

#### Northeastern Transportation and Wildlife Conference

# Streamlining emergency coordination for engineering and the environment

Pre Planning the Event 9/12/2016

- New York State Department of Transportation
- New York State Department of Environmental Conservation
- Adirondack Park Agency

September 27, 2016 2

#### **Hurricane Irene**



September 27, 2016 3

#### Saranac River Slope Failure

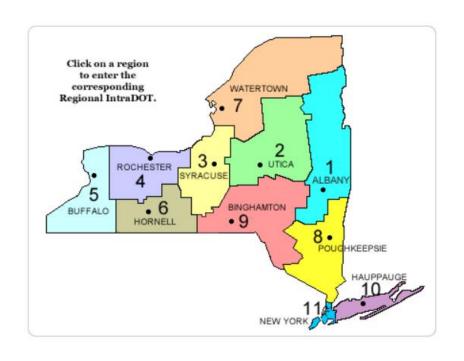


## **NYSDOT Emergency Action Plan**

- Governors Executive Order
  - E.O. #26 3/5/1999
  - All State Agencies shall use the National Interagency Incident Management System (NIIMS)
  - Incidents shall be managed using the Incident Command System
- NYSDOT Regional Incident reporting system
  - Low, Minor, < 30 min., Intermediate, 30 min. to 3 hours</li>
  - Major (Level 1) Events that have a severe traffic impact or safety risk. Generally >3 hours duration.
- Defining the emergency
- Action Planning / Alternatives
- Notifications / Permitting



#### **NYSDOT R7 ASSET MANAGEMENT**



**1252** Bridges (> 20')

**671** Large Culverts (5' – 20')

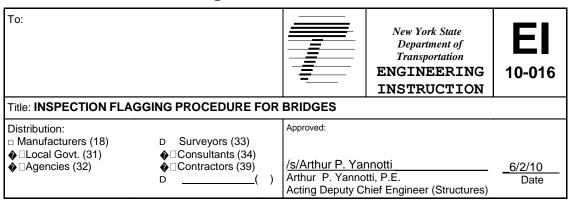
**9142** Small Culverts (< 5')

3500 Lane Miles Highways

Inspection cycles are subject to change based upon rating criteria



## **NYSDOT** Inspection Guidelines



#### ADMINISTRATIVE INFORMATION:

- Effective Date: This Engineering Instruction is effective from July 1, 2010.
- Superseded Issuances: None
- Disposition of Issued Materials: The attached procedure replaces Appendix I of the Bridge Inspection Manual.

**PURPOSE:** The purpose of this EI is to issue the revised Flagging Procedure for Bridges that resides as Appendix I of the Bridge Inspection Manual.

#### **TECHNICAL INFORMATION:**

- The flagging procedure is being revised to accommodate changes in practice and to incorporate electronic communication option.
- Changes Being Affected By This Issuance: Bridge Inspection Flagging Procedure
- There is no significant impact on cost.

#### **IMPLEMENTATION:**

 The Main Office Bridge Inspection Unit will replace the old Appendix I with the attached revised procedure and inform all relevant inspection personnel and bridge authorities in the New York State.

**TRANSMITTED MATERIALS:** Revised "Inspection Flagging Procedure for Bridges" (Appendix I of the Bridge Inspection Manual), dated July 1, 2010 is attached.

**CONTACT:** Direct questions regarding this issuance to Bridge Inspection Unit Supervisor of the Office of Structures at (518) 457-5498.



#### NYSDOT RED FLAG PROCEDURE

- Observation
- Prompt Interim Action
- Prepare Flagged Bridge Report

Outstanding Flags (all bridges)					
Flag Type	Local State				
Red	0 Active 0 Active				
	( 4 Inactive)	(2 inactive)			
Yellow	23	15			
Safety	18	3			

- Verbal Notification of Regional Bridge Engineer
- Verbal Notification of Responsible Party
- Decision on Prompt Interim Action Flags
- Flag Documentation

State Culvert Flags				
FLAG TYPE January 2015				
RED	1 Active			
	5 Inactive			
YELLOW	20			
SAFETY	22			



#### "EMERGENCY DEFINITION"

- The situation is an emergency based on the immediate protection of life, health, general welfare, property or natural resources. (6 NYCRR Part 621.12)
- An "emergency" is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures. (USACE)
- Regional "Finding of Emergency" by the Regional Director (NYSDOT)



