

# Owego Apalachin Maintenance and Storage Building Replacement Project

## Appendix C Correspondence

# HIGHLAND ASSOCIATES

6/25/2012

Mr. James Mead

Code Enforcement Officer  
Village of Owego  
20 Elm Street  
Owego, NY 13827

RE: Owego Apalachin Central School District - Storage / Bus Garage  
75 Elm Street  
Owego, NY 13827

Dear Mr. Mead,

On behalf of the Owego Apalachin Central School District (OACSD), I am writing to ask you to review and approve our evaluation of flood proofing measures proposed for the OACSD Storage / Bus Garage Building.

The 9,359 square foot Storage Building, built in 1977, located at 75 Elm Street in Owego New York, is a 1-story, non-combustible/combustible type of construction. (Type IIIB per NYSBC) the existing facility is a S-1 (Storage-Moderate Hazard).

The Storage Building sustained damages in the flood of September 7 and 8, 2011. The estimated cost to repair the building to pre-disaster condition is \$347,786 as per FEMA repair cost estimate<sup>1</sup>. The buildings current appraised value is \$318,000<sup>2</sup>. The repair costs are 109% of the current appraised value. We believe this qualifies the building as a "substantially damaged" building under NFIP flood plain management regulations.

The existing finish first floor elevation is 809.6 (See attachment A for Certified Elevation Certificates). The entire building is within the flood zone and has a 100 year base flood elevation (B.F.E.) of 813.0'. Flood plain compliance will be required which is +2' above the B.F.E. (815.0'). Refer to Attachment B for flood map.

Finish Floor.....	809.6'
B.F.E.....	813.0'
Design Requirement (BFE + 2').....	815.0'
Flood Proofing Design Required.....	5.4'

The structure constructed of CMU. It is unknown if flood waters altered the structural integrity of foundations, footings and wall systems but it assumed some level of damage has occurred based on visual inspections. We do feel the building is safe and is not a concern from a structural standpoint. The building had no design features to prevent flood water intrusion. The water level within the building rapidly

<sup>1</sup> FEMA Project Worksheet 0C3DE97, CEF Total Project Summary, Part A

<sup>2</sup> Summary Appraisal Report of 36 Talcott Street, Owego, NY, by Congdon & Company Inc., dated 01/12/2012

# HIGHLAND ASSOCIATES

equalized to the level of external flooding thereby preventing large scale structural damage to the building.

In an effort to achieve floodplain compliance in accordance with FEMA Regulations<sup>1</sup>, we have evaluated options to waterproof the structure. The existing buildings walls cannot support the lateral loading associated 5.4' of flood water against the exterior walls of the building. We have determined the only practical means of obtaining flood plain compliance would be to install a flood wall around the perimeter of the structure and back flow preventers on all service piping. Please refer to Attachment C for site drawing and flood wall design.

If you concur with our conclusion that: 1) the building is "substantially damaged" as defined by NFIP Floodplain Management regulations and 2) installing a flood wall and back flow preventers is the only practical means to obtain flood plain compliance, as mandated by NFIP requirements for "substantially damaged" buildings, please respond with a letter confirming your conclusions.

Should you have any questions, concerns or require additional information, please contact me.

Sincerely,



William Flynn, Principal, AIA, Highland Associates

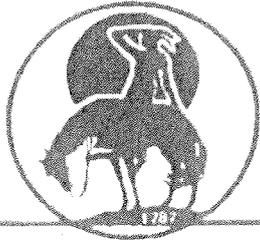
cc: Dr. William Russell, Superintendent of Schools, Owego Apalachin Central School District



<sup>1</sup> Title 44 CFR, § 60.3 Flood plain management criteria for flood-prone areas,

(c) When the Federal Insurance Administrator has provided a notice of final flood elevations for one or more special flood hazard areas on the community's FIRM and, if appropriate, has designated other special flood hazard areas without base flood elevations on the community's FIRM, but has not identified a regulatory floodway or coastal high hazard area, the community shall:

- (1) Require the standards of paragraph (b) of this section within all A1-30 zones, AE zones, A zones, AH zones, and AO zones, on the community's FIRM;
- (2) Require that all new construction and substantial improvements of residential structures within Zones A1-30, AE and AH zones on the community's FIRM have the lowest floor (including basement) elevated to or above the base flood level, unless the community is granted an exception by the Federal Insurance Administrator for the allowance of basements in accordance with § 60.6 (b) or (c);
- (3) Require that all new construction and substantial improvements of nonresidential structures within Zones A1-30, AE and AH zones on the community's firm (i) have the lowest floor (including basement) elevated to or above the base flood level or, (ii) together with attendant utility and sanitary facilities be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;
- (4) Provide that where a non-residential structure is intended to be made watertight below the base flood level, (i) a registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the applicable provisions of paragraph (c)(3)(ii) or (c)(8)(ii) of this section, and (ii) a record of such certificates which includes the specific elevation (in relation to mean sea level) to which such structures are flood proofed shall be maintained with the official designated by the community under § 59.22(a)(9)(iii);



FOUNDED 1787

## Village of Owego

20 Elm Street

Owego, New York 13827

Office of the Mayor  
Village Clerk/Treas  
FAX  
Sewer Dept  
FAX

607/687-1710  
607/687-3555  
607/687-1787  
607/687-2282  
607/687-2344

Village Police Dept  
FAX  
Dept. of Public Works/Code  
FAX  
Village Garage

607/687-2233  
607/687-2235  
607/687-1101  
607/687-2062  
607/687-2221

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TO: Owego Apalachin Central School District Administration

DATE: August 29, 2012

RE: Owego Apalachin Central School District - Flood Proofing

TO: Dr. William Russell

After reviewing the reports by Highland Associates regarding flood proofing measures for the Owego Apalachin School District and on August 29, 2012 visiting and inspecting three sites; the bus garage/storage building, the maintenance building on Elm Street along with the administration building located on Talcott Street, there is no question that all three sites are substantially damaged from the flood of September 8, 2011. The proposed flood walls, in my opinion, are the only practical means of flood proofing compliance.

Given the facts from visiting the three structures, and reviewing the proposed flood walls, this office feels that the most effective remediation is to demolish and remove all three structures from the flood plain.

Sincerely,

James S. Mead  
Code Enforcement Officer/Floodplain Manager  
Village of Owego



January 7<sup>th</sup>, 2014

Mr. Dan Griffiths, P.E.  
Griffiths Engineering, LLC  
13 South Washington Street, Suite 1  
Binghamton, NY 13903

Re: Owego Central School District Flood Protection      WEC Project: E043.2012  
Existing Maintenance & Storage Building Site

Dear Mr. Griffiths:

Per your request, I have taken a closer look at the Maintenance and Storage Building Facility with regard to providing flood protection at the existing site located south of the Owego Central School Campus (see attached location map). To provide flood protection of the facility at the existing site would require either construction of a perimeter flood wall protection system with flood gates (Option 1), elevation of the structures and site by fill (Option 2) or elevating the buildings by structural measures such as piles (Option 3).

Based on information listed on the elevation certificate (attached) the September 2011 high water mark inundated the existing buildings by approximately 6' of water. Since the facility stores hazardous materials that may be highly volatile, flammable, explosive or water reactive, it is our opinion that the facility be considered a "critical facility". As such, a proposed replacement facility should be protected to at least the 500-year flood elevation which is approximately elevation 816.0. Such action would displace a significant volume of floodplain storage. Based on the 100-year base flood elevation (BFE) of 813.0, it is estimated that approximately 21,000CY+/- of floodplain volume would need to be replaced with Options 1 and 2 in accordance with the Village of Owego Floodplain Damage Ordinance listed below.

The Village of Owego Floodplain Damage Prevention ordinance 117-14-B-3 states *"Whenever any portion of a floodplain is authorized for development, the volume of space occupied by the authorized fill or structure below the base flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood elevation at or adjacent to the development site. All such excavations shall be constructed to drain freely to the watercourse. No area below the*

*waterline of a pond or other body of water can be credited as a compensating excavation".* Given this requirement, it is our opinion that it would be impossible to compensate for lost flood plain storage (for Options 1 and 2) within the constraints of the existing property. As such, the logical flood compensation area would need to be located on a vacant property owned by the School District that is located adjacent and to the west (see attached map) of the existing site. Based on the estimate of 21,000CY of floodplain compensation, WEC developed a conceptual grading plan on the vacant site as depicted on the attached mitigation plan. As can be observed from the grading plan, the excavation area would be extensive and approximately 5' deep. In addition, it can be observed that the mitigation site itself is in a depressed area and there is no opportunity to freely drain the site. As such, the mitigation plan would not comply with the Owego Floodplain Damage Prevention Ordinance.

