

OHIO PUBLIC WORKS COMMISSION

N8

(2)

65 East State Street, Suite 312
Columbus, Ohio 43215
(614) 466-0880

CB 316

APPLICATION FOR FINANCIAL ASSISTANCE

Revised 6/90

IMPORTANT: Applicant should consult the "Instructions for Completion of Project Application" for assistance in the proper completion of this form.

APPLICANT NAME City of Sharonville
STREET 10900 Reading Road

CITY/ZIP Sharonville, Ohio 45241

PROJECT NAME Sharonville Detention Dam Emergency Spillway
Replacement

PROJECT TYPE Storm Water Collection and Detention

TOTAL COST \$ 653,000.00

DISTRICT NUMBER 2
COUNTY Hamilton

PROJECT LOCATION ZIP CODE 45241

SEP 14 P 3: 07
OFFICE OF THE
COUNTY ENGINEER

DISTRICT FUNDING RECOMMENDATION

To be completed by the District Committee ONLY

RECOMMENDED AMOUNT OF FUNDING: \$ 326,500.00

FUNDING SOURCE (Check Only One):

State Issue 2 District Allocation
 Grant
 Loan
 Loan Assistance

State Issue 2 Small Government Fund
 State Issue 2 Emergency Funds
 Local Transportation Improvement Fund

FOR OPWC USE ONLY

OPWC PROJECT NUMBER:

OPWC FUNDING AMOUNT: \$

1.0 APPLICANT INFORMATION

1.1 CHIEF EXECUTIVE

OFFICER Hon. John S. Dowlin
TITLE Mayor
STREET 10900 Reading Road

CITY/ZIP Sharonville, Ohio 45241
PHONE (513) 563-1144
FAX (513) 563-0617

1.2 CHIEF FINANCIAL

OFFICER Mr. James D. Greensfelder
TITLE Auditor
STREET 10900 Reading Road

CITY/ZIP Sharonville, Ohio 45241
PHONE (513) 563-1144
FAX (513) 563-0617

1.3 PROJECT MANAGER

Mr. Al Ledbetter
TITLE Deputy Safety - Service Director
STREET 10900 Reading Road

CITY/ZIP Sharonville, Ohio 45241
PHONE (513) 563-1144
FAX (513) 563-0617

1.4 PROJECT CONTACT

Mr. Rex E. Baysore
TITLE Safety Service Director
STREET 10900 Reading Road

CITY/ZIP Sharonville, Ohio 45241
PHONE (513) 563-1144
FAX (513) 563-0617

1.5 DISTRICT

LIAISON Mr. William Brayshaw, P.E., P.S.
TITLE Chief Deputy Engineer
STREET Hamilton County Engineer's Office
223 West Galbraith Road

CITY/ZIP Cincinnati, Ohio 45215
PHONE (513) 761-7400
FAX (513) 761-9127

3.0 PROJECT FINANCIAL INFORMATION

3.1 PROJECT ESTIMATED COSTS (Round to Nearest Dollar):

a)	Project Engineering Costs:	
	1. Preliminary Engineering	\$ _____
	2. Final Design	\$ _____
	3. Construction Supervision	\$ _____
b)	Acquisition Expenses	
	1. Land	\$ _____
	2. Right-of-Way	\$ _____
c)	Construction Costs	\$ <u>642,885</u>
d)	Equipment Costs	\$ _____
e)	Other Direct Expenses	\$ _____
f)	Contingencies	\$ <u>10,115</u>
g)	TOTAL ESTIMATED COSTS	\$ <u>653,000</u>

3.2 PROJECT FINANCIAL RESOURCES (Round to Nearest Dollar and Percent):

	Dollars	%
a) Local In-Kind Contributions*	\$ _____	_____
b) Local Public Revenues	\$ <u>326,500</u>	<u>50</u>
c) Local Private Revenues	\$ _____	_____
d) Other Public Revenues		
1. ODOT	\$ _____	_____
2. FMHA	\$ _____	_____
3. OEPA	\$ _____	_____
4. OWDA	\$ _____	_____
5. CDBG	\$ _____	_____
6. Other _____	\$ _____	_____
e) OPWC Funds		
1. Grant	\$ <u>326,500</u>	<u>50</u>
2. Loan	\$ _____	_____
3. Loan Assistance	\$ _____	_____
f) TOTAL FINANCIAL RESOURCES	\$ <u>653,000</u>	<u>100</u>

* If the required local match is to be 100% In-Kind Contributions, list source of funds to be used for retainage purposes.

3.3 AVAILABILITY OF LOCAL FUNDS

Indicate the status of all local share funding sources listed in section 3.2(a) through 3.4(c). In addition, if funds are coming from sources listed in section 3.2(d), the following information must be attached to this project application:

- 1) The date funds are available;
- 2) Verification of funds in the form of an agency approval letter or agency project number. Please include the name and number of the agency contact person.

3.4 PREPAID ITEMS - N/A

Definitions:

- Cost -** Total Cost of the Prepaid Item.
- Cost Item -** Non-construction costs, including preliminary engineer, final design, acquisition expenses (land or right-of-way).
- Prepaid -** Cost items (non-construction costs directly related to the project), paid prior to receipt of fully executive Project Agreement from OPWC.
- Resource Category -** Source of funds (see section 3.2).
- Verification -** Invoice(s) and copies of warrant(s) used to for prepaid costs, accompanied by Project Manager's Certification (see section 1.4).

IMPORTANT: Verification of all prepaid items shall be attached to this project application.

	<u>COST ITEM</u>	<u>RESOURCE CATEGORY</u>	<u>COST</u>
1)	_____	_____	\$ _____
2)	_____	_____	\$ _____
3)	_____	_____	\$ _____
TOTAL OF PREPAID ITEMS \$ _____			

3.5 REPAIR/REPLACEMENT or NEW/EXPANSION

This section need only be completed if the Project is to be funded by S12 funds:

TOTAL PORTION OF PROJECT/REPLACEMENT	<u>\$653.000</u>	<u>100 %</u>
State Issue 2 Funds for Repair/Replacement (Not to Exceed 90%)	<u>\$326.500</u>	<u>50 %</u>
TOTAL PORTION OF PROJECT NEW/EXPANSION	\$ _____	_____ %
State Issue 2 Funds for New/Expansion (Not to Exceed 50%)	\$ _____	_____ %

4.0 PROJECT SCHEDULE

	ESTIMATED START DATE	ESTIMATED COMPLETE DATE
4.1 ENGR. DESIGN	In Progress	<u>12 /31 /90</u>
4.2 BID PROCESS	<u>03 /04 /91</u>	<u>03 /26 / 91</u>
4.3 CONSTRUCTION	<u>04 /15 /91</u>	<u>12 /15 / 91</u>

Bid Schedule assumes notification of Issue 2 Funding in February, 1991.

5.0 APPLICANT CERTIFICATION

The Applicant Certifies That:

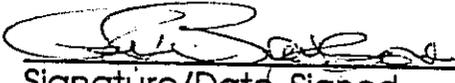
As the official representative of the Applicant, the undersigned certifies that: (1) he/she is legally empowered to represent the applicant in both requesting and accepting financial assistance as provided under Chapter 164 of the Ohio Revised Code and 164-1 of the Ohio Administrative Code; (2) that to the best of his/her knowledge and belief, all representations that are a part of this application are true and correct; (3) that all official documents and commitments of the applicant that are a part of this application have been duly authorized by the governing body of the Applicant; (4) and, should the requested financial assistance be provided, that in the execution of this project, the Applicant will comply with all assurances required by Ohio law, including those involving minority business utilization, Buy Ohio, and prevailing wages.

IMPORTANT: Applicant certifies that physical construction on the project as defined in this application has not begun, and will not begin, until a Project Agreement on this project has been issued by the Ohio Public Works Commission. Action to the contrary is evidence that OPWC funds are not necessary to complete this project.

