General Notes

1. See DPZ File Nos. S-88-114, PB-242, FDP-202, P-90-20, SDP-90-70 and F-90-154.
2. Stormwater quantity management provided under F-90-154. Quality management provided on-site with "water quality structure" per Howard County Standards.
3. Topography shown as existing reflects mass grading as shown on SDP-90-70. Sediment trap in the northwest corner of parcel is assumed to have been backfilled and stabilized per sequence of construction in F-90-154.
4. Utility information shown per Final Construction Plans for development.
5. Coordinates and bearings are based on Maryland State Plane.

Site Analysis

1. Area of Parcel: 1.25 AC.
2. Zoning: NT (Commercial) FDP-202
3. Proposed Use: Quick Serve Restaurant
4. Number of Seats: 100 (34 PARKING SP. REQ'D)
5. Number of Employees: 9 PER SHIFT (2 PARKING SP. REQ'D)
6. Parking Required: 36
7. Parking Provided: 46 + 2 Handicap
8. AREA OF BUILDING: 4785 SF (8.8% COVERAGE)

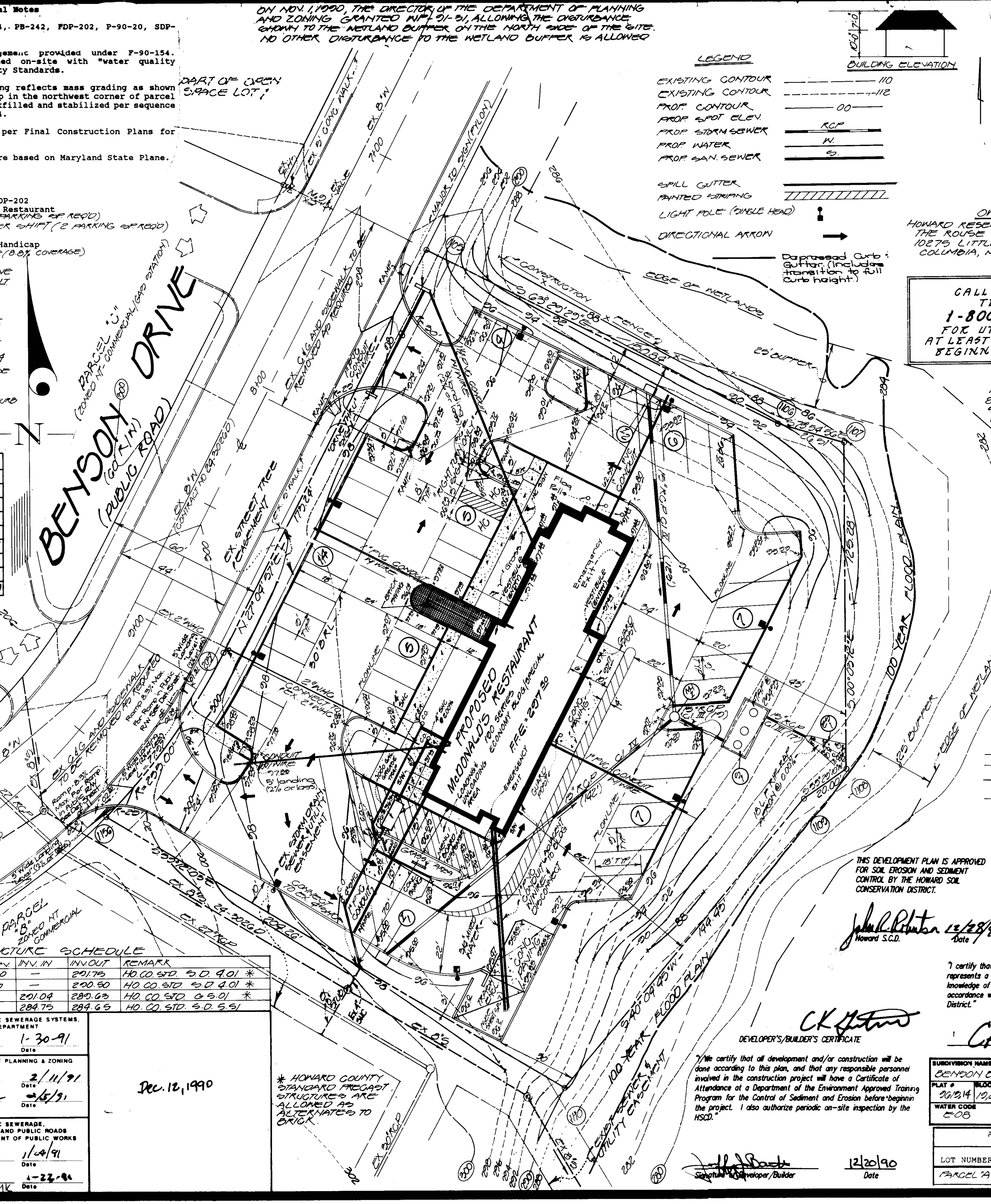
PARKING NOTES

1. PAVING WITHIN BENSON DRIVE R/W SHALL BE P-3 OR P-3ALT. AS SHOWN ON SHEET SP-4.
2. REMAINDER OF PAVING SHALL CONFORM TO DETAIL, THIS SHEET.
3. 7" CURB & GUTTER SHALL BE USED IN BENSON DRIVE R/W. SEE DETAIL ON SHEET SP-4
4. REMAINDER OF C&G SHALL BE 6". SEE DETAIL, SHEET SP-4.
5. WHERE FLOW IS AWAY FROM CURB UTILIZE SPILL GUTTER.
6. All on-site paved areas are private.

COORDINATE TABLE

NO.	NORTH	EAST
1105	493170.8762	856945.5797
1106	493103.5521	857080.5597
1107	493096.2075	857106.0318
1108	492970.9278	857106.1483
1109	492959.5969	857089.6703
1110	492849.0869	856996.6809
1156	492953.6728	856821.2311
2037	493016.6309	856866.7079

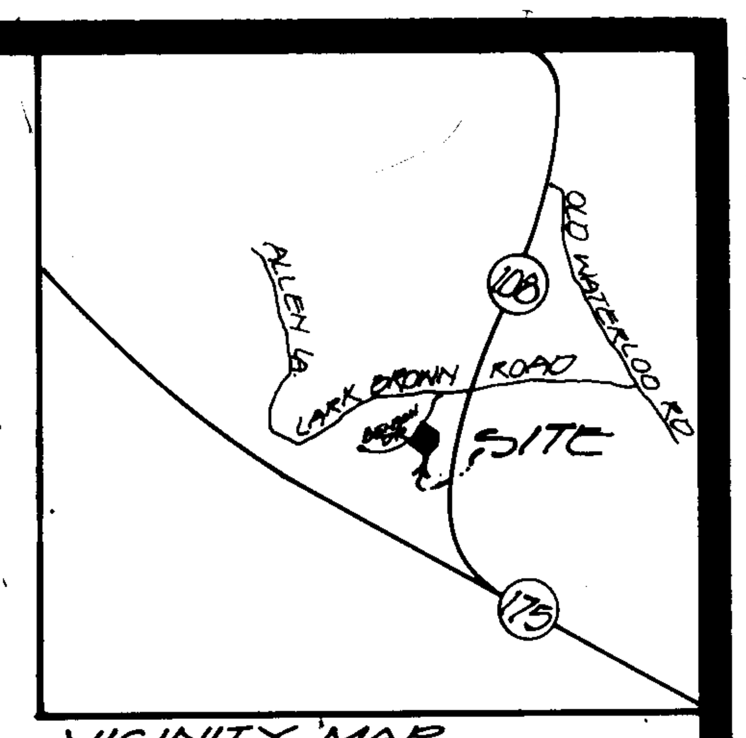
ON NOV. 1, 1990, THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND ZONING GRANTED WP-91-31, ALLOWING THE DISTURBANCE SHOWN TO THE WETLAND BUFFER ON THE NORTH SIDE OF THE SITE. NO OTHER DISTURBANCE TO THE WETLAND BUFFER IS ALLOWED



LEGEND

EXISTING CONTOUR	110
EXISTING CONTOUR	112
PROP. CONTOUR	00
PROP. SPOT ELEV.	
PROP. STORM SEWER	RCP
PROP. WATER	W.
PROP. SAN. SEWER	S.
SPILL GUTTER	
PAINTED STRIPING	
LIGHT POLE (SINGLE HEAD)	
DIRECTIONAL ARROW	
Depressed Curb & Gutter (Includes transition to full curb height)	

BUILDING ELEVATION



VICINITY MAP
SCALE: 1" = 2000'

OWNER
HOWARD RESEARCH & DEVELOPMENT LAND CO
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MD. 21044

CALL "MISS UTILITY"
TELEPHONE
1-800-257-7777
FOR UTILITY LOCATIONS
AT LEAST 48 HOURS BEFORE
BEGINNING CONSTRUCTION

BUILDER
McDONALD'S CORPORATION
8850 STANFORD BLVD.
SUITE 2000
COLUMBIA, MD. 21045
(301) 290-0000

PIPE SCHEDULE

TYPE	LENGTH
15" RCP CL IV	265 L.F.
15" RCP CL III	36 L.F.

STRUCTURE SCHEDULE

STRUCT.#	TYPE	TOP ELEV.	INV. IN	INV. OUT	REMARK
I-1	A-5	295.50	—	291.75	HO. CO. STD. S.D. 4.01 *
I-2	A-5	294.33	—	290.50	HO. CO. STD. S.D. 4.01 *
MH1	STD. MANHOLE	297.7	291.04	289.63	HO. CO. STD. G 5.01 *
ES-1	STD. END SECT.	—	284.75	284.65	HO. CO. STD. S.D. 5.51

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT
[signature] 1-30-91
County Health Officer — Date

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
[signature] 2/11/91
Director — Date
[signature] 2/5/91
Chief, Division of Community Planning and Land Development — Date

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[signature] 1/24/91
Director — Date
[signature] 1-22-91
Chief Bureau of Engineering — Date

Dec. 12, 1990

* HOWARD COUNTY STANDARD PRECAST STRUCTURES ARE ALLOWED AS ALTERNATES TO BRICK.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[signature] 12/28/90
Howard S.C.D. — Date

Reviewed for HOWARD S.C.D.
Name
and meets Technical Requirements.
[signature] 12/28/90
U.S. Soil Conservation Service — Date

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

[signature] 12-17-90
Date

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD."

[signature] 12/20/90
Signature of Developer/Builder — Date

SUBDIVISION NAME			SECT\AREA	PARCEL #	
BENSON BUSINESS CENTER			1	"A"	
PLAT #	BLOCK #	ZONING	TAX MAP #	ELECT. DIST.	CENSUS TR.
9613,14	19,20	NT (EMP. CENTER COMM.)	37	6TH	6065.02
WATER CODE			SEWER CODE		
E08			3420000		

ADDRESS CHART

LOT NUMBER	STREET ADDRESS
PARCEL "A"	8305 BENSON DRIVE

GENERAL NOTES:

1. McDonald's Road Sign and Base are by the Sign Contractor. Conduit and Wiring are by the General Contractor.
2. Bases, Anchor Bolts, Conduit, and Wiring for All Other Signs are by the General Contractor.
3. ¾" Empty Conduit to Locations Shown at the Lot Perimeter for Lot Lighting is by the General Contractor. Lighting Fixtures, Bases, Poles, Conduit, and Wiring are by the Owner/Operator.
4. Bases for Flagpoles are by the General Contractor. Anchor Bolts are by the Flagpole Supplier.
5. Proposed Utilities are Shown in Schematic Only. Exact Locations shall be Field Determined to Allow for the Most Economical Installation.
6. The Contractor shall Coordinate with All Utility Companies to Determine Exact Point of Service Connection at Existing Utility. Refer to the Building Electrical and Plumbing Drawings for Utility Service Entrance Locations, Sizes, and Circuiting.
7. All Elevations Shown are in Reference to the Benchmark and must be Verified by the General Contractor At Groundbreak.
8. Finish Walk and Curb Elevations shall be 6" Above Finish Pavement.
9. All Landscape Areas shall be Rough Graded to 6" Below Top of All Walks and Curbs. Finish Grading, Landscaping, and Sprinkler Systems are by the Owner/Operator.

PAVING SPECIFICATION:
(Minimum 3" Total Compacted Asphalt Thickness.)

- 1½" SURFACE COURSE SN
- 2" BASE COURSE
- 6" CRUSHED STONE
- COMPACTED AND APPROVED SUBGRADE

Note: McDonald's Engineer Reserves The Right To Request A Compaction Test And Or A Core Sample. If Tests Prove Correct, Per Above Specifications, Tests Will Be At The Expense Of McDonald's, Otherwise, G.C. Will Be Charged.

LOT LIGHTING RECOMMENDATION:

GARDCO FORM-10 #H1913-400MH
20' POLE BY K.E. INDUSTRIES
#RTSP 20-5-9-11-BL.
BLACK POWDER COAT

Note: Electrical Contractor To Circuit Lot Lighting As Noted.

PARKING INFORMATION:

Total Spaces	Spaces		
48	26 STANDARD Spaces	9' x 18'	@ 90°
	20 STANDARD Spaces	x	@ 60°
	2 HANDICAPPED Spaces	x	@ 90°
	Spaces	x	@ °

UTILITY INFORMATION:

	Size	Type	Location
Sanitary Sewer	8"	GRAVITY	SOUTH WEST (EASEMENT)
Water	12"		BENSON DR
Storm Sewer	27"		SOUTHWEST (EASEMENT)
Electric			
Gas			

SURVEY INFORMATION:

Prepared By: GLW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS
3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK · BURTONSVILLE, MD 20866
Dated: — DES. HDB — DRN. HDB — CHK.

LEGEND:

Sanitary Sewer	S	Gas	G
Water	W	Lot Light	LP 30
Storm Sewer	ST	Existing Elevation	(76.5)
Electric	E	Proposed Elevation	77.0

PLAN SCALE: 1" = 20'

STREET ADDRESS: BENSON DRIVE
CITY: COLUMBIA — STATE: MARYLAND
COUNTY: HOWARD

SITE PLAN

PLAN APPROVALS:

	Signature: (2 required)	Date:
Regional Mgr.	[signature]	9-4-90
Const. Mgr.	[signature]	9/4/90
Operations Dept.		
Real Estate Dept.	[signature]	9-4-90

CO-SIGN SIGNATURES:

Contractor	
Owner	

McDonald's®

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McD 14533

PLAN STATUS:

	Description	Date:	By:
	Preliminary Drawn		
	Revisions		
1	REVISE BLDG. TYPE TO 100 SERIES	9/16/91	HK
2	Add addition to ex. building	5/12/93	MF
3			
4			
5			
6			
7			
8			
9			
	Plan Checked		
	As-Built Drawn		

REGIONAL DWG. NO.: 19-376

CORPORATE DWG. NO.:

SP-1 OF 11

GLW 90-025 11-9-90

SDP-91-30

ON NOV. 1, 1990, THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND ZONING GRANTED WP-91-31, ALLOWING THE DISTURBANCE SHOWN TO THE WETLAND BUFFER ON THE NORTH SIDE OF THE SITE. NO OTHER DISTURBANCE TO THE WETLAND BUFFER IS ALLOWED

Construction Sequence

1. Obtain grading permit.
2. Install stabilized construction sequence.
3. Construct sediment trap and earth dikes #1 and #2. Construct earth dike #1 at "initial location".
4. Clear and grade site. As fill progresses along earth dike #1, relocate to "final location".
5. Install storm drain runs I-1 to MH1 and I-2 to MH1; install curb and gutter except in area of sediment trap.
6. Install flexible plastic corrugated pipe from MH1 to sediment trap.
7. As fill and installation of curb and gutter progresses, remove earth dikes as necessary.
8. As earth dikes are removed and fill slopes are constructed, install silt fence as shown.
9. Construct building.
10. Stabilize site with asphalt, gravel and grass seed/sod and mulch.
11. Remove sediment control measures only when areas served by these measures are stabilized and permission is granted by the Sediment Control Inspector.

PARKING NOTES

1. PAVING WITHIN BENSON DRIVE R/W SHALL BE P-3 OR P-3ALT AS SHOWN ON SHEET SP-4.
2. REMAINDER OF PAVING SHALL CONFORM TO DETAIL, THIS SHEET.
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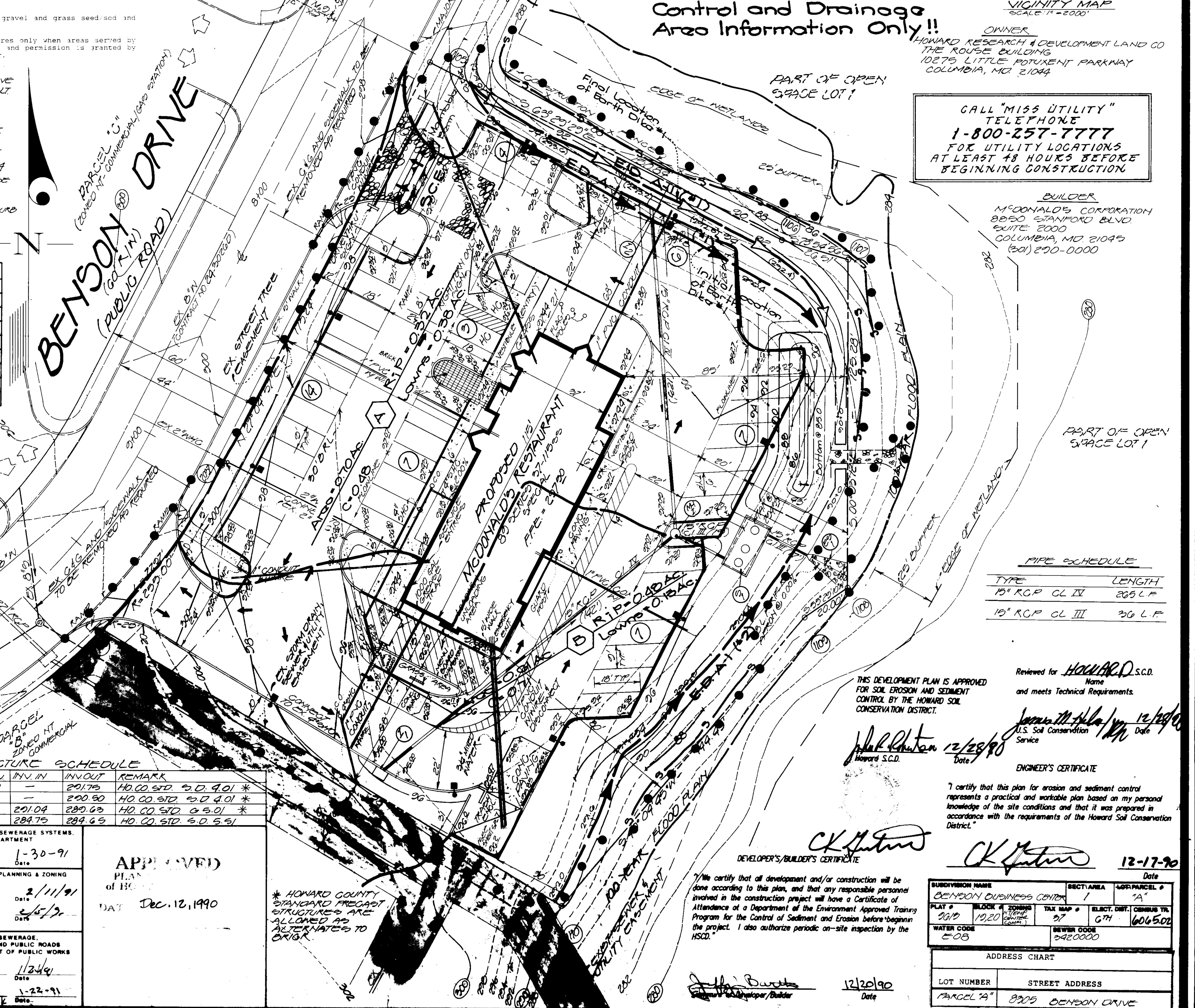
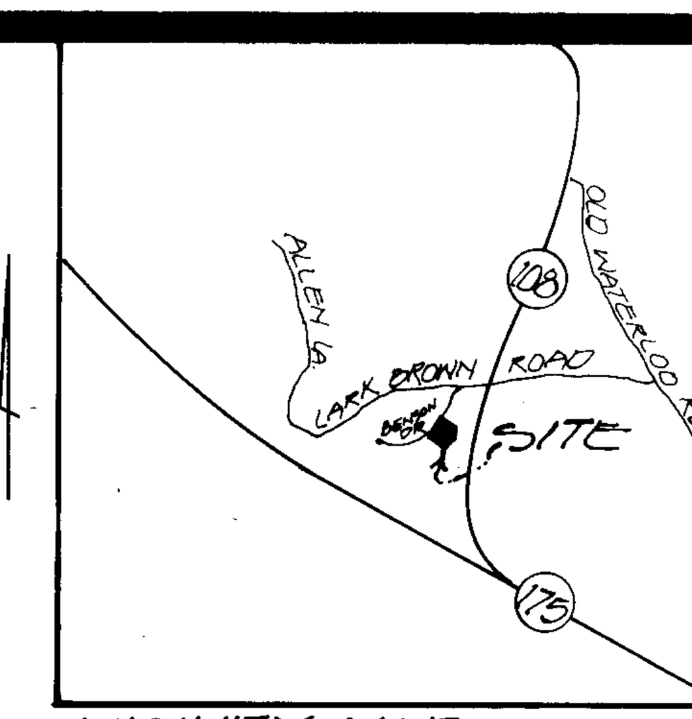
1156	492953.6728	856821.2311
2037	493016.6309	856866.7079

LEGEND

- EARTH DIKE
- PROP. DRAINAGE DIVIDE
- LIMIT OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE (S.C.E.)
- SILT FENCE
- PROPOSED TEMPORARY CONTOUR

This Plan For Sediment Control and Drainage Area Information Only!!





VICINITY MAP
SCALE: 1" = 2000'

OWNER

HOWARD RESEARCH & DEVELOPMENT LAND CO
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MD. 21044

CALL "MISS UTILITY"
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BUILDER

McDONALD'S CORPORATION
8850 STANFORD BLVD.
SUITE 2000
COLUMBIA, MD. 21045
(301) 290-0000

PIPE SCHEDULE

TYPE	LENGTH
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STRUCT.#	TYPE	TOP ELEV.	INV. IN	INV. OUT	REMARK
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I-2	A-5	294.33	—	290.50	HO.CO.STD. S.D. 4.01 *
MH1	STD. MANHOLE	297.7	291.04	289.63	HO.CO.STD. G 5.01 *
ES 1	STD. END SECT.	—	284.75	284.65	HO.CO.STD. S.D. 5.51

* HOWARD COUNTY STANDARD PRECAST STRUCTURES ARE ALLOWED AS ALTERNATES TO BRICK.

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT
County Health Officer — Date 1-30-91

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Director — Date 2/11/91
Chief, Division of Community Planning and Land Development — Date 2/5/91

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Director — Date 1/24/91
Chief Bureau of Engineering — Date 1-22-91

APPROVED
PLAN[illegible]
of HO[illegible]
DATE Dec. 12, 1990

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Howard S.C.D. — Date 12/28/90

Reviewed for HOWARD S.C.D. (Name) and meets Technical Requirements.

U.S. Soil Conservation Service — Date 12/28/90

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD."

Signature of Developer/Builder — Date 12/20/90

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Date 12-17-90

SUBDIVISION NAME			SECT\AREA	PARCEL #	
BENSON BUSINESS CENTER			1	"A"	
PLAT #	BLOCK #	ZONING	TAX MAP #	ELECT. DIST.	CENSUS TR.
9019	19,20	NT (EHP CENTER COMM.)	37	6TH	6065.02
WATER CODE			SEWER CODE		
E08			3420000		

ADDRESS CHART

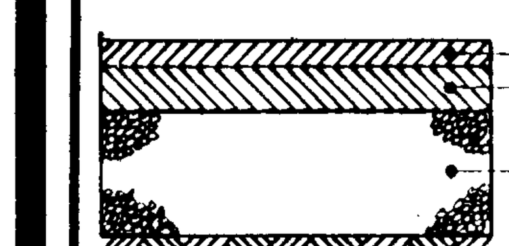
LOT NUMBER	STREET ADDRESS
PARCEL "A"	8305 BENSON DRIVE

7. All Elevations Shown are in Reference to the Benchmark and must be Verified by the General Contractor At Groundbreak.

8. Finish Walk and Curb Elevations shall be 6" Above Finish Pavement.

9. All Landscape Areas shall be Rough Graded to 6" Below Top of All Walks and Curbs. Finish Grading, Landscaping and Sprinkler Systems are by the Owner Operator.

PAVING SPECIFICATION



GARDCO FORM-10 #H1913-400MH
20' POLE BY K.E. INDUSTRIES
#RTSP 20-5-9-11-BL.
BLACK POWDER COAT

PARKING INFORMATION

Total Spaces				
48	26 STANDARD Spaces	9' x 18'	@	90
	20 STANDARD Spaces	x	@	60
	2 HANDICAPPED Spaces	x	@	90
	Spaces	x	@	

UTILITY INFORMATION

	Size	Type	Location
Sanitary Sewer	8"	GRAVITY	SOUTH WEST (EASEMENT)
Water	12"		BENSON DR
Storm Sewer	27"		SOUTHWEST (EASEMENT)
Electric			
Gas			

SURVEY INFORMATION

Prepared By: GLW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS
3909 NATIONAL DRIVE SUITE 250 BURTONSVILLE OFFICE PARK BURTONSVILLE, MD 20866
Dated — DES. HDB DRN. HDB CHK.

