESCP, SWPPP, Erosion and Sediment Control schedule, signed Contractor Certification Statements, A-38s, A-39s, A-40, and any IONs are filed in the Tollway web based project management system.

N. Refer to Article 4.4.3 for additional responsibilities.

3.3.4 Contractor

A. Shall appoint an Erosion and Sediment Control Manager/Inspector (ESCM). This employee shall be thoroughly experienced in all aspects of erosion and sediment control and construction. This employee shall have the primary responsibility and sufficient authority for the implementation of the approved erosion and sediment control schedules and methods of operation. At least 10 days prior to the beginning of work, the name and credentials of this employee shall be submitted to the CM for acceptance.

B. If it is determined that concrete fines are discharging into the ditch, in cooperation with the CM, the Contractor's Erosion and Sediment Control Manager/Inspector must ensure that no discharge of noted sediments occurs from the Tollway ROW. Additionally, if directed by the CM, must take action to ensure the pH of the contaminated stormwater does not exceed 9.0.

C. Shall, with support from the CM, coordinate a pre-construction erosion and sediment control meeting at least five business days prior to start of work.

D. Shall finalize the preliminary ESCP provided by the Designer. Finalize the ESCP by providing missing details related to the ESC control measures and maintenance of controls for the project site. Copy of completed ESCP to be provided to the Tollway CM within 21 days of Notice of Award and prior to any ground disturbing activities.

E. Shall provide support to the CM to finalize the NOI.

F. Shall develop a SWPPP, Erosion and Sediment Control schedule, and sign Contractor Certification Statements. SWPPP, Erosion and Sediment Control schedule, and Contractor Certification Statement to be submitted to the Tollway CM within 21 days of Notice of Award and prior to any ground disturbing activities.

G. Shall install all the required measures of the ESCP and SWPPP.

H. Shall post a copy of the Letter of Notification and General NPDES permit at the construction site. The letter and permit must be placed in a prominent place for public viewing.

3.3.5 Contractor's Erosion and Sediment Control Manager/Inspector (ESCM)

A. Shall have sufficient training and experience to carry out all aspects of erosion control during construction. This person is required to have taken an approved sediment and erosion control training course and have an approved certification on Erosion and Sediment Control. Examples of qualifications for this position include Certified Professional in Erosion and Sediment Control (CPESC), and Certified Erosion, Sediment and Stormwater Inspector (CESSWI). Reference CM manual Article 5.1.2.2.9 for approved certification sources on Erosion and Sediment Control training.

B. Shall attend Erosion Control Field Meetings prior to any soil disturbance.

C. Shall attend Preconstruction Erosion and Sediment Control Meeting.

D. Shall complete erosion control inspections weekly and within 24 hours of a rainfall event with 0.5 inch or greater of precipitation (5 inches of snow).

E. Shall be responsible for identifying the need for any required maintenance or repairs. Shall be responsible for identifying the need for any changes to the erosion and sediment control plans. Shall be responsible for confirming appropriate corrective action was taken.

F. Shall complete A-38 weekly inspection forms for every inspection. A-38 inspection forms shall include a log of color photographs for every inspection.

G. Shall complete A-39 inspection and maintenance forms documenting all changes to the SWPPP. Shall include color photographs as necessary.

H. Shall ensure that all A-38 forms, accompanying photographs, A-39 forms, and photographs are maintained in the project file. Electronic copies of these forms shall also be filed in the Tollway's web based project management system

3.4 Permits and Approvals

The Designer shall prepare background documentation needed to submit permit applications and shall prepare the application forms for submittal by Tollway.

3.4.1 National Pollutant Discharge Elimination System (NPDES)

A General NPDES Permit for Stormwater Discharges from Construction Site Activities, NOI is required for any project with a disturbance of 1 acre or more. If a single project involves a cumulative disturbance of 1 acre or more, such as a program of repair/replacement of guardrail at numerous locations, a permit is required.

The NOI shall be submitted for each individual design section project so the permit can be closed out by submittal of a NOT (by the CM) after that section is complete. For NPDES forms, refer to Appendix 1.

An electronic copy of the NOI must be provided to the Tollway Environmental Planner a minimum of 35 days prior to the start of construction.

A permit will not be required for projects that consist of only resurfacing or patching, or ditch or pond cleanings if the soil is not redeposited on the land. Refer to Article 2.2 for projects that do not require a permit.

3.4.2 County Soil and Water Conservation District (CSWCD)

If an USACE Section 404 Permit is required, a review of the ESCP is required by the CSWCD in order to obtain the USACE Permit. The CSWCD submittal shall include the application form, permit review fee, site plan checklist, narrative checklist, and narrative. Refer to Appendix 6 for sample forms. The Designer shall obtain current forms and fee schedule from the CSWCD.

The Designer shall determine the disturbed area involved and the required permit review fee. The fee will be paid for by the Tollway

3.4.3 County Stormwater Management Agency (CSMA)

A review of the ESCP and a permit may be required from the County Stormwater Management Agency. The Designer shall obtain the latest requirements from the County.

3.4.4 Municipalities

The County Stormwater Management Agency generally handles the ESCP review. In some cases, the municipality is designated a waiver community and performs the review. The Designer shall determine which agency governs and shall obtain the requirements from that agency.

3.5 Construction Requirements

3.5.1 General

The Tollway requires that the Contractor assign an employee to the project to serve as an ESCM. This employee shall be experienced and have satisfactorily completed an Erosion and Sediment Control Training program. Proof of compliance with the above shall be provided at the Preconstruction Meeting.

A. Prior to construction, it is important that all parties responsible for implementing the ESCP understand why the proposed measures are needed, and how they must be installed, operated, and maintained.

B. If during construction, adjustments or modifications to the ESCP are necessary, the adjustments or modifications must be reviewed and accepted by the CM representative. A copy of the revised ESCP must be kept on-site during construction.

C. During construction, an adequate inspection, maintenance, and prompt repair program must be implemented by the Contractor.

D. After construction is completed, the temporary erosion control measures shall be removed, as called for in the plan, and the final permanent measures installed. Temporary erosion control measures cannot be left in place on a permanent basis unless consistent with standards, the Tollway DDM, and approval by the Tollway CM. In no instance may riprap or ditch checks be left in place unless the CM gets written acceptance from the Environmental Unit and it is not a hazard to the motorist.

E. A maximum of 20 acres is allowed to be disturbed at a single time. See Standard K1 Drawing general notes for exceptions. In addition, stabilization of cut or fill slopes is required whenever the cut or fill activity reaches 15' vertically, or the finished slope equals 50', whichever is more restrictive.

F. All construction personnel (including the CM) shall be required to wear highly visible fluorescent orange, fluorescence yellow/green, or a combination of fluorescent orange and fluorescent yellow/green vests at all times while on the construction site. These vests must meet the requirements of ANSI/ISEA 107-2004 for Conspicuity Class 2 garments.

G. Projects that will disturb 1 acre or more of total land area are subject to the statewide general NPDES Stormwater Permit for Construction Site Activities. The Contractor shall complete and sign the Contractor Certification Statement in Special Provision 111.2 indicating that he understands the requirements of the NPDES Permit and the SWPPP.

H. The Designer and CM should be aware that the permitting authority may elect to make periodic on-site inspections, especially at the main stages of the project or after completion of the following construction stages:

1. upon completion of installation of sediment and runoff control measures, prior to proceeding with any other earth disturbance or grading,

2. after stripping and clearing,

3. after rough grading,

4. after final grading,

5. after seeding and landscaping, or

6. after final stabilization and landscaping, prior to the removal of temporary sediment control measures.

7. If a permitting authority does make an on-site inspection, the CM should notify the Tollway's Environmental Unit and provide an inspection report indicating the results of the inspection.

I. Inspection of the construction site shall be performed by qualified personnel familiar with the current Tollway erosion and sediment control practices as well as the other regulatory agency requirements. Inspections to determine necessary maintenance shall be done by the CM in cooperation with the Contractor's ESCM at least once every 7 calendar days and within 24 hours of a rainfall event with 0.5 inch of precipitation or greater (5 inches of snow).
The IEPA's *General NPDES Permit No. ILR10* is a required reference for completing inspections.

ESCMs shall complete an A-38 form and create a photographic log of the inspection. This log shall be attached to the A-38 form and both shall be saved as part of the project file.

See the Tollway's web based project management system for the most recent version of the A-38 and A-39 inspection forms.

J. Hard copies of the A-38 form and the photographic log of the inspections, as well as any A-39 forms, shall be given to both the Contractor and the CM in writing. Electronic copies of same shall be filed in the Tollway's web based project management systems.

3.5.2 Preconstruction Meeting

A Preconstruction Meeting shall be held prior to any land disturbance to discuss the Erosion and Sediment Control Plan, the Landscape Plan, project permits, Contractor's schedule, installation of controls, and inspections to be performed. The Contractor's Certification Statement is to be signed at this Meeting.

A. The Preconstruction Meeting shall be attended by the DSE, Landscape DSE, CM, Tollway Coordinator, Contractor's ESCM, and the Contractor's erosion/landscape subcontractor. See the Tollway's web based project management system for the most recent version of the A-40 form.

B. If the project involves an USACE 404 permit, notify and invite the CSWCD, NRCS, and the USACE. In Lake County, contact the Stormwater Management Commission.

C. The Preconstruction Meeting shall include an onsite field review of the ESCP.

SECTION 4.0 LANDSCAPE

4.1 Design Factors and Data Requirements

4.1.1 Use of Design Factors and Data Requirements

The Landscape Design Section Engineer (Landscape DSE) shall use an integrative approach and these Design Factors provided as a guide in developing innovative design solutions for project conditions. The Landscape DSE shall consider all design elements of the roadway landscape and create a facility that is functional in overall form and detail, while providing appropriate aesthetics. Grading, safety, visual quality, erosion control, environmental issues, materials, and maintenance practices are some of the design elements that must be considered. Every factor may not apply to all projects, nor will those described in this section cover all project situations. However, all landscape designs shall be developed in conjunction with the drainage, grading, utilities, and erosion control concepts; and with an overall commitment to protect, preserve, and enhance environmental resources, while applying green strategies and promoting environmental sustainability. The final plans for landscape improvement contracts shall be signed and sealed by a Registered Landscape Architect, licensed in State of Illinois.

A. Application of Design Factors

The application of the criteria to projects will depend on the scope and type of proposed improvements as follows:

- Landscape improvement projects:
  The design factors and data requirements in this document shall be applied.

- Rehabilitation/reconstruction, widening, or lane addition projects:
  The design factors and data requirements shall be used in the design of the project section to correct any deficiencies identified in the Proposed improvement and to ensure that the completed project has a coordinated design intent.

B. Tollway Publications to be Referenced

Reference shall be made to the current editions of following Tollway publications when designing any landscape installation.

- *Environmental Studies Manual,*

- Erosion and Sediment Control sections of this manual,

- *Drainage Design Manual,*

- *Design Section Engineer's Manual, and*

- other publications as directed by Tollway.

4.1.2 Design Approach

The Landscape DSE shall consider any Context Sensitive Solutions (CSS) developed in previous design phases as a basis for the design approach to a project. The Designer shall identify the need and purpose, while incorporating design standards, flexibility, safety, aesthetics, environmental stewardship, and community sensitivity with the goal of constructing safe roadways that improve mobility, while enhancing the qualities of place.

A. Inventory and Data Collection

The Landscape DSE shall work with the Tollway PM, Tollway EP, Tollway Landscape Architect, and other members of the project team to carry out an in-the-field investigation to systematically examine the site, collect data, and then analyze the existing site conditions, along with data developed during previous design or planning stages. The existing landscape character shall be examined and an Existing Vegetative Assessment (EVA) carried out, if needed. The main components of the landscape, built and natural, shall be identified and recorded on a Field Analysis Map, in a brief written narrative, and by taking photographs or making sketches. The information distilled from the field analysis shall be recorded on the Issues and Opportunities Schematic.

The EVA is typically generated in the Master planning stage for use and further evaluation in planning and design. The EVA may include a Tree Stand Delineation and/or Tree Survey map.

The Tree Stand Delineation is a general accounting of existing vegetation, both in quality and quantity. It shall provide an overview of the tree groupings, other natural attributes, and limitations of the site. General information may include groupings of similar trees, individual trees of significance, and important roles or value of the vegetative groupings.

Where more detailed and precise information is needed, a Tree Survey may be necessary. The map resulting from the tree survey shall identify and briefly describe all trees of importance, show tree species, trunk diameter, and base locations with elevations of each tree so potential impacts of grade changes can be easily determined.

B. Issues and Opportunities Schematic

The Issues and Opportunities Schematic shall delineate the following:

- the identification, by text and illustration (photograph or graphic image), of the landscape character of the project and adjacent sites and surrounding land use;
- landscape features to be preserved or that may influence the design;
- integration of maintenance and safety requirements;
- any important viewsheds that are to be protected or enhanced;

- any important features, natural or built, within or outside the Tollway ROW that may influence the design shall be identified and recorded;
- aesthetic opportunities and views to or from the site that should be screened;
- natural plant divisions;
- historic features or influences;
- topographic and hydraulic features, including existing runoff patterns and erosion control deficiencies;
- the overall strengths and weaknesses of the site and potential design opportunities; and
- identification of any agencies, municipalities, community groups, or individuals that the design team will have to coordinate with to achieve a successful landscape design.

4.1.3 Design Concept Development

The landscape design concept shall be developed in conjunction with the overall design team. Particular attention shall be paid to developing a single clear landscape concept that unites and uses drainage, grading, and planting to maximize functional effect. The design concept shall take into account the information obtained from the Site Analysis and the Issues and Opportunities Schematic. Additional site visits shall be carried out to evaluate preliminary concepts as they are developed by the team. Special attention shall be given to working with and reducing the impact on the existing ecological systems and areas surrounding the site, to seek out aesthetic and functional opportunities, and to maintain a high level of environmental stewardship. The design shall be as self-maintaining as possible. The Designer shall inform the Tollway PM of any agencies, municipalities, community groups, or individuals that the Landscape DSE should coordinate with to achieve a successful landscape design.

The following are the minimum requirements to be considered for the Landscape Design Concept Submittal. The submittal shall be developed to a 30% level of completeness:

- a site location map;
- a table of suggested and required agency, municipality, groups, or individuals with whom coordination is desirable;
- a table of potential utility conflicts;
- an Issues and Opportunities Schematic plan, and/or conceptual drawings;

- A narrative report describing the desired and agreed upon general landscape character and landscape goals for each of the project's target areas. The narrative shall explain how existing site conditions, as provided in the Issues and Opportunities Schematic, have been addressed; the project overview, the landscape concept and proposed options, how the desired landscape character will be accomplished, maintenance, suggested opportunities, any proposed changes to the drainage and grading design, and a discussion of the pros and cons of any alternates that are included in the submission;

- a plan view showing the conceptual layout of the proposed landscape design, suggested planting, and mowing pattern treatments (see Appendix 7 for Tollway's *Roadside Mowing Policy*). The plan or plans shall be coordinated with drainage and grading design concepts and any utility layouts to ensure the development of a single, clear landscape design and the avoidance of any future conflicts on-site;

- views to or from the site that should be screened, and any important viewsheds that are to be protected or enhanced, shall be indicated on the plans;

- cross sections or enlargements shall display the viability of the conceptual design;

- the plans shall be at a maximum 1 inch =100 feet scale to represent the overall concept and typical landscape treatments, and at a minimum of 1 inch = 50 feet to adequately represent typical segments of the concept where additional detail is desirable;

- a list or copies of the relevant information and design criteria collected through the coordination process;

- a list of plant types intended to be used, including appropriate background information, if needed;

- a rough cost estimate; and

- any additional information required by Tollway PM.

- Prepare and submit the Landscape Design Submittal Checklist, Section A, Landscape Design Concept Submittal located in Appendix 8.

4.1.4 Preliminary Plans and Special Provisions

The landscape design shall be developed by a Landscape Architect registered in Illinois, in conjunction with the overall design team, and shall be coordinated with and complimentary to the proposed drainage, grading, and lighting designs. Any alternative drainage systems and grading solutions proposed shall be described in the text and displayed in plan and cross section format. All planting plans shall be coordinated with any utility drawings to eliminate potential conflicts. The background documentation maintained by the Designer shall meet the requirements in the Tollway *Environmental Studies Manual*. The documentation shall also identify any special requirements used to select specific measures.

The following are the minimum requirements for the Preliminary Landscape Design Submittal. The submittal shall contain a minimum of the following, which shall be developed to a 60% level of completeness:

- a comment disposition log that addresses each and all Tollway comments from the previous submittal;
- site location map and construction area map;
- plan views showing the layout of the overall landscape design. The overall design shall be delineated at a scale of 1 inch = 50 feet, and at 1 inch = 20 feet in areas where additional detail is required (see Appendix 9 for example). The plans shall be coordinated with, and complimentary to the proposed drainage, grading, and utility drawings;
- tree preservation plan that will include existing tree locations; size; species; methods of protection, including fencing and wrapping; and a defined safe area needed to protect tree root structures of trees to be protected based on the analysis of the existing vegetative assessment;
- preliminary planting and construction details needed to clarify design intent, including plans of any atypical or special areas;
- details of any hard landscape elements, such as paving or special features;
- cross sections that adequately display significant changes in grade or width of the area to be planted, and the viability of the landscape concept;
- plant quantities, types, and sizes shall be indicated on the plan. The Landscape DSE shall determine the viability of the plant material selection with due consideration to site conditions, soils, and salt tolerance. Provide a plant name abbreviation key to be used on all plan drawings; and
- utilities matrix sheet that identifies any utility interferences.
- plan drawing set, which should typically include a cover sheet, index of drawings, general and landscape notes, suggested progress schedule, summary of quantities, schedule of quantities, maintenance of traffic, drawing key plan, required erosion control plans, plan drawings, and details.
- a preliminary cost estimate;
- Proposed preliminary mowing patterns and delineations, as needed;
- Special Provisions to the Standard Specifications (J pages) and Schedule of Prices (P pages) that follow accepted Tollway standards;;
- a suggested schedule for all work and inspection of the planting material must be coordinated with all other roadway/project construction schedule that are in the vicinity; and

- any additional information required by Tollway PM.
- prepare and submit the Landscape Design Submittal Checklist, Section B, Preliminary Plans and Special Provisions, located in Appendix 8.

4.1.5 Pre-Final Plans and Special Provisions

The landscape design submittal for the Pre-Final Plan phase shall include the plans, text, and specifications submitted at the Preliminary Plans and Special Provisions Phase developed to a 99% level of completeness. This submittal shall include the following.

- Address in written comment disposition log all Tollway comments from the previous submittal. All drawings shall be coordinated with the appropriate agencies and shall include the drainage, grading, lighting, signage, and utility packages (see Appendix 8 for Landscape Design Submittal checklist).
- All drawings shall be fully annotated and show dimensions, landscape notes, general notes, references, symbols, legends, labels, cover sheet, index, suggested progress schedule, drawing key plan, maintenance of traffic, and required erosion control.
- The drawings shall be cross referenced to a fully detailed Summary of Quantities and Schedule of Quantities. The Summary of Quantities shall fully delineate the pay item number, species, type, unit of measure, and quantity of all plants selected. The Schedule of Quantities shall provide pay item numbers, key names, item names, and quantities to be found on each sheet.
- All details, hardscape, and special features shall be completed and cross referenced to the plans, suggested schedule, and drawing key plans.
- Special Provisions shall follow the Tollway format and shall be complete with all materials and ways and means specified.
- construction cost estimate to reflect adjustments to the landscape plans shall be included.
- a completed utilities matrix.
- Include a list of any additional information required by Tollway PM.
- Prepare and submit the Landscape Design Submittal Checklist, Section C, Pre-Final Plans and Special Provisions, located in Appendix 8.

4.1.6 Final Plans and Special Provisions

All comments and questions received during the review of the Pre-Final Plans shall be adequately addressed and provided in writing on the comment disposition log, and resolved by revisions to the final plans and Special Provisions. The final plans and Special Provisions shall be sealed by a Registered Landscape Architect licensed in Illinois.

Upon final review, if comments or changes are needed to the Final Plans or Special Provisions, the Designer shall provide a Final Advertising Submittal to include all completed plans and Special Provisions. An updated Engineer Estimate shall be provided with the submittal.

Prepare and submit the Landscape Design Submittal Checklist, Section D (Appendix 8), Final Plans and Special Provisions (example In Appendix 9).

4.1.7 Addenda, Bidding, Tagging, and Construction Observation

The Landscape DSE shall, at the request of the Tollway, produce the technical information as appropriate to interpret, clarify, or expand on the Construction Documents. When addendums are required, the Designer will prepare the documents, the Tollway will issue the addenda and perform the complete bidding process. The Tollway or the CM is usually responsible for nursery tagging, as determined necessary, and concurrence of the final location of plants on-site. Reference shall be made to the Standard Specifications Sections 253 and 254 for transportation, temporary storage, and planting procedures.

The Landscape DSE shall also be responsible for attending the erosion and sediment control Preconstruction Meeting.

4.2 Design Criteria

4.2.1 Permanent Seeding/Sodding Design Requirements

When planning for the use of seeding classes provided in the Standard Specifications and Tollway Supplemental Specifications, the Landscape DSE shall recognize the mowing policy and maintenance practices, and general seeding zones. Locations for each seeding class and sod type shall be clearly shown on the plans, along with a graphic legend and quantity summary for each sheet.

A. Topsoil and Compost[gh1]

Pay Items:

21101505 - TOPSOIL EXCAVATION AND PLACEMENT
211016 - 21101685 – TOPSOIL FURNISH AND PLACE, Various items
21101805 – COMPOST FURNISH AND PLACE, Various items

Description and Purpose:

Topsoil shall be obtained from within the limits of the right-of-way when per Standard Specifications 211; on-site topsoil material must comply with the materials requirements in Article 1081.05 of the Standard Specifications. When the site is prepared, the topsoil shall be spread at the specified depth in the final location.

Application:

- During pavement widening projects, a 6 foot wide swath of the existing on-site topsoil along the existing pavement shall typically be removed and disposed of off-site at a proper location. The remainder of the existing on-site topsoil shall then be tested on-site for use and nutrient requirements.

- The Designer shall complete a visual inspection of the project area and remove topsoil locations that display signs of contamination.

- Topsoil replacement shall be used when there is an insufficient quantity of existing on-site topsoil that meets the requirements of Articles 211.03 and 1081.05 of the Standard Specifications.

- As appropriate, the Designer shall complete an inspection of the project area to evaluate the condition of existing slopes. If the field inspection indicates slope failure or erosion concerns, a plan shall be developed for the repair of the site.

B. Seeding

Pay Items:

25000100 through 25000350 – SEEDING, Various Classes
JS250220 through JS250350 – SEEDING, Various Classes

Description and Purpose:

The seeding classes shown in Section 250 of the Standard Specifications are typically used for bare earth seeding but some of the seeding classes may also be considered for interseeding into existing turf. The seeding can generally be broken into the following zones (See Figure 2-Article 4.2.1, General Seeding Zones,). The use of Tollway Supplemental Specifications take precedence over Standard Specifications if both could apply.

Application:

1. Zone 1 Seeding

The turf immediately adjacent to the roadway is normally the most intensively managed part of the ROW (see Figure 2, General Seeding Zones). This area also receives the highest concentrations of salt laden spray. This portion of the roadway requires a seeding mixture that can tolerate salt concentrations and regular mowing while still maintaining an acceptable appearance and resistance to erosion. This area would typically extend from the edge of pavement to the bottom of the backslope of the drainage ditch, or to a minimum of 20 feet in areas with slopes 1:3 (V:H) and flatter. Seeding in this zone would typically be accompanied with erosion control blanket. The mix developed for this use is:

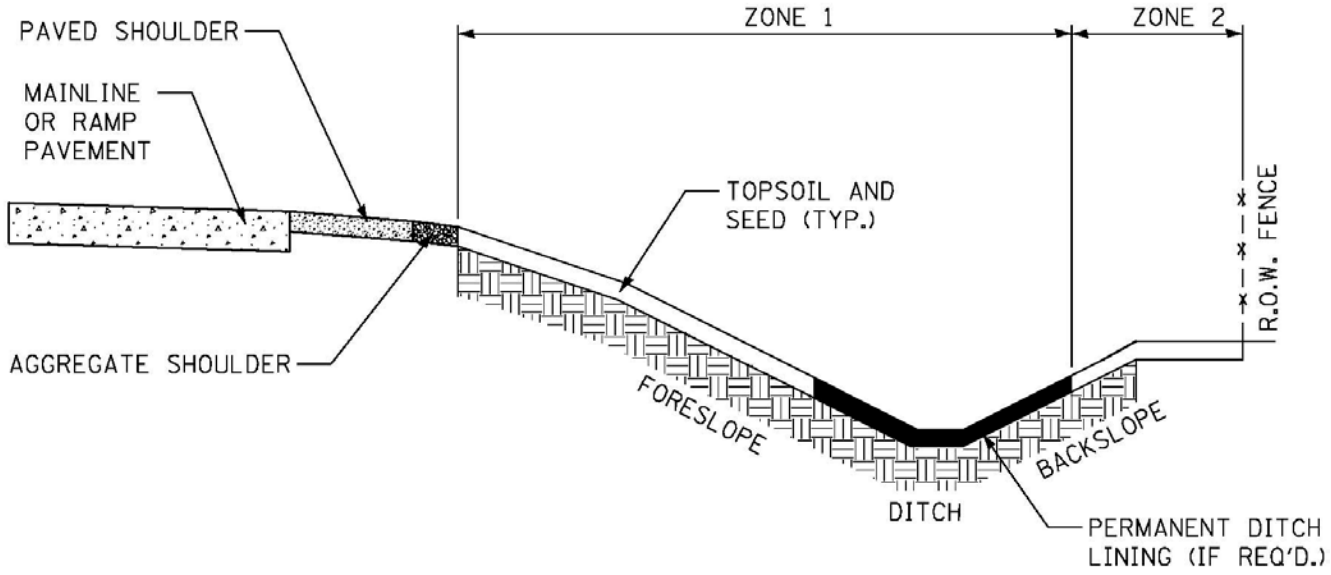
- CLASS 2E, SALT TOLERANT ROADSIDE MIXTURE, as shown in Article 250.07 of the Tollway Supplemental Specifications.

- Other applications for this mix may be in ditches or portions of detention ponds that receive salt laden water.

2. Zone 2 Seeding

In areas beyond the Zone 1 mowing limits, seeding is normally desired, particularly in rural areas, which will reduce routine ROW mowing cycles and contribute to the preservation of plant and wildlife environments. (See Figure 2-Article 4.2.1B, General Seeding Zones). These areas must control surface erosion while maintaining an acceptable appearance both to adjacent neighbors and to motorists. Seeding classes have been developed to meet the needs for these conditions:

FIGURE 2 – GENERAL SEEDING ZONES



- CLASS 2F, IT ROADSIDE MIXTURE is commonly used in zones near residential or urban areas where more frequent mowing and more manicured appearance is desirable. This mix does not include native prairie grasses or forbs.

- CLASS 3E, IT SLOPE MIXTURE also includes native prairie grasses, has reduced maintenance requirements, and is formulated to assist in stabilizing slopes steeper than 1:3 (V:H).

- CLASS 4E, IT NATIVE GRASS includes native prairie grasses to produce a natural appearance where decreased mowing frequency and reduced maintenance is desirable, and for use in rural areas, where taller grasses may be acceptable.

- CLASS 4F, IT LOW PROFILE NATIVE GRASS also includes native prairie grasses where decreased mowing frequency and reduced maintenance is desirable, but where taller grasses are not acceptable. This mixture is generally used for most backslope conditions where native grasses are desired.

- CLASS 4B, WETLAND GRASS AND SEDGE MIXTURE may be specified in wetlands or ponded retention or other suitable areas. The mix is suited to wet locations where no mowing is desirable.

- CLASS 5, FORBS WITH ANNUALS MIXTURE may be specified to be added with the class 4E and/or 4F mixtures in high profile areas where wildflowers are desirable. Selective Mowing Stakes may be needed when adding this mix to assist the maintenance crews by clearly directing future mowing activity.

- CLASS 5A, LARGE FLOWER NATIVE FORB MIXTURE may also be specified to be added with the class 4E and/or 4F mixtures in high profile areas where larger, showier flowers are desired. Selective Mowing Stakes may be needed when adding this mix to assist the maintenance crews by directing mowing activities.

- CLASS 5B, WETLAND FORB MIXTURE may be specified in wetlands or occasionally ponded retention areas. The mix is suited to wet locations and can be combined with Class 4B where no mowing is desirable.

Additional seed mixes may be required for detention basins, retention basins, wetlands, restoration areas, or other site specific conditions. These mixes should be addressed individually and be included in the contract special provisions.

All seeds shall meet Article 1081.04 of the Standard Specifications requirements.

For seeding in swales, the maximum velocity for seeding is to be determined by Tollway DDM Table 7.0, *Permissible Flow Velocities For Grass Lined Channels*.

C. Bare Earth Seeding

Pay Items:

25000100 - 25000350 – SEEDING, Various Classes
JS250220 - JS250350 – SEEDING, Various Classes

Description and Purpose:

Bare earth seeding will require seed bed preparation prior to applying seed. The area to be seeded shall be cleared and prepared as detailed in Articles 250.05 and 250.06 of the Tollway Supplemental Specifications.

Application:

- No seeds shall be sown until the seed bed has been approved by the Engineer.

D. Interseeding

Pay Item:

25003110 - INTERSEEDING, Various Classes

Description and Purpose:

Interseeding in areas of existing turf shall be done in conformance with Article 250.06 of the Standard Specifications.

Application:

- Where desirable, native grasses may be interseeded into the existing turf in the process of converting previously mowed areas to reduced mowing areas. This procedure is used in selected Zone 2 seeding areas only.

- In select reduced mowing areas where added diversity is desired, CLASS 5, FORBS WITH ANNUALS MIXTURE or CLASS 5A, LARGE FLOWER NATIVE FORB may be sowed into existing native turf to highlight or further enhance the appearance of an area. Selective Mowing Stakes may be utilized to delineate the reduced mowing area and assist the maintenance crews by clearly directing future mowing activity.

- These grasses and forbs may take 3 to 5 years to establish and are generally implemented to reduce mowing, and provide a natural meadow ground cover appearance. Wildflower seeding may need to be reseeded on a regular basis to provide long term benefit.

E. Fertilizer and Agricultural Ground Limestone Application

Pay Items:

25000400 - NITROGEN FERTILIZER NUTRIENT, POUND
25000500 - PHOSPHORUS FERTILIZER NUTRIENT, POUND
25000600 - POTASSIUM FERTILIZER NUTRIENT, POUND
25000700 - AGRICULTURAL GROUND LIMESTONE, TON

Description and Purpose:

Fertilizer should be specified for newly seeded areas. Agricultural limestone is typically not required for seeding on Tollway ROW. In the absence of soil testing, the application rate provided in Article 250.04 should be used.

Application:

Soil testing should be considered during the initial stages of the design process when existing topsoil is to be re-used on the site. The soil tests should be used, along with visual inspection, to determine areas where existing topsoil is unacceptable for re-use, resulting in the need for removal. The tests may then be used to more accurately determine fertilizer application rates to supplement natural fertility levels of the re-used topsoil.

When re-use of site topsoil is considered, soil tests shall be taken from the in-place material at its natural location. Locations not acceptable for use as topsoil should be clearly shown on the drawings and/or special provisions for removal prior to stockpiling. The Designer is responsible for initiating and directing soil testing that is to be carried out by a state laboratory, or a recognized commercial laboratory, using approved methods. Soil tests should include the following:

1. Chemical Analysis

   BIOASSAY TESTS shall be provided to determine the persistence of plant damaging chemical residue and its damage potential. Should the bioassay tests on any samples disclose the presence of adverse chemical activity, the material represented by those samples shall be disqualified for use as topsoil.

   SOLUBLE SALT TESTS indicating salt content in parts per million (ppm) shall be provided. If the tests disclose soluble salt concentrations in excess of 1000 ppm, the material represented by those samples shall either be disqualified for use as topsoil or a cost effective reclamation process shall be recommended.

   PH TESTS shall be provided to measure acidity and alkalinity levels to assist in determining the availability of nutritional material in the soil, and the consequent ability of plants to extract materials from the soil.

   PHOSPHORUS, and POTASSIUM TESTS shall be provided to indicate the available nutrient levels in the soil.

2. Mechanical Analysis

   PERCENT SAND, SILT, and CLAY shall be provided. Turf grown on different soils may respond differently to the same fertilizer. It is therefore important to review and understand the soil type.

3. Laboratory Recommendation

   Rates for application of nitrogen, phosphorus, potassium, and agricultural ground limestone or sulfur shall be provided by the testing agency. Nutrients that are already available to the plants in adequate amounts shall not be added, and the use of phosphorus shall be minimized.

Soil samples shall be collected from a series of sub-sample points equally distributed across the area to be represented. These soil sub-samples shall be taken to a depth of 6 inches to 8 inches for each representative area. The sub-samples shall be thoroughly mixed together for each representative test area prior to testing. A minimum of 3 sub-samples shall be gathered for each soil sample area representing approximately 1 acre of in-place topsoil.

The Designer shall visually review areas such as ramp side slopes and snow disposal locations which show evidence of heavy erosion, poor turf growth, or salt saturation as possible locations for topsoil removal. A 6 foot wide strip of topsoil along the edge of the pavement shall be removed and disposed of on mainline and ramp widening improvements. This is in addition to soil in other areas identified for removal by visual inspection and/or topsoil testing.

Additional specifications for fertilizer application use on existing trees and sod can be found in:

- Care of Existing Plant Material, Section 201 of the Standard Specifications
- Ground Preparation for Sodding, Section 252 of the Standard Specifications

F. Seeding and Sodding Times

Description and Purpose:

Article 250.07 (Note 7) of the Tollway Supplemental Specifications and Article 252.04 of the Standard Specifications provide seeding and sodding dates. The Designer shall carefully consider the seasonal planting limitations for each seeding and sodding item and coordinate their timing into the construction schedule.

G. Selective Mowing Stakes

Pay Item:

25000775 – SELECTIVE MOWING STAKES, EACH

Description and Purpose:

Selective mowing stakes may be used in conjunction with seeding, in compliance with Article 250.08 of the Standard Specifications. Selective mowing stakes are installed to assist the maintenance crews by clearly directing future mowing activity at approved locations.

H. Mulch, Erosion Control Blankets

Pay Items:

25100105 - 25100135 – MULCH, Various Methods
25100630 - 25100900 – Various Erosion Control Blankets
JI251010 - EROSION CONTROL BLANKET, BIODEGRADABLE NETTING
JI251015 - HEAVY DUTY EROSION CONTROL BLANKET, BIODEGRADABLE NETTING

Description and Purpose:

Mulch is a protective covering of organic material laid over the soil to prevent erosion, retain moisture, retain seed, and protect plantings.

These items consist of furnishing, transporting, and placing straw and/or wood fiber mulch on seeded areas (Article 251.03 of the Standard Specifications and Tollway Supplemental Specifications). Material must be in conformance with Article 1081.06 of the Standard Specifications. Refer to IDOT's *Bureau of Design and Environmental Manual*, Sediment Control Practices Reference Table (Figure 41-3.C) for treatments to be considered and recommended.

Article 251.04 of the Standard Specifications provides guidance on placing erosion control blankets on seeded areas. Materials must be in conformance with Article 1081.10 of the Standard Specifications.

These items can be used in conjunction with Section 250 (Seeding), Section 253 (Planting Woody Material), Section 254 (Planting Perennial Plants), and subject to Article 1081.06 requirements.

Application:

Mulch, Straw, Fiber, Compost

- Use with seeding on slopes up to 1:10 (V:H) unless erosion control blanket is provided; and
- Provide erosion control blanket when slopes meet or exceed 1:10 (V:H).
- Provide sod or erosion control blanket in swales.

1. Mulch Method 1

    - Mulch Method 1 comprises the application of loose straw mulch by hand or machine.
    - Use in flat areas where wind displacement will not carry mulch onto the roadway or off Tollway property.
    - Apply at a rate of 2 tons/acre.

2. Mulch Method 2

    - Mulch Method 2 comprises the application and stabilization of straw mulch by mechanical or chemical procedures.

    - Unless dictated by the necessities of the project or other reasons where, in the Designer's judgment, one procedure is preferable, the Contractor should be allowed to use any or all of these procedures interchangeably.

    - Procedure 1 comprises the mechanical stabilization of straw mulch by packing it into the soil with dull blades or disks pulled by a tractor. This procedure is particularly suited for large open areas where the maneuvering of the tractor and packer is not impeded.

    - Apply straw mulch at the same rate as Method 1.

    - Procedure 2 comprises the placement of straw mulch by blower, followed by an overspray of hydraulic mulch. This procedure is particularly suited to confined areas where access by a tractor might be difficult and on areas which have been hydroseeded.

    - Apply straw mulch at the same rate as Method 1.

    - Apply hydraulic mulch at a rate of 750 pounds/acre and water at a rate of 1,000 gallons/acre.

    - Procedure 3 comprises the application of chemical stabilizer to blown straw mulch. The chemical binder and application rate must be accepted by the Engineer prior to use to insure the product is environmentally safe and acceptable.

    - Apply straw mulch at the same rate as Method 1.

    - Do not use gypsum or plaster-like binders.

3. Mulch Method 3

    - Mulch Method 3 is not used individually on the Tollway.

4. Mulch Method 4

    - This method consists of applying compost combined with a performance additive designed to bind/stabilize the compost.

    - The compost/performance additive mixture shall be applied to the surface of the slope to a depth of 2 inches using a pneumatic blower.

    - Mulch Method 4 can be used if determined by the Designer and reviewed by the Tollway Landscape Architect.

Erosion Control Blanket:

- These items are typically more effective than mulch alone and consist of furnishing and installing erosion control blankets as shown on the plans or as directed by the Engineer.

- Because of continuing new technology in erosion control, the Designer is encouraged to explore new methods and materials beyond those shown in the Standard Specifications for erosion control and turf reinforcement. The Designer should be familiar with such products and recommend their use when appropriate. For example, if there is a slope failure as a result of regular subsurface drainage, other methods shall be employed to correct the problem prior to application of erosion blanket surface treatments or when innovative methods and/or materials may be beneficial to prevent scour at drain outlets.

- Erosion blankets are typically used in conjunction with permanent seeding, as per Section 250 of the Tollway Supplemental Specifications and Article 1081.04 of the Standard Specifications.

    1. Erosion Control Blanket, Biodegradable Netting

        - This item is a single net Rolled Erosion Control Product (Erosion Blanket) intended for short term use on shallow slopes. The netting is intended to biodegrade in 90 days. This product is described in Articles 1081.10(a) and (b) of the Standard Specifications.

        - Excelsior Blanket or Knitted Straw Mat can be used interchangeably.

        - To be used in conjunction with permanent seeding, Section 250 of the Tollway Supplemental Specifications.

        - Use in swales where the hydraulic shear is less than 2.1 pounds per square foot.

        - To be used on all slopes within a 30 foot wide strip adjacent to the roadway and ramp pavements where wind and debris create a difficult environment for seed germination.

        - May be used with Temporary Ground Cover, Article 280.04(f) of the Standard Specifications, for temporary erosion control in swales with a maximum velocity of 6 feet per second.

    2. Heavy Duty Erosion Control Blanket, Biodegradable Netting

        - This item is a double net Rolled Erosion Control Product (Erosion Blanket) intended for short term use on shallow slopes. The bottom netting is intended to remain in service as turf reinforcement. This product is described in Article 1081.10(c) of the Standard Specifications.

- To be used as a permanent, non-degradable liner primarily to stabilize channel configurations while permanent vegetation is establishing. This blanket works best when drainage can be diverted until turf is established.

- To be used as permanent lining in swales where the hydraulic shear is between 2.1 and 6.0 pounds per square foot.

- To be used with permanent seeding of specified channels or ditches with velocities between 4 feet and 6 feet per second.

- When velocities exceed 6 feet per second, line channel or ditch per Tollway DDM, Section 7.0 – *Ditch and Channel Design*.

- May be used for temporary erosion control in swales with velocities between 6 feet and 17 feet per second.

When using turf reinforcement mat, preference should be given to types that have open patterns that readily allow vegetation to grow through.

I. Sodding

Pay Items:

25200100 – SODDING
25200110 – SODDING, SALT TOLERANT

Description and Purpose:

In general, sodding (native) is to be used in a limited basis at specifically designated areas, such as toll plazas, ditches, maintenance buildings, oasis or other support complexes. Sodding (salt tolerant) shall be used in designated areas within 30 feet from the edge of pavement. Salt tolerant sod may also be considered for use in drainage ditches where flow velocities do not exceed 4 feet per second and slope is no more than 10%. A channel lining shall be required where the flow velocity exceeds 4 feet per second and ditch slope exceeds 10%. For additional details see Section 252 of the Standard Specifications and the Tollway DDM, Section 7.0 *Ditch and Channel Design*. Sodding shall be done in conformance with Article 1081.03 of the Standard Specifications.

J. Watering and Supplemental Watering

Pay Item:

25200200 – SUPPLEMENTAL WATERING

Description and Purpose:

Supplemental watering may be required for sod during periods of heat or drought, per Article 252.09 (Sodding) of the Standard Specifications.

Application:

- During the period of establishment, watering is typically incidental for woody plants (Article 253.15 of the Standard Specifications) and Perennial Plants (Article 254.09 of the Standard Specifications), and is not considered supplemental.

- If woody plant supplemental watering and seeding supplemental watering is needed, it should be provided in the Special Provisions for each contract.

- Supplemental Watering is used in conjunction with sodding and is most critical during the initial 60 day establishment period. This item is typically used to supplement the contractors required watering during the first 30 days in the event of hot or dry periods, and/or for watering needed beyond the first 30 day growing period. This item is not required for seeding.

K. Herbicide and Weed Control

Description and Purpose:

Weed control should be used for weed management opportunities and may be needed either before planting or during the period of establishment. Weeding for woody plants shall be done during the period of establishment per Article 253.15 of the Standard Specifications and at the end of the period of establishment for perennial beds per Article 254.09 of the Standard Specifications. Additionally, weed control may be required at the direction of the Engineer.

Weed control may be accomplished through the use of Weed Barrier Fabric, as specified in Article 1081.14; mulch for woody plants, as specified in Article 253.11; or mulch for perennial beds, as specified in Article 254.07 (all of the Standard Specifications).

L. Filter Fabric

Pay Item:

28200200 - FILTER FABRIC, SQUARE YARD

Description and Purpose:

Filter fabric is used to provide a separation between fine grained and open graded materials in order to prevent intermingling of the materials. For example, it may be used to separate planting mix from drain stone, drain stone from subgrade, or planting mix from coarse subgrade. Filter fabrics must be in accordance with Article 1080.03 of the Standard Specifications.

4.2.2 Planting, Removal, and Care

Per Sections 253 and 254 of the Standard Specifications, all placements of plantings along the roadside shall comply with Tollway and AASHTO safety recommendations, including those for clear zones and distance from signage, and shall follow the overall guidelines to blend the facility into the surrounding areas.

When trees must be removed, opportunities for providing replacement shall be pursued (See Appendix 10). The addition of vegetation can be reviewed once all existing desirable vegetation has been protected.

The adjacent land use and topography shall provide direction for the intensity of the planting. Rural areas may require little or no planting, while more urban sites may be more heavily planted in an effort to blend into the adjacent community. A natural and sustainable landscape shall be the basis for all roadside design.

A. Clearing, Tree Removal and Protection, Care and Repair of Existing Plant Material

Pay Items:

20100110 through 20101700

Description and Purpose:

Clearing shall consist of removal and disposal of obstructions, logs, and vegetation according to Article 201.01 of the Standard Specifications. Clearing should be used when vegetation interferes with construction activities, when dead or diseased trees are present in the work zone, or as directed by the Tollway, except when specified in the plans that the tree should be protected. The Designer and CM shall review and inventory the existing vegetation and complete site inspections to save or protect existing vegetation of value, whenever possible.

Application:

- Care of existing plant material consists of pruning, fertilizing, and watering of existing vegetation to remain, and shall be done in accordance with Articles 201.05 – 201.06 of the Standard Specifications. Repair or replacement of existing plant material consists of restoring plants damaged by the Contractor to its original condition, per Article 201.07 of the Standard Specifications. The need for protection or repair of existing plant material will be made by the Designer during the design phase or the CM during the construction phase. These determinations will be made based on field inspections, project specific conditions, and professional judgment. Plant material damaged by the Contractor shall be repaired at no additional cost to the Tollway.

- The need for the repair or replacement of existing plant material should be evaluated.