IMPORTANT: In the event of a project cost underrun, applicant understands that the identified local match share (sections 3.2(a) through 3.2(c) will be paid in full toward completion of this project. Unneeded OPWC funds will be returned to the funding source from which the project was financed.

Rex Baysore, Safety Service Director

Certifying Representative (Type Name and Title)



Signature/Date Signed

9/7/90

Applicant shall check each of the statements below, confirming that all required information is included in this application:

A five-year Capital Improvements Report as required in 164-1-31 of the Ohio Administrative Code and a two-year Maintenance of Local Effort Report as required in 164-1-12 of the Ohio Administrative Code.

A registered professional engineer's estimate of useful life as required in 164-1-13 of the Ohio Administrative Code. Estimate shall contain engineer's original seal and signature.

A registered professional engineer's estimate of cost as required in 164-1-14 and 164-1-16 of the Ohio Administrative Code. Estimate shall contain engineer's original seal and signature.

A certified copy of the legislation by the governing body of the applicant authorizing a designated official to submit this application and to execute contracts.

YES
N/A

A copy of the cooperation agreement(s) (for projects involving more than one subdivision or district).

YES
N/A

Copies of all invoices and warrants for those items identified as 'pre-paid' in section 4.4 of this application.

6.0 DISTRICT COMMITTEE CERTIFICATION

The District Integrating Committee for District Number 2 Certifies That:

As the official representative of the District Public Works Integrating Committee, the undersigned hereby certifies: that this application for financial assistance as provided under Chapter 164 of the Ohio Revised Code has been duly selected by the appropriate body of the District Public Works Integrating Committee; that the project's selection was based entirely on an objective, District-oriented set of project evaluation criteria and selection methodology that are fully reflective of and in conformance with Ohio Revised Code Sections 164.05, 164.06, and 164.14, and Chapter 164-1 of the Ohio Administrative Code; and that the amount of financial assistance hereby recommended has been prudently derived in consideration of all other financial resources available to the project. As evidence of the District's due consideration of required project evaluation criteria, the results of this project's ratings under such criteria are attached to this application.

DONALD C. SCHRAMM, CHAIRMAN DISTRICT #2 INTEGRATING COMMITTEE

Certifying Representative (Type Name and Title)

Donald C. Schramm 11/2/90

Signature/Date Signed

CITY OF SHARONVILLE
5-YEAR ISSUE 2
CAPITAL IMPROVEMENTS PLAN

YEAR	PRIORITY	PROJECT/DESCRIPTION	ESTIMATED COST
1991	1	Sharonville Detention Dam Emergency Spillway Replacement	\$ 653,000
	2	South Sharon Creek Improvements (Stream Channel Realignment)	\$ 97,000
1992	1	Replacement of Oak Street Bridge	\$ 115,000
1993	1	Widening of Mosteller Road (Crescentville to I-275)	\$ 1,500,000
1994	1	Widening of Crescentville Road (I-75 to Gano Road)	\$ 910,000
1995	1	Kemper Road Improvements (Reed Hartman to East Corp. Line)	\$ 500,000

CITY OF SHARONVILLE
FIVE YEAR CAPITAL IMPROVEMENT PLAN
FOR INFRASTRUCTURE

1991

1. Street Program	\$700,000.00
2. Curb & Sidewalk Repairs	65,000.00
3. Street Lights (Indian Springs)	40,000.00
4. Replacement of Kemper Road Bridge over Sharon Woods Lake	820,000.00
5. Sharonville Retention Dam Spillway	671,000.00
6. Stabilization of Hazelwood Creek Bank (Creek and Thornview)	98,000.00
7. Land Acquisition for I-275 Improvements	<u>500,000.00</u>
TOTAL	\$2,894,000.00

1992

1. Street Program	700,000.00
2. Curb & Sidewalk Repairs	65,000.00
3. Engineer, Widen & Overlay of Reading Road north of Kemper Road	88,000.00
4. Engineering for Replacement of Rt 42 Bridge(south of Sharon Ave.)	80,000.00
5. Replacement of Oak Street Bridge	115,000.00
6. Traffic Signal Modifications at Mosteller & I-275	40,000.00
7. Engineering of ramp improvements to I-275 & Reed Hartman.	80,000.00
8. Enginerering improvements of Crescentville (I-75 to Gano Road)	80,000.00
9. Engineering of 4 lane bridge over I-75 on Crescentville	90,000.00
10. Engineering for improvements of Mosteller Road (Crescentville to I-275.)	<u>90,000.00</u>
TOTAL	\$1,428,000.00

1993

1. Street Program	800,000.00
2. Curb & Sidewalk Repairs	70,000.00
3. Replacement of Rt 42 Bridge (South of Sharon Avenue)	1,000,000.00
4. Widening of Mosteller Road (Crescentville to I-275.)	<u>1,500,000.00</u>
TOTAL	\$3,370,000.00

CITY OF SHARONVILLE
2 YEAR MAINTENANCE OF LOCAL EFFORT

YEAR	PROJECT	LOCAL	FUNDING M.R.F.	SOURCE L.T.I.P.	ISSUE II	AMOUNT
1989	Engineering - Infrastructure Projects	X				300,000
1989	Street Program	X				445,693
1989	Canal Road	X				457,354
1989	Sidewalk Repairs	X				225,000
1989	Reed Hartman Highway	X	X			152,333
1989	Kemper Road Improvement	X				<u>1,000,000</u>
	TOTAL					\$2,580,380

YEAR	PROJECT	LOCAL	FUNDING M.R.F.	SOURCE L.T.I.P.	ISSUE II	AMOUNT
1990	Engineering - Infrastructure Projects	X				250,000
1990	Street Program	X				700,000
1990	Street Lights Indian Springs	X				40,000
1990	Curb & Sidewalk Repairs	X				69,170
1990	Canal Road	X				135,000
1990	Kemper Road Widening	X				169,113
1990	Reed Hartman Improvement		X			135,000
1990	Main Street Bridge Repairs	X				35,000
1990	Traffic Light New & Mod.	X				42,000
1990	Brick Repairs	X				1,500
1990	Stone Wall Repairs (Thornview)	X				<u>9,900</u>
1990	Kemper Road Bridge Replace. East of Mosteller	X	X	X		282,700
	TOTAL					\$1,869,383

CITY OF SHARONVILLE
2 YEAR MAINTENANCE OF LOCAL EFFORT

YEAR	PROJECT	LOCAL	FUNDING MDF	SOURCE C.D.	ISSUE II	AMOUNT
1988	Engineering - Infrastructure Projects	X				125,000
1988	Street Program	X				535,000
1988	Hauck Road upgrade	X				98,000
1988	Clinton Avenue storm sewer	X				25,000
1988	U.S. Rt. 42 Improvement	X	X			190,000
1988	Traffic signals and school lights	X				6,200
1988	Development of Left Turn on Chester	X				70,000
1988	Brick repairs - Downtown	X				4,500
1988	Sidewalk repairs	X				65,000
			TOTAL			\$1,118,700

OPINION OF CONSTRUCTION COST
AND
USEFUL LIFE STATEMENT

DETENTION DAM
EMERGENCY SPILLWAY REPLACEMENT
SHARONVILLE, OHIO
1991 Issue 2 Application
90002-29
September 12, 1990

