



NIRPC Environmental Management Policy Committee

August 1, 2013

Tier Two



Agenda



- Current Status
- Environmental Analyses & Best Management Practices
- Next Steps

Current Status

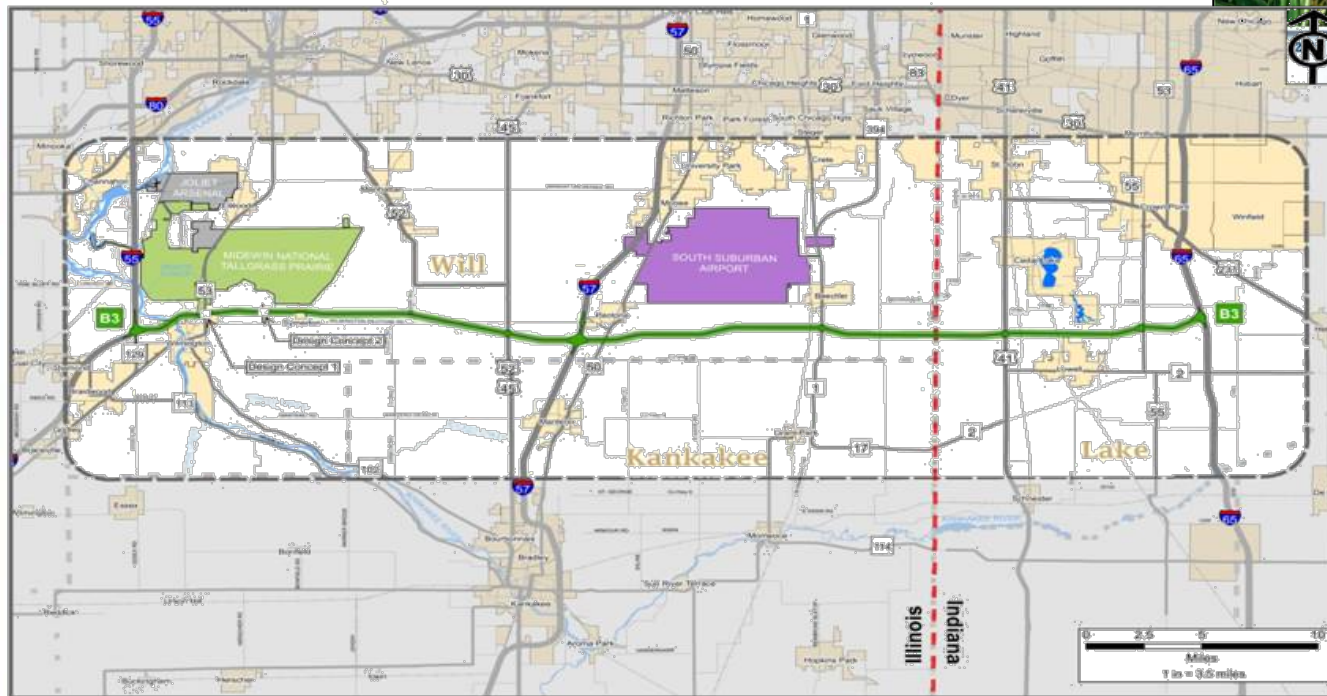
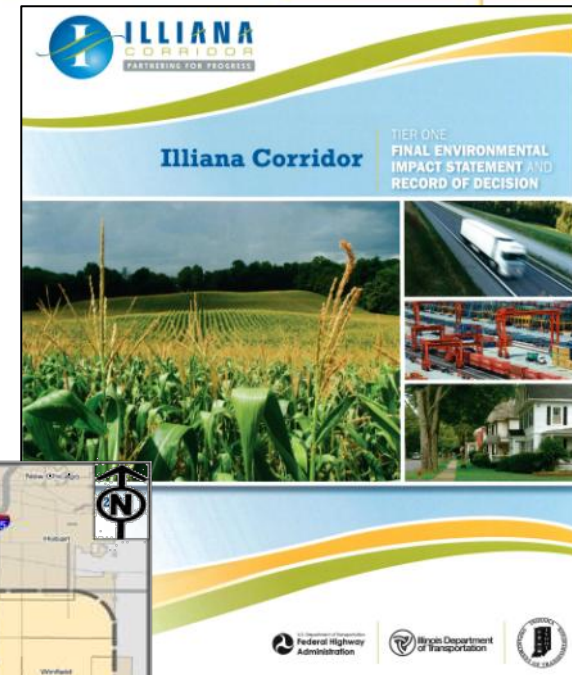
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Illiana Corridor Tier Two Studies

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- Preferred Corridor Recommendation of B3 and No Action Alternative the starting point for Tier Two



First combined
FEIS/ROD
issued in
country under
new MAP-21
streamlining
provisions