## **UPA 621.12: Emergency authorizations**

If prior notice is not possible, a state or local government agency may take immediate action, but must notify the Department's Regional Permit Administrator within 24 hours of taking action. The notification must provide the Department a basis on which to issue an Emergency Authorization



## **UPA 621.12: Emergency authorizations**

Prior to issuing an emergency authorization DEC must:

- Make a finding of emergency; "Presents an immediately threat to life, health, property, general welfare or natural resources."
- Project will be carried out in a manner that will cause the least change, modification or adverse impact to life, health, property or natural resources



# **Adirondack Park Agency Emergency Certifications**

#### Criteria:

- An emergency exists or existed
- The emergency project is or was immediately necessary for protection of life or property
- The emergency project is or was limited to what is necessary to respond to the emergency



# **NYSDOT Offsite Resource Inventory**

- Key Map
- Culvert Inspection
- Inspection flagging documentation
- Stream Stats
- USDA Soil survey
- Office
  - Section 7 threatened and endangered species IPAC Screening
  - NYSDEC environmental viewer
- Wetland delineation –off site
- Condition photos
- USACE emergency procedures
- Emergency declaration
  - Internal
  - Regulatory
- •12 Regulatory notifications (email, phone ect.)



# NYSDOT Onsite Resource Inventory/Analysis

- NYSDOT On site inspections Culvert form
- Field site photos
- Wetland delineation
- Stream field sections
- Section 7 field screening / finding verification
- Section 106 field screening / finding verification



Inspection Date: 12/9/201

1. 🛮 Yes 🗌 No Is water flowing thru the culvert? If yes, water depth in culvert? 2"
2. Height of ordinary high water mark at the invert of the culvert? 18"
Slope of the waterway reach
Above culvert: $\square$ 0 - 1% $\boxtimes$ 1-4% $\square$ >4%
Below culvert: ☐ 0 - 1% 🔀 1-4% ☐ >4%
General description of the bottom material
In culvert: ☐ Unconsolidated ☐ Stone ☐ concrete ☒ metal ☐ Plastic
Inlet: ☐ Unconsolidated ☐ Stone ☐ concrete ☒ metal ☐ Plastic
Outlet: Unconsolidated Stone concrete metal Plastic
Reach above: Unconsolidated native native native stone manufactured stone
Reach below: Unconsolidated native native stone manufactured stone
5.  Yes No Do natural or man-made barriers to fauna passage exist?
6. Yes No Does a low flow path/channel exist thru the culvert?
7. $\square$ narrower $\boxtimes$ matched $\square$ wider What is the culvert width in relation to stream char
8. Is the presence or passage likely for;
9. Yes No Is the culvert perched? If yes, depth:
10. Do pools exist at the;  Inlet Depth:
☐ Use the same Deaths.
Upstream Depth:
Downstream Depth:
11. Yes No Is vegetation shading the reach above or below the culvert?
12. Yes No Will tree (>4" Dia.) removal be required?
13. ☐ Yes ☐ No Is there connectivity to a NYSDEC wetland at the outlet and/or inlet?
15. Adjacent land use;  Above culvert: ☐ residential ☐ agricultural ☐ commercial ☐ natural ☒ wetlan
Below culvert: residential agricultural commercial natural wetlan
16.  ☐ Yes ☐ No Is the culvert in alignment with the waterway?
17. ☐ Yes ☐ No* Are invasive species present?
18. ☐ Yes ☐ No Are there any indications of illicit discharges present?
19. ☐ Yes ☒ No Is beaver activity affecting the culvert?
20. ☐ Yes ☒ No Is a regulatory agency on-site review recommended?
For this screening reed canary grass is not considered invasive
hotos: See next page for locations. Date:
eviewer's: <u>John Falge</u> Date: <u>12/9/2015</u> Weather:

## **Culvert Form**



#### REGULATORY COMPLIANCE

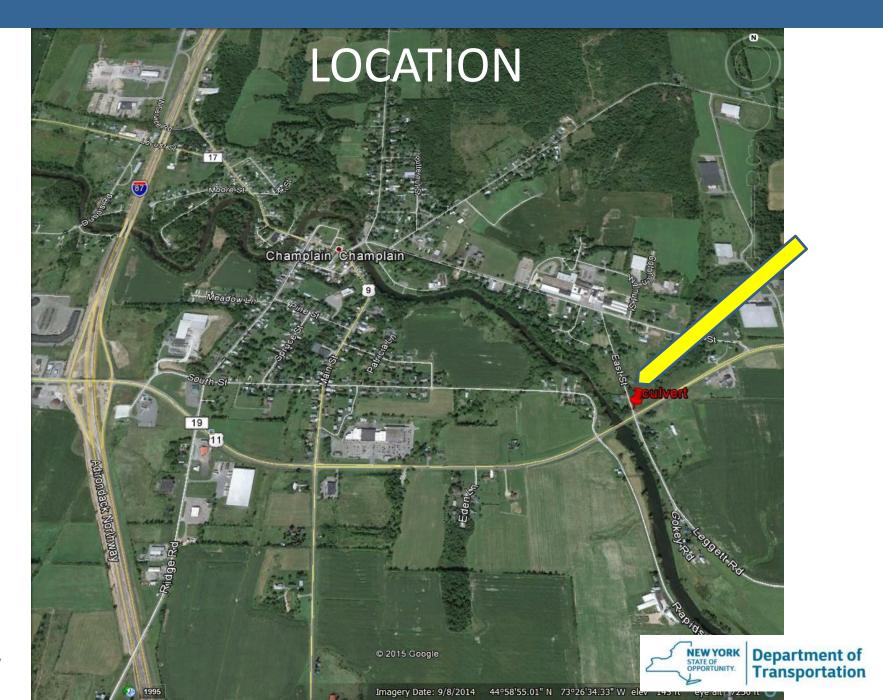
- USACE Compliance Certification
- NYSDEC Compliance Certification
- FEMA Documentation
- Adirondack Park Agency



# 262924 Emergency Culvert Replacement Case Study

- 12/1/2015 Culvert Inspection
  - Red Flag Determination
- NYSDOT Regional Incident reporting system
  - Major (Level 1) Events that have a severe traffic impact or safety risk.
- 12/4/2015 Uniform Procedures Act "Finding of Emergency"
  - Notifications
- 12/9/2015 On Site Environmental Resource Inventory and Analysis
  - Alternative Analysis / Engineering Design
- 12/11/2015 Environmental Permitting Regulatory Coordination
  - LEPDA determination
  - Initial submission to NYSDEC USACE
  - USACE PCN concurrence 12/17/2015
  - NYSDEC Blanket Water Quality Certification
- In Water construction begins
- **12/21/2015** Project Complete
- 12/23/2015 Regulatory Certifications

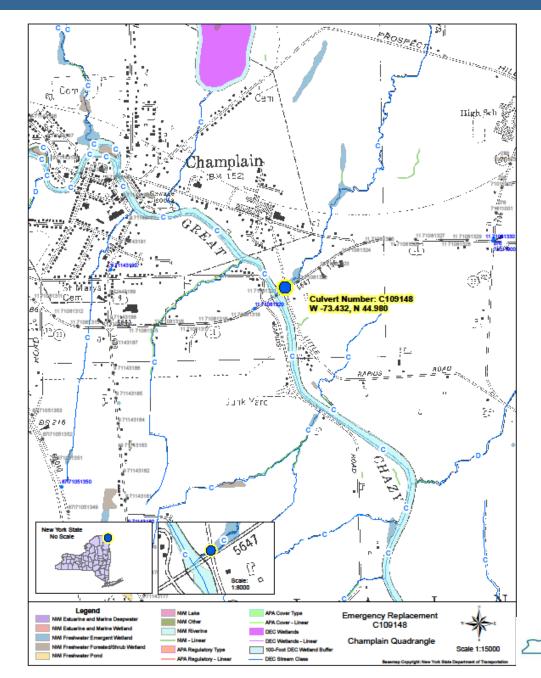




# REGULATORY COORDINATION Environmental Inventory and Analysis

- U.S. ARMY Corps of Engineers
- NYSDEC Region 5, Ray Brook
- U.S. Fish & Wildlife Service, Section 7
- SHPO / Section 106
- USDA NRCS







