



MANAGEMENT SERVICES DEPARTMENT
PURCHASING DIVISION
241 W. South Street
Kalamazoo, Michigan 49007-4796
Telephone (269) 337-8020
FAX (269) 337-8500
cokpurchasing@kalamazoo.org

ADDENDUM #2
October 2, 2020

TO: ALL Prospective Bidders
PROJECT: Milham Park Dam Removal
BID REFERENCE #: 95939-001.0
BID OPENING DATE/TIME: **October 13, 2020 @ 3:30 p.m. Local Time**

The purpose of this addendum is to clarify and/or modify the Drawings and/or Specifications for this project. All work affected is subject to all applicable terms and conditions of the Bidding and Contract Documents.

NOTE: The **BID OPENING DATE** has been changed to **Tuesday, October 13, 2020 @ 3:30 p.m.**

QUESTIONS & ANSWERS FROM BIDDERS

- QUESTION:** Are the weir drawings available?
ANSWER: Weir drawings have been issued with this addendum – *See Attachment #1*
- QUESTION:** Addendum #1 states that EGLE permit will restrict work until after April 30 and substantial completion is September 3. Live branches for toe wood and brush toe are to be installed during dormant season. Please clarify work timing.
ANSWER: Substantial completion date does not include planting. Contractor may install branches required by details during growing season. Live stakes shall be installed during dormant periods unless owner approves other timing. Contractor should request an extension of final completion date or permission to plant outside of the specified window if needed. Extension of final completion date is allowed.
- QUESTION:** Is there available flow data?
ANSWER: There is an active gage station near the site maintained by USGS https://waterdata.usgs.gov/nwis/inventory?site_no=04106500.
- QUESTION:** Reference C-103 profile – Top of Weir appears to be approx. 813.5, water surface appears to be approx. 810.5. Is the existing water surface correct, when was data collected?
ANSWER: Water surface elevation is a best fit line based upon data collected in summer 2019. The weir elevation is correct, the water surface elevation is an approximation of all points in a consistent slope and should not be considered accurate in this location.
- QUESTION:** Is the elevation presented in C-003 Bank Protection Table for top of toe wood or brush toe the same for the full length of each “run” of structure?
ANSWER: Yes.
- QUESTION:** The address given for available wood material appears to be a gated facility. Can we have confirmation that there is enough of the correct size and type of logs and wood material available or coordinate access to look? If not, can you provide a quantity of logs or root wad logs that is available so all bidders are assuming the same amounts.
ANSWER: There are adequate logs with root wads available at that location, or will be available by construction, to complete the toe wood. Contractor shall assume that all wood for the project will be available at that location or may be harvested on site.

7. **QUESTION:** Can you provide clarity on the erosion and sediment control and pump around requirements?
ANSWER: Contractor shall assume ability to work “in the wet” if desired, a pump around is not required for the project. Erosion control must be provided for staging and storage areas, temporary stockpile locations, around catch basins down slope of disturbed areas, and to protect wetland areas down slope of disturbed areas. Stockpiles or open ground shall not be left exposed for more than 7 days of inactivity. Contractor shall sow temporary seed to stabilize idled parts of the project site. No restrictions on type of equipment are anticipated. The EGLE permit will be provided to the Contractor upon issuance.
8. **QUESTION:** Will access from the golf course area be allowed for seeding equipment?
ANSWER: Access will be allowed. Conditions to access are that Contractor shall provide ‘maintenance of traffic’ for golf course operations including signage and personnel to direct pedestrians. Damage shall be repaired at no additional expense to Owner.
9. **QUESTION:** Is tree removal allowed to facilitate access?
ANSWER: Trees may only be removed with written permission from Owner and will be considered on a case by case basis.
10. **QUESTION:** At the construction access at Milham Park Rd and Lovers lane, this is very narrow for a low boy to bring in heavy equipment, excavators, off road trucks etc. can obstructions be removed to get equipment onto the site if needed?
ANSWER: Obstructions and trees may be removed if necessary but must be approved and coordinated with the Owner in writing prior to removal. Structures, signage, or other items removed to facilitate access shall be replaced by Contractor at no expense to Owner.

The Addendum can be viewed and downloaded from the City’s website at <https://www.kalamazoo.org/bidopportunities>.

In order for a bid to be responsive, this signed and dated addendum must be returned with your bid. If you have already submitted your bid, acknowledge receipt and acceptance of this addendum by signing in the place provided and returning it to the undersigned and it shall be incorporated in your bid. Please identify your return envelope with the bid reference number and project description.

Sincerely,



Michelle Emig
Purchasing Division Manager

- c: Patrick McVerry, Parks & Recreation
- Rob Myllyoja, Stantec
- Jim Moyer, Stantec
- Jonathan Scheibly, Stantec
- Prevailing Wage File

FIRM: _____

SIGNED: _____

NAME: _____

DATE: _____

(Type or Print)



ADDENDUM #2

Attachment #1

1989 Milham Park Dam Rehab

Milham Park Dam Removal

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
PERMIT

36

I
S City of Kalamazoo
S T Dept. of Public Works
U O 241 W. South Street
E Kalamazoo MI 49007
D

Permit No. 89-12-0502

Issued Feb 12 90
Extended
Revised
Expires Dec 31 91

This permit is granted under the provisions of:
The Inland Lakes and Streams Act, 1972 PA 346, as amended.

The Goemaere-Anderson Wetland Protection Act, 1979 PA 203.

Permitted Activity

Construct a sediment basin downstream from the construction site.
Place two filter fabric sediment barriers across the stream.
Construct a new 80.5-foot long steel sheet pile, stoplog low head dam
immediately downstream of the existing dam. Remove the existing dam.
Dredge 1,457 cubic yards of sediment from the existing impoundment.

Water Course Affected: S Br Portage Cr
County: Kalamazoo Town: 12S Range: 11W Sections: 34 0
Subdivision: Lot:

- Authority granted by this permit is subject to the following limitations:
- A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
 - B. The permittee in exercising the authority granted by this permit shall not cause unlawful pollution as defined by Act 245 of the Public Acts of 1929, as amended.
 - C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
 - D. All work shall be completed in accordance with the plans and the specifications submitted with the application and/or plans and specifications attached hereto.
 - E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved herein.
 - F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with Act 53 of the Public Act of 1974 and comply with each of the requirements of that act.
 - G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits or complying with other state statutes.
 - H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
 - I. Permittee shall notify the Department of Natural Resources within one week after the completion of the activity authorized by this permit, by completing and forwarding the attached, preaddressed post card to the office addressed thereon.
 - J. This permit shall not be assigned or transferred without the written approval of the Department of Natural Resources.
 - K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific State Act, Federal Act and/or Rule under which this permit is granted.
 - L. Work to be done under authority of this permit is further subject to the following special instructions and specifications:

I
S City of Kalamazoo
S T Dept. of Public Works
U O 241 W. South Street
E Kalamazoo MI 49007
D

Permit No. 89-12-0502	
Issued	Feb 12 90
Extended	
Revised	
Expires	Dec 31 91

PERMIT LIMITATIONS, continued

All work shall be completed in accordance with the attached plans and plans on file with the Department of Natural Resources.

Two filter fabric barriers shall be installed downstream from the construction site to prevent excessive off-site siltation. Barrier shall be installed prior to commencement of dredging and shall be maintained for duration of project. Barrier shall be left in place after completion of dredging until all disturbed sediments have settled.

All dredged material shall be disposed of in a Type II landfill.

Prior to the initiation of any permitted construction activities, a sediment basin shall be constructed immediately downstream of the construction site. The sediment basin shall be maintained in good working order throughout the duration of the project. All excavated material shall be placed on an upland site.

All raw areas resulting from this construction activity shall be promptly and effectively stabilized with seed-fertilizer-mulch and/or sod in sufficient quantity to prevent erosion and subsequent siltation to the watercourse.

Permittee covenants not to sue the State of Michigan, or any of its departments, boards, commissions, officers, employees, or agents for any claim, whether legal or equitable, arising under or in any manner related to the privileges granted in this Permit. Permittee hereby releases, waives, and discharges the State of Michigan and all of its departments, boards, commissions, officers, employees, and agents from any and all liability to permittee arising under or in any manner related to the privileges granted under this Permit.

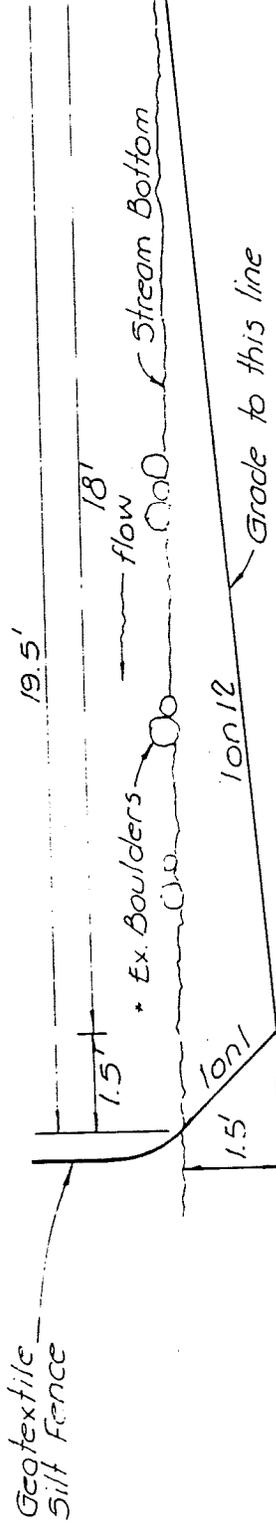
Permittee agrees to indemnify the State of Michigan and all of its departments, agencies, boards, commissions, officers, employees, and agents from any and all liability arising under or in any manner related to the issuance of the Permit or the privileges granted under this Permit.

David F. Hales
Director, Department of Natural Resources
By: 
Kimberly D. Rice
Land and Water Management Division

KDR:jg

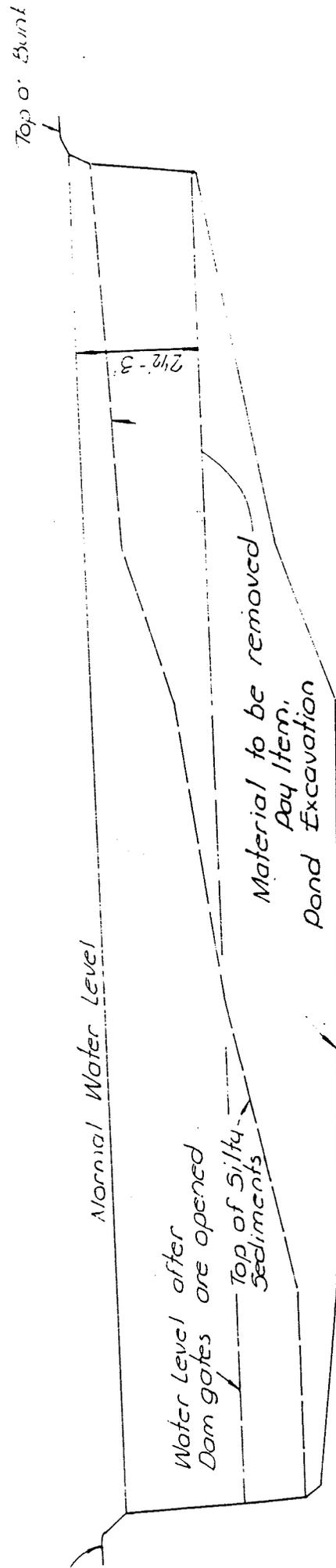
cc: LWMD, Lansing, Region III
D-12 Law, Waste Management (T. Leep)

DWR File #89-12-502
 Sheet 2 of 6

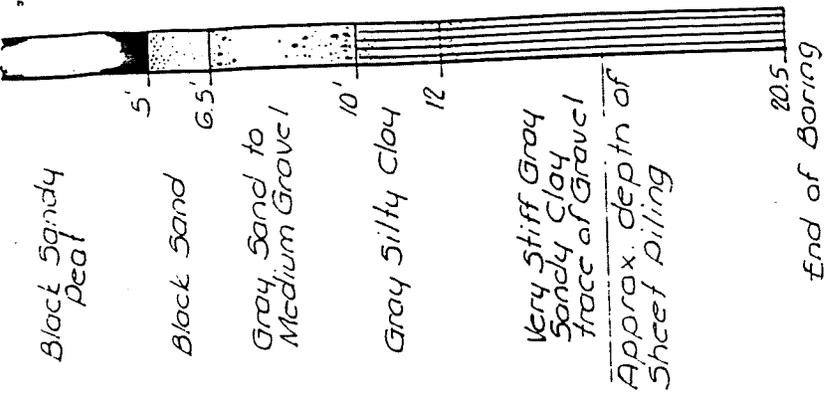


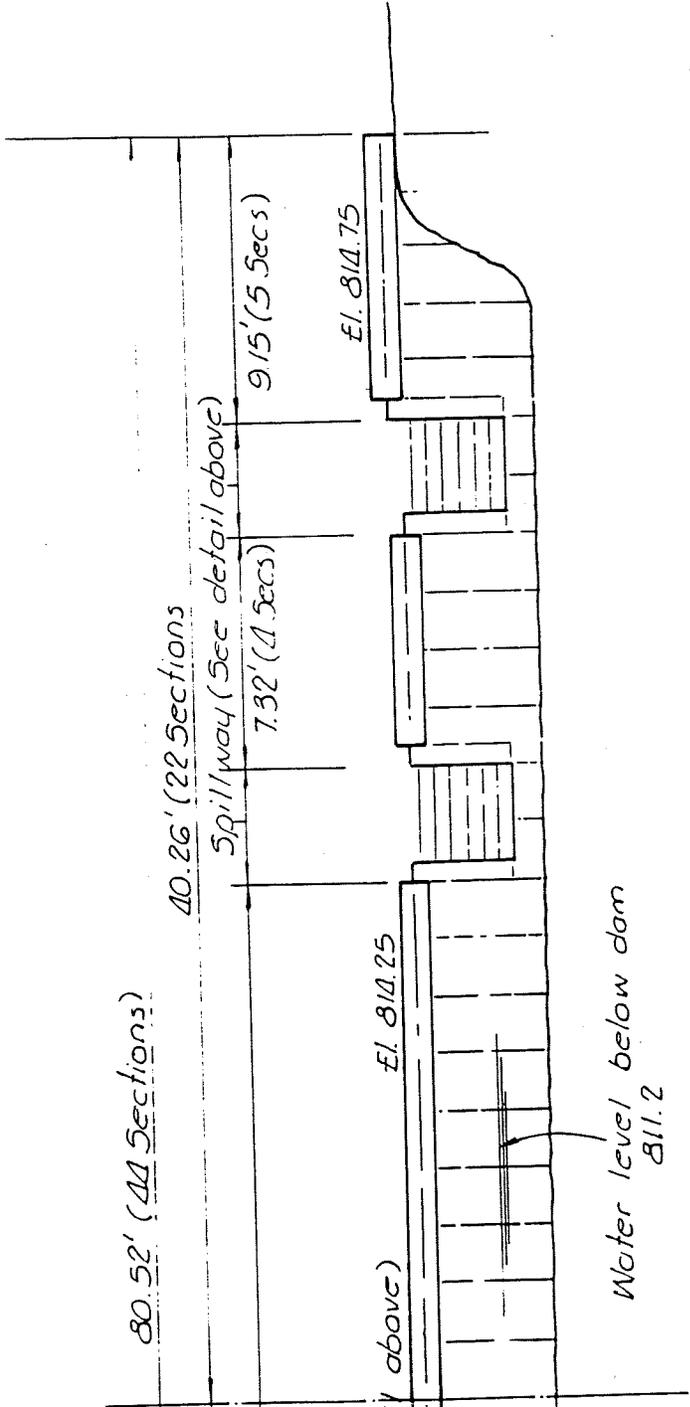
* Ex. Boulders are to be salvaged and replaced in stream after the Streambed Protection is placed.

DETAIL SHOWING SEDIMENT BASIN



DETAIL SHOWING SEDIMENT REMOVAL

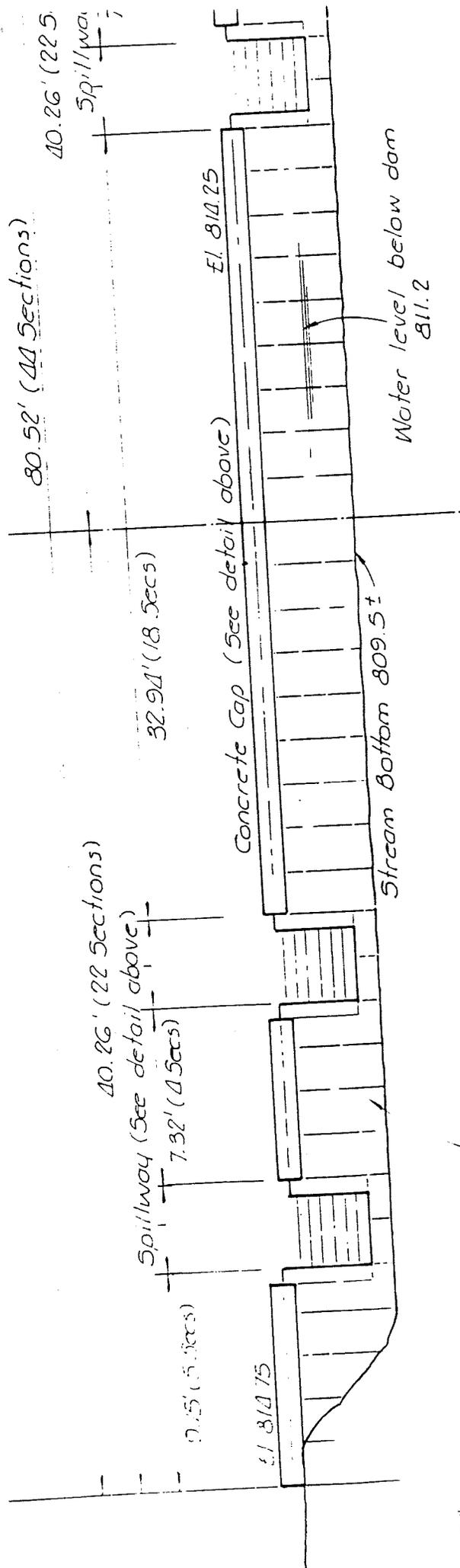




Notes
 Steel Sheet piling sections shall be 16 feet long
 and driven to grade to obtain bearing.

For construction sequence, See Proposal.
 For Log of Boring, See Sht. 3

DNR File # 89-12-502
 Sheet 3 of 6



PROPOSED MILHAM PARK DAM REPLACEMENT
PROFILE

Quantities for Structure

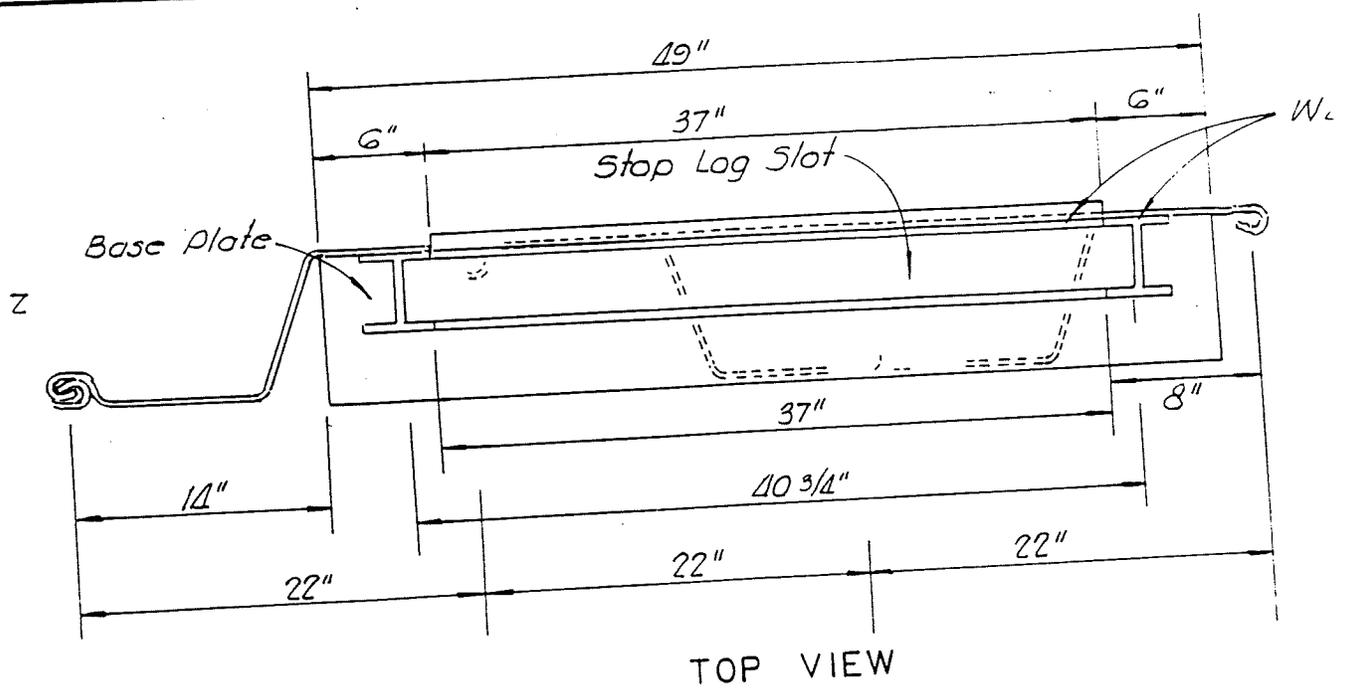
- 1288 sft. Permanent Steel Sheet Piling
- 5 cyds. Concrete, Grade 355
- 304 lbs. Steel Reinforcement
- 1 each Spillways, Fabricated and Erected

DWR File # 89-12-50a
Sheet 4 of 6

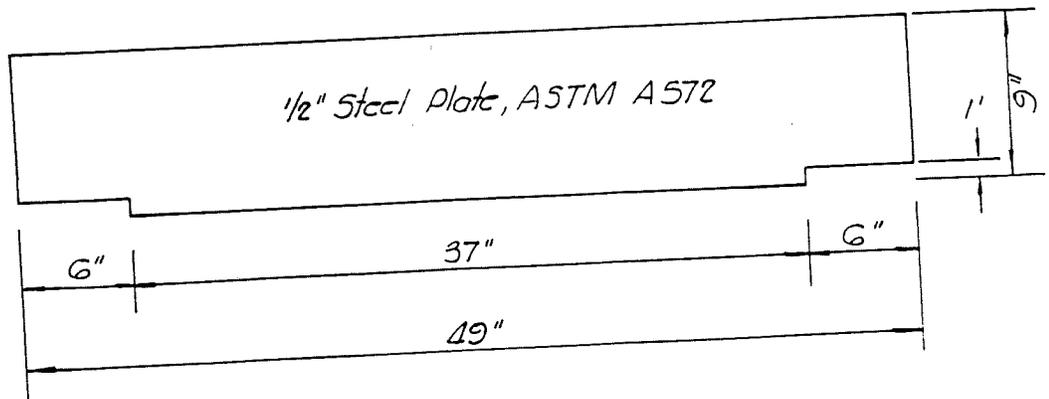
"Z"
0
0
0
19
sec
4

OWR File # 89-12-502

Sheet 5 of 6



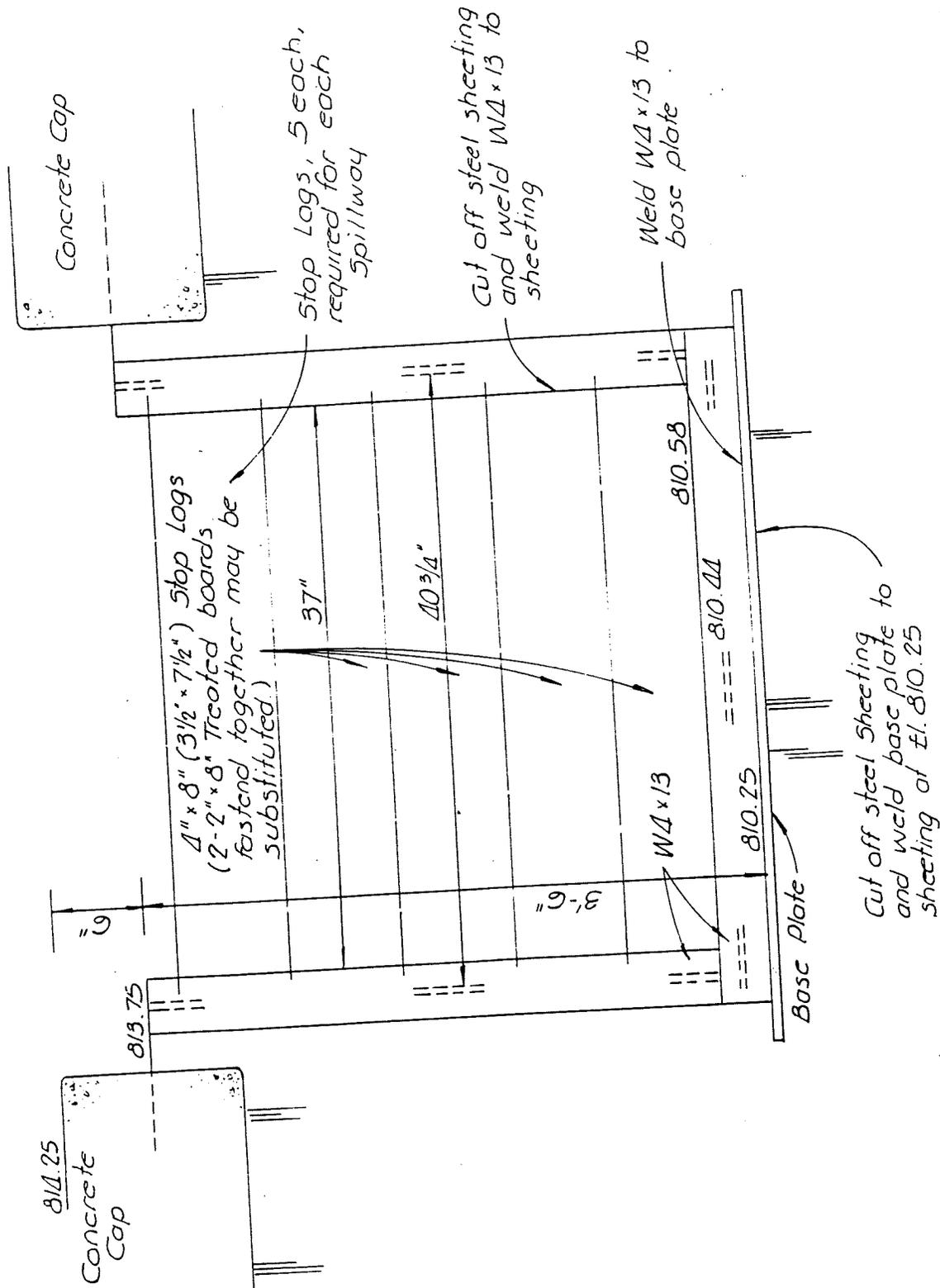
BASE PLATE DETAIL



SPILL WAY

OWR File # 89-12-502

Sheet 6 of 6



APPLICATION FOR PERMIT

FOR OFFICIAL USE

Corps of Engineers
Department of the Army

Corps File No.

State of Michigan
Department of Natural Resources
Land Resource Programs

DNR File No.

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT THIS APPLICATION — PRINT OR TYPE

1. APPLICANT (individual or corporate name)

AGENT/CONTRACTOR (firm name, if known)

CITY OF KALAMAZOO, D.P.W.

ADDRESS

241 W. South Street

ADDRESS

CITY

STATE

ZIP

Kalamazoo

MI

49007

CITY

STATE

ZIP

TELEPHONE

(Work)

(Home)

385-8002

SOC. SECURITY or FED. I.D. No.

TELEPHONE

2. If applicant is not owner of the property where the proposed activity will be conducted, provide name and address of owner and include letter of authorization from owner:

OWNER'S NAME

City of Kalamazoo

MAILING ADDRESS

241 W. South Street

CITY

Kalamazoo,

STATE

MI

ZIP

49007

3. **PROJECT LOCATION**

Street/Road

Village/City

Milham Park Lovers Lane

Kalamazoo

BODY OF WATER (Lake, stream, creek, pond, or drain)

S. Branch-Portage Creek

County

Township

Town

Range

Section(s)

Subdivision or Plat

Lot No.

Private Claim

Kalamazoo

Kalamazoo

T12S

R11W

34

4. **PROJECT INFORMATION**

(a) Describe proposed activity

Remove and replace deteriorated dam and remove silt from bottom of pond from a point 650'± above the dam to the dam.

(b) Attach drawings of the proposed activity prepared in accordance with the *DRAWING REQUIREMENTS* on pages 1 & 2 of Instructions.

(c) Check appropriate Project Type (below)

See Samples of Drawings Required

- 1) Dredging, Filling, Draining or Construction Work in Inland Lakes or Streams, Great Lakes Bottomlands or Wetland Areas 1, 2, 3, 4, or 5
- 2) Work in Riverine Flood Plain (See SPECIAL INSTRUCTIONS, Section 1, on back of this form) 6
- 3) New or Replacement Bridge or Culvert ... (See SPECIAL INSTRUCTIONS, Section 2, on back of this form) 7, 8, 9 and 10
- 4) Dam Construction or Reconstruction (See SPECIAL INSTRUCTIONS, Section 3, on back of this form) 11

NOTE: If boxes 2, 3 and/or 4, above, are checked provide appropriate additional information on the back under "SPECIAL INSTRUCTIONS"

(d) **PROPOSED USE:**

1. Public; Private; Commercial; Other (specify) _____

2. Will the project site be served by a new on-site Sewage Disposal System (Septic Tank) No Yes

(e) Location of Source of Fill if more the 50 cubic yards are required for other than commercial source:

County	Township	Town	Range	Section	¼ Section
--------	----------	------	-------	---------	-----------

Further Description (provide vicinity map of Source Site (Sample Drawing 5) if more than 50 cubic yards and source is other than commercial)

(f) **Dredge Spoils Disposal Location Site (if required):**

County	Township	Town	Range	Section	¼ Section
--------	----------	------	-------	---------	-----------

Further Description (provide vicinity map for Disposal Site (Sample Drawing 3))

See Attached Map

(g) Describe any project alternatives considered.

If fill is required, is project water dependent? No Yes

(h) Date activity will commence if permit is issued 11-15-89 ; be completed 3-1-90

(i) Is any portion of the requested project now complete? No Yes. If yes, identify the completed portion on the drawings you submit and give the date activity was completed.

DO NOT WRITE IN THIS SPACE — FOR CASHIER USE ONLY

**APPLICATION CONTINUED ON
REVERSE SIDE.**

REMOVE INSTRUCTIONS BEFORE MAILING

PR 2731
Rev. 9/82

5. State why you believe the project will not cause pollution, impair or destroy the water or any natural resources:

See attached construction sequence

6. List all other Federal, State or local governmental agency permits or certifications required for proposed project. Specify permit approvals or denials already received. Explain reasons for denials.

Agency Type Approval Identification No. Date Applied Date Approved/Denied

State reasons if permit denied:

7. Is there any present litigation involving the subject property? [X] No [] Yes If "Yes", explain:

8. Adjoining Riparian (Neighboring Waterfront Property Owner) Name and mailing address at which they may be reached.

Table with 5 columns: Name of Riparian #, Address, City, State, ZIP. Includes entries for City of Kalamazoo and Name and Address of Lake Association.

READ CAREFULLY BEFORE SIGNING.

9. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true and accurate and in compliance with the State Costal Zone Management Program.

SIGNATURE [Handwritten Signature] City Engineer DATE 10-17-89

SPECIAL INSTRUCTIONS

- SECTION 1. FOR WORK IN FLOODWAY AREAS, a hydraulic engineering report prepared by a Registered Professional Engineer showing the impact of the proposal on flood stage or discharge characteristics may be needed.
SECTION 2. FOR NEW OR REPLACEMENT BRIDGES OR CULVERTS. To assist in the selection of an appropriate size structure, a design discharge may be requested from the Department of Natural Resources, Water Management Division.

Table with columns: STRUCTURAL DATA, Existing, PROPOSED (replacement), ELEVATIONS; (Bench Mark Datum), ROAD GRADES, EXISTING, PROPOSED. Includes rows for Type, Entrance Design, Span, Rise, Length, Waterway Area, Low Steel, Invert, Highwater, At structure, Low Point of Approach.

SECTION 3. DAM CONSTRUCTION OR RECONSTRUCTION, COMPLETE THE FOLLOWING:

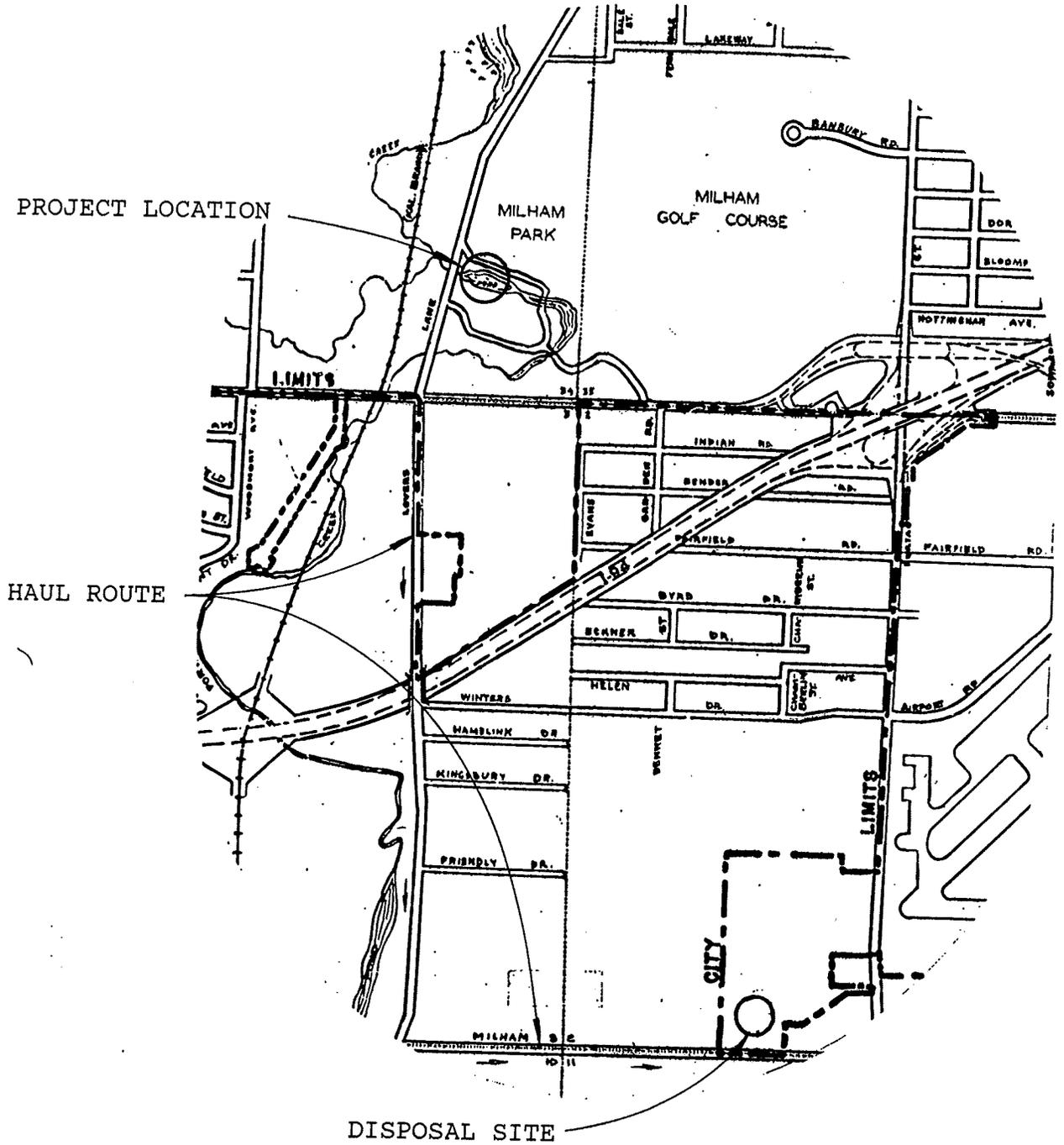
Proposed head 3.07 ft. (Difference between normal pond level and stream water surface level below dam). Proposed Impoundment size (flooded area) 2.8

If the proposed dam project has a head of five(5) feet or more or impounds five (5) or more surface acres, compliance with the Dam Construction Approval Act is required. Following a review of the environmental impacts of the proposed dam construction and clearance for the issuance of an Inland Lake and Streams Act Permit, you will be notified of the need to submit construction plans and specifications, prepared by a Registered Professional Engineer.

Head less than five (5) feet... No Fee Head greater than five (5) feet but less than eight (8) feet... \$200.00 Head greater than eight (8) feet but less than 20 feet... \$400.00 Head greater than 20 feet... \$600.00

CITY OF KALAMAZOO
DIVISION OF PUBLIC WORKS

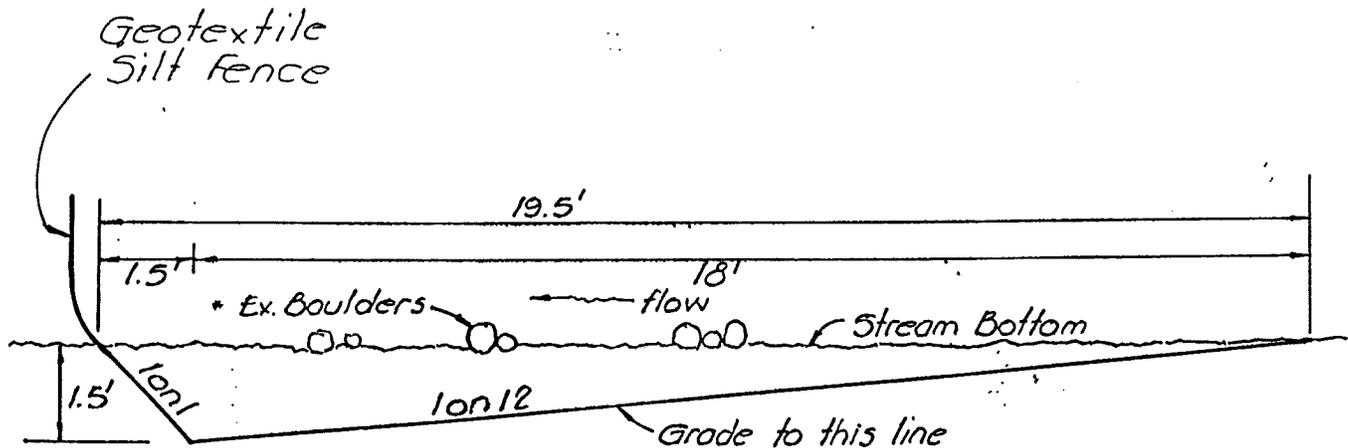
MILHAM PARK
DAM REPLACEMENT AND POND IMPROVEMENT



October 17, 1989

CONSTRUCTION SEQUENCE
for MILHAM DAM REPLACEMENT
and POND IMPROVEMENT

1. Place Geotextile Silt Fences below proposed Sediment Basin and below the Lovers Lane bridge.
2. Excavate the Sediment Basin. Salvage boulders from the basin for future use in stream.
3. Lower the water elevation in the pond.
4. Begin silt removal from the pond and dam construction.
5. After silt removal operations are completed and the new dam is constructed, remove the old dam.
6. Clean trapped sediments from sediment Basin and place 4 inches of Stream Liner and the boulders salvaged from Step 2 in the Sediment Basin.
7. Remove Geotextile Silt Fences.



* Ex. Boulders are to be salvaged and replaced in stream after the Streambed Protection is placed.

