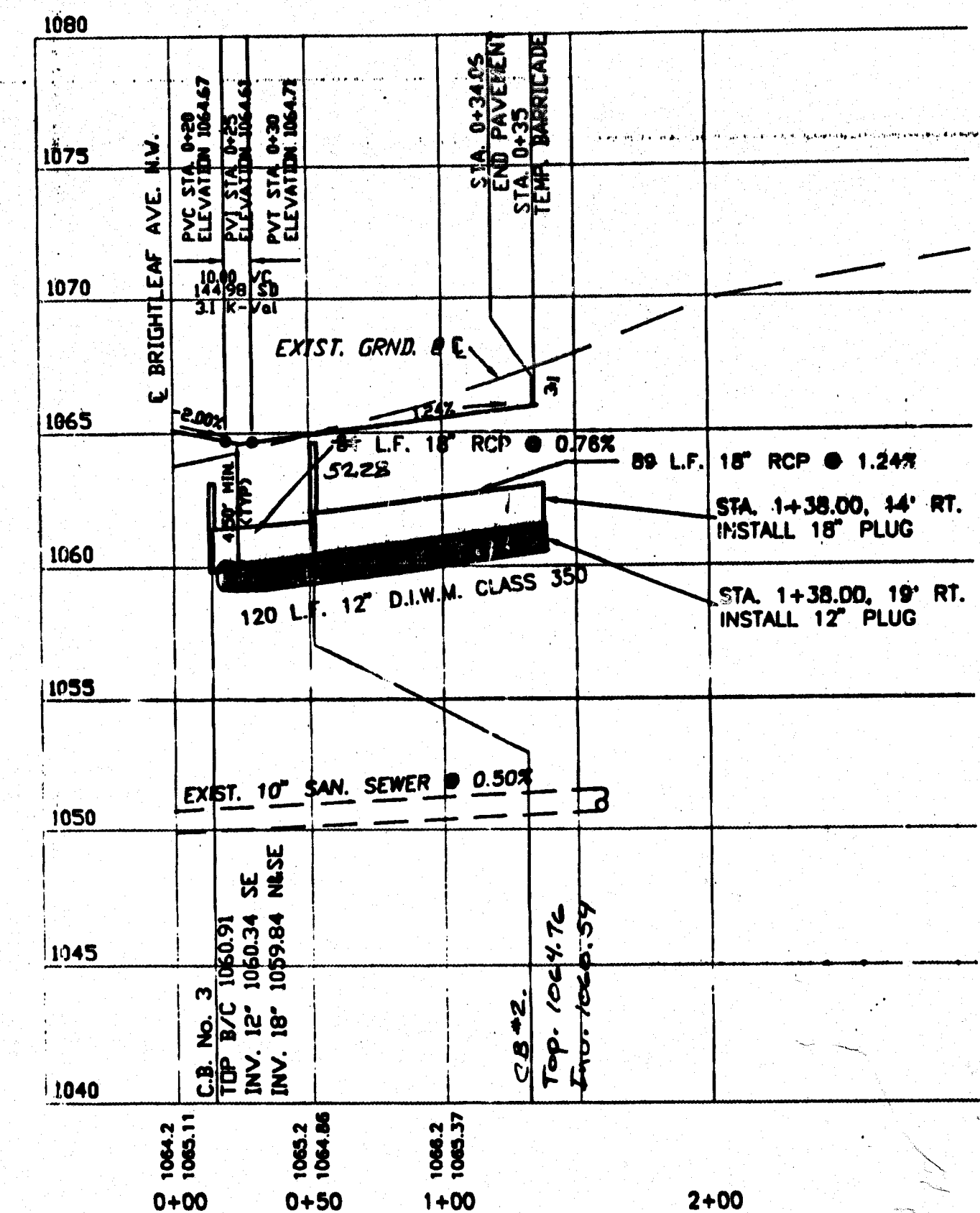
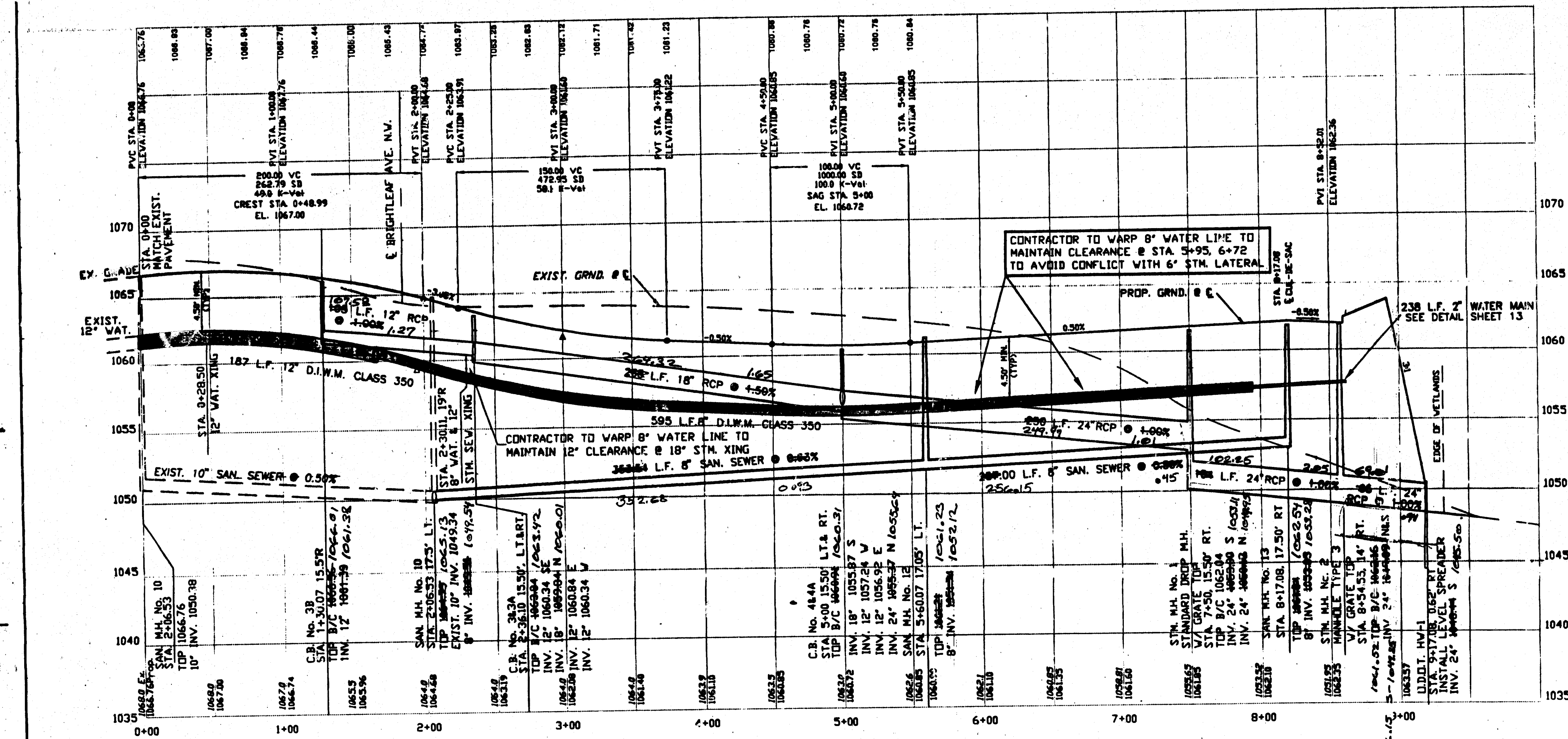
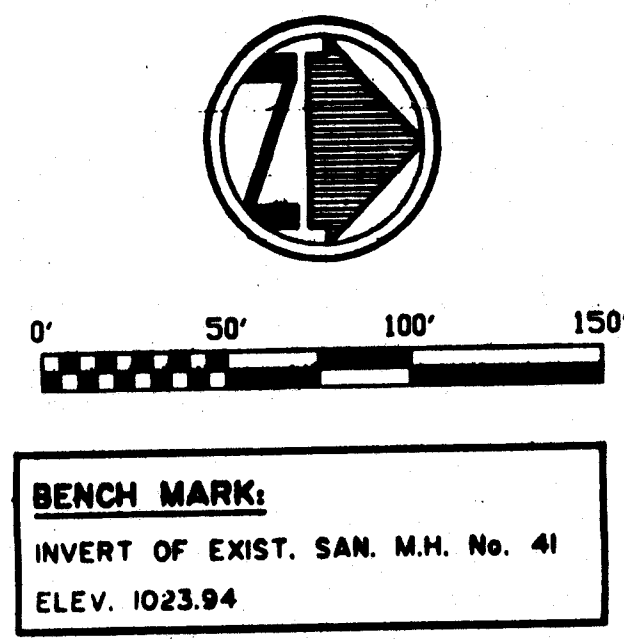
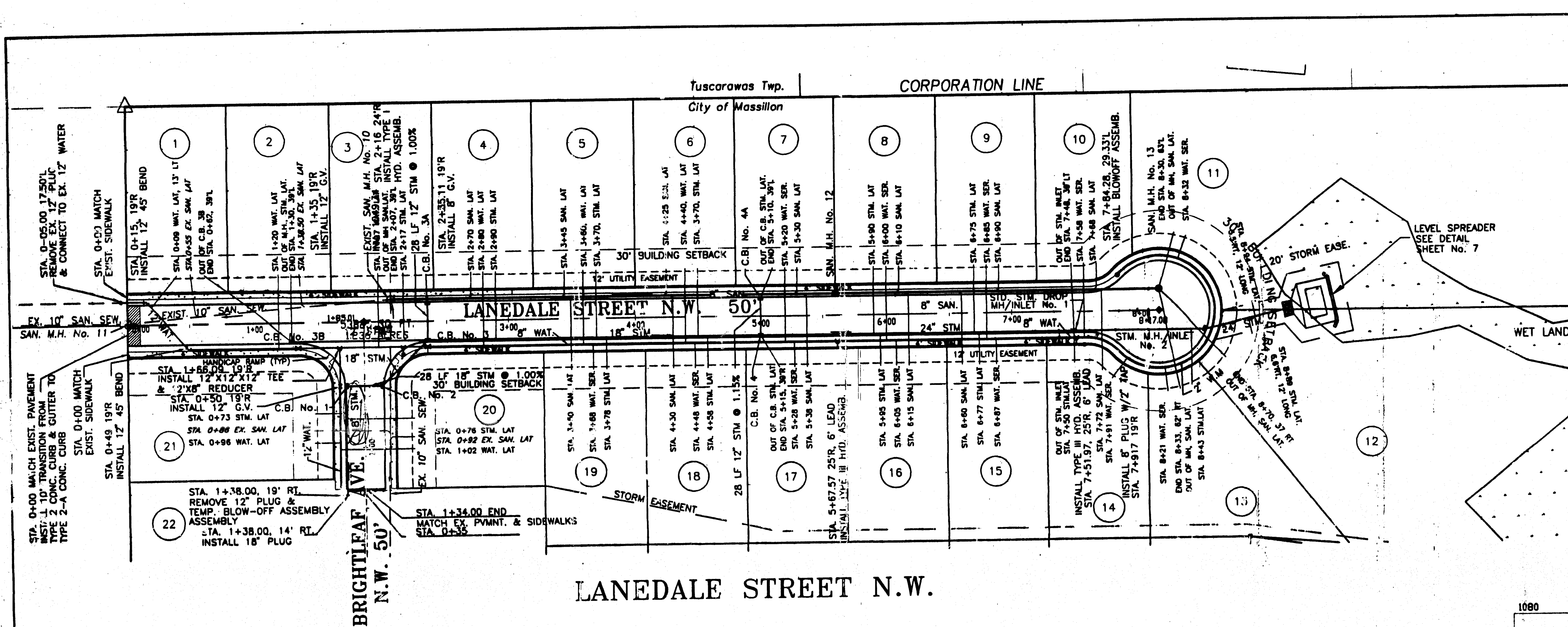




LANEDALE STREET N.W.

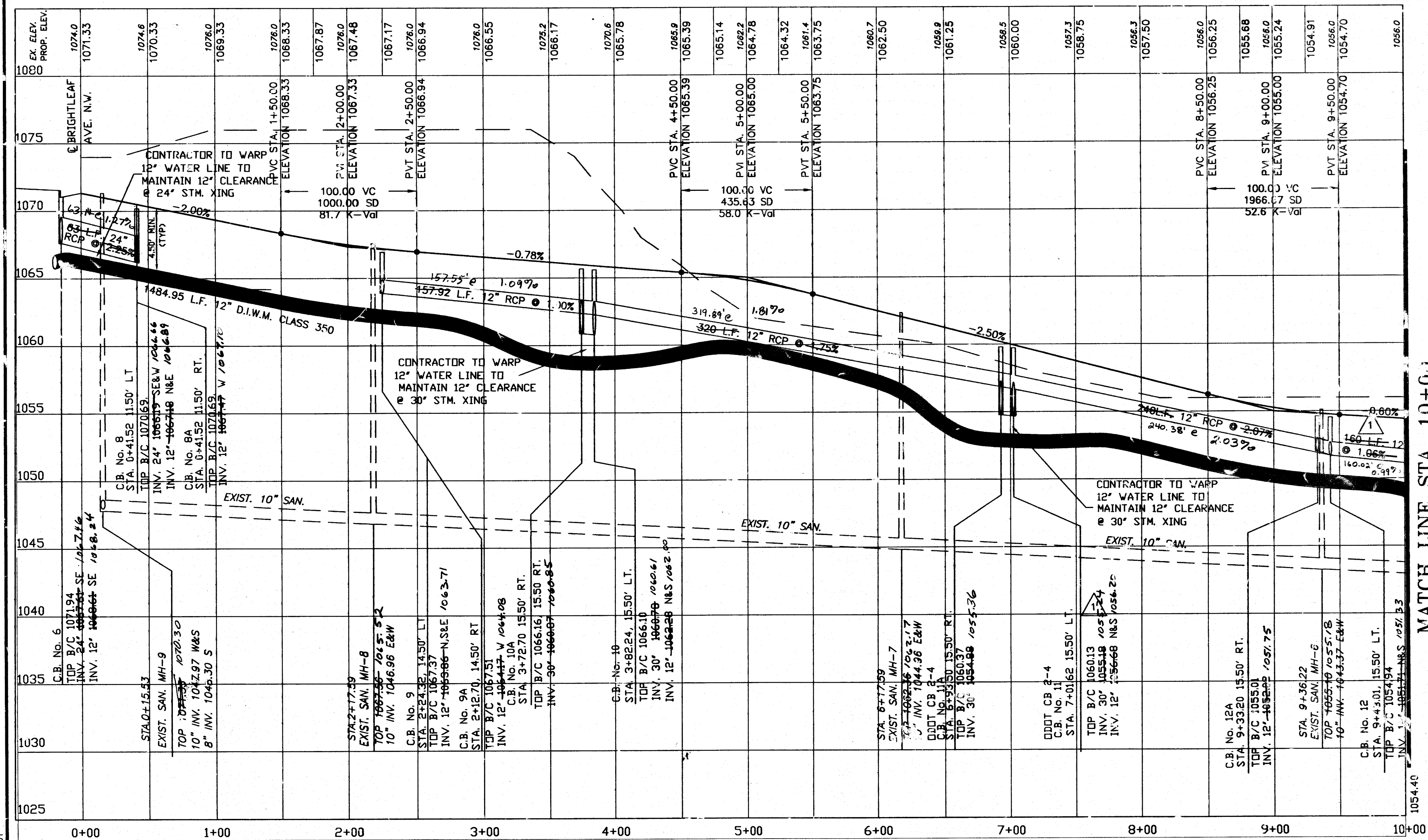
BRIGHTLEAF AVENUE NW

A= BUILT DATA
9/6/00

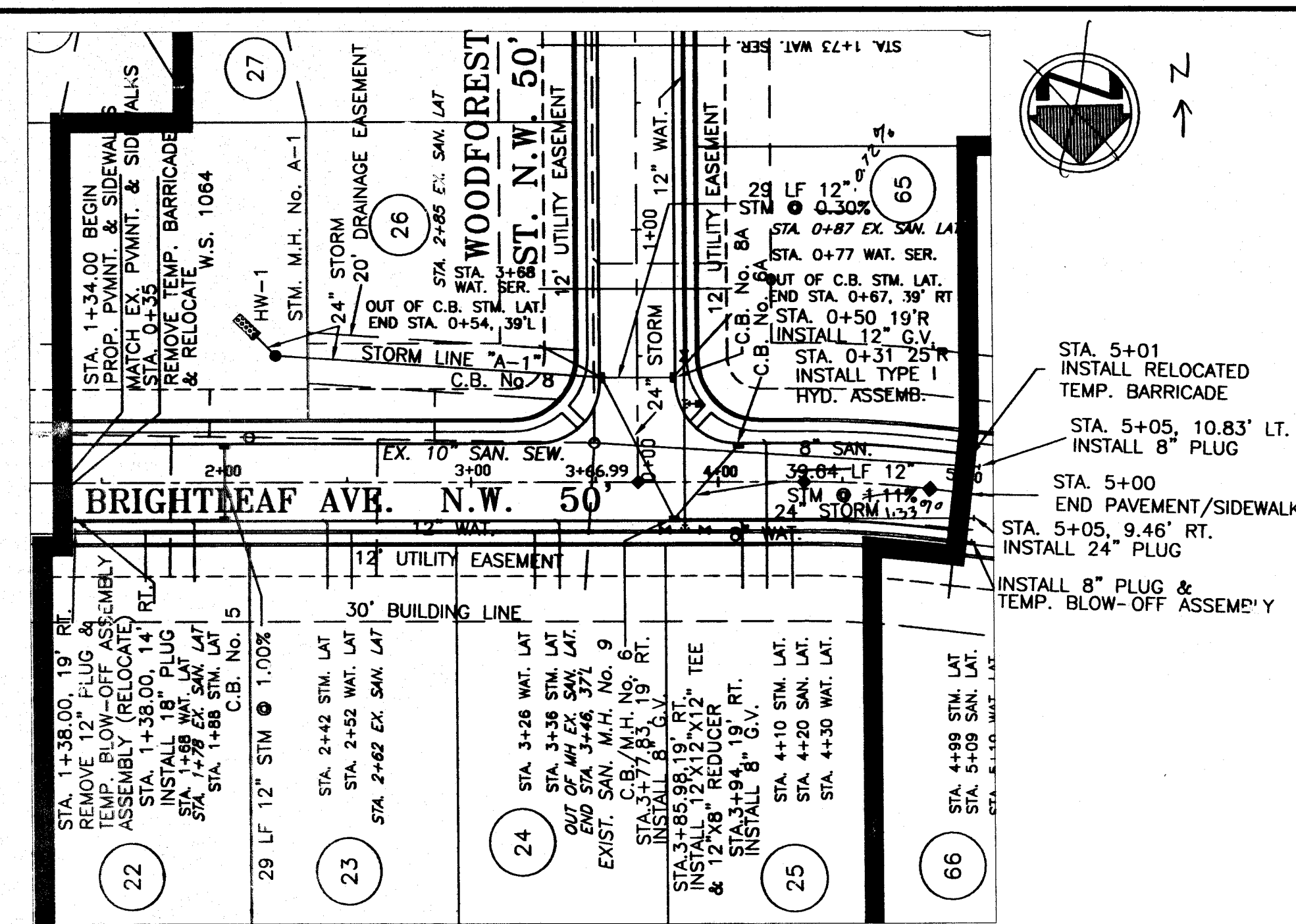
W. G. COLLIERS
CONSTRUCTION CO.
2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE: 800-362-2764
PLAN AND PROFILE
LANEDALE AVE/BRIGHTLEAF AVE

WEST BUCK ESTATES
PLAN AND PROFILE
700

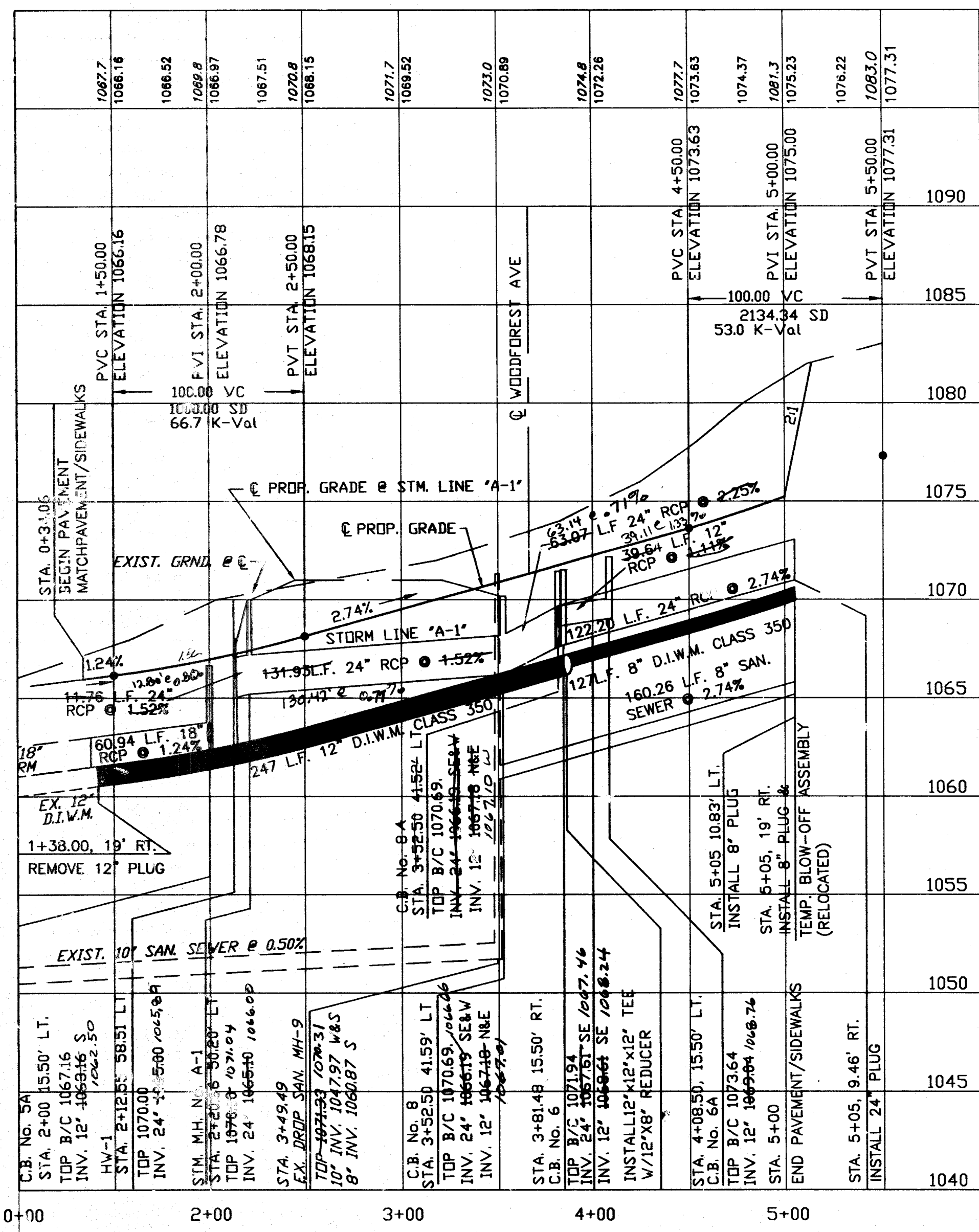
00 50 02



MATCH LINE STA. 10+00



BRIGHTLEAF AVE. N.W.



THE OIL AND GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
P.O. BOX 201
GRAND PRAIRIE, IL 60132-0201
PHONE (616) 587-0426 OR
CALL TOLL FREE 800-925-0988

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE: 800-362-2764
OR UTILITIES PROTECTION SERVICE

PLAN AND PROFILE
WOODFOREST ST./BRIGHTLEAF AVE.

DATE	10-12-00	3	11-8-00	1	NO.	DATE	BY
SCALE	1"=50'	2	REV. INVENTS	1	NO.	DATE	BY
SCALE	1"=50'	2	REV. INVENTS	1	NO.	DATE	BY
SCALE	1"=50'	2	REV. INVENTS	1	NO.	DATE	BY
SCALE	1"=50'	2	REV. INVENTS	1	NO.	DATE	BY

WEST BROOK ESTATES-PHASE II
PLAN AND PROFILE

700

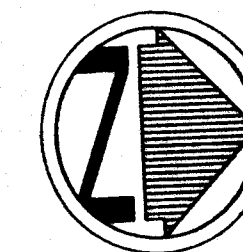
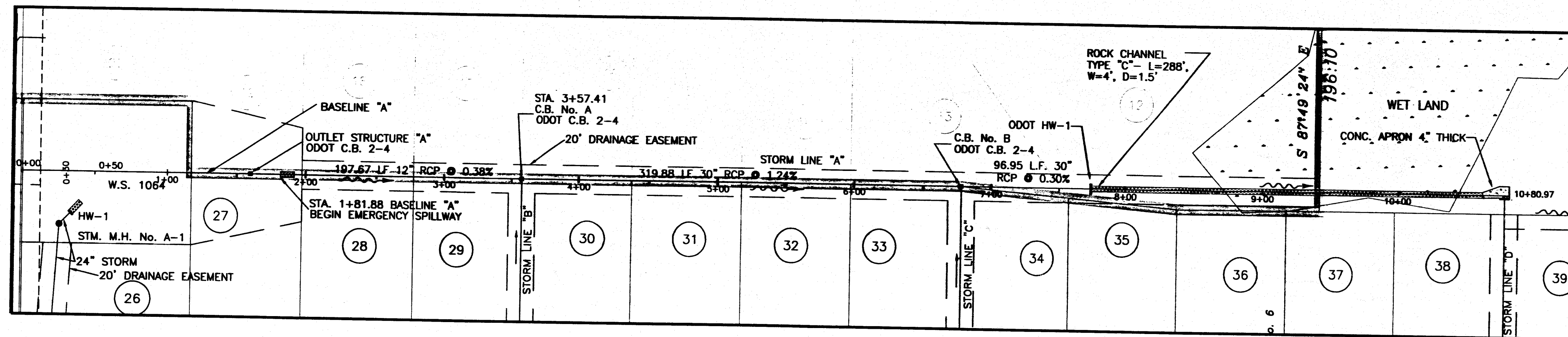
A.R. LOCKHART DEVELOPMENT CO.
800 W. WATERLOO RD. ARLINGTON, OH 43114 • PH. 330.745.6520 • FAX. 330.745.0716

A.R.L.

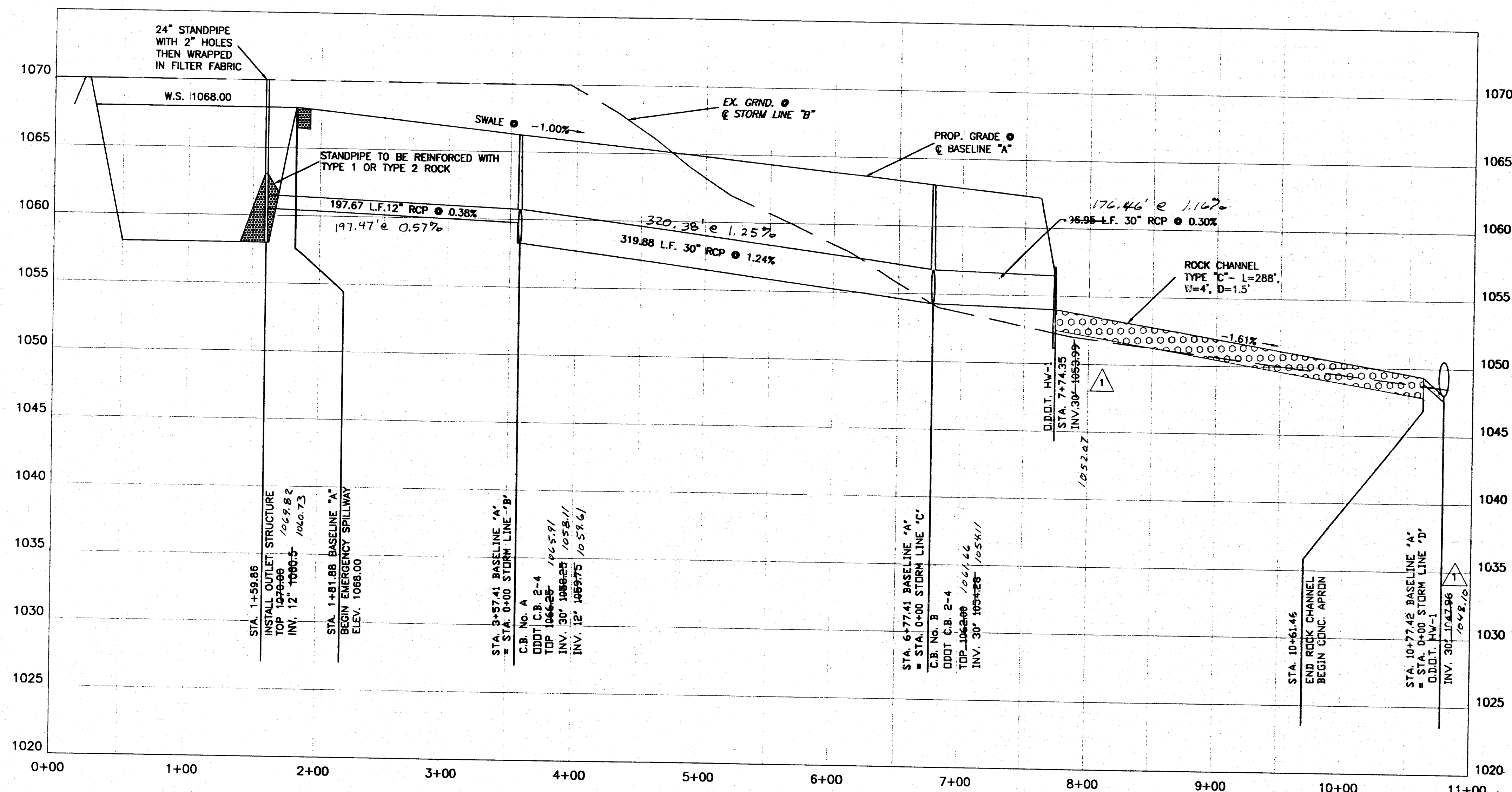
4
18

As Bldg
3/10/03

00 50 02



BENCH MARK:
INVERT OF EXIST. SAN. M.H. No. 41
ELEV. 1023.94



WEST BROOK ESTATES-PHASE II PLAN AND PROFILE

PROJECT NUMBER
700

A.R. LOCKHART DEVELOPMENT CO.
800 W. WATERLOO RD. AARON, OH 44014 • PH: 330.745.6520 • FAX: 330.745.0716



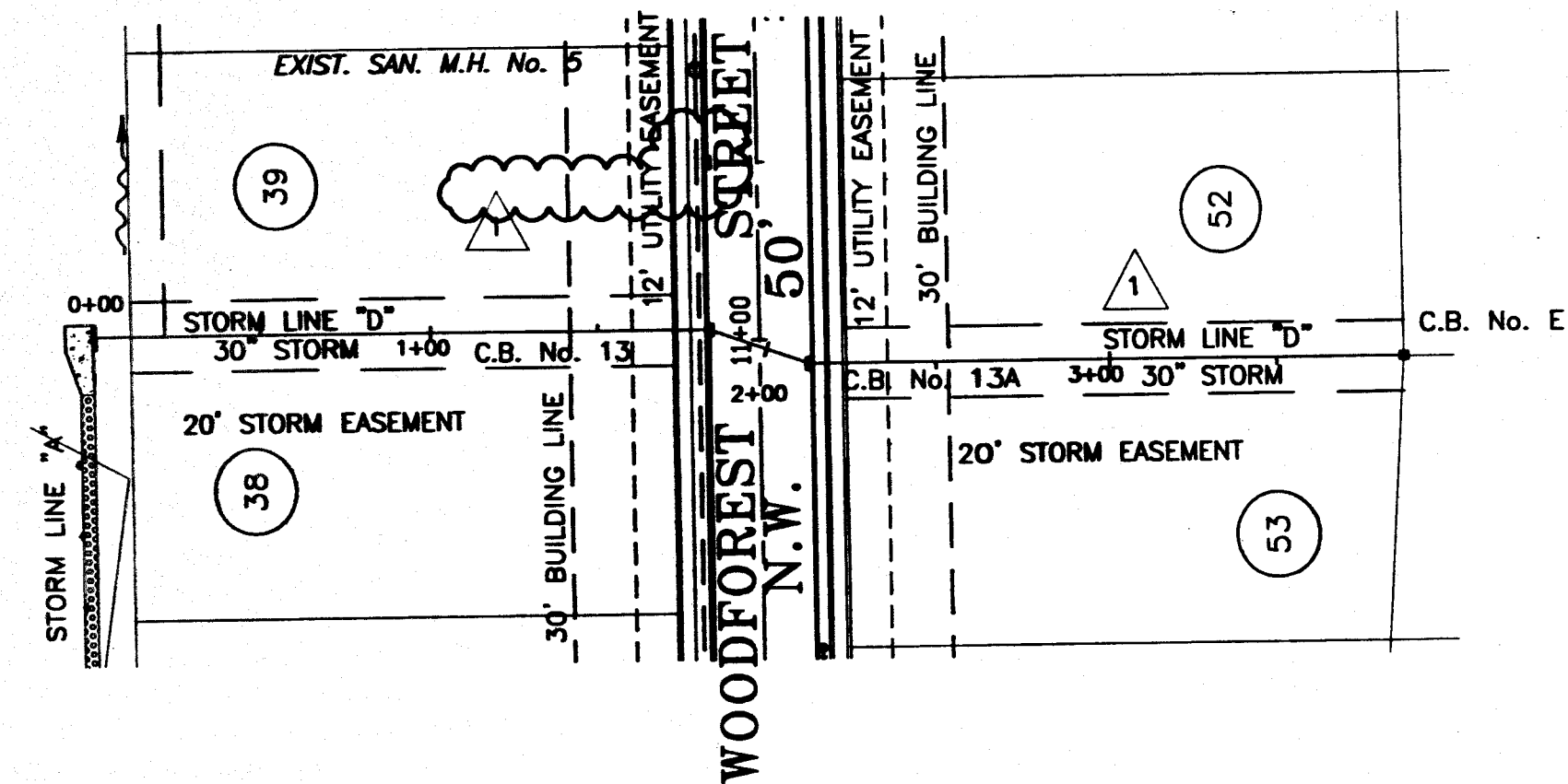
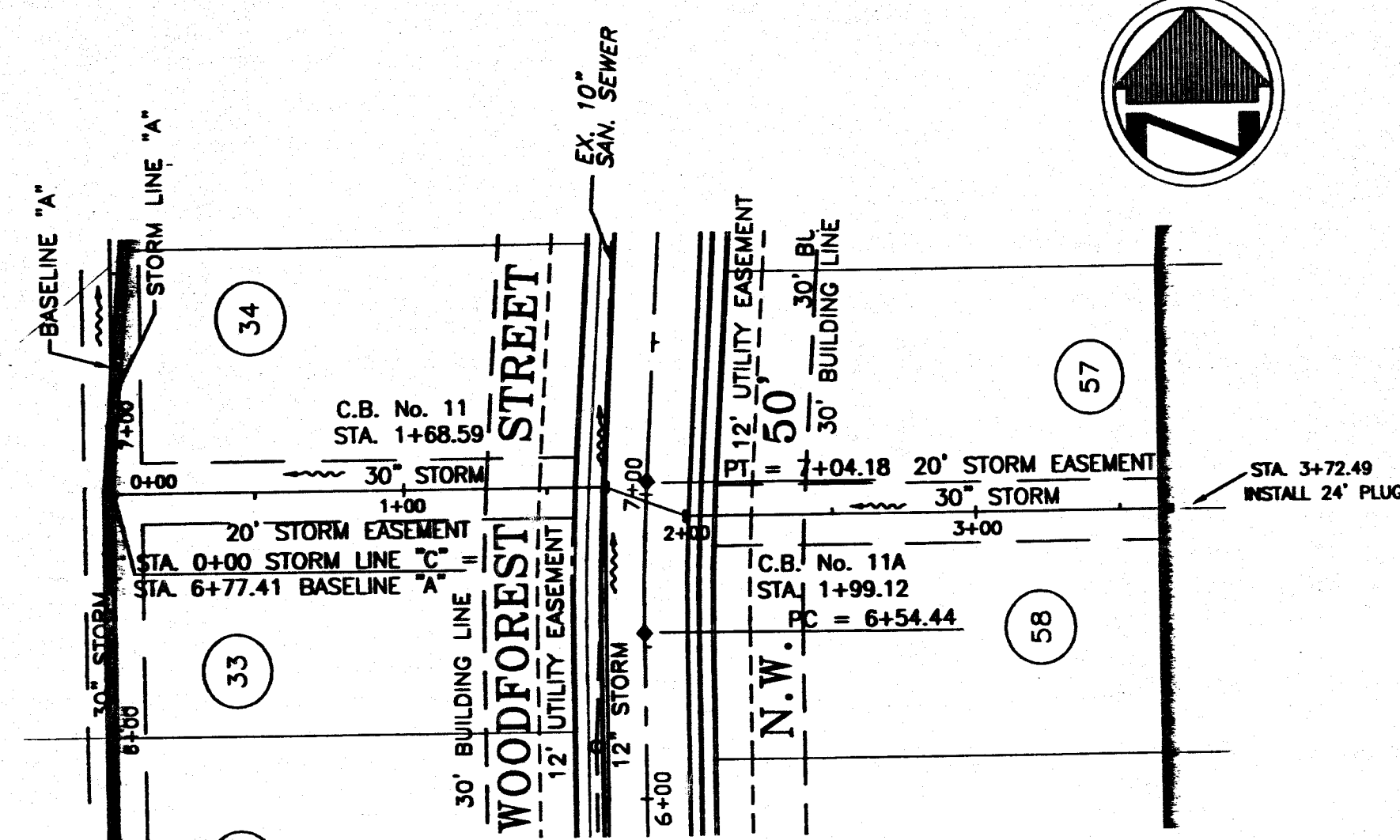
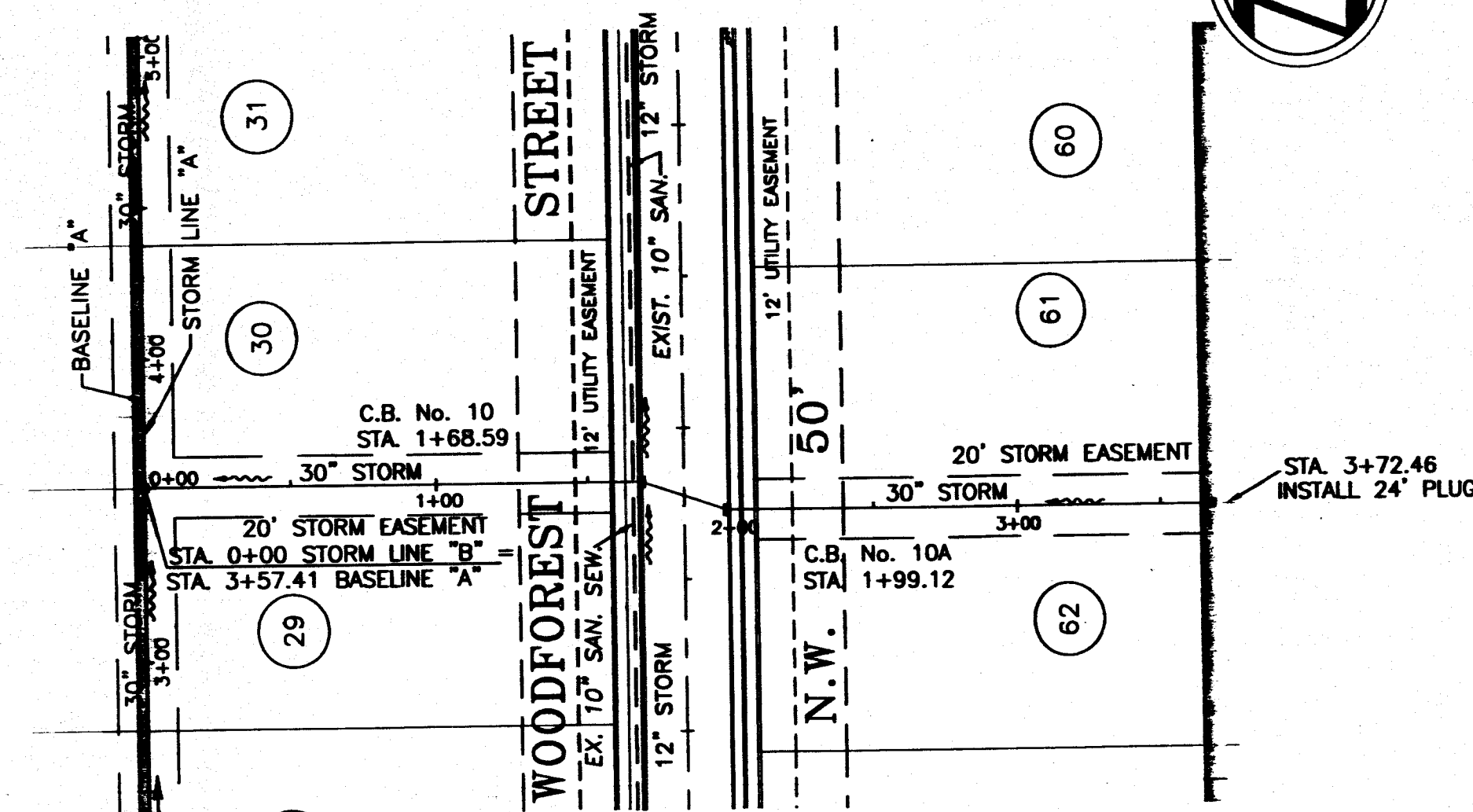
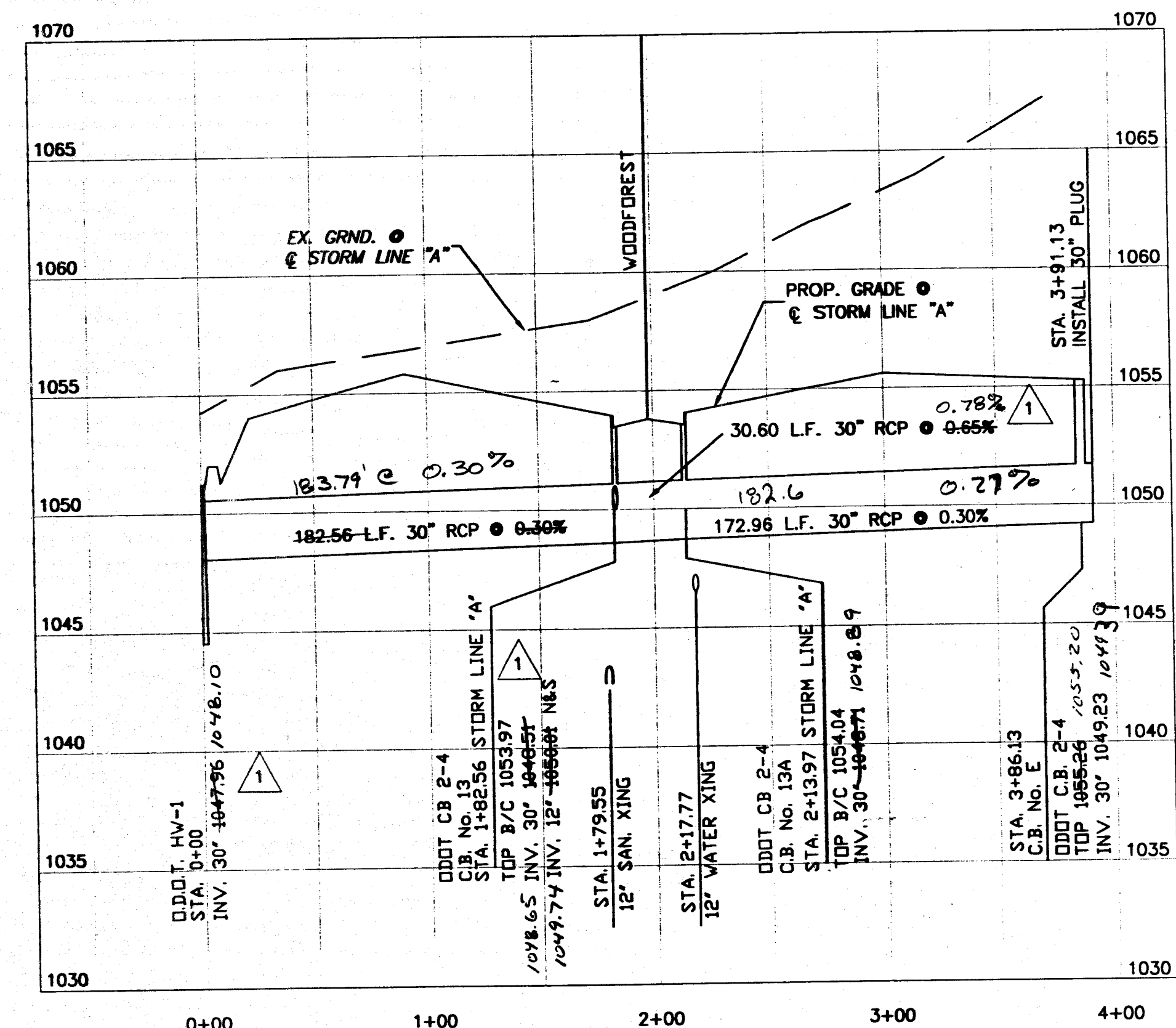
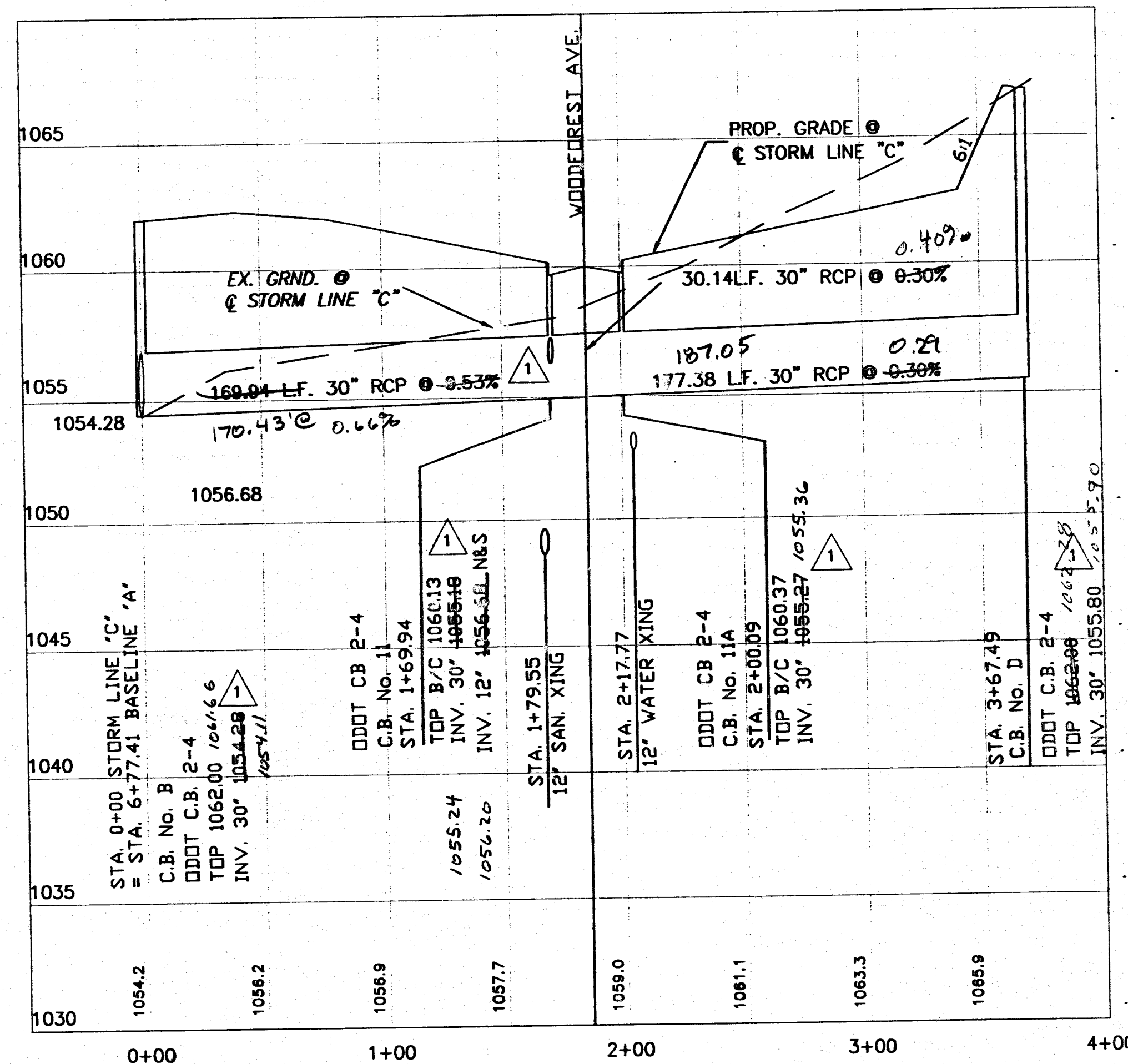
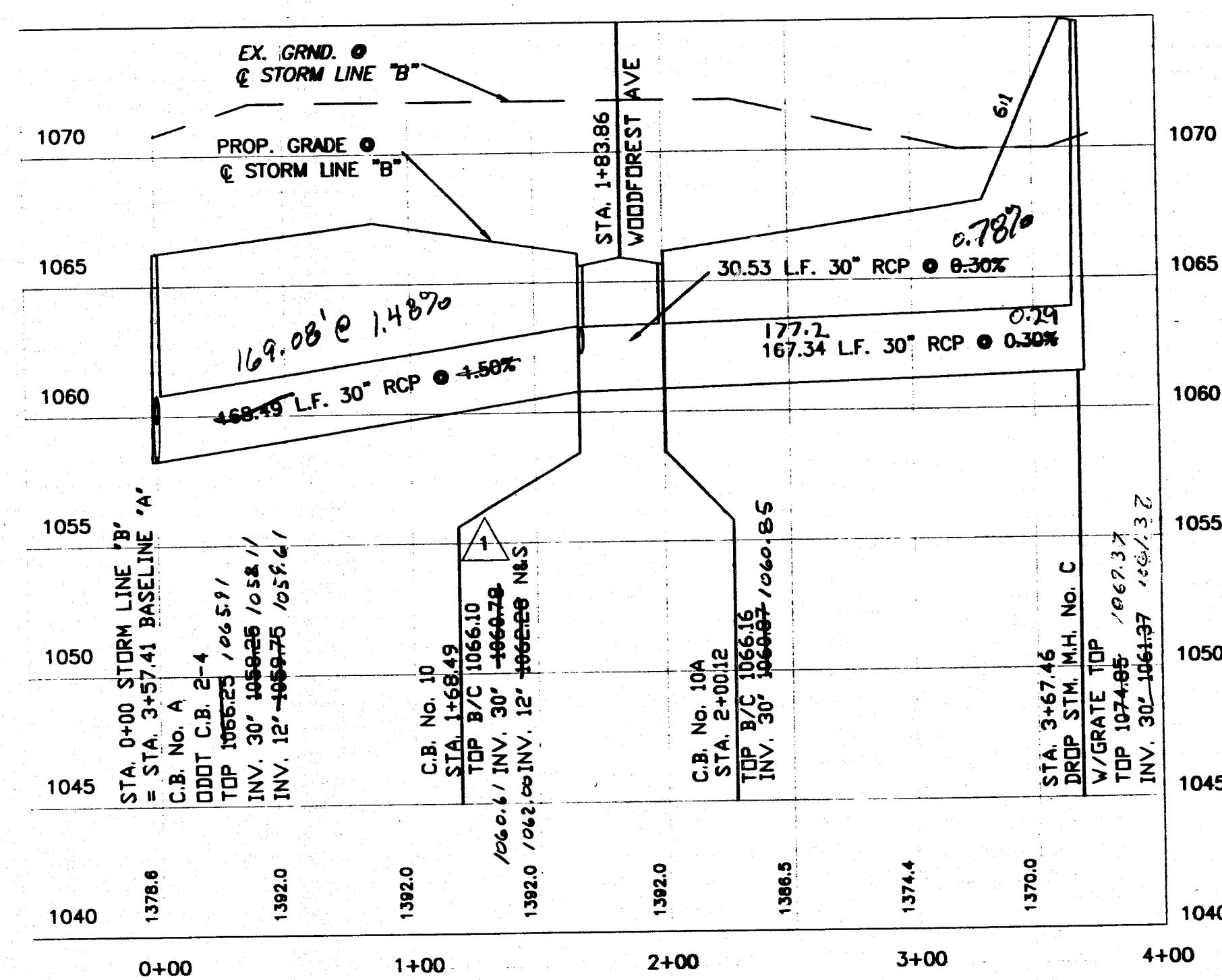
6
18

