



**US Army Corps
Of Engineers**
Wilmington District

PUBLIC NOTICE

Issue Date: October 3, 2014
Comment Deadline: November 3, 2014
Corps Action ID Number: SAW-2008-03216

The Wilmington District, Corps of Engineers (Corps) received an application from John Wieland Homes seeking Department of the Army authorization to impact 1,007 linear feet of stream and 0.313 acre of wetland, associated with the development of Phase II of a single-residential subdivision called Olmsted in Mecklenburg County, North Carolina.

Specific plans and location information are described below and shown on the attached plans. This Public Notice and all attached plans are also available on the Wilmington District Web Site at <http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx>

Applicant: Mr. Andrew McCoy
John Wieland Homes
8325-D Arrowridge Blvd
Charlotte, North Carolina 28273

AGENT (if applicable): Mr. Gregg Antemann
Carolina Wetland Services, Inc.
550 E Westinghouse Blvd
Charlotte, North Carolina 28273

Authority

The Corps evaluates this application and decides whether to issue, conditionally issue, or deny the proposed work pursuant to applicable procedures of the following Statutory Authorities:

- Section 404 of the Clean Water Act (33 U.S.C. 1344)
- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)
- Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413)

Location

Directions to Site: The site is located north of the terminus of Balcony Bridge Road, in Huntersville, Mecklenburg County, North Carolina. This site is located in the Rocky River Watershed of the Upper Pee Dee River Basin (8-Digit Cataloging Unit 03040105). From Interstate 485, drive north on NC Hwy115 (Old Statesville Road) for approximately 0.5 miles.

Turn right on Eastfield Road and drive for approximately 2.6 miles. Take a left onto Long Common Parkway and drive for 0.6 mile. Take a right onto Balcony Bridge Road and the project area is located immediately north of its terminus (See Figure 1, 2 & 4)

Project Area (acres): 292 Nearest Town: Huntersville
 Nearest Waterway: Ferrelltown Creek River Basin: Upper Pee Dee
 Latitude and Longitude: 35.391817N, 80.795877W

Existing Site Conditions

The project area is wooded with adjacent residential developments and utility line right-of-ways. Dominant vegetation within the project area consists of ironwood (*Carpinus caroliniana*), tulip poplar (*Liriodendron tulipifera*), sweetgum (*Liquidambar styraciflua*), Eastern red cedar (*Juniperus virginiana*), red elm (*Ulmus rubra*), red maple (*Acer rubrum*), Virginia creeper (*Parthenocissus quinquefolia*), Japanese honeysuckle (*Lonicera japonica*), false nettle (*Boehmeria cylindrical*), Chinese privet (*Ligustrum sinense*), bedstraw (*Galium sp.*) and various sedges (*Carex spp.*).

According to the Mecklenburg County Soil Survey (see Figure 4), on-site soils consist of Cecil sandy clay loam, 8-15 percent slopes, moderately eroded (CeD2), Enon sandy loam, 2-8 percent slopes (EnB), Monocan loam, 0-2 percent slopes, frequently flooded (MO), Wilkes loam 4-8 percent slopes, 8-15 percent slopes, and 15-25 percent slopes (WkB, WkD, and WkE, respectively).

On-site Cecil, Enon, and Wilkes soil units are well drained soils. Monocan loam, 0-2 percent slopes, frequently flooded (MO) is somewhat poorly drained and is listed in the North Carolina Hydric Soils List for Mecklenburg County as having hydric inclusions. Monocan loam, 0-2 percent slopes, frequently flooded (MO) is also listed as partially hydric on the National Hydric Soils List.

The project area contains several jurisdictional waters of the U.S. to include stream channels and wetlands. These on-site jurisdictional features were delineated by CWS on January 24-28, 2005 and verified by Ms. Amanda Jones of the USACE on March 15, 2006 (SAW-2005-31604). The site was reinvestigated by CSW in 2008 and re-verified by the USACE in association with a Nationwide Permit 29 issued in April of 2008 (SAW-2008-01130). On November 19, 2013, CWS reinvestigated the site and felt there were no changes to the limits of jurisdiction of on-site waters. On July 29, 2014, Mr. Steve Kichefski of USACE field reviewed on-site jurisdictional features in the locations of proposed impacts. The applicant's summary of Phase II jurisdictional Waters of the US are listed in Table 1 below.

Table 1. Summary of On-Site Jurisdictional Waters of the U.S.

Jurisdictional Feature	Classification	Approximate Length (lf)
Stream A	Perennial RPW (SCP1)	3,377
Stream F	Seasonal RPW	815
Stream G	Seasonal RPW	469
Stream H	Seasonal RPW	267
Stream J	Seasonal RPW	77

Jurisdictional Feature	Classification	Approximate Length (lf)
Stream K	Seasonal RPW (SCP2)	1,167
Stream L	Seasonal RPW	431
Stream M	Seasonal RPW (SCP3)	745
Stream N	Seasonal RPW	302
Stream O	Seasonal RPW (SCP4)	600
Stream P	Perennial RPW (SCP5)	2,370
	Seasonal RPW	585
Stream Q	Seasonal RPW	440
Stream R	Seasonal RPW	170
Stream S	Seasonal RPW (SCP6)	670
Stream T	Seasonal RPW (SCP7)	1,176
	Perennial RPW	360
Stream U	Seasonal RPW	471
Stream V	Seasonal RPW	880
Stream W	Seasonal RPW	230
Stream X	Seasonal RPW	55
Stream Y	Seasonal RPW	254
Seasonal RPW		9,804 lf
Perennial RPW		6,107 lf
Stream Total		15,911 lf
Jurisdictional Feature	Classification	Approximate Acreage (ac)
Wetland AA	Directly abutting RPW (DP3)	4.38
Wetland BB	Directly abutting RPW	0.033
Wetland CC	Directly abutting RPW	0.184
Wetland DD	Directly abutting RPW (DP1)	0.331
Wetland FF	Directly abutting RPW	0.099
Wetland GG	Directly abutting RPW (DP2, DP4)	0.382
Wetland LL	Directly abutting RPW	0.207
Wetland MM	Directly abutting RPW	0.082
Pond A	Impoundment of Stream A	10.53
Wetland Total		5.7 ac
Pond Total		10.53 ac

Applicant's Stated Purpose

The purpose of this submittal is to construct the final phase of the Olmsted Subdivision, Phase II. Phase II will develop approximately 292 acres of wooded area into a residential subdivision to provide single-family housing to meet the growth and demand of an area of Mecklenburg County that is experiencing significant population growth.

Project Description

According to the applicant, the currently proposed site plan (see Figure 5) was developed as a result of the applicant's alternative analysis and avoidance and minimization process. They felt that the impacts and crossing locations were constrained by the existing road layout from Phase I as well as the natural site topography and existing natural resources. The Olmsted Phase II

proposed impacts to jurisdictional waters include 1,007 linear feet of stream and 0.313 acre of wetland. Impacts to on-site seasonal stream channels total 707 linear feet and most are the result of culverts and rip rap aprons associated with roadway crossings 1, 3, 4, and 10. Impacts to on-site perennial stream channels total 300 linear feet and are the result of the installation of culverts and rip rap aprons associated with crossings 6 and 7. Permanent impacts to jurisdictional wetlands total 0.313 acre and are the result of the placement of fill for road crossings, building pads and the conversion of forested wetlands to maintained herbaceous wetlands in utility easements. Proposed impacts are summarized in Table 2 below.

Table 2. Phase II Proposed Impacts to Jurisdictional Waters

Jurisdictional Feature	NCDWR Score	USACE Score	Type of Impact	Temporary / Permanent	Impacts (lf)	Impact (acres)	Figure Number
Seasonal RPW Stream K	27.5	63	Culvert & Rip Rap	Permanent	168	0.012	13 & 14
Seasonal RPW Stream M	28.5	59	Culvert & Rip Rap	Permanent	164	0.009	16 & 17
Seasonal RPW Stream O	18.5	55	Culvert & Rip Rap	Permanent	132	0.009	18 & 19
Seasonal RPW Stream S	28	50	Utility Crossing	Temporary	15	0.001	20 & 21
Seasonal RPW Stream T	20.5	46	Culvert & Rip Rap	Permanent	228	0.015	30 & 29
Perennial RPW Stream P	32.5	59	Culvert & Rip Rap	Permanent	162	0.011	22 & 23
			Culvert & Rip Rap	Permanent	138	0.015	24 & 28
Wetland AA	n/a	n/a	Fill (footers for aerial sewer)	Permanent	--	0.0005	27
	n/a	n/a	Conversion from Forested to Herbaceous (Sewer)	Permanent	--	0.032	27
	n/a	n/a	Fill (Road Crossing)	Permanent	--	0.070	16 & 17
Wetland DD	n/a	n/a	Fill (Road Crossing)	Permanent	--	0.050	31
Wetland GG	n/a	n/a	Fill	Permanent	--	0.160	30
Total Permanent Wetland Impacts					--	0.313 acre	
Total Permanent Seasonal RPW Stream Impacts					692 lf	0.045 acre	
Total Permanent Perennial RPW Stream Impacts					300 lf	0.026 acre	

Avoidance and Minimization

The applicant provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment: Impacts to on-site jurisdictional waters of the U.S. have been reduced to the maximum extent practicable. Road and utility crossings of jurisdictional waters of the U.S. were avoided and/or combined wherever possible in order to reduce impacts. Road crossings have been reduced to the minimum number necessary to meet local planning ordinances requiring appropriate emergency disturbances to jurisdictional waters of the United States. Additionally, a bottomless culvert will be implemented on one road crossing in order to reduce impacts to Perennial RWP Stream A. According to the applicant, a bottomless culvert was utilized despite the considerable expense involved, due to the high quality of this stream.

Retaining walls are used at headwalls and endwalls to minimize the length of culvert required for each crossing. In addition, the required amount of rip rap was limited to the maximum extent practicable and within specification of local ordinances. The temporary construction easement for the sanitary sewer will be limited to 15 feet in width through wetlands. Proper sediment and erosion control measures will be applied to minimize disturbances to downstream waters.

Compensatory Mitigation

The applicant offered the following compensatory mitigation plan to offset unavoidable functional loss to the aquatic environment: The applicant is proposing to offset impacts associated with this project by making payment into the North Carolina Ecosystem Enhancement (NCEEP) In Lieu Fee Program according to the ratios listed in the following table. NCEEP has agreed to accept this mitigation by letter dated August 26, 2014 in the Yadkin Basin (HUC 03040105).

Table 3. Total Proposed Mitigation

Rapanos Classification	Status of Impacts	Impacts (acre)	Impacts (lf)	Mitigation Required
Seasonal RPW	Completed	--	470	None (grandfathered)
Seasonal RPW with Low Aquatic Function (Stream T)	Proposed	--	228	None
Seasonal RPW	Proposed	--	464	Yes (1:1) 464 credits
Perennial RPW	Proposed	--	300	Yes (2:1) 600 credits
Directly Abutting Wetlands	Proposed	0.313	--	Yes (2:1) 0.626 credits
Total Required Stream Mitigation				1,064 linear feet
Total Required Wetland Mitigation				0.626 acre

Essential Fish Habitat

Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, this Public Notice initiates the Essential Fish Habitat (EFH) consultation requirements. The Corps' initial determination is that the proposed project would not effect EFH or associated fisheries managed by the South Atlantic or Mid Atlantic Fishery Management Councils or the National Marine Fisheries Service.

Cultural Resources

Pursuant to Section 106 of the National Historic Preservation Act of 1966, Appendix C of 33 CFR Part 325, and the 2005 Revised Interim Guidance for Implementing Appendix C, the District Engineer consulted district files and records and the latest published version of the National Register of Historic Places and initially determines that:

- No historic properties, nor properties eligible for inclusion in the National Register, are present within the Corps' permit area; therefore, there will be no historic properties affected. The Corps subsequently requests concurrence from the SHPO (or THPO).

The District Engineer's final eligibility and effect determination will be based upon coordination with the SHPO and/or THPO, as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on historic properties within the Corps-identified permit area.