DETAIL SHOWING SEDIMENT BASIN

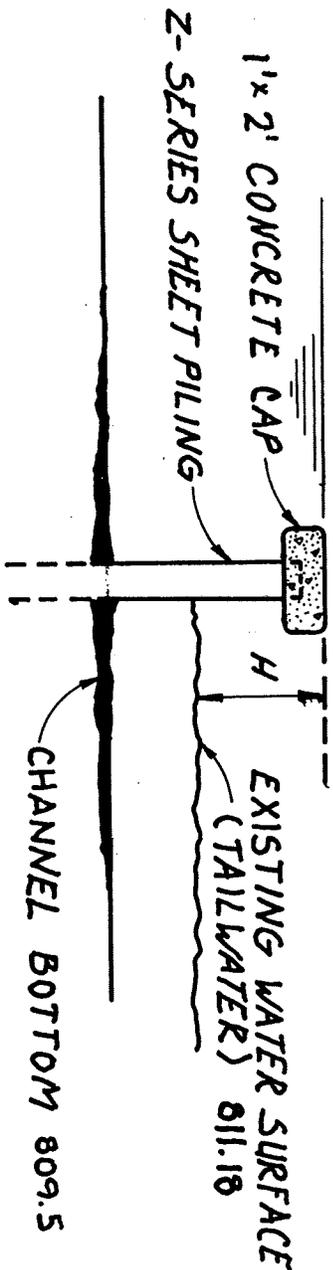
City of Kalamazoo
Division of Public Works

October 17, 1989

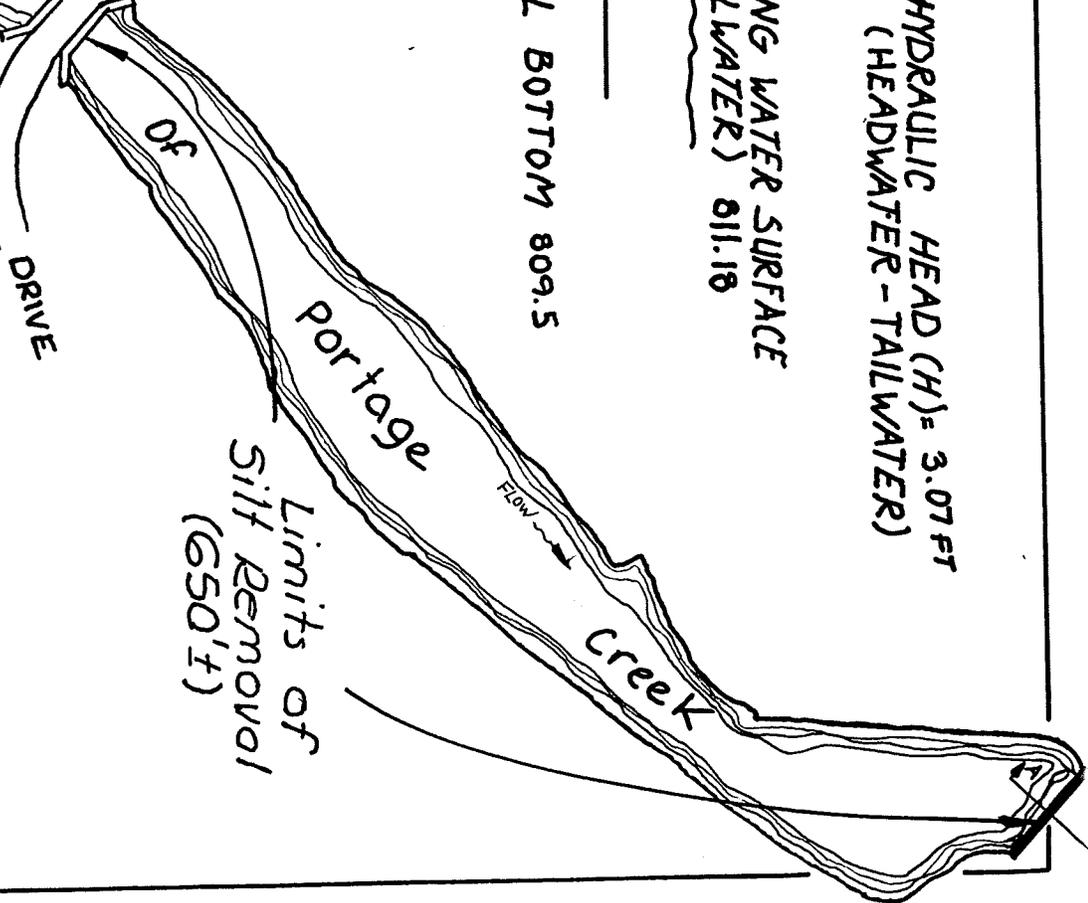
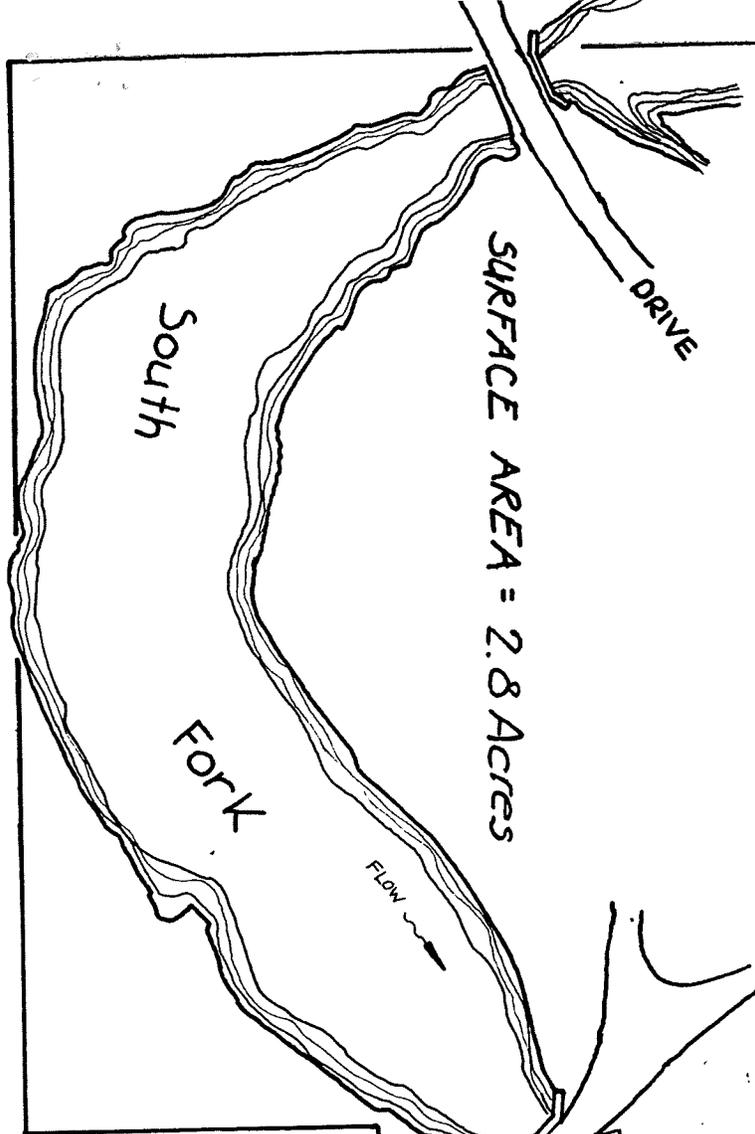
SECTION A A

PROPOSED WATER SURFACE
(HEADWATER) 814.25

HYDRAULIC HEAD (H) = 3.07 FT
(HEADWATER - TAILWATER)



SURFACE AREA = 2.8 Acres



CITY OF KALAMAZOO
DEPARTMENT OF PUBLIC WORKS
MILHAM PARK DAM REPLACEMENT
AND POND IMPROVEMENT

OCTOBER 17, 1989

Professional Service Industries, Inc.

Michigan Testing Engineers Division

LOG OF SOIL BORING NO. 1

PROJECT Milham Park Dam

JOB NO. 413-95048

LOCATION Milham Park

SURFACE ELEV. -- DATE 8-9-89

Portage, Michigan

Sample & Type	Depth	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Dry Den. Wt. P.C.F.	Unc. Comp. Strength PSF		Str. %
						Qp	Qu	
	1	Dark brown to black TOPSOIL, moist						
	2		1					
A			1	26				
SS	3	Black sandy PEAT, very moist, very soft to soft	1					
	4							
	5		1					
B			2	--				
SS			4					
	6	Black fine to medium SAND and small GRAVEL, saturated						
	7		20/1"					
C			5	--				
SS	8	Gray fine to medium SAND and small to medium GRAVEL, occasional COBBLES and RUBBLE, saturated, slightly compact	5					
	9							
	10		4					
D			4	14		5000		
SS			3					
	11	Gray silty CLAY, some SAND, moist, very stiff						
	12							
	13							
	14							
	15		7					
E			8	8		6000		
SS			9					
	16	Gray sandy CLAY, trace small GRAVEL, moist, very stiff						
	17							
	18							
	19							
	20		8					
			10	11		7000		
			11					
	21	End of Boring @ 20' -6"						
	22							
	23							
	24							
	25							

TYPE OF SAMPLE D - DISTURBED SS - SPLIT SPOON UL - UNDIST LINER TW - THIN WALL TUBE RC - ROCK CORE WS - WASHED SAMPLE	REMARKS:	GROUND WATER OBSERVATIONS G W ENCOUNTERED AT 3 FT. 0 INS. G W ENCOUNTERED AT FT. INS. G W AFTER COMPLETION -- FT. INS. G W AFTER HRS. FT. INS. G W VOLUMES medium to heavy
------------------------------------------------------------------------------------------------------------------------------------------------	-----------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



Professional Service Industries, Inc.
Michigan Testing Engineers Division

August 14, 1989

Delta Engineering
723 Mills
Kalamazoo, Michigan 49001
Attention: Mr. Emil Platske

Re: Soils Investigation
Milham Park Dam
Kalamazoo, Michigan
PSI Report No. 413-95048

Gentlemen:

In accordance with your instructions, we have performed a soils investigation at the site of the above referenced project.

One (1) soil test boring has been performed, and was drilled to a depth of twenty feet six inches (20'-6") below the existing ground surface. The location of this boring was jointly determined by Mr. Emil Platske, P.E. of Delta Engineering, and Mr. David L. Pax of Professional Service Industries, Inc.

Groundwater was measured in the boring after the drilling operations and appeared to be at a depth of approximately three (3) feet. The permeability of the soils, seasonal variations, temperature and recent rainfall conditions may influence water levels at other times. These water levels are

Delta Engineering
August 14, 1989
413-95048
Page two of two

indicated on the attached logs of soil boring.

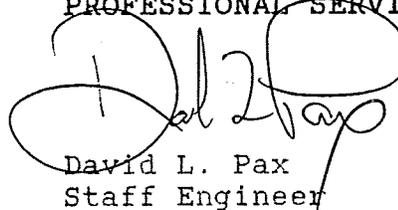
A copy of the boring log is appended. The stratification of the soils, as indicated on the boring log, represents the soil conditions at the actual boring location, and other variations may occur away from the boring. Lines of demarcation represent the approximate boundaries between the soil types, but the transition may be gradual.

The natural moisture content of the soils encountered are listed on the boring log.

Pursuant to your instructions, no other conclusions or analyses have been made, but if we can be of further service, please do not hesitate to call.

Very truly yours,

PROFESSIONAL SERVICE INDUSTRIES, INC.



David L. Pax
Staff Engineer

DLP/cf

Enclosure: Log of Soil Boring

45'

+	HI	-	Elev	BM Sta	DEPT FROM WATER	RT
				11+25	$\frac{15'}{3.3}$ $\frac{15'}{5.0}$ $\frac{30'}{3.8}$ $\frac{30'}{5.0}$ I.S. B.S. 811.2 809.5 810.7 809.5	$\frac{45'}{2.8}$ $\frac{45'}{4.5}$ $\frac{54'}{0.6}$ $\frac{54'}{4.5}$ 813.9 810.0 813.9 810.0
				11+50	$\frac{15'}{3.2}$ $\frac{15'}{5.5}$ $\frac{30'}{2.8}$ $\frac{30'}{5.3}$ 811.3 809.0 811.7 809.2	$\frac{45'}{1.5}$ $\frac{45'}{2.0}$ $\frac{56'}{1.0}$ $\frac{56'}{2.2}$ 813.0 812.5 813.5 812.3
				11+75	$\frac{15'}{3.0}$ $\frac{15'}{5.0}$ $\frac{30'}{3.0}$ $\frac{30'}{5.3}$ 811.5 809.5 811.5 809.2	$\frac{45'}{1.3}$ $\frac{45'}{2.0}$ $\frac{45'}{2.0}$ 812.2 812.2 812.2
				12+0	$\frac{15'}{3.8}$ $\frac{15'}{5.0}$ $\frac{30'}{2.6}$ $\frac{30'}{5.0}$ 810.1 809.5 811.9 809.5	$\frac{45'}{1.2}$ $\frac{45'}{1.4}$ $\frac{45'}{1.5}$ 813.3 810.1 814.5
				12+25	$\frac{15'}{3.8}$ $\frac{15'}{4.7}$ $\frac{30'}{2.5}$ $\frac{30'}{4.9}$ 810.1 809.9 812.0 809.6	$\frac{45'}{1.7}$ $\frac{45'}{5.1}$ $\frac{53'}{0.7}$ $\frac{53'}{4.0}$ 812.8 809.4 813.8 810.5
				12+50	$\frac{15'}{2.5}$ $\frac{15'}{5.0}$ $\frac{30'}{3.0}$ $\frac{30'}{4.8}$ 812.0 809.5 811.5 809.7	$\frac{45'}{1.5}$ $\frac{45'}{5.0}$ $\frac{55'}{0.6}$ $\frac{55'}{4.2}$ 813.0 809.5 813.9 810.3
				12+75	$\frac{15'}{2.6}$ $\frac{15'}{4.8}$ $\frac{30'}{3.0}$ $\frac{30'}{4.9}$ 811.9 809.1 811.5 810.6	$\frac{45'}{1.6}$ $\frac{45'}{5.2}$ $\frac{58'}{1.0}$ $\frac{58'}{5.0}$ 812.9 809.3 813.5 809.5
				13+0	$\frac{15'}{2.5}$ $\frac{15'}{5.0}$ $\frac{30'}{2.5}$ $\frac{30'}{4.5}$ 812.0 809.5 812.0 810.0	$\frac{45'}{2.0}$ $\frac{45'}{4.5}$ $\frac{54'}{1.5}$ $\frac{54'}{4.8}$ 814.5 810.0 813.0 809.7

+	HI	-	Elev	BM Sta	LT	RT
			100.00	P.M.I.	B.M. = PAINTED \square NE. COR EMBARKMENT @ RED WOOD BRIDGE ELEV. = 100.00 814.08	
4.50					T/W H ₂ O TOP SILT BOTTOM SILT 100.00 814.08 104.50	T/W H ₂ O 153' 7.35 9.50
	104.50			9+85	104.50	
4.40	104.40			9+50	80' 7.30	163' 7.30 6.70
5.50	105.50			9+75	75' 7.20 8.30	151' 7.70
7.7	107.70			10+0	74' 7.0 7.3 11.8 12.3	149' 6.9
		6.63	101.07			
6.68	107.75			10+25	31' 6.85 7.4 9.6 10.7	135' 7.3
6.46	107.55			10+50	13' 6.7 7.2 9.6 9.7	181' 6.9
		6.62	101.09			
5.65	106.81			10+75	9.5' 5.9	101' 6.9

PROJECT PAGE 92 TO LINE 1074

MILLHAM PARK

NOTE: ALL X-SECT. @ 92 TO LINE 1074

13+0

+97 8" CEDAR 116'
 +97 15" CEDAR 122'
 +80 BUSH 123'
 +67 36" WILLOW STUMP 69'
 +67 20" BIRCH 111'
 +65 END BRUSH 69'
 +44 8" DEAD MAPLE 141'
 +17 BEGIN BRUSH 75'
 +01 12" STUMP 61'
 +01 14" MULBERRY BUSH 80'

12+0

12+0
 +94 6" ELM 56'
 +84 8" TWIN CEDAR 60'
 +75 24" STUMP 61'
 +67 14" PINE 79'
 +65 8" ASH 53'
 +64 4" CEDAR 57'
 +62 6" CEDAR 56'
 +62 12" ELM 83'
 +57 7" PINE 68'
 +49 END STONE WALL
 +53 & 5x5 CONC. CISTERNS 57'
 +49 10" PINE 69'
 +46 12" PINE 76'
 +40 12" PINE 80'
 +37 SPIRUE BUSH 69'
 +32 4" BIRCH 69'
 +32 14" PINE 84'
 +24 3" BIRCH 80'
 +22 20" PINE 89'
 +12 3" BIRCH 80'
 +05 6" BIRCH 91'

12+0

11+0

11+0
 +81 12" STUMP 105'
 +81 MULTI FLORA ROSE 101'
 +69 SPIRUE BUSH 114'
 +65 SPIRUE BUSH 115'
 +60 8" BIRCH 120'
 +50 SPIRUE BUSH 120'
 +49 SPIRUE BUSH 124'
 +40 8" ELM STUMP 138'
 +31 18" PINE 141'
 +21 16" TWIN MULBERRY 143'
 +18 10" PINE 154'
 +09 10' DIA BUSH 176'
 +11 COR STONE WALL 147'

10+0

+52 STONE WALL 160'
 +46 COR STONE WALL 162'
 +36 END RIP. MAP BEGIN STONE WALL 157'
 +24 S.E. ZOR BRIDGE 151'
 +25 C/W 160'
 +20 F/W 160'
 +20 S.W. COR BRIDGE 152'

9+0



Lovers Lane

Bridge

RED WOOD BRIDGE

DAM

74' DAM

74'

92° 74P.

+0 10+0

4+25 +0

+0

+0

+0

160' PT.

-160

13+0 E/DR. 11.0	13+0 E/W 3.0
+75 E/DR. 12.5	+75 E/W 3.0
+50 E/DR. 13'	+50 E/W 2.5
+25 E/DR. 15'	+25 E/W 3.0
12+0 E/DR. 19'	12+0 E/W 4'
+75 E/DR. 22'	+75 E/W 5'
+50 E/DR. 23'	+50 E/W 5.5
+25 E/DR. 24.5	+25 E/W 6.5
11+0 E/DR. 23'	11+0 E/W 8'
+75 E/DR. 20'	+75 E/W 10'
+50 E/DR. 17'	+50 E/W 13.5
+25 E/DR. 16'	+33 3/4 PT WALL 16'
+0 E/DR. 21.5 10+0	+21 3/4 PT WALL 22'
+75 E/DR. 34'	+06 3/4 PT WALL 72'
+50 E/DR. 51'	+0 E/W 74.5
+25 E/DR. 71'	+75 E/W 74.5
+0 E/DR. 77' 9+0	+50 E/W 78.5
	+40 3/4 PT 82.5
	+25 E/W 103'
	8+98 P.P. 47'

13+0 E/S 79.5
+75 E/S 87.5
+50 E/S 89.5
+25 E/S 90'
12+0 E/S 97'
+75 E/S 109'
+54 END WALL 102'
+50 3/4 PT 108.50
+25 WALL 91.5
11+0 WALL 75.0
+75 WALL 59.5
+50 WALL 40.5
+25 WALL 22.5
+10 3/4 PT 13'
10+0 WALL 14'
+91 3/4 PT END WALL 165
+78 3/4 PT 15.0
+75 WALL 13.5
+60 3/4 PT WALL 5
9+0

LENGTH R.W. BRIDGE
30.5'
W.D.R. 16.

9 to

+11 F.W. 0:
+16 D.W. 6:
+25 8" CLASS APPE 16
+25 14" APPE 1/2:
+25 EDGE DR. 74'

+25 4 PT DR. 16'
+23 17" SCYMONS 3' x 11' 72'
+25 H2O METER PIT 6'
+10 TO EDGE DR. 25'

+86 6" CEDAR 6'
+84 16" CEDAR 6'
+76 13" CEDAR 6'
+10 TO EDGE DR. 26'

+42 25" SCYMONS 12'

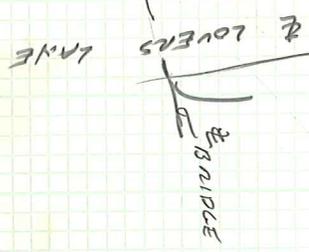
+62 21" SCYMONS 5'
+01 26" SCYMONS 11'
+0 TO EDGE DR. 20'

+30 19" SCYMONS 3'
+0 TO EDGE DR. 12.5'

+0 TO EDGE DR. 6'

8+69.76

146.38
86-05-00



Begin wall 90
+34 END RIP RAP STONE

+87 14" PINE 45'
+85 23" PINE 54'
+76 13" PINE 56'

1570

+35 16" PINE 3'
+01 CAR STONE WALL 72'

1140

1240

1340

+37 END STONE WALL 0'

NORTH EDGE DR. 11.1

N. 85-E 29.90
SOUTH EDGE WALL 3'

FOR P.O.T. 1340



13 +0

+13 12" CEDAR 78'
 +15 14" PINE 88'
 +18 15" PINE 128'
 +32 8" PINE 89'
 +39 12" BIRCH 93'
 +42 7 RIPLE 6" BIRCH 104'
 +42 BEECH 105'
 +46 14" KNOXBERRY BUSH 134'
 +70 END BUSH 121'
 +73 W. END + 2 SHELTER 160'
 19x42

+0

+0

+0

+0

MIL HAM
PARK

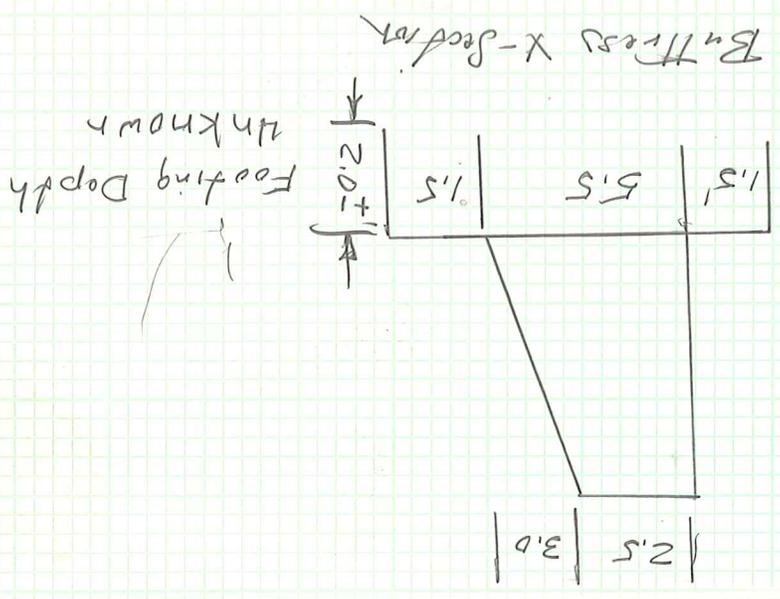
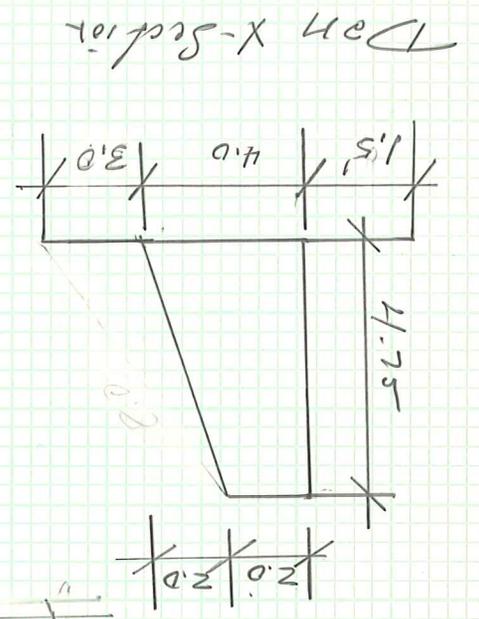
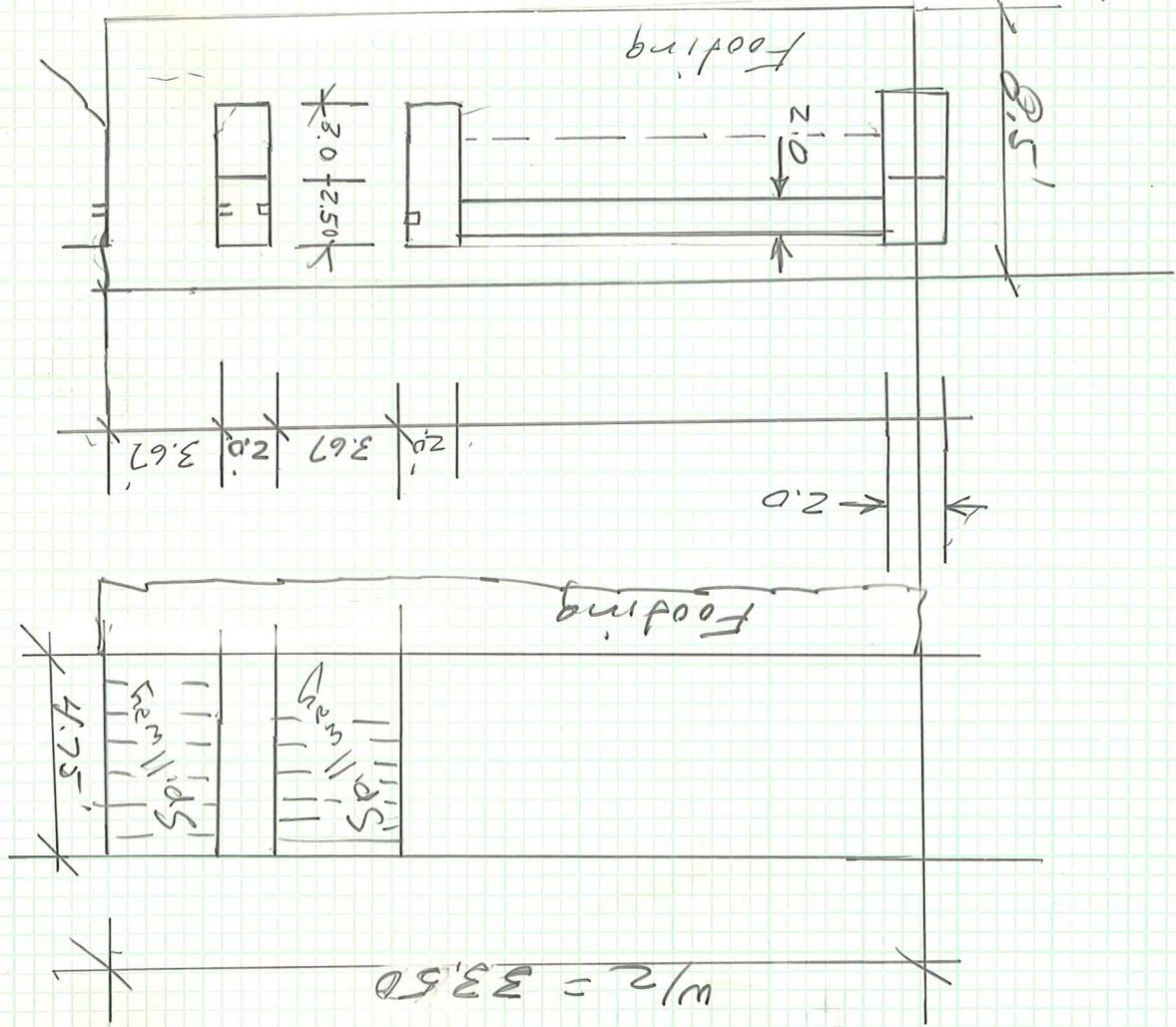
+	HI	-	Elev	BM Sta	LT	RT
			100.00	B.M.	H ₂ O	H ₂ O
6.26	106.26			12+75	$\frac{3'}{5.0}$ $\frac{4'}{5.8}$ 7.8 8.8 9.8 10.8 11.8 12.8 13.8 14.8 15.8 16.8 17.8 18.8 19.8 20.8 21.8 22.8 23.8 24.8 25.8 26.8 27.8 28.8 29.8 30.8 31.8 32.8 33.8 34.8 35.8 36.8 37.8 38.8 39.8 40.8 41.8 42.8 43.8 44.8 45.8 46.8 47.8 48.8 49.8 50.8 51.8 52.8 53.8 54.8 55.8 56.8 57.8 58.8 59.8 60.8 61.8 62.8 63.8 64.8 65.8 66.8 67.8 68.8 69.8 70.8 71.8 72.8 73.8 74.8 75.8 76.8 77.8 78.8 79.8 80.8 81.8 82.8 83.8 84.8 85.8 86.8 87.8 88.8 89.8 90.8 91.8 92.8 93.8 94.8 95.8 96.8 97.8 98.8 99.8 100.8 101.8 102.8 103.8 104.8 105.8 106.8 107.8 108.8 109.8 110.8 111.8 112.8 113.8 114.8 115.8 116.8 117.8 118.8 119.8 120.8 121.8 122.8 123.8 124.8 125.8 126.8 127.8 128.8 129.8 130.8 131.8 132.8 133.8 134.8 135.8 136.8 137.8 138.8 139.8 140.8 141.8 142.8 143.8 144.8 145.8 146.8 147.8 148.8 149.8 150.8 151.8 152.8 153.8 154.8 155.8 156.8 157.8 158.8 159.8 160.8 161.8 162.8 163.8 164.8 165.8 166.8 167.8 168.8 169.8 170.8 171.8 172.8 173.8 174.8 175.8 176.8 177.8 178.8 179.8 180.8 181.8 182.8 183.8 184.8 185.8 186.8 187.8 188.8 189.8 190.8 191.8 192.8 193.8 194.8 195.8 196.8 197.8 198.8 199.8 200.8 201.8 202.8 203.8 204.8 205.8 206.8 207.8 208.8 209.8 210.8 211.8 212.8 213.8 214.8 215.8 216.8 217.8 218.8 219.8 220.8 221.8 222.8 223.8 224.8 225.8 226.8 227.8 228.8 229.8 230.8 231.8 232.8 233.8 234.8 235.8 236.8 237.8 238.8 239.8 240.8 241.8 242.8 243.8 244.8 245.8 246.8 247.8 248.8 249.8 250.8 251.8 252.8 253.8 254.8 255.8 256.8 257.8 258.8 259.8 260.8 261.8 262.8 263.8 264.8 265.8 266.8 267.8 268.8 269.8 270.8 271.8 272.8 273.8 274.8 275.8 276.8 277.8 278.8 279.8 280.8 281.8 282.8 283.8 284.8 285.8 286.8 287.8 288.8 289.8 290.8 291.8 292.8 293.8 294.8 295.8 296.8 297.8 298.8 299.8 300.8 301.8 302.8 303.8 304.8 305.8 306.8 307.8 308.8 309.8 310.8 311.8 312.8 313.8 314.8 315.8 316.8 317.8 318.8 319.8 320.8 321.8 322.8 323.8 324.8 325.8 326.8 327.8 328.8 329.8 330.8 331.8 332.8 333.8 334.8 335.8 336.8 337.8 338.8 339.8 340.8 341.8 342.8 343.8 344.8 345.8 346.8 347.8 348.8 349.8 350.8 351.8 352.8 353.8 354.8 355.8 356.8 357.8 358.8 359.8 360.8 361.8 362.8 363.8 364.8 365.8 366.8 367.8 368.8 369.8 370.8 371.8 372.8 373.8 374.8 375.8 376.8 377.8 378.8 379.8 380.8 381.8 382.8 383.8 384.8 385.8 386.8 387.8 388.8 389.8 390.8 391.8 392.8 393.8 394.8 395.8 396.8 397.8 398.8 399.8 400.8 401.8 402.8 403.8 404.8 405.8 406.8 407.8 408.8 409.8 410.8 411.8 412.8 413.8 414.8 415.8 416.8 417.8 418.8 419.8 420.8 421.8 422.8 423.8 424.8 425.8 426.8 427.8 428.8 429.8 430.8 431.8 432.8 433.8 434.8 435.8 436.8 437.8 438.8 439.8 440.8 441.8 442.8 443.8 444.8 445.8 446.8 447.8 448.8 449.8 450.8 451.8 452.8 453.8 454.8 455.8 456.8 457.8 458.8 459.8 460.8 461.8 462.8 463.8 464.8 465.8 466.8 467.8 468.8 469.8 470.8 471.8 472.8 473.8 474.8 475.8 476.8 477.8 478.8 479.8 480.8 481.8 482.8 483.8 484.8 485.8 486.8 487.8 488.8 489.8 490.8 491.8 492.8 493.8 494.8 495.8 496.8 497.8 498.8 499.8 500.8 501.8 502.8 503.8 504.8 505.8 506.8 507.8 508.8 509.8 510.8 511.8 512.8 513.8 514.8 515.8 516.8 517.8 518.8 519.8 520.8 521.8 522.8 523.8 524.8 525.8 526.8 527.8 528.8 529.8 530.8 531.8 532.8 533.8 534.8 535.8 536.8 537.8 538.8 539.8 540.8 541.8 542.8 543.8 544.8 545.8 546.8 547.8 548.8 549.8 550.8 551.8 552.8 553.8 554.8 555.8 556.8 557.8 558.8 559.8 560.8 561.8 562.8 563.8 564.8 565.8 566.8 567.8 568.8 569.8 570.8 571.8 572.8 573.8 574.8 575.8 576.8 577.8 578.8 579.8 580.8 581.8 582.8 583.8 584.8 585.8 586.8 587.8 588.8 589.8 590.8 591.8 592.8 593.8 594.8 595.8 596.8 597.8 598.8 599.8 600.8 601.8 602.8 603.8 604.8 605.8 606.8 607.8 608.8 609.8 610.8 611.8 612.8 613.8 614.8 615.8 616.8 617.8 618.8 619.8 620.8 621.8 622.8 623.8 624.8 625.8 626.8 627.8 628.8 629.8 630.8 631.8 632.8 633.8 634.8 635.8 636.8 637.8 638.8 639.8 640.8 641.8 642.8 643.8 644.8 645.8 646.8 647.8 648.8 649.8 650.8 651.8 652.8 653.8 654.8 655.8 656.8 657.8 658.8 659.8 660.8 661.8 662.8 663.8 664.8 665.8 666.8 667.8 668.8 669.8 670.8 671.8 672.8 673.8 674.8 675.8 676.8 677.8 678.8 679.8 680.8 681.8 682.8 683.8 684.8 685.8 686.8 687.8 688.8 689.8 690.8 691.8 692.8 693.8 694.8 695.8 696.8 697.8 698.8 699.8 700.8 701.8 702.8 703.8 704.8 705.8 706.8 707.8 708.8 709.8 710.8 711.8 712.8 713.8 714.8 715.8 716.8 717.8 718.8 719.8 720.8 721.8 722.8 723.8 724.8 725.8 726.8 727.8 728.8 729.8 730.8 731.8 732.8 733.8 734.8 735.8 736.8 737.8 738.8 739.8 740.8 741.8 742.8 743.8 744.8 745.8 746.8 747.8 748.8 749.8 750.8 751.8 752.8 753.8 754.8 755.8 756.8 757.8 758.8 759.8 760.8 761.8 762.8 763.8 764.8 765.8 766.8 767.8 768.8 769.8 770.8 771.8 772.8 773.8 774.8 775.8 776.8 777.8 778.8 779.8 780.8 781.8 782.8 783.8 784.8 785.8 786.8 787.8 788.8 789.8 790.8 791.8 792.8 793.8 794.8 795.8 796.8 797.8 798.8 799.8 800.8 801.8 802.8 803.8 804.8 805.8 806.8 807.8 808.8 809.8 810.8 811.8 812.8 813.8 814.8 815.8 816.8 817.8 818.8 819.8 820.8 821.8 822.8 823.8 824.8 825.8 826.8 827.8 828.8 829.8 830.8 831.8 832.8 833.8 834.8 835.8 836.8 837.8 838.8 839.8 840.8 841.8 842.8 843.8 844.8 845.8 846.8 847.8 848.8 849.8 850.8 851.8 852.8 853.8 854.8 855.8 856.8 857.8 858.8 859.8 860.8 861.8 862.8 863.8 864.8 865.8 866.8 867.8 868.8 869.8 870.8 871.8 872.8 873.8 874.8 875.8 876.8 877.8 878.8 879.8 880.8 881.8 882.8 883.8 884.8 885.8 886.8 887.8 888.8 889.8 890.8 891.8 892.8 893.8 894.8 895.8 896.8 897.8 898.8 899.8 900.8 901.8 902.8 903.8 904.8 905.8 906.8 907.8 908.8 909.8 910.8 911.8 912.8 913.8 914.8 915.8 916.8 917.8 918.8 919.8 920.8 921.8 922.8 923.8 924.8 925.8 926.8 927.8 928.8 929.8 930.8 931.8 932.8 933.8 934.8 935.8 936.8 937.8 938.8 939.8 940.8 941.8 942.8 943.8 944.8 945.8 946.8 947.8 948.8 949.8 950.8 951.8 952.8 953.8 954.8 955.8 956.8 957.8 958.8 959.8 960.8 961.8 962.8 963.8 964.8 965.8 966.8 967.8 968.8 969.8 970.8 971.8 972.8 973.8 974.8 975.8 976.8 977.8 978.8 979.8 980.8 981.8 982.8 983.8 984.8 985.8 986.8 987.8 988.8 989.8 990.8 991.8 992.8 993.8 994.8 995.8 996.8 997.8 998.8 999.8 1000.8 1001.8 1002.8 1003.8 1004.8 1005.8 1006.8 1007.8 1008.8 1009.8 1010.8 1011.8 1012.8 1013.8 1014.8 1015.8 1016.8 1017.8 1018.8 1019.8 1020.8 1021.8 1022.8 1023.8 1024.8 1025.8 1026.8 1027.8 1028.8 1029.8 1030.8 1031.8 1032.8 1033.8 1034.8 1035.8 1036.8 1037.8 1038.8 1039.8 1040.8 1041.8 1042.8 1043.8 1044.8 1045.8 1046.8 1047.8 1048.8 1049.8 1050.8 1051.8 1052.8 1053.8 1054.8 1055.8 1056.8 1057.8 1058.8 1059.8 1060.8 1061.8 1062.8 1063.8 1064.8 1065.8 1066.8 1067.8 1068.8 1069.8 1070.8 1071.8 1072.8 1073.8 1074.8 1075.8 1076.8 1077.8 1078.8 1079.8 1080.8 1081.8 1082.8 1083.8 1084.8 1085.8 1086.8 1087.8 1088.8 1089.8 1090.8 1091.8 1092.8 1093.8 1094.8 1095.8 1096.8 1097.8 1098.8 1099.8 1100.8 1101.8 1102.8 1103.8 1104.8 1105.8 1106.8 1107.8 1108.8 1109.8 1110.8 1111.8 1112.8 1113.8 1114.8 1115.8 1116.8 1117.8 1118.8 1119.8 1120.8 1121.8 1122.8 1123.8 1124.8 1125.8 1126.8 1127.8 1128.8 1129.8 1130.8 1131.8 1132.8 1133.8 1134.8 1135.8 1136.8 1137.8 1138.8 1139.8 1140.8 1141.8 1142.8 1143.8 1144.8 1145.8 1146.8 1147.8 1148.8 1149.8 1150.8 1151.8 1152.8 1153.8 1154.8 1155.8 1156.8 1157.8 1158.8 1159.8 1160.8 1161.8 1162.8 1163.8 1164.8 1165.8 1166.8 1167.8 1168.8 1169.8 1170.8 1171.8 1172.8 1173.8 1174.8 1175.8 1176.8 1177.8 1178.8 1179.8 1180.8 1181.8 1182.8 1183.8 1184.8 1185.8 1186.8 1187.8 1188.8 1189.8 1190.8 1191.8 1192.8 1193.8 1194.8 1195.8 1196.8 1197	

+	HI	-	Elev	BM Sta	Lt	Rt
	106.81	5.84	100.97		T/W H ₂ O T.S. B.S. 106.88	T/W H ₂ O T.S. 7.5
5.91	106.88	5.71	101.17	11+0	8' 9' (3.6) 10.1 11.1 7.0 8.0	8.3' 6.3' 100.6
5.47	106.64	5.57	101.07	11+25	6.5' 7.5' (3.6) 9.8 10.4 9.1 10.2 10.5	6.6' 6.2' 6.10 100.5
5.57	106.64	5.42	101.22	11+50	5' 6' (3.8) 10.0 7.5 10.6 10.6 10.6	5.7' 6.2' 5.7 100.9
5.39	106.61	5.38	101.23	11+75	4.5' 5.5' (3.9) 10.1 9.2 9.6 10.1 10.1	5.2' 5.9' 100.7
5.38	106.61	5.44	101.17	12+0	4' 5' (4.0) 10.2 7.7 9.6 10.2 10.2	6.1' 6.2' 6.3' 100.8
5.07	106.24	4.86	101.38	12+25	3' 4' (4.0) 9.9 9.6 8.4 8.0 8.0	7.3' 5.9' 5.6' 100.6
				12+50	2.5' 3.5' (4.0) 10.2 9.2 8.0 8.0	7.2' 6.2' 5.9' 100.7
5.25	106.63				5.6' 6.2' 9.2 10.2 9.6 10.2 9.6	6.4' 6.2' 5.9' 100.7

$w/2$
 3.5
 $\frac{11.5}{20}$
 5.15
 55.15

total 67.0

$w/2 = 33.50$



Footings Depth unknown

67.1 long

51

+	HI	-	Elev	BM Sta	LI	Rt
	106.81	5.84	100.97		T/W H ₂ O 7.5. B.S. (106.88)	7.5. H ₂ O T/W
5.91	106.88			11+0	8' 9' (3.6)	8.9' 8.5'
		5.71	101.17		5.9 6.5 9.7 10.1 (4.6)	7.0 6.5 6.3
5.47	106.64			11+25	6.5' 2.5' (3.6)	6.5' 6.6'
		5.57	101.07		5.6 6.2 9.5 9.8 10.4 (4.7)	6.4 6.2 6.10
5.57	106.64			11+50	5' 6' (3.6)	5.6' 5.7'
		5.42	101.22		5.6 6.2 9.5 10.0 7.5 (3.0)	6.8 6.2 5.7
5.39	106.61			11+75	4.5 5.5 (3.9)	5.1' 5.2'
		5.38	101.23		5.5 6.2 8.5 10.1 0.2 (3.0)	6.6 6.2 5.9
5.38	106.61			12+0	4' 5' (4.0)	6.1' 6.2'
		5.44	101.17		5.6 6.2 9.9 10.2 7.7 (2.5)	6.4 6.2 5.8
5.07	106.24			12+25	3' 4' (4.0)	7.3' 7.4'
		4.86	101.38		5.3 5.9 9.6 9.9 8.4 (4.0)	6.2 5.9 5.6
5.25	106.63			12+50	2.5 3.5 (4.0)	7.3' 7.3'
					5.6 6.2 9.2 10.2 8.0 (1.8)	6.1 6.2 5.9