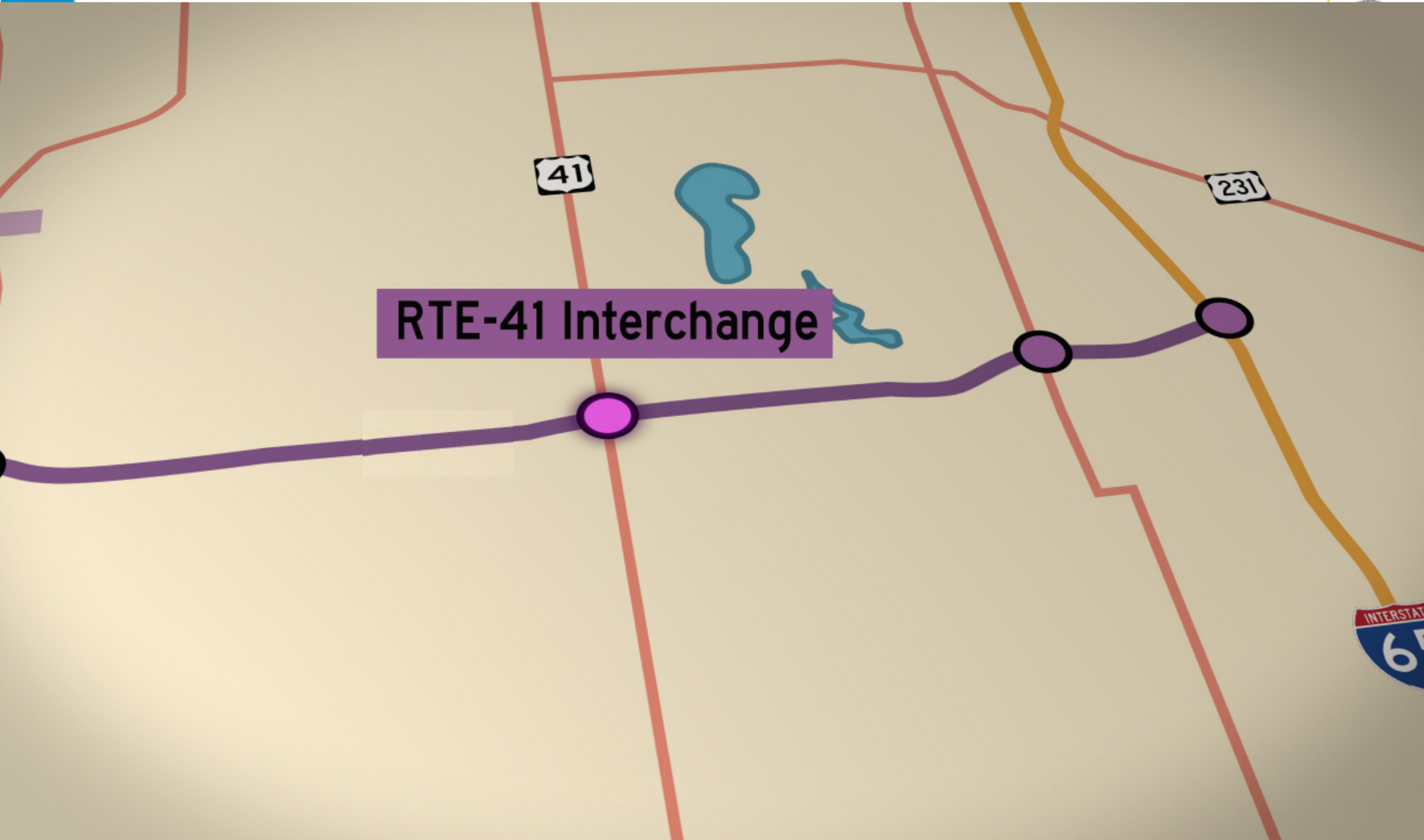
Working Alignment Measures Potential Impacts

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- Alignment location will move
- Actual alignment will be finalized fall 2013