In addition it should be noted that the existing site is within the 100-year backwater elevation of the Susquehanna River. As such, dry access to the site would not be possible during a major riverine event to maintain operation of interior pumping facilities (Option 1). It is noted that during the record flooding in September 2011, flood stages on the Susquehanna River in the Owego area did not subside for several days.

For Option 3, floodplain mitigation measures would be minimized due to the assumed use of piles to elevate the first floor elevations of structures above the design flooding level. It is recommended that if this option were to be pursued, the first floor elevation of the elevated structures be set above the 500-year flood elevation. Given this, it is our opinion that the existing site could not function for it's intended use (vehicle access to first floor bays, etc.) due to the differential in adjacent existing grades and the new first floor elevation.

As previously identified by the project architect (Highland Associates), the estimated cost of any of the Options listed in this letter would exceed the cost of relocating the facility at a site outside the floodplain adjacent to Monkey Run Creek. Therefore it is our opinion that relocation of the existing facility to a new location outside the 100-year floodplain is the only method of achieving local floodplain code compliance, makes economic sense, and is the logical choice to eliminate future repetitive damage to the facility.

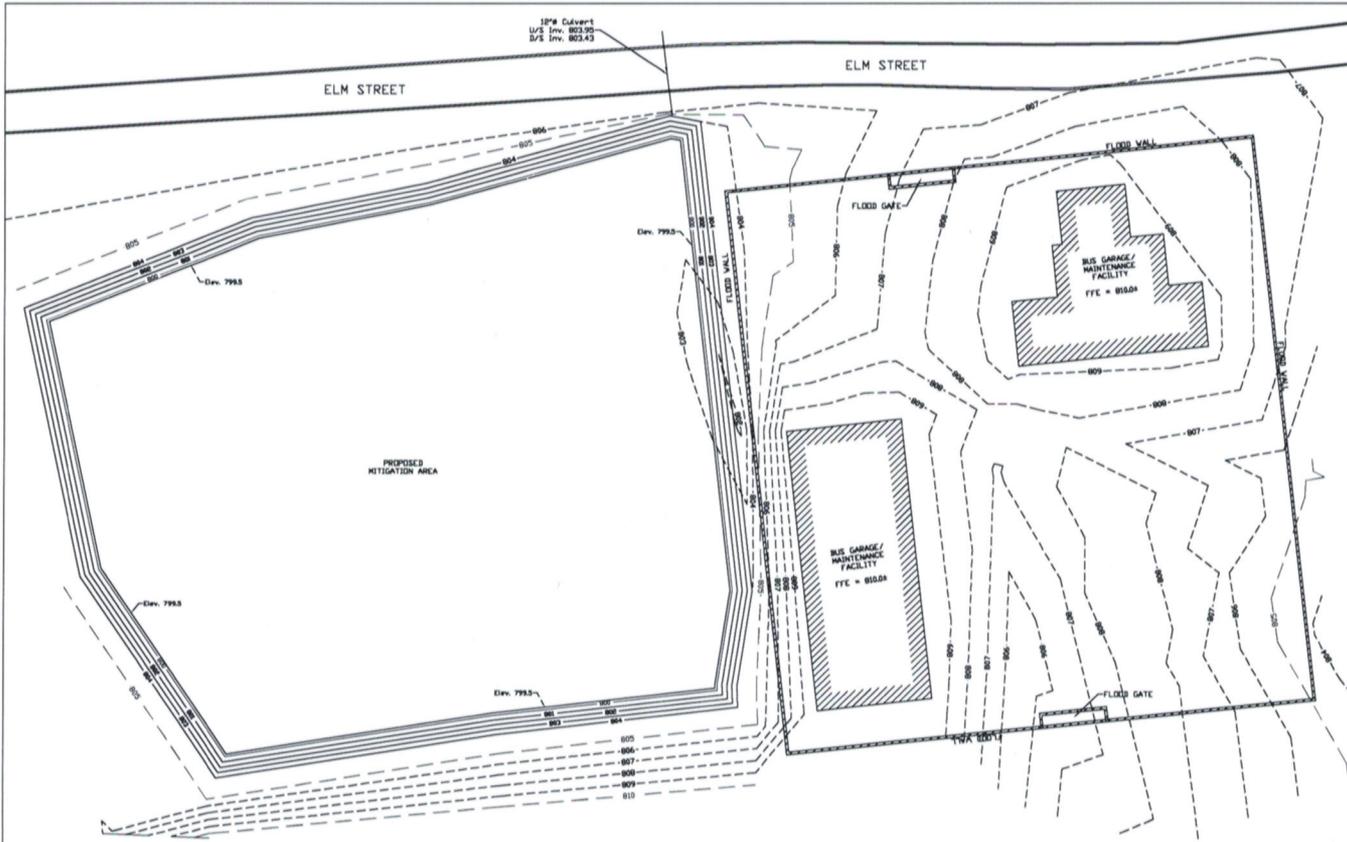
If you have any questions concerning this assessment, please do not hesitate to call.