LEGEND

Sanitary Sewer	S	Gas	G
Water	W	Lot Light	
Storm Sewer	ST	Existing Elevation	76.5
Electric	E	Proposed Elevation	77.0

PLAN SCALE 1" = 20'

STREET ADDRESS: BENSON DRIVE
CITY: COLUMBIA — STATE: MARYLAND
COUNTY: HOWARD

PLAN STATUS: Date, By — Description, Preliminary Draw, Revisions, Plan Checked, As-Built Draw

McDonald's

REGIONAL DWG NO 19-376

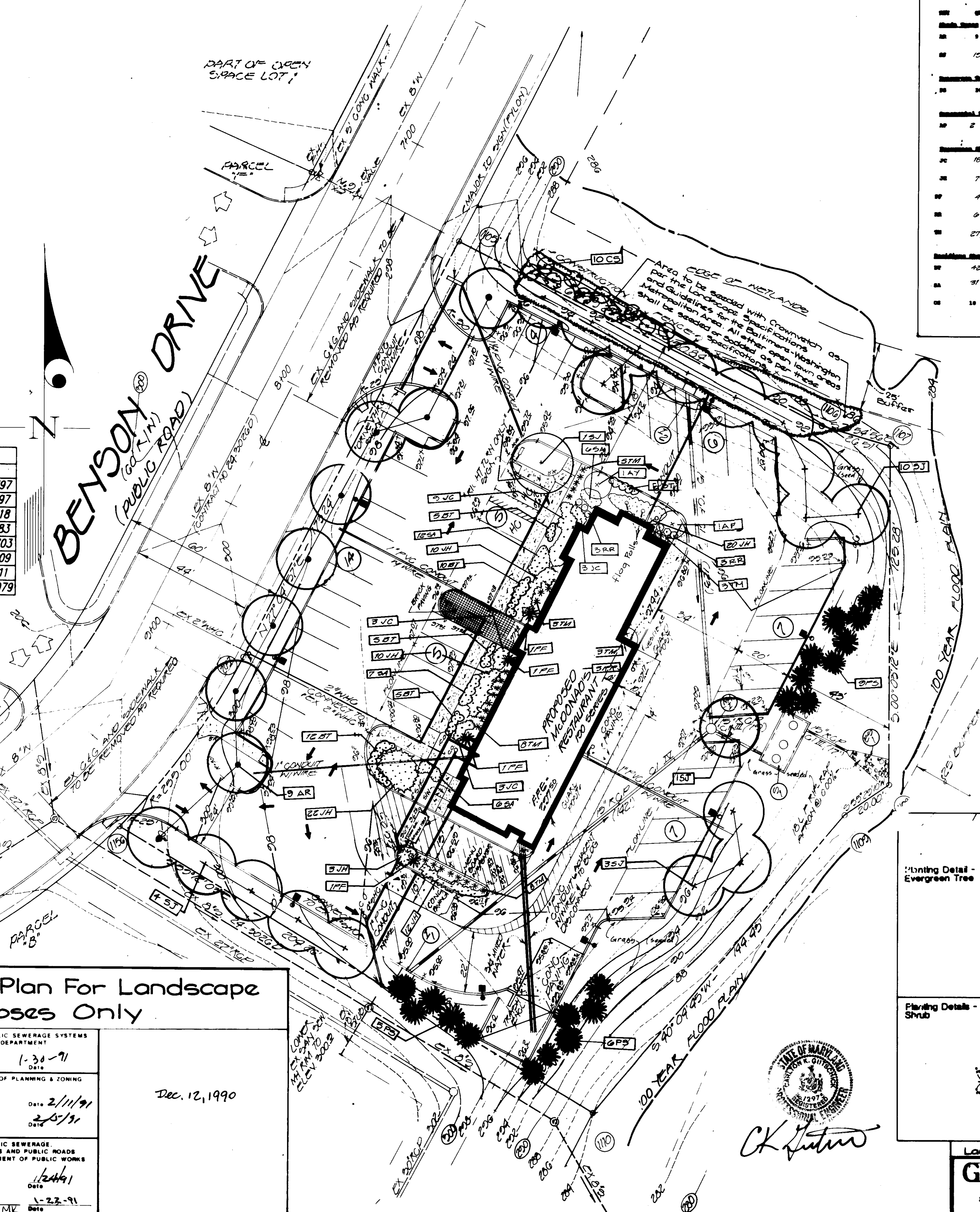
CORPORATE DWG NO

Drainage Area Map and Sediment Control Plan

SP-2 OF 11

GLW 90-025 11-9-90

SDP-91-30



COORDINATE TABLE

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1110	492849.0869	856996.6809
1156	492953.6728	856821.2311
2037	493016.6309	856866.7079

Note: This Plan For Landscape Purposes Only

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT

[signature] County Health Officer — Date 1-30-91

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

[signature] Director — Date 2/11/91

[signature] Chief, Division of Community Planning and Land Development JA — Date 2/5/91

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[signature] Director — Date 1/24/91

[signature] Chief Bureau of Engineering MK — Date 1-23-91

Dec. 12, 1990

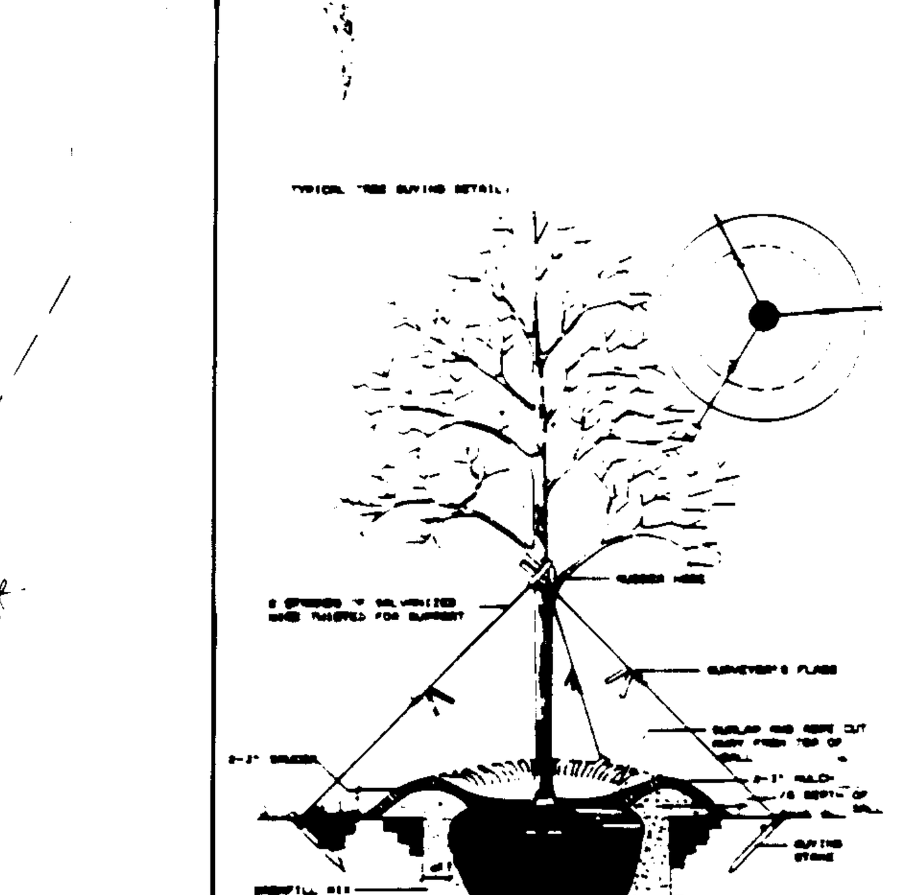
PLANT LIST

KEY	QUANT.	NAME botanical/common	SIZE	REMARKS
Shade Trees				
AR	9	Acer Rubrum "Red Sunset"/ Red Sunset Maple	3-3.5" cal. 14-16' Ht.	B&B
[illegible]	15	[illegible]	3-3.5" cal. 14-16' Ht.	B&B
Evergreen Trees				
PS	30	Pinus Strobus/White Pine	3-3.5" cal. 10-12' Ht.	B&B
Ornamental Trees				
AP	2	Acer Palmatum Atropurpureum "Bloodgood"/Bloodgood Maple	4-5' Ht. [illegible]	B&B
Evergreen Shrubs				
JC	18	Juniperus chinensis "Gold Coast"/Gold Coast Juniper	5 gallon	Cont. 3'O.C.
JH	77	Juniperus Horizontalis "Bar Harbor"/Bar Harbor Juniper	2 gallon	Cont. 30"O.C.
[illegible]	4	[illegible]	5 gallon	Cont.
RR	6	Rhododendron P.J.M./ P.J.M. Rhododendron	18-24" spd.	B&B
TM	27	Taxus Media "Densiformis"/ Dense Yew	18-24" spd.	B&B
Deciduous Shrubs				
BT	42	Berberis T.A. "Crimson Pygmy"/ Crimson Pygmy Barberry	3 gallon	Cont. 2'O.C.
SA	31	Spiraea Japonica "Alpina"/ Alpine Spirea	3 gallon	Cont. 2'O.C.
CS	10	Cornus alba "Siberica"/ Red-twig Dogwood	24-30" Ht.	B&B

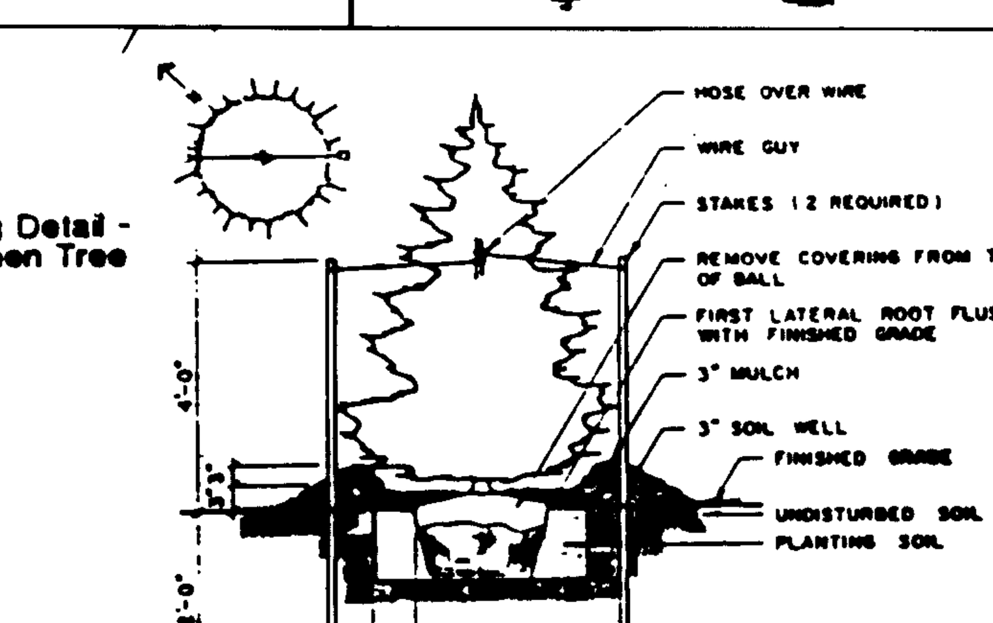
Landscape Notes

1. All plant materials and planting methods to be in conformance with the planting specifications for commercial projects in Columbia as per the guidelines of the Howard Research and Development Corporation (HRD).
2. Any specific specification not noted in the HRD Guidelines shall be as per the "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas" by the Landscape Contractors Association of Metropolitan Washington.
3. Soil backfill mix for trees, shrubs, and ground cover plantings shall be 1/2 existing soil, 1/4 organic material (peat moss, compost, rotted manure, etc.) 1/4 topsoil, and granular fertilizer (osmocote 10-6-4 or approved equal).
4. All planting beds to be mulched with 2-inch double shredded hardwood, well aged.
5. All trees under 2-1/2 inches caliper will be staked as per guidelines, all trees over 2-1/2 inches caliper shall be guyed as per detail.
6. All slopes in excess of 2:1 shall be seeded with crownvetch as shown on plan.
7. All work shall be laid out by the landscape contractor and approved by the owner/landscape architect prior to start.
8. Written approval is required by the owner/landscape architect for any changes or substitutions prior to construction.

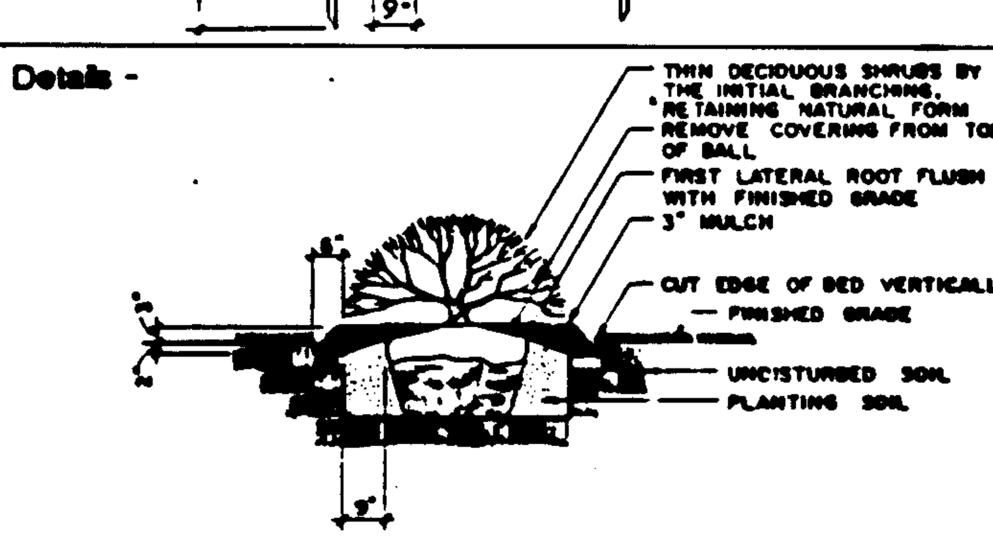
TYPICAL TREE GUYING DETAIL

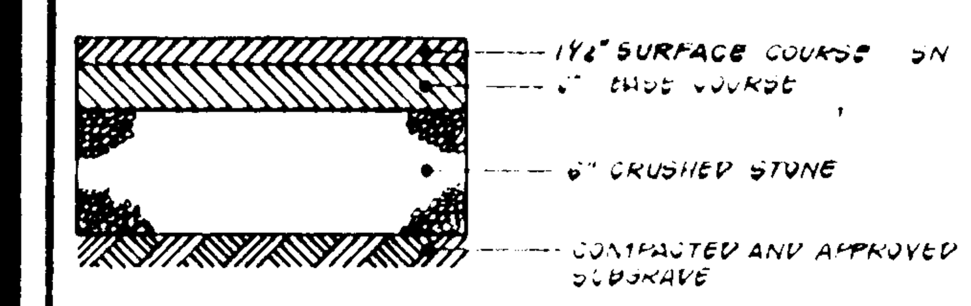


Planting Detail - Evergreen Tree



Planting Details - Shrub





GARDCO FORM-10 #H1913-400MH
20' POLE BY K.E. INDUSTRIES
#RTSP 20-5-9-11-BL
BLACK POWDER COAT

	26 STANDARD	9'	18'	90
48	20 STANDARD			60
	2 HANDICAPPED			90

8" GRAVITY SOUTH WEST (EASEMENT)
12" BENSON DR.
27" SOUTHWEST (EASEMENT)

Landscape Plan Prepared by:

GLW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS
3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK
BURTONSVILLE, MD 20866
TEL. (301) 421-4024

STATE OF MARYLAND CARLTON K. GUTSCHICK 12973 REGISTERED PROFESSIONAL ENGINEER

[signature] CK Gutschick

GLW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS
DES HOB DRN HOB

REV. LANDSCAPE LAYOUT DUE TO BLDG. TYPE CHANGE 9-16-91 KK
Rev. Building footprint & landscaping 3/12/93 MF

McDonald's

[signatures] 9-4-96

STREET ADDRESS: BENSON DRIVE
CITY: COLUMBIA — STATE: MARYLAND
COUNTY: HOWARD

REGIONAL DWG. NO. 19-376

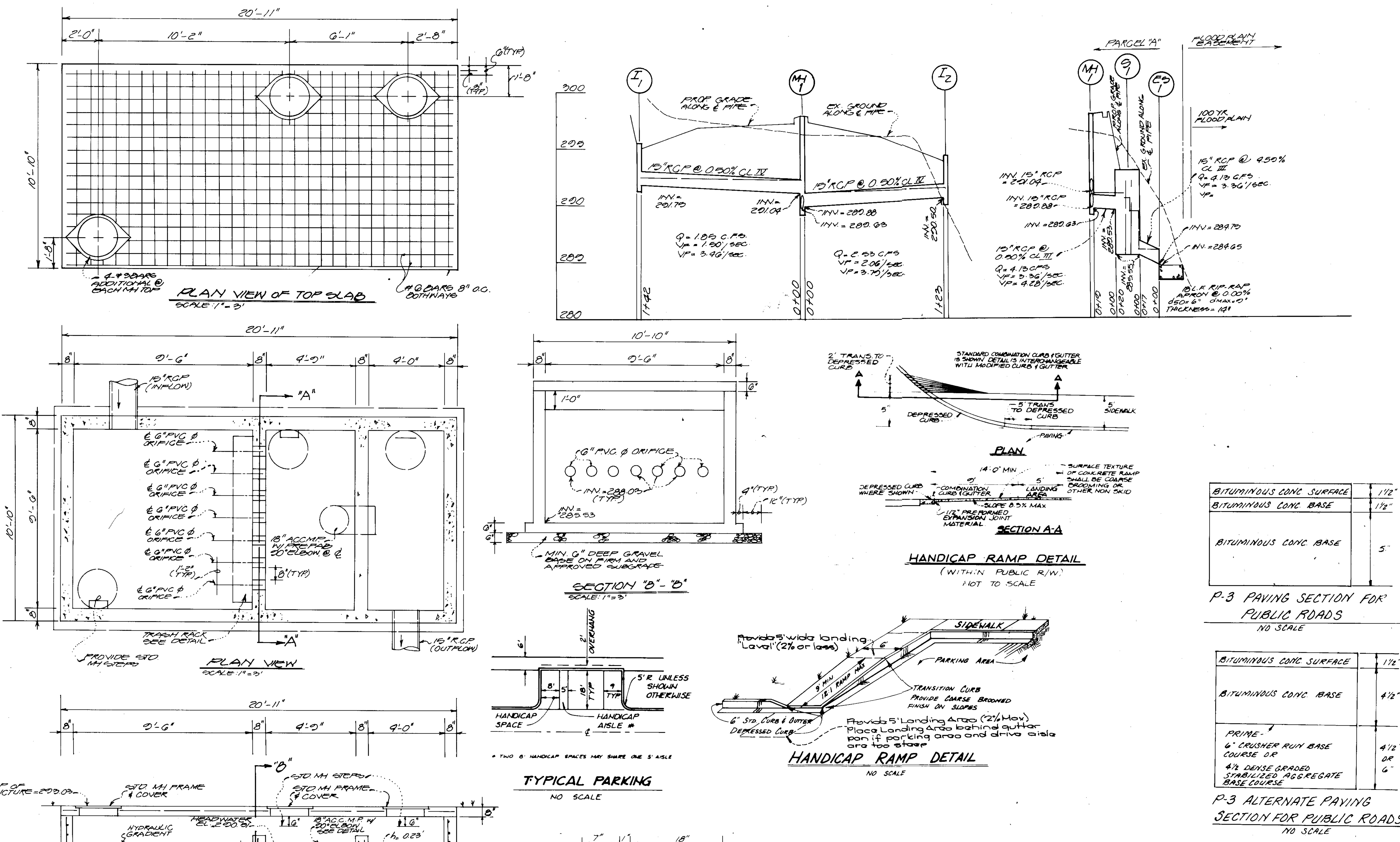
CORPORATE DWG. NO.

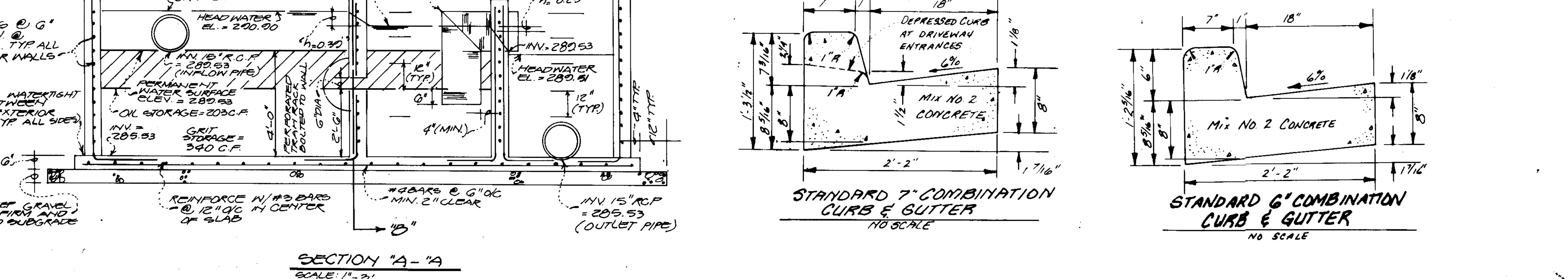
Landscape Plan

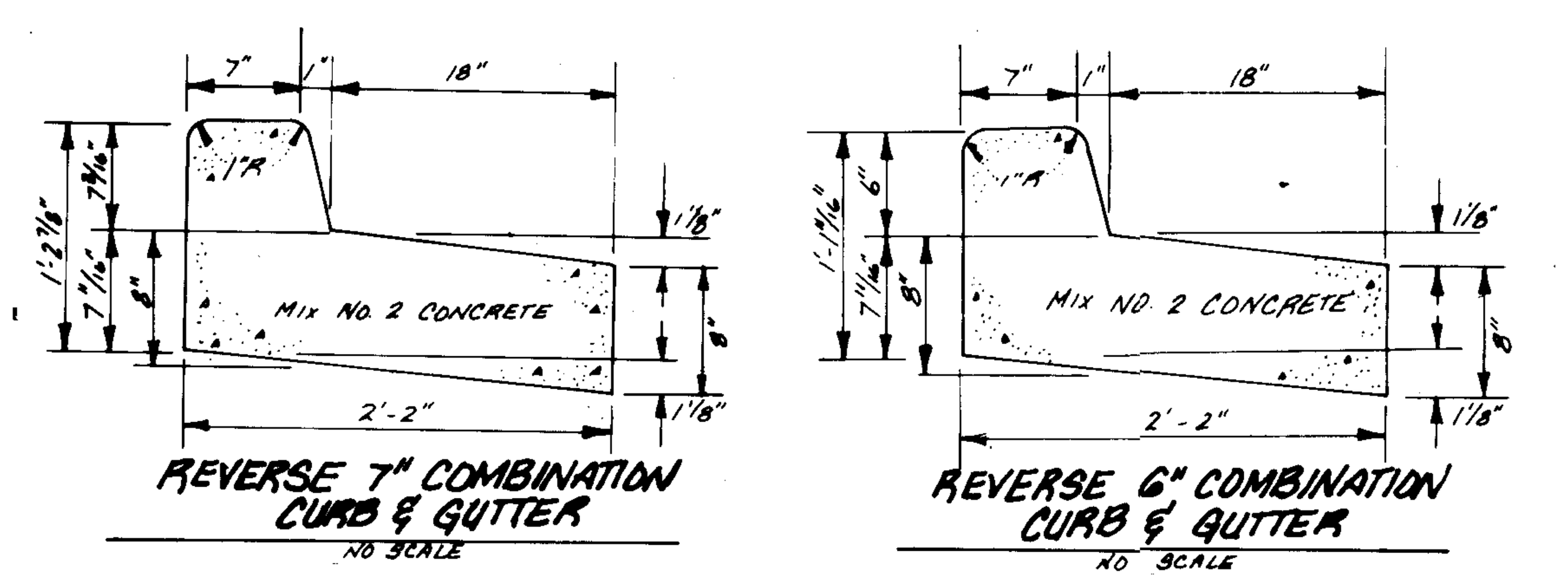
SP-3 OF 11

GLW 90-029 11-9-90

SDP-91-30







APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

County Health Officer — 1-30-91 Date

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

2/11/91 Date

Chief, Division of Community Planning — Date

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

1-22-91

APPROVED

Dec. 12, 1990

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD."

Signature of Developer/Builder — 12/20/90 Date

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

12-17-90 Date

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Reviewed for Howard S.C.D. Name and meets Technical Requirements.

Howard S.C.D. — 12/28/90 Date

U.S. Soil Conservation Service — 12/28 Date

GENERAL NOTES:

1. McDonald's Road Sign and Base are by the Sign Contractor. Conduit and Wiring are by the General Contractor.
2. Bases, Anchor Bolts, Conduit, and Wiring for All Other Signs are by the General Contractor.
3. ¾" Empty Conduit to Locations Shown at the Lot Perimeter for Lot Lighting is by the General Contractor. Lighting Fixtures, Bases, Poles, Conduit, and Wiring are by the Owner/Operator.
4. Bases for Flagpoles are by the General Contractor. Anchor Bolts are by the Flagpole Supplier.
5. Proposed Utilities are Shown in Schematic Only. Exact Locations shall be Field Determined to Allow for the Most Economical Installation.
6. The Contractor shall Coordinate with All Utility Companies to Determine Exact Point of Service Connection at Existing Utility. Refer to the Building Electrical and Plumbing Drawings for Utility Service Entrance Locations, Sizes, and Circuiting.
7. All Elevations Shown are in Reference to the Benchmark and must be Verified by the General Contractor At Groundbreak.
8. Finish Walk and Curb Elevations shall be 6" Above Finish Pavement.
9. All Landscape Areas shall be Rough Graded to 6" Below Top of All Walks and Curbs. Finish Grading, Landscaping, and Sprinkler Systems are by the Owner/Operator.

PAVING SPECIFICATION:

(Minimum 3" Total Compacted Asphalt Thickness.)

Note: McDonald's Engineer Reserves The Right To Request A Compaction Test And/Or A Core Sample. If Tests Prove Correct, Per Above Specifications, Tests Will Be At The Expense Of McDonald's, Otherwise, G.C. Will Be Charged.

LOT LIGHTING RECOMMENDATION:

Note: Electrical Contractor To Circuit Lot Lighting As Noted.

PARKING INFORMATION:

Total Spaces:	Spaces	x	@	°
	Spaces	x	@	°
	Spaces	x	@	°
	Spaces	x	@	°

UTILITY INFORMATION:

	Size:	Type:	Location:
Sanitary Sewer			
Water			
Storm Sewer			
Electric			
Gas			

SURVEY INFORMATION:

Prepared By: GLW GUTSCHICK LITTLE & WEBER, P.A. ENGINEERS, PLANNERS, SURVEYORS

Dated:

LEGEND:

Sanitary Sewer	— S —	Gas	— G —
Water	— W —	Lot Light	LP:30
Storm Sewer	— ST —	Existing Elevation	(76.5)
Electric	— E —	Proposed Elevation	77.0

PLAN SCALE: 1" = 20'

STREET ADDRESS: BENSON DRIVE

CITY: COLUMBIA STATE: MARYLAND

COUNTY: HOWARD

STORM DRAIN PROFILES AND DETAILS

PLAN APPROVALS: Signature: (2 required) Date: Regional Mgr / Const. Mgr. / Operations Dept. / Real Estate Dept.