B. Planting Woody Plants
Planting Perennial Plants

Pay Items:

A2C00G03 through B2013916 – TREES, Various
C2C00124 through C3006024 – SHRUBS, Various
D20C00412 through D2015401 – EVERGREENS, Various
E20010G1 through E20330Q1 – VINES, Various
F2001072 through H20040Y2 – SEEDLINGS, Various
K0012970 through K0013110 – PERENNIALS, VARIOUS

Description and Purpose:

Landscaping within the Tollway ROW accomplishes multiple purposes, including permanent erosion control, aesthetics, and visual screening of adjacent residential or commercial properties. It is important to design this border to be aesthetically appealing, but it is also important to provide a landscape that is functional and easily maintained. Maintenance activities, such as mowing, can be minimized through the use of woody (trees, shrubs, evergreens, vines) or perennial herbaceous plants (ornamental plants or native plants, including wetland, woodland, or prairie plants). Plants should be chosen based on general landscape design, location, growing requirements, maintenance requirements, and aesthetics. Materials for planting of woody and perennial plants should be done in conformance with Section 1081 of the Standard Specifications.

Application:

- The Tollway may initiate adjacent landowner or municipal outreach. The adjacent entities may provide input for the Tollway to consider, and may result in cost-participation by the local entity to increase quality or quantity of the landscape plan.

- All placement of plantings along the roadside shall comply with Tollway and AASHTO safety recommendations, including clear zones and distance from signage, and shall follow overall guidelines to blend the facility into the surrounding areas.

- When trees must be removed, opportunities for providing replacement shall be pursued (See Appendix 10, Preservation, Removal and Replacement of Trees). The addition of vegetation can be reviewed once all existing desirable vegetation has been protected.

- The adjacent land-use and topography should provide direction for the intensity of the planting. Rural areas may require little or no planting while more urban sites may be more heavily planted in an effort to blend into the adjacent community. A natural effect should be the basis for all roadside design.

- The Landscape DSE should also address maintenance, such as mowing. Maintenance activities can be minimized through the use of woody (trees, shrubs, evergreens, vines) or perennial herbaceous plants (ornamental plants or native plants, including wetland, woodland, or prairie plants). Plants should be chosen based on general landscape design, location, growing requirements, maintenance requirements, and aesthetics.

4.2.3 Protection of Existing Resources

Certain existing landscape features, whether manmade or natural, shall be protected through a process of identification; enhancement, restoration, or preservation; avoidance; or incorporation into the design of the highway improvement. A variety of techniques may be employed to protect identified resources, including both temporary and permanent measures, as appropriate. The appropriate technique shall be determined during the design concept phase. Consider the following when protecting existing features.

A. Review Previous Commitments

Review commitments in environmental documents, tree surveys, wetland reports, public hearing records, and other project documents for areas requiring protection during project development and implementation.

B. Statute Protection

Determine which features of the project area are protected by statute. These may include wetlands, endangered species, nature preserves, natural areas, and cultural sites.

C. Cultural Environment

Establish the project's setting or cultural environment. Determine if the project is in a rural, urban, or a transitional area. The design shall be influenced by the cultural and physical environment adjacent to it. Existing features shall be protected when possible.

4.2.4 Grading and Alignment

The portion of the design process concerning alignment and grading offers the best opportunity to fit the highway into the landscape, thereby avoiding unnecessary environmental impacts and yielding a functional and aesthetically pleasing form. The basic guidelines for grading and alignment are included in the AASHTO-"*Guide for Transportation Landscape and Environmental Design".* In addition, consider the following:

A. Environmental Commitments

During Master Planning, ensure that all environmental commitments, including the EVA and tree inventories, are reviewed and noted so that these issues can appropriately influence alignment and grading decisions. These commitments will also serve as controls during Design Phase plan preparation.

B. Surrounding Landscape

Give consideration to the surrounding landscape. Blend the alignment and grading to fit the existing topography with minimal visual or physical disruption. Where appropriate, screen unsightly views of industrial areas, junkyards, etc. Vegetative screens should also be provided as visual buffers for residential development.

C. Clearing and Construction Limits

Carefully plan and define the establishment of clearing and construction limits. Consider both existing landscape features and critical areas.

D. Plant Survival

Consider the survival potential of both existing plantings to be preserved and proposed plantings at the time that grading decisions are made. Existing plantings are vulnerable when there is the potential for disturbance to root zones or drainage patterns. This is especially critical in confined areas where landscape features such as screening are proposed.

4.2.5 Erosion Control

The measures incorporated in the Landscape Plans shall permanently protect the site from erosion and sediment damage to adjacent sites.

Every effort shall be made to schedule the permanent erosion control to be completed as early as practical, to minimize the cost of the temporary control measures.

All projects shall comply with current provisions of the EPA's "Clean Water Act" (see Tollway DDM). Erosion control plans shall clearly describe the location, type of controls, and scheduling to be implemented in each stage of construction. Special resources, such as wetlands, shall be clearly identified along with erosion protection measures. Specific project needs, problem areas, and erosion control philosophy shall be identified and discussed at the erosion and sediment control Preconstruction Meeting. The Preconstruction Meeting also includes a field review.

4.2.6 Drainage

Design of the highway drainage system shall be part of, and not separate from, the natural hydrology of the environment. Consider the environmental impacts of drainage, stormwater management, detention or retention basin design shapes, and the impact that water retention and/or soil saturation will have on existing or proposed plant material.

See the Tollway DDM for more detailed guidance.

4.2.7 Visual Quality

Encouraging a visual change that will improve or enhance the surrounding landscape ensures a project's visual quality. Define the visual environment by identifying key views, analyzing resources, depicting the project's proposed appearance, and assessing its visual impacts. Manmade features such as buildings, bridges, retaining walls, sound walls, and other structures shall also be assessed during the project design and integrated successfully into the Illinois natural landscape.

To support the reduction of maintenance and enhance visual quality in a project, evaluate the project's relationship with regards to the following:

- natural landscape elements,
- topographical and physical characteristics,
- ecological influences,
- residential areas and their character,
- historical features,
- visual and psychological values,
- existing land uses, and
- existing and proposed project profile and structures.

4.2.8 Safety

Safety shall be the highest functional goal of every Tollway design, and all landscape and environmentally based design principles must be compatible with such criteria.

During design, consider the following:

- soil erosion/pollution control;
- the location, size, and height (mature size, height) of plantings in relation to sight distance, drainage, and clear zones;
- pedestrian safety in areas such as oasis areas, toll plazas, and bikeways;
- reduction of headlight glare;
- directional and feature delineation or screening;
- snow drifting and environmental conditions control; and
- sound abatement.

4.2.9 Historical Influences

Historical influences may affect the project by way of a nearby destination, an adjacent feature, or in some cases, as a part of the roadway or its appurtenances. Pay particular attention to such influences and prepare the project design to be compatible or to harmonize with them. Historical markers, structures, districts, and bridges all may influence the design of a project. Required avoidance of, or mitigation of impacts to, historical resources is usually identified in early project coordination, but the Landscape DSE shall be alert for any unidentified items. Special consideration may need to be given to landscape treatment within designated National Register Historic Districts.

4.2.10 Planting Treatments

A. Treatment of Mainline ROW

1. Roadside plantings under normal conditions are viewed at high speeds. The amount, spacing, and size of planting shall be sufficient to produce a grouping that will be recognized by the passing motorists. At high speeds, the angle of a driver's vision narrows and distant views are held for a longer time. Therefore, typically, lineal and more extensive swaths of planting masses shall be used along mainline locations with decreasing plant bed size near or at plazas.

2. There should be an overall naturalistic theme for the landscape design, with groups of primarily native trees following free form lines, unless a specific localized design intent requires a more formal planting. Shrub planting beds shall follow contour lines in defined, intentional shapes. Shrubs shall be spaced close enough so plants grow together, reducing future maintenance.

3. Maintenance shall be a prime consideration of the landscape design. Integration of tree, shrub, and turf areas shall be designed to minimize mowing around individual plants. This may be achieved by using architectural mow lines to create areas where mowing is reduced and by planting predominantly in natural groupings. Trees shall be located within no mowing zones or reduced mow areas whenever possible. Selective Mowing Stakes, shall be considered to delineate areas that do not require mowing.

4. All tree and shrub plantings shall be kept out of the clear zone as defined in AASHTO - *Roadside Design Guide*. The clear zone along the mainline varies based on the steepness of the slopes and design speed Refer to the Tollway's Traffic Barrier Guidelines for more information. Typically, tree and shrub plantings shall not be located within Zone 1 as shown in Figure 2-Article 4.2.1B, General Seeding Zones.

5. The need for salt tolerant plant material and maintenance concerns limit the Designer's choice of plant material. However, where possible in Zone 2, in areas where there is increased ROW, the Designer may expand the range of plant material to include a variety of tree and shrub material.

6. All public and Tollway utilities, including overhead wires, shall be carefully reviewed and located when determining locations for plant material during the design. Tall growing trees shall not be proposed where conflict with overhead wires is possible. Trees shall not be planted where the spread of its branches could interfere with or obstruct the lighting of any luminaries or signs.

7. Locations adjacent to wooded areas may require agency coordination and plantings to create the effect of bringing the woods onto the ROW. This design principle helps to break up the appearance of cleared linear roadway space, and better blends the project into the surroundings. Tree species shall be similar to those in the existing wooded area, if possible.

8. Trees and shrubs shall be planted in natural groupings rather than individual specimens whenever possible. Individual plantings may be considered only when accentuating a site or architectural feature is desirable.

9. The Landscape DSE shall check with the Tollway coordinator to locate any areas where experience has demonstrated the need for control of drifting snow. Proper shrub plantings shall be considered at these locations to form a snow barrier to control drifting.

10. Examine the highway alignment to determine where to maximize the visual experience and safety. Screening of undesirable views and enhancing scenic views shall be considered in order to provide less distraction to motorists. In order that natural features may be preserved, the Tollway Landscape Architect will be consulted during the conceptual planning stage.

11. When planting is desirable near signage, the appropriate plants shall be positioned behind highway signs. This shall be done only to provide a background or frame for better visibility, and shall not obstruct views to any signage. Plantings near signs shall be positioned so that there is enough space between the plantings and the sign for a mower, or the sign is to be positioned in the planting bed. Plantings shall not be placed where they may interfere with the operation of any breakaway devices.

12. Existing trees shall be conserved and protected whenever practical. When removal of existing vegetation is required, the Landscape DSE shall consider the Tollway's tree replacement policy and where appropriate, add additional plant material to help compensate for their loss. The trees to be saved, the method of protection, and any maintenance requirements shall be shown on the construction plans.

13. The design shall take into consideration salt spray and drifting from winter plowing operations. Assume winter winds will be predominantly from the north, northwest, and west. Salt drifting can carry up to approximately 150 feet, with heavy concentrations of salt spray up to 30 feet from the edge of pavement. The design shall address ramps, plazas, and other areas where concentrations of salt saturated surface runoff may affect adjacent turf.

14. Large planting projects may include a small percentage of fast growing trees to provide the immediate benefit of large plant material while slower growing plants mature.

15. Subsurface drainage on cut slopes that interferes with soil sediment control or proper vegetation establishment shall be identified and evaluated for repair.

B. Treatment of Drainage Channels and Ditches

Ditch bottom erosion, and the depositing of sediment from the erosion of side slopes, are prevailing problems with ditches. Erosion control treatment of these slopes shall be handled in accordance with Article 3.2.1 of this manual, to insure minimum sedimentation of drainage ways during turf establishment.

A minimum of 0.3% longitudinal slope shall be maintained in any channel and ditch bottom where positive drainage is expected. Flatter minimum grades will produce pockets of standing water and cattail growth, and may increase the need for future maintenance. For roadside ditches with a longitudinal slope less than 0.3% (i.e., due to some special local conditions), a ditch lining shall be provided. Consult the Tollway DDM for details.

The ditch cross section shall typically be trapezoidal in shape and maintain a 6 foot wide bottom whenever possible. (Per the Tollway DDM, ditches must maintain a minimum 4 foot wide bottom.) The erosion control measures may be salt tolerant sodding, erosion blanket lining with salt tolerant seed, or open cell articulated concrete block mats, depending on specific slope and hydraulic conditions. Any other available erosion control products existing on the market can be used if cost effective, upon the acceptance by the Tollway PM.

See Article 4.2.1, Paragraph H for applications of Erosion Blankets. When seeding is used in ditch bottoms, it is best to restrict flowing water until turf is established. When sodding is used, water velocities up to 4 feet per second may remain without being restricted during establishment. Properly placed sod is normally the preferred cover in swales because there is no time lag between installation and the time when the channel is protected by vegetation. Sod also offers more flexibility in the timing of installation than seeding. Channel lining shall be required where the design discharge velocity exceeds the scour velocity of the soil. See Tollway DDM Section 7.0 – *Ditch and Channel Design Section* for additional information.

Trees or shrubs shall not be planted in or near drainage ways where their presence would interfere with the flow of water or access to drainage structures.

C. Treatment of Toll Plazas

The pavement at toll facilities may receive increased salt applications during winter snow removal. The Landscape DSE shall consider salt drifting and higher concentrations of brine associated with snow plowing operations in these locations. Pavers matching the building materials, or other sustainable options, shall be considered at appropriate locations along curbs and adjacent to pavements into turf areas. The paver's width shall be approximately 24 inches wide. The Landscape DSE may consider material that compliments the building at manned toll plazas.

Plantings around manned plazas shall leave views open from the toll plaza to the adjacent mainline travel lanes. All plaza plantings shall avoid plant types and massing that people or vehicles could hide in or behind, or cause visual obstructions for safety or security. These plantings shall be selected from the most salt tolerant plants on the plant schedule. Appropriately placed irrigation links shall be considered at Manned Toll Plazas to allow easy irrigation hook-ups for plant material.

D. Treatment of Interchanges

All new interchange projects require evaluation for design opportunities and landscape plantings. The actual quantity of landscape material used will vary depending on the surrounding terrain and the details of the specific interchange. Trees shall be used to blend the improvement into the surrounding area and the use of shrubs shall typically be minimal. The use of low profile native grasses is encouraged in the interior of appropriate infields to reduce mowing. Interchanges and ramps may be viewed as gateways to some local communities. The Landscape DSE shall consider any defined character developed by local municipalities when preparing design concept options.

It is important to plan for the use of salt on ramps. Damage to turf areas where pavement runoff exits the pavement shall also be addressed in the design. Erosion blanket shall be used on all slopes within 30 feet of the edge of pavement on the ramps. Curb and gutter should be on ramp shoulders in locations shielded by guardrails or where flow concentrations require its use. Surface and subsurface drainage outlets shall be located to minimize erosion potential of concentrated water outfalling on slopes.

When additional subgrade is available on-site, the Designer shall consider reducing the steepness of slopes as much as practical on crossroad embankments. This may reduce project cost and guardrail quantity, increase safety, decrease maintenance, and improve aesthetics.

E. Treatment of Maintenance Facilities

These sites may benefit from plantings that serve to screen portions of the site from the roadway. Screening of undesirable views and enhancing scenic views shall be considered to provide less distraction to the motorists.

The runoff from these sites may contain high concentrations of salt or other material being stored at the facility. Therefore, salt-tolerant vegetation shall be used where practical. Use of a vegetative filter strip where the runoff leaves the site is recommended.

4.2.11 Protection of Existing Plants

Preservation measures shall be evaluated whenever existing vegetation is present in the construction area or when adjacent existing vegetation may be effected by the construction operations. See Article 3.2.4 – L. Tree Protection in this manual, and the Tollway Standard K1 Drawings for tree protection detail. The following summarizes the key points in the Tollway's policy on treatment of trees. The complete policy is included as Appendix 10 in this manual.

A. Removal of Trees

In deciding whether trees should be removed, the environmental, aesthetic, and functional value of the trees must be considered, along with the potential hazard posed by the trees. An on-site inspection shall be made by a team which includes expertise in roadside safety, landscape architecture, and environmental impact analysis to help evaluate these factors.

B. Replacement of Trees

A landscape inventory is typically made during the Phase 1 project planning stage. A minimum quantity of replacements shall be established based on the Tollway criteria for removal and replacement of trees. In summary, trees with a trunk size of 6 inches or more diameter at breast height (DBH) and other desirable trees planted within the previous 15 years shall be replaced. Minimum ratios for replacement of trees shall be as provided in Appendix 10 and as determined by analysis of the vegetative assessment information.

4.2.12 Plant Materials

Roadway trees often have reduced growth rates compared to their woodland counterparts. Salt drifting, harsh microclimates, and low maintenance are some of the conditions that affect the roadway landscape. Generally, native or indigenous plants are most suited to meet these conditions. Only plants within the hardiness zones of the specific landscape project shall be specified (as designated in the current publication, *Plant Hardiness Zones*, by the Agricultural Research Service, U.S. Department of Agriculture). See Appendix 11 for details.

A. Size

The favored planting size for shade trees is from 1 inch to 2 ½ inches DBH in caliper (diameter), intermediate trees and evergreen trees between 4 feet and 6 feet in height, and shrubs between 18 inches and 30 inches in height. These sizes are general requirements and shall be evaluated for each individual project and plant species. Some specimen trees near plazas or other features, for example, may be larger than typical mainline plantings. Using larger sizes provides immediate visual impact but requires longer periods for the plant to become established and therefore increases maintenance.

B. Root

All deciduous trees larger than 1 inch DBH in caliper or 4 feet in height shall be specified as “balled and burlapped root type”. All evergreen trees shall be specified as “balled and burlapped” root type. Shrubs shall be specified as either “balled and burlapped” or “container grown”. Bare root material may be used for smaller plant material but shall be approved by Tollway’s Landscape Architect prior to specifying.

C. Plans and Legend

When the scope of work includes the planting of trees and shrubs as part of the general roadway improvement plans, a separate Plant Materials List shall be included in the plans in addition to that provided in the Summary of Quantities (See Table 3). If conditions prevent the planting work from being performed concurrently, the landscape plans shall be able to be removed and function independently.

Table 3
Landscape Materials List

Pay Item	Description	Unit	Quantity	Record Quantity	Comments
20101400	Nitrogen Fertilizer Nutrient	Pound	300		30 pound/acre
20101500	Phosphorus Fertilizer Nutrient	Pound	1200		10 pound/acre
20101600	Potassium Fertilizer Nutrient	Pound	1800		90 pound/acre
25200110	Sodding (Salt Tolerant)	SY YD	8,500		No fertilizer
JIA20011	Tree, *Gleditsia Triacanthos Inermis* Skyline (Skyline Thornless Common Honey Locust), 1-1/2" Caliper, Balled and Burlapped	Each	36		Specimen qual. B&B root
JIA20020	Tree, *Quercus Macrocarpa* (Bur Oak), 1-1/2" Caliper	Each	50		Specimen qual. B&B root
JIC20010	Shrub, *Lonicera Tatarica* Arnold Red, (Arnold Red Tatarian Honeysuckle), 6" Height	Each	32		Specimen qual. B&B root
JIC20015	Shrub, *Cephalanthus Occidentalis* (Button Bush) Container Grown, 3-Gallon	Each	160		Full specimen
JI251010	Erosion Control Blanket, Biodegradable Netting	SQ YD	104,544		Observe stapling Requirements

JS250220	Seeding, Class 2E	Acre	21.6		Salt tolerant
JT253020	Summer Watering	Unit	102		
K0026710	Tree Care Mulch	Lump Sum	1		

The Designer shall work with Tollway and local nurseries to determine the availability and condition of the plant types selected. If specific plant types are not available, the Designer shall work with Tollway to find suitable alternates.

Shade Trees :

Acer platanoides, Norway Maple*
Acer nigrum, Black Maple
Celtis occidentalis, Hackberry
Gleditsia triacanthos var. inermis, Honeylocust, Thornless*
Ginkgo biloba, Ginkgo*
Gymnocladus dioica, Kentucky Coffeetree*
*Quercus Alba, White Oak**
Quercus bi-color, Swamp White Oak
Quercus macrocarpa, Bur Oak
Salix alba var., Weeping Willow*
Tilia americana, American Linden

Intermediate Trees :

Acer campestre, Hedge Maple*
Acer tataricum, Tatarian Maple
Crataegus crus-galli 'thornless', Cockspur Hawthorn
Malus varieties, Crabapple, several varieties

Evergreen Trees :

Picea abies, Norway Spruce
Picea pungens, Colorado Spruce*
Pinus nigra, Austrian Pine*

* Designates Salt Tolerant Species

Shrubs :

Cornus racemosa, *Gray Dogwood*
Euonymus alatus, Winged Euonymus
Forsythia intermedia, Border Forsythia
Lonicera xylosteoides, Clavey Honeysuckle
Lonicera tatarica, Tatarian Honeysuckle
Rhus Aromatica, Fragrant Sumac
Rhus typhina, Staghorn sumac
Ribes alpinum, Alpine currant
Spiraea bumalda 'froebeli', Froebel Spirea

Syringa vulgaris, *Lilac,* several varieties
Viburnum, Viburnum, several varieties

D. Graphic Symbols

See Appendix 9 for sample drawings used with the Landscape Plans.

E. Recurring General Planting Notes

1. The plant locations shown on the plans are approximate only. The exact locations shall be staked by the Engineer and reviewed by the Tollway's Landscape Architect prior to excavation of any plant pits or beds. The Contractor shall review staking locations and discuss any revisions needed to avoid utilities or any other elements prior to digging operations.

2. The Contractor shall verify the location of all underground utilities and structures in the field prior to the excavation of any plant pit or planting bed. The Contractor shall be responsible for the protection of all underground or surface utilities even though they may not be shown on the plans. Any utility that is damaged during construction shall be repaired or replaced at the Contractor's expense, to the satisfaction of the Engineer.

3. Salt tolerant sodding shall be installed at the bottom of ditches and to a point 2 feet above the ditch invert where flow velocities do not exceed 4 feet per second and the slope is no more than 10%, or as directed by the Engineer.

4. All plant material shall be of specimen quality and at a minimum comply with the American National Standard Institute (ANSI) SECTION Z-60.1 *American Industry Standards for Nursery Stock*, 2004 or current issue.

5. Any turf areas outside the construction seeding limits which are disturbed shall be repaired, reseeded, and covered with erosion blanket, or sodded, to the satisfaction of and as directed by the Engineer, at the Contractor's expense.

6. All plant material root types shall be balled and burlapped, unless otherwise specified.

7. The Contractor is required to comply with all State and Federal regulations regarding air, water, and noise pollution.

4.2.13 Restoration of Staging Areas

When a staging area is provided in the design, Restoration Plans shall be provided in the contract documents. When staging area restoration is not required in the contract plans, the Contractor shall provide a Restoration Plan for review and acceptance by the Tollway. The Contractor shall obtain a permit from the Tollway and post a bond for the completion of restoration work. Requirements for Use of Tollway Property to Support Construction Activities form shall be completed and provided to the Tollway. This form (found in Appendix 12) details general requirements for the use of staging areas and documents efforts needed to support this activity.

When the staging site is ready to be restored in accordance with the approved Restoration Plan, the CM will advise the Tollway's PM and Landscape Architect. At that time, any replacement trees may be tagged and inspected at the nursery prior to arriving at the site. Once the final grading and permanent seeding work is completed, inspected, and approved, the tree locations may be staked by the Tollway's Landscape Architect. The Contractor shall maintain and guarantee the trees in accordance with the Standard Specifications and Provisions.

4.3 Landscape Plans

The landscape plans, special provisions, and ESCP's that are part of the total erosion and sediment control program for the site must identify all measures to be installed; indicate a planting schedule; and provide maintenance, care, and fertilizer requirements. Maintenance, care, and fertilizer shall be for a 2 year establishment period (Standard and Supplemental Specifications Section 253). Incorporate a tree preservation plan and define what standard drawing/specification is to be used to ensure that the correct measure is applied. See Appendix 9 of this Manual for example of Landscape Drawings developed for the Tollway and refer to Standard and Supplemental Specifications.

The background documentation maintained by the Designer shall meet the requirements in the Tollway *Environmental Studies Manual*. This documentation shall also identify any special requirements used to select specific measures.

Additional Special Provisions may be developed for payment of plant care, materials, and labor needed to encourage the proper health of the plantings over the establishment period.

4.4 Responsibilities

Below is a discussion of the responsibilities of the various entities.

4.4.1 Illinois Tollway responsibilities include:

- will facilitate the coordination necessary with other agencies and local governments;
- will determine, with the assistance of the Designer, the potential impacts of the project and the need for permits and/or approvals. The impact of the project and need for permits and/or approvals shall be identified by the Landscape DSE.
- The Tollway will review the plans prepared by the Designer for technical adequacy, compliance with the Landscape Goals established for the project, and confirm that the bid schedule includes all relevant measures.
- **Tollway Staff Responsibilities:**
  (Description of staff responsibilities can vary by contract and is for guidance only.)

A. Tollway Project Manager (PM)

The PM will be the primary point of contact with the Designer. The PM will be responsible for ensuring that the Designer complies with the directives of this section and for disseminating information and submittals to the appropriate individuals. Permit submittals, when needed, shall be prepared by the Designer and submitted to the PM. The PM will submit permit applications to the appropriate agencies.

B. Tollway Environmental Planner (EP)

The Environmental Planner (EP) will be responsible for ensuring that the PM, and therefore the Designer and the Landscape DSE, is aware of how environmental concerns effect the project or study. The EP will review all related submittals, including permit applications to the Tollway by the Designer, and other reports and contract documents as necessary, and will ensure that the landscape plans are in compliance with the Landscape Goals for the project. The EP will be the primary point of contact with state and federal resource and regulatory agencies.

C. Tollway Landscape Architect

The Landscape Architect will primarily administer the Tollway policy and procedures for the application and planning of natural elements, and the reduction of impacts on the landscape, including but not limited to, vegetation. The Landscape Architect will administer Tollway policies and procedures with a concern for stewardship and conservation of natural resources, aesthetics, and sensitivity to the community, with the goal of constructing roadways that improve mobility while enhancing the qualities of a place. The responsibilities of the Landscape Architect can vary by contract. The Landscape Architect, on a typical project, will guide the work as follows:

- advise the Designer, EP, Landscape DSE, and other members of the project team on in-the-field site investigations, the systematic examination of the site, the collection of site data, and analysis of existing site conditions;
- review the Issues and Opportunities Diagram and EVA to assist in establishing the Landscape Goals for the project;
- review any landscape design standards developed by County, local agencies, or municipalities with the Designer and the Landscape DSE, and determine to what extent they should be adopted for use on the project;
- assist in establishing the Landscape Goals for the project;
- advise the Designer and the Landscape DSE on the selection of plant material and on the site and landscape design direction;
- make the final assessment of the plant material selected to determine its suitability for site conditions and salt tolerance;

- approve the selection of bare root plant material where appropriate;
- review any addenda for compliance with Landscape Goals of the project; and
- work with the CM to nursery tag plant material and review placement of plant material on-site.

4.4.2 Designer responsibilities include:

- ensuring that the approach to the project follows the principles of "Context Sensitive Design" as stated in Article 4.1.2. Design Approach of this manual.
- coordinating with the Tollway EP, Tollway Landscape Architect, the Landscape DSE, and other members of the project team to facilitate in-the-field investigations, systematic examination of the site, collection of site data, and the analysis of existing site conditions;
- ensuring that the finding of the data collection and analysis phase and the EVA is recorded on the Issues and Opportunities Diagram;
- verifying County or local agency requirements under the direction of the PM;
- reviewing any landscape design standards developed by County, local agencies, or municipalities with the Tollway's Landscape Architect and the Landscape DSE, and determining to what extent they should be adopted for use on the project;
- assisting in establishing the Landscape Goals for the project;
- reviewing current Tollway Standard Drawings, Specifications, and Supplemental Specifications for the latest criteria;
- ensuring that the landscape concept design is coordinated with the grading and drainage concepts;
- ensuring that the landscape design addresses all the issues and opportunities delineated on the Issues and Opportunities Diagram;
- ensuring that the landscape plans conform to Tollway Standard Specifications and Standard Drawings and preparing or directing the preparation of Plans, Special Provisions, and Special Drawings as required;
- reviewing design submittals to ensure that the landscape concepts are coordinated and complimentary to the proposed drainage, grading, and lighting designs; as well as for technical adequacy, compliance with the Landscape Goals established for the project, and confirming that the bid schedule includes all relevant measures;
- filling out and submitting to the Tollway the Landscape Design Submittal Checklist;

- assisting the Landscape DSE in making the final assessment of the plant material selected in determining its suitability for site conditions and salt tolerance;

- reviewing, if required, any addenda for clarity and accuracy;

- ensuring that background documentation meets the requirements of the Tollway *Environmental Studies Manual*; and

- attending the Erosion and Sediment Control Preconstruction Meeting.

4.4.3 Construction Manager (CM) responsibilities include:

- scheduling and holding the Preconstruction Meeting. See the Tollway's Web Based Project Management System for the most recent version of the A-40 form;

- nursery tagging, transporting, storing, and on-site locating of all plant materials in accordance with Standard Specification Sections 253 and 254 – Planting, under the guidance of the Tollway Landscape Architect;

- ensuring that the plant material and other landscape features are installed in accordance with the plans and specifications and consulting with the Tollway's Landscape Architect or other Tollway designated representatives if the landscape plans need to be changed;

- developing the A-37, Period of Establishment form, and providing copies to the Tollway PM, Tollway Landscape Architect, and Landscape Contractor (See the Tollway's web based project management system for the most recent version of the A-37 Landscape Period of Establishment form.);

- ensuring that electronic copies of these forms shall be filed in the Tollway's web based project management system.*;*

- Ensuring that the Landscape Design Submittal Checklist is filed in the Tollway's web based project management system.*;* and

- inspecting the installed measures, in cooperation with the Contractor's Landscape Manager, to ensure compliance with all plans, specifications, and procedures.

4.5 Approvals

4.5.1 Coordination with other Agencies/Municipalities

Tollway facilities cross and interconnect with State, Township, County, and Municipal properties and roadways. Requirements, design standards, or defined landscape character established by these agencies/municipalities should be followed, if possible, within, adjacent to, or leading to that agency's jurisdiction. Opportunities to expand local partnerships or apply innovative designs should also be explored. It is the responsibility of the Designer to obtain the requirements of all agencies within and directly adjacent to the project limits, as well as identify opportunities to expand local partnerships. The Designer, in coordination with the Tollway PM, shall evaluate these requirements and opportunities and determine their applicability to the Tollway project. The Tollway PM will be informed of all coordination efforts to be performed prior to contact being made with any agencies.

Special attention shall be paid in the coordination of the following:

- any public outreach or presentations that may be required by the municipality or agency in question;
- the potential of developing gateway treatments at the intersections, with roadways leading into towns or other important facilities;
- the potential of developing gateway treatments at the crossing of boundaries such as county lines, or the crossing of natural features such as rivers;
- the preservation of viewsheds that are deemed important by the municipality or agency;
- the screening of views to or from the Tollway facility; and
- the blending of the Tollway facility into the landscape character of its surroundings.

4.5.2 Coordination with other disciplines that are part of the project team

The character and concept for the landscape design will be developed in conjunction with the overall design team in an integrative design approach. The drainage systems, grading, and other elements must be part of the same overall landscape character as defined in the Landscape Goals developed for the project. Coordination with the other disciplines of the design team must take place throughout all phases of the project. The Landscape DSE shall consider structures, site furnishings, plant materials, topography, grading, swales, and ponds to develop innovative design solutions and collaborative problem solving. The design, however, must comply with the criteria as laid out in the Tollway DDM or other Tollway criteria, and must also place safety as the highest concern.

APPENDIX 1

NPDES FORMS

IN ORDER TO SATISFY THE EROSION CONTROL REQUIREMENTS AS OUTLINED IN THE NPDES PERMIT AND THE TOLLWAY SPECIAL PROVISION 111, THE FOLLOWING FORMS ARE REQUIRED:

FORM	RESPONSIBILITY	WHEN	WHERE TO SEND
1) Storm Water Pollution Prevention Plan (S.P.111.2 and Erosion Control Plan on all Projects)	Design Section Engineer*	At Pre-Final Plan Submittal	Keep in Project Erosion Control File
2) Tollway Certification Statement (in S.P. 111.2)	Design Section Engineer fills out and gives to Tollway	At Pre-Final Plan Submittal	To Tollway
3) Contractor Certification Statement, Individuals Responsible for Spill Prevention and Cleanup form, and Inventory for Pollution Prevention form (in S.P. 111.2)	Construction Section Engineer gives to Contractor and all Subcontractors involved in Erosion Control	At Preconstruction Conference	Keep in Project Erosion Control File
4) Notice of Intent (NOI), form WPC 623	Design Section Engineer to begin form. Construction Manager finishes and provides electronic copy to Tollway Environmental unit**	35 days prior to construction beginning	Post at Jobsite Original to Tollway's Environmental Unit, Copy to Project Erosion File Copy to CSE Copy to Contractor
5) NPDES/Erosion Control Inspection Report (Required on all Projects)	Construction Section Engineer**	Weekly & after more that 0.5" rainfall	Keep original in Project Erosion File Electronic copy in Proliance Environmental Catalog Card file Copy to Contractor
6) Incidence of Non-Compliance (ION) form WPC 624	Construction Section Engineer fills out and gives to Tollway for submittal	To IEPA within 5 Days of Incident	Original by Certified Mail to IEPA Copy to Project Erosion File Electronic copy in Proliance Environmental Catalog Card file Copy to Contractor
7) Notice of Termination (NOT) form WPC 621 (Required on all Projects)	Construction Section Engineer fills out and gives to Tollway for submittal	Final Stabilization***	Original by Certified Mail to IEPA Copy to Project Erosion File Electronic copy in Proliance Environmental Catalog Card file Copy to Contractor

NOTES:

* This form must be signed by the Chief Engineer.

** Contractor should be given a copy of the NPDES Permit, Inspection Report and ION forms.

*** Final stabilization is defined as 70% viable vegetative growth.

General NPDES Permit No. ILR10

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
www.epa.state.il.us

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

General NPDES Permit
For
Storm Water Discharges From Construction Site Activities

Expiration Date: July 31, 2018

Issue Date: July 30, 2013

Effective Date: August 1, 2013

In compliance with the provisions of the Illinois Environmental Protection Act, the Illinois Pollution Control Board Rules and Regulations (35 Ill. Adm. Code, Subtitle C, Chapter I), and the Clean Water Act, and the regulations thereunder the following discharges are authorized by this permit in accordance with the conditions and attachments herein.

Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

Part I. COVERAGE UNDER THIS PERMIT

A. **Permit Area**. The permit covers all areas of the State of Illinois with discharges to any waters of the State.

B. **Eligibility**.

1. This permit shall authorize all discharges of storm water associated with industrial activity from a construction site that will result in the disturbance of one or more acres total land area or a construction site less than one acre of total land that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb one or more acres total land area. This permit may authorize discharges from other construction site activities that have been designated by the Agency as having the potential to adversely affect the water quality of waters of the state. This permit also authorizes discharges from construction sites previously approved by the Agency under the previous version of ILR10 that are still occurring after the effective date of this permit, except for discharges identified under Part I.B.3 (Limitations on Coverage). Where discharges from construction sites were initially covered under the previous version of the ILR10, the Storm Water Pollution Prevention Plan must be updated/revised as necessary to ensure compliance with the provisions of this reissued ILR10 permit in accordance with Part II.A.2.

2. This permit may only authorize a storm water discharge associated with industrial activity from a construction site that is mixed with a storm water discharge from an industrial source other than construction, where:

   a. the industrial source other than construction is located on the same site as the construction activity;

   b. storm water discharges associated with industrial activity from the areas of the site where construction activities are occurring are in compliance with the terms of this permit; and

   c. storm water discharges associated with industrial activity from the areas of the site where industrial activities other than construction are occurring (including storm water discharges from dedicated asphalt plants and dedicated concrete plants) are covered by a different NPDES general permit or an individual permit authorizing such discharges.

3. **Limitations on Coverage**. The following storm water discharges from construction sites are not authorized by this permit:

   a. storm water discharges associated with industrial activities that originate from the site after construction activities have been completed and the site has undergone final stabilization;

   b. discharges that are mixed with sources of non-storm water other than discharges identified in Part III.A (Prohibition on Non-Storm Water Discharges) of this permit and in compliance with paragraph IV.D.5 (Non-Storm Water Discharges) of this permit;

c. storm water discharges associated with industrial activity that are subject to an existing NPDES individual or general permit or which are issued a permit in accordance with Part VI.N (Requiring an Individual Permit or an Alternative General Permit) of this permit. Such discharges may be authorized under this permit after an existing permit expires provided the existing permit did not establish numeric limitations for such discharges;

d. storm water discharges from construction sites that the Agency has determined to be or may reasonably be expected to be contributing to a violation of a water quality standard; and

e. storm water discharges that the Agency, at its discretion, determines are not appropriately authorized or controlled by this general permit.

f. storm water discharges to any receiving water specified under 35 Ill. Adm. Code 302.105(d) (6).

C. **Authorization**.

1. In order for storm water discharges from construction sites to be authorized to discharge under this general permit a discharger must submit a Notice of Intent (NOI) in accordance with the requirements of Part II below, using an NOI form provided by the Agency.

2. Where a new contractor is selected after the submittal of an NOI under Part II below, or where site ownership is transferred, a new Notice of Intent (NOI) must be submitted by the owner in accordance with Part II.

3. Unless notified by the Agency to the contrary, dischargers who submit an NOI in accordance with the requirements of this permit are authorized to discharge storm water from construction sites under the terms and conditions of this permit in 30 days after the date the NOI is received by the Agency.

4. The Agency may deny coverage under this permit and require submittal of an application for an individual NPDES permit based on a review of the NOI or other information.

Part II. NOTICE OF INTENT REQUIREMENTS

A. **Deadlines for Notification**.

1. To receive authorization under this general permit, a discharger must submit a completed Notice of Intent (NOI) in accordance with Part VI.G (Signatory Requirements) and the requirements of this Part in sufficient time to allow a 30 day review period after the receipt of the NOI by the Agency and prior to the start of construction. The completed NOI may be submitted electronically to the following email address: epa.constilr10swppp@illinois.gov

2. Discharges that were covered by the previous version of ILR10 are automatically covered by this permit. Where discharges associated with construction activities were initially covered under the previous version of ILR10 and are continuing, the Storm Water Pollution Prevention Plan must be updated/revised within 12 months of the effective date of this reissued permit, as necessary to ensure compliance with the provisions of the reissued ILR10. Updating of the SWPPP is not required if construction activities are completed and a Notice of Termination is submitted within 12 months of the effective date of this permit.

3. A discharger may submit an NOI in accordance with the requirements of this Part after the start of construction. In such instances, the Agency may bring an enforcement action for any discharges of storm water associated with industrial activity from a construction site that have occurred on or after the start of construction.

B. **Failure to Notify**. Dischargers who fail to notify the Agency of their intent to be covered, and discharge storm water associated with construction site activity to Waters of the State without an NPDES permit are in violation of the Environmental Protection Act and Clean Water Act.

C. **Contents of Notice of Intent**. The Notice of Intent shall be signed in accordance with Part VI.G (Signatory Requirements) of this permit by all of the entities identified in paragraph 2 below and shall include the following information:

1. The mailing address, and location of the construction site for which the notification is submitted. Where a mailing address for the site is not available, the location can be described in terms of the latitude and longitude of the approximate center of the facility to the nearest 15 seconds, or the nearest quarter section (if the section, township and range is provided) that the construction site is located in;

2. The owner's name, address, telephone number, and status as Federal, State, private, public or other entity;

3. The name, address and telephone number of the general contractor(s) that have been identified at the time of the NOI submittal;

4. The name of the receiving water(s), or if the discharge is through a municipal separate storm sewer, the name of the municipal operator of the storm sewer and the ultimate receiving water(s);

5. The number of any NPDES permits for any discharge (including non-storm water discharges) from the site that is currently authorized by an NPDES permit;

6. A description of the project, detailing the complete scope of the project, estimated timetable for major activities and an estimate of the number of acres of the site on which soil will be disturbed;

7. For projects that have complied with State law on historic preservation and endangered species prior to submittal of the NOI, through coordination with the Illinois Historic Preservation Agency and the Illinois Department of Natural Resources or through fulfillment of the terms of interagency agreements with those agencies, the NOI shall indicate that such compliance has occurred.

8. An electronic copy of the storm water pollution prevention plan that has been prepared for the site in accordance with Part IV of this permit. The electronic copy shall be submitted to the Agency at the following email address: epa.constilr10swppp@illinois.gov

9. Revised notice of intents shall be submitted for any substantial modifications to the project such as: address changes, new contractors, area coverage, additional discharges to waters of the state, or other substantial modifications.

D. **Where to Submit.**

Construction activities which discharge storm water that requires a NPDES permit must use an NOI form provided by the Agency. The applicable fee shall also be submitted. NOIs must be signed in accordance with Part VI.G (Signatory Requirements) of this permit. The NOI form may be submitted to the Agency in any of the following methods:

1. File electronically with digital signature at the following website address: http://dataservices.epa.illinois.gov/SWConstructionPermit/bowLogin.aspx

   Registration specific to the permittee is required in order to file electronically.

2. Submit complete NOI and SWPPP electronically to the following email address: epa.constilr10swppp@illinois.gov. Submit the NOI with original signature and fee by certified mail to the Agency at the following address:

   Illinois Environmental Protection Agency
   Division of Water Pollution Control, Mail Code #15
   Attention: Permit Section
   1021 North Grand Avenue East
   Post Office Box 19276
   Springfield, Illinois 62794-9276

E. **Additional Notification**. Construction activities that are operating under approved local sediment and erosion plans, land disturbance permits, grading plans, or storm water management plans, in addition to filing copies of the Notice of Intent in accordance with Part D above, shall also submit signed copies of the Notice of Intent to the local agency approving such plans in accordance with the deadlines in Part A above. See Part IV.D.2.d (Approved State or Local Plans). A copy of the NOI shall be sent to the entity holding an active General NPDES Permit No. ILR40 if the permittee is located in an area covered by an active ILR40 permit.

F. **Notice of Termination**. Where a site has completed final stabilization and all storm water discharges from construction activities that are authorized by this permit are eliminated, the permittee must submit a completed Notice of Termination that is signed in accordance with Part VI.G (Signatory Requirements) of this permit.

1. The Notice of Termination shall include the following information:

   a. The mailing address, and location of the construction site for which the notification is submitted. Where a mailing address for the site is not available, the location can be described in terms of the latitude and longitude of the approximate center of the facility to the nearest 15 seconds, or the nearest quarter section (if the section, township and range is provided) that the construction site is located in;

   b. The owner's name, address, telephone number, and status as Federal, State, private, public or other entity;

   c. The name, address and telephone number of the general contractor(s);

   d. The date when construction was completed and the site was stabilized; and

   e. The following certification signed in accordance with Part VI.G (Signatory Requirements) of this permit:

      "I certify under penalty of law that all storm water discharges associated with construction site activity from the identified facility that are authorized by NPDES general permit ILR10 have otherwise been eliminated. I understand that by submitting this notice of termination, that I am no longer authorized to discharge storm water associated with construction site activity by the general permit, and that discharging pollutants in storm water associated with construction site activity to Waters of the State is unlawful under the Environmental Protection Act and Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act."

      For the purposes of this certification, elimination of storm water discharges associated with industrial activity means that all disturbed soils at the identified facility have been finally stabilized and temporary erosion and sediment control measures have been removed or will be removed at an appropriate time, or that all storm water discharges associated with construction activities from the identified site that are authorized by a NPDES general permit have otherwise been eliminated.

2. All Notices of Termination are to be sent to the Agency to the mailing address in Part II.D.1, using the form provided by the Agency, or electronically if the permittee submitted a Notice of Intent by electronic means.

Part III. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, AND OTHER NON-NUMERIC LIMITATIONS

A. **Prohibition on Non-Storm Water Discharges.**

1. Except as provided in Part I paragraph B.2 and paragraphs 2, 3 or 4 below, all discharges covered by this permit shall be comprised entirely of storm water.

2. a. Except as provided in paragraph b below, discharges of materials other than storm water must be in compliance with a NPDES permit (other than this permit) issued for the discharge.

b. The following non-storm water discharges may be authorized by this permit provided the non-storm water component of the discharges is in compliance with Part IV.D.5 (Non-Storm Water Discharges): discharges from fire fighting activities; fire hydrant flushings; waters used to wash vehicles where detergents are not used; waters used to control dust; potable water sources including uncontaminated waterline flushings; landscape irrigation drainages; routine external building washdown which does not use detergents; pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; uncontaminated air conditioning condensate; springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials such as solvents.

3. The following non-storm water discharges are prohibited by this permit: concrete and wastewater from washout of concrete (unless managed by an appropriate control), drywall compound, wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials, fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance, soaps, solvents, or detergents, toxic or hazardous substances from a spill or other release, or any other pollutant that could cause or tend to cause water pollution.

4. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are allowable if managed by appropriate controls.

B. **Discharges into Receiving Waters With an Approved Total Maximum Daily Load (TMDL):**

Discharges to waters for which there is a TMDL allocation for sediment or a parameter that addresses sediment (such as total suspended solids, turbidity, or siltation) are not eligible for coverage under this permit unless the owner/operator develops and certifies a SWPPP that is consistent with wasteload allocations in the approved TMDL. To be eligible for coverage under this general permit, operators must incorporate into their SWPPP any conditions and/or Best Management Practices applicable to their discharges necessary for consistency with the TMDL within any timeframes established in the TMDL. If a specific numeric waste load allocation has been established that would apply to the project's discharges, the operator must incorporate that allocation into its SWPPP and implement necessary steps to meet that allocation.