THE OIL AND GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
P.O. BOX 208
GRANVILLE, OHIO 43023-0208
PHONE (614) 587-0486 OR
CALL TOLL FREE 800-925-0988

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE: 800-362-2764
ONE UTILITIES PROTECTION SERVICE

PLAN AND PROFILE
STORM LINE 'A'

As Built
3/6/03



THE OIL AND GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
P.O. BOX 200
GRANVILLE, OHIO 43023-0200
PHONE (614) 587-0486 OR
CALL TOLL FREE 800-925-0988

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE 800-362-2764
ONE UTILITIES PROTECTION SERVICE

PLAN AND PROFILE
STORM LINES - 'B', 'C', AND 'D'

WEST BROOK ESTATES-PHASE II PLAN AND PROFILE

A.R.I. A.R. LOCKHART DEVELOPMENT CO.
800 W. WATERLOO RD. ANN ARBOR, MI 48106 • PH: 330.745.0716

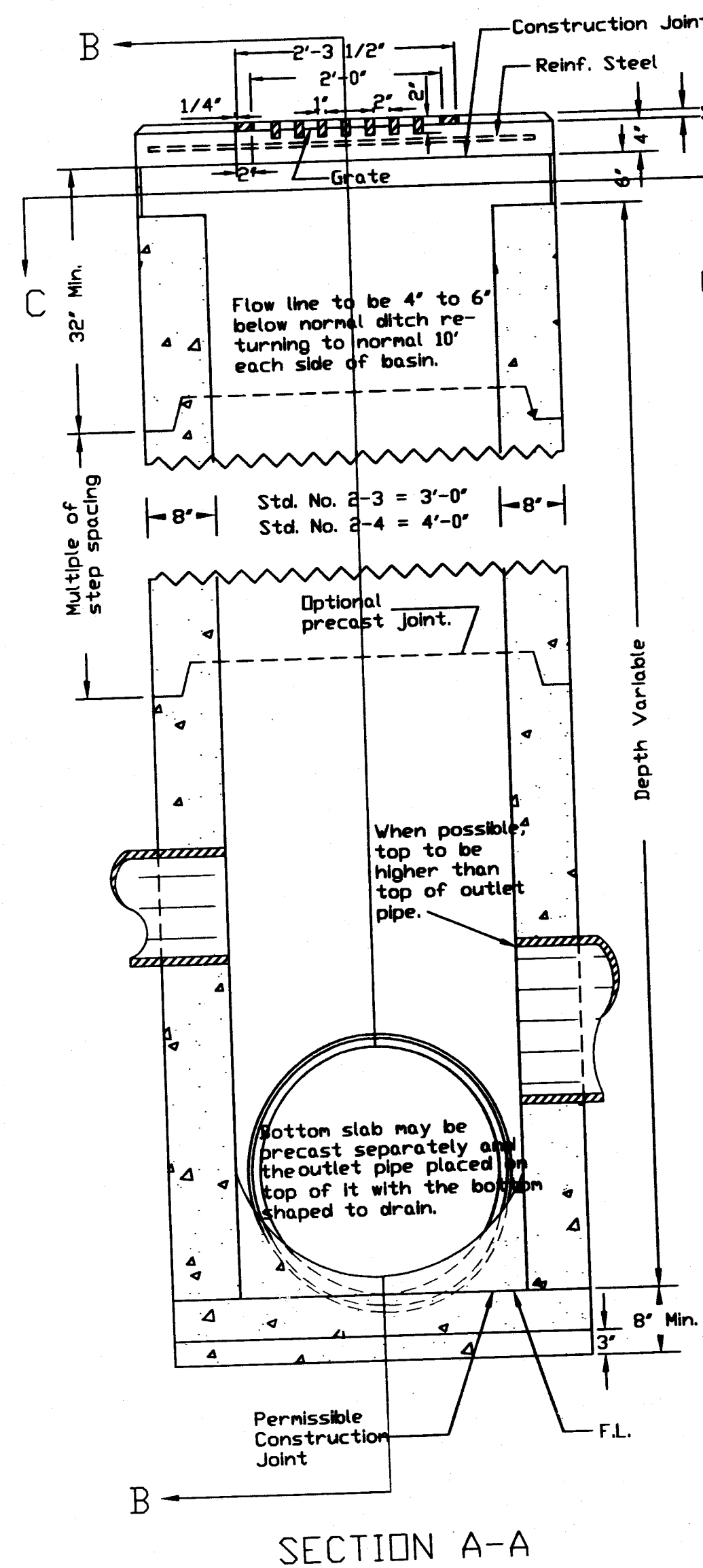
PROJECT NUMBER
700

DATE	10-17-00	3	NO.	DATE	11-8-00	REVISION	BY
SCALE: 1"=50' HORIZ.							
SCALE: 1"=5' VERT.							
DRAWN: CTB							
CHECKED: STK							
REVISED TOP B/C'S & INVERTS							

7
18

As Built
3/6/03

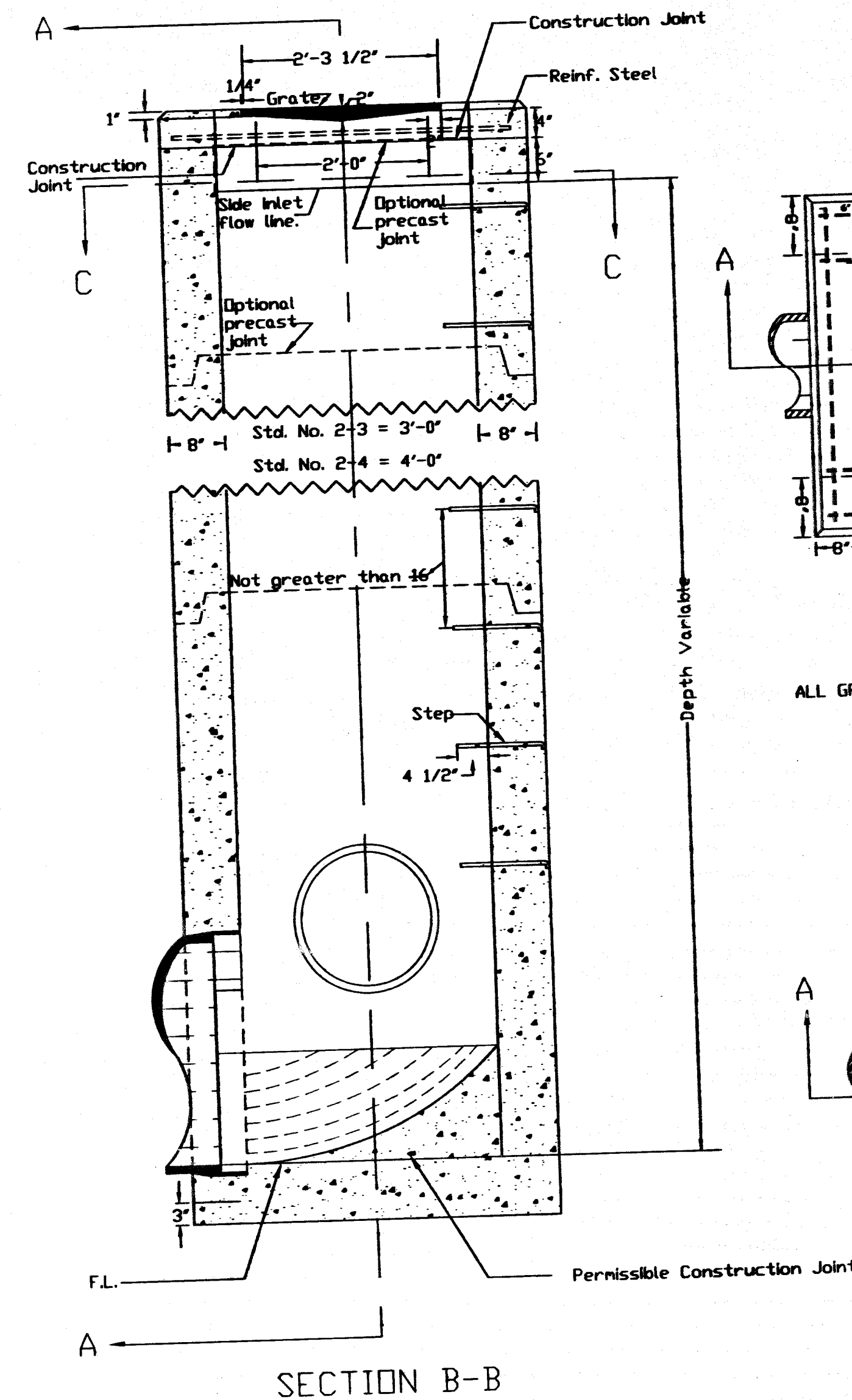
STANDARD NO. 2-3 & No. 2-4 CATCH BASINS



GRATING - The design shall be essentially the same and equally as strong as the one shown hereon.

Minimum weight 120 lbs. BRICK, concrete block or cast-in-place walls shall have a nominal thickness of 8 inches. Precast walls shall have a minimum thickness of 6 inches and be reinforced sufficiently to permit shipping and handling without damage.

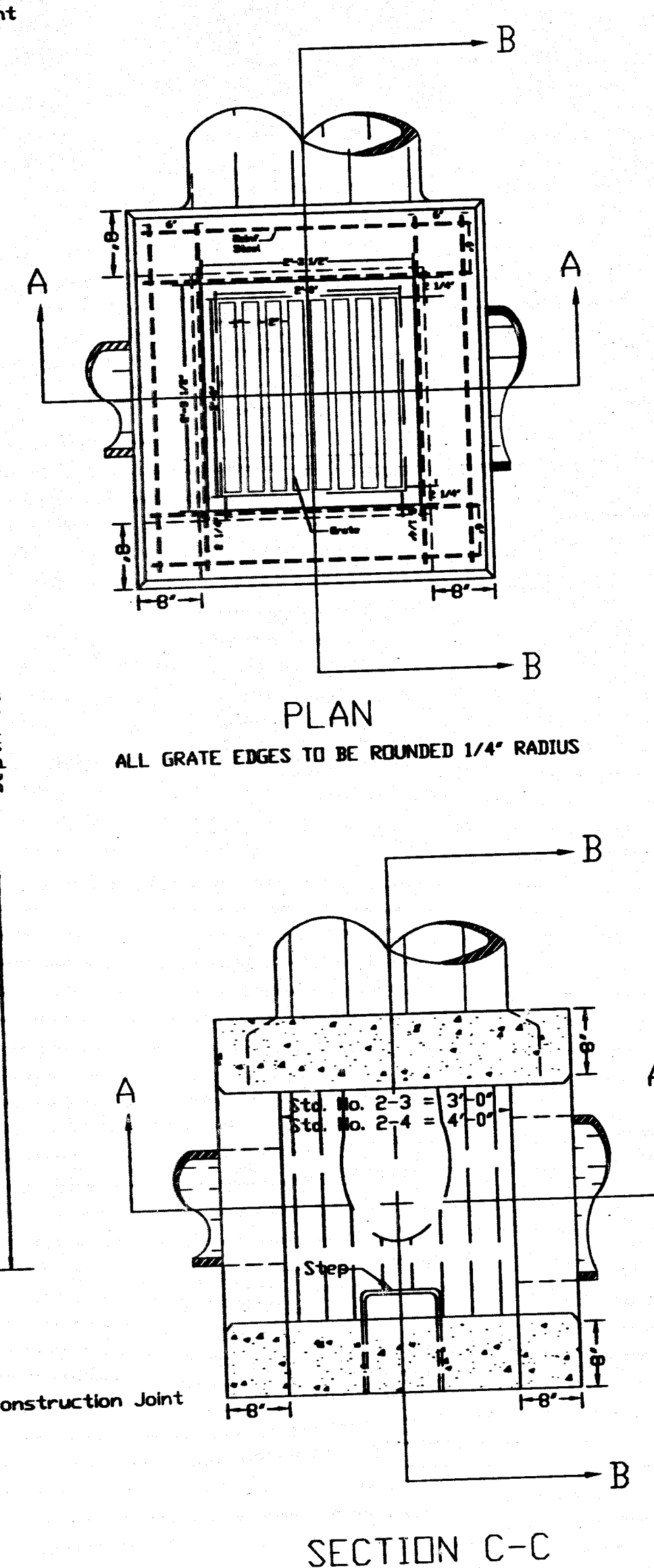
CONCRETE, cast-in-place, to be Class C. All precast concrete shall meet the requirements of 706.13 with 6 ±2% air void content in the hardened concrete and be marked with the catch basin number.



REINFORCING in the top to be No. 4 bars 6' center to center. For Standard No. 2-3 use 8 bars and for Standard 2-4 use 12 bars. OPENINGS for pipes shall be +2" when prefabricated or field cut. LOCATION and elevation when given on the plans is top center of the grate. When side openings are provided, elevation shall be the Flow Line of the side inlet.

SIDE INLETS shall be provided only when specified on the plans.

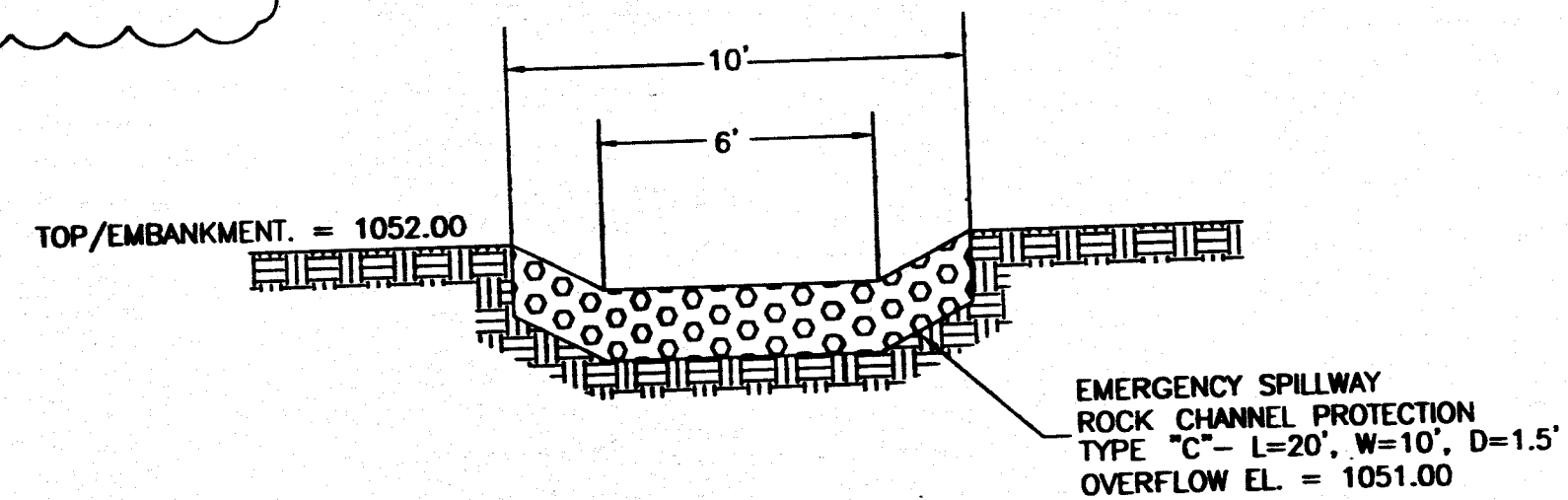
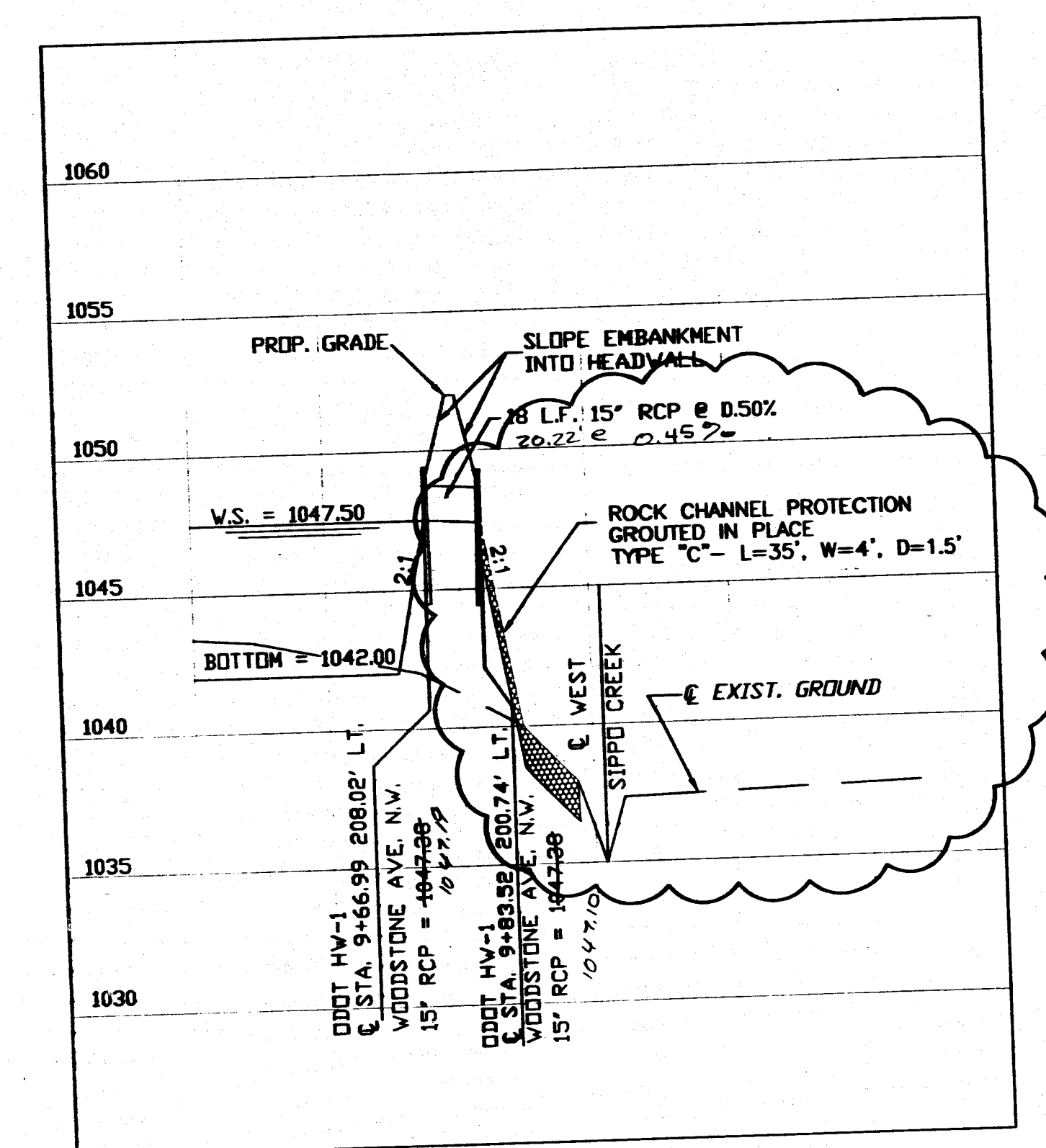
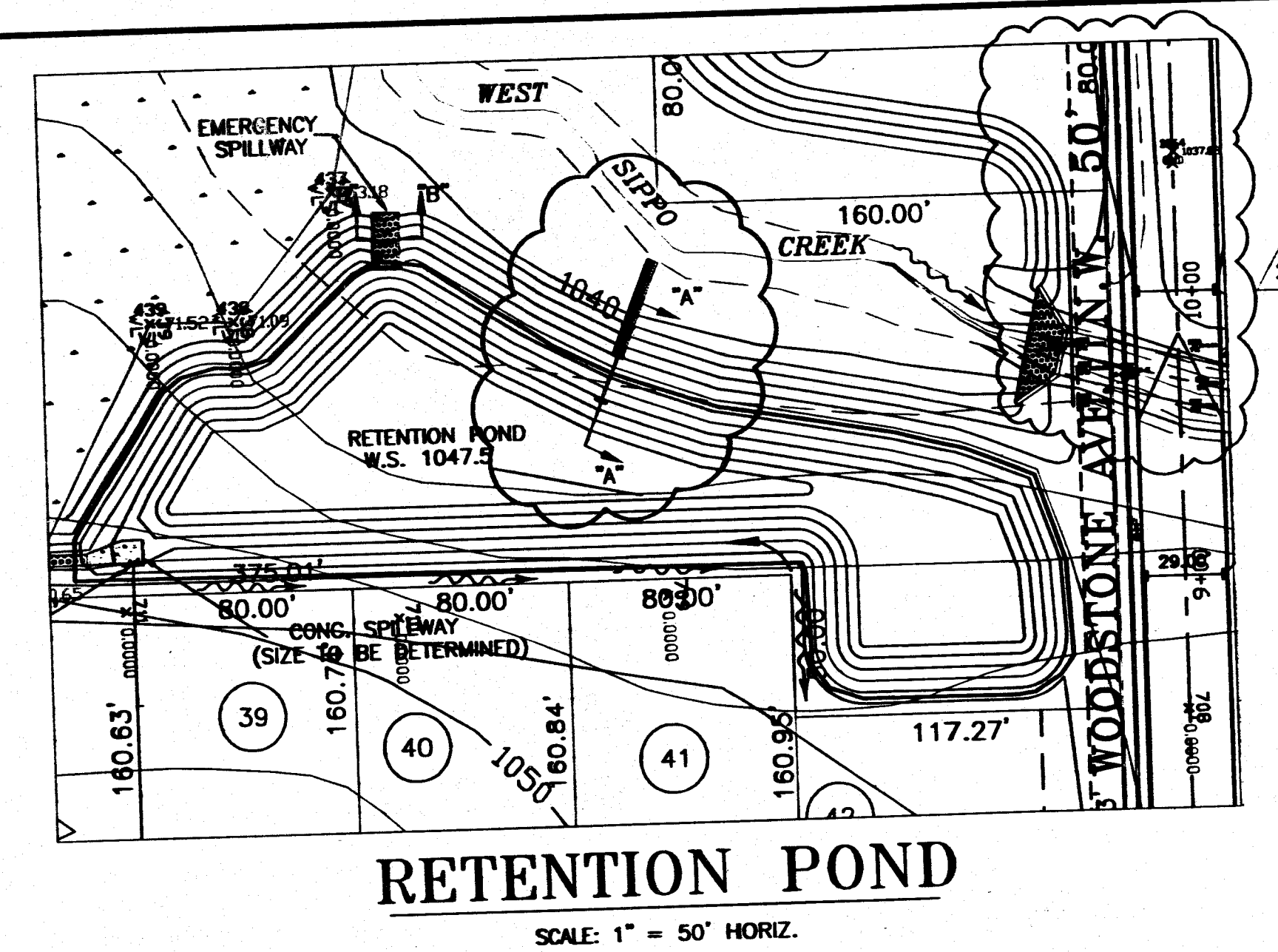
STEPS shall be provided where the depth exceeds 72" and shall meet the requirements of MH-1.



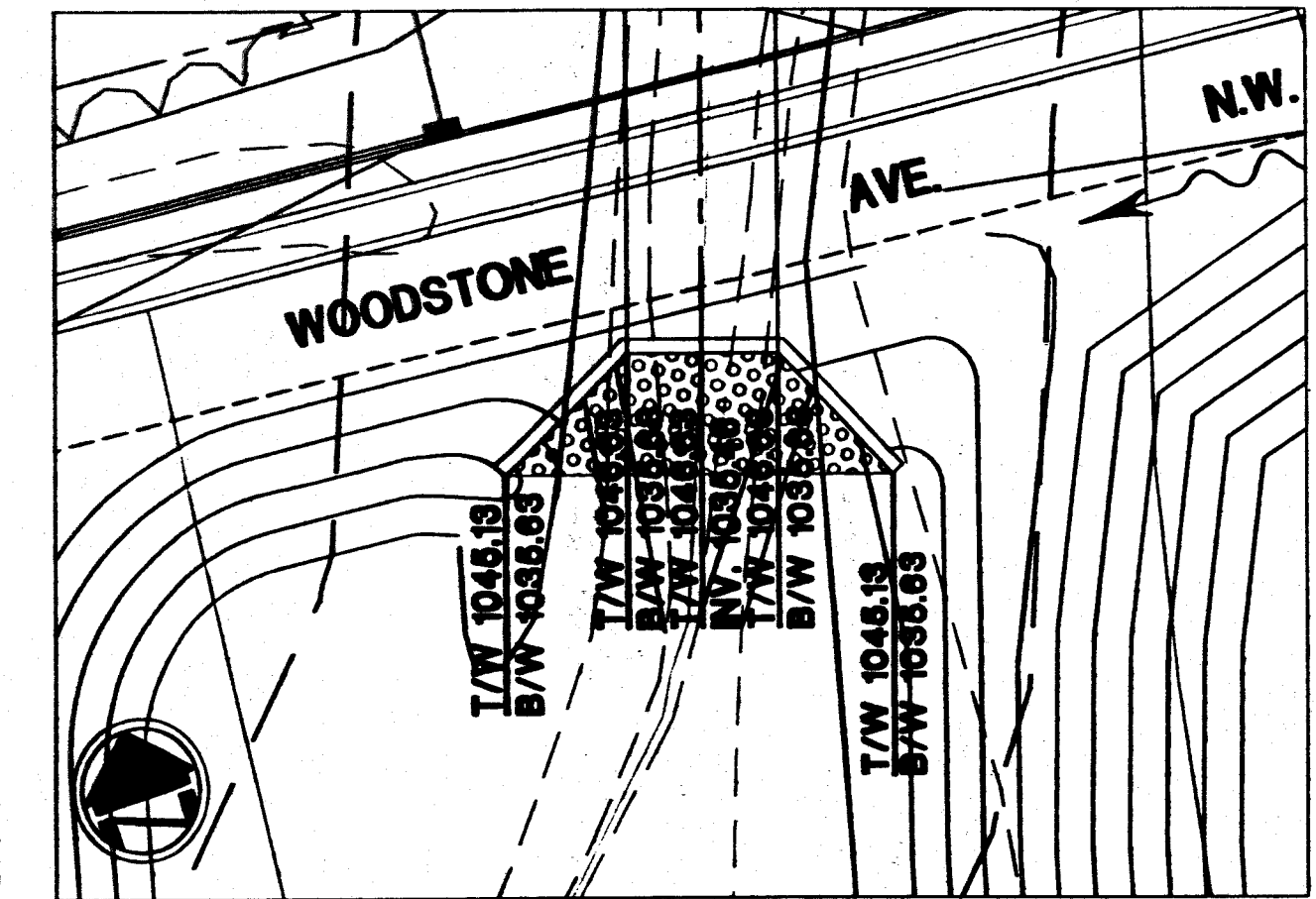
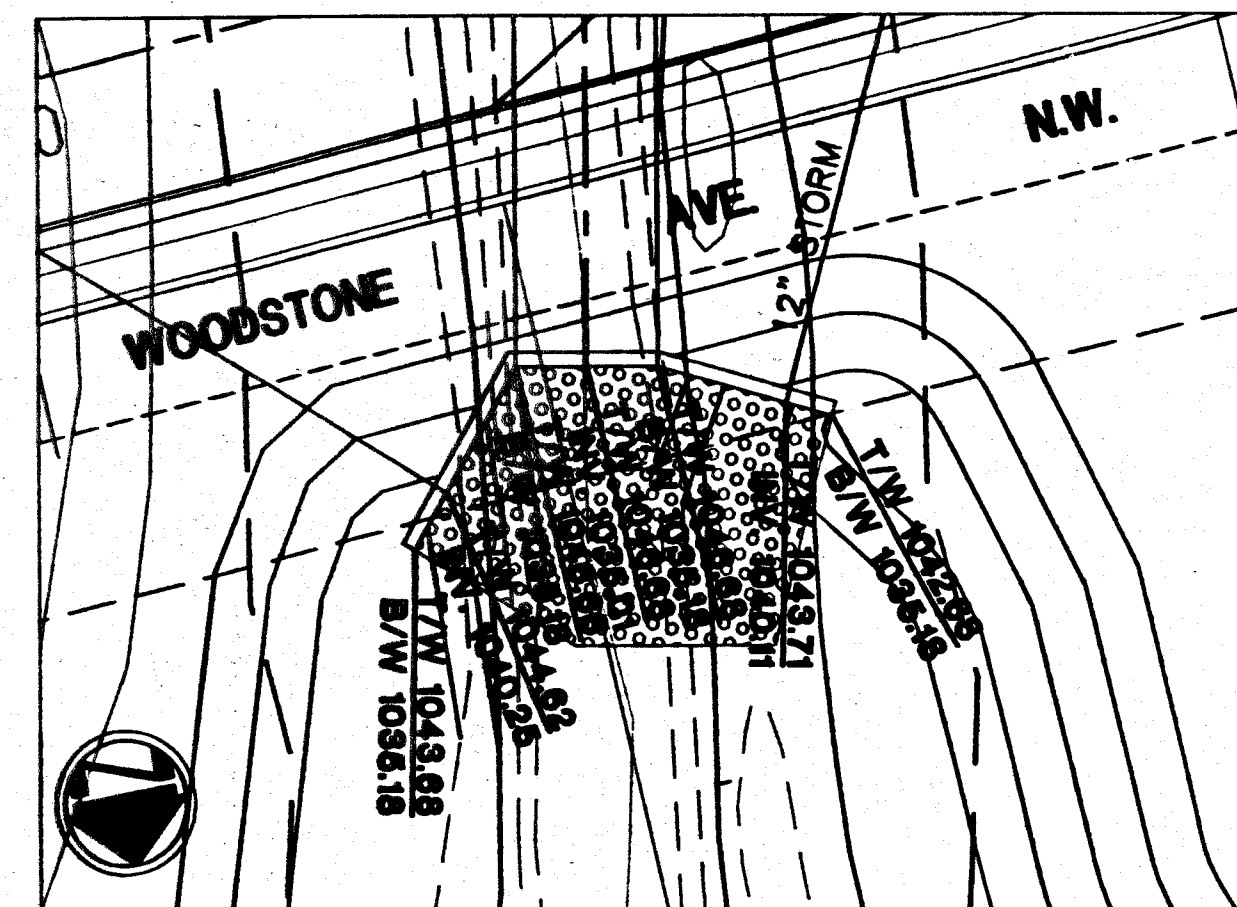
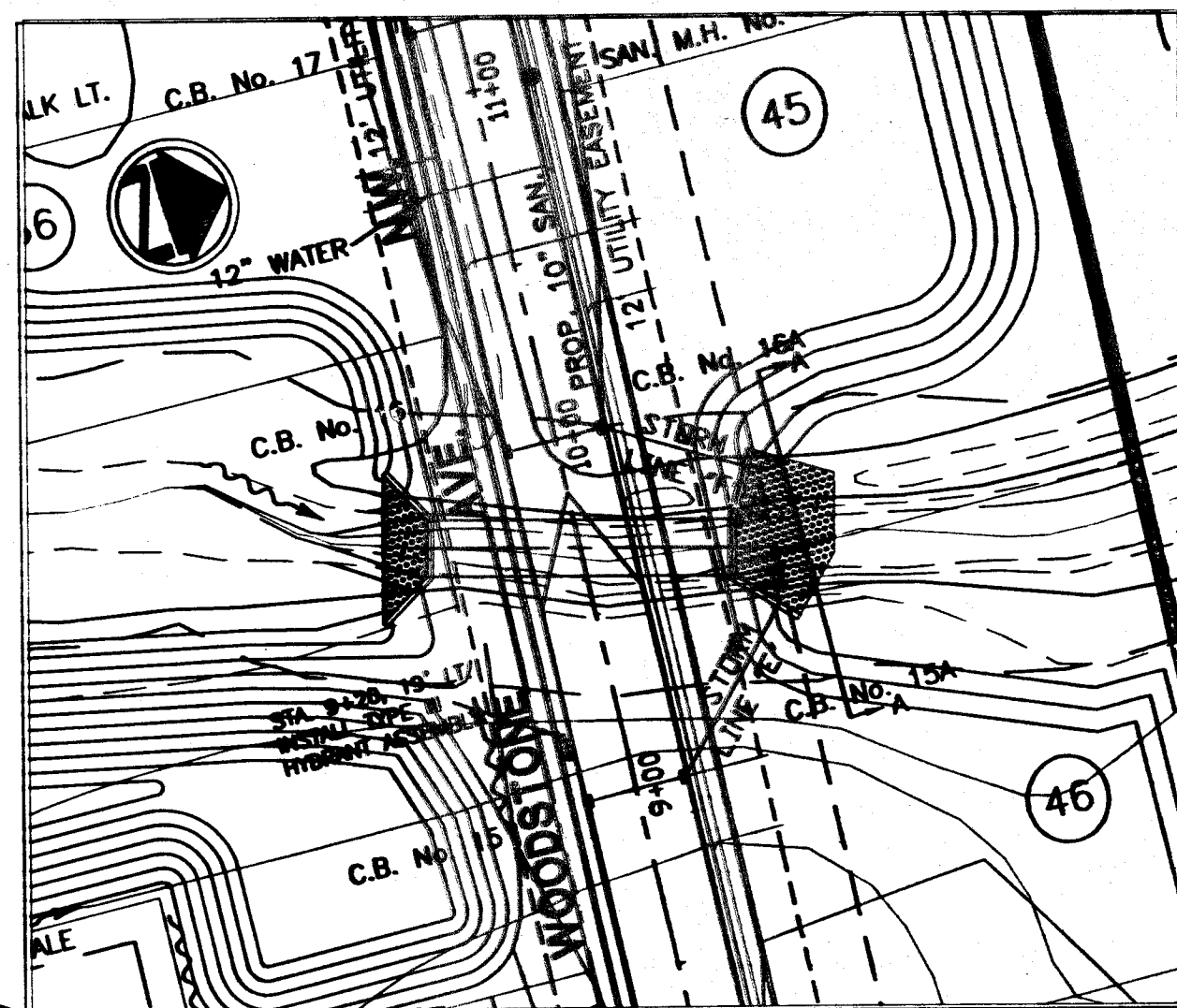
CATCH BASIN SIZE	OUTLET PIPE SIZE
2-3	12" TO 33"
2-4	36" TO 42"

INLETS OVER 12 FEET IN DEPTH shall be precast or cast-in-place concrete; reinforced with No. 4 bars on 12" centers both vertically and horizontally with 2" clearance from inside wall face.

NOTES: THE POND DETAILS SHOWN HEREON WERE ON SHEET 18 OF THE APPROVED PLAN SET.