Endangered Species

Pursuant to the Endangered Species Act of 1973, the Corps reviewed the project area, examined all information provided by the applicant and consulted the latest North Carolina Natural Heritage Database. Based on available information:

- The Corps determines that the proposed project would not affect federally listed endangered or threatened species or their formally designated critical habitat.

Other Required Authorizations

The Corps forwards this notice and all applicable application materials to the appropriate State agencies for review.

North Carolina Division of Water Resources (NCDWR): The Corps will generally not make a final permit decision until the NCDWR issues, denies, or waives the state Certification as required by Section 401 of the Clean Water Act (PL 92-500). The receipt of the application and this public notice, combined with the appropriate application fee, at the NCDWR Central Office in Raleigh constitutes initial receipt of an application for a 401 Certification. A waiver will be deemed to occur if the NCDWR fails to act on this request for certification within sixty days of receipt of a complete application. Additional information regarding the 401 Certification may be reviewed at the NCDWR Central Office, 401 and Buffer Permitting Unit, 512 North Salisbury Street, Raleigh, North Carolina 27604-2260. All persons desiring to make comments regarding the application for a 401 Certification should do so, in writing, by November 3, 2014 to:

NCDWR Central Office
Attention: Ms. Karen Higgins, 401 and Buffer Permitting Unit
(USPS mailing address): 1617 Mail Service Center, Raleigh, NC 27699-1617

Or,

(Physical address): 512 North Salisbury Street, Raleigh, North Carolina 27604

North Carolina Division of Coastal Management (NCDCM):

The application did not include a certification that the proposed work complies with and would be conducted in a manner that is consistent with the approved North Carolina Coastal Zone Management Program. Pursuant to 33 CFR 325.2(b)(2) the Corps cannot issue a Department of Army (DA) permit for the proposed work until the applicant submits such a certification to the Corps and the NCDCM, and the NCDCM notifies the Corps that it concurs with the applicant's consistency certification. As the application did not include the consistency certification, the Corps requests, via this Public Notice, concurrence or objection from the NCDCM.

Based upon all available information, the Corps determines that this application for a Department of Army (DA) permit does not involve an activity which would affect the coastal zone, which is defined by the Coastal Zone Management (CZM) Act (16 U.S.C. § 1453).

Evaluation

The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving the discharge of dredged or fill materials in waters of the United States, the evaluation of the impact of the activity on the public interest will include application of the Environmental Protection Agency's 404(b)(1) guidelines.

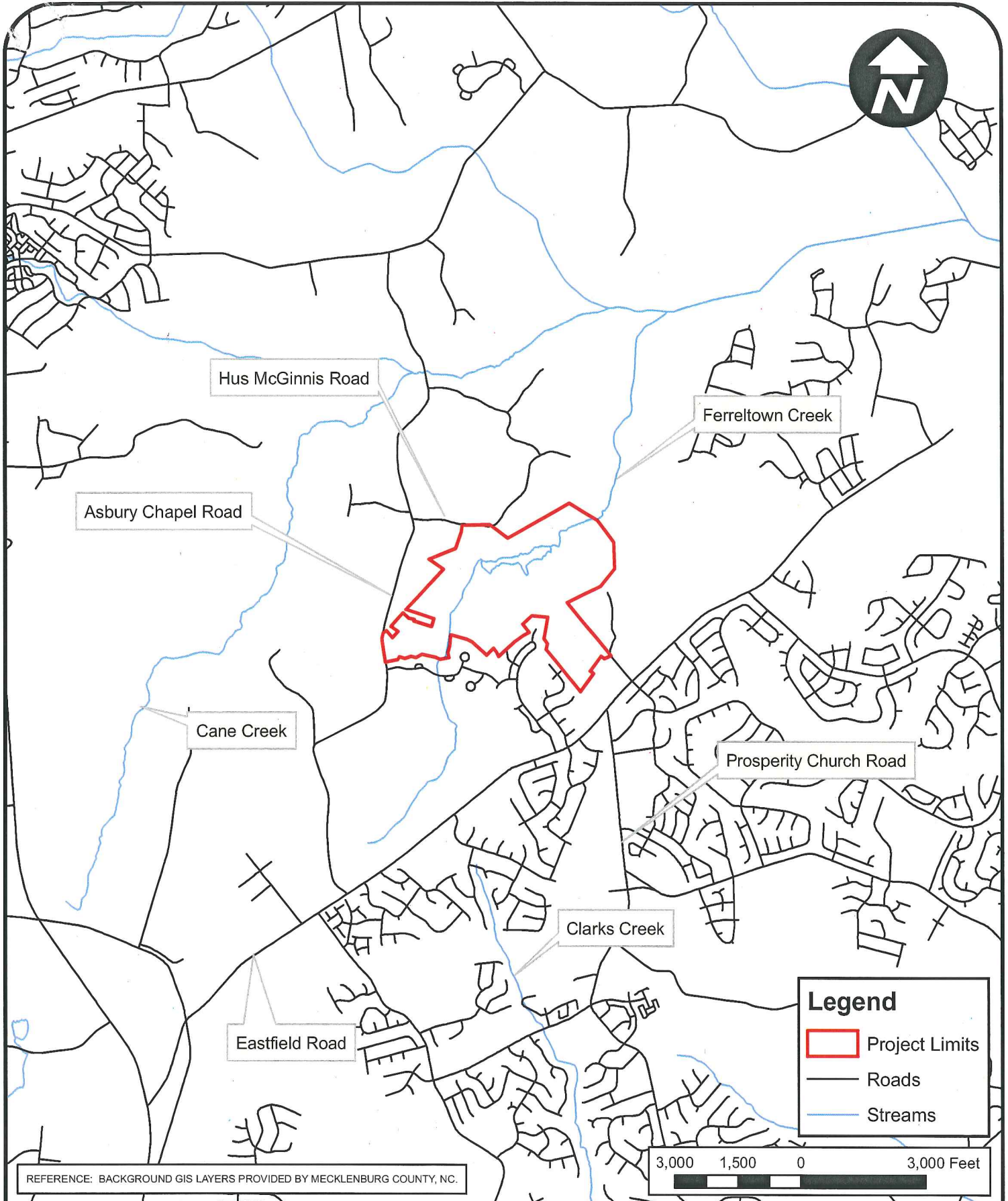
Commenting Information

The Corps of Engineers is soliciting comments from the public; Federal, State and local agencies and officials, including any consolidated State Viewpoint or written position of the Governor; Indian Tribes and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this

decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment (EA) and/or an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing shall be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.

The Corps of Engineers, Wilmington District will receive written comments pertinent to the proposed work, as outlined above, until 5pm, November 3, 2014. Comments should be submitted to Mr. Steve Kichefski, Asheville Regulatory Field Office, 151 Patton Avenue, Room 208, Asheville, North Carolina 28801-5006, at (828) 271-7980.



REFERENCE: BACKGROUND GIS LAYERS PROVIDED BY MECKLENBURG COUNTY, NC.

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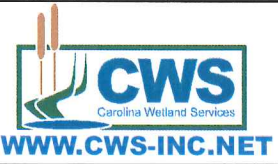
DATE: 08-26-14

CWS PROJECT NO:
2013-3236

DRAWN BY:
ELBS

APPLICANT NO:

CHECKED BY:
TJB

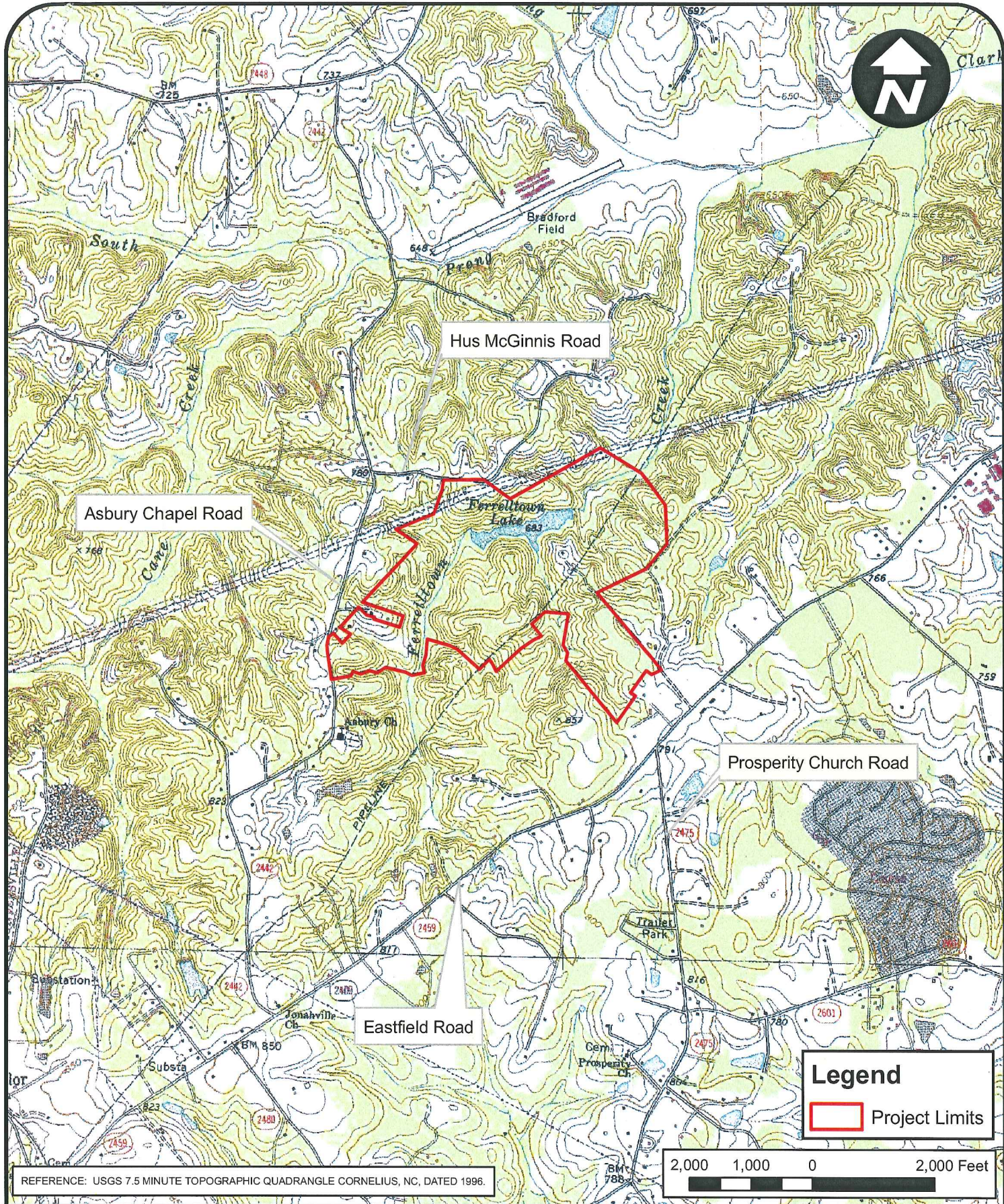


Vicinity Map

Olmstead Phase II
Huntersville, North Carolina
CWS Project No. 2013-3236

FIGURE NO.

1 of
18



REFERENCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE CORNELIUS, NC, DATED 1996.