CO-SIGN SIGNATURES: Contractor / Owner

McDonald's

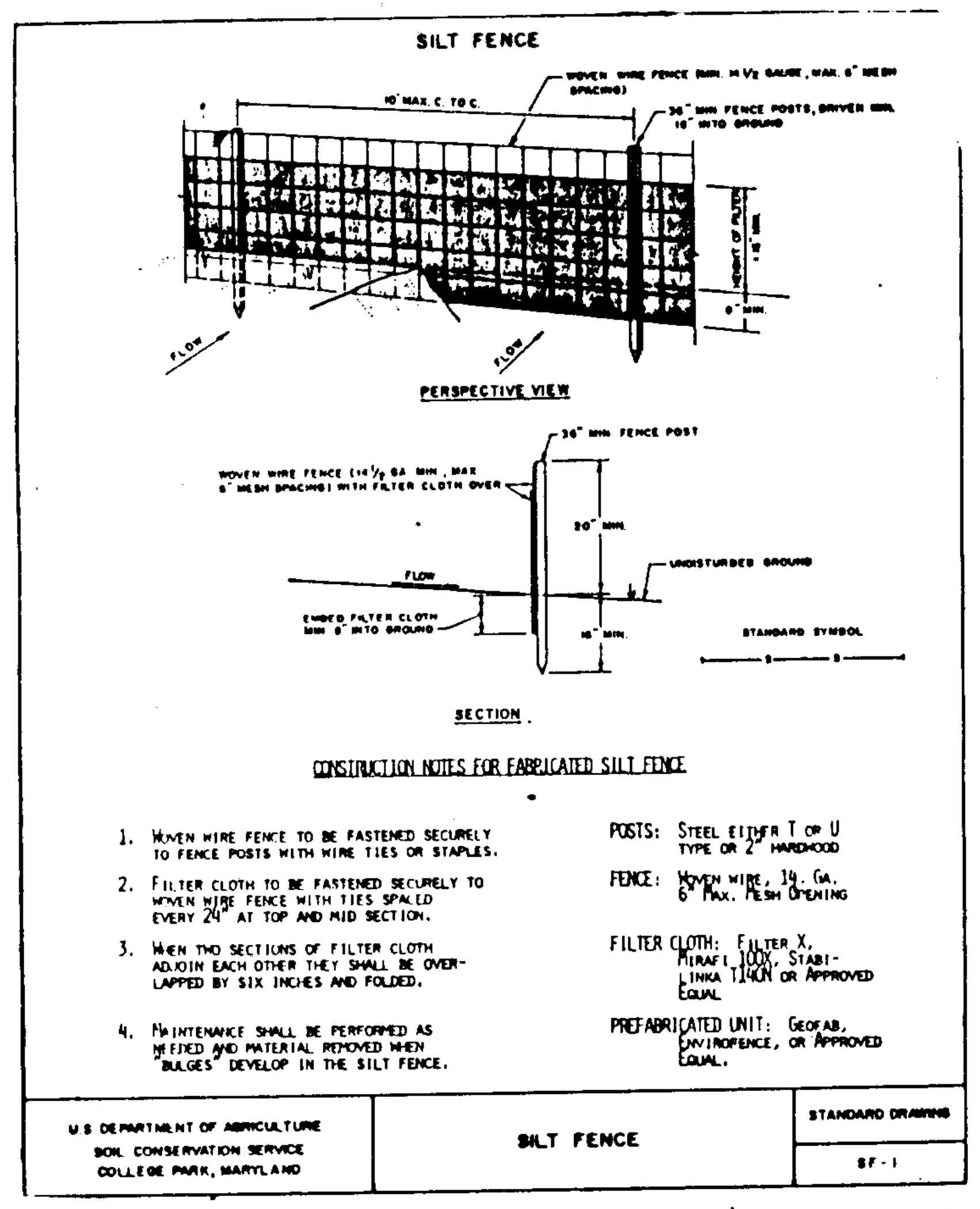
McD 14533

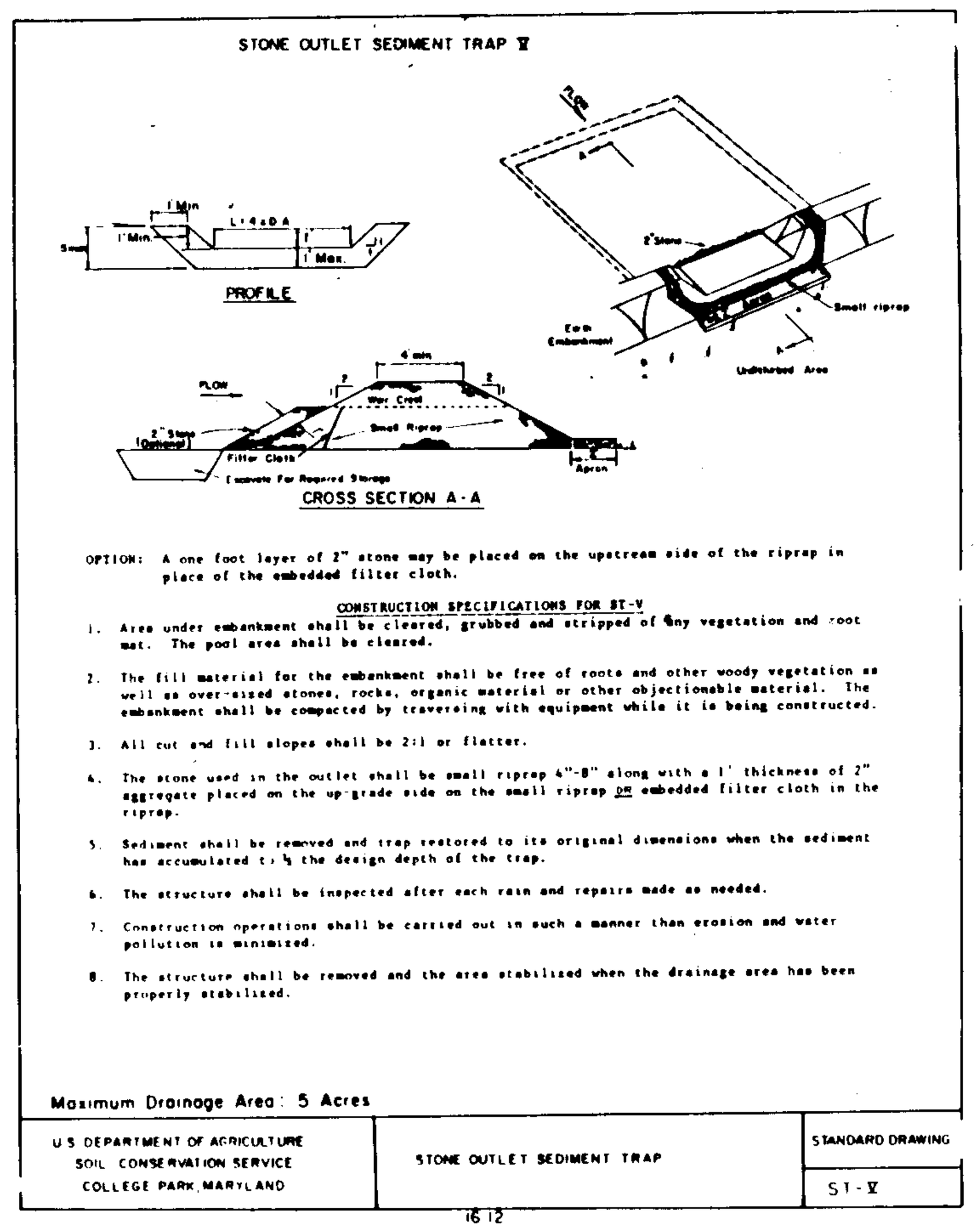
PLAN STATUS: Date: By: 1 Description — Preliminary Drawn; 2 Revisions; 3; 4; 5; 6; 7; 8; 9; Plan Checked; As-Built Drawn

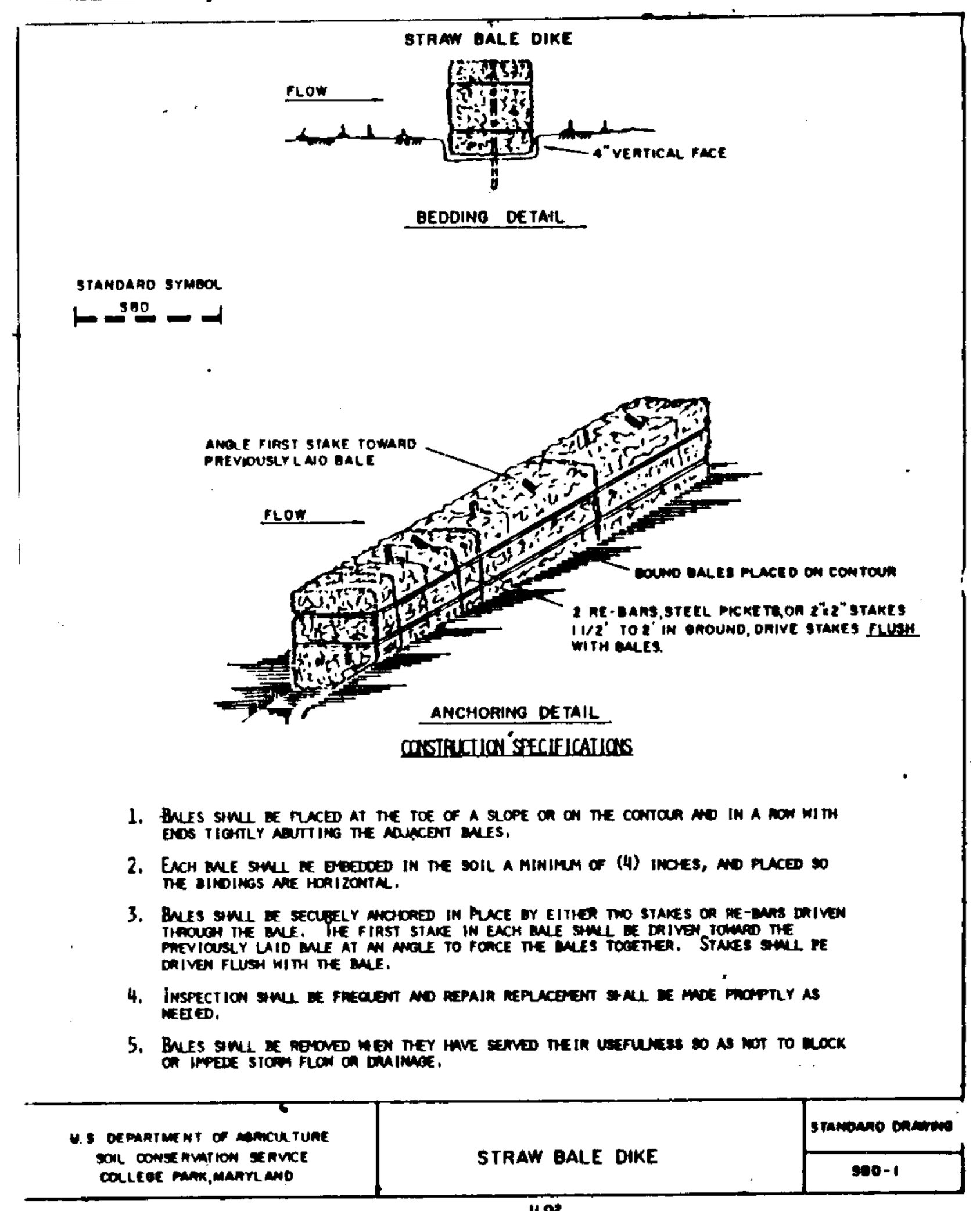
REGIONAL DWG. NO.:

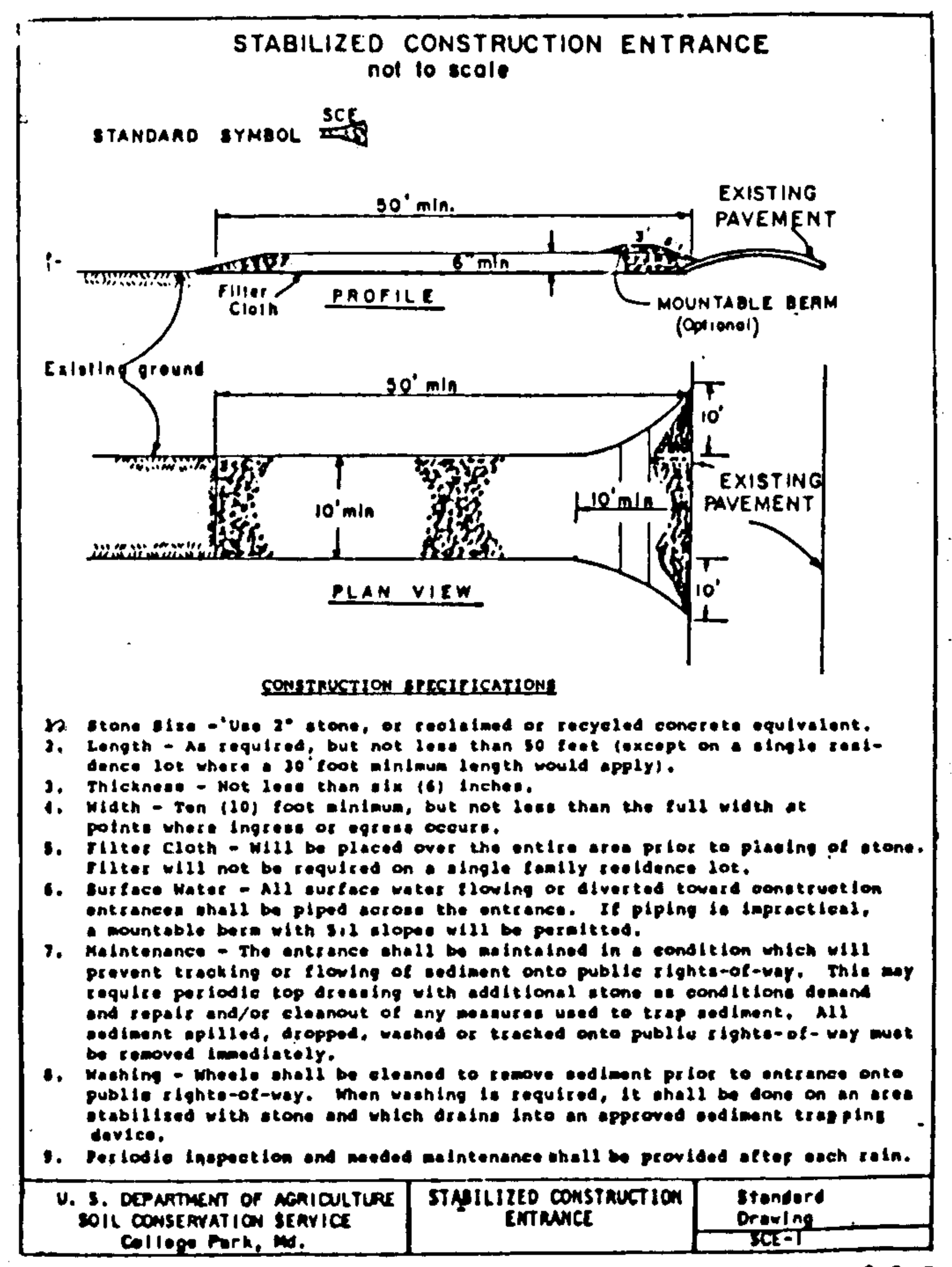
CORPORATE DWG. NO.:

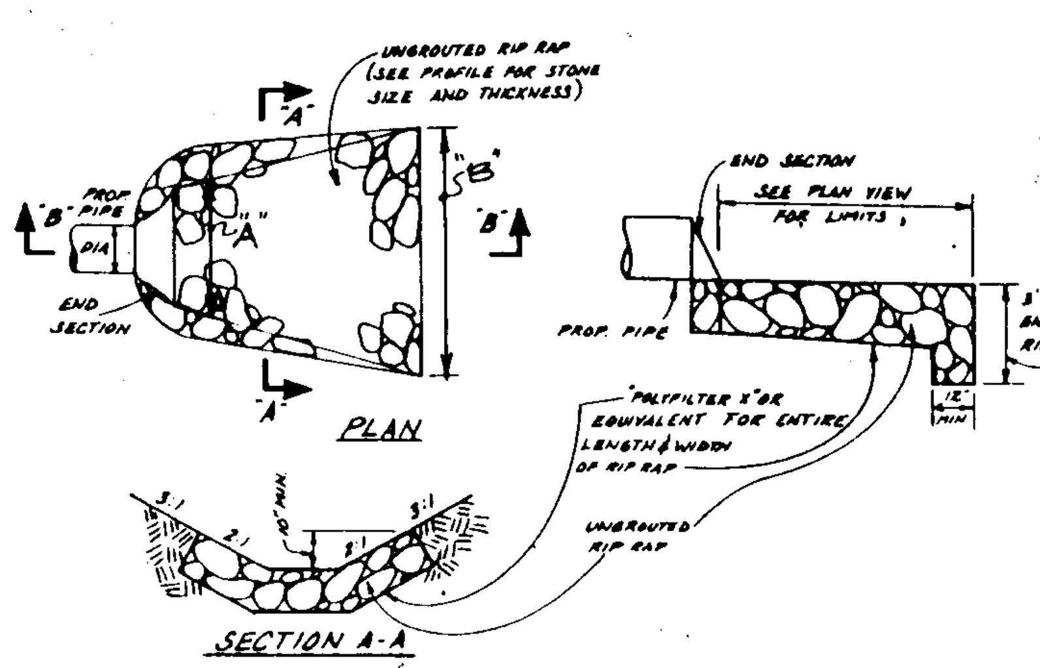
SP-4











UNGROUTED RIP RAP OUTLET PROTECTION DETAILS
NO SCALE

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

County Health Officer — 1-30-91 Date

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Director — 2/11/91 Date

Chief, Division of Community Planning — 2/5/91 Date

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Director — 1/24/91 Date

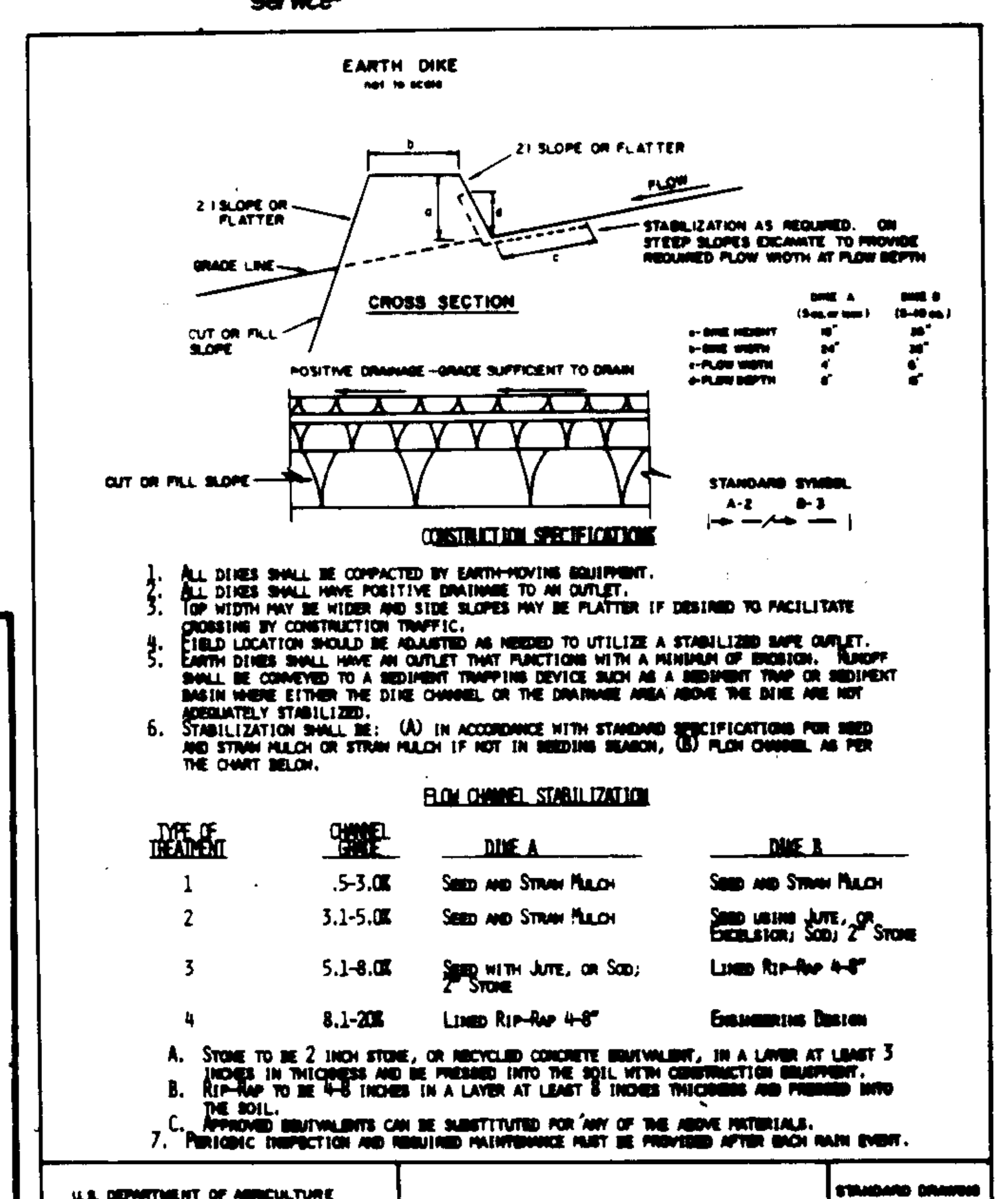
1-22-91

APPR... PLANN... HO...

Dec. 12, 1990

Reviewed for HOWARD S.C.D.
Name
and meets Technical Requirements.

U.S. Soil Conservation Service — 12/28/90 Date



SEDIMENT CONTROL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

3. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes and perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.

4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSIONS AND SEDIMENT CONTROL for permanent seedings (Sec. 51), sod (Sec. 54), temporary seedings (Sec. 50) and mulching (Sec. 52). Temporary stabilization, with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.

6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.

7. Site Analysis:
   - Total Area of Site: 1.25 Acres ±
   - Area Disturbed: 1.22 Acres ±
   - Area to be roofed or paved: 0.81 Acres ±
   - Area to be vegetatively stabilized: 0.41 Acres ±
   - Total Cut: 500 Cu. Yds.
   - Total Fill: 500 Cu. Yds.
   - Off-Site waste/borrow area location N/A

8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

9. Additional sediment control must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.

10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Trainin Program for the Control of Sediment and Erosion before beginnin the project. I also authorize periodic on-site inspection by the HSCD."

Signature of Developer/Builder — 12/20/90 Date

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

12-17-90 Date

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Howard S.C.D. — 12/28/90 Date

PERMANENT SEEDING NOTES

Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules

1) Preferred – Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 unreaform fertilizer (9 lbs/1000 sq ft).

2) Acceptable – Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

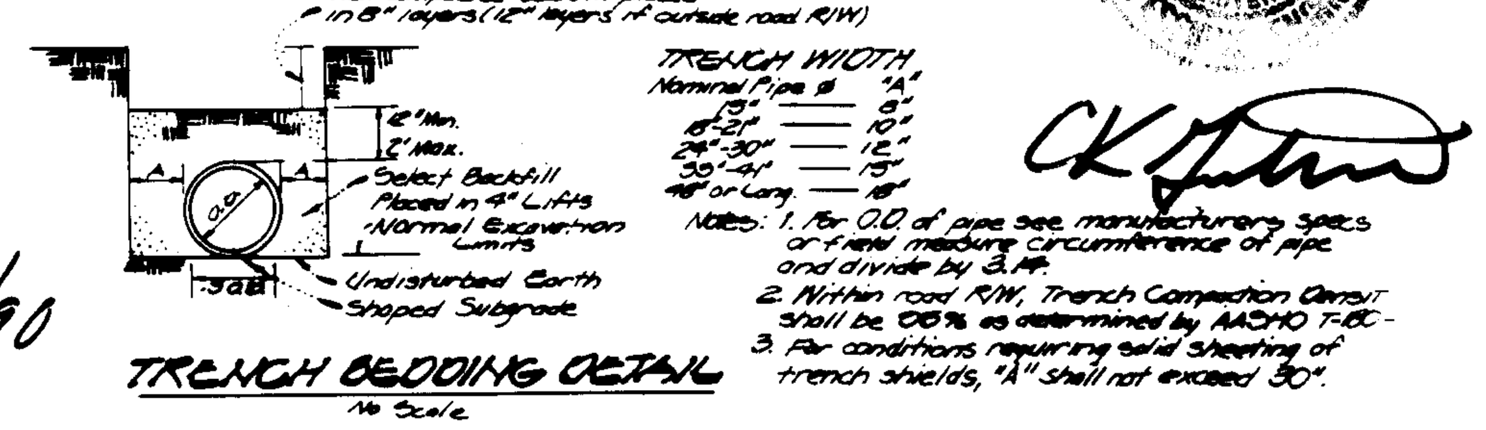
Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).

Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft).

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs./1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.



GENERAL NOTES:

1. McDonald's Road Sign and Base are by the Sign Contractor. Conduit and Wiring are by the General Contractor.
2. Bases, Anchor Bolts, Conduit, and Wiring for All Other Signs are by the General Contractor.
3. ¾" Empty Conduit to Locations Shown at the Lot Perimeter for Lot Lighting is by the General Contractor. Lighting Fixtures, Bases, Poles, Conduit, and Wiring are by the Owner/Operator.
4. Bases for Flagpoles are by the General Contractor. Anchor Bolts are by the Flagpole Supplier.
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9. All Landscape Areas shall be Rough Graded to 6" Below Top of All Walks and Curbs. Finish Grading, Landscaping, and Sprinkler Systems are by the Owner/Operator.

PLAN APPROVALS: Signature: (2 required) Date: — Regional Mgr. / Const. Mgr. / Operations Dept. / Real Estate Dept.

CO-SIGN SIGNATURES: Contractor / Owner

PAVING SPECIFICATION:
(Minimum 3" Total Compacted Asphalt Thickness.)

Note: McDonald's Engineer Reserves The Right To Request A Compaction Test And/Or A Core Sample. If Tests Prove Correct, Per Above Specifications, Tests Will Be At The Expense Of McDonald's, Otherwise, G.C. Will Be Charged.

LOT LIGHTING RECOMMENDATION:

Note: Electrical Contractor To Circuit Lot Lighting As Noted.

PARKING INFORMATION:

Total Spaces:				
	Spaces	x	@	°
	Spaces	x	@	°
	Spaces	x	@	°
	Spaces	x	@	°

UTILITY INFORMATION:

	Size:	Type:	Location:
Sanitary Sewer			
Water			
Storm Sewer			
Electric			
Gas			

SURVEY INFORMATION:

Prepared By: GLW GUTSCHICK LITTLE & WEBER, P.A. ENGINEERS, PLANNERS, SURVEYORS 3909 NATIONAL DRIVE SUITE 250 BURTONSVILLE OFFICE PARK BURTONSVILLE, MD 20866

Dated: DES. DRN. CHK.

LEGEND:

Sanitary Sewer	—— S ——	Gas	—— G ——
Water	—— W ——	Lot Light	LP:30
Storm Sewer	—— ST ——	Existing Elevation	(76.5)
Electric	—— E ——	Proposed Elevation	77.0

PLAN SCALE: 1" = 20'

STREET ADDRESS: BENSON DRIVE

CITY: COLUMBIA STATE: MARYLAND

COUNTY: HOWARD

SEDIMENT CONTROL DETAILS & NOTES

PLAN STATUS: Date: By: — 1 Description / 2 Preliminary Drawn / 3 Revisions / 4 / 5 / 6 / 7 / 8 / 9 / Plan Checked / As-Built Drawn

McDonald's

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McD 14533

REGIONAL DWG. NO.:

CORPORATE DWG. NO.:

SP- 5 OF 11

GLW 90025 11-9-90

SDP-91-30

SIGNATURE BLOCK AND APPROVAL STAMP BELOW APPLY TO SHEETS SP-6 THRU SP-11. DUE TO STANDARD DETAILS & SPECIFICATION SHEETS USED BY OWNER NATIONWIDE, THERE IS NO ROOM FOR THESE ITEMS ON SHEETS SP-7 TO SP-11

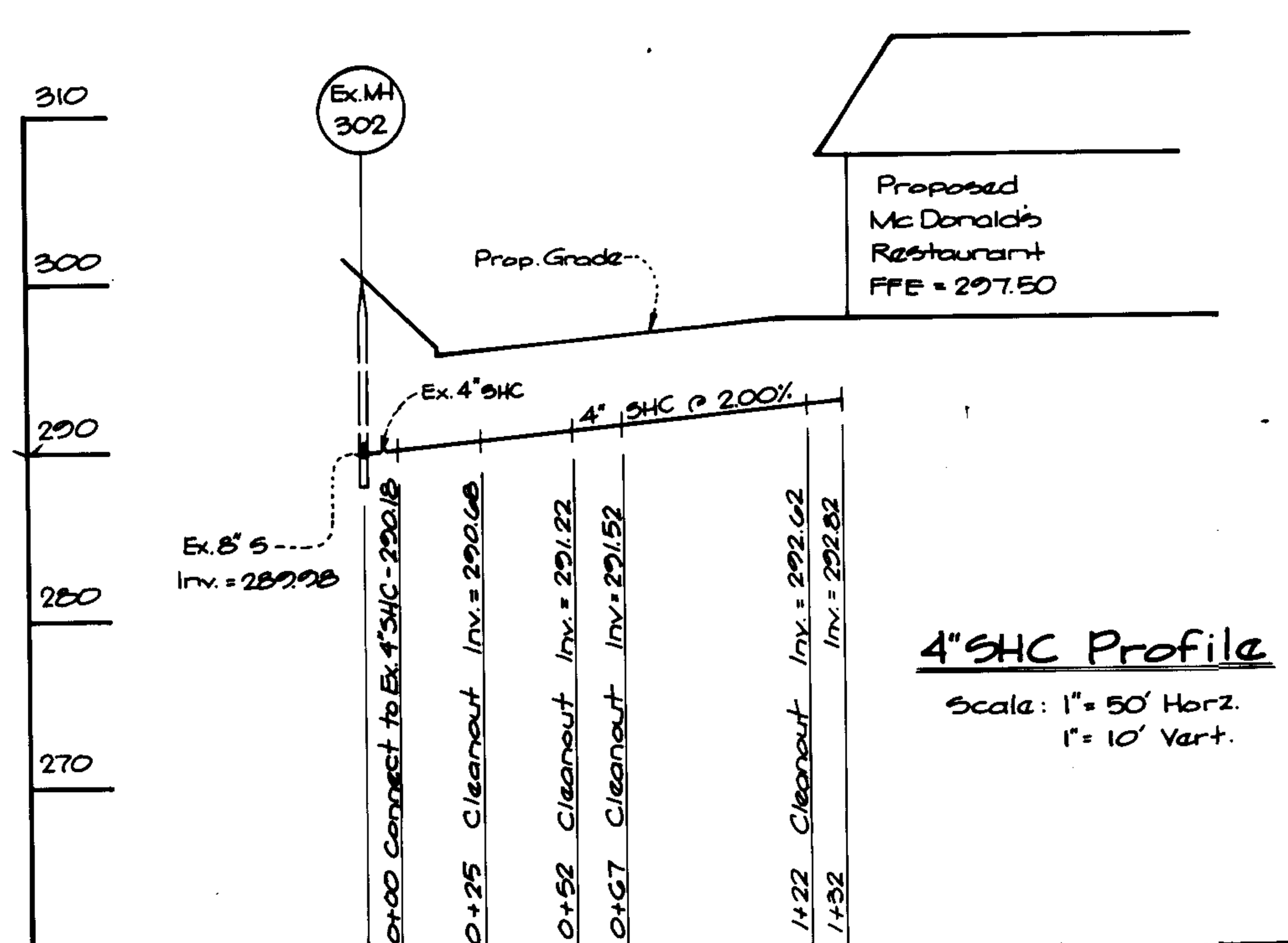
Chief, Division of Community Planning and Land Development

APPROVED: FOR STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Director — Date 1/24/91