SPEC NO.	ITEM	ESTIMATED QUANTITY	UNIT OF MEASURE	TOTAL	ITEM COST
201	Clearing & Grubbing		L.S.	\$ 5,000.00	\$ 5,000.00
202	Structures Removed		L.S.	4,000.00	4,000.00
203	Spillway "Notch" Excavation	3170	C.Y.	5.00	15,850.00
203	Excavation For Structures	3800	C.Y.	15.00	57,000.00
203	Embankment For Structures	184	C.Y.	15.00	2,760.00
203	On-Site Embankment W/Excess Excavation	3170	C.Y.	10.00	31,700.00
	Service Road				
203	Subgrade Compaction	1000	S.Y.	1.00	1,000.00
301	Bituminous Aggregate Base	65	C.Y.	65.00	4,225.00
404	Asphalt Surface Course	17	C.Y.	75.00	1,275.00
606	Guard Posts	90	Each	20.00	1,800.00

DETENTION DAM
 EMERGENCY SPILLWAY REPLACEMENT
 Page Two

SPEC NO.	ITEM	ESTIMATED QUANTITY	UNIT OF MEASURE	TOTAL	ITEM COST
	Spillway				
509	Reinforcing Steel	127800	LB	.45	57,510.00
511	Class "C" Concrete - Footings	253	C.Y.	180.00	45,540.00
511	Class "C" Concrete - Above Footings	1025	C.Y.	255.00	261,375.00
518	Porous Backfill	310	C.Y.	25.00	7,750.00
518	6" Perforated Pipe	1370	L.F.	7.50	10,275.00
518	6" Nonperforated Pipe	100	L.F.	7.50	750.00
SPL	6" PVC Waterstop	318	L.F.	5.00	1,590.00
601	Concrete Spillway Approach Apron	470	S.Y.	30.00	14,100.00
304	Aggregate Base (Under Spillway)	582	C.Y.	30.00	17,460.00
SPL	Structural Steel (Grate Modification)	4670	LB	2.00	9,340.00
601	Rock Channel Protection, Type A	1390	C.Y.	35.00	48,650.00
601	Rock Channel Protection, Type B	115	C.Y.	35.00	4,025.00
SPL	Type "B" Gabions	385	C.Y.	70.00	26,950.00

DETENTION DAM
 EMERGENCY SPILLWAY REPLACEMENT
 Page Three

SPEC NO.	ITEM	ESTIMATED QUANTITY	UNIT OF MEASURE	TOTAL	ITEM COST
	Restoration				
653	Topsoil, Furnished and Placed	210	C.Y.	25.00	5,250.00
659	Seeding and Mulching	6750	S.Y.	1.00	6,750.00
660	Sodding	240	S.Y.	4.00	960.00
	Subtotal				642,885.00
	Contingencies				10,115.00
	Total Construction Cost				653,000.00



BY: CDS ASSOCIATES, INC. - CITY ENGINEER
Robert F. Dreyer 9/13/90
 ROBERT F. DREYER, P.E. DATE

*OPINION OF CONSTRUCTION COST IS SUBJECT TO ADJUSTMENT UPON DETAIL PLAN COMPLETION AND UPON RECEIPT OF BIDS BY QUALIFIED CONTRACTORS.

USEFUL LIFE - UPON SATISFACTORY COMPLETION OF THE WORK, THE USEFUL LIFE OF THE SHARONVILLE DETENTION DAM EMERGENCY SPILLWAY REPLACEMENT WILL BE 50 YEARS.

RESOLUTION NO. 90 - R - 6

RESOLUTION AUTHORIZING THE SAFETY/SERVICE DIRECTOR TO SUBMIT AN ISSUE II APPLICATION TO THE D.P.W.I.C. AND AUTHORIZING THE SAFETY/SERVICE DIRECTOR TO EXECUTE A PROJECT AGREEMENT WITH O.P.W.C.

WHEREAS, the City of Sharonville has identified several infrastructure projects which are in need of corrective repairs, and

WHEREAS, the City of Sharonville wishes to undertake such repairs via funds available as part of the Issue II grant program, and

WHEREAS, the Safety/Service Director is authorized to recommend such repairs and execute contracts for such repairs, and

WHEREAS, the City of Sharonville wishes to submit 1991 Issue II grant application to the Ohio Public Works Commission, and

WHEREAS, the Safety/Service Director is authorized to enter contracts on behalf of the City of Sharonville.

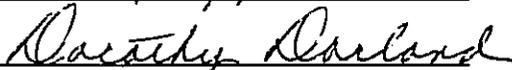
NOW THEREFORE, BE IT HEREBY RESOLVED BY THE COUNCIL OF THE CITY OF SHARONVILLE THAT:

1. The Safety/Service Director is authorized to submit an application to D.P.W.I.C.
2. The Safety/Service Director is authorized to execute a project agreement with the O.P.W.C.

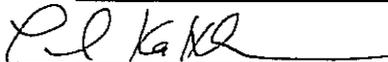


Paul Kattelmann
President of Council

Passed: 9/11/90

Attest: 
Clerk of Council

Approved: _____


MAYOR JOHN S. DOWLIN



City of Sharonville

MAYOR
John S. Dowlin

**SAFETY/SERVICE
DIRECTOR**
Rex E. Baysore

**PRESIDENT OF
COUNCIL**
Paul Kattelman

COUNCIL
Dewey E. Angel
Edward L. Barger
Robert W. Houston
Virgil G. Lovitt, II
John Steckler
Ivy E. Taylor
Mark E. Piepmeier

AUDITOR
James D. Greensfelder

TREASURER
Janet L. Barger

LAW DIRECTOR
Thomas T. Keating

CLERK OF COUNCIL
Dorothy Darland

September 9, 1990

CERTIFICATION OF ISSUE II FUNDS

This is to certify that the funds required to initiate and complete the proposed Issue II Public Works Project(s) will be available upon the Ohio Public Works Committee's approval of the projects.