#### SITE PHOTO INDEX

Environmental Screening On - site Culvert Inspection

#### Photo Key

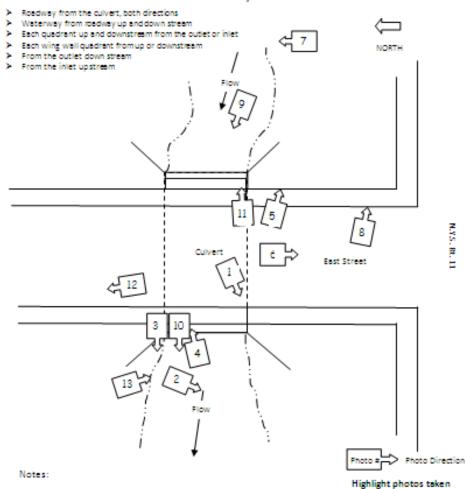
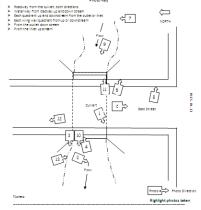




Figure 1 At the culvert looking SW toward NYS Rt.11. Note the Great Chazy River at right side of photo.



Figure 2 Outlet photo showing raccoon tracks.





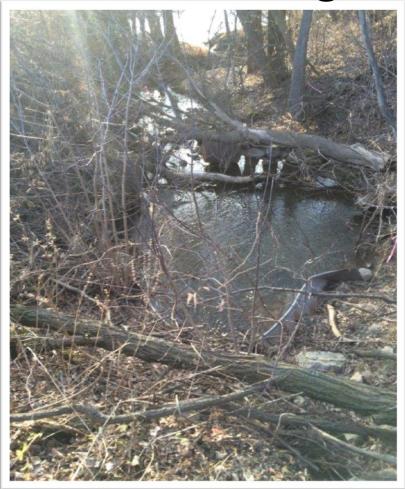


Figure 3 Outlet channel looking west from culvert. Small pool at the outlet. Typical section taken near the top of the photo.



Figure 4 at the outlet of the culvert looking up toward the road surface. 15' +/- cover over the culvert.





Figure 5 From roadway looking E at Rt.11 and stream inlet.



Figure 6 Road signage location Note upstream wetland.

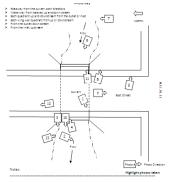






Figure 7 Outlet location showing signs of structural failure and flow channel width of 5" +/-. Note no native material in the pipe.



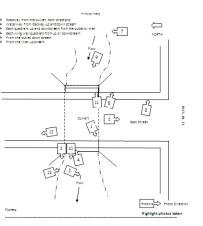


Figure 8 Upstream section location where the channel was measured.





Figure 9 Outlet flow at the end section

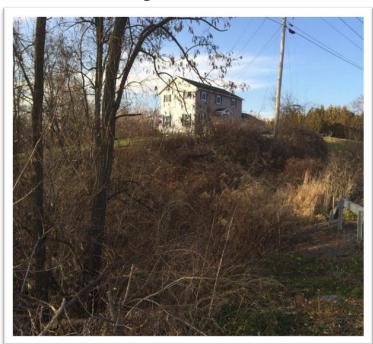


Figure 10 Adjacent down stream property

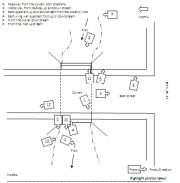






Figure 10 From road looking W. Note Great Chazy river at the top of the photo.



Figure 11 Upstream looking E from road. Wetland and associated stream channel. NYS Rt. 11 embankment to the right.



# CONSTRUCTION EMERGENCY CONTRACT

Contract Notes
Plans
Specifications
Certifications



#### **CONSTRUCTION NOTES**

**Special Note** 

#### **Notifications - Environmental EMERGENCY AUTHORIZATIONS**

Uniform Procedures Act - 6NYCRR Part 621.12

This note applies to emergency work that may involve environmental resources such as waterways, wetlands, endangered species, historic properties, cultural resources, forest preserve, scenic vistas, and "critical environment areas".

Emergencies dictate a prompt response to events that immediately threaten life, health, property or natural resources. The environmental regulatory agencies recognize that emergency situations develop that the Department of Transportation (DOT) has an obligation to ameliorate as an emergency site condition. Under these circumstances, regulatory agencies can expedite project review and issuance of Emergency Authorization (EA) decisions. Part 621 of the N.Y.S. Environmental Conservation law, also provides for immediate action by state government agencies, but requires the DOT to notify the regulators as follows: (see table 1.1 for environmental regulators by County)

Within 24 hours of taking action.