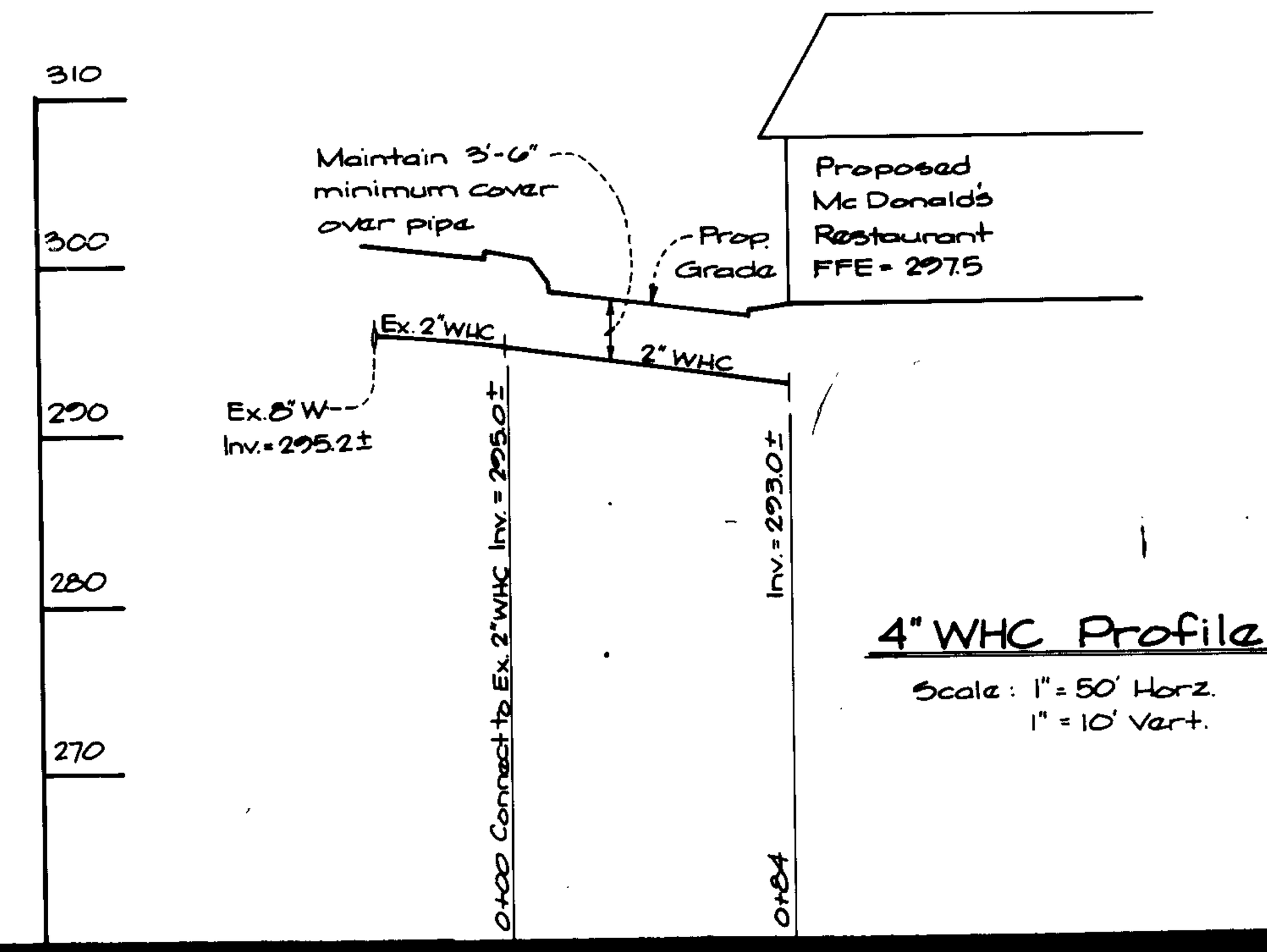
Chief, Bureau of Engineering — Date 1-22-91

APPROVED PLANNING BOARD of HOWARD COUNTY DATE Dec. 12, 1990



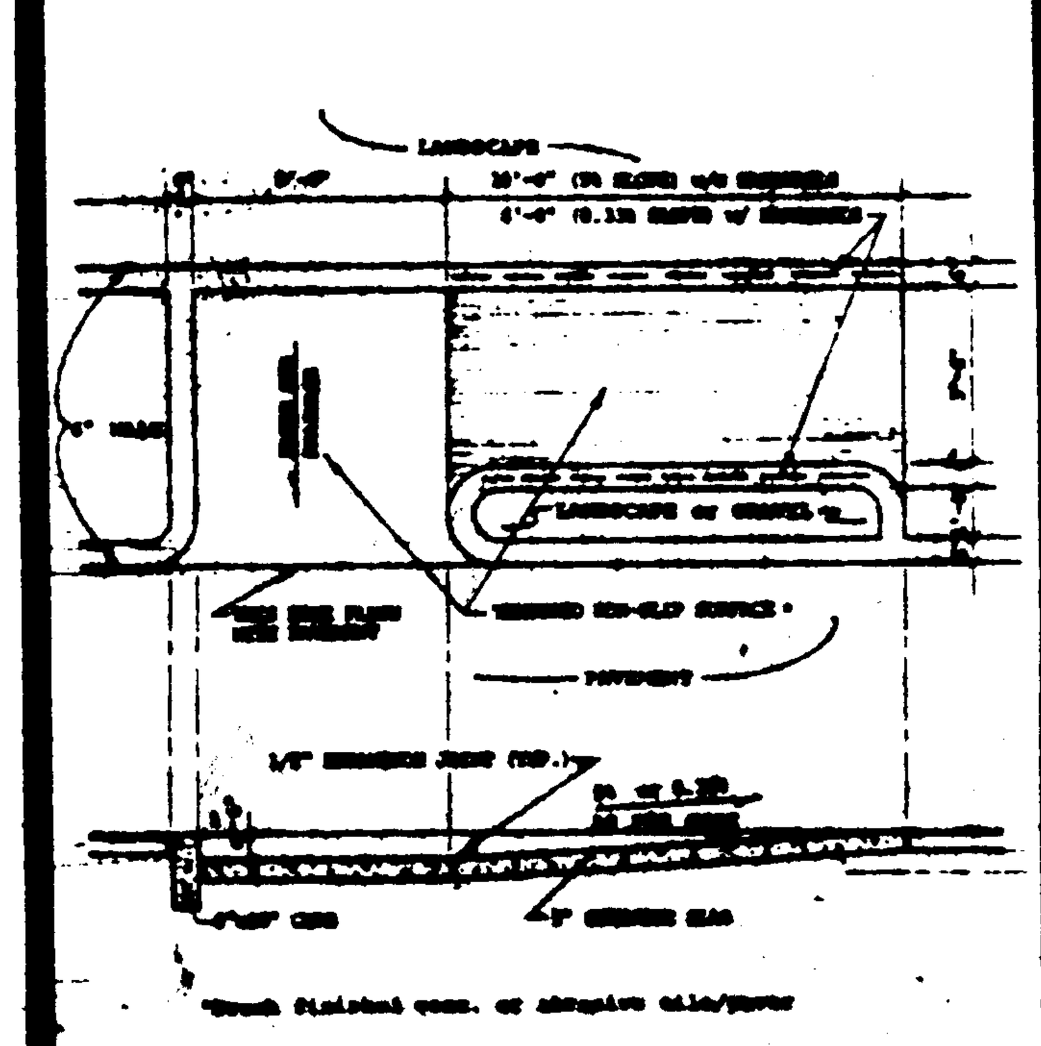
4" SHC Profile

Scale: 1" = 50' Horz. 1" = 10' Vert.

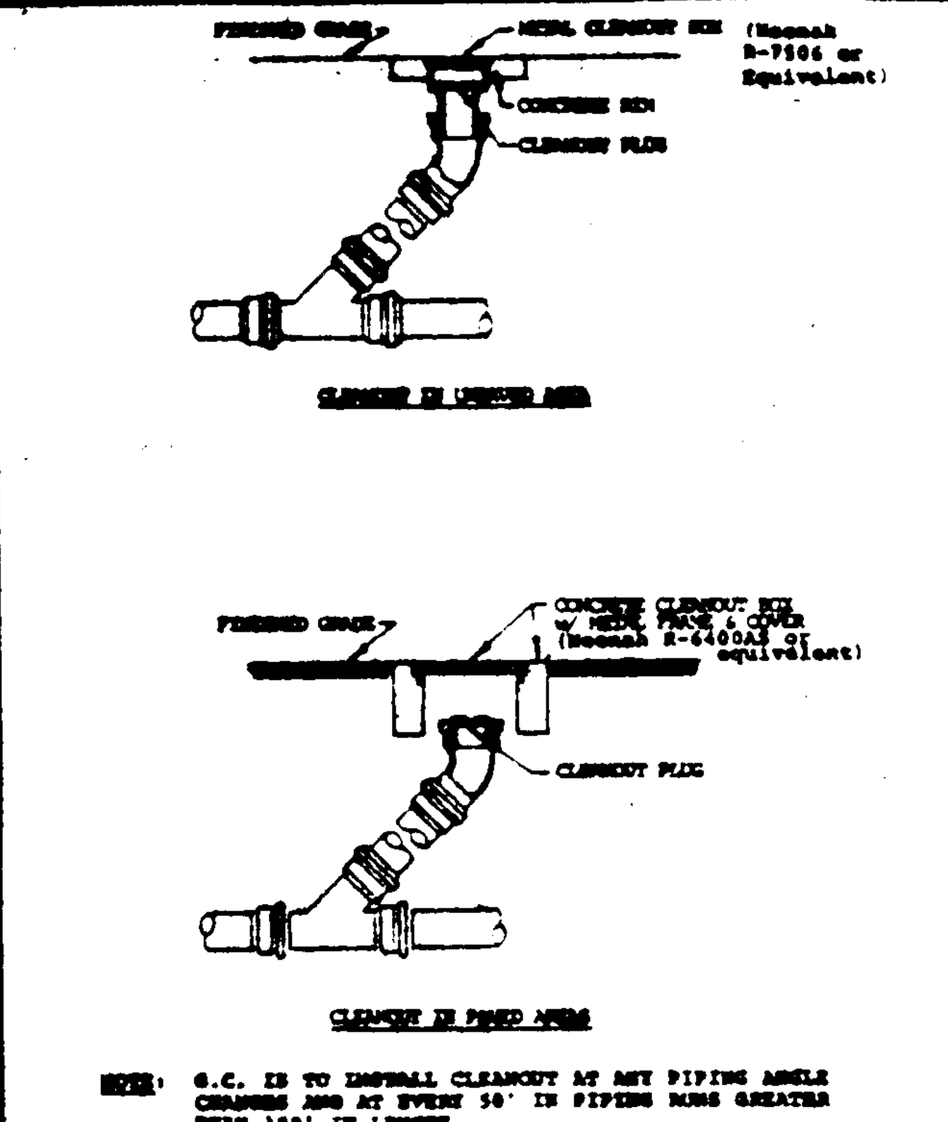


4" WHC Profile

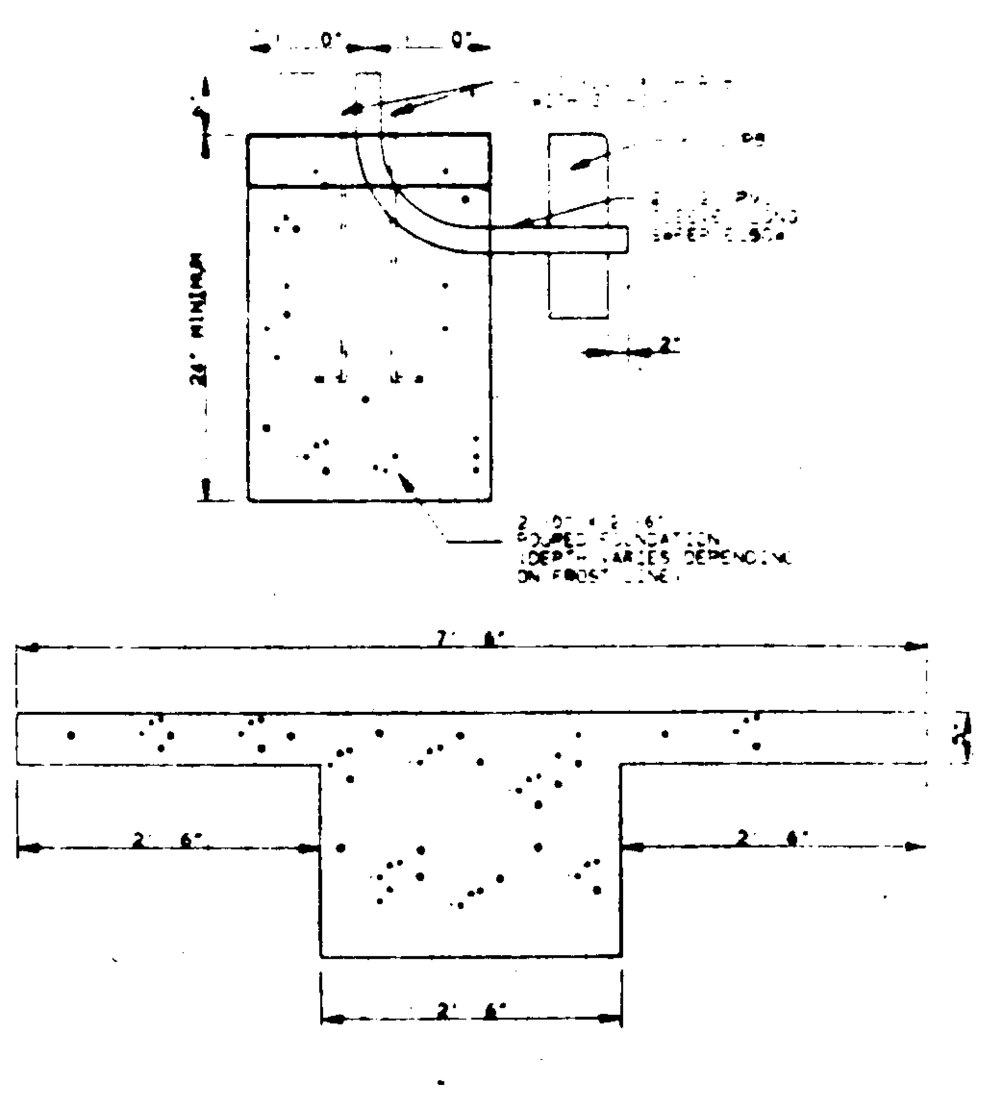
Scale: 1" = 50' Horz. 1" = 10' Vert.



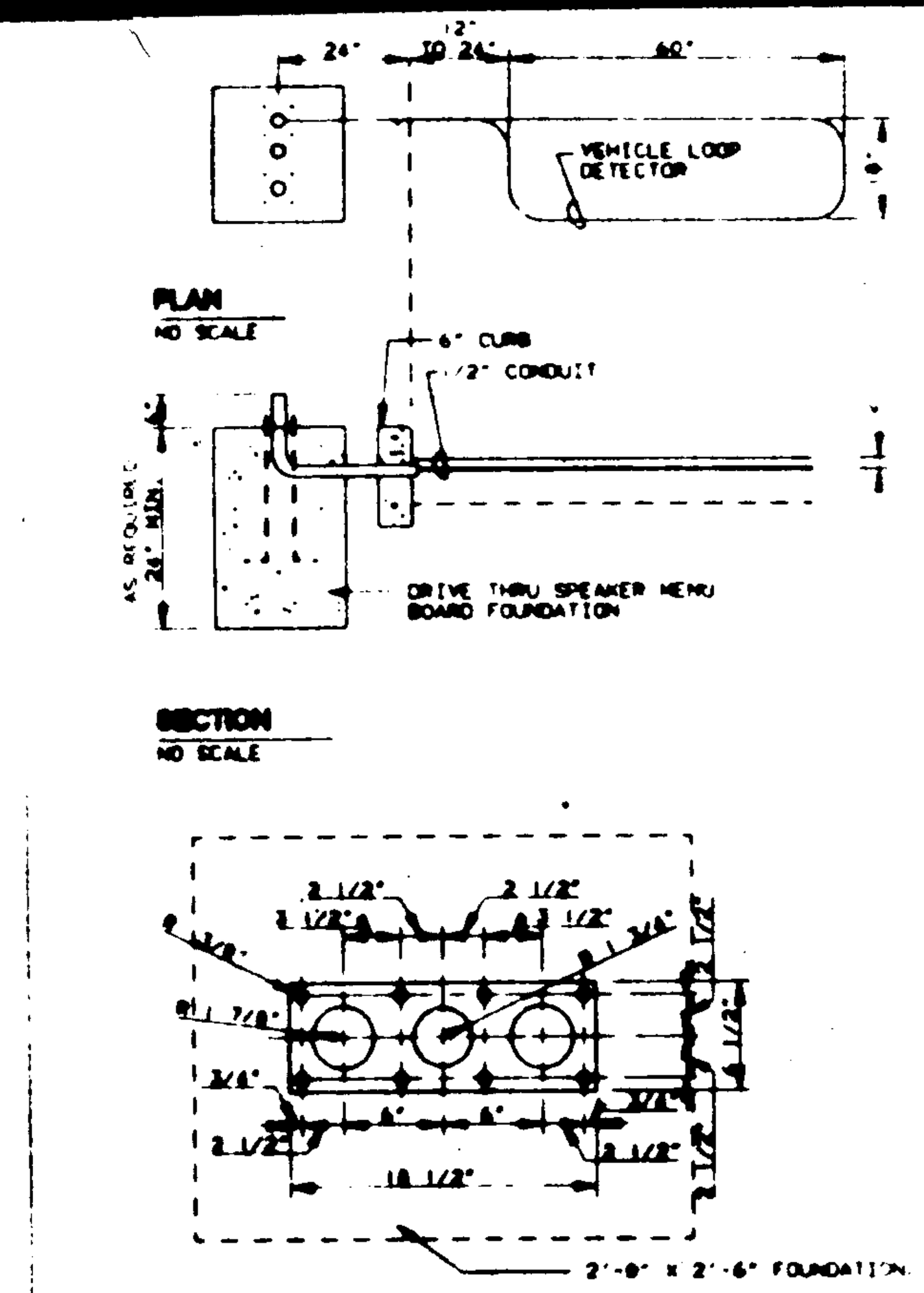
HANDICAPPED ACCESS RAMP C



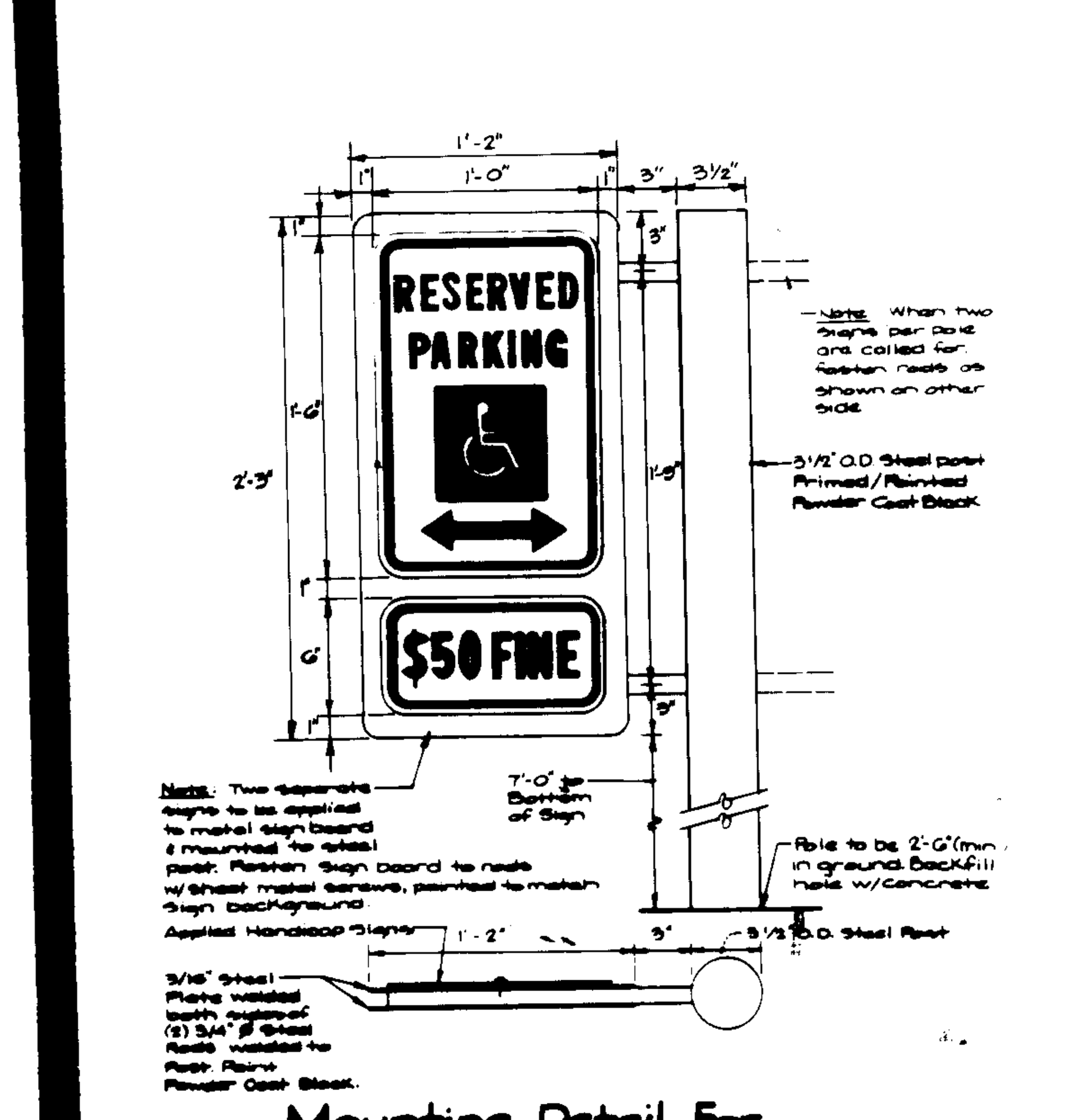
EXTERIOR CLEANOUTS



5X7 SPEAKER/MENU BOARD BASE



D T MENU BOARD TEMPLATE D



Mounting Detail For Parking Restriction Sign

No Scale

Parking Restriction Sign for Handicapped Parking

No Scale

Revisions		
No.	Date	By
1	3-4-87	K
2	1-22-88	KS

D.E. Miller: Architect
McDonald's Corporation
McDonald's Plaza
Oak Brook, Illinois 60521

Date Drawn: 4-18-83
Drawn By: D WEISS
Checked By:
Job No.

McDonald's

Drawn For:
McDonald's Corporation
McDonald's Plaza
Oak Brook, Illinois 60521
C. W. Broadbent
Vice Pres. Of Architecture And Construction