CATCH BASIN DETAILS AND POND DETAILS
WEST BROOK ESTATES - PHASE I



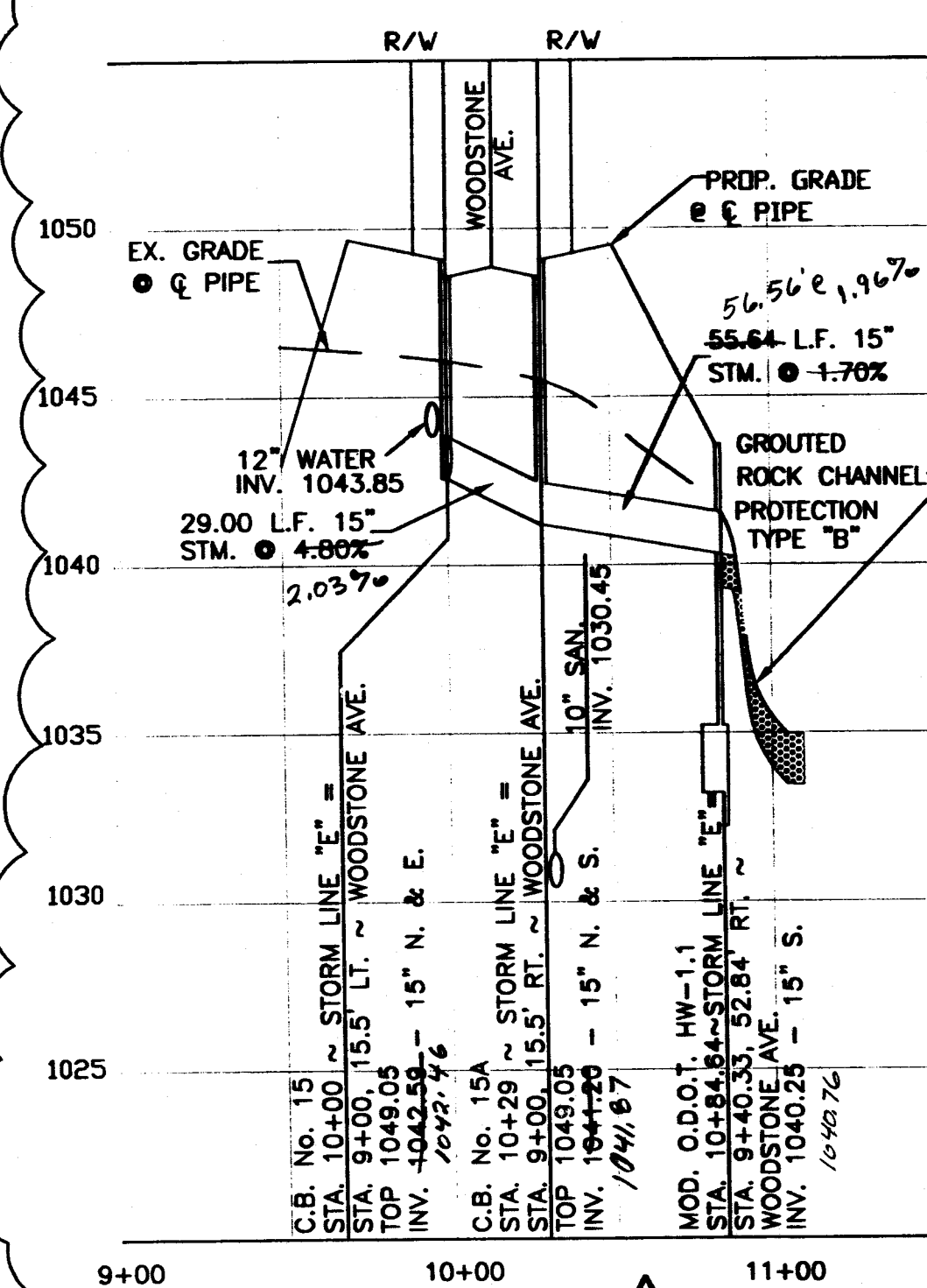
HEADWALL-CULVERT "A"
(DOWNSTREAM END)

MOD. O.D.D.T. HW-1.1
SCALE: 1"=20'

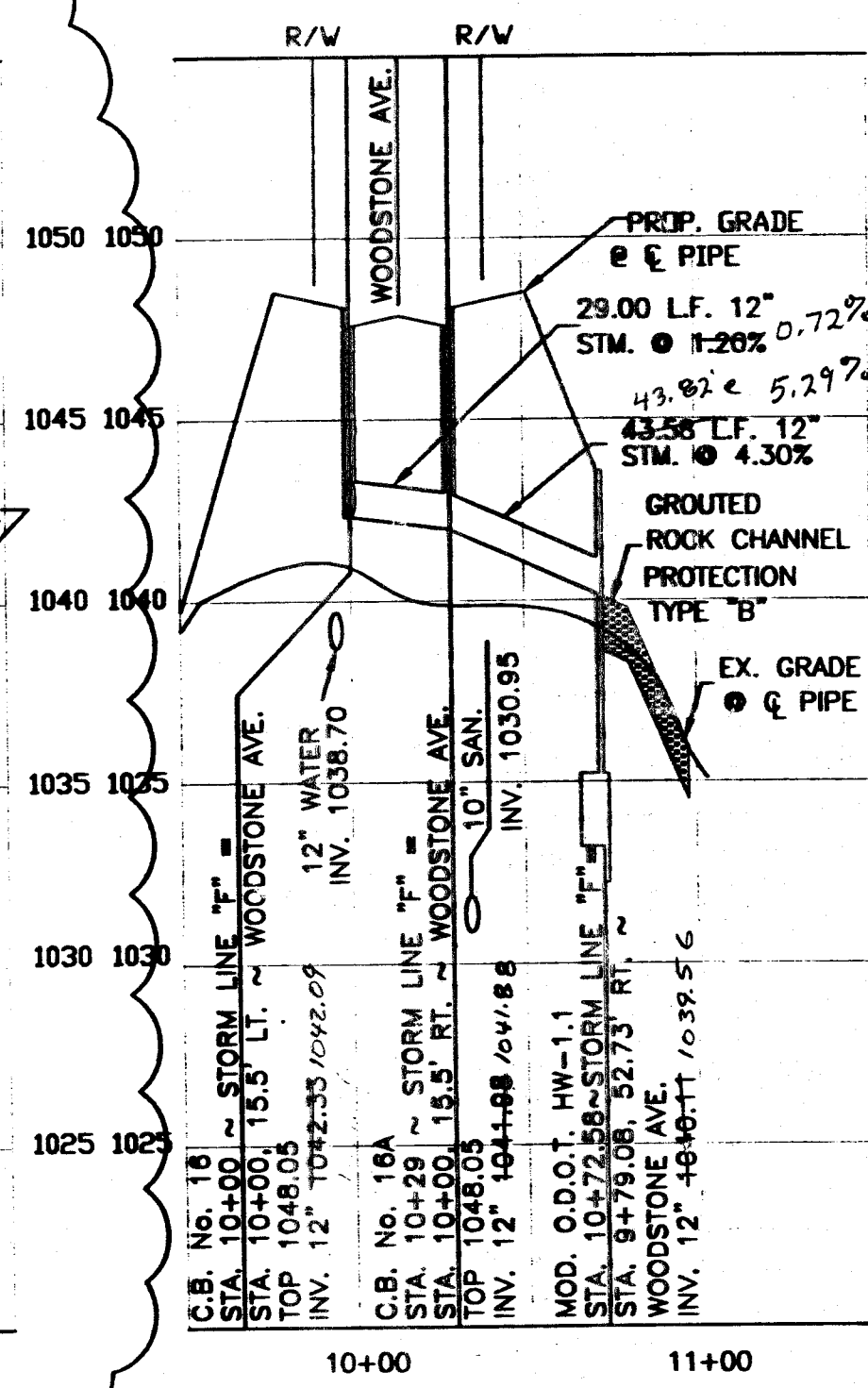
HEADWALL-CULVERT "A"
(UPSTREAM END)

MOD. O.D.D.T. HW-1.1
SCALE: 1"=20'

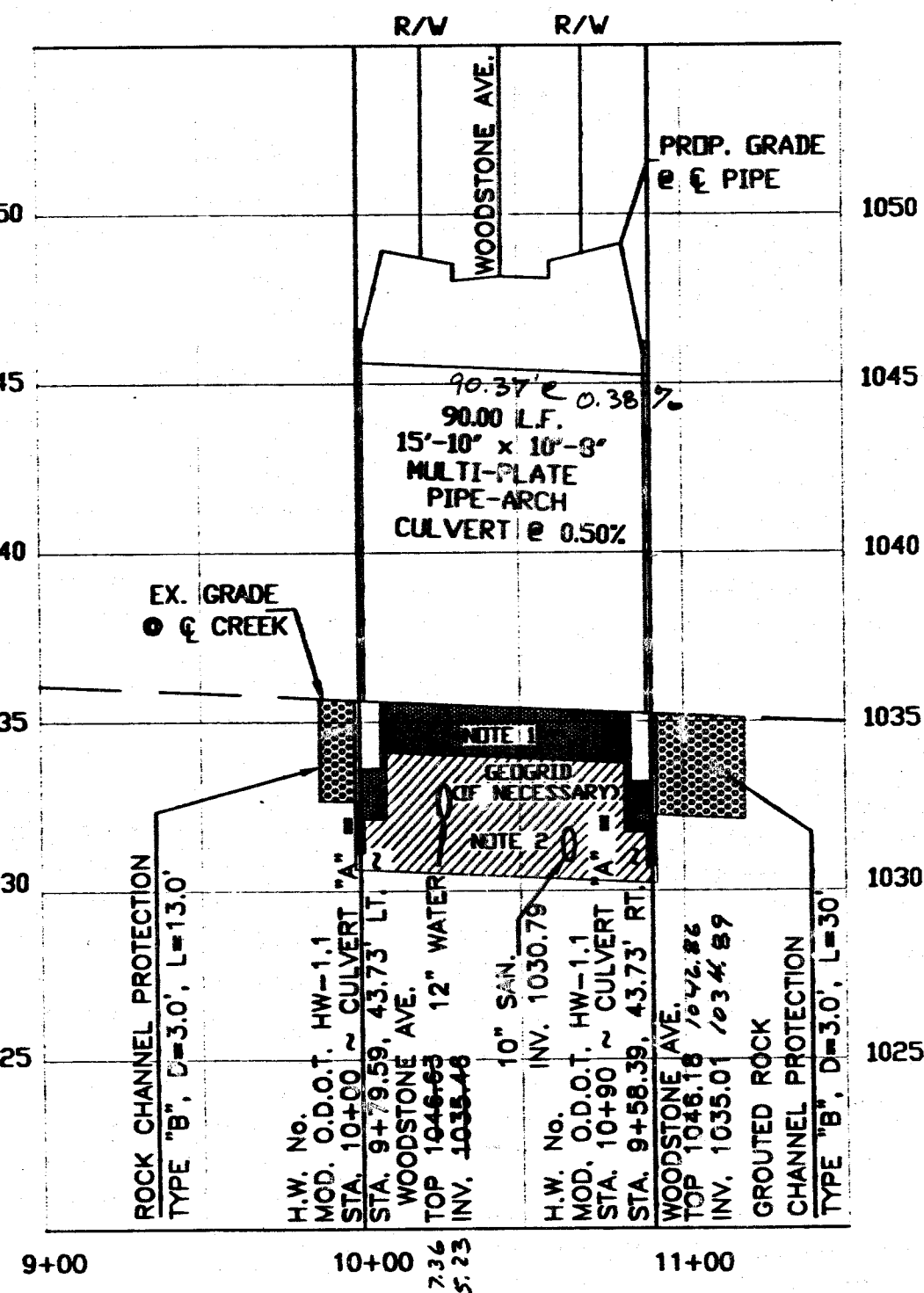
STORM LINE "E"



STORM LINE "F"

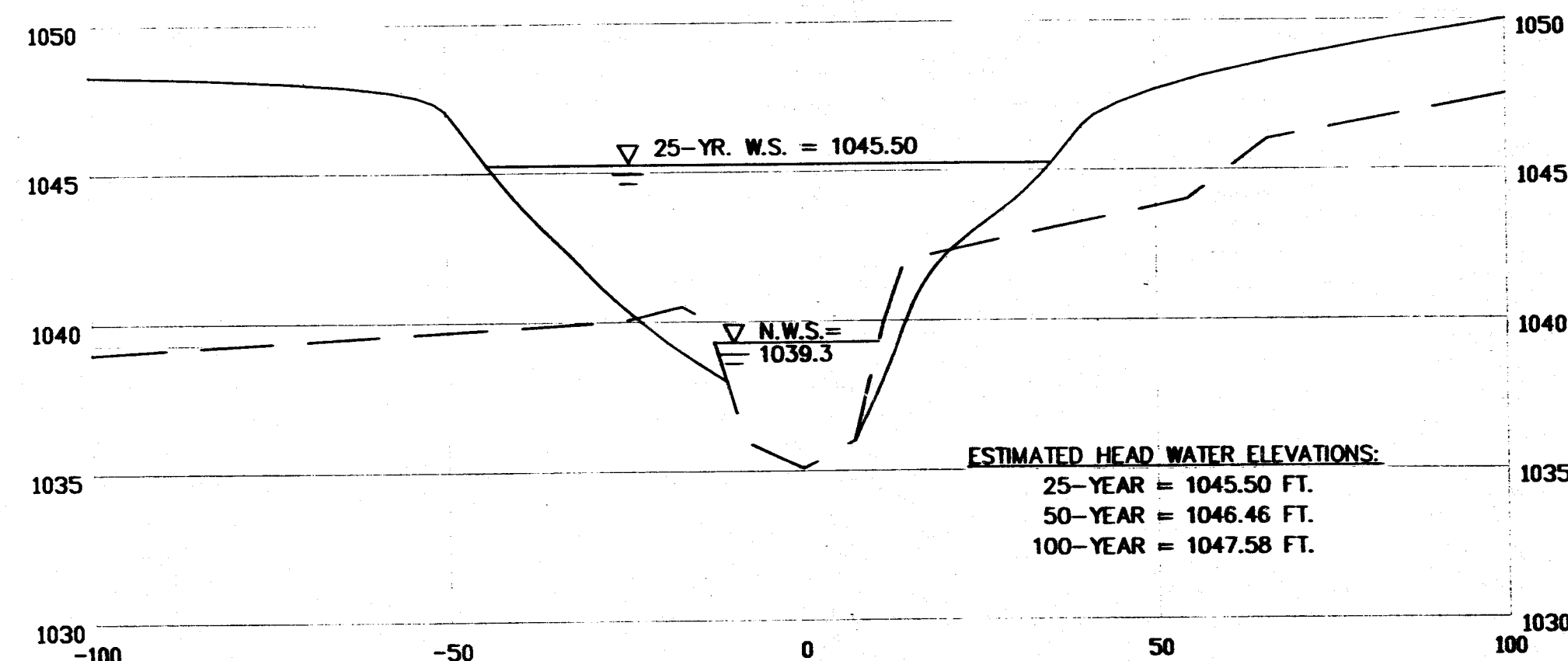


CULVERT "A"



SECTION A-A

SCALE: H: 1"=20', V: 1"=5'



BEDDING NOTES:

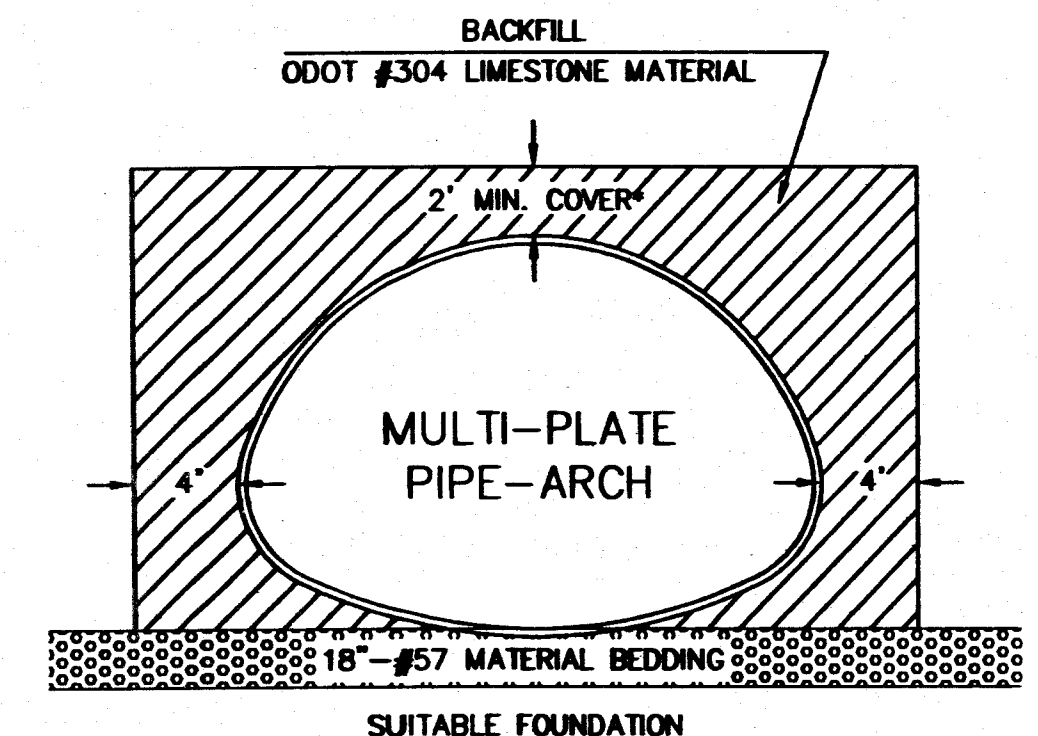
- 18" CRUSHED LIMESTONE OR CONCRETE MEETING O.D.D.T. 1997 CMS 703 ITEM #57, WITH THE NO. 57 STONE TO BE COMPACTED WITH A VIBRATORY COMPACTOR.
- CRUSHED LIMESTONE OR CONCRETE MEETING O.D.D.T. 1997 CMS 703 ITEM #1 AND #2, PLACED IN MAXIMUM LIFTS OF 18", WITH EACH LIFT THOROUGHLY COMPACTED WITH A VIBRATORY COMPACTOR.
- UNDERCUT AS NECESSARY BELOW EXISTING GRADE TO REMOVE ALL ORGANIC SOILS.
- THE FOUNDATION WILL BE UNDERCUT BELOW THE CULVERTS AND WINGWALLS FOR A MINIMUM HORIZONTAL DISTANCE BEYOND THE CULVERT AND WINGWALLS EQUAL TO THE DEPTH OF THE UNDERCUT BELOW THE BASE OF THE STRUCTURES TO REMOVE ORGANIC SOILS.

CULVERT "A" PROPERTIES

MANUFACTURER: CONTECH CONSTRUCTION PRODUCTS
TYPE: 15'-10"x10'-8" MULTI-PLATE PIPE ARCH
METAL THICKNESS: 12 GAGE
AREA OF OPENING = 134 S.F.
LOADING: HS-20 LIVE LOAD
SKEW ANGLE TO ROADWAY CENTER LINE = 103°37'25"
HEADWALLS: MODIFIED O.D.D.T. HW-1.1

CULVERT "A" HYDRAULIC DATA

DRAINAGE AREA = 1,710 AC.
DESIGN STORM EVENT = 25 YEARS
DESIGN DISCHARGE, Q25 = 1,164 CFS



* PROVIDE 2 FT. MIN. COVER OVER PIPE (BACKFILL & CONC. PAVEMENT)

BEDDING AND BACKFILL MATERIAL DETAIL

NOT TO SCALE

△ DENOTES REVISIONS MADE TO THE APPROVED PLAN SET FOR A.R. LOCKHART DEVELOPMENT CO. BY JEFFREY S. SMITH, P.E. (REG. NO. E-64042)

A= Build
3/16/03

SITE IMPROVEMENT PLANS FOR WEST BROOK ESTATES - PHASE 1A

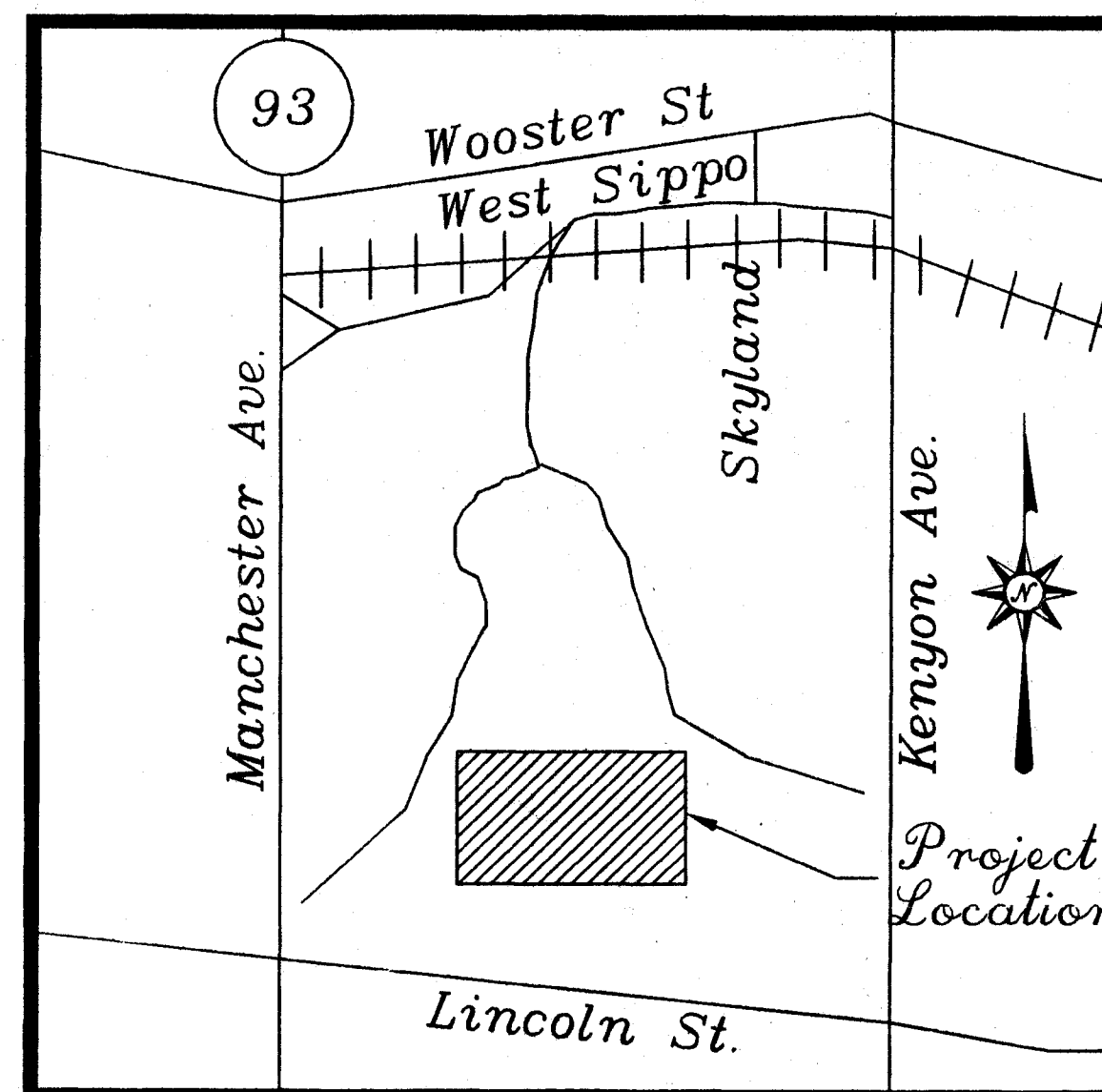
SITUATED IN THE CITY OF MASSILLON,
COUNTY OF STARK, STATE OF OHIO

GENERAL CONSTRUCTION NOTES

- CONSTRUCTION SHALL BE INSPECTED BY THE CITY OF MASSILLON ENGINEERING DEPARTMENT. A PRE-CONSTRUCTION MEETING IS REQUIRED.
- THE CONTRACTOR OR OWNER MUST NOTIFY THE ENGINEERING DEPARTMENT, FOR MATERIAL AND CONSTRUCTION INSPECTION THREE (3) WORKING DAYS PRIOR TO THE TIME WORK IS STARTED ON THE PROPOSED PROJECT WHICH THE CITY OF MASSILLON WILL INSPECT.
- MATERIALS:
 - SANITARY SEWER**
THE CONTRACTOR SHALL USE SDR 35 PVC PIPE IN ACCORDANCE WITH ITEM 707.44 OF THE O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS (LATEST EDITION) UNLESS NOTED OTHERWISE ON THE PLANS. WITH CLASS "B" BEDDING IN ACCORDANCE WITH SECTION 603.04.
 - STORM SEWER**
ALL STORM SEWERS 12" OR GREATER SHALL BE REINFORCED CONCRETE PIPE IN ACCORDANCE WITH ITEM 706.02 OF THE O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS (LATEST EDITION) UNLESS OTHERWISE NOTED ON THE PLANS. WITH CLASS "B" BEDDING IN ACCORDANCE WITH SECTION 603.04.
- ALL TRENCH BACKFILL SHALL BE GRANULAR MATERIAL THAT CONFORMS TO ITEM 603.
- ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
- ALL MANHOLE TOPS WITHIN STREET RIGHT-OF-WAY ARE TO BE FLUSH WITH FINISHED GRADE. ALL MANHOLE TOPS IN EASEMENTS ARE TO BE 6 INCHES ABOVE FINISH GRADE. ALL MANHOLES SHALL BE SUPPLIED WITH SOLID LIDS EXCEPT IN EASEMENTS WHERE THE MANHOLE COVERS SHALL BE THE SOLID-LOCKING TYPE.
- ALL SANITARY MANHOLES SHALL HAVE PRECAST CONCRETE BOTTOMS AND INVERTS CHanneled TO CARRY FLOW.
- CONTACT OHIO UTILITIES PROTECTION SERVICE (1-800-362-2764) 48 HOURS BEFORE BEGINNING WORK.
- COST OF WYES AND STUBS TO BE INCLUDED IN PRICE BID PER LINEAR FOOT OF SANITARY SEWER.
- PRICES BID PER FOOT FOR ALL PIPE IS COMPLETE IN PLACE REGARDLESS OF SOIL OR ROCK CONDITIONS.
- ALL FILL AREAS UNDER PAVEMENT, STRUCTURES AND OTHER AREAS INDICATED ON THE PLANS SHALL CONFORM TO CITY SPECIFICATIONS.
- SANITARY SEWER, 6" PVC SDR 35 LATERALS TO BE EXTENDED NO LESS THAN 5' BEYOND DEDICATED RIGHT-OF-WAY. LATERALS SHALL BE NO SHALLOWER THAN 8' AT THE RIGHT-OF-WAY LINE.
- EXCESS EXCAVATION TO BE PLACED IN ACCORDANCE WITH THE APPROVED GRADING PLAN.
- FERTILIZING, SEEDING AND MULCHING FOR THE RESTORATION OF DISTURBED AREAS BETWEEN THE PAVEMENT EDGES AND THE RIGHT-OF-WAY LINE AND EASEMENTS SHALL CONFORM TO O.D.O.T. 659 AS SPECIFIED IN CONSTRUCTION AND MATERIAL SPECIFICATIONS (LATEST EDITION). TOPSOIL IS TO BE SPREAD 4" THICK OVER ALL DISTURBED AREAS.
- ALL SANITARY SEWERS TO PASS AIR TEST AND BE VIDEO TAPED. THE COSTS OF THESE TESTS ARE AT THE DEVELOPER'S EXPENSE.
- COST OF ANY SHEETING OR DEWATERING NECESSARY FOR INSTALLATION OF SANITARY SEWER SHALL BE INCLUDED IN PRICE BID PER LINEAR FOOT OF RESPECTIVE ITEMS. ANY FOUNDATION SLAG REQUIRED WILL BE INCLUDED IN THE COST OF SANITARY SEWER.
- ALL EXISTING ROAD SURFACES, EASEMENTS OR RIGHT OF WAYS DISTURBED BY CONSTRUCTION OF ANY PART OF THIS IMPROVEMENT ARE TO BE RESTORED COMPLETELY TO THE BEFORE CONSTRUCTION CONDITION OR BETTER AND ALL COSTS ARE INCLUDED IN THE PAY ITEMS.
- TEMPORARY SOIL EROSION AND SILTATION CONTROL WILL BE REQUIRED IN ACCORDANCE WITH O.D.O.T ITEM 207 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (LATEST EDITION).
- ALL SEWER RUN DISTANCES GIVEN ARE FROM CENTERLINE TO CENTERLINE OF MANHOLES OR INLETS. ALL INVERT ELEVATIONS GIVEN ARE TO CENTERLINE OF MANHOLE OR INLET. ALL TOP ELEVATIONS ARE TO TOP OF MANHOLE OR BACK OF CURB AT INLETS. SEWER GRADES ARE ESTABLISHED FROM CENTERLINE TO CENTERLINE OF MANHOLE OR INLET AND ARE CARRIED THROUGH TO ASSURE POSITIVE FLOW FROM INVERT TO INVERT.
- ALL SANITARY LATERALS SHALL BE LAID AT NO LESS THAN 1.00%.

CONTRACTOR / PROJECT ENGINEER:
W.G. LOCKHART CONSTRUCTION COMPANY
800 WEST WATERLOO ROAD
AKRON, OHIO 44314
PH: (330) 745-6520
FAX: (330) 745-0716

FEBRUARY 2000



LOCATION MAP

Not to scale

DRAWING LIST

SHT. NO.	DESCRIPTION
1	TITLE SHEET
2	SITE PLAN/UTILITY LAYOUT
3	GRADING AND SWPPP PLAN
4	PLAN/PROFILE - LANEDALE/BRIGHTLEAF DR.
5	TYPICAL SECTION AND INTERSECTION DETAILS
6	STANDARD GENERAL NOTES
7	STANDARD GENERAL NOTES
8	STANDARD CONSTRUCTION DRAWING
9	STANDARD CONSTRUCTION DRAWING
10	STANDARD DETAILS
11	STORM WATER POLLUTION PREVENTION PLAN DETAILS
12	STORM WATER POLLUTION PREVENTION PLAN DETAILS
13	WATER DETAILS

GENERAL CONSTRUCTION NOTES (CON'T)

WATER MAIN

- MUST MAINTAIN A 12" MINIMUM VERTICAL CLEARANCE FROM EDGE OF ALL WATER MAIN PIPE TO EDGE OF ALL PROPOSED STORM SEWERS AND/OR INLET LEAD PIPE WHERE THEY CROSS.
- MUST MAINTAIN A 4.0' MINIMUM HORIZONTAL CLEARANCE FROM EDGE OF WATER MAIN PIPE TO EDGE OF STORM SEWER PIPE INLETS AND STORM SEWER MANHOLES.
- MUST MAINTAIN A 10.0' MINIMUM HORIZONTAL CLEARANCE FROM EDGE OF WATER MAIN PIPE TO EDGE OF SANITARY SEWER AND/OR FORCE MAIN PIPE.
- MUST MAINTAIN A 18" MINIMUM VERTICAL CLEARANCE FROM EDGE OF ALL WATER MAIN PIPE AND/OR SERVICE TO OUTSIDE EDGE OF ALL SANITARY SEWER PIPE WHERE THEY CROSS.
- THE GROUND OVER THE WATER MAIN LINE SHALL REMAIN FREE OF TRASH CONTAINERS, TREES, SHRUBS AND ALL OTHER VEGETATION (EXCLUDING GRASS). MOUNDING OF EARTH OVER THE WATER LINE FOR AESTHETIC PURPOSES IS PROHIBITED.
- WHERE WATER MAINS CROSS SEWER TRENCHES, THE TRENCH IS TO BE BACKFILLED WITH APPROVED GRANULAR MATERIAL.
- ALL WATERLINES AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS ESTABLISHED BY THE CONSUMERS OHIO WATER COMPANY. PIPE SHALL BE CLASS 350, CEMENT-LINED, DUCTILE IRON WITH PUSH ON JOINTS, EXCEPT AS NOTED. ALL FITTINGS SHALL BE CEMENT-LINED MECHANICAL JOINT TYPE. VALVES SHALL BE MECHANICAL JOINT, NON-RISING STEM, RIGHT OPEN (CLOCKWISE) WITH 2-INCH SQUARE OPERATING NUT. POURED CONCRETE THRUST BLOCKS MUST BE CONSTRUCTED WHERE NECESSARY. ALL VALVES 4" THRU 12" ARE GATE VALVES AND MUST HAVE BOXES.
- COMPACTED PREMIUM BACKFILL IS REQUIRED FOR UNDERGROUND CONSTRUCTION UNDER OR WITHIN 3 FEET OF ANY PROPOSED OR EXISTING SIDEWALK OR PAVEMENT.
- ANY EXISTING WATER APPURTENANCES THAT ARE DAMAGED MUST BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL SUPPLY A TEMPORARY SAFE WATER SERVICE TO ANY HOME THAT WILL HAVE ITS WATER SERVICE INTERRUPTED BY THIS CONSTRUCTION.
- NO TAPS FOR WATER SERVICES SHALL BE MADE UNTIL AFTER THE MAIN LINE HAS BEEN TESTED AND STERILIZED.
- ALL WATER MAIN CONSTRUCTION SHALL BE INSPECTED BY THE CONSUMERS OHIO WATER COMPANY. NOTIFY THE CONSUMERS OHIO WATER COMPANY AT LEAST 48 HOURS PRIOR TO BEGINNING WATERLINE CONSTRUCTION.
- ALL NEW WATER MAINS ARE TO BE COMPLETELY WRAPPED WITH POLYETHYLENE ENCASMENT AS SPECIFIED IN AWWA C-105.
- PRIOR TO ACCEPTANCE THE WATERLINE SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AWWA C-600, LATEST EDITION, AND DISINFECTED IN ACCORDANCE WITH AWWA C-651, LATEST EDITION, BY THE CONTRACTOR.
- ALL HYDRANTS SHALL HAVE STANDARD THREADS ON ALL HOSE CONNECTIONS.
- MUST MAINTAIN A 36" MINIMUM HORIZONTAL CLEARANCE FROM THE EDGE OF ALL WATER MAIN PIPE TO THE EDGE OF DIRECT BURIAL CONDUIT, CONCRETE ENCASED ELECTRICAL CONDUIT, THE LIGHT POLE BASES, AND THE HAND HOLE PULL BOXES.
- MUST MAINTAIN A 12" MINIMUM VERTICAL CLEARANCE FROM EDGE OF ALL WATER MAIN PIPE TO THE EDGE OF THE DIRECT BURIAL CONDUIT AND THE EDGE OF THE CONCRETE ENCASED ELECTRICAL CONDUIT WHERE THEY CROSS.
- USE EXTREME CAUTION WHEN EXCAVATING IN THE AREA OF EXISTING WATER MAIN PIPES, VALVES OR HYDRANTS.
- ALL 2 INCH PIPE AND FITTINGS AROUND CUL-DE-SACS ARE TO BE HDPE TUBING WITH TRACER WIRE AND MARKING TAPE INSTALLED WITH 4 FEET 6 INCHES OF COVER.
- SERVICE TAPS OFF OF MAINLINE TO BE MADE BY CONSUMERS OHIO WATER COMPANY. SERVICES OFF OF 2" TEES AT CUL-DE-SACS MAY BE SPLIT TO SERVICE TWO UNITS, WITH INDIVIDUAL CURB STOPS, INSTALLED BY THE CONTRACTOR.
- BLOW-OFF ASSEMBLIES TO BE KUPFERLE FOUNDRY TF500 WITH VALVE BOX. INSTALL 2" CURB STOP WITH BOX AHEAD OF EACH BLOW OFF.

OHIO EPA NOTES

- A MINIMUM OF 35 PSI SHALL BE MAINTAINED TO THE CURB STOP DURING NORMAL OPERATING CONDITIONS.
- BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS.
- ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.

APPROVALS

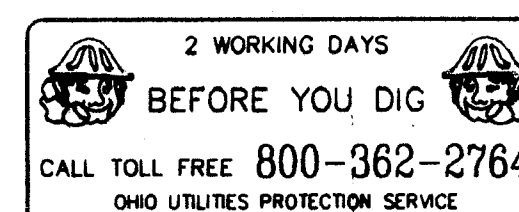
CITY OF MASSILLON ENGINEER _____ DATE _____

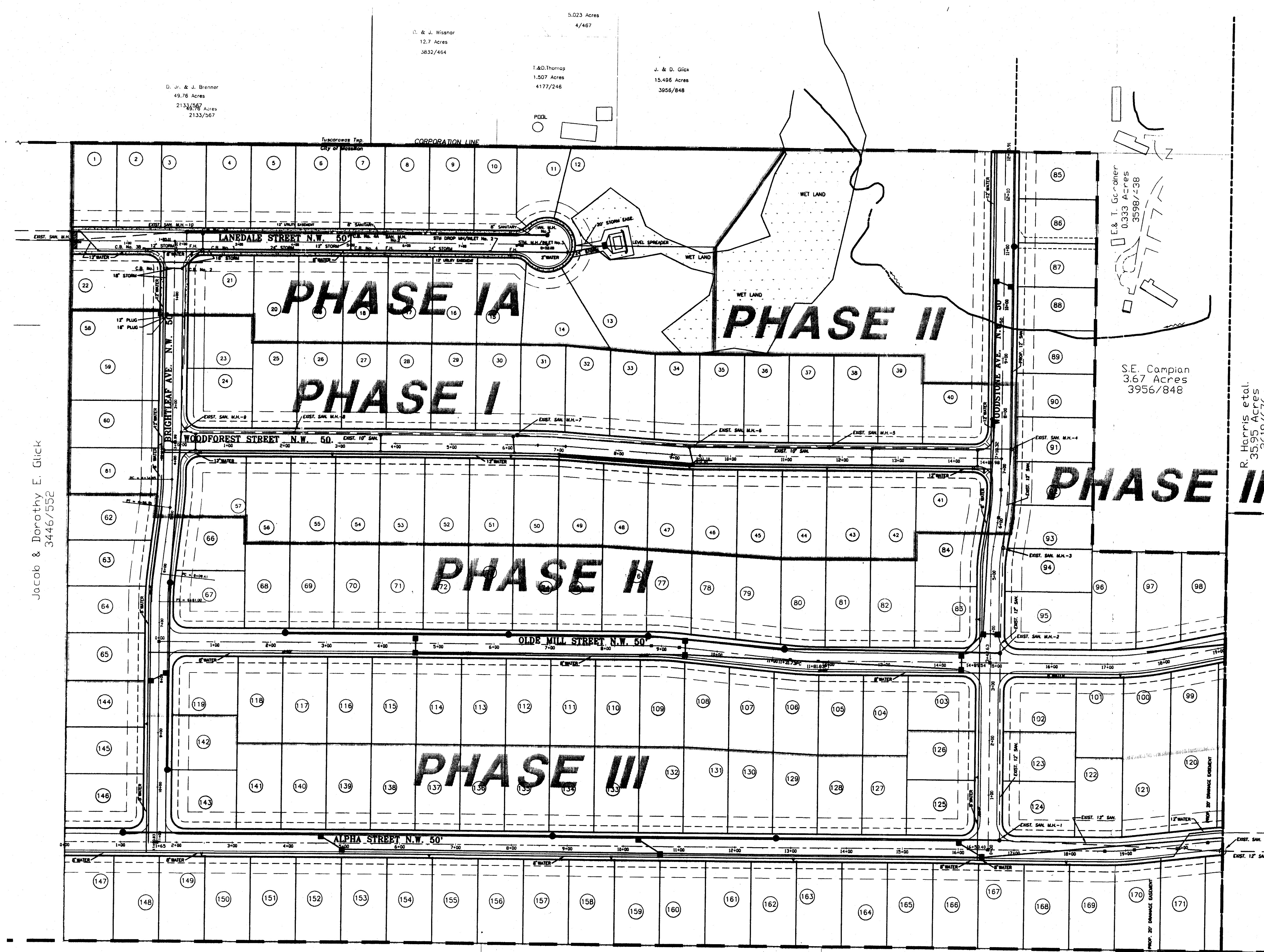
CONSUMER OHIO WATER COMPANY _____ DATE _____

SAFETY SERVICE DIRECTOR _____ DATE _____

SUBMITTED BY: SHISHIR B. KAPADIA, P.E. No. E- 39632 _____ DATE _____

OWNER/DEVELOPER: A. R. LOCKHART DEVELOPMENT CO. _____ DATE _____
A. R. LOCKHART, PRESIDENT





Jacob & Dorothy E. Glick
3446/552

0' 100' 200' 300'

BENCH MARK:
INVERT OF EXIST. SAN. M.H. No. 41
ELEV. 1023.94

W.G. LOCKHART CONSTRUCTION CO.
2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE: 800-362-2764
OHIO UTILITIES PROTECTION SERVICE

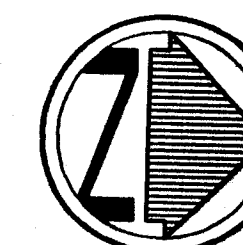
DATE	REVISION	BY
2/25/00	1	
3/1/00	2	
3/1/00	3	

DATE: 2/25/00	SCALE: 1" = 100' HORIZ.
SCALE: NONE	DRAWN: CTB
CHECKED: JRB	

PROJECT NUMBER	700
W.G. LOCKHART CONSTRUCTION CO.	5800 West Waterloo Road Akron, Ohio 44314 (330) 745-6570

13

NOTE:
DISTURBED WETLAND AREA - 0.196 ACRES



0' 100' 200' 300'

BENCH MARK:
INVERT OF EXIST. SAN. M.H. No. 41
ELEV. 1023.94

LEGEND - EROSION CONTROL

- IP INLET PROTECTION
- LS LEVEL SPREADER
- SF SILT FENCE

WEST BROOK ESTATES
GRADING AND SWPP PLAN

700

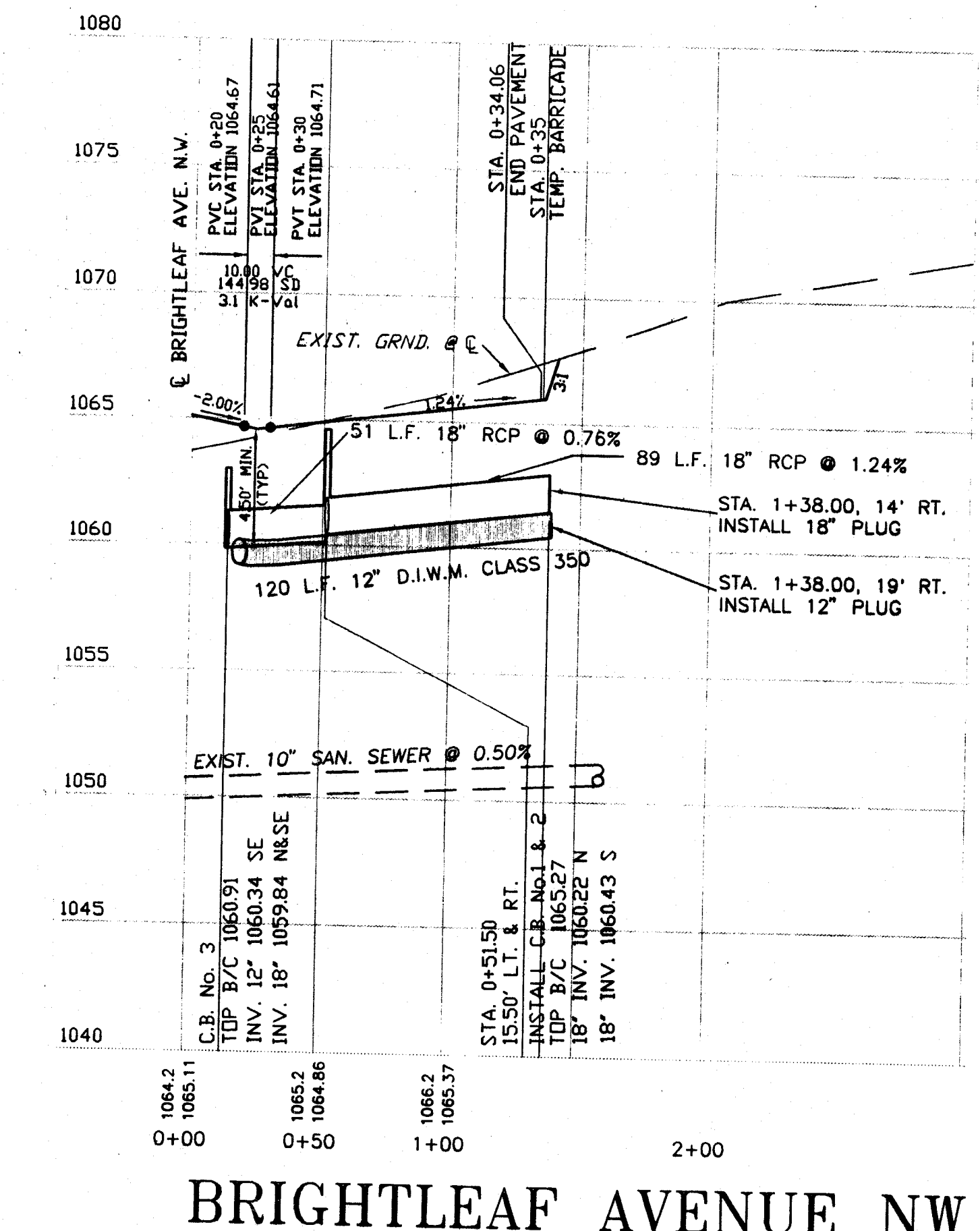
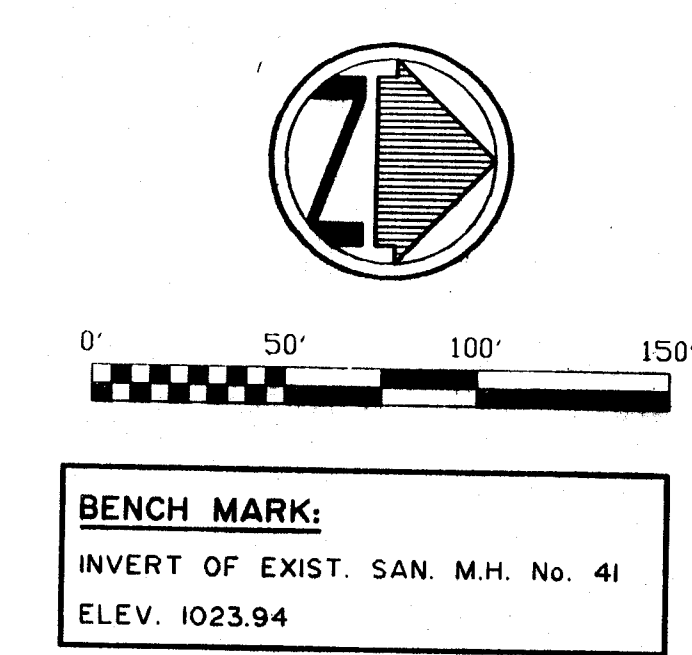
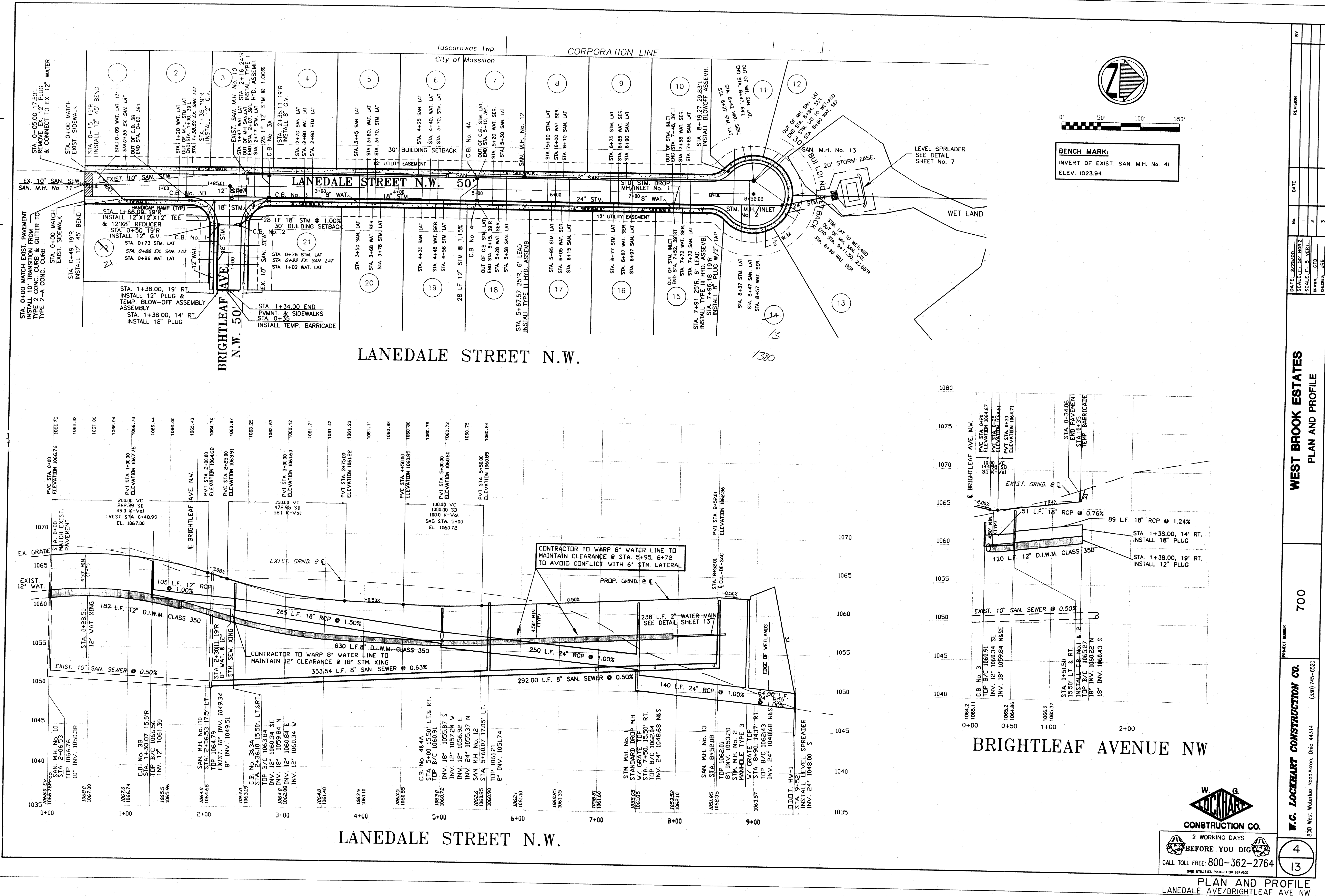
W.C. LOCKHART CONSTRUCTION CO.
800 West Waterloo Road Akron, Ohio 44314
(330) 745-5520



CONSTRUCTION CO.
2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE: 800-362-2764
DMS UTILITIES PROTECTION SERVICE

3
13

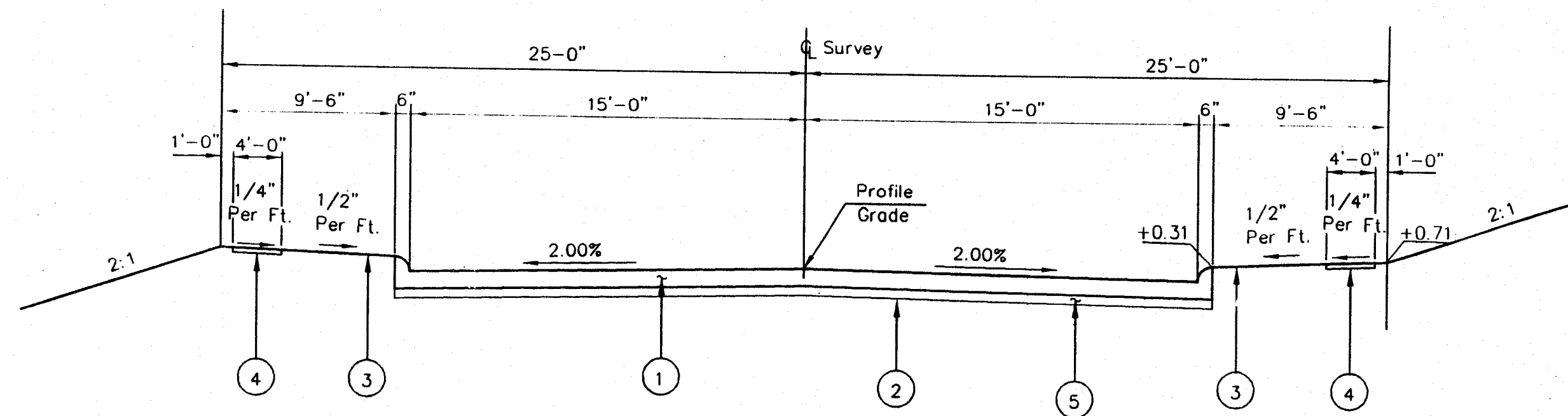
GRADING AND SWPP PLAN



DATE	2/25/00	SCALE	1" = 50' HORIZ. 1" = 5' VERT.	BY
NO.	1	DATE		
REVISION		DATE		
BY		DATE		

PROJECT NUMBER	700	PROJECT NAME	WEST BROOK ESTATES
CONTRACTOR	W.G. LOCHART CONSTRUCTION CO.	LOCATION	500 West Waterloo Road Akron, Ohio 44314
PHONE	(330) 745-6520		

4	13
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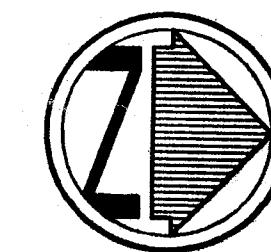


TYPICAL SECTION

N.T.S.