Please refer to the Agency website at: http://www.epa.state.il.us/water/tmdl/report-status.html

C. Discharges covered by this permit, alone or in combination with other sources, shall not cause or contribute to a violation of any applicable water quality standard.

Part IV. STORM WATER POLLUTION PREVENTION PLANS

A storm water pollution prevention plan shall be developed for each construction site covered by this permit. Storm water pollution prevention plans shall be prepared in accordance with good engineering practices. The plan shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with construction site activity from the facility. In addition, the plan shall describe and ensure the implementation of best management practices which will be used to reduce the pollutants in storm water discharges associated with construction site activity and to assure compliance with the terms and conditions of this permit. The permittee must implement the provisions of the storm water pollution prevention plan required under this part as a condition of this permit.

A. **Deadlines for Plan Preparation and Compliance**.

The plan shall:

1. Be completed prior to the start of the construction activities to be covered under this permit and submitted electronically to the Agency at the time the Notice of Intent is submitted; and

2. Provide for compliance with the terms and schedules of the plan beginning with the initiation of construction activities.

B. **Signature, Plan Review and Notification**.

1. The plan shall be signed in accordance with Part VI.G (Signatory Requirements), and be retained at the construction site which generates the storm water discharge in accordance with Part VI.E (Duty to Provide Information) of this permit.

2. Prior to commencement of construction, the permittee shall provide the plan to the Agency.

3. The permittee shall make plans available upon request from this Agency or a local agency approving sediment and erosion plans, grading plans, or storm water management plans; or in the case of a storm water discharge associated with industrial activity which discharges through a municipal separate storm sewer system. A list of permitted municipal separate storm sewer systems is available at: http://www.epa.state.il.us/water/permits/storm-water/ms4-status-report.pdf

4. The Agency may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this Part. Such notification shall identify those provisions of the permit which are not being met by the plan, and identify which provisions of the plan require modifications in order to meet the minimum requirements of this part. Within 7 days from receipt of notification from the Agency, the permittee shall make the required changes to the plan and shall submit to the Agency a written certification that the requested changes have been made. Failure to comply shall terminate authorization under this permit.

5. A copy of the letter of notification of coverage along with the General NPDES Permit for Storm Water Discharges from Construction Site Activities or other indication that storm water discharges from the site are covered under an NPDES permit shall be posted at the site in a prominent place for public viewing (such as alongside a building permit).

6. All storm water pollution prevention plans and all completed inspection forms/reports required under this permit are considered reports that shall be available to the public at any reasonable time upon request. However, the permittee may claim any portion of a storm water pollution prevention plan as confidential in accordance with 40 CFR Part 2.

C. **Keeping Plans Current**. The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to Waters of the State and which has not otherwise been addressed in the plan or if the

storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under paragraph D.2 below, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with construction site activity. In addition, the plan shall be amended to identify any new contractor and/or subcontractor that will implement a measure of the storm water pollution prevention plan. Amendments to the plan may be reviewed by the Agency in the same manner as Part IV.B above. Any revisions of the documents for the storm water pollution prevention plan shall be kept on site at all times.

D. **Contents of Plan**. The storm water pollution prevention plan shall include the following items:

1. **Site Description**. Each plan shall provide a description of the following:

a. A description of the nature of the construction activity or demolition work;

b. A description of the intended sequence of major activities which disturb soils for major portions of the site (e.g. clearing, grubbing, excavation, grading, on-site or off-site stockpiling of soils, on-site or off-site storage of materials);

c. An estimate of the total area of the site and the total area of the site that is expected to be disturbed by clearing, grubbing, excavation, grading, on-site or off-site stockpiling of soils and storage of materials, or other activities;

d. An estimate of the runoff coefficient of the site after construction activities are completed and existing data describing the soil or the quality of any discharge from the site;

e. A site map indicating drainage patterns and approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent offsite sediment tracking, areas of soil disturbance, the location of major structural and nonstructural controls identified in the plan, the location of areas where stabilization practices are expected to occur, locations of on-site or off-site soil stockpiling or material storage, surface waters (including wetlands), and locations where storm water is discharged to a surface water; and

f. The name of the receiving water(s) and the ultimate receiving water(s), and areal extent of wetland acreage at the site.

2. **Controls**. Each plan shall include a description of appropriate controls that will be implemented at the construction site and any off-site stockpile or storage area, The Illinois Urban Manual www.aiswcd.org/IUM or other similar documents shall be used for developing the appropriate management practices, controls or revisions of the plan. The plan will clearly describe for each major activity identified in paragraph D.1 above, appropriate controls and the timing during the construction process that the controls will be implemented. For example, perimeter controls for one portion of the site will be installed after the clearing and grubbing necessary for installation of the measure, but before the clearing and grubbing for the remaining portions of the site. Perimeter controls will be actively maintained and/or repaired until final stabilization of those portions of the site upward of the perimeter control. Temporary perimeter controls will be removed after final stabilization. The description of controls shall address as appropriate the following minimum components:

a. Erosion and Sediment Controls. The permittee shall design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:

(i) Control storm water volume and velocity within the site to minimize soil erosion;
(ii) Control storm water discharges, including both peak flowrates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;
(iii) Minimize the amount of soil exposed during construction activity;
(iv) Minimize the disturbance of steep slopes;
(v) Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting storm water runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
(vi) Provide and maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible; and
(vii) Minimize soil compaction and, unless infeasible, preserve topsoil.

b. **Stabilization Practices**. The storm water pollution prevention plan shall include a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans should ensure that existing vegetation is preserved where practicable and that disturbed portions of the site are stabilized. Stabilization practices may include: temporarily seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, staged or staggered development, and other appropriate measures. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated, shall be included in the plan. Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization of disturbed areas must be initiated within 1 working day of permanent or temporary cessation of earth disturbing activities and shall be completed as soon as possible but not later than 14 days from the initiation of stabilization work in an area. Exceptions to these time frames are specified as provided in paragraphs (i) and (ii) below:

(i) Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.
(ii) On areas where construction activity has temporarily ceased and will resume after 14 days, a temporary stabilization method can be used. Temporary stabilization techniques and materials shall be described in the SWPPP.

c. **Structural Practices**. A description of structural practices utilized to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Structural practices should be placed on upland soils to the degree practicable. The installation of these devices may be subject to Section 404 of the CWA.

(i) The following design requirements apply to sediment basins if such structural practices will be installed to reduce sediment concentrations in storm water discharges:

a. When discharging from the sediment basin, utilize outlet structures that withdraw water from the surface in order to minimize the discharge.
b. Prevent erosion of the sediment basin using stabilization controls (e.g., erosion control blankets), at the inlet and outlet using erosion controls and velocity dissipation devices:
c. Sediment basins shall be designed to facilitate maintenance, including sediment removal from the basins, as necessary.

d. Use of Treatment Chemicals. Identify the use of all polymer flocculants or treatment chemicals at the site. Dosage of treatment chemicals shall be identified along with any information from any Material Safety Data Sheet. Describe the location of all storage area for chemicals. Include any information from the manufacturer's specifications. Treatment chemicals must be stored in areas where they will not be exposed to precipitation. The SWPPP must describe procedures for use of treatment chemicals and staff responsible for use/application of treatment chemicals must be trained on the established procedures.

e. Best Management Practices for Impaired Waters. For any site which discharges directly to an impaired water identified on the Agency's website for 303(d) listing for suspended solids, turbidity, or siltation the storm water pollution prevention plan shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event. If required by federal regulations or the Illinois Urban Manual, the storm water pollution prevention plan shall adhere to a more restrictive design criteria. Please refer to the Agency's website at: (http://www.epa.state.il.us/water/tmdl/303d-list.html)

f. **Pollution Prevention**. The permittee shall design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:

(i) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
(ii) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to storm water; and
(iii) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.

g. Other Controls.

(i) Waste Disposal. No solid materials, including building materials, shall be discharged to Waters of the State, except as authorized by a Section 404 permit.
(ii) The plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.
(iii) For construction sites that receive concrete or asphalt from off-site locations, the plan must identify and include appropriate controls and measures to reduce or eliminate discharges from these activities.
(iv) The plan shall include spill response procedures and provisions for reporting if there are releases in excess of reportable quantities.

h. **Best Management Practices for Post-Construction Storm Water Management**. Describe the measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. Structural measures should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA. This permit only addresses the installation of storm water management measures, and not the ultimate operation and maintenance of such structures after the construction activities have been completed and the site has undergone final stabilization. Permittees are responsible for only the installation and maintenance of storm water management measures prior to final stabilization of the site, and are not responsible for maintenance after storm water discharges associated with industrial activity have been eliminated from the site.

(i) The storm water pollution prevention plan and design and construction plans shall explicitly consider post-construction storm water management. Such practices may include: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices). The Permittee must plan for and put in place storm water BMPs to retain the greatest amount of post-development storm water runoff practicable given the site and project constraints by installing one or more of the Best Management Practices (BMPs) as described in the Illinois Urban Manual.

The storm water pollution prevention plan shall include an explanation of the technical basis used to select the practices to control pollution where post-construction flows will exceed predevelopment levels.

(ii) Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

(iii) Unless otherwise specified in the Illinois Urban Manual (2012), the storm water pollution prevention plan shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event.

i. **Approved State or Local Plans**.

(i) The management practices, controls and other provisions contained in the storm water pollution prevention plan must be at least as protective as the requirements contained in the Illinois Urban Manual, 2012. Construction activities which discharge storm water must include in their storm water pollution prevention plan procedures and requirements specified in applicable sediment and erosion control plans or storm water management plans approved by local officials. Requirements specified in sediment and erosion control plans or site permits or storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI to be authorized to discharge under this permit, incorporated by reference and are enforceable under this permit. The plans shall include all requirements of this permit and include more stringent standards required by any local

approval. This provision does not apply to provisions of master plans, comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit that is issued for the construction site.

(ii) Dischargers seeking alternative permit requirements are not authorized by this permit and shall submit an individual permit application in accordance with 40 CFR 122.26 at the address indicated in Part II.D (Where to Submit) of this permit, along with a description of why requirements in approved local plans or permits should not be applicable as a condition of an NPDES permit.

3. **Maintenance**.

a. The plan shall include a description of procedures to maintain in good and effective operating conditions, all erosion and sediment control measures and other Best Management Practices, including vegetation and other protective measures identified in the Storm Water Pollution Prevention Plan.

b. Where a basin has been installed to control sediment during construction activities, the Permittees shall keep the basin(s) in effective operating condition and remove accumulated sediment as necessary.

4. **Inspections**. Qualified personnel (provided by the permittee) shall inspect disturbed areas of the construction site that have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven calendar days and within 24 hours of the end of a storm or by the end of the following business or work day that is 0.5 inches or greater. Qualified personnel means a person knowledgeable in the principles and practices of erosion and sediment controls measures, such as a licensed Professional Engineer (P.E.), a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Erosion Sediment and Storm Water Inspector (CESSWI) or other knowledgeable person who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activities.

a. Inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections will recommence when construction activities are conducted, or if there is 0.5" or greater rain event, or a discharge due to snowmelt occurs.

b. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

c. Based on the results of the inspection, the description of potential pollutant sources identified in the storm water pollution prevention plan in accordance with Part IV.D.1 (Site Description) of this permit and the pollution prevention control measures identified in the plan in accordance with Part IV.D.2 (Controls) of this permit shall be revised as appropriate as soon as practicable after such inspection to minimize the potential for such discharges. Such modifications shall provide for timely implementation of any changes to the plan and pollution prevention control measures within 7 calendar days following the inspection.

d. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph b above shall be made and retained as part of the storm water pollution prevention plan for at least three years from the date that the permit coverage expires or is terminated. All inspection reports shall be retained at the construction site. The report shall be signed in accordance with Part VI.G (Signatory Requirements) of this permit.

e. The permittee shall notify the appropriate Agency Field Operations Section office by email at: epa.swnoncomp@illinois.gov, telephone or fax within 24 hours of any incidence of noncompliance for any violation of the storm water pollution prevention plan observed during any inspection conducted, or for violations of any condition of this permit. The permittee shall complete and submit within 5 days an "Incidence of Noncompliance" (ION) report for any violation of the storm water pollution prevention plan observed during any inspection conducted, or for violations of any condition of this permit. Submission shall be on forms provided by the Agency and include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. Corrective actions must be undertaken immediately to address the identified non-compliance issue(s).

f. All reports of noncompliance shall be signed by a responsible authority as defined in Part VI.G (Signatory Requirements).

g. After the initial contact has been made with the appropriate Agency Field Operations Section Office, all reports of noncompliance shall be mailed to the Agency at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

5. **Non-Storm Water Discharges**. Except for flows from fire fighting activities, sources of non-storm water listed in Part III.A.2 of this permit that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and insure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

E. **Additional requirements for storm water discharges from industrial activities other than construction, including dedicated asphalt plants, and dedicated concrete plants**. This permit may only authorize any storm water discharge associated with industrial activity from a construction site that is mixed with a storm water discharge from an industrial source other than construction, where:

1. The industrial source other than construction is located on the same site as the construction activity;

2. Storm water discharges associated with industrial activity from the areas of the site where construction activities are occurring are in compliance with the terms of this permit; and

3. Storm water discharges associated with industrial activity from the areas of the site where industrial activity other than construction are occurring (including storm water discharges from dedicated asphalt plants [other than asphalt emulsion facilities] and dedicated concrete plants) are in compliance with the terms, including applicable NOI or application requirements, of a different NPDES general permit or individual permit authorizing such discharges.

F. **Contractors**.

1. The storm water pollution prevention plan must clearly identify for each measure identified in the plan, the contractor(s) or subcontractor(s) that will implement the measure. All contractors and subcontractors identified in the plan must sign a copy of the certification statement in paragraph 2 below in accordance with Part VI.G (Signatory Requirements) of this permit. All certifications must be included in the storm water pollution prevention plan except for owners that are acting as contractors.

2. **Certification Statement**. All contractors and subcontractors identified in a storm water pollution prevention plan in accordance with paragraph 1 above shall sign a copy of the following certification statement before conducting any professional service at the site identified in the storm water pollution prevention plan:

> "I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification."

The certification must include the name and title of the person providing the signature in accordance with Part VI.G of this permit: the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification is made.

Part V. RETENTION OF RECORDS

A. The permittee shall retain copies of storm water pollution prevention plans and all reports and notices required by this permit, records of all data used to complete the Notice of Intent to be covered by this permit and the Agency Notice of Permit Coverage letter for a period of at least three years from the date that the permit coverage expires or is terminated. This period may be extended by request of the Agency at any time.

B. The permittee shall retain a copy of the storm water pollution prevention plan and any revisions to said plan required by this permit at the construction site from the date of project initiation to the date of final stabilization.

Part VI. STANDARD PERMIT CONDITIONS

A. **Duty to Comply**. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Illinois Environmental Protection Act and the CWA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Failure to obtain coverage under this permit or an individual permit for storm water releases associated with construction activities is a violation of the Illinois Environmental Protection Act and the CWA.

B. **Continuation of the Expired General Permit**. This permit expires five years from the date of issuance. An expired general permit continues in force and effect until a new general permit or an individual permit is issued. Only those construction activities authorized to discharge under the expiring general permit are covered by the continued permit.

C. **Need to halt or reduce activity not a defense**. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. **Duty to Mitigate**. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. **Duty to Provide Information**. The permittee shall furnish within a reasonable time to the Agency or local agency approving sediment and erosion control plans, grading plans, or storm water management plans; or in the case of a storm water discharge associated with industrial activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the municipal operator of the system, any information which is requested to determine compliance with this permit. Upon request, the permittee shall also furnish to the Agency or local agency approving sediment and erosion control plans, grading plans, or storm water management plans; or in the case of a storm water discharge associated with industrial activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the municipal operator of the system, copies of all records required to be kept by this permit.

F. **Other Information**. When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report to the Agency, he or she shall promptly submit such facts or information.

G. **Signatory Requirements**. All Notices of Intent, storm water pollution prevention plans, reports, certifications or information either submitted to the Agency or the operator of a large or medium municipal separate storm sewer system, or that this permit requires be maintained by the permittee, shall be signed.

1. All Notices of Intent shall be signed as follows:

a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (2) any person authorized to sign documents that has been assigned or delegated said authority in accordance with corporate procedures;

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency, or (2) a senior executive officer

having responsibility for the overall operations of a principal geographic unit of the agency.

2. All reports required by the permit and other information requested by the Agency shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to the Agency.

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).

   c. **Changes to Authorization**. If an authorization under Part I.C (Authorization) is no longer accurate because a different individual or position has responsibility for the overall operation of the construction site, a new authorization satisfying the requirements of Part I.C must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.

   d. **Certification**. Any person signing documents under this Part shall make the following 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."

H. **Penalties for Falsification of Reports**. Section 309(c)(4) of the Clean Water Act provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or by both. Section 44(j)(4) and (5) of the Environmental Protection Act provides that any person who knowingly makes any false statement, representation, or certification in an application form, or form pertaining to a NPDES permit commits a Class A misdemeanor, and in addition to any other penalties provided by law is subject to a fine not to exceed $10,000 for each day of violation.

I. **Penalties for Falsification of Monitoring Systems**. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by fines and imprisonment described in Section 309 of the CWA. The Environmental Protection Act provides that any person who knowingly renders inaccurate any monitoring device or record required in connection with any NPDES permit or with any discharge which is subject to the provisions of subsection (f) of Section 12 of the Act commits a Class A misdemeanor, and in addition to any other penalties provided by law is subject to a fine not to exceed $10,000 for each day of violation.

J. **Oil and Hazardous Substance Liability**. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 311 of the CWA.

K. **Property Rights**. The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

L. **Severability**. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

M. **Transfers**. This permit is not transferable to any person except after notice to the Agency. The Agency may require the discharger to apply for and obtain an individual NPDES permit as stated in Part I.C (Authorization).

N. **Requiring an Individual Permit or an Alternative General Permit.**

1. The Agency may require any person authorized by this permit to apply for and/or obtain either an individual NPDES permit or an alternative NPDES general permit. Any interested person may petition the Agency to take action under this paragraph. Where the Agency requires a discharger authorized to discharge under this permit to apply for an individual NPDES permit, the Agency shall notify the discharger in writing that a permit application is required. This notification shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the discharger to file the application, and a statement that on the effective date of the individual NPDES permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. Applications shall be submitted to the Agency indicated in Part II.D (Where to Submit) of this permit. The Agency may grant additional time to submit the application upon request of the applicant. If a discharger fails to submit in a timely manner an individual NPDES permit application as required by the Agency under this paragraph, then the applicability of this permit to the individual NPDES permittee is automatically terminated at the end of the day specified by the Agency for application submittal. The Agency may require an individual NPDES permit based on:

   a. information received which indicates the receiving water may be of particular biological significance pursuant to 35 Ill. Adm. Code 302.105(d)(6);

   b. whether the receiving waters are impaired waters for suspended solids, turbidity or siltation as identified by the Agency's 303(d) listing;

   c. size of construction site, proximity of site to the receiving stream, etc.

   The Agency may also require monitoring of any storm water discharge from any site to determine whether an individual permit is required.

2. Any discharger authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. In such cases, the permittee shall submit an individual application in accordance with the requirements of 40 CFR 122.26(c)(1)(ii), with reasons supporting the request, to the Agency at the address indicated in Part II.D (Where to Submit) of this permit. The request may be granted by issuance of any individual permit or an alternative general permit if the reasons cited by the permittee are adequate to support the request.

3. When an individual NPDES permit is issued to a discharger otherwise subject to this permit, or the discharger is authorized to discharge under an

alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual NPDES permit is denied to a discharger otherwise subject to this permit or the discharger is denied for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee remains in effect, unless otherwise specified by the Agency.

O. **State/Environmental Laws**. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

P. **Proper Operation and Maintenance**. The permittee shall at all times properly operate and maintain all construction activities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

Q. **Inspection and Entry**. The permittee shall allow the IEPA, or an authorized representative upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated construction activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

R. **Permit Actions**. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

S. **Bypasses and Upsets.** The provisions of 40 CFR Section 122.41(m) & (n) are applicable and are hereby incorporated by reference.

Part VII. REOPENER CLAUSE

A. If there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with industrial activity covered by this permit, the discharger may be required to obtain an individual permit or an alternative general permit in accordance with Part I.C (Authorization) of this permit or the permit may be modified to include different limitations and/or requirements.

B. Permit modification or revocation will be conducted according to provisions of 35 Ill. Adm. Code, Subtitle C, Chapter I and the provisions of 40 CFR 122.62, 122.63, 122.64 and 124.5 and any other applicable public participation procedures.

C. The Agency will reopen and modify this permit under the following circumstances:

1. the U.S. EPA amends its regulations concerning public participation;

2. a court of competent jurisdiction binding in the State of Illinois or the 7th Circuit Court of Appeals issues an order necessitating a modification of public participation for general permits; or

3. to incorporate federally required modifications to the substantive requirements of this permit.

Part VIII. DEFINITIONS

"Agency" means the Illinois Environmental Protection Agency.

"Best Management Practices" ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control construction site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

"Commencement of Construction or Demolition Activities" The initial disturbance of soils associated with clearing, grading, or excavating activities or other construction or demolition activities.

"Construction Activities" Earth disturbing activities, such as clearing, grading and excavation of land. For purposes of this permit, construction activities also means construction site, construction site activities, or site. Construction activities also include any demolition activities at a site.

"CWA" means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. (96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et seq.).

"Dedicated portable asphalt plant" A portable asphalt plant that is located on or contiguous to a construction site and that provides asphalt only to the construction site that the plant is located on or adjacent to. The term dedicated portable asphalt plant does not include facilities that are subject to the asphalt emulsion effluent limitation guideline at 40 CFR 443.

"Dedicated portable concrete plant" A portable concrete plant that is located on or contiguous to a construction site and that provides concrete only to the construction site that the plant is located on or adjacent to.

"Dedicated sand or gravel operation" An operation that produces sand and/or gravel for a single construction project.

"Director" means the Director of the Illinois Environmental Protection Agency or an authorized representative.

"Final Stabilization" means that all soil disturbing activities at the site have been completed, and either of the two following conditions are met:

(i) A uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or

(ii) Equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

For individual lots in residential construction, final stabilization means that either:

(i) The homebuilder has completed final stabilization as specified above, or

(ii) The homebuilder has established temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for, and benefits of, final stabilization.

"Large and Medium municipal separate storm sewer system" means all municipal separate storm sewers that are either:

(i) Located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendices F and G of 40 CFR Part 122); or

(ii) Located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties (these counties are listed in Appendices H and I of 40 CFR Part 122); or

(iii) Owned or operated by a municipality other than those described in paragraph (i) or (ii) and that are designated by the Director as part of the large or medium municipal separate storm sewer system.

"NOI" means notice of intent to be covered by this permit (see Part II of this permit.)

"Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharges. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

"Runoff coefficient" means the fraction of total rainfall that will appear at the conveyance as runoff.

"Storm Water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

"Storm Water Associated with Industrial Activity" means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program. For the categories of industries identified in subparagraphs (i) through (x) of this subsection, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the categories of industries identified in subparagraph (xi), the term includes only storm water discharges from all areas listed in the previous sentence (except access roads) where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally or municipally owned or operated that meet the description of the facilities listed in this paragraph (i)- (xi)) include those facilities designated under 40 CFR 122.26(a)(1)(v). The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR Subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (xi) of this paragraph);

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28, 29, 311, 32, 33, 3441, 373;

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations meeting the definition of a reclamation area under 40 CFR 434.11(l)) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator;

(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA;

(v) Landfills, land application sites, and open dumps that have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under Subtitle D of RCRA;

(vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but

limited to those classified as Standard Industrial Classification 5015 and 5093;

(vii) Steam electric power generating facilities, including coal handling sites;

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42, 44, and 45 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under subparagraphs (i)-(vii) or (ix)-(xi) of this subsection are associated with industrial activity;

(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with 40 CFR 503;

(x) Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than one acre of total land area which are not part of a larger common plan of development or sale unless otherwise designated by the Agency pursuant to **Part I**.B.1.

(xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 31 (except 311), 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25, (and which are not otherwise included within categories (i)-(x)).

"Waters" mean all accumulations of water, surface and underground, natural, and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon the State of Illinois, except that sewers and treatment works are not included except as specially mentioned; provided, that nothing herein contained shall authorize the use of natural or otherwise protected waters as sewers or treatment works except that in-stream aeration under Agency permit is allowable.

"Work day" for the purpose of this permit, a work day is any calendar day on which construction activities will take place.

The following modifications have been made to the final permit from the previously issued General NPDES Permit ILR10:

1. I.B.1: A requirement that existing permittees may have to update/revise their Storm Water Pollution Prevention Plan (SWPPP). See also Section II.A.2 below

2. II.A.2: Provides that permittees must upgrade/revise their SWPPP within 12 months of the effective date of this permit. Projects which will be terminated within the next 12 months are not required to update/revise their SWPPP.

3. II.C.7: The requirement for consultation with the Illinois Historic Preservation Agency and the Illinois Department of Natural Resources was moved from Section I.C.3 to Section II.C.7.

4. II.C.9: Revised Notices of Intent for substantial modifications.

5. II.D: Where to submit Notices of Intent.

6. II.E: NOI shall be copied to local active MS4 permit holders.

7. II.F.1.d: Date of completion and stabilization now included in Notice of Termination (NOT).

8. II.F.2: Provides for electronic submission of NOT.

9. III.A.3: Prohibition of various non-storm water discharges in accordance with 40 CFR 450.

10. III.A.4: Allowance for groundwater dewatering in accordance with 40 CFR 450.

11. IV.B.5: Copy of Approval Letter must be posted at site.

12. IV.D.1.e: Inclusion of information concerning off-site stockpiling of soils or other materials in the site description.

13. IV.D.2.a: Delineation of erosion and sediment controls now specified in accordance with 40 CFR 450.

14. IV.D.2.b: Requirements for initiation of stabilization activities in accordance with 40 CFR 450.

15. IV.D.2.c: Design requirements for sediment basins added to permit.

16. IV.D.2.f: Pollution prevention measures now included in permit in accordance with 40 CFR 450.

17. IV.D.2.g: Provisions for control of other wastes now included in permit.

18. IV.D.2.h: Requirement to explicitly consider post-construction storm water management in the SWPPP.

19. IV.D.3.b. Requirement to keep sediment basins in operating condition.

20. IV.D.4.a: Clarified inspection requirements after construction has temporarily ceased or under frozen conditions.

21. IV.D.4.e: Specified that corrective actions must be undertaken immediately following an incident of non-compliance in accordance with 40 CFR 450.

22. VI.S: Bypass and Upsets provisions were added to the Standard Permit Conditions.

23. VIII: Definition of construction activities was added to permit.

24. VIII: Definition of work day was added to the permit.

25. General: References to the Illinois Environmental Protection Agency's Urban Manual were changed to Illinois Urban Manual (2012).

26. General: The word "facilities" in previous permit was changed to "construction activities" in the draft permit.

27. General: Various edits.

Illinois Environmental Protection Agency

Bureau of Water • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control
Notice of Intent (NOI) for General Permit
to Discharge Storm Water Associated with Construction Site Activities

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at the above address.

For Office Use Only

Permit No. ILR10 _____

OWNER INFORMATION

Company/Owner Name: _____

Mailing Address: _____ Phone: _____

City: _____ State: ___ Zip: _____ Fax: _____

Contact Person: _____ E-mail: _____

Owner Type (select one) _____

MS4 Community: ☐ Yes ☐ No

CONTRACTOR INFORMATION

Contractor Name: _____

Mailing Address: _____ Phone: _____

City: _____ State: ___ Zip: _____ Fax: _____

CONSTRUCTION SITE INFORMATION

Select One: ☐ New ☐ Change of information for: ILR10 _____

Project Name: _____ County: _____

Street Address: _____ City: _____ IL Zip: _____

Latitude: _____ _____ _____ Longitude: _____ _____ _____ _____ _____ _____

(Deg) (Min) (Sec) (Deg) (Min) (Sec) Section Township Range

Approximate Construction Start Date _____ Approximate Construction End Date _____

Total size of construction site in acres: _____

If less than 1 acre, is the site part of a larger common plan of development?

☐ Yes ☐ No

Fee Schedule for Construction Sites:
Less than 5 acres - $250
5 or more acres - $750

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Has the SWPPP been submitted to the Agency? ☐ Yes ☐ No

(Submit SWPPP electronically to: epa.constilr10swppp@illinois.gov)

Location of SWPPP for viewing: Address: _____ City: _____

SWPPP contact information:

Inspector qualifications:

Contact Name: _____ _____

Phone: _____ Fax: _____ E-mail: _____

Project inspector, if different from above

Inspector qualifications:

Inspector's Name: _____ _____

Phone: _____ Fax: _____ E-mail: _____

TYPE OF CONSTRUCTION (select one)

Construction Type _____

SIC Code: _____

Type a detailed description of the project:

_____

_____

_____

_____

_____

_____

HISTORIC PRESERVATION AND ENDANGERED SPECIES COMPLIANCE

Has the project been submitted to the following state agencies to satisfy applicable requirements for compliance with Illinois law on:

Historic Preservation Agency ☐ Yes ☐ No

Endangered Species ☐ Yes ☐ No

RECEIVING WATER INFORMATION

Does your storm water discharge directly to: ☐ Waters of the State or ☐ Storm Sewer

Owner of storm sewer system: _____

Name of closest receiving water body to which you discharge: _____

Mail completed form to: Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610
FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this 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. In addition, I certify that the provisions of the permit, including the development and implementation of a storm water pollution prevention plan and a monitoring program plan, will be complied with.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

_____ _____

Owner Signature: Date:

_____ _____

Printed Name: Title:

INSTRUCTIONS FOR COMPLETION OF CONSTRUCTION ACTIVITY NOTICE OF INTENT (NOI) FORM

Submit original, electronic or facsimile copies. Facsimile and/or electronic copies should be followed-up with submission of an original signature copy as soon as possible. Please write "copy" under the "For Office Use Only" box in the upper right hand corner of the first page.

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610
FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

Reports must be typed or printed legibly and signed.

Any facility that is not presently covered by the General NPDES Permit for Storm Water Discharges From Construction Site Activities is considered a new facility.

If this is a change in your facility information, renewal, etc., please fill in your permit number on the appropriate line, changes of information or permit renewal notifications do not require a fee.

NOTE: FACILITY LOCATION IS NOT NECESSARILY THE FACILITY MAILING ADDRESS, BUT SHOULD DESCRIBE WHERE THE FACILITY IS LOCATED.

Use the formats given in the following examples for correct form completion.

	Example	Format
Section	12	1 or 2 numerical digits
Township	12N	1 or 2 numerical digits followed by "N" or "S"
Range	12W	1 or 2 numerical digits followed by "E" or "W"

For the Name of Closest Receiving Waters, do not use terms such as ditch or channel. For unnamed tributaries, use terms which include at least a named main tributary such as "Unnamed Tributary to Sugar Creek to Sangamon River."

Submission of initial fee and an electronic submission of Storm Water Pollution Prevention Plan (SWPPP) for Initial Permit prior to the Notice of Intent being considered complete for coverage by the ILR10 General Permits. Please make checks payable to: Illinois EPA at the above address.

Construction sites with less than 5 acres of land disturbance - fee is $250.

Construction sites with 5 or more acres of land disturbance - fee is $750.

SWPPP should be submitted electronically to: epa.constilr10swppp@illinois.gov When submitting electronically, use Project Name and City as indicated on NOI form.

Illinois Environmental Protection Agency

Bureau of Water • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control
Construction Site Storm Water Discharge Incidence of Non-Compliance (ION)

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Compliance Assurance Section at the above address. You may email this completed form to:
epa.swnoncomp@illinois.gov

For Office Use Only
Permit No. ILR10_____

Permittee Name: _____

Address: _____ County: _____

City: _____ State: _____ Zip: _____ Phone: _____

Construction Site Name: _____ E-mail: _____

Latitude: _____ _____ _____ Longitude: _____ _____ _____ _____ _____ _____

(Deg) (Min) (Sec) (Deg) (Min) (Sec) Section Township Range

Cause of Non-Compliance

_____
_____
_____
_____

Actions Taken to Prevent Any Further Non-Compliance

_____
_____
_____
_____

Environmental Impact Resulting From the Non-Compliance

_____
_____
_____
_____

Actions Taken to Reduce the Environmental Impact Resulting From the Non-Compliance

_____
_____
_____
_____

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

_____ _____
Owner Signature: Date:

_____ _____
Printed Name: Title:

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

DIVISION OF WATER POLLUTION CONTROL
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
FIELD OPERATIONS SECTION

GUIDELINES FOR COMPLETION OF INCIDENCE OF NON-COMPLIANCE (ION) FORM

Complete and submit this form for any violation of the Storm Water Pollution Prevention Plan observed during any inspection conducted, including those not required by the SWPPP. Please adhere to the following guidelines:

Initial submission within 24 hours by email, telephone or fax (see region fax numbers) of any incidence of non-compliance for any violation. Submit email copy to: epa.swnoncomp@illinois.gov. After 24 hours notification, submit signed original ION within 5 days to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance #19
Post Office Box 19276
Springfield, Illinois 62794-9276

FIELD OPERATIONS HEADQUARTERS
Bruce Yurdin, Manager
Phone: 217/782-3362 Fax: 217/785-1225
EMAIL: epa.swnoncomp@illinois.gov

Region 1 - ROCKFORD
Chuck Corley, Manager
Phone: 815/987-7760 Fax: 815/987-7005

Region 2 - DESPLAINES
Jay Patel, Manager
Phone: 847/294-4000 Fax: 847/294-4058

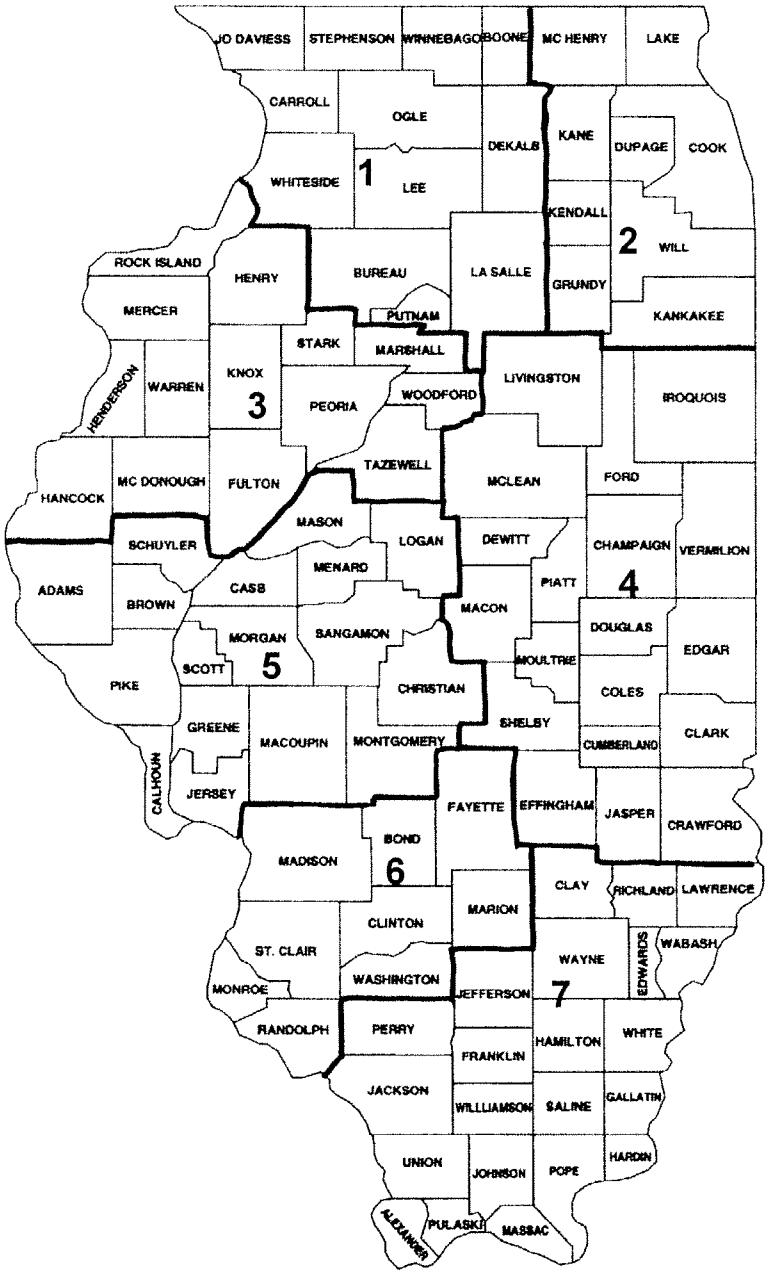
Region 3 - PEORIA
Jim Kammueller, Manager
Phone: 309/693-5463 Fax: 309/693-5467

Region 4 - CHAMPAIGN
Joe Koronkowski, Manager
Phone: 217/278-5800 Fax: 217/278-5808

Region 5 - SPRINGFIELD
Bruce Yurdin, FOS Manager
Phone: 217/782-3362 Fax: 217/785-1225

Region 6 - COLLINSVILLE
Bruce Yurdin, FOS Manager
Phone: 217/782-3362 Fax: 217/785-1225

Region 7- MARION
Byron Marks, Manager
Phone: 618/993-7200 Fax: 618/997-5467



Illinois Environmental Protection Agency

Bureau of Water • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control
NOTICE OF TERMINATION (NOT)
of Coverage under the General Permit for Storm Water Discharges Associated with Construction Site Activities

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Permit Section at the above address.

Permit No. ILR10 _____

OWNER INFORMATION

Owner Name: _____

Owner Type (select one) _____

Mailing Address: _____ Phone: _____

City: _____ State: ___ Zip: _____ Fax: _____

Contact Person: _____ E-mail: _____

CONTRACTOR INFORMATION

Contractor Name: _____

Mailing Address: _____ Phone: _____

City: _____ State: ___ Zip: _____ Fax: _____

CONSTRUCTION SITE INFORMATION

Facility Name: _____

Street Address: _____

City: _____ IL Zip: _____ County: _____

NPDES Storm Water General Permit Number: ILR10 _____

Latitude: _____ _____ _____ Longitude: _____ _____ _____ _____ _____ _____

(Deg) (Min) (Sec) (Deg) (Min) (Sec) Section Township Range

DATE PROJECT HAS BEEN COMPLETED AND STABILIZED: _____

NOTE: Coverage under this permit cannot be terminated without the completion date.

I certify under penalty of law that disturbed soils at the identified facility have been finally stabilized or that all storm water discharges associated with industrial activity from the identified facility that are authorized by an NPDES general permit have otherwise been eliminated. I understand that by submitting this notice of termination, that I am no longer authorized to discharge storm water associated with industrial activity by the general permit, and that discharging pollutants in storm water associated with industrial activity to Waters of the State is unlawful under the Environmental Protection Act and the Clean Water Act where the discharge is not authorized by an NPDES Permit.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

_____ Owner Signature:

_____ Date:

Mail completed form to: Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276

(Do not submit additional documentation unless requested)

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

GUIDELINES FOR COMPLETION OF NOTICE OF TERMINATION (NOT) FORM

Please adhere to the following guidelines:

Submit original, electronic or facsimile copies. Facsimile and/or electronic copies should be followed-up with submission of an original signature copy as soon as possible.

Submit completed forms to:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Permit Section
Post Office Box 19276
Springfield, Illinois 62794-9276
or call (217) 782-0610
FAX: (217) 782-9891

Or submit electronically to: epa.constilr10swppp@illinois.gov

Reports must be typed or printed legibly and signed.

NOTE: FACILITY LOCATION IS NOT NECESSARILY THE FACILITY MAILING ADDRESS, BUT SHOULD DESCRIBE WHERE THE FACILITY IS LOCATED.

Use the formats given in the following examples for correct form completion.

	Example	Format
Section	12	1 or 2 numerical digits
Township	12N	1 or 2 numerical digits followed by "N" or "S"
Range	12W	1 or 2 numerical digits followed by "E" or "W"

Final stabilization has occurred when:

(a) all soil disturbing activities at the site have been completed;

(b) a uniform perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas not covered by permanent structures; or

(c) equivalent permanent stabilization measures have been employed.

APPENDIX 2

United States Environmental Protection Agency
Office of Water (4203)
EPA 833-F-00-013
January 2000 (revised December 2005)
Fact Sheet 3.0

Stormwater Phase II Final Rule

Small Construction Program Overview

The 1972 amendments to the Federal Water Pollution Control Act, later referred to as the Clean Water Act (CWA), prohibit the discharge of any pollutant to navigable waters of the United States from a point source unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Efforts to improve water quality under the NPDES program traditionally have focused on reducing pollutants in industrial process wastewater and municipal sewage treatment plant discharges. Over time, it has become evident that more diffuse sources of water pollution, such as stormwater runoff from construction sites, are also significant contributors to water quality problems.

Sediment runoff rates from construction sites are typically 10 to 20 times greater than those from agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. During a short period of time, construction activity can contribute more sediment to streams than can be deposited over several decades, causing physical and biological harm to our Nation's waters.

In 1990, EPA promulgated rules establishing Phase I of the NPDES stormwater program. Phase I addresses, among other discharges, discharges from large construction activities disturbing 5 acres or more of land. Phase II of the NPDES stormwater program covers small construction activities disturbing between 1 and 5 acres. Phase II became final on December 8, 1999 and small construction permit applications were due by March 10, 2003 (specific compliance dates will be set by the NPDES permitting authority in each State). This fact sheet outlines the construction activities covered by Phase I and Phase II, including possible waiver options from Phase II coverage, and the Phase II construction program requirements.

Who Is Covered Under the Phase I Rule?

Sites Five Acres and Greater

The Phase I NPDES stormwater rule identifies eleven categories of industrial activity in the definition of "stormwater discharges associated with industrial activity" that must obtain an NPDES permit. Category (x) of this definition is construction activity, commonly referred to as "large" construction activity. Under category (x), the Phase I rule requires all ***operators*** of construction activity ***disturbing 5 acres or greater of land*** to apply for an NPDES stormwater permit. Operators of sites disturbing less than 5 acres are also required to obtain a permit if their activity is part of a "larger common plan of development or sale" with a planned disturbance of 5 acres or greater. "Disturbance" refers to exposed soil resulting from activities such as clearing, grading, and excavating. Construction activities can include road building, construction of residential houses, office buildings, industrial sites, or demolition.

What Is Meant by a "Larger Common Plan of Development or Sale"?

As defined in EPA's NPDES stormwater general permit for construction activity, a "larger common plan of development or sale" means a contiguous area where multiple separate and distinct construction activities are occurring under one plan (e.g., the operator is building on three half-acre lots in a 6-acre development). The "plan" in a common plan of development or sale is broadly defined as any announcement or piece of documentation

(including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that construction activities may occur on a specific plot.

What Is the Definition of an "Operator" of a Construction Site?

As defined in EPA's stormwater general permit for construction activity, an "operator" is the party or parties that has:

- ❑ Operational control of construction project plans and specifications, including the ability to make modifications to those plans and specifications; *or*
- ❑ Day-to-day operational control of those activities that are necessary to ensure compliance with a stormwater pollution prevention plan (SWPPP) for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

There may be more than one party at a site performing the tasks related to "operational control" as defined above. Depending on the site and the relationship between the parties (e.g., owner, developer, contractor), there can either be a single party acting as site operator and consequently be responsible for obtaining permit coverage, or there can be two or more operators, all obligated to seek permit coverage. It is important to note that NPDES-authorized States may use a different definition of "operator" than the one above.

How Is the Phase II Construction Rule Related to the Phase I Construction Rule?

In 1992, the Ninth Circuit court remanded for further proceedings portions of EPA's existing Phase I stormwater regulation related to the category (x) discharges from large construction activity (NRDC v. EPA, 966 F.2d at 1292). EPA responded to the court's decision by designating under Phase II stormwater discharges from construction activity disturbing less than 5 acres as sources that should be regulated to protect water quality. The Phase II Rule designates these sources as "stormwater discharges associated with *small construction* activity," rather than as another category under "stormwater associated with *industrial* activity."

Who Is Covered Under the Phase II Construction Rule?

Sites Between One and Five Acres

The Stormwater Phase II Rule automatically designates, as small construction activity under the NPDES stormwater permitting program, all operators of construction site activities that result in a ***land disturbance of equal to or greater than 1 and less than 5 acres***.

Sites Less Than One Acre

Site activities disturbing less than 1 acre are also regulated as small construction activity if they are part of a larger common plan of development or sale with a planned disturbance of equal to or greater than 1 acre and less than 5 acres, or if they are designated by the NPDES permitting authority. The NPDES permitting authority or EPA Region may designate construction activities disturbing less than 1 acre based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to waters of the United States.

Are Waivers Available for Operators of Regulated Construction Activity?

Yes, but only for small, not large, construction activity. Under the Phase II Rule, NPDES permitting authorities have the option of providing a waiver from the requirements to operators of small construction activity who certify to either one of two conditions:

❶ Low predicted rainfall potential (i.e., activity occurs during a negligible rainfall period), where the rainfall erosivity factor ("R" in the Revised Universal Soil Loss Equation [RUSLE]) is less than 5 during the period of construction activity (See Fact Sheet 3.1); *or*

❷ A determination that stormwater controls are not necessary based on either:

(A) A "total maximum daily load" (TMDL) that address the pollutant(s) of concern for construction activities; **OR**

(B) An equivalent analysis that determines allocations are not needed to protect water quality based on consideration of instream concentrations, expected growth in pollutant concentrations from all sources, and a margin of safety.