Rex E. Baysore

Safety/Service Director

BUTLER COUNTY
HAM

LOCATION MAP

NORTH

SYCAMORE

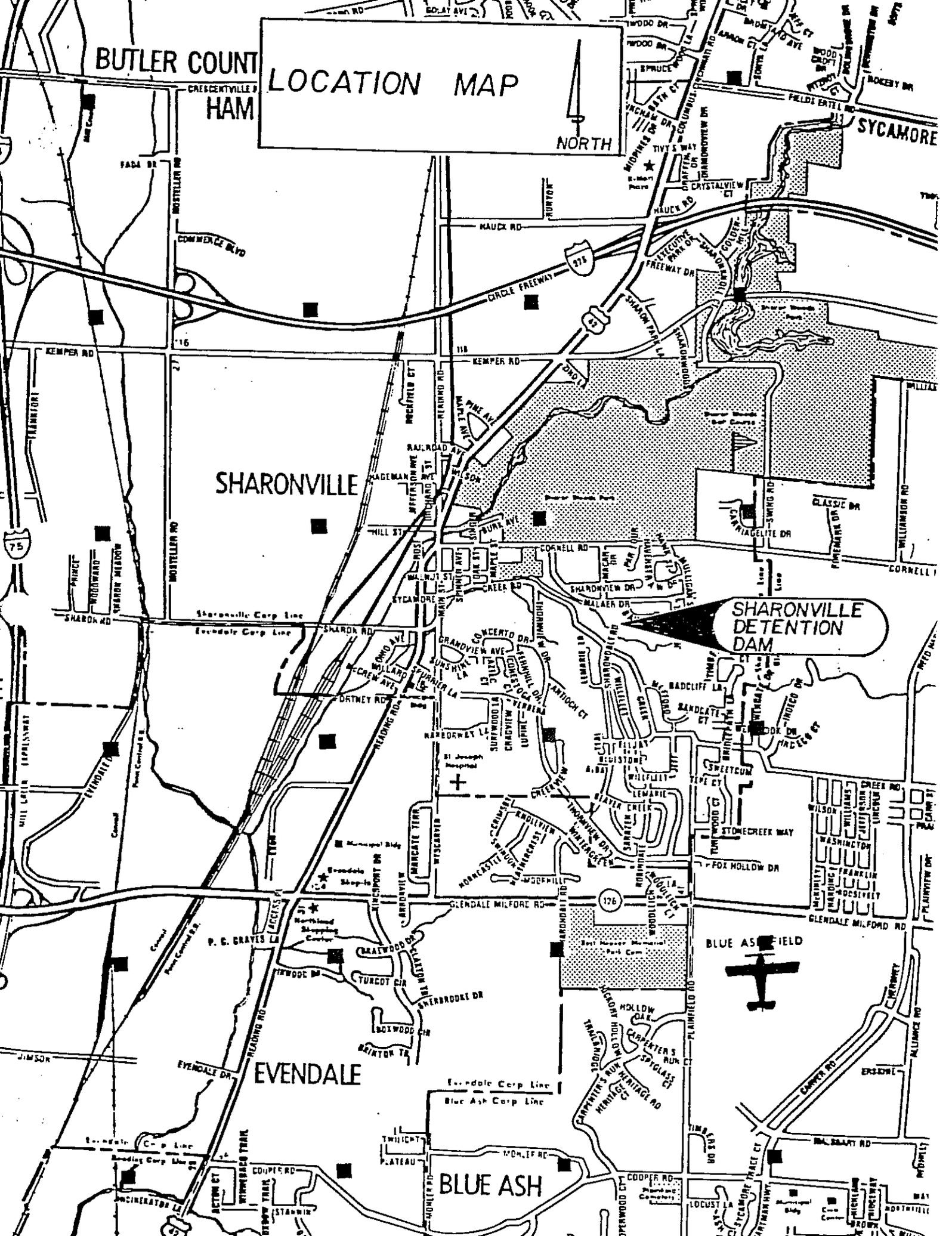
SHARONVILLE

SHARONVILLE
DETENTION
DAM

EVENDALE

BLUE ASH

BLUE ASH FIELD



SUPPORTING INFORMATION

Resulting Employment Opportunities

- A. **Temporary Employment:** It is anticipated that 10 to 15 temporary construction jobs will be created as a result of this project.
- B. **Full-Time Employment:** It is not anticipated that any new full-time employment will result from the proposed infrastructure activity.

1994

1.	Street Program	800,000.00
2.	Curb & Sidewalk Repairs	70,000.00
3.	Widening of Crescentville (I-75 - Gano Road)	910,000.00
4.	Engineering for improvements of Kemper Road from Reed Hartman to Corp line.	80,000.00
5.	Storm Drain Repairs -- City Wide	<u>500,000.00</u>
	TOTAL	\$2,360,000.00

1995

1.	Street Program	800,000.00
2.	Curb & Sidewalk Repairs	70,000.00
3.	Improvements to Kemper Road from Reed Hartman to Corp line	500,000.00
4.	Widen and overlay Kemper Road (Sharon Woods to Reed Hartman)	315,000.00
5.	Storm Drain Repairs -- City Wide	<u>500,000.00</u>
	TOTAL	\$2,185,000.00

ATTACHMENT #1
SHARONVILLE RETENTION DAM
SUMMARY OF PERTINENT DATA

EXISTING DATA

Date Built: 1967

Purpose: To control flooding of downtown Sharonville CBD and residential area by creating a dry (detention) reservoir

Type: Earth embankment

Length: 400 feet

Height: 45 feet

Water Surface: 13.7 acres at maximum pool

Detention Volume: 255 acre-feet at maximum pool

Tributary Area: 2.1 square miles (1340 acres)

Design Storm: 100-year frequency, 2-hour duration

Design Inflow: 400 cfs

Principal Spillway: 14' by 13.5' x 14' reinforced concrete outlet structure with three 10' x 10' steel trash racks and a 48" concrete pipe spillway to pass normal creek flows and control discharge during storms; capacity = 443 cfs at maximum pool

Emergency Spillway: Vegetated trapezoidal channel down left side of dam; capacity 845 cfs

OHIO DEPARTMENT OF NATURAL RESOURCES FINDINGS

Size Classification: Intermediate

Hazard Potential Classification: High (Class I)

Required Spillway Capacity: 100% Probable Maximum Flood (PMF) = 8,300 cfs

ATTACHMENT #2
BAFFLED CHUTE SPILLWAY DESCRIPTION

A concept drawing of the ogee weir is included in Appendix C. A bridge would be constructed over the top of the spillway opening in order to provide access to the basin for service vehicles. The energy dissipator for this spillway would be a SAF stilling basin at the toe of the dam structure. The stilling basin used would be designed for the 50% PMF only per ODNR recommendations. The tailwater curve for this design is included in Appendix D.

(4) Baffled Chute Spillway:

The baffled chute spillway was designed and dimensioned using BuRec's design procedure outlined in Reference 6. These calculations are included in Appendix D.

"Baffled chutes are used in flow ways where water is to be lowered from one level to another and where it is desirable to avoid a stilling basin. The baffle piers partially obstruct the flow, dissipating energy as the water flows down the chute so that the flow velocities entering the downstream channel are relatively low. Advantages of baffled aprons include economy, low terminal velocity of the flow regardless of the height of the drop, downstream degradation does not affect the spillway operation, and there are no requirements for initial tailwater depth in order for the stilling action to be effective." (Reference 6, Page 364).

The baffled chute spillway has the following characteristics:

- The elevation of the control crest is 676.5 feet for a spillway designed to safely pass the 100% PMF.
- The spillway opening width is 120 feet.
- The slope of the chute is 2:1 minimum.
- The spillway design flowrate is 8000 cfs or 66.7 cfs per foot of width.
- The critical depth at the control section for 8000 cfs is about 5 feet of depth.
- The chute training walls, which conduct the discharge to existing stream channel, are 12 feet tall normal to the chute floor.

A concept drawing of the baffled chute is included in Appendix D. A bridge for the service road will not be needed. A ford having a trapezoidal profile with a 12% maximum slope shall be constructed in the upstream face of the existing dam embankment. This ford forms the approach channel for the proposed spillway and will be protected with rock channel protection (RCP). As stated above an energy dissipator is not needed. A three foot thick layer of ODOT Type A rock channel protection shall be placed downstream of the embankment toe which is protected by the chute and training walls. The RCP shall be bedded in a suitable well graded filter layer over a non-woven geotextile.

ATTACHMENT #3

SHARONVILLE RETENTION DAM

PERTINENT CORRESPONDENCE



THE OHIO PUBLIC WORKS COMMISSION

77 South High Street, Suite 1629, Columbus, Ohio 43266

April 18, 1990

COMMISSIONERS

Chairman
William W. Wilkins
Vice Chairman
Don M. Pesich
John S. Christie
William H. Haraha
George E. Terwilleger
David H. Wagner, Jr.
W. Marshall Wright

DIRECTOR

Randall F. Howard

Mr. Donald C. Schramm, P.E.-P.S.
*Chairman, District 2 Public
Works Integrating Committee*
700 County Administration Building
138 East Court Street
Cincinnati, Ohio 45202

Dear Mr. Schramm:

SUBJECT: *State Issue 2 Program
Storm Water Retention Dam Project
City of Sharonville*

This letter is provided in response to this agency's receipt of additional information regarding the subject proposal for State Issue 2 Program funding.

Our original understanding of the facility in question caused us to reject the proposed spillway replacement activities on the grounds that they were component activities of a flood control system, and, thus, ineligible for program assistance. The additional descriptive information which was recently submitted by the City more accurately portrays the facility as a storm water detention dam which collects and holds storm runoff for later controlled release as the downstream drainage facilities' capacity to accept the flow is assured.

Given this agency's current definition of flood control facilities as those that are primarily designed to protect property from the effects of severe storms having frequencies of occurrence of fifty years or less, it is now our determination that the subject proposal in fact does qualify for State Issue 2 Program funding as eligible storm water collection and retention improvements.

