

NOTE: CALL "MISSDIG" (1-800-482-7171)
3 WORKING DAYS PRIOR TO ANY EXCAVATION
FOR UNDERGROUND UTILITY INFORMATION

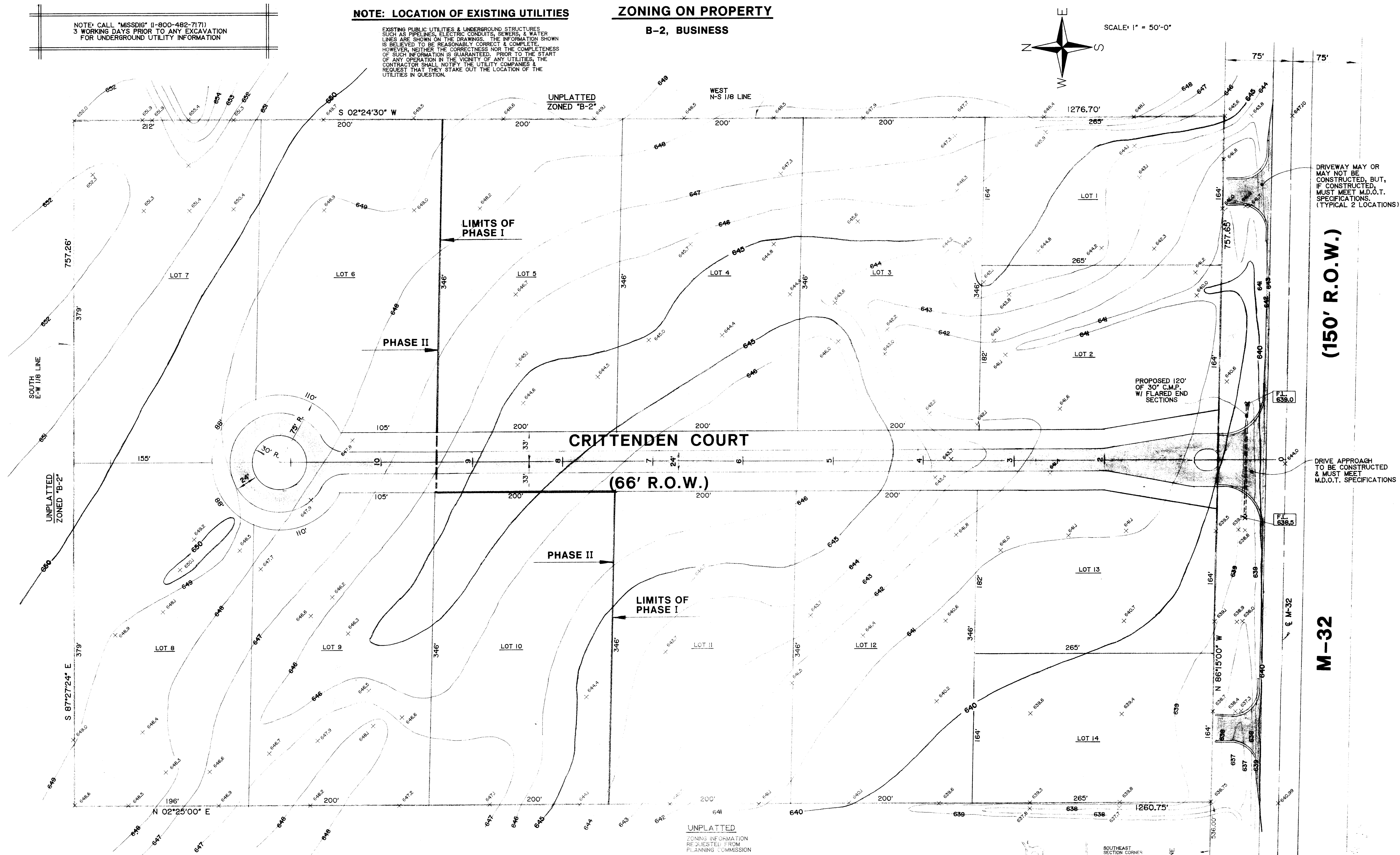
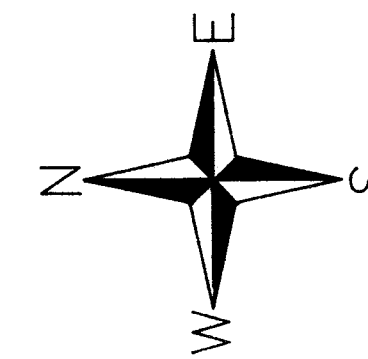
NOTE: LOCATION OF EXISTING UTILITIES