> ***Pollutants of concern*** include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity, or siltation) and any other pollutant that has been identified as a cause of impairment of a receiving waterbody.

The intent of the waiver provision is to waive only those sites that are highly unlikely to have a negative effect on water quality. Therefore, before applying for a waiver, operators of small construction activity are encouraged to consider the potential water quality impacts that may result from their project and to carefully examine such factors as proximity to water resources and sensitivity of receiving waters.

a. *What is the Rainfall Erosivity Factor in Waiver ❶?*

Waiver ❶ uses the Rainfall Erosivity Factor to determine whether the potential for polluted discharge is low enough to justify a waiver from the requirements. It is one of six variables used by the Revised Universal Soil Loss Equation (RUSLE)—a predictive tool originally used to measure soil loss from agricultural lands at various times of the year on a regional basis—to predict soil loss from construction sites. The Rainfall Erosivity Factor waiver is time-sensitive and is dependent on when during the year a construction activity takes place, how long it lasts, and the expected rainfall and intensity during that time. For information about the rainfall erosivity waiver, see Fact Sheet 3.1. An erosivity calculator for construction sites is available at http://ei.tamu.edu.

b. *What is a "TMDL" in Waiver ❷?*

For impaired waters where technology-based controls required by NPDES permits are not achieving State water quality standards, the CWA requires implementation of the TMDL process. The TMDL process establishes the maximum amount of pollutants a waterbody can assimilate before water quality is impaired, then requires that this maximum level not be exceeded.

A TMDL is done for each pollutant that is found to be contributing to the impairment of a waterbody or a segment of a waterbody. To allow a waiver for construction activities, a TMDL would need to address sediment, or a parameter that addresses sediment such as total suspended solids, turbidity, or siltation. Additional TMDLs addressing common pollutants from construction sites such as nitrogen, phosphorus, and oil and grease also may be necessary to ensure water quality protection and allow a waiver from the NPDES stormwater program.

A TMDL assessment determines the source or sources of a pollutant of concern, considers the maximum allowable level of that pollutant for the waterbody, then allocates to each source or category of sources a set level of the pollutant that it is allowed to discharge into the waterbody. Allocations to point sources are called wasteload allocations.

How Would an Operator Qualify for, and Certify to, Waiver ❷?

EPA expects that when TMDLs or equivalent analyses are completed, there may be a determination that certain classes of sources, such as small construction activity, would not have to control their contribution of pollutants of concern to the waterbody in order for the waterbody to be in attainment with water quality standards (i.e., these sources were not assigned wasteload allocations). In such a case, to qualify for waiver ❷, the operator of the construction site would need to certify that its construction activity will take place, and the stormwater discharges will occur, within the area covered either by the TMDLs or equivalent analysis. A certification form would likely be provided by the NPDES permitting authority for this purpose.

What Does the Phase II Construction Program Require?

The Phase II Final Rule requires operators of Phase II small construction sites, nationally, to obtain an NPDES permit and implement practices to minimize pollutant runoff. It is important to note that, locally, these same sites also may be covered by State, Tribal, or local construction runoff control programs (see Fact Sheets 2.6 and 2.7 for information on the Phase II small MS4's construction program). For the Phase II small construction program, EPA has taken an approach similar to Phase I where the program requirements are not fully defined in the rule but rather in the NPDES permit issued by the NPDES permitting authority.

EPA recommended that the NPDES permitting authorities use their existing Phase I large construction general permits as a guide to developing their Phase II small construction permits. In doing so, the Phase II requirements would be similar to the three general Phase I requirements summarized below.

- ❑ Submission of a ***Notice of Intent*** (NOI) that includes general information and a certification that the activity will not impact endangered or threatened species. This certification is unique to EPA's NOI and is not a requirement of most NPDES-delegated State's NOIs;
- ❑ The development and implementation of a ***Stormwater Pollution Prevention Plan*** (SWPPP) with appropriate BMPs to minimize the discharge of pollutants from the site; and

- ❑ Submission of a ***Notice of Termination*** (NOT) when final stabilization of the site has been achieved as defined in the permit or when another operator has assumed control of the site.

In July 2003, EPA issued a construction general permit that covers both large and small construction activities. This permit, supporting information, and guidance can be found at http://www.epa.gov/npdes/stormwater/cgp.

Can the Permitting Authority Reference a Qualifying Erosion and Sediment Control Program in NPDES Construction Permits?

Yes. The Phase II Rule allows the NPDES permitting authority to include in its NPDES permits for large and for small construction activity conditions that incorporate by reference qualifying State, Tribal, or local erosion and sediment control program requirements. A qualifying program must include the following requirements:

- ❑ Requirements for construction site operators to implement appropriate erosion and sediment control best management practices;
- ❑ Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste that may cause adverse impacts to water quality;
- ❑ Requirements for construction site operators to develop and implement a stormwater pollution prevention plan; and
- ❑ Requirements to submit a site plan for review that incorporates consideration of potential water quality impacts.

In addition to the four elements above, a qualifying program for large construction activities must also include any additional requirements necessary to achieve the applicable technology-based standards of "Best Available Technology" (BAT) and "Best Conventional Technology" (BCT) based on the best professional judgment of the permit writer.

Should a State, Tribal, or local program include one or more, but not all, of the elements listed above, the permitting authority can reference the program in the permit, provided it also lists the missing element(s) as a condition in the permit.

What are Some Recommended BMPs for Small Construction Sites?

The approach and BMPs used for controlling pollutants in stormwater discharges from small construction sites may vary from those used for large sites since their characteristics can differ in many ways. For example, operators of small sites may have more limited access to qualified design personnel and technical information. Also, small sites may have less space for installing and maintaining certain BMPs.

As is the case with all construction sites, erosion and sediment control at small construction sites is best accomplished with proper planning, installation, and maintenance of controls. The following practices have shown to be efficient, cost effective, and versatile for small construction site operators to implement. The practices are divided into two categories: non-structural and structural.

❑ Non-Structural BMPs

- Minimizing Disturbance
- Preserving Natural Vegetation
- Good Housekeeping Practices

❑ Structural BMPs

Erosion Controls
- Mulch
- Grass
- Stockpile Covers

Sediment Controls
- Silt Fence
- Inlet Protection
- Check Dams
- Stabilized Construction Entrances
- Sediment Traps

Most erosion and sediment controls require regular maintenance to operate correctly. Accumulated sediments should be removed frequently and materials should be checked periodically for wear. Regular inspections by qualified personnel, which can allow problem areas to be addressed, should be performed after major rain events.

The BMPs listed above as well as additional erosion and sediment control practices for construction activities are described in detail in the National Menu of BMPs for Stormwater Phase II, which can be found at http://www.epa.gov/npdes/stormwater.

For Additional Information

Contacts

A. U.S. EPA Office of Wastewater Management
http://www.epa.gov/npdes/stormwater
Phone: 202-564-9545

☞ Your NPDES Permitting Authority. Most States and Territories are authorized to administer the NPDES Program, except the following, for which EPA is the permitting authority:

Alaska	Guam
District of Columbia	Johnston Atoll
Idaho	Midway and Wake Islands
Massachusetts	Northern Mariana Islands
New Hampshire	Puerto Rico
New Mexico	Trust Territories
American Samoa	

☞ A list of names and telephone numbers for each EPA Region and State is located at http://www.epa.gov/npdes/stormwater (click on "Contacts").

☞ Your local soil conservation district office. They can provide assistance with RUSLE and other conservation related issues.A list of conservation district contacts is available at http://www.nacdnet.org/resources/cdsonweb.html

Reference Documents

☞ EPA's Stormwater Web Site
http://www.epa.gov/npdes/stormwater
- Stormwater Phase II Final Rule Fact Sheet Series
- Stormwater Phase II Final Rule (64 *FR* 68722)
- National Menu of Best Management Practices for Stormwater Phase II
- Measurable Goals Guidance for Phase II Small MS4s
- Stormwater Case Studies
- Construction General Permit and Fact Sheet (68 FR 45817)
  http://www.epa.gov/npdes/stormwater/cgp
- EPA Stormwater Management for Construction Activities and Best Management Practices : Developing Pollution Prevention Plans Guidance
- And many others

☞ Construction Industry Compliance Assistance Center:
http://www.cicacenter.org/

☞ *Agricultural Handbook Number 703, Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)*, Chapter 2, pp. 21-64, January 1997. http://www.epa.gov/npdes/pubs/ruslech2.pdf

☞ *Guidance for Water Quality Based Decisions: The TMDL Process.* April 1991. U.S. EPA Office of Water. EPA 440/4-91-001.
http://www.epa.gov/OWOW/tmdl

APPENDIX 3

GENERAL NOTES

EROSION CONTROL

1.) TEMPORARY EROSION CONTROL DEVICES SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

2.) THE CONTRACTOR SHALL CONFINE ACTIVITIES TO FALL WITHIN THE PROPOSED RIGHT-OF-WAY AS SHOWN ON THE PLANS.

3.) CONTRACTOR SHALL ESTABLISH POINTS OF INGRESS AND EGRESS FROM EXISTING ROADWAYS. THE WORK SHALL BE IN ACCORDANCE WITH THE DETAIL ENTITLED STABILIZED CONSTRUCTION ENTRANCE.

4.) ALL PERMANENT AND/OR TEMPORARY CHANNEL RELOCATION OR MODIFICATION SHALL BE CONSTRUCTED UNDER DRY CONDITIONS AND STABILIZED PRIOR TO DIVERSION OF FLOW THROUGH THE NEW CHANNEL.

5.) ANY DEVIATION OF THE TEMPORARY EROSION CONTROL PLAN OR SCHEDULE BY THE CONTRACTOR SHALL BE AT THE DISCRETION OF THE ENGINEER.

6.) QUANTITY CALCULATIONS FOR ITEM 628J TEMPORARY RIPRAP ARE BASED ON THE REPLACEMENT OF THE STONE OUTLET STRUCTURES AND ROCK CHECK DAMS ONCE. THESE REPLACEMENTS SHALL OCCUR IN CONJUNCTION WITH ITEM 628B EROSION AND SEDIMENT CONTROL-CLEANOUT OR AS DIRECTED BY THE ENGINEER.

7.) THE CONTRACTOR SHALL MAKE NOTE OF THE THREE DRAINAGE DIVIDE SYMBOLS USED IN THE EROSION AND SEDIMENT CONTROL PLAN. THESE SYMBOLS WERE USED TO EVALUATE THE AMOUNT OF DRAINAGE AREA THAT WOULD IMPACT THE PROPOSED CONSTRUCTION PROJECT. STANDARD SYMBOLS AND TERMINOLOGY:

A. —··— IS USED TO IDENTIFY A UNIT OF LAND FROM WHICH THE SURFACE. SUBSURFACE, AND GROUND WATER RUNOFF DRAIN TO A COMMON OUTLET.

B. —·—·— IS USED TO SUBDIVIDE MAJOR WATERSHEDS IN ORDER TO CONCENTRATE SURFACE. SUBSURFACE. AND GROUND WATER RUNOFF TO A PARTICULAR CULVERT CROSSING.

C. ←·→·→ IS USED FOR CALCULATING DRAINAGE AREAS IN ORDER TO MAXIMIZE THE SIZE OF THE TEMPORARY SEDIMENT TRAPS AND TO MINIMIZE THE NUMBER OF LOCATIONS.

8.) ALL PERMANENT BERMS SHALL BE CONSTRUCTED TO THE LINES AND GRADES AS SHOWN ON THE PLANS AND CROSS-SECTIONS FOR 143rd ST. PRIOR TO ANY GRADING OF DITCHES NEAR WETLANDS #23. 24. AND 25.

9.) THE CONTRACTOR SHALL INSTALL ALL TEMPORARY PERIMETER CONTROLS PRIOR TO ANY GRADING OPERATION. THIS INCLUDES, BUT IS NOT LIMITED TO DIVERSION DIKES. TEMPORARY SWALES. SILT FENCES. AND SUPER SILT FENCES. LOCATIONS AND TREATMENTS OF EROSION CONTROL MEASURES ARE SHOWN ON THE PLAN SHEETS.

10.) TEMPORARY SLOPE DRAINS SHALL BE USED AT THE TOP OF FILL SLOPES AS EMBANKMENT IS CONSTRUCTED TO PREVENT EXCESSIVE EROSION. THE TEMPORARY SLOPE DRAIN WILL REMAIN IN PLACE UNTIL SHOULDERS ARE CONSTRUCTED AND THE SLOPES ARE SEEDED AND MULCHED.

11.) INCREMENTAL SEGMENTS OF TEMPORARY PIPE SLOPE DRAINS SHALL NOT BE MEASURED FOR PAYMENT MORE THAN ONCE.

12.) STABILIZED CONSTRUCTION ENTRANCES SHALL BE CONSTRUCTED AND MAINTAINED DURING THE LENGTH OF THE CONSTRUCTION SEASON. ADDITIONAL MAINTENANCE BEYOND INITIAL CONSTRUCTION SHALL BE PAID FOR BY THE TON UNDER ITEM 302A AGGREGATE BASE COURSE.

13.) ALL SEDIMENT TRAPS. SILT FENCES. AND SUPER SILT FENCES SHALL BE CLEANED OUT OF ALL SEDIMENT ACCUMULATION BEFORE THE WINTER SHUT DOWN DATES.

14.) THE CONTRACTOR CAN WORK WITHIN ANY WORK ZONE AREAS PROPOSED ON THE "CLEARING WORK ZONE SCHEDULE" TO BEST FACILITATE CONSTRUCTION. EACH AREA MUST BE CLEARED AND ALL EROSION CONTROL ITEMS MUST BE CONSTRUCTED. STABILIZED. AND APPROVED BY THE ENGINEER PRIOR TO STARTING ANOTHER WORK ZONE.

15.) THE CONTRACTOR SHALL REFER TO 2003 SUPPLEMENTAL SPECIFICATION FOR CURRENT PENALTIES FOR NON-CONFORMANCE.

16.) THE CONTRACTOR SHALL STABILIZE. AND USE PERMANENT DITCHES AND CROSS CULVERTS IN CONJUNCTION WITH THE EROSION CONTROL MEASURES TO CONTROL SEDIMENT LADEN WATER AS WELL AS OFF-SITE RUNOFF WATER FOR 143rd ST. AND ARCHER AVE.. WHERE THE PROPOSED DITCHES AND PROPOSED CROSS CULVERTS DO NOT APPLY. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY DITCHES AND TEMPORARY CULVERTS TO MAINTAIN POSITIVE DRAINAGE. FOR ALL CASES. EROSION CONTROL MEASURES WILL STILL BE CONSTRUCTED PER PLAN OR AS DIRECTED BY THE ENGINEER.

17.) MINIMUM DEWATERING BASIN SHALL BE 10'x 10'x 3' IN DEPTH. DEWATERING BASIN SIZE AND LOCATION SHALL BE APPROVED BY THE ENGINEER BEFORE CONSTRUCTION.

18.) SAME DAY STABILIZATION HAS BEEN SPECIFIED FOR THOSE AREAS WHERE THERE IS LIMITED SPACE AVAILABLE FOR THE CONSTRUCTION OF SEDIMENT TRAPS OR OTHER SEDIMENT CONTROL MEASURES BETWEEN THE ROADWAY SIDESLOPE AND THE ROW LINE. THE INTENT OF SAME DAY STABILIZATION IS TO PREVENT THE MOVEMENT OF SOILS ONCE THEY ARE EXPOSED BY THE CONTRACTOR'S OPERATIONS. SAME DAY STABILIZATION IS TO BE IMPLEMENTED AFTER THE INITIAL PERIMETER CONTROLS ARE IN PLACE AND CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS EACH DAY.

THE PRIMARY METHOD OF SAME DAY STABILIZATION DURING GRADING OPERATIONS SHALL BE ITEM 628K TEMPORARY STABILIZATION WITH STRAW MULCH. OTHER TEMPORARY METHODS SHALL BE AS DIRECTED BY THE ENGINEER.

IN EITHER CASE, AT THE END OF THE DAY, THE WORK ZONE MUST BE LEFT IN A CONDITION IN WHICH THE GRADING AREAS DISTURBED THAT DAY ARE STABILIZED AND MEASURES ARE IN PLACE TO CONTROL SEDIMENT LADEN WATER AND OFFSITE RUNOFF.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING HIS OPERATIONS WITH THE WORK OF ANY SUB-CONTRACTORS TO INSURE THAT STABILIZATION IS PERFORMED THE SAME DAY THAT DISTURBANCE OCCURS. THE PERFORMANCE OF SAME DAY STABILIZATION IS ALSO SUBJECT TO THE PENALTIES FOR NON-CONFORMANCE AND FAILURE TO RESPOND AS OUTLINED IN THE STANDARD SPECIFICATIONS.

19.) A NOMINAL QUANTITY FOR ITEM 628CR REERECT SILT FENCE HAS BEEN PROVIDED. REERECTION OF SILT FENCE SHALL BE AS APPROVED OR DIRECTED BY THE ENGINEER.

DRAWN	DATE.....	ENGINEERING CONSULTANT	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. DATE DESCRIPTION	CONTRACT NO.	DRAWING NO.
CHECKED	SCALE... NONE.....				EROSION CONTROL NOTES	.....OF.....

EROSION CONTROL SCHEDULE FOR I-355 TOLLWAY AND CROSS ROADS

CONTRACT	MANAGEMENT OF EROSION AND SEDIMENT CONTROL	EROSION AND SEDIMENT CONTROL - EXCAVATION	EROSION AND SEDIMENT CONTROL - CLEANOUT	SILT FENCE	RE-ERECT SILT FENCE	TEMPORARY SWALE, TREATMENT TYPE I	STABALIZED CONSTRUCTION ENTRANCE	SUPER SILT FENCE	TEMPORARY PIPE SLOPE DRAINS	TREE PROTECTION	TEMPORARY RIPRAP	TEMPORARY STABILIZATION WITH STRAW MULCH	DIVERSION DIKE, TREATMENT TYPE I	RECTANGULAR INLET PROTECTION	GEOTEXTILE FABRIC CLASS C	SAME DAY STABILIZATION
	628	628A	628B	628C	628CR	628D1	628E	628G	628H	628I	628J	628K	628L1	628M1	628N	628P
	CAL MO.	CU. YD.	CU. YD.	L.F.	L.F.	L.F.	SQ. YD.	L.F.	L.F.	L.F.	TON	ACRE	L.F.	EACH	SQ. YD.	SQ. YD.
7710																
I-355 CENTERLINE																
430+00 TO 438+00		839	915	760	190	25			188		1,222	4.96	750	3	860	4,800
438+00 TO 452+00			4,152			70			124		1,535	12.40	880	10		12,000
452+00 TO 466+00			2,592								2,696	22.50		16		21,778
466+00 TO 480+00			7,205								3,070	25.71		12		24,889
480+00 TO 494+00		2,467	1,951	650	163			440	231		1,307	27.00		16	486	26,133
494+00 TO 505+19.50		2,814	3,149	2,550	638	50			69		1,583	13.89		20		13,444
SUBTOTAL	-	6,120	19,964	3,960	990	145	-	440	612	-	11,412	106.45	1,630	77	1,347	103,044
Ill. Rte. 171 (ARCHER AVE.)																
93+40 TO 95+00			278	70	18						21	5.46				5,289
95+00 TO 109+00			751								207	5.51		4		5,333
109+00 TO 123+00			135								664	9.64		3		9,333
123+00 TO 134+90		27	106	980	245			330			417	4.10				3,967
SUBTOTAL	-	27	1,270	1,050	263	-	-	330	-	-	1,308	24.71	-	7	-	23,922
143RD STREET																
78+36 TO 92+00			388	970							560	4.38		33		4,244
92+00 TO 107+00			452								581	5.85		37		5,667
107+00 TO 122+15			600								394	6.96		31		6,733
SUBTOTAL	-	-	1,440	970	243	-	-	-	-	-	1,535	17.19	-	101	-	16,644
SOIL STOCKPILES	-	-	100	1,000	250	-	-	-	-	-	-	3.00	-	-	-	2,904
SUBTOTAL	-	6,146	22,774	6,980	1,745	145	-	770	612	-	14,255	151.36	1,630	185	1,347	146,514
AT ENGINEER'S DISCRETION	-	1,229	1,139	349	1,745	15	1,000	77	61	3,000	713	8.0	326	93	269	7,326
TOTAL	13	7,375	23,913	7,329	3,490	160	1,000	847	673	3,000	14,968	159.4	1,956	278	1,616	156,744

DRAWN BY -- -- -- -- -- -- | DATE -- -- -- --

CHECKED BY -- -- -- -- -- -- | SCALE -- NONE --

ENGINEERING CONSULTANT

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT

EROSION CONTROL SCHEDULE

DRAWING NO.

-- -- -- OF -- -- --

EROSION CONTROL STAGE CONSTRUCTION SEQUENCE:

(REFER TO MOT PLANS FOR WORK ZONES AND DRAINAGE CONSTRUCTION FOR EACH STAGE).

EROSION CONTROL NOTES:

1. FOR EROSION AND SEDIMENT CONTROL GENERAL NOTES SEE STANDARD DRAWING K1-00, SHEET 1.

2. THE PERMANENT VEGETATIVE PLAN SHALL BE USED ON ALL DISTURBED AREAS WHENEVER POSSIBLE (ACCORDING TO GENERAL NOTE NUMBER 8). A QUANTITY FOR TEMPORARY STABILIZATION WITH STRAW MULCH (ITEM JS280150) HAS ALSO BEEN PROVIDED FOR ALL ANTICIPATED DISTURBED AREAS.

3. WHEN PERMANENT LANDSCAPING IS NOT POSSIBLE IN "SAME DAY STABILIZATION" AREAS, ITEM JS280150 SHALL BE USED FOR SAME DAY STABILIZATION.

4. STABILIZED CONSTRUCTION ENTRANCES ARE SHOWN AT SUGGESTED LOCATIONS. A NOMINAL QUANTITY HAS BEEN PROVIDED FOR PLACING AND MAINTAINING ADDITIONAL ENTRANCES.

5. TEMPORARY SEDIMENT BASINS AND TRAPS FOR THIS PROJECT HAVE BEEN SIZED FOR THE RUNOFF FROM A 2-YEAR FREQUENCY, 24-HOUR DURATION STORM, OR 1,800 CU FT/ACRE, WHICHEVER IS GREATER. THEREFORE,THEY MAY REQUIRE MORE FREQUENT CLEANING THAN BASINS AND TRAPS SIZED TO THE STANDARD 3,600 CU FT/ ACRE CRITERIA.

6. REMOVING AND REINSTALLING INLET PROTECTION DEVICES TO ACCOMODATE DRAINAGE STRUCTURE ADJUSTMENT IS INCLUDED IN THE COST OF THE INLET PROTECTION DEVICE.

PRESTAGE

WB I-90 STORM SEWER, RETAINING WALL, AND TEMPORARY PAVEMENT CONSTRUCTION.

INSTALL PERIMETER SILT FENCE AS SHOWN IN THE PLANS. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES TO ACCESS SEWER AND SEDIMENT BASIN CONSTRUCTION AREAS. CONSTRUCT RELOCATED OUTLET DITCH, DETENTION BASIN OUTLET STRUCTURE, AND TEMPORARY CHANNEL THROUGH THE DETENTION BASIN NORTH OF RAMP F USING SAME DAY STABILIZATION (SEE ESC-14). CONSTRUCT SEDIMENT BASINS IN DETENTION BASIN AREAS ON BOTH SIDES OF RAMP F. CONSTRUCT CULVERT UNDER RAMP F AND TEMPORARY STORM SEWER TO CONNECT THE SEDIMENT BASINS. CONSTRUCT TEMPORARY STORM SEWER TO CONVEY RUNOFF FROM WB I-90 DITCH UNDER THE TEMPORARY CHANNEL AND INTO THE SEDIMENT BASIN NORTH OF RAMP F.

EXCAVATE AND CONSTRUCT RETAINING WALLS FOR WB-190 TEMPORARY PAVEMENT CONSTRUCTION NORTH OF THE INTERCHANGE. STABILIZE THE CUT SLOPE USING PERMANENT STABILIZATION WHERE IT IS FEASIBLE TO EXCAVATE TO FINAL SLOPE LIMITS. USE TEMPORARY STABILIZATION WITH STRAW MULCH WHERE CUT SLOPES FOR TEMPORARY WIDENING DO NOT COINCIDE WITH FINAL SLOPE LIMITS.

COMPLETE WB I-90 STORM SEWER AND INSTALL CULVERT INLET PROTECTION AT UPSTREAM END. EXCAVATE PROPOSED DITCH WITH TEMPORARY FORESLOPE. INTALL DITCH CHECKS IN PROPOSED DITCH AND APPLY PERMANENT STABILIZATION TO DITCH BOTTOM AND BACKSLOPE. APPLY TEMPORARY STABILIZATION WITH STRAW MULCH TO FORESLOPE.

COMPLETE EARTHWORK FOR TEMPORARY PAVEMENT AND PLACE AGGREGATE BASE COURSE AS SOON AS PRACTICABLE. INSTALL SILT FENCE ALONG TEMPORARY GUTTER AND FILTER FABRIC INLET PROTECTION IN STORM SEWER STRUCTURES ALONG TEMPORARY GUTTER.

I-90 SHOULDER REMOVAL AND REPLACEMENT

INSTALL ROCK CHECK DAM AND INLET PROTECTION IN EXISTING WB I-90 DITCH NEAR THE KISHWAUKEE RIVER AS SHOWN IN THE PLANS. MINIMIZE DISTURBANCE OF ROADSIDE SLOPES DURING SHOULDER REMOVAL AND REPLACEMENT. STABILIZE DISTURBED AREAS WITH PERMANENT STABILIZATION BETWEEN THE RIVER AND THE EASTERN LIMITS OF PAVEMENT AND DITCH CONSTRUCTION. PROVIDE TEMPORARY STABILIZATION WITH STRAW MULCH ON DISTURBED AREAS WITHIN THE LIMITS OF PROPOSED PAVEMENT CONSTRUCTION.

WB I-90 SHOULDER REMOVAL AND REPLACEMENT WITH EMBANKMENT WIDENING IN RAMP F INFIELD AND ASSOCIATED DRAINAGE CONSTRUCTION

CONSTRUCT SEDIMENT TRAP WEST OF MILL ROAD PRIOR TO COMMENCING DRAINAGE CONSTRUCTION ASSOCIATED WITH WB I-90 EMBANKMENT WIDENING IN RAMP F INFIELD. INSTALL DITCH CHECKS IN INFIELD DITCH AND CULVERT INLET PROTECTION AT CULVERT JACKED UNDER RAMP F. APPLY TEMPORARY STABILIZATION WITH STRAW MULCH.

PRESTAGE (CONTINUED)

RAMP F SHOULDER REMOVAL AND REPLACEMENT

MINIMIZE DISTURBANCE OF ROADSIDE SLOPES DURING SHOULDER REMOVAL AND REPLACEMENT. PROVIDE TEMPORARY STABILIZATION WITH STRAW MULCH ON DISTURBED AREAS

RAMP I SHOULDER REMOVAL AND REPLACEMENT WITH EMBANKMENT WIDENING AND ASSOCIATED DRAINAGE CONSTRUCTION

CONSTRUCT SEDIMENT BASIN ON WEST SIDE OF I-39 NEAR THE US 20 INTERCHANGE. EXCAVATE PROPOSED DITCH ADJACENT TO TEMPORARY WIDENING. INSTALL DITCH CHECKS AND APPLY TEMPORARY STABILIZATION WITH STRAW MULCH.

STAGE 1A-1

I-90 MEDIAN SHOULDER REMOVAL AND REPLACEMENT, STORM SEWER CONSTRUCTION, EMBANKMENT WIDENING, AND TEMPORARY PAVEMENT CONSTRUCTION

PRIOR TO CLEARING AND GRUBBING FOR EMBANKMENT CONSTRUCTION IN MEDIAN, COVER/ADJUST EXISTING MEDIAN INLETS AS INDICATED IN THE MOT PLAN AND INSTALL INLET PROTECTION ON STRUCTURES THAT WILL REMAIN OPEN. CONSTRUCT MEDIAN STORM SEWER AND CROSS ROAD CULVERTS AS INDICATED ON THE MOT PLAN AND INSTALL CULVERT INLET PROTECTION AND INLET PROTECTION AS SHOWN IN THE PLAN. THE PLAN INCLUDES INLET PROTECTION AT SELECT INLETS IN AREAS TO BE PAVED TO PROVIDE SUBGRADE DRAINAGE OUTLET UNTIL MEDIAN PAVEMENT IS CONSTRUCTED. APPLY TEMPORARY STABILIZATION WITH STRAW MULCH TO DISTURBED EARTH SLOPES IN MEDIAN. USE SAME-DAY STABILIZATION AT MEDIAN STORM SEWER OUTLETS AND AT INLET AND OUTLET OF CROSS ROAD CULVERT NORTH OF NEWBURG ROAD.

NEWBURG BRIDGE AND APPROACH ROADWAY

ROAD CONSTRUCTION CONSISTS OF MINOR WORK ATOP EXISING EMBANKMENT. MINIMIZE DISTURBANCE TO EXISTING EMBANKMENT SLOPES. PROVIDE PERMANENT STABILIZATION OF DISTURBED AREAS.

STAGE 1A-2

WB I-90 EMBANKMENT CONSTRUCTION AND TEMPORARY PAVEMENT CONSTRUCTION AT INTERCHANGE

APPLY TEMPORARY STABILIZATION WITH STRAW MULCH TO TEMPORARY SLOPE.

RAMP F SHOULDER REMOVAL AND REPLACEMENT

MINIMIZE DISTURBANCE OF ROADSIDE SLOPES DURING SHOULDER REMOVAL AND REPLACEMENT. APPLY TEMPORARY STABILIZATION WITH STRAW MULCH TO DISTURBED AREA.

I-39 TEMPORARY PAVEMENT CONSTRUCTION IN MEDIAN

INSTALL INLET PROTECTION AT EXISTING MEDIAN INLET AT NORTH END OF BRIDGE OVER US 20 BEFORE COMMENCING CLEARING AND GRUBBING IN MEDIAN. CONSTRUCT PROPOSED AND TEMPORARY STORM SEWER AS SHOWN IN THE MOT PLAN. INSTALL INLET PROTECTION AT TEMPORARY INLET. APPLY TEMPORARY STABILIZATION WITH STRAW MULCH TO DISTURBED AREA IN MEDIAN AND AT TEMPORARY OUTLET OF PROPOSED STORM SEWER TO EXISTING DITCH.

STAGE 1B-1

STAGE 1B-1 CONSISTS OF TWO LARGE INDEPENDENT WORK ZONES, EB I-90/RAMP I AND RAMPS G AND H. STAGE CONSTRUCTION TO COMPLETE GRADING AND INITIATE STABILIZATION IN ONE WORK ZONE BEFORE COMMENCING WORK IN THE OTHER.

EB I-90/RAMP I GRADING, DRAINAGE AND PAVEMENT CONSTRUCTION WEST OF THE INTERCHANGE

BEFORE COMMENCING WORK ALONG EB I-90, COORDINATE WITH CONTRACT S-06-5402 TO DIVERT EB I-90 DITCH FLOW TO MEDIAN STORM SEWER AT NORTH END OF PROJECT. EXCAVATE RAMP I DITCH ALONG THE EXISTING RETAINING WALL TO ROUTE RUNOFF FROM SB I-39 SOUTH TO THE SEDIMENT BASIN ON THE WEST SIDE OF I-39 NEAR THE US 20 INTERCHANGE. INSTALL DITCH CHECKS AND APPLY EMPORARY STABILIZATION WITH STRAW MULCH TO DITCH.

CONSTRUCT SEDIMENT BASINS ON NORTH AND SOUTH SIDE OF CROSS ROAD CULVERT AT RAMP I STA. 320+00. ALLOW OFF-ROW RUNOFF TO PASS THROUGH THE CULVERT UNTRAPPED.

CONSTRUCT STORM SEWER, INCLUDING TEMPORARY CONNECTION TO CROSS ROAD CULVERT AT RAMP I STA. 320+00. MIMIMIZE DISTURBANCE OF EXISTING DITCH UPSTREAM OF STORM SEWER AS STORM SEWER CONSTRUCTION ROGRESSES NORTHWARD. CONSTRUCT DITCHES AND STORM SEWER AT TOP OF CUT TO INTERCEPT OFF-ROW RUNOFF AND CONVEY IT TO THE STORM SEWER AS SEWER CONSTRUCTION PROGRESSES NORTHWARD. INSTALL INLET PROTECTION AND STABILIZE DITCHES AS THEY ARE COMPLETED.

CONSTRUCT SEDIMENT BASINS AT INLET OF NEWLY CONSTRUCTED STORM SEWER AND IN DETENTION BASIN UPSTREAM OF CROSS ROAD CULVERT AT EB I-90 STA 451+78.

EXCAVATE PROPOSED EB I-90 DITCH AND DETENTION POND WITH TEMPORARY FORESLOPE WHERE REQUIRED TO ACCOMMODATE TEMPORARY PAVEMENT. STABILIZE THE CUT SLOPE USING PERMANENT STABILIZATION. STAGE CAVATION ACCORDING TO THE EXCAVATION PHASING PLAN ON STD K1-00, SHEET 2. APPLY TEMPORARY STABILIZATION WITH STRAW MULCH TO TEMPORARY FORESLOPE. INSTALL DITCH CHECKS, INLET PROTECTION AND SILT FENCE ALONG GUTTER SECTION.

APPLY TEMPORARY STABILIZATION WITH STRAW MULCH TO TEMPORARY CUT SLOPE BETWEEN EXISTING AND PROPOSED RAMP I. ERECT SILT FENCE AT TOE OF TEMPORARY CUT SLOPE AND INSTALL INLET PROTECTION AT GORE INLET BETWEEN RAMP I AND EB I-90.

RAMPS G, H, AND 35 GRADING, DRAINAGE AND PAVEMENT CONSTRUCTION

CONSTRUCT SEDIMENT BASINS ON THE EAST SIDE OF RAMP H AND RAMP 35, EXCAVATE DITCH ALONG EAST SIDE, INSTALL DITCH CHECKS, AND STABILIZE DITCH WITH PERMANENT STABILIZATION.

EXCAVATE PROPOSED DITCH ON LEFT SIDE OF RAMP H AS FAR AS POSSIBLE WITHOUT ENCROACHING ON EB I-90 DITCH FORESLOPE. PROVIDE ROCK CHECK DAM IN TEMPORARY (PARTIAL DEPTH) DITCH BETWEEN PROPOSED RAMP H DITCH AND EXISTING EB I-90 DITCH UNTIL LEFT DITCH AND CROSS ROAD STORM SEWER CAN BE COMPLETED IN STAGE 1B-3. INSTALL DITCH CHECKS AND APPLY TEMPORARY STABILIZATION WITH STRAW MULCH.

EXCAVATE PROPOSED DITCH ON THE LEFT SIDE OF RAMP G TO THE EXTENT POSSIBLE AND CONSTRUCT TEMPORARY AND PROPOSED STORM SEWER TO PROVIDE DRAINAGE OUTLET. INSTALL DITCH CHECKS AND STABILIZE DITCH WITH PERMANENT STABILIZATION. INSTALL INLET AND CULVERT INLET PROTECTION ON TEMPORARY DRAINAGE STRUCTURES.

CONSTRUCT AND STABILIZE RAMP EMBANKMENTS USING THE EMBANKMENT PHASING PLAN ON STD K1-00, SHEET 2. INSTALL DITCH CHECKS IN THE FILL DITCHES FORMED BETWEEN EMBANKENTS. PROVIDE TEMPORARY PIPE SLOPE DRAINS TO CONVEY RUNOFF FROM TOP OF EMBANKMENT TO TOE DITCH.

DRAWN BY DATE CHECKED BY DATE		THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. DATE DESCRIPTION	CONTRACT NO. NORTHWEST TOLLWAY EROSION & SEDIMENT CONTROL SEQUENCE AND GENERAL NOTES	DRAWING NO. OF

EROSION CONTROL STAGE CONSTRUCTION SEQUENCE:

STAGE 1B-2

EB I-90/RAMP H GRADING, DRAINAGE AND PAVEMENT CONSTRUCTION EAST OF THE INTERCHANGE

CONSTRUCT SEDIMENT TRAPS EAST AND WEST OF THE CROSS ROAD CULVERT AT EB I-90 STA. 511+76 AND INSTALL ROCK CHECK DAM EAST OF EXISTING MEDIAN STORM SEWER OUTLET AT EB I-90 STA. 517+63. NOTE THAT MEDIAN DRAINAGE WEST OF WB I-90 STA. 378+00 WAS DIVERTED TO RAMP F DITCH DURING PRESTAGE CONSTRUCTION.

CONSTRUCT DOWNSTREAM PORTION OF PROPOSED CROSS ROAD CULVERT WHLE MAINAINING FLOW IN ADJACENT EXISTING CROSS ROAD CULVERT. STABILIZE OUTLET CHANNEL AT CULVERT OUTLET USING SAME-DAY STABILIZATION.

CONSTRUCT EB I-90 DITCH AND STORM SEWER DOWSTREAM OF DETENTION POND. INSTALL DITCH CHECKS AND INLET PROTECTION. STABILIZE WITH PERMANENT STABILIZATION.

CONSTRUCT STORM SEWER FROM RAMP H LEFT DITCH TO DETENTION POND, AND INSTALL CULVERT INLET PROTECTION.

CONSTRUCT EB I-90 MEDIAN STORM SEWER AND GORE DRAINAGE STRUCTURES. INSTALL INLET PROTECTION AT MEDIAN DRAINAGE STRUCTURES. APPLY TEMPORARY STABILIZATION WITH STRAW MULCH IN MEDIAN.

RAMP G SUBSTRUCTURE

CONSTRUCT CULVERT INLET PROTECTION AT EXISTING INFIELD OUTLET CULVERT. REMOVE EXISTING RAMP I EMBANKMENT USING EXCAVATION PHASING ACCORDING TO STD K1-00, SHEET 2. INSTALL DITCH CHECKS IN PROPOSED DITCHES. STABILIZE FINAL SLOPES WITH PERMANENT STABILIZATION. APPLY TEMPORARY STABILIZATION WITH STRAW MULCH WHERE TEMPORARY SLOPES ARE REQUIRED TO AVOID UNDERMINING EXISTING I-39 EMBANKMENT.

NB I-39/RAMP G ANDRAMP 35 TIE-IN TO EXISTING RAMP

COMPLETE INFIELD GRADING, INSTALL DITCH CHECKS AND CULVERT INLET PROTECTION, AND STABILIZE DISTURBED AREAS USING PERMANENT STABILIZATION. COMPLETE DRAINAGE CONSTRUCTION IN I-39 MEDIAN, STABILIZE WITH PERMANENT STABIZATION, AND INSTALL INLET PROTECTION ON PROPOSED INLETS.

STAGE 1B-3

EB I-90 AND RAMP G

COMPLETE MEDIAN STORM SEWER OUTLET SOUTH OF RAMP G NORTH ABUTMENT AND INSTALL STONE CULVERT INLET PROTECTION. EXCAVATE PROPOSED MEDIAN DITCH BETWEEN EB I-90 AND WB I-90 AT INTERCHANGE WITH TEMPORARY FORESLOPE TO ACCOMMODATE TEMPORARY PAVEMENT. INTALL DITCH CHECKS AND APPLY TEMPORARY STABILIZATION.

CONSTRUCT RAMP G WALL FOUNDATION AND DITCH AND STORM SEWER ALONG RAMP G WALL. INSTALL DITCH CHECKS IN DITCH AND APPLY PERMANENT STABILIZATION. INSTALL INLET PROTECTION ON SELECT INLETS BEWTEEN RAMP G AND WB I-90 AND AT THE LOW END OF THE RAMP G WALL TO PROVIDE DRAINAGE OUTLET DURING WALL AND EMBANKMENT CONSTRUCTION.

ADJUST MEDIAN INLETS CONSTRUCTED IN STAGE 1A-1. INSTALL INLET PROTECTION ON RAMP G SIDE OF INLET 1200 TO PROVIDE TEMPORARY DRAINAGE OUTLET.

APPLY TEMPORARY STABILIZATION TO CUT SLOPE BETWEEN NEW PAVEMENT AND EXISTING/TEMPORARY PAVEMENT.

EXCAVATE EB I-90 DITCH BETWEEN I-39 AND RAMP H. INSTALL DITCH CHECKS AND APPLY PERMANENT STABILIZATION.

COMPLETE RAMP G EMBANKMENT AND WALL EAST OF I-39 USING THE EMBANKMENT PHASING PLAN ACCORDING TO STD K1-00, SHEET 2. GRADE INFIELD TO THE EXTENT POSSIBLE WITHOUT UNDERMINING NB I-39. APPLY PERMANENT STABILIZATION TO DISTURBED AREA.

REMOVE EB I-90 OUTER PAVEMENT WIDENING AT END OF STAGE 1B-3 AND FINISH AND STABILIZE DITCH AND DETENTION BASIN FORESLOPE.

AFTER PERMANENT VEGETATION IS ESTABLISHED ON EB I-90 SLOPES AND DITCHES, REMOVE SEDIMENT BASINS IN EB I-90 OUTER DITCH NORTH OF THE INTERCHANGE. FINISH GRADE AND APPLY PERMANENT STABILIZATION TO DISTURBED AREA. THE EB I-90 DETENTION POND NORTH OF NEWBURG ROAD MUST BE FINISH GRADED AND VEGETATED BEFORE THE TEMPORARY STORM SEWER AT THE NORTH END OF THE PROJECT IS ABANDONED IN STAGE 2B-2.

STAGE 2A-1

RAMP G BRIDGE

MAINTAIN SEDIMENT BASIN IN RAMP I INFIELD. STABILIZE DISTURBED AREAS WITH PERMANENT STABILIZATION.

STAGE 2A-2

RAMP F SUBSTRUCTURE AND COMPLETION OF EB I-90 PAVEMENT UNDER RAMP F.

MAINTAIN SEDIMENT CONTROL DEVICES IN RAMP INFIELDS AND MEDIAN. STABILIZE DISTURBED AREAS WITH PERMANENT STABILIZATION.

STAGE 2A-3

RAMP F NORTH OF I-90

MAINTAIN SILT FENCE INSTALLED DURING PRESTAGE ALONG RAMP F RIGHT OF WAY.

CONSTRUCT INFIELD OUTLET CULVERT TO DETENTION BASIN WEST OF RAMP F AND INSTALL CULVERT INLET PROECTION AT UPSTREAM END OF CULVERT. GRADE RAMP F INFIELD USING PHASED EXCAVATION ACCORDING TO STANDARD K1-00, SHEET 2. STABILIZE INFIELD WITH PERMANENT STABILIZATION.

EXCAVATE LEFT AND RIGHT DITCHES UPSTREAM OF DITCH CONSTRUCTED IN PRESTAGE. INTALL DITCH CHECKS AND APPLY PERMANENT STABILIZATION.

PROVIDE TEMPORARY BERM WITH TEMPORARY PIPE SLOPE DRAINS ACCORDING TO STD K1-00, SHEET 5 AT SLOPE BREAK ON RIGHT SIDE OF RAMP F EMBANKMENT GRADING.

RAMP F AND RAMP I SOUTH OF I-90

COMPLETE GRADING OF RAMP I INFIELD EXCEPT FOR TEMPORARY SLOPES REQUIRED TO ACCOMMODATE TEMPORARY PAVEMENT ALONG RAMP I. APPLY TEMPORARY STABILIZATION WITH STRAW MULCH ON TEMPORARY SLOPES. APPLY PERMANENT STABILIZATION TO ALL OTHER DISTURBED SLOPES.

COMPLETE INFIELD GRADING BETWEEN RAMP G EMBANKMENT AND EB I-90 DITCH AND STABILIZE WITH PERMANET STABILIZATION.

COMPLETE GRADING BETWEEN RAMP G AND RAMP F. INSTALL DITCH CHECKS IN NEWLY CONSTRUCTED DITCH. COMPLETE INFIELD OUTLET CULVERTS AND INSTALL CULVERT INLET PROTECTION. STABILIZE WITH PERMANENT STABILIZATION.

COMPLETE FORESLOPE ON RIGHT SIDE OF RAMP I AND STABILIZE WITH PERMANENT STABILIZATION.

STAGE 2B-1

WB I-90 CONSTRUCTION BETWEEN EB I-90 AND EXISTING/TEMPORARY WB I-90 PAVEMENT

MAINTIAN INLET PROTECTION ON RAMP G SIDE OF INLET 1200 AND REMOVE PAVEMENT BETWEEN EB I-90 AND CROSSOVER AS REQUIRED TO PROVIDE DRAINAGE OUTLET FOR NORTH SECTION OF PAVEMENT CONSTRUCTION.

