

**§ 404 Individual Permit Application &
§ 401 Water Quality Certification**
Stearns Road Railroad Grade Separation (PID 80729)



Prepared for:
Cuyahoga County Department of Public Works
2100 Superior Viaduct
Cleveland, Ohio 44113

Tran Systems

December 19, 2012

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§404 Individual Permit Application

17. DIRECTIONS TO THE SITE

From Buffalo: I-90 West to I-71 South to I-480 West, Exit Stearns Road. Turn left onto Stearns Road.

18. Nature of Activity (Description of project, include all features)

The Preferred Alternative involves the re-alignment of Stearns Road to improve congestion and safety issues associated with the Norfolk Southern railroad crossing. A bridge will be constructed over the railroad tracks to provide a grade separation which will alleviate congestion and safety issues associated with the train traffic. This will provide an unobstructed route for residents and school buses to travel throughout Olmsted Township.

The Preferred Alternative will impact one jurisdictional wetland (Wetland A, provisional Cat. 1, non-forested). A total of 1.78 acres of Wetland A will be impacted as a direct result of roadway construction activities along Stearns Road. No indirect impacts to wetlands are expected as a result of the Preferred Alternative. Permanent fill (clean earthen fill), will be placed in one jurisdictional wetland during construction of the Preferred Alternative.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

Olmsted Township has been adversely impacted by the increase in rail traffic resulting from the merger of Conrail to CSX and NS. Specifically, the crossing of Stearns Road with two sets of mainline NS tracks that connect Cleveland and Chicago, has experienced vehicular delays. The delays are caused by trains blocking the crossing, and have had a substantial adverse impact on the area. According to NS, there are a total of 45 train movements passing Stearns Road per day. Trains average 45 MPH and also average a little over a mile in length which estimates to the roadway being blocked for approximately 90-100 minutes per day.

Cuyahoga County, on behalf of Olmsted Township, has taken the necessary actions to pursue an improvement that will alleviate the traffic delays. As a result, a Grade Separation Location Study was performed in February 2001 by the Cuyahoga County Engineer's Office and the current project to study and design a grade separation project at this crossing has been undertaken. The Preferred Alternative involves t

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

The Preferred Alternative will impact one jurisdictional wetland (Wetland A, provisional Cat. 1, non-forested). A total of 1.78 acres of Wetland A will be impacted as a direct result of roadway construction activities along Stearns Road. No indirect impacts to wetlands are expected as a result of the Preferred Alternative. Permanent fill (clean earthen fill), will be placed in one jurisdictional wetland during construction of the Preferred Alternative.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
2,872 (Permanent, Earthen Fill)		

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 1.78 acres
or
Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

Avoidance and minimization of impacts to aquatic resources have been incorporated throughout the entire design process. For compensation for impacts, wetland credits will be purchased from the North Coast Regional Council of Park Districts at the Castalia Quarry mitigation site. A total of 2.70 acres of wetland credits will be purchased.

24. Is Any Portion of the Work Already Complete? Yes No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list)

a. Address- HPCP I, LLC 27090 Bagley Road

City - Olmsted Township State - Ohio Zip - 44138

b. Address- Thomas H. McKenna, Sr. TR 27120 Bagley Road

City - Olmsted Township State - Ohio Zip - 44138

c. Address- HPCP I, LLC 27082 Bagley Road

City - Olmsted Township State - Ohio Zip - 44138

d. Address- See Exhibit 1, page 4 for additional property owner information.

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
ODOT	CE Level 4	PID 80729	July 2010	September 13, 2010	
ODOT/USFWS/DNR	ESR/ESA Sec. 7	PID 80729	August 2008	November 2008	
SHPO	Cultural Resources	PID 80729	August 2008	November 2008	
USACE	JD	2008-00970-ROC	August 2008	October 8, 2009	

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT

DATE

SIGNATURE OF AGENT

DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

EXHIBIT 1.**Block 25. Addresses of Adjoining Property Owners**

Parcel #	Owner's Name	House Number	Street Name	City	Zip
264-20-024	FLETCHER, MARGARET M.	08152	STEARNS	OLMSTED TOWNSHIP	44138
264-20-023	RAGER, JANICE	08148	STEARNS	OLMSTED TOWNSHIP	44138
264-20-022	L. HURST, BETTY A	8140	STEARNS	OLMSTED TOWNSHIP	44138
264-20-020	TEMESVARI, MARY K.	08086	STEARNS	OLMSTED TOWNSHIP	44138
264-20-019	VAN RIPER BETTY J.	08068	STEARNS	OLMSTED TOWNSHIP	44138
264-20-018	MIHALIC, RICHARD S	08050	STEARNS	OLMSTED TOWNSHIP	44138
264-20-016	MOYSE, GEOFFREY E.	08032	STEARNS	OLMSTED TOWNSHIP	44138
264-20-013	PEARL ROAD MINI STORAGE INC.	8000	STEARNS	OLMSTED TOWNSHIP	44138
264-21-008	KLEK BOBBIE	07949	STEARNS	OLMSTED TOWNSHIP	44138

§401 Water Quality Certification Application

APPLICATION FOR OHIO EPA SECTION 401 WATER QUALITY CERTIFICATION

Effective October 1, 1996
Revised August, 1998

This application must be completed whenever a proposed activity requires an individual Clean Water Act Section 401 Water Quality Certification (Section 401 certification) from Ohio EPA. A Section 401 certification from the State is required to obtain a federal Clean Water Act Section 404 permit from the U.S. Army Corps Engineers, or any other federal permits or licenses for projects that will result in a discharge of dredged or fill material to any waters of the State. To determine whether you need to submit this application to Ohio EPA, contact the U.S. Army Corps of Engineers District Office with jurisdiction over your project, or other federal agencies reviewing your application for a federal permit to discharge dredged or fill material to waters of the State, or an Ohio EPA Section 401 Coordinator at (614) 644-2001.

The Ohio EPA Section 401 Water Quality Certification Program is authorized by Section 401 of the Clean Water Act (33 U.S.C. 1251) and the Ohio Revised Code Section 6111.03(P). Ohio Administrative Code (OAC) Chapter 3745-32 outlines the application process and criteria for decision by the Director of Ohio EPA. In order for Ohio EPA to issue a Section 401 certification, the project must comply with Ohio's Water Quality Standards (OAC 3745-1) and not potentially result in an adverse long-term or short-term impact on water quality. Included in the Water Quality Standards is the Antidegradation Rule (OAC Rule 3745-1-05), effective October 1, 1996, revised October, 1997 and May, 1998. The Rule includes additional application requirements and public participation procedures. **Because there is a lowering of water quality associated with every project being reviewed for Section 401 certification, every Section 401 certification applicant must provide the information required in Part 10 (pages 3 and 4) of this application.** In addition, applications for projects that will result in discharges of dredged or fill material to wetlands must include a wetland delineation report approved by the Corps of Engineers, a wetland assessment with a proposed assignment of wetland category (ies), official documentation on evaluation of the wetland for threatened or endangered species, and appropriate avoidance, minimization, and mitigation as prescribed in OAC 3745-1-50 to 3745-1-54. Ohio EPA will evaluate the applicant's proposed wetland category assignment and make the final assignment.

Information provided with the application will be used to evaluate the project for certification and is a matter of public record. If the Director determines that the application lacks information necessary to determine whether the applicant has demonstrated the criteria set forth in OAC Rule 3745-32-05(A) and OAC Chapter 3745-1, Ohio EPA will inform the applicant in writing of the additional information that must be submitted. The application will not be accepted until the application is considered complete by the Section 401 Coordinator. An Ohio EPA Section 401 Coordinator will inform you in writing when your application is determined to be complete.

Please submit the following to "Section 401 Supervisor, Ohio EPA/DSW, P.O. Box 1049, Columbus, Ohio 43216-1049:

- Four (4) sets of the completed application form, including the location of the project (preferably on a USGS quadrangle) and 8-1/2 x 11" scaled plan drawings and sections.
- One (1) set of original scaled plan drawings and cross-sections (or good reproducible copies).

(See Application Primer for detailed instructions)

1. The federal permitting agency has determined this project: (check appropriate box and fill in blanks)

a. requires an individual 404 permit/401 certification- Corps Public Notice # _____

b. _____ requires a Section 401 certification to be authorized by Nationwide Permit # _____

c. _____ requires a modified 404 permit/401 certification for original Public Notice # _____

d. _____ requires a federal permit under _____ jurisdiction identified by # _____

e. _____ requires a modified federal permit under _____ jurisdiction identified by # _____

2. Application number (to be assigned by Ohio EPA): _____

3. Name and address of Applicant: Telephone number during business hours:
 Douglas L. Dillon (216) 348-3800 (Office)
 Cuyahoga County Dept. of Public Works
 2100 Superior Viaduct (216) 348-3896 (Fax)
 Cleveland, OH 44113

3a. Signature of Applicant: Date: _____

4. Name, address and title of Authorized Agent: Telephone number during business hours:
 Chantil Milam (614) 433-7818 (Office)
 TranSystems Corp.
 1105 Schrock Road, Ste. 400 (614) 846-2602 (Fax)
 Columbus, OH 43229

4a. Statement of Authorization: I hereby designate and authorize the above-named agent to act in my behalf in the processing of this permit application, and to furnish, upon request, supplemental information in support of the application.

Signature of Applicant: Date: _____

5. Location on land where activity exists or is proposed. Indicate coordinates of a fixed reference point at the impact site (if known) and the coordinate system and datum used.

The project is located in Olmsted Township, Cuyahoga County, Ohio (Figure 1, Appendix A). The project's southern boundary is located 900 feet south of the existing railroad crossing at the northern limit of the Bagley Road/Stearns Road intersection. The northern project boundary is located approximately 2,200 feet north of the existing railroad crossing, approximately 500 feet south of the Cook Road/Stearns Road intersection. **See Exhibit 2, p.11 for a more detailed description of the project location.**

Rocky River (HUC 04110001)	Cuyahoga	Olmsted	Ohio	44138
Watershed	County	Township	State	Zip Code

6. Is any portion of the activity for which authorization is sought complete? _____ Yes No
 If answer is "yes," give reasons, month and year activity was completed. Indicate the existing work on the drawings.

7. List all approvals or certifications and denials received from other federal, interstate, state or local agencies for any structures, construction, discharge or other activities described in this application.

AGENCY	TYPE APPROVAL	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
ODOT	Level 4 Categorical Exclusion	PID 80729	July 2010	9-13-2010	
ODOT	Level 1 ESR	PID 80729	August 2008	November 2008	
USFWS / ODNR	Level 1 ESR/ ESA Section 7	PID 80729	August 2008	November 2008	
SHPO	Cultural Resource Clearance	PID 80729	August 2008	11-10-2008	
USACE	Jurisdictional Determination	Rocky River- 2008-00970-ROC	August 2008	10-8-2009	
USACE	§404 Individual Permit application submitted concurrently	PID 80729			

See Exhibit 3, p. 12

8. **DESCRIPTION OF THE ACTIVITY (fill in information in the following four blocks - 8a, 8b, 8c & 9)**

- 8a. Activity: Describe the Overall Activity:

The Stearns Road Railroad Grade Separation project proposes to construct a railroad grade separation between Stearns Road and two Norfolk and Southern Corporation railroad tracks in Olmsted Township, Cuyahoga County, Ohio. For a more detailed description of the proposed project See Exhibit 4, p. 13. See Table 2 in Appendix E for a description of actions to one wetland impacted by the proposed project.

- 8b. Purpose: Describe the purpose, need and intended use of the activity:

Olmsted Township has been adversely impacted by the increase in rail traffic resulting from the merger of Conrail to CSX and NS. Specifically, the crossing of Stearns Road with two sets of mainline NS tracks that connect Cleveland and Chicago, has experienced vehicular delays. The delays are caused by trains blocking the crossing, and have had a substantial adverse impact on the area. According to NS, there are a total of 45 train movements passing Stearns Road per day. Trains average 45 MPH and also average a little over a mile in length which estimates to the roadway being blocked for approximately 90-100 minutes per day.

Cuyahoga County, on behalf of Olmsted Township, has taken the necessary actions to pursue an improvement that will alleviate the traffic delays. As a result, a Grade Separation Location Study was performed in February 2001 by the Cuyahoga County Engineer's Office and the current project to study and design a grade separation project at this crossing has been undertaken. The Preferred Alternative involves the re-alignment of Stearns Road to improve congestion and safety issues associated with the Norfolk Southern railroad crossing. A bridge will be constructed over the railroad tracks to provide a grade separation which will alleviate congestion and safety issues associated with the train traffic. This will provide an unobstructed route for residents and school buses to travel throughout Olmsted Township.

- 8c. Discharge of dredged or fill material: Describe type, quantity of dredged material (in cubic yards), and quantity of fill material (in cubic yards). (OAC

3745-1-05(B)(2)(a))

Permanent (total for 1 wetland)

Total

Area

1.78 acres

1.78 acres

Fill Volume

2,872 cu.yd.

2,872 cu.yd

Fill Material

Clean earthen fill

9. Waterbody and location of waterbody or upland where activity exists or is proposed, or location in relation to a stream, lake, wetland, wellhead or water intake (if known). Indicate the distance to, and the name of any receiving stream, if appropriate.

The Stearns Road project area is located in the Rocky River watershed (HUC 04110001), which drains to Lake Erie. One jurisdictional wetland will be impacted as a result of the proposed project. See Tables 1 and 2, Appendix E for location information and descriptions of the impacted features. (See also Exhibit 5, p. 14-15)

10. To address the requirements of the Antidegradation Rule, your application must include a report evaluating the:

- " Preferred Design (your project) and Mitigative Techniques
- " Minimal Degradation Alternative(s) (scaled-down version(s) of your project) and Mitigative Techniques
- " Non-Degradation Alternative(s) (project resulting in avoidance of all waters of the state)

At a minimum, item a) below must be completed for the Preferred Design, the Minimal Degradation Alternative(s), and the Non-Degradation Alternative(s), followed by completion of item b) for each alternative, and so on, until all items have been discussed for each alternative (see Primer for specific instructions). (Application and review requirements appear at **OAC 3745-1-05(B)(2)**, **OAC 3745-1-05(C)(6)**, **OAC 3745-1-05(C)(1)** and **OAC 3745-1-54**).

See Exhibit 6, pp. 12-24 for an Antidegradation Rule Discussion

- 10a) Provide a detailed description of any construction work, fill or other structures to occur or to be placed in or near the surface water. Identify all substances to be discharged, including the cubic yardage of dredged or fill material to be discharged to the surface water. **(OAC 3745-1-05(B)(2)(b))**
- 10b) Describe the magnitude of the proposed lowering of water quality. Include the anticipated impact of the proposed lowering of water quality on aquatic life and wildlife, including threatened and endangered species (include written comments from Ohio Department of Natural Resources and U.S. Fish and Wildlife Service), important commercial or recreational sport fish species, other individual species, and the overall aquatic community structure and function. Include a Corps of Engineers approved wetland delineation. **(OAC 3745-1-05(C)(6)(a, b) and OAC 3745-1-54)**
- 10c) Include a discussion of the technical feasibility, cost effectiveness, and availability. In addition, the reliability of each alternative shall be addressed (including potential recurring operational and maintenance difficulties that could lead to increased surface water degradation.) **(OAC 3745-1-05(C)(6)(h, j-k) and OAC 3745-1-54)**
- 10d) For regional sewage collection and treatment facilities, include a discussion of the technical feasibility, cost effectiveness and availability, and long-range plans outlined in state or local water quality management planning documents and applicable facility planning documents. **(OAC 3745-1-05(C)(6)(l))**
- 10e) To the extent that information is available, list and describe any government and/or privately sponsored conservation projects that exist or may have been formed to specifically target improvement of water quality or enhancement of recreational opportunities on the affected water resource. **(OAC 3745-1-05(B)(2)(g))**
- 10f) Provide an outline of the costs of water pollution controls associated with the proposed activity. This may include the cost of best management practices to be used during construction and operation of the project. **(OAC 3745-01-05(C)(6)(g))**
- 10g) Describe any impacts on human health and the overall quality and value of the water resource. **(OAC 3745-1-05(C)(6)(c) and OAC 3745-1-54)**
- 10h) Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated and a brief discussion on the condition of the local economy. **(OAC 3745-1-5(B)(2)(e), and OAC 3745-1-05(C)(6)(l))**
- 10i) Describe and provide an estimate of the important social and economic benefits that may be lost as a result of this project. Include the effect on commercial and recreational use of the water resource, including effects of lower water quality on recreation, tourism, aesthetics, or other use and enjoyment by humans. **(OAC 3745-1-05(B)(2)(e,f), and OAC 3745-1-05(C)(6)(e))**
- 10j) Describe environmental benefits, including water quality, lost and gained as a result of this project. Include the effects on the aquatic life, wildlife, threatened or endangered species. **(OAC 3745-1-05 (B)(2)(e,f), OAC 3745-1-05 (C)(6)(b) and OAC 3745-1-54)**
- 10k) Describe mitigation techniques proposed (except for the Non-Degradation Alternative):
 - " Describe proposed Wetland Mitigation (see **OAC 3745-1-54** and Primer)
 - " Describe proposed Stream, Lake, Pond Mitigation (see Primer)

11. Application is hereby made for a Section 401 Water Quality Certification. I certify that I am familiar with the information contained in this application and, to the best of my knowledge and belief, such information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activities or I am acting as the duly authorized agent of the applicant.

Signature of Applicant

Date

Signature of Agent

Date

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in Block 3 has been filled out and signed.

Do not send a certification processing fee with this application. The appropriate fee will be assessed when a certification is issued.

EXHIBIT 2

401 APPLICATION: BLOCK 5

Location on land where activity exists or is proposed. Indicate coordinates of a fixed reference point at the impact site (if known) and the coordinate system and datum used.

The project is located in Olmsted Township, Cuyahoga County, Ohio (Figure 1, Appendix A). The project's southern boundary is located 900 feet south of the existing railroad crossing at the northern limit of the Bagley Road/Stearns Road intersection. The northern project boundary is located approximately 2,200 feet north of the existing railroad crossing, approximately 500 feet south of the Cook Road/Stearns Road intersection. Based on the USGS North Olmsted and West View, Ohio Quadrangles (USGS, 1994), the project is located at an approximate elevation of 789 feet within a residential area, located near the Lorain County border at 41°22'31.20" N latitude and -81°56'39.30" W longitude (Figure 2, Appendix A).

EXHIBIT 3

401 APPLICATION: BLOCK 7

List all approvals or certifications and denials received from other federal, interstate, state or local agencies for any structures, construction, discharge or other activities described in this application.

This document serves as both the Ohio Environmental Protection Agency (Ohio EPA) Individual §401 Water Quality Certification application and the U.S. Army Corps of Engineers (USACE) §404 Individual permit application. Please refer to the table located in Block 7 of the 401 Application for a list of approvals or certifications for this proposed project. A Categorical Exclusion Document Level IV has been approved by the Ohio Department of Transportation (ODOT) (Appendix B). Coordination with the Ohio EPA, ODOT, the Ohio Department of Natural Resources (ODNR), the State Historic Preservation Office (SHPO), the U.S Fish and Wildlife Service (USFWS), and the U.S. Army Corps of Engineers (USACE) has been completed (Appendix B).

EXHIBIT 4

401 APPLICATION: BLOCK 8a

Nature of activity. Description of the project.

The proposed project involves a railroad grade separation between Stearns Road (C.R. 76) and two railroad tracks of Norfolk Southern Corporation railroad in Olmsted Township, Cuyahoga County, Ohio (Figure 1, Appendix A). Within the township, Stearns Road is a north-south minor arterial roadway and the project area can be described as level terrain having residential/commercial land use with developed/disturbed terrestrial habitat. Project plan sheets are provided in Appendix C. In July 1998, the Surface Transportation Board (STB) approved the acquisition of all holdings and facilities of the Consolidated Rail Corporation (Conrail) jointly by the Norfolk Southern Corporation (NS) and CSX Transportation, Inc. (CSX). The Conrail assets were divided jointly between the two rail carriers resulting in the merger of three Class I railroads into two. The proposed railroad grade separation was initiated by the Cuyahoga County Engineer's Office upon completion of a Grade Separation Location Study which was undertaken as a result of the changes to rail traffic patterns leading to increased train traffic volumes through the western suburbs of Cuyahoga County. This increased rail volume impacts vehicular traffic by increasing accident potential, increasing vehicular traffic delays, increasing response times for emergency services, and adversely affecting school bus routes. Further, the community is affected by the increase in noise from the train horns and the decrease in air quality from idling vehicles stopped at the crossings.

The Preferred Alternative proposes a new roadway alignment approximately 225 feet east of the existing Stearns Road centerline. The overpass will be supported on earthen embankments with a three-span pre-stressed concrete I-beam structure with composite concrete deck superstructure on semi-integral stub type abutments in HP piles with spill through slopes spanning the rail lines. Piers would be located within the railroad right of way. Three frontage roads are proposed to maintain access to the properties on the north side of the tracks and the properties on the west side of the road south of the railroad tracks. Although touchdown points of the grade separation are within 1,000 feet of the existing crossing, road improvements will extend to the north to the southern project limit of the Cook Road/Stearns Road improvement project to result in a completely improved road corridor to Bagley Road. Other improvements that are proposed with this alternative include the extension of sanitary sewer trunk lines. A 15" line will be extended along Stearns Road and the western frontage road with a branch serving the properties that are along the eastern frontage road. The 18" sewer extension from Bagley Road will extend north 30 feet shy of the rail right of way where it will be stubbed to the west. A casing pipe will be installed beneath the grade separation embankment to accommodate the future extension of the line to serve the area. Other utility impacts include the relocation of the water main located along the western edge of pavement. The line will require relocation in advance of the elevated profile grade to limit the depth of cover over the pipe. New waterlines will be constructed along both frontage roads. Private utility relocations will also be required.