EXISTING PUBLIC UTILITIES & UNDERGROUND STRUCTURES
SUCH AS PIPELINES, ELECTRIC CONDUITS, SEWERS, & WATER
LINES ARE SHOWN ON THE DRAWINGS. THE INFORMATION SHOWN
IS BELIEVED TO BE REASONABLY CORRECT & COMPLETE.
HOWEVER, NEITHER THE CORRECTNESS NOR THE COMPLETENESS
OF SUCH INFORMATION IS GUARANTEED. PRIOR TO THE START
OF ANY OPERATION IN THE VICINITY OF ANY UTILITIES, THE
CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES &
REQUEST THAT THEY STAKE OUT THE LOCATION OF THE
UTILITIES IN QUESTION.

ZONING ON PROPERTY

B-2, BUSINESS

SCALE: 1" = 50'-0"



UTILITIES

ELECTRICAL - ALPENA POWER COMPANY
310 N. SECOND AVENUE
ALPENA, MICHIGAN 49707
%GARY GRAHAM
ENGINEERING DIRECTOR
(517) 356-2293

TELEPHONE - GENERAL TELEPHONE COMPANY
4040 U.S.-23 NORTH
ALPENA, MICHIGAN 49707
%KURT KRAJNIAK
OPS ENGINEER
(517) 356-8261

GAS - MICHIGAN CONSOLIDATED GAS COMPANY
1111 U.S.-23 NORTH
ALPENA, MICHIGAN 49707
%TOM DOWLING
SERVICE CENTER FOREMAN
1-800-330-6475

CABLEVISION - ALPENA CABLEVISION
2066 M-32 WEST
ALPENA, MICHIGAN 49707
%AL PHILLIPS
(517) 356-4502

WATER & SEWER - TOWNSHIP OF ALPENA
4385 U.S.-23 NORTH
ALPENA, MICHIGAN 49707
%GARY RONDEAU
(517) 356-2851

PROPERTY DESCRIPTION

Commencing at the Southwest Corner of Section 20, T31N, R8E, Michigan Meridian; thence N02°22'30"E 75.00 Feet along the West Line of Section 20 to the North 150 foot Right of Way Line of Highway M-32; thence S86°15'00"W 1276.75 feet along the North 150 foot Right of Way Line of Highway M-32 to the Point of Beginning; thence N02°25'00"E 1260.75 Feet to the South Line of the Northwest 1/4 of the Southwest 1/4; thence S87°27'24"E 757.26 Feet along the South Line of the Northwest 1/4 of the Southwest 1/4; thence S02°24'30"W 1276.70 feet to the North 150 foot Right of Way Line of Highway M-32; thence N86°15'00"W 757.65 feet along the North 150 foot Right of Way Line of Highway M-32 to the Point of Beginning.

