



PUBLIC NOTICE

US Army Corps
of Engineers
New York District
Jacob K. Javits Federal Building
New York, N.Y. 10278-0090
ATTN: Regulatory Branch

In replying refer to:

Public Notice Number: 2004-00567-Y6
Issue Date: June 12, 2006
Expiration Date: July 12, 2006

To Whom It May Concern:

The New York District, Corps of Engineers has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344).

APPLICANT: New York City
Department of Environmental Protection
59-17 Junction Blvd., 11th Floor
Flushing, NY 11373

ACTIVITY: Discharge fill material

WATERWAY: Porzio's Pond, Lemon Creek/Sandy Brook watershed, Arthur Kill

LOCATION: Woodrow, Borough of Staten Island, Richmond County, New York

A detailed description and plans of the applicant's activity are enclosed to assist in your review.

The decision whether to issue a permit will be based on an evaluation of the probable impact 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, floodplain values, 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.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; 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 preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

ALL COMMENTS REGARDING THE PERMIT APPLICATION MUST BE PREPARED IN WRITING AND MAILED TO REACH THIS OFFICE BEFORE THE EXPIRATION DATE OF THIS NOTICE, otherwise, it will be presumed that there are no objections to the activity.

CENAN-OP-RE
PUBLIC NOTICE NO. 2004-00567-Y6

Any person may request, in writing, before this public notice expires, that a public hearing be held to collect information necessary to consider this application. Requests for public hearings shall state, with particularity, the reasons why a public hearing should be held. It should be noted that information submitted by mail is considered just as carefully in the permit decision process and bears the same weight as that furnished at a public hearing.

Our preliminary determination is that the activity for which authorization is sought herein is not likely to affect any Federally endangered or threatened species or their critical habitat. However, pursuant to Section 7 of the Endangered Species Act (16 U.S.C. 1531), the District Engineer is consulting with the appropriate Federal agency to determine the presence of and potential impacts to listed species in the project area or their critical habitat.

Based upon a review of the latest published version of the National Register of Historic Places, there are no known sites eligible for, or included in, the Register within the permit area. Presently unknown archeological, scientific, prehistorical, or historical data may be lost by work accomplished under the required permit.

Reviews of activities pursuant to Section 404 of the Clean Water Act will include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404 (b) of the Clean Water Act and the applicant will obtain a water quality certificate or waiver from the appropriate state agency in accordance with Section 401 of the Clean Water Act prior to a permit decision.

Pursuant to Section 307 (c) of the Coastal Zone Management Act of 1972 as amended [16 U.S.C. 1456 (c)], for activities under consideration that are located within the coastal zone of a state which has a federally approved coastal zone management program, the applicant has certified in the permit application that the activity complies with, and will be conducted in a manner that is consistent with, the approved state coastal zone management program. By this public notice, we are requesting the state's concurrence with, objection to, or waiver of the applicant's certification. No permit decision will be made until one of these actions occur. For activities within the coastal zone of New York State, the applicant's certification and accompanying information is available from the Consistency Coordinator, New York State Department of State, Division of Coastal Resources and Waterfront Revitalization, Coastal Zone Management Program, 41 State Street, Albany, New York 12231, Telephone (518) 474-6000. Comments regarding the applicant's certification, and copies of any letters to this office commenting upon this proposal, should be so addressed.

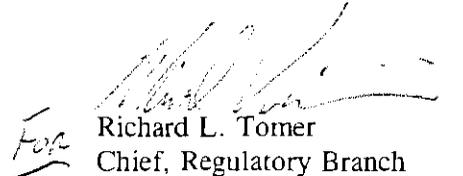
In addition to any required water quality certificate and coastal zone management program concurrence, the applicant has obtained or requested the following governmental authorization for the activity under consideration:

- New York State Department of Environmental Conservation permit

It is requested that you communicate the foregoing information concerning the activity to any persons known by you to be interested and who did not receive a copy of this notice. If you have any questions concerning this application, you may contact this office at (917) 790-8522 and ask for Craig Spitz.

CENAN-OP-RE
PUBLIC NOTICE NO. 2004-00567-Y6

For more information on New York District Corps of Engineers programs, visit our website at <http://www.nan.usace.army.mil>


Richard L. Tomer
Chief, Regulatory Branch

Enclosures

WORK DESCRIPTION

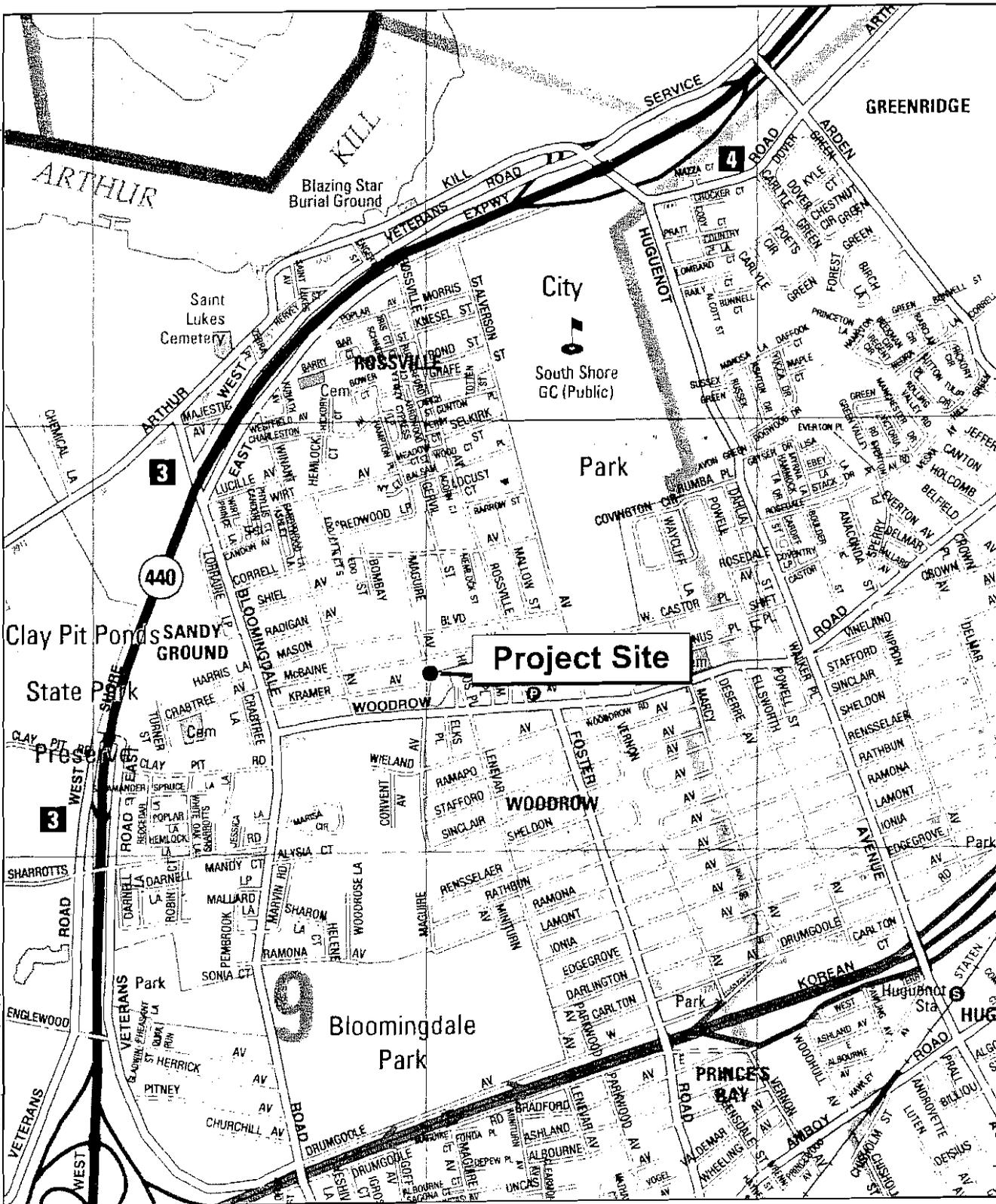
The applicant, New York City Department of Environmental Protection, has requested Department of the Army authorization to fill approximately 0.09 acres of Federal wetlands in association with the installation of riprap outlet stilling basins (basins where stormwater collects and is filtered prior to discharge), stormwater pipe extensions and accessways at Porzio's Pond in the Lemon Creek/Sandy Brook Watershed, Arthur Kill, at Woodrow, Borough of Staten Island, Richmond County, New York.

Specifically, the work, designated as BMP LC-3, would involve the following:

Construct immediately south of McBaine Avenue, a 12-foot wide by 31-foot long boulder-lined permanent paver block accessway, stormwater pipe extension, headwall and concrete embedded rip-rap outlet stilling basin and grading to provide extended surface water detention. Within federal wetlands, temporarily impact, during construction, approximately 0.12 acres, excavate approximately 560 cubic yards of material and discharge approximately 170 cubic yards of material, such as riprap, for a total permanent loss of approximately 0.03 acres of federal wetlands. Enhance approximately 0.11 acres of federal wetlands and create approximately 0.01 acres of rock/toe plantings as shown on drawings 3 and 23 through 27 and plant with appropriate vegetation as shown on the attached plant lists.

Construct parallel to Kramer Avenue, a 12-foot wide by 91-foot long boulder-lined permanent paver block accessway and second outlet stilling basin consisting of the same components as in the BMP south of McBaine Avenue. Within federal wetlands, temporarily impact, during construction, approximately 0.13 acres, excavate approximately 640 cubic yards of material and discharge approximately 152 cubic yards of material, such as riprap, for a total permanent loss of approximately 0.06 acres of federal wetlands. Enhance approximately 0.08 acres of wetlands and create approximately 0.01 acres of rock/toe plantings as shown on drawings 3 and 23 through 27 and plant with appropriate vegetation as shown on the attached plant lists.

The stated purpose of the proposed work is to improve water quality and minimize flooding of residential areas by managing drainage from an approximately 29 acre watershed north of the project site.



H&S File: 7130605/803-1/Woodrow.cdl 6-04



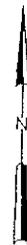
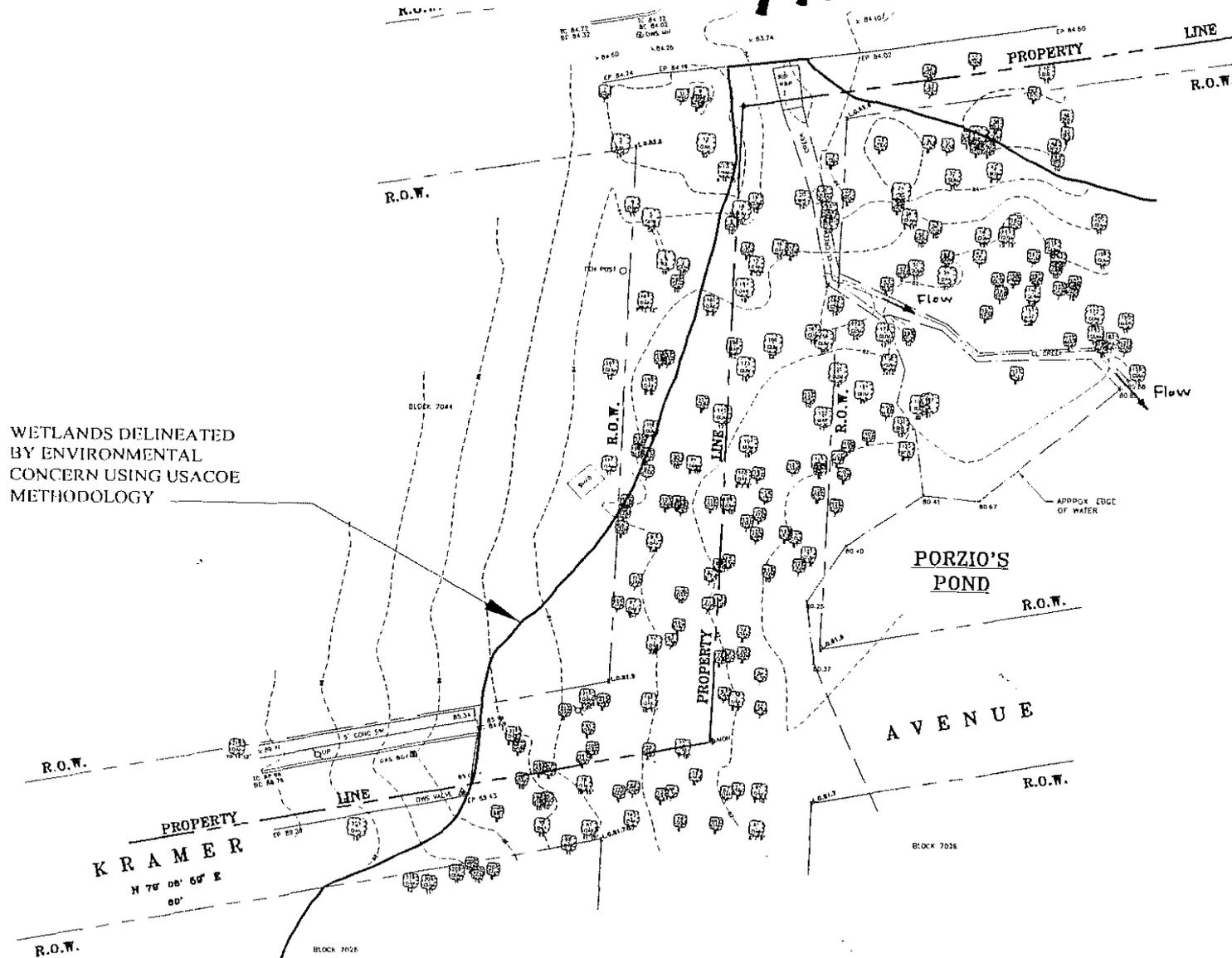
New York City
Department of Environmental Protection

Hazen and Sawyer
Environmental Engineers & Scientists

NYCDEP Bluebelt
Lemon Creek/Sandy Brook Watershed BMP LC-3
Site Location Map

Figure 1

McBAIN AVE.