SCALE: 1" : 2000'

DATE: 08-14-13

CWS PROJECT NO:
2013-3236

DRAWN BY:
KMT

APPLICANT NO:

CHECKED BY:
TJB

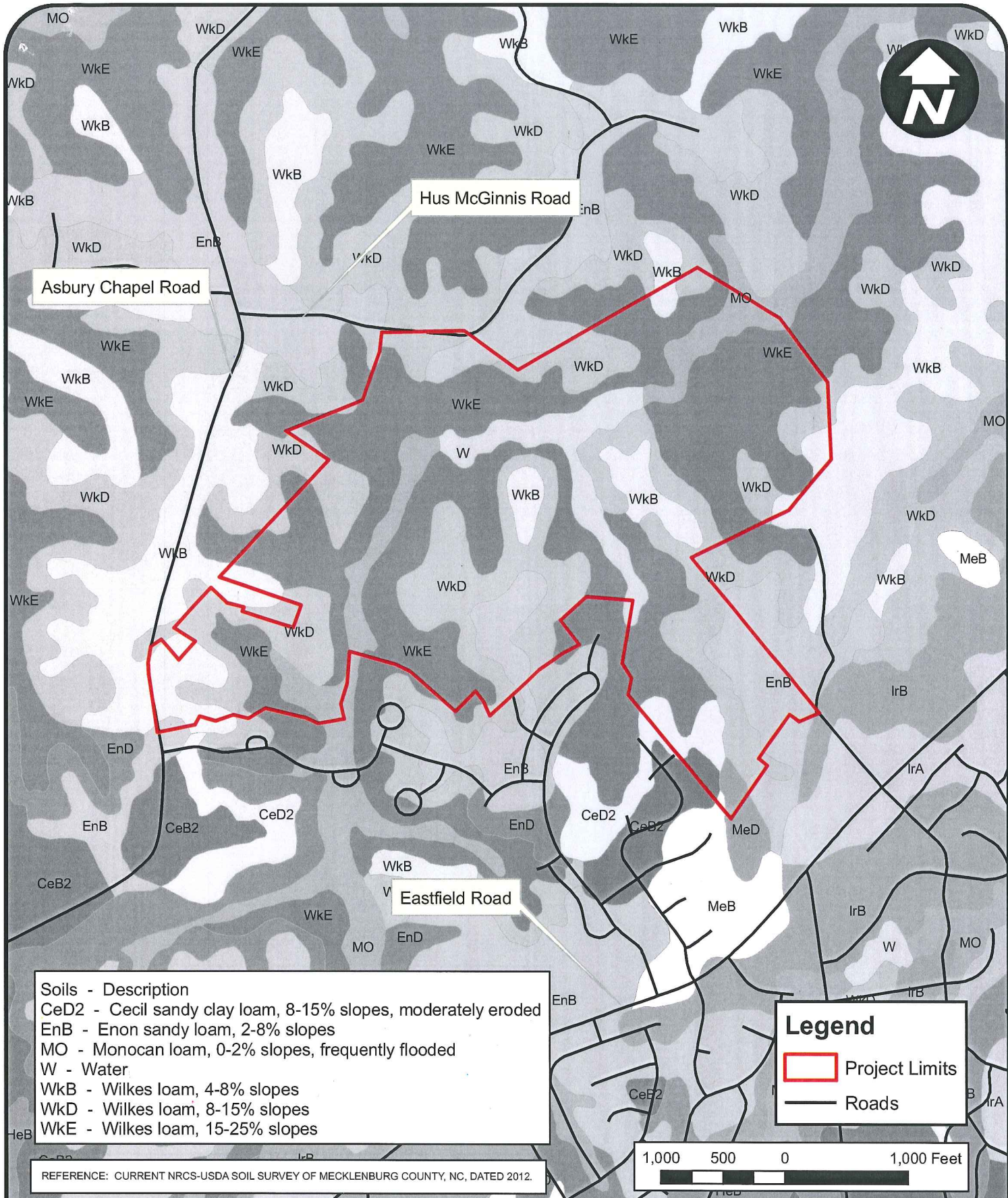


USGS Site Location Map

Olmstead Phase II
Huntersville, North Carolina
CWS Project No. 2013-3236

FIGURE NO.

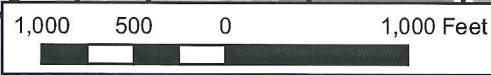
2 of
18



Soils - Description
 CeD2 - Cecil sandy clay loam, 8-15% slopes, moderately eroded
 EnB - Enon sandy loam, 2-8% slopes
 MO - Monocan loam, 0-2% slopes, frequently flooded
 W - Water
 WkB - Wilkes loam, 4-8% slopes
 WkD - Wilkes loam, 8-15% slopes
 WkE - Wilkes loam, 15-25% slopes

Legend

- Project Limits
- Roads



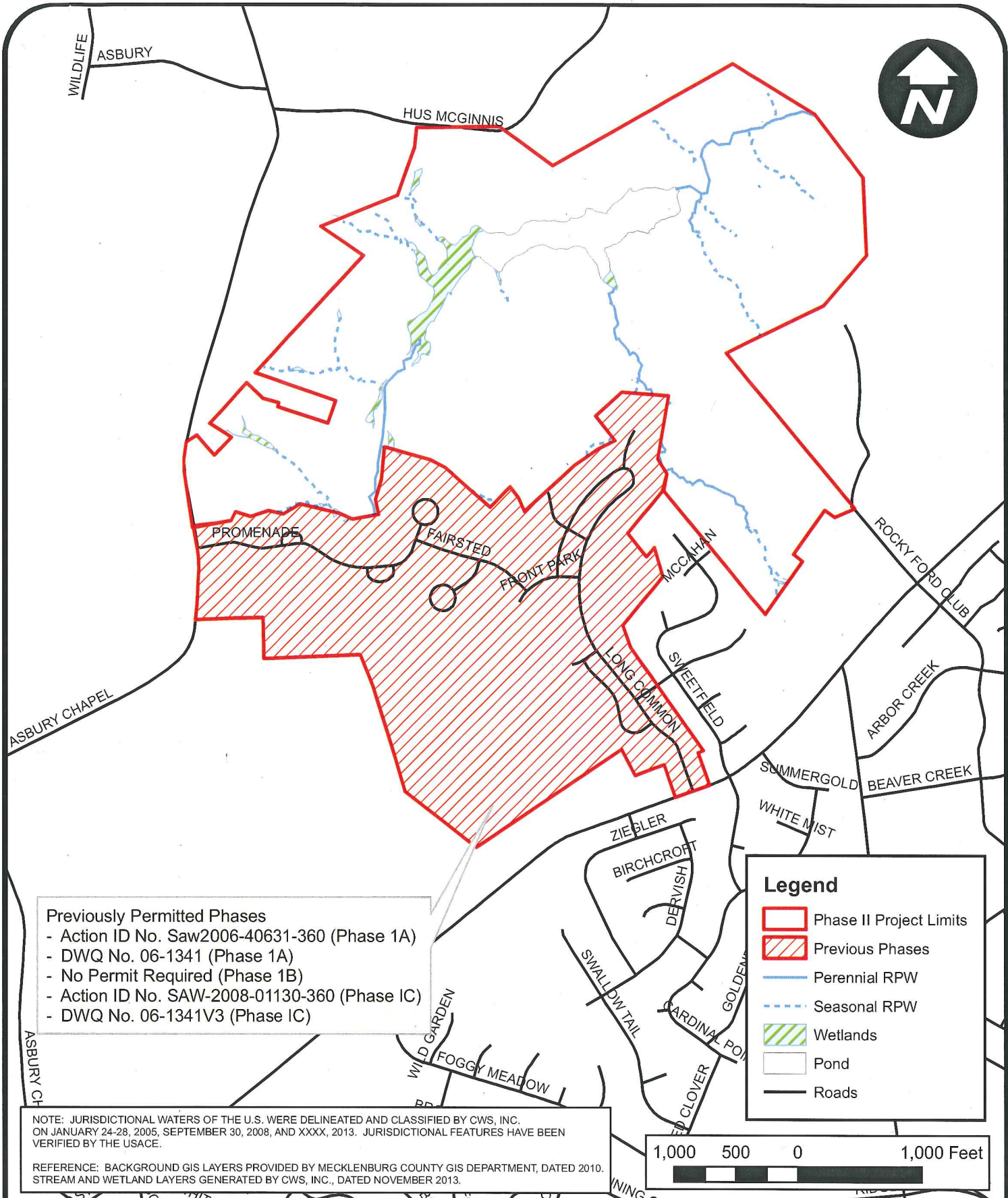
REFERENCE: CURRENT NRCS-USDA SOIL SURVEY OF MECKLENBURG COUNTY, NC, DATED 2012.

SCALE: 1" : 1000'	DATE: 08-14-13
CWS PROJECT NO: 2013-3236	DRAWN BY: KMT
APPLICANT NO:	CHECKED BY: TJB



Current NRCS-USDA Soil Survey of Mecklenburg County
 Olmstead Phase II
 Huntersville, North Carolina
 CWS Project No. 2013-3236

FIGURE NO.
3 of 18



Previously Permitted Phases

- Action ID No. Saw2006-40631-360 (Phase 1A)
- DWQ No. 06-1341 (Phase 1A)
- No Permit Required (Phase 1B)
- Action ID No. SAW-2008-01130-360 (Phase 1C)
- DWQ No. 06-1341V3 (Phase 1C)

Legend

- Phase II Project Limits
- Previous Phases
- Perennial RPW
- Seasonal RPW
- Wetlands
- Pond
- Roads



NOTE: JURISDICTIONAL WATERS OF THE U.S. WERE DELINEATED AND CLASSIFIED BY CWS, INC. ON JANUARY 24-28, 2005, SEPTEMBER 30, 2008, AND XXXX, 2013. JURISDICTIONAL FEATURES HAVE BEEN VERIFIED BY THE USACE.

REFERENCE: BACKGROUND GIS LAYERS PROVIDED BY MECKLENBURG COUNTY GIS DEPARTMENT, DATED 2010. STREAM AND WETLAND LAYERS GENERATED BY CWS, INC., DATED NOVEMBER 2013.

SCALE: 1" : 1000'

CWS PROJECT NO:
2013-3236

APPLICANT NO:

DATE: 11-12-13

DRAWN BY: KMT

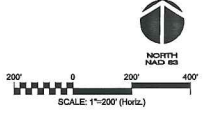
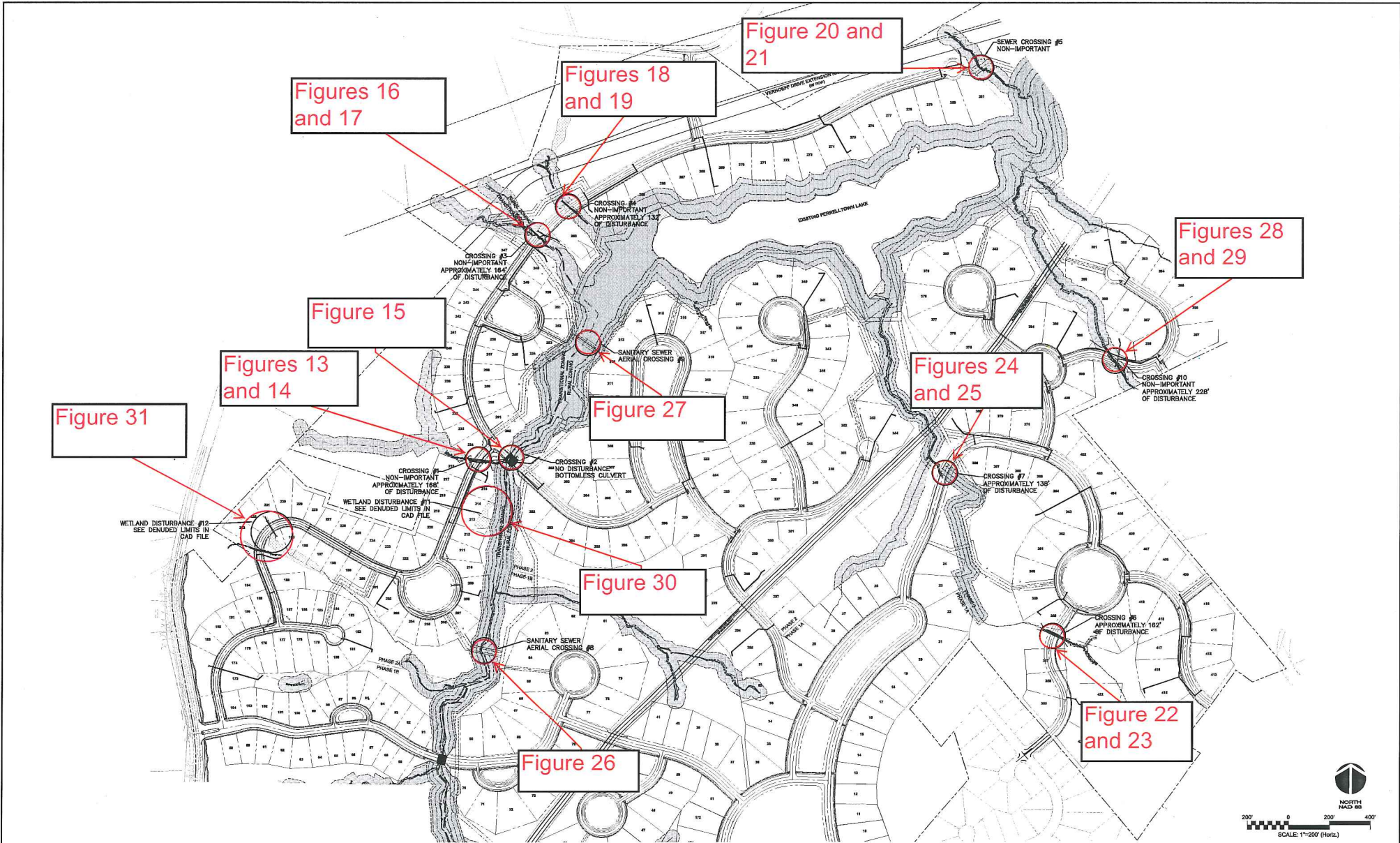
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Approximate Jurisdictional Boundary Map - Overview