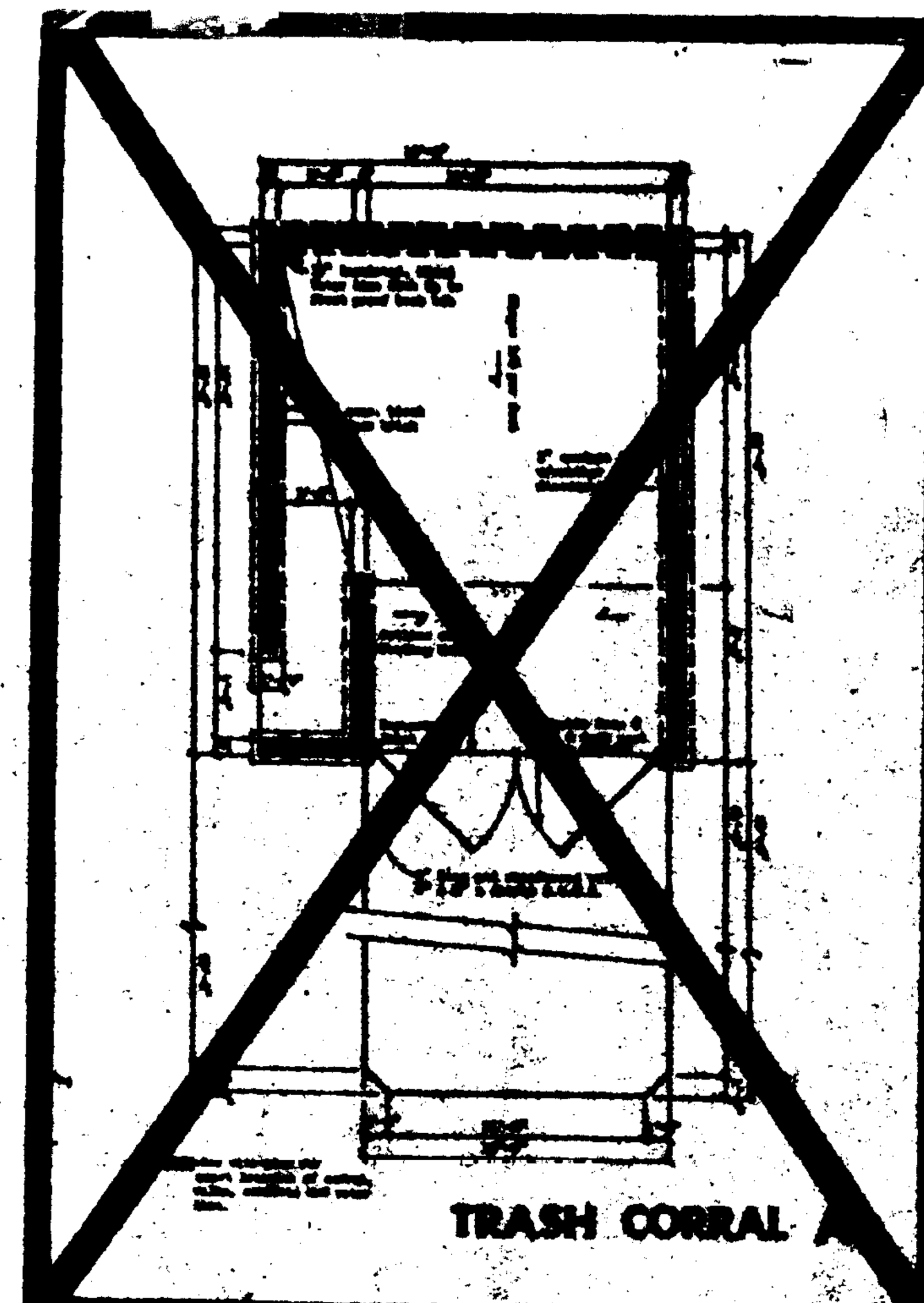
APPROVED BY

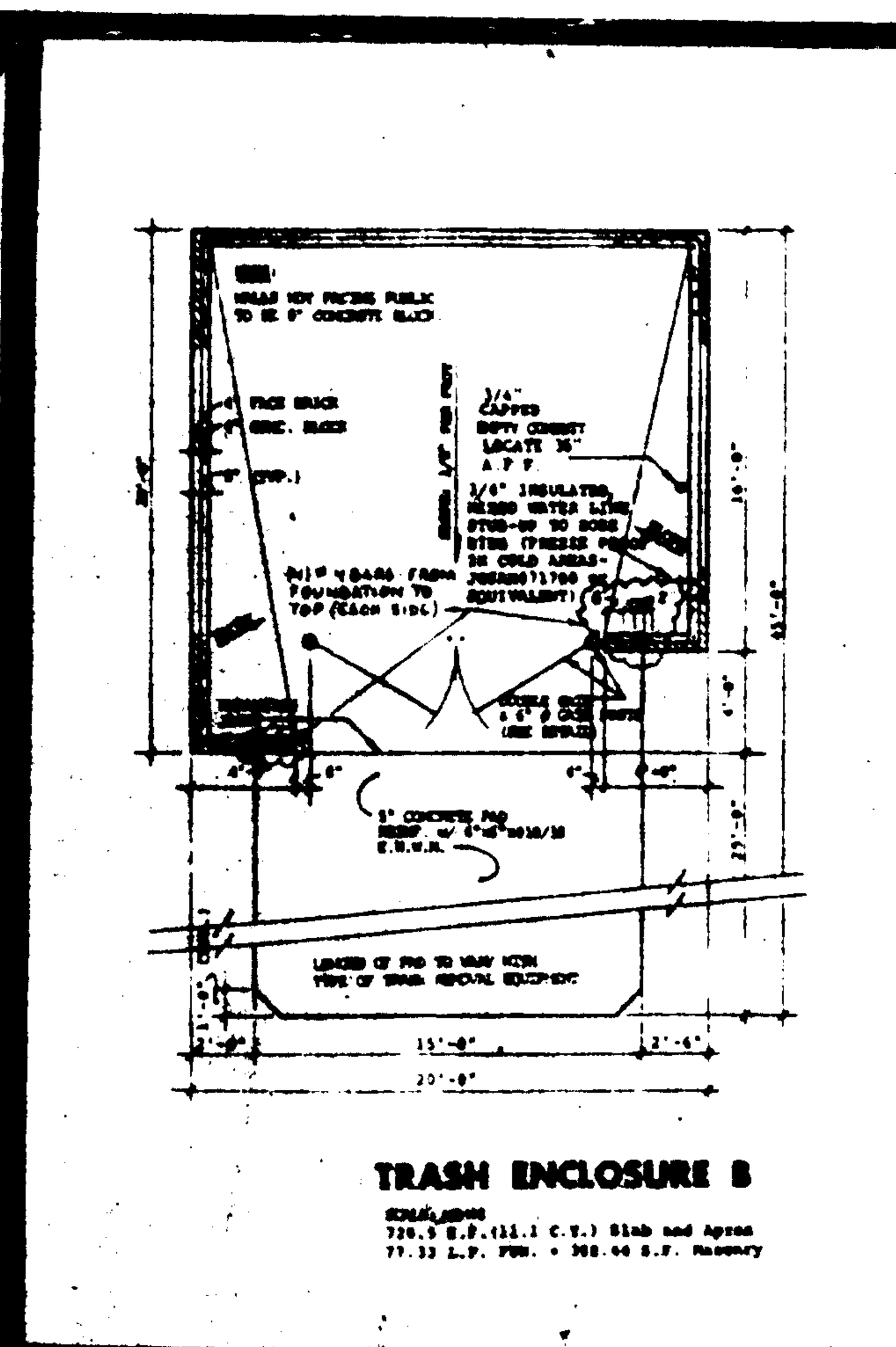
SP-6 OF 11

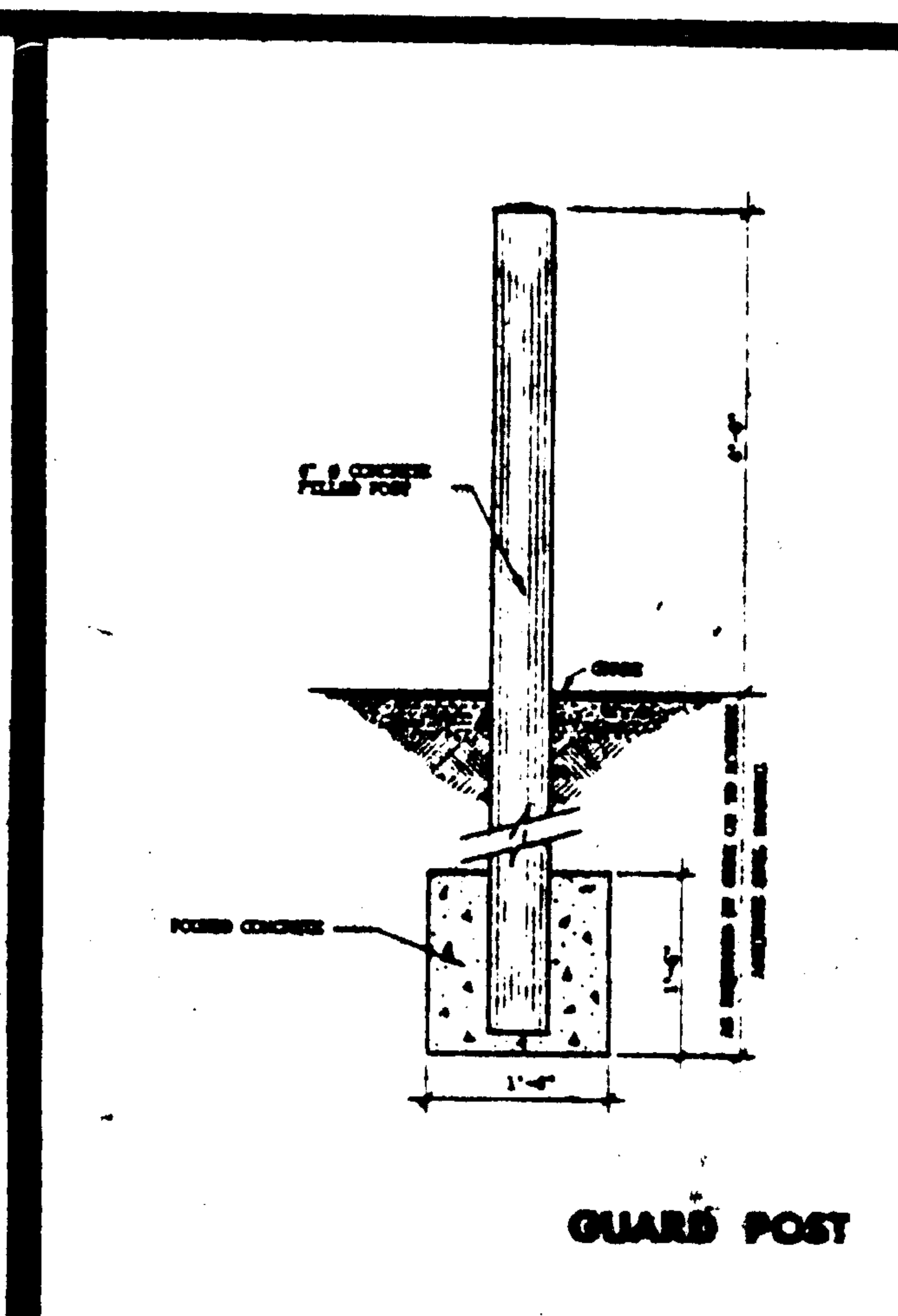
DETAILS

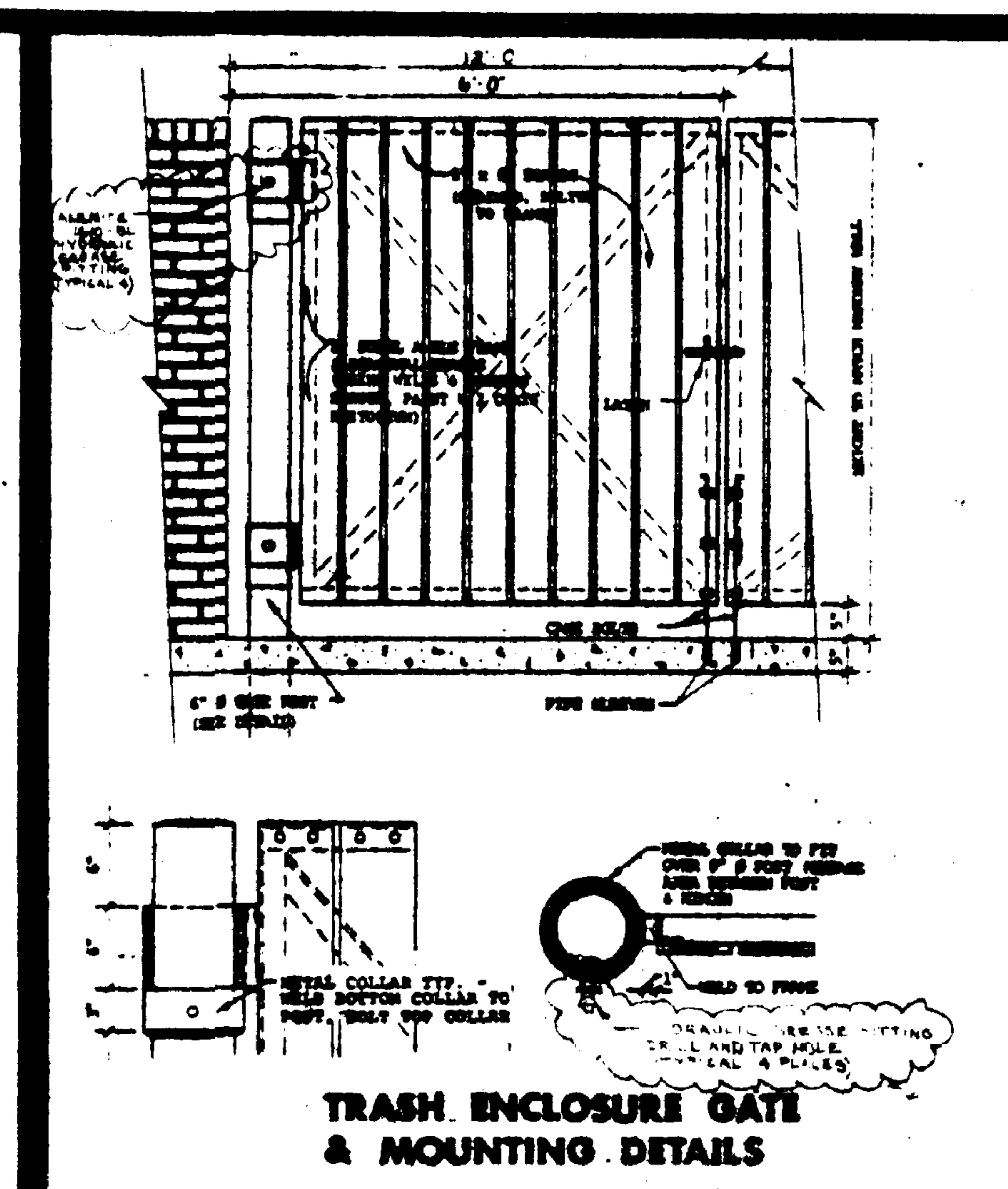
GLW 90-025 11-9-90

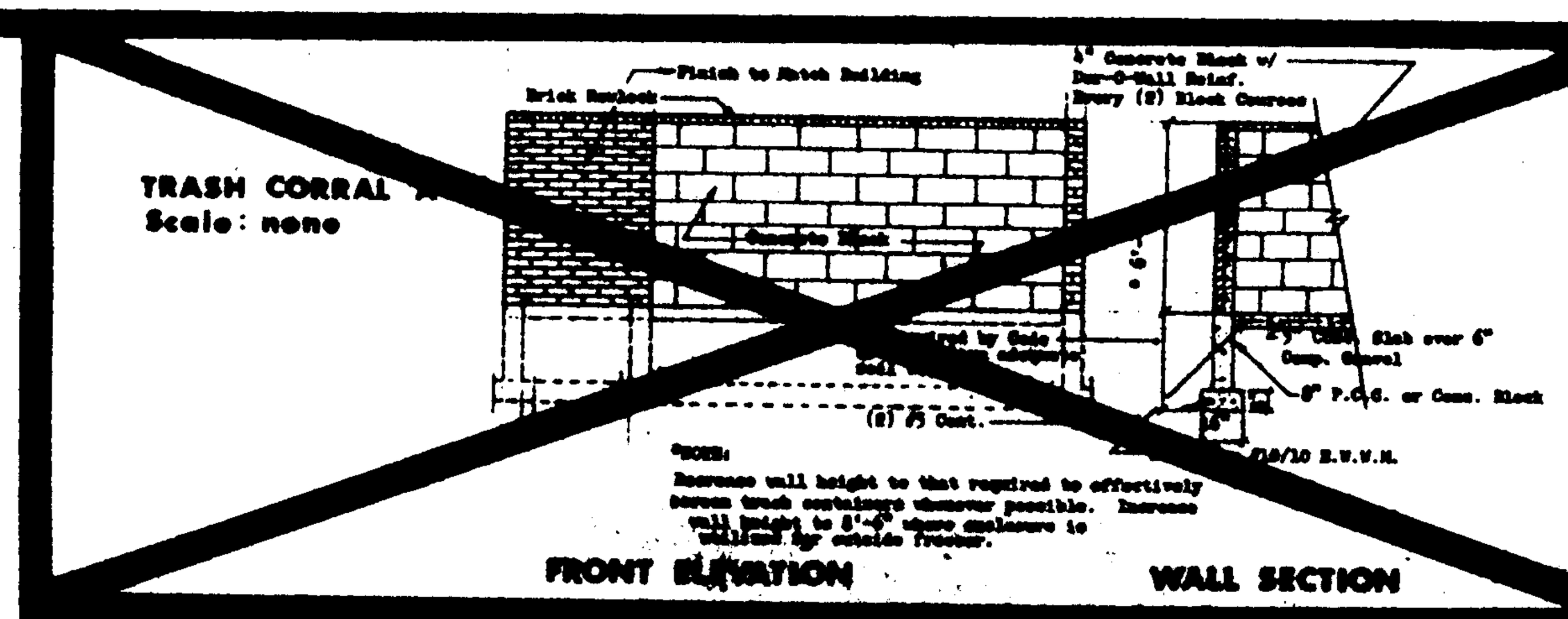
SDP-91-30

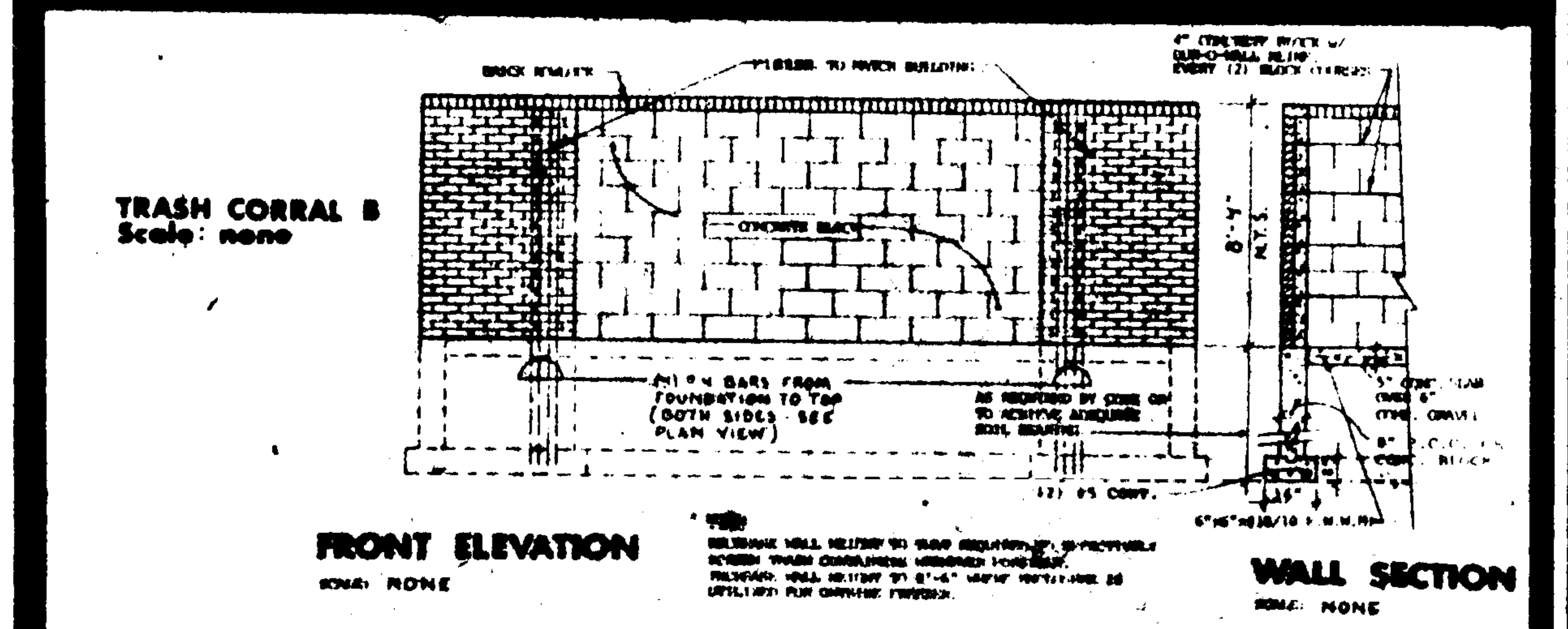


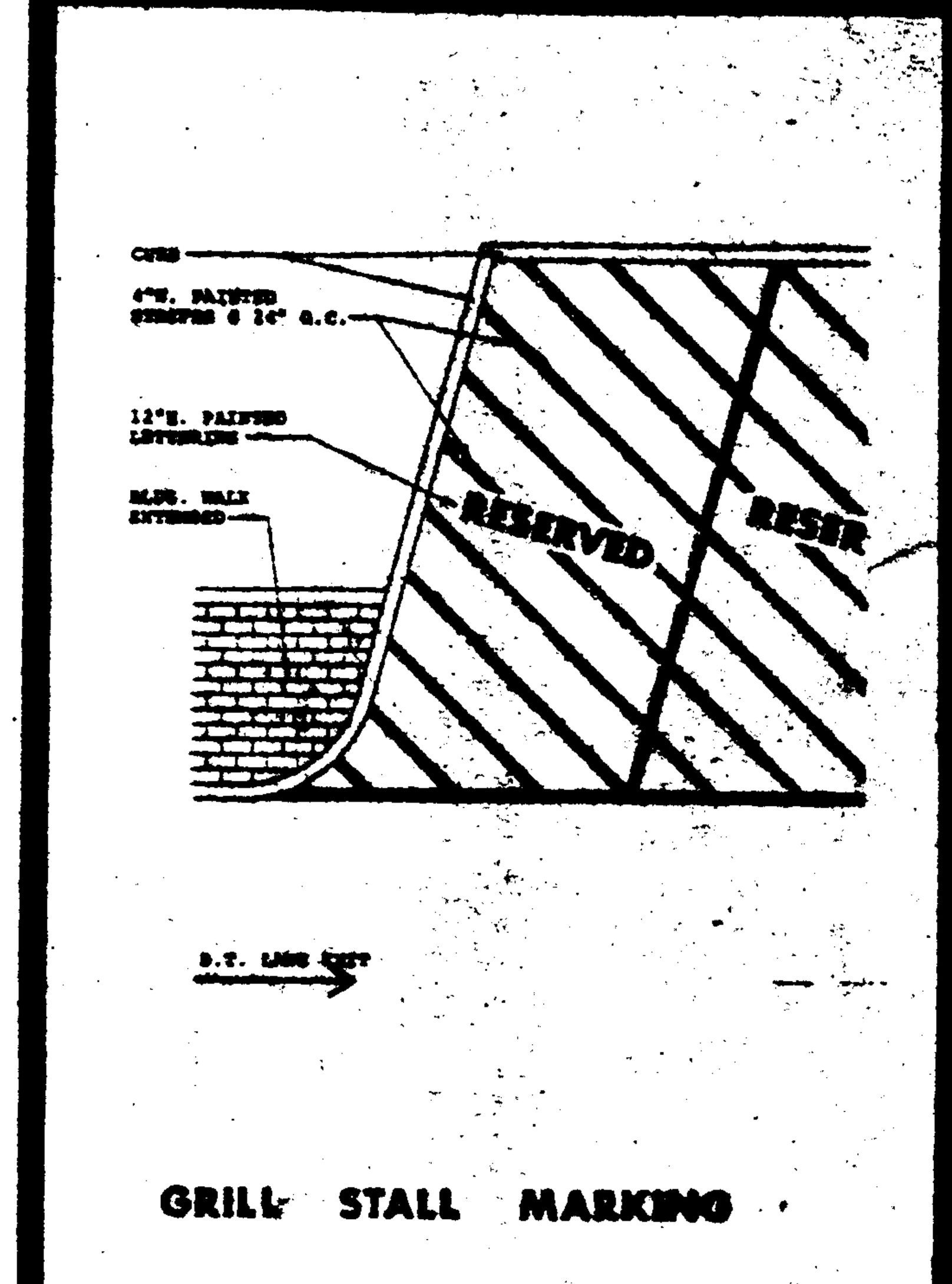


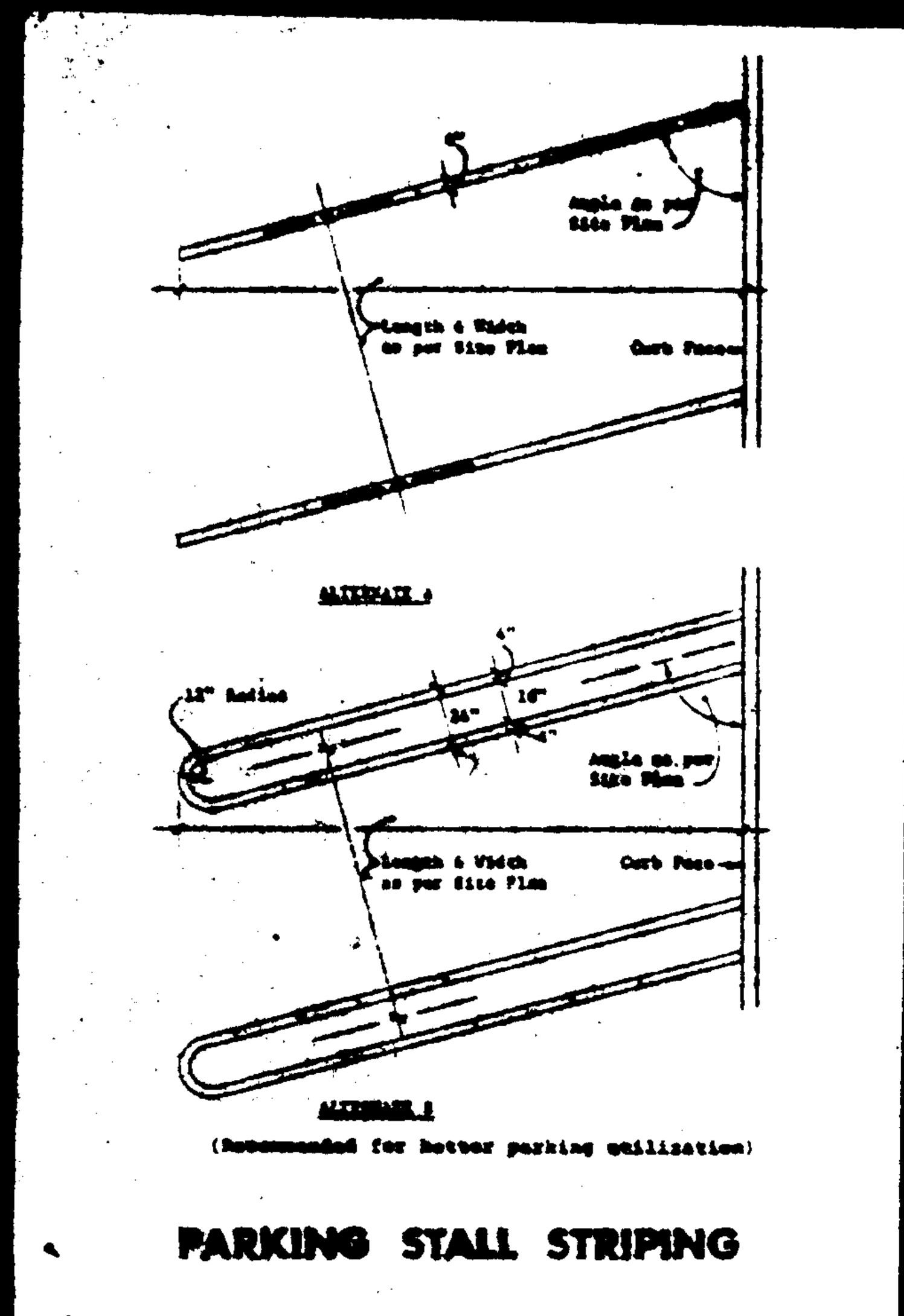


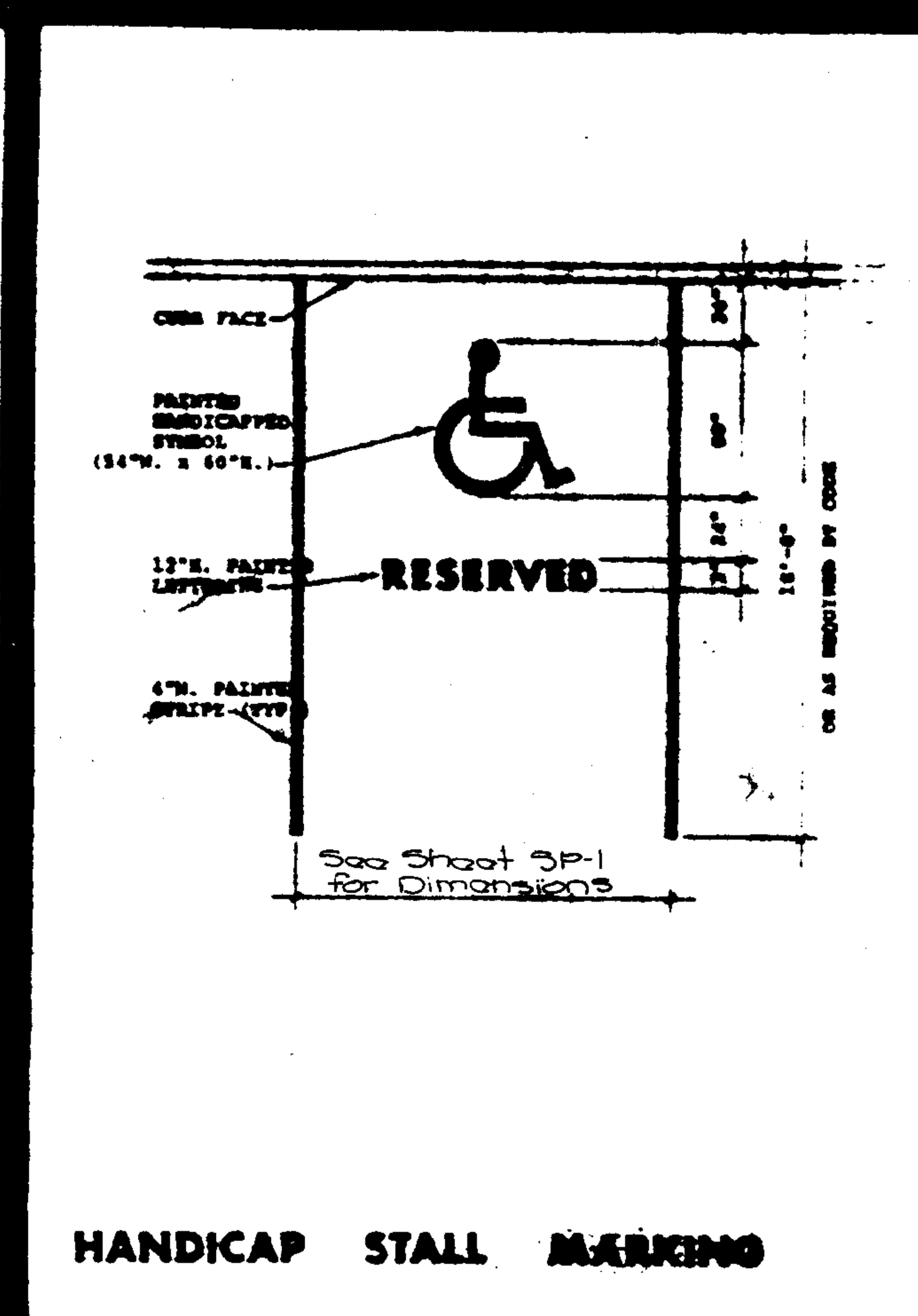


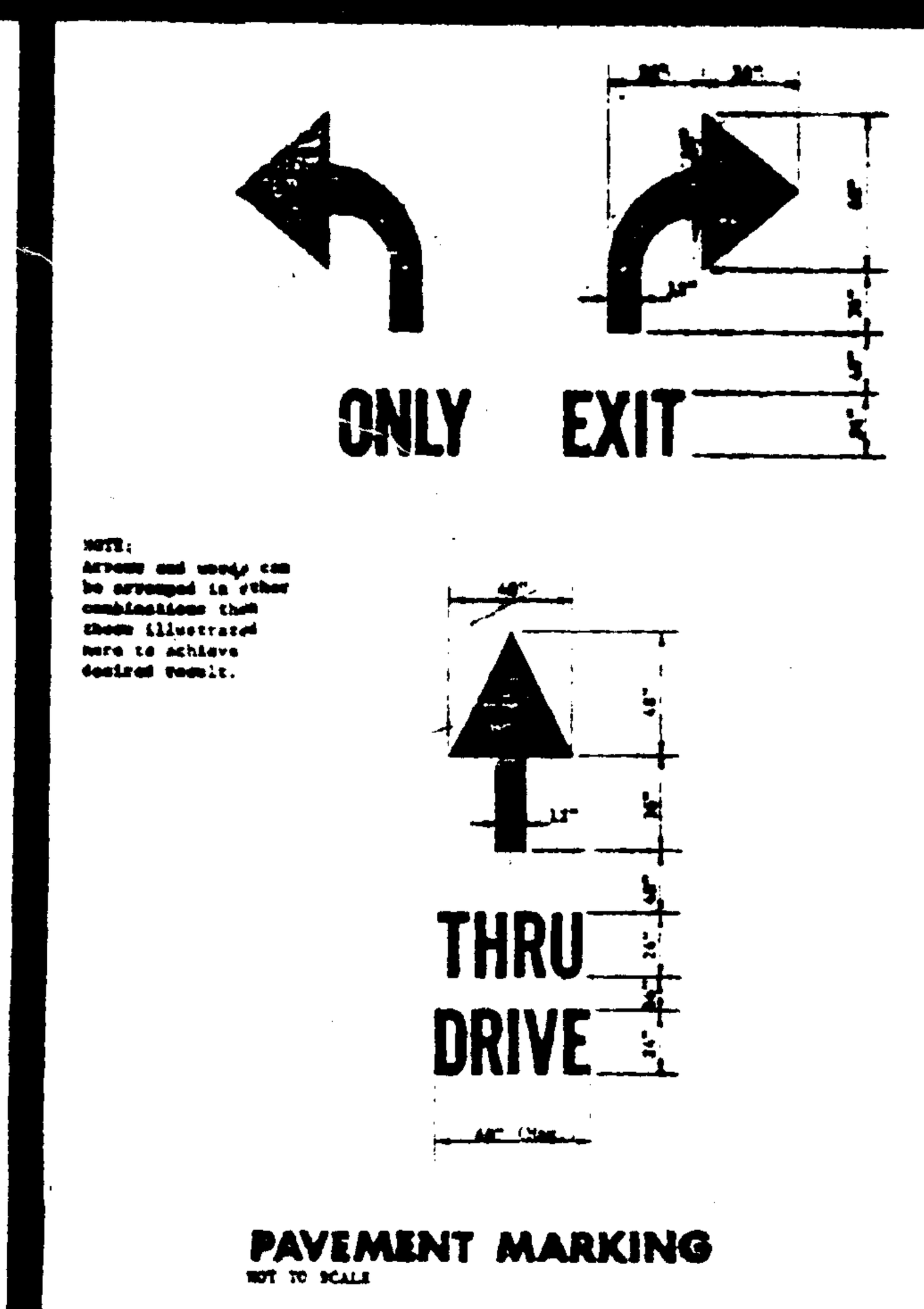


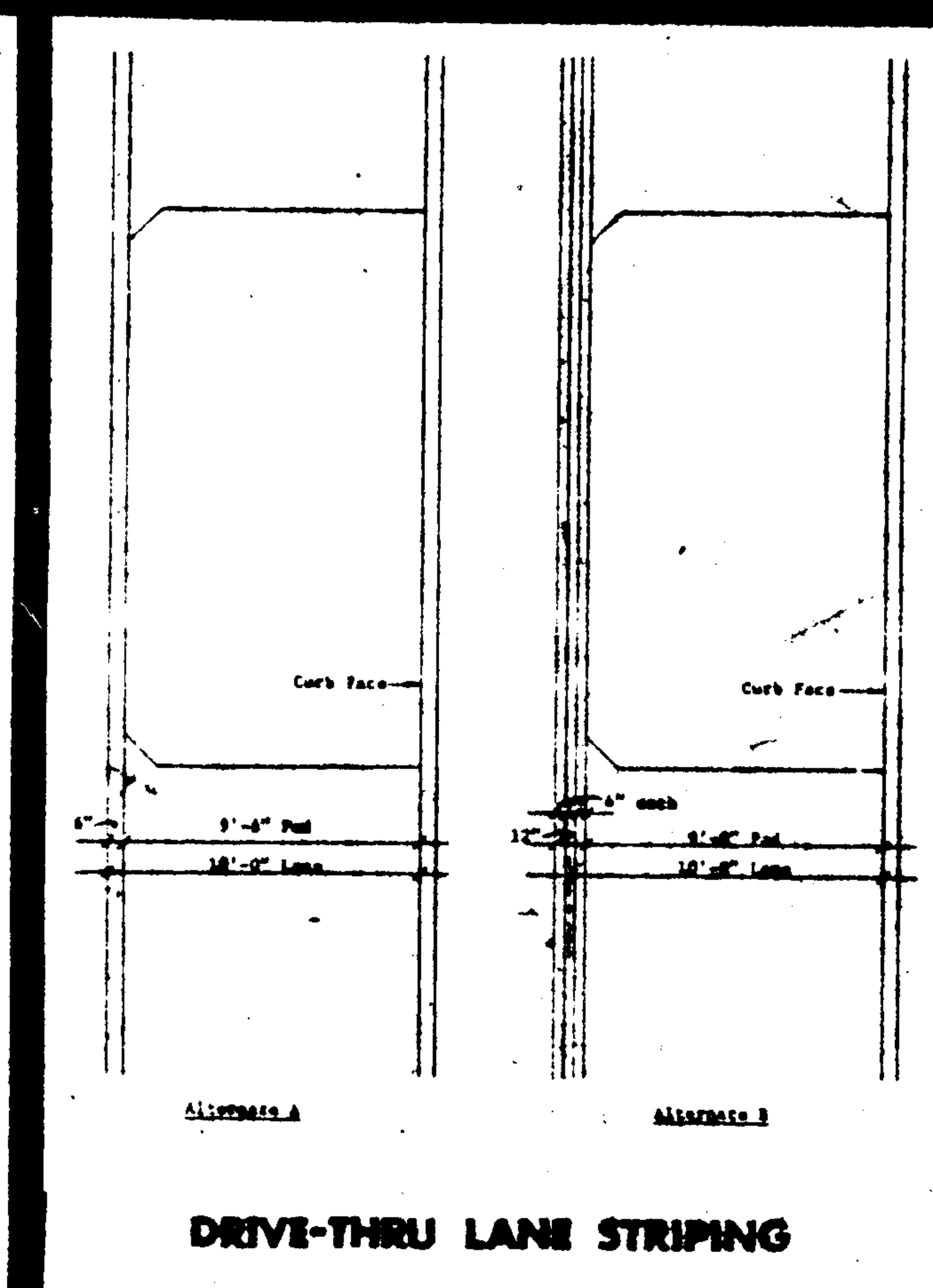












PAVEMENT PAINTING SPECIFICATION

All pavement painting - striping, lettering, directional arrows - is to be white in color.

Listed below are recommended paint manufacturers and products:

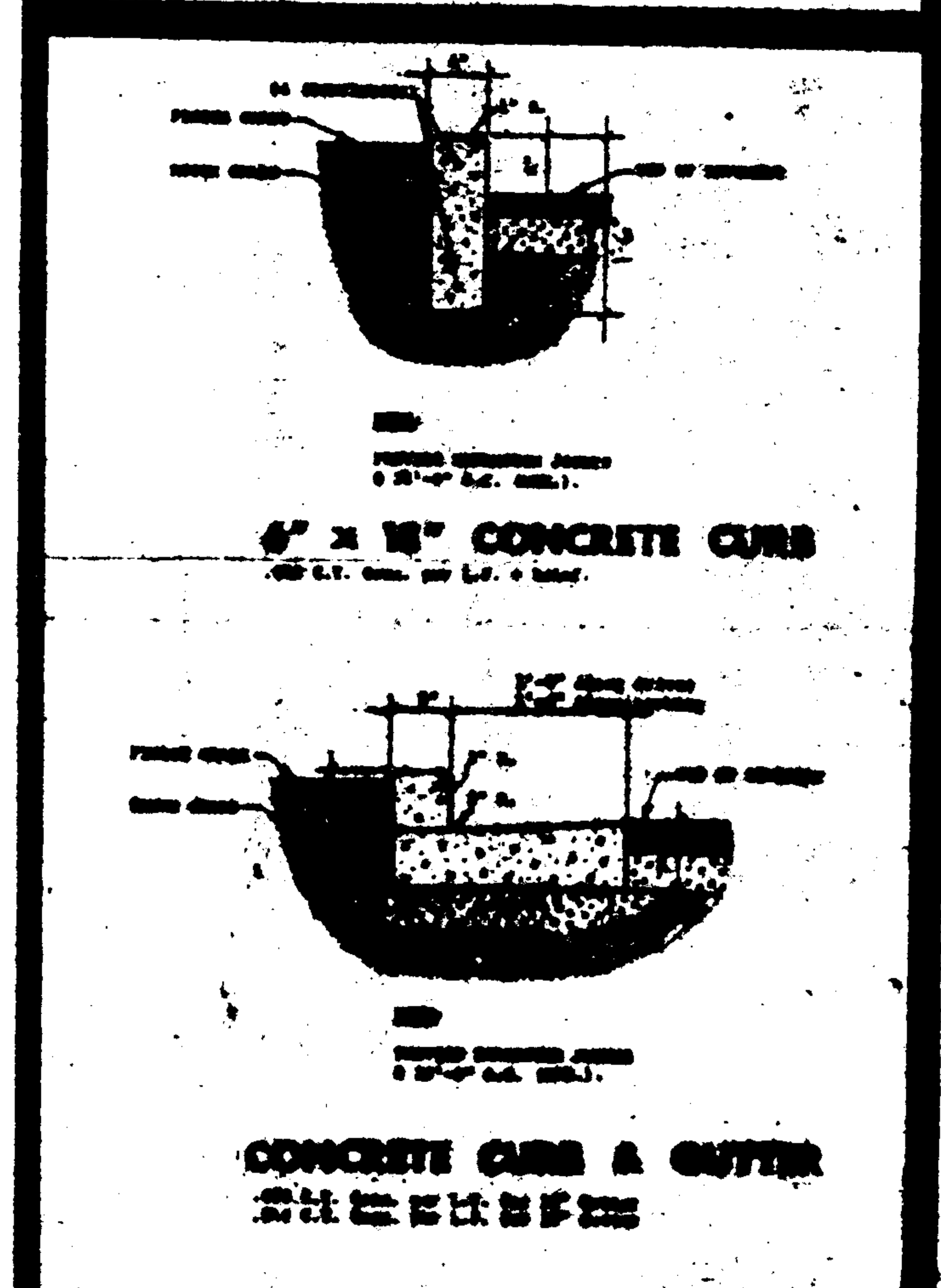
Glidden - "Traffic Zone Paint" (216)771-5121
Pittsburgh - "Traffic & Zone Marking Paint" (412)434-3131
Sherwin Williams - "Pro-Mar Traffic Marking Paint" (800)321-8194
Maintenance, Inc. (Premier Industrial Corp.) - "Tyme-Stripe" (216)264-6262

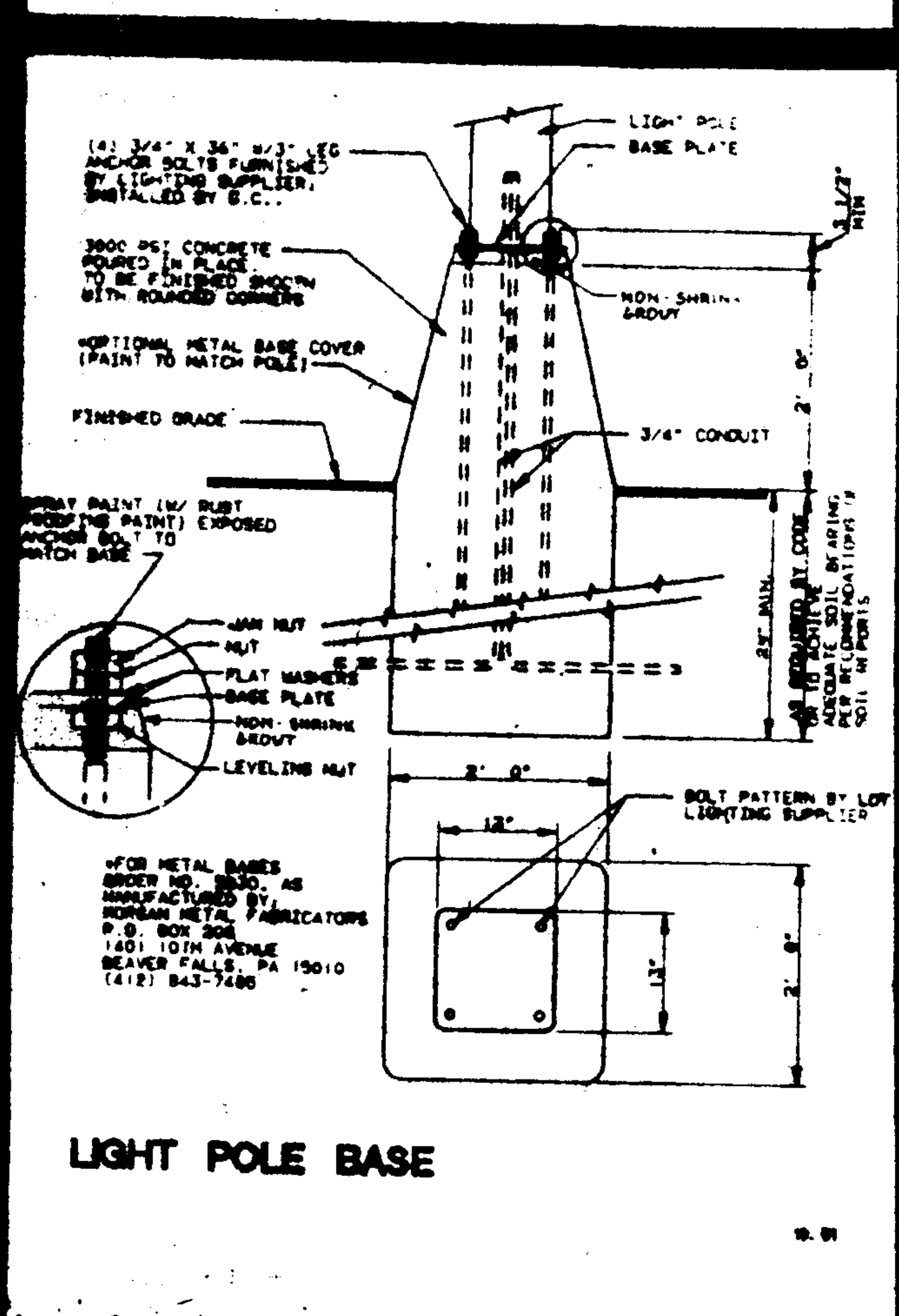
Pavement areas to be striped must be sound, and free of dust, dirt, oil, grease and any other foreign matter. Remove loose dirt by brushing and/or blowing clear with air or water pressure. Care should be taken not to spread surface deposits of oil or grease over additional areas in the cleaning process; these should be removed with solvents or commercial detergents. Old striping should be wire-brushed to ensure new paint bond, or removed entirely if badly cracked, flaked, or peeled. Where application is over protective sealers or coatings, such materials should be allowed to cure for at least 48 hours before painting. A check should be made by applying a test strip to determine the condition for painting.

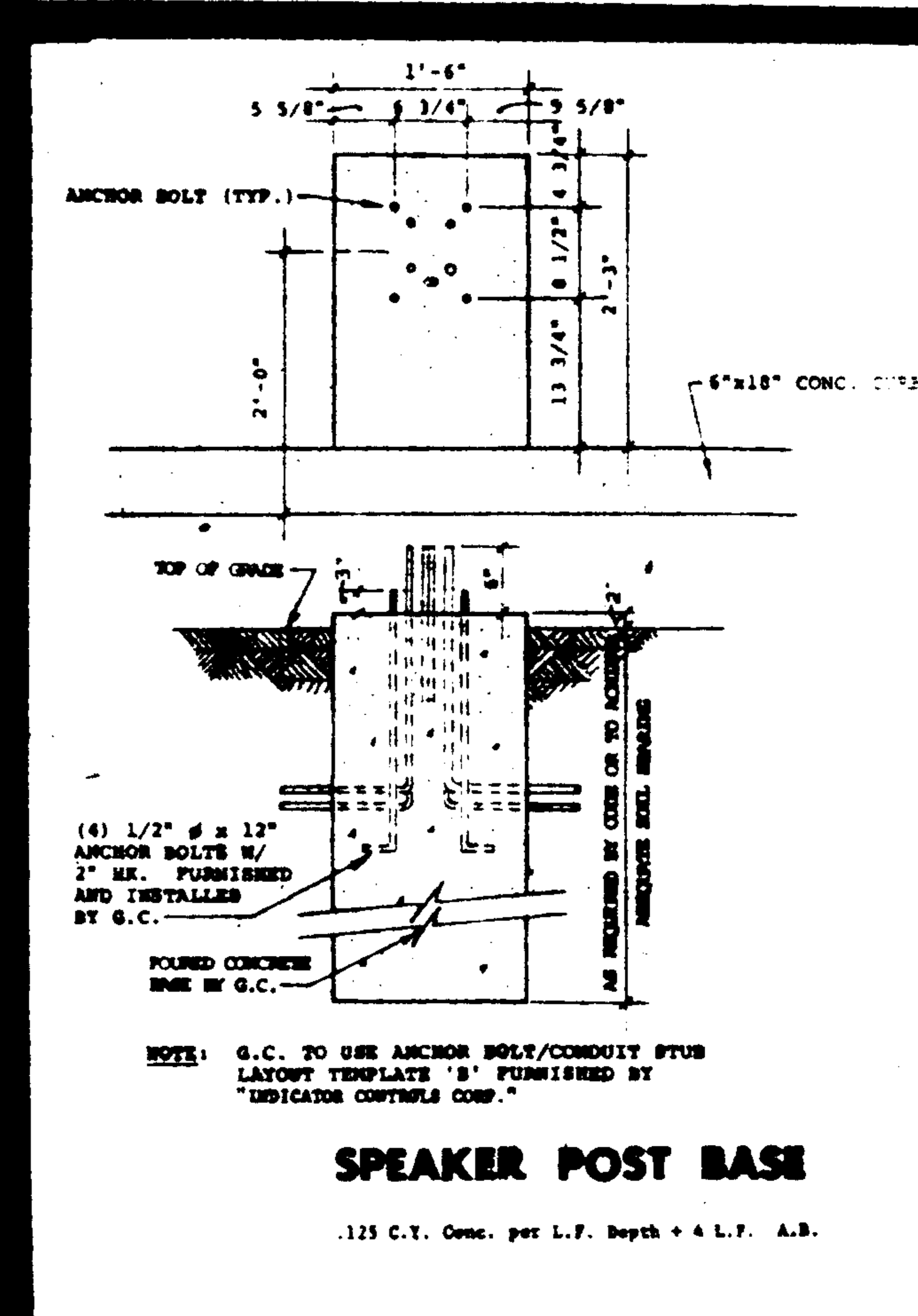
The pavement surface should be laid out with chalk marks for required striping so that marking will be accurate and in keeping with positioning and dimensioning shown on the site plan. One uniform coat of paint should be applied by brush, roller, or spray, at a rate of not less than one gallon per 300 square feet. One gallon will yield from 300 to 300 lineal feet of 4" wide stripe.

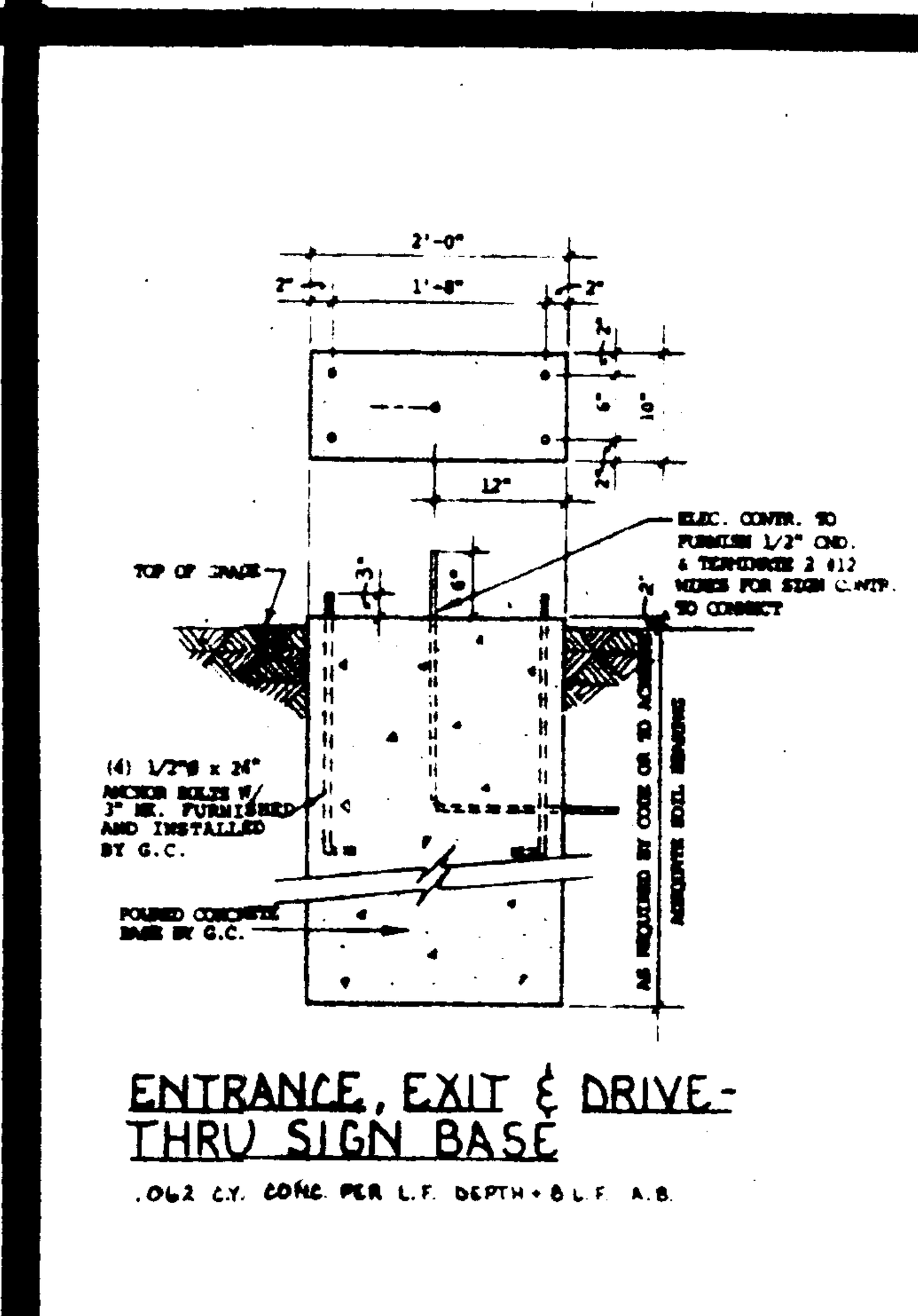