The gas line, located along the eastern edge of pavement will require some relocation to minimize depth of cover and several utility poles and aerial lines will require relocation due to the changes in vertical and horizontal alignment. Property impacts associated with this alternative include 11 residential relocations and two total property takes as well as the acquisition of 3.3 acres of vacant commercial land. Permanent property impacts for embankment construction will be experienced where the roadway profile is elevated and temporary property impacts will be experienced along the entire corridor for grading and driveway replacements and to facilitate maintenance of traffic. The project will largely be constructed utilizing part-width construction along the length of the corridor. Local traffic will be maintained during the construction of each phase of this alternative. One-way thru traffic will be maintained in the southbound direction with northbound traffic detoured during several phases of the work when two-way traffic is not possible.

EXHIBIT 5

401 APPLICATION: BLOCK 9

Waterbody and location of waterbody or upland where activity exists or is proposed, or location in relation to a stream, lake, wetland, wellhead or water intake (if known). Indicate the distance to, and the name of any receiving stream, if appropriate.

The project area is located within the West Branch Rocky River (headwaters to Rocky River) (HUC 04110001-060) of the Rocky River drainage basin (NRCS, 2012). The majority of the West Branch Rocky River (70%) was in full attainment of the existing warmwater habitat (WWH) aquatic life use; the remainder partially met the designated use (Ohio EPA, 2008b). Water quality sampling indicates a shift in impact type from nutrient enrichment from point sources to impacts associated with urban land use. West Branch Rocky River from Plum Creek to East Branch Rocky River is listed on the 303(d) List of Prioritized Impaired Waters (Category 5) (Ohio EPA, 2004). Aquatic life use, recreation use (primary contact), and fish consumption are listed as impaired. Probable impairment causes are unknown toxicity unknown ammonia, nutrients, siltation, organic enrichment/DO, and other habitat alterations. Probable sources include municipal point source, land development/suburbanization, urban runoff/storm sewers (NPS), and unknown source (Ohio EPA, 2004). Drainage of the study area occurs by way of roadside and railroad ditches as well as an unnamed tributary to the West Branch Rocky River (HUC 04110001-060). The unnamed tributary has no assigned aquatic life use designation. See Appendix B for the Jurisdictional Determination for the project area.

Wetland A: Wetland A is a PEM wetland located in the southeast section of the project area (Figure 3, Appendix A and photographs in Appendix D). This PEM wetland area was delineated as 2.86 acres within the study area boundary but appears to extend outside of boundary limits for a total size of approximately 3.43 acres. Based on aerial photography and existing woody remnants on site, this wetland appears to have been cleared of woody vegetation. Furthermore, the area was being drained by means of ditching from the wetland area. This wetland scored an 18.5 on the ORAM, which indicates a provisional Category 1 wetland. Wetland A was determined to be adjacent to an off-site perennial RPW and found to present significant nexus to the Rocky River, a TNW (see USACE letter, 2008). See Table 1 in Appendix E for location information and a description of the impacted feature.

EXHIBIT 6

401 APPLICATION: BLOCK 10

At a minimum, item a) below must be completed for the Preferred Design, the Minimal Degradation Alternative(s), and the Non-Degradation Alternative(s), followed by completion of item b) for each alternative, and so on, until all items have been discussed for each alternative (see Primer for specific instructions). (Application and review requirements appear at OAC 3745-1-05(B)(2), OAC 3745-1-05(C)(6), OAC 3745-1-05(C)(1) and OAC 3745-1-54).

Project History and Previous Studies

Olmsted Township has been adversely impacted by the increase in rail traffic resulting from the merger of Conrail to CSX and NS. Specifically, the crossing of Stearns Road with two sets of mainline NS tracks that connect Cleveland and Chicago, has experienced vehicular delays. The delays are caused by trains blocking the crossing, and have had a substantial adverse impact on the area. According to NS, there are a total of 45 train movements passing Stearns Road per day. Trains average 45 MPH and also average a little over a mile in length. It has been estimated that Stearns Road is blocked by trains approximately 90-100 minutes per day.

Cuyahoga County, on behalf of Olmsted Township, has taken the necessary actions to pursue an improvement that will alleviate the traffic delays. As a result, a Grade Separation Location Study was performed in February 2001 by the Cuyahoga County Engineer's Office and the current project to study and design a grade separation project at this crossing has been undertaken.

Background Information

Stearns Road (C.R. 76) is classified as a Minor Urban Arterial with a posted speed limit of 35 miles per hour within the project area. It is a two-lane shouldered section with unlimited access and roadside ditches. Within the project limits, the current average daily traffic is 11,610 vehicles per day (2007) which is comprised of 3% trucks.

Rail traffic averages 45 trains per day with freight trains travelling through this area at 50 miles per hour. The crossing consists of two sets of tracks that travel east-west through the middle of Olmsted Township. Trains utilizing the tracks are evenly distributed throughout the day. The warning devices at this crossing include standard railroad cross bucks and gates with mast mounted lights. Roadway improvement projects to Bagley Road and Cook Road (with some minor resurfacing of Stearns Road as it approaches the crossing) are either completed or under construction at this time, but will be completed prior to the construction of this project, so there are no other projects that would be affected by this improvement.

Project Location

The rail line bisects Olmsted Township north/south. The existing crossing is located on Stearns Road approximately 850 feet north of Bagley Road and 3,000 feet south of Cook Road in an area predominantly comprised of residential and commercial land use. Laurel Lane, which provides access to a residential subdivision, intersects Stearns Road to the east approximately 1,400 feet north of the railroad crossing.

The area north of the railroad crossing is mostly residential land use with homes having driveway access from Stearns Road. The area south of the railroad crossing is zoned commercial, even though the current land use is residential with homes also having driveway access from Stearns Road. A large vacant property is located in the southeast quadrant of the crossing. There are two other north-south roadway corridors that parallel Stearns Road provide traffic access between Bagley Road and Cook Road. Bronson Road is located 1.2 miles west of Stearns Road and Fitch Road is located approximately one mile east of Stearns Road. A railroad grade separation is also proposed at the Fitch Road crossing but is not a part of this project.

As part of the environmental review process, several location alternatives were selected to meet the purpose and need of this proposed project. Throughout ODOT's Project Development Process (which included several public involvement meetings), many of these conceptual alternatives were dismissed. Ultimately, two alternatives (Alternatives W-1b, E-1 and E-2) were selected as feasible alternatives. Finally, Alternative E-2 was selected as the Preferred Alternative for the proposed project. The No-Build Alternative was not considered as a conceptual alternative because it did not meet the purpose and need for the project.

10a. ALTERNATIVES DISCUSSION

Provide a detailed description of any construction work, fill or other structures to occur or to be placed in or near the surface water. Identify all substances to be discharged, including the cubic yardage of dredged or fill material to be discharged to the surface water. (OAC 3745-1-05(B)(2)(b))

10a-1. Preferred Alternative

The Preferred Alternative involves the re-alignment of Stearns Road to improve congestion and safety issues associated with the Norfolk Southern railroad crossing. A bridge will be constructed over the railroad tracks to provide a grade separation which will alleviate congestion and safety issues associated with the train traffic. This will provide an unobstructed route for residents and school buses to travel throughout Olmsted Township.

The Preferred Alternative proposes a new roadway alignment approximately 225 feet east of the existing Stearns Road centerline. The overpass will be supported on earthen embankments with a three-span pre-stressed concrete I-beam structure with composite concrete deck superstructure on semi-integral stub type abutments in HP piles with spill through slopes spanning the rail lines. Piers would be located within the railroad right of way. Three frontage roads are proposed to maintain access to the properties on the north side of the tracks and the properties on the west side of the road south of the railroad tracks. Although touchdown points of the grade separation are within 1,000 feet of the existing crossing, road improvements will extend to the north to the southern project limit of the Cook Road/Stearns Road improvement project to result in a completely improved road corridor to Bagley Road. Other improvements that are proposed with this alternative include the extension of sanitary sewer trunk lines. A 15" line will be extended along Stearns Road and the western frontage road with a branch serving the properties that are along the eastern frontage road. The 18" sewer extension from Bagley Road will extend north 30 feet shy of the rail right of way where it will be stubbed to the west. A casing pipe will be installed beneath the grade separation embankment to accommodate the future extension of the line to serve the area. Other utility impacts include the relocation of the water main located along the western edge of pavement. The line will require relocation in advance of the elevated profile grade to limit the depth of cover over the pipe. New waterlines will be constructed along both frontage roads. Private utility relocations will also be required. Project plan sheets are located in Appendix C.

Wetlands

The Preferred Alternative will impact one jurisdictional wetland (Wetland A). A total of 1.78 acres of jurisdictional wetlands will be impacted as a direct result of roadway construction activities along Stearns Road. No indirect impacts to wetlands are expected as a result of the Preferred Alternative. Permanent fill will be placed in one jurisdictional wetland during construction of the Preferred Alternative. Fill material will consist of clean earthen fill and will be obtained by the general contractor. Proposed wetland impacts will consist of 1.78 acres of Category 1 Non-Forested wetlands.

Impacts to wetlands as a result of the Preferred Alternative are shown on Figure 5 and on attached plan sheets located in Appendix C. A summary of proposed activities and fill types and quantities for each impacted feature are shown in Table 2, Appendix E.

10a-2. Minimal Degradation Alternative

The Minimal Degradation Alternative proposes the same bridge and roadway improvements as the Preferred Alternative with the exception of the embankment construction proposed for the southeast approach. In lieu of a graded embankment, a retaining wall is proposed to reduce the project footprint. Right of Way impacts are the same except for the acreage of vacant commercial land in the southeast quadrant, which for this alternative, is reduced by 0.60 acres to 2.7 acres. Other design aspects of this alternative, including the length of the roadway improvements, drainage, sanitary sewer, bridge and maintenance of traffic schemes, are identical to the Preferred Alternative. The Minimal Degradation Alternative would minimize impacts Wetland A because the proposed alignment would also include a retaining wall. The retaining wall would decrease the overall footprint of the roadway because it limits the amount of grading necessary for the construction of the roadway.

The Minimal Degradation Alternative has been developed through ODOT's PDP. Conceptual design indicates that while construction of this alternative is technically possible, it only provides marginal ecological benefit by providing less water quality impacts (Figures 6 and 7, Appendix A).

Wetlands

The Minimal Degradation Alternative will impact one jurisdictional wetland (Wetland A). A total of 1.30 acres of jurisdictional wetlands will be impacted as a direct result of roadway construction activities along Stearns Road. No indirect impacts to wetlands are expected as a result of the Preferred Alternative. Permanent fill will be placed in one jurisdictional wetland during construction of the Preferred Alternative. Fill material will consist of clean earthen fill and will be obtained by the general contractor. Proposed wetland impacts will consist of 1.30 acres of Category 1 Non-Forested wetlands.

Impacts to wetlands as a result of the Minimal Degradation Alternative are shown on Figure 7 and on attached plan sheets located in Appendix C. A summary of proposed activities and fill types and quantities for each impacted feature are shown in Table 3, Appendix E.

10a-3. Non-Degradation Alternative

Due to the location and configuration of the project area coupled with ODOT's design criteria for roadway widths and bridges, this proposed project cannot be completed without impacts to the aquatic resources. Therefore, the "No-Build" alternative is presented as the Non-Degradation Alternative. As the name implies, this involves not constructing the proposed improvement project. While no impacts to the resources would occur, the "No-Build" alternative does not meet the purpose and need for the project.

10b. IMPACTS ON WATER QUALITY AND AQUATIC LIFE BY ALTERNATIVE

Describe the magnitude of the proposed lowering of water quality. Include the anticipated impact of the proposed lowering of water quality on aquatic life and wildlife, including threatened and endangered species (include written comments from Ohio Department of Natural Resources and U.S. Fish and Wildlife Service), important commercial or recreational sport fish species, other individual species, and the overall aquatic community structure and function. Include a Corps of Engineers approved wetland delineation. (OAC 3745-1-05(C)(6)(a, b) and OAC 3745-1-54)

Minimal impacts on water quality, aquatic life, and wildlife species can be expected from both the Preferred and Minimal Degradation Alternatives. Field investigations did not reveal the presence of any federal or state-listed threatened, endangered, or special interest species within the study area. The Ohio Department of Natural Resources (ODNR) Division of Wildlife (DOW) was contacted for records of occurrences of endangered, threatened, or potentially threatened species and geological features within the study area, including a one mile radius. In addition, records for

Indiana bat capture locations and/or hibernacula within five miles and ten miles respectively of the study area were requested (Appendix B). This proposed project was also coordinated with ODNR Division of Wildlife and ODNR Division of Soil and Water Conservation, as well as the U.S. Fish and Wildlife Service (USFWS) (Appendix B). Coordination with ODNR and USFWS disclosed no known occurrences of any listed species, or their critical habitat within the study area. Additionally no records of Indiana bat captures or hibernacula within five and ten miles of the study area respectively were indicated.

The USFWS lists four federally threatened, endangered, proposed, candidate species, and/or species of concern for Cuyahoga County, Ohio. The list includes the endangered Indiana bat (*Myotis sodalis*), Kirtland's warbler (*Dendroica kirtlandii*) and piping plover (*Charadrius melodus*) (USFWS, 2012). Suitable habitat was evaluated for these species as well as suitable bald eagle (*Haliaeetus leucocephalus*) nesting habitat and nearest nesting sites. Federal and State-listed species and potential habitat within proximity to the Preferred Alternative are also listed in the Level 1 ESR (TranSystems, 2008). A total of 5 potential Indiana bat roosting trees would be impacted as a result of the Preferred and Minimal Degradation Alternatives.

Coordination was initiated by TranSystems on November 15, 2007. A response was received from ODNR DNAP on November 20, 2007. In their comments they stated that ODNR has no record of Indiana bat (*Myotis sodalis*, state endangered, federal endangered) capture locations or hibernacula within a ten mile radius of the project site. There are no existing or proposed state nature preserves or scenic rivers located at the project site. They are also unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state parks, state forests or state wildlife areas within the project area.

Coordination was initiated by ODOT-OES on October 27, 2008. Comments were received from the USFWS on December 8, 2008. In their response, the USFWS stated that the project falls under the Programmatic Consultation between the USFWS, FHWA and ODOT. The USFWS concurred with the ODOT determination that the project, as proposed, may affect, but is not likely to adversely affect the Indiana bat (*Myotis sodalis*). The project is within the PC-1a category of project impacts; therefore, cutting date restrictions apply. The USFWS encourages the use of the revised guidelines of tree removal prior to April 1 or after September 30. This recommendation is included as an environmental commitment to the project. The USFWS correspondence is included in Appendix B.

A Jurisdictional Determination for the proposed project was received on October 8, 2009 from the USACE (Appendix B). Two wetlands (Wetland A and B) and one stream (Stream 1) were confirmed to be jurisdictional. Of those identified resources, only one wetland (Wetland A) is located within the proposed project area and will be impacted as a result of the proposed project. One wetland is considered a Category 1 wetland as determined by the Ohio Rapid Assessment Method (ORAM), indicating that the wetland is of low quality.

Erosion and sediment control practices will be followed during project construction. A well-designed erosion control plan, which will be incorporated into the final construction plans, will minimize short-term construction impacts on the quality of the water exiting the site by use of silt barriers, silt fences, and/or other structures appropriately placed around the construction site. Once areas disturbed by construction have become stabilized (using permanent erosion protection or by the establishment of vegetation) it is expected that the construction area will no longer be a source of additional silt loadings.

10b-1. Preferred Alternative

The Preferred Alternative will impact one jurisdictional wetland (Wetland A) within the proposed project area, for an impact total of 1.78 acres (Figure 5, Appendix A) (Table 2, Appendix E). Wetlands within the project area were evaluated using the most current version of the ORAM (v.5.0) and were determined to be provisional Category 1 non-forested wetland. In general, the Category 1 wetland is limited to fair quality wetlands with signs of past

disturbances/modifications. Proposed wetland impacts associated with the construction of the Preferred Alternative total 1.78 acres (2,872 CU.YD.) of fill resulting in a 62% loss of wetland habitat within the proposed construction limits. While the wetland impacts associated with this project may have local significance, the loss of wetland habitat associated with this alternative is not likely to have a significant impact on water quality within the Rocky River watershed.

10b-2. Minimal Degradation Alternative

Like the Preferred Alternative, the Minimal Degradation Alternative will also impact one wetland within the proposed project area. Impacts to Wetland A, have been reduced by 0.48 acre, by implementing a retaining wall as part of the design the wetland impacts would be minimized (Figure 7, Appendix A) (Table 3, Appendix E). Proposed wetland impacts associated with the construction of the Minimal Degradation Alternative will total 1.30 acres (2,097 CU.YD.) of fill resulting in a 45% loss of wetland habitat within the proposed construction limits. While the wetland impacts associated with this project may have local significance, the loss of wetland habitat associated with this alternative is not likely to have a significant impact on water quality within the Rocky River watershed.

10b-3. Non-Degradation Alternative

No new impacts are expected in association with the Non-Degradation Alternative.

10c. **TECHNICAL FEASIBILITY AND COST EFFECTIVENESS BY ALTERNATIVE**

Include a discussion of the technical feasibility, cost effectiveness, and availability. In addition, the reliability of each alternative shall be addressed (including potential recurring operational and maintenance difficulties that could lead to increased surface water degradation.) (OAC 3745-1-05(C)(6)(h, j-k) and OAC 3745-1-54)

The following section (10c-1) discusses the feasibility, availability, reliability, and operations and maintenance difficulties associated with each alternative. Section 10c-2 discusses the cost effectiveness of each alternative. Table 4 in Appendix E summarizes each of these categories by alternative.

10c-1. **Technical feasibility, availability to construct, reliability and operational maintenance difficulties.**

10c-1a. Preferred Alternative

The Preferred Alternative has been advanced to the engineering and drainage design stage. All structures, roadway alignment, and construction footprint have been developed to be technically feasible and available to construct. This Alternative is deemed reliable with no known or foreseen maintenance or operational difficulties although waterway impacts are unavoidable due to design constraints. Improvements for the overall water quality of the project area will improve with the use of Best Management Practices (BMPs).

10c-1b. Minimal Degradation Alternative

The Minimal Degradation Alternative has not been developed to the same engineering detail as the Preferred Alternative; however, conceptual design was developed per ODOT's specifications. The Minimal Degradation Alternative is also technically feasible and available to construct and is similar to the Preferred Alternative. This alternative follows the same roadway configuration as the Preferred Alternative however, it minimizes the impact footprint. Although, waterway impacts would be lessened with this alternative, a secondary issue is the cost associated with this alternative which is discussed in Section 10c-2.

10c-1c. Non-Degradation Alternative

The Non-Degradation Alternative (No-Build) is technically feasible however it does not meet the transportation need of the project for improving traffic flow and safety problems. In many areas, drainage ditches and other waterways are located adjacent to the shoulder edge of the existing roadway which can contribute to the lowering of the water quality within and adjacent to the study area.

10c-2. Cost Effectiveness

10c-2a. Preferred Alternative

The Preferred Alternative will cost \$9,356,536 to construct, which is \$1,874,784 less than the Minimal Degradation Alternative. The difference in total cost between the Preferred Alternative and the Minimal Degradation Alternative is the cost of the retaining wall associated with the Minimal Degradation Alternative. See Table 4, in Appendix E for cost estimates associated with this alternative.

10c-2b. Minimal Degradation Alternative

The Minimal Degradation Alternative would cost a total of \$11,231,320, which is \$1,874,784 more than the Preferred Alternative. The impact footprint would be minimized because a retaining wall would be constructed to support the roadway and thus, would not require as much grading and less construction limits as the Preferred Alternative. The cost to construct the retaining wall would be \$1,590,000. This cost does not take into account the future maintenance of the wall and the costs associated with those activities. While this alternative if feasible, the additional cost and future costs associated with this alternative make it less cost effective than the Preferred Alternative. See Table 4, in Appendix E for cost estimates associated with this alternative.

10c-2c. Non-Degradation Alternative

The Non-Degradation Alternative would have no additional costs. However, if the Non-Degradation Alternative were implemented, preliminary engineering costs already incurred would be lost and would therefore not be cost effective. See Table 4, in Appendix E for cost estimates associated with this alternative.

10d. SEWAGE PROJECTS - THIS SECTION NOT APPLICABLE TO THIS PROJECT

For regional sewage collection and treatment facilities, include a discussion of the technical feasibility, cost effectiveness and availability, and long-range plans outlined in state or local water quality management planning documents and applicable facility planning documents. (OAC 3745-1-05(C)(6)(I))

This section is not applicable to this project as this project does not involve sewage collection or treatment facilities.

10e. CONSERVATION PROJECTS TARGETING THE WATER RESOURCE

To the extent that information is available, list and describe any government and/or privately sponsored conservation projects that exist or may have been formed to specifically target improvement of water quality or enhancement of recreational opportunities on the affected water resource. (OAC 3745-1-05(B)(2)(g))

The ODNR- Division of Natural Areas and Preserves website (<http://www.dnr.state.oh.us/Default.aspx?alias=www.dnr.state.oh.us/dnap>) was reviewed for the locations of any state nature preserves or conservation areas in the vicinity of the project area. No state nature preserves or conservation areas are located within or adjacent to the project area.

Internet searches (<http://myrockyriver.ning.com/>, <http://ohiowatersheds.osu.edu/groups>) for watershed groups specifically targeting the Rocky River watershed were conducted. The Rocky River Watershed Council is an

organized watershed group which encompasses the project area. Proposed mitigation for waterway impacts associated with the Preferred Alternative is proposed to be off-site. See Block 10k for a more detailed discussion on mitigation opportunities.