US-41 Interchange



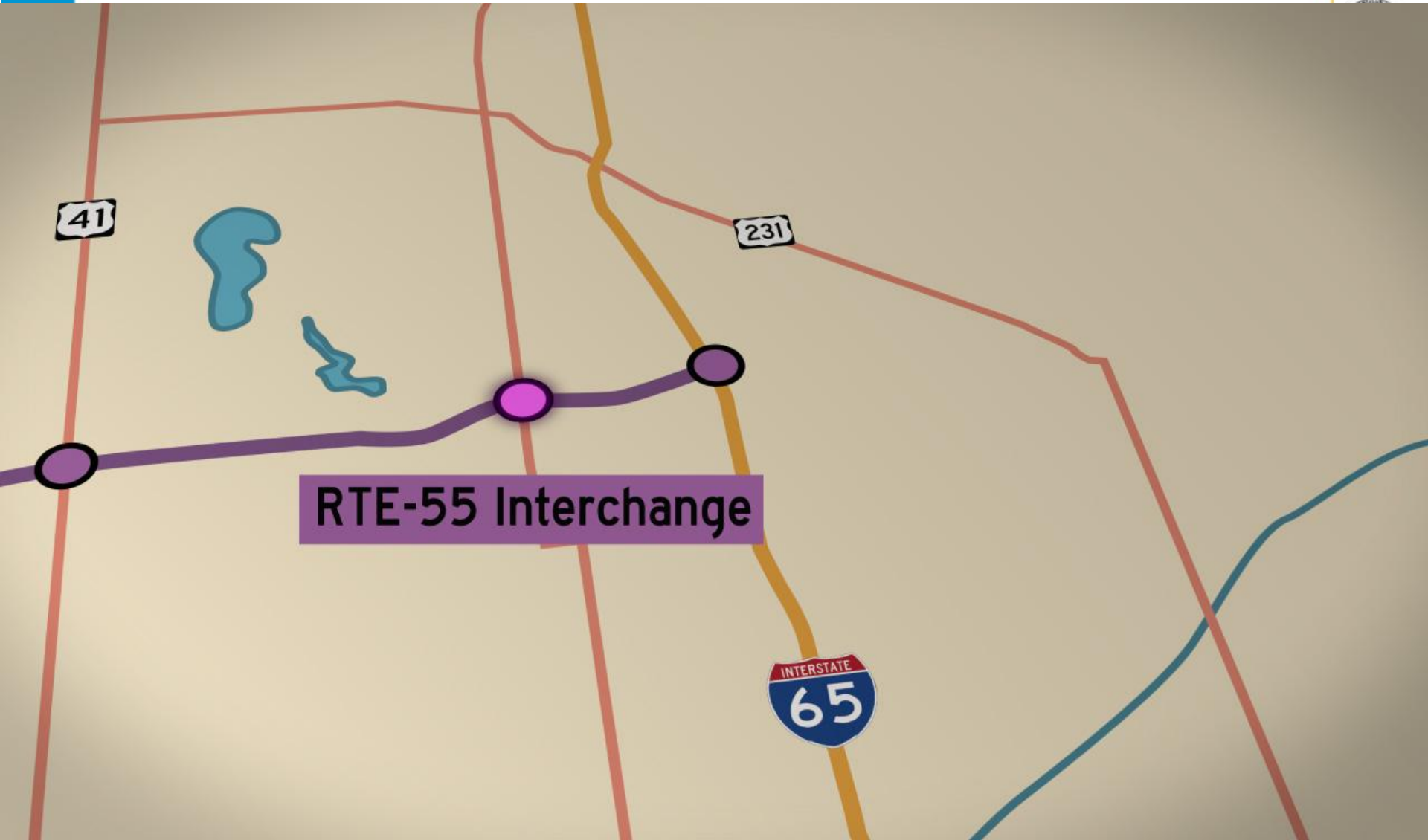
US-41 Interchange

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Indiana RTE-55 Interchange

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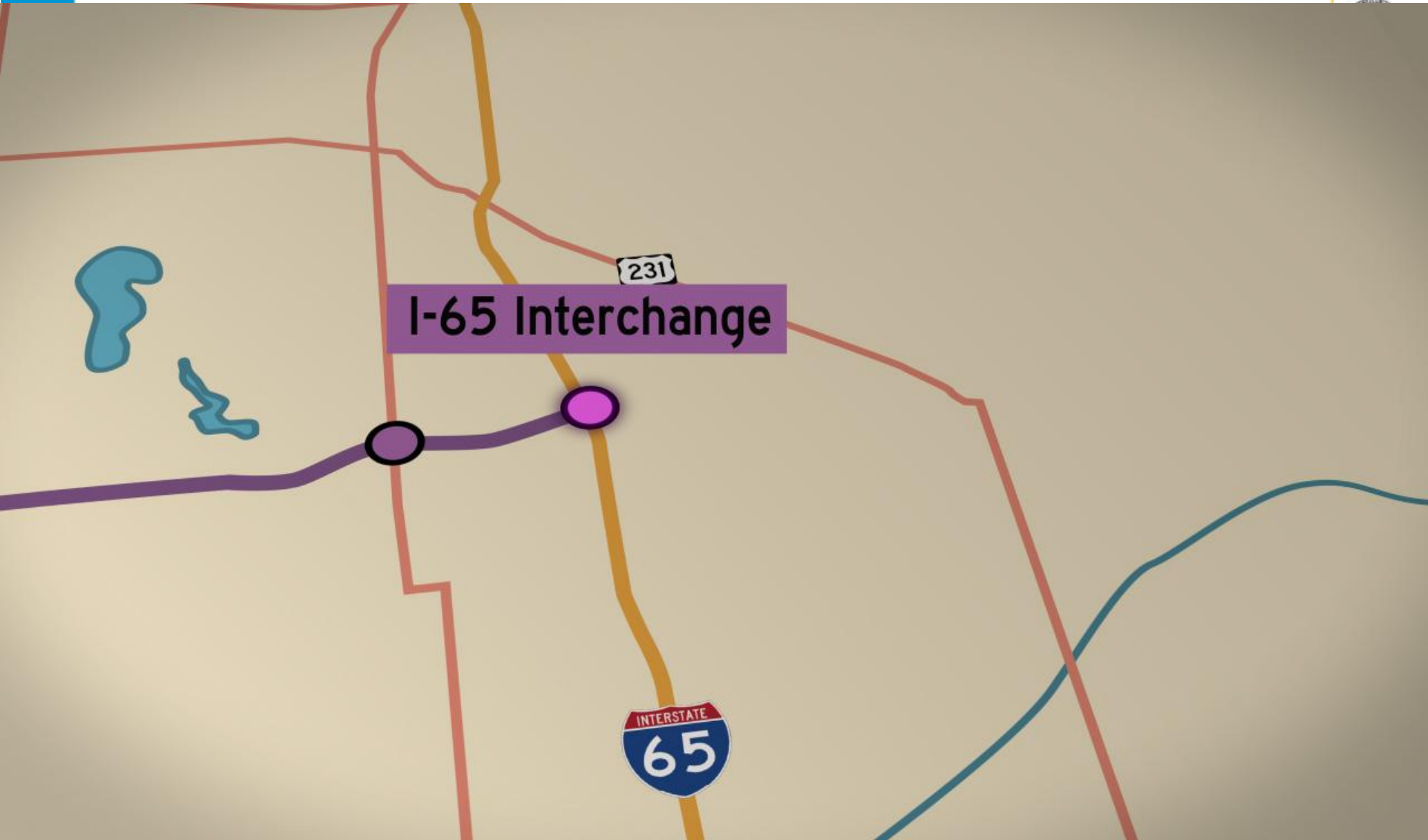
Indiana RTE-55 Interchange

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I-65 System Interchange

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I-65 System Interchange

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I-65 System Interchange

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Indiana Alternatives



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Location	Proposed Alternatives Description
IN/IL State Line to Mount Street	One alignment alternative
Mount Street to Holtz Road	Two alignment alternatives – an alignment to the south of the Tier One working alignment to minimize wetland impacts, and an alignment to the north of the Tier One working alignment to minimize contiguous forest severance
Holtz Road to Broadway Street	One alignment alternative
Broadway Street to I-65	Three alignment alternatives – a turbine interchange on the Tier One working alignment to the north, a trumpet interchange to the south of the Tier One working alignment, and a trumpet interchange further to the south based on safety considerations and minimizing impacts to forested areas.

P3 Development Status



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- Illiana P3 Industry Forum held on June 24 & 25, 2013
- Request for Qualifications – Fall 2013
- Request for Proposals – Winter 2013/ Spring 2014





Environmental Analyses & Best Management Practices

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Tier Two EIS Studies