WETLANDS DELINEATED
BY ENVIRONMENTAL
CONCERN USING USACOE
METHODOLOGY

2 of 27

COMPOSITE (EXISTING)

IT IS A WARRANTY OF BEST WORKMANSHIP OF THE NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC) AND THE
CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION
(DEP) AND NOT A WARRANTY OF MERCHANTABILITY OR FITNESS FOR
ANY PARTICULAR PURPOSE. THE USER OF THIS PLAN SHALL BE
RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND
FOR OBTAINING ALL NECESSARY INFORMATION FROM THE
APPLICABLE AGENCIES AND FOR OBTAINING ALL NECESSARY
DATA AND RECORDS OF THE PROJECT.

DESIGNED	ER/AAJ	SCALE	1"=20'-0"
DRAWN	AAJ	CAD FILE	VERDONICA
CHECKED	EP	DATE	1/27/01
SECT CHIEF	R.D.S.		

P.E.	HAZEN AND SAWYER P.C. 400 SEVENTH AVENUE, NEW YORK, NEW YORK 10018
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HAZEN AND SAWYER
Environmental Engineers & Scientists

APPROVED FOR THE CITY OF NEW YORK
PROJECT MANAGER

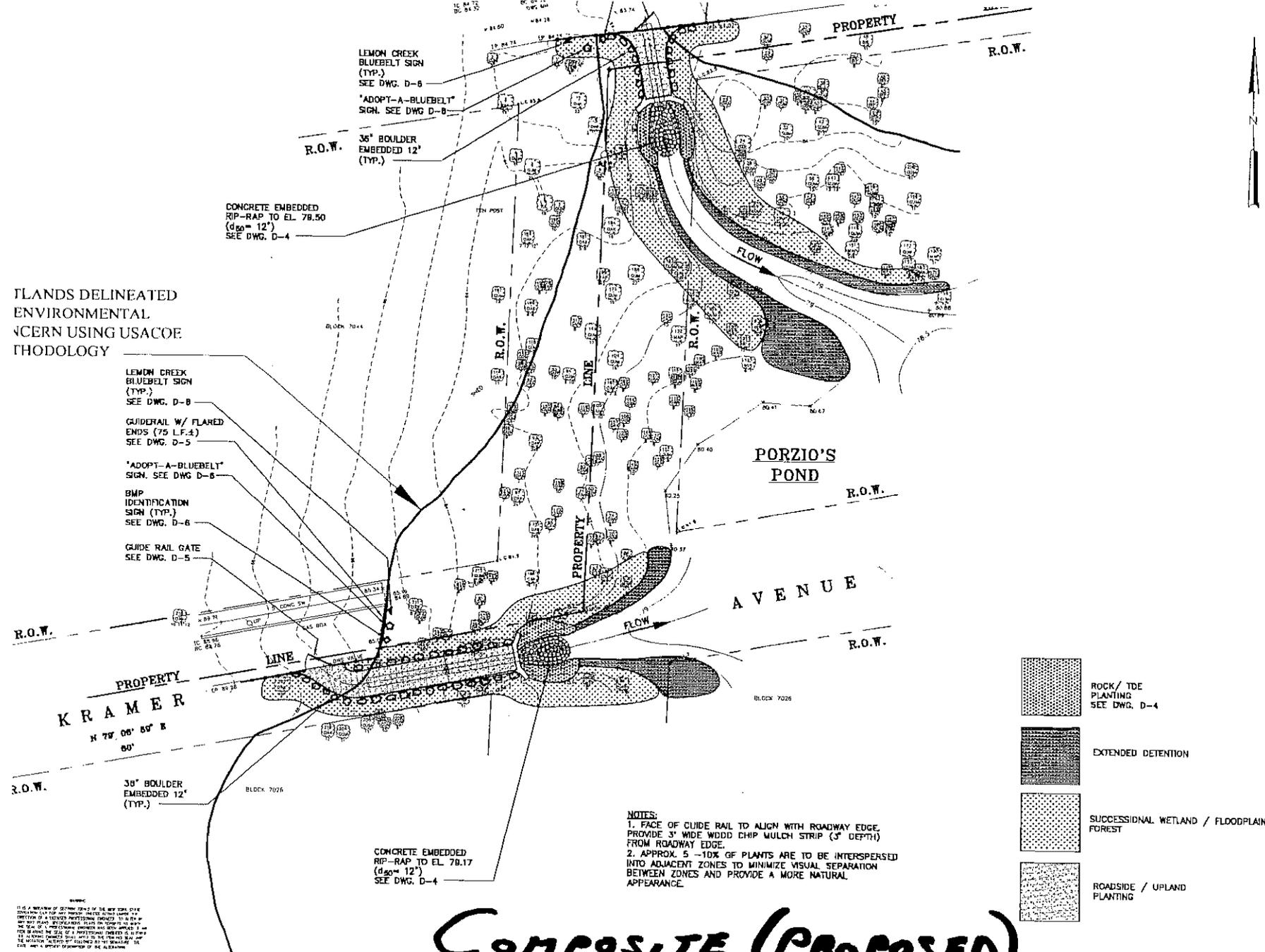


CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER AND SEWER OPERATIONS
CAPITAL PROJECT BE-1 AND BE-100
STORM WATER AND SANITARY DRAINAGE
MANAGEMENT PLAN FOR SOUTH RICHMOND

STORM WATER AND SANITARY DRAINAGE PLAN
LEMON CREEK DRAINAGE AREA
BMP LC-3: MCBAIN AVENUE/KRAMER AVENUE
EXISTING SITE PLAN

DATE	1/27/01
SHEET	10

McBAINE AVE.



LANDS DELINEATED ENVIRONMENTAL CONCERN USING USACE METHODOLOGY

- LEMON CREEK BLUEBELT SIGN (TYP.) SEE DWG. D-6
- GUIDERAIL W/ FLARED ENDS (75 L.F.4) SEE DWG. D-5
- "ADOPT-A-BLUEBELT" SIGN. SEE DWG. D-6
- BMP IDENTIFICATION SIGN (TYP.) SEE DWG. D-6
- GUIDE RAIL GATE SEE DWG. D-5

	ROCK / TDE PLANTING SEE DWG. D-4
	EXTENDED DETENTION
	SUCCESSIONAL WETLAND / FLOODPLAIN FOREST
	ROADSIDE / UPLAND PLANTING

NOTES:
 1. FACE OF GUIDE RAIL TO ALIGN WITH ROADWAY EDGE. PROVIDE 3" WIDE WOOD CHIP MULCH STRIP (3" DEPTH) FROM ROADWAY EDGE.
 2. APPROX. 5-10% OF PLANTS ARE TO BE INTERSPERSED INTO ADJACENT ZONES TO MINIMIZE VISUAL SEPARATION BETWEEN ZONES AND PROVIDE A MORE NATURAL APPEARANCE.

COMPOSITE (PROPOSED)

3 OF 27

THIS IS A PRELIMINARY PLAN. THE CITY ENGINEER'S OFFICE SHALL REVIEW THIS PLAN FOR CONFORMANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS. THE CITY ENGINEER'S OFFICE SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE USER OF THIS PLAN SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

DESIGNED	CA	SCALE	1"=20'-0"
DRAWN	JAF		
CHECKED	E.R.		
SECT. CHIEF	R.B.S.		

DATE	
PROJECT NO.	
DATE	

HAZEN AND SAWYER
 Environmental Engineers & Scientists

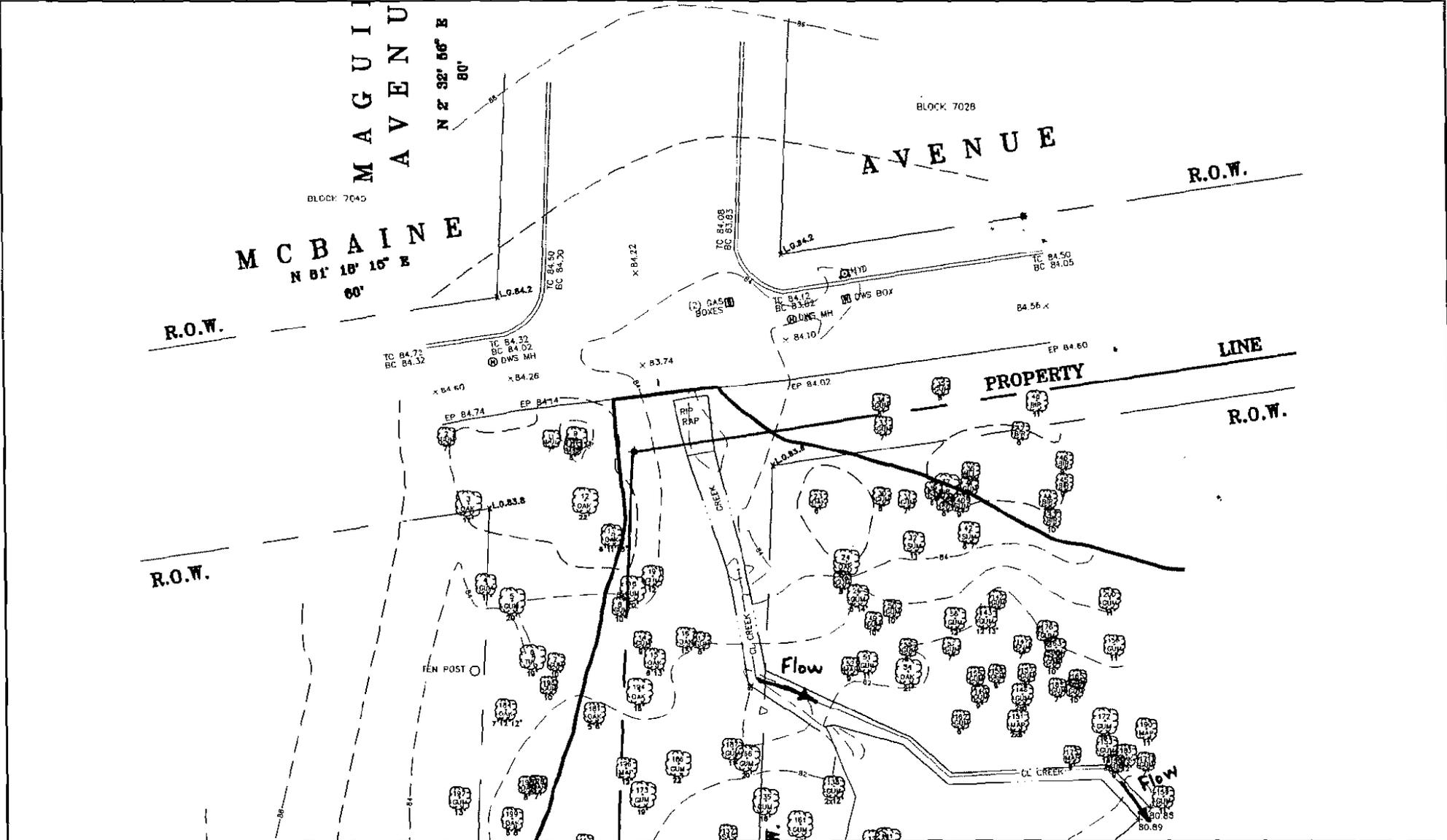
APPROVED FOR THE CITY OF NEW YORK
 PROJECT MANAGER



CITY OF NEW YORK
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 BUREAU OF WATER AND SEWER OPERATIONS
 CAPITAL PROJECTS DIVISION
 STORM WATER AND SANITARY DRAINAGE
 MANAGEMENT PLAN FOR SOUTH RICHMOND

STORM WATER AND SANITARY DRAINAGE PLAN
 LEMON CREEK DRAINAGE AREA
 BMP LC-3- McBAINE AVENUE/KRAMER AVENUE
 LANDSCAPING PLAN
 ZONES / PLANTS

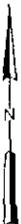
DATE	
SHEET	15
DWG. NO.	