Olmstead Phase II
 Huntersville, North Carolina
 CWS Project No. 2013-3236

FIGURE NO.
4 of 18



NO.	DATE	DESCRIPTION

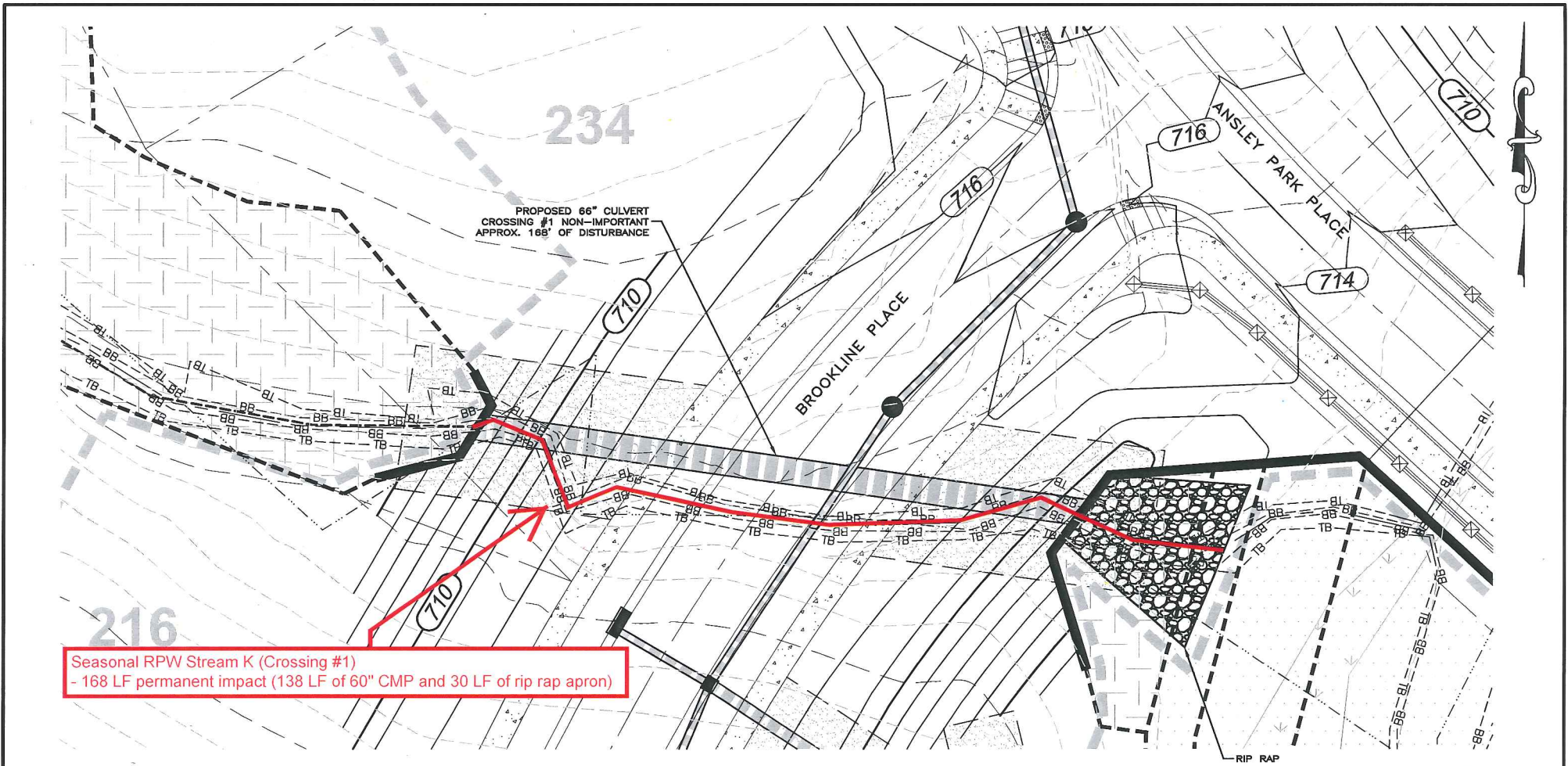
MCKIM & CREED
 8020 Tower Point Drive
 Charlotte, North Carolina 28227
 Phone: (704)841-2558, Fax: (704)841-2597
 A40003897 130000891
 www.mckimcreed.com

John Wieland
**JOHN WIELAND HOMES
 AND NEIGHBORHOODS**

OLMSTED PHASE 2
401/404 OVERALL PLAN

DATE: 03/29/05	SCALE: 1"=200'	FIGURE NO:
DATE: 03/29/05	HORIZONTAL:	
DESIGNED: DIS	VERTICAL:	
CHECKED: WSB		
PROJECT: 050		

STATUS: **FINAL DESIGN
 NOT FOR CONSTRUCTION**



SCALE 1" = 20'



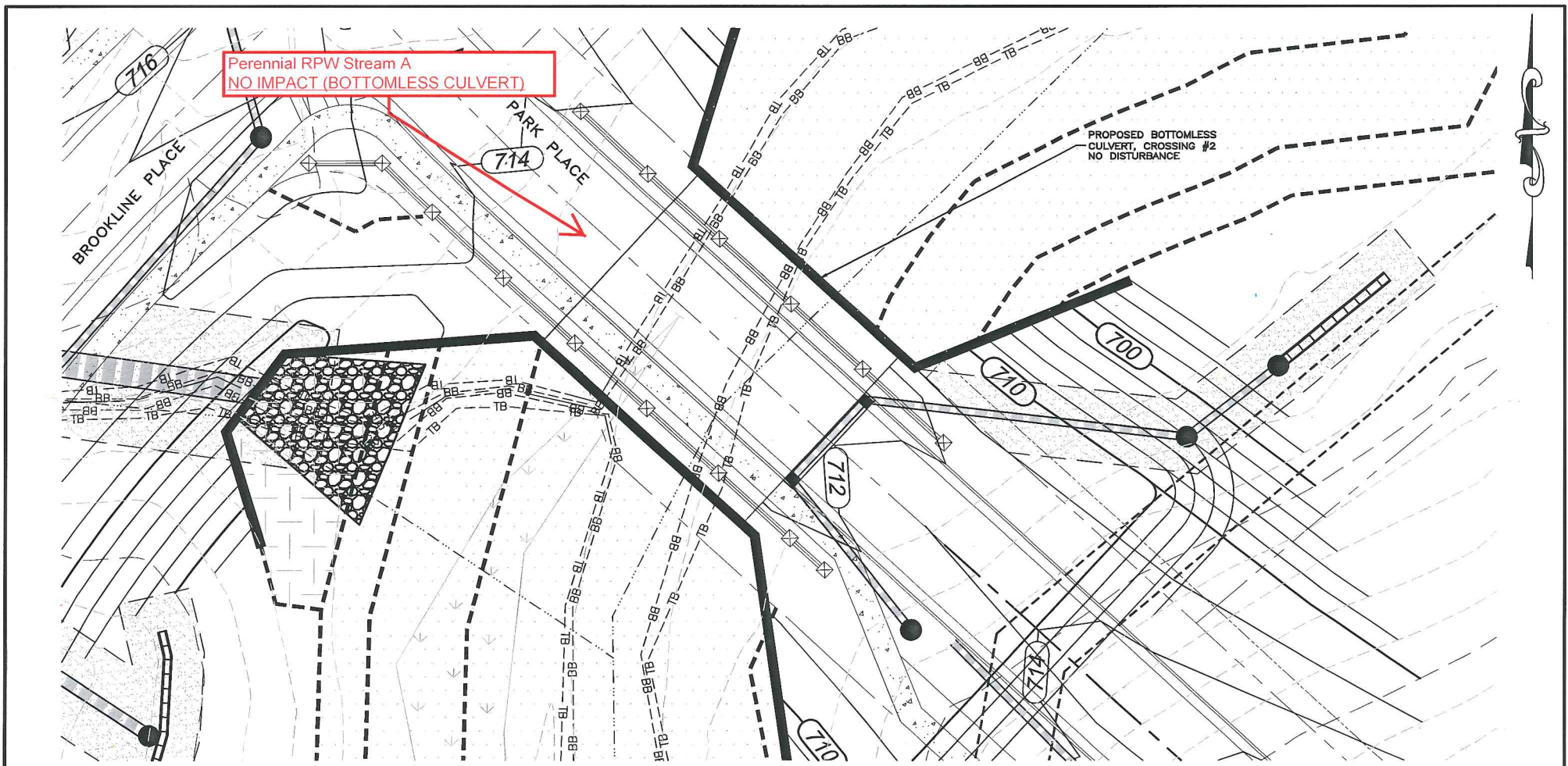
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OLMSTED SUBDIVISION
 PHASE 2

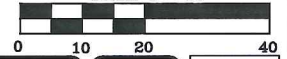
CULVERT PLAN VIEW
 AT CROSSING #1
 (BROOKLINE PLACE)

401/404 PERMIT

DATE: FEBRUARY 2014	SCALE	MAC FILE NUMBER
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DRAWN: TAK	VERTICAL: AS NOTED	FIGURE
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CHECKED: DKD		
PROJ. MGR.: DKD		
STATUS: PRELIMINARY DESIGN FOR PERMITTING		



SCALE 1" = 20'