- Social/Economic
- Indirect & Cumulative Impacts
- Agricultural
- Cultural (historic/arch.)
- Air Quality
- Noise
- Energy
- Natural Resources
- Flood Plains
- Water Quality/Resources
- Environmental Justice
- Wetlands
- Special Waste
- Special Lands
- Permits/ Certifications
- Other Issues

Sequencing of environmental mitigation:

- **Avoiding** the impact altogether
- If avoidance is not feasible, **Minimize** the impact by limiting the degree or magnitude of the action
- **Mitigating** for the impact by replacing or providing substitute resources or environments

Illiana Field Studies (IN)

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- Wetland/Waters of the U.S. delineations
- Aquatic Resources
 - Habitat Assessments
 - Fish and Mussels
 - Aquatic Macro-Invertebrates
 - Water Quality sampling
- Indiana Bat
- Eastern Prairie Fringed Orchid
- Riparian Corridor Tree Study

Indiana Well Protection Area Review (IN)



- Indiana Department of Environmental Management issued a letter on February 21, 2013 stating that the project corridor is not located within any Wellhead Protection Areas.
- The project corridor is not located within karst topography or within a designated sole source aquifers.

Detailed Analysis of Natural Resources



- Grassland Birds – Analysis of impacts and minimization strategies
- Riparian Corridors
 - Water Quality Buffers
 - Wildlife Crossings
 - Connectivity with Natural Areas
- Wetlands
 - Field visits conducted with federal and state agencies.
 - Review of potential impact areas and minimization/avoidance measures
- Forest Impacts
 - Field review – Minimizing and avoidance of impacts to area forests.