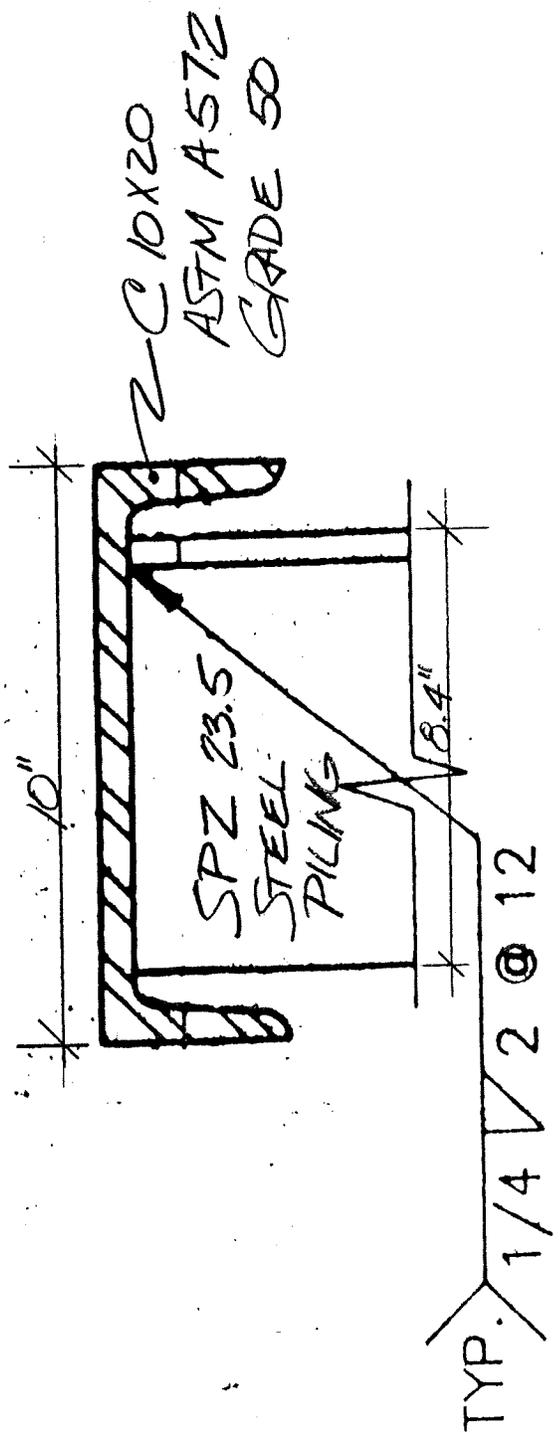
MIL HAM
PARK

+	HI	-	Elev	BM Sta	Lt	Rt	
			100.00	B.M.	T/W H ₂ O	TOP SILT H ₂ O T/W	
6.26	106.26			12+75	3' 4' (3.0) 5.0 5.8 8.8	74' 75' 5.8 5.2	
		493	101.33		101.20 91.50 106.73 (4.0)	109.80 109.10 101.00	
5.10	106.43			13+0	3' 4' (1.0) 5.1 6.0 8.0	80' 81' 6.0 5.5	
				10+0	97' 97' 1.0 4.5	101.20 101.10	
				10+25	103.80 101.90 30' 30' 45' 45' 60' 60' 4.0 5.5 5.0 5.5 5.0 5.8	75' 75' 82' 82' 105' 105' 125' 125' 5.0 5.5 3.5 5.3 0.5 5.0 0.5 5.0	
				10+50	30' 30' 30' 3.0 4.7	45' 45' 53' 58' 73' 73' 100' 100' 2.5 4.8 1.3 4.6 1.0 4.6 0.7 6.5	
				10+75	15' 15' 30' 30' 3.9 5.0 2.6 5.0	45' 45' 45' 1.0 4.0	69' 69' 0.5 4.5
				11+0	15' 15' 30' 30' 3.5 4.5 2.8 4.5	45' 45' 45' 1.7 4.8	53' 53' 0.8 4.7

1-31-90
TCE

MILHAM PARK

CROSS SECTION DETAIL OF PROPOSED PILE CAP ALTERNATE



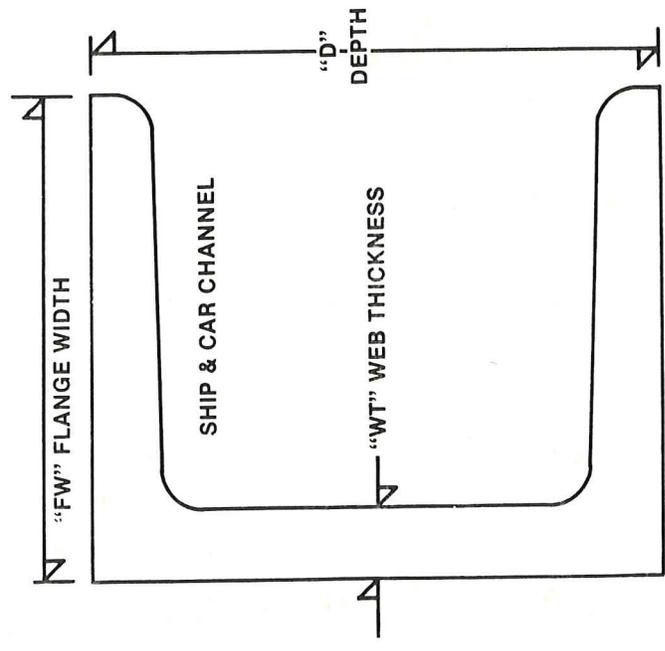
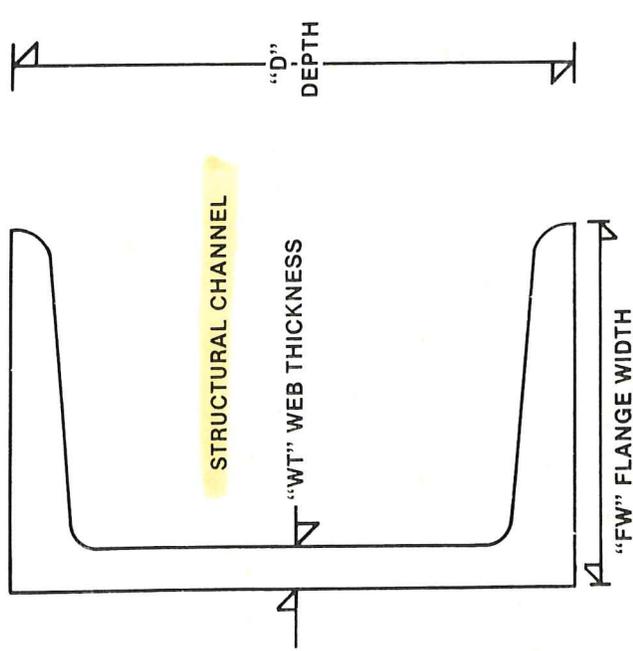
EL

Bar Channels

Size in Inches	Estimated Wt. in Lbs.	
	Per Ft.	20 Ft. Bar
1 x 1/2 x 1/8	.84	16.80
1 1/4 x 1/2 x 1/8	1.01	20.20
1 1/2 x 1/2 x 1/8	1.12	22.40
1 1/2 x 1 1/2 x 3/16	2.72	54.40
2 x 1/2 x 1/8	1.43	28.60
2 x 5/8 x 1/4	2.28	45.60
2 x 1 x 1/8	1.59	31.80
2 x 1 x 3/16	2.32	46.40
2 1/2 x 5/8 x 3/16	2.27	45.40

Structural Channels

"D" Depth Channel & Wt. Per Ft.	Wt. For 20'	"WT" Thickness Of Web In Inches	"FW" Width Of Flange In Inches
3" x 4.1 lbs.	82	.170	1.410
5.0 lbs.	100	.258	1.498
6.0 lbs.	120	.356	1.596
4" x 5.4 lbs.	108	.180	1.580
7.25 lbs.	145	.320	1.720
5" x 6.7 lbs.	134	.190	1.750
9.0 lbs.	180	.325	1.885
6" x 8.2 lbs.	164	.200	1.920
10.5 lbs.	210	.314	2.034
13.0 lbs.	260	.437	2.157
7" x 9.8 lbs.	196	.210	2.090
12.25 lbs.	245	.314	2.194
14.75 lbs.	295	.419	2.299
8" x 8.5 lbs.	170	.180	1.875
11.5 lbs.	230	.220	2.260
13.75 lbs.	275	.303	2.343
18.75 lbs.	375	.487	2.527
9" x 13.4 lbs.	268	.230	2.430
15.0 lbs.	300	.285	2.485
20.0 lbs.	400	.448	2.648
10" x 15.3 lbs.	306	.240	2.600
20.0 lbs.	400	.379	2.739
25.0 lbs.	500	.526	2.886
30.0 lbs.	600	.673	3.033



MILHAM PARK DAM REPLACEMENT

TOTAL CONSTRUCTION COST \$91,869.81 *

PAID :

ESTIMATE # 1 \$36,600.94

ESTIMATE # 2 44,144.12

TOTAL PAID

\$80,745.06

TOTAL OUTSTANDING

\$11,124.75

* FINAL MEASUREMENTS NOT COMPLETED
ESTIMATED FINAL COST \pm \$1000.

RWS

5/10/90

INSPECTOR'S DAILY REPORT

Contractor Diversco Construction Co.

Weather sunny, bright, snow on the ground

Subcontractor _____

Temp. High low 40's Low high 30's

CONTRACT ITEMS AS CONSTRUCTED

Foreman - Name	Men	Equipment/Number							
Roger	2	crane	1	back-hoe	1	vibrating pile driver	1	generator for driver	1
Work Item	Station and Location	Quantity	Unit Meas.	Remarks					

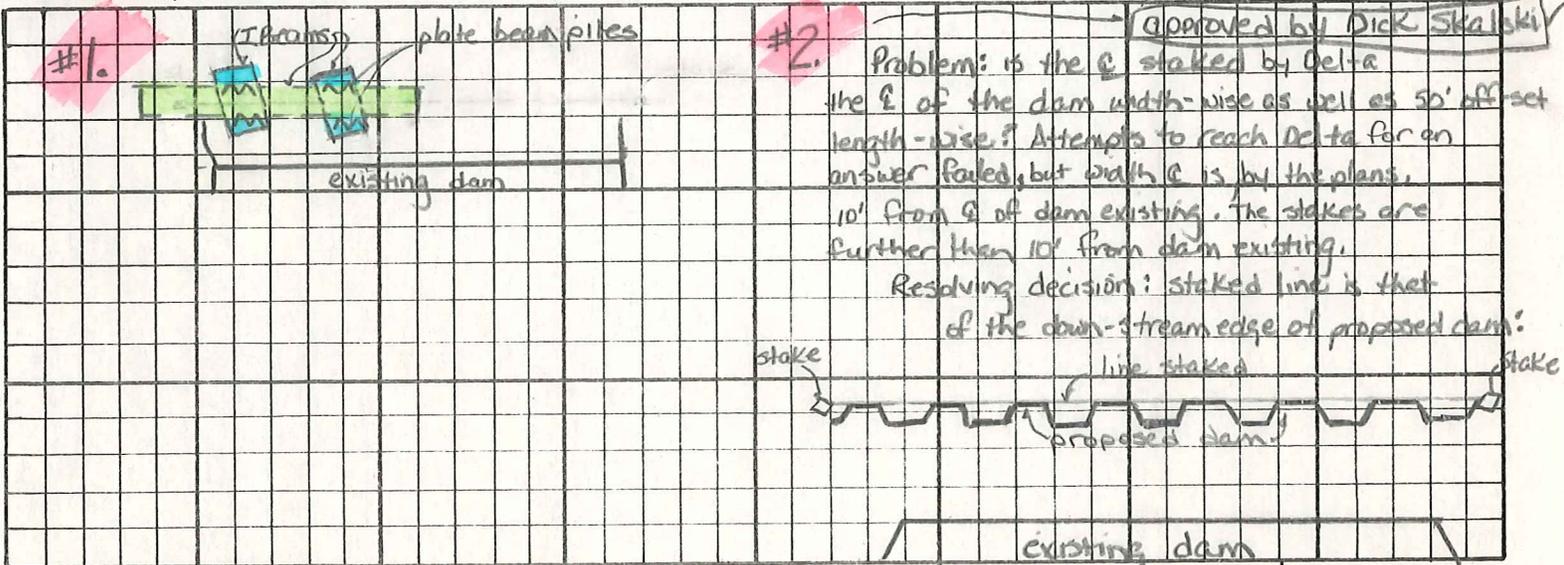
No work items completed today, *

* I arrived at 9:25 A.M.; at that time, sediment was being removed for the sediment basin at the south west edge of the pond.

Today's work consisted of:

- sediment basin excavation (to be measured by truck load as it is hauled away.)
- 9:45 A.M. - removing a section of stone wall south and west of existing dam, to allow for placement of steel sheet piling. (part of removing structures, a lump sum)
- 1:20 P.M. - pond excavation
- 1:20 P.M. - stringing a line from stake to stake across the pond.
- 4:45 P.M. - driving steel plate piles, welding off tops and placing beams to form a temporary construction access bridge. (see diagram #1)

Don Paulsen on site at 10:30 A.M., taking pictures, left at 10:45; Dick Skalski and Jonathan Start on site from approx. 11:00 to 11:15. *RWS 3/15/90*



Elizabeth A. Smith
Inspector Signature

W. Nelson
Project Engr.

Control Section Identification	955-45-014	Job Number	1989 BH
Federal Number	William Park Dam	Date	Wednesday February 21, 1990
Day	Wednesday	Report No.	1

INSPECTOR'S DAILY REPORT

Contractor DIVERSCO CONSTRUCTION CO.
 Subcontractor NONE

Weather Sunny to P.C. Cloudy
 Temp. High 21° Low 7°

CONTRACT ITEMS AS CONSTRUCTED

Foreman - Name	Men	Equipment/Number			
Roger	3	crane	Backhoe	VIBRATORY PILE DRIVER	FRONT END LOADER Generator
Work Item	Station and Location	Quantity	Unit Meas.	Remarks	
Permanent steel sheet piling 5010001	S. half of structure	224	SFT	2' x 16' = 32' 32' x 7 = 224 7 sections	
NOTE: No reports completed for Thu. 2/27 or Fri. 2/28. P.S.					
NOTE: No calculations were made on sediment basin excavation all payment made as pond excavation.					

Sketches, Computations, Remarks, etc. 3/6/90 RWS

8:00am	Diversco commenced welding and setting of templates used in the guidance of the steel sheet piling.
11:00am (approx.)	Diversco commenced placement of steel sheet piling into Portage Creek streambed and halted operations at approx. 5:15pm
* Note	Care was taken in the positioning, leveling, and setting the piles to proper line and grade.

Daniel R. Gordon
 Inspector Signature

W. Nelson
 Project Engr.

Control Section Identification	955-45-01A	Job Number	1989BH
Federal Number	MILHAM PARK DAM		
Day	Mon.	Date	2-26-90
Report No.	2		

INSPECTOR'S DAILY REPORT

Contractor DIVERSCO CONSTRUCTION CO.

Weather Sunny to P. Cloudy

Subcontractor _____

Temp. High 33° Low 15°

CONTRACT ITEMS AS CONSTRUCTED

Foreman - Name	Men	Equipment/Number			
Roger	3	crane 1	generator 1	Pump 6" DIA 1	Backhoe 1 front loader 1
Work Item	Station and Location	Quantity	Unit Meas.	Remarks	
Sediment Excavation Maintenance 2130014		20.5	cyds		
10:00am contractor	Removed Remaining	boards from	existing	spillway, to lower water level even further.	
9:00am Contractor used	a crane with a	clamp to build	a damn around the	new steel sheet piling with existing streambed sediment	
10:30am Contractor exercised	maintenance on	sediment basin	by digging	out sediment with a backhoe.	
1:00 pm Contractor began	to pump water	away from the	new damn structure	and returned the water near pedestrian bridge.	

Sketches, Computations, Remarks, etc.

✓ RWS 3/16/90

1:00 pm Contractor started removing pond sediment

Sediment Excavation Maintenance

$605.28 \text{ cft} - 51.3126 \text{ cft} = 553.97 \text{ cft} / 27 = 20.5 \text{ cyds}$

Daniel R. Gordon
Inspector Signature

W. Nelson
Project Engr.

Control Section Identification	955-45-014	Job Number	189 BH
Federal Number	MILHAM PARK DAM		
Day	Wednes	Date	2-28-90
Report No.	4		

INSPECTOR'S DAILY REPORT

Contractor DIVERSCO CONSTRUCTION CO.

Weather Sunny

Subcontractor _____

Temp. High 43 Low 19°

CONTRACT ITEMS AS CONSTRUCTED

Foreman - Name	Men	Equipment/Number								
Roger	3	crane	1	arc welder	1	Front end loader	1	cutting torch	1	Back hoe

Work Item	Station and Location	Quantity	Unit Meas.	Remarks
<p>✓ No work items completed</p>				
<p>a generator and vibratory pile driver on site also lighted arrow not being used at present not being used</p>				

Sketches, Computations, Remarks, etc.

1 work day accumulated work days = 4 ✓ RWS 3/6/90

8:00am	Contractor commenced pond excavating operations
10:00am	Contractor started construction of spillways on the south side of newly constructed dam structure. Contractor finished welding in place one spillway. also one other spillway was cut and prepared to weld base plates.
	* note: spillways will be recorded as a pay item upon completion of all aspects of said spillways.
5:00pm	Contractor ceased operations
11:00am	a truck load of gravel was delivered to site for contractors convenience. Is not a pay item. also a steel cap 18" was delivered with gravel.

Daniel R. Gordon
Inspector Signature

W. Nelson
Project Engr.

Control Section Identification	955-45-014	Job Number	1989BH
Federal Number	MILHAM PARK DAM		
Day	THURS	Date	3-1-90
		Report No.	3

INSPECTOR'S DAILY REPORT

Contractor DIVERSCO CONSTRUCTION CO.
 Subcontractor _____

Weather Sunny to P. Cloudy
 Temp. High 45° Low 31°

CONTRACT ITEMS AS CONSTRUCTED

Foreman - Name	Men	Equipment/Number					
<u>Roger</u>	<u>3</u>	<u>Backhoe</u> <u>1</u>	<u>Front end loader</u> <u>1</u>	<u>welder (arc)</u> <u>1</u>	<u>torch cutting</u> <u>1</u>	<u>crane</u> <u>1</u>	
Work Item	Station and Location	Quantity	Unit Meas.	Remarks			
<u>Furnish and place pile cap C 18x42.7</u>	<u>S. End</u>	<u>8.75</u>	<u>LFT</u>				
<u>Furnish and place pile cap C 12x20</u>	<u>S. 1/2</u>	<u>10'</u>	<u>LFT</u>				
<u>Pile cap welding</u>	<u>S. 1/2</u>	<u>.25</u>	<u>LSUM</u>				

Sketches, Computations, Remarks, etc.

RWS 3/16/90

<u>8:00 am</u>	<u>to</u>	<u>11:00 am</u>												
			<u>Contractor finished welding second spillway and started cutting and trimming the top of the new Dam to grade.</u>											
<u>* Note *</u>			<u>Crane operator left at approx. 10:00 am still awaiting certification on steel. Contractor promises to have certification by Monday.</u>											
<u>* A NOTE</u>			<u>was handed to the contractor concerning placement of protective fence around stockpiles of excavated material. 3:00 pm DRG</u>											
<u>12:30 pm</u>	<u>Contractor began placing 18" steel cap on high section of newly constructed Dam. also distance between pile spillways on south side was capped with 12" pile cap</u>													

David R. Gordon
Inspector Signature

W. Nelson
Project Engr.

Control Section Identification <u>955-45-014</u>	Job Number <u>1989BH</u>
Federal Number <u>MILHAM PARK DAM</u>	
Day <u>FRI</u>	Date <u>3-2-90</u>
Report No. <u>6</u>	

INSPECTOR'S DAILY REPORT

Contractor DIVERSCO CONSTRUCTION CO.
 Subcontractor _____

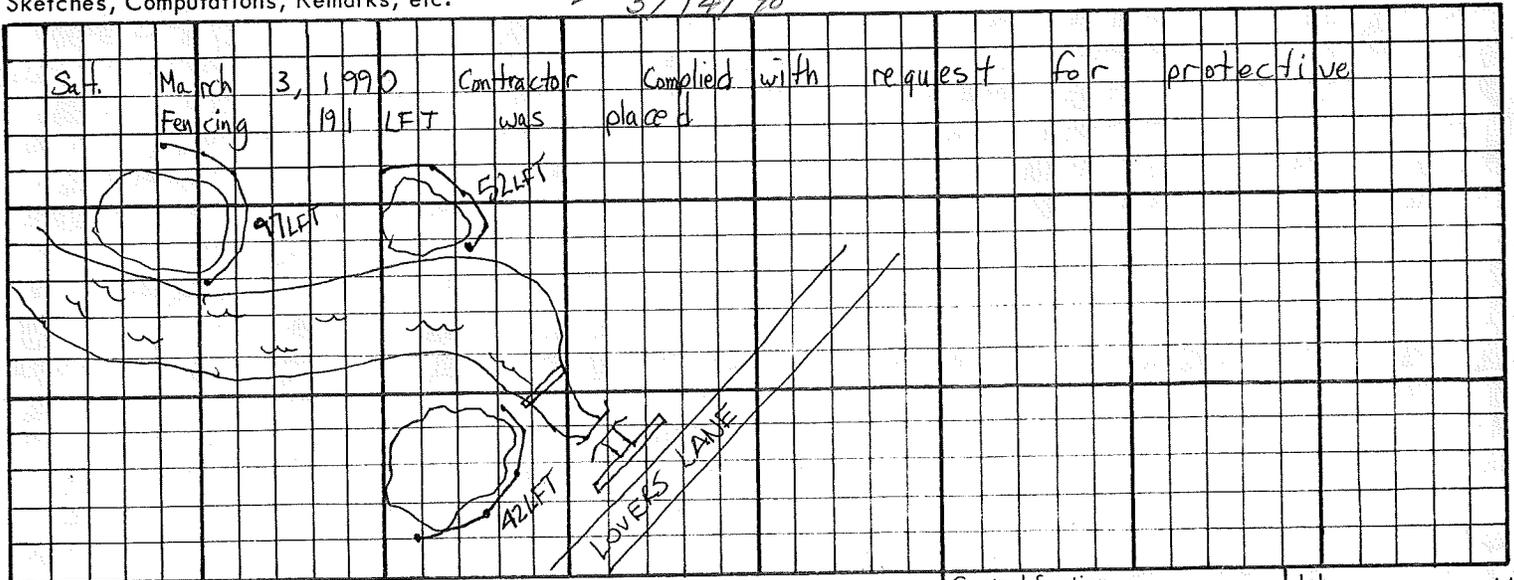
Weather Sunny to P. Cloudy
 Temp. High 40° Low ~~20°~~

CONTRACT ITEMS AS CONSTRUCTED

Foreman - Name	Men	Equipment/Number					DUMP on hauling trucks		
		backhoe	1	crane	1	Front-end loader			1
Roger	3	backhoe	1	crane	1	Front-end loader	1	DUMP on hauling trucks	1
Work Item	Station and Location	Quantity	Unit Meas.	Remarks					
Protective Fence 6317001	See below	191	LFT						
Removal of Structures item code 2060001	South half of Dam	.5	LSUM						
Geotextile silt Fence	under walking bridge & Pedestrian	32	LFT						
Pond Excavation to be recorded in I.D.R. #		360	CYD	need volume ticket to be retrieved from contractor.					
Contractor Commencing inspectors were not present received from Dump site. northside of Portage creek	hauling operations not on necessary because of the volume measurements Also Contractor on Friday.	for the major	ity of the week	volume measurements other equipment to					

Sketches, Computations, Remarks, etc.

✓ 3/14/90



Daniel R. Gordon
 Inspector Signature

W. Nelson
 Project Engr.

Control Section Identification <u>955-45-014</u>	Job Number <u>1989BH</u>
Federal Number <u>MILHAM PARK DAM</u>	Report No. <u>7</u>
Day <u>Mon-FRI</u>	Date <u>3-5-90 to 3-9-90</u>

MAR 6 2 06 PM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128589

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 ea
5. Pickup - Level IV	_____	\$ 25.00 ea
6. Pickup - Level V	_____	\$ 28.00 ea
7. Pickup - Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Dirt
Portage Creek

DRIVER Greg Sytur VEHICLE # 319

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 6 2 06 PM '90

NO. 4480 NAME Diversco

TICKET # 128590

	QUANTITY	PRICE
1. General Refuse		\$ 7.50 yd
2. Pickup - Level Bed		\$ 16.00 ea
3. Pickup - Level II		\$ 19.00 ea
4. Pickup - Level III		\$ 22.00 ea
5. Pickup - Level IV		\$ 25.00 ea
6. Pickup - Level V		\$ 28.00 e
7. Pickup - Level VI		\$ 31.00
8. Special Handling	<u>20</u>	\$ <u>16.00</u>

ADDED DESCRIPTION:

Portage Creek

DRIVER Log P.

VEHICLE # 3

CUSTOMER COPY

MAR 6 11 13 AM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 44/80 NAME Diversco

TICKET # 128570

	QUANTITY	PRICE
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 ea
5. Pickup - Level IV	_____	\$ 25.00 ea
6. Pickup - Level V	_____	\$ 28.00 ea
7. Pickup - Level VI	_____	\$ 31.00 e
8. Special Handling	<u>20</u>	\$ <u>16.00</u>

20
0.1 Dirt

ADDED DESCRIPTION: Portage Creek

DRIVER Rog P VEHICLE # 31

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 6 11 15 AM '90

NO. 4480 NAME Diversco

TICKET # 128571

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 ea
5. Pickup - Level IV	_____	\$ 25.00 ea
6. Pickup - Level V	_____	\$ 28.00 ea
7. Pickup - Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u> <u>O.D.</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek

DRIVER Greg Sykes VEHICLE # 319

CUSTOMER COPY

Landfill Management Company
 Orchard Hill Sanitary Landfill
 3378 Hennesey Road
 Watervliet, Michigan 49098
 Phone: (616) 463-5588

MAR 7 9 31 AM '90

NO. 4440 NAME DIVERSCO

TICKET # 128604

	QUANTITY	PRICE
1. General Refuse		\$ 7.50 yd
2. Pickup - Level Bed		\$ 16.00 ea
3. Pickup - Level II		\$ 19.00 ea
4. Pickup - Level III		\$ 22.00 ea
5. Pickup - Level IV		\$ 25.00 ea
6. Pickup - Level V		\$ 28.00 ea
7. Pickup - Level VI		\$ 31.00
8. Special Handling	<u>20</u>	\$ <u>16.00</u>

ADDED DESCRIPTION: Portage Creek
DIRT

DRIVER Greg [Signature] VEHICLE # 31

CUSTOMER COPY

MAR 7 9 32 AM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128605

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 ea
5. Pickup - Level IV	_____	\$ 25.00 ea
6. Pickup - Level V	_____	\$ 28.00 ea
7. Pickup - Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION:

Dirt
Portage Creek

DRIVER Dave Postma VEHICLE # _____

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennessey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 7 12 00 PM '90

NO. 4480 NAME Diversco

TICKET # 128613

	QUANTITY	PRICE
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 e
5. Pickup - Level IV	_____	\$ 25.00
6. Pickup - Level V	_____	\$ 28.0
7. Pickup - Level VI	_____	\$ 31
8. Special Handling	_____	\$ h

ADDED DESCRIPTION: Portage 20
Dirt
Creek

DRIVER Greg Sytem VEHICLE # _____

CUSTOMER COPY

MAR 7 12 26 PM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennessey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME DIVERSCO

TICKET # 128621

	QUANTITY	PRICE
1. General Refuse		\$ 7.50 yd
2. Pickup - Level Bed		\$ 16.00 ea
3. Pickup - Level II		\$ 19.00 ea
4. Pickup - Level III		\$ 22.00 ea
5. Pickup - Level IV		\$ 25.00 ea
6. Pickup - Level V		\$ 28.00
7. Pickup - Level VI		\$ 31.00
8. Special Handling	<u>20</u>	\$ <u>16.00</u>

ADDED DESCRIPTION: Portage Creek
Dirt

DRIVER Dave Poslamo VEHICLE # _____

CUSTOMER COPY

MAR 7 2 20 PM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128627

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	<u>\$16.00</u> yd

ADDED DESCRIPTION: Dirt
Portage Creek

DRIVER Dreg Sydnor VEHICLE # 319

CUSTOMER COPY

MAR 7 2 40 PM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET #	QUANTITY	PRICE
		\$ 7.50 yd
1. General Refuse		\$ 16.00 ea
2. Pickup - Level Bed		\$ 19.00 ea
3. Pickup - Level II		\$ 22.00
4. Pickup - Level III		\$ 25.00
5. Pickup - Level IV		\$ 28.00
6. Pickup - Level V		\$ 30.00
7. Pickup - Level VI		\$ 32.00

8. Special Handling

ADDED DESCRIPTION:

20
Dirt
Portage Creek

DRIVER John Postma VEHICLE _____

CUSTOMER COPY

MAR 8 9 29 AM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME DIVERSCO

TICKET # 128640

	QUANTITY	PRICE
1. General Refuse		\$ 7.50 yd
2. Pickup - Level Bed		\$ 16.00 ea
3. Pickup - Level II		\$ 19.00 ea
4. Pickup - Level III		\$ 22.00
5. Pickup - Level IV		\$ 25.00
6. Pickup - Level V		\$ 28.00
7. Pickup - Level VI		\$ 30.00

8. Special Handling

ADDED DESCRIPTION: Portage 20
Dirt
Creek

DRIVER Greg Sylew VEHICLE _____

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 8 9 30 AM '90

NO. 4480 NAME Diverseco

TICKET # 128641

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 ea
5. Pickup - Level IV	_____	\$ 25.00 ea
6. Pickup - Level V	_____	\$ 28.00 ea
7. Pickup - Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u> <u>DIRT</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek

DRIVER [Signature] VEHICLE # 317

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 8 11 37 AM '90

NO. 4480 NAME Diversco

TICKET # 128650

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 ea
5. Pickup - Level IV	_____	\$ 25.00 ea
6. Pickup - Level V	_____	\$ 28.00 ea
7. Pickup - Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	<u>\$16.00</u> yd

ADDED DESCRIPTION:

Portage Creek

DRIVER

Greg Sykes

VEHICLE #

319

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennessey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 8 11 38 AM '90

NO. 4480 NAME Diversco

TICKET # 128651

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse		\$ 7.50 yd
2. Pickup - Level Bed		\$ 16.00 ea
3. Pickup - Level II		\$ 19.00 ea
4. Pickup - Level III		\$ 22.00 ea
5. Pickup - Level IV		\$ 25.00 ea
6. Pickup - Level V		\$ 28.00 ea
7. Pickup - Level VI		\$ 31.00
8. Special Handling	<u>20</u>	\$ <u>16.00</u>

ADDED DESCRIPTION: Portage Creek
Dirt

DRIVER [Signature] VEHICLE # 3

CUSTOMER COPY

MAR 8 1 52 PM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128666

	QUANTITY	PRICE
1. General Refuse		\$ 7.50 yd
2. Pickup - Level Bed		\$ 16.00 ea
3. Pickup - Level II		\$ 19.00 ea
4. Pickup - Level III		\$ 22.00 ea
5. Pickup - Level IV		\$ 25.00 ea
6. Pickup - Level V		\$ 28.00 ea
7. Pickup - Level VI		\$ 31.00 e
8. Special Handling	<u>20</u>	<u>\$16.00</u>

ADDED DESCRIPTION:

Portage Creek
Dirt

DRIVER Greg Sylow

VEHICLE # 31

CUSTOMER COPY

MAR 8 1 53 PM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennessey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128667

	QUANTITY	PRICE
1. General Refuse		\$ 7.50 yd
2. Pickup - Level Bed		\$ 16.00 ea
3. Pickup - Level II		\$ 19.00 ea
4. Pickup - Level III		\$ 22.00 ea
5. Pickup - Level IV		\$ 25.00
6. Pickup - Level V		\$ 28.00
7. Pickup - Level VI		\$ 31.00
8. Special Handling	<u>20</u> <u>Dirt</u>	<u>\$16.</u>

ADDED DESCRIPTION: Portage Creek

DRIVER [Signature]

VEHICLE #

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennessey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 9 9 06 AM '90

NO. 4480 NAME Diversco

TICKET # 128679

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse		\$ 7.50 yd
2. Pickup - Level Bed		\$ 16.00 ea
3. Pickup - Level II		\$ 19.00 ea
4. Pickup - Level III		\$ 22.00 ea
5. Pickup - Level IV		\$ 25.00 ea
6. Pickup - Level V		\$ 28.00 ea
7. Pickup - Level VI		\$ 31.00
8. Special Handling	<u>20</u>	<u>\$ 16.00</u>

ADDED DESCRIPTION: Portage Creek
Dirt

DRIVER Greg Dylun VEHICLE # 31

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 9 9 07 AM '90

NO. 4480 NAME Diversco

TICKET # 128680

	QUANTITY	PRICE
1. General Refuse		\$ 7.50 yd
2. Pickup - Level Bed		\$ 16.00 ea
3. Pickup - Level II		\$ 19.00 e
4. Pickup - Level III		\$ 22.00
5. Pickup - Level IV		\$ 25.0
6. Pickup - Level V		\$ 28
7. Pickup - Level VI		\$
8. Special Handling		\$

ADDED DESCRIPTION:

20
Dirt
Portage Creek

DRIVER [Signature]

VEHICLE

CUSTOMER COPY

INSPECTOR'S DAILY REPORT

Contractor DIVERSCO CONSTRUCTION CO.

Subcontractor _____

Weather Sunny to P. Cloudy

Temp. High 70° Low 53°

CONTRACT ITEMS AS CONSTRUCTED

Foreman - Name	Men	Equipment/Number									
Roger	3	trucks	2	trailer	1	Front end loader	1	generator	1		
		crane	1	backhoe	1	vibratory compactor	1				
Work Item	Station and Location		Quantity	Unit Meas.	Remarks						
Permanent Steel sheet Piling 5010001	E of New structure		512 ^{RWS} 528	SFT	(2' x 16' 32') x (16 sections) = 528 ^{RWS} 512						

Sketches, Computations, Remarks, etc.

1 work day ✓ RWS 3/16/90

9:00am	Contractor	began	placing	permanent	steel	sheet	piling	on	North	side	of	Portage	creek
aprox.	11:00am	Dan	Timmer	and	Tom	Labell	of	Diversco	visited	site			
Contractor discovered that the 40 sections of steel sheet piling they had originally planned for the dam was 1 section too short. Contractor was given approval to place the necessary 24 th section of steel piling necessary to complete structure to North Side (additional) of Portage Creek.													
Contractor left site at 3:00pm to retrieve additional piling.													

Daniel R. Gordon
Inspector Signature

W. Nelson
Project Engr.

Control Section Identification	955-45-014	Job Number	1989 BH
Federal Number	MILHAM PARK DAM		
Day	MON	Date	3-12-90
		Report No.	8

Original - Project Engr. C.C. - Inspector

MAR 13 9 20 AM '90

Landfill Managany
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME DIVERSCO CONS.

TICKET # 128764

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ yd

ADDED DESCRIPTION:

PORTAGE CR.
DIRT

DRIVER [Signature] VEHICLE # 312

CUSTOMER COPY

MAR 13 9 48 AM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennessey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME DIVERSCO CONS.

TICKET # 128769

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ yd

ADDED DESCRIPTION:

PORTAGE CR.
DIRT
319

DRIVER Dave Palma VEHICLE # 319

CUSTOMER COPY

March 13

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME DIVERSCO CONC

TICKET # 128775

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 ea
5. Pickup - Level IV	_____	\$ 25.00 ea
6. Pickup - Level V	_____	\$ 28.00 ea
7. Pickup - Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ yd

ADDED DESCRIPTION:

PORTAGE CR.
DIRT

DRIVER 

VEHICLE # 312

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennessey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 13 12 28 PM '90

NO. 4480 NAME DIVERSCO CON'S

TICKET # 128782

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 ea
5. Pickup - Level IV	_____	\$ 25.00 ea
6. Pickup - Level V	_____	\$ 28.00 ea
7. Pickup - Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ yd

ADDED DESCRIPTION:

DIRT
PIRTAGE CR.

DRIVER Dave Castro VEHICLE # 319

CUSTOMER COPY

MAR 13 1 44 PM '99

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME DIVERSCO CONS.

TICKET # 128788

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ yd

ADDED DESCRIPTION:

DIRT
PORTAGE CR.

DRIVER [Signature] VEHICLE # 312

CUSTOMER COPY

MAR 13 2 33 PM '90

Landfill Management Company

Orchard Hill Sanitary Landfill

3378 Hennesey Road

Watervliet, Michigan 49098

Phone: (616) 463-5588

NO. 4480 NAME DIVERSCO CON'S.

TICKET # 128789

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 ea
5. Pickup - Level IV	_____	\$ 25.00 ea
6. Pickup - Level V	_____	\$ 28.00 ea
7. Pickup - Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ yd

ADDED DESCRIPTION:

PORTAGE CR
DIRT

DRIVER Dave Ostro VEHICLE # 319

CUSTOMER COPY

INSPECTOR'S DAILY REPORT

Contractor DIVERSCO CONSTRUCTION CO.

Subcontractor _____

Weather Sunny to P. Cloudy

Temp. High 75° Low 60°

CONTRACT ITEMS AS CONSTRUCTED

Foreman - Name	Men	Equipment/Number									
Roger	3	crane	1	Backhoe	1	Front end loader	1	generator	1	arc welder	1
				Bulldozer	1	6" DIA PUMP	1	vibratory Pile driver	1	Dump trucks	2
Work Item	Station and Location	Quantity	Unit Meas.	Remarks							
Permanent steel sheet piling 5010001		32	SFT	2' x 16' = 32 ✓ puz							
Pond Excavation 209700A		120	CYD	20 x 6 loads = 120							

Sketches, Computations, Remarks, etc.

✓ RWS 3/16/90

8:00 am	Contractor finished date placement of the remainder of steel sheet piling and began checking for grade.
11:00 am (approx.)	Contractor built a dirt and rock retainment structure (DYKE) around North half of New Dam. gravel was placed on riverbed between the new and old Dam's by Contractor for stability of work area and drainage of waste G. this is not a pay item. Contractor performed loading and hauling of Pond excavation

Daniel R. Gordon
Inspector Signature

W. Nelson
Project Engr.

Control Section Identification	955-45-014	Job Number	1989 BH
Federal Number	MILHAM PARK DAM	Day	wednes
Date	3-14-90	Report No.	10

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 14 9 10 AM '90

NO. 4470 NAME Diversco

TICKET # 128802

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER [Signature] VEHICLE # 312

CUSTOMER COPY

MAR 14 9 51 AM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128806

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER Jane Postma VEHICLE # 319

CUSTOMER COPY

MAR 14 11 19 AM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128810

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER [Signature] VEHICLE # 312

CUSTOMER COPY

MAR 14 11 58 AM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennessey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 5060 NAME Diversco

TICKET # 128812

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ 16.00 yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER Dave Postma VEHICLE # 319

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 14 1 35 PM '90

NO. 4480 NAME Diversco

TICKET # 128822

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER [Signature] VEHICLE # 312

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 14 2 34 PM '90

NO. 4480 NAME DifferSCO

TICKET # 128827

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 ea
5. Pickup - Level IV	_____	\$ 25.00 ea
6. Pickup - Level V	_____	\$ 28.00 ea
7. Pickup - Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER Dave Postma VEHICLE # 319

CUSTOMER COPY

INSPECTOR'S DAILY REPORT

Contractor Diversco Construction Co.

Weather M. Cloudy

Subcontractor _____

Temp. High 65° Low 56°

CONTRACT ITEMS AS CONSTRUCTED

Foreman - Name	Men	Equipment/Number									
Roger	3	Front end loader	1	arc welder torch	1	Bulldozer	1	Dumptrucks	2	6" Dia Pump	1
Work Item	Station and Location		Quantity	Unit Meas.	Remarks						
Pond Excavation <u>2097004</u>			120	CYD	20 x 6 = 120						
Note: * Contractor breaks from 9:32 ^{am} to 9:45 ^{am} and from 12:02 ^{pm} to 12:30 ^{pm} regularly. Further reference to this will not be made in future WDR's											

Sketches, Computations, Remarks, etc.

✓ DWS 3/30/90

8:00 am	Contractor began pumping water away from work area with a 6" Diameter Pump. Then the contractor proceeded to cut a space in the Dam for new spillway on the North side of Portage creek. This is one of two to be placed in that half of the dam.
10:30 am	Tom from Diversco visited site
10:00 am	Dan Gordon, the inspector for the City informed Roger that the silt fence forming a silt basin was in need of repair. Contractor responded with intentions to correct the situation (three stakes have up rooted.)
3:15 pm	Contractor ended operations

Daniel R. Gordon
Inspector Signature

W. Nelson
Project Engr.

Control Section Identification <u>955-45-014</u>	Job Number <u>1989BH</u>
Federal Number <u>MILHAM PARK DAM</u>	
Day <u>THURS</u>	Date <u>3-15-90</u>
	Report No. <u>11</u>

MAR 15 9 33 AM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128840

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 ea
Pickup - Level IV	_____	\$ 25.00 ea
Pickup - Level V	_____	\$ 28.00 ea
Pickup - Level VI	_____	\$ 31.00 ea
Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER [Signature] VEHICLE # 312

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 15 10 28 AM '90

NO. 4480 NAME Diversco

TICKET # 128850

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER Jane Postma VEHICLE # 319

CUSTOMER COPY

MAR 15 11 50 AM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128858

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER [Signature] VEHICLE # 312

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 15 12 43 PM '90

NO. 4480 NAME Dillersco

TICKET # 128863

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER Dave Postma VEHICLE # 319

CUSTOMER COPY

Landfill Management Company **MAR 15 2 05 PM '90**
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128869

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER [Signature] VEHICLE # 312

CUSTOMER COPY

Landfill Management Company **MAR 15 3 13 PM '90**
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128872

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER Dave Postma VEHICLE # 319

CUSTOMER COPY

INSPECTOR'S DAILY REPORT

Contractor DIVERSCO CONSTRUCTION CO.