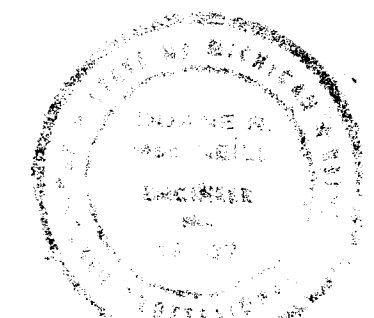
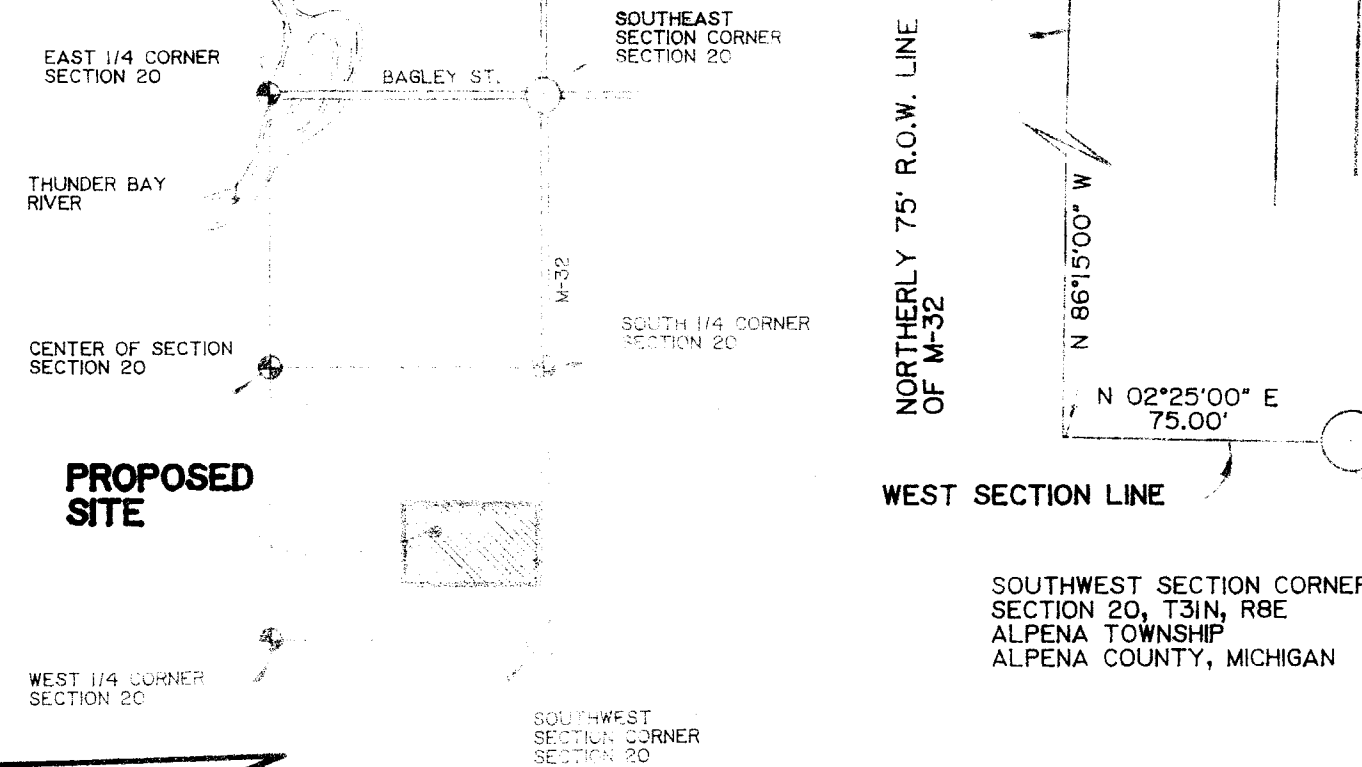
Being a part of the Southwest 1/4 of the Southwest 1/4 of Section 20, T31N, R8E, Michigan Meridian, Alpena Township, Alpena County, Michigan.

Containing 22.06 Acres.

Subject to Easements, Restrictions, and Reservations of record, if any.

VICINITY MAP

SCALE: NONE



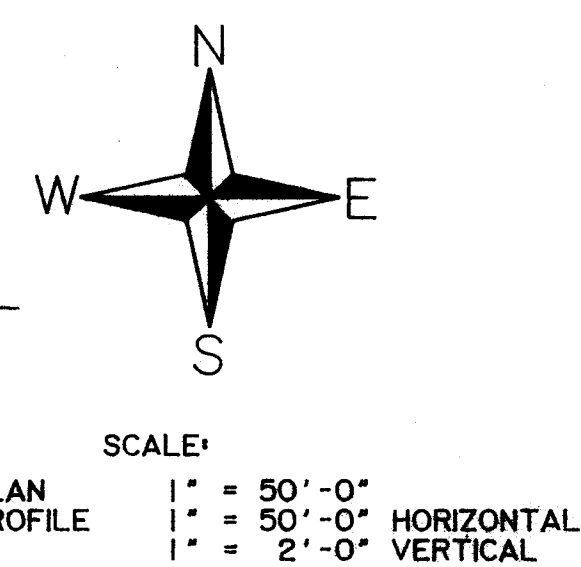
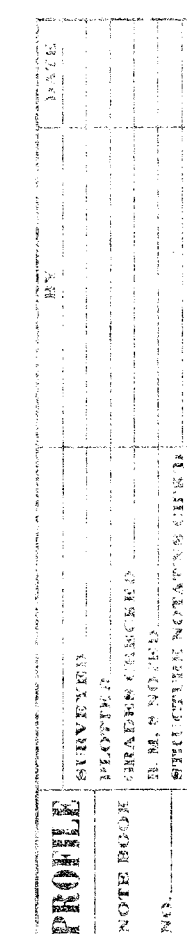
REVISIONS	BY