The District 2 Public Works Integrating Committee is now free to resubmit the proposal for formal approval as it may deem appropriate. Should you have any questions regarding this matter, please do not hesitate to contact me directly or speak with your Program Representative, Ms. Linda Willis.

Sincerely,

Randall F. Howard
Randall F. Howard
Director

cc: Mayor John S. Dowlin

REC. APR 17 1990



City of Sharonville

MAYOR
John S. Dowlin

SAFETY/SERVICE DIRECTOR
Rex E. Baysore

PRESIDENT OF COUNCIL
Paul Kattelman

COUNCIL
Dewey E. Angel
Edward L. Barger
Robert W. Houston
Virgil G. Lovitt, II
John Steckler
Ivy E. Taylor
James B. Williams

AUDITOR
James D. Greensfelder

TREASURER
Janet L. Barger

LAW DIRECTOR
Thomas T. Keating

CLERK OF COUNCIL
Dorothy Darland

April 16, 1990

Mr. Randall F. Howard
Director
Ohio Public Works Commission
77 South High Street
Suite 1629
Columbus, Ohio 43266

Re: Storm Water Detention Dam Emergency Spillway Replacement - 89151

Dear Mr. Howard:

The City of Sharonville, as you may well imagine, was disappointed to learn of the OPWC's classification of the City's storm water detention facility as a flood control structure, thereby, denying Issue 2 funding for replacement of it's emergency spillway. We remain convinced that our project meets the definition of a Public Infrastructure Capital Improvements Project for purposes of Issue 2 funding, that is, a storm water collection and storage facility, and is worthy of that funding.

The Sharonville's storm water detention dam exists to control storm water runoff from a relatively small (2.1 square miles) drainage area. The facility functions in the same manner as all storm water detention facilities by collecting and storing storm runoff and releasing it at a controlled rate such that it does not exceed the capacity of the downstream storm water drainage facilities.

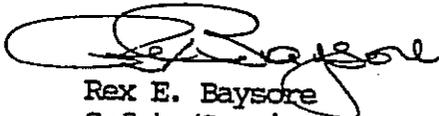
There is a clear distinction between this project and a flood control structure, such as a levee, constructed in a low lying area and designed to prevent widespread inundation by flood waters backing up from a river or major stream. We believe this is the distinction being made by excluding flood control projects from the Issue 2 funding program.

We are requesting that you carefully review our thoughts on this matter and reconsider the Sharonville Storm Water Detention Dam Emergency Spillway Replacement Project for Issue 2 funding.

Given this correspondence, we would ask that you send to us any new thoughts you might have on this matter. We would, of course, like to convey those thoughts to our local Issue 2 committee.

Thank you for your attention.

Sincerely,



Rex E. Baysore
Safety/Service Director

REB/dot

cc: Mayor
Deputy Safety/Service Director
District 2 Committee
CDS Associates, Inc. ✓

CDS/HOWARD

JUL 09 1987

July 7, 1987

Fountain Square
Columbus, Ohio 43224

Mr. Rex Baysore
Safety Service Director
City of Sharonville
10900 Reading Road
Sharonville, Ohio 45241

RE: Sharonville Retention Dam
Hamilton County
File No: 9243-013

Dear Mr. Baysore:

Enclosed is a copy of the report of the April 9, 1987, inspection of the above dam. The inspection was conducted by the Division of Water under authority of Section 1521.062 of the Ohio Revised Code. The last inspection by this office was conducted in 1980.

The report indicates repairs and modifications to the dam that must be completed. These actions include: increasing the discharge-storage capacity to accommodate flows associated with the Probable Maximum Flood; redesigning and replacing the spillway trashracks; and inspecting and possibly repairing the spillway pipe. These items were noted and discussed with Sharonville personnel following the previous inspection. Time limits for their completion are noted in the report. Several routine maintenance, monitoring, and operating procedures that should be addressed are also noted.

My staff would like to meet with you to discuss and to answer any questions concerning the report findings and requirements. Kathryn Corson can be reached at 614/265-6721 to arrange a convenient date and time.

Sincerely,



Robert L. Goettemoeller, Chief
Division of Water

RLG:kac
enclosure

cc: Mr. Frederick Gossman



Ohio Department of Natural Resources

DIVISION OF WATER
Fountain Square • Columbus, Ohio 43224 • (614) 466-4768

December 1, 1982

Charles J. McCarthy
Deputy Safety Service Director
City of Sharonville
10900 Reading Road
Sharonville, Ohio 45241

Sharonville Retention Dam
File No. 9343-013
Hamilton County

Dear Mr. McCarthy:

Preliminary plans prepared by CDS Associations for modifications to Sharonville Retention Dam were received from your office on November 18, 1982. These plans appear to offer acceptable concepts to provide adequate discharge capacity at this site. My staff will be performing a more detailed review of these proposed modifications within the next few weeks.

In response to questions raised by you and the November 17, 1982 letter from Mr. James B. Darland, Safety Service Director, we would encourage the city to investigate all possibilities which would provide safe flood protection. Possible alternatives might be lowering the height of the existing dam and/or constructing more small dams in the upper part of the watershed.

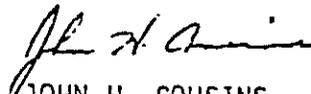
Once more I would emphasize the need for the City of Sharonville to move rapidly towards implementation of modifications to improve the safety of this dam. Work on the trashrack should begin as soon as possible. Cost of dam safety is reasonable compared to the possibility of catastrophic failure resulting in loss of life and/or widespread downstream destruction. This is a real possibility at Sharonville because rainfall of the magnitude which would cause overtopping of the Sharonville Retention Dam occurs in Ohio every year. Last June, locations in southeastern Hamilton County received in excess of 4.5 inches of rainfall from one storm, most of which fell in less than 2 hours. Runoff from a storm of this magnitude occurring at Sharonville could cause the dam to overtop even if the trashrack did not plug.

December 1, 1982

The Soil Conservation Service, U.S. Army Corps of Engineers, and U.S. Bureau of Reclamation all recommend that dams located upstream of populated areas be able to safely pass large and infrequent storms. The Probable Maximum Flood has been a national standard used for many years and was adopted by the Division of Water when the Dam Safety Law was passed in 1963.

The Division has been given the responsibility under the law to assure that the continued operation and use of a dam, dike, or levee does not constitute a hazard to life, health, or property. Through cooperation and expedient action, we can fulfill our mutual obligation to the citizens of Sharonville in this regard.

Sincerely,


JOHN H. COUSINS
Chief

JHC/ksc

cc: John S. Dowlin, Mayor
James B. Darland, Safety/Service Director

Photo E: Top of Dam, Looking North.



Note Gravel Service Road and Ceremonial Pulpit in foreground.

Photo D: Top of Dam Looking South.