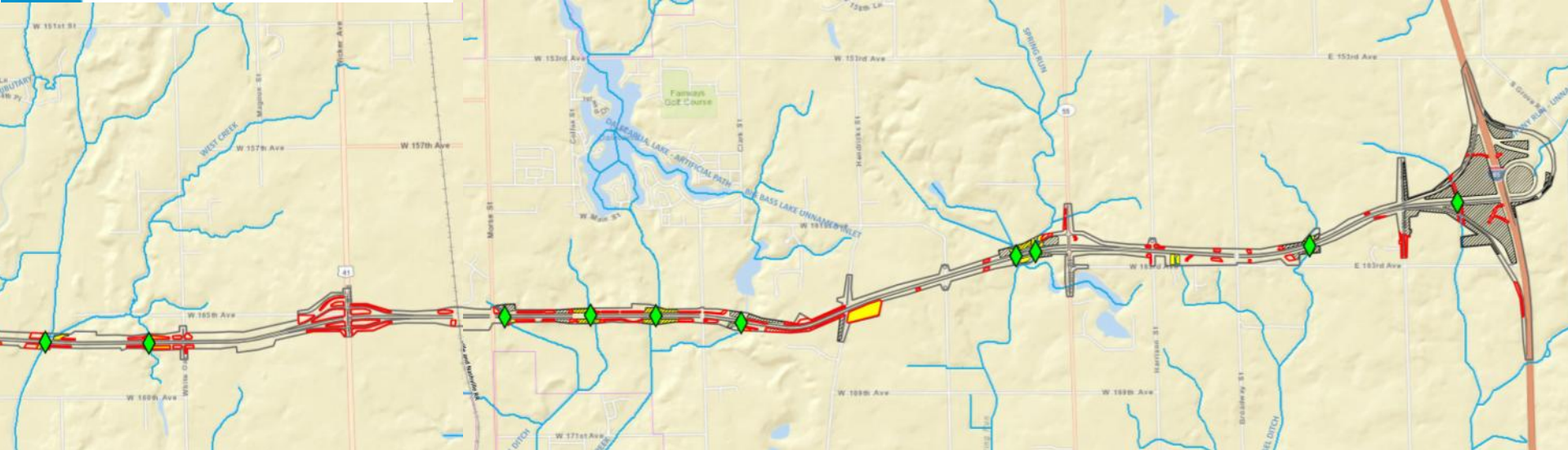


Best Management Practice

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BMP Opportunity Areas (IN)



Legend

-  Water Quality Best Management Practices
-  Prairie or Forest Restoration/Enhancement
-  Wetland/Riparian Buffer
-  Proposed Right-of-Way
-  Wildlife Crossing

Mitigation Opportunity Areas

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Water Quality Best Management Practices (BMP)