D.R. MacNeill & Associates
418 RIPLEY BLVD., ALPENA, MICH. 49707
517-356-9792

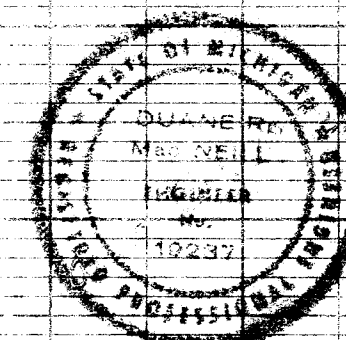
FOR: DEVERE CONSTRUCTION, INC.
2074 M-32
ALPENA, MICHIGAN 49707
PHONE: (517) 356-4411

PRELIMINARY PLAT OF
CRITTENDEN COURT SUBDIVISION
PART OF THE SW 1/4 OF SW 1/4
SECTION 20, T31N, R8E
ALPENA TOWNSHIP
ALPENA COUNTY, MICHIGAN

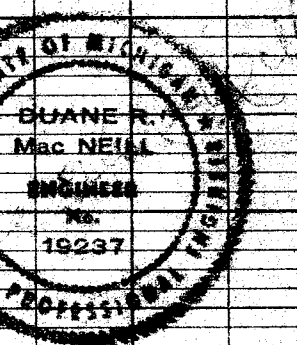
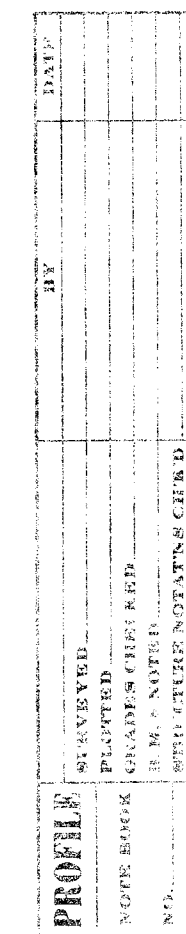
Date JUNE 1998
Scale AS SHOWN
Drawn D.C.H.
Job
Sheet 1
Of 4 Sheets