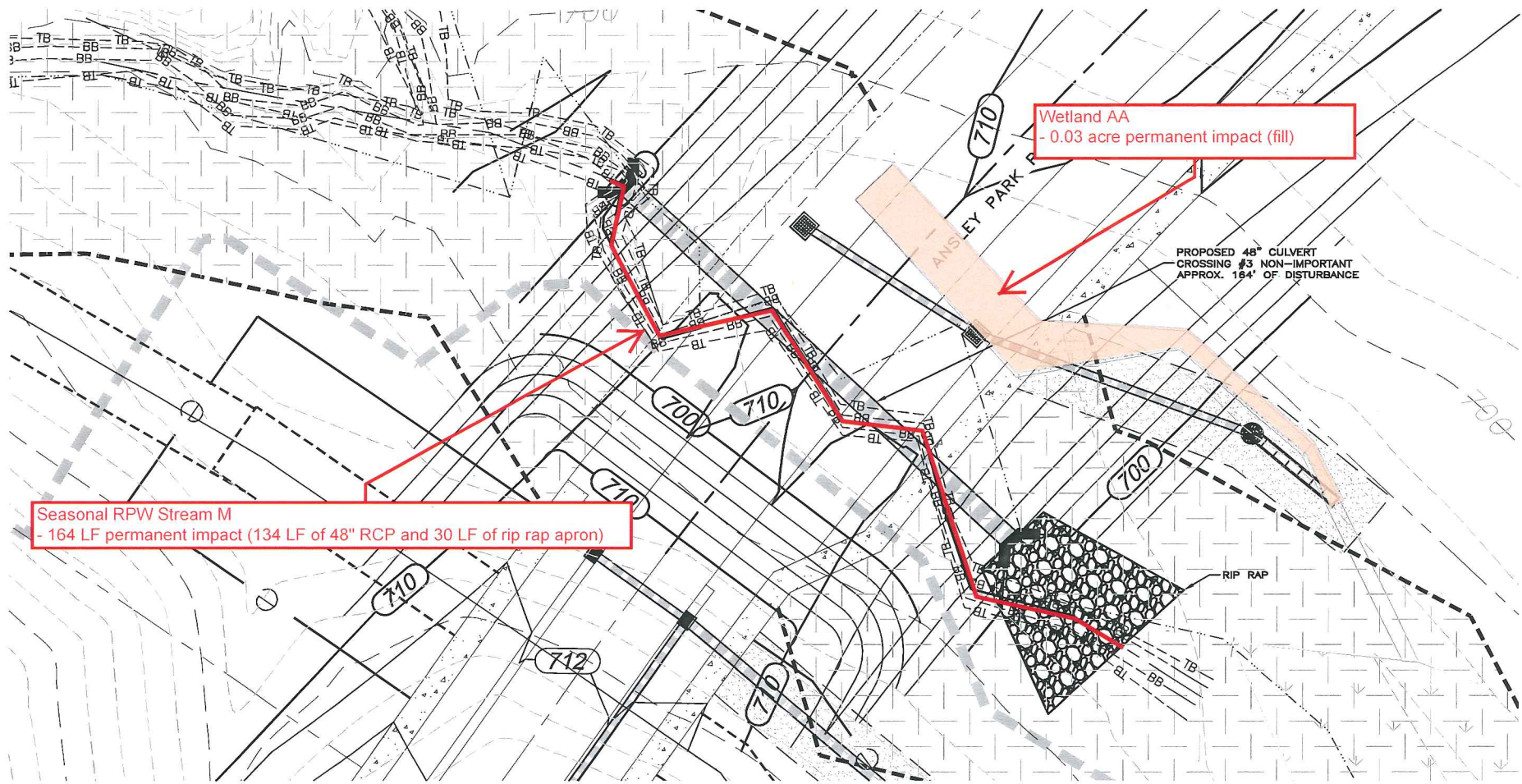


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OLMSTED SUBDIVISION
PHASE 2

**CULVERT PLAN VIEW
AT CROSSING #2
(ANSLEY PARK PLACE)**
Olmstead Phase II
Huntersville, North Carolina
CWS Project No. 2013-3236

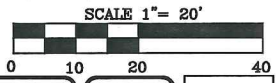
DATE: FEBRUARY 2014	SCALE	Figure
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DRAWN: TAK	VERTICAL: AS NOTED	
DESIGNED: TAK	REVISION	
CHECKED: DKD		
PROJ. MGR.: DKD		
STATUS: PRELIMINARY DESIGN FOR PERMITTING		



Seasonal RPW Stream M
 - 164 LF permanent impact (134 LF of 48" RCP and 30 LF of rip rap apron)

Wetland AA
 - 0.03 acre permanent impact (fill)

PROPOSED 48" CULVERT
 CROSSING #3 NON-IMPORTANT
 APPROX. 164' OF DISTURBANCE

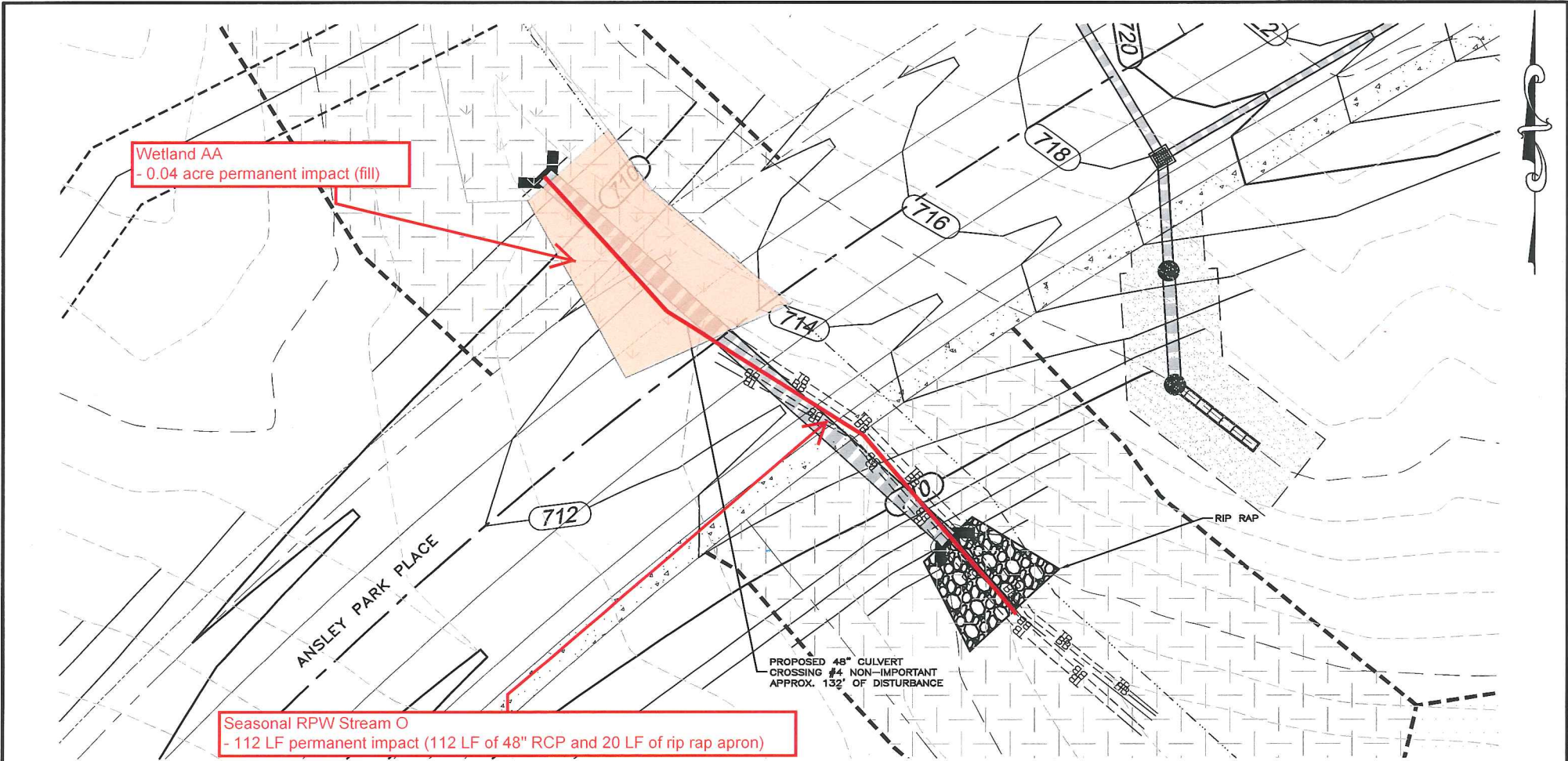


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OLMSTED SUBDIVISION
 PHASE 2

CULVERT PLAN VIEW
 AT CROSSING #3
 (ANSLEY PARK PLACE)
 401/404 PERMIT

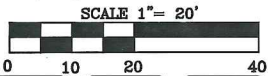
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CHECKED: DKD		
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STATUS: PRELIMINARY DESIGN FOR PERMITTING		



Wetland AA
- 0.04 acre permanent impact (fill)

Seasonal RPW Stream O
- 112 LF permanent impact (112 LF of 48" RCP and 20 LF of rip rap apron)

PROPOSED 48" CULVERT
CROSSING #4 NON-IMPORTANT
APPROX. 132' OF DISTURBANCE



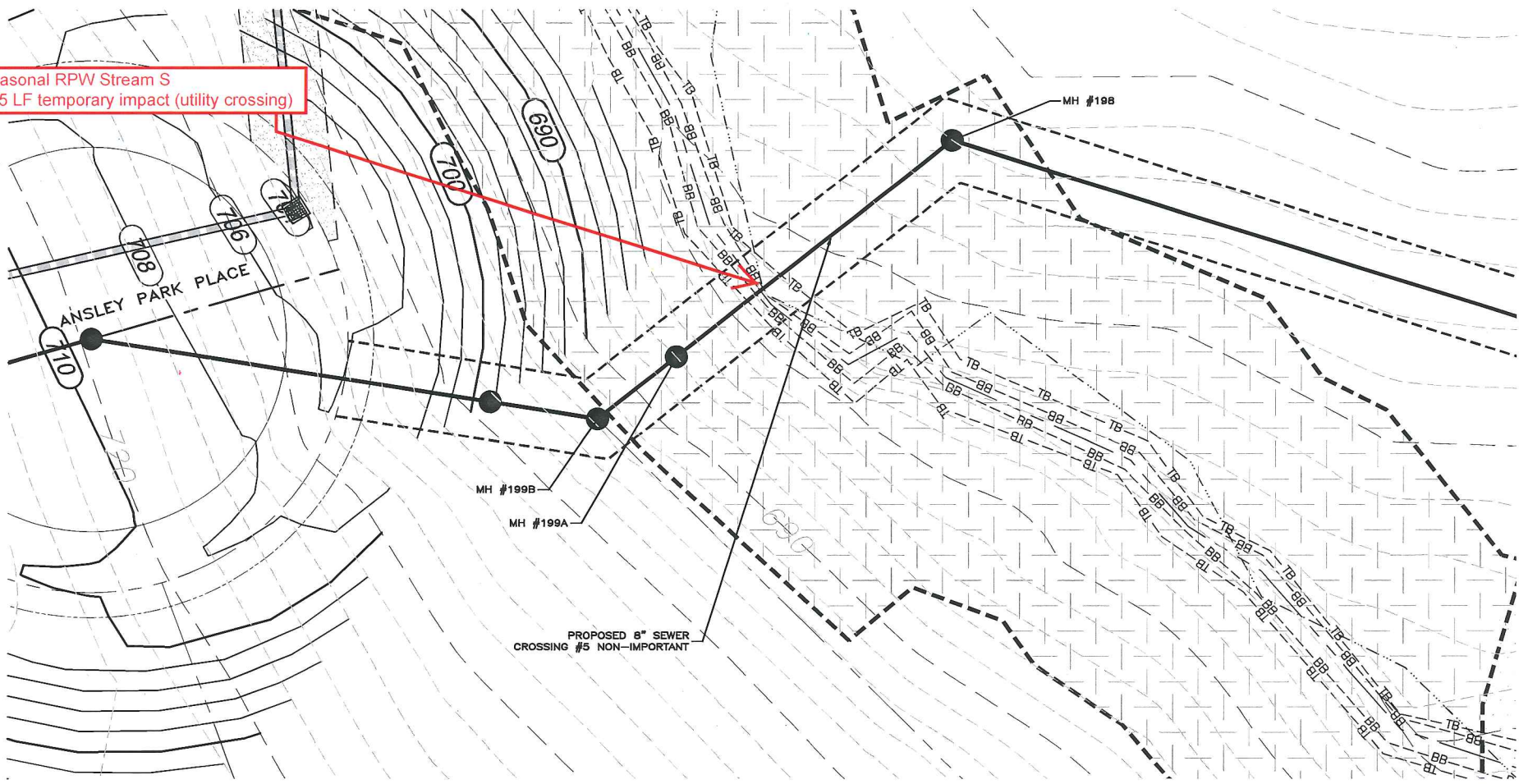
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OLMSTED SUBDIVISION
PHASE 2

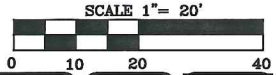
CULVERT PLAN VIEW
AT CROSSING #4
(ANSLEY PARK PLACE)
401/404 PERMIT

DATE: FEBRUARY 2014	SCALE	Figure
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DRAWN: TAK	VERTICAL: AS NOTED	
DESIGNED: TAK		
CHECKED: DKD		
PROJ. MGR.: DKD		REVISION
STATUS: PRELIMINARY DESIGN FOR PERMITTING		

Seasonal RPW Stream S
 - 15 LF temporary impact (utility crossing)