- 1 BMP Swale-Basin
- 2 BMP Swale
- 3 BMP Infiltration



Wetland/Riparian Buffer

- 4 Riparian Buffer WQ BMP
- 5 Wetland Water Quality (WQ) BMP



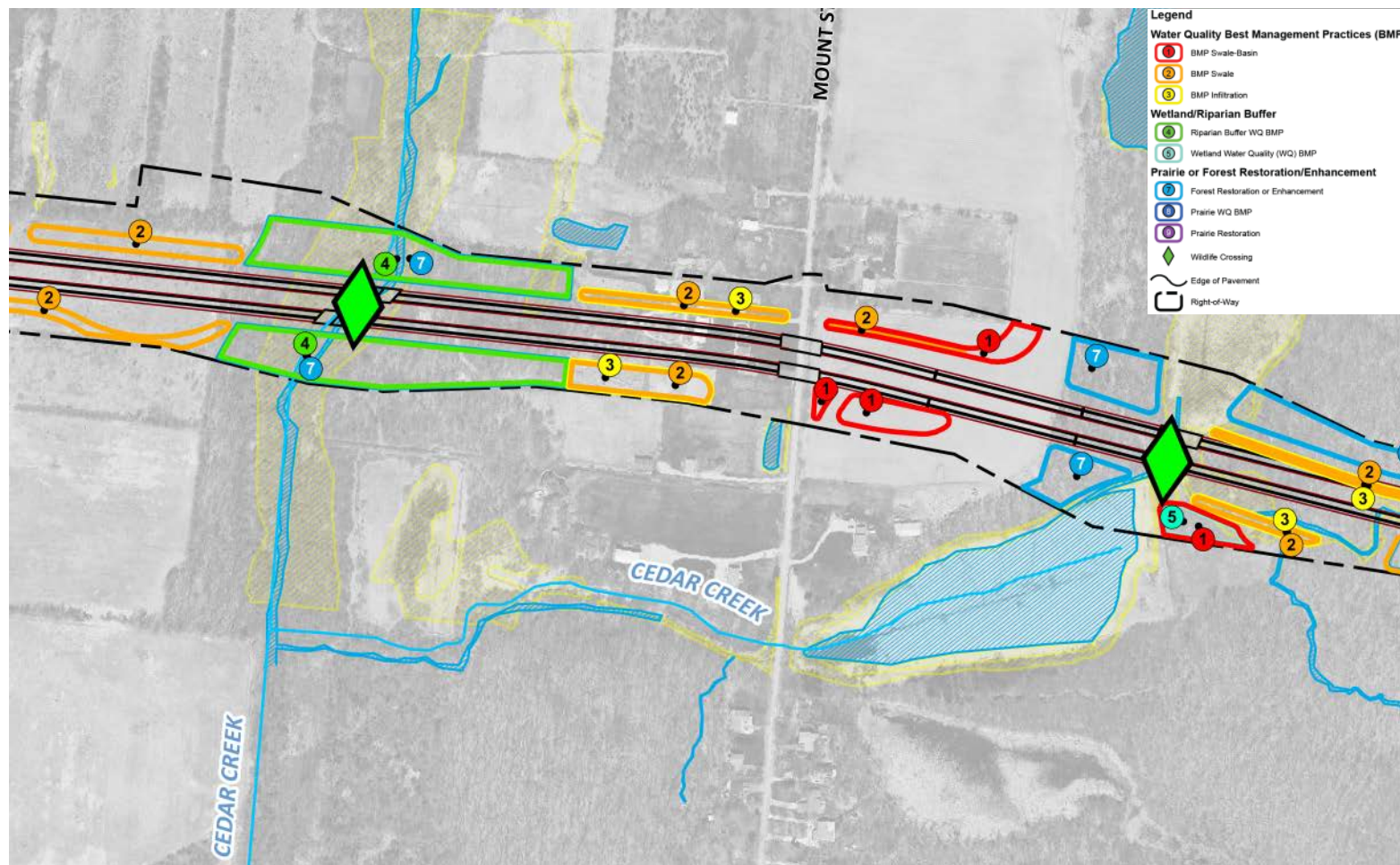
Prairie or Forest Restoration/Enhancement

- 7 Forest Restoration or Enhancement
- 8 Prairie WQ BMP
- 9 Prairie Restoration
- Wildlife Crossing
- Edge of Pavement
- Right-of-Way