Weather M. Cloudy

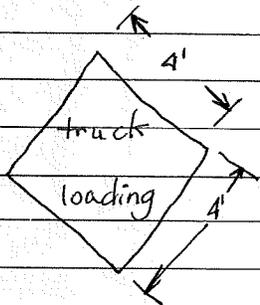
Subcontractor _____

Temp. High 57° Low 35°

CONTRACT ITEMS AS CONSTRUCTED

Foreman - Name	Men	Equipment/Number									
Roger	3	concrete vibrator	1	backhoe	1	FRONT END LOADER	1	concrete truck	1	torch	1
						Bulldozer	1	6" Dia pump	1	arc welder	1

Work Item	Station and Location	Quantity	Unit Meas.	Remarks
✓ Sign, Type B, Temporary 6310057	aprox 1/4 mile south of Dam	16	SFT	see sketch Below
✓ CONCRETE, Grade 355 5030004	North edge of Portage creek at E of New Dam	3	cyd	
✓ Pond Excavation 2097004		120	cyd	-20 for sediment Basin Maintenance
✓ Geo textile silt fence 2130015	west side of lovers lane	125	LFT	was placed Feb 21, 1990
	4x4 = 16 SFT			



Sketches, Computations, Remarks, etc.

8:00 am	Contractor commenced loading Dump trucks and hauling of Pond excavation. Also Contractor began setting forms for concrete to be placed at the North end of the new Dam.
2:30 pm	Concrete arrived and was placed in forms. Also contractor used a concrete vibrator. the Stones aprox 6" in Dia or larger were placed in concrete for foots.
4:00 pm	Contractor ended operations

Daniel R. Gordon
Inspector Signature

W. NELSON
Project Engr.

Control Section Identification	955-45-014	Job Number	1989BH
Federal Number	MILHAM PARK DAM		
Day	FRI	Date	3-16-90
Report No.	12		

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennessey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 16 9 20 AM '90

NO. 4480 NAME Diversco

TICKET # 128886

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 ea
5. Pickup - Level IV	_____	\$ 25.00 ea
6. Pickup - Level V	_____	\$ 28.00 ea
7. Pickup - Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER [Signature] VEHICLE # 312

CUSTOMER COPY

Landfill Management Company **MAR 16 11 52 AM '90**

Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128903

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER Dave Postma VEHICLE # 319

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 16 2 29 PM '90

NO. 4480 NAME Diversco

TICKET # 128922

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER Dave Postmes VEHICLE # 319

CUSTOMER COPY

MAR 16 9 50 AM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennessey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128888

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER Joe Postma VEHICLE # 319

CUSTOMER COPY

Landfill Management Company

Orchard Hill Sanitary Landfill

3378 Hennessey Road

Watervliet, Michigan 49098

Phone: (616) 463-5588

MAR 16 11 45 AM '90

NO. _____ NAME Diversco

TICKET # 128902

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER [Signature] VEHICLE # 312

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 16 2 00 PM '90

NO. 4480 NAME Diversco

TICKET # 128916

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER AGN VEHICLE # 312

CUSTOMER COPY

Landfill Management Company **MAR 19 10 22 AM '90**
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128947

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ 16.00 yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER Jane Pastma VEHICLE # 319

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 19 2 21 PM '90

NO. 4480 NAME Divetsco

TICKET # 128976

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER [Signature] VEHICLE # 312

CUSTOMER COPY

MAR 19 11 51 AM '90

Landfill Management Company

Orchard Hill Sanitary Landfill

3378 Hennesey Road

Watervliet, Michigan 49098

Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128956

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ 16.00 yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER [Signature] VEHICLE # 312

CUSTOMER COPY

Landfill Management Company **MAR 19 9 24 AM '90**
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 128942

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER [Signature] VEHICLE # 312

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 19 3 08 PM '90

NO. 4480 NAME Diversco

TICKET # 128987

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER Dave Postma VEHICLE # 319

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennessey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 19 12 53 PM '90

NO. 4480 NAME Diversco

TICKET # 128964

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER Dave Postmo VEHICLE # 319

CUSTOMER COPY

INSPECTOR'S DAILY REPORT

Contractor DIVERSCO CONSTRUCTION CO.

Subcontractor _____

Weather Sunny to P. Cloudy

Temp. High 44° Low 32°

CONTRACT ITEMS AS CONSTRUCTED

Foreman - Name	Men	Equipment/Number				
ROGER	4	backhoe 1	Bulldozer 1	GRINDER 1		
		crane 1	FRONT END LOADER 1			
Work Item	Station and Location	Quantity	Unit Meas.	Remarks		
Boulders 2137001		19	EA			
Spillways, Fabricated and erected 5047001		1	EA			
Pond Excavation 2097004		20	cyds			

Sketches, Computations, Remarks, etc.

RWS 4/2/90

8:00am	Contractor began excavation of dirt used to build a temporary dyke around new Dam during the fabrication of new spillways. one spillway was completed meaning that all the boards were placed.
	Contractor spent part of the day grooming areas disturbed by the machinery tracks.
1:00pm	Contractor started removing particles of rubble from old Dam out of the creekbed.
	boulders 2' dia or larger were placed randomly into creek below the new dam

Daniel R. Gordon
Inspector Signature

W. Nelson
Project Engr.

Control Section Identification <u>955-45-014</u>	Job Number <u>1989BH</u>
Federal Number <u>MILHAM PARK DAM</u>	
Day <u>tues</u>	Date <u>3-20-90</u> Report No. <u>1A</u>

Original - Project Engr. C.C. - Inspector

MAR 20 9 12 AM '90

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

NO. 4480 NAME DIVERSCO

TICKET # 129004

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 ea
5. Pickup - Level IV	_____	\$ 25.00 ea
6. Pickup - Level V	_____	\$ 28.00 ea
7. Pickup - Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ yd

ADDED DESCRIPTION:

PORTAGE CR
DIRT

DRIVER Dave Postma VEHICLE # 319

CUSTOMER COPY

MAR 22 9 23 AM '90

Landfill Management Company

Orchard Hill Sanitary Landfill

3378 Hennesey Road

Watervliet, Michigan 49098

Phone: (616) 463-5588

NO. 4480 NAME Diversco

TICKET # 129100

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	<u>\$ 16.00</u> yd

ADDED DESCRIPTION: Portage Creek Dirt

DRIVER Dave Postma VEHICLE # 319

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennesey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 22 11 29 AM '90

NO. 4480 NAME DIVERSCO

TICKET # 129118

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup - Level Bed	_____	\$ 16.00 ea
3. Pickup - Level II	_____	\$ 19.00 ea
4. Pickup - Level III	_____	\$ 22.00 ea
5. Pickup - Level IV	_____	\$ 25.00 ea
6. Pickup - Level V	_____	\$ 28.00 ea
7. Pickup - Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

ADDED DESCRIPTION: Portage creek Dirt

DRIVER Jane Postma VEHICLE # 319

CUSTOMER COPY

Landfill Management Company
Orchard Hill Sanitary Landfill
3378 Hennessey Road
Watervliet, Michigan 49098
Phone: (616) 463-5588

MAR 23 9 42 AM '90

NO. 4480 NAME Diversco

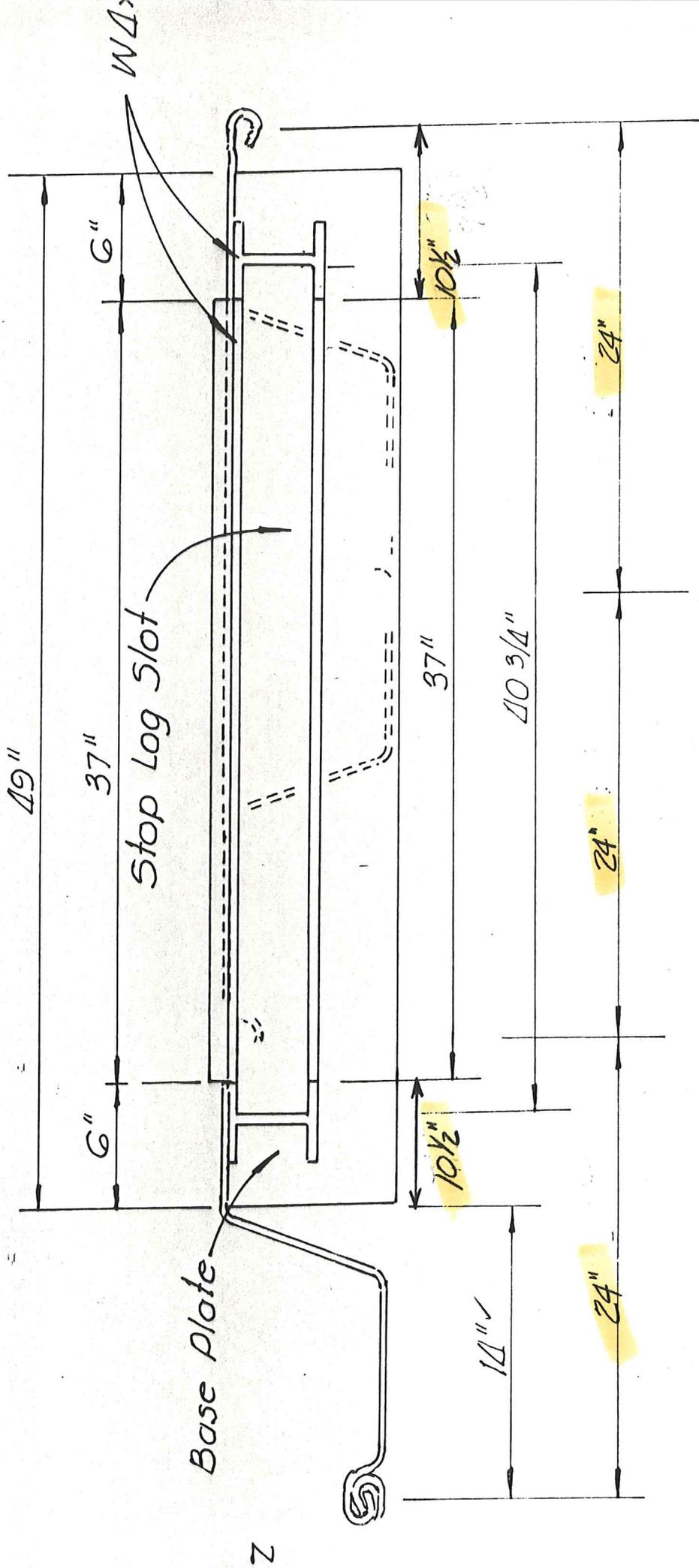
TICKET # 129148

	<u>QUANTITY</u>	<u>PRICE</u>
1. General Refuse	_____	\$ 7.50 yd
2. Pickup – Level Bed	_____	\$ 16.00 ea
3. Pickup – Level II	_____	\$ 19.00 ea
4. Pickup – Level III	_____	\$ 22.00 ea
5. Pickup – Level IV	_____	\$ 25.00 ea
6. Pickup – Level V	_____	\$ 28.00 ea
7. Pickup – Level VI	_____	\$ 31.00 ea
8. Special Handling	<u>20</u>	\$ <u>16.00</u> yd

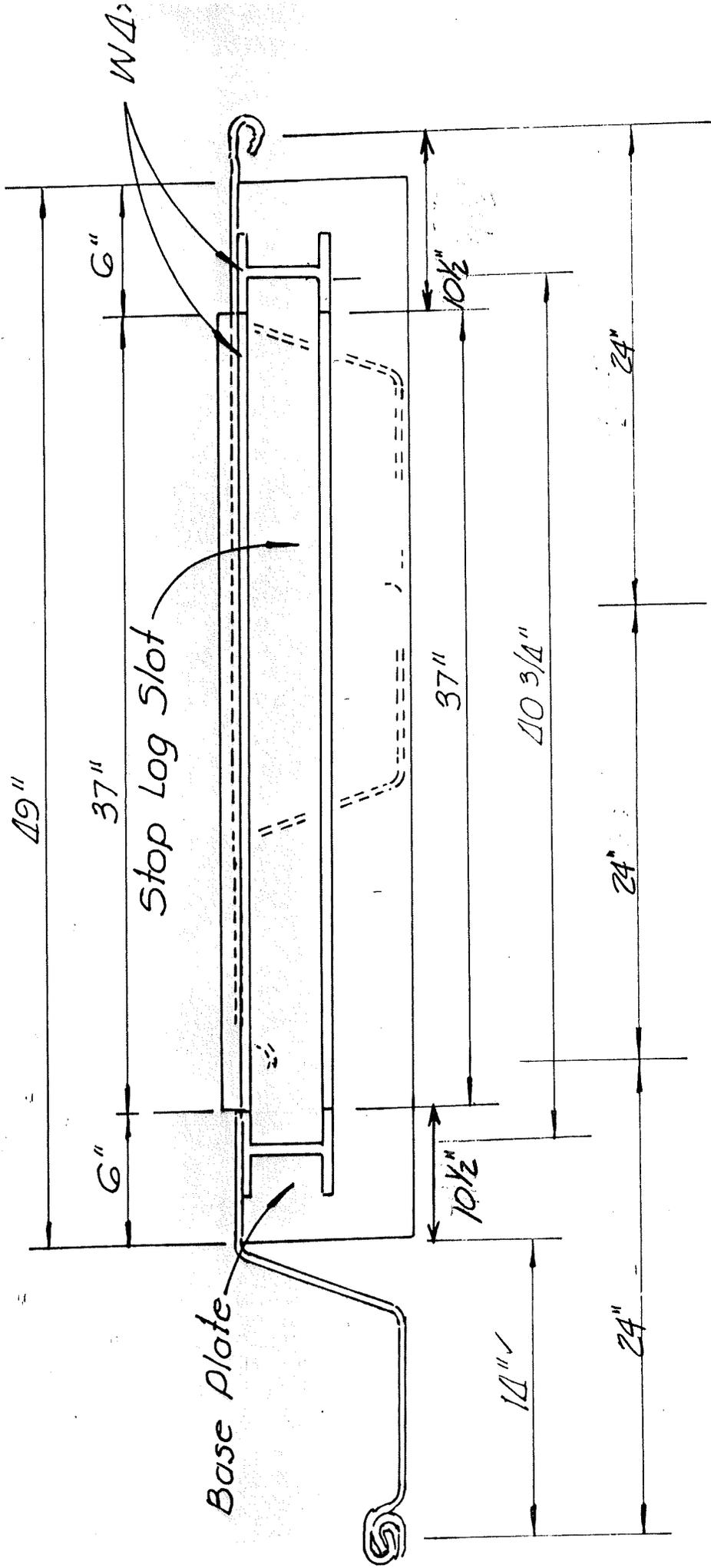
ADDED DESCRIPTION: Portage Creek Dirt

DRIVER Dave Postma VEHICLE # 319

CUSTOMER COPY

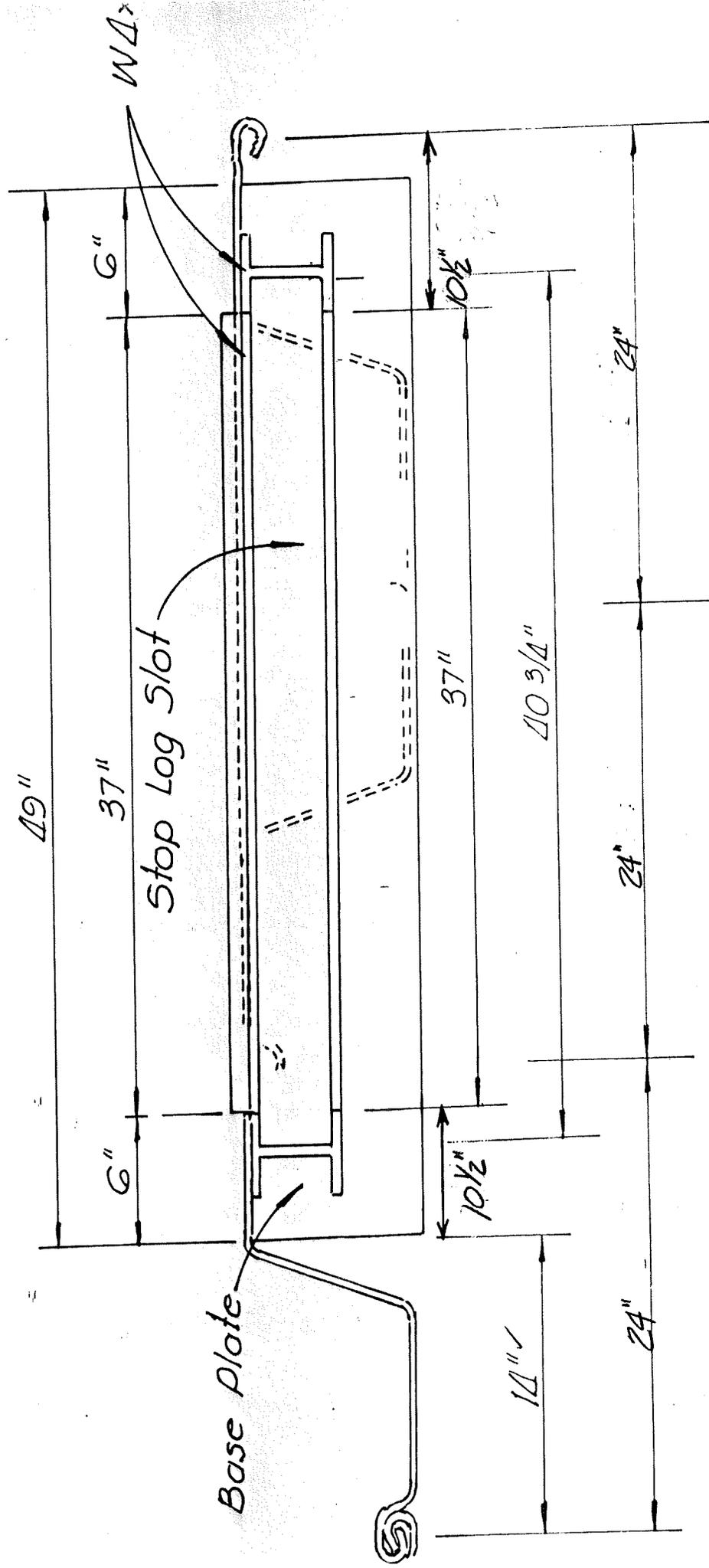


BASE PLATE DETAIL



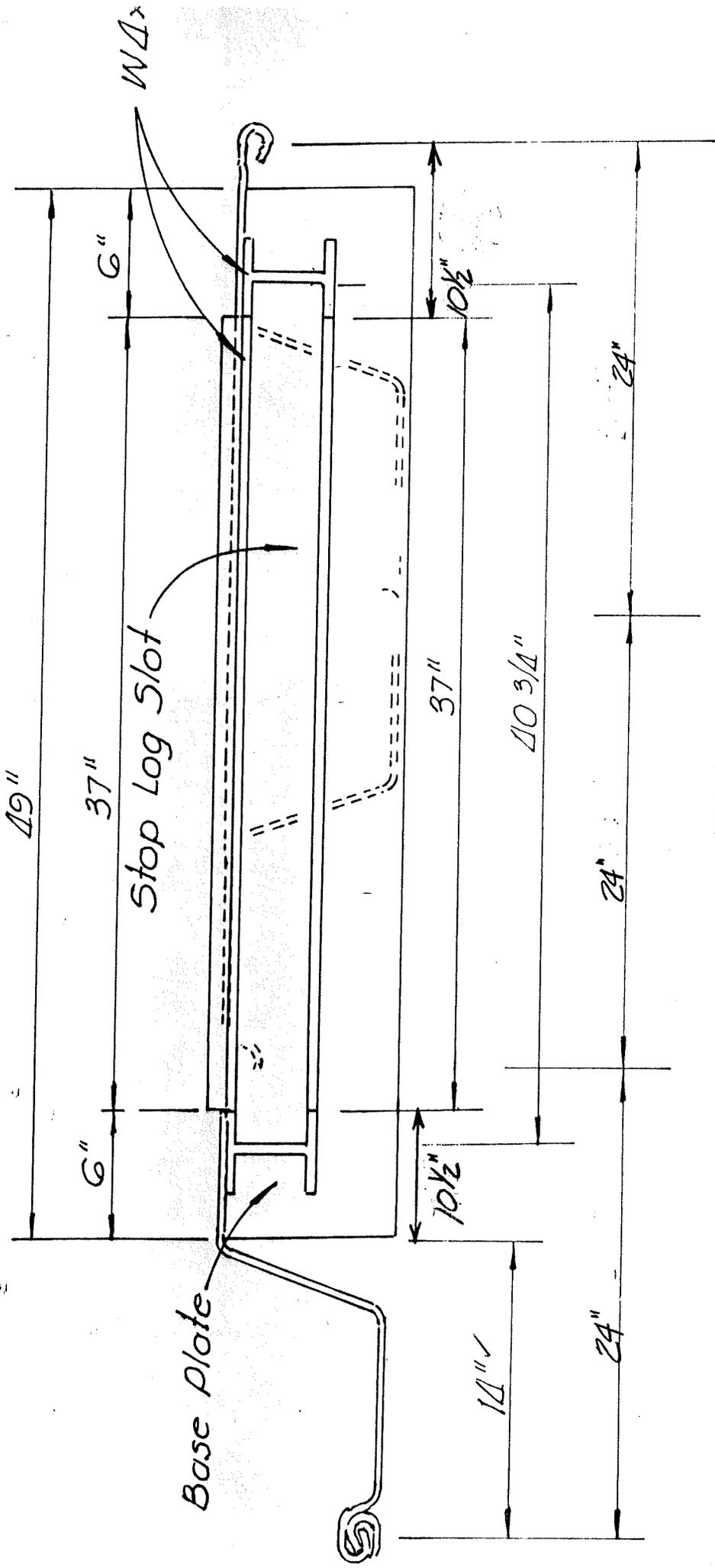
TOP VIEW

BASE PLATE DETAIL



TOP VIEW

BASE PLATE DETAIL



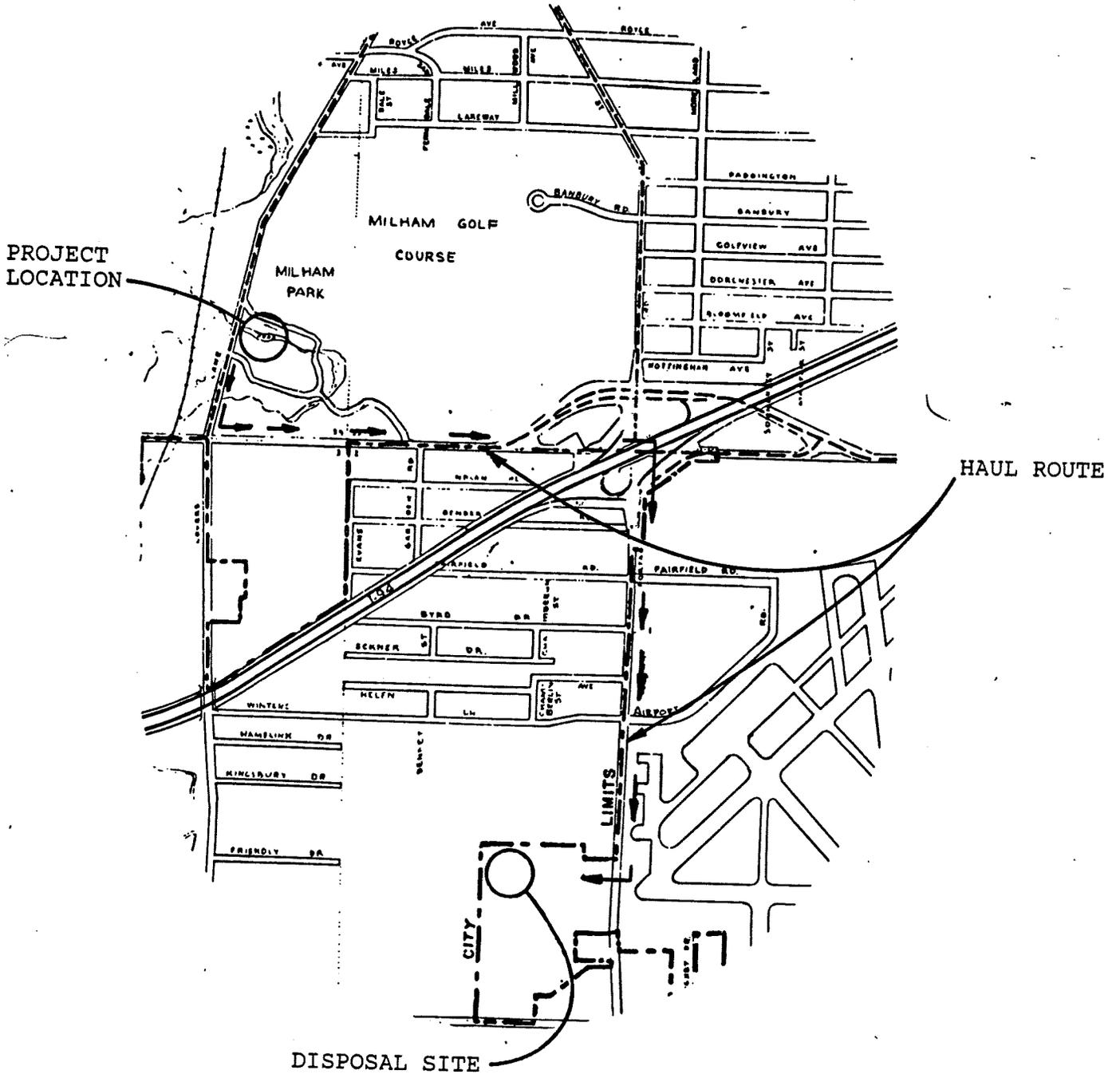
TOP VIEW

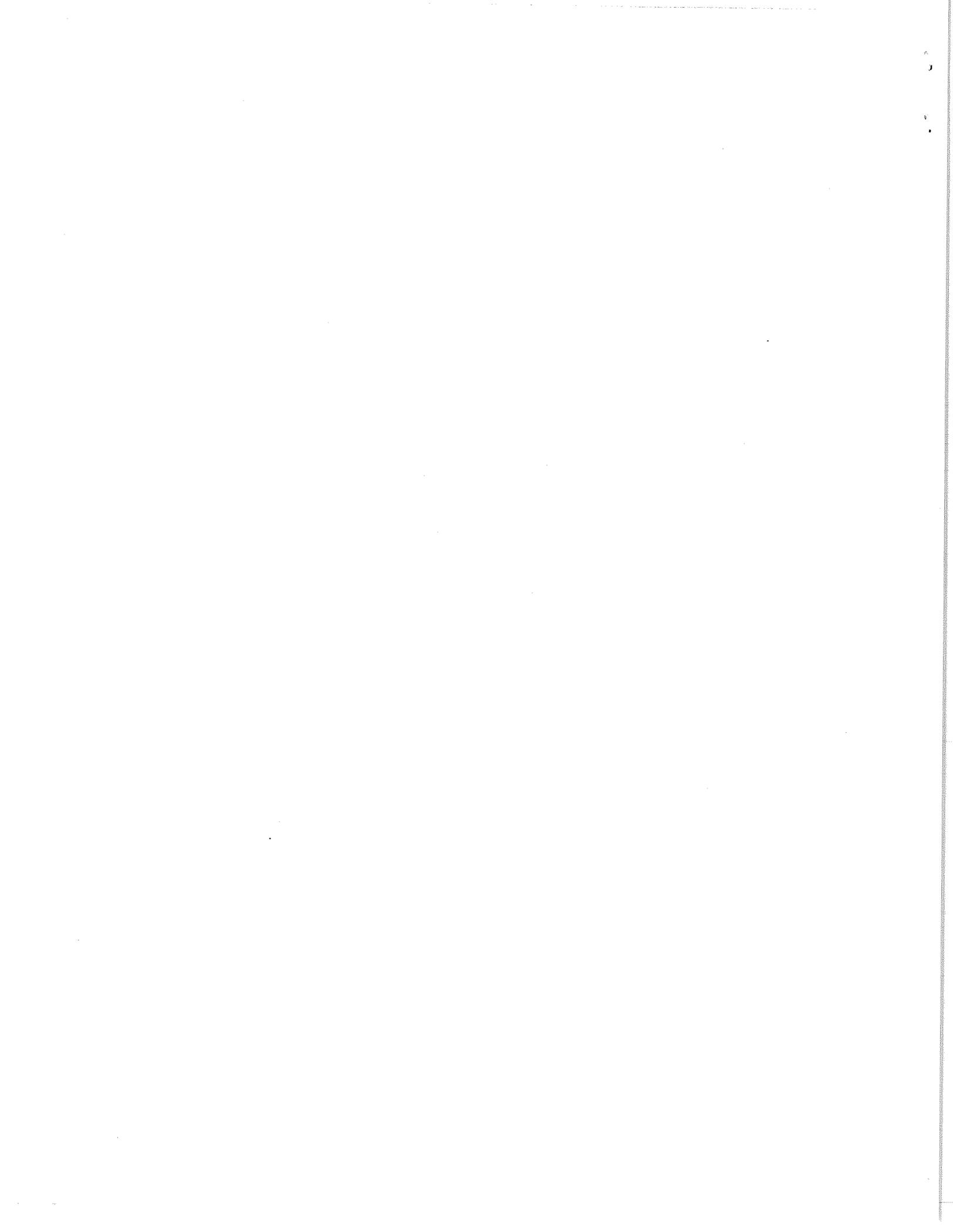
BASE PLATE DETAIL

CITY OF KALAMAZOO
DIVISION OF PUBLIC WORKS

MILHAM PARK
DAM REPLACEMENT and POND IMPROVEMENT

CONTRACT NUMBER 1989 BH
BID REFERENCE NUMBER 955-45-014







INVITATION FOR BIDS

The City of Kalamazoo, Michigan is soliciting sealed bids for:

MILHAM PARK DAM REPLACEMENT AND POND IMPROVEMENT - 1989 BH
Department of Public Services
Public Works Division

ISSUE & RECEIVING OFFICE:
Purchasing Division
Department of Staff Services
241 W. South Street
Kalamazoo, Michigan 49007

BID OPENING: November 9, 1989 @ 3:00 P.M.
Local Time

ISSUE DATE: October 27, 1989

BID REFERENCE #: 955-45-014

You are invited to submit a bid for this project. Specifications, Terms, Conditions and Instructions for submitting bids are contained herein. This Invitation for Bids with all pages, documents and attachments contained herein, or subsequently added to and made a part hereof, submitted as a fully and properly executed bid, shall constitute the contract between the City and the successful bidder when approved and accepted on behalf of the City by an authorized official or agent of the City.

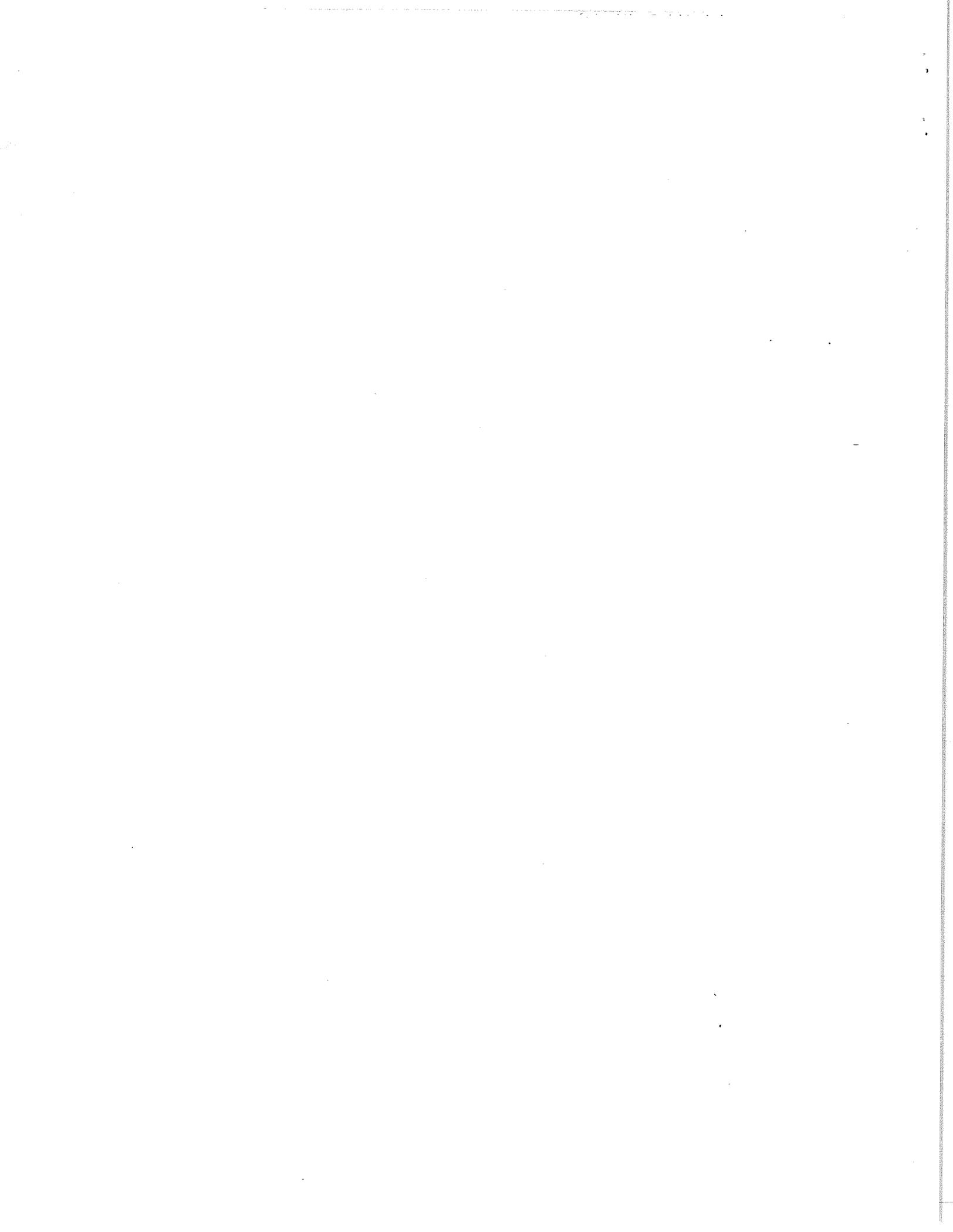
All bidders shall complete the Bid and Award page(s) and submit all information requested herein in order for a bid to be responsive. **FAILURE TO DO SO WILL RESULT IN THE BID BEING REJECTED AS NON-RESPONSIVE.** The bid document shall be returned in its entirety, in a properly identified and sealed envelope to the Purchasing Division at the above address. **BIDS MUST BE RECEIVED BEFORE THE TIME OF BID OPENING, LATE BIDS WILL NOT BE CONSIDERED.** The City reserves the right to postpone the bid opening for its own convenience.

CONTENTS

	<u>Page(s)</u>
Bid and Award	1, 1-A, 1-B
Instructions to Bidders	2
Insurance Requirements	3
Special Requirements	4 - 5
Specifications	6 - 7
Special Conditions	8 - 11
Terms and Conditions	12 - 15
Special Provisions	16 - 23

APPENDICES

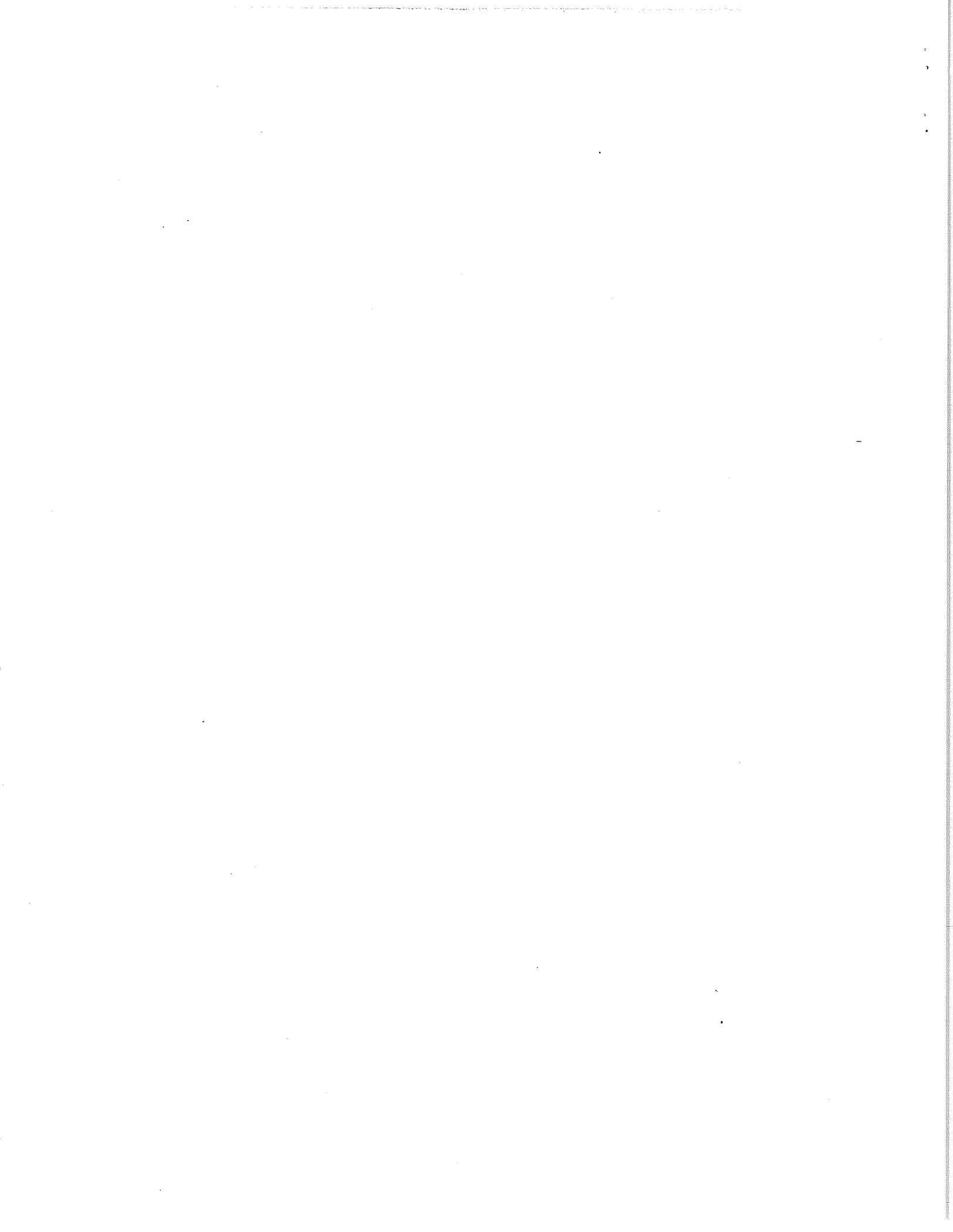
- Appendix A
- Appendix B
- Appendix C
- Prevailing Wage Rates
- Fair Employment Practices (A & B forms)



BID AND AWARD

The undersigned having become thoroughly familiar with all the bid/contract documents incorporated herein, the project sites and the local conditions affecting the work, hereby propose to perform everything required to be performed in strict conformity with the requirements of the current Standard Specifications for Highway Construction of the Michigan Department of Transportation, and to provide and furnish all of the labor, materials, necessary tools, expendable equipment and all utility and transportation services necessary to complete in a workmanlike manner the subject project for the City of Kalamazoo for the unit prices stated below:

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>
1.	Removal of Structures Item Code - 2060001	1	LS	\$ _____	\$ _____
2.	Pond Excavation Item Code - 2097004	4092	CYD	\$ _____	\$ _____
3.	Steambed Protection (LM) Item Code - 2130009	27	CYD	\$ _____	\$ _____
4.	Sediment Basin Excavation Item Code - 2130013	34	CYD	\$ _____	\$ _____
5.	Sediment Excavation Maintenance Item Code - 2130014	68	CYD	\$ _____	\$ _____
6.	Geotextile Silt Fence Item Code - 2130015	200	LFT	\$ _____	\$ _____
7.	Boulders Item Code - 2137001	18	EA	\$ _____	\$ _____
8.	Permanent Steel Sheet Piling Item Code - 5010001	1288	SFT	\$ _____	\$ _____
9.	Concrete, Grade 355 Item Code - 5030004	5	CYD	\$ _____	\$ _____
10.	Steel Reinforcement Item No. - 5030030	304	LBS	\$ _____	\$ _____
11.	Spillways, Fabricated and Erected Item Code - 5047001	4	EA	\$ _____	\$ _____
12.	Barricade, Type II Item Code - 6310025	6	EA	\$ _____	\$ _____
13.	Barricade, Type III Item Code - 6310035	2	EA	\$ _____	\$ _____
14.	Sign, Type B, Temporary Item Code - 6310057	48	SFT	\$ _____	\$ _____



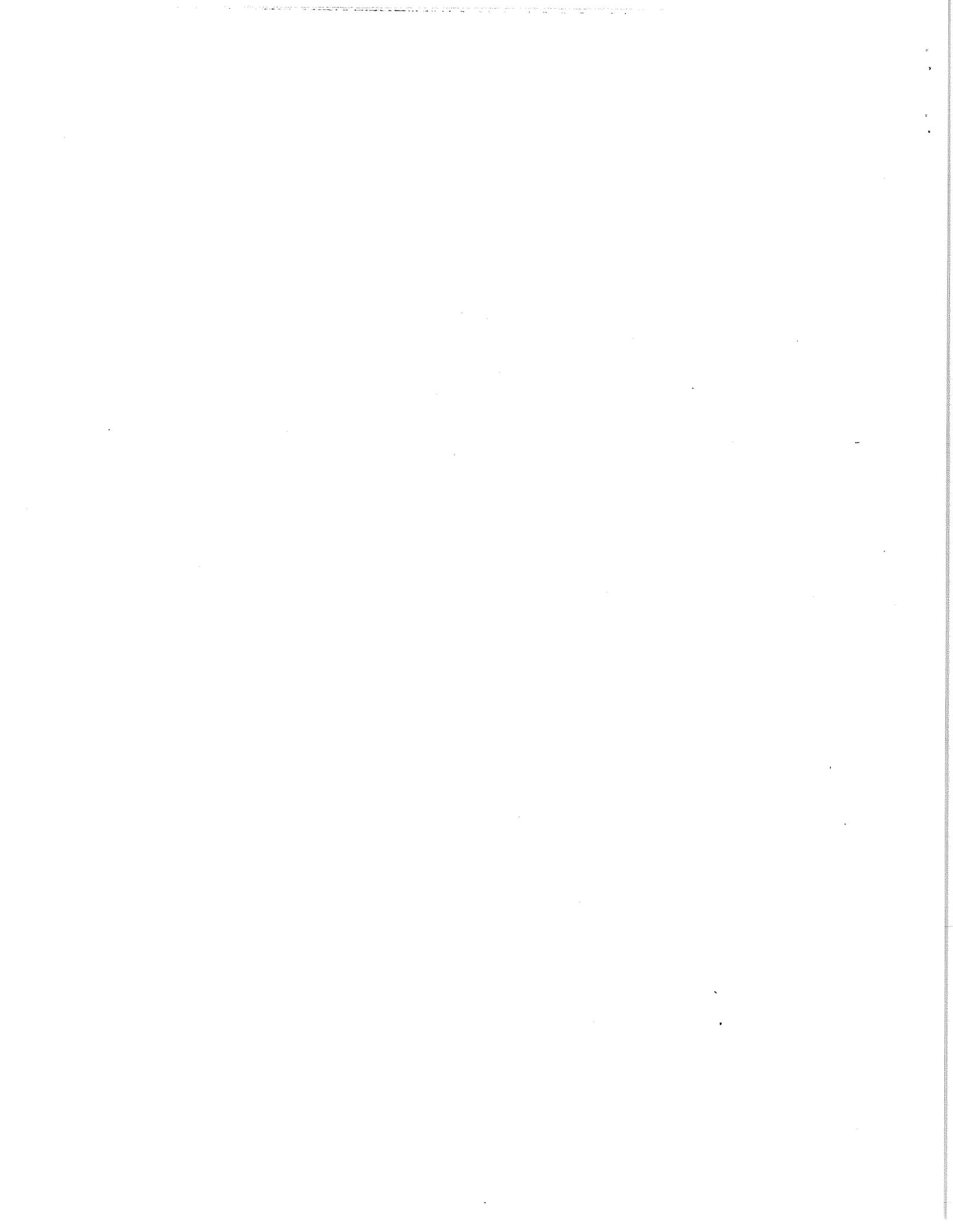
**CITY OF KALAMAZOO - INVITATION FOR BIDS
MILHAM PARK DAM REPLACEMENT AND
POND IMPROVEMENTS - 1989 BH**

Page 1-A
Reference No. 955-45-014

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>
15.	Protective Fence Item Code - 6317001	300	LFT	\$ _____	\$ _____
16.	Roadside Seeding Item Code - 6530006	50	LBS	\$ _____	\$ _____
17.	Chemical Fertilizer Nutrient Item Code - 6530010	120	LBS	\$ _____	\$ _____
18.	Topsoil Surface, 3" Item Code - 6530014	2420	SYD	\$ _____	\$ _____
19.	Erosion Control Blankets Item Code - 6537001	2420	SYD	\$ _____	\$ _____
GRAND TOTAL					\$ _____

SUB-CONTRACTORS: The undersigned bidder agrees that the following is a complete and accurate list of all sub-contractors to be utilized if awarded this contract. Any change from this list shall be permitted only with the consent of the City. **LIST NAME OF EACH SUB-CONTRACTOR AND BRIEF DESCRIPTION OF WORK TO BE DONE.**

FAILURE TO PROVIDE ALL THE INFORMATION REQUESTED HEREIN MAY BE CAUSE FOR REJECTING THE BID AS NON-RESPONSIVE.