10f. COST OF WATER PROTECTION CONTROLS BY ALTERNATIVE

Provide an outline of the costs of water pollution controls associated with the proposed activity. This may include the cost of best management practices to be used during construction and operation of the project. (OAC 3745-01-05(C)(6)(g))

Estimated costs associated with each alternative are listed in Table 5 in Appendix E.

Compliance with the ODOT specifications and applicable National Pollutant Discharge Elimination System (NPDES) permit requirements are expected to provide adequate protection to relevant water resources. Temporary sediment and erosion control practices such as silt fence utilization, will be followed while constructing the proposed project. Water protection costs associated with either Build Alternative will be similar however, there will be no storm water pollution and prevention control costs associated with the Non-Degradation Alternative.

10g. IMPACTS ON HUMAN HEALTH AND OVERALL WATER RESOURCE QUALITY BY ALTERNATIVE

Describe any impacts on human health and the overall quality and value of the water resource. (OAC 3745-1-05(C)(6)(c) and OAC 3745-1-54)

10g-1. Impacts on Human Health

10g-1a. Preferred Alternative

Completion of this project will improve access between Bagley Road and Cook Road in Olmsted Township. By eliminating the at-grade railroad crossing, overall safety, noise and air quality will be improved. Vehicles will not have to idle at the crossing and the train will not have to signal the crossing. The overall response time for emergency vehicles will be improved as well.

Reviews of the OEPA and ODNR groundwater resource maps were conducted. This mapping did not indicate the presence of any Source Protection Areas for Public Water Systems in the project area nor did they identify the presence of community or non-community drinking water sources within the project area. In addition, mapping from United States Environmental Protection Agency (USEPA) indicates there are no sole source aquifers within the project area. Overall, the construction of the project is not expected to lower water quality to the point of affecting human health. Any lowering of water quality by this project should be minimal.

10g-1b. Minimal Degradation Alternative

The Minimal Degradation Alternative also eliminates the at-grade rail crossing and thus, provides the same overall benefits to human health as the Preferred Alternative.

10g-1c. Non-Degradation Alternative

Impacts to human health are expected to remain the with the no-build alternative. Noise and air quality would remain the same. Safety in regards to crashes and emergency response would still be altered because of delays at the at-grade railroad intersection. The Non-Degradation Alternative would not create a direct lowering of the water quality.

10g-2. Impacts on Overall Quality and Value of the Water Resource



10g-2a. Preferred Alternative

The Preferred Alternative will directly impact a Category 1 wetland but these impacts are not expected to result in significant adverse effects to the overall quality of the surface waters; nor are they expected to result in the permanent lowering of water quality and the existing aquatic life use for any of the features. See Block 10b and Tables 2 and 5 in Appendix E for more details on the quantity and types of impacts for each feature.

10g-2b. Minimal Degradation Alternative

The Minimal Degradation Alternative will result in the permanent fill of one wetland. The Minimal Degradation Alternative provides avoidance of Wetland A by 0.37 acres than the Preferred Alternative. Overall, this is a marginal ecological benefit (less water quality degradation) than the Preferred Alternative. See Block 10b and Tables 3 and 5 in Appendix E for more details on the quantity and types of impacts for each feature.

10g-2c. Non-Degradation Alternative

The Non-Degradation Alternative will not impact any surface waters; therefore, it will not have an impact on the value and quality of the resources. The current water quality of the surface waters would remain the same.

10h. **SOCIAL AND ECONOMIC BENEFITS TO BE REALIZED BY ALTERNATIVE**

Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated and a brief discussion on the condition of the local economy. (OAC 3745-1-5(B)(2)(e), and OAC 3745-1-05(C)(6)(I))

In 2010, Cuyahoga County had a total population of 1,280,122 people (compared to 1,393,978, in 2000) comprised of White alone (63.6%), Black or African American alone (29.7%), American Indian and Alaska Native alone (0.2%), Asian alone (2.6%), Native Hawaiian and Other Pacific Islander alone (>0.0% but less than half unit measurement shown), and two or more races (2.1%); those of Hispanic or Latino origin (4.8%) may be of any race. In 2010, the median household income for Cuyahoga County was \$43,603 per year with a 2010 per capita money income of \$26,263. The percent of persons within Cuyahoga County living in poverty in 2010 was at 16.4% which is above the state average of 14.2% (U.S. Census Bureau, 2012).

Currently, the majority of the study area is primarily zoned for residential and commercial uses (Figure 8, Appendix A).

10h-1. Preferred Alternative

The project will improve community cohesion by linking the entire community, now divided by the railroad tracks. As a result of the proposed roadway improvements and associated sanitary sewer improvements, property values will likely increase in the immediate project area. Other community benefits include the elimination of train horns and safety hazards related to vehicle/pedestrian/train conflicts. The project will have positive impact on the traveling public by providing a safer roadway with the potential to reduce accidents, property damage and personal injuries. The project will not conflict with local and/or regional development patterns and will not result in substantial impact on the local tax base.

The water resources within the study area are not known to have any recreational or commercial opportunities or value. Therefore, the Preferred Alternative is not expected to positively affect these resources, including tourism.

10h-2. Minimal Degradation Alternative

The Minimal Degradation Alternative would have the same effect on social and economic factors of the area as the Preferred Alternative due to the proposed project.

10h-3. Non-Degradation Alternative

The Non-Degradation Alternative could affect the overall social and economic resources by limiting the potential for overall continuity to the regional area. Existing land use would remain, thus maintaining the overall aesthetics of the area.

10i. **SOCIAL AND ECONOMIC BENEFITS TO BE LOST BY ALTERNATIVE**

Describe and provide an estimate of the important social and economic benefits that may be lost as a result of this project. Include the effect on commercial and recreational use of the water resource, including effects of lower water quality on recreation, tourism, aesthetics, or other use and enjoyment by humans. (OAC 3745-1-05(B)(2)(elf), and OAC 3745-1-05(C)(6)(e))

10i-1. Preferred Alternative

Property impacts associated with this alternative include 11 residential relocations and two total property takes as well as the acquisition of 3.3 acres of vacant commercial land. Permanent property impacts for embankment construction will be experienced where the roadway profile is elevated and temporary property impacts will be experienced along the entire corridor for grading and driveway replacements and to facilitate maintenance of traffic. The project will largely be constructed utilizing part-width construction along the length of the corridor. Local traffic will be maintained during the construction of each phase of this alternative. One-way thru traffic will be maintained in the southbound direction with northbound traffic detoured during several phases of the work when two-way traffic is not possible.

10i-2. Minimal-Degradation Alternative

The Minimal Degradation Alternative would result in similar property impacts as the Preferred Alternative. The total acquisition of vacant commercial land is less with this alternative (2.7 acres versus 3.3 acres for the Preferred Alternative). All other losses would be identical to the Preferred Alternative.

10i-3. Non-Degradation Alternative

The Non-Degradation Alternative would have a continued effect on the social and economic factors of the area. If transportation facilities are not upgraded, the current social factors such as: increased potential for accidents, delayed emergency response times, and train signaling noise would continue to occur.

10j. **ENVIRONMENTAL BENEFITS TO BE LOST AND GAINED BY ALTERNATIVE**

Describe environmental benefits, including water quality, lost and gained as a result of this project. Include the effects on the aquatic life, wildlife, threatened or endangered species. (OAC 3745-1-05 (B)(2)(e,f), OAC 3745-1-05 (C)(6)(b) and OAC 3745-1-54)

10j-1. **Environmental Benefits to be Lost**

10j-1a. Preferred Alternative

The land use within and adjacent to the study area consists of disturbed areas zoned as residential and commercial.

Terrestrial areas consist of mixed deciduous forest, scrub/shrub, old field and agricultural areas. The land use within the study area is predominately disturbed habitat including residential parcels (Figure 8, Appendix A).

Terrestrial impacts associated with the Preferred Alternative will predominantly affect residential and disturbed habitat such as roadway, regularly maintained medians and right of way, lawns, and landscaped areas. Plant life will be affected by the proposed alternative due to clearing and grubbing activities associated with construction activities. These activities are expected to have a relatively low magnitude of ecological impact due to the prevalence of disturbed conditions as well as the young nature and relatively low diversity of plant life within the forest and scrub-shrub habitats. All plant species encountered within the construction limits are common and abundant outside of the construction limits; therefore, the loss of these plants within the study area would not have a major adverse impact on the population of any of the species. Construction activities may result in the displacement of bird and wildlife species, however, these species are likely to be common and tolerant of disturbance, and should relocate to suitable similar habitat available outside of the immediate study area.

The project area is not currently known to harbor threatened and endangered species, thus no environmental benefits in this realm would be lost by the implementation of this or any alternative (Appendix B). As discussed in Section 10b, the Preferred Alternative will impact wetland and stream habitat during the construction of the proposed project.

10j-1b. Minimal Degradation Alternative

This alternative will result in the loss of wetland habitat similar to the Preferred Alternative; however the Minimal Degradation Alternative would reduce impacts to wetland habitat by 0.48 acres.

High quality habitats were not identified within this study corridor, therefore, the proposed Minimal Degradation Alternative would not be expected to negatively impact environmental resources of the project vicinity.

10j-1c. Non-Degradation Alternative

The Non-Degradation Alternative would not impact any threatened or endangered species, terrestrial, or water resources.

10j-2. Environmental Benefits to be Gained

The construction of the proposed project is not expected to create noticeable environmental benefits within the project vicinity. BMP's will be used during construction and disturbed areas will be re-vegetated which will be beneficial for native wildlife and for the overall aesthetic of the project area.

10k. MITIGATION TECHNIQUES PROPOSED

*Describe mitigation techniques proposed (except for the Non-Degradation Alternative): Describe proposed Wetland Mitigation (see **OAC 3745-1-54** and Primer); Describe proposed Stream, Lake, Pond Mitigation (see Primer).*

10k-1. Proposed Mitigation

10k-1a. Preferred Alternative

Wetland Mitigation

One jurisdictional wetland will be affected by the Preferred Alternative (Table 2, Appendix E). The Preferred Alternative will impact 1.78 acres of wetland habitat.

The Ohio wetland antidegradation rule 3745-1-54 wetland chart, of the Administrative Code was used to determine the amount of proposed wetland mitigation that would be required as compensation for wetland impacts associated with the proposed project (Ohio EPA, 1998). The wetlands within the study area were evaluated using the *Ohio Rapid Assessment Method: Version 5.0* (Mack, 2001); based on that assessment, the proposed impacted wetland is a Category 1 wetland (Table 2, Appendix E).

The Preferred Alternative will impact 1.78 acres of Category 1 wetland. Numerous alternatives were explored to determine the preferred mitigative technique to compensate for unavoidable impacts to the Category 1 wetland. For wetland impacts, a total of 2.70 acres (1.5:1 mitigation ratio) of wetland credits will be purchased through the North Coast Regional Council of Park Districts at the Castalia Quarry mitigation site will be used (Figure 9, Appendix A). The Castalia Quarry site is located approximately 55 miles west of the project and is in the 04100011 HUC (Sandusky River watershed), which is within the Lake Erie drainage area (<http://www.wetlandsandwatershed.com/index.html>).

Indiana Bat Mitigation

Coordination was initiated by ODOT-OES on October 27, 2008. Comments were received from the USFWS on December 8, 2008. In their response, the USFWS stated that the project falls under the Programmatic Consultation between the USFWS, FHWA and ODOT. The USFWS concurred with the ODOT determination that the project, as proposed, may affect, but is not likely to adversely affect the Indiana bat (*Myotis sodalists*). The project is within the PC-1a category of project impacts; therefore, cutting date restrictions apply. The USFWS encourages the use of the revised guidelines of tree removal prior to April 1 or after September 30, as Indiana bats have been observed arriving at their traditional summer areas earlier in the spring and staying longer in the fall than previously documented. This recommendation is included as an environmental commitment to the project to mitigate adverse impacts to the bat species.

10k-1b. Minimal Degradation Alternative

Wetland Mitigation

The Minimal Degradation Alternative will impact 1.30 acres of wetland habitat, a difference of 0.48 acres than the Preferred Alternative.

As mentioned in the previous section and in the Preferred Alternative, the proposed mitigation technique proposes to mitigate impacts off-site. For wetland impacts, purchased wetland credits through the North Coast Regional Council of Park Districts at the Castalia Quarry mitigation site will be used (Figure 9, Appendix A). The Castalia Quarry site is located approximately 55 miles west of the project and is in the 04100011 HUC (Sandusky River watershed), which is within the Lake Erie drainage area. Mitigation for the impacted wetland features will occur at a 1.5:1 ratio for Category 1 non-forested wetlands for a total of 2.00 acres of wetland mitigation off-site, 0.70 acres less than the Preferred Alternative.

Indiana Bat Mitigation

Indiana Bat mitigation requirements for the Minimal Degradation Alternative will be the same as the Preferred Alternative.

10k-1c. Non-Degradation Alternative

No mitigation is proposed with the Non-Degradation Alternative, as no waterway impacts will occur as a result of this alternative.

EXHIBIT 7 REFERENCES CITED

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979, reprinted 1992. *Classification of wetlands and deepwater habitats of the United States*. U.S. Department of the Interior, Fish and Wildlife Service, Washington, DC.
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Appendix A

Figures

Cook Rd

Study Area

0 150 300 600 Feet

Stearns Rd

Sanctuary Ln

Dogwood Ln

Laurel Ln

Glenside Ln

Valeside Ln

Glens

Bagley Rd

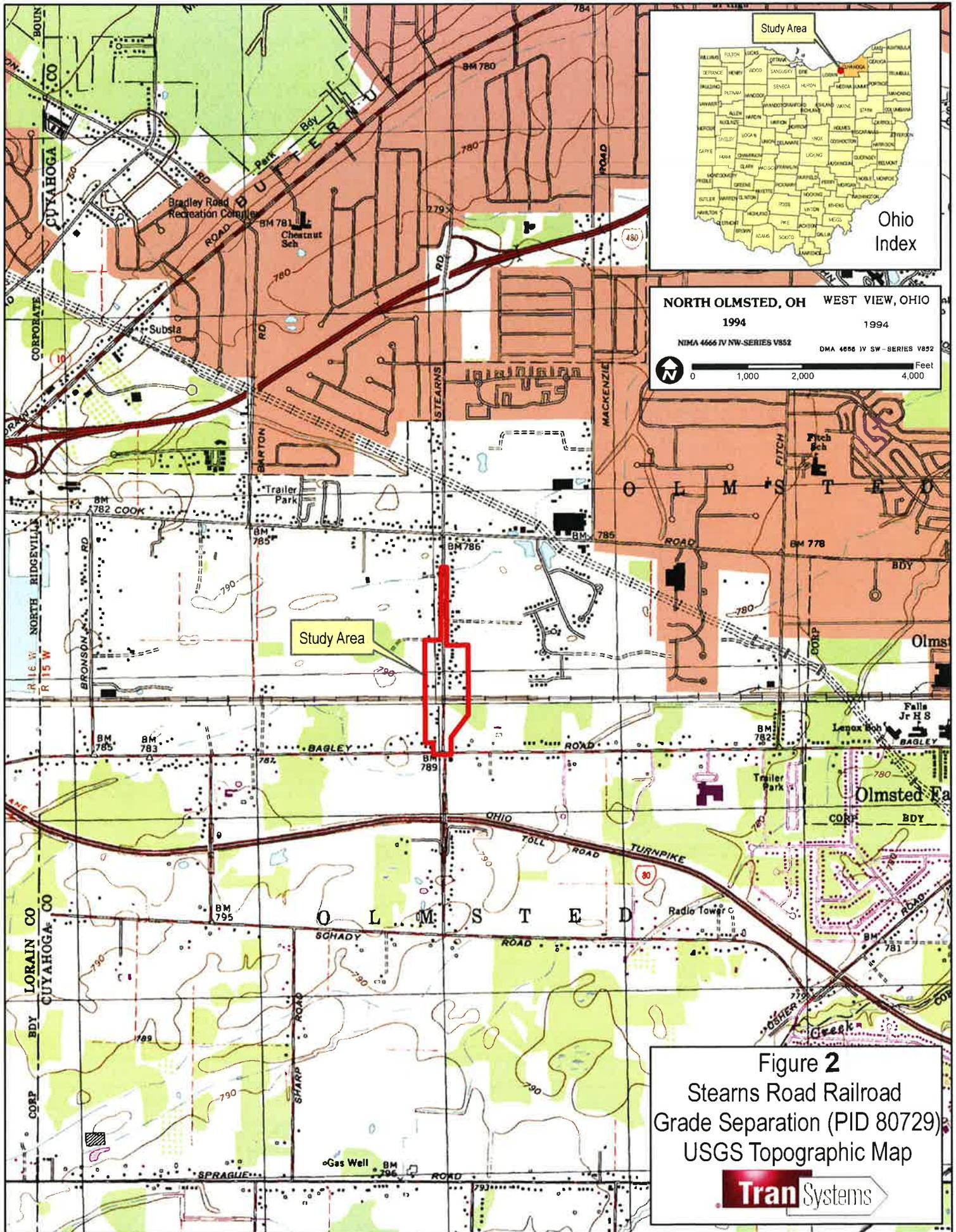
Stearns Rd

Bagley Rd

Figure 1
 Stearns Road Railroad
 Grade Separation (PID 80729)
 Study Area



Swings-N-Things



	Study Area		Old Field
	Stream		Urban / Open Urban
	Culvert		Wetlands
	Ditch		Wooded
			Roost Tree

0 150 300 600 Feet



Stream 1
103 Linear Feet
(no impacts)

Wetland B
0.044 Acre
(no impacts)

Wetland
Continues

Wetland A
2.885 Acres

Wetland
Continues

Figure 3
Stearns Road Railroad
Grade Separation (PID 80729)
Terrestrial Resources Map



Study Area
 Construction Limits
 Proposed Edge of Pavement

0 150 300 600 Feet

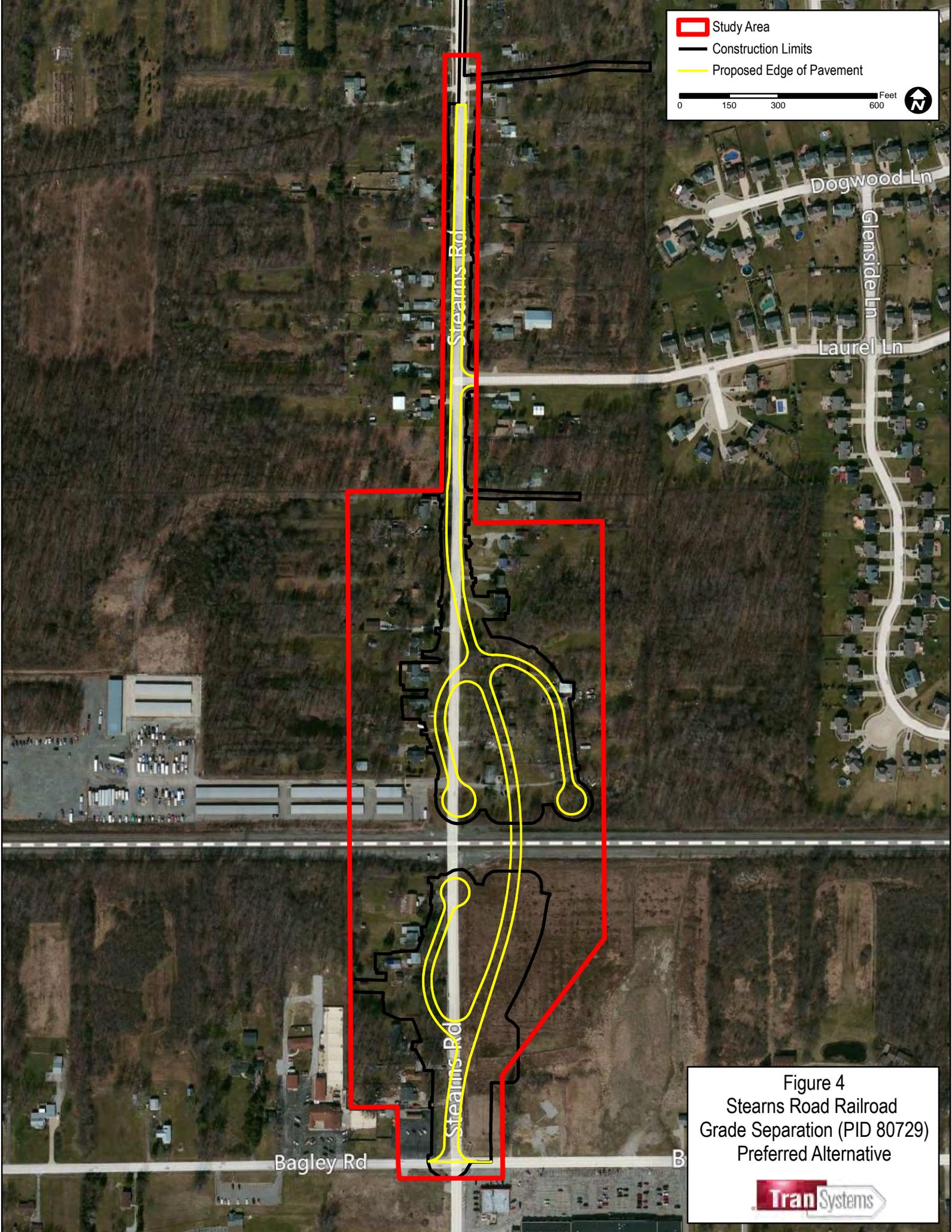
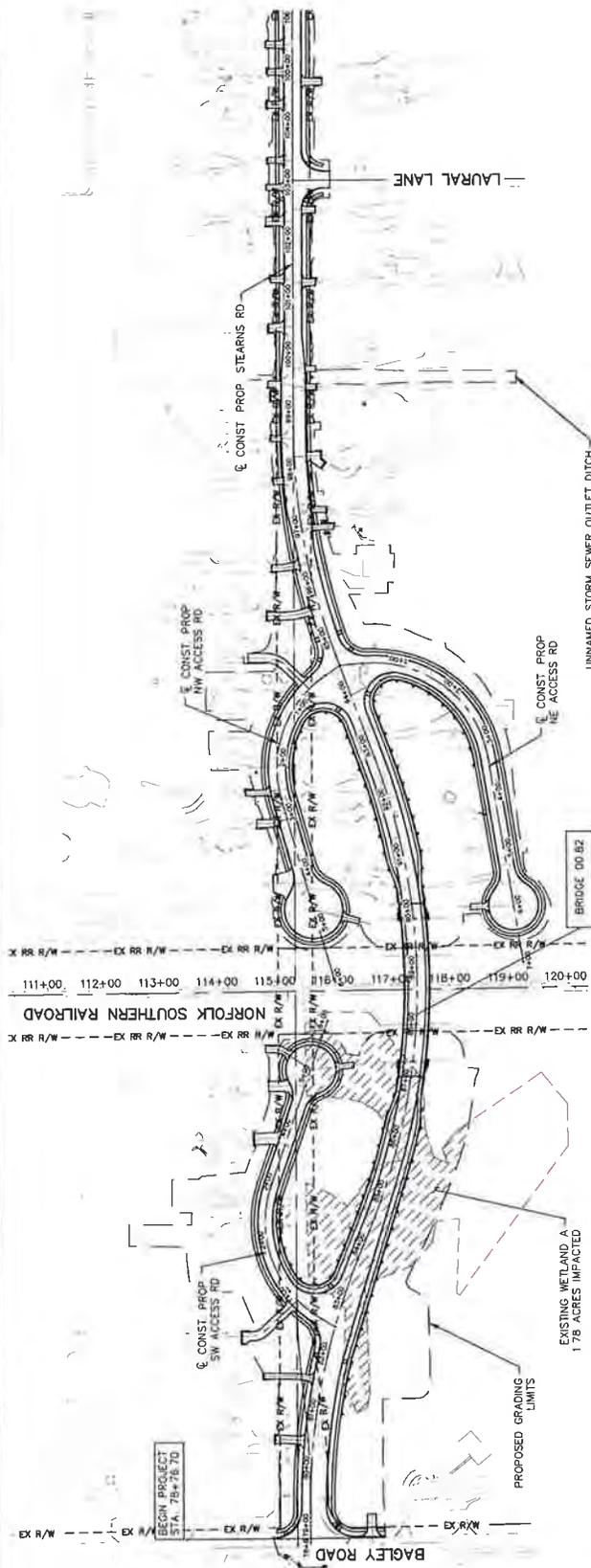