LEMON CREEK DRAINAGE AREA

BMP LC-3: MCBAIN AVENUE
EXISTING SITE PLAN

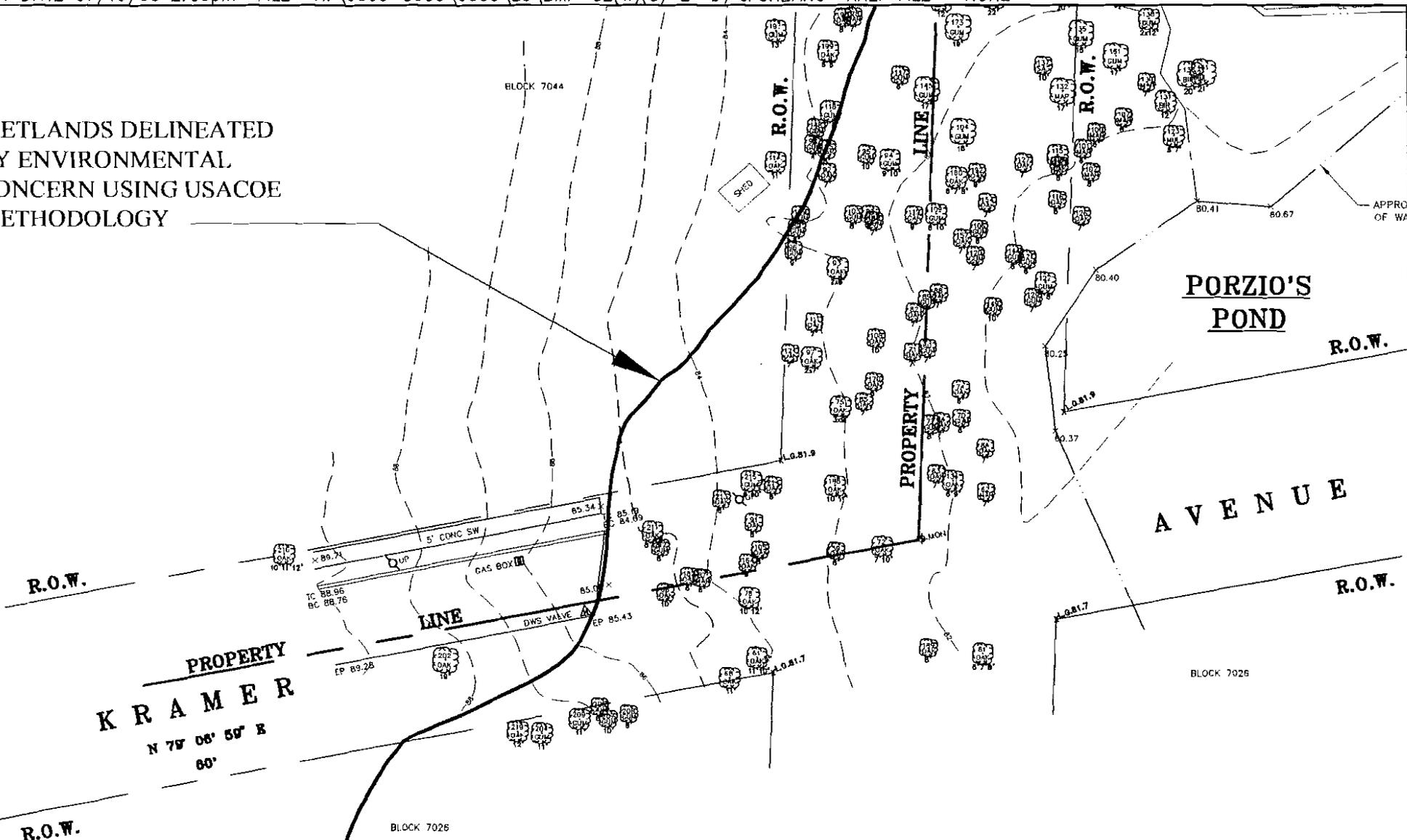
HAZEN AND SAWYER
Environmental Engineers & Scientists



1" = 40'-0"



WETLANDS DELINEATED
BY ENVIRONMENTAL
CONCERN USING USACOE
METHODOLOGY



PROPERTY
KRAMER
N 75° 06' 50" E
80'

R.O.W.

BLOCK 7026

HAZEN AND SAWYER
Environmental Engineers & Scientists



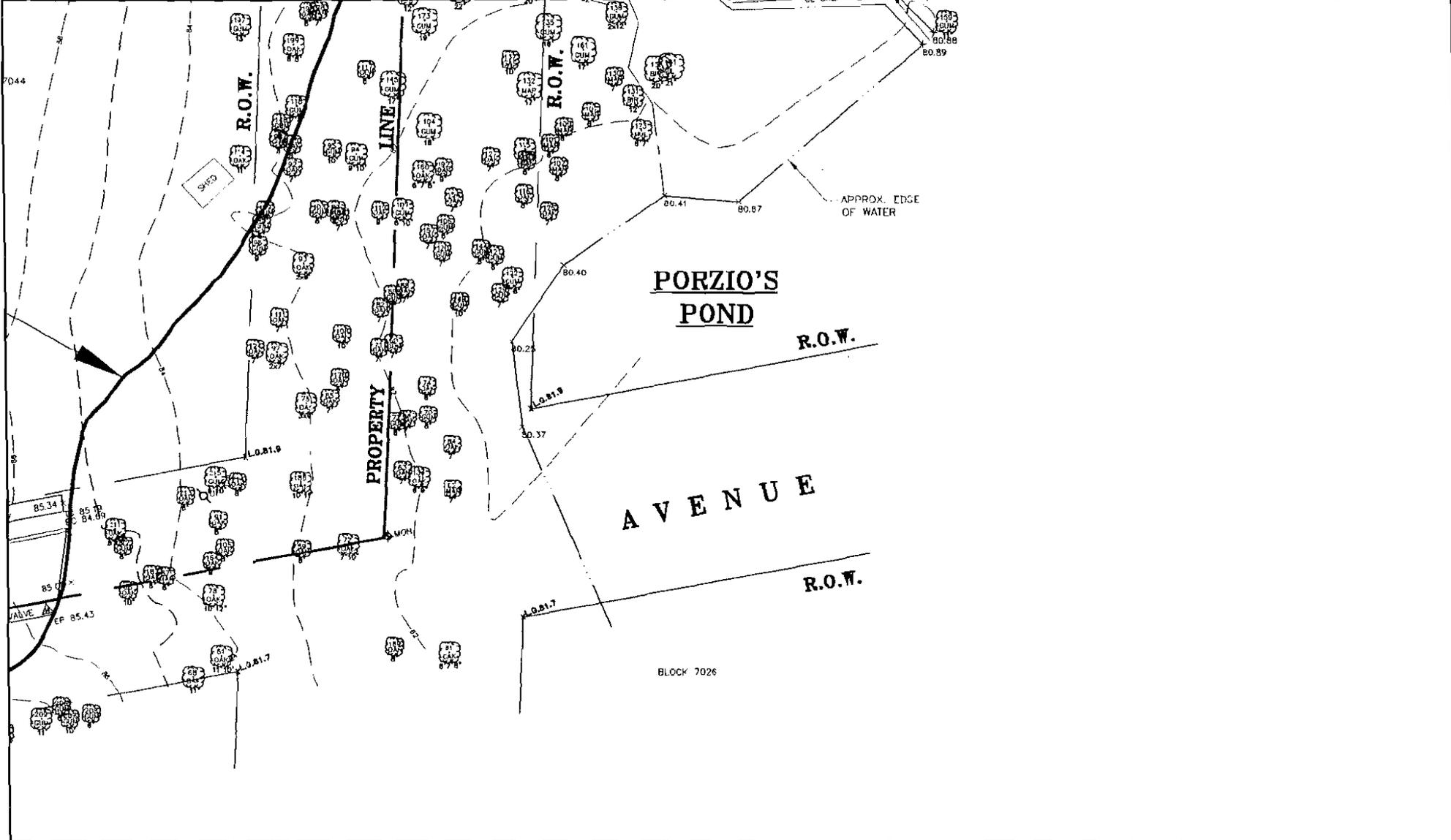
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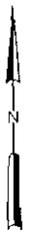
LEMON CREEK DRAINAGE AREA

BMP LC-3: KRAMER AVENUE
EXISTING SITE PLAN

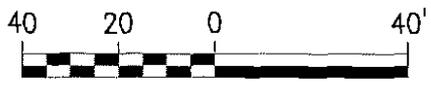
SHEET 5 OF 27



HAZEN AND SAWYER
 Environmental Engineers & Scientists



1" = 40'-0"