**CITY OF KALAMAZOO - INVITATION FOR BIDS
MILHAM PARK DAM REPLACEMENT AND
POND IMPROVEMENTS - 1989 BH**

Page 1-B
Reference No. 955-45-014

I hereby state that all of the information I have provided is true, accurate and complete. I hereby state that I have authority to submit this bid which will become a binding contract if accepted by the City of Kalamazoo. I hereby state that I have not communicated with nor otherwise colluded with any other bidder, nor have I made any agreement with nor offered or accepted anything of value from an official or employee of the City of Kalamazoo that would tend to destroy or hinder free competition.

I hereby state that I have read, understand and agree to be bound by all of the terms and conditions of this bid document.

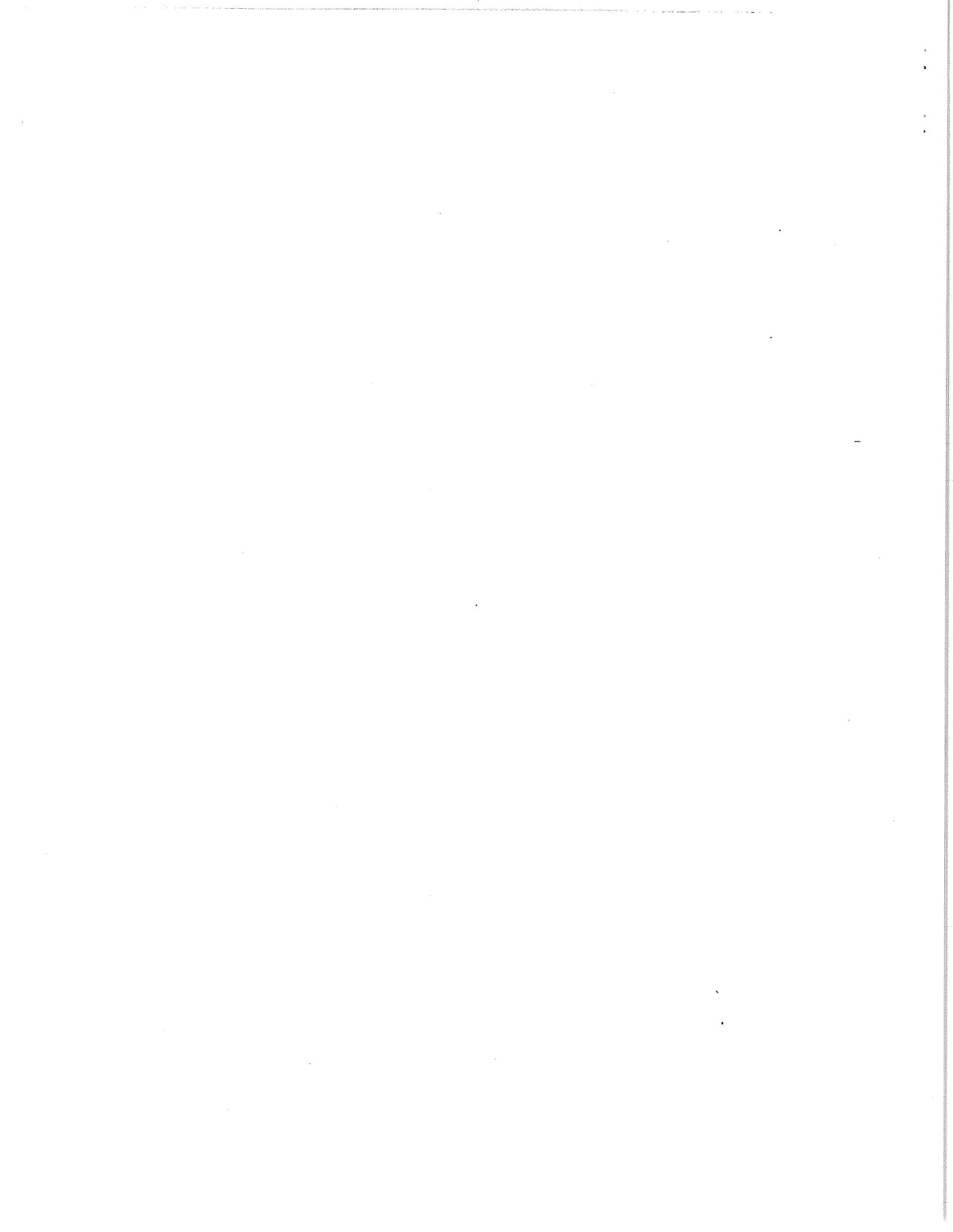
SIGNED: _____ NAME: _____
TITLE: _____ DATE: _____ (Type or Print)
FIRM NAME: _____ PHONE: _____
(if any)
ADDRESS: _____
(Street Address) (City) (State) (Zip)

AWARD - FOR CITY USE ONLY - DO NOT WRITE BELOW

ACCEPTED BY: _____
(Contracting Officer)

TITLE: _____

DATE: _____



INSTRUCTIONS TO BIDDERS

1. **EXAMINATION OF BID DOCUMENT**-Before submitting a bid, bidders shall carefully examine the specifications and shall fully inform themselves as to all existing conditions and limitations. The bidder shall indicate in the bid the sum to cover the cost of all items included on the bid form.
2. **PREPARATION OF BIDS**-The bid shall be legibly prepared in ink or typed. If a unit price or extension already entered by the bidder on the Bid and Award form is to be altered, it shall be crossed out and the new unit price or extension entered above or below and initialed by the bidder with ink. The bid shall be legally signed and the complete address of the bidder given thereon.

All bids shall be tightly sealed in an opaque envelope and properly identified with the attached bid sticker. Bids opened by mistake, due to improper identification, will be so documented and resealed. The Purchasing Division will maintain and guarantee confidentiality of the contents until the specified opening date and time.
3. **EXPLANATION TO BIDDERS**-Any explanation desired by a bidder regarding the meaning or interpretation of the Invitation for Bid (IFB) and attachments, must be requested in writing and with sufficient time allowed for a reply to reach all prospective bidders, before the submission of their bid. Any information given to a prospective bidder concerning the IFB will be furnished to all prospective bidders as an Amendment, or Addendum, to the IFB if such information would be prejudicial to uninformed bidders. Receipt of amendments, or addendums, by a bidder must be acknowledged in the bid, by attachment, or by letter or telegram received before the time set for opening of bids. Oral explanation or instructions given prior to the opening will not be binding.
4. **CASH DISCOUNTS**-Discount offered for payment within less than thirty (30) days will not be considered in evaluating bids for award. Offered discounts of less than thirty (30) days will be taken if payment is made within the discount period, even though not considered in evaluation of the bid.
5. **WITHDRAWAL OF BIDS**-Bids may be withdrawn in person by a bidder, or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the exact time set for receipt of bids. No bid may be withdrawn for at least 60 days after bid opening.
6. **ALTERNATE BIDS**-Bidders are cautioned that any alternate bid, unless specifically requested, or any changes, insertions, or omissions to the terms & conditions, specifications, or any other requirement of this IFB, may be considered nonresponsive, and at the option of the City, result in rejection of the bid.
7. **LATE BIDS**-Any bid received at the office designated herein after the exact time specified for receipt, will not be considered. (Note: The City reserves the right to consider bids that have been determined by the City to be received late due to mishandling by the City after receipt of the bid and no award has been made.)
8. **UNIT PRICES**-If there is a discrepancy between unit prices and their extensions, unit prices shall prevail.

INDEMNITY AND INSURANCE

The Contractor/Vendor shall save, defend, indemnify and hold harmless, the City of Kalamazoo and its employees, officials, departments, agents, boards, commission, and volunteers against demands, proceedings, orders, decrees of lawsuits, damages and judgments of every nature and description arising out of, or resulting from negligent acts, omissions or non-performance of the Contractor or its employees, agents or subcontractors.

The Contractor shall furnish within fifteen (15) working days of Notice of Award, Certificate(s) of Insurance, providing insurance coverage as follows:

- (A) Workers' Compensation Insurance - Covering all persons engaged in work under this contract to the full statutory limits stipulated in the Michigan Workers' Compensation Act.
- (B) Comprehensive General Liability Insurance - Including Premises and Operations, including XCU coverage, if the nature of the contract requires XC or U work. Product and Completed Operations, Contractual and Independent Contractor's Protection with limits as follows:

	Construction*	Non-Construction
Bodily Injury	\$500,000 ea/ \$500,000 occurrence	\$300,000 ea/ \$300,000 occurrence
Property Damage or Bodily Injury/ Property Damage	\$100,000 occurrence/ \$100,000 aggregate \$500,000 CSL	\$100,000 occurrence/ \$100,000 aggregate \$300,000 CSL

- (C) Automobile Liability Insurance - Including owned, non-owned, and hired motor vehicles as well as Michigan Property Protection Insurance as required by statute. Limits as follows:

	If vehicles are required for contract work	If vehicles are not required for contract work
Bodily Injury	\$500,000 ea/	\$250,000 ea/ \$500,000 occurrence
Property Damage or Bodily Injury/ Property Damage	\$100,000 occurrence/ \$100,000 aggregate \$500,000 CSL	\$100,000/occurrence \$100,000 aggregate \$500,000 CSL

The above requirements should not be interpreted to limit the liability of the Contractor under this contract.

ALL INSURERS SHALL BE EITHER LICENSED OR AUTHORIZED TO DO BUSINESS IN THE STATE OF MICHIGAN.

These coverages shall protect the Contractor, its employees, agents, representatives, and subcontractors against claims arising out of the work performed.

THE CITY OF KALAMAZOO, ITS AGENTS AND EMPLOYEES, SHALL BE INCLUDED AS ADDITIONALLY INSURED WITH RESPECT TO ALL LIABILITY POLICIES HEREIN.

A thirty (30) day cancellation clause with notice to the City of Kalamazoo shall be included; words modifying the cancellation clause such as "endeavor to" provide notice will be unacceptable and must be stricken.

It shall be the Contractor's responsibility to provide similar insurance for each subcontractor or to provide evidence that each subcontractor carries such insurance in like amounts, prior to the time such subcontractor proceeds to perform under the contract.

*A partial list of construction activity for purposes of example are: demolition contractors, building contractors, commercial builders, electrical contractors, mechanical contractors, plumbing contractors, sign contractors, moving contractors, and excavators.

SPECIAL REQUIREMENTS

1. BID BOND/GUARANTEE

The bid must be accompanied by a bid bond which shall not be less than five (5%) percent of the total amount of the bid. No bid will be considered unless it is accompanied by the required guarantee. The bid guarantee shall insure the execution of the bid and award, and the furnishing of a performance bond and a labor and material bond (A and B below) by the successful bidder. (Bidders Note: A cashier's or certified check in lieu of a bid bond is NOT acceptable.)

(A) PERFORMANCE BOND

A performance bond shall be furnished in the full amount of the contract insuring the City of faithful performance of all the provisions of the contract, and the satisfactory performance of any equipment required hereunder. The bond shall also insure the City against defective workmanship and/or materials.

(B) LABOR AND MATERIAL BONDS

A labor and material bond shall be furnished for the period covered by the contract, in the full amount of the contract for the protection of labor and material suppliers and sub-contractors.

Bonds shall be secured by a guaranty or a surety company listed in the latest issue of the U.S. Treasury, form 356, and licensed to do business in the State of Michigan, and written in favor of the City of Kalamazoo. The amount of such bonds shall be within the maximum amount specified for such company in said form 356. The bonds shall be accompanied by a power of attorney showing authority of the bonding agent to sign such bonds on behalf of the guaranty or surety company. The cost of the bonds shall be borne by the Contractor.

Failure of the Contractor to supply the required bonds within fifteen (15) days after Notice of Award, or within such extended period as the Purchasing Agent may agree to, shall constitute a default and the City of Kalamazoo may either award this contract to the next lowest bidder or re-advertise for bids and may charge against the Contractor for the difference between the amount of the bid and the amount for which a contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the bid bond. If a more favorable bid is received by re-advertising, the defaulting bidder shall have no claim against the City of Kalamazoo for a refund.

2. WAIVERS OF LIEN

Upon completion of all work and request for final payment, the Contractor shall furnish a 100% waiver of lien from each supplier and sub-contractor covering all items of the work. Failure to supply waivers of lien for the entire job upon completion and final payment request will be considered grounds for withholding final payment.

3. DAVIS-BACON ACT

The successful bidder will be required to comply with Section 2-125 of the Code of Ordinances of the City of Kalamazoo regarding prevailing wages (Davis-Bacon Act), and Appendix B attached, incorporated herein by reference. Special note: This provision applies only to contracts in excess of \$50,000 for City (\$2,000 federal or state) funded projects.

The City's requirements as it relates to Davis-Bacon includes a meeting with the City's Contract Compliance Officer prior to work and payroll and work monitoring during the duration of the contract. Please contact the Contract Compliance Officer at (616) 385-8020 if you have any questions regarding Davis-Bacon provisions.

4. **SUB-CONTRACTORS**

Bidders shall state on the Bid and Award page any and all subcontractors to be associated with this bid, including the type of work to be performed. Any and all subcontractors shall be bound by all of the terms, conditions and requirements of the bid/contract; however, the prime contractor shall be responsible for the performance of the total work requirements.

The Contractor shall cooperate with the City of Kalamazoo in meeting its commitments and goals with regard to maximum utilization of minority and women business enterprises, and will use its best efforts to ensure that minority and women business enterprises have a maximum practicable opportunity to compete for sub-contract work under this agreement.

5. **MDOT PRE-QUALIFICATION**

- A. Pre-qualification by the Michigan Department of Transportation of FA certification will be required as a pre-requisite to consideration of any bid. The work performed under this contract shall be in accordance with the 1984 Michigan Department of Transportation "Standard Specifications for Highway Construction", and the general and supplemental specifications as contained in the contract documents.
- B. Sub-contractors will **not** be required to have MDOT pre-qualification. The City may, however, require work history and equipment inventory to assure capability of performing the work requirements.

SPECIFICATIONS

1. AWARD

Project shall be awarded on a total basis, **NOT SPLIT**.

2. DIRECTOR'S STATUS

The Public Works Manager or his duly authorized representative will have general authority to stop the work whenever such stoppage may be necessary to insure the proper execution of this contract. He/she shall have the authority to reject any work or materials which do not conform to the contract and to decide questions or interpretation which may arise from the contract documents.

The Contractor shall immediately report to the Public Works Manager any questionable or obvious error or omission which may be apparent and shall not proceed with the work until the Public Works Manager has resolved the error or omission.

3. CONSTRUCTION SCHEDULE AND COORDINATION

The Contractor shall supply the City with an agreeable construction schedule before commencing work on this contract. This schedule shall detail beginning and completion dates for each major component of this project.

The Contractor shall coordinate and cooperate with all other contractors who may be working on the site in order to allow for the orderly progress of all work being done on the site. Note the special provision for coordination clause included herein.

The Contractor is required to keep the Public Works Manager fully informed of any proposed work which will tend to interfere with the existing operations at the working site.

The Contractor shall schedule his/her work to accommodate the City's schedule. In the event this schedule falls on weekends, nights or overtime work is required, no additional compensation will be allowed. All work shall be part of this contract without regard to when it is done.

3. PROTECTION OF WORK

The Contractor shall maintain adequate protection of all his/her work from damage and shall protect all public and private abutting property from injury or loss arising in connection with this contract.

4. PROTECTION OF PROPERTY

The Contractor shall confine his equipment and operations to those areas of the City's land necessary for the completion of the work, or as authorized by the Public Works Manager. He/she shall protect and preserve from damage any facilities and natural features including trees, shrubs and turf which are not required to be disturbed by the requirements of the work.

The Contractor shall be responsible to determine the location of and to protect from damage any utilities or other improvements.

5. REMOVAL OF RUBBISH

The Contractor shall remove all rubbish and accumulated materials due to his/her construction.

6. GUARANTEE

The Contractor shall guarantee all materials and workmanship for a period of one (1) year from the final acceptance of the completed work and shall repair, replace or make good any materials of work which shall fail to function or perform or be found defective, without cost to the City.

7. SAFETY

The Contractor shall conform to all applicable OSHA and MIOSHA regulations.

SPECIAL CONDITIONS

1. INTENT

It is the intent of these plans and specifications to provide for all labor, materials, tools and equipment necessary to perform in a workmanlike manner the street reconstruction work for the City of Kalamazoo, as delineated and specified herein.

2. SCOPE OF WORK

This construction project includes, but is not limited to dam replacement and pond improvements at Milham Park.

3. QUANTITIES

The quantities shown on the Bid and Award pages are approximate only and are subject to increase or decrease. No guarantee of maximum or minimum is given.

4. PRICE

The unit price, including its pro-rata share of overhead, multiplied by the quantity shown shall represent the total bid. Any bid not conforming to this requirement may be rejected as non-responsive. Special attention of all bidders is called to this provision since if conditions make it necessary to revise the quantities, no limit will be fixed for such increased or decreased quantities, nor extra compensation allows; provided the net monetary value of all such additive and subtractive changes in quantities of such items of work, i.e., difference in cost, shall not increase or decrease the original contract price by more than twenty-five (25%) percent. Some items of work might be increased beyond the 25% limitations as spelled out previously, upon mutual agreement.

5. INSPECTION OF WORK

The City may maintain inspectors on the job who shall at all times have access to the work.

6. INSPECTION OF SITE

Each bidder shall visit the site of the proposed work and fully acquaint himself/herself with the existing conditions relating to construction and labor, and shall fully inform himself/herself as to the facilities involved and the difficulties and restrictions attending the performance of this contract. The bidder shall thoroughly examine and become familiar with the drawings, specifications and all other bid/contract documents. The Contractor, by the execution of this contract, shall in no way be relieved of any obligation under it due to his failure to receive or examine any form or legal instrument, or to visit the site and acquaint himself/herself with the conditions there existing. No allowance shall be made subsequently in this connection in behalf of the Contractor for any negligence of his/her part. For inspection call the Public Works Division, 385-8022.

7. LAYING OUT WORK

Before submitting a bid the Contractor shall verify all measurements and shall be responsible for the correctness of same. No extra charge or compensation will be allowed on account of differences between actual dimensions and the measurements indicated on the drawings. Any difference which may be found shall be submitted to the Public Works Manager for consideration before proceeding.

8. TEMPORARY UTILITIES

- A. Temporary or construction water will NOT BE available on the sites. Drinking water must be provided for by the Contractor.
- B. Temporary toilets: To be supplied by the Contractor as may be necessary.

9. SITE SECURITY

The Contractor will be responsible for job site security of all materials and tools provided by him/her, and no claim for loss or damage will be considered by the City.

10. SITE ACCESS

The City will provide fair and reasonable access to the job site at all normal working hours.

11. MATERIALS INSPECTION AND RESPONSIBILITY

The City Engineer shall have the right to inspect any material to be used in carrying out the terms of this contract.

The City does not assume any responsibility for the contracted quality and standard of all materials, equipment, components or completed work furnished under this contract.

Any such materials, equipment, components or completed work which does not comply with MDOT specifications or state codes may be rejected by the City and shall be replaced by the Contractor at no cost to the City.

Any materials, equipment or components rejected shall be removed within a reasonable period of time from the premises of the City at the entire expense of the Contractor after written notice has been mailed by the City to the Contractor that such materials, equipment or components have been rejected.

12. TARDINESS

Construction delays resulting from tardiness on the part of the Contractor will be reviewed by the City in the event of any request for contract extension by the Contractor.

13. MODIFICATIONS TO THE CONTRACT

Any modifications to the contract shall be subject to prior approval by the Purchasing Manager. City Commission approval may be required.

Prices for additional work required are not requested in the itemized listing contained herein for the base project. Should additional work be authorized, compensation shall be made on the basis of price or prices to be mutually agreed upon. Such additional work shall not begin until a change order has been approved. Also see Item 6, Page 13 of the Terms and Conditions.

14. PROGRESS SCHEDULE

The Contractor will be required to start work within ten (10) days after receiving Notice to Proceed. This contract shall be completed by April 1, 1990.

The provisions of Article 1.08.07b of the Standard Specifications for reducing liquidated damages to 50 percent of the amount indicated in Table 1.08-1 of Article 1.08.07c for projects where traffic is maintained during construction will not apply.

The Contractor will be required to meet with the Public Works representatives to work out detailed progress schedule. The schedule for this meeting will be set within one week after contract award has been made.

The named sub-contractor(s) for all items shall also be present at the scheduled meeting and they will be required to sign the Progress Schedule to indicate their approval of the scheduled dates of work set forth in the Progress Schedule.

The Progress Schedule shall include, as a minimum, the starting and completion dates for major items, and where specified in the bid document the date the project is to be opened to traffic as well as the final project completion date specified in the bid document.

Failure on the part of the Contractor to carry out the provisions of the Progress Schedule as established, may be considered sufficient cause to prevent bidding future projects until a satisfactory rate of progress is again established.

The starting date, contract time or completion date for this project may be adjusted by Public Works without imposing liquidated damages upon the receipt of satisfactory documented evidence that unforeseen delayed delivery of critical materials will prevent the orderly prosecution of the work.

15. MAINTAINING TRAFFIC

This work shall be in accordance with the requirements of Section 6.31 of the Standard Specifications as herein specified. The Contractor is advised that the current Michigan Manual of Uniform Traffic Control Devices is hereby established as governing all work in connection with traffic control devices, barricade lighting, etc. required on this project.

The Contractor shall furnish, erect, maintain and, upon completion of the work shall remove all traffic control devices and barricade lights within the projects and around the perimeter of the project for the safety and protection of thru and local traffic. This includes, but not limited to: advance, regulatory and warning signs; barricades and channeling devices at intersecting streets on which traffic is to be maintained; barricades at the ends of the projects and at right-of-way lines for intersecting streets which are to be closed with the first usable street on each side of project. Traffic regulators, where required by the Engineer, are included.

Where described by the Engineer, the requirements for the maintenance of thru traffic as described in Article 6.31.09 of the Standard Specifications shall also apply to the maintenance of local traffic.

Protection for all pedestrian traffic shall be maintained at all times.

Payment for traffic control devices shall be made based on quantity used and contract unit prices. All devices shall be paid for once only. Relocation of signs, barricades, lights or flaggers shall be incidental to the appropriate work item. Removal and reinstallation of these devices shall also be incidental to the appropriate work item with no extra payment made.

All temporary signs not attached to Type III barricades shall be installed to maintain a minimum of 5 feet of under-clearance. The Contractor may install temporary signs on driven posts on moveable stands at his/her option while maintaining the required under-clearance.

16. LIQUIDATED DAMAGES

Liquidated damages, if applicable, shall be assessed according to Section 1.08.07 and Table 1.08-1 of MDOT 1984 Standard Specifications for Construction.

The provisions of Article 1.08.07b of the Standard Specifications for reducing liquidated damages to 50 percent of the amount indicated in Table 1.08-1 of Article 1.08.07c for projects where traffic is maintained during construction will not apply.

17. QUESTIONS

Bidders shall address questions regarding the specifications to the Division of Public Works at (616) 385-8002. (This does not exempt any bidder from Page 2, Item 3.)

Questions regarding terms, conditions and other related bid requirements shall be addressed to Patricia Cook, Buyer, at 385-8020.

18. BASIS FOR PAYMENT

Payment shall be based on the bid unit price for each work item and the approved constructed quantity for that work item. Due to potential differences in conditions between the plans and the field, final as built quantities may be different than contained in the bid document. The City does not guarantee quantities and will pay only for "as built" quantities approved by the Engineer or his representative. Quantities in excess of those approved shall be at the Contractor's own expense, the City will not be responsible for any excess quantities not approved. Should an item of work have to be redone, such as replacing new walk because the Contractor failed to adequately protect the wet concrete from rain or pedestrian or vehicular damage, such work shall be replaced at the Contractor's expense. Should changes in design result in the Project Engineer directing the removal and reinstallation of already completed work prior to final completion and acceptance of the project, such removal and installation shall be paid for based on as bid unit prices and the quantities removed and installed.

TERMS AND CONDITIONS

1. AWARD OF CONTRACT

- A. This contract will be awarded to that responsible bidder whose bid, conforming to this solicitation, will be most advantageous to the City, price and other factors considered. The City reserves the right to accept or reject any or all bids and waive informalities and minor irregularities in bids received.

Notification of award will be in writing by the Purchasing Agent. Upon notification, the Contractor shall submit to the Purchasing Division all required insurance certificates and such other documentation as may be requested or required hereunder. Upon their receipt and subsequent approval by the City, the Purchasing Agent will forward to the Contractor a written **NOTICE TO PROCEED**. Work shall **NOT** be started until such **NOTICE TO PROCEED** is received by the Contractor.

- B. Unilateral changes in bid prices by the bidder shall not be allowed. However, the City, at its sole option, reserves the right to negotiate with bidders in the event of, but not limited to:

- 1) No bids received;
- 2) A single bid being received; or
- 3) Prices quoted are over budget and/or unreasonable.

2. COMPLETE CONTRACT

This bid document, its addenda, amendments, attachments and modifications, when executed, becomes the complete contract between the parties hereto, and no verbal or oral promises or representations made in conjunction with the negotiation of this contract shall be binding on either party.

3. SUBCONTRACTORS - NON ASSIGNMENT

Bidders shall state in writing any and all sub-contractors to be associated with this bid, including the type of work to be performed. The Contractor shall cooperate with the City of Kalamazoo in meeting its commitments and goals with regard to maximum utilization of minority and women-owned business enterprises.

The Contractor hereby agrees and understands that the contract resulting from this solicitation shall not be transferred, assigned or sublet without prior written consent of the City of Kalamazoo.

4. TAXES

The City of Kalamazoo is exempt from all federal excise tax and state sales and use taxes. However, depending upon the situation, the vendor or contractor may not be exempt from said taxes and the City of Kalamazoo is making no representation as to any such exemption.

5. PAYMENTS

Unless otherwise specified by the City in this contract, the Contractor will be paid in not more than thirty (30) days after receipt of a properly executed invoice, the sum stipulated herein for supplies delivered and accepted, or service rendered and accepted. Payments are processed by the Finance Department after receipt of an original invoice from the Contractor and approval by the department.

6. CHANGES AND/OR CONTRACT MODIFICATIONS

The City reserves the right to increase or decrease quantities, service or requirements, or make any changes necessary at any time during the term of this contract, or any negotiated extension thereof. Price adjustments due to any of the foregoing changes shall be negotiated and mutually agreed upon by the Contractor and the City.

Changes of any nature after contract award which reflect an increase or decrease in requirements or costs shall not be permitted unless properly drafted Change Order forms are submitted to the Purchasing Manager. City Commission approval may be required. **SUCH CHANGES, IF PERFORMED IN ADVANCE OF PURCHASING MANAGER APPROVAL, MAY BE SUBJECT TO DENIAL AND NON-PAYMENT.**

7. LAWS, ORDINANCES AND REGULATIONS

The Contractor shall keep himself/herself fully informed of all local, state and federal laws, ordinances and regulations in any manner affecting those engaged or employed in the work and the equipment used. Contractor and/or employees shall, at all times, serve and comply with such laws, ordinances and regulations.

Any permits, licenses, certificates or fees required for the performance of the work shall be obtained and paid for by the Contractor.

8. HOLD HARMLESS

The Contractor agrees to defend, indemnify and save harmless the City, its officials, employees, departments and agents from all liability, claims, demands, judgment and expenses to persons or property occasioned, wholly or in part, by the negligent acts or omissions of the Contractor, his/her agents or employees.

9. DEFAULT

The City may at any time, by written notice to the Contractor, terminate this contract and the Contractor's right to proceed with the work, for just cause, which shall include, but is not limited to the following:

- A. Failure to provide insurance and bonds (when called for), in the exact amounts and within the time specified or any extension thereof.
- B. Failure to make delivery of the supplies, or to perform the services within the time specified herein, or any extension thereof.
- C. Make unauthorized substitution or articles other than those bid and specified.
- D. So fails to make progress as to endanger performance of the contract in accordance with its terms.
- E. Fails to perform any other provision of the contract.
- F. **Standard of Performance** - Contractor guarantees the performance of the commodities, goods or services rendered herein in accordance with the accepted standards of the industry or industries concerned herein, except that if this specification calls for higher standards, then such higher standards shall be provided.

Upon notice by the City of Contractor's failure to comply with such standards or to otherwise be in default of this contract in any manner following the Notice to Proceed, Contractor shall immediately remedy said defective performance in a manner acceptable to the City. Should Contractor fail to immediately correct said defective performance, said failure shall be considered a breach of this contract and grounds for termination of the same by the City.

In the event of any breach of this contract by Contractor, Contractor shall pay any cost to the City caused by said breach including, but not limited to the replacement cost of such goods or services with another Contractor.

The City reserves the right to withhold any or all payments until any defects in performance have been satisfactorily corrected.

In the event the Contractor is in breach of this contract in any manner, and such breach has not been satisfactorily corrected, this may result in the Contractor being barred from being awarded any future City contracts.

- G. All remedies available to the City herein are cumulative and the election of one remedy by the City shall not be a waiver of any other remedy available to the City.

10. INDEPENDENT CONTRACTOR

At all times, the Contractor, any of his/her employees, or his/her sub-contractors and their subsequent employees shall be considered independent contractors and not as City employees. The Contractor shall exercise all supervisory control and general control over all workers' duties, payment of wages to Contractor's employees and the right to hire, fire and discipline their employees and workers. As an independent contractor, payment under this contract shall not be subject to any withholding for tax, social security or other purposes, nor shall the Contractor or his/her employees be entitled to sick leave, pension benefit, vacation, medical benefits, life insurance or workers' unemployment compensation or the like.

11. PROJECT SUPERVISOR

The Contractor shall employ an individual to act as Project Supervisor. The Project Supervisor shall be available to the Contractor's workers and the Project Manager at all times by use of a beeper or other reliable means. The Project Supervisor shall prepare daily work plans for the employees, monitor employee performance, attendance and punctuality; and work closely with the City's Project Manager in assuring contract compliance.

12. MEETINGS

The Contractor and/or Project Supervisor shall be available to meet with the Department Head or Project Manager at a mutually agreeable time to discuss problems, issues or concerns relative to the contract. Either party may call a meeting at any time. When such a request for a meeting is made, the meeting date shall, in no case exceed five (5) working days after the request; and, if in the sole opinion of the Department Head, the severity of the circumstance warrants, no more than one (1) working day.

13. INSPECTION OF WORK SITE

Before submitting bids for his/her work, the Contractor shall be responsible for examining the work site and satisfy himself/herself as to the existing conditions under which he/she will be obliged to operate, or that in any way affects the work under this contract. No allowance shall be made subsequently, in behalf of the Contractor, for any negligence on his/her part.

CONSTRUCTION SEQUENCE
for MILHAM DAM REPLACEMENT
and POND IMPROVEMENT

1. Place Geotextile Silt Fences below proposed Sediment Basin and below the Lovers Lane bridge.
2. Excavate the Sediment Basin. Salvage boulders from the basin for future use in stream.
3. Lower the water elevation in the pond.
4. Begin silt removal from the pond and dam construction.
5. After silt removal operations are completed and the new dam is constructed, remove the old dam.
6. Clean trapped sediments from sediment Basin and place 4 inches of Stream Liner and the boulders salvaged from Step 2 in the Sediment Basin.
7. Remove Geotextile Silt Fences.

CITY OF KALAMAZOO
DIVISION OF PUBLIC WORKS
SPECIAL PROVISION FOR
SPILLWAYS, FABRICATED AND ERECTED

DESCRIPTION - This work shall consist of fabricating and erecting spillways in the proposed dam as provided on the plans, or by authorization.

CONSTRUCTION METHODS - Shall be in accordance with Section 5.04 of the "Standard Specifications for Construction".

MEASUREMENT AND PAYMENT - Spillways, Fabricated and Erected will be paid for at the contract unit price, each. Which will be payment in full for fabricating and erecting the spillways at the proper line and grade and furnishing and placing the stop logs.

CITY OF KALAMAZOO
DIVISION OF PUBLIC WORKS
SPECIAL PROVISION
for
BOULDERS

1 of 1

Description:

This work shall consist of furnishing boulders (12 inches to 36 inches in diameter) and placing these boulders in the relocated and reconstructed streambed. The boulders' diameter or diameters will be determined by the Engineer and shall be placed in the relocated and reconstructed streambed as directed by the Engineer.

Boulders are defined as rock fragments usually rounded by weathering or abrasions.

Measurement and Payment:

The completed work of BOULDERS will be measured and paid for at the contract unit price for the following contract item (pay item).

<u>Pay Item</u>	<u>Pay Unit</u>
Boulders	Each

CITY OF KALAMAZOO
DIVISION OF PUBLIC WORKS

SPECIAL PROVISION FOR
POND EXCAVATION

DESCRIPTION - This work shall consist of removing the layer of Soft Semi-Organic Sedimentary Deposits from the bottom of the pond.

CONSTRUCTION METHODS - Shall be in accordance with Sections 208 and 209 of the "Standard Specifications for Construction".

MEASUREMENT AND PAYMENT

Pay Item	Pay Unit
Pond Excavation	Cubic Yard

Pond Excavation will be measured as follows:

Measurement of Pond Excavation will be measured by the staked-section method of the excavated material as deposited in the disposal area.

Pond Excavation will be paid for at the contract unit price per cubic yard, which shall be payment in full for excavating, hauling and placing the material in the disposal area.

CITY OF KALAMAZOO
DIVISION OF PUBLIC WORKS
SPECIAL PROVISION FOR
STREAMBED PROTECTION (LM)

1 of 1

Description:

Streambed Protection shall be placed in streambeds and channel changes as shown on plans and/or as directed by the Engineer.

The aggregate used shall be natural stone meeting the following gradation requirements:

<u>Sieve Size</u>	<u>1/2"</u>	<u>No. 4</u>	<u>Loss by Washing</u>
% Passing	0-60	0-8	0-3

The maximum gradation allowed will be six inches in diameter.

The following physical requirements shall be waived, Los Angeles abrasion, soft materials, chert, thin and elongated particles, and freeze-thaw durability.

Measurement and Payment:

STREAMBED PROTECTION will be measured and paid for at the contract unit price for the following contract item (pay item).

<u>Pay Item</u>	<u>Pay Unit</u>
Streambed Protection (LM)	Cubic Yards

KALAMAZOO

PUBLIC WORKS DIVISION

SPECIAL PROVISION
for
DIFFERING SITE CONDITIONS

1 of 1

During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before they are disturbed and before the affected work is performed.

Upon written notification, the Engineer will investigate the conditions, and if the Engineer determines that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding loss of anticipated profits, will be made and the contract modified in writing accordingly. The Engineer will notify the Contractor of the determination whether or not an adjustment of the contract is warranted.

No contract adjustment which results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice.

No contract adjustment will be allowed under this clause for any effects caused on unchanged work.

KALAMAZOO
PUBLIC WORKS DIVISION

SPECIAL PROVISION
for
SIGNIFICANT CHANGES IN THE CHARACTER OF WORK

The Engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the Contractor agrees to perform the work as altered.

If the alterations or changes in quantities significantly change the character of the work under the contract, whether or not changed by any such different quantities or alterations, an adjustment, excluding loss of anticipated profits, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the Contractor in such amount as the Engineer may determine to be fair and equitable.

If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.

The term "significant change" shall be construed to apply only to the following circumstances:

1. When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction or
2. When a major item of work, as defined elsewhere in the contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

KALAMAZOO
PUBLIC WORKS DIVISION

SPECIAL PROVISION
for
SUSPENSIONS OF WORK ORDERED BY THE ENGINEER

1 of 1

If the performance of all or any portion of the work is suspended or delayed by the Engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the Contractor believes that additional compensation and/or time is due as a result of such suspension or delay, the Contractor shall submit to the Engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

Upon receipt, the Engineer will evaluate the Contractor's request. If the Engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the Contractor, suppliers, of subcontractors at any approved tier, and not caused by weather, the Engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The Engineer will notify the Contractor of the determination whether or not an adjustment of the contract is warranted.

No contract adjustment will be allowed unless the Contractor has submitted the request for adjustment within the time prescribed.

No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other item or condition of this contract.