Additional information from the DOT no later than 24 hours after the initial notification. This additional information must be sufficient to provide the Regulatory Agency a basis on which to concur or make an EA.

EA's can only be issued for a period of up to 30 days and renewed for up to an additional 30 day period. Project continuation beyond that 60 day period can only be accomplished by submitting a completed application for and receiving a regular permit. If necessary, the regulators can summarily order a suspension of work if no EA has been granted or it finds the emergency finding no longer applies. Regulators may order remedial work as written in the EA.

Department of

#### **CONSTRUCTION NOTES**

#### The Department of Transportation shall:

- 1. Make a written "<u>Finding of Emergency</u>" stating why the immediate action is needed (generally speaking an emergency declaration by the Federal government, N.Y.S. or a local government fulfills this criterion, although the DOT can make their own finding).
- 2. Make the Regulatory notifications and provide the required information within the time frames stated above.
- Approve materials, techniques and methodologies for construction activities to be carried out in a manner which causes the least change, modification or adverse impact to life, property or natural resources.
- 4. After stabilizing the emergency site, proceed under conditions to assure compliance with the EA or other regulatory standards normally applicable absent the emergency.

#### The contractor shall:

Verify notification of environmental agencies.

- 1. Provide DOT staff supporting permit documentation for proposed construction activities that may affect environmental resources, including, but not limited to, schedules, materials, access, and construction techniques.
- 2. Pay for any permits, licenses or fees that are required to perform the work. (ie. Hauling permits, dumping permits, permits for borrow pits, surplus material areas, staging areas, equipment storage areas, batch plants or any ancillary facilities beyond the project boundaries. etc.)



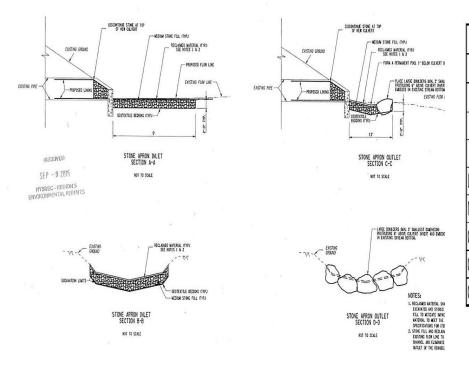
## **Aquatic Life Passage**

#### Low flow passage

- 7Q2
- Fishx
- Backwatering



## **Aquatic Life Passage**

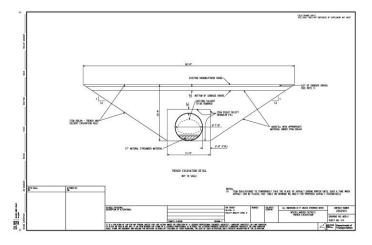


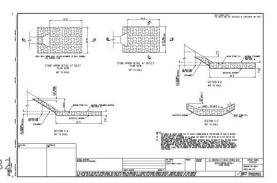
Water Depth Inside Culvert (ft)						
	Existing 72" CMP		Proposed 60" CI	Proposed 60" CMP with Rock Weir		
		Distance from Inlet		Distance from Inlet		
Low Flow = 0.08 cfs (from DEC)	0		0.309	41.434		
Median Flow = 0.91 cfs (from DEC)	0		0.43	42.226		
Q2 = 33.20 cfs	1.783	39.542	1.903	38.379		
Q50 = 92.60 cfs	2.981	49.093	3.231	49.958		
Q100 = 106.00 cfs	3.224	43.679	3.531	42.02		

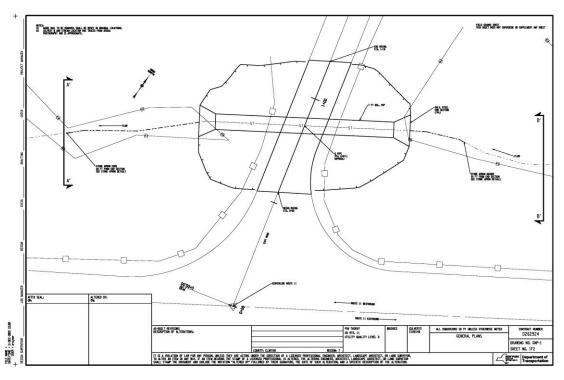


#### **CONSTRUCTION**

- Accelerated project design and plans
- Environmental resource protection
- Hydraulic alternative analysis









New York State Department of Transportation

Culvert Identification Number : C109148 Emergency Standby- D262924

#### SEQR - Construction Consistency Certification

The wors proposed has been reviewed using 17 NYCRR, Part 15 of the New York State Environmental Quality Review Act (SEQR). The proposed actions to be undertaken, as part of the project, have been determined to be more in nature and classified as exempt, excluded or Type II actions. After engineering and environmental analysis, the proposed work has been decemed not to have a significant effect on the environment.