LEMON CREEK DRAINAGE AREA

BMP LC-3: KRAMER AVENUE
 EXISTING SITE PLAN
 SHEET 6 OF 27

PLANT SCHEDULE LC-3

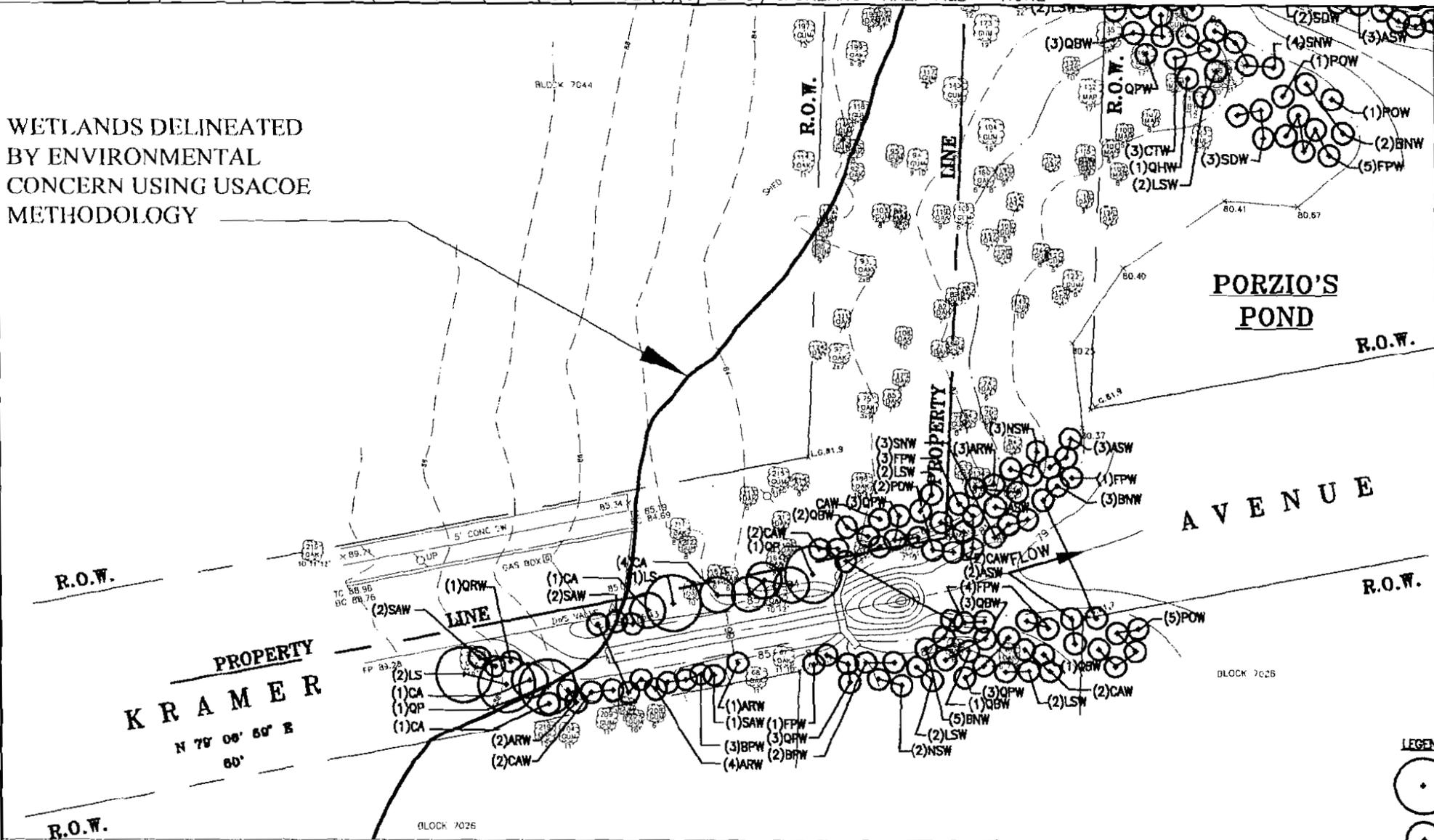
KEY	QTY	BOTANICAL NAME	COMMON NAME	CAL.	HT.	ROOT	REMARKS
CANOPY TREES							
AR	1	ACER RUBRUM	RED MAPLE	1 1/2"-2"	6'-8'	B&B/C	MULTI-STEM PREFERRED WITH WELL-BRANCHED TOP, FIBROUS ROOT SYSTEM.
CO	1	CELTIS OCCIDENTALIS	HACKBERRY	1 1/2"-2"	-	B&B/C	LOW-BRANCHED TOP. FIBROUS ROOT SYSTEM ESSENTIAL. SPRING PLANTING ONLY.
FP	1	FRAXINUS PENNSYLVANICA	GREEN ASH	1 1/2"-2"	-	B&B/C	LOW-BRANCHED TOP. FIBROUS ROOT SYSTEM ESSENTIAL.
LS	4	LIQUIDAMBAR STYRACIFLUA	SWEETGUM	1 1/2"-2"	6'-8'	B&B/C	MULTI-STEM PREFERRED WITH WELL-BRANCHED TOP, FIBROUS ROOT SYSTEM. SPRING PLANTING ONLY.
QH	1	QUERCUS PHELLOS	WILLOW OAK	1 1/2"-2"	-	B&B/C	LOW-BRANCHED TOP. FIBROUS ROOT SYSTEM ESSENTIAL. SPRING PLANTING ONLY. *RARE PLANT, SEE NOTES.
QP	4	QUERCUS PALUSTRIS	PIN OAK	1 1/2"-2"	-	B&B/C	LOW-BRANCHED TOP. FIBROUS ROOT SYSTEM ESSENTIAL.
UNDERSTORY AND EVERGREEN TREES							
CA	7	CORNUS ALTERNIFOLIA	PAGODA DOGWOOD	-	5'-6'	B&B/C	MULTI-STEM PREFERRED. HEAVY PLANTS WELL FURNISHED TO THE GROUND. MUST BE FREE FROM WINTER INJURY.
TREES - WHIPS 5-6'							
ARW	10	ACER RUBRUM	RED MAPLE	-	5-6'whip	C	
ASW	15	ACER SACCARINUM	SILVER MAPLE	-	5-6'whip	C	
BRW	19	BETULA NIGRA	RIVER BIRCH	-	5-6'whip	C	
BPW	5	BETULA POPULIFOLIA	GRAY BIRCH	-	5-6'whip	C	
CAW	10	CORNUS ALTERNIFOLIA	PAGODA DOGWOOD	-	5-6'whip	C	
CIW	3	CARYA TOMENTOSA	MOCKERNUT HICKORY	-	5-6'whip	C	
FPW	14	FRAXINUS PENNSYLVANICA	GREEN ASH	-	5-6'whip	C	
LSW	4	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	-	5-6'whip	C	
NSW	9	NYSSA SYLVATICA	SOUR GUM	-	5-6'whip	C	SPRING PLANTING ONLY
POW	4	PLATANUS OCCIDENTALIS	SYCAMORE	-	5-6'whip	C	
QBW	10	QUERCUS BICOLOR	SWAMP WHITE OAK	-	5-6'whip	C	SPRING PLANTING ONLY
QPW	8	QUERCUS PALUSTRIS	PIN OAK	-	5-6'whip	C	EARLY SPRING OR LATE FALL PLANTING ONLY
QRW	1	QUERCUS RUBRA	RED OAK	-	5-6'whip	C	SPRING PLANTING ONLY
SDW	13	SALIX DISCOLOR	PUSSY WILLOW	-	5-6'whip	C	
TREES - WHIPS 1-4'							
ASW	5	ACER SACCARINUM	SILVER MAPLE	-	1-4'whip	C	
BPW	18	BETULA POPULIFOLIA	GRAY BIRCH	-	1-4'whip	C	
FPW	10	FRAXINUS PENNSYLVANICA	GREEN ASH	-	1-4'whip	C	
LSW	12	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	-	1-4'whip	C	
POW	7	PLATANUS OCCIDENTALIS	SYCAMORE	-	1-4'whip	C	
QHW	1	QUERCUS PHELLOS	WILLOW OAK	-	1-4'whip	C	SPRING PLANTING ONLY *RARE PLANT, SEE NOTES.
QPW	9	QUERCUS PALUSTRIS	PIN OAK	-	1-4'whip	C	EARLY SPRING OR LATE FALL PLANTING ONLY
SNW	14	SALIX NIGRA	BLACK WILLOW	-	1-4'whip	C	PLANT AT LOWER ELEVATIONS AWAY

LEMON CREEK DRAINAGE AREA

BMP LC-3: MCBAIN/KRAMER AVES
LADSCAPING PLANT SCHEDULES

SHEET 8 OF 27

WETLANDS DELINEATED
BY ENVIRONMENTAL
CONCERN USING USACOE
METHODOLOGY



PROPERTY
KRAMER
N 70° 09' 58" E
60'

**PORZIO'S
POND**

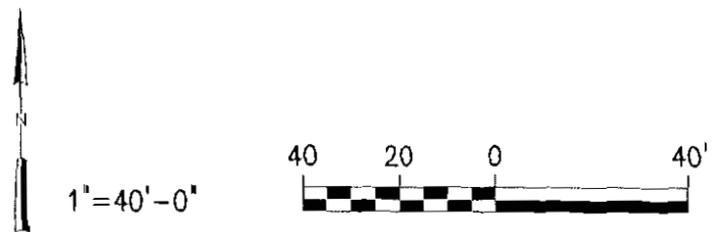
AVENUE

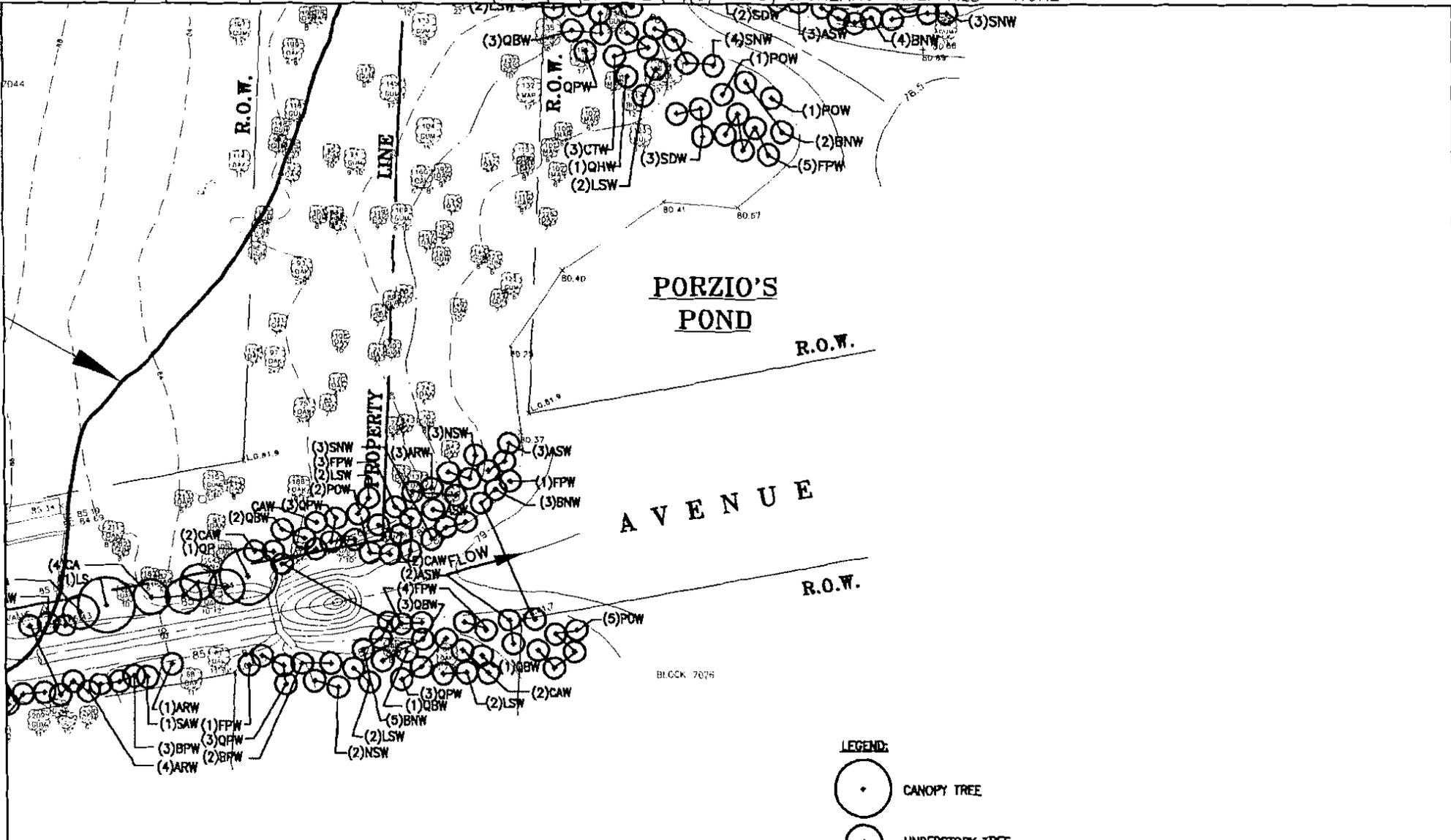
LEMON CREEK DRAINAGE AREA

BMP LC-3: KRAMER AVENUE
LANDSCAPING PLAN - TREES

SHEET 10 OF 27

HAZEN AND SAWYER
Environmental Engineers & Scientists



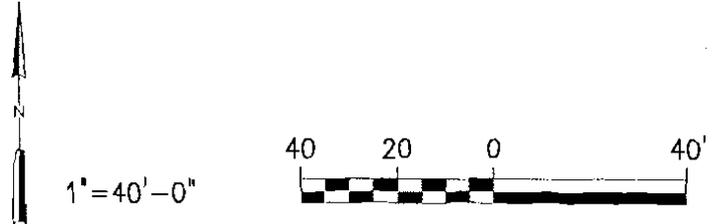


PORZIO'S POND

AVENUE

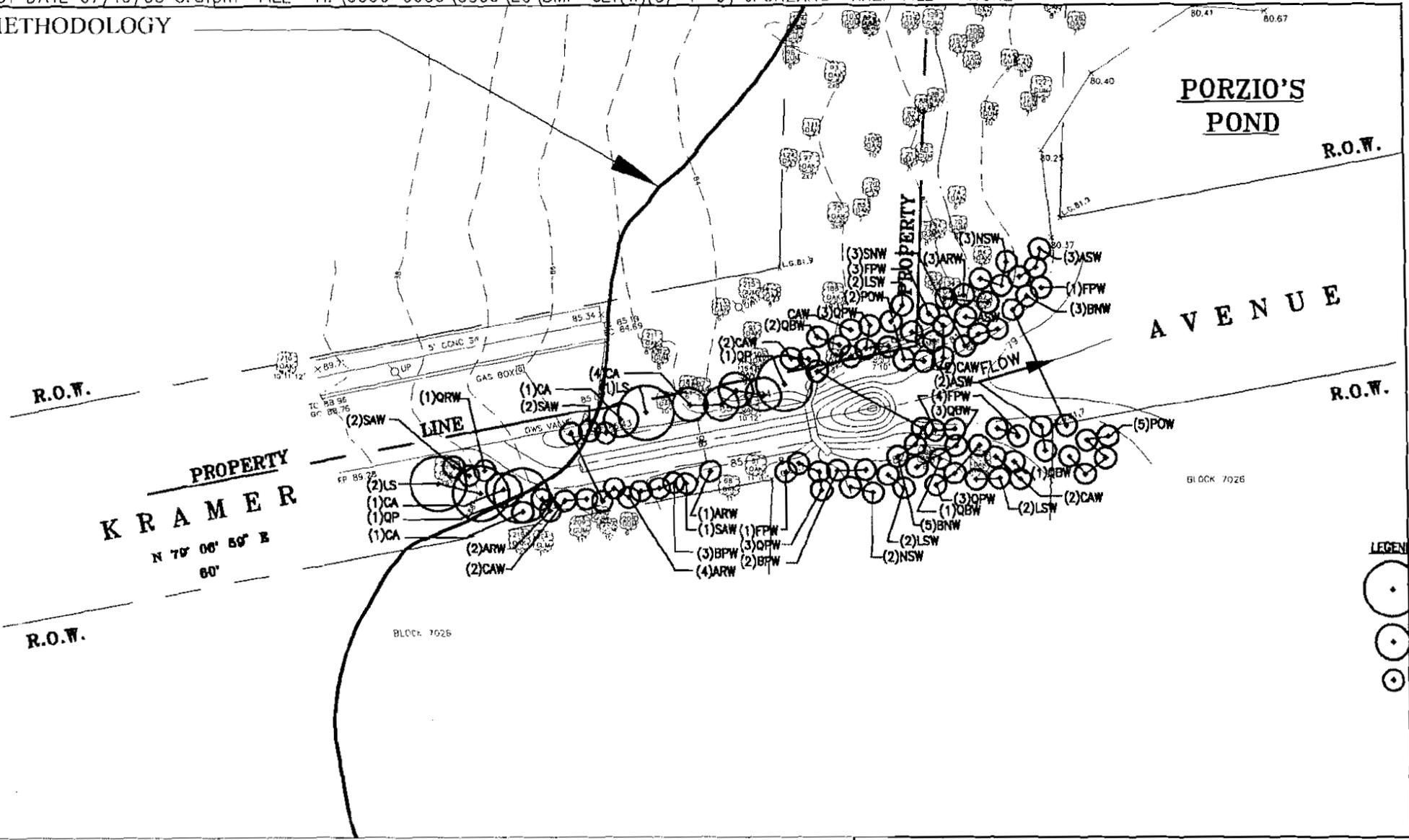
LEGEND:
 ○ ● CANOPY TREE
 ○ × UNDERSTORY TREE