Figure 4
 Stearns Road Railroad
 Grade Separation (PID 80729)
 Preferred Alternative





PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A GRADE SEPARATION OF STEARNS ROAD OVER THE NORFOLK SOUTHERN RAILROAD TRACKS ON A NEW ALIGNMENT. THE PROJECT LENGTH IS 0.61 MILES AND WILL INVOLVE THE RECONSTRUCTION AND WIDENING OF STEARNS ROAD FROM 12 FEET TO 24 FEET. THE PROJECT ALSO INCLUDES THE CONSTRUCTION OF A NEW SANITARY SEWER AND WATER MAIN RELOCATION WILL ALSO BE INCLUDED

CUY-STEARNES ROAD (CR-76) LATITUDE: N 41° 22' 30" LONGITUDE: W 81° 34' 30"



Figure 5

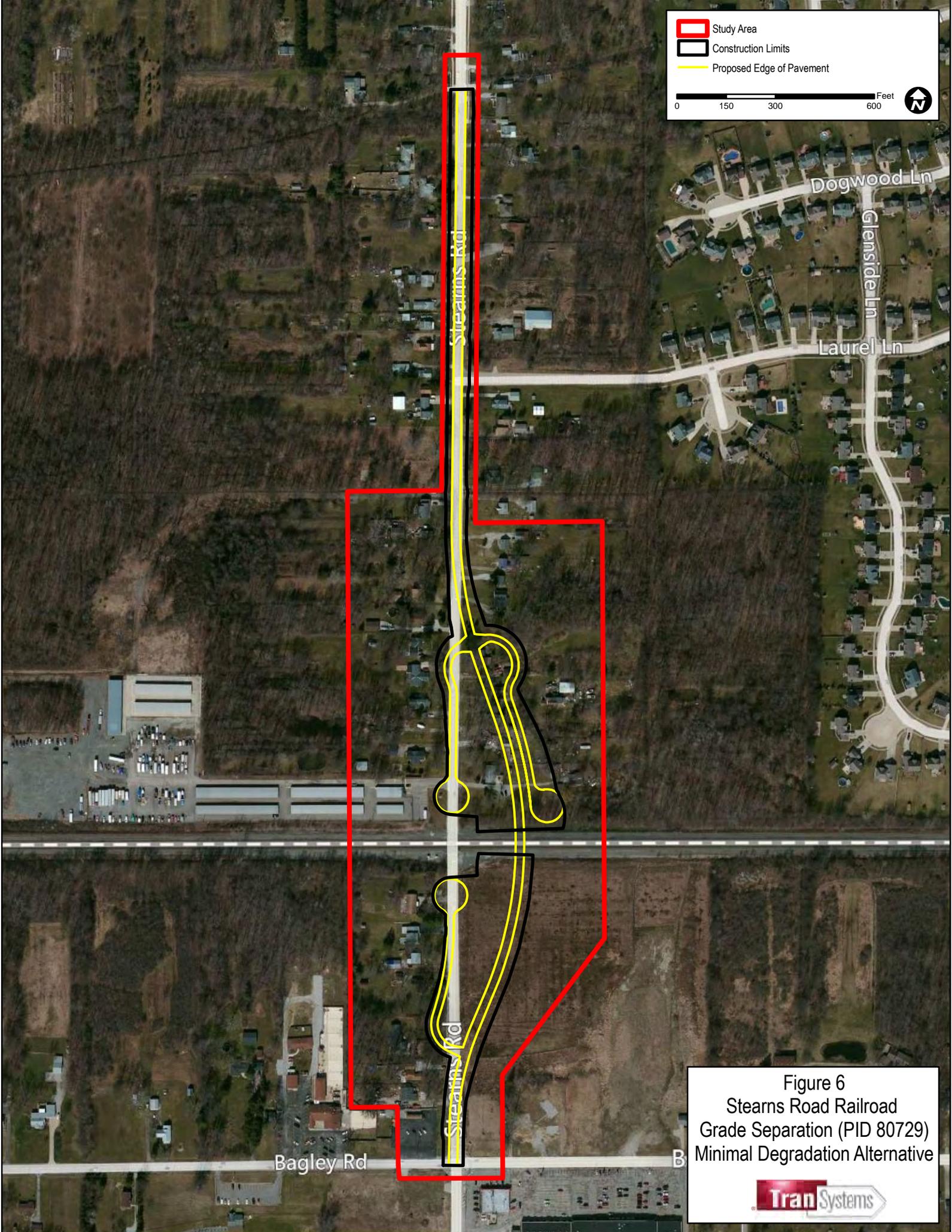
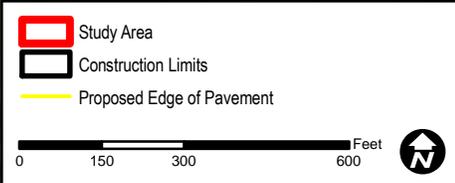
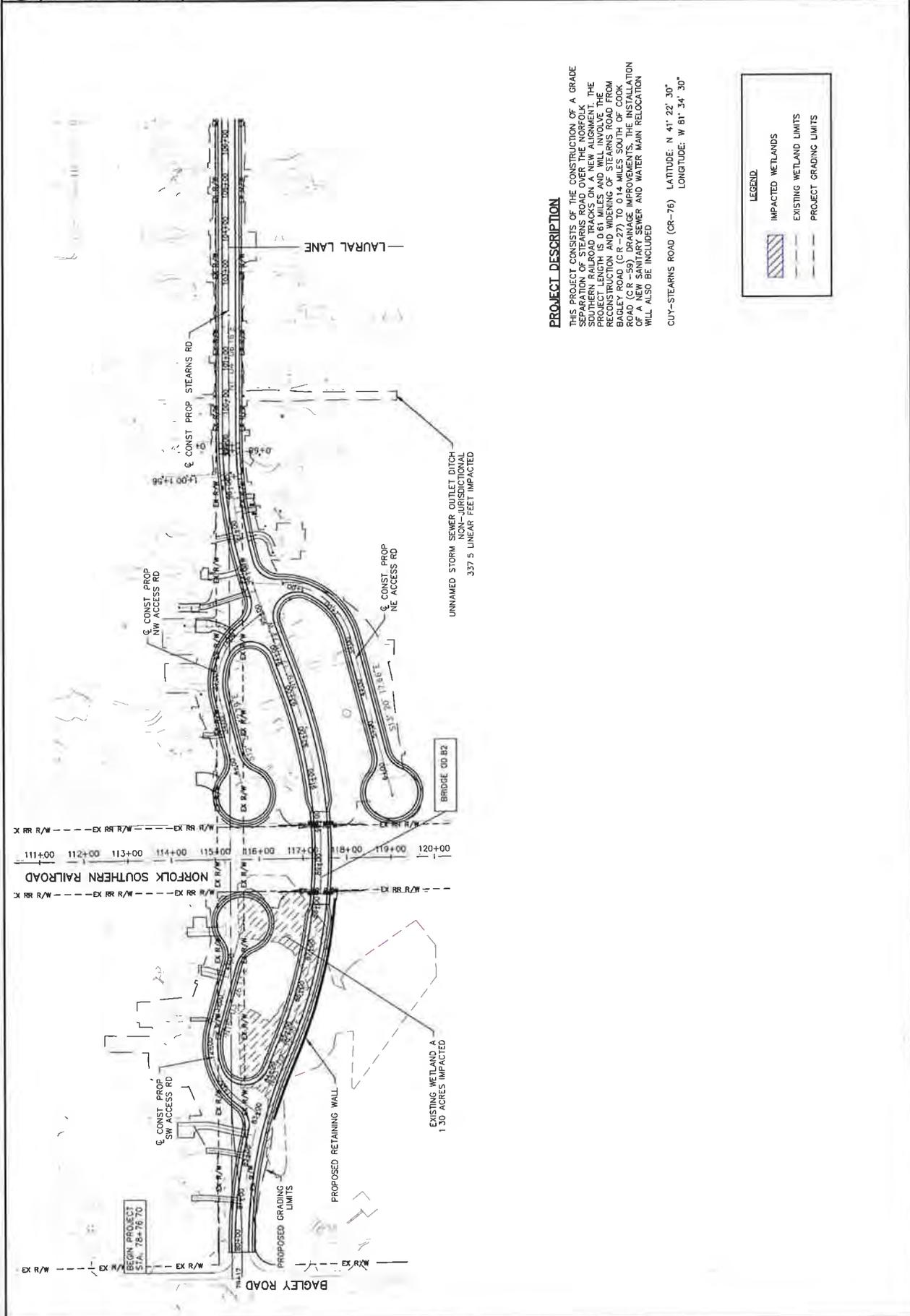


Figure 6
 Stearns Road Railroad
 Grade Separation (PID 80729)
 Minimal Degradation Alternative





PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A GRADE SEPARATION OF STEARNS ROAD OVER THE NORFOLK SOUTHERN RAILROAD. THE PROJECT LENGTH IS 0.61 MILES AND WILL INVOLVE THE RECONSTRUCTION AND WIDENING OF STEARNS ROAD FROM BAGLEY ROAD (C R - 27) TO 0.14 MILES SOUTH OF COOK ROAD (C R - 59). DRAINAGE IMPROVEMENTS, THE INSTALLATION OF A NEW SANITARY SEWER AND WATER MAIN RELOCATION WILL ALSO BE INCLUDED.

CUY- STEARNS ROAD (CR-76) LATITUDE: N 41° 22' 30" LONGITUDE: W 81° 54' 30"

LEGEND

- IMPACTED WETLANDS
- EXISTING WETLAND LIMITS
- PROJECT GRADING LIMITS

Figure 7

Study Area
 Commercial
 Residential

0 125 250 500 Feet

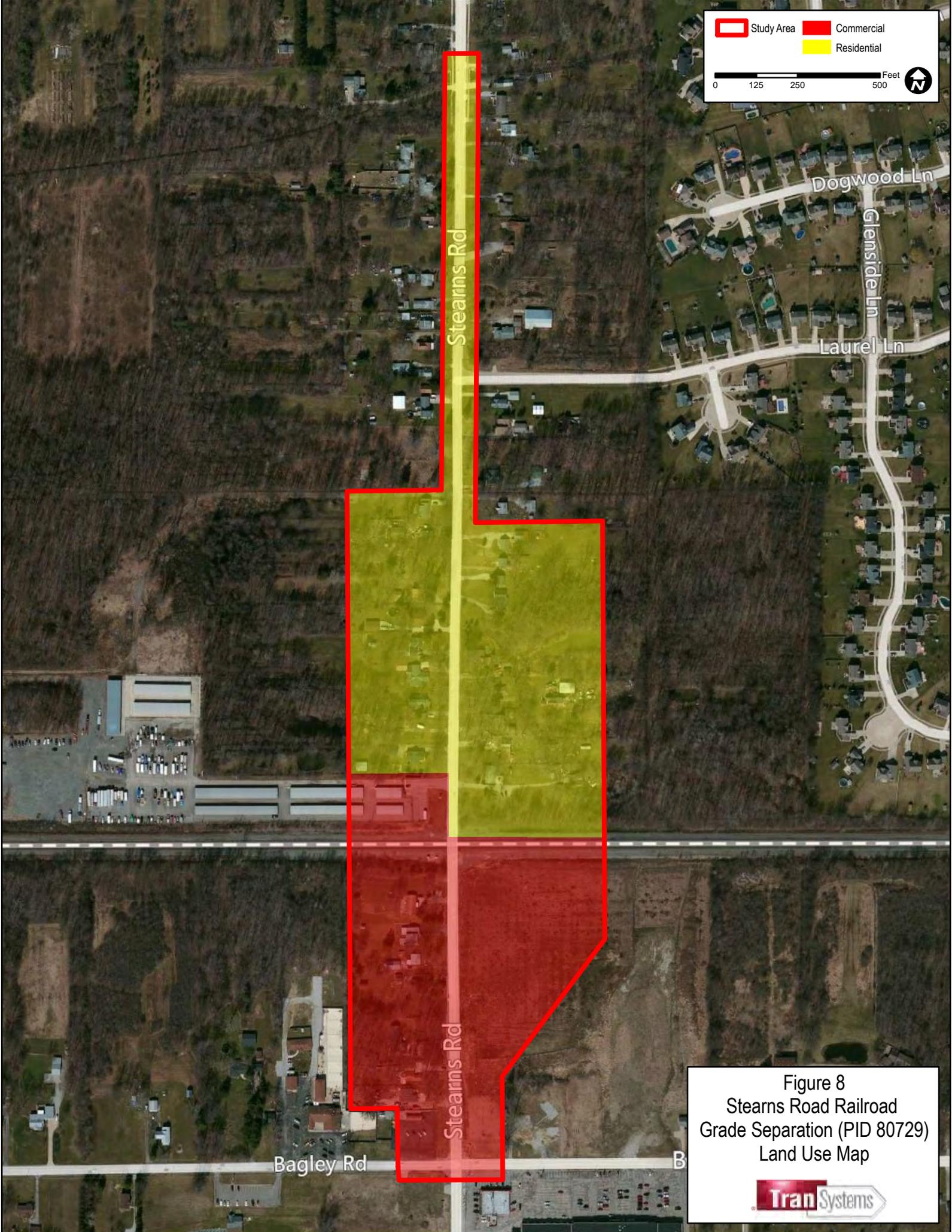
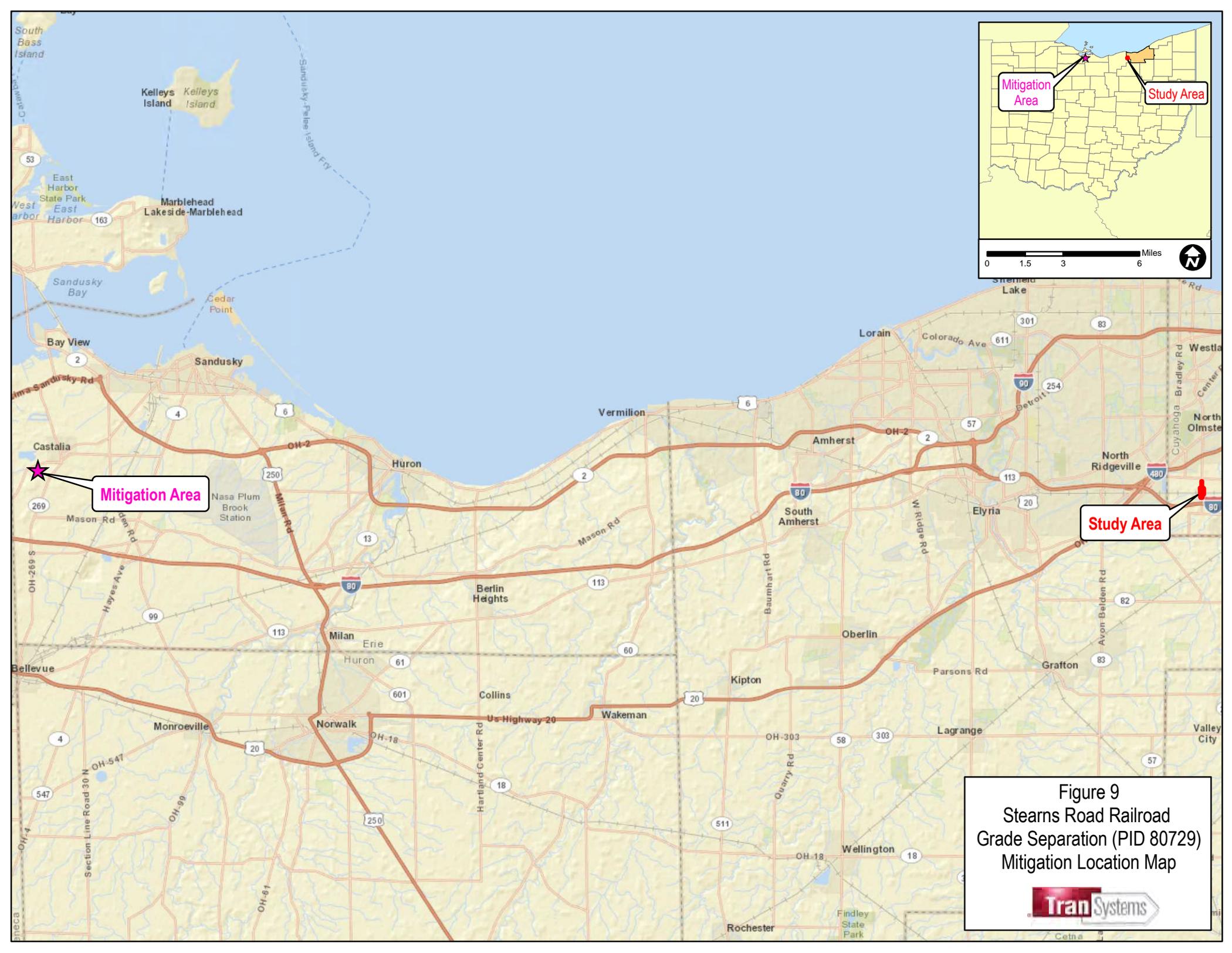


Figure 8
 Stearns Road Railroad
 Grade Separation (PID 80729)
 Land Use Map





Mitigation Area

Study Area

0 1.5 3 6 Miles

Mitigation Area

Study Area

Figure 9
Stearns Road Railroad
Grade Separation (PID 80729)
Mitigation Location Map

Appendix B
Agency Correspondence



Ohio Department of Transportation
INTER-OFFICE COMMUNICATION
Office of Environmental Services

TO: Sean Logan, Director, ODNR
Attn: Brian Mitch, Assistant Environmental Administrator, REALM

DATE: 27 October, 2008

FROM: Timothy M. Hill, Administrator, Office of Environmental Services

A handwritten signature in black ink, appearing to read "Timothy M. Hill", written over the printed name in the "FROM:" field.

SUBJECT: Ecological Coordination

PROJECT: CUY-Stearns Rd. Railroad Grade Separation (PID 80729)

Enclosed for your review is an ecological survey report for a proposed project located in Olmsted Township, Cuyahoga County, Ohio. The project involves the installation of a railroad grade separation for Stearns Road.

As proposed, the grade separation project has two alternatives: E-2 would impact 1.39 acres of category one wetland and W-1b would impact 0.05 acre of category one wetland. Neither alternative has stream impacts.

Federal or Ohio listed endangered or threatened species were not found during the field survey of the project area. A review of the Department of Natural Areas and Preserves' Natural Heritage Database Mapping on May 18, 2007, did not find records for state listed species within 1 mile of the project area.

Your concurrence and/or comments on the project would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development. If you have any questions or concerns, contact John Baird, Environmental Supervisor at (614) 466-1913.

TMH:WRC:DFR:jrb
Enclosures

c Tom Sorge, District 12 - File - Reading File



OHIO DEPARTMENT OF TRANSPORTATION
CENTRAL OFFICE, 1980 WEST BROAD STREET, COLUMBUS, OH 43223
TED STRICKLAND, GOVERNOR • JAMES G. BEASLEY, P.E., P.S., DIRECTOR

27 October 2008
Mary Knapp, Supervisor
U.S. Fish and Wildlife Service
6950-H Americana Parkway
Reynoldsburg, Ohio 43068

Re: CUY- Stearns Rd. Railroad Grade Separation (PID 80729)
Ecological Coordination

Dr Knapp:

Attached for your review in accordance with the Fish and Wildlife Coordination Act (16 U S C 661 et seq) and the Endangered Species Act of 1973 (as amended), is an ecological survey report for a proposed project located in Olmsted Township, Cuyahoga County, Ohio. The project involves the installation of a railroad grade separation for Stearns Road.