INSTALL INLET PROTECTION AT INLET 1525 TO PROVIDE TEMPORARY SUBGRADE DRAINAGE OUTLET UNTIL PAVEMENT IS CONSTRUCTED.

MAINTAIN DITCH CHECKS AND INLET PROTECTION IN MEDIAN DITCH WEST OF RAMP F BRIDGE. APPLY PERMANENT STABILIZATION TO WB I-90 FORESLOPE.

MAINTAIN DITCH CHECKS IN MEDIAN DITCH EAST OF RAMP F BRIDGE. INSTALL INLET PROTECTION AT PROPOSED MEDIAN OUTLET TO RAMP F INFIELD. APPLY PERMANENT STABILIZATION TO WB I-90 FORESLOPE.

COMPLETE MEDIAN DITCH CONSTRUCTION AT EAST END OF PROJECT. MAINTAIN INLET PROTECTION. INSTALL DITCH CHECKS AND APPLY PERMANENT STABILIZATION TO MEDIAN.

STAGE 2B-2

WB I-90 OUTER LANES

COORDINATE WITH CONTRACT S-06-5402 TO ABANDON TEMPORARY STORM SEWER AT NORTH END OF PROJECT BEFORE COMMENCING WORK ON WB I-90 DITCH AND DETENTION POND NORTH OF NEWBURG ROAD.

MAINTAIN SILT FENCE ALONG WB I-90 ROW ALONG DETENTION BASIN NORTH OF CROSS ROAD CULVERT AND CONSTRUCT SEDIMENT TRAP IN DETENTION BASIN. EXCAVATE PROPOSED DITCH AND DETENTION POND. INSTALL DITCH CHECKS AND APPLY PERMANENT STABILIZATION. USE SAME-DAY STABILIZATION ON DISTURBED AREAS BETWEEN DETENTION POND AND CROSS ROAD CULVERT OUTLET.

MAINTAIN SEDIMENT BASIN IN DETENTION POND NORTH OF RAMP F. REMOVE TEMPORARY PAVEMENT AND CONSTRUCT FINAL GRADING NORTH OF RAMP F. APPLY PERMANENT STABILIZATION TO DISTURBED FORESLOPE NORTH OF WB I-90 STORM SEWER AND TO CUT SLOPE BELOW PREVIOUSLY COMPLETED CUT SLOPE ALONG WB I-90 STORM SEWER. INSTALL SILT FENCE ALONG PROPOSED GUTTER AND FILTER FABRIC INLET PROTECTION IN STORM SEWER STRUCTURES ALONG PROPOSED GUTTER.

MAINTAIN DITCH CHECKS AND CULVERT INLET PROTECTION IN RAMP F INFIELD. COMPLETE WB I-90 FORESLOPE AND APPLY PERMANENT STABILIZATION TO FORESLOPE AND DITCH.

CONSTRUCT SEDIMENT TRAP WEST OF CROSS ROAD CULVERT AT WB I-90 STA 365+00 BEFORE COMMENCING CLEARING AND GRADING EAST OF MILL ROAD.

COMPLETE CONSTRUCTION OF CROSS ROAD CULVERT AND STABILIZE CULVERT INLET USING SAME-DAY STABILIZATION.

CONSTRUCT DITCH EAST OF MILL ROAD AND CULVERT AND STORM SEWER AT MILL ROAD. INSTALL DITCH CHECKS AND APPLY PERMANENT STABILIZATION. LOWER THE WEIR ELEVATION AT THE OUTLET OF THE SEDIMENT BASIN WEST OF MILL ROAD.

RAMP I

MAINTAIN SEDIMENT BASIN ON WEST SIDE OF I-39 NEAR THE US 20 INTERCHANGE. COMPLETE RAMP I GRADING AND APPLY PERMANENT STABILIZATION TO DISTURBED FORESLOPE.

STAGE 2B-3

COMPLETE RAMP G CONSTRUCTION NORTH OF NEWBURG ROAD

NO EROSION/SEDIMENT CONTROL REQUIRED.

REMOVE I-90 CROSS OVER NEAR KISHWAUKEE RIVER AND TEMPORARY PAVEMENT WIDENING ALONG WB I-90 MEDIAN SHOULDER

RESTORE MEDIAN DITCH. INSTALL DITCH CHECKS AND INLET PROTECTION AT INLETS THAT HAD BEEN COVERED. MAINTAIN INLET PROTECTION AT INLET EAST OF CROSSOVER. APPLY PERMANENT STABILIZATION IN MEDIAN DITCH.

REMOVE EB I-90 TEMPORARY WIDENING IN MEDIAN

MAINTAIN INLET AND CULVERT INLET PROTECTION IN MEDIAN. REMOVE WIDENING AND CONSTRUCT FINAL FORESLOPE ALONG EB I-90. APPLY PERMANENT STABILIZATION.

REMOVE RAMP I TEMPORARY WIDENING

CONSTRUCT FINAL SWALE BETWEEN RAMP I AND RAMP F AND APPLY PERMANENT STABILIZATION. INSTALL DITCH CHECK AT LOWER END OF REGRADED SWALE.

DRAWN BY	DATE	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. / DATE / DESCRIPTION	CONTRACT NO.	DRAWING NO.
CHECKED BY	DATE			NORTHWEST TOLLWAY EROSION & SEDIMENT CONTROL SEQUENCE AND GENERAL NOTES	OF

SEDIMENT TRAP SCHEDULE

SEE PLANS FOR TRAPS NOT IN CONTRACT

I-355 TOLLWAY (MAINLINE)

	STATION	OFFSET	AREA SERVED (ACRE)	WIDTH (FT.)	LENGTH (FT.)	DEPTH (FT.)	WET STORAGE DESIGN VOLUME (C.F.)	OUTLET ELEVATION	BOTTOM ELEVATION	SPILLWAY HEIGHT (FT.)
	430+75	100' RT	0.80	10	115.0	3.2	3600	748.30	745.10	2.0
	436+85	110' LT	0.30	10	43.0	3.2	1350	750.38	747.18	1.0
	436+95	110' RT	0.50	10	72.0	3.2	2250	751.50	748.30	2.0
	437+40	110' LT	0.80	15	75.0	3.2	3600	750.40	747.20	1.0
	437+50	110' RT	0.70	15	67.0	3.2	3150	750.70	747.50	2.0
*	444+65	140' LT	2.20	15	211.0	3.2	9900	739.00	735.80	1.5
*	445+20	150' LT	1.60	15	154.0	3.2	7200	738.80	735.60	1.5
*	447+70	80' LT	4.20	30	202.0	3.2	18900	746.00	742.80	1.5
*	446+90	185' RT	2.50	15	240.0	3.2	11250	743.00	739.80	2.5
*	447+50	200' RT	2.60	15	250.0	3.2	11700	743.50	740.30	2.5
*	447+10	100' RT	2.10	32	95.0	3.1	9450	743.00	739.90	2.0
*	449+90	140' RT	2.70	32	122.0	3.2	12150	744.00	740.80	2.5
*	455+65	105' LT	3.83	30	184.0	3.2	17235	726.00	722.80	2.5
*	455+90	110' RT	3.94	30	189.0	3.2	17730	725.10	721.90	2.5
*	462+30	105' LT	2.76	50	80.0	3.1	12420	716.00	712.90	2.5
*	467+60	100' LT	3.22	50	100.0	2.9	14490	708.10	705.20	2.5
*	475+60	100' LT	1.19	30	65.0	2.8	5355	697.00	694.20	2.5
*	476+70	250' LT	4.40	50	150.0	2.7	19800	689.00	686.30	2.5
*	471+30	450' RT	0.60	20	50.0	2.7	2700	703.00	700.30	1.5
*	471+95	450' RT	1.10	40	40.0	3.1	4950	702.00	698.90	2.2
	494+10	200' LT	2.90	30	140.0	3.1	13050	664.40	661.30	2.5
	506+45	180' LT	2.40	35	100.0	3.1	10800	637.30	634.20	1.0
	506+75	165' RT	1.70	30	80.0	3.2	7650	632.00	628.80	1.0

* INSTALLED UNDER CONTRACT 7719

ILL.RTE. 171 (ARCHER AVE)

	STATION	OFFSET	AREA SERVED (ACRE)	WIDTH (FT.)	LENGTH (FT.)	DEPTH (FT.)	DESIGN VOLUME (C.F.)	OUTLET ELEVATION	BOTTOM ELEVATION	CLEANOUT ELEVATION
*	92+00	70' RT	1.30	15	104.0	3.8	5928	693.00	689.20	691.50
*	97+80	150' LT	0.50	33	22.0	3.2	2325	677.00	673.80	675.75
*	100+15	170' LT	1.50	23	94.0	3.2	6920	675.50	672.30	674.25
*	98+75	90' RT	1.00	15	96.0	3.2	4610	685.70	682.50	684.45

* INSTALLED UNDER CONTRACT 7719

143rd STREET

	STATION	OFFSET	AREA SERVED (ACRE)	WIDTH (FT.)	LENGTH (FT.)	DEPTH (FT.)	DESIGN VOLUME (C.F.)	OUTLET ELEVATION	BOTTOM ELEVATION	CLEANOUT ELEVATION
*	114+65	115' LT	1.00	15	100.0	3.2	4800	730.60	727.40	729.35

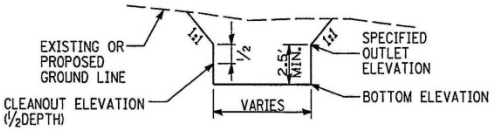
* INSTALLED UNDER CONTRACT 7719

	DETENTION BASIN	AREA SERVED (ACRE)	WET STORAGE (C.F.)	DRY STORAGE (C.F.)
*	BASIN # 5	12.0	55,104	60,984
*	BASIN # 6	11.5	52,500	58,370
*	BASIN # 7	5.3	44,431	27,443
	BASIN # 8	14.0	66,603	63,162
	BASIN # 9	7.0	32,234	31,799

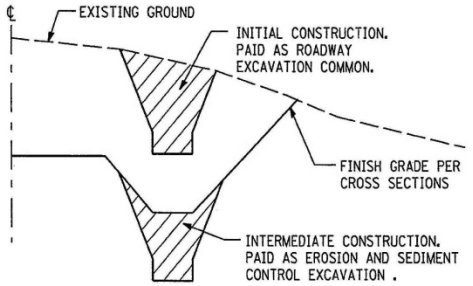
* INSTALLED UNDER CONTRACT 7719

	DETENTION BASIN	EXCAVATION BELOW PROPOSED OUTLET ELEVATION	OUTLET ELEVATION	TOP OF AGGREGATE BERM EL.
*	BASIN # 5	42'X320'X4.1'	686.0	689.0
*	BASIN # 6	120'X125'X3.5'	685.7	687.4
*	BASIN # 7	1.0	677.5	678.1
	BASIN # 8	1.1	664.5	665.5
	BASIN # 9	8712 S.F.X3.6'	654.5	657.5

* INSTALLED UNDER CONTRACT 7719



SEDIMENT TRAP DETAIL FOR BASIS OF EXCAVATION QUANTITIES (TYPICAL)

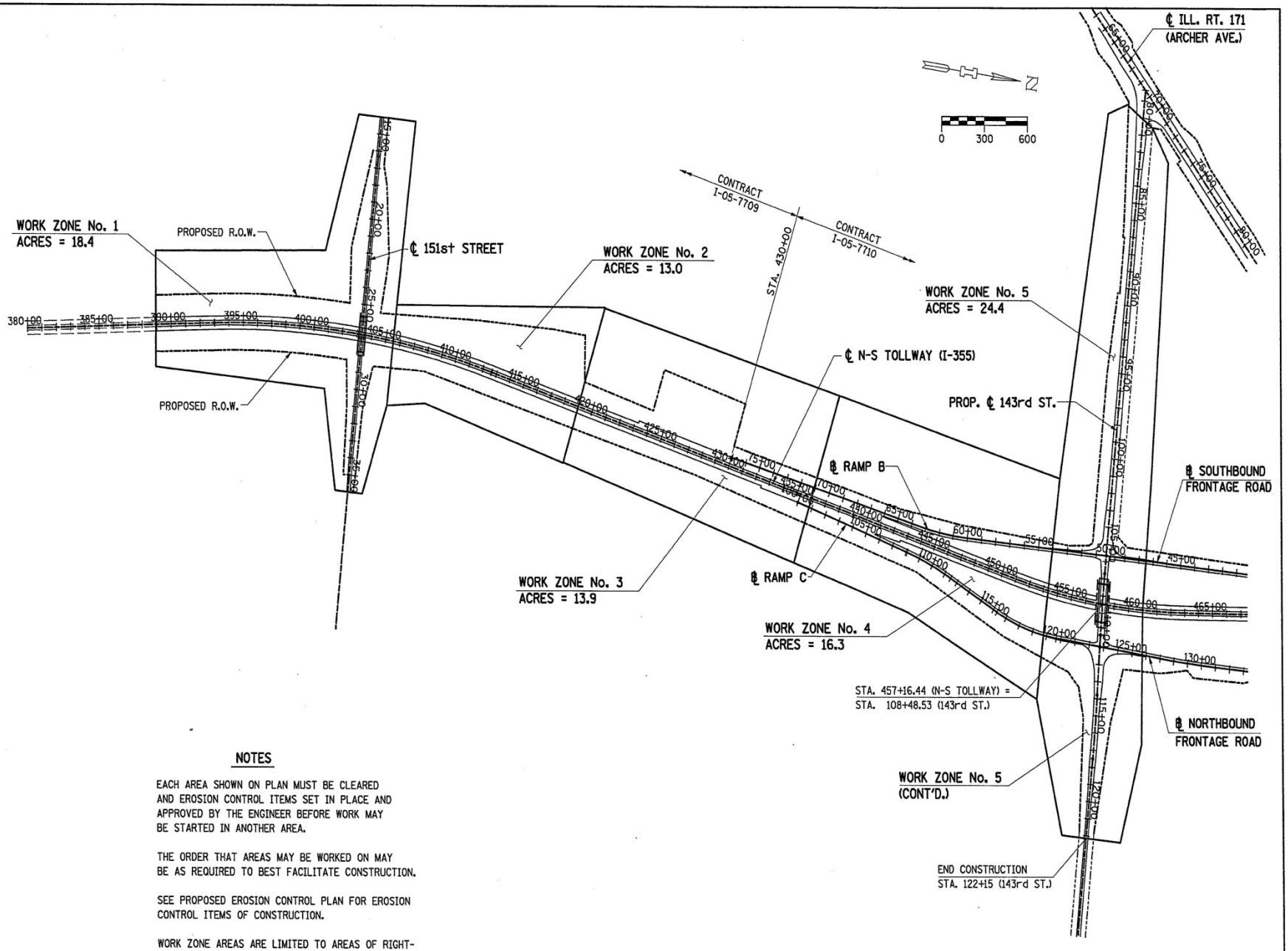


DETAIL FOR MULTIPLE CONSTRUCTION OF SEDIMENT TRAPS (NTS)

NOTES:

1. BASINS SHALL BE OVER EXCAVATED TO THE DEPTH SHOWN TO PROVIDE SEDIMENT BASIN STORAGE.
2. ELEVATIONS ARE SHOWN FOR THE FINAL POSITION OF SEDIMENT TRAPS ONLY. ELEVATIONS FOR MULTIPLE CONSTRUCTIONS OF THE SAME TRAP SHALL BE DETERMINED BY THE CONTRACTOR TO FIT HIS SEQUENCE OF CONSTRUCTION. ALL INTERMEDIATE CONSTRUCTION OF SEDIMENT TRAPS MUST BE APPROVED BY THE ENGINEER.

DRAWN ..... DATE	ENGINEERING CONSULTANT	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS: NO. / DATE / DESCRIPTION	CONTRACT	DRAWING NO.
CHECKED ..... SCALE				SCHEDULE OF QUANTITIES SEDIMENT TRAPS	..... OF .....



NOTES

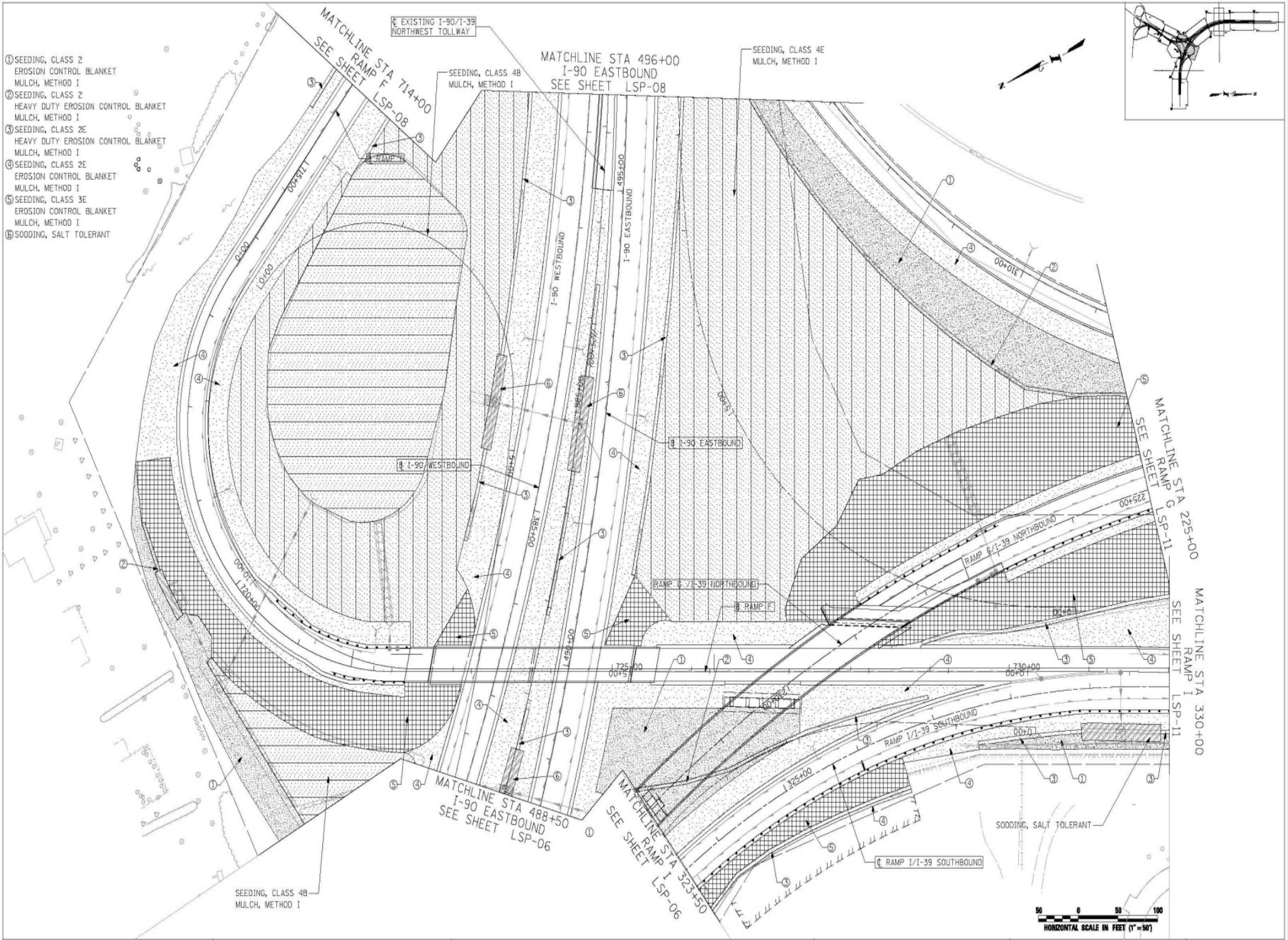
EACH AREA SHOWN ON PLAN MUST BE CLEARED AND EROSION CONTROL ITEMS SET IN PLACE AND APPROVED BY THE ENGINEER BEFORE WORK MAY BE STARTED IN ANOTHER AREA.

THE ORDER THAT AREAS MAY BE WORKED ON MAY BE AS REQUIRED TO BEST FACILITATE CONSTRUCTION.

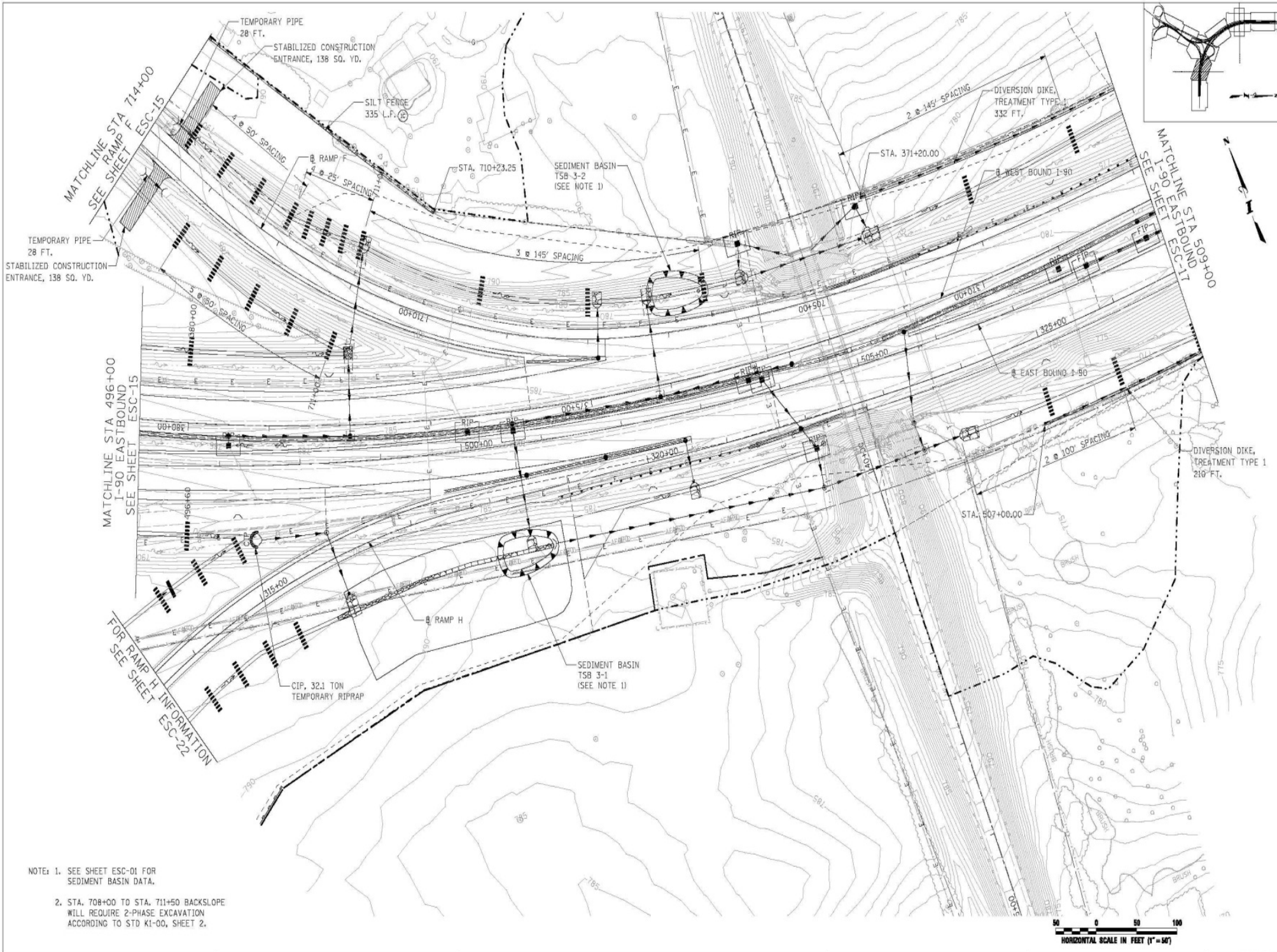
SEE PROPOSED EROSION CONTROL PLAN FOR EROSION CONTROL ITEMS OF CONSTRUCTION.

WORK ZONE AREAS ARE LIMITED TO AREAS OF RIGHT-OF-WAY.

DRAWN BY _____ CHECKED BY _____	DATE _____ SCALE 1"=300'	ENGINEERING CONSULTANT	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. / DATE / DESCRIPTION	CONTRACT LIMITATIONS OF CONSTRUCTION FOR EROSION CONTROL	DRAWING NO. _____OF_____



DRAWN BY	DATE	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. DATE DESCRIPTION
CHECKED BY	DATE		CONTRACT NO. NORTHWEST TOLLWAY SEEDING PLAN
			DRAWING NO. OF



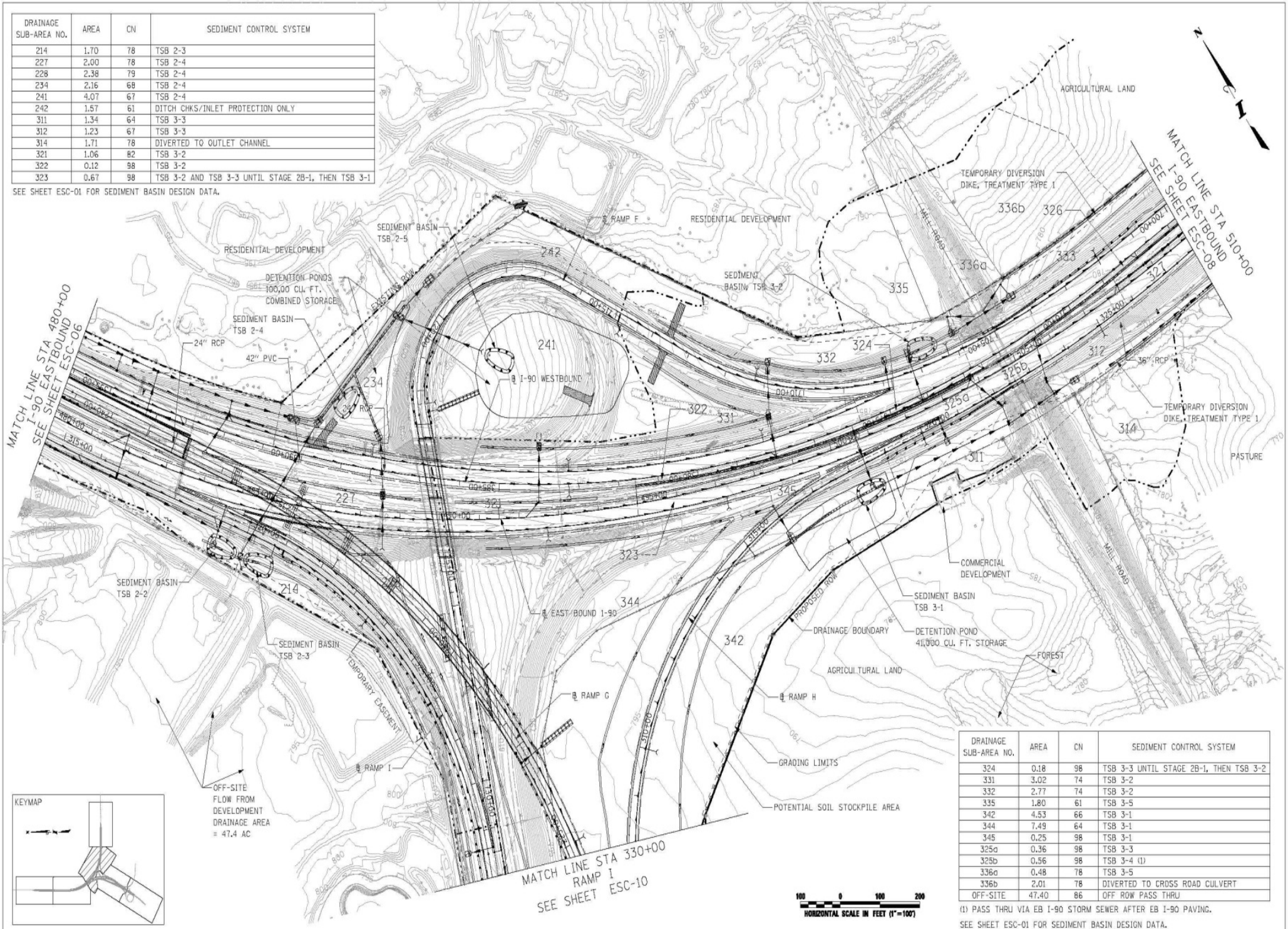
NOTE: 1. SEE SHEET ESC-01 FOR SEDIMENT BASIN DATA.

2. STA. 708+00 TO STA. 711+50 BACKSLOPE WILL REQUIRE 2-PHASE EXCAVATION ACCORDING TO STD K1-00, SHEET 2.

DRAWN BY DATE CHECKED BY DATE	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. DATE DESCRIPTION	CONTRACT NO. NORTHWEST TOLLWAY EROSION & SEDIMENT CONTROL PLAN	DRAWING NO. OF

DRAINAGE SUB-AREA NO.	AREA	CN	SEDIMENT CONTROL SYSTEM
214	1.70	78	TSB 2-3
227	2.00	78	TSB 2-4
228	2.38	79	TSB 2-4
234	2.16	68	TSB 2-4
241	4.07	67	TSB 2-4
242	1.57	61	DITCH CHKS/INLET PROTECTION ONLY
311	1.34	64	TSB 3-3
312	1.23	67	TSB 3-3
314	1.71	78	DIVERTED TO OUTLET CHANNEL
321	1.06	82	TSB 3-2
322	0.12	98	TSB 3-2
323	0.67	98	TSB 3-2 AND TSB 3-3 UNTIL STAGE 2B-1, THEN TSB 3-1

SEE SHEET ESC-01 FOR SEDIMENT BASIN DESIGN DATA.



KEYMAP

DRAINAGE SUB-AREA NO.	AREA	CN	SEDIMENT CONTROL SYSTEM
324	0.18	98	TSB 3-3 UNTIL STAGE 2B-1, THEN TSB 3-2
331	3.02	74	TSB 3-2
332	2.77	74	TSB 3-2
335	1.80	61	TSB 3-5
342	4.53	66	TSB 3-1
344	7.49	64	TSB 3-1
345	0.25	98	TSB 3-1
325a	0.36	98	TSB 3-3
325b	0.56	98	TSB 3-4 (1)
336a	0.48	78	TSB 3-5
336b	2.01	78	DIVERTED TO CROSS ROAD CULVERT
OFF-SITE	47.40	86	OFF ROW PASS THRU

(1) PASS THRU VIA EB I-90 STORM SEWER AFTER EB I-90 PAVING.

SEE SHEET ESC-01 FOR SEDIMENT BASIN DESIGN DATA.

DRAWN BY DATE

CHECKED BY DATE

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

2700 OGDEN AVENUE

DOWNERS GROVE, ILLINOIS 60515

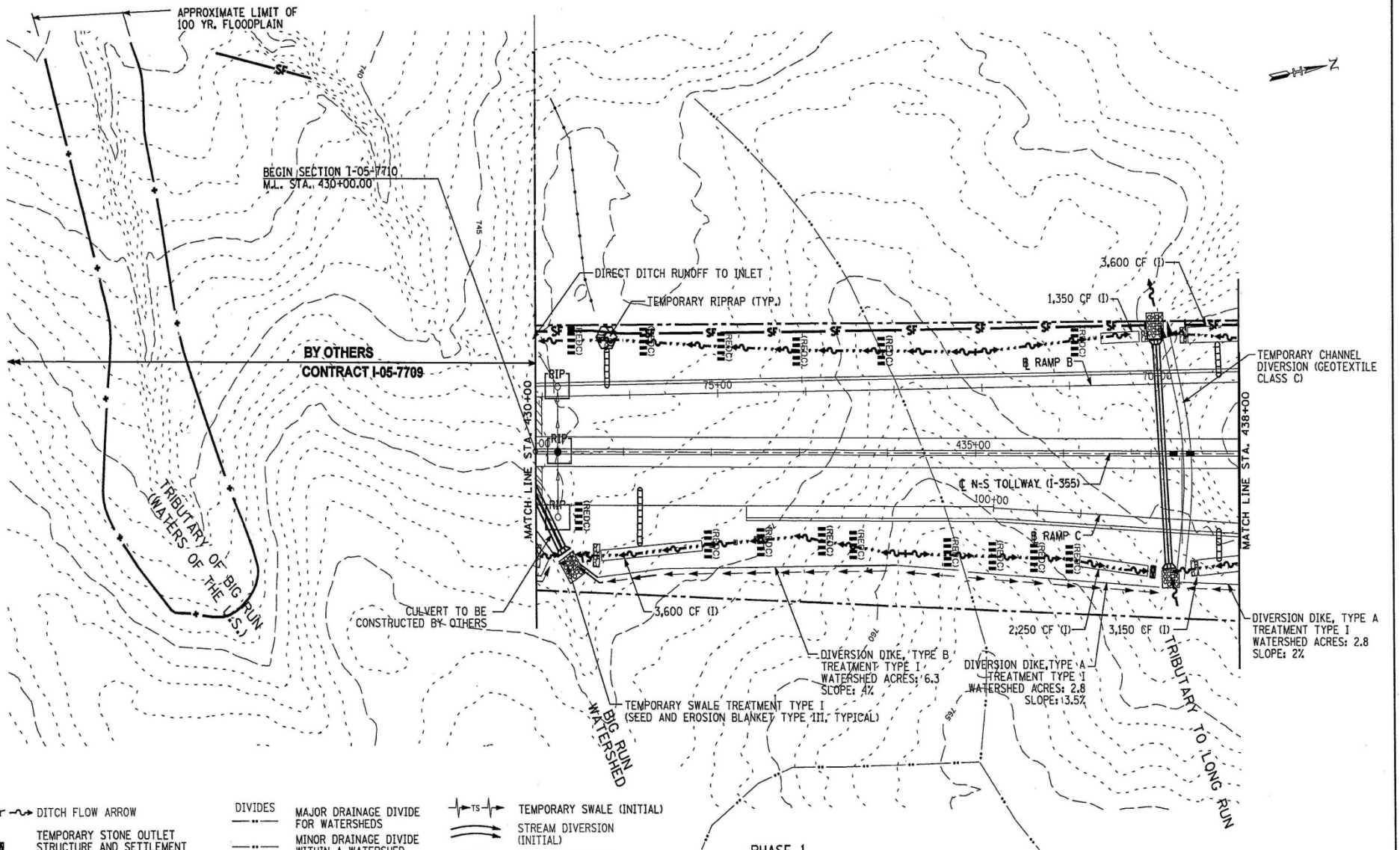
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO.

EROSION & SEDIMENT CONTROL OVERVIEW PLAN

DRAWING NO.

OF



LEGEND

- DITCH FLOW ARROW
- TEMPORARY STONE OUTLET STRUCTURE AND SETTLEMENT BASIN W/REQ'D VOLUME INITIAL (I) OR INTERMEDIATE (INT)
- TEMPORARY SLOPE DRAIN (INITIAL)
- WETLANDS
- SILT FENCE (INITIAL)
- SUPER SILT FENCE (INITIAL)

DIVIDES

- MAJOR DRAINAGE DIVIDE FOR WATERSHEDS
- MINOR DRAINAGE DIVIDE WITHIN A WATERSHED
- ARTIFICIAL SUB-DIVIDE FOR CALCULATION PURPOSES
- RECTANGULAR INLET PROTECTION (INTERMEDIATE)
- STABILIZED CONSTRUCTION ENTRANCE (INTIAL)
- DIVERSION DIKE (INITIAL)
- TEMPORARY RIPRAP (INITIAL)
- TEMPORARY SWALE (INITIAL)
- STREAM DIVERSION (INITIAL)
- DEWATERING BASIN (INITIAL)
- ROCK CHECK DAM (INITIAL)
- AREA OF WETLAND IMPACTED BY CONSTRUCTION
- TEMPORARY BERM
- TEMPORARY STREAM CROSSING

PHASE 1
INITIAL & INTERMEDIATE
EROSION CONTROL

- REVETMENT MAT

DRAWN	DATE	ENGINEERING CONSULTANT	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. / DATE / DESCRIPTION	CONTRACT NO. PROPOSED EROSION CONTROL PLAN	DRAWING NO. ..... OF .....
CHECKED	SCALE ..... 1"=50'					

APPENDIX 4

Illinois State Toll Highway Authority

Erosion and Sediment Control Plan Technical Review Checklist

Project: _____

Contract Number: _____

DSE: _____

Date: _____

Tollway Reviewer _____

Date: _____

Items are to be checked off by the DSE and the form shall be submitted to the Tollway for review.

Tollway reviewer to indicate:
C = Complies
D = Deficient
NA = Not Applicable

A. Design Concept Submittal

General

1. ____ project boundaries, identified adjacent land uses, soil types, and existing and proposed topography

2. ____ Define the existing drainage network; including storm sewers; culverts; ditches; swales; channels; streams; constructed bioswales; and rivers that enter, cross, or may be impacted by the construction of the Project. Show existing and proposed drainage basins and overland stormwater/flood routing.

3. ____ Based on a 25-year, 24-hour storm event, or event required by the IEPA's ILR10 permit, whichever is more stringent, determine the amount of runoff from the project area and tributary watershed areas.

4. ____ Identify all locations where existing ditches, swales, channels, streams, or rivers will need to be diverted to facilitate construction.

5. ____ Define areas where protection of existing vegetation will be required.

6. ____ Identify type and location of any special management areas, such as floodplains, floodways, wetlands, creeks, rivers, protected habitat, bioswales, etc.

7. ____ Define additional right-of-way or construction easements necessary to accommodate the implementation of the erosion and sediment control measures.

8. ____ General location map, including latitude, longitude, Section, Township and Range

Narrative

9. ____ Evaluate the project for the need to obtain an U.S. Army Corps of Engineers Section 404 permit, triggering the need for a review of the ESCP by the County Soil and Water Conservation District. Determine if ESCP review by other agencies will be required as a result of the need for an Illinois Department of Natural Resources Floodway/Floodplain Management permit or an Illinois Environmental Protection Agency Individual Section 401 permit.

10. ____ Evaluate project site requirements for NPDES Permit No. ILR10 – Storm Water Discharges From Construction Activities.

11. ____ Evaluate project site requirements for County Stormwater Management Agency requirements.

12. ____ Begin necessary coordination related to National Historic Preservation Act and Endangered Species Act compliance. Per requirements of NPDES Permit No. ILR10 – Storm Water Discharges From Construction Activities, information related to this coordination must be provided as part of the Notice of Intent (NOI). The DSE will develop draft documents suitable for submission to the Illinois Historic Preservation Agency and U.S. Fish and Wildlife Service, as necessary. Draft documents will be provided to the Tollway Environmental Unit for their submission to these agencies.

13. ____ Provide narrative summarizing the project site evaluation, strategy for runoff control, rationalization for choice of BMPs, regulatory and resource agency coordination, and the overall erosion and sediment control concept. The narrative shall include a thorough explanation of the conclusions reached from the project site evaluation and governmental and regulatory coordination.

<u>Overview Drawings at 1" = 100'</u>

14. ____ conceptual proposed conditions, including contours, drainage patterns, storm conveyance systems, and possible BMPs

15. ____ project centerline stationing and ramp baseline, as applicable

16. ____ existing and proposed roadway geometry

17. ____ right-of-way limits

18. ____ existing contours (half tone)

19. ____ drainage areas tributary to the project and within project limits

20. ____ existing drainage network, including storm sewers, culverts, bridges, swales, ditches, channels, creeks, streams, rivers, constructed bioswales, and waterway names

21. ____ floodplain and floodway limits, with elevations clearly noted

22. ____ size of bridges, storm sewer/s, culverts, and existing outlets

23. ____ type and location of any special management areas

24. ____ location, size, and I.D. number of existing wetland areas, other environmentally sensitive areas, and which portions of these (if any) will be impacted

<u>Other</u>

25. ____ work stage drawing(s) that define the suggested sequencing of construction to limit the size of the area disturbed at one time to 20 acres

26. ____ Submit the Environmental Studies Inventory Sheet and the Erosion and Sediment Control Analysis form contained in the Tollway Environmental Studies Manual.

27. ____ rough cost estimate, including any additional right-of-way costs for implementing the ESCP

B. Preliminary Design Submittal

General

1. ____ Identify hydric or potentially erodible soils. Based on soils report information, refine soil classifications and adjust ESCP concept, as necessary.

2. ____ Address, in writing, all Tollway comments from previous submittal.

3. ____ Provide overview drawings reflecting any revisions called for in the previous review.

Drawings at 1" = 50'

4. ____ Show all information provided on overview drawings, including existing contour at half tone and proposed contours at full tone.

5. ____ Provide plan sheet EC-1, Erosion and Sediment Control Plan, and Standard Symbols. Show standard symbols, non standard symbols, abbreviations, and special construction details (if necessary). See Appendix 3 of the Tollway's *Erosion and Sediment Control, Landscape Design Criteria* manual and Tollway Standard K Drawings.

6. ____ Provide plan sheet EC-2, Erosion Control Schedule, and Materials Schedule. Summarize, by drawing number, the measures to be installed, pay items, pay item numbers, and quantities. Include a column for Record Quantities for use by the CSE.

   Provide additional quantities over and above the plan quantities for use "At Engineer's Discretion". Coordinate these quantities with Tollway Project Engineers prior to submitting plans (see Appendix 3).

7. ____ Provide plan sheet EC-3, Erosion Control Sequences and General Notes. Show maintenance schedule for each erosion control practice with parties responsible for maintenance, i.e., Landscape Contractor or General Contractor. Show construction sequences for installing control measures in relation to specific stages of construction and earth disturbance activities. Show the following general notes:

   ____a) For erosion and sediment control general notes, see Standard Drawings K1 and K2.

   ____b) The permanent vegetative plan shall be used on all disturbed areas whenever possible (according to general note number 8). A quantity for temporary stabilization with straw mulch (Item 280.15) has also been provided for all anticipated disturbed areas.

____c) When permanent landscaping is not possible in “Same Day Stabilization” areas, Item 280.15 shall be used for same day stabilization.

____d) Temporary sediment basin #____ and temporary sediment traps #____ have been sized using 1800 cubic feet/acre storage and may need more frequent cleaning than traps sized to the standard 3600 cubic feet/acre criteria.

____e) Stabilized construction entrances shown at suggested locations. A nominal quantity has been provided for placing and maintaining additional entrances(s).

8. ____ Delineate disturbed area and provide drainage patterns for proposed conditions. Make special note of drainage areas used to size the perimeter controls, sediment traps, or retention basins.

9. ____ Direction of runoff flow prior to construction, during construction, and after construction is completed. This may require duplicate drawings in some situations.

10. ____ Identify reaches that will require use of staged construction with temporary or permanent stabilization of slopes before additional excavation or placement of fill. Label how many stages/phases of construction will be needed, with the slope length (50 feet) and/or 15 feet fill or cut limitations shown on Tollway Standard Drawing K1, at representative (20 acre) locations along the route.

11. ____ borrow sites and topsoil stockpile locations, including applicable ESC measures.

12. ____ Identify and quantity all tree protection and sediment control measures that must be in place prior to start of grading. These include sediment basins, sediment traps, and silt fences. These practices shall be identified on the plan as Initial Construction.

13. ____ Identify locations where temporary stream diversions will be needed for installation of culverts or bridges. These measures shall be identified on the plan as Initial Construction.

14. ____ Identify and quantify the permanent and temporary storm water practices that must be in place before grading occurs in each specific area along the route. These include storm water detention sites, stabilized channel outlets, stabilized temporary swales or diversion dikes, and any needed stream diversions. Notes shall be placed on the drawings identifying which of the runoff control practices and sediment control measures are to be installed prior to the start of grading. Most of these will fall in the category of perimeter controls. These practices shall be identified as Initial Construction.

15. ____ Identify reaches that will have temporary pipe slope drains and temporary berms (fill areas).

16. ____ Show the area, in acres, controlled by each temporary sediment basin, sediment trap, temporary diversion, temporary swale, or other temporary measure.

17. ____ Show the location, size, and storage capacity of all detention basins to be constructed for storm water management. Add notes if any portion of the basin is designed to serve as a sediment trap/basin.

18. ____ Layout the ESCP showing type and location of erosion and sediment control measures to be used. Annotate as needed to get design intent across. Complete detailing is not required at this phase.

19. ____ Provide provisions for dust control watering and other pollution control measures.

Other

20. ____ preliminary cost estimate

21. ____ preliminary Special Provisions

22. ____ any additional information required by the Tollway Project Engineer

23. ____ provide Permanent Landscape Plans at 1" = 50' showing final landscape post construction features and permanent seeding. Refer to Section II Landscape for requirements.

C. Pre-Final Design Submittal

General

1. ____ Address, in writing, all Tollway comments from previous submittal.

2. ____ overview drawings

Drawings at 1" = 50'

3. ____ Identify any erosion or sediment control measures that will serve as permanent erosion control measures remaining after construction is complete.

4. ____ Identification number, volume, length, width, bottom elevation and cleanout elevation of sediment traps and sediment basins shall be shown on the drawings.

5. ____ Sediment traps, sediment basins, dewatering basins, temporary swales and temporary channel diversions shall be drawn on the cross sections and submitted for review to verify that the devices fin in the intended area.

6. ____ Label the specific location(s), size and length of all erosion and sediment control measures shown on the drawings.

7. ____ Provide the dimension, material and installation details for all erosion and sediment control measures and facilities not covered by the Standard Drawings.