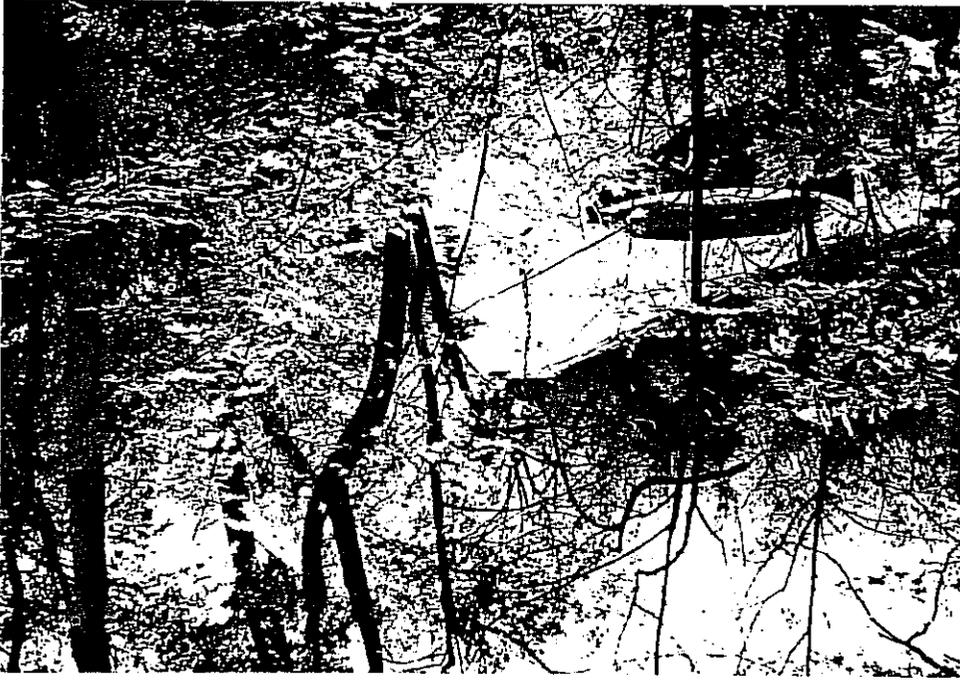


Photo C: South End of Dam from Upstream Side.

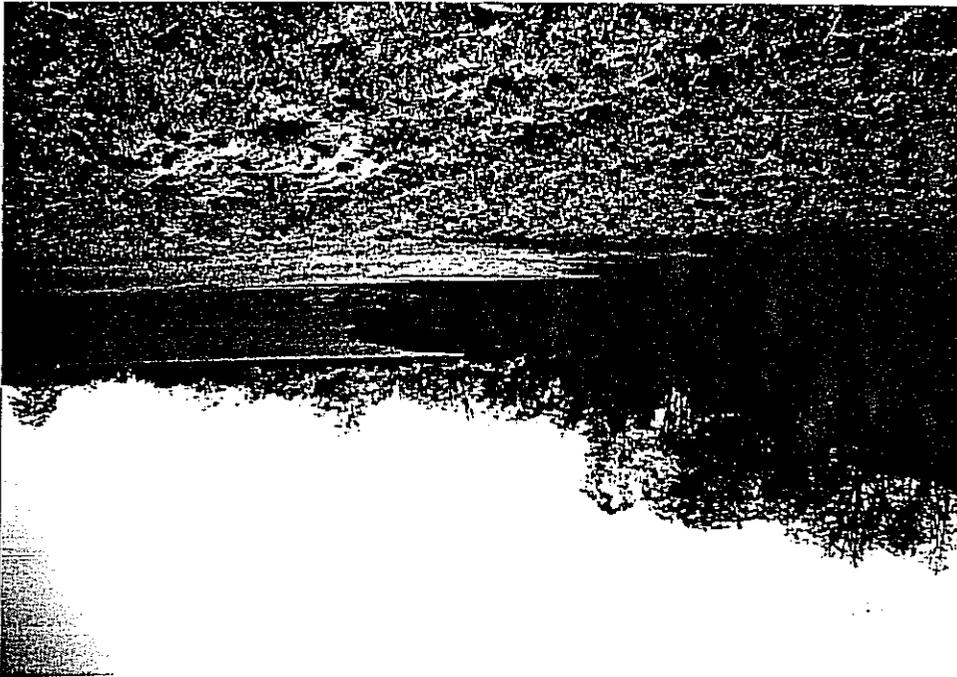


Photo B: North End of Dam from Upstream Side.

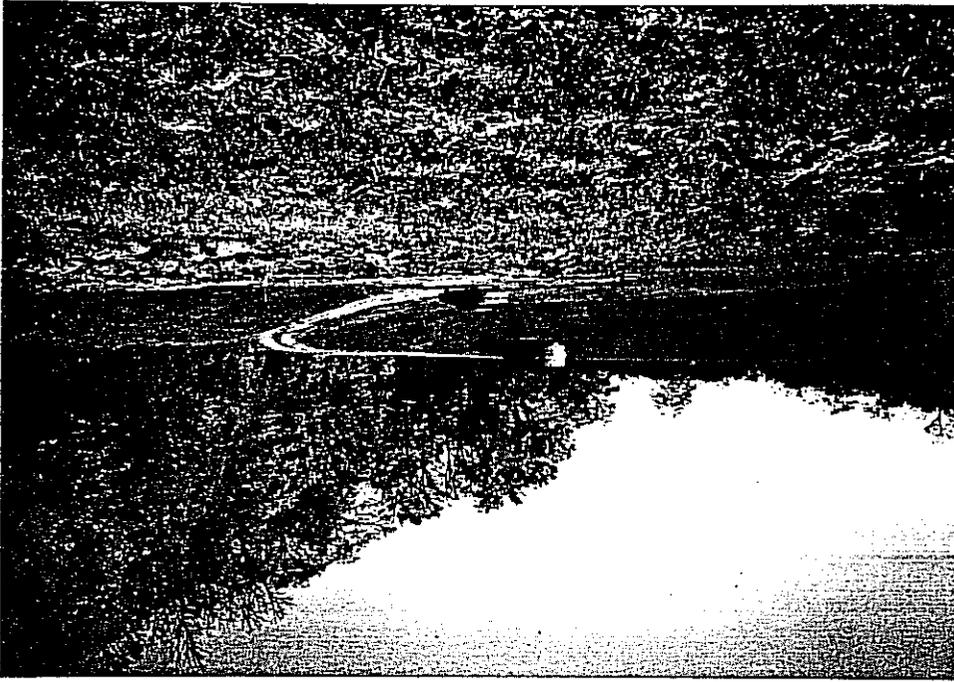


Photo A: Sharonville Detention Reservoir Looking Upstream from Top of Dam.

Note the 10' x 10' x 10' outlet structure.





REC'D NOV 30 1982

Ohio Department of Natural Resources

DIVISION OF WATER
Fountain Square • Columbus, Ohio 43224 • (614) 466-4768

November 29, 1982

J. Frederick Gossman
CDS Associations, Inc.
11223 Cornell Park Drive
Cincinnati, Ohio 45242

Sharonville Retention Dam
File Number: 9243-013
Hamilton County

Dear Mr. Gossman:

In reference to your letter dated November 18, 1982, the school and homes can be easily located on topographic sheet No. 443 from the Hamilton County Engineer's office. History has shown that a breach wave in the first reach immediately downstream from a dam will be between 1/3 to 1/2 the height of the dam (15 to 22 feet at Sharonville). Water at this depth would definitely affect the school and probably more than the estimated 30 homes even though the flood wave would begin to spread out in this area. Calculations to determine the exact number of homes affected would require downstream breach wave routing and was not performed. Usually such an analysis is only recommended when there is a question about the hazard classification. For the Sharonville Dam, we have no such question about its Class I designation.

If a request for a change in classification is being considered, proof that a failure would not result in probable loss of human life, serious hazard to health, or serious damage to homes, high-value industrial or commercial properties or major public utilities would need to be furnished by the owner.

Sincerely,

George E. Mills, P.E.
Unit Supervisor
Dam Inspection Section

GEM/ksc



81 35 19921

Ohio Department of Natural Resources

DIVISION OF WATER
Fountain Square • Columbus, Ohio 43224 • (614) 466-4768

August 2, 1982

The Honorable John S. Dowlin
Mayor, City of Sharonville
10900 Reading Road
Sharonville, Ohio 45241

Sharonville Retention Dam
File No. 9243-013
Hamilton County

Dear Mayor Dowlin:

A meeting was held on Tuesday, July 27, 1982, between J. Bruce Pickens, Joel A. Reed, Kathryn B. Corson, and George E. Mills, engineers of my staff; and Assistant Service Director Charles J. McCarthy, and Fred Gossman and Mark Kluesener of Construction Design Services, Inc. This meeting was requested by us to discuss the present condition of Sharonville Retention Dam and to review the action the City has taken and plans to take to bring this dam up to adequate safety standards.