APPENDIX A**NON-DISCRIMINATION CLAUSE FOR ALL CITY OF KALAMAZOO CONTRACTS**

In connection with the performance of work under this contract, the Contractor agrees as follows:

1. The Contractor will not discriminate against any employees or applicant for employment because of race, religion, color, national origin, age* or sex*. The Contractor will take affirmative action to insure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, color, national origin, age* or sex*. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and, selection for training, including apprenticeship.
2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, age* or sex*.
3. The Contractor will furnish and file compliance reports with the Purchasing Division of the City. Such reports shall elicit information as to the practices, policies, program and employment statistics for the Contractor and each subcontractor and said Contractor and subcontractor** shall permit access to all books, records and accounts regarding employment practices by agents and representatives of the City duly charged investigative duties to assure compliance with this clause.
4. Breach of the covenants herein may be regarded as a material breach of the contract, or purchasing agreement, as provided in the Michigan Fair Employment Practices Act and may be processed thereunder.
5. The Contractor will include, or incorporate by reference, the provisions of the foregoing paragraphs (1) through (4) in every subcontract or purchase order unless exempted by the rules, regulations or orders of the Michigan Civil Rights Commission** and will provide in every subcontract or purchase order that said provision will be binding upon each subcontractor or seller.

*See Sec. IV of Municipal Code of Fair Practices, and Sec. 202 of Act. No. 453 of 1976, M.C.L.A. 37.2202, which reads in part as follows:

37.2202 Employer; prohibited acts

Sec. 202. (1) An employer shall not:

- (a) Fail or refuse to hire, or recruit, or discharge, or otherwise discriminate against an individual with respect to employment, compensation, or a term, condition, or privilege of employment, because of religion, race, color, national origin, age, sex, height, weight, or marital status.
- (b) Limit, segregate, or classify an employee or applicant for employment in a way which deprives or tends to deprive the employee or applicant of an employment opportunity, or otherwise adversely affects the status of an employee or applicant because of religion, race, color, national origin, age, sex, height, weight, or marital status.
- (c) Segregate, classify, or otherwise discriminate against a person on the basis of sex with respect to a term, condition, or privilege of employment, including a benefit plan or system."

**Except for contracts entered into with parties employing less than three employees.

APPENDIX B

The Davis-Bacon Act is applicable to this contract, therefore, prevailing wage rates will apply as follows:

- () Project is funded in whole or in part by federal monies and is estimated to be in excess of \$2,000.00. Applicable prevailing wage rates are attached.
- (X) Project is funded in whole or in part by state monies and is estimated to be in excess of \$ 90,000.00. Applicable prevailing wage rates are attached.
- () Project is funded by City of Kalamazoo monies and is estimated to be in excess of \$50,000.00. The state prevailing wage rates are applicable and attached.

Specifications for projects in which the City of Kalamazoo is party for construction, alterations, and/or repair, including painting and decorating of public buildings or public works in or for the City of Kalamazoo; and, which requires or involves the employment of mechanics and/or laborers shall contain the following provisions stating the minimum wages to be paid the various classes of laborers and mechanics for the project. Wages shall be as determined by the Secretary of Labor to be prevailing for the corresponding classes of laborers and mechanics employed on projects in or around the vicinity of the City of Kalamazoo.

By the incorporation of prevailing wage rates within this specification, the City of Kalamazoo stipulates that:

Contractor or his sub-contractor shall pay all mechanics and laborers employed directly upon the site of the work, unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account, the full amount, accrued at the time of payment, computed at wage rates as incorporated herein regardless of any contractual relationship which may be alleged to exist between the contractor or sub-contractor and such laborers and mechanics;

The scale of wages to be paid shall be posted by the contractor in a prominent and easily accessible place at the site of the work; and,

There may be withheld from the contractor's accrued payments the amount considered necessary by the City's Contracting Official to pay to laborers and mechanics employed by the contractor or any sub-contractor on the work for the difference between the rates of wages required by the contract and the rates of wages received by such laborers and mechanics except those amounts properly deducted or refunded pursuant to the terms of the Davis-Bacon Act (USC, Title 40, Sec. 276a) and interpretations thereof.

The overtime pay to which a laborer or mechanic is entitled under this contract shall be that overtime pay to which he/she is entitled by any agreement made with the contractor or sub-contractor or by any applicable provision of law; but in no event shall such amount be less than the prevailing wage in the Kalamazoo community for such overtime.

APPENDIX C - MBE/WBE POLICY
CITY OF KALAMAZOO

- A. For all construction projects in excess of \$10,000, a general contractor must make reasonable efforts to assure that 20% of the total contract is awarded to a bona fide owned and operated Minority/Women Business Enterprises or to minority contractors. This goal is further defined as a 10% goal to women owned businesses and 10% to minority owned businesses.
- B. In the event the project does not necessitate sub-contracting, the contractor must attempt to establish and commit himself/herself to a hiring goal of 20% minorities within the company. Additionally, contractors must continue to provide the City of Kalamazoo with the company's Affirmative Action plan to ensure continued contract compliance.
- C. Compliance procedures to ensure the contracts are awarded to competitors that meet the MBE/WBE goal program.
1. Each bidder or proposer intending to compete for contracts must certify his/her intent to meet MBE/WBE goals. Each bidder or proposer must take affirmative action to seek out MBE/WBE's to sublet part of the work.
 2. The lowest bidder or the proposer chosen as the recipient of the contract must submit the names of MBE/WBE's, a description of the work, and the dollar value of work to be performed by the MBE/WBE.
 3. For construction or consulting contracts, names of the MBE/WBE and the description of work to be performed by each MBE/WBE must be submitted to the Purchasing Division of the City of Kalamazoo within seven (7) days after the determination of the apparent low bidder.
 4. The bidder or proposer who fails to submit the names of MBE/WBE's and the description and value of work to be performed by each MBE/WBE is ineligible to be awarded the contract or grant.
 5. The successful bidder or proposer shall make good faith efforts to replace another MBE/WBE in substitution for an MBE/WBE unable to perform successfully.

D. Definitions

Minority Business Enterprises: A minority business enterprise is defined as a company wherein minorities constitute active participation and ownership of over 50%. Minorities are defined as United States citizens who are members of the following groups of protected classes: Black, Hispanic, Oriental, Eskimo and American Indians who are certified by the Indian Affairs Commission. These groups will have the power to make policy decisions in a business and are involved in the day-to-day management of the business.

Female Business Enterprise: A female business enterprise is defined as a company wherein females constitute active participation and ownership of over 50%. The female owner will have the power to make policy decisions in a business and are involved in the day-to-day management of the business.

MICHIGAN DEPARTMENT OF LABOR
 BUREAU OF EMPLOYMENT STANDARDS
 WAGE HOUR ADMINISTRATION
 MICHIGAN PREVAILING WAGE RATE SCHEDULE
 ROAD BUILDING
 EXPIRATION: 06/30/90

PROJECT NO : 890 1173 0 RB 07/05/89

DATE ISSUED: 07-05-89

DESCRIPTION : CITY OF KALAMAZOO
 PURCHASING DIVISION
 STATE UNIT : KALAMAZOO COUNTY

CONSTRUCTION MECHANIC CLASSIFICATION(S)	BASIC HOURLY RATE	FRINGE BENEFIT RATE	PREVAILING WAGE RATE TOTAL	OVERTIME PROVISION **
CARPENTERS				
ZONE 1	\$19.23	\$6.53	\$25.76	HHHHHHHD
ZONE 2	\$16.66	\$3.00	\$19.66	HHHHHHHH
CEMENT MASON				
ZONE 1	\$18.21	\$3.07	\$21.28	HHHHHHHH
ZONE 2	\$17.40	\$3.07	\$20.47	HHHHHHHH
OPERATING ENGINEERS				
ZONE 1 - CLASS I	\$15.83	\$7.56	\$23.39	HHHHHHHH
- CLASS II	\$14.50	\$7.39	\$21.89	HHHHHHHH
- CLASS III	\$14.06	\$7.33	\$21.39	HHHHHHHH
- CLASS IV	\$13.93	\$7.31	\$21.24	HHHHHHHH
ZONE 2 - CLASS I	\$15.83	\$7.56	\$23.39	HHHHHHHH
- CLASS II	\$14.39	\$7.37	\$21.76	HHHHHHHH
- CLASS III	\$13.95	\$7.31	\$21.26	HHHHHHHH
- CLASS IV	\$13.70	\$7.28	\$20.98	HHHHHHHH
LABORERS				
ZONE 1 - CLASS A	\$15.70	\$3.51	\$19.21	HHHHHHHH
- CLASS B	\$15.40	\$3.51	\$18.91	HHHHHHHH
- CLASS B-1	\$15.19	\$3.51	\$18.70	HHHHHHHH
- CLASS B-2	\$14.93	\$3.51	\$18.44	HHHHHHHH
- CLASS C	\$15.11	\$3.51	\$18.62	HHHHHHHH
- CLASS D	\$14.93	\$3.51	\$18.44	HHHHHHHH
- CLASS E	\$14.83	\$3.51	\$18.34	HHHHHHHH
- CLASS F	\$14.80	\$3.51	\$18.31	HHHHHHHH
ZONE 2 - CLASS A	\$14.76	\$3.51	\$18.27	HHHHHHHH
- CLASS B	\$14.42	\$3.51	\$17.93	HHHHHHHH
- CLASS B-1	\$14.55	\$3.51	\$18.06	HHHHHHHH
- CLASS B-2	\$14.29	\$3.51	\$17.80	HHHHHHHH
- CLASS C	\$14.20	\$3.51	\$17.71	HHHHHHHH
- CLASS D	\$13.96	\$3.51	\$17.47	HHHHHHHH
- CLASS E	\$13.90	\$3.51	\$17.41	HHHHHHHH
- CLASS F	\$13.76	\$3.51	\$17.27	HHHHHHHH
ZONE 2-A - CLASS A	\$14.20	\$3.51	\$17.71	HHHHHHHH
- CLASS B	\$13.89	\$3.51	\$17.40	HHHHHHHH
- CLASS B-1	\$13.98	\$3.51	\$17.49	HHHHHHHH
- CLASS B-2	\$13.73	\$3.51	\$17.24	HHHHHHHH

CONSTRUCTION MECHANIC CLASSIFICATION(S)		BASIC HOURLY RATE	FRINGE BENEFIT RATE	PREVAILING WAGE RATE TOTAL	OVERTIME PROVISION
		: \$: \$: \$: **
	-CLASS C.....	\$13.63	\$3.51	\$17.14	HHHHHHHH
	-CLASS D.....	\$13.42	\$3.51	\$16.93	HHHHHHHH
	-CLASS E.....	\$13.33	\$3.51	\$16.84	HHHHHHHH
	-CLASS F.....	\$13.22	\$3.51	\$16.73	HHHHHHHH
ZONE 3	-CLASS A.....	\$14.04	\$3.51	\$17.55	HHHHHHHH
	-CLASS B.....	\$13.61	\$3.51	\$17.12	HHHHHHHH
	-CLASS B-1.....	\$13.99	\$3.51	\$17.50	HHHHHHHH
	-CLASS B-2.....	\$13.76	\$3.51	\$17.27	HHHHHHHH
	-CLASS C.....	\$13.55	\$3.51	\$17.06	HHHHHHHH
	-CLASS D.....	\$13.26	\$3.51	\$16.77	HHHHHHHH
	-CLASS E.....	\$13.12	\$3.51	\$16.63	HHHHHHHH
	-CLASS F.....	\$13.05	\$3.51	\$16.56	HHHHHHHH
ZONE 3-A	-CLASS A.....	\$13.82	\$3.51	\$17.33	HHHHHHHH
	-CLASS B.....	\$13.39	\$3.51	\$16.90	HHHHHHHH
	-CLASS B-1.....	\$13.79	\$3.51	\$17.30	HHHHHHHH
	-CLASS B-2.....	\$13.53	\$3.51	\$17.04	HHHHHHHH
	-CLASS C.....	\$13.31	\$3.51	\$16.82	HHHHHHHH
	-CLASS D.....	\$13.03	\$3.51	\$16.54	HHHHHHHH
	-CLASS E.....	\$12.90	\$3.51	\$16.41	HHHHHHHH
	-CLASS F.....	\$12.81	\$3.51	\$16.32	HHHHHHHH
ZONE 4	-CLASS A.....	\$14.04	\$3.51	\$17.55	HHHHHHHH
	-CLASS B.....	\$13.61	\$3.51	\$17.12	HHHHHHHH
	-CLASS B-1.....	\$13.99	\$3.51	\$17.50	HHHHHHHH
	-CLASS B-2.....	\$13.76	\$3.51	\$17.27	HHHHHHHH
	-CLASS C.....	\$13.55	\$3.51	\$17.06	HHHHHHHH
	-CLASS D.....	\$13.26	\$3.51	\$16.77	HHHHHHHH
	-CLASS E.....	\$13.12	\$3.51	\$16.63	HHHHHHHH
	-CLASS F.....	\$13.05	\$3.51	\$16.56	HHHHHHHH
SIGN INSTALLERS					
ZONE 1	- CLASS A.....	\$14.06	\$4.34	\$18.40	HHHHHHHH
	- CLASS B.....	\$13.81	\$4.34	\$18.15	HHHHHHHH
ZONE 2	- CLASS A.....	\$13.07	\$4.34	\$17.41	HHHHHHHH
	- CLASS B.....	\$12.82	\$4.34	\$17.16	HHHHHHHH
TEAMSTERS					
ZONE 1	- TRUCK DRIVERS(LESS THAN 8CYD):	\$15.88	\$4.54	\$20.42	HHHHHHHH
	- TRUCK DRIVERS(8CYD AND OVER):	\$15.98	\$4.54	\$20.52	HHHHHHHH
	- EUCLID TYPE EQUIPMENT.....	\$16.13	\$4.54	\$20.67	HHHHHHHH
ZONE 2	- TRUCK DRIVERS(LESS THAN 8CYD):	\$15.78	\$4.54	\$20.32	HHHHHHHH
	- TRUCK DRIVERS(8CYD AND OVER):	\$15.88	\$4.54	\$20.42	HHHHHHHH
	- EUCLID TYPE EQUIPMENT.....	\$16.03	\$4.54	\$20.57	HHHHHHHH

WH-1327

PROJECT NO: 890 1173 0 RB 07/05/89
COUNTY:

** THE CONTRACTOR SHALL HAVE THE OPTION OF SCHEDULING FOUR TEN HOUR DAYS WITHOUT PAYMENT OF OVERTIME PROVIDING THAT TIME AND ONE-HALF IS PAID FOR ALL HOURS OVER TEN HOURS PER DAY AND TIME AND ONE-HALF FOR ALL HOURS OVER FORTY PER WEEK.

FOR INFORMATION CALL
BUREAU OF EMPLOYMENT STANDARDS
WAGE HOUR ADMINISTRATION
517/322-1825

OVERTIME PROVISION

1. OVERTIME WORKING HOURS SCHEDULE:

	M	TU	W	TH	F	S	SUN & HOLIDAYS
FIRST 8 HOURS						4	8
9TH HR			1			5	
10TH HR			2			6	
OVER 10 HOURS			3			7	

2. OVERTIME PROVISION IS A 8 DIGIT CODE:

- 1ST DIGIT - COVERS AREA 1.
- 2ND DIGIT - COVERS AREA 2.
- 3RD DIGIT - COVERS AREA 3.
- 4TH DIGIT - COVERS AREA 4.
- 5TH DIGIT - COVERS AREA 5.
- 6TH DIGIT - COVERS AREA 6.
- 7TH DIGIT - COVERS AREA 7.
- 8TH DIGIT - COVERS AREA 8.

3. OVERTIME INDICATORS USED IN THE OVERTIME PROVISION.

- B** - BASIC HOUR RATE
- H** - ONE AND HALF PAY
- X** - ONE AND HALF PAY OVER 40 HOURS
- D** - DOUBLE PAY
- T** - TRIPLE PAY

4. EXAMPLES:

HHHHHHHD - TIME AND A HALF THE BASIC HOURLY RATE AFTER 8 HOURS MONDAY-FRIDAY. TIME AND A HALF THE BASIC HOURLY RATE SATURDAY. DOUBLE TIME SUNDAY AND HOLIDAYS.

HHHDHDDDD - TIME AND A HALF THE BASIC HOURLY RATE FOR 9TH AND 10TH HOURS MONDAY-FRIDAY. DOUBLE TIME THEREAFTER. TIME AND HALF THE BASIC HOURLY RATE THE FIRST 8 HOURS ON SATURDAY, DOUBLE TIME THEREAFTER. DOUBLE THE BASIC HOURLY RATE SUNDAY AND HOLIDAYS.

XXXXHHHD - TIME AND A HALF THE BASIC HOURLY FOR ALL HOURS OVER 40 HOURS AND TIME AND A HALF THE BASIC HOURLY RATE FOR SATURDAY. DOUBLE TIME SUNDAY AND HOLIDAYS.

****** THE CONTRACTOR SHALL HAVE THE OPTION OF SCHEDULING FOUR TEN HOUR DAYS WITHOUT PAYMENT OF OVERTIME PROVIDING THAT TIME AND ONE-HALF IS PAID FOR ALL HOURS OVER TEN HOURS PER DAY AND TIME AND ONE-HALF FOR ALL HOURS OVER FOURTY PER WEEK.

Effective 7-1-89

MICHIGAN DEPARTMENT OF LABOR
BUREAU OF EMPLOYMENT STANDARDS
WAGE HOUR ADMINISTRATION

PREVAILING WAGE RATE FOR THE MICHIGAN ROADBUILDERS
MICHIGAN HIGHWAY, BRIDGE AND AIRPORT
(EXCLUSIVE OF BUILDINGS) CONSTRUCTION
EXPIRATION 6-30-90

CARPENTERS

Zone 1

Wayne, Oakland, Macomb, Sanilac, St. Clair,
Monroe, Livingston, Washtenaw, Genesee, Tuscola,
Huron and Lapeer Counties.

Zone 2

The entire state except those counties listed in
Zone 1.

CEMENT MASONS

Zone 1

Genesee, Oakland, Macomb, Monroe, Washtenaw,
Wayne, Livingston and Saginaw Counties.

Zone 2

Alcona, Alger, Allegan, Alpena, Antrim, Arenac,
Baraga, Barry, Bay, Berrien Benzie, Branch,
Calhoun, Cass, Charlevoix, Cheboygan, Chippewa,
Clare, Clinton, Crawford, Delta, Dickinson, Eaton,
Emmet, Gladwin, Gogebic Grand Traverse, Gratiot,
Hillsdale, Houghton, Huron, Ingham, Ionia, Iosco,
Iron, Isabella, Jackson, Kalamazoo, Kalkaska,
Kent, Keweenaw, Lake, Lapeer, Leelanau, Lenawee,
Luce, Mackinac, Manistee, Marquette, Mason,
Mecosta, Menominee, Midland, Missaukee, Montcalm,
Montmorency, Muskegon, Newaygo, Oceana, Ogemaw,
Ontonagon, Osceola, Oscoda, Otsego Ottawa, Presque
Isle, Roscommon, Sanilac, Schoolcraft, Shiawassee,
St. Clair, St. Joseph, Tuscola, Van Buren, and
Wexford Counties.

LABORERS

- Zone 1 Genesee, Macomb, Monroe, Oakland, Washtenaw and Wayne.
- Zone 2 Allegan, Barry, Bay, Berrien, Branch, Calhoun, Cass, Clinton, Eaton, Gratiot, Hillsdale, Huron, Ingham, Jackson, Kalamazoo, Lapeer, Lenawee, Livingston, Midland, Muskegon, Saginaw, Sanilac, Shiawassee, St. Clair, St. Joseph, Tuscola and Van Buren.
- Zone 2-A Ionia, Kent, Montcalm, and Ottawa.
- Zone 3 Alcona, Alpena, Antrim, Arenac, Benzie, Charlevoix, Cheboygan, Clare, Crawford, Emmet, Gladwin, Grand Traverse, Iosco, Isabella, Kalkaska, Lake, Leelanau, Manistee, Mason, Missaukee, Montmorency, Newaygo, Oceana, Ogemaw, Oscoda, Otsego, Presque Isle, Roscommon, and Wexford.
- Zone 3-A Mecosta and Osceola.
- Zone 4 Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon, and Schoolcraft.

LABORERS CLASSIFICATION DESCRIPTIONS

Class A

Line-Form Setter for Curb or Pavement.

Class B

Pipe Layers, Oxygen Gun.

Class B-1

Asphalt Raker.

Class B-2

Asphalt Tamper and Asphalt Raker Helper.

Class C

Tunnel Miner (highway work only), Finishers Tender, Guard Rail Builder, Highway and Median Barrier Installer (including sound barrier and crash barrier), Fence Erector, Bottom Man, Powder

Class C (cont'd)

Man Wagon Drill and Air Track Operators, Curb and Side Rail Setters' Helper, Diamond and Core Drills.

Class D

Mix Operator (less than 5 sacks), Air or Electric Tool Operator (jack hammer, etc.), Spreader, Boxman (asphalt, stone, gravel, etc.), Concrete paddler, Power Chain Saw Operator, Paving Batch Truck Dumper, Asphalt Screen Checker, Grade Checker and Tunnel Mucker (highway work only), Concrete Saw (under 40 H.P.), and Dry Pack Machine.

Class E

Cement Handler or Dockman, Topman, and Asphalt Dust Handler.

Class F

Asphalt Shoveler or Loader, Asphalt Plant Misc., Axe Man, Batch Bin (no power), Burlap Man, Carpenter's Helper, Subgrade Labor (hand tools), Yard Man, Guard Rail Builder's Helper, Highway and Median Barrier Installer's Helper, (including Sound and Crash Barrier) Fence Erector's Helper, Dumper (wagon, truck, etc.) Jetting Labor, Joint Filling Labor, Misc, Unskilled Labor, Powder Monkey (helper), Sprinkler Labor, Form Setting Labor, Form Stripper, Pavement Reinforcing, Handling and Placing (e.g. wire mesh, steel mats, dowel bars, etc.) Mason's or Bricklayer's Tender on Manholes, Manhole Builder, Headwalls, etc., Water Proofing, Seal Coating and Slurry Mix, Shoring, Underpinning, Bridge Painting, etc. (spray, roller and brush) Sandblasting, Pressure Grouting, and Bridge Pin and Hanger Removal.

OPERATING ENGINEERS

Zone 1

Genesee, Oakland, Macomb, Monroe, Washtenaw and Wayne Counties.

Zone 2

Alcona, Alger, Allegan, Alpena, Antrim, Arenac, Baraga, Barry, Bay, Berrien Benzie, Branch, Calhoun, Cass, Charlevoix, Cheboygan, Chippewa, Clare, Clinton, Crawford, Delta, Dickinson, Eaton, Emmet, Gladwin, Gogebic Grand Traverse, Gratiot, Hillsdale, Houghton, Huron, Ingham, Ionia, Iosco, Iron, Isabella, Jackson, Kalamzoo, Kalkaska, Kent, Keweenaw, Lake, Lapeer, Leelanau, Lenawee, Livingston, Luce, Mackinac, Manistee, Marquette, Mason, Mecosta, Menominee, Midland, Missaukee, Montcalm, Montmorency, Muskegon, Newaygo, Oceana, Ogemaw, Ontonagon, Osceola, Oscoda, Otsego Ottawa, Presque Isle, Roscommon, Saginaw, Sanilac, Schoolcraft, Shiawassee, St. Clair, St. Joseph, Tuscola, Van Buren and Wexford Counties.

OPERATING ENGINEERS CLASSIFICATION DESCRIPTIONS

Class I

Asphalt Paver (Self-Propelled)	Locomotive Operator
Asphalt Planner (Self-Propelled)	Asphalt Plant OperatorMechanic
Auto-Grader	Paver Operator (5 bags or more)
Blade Grader Operator	Pump Operator (6" Discharge or over, Gas, Diesel Powered or Generator of 300 amp or Larger)
Batch Plant (Concrete-Central Mix, Transit Mix, Shrink Mix)	Generator of 300 amp or Larger)
Back Hoe (with over 3/8 yd. bucket)	File Driving Operator
Bull Dozer Operator	Roto Mill
Concrete Pump 3" and over	Roller Operator (Asphalt)
Concrete Spreader (Slip form paving)	Side Boom Tractor (Type D-4 or Equivalent or Larger)
Conveyor Loader Operator (Euclid Type)	Slip Form Paver
Crane Operator	Self-Propelled or Tractor Drawn Scraper)
Dragline Operator	Slurry Machine (Asphalt)
Elevating Grader Operator	Swinging Boom Truck (over 12 ton capacity)
Endloader Operator (1 yd. capacity or over}	Shoulder or Gravel Distributing Machine Operator (Self-Propelled)
Finishing Machine Operator (Asphalt)	Shovel Operator
Gradall (and similar type machines)	Tractor OperatorTrenching Machine Operator
Hoisting Engineer	Tube Finisher (slip form paving)
*Mechanic	

Class II

Sweeper (Wayne type & similar equipment)	Back Hoe (with 3/8 yd. buck or less)
Screening Plant Operator	Side Boom Tractor (smaller than D-4 type or equivalent)
Washing Plant Operator	Batch Plant (concrete-dry mix)
Crusher Operator	
Vacuum Truck	

Class III

Air Compressor Operator (600 cfm or more)	Wagon Drill Operator
Air Compressor (2 or more- less than 600 cfm)	Concrete Breaker
	Tractor Operator (farm type with attachments)

Class IV

Boiler Fireman	Endloader Operator (under 1 yd capacity)
Oiler	Roller Operator (other than asphalt)
Fireman	Curing Equipment Operator (self-propelled)
Mechanic's Helper	Concrete Saw Operator (40 H.P. or over)
Trencher (service)	Power Bin Operator
Flexplane Operator	Plant Drier Operator (Asphalt)
Cleftplane Operator	
Grader Operator Self Pro- pelled Fine-Grade or Form (concrete)	

OPERATING ENGINEERS (cont'd)

Finishing Machine Operator
(concrete)
Boom or Winch Hoist Truck
Operator
Stump Remover
Concrete Pump Under 3"

Vibratory Compaction Equipment
(6 Ft. wide or over)
Guard Post Driver Operator
All Mulching Equipment
Farm Type Tractor Operator
Mesh Installer (self-propelled)

SIGN INSTALLERS AND TEAMSTERS

Zone 1

Genesee, Oakland, Macomb, Monroe, Washtenaw, Wayne and Livingston

Zone 2

Alcona, Alger, Allegan, Alpena, Antrim, Arenac, Baraga, Barry, Bay
Benzie, Berrien Branch, Calhoun, Cass, Charlevoix, Cheboygan,
Chippewa,
Clare, Clinton, Crawford, Delta, Dickinson, Eaton, Emmet, Gladwin,
Gogebic Grand Traverse, Gratiot, Hillsdale, Houghton, Huron, Ingham,
Ionia, Iosco, Iron, Isabella, Jackson, Kalamazoo, Kalkaska, Kent,
Keweenaw, Lake, Lapeer, Leelanau, Lenawee, Livingston, Luce, Mackinac,
Manistee, Marquette, Mason, Mecosta, Menominee, Midland, Missaukee,
Montcalm, Montmorency, Muskegon, Newaygo, Oceana, Ogemaw, Ontonagon,
Osceola, Oscoda, Ottawa, Otsego, Presque Isle, Roscommon, Saginaw,
Sanilac, Schoolcraft, Shiawassee, St. Clair, St. Joseph, Tuscola, Van
Buren, and Wexford Counties

SIGN INSTALLERS CLASSIFICATION DESCRIPTIONS

Class A

Perform all necessary labor and use all tools and equipment required to construct and set concrete forms required in the installation of highway and street signs, plus all types of work included in Class B.

Class B

Perform all miscellaneous labor, use all hand and power tools, and shall operate all other equipment, mobile or otherwise, required for the complete installation of highway and street signs.

WH3009

PROJECT NO: 890
COUNTY:

** THE CONTRACTOR SHALL HAVE THE OPTION OF SCHEDULING FOUR TEN HOUR DAYS WITHOUT PAYMENT OF OVERTIME PROVIDING THAT TIME AND ONE-HALF IS PAID FOR ALL HOURS OVER TEN HOURS PER DAY AND TIME AND ONE-HALF FOR ALL HOURS OVER FORTY PER WEEK.

FOR INFORMATION CALL
BUREAU OF EMPLOYMENT STANDARDS
WAGE HOUR ADMINISTRATION
517/322-1825

Roadbuilders Prevailing Wage Rates

One of the statutory responsibilities of the Michigan Department of Labor is to determine prevailing wage rates pursuant to the Prevailing Wage Law, Act 166 of the Public Acts of 1965. Prevailing wage rates are based on collectively bargained agreements. The purpose of establishing prevailing wage rates is to provide rates for contractors bidding on state project.

The department is responsible for establishing the basic hourly rate and the fringe benefit rate for specific classifications of construction mechanics requested by the contracting agent prior to contracts being let out for bid on state projects. If a contract is not awarded or construction undertaken within 90 days of the date of the department's issuance of rates, a redetermination of rates should be requested by the contracting agent. The department shall respond to a request for a redetermination of wage rates prior to a state project being awarded and commenced. Classifications not provided on the Prevailing Wage Rate Schedule should be obtained prior to project award. Requests from the general public will be provided based on classifications and rates on file.

The department recognizes and enforces the ratio standard for apprentices to journeypersons as required on state contracts. Questions regarding the ratio of apprentices to journeypersons for a classification should be directed to the office listed below. A recognized apprentice is a construction mechanic who is registered as an apprentice with the Bureau of Apprenticeship and Training, Employment And Training Administration, U.S. Department of Labor.

Inspections shall involve determination of compliance pertaining to posting and recordkeeping requirements as well as payment of the prevailing rate or appropriate apprenticeship ratio. The statute requires that every contractor and subcontractor shall post a copy of all prevailing wage and fringe benefit rates prescribed in the contract at the construction site. An accurate record showing the name and occupation and the actual wages and benefits paid to each construction mechanic shall be kept by the employer.

If noncompliance is determined, the department attempts to resolve the complaint informally. If attempts at a voluntary resolution are not successful, the complaint will be referred to the prosecuting attorney for enforcement action.

If you have any questions or require rates for additional classifications, please contact:

Bureau of Employment Standards
Wage Hour Administration
7150 Harris Drive
Lansing, Michigan 48909
Phone: 517/322-1825

FAIR EMPLOYMENT PRACTICES

Any vendor desiring to conduct business in excess of \$10,000 with the City of Kalamazoo, must be determined awardable by the Purchasing Division in regards to complying with the non-discrimination policy of the City of Kalamazoo as stated in Appendix A.

REVISED INSTRUCTIONS FOR COMPLIANCE

If your firm has not already been declared awardable by the City of Kalamazoo, the State of Michigan or another municipal government in Michigan with an EEO awardability program, please complete the attached A & B forms providing your firm's employment statistics and affirmative action goals and time tables. If your firm is awardable as described above, enclose a copy of the certificate.

Specifically, compliance refers to your Equal Employment Opportunity (EEO) policies with respect to the hiring, upgrading and advancement opportunities for female and minority employees at all job levels in your business.

A. EXPLANATION OF FORMS:

Section A: Your firm's employment statistics shall be provided for every category. In addition to reflecting the current workforce of the employees in all job categories, be sure to reflect your minority and female employees.

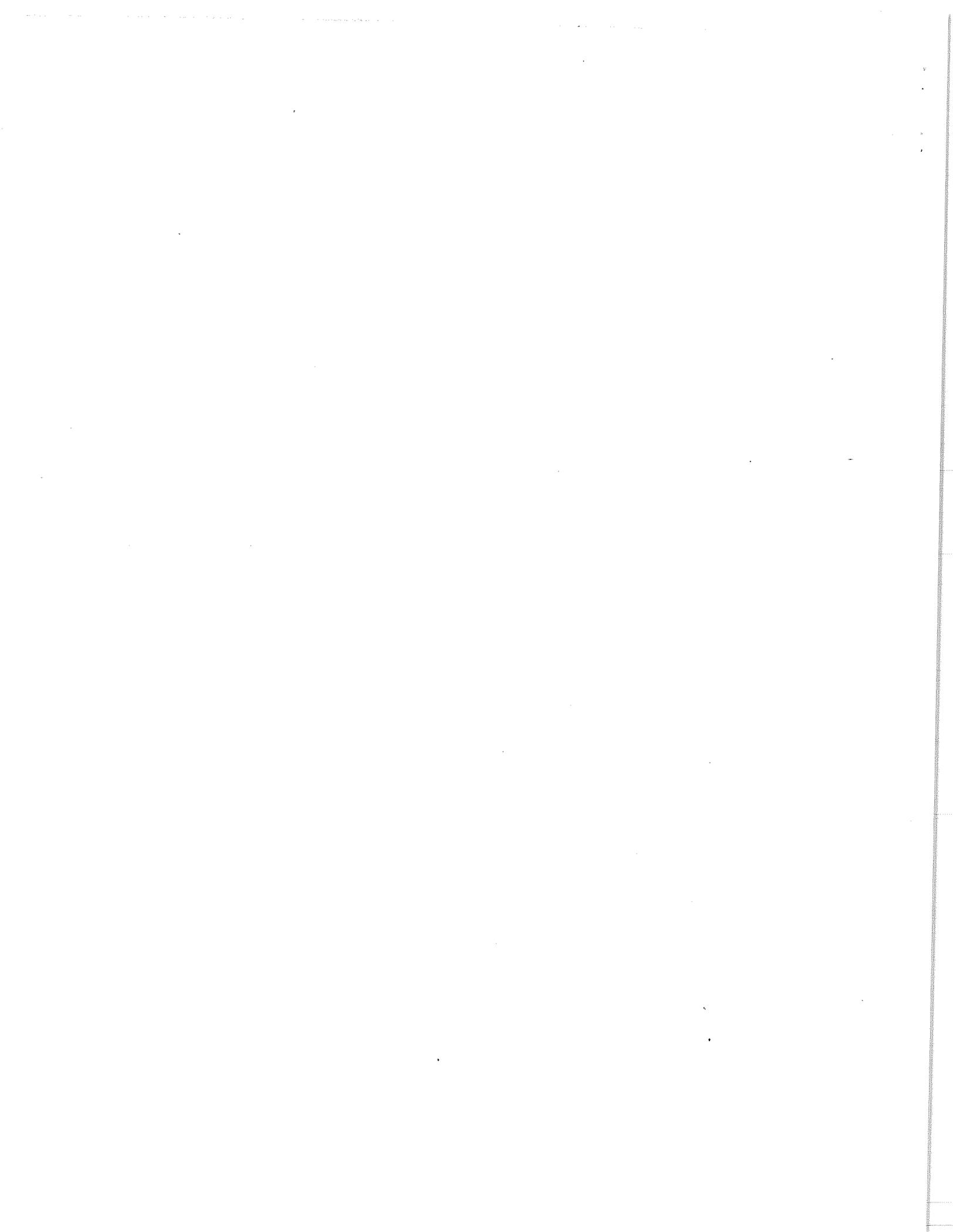
Section B: The Plan of Action form should be used to communicate your goal plan for increasing the level of females and minorities, at all job levels or categories, where minority and females are under represented.

In order to be considered awardable, you shall indicate on Section B your commitments to increase females and minorities within your workforce, regardless of whether or not you anticipate turnover. Specifically, your goals will be considered in reviewing future awardability.

Failure to meet the goals, without justifiable reasons, is cause for NON-AWARDABILITY. If good faith effort can be demonstrated and documented in detail, consideration will be given.

NOTE: If you are currently awardable by the Michigan Civil Rights Commission, a municipal government in Michigan with an EEO awardability program, or any other State or Federal agency, a copy of the certification may be submitted in lieu of the enclosed A and B forms.

- B. Forms A and B (or the appropriate certificate of awardability) must be completed and returned to the Purchasing Division with your bid response.
- C. Awardability is issued by the City of Kalamazoo for a period of three (3) years and shall be renewed every three years. Once you have been declared awardable to conduct business with the City of Kalamazoo, you only need to provide a copy of the Certificate of Awardability with each bid document you return to Purchasing.



SECTION A

NAME OF COMPANY _____ **TELEPHONE #** _____

ADDRESS _____

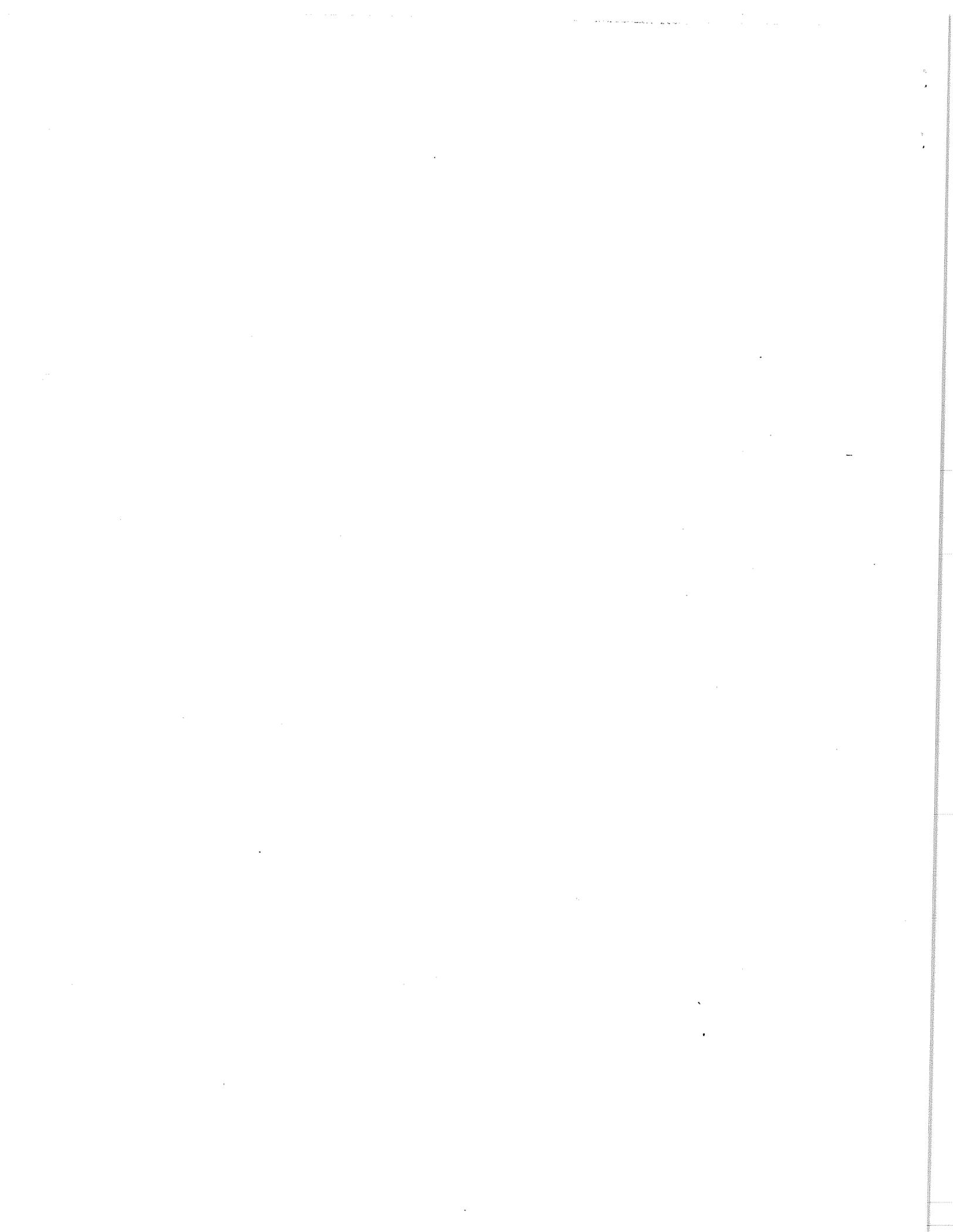
ZIP CODE _____

EMPLOYMENT STATISTICS

WORK FORCE BREAKDOWN

JOB CATEGORIES	MALE EMPLOYEES					FEMALE EMPLOYEES					TOTAL ALL EMPLOYEES
	Total Males	Black	Oriental	American-Indian	Spanish-American	Total Females	Black	Oriental	American-Indian	Spanish-American	
OFFICIALS and MANAGERS											
PROFESSIONALS											
TECHNICIANS											
SALES WORKERS											
OFFICE and CLERICAL											
CRAFTSMEN (Skilled)											
OPERATIVES (Semiskilled)											
LABORERS (Unskilled)											
SERVICE WORKERS											
TOTAL											

1. The above figures are:
 _____ usually high _____ average _____ below average
2. Date of payroll used _____
3. Does the company agree on City of Kalamazoo contracts to notify all subcontractors of their responsibility to file compliance reports? _____ yes _____ no
4. How many new hires has your company had in the past twelve months? _____
5. Number of new minority hires in past twelve months? _____
6. Number of new female hires in past twelve months? _____



SECTION B

PLAN OF ACTION:

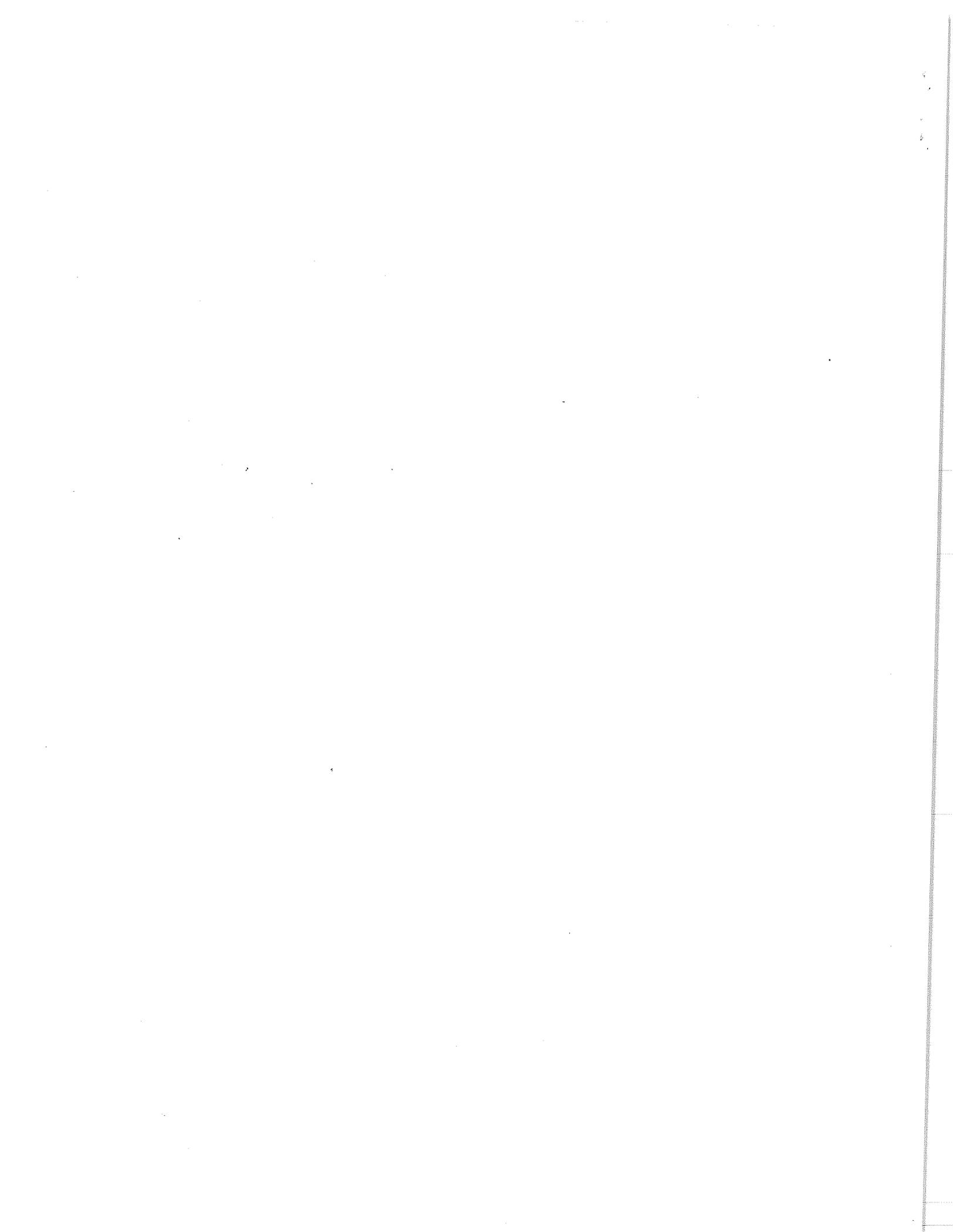
Goals & Time Tables – are defined as result-oriented procedures by which the employer – subject only to the requirement that the targeted results are as much as reasonably can be expected – determines goals and time schedule for correcting minority and female underutilization at all job levels, and then makes every good faith effort to achieve the self-imposed goals. Failure to meet goals and time tables is excused if the employer can show that good-faith efforts have really been made. However, an employer must be prepared to demonstrate in detail why good-faith efforts failed to produce desired results.