PROPOSED 8" SEWER
 CROSSING #5 NON-IMPORTANT

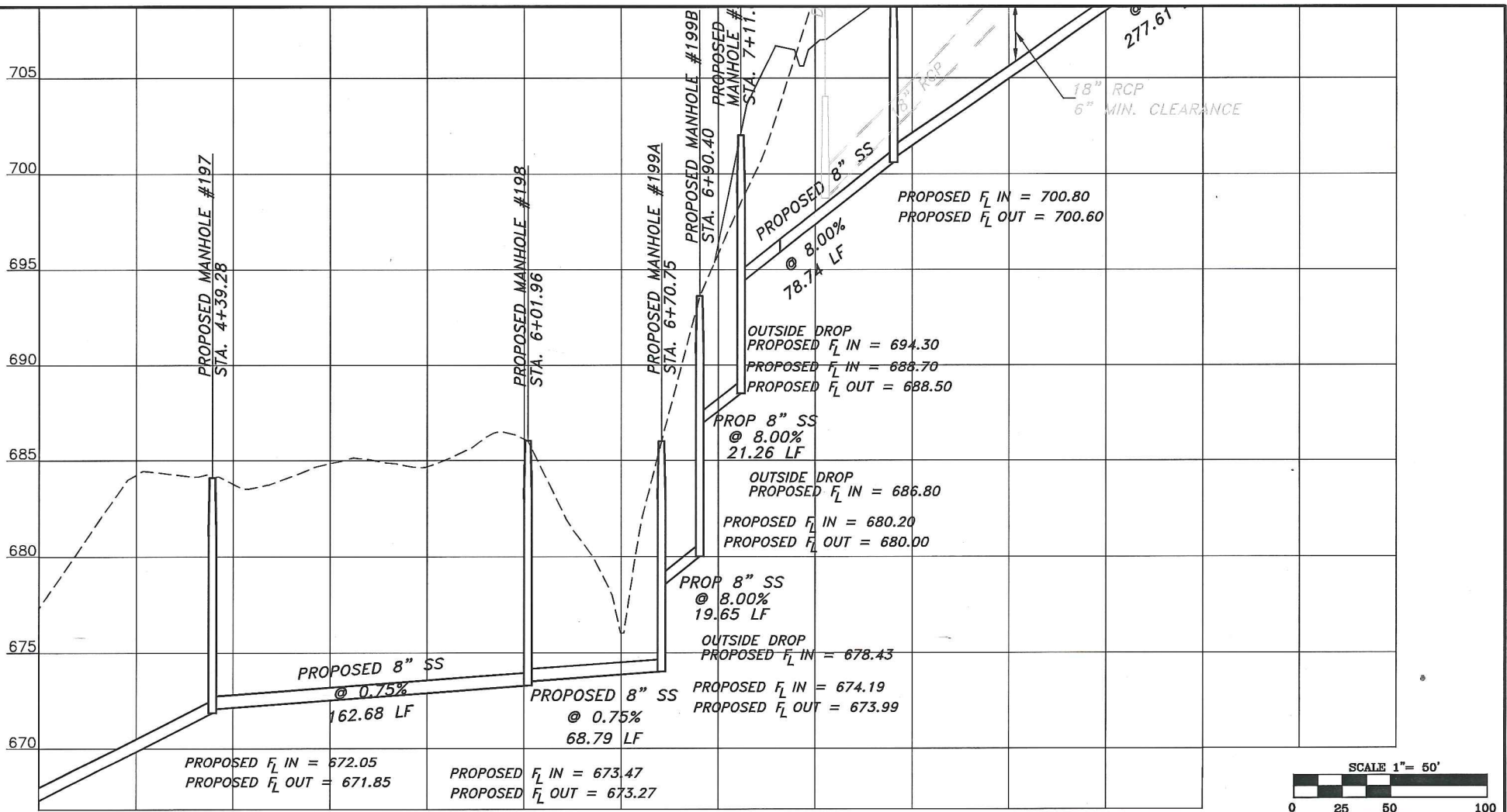


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SEWER CROSSING PLAN VIEW
 AT CROSSING #5
 (ANSLEY PARK PLACE)
 401/404 PERMIT

DATE: FEBRUARY 2014	SCALE	Figure
MCE PROJ. # 1524-0018	HORIZONTAL: AS NOTED	
DRAWN: TAK	VERTICAL: AS NOTED	
DESIGNED: TAK	REVISION: -	
CHECKED: DKD		
PROJ. MGR.: DKD		
STATUS: PRELIMINARY DESIGN FOR PERMITTING		

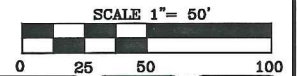


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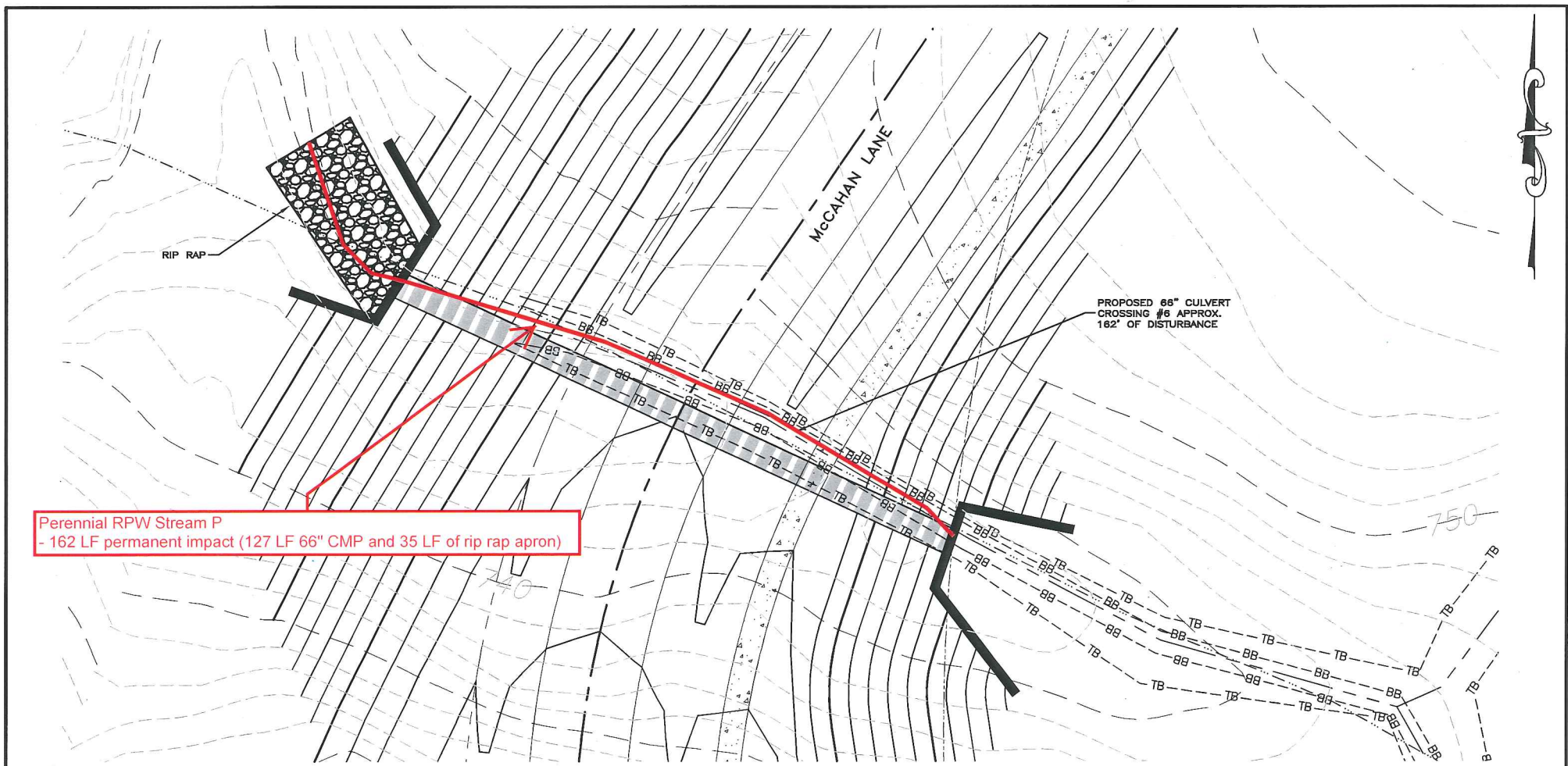
OLMSTED SUBDIVISION
 PHASE 2

SEWER CROSSING PROFILE
 AT CROSSING #5
 (ANSLEY PARK PLACE)

401/404 PERMIT



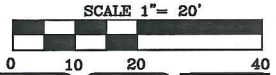
DATE: FEBRUARY 2014	SCALE	Figure
MCE PROJ. # 1524-0016	HORIZONTAL: AS NOTED	
DRAWN: TAK	VERTICAL: AS NOTED	
DESIGNED: TAK	REVISION	
CHECKED: DKD		
PROJ. MGR. DKD		
STATUS: PRELIMINARY DESIGN FOR PERMITTING		



Perennial RPW Stream P
 - 162 LF permanent impact (127 LF 66" CMP and 35 LF of rip rap apron)

PROPOSED 66" CULVERT
 CROSSING #6 APPROX.
 162' OF DISTURBANCE

McCAHAN LANE



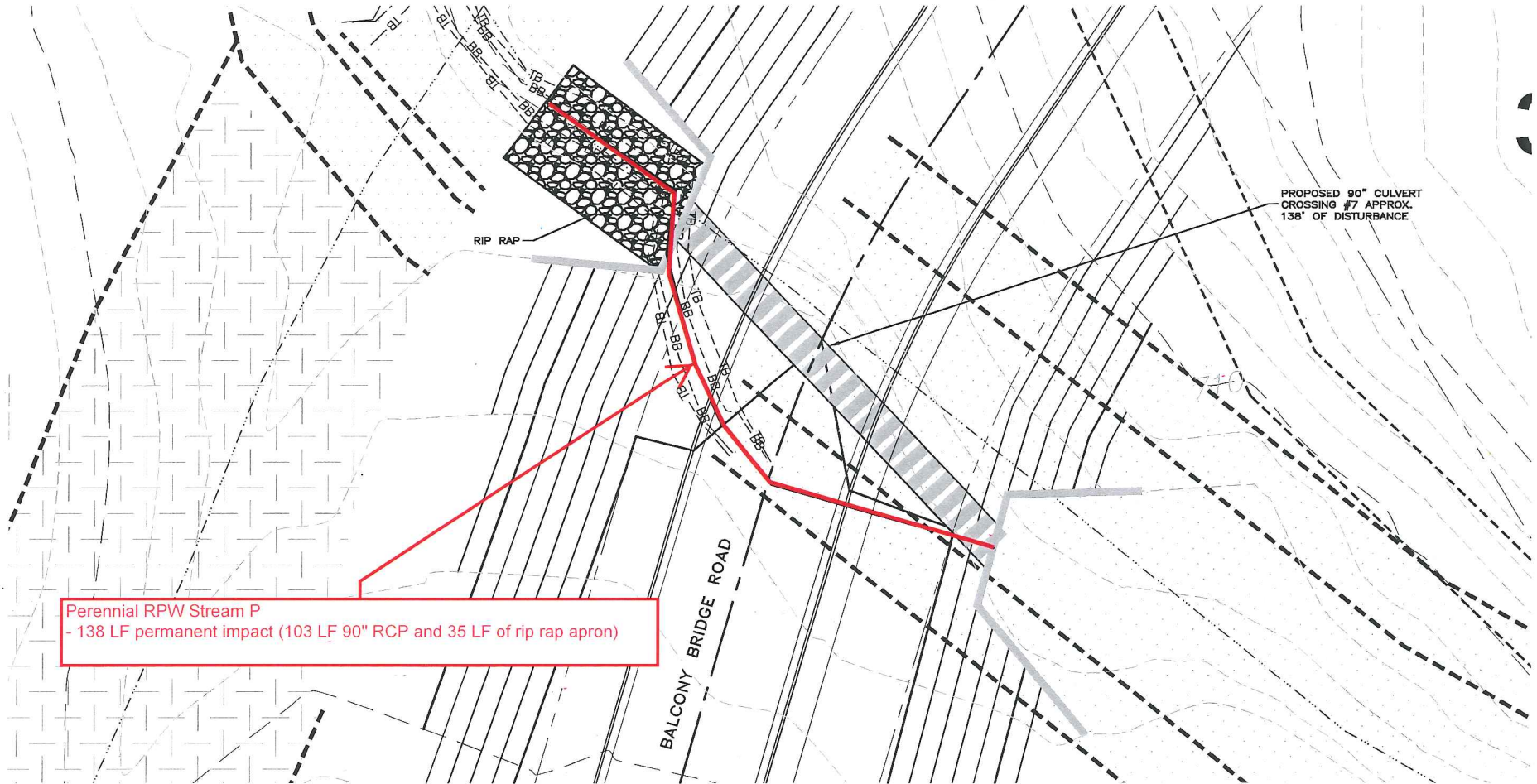
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CULVERT PLAN VIEW
 AT CROSSING #6
 (McCAHAN LANE)