Paint should not be applied when weather is rainy, foggy, or excessively humid (over 85% relative humidity), and not when ambient or pavement temperature is below 50°F., and not when above conditions are anticipated for eight hours after application.

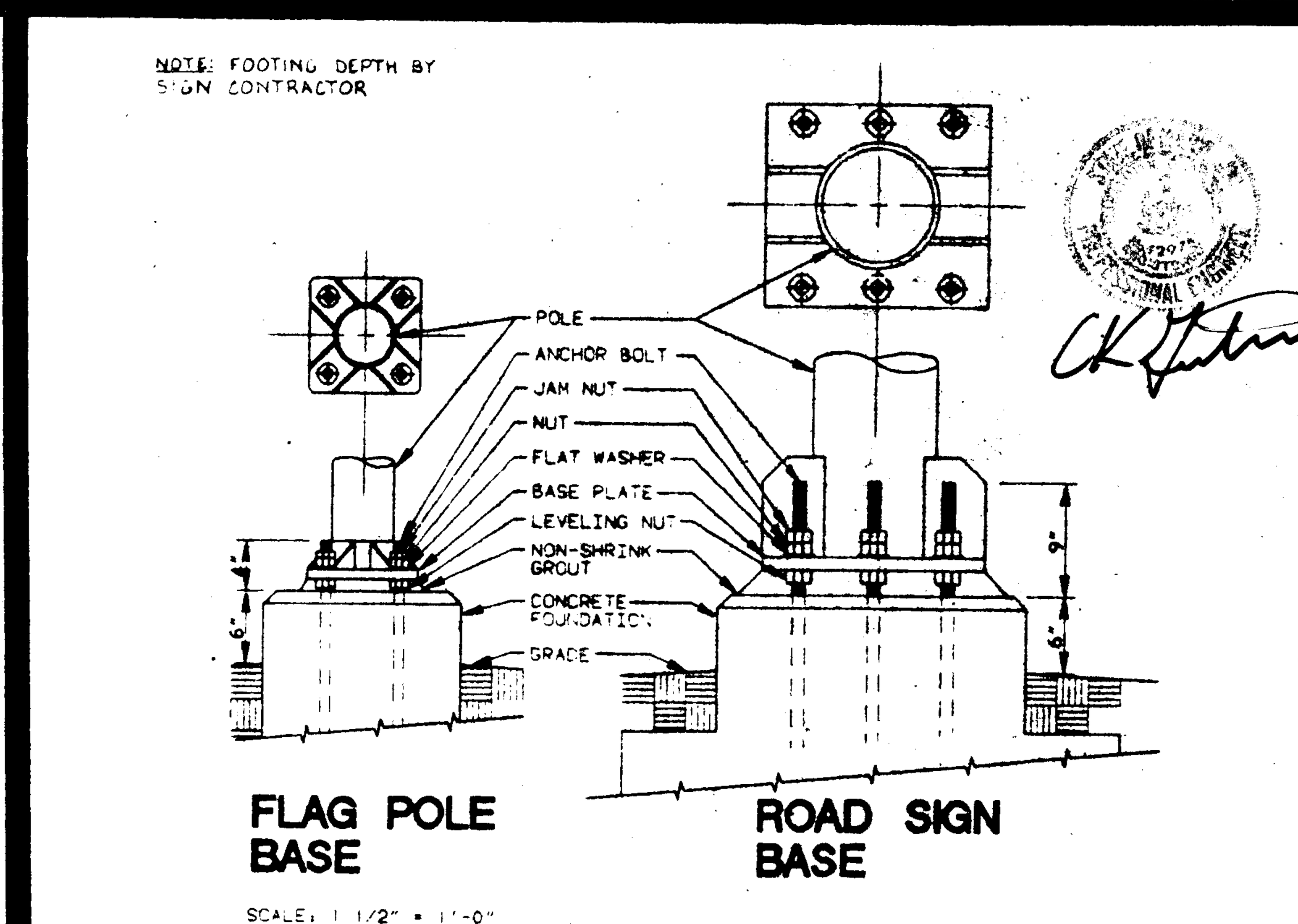
Pavement should not be opened to traffic until all paint is allowed to cure for at least 1 hour. (consult manufacturer for specific drying times).











McDonald's

Revisions		
No.	Date	By
1	10-17-85	RP
2	4-16-86	KS

D.E. Miller: Architect
McDonald's Corporation
McDonald's Plaza
Oak Brook, Illinois 60521

Date Drawn: 4-12-83
Drawn By: D MEIER
Checked By:
Job No.

Drawn For:
McDonald's Corporation
McDonald's Plaza
Oak Brook, Illinois 60521
C. W. Broadbent
Vice Pres. Of Architecture
And Construction

APPROVED BY: ______

SP-7 OF 11
DETAILS
GLW 90-025 11-9-90
SDP91-30

SECTION 02514
ASPHALT CONCRETE PAVING

PART 1 - GENERAL

1.01 General Conditions

The General Conditions of the Contract, and the Supplemental General Conditions bound in the "specifications for the 86 Series Standard Restaurant Buildings" are part of this specification. The Contractor shall consult them in detail for instructions pertaining to work under this trade. All bids must be based on material specified as standard. The term Owner as used herein is McDonald's Corporation and/or its appointed representative.

1.02 Scope of Work

Furnish all labor, materials, equipment, and services to complete all asphalt parking area and drive work as shown and specified on the drawings and herein.

1.03 Work Not Included

A. Earth removal, filling, compaction, or any rough grading of parking area and drives.

B. Barricades and traffic control will be furnished by the General Contractor.

1.04 General Requirements

A. Pavement Thickness Design (20 year design period):

Pavement shall be a plant-mixed asphalt surface course over a plant-mixed asphalt base course, or a plant-mixed asphalt single deep-lift course, over a sound and well-drained granular sub-base course, where required, over the prepared sub-grade. Thickness of each course shall be as specified by the Owner on the site plan. In all cases, the minimum thickness of the structure shall be as described below for the specific sub-grade type, or types, existing at the location of the pavement.