As proposed, the grade separation project has two alternatives. E-2 would impact 1.39 acres of category one wetland and W-1b would impact 0.05 acre of category one wetland. Neither alternative has stream impacts.

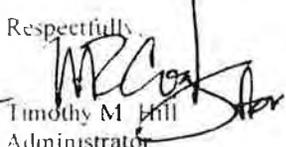
No Federal or Ohio listed endangered or threatened species were found during the field survey of the project area. A review of the Department of Natural Areas and Preserves' Natural Heritage Database Mapping on November 2008 did not find any state listed species of plants within 1 mile of the project area. However, Cuyahoga County is within the known or historic range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally endangered Piping Plover (*Charadrius melodus*). Neither species, nor any other wildlife on the Federal endangered threatened species list, were identified within the project area during the field survey.

Indian bat

Suitable habitat and is present within the study area (28 potential trees were identified). Alternative E-2 would impact five of these trees while Alternative W-1b would impact eight trees. Based on the attached OHAF form the project will have a MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT call for this species. Your concurrence and/or comments would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development.

If you have any questions or concerns, contact John Baird, Environmental Specialist at (614) 466-1913.

Respectfully,


Timothy M. Hill
Administrator

Office of Environmental Services

TMH:WRC:DER:jrb
Enclosure

c Tom Sorge, District 12 - File - Reading File

Indiana Bat Ohio Habitat Assessment Form (OHAF) for ODOT/USFWS use only
to be used in conjunction with Indiana bat Programmatic Consultation, July 2006

Project Name/Number: CL14 - Stearn Rd Grade Separation Project (PID 80729)

Prepared By: John Baird Date of Assessment: 10/20/08

Lat/Long coordinates approx. center of project: Decimal degrees, 5 decimal places (example 42.78963)

Latitude: _____ Longitude: _____

Indiana bat Management Unit that Project primarily occurs in: W unit S unit C unit E unit NE unit

Section 1 (Programmatic Consultation Tier 1)
to be used in conjunction with Indiana bat Programmatic Consultation, July 2006

1. Will any portion of project occur outside of the defined urban areas (GIS layer)?

- NO Project will have NO EFFECT on the Indiana bat and documentation filed at ODOT
 YES Continue to #2

2. Will any portion of project occur within 0.5 mile of a known or suspected hibernaculum?

- NO Continue to #3
 YES Project MAY AFFECT the Indiana bat, follow Conservation Measure A-3 (Send Documentation to USFWS) and continue to #3

3. Will project clear any potential Indiana bat roost trees?

Roost trees are living trees (>8 inch dbh), standing dead trees or snags (trees with less than 10% live canopy) with exfoliating, peeling or loose bark, split trunks and/or branches or cavities

- NO Project will have NO EFFECT on the Indiana bat, documentation filed at ODOT (Unless answered yes on #2, then Project MAY AFFECT the Indiana bat, follow Conservation Measure A-3 (Send Documentation to USFWS) and continue to #4);
 YES Project MAY AFFECT the Indiana bat, continue to #5

4. Is the project within 5 miles of a known hibernaculum?

- No Continue to #5
 Yes Project LIKELY TO AFFECT the Indiana bat. Continue to Tier 2 (Section 2 Part One)

5. Is the project located between 5 and 10 miles of a hibernaculum?

- No Continue to #6
 Yes Project MAY AFFECT the Indiana bat, follow Conservation Measure A-2 (Send Documentation to USFWS) Continue to #6

6. Are all of the potential roost trees isolated?

- NO Continue to #7
 YES Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat, send this OHAF documentation to USFWS for concurrence (seasonal cutting required if impacts do not meet PC1-a or PC1-b, or if any isolated maternity roost trees are being removed)

7. Are any of the identified potential roost trees potential maternity roost trees?
 (Trees >16 inch dbh, with some solar exposure; if not known, assume yes)

NO Continue to #9
 YES Continue to #8

8. Are all of the identified potential maternity roost trees isolated?

No Project LIKELY TO AFFECT the Indiana bat. Continue to Tier 2 (Section 2, Part one)
 YES Continue to #9

9. Will project occur in W or C management unit?

NO Continue to #10
 YES Skip 10 & 11 continue to #12

10. Will project remove more than 20 potential roost trees?

NO Total Number of Trees Continue to #11
 YES Project LIKELY TO AFFECT the Indiana bat, Continue to Tier 2 (Section 2 Part One)

11. Will project occur within 5 miles of an Indiana bat capture record (including hibernacula records)?

NO Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat. Submit OHAF & project documentation to USFWS for concurrence
 YES Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat. Submit OHAF & project documentation to USFWS and follow Conservation Measure A-1

12. Will project remove more than 10 potential roost trees?

NO Total Number of Trees Continue to #13
 YES Project LIKELY TO aFFECT the Indiana bat Continue to Tier 2 (Section 2: Part One)

13. Will project occur within 5 miles of an Indiana bat capture record (including hibernacula records)?

NO Continue to #14
 YES Skip #14 & #15. Continue to #16

14. Is the project area (that contains the potential roost trees) within a forest area of less than 100 acres, or connected to a forest area of less than 100 acres via a tree line (row of trees 2 or more wide)?

NO Continue to #15
 YES Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat. Submit OHAF documentation to USFWS for concurrence

15. Is there a perennial water source within 0.5 mile of potential roost trees (that are within a forest area of more than 100 acres)?

NO Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat. Submit OHAF documentation to USFWS for concurrence
 YES Project MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT the Indiana bat. Submit OHAF documentation to USFWS for concurrence: follow Conservation Measure A-1



OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, 1980 WEST BROAD STREET, COLUMBUS, OH 43223

TED STRICKLAND, GOVERNOR • JAMES G. BEASLEY, P.E., P.S., DIRECTOR

TO: Ric Queen, OEPA - DSW **DATE:** 27 October 2008
Attn: Art Goleman
Timothy M. Hill
FROM: Timothy M. Hill, Administrator, Office of Environmental Services
SUBJECT: Pre-application Coordination
PROJECT: CUY-Stearns Rd. Railroad Grade Separation (PID 80729)

Enclosed for your review is an ecological survey report for a proposed project located in Olmsted Township, Cuyahoga County, Ohio. The project involves the installation of a railroad grade separation for Stearns Road.

As proposed, the grade separation project has two alternatives: E-2 would impact 1.39 acres of category one wetland and W-1b would impact 0.05 acre of category one wetland. Neither alternative has stream impacts.

This information is being provided for the purposes of pre-application coordination. Your concurrence and/or comments would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development. If you have any questions or concerns contact John Baird, at (614) 466-1913.

TMH:WRC:DER:jrb
Enclosure

c Tom Sorge, District 12 - File - Reading File



OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, 1980 WEST BROAD STREET, COLUMBUS, OH 43223

TED STRICKLAND, GOVERNOR • JAMES G. BEASLEY, P.E., P.S., DIRECTOR

U.S. Army Corps of Engineers
Ohio Regulatory Transportation Office
Building 10 Section 10
3990 E. Broad St.
Columbus, OH 43218

27 October 2008

Attention: Deborah Wegmann

Re: CUY-Stearns Rd. Railroad Grade Separation (PID 80729)
Ecological Coordination (Preapplication)

Dear Ms. Wegmann:

Transmitted, herewith, for your review is a Level One Ecological Survey Report. The report was prepared by TranSystems Consultants, and is dated August 2008. The project involves the installation of a railroad grade separation for Stearns Road.

As proposed, the grade separation project has two alternatives: E-2 would impact 1.39 acres of category one wetland and W-1b would impact 0.05 acre of category one wetland. Neither alternative has stream impacts.

This submission is to notify you of possible Corps involvement (i.e. 404 Permit), to solicit comments concerning the proposed project and to satisfy the requirements set forth in the National Environmental Policy Act, as amended, which requires early coordination with agencies. An application for a 404 permit will be submitted to your office at a later date.

Your concurrence and/or comments on this submission would be appreciated. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development. If you have any questions or concerns, contact John Baird, Environmental Specialist, at (614) 466-1913.

Sincerely,

Timothy M. Hill, Administrator
Office of Environmental Services

FMH:WRC JRB jrb
Enclosure

c: Tom Sorge, District12 - File - Reading File



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
4625 Morse Road, Suite 104
Columbus, Ohio 43230
614-416-8993 / FAX 614-416-8994

December 8, 2008

Timothy M. Hill
Office of Environmental Services
Ohio Department of Transportation
P.O. Box 899
Columbus, OH 43216-0899

TAILS: 31420-2009-I-0075 (PID 80729)

Attn: Donald Rostofer
Megan Michael
RE: **CUY-Stearns Road Railroad Grade Separation (PID 80729)**

Dear Mr. Hill:

This is in response to your October 27, 2008 letter received in our office on October 28, 2008 requesting U.S. Fish & Wildlife Service (Service) concurrence on your Endangered Species Act section 7(a)(2) effects determination for the Indiana bat. This project involves the installation of a railroad grade separation for Stearns Road in Olmsted Township, Cuyahoga County, Ohio. The grade separation project has two alternatives. The E-2 alternative would impact 1.39 acres of Category 1 wetland. The W-1b alternative would impact 0.05 acre of Category 1 wetland. No streams would be impacted by either alternative. Twenty-eight trees exhibiting suitable roost tree characteristics were found within the study area of the Ecological Survey Report (ESR). Five of these trees would be impacted by alternative E-2; eight trees would be impacted by alternative W-1b.

In general, the U.S. Fish and Wildlife Service recommends that proposed developments minimize water quality impacts and impacts to quality fish and wildlife habitat, such as forests, streams, and wetlands. Although alternative W-1b would impact more (i.e., 3 more) potential Indiana bat roost trees than alternative E-2, the overall ecological impacts of alternative E-2 are substantially greater than those of W-1b (as shown in Table 13, p. 26 of the ESR). In addition, alternative W-1b would altogether avoid fragmenting an existing wooded wetland; whereas alternative E-2 appears to bisect that habitat. Therefore, the Service would prefer that alternative W-1b be chosen for the project.

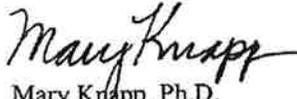
The subject project falls under the Programmatic Consultation between USFWS, FHWA, and ODOT. The Service concurs with your determination that this project, as proposed, may affect, but is not likely to adversely affect the **Indiana bat** (*Myotis sodalis*). The project is within the PC2-b category of project impacts; therefore, cutting date restrictions will apply. The Service encourages the use of the revised guidelines of tree removal prior to April 1 or after September 30.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act, of 1973, as amended, and is consistent with the intent of the National Environmental Policy Act of 1969, and the U.S. Fish and

Wildlife Service's Mitigation Policy. This concludes consultation on this action as required by section 7(a)(2) of the Endangered Species Act. Should, during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be reinitiated to assess whether the determinations are still valid.

If you have questions, or if we may be of further assistance in this matter, please contact Karen Hallberg at extension 23 in this office.

Sincerely,


Mary Krapp, Ph.D.
Field Supervisor

cc: ODNR, DOW, SCEA Unit, Columbus, OH
Ohio Regulatory Transportation Office, Columbus, OH



State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

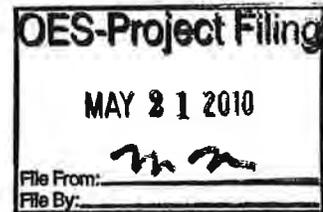
TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

February 20, 2009

Timothy M. Hill, Administrator
Ohio Department of Transportation
Office of Environmental Services
PO Box 899
Columbus, Ohio 43216-0899



Re: Pre-Application Coordination
Ecological Survey Report (Level 1)
CUY-Sterns Road Railroad Grade Separation, PID 90729

Dear Mr. Hill:

This is in response to your requests to review the Ecological Survey Report (Level 1). The report describes a project ODOT is evaluating which consists of the railroad grade separation for Sterns Road in Olmsted Township, Cuyahoga County, Ohio. ODOT currently is considering two alternatives, E-2 and W-1b. Alternative E-2 would result in 1.39 acres of wetland impacts, 3,174 linear feet of ditch impacts, and 9.31 acres of terrestrial impacts. For Alternative W-1b, the corresponding impacts are: 0.05, 2,852, and 9.54, respectively.

Section 401 Regulatory Analysis

Based on the designated impacts described in the report, Alternative E-2 would require Individual Section 401 authorization due to the wetland impacts exceeding our regulatory limits. Alternative W-1b would not require Individual Section 401 authorization. Our final regulatory decision will be based on the specifics of the selected project alignment at its impacts, and the Army Corps of Engineers jurisdictional determination and regulatory oversight of the project.

Assessment of Alternatives and Ecological Resources

From a direct impact standpoint, we prefer Alternative W-1b over Alternative E-2. Alternative W-1b also impacts fewer quality resources such as wooded habitat. Since E-2 will impact a large portion of Wetland A we are concerned that the remaining portion of the wetland will degrade over time, especially if the existing hydrology is disturbed and not

Ohio Department of Transportation
CUY-Sterns Road Railroad Grade
Separation, PID 90729
Page 2 of 2

restored, or the fill (pavement) places additional stress on the wetland. Will the impacts to the ditch system affect the hydrology of Wetland A? According to the description on page 15, the wetland is being impacted by tree removal, drainage, and other man-made alterations. Although the wetland is not exceptional quality (Category 1), it is relatively large and likely imparting significant ecological and water quality benefits in terms of water retention and purification. Even if Alternative E-2 is not selected as the Preferred Alternative, a potential on-site mitigation project could consist of purchasing Wetland A (remaining) and adjacent habitat, and implementing efforts to restore, enhance, and expand the remaining portion, for example, by planting natural vegetation within it and along the buffer area.

This concludes our remarks. If you have any questions, feel free to contact me at (614) 644-2138.

Sincerely,



Arthur L. Coleman, Jr.
Division of Surface Water
EM&SPS

cc: Deborah L. Wegmann, USACE, Huntington District (Columbus Transportation Office)
Wayne Gorski, USEPA, Region V
William Cody, Asst. Administrator, OES/ODOT
Mike Pettegrew, Supervisor, Waterway Permits, OES/ODOT
Donald Rostofer, Supervisor, Ecological Section, OES/ODOT
Karen Hallberg, USFWS
Brian Mitch, ODNR



DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

October 8, 2009

Operations and Readiness Division
Regulatory Branch
Rocky River – 2008-00970-ROC
CUY-Stearns Road Railroad Grade Separation, PID: 80729

Mr. Timothy M. Hill
Office of Environmental Services
Ohio Department of Transportation
Post Office Box 899
Columbus, Ohio 43216-0899

Dear Mr. Hill:

I refer to the Ecological Survey Report (ESR) prepared by TranSystems dated August 2008 and received in this office on October 29, 2008. The ESR contains information concerning potential resources within an approximate 35-acre study area located just east of Stearns Road and north of Bagley Road in Cuyahoga County, Ohio. A total of thirteen potential waters of the United States were identified within the 35-acre study area: one stream; two wetlands; and 10 ditches.

The United States Army Corps of Engineers (USACE) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act (CWA) requires that a Department of the Army (DA) permit be obtained prior to placing dredged or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 requires a DA permit be obtained for any work in, on, over or under a navigable water.

Based on the information provided and site visits conducted on March 5, 2009 and June 25, 2009, it has been determined that Stream 1 (103 linear feet [lf]) is an intermittent-seasonal relatively permanent water (RPW) and an indirect tributary of the Rocky River, a traditional navigable water (TNW). Wetland A (2.89 acres [ac]) is adjacent to an off-site perennial RPW, and found to present a significant nexus to the Rocky River, a TNW. Wetland B (0.04 ac) is adjacent to RPW Stream 1 and found to present a significant nexus to the Rocky River, a TNW. Therefore, Stream 1 and Wetlands A and B are waters of the U.S., subject to regulation under Section 404 of the CWA.

Ten other potential water resources within the study area were identified as Ditches 1-10. Each of the 10 ditches was evaluated under ditch criteria. None of these constructed roadside and raiiside ditches have OHWMs and are RPWs, therefore they are not waters of the U.S.

In accordance with the June 5, 2007 Joint Memorandum between the USEPA and the U.S. Army Corps of Engineers and the January 28, 2008 U.S. Army Corps of Engineers Memorandum regarding coordination on jurisdictional determinations, this determination was coordinated with the USEPA Region 5, with coordination completed on September 30, 2009.

This jurisdictional verification is valid for a period of five years from the date of this letter unless new information warrants revision of the delineation prior to the expiration date. This letter contains an approved jurisdictional determination for the subject site. Should you disagree with our jurisdictional determination, you have the right to file an administrative appeal under the Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form.

If you request to appeal this determination you must submit a completed RFA form to the Great Lakes and Ohio River Division Office at the following address:

Review Officer
U.S. Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10032
Cincinnati, Ohio 45202-3222
Phone: (513) 684-7261
Fax: (513) 684-2460

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by **07 December 2009**. **It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter.**

This determination has been conducted to identify the limits of the Corps of Engineers' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are United States Department of Agriculture (USDA) program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

If you have any questions concerning the above, please contact Peter Clingan of the Columbus Field Office at 614-692-4654.

Sincerely,



LuAnne S. Conley, P.E.
Chief, South/Transportation Section

Enclosure

Copy Furnished w/ enclosure via email:

Art.Coleman@epa.state.oh.us

Mike.Pettegrew@dot.state.oh.us

Ric.Queen@epa.state.oh.us

Donald.Rostofer@dot.state.oh.us

CL-Craig Cox

From: Tom.Sorge@dot.state.oh.us
Sent: Monday, July 12, 2010 10:50 AM
To: CL-Craig Cox
Cc: Mark.Carpenter@dot.state.oh.us
Subject: Fw: 08-0286; ODOT EC for Project CUY-Stearns Road
Attachments: oledata.mso

For inclusion in the CE Level 4 Document.

Tom Sorge, Environmental Specialist 2
Planning ODOT District 12
(216) 584-2086
Tom.Sorge@dot.state.oh.us

"Mitch, Brian" <Brian.Mitch@dnr.state.oh.us>

05/21/2010 09:53 AM

To <megan.michael@dot.state.oh.us>

cc

Subject FW: 08-0286; ODOT EC for Project CUY-Stearns Road

Is this the one you were looking for?

Brian

From: Mitch, Brian
Sent: Wednesday, November 26, 2008 2:50 PM
To: 'tim.hill@dot.state.oh.us'
Cc: Donald.Rostofer@dot.state.oh.us; John.Baird@dot.state.oh.us
Subject: 08-0286; ODOT EC for Project CUY-Stearns Road



ODNR COMMENTS TO Timothy M. Hill, Administrator, ODOT Office of Environmental Services, 1980 West Broad Street, Columbus, Ohio 43223

Location: The project is located along Stearns Road in Olmsted Township, Cuyahoga County, Ohio.

Project: The project involves the installation of a railroad grade separation. As proposed, the grade separation project has two alternatives; E-2 would impact 1.39 acres of category one wetland and W-1b would impact 0.05 acre of category one wetland. Neither alternative has stream impacts.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Rare and Endangered Species: The ODNR, Division of Natural Areas and Preserves, has no comments on this project.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area.

fish and Wildlife: The ODNR, Division of Wildlife (DOW) has the following comments.

The DOW recommends sufficient mitigation is provided for any wetland and stream impacts that may occur as a result of this project.

The project is within the range of the Indiana bat (*Myotis sodalis*), a state and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees: Shagbark hickory (*Carya ovata*), Shellbark hickory (*Carya laciniosa*), Bitternut hickory (*Carya cordiformis*), Black ash (*Fraxinus nigra*), Green ash (*Fraxinus pennsylvanica*), White ash (*Fraxinus americana*), Shingle oak (*Quercus imbricaria*), Northern red oak (*Quercus rubra*), Slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), Eastern cottonwood (*Populus deltoides*), Silver maple (*Acer saccharinum*), Sassafras (*Sassafras albidum*), Post oak (*Quercus stellata*), and White oak (*Quercus alba*). Indiana bat habitat consists of suitable trees that include dead and dying trees of the species listed above with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees of the species listed above with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. If suitable trees occur within the project area, these trees must be conserved. If suitable habitat occurs on the project area and trees must be cut, cutting must occur between September 30 and April 1. If suitable trees must be cut during the summer months of April 2 to September 29, a net survey must be conducted in May or June prior to cutting. Net surveys shall incorporate either two net sites per square kilometer of project area with each net site containing a minimum of two nets used for two consecutive nights, or one net site per kilometer of stream within the project limits with each net site containing a minimum of two nets used for two consecutive nights. If no tree removal is proposed, the project is not likely to impact this species.

The project is within the range of the bald eagle (*Haliaeetus leucocephalus*), a state threatened species. The location of bald eagle activity frequently changes. Therefore, closer to the actual date of construction, the applicant must obtain an updated status of bald eagle activity in the area. To obtain any changes in status, contact Mark Shieldcastle at the Ohio Department of Natural Resources, Division of Wildlife, Crane Creek Wildlife Research Station, for current information on the presence of bald eagles in the area. He can be reached at (419) 898-0960. If a nest is located within ½ mile of the project site, coordination with the DOW is required.

ODNR appreciates the opportunity to provide these comments. Please contact Brian Mitch at (614) 265-6378 if you have questions about these comments or need additional information.