HAZEN AND SAWYER
 Environmental Engineers & Scientists

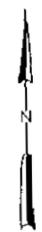


LEMON CREEK DRAINAGE AREA
 BMP LC-3: KRAMER AVENUE
 LANDSCAPING PLAN - TREES
 SHEET // OF 27

METHODOLOGY



HAZEN AND SAWYER
Environmental Engineers & Scientists

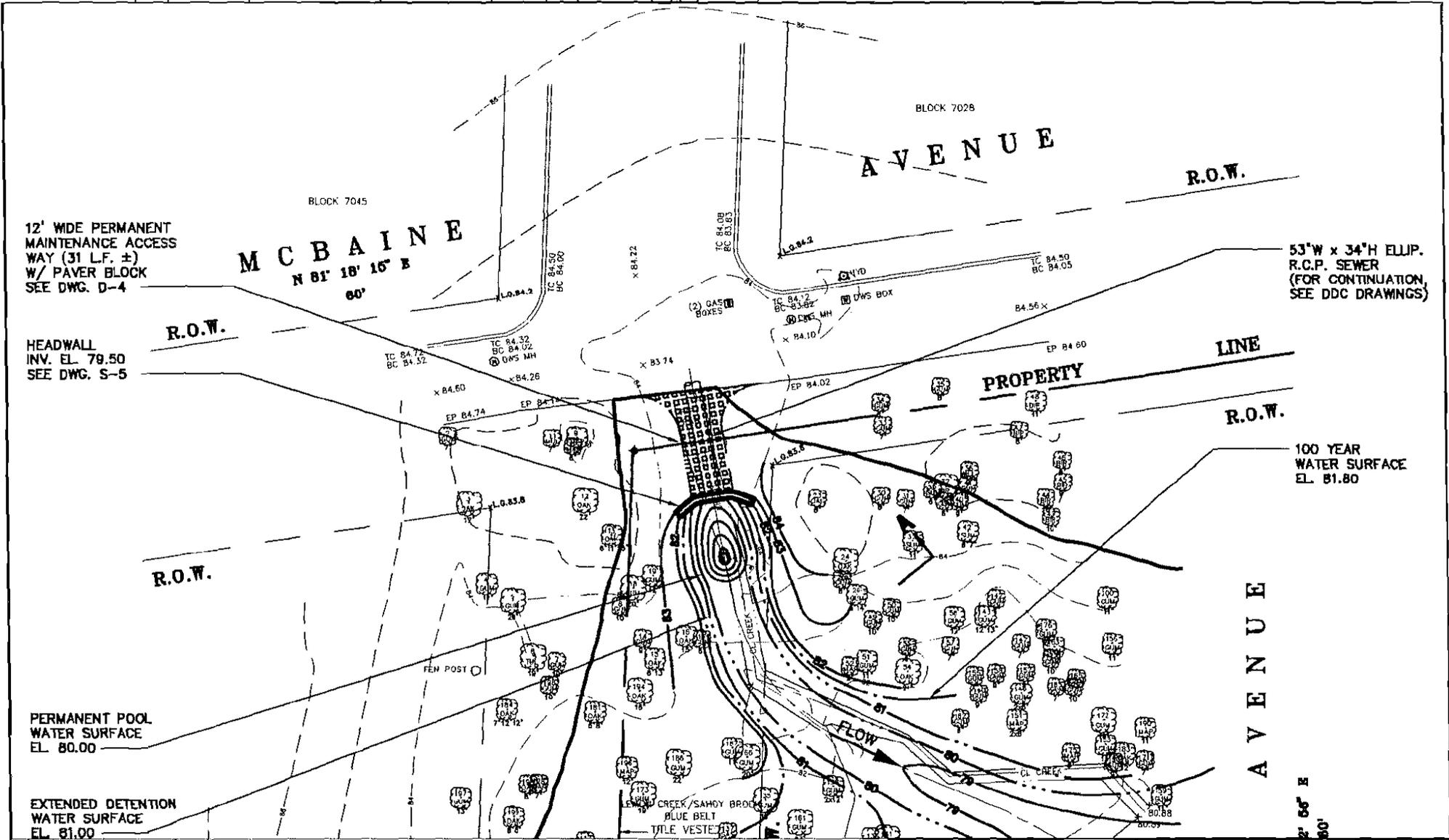


1" = 40'-0"



LEMON CREEK DRAINAGE AREA

BMP LC--3: KRAMER AVENUE
LANDSCAPING PLAN - TREES
SHEET 12 OF 27



HAZEN AND SAWYER
Environmental Engineers & Scientists

1" = 40' - 0"

40 20 0 40'

LEMON CREEK DRAINAGE AREA

BMP LC-3: MCBAIN AVENUE
FINAL SITE PLAN
SHEET 3 OF 27

WETLANDS DELINEATED
BY ENVIRONMENTAL
CONCERN USING USACOE
METHODOLOGY

EXTENDED DETENTION
WATER SURFACE
EL. 81.00

100 YEAR
WATER SURFACE
EL. 81.80

BLOCK 7044

LEMON CREEK/SAHOY BROOK
BLUE BELT
TITLE VESTED
2-24-95
LOT 300
BLOCK 7026

**PORZIO'S
POND**

MATCH PROPOSED GRAD
WITH EXISTING CONDITION
(FIELD VERIFY)

AVENUE

**PROPERTY
KRAMER**
N 79° 08' 50" E
60'

53" W x 34" H ELLIP.
R.C.P. STORM SEWER
(FOR CONTINUATION,
SEE DDC DRAWINGS)

EXTENDED DETENTION
WATER SURFACE
EL. 81.00

LEMON CREEK DRAINAGE AREA

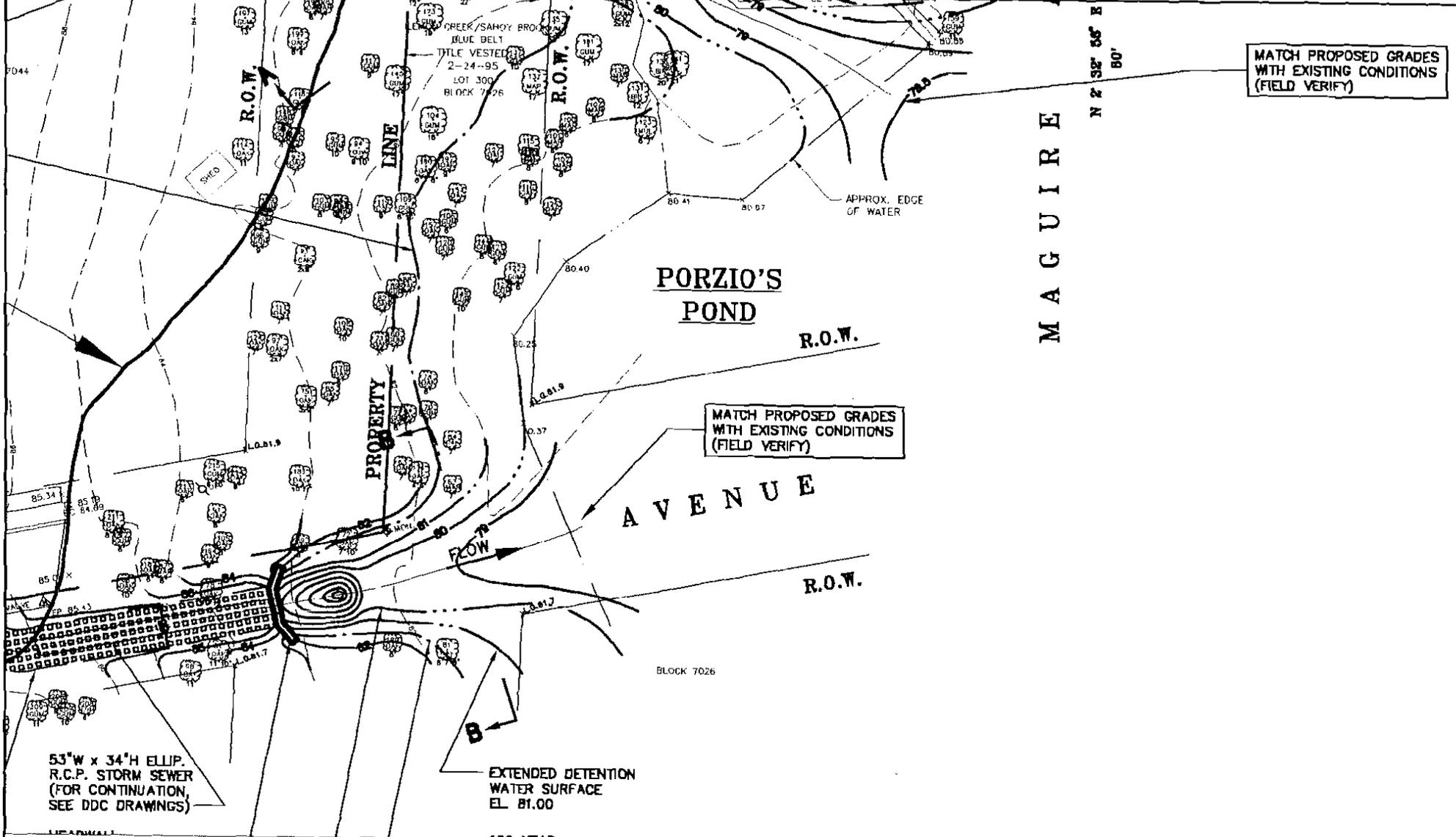
BMP LC-3: KRAMER AVENUE
FINAL SITE PLAN
SHEET 14 OF 27

HAZEN AND SAWYER
Environmental Engineers & Scientists



1" = 40' - 0"