Sincerely

*Charles F. Woidt Jr.*

Charles (Rick) Woidt Jr., P.E., CFM

with attachments



18" x 18" Culvert  
 U/S Inv. 803.95  
 S/S Inv. 803.43

ELM STREET

ELM STREET

PROPOSED MITIGATION AREA

Elev. 799.3

Elev. 799.3

Elev. 799.3

Elev. 799.3

FLOOD GATE

FLOOD WALL

BUS GARAGE/  
 MAINTENANCE  
 FACILITY  
 FFE = 818.04

BUS GARAGE/  
 MAINTENANCE  
 FACILITY  
 FFE = 818.04

FLOOD GATE

LEGEND	
SYMBOL	ITEM DESCRIPTION
—	EDGE OF ROAD
---800---	EXISTING CONTOURS MAJOR
---800---	EXISTING CONTOURS MINOR
▨	EXISTING BUILDING
---800---	PROPOSED CONTOURS MAJOR
---800---	PROPOSED CONTOURS MINOR
▨	PROPOSED FLOODWALL



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**HIGHLAND ASSOCIATES**

Architecture | Engineering | Interior Design  
 1000 Route 9W, Suite 200 | 1000 Route 9W, Suite 200 | 1000 Route 9W, Suite 200  
 P.O. Box 1000 | P.O. Box 1000 | P.O. Box 1000  
 Middletown, NY 10941 | Middletown, NY 10941 | Middletown, NY 10941