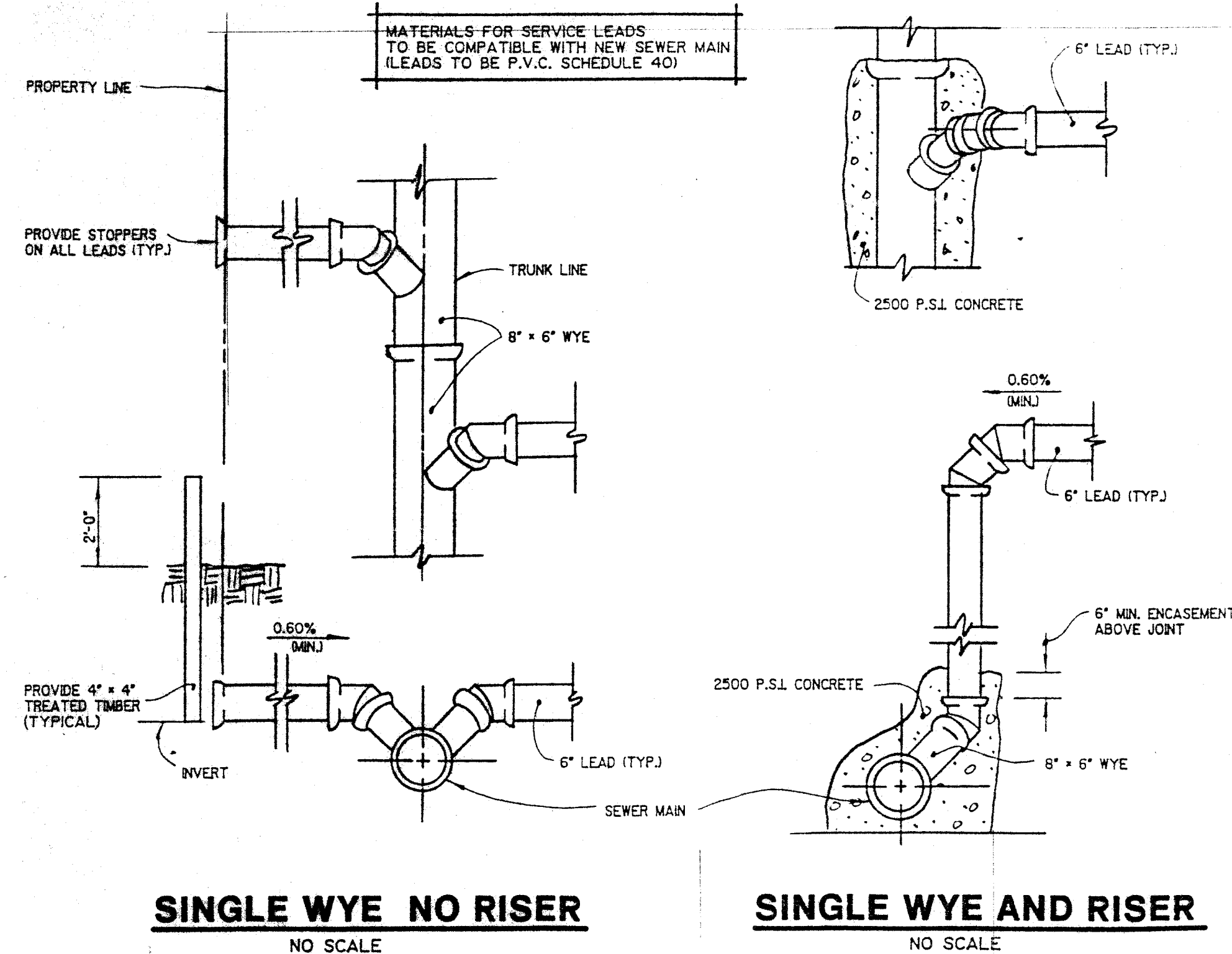
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