1. Minimum Structure for Asphalt Parking Areas[1]

Sub-grade Type[3]	Minimum Compacted Thickness in Inches: Granular Insulation Course	Granular Sub-base Course	Asphalt Base Course	Asphalt Surface Course	Deep-Lift Course
Good to Excellent	0	0	2-1/2	1	3-1/2
Medium	0	4	2	1	3
Poor	2 or "typar"	6	2	1	3

2. Minimum Structure for Asphalt Drives[2]

Sub-grade Type 3	Minimum Compacted Thickness in Inches: Granular Insulation Course	Granular Sub-base Course	Asphalt Base Course	Asphalt Surface Course	Deep-Lift Course*
Good to Excellent	0	0	4-1/2	1	5-1/2
Medium	0	5	4	1	5
Poor	2 or "Typar"	9	4	1	5

*If contractor cannot guarantee compaction on a single life, two lifts of equal thickness may be substituted for a single deep-lift.

3. Minimum Structure for Asphalt Truck Parking Areas and Drives (Subject to more than 20 & less than 400 trucks/day).

Sub-grade Type[3]	Minimum Compacted Thickness (in inches): Granular Insulation Course	Granular Sub-base Course	Deep-Lift Asphalt Course*
Good to Excellent	0	0	7-1/2
Medium	0	6	7
Poor	2 or "Typar"	11	7

*If contractor cannot guarantee compaction on a single lift, two lifts of equal thickness may be substituted for a single deep-lift.

NOTES:

1. Parking areas are defined as those areas subject to passenger car traffic (Max. 4,000 lb. axle load).
2. Drives are defined as those areas subject to passenger car and truck traffic (Max. 18,000 lb. axle load) of up to 20 trucks/day.
3. See Appendix A, P. 02514-6, for sub-grade classification.

B. Pavement Smoothness

The surface of the completed pavement structure when tested with a ten (10) foot straightedge, shall not contain irregularities in excess of one quarter (1/4) inch.

C. Pavement Testing and Inspection

The Contractor shall furnish for test and analysis representative core samples of the compacted asphalt paveme structure. Sampling and testing shall be in accordance with the latest revisions of the AASHTO.

or the ASTM Standard procedures for sampling and testing the materials being used in the work. All phases of the work will be periodically inspected by the Owner. If the results of the tests or special inspection meet the standards required by the plans or specifications, the Owner shall bear the cost of such tests or inspection. If the results do not meet the plans or specifications, the Contractor shall bear the cost of such tests and inspections. Additionally, if any work is found to be defective in material or workmanship, or contrary to specifications on the drawings or herein, that work shall be removed and replaced by the Contractor at his own expense.

D. Performance Guarantee

The Contractor shall guarantee in writing the satisfactory performance of the completed pavement for a period of one (1) year.

PART 2 - PRODUCTS

2.01 Materials

A. Asphalt Prime Coat shall be MC-30, MC-70, or MC-250, complying with the requirements of AASHTO Specification M82 or ASTM Specification D2027.

B. Asphalt Tack Coat, when required, shall be SS-1, SS-1h, CSS-1, or CSS-1h diluted one part water to one part emulsified asphalt. Before dilution the emulsified asphalt shall comply with the requirements of ASSHTO Specifications M140 or M208 or ASTM Specifications D977 or D2397.

C. Granular Insulation Course material shall be fine aggregate, coarse sand or stone screening, graded so that 90-100% passes 3/4" U.S. Sieve and not more than 30% passes No. 100 U.S. Sieve.

D. Granular Sub-base Course material shall be hard crushed stone, slag, crushed gravel, or uncrushed gravel having rough texture anb subangular to angular particle shape and shall be as specified by the Owner on the site plan.

E. Asphalt Concrete Plant Mix Base and Surface Course material shall be as follows:

1. Asphalt cement for the asphalt concrete plant mix shall comply with the applicable requirements of AASHTO Specification M226 or ASTM Specification D3381.

2. Mineral aggregate for the asphalt concrete plant mix shall consist of coarse aggregate, fine aggregate, and, if needed, mineral filler. The coarse aggregate shall be sound, angular crushed stone, crushed gravel, or crushed slag. Uncrushed coarse aggregate may be used in base course mixtures if the mixture meets all design criteria. The fine aggregate shall be well graded, moderately sharp to sharp sands.

3. Asphalt concrete plant mix shall meet the requirements of ASTM Standard Specification D1663 and shall meet the following gradation range requirements for each course mix. (Similar mixes specified by local agencies may be used if they have history of satisfactory performance).

Sieve Size:	Base Course (3/4" Max. Agg.)	Single Deep-Lift Course* (1/2" Max. Agg.)	Surface Course (3/4" Max. Agg.)
	Total Percent Passing(by wt.)		
1" (25.0mm)	100	--	--
3/4" (19.0mm)	90-100	100	--
1/2" (12.5mm)	--	90-100	100
3/8" (9.5mm)	60-80	--	90-100
No.4 (4.75mm)	35-65	45-70	60-80
No.8 (2.36mm)	20-50	25-55	35-65
No.50 (0.50mm)	3-20	5-20	6-25
No.200 (0.075mm)	2-8	2-9	2-10
Asphalt Cement Content (Weight percent of total mix)	4.0-9.0	4.5-9.5	5.0-[illegible]
Maximum Allowable Percent of Re-cycled/Reclaimed Materials (Weight percent of total mix)	NONE	NONE	NONE

*Note: In truck parking areas only, 3/4" mix may be substituted for 1/2" mix in deep-lift construction provided that asphalt content falls within the range of 4.5-9.5% by weight (5.5% optimum).

PART 3 - EXECUTION

3.03 Construction

A. Initial Preparation - If specified by the Owner, a commercial sterilant or weed killer containing chemical compounds such as sodium chlorate, porate, or arsenate shall be applied to the prepared sub-grade following recommendations of the product manufacturer.

B. Placement of Granular Courses - The granular insulation and sub-base courses shall be placed over the sub-grade and each course compacted at 95% of the maximum laboratory density (as determined on the same material by ASTM D1557, Method D) and uniform specified thickness as well as to required grade and cross-section.

C. Placement of Asphalt Prime Coat - The prepared granular sub-base course or prepared sub-grade, when granular sub-base course is not specified, shall be primed with an asphalt prime coat applied at a rate of 0.2 to 0.5 gallons per square yard. Surfaces of concrete curbs, gutters, vertical faces of existing pavements, and all structures to be in actual contact with the asphalt-aggregate mixture shall be given a thin, even coating of asphalt prime. Care shall be taken to prevent spattering any surface that will not be in contact with the asphalt aggregate mixture.

D. Placement of Asphalt Concrete Plant Mix Base and Surface, or Single Deep-Lift Courses - The mixture shall be placed in one or more lifts as specified on the drawings. The minimum course lift thickness shall be at least two times the maximum particle size; the maximum lift thickness shall be that which can be demonstrated to be laid in a single lift and compacted to required uniform density and smoothness. Asphalt courses shall be spread with an approved, conventional self-propelled asphalt paving machine. Placing and spreading the mixture shall be a continuous operation. Any irregularities in the surface of the pavement shall be corrected directly behind the paver. Small, confined areas may be spread and finished by hand.

E. Asphalt mix material shall be delivered to the site at a temperature not lower than 275°F or higher than 320°F and shall not be placed when the outside air temperature is below 50°F or during inclement or unsuitable weather. (For late season paving, see Appendix B, p. 02514-6).

The mix shall be compacted immediately after placing as soon as the mix will support the roller without undue displacement. Initial compaction rolling with a steel-wheeled tandem, steel three-wheeled, vibratory, or pneumatic-tired roller shall follow the paver as closely as possible. In areas too small for the roller, a vibrating plate compacter or hand tamper shall be used to achieve thorough compaction. Each course shall be compacted to not less than 95% of maximum laboratory density and uniform specified thickness as well as to required grade and cross-section. Compaction shall be completed before the course has cooled to below 250°F.

F. After compaction rolling has been completed and before the course has cooled to no lower than 140°F, finish rolling shall be performed with a tandem steel roller and shall continue until all roller marks and imperfections are eliminated.

G. In instances where the asphalt base course is to remain exposed for a designated period of time before the asphalt surface course is applied, as instructed by the Owner, the asphalt base course shall be repaired of any failures, swept, cleaned, and primed with an asphalt tack coat applied at the rate of .05 to .15 gallons per square yard before the asphalt surface course is installed.

APPENDIX A - Sub-Grade Classification

"Good to Excellent" - "Good" sub-grade soils include clean sands, sand-gravels, and soils free of detrimental amounts of plastic materials. Generally, any soil that retains a substantial amount of its load-bearing capacity when wet. CBR (California Bearing Ratio) values of 10 to 20. "Excellent" sub-grade soils include well-graded, clean and sharp sands and gravels. Generally, any soil that is unaffected by moisture or frost action. CBR values greater than 20.

"Medium" - Soils include loams, clay loams, silty sands, and sand-gravel containing moderate amounts of clay and fine silt. Generally, any soil that retains a moderate degree of firmness under adverse moisture conditions. CBR Values of 5 to 10.

"Poor" - Soils include clays, silts, sandy loams. Generally, any soil that becomes quite soft and plastic when wet. CBR values less than 5.

APPENDIX B - Late Season Paving

In cases where the asphalt base course must be installed in cool or cold weather, in order to enable the store to open by the end of the year, the minimum temperature of the mix shall be 285°F. when the ground temperature is 40° - 50°F., and a minimum of 295°F. when the ground temperature is 32° - 40°F. Compaction rolling shall be completed before the course has cooled to below 250°.

SECTION 02515
PORTLAND CEMENT CONCRETE PAVING

PART 1 - GENERAL

1.01 DESCRIPTION

A. **Related Work Specified Elsewhere:**

1. Cast-In-Place Concrete: Section 03300
2. Earthwork: Section 02200
3. Concrete Walks and Curbs: Section 02515

B. Description of Work:

1. The extent of the work is shown on the drawings and specified herein.

1.02 QUALITY ASSURANCE

A. Reference Standard:

1. Conform to the requirements of Section 03300 - Cast-In-Place Concrete.

1.03 SUBMITTALS

A. Reference Standard:

1. Conform to the requirements of Section 03300 - Cast-In-Place Concrete.

PART 2 - PRODUCTS

2.01 CONCRETE MATERIALS

A. Reference Standard:

1. Conform to the requirements of Section 03300 - Cast-In-Place Concrete, except as noted below:

a. Maximum coarse aggregate size shall be 1 inch.

2.02 PROPORTIONING AND DESIGN OF MIXES

A. Reference Standard:

1. Conform to the requirements of Section 03300 - Cast-In-Place Concrete, except as noted below:

a. All concrete shall have a compressive strength of 3500 psi minimum at 28 days, except in Northern Climates* where it shall be 4000 psi minimum at 28 days.

b. All concrete shall be produced with a minimum cement content of 520 lb. per cubic yard (5.5 U.S. bags) except in Northern Climates* where it shall be produced with a minimum cement content of 560 lb. per cubic yard (6.0 U.S. bags).

c. All concrete shall be produced with an entrained air content of 4% by volume, except in Northern Climates* where it shall be produced with an entrained air content of 6% by volume.

d. All concrete shall have a maximum water/cement ratio of 0.53 (6.0 gal/bag), except in Northern Climates* where it shall have a maximum water/cement ratio of 0.49 (5.5 gal./bag).

e. The maximum allowable concrete slump shall be 4 inches.

*"Northern Climates" shall be defined as those areas exposed to freeze-thaw cycles or the use of deicing salts.

2.03 CONCRETE MIXING

A. Reference Standard:

1. Conform to the requirements of Section 03300 - Cast-In-Place Concrete.

PART 3 - EXECUTION

3.01 PREPARATION

A. General:

1. Preparation shall conform to the requirements of Section 03300 - Cast-In-Place Concrete.

2. The subgrade shall be in a moist condition prior to concrete placement and shall comply with the requirements of ACI 302-69.

3.02 CONCRETE PLACEMENT

A. General:

1. Placement shall conform to the requirements of Section 03300 - Cast-In-Place Concrete.

2. Concrete shall be placed, struck off, consolidated, and finished to plan grade with a mechanical finishing machine, vibrating screed, or by hand-finishing methods when approved. In lieu of fixed forms, the contractor may place concrete with a slipform paver designed to spread, consolidate, screed, and float finish the freshly placed concrete in one complete pass of the machine. Pavement shall be pitched to area drains or perimeter areas to remove water.

3. The slab thickness shall be 5" in all areas subject to passenger vehicles and up to 20 trucks per day. The slab thickness shall be 8" in all areas subject to more than 20 and less than 400 trucks per day.

3.03 JOINTS

A. General:

1. Concrete work shall be joinsed as shown on the project drawings. If not indicated on the drawings, a jointing plan shall be prepared by the contractor and approved before paving begins.

B. Control Joints:

1. Provide control joints or contraction joints which shall be formed by one of the following methods: sawing, forming by hand, or using full-depth construction joints. Joint depth shall be a minimum of one-fourth the slab thickness. Hand-formed joints shall have a maximum edge radius of ¼ inch. Sawing of joints shall begin as soon as the concrete has hardened sufficiently to permit sawing without excessive reveling. All joints shall be completed before uncontrolled shrinkage cracking occurs. Joints shall be continuous across the slab, unless interrupted by full-depth premolded joint filler. Joints shall extend completely through the curb. Joint openings wider than 1/4 inch shall be cleaned and sealed before opening parking area to traffic.

2. Joints should be laid out to aid construction and to control cracking. A square panel pattern is preferable but a dimensional ratio of 1 1/2 x 1 is permissible. Joint spacing shall not exceed 15 feet. Keyed joints are not required. Transverse joints shall be sawed. Spacing may be varied to accommodate catch basins, man holes etc. when pavement areas have many drainage inlets or other structures, place joints to approximate the cracking that would occur without joints. Whenever practical curbs should be cast integrally.

C. Isolation Joints:

1. Provide isolation or expansion joints to isolate fixed objects abutting or within the paved area. They shall contain premolded joint filler for the full depth of the slab.

3.04 FINISHING

A. General:

1. After concrete has been struck off and consolidated, a bullfloat may be used to remove any high or low spots. Bullfloat use shall be confined to a minimum. A final skid-resistant finish shall be made with a burlap drag or broom.

3.05 CURING AND PROTECTION

A. Reference Standard:

1. Conform to the requirements of Section 03300 - Cast-In-Place Concrete.

3.06 CONCRETE SURFACE REPAIRS

A. Reference Standard:

1. Conform to the requirements of Section 03300 - Cast-In-Place Concrete.

3.07 FIELD QUALITY CONTROL

A. Reference Standard:

1. Conform to the requirements of Section 03300 - Cast-In-Place Concrete.

3.08 OPENING TO TRAFFIC

A. General:

1. The pavement shall be closed to all traffic for at least seven (7) full days or until such time that the minimum compressive strength of the concrete is at least 75% of its design strength. In all cases approval shall be obtained prior to opening of the pavement to traffic.

Revisions | Items | By
Issue Date | Drawn | Checked | Building Type SITE SPECS

McDonald's Corporation
McDonald's Plaza
Oak Brook, Illinois 60521

McDonald's

GLW 90-025 11-9-90

APPROVED/RECOMMENDED ASPHALT PAVEMENT SEALERS

1. a. Jennite J-16 Seal Coat:

new pavement - 2 coat application.
older pavement - 1 coat application.

b. *Neartex Fass-Dry:

new pavement - 2 coat application.
older pavement - 1 coat application.

Latex fortified, quick drying (15-30 minutes)

c. Jennite J-16 Sand Slurry: for application to older pavement or where a light abrasive surface is desired on new pavement - 2 coat application.

d. *Power Plus 88/Jennite J-16 Sand Slurry: a single coat, quick-dry application for new and older pavements.

Manufacturer: Premier Industrial Corp.
1051 W. Liberty St.
P.O. Box 408
Wooster, Ohio 44691
(216) 264-6262

2. a. Jetcoat 707 Seal Coat:

new pavement - 2 coat application.
older pavement - 1 coat application.

b. Jetcoat 707 Sand Slurry: for application to older pavement or where a light abrasive surface is desired on new pavement - 2 coat application.

Manufacturer: Jetcoat Corporation
472 S. Breni Avenue
Columbus, Ohio 43216
(614) 279-8688

3. *Gilsonite Sealer 'N' Binder Formula 8: a single coat, quick-dry application for new and older pavements.

Manufacturer: Asphalt Systems, Inc.
P.O. Box 518
Danville, California 94526
(415) 820-4440

4. a. Sealmaster: new pavement - 2 coat application.
older pavement - 1 coat application.

Manufacturer: Wikel Mfg. Co. Inc.
2520 S. Campbell St.
P.O. Box 2277
Sandusky, Ohio 44870
(419) 626-5470

5. a. *Sweepco Flex-Shield:
new pavement - 2 coat application.
older pavement - 1 coat application.

Manufacturer: Southwestern Petroleum Corporation
P.O. Box 789
Ft. Worth, Texas 76101
(817) 332-2336

6. a. *Fass-Dri

new pavement - 2 coat application
old pavement - 1 coat application

Manufacturer: Maintenance, Inc.
P.O. Box 408
Wooster, OH 44691
(216) 264-6262

PAVEMENT PAINTING SPECIFICATION

All pavement painting - striping, lettering, directional arrows - is to be white in color.

Listed below are recommended paint manufacturers and products:

Carbit -	White Zone Marking Paint (312) 664-6886
Glidden -	"Traffic Zone Paint" (216)771-5121
Pittsburgh -	"Traffic & Zone Marking Paint" (412)434-3131
Sherwin Williams -	"Pro-Mar Traffic Marking Paint" (800)321-8194
Maintenance, Inc. (Premier Industrial Corp.) -	"Vyna-Stripe" (216)264-6262

Pavement areas to be striped must be sound, and free of dust, dirt, oil, grease and any other foreign matter. Remove loose dirt by brushing and/or blowing clear with air or water pressure. Care should be taken not to spread surface deposits of oil or grease over additional areas in the cleaning process; these should be removed with solvents or commercial detergents. Old striping should be wire-brushed to assure new paint bond, or removed entirely if badly cracked, flaked, or peeled. Where application is over protective sealers or coatings, such materials should be allowed to cure for at least 48 hours before painting. A check should be made by applying a test strip to determine the readiness for painting.

The pavement surface should be laid out with chalk marks for required striping so that marking will be accurate and in keeping with positioning and dimensioning shown on the site plan. One uniform coat of paint should be applied by brush, roller, or spray, at a rate of not less than one gallon per 200 square feet. One gallon will yield from 300 to 500 lineal feet of 4" wide stripe.

Paint should not be applied when weather is rainy, foggy, or excessively humid (over 85% relative humidity), and not when ambient or pavement temperature is below 50°F., and not when above conditions are anticipated for eight hours after application.

Pavement should not be opened to traffic until all paint is allowed to cure for at least 1 hour. (consult manufacturer for specific drying times).

McDONALD'S MINIMUM SOIL TESTING REQUIREMENTS

1. Field Borings:

Test borings shall be made, at the location shown on the attached sketch, with a truck-mounted rotary drill rig using a 3.5-inch I.D. continuous-flight, hollow-stem auger to a depth of 10.0-feet or to a depth equal to a distance of 4X the standard footing width below the proposed footing bottom elevation, whichever is greater, at locations proposed for slab-on-grade structures and road signs; to a depth of 15.0 feet at locations proposed for basement structures; and to a depth of 5.0 feet at locations proposed for pavement structures. If soils suitable for 2,000 P.S.F. at proposed slab-on-grade foundation depths or 3,000 P.S.F. at proposed basement foundation depths are not encountered, boring shall be further advanced until such material is found, or to a maximum depth of 20.0-feet; boring in excess of 20.0-feet depth shall not be made without authorization from a representative of McDonald's Corporation. All borings shall be terminated upon refusal on hard rock surfaces; rock corings shall not be made without authorization from a representative of McDonald's Corporation. Upon completion of drilling operations, all bore holes shall be backfilled and site vacated in as near to original condition as found. If bore holes must remain open for observation purposes, they shall be securely capped or covered during any absence from the site.

2. Sampling and Testing:

Sampling shall be performed at 2.5-foot intervals using a standard 2-inch O.D. split-spoon sampler incorporating the standard penetration test in accordance with ASTM Specification D 1587. If deemed necessary, cohesive-type soils shall be sampled using a thin-walled Shelby tube sampler in accordance with ASTM Specification D2587 and tested for unconfined compressive strength as per ASTM Specification D2166 and for moisture content as per ASTM Specification D2216. No other testing shall be performed without prior authorization from a representative of McDonald's Corporation.

3. Soils Report:

A written soils evaluation report shall be submitted containing the following information.

a. Boring layout plan illustrating actual drilling locations, denoting the boring number, and the dimensions of each from the property lines.

b. Boring logs indicating the boring number; date of drilling; top of hole elevation; description of soil type, density, consistency, color, and moisture; elevation of changes in soil strata; elevation of water table; elevations of samples; and penetration resistance in blow counts per six inches for each sample.

c. A brief description of the general site characteristics and conditions encountered, including observations on any indication of a seasonal high water table, previous filling or grading of the site, or signs of damage due to settlement in structures adjacent to the site.

d. Recommendations for building and road sign foundation design and depth, including alowable soil bearing pressure; recommendations for slab-on-grade and pavement structure design; and recommendations for subgrade preparation and earthwork when any unusual soil conditions exist.

SECTION 02608
WATER WELLS

PART 1 - GENERAL

1.01 GENERAL CONDITIONS:

The General Conditions of the Contract, and the Supplemental General Conditions bound herewith are part of this specification. This Contractor shall consult them in detail for instructions pertaining to work under this trade. ALL BIDS must be based on material specified as standards.

1.02 SCOPE OF WORK:

Furnish all labor, material, and equipment necessary to construct a water well with a minimum capacity of 40 gallons of water per minute and a minimum flow pressure of 30 pounds per square inch, or as specified on the drawings. The extent of water well work is as shown on the drawings. All water closets and urinals shall be a water-saver, tank type. All kitchen equipment shall have air-cooled compressors.

The water well work is to include the following:

- Applications and permits for drilling and developing well.
- Drilling pilot hole.
- Drilling for final water well depth.
- Placing and grouting well casing.
- Development of well.
- Testing and disinfection.

1.03 QUALITY ASSURANCE:

Protecting Water Quality:

Take precautions to prevent contaminated water or water having undesirable physical or chemical characteristics from entering the stratum from which well is to draw its supply. Take necessary precautions to prevent contaminated water, gasoline, etc., from entering well either through opening or by seepage through ground surface.

If well becomes contaminated or water having undesirable physical or chemical characteristics enters well due to neglect, provide casings, seals, sterilizing agents or other materials to eliminate contamination or shut off undesirable water. Provide remedial work at no cost to the Owner.

Exercise extreme care in performance of work to prevent breakdown or caving in of strata overlaying that from which water is to be drawn. Develop, pump or bail well by such methods as may be approved by the McDonald's Engineer until water pumped from well is substantially free from sand.

At all times during progress of work, protect the well in such manner to prevent either tampering with the well or the entrance of foreign matter. Upon completion, provide a temporary well cap.

Drillers Requirements:

Provide an experienced foreman or driller to be constantly in of well site and who has authority to take orders from McDonald's Engineer and shall supply, upon request, any information desired by McDonald's Engineer.

Well Screen:

Provide screen and accessories, required for satisfactory installation and operation, as standard products of a manufacturer regularly engaged in production of such equipment.

1.04 ABANDONMENT OF DRILLING:

If it becomes necessary to abandon drilling operation before completion of a water producing well, follow regulations for abandonment of well by local authorities having jurisdiction.

Should abandonment of drilling be necessary due to poor workmanship or negligence on the part of Contractor, no compensation will be allowed.

Should abandonment of drilling be necessary due to inadequate supply of good quality water, or for such other reason that McDonald's Engineer deems to be no fault of Contractor, compensation for work will be based on unit prices in contract.

1.05 SUBMITTALS:

Samples, Records and Reports:

Take samples of sub-strata formation at ten foot intervals and at each change in formation throughout entire depth of well. Carefully preserve samples at site in glass jars properly labeled for identification.

Furnish samples of water-bearing formation to qualified testing laboratory and well screen manufacturer for mechanical sieve analysis.

Provide McDonald's Engineer with six copies of the following information for record purposes.

Casings - diameter, thickness, weight per foot of length, depth below grade.

Screen - Diameter, opening size.

Pumping test - static water level, maximum safe yield, draw-down at maximum yield.

Log - formation log indicating strata encountered.

Alignment - certificate that well is aligned and plumb within specified tolerances

Provide McDonald's Engineer with six copies of bacteriological, physical and chemical analysis of water from finished well. Make analysis, certified by an approved testing laboratory, in accordance with local authority requirements, including the following.

Bacteriological evaluation

Coliform

Provide testing and report results for either multitube fermentation technique or membrane filter technique.

Physical and Chemical: (See Appendix, p. 02608-7

Color	ph	Sulfate (as S04)
Odor	Alk. to ph 4	CO2
Turbidity	Nitrate (as NO3)	Iron
Total Solids	Fluoride	Manganese
Chloride	Total Hardness	

PART 2 - PRODUCTS

2.01 MATERIALS:

A. CASING:

Provide permanent seamless and welded carbon steel pipe casing for well complying with ASTM A 589, Type IV; size, wall thickness and weight per lineal foot as indicated.

Joints may be welded or threaded coupling.

Provide galvanized pipe complying with ASTM A 120.

B. GROUT:

Cement: ASTM C 150, Type to suite project conditions.

Water: Potable

C. WELL SCREEN:

Construct screen of AISI type 302/304 stainless steel, continuous slot type, fabricated by welding. Provide V-shaped openings, widening inwardly. For joints connecting screen sections, use butt-type stainless steel coupling rings. Provide screen with necessary fittings to close bottom and to provide tight seal between top of screen and well casing.

PART 3 - EXECUTION

3.01 CONSTRUCTION:

Drill a pilot hole, minimum 4" diameter, to design depth and collect samples of formation for record and for analysis to select final screen and well depth. Provide information to McDonald's Engineer on static level of ground water, level of water for various pumping rates, and depth to water bearing strata. McDonald's Engineer will advise as to final well casing and grouting depth.

Enlarge pilot hole and install permanent casing screen and grout. Provide the first section of casing with hardened steel driving shoe of standard commercial quality having an outside diameter slightly larger than the casing couplings where threaded couplings are used.

Mix grout with the proportions of one cubic foot of cement (94 lb. sack) with 5 to 6 gallons of water. Bentonite clay may be added in amounts of 3 to 5 pounds per cubic foot of cement. If bentonite clay is added, water may be increased to 6.5 gallons per cu. ft. of cement.

Place grout continuously to insure entire filling of annular space in one operation. No drilling operation or other work in well will be permitted within 72 hours after grouting of casing. If quick-setting cement is used, this period may be reduced to 24 hours.

Provide the permanent casing with a temporary well cap. Top of casing 36" above existing grade, unless otherwise indicated.

3.02 DEVELOPMENT:

Develop well by such methods as will effectively extract from water-bearing formation the maximum practical quantity of sand, drilling mud and other fine materials in order to bring well to a maximum yield per foot of drawdown and to a sand-free condition. Compressed air, surge plungers, high velocity jetting equipment and pumps may be used for development work. This work must be done in a manner that does not cause undue settlement and disturbance of the strata above water bearing formation nor disturb the seal effected around well casing, reducing sanitary protection otherwise afforded by such seal.

Continue development of well until water pumped from well at maximum testing pumping rate is clear and free from sand. Water shall be considered sand-free when no samples, taken during test pumping, contain more than 2 parts per million of sand by weight.

3.03 TESTING FOR PLUMBNESS AND ALIGNMENT OF SUBMERSIBLE TYPE PUMPS (ONLY)

Set casing and liners round, plumb and true to line. Tests for plumbness and alignment must be made after construction of well and before its acceptance. Additional tests, however, may be made during performance of work.

Test plumbness and alignment by lowering into the well, to depth of the lowest anticipated pump setting, a section of pipe 40 feet long or a dummy of same length. Provide outer diameter of the plumb not less than 1/2" smaller than diameter of that part of casing or hole being tested. A dummy, if it is used, shall consist of a rigid spindle with three rings, each ring being 12" wide and truly cylindrical, and spaced one at each end of dummy and with one ring in center. Central member of dummy must be rigid so that it will maintain alignment of axes of rings.