LEGEND

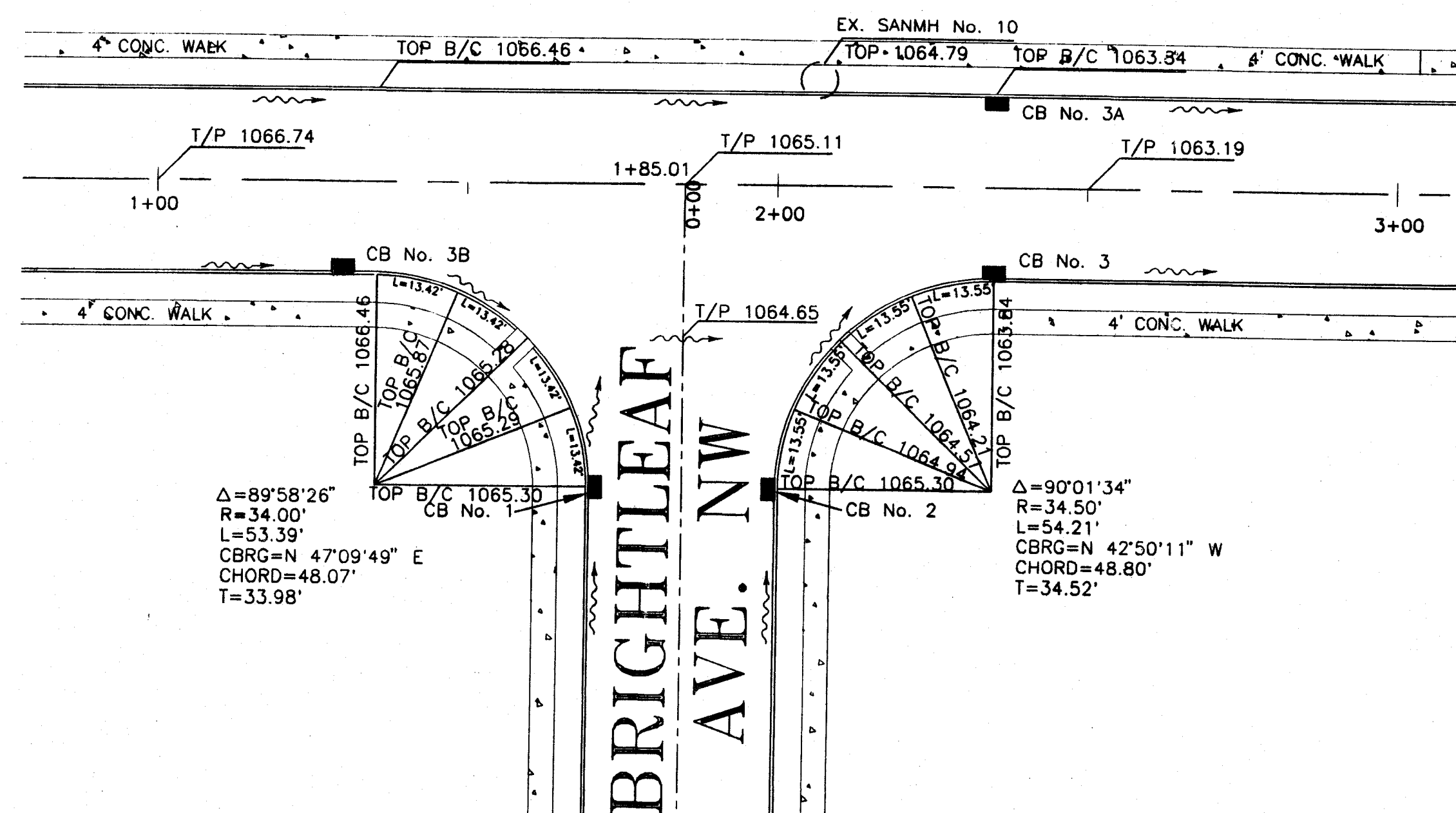
- | | |
|------------|--|
| ① Item 452 | 7" Plain Portland Cement Concrete Pavement |
| ② Item 203 | Subgrade Compaction |
| ③ Item 659 | Seeding and Mulching |
| ④ Item 608 | 4" Concrete Sidewalk (6" @ Drives) |
| ⑤ Item 304 | 4" Aggregate Base |



BENCH MARK:

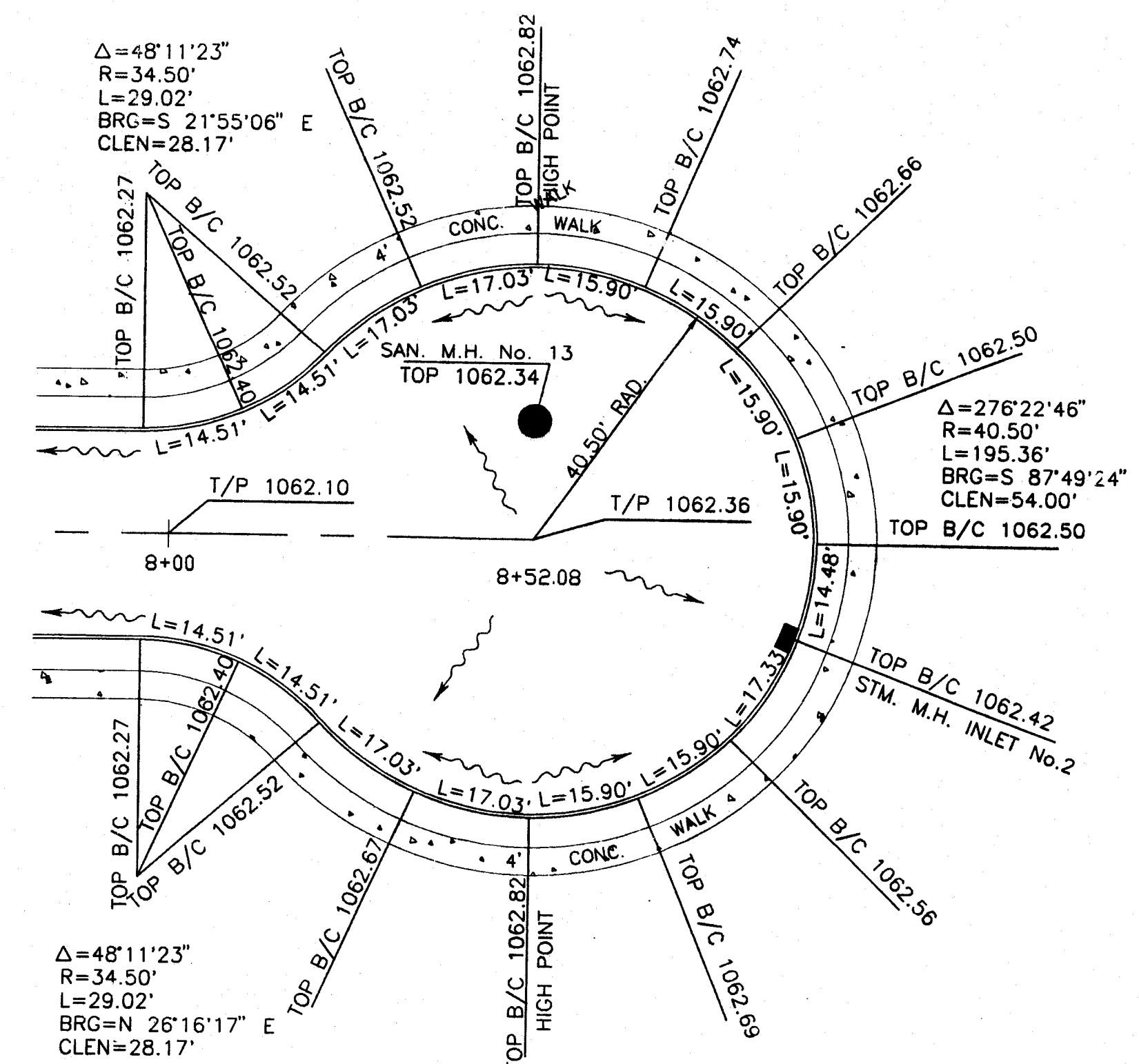
INVERT OF EXIST. SAN. M.H. No. 41
ELEV. 1023.94

LANEDALE STREET N.W.



LEGEND

B/C - BACK OF CURB
T/P - TOP OF PAVEMENT



LANEDALE STREET N.W.



CONSTRUCTION CO.

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE: 800-362-2764
AND UTILITIES PROTECTION SERVICE

WEST BROOK ESTATES
TYPICAL SECTION AND INTERSECTION DETAILS

700

W.C. LOCKHART CONSTRUCTION CO.
800 West Waterloo Road Akron, Ohio 44314
(330) 745-6520

5
13

TYPICAL SECTION AND INTERSECTION DETAILS

UTILITIES

LISTED BELOW ARE ALL KNOWN UTILITIES LOCATED WITHIN THE CITY CORPORATION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AMERITECH 50 W.BOWERY, 6TH FLOOR AKRON, OH 44308 800-290-2242 RICK MARSILI	CONSUMER OHIO WATER COMPANY P.O. BOX 584 MASSILLON, OH 44648 (330) 833-4156	OHIO EDISON STARK DIVISION 2600 S. ERIE ST. MASSILLON, OH 44545 (330) 833-3141
MB OPERATING P.O. BOX 21310 CANTON, OH 44701-1310 (330) 456-2454	AT&T COMMUNICATIONS 2535 E. 40TH AVE. DENVER, CO 80205-3601 (800) 852-3786	MASSILLON CABLE TV P.O. BOX 814 MASSILLON, OH 44648 (330) 8334134
CITY OF MASSILLON SANITARY SEWER ONE JAMES DUNCAN PLAZA MASSILLON, OH 44646 (330) 830-1722	THE EAST OHIO GAS COMPANY 4725 SOUTHWAY ST. S.W. CANTON, OH 44706 (330) 478-3142 NANCY KOVACH	NORTHEAST OHIO NATURAL GAS CORP. 1425 N. WOOSTER AVE. STRASBURG, OH 44680-9766 (330) 878-5589

THE CONTRACTOR SHALL NOTIFY ALL UTILITIES 48 HOURS PRIOR TO ANY WORK.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE SHOWN AT APPROXIMATE LOCATIONS AND WHERE OBTAINED AS REQUIRED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

OUPS - 1-800-362-2764

DATUM ELEVATION

ALL BENCHMARKS ARE BASED ON REFERENCE BENCHMARKS PROVIDED BY THE CITY OF MASSILLON.

STATIONING

ALL STATIONING SHOWN IS REFERENCED TO THE BASELINE AS SHOWN.

REMOVAL OF TREES OR STUMPS

ALL TREES AND STUMPS REMOVED DURING CONSTRUCTION SHALL BE UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING.

MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAIL AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. ____.

ITEM SPECIAL - MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATION SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NORMAL 4"x4" SQUARE OR 4-1/2" DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NORMAL PIPE SIZE 2" I.D., AND CONFORM TO AASHTO M 181.

HARDWARE (PLATES, SCREWS, BOLTS, ETC..) SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.12. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT, (SINGLE) (DOUBLE).

ITEM 609. CAST IN PLACE 6"x18" CONCRETE CURB

GRANULAR BEDDING, BACKFILLING AND CONCRETE CURB PLACEMENT ALONG WITH ALL APPURTENANCES IS TO BE INCLUDED IN ITEM 609.

ITEM 659. TOPSOIL, SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL EXPOSED SOIL BETWEEN THE RIGHT OF WAY LINES, AND WITHIN THE CONSTRUCTIONS LIMITS FOR AREAS OUTSIDE THE RIGHT OF WAY LINES DISTURB DURING CONSTRUCTION.

THE CITY SHALL APPROVE SEED MIX PRIOR TO CONSTRUCTION TO BE USED THROUGH OUT CONSTRUCTION LIMITS. PROPOSED MIX SHALL BE SUBMITTED IN WRITING PRIOR TO ANY CONSTRUCTION.

ITEM 659, SEEDING AND MULCHING LUMP SUM BID

EROSION CONTROL

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL AND SHALL MEET THE REQUIREMENTS OF 108.04.

ITEM 604. CATCH BASIN NO. 3. 3A

CATCH BASINS SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 604 EXCEPT THAT THE GRATES SHALL BE NEENAH NO. R-4859-C OR EAST JORDAN NO. 6730-2 OR APPROVED EQUALS.

CROSSING OR CONNECTING TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

REMOVAL AND RELOCATION OF EXISTING UTILITIES

ALL UTILITY CONFLICTS WHERE THE REMOVAL AND RELOCATION OF AND EXISTING UTILITY DO TO PROPOSED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 202 REMOVAL AND RELOCATION OF EXISTING UTILITIES.

RESIDENTIAL AND COMMERCIAL DRAINAGE CONNECTIONS

EACH LOT SHALL BE SUPPLIED WITH A SINGLE 6" STORM LATERAL THAT WILL BE INSTALLED FROM THE MAIN TO THE PROPERTY LINE. SAID STORM LATERAL SHALL SE CONNECTED TO FOUNDATION DRAINS, SUMP DRAIN AND WHEN POSSIBLE AS PER ENGINEER'S DIRECTION THE DOWN SPOUT WILL BE CONNECTED.

THE FOLLOWING WORK SHALL BE PAID FOR UNDER ITEM 603 6" STORM LATERAL.

DOWN SPOUTS

ALL DOWN SPOUTS UNABLE TO BE CONNECTED TO THE STORM LATERAL SHALL BE PUT THROUGH THE CURB AS PER ENGINEERS DIRECTION.

CURB OPENING SHALL NOT GREATER THAN A 3 1/2" DIAMETER.

THE WORK ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 609.

ITEM 651. TOPSOIL STOCKPILED

THE MATERIAL FOR THIS ITEM SHALL BE OBTAINED FROM AREAS WITHIN THE PROPOSED RIGHT-OF-WAY.

PROVISION OF THIS 651 ITEM SHALL NOT BE CONSTRUED AS A WAIVER OF THE PROVISIONS OF 201.4. SOD AND INCIDENTAL TOPSOIL REMOVED ELSEWHERE ON THIS PROJECT FOR SALVAGE, FOR USE AS DESCRIBED IN 203.04(e), SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE VARIOUS 203 ITEMS.

MANHOLES, CATCH BASINS, INLETS AND PIPES REMOVED OR ABANDONED

ALL CASTING AND PIPES SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT-OF-WAY FOR SALVAGE BY THE CITY. CONTACT THE CITY OF MASSILLON STREET SUPERINTENDENT - GEORGE PATTERSON AT 330-833-5746.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

ITEM 407. TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.08 GALLONS PER SQUARE YARD OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

ITEM 408. BITUMINOUS PRIME COAT

THE RATE OF APPLICATION OF THE 408 PRIME COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.40 GALLONS PER SQUARE YARD OF PRIME COAT FOR ESTIMATING PURPOSES ONLY.

REVIEW OF SANITARY AND DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE CITY OF MASSILLON AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE CITY OF MASSILLON.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE CITY OF MASSILLON.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

NOTIFICATION OF SAFETY FORCES

THE CONTRACTOR SHALL NOTIFY THE CITY OF MASSILLON FIRE DEPARTMENT, MASSILLON POLICE DEPARTMENT, CITY ENGINEER AND LOCAL (MASSILLON, TUSLAW JACKSON & PERRY) SCHOOL DISTRICT TRANSPORTATION SUPERVISOR, AND THE SAFETY & SERVICE DIRECTOR AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSING OR TRAFFIC CHANGE.

SANITARY / STORM WORK

THE FOLLOWING CONDUIT TYPES MAY BE USED FOR SANITARY SEWER: 707.44 SDR35, 706.08, 706.03, 706.02 WITH JOINTS AS PER 706.11 OR 706.12.

THE FOLLOWING CONDUIT TYPES MAY BE USED FOR STORM SEWER WITH MORE THAN (1) ONE FOOT OF COVER: 707.42, 706.08, 706.02, WITH JOINTS AS PER 706.10 OR 706.11.

THE FOLLOWING CONDUIT TYPES MAY BE USED FOR STORM SEWER WITH LESS THAN (1) ONE FOOT OF COVER: 706.02 WITH JOINTS AS PER 706.10 OR 706.11

CONNECTION TO EXISTING SEWERS

CONSTRUCTION OF THE NEW SEWER SHALL BE SCHEDULED AND PERFORMED SUCH THAT ALL NEW SEWER IS IN PLACE TESTED AND FOUND READY FOR ACCEPTANCE BEFORE THE ACTUAL CUTTING AND TYING INTO THE EXISTING SEWER IS PERFORMED.

INTERNAL TELEVISION INSPECTION

ALL SANITARY SEWERS 8" DIAMETER AND LARGER, MUST PASS INTERNAL TELEVISION INSPECTION. THE CONTRACTOR SHALL PROVIDE COMPLETE, INTERNAL INSPECTION VIDEOTAPE TO THE CITY OF MASSILLON ENGINEERING DEPARTMENT. THE VIDEOTAPING PROCEDURE MUST BE IN ACCORDANCE WITH SPECIFICATION SECTION 02743.

LATERAL LOCATIONS

ALL NEW LATERAL LOCATIONS SHALL BE DETERMINED IN THE FIELD. TO DETERMINE THE LOCATION THE CONTRACTOR SHALL SPEAK TO THE LAND OWNER FOR BEST SUITABLE LOCATION. ALL LOCATIONS MUST BE APPROVED BY ENGINEER.

ALL NEW LATERAL LOCATIONS TO BE FIELD CHECKED AND LOCATED BY THE CONTRACTOR PRIOR TO BACKFILLING.

LATERALS SHALL BE 6" CONDUIT TYPE B.

LATERAL PRICE SHALL INCLUDE ALL APPURTENANCES NECESSARY

EXISTING ROOF DRAINS, YARD DRAINS, OR FOUNDATION DRAINS SHALL BE CONNECTED TO THE 6" STORM SEWER LATERAL AND NOT THE SANITARY SEWER LATERAL.

IT IS PROHIBITED TO CONNECT ANY CLEAN WATER CONDUIT TO THE SANITARY SEWER.

THE FOLLOWING WORK SHALL BE PAID FOR UNDER ITEM 603 6" CONDUIT TYPE B 707.42.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 ITEM.

EXISTING DATA

EACH CONTRACTOR SHALL VISIT THE SITE PERSONALLY TO ASCERTAIN THE NATURE OF THE WORK AND BECOME THOROUGHLY FAMILIARIZED WITH THE SITE PRIOR TO BID SUBMISSION.

EXISTING STRUCTURES, GRADES, PIPING, ETC. ARE INDICATED IN APPROXIMATE LOCATION ON THE PLAN. INFORMATION SHOWN IS NOT GUARANTEED TO BE CORRECT AND COMPLETE. THE DATA SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. THE EXISTENCE OF FACILITIES ABOVE OR BELOW GROUND, WHICH MAY NOT BE SHOWN, WILL NOT BE A BASIS FOR A CLAIM FOR EXTRA WORK.

EXISTING UNDERGROUND UTILITIES SHOWN ARE RECORDS PROVIDED BY UTILITY COMPANIES AND ARE APPROXIMATE ONLY. SERVICE LATERALS ARE NOT SHOWN.

IT IS THE RESPONSIBILITY OF CONTRACTOR TO NOTIFY THE CITY, PRIOR TO BID OPENING, OF ANY NON-CONFORMING OR CONFLICTING INFORMATION.

CONSTRUCTION SPECIFICATIONS & STANDARDS

ALL CONSTRUCTION TO BE CITY OF MASSILLON SPECIFICATIONS AND STANDARDS, THE LATEST EDITION OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS AND FOLLOW ALL OSHA AND ADA REGULATIONS AND REQUIREMENTS.

CONTRACTOR AVAILABILITY

THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A 24 HOUR PHONE NUMBER WHERE THE CONTRACTOR SHALL BE AVAILABLE FOR EMERGENCIES.

PRESERVATION OF PRIVATE PROPERTY

THE CONTRACTOR SHALL PERFORM WORK AS TO NOT DISTURB, DAMAGE OR DESTROY ANY TELEPHONE OR POWER POLES, SIGNS, LANDSCAPING ITEMS, ETC. ANY ITEM DAMAGED OR DESTROYED SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ANY ITEM DISTURBED OR IN CONFLICT WITH THE WORK TO BE PERFORMED SHALL BE REMOVED AND RESET AT THE CONTRACTOR'S EXPENSE. PRIOR ENGINEER APPROVAL IS REQUIRED BEFORE ANY OF THE ABOVE ITEMS ARE PERFORMED.

PRESERVATION OF PROPERTY CORNERS AND SURVEY MARKERS

THE CONTRACTOR SHALL PRESERVE ALL CORNERSTONES, IRON PINS, CONCRETE MONUMENTS ANY TYPE OF LAND MONUMENT. HE SHALL HAVE ALL LAND MONUMENTS IN THE PROXIMITY OF THE WORK REFERENCED. HE SHALL REPLACE DESTROYED OR DAMAGED MONUMENTS AND SHALL FURNISH A CERTIFICATION BY AN OHIO REGISTERED SURVEYOR THAT THE MONUMENTS HAVE BEEN RESTORED.

EXCAVATED MATERIAL

ALL EXCAVATED MATERIAL AND ALL MATERIAL USED IN CONSTRUCTION OF THE WORK SHALL BE PILED IN A MANNER THAT WILL NOT ENDANGER THE WORK AND THAT WILL LEAVE DRIVEWAYS OR OTHER CONTROLS UNOBSTRUCTED AND ACCESSIBLE WHILE THE WORK IS TO BE COMPLETED. SATISFACTORY PROVISIONS SHALL BE MADE FOR STREET DRAINAGE, AND NATURAL WATERCOURSES SHALL NOT TO BE OBSTRUCTED. DURING THE PROGRESS OF THE WORK, ALL MATERIAL PILES SHALL BE KEPT TRIMMED UP AND MAINTAINED IN A NEAT MANNER. ALL EXCAVATED WASTE MATERIAL SHALL BE REMOVED FROM THE PROJECT SITE, AS DIRECTED BY THE ENGINEER. THE WASTE SITE IS TO BE PROVIDED BY THE CONTRACTOR AT NO COST TO THE CITY. UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS. ALONG WITH A LETTER FROM THE PROPOSED WASTE SITE OWNER PERMITTING SUCH AND HOLDING THE CITY HARMLESS.

PRESERVATION OF EXISTING UTILITY SERVICES

ANY EXISTING WATER LINE, SANITARY SEWER, STORM SEWER, GAS LINE OR OTHER UTILITY IN OR OUTSIDE OF THE CONSTRUCTION LIMITS, DAMAGED DURING CONSTRUCTION OF THE PROPOSED PROJECT, WILL BE REPLACED AT THAT CONTRACTORS EXPENSE.

ITEM 623. CONSTRUCTION STAKING

CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND UPON COMPLETION OF PROJECT AS-BUILT DRAWINGS ARE REQUIRED.

THIS WORK IS TO BE UNDER ITEM 623 CONSTRUCTION STAKING.

SUBSURFACE CONDITIONS

IT IS THE OBLIGATION AND RESPONSIBILITY OF THE BIDDER TO MAKE HIS OWN INVESTIGATIONS OF SUBSURFACE CONDITIONS PRIOR TO SUBMITTING HIS PROPOSAL. THE BIDDER MAY EXAMINE THE RECORDS OF ALL BORINGS, TEST EXCAVATIONS AND OTHER SUBSURFACE INVESTIGATIONS, IF ANY, MADE SOLELY FOR DESIGN PURPOSES FOR THE OWNER. SAID BORINGS, TEST EXCAVATIONS AND OTHER SUBSURFACE INVESTIGATIONS, ARE NOT A PART OF THE CONTRACT DOCUMENTS, EXCEPT TO THE EXTENT THAT THE RESULTS THEREOF ARE SPECIFICALLY SHOWN ON THE PLANS OR INCLUDED IN THE SPECIFICATIONS AND ARE NOT WARRANTED TO SHOW THE ACTUAL SUBSURFACE CONDITIONS. THE CONTRACTOR AGREES THAT THEY WILL MAKE NO CLAIM AGAINST THE OWNER OR THE ENGINEER IF, IN CARRYING OUT THE WORK, HE FINDS THAT THE ACTUAL SUBSURFACE CONDITIONS ENCOUNTERED DO NOT CONFORM TO THOSE INDICATED BY SAID BORINGS, TEST EXCAVATIONS AND OTHER SUBSURFACE INVESTIGATIONS.

PAVEMENT DESIGN

PAVEMENT DESIGN CRITERIA SHALL BE BASED UPON SITE-SPECIFIC SOIL CONDITIONS AND DRAINAGE OF THE SITE. IN CERTAIN CASES, SOIL BORINGS AND OTHER SUBSURFACE INVESTIGATIONS MAY BE NECESSARY AS REQUIRED BY THE CITY ENGINEER. ALL PAVEMENT DESIGNS AND SOILS INFORMATION SHALL BE SUBMITTED TO THE MASSILLON CITY ENGINEER FOR HIS APPROVAL PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.

RESTORATION

FOR SANITARY SEWER INSTALLED, TESTED, AND ACCEPTED UP TO MAY 15TH OF ANY CALENDAR YEAR, RESTORATION SHALL BE COMPLETE BY JUNE 30TH OF THAT YEAR. FOR INSTALLATION OF SANITARY SEWER TESTED AND ACCEPTED FROM MAY 15TH TO SEPTEMBER 30TH OF ANY CALENDAR YEAR, RESTORATION SHALL BE COMPLETE BY NOVEMBER 15TH OF THAT CALENDAR YEAR. FOR SANITARY SEWER INSTALLED, TESTED, AND ACCEPTED AFTER NOVEMBER 15TH OF ANY CALENDAR YEAR, RESTORATION SHALL BE COMPLETE BY MAY 15TH OF THE NEXT CALENDAR YEAR.

ALL SOIL AREAS DISTURBED BY THE CONTRACTOR SHALL BE TOPSOILED, SEEDED AND MULCHED. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR EACH ITEM OF AFFECTED WORK. TOPSOIL, SEEDING AND MULCHING SHALL NOT BE A SEPARATE PAY ITEM. THIS INCLUDES BACKFILLING, SEEDING AND MULCHING ALONG THE EDGE OF ALL PAVEMENT RESTORATION.

PAVEMENT CROSSINGS WILL RECEIVE TYPE C PAVEMENT REPLACEMENT WITH FULL WIDTH PAVEMENT OVERLAY.

CONTRACTOR TO REPLACE ALL PAVEMENT MARKINGS. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR PAVEMENT.

CONTRACTOR TO USE HOT APPLIED JOINT CRACK SEALER ON ASPHALT PAVEMENT AT ALL ENDS AND INTERSECTIONS.

ALL TRENCHES IN ROAD RIGHT OF WAY WILL RECEIVE FULL DEPTH PREMIUM GRANULAR BACKFILL.

MAINTENANCE OF TRAFFIC

THE CONTRACTOR SHALL SUPPLY A MAINTENANCE OF TRAFFIC PLAN TO THE CITY OF ENGINEER.

MAINTENANCE OF TRAFFIC PLAN MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO ANY CONSTRUCTION COMMENCING.

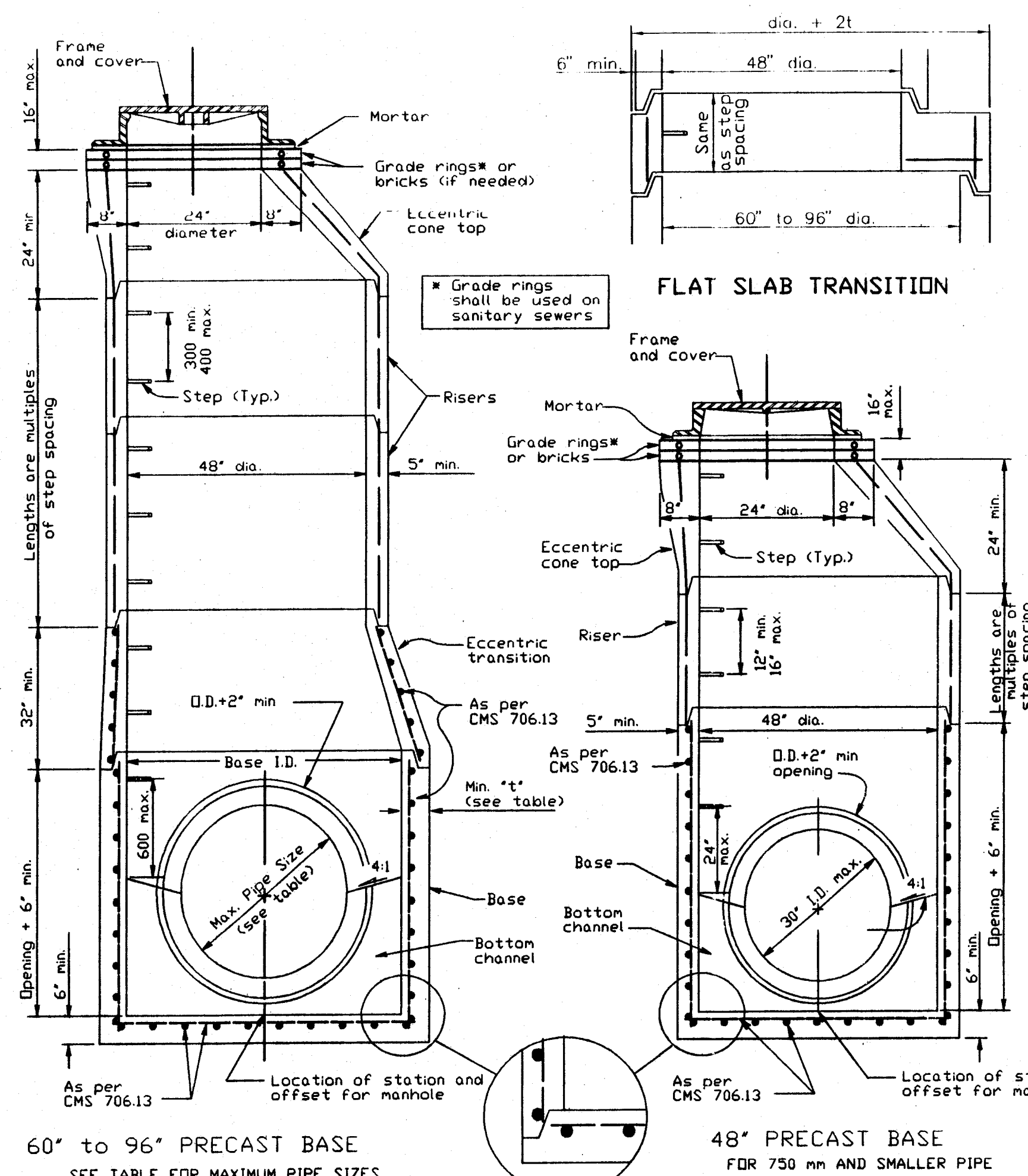
ACCESSIBILITY TO PRIVATE PROPERTY

ACCESS TO ALL DRIVEWAYS AND PARKING AREAS WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES EXCEPT WHILE LAYING THE SANITARY SEWER ACROSS THE DRIVE. THE TRENCH SHALL BE BACKFILLED AT THE END OF EACH WORK DAY TO PROVIDE ACCESS. THE CONTRACTOR MUST NOTIFY EACH PROPERTY OWNER AT LEAST 24 HOURS IN ADVANCE OF CUTTING THEIR DRIVEWAY.

FINAL APPROVAL

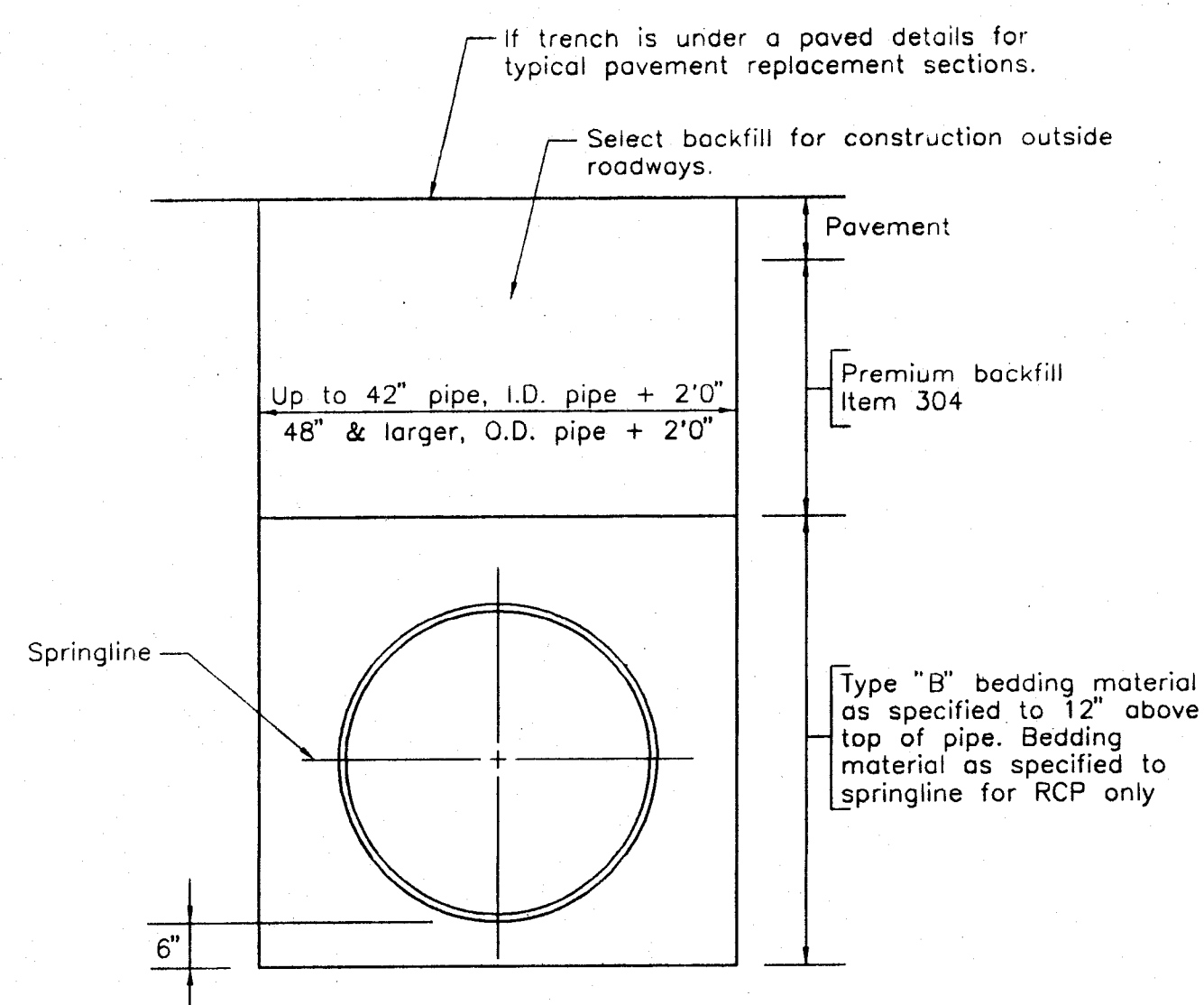
A VIDEO TAPE WILL BE MADE BY THE CONTRACTOR AND SUBMITTED TO THE CITY PRIOR TO THE PROJECT COMMENCING. AFTER THE FINAL INVOICE IS RECEIVED THE SITE WILL BE VIDEO TAPED AGAIN BY THE CONTRACTOR. ANY DISCREPANCIES WILL BE RESOLVED PRIOR TO FINAL PAYMENT.