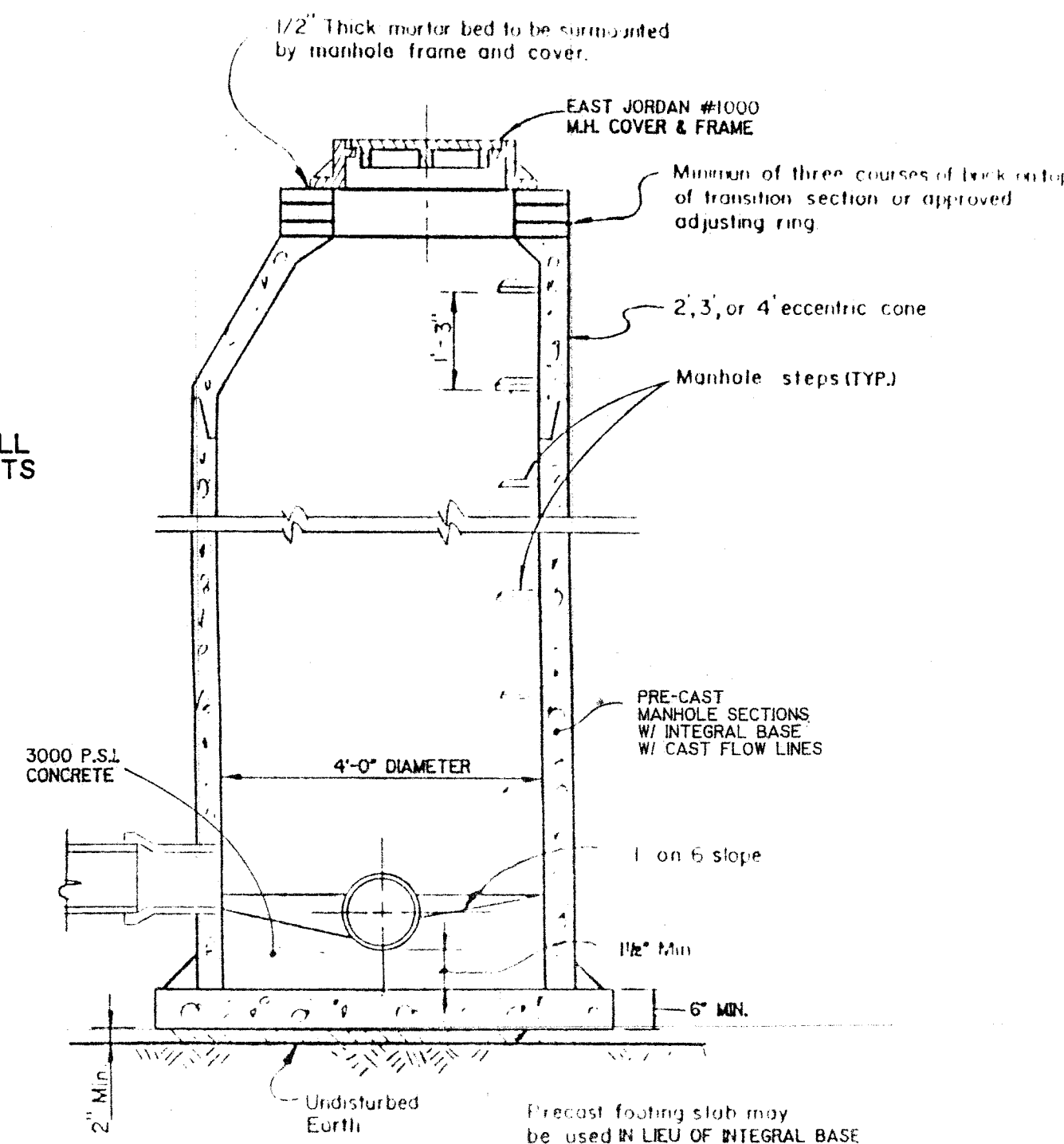
SEWER DETAILS