1. Does the company have a written Affirmative Action Plan? _____ yes _____ no
2. If so has your Affirmative Action Plan been presented to the City of Kalamazoo? _____ yes _____ no
3. The following chart, when completed by the company, comprises an analysis of the work force by job category and a commitment to increase minority and female representation where needed in order to achieve reasonably representative integration.

JOB CATEGORIES	TOTAL ALL EMPLOYEES	TOTAL MINORITIES	TOTAL FEMALES	COMMITMENT TO INCREASE LEVELS OF MINORITY EMP.			COMMITMENT TO INCREASE LEVELS OF FEMALE EMP.		
				6 MOS.	1 YR.	1½ YRS.	6 MOS.	1 YR.	1½ YRS.
OFFICIALS AND MANAGERS									
PROFESSIONALS									
TECHNICIANS									
SALES WORKERS									
OFFICE AND CLERICAL									
CRAFTSMEN (Skilled)									
OPERATIVES (Semiskilled)									
LABORERS (Unskilled)									
SERVICE WORKERS									
TOTAL									

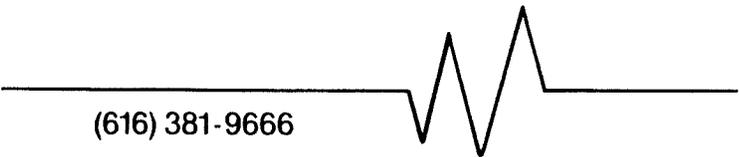
4. Does this company have an Equal Employment Opportunity report on file with other government agencies? If so please list which agencies.

5. DATE	TYPE OR PRINT NAME & TITLE OF AUTHORIZED REPRESENTATIVE	SIGNATURE OF AUTHORIZED REPRESENTATIVE



KAR Laboratories, Inc.
4425 Manchester Road
Kalamazoo, MI 49002

(616) 381-9666



Delta Engineering
723 Mills Street
Kalamazoo, MI 49001

Date: November 20, 1989

Project No.: 892214

Attn: Mr. Emil F. Platske

Enclosed are the results of the analysis of four
soil samples from Portage Creek, Milham Park
submitted 11/02/89.

Respectfully submitted,

KAR Laboratories, Inc.

William H. Bouma

William H. Bouma, Ph.D.
Director

WHB/kb

ANALYTICAL REPORT

To: Delta Engineering
723 Mills Street
Kalamazoo, MI 49001

Project No.: 892214
Client No.: 2458
Project Date: 11/02/89
Date Promised: 11/22/89
Date Reported: 11/20/89
PO#:

Attn: Mr. Emil F. Platske

Project Desc.: Analysis of four soil samples from Port. Creek, Milham Park.

Sample No.: 892214-01

Rec'd on: 11/02/89

Sample ID: Portage Creek, Milham Park #1

MDNR Scan 1 & 2

See attached

PCB, total	<0.5 mg/kg
Arsenic, total	33 mg/kg
Lead, total	16 mg/kg
Mercury, total	<0.1 mg/kg

KAR Laboratories, Inc.

To: Delta Engineering
723 Mills Street
Kalamazoo, MI 49001

Sample No.: 892214-01
Date Received: 11/02/89
Date Promised: 11/22/89
Date Reported: 11/20/89

Attn: Mr. Emil F. Platske

Re: VOLATILE HYDROCARBON ANALYSIS - Michigan DNR Scan 1 and Scan 2

Sample ID: Portage Creek, Milham Park #1

SCAN 1 - Purgeable Halocarbons

Bromodichloromethane	ND	trans-1,2-Dichloroethene	ND
Bromoform	ND	1,2-Dichloropropane	ND
Bromomethane	ND	cis-1,3-Dichloropropene	ND
Carbon tetrachloride	ND	trans-1,3-Dichloropropene	ND
Chlorobenzene	ND	Methylene chloride	ND
Chloroethane	ND	1,1,2,2-Tetrachloroethane	ND
Chloroform	ND	Tetrachloroethene	ND
Chloromethane	ND	1,1,1-Trichloroethane	ND
Dibromochloromethane	ND	1,1,2-Trichloroethane	ND
1,1-Dichloroethane	ND	Trichloroethene	ND
1,2-Dichloroethane	ND	Trichlorofluoromethane	ND
1,1-Dichloroethene	ND	Vinyl chloride	ND
cis-1,2-Dichloroethene	ND		

SCAN 2 - Purgeable Aromatic Hydrocarbons

Benzene	ND	m-and/or p-Xylene	ND
Ethyl benzene	ND	o-Xylene	ND
Toluene	ND		

Concentrations are expressed as ug/kg dry sample
"ND" means not detected. The limit of detection was 10
for all compounds except Methylene chloride, which was 100

ANALYTICAL REPORT

To: Delta Engineering
723 Mills Street
Kalamazoo, MI 49001

Attn: Mr. Emil F. Platske

Project No.: 892214
Client No.: 2458
Project Date: 11/02/89
Date Promised: 11/22/89
Date Reported: 11/20/89
PO#:

Project Desc.: Analysis of four soil samples from Port. Creek, Milham Park.

Sample No.: 892214-02

Rec'd on: 11/02/89

Sample ID: Portage Creek, Milham Park #2

MDNR Scan 1 & 2

See attached

PCB, total <0.5 mg/kg

Arsenic, total 25 mg/kg

Lead, total 22 mg/kg

Mercury, total <0.1 mg/kg

To: Delta Engineering
723 Mills Street
Kalamazoo, MI 49001

Sample No.: 892214-02
Date Received: 11/02/89
Date Promised: 11/22/89
Date Reported: 11/20/89

Attn: Mr. Emil F. Platske

Re: VOLATILE HYDROCARBON ANALYSIS - Michigan DNR Scan 1 and Scan 2

Sample ID: Portage Creek, Milham Park #2

SCAN 1 - Purgeable Halocarbons

Bromodichloromethane	ND	trans-1,2-Dichloroethene	ND
Bromoform	ND	1,2-Dichloropropane	ND
Bromomethane	ND	cis-1,3-Dichloropropene	ND
Carbon tetrachloride	ND	trans-1,3-Dichloropropene	ND
Chlorobenzene	ND	Methylene chloride	ND
Chloroethane	ND	1,1,2,2-Tetrachloroethane	ND
Chloroform	ND	Tetrachloroethene	ND
Chloromethane	ND	1,1,1-Trichloroethane	ND
Dibromochloromethane	ND	1,1,2-Trichloroethane	ND
1,1-Dichloroethane	ND	Trichloroethene	ND
1,2-Dichloroethane	ND	Trichlorofluoromethane	ND
1,1-Dichloroethene	ND	Vinyl chloride	ND
cis-1,2-Dichloroethene	ND		

SCAN 2 - Purgeable Aromatic Hydrocarbons

Benzene	ND	m-and/or p-Xylene	ND
Ethyl benzene	ND	o-Xylene	ND
Toluene	ND		

Concentrations are expressed as ug/kg dry sample
"ND" means not detected. The limit of detection was 10
for all compounds except Methylene chloride, which was 100

KAR Laboratories, Inc.

ANALYTICAL REPORT

To: Delta Engineering
723 Mills Street
Kalamazoo, MI 49001

Attn: Mr. Emil F. Platske

Project No.: 892214
Client No.: 2458
Project Date: 11/02/89
Date Promised: 11/22/89
Date Reported: 11/20/89
PO#:

Project Desc.: Analysis of four soil samples from Port. Creek, Milham Park.

Sample No.: 892214-03

Rec'd on: 11/02/89

Sample ID: Portage Creek, Milham Park #3

MDNR Scan 1 & 2

See attached

PCB, total

<0.5 mg/kg

Arsenic, total

35 mg/kg

Lead, total

22 mg/kg

Mercury, total

<0.1 mg/kg

To: Delta Engineering
723 Mills Street
Kalamazoo, MI 49001

Sample No.: 892214-03
Date Received: 11/02/89
Date Promised: 11/22/89
Date Reported: 11/20/89

Attn: Mr. Emil F. Platske

Re: VOLATILE HYDROCARBON ANALYSIS - Michigan DNR Scan 1 and Scan 2

Sample ID: Portage Creek, Milham Park #3

SCAN 1 - Purgeable Halocarbons

Bromodichloromethane	ND	trans-1,2-Dichloroethene	ND
Bromoform	ND	1,2-Dichloropropane	ND
Bromomethane	ND	cis-1,3-Dichloropropene	ND
Carbon tetrachloride	ND	trans-1,3-Dichloropropene	ND
Chlorobenzene	ND	Methylene chloride	ND
Chloroethane	ND	1,1,2,2-Tetrachloroethane	ND
Chloroform	ND	Tetrachloroethene	ND
Chloromethane	ND	1,1,1-Trichloroethane	ND
Dibromochloromethane	ND	1,1,2-Trichloroethane	ND
1,1-Dichloroethane	ND	Trichloroethene	ND
1,2-Dichloroethane	ND	Trichlorofluoromethane	ND
1,1-Dichloroethene	ND	Vinyl chloride	ND
cis-1,2-Dichloroethene	ND		

SCAN 2 - Purgeable Aromatic Hydrocarbons

Benzene	ND	m-and/or p-Xylene	ND
Ethyl benzene	ND	o-Xylene	ND
Toluene	ND		

Concentrations are expressed as ug/kg dry sample
"ND" means not detected. The limit of detection was 10
for all compounds except Methylene chloride, which was 100

KAR Laboratories, Inc.

ANALYTICAL REPORT

To: Delta Engineering
723 Mills Street
Kalamazoo, MI 49001

Attn: Mr. Emil F. Platske

Project No.: 892214
Client No.: 2458
Project Date: 11/02/89
Date Promised: 11/22/89
Date Reported: 11/20/89
PO#:

Project Desc.: Analysis of four soil samples from Port. Creek, Milham Park.

Sample No.: 892214-04

Rec'd on: 11/02/89

Sample ID: Portage Creek, Milham Park #4

MDNR Scan 1 & 2

See attached

PCB, total <0.5 mg/kg

Arsenic, total 49 mg/kg

Lead, total 19 mg/kg

Mercury, total <0.1 mg/kg

Unless otherwise noted, test results represent the sample(s) as they were received.

KAR Laboratories, Inc.

To: Delta Engineering
723 Mills Street
Kalamazoo, MI 49001

Sample No.: 892214-04
Date Received: 11/02/89
Date Promised: 11/22/89
Date Reported: 11/20/89

Attn: Mr. Emil F. Platske

Re: VOLATILE HYDROCARBON ANALYSIS - Michigan DNR Scan 1 and Scan 2

Sample ID: Portage Creek, Milham Park #4

SCAN 1 - Purgeable Halocarbons

Bromodichloromethane	ND	trans-1,2-Dichloroethene	ND
Bromoform	ND	1,2-Dichloropropane	ND
Bromomethane	ND	cis-1,3-Dichloropropene	ND
Carbon tetrachloride	ND	trans-1,3-Dichloropropene	ND
Chlorobenzene	ND	Methylene chloride	ND
Chloroethane	ND	1,1,2,2-Tetrachloroethane	ND
Chloroform	ND	Tetrachloroethene	ND
Chloromethane	ND	1,1,1-Trichloroethane	ND
Dibromochloromethane	ND	1,1,2-Trichloroethane	ND
1,1-Dichloroethane	ND	Trichloroethene	ND
1,2-Dichloroethane	ND	Trichlorofluoromethane	ND
1,1-Dichloroethene	ND	Vinyl chloride	ND
cis-1,2-Dichloroethene	ND		

SCAN 2 - Purgeable Aromatic Hydrocarbons

Benzene	ND	m-and/or p-Xylene	ND
Ethyl benzene	ND	o-Xylene	ND
Toluene	ND		

Concentrations are expressed as ug/kg dry sample
"ND" means not detected. The limit of detection was 10
for all compounds except Methylene chloride, which was 100



DEPARTMENT OF PUBLIC SERVICES

Public Works Division
241 W. South Street
Kalamazoo, Michigan 49007-4796
(616) 385-8002

August 28, 1990

Ms. Kimberly D. Rice
Land and Water Management Division
Department of Natural Resources
621 10th
Plainwell, MI 49080

Dear Ms. Rice:

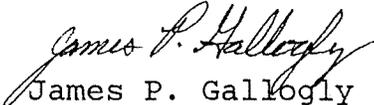
We recently completed the replacement of the Milham Park Dam, Permit No. 89-12-0502. Since that time we have had several moderately heavy rain events where the flow of Portage Creek has been great enough to carry water around the dam. While this has not caused any serious problems, in an effort to eliminate any possible resulting erosion, we would like to lower the center channel of the new structure by 3". It is our assumption that for some reason the new structure was constructed at a higher elevation than the previous dam resulting in this situation.

The work will require lowering the water level behind the dam for approximately 48 hours in order to remove the existing center channel, cut the sheet piling to the new elevation, and reweld the cap. Diversco Construction Company has indicated they are willing to complete this work as an addition to their present contract. It is anticipated that this work will be done in the fall when disruption to the golf course irrigation system and park use will be minimal.

We are requesting your approval for this work. If you need further information, or if you have any questions, please call.

ric

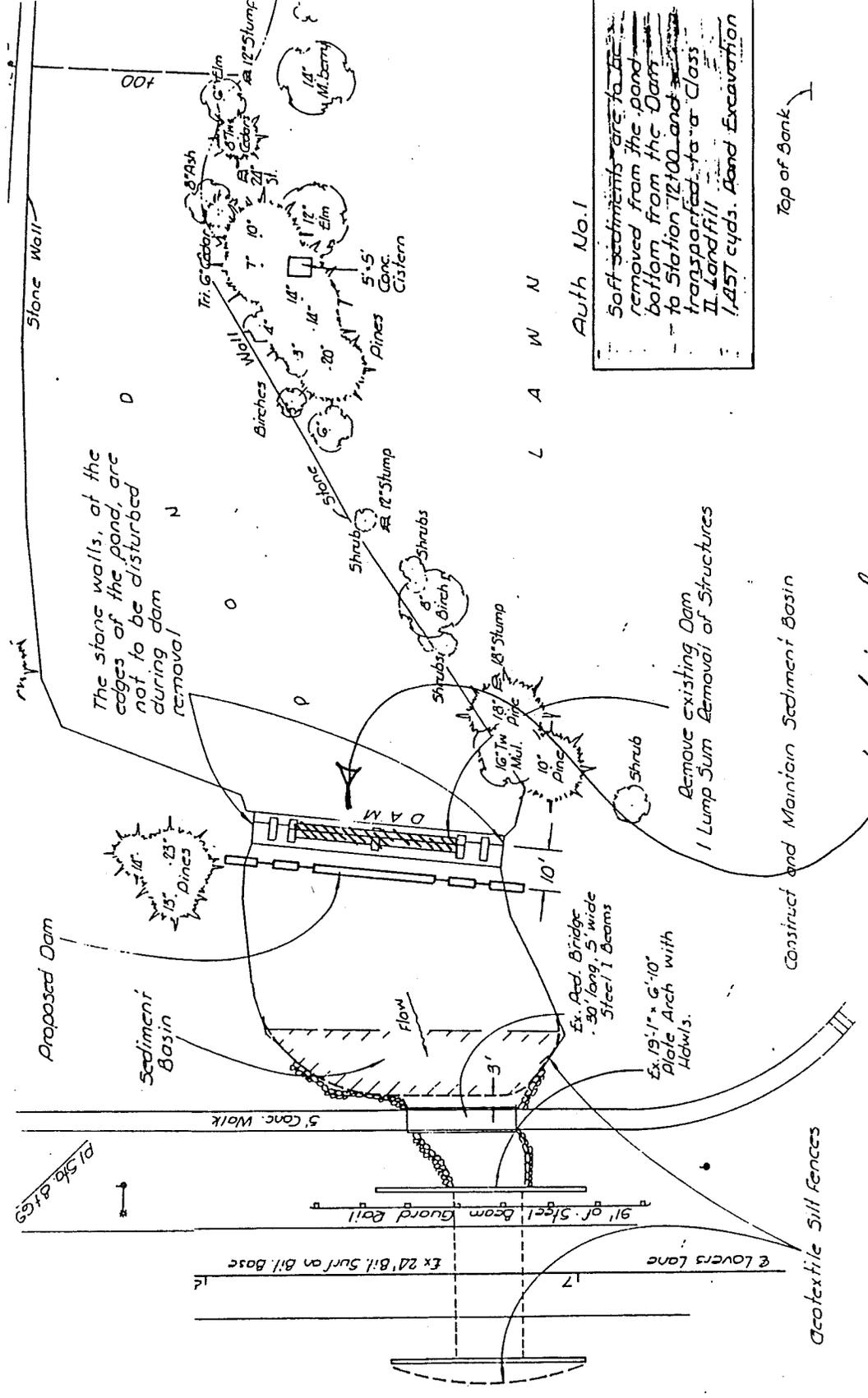
Sincerely,


James P. Gallogly

Asst. Manager, Public Works

c R. W. Skalski ✓
W. L. Nelson
D. Paulsen
J. P. Gallogly

DNR File # 89-12-502
Sheet 1 of 6



Auth No. 1
 Soft sediments are to be removed from the pond bottom from the Dam to Station 12+00 and transported to a Class II Landfill 1,457 cyds. Pond Excavation

Top of Bank

The stone walls, at the edges of the pond, are not to be disturbed during dam removal

Remove existing Dam
 1 Lump Sum Removal of Structures

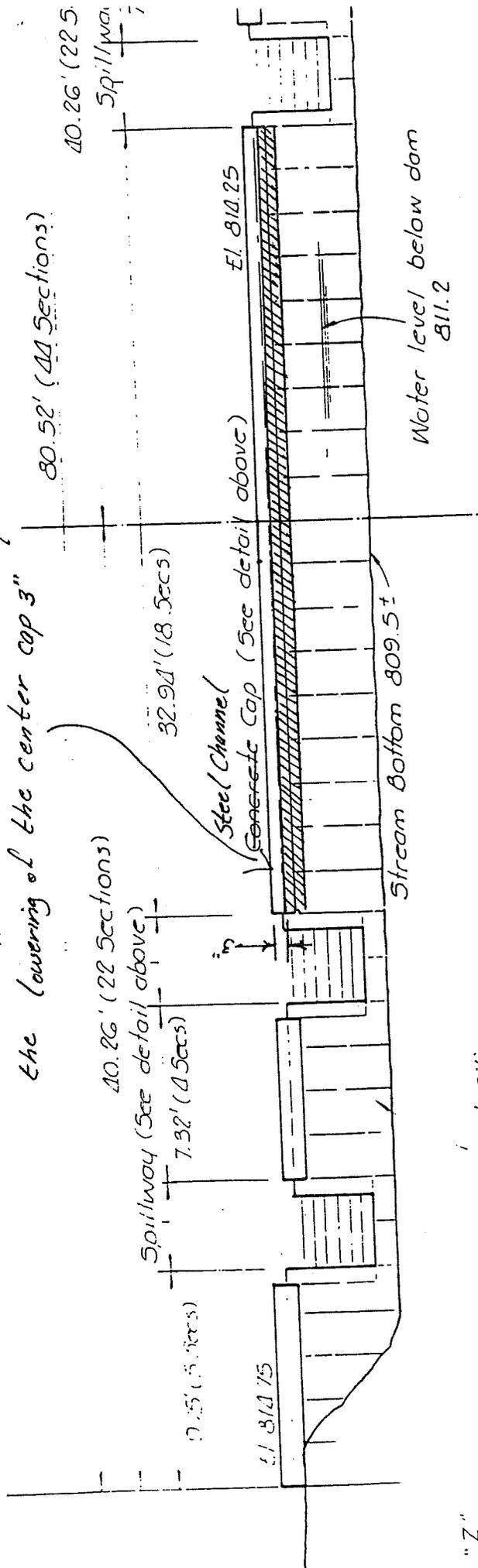
Construct and Maintain Sediment Basin

Location of proposed construction

12

NOTE:

This work to consist of only
the lowering of the center cap 3"



PROPOSED MILHAM PARK DAM REPLACEMENT

PROFILE

Steel Sheet Piling

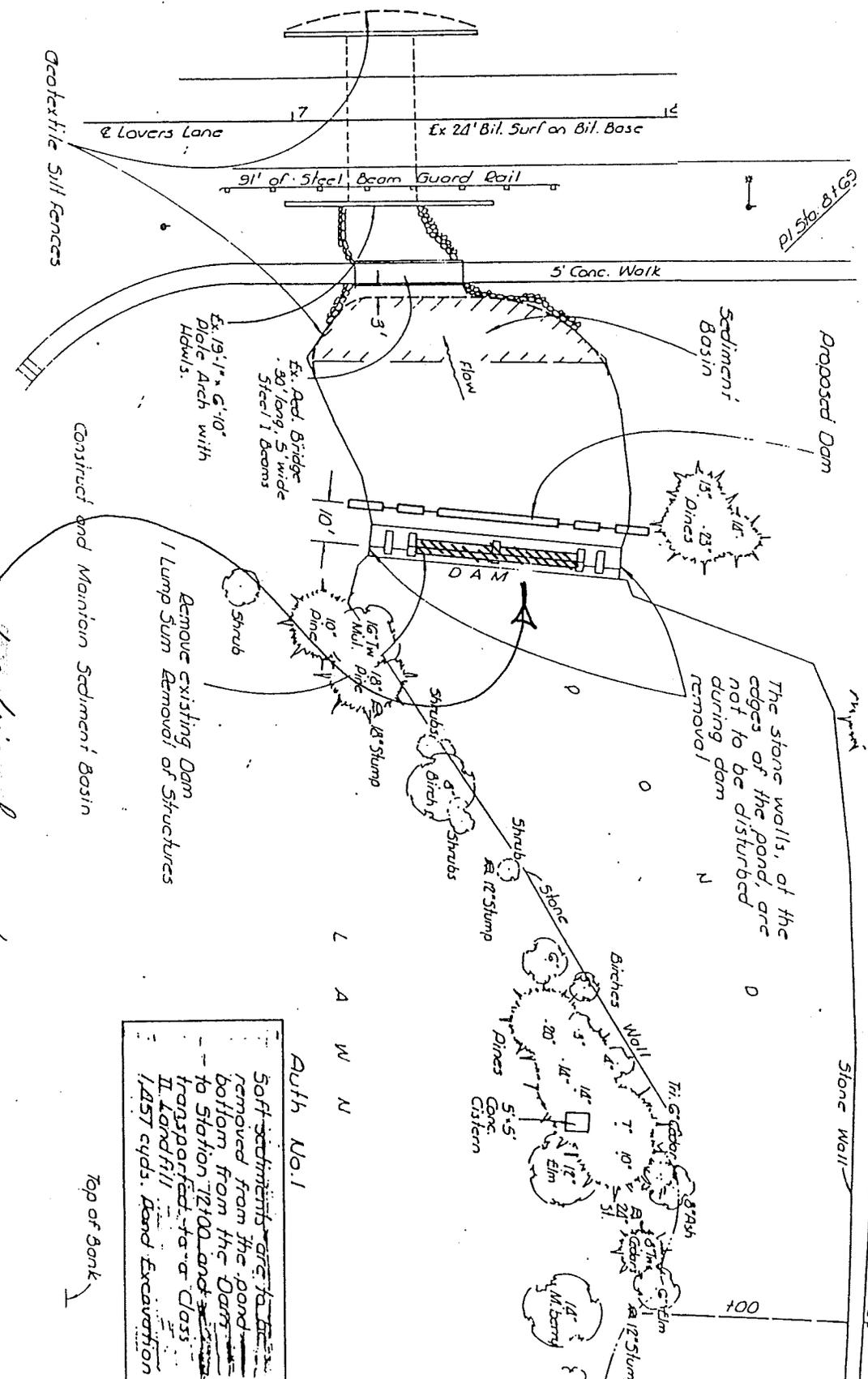
Quantities for Structure

- 1288 sft. Permanent Steel Sheet Piling
- 5 cuds. Concrete, Grade 355
- 304 lbs. Steel Reinforcement
- 2 each Spillways, Fabricated and Erected

DWR File # 89-12-50a
Sheet 4 of 6

"Z"
0
0
0
19
sec'
4

DMR File # 89-12-502
 Sheet 1 of 6



Location of proposed construction

Construct and Maintain Sediment Basin

*Remove Existing Dam
 1 Lump Sum Removal of Structures*

The stone walls, of the edges of the pond, are not to be disturbed during dam removal

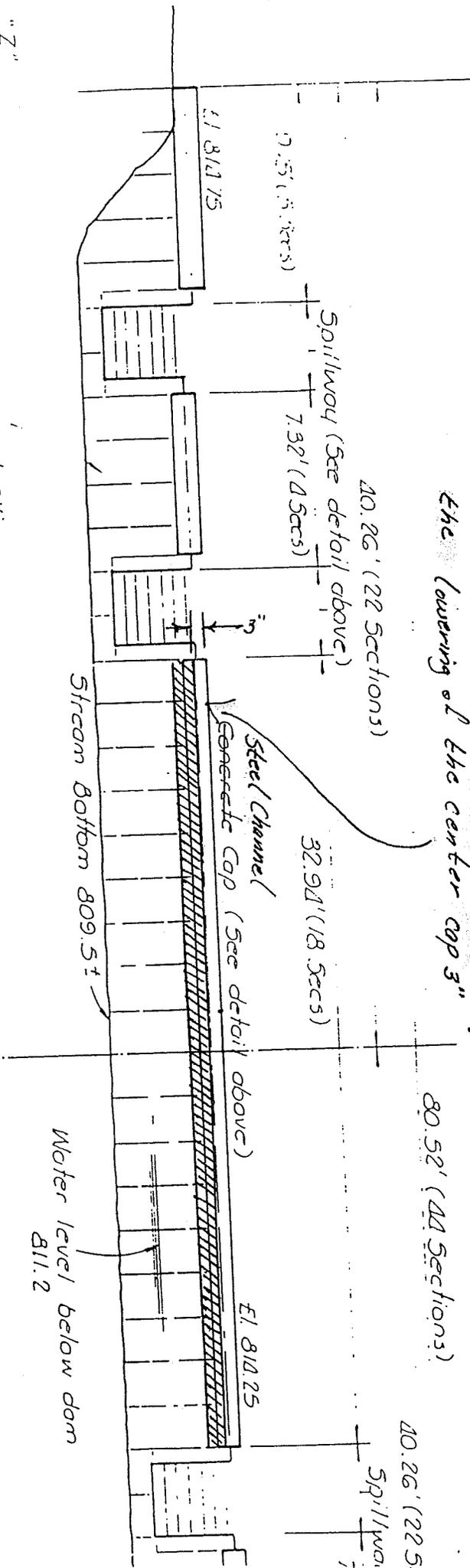
Auth No. 1
 Soft sediments are to be removed from the pond bottom from the Dam to Station 12100 and transported to a Class II Landfill and excavation 1,457 cyds. and excavation

Top of Bank

2

NOTE:

This work to consist of only the lowering of the center cap 3"



Steel Sheet Piling

PROPOSED MILHAM PARK DAM REPLACEMENT PROFILE

Quantities for Structure

- 1288 sft. Permanent Steel Sheet Piling
- 5 cuys. Concrete, Grade 355
- 304 lbs. Steel Reinforcement
- 4 each Spillways, Fabricated and Erected

DMUR File # 89-12-502
Sheet 4 of 6

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
PERMIT

36

I
S City of Kalamazoo
S T Dept. of Public Works
U O 241 W. South Street
E Kalamazoo MI 49007
D

Permit No. 89-12-0502

Issued Feb 12 90

Extended

Revised

Expires Dec 31 91

This permit is granted under the provisions of:
The Inland Lakes and Streams Act, 1972 PA 346, as amended.

The Goemaere-Anderson Wetland Protection Act, 1979 PA 203.

Permitted Activity

Construct a sediment basin downstream from the construction site.
Place two filter fabric sediment barriers across the stream.
Construct a new 80.5-foot long steel sheet pile, stoplog low head dam immediately downstream of the existing dam. Remove the existing dam.
Dredge 1,457 cubic yards of sediment from the existing impoundment.

Water Course Affected: S Br Portage Cr

County: Kalamazoo Town: 12S Range: 11W Sections: 34 0

Subdivision: Lot:

- Authority granted by this permit is subject to the following limitations:
- A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
 - B. The permittee in exercising the authority granted by this permit shall not cause unlawful pollution as defined by Act 245 of the Public Acts of 1929, as amended.
 - C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
 - D. All work shall be completed in accordance with the plans and the specifications submitted with the application and/or plans and specifications attached hereto.
 - E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved herein.
 - F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with Act 53 of the Public Act of 1974 and comply with each of the requirements of that act.
 - G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits or complying with other state statutes.
 - H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
 - I. Permittee shall notify the Department of Natural Resources within one week after the completion of the activity authorized by this permit, by completing and forwarding the attached, preaddressed post card to the office addressed thereon.
 - J. This permit shall not be assigned or transferred without the written approval of the Department of Natural Resources.
 - K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific State Act, Federal Act and/or Rule under which this permit is granted.
 - L. Work to be done under authority of this permit is further subject to the following special instructions and specifications:

I
S City of Kalamazoo
S T Dept. of Public Works
U O 241 W. South Street
E Kalamazoo MI 49007
D

Permit No. 89-12-0502
Issued Feb 12 90
Extended
Revised
Expires Dec 31 91

PERMIT LIMITATIONS, continued

All work shall be completed in accordance with the attached plans and plans on file with the Department of Natural Resources.

Two filter fabric barriers shall be installed downstream from the construction site to prevent excessive off-site siltation. Barrier shall be installed prior to commencement of dredging and shall be maintained for duration of project. Barrier shall be left in place after completion of dredging until all disturbed sediments have settled.

All dredged material shall be disposed of in a Type II landfill.

Prior to the initiation of any permitted construction activities, a sediment basin shall be constructed immediately downstream of the construction site. The sediment basin shall be maintained in good working order throughout the duration of the project. All excavated material shall be placed on an upland site.

All raw areas resulting from this construction activity shall be promptly and effectively stabilized with seed-fertilizer-mulch and/or sod in sufficient quantity to prevent erosion and subsequent siltation to the watercourse.

Permittee covenants not to sue the State of Michigan, or any of its departments, boards, commissions, officers, employees, or agents for any claim, whether legal or equitable, arising under or in any manner related to the privileges granted in this Permit. Permittee hereby releases, waives, and discharges the State of Michigan and all of its departments, boards, commissions, officers, employees, and agents from any and all liability to permittee arising under or in any manner related to the privileges granted under this Permit.

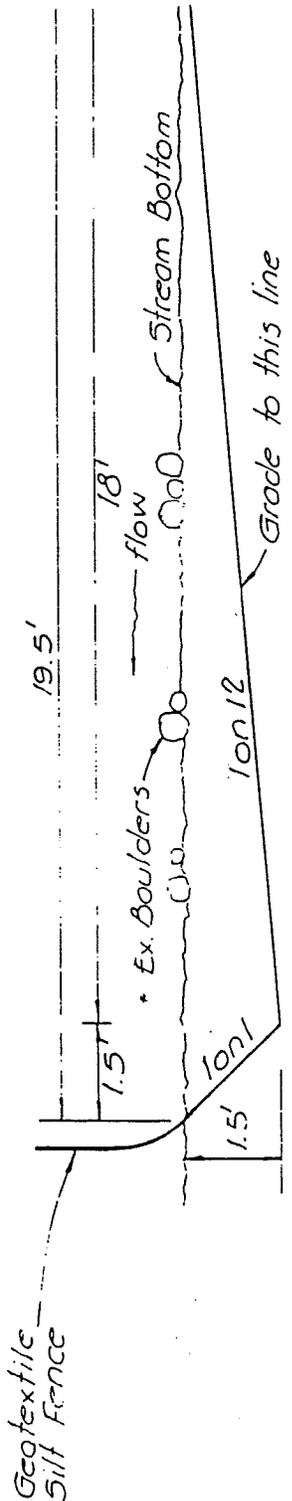
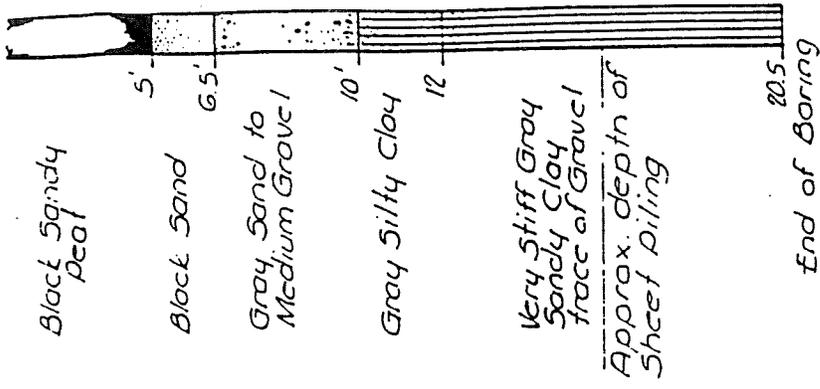
Permittee agrees to indemnify the State of Michigan and all of its departments, agencies, boards, commissions, officers, employees, and agents from any and all liability arising under or in any manner related to the issuance of the Permit or the privileges granted under this Permit.

David F. Hales
Director, Department of Natural Resources
By: Kimberly D. Rice
Kimberly D. Rice
Land and Water Management Division

KDR:jg

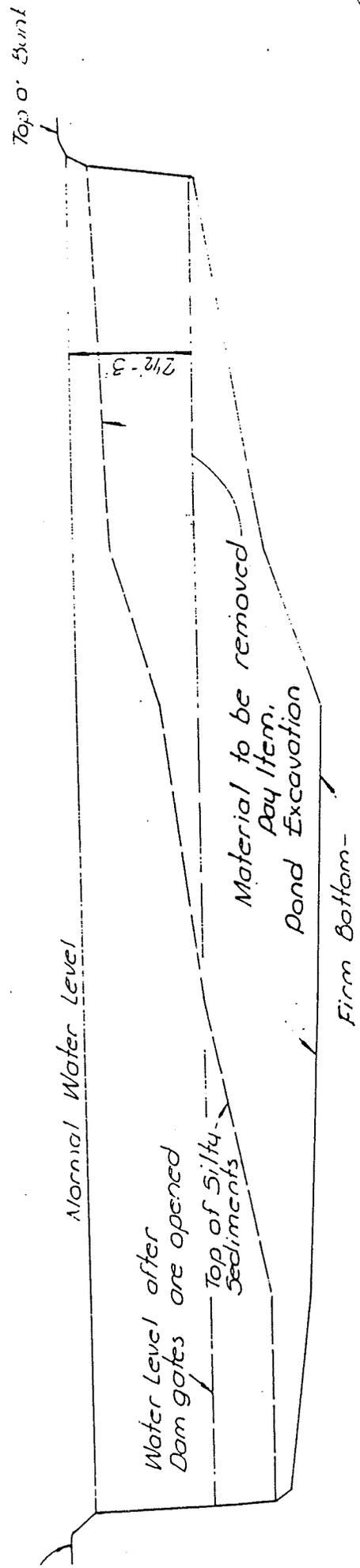
cc: LWMD, Lansing, Region III
D-12 Law, Waste Management (T. Leep)

DWR File # 89-12-502
 Sheet 2 of 6

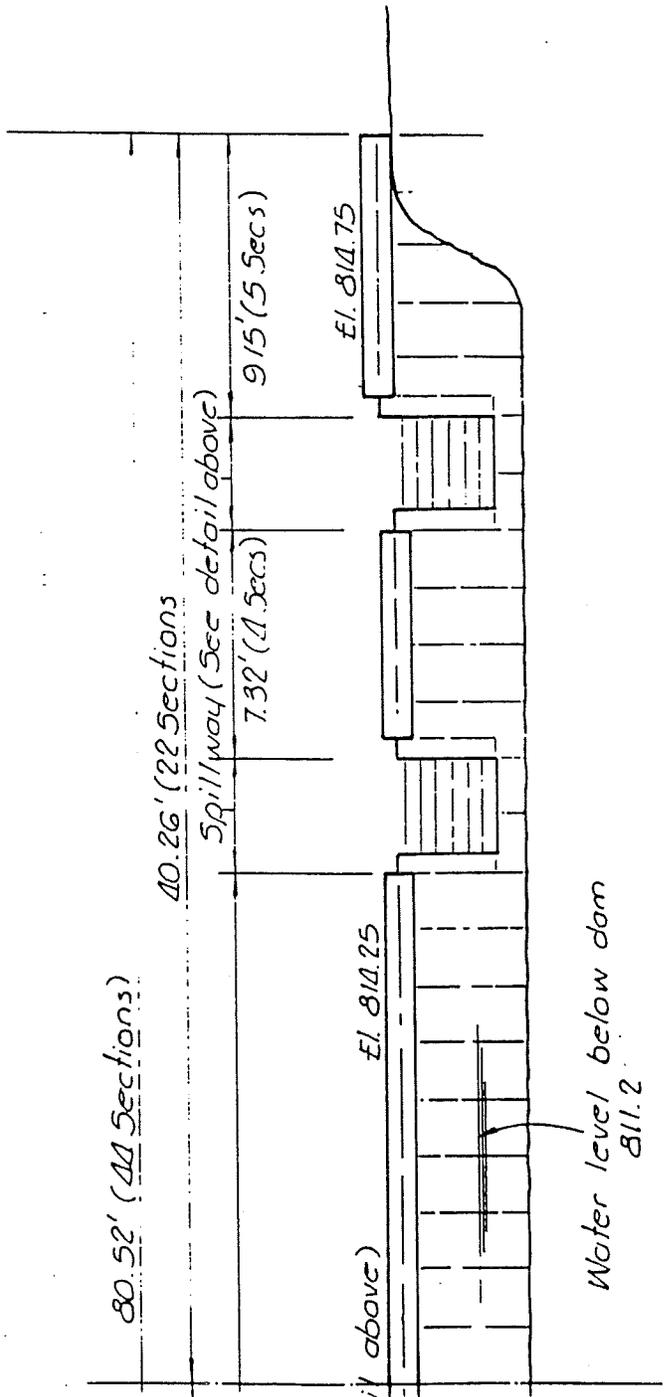


* Ex. Boulders are to be salvaged and replaced in stream after the Streambed Protection is placed.