8. ____ Provide a maintenance schedule on sheet EC-3 for any special measures not covered in the standard drawings and specifications.

Other

9. ____ pre-final cost estimate

10. ____ pre-final Special Provisions

11. ____ prepare Storm Water Pollution Prevention Plan (SWPPP). The DSE shall modify Special Provisions 111.2 to satisfy this requirement.

12. ____ any additional information required by the Tollway Project Engineer

13. ____ NPDES NOI form

14. ____ County Soil and Water Conservation District form, checklist and narrative (provide only if required because of a Section 404 permit)

15. ____ County Stormwater Management Agency submittal (if required)

16. ____ submittal information for other agencies, as required

D. Final Design Submittal

1. ____ Address, in writing, all Tollway comments from previous submittals.

2. ____ final overview and ESCP drawings

3. ____ final Special Provisions and SWPPP in Special Provision 111.2

4. ____ final cost estimate

5. ____ Professional Engineer's seal and signature on plans

6. ____ any additional information required by the Tollway Project Engineer

7. ____ final schedule of materials

APPENDIX 5

APPENDIX 5

Stabilized Construction Entrance/Exit

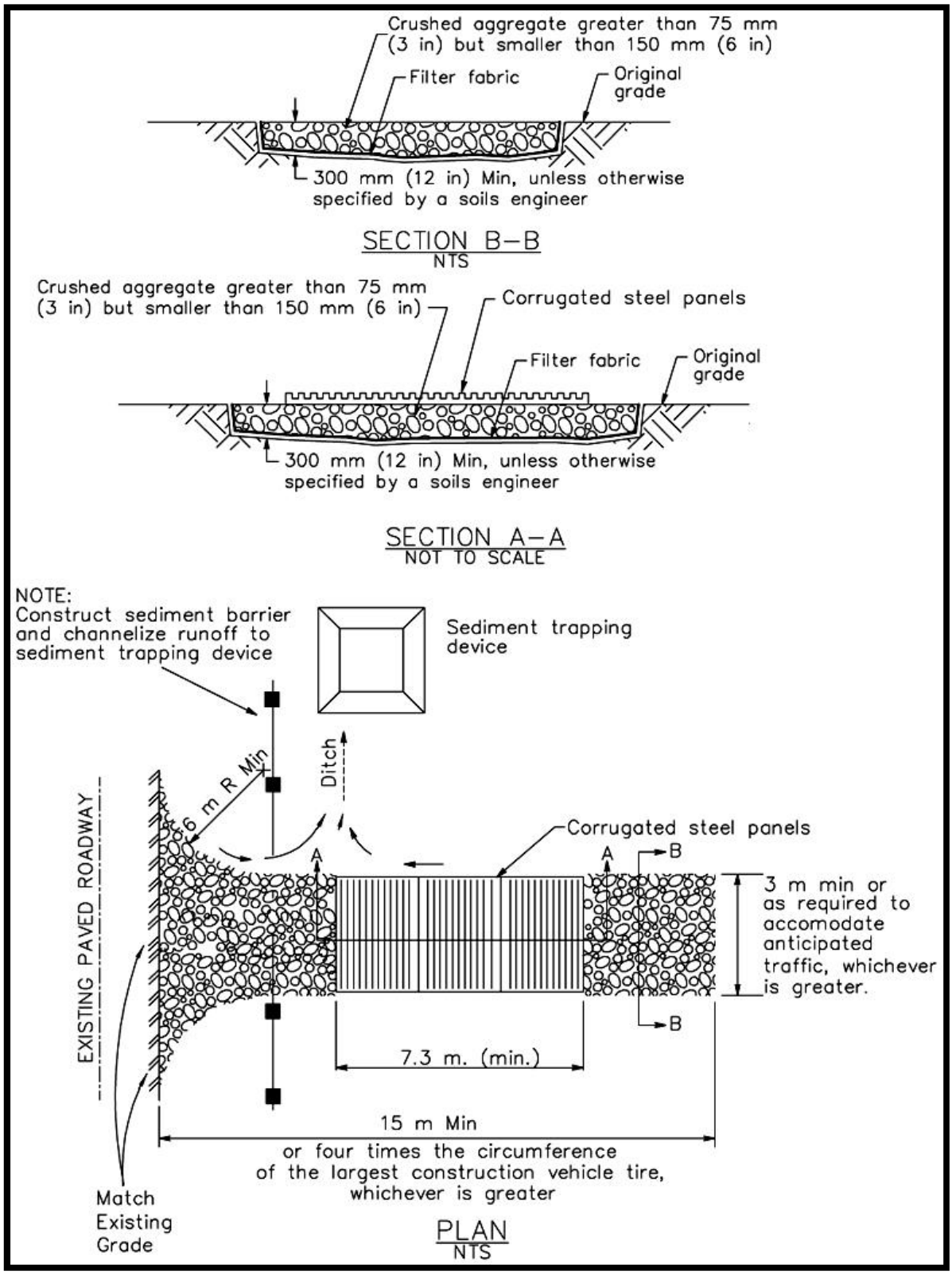
A stabilized construction access is defined as a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles. Reducing tracking of sediments and other pollutants onto paved roads helps prevent deposition of sediments into local storm drains or surface waters and minimizes the production of airborne dust.

A stabilized construction entrance is a pad of aggregate underlain with filter cloth located at any point where traffic will be entering or leaving a construction site, to or from a public right of way. NPDES permits require that appropriate measures be implemented to prevent the tracking of sediments onto paved roadways, where a significant source of sediments is derived from mud and dirt carried out from construction sites.

An advantage of the Stabilized Construction Entrance/Exit is that it does remove some sediment from equipment and serves to channel construction traffic into and out of the site at specified locations. Efficiency is greatly increased when a washing rack is included as part of a stabilized construction entrance/exit.

Supplemental Design and Layout Features:

- Rumble racks constructed of steel panels with ridges and installed in the stabilized entrance/exit will help remove additional sediment and to keep adjacent highway clean.
- When aggregate is selected, place crushed aggregate over geotextile fabric to at least 12” in depth, or place aggregate to a depth recommended by a geotechnical engineer. A crushed aggregate greater than 3” but smaller than 6” should be used.
- Limit the points of entrance/exit to the construction site.
- Properly grade each construction entrance/exit to prevent runoff from leaving the construction site.
- Route runoff from stabilized entrances/exits through a sediment trapping device before discharge.
- Implement Street Sweeping and Vacuuming equipment, as needed.
- The entrance should be maintained in a condition that will prevent tracking or flow of mud onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair or cleaning of any structures used to trap sediment.
- Inspect routinely, every week and after ½” storm event, for damage and assess effectiveness.


Crushed aggregate greater than 75 mm
(3 in) but smaller than 150 mm (6 in)
Filter fabric
Original grade
300 mm (12 in) Min, unless otherwise specified by a soils engineer
SECTION B–B
NTS
Crushed aggregate greater than 75 mm
(3 in) but smaller than 150 mm (6 in)
Corrugated steel panels
Filter fabric
Original grade
300 mm (12 in) Min, unless otherwise specified by a soils engineer
SECTION A–A
NOT TO SCALE
NOTE:
Construct sediment barrier and channelize runoff to sediment trapping device
Sediment trapping device
Ditch
6 m R Min
EXISTING PAVED ROADWAY
Corrugated steel panels
A
A
B
B
3 m min or as required to accomodate anticipated traffic, whichever is greater.
7.3 m. (min.)
15 m Min
or four times the circumference of the largest construction vehicle tire, whichever is greater
Match Existing Grade
PLAN
NTS

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APPENDIX 6

Soil Erosion and Sediment Control Plan Review
Kane-DuPage Soil and Water Conservation District
(630)-584-7961 x3

FOR OFFICE USE ONLY SWCD Application No.:
Meets technical standards_____ Does not meet technical standards_____
Date all Information received: _____Reviewed by: _____ Fee Paid: _____Check No.:
In-Stream: yes □ no □

	APPLICANT (Owner/Developer)	Erosion Control Consultant/Engineer
Business Name		
Address City/State/Zip		
Contact Name		
E-Mail Address		
Phone		
Fax		

Current Project Name and Phase number: _____ Location (Municipality):_____

Job site contact person: _____ E-Mail Address: _____

On site Contact's Phone number: (_____) -_____-_____ Fax number: (_____) -_____-_____

Village/Municipal contact person: _____ Phone # (_____)-_____-_____

Township, range, & section: _____ Nearest Intersection:_____

Proposed land use: _____ Acreage of disturbance:_____

Army Corps application number (if applicable):_____

Construction start date: _____ Anticipated construction completion date:_____

The applicant agrees to the following conditions:

1. Submit all required information listed on the following pages for each phase of development, regarding the soil erosion and sediment control (SE/SC) plan.
2. Upon submittal of this application, pay the applicable fee (see the attached fee schedule), in accordance with total acres of disturbance to the original topography and/or vegetation, in-stream and wetland disturbance, and the length of the project.
3. If the KDSWCD does not receive all required items within **30 days**, the item that has been submitted will be considered void.
4. Notify representatives from the Kane-DuPage Soil and Water Conservation District (KDSWCD) of the pre-construction meeting.
5. Allow a KDSWCD, NRCS, or Army Corps of Engineers District representative the right to conduct on-site investigations throughout all active construction phases to determine whether all necessary SE/SC practices have been installed and are functioning properly.
6. Upon commencement of earthwork or construction, document SE/SC site inspections with all information being accurate and complete.
7. Comply with the Kane-DuPage SWCD's written and verbal recommendations regarding:
   A. The SE/SC plan and corrections or changes made thereto.
   B. Installation and maintenance requirements of the SE/SC practices on-site.
8. Pay additional costs incurred by the SWCD in response to repeated non-compliance issues.
9. If any changes occur to the plans, schedules, etc., the applicant shall be responsible for notifying the Kane-DuPage Soil and Water Conservation District.

Upon receipt of all required information, the SE/SC plan will be reviewed within **15 working days** and all involved parties will be notified whether or not the plan meets technical standards

Applicant's Signature:_____ Date:_____

Revised April 1, 2008

Table 1	SESC Fee Schedule	Review Fee	Inspect Fee
Section 1	Initial Application Fee		
	Single Family Home <1 acre	$100.00	
	Commercial Site not part of a larger development <1	$250.00	
	Construction Site 0-4 acres	$211	$488
	Construction Site 5-9 acres	$260	$488
	Construction Site 10-14 acres	$341	$1024
	Construction Site 15-19 acres	$374	$1365
	Construction Site 20-29 acres	$390	$2048
	Construction Site 30-39 acres	$423	$2048
	Construction Site 40-49 acres	$455	$2340
	Construction Site 50-59 acres	$488	$2574
	Construction Site 60-69 acres	$520	$3432
	Construction Site 70-79 acres	$536	$3432
	Construction Site 80-89 acres	$585	$3861
	Construction Site 90-99 acres	$618	$3861
	Construction Site 100-199 acres	$650	$4290
	Construction Site 200-299 acres	$699	$5506
	Construction Site 300-399 acres	$764	$5756
	Construction Site 400-499 acres	$796	$6167
**	> 500 acres contact SWCD for a modified fee		
Section 2	In-Stream or Stream-side work Fee		
	0-2 Month project length	$500	
	2-4 Month project length	$1000	
	4-6 month project length	$1500	
	6-8 month project length	$2000	
	8-10 month project length	$2500	
	10-12 month project length	$3000	
Section 3	Utilities, Railroads, or Linear Projects		
	$300.00 for each wetland impacted or crossed	$300 per wetland	
Section 4	Re-Submittal Fee		
	1/3 of the original Review Fee	1/3 of Review	
Section 5	Re-Approval Fee		
	$80.00	$80	
Section 6	Non Compliance Fee		
	Will be notified by letter – Billable at	$65/hr	

For a fee calculator, see next page.

For projects > 500 acres or any other unique project as determined by the SWCD Board of Directors, a modified fee schedule may be developed on an individual basis, based upon the size, complexity, and duration. **ALL FEES ARE SUBJECT TO YEARLY INCREASES.

SEND REQUIRED INFORMATION WITH FEE PAYABLE TO:

Kane-DuPage Soil and Water Conservation District
2315 Dean Street, Suite 100
St. Charles, IL 60175

Hours: M-F 8:00 a.m. - 4:30 p.m.
Phone: 630/584/7961 x3
Fax: 630/584/9534

Fee Calculator and Worksheet

Step 1: Review Fee			
Acres of disturbance*		_____	Line 1
Enter review fee using table 1	$	_____	Line 2
Step 2: Inspection Fee			
Length of project (whole years)		_____	Line 3
Enter inspection fee using table 1	$	_____	Line 4
Multiply line 3 and line 4	$	0	Line 5
Step 3: In-Stream or Stream-Side Work Fee (If not applicable, enter $0 in line 7 and go to step 4)			
Length of Work (months – round up)		_____	Line 6
Enter fee using section 2 of table 1	$	_____	Line 7
Step 4: Linear Project (If not applicable, enter $0 in line 10 and go to step 5)**			
Enter the number of impacted wetlands on line 8		_____	Line 8
Wetland impact fee	$	300	Line 9
Multiply line 8 and line 9	$	0	Line 10
Step 5: Total Fee			
Sum lines 2, 5, 7, and 10	$	0	Line 11

For all projects above 500 acres in size or any other unique project as determined by the KDSWCD Board of Directors, a modified fee schedule will be developed on an individual basis, based upon the size, scope, complexity, and duration of the project.

***Linear projects refer to roadway or utility projects**

***Please remit this worksheet with your payment**.

Total Fee = Review Fee + (Inspect fee X project length in years) + In-Stream Fee* + Utility Fee*

For a fee calculator, see next page. *if applicable

Site Plan Checklist

The soil erosion and sediment control plan cannot be reviewed until all of the following information is submitted for each upcoming active construction phase:

1. Existing site conditions and natural resources present, including:

_____ Site boundaries and adjacent lands which accurately identify site location.
_____ Buildings, roads and utilities.
_____ Topography, vegetation, drainage patterns, subwatershed delineation, critical erosion areas, and any subsurface drainage tiles.
Wetland and floodplain delineation. Please show the boundaries on the construction plans.
_____ Adjacent areas that affect or are affecting the project site, e.g. drainage onto or through the site affecting wetlands, streams, lakes, and drainage areas downstream.
_____ Vicinity map.
_____ Show areas where trees and vegetation are to be preserved.
_____ Map legend, including north arrow and scale on all materials submitted.

2. Final site conditions, including:

_____ An accurate depiction of post-construction appearance, e.g. utilities, roads, buildings, open space.
_____ Locations, dimensions, cross sections and elevations of all (temporary and permanent) stormwater management facilities (including sediment basins), plus inlet and outlet locations.
_____ Surface flow direction, including sheet flow and concentrated flow direction.
_____ Post-construction topography, **final contours should be easily distinguished** (2 foot contour is preferred) including subwatershed delineations.

3. A complete soil erosion and sediment control plan, including:

_____ Location and detailed drawings of all permanent and temporary soil erosion and sediment control practices.
_____ A schedule outlining the installation of the practices with the responsible parties identified.
_____ Inspection, and maintenance schedules with responsible parties identified.
_____ Seeding information: rates, species, dates, fertilization, temporary or permanent.
_____ Location and dimension of all temporary soil and aggregate stockpiles.

4. Locations, dimension & phase timeline of all land disturbing activities, including:

_____ Designate construction limits, areas that will be disturbed and areas of wetland fill.
_____ Describe grading and building schedule and phasing timeline.
_____ Create and Submit a construction sequence for any in-stream work and/or critical areas.

Narrative Checklist

The soil erosion and sediment control plan cannot be reviewed until all of the following information is submitted for each upcoming active construction phase:

_____ **Project description -** Briefly describes the nature and purpose of the land disturbing activity, and the area (acres) to be disturbed.

_____ **Existing site conditions-** A description of the existing topography, vegetation, drainageways, subsurface drain tile, buildings, roads and utilities.

_____ **Adjacent areas -** A description of neighboring areas such as streams, lakes, residential areas, roads, etc. which might be affected by the land disturbance. Describe any adjacent or neighboring activities that may affect the soil erosion and sediment control plan.

_____ **Off-site areas-** Will any other areas be disturbed? Describe any off-site land disturbing activities.

_____ **Critical areas -** A description of areas on the site which have potentially serious problems, e.g. steep or long slopes, channels, intermittent streams, and side hill seeps.

_____ **Soil erosion and sediment control measures-** A description of the methods which will be used to control erosion and sedimentation on the site. Control methods should meet the standards in section 4 of the Illinois Urban Manual.

_____ **Construction Sequence-** A sequence of events for construction in and near creeks, streams, or other critical areas.

_____ **Permanent stabilization-** A brief description including specifications of how the site will be stabilized after construction is completed.

_____ C**alculations-** Detailed calculations for the design of temporary sediment basins, permanent stormwater detention basins, diversions, channels, etc.. Include pre and post development runoff.

_____ **Detail drawings-** Include detail drawings form the Illinois Urban Manual. Any structural practices used that are not referenced to the Illinois Urban Manual or local handbooks should be explained and illustrated with detail drawings.

_____ **Operation and Maintenance -** Provide a schedule of maintenance for all temporary and permanent erosion and sediment control practices to ensure that they perform properly. Identify the parties responsible for maintenance.

		Status	Comments
Permit Application (Current)			
Fee			
Deposits			
Performance Bond			
Construction Plans			
PE Stamp and Signature			
Wetland impacts?			
CWS signature?			
Benchmarks (get bm monument for floodplains)			
Project Concerns			
Variance Request			
Culvert/Bridge -- New or Modif.			
Dam -- New or Modif.			
Studied Floodplain/Floodway			
Pre-Construction BFE Determination Req'd			
With-Project BFE Determination Req'd			
H & H Narrative			
H & H Disk			
Maintenance Plan			
Elevation Certificates			
Performance Standards			
Plat & Site Plans			
Site Drainage Plan			
Area Drainage Plan			
Soils Mapping Needed?			
Drain Tile Survey Needed?			
Runoff Calculations			
Area, CN, T_c Table			
Huff Distrib. / Rainfall Data			
Existing Depressional Storage Vol.			
Release Rates & Discharges			
Watershed Specific Release Rates			
2-yr Release Rate Addressed			
100-yr Release Rate Addressed			
Adequate Downstream Capacity			
Interbasin Transfer			
Runoff Volume Hierarchy			
Detention Facility			
Stabilized Emergency Overflow			
Maintainable Restrictor			
Detention Provided in FP			
safety shelf			
maintenance & emergency ingress			
On-stream Detention			
DVSF			
2 yr RR / Volume			
100 yr RR / Volume			
Stormwater Conveyance Systems			
Stormsewer and Swales			
Sized for a 10-yr Storm			
No sanitary or draintile connections			
Streams and Channels			
Minimal Disturbance			
Channel Mitigation Plan - WOUS			
Maintain Morphology			
Revegetation Plan			

		Status	Comments
Construction in Dry			
Detail of Temp Crossing			
Overland Flow Paths			
To Detention Facility			
From Detention Facility			
Off-site Tributary Flow			
Low floor opening			
Water Quality Treatment			
Buffers			
Width - Surface Area Provided			
Revegetation			
SE/SC Plan			
SE/SC Notes on Drawing			
Typical Construction Sequence on Dwg			
Silt Fence			
Stabilized Construction Entrance			
Sediment trap			
Sedimentation Basin w/ Perf. Riser			
Deed or Plat Restrictions			
Storm Sewers / Swales / Channels / Overland F.P.			
Buffers / Wetlands			
Detention & Comp. Storage Areas			
Water Quality Treatment Areas			
Regulatory Floodplain			
LOMA/LOMR			
BFE Analysis			
Critical Duration Analysis			
Cross-section Locations/plots			
Compensatory Storage			
FPE for Low Floor			
Elevated / Water-proofed Facilities etc.			
Elevation Certificate Needed			
Structural Dry Floodproofing need info up front			
Regulatory Floodway			
Appropriate Use			
Compensatory Storage			
Floodprone Areas			
Maintain Carrying Capacity < 100 acres Trib			
> 100 acres - H & H analysis			
Flood Table Lands - FPE			
Dry flood-proofing?			
Elevation Certificate needed			
Additional Project Requirements			
IDNR/OWR Permits			
COE Permits (current? Match existing plan?)			
IDOT/DOH/LCDOT/Village ROW work approval			
NRI (Natural Resource Inventory)			
(IEPA) Notice of Intent > 1 Acre Needs SP3			
Soils Map with Property Limits			
Subsurface Drainage Inventory			
Lake County Health Department			
U.S. Fish and Wildlife			
IDNR Endangered Species Consultation/IWPA			

		Status	Comments

REVIEW COMMENTS

SOIL EROSION AND SEDIMENT CONTROL CHECKLIST
Return with supporting documentation to SMC

Please provide a single sheet site drainage plan that includes the following information, check if included:

_____Pre-construction and with-project conditions contours
_____With-project overland flow paths
_____Storm sewers (including inlet and outlet locations)
_____Stormwater management facilities (including detention and water quality treatment areas and their associated normal and high water levels, swales etc.)
_____Regulatory Floodplain delineation
_____Wetland and appropriate wetland buffer delineations
_____Limits of construction - conservation areas should be preserved
_____Other improvements (including buildings, roads, parking lots etc...)

Please provide an area drainage plan which includes the following, check if included:

_____Project location in the watershed (a vicinity map may also be required)
_____Delineate all on-site and off-site subbasins which drain through the site

Please provide a narrative description which includes the following, check if included:

_____Project description -- Briefly describes the nature and purpose of the land disturbing activity, and the areas to be disturbed. In addition, include a description of the soil erosion and sediment control practices that will be implemented on site.
_____Adjacent areas -- A description of neighboring areas such as streams, lakes, residential areas, roads, etc. that might be affected by the land disturbance. Describe any adjacent or neighboring activities that may affect the soil erosion and sediment control plan.
_____Off-site areas -- Will any other areas be disturbed? Describe any off-site land disturbing activities.
_____Location and identification of soil types -- flagging of hydric soils and highly erodible soils.
_____Stormwater runoff control -- Describe the strategy to control stormwater runoff.
_____Calculations -- Detailed calculations for the design of soil erosion and sediment control measures, as appropriate.

Please provide a detailed soil erosion and sediment control plan which includes the following, check if addressed:

_____Slope stabilization measures (for those ≥ 3:1)
_____Blanket on side slopes of detention facilities from NWL to HWL
_____Blanket on slopes adjacent to wetlands
_____Inlet and outlet erosion control measures
_____Direct runoff to stormwater management facilities during construction
_____Swales, channels, and all other concentrated flow areas soil stabilization
_____Appropriate filter barriers in areas of concentrated flows
_____Sediment trap or equivalent control at the downslope point of disturbance for disturbed areas draining between 1 and 5 acres
_____Sediment basin or equivalent control at the downslope point of disturbances for disturbed areas draining greater than 5 acres
_____Over-excavated detention facilities with a temporary perforated riser installed during construction to accommodate sediment accumulation
_____Basin Overflow protection
_____Silt Fence / Perimeter control at the downslope points of disturbance
_____Stabilized Construction Entrance
_____Construction Fencing at the limits of construction and/or disturbance
_____Seeding information: rates, species, dates, fertilization, temporary or permanent
_____Location and dimension of all temporary soil and aggregate stockpiles – specifically not in Regulatory Floodplain
_____Address areas of off-site discharge
_____Show protection of wetlands, streams, lakes, Regulatory Floodplains, conservancy areas etc.
_____Appropriate sediment control for utility installation through or adjacent to wetlands
_____Include detail drawings on the plans for all soil erosion and sediment control measures
_____Appropriate de-watering device/measure, if applicable
_____Construction sequencing that clearly indicates which sedimentation and erosion control measures and stormwater management facilities will be installed prior to the start of general construction.
_____SE/SC notes on Plan

Soil Erosion and Sediment Control Plan Review
North Cook Soil and Water Conservation District
(847)-468-0071

FOR OFFICE USE ONLY SWCD Application No.:
Meets technical standards_____ Does not meet technical standards_____
Date all Information received: _____Reviewed by: _____ Fee Paid: _____Check No.:_____
In-Stream: yes □ no □

	APPLICANT (Owner/Developer)	Erosion Control Consultant/Engineer
Business Name		
Address City/State/Zip		
Contact Name		
E-Mail Address		
Phone		
Fax		

Current Project Name and Phase number: _____ Location (Municipality):_____

Job site contact person: _____ E-Mail Address: _____

On site Contact's Phone number: (_____) -_____-_____ Fax number: (_____) -_____-_____

Village/Municipal contact person: _____ Phone # (_____)-_____-_____

Township, range, & section: _____ Nearest Intersection:_____

Proposed land use: _____ Acreage of disturbance:_____

Army Corps application number (if applicable):_____

Construction start date: _____ Anticipated construction completion date:_____

The applicant agrees to the following conditions:

1. Submit all required information listed on the following pages for each phase of development, regarding the soil erosion and sediment control (SE/SC) plan.

2. Upon submittal of this application, pay the applicable fee (see the attached fee schedule), in accordance with total acres of disturbance to the original topography and/or vegetation, in-stream and wetland disturbance, and the length of the project.

3. If the NCCSWCD does not receive all required items within **30 days**, the item that has been submitted may be mailed back to you.

4. Notify representatives from the North Cook County Soil and Water Conservation District (NCCSWCD) of the pre-construction meeting.

5. Allow a NCCSWCD, NRCS, or Army Corps of Engineers District representative the right to conduct on-site investigations throughout all active construction phases to determine whether all necessary SE/SC practices have been installed and are functioning properly.

6. Upon commencement of earthwork or construction, document SE/SC site inspections with all information being accurate and complete.

7. Comply with the North Cook County SWCD's written and verbal recommendations regarding:

A. The SE/SC plan and corrections or changes made thereto.

B. Installation and maintenance requirements of the SE/SC practices on-site.

8. Pay additional costs incurred by the SWCD in response to repeated non-compliance issues.

9. If any changes occur to the plans, schedules, etc., the applicant shall be responsible for notifying the North Cook Soil and Water Conservation District.

Upon receipt of all required information, the SE/SC plan will be reviewed within **15 working days** and all involved parties will be notified whether or not the plan meets technical standards.

Applicant's Signature: _____ Date: _____

Table 1	SESC Fee Schedule	Review Fee	Inspection Fee
Section 1	Initial Application Fee		
	Single Family Home <1 acre	$100.00	
	Commercial Site not part of a larger development <1	$250.00	
	Construction Site 0- 4 acres	$211	$638
	Construction Site 5-9 acres	$260	$788
	Construction Site 10-14 acres	$341	$1024
	Construction Site 15-19 acres	$374	$1365
	Construction Site 20-29 acres	$390	$2048
	Construction Site 30-39 acres	$423	$2048
	Construction Site 40-49 acres	$455	$2340
	Construction Site 50-59 acres	$488	$2574
	Construction Site 60-69 acres	$520	$3432
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	Construction Site 200-299 acres	$699	$5506
	Construction Site 300-399 acres	$764	$5756
	Construction Site 400-499 acres	$796	$6167
**	> 500 acres contact SWCD for a modified fee		
Section 2	In-Stream or Stream-side work Fee		
	0-2 Month project length	$500	
	2-4 Month project length	$1000	
	4-6 month project length	$1500	
	6-8 month project length	$2000	
	8-10 month project length	$2500	
	10-12 month project length	$3000	
Section 3	Utilities, Railroads, or Linear Projects		
	$300.00 for each wetland impacted/crossed	$300 per wetland	
Section 4	Re-Submittal Fee		
	1/3 of the Original Review Fee	1/3 of Review	
Section 5	Re-Approval Fee		
	$80.00	$80	
Section 6	Non Compliance Fee		
	Will be notified by letter – Billable at	$65/hr	

For a fee calculator, see next page.

**For projects > 500 acres or any other unique project as determined by the SWCD Board of Directors, a modified fee schedule may be developed on an individual basis, based upon the size, complexity, and duration.
ALL FEES ARE SUBJECT TO YEARLY INCREASES.

SEND REQUIRED INFORMATION WITH FEE PAYABLE TO:

ict

U.S. Mail: North Cook County SWCD
P.O. Box 407
Streamwood, IL 60107

Delivery Service Only: North Cook Co. SWCD
899 Jay Street
Elgin, Il. 60120

Phone: 847/468/0071 WWW.NORTHCOOKSWCD.ORG Fax: 847/468/1179

Fee Calculator and Worksheet

Step 1: Review Fee			
Acres of disturbance*		_____	Line 1
Enter review fee using table 1	$	_____	Line 2
Step 2: Inspection Fee			
Length of project (years)		_____	Line 3
Enter inspection fee using table 1	$	_____	Line 4
Multiply line 3 and line 4	$	_____	Line 5
Step 3: In-Stream or Stream-Side Work Fee (If not applicable, enter $0 in line 7 and go to step 4)			
Length of Work (months – round up)		_____	Line 6
Enter fee using table 2	$	_____	Line 7
Step 4: Linear Project (If not applicable, enter $0 in line 10 and go to step 5)**			
Enter the number of impacted wetlands on line 8		_____	Line 8
Wetland impact fee	$	_____	Line 9
Multiply line 8 and line 9	$	_____	Line 10
Step 5: Total Fee			
Sum lines 2, 5, 7, and 10	$	_____	Line 11
For all projects above 500 acres in size or any other unique project as determined by the NCCSWCD Board of Directors, a modified fee schedule will be developed on an individual basis, based upon the size, scope, complexity, and duration of the project.			
Linear projects refer to roadway or utility projects			
Please remit this worksheet with your payment.			

Total Fee = Review Fee + (Inspect fee X project length in years) + In-Stream Fee* + Utility Fee*

For a fee calculator, see next page. *if applicable

Site Plan Checklist

The soil erosion and sediment control plan cannot be reviewed until all of the following information is submitted for each upcoming active construction phase:

1. Existing site conditions and natural resources present, including:

_____Site boundaries and adjacent lands which accurately identify site location.
_____Buildings, roads and utilities.
_____Topography, vegetation, drainage patterns, subwatershed delineation, critical erosion areas, and any subsurface drainage tiles.
_____Wetland and floodplain delineation. Please show the boundaries on the construction plans.
_____Adjacent areas that affect or are affecting the project site, e.g. drainage onto or through the site affecting wetlands, streams, lakes, and drainage areas downstream.
_____Vicinity map.
_____Show areas where trees and vegetation are to be preserved.
_____Map legend, including north arrow and scale on all materials submitted.

2. Final site conditions, including:

_____An accurate depiction of post-construction appearance, e.g. utilities, roads, buildings, open space.
_____Locations, dimensions, cross sections and elevations of all (temporary and permanent) stormwater management facilities (including sediment basins), plus inlet and outlet locations.
_____Surface flow direction, including sheet flow and concentrated flow direction.
_____Post-construction topography, **final contours should be easily distinguished** (2 foot contour is preferred) including subwatershed delineations.

3. A complete soil erosion and sediment control plan, including:

_____Location and detailed drawings of all permanent and temporary soil erosion and sediment control practices.
_____A schedule outlining the installation of the practices with the responsible parties identified.
_____Inspection, and maintenance schedules with responsible parties identified.
_____Seeding information: rates, species, dates, fertilization, temporary or permanent.
_____Location and dimension of all temporary soil and aggregate stockpiles.
_____Details and plan concerning construction site dewatering.

4. Locations, dimension & phase timeline of all land disturbing activities, including:

_____Designate construction limits, areas that will be disturbed and areas of wetland fill.
_____Describe grading and building schedule and phasing timeline.
_____Create and Submit a construction sequence for any in-stream work and/or critical areas.

Narrative Checklist

The soil erosion and sediment control plan cannot be reviewed until all of the following information is submitted for each upcoming active construction phase:

_____**Project description** - Briefly describes the nature and purpose of the land disturbing activity, and the area (acres) to be disturbed.

_____**Existing site conditions**- A description of the existing topography, vegetation, drainageways, subsurface drain tile, buildings, roads and utilities.

_____**Adjacent areas** - A description of neighboring areas such as streams, lakes, residential areas, roads, etc. which might be affected by the land disturbance. Describe any adjacent or neighboring activities that may affect the soil erosion and sediment control plan.

_____**Off-site areas**- Will any other areas be disturbed? Describe any off-site land disturbing activities.

_____**Critical areas** - A description of areas on the site which have potentially serious problems, e.g. steep or long slopes, channels, intermittent streams, and side hill seeps.

_____ **Soil erosion and sediment control measures**- A description of the methods which will be used to control erosion and sedimentation on the site. Control methods should meet the standards in section 4 of the Illinois Urban Manual.

_____**Construction Sequence**- A sequence of events for construction in and near creeks, streams, or other critical areas.

_____**Permanent stabilization**- A brief description including specifications of how the site will be stabilized after construction is completed.

_____C**alculations**- Detailed calculations for the design of temporary sediment basins, permanent stormwater detention basins, diversions, channels, etc.. Include pre and post development runoff.

_____**Detail drawings**- Include detail drawings form the Illinois Urban Manual. Any structural practices used that are not referenced to the Illinois Urban Manual or local handbooks should be explained and illustrated with detail drawings.

_____**Operation and Maintenance** - Provide a schedule of maintenance for all temporary and permanent erosion and sediment control practices to ensure that they perform properly. Identify the parties responsible for maintenance.

Soil Erosion and Sediment Control Plan Review
McHenry County Soil and Water Conservation District
(815)-338-0099 x3

FOR OFFICE USE ONLY SWCD Application No.:
Meets technical standards_____ Does not meet technical standards_____
Date all Information received: _____Reviewed by: _____ Fee Paid: _____Check No.:
In-Stream: yes □ no □

	APPLICANT (Owner/Developer)	Erosion Control Consultant/Engineer
Business Name		
Address City/State/Zip		
Contact Name		
E-Mail Address		
Phone		
Fax		

Current Project Name and Phase number: _____ Location (Municipality):_____

Job site contact person: _____ E-Mail Address: _____

On site Contact's Phone number: (_____) -_____-_____ Fax number: (_____) -_____-_____

Village/Municipal contact person: _____ Phone # (_____)-_____-_____

Township, range, & section: _____ Nearest Intersection:_____

Proposed land use: _____ Acreage of disturbance:_____

Army Corps application number (if applicable):_____

Construction start date: _____ Anticipated construction completion date:_____

The applicant agrees to the following conditions:

1. Submit all required information listed on the following pages for each phase of development, regarding the soil erosion and sediment control (SE/SC) plan.
2. Upon submittal of this application, pay the applicable fee (see the attached fee schedule), in accordance with total acres of disturbance to the original topography and/or vegetation, in-stream and wetland disturbance, and the length of the project.
3. If the MCSWCD does not receive all required items within **30 days**, the item that has been submitted may be mailed back to you.
4. Notify representatives from the McHenry County Soil and Water Conservation District (MCSWCD) of the pre-construction meeting.
5. Allow a MCSWCD, NRCS, or Army Corps of Engineers District representative the right to conduct on-site investigations throughout all active construction phases to determine whether all necessary SE/SC practices have been installed and are functioning properly.
6. Upon commencement of earthwork or construction, document SE/SC site inspections with all information being accurate and complete.
7. Comply with the McHenry County SWCD's written and verbal recommendations regarding:
   A. The SE/SC plan and corrections or changes made thereto.
   B. Installation and maintenance requirements of the SE/SC practices on-site.
8. Pay additional costs incurred by the SWCD in response to repeated non-compliance issues.
9. If any changes occur to the plans, schedules, etc., the applicant shall be responsible for notifying the McHenry County Soil and Water Conservation District.

Upon receipt of all required information, the SE/SC plan will be reviewed within **15 working days** and all involved parties will be notified whether or not the plan meets technical standards

Applicant's Signature:_____ Date:_____

Revised March 1, 2008

Table 1	SESC Fee Schedule	Review Fee	Inspect Fee
Section 1	Initial Application Fee		
	Single Family Home <1 acre	$100.00	
	Commercial Site not part of a larger development <1	$250.00	
	Construction Site 1-4 acres	$211	$488
	Construction Site 5-9 acres	$260	$488
	Construction Site 10-14 acres	$341	$1024
	Construction Site 15-19 acres	$374	$1365
	Construction Site 20-29 acres	$390	$2048
	Construction Site 30-39 acres	$423	$2048
	Construction Site 40-49 acres	$455	$2340
	Construction Site 50-59 acres	$488	$2574
	Construction Site 60-69 acres	$520	$3432
	Construction Site 70-79 acres	$536	$3432
	Construction Site 80-89 acres	$585	$3861
	Construction Site 90-99 acres	$618	$3861
	Construction Site 100-199 acres	$650	$4290
	Construction Site 200-299 acres	$699	$5506
	Construction Site 300-399 acres	$764	$5756
	Construction Site 400-499 acres	$796	$6167
**	> 500 acres contact SWCD for a modified fee		
Section 2	In-Stream or Stream-side work Fee		
	0-2 Month project length	$500	
	2-4 Month project length	$1000	
	4-6 month project length	$1500	
	6-8 month project length	$2000	
	8-10 month project length	$2500	
	10-12 month project length	$3000	
Section 3	Utilities, Railroads, or Linear Projects		
	$300.00 for each wetland impacted/crossed	$300 per wetland	
Section 4	Re-Submittal Fee		
	1/3 of the Original Review Fee	1/3 of Review	
Section 5	Re-Approval Fee		
	$80.00	$80	
Section 6	Non Compliance Fee		
	Will be notified by letter – Billable at	$65/hr	

For a fee calculator, see next page.

For projects > 500 acres or any other unique project as determined by the SWCD Board of Directors, a modified fee schedule may be developed on an individual basis, based upon the size, complexity, and duration. **ALL FEES ARE SUBJECT TO YEARLY INCREASES.

SEND REQUIRED INFORMATION WITH FEE PAYABLE TO:

McHenry County SWCD
1648 S. Eastwood Dr.
Woodstock, IL 60098

Phone: 815-338-0099 x3
Fax: 815-338-7731

Fee Calculator and Worksheet

Step 1: Review Fee			
Acres of disturbance*		_____	Line 1
Enter review fee using table 1	$	_____	Line 2
Step 2: Inspection Fee			
Length of project (years)		_____	Line 3
Enter inspection fee using table 1	$	_____	Line 4
Multiply line 3 and line 4	$	_____	Line 5
Step 3: In-Stream or Stream-Side Work Fee (If not applicable, enter $0 in line 7 and go to step 4)			
Length of Work (months – round up)		_____	Line 6
Enter fee using table 2	$	_____	Line 7
Step 4: Linear Project (If not applicable, enter $0 in line 10 and go to step 5)**			
Enter the number of impacted wetlands on line 8		_____	Line 8
Wetland impact fee	$	300	Line 9
Multiply line 8 and line 9	$	_____	Line 10
Step 5: Total Fee			
Sum lines 2, 5, 7, and 10	$	_____	Line 11

For all projects above 500 acres in size or any other unique project as determined by the MCSWCD Board of Directors, a modified fee schedule will be developed on an individual basis, based upon the size, scope, complexity, and duration of the project.

***Linear projects refer to roadway or utility projects**

Please remit this worksheet with your payment.

Total Fee = Review Fee + (Inspect fee X project length in years) + In-Stream Fee* + Utility Fee*

For a fee calculator, see next page.

*if applicable

Site Plan Checklist

The soil erosion and sediment control plan cannot be reviewed until all of the following information is submitted for each upcoming active construction phase:

1. Existing site conditions and natural resources present, including:

_____Site boundaries and adjacent lands which accurately identify site location.
_____Buildings, roads and utilities.
_____Topography, vegetation, drainage patterns, subwatershed delineation, critical erosion areas, and any subsurface drainage tiles.
_____Wetland and floodplain delineation. Please show the boundaries on the construction plans.
_____Adjacent areas that affect or are affecting the project site, e.g. drainage onto or through the site affecting wetlands, streams, lakes, and drainage areas downstream.
_____Vicinity map.
_____Show areas where trees and vegetation are to be preserved.
_____Map legend, including north arrow and scale on all materials submitted.

2. Final site conditions, including:

_____An accurate depiction of post-construction appearance, e.g. utilities, roads, buildings, open space.
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APPENDIX 7

Illinois Tollway

Roadside Mowing Guide

March 2010

TABLE OF CONTENTS

Section 1 – Roadside Vegetation Management

The purpose of this guide is to serve as a standardized reference for systemwide mowing management by promoting a safe, economically responsible and aesthetically pleasing natural roadside turf environment. It is the intent to provide general vegetation management methods to reduce soil erosion, enhance water quality, conserve energy, manage existing turf and control invasive plants. Modifications may be necessary to allow flexibility for various roadway circumstances, equipment limitations and needs.

A.) General Appearance and Function:

For new plantings the natural roadside turf management intent generally will promote the practical use of native plants, and for existing conditions is to provide a responsible uniform maintenance practice for relevant right-of-way locations. For existing grasses this practice would generally incorporate reduced cutting frequency from that of conventionally manicured turf grass and by cutting most backslopes when turf reaches approximately 18 inches, or possibly greater in rural locations. The zone immediately along the edge of pavement would continue to maintain a standard manicured appearance through regular cuttings at approximately 6 inches height. The inteneded result will be a natural rather than a traditional manicured appearance.

Example: less desirable conventional backslope turf mowing practice

Example: more desirable natural turf mowing practice, taller heights on backslopes

Section 2 – Mowing Guidelines

(see figures 1, 2 and 3)

A.) Shoulder (and Median) Mowing:

Mowing Frequency: **As needed, approximately 3 – 5 cycles per year**
Mowing Height: **Minimum 6 inches**

Shoulder and median cutting cycles may be made as needed to maintain a manicured appearance and should typically begin when 50 percent of the vegetation reaches 10 inch height. Mower equipment settings shall be adjusted to maintain the vegetation height between 6 and 12 inches.

The width of the cut shall be approximately 15 feet wide from the edge of shoulder or through the ditch line and is generally intended to be one pass of the mowing equipment. This practice may require a range of mowing widths to continuously manage drainage through the ditch line.

Mowing and vegetation control should be provided on all medians less than 100 feet in width. Medians 100 feet and wider may be managed at discretion of each maintenance section and is dependent upon the terrain.

B.) Backslope (and Interchange) Mow Management-

URBAN AREAS:

Mowing Frequency: **Between 1 to 3 cycles per year**
Mowing Height: **Minimum 6 inches**

For the purposes of Tollway vegetation management, urban areas are defined as having a surrounding setting that is characteristic of city or town development. The start of rural location limits commonly begin west of the Fox River, but exact locations should be determined by each maintenance section.

Urban mowing of all accessible areas beyond the “Shoulder and Median Mowing” limits shall typically be conducted between one to three mowing cycles each year. Mower equipment settings shall be adjusted to cut vegetation once heights reach approximately 18 inches.

Mowing areas generally include, interchange infields and back-slopes to the fence line. A single mowing pass along the fence line may be provided on a more frequent basis in areas such as those adjacent to residential neighborhoods.

RURAL AREAS:

Mowing Frequency: **Approximately 1 cycle every 1 – 2 years (less as practical)**
Mowing Height: **Minimum 6 inches (up to 15 inches)**

For the purposes of Tollway vegetation management, rural areas are defined as those outside urban areas, generally with a surrounding setting characteristic of that beyond a city or town.

Rural mowing of all accessible areas beyond the “Shoulder and Median Mowing” limits shall typically be conducted in one cycle every (1) one or two (2) years or less depending on site

conditions. Mower equipment settings shall be adjusted to cut vegetation once heights reach approximately 18 inches or higher when practical and desirable.

Mowing areas generally include, interchange infields and back-slopes to the fence line. Mowing frequency should be evaluated each year and is intended to be the least possible to control weed growth and undesirable woody vegetation.

C.) Facility Mowing:

The area immediately surrounding Oasis, Toll Plazas, Maintenance Yards and other Tollway structures and facilities may be maintained with conventional lawn maintenance methods (Shoulder Mowing and/or Traditional Mowing) of increased mowing frequency for a more manicured turf appearance. Additional care and watering may also be required to turf areas with traditional mowing practices and should also to surrounding trees, shrubs and other ornamental plants during the summer months or dry periods, as needed.