BMP Opportunity Areas



- Cedar Creek, IN



BMP Example

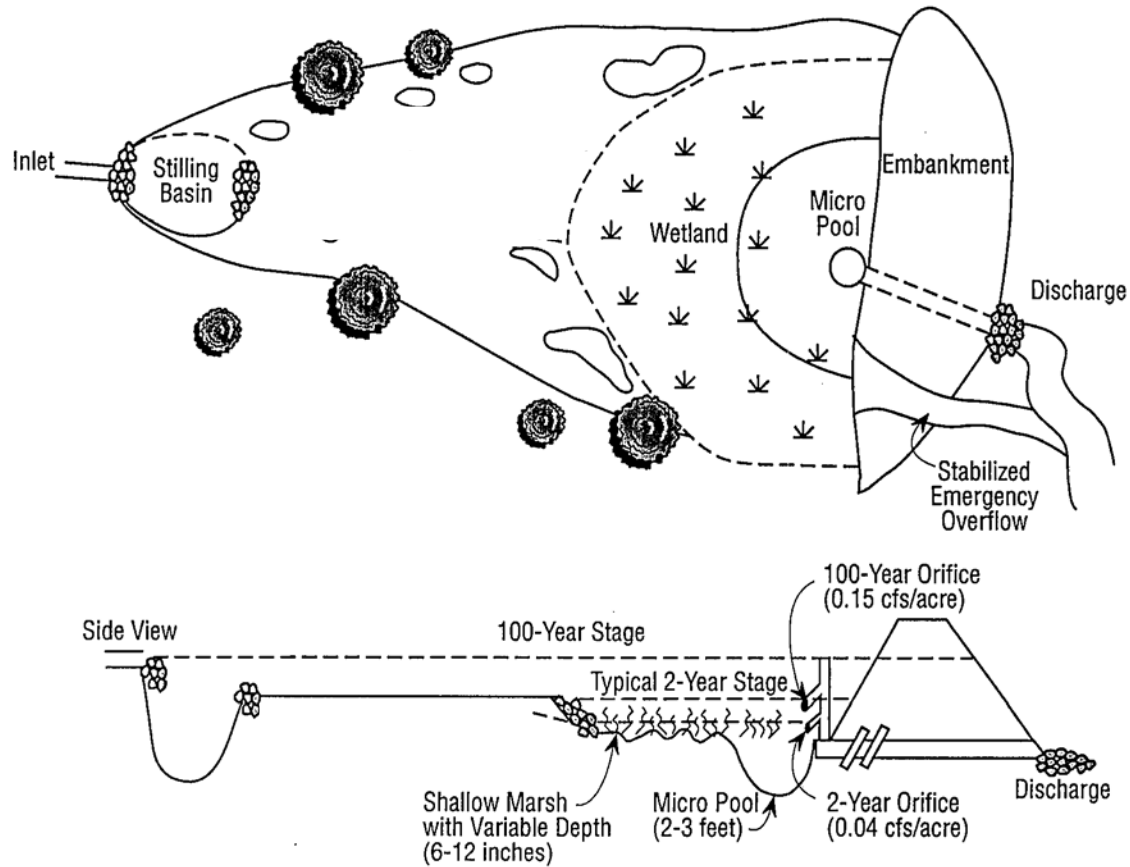


Naturalized Stormwater Management Facilities



Unit
Mac

Typical Water Quality Wetland/Detention Pond

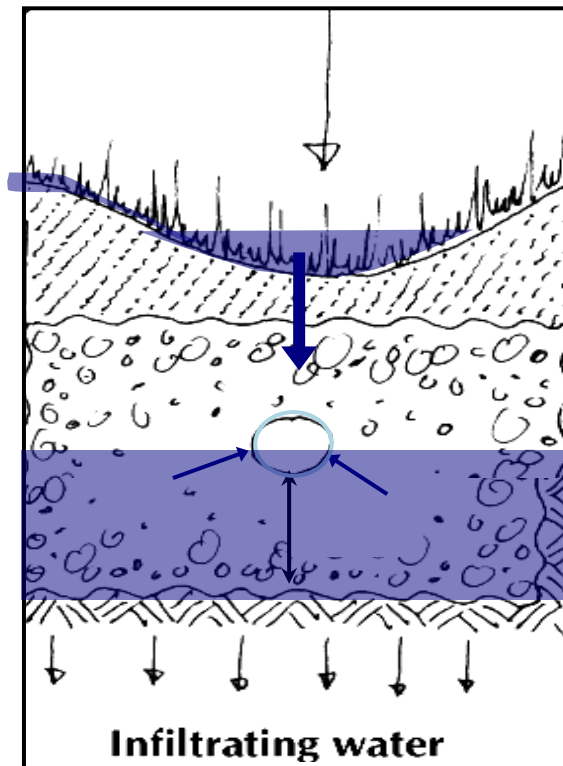
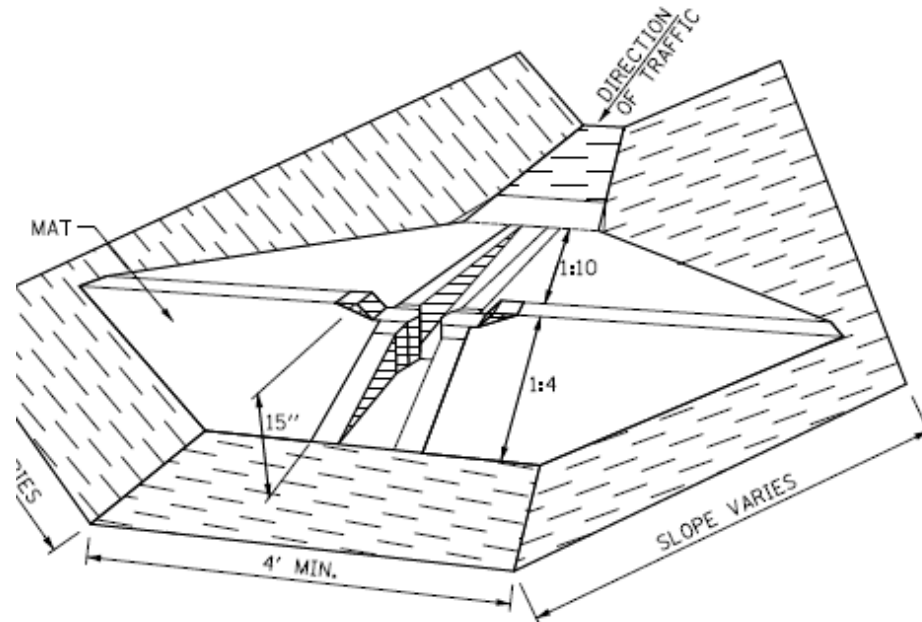