COST OF THIS WORK SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

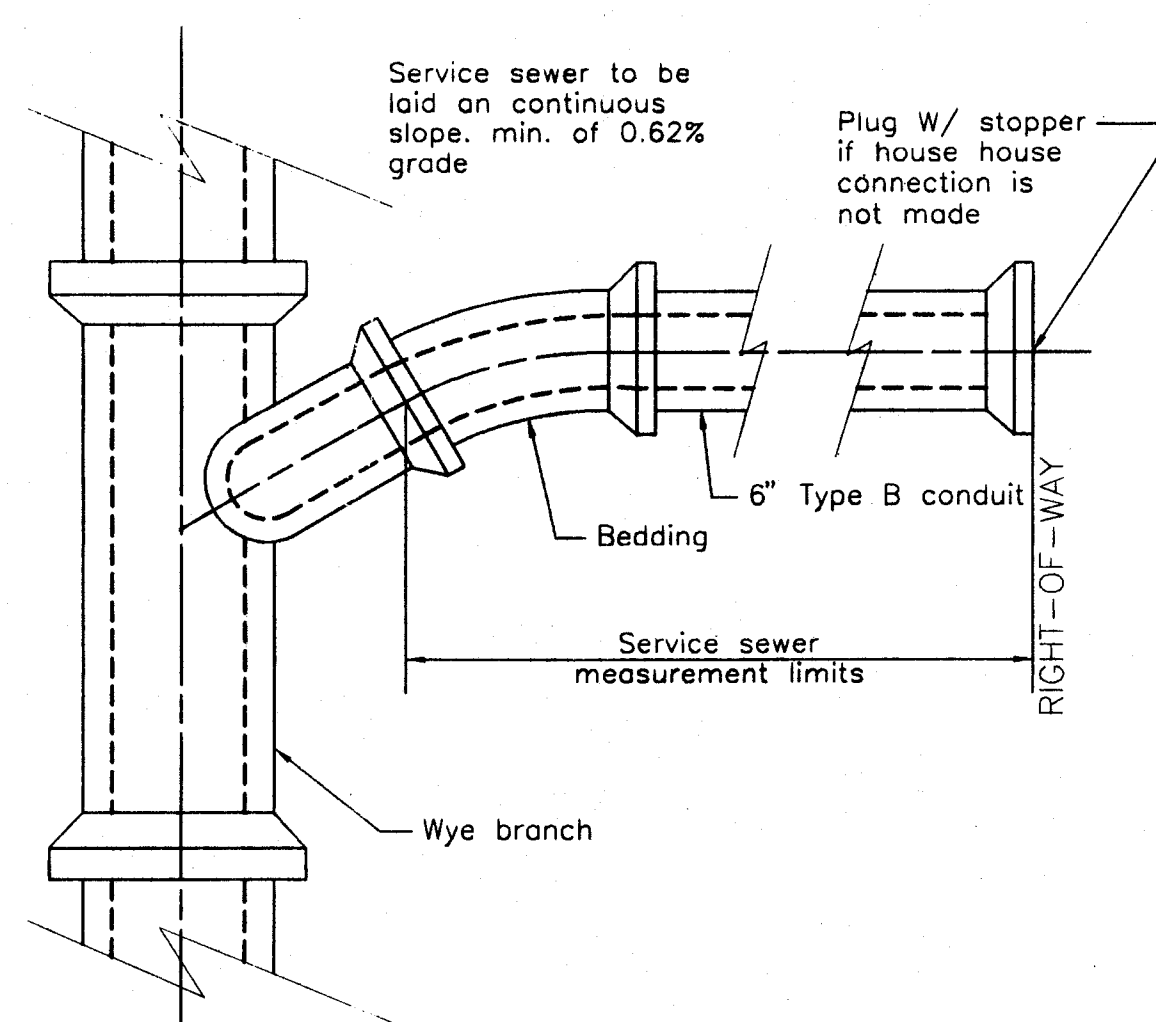


SECTION VIEWS OF REINFORCED PRECAST MANHOLES

MANHOLE TYPE 3

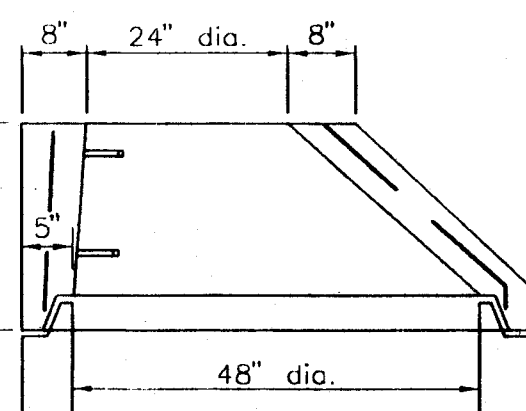


BEDDING AND TRENCH DETAIL
TYPE "B" BEDDING

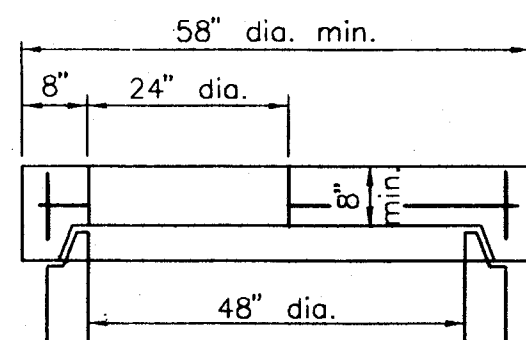


STANDARD SERVICE CONNECTION

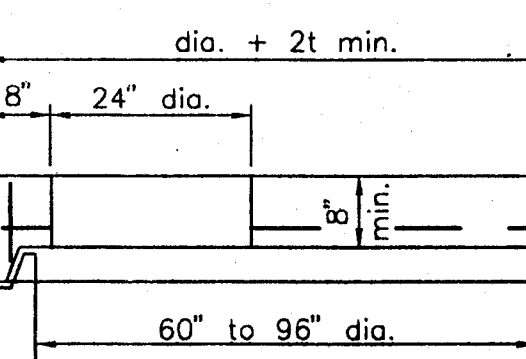
Base I.D.	Min. "t"	Max. Pipe Size
60"	5"	36"
72"	6"	48"
84"	7"	54"
90"	7 1/2"	60"
96"	8"	60"



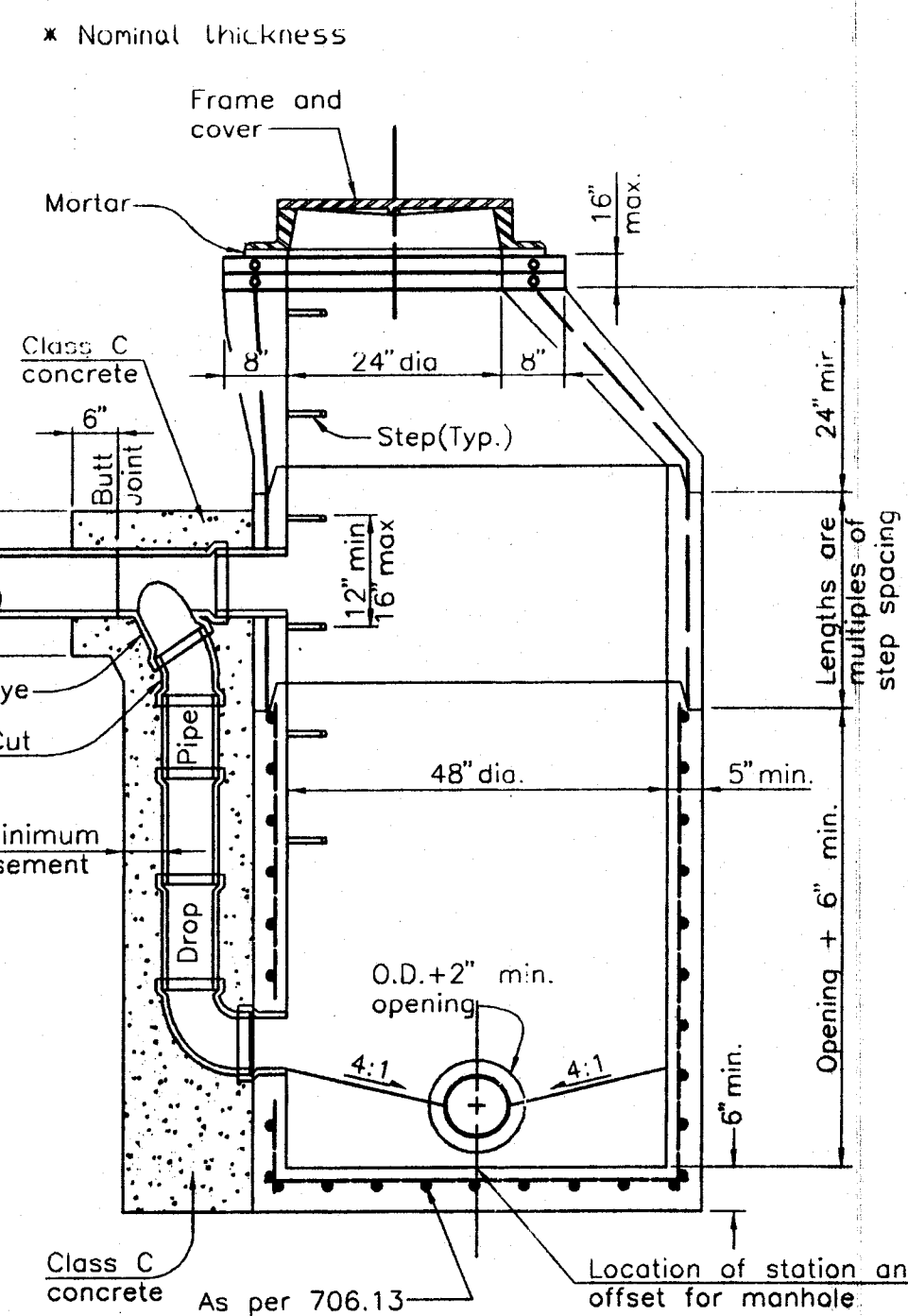
ALTERNATE
ECCENTRIC CONE TOP



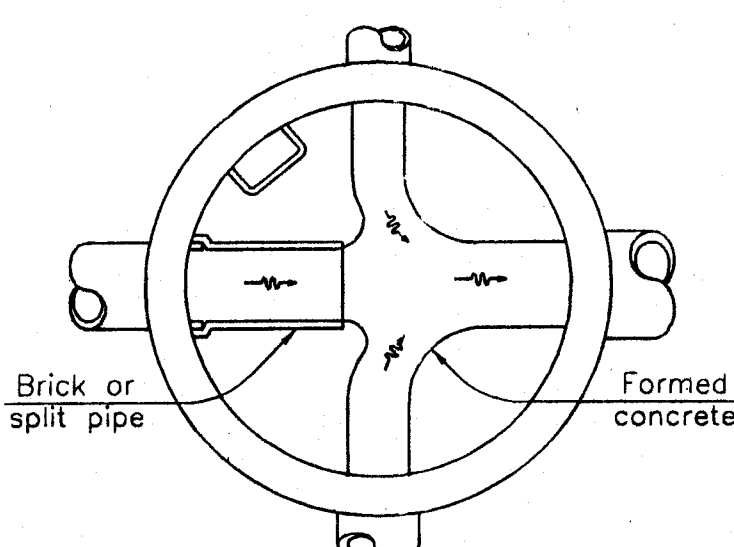
FLAT SLAB TOP



FLAT SLAB TOP

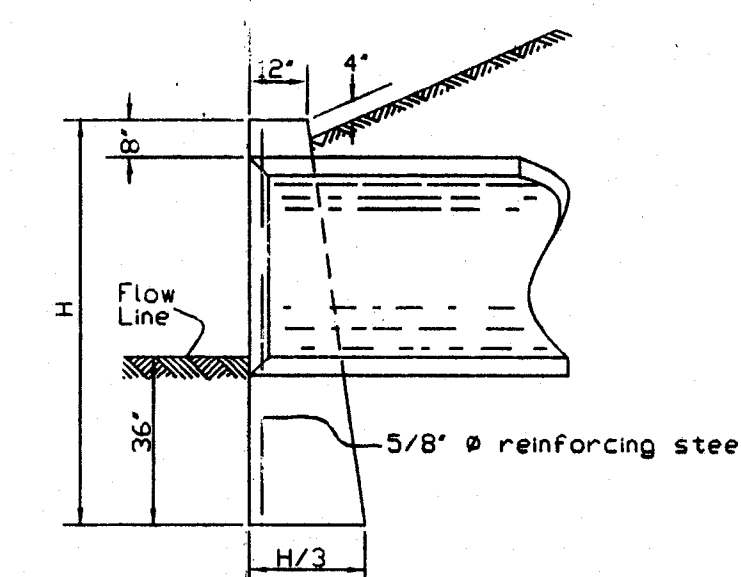


STANDARD DROP MANHOLE

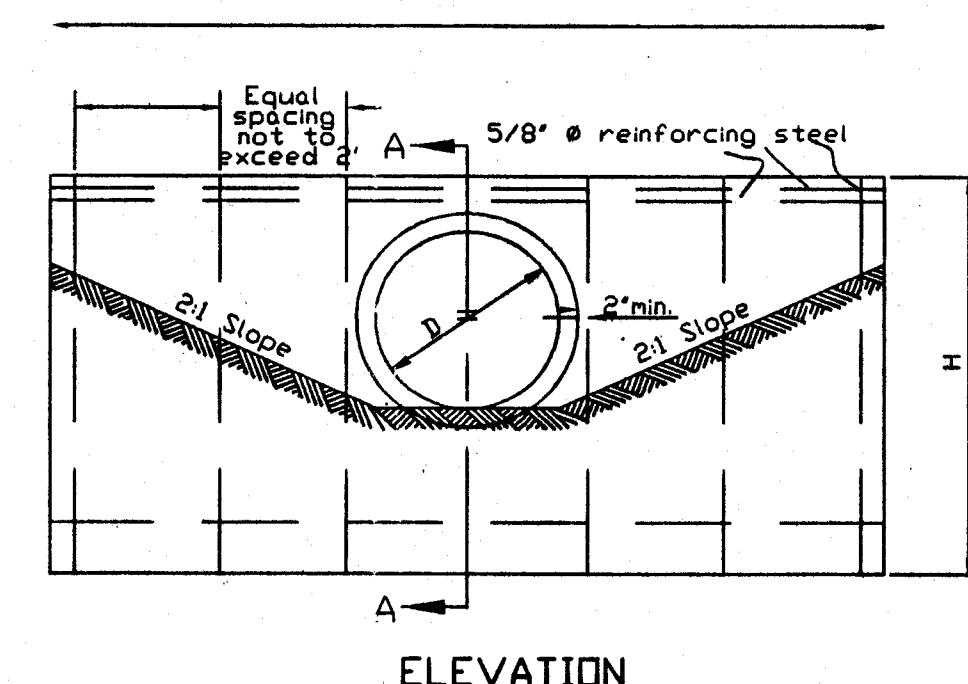


SECTION BELOW SPRING LINE

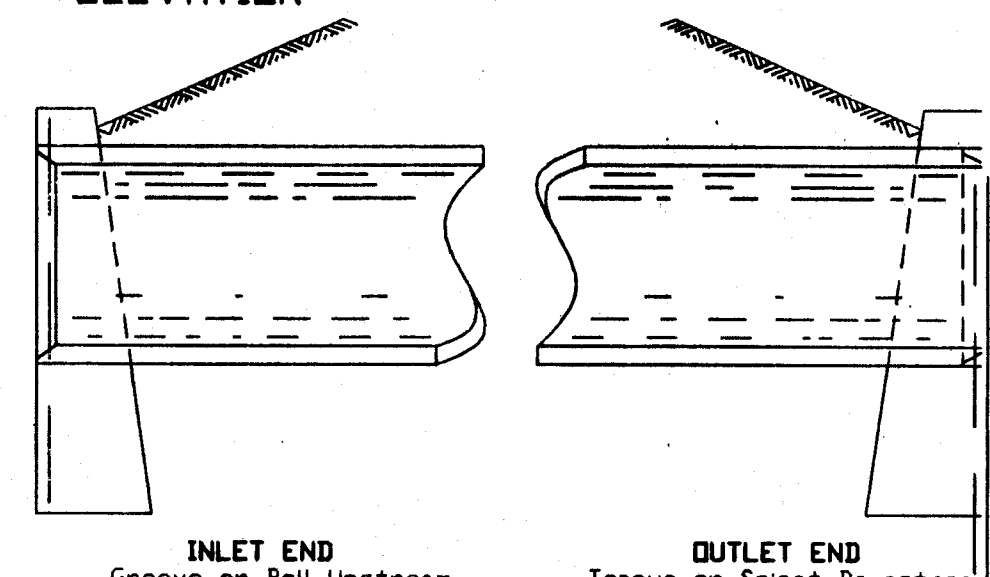
Showing method of turning side drain which enter the manhole at the flowline



SECTION A-A



ELEVATION



RIGID PIPE
END TREATMENT AT HEADWALL

NO. 1 HEADWALL: Where required will be provided for non-skewed culverts having a diameter or rise of 36 inches or less.

CONCRETE: Concrete shall be Class C.

REINFORCING STEEL: Bars shall be #5 and epoxy coated.

DETAILS AND QUANTITIES: Are shown for circular sections only. When used with reinforced elliptical concrete pipe or corrugated metal pipe arches, it will be necessary to adjust dimensions and quantities to conform to those listed for the nearest size circular pipe. The dimensions established by vertical diameter shall apply to rise, and dimensions established by horizontal diameter shall apply to span. All calculated dimensions shall be rounded to the nearest 1/4 inch. Changer all exposed corners 3/4 of an inch.

FOUNDATION: Where the soil borings indicate a bearing capacity of less than 2600 pounds, it will be necessary to increase the width of the footing.

HEADWALL LOCATION: To be determined by the intersection of the embankment slope at the back of the headwall at Point 'K'. The slopes adjacent to the headwall shall be 2:1.

Diameter	DIMENSIONS		QUANTITIES ONE HEADWALL	
	M	L	Concrete (C.Y.)	Reinforcing Steel (lbs.)
15"	5'-2"	7'-0"	1.7	41
18"	5'-5"	8'-4"	2.2	57
21"	5'-8"	9'-8"	2.8	62
24"	5'-11"	11'-0"	3.3	69
30"	6'-5"	13'-8"	4.7	92
36"	7'-0"	16'-4"	6.5	105

L = Circular Sections = $5D + 4t$
 L = Elliptical or Pipe-Arch = $4R + 4t + S$
 H = Circular Sections = $D + t + 44$
 H = Elliptical or Pipe-Arch = $R + t + 44$
 D = Diameter of Pipe
 R = Rise of Pipe
 S = Span of Pipe
 t = Thickness of Barrel
 L = Length of Headwall
 H = Height of Headwall

FULL-HEIGHT HEADWALL - HW-1

NOTES

GENERAL: With normal soil and site conditions this standard precast manhole may be used for any required manhole depth.

Sections of the precast manhole shall be cast and assembled with either all tongue or all groove ends up. Lift holes may be provided in each section for handling.

TOP AND TRANSITION (OR REDUCER): This section shall be a flat slab unless an eccentric cone is specified.

BASE: Manhole No. 3 is shown with a monolithic floor and riser which may be cast in one or two operations. A permissible alternate is to cast and ship the floor and barrel separately. Openings for inlet and outlet pipes shall be provided, either when bottom channels may be formed of concrete, precast in the base or field constructed as shown.

RISER SECTIONS: Openings for 18" and smaller inlet pipes may be either prefabricated, or cut in the field provided the sides of the pipe at the springline do not project into the manhole.

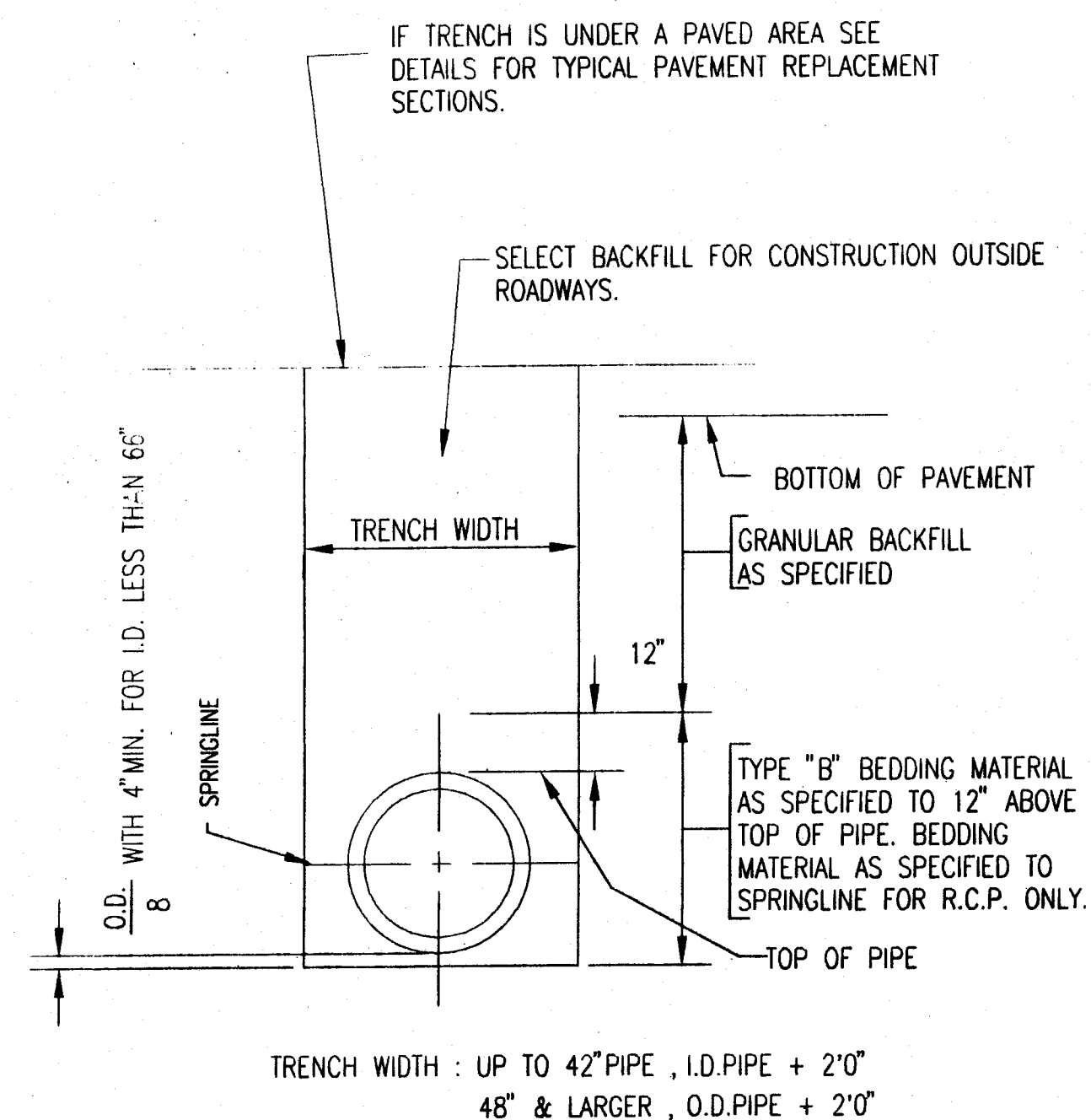
CONNECTIONS: Connections between precast manhole sections and pipes on sanitary sewers may be sealed with resilient connectors conforming to ASTM C 923.

JOINT SEAL: Seal between precast manhole sections on sanitary sewers shall be resilient and flexible gasket joints per CMS 706.11.

MATERIALS: Materials for bases and other precast sections, including reinforcement not specified hereon, shall comply with the requirements of CMS 706.13.

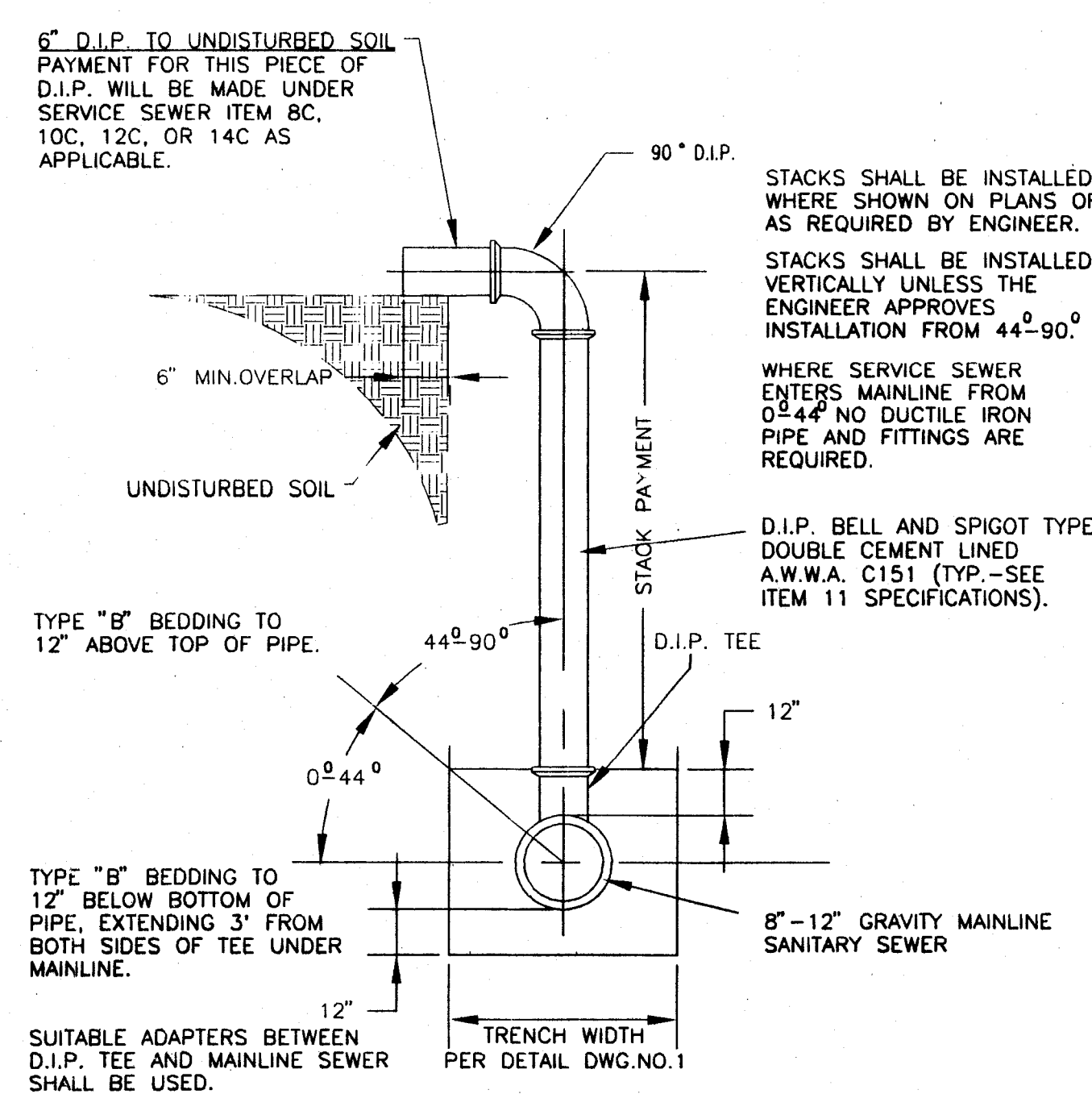
DROP PIPE: When specified on the plans, drop pipe shall be constructed as shown on MH-3IM.

STEPS, FRAMES AND COVERS: Shall comply with the requirements set forth on MH-1IM.

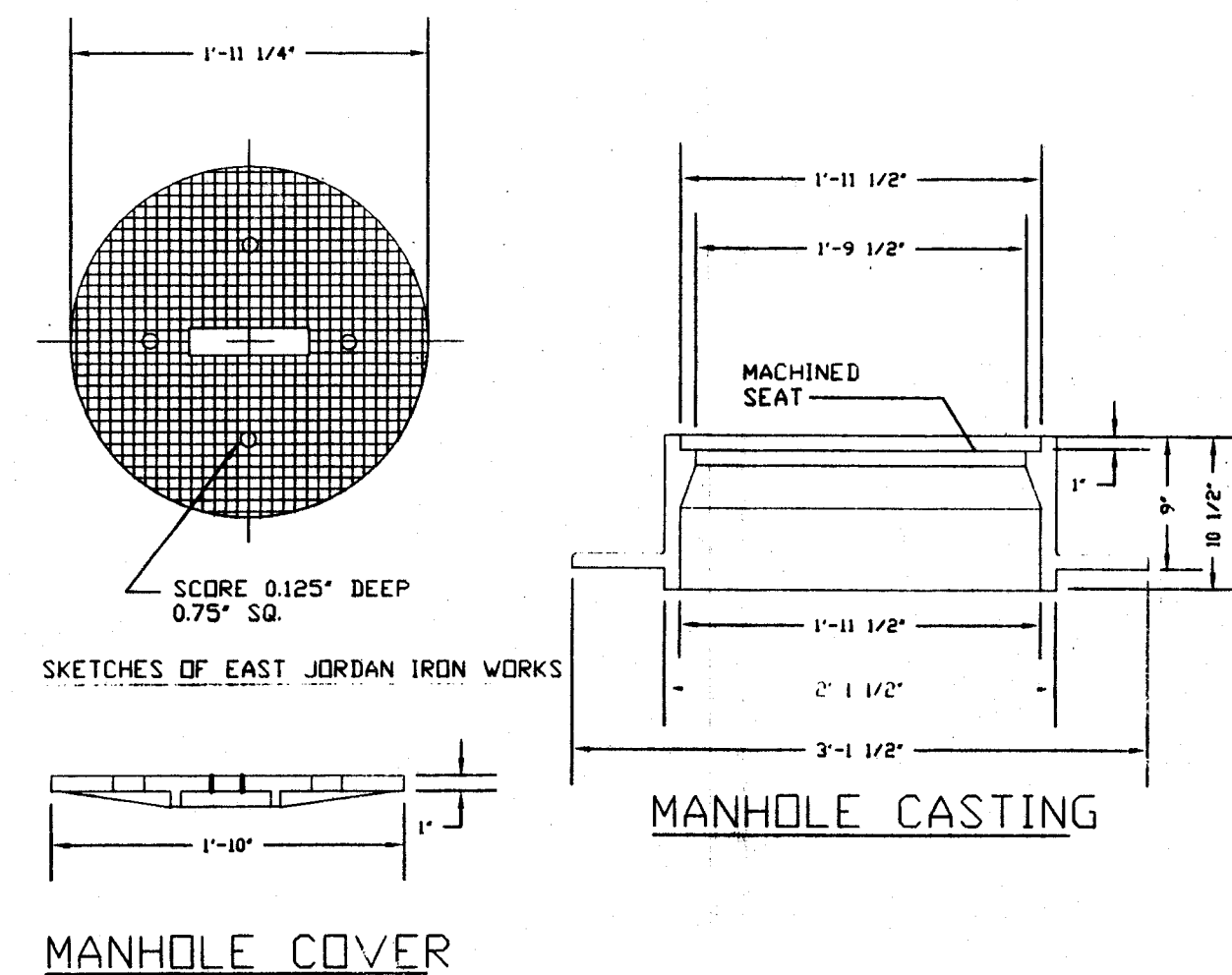


* STARK COUNTY BEDDING CLASSIFICATION TYPE B MEETS OR EXCEEDS ASTM D-2321 CLASS 1 BEDDING FOR FLEXIBLE PIPING, AND ASTM C-12, CLASS B BEDDING FOR RIGID PIPING.

**BEDDING AND TRENCH DETAIL
TYPE "B" BEDDING**



**SERVICE STACK
8"-12" MAINLINE**



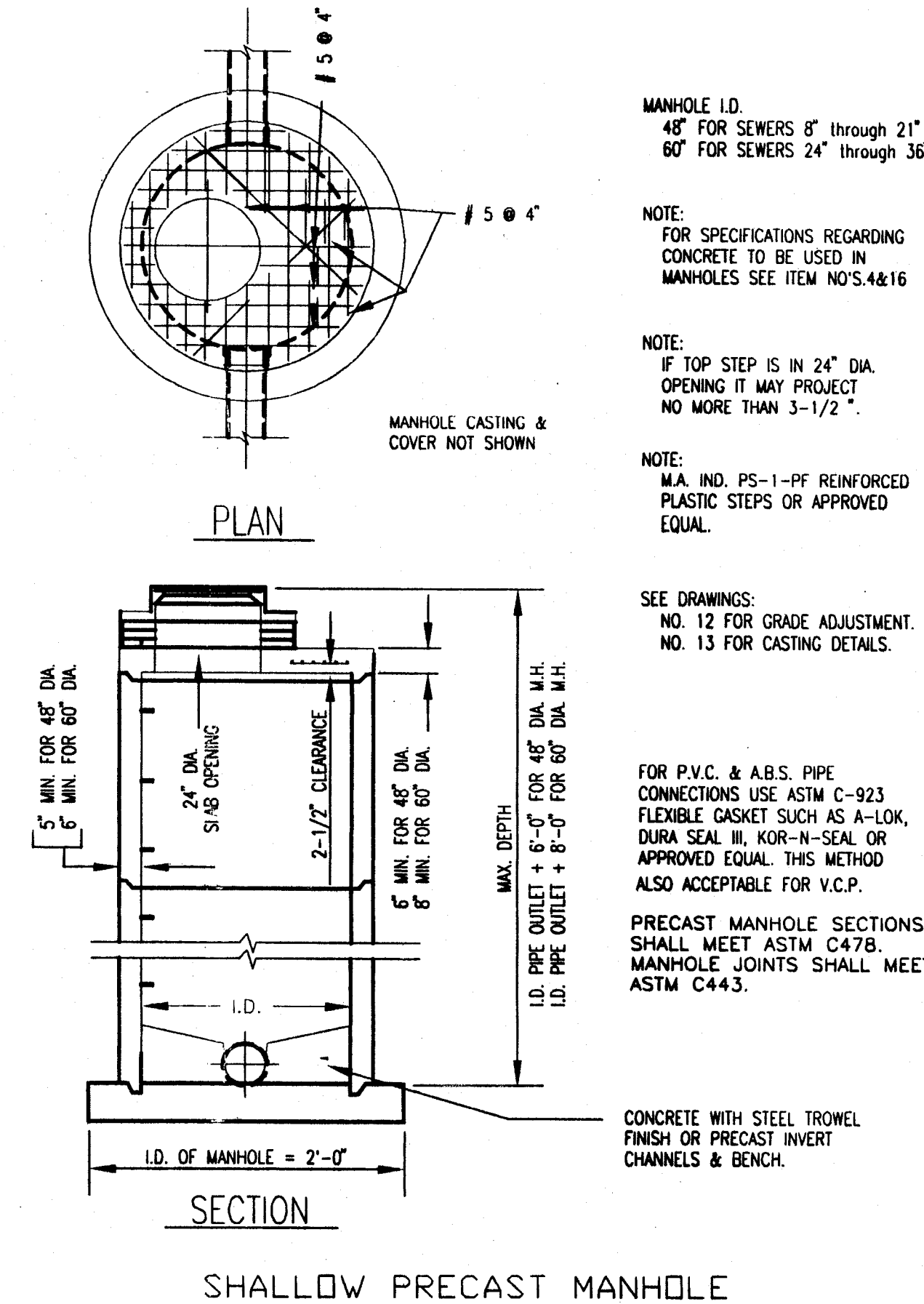
EAST JORDAN IRON WORKS NO. 2015 W/TYPE 'C' VENT COVER
EAST AKRON CASTING CO. CASTING NO. 155, COVER NO. 156 OR APPROVED EQUAL

WATERPROOF CASTING AND COVER

NOTE: COVER SHALL BEAR THE WORDS: "SANITARY SEWER" OR "SAN. SEWER"

ALL CAST IRON SHALL CONFORM TO ASTM A48, CLASS 350 IRON. CASTING WEIGHT: APPROX. 319 LBS. COVER WEIGHT: APPROX. 131 LBS.

MANHOLE CASTING AND COVER



MANHOLE I.D.
48" FOR SEWERS 8" through 21"
60" FOR SEWERS 24" through 36"

NOTE: FOR SPECIFICATIONS REGARDING CONCRETE TO BE USED IN MANHOLES SEE ITEM NO'S 4&16

NOTE: IF TOP STEP IS IN 24" DIA. OPENING IT MAY PROJECT NO MORE THAN 3-1/2"

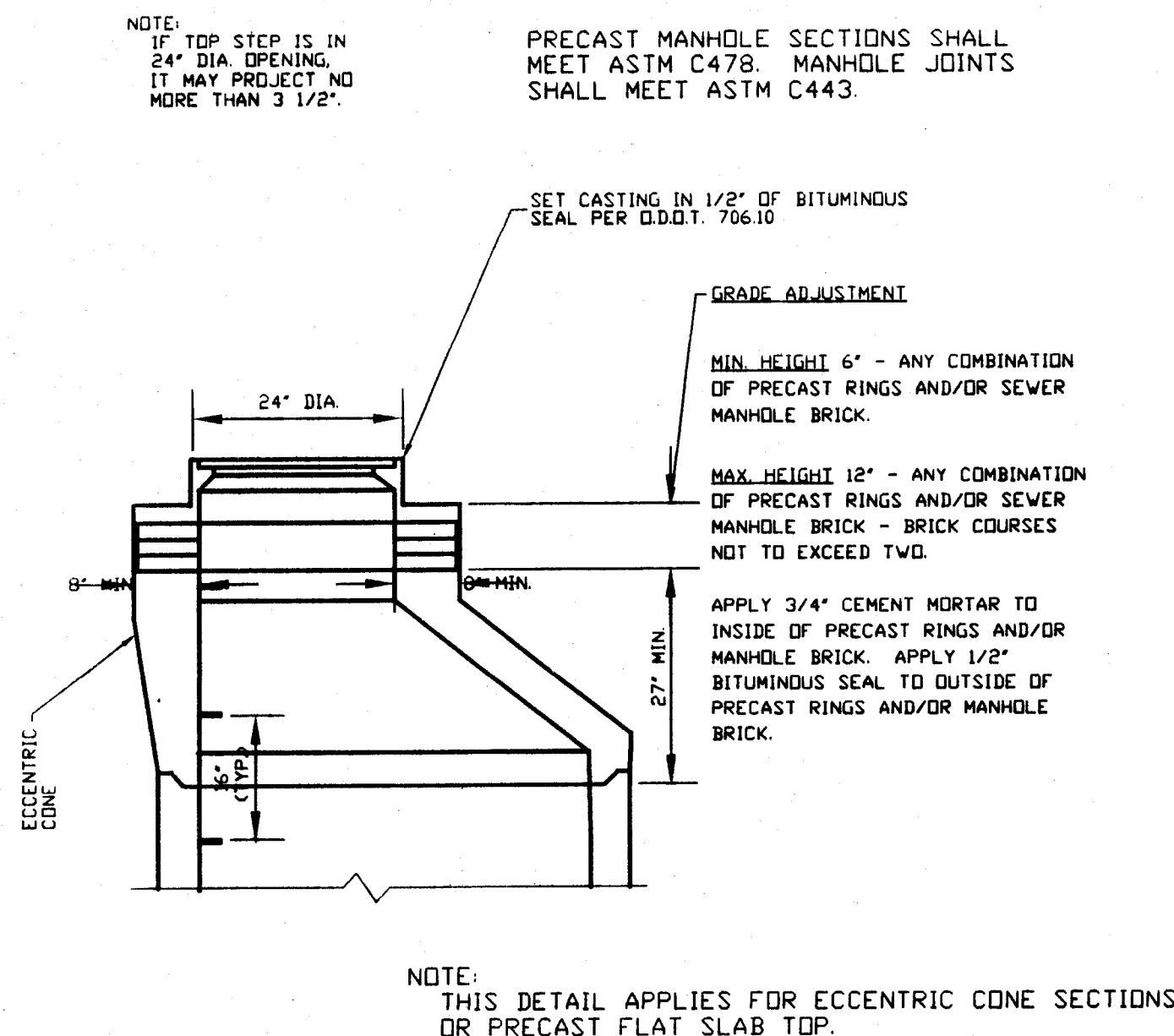
NOTE: M.A. NO. PS-1-PF REINFORCED PLASTIC STEPS OR APPROVED EQUAL.

SEE DRAWINGS:
NO. 12 FOR GRADE ADJUSTMENT.
NO. 13 FOR CASTING DETAILS.

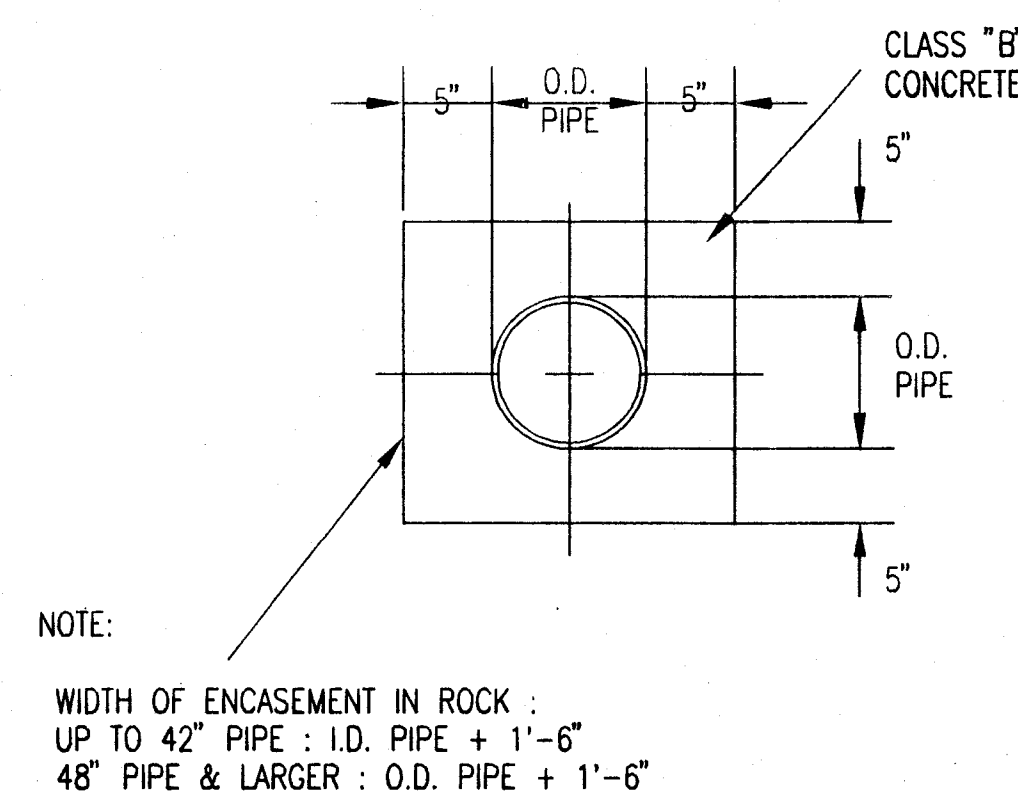
FOR P.V.C. & A.B.S. PIPE CONNECTIONS USE ASTM C-923 FLEXIBLE GASKET SUCH AS A-LOK, DURA SEAL III, KOR-N-SEAL OR APPROVED EQUAL. THIS METHOD ALSO ACCEPTABLE FOR V.C.P.

PRECAST MANHOLE SECTIONS SHALL MEET ASTM C478. MANHOLE JOINTS SHALL MEET ASTM C443.

CONCRETE WITH STEEL TROWEL FINISH OR PRECAST INVERT CHANNELS & BENCH.

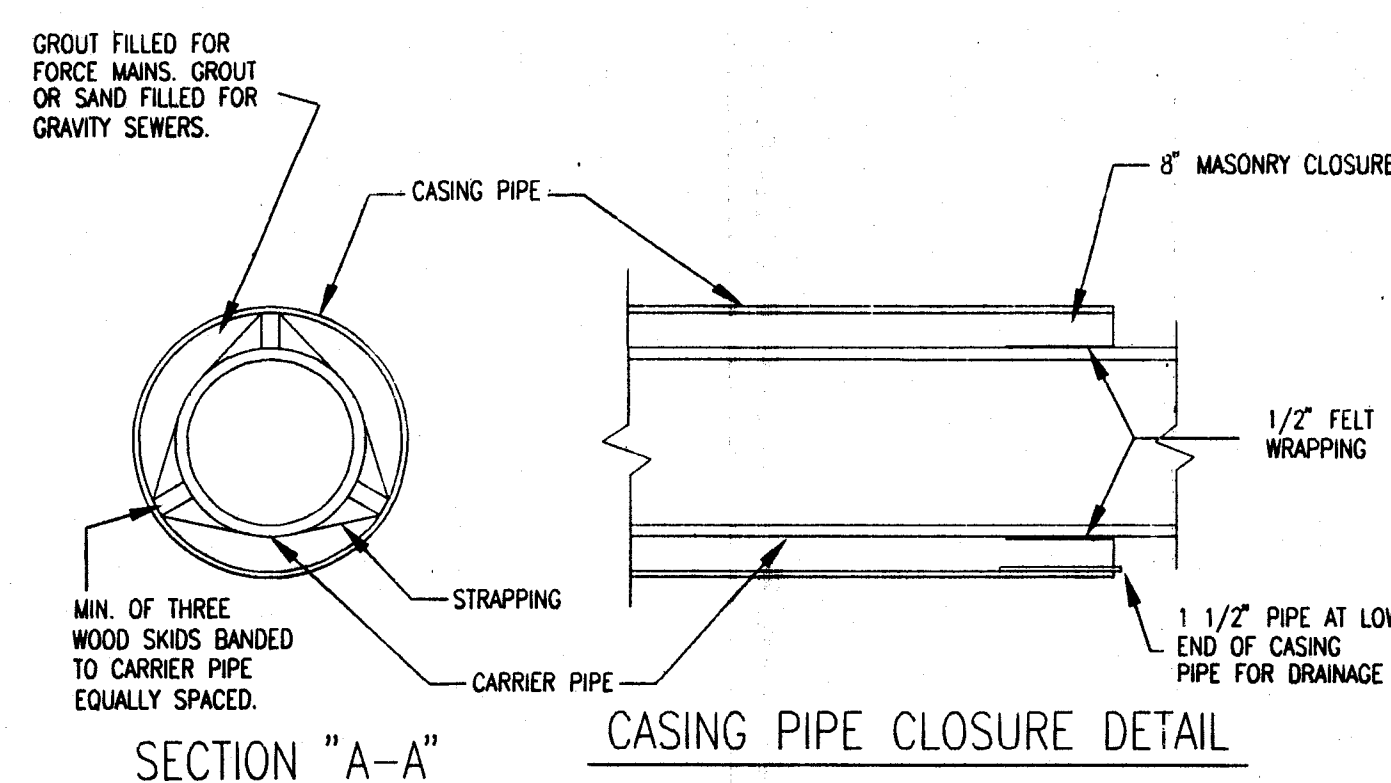


**MANHOLE
GRADE ADJUSTMENT
DETAIL**



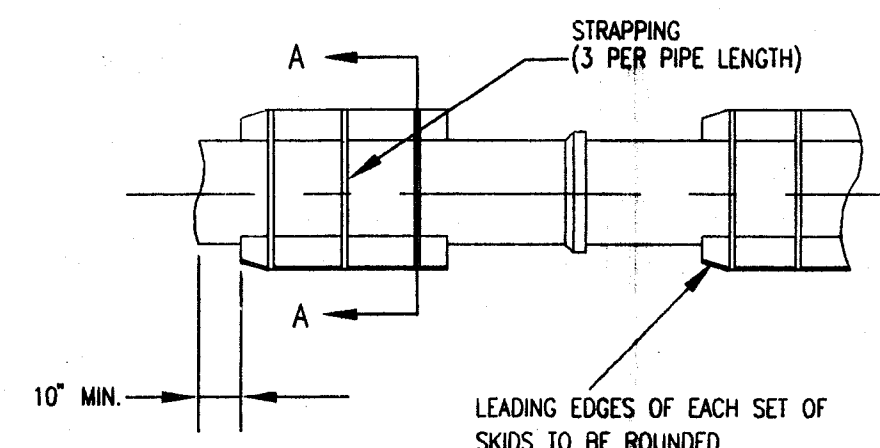
NOTE: WIDTH OF ENCASEMENT IN ROCK:
UP TO 42" PIPE : I.D. PIPE + 1'-6"
48" PIPE & LARGER : O.D. PIPE + 1'-6"

**PIPE
ENCASEMENT**



SECTION "A-A"

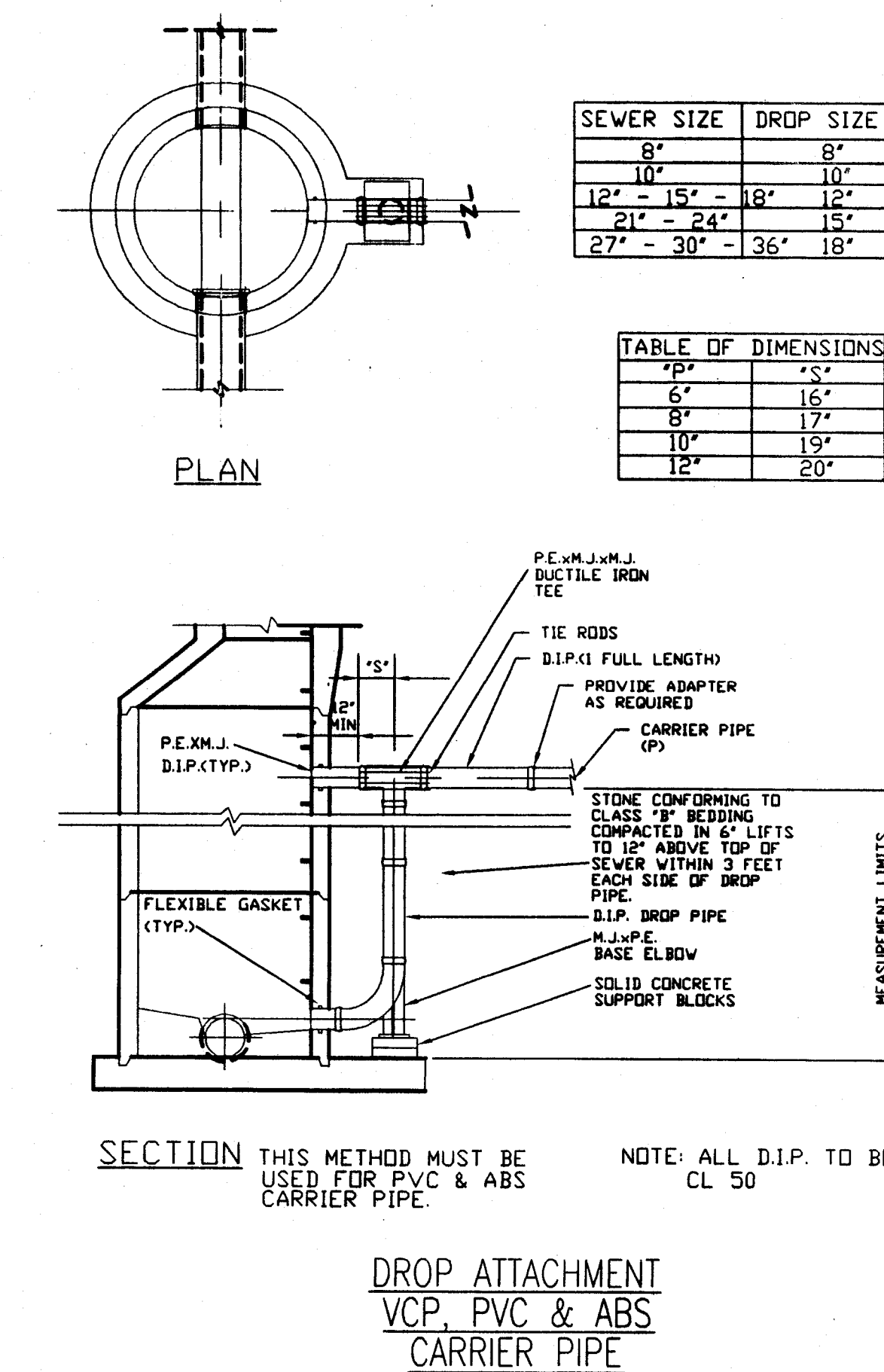
CASING PIPE CLOSURE DETAIL



PIPE SKID DETAIL

CASING PIPE EQUAL TO TWICE THE I.D. OF CARRIER PIPE FOR PUSH-ON-JOINT PIPE. FOR D.C.I.P. W/MECH. JOINTS & FOR R.C.P. CASING PIPE TO BE TWO SIZES LARGER THAN TWICE THE CARRIER PIPE I.D.