HAZEN AND SAWYER
Environmental Engineers & Scientists

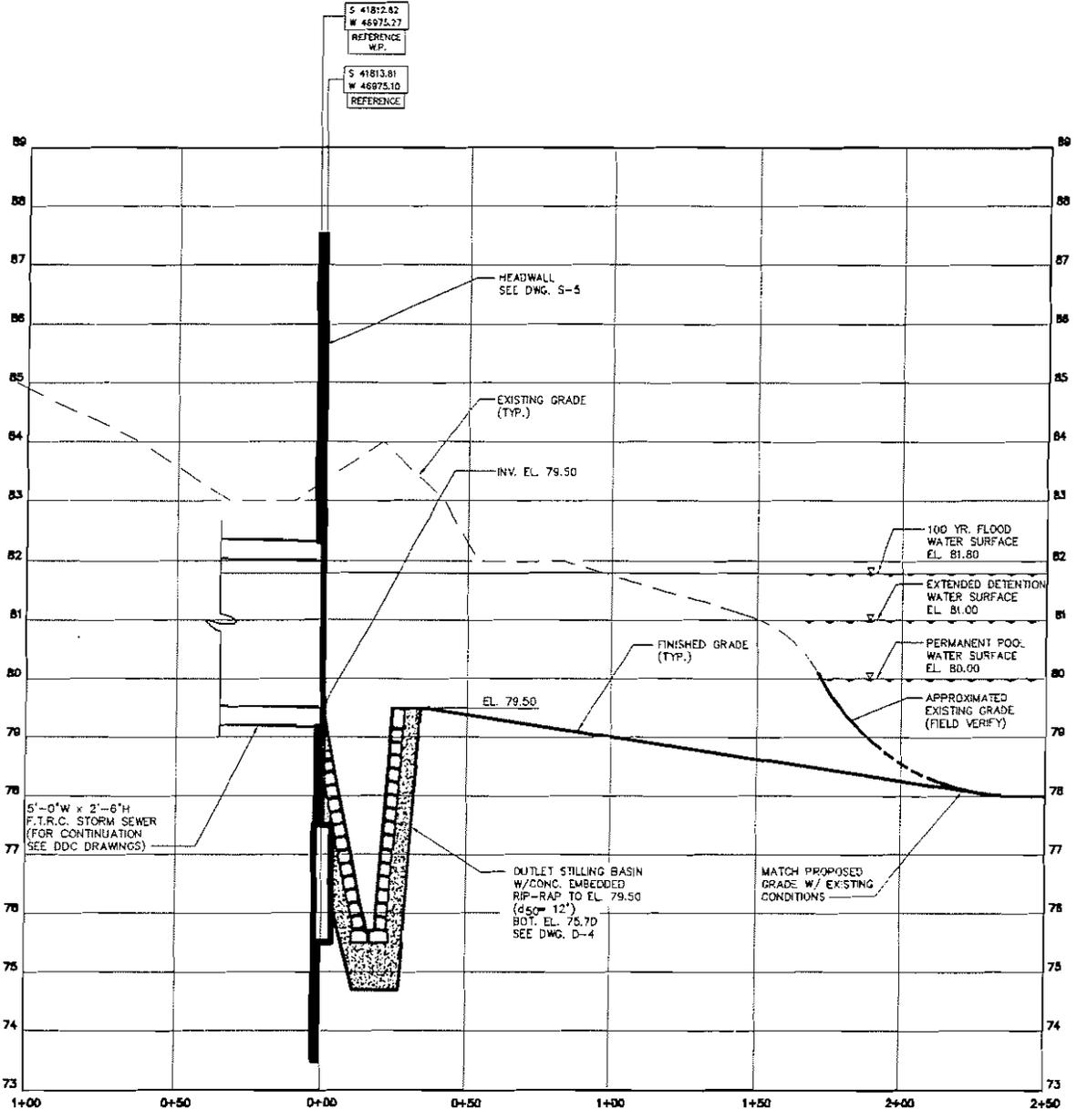
1"=40'-0"



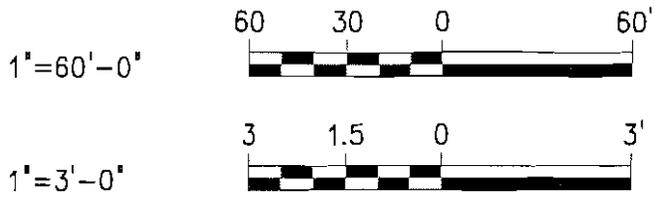
LEMON CREEK DRAINAGE AREA

BMP LC-3: KRAMER AVENUE
FINAL SITE PLAN
SHEET 15 OF 27

PLOT DATE 07/20/05 3:56pm FILE= H:\6000-9999\6300\LC\BMP--3P(W)--1 by JFORZANO XREF FILE = NONE



**CULVERT PROFILE
(MCBAINE AVENUE)**
HORIZ: 1"=60'
VERT: 1"=3'



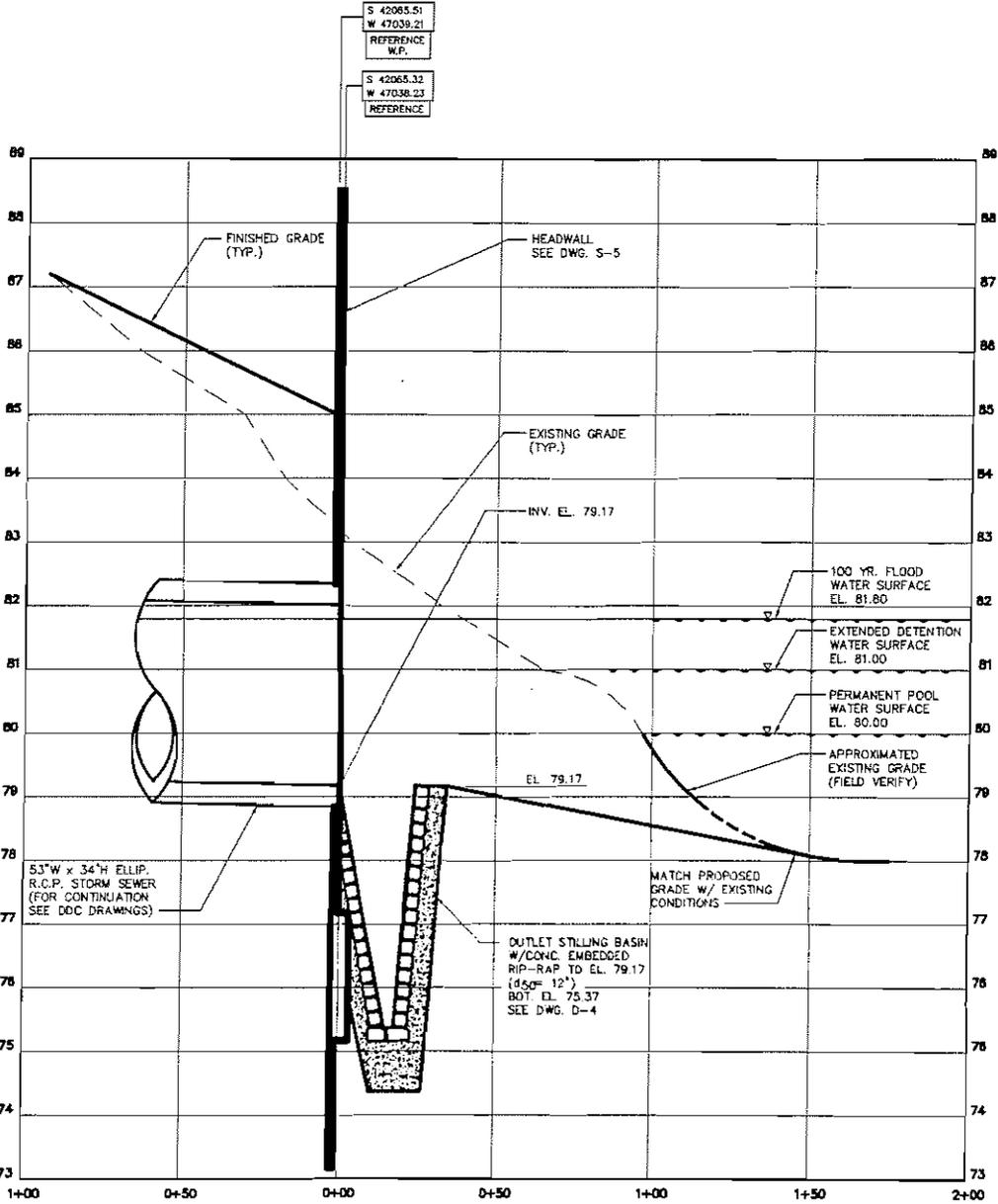
HAZEN AND SAWYER
Environmental Engineers & Scientists

LEMON CREEK DRAINAGE AREA

BMP LC-3: MCBAINE AVENUE
PROFILE

SHEET 17 OF 27

PLOT DATE 07/20/05 3:59pm FILE= H:\6000-9999\6300\LC\BMP-3P(W)-2 by JFORZANO XREF FILE = NONE



**ELLIP. PIPE PROFILE
(KRAMER AVENUE)**

HORIZ: 1"=60'
VERT: 1"=3'



1"=60'-0"

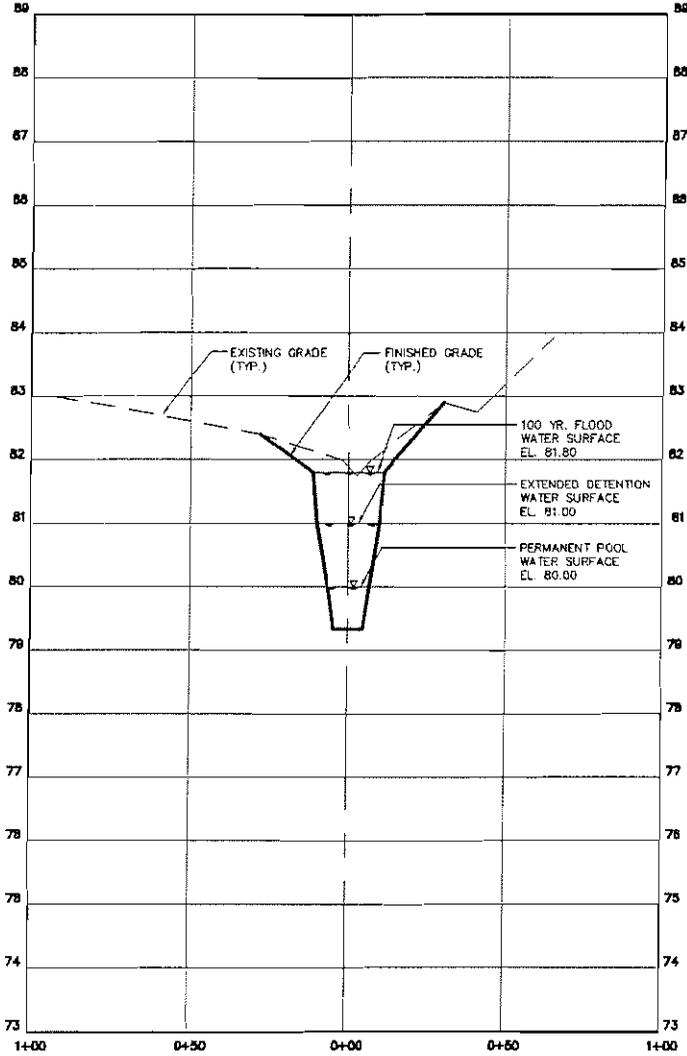


1"=3'-0"

HAZEN AND SAWYER
Environmental Engineers & Scientists

LEMON CREEK DRAINAGE AREA

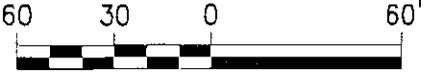
BMP LC-3: KRAMER AVENUE
PROFILE
SHEET 18 OF 27



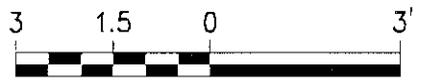
**CROSS SECTION A-A
(MCBAINE AVENUE)**

HORIZ: 1"=60'
VERT: 1"=3'

1"=60'-0"



1"=3'-0"



LEMON CREEK DRAINAGE AREA

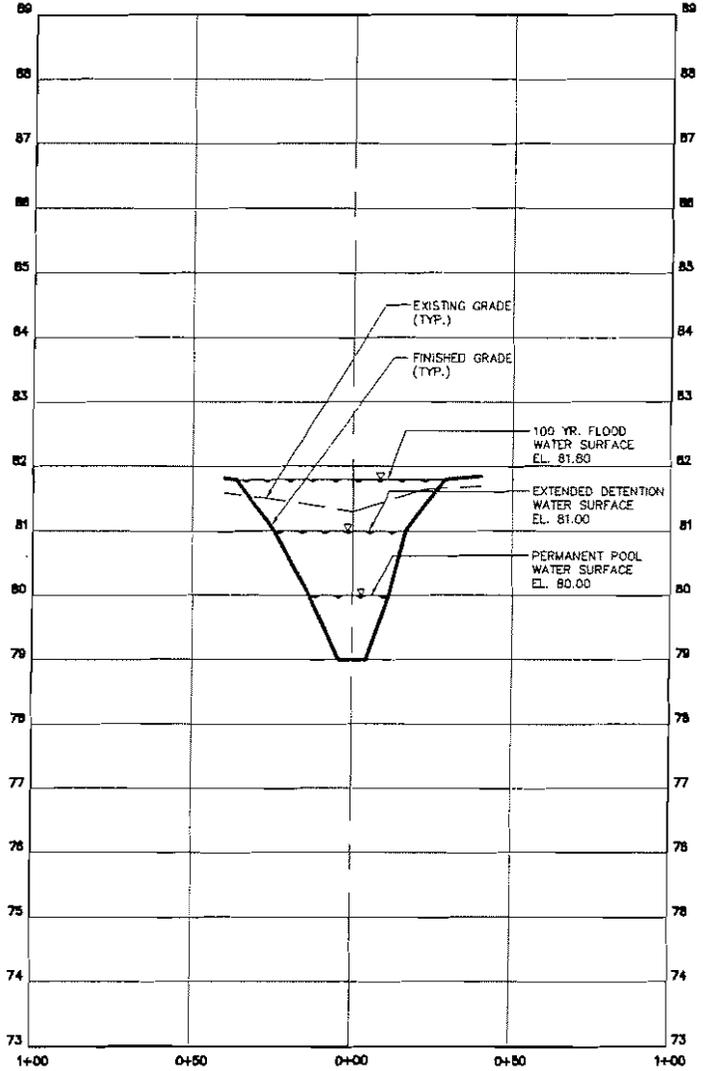
BMP LC-3: MCBAINE AVENUE
CROSS SECTION

SHEET 9 OF 27

HAZEN AND SAWYER
Environmental Engineers & Scientists

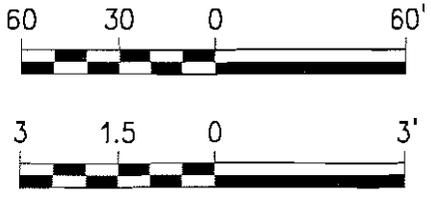
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**CROSS SECTION B-B
(KRAMER AVENUE)**