The action has been reviewed for inflired, secondary or cumulative impacts to environmental resources. Information on the locations of environmental resources can be found at <a href="https://www.nysdot.gov/divisiors/engineering/environmental-analysis">www.nysdot.gov/divisiors/engineering/environmental-analysis</a>. Regulatory Agencies or by contacting the New York State Department of Transportation Environmental Staff.

Upon site review, if the proposed work has the potential to impact environmental resources, the SEQR determination may need to change and additional reviews, and *for* regulatory permits secured. The thresholds noted below <u>MUST\_NOT</u> be exceeded to maintain the proper environmental determinations.

#### Thresholds

- No Acquisition of any occupied buildings.
- 2. No Significant changes in traffic volume, vehicle mis, local travel patterns or access.
- 3. No inconsistencies with current plans and goals of local government bodies.
- No physical alteration or disturbance > 1 acce.
- 5. No adverse effection any building > 50 years old or any bridge listed on the Department's historic bridge survey.
- 6. No more than minor alteration or adverse effects upon any property, protected area, or environmental resource of significance including but not limited to:

# Encommental Resources Screened □ Wetlands (APA, USACOE & NYSDEC) □ Forest Preserve □ Flood Prairi areas □ Rare, Endangered or Threatened wild life species □ Prime or unique agricultural land □ Work within a designated critical environmental area □ Lakes, rivers, streams and other water resources □ Subsurface work in proximity to existing or historic gas stations, spill sites or hazardous waste □ Wild, Scenis and Recreational rivers □ Visual Quality

If project actions are preposed that exceed any of the above thresholds, relative to the resources screened, additional information for re-classification and regulatory processing shall be necessary. The contractor shall be responsible for supplying supplemental information for the proposed work, materials, timing or methodology necessary to meet Regulatory requirements prior to commencement of work. Delays or estra costs associated with additional permits or approvals shall be the responsibility of the contractor.

As proposed, we certify the above determination is consistent with the SEQR Laws, Rules and Regulations of New York State.

Environmental Reviews

12-15-2015
Date
Signature

Environmental Reviewer:

John M. Falge Construction Environmental Coordinator

Construction Review

\_\_\_ Construction:

Gary McKinney Regional Construction Engineer

# SEQR / NEPA CONSTRUCTION CERTIFICATION



# CONSTRUCTION EMERGENCY CONTRACT

D262924, Reale Construction Inc. Tom Maroun, Engineer In Charge







## **STARTUP**



- Traffic Controls (Closure)
- Material storage and stockpiling
- Mobilization



#### **COFFERDAMS – MAINTAINING FLOWS**

• Inlet



• Cofferdam



#### **EXCAVATION / PIPE PLACEMENT**





#### PIPE INSTALLATION



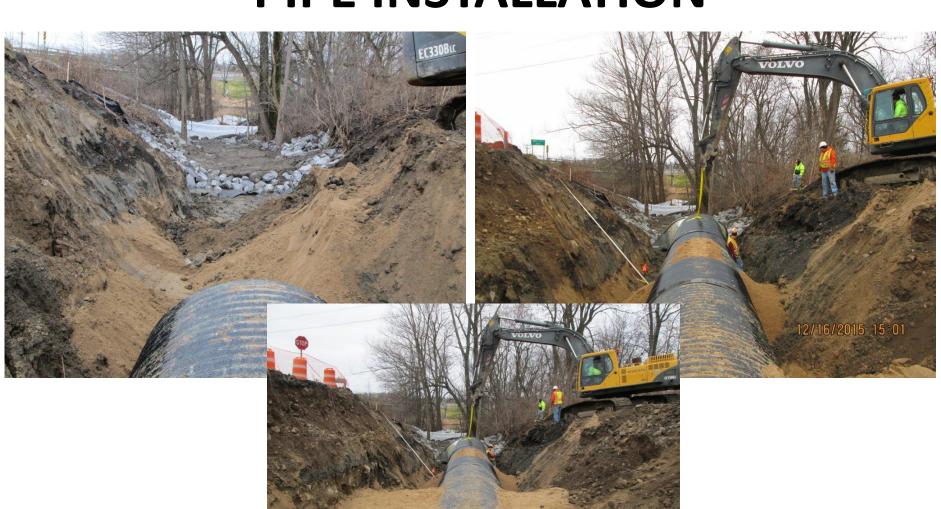


Existing 72" x 44" Arch

Replacement 84" Round Corrugated Metal Pipe **Embedded 16" +/-**



#### PIPE INSTALLATION





#### SITE RESTORATION



#### **Aquatic Life Passage**

USGS NY WSC Streamflow Estimation Tool (NYSET)

Summary Report by: jor Date: 8/13/15

Project Description:

Reference streamgage: 04275500 Ausable River near Au Sable Forks, NY

Percent

Correlation coefficient: Distance from ungaged site: 0.90

18.38

Basin characteristics	Ungaged site	Reference streamgage	Range*	Units	different from reference gage	Streamflow statistics for ungaged site, 1961 - 2010, in cubic feet per second	
Drainage area	1.57	445.00	3.14-4,780	miles squared	-99.65	Mean daily streamflow	<sup>-</sup> 1.91
Mean annual runoff, 1951 - 1980	18.10	20.80	11.6-37.4	inches	-12.98	Median daily streamflow	0.91
Percent of basin underlain by hydrologic soils group A	5.00	13.50	0.52-51.9	percent	-8.50	-7Q2 -	0.08
Percent of basin underlain by hydrologic soils group B	2.00	11.00	1.16-69.6	percent	-9.00	7Q10	0.01
Slope of lower half of channel	52.00	53.90	1.56-152	feet/ mile	-3.53		
Percent of basin above 1200 ft sea level	100.00	80.20	0.00-100	percent	19.80	Monthly streamflow statistics for ungaged	
Mean May precipitation, 1971 - 2000	3.30	3.70	3.15-5.68	inches	-10.81	site, 1961 - 2010 in cubic feet per second	Mean
Mean June precipitation, 1971 - 2000	3.98	4.14	3.59-5.33	inches	-3.86	January	1.20
Mean July precipitation, 1971 - 2000	4.07	4.24	3.20-5.26	inches	-4.01	February	0.91
Mean Summer precipitation, 1971 - 2000	12.80	12.90	10.48-15.51	inches	-0.78	March	2.22
Maximun June temperature, 1971 - 2000	73.20	71.90	68.8-78.8	degrees Fahrenheit	1.81	April	5.96
X location of basin centroid	579814.80	592992.13	-	UTM meters	-	May	4.05
Y location of basin centroid	4932532.60	4906186.75	-	UTM meters	5	June	1.64
X location of basin outlet	579705.00	607990.57	-	UTM meters		July	0.73
Y location of basin outlet	4931615.00	4922945.42		UTM meters	<del>-</del>	August	0.65
*Streamflow estimates may no	t be valid if value fo	or ungaged sit	e is outside	of this range		September	0.77
						October	1.42
						November	1.95
						December	1.43



Department of Environmental Conservation

#### SITE RESTORATION – Embedded Pipe





**Embedded 16" +/-**



#### **INLET RESTORATION**





#### **OUTLET RESTORATION**











### SLOPE PROTECTIONS ROADWAY RESTORATION







# REGULATORY COMPLETION Notifications

- USACE District Offices
- NYSDOT Operations
- NYSDEC Regulatory Office
- Adirondack Park Agency