**GRIFFITHS ENGINEERING**

44 South Main Street, Suite 100  
 Middletown, NY 10941  
 Telephone: 845-734-8888  
 Fax: 845-734-8888



44 Chicago Street, Suite 200  
 Middletown, NY 10941  
 Telephone: 845-734-8888  
 Fax: 845-734-8888

OWEGO ELEMENTARY SCHOOL  
 SED CONTROL NUMBER  
 # 62-06-01-06-001-6-001

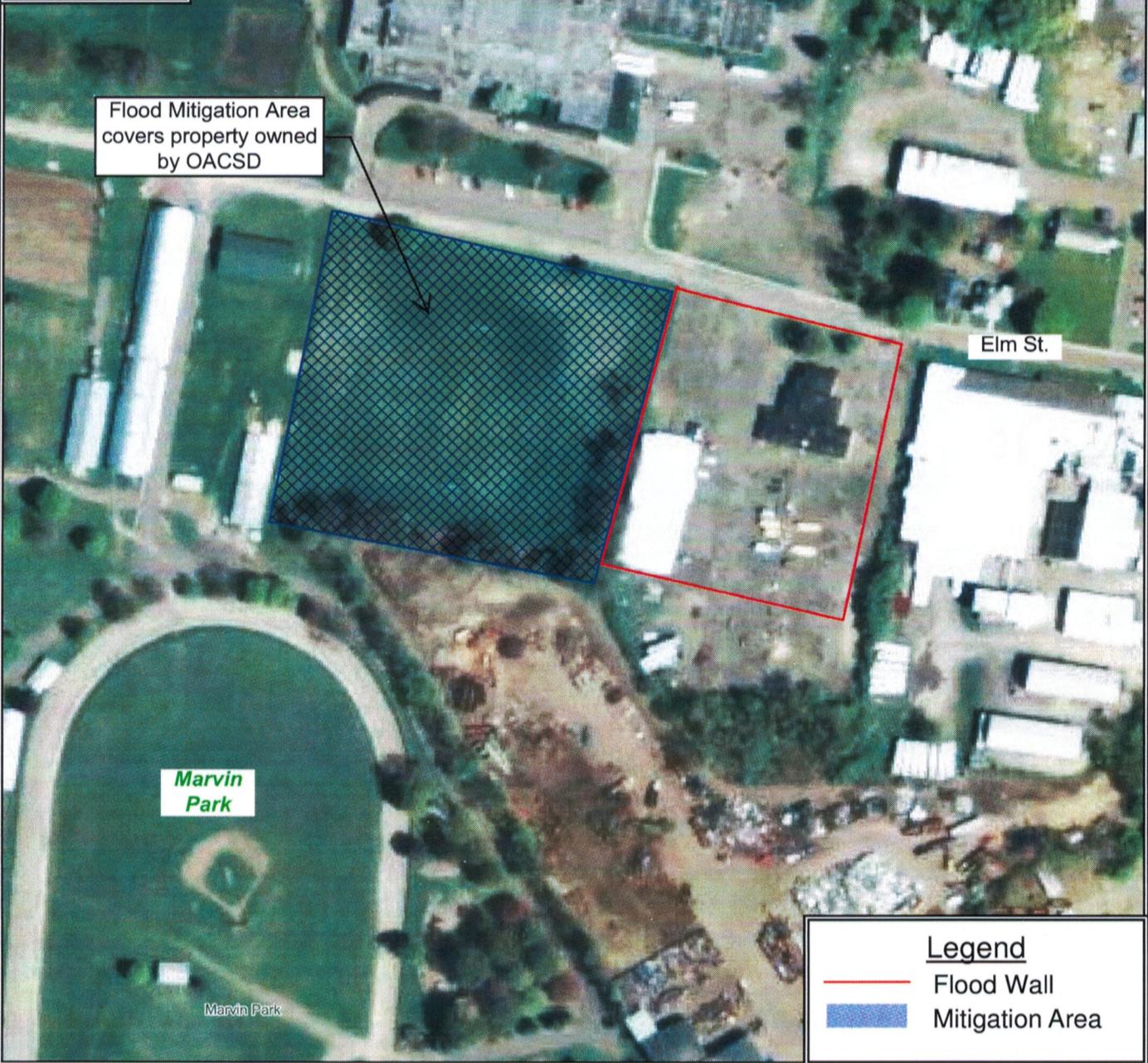
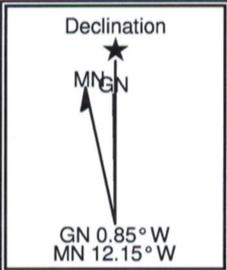
OWEGO-APALACHIN  
 CENTRAL SCHOOL DISTRICT

Maintenance Facility  
 Owego, New York  
 Existing Facility  
 Floodwall &  
 Site Mitigation

PRELIMINARY SITE MITIGATION

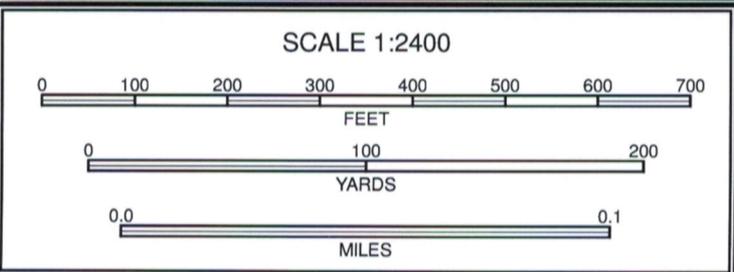
PROJECT NO. NPD  
 DRAWING NO. CF-10  
 DATE: 01/06/2014  
 SHEET NO.

A-1



**Legend**

- Flood Wall
- Mitigation Area



Owego Central School District  
Maintenance Facility  
-  
Conceptual Flood Mitigation Area

Scale: 1inch = 200feet



Natural Resources  
Conservation Service

June 11, 2015

441 South Salina St.  
Suite 354  
Syracuse, NY 13212  
315-477-6506  
[kathryn.duncan@ny.usda.gov](mailto:kathryn.duncan@ny.usda.gov)

Christine Piwonka-Bernstein  
Department of Homeland Security FEMA  
Leo O'Brien Federal Building  
11 A Clinton Avenue Suite 742  
Albany, NY 12207

Re: Owego Apalachin School Maintenance Bldg/Garage - DR-4031 PW #2001  
NRCS FPPA review

Ms. Piwonka-Bernstein,

I have received the materials with the information needed to complete a Farmland Conversion Impact Rating (NRCS-AD-1006) for the project cited above which is required by FEMA for any project receiving federal funding.