PIPE BORING



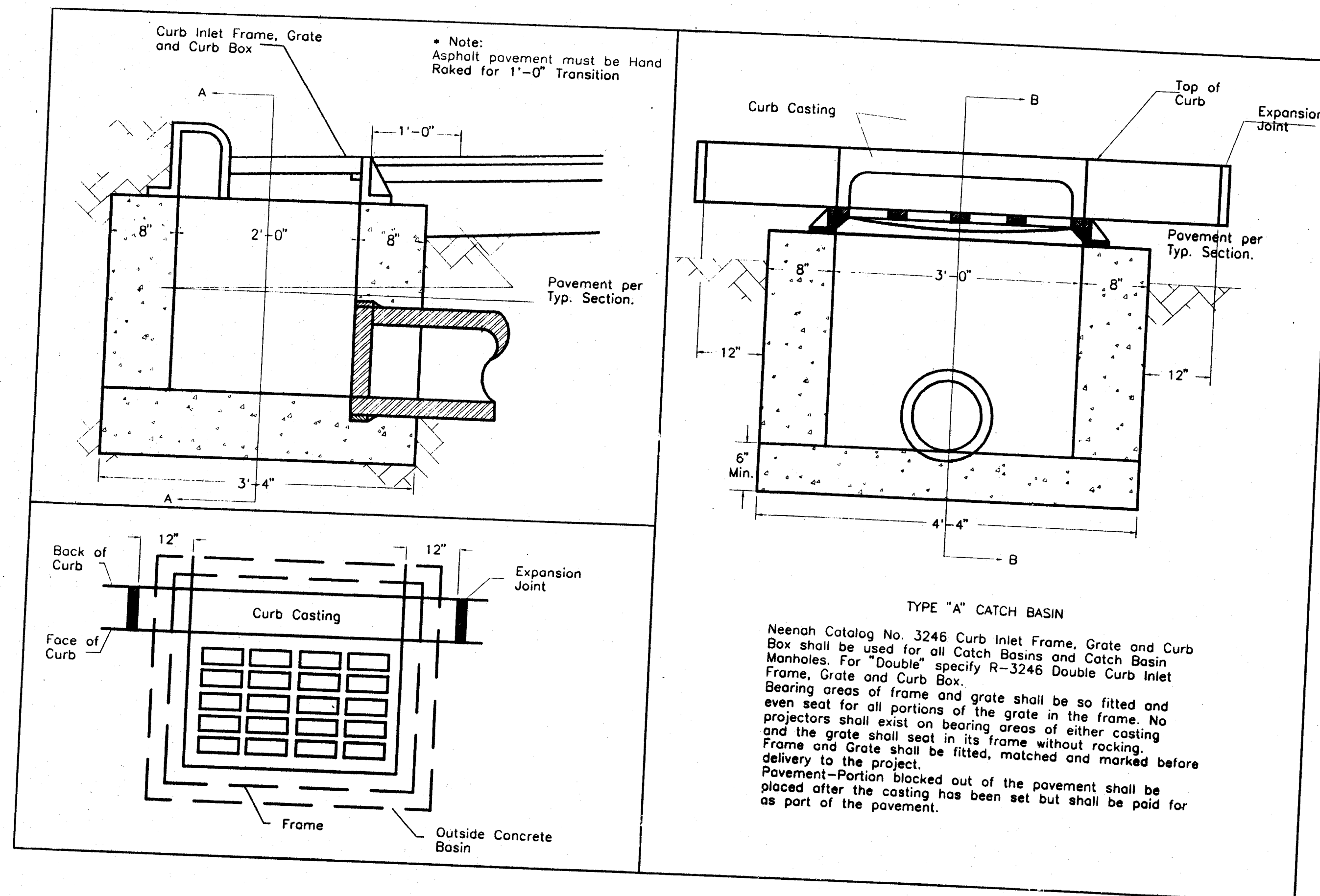
SECTION

**DROP ATTACHMENT
VCP, PVC & ABS
CARRIER PIPE**

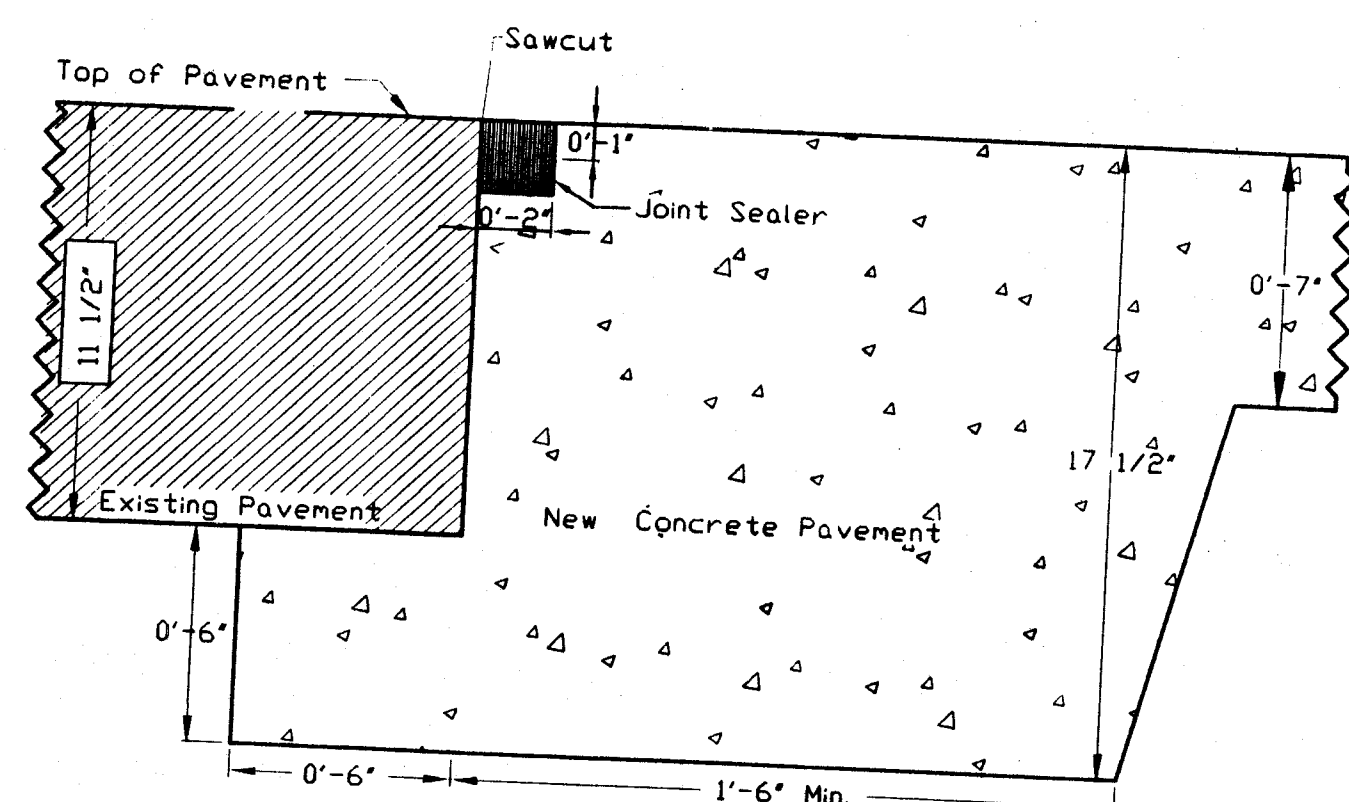
SEWER SIZE	DROP SIZE
8"	8"
10"	10"
12" - 15"	12"
21" - 24"	15"
27" - 30"	18"

TABLE OF DIMENSIONS	
"P"	"S"
6"	16"
8"	17"
10"	19"
12"	20"

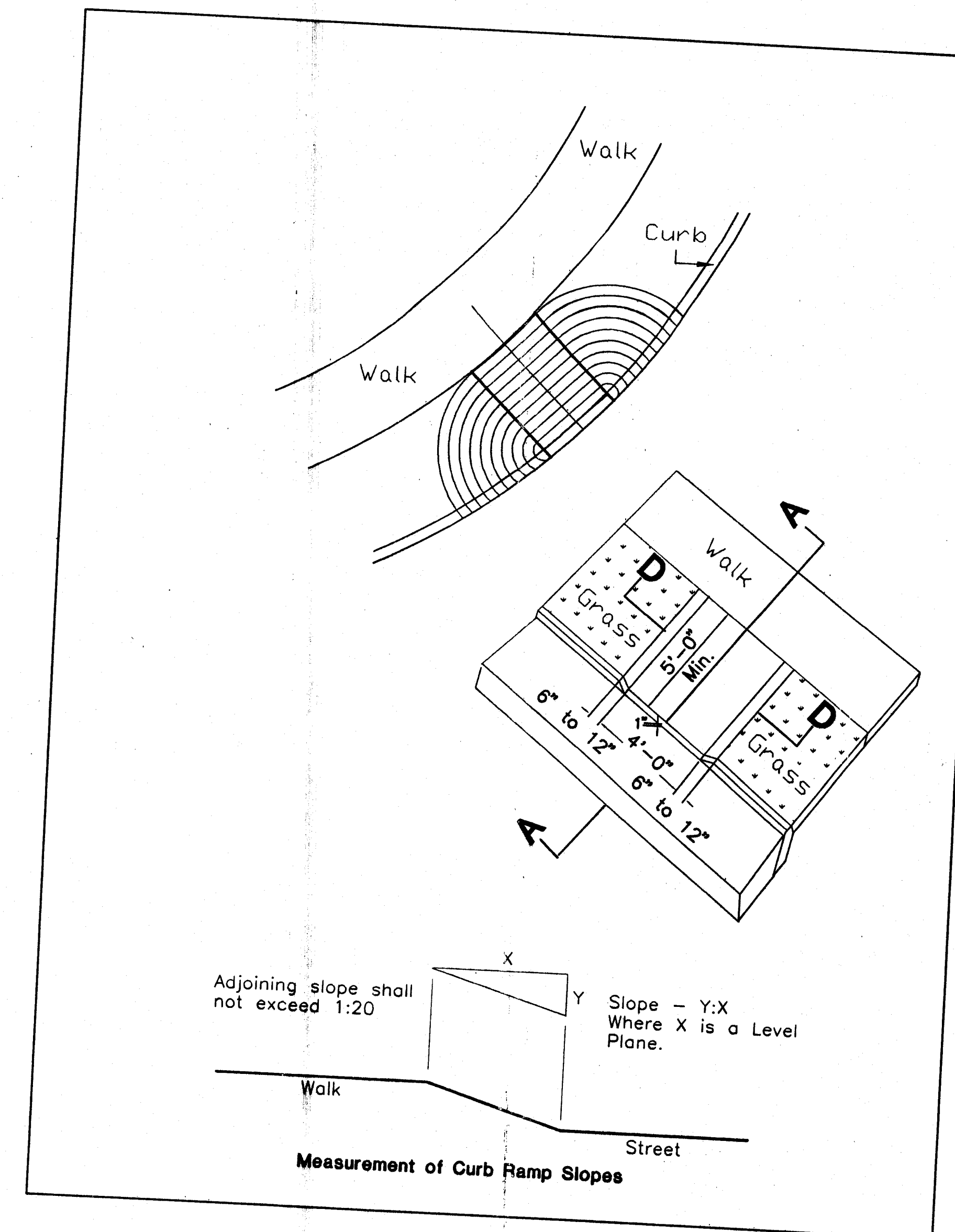
NOTE: ALL D.I.P. TO BE CL 50



TYPE "A" CATCH BASIN
NOT TO SCALE



EXISTING ASPHALT/CONCRETE PAVEMENT DETAIL
NOT TO SCALE



O.D.O.T. TYPE 2 HANDICAP RAMP
NOT TO SCALE

SANITARY SEWER

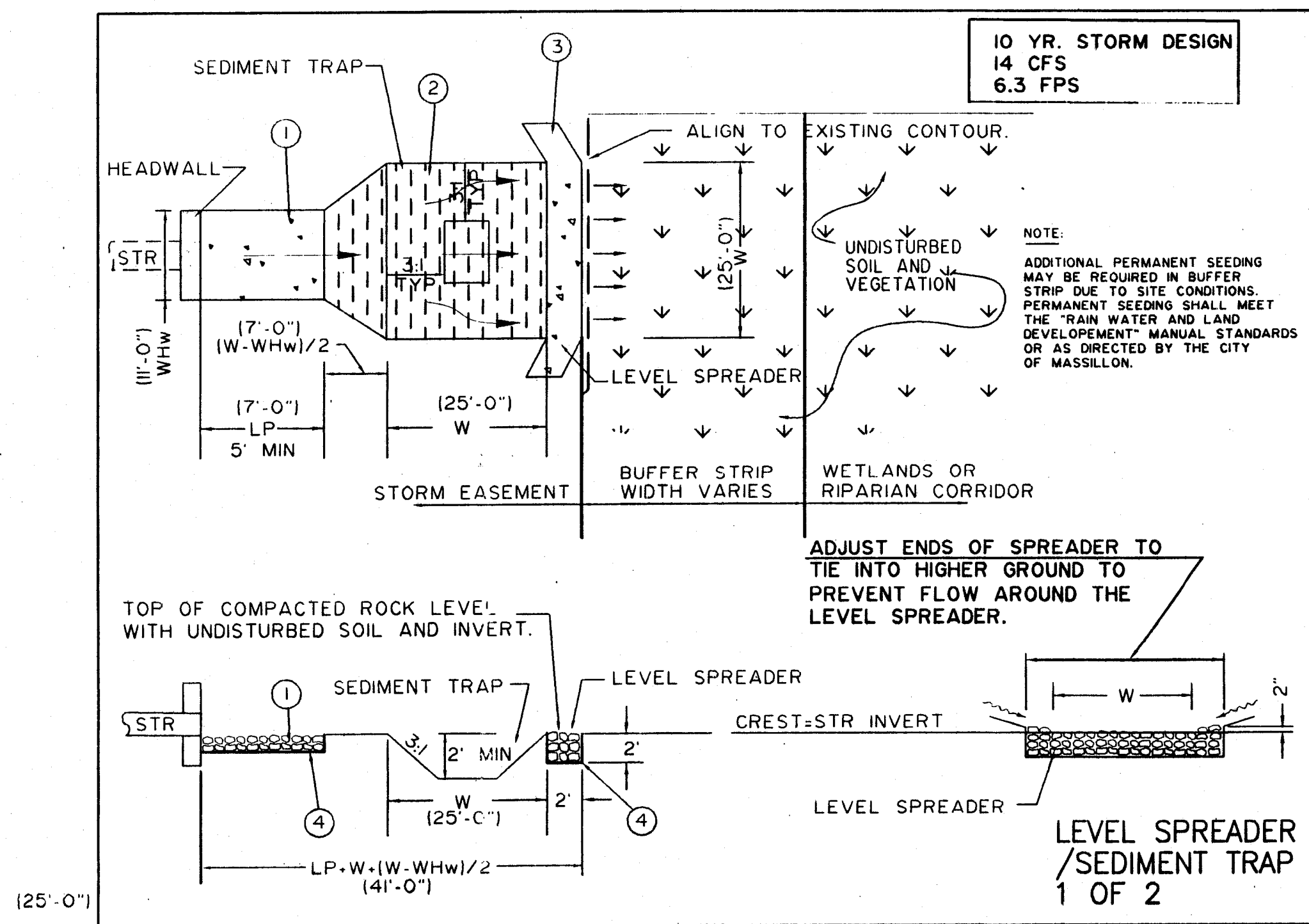
CONSTRUCTION NOTES:

- FLEXIBLE GASKETS ON SEWER LINES SHOULD MEET SECTION 34.6 34.6 IN TEN STATE STANDARDS AND ASTM SPEC. D-923.
- MANHOLE ADJUSTMENTS TO GRADE SHALL BE 12" OR LESS. USE PRECAST COLLARS AND A MAXIMUM OF TWO COURSES OF BRICK IF NECESSARY AND SHALL FOLLOW ASTM SPEC C-32.
- LEAKAGE TEST LIMITS ARE 100 GAL/IN DIAMETER/MILE/DAY.

DEFLECTION TEST NOTES:

- DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM.
- NO PIPE SHALL EXCEED A DEFLECTION OF 5 PERCENT. IF DEFLECTION EXCEEDS 5 PERCENT, RELACEMENT OR CORRECTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH REQUIREMENTS IN THE APPROVED SPECIFICATIONS.
- THE RIGID BALL OR MANDRELL USED FOR THE DEFLECTION TEST SHALL HAVE A DIAMETER NOT LESS THAN 95 PERCENT OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE DEPENDING ON WHICH IS SPECIFIED IN THE ASTM SPECIFICATION, INCLUDING THE APPENDIX, TO WHICH THE PIPE IS MANUFACTURED. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.

DATE	2/22/00	SCALE	AS SHOWN	SCALE	IN	BY	REVISION	DATE	NO.	BY
									1	
									2	
									3	



LEVEL SPREADER W/ SEDIMENT TRAP

NO SCALE

- ROCK CHANNEL PROTECTION AS PER ODOT 601.
- SEEDING AND MULCHING WITH JUTE OR EXCELSIOR MATTING AS PER ODOT 667/668.
- ODOT ROCK TYPE C, MACHINE COMPACTED WITH 12" LIFTS OR CONCRETE.
- FILTER FABRIC, AS PER ODOT 712.09 TYPE B.

LP LENGTH OF ROCK CHANNEL PROTECTION, DESIGNED AS PER ODOT STANDARDS. WIDTH OF ROCK SHALL BE WIDTH OF HEAD WALL.

WHW WIDTH OF HEADWALL

W WIDTH OF LEVEL SPREADER AS PER TABLE 1.

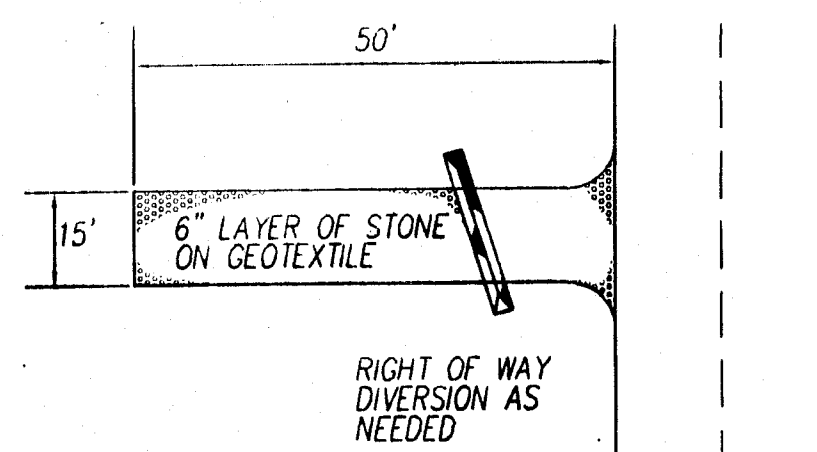
PEAK FLOW 10YR STORM	LEVEL SPREADER WIDTH (W) FT
<10 CFS	15
10-15 CFS	20
15-20 CFS	25

ADJUSTMENTS TO WIDTH MAY BE NECESSARY DUE TO EROSION POTENTIAL OR OTHER SITE CONDITIONS.

NOTES

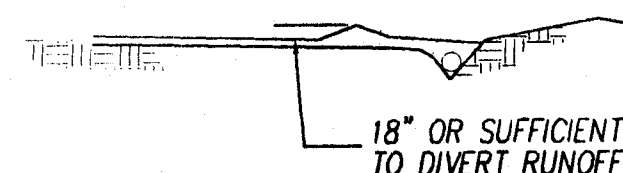
- LEVEL SPREADER/SEDIMENT TRAP MAY BE USED TO DIFFUSE FLOW ONTO NEARLY FLAT AREAS SUCH AS FLOOD PLAINS OR WETLANDS.
- LEVEL SPREADER/SEDIMENT TRAP MAY BE CONSTRUCTED WHERE FLOW IS RELEASED ON TO SLOPES WITH DENSE VEGETATION LESS THAN 5%.
- LEVEL SPREADER/SEDIMENT TRAP SHALL NOT BE USED WHERE THE NATURAL TOPOGRAPHY WILL CONCENTRATE FLOWS BELOW THE DISCHARGE POINT OR IN AREAS WITH HIGHLY EROSION SOILS.
- LEVEL SPREADER SHALL NOT BE CONSTRUCTED ON FILL AREAS.
- LEVEL SPREADER MUST DISCHARGE ON TO UNDISTURBED SOIL AND VEGETATION.

LEVEL SPREADER / SEDIMENT TRAP 2 OF 2



PLAN VIEW

ROAD OR OTHER EXISTING PAVED SURFACE



PROFILE

TEMPORARY CONSTRUCTION DRIVE

CRS

TEMPORARY CONSTRUCTION DRIVE NOTES:

- STONE SIZE- TWO-INCH STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT
- LENGTH- THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 50 FEET.
- THICKNESS- THE STONE LAYER SHALL BE AT LEAST 6 INCHES THICK.
- MIDTH- THE ENTRANCE SHALL BE AT LEAST 15 FEET WIDE.
- BEDDING- A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. IT SHALL HAVE A GRAB TENSILE STRENGTH OF AT LEAST 200 LBS. AND A MULLEN BURST STRENGTH OF AT LEAST 190 LBS.
- CULVERT- A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FLOWING ACROSS THE ENTRANCE FROM BEING DIRECTED OUT ONTO PAVED SURFACES.

SEDIMENT PONDS/TRAPS AND PERIMETER CONTROLS SHALL BE IMPLEMENTED AS A FIRST STEP OF GRADING WITHIN 7 DAYS FROM THE START OF GRUBBING AND SHALL CONTINUE TO FUNCTION UNTIL UPLAND AREAS ARE STABILIZED.

DISTURBED AREAS WHICH WILL REMAIN UNWORKED FOR A PERIOD OF 45 DAYS OR MORE, SHALL BE STABILIZED WITH SEEDING AND MULCHING OR OTHER APPROPRIATE MEANS WITHIN 7 DAYS.

DITCHES WITH GRADES GREATER THAN 1.5% WILL HAVE EROSION CONTROL BLANKETS/MATting INSTALLED AS PART OF STABILIZATION MEASURES.

BUILDER IS RESPONSIBLE FOR EROSION CONTROL ON INDIVIDUAL LOT NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF.

OFF-SITE VEHICLE TRACKING SEDIMENT SHALL BE MINIMIZED. CONSTRUCTION VEHICLES ARE LIMITED TO THE CONSTRUCTION ACCESS ROAD(S) NOTED ON PLAN.

ALL EROSION AND SEDIMENTATION CONTROL PRACTICES MUST MEET THE STANDARDS AND SPECIFICATIONS OF THE OHIO WATER MANAGEMENT AND SEDIMENT CONTROL HANDBOOK FOR URBANIZING AREAS.

OTHER EROSION AND SEDIMENT CONTROL ITEMS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS.

REGULAR INSPECTION AND MAINTENANCE WILL BE PROVIDED FOR ALL EROSION AND SEDIMENT CONTROL PRACTICES. PERMANENT RECORDS OF MAINTENANCE AND INSPECTIONS MUST BE KEPT THROUGHOUT THE CONSTRUCTION PERIOD. INSPECTIONS MUST BE MADE A MINIMUM OF ONCE EVERY SEVEN DAYS AND IMMEDIATELY AFTER STORM EVENTS GREATER THAN 0.5 INCHES OF RAIN IN A 24 HOUR PERIOD. PROVIDE NAME OF INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTION AND CORRECTIVE MEASURES TAKEN.

GENERAL NOTES

-NOTICE OF INTENT (NOI) MUST BE SUBMITTED TO OHIO EPA FOR NPDES PERMIT 45 DAYS PRIOR TO THE START OF CLEARING AND OR GRADING.

- CONSTRUCTION MUST COMPLY WITH ALL LOCAL EROSION AND SEDIMENT CONTROL REGULATIONS.

- NO SOLID OR LIQUID WASTE SHOULD BE DISCHARGED INTO STORM WATER RUNOFF.

- OFF-SITE TRACKING OF SEDIMENTS SHALL BE MINIMIZED.

- SWPPP MUST SHOW COMPLIANCE WITH LOCAL WASTE DISPOSAL, SANITARY, AND HEALTH REGULATIONS.

MAINTENANCE AND INSPECTION PERMANENT RECORDS OF MAINTENANCE AND INSPECTION MUST BE MAINTAINED A MINIMUM OF ONCE EVERY SEVEN DAYS AND AFTER STORM EVENTS GREATER THAN 0.5 INCH IN A 24 HOUR PERIOD. NAME OF INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTION, CERTIFICATION OF COMPLIANCE, CORRECTIVE MEASURES TAKEN. RECORDS MUST BE MAINTAINED FOR 2 YEARS AFTER NOTICE OF INTENT PER OHIO EPA NPDES PERMIT.

REPAIRS ANY EROSION CONTROL MEASURES, STRUCTURES, DEVICES, OR RELATED ITEMS IN NEED OF REPAIR WILL BE MADE WITHIN FIFTEEN DAYS.

SOIL PROTECTION CHART

STABILIZATION TYPE PERMANENT SEEDING DORMANT SEEDING TEMPORARY SEEDING MULCHING

• IRRIGATION NEEDED DURING JUNE THRU AUGUST
• IRRIGATION NEEDED FOR 2-3 WEEKS AFTER APPLYING SOD

EROSION CONTROL SCHEDULE PROJECT IMPLEMENTATION SCHEDULE

SYMBOL ODOT ITEM QUANTITIES UNITS DESCRIPTION

1. SITE VEGETATION

2. SEDIMENT CONTROL MEASURES

3. SITE GRADING

4. SITE IMPROVEMENT INSTALLATION

5. MISCELLANEOUS

6. OTHER

7. TOTAL

8. TOTAL

9. TOTAL

10. TOTAL

11. TOTAL

12. TOTAL

13. TOTAL

14. TOTAL

15. TOTAL

SCHEDULE OF MAJOR CONSTRUCTION OPERATIONS 1999- 2000

	1999	2000
CLEARING	X	
SILT FENCE	X	
SEDIMENTATION BASINS	X	
STRAW BALE BARRIERS	X	
DRAINAGE-WAY ROUTING	X	
INLET PROTECTION	X	
DITCH PROTECTION	X	
MULCHING	X	
TEMP. SEEDING & MULCHING	X	
PERM. SEEDING & MULCHING	X	

SITE DESCRIPTION (MARK ONE)

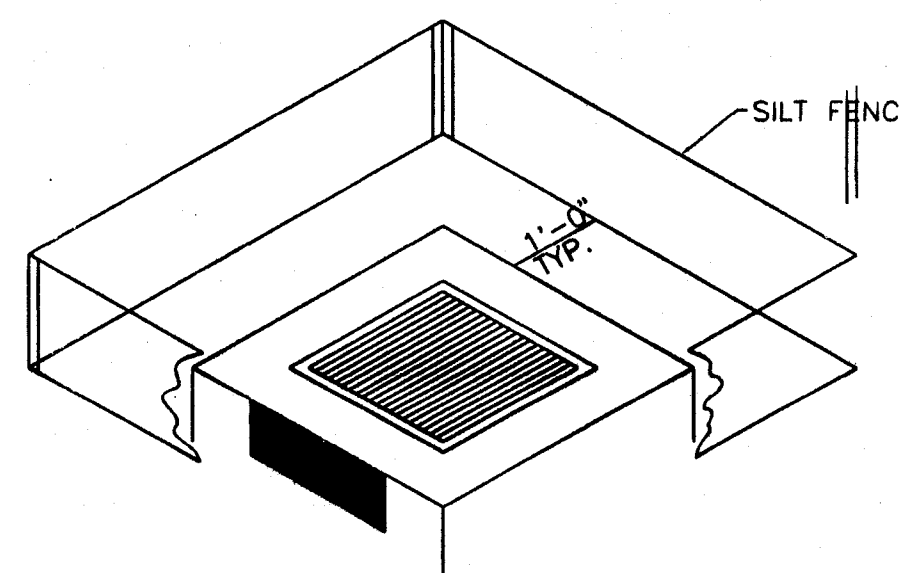
SUBDIVISION	X	TOTAL AREA	9.359
COMMERCIAL		PRE-DEV. RUNOFF COEFF.	0.3
RESIDENTIAL		AREA TO BE CLEARED	9.359
P.U.D.		AREA TO BE EXCAVATED	9.359
OTHER		POST. DEV. RUNOFF COEFF.	0.45

SOIL TYPES	Cell	OFF SITE	% EXCAVATED
Cell B	0	% OFF SITE	% EXCAVATED
Cell C	0	% OFF SITE	% EXCAVATED
Cell D	0	% OFF SITE	% EXCAVATED
Cell E	0	% OFF SITE	% EXCAVATED
Cell F	0	% OFF SITE	% EXCAVATED
Cell G	0	% OFF SITE	% EXCAVATED
Cell H	0	% OFF SITE	% EXCAVATED
Cell I	0	% OFF SITE	% EXCAVATED
Cell J	0	% OFF SITE	% EXCAVATED
Cell K	0	% OFF SITE	% EXCAVATED
Cell L	0	% OFF SITE	% EXCAVATED
Cell M	0	% OFF SITE	% EXCAVATED
Cell N	0	% OFF SITE	% EXCAVATED
Cell O	0	% OFF SITE	% EXCAVATED
Cell P	0	% OFF SITE	% EXCAVATED
Cell Q	0	% OFF SITE	% EXCAVATED
Cell R	0	% OFF SITE	% EXCAVATED
Cell S	0	% OFF SITE	% EXCAVATED
Cell T	0	% OFF SITE	% EXCAVATED
Cell U	0	% OFF SITE	% EXCAVATED
Cell V	0	% OFF SITE	% EXCAVATED
Cell W	0	% OFF SITE	% EXCAVATED
Cell X	0	% OFF SITE	% EXCAVATED
Cell Y	0	% OFF SITE	% EXCAVATED
Cell Z	0	% OFF SITE	% EXCAVATED

SITE LOCATION INFORMATION

CITY OF MASSILLON	STARK	OHIO
TOWNSHIP	COUNTY	STATE
TUSCARAWAS	WEST SIPPON CREEK	
NAME OF WATERSHED / RECEIVING WATERS		44314
WEST BROOK ESTATES - PHASE 1A		
PROJECT NAME		ZIP CODE
A.R. LOCKHART DEVELOPMENT Co.		330-745-6520
DEVELOPER		PHONE
800 WEST WATERLOO RD., AKRON, OHIO		
DEVELOPER ADDRESS		

INLET PROTECTION INLET PROTECTION TO BE PLACED AT ALL INLETS AS INLETS ARE INSTALLED, AND MAINTAINED UNTIL SITE IS STABILIZED.



IP SILT FENCE FILTER FOR INLETS

NOTE:

REQUIRED EROSION CONTROL FOR ALL PROPOSED CURB INLETS

- INSTALL SILT FENCE ENTIRELY AROUND EACH INLET AND MAINTAIN AS REQUIRED.
- UPON INSTALLATION OF CONCRETE PAVEMENT WITH INTEGRAL CURB, MAINTAIN SILT FENCE BEHIND THE CURB (OR PLACE STRAW BALES).
- MAINTAIN THE SILT FENCE (OR STRAW BALES) BEHIND THE CURB UNTIL GRASS IN THE TREE LAWN AREA IS ESTABLISHED.

WEST BROOK ESTATES
STORM WATER POLLUTION PREVENTION DETAILS

700

W.C. LOCKHART CONSTRUCTION CO.
800 West Waterloo Road Akron, Ohio 44314
(330) 745-6520

12
13

SWPPP DETAILS

SITE IMPROVEMENT PLANS FOR WEST BROOK ESTATES - PHASE II

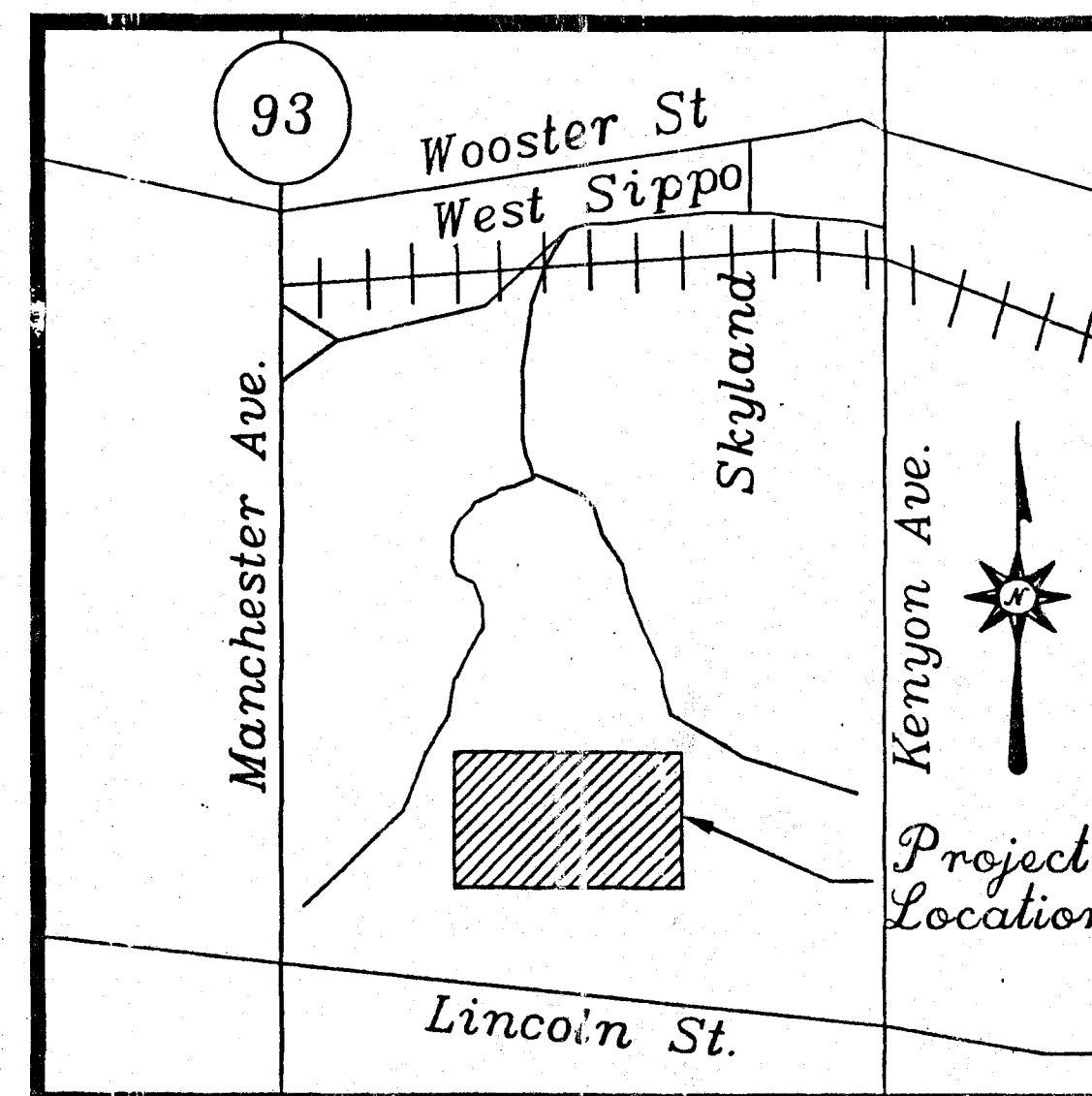
SITUATED IN THE CITY OF MASSILLON,
COUNTY OF STARK, STATE OF OHIO

GENERAL CONSTRUCTION NOTES

- CONSTRUCTION SHALL BE INSPECTED BY THE CITY OF MASSILLON ENGINEERING DEPARTMENT. A PRE-CONSTRUCTION MEETING IS REQUIRED.
- THE CONTRACTOR OR OWNER MUST NOTIFY THE ENGINEERING DEPARTMENT, FOR MATERIAL AND CONSTRUCTION INSPECTION THREE (3) WORKING DAYS PRIOR TO THE TIME WORK IS STARTED ON THE PROPOSED PROJECT WHICH THE CITY OF MASSILLON WILL INSPECT.
- MATERIALS:
 - SANITARY SEWER**
THE CONTRACTOR SHALL USE SDR 35 PVC PIPE IN ACCORDANCE WITH ITEM 707.44 OF THE O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS (LATEST EDITION) UNLESS NOTED OTHERWISE ON THE PLANS, WITH CLASS "B" BEDDING IN ACCORDANCE WITH SECTION 603.04.
 - STORM SEWER**
ALL STORM SEWERS 12" OR GREATER SHALL BE REINFORCED CONCRETE PIPE IN ACCORDANCE WITH ITEM 706.02 OF THE O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS (LATEST EDITION) UNLESS OTHERWISE NOTED ON THE PLANS, WITH CLASS "B" BEDDING IN ACCORDANCE WITH SECTION 603.04.
- ALL TRENCH BACKFILL SHALL BE GRANULAR MATERIAL THAT CONFORMS TO ITEM 603.
- ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
- ALL MANHOLE TOPS, WITHIN STREET RIGHT-OF-WAY ARE TO BE FLUSH WITH FINISHED GRADE. ALL MANHOLE TOPS IN EASEMENTS ARE TO BE 6 INCHES ABOVE FINISH GRADE. ALL MANHOLES SHALL BE SUPPLIED WITH SOLID LIDS EXCEPT IN EASEMENTS WHERE THE MANHOLE COVERS SHALL BE THE SOLID-LOCKING TYPE.
- ALL SANITARY MANHOLES SHALL HAVE PRECAST CONCRETE BOTTOMS AND INVERTS CHanneled TO CARRY FLOW.
- CONTACT OHIO UTILITIES PROTECTION SERVICE (1-800-362-2764) 48 HOURS BEFORE BEGINNING WORK.
- COST OF WYES AND STUBS TO BE INCLUDED IN PRICE BID PER LINEAR FOOT OF SANITARY SEWER.
- PRICES BID PER FOOT FOR ALL PIPE IS COMPLETE IN PLACE REGARDLESS OF SOIL OR ROCK CONDITIONS.
- ALL FILL AREAS UNDER PAVEMENT, STRUCTURES AND OTHER AREAS INDICATED ON THE PLANS SHALL CONFORM TO CITY SPECIFICATIONS.
- SANITARY SEWER, 6" PVC SDR 35 LATERALS TO BE EXTENDED NO LESS THAN 5' BEYOND DEDICATED RIGHT-OF-WAY. LATERALS SHALL BE NO SHALLOWER THAN 8' AT THE RIGHT-OF-WAY LINE.
- EXCESS EXCAVATION TO BE PLACED IN ACCORDANCE WITH THE APPROVED GRADING PLAN.
- FERTILIZING, SEEDING AND MULCHING FOR THE RESTORATION OF DISTURBED AREAS BETWEEN THE PAVEMENT EDGES AND THE RIGHT-OF-WAY LINE AND EASEMENTS SHALL CONFORM TO O.D.O.T. 659 AS SPECIFIED IN CONSTRUCTION AND MATERIAL SPECIFICATIONS (LATEST EDITION). TOPSOIL IS TO BE SPREAD 4" THICK OVER ALL DISTURBED AREAS.
- ALL SANITARY SEWERS TO PASS AIR TEST AND BE VIDEO TAPED. THE COSTS OF THESE TESTS ARE AT THE DEVELOPER'S EXPENSE.
- COST OF ANY SHEETING OR DEWATERING NECESSARY FOR INSTALLATION OF SANITARY SEWER SHALL BE INCLUDED IN PRICE BID PER LINEAR FOOT OF RESPECTIVE ITEMS. ANY FOUNDATION SLAG REQUIRED WILL BE INCLUDED IN THE COST OF SANITARY SEWER.
- ALL EXISTING ROAD SURFACES, EASEMENTS OR RIGHT OF WAYS DISTURBED BY CONSTRUCTION OF ANY PART OF THIS IMPROVEMENT ARE TO BE RESTORED COMPLETELY TO THE BEFORE CONSTRUCTION CONDITION OR BETTER AND ALL COSTS ARE INCLUDED IN THE PAY ITEMS.
- TEMPORARY SOIL EROSION AND SILTATION CONTROL WILL BE REQUIRED IN ACCORDANCE WITH O.D.O.T. ITEM 207 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (LATEST EDITION).
- ALL SEWER RUN DISTANCES GIVEN ARE FROM CENTERLINE TO CENTERLINE OF MANHOLES OR INLETS. ALL INVERT ELEVATIONS GIVEN ARE TO CENTERLINE OF MANHOLE OR INLET. ALL TOP ELEVATIONS ARE TO TOP OF MANHOLE OR BACK OF CURB AT INLETS. SEWER GRADES ARE ESTABLISHED FROM CENTERLINE TO CENTERLINE OF MANHOLE OR INLET AND ARE CARRIED THROUGH TO ASSURE POSITIVE FLOW FROM INVERT TO INVERT.
- ALL SANITARY LATERALS SHALL BE LAID AT NO LESS THAN 1.00%.

CONTRACTOR / PROJECT ENGINEER:
A. R. LOCKHART DEVELOPMENT COMPANY
800 WEST WATERLOO ROAD
AKRON, OHIO 44314
PH: (330) 745-6520
FAX: (330) 745-0716

SEPTEMBER, 2000

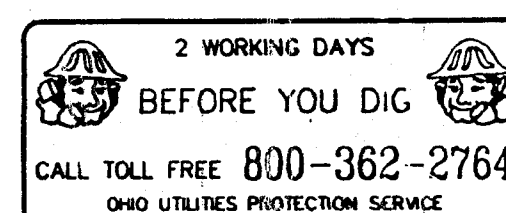


LOCATION MAP

Not to scale

DRAWING LIST

SHT. NO.	DESCRIPTION
1	TITLE SHEET
2	SITE PLAN/UTILITY LAYOUT
3	GRADING AND SWPPP PLAN
4	PLAN/PROFILE - WOODFOREST ST. /BRIGHTLEAF AVE.
5	PLAN/PROFILE - WOODFOREST ST./WOODSTONE AVE.
6	PLAN/PROFILE - STORM LINE "A"
7	PLAN/PROFILE - STORM LINE "B", "C", AND "D"
8	TYPICAL SECTION AND INTERSECTION DETAILS
9	STANDARD GENERAL NOTES
10	STANDARD GENERAL NOTES
11	STANDARD CONSTRUCTION DRAWING
12	STANDARD CONSTRUCTION DRAWING
13	MISCELLANEOUS DETAILS
14	STORM WATER POLLUTION PREVENTION PLAN DETAILS
15	STORM WATER POLLUTION PREVENTION PLAN DETAILS
16	WATER AND MISCELLANEOUS DETAILS
17	CATCH BASIN DETAILS
18	RETENTION POND DETAILS



GENERAL CONSTRUCTION NOTES (CON'T)

WATER MAIN

- MUST MAINTAIN A 12" MINIMUM VERTICAL CLEARANCE FROM EDGE OF ALL WATER MAIN PIPE TO EDGE OF ALL PROPOSED STORM SEWERS AND/OR INLET LEAD PIPE WHERE THEY CROSS.
- MUST MAINTAIN A 4.0' MINIMUM HORIZONTAL CLEARANCE FROM EDGE OF WATER MAIN PIPE TO EDGE OF STORM SEWER PIPE INLETS AND STORM SEWER MANHOLES.
- MUST MAINTAIN A 10.0' MINIMUM HORIZONTAL CLEARANCE FROM EDGE OF WATER MAIN PIPE TO EDGE OF SANITARY SEWER AND/OR FORCE MAIN PIPE.
- MUST MAINTAIN A 18" MINIMUM VERTICAL CLEARANCE FROM EDGE OF ALL WATER MAIN PIPE/AND OR SERVICE TO OUTSIDE EDGE OF ALL SANITARY SEWER PIPE WHERE THEY CROSS.
- THE GROUND OVER THE WATER MAIN LINE SHALL REMAIN FREE OF TRASH CONTAINERS, TREES, SHRUBS AND ALL OTHER VEGETATION (EXCLUDING GRASS). MOUNDING OF EARTH OVER THE WATER LINE FOR AESTHETIC PURPOSES IS PROHIBITED.
- WHERE WATER MAINS CROSS SEWER TRENCHES, THE TRENCH IS TO BE BACKFILLED WITH APPROVED GRANULAR MATERIAL.
- ALL WATERLINES AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS ESTABLISHED BY THE CONSUMERS OHIO WATER COMPANY. PIPE SHALL BE CLASS 350, CEMENT-LINED, DUCTILE IRON WITH PUSH ON JOINTS, EXCEPT AS NOTED. ALL FITTINGS SHALL BE CEMENT-LINED MECHANICAL JOINT TYPE. VALVES SHALL BE MECHANICAL JOINT, NON-RISING STEM, RIGHT OPEN (CLOCKWISE) WITH 2-INCH SQUARE OPERATING NUT. POURED CONCRETE THRUST BLOCKS MUST BE CONSTRUCTED WHERE NECESSARY. ALL VALVES 4" THRU 12" ARE GATE VALVES AND MUST HAVE BOXES.
- COMPACTED PREMIUM BACKFILL IS REQUIRED FOR UNDERGROUND CONSTRUCTION UNDER OR WITHIN 3 FEET OF ANY PROPOSED OR EXISTING SIDEWALK OR PAVEMENT.
- ANY EXISTING WATER APPURTENANCES THAT ARE DAMAGED MUST BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL SUPPLY A TEMPORARY SAFE WATER SERVICE TO ANY HOME THAT WILL HAVE ITS WATER SERVICE INTERRUPTED BY THIS CONSTRUCTION.
- NO TAPS FOR WATER SERVICES SHALL BE MADE UNTIL AFTER THE MAIN LINE HAS BEEN TESTED AND STERILIZED.
- ALL WATER MAIN CONSTRUCTION SHALL BE INSPECTED BY THE CONSUMERS OHIO WATER COMPANY. NOTIFY THE CONSUMERS OHIO WATER COMPANY AT LEAST 48 HOURS PRIOR TO BEGINNING WATERLINE CONSTRUCTION.
- ALL NEW WATER MAINS ARE TO BE COMPLETELY WRAPPED WITH POLYETHYLENE ENCASEMENT AS SPECIFIED IN AWWA C-103.
- PRIOR TO ACCEPTANCE THE WATERLINE SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AWWA C-600, LATEST EDITION, AND DISINFECTED IN ACCORDANCE WITH AWWA C-651, LATEST EDITION, BY THE CONTRACTOR.
- ALL HYDRANTS SHALL HAVE STANDARD THREADS ON ALL HOSE CONNECTIONS.
- MUST MAINTAIN A 36" MINIMUM HORIZONTAL CLEARANCE FROM THE EDGE OF ALL WATER MAIN PIPE TO THE EDGE OF DIRECT BURIAL CONDUIT, CONCRETE ENCASED ELECTRICAL CONDUIT, THE LIGHT POLE BASES, AND THE HAND HOLE PULL BOXES.
- MUST MAINTAIN A 12" MINIMUM VERTICAL CLEARANCE FROM EDGE OF ALL WATER MAIN PIPE TO THE EDGE OF THE DIRECT BURIAL CONDUIT AND THE EDGE OF THE CONCRETE ENCASED ELECTRICAL CONDUIT WHERE THEY CROSS.
- USE EXTREME CAUTION WHEN EXCAVATING IN THE AREA OF EXISTING WATER MAIN PIPES, VALVES OR HYDRANTS.
- ALL 2 INCH PIPE AND FITTINGS AROUND CUL-DE-SACS ARE TO BE HOPE TUBING WITH TRACER WIRE AND MARKING TAPE INSTALLED WITH 4 FEET 6 INCHES OF COVER.
- SERVICE TAPS OFF OF MAINLINE TO BE MADE BY CONSUMERS OHIO WATER COMPANY. SERVICES OFF OF 2" TEES AT CUL-DE-SACS MAY BE SPLIT TO SERVICE TWO UNITS, WITH INDIVIDUAL CURB STOPS, INSTALLED BY THE CONTRACTOR.
- BLOW-OFF ASSEMBLIES TO BE KUPFERLE FOUNDRY TF500 WITH VALVE BOX. INSTALL 2" CURB STOP WITH BOX AHEAD OF EACH BLOW OFF.