NOTE: CONSTRUCTION MATERIALS

FORCE MAIN P.V.C.-SDR 26
 SEWER MAIN P.V.C.-SDR 35
 WATER MAIN P.V.C. DR 18-C (900)
 MANHOLE COVERS E.J.L.W. #1000
 FIRE HYDRANTS TRAVERSE CITY OR E.J.L.W.
 GATE VALVES WATEROUS 200 SERIES

ALL MATERIALS & CONSTRUCTION MUST MEET ALL LOCAL, STATE, & MANUFACTURER'S REQUIREMENTS



STANDARD MANHOLE DETAIL

NO SCALE

GENERAL NOTES

SEWER

- WHERE SANITARY SEWER LEADS CROSS WATERMAIN, PROVIDE 18\"/>

WATER MAIN DETAILS

STANDARD THRUST BLOCKS

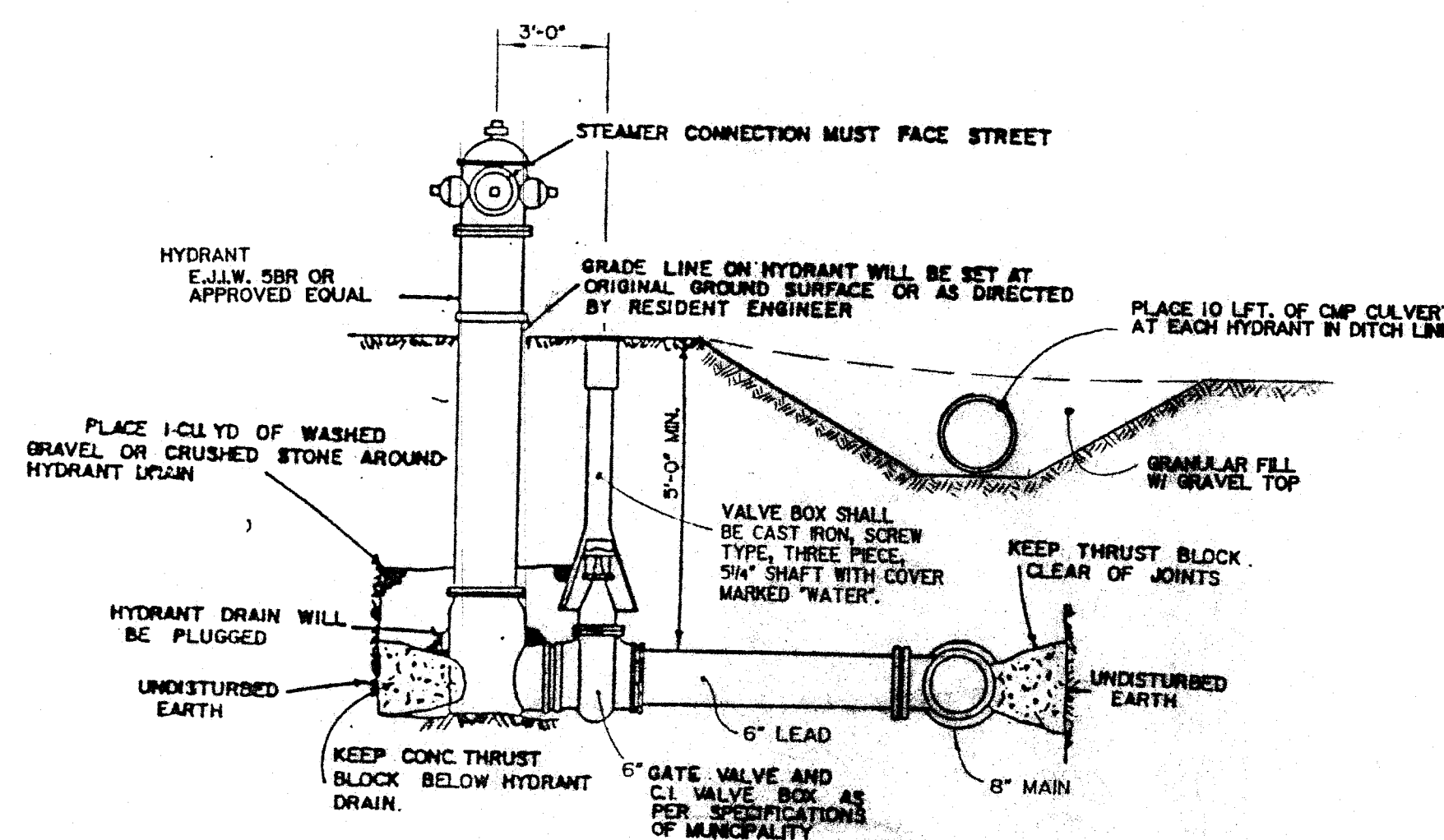
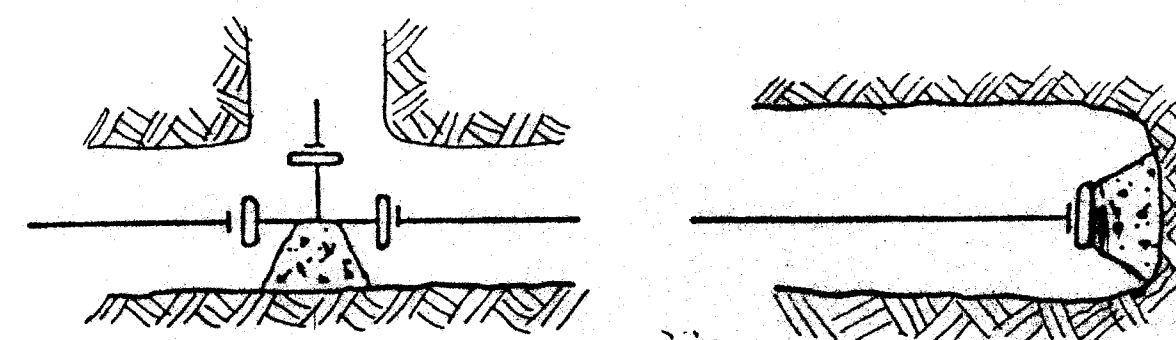
DIAMETER OF PIPE OR BRANCH OF TEE	90° BEND			45° BEND			22 1/2° BEND			TEE			PLUG		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
6"			9"			9"			9"			10"			9"
8"			1'-10"			1'-3"			1'-3"			1'-9"			10"
12"			1'-3"			1'-6"			1'-6"			2'-0"			1'-3"