#### **CONTACT EXCHANGE**

Agency	Coverage	Name	Title	Phone	Cell	Fax	Email
NYS Department of	Lewis	Larry Ambeau	Regional Permit Administrator	315-785-2247		315 -785-2242	Lawrence.ambeau@dec.ny.gov
Environmental	St. Lawrence		Deputy				
Conservation		Tom Voss	Regional Permit Administrator	315-785-2249		315 -785-2242	Thomas.voss@dec.ny.gov
Region 6, Watertown		Jessica Hart	Environmental Analyst	315-785-2246		315 -785-2242	Jessica.hart@dec.ny.gov
U.S. Army Corps of	Lewis	Bridget Brown	Team Leader	315-255-8090		315-273-2055	Bridget.brown@usace.army.mil
Engineers – Buffalo District	St. Lawrence						
Adirondack Park Agency	(Inside Park)	Tom Saehrig	Environmental Project Review	518-891-4050		518-891-3938	thomas.saehrig@apa.ny.gov
	Lewis, Clinton		Specialist				
	St. Lawrence	Richard Weber	Deputy Director of Regulatory	518-891-4050		518-891-3938	Richard.weber@apa.ny.gov
			Programs				
NYS Department of	Franklin	Marc Migliore	Regional Permit Administrator	518-897-1238		518 -897-1394	mark.migliore@dec.ny.gov
Environmental	Clinton		Deputy	518-623-1285			
Conservation		Erin Burns	Regional Permit Administrator	518-897-1234		518 -897-1394	Erin.burns@dec.ny.gov
Region 5, Ray Brook		Erin Donhauser	Environmental Analyst	518-897-1234		518 -897-1394	Erin.donhauser
U.S. Army Corps of		Christine DeLorier	NYSDOT Project Manager	518-273-7420		518-273-2055	Christine.delorier@usa.army.mil
Engineers – N.Y. District							
NYSDOT Construction	Project EIC						
NYSDOT Construction	All	Gary McKinney	Regional Construction Engineer	315-785-2329	315-399-6478	315-785-2483	gary.mckinney@dot.ny.gov
NYSDOT Construction	All	Jeff Carpenter	Construction Supervisor	315-785-2307	315-778-2483	315-785-2483	Jeff.carpenter@dot.ny.gov
NYSDOT Construction	All	Kevin LaJuett	Construction Supervisor	315-785-2332	315-778-2555	315-785-2483	kevin.lajuett@dot.ny.gov
NYSDOT Construction	All	John Falge	CEC - Environmental	315-785-2343	315-778-2211	315-785-2315	john.falge@dot.ny.gov
NYSDOT Maintenance	All	Rick Hunkins	Maintenance Engineer	315-782-4473	315-412-3386	315-788-0971	rick.hunkins@dot.ny.gov
NYSDOT 7-1	Clinton	Val Basil	Resident Engineer	518-563-2020	518-944-7602	518-561-7315	val.basil@dot.ny.gov
NYSDOT 7-2	Franklin	Rob Haynes	Resident Engineer	518-483-0770	518-810-1013	518-483-8074	rob.haynes@dot.ny.gov
NYSDOT 7-3	Jefferson	Matt Bush	Resident Engineer	315-785-9317	315-276-5535	315-785-5635	Matt.bush@dot.ny.gov
NYSDOT 7-4	Lewis	Ken Bibbins	Resident Engineer	315-376-3523	315-214-9565	315-376-8478	Ken.bibbins@dot.ny.gov
NYSDOT 7-5	St. Lawrence	Ernie Olin	Resident Engineer	315-265-2320	315-323-8222	315-268-0512	ernest.olin@dot.ny.gov
NYSDOT Maintenance	All	Jim Ayers	MEC – Environmental	315-785-2318	315-276-5166	315-785-2320	james.ayers@dot.ny.gov
NYSDOT Region 7	All	Robert Peck	Environmental Manager	315-785-2350	315-778-3458	315-785-2576	robert.peck@dot.ny.gov
NYSDOT Region 7	All	Dennis Pawlicki	Regional Emergency Manager	315-785-2316	315-783-5336	315-785-2314	Dennis.pawlicki@dot.ny.gov



#### QUESTIONS??

JOHN FALGE

**Environmental Specialist II** 

**Construction Environmental Coordinator** 

NYSDOT Region 7
317 Washington St.
Watertown, NY 13601
(315) 785-2343



## 262924 Emergency Culvert Replacement Case Study

- 12/1/2015 Culvert Inspection
  - Red Flag Determination
- NYSDOT Regional Incident reporting system
  - Major (Level 1) Events that have a severe traffic impact or safety risk.
- 12/4/2015 Uniform Procedures Act "Finding of Emergency"
  - Notifications
- 12/9/2015 On Site Environmental Resource Inventory and Analysis
  - Alternative Analysis / Engineering Design
- 12/11/2015 Environmental Permitting Regulatory Coordination
  - LEPDA determination
  - Initial submission to NYSDEC USACE
  - USACE PCN concurrence 12/17/2015
  - NYSDEC Blanket Water Quality Certification
- In Water construction begins
- **12/21/2015** Project Complete
- 12/23/2015 Regulatory Certifications