OHIO EPA NOTES

- A MINIMUM OF 35 PSI SHALL BE MAINTAINED TO THE CURB STOP DURING NORMAL OPERATING CONDITIONS.
- BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS.
- ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.

RECEIVED
JUN 28 2001
OHIO EPA NEDO

APPROVALS

J.B.
CITY OF MASSILLON ENGINEER

9/25/00
DATE

Donald Brunsden
CONSUMER OHIO WATER COMPANY

6/22/01
DATE

SAFETY SERVICE DIRECTOR

DATE

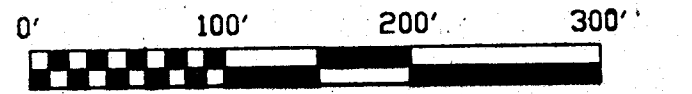
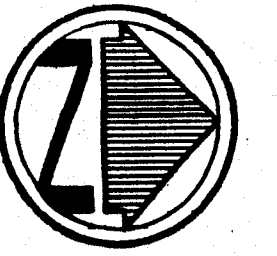
SUBMITTED BY: *Shishir B. Kafadia*
SHISHIR B. KAFADIA, P.E. No. E- 39632

9/25/00
DATE

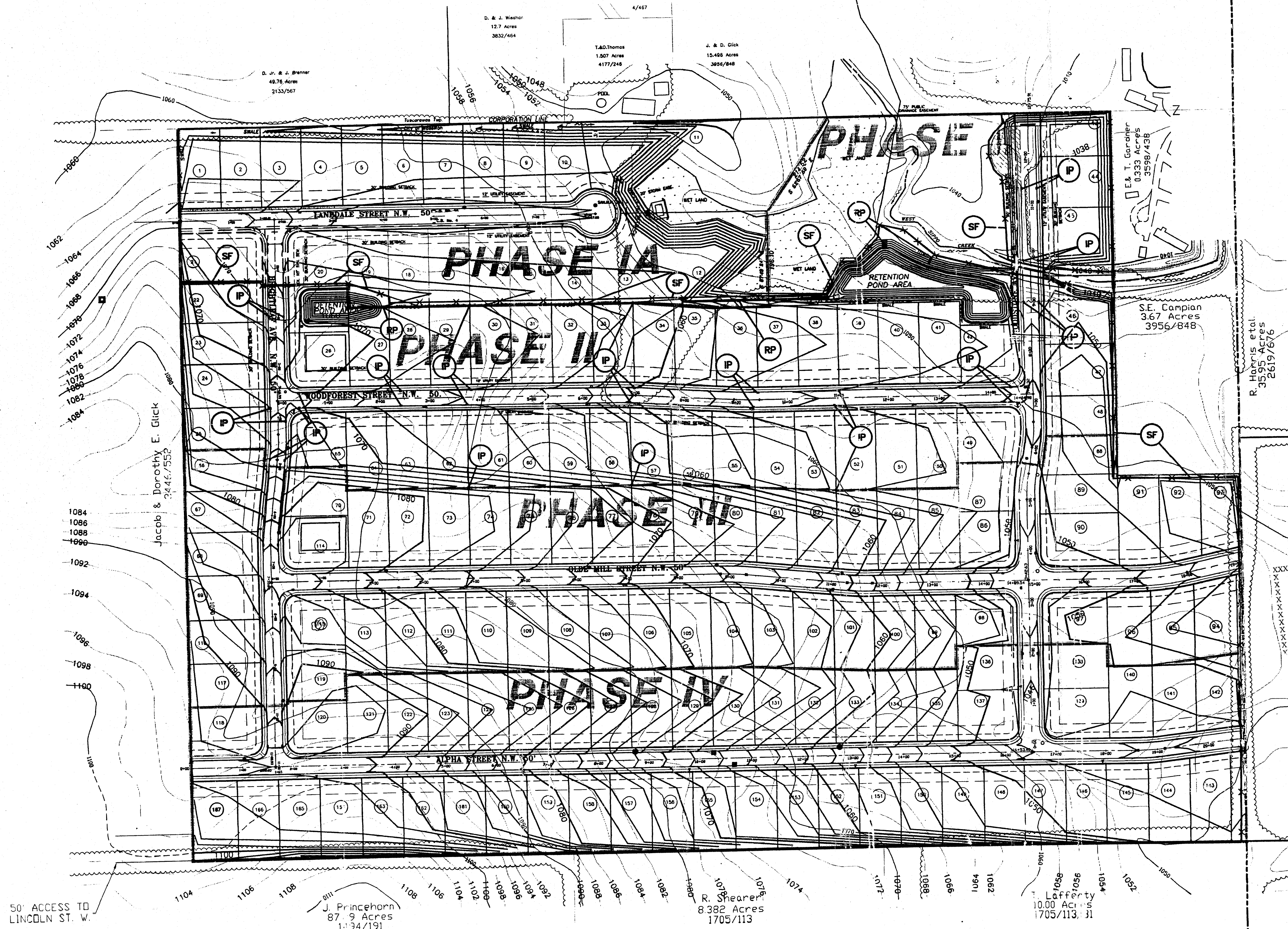
OWNER/DEVELOPER: *A. R. Lockhart*
A. R. LOCKHART DEVELOPMENT CO.
A. R. LOCKHART, PRESIDENT

9/25/00
DATE

NOTE
LOT OWNER/GRADING CONTRACTOR IS RESPONSIBLE FOR FINISHED GRADE.



BENCH MARK:
INVERT OF EXIST. SAN. M.H. No. 41
ELEV. 1023.94



LEGEND - EROSION CONTROL

- IP INLET PROTECTION
- SF SILT FENCE
- RP ROCK PROTECTION

SEWERAGE
APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF
LETTER OF APPROVAL
HERE TO ATTACHED

THE OIL AND GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
P.O. BOX 206
GRANVILLE, OHIO 43023-0206
PHONE (614) 587-0486 OR
CALL TOLL FREE 800-925-0988

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE: 800-362-2764
OHIO UTILITIES PROTECTION SERVICE

WEST BROOK ESTATES-PHASE II
GRADING AND SWPP PLAN

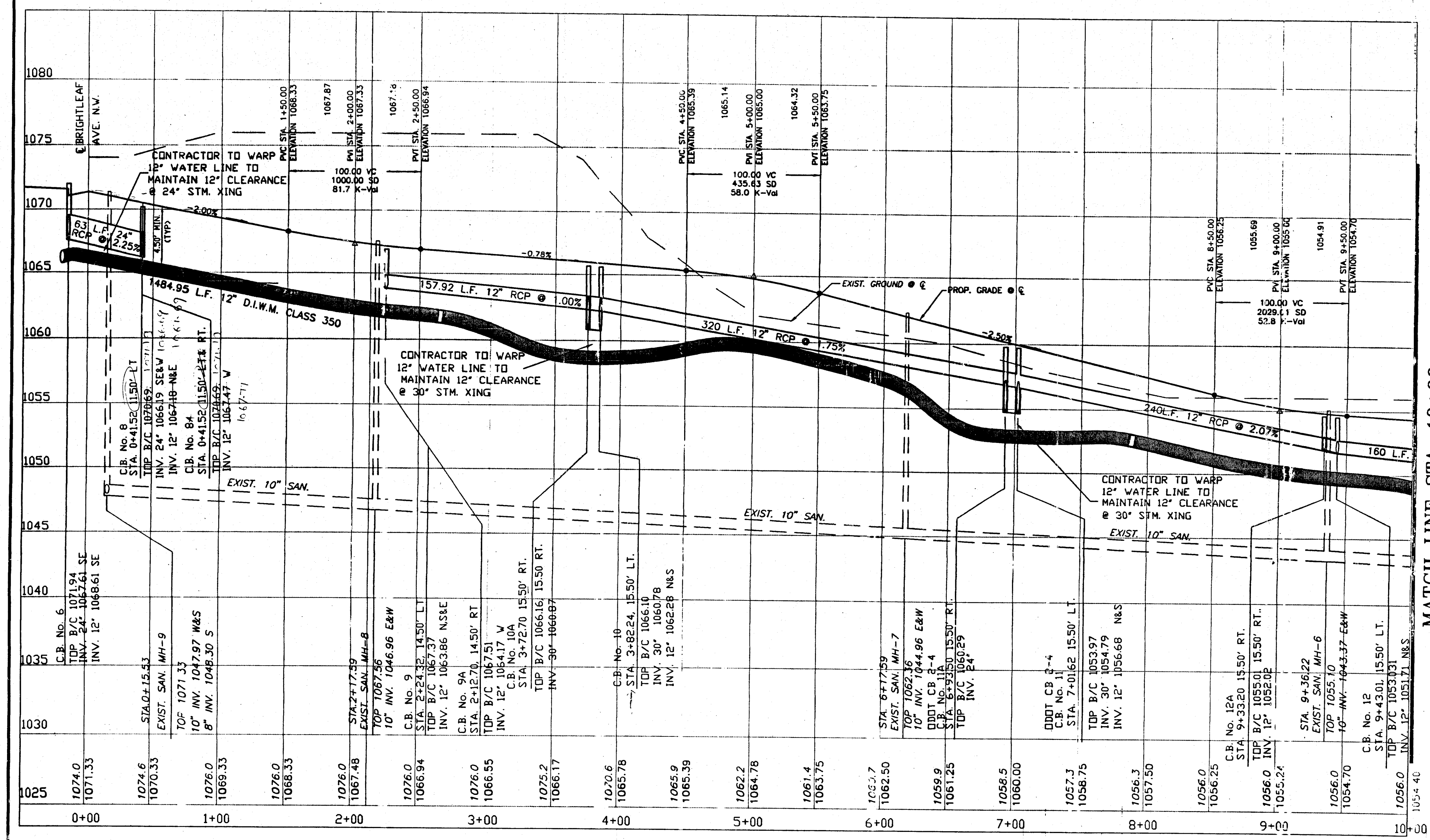
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A. R. LOCKHART DEVELOPMENT CO.
800 W. WATERLOO RD. ARLON, OH 43114
PH: 330.745.6230 • FAX: 330.745.0716

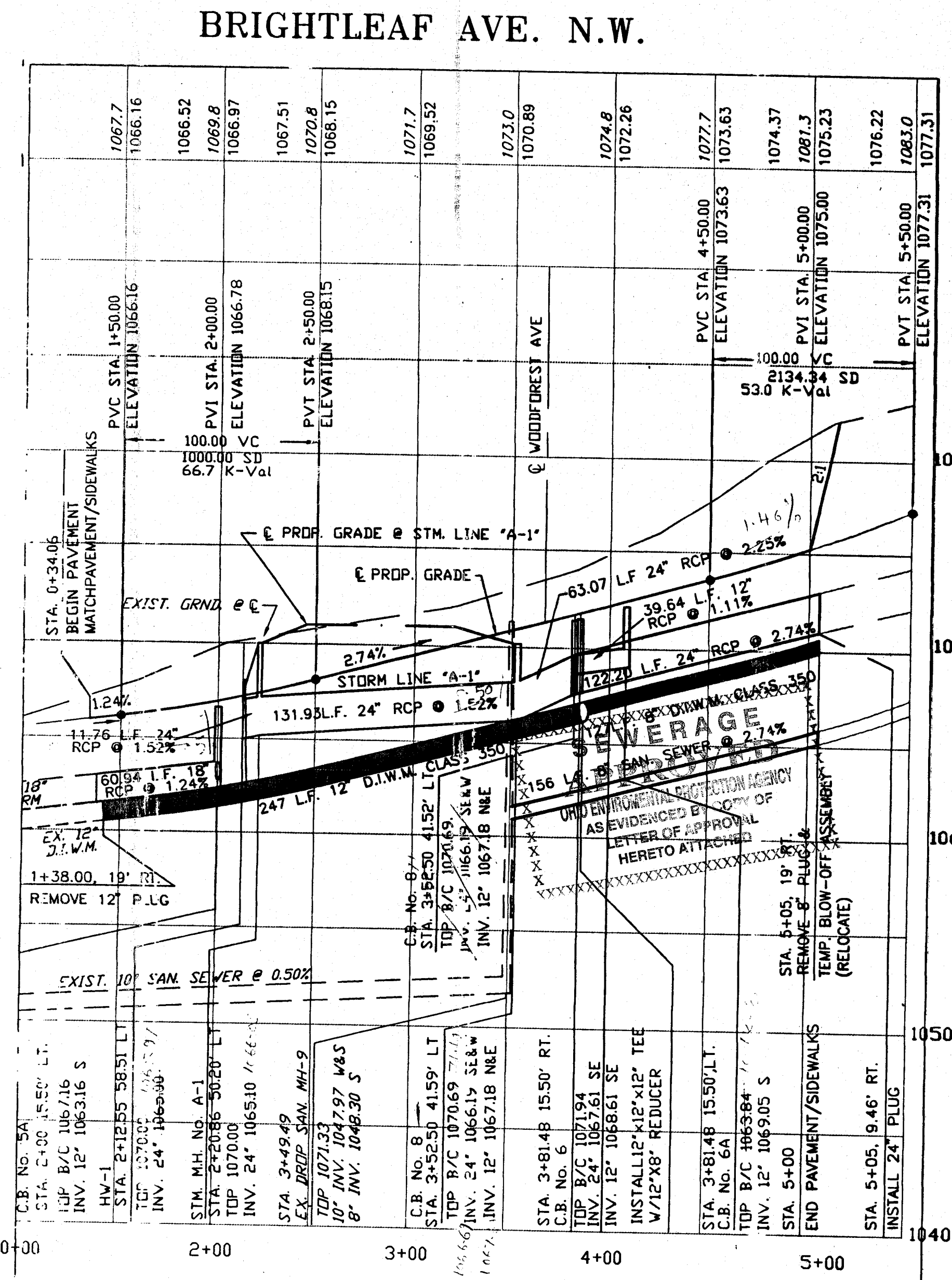


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GRADING AND SWPP PLAN
WEST BROOK ESTATES - PHASE II



MATCH LINE STA. 10+00



THE OIL AND GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
P.O. BOX 208
GRANVILLE, OHIO 43023-0208
PHONE (614) 587-0486 OR
CALL TOLL FREE 800-925-0988

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OHIO UTILITIES PROTECTION SERVICE

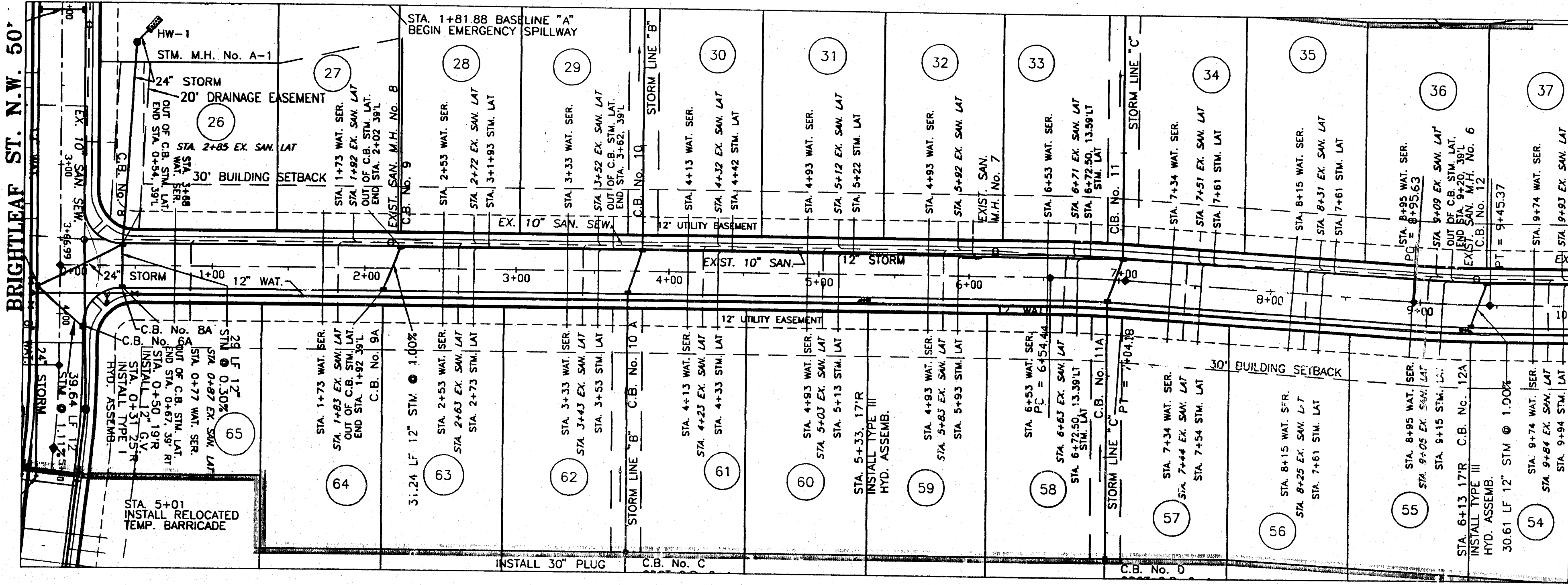
PLAN AND PROFILE
WOODFOREST ST./BRIGHTLEAF AVE.

WEST BROOK ESTATES-PHASE II
PLAN AND PROFILE

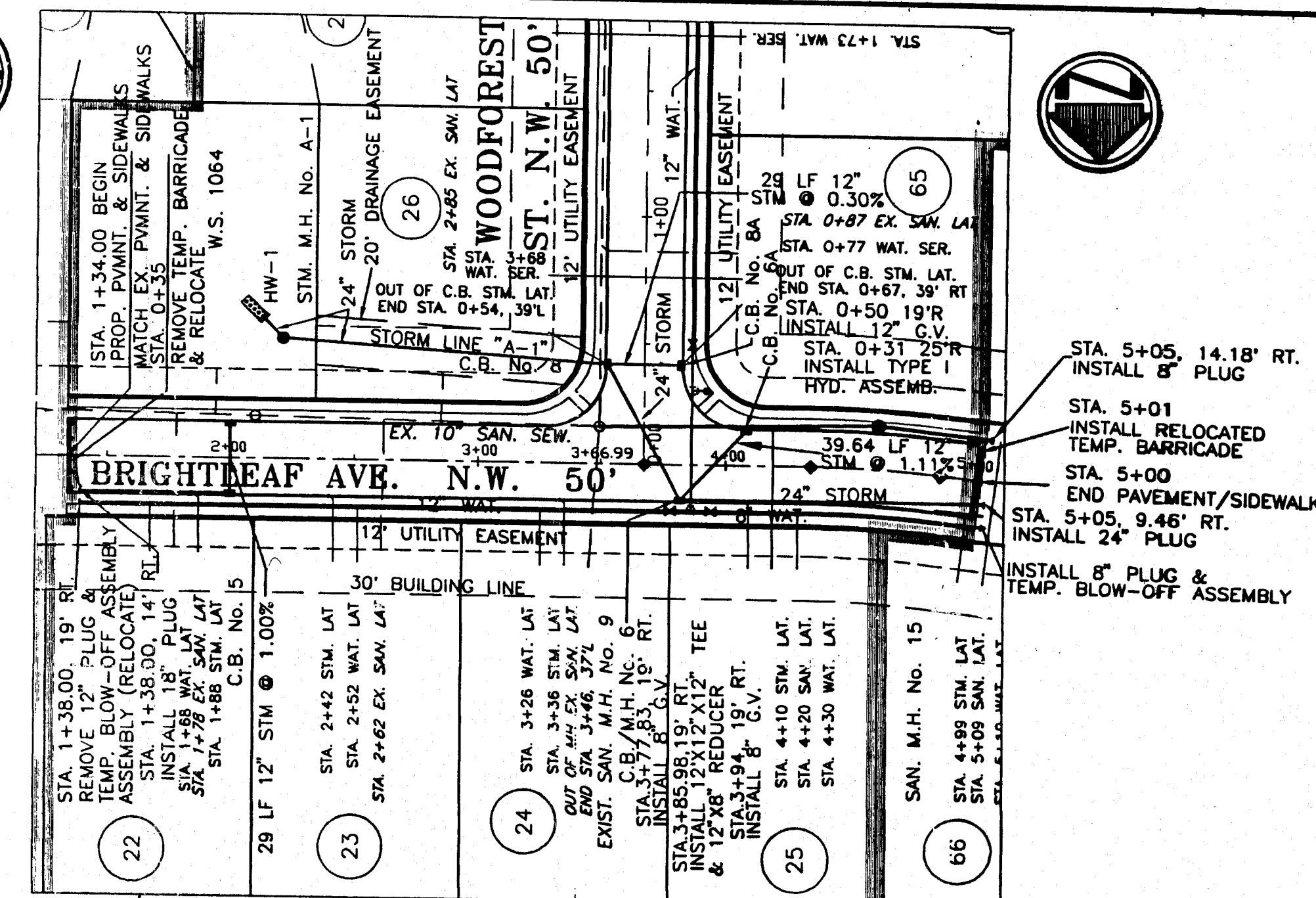
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A.R. LOCKHART DEVELOPMENT CO.
800 W. WATERLOO RD. ARLINGTON, OH 43015
PHONE (614) 330-7455 FAX (614) 330-7456

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MATCH LINE STA. 10+00



DATE	9/25/00
SCALE	1"=50' HORIZ. 1"=5' VERT.
DRAWN	CTB
CHECKED	SK
DATE	
BY	
DATE	
BY	

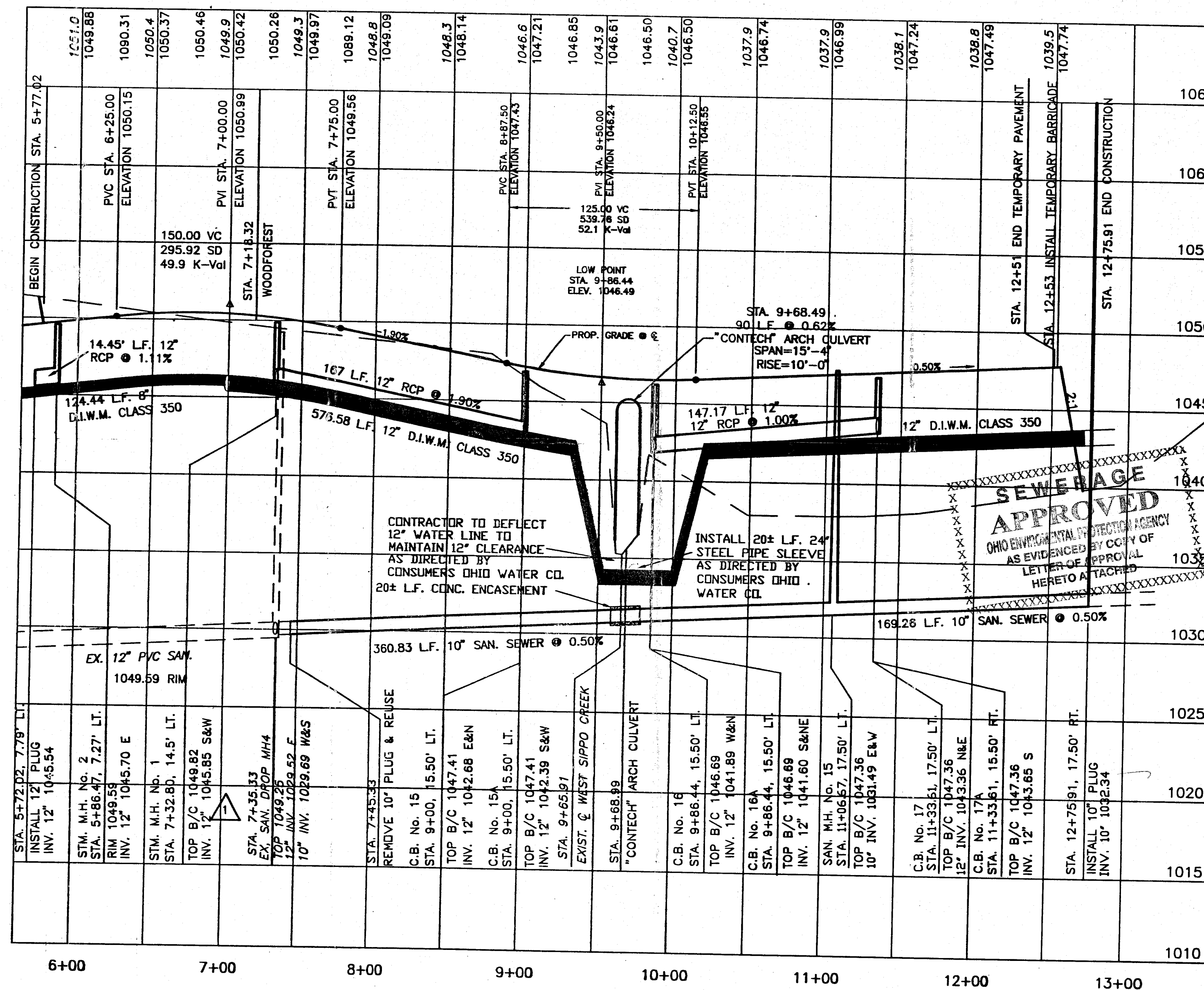
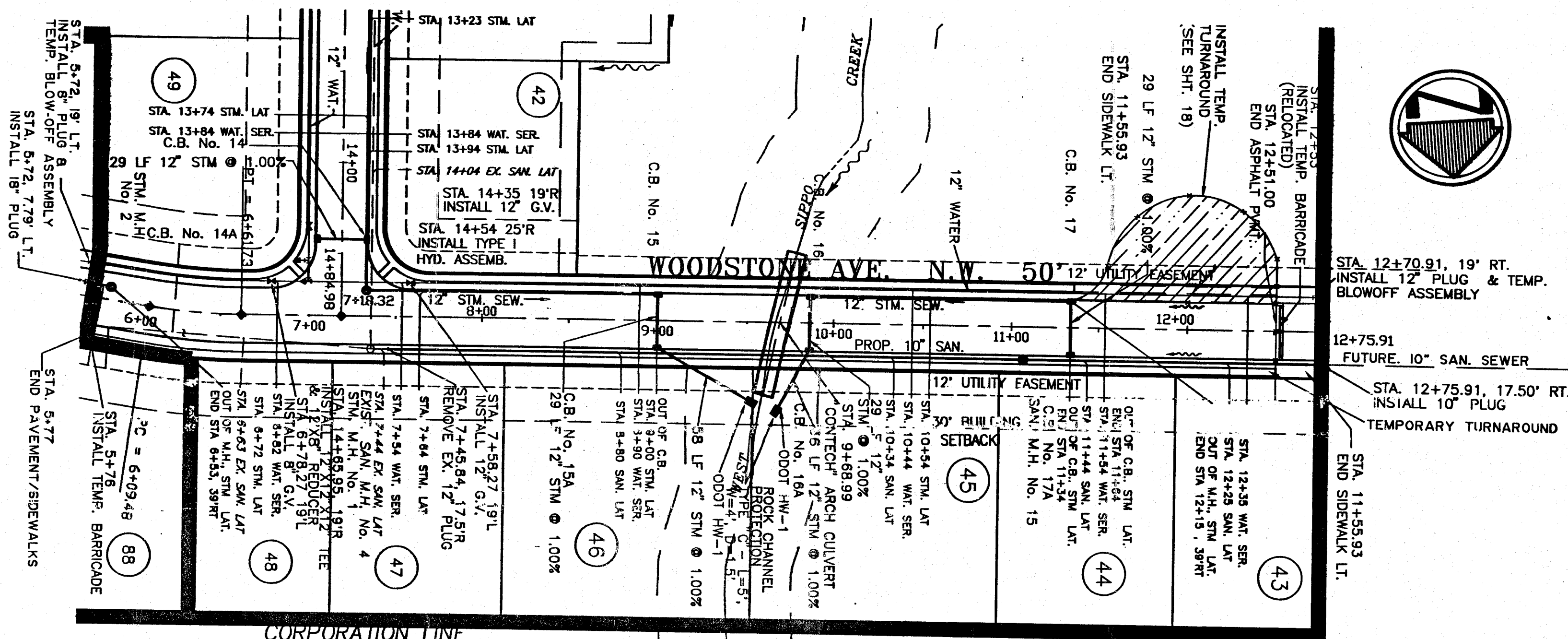
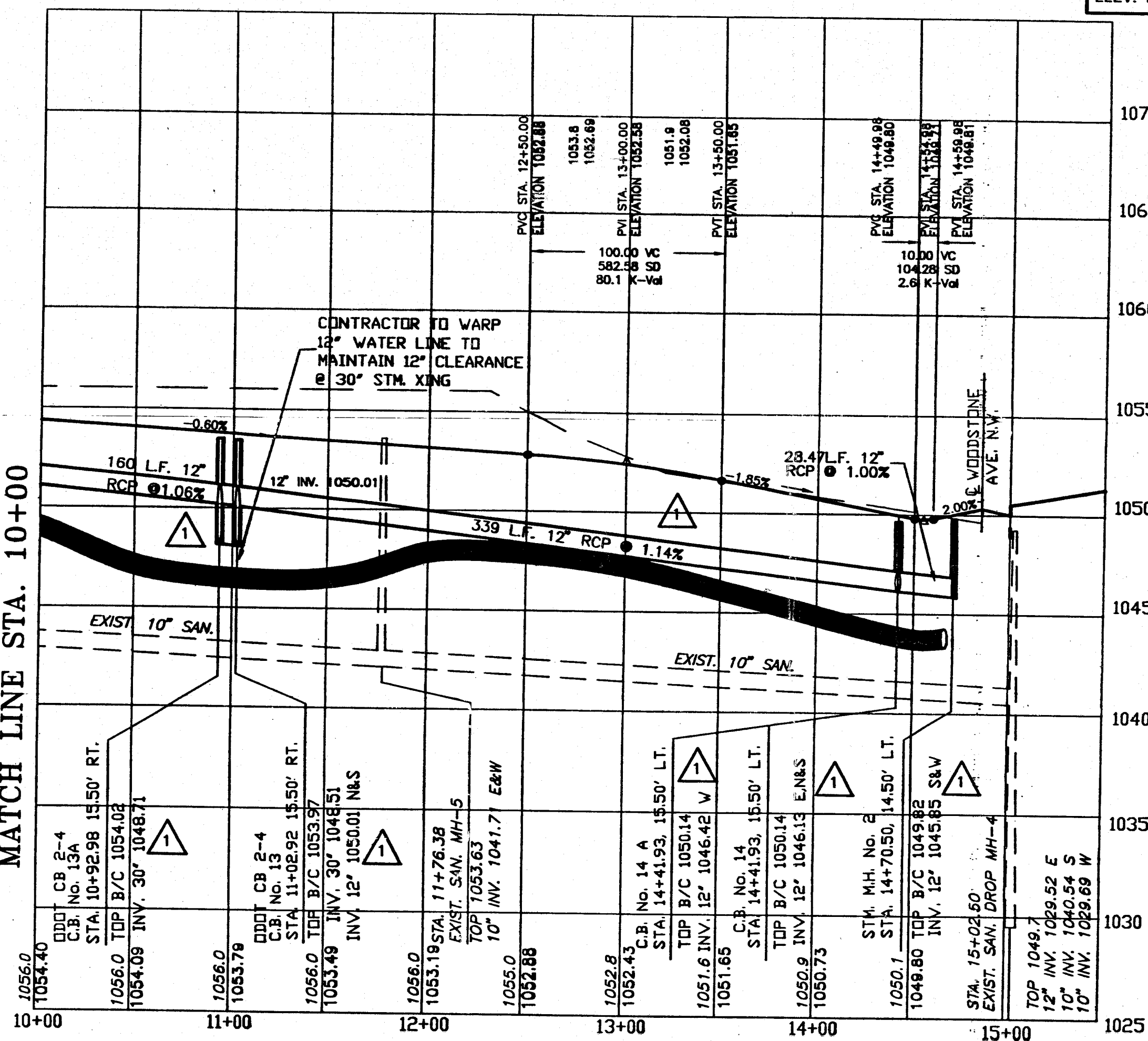
MATCH LINE STA. 10+00

MATCH LINE STA. 10+00

WOODFOREST STREET N.W.

WOODSTONE AVENUE N.W.

BENCH MARK:
INVERT OF EXIST. SAN. M.H. No. 41
ELEV. 1023.94



THE OIL AND GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
P.O. BOX 208
GRANDVILLE, OHIO 43031-0208
PHONE (614) 587-0486 OR
CALL TOLL FREE 800-925-0988

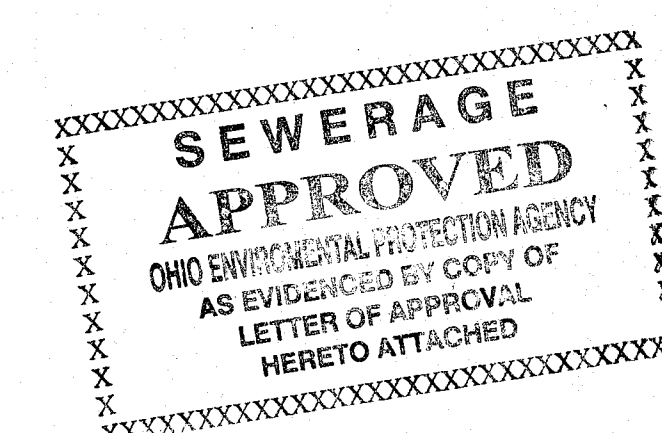
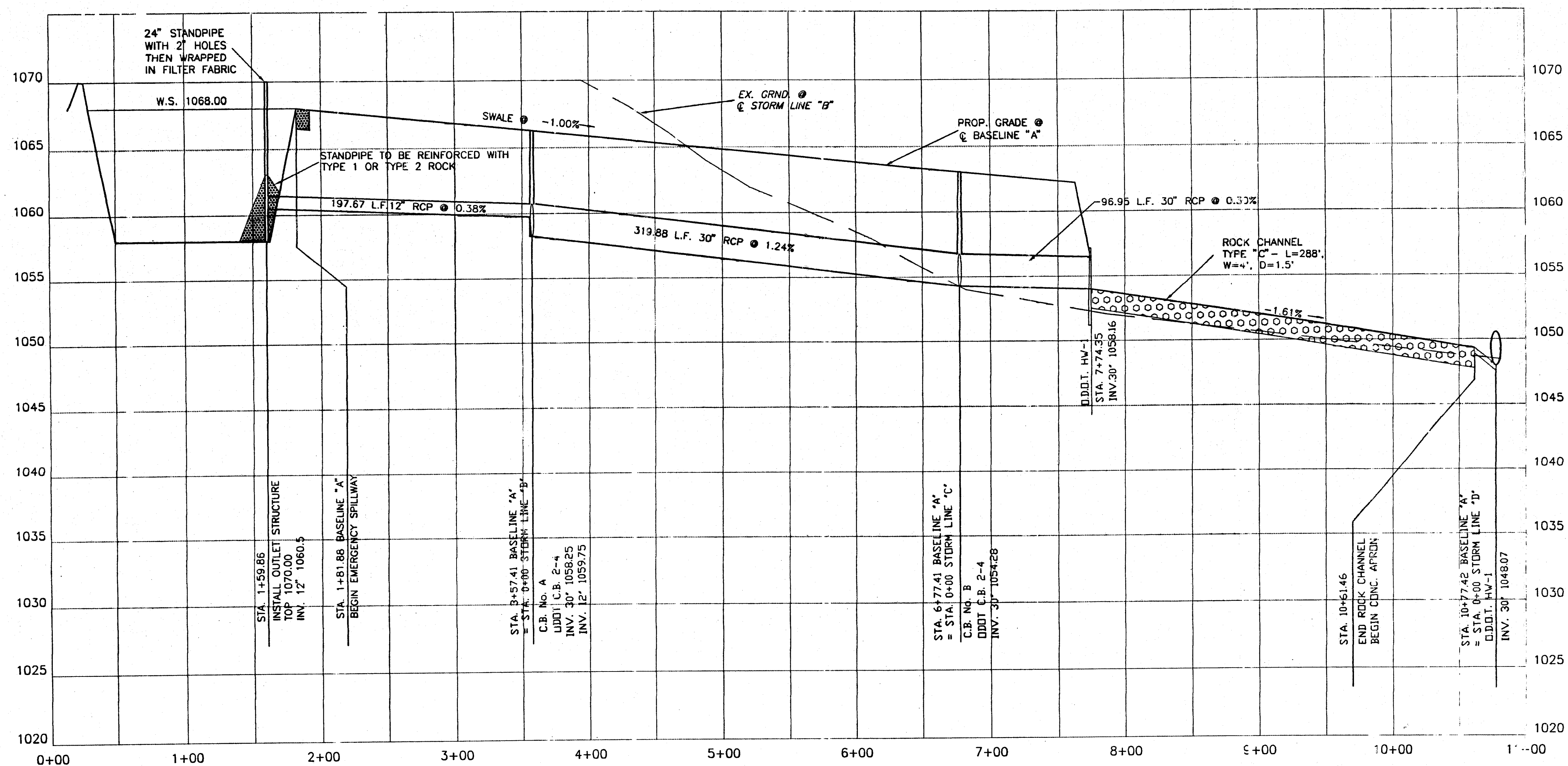
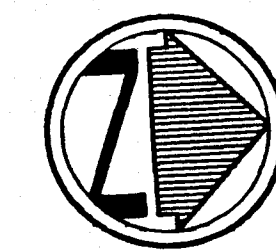
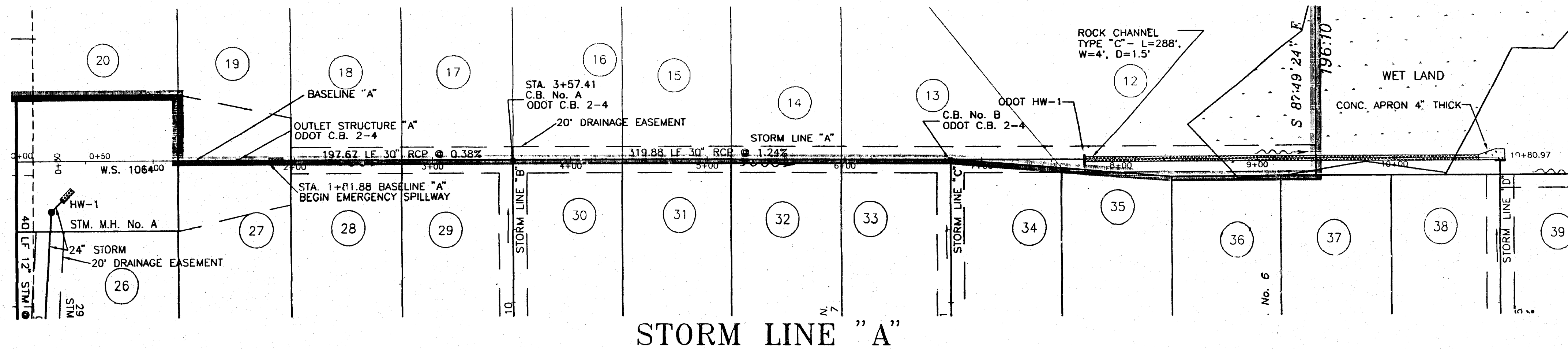
2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE 800-362-2764
OHIO UTILITIES PROTECTION SERVICE

WEST BROOK ESTATES-PHASE II

WEST BROOK ESTATES-PHASE II
PLAN AND PROFILE

700

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THE OIL AND GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
GRANVILLE, OHIO 43023-0208
PHONE (614) 587-0486 OR
CALL TOLL FREE 800-925-0988

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE: 800-362-2764
OHIO UTILITIES PROTECTION SERVICE

WEST BROOK ESTATES-PHASE II

PLAN AND PROFILE

PROJECT NUMBER: 700

A. R. LOCKHART DEVELOPMENT CO.
800 W. WATERLOO RD. ADDON, OH 4314 • PH: 330.745.6520 • FAX: 330.745.0716

A.R.L.