George Mills and Joel Reed had visited the Sharonville Retention Dam on June 29, 1982. Their cursory inspection revealed the trash racks on the inlet to the low flow pipe to be almost completely blocked with sediment and debris. The old, damaged trash racks on the front and right side (looking downstream) had been replaced with new trash racks with essentially the same size openings. The top of the inlet was entirely covered with debris and could not be viewed. In a telephone conversation on July 1, 1982, Mr. Mills advised Mr. McCarthy of the serious nature of the clogged inlet. A site visit on July 27, 1982, revealed no change in the condition of the inlet. During the July 27 meeting, Mr. McCarthy indicated that the inlet would be cleared as soon as possible. Clearing the inlet is apparently complicated by soft conditions which restrict heavy equipment use.

The clogging problem was first noted by my staff in 1980 and brought to the attention of Mr. James Darland, Safety Service Director, in a letter from Joel Reed dated November 7, 1980. Mr. Reed recommended at that time that new trash racks with substantially larger openings be designed and installed. He also pointed out that approval of plans for any proposed modification would be required. This recommendation apparently was not accepted. Mr. McCarthy indicated at the 27 July meeting that enlarging the openings in the existing trash racks would be investigated.

Project Description/History

The Sharonville Detention Dam was constructed in 1967 to collect and detain runoff from a 2.1 square mile developing watershed in Sharonville and Blue Ash. A 48" diameter principal pipe spillway provides a controlled release of runoff such that the capacity of downstream storm drainage facilities is not exceeded. Construction was funded by Hamilton County on land acquired by the City of Sharonville. Upon completion of construction, the dam was turned over to Sharonville for ownership and maintenance.

At maximum pool, the dam will impound 255 acre-feet of water. In the absence of significant precipitation, the reservoir is dry and low stream flows are passed through the 48-inch outlet conduit. See attachment 1 - "Summary of Pertinent data," for a complete description of the existing dam.

The U.S. Army Corps of Engineers and the Ohio Department of Natural Resources have determined the dam's earth spillway to be severely inadequate, having only 15 percent of the required capacity.

This project will consist of replacing the existing earth spillway with one of adequate capacity. The new spillway will be a baffled chute spillway of reinforced concrete located toward the center of the dam. There is a service road on top of the dam providing access to the outlet structure for cleaning and maintenance; a ford will be incorporated into the spillway design in order to maintain this access.

The project will also include correction of minor deficiencies; modification of principal pipe spillway inlet grates and repair of principal pipe spillway stilling basin.

Attachment 2 from the "Preliminary Report on Sharonville Detention Dam Emergency Spillway Replacement" gives a detailed description of the baffled chute spillway and Exhibit 1 from the same report provides a concept drawing of the proposed spillway replacement.

ADDITIONAL SUPPORT INFORMATION

For 1991, jurisdictions shall complete the State application form for Issue 2, Small Government, or Local Transportation Improvement Program (LTIP) funding. In addition, the District 2 Integrating Committee requests the following information to determine which projects are funded. Do NOT request a specific type of funding desired, as this is decided by the District Integrating Committee.

1. Of the total infrastructure within the jurisdiction which is similar to the infrastructure of this project, what percentage can be classified as being in poor condition, adequacy and/or serviceability?

Typical examples are:

Road percentage = $\frac{\text{Miles of road that are in poor condition}}{\text{Total miles of road within jurisdiction}}$

Storm percentage = $\frac{\text{Miles of storm sewers that are in poor condition}}{\text{Total miles of storm sewers within jurisdiction}}$

Bridge percentage = $\frac{\text{Number of bridges that are in poor condition}}{\text{Number of bridges within jurisdiction}}$

This is the only publicly owned and maintained detention dam within the City of Sharonville.

2. What is the condition of the existing infrastructure to be replaced, repaired, or expanded? For bridges, base condition on latest general appraisal and condition rating.

Closed	_____	Poor	<u> X </u>	(Unsafe)
Fair	_____	Good	_____	

Give a brief statement of the nature of the deficiency of the present facility such as: inadequate load capacity (bridge); surface type and width; number of lanes; structural condition; substandard design elements such as berm width, grades, curves, sight distances, drainage structures, or inadequate service capacity. If known, give the approximate age of the infrastructure to be replaced, repaired, or expanded.

The existing dam is approximately 23 years old. Inspections by ODNR in June 1980 and April 1987 indicate the earthen dam to be basically stable. The dam's major deficiency is that its combined storage-discharge capacity is seriously inadequate. The dam is classified by ODNR as Intermediate in size with High Hazard Potential (Class I). The hazard rating is based on the probability that a residential area (30-plus homes) and two elementary schools located less than one mile downstream would be severely damaged with almost certain loss of life in the event of a dam failure. See Exhibit 2.

Ohio dam law establishes the Probable Maximum Flood (PMF) as the spillway design discharge for High Hazard Potential dams. The existing spillway capacity is roughly 850 cfs; required capacity, equal to the peak PMF discharge, is 8,300 cfs. ODNR has determined that the PMF would overtop the dam for 4.3 hours at a maximum depth of 3.2 feet over its entire 400 foot length (6.4 feet deep throughout the existing emergency spillway) and would without doubt cause the dam to be breached. Other deficiencies include openings on outlet structure trash racks too small, causing excessive blockage during heavy rains; leaks and misaligned pipe sections in principal spillway conduit; and spalled wingwalls and broken energy dissipation blocks on the principal spillway stilling basin.

3. If State Issue 2 funds are awarded, how soon (in weeks or months) after completion of the agreement with OPWC would the opening of bids occur?
4 weeks

Please indicate the current status of the project development by circling the appropriate answers below.

- a) Has the Consultant been selected? Yes No N/A
- b) Preliminary development or engineering completed?. Yes No N/A
- c) Detailed construction plans completed? Yes No N/A
- d) All right-of-way acquired? Yes No N/A
- e) Utility coordination completed?. Yes No N/A

Give estimate of time, in weeks or months, to complete any item above not yet completed.

C) is in progress, plans 90% complete; anticipate 15 weeks to finalize plans, prepare contract documents and final estimates and receive ODNR final approval. D) entire project on Sharonville property e) co-ordination in progress; anticipate 2 weeks to finalize.

4. How will the proposed infrastructure activity impact the general health, welfare, and safety of the service area? (Typical examples include the effects of the completed project on accident rates, emergency response time, fire protection, health hazards, user benefits, and commerce.)

The existing dam was designed for a 100 year storm and the existing total spillway capacity is inadequate for the dams' high hazard potential rating. A storm in excess of the 100 year would begin to overtop the dam and create the potential for dam failure; occurrence of the maximum required design storm, the PMF would definitely result in overtopping and dam failure, leading to high property loss and almost certain loss of life. Such a storm and the resulting dam failure would occur quickly and without warning. Thus the dam is an imminent threat to the downstream areas and is considered by ODNR to be the second most hazardous dam in the state of Ohio. (See the attached ODNR correspondence) Exhibit 2 outlines the approximate downstream area that would be affected by a dam failure. This area includes 2 schools, 104 homes and 70 acres of central business district. The modified dam will safely pass storms up to the 100% PMF avoiding a catastrophic failure. The improvements will lower the maximum water level and storage volume attainable behind the dam. Consequently, protection to the downstream storm drainage system due to storms less severe than the PMF will be somewhat reduced.