D.) Safety and Best Management Practices Notes:

a.) Operator training is provided by each maintenance section and should be completed prior to use of any mowing equipment.

b.) Additional mowing may be performed in areas where vegetation impedes roadside drainage. If possible mowing in drainage ditches should be performed when the areas are dry to reduce turf damage and potential soil erosion.

c.) Spot mowing may be performed for noxious weed control. Blanket mowing of larger select areas may also be provided when increase control of noxious weeds is desirable and to aesthetically blend mow areas. When cutting for weed control the timing is important and typically should be completed before the targeted plant flowers, reducing the ability to propagate, but may vary for various plant types (see Section 4).

d.) Shoulder Mowing may also be expanded where lower grass heights are desirable, such as, delineation of message signs. This shall be performed with long, smooth approach transitions to the signage, so the mowed edge does not produce an abrupt or ragged appearance.

e.) Medians and Interchange infields less than approximately 100 feet wide shall be completely mowed according to the regular ‘Shoulder Mowing’ cycle.

f.) Slopes greater than 2.5:1 shall not be mowed with conventional mowers.

g.) Areas with steep slopes or poor access or conditions that currently have reduced mowing restrictions may remain as such unless otherwise directed or indicated on the vegetation management maps.

h.) All mowing should be performed in a manner to prevent scalping, equipment rutting tracks or other turf and slope damage. Whenever possible mowing should not be done when ground conditions are wet or where equipment slipping could cause turf damage or lead to potential soil erosion and sediment loss.

i.) Designated locations behind noise walls may be considered for regular ‘Shoulder Mowing’ practices to maintain a manicured appearance and control debris adjacent to residential and urban locations.

j.) Regular Shoulder Mowing practices using one pass of the tractor mower width may be permitted along the right-of-way fence in urban areas as needed to control weed growth or to maintain a manicured appearance adjacent to similar residential and urban conditions.

k.) Urban backslopes with flatter grades and adjacent to currently groomed commercial or residential locations may be considered for more frequent mowing practices to blend with the surrounding land use. These locations should typically be determined by each Maintenance Section and identified on Vegetation Management Maps.

l.) All areas should be patrolled for debris prior to mowing. Permanent obstructions with low visibility may be marked with appropriate stakes to more clearly identify obstacles.

m.) When mowing must be done near, between or around trees and shrubs, care should be exercised to avoid damaging plants and their supports. Mowing equipment, such as smaller tractors, may be required when occasional mowing within groups of tree plantings is needed. Care should be taken near newly planted seedlings and the use of mowing markers may be provided to delineate mowing limits. Trees are typically located within the 'Backslope mowing zones to reduce mowing frequency and subsequent maintenance needed around plantings.

n.) Backslope mowing should be performed during the spring or during the fall mowing cycles whenever possible. Shoulder Mowing may be performed as needed to maintain specified turf heights.

Section 3 – Management / Weed Control:

A.) Vegetation Management Maps:

The maintenance methods provided in this guide is suggested as a general reference for standardized practice, but will not include all situations or most desirable practices. Many areas throughout the system may also require variation of standardized measures to best address site specific conditions. Preparation of Vegetation Management Maps may be desirable for each maintenance section to assist in directing some of the variations of mowing and maintenance activities. Items that may be delineated include, special conditions, mowing limits, frequency and locations for monitoring weed control. Changes in the general guidance for back-slopes, interchange infields or other locations may also be provided on the mowing plans.

Areas planted in native grasses and/or wildflowers may require special mowing practices (or prescribed burning) and should be indicated on the Maps.

B.) Herbicides and Weed Control:

When noxious weeds are not able to be controlled by cutting, herbicide application may be considered as an alternative management tool. Other invasive and nuisance weed species should be controlled by mowing at proper times of the year to manage growth and spreading. Chemical treatment must be applied by registered applicators. Illinois state-listed noxious weeds (see list below) should be managed in a timely manner and during the most effective time for control. Use of specific herbicides selected for targeted plants are most effective in eradicating growth. Care should be taken to preclude damage of desirable vegetation. Spot spraying of target weeds should

be the first consideration in chemical control. Blanket spraying should only be used in areas containing high concentrations of the target weeds when other options are not effective.

Illinois Noxious weeds List (as of current printing):

1. Marihuana (*Cannabis sativa L*.)
2. Giant Ragweed (*Ambrosia trifida L*.)
3. Common Ragweed (*Ambrosia artemisiifolia L*.)
4. Canada Thistle (*Cirsium arvense*)
5. Perennial Sowthistle (*Sonchus arvensis*)
6. Musk Thistle (*Carduus nutans*)
7. Perennial sorghum types, including Johnsongrass (*Sorghum halepense*)
8. Kudzu (*Pueraria labata*)

Other common invasive or nuisance weeds include, but not limited to:

1. Leafy Spurge
2. Purple Loosestrife
3. Garlic Mustard
4. Reed Canary Grass
5. White and Yellow Sweet Clover
6. Cut-leaf and Common Teasel

Effective and safe weed management control may be developed for problem areas by contacting the USDA Midwest Area Weed Management Unit.

C.) Marking Limits for Special Mow Areas:

Selective mowing stakes (Article 250.08 of the Standard Specifications) may be used to delineate mowing lines for special mowing practices of wildflower, wetland and/or other conservation areas requiring guidance of mower operations.

When the complete right-of-way is mowed, use extra care in areas beyond the clear zone to identify and save desirable volunteer trees and shrubs.

D.) Mowing Equipment:

Large tractors with flail or rotary mowing equipment attachments are used for most roadway mowing conditions.

Smaller rotary tractors and/or hand mowing equipment should be used in locations that are not easily accessible to larger tractor units. These locations may include, between tree groupings, around culvert inlets and outlets, near building facilities or other locations that may cause unwanted damage to desirable vegetation or structures.

Slope mowers are designed for use on slopes steeper than 3 to 1. These mowers are equipped with proper center-of-gravity mechanics and can maneuver slopes safely while reducing damage to slopes. The equipment should be operated as provided by each manufacturer.

All mowing equipment should be checked to confirm the proper mowing deck heights are set prior to cutting. Adjustments to mowing equipment may be considered to achieve higher cuts if desirable and beneficial, particularly for rural backslope and interchanges. Adjustments, changes or additions to mowing equipment should be coordinated with specific manufactures to provide safe results.

Figure 1
Typical URBAN Mow Zones

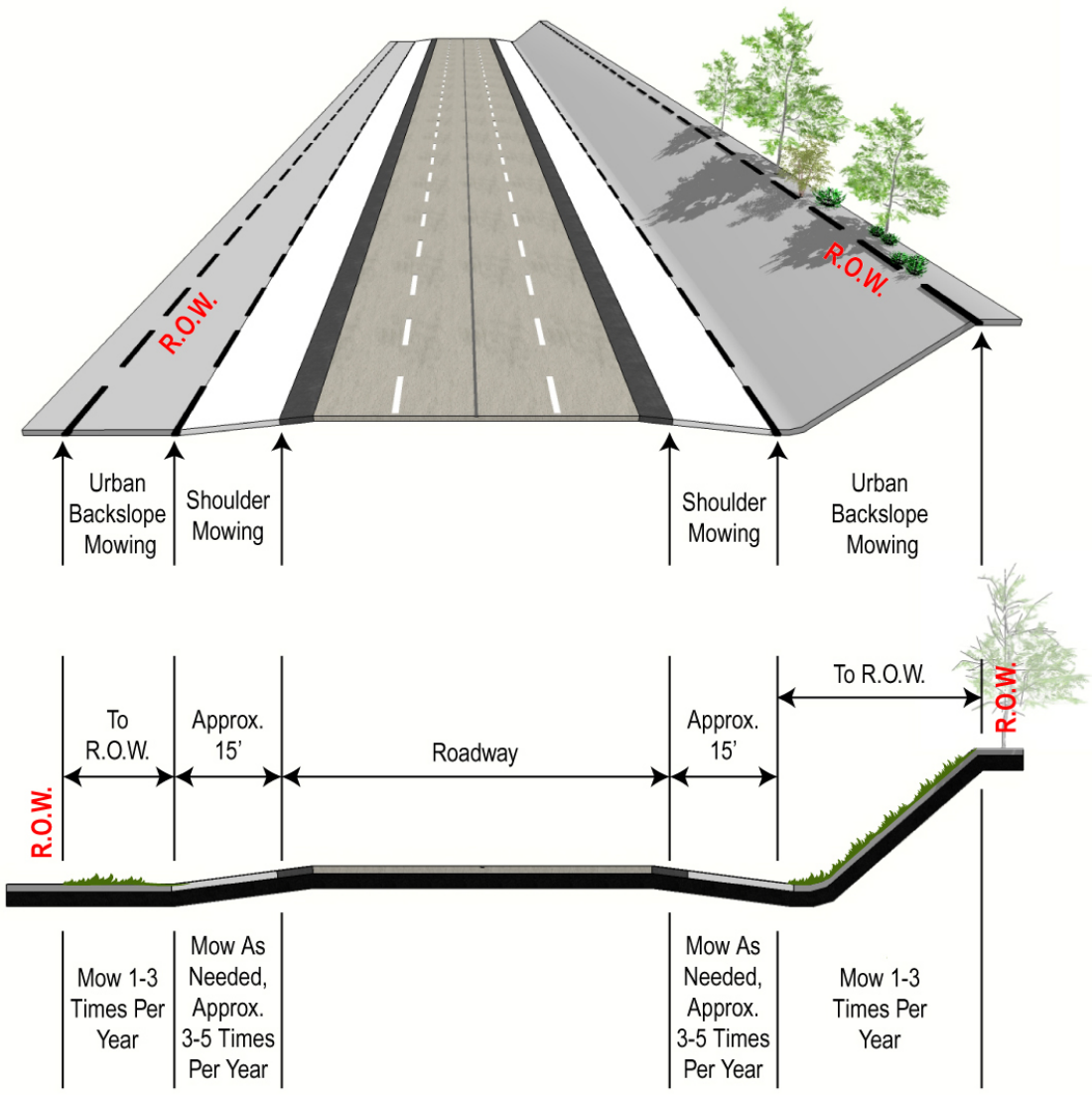


Figure 2
Typical RURAL Mow Zones

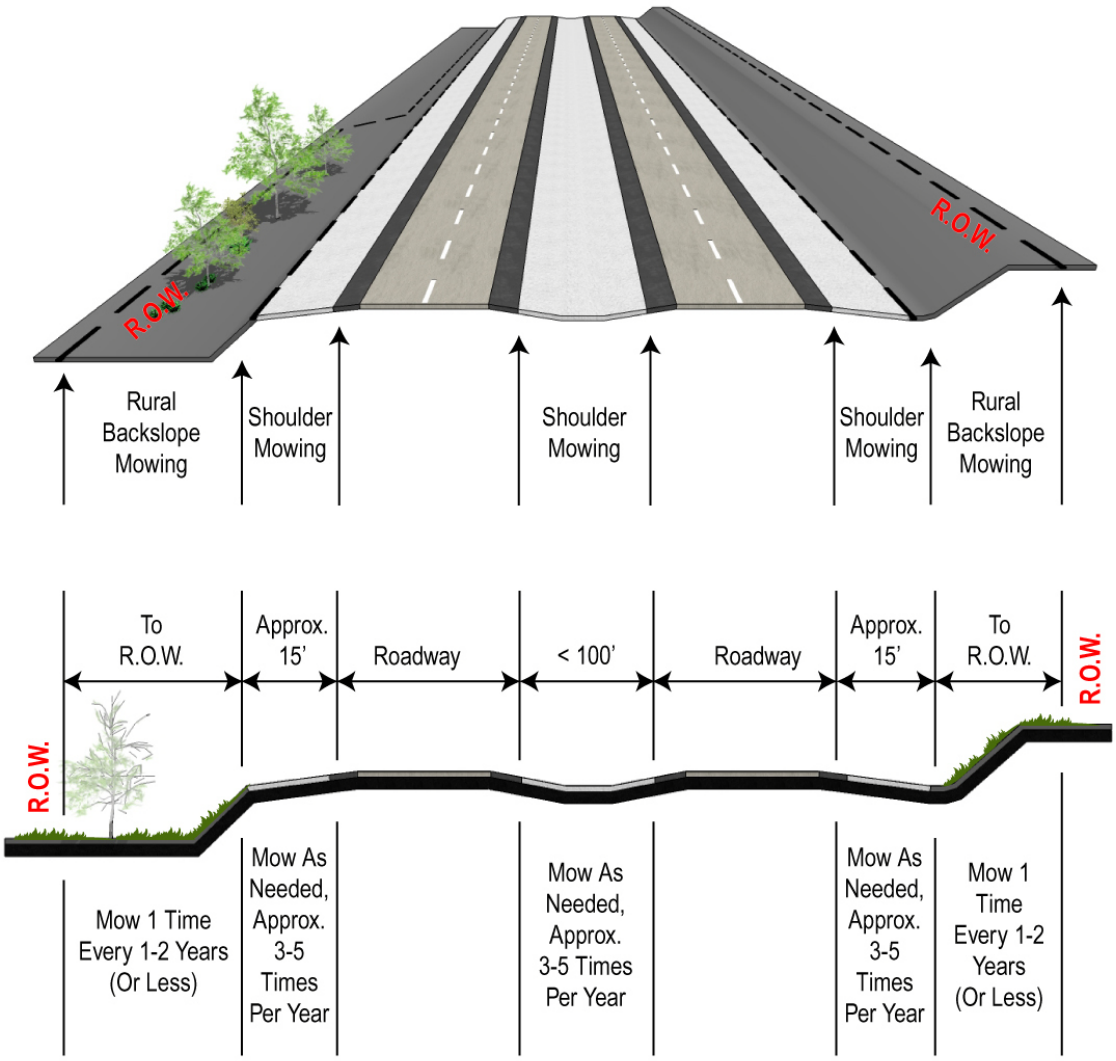
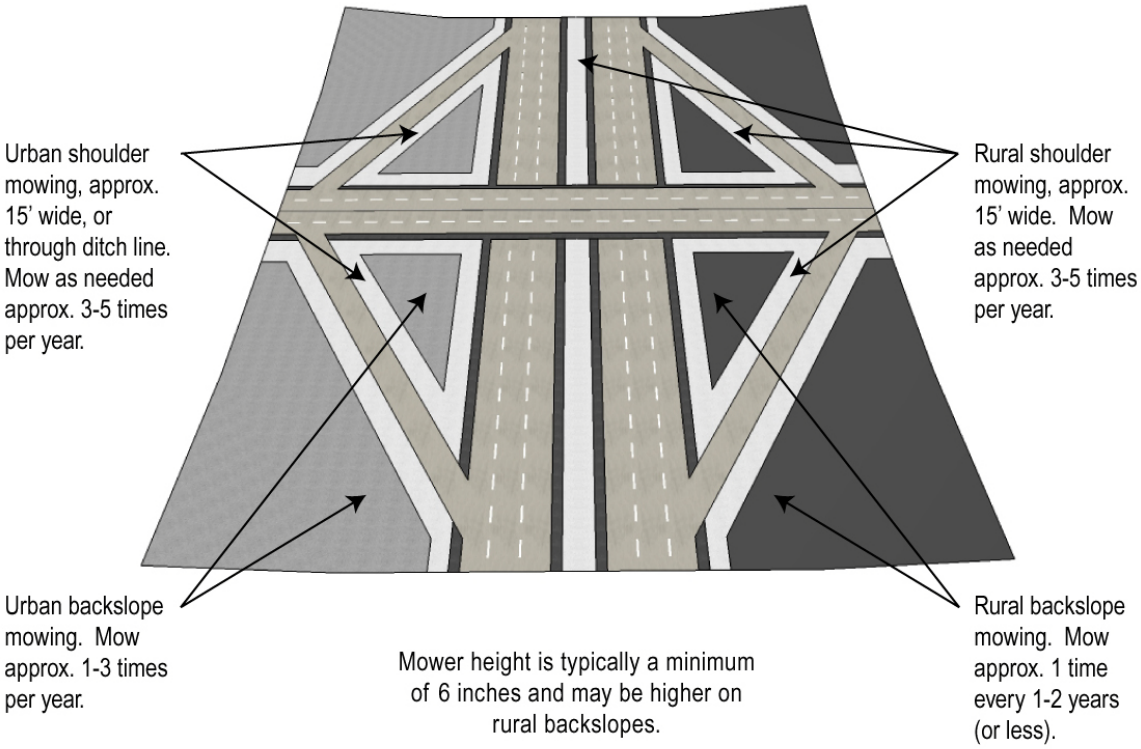


Figure 3
URBAN (Left) and RURAL (Right)
Interchange Mow Zones



APPENDIX 8

Illinois State Toll Highway Authority

Landscape Design Submittal Checklist

Project: _____

Contract Number: _____

DSE: _____

Date: _____

Tollway Reviewer _____

Date: _____

Items are to be checked off by the DSE and the form shall be submitted to the Tollway for review.

Tollway reviewer to indicate;
C = Complies
D = Deficient
NA = Not Applicable

A. Landscape Design Concept Submittal

1. ____ site location map

2. ____ an Issues and Opportunities Diagram delineating the following:

    ____a) the identification, by text and illustration (photo or graphic image), of the landscape character of the existing and adjacent sites

    ____b) landscape features to be preserved or that may influence the design

    ____c) any important view sheds that are to be protected or enhanced

    ____d) Any important features, natural or built, within or outside the Tollway ROW, that may influence the design will be identified and recorded.

    ____e) views to or from the site that should be screened

    ____f) historic features or influences

    ____g) topographic and hydraulic features

    ____h the overall strengths and weaknesses of the site

    ____i) identification of any agencies, municipalities, community groups or individuals that the design team will have to coordinate with to achieve a successful landscape design

3. ____ a short narrative describing the following:

    ____a) desired landscape character and landscape goals

    ____b) how existing site conditions/issues have been addressed

    ____c) how the proposed landscape design compliments the proposed drainage/ grading design

____d) a discussion of the pros and cons of any alternatives that are included in the submission

4. ____ concept plans

____a) The plans must be coordinated with drainage/grading design and any utility and lighting layouts.

____b) The plans shall be at a 1" = 100' scale to represent the overall concept and at a 1" = 50' to adequately represent typical sections of the concept where additional detail is so desired.

____c) Any important view sheds that are to be protected or enhanced should be indicated on the plan/plans

____d) Views to or from the site that should be screened should also be indicated.

5. ____ preliminary cross sections to display the viability of the conceptual design

6. ____ a list of plant types to be used

7. ____ a list or copies of the relevant information and design criteria collected through the coordination process

8. ____ a rough cost estimate

9. ____ any additional information required by the Tollway project engineer

B. Preliminary Plans and Special Provisions

1. ____a) The preliminary plans submittal will include plans, text, and specifications developed to a 60% level of completeness.

____b) The Plans must be coordinated with, and complimentary to, the proposed drainage, grading designs, and utility drawings.

____c) Any alternative drainage systems and grading solutions proposed should be described in text and also displayed in plan and cross section format.

____d) The background documentation maintained by the DSE will need to meet the requirements in the Tollway Environmental Studies Manual.

____e) This documentation will also need to identify any special requirements used to select specific measures.

2. ____ site location map

3. ____ plan or plan views showing the schematic layout o the overall landscape design. The overall design will be delineated at a scale of 1" = 50' and at 1" = 20' in areas where additional detail is required.

4. ____ a tree preservation plan that will include the following:

____a) existing tree locations

____b) size, species and condition

____c) methods of protection, including fencing and wrapping

____d) defined safe area to protect tree root structures based on the analysis of the Existing Vegetation Assessment

5. ____ preliminary detailed plans of any atypical or special areas

6. ____ preliminary planting and construction details

7. ____ preliminary details of any hard-landscaped elements such as paving or special features

8. ____ cross sections that adequately display significant changes in grade or width of the area to be planted and the viability of the landscape concept

9. ____ Plant names and sizes will be indicated on the plans.

____a) Tollway Project Engineer and the landscape architect will determine the viability of the plant material selection with due consideration to site conditions and salt tolerance.

10. ____ Landscape Materials List to include the following:

____a) preliminary schedule of quantities and construction cost estimate for plant material

____b) all measures to be installed

____c) planting schedule, indicating species (common and botanical names), sizes to be used, and quantity

____d) maintenance guidelines, provisions for care, and fertilizer requirements for a 820 day/three year establishment period for a spring planting or for two growing seasons if the plantings take place in fall

11. ____ outline or special provisions to the Standard Specifications that follow the accepted Tollway standards

12. ____ a coordination schedule for the installation and inspection of the planting material

13. ____ Address, in writing, all Tollway comments from the previous submittal.

14. ____ any additional information required by the Tollway project engineer

C. Pre-Final Plans and Special Provisions

1. ____a) Pre-Final Plan phase will develop the plans, text, and specifications submitted at the Preliminary Plans and Special Provisions Phase to a 99% level of completeness.

____b) All drawings will be coordinated with the drainage, grading, and utility packages.

____c) All drawings will be fully annotated and show dimensions, notes, references, symbols, legends, and labels

____d) The drawings will be cross referenced to a fully detailed plant schedule.

____e) The plant schedule will fully delineate the species (common and botanical name and size), type, spacing, and quantity of all plants selected.

____f) All details for planting, hard-landscape, and special features will be complete and cross referenced to the plans.

____g) The Specifications and Special Provisions will follow Tollway format and will be complete with all materials, ways, and means specified.

2. ____ a site location map

3. ____ a plan or plan views showing the schematic layout of the overall landscape design. The overall design will be delineated at no less than a scale of 1" = 50' and at 1" = 20' in areas where additional detail is required.

4. ____ a tree preservation plan, that will include the following:

____a) existing tree locations

____b) size, species, and condition

____c) methods of protection, including fencing and wrapping

____d) defined safe area to protect tree root structures, based on the analysis of the Existing Vegetative Assessment

5. ____ detailed plans of any atypical or special areas

6. ____ planting and constructions details

7. ____ details of any hard-landscape elements, such as paving or special features

8. ____ cross sections that adequately display significant changes in grade or width of the area to be planted and the viability of the landscape concept.

9. ____ Plant types (common/botanical names or key codes) and sizes will be indicated on plans.

10. ____ Landscape Materials List to include the following:

____a) schedule of quantities and construction cost estimate for plant material

____b) all measures to be installed

____c) planting schedule which fully delineates the species, type, spacing, and quantity of all plants selected

____d) maintenance guidelines and provisions for care, and fertilizer requirements for a 820 day/three year establishment period for a spring planting or for two growing seasons if the planting takes place in the fall

11. ____ specifications and special provisions that follow the accepted Tollway standards

12. ____ a coordinated schedule for the design installation and inspection of the planting material.

13. ____ address, in writing, all Tollway comments from the previous submittal

14. ____ any additional information required by the Tollway project engineer

C. Final Plans and Special Provisions

1. ____ All comments and questions received during the review of Pre-Final Plans must be adequately addressed in writing or resolved by revisions to the final or Special Provisions.

2. ____ drawings must be at 100% completeness

3. ____ a site location map

4. ____ a plan or plan view showing the schematic layout of the overall landscape design. The overall design will be delineated at no less than a scale of 1" = 50' and 1" = 20' in areas where additional detail is required.

5. ____ a tree preservation plan that will include the following:

____a) existing tree locations

____b) size and species (common and botanical name)

____c) methods of protection, including fencing and wrapping

____d) defined safe areas needed to protect tree root structures, based on the analysis of the Existing Vegetative Assessment

____e) The drawings will be cross referenced to a fully detailed plant schedule. The plant schedule will identify the species (common and botanical name), size, type, spacing, and quantity

6. ____ detailed plans of any atypical or special areas

7. ____ planting and construction details

8. ____ details of any hard-landscaped elements, such as paving or special features

9. ____ cross sections that adequately display significant changes in grade or width of the area to be planted and the viability of the landscape concept

10. ____ Plant types (common/botanical names or key codes) and sizes will be indicated on the plans.

11. ____ Landscape Materials List, which will include the following:

____a) schedule of quantities and construction cost estimate for plant material

____b) all measures to be installed

____c) planting schedule

____d) maintenance guidelines, provisions for care, and fertilizer requirements for a 820 day/three year establishment period for a spring planting or for two growing seasons if the plantings take place in the fall

12. ____ specifications and special provisions that follow Tollway standards

13. ____ registered Landscape Architect's seal and signature on plans

14. ____ Address, in writing, all Tollway comments from the previous submittal.

15. ____ any additional information required by the Tollway project engineer

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APPENDIX 9

INDEX OF DRAWINGS

ISTHA STANDARD DRAWINGS

STANDARD #	TITLE
D2-00	SYMBOLS AND PATTERNS
D7-00	LANDSCAPE PLANTING DETAILS
E1-00	CONSTRUCTION SIGNS
E3-00	TEMPORARY GORE DETAILS AND SHOULDER CLOSURE DETAILS
K1-00	TEMPORARY EROSION AND SEDIMENT CONTROLS

LEGEND

- R.O.W.
- MAJOR DECIDUOUS TREE
- MINOR DECIDUOUS TREE
- EVERGREEN TREE
- SHRUB BEDS WITH MULCH
- EXISTING TREE LINES
- EXISTING NOISE WALL LOCATION
- CONTOURS
- EXISTING FIBER OPTIC LINE
- EXISTING FENCE LINE
- G — EXISTING GAS PIPELINE
- E — EXISTING ELECTRIC LINE
- EXISTING OVERHEAD SIGN
- DIRECTION OF RAMP TRAFFIC
- EXISTING ELECTRIC LINE
- FUTURE BIKE PATH LOCATION (ALONG EAST R.O.W.)

DRAWN . . . . . DATE . . . . . CHECKED . . . . . SCALE . . . . .

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

INDEX OF DRAWINGS AND LEGEND

DRAWING NO. . . . . OF . . . .

GENERAL NOTES

(ILLINOIS STATE TOLL HIGHWAY AUTHORITY)

1. DURING CROSSROAD CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ADJACENT TRAFFIC LANES OPEN TO TRAFFIC FROM DEBRIS BEING BLOWN OR OTHERWISE REMOVED FROM THE CONSTRUCTION AREAS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR KEEPING DEBRIS OFF OF THE ADJACENT TRAVELED LANE SURFACE. STREET SWEEPING, AS SPECIFIED BY THE ENGINEER, SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

2. POLLUTION CONTROL: THE CONTRACTOR WILL BE REQUIRED TO COMPLY WITH ALL STATE REGULATIONS REGARDING AIR, WATER AND NOISE POLLUTION. HE WILL NOT BE ALLOWED TO BUILD FIRES ON THE SITE.

3. FLUORESCENT VESTS AND HARD HATS: ALL CONSTRUCTION PERSONNEL WILL BE REQUIRED TO WEAR FLUORESCENT ORANGE, FLUORESCENT YELLOW/GREEN OR A COMBINATION OF FLUORESCENT ORANGE, AND FLUORESCENT YELLOW /GREEN VESTS AND HARD HATS AT ALL TIMES WHILE ON THE CONSTRUCTION SITE. COMPLIANCE WITH THIS REQUIREMENT SHALL BE CONSIDERECD AS INCIDENTAL TO THE CONTRACT.

4. THE SCALE SHOWN ON THE DRAWINGS APPLIES ONLY TO FULL SIZE PLANS AND NOT TO THE REDUCED SIZE PLANS. SCALE BARS ARE PROVIDED ON APPLICABLE SHEETS.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS PROJECT. SPECIFICALLY AS THEY RELATE TO LUMP SUM PAY ITEMS.

6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.

7. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP AN OFFICE OR YARD ON THE TOLLWAY PROPERTY WITHOUT WRITTEN APPROVAL FROM THE CHIEF ENGINEER OF THE AUTHORITY.

8. THE APPROXIMATE LOCATIONS OF KNOWN UTILITIES ARE SHOWN ON THE PLANS. HOWEVER, THE AUTHORITY DOES NOT GUARANTEE THEIR ACCURACY. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THESE UTILITIES AND THE EXISTENCE AND LOCATION OF ANY UTILITIES NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL CALL J.U.L.I.E.- (800)892-0123. 48 HOURS BEFORE ANY DIGGING OPERATION.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND OR SURFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER AND/OR THE OWNER. THIS WORK SHALL BE AT THE CONTRACTOR'S EXPENSE.

10. WHENEVER, DURING CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF DRAINAGE STRUCTURES SUCH THAT THE NATURAL FLOW OF WATER IS CONSTRICTED, IT SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS. THE WORK SPECIFIED ABOVE WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

11. WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY OUTLETS AND CONNECTIONS FOR ALL PRIVATE OR PUBLIC DRAINS, SEWERS OR CATCH BASINS. HE SHALL PROVIDE FACILITIES TO TAKE IN ALL STORM WATER WHICH WILL BE RECEIVED BY THESE DRAINS AND SEWERS AND DISCHARGE THE SAME. HE SHALL PROVIDE AND MAINTAIN AN EFFICIENT PUMPING PLANT, IF NECESSARY, AND A TEMPORARY OUTLET AND BE PREPARED AT ALL TIMES TO DISPOSE OF THE WATER RECEIVED FROM THESE TEMPORARY CONNECTIONS UNTIL SUCH TIME AS THE PERMANENT CONNECTIONS WITH SEWERS ARE BUILT AND IN SERVICE. THIS WORK WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

12. COOPERATION WITH UTILITIES: THE CONTRACTOR SHALL, IN ACCORDANCE WITH ARTICLE 105.07 OF THE TOLLWAY SUPPLEMENTAL SPECIFICATIONS, COORDINATE ALL WORK INVOLVING EXISTING OR PROPOSED UTILITIES. THE FOLLOWING AGENCIES AND REPRESENTATIVES HAVE BEEN CONTACTED IN REFERENCE TO THIS CONTRACT AND PERTINENT UTILITY INFORMATION HAS BEEN INCORPORATED INTO THESE PLANS. ADDITIONAL INQUIRIES AND COMMUNICATIONS MAY BE DIRECTED TO:

SBC
65 WEST WEBSTER STREET, FLOOR 4E
JOLIET, IL 60431
MR. BOB HODOROWICZ
815/727-8299

COMMONWEALTH EDISON COMPANY
SOUTHWEST REGION HEADQUARTERS
2 LINCOLN CENTER
OAKBROOK TERRACE, IL 60181
PUBLIC RELOCATION SOUTHWEST REGION
MR. TONY COX
815/724-5010

COMCAST
688 INDUSTRIAL DRIVE
ELMHURST, IL 60126
MR. BOB SCHULTER
630/600-6347

NICOR
1844 FERRY ROAD
NAPERVILLE, ILLINOIS 60563
MR. SCOTT STOOSDILL
708/983-8676 X 2362

BP AMOCO PIPELINE COMPANY
28100 TORCH PKWY
WARRENVILLE, ILLINOIS 60555
MS. MARCY FOSTER

TEXAS EASTERN PRODUCTS PIPELINE COMPANY (TEPPCO)
PO BOX 426
SEYMOUR, INDIANA 47274-0426
MR. DWANE STOUT, RIGHT-OF-WAY REPRESENTATIVE
812/522-2569
812/522-1298 FAX

WOLVERINE PIPE LINE COMPANY
8105 VALLEYWOOD LANE
PORTAGE, MICHIGAN 49024-5281
MR. FRED HIPSHEAR
269/323-2491 X 24

J.U.L.I.E.
JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS
800/892-0123

LAKEHEAD PIPELINE COMPANY
MR. BRAD SHAMIA
CIVIL ENGINEERING
119 NORTH 25th STREET EAST
P.O. BOX 789
SUPERIOR, WI 54880
715/394-1518
715/394-1564 FAX

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS DISTRICT 1
201 WEST CENTER COURT
SCHAUMBURG, IL 60196-1096
MS. DIANE OKEEFE, DEPUTY DIRECTOR, REGION ONE
847/705-4110
847/705-4468 FAX

WILL COUNTY DEPARTMENT OF HIGHWAYS
16841 WEST LARAWAY ROAD
JOLIET, IL 60433
MR. SHELDON LATZ
COUNTY ENGINEER
815/727-8476
815/727-9806 FAX

EXXON MOBIL PIPELINE COMPANY
2140 S. WATER STREET
WILMINGTON, IL 60481
MR. JIM TAYLOR

ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, IL 60515
MR. DANA HAVARANEK
630/241-6800 x 3941
630/241-6105 FAX

(UTILITIES CONTINUED...)

COOK COUNTY HIGHWAY DEPARTMENT
69 WEST WASHINGTON STREET
SUITE 2100
CHICAGO, IL 60602
THEODORE P. GEORGAS
ASSISTANT SUPERINTENDENT OF HIGHWAYS
312/603-1700
312/603-9957 FAX

PEOPLES GAS
MR. STEVE GRIFFIN
122 SOUTH MICHIGAN AVENUE
CHICAGO, IL 60603
312/240-4740

UNOCAL PIPELINE COMPANY
MR. DAVID T. HOCKING
UTILITY TECHNICIAN
18401 SOUTH WOLF ROAD
P. O. BOX 630
MOKENA, IL 60448
(708) 479-9260

13. THE STANDARD DRAWINGS LISTED IN THE PLANS INDEX ARE INTENDED TO BE THE LATEST REVISIONS AND SHALL TAKE PRECEDENCE OVER EARLIER REVISIONS THAT MAY BE REFERRED TO ELSEWHERE IN THE PLANS OR SPECIAL PROVISIONS.

14. ALL FRAMES AND GRATES, SIGNS, FENCES AND DELINEATORS DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.

15. NIGHT OPERATIONS: WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE UTMOST PRECAUTION IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC, AS WELL AS THE ADJOINING RESIDENTIAL AREAS.

16. WHERE SECTION, SUB-SECTION MONUMENTS OR BENCH MARKS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY NAILS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATIONS.

17. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS AND WRITTEN AUTHORIZATIONS FROM IDOT, WILL AND COOK COUNTY HIGHWAY DEPARTMENTS FOR CONSTRUCTION ABOVE, ADJACENT TO, AND ON ROADWAYS WITHIN THEIR JURISDICTIONS.

19. ALL ELEVATIONS ARE BASED ON UNITED STATES COAST AND GEODETIC SURVEY DATUM. BENCHMARKS FOR THE PROJECT ARE DESCRIBED IN THE PLANS.

20. THE CONTRACTOR SHALL BE MADE AWARE THAT ALL CONSTRUCTION VEHICLES SHALL BE LIMITED TO 15 FEET ABOVE EXISTING GRADE WHILE CROSSING UNDER COMMONWEALTH EDISON'S TRANSMISSION LINES.

21. THE CONTRACTOR SHALL NOTIFY THE AGENCIES AND UTILITIES AT LEAST 10 DAYS PRIOR TO ANY CONSTRUCTION IN THE AREA AND SHALL COMPLY WITH ALL RESTRICTIONS FOR EQUIPMENT MOVEMENTS AND CLEARANCES IN REGARDS TO THEIR FACILITIES.

22. THE CONTRACTOR'S OPERATIONS AND TEMPORARY STORAGE ACTTIVITIES SHALL BE LIMITED TO THE WORK AREA AND/OR CONSTRUCTION LIMITS. ANY ADDITIONAL STAGING AREAS ADJACENT TO THE PROJECT ARE SUBJECT TO PRIOR APPROVAL BY THE APPROPRIATE AGENCY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR COMPLIANCE WITH THE ABOVE REQIREMENTS.

23. FENCE: EXISTING FENCE THAT HAS TO BE DISCONNECTED AND/OR REMOVED FOR THE CONTRACTOR' S OPERATION SHALL BE RECONNECTED AND/OR REPLACED BY THE CONTRACTOR IN KIND AT NO ADDITIONAL COST TO THE TOLLWAY. TEMPORARY FENCE SHOULD BE INSTALLED IF EXISTING FENCE IS TO BE REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 664 OF THE STANDARD SPECIFICATIONS. ANY RIGHT-OF-WAY MARKERS DISTURBED BY THE CONTRACTOR' S OPERATION SHOULD BE RE-ESTABLISHED BY A REGISTERED LAND SURVEYOR AT THE CONTRACTOR' S EXPENSE.

24. RESTORATION OF THE PROJECT WILL BE COMPLETED TO THE SATISFACTION OF THE ILLINOIS TOLLWAY AND APPROPRIATE GOVERNING AGENCIES BEFORE PAYMENT IS MADE TO THE CONTRACTOR. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE OVERALL PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

25. COORDINATION OF MAINTENANCE OF TRAFFIC: THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT OTHER SEPARATE CONTRACTS WILL BE IN FORCE THAT INTERSECT THE LIMITS OF THIS PROJECT. THE CONTRACTOR SHALL COOPERATE WITH THE OTHER CONTRACTORS IN THE PHASING AND PERFORMANCE OF THIS WORK SO AS NOT TO DELAY, INTERRUPT OR HINDER THE PROGRESS OR COMPLETION OF THE WORK BEING PERFORMED BY OTHER CONTRACTORS. SHOULD A CONFLICT ARISE BETWEEN THE CONTRACTOR WITH RESPECT TO SEQUENCE OF CONSTRUCTION OR MAINTENANCE OF TRAFFIC REQUIREMENTS, SAID CONFLICTS SHALL BE RESOLVED BY, OR AT THE DIRECTION OF THE ENGINEER.

26. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE TOLLWAY ELECTRICIAN AT LEAST 10 DAYS IN ADVANCE OF ANY CONSTRUCTION NEAR TOLLWAY OWNED ELECTRICAL, COMMUNICATIONS OR TRAFFIC CONTROL CABLES. TOLLWAY ELECTRICIANS WILL LOCATE ANY POSSIBLE INTERFERING CABLES. ANY BURIED CABLE AT OR NEAR A PROPOSED CONSTRUCTION LOCATION SHALL FIRST BE EXPOSED BY THE CONTRACTOR BY HAND DIGGING. ONCE EXPOSED, AND IF THE ENGINEER DETERMINES THERE IS A CONFLICT, THE TOLLWAY ELECTRICIANS SHALL RELOCATE THE CABLES. IF CONTRACTOR CUTS OR DAMAGES ANY CABLES, EITHER THROUGH CARELESSNESS OR FAILURE TO FOLLOW THE ABOVE PROCEDURE, HE SHALL THEN BE HELD RESPONSIBLE FOR THE REPAIRING OF ALL DAMAGES AT THIS EXPENSE, TO THE SATISFACTION OF THE TOLLWAY. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. TOLLWAY ELECTRICAL LOCATES SHALL BE REQUESTED BY CONTACTING FRANK TOMASELLI AT 630/241-6800 X 3510. TOLLWAY COMMUNICATIONS LOCATES SMALL BE REQUESTED BY CONTACTING BILL SPRINGER AT 630/241-6800 X 3405

DRAWN	DATE		THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. / DATE / DESCRIPTION	GENERAL NOTES	DRAWING NO. . . . . OF . . . .
CHECKED	SCALE					

DWG.	LOCATION	JIA20010	JIA20011	JIA20025	JIA20030	JIA20035	JIB20001	JIB20010	JID20010	JID20020	JID20022	JID20030	JID20040	
		TREE. GLEDITSIA TRIACANTHOS INERMIS (THORNLESS COMMON HONEYLOCUST), 5 GALLON CONTAINER	TREE. GLEDITSIA TRIACANTHOS INERMIS SKYLINE (SKYLINE THORNLESS COMMON HONEYLOCUST), 1.5" CALIPER. BALLED AND BURLAPPED	TREE. QUERCUS MACROCARPA (BUR OAK), 3" CALIPER BALLED AND BURLAPPED	TREE. QUERCUS ROBUR (ENGLISH OAK), 2" CALIPER. BALLED AND BURLAPPED	TREE. QUERCUS ROBUR X MACROCARPA (HERITAGE OAK), 2" CALIPER. BALLED AND BURLAPPED	TREE. ACER TATARICUM. (TATARIAN MAPLE), 2" CALIPER. BALLED AND BURLAPPED	TREE. ROBINIA PSEUDOACACIA (BLACK LOCUST), 5 GALLON CONTAINER	EVERGREEN. PICEA ABIES (NORWAY SPRUCE), 10' HEIGHT. BALLED AND BURLAPPED	EVERGREEN. PICEA GLAUCA DENSATA (BLACK HILLS SPRUCE), 10' HEIGHT. BALLED AND BURLAPPED	EVERGREEN. PICEA GLAUCA DENSATA (BLACK HILLS SPRUCE), 12' HEIGHT. BALLED AND BURLAPPED	EVERGREEN. PICEA PUNGENS (COLORADO GREEN SPRUCE), 10' HEIGHT. BALLED AND BURLAPPED	EVERGREEN. PINUS NIGRA (AUSTRIAN PINE), 10' HEIGHT BALLED AND BURLAPPED	
		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
	ABBREVIATIONS	IH	SH	BO	EO	HO	TTM	BL	PNS	PBS	PBS	PCS	PAP	
10	406+50 TO 422+00													
11	422+00 TO 437+00													
12	437+00 TO 451+00													
13	451+00 TO 465+00	150												
14	143RD STREET 97+67.65 TO 107+00	80	45											
15	465+00 TO 476+00													
16	476+00 TO 480+00	50												
17	ARCHER AVENUE 110+00 TO 123+55.66													
18	480+00 TO 495+00	50				10		60						
19	495+00 TO 509+50													
20	509+50 TO 524+00			15	9			95						
21	524+00 TO 537+00												12	
22	537+00 TO 553+00												52	
23	553+00 TO 562+00									12			19	
24	562+00 TO 575+00	45								23		18	14	
25	575+00 TO 585+00					23								
26	583+00 TO 585+50													
27	585+00 TO 600+00					10	30						50	
28	600+00 TO 613+00													
29	613+00 TO 626+00													
30	626+00 TO 640+00													
31	640+00 TO 654+00													
32	654+00 TO 668+00													
33	654+00 TO 668+00													
34	668+00 TO 682+00													
35	682+00 TO 696+00													
36	696+00 TO 708+00													
37	708+00 TO 720+00													
38	720+00 TO 734+00													
39	734+00 TO 748+00 (EAST)	90				4								
40	734+00 TO 748+00 (WEST)													
41	I-55 1696+92.57 TO 1708+00													
42	748+00 TO 763+00 (WEST)									38				
43	748+00 TO 763+00 (CENTER)					28								
44	748+00 TO 763+00 (EAST)					52								
45	763+00 TO 776+00 (EAST)					14								
46	763+00 TO 776+00 (WEST)					11				71	3			
47	776+00 TO 787+00													
	ESTIMATED QUANTITY TOTALS	465	45	15	9	152	30	155	8	144	3	18	147	

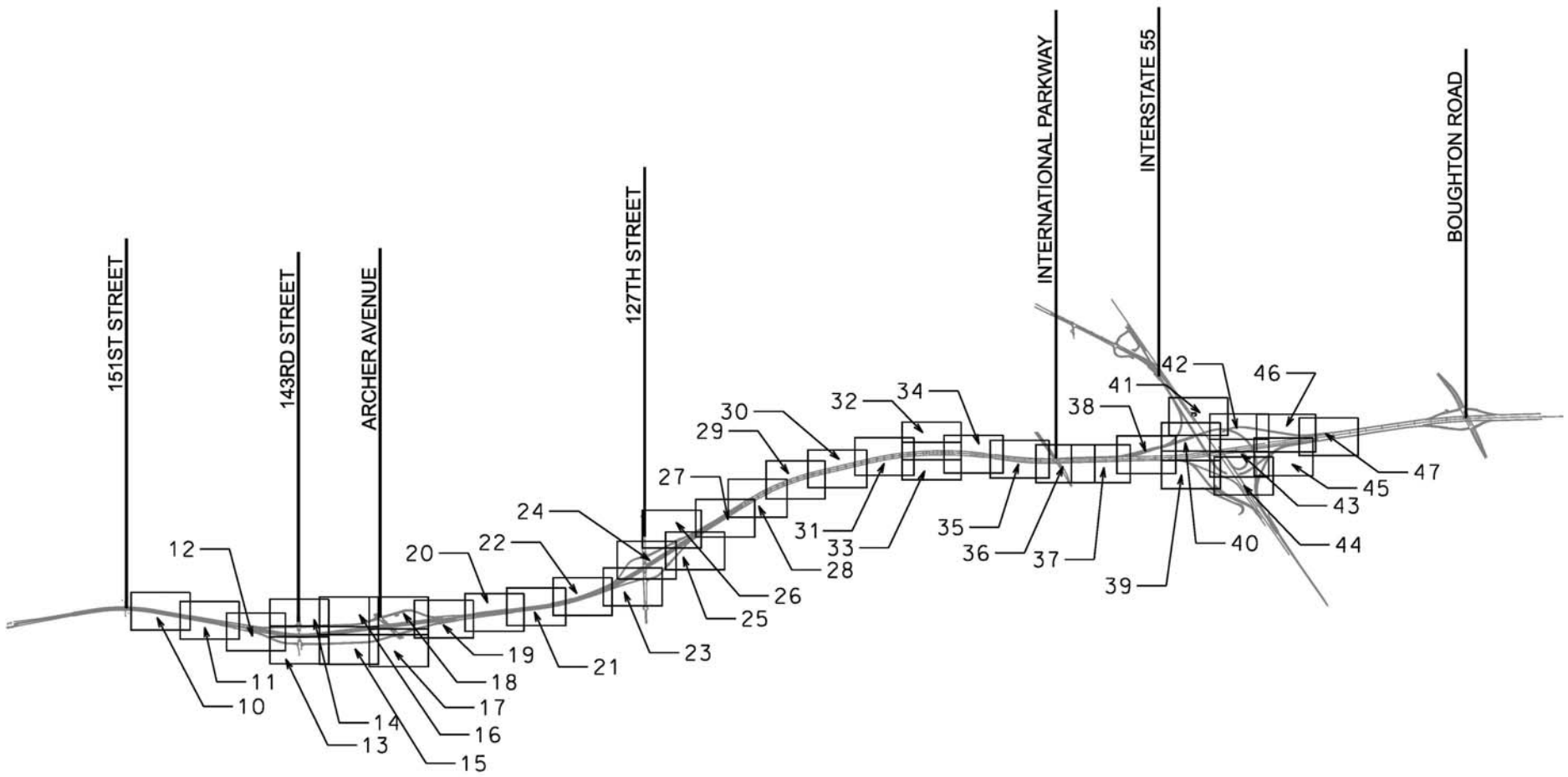
DRAWN . . . . . DATE . . . . . CHECKED . . . . . SCALE . . . . .