Brian Mitch, Environmental Review Manager
Ohio Department of Natural Resources
Environmental Services Section
2045 Morse Road, Building D-3
Columbus, Ohio 43229-6693
Office: (614) 265-6378
FAX: (614) 267-4764
brian.mitch@dnr.state.oh.us



Ohio Department of Natural Resources

TED STRICKLAND, GOVERNOR

SEAN D. LOGAN, DIRECTOR

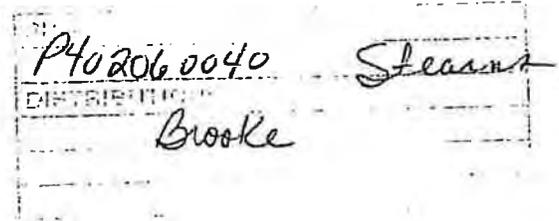
Division of Natural Areas and Preserves

Steven D. Maurer, Chief
2045 Morse Rd., Bldg. F-1
Columbus, OH 43229-6693

Phone: (614) 265-6453; Fax: (614) 267-3096

November 20, 2007

Brooke Harrison
TranSystems Corp.
55 Public Square, Suite 1900
Cleveland, OH 44113



Dear Ms. Harrison:

After reviewing our Natural Heritage maps and files, I find the Division of Natural Areas and Preserves has no records of rare or endangered species within a one mile radius of the Stearns Rd. Grade Separation project area in Olmsted Township, Cuyahoga County, and on the North Olmsted and West View Quads (402060040). We also have no records for Indiana Bat (*Myotis sodalis*, state endangered, federal endangered) capture locations or hibernacula within a ten mile radius of the project site.

There are no existing or proposed state nature preserves at the project site. We are also unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state parks, state forests or state wildlife areas within the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although we inventory all types of plant communities, we only maintain records on the highest quality areas.

Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

Debbie Woischke, Ecological Analyst
Natural Heritage Program





OHIO DEPARTMENT OF TRANSPORTATION

DISTRICT 12 • 5500 TRANSPORTATION BLVD • GARFIELD HEIGHTS, OH 44125 • (216) 581-2333

November 10, 2008

Robert Klaiber, P.E., P.S.
Cuyahoga County Engineer
2100 Superior Viaduct
Cleveland Ohio 44113

Attn: Dave Griesmer

**Re: CUY-Stearns Road Railroad Grade Separation (PID 80729);
Cultural Resource Approval**

Dear Mr. Griesmer:

The Ohio Department of Transportation's Office of Environmental Services (OES) has reviewed the Memorandum Phase I History / Architecture Survey for the LAK-Vrooman Road Bridge Project and determined that based on the undertaking as planned and in accordance with Stipulation 4B of the *Programmatic Agreement Among The Federal Highway Administration, The Advisory Council On Historic Preservation, The Ohio Historical Society, State Historic Preservation Office, And The State of Ohio, Department of Transportation Regarding The Implementation Of The Federal-Aid Highway Program In Ohio (Agreement No. 12642)* executed July 17, 2006, and in compliance with 36 CFR Section 800.4(d)(1), ODOT's Office of Environmental Services (OES) has determined that "no historic properties affected." See the attached 11/05/08 Letter.

The 10/31/08 Letter states " These findings suggest that the proposed CUY-Stearns Road Grade Separation project (PID 80729) will not affect any archeological resources and no further archeological investigations are required unless the project scope changes." See the attached 10/31/08 Letter.

If you have any questions, please contact me at (216) 584-2086 or Mark Carpenter at (216) 584-2089 or via e-mail: Tom.Sorge@dot.state.oh.us or Mark.Carpenter@dot.state.oh.us

Respectfully,

A handwritten signature in black ink, appearing to read "Thomas K. Sorge Jr.", written over a white background.

Thomas K. Sorge Jr.
Environmental Specialist

DAS:MAC:TKS

encl: (as stated)

c: PID 80729

M. Schulz

E. Fulton, TranSystems



OHIO DEPARTMENT OF TRANSPORTATION
INTER-OFFICE COMMUNICATION
Office of Environmental Services

TO: Bonnie Teeuwen, District 12 Deputy Director DATE: November 5, 2008
Attention: Mark Carpenter, District Environmental Coordinator
FROM: Timothy M. Hill, Administrator, Office of Environmental Services
SUBJECT: Cultural Coordination
PROJECT: CUY-Stearns Road Grade Separation (PID: 80729)

Project Description

The subject undertaking is to construct a grade separation of Stearns Road in Olmstead Township, Cuyahoga County, Ohio. Enclosed are the following: *Cultural Resource Literature Review for the Proposed Stearns Road Railroad Grade Separation (PID 80729) In Olmsted Township, Cuyahoga County, Ohio*, dated July 2008, prepared for the Cuyahoga County Engineer's Office, by Tran Systems, and the "Summary of an Archaeological Field Review Located in Olmsted Township, Cuyahoga County, Ohio, CUY-Stearns Road Grade Separation (PID 80729)", prepared by the ODOT Office of Environmental Services (OES) on October 31, 2008.

Area of Potential Effects (APE)

The APE includes a geographic area large enough to incorporate the footprint of the alternatives under consideration.

Literature Review

The enclosed literature review provides an overview of the prehistoric and historic context of the region; historic maps; photographs; location maps; and the results of the field review and literature review. Two previously documented history/architecture resources were identified: 27089 Bagley Road (CUY-1755-14) [which has been razed]; and 27076 Bagley Road (CUY-1751-14) [immediately outside of the APE]. No previously identified archaeological sites or National Register properties are located within or adjacent to the APE.

The 1875 atlas illustrates the rail line. Structures are not illustrated along Stearns Road at this location. The 1902 USGS topographical map illustrates the rail line and one structure along Stearns Road. The circa 1920-1930 Olmstead Township map illustrates the rail line. The enclosed history describes the area as predominately agricultural in nature.

PL ✓
SB SUB
JW AW
SW S

Ms. Teeuwen
CUY-Stearns Road Grade Separation (PID 80729)

-2-

November 5, 2008

Archaeological Field Review

An archaeological field review was conducted on October 27, 2008 by the ODOT OES staff. The area is mostly residential with a few commercial properties scattered throughout: an automobile sales business is located in the northwest quadrant of the Bagley Road/Stearns Road intersection; a restaurant in the southeast quadrant of the Bagley Road/Stearns Road intersection; and a personal storage facility located in the northwest quadrant of the Stearns Road/Norfolk Southern rail line crossing. The only open area is in the southwest quadrant of the Stearns Road/Norfolk Southern rail line crossing. There was a dense woodlot in this area as of May 2006, but has recently been timbered and subsequently bulldozed. Evidence of fill was also noted. All other areas within the footprint of the APE have been previously disturbed by residential and commercial development, utility installation, and landscaping. These disturbances combined with the poorly drained and hydric nature of the area precludes the existence of significant archeological remains and no further archeological investigations are recommended.

History/Architecture Field Review

The enclosed photograph log illustrates structures fifty years of age or older within the APE. A historic district is not evident. The 1875 atlas associates several large parcels with the APE. Currently, the APE features multiple small lots featuring post World War II housing. Several earlier structure types are illustrated; however, they are not representative of the agricultural history of the region. Rail related structures were not identified. The pre-1958 history/architecture resources are of common architectural styles with various types of alterations. The October 27, 2008 field review confirmed the enclosed photograph log is an accurate representation of the APE. No further history/architecture investigations are warranted.

Summary

In accordance with Stipulation 4B of the *Programmatic Agreement Among The Federal Highway Administration, The Advisory Council On Historic Preservation, The Ohio Historical Society, State Historic Preservation Office, And The State of Ohio, Department of Transportation Regarding The Implementation Of The Federal-Aid Highway Program In Ohio (Agreement No. 12642)* executed July 17, 2006, and in compliance with 36 CFR Section 800.4(d)(1), ODOT's Office of Environmental Services (OES) has determined that "no historic properties affected" is the appropriate finding for the proposed highway project based on the following:

- The undertaking as proposed will not affect any known significant cultural resources.

This completes the Section 106 review and no further cultural resource investigations are required. You may process the environmental document with no further comment or involvement from ODOT-OES unless the scope of the proposed undertaking was to change. The environmental document should note the date of this IOC for project Section 106 clearance.

TMH:sg
Attachments

c: M. Epstein, OSHPO, w/attachments; Section 106 PA file; File; Reading file



OHIO DEPARTMENT OF TRANSPORTATION
MEMO-TO-FILE
Office of Environmental Services

TO: Paul Graham, Assistant Environmental Administrator *sub/for* **DATE:** October 31, 2008
FROM: Jason Watkins, Staff Archaeologist, Office of Environmental Services
SUBJECT: Summary of an Archaeological Field Review Located in Olmsted Township, Cuyahoga County, Ohio
PROJECT: CUY-Stearns Road Grade Separation (PID 80729)

On October 27, 2008, ODOT-OES staff completed an archaeological field review for the proposed railroad grade separation project along Stearns Road in Olmsted Township, Cuyahoga County, Ohio. The proposed project involves a grade separation of the Norfolk Southern rail line and Stearns Road (County Road 76) on a new alignment. Two alternatives are being considered at this time: one alignment to the east of the current crossing and another to the west (see preliminary mapping in Appendix B of the red flag literature review [Sudnik and Schneider 2008]). Included in both alternatives are proposed plans to cul-de-sac existing Stearns Road. New permanent right-of-way will be required on both alternatives, thus initiating this archaeological review.

The primary focus of the review was to determine the potential for archaeological resources. Investigations were designed to determine the amount of cultural resource coordination. A red flag literature review was completed by TranSystems in July 2008. The review failed to identify any previously recorded archaeological sites within the study area. The closest recorded site, a prehistoric lithic scatter (33CU117), is located over 1.25 mile to the southwest. Thus, no previously recorded archaeological resources will be affected by the proposed grade separation. The literature review also included a summary of the soils reported in the project area. The area is covered rather equally by Condit silty clay loam (Ct) and Mahoning silt loam (MgA) (see Figure 2, Sudnik and Schneider 2008). Condit silty clay loam is reported as a poorly drained and listed as a hydric soil (USDA/SCS 1987). Mahoning silt loam is also listed as a poorly drained soil and is a non-hydric soil with hydric components in depressions. Predictively, the common occurrence of imperfectly drained soils and hydric conditions suggest it is unlikely that major habitation and substantial ceremonial sites exist within the project area, though isolated find sites and lithic scatters might be found in this area if relatively undisturbed soil deposits were encountered.

An archaeological field review for the proposed intersection improvements was conducted on October 27, 2008. The area is mostly residential with a few commercial properties scattered throughout: an automobile sales located in the northwest quadrant of the Bagley Road/Stearns Road intersection; a restaurant in the southeast quadrant of the Bagley Road/Stearns Road intersection; and a personal storage facility located in the northwest quadrant of the Stearns Road/Norfolk Southern rail line crossing. The only open area is in the southwest quadrant of the Stearns Road/Norfolk Southern rail line crossing. There was a dense woodlot in this area as of May 2006, but has recently been timbered and subsequently bulldozed (Sudnik and Schneider 2008: 13). During OES's field visit evidence of fill was also noted (fill piles and silt screen installed along the perimeter of the property). This area was also predominantly covered in hydric Condit silty clay loam. All other areas within the footprint of the two alternatives have

**Memo-to-file: 10/31/08, CUY-Stearns Road Grade Separation (PID 80729)
Archaeological Field Review, page 2**

been previously disturbed by residential and commercial development, utility installation, and landscaping. These disturbances combined with the poorly drained and hydric nature of the area preclude the existence of significant archaeological remains and no further archaeological investigations are recommended.

Summary

Our investigations indicated that no previously recorded archaeological resources will be affected by the proposed grade separation project. The field review indicated that the proposed project area has been previously disturbed and is also covered in poorly drained and hydric soil. No archaeological remains were identified that need detailed consideration by the Ohio Historic Preservation Office. These findings suggest that the proposed CUY-Stearns Road Grade Separation project (PID 80729) project will not affect any archaeological resources and no further archaeological investigations are required unless the project scope changes.

References

Sudnik, R. and A. Schneider

- 2008 Cultural Resources Literature Review for the Proposed Stearns Road Railroad Grade Separation (PID 80729) in Olmsted Township, Cuyahoga County, Ohio. Unpublished Red Flag Literature Review on file at the Ohio Department of Transportation, Office of Environmental Services, Columbus.

USDA/SCS (United States Department of Agriculture/Soil Conservation Service)

- 1987 Technical Guide and supplemental list of Ohio's Hydric Soils and Non-hydric Soils with Hydric Components. Unpublished county lists prepared by the SCS and on file USDA/SCS office, Columbus, Ohio.

TMH: jaw

c: Project File; Reading File; Mark Epstein, OSHPO w/attachments

Appendix C
Project Plan Sheets

CUYAHOGA COUNTY

CUY - STEARNS ROAD (C.R.-76)

GRADE CROSSING ELIMINATION WITH NORFOLK SOUTHERN RAILROAD

COUNTY SANITARY IMPROVEMENT No. _____

TOWNSHIP OF OLMSTED STATE OF OHIO

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A GRADE SEPARATION OF STEARNS ROAD OVER THE NORFOLK SOUTHERN RAILROAD TRACKS ON A NEW ALIGNMENT. THE PROJECT LENGTH IS 0.61 MILES AND WILL INVOLVE THE RECONSTRUCTION AND WIDENING OF STEARNS ROAD FROM BAGLEY ROAD (C.R.-27) TO 0.14 MILES SOUTH OF COOK ROAD (C.R.-59) DRAINAGE IMPROVEMENTS, THE INSTALLATION OF A NEW SANITARY SEWER AND WATER MAIN RELOCATION WILL ALSO BE INCLUDED.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA 14.66 ACRES
 ESTIMATED CONTRACTOR
 EARTH DISTURBED AREA 8.29 ACRES
 NOTICE OF INTENT
 EARTH DISTURBED AREA 22.95 ACRES

2010 SPECIFICATIONS

THE STANDARD CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, SHALL GOVERN THIS IMPROVEMENT EXCEPT WHEN MODIFIED BY THE PLANS, SPECIAL PROVISIONS, SUPPLEMENTAL SPECIFICATIONS OR PROPOSAL NOTES.

DOUGLAS L. DILLON, P.E., P.S.
 COUNTY ENGINEER

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MARKING OF THIS IMPROVEMENT WILL REQUIRE THE PARTIAL CLOSING OF THE HIGHWAY TO TRAFFIC, AS NOTED ON SHEETS 17-33, THAT DETOURS WILL BE PROVIDED AS SHOWN HEREIN, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____ DATE _____
 CUYAHOGA COUNTY ENGINEER

BOARD OF COMMISSIONERS

 CUYAHOGA COUNTY COMMISSIONER DATE _____

 CUYAHOGA COUNTY COMMISSIONER DATE _____

 CUYAHOGA COUNTY COMMISSIONER DATE _____

JOURNAL NO _____ PAGE _____ DATE _____

RESOLUTION NO _____

FEDERAL PROJECT NO
E080 (391)

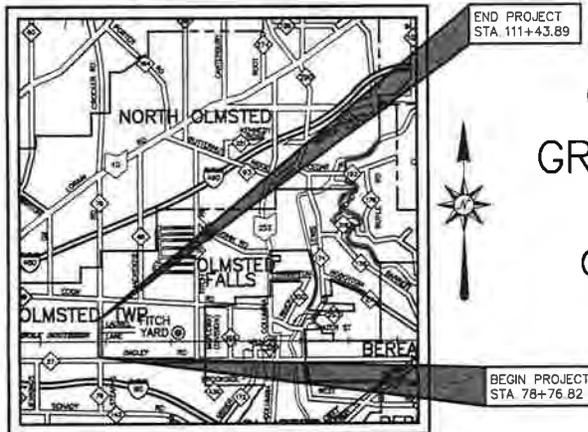
PID NO
80728

CONSTRUCTION PROJECT NO

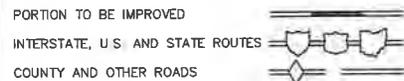
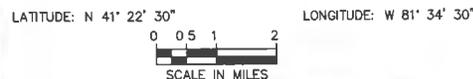
RAILROAD INVOLVEMENT
NORFOLK SOUTHERN

CUY - STEARNS ROAD (C.R.-76)

1
200



LOCATION MAP



DESIGN DESIGNATION

CURRENT ADT (2005).....	11,610
FUTURE ADT (2025).....	12,330
DESIGN HOURLY VOLUME (DHV).....	1,457
DIRECTIONAL DISTRIBUTION (D).....	59%
TRUCKS (T) (24 HOUR B&C).....	3%
DESIGN SPEED.....	40 M.P.H.
LEGAL SPEED.....	35 M.P.H.
DESIGN FUNCTIONAL CLASSIFICATION:	URBAN MINOR ARTERIAL

DESIGN EXCEPTIONS

NONE REQUIRED

INDEX OF SHEETS

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DRIVEWAY PROFILES - N.W. ACCESS ROAD	135-136		

**STAGE 2 REVIEW SUBMISSION
 JANUARY 13, 2012**

OHIO DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION DRAWINGS						CUYAHOGA COUNTY ENGINEER CONSTRUCTION DRAWINGS						O.D.O.T. SUPPLEMENTAL SPECIFICATIONS	
NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE	NUMBER	DATE
BP-2.3	07-16-04	DM-4.3	04-17-09	MT-105.10	01-16-09	BP-2.4C	10-10-08	SGN-1C	01-26-04	800	10-21-11		
F-1.1	04-16-10	DM-4.4	04-17-09	PSID-1-99	07-18-08	BP-2.5C	06-16-11	SGN-2C	01-26-04	802	01-21-11		
GR-1.1	07-16-04	TC-41.20	01-19-01	VFF-1-90	04-15-11	BP-2.6C	10-10-08	SGN-3C	01-26-04	823	07-15-11		
GR-2.1	01-16-04	TC-41.40	07-16-04	AS-1-B1	07-19-02	BP-4.1C	05-31-10	SGN-4C	01-26-04	832	05-05-09		
GR-3.1	10-16-09	TC-42.20	01-21-11	SICD-1-96	07-19-02	CB-3C	06-16-11	SGN-5C	01-26-04				
GR-4.1	01-21-11	TC-52.10	01-19-07			CB-3C2	06-16-11	SGN-6C	01-26-04				
GR-4.2	01-19-07	TC-52.20	01-19-07			MD-2C	10-10-08			PST-1C	01-26-04		
RM-4.2	10-15-10	TC-71.10	01-21-11			MD-1C	05-31-10						
		TC-82.10	01-21-11			MD-6C	05-31-10						
						MD-7C	10-29-01			MKG-1C	01-26-04		
						MH-10C	05-31-10			MKG-2C	01-26-04		
						MH-11C	10-29-01						
CB-1.1	07-15-05	MT-35.10	04-20-01			AS-1C	09-25-08						
		MT-97.10	10-15-10			BR-2-98C	09-12-11						
HW-2.1	07-30-07	MT-99.20	01-16-09			CP-1C	09-12-11						
HW-2.2	07-30-07	MT-101.60	04-17-09			PRF-1C	09-12-11						

SEE SECTION 200 OF THE CUYAHOGA COUNTY ENGINEER SPECIFICATION BOOKLET IN THE BID PACKAGE

UNDERGROUND UTILITIES

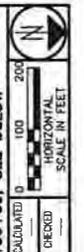
**TWO (2) WORKING DAYS
 BEFORE YOU DIG**

CALL 1-800-362-2764 (TOLL FREE)
 OHIO UTILITIES PROTECTION SERVICE
 NON MEMBERS
 MUST BE CALLED DIRECTLY
 - AND -
 CALL 1-800-925-0988 (TOLL FREE)
 OHIO OIL & GAS PRODUCERS
 UNDERGROUND PROTECTION SERVICE

PLAN PREPARED BY:

TranSystems

55 PUBLIC SQUARE,
 SUITE 1900
 CLEVELAND, OHIO 44113



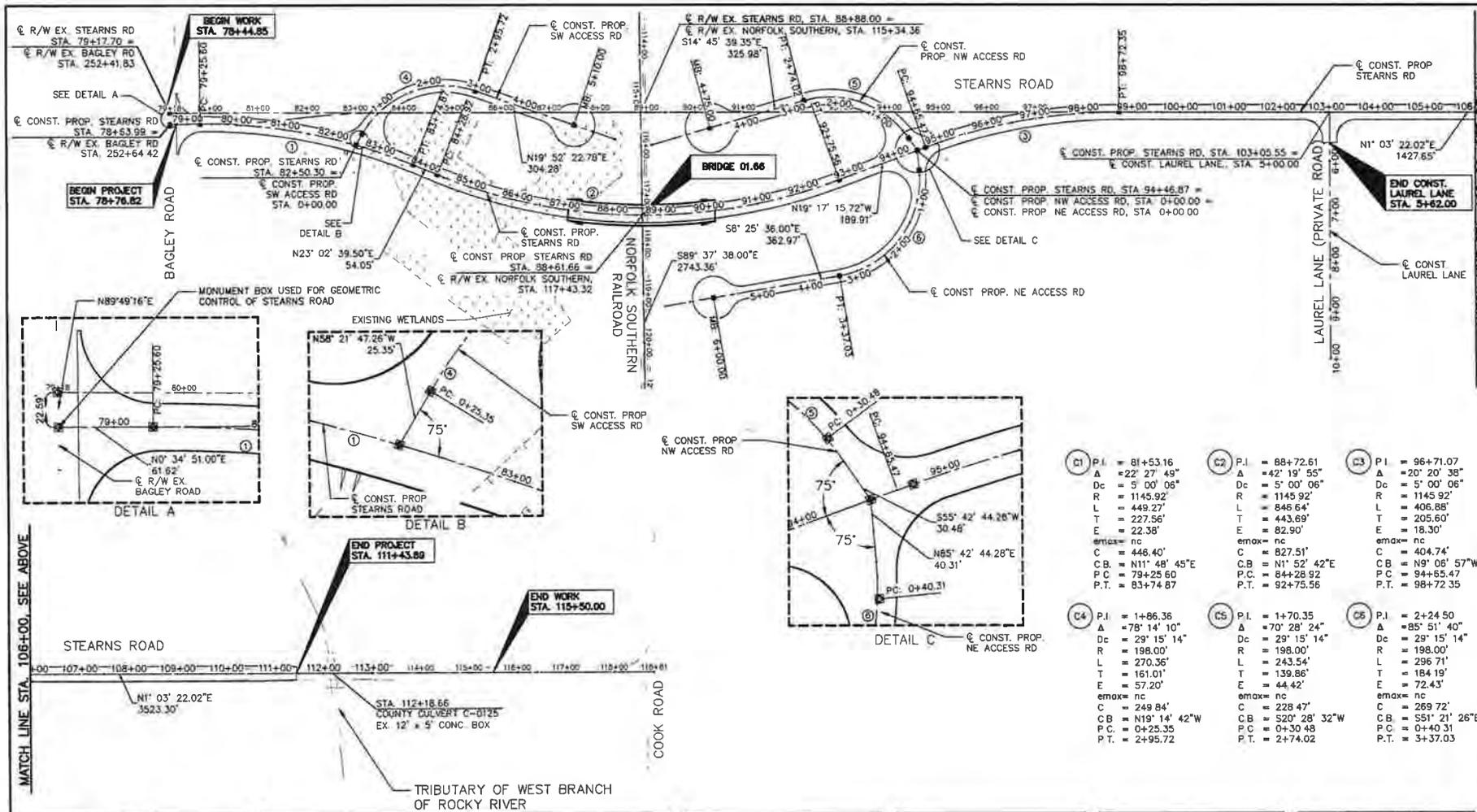
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CHECKED