Bioswale

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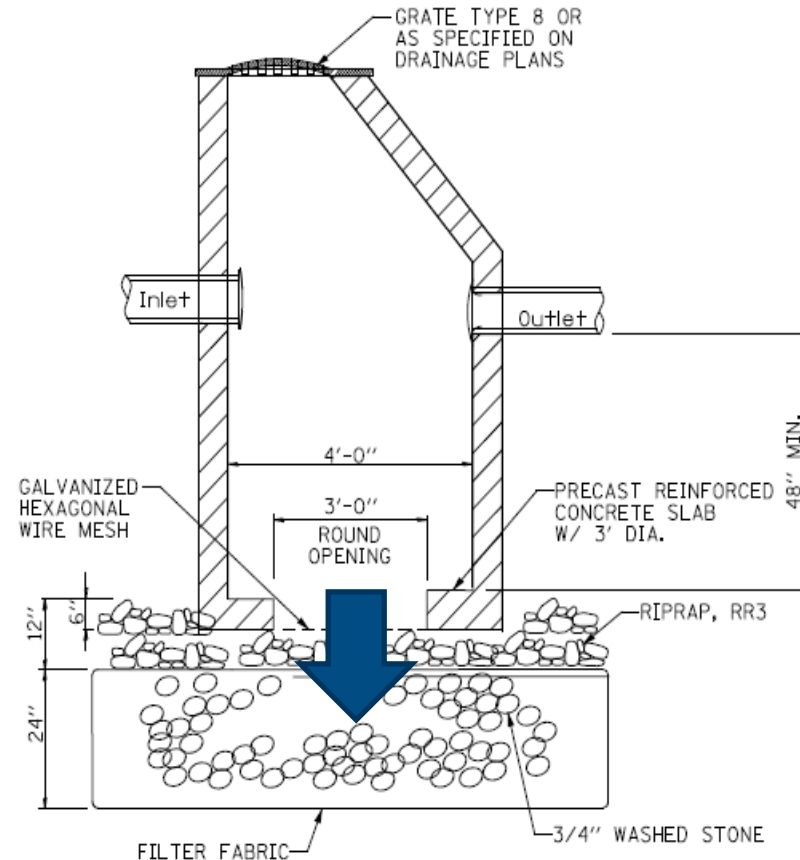
- Bioswales can be installed within swale and ditch lines to promote filtration and nutrient uptake



Infiltration Catch Basins

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- Manholes are designed with leaky bottoms to promote infiltration



INFILTRATION CATCH BASIN DETAIL

Pollutant Load Analysis

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Study Area: 18 rivers/creeks and their tributaries



Before BMPs

- Methods
 - Summarized existing water quality data
 - Computed General Use Water Quality standards
 - Calculated stream concentrations
 - Drainage Areas >1 sq mi: Driscoll method
 - Drainage Areas <1 sq mi: Driver method (Driver and Tasker, 1990)
 - Determined stream impacts
 - Calculated chloride concentrations - USGS method (Frost, et al., 1981).
- Results
 - Before BMPs were applied, acute water quality standards were achieved in all but two drainage areas for copper and zinc.
 - The resulting chloride concentrations achieved all Illinois and Indiana General Use Water Quality Standards

Proposed BMPs

- Methods
 - Combined BMP for each stream (*BMP Opportunity Area Technical Report*)
 - Determined percentage of pollutant removal
 - Calculated stream concentrations w/ percentage of removal reduction
 - Determine stream impacts
- Results
 - Pollutant concentrations for zinc, copper, and lead with the proposed BMPs will be further reduced and will achieve water quality standards
 - Additional reductions in peak chloride concentrations will occur with the proposed BMPs

Potential Waters Mitigation

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- Identify potential sites within Kankakee River Basin
- Depending on available sites, mitigation could include:
 - Re-meandering channelized streams;
 - Removing/replacing existing drain tiles/culverts with stabilized stream channels;
 - Stabilizing eroded streambanks with bioengineering methods;
 - Constructing in-stream habitat (e.g., riffle-pool and meander complexes);
 - Creating native riparian buffer
- Consider mitigation sites that could improve impaired waters
- Final decisions regarding approach & site selection will be completed during Section 401/404 permitting process

Potential Wetland Mitigation

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- Identify potential sites within Kankakee River Basin
- State Impacts will occur in state they occur (Indiana mitigation for wetland impacts will occur in Indiana).
- Depending on available sites, mitigation could include:
 - Mixture of wetland and upland mitigation near major tributaries;
 - Wetland restoration along Kankakee River/West Creek;
 - Synergy with existing County Parks and other local efforts
- Final decisions regarding approach & site selection will be completed during Section 401/404 permitting process

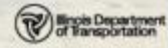
Next Steps

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Next Steps

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- NIRPC Illiana conformity determination – August 2013
- NIRPC Illiana public comment period – September 2013
- Proposed NIRPC 2040 CRP amendment – October 2013
- Tier Two Draft EIS – Fall 2013
- Tier Two Draft EIS Public Hearing – Fall 2013
- Tier Two Final EIS/Record of Decision – Spring 2014



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