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

SCHEDULE OF QUANTITIES

DRAWING NO. . . . . OF . . . .



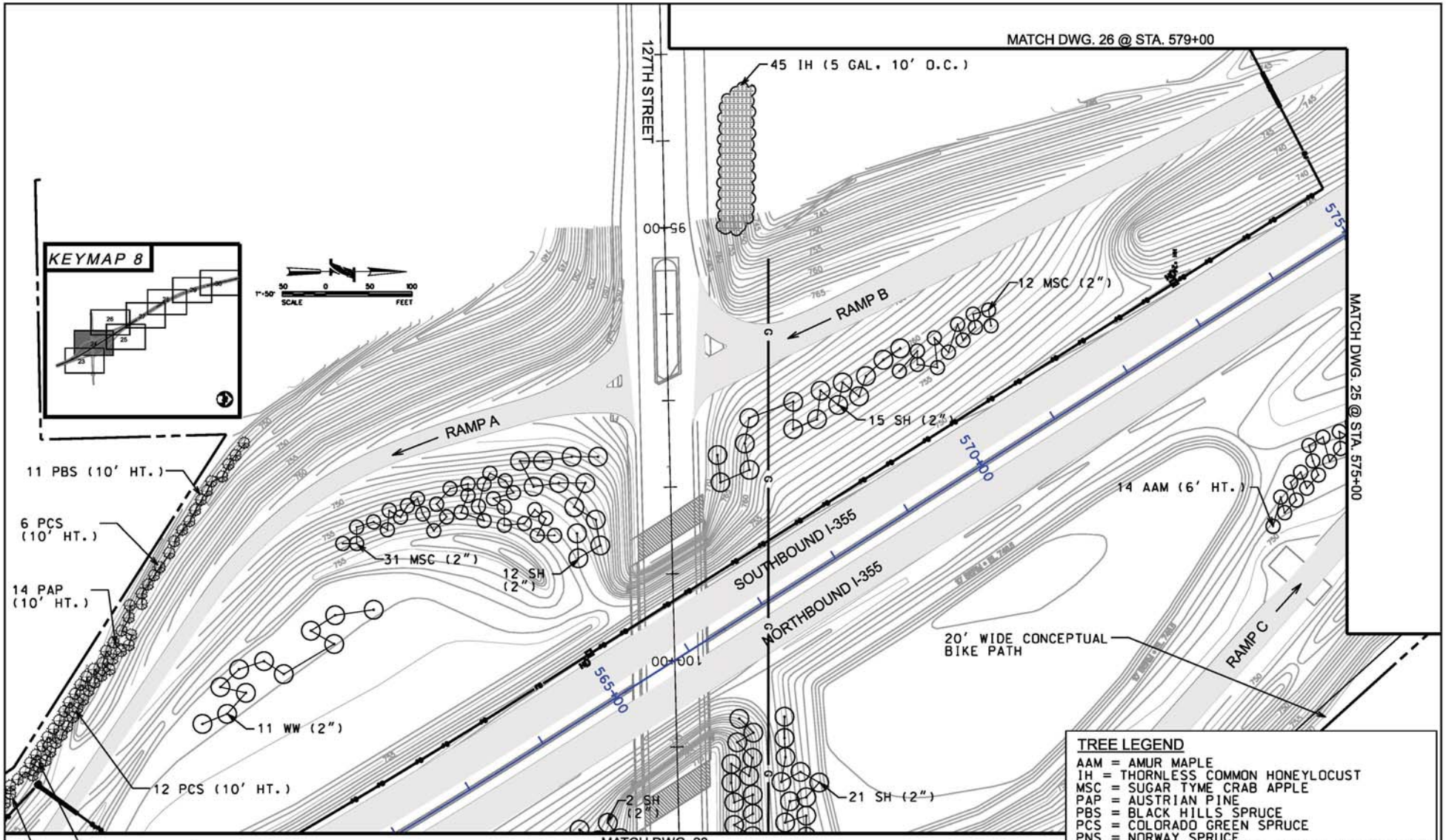
1"=50'
50 0 50 100
SCALE FEET

DRAWN . . . . . DATE . . . . . THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
CHECKED . . . . . SCALE . . . . . 2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

LANDSCAPE PLAN
KEY MAP

DRAWING NO.
. . . . OF . . . .



TREE LEGEND

AAM = AMUR MAPLE
IH = THORNLESS COMMON HONEYLOCUST
MSC = SUGAR TYME CRAB APPLE
PAP = AUSTRIAN PINE
PBS = BLACK HILLS SPRUCE
PCS = COLORADO GREEN SPRUCE
PNS = NORWAY SPRUCE
SH = SKYLINE THORNLESS COMMON HONEYLOCUST
WW = GOLDEN WEEPING WILLOW

DRAWN . . . . . DATE . . . . .
CHECKED . . . . . SCALE . 1"=50' . . . . .

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

LANDSCAPE PLAN
STA. TO STA.

DRAWING NO.
. . . . OF . . . .

SUGGESTED PROGRESS SCHEDULE

WORK ITEMS	2008					2009							2010							2011				2012	
	SUMMER	FALL	WINTER	SPRING		SUMMER	FALL	SPRING	SUMMER	FALL	SPRING		SUMMER	FALL	SPRING										
	INITIAL PLANTINGS					PERIOD OF ESTABLISHMENT							EXTENDED WOODY PLANT CARE												
PLANT TAGGING	■																								
WOODY PLANTINGS		■		■																					
SPRING REPLACEMENTS								■			■														
FALL REPLACEMENTS							■			■															
WOODY PLANT CARE																				■	■	■			
INSPECTIONS				■			■			■										■	■	■			
CLEARING, WATERFALL GLEN & BLACK PARTRIDGE			■																						
COVER CROP SEEDING, WATERFALL GLEN & BLACK PARTRIDGE				■																					
COVER CROP SEEDING, KEEPATAW	■																								
PERMANENT SEEDING & MULCH, KEEPATAW		■	■	■																					

INTERIM COMPLETION DATE

INTERIM COMPLETION DATE

FINAL COMPLETION DATE

NOTE: THIS PROGRESS SCHEDULE REPRESENTS THE DESIGN SECTION ENGINEER'S SUGGESTED SCHEDULING OF THE OVERALL CONTRACT. THE CONTRACTOR SHALL SUBMIT HIS/HER SCHEDULE IN ACCORDANCE WITH S.P. 124.

DRAWN . . . . . DATE . . . . . CHECKED . . . . . SCALE . . . . .

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

SUGGESTED PROGRESS SCHEDULE

DRAWING NO.

. . . . OF . . . .

INDEX OF DRAWINGS

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D2-00	SYMBOLS AND PATTERNS
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E3-00	TEMPORARY GORE DETAILS AND SHOULDER CLOSURE DETAILS
K1-00	TEMPORARY EROSION AND SEDIMENT CONTROLS

LEGEND

- R.O.W.
- MAJOR DECIDUOUS TREE
- MINOR DECIDUOUS TREE
- EVERGREEN TREE
- SHRUB BEDS WITH MULCH
- EXISTING TREE LINES
- EXISTING NOISE WALL LOCATION
- CONTOURS
- EXISTING FIBER OPTIC LINE
- EXISTING FENCE LINE
- G — EXISTING GAS PIPELINE
- E — EXISTING ELECTRIC LINE
- EXISTING OVERHEAD SIGN
- DIRECTION OF RAMP TRAFFIC
- EXISTING ELECTRIC LINE
- FUTURE BIKE PATH LOCATION (ALONG EAST R.O.W.)

DRAWN . . . . . DATE . . . . . CHECKED . . . . . SCALE . . . . .

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
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INDEX OF DRAWINGS AND LEGEND

DRAWING NO. . . . . OF . . . .

GENERAL NOTES

(ILLINOIS STATE TOLL HIGHWAY AUTHORITY)

1. DURING CROSSROAD CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ADJACENT TRAFFIC LANES OPEN TO TRAFFIC FROM DEBRIS BEING BLOWN OR OTHERWISE REMOVED FROM THE CONSTRUCTION AREAS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR KEEPING DEBRIS OFF OF THE ADJACENT TRAVELED LANE SURFACE. STREET SWEEPING, AS SPECIFIED BY THE ENGINEER, SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

2. POLLUTION CONTROL: THE CONTRACTOR WILL BE REQUIRED TO COMPLY WITH ALL STATE REGULATIONS REGARDING AIR, WATER AND NOISE POLLUTION. HE WILL NOT BE ALLOWED TO BUILD FIRES ON THE SITE.

3. FLUORESCENT VESTS AND HARD HATS: ALL CONSTRUCTION PERSONNEL WILL BE REQUIRED TO WEAR FLUORESCENT ORANGE, FLUORESCENT YELLOW/GREEN OR A COMBINATION OF FLUORESCENT ORANGE, AND FLUORESCENT YELLOW /GREEN VESTS AND HARD HATS AT ALL TIMES WHILE ON THE CONSTRUCTION SITE. COMPLIANCE WITH THIS REQUIREMENT SHALL BE CONSIDERECD AS INCIDENTAL TO THE CONTRACT.

4. THE SCALE SHOWN ON THE DRAWINGS APPLIES ONLY TO FULL SIZE PLANS AND NOT TO THE REDUCED SIZE PLANS. SCALE BARS ARE PROVIDED ON APPLICABLE SHEETS.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS PROJECT. SPECIFICALLY AS THEY RELATE TO LUMP SUM PAY ITEMS.

6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.

7. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP AN OFFICE OR YARD ON THE TOLLWAY PROPERTY WITHOUT WRITTEN APPROVAL FROM THE CHIEF ENGINEER OF THE AUTHORITY.

8. THE APPROXIMATE LOCATIONS OF KNOWN UTILITIES ARE SHOWN ON THE PLANS. HOWEVER, THE AUTHORITY DOES NOT GUARANTEE THEIR ACCURACY. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THESE UTILITIES AND THE EXISTENCE AND LOCATION OF ANY UTILITIES NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL CALL J.U.L.I.E.- (800)892-0123. 48 HOURS BEFORE ANY DIGGING OPERATION.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND OR SURFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER AND/OR THE OWNER. THIS WORK SHALL BE AT THE CONTRACTOR'S EXPENSE.

10. WHENEVER, DURING CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF DRAINAGE STRUCTURES SUCH THAT THE NATURAL FLOW OF WATER IS CONSTRICTED, IT SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS. THE WORK SPECIFIED ABOVE WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

11. WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY OUTLETS AND CONNECTIONS FOR ALL PRIVATE OR PUBLIC DRAINS, SEWERS OR CATCH BASINS. HE SHALL PROVIDE FACILITIES TO TAKE IN ALL STORM WATER WHICH WILL BE RECEIVED BY THESE DRAINS AND SEWERS AND DISCHARGE THE SAME. HE SHALL PROVIDE AND MAINTAIN AN EFFICIENT PUMPING PLANT, IF NECESSARY, AND A TEMPORARY OUTLET AND BE PREPARED AT ALL TIMES TO DISPOSE OF THE WATER RECEIVED FROM THESE TEMPORARY CONNECTIONS UNTIL SUCH TIME AS THE PERMANENT CONNECTIONS WITH SEWERS ARE BUILT AND IN SERVICE. THIS WORK WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

12. COOPERATION WITH UTILITIES: THE CONTRACTOR SHALL, IN ACCORDANCE WITH ARTICLE 105.07 OF THE TOLLWAY SUPPLEMENTAL SPECIFICATIONS, COORDINATE ALL WORK INVOLVING EXISTING OR PROPOSED UTILITIES. THE FOLLOWING AGENCIES AND REPRESENTATIVES HAVE BEEN CONTACTED IN REFERENCE TO THIS CONTRACT AND PERTINENT UTILITY INFORMATION HAS BEEN INCORPORATED INTO THESE PLANS. ADDITIONAL INQUIRIES AND COMMUNICATIONS MAY BE DIRECTED TO:

SBC
65 WEST WEBSTER STREET, FLOOR 4E
JOLIET, IL 60431
MR. BOB HODOROWICZ
815/727-8299

COMMONWEALTH EDISON COMPANY
SOUTHWEST REGION HEADQUARTERS
2 LINCOLN CENTER
OAKBROOK TERRACE, IL 60181
PUBLIC RELOCATION SOUTHWEST REGION
MR. TONY COX
815/724-5010

COMCAST
688 INDUSTRIAL DRIVE
ELMHURST, IL 60126
MR. BOB SCHULTER
630/600-6347

NICOR
1844 FERRY ROAD
NAPERVILLE, ILLINOIS 60563
MR. SCOTT STOOSDILL
708/983-8676 X 2362

BP AMOCO PIPELINE COMPANY
28100 TORCH PKWY
WARRENVILLE, ILLINOIS 60555
MS. MARCY FOSTER

TEXAS EASTERN PRODUCTS PIPELINE COMPANY (TEPPCO)
PO BOX 426
SEYMOUR, INDIANA 47274-0426
MR. DWANE STOUT, RIGHT-OF-WAY REPRESENTATIVE
812/522-2569
812/522-1298 FAX

WOLVERINE PIPE LINE COMPANY
8105 VALLEYWOOD LANE
PORTAGE, MICHIGAN 49024-5281
MR. FRED HIPSHEAR
269/323-2491 X 24

J.U.L.I.E.
JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS
800/892-0123

LAKEHEAD PIPELINE COMPANY
MR. BRAD SHAMIA
CIVIL ENGINEERING
119 NORTH 25th STREET EAST
P.O. BOX 789
SUPERIOR, WI 54880
715/394-1518
715/394-1564 FAX

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS DISTRICT 1
201 WEST CENTER COURT
SCHAUMBURG, IL 60196-1096
MS. DIANE OKEEFE, DEPUTY DIRECTOR, REGION ONE
847/705-4110
847/705-4468 FAX

WILL COUNTY DEPARTMENT OF HIGHWAYS
16841 WEST LARAWAY ROAD
JOLIET, IL 60433
MR. SHELDON LATZ
COUNTY ENGINEER
815/727-8476
815/727-9806 FAX

EXXON MOBIL PIPELINE COMPANY
2140 S. WATER STREET
WILMINGTON, IL 60481
MR. JIM TAYLOR

ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, IL 60515
MR. DANA HAVARANEK
630/241-6800 x 3941
630/241-6105 FAX

(UTILITIES CONTINUED...)

COOK COUNTY HIGHWAY DEPARTMENT
69 WEST WASHINGTON STREET
SUITE 2100
CHICAGO, IL 60602
THEODORE P. GEORGAS
ASSISTANT SUPERINTENDENT OF HIGHWAYS
312/603-1700
312/603-9957 FAX

PEOPLES GAS
MR. STEVE GRIFFIN
122 SOUTH MICHIGAN AVENUE
CHICAGO, IL 60603
312/240-4740

UNOCAL PIPELINE COMPANY
MR. DAVID T. HOCKING
UTILITY TECHNICIAN
18401 SOUTH WOLF ROAD
P. O. BOX 630
MOKENA, IL 60448
(708) 479-9260

13. THE STANDARD DRAWINGS LISTED IN THE PLANS INDEX ARE INTENDED TO BE THE LATEST REVISIONS AND SHALL TAKE PRECEDENCE OVER EARLIER REVISIONS THAT MAY BE REFERRED TO ELSEWHERE IN THE PLANS OR SPECIAL PROVISIONS.

14. ALL FRAMES AND GRATES, SIGNS, FENCES AND DELINEATORS DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.

15. NIGHT OPERATIONS: WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE UTMOST PRECAUTION IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC, AS WELL AS THE ADJOINING RESIDENTIAL AREAS.

16. WHERE SECTION, SUB-SECTION MONUMENTS OR BENCH MARKS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY NAILS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATIONS.

17. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS AND WRITTEN AUTHORIZATIONS FROM IDOT, WILL AND COOK COUNTY HIGHWAY DEPARTMENTS FOR CONSTRUCTION ABOVE, ADJACENT TO, AND ON ROADWAYS WITHIN THEIR JURISDICTIONS.

19. ALL ELEVATIONS ARE BASED ON UNITED STATES COAST AND GEODETIC SURVEY DATUM. BENCHMARKS FOR THE PROJECT ARE DESCRIBED IN THE PLANS.

20. THE CONTRACTOR SHALL BE MADE AWARE THAT ALL CONSTRUCTION VEHICLES SHALL BE LIMITED TO 15 FEET ABOVE EXISTING GRADE WHILE CROSSING UNDER COMMONWEALTH EDISON'S TRANSMISSION LINES.

21. THE CONTRACTOR SHALL NOTIFY THE AGENCIES AND UTILITIES AT LEAST 10 DAYS PRIOR TO ANY CONSTRUCTION IN THE AREA AND SHALL COMPLY WITH ALL RESTRICTIONS FOR EQUIPMENT MOVEMENTS AND CLEARANCES IN REGARDS TO THEIR FACILITIES.

22. THE CONTRACTOR'S OPERATIONS AND TEMPORARY STORAGE ACTTIVITIES SHALL BE LIMITED TO THE WORK AREA AND/OR CONSTRUCTION LIMITS. ANY ADDITIONAL STAGING AREAS ADJACENT TO THE PROJECT ARE SUBJECT TO PRIOR APPROVAL BY THE APPROPRIATE AGENCY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR COMPLIANCE WITH THE ABOVE REQIREMENTS.

23. FENCE: EXISTING FENCE THAT HAS TO BE DISCONNECTED AND/OR REMOVED FOR THE CONTRACTOR' S OPERATION SHALL BE RECONNECTED AND/OR REPLACED BY THE CONTRACTOR IN KIND AT NO ADDITIONAL COST TO THE TOLLWAY. TEMPORARY FENCE SHOULD BE INSTALLED IF EXISTING FENCE IS TO BE REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 664 OF THE STANDARD SPECIFICATIONS. ANY RIGHT-OF-WAY MARKERS DISTURBED BY THE CONTRACTOR' S OPERATION SHOULD BE RE-ESTABLISHED BY A REGISTERED LAND SURVEYOR AT THE CONTRACTOR' S EXPENSE.

24. RESTORATION OF THE PROJECT WILL BE COMPLETED TO THE SATISFACTION OF THE ILLINOIS TOLLWAY AND APPROPRIATE GOVERNING AGENCIES BEFORE PAYMENT IS MADE TO THE CONTRACTOR. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE OVERALL PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

25. COORDINATION OF MAINTENANCE OF TRAFFIC: THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT OTHER SEPARATE CONTRACTS WILL BE IN FORCE THAT INTERSECT THE LIMITS OF THIS PROJECT. THE CONTRACTOR SHALL COOPERATE WITH THE OTHER CONTRACTORS IN THE PHASING AND PERFORMANCE OF THIS WORK SO AS NOT TO DELAY, INTERRUPT OR HINDER THE PROGRESS OR COMPLETION OF THE WORK BEING PERFORMED BY OTHER CONTRACTORS. SHOULD A CONFLICT ARISE BETWEEN THE CONTRACTOR WITH RESPECT TO SEQUENCE OF CONSTRUCTION OR MAINTENANCE OF TRAFFIC REQUIREMENTS, SAID CONFLICTS SHALL BE RESOLVED BY, OR AT THE DIRECTION OF THE ENGINEER.

26. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE TOLLWAY ELECTRICIAN AT LEAST 10 DAYS IN ADVANCE OF ANY CONSTRUCTION NEAR TOLLWAY OWNED ELECTRICAL, COMMUNICATIONS OR TRAFFIC CONTROL CABLES. TOLLWAY ELECTRICIANS WILL LOCATE ANY POSSIBLE INTERFERING CABLES. ANY BURIED CABLE AT OR NEAR A PROPOSED CONSTRUCTION LOCATION SHALL FIRST BE EXPOSED BY THE CONTRACTOR BY HAND DIGGING. ONCE EXPOSED, AND IF THE ENGINEER DETERMINES THERE IS A CONFLICT, THE TOLLWAY ELECTRICIANS SHALL RELOCATE THE CABLES. IF CONTRACTOR CUTS OR DAMAGES ANY CABLES, EITHER THROUGH CARELESSNESS OR FAILURE TO FOLLOW THE ABOVE PROCEDURE, HE SHALL THEN BE HELD RESPONSIBLE FOR THE REPAIRING OF ALL DAMAGES AT THIS EXPENSE, TO THE SATISFACTION OF THE TOLLWAY. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. TOLLWAY ELECTRICAL LOCATES SHALL BE REQUESTED BY CONTACTING FRANK TOMASELLI AT 630/241-6800 X 3510. TOLLWAY COMMUNICATIONS LOCATES SMALL BE REQUESTED BY CONTACTING BILL SPRINGER AT 630/241-6800 X 3405

DRAWN	DATE		THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	REVISIONS NO. / DATE / DESCRIPTION	GENERAL NOTES	DRAWING NO. . . . . OF . . . .
CHECKED	SCALE					

DWG.	LOCATION	JIA20010	JIA20011	JIA20025	JIA20030	JIA20035	JIB20001	JIB20010	JID20010	JID20020	JID20022	JID20030	JID20040	
		TREE. GLEDITSIA TRIACANTHOS INERMIS (THORNLESS COMMON HONEYLOCUST), 5 GALLON CONTAINER	TREE. GLEDITSIA TRIACANTHOS INERMIS SKYLINE (SKYLINE THORNLESS COMMON HONEYLOCUST), 1.5" CALIPER. BALLED AND BURLAPPED	TREE. QUERCUS MACROCARPA (BUR OAK), 3" CALIPER BALLED AND BURLAPPED	TREE. QUERCUS ROBUR (ENGLISH OAK), 2" CALIPER. BALLED AND BURLAPPED	TREE. QUERCUS ROBUR X MACROCARPA (HERITAGE OAK), 2" CALIPER. BALLED AND BURLAPPED	TREE. ACER TATARICUM. (TATARIAN MAPLE), 2" CALIPER. BALLED AND BURLAPPED	TREE. ROBINIA PSEUDOACACIA (BLACK LOCUST), 5 GALLON CONTAINER	EVERGREEN. PICEA ABIES (NORWAY SPRUCE), 10' HEIGHT. BALLED AND BURLAPPED	EVERGREEN. PICEA GLAUCA DENSATA (BLACK HILLS SPRUCE), 10' HEIGHT. BALLED AND BURLAPPED	EVERGREEN. PICEA GLAUCA DENSATA (BLACK HILLS SPRUCE), 12' HEIGHT. BALLED AND BURLAPPED	EVERGREEN. PICEA PUNGENS (COLORADO GREEN SPRUCE), 10' HEIGHT. BALLED AND BURLAPPED	EVERGREEN. PINUS NIGRA (AUSTRIAN PINE), 10' HEIGHT BALLED AND BURLAPPED	
		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
	ABBREVIATIONS	IH	SH	BO	EO	HO	TTM	BL	PNS	PBS	PBS	PCS	PAP	
10	406+50 TO 422+00													
11	422+00 TO 437+00													
12	437+00 TO 451+00													
13	451+00 TO 465+00	150												
14	143RD STREET 97+67.65 TO 107+00	80	45											
15	465+00 TO 476+00													
16	476+00 TO 480+00	50												
17	ARCHER AVENUE 110+00 TO 123+55.66													
18	480+00 TO 495+00	50				10		60						
19	495+00 TO 509+50													
20	509+50 TO 524+00			15	9			95						
21	524+00 TO 537+00												12	
22	537+00 TO 553+00												52	
23	553+00 TO 562+00									12			19	
24	562+00 TO 575+00	45								23		18	14	
25	575+00 TO 585+00					23								
26	583+00 TO 585+50													
27	585+00 TO 600+00					10	30						50	
28	600+00 TO 613+00													
29	613+00 TO 626+00													
30	626+00 TO 640+00													
31	640+00 TO 654+00													
32	654+00 TO 668+00													
33	654+00 TO 668+00													
34	668+00 TO 682+00													
35	682+00 TO 696+00													
36	696+00 TO 708+00													
37	708+00 TO 720+00													
38	720+00 TO 734+00													
39	734+00 TO 748+00 (EAST)	90				4								
40	734+00 TO 748+00 (WEST)													
41	I-55 1696+92.57 TO 1708+00													
42	748+00 TO 763+00 (WEST)									38				
43	748+00 TO 763+00 (CENTER)					28								
44	748+00 TO 763+00 (EAST)					52								
45	763+00 TO 776+00 (EAST)					14								
46	763+00 TO 776+00 (WEST)					11				71	3			
47	776+00 TO 787+00													
	ESTIMATED QUANTITY TOTALS	465	45	15	9	152	30	155	8	144	3	18	147	

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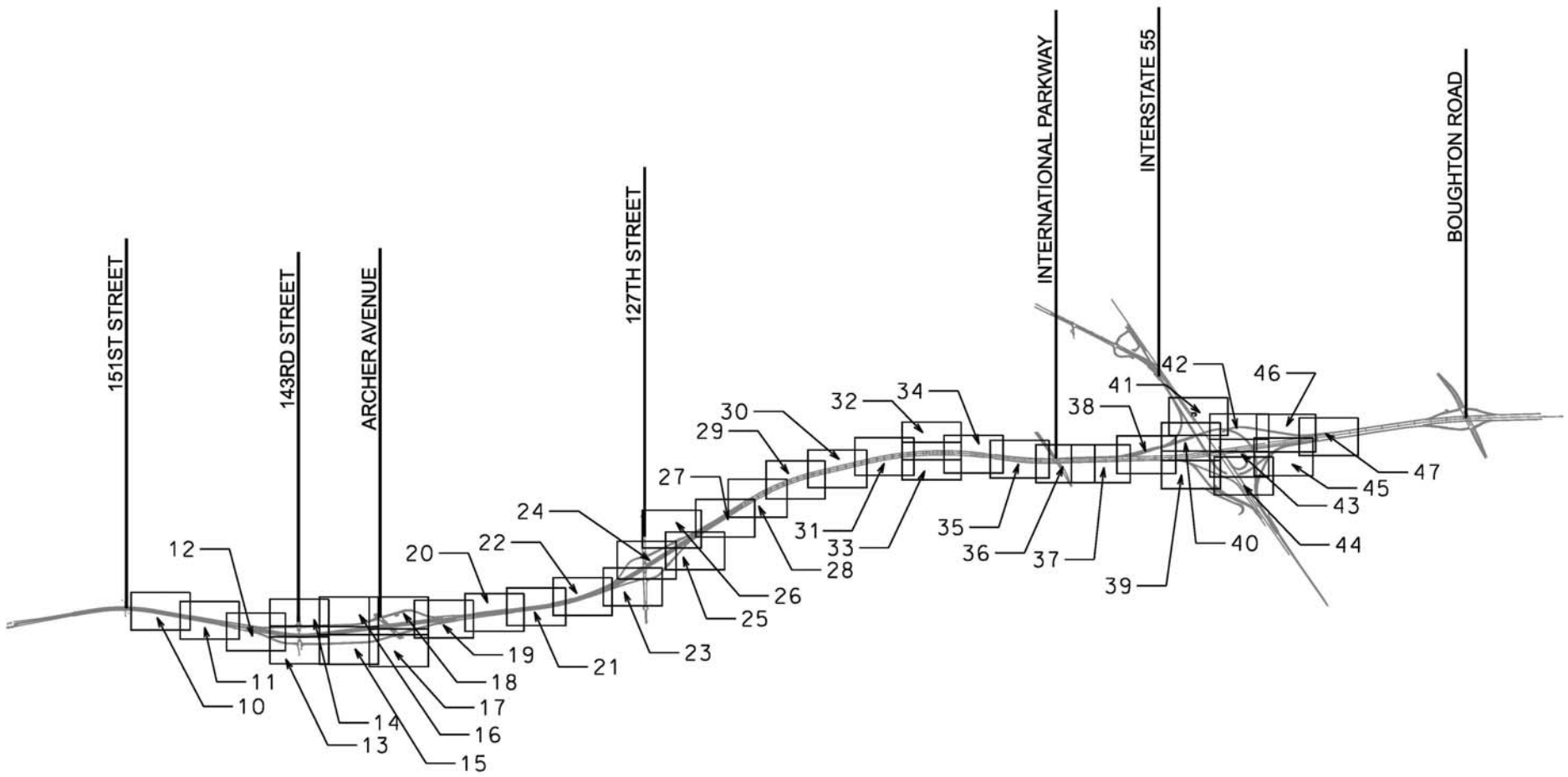
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

SCHEDULE OF QUANTITIES

DRAWING NO. . . . . OF . . . .



1"=50'
50 0 50 100
SCALE FEET

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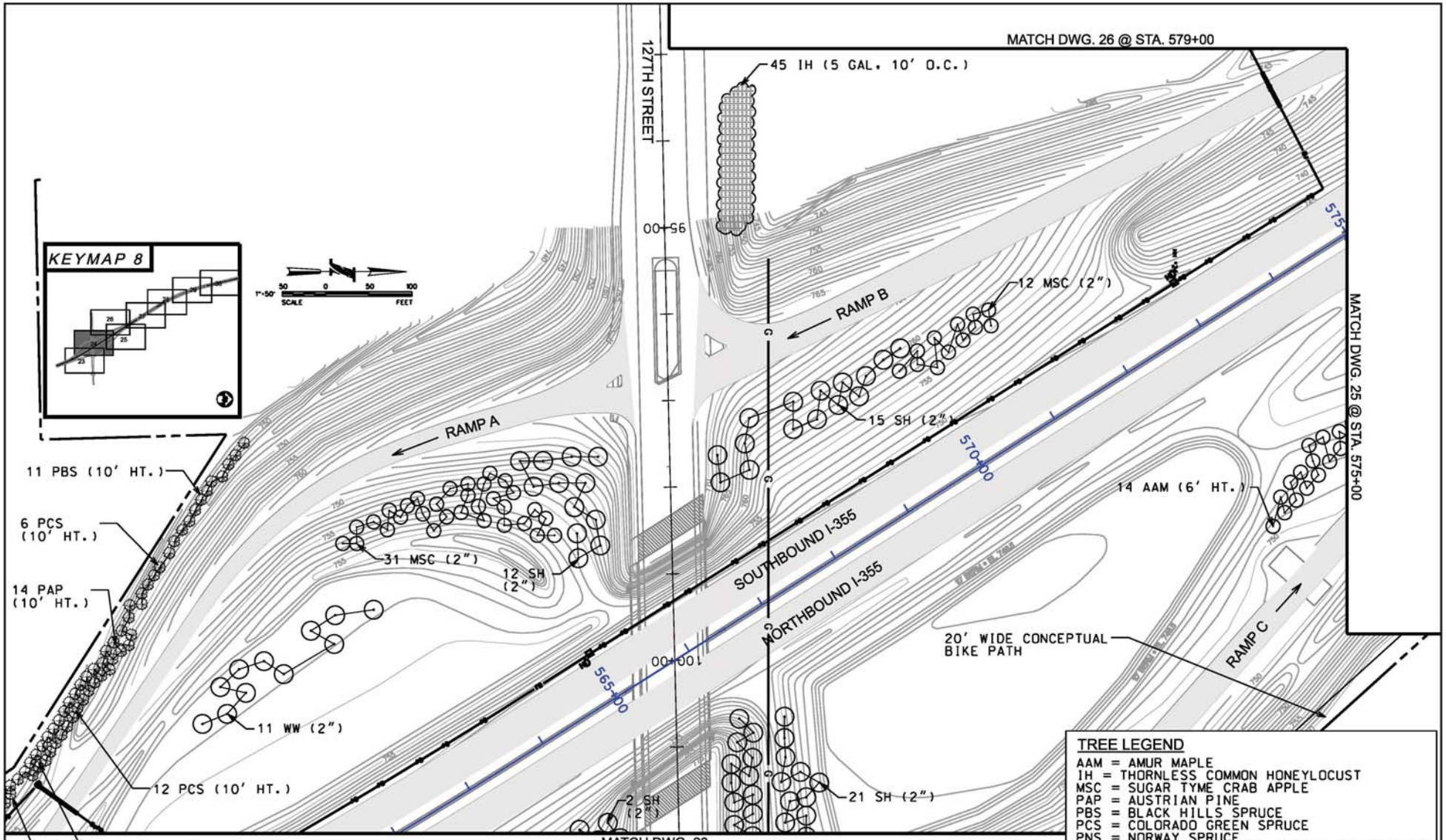
CHECKED . . . . . SCALE . . . . . 2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

LANDSCAPE PLAN
KEY MAP

DRAWING NO.
. . . . OF . . . .



TREE LEGEND

AAM = AMUR MAPLE
IH = THORNLESS COMMON HONEYLOCUST
MSC = SUGAR TYME CRAB APPLE
PAP = AUSTRIAN PINE
PBS = BLACK HILLS SPRUCE
PCS = COLORADO GREEN SPRUCE
PNS = NORWAY SPRUCE
SH = SKYLINE THORNLESS COMMON HONEYLOCUST
WW = GOLDEN WEEPING WILLOW

DRAWN . . . . . DATE . . . . .
CHECKED . . . . . SCALE . 1"=50' . . . . .

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

LANDSCAPE PLAN
STA. TO STA.

DRAWING NO.
. . . . OF . . . .

SUGGESTED PROGRESS SCHEDULE

WORK ITEMS	2008					2009							2010							2011				2012	
	SUMMER	FALL	WINTER	SPRING		SUMMER	FALL	SPRING	SUMMER	FALL	SPRING		SUMMER	FALL	SPRING										
	INITIAL PLANTINGS					PERIOD OF ESTABLISHMENT							EXTENDED WOODY PLANT CARE												
PLANT TAGGING	■																								
WOODY PLANTINGS		■		■																					
SPRING REPLACEMENTS								■			■														
FALL REPLACEMENTS							■			■															
WOODY PLANT CARE																				■	■	■			
INSPECTIONS				■			■			■										■	■	■			
CLEARING, WATERFALL GLEN & BLACK PARTRIDGE			■																						
COVER CROP SEEDING, WATERFALL GLEN & BLACK PARTRIDGE				■																					
COVER CROP SEEDING, KEEPATAW	■																								
PERMANENT SEEDING & MULCH, KEEPATAW		■	■	■																					

INTERIM COMPLETION DATE

INTERIM COMPLETION DATE

FINAL COMPLETION DATE

NOTE: THIS PROGRESS SCHEDULE REPRESENTS THE DESIGN SECTION ENGINEER'S SUGGESTED SCHEDULING OF THE OVERALL CONTRACT. THE CONTRACTOR SHALL SUBMIT HIS/HER SCHEDULE IN ACCORDANCE WITH S.P. 124.

DRAWN . . . . . DATE . . . . . CHECKED . . . . . SCALE . . . . .

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

SUGGESTED PROGRESS SCHEDULE

DRAWING NO.

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APPENDIX 10

PRESERVATION, REMOVAL AND REPLACEMENT OF TREES

1. Policy:

The Illinois State Toll Highway Authority (Tollway) recognizes the essential functions and values that trees contribute to the roadside infrastructure and the environment. Accordingly, the Tollway is committed to protect and preserve existing trees within project limits consistent with the standards of highway and public safety and to the extent practical. When trees of value must be removed opportunities will be pursued to provide replacement trees.

2. Purpose:

This document provides guidance for decision making pertaining to the preservation, removal and replacement of existing roadside trees in conjunction with the planning, design and construction improvements. The intent of this guidance is to replace vegetation of value when trees cannot be preserved and require removal.

3. Guidelines for implementation:

For consideration of tree replacement the term "tree" shall mean a live woody perennial plant in good health, having a single main stem or trunk, the diameter of which is 6 inches or greater at diameter breast height (DBH) measured at a point 4.5 feet above the highest ground level at the base of the tree. The term "tree" also may include woody perennial plants having a single main stem or trunk of 4 inches or greater DBH when determination is made that such plants have been deliberately planted for specific functional landscape, environmental mitigation or habitat preservation/enhancement purposes.

Replacement does not apply to the removal of trees that are dead, dying, diseased, severely damaged or in poor health and form. Tree replacement for invasive, volunteer or undesirable woody vegetation is not typically required; however, wooded tree stands may be evaluated to determine a reduced suitable replacement rate when the invasive or undesirable tree species provides an identified environmental or functional value.

(a.) Tree Preservation and Tree Removal:

Tree preservation and protection should be explored before consideration of removal and replacement. When removal is necessary locations for on-site replacement should be pursued before considering potential off-site mitigation solutions.

An evaluation shall be conducted by the Designer with qualified personnel whenever tree removal is proposed and identified during the Phase I study or the Environmental Studies Inventory (ESIS) documents. Depending on the scale and scope of work, the evaluation may necessitate a tree survey. All evaluation methods should include an analysis report and summary of recommendations to demonstrate compliance with policy and that the necessary loss of valued

vegetation has been minimized and mitigated. The information shall be submitted to the Tollway Project Manager and Landscape/Environmental Unit for review. If any of the conditions in APPENDEX III of the Environmental Studies Manual (ESM) apply, a project submittal may also be required to the Illinois Department of Natural Resources (IDNR) for completion of the natural resource review process. Resulting documentation should accompany subsequent phases of the project's development and implementation. Tree protection areas and sensitive environmental issues should also be noted in the contract documents and discussed during the pre-construction meeting.

Alternate options for mitigation may be considered for unique specimen trees, such as those on the inventory of state record; outstanding examples possessing exceptional size and form, or of recognized historical significance.

(b.) Tree Replacement:

General replacement ratios for trees shall be:

Tree(s) Removed Diameter Breast Height (DBH)	Number of Replacement Trees
greater than 24” diameter	2
6" to 24" diameter	1

An estimated replacement ratio of 0.1 to 0.8 for invasive or undesirable tree species removed (6” diameter or greater) in wooded tree stands may be considered when environmental or functional value has been determined.

Plantings shall be accomplished in conformance with applicable sections of the most current Standard and Tollway Supplemental Specifications for Planting Woody Plants (Section 253) and the Erosion and Sediment Control, Landscape Criteria Manual. To provide the best chances of establishment, sizes for replacement trees shall typically be 1 caliper inch to 2 caliper inches for each replacement tree. Consideration may be given for other equivalent replacement material sizes and ratios when special conditions are identified and provided for review in the design evaluation report.

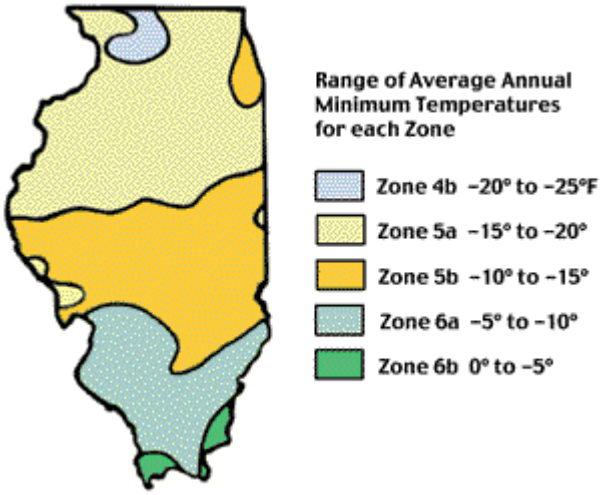
Suitable tree replacement locations should be provided at locations on-site, as near to the removal areas as practical and address locations identified in the Phase I report. If final tree replacement quantities result in undesirable crowding of trees at nearby right-of-way locations, consideration may be given to reduce the number of replacement trees required to be planted and/or designate other practical locations within the right-of-way.

Off-site options for tree replacement may be considered based on goals, priorities, and the particular circumstances of each project. Where trees must be removed for Tollway projects in urban areas, sensitivity should be afforded to the concerns of adjacent community and affected residents in determining appropriate replacement solutions.

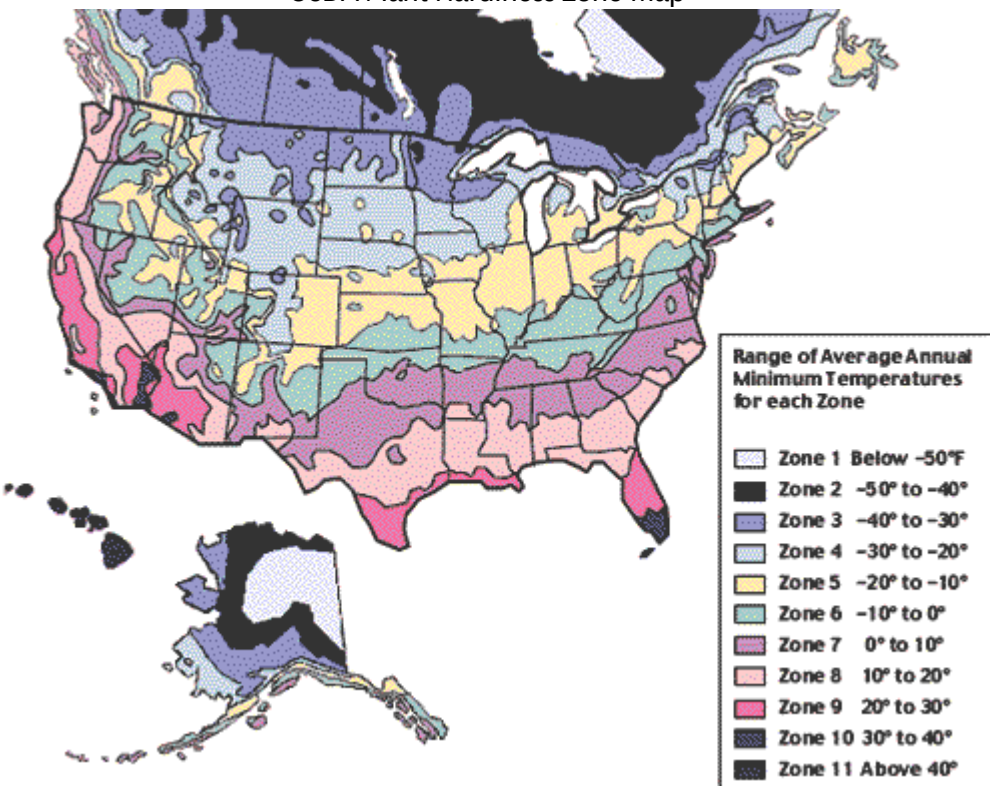
APPENDIX 11

U.S. Department of Agriculture Plant Hardiness Zone Maps

USDA Plant Hardiness Zone Map
Illinois



USDA Plant Hardiness Zone Map



APPENDIX 12

Requirements for Use of Tollway Property to Support Construction Activities

General Requirements for Use of Staging Areas: The Contractor shall provide an **Existing Conditions Survey** and **Restoration Plan** for Tollway review and approval prior to using the subject property. Complete and attach this checklist to the Existing Conditions Survey and Restoration Plan when submitted.

Property Information:
Corridor: I-294/I-94 Project No.
Property will be used for:
☐ Material Storage ☐ Concrete Production ☐ Other (Describe):

<u>Existing Conditions Survey</u>:

1. Depict the following characteristics on plan sheets:

   ☐ Waterways, Structures & Drainage Patterns
   ☐ Retention/Detention Areas
   ☐ Wetland Locations
   ☐ Vegetation
      - Note caliper of trees, heights of shrubs
      - Note presence of other vegetation (grass, landscaping)
   ☐ Existing Topography
      - Minimum of 1-foot contours and additional spot elevations if needed to demonstrate existing conditions
      - Elevations of any inlet or outlet structures
   ☐ Limits of proposed staging area disturbance and location of vehicle entry/exit points
   ☐ Location of soil samples collected to document existing conditions (see item 2)

2. Collect one composite soil sample per infield/staging area, composed of samples from three representative locations.
   ☐ Samples shall be tested for pH, textural class (percent sand, silt and/or clay, also called mechanical analysis), and depth of topsoil. Samples shall be collected up to a depth of approximately 12 inches below topsoil to identify textural class of subsurface soil.
   ☐ Provide results of soil analysis

3. Document property condition using:
   ☐ Still Photography and/or
   ☐ Video

Restoration Plan

Provide a plan for restoring the property described in the Existing Conditions Survey to be implemented at or prior to project completion. The Restoration Plan shall include the following information:

- ☐ Final drainage patterns
- ☐ Final retention/detention capacity of changed from existing
- ☐ Wetland protection measures
- ☐ Wetland mitigation plans (if wetlands are disturbed)
- ☐ Protection for existing vegetation (i.e., tree protection)
- ☐ Location and type of replacement species if existing vegetation is disturbed/damaged
- ☐ Final topography (contour plans and spot elevations)
- ☐ Proposed topsoil depth and location
- ☐ Permanent seeding/erosion blanket types and locations
- ☐ Erosion and sediment control plan for period of use

By signing below, I verify the current condition of the property described above, and agree to restore the property to a condition equal to, or better than, its current condition at the completion of its use for the activities outlined above. Restoration activities may include removal of all construction-related materials, regrading, scarifying near subsurface soil to reverse the impacts of heavy equipment traffic, placement of topsoil, placement of grass and/or other vegetation and replacement of trees/shrubs as directed by the Tollway Landscape Architect or his designated representative.

Contractor Representative Name:

Company:

_____ _____

Signature Date

Cc: Tollway Project Manager
Jeff Schneberg
Mike Zadel