MATCH LINE STA. 106+00, SEE BELOW

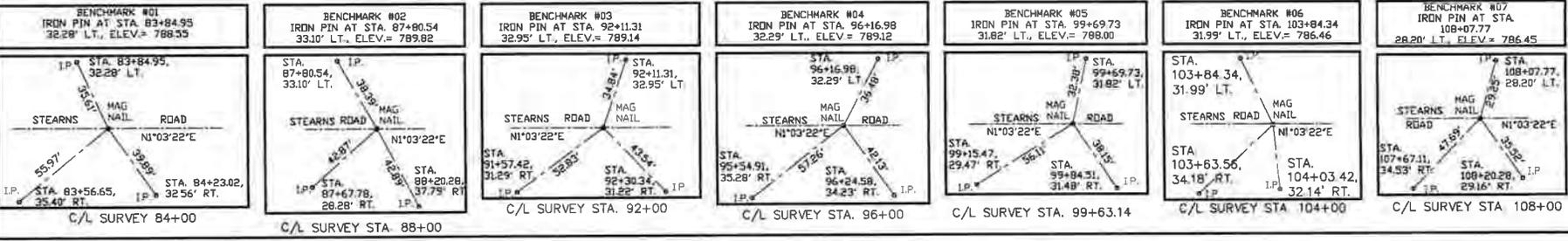
SCHEMATIC PLAN
STEARNS ROAD

BUY - STEARNS ROAD (OR-76)

2
200



MATCH LINE STA. 106+00, SEE ABOVE



C1 P.I. = 81+53.16 Δ = 22' 27' 49" Dc = 5' 00' 06" R = 1145.92' L = 449.27' T = 227.56' E = 22.38' emax = nc C = 446.40' CB = N11° 48' 45"E P.C. = 79+25.60 P.T. = 83+74.87	C2 P.I. = 88+72.61 Δ = 42' 19' 55" Dc = 5' 00' 06" R = 1145.92' L = 846.64' T = 443.69' E = 82.90' emax = nc C = 827.51' CB = N1° 52' 42"E P.C. = 84+28.92 P.T. = 92+75.56	C3 P.I. = 96+71.07 Δ = 20' 20' 38" Dc = 5' 00' 06" R = 1145.92' L = 406.88' T = 205.60' E = 18.30' emax = nc C = 404.74' CB = N9° 06' 57"W P.C. = 94+55.47 P.T. = 98+72.35
C4 P.I. = 14+86.36 Δ = 78' 14' 10" Dc = 29' 15' 14" R = 198.00' L = 270.36' T = 161.01' E = 57.20' emax = nc C = 249.84' CB = N19° 14' 42"W P.C. = 0+25.35 P.T. = 2+95.72	C5 P.I. = 14+70.35 Δ = 70' 28' 24" Dc = 29' 15' 14" R = 198.00' L = 243.54' T = 139.86' E = 44.42' emax = nc C = 228.47' CB = S20° 28' 32"W P.C. = 0+30.48 P.T. = 2+74.02	C6 P.I. = 2+24.50 Δ = 85' 51' 40" Dc = 29' 15' 14" R = 198.00' L = 296.71' T = 184.19' E = 72.43' emax = nc C = 269.72' CB = S51° 06' 26"E P.C. = 0+40.31 P.T. = 3+37.03

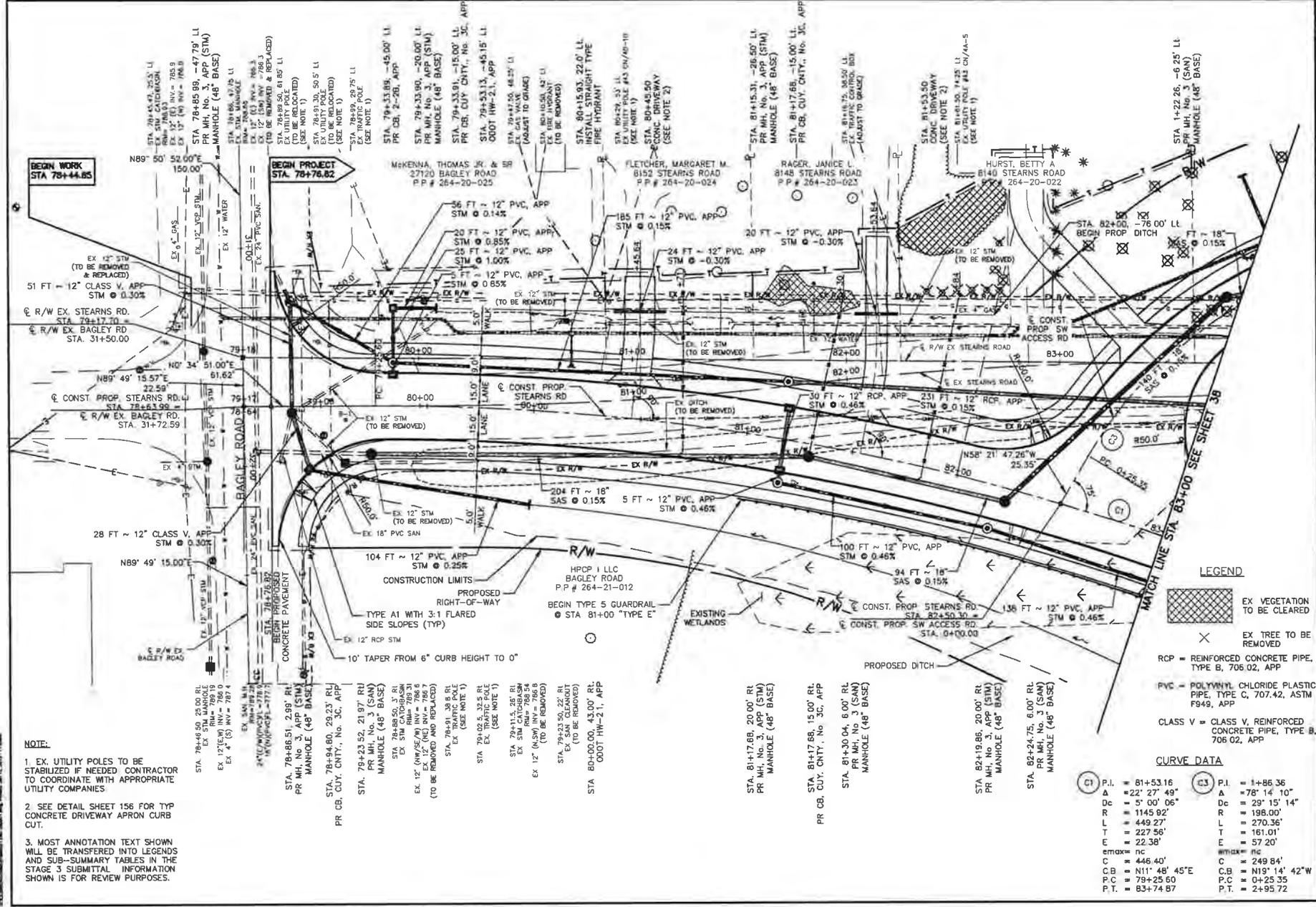




PLAN AND PROFILE - STEARNS ROAD
STA. 78+00 TO STA. 83+00

CUY - STEARNS ROAD (CR-76)

35
200



BEGIN WORK
STA 78+44.85

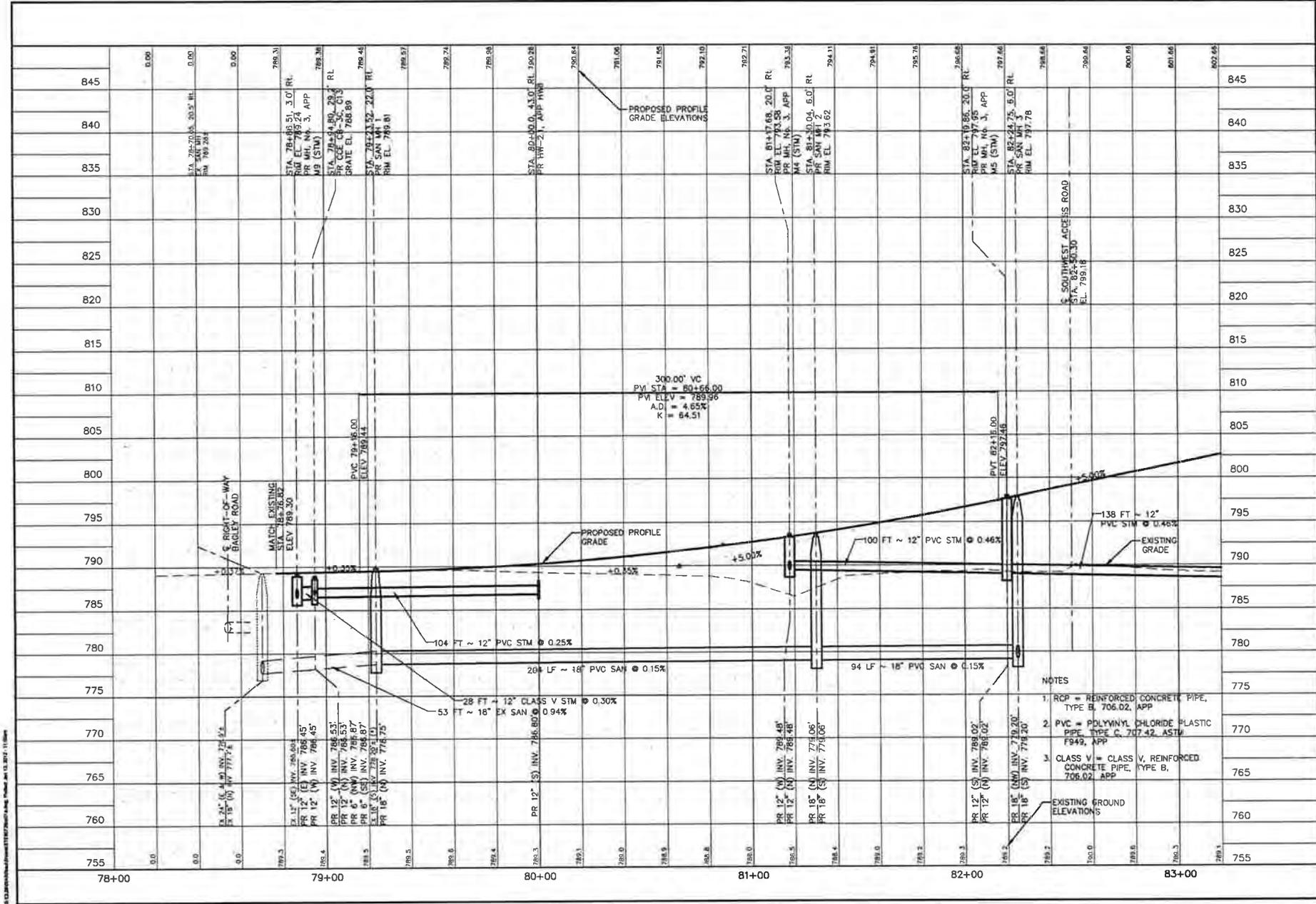
BEGIN PROJECT
STA 78+76.82

LEGEND

CURVE DATA

NOTE:
1. EX. UTILITY POLES TO BE STABILIZED IF NEEDED CONTRACTOR TO COORDINATE WITH APPROPRIATE UTILITY COMPANIES.
2. SEE DETAIL SHEET 156 FOR TYP CONCRETE DRIVEWAY APRON CURB CUT.
3. MOST ANNOTATION TEXT SHOWN WILL BE TRANSFERRED INTO LEGENDS AND SUB-SUMMARY TABLES IN THE STAGE 3 SUBMITTAL. INFORMATION SHOWN IS FOR REVIEW PURPOSES.

35
200



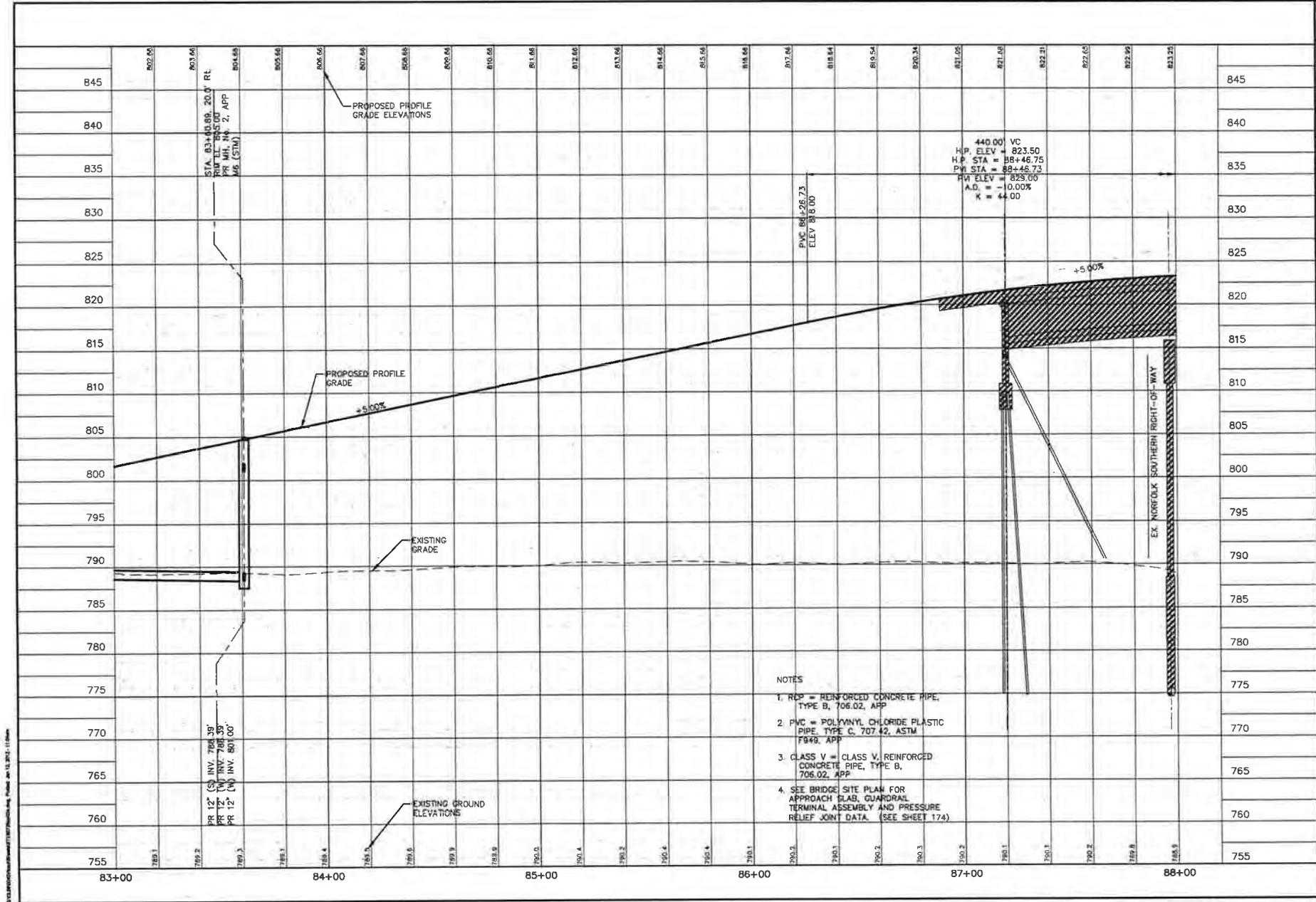
PLAN AND PROFILE - STEARNS ROAD
 STA. 78+00 TO STA. 83+00 - RIGHT

CUY - STEARNS ROAD (CR-76)

CALCULATED 0 20 40
 HORIZONTAL SCALE IN FEET
 CREDITED

- NOTES
1. ROP = REINFORCED CONCRETE PIPE, TYPE B, 706.02, APP
 2. PVC = POLYVINYL CHLORIDE PLASTIC PIPE, TYPE C, 707.42, ASTM F949, APP
 3. CLASS V = CLASS V, REINFORCED CONCRETE PIPE, TYPE B, 706.02, APP

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STA. 83+00.00, 20.0' RL
 H.P. STA = 83+00.00
 P.V. STA = 83+46.73
 M.S. (STM)

PR 12" (S) INV. 786.39'
 PR 12" (N) INV. 788.39'
 PR 12" (N) INV. 801.00'

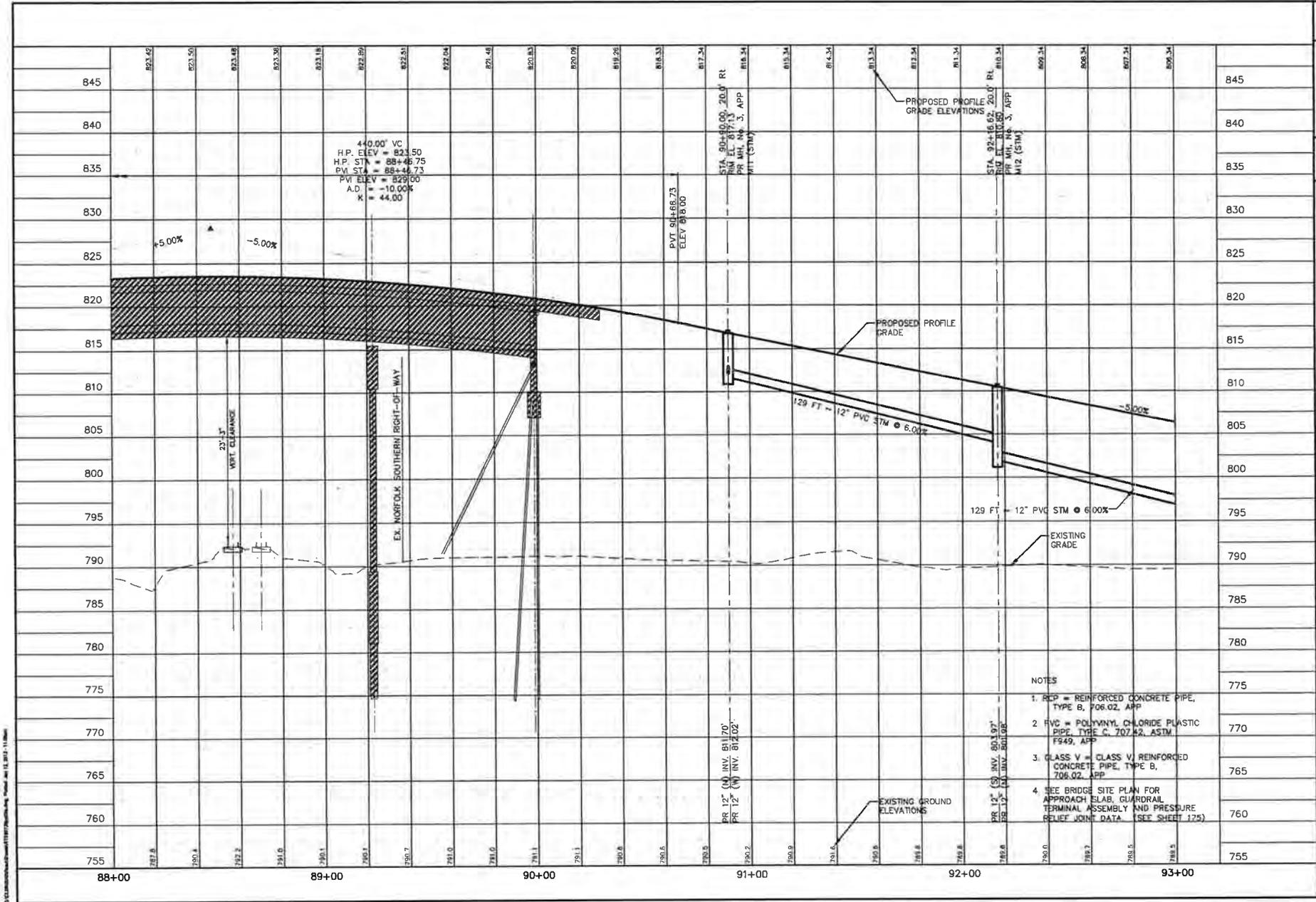
440.00' VC
 H.P. ELEV = 823.50
 H.P. STA = 88+46.73
 P.V. STA = 83+46.73
 H.W. ELEV = 825.00
 A.D. = -10.00%
 K = 44.00