401/404 PERMIT

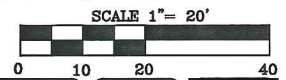
DATE: FEBRUARY 2014	SCALE	Figure
MCE PROJ. # 1524-0018	HORIZONTAL: AS NOTED	
DRAWN: TAK	VERTICAL: AS NOTED	
DESIGNED: TAK		
CHECKED: DKD		
PROJ. MGR.: DKD		
STATUS: PRELIMINARY DESIGN FOR PERMITTING		



PROPOSED 90" CULVERT
CROSSING #7 APPROX.
138' OF DISTURBANCE

Perennial RPW Stream P
- 138 LF permanent impact (103 LF 90" RCP and 35 LF of rip rap apron)

BALCONY BRIDGE ROAD



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CULVERT PLAN VIEW
AT CROSSING #7
(BALCONY BRIDGE ROAD)

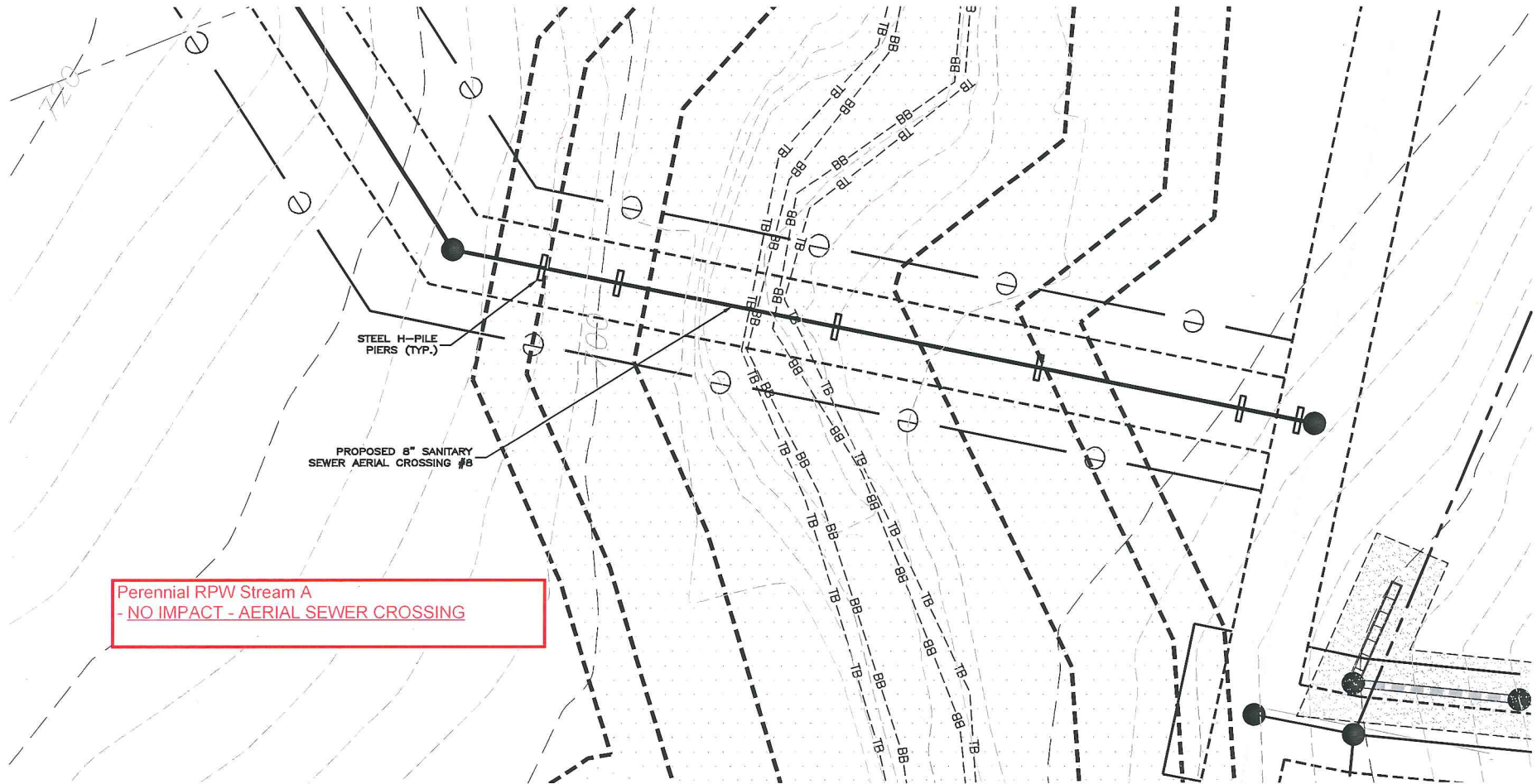
401/404 PERMIT

DATE:	FEBRUARY 2014
MCE PROJ. #	1524-0016
DRAWN	TAK
DESIGNED	TAK
CHECKED	DKD
PROJ. MGR.	DKD

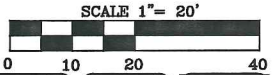
SCALE
HORIZONTAL: AS NOTED
VERTICAL: AS NOTED

Figure

STATUS:	PRELIMINARY DESIGN FOR PERMITTING	REVISION	-
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Perennial RPW Stream A
 - NO IMPACT - AERIAL SEWER CROSSING



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SEWER CROSSING PLAN VIEW
 AT CROSSING #8

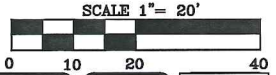
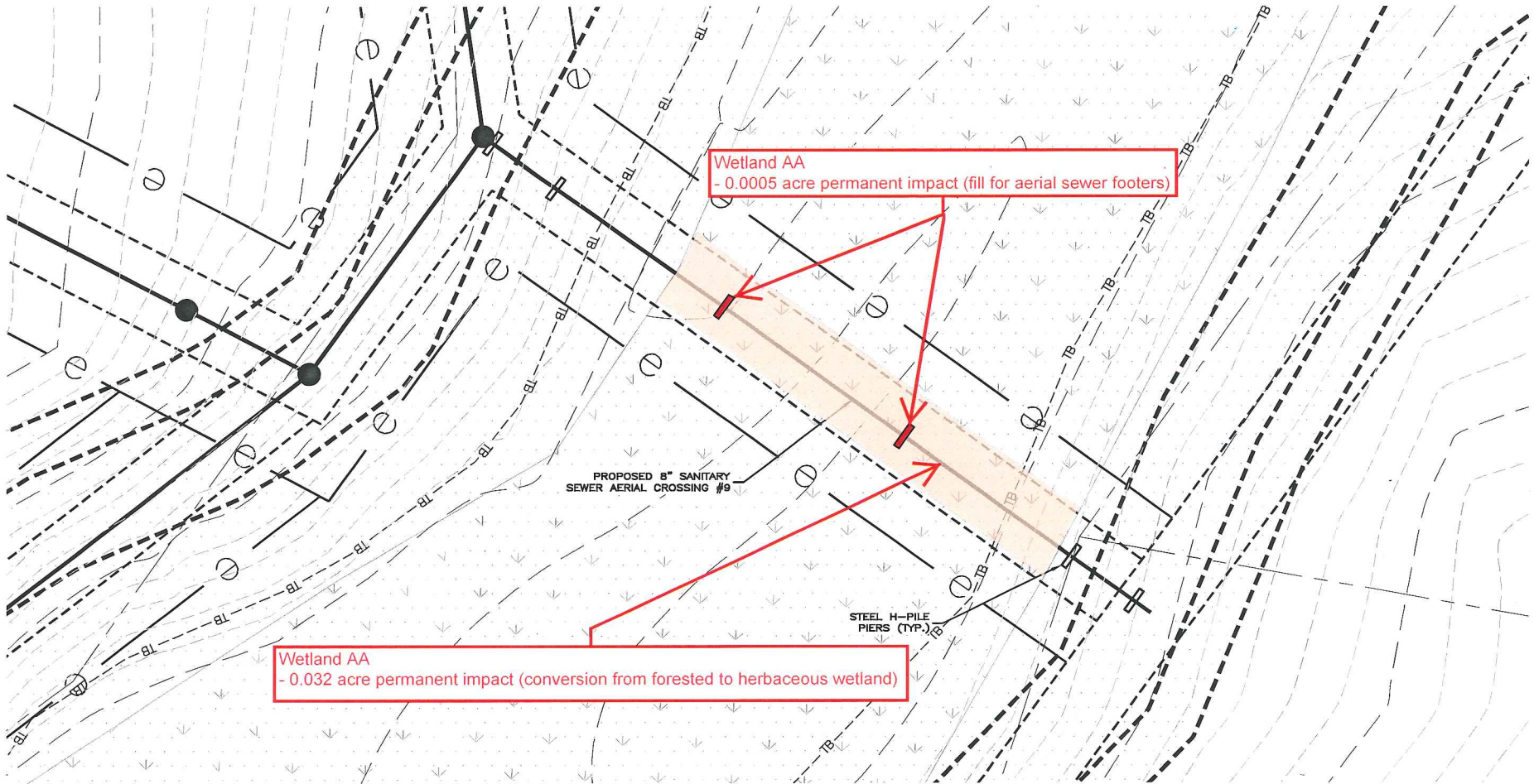
401/404 PERMIT