Should dummy fail to move freely throughout length of casing or hole to depth of lowest anticipated pump setting, or should well vary from the vertical in excess of two-thirds smallest inside diameter of that part of well being tested per 100 feet of depth, the plumbness and alignment of well are not acceptable.

The McDonald's Engineer may waive requirements of this paragraph for plumbness, if, in his judgment utility of completed well will not be materially affected.

3.04 TESTING FOR YIELD AND DRAWDOWN:

After well has been constructed and cleaned out and depth of well accurately measured, provide the necessary arrangements for conducting final pumping test.

Provide a Bailer or air ejection test as a preliminary determination of expected yield. Make preliminary tests at depths where evidence is found of a sufficient quantity of water to satisfy desired yield. Provide two preliminary tests as part of this work.

Provide a variable capacity test pump with minimum capacity of maximum expected yield at a total head equal to drawdown in well, plus head loss in pump column and discharge pipe. Provide a reliable source of power for continuous run of test pump of at least 1 1/2 times power required, and provide complete controls and appurtenances.

Provide necessary discharge piping for pumping unit to conduct water to a point of disposal so as to avoid a nuisance or endanger adjacent property. Provide and maintain equipment of adequate size and type for measuring flow of water, such as a weir box, orifice or water meter. Measure elevation to water level in well with electrical device or air line control with gauge, hand pump and check valve. Fasten air line to pumping unit and terminate approximately at lowest pumping level anticipated, but in no case be closer than 2 feet from end of suction pipe.

Provide labor, motive power, lubricating oil and other necessary materials, equipment and supplies required to operate pumping unit. Final testing shall consist of 8 hours of continuous pumping after maximum drawdown has been reached. After completion of final test, remove by bailing, sand pumping or other methods, sand, stones or other foreign materials that may become deposited in well.

After test pump and auxiliary equipment have been installed, make arrangements for conducting pumping test and notify McDonald's Engineer 3 days prior to starting test. Note the water level elevations, referred to an assigned datum in well, test pump started and adjusted to required pumping rate. Record readings of water level in well and pumping rate at 30 minute intervals. When drawdown in well is 5 feet above top of suction screen after designated time, record maximum yield of well. Upon completion of pumping test, record returning water levels in well for a sufficient period, at time intervals so that a curve of recovery rate of well may be plotted.

3.05 DISINFECTION:

Use disinfection procedures as required by governing authorities. Clean the completed, tested and developed well of foreign substances including debris, cement, oil, grease, joint dope and scum. Swab casing thoroughly using alkalis, if necessary, to remove foreign substances.

Disinfect well with chlorine solution of sufficient strength to provide a minimum of 100 parts per million chlorine to water within the well. Introduce solution into well using gravity, pump or drop feeder. Allow a contact period of 24 hours and then pump well until chlorine residual is less than 0.2 parts per million.

3.06 GUARANTEE AND CORRECTION OF WORK:

Contractor guarantees to perform the Contractor's Work in a first class workmanlike manner and guarantees and warrants all work against defects in material or workmanship for a period of one (1) year from the opening date of the restaurant. Within a reasonable time after written notice, thereof, Contractor shall remedy and repair any defects in materials or workmanship, without expense to Owner, including damages or other work resulting therefrom.

APPENDIX: Physical and Chemical Test Results Interpretation

Color: 15 "units" is acceptable. Some waters may have higher color values which are not objectionable if other characteristics are satisfactory.

Odor: Absence of odor is desirable. A slight odor is acceptable if it becomes unnoticeable after dilution with 3 parts of odor-free water.

Revisions

No	Date	Items	By

Issue Date 2-3-87 | Drawn KS | Checked | Building Type SITE SPECS

McDonald's Corporation
McDonald's Plaza
Oak Brook, Illinois 60521

McDonald's

MCD 10160

GLW 90-029 11/90

SP-9
(SPECS 2 of 4)

SDP-91-30

Turbidity:	1 unit is desirable, but up to 5 units is acceptable if other factors (such as interference with disinfection) are not present.
pH:	Range of 6.5 - 8.5 is desirable. As low as 5 is acceptable, however, low pH's may contribute to corrosion. (Note: On the pH scale 7.0 is neutral, acid is below and alkaline is aboe pH 7.0).
Total Hardness:	Affects lathering of soap and causes scale deposits. Values of 60-120 mg/L (parts per million), calculated as calcium carbonate, represents moderately hard water.
Chloride, Sulfate:	These affect taste when present above 200 mg/L. Levels over 300mg/L are considered unhealthful. At levels above 1,000 mg/L, there may be laxative effects.
Nitrate:	This is an indicator of decaying organic matter or of fertilizers containing nitrate. The recommended limit for nitrate is 10 mg/L. If continually ingested in excessive amounts, it may cause met-hemoglobinemia (blue baby disease).
Iron, Manganese:	These are objectionable when they affect taste or cause staining of kitchenware. Total concentration of both should not be more than 0.5 mg/L, each separately should not be above 0.3 mg/L.

Chapter 9 - Retaining Walls

NOTE: All retaining walls or structures greater than 2'-0" in grade change (grade level change from one side of wall to the other) must be designed and sealed by a registered civil or structural engineer, and all drawings for same submitted to the Corporate Architect for review and approval.

SECTION 02707
STORM SEWER SYSTEMS

PART 1 - GENERAL

1.01 GENERAL CONDITIONS:

The General Conditions of the Contract, and the Supplemental General Conditions bound herewith are part of this specification. This Contractor shall consult them in detail for instruction pertaining to work under this trade. ALL BIDS must be based on material specified as standards.

1.02 SCOPE OF WORK:

The extent of storm sewer system work is as shown on the drawings and is to include, but is not limited to, storm sewer conduits, manholes, catch basins, frames, covers, and gratings.

1.03 RELATED WORK SPECIFIED ELSEWHERE:

A. Earthwork: "Specifications for Standard Buildings" Division 2, Section 02200

B. Concrete: "Specifications for Standard Buildings" Division 3

PART 2 - PRODUCTS

2.01 MATERIALS:

A. CONDUITS:

1. General: Furnish ells, tees, reducing tees, wyes, couplings, increasers, crosses, transitions, and end caps of the same type and class of material as the conduit, or of materials having equal or superior physical and chemical properties as acceptable to the McDonald's Engineer.

2. Vitrified Clay Pipe (VCP): ASTM C 700, Standard Strength (SS) except where Extra Strength (XS) indicated with resilient gasket joints complying with ASTM C 425.

3. Concrete Pipe (CP): ASTM C 14, Class 2, unless otherwise indicated.

4. Reinforced Concrete Pipe (RCP): ASTM C 76, Class as indicated, with modified tongue-and-groove compression gasket joints complying with ASTM C 443.

5. Corrugated Metal Pipe (CMP): AASHTO M 36, helically or circumferentially corrugated, mill galvanized steel, gauge and size as indicated. Furnish bituminous coating conforming to AASHTO M 190, type as indicated.

B. CONCRETE MANHOLES AND CATCH BASINS:

1. Concrete Base: Precast or cast-in-place, at Contractor's option. Use concrete which will attain a 28-day compressive strength of not less than 3000 psi.

2. Precast Concrete Manhole: ASTM C 478, sized as indicated.

C. MASONRY MANHOLES AND CATCH BASINS:

1. Concrete Masonry Units: ASTM C 139.

2. Manhole/Sewer Brick: ASTM C 32, Grade MS/SS.

3. Masonry Mortar: ASTM C 270, Type M.

D. METAL ACCESSORIES:

1. Manhole Frames and Covers: Gray cast iron, ASTM A 48, Class 30 B.

   Comply with requirements of FS RR-F-621 for type and style indicated.

   Furnish covers with cast-in legend "STORM" on roadway face.

2. Manhole Steps: Gray cast iron, ASTM A 48, Class 30 B, integrally cast into manhole sidewalls, unless otherwise indicated.

3. Catch Basin Frames and Gratings: Gray cast iron, ASTM A 48, Class 30 B.

   Comply with requirements of FS RR-F-621, for type and style required.

PART 3 - EXECUTION

3.01 INSPECTION:

Installer must examine the areas and conditions under which storm sewer system work is to be installed and notify the Contractor in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

3.02 INSTALLATION:

A. CONDUITS:

1. General: Install conduit in accordance with governing authorities having jurisdiction, except where more stringent requirements are indicated. Inspect conduit before installation to detect any apparent defects. Mark materials with white paint and promptly remove from the site. Lay conduit beginning at the low point of a system, true to the grades and alignment indicated with unbroken continuity of invert. All conduit shall be installed at a minimum slope of 1/8" per foot, unless otherwise indicated. Place bell ends of clay conduit or the groove end of concrete conduit facing upstream.

   Place the outside lap of corrugated metal pipe facing upstream and longitudinal laps at the side.

   Install gaskets in accordance with manufacturer's recommendations for the use of lubricants, cements, and other special installation requirements.

2. Vitrified Clay Pipe: Install in accordance with applicable provisions of ASTM C 12, Recommended Practice for Installing Clay Sewer Pipe, unless otherwise indicated.

3. Concrete Pipe: Install in accordance iwth applicable provisions of the American Concrete Pipe Association "Concrete Pipe Field Manual", unless otherwise indicated. Place circular concrete pipe with elliptical reinforcing so that the reference lines indicating the top of the pipe are not more than 5 degrees from the vertical plane through the longitudinal axis of the pipe.

4. Corrugated Metal Pipe: During installation, handle with care to prevent damage to bituminous coating or paving. After installation, apply a factory-furnished bituminous coating to any damaged surfaces. Remove and replace any sections where bituminous coating or paving has been damaged to such extent that satisfactory field repairs cannot be made.

5. Cleaning Conduit: Clear the interior of conduit of dirt and other superfluous material as the work progresses. Maintain a swab or drag in the line and pull past each joint as it is completed. In large, accessible conduit, brushes and brooms may be used for cleaning.

   Place plugs in the ends of uncompleted conduit at the end of the day or whenever work stops. Flush lines between manholes or catch basins, if required to remove collected debris.

6. Closing Abandoned Conduits: Close open ends of abandoned underground conduits which are indicated to remain in place. Provide sufficiently strong closures to withstand any hydrostatic or earth pressure which may result after ends of abandoned conduits have been closed.

7. Interior Inspection: Inspect conduit to determine whether line displacement or other damage has occurred. Make inspections after lines between manholes and catch basins have been installed and approximately two feet of backfill is in place and at completion of the project.

   If the inspection indicates poor alignment, debris, displaced pipe, infiltration, or other defects, take whatever steps are necessary to correct such defects to the satisfaction of the McDonald's Engineer.

B. MANHOLES AND CATCH BASINS:

1. Precast Concrete Manholes and Catch Basins: Place precast concrete sections as shown on the drawings. Provide a rubber joint gasket (complying with ASTM C 433) or a bituminous mastic coating at joints of sections.

2. Set tops of frames, covers, and gratings at the elevations indicated on the drawings.

   Masonry Construction Manholes and Catch Basins: At Contractor's option, use either sewer brick or concrete masonry units to construct masonry manholes. Mix mortar with only enough water for workability. Retempering of mortar will not be permitted. Keep mortar mixing and conveying equipment clean. Do not deposit mortar upon, or permit contact with, the ground. Lay masonry in mortar so as to form full bed with ends and side joints in one operation, and with full bed and vertical joints, not more than 5/8" wide. Protect fresh masonry from freezing and from too rapid drying.

   Apply a 1/2" thick mortar coating on both interior and exterior wall surfaces.

   Set tops of frames, covers, and gratings at the elevations indicated on the drawings.

3.03 TAP CONNECTIONS:

A. General: Make connections to existing conduits and underground structures, so that the finished work will conform as nearly as practicable to the requirements specified for new work.

B. Small - Sized Connections: Use commercially manufactured wyes for branch connections. Field cutting into conduit will not be permitted. Spring wyes into existing line and encase the entire wye, plus 6" overlap, with not less than 6" of 3000 psi, 28-day compressive strength concrete.

C. Medium - Sized Connections: Branch connections made from the side into existing 12" to 21" conduit shall have a wye sprung into the existing line, and the entire wye encased with not less than 6" of 3000 psi, 28-day compressive strength concrete.

D. Large - Sized Connections: For branch connections from the side into an existing 24" or larger conduit or to underground structures, cut an opening into the unit sufficiently large to allow 3" of concrete to be packed around the entering connection. Cut the ends of the connection passing through conduit or structure wall to conform to the shape of and be flush with the inside wall, unless otherwise indicated.

   On the outside of the conduit or structure wall, encase the entering connection in 6" of concrete for a minimum length of 12" to provide additional support or collar from the connection to undisturbed ground. Provide concrete which will attain a minmum 28-day compressive strength of 3000 psi, unless otherwise indicated. Use an epoxy bonding compound as an interface between new and existing concrete and conduit materials.

   Take care while making top connections to prevent concrete or debris from entering the existing conduit or structure. Remove any debris, concrete, or other extraneous material which may accumulate.

3.04 BACKFILLING:

Conduct backfill operations of open-cut trenches closely following laying, jointing, and bedding of pipe, and after initial inspection and testing are completed.

To minimize local area traffic interruptions, allow no more than 100 feet between pipe laying and the point of complete backfilling.

3.05 TESTING:

Perform testing of completed conduit lines in accordance with local authorities having jurisdiction.

3.06 GUARANTEE AND CORRECTION OF WORK:

Contractor guarantees to perform the Contractor's Work in a first class workmanlike manner and guarantees and warrants all work against defects in material or workmanship for a period of one (1) year from the opening date of the restaurant. Within a reasonable time after written notice, thereof, Contractor shall remedy and repair any defects in materials or workmanship, without expense to Owner, including damages or other work resulting therefrom.

END OF SECTION

MINIMUM SEPTIC SYSTEM REQUIREMENTS

FOR MCDONALD'S RESTAURANTS

The below requirements apply in all cases except where local codes or design conditions may supersede them.

1. Minimum soil percolation rate: 1" in 30 minutes. (See Appendix, p. 614).

2. Building design sewage outflow: 25 G.P.D. per seat.

   NOTE: ALL KITCHEN EQUIPMENT COMPRESSORS SHALL BE AIR-COOLED. IF WATER-COOLED EQUIPMENT IS UTILIZED, WASTEWATER FROM SAME SHALL BE RECYCLED OR DISCHARGED THROUGH DRYWELLS.

3. Grease trap:

   a. Wastewater inflow shall be from the five-compartment sink, washing machine, and any other possible grease-laden source.

   b. Construction: Sealed, watertight, reinforced concrete with manhole(s) for access; commercial units of pre-cast concrete or galvanized steel are acceptable.

   c. Size: 750 gallon minimum capacity.

   d. Grade: frost depth or a minimum of earth covering to secure uniformity of temperature and warmth in winter.

   e. Location: preferably in areas where maintenance or removal will cause the least disfigurement of property; avoid placement under paved areas; any required venting should be remoted to a location no less than 100' from the building and 50' from customer parking areas.

4. Septic tank:

   a. Construction: Same as for "Grease trap."

   b. Size: 3,000 gallon minimum capacity.

   c. Grade: Same as for "Grease trap."

   d. Location: Same as for "Grease trap."

5. Piping from building to grease trap and septic tank:

   a. Construction: cast-iron preferred.

   b. Size: 6" preferred, 4" minimum.

   c. Pitch: 1" in 8' for 6" pipe/1" in 4' for 4" pipe.

   d. Grade: frost depth or 1'-6", whichever is greater.

   e. Manholes: at any piping angle changes greater than 45° and at every 100' in piping runs greater than 200'.

6. Effluent disposal system.

   a. Design: Distribution box with either a subsoil drain field, sand filter(s), or leaching cesspool(s) - the choice of which shall be governed by soil absorption, available area (size and terrain), groundwater depth, and local code requirements. Wherever feasible, a separate sub-system/disposal area shall be provided for effluent discharged through the grease trap. The actual design work (calculations and drawings specifying system type, size, materials, and construction) shall be performed by a qualified civil or sanitary engineer.

   b. Location: Same as for "Grease trap" and preferably in an area downgrade, down-wind, and as far from building as conditions will permit.

NOTE: In all cases the restaurant operator should be provided with a complete set of working drawings for his particular septic system, along with a detailed maintenance schedule or outline (per manufacturer's or designer's recommendations) for his use.

APPENDIX:

A percolation test shall consist of digging or boring a 12" diameter hole to 6" below bottom of proposed leaching trench elevation (min. 18" below grade). The hole shall be filled with water and allowed to drain empty. Then, while the bottom is still wet, water shall be poured to a depth of 6" and the time required for the hole to drain recorded. One-sixth (1/6) of this time will be the average time required for the water level to drop 1". The average time of three successive trials is the soil percolation rate.

SECTION 02606
SANITARY SEWER LIFT STATIONS

PART 1 - GENERAL

1.01 GENERAL CONDITIONS:

The General Conditions of the Contract, and the Supplemental General Conditions bound herewith are part of this specification. This Contractor shall consult them in detail for instructions pertaining to work under this trade. ALL BIDS must be based on material specified as standards.

1.02 SCOPE OF WORK:

The extent of lift station work is shown on the drawings and by the requirements of this section. Work includes, but is not limited to, wet-pit (submersible equipment) or day-pit (self-priming or centrifugal equipment) lift stations.

1.03 RELATED WORK SPECIFIED ELSWHERE:

Earthwork: "Specifications for Standard Buildings" Division 2, Section 02200

Concrete: "Specifications for Standard Buildings" Division 3

1.04 QUALITY ASSURANCE:

A. Manufacturers: Firms regularly engaged in the manufacture of lift station equipment of types and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.

   Such manufacturers include, but are not limited to:

   Lyco, Gorman-Rudd, Clow, Davco, Smith-Loveless.

B. NEC Compliance: Comply with National Electrical Code (NFPA 70) as applicable to installation and electrical connections of ancillary electrical components of lift stations.

C. UL Labels: Provide lift station ancillary electrical components which have been listed and labeled by Underwriters Laboratories.

1.05 SUBMITTALS:

A. Manufacturer's Data, Lift Stations:

   Submit manufacturer's data on lift station products, including certified drawings showing overall dimensions of complete assembly weights, support requirements, sizes and locations of connections, accessories, and parts lists. Include the following information:

   Wiring diagrams.

   Performance certification.

   Product warranties.

   For below grade installation of steel, provide a structural design analysis, including compatibility of the shell with concrete slab for anchorage system.

   Written instruction for installation, including assembly of components where not factory assembled.

B. Shop Drawings, Lift Stations:

   Submit shop drawings showing layout of lift station, including space and access requirements and interface of lift station equipment with piping, electrical work and other equipment.

C. Maintenance Manuals, Lift Stations:

   Submit maintenance manuals for each type and different size lift station equipment package.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING:

A. Handle lift station equipment carefully to prevent external and internal component damage, breakage, denting and scoring the enclosure finish. Do not install damaged equipment; either replace damaged components or return unit to factory for replacement.

B. Store lift station equipment in a clean dry place. Protect from weather, dirt, fumes, water, construction debris and physical damage.

Revisions			
No	Date	Items	By

Issue Date	Drawn	Checked	Building Type
2 - 3 - 87	K S		SITE SPECS

McDonald's Corporation
McDonald's Plaza
Oak Brook, Illinois 60521

McDonald's®

McD 10160

GLW 90-025 11-9-90

SP-10 of 11

(SPECS 3 of 4)

SDP-91-30

PART 2 - PRODUCTS

2.01 MATERIALS:

A. Provide a factory assembled and tested, packaged lift station equipment of the type specified on the drawings.

PART 3 - EXECUTION

3.01 INSTALLATION:

A. General: Install lift station equipment where shown, in accordance with equipment manufacturer's written instructions, and with recognized industry practices, to ensure that station complies with requirements and serves intended purposes. Comply with requirements of governing regulations.

B. Coordination of Trades:

Coordinate with other work (plumbing, electrical) as necessary to interface installation of lift stations with other components of sanitary system.

C. Equipment Start-Up:

Start up lift station equipment in accordance with manufacturer's written procedures, upon completion of installation, and demonstrate compliance with requirements.

D. Concrete and Backfill:

Construct concrete vault or encasement to house lift station as indicated on the drawings.

Backfill completed lift station promptly after start-up and successful operation has been demonstrated, and concrete work (if indicated) has been completed and satisfactorily cured.

3.02 GUARANTEE AND CORRECTION OF WORK:

Contractor guarantees to perform the Contractor's Work in a first class workmanlike manner and guarantees and warrants all work against defects in material or workmanship for a period of one (1) year from the opening date of the restaurant. Within a reasonable time after written notice, thereof, Contractor shall remedy and repair any defects in materials or workmanship, without expense to Owner, including damages or other work resulting therefrom.

SECTION 02706
EXTERIOR SANITARY SEWER SYSTEMS

PART 1 - GENERAL

1.01 GENERAL CONDITIONS:

The General Conditions of the Contract, and the Supplemental General Conditions bound herewith are part of this specification. This Contractor shall consult them in detail for instructions pertaining to work under this trade. ALL BIDS must be based on material specified as standards.

1.02 SCOPE OF WORK:

The extent of sanitary sewer system work is as shown on the drawings and is to include, but is not limited to, sanitary sewer conduits, manholes, frames, and covers.

1.03 RELATED WORK SPECIFIED ELSEWHERE:

Earthwork: "Specifications for Standard Buildings" Division 2, Section 02200
Concrete: "Specifications for Standard Buildings" Division 3

PART 2 - PRODUCTS

2.01 MATERIALS:

A. CONDUITS:

1. General: Furnish ells, tees, reducing tees, wyes, couplings, increasers, crosses, transitions, and end caps of the same type and class of material as the conduit, or of material having equal or superior physical and chemical properties as acceptable to the McDonald's Engineer.

2. Cast Iron Soil Pipe (CISP): ASTM A 74, Service Weight (CISP-SW) class, except where Extra-Heavy (CISP-XH) class indicated, with neoprene rubber compression gaskets conforming to ASTM C 564.

3. Vitrified Clay Pipe (VCP): ASTM C 700, Standard Strength (SS), except where Extra Strength (XS) indicated, with resilient gasket joints complying with ASTM C 425.

4. Poly Vinyl Chloride Pipe (PVC): ASTM D 3033, Type PSP, or ASTM D 3034, Type PSM.

B. CONCRETE MANHOLES:

1. Concrete Base: Precast or cast-in-place, at Contractor's option. Concrete used shall be that which will attain a 28 day compressive strength of not less than 3,000 psi.

2. Precast Concrete Manhole: ASTM C 478, sized as indicated.

C. MASONRY MANHOLES:

1. Concrete Masonry Units: ASTM C 139.

2. Manhole/Sewer Brick: ASTM C 32, Grade MS/SS.

3. Masonry Mortar: ASTM C 270, Type M.

D. METAL ACCESSORIES:

1. Manhole Frames and Covers: Gray cast iron, ASTM A 48, Class 30 B.

Comply with requirements of FS RR-F-621 for type and style indicated.

Furnish covers with cast-in legend "Sanitary" on roadway face.

2. Manhole Steps: Gray cast iron, ASTM A 48, Class 30 B.

PART 1 - EXECUTION

3.01 INSPECTION

Installer must examine the areas and conditions under which sanitary sewer system work is to be installed and notify the Contractor in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

3.02 INSTALLATION:

A. CONDUITS:

1. General: Install conduit in accordance with governing authorities having jurisdiction, except where more stringent requirements are indicated.

Inspect conduit before installation to detect any apparent defects. Mark defective materials with white paint and promptly remove from the site.

Lay conduit beginning at the low point of a system, true to the grades and alignment indicated, with unbroken continuity of invert. All conduit shall be installed at a minimum slope of 1/8" per foot, unless otherwise indicated. Install gaskets in accordance with manufacturer's recommendations for the use of lubricants, cements, and other special installation requirements.

2. Cast Iron Soil Pipe: After inspection and at least 48 hours before installation, apply high-build bituminous coating to external surfaces. Apply in a single coat in accordance with manufacturer's recommendations to attain a dry-film thickness of not less than 12 mils.

3. Vitrified Clay Pipe: Install in accordance with applicable provisions of ASTM C 12, Recommended Practice for Installing Clay Sewer Pipe, unless otherwise indicated.

4. Plastic Pipe: Install in accordance with pipe manufacturer's written instructions.

5. Cleaning Conduit: Clear the interior of conduit of dirt and other superfluous material as the work progresses. Maintain a swab or drag in the line and pull past each joint as it is completed. In large, accessible conduit, brushes and brooms may be used for cleaning.

6. Place plugs in the end of uncompleted conduit at the end of the day or whenever work stops. Flush lines between manholes if required to remove collected debris.

7. Joint Adaptors: Make joints between cast iron pipe and other types of pipe with standard manufactured cast iron adaptors and fittings.

Interior Inspection: Inspect conduit to determine whether line displacement or other damage has occurred.

Make inspection after lines between manholes, or manhole locations, have been installed and approximately two feet of backfill is in place and at completion of the project.

If the inspection indicates poor alignment, debris, displaced pipe, infiltration, or other defects, take whatever steps are necessary to correct such defects to the satisfaction of the McDonald's Engineer.

B. MANHOLES:

1. Precast Concrete Manholes: Place precast concrete sections as shown on the drawings. Where manholes occur in pavements, set tops of frames and covers flush with finish surface. Elsewhere, set tops 3" above finish surface unless otherwise indicated.

Use epoxy bonding compound where manhole steps are mortared into manhole walls.

Provide a rubber gasket (complying with ASTM C 443) or a bituminous mastic coating at joints of sections.

2. Masonry Construction Manholes: At Contractors option, use either sewer brick or concrete masonry units to construct masonry manholes.

Mix mortar with only enough water for workability. Retempering of mortar will not be permitted. Keep mortar mixing and conveying equipment clean. Do not deposit mortar upon, or permit contact with, the ground.

Lay masonry in mortar so as to form full bed with ends and side joints in one operation, and with full bed and vertical joints, not more than 5/8" wide. Protect fresh masonry from freezing and from too rapid drying. Apply a 1/2" thick mortar coating on both interior and exterior wall surfaces.

Where manholes occur in pavements, set tops of frames and covers flush with finish surface. Elsewhere, set tops 3" above finish surface, unless otherwise indicated.

Use epoxy bonding compound where manhole steps are mortared into masonry walls.

3.03 TAP CONNECTIONS:

A. General: Make connections to existing conduits and underground structures, so that the finished work will conform as nearly as practicable to the requirements specified for new work.

B. Small-Sized Connections: Use commercially manufactured wyes for branch connections. Field cutting into conduit will not be permitted. Spring wyes into existing line and encase the entire wye, plus 6" overlap, with not less than 6" of 3000 psi, 28-day compressive strength concrete.

C. Medium-Sized Connections: Branch connections made from the side into existing 12" to 21" conduit shall have a wye sprung into the existing line, and the entire wye encased with not less than 6" of 3000 psi, 28-day compressive strength concrete.

D. Large-Sized Connections: For branch connections from the side into an existing 24" or larger conduit or to underground structures, cut an opening into the unit sufficiently large to allow 3" of concrete to be packed around the entering connection. Cut the ends of the connection passing through conduit or structure wall, encase the entering connection in 6" of concrete for a minimum length of 12" to provide additional support or collar from the connection to undisturbed ground. Provide concrete which will attain a minimum 28-day compressive strength of 3000 psi.

Use an epoxy bonding compound as an interface between new and existing concrete and conduit materials.

Take care while making tap connections to prevent concrete or debris from entering the existing conduit or structure. Remove any debris, concrete, or other extraneous material which may accumulate.

3.04 BACKFILLING:

Conduct backfill operations of open-cut trenches closely following laying, jointing, and bedding of pipe, and after initial inspection and testing are completed.

To minimize local area traffic interruptions, allow no more than 100 feet between pipe laying and the point of complete backfilling.

3.05 TESTING:

Perform testing of completed conduit lines in accordance with local authorities having jurisdiction.

3.06 GUARANTEE AND CORRECTION OF WORK:

Contractor guarantees to perform the Contractor's Work in a first class workmanlike manner and guarantees and warrants all work against defects in material or workmanship for a period of one (1) year from the opening date of the restaurant. Within a reasonable time after written notice, thereof, Contractor shall remedy and repair any defects in materials or workmanship, without expense to Owner, including damages or other work resulting therefrom.

Revisions:

No	Date	Items	By

Issue Date: 2 - 3 - 87 | Drawn: K S | Checked

Building Type
SITE SPECS

McDonald's Corporation
McDonald's Plaza
Oak Brook, Illinois 60521

McDonald's

McD 10160

GLN 00-025 11-9-90

SP-11
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SDP-91-30