DETAIL SHOWING SEDIMENT BASIN



DETAIL SHOWING SEDIMENT REMOVAL

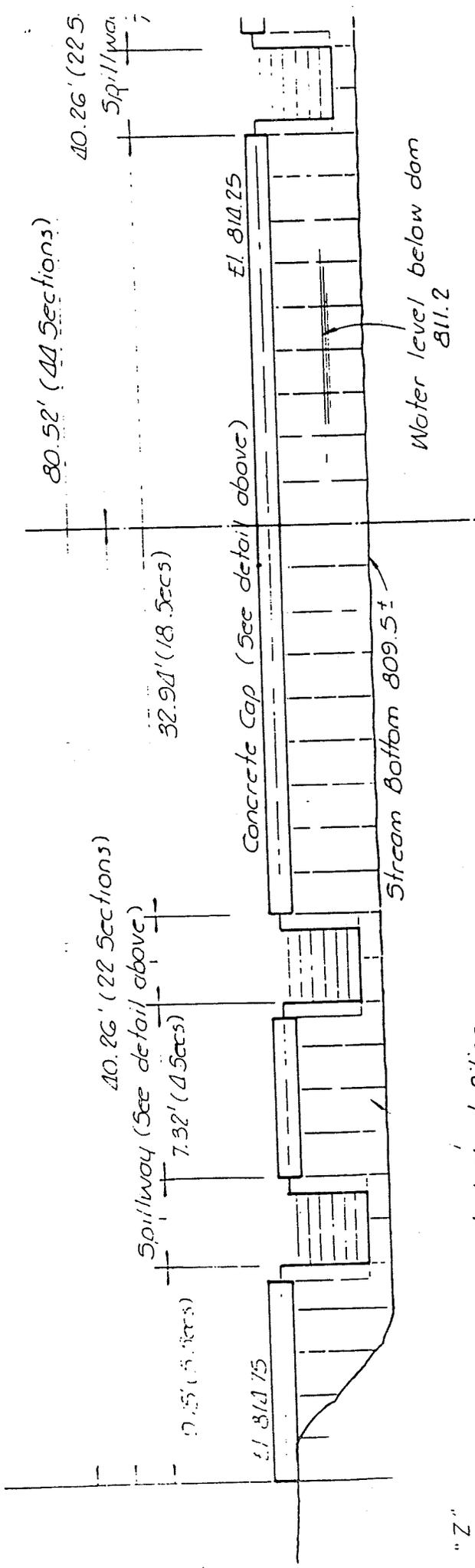


Notes
 Steel Sheet Piling sections shall be 16 feet long
 and driven to grade to obtain bearing.
 For construction sequence, See Proposal.
 For Log of Boring, See Sht. 3

ARK DAM REPLACEMENT

FILE

DNR File # 89-12-502
 Sheet 3 of 6



"Z"
0
0
0
19
sec'
4

Steel Sheet Piling

PROPOSED MILHAM PARK DAM REPLACEMENT

PROFILE

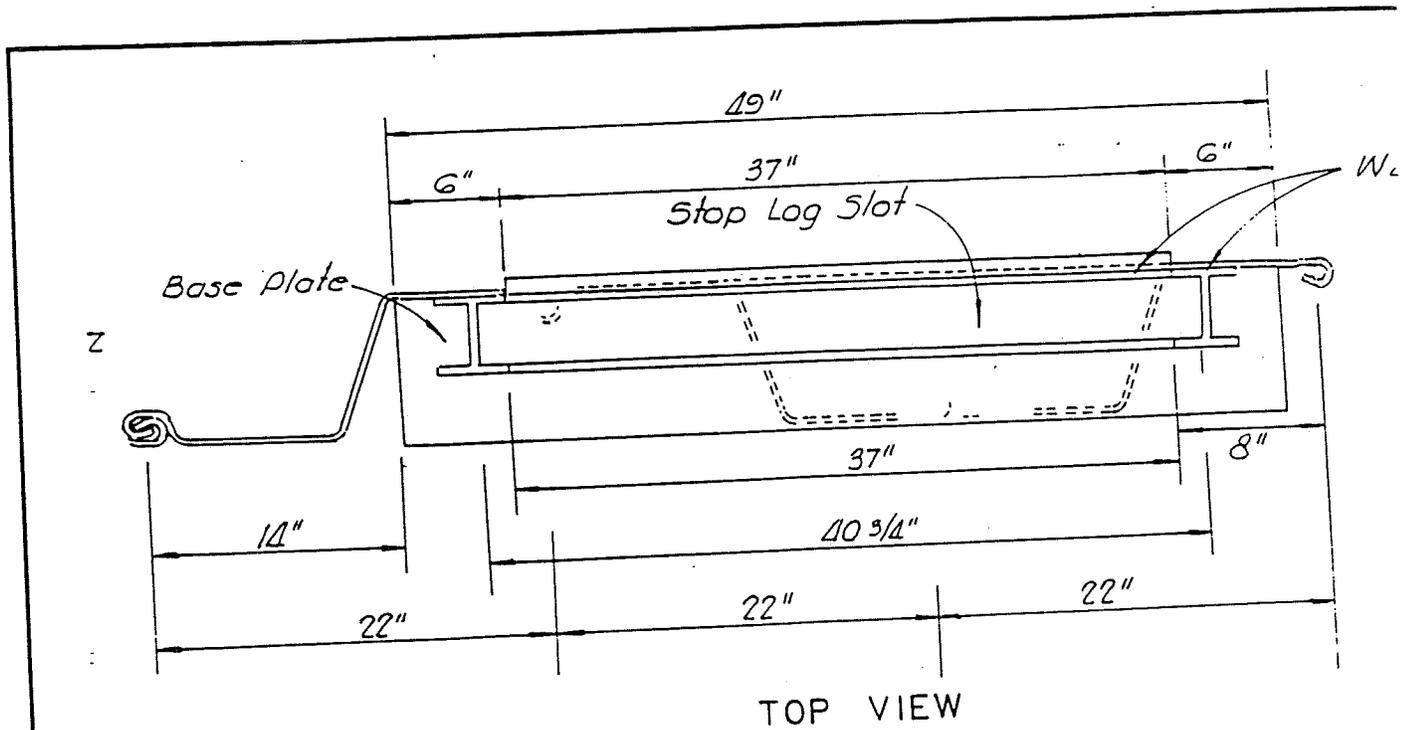
Quantities for Structure

- 1288 sft. Permanent Steel Sheet Piling
- 5 cuds. Concrete, Grade 357
- 304 lbs. Steel Reinforcement
- 4 each Spillways, Fabricated and Erected

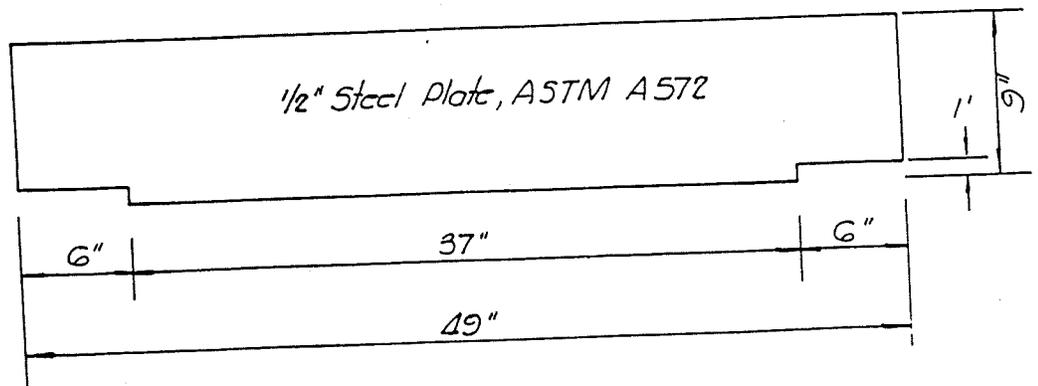
DWR File # 89-12-502
Sheet 4 of 6

DNR File # 89-12-502

Sheet 5 of 6



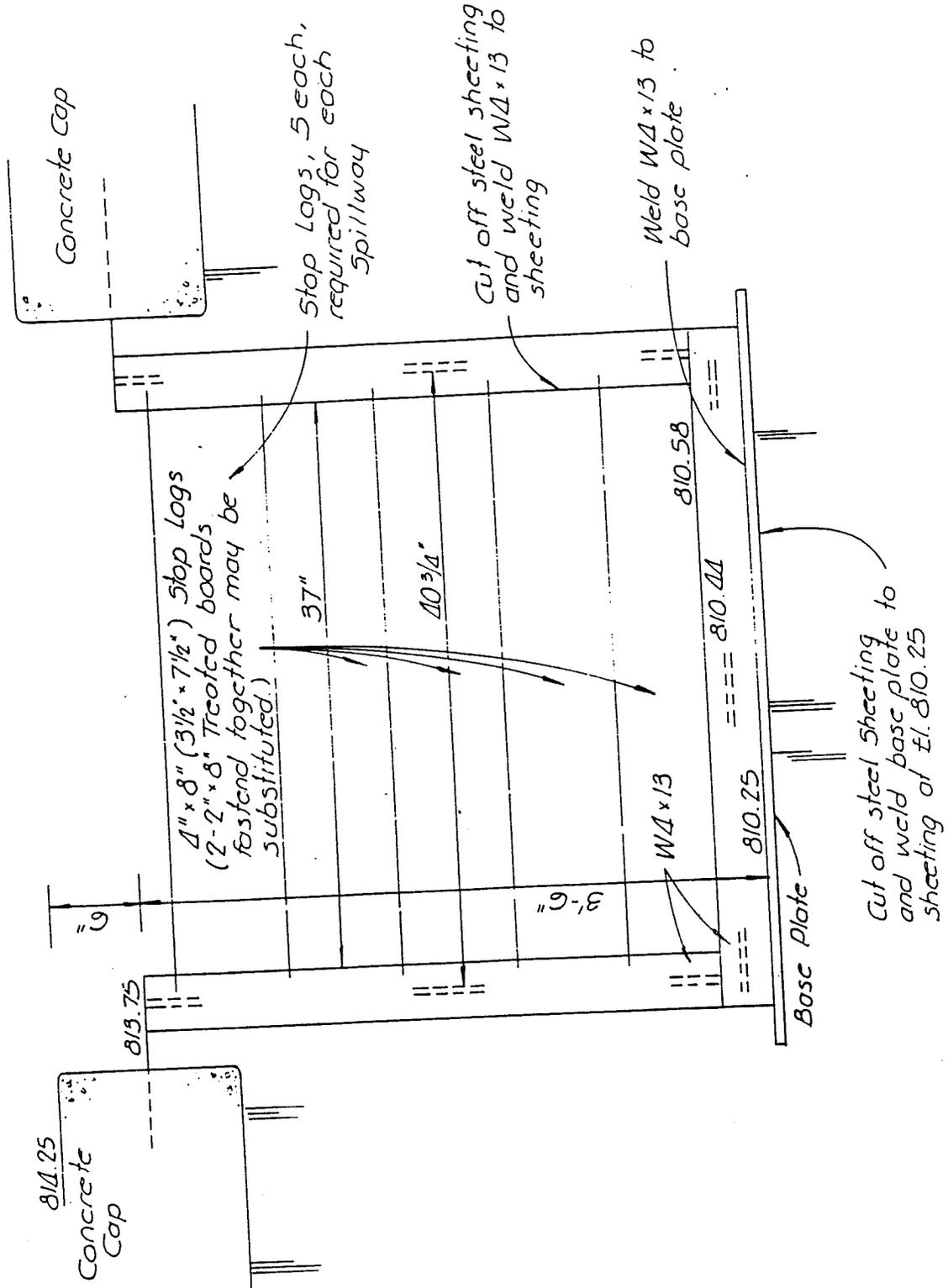
BASE PLATE DETAIL



SPILL WAY

DWR File # 89-12-502

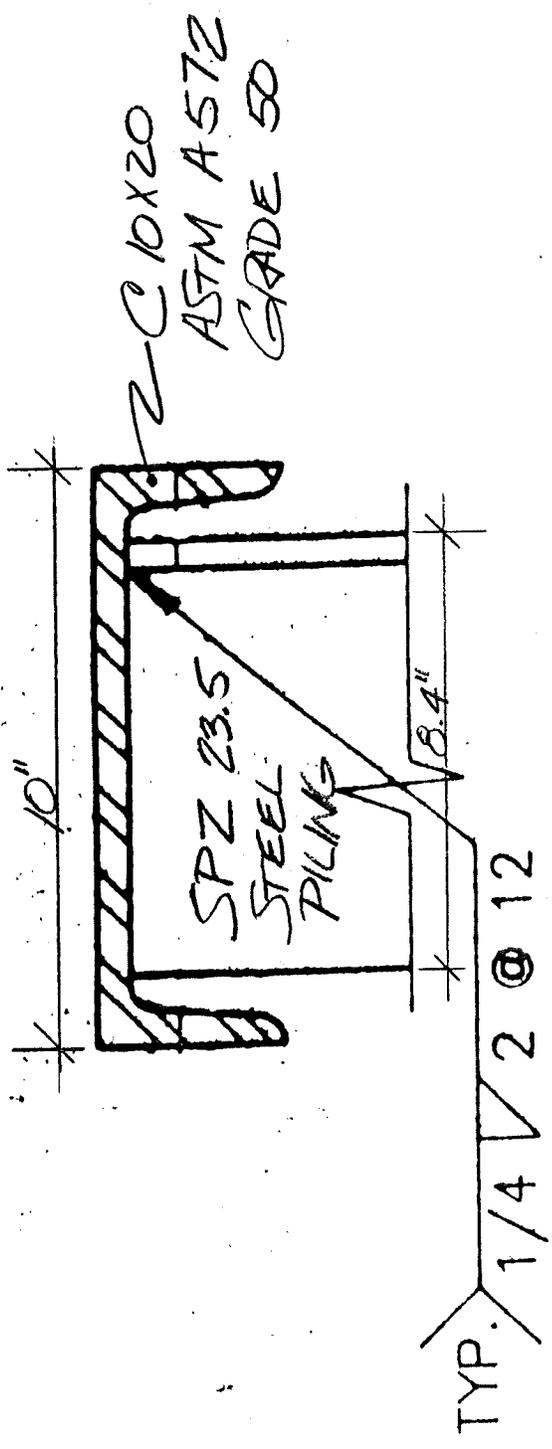
Sheet 6 of 6



1-31-90
TCC

MILHAM PARK

CROSS SECTION DETAIL OF PROPOSED PILE CAP ALTERNATE



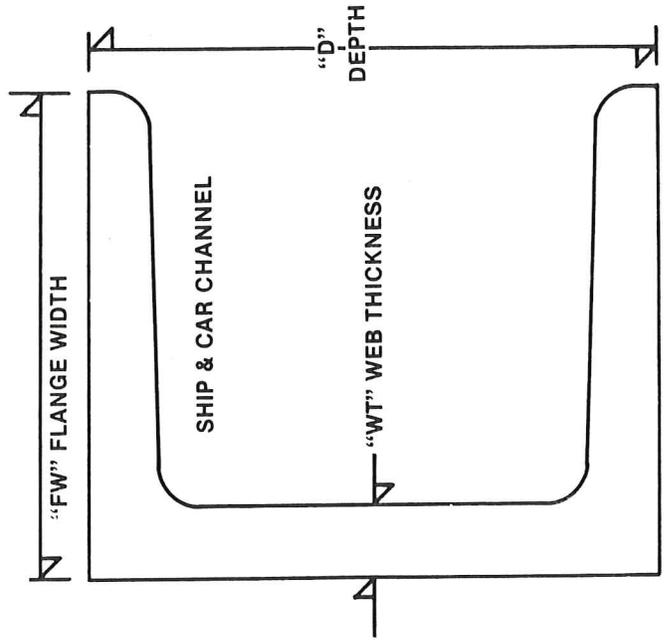
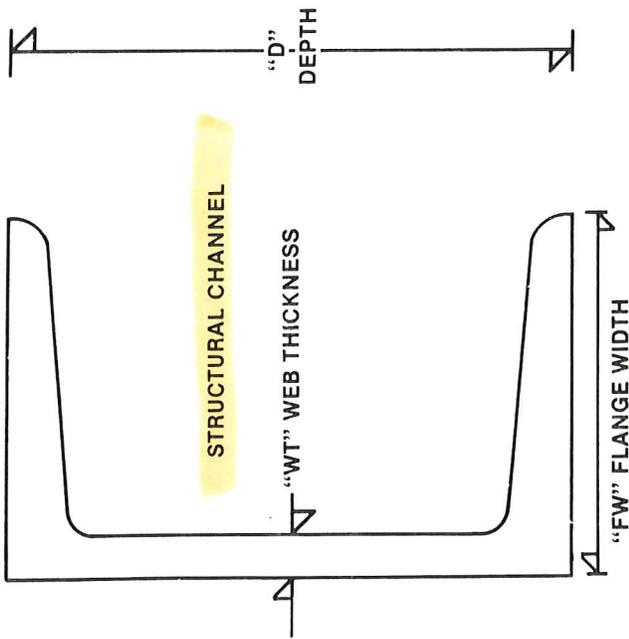
EL

Bar Channels

Size in Inches	Estimated Wt. in Lbs.	
	Per Ft.	20 Ft. Bar
1 x 1/2 x 1/8	.84	16.80
1 1/4 x 1/2 x 1/8	1.01	20.20
1 1/2 x 1/2 x 1/8	1.12	22.40
1 1/2 x 1 1/2 x 3/16	2.72	54.40
2 x 1/2 x 1/8	1.43	28.60
2 x 5/8 x 1/4	2.28	45.60
2 x 1 x 1/8	1.59	31.80
2 x 1 x 3/16	2.32	46.40
2 1/2 x 5/8 x 3/16	2.27	45.40

Structural Channels

"D" Depth of Channel & Wt. Per Ft.	Wt. For 20'	"WT" Thickness Of Web In Inches	"FW" Width Of Flange In Inches
3" x 4.1 lbs.	82	.170	1.410
5.0 lbs.	100	.258	1.498
6.0 lbs.	120	.356	1.596
4" x 5.4 lbs.	108	.180	1.580
7.25 lbs.	145	.320	1.720
5" x 6.7 lbs.	134	.190	1.750
9.0 lbs.	180	.325	1.885
6" x 8.2 lbs.	164	.200	1.920
10.5 lbs.	210	.314	2.034
13.0 lbs.	260	.437	2.157
7" x 9.8 lbs.	196	.210	2.090
12.25 lbs.	245	.314	2.194
14.75 lbs.	295	.419	2.299
8" x 8.5 lbs.	170	.180	1.875
11.5 lbs.	230	.220	2.260
13.75 lbs.	275	.303	2.343
18.75 lbs.	375	.487	2.527
9" x 13.4 lbs.	268	.230	2.430
15.0 lbs.	300	.285	2.485
20.0 lbs.	400	.448	2.648
10" x 15.3 lbs.	306	.240	2.600
20.0 lbs.	400	.379	2.739
25.0 lbs.	500	.526	2.886
30.0 lbs.	600	.673	3.033



STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
PERMIT

36

I
S City of Kalamazoo
S T Dept. of Public Works
U O 241 W. South Street
E Kalamazoo MI 49007
D

Permit No. 89-12-0502

Issued Feb 12 90

Extended

Revised

Expires Dec 31 91

This permit is granted under the provisions of:
The Inland Lakes and Streams Act, 1972 PA 346, as amended.

The Goemaere-Anderson Wetland Protection Act, 1979 PA 203.

Permitted Activity

Construct a sediment basin downstream from the construction site.
Place two filter fabric sediment barriers across the stream.
Construct a new 80.5-foot long steel sheet pile, stoplog low head dam immediately downstream of the existing dam. Remove the existing dam.
Dredge 1,457 cubic yards of sediment from the existing impoundment.

Water Course Affected: S Br Portage Cr
County: Kalamazoo Town: 12S Range: 11W Sections: 34 0
Subdivision: Lot:

- Authority granted by this permit is subject to the following limitations:
- A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
 - B. The permittee in exercising the authority granted by this permit shall not cause unlawful pollution as defined by Act 245 of the Public Acts of 1929, as amended.
 - C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
 - D. All work shall be completed in accordance with the plans and the specifications submitted with the application and/or plans and specifications attached hereto.
 - E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved herein.
 - F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with Act 53 of the Public Act of 1974 and comply with each of the requirements of that act.
 - G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits or complying with other state statutes.
 - H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
 - I. Permittee shall notify the Department of Natural Resources within one week after the completion of the activity authorized by this permit, by completing and forwarding the attached, preaddressed post card to the office addressed thereon.
 - J. This permit shall not be assigned or transferred without the written approval of the Department of Natural Resources.
 - K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific State Act, Federal Act and/or Rule under which this permit is granted.
 - L. Work to be done under authority of this permit is further subject to the following special instructions and specifications:

I
S City of Kalamazoo
S T Dept. of Public Works
U O 241 W. South Street
E Kalamazoo MI 49007
D

Permit No. 89-12-0502
Issued Feb 12 90
Extended
Revised
Expires Dec 31 91

PERMIT LIMITATIONS, continued

All work shall be completed in accordance with the attached plans and plans on file with the Department of Natural Resources.

Two filter fabric barriers shall be installed downstream from the construction site to prevent excessive off-site siltation. Barrier shall be installed prior to commencement of dredging and shall be maintained for duration of project. Barrier shall be left in place after completion of dredging until all disturbed sediments have settled.

All dredged material shall be disposed of in a Type II landfill.

Prior to the initiation of any permitted construction activities, a sediment basin shall be constructed immediately downstream of the construction site. The sediment basin shall be maintained in good working order throughout the duration of the project. All excavated material shall be placed on an upland site.

All raw areas resulting from this construction activity shall be promptly and effectively stabilized with seed-fertilizer-mulch and/or sod in sufficient quantity to prevent erosion and subsequent siltation to the watercourse.

Permittee covenants not to sue the State of Michigan, or any of its departments, boards, commissions, officers, employees, or agents for any claim, whether legal or equitable, arising under or in any manner related to the privileges granted in this Permit. Permittee hereby releases, waives, and discharges the State of Michigan and all of its departments, boards, commissions, officers, employees, and agents from any and all liability to permittee arising under or in any manner related to the privileges granted under this Permit.

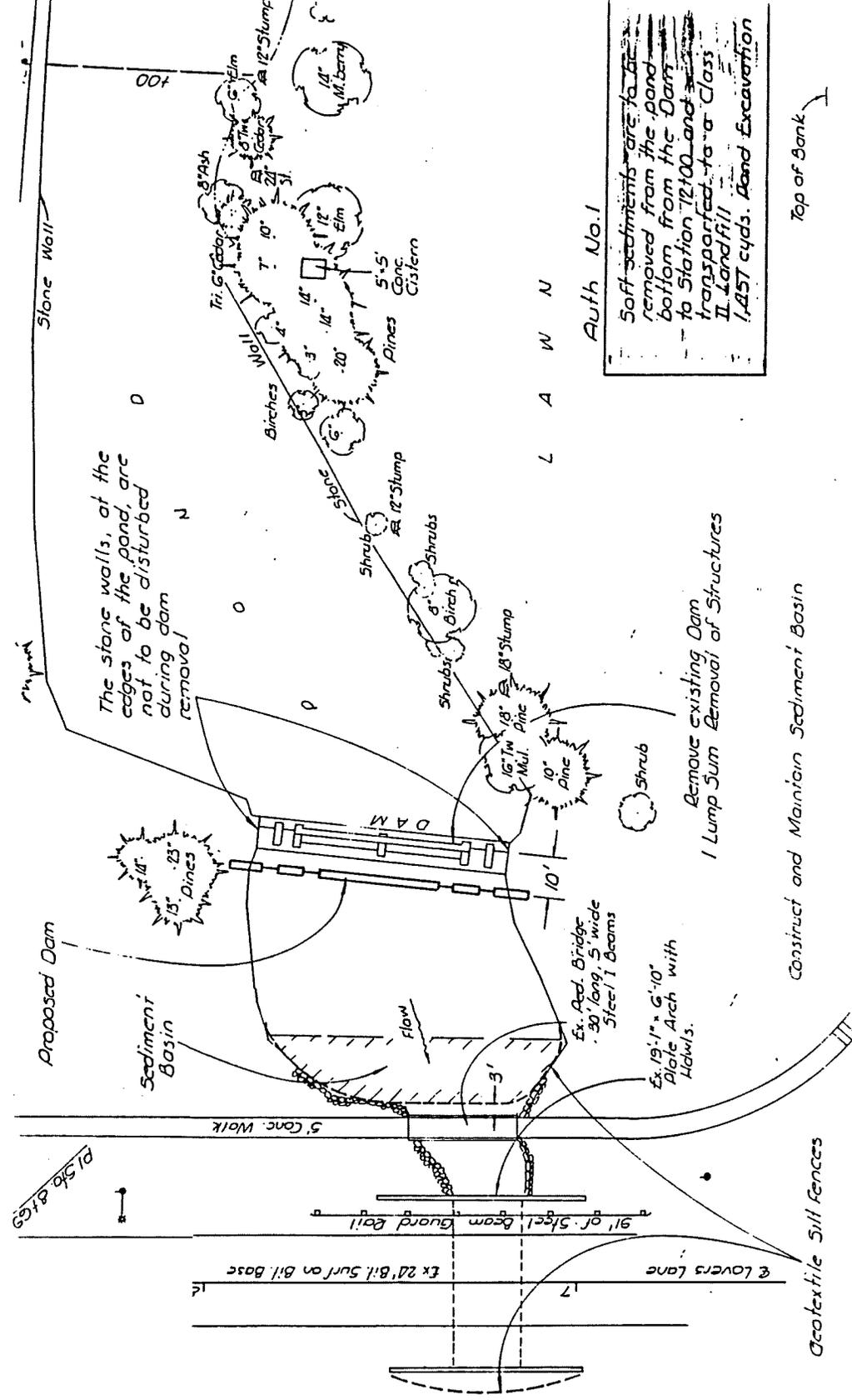
Permittee agrees to indemnify the State of Michigan and all of its departments, agencies, boards, commissions, officers, employees, and agents from any and all liability arising under or in any manner related to the issuance of the Permit or the privileges granted under this Permit.

David F. Hales
Director, Department of Natural Resources
By: *Kimberly D. Rice*
Kimberly D. Rice
Land and Water Management Division

KDR:jg

cc: LWMD, Lansing, Region III
D-12 Law, Waste Management (T. Leep)

ONR File # 89-12-502
Sheet 1 of 6



The stone walls, at the edges of the pond, are not to be disturbed during dam removal.

Remove Existing Dam
 1 Lump Sum Removal of Structures

Construct and Maintain Sediment Basin

Auth No. 1

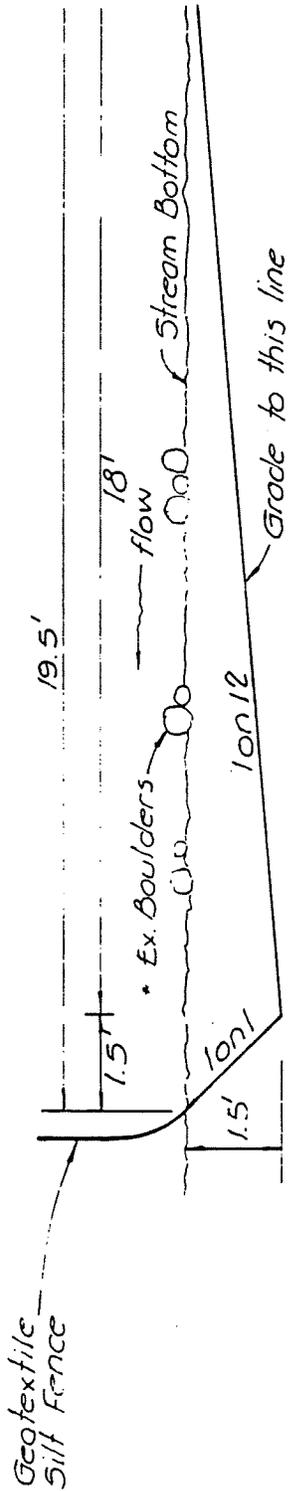
Soft sediments are to be removed from the pond bottom from the Dam to Station 72+00 and transported to a Class II Landfill 1,457 cu yds. Pond Excavation

Top of Bank

L A W N

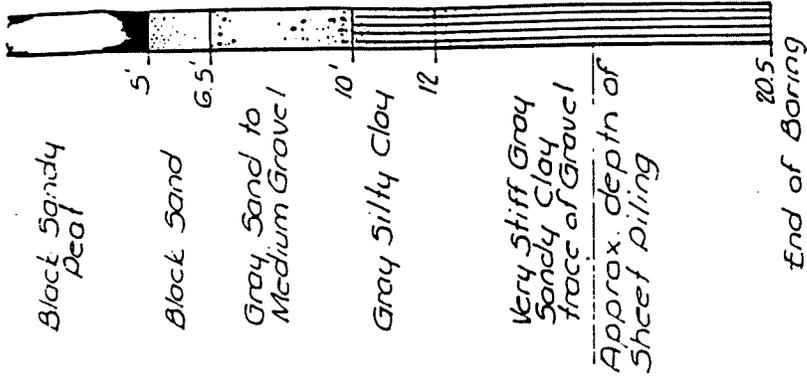
12

DWR File # 89-12-502
 Sheet 2 of 6

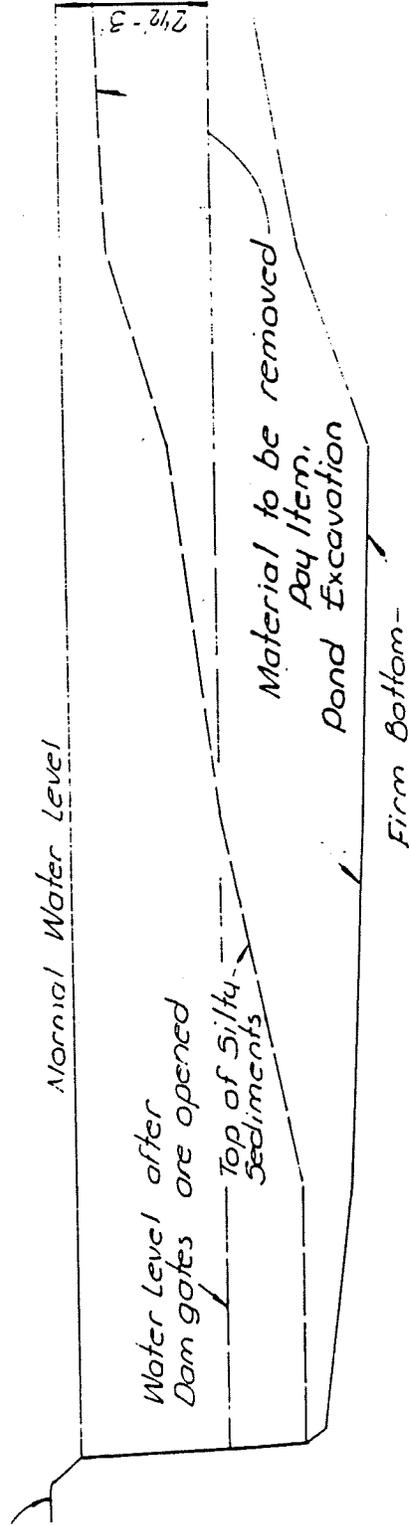


* Ex. Boulders are to be salvaged and replaced in stream after the Streambed Protection is placed.

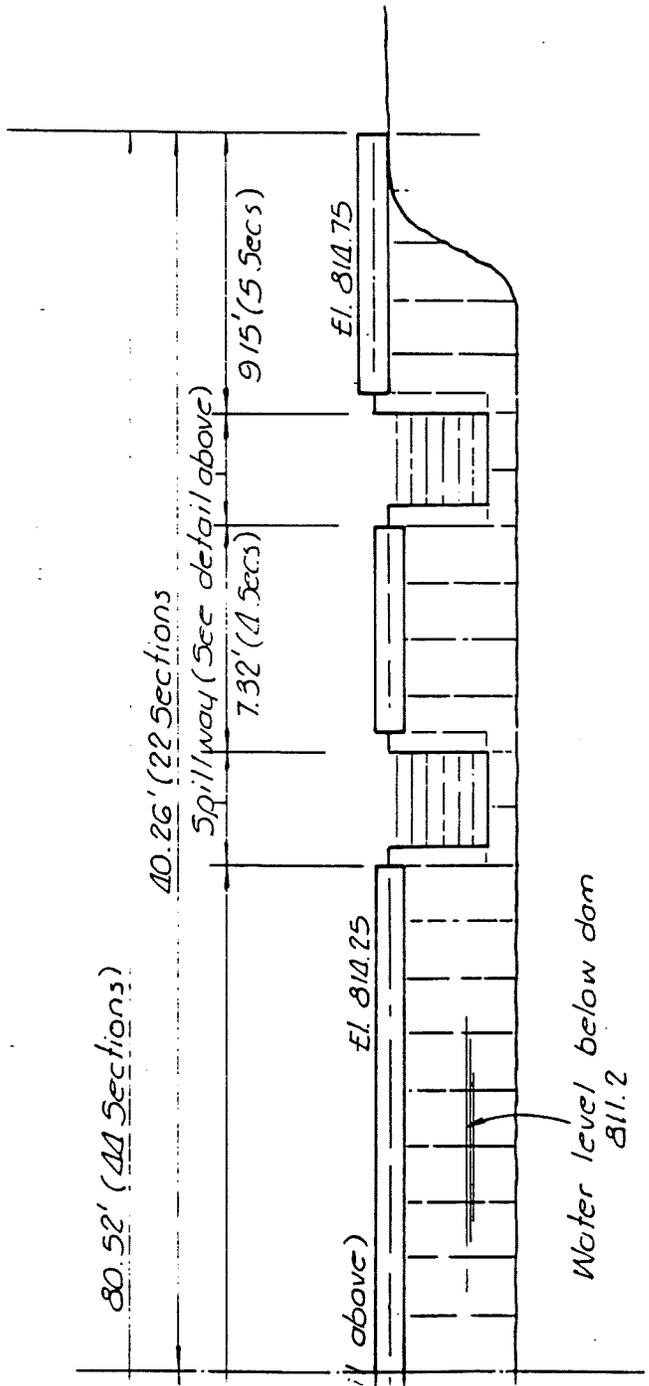
DETAIL SHOWING SEDIMENT BASIN



Top o' Bunt



DETAIL SHOWING SEDIMENT REMOVAL

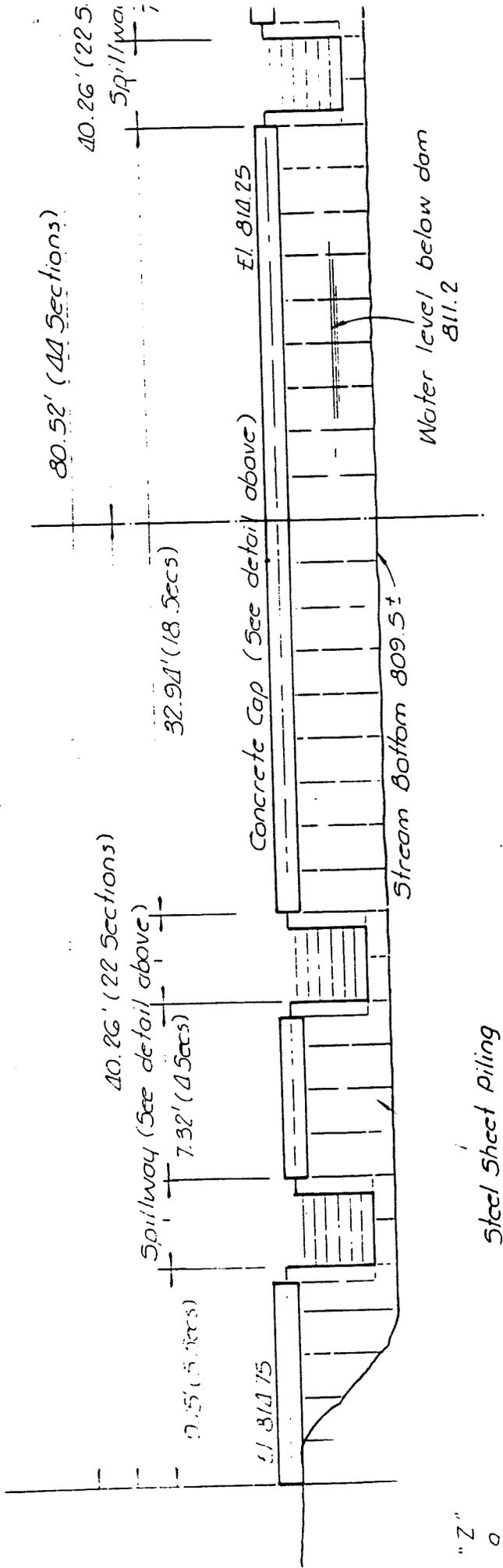


Notes
 Steel Sheet Piling sections shall be 16 feet long
 and driven to grade to obtain bearing.
 For construction sequence, See Proposal.
 For Log of Boring, See Sht. 3

ARK DAM REPLACEMENT

)FILE

DWR File # 89-12-502
 Sheet 3 of 6



"Z"
0
0
0
19
sec
4

PROPOSED MILHAM PARK DAM REPLACEMENT

PROFILE

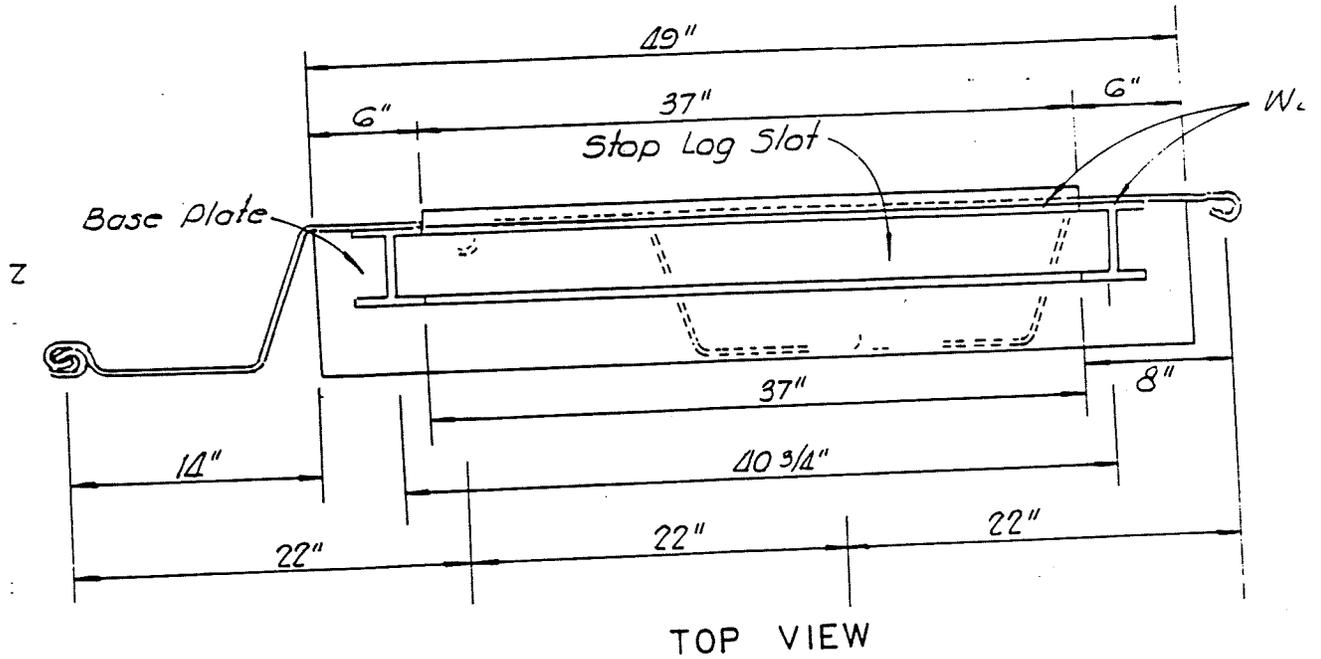
Quantities for Structure

- 1288 sft. Permanent Steel Sheet Piling
- 5 cuds. Concrete, Grade 355
- 304 lbs. Steel Reinforcement
- 1 each Spillways, Fabricated and Erected

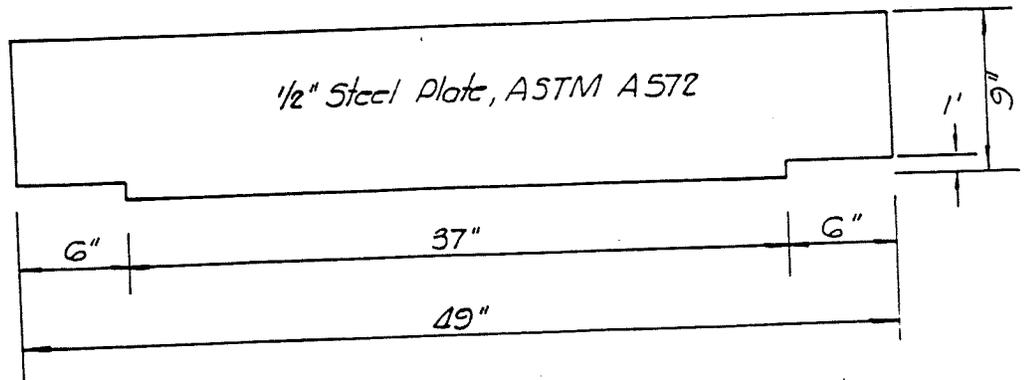
DWR File # 89-12-50a
Sheet 4 of 6

ONR File # 89-12-502

Sheet 5 of 6



BASE PLATE DETAIL



SPILL WAY

OWR File # 89-12-502
 Sheet 6 of 6