DATE:	FEBRUARY 2014
MCE PROJ. #	1524-0016
DRAWN	TAK
DESIGNED	TAK
CHECKED	DKD
PROJ. MGR.	DKD

SCALE
HORIZONTAL: AS NOTED
VERTICAL: AS NOTED

Figure

STATUS:	PRELIMINARY DESIGN FOR PERMITTING	REVISION	-
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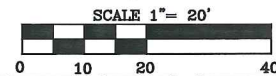
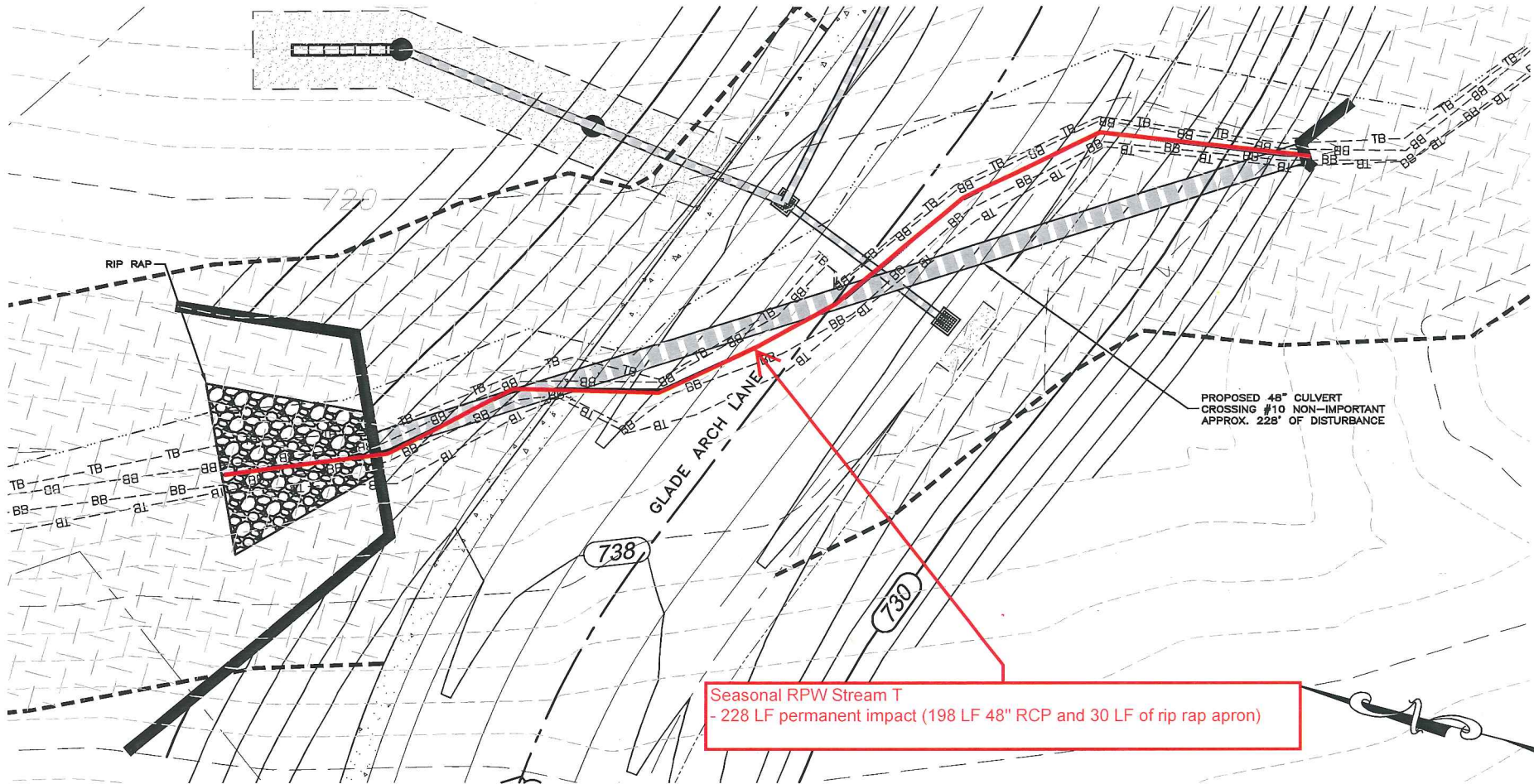


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SEWER CROSSING PLAN VIEW
 AT CROSSING #9
 401/404 PERMIT

DATE: FEBRUARY 2014	SCALE	Figure
MCE PROJ. # 1524-0016	HORIZONTAL: AS NOTED	
DRAWN: TAK	VERTICAL: AS NOTED	
DESIGNED: TAK	REVISION	
CHECKED: DKD		
PROJ. MGR. DKD		
STATUS: PRELIMINARY DESIGN FOR PERMITTING		



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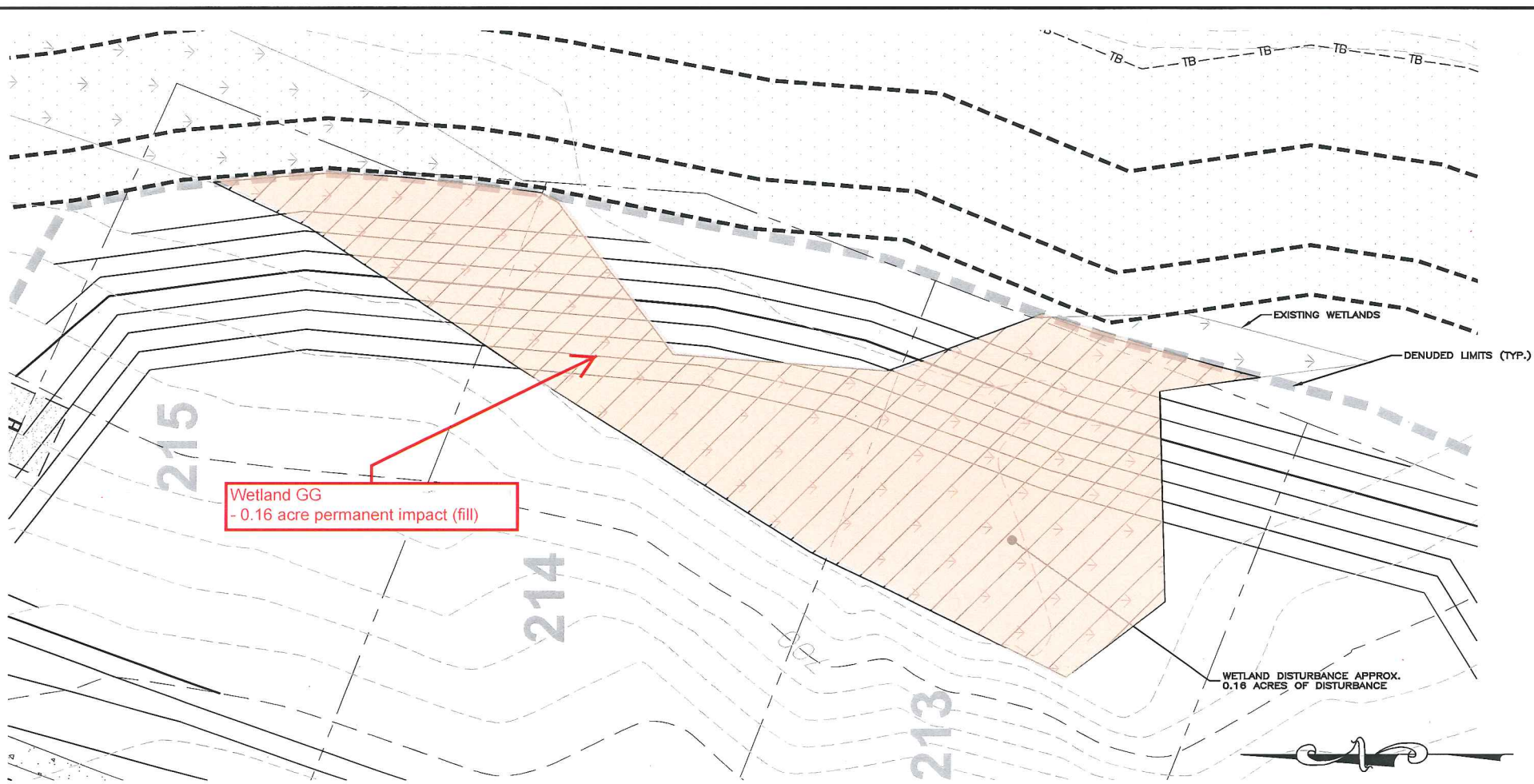
OLMSTED SUBDIVISION
PHASE 2

CULVERT PLAN VIEW
AT CROSSING #10
(GLADE ARCH LANE)

401/404 PERMIT

DATE: FEBRUARY 2014	SCALE	Figure
MCE PROJ. # 1524-0016	HORIZONTAL: AS NOTED	
DRAWN: TAK	VERTICAL: AS NOTED	
DESIGNED: TAK	REVISION	
CHECKED: DKD		
PROJ. MGR. DKD		

STATUS: PRELIMINARY DESIGN FOR PERMITTING



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PHASE 2

WETLAND DISTURBANCE PLAN VIEW
DISTURBANCE #11

401/404 PERMIT

DATE: FEBRUARY 2014
MCE PROJ. # 1524-0016
DRAWN: TAK
DESIGNED: TAK
CHECKED: DKD
PROJ. MGR.: DKD

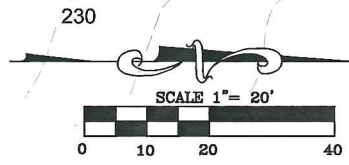
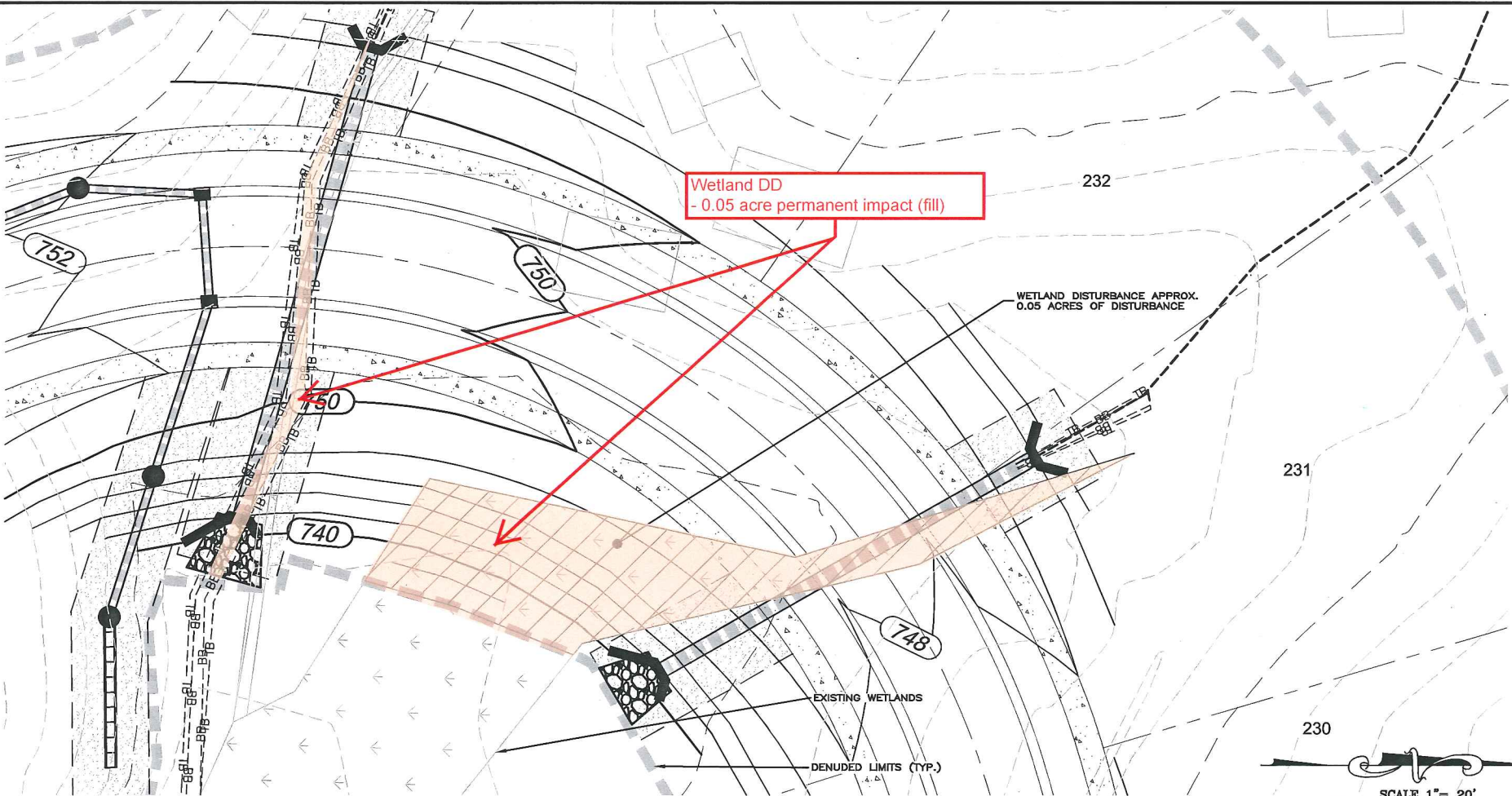
SCALE
HORIZONTAL:
AS NOTED
VERTICAL:
AS NOTED

Figure

STATUS: PRELIMINARY DESIGN
FOR PERMITTING

REVISION

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OLMSTED SUBDIVISION
PHASE 2

WETLAND DISTURBANCE PLAN VIEW
DISTURBANCE #12

401/404 PERMIT

DATE:	FEBRUARY 2014
MCE PROJ. #	1524-0016
DRAWN	TAK
DESIGNED	TAK
CHECKED	DKD
PROJ. MGR.	DKD

SCALE
HORIZONTAL: AS NOTED
VERTICAL: AS NOTED

Figure

STATUS:	PRELIMINARY DESIGN FOR PERMITTING	REVISION	-
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