- NOTES
1. RCP = REINFORCED CONCRETE PIPE, TYPE B, 706.02, APP
 2. PVC = POLYVINYL CHLORIDE PLASTIC PIPE, TYPE C, 707.42, ASTM F898, APP
 3. CLASS V = CLASS V, REINFORCED CONCRETE PIPE, TYPE B, 706.02, APP
 4. SEE BRIDGE SITE PLAN FOR APPROACH SLAB, GUARDRAIL TERMINAL ASSEMBLY AND PRESSURE RELIEF JOINT DATA. (SEE SHEET 174)



PLAN AND PROFILE - STEARNS ROAD
 STA. 83+00 TO STA. 88+00 - RIGHT

CUY - STEARNS ROAD (CR-76)



44.00' VC
 H.P. ELEV = 823.50
 H.P. STA = 88+46.75
 PVI STA = 88+44.73
 PVI ELEV = 829.00
 A.D. = -10.00%
 K = 44.00

EX. NORFOLK SOUTHERN RIGHT-OF-WAY
 22'-13"
 WRT. CLEARANCE

PVT 91+66.73
 ELEV 818.00

STA. 90+60.00, 20.0' RT
 FIN. E.L. 817.13
 PR. MH. NO. 3, APP
 M12 (STM)

PR 12" (6) INV. 811.70'
 PR 12" (6) INV. 814.02'

STA. 92+16.62, 20.0' RT
 FIN. E.L. 816.50
 PR. MH. NO. 3, APP
 M12 (STM)

PR 12" (5) INV. 804.97'
 PR 12" (5) INV. 801.98'

NOTES

1. RCP = REINFORCED CONCRETE PIPE, TYPE B, 706.02, APP
2. PVC = POLYVINYL CHLORIDE PLASTIC PIPE, TYPE C, 707.42, ASTM F949, APP
3. CLASS V = CLASS V REINFORCED CONCRETE PIPE, TYPE B, 706.02, APP
4. SEE BRIDGE SITE PLAN FOR APPROACH SLAB, GUARDRAIL TERMINAL ASSEMBLY AND PRESSURE RELIEF JOINT DATA (SEE SHEET 125)

PLAN AND PROFILE - STEARNS ROAD
 STA. 88+00 TO STA. 93+00 - RIGHT

CUY - STEARNS ROAD (CR-76)

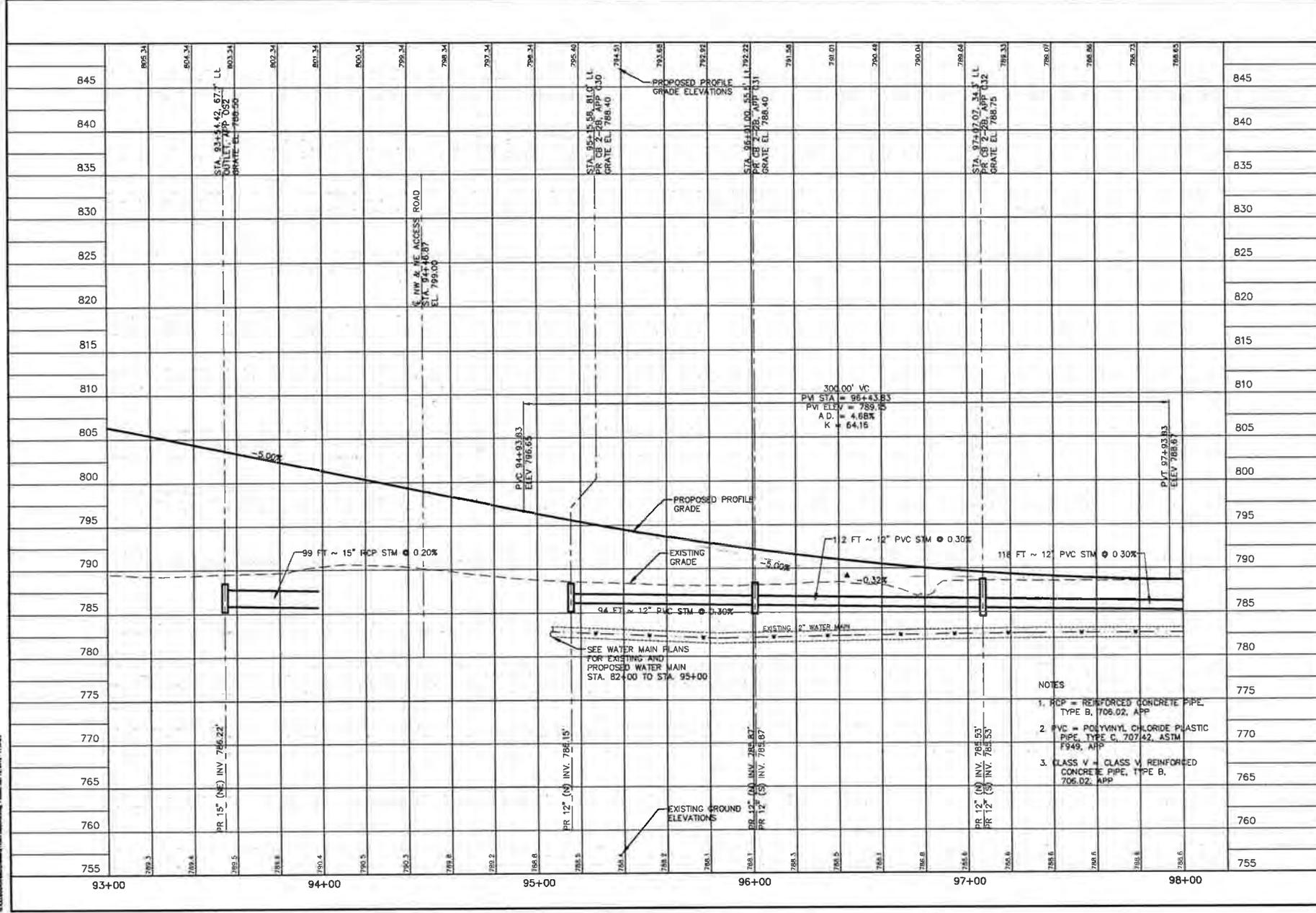
CALCULATED
 0
 20
 40
 HORIZONTAL
 SCALE IN FEET

845
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 820
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 800
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 780
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88+00
 89+00
 90+00
 91+00
 92+00
 93+00

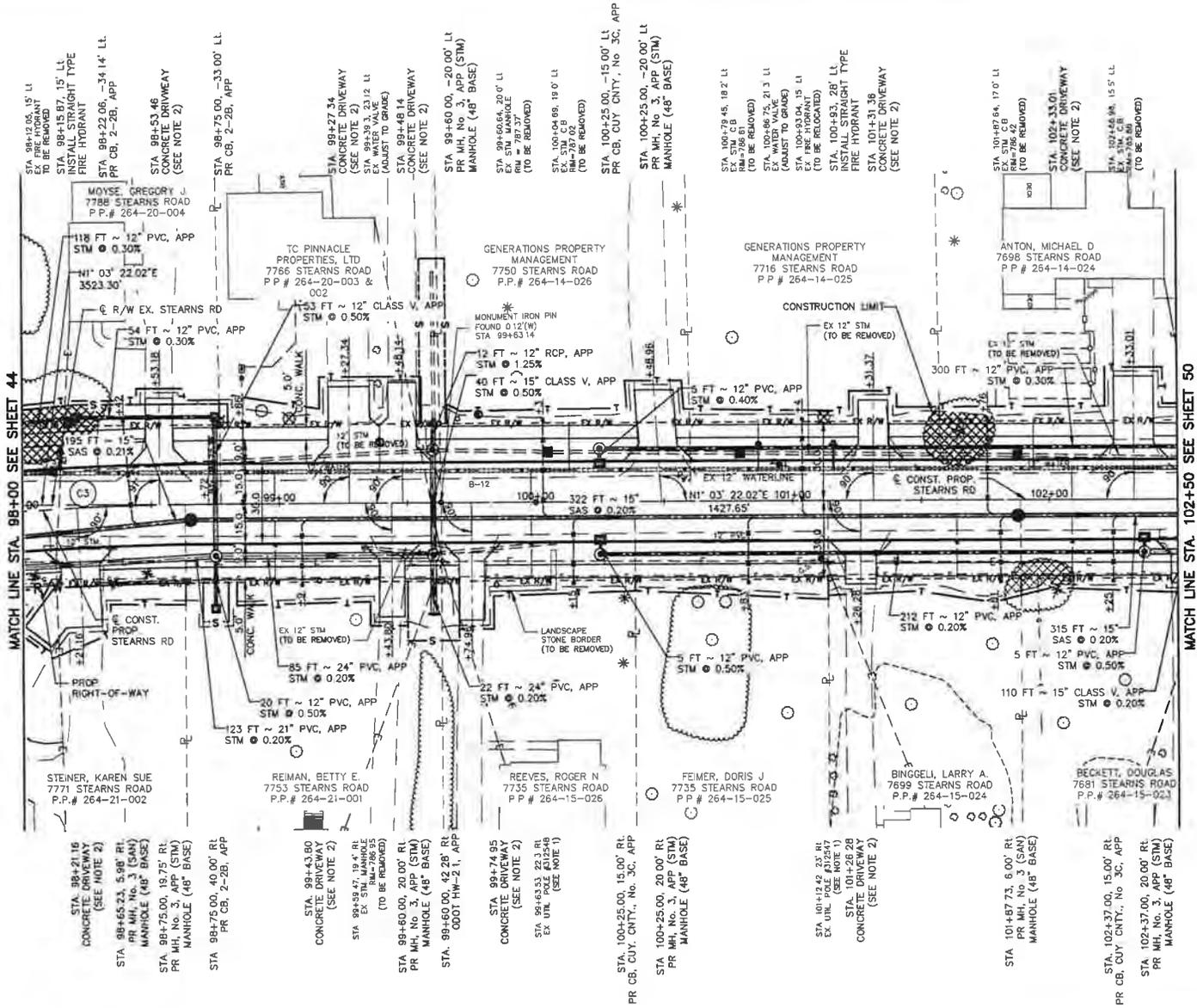
42 / 200

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- NOTES
1. RCP = REINFORCED CONCRETE PIPE, TYPE B, 706.02, APP
 2. PVC = POLYVINYL CHLORIDE PLASTIC PIPE, TYPE C, 707.42, ASTM F949, APP
 3. CLASS V - CLASS V REINFORCED CONCRETE PIPE, TYPE B, 706.02, APP

46 200	PLAN AND PROFILE - STEARNS ROAD STA. 93+00 TO STA. 98+00 - LEFT	CALCULATED 0 20 40 HORIZONTAL SCALE IN FEET CHECKED
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CURVE DATA

PI	= 96+71.07
Δ	= 20° 20' 38"
Dc	= 5' 00' 06"
L	= 1145.92'
T	= 406.88'
E	= 205.60'
T	= 18.30'
emax	= nc
C	= 404.74'
CB	= N9° 06' 57" W
PC	= 94+65.47
P.T.	= 98+72.35

LEGEND

-  EX VEGETATION TO BE CLEARED
-  EX TREE TO BE REMOVED

- RCP = REINFORCED CONCRETE PIPE, TYPE B, 706.02, APP
- PVC = POLYVINYL CHLORIDE PLASTIC PIPE, TYPE C, 707.42, ASTM F949, APP
- CLASS V = CLASS V, REINFORCED CONCRETE PIPE, TYPE B, 706.02, APP

- NOTE:**
1. EX UTILITIES POLE TO BE RELOCATED CONTRACTOR TO COORDINATE W/ APPROPRIATE UTILITY COMPANIES.
 2. SEE DETAIL SHEET 156 FOR TYPICAL CONCRETE DRIVEWAY APRON CURB CUT.



PLAN AND PROFILE - STEARNS ROAD
STA. 98+00 TO STA. 102+50

CUY - STEARNS ROAD (CR-76)

Appendix D

Photographs



Photo 1. Wetland A looking northeast at PEM wetland habitat.



Photo 2. Wetland A looking north at PEM wetland habitat and brush/dirt piles.

Stearns Road Railroad Grade Separation

PHOTO DOCUMENTATION

Cuyahoga County, Ohio



**Photographer(s):
B.M. Falkinburg**

**Date of Photograph:
2008**

**Project Number:
P402060040**



Photo 3. Railroad crossing at Stearns Road facing south.



Photo 4. Stearns Road facing north, north of railroad crossing.

<p align="center">Stearns Road Railroad Grade Separation</p> <p align="center">Cuyahoga County, Ohio</p>		<p align="center">PHOTO DOCUMENTATION</p>	
	<p>Photographer(s): B.M. Falkinburg</p>	<p>Date of Photograph: 2008</p>	<p>Project Number: P402060040</p>



Photo 5. Typical wooded habitat within the study area.



Photo 6. Typical old field habitat within the study area.

Stearns Road Railroad Grade Separation

Cuyahoga County, Ohio

PHOTO DOCUMENTATION



Photographer(s):
B.M. Falkinburg

Date of Photograph:
2008

Project Number:
P402060040

Appendix E Tables

Table 1. Water Resources within the Stearns Road Grade Separation (PID-80729) Project Area

Resource ID	Cowardin Class / Stream Class	Hydrologic Connectivity	Drainage Basin / HUC	Habitat Score (ORAM / HHEI) / Ohio EPA Category	*Total Wetland Area (acres) / Stream Length (L.F.)	Adjacent Habitat
Wetland A	PEM	Unnamed Tributary to Rocky River	Rocky River / 04110001	18.5 / Category 1	2.86	Roadway / Forest
Wetland B	PEM / PFO	Unnamed Tributary to Rocky River	Rocky River / 04110001	20.5 / Category 1	0.17	Roadway / Forest
Stream 1	Modified Class I	Unnamed Tributary to Rocky River	Rocky River / 04110001	39 (HHEI)	103	Roadway / Forest

*Area is approximate, wetland extends beyond study area and was not delineated fully beyond

Table 2. Proposed Wetland Impacts for the Proposed Stearns Road Grade Separation- Preferred Alternative (PID-80729)

Resource ID	Cowardin Class	*Total Wetland Area (acres)	Proposed Action	Volume Filled (Cubic Yards)	Area Filled (acres)	Percent Wetland Avoidance within Construction Limits
Wetland A	PEM	2.86	Fill	2,872	1.78	38%
Totals		2.86		2,872	1.78	

*Area is approximate, wetland extends beyond study area and was not delineated fully beyond

Table 3. Proposed Wetland Impacts for the Proposed Stearns Road Grade Separation- Minimal Degradation Alternative (PID-80729)

Resource ID	Cowardin Class	*Total Wetland Area (acres)	Proposed Action	Volume Filled (Cubic Yards)	Area Filled (acres)	Percent Wetland Avoidance within Construction Limits
Wetland A	PEM	2.86	Fill	2,097	1.30	55%
Totals		2.86		2,097	1.30	

*Area is approximate, wetland extends beyond study area and was not delineated fully beyond

Table 4. Estimated Cost of Construction by Alternative.

Item Description	Preferred Alternative Cost	Minimal Degradation Alternative Cost	Non-Degradation (No-Build) Alternative Cost
Real Estate	\$2,018,732	\$1,943,239	\$0
Roadway	\$1,566,550	\$1,505,364	\$0
Erosion Control	\$56,706	\$56,706	\$0
Drainage	\$533,204	\$533,204	\$0
Pavement	\$753,403	\$753,403	\$0
Retaining Wall	\$0	\$1,590,000	\$0
Structure	\$1,801,091	\$1,801,091	\$0
Water Work	\$213,801	\$213,801	\$0
Sanitary Sewers	\$309,642	\$309,642	\$0
Traffic Control	\$0	\$0	\$0
Maintenance of Traffic	\$0	\$0	\$0
General Items	\$0	\$0	\$0
Traffic Signaling/Lighting	\$0	\$0	\$0
Total Estimated Cost	\$7,253,129	\$8,706,449	\$0
Contengency & Inflation	\$2,103,407	\$2,524,870	\$0
Grand Total	\$9,356,536	\$11,231,320	\$0

Table 5. Estimated Cost of Water Pollution Controls and Temporary Erosion Controls by Alternative.

Item Description	Preferred Alternative Cost	Minimal Degradation Alternative Cost	Non-Degradation (No-Build) Alternative Cost
Erosion Control including BMP	\$56,706.00	\$56,706.00	\$0
Drainage including storm sewers and culverts	\$533,204.00	\$533,204.00	\$0
Total Estimated Cost	\$589,910.00	\$589,910.00	\$0
Contengency & Inflation	\$171,074	\$215,317	\$0
Grand Total	\$760,984	\$805,227	\$0



1105 Schrock Road, Suite 400
Columbus, Ohio 43229
Main 614-433-7800

I0a. Alternative Discussion

I0a-3. Non-degradation Alternative

Due to the location and the extent of the existing wetlands in the project area, coupled with FHWA and ODOT Roadway standards, a project to separate the rail road from the automobile traffic on Stearns Road cannot be reasonably constructed without impacts to aquatic resources. However, to meet the 401 requirements the Non-degradation Alternative will involve the construction of a clear span bridge over the existing railroad tracks that extend from Bagley Road to the northern edge of the study area as defined in Figure 1. The western end of Laurel Lane will need to be elevated to meet the grade of the proposed Stearns Road Bridge.

Although the Non-degradation Alternative may be technically feasible the extreme costs both in dollars and the affected adjacent residents would be inordinate. The Non-degradation Alternative was not developed through ODOT's Project Development Process therefore no plans have been created.

I0b. Impacts on Water Quality and Aquatic Life by Alternative

I0b-3 Non-degradation Alternative

No new impacts are expected in association with the Non-degradation Alternative.

I0c. Cost Effectiveness

I0c-1c Non-degradation Alternative

The Non-degradation Alternative may be technically feasible but the costs of a clear span bridge in comparison to the Preferred Alternative are estimated to increase greatly (approximately \$50 million). Additionally, to eliminate all impacts to aquatic resources the development of a clear span bridge would require all residences along Stearns Road in the project area to be appropriated and demolished due to lack of access from the elevated proposed roadway.

I0c-2c Non-degradation Alternative

It is estimated that the costs for the proposed Non-degradation Alternative would approach \$50 million. The cost increase would be due to exorbitant amounts of steel needed to construct a clear span bridge, the increased costs for real estate appropriations, the specialized construction techniques required to build such a large structure and the additional work to elevate Laurel Road.

I0d Sewage Projects: N/A no change required in application

I0e Conservation Projects: No change required in application

I0f Costs of Water Protection: See attached amended Table 5.

I0g-1 Impacts on Human Health

I0g-1c Non-degradation Alternative

Impacts to human health are expected to increase with the Non-Degradation Alternative due to increase of size and scope of the project. Noise and air quality during construction will increase in proportion to the size of the bridge and the increased time it will take to build the larger structure.

I0g-2 Impacts on Overall Quality and the value of the Water Resource

I0g-2c Non-degradation Alternative: No change required in application

I0h Social and Economic Benefits to be gained

I0h-3 Non-degradation Alternative

The proposed Non-degradation Alternative would improve transportation connectivity in the region but the overall aesthetics and the cohesiveness of the Stearns Road would be greatly changed by the clear span bridge.

I0i Social and Economic Benefits to be lost

I0i-3 Non-degradation Alternative

The loss of access to the proposed bridge would make it necessary to appropriate all the residences and businesses along Stearns Road. The overall effect to the community would be devastating.

I0j-1 Environmental Benefits to be Lost: No change required in application

I0j-2 No change required in application

I0k Mitigation Techniques Proposed

I0kk-1c Non-degradation Alternative

No aquatic resource mitigation will be required as the Non-degradation Alternative will not impact any wetlands or streams. However, Indiana Bat mitigation will increase due to the need to remove all the trees in the study area directly beneath or adjacent to the proposed bridge.

Table 4. Estimated Cost of Construction by Alternative.

Item Description	Preferred Alternative Cost	Minimal Degradation Alternative Cost	Non-Degradation Alternative Cost
Real Estate	\$2,018,732	\$1,943,239	<p>The Non Degradation Alternative was not developed through ODOT's Project Development Process therefore plans and a breakdown of costs were not developed.</p> <p>The overall costs of a clear span bridge (Non-Deg Alternative) from Bagley Road north over the project area is estimated to cost \$50 million.</p>
Roadway	\$1,566,550	\$1,505,364	
Erosion Control	\$56,706	\$56,706	
Drainage	\$533,204	\$533,204	
Pavement	\$753,403	\$753,403	
Retaining Wall	\$0	\$1,590,000	
Structure	\$1,801,091	\$1,801,091	
Water Work	\$213,801	\$213,801	
Sanitary Sewers	\$309,642	\$309,642	
Traffic Control	\$0	\$0	
Maintenance of Traffic	\$0	\$0	
General Items	\$0	\$0	
Traffic Signaling/Lighting	\$0	\$0	
Total Estimated Cost	\$7,253,129	\$8,706,449	
Contingency & Inflation	\$2,103,407	\$2,524,870	
Grand Total	\$9,356,536	\$11,231,320	

Table 5. Estimated Cost of Water Pollution Controls and Temporary Erosion Controls by Alternative.

Item Description	Preferred Alternative Cost	Minimal Degradation Alternative Cost	Non-Degradation Alternative Cost
Erosion Control including BMP	\$56,706.00	\$56,706.00	<p>The Non Degradation Alternative was not developed through ODOT's Project Development Process therefore plans and a breakdown of costs were not developed. Costs for erosion controls are estimated at \$4 million.</p>
Drainage including storm sewers and culverts	\$533,204.00	\$533,204.00	
Total Estimated Cost	\$589,910.00	\$589,910.00	
Contingency & Inflation	\$171,074	\$215,317	
Grand Total	\$760,984	\$805,227	