HORIZ: 1"=60'
VERT: 1"=3'



LEMON CREEK DRAINAGE AREA
BMP LC-3: KRAMER AVENUE CROSS SECTION SHEET 20 OF 27

HAZEN AND SAWYER
Environmental Engineers & Scientists

PLANT SCHEDULE LC-3

SHRUB CLUSTERS, FERNS, FORNS, GRASSES & AQUATIC PLANTS								
ZONE	SPACING	QTY	BOTANICAL NAME	COMMON NAME	SIZE	FORM	REMARKS	
[Pattern]	ROCK / TOE PLANTING - ELEVATION 80.0 - 82.0							
	DORMANT CUTTINGS							
		APPROX. 2'-0" O.C.	20	CORNUS AMOMUM	SILKY DOGWOOD	AS SPEC.	-	
		APPROX. 2'-0" O.C.	20	CORNUS STOLONIFERA	RED OSIER DOGWOOD	AS SPEC.	-	
	APPROX. 4'-0" O.C.	5	SALIX DISCOLOR	PUSSY WILLOW	AS SPEC.	-		
[Pattern]	EXTENDED DETENTION - ELEVATION 80.0 - 81.0							
	SHRUBS							
[Pattern]	HERBACEOUS PLANTS							
	NO HERBACEOUS PLANTINGS - ONLY SEEDING							
[Pattern]	SUCCESSIONAL WETLAND / FLOODPLAIN FOREST - ELEVATION 81.0' - LIMIT OF WORK							
	SHRUBS							
	CLUSTERS (3'-0" O.C.)	40	ARONIA ARBUTIFOLIA	RED CHOKEBERRY	12-18'	B&B/C		
	CLUSTERS (3'-0" O.C.)	40	ARONIA MELANDCARPA	BLACK CHOKEBERRY	12-18'	D&B/C		
	CLUSTERS (2'-6" O.C.)	59	BACCHARIS HALIMIFOLIA	GROUNDSEL RUSH	12-18'	B&B/C		
	CLUSTERS (3'-0" O.C.)	40	CORNUS AMOMUM	SILKY DOGWOOD	12-18'	-		
	CLUSTERS (4'-0" O.C.)	11	EUCONYMUS AMERICANUS	STRAWBERRY BUSH	12-18'	B&B/C	*RARE PLANT, SEE NOTES.	
	CLUSTERS (3'-0" O.C.)	40	ILEX VERTICILLATA	WINTERBERRY	12-18'	B&B/C		
	CLUSTERS (3'-0" O.C.)	40	LINDERA BENZON	SPICE BUSH	12-18'	B&B/C		
	CLUSTERS (4'-0" O.C.)	23	SAMBUCUS CANADENSIS	ELDERBERRY	12-18'	B&B/C		
	CLUSTERS (3'-0" O.C.)	40	ROSA PALUSTRIS	SWAMP ROSE	12-18'	B&B/C		
	CLUSTERS (3'-0" O.C.)	40	VIBURNUM DENTATUM	ARROW - WOOD	12-18'	B&B/C		
[Pattern]	HERBACEOUS PLANTS							
		APPROX. 1'-0" O.C.	165	ANDROPOGON VIRGINICUS	BUNCH BROOM SEDGE	2 3/4'	PLUG	
		CLUSTERS	165	ASTER NOVI-ANGLIAE	NEW ENGLAND ASTER	2 3/4'	PLUG	
		CLUSTERS	165	ASTER NOVI-BELGII	NEW YORK ASTER	2 3/4'	PLUG	*RARE PLANT, SEE NOTES.
		CLUSTERS	165	DANTHONIA SPICATA	POVERTY OATGRASS	2 3/4'	PLUG	
		CLUSTERS	120	DESCHAMPSIA CESPITOSA	TUFTED HAIRGRASS	2 3/4'	PLUG	*RARE PLANT, SEE NOTES.
		CLUSTERS	165	EUPATORIUM MACULATUM	SPOTTED JOE-PYE WEED	2 3/4'	PLUG	
		CLUSTERS	165	EUPATORIUM PERFOLIATUM	BONESET	2 3/4'	PLUG	
		CLUSTERS	165	EUPATORIUM PURPUREUM	PURPLE JOE-PYE WEED	2 3/4'	PLUG	
		CLUSTERS	165	HELIANTHUS ANGUSTIFOLIUS	SWAMP SUNFLOWER	2 3/4'	PLUG	SUNNY LOCATIONS ONLY
		CLUSTERS	165	PANICUM VIRGATUM	SWITCHGRASS	2 3/4'	PLUG	
		CLUSTERS	165	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	2 3/4'	PLUG	
		CLUSTERS	165	SOLIDAGO CANADENSIS	CANADA GOLDENROD	2 3/4'	PLUG	
		CLUSTERS	165	SOLIDAGO ODORA	SCENTED GOLDENROD	-	QT.	FULL SUN
		CLUSTERS	165	SOLIDAGO RUGOSA	ROUGH-LEAVED GOLDENROD	2 3/4'	PLUG	
		CLUSTERS	165	SOLIDAGO SPECIOSA	SHOWY GOLDEN ROD	2 3/4'	PLUG	
	[Pattern]	* FOR SHADY LOCATIONS DIRECTLY UNDER OR ADJACENT TO EX. FORESTS.						
		SHRUBS						
		CLUSTERS (4'-0" O.C.)	5	CORYLUS AMERICANUM	AMERICAN FILBERT	12-18'	B&B/C	
		CLUSTERS (3'-0" O.C.)	3	*DIRCA PALUSTRIS	ATLANTIC LEATHERWOOD	12-18'	B&B/C	*RARE PLANT, SEE NOTES.
	CLUSTERS (3'-0" O.C.)	9	HAMAMELUS VIRGINIANA	WITCH HAZEL	12-18'	B&B/C		
	CLUSTERS (3'-0" O.C.)	3	*VIBURNUM CASSINOIDES	WITHERROD	12-18'	B&B/C	*RARE PLANT, SEE NOTES.	
[Pattern]	FERNS, FORNS, & GRASSES							
		CLUSTERS	3	*ACTIAEA PACHYPODA	WHITE BANEBERRY	-	QT.	*RARE PLANT, SEE NOTES.
		CLUSTERS	3	*ARISAEMA TRIPHYLLUM	JACK IN THE PULPIT	-	QT.	*RARE PLANT, SEE NOTES.
		CLUSTERS	58	DENNSTAEDTIA PUNCTILOBA	HAY-SCENTED FERN	-	QT.	PLANT IN SHADE
		CLUSTERS	3	*ERYTHRONIUM AMERICANUM	TROUT LILY	-	QT.	*RARE PLANT, SEE NOTES.
		CLUSTERS	3	POLYGONATUM BIFLORUM	SOLOMON'S SEAL	-	QT.	*RARE PLANT, SEE NOTES.
	CLUSTERS	58	SMILACINA RACEMOSA	FALSE SOLOMON'S SEAL	-	QT.		

LEMON CREEK DRAINAGE AREA

BMP LC-3: MCBAIN/KRAMER AVES
LADSCAPING PLANT SCHEDULES
SHEET 21 OF 27

NOTES:

1. ALL PLANTS AND SEEDS SHALL BE TRUE TO GENUS AND SPECIES. CULTIVARS AND VARIETIES ARE NOT ACCEPTABLE. SEE SPECIFICATIONS FOR ADDITIONAL PLANT REQUIREMENTS.
2. PLANTS SHALL BE PLANTED WITHIN THE ZONES NOTED ABOVE WITH THE FOLLOWING CONSIDERATIONS:
3. SHRUB CLUSTERS SHALL BE COMPRISED OF A RANDOM SELECTION OF THE SPECIFIED SHRUB SPECIES, RANGING IN SIZE FROM 6-10 INDIVIDUALS. WITHIN THE REMAINING AREAS, THE FORBS SHALL BE PLANTED IN MONOTYPIC CLUSTERS OF 15-30 INDIVIDUALS WITH AN IRREGULAR SPACING OF 0.5'-1.5', REFER TO PLANS FOR LAYOUT OF SHRUBS IN EXTENDED DETENTION ZONES.
4. INSTALL EROSION CONTROL MAT - BONTERRA CF 7 - OVER ALL AREAS THAT HAVE BEEN REGRADED AND/OR DISTURBED.
5. PLANTS NOTED AS RARE OR EXTIRPATED ARE PLANTS THAT WERE AT ONE TIME NATIVE TO STATEN ISLAND AND THE REGION, BUT ARE CURRENTLY RARE OR NON-EXISTENT. CONTRACTOR SHOULD CONTACT GROWERS EARLY INTO THE CONSTRUCTION, AS THE PLANTS MAY BE DIFFICULT TO LOCATE OR MAY NEED TO BE GROWN FOR THE PROJECT.

ABBREVIATIONS:

- B & B = BALLED AND BURLAPPED
B&B/C = SHRUBS SHALL BE EITHER BALLED & BURLAPPED OR CONTAINER GROWN.
* = RARE OR EXTIRPATED PLANT, SEE NOTE 4.
C = CONTAINER GROWN - SIZE AS NOTED
QT = QUART CONTAINER GROWN
UR = BARE ROOT

PERMANENT SEEDING:

1. ROCK IDE PLANTING:
NO SEEDING.

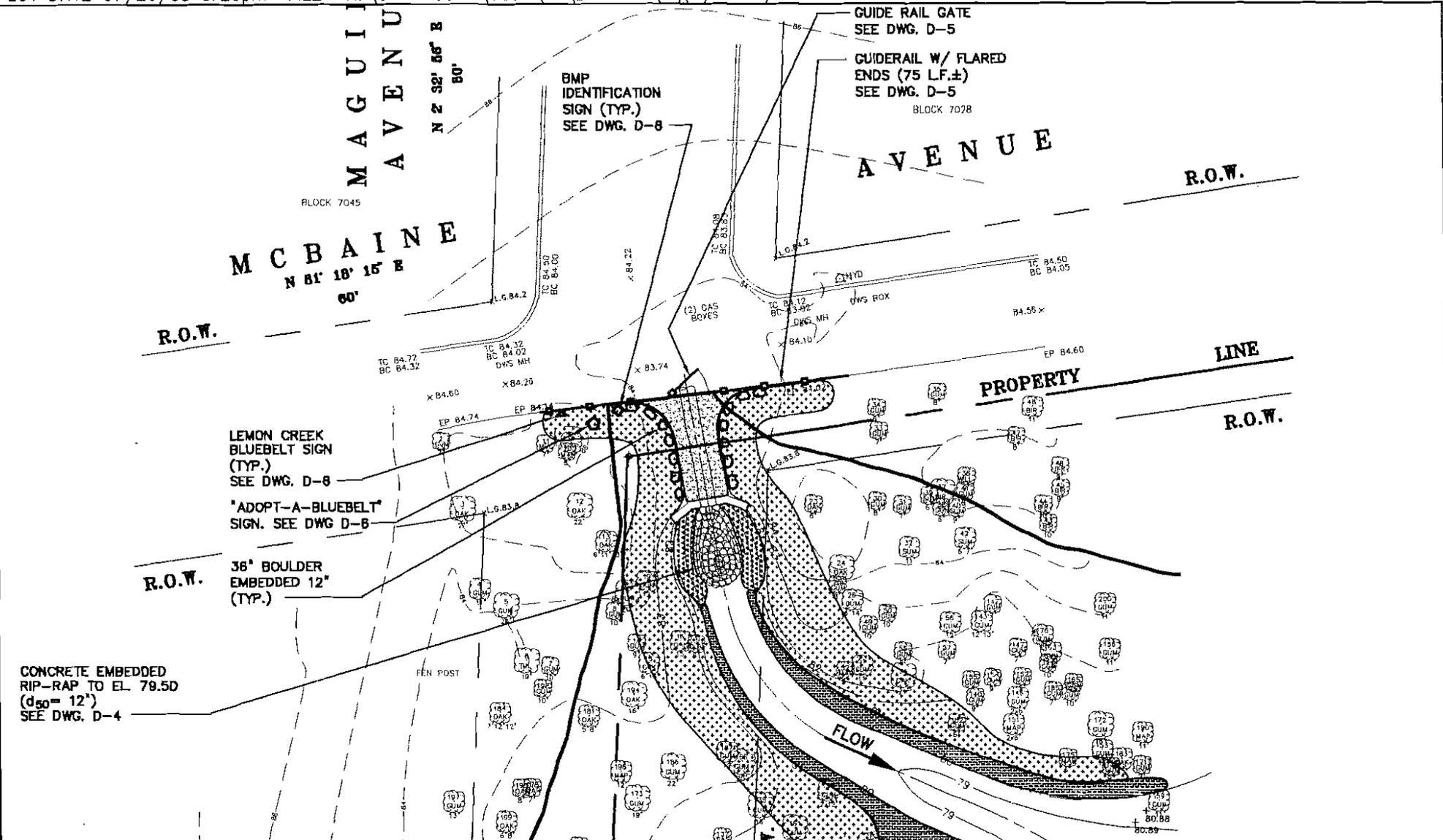
2. EXTENDED DETENTION ZONE:
2 LBS. FACW WETLAND MEADOW MIX AT A RATE OF 6 LBS. PER 10,000 SF.