5. For any project involving GRANTS, the local jurisdiction must provide a MINIMUM OF 10% of the anticipated construction cost. Additionally, the local jurisdiction must pay 100% of the costs of preliminary engineering, inspection of construction, and right-of-way acquisition. If a project is to be funded under Issue 2 or Small Government, the costs of any betterment/expansion are 100% local. Local matching funds must either be currently on deposit with the jurisdiction, or certified as having been approved or encumbered by an outside agency (MRF, CDBG, etc.). Proposed funding must be shown on the Project Application under Section 3.2, "Project Financial Resources". For example a project involving LOANS or CREDIT ENHANCEMENTS, 100% of construction costs are eligible for funding, with no local match required.

What matching funds are to be used for this project? (i.e. Federal, State, MRF, Local, etc.) Local

To what extent are matching funds to be utilized, expressed as a percentage of anticipated CONSTRUCTION costs? 50%

6. Has any formal action by a federal, state, or local government agency resulted in a complete ban or a partial ban of the use or expansion of use for the involved infrastructure? (Typical examples include weight limits, truck restrictions, and moratoriums or limitations on issuance of new building permits). **THE BAN MUST HAVE AN ENGINEERING JUSTIFICATION TO BE CONSIDERED VALID.**

COMPLETE BAN _____ PARTIAL BAN _____ NO BAN X

Will the ban be removed after the project is completed? Yes _____ No _____

Document with specific information explaining what type of ban currently exists and the agency that imposed the ban.

There is no ban on the use of the dam. However, the Ohio Department of Natural Resources, by their authority under the Ohio Revised Code, has ordered the City of Sharonville to modify the existing dam to accommodate the PMF as required by ODNR, Division of Water, Administrative Rule 1501:21-13-02. If the required modifications are not completed, the ODNR has the authority to remove the dam. See ODNR correspondence, attachment 3.

7. What is the total number of existing users that will benefit as a result of the proposed project? Use appropriate criteria such as households, traffic counts, ridership figures for public transit, daily users, etc., and equate to an equal measurement of users:

According to ODNR, at least 30 homes and the two schools immediately downstream of the dam (Sharonville Elementary and St. Michaels, 830 total enrollment and staff) would suffer extensive property damage and almost certain loss of life in the event of a dam failure. A detailed hydraulic study to determine the exact area affected by a failure and the level of impact has not been conducted. However, Exhibit 2 outlines the estimates area that would be inundated. This area includes 104 houses, two schools, 70 acres of Central Business District, and a shopping area (Makro) at the Sharonville-Evendale corporation line.

For roads and bridges, multiply current documented Average Daily Traffic by 1.2 occupants per car (I.T.E. estimated conversation factor) to determine users per day. Ridership figures for public transit must be documented. Where the facility currently has any restrictions or is partially closed, use documented traffic counts prior to restriction. For storm sewers, sanitary sewers, water lines, and other related facilities, multiply the number of households in the service area by four (4) to determine the approximate number of users per day.

8. The Ohio Public Works Commission requires that all jurisdictions applying for project funding develop a five year overall Capital Improvement Plan that shall be updated annually. The Plan is to include an inventory and condition survey of existing capital improvements, and a list detailing a schedule for capital improvements and/or maintenance. Both Five-Year Overall and Five-Year Issue 2 Capital Improvement Plans are required.

9. Is the infrastructure to be improved part of a facility that has regional significance? (Consider the number of jurisdictions served, size of service area, trip lengths, functional classification, and length of route.) Provide supporting information.

No; except for possibly a small commercial area along the Sharonville-Evendale corporation line, flooding from a dam failure will affect only Sharonville. See Exhibit 2 "Estimated Area Affected by Dam Failure."

OHIO INFRASTRUCTURE BOND PROGRAM (ISSUE 2)
LOCAL TRANSPORTATION IMPROVEMENT PROGRAM (LTIP)
DISTRICT 2 - HAMILTON COUNTY
1991 PROJECT SELECTION CRITERIA

JURISDICTION/AGENCY: CITY OF SHARONVILLE

PROJECT IDENTIFICATION:

SHARONVILLE DETENTION DAM EMERGENCY SPILLWAY ** - ITEM 4
REPLACEMENT

PROPOSED FUNDING:

ELIGIBLE CATEGORY:

POINTS

10

1) Type of project

10 Points - Bridge, road, stormwater
5 Points - All other projects

10

2) If Issue 2/LTIP funds are granted, how soon after the Project Agreement is completed would a construction contract be awarded? (Even though the jurisdictions will be asked this question, the Support Staff will assign points based on engineering experience.)

10 Points - Will definitely be awarded in 1991
5 Points - Some doubt whether it can be awarded in 1991
0 Points - No way it can be awarded in 1991

5

3) What is the condition of the infrastructure to be replaced or repaired? For bridges, base condition on latest general appraisal and condition rating.

15 Points - Poor condition
10 Points - Fair to Poor condition
5 Points - Fair condition

NOTE: If infrastructure is in "good" or better condition, it will NOT be considered for Issue 2/LTIP funding, unless it is a betterment project that will improve serviceability.

4

- 4) If the project is built, what will be its effect on the facility's serviceability?
- 5 Points - Will significantly effect serviceability
 - 4 Points -
 - 3 Points - Will moderately effect serviceability
 - 2 Points -
 - 1 Point - Will have little or no effect on serviceability

0**

- 5) Of the total infrastructure within the jurisdiction which is similar to the infrastructure of this project, what portion can be classified as being in poor or worse condition, and/or inadequate in service?
- 10 Points - 50% and over
 - 8 Points - 40% to 49%
 - 6 Points - 30% to 39%
 - 4 Points - 20% to 29%
 - 2 Points - 10% to 19%
 - 0 Points - Less than 10%

10

- 6) How important is the project to the health, welfare, and safety of the public and the citizens of the District and/or the service area?
- 10 Points - Significant importance
 - 8 Points -
 - 6 Points - Moderate importance
 - 4 Points -
 - 2 Points - Minimal importance

2

- 7) What is the overall economic health of the jurisdiction?
- 10 Points - Poor
 - 8 Points -
 - 6 Points - Fair
 - 4 Points -
 - 2 Points - Excellent

5

- 8) What matching funds are being committed to the project, expressed as a percentage of the TOTAL CONSTRUCTION COST? Matching funds may be local, Federal, ODOT, MRF, etc. or a combination of funds.
- 5 Points - ~~More than~~ 50% or more
 - 4 Points - 40% to 49.9%
 - 3 Points - 30% to 39.9%
 - 2 Points - 20% to 29.9%
 - 1 Point - 10% to 19.9%

MINIMUM 10% MATCHING FUNDS REQUIRED

10

9) Has any formal action by a Federal, State, or local governmental agency resulted in a partial or complete ban on the usage or expansion of the usage for the involved infrastructure? Examples include weight limits on structures and moratoriums on building permits in a particular area due to local flooding downstream. Points can be awarded ONLY if construction of the project being rated will cause the ban to be removed.

- 10 Points - Complete ban
- 5 Points - Partial ban
- 0 Points - No ban

2

10) What is the total number of existing daily users that will benefit as a result of the proposed project? Appropriate criteria includes traffic counts & households served, when converted to a measurement of persons. Public transit users are permitted to be counted for roads and bridges, but only when certifiable ridership figures are provided.

- 10 Points - 10,000 and Over
- 8 Points - 7,500 to 9,999
- 6 Points - 5,000 to 7,499
- 4 Points - 2,500 to 4,999
- 2 Points - 2,499 and Under

1

11) Does the infrastructure have regional impact? Consider originations & destinations of traffic, size of service area, number of jurisdictions served, functional classification, etc.

- 5 Points - Major impact
- 4 Points -
- 3 Points - Moderate impact
- 2 Points -
- 1 Point - Minimal or no impact

TOTAL AVAILABLE = 100 POINTS