I have completed the form with the required information. The final number of points that the project has received as part of the process is 130. According to the FPPA manual 440-V-CPM – Amed 12 – 523.10 Part B Lands Not Subject to Provisions of the FPPA, Lands that receive a combined score of less than 160 points from the LESA criteria are not subject to the act. No further action is required for this project. Please keep this letter with the completed form as this is the final determination.

If you have any questions about this determination please feel free to contact me.

A handwritten signature in blue ink that reads "Kathryn Duncan". The signature is fluid and cursive.

Kathryn Duncan  
Cartographer

**FARMLAND CONVERSION IMPACT RATING**

<b>PART I</b> (To be completed by Federal Agency)		Date Of Land Evaluation Request <b>6/10/15</b>				
Name of Project <b>OASCD Bus/Maintenance Bldg</b>		Federal Agency Involved <b>FEMA</b>				
Proposed Land Use <b>Schools/Maintenance and Support</b>		County and State <b>Tioga County, NY</b>				
<b>PART II</b> (To be completed by NRCS)		Date Request Received By NRCS <b>6/10/2015</b>		Person Completing Form: <b>Katie Duncan</b>		
Does the site contain Prime, Unique, Statewide or Local Important Farmland? <i>(If no, the FPPA does not apply - do not complete additional parts of this form)</i>		YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	377 ac	Average Farm Size 189 ac	
corn, hay	Farmable Land In Govt. Jurisdiction Acres: <b>106,834</b> 32	Amount of Farmland As Defined in FPPA Acres: <b>232,833</b> 70				
Tioga Co LESA	none	Date Land Evaluation Returned by NRCS <b>6/11/2015</b>				
<b>PART III</b> (To be completed by Federal Agency)		Alternative Site Rating				
		Site A	Site B	Site C	Site D	
A. Total Acres To Be Converted Directly		3.72				
B. Total Acres To Be Converted Indirectly		0				
C. Total Acres In Site		49.88				
<b>PART IV</b> (To be completed by NRCS) Land Evaluation Information						
A. Total Acres Prime And Unique Farmland		3.72				
B. Total Acres Statewide Important or Local Important Farmland		0				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted		.001				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value		11.8				
<b>PART V</b> (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)		81				
<b>PART VI</b> (To be completed by Federal Agency) Site Assessment Criteria <i>(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)</i>		Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use		(15)	11			
2. Perimeter In Non-urban Use		(10)	2			
3. Percent Of Site Being Farmed		(20)	0			
4. Protection Provided By State and Local Government		(20)	20			
5. Distance From Urban Built-up Area		(15)	1			
6. Distance To Urban Support Services		(15)	0			
7. Size Of Present Farm Unit Compared To Average		(10)	0			
8. Creation Of Non-farmable Farmland		(10)	0			
9. Availability Of Farm Support Services		(5)	5			
10. On-Farm Investments		(20)	0			
11. Effects Of Conversion On Farm Support Services		(10)	10			
12. Compatibility With Existing Agricultural Use		(10)	0			
TOTAL SITE ASSESSMENT POINTS		160	49	0	0	0
<b>PART VII</b> (To be completed by Federal Agency)						
Relative Value Of Farmland (From Part V)		100	81	0	0	0
Total Site Assessment (From Part VI above or local site assessment)		160	49	0	0	0
<b>TOTAL POINTS (Total of above 2 lines)</b>		260	130	0	0	0
Site Selected:		Date Of Selection	Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>			
Reason For Selection:						
Name of Federal agency representative completing this form: <b>Christine Piwonka-Bernstein</b>					Date: <b>6/10/15</b>	

## STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

- Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, <http://fppa.nrcs.usda.gov/lesa/>.
- Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s) of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at [http://offices.usda.gov/scripts/ndISAPI.dll/oip\\_public/USA\\_map](http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map), or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)
- Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.
- Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.
- Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.
- Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.
- Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

## INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

*(For Federal Agency)*

**Part I:** When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

**Part III:** When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

**Part VI:** Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.
2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

**Part VII:** In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.

Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site A}$$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.