3. WETLAND SUCCESSIONAL FOREST ZONE:
4 LBS. STATEN ISLAND NATIVE WILDFLOWER MIX AT A RATE OF 4.5 LBS. PER 10,000 SF.

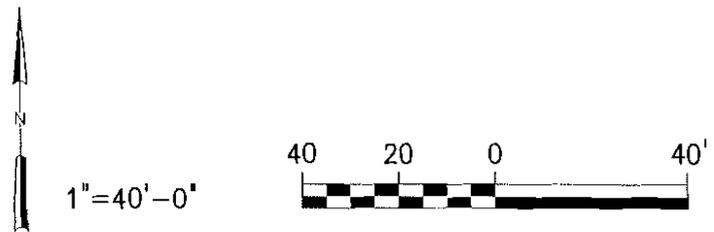
4. ROADSIDE UPLAND PLANTING:
1.0 LB. BLUEBELT ROADSIDE WILDFLOWER MIX AT A RATE OF 6 LBS. PER 10,000 SF.
6. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION ON SEED MIXES AND APPLICATIONS.

LEMON CREEK DRAINAGE AREA

BMP LC-3: MCBAIN/KRAMER AVES
LANDSCAPING PLANT SCHEDULES
SHEET 22 OF 27



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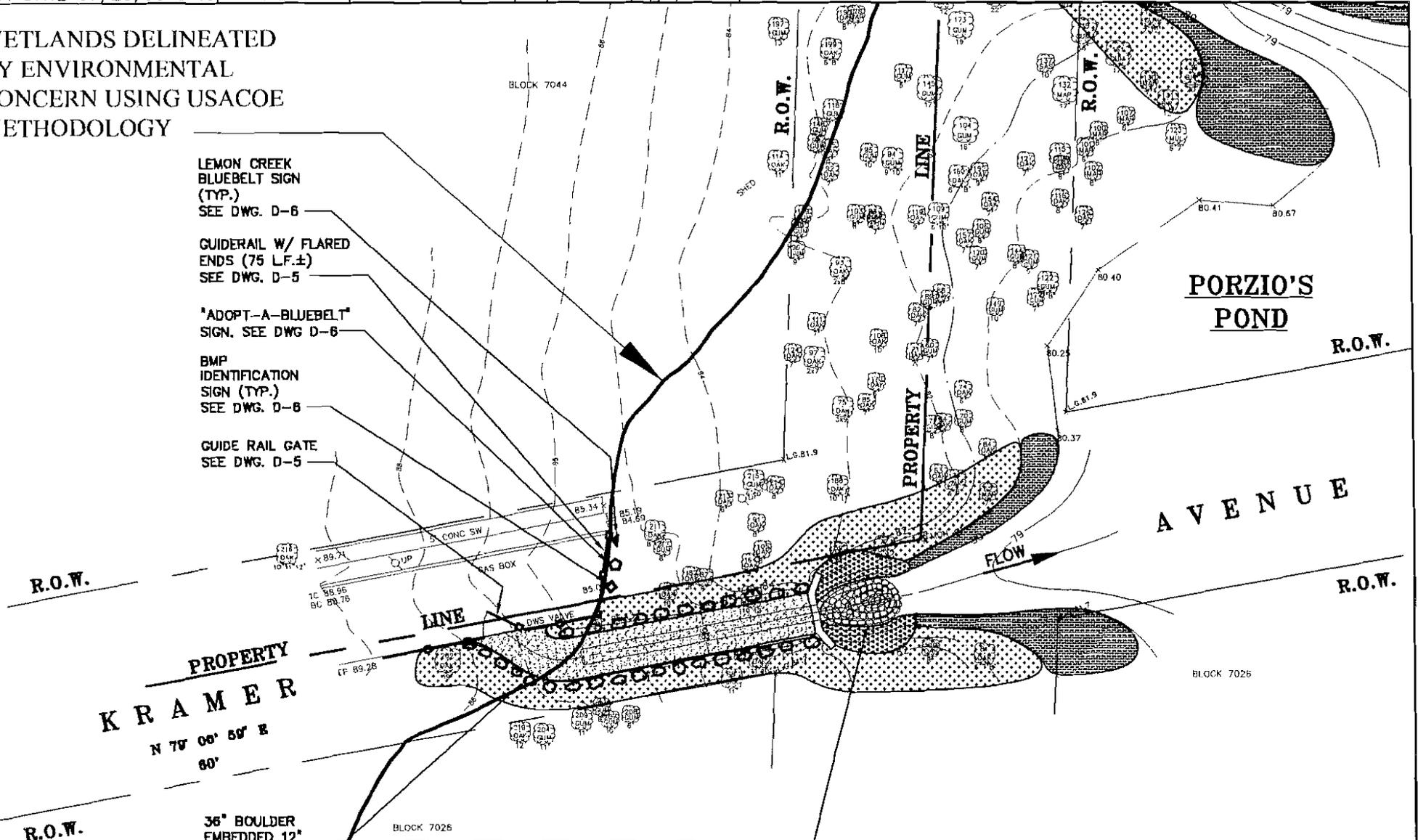


LEMON CREEK DRAINAGE AREA

BMP LC-3: MCBAIN AVENUE
LANDSCAPING PLAN - ZONES
SHEET 23 OF 27

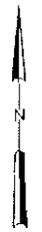
**WETLANDS DELINEATED
BY ENVIRONMENTAL
CONCERN USING USACOE
METHODOLOGY**

- LEMON CREEK BLUEBELT SIGN (TYP.) SEE DWG. D-6
- GUIDERAIL W/ FLARED ENDS (75 LF.±) SEE DWG. D-5
- 'ADOPT-A-BLUEBELT' SIGN. SEE DWG D-6
- BMP IDENTIFICATION SIGN (TYP.) SEE DWG. D-8
- GUIDE RAIL GATE SEE DWG. D-5



R.O.W.
PROPERTY
KRAMER
N 79° 00' 58" E
60°
36" BOULDER EMBEDDED 12"

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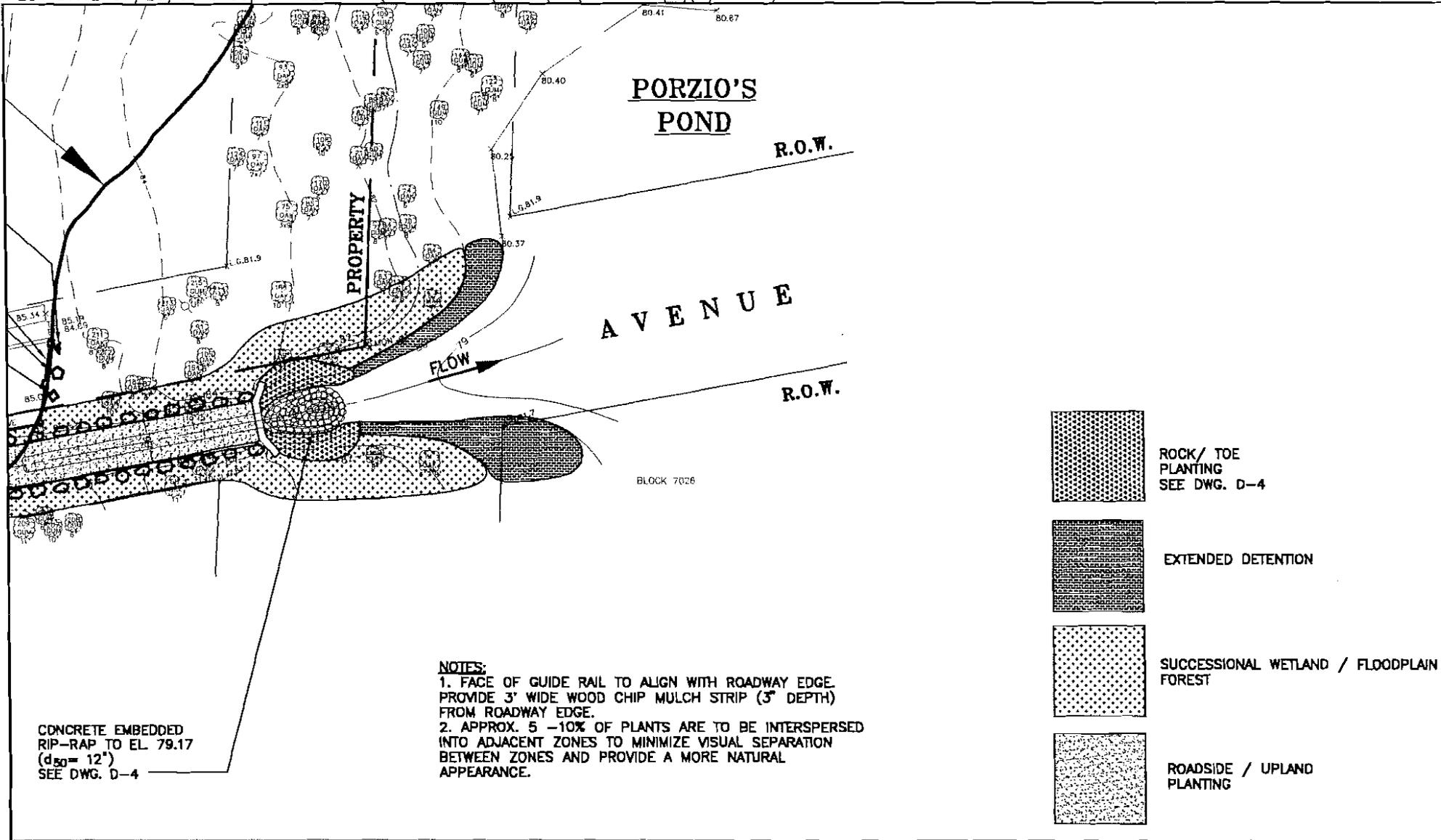


1" = 40' - 0"



LEMON CREEK DRAINAGE AREA

BMP LC-3: KRAMER AVENUE
LANDSCAPING PLAN - ZONES
SHEET 24 OF 27



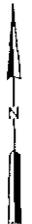
NOTES:
 1. FACE OF GUIDE RAIL TO ALIGN WITH ROADWAY EDGE. PROVIDE 3' WIDE WOOD CHIP MULCH STRIP (3" DEPTH) FROM ROADWAY EDGE.
 2. APPROX. 5 - 10% OF PLANTS ARE TO BE INTERSPERSED INTO ADJACENT ZONES TO MINIMIZE VISUAL SEPARATION BETWEEN ZONES AND PROVIDE A MORE NATURAL APPEARANCE.

CONCRETE EMBEDDED RIP-RAP TO EL. 79.17 (d₅₀ = 12") SEE DWG. D-4

LEMON CREEK DRAINAGE AREA

BMP LC-3: KRAMER AVENUE LANDSCAPING PLAN - ZONES SHEET 27 OF 27

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1" = 40'-0"