THRUST LOAD TABLES

SOIL BEARING LOADS —		HORIZONTAL THRUST	
TYPE OF SOIL		SBC LBS 30 FT.	
MUCK, PEAT, ETC.		0	
SOFT CLAY		1000	
SAND		2000	
SAND & GRAVEL		3000	
SAND & GRAVEL W/CLAY		4000	
HARD COMPACTED CLAY		5000	

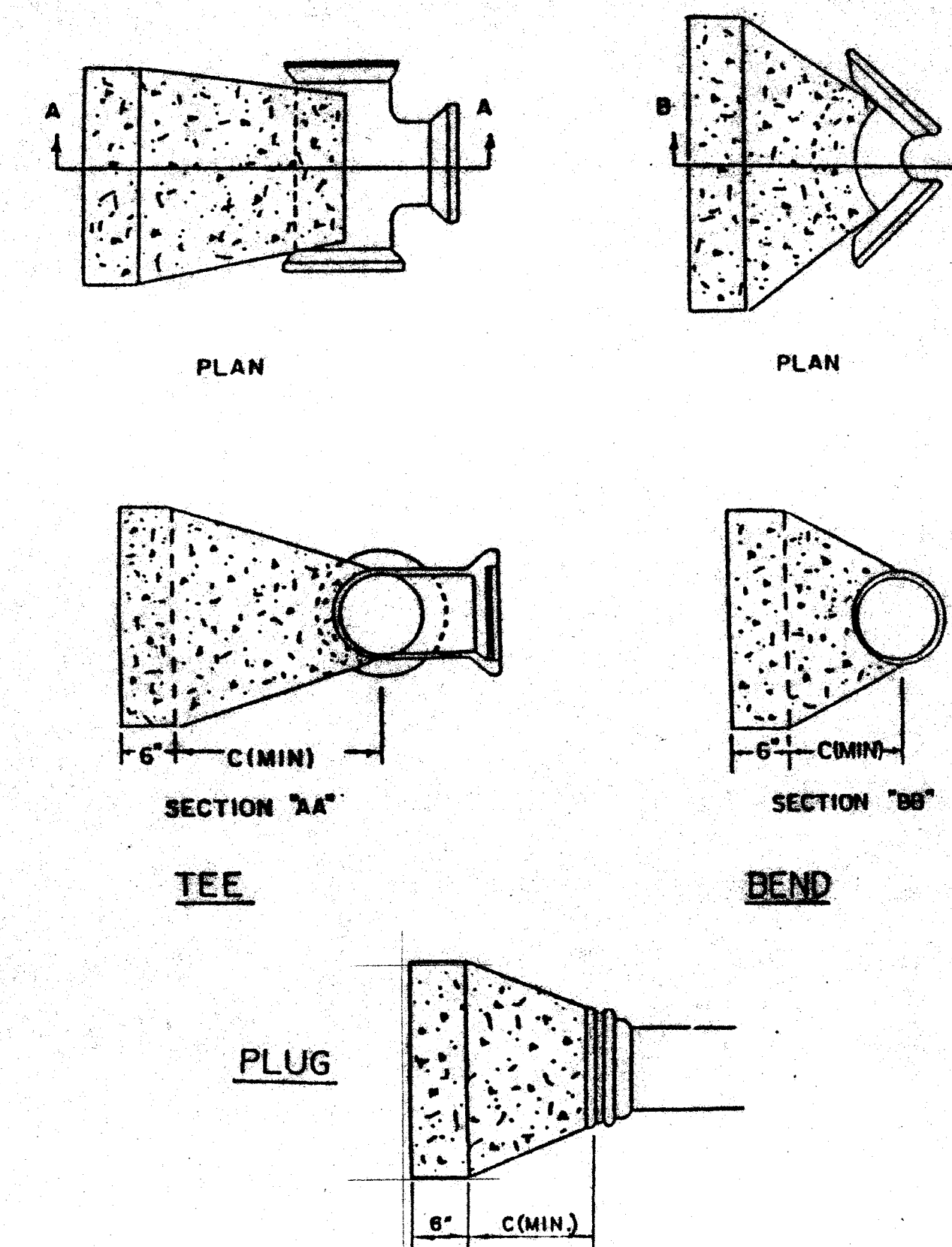
THRUST TABLE				
MAIN SIZE	TEES DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS
6"	4,250	6,000	3,250	1,650
8"	7,340	10,670	5,770	2,940
12"	16,970	23,990	12,980	6,820
16"	30,160	42,830	23,090	11,770
20"	47,120	66,650	36,070	18,390
24"	67,860	96,000	51,940	26,490
36"	152,680	219,920	116,860	59,380

ALL THRUST BLOCKS SHALL EXTEND TO UNDISTURBED SOIL. CONCRETE SHALL BE 3000 P.S.I. (5 BAG WET MIX) COAT PIPE TO PREVENT BOND TO CONCRETE.



HYDRANT & VALVE DETAILS

NO SCALE



THRUST BLOCK DETAILS

NO SCALE

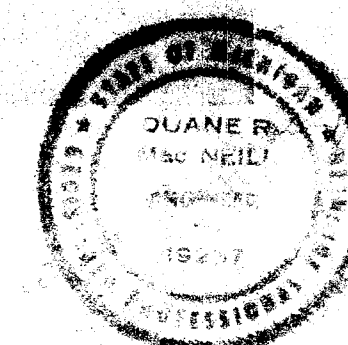
GENERAL NOTES

GATE VALVES

- GATE VALVES SHALL BE CONSTRUCTED TO A.W.W.A. C509 SPECIFICATIONS. VALVES SHALL BE WATEROUS, AS APPROVED, OR EQUAL WITH NON-RISING STEM, RESILIENT WEDGE TYPE WITH MECHANICAL JOINT A.N.S.I. A 21.11 & SHALL OPEN COUNTER CLOCKWISE.
- VALVE BOXES SHALL BE CAST IRON, SCREW TYPE, THREE PIECE, 5/4\"/>

WATERMAIN

- WHERE WATERMAIN AND SANITARY SEWER CROSS, PROVIDE 18\"/>



D.R. MacNeill & Associates
 418 RIPLEY BLVD., ALPENA, MICH. 49707
 517-358-0762

NOTES & DETAILS

PROPOSED SEWER & WATER
 FOR CHITTENDEN COURT SUBDIVISION
 ALPENA, MICHIGAN 49707

Date: JAN 1988
 Scale: AS SHOWN
 Drawn: D.C.H.
 As:
 Sheet: **4**
 Of 4 Sheets