DATE: 9/7/00
SCALE: HORIZ. 1"=50'
SCALE: VERT. 1"=5'
DRAWN: CTR
CHECKED: SKB

REVISION

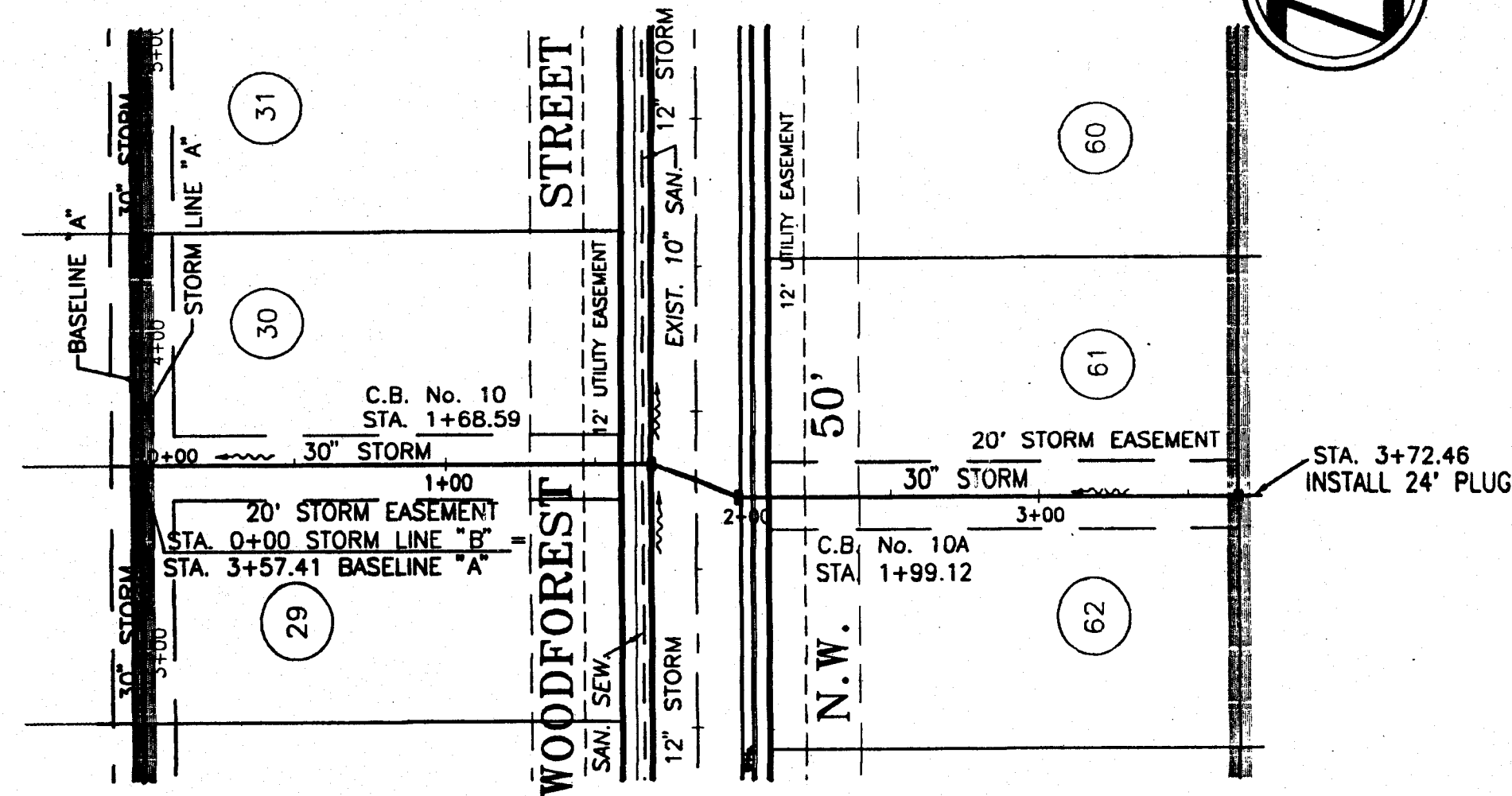
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BY

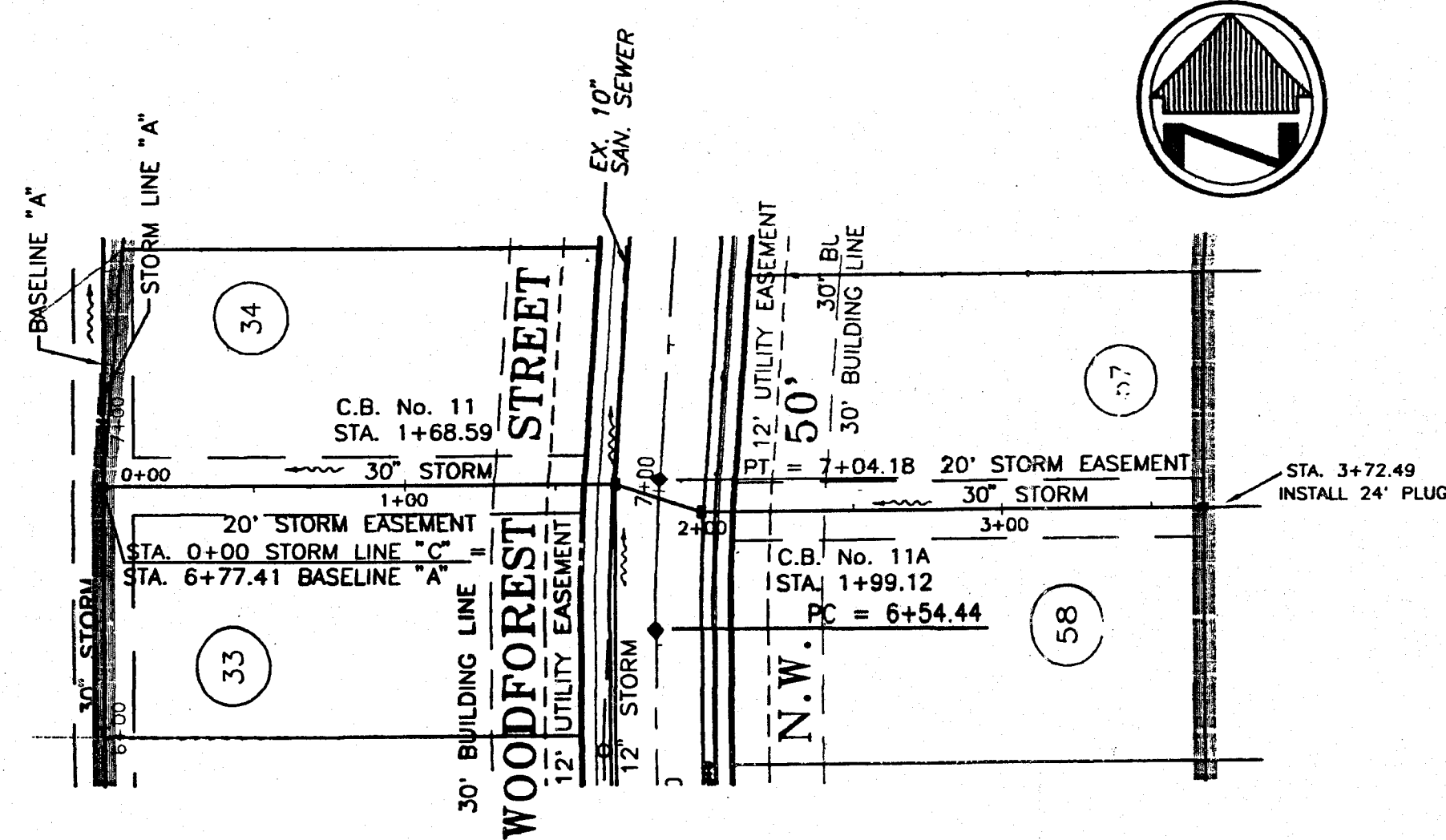
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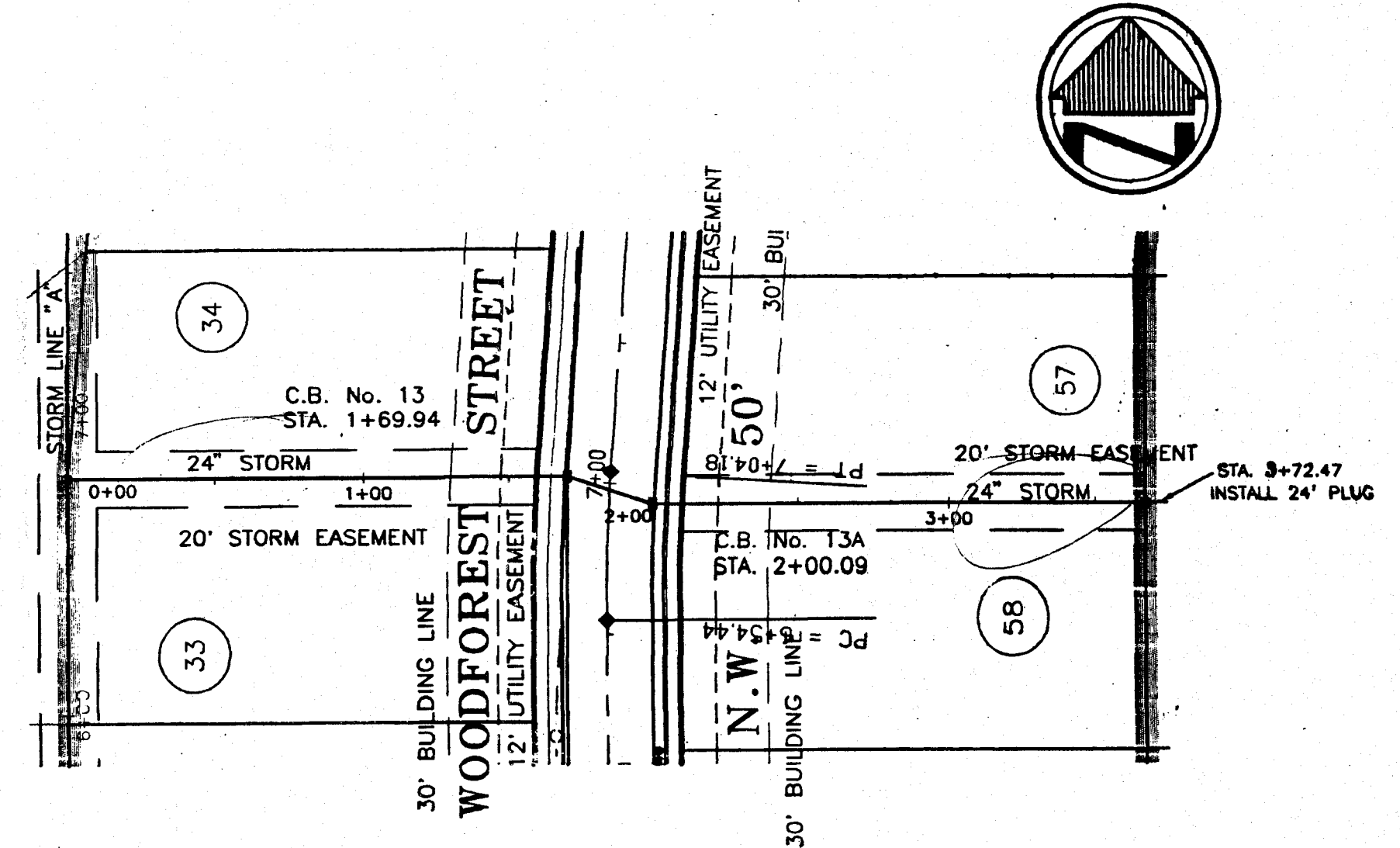
PLAN AND PROFILE
STORM LINE "A"



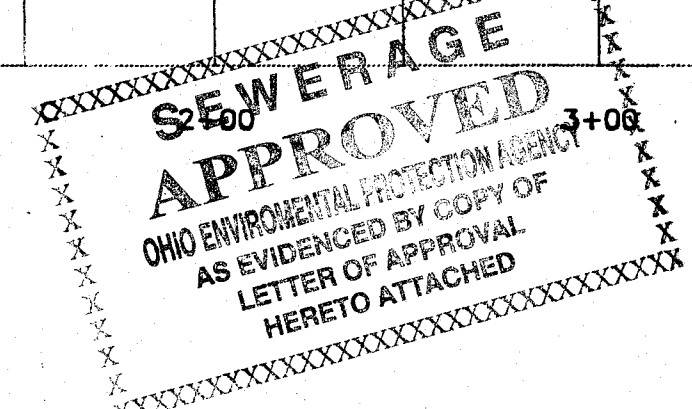
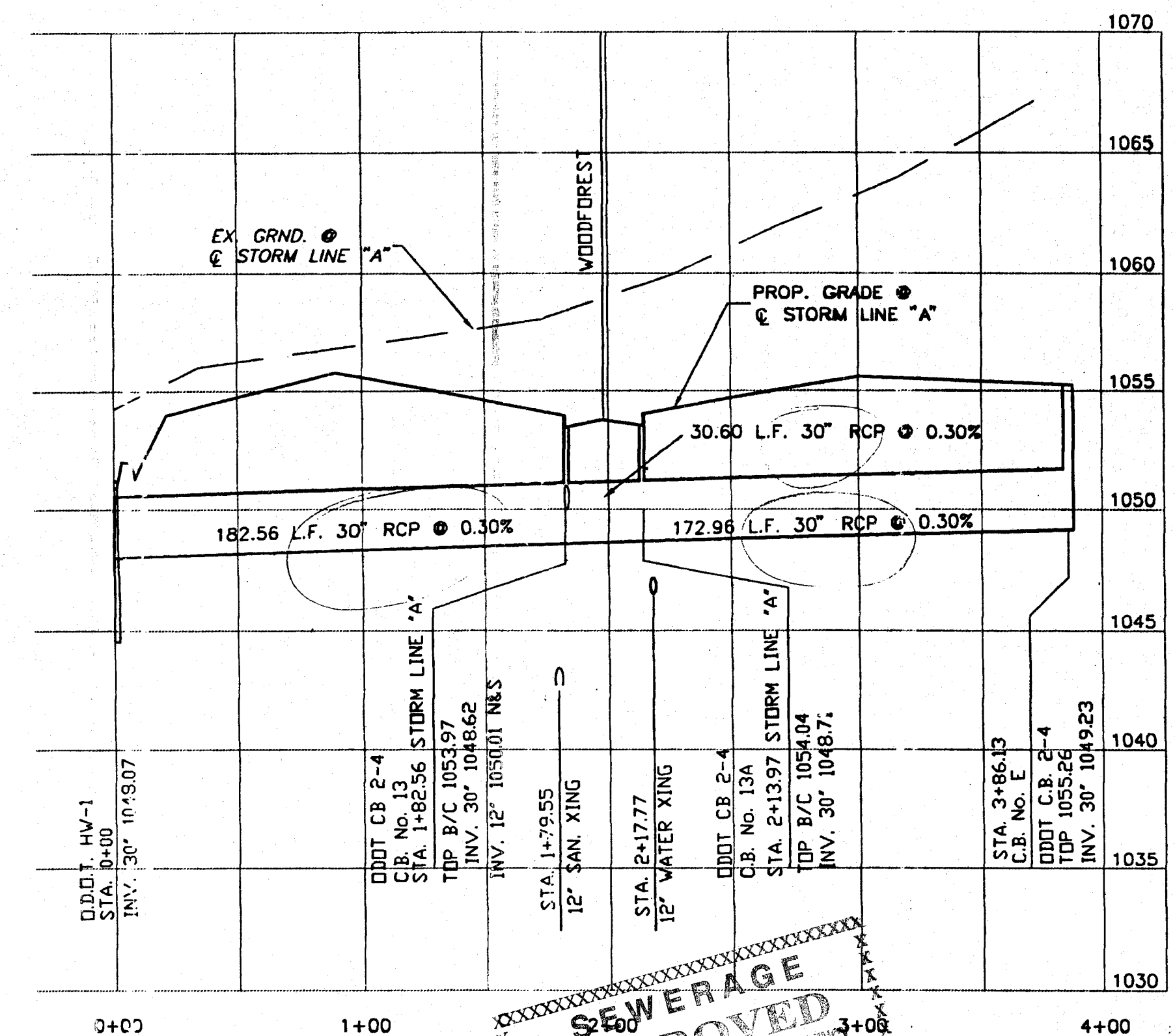
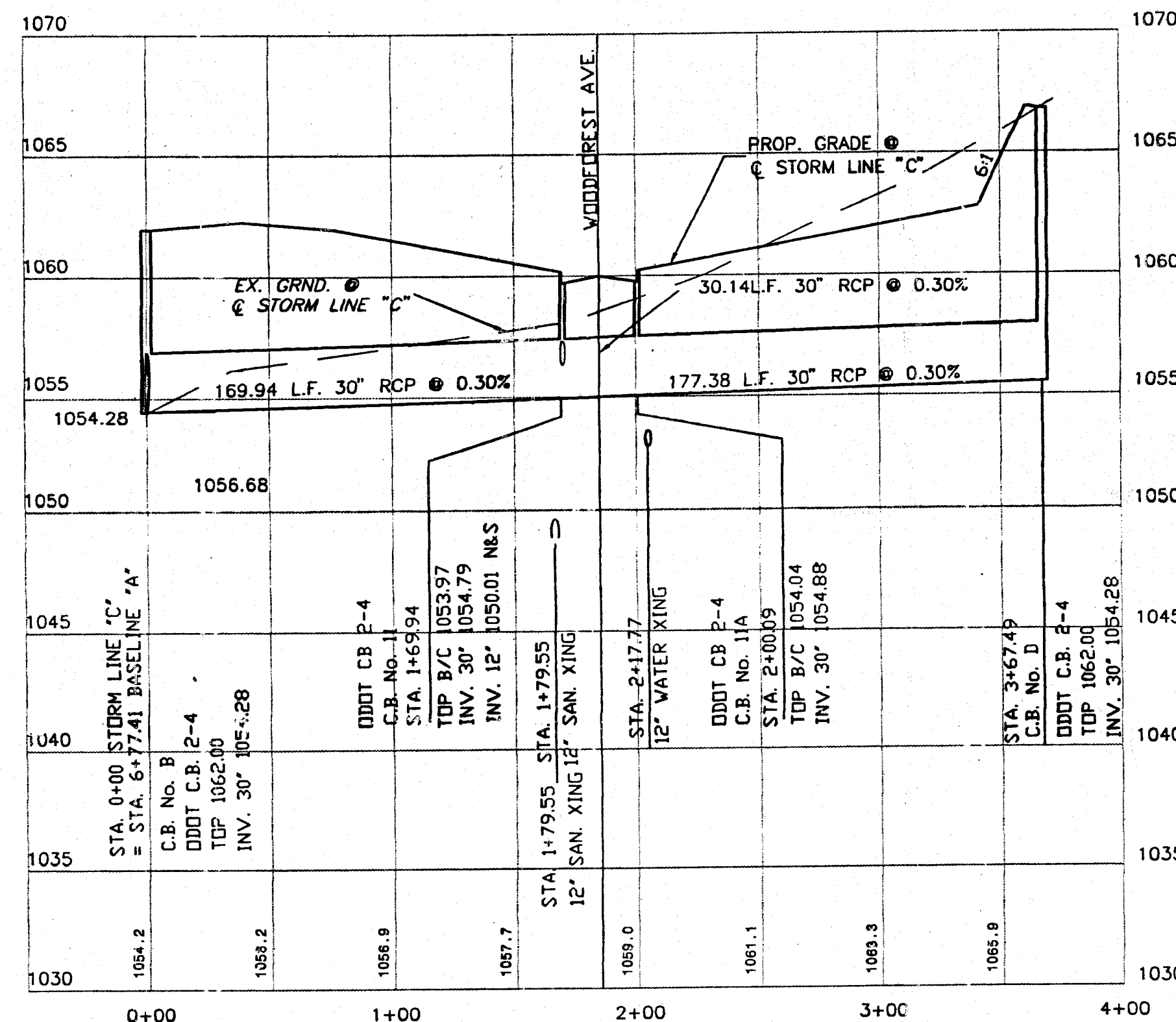
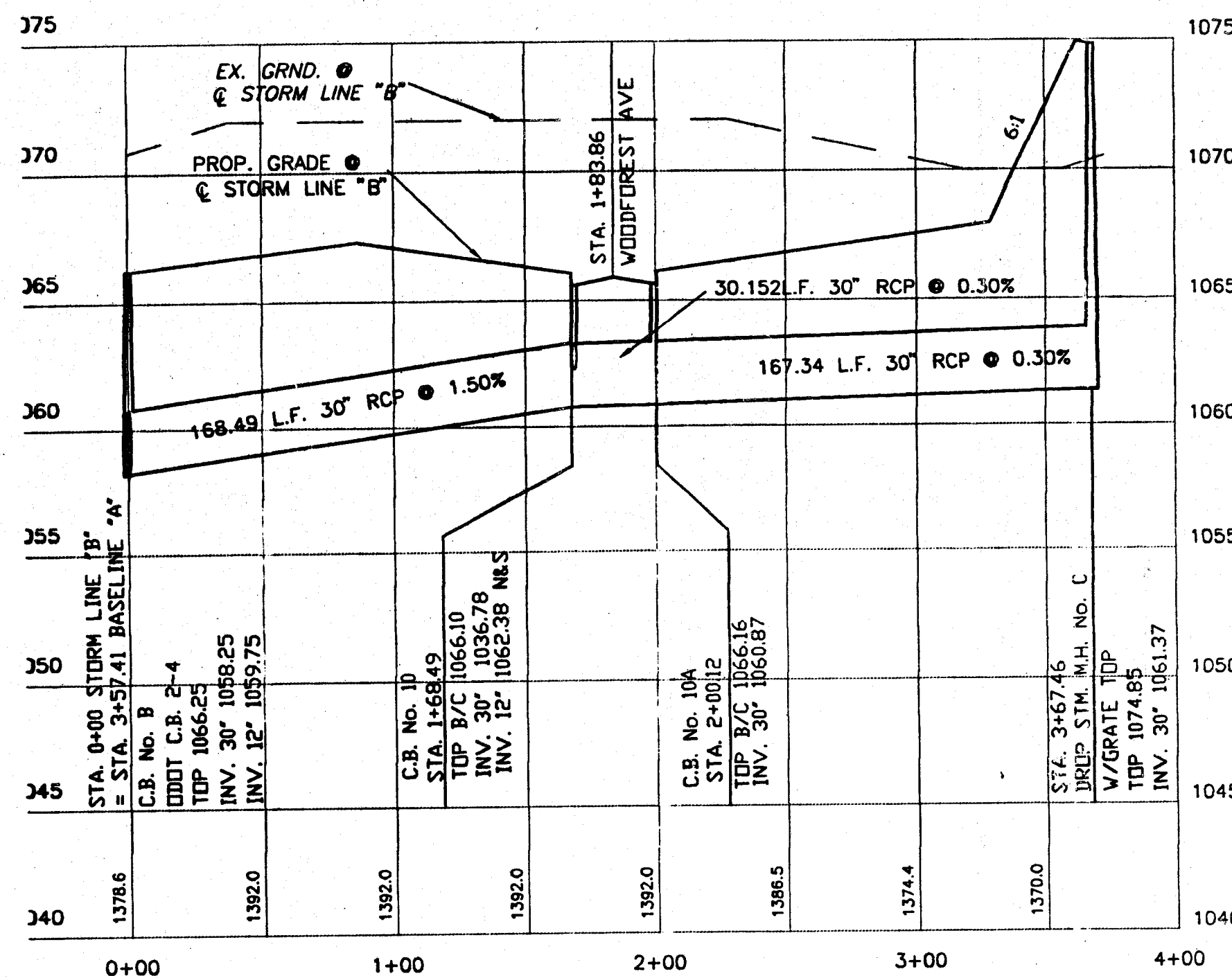
STORM LINE "B"



STORM LINE "C"



STORM LINE "D"



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UNDERGROUND PROTECTION SERVICE
P.O. BOX 206
GRANVILLE, OHIO 43023-0206
PHONE (614) 587-0486 OR
CALL TOLL FREE 800-925-0988

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE: 800-362-2764
BAD UTILITY PROTECTION SERVICE

WEST BROOK ESTATES-PHASE II
PLAN AND PROFILE

700

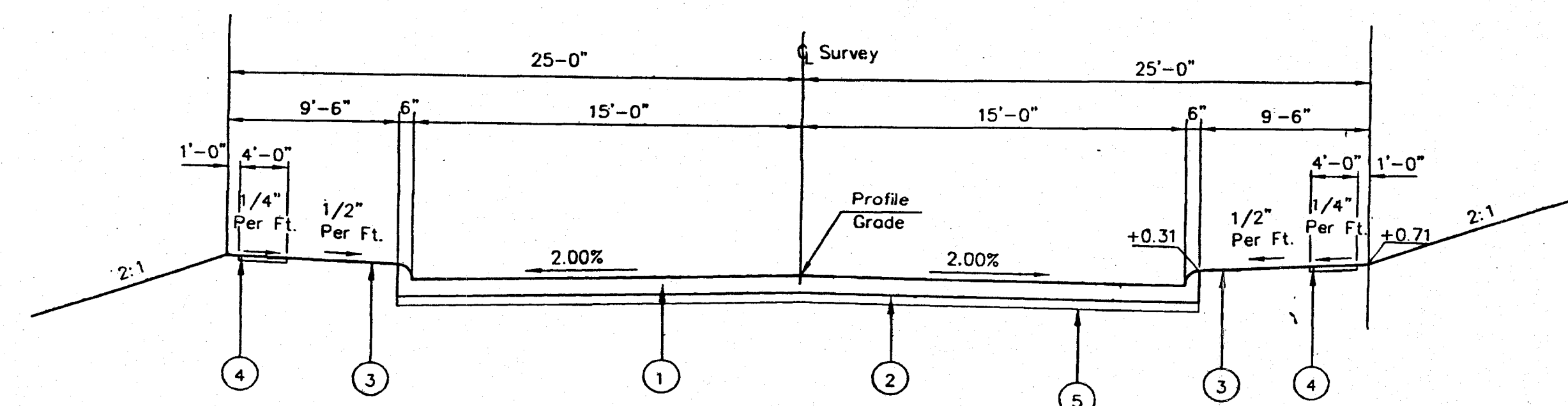
A.R. LOCKHART DEVELOPMENT CO.
800 W. WATERLOO RD. AKRON, OH 44314 • PH: 330.745.6520 • FAX: 330.745.0716

DATE: 9/1/06
SCALE: 1"=50' HORIZ.
SCALE: 1"=5' VERT.
DRAWN: CJB
CHECKED: JKB

7
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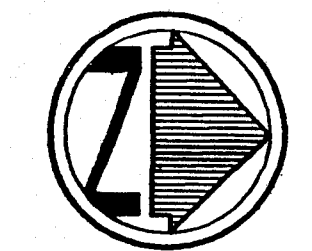
PLAN AND PROFILE
STORM LINES - "B", "C", & "D"

- LEGEND**
- ① Item 452 7" Plain Portland Cement Concrete Pavement
 - ② Item 203 Subgrade Compaction
 - ③ Item 659 Seeding and Mulching
 - ④ Item 608 4" Concrete Sidewalk (6" @ Drives)
 - ⑤ Item 304 4" Aggregate Base

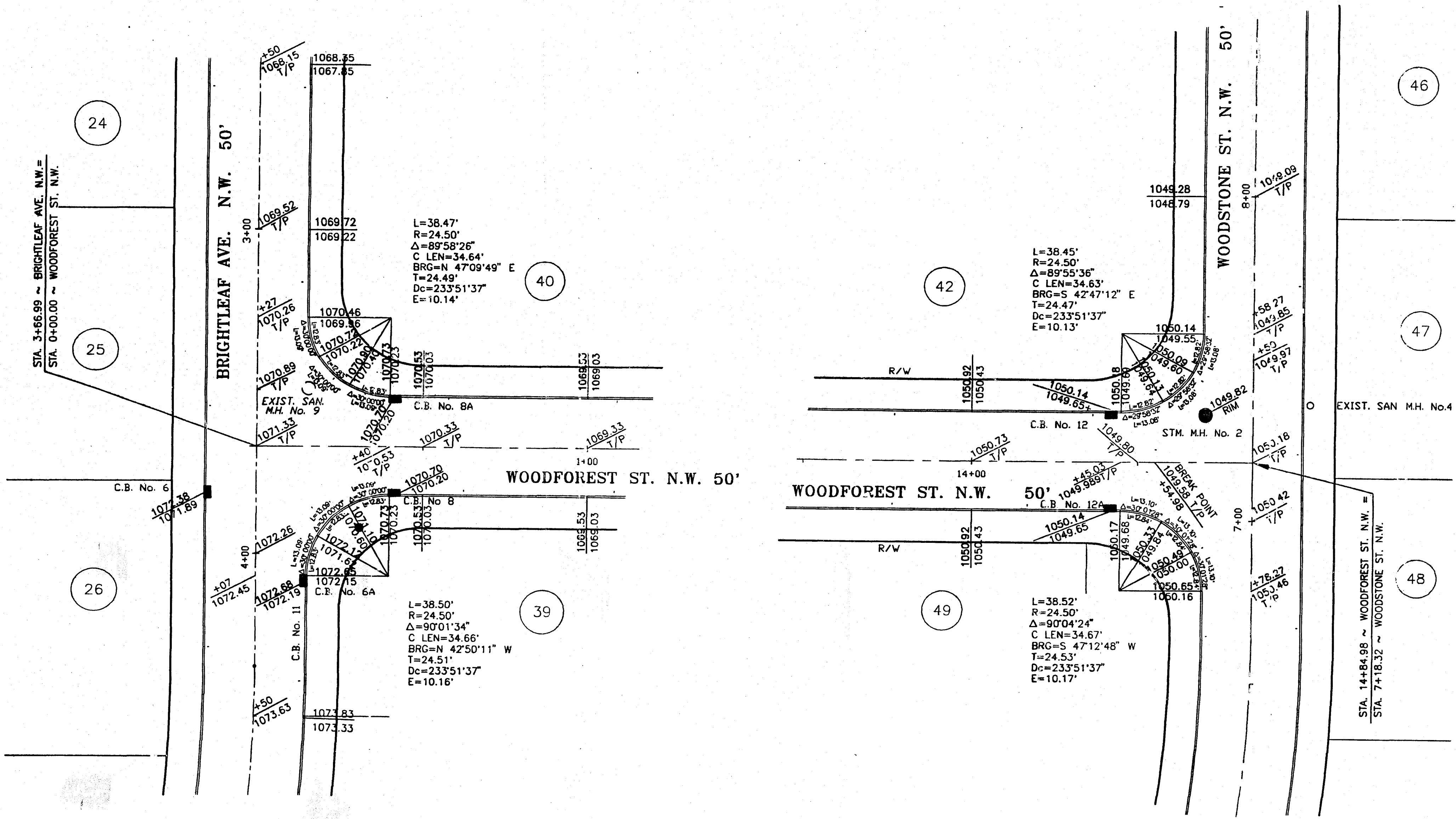


TYPICAL SECTION

N.T.S.

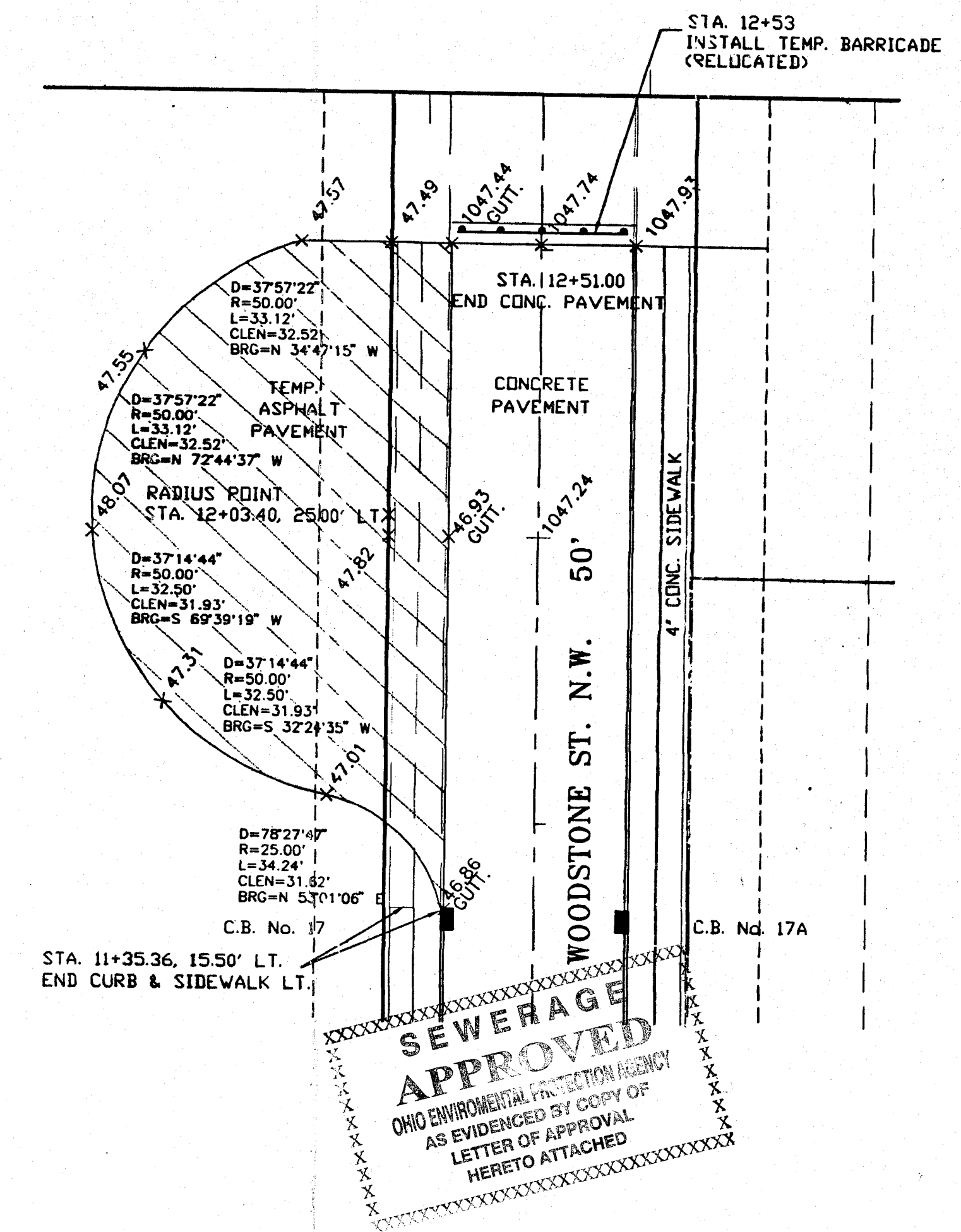


- LEGEND**
- B/C - BACK OF CURB
 - T/P - TOP OF PAVEMENT
 - 1050.21 TOP BACK OF CURB
 - 1049.71 GUTTER @ FACE OF CURB



INTERSECTION DETAILS

SCALE: 1"=20'



WEST BROOK ESTATES-PHASE II TYP. SECTION & INTERSECTION DETAILS

700

A.R. LOCKHART DEVELOPMENT CO.
80 W. WATERLOO RD. AKRON, OH 44314 • TEL: 330.745.6220 • FAX: 330.745.0716



2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE: 800-362-2764
OHIO UTILITIES PROTECTION SERVICE

8
18

TYPICAL SECTION AND INTERSECTION DETAILS
WEST BROOK ESTATES - PHASE II

UTILITIES

LISTED BELOW ARE ALL KNOWN UTILITIES LOCATED WITHIN THE CITY CORPORATION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AMERITECH
50 W.BOWERY, 6TH FLOOR
AKRON, OH 44308
800-290-2242
RICK MARSILI

CONSUMER OHIO
WATER COMPANY
P.O. BOX 584
MASSILLON, OH 44648
(330) 833-4156

OHIO EDISON
STARK DIVISION
2600 S. ERIE ST.
MASSILLON, OH 44545
(330) 833-3141

MB OPERATING
P.O. BOX 21310
CANTON, OH 44701-1310
(330) 456-2454

AT&T COMMUNICATIONS
2535 E. 40TH AVE.
DENVER, CO 80205-3601
(800) 852-3786

MASSILLON CABLE TV
P.O. BOX 814
MASSILLON, OH 44648
(330) 8334134

CITY OF MASSILLON
SANITARY SEWER
ONE JAMES DUNCAN PLAZA
MASSILLON, OH 44646
(330) 830-1722

THE EAST OHIO GAS COMPANY
4725 SOUTHWAY ST. S.W.
CANTON, OH 44706
(330) 478-3142
NANCY KOVACH

NORTHEAST OHIO NATURAL
GAS CORP.
1425 N. WOOSTER AVE.
STRASBURG, OH 44680-9766
(330) 878-5589

THE CONTRACTOR SHALL NOTIFY ALL UTILITIES 48 HOURS PRIOR TO ANY WORK.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE SHOWN AT APPROXIMATE LOCATIONS AND WHERE OBTAINED AS REQUIRED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

OUPS - 1-800-362-2764

DATUM ELEVATION

ALL BENCHMARKS ARE BASED ON REFERENCE BENCHMARKS PROVIDED BY THE CITY OF MASSILLON.

STATIONING

ALL STATIONING SHOWN IS REFERENCED TO THE BASELINE AS SHOWN.

REMOVAL OF TREES OR STUMPS

ALL TREES AND STUMPS REMOVED DURING CONSTRUCTION SHALL BE UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING.

MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAIL AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. ____.

ITEM SPECIAL - MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATION SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NORMAL 4"x4" SQUARE OR 4-1/2" DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NORMAL PIPE SIZE 2" I.D., AND CONFORM TO AASHTO M 181.

HARDWARE (PLATES, SCREWS, BOLTS, ETC..) SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR DOUBLE MAIL-BOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.12. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT, (SINGLE) (DOUBLE).

ITEM 609. CAST IN PLACE 6"x18" CONCRETE CURB

GRANULAR BEDDING, BACKFILLING AND CONCRETE CURB PLACEMENT ALONG WITH ALL APPURTENANCES IS TO BE INCLUDED IN ITEM 609.

ITEM 659. TOPSOIL, SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL EXPOSED SOIL BETWEEN THE RIGHT OF WAY LINES, AND WITHIN THE CONSTRUCTIONS LIMITS FOR AREAS OUTSIDE THE RIGHT OF WAY LINES DISTURB DURING CONSTRUCTION.

THE CITY SHALL APPROVE SEED MIX PRIOR TO CONSTRUCTION TO BE USED THROUGH OUT CONSTRUCTION LIMITS. PROPOSED MIX SHALL BE SUBMITTED IN WRITING PRIOR TO ANY CONSTRUCTION.

ITEM 659, SEEDING AND MULCHING LUMP SUM BID

EROSION CONTROL

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL AND SHALL MEET THE REQUIREMENTS OF 108.04.

ITEM 604. CATCH BASIN NO. 3, 3A

CATCH BASINS SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 604 EXCEPT THAT THE GRATES SHALL BE NEENAH NO. R-4859-C OR EAST JORDAN NO. 6730-2 OR APPROVED EQUALS.

CROSSING OR CONNECTING TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

REMOVAL AND RELOCATION OF EXISTING UTILITIES

ALL UTILITY CONFLICTS WHERE THE REMOVAL AND RELOCATION OF AND EXISTING UTILITY DO TO PROPOSED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 202 REMOVAL AND RELOCATION OF EXISTING UTILITIES.

RESIDENTIAL AND COMMERCIAL DRAINAGE CONNECTIONS

EACH LOT SHALL BE SUPPLIED WITH A SINGLE 6" STORM LATERAL THAT WILL BE INSTALLED FROM THE MAIN TO THE PROPERTY LINE. SAID STORM LATERAL SHALL BE CONNECTED TO FOUNDATION DRAINS, SUMP DRAIN AND WHEN POSSIBLE AS PER ENGINEER'S DIRECTION THE DOWN SPOUT WILL BE CONNECTED.

THE FOLLOWING WORK SHALL BE PAID FOR UNDER ITEM 603 6" STORM LATERAL.

DOWN SPOUTS

ALL DOWN SPOUTS UNABLE TO BE CONNECTED TO THE STORM LATERAL SHALL BE PUT THROUGH THE CURB AS PER ENGINEERS DIRECTION.

CURB OPENING SHALL NOT GREATER THAN A 3 1/2" DIAMETER.

THE WORK ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 609.

ITEM 651. TOPSOIL STOCKPILED

THE MATERIAL FOR THIS ITEM SHALL BE OBTAINED FROM AREAS WITHIN THE PROPOSED RIGHT-OF-WAY.

PROVISION OF THIS 651 ITEM SHALL NOT BE CONSTRUED AS A WAIVER OF THE PROVISIONS OF 201.4. SOD AND INCIDENTAL TOPSOIL REMOVED ELSEWHERE ON THIS PROJECT FOR SALVAGE, FOR USE AS DESCRIBED IN 203.04(e), SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE VARIOUS 203 ITEMS.

MANHOLES, CATCH BASINS, INLETS AND PIPES REMOVED OR ABANDONED

ALL CASTING AND PIPES SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT-OF-WAY FOR SALVAGE BY THE CITY. CONTACT THE CITY OF MASSILLON STREET SUPERINTENDENT - GEORGE PATTERSON AT 330-833-5745.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

ITEM 407. TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.08 GALLONS PER SQUARE YARD OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

ITEM 408. BITUMINOUS PRIME COAT

THE RATE OF APPLICATION OF THE 408 PRIME COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.40 GALLONS PER SQUARE YARD OF PRIME COAT FOR ESTIMATING PURPOSES ONLY.

REVIEW OF SANITARY AND DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE CITY OF MASSILLON AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE CITY OF MASSILLON.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE CITY OF MASSILLON.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

NOTIFICATION OF SAFETY FORCES

THE CONTRACTOR SHALL NOTIFY THE CITY OF MASSILLON FIRE DEPARTMENT, MASSILLON POLICE DEPARTMENT, CITY ENGINEER AND LOCAL MASSILLON, TUSLAW JACKSON & PERRY) SCHOOL DISTRICT TRANSPORTATION SUPERVISOR, AND THE SAFETY & SERVICE DIRECTOR AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSING OR TRAFFIC CHANGE.

REVIEWED BY
AT THE NATIONAL
OFFICE OF THE
THE CITY OF MASSILLON, OHIO

ELECTRONIC FILE NAME
stano1.dwg
ACCOUNT NUMBER
STANDARD

DRAWN BY
F. Werner
DATE
Sept. 13, 1999

CITY OF MASSILLON
Standard General Notes
City of Massillon
Stark County, Ohio

CITY OF MASSILLON
Francis H. Cicchinelli, Jr.
Mayor

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SANITARY / STORM WORK

THE FOLLOWING CONDUIT TYPES MAY BE USED FOR SANITARY SEWER: 707.44 SDR35, 706.08, 706.03, 706.02 WITH JOINTS AS PER 706.11 OR 706.12.

THE FOLLOWING CONDUIT TYPES MAY BE USED FOR STORM SEWER WITH MORE THAN (1) ONE FOOT OF COVER: 707.42, 706.08, 706.02, WITH JOINTS AS PER 706.10 OR 706.11.

THE FOLLOWING CONDUIT TYPES MAY BE USED FOR STORM SEWER WITH LESS THAN (1) ONE FOOT OF COVER: 706.02 WITH JOINTS AS PER 706.10 OR 706.11

CONNECTION TO EXISTING SEWERS

CONSTRUCTION OF THE NEW SEWER SHALL BE SCHEDULED AND PERFORMED SUCH THAT ALL NEW SEWER IS IN PLACE TESTED AND FOUND READY FOR ACCEPTANCE BEFORE THE ACTUAL CUTTING AND TYING INTO THE EXISTING SEWER IS PERFORMED.

INTERNAL TELEVISION INSPECTION

ALL SANITARY SEWERS 8" DIAMETER AND LARGER, MUST PASS INTERNAL TELEVISION INSPECTION. THE CONTRACTOR SHALL PROVIDE COMPLETE, INTERNAL INSPECTION VIDEOTAPE TO THE CITY OF MASSILLON ENGINEERING DEPARTMENT. THE VIDEOTAPING PROCEDURE MUST BE IN ACCORDANCE WITH SPECIFICATION SECTION 02743.

LATERAL LOCATIONS

ALL NEW LATERAL LOCATIONS SHALL BE DETERMINED IN THE FIELD. TO DETERMINE THE LOCATION THE CONTRACTOR SHALL SPEAK TO THE LAND OWNER FOR BEST SUITABLE LOCATION. ALL LOCATIONS MUST BE APPROVED BY ENGINEER.

ALL NEW LATERAL LOCATIONS TO BE FIELD CHECKED AND LOCATED BY THE CONTRACTOR PRIOR TO BACKFILLING.

LATERALS SHALL BE 6" CONDUIT TYPE B.

LATERAL PRICE SHALL INCLUDE ALL APPURTENANCES NECESSARY

EXISTING ROOF DRAINS, YARD DRAINS, OR FOUNDATION DRAINS SHALL BE CONNECTED TO THE 6" STORM SEWER LATERAL AND NOT THE SANITARY SEWER LATERAL.

IT IS PROHIBITED TO CONNECT ANY CLEAN WATER CONDUIT TO THE SANITARY SEWER.

THE FOLLOWING WORK SHALL BE PAID FOR UNDER ITEM 603 6" CONDUIT TYPE B 707.42.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 ITEM.

EXISTING DATA

EACH CONTRACTOR SHALL VISIT THE SITE PERSONALLY TO ASCERTAIN THE NATURE OF THE WORK AND BECOME THOROUGHLY FAMILIARIZED WITH THE SITE PRIOR TO BID SUBMISSION.

EXISTING STRUCTURES, GRADES, PIPING, ETC. ARE INDICATED IN APPROXIMATE LOCATION ON THE PLAN. INFORMATION SHOWN IS NOT GUARANTEED TO BE CORRECT AND COMPLETE. THE DATA SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. THE EXISTENCE OF FACILITIES ABOVE OR BELOW GROUND, WHICH MAY NOT BE SHOWN, WILL NOT BE A BASIS FOR A CLAIM FOR EXTRA WORK.

EXISTING UNDERGROUND UTILITIES SHOWN ARE RECORDS PROVIDED BY UTILITY COMPANIES AND ARE APPROXIMATE ONLY. SERVICE LATERALS ARE NOT SHOWN.

IT IS THE RESPONSIBILITY OF CONTRACTOR TO NOTIFY THE CITY, PRIOR TO BID OPENING, OF ANY NON-CONFORMING OR CONFLICTING INFORMATION.

CONSTRUCTION SPECIFICATIONS & STANDARDS

ALL CONSTRUCTION TO BE CITY OF MASSILLON SPECIFICATIONS AND STANDARDS, THE LATEST EDITION OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS AND FOLLOW ALL OSHA AND ADA REGULATIONS AND REQUIREMENTS.

CONTRACTOR AVAILABILITY

THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A 24 HOUR PHONE NUMBER WHERE THE CONTRACTOR SHALL BE AVAILABLE FOR EMERGENCIES.

PRESERVATION OF PRIVATE PROPERTY

THE CONTRACTOR SHALL PERFORM WORK AS TO NOT DISTURB, DAMAGE OR DESTROY ANY TELEPHONE OR POWER POLES, SIGNS, LANDSCAPING ITEMS, ETC. ANY ITEM DAMAGED OR DESTROYED SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ANY ITEM DISTURBED OR IN CONFLICT WITH THE WORK TO BE PERFORMED SHALL BE REMOVED AND RESET AT THE CONTRACTOR'S EXPENSE. PRIOR ENGINEER APPROVAL IS REQUIRED BEFORE ANY OF THE ABOVE ITEMS ARE PERFORMED.

PRESERVATION OF PROPERTY CORNERS AND SURVEY MARKERS

THE CONTRACTOR SHALL PRESERVE ALL CORNERSTONES, IRON PINS, CONCRETE MONUMENTS ANY TYPE OF LAND MONUMENT. HE SHALL HAVE ALL LAND MONUMENTS IN THE PROXIMITY OF THE WORK REFERENCED. HE SHALL REPLACE DESTROYED OR DAMAGED MONUMENTS AND SHALL FURNISH A CERTIFICATION BY AN OHIO REGISTERED SURVEYOR THAT THE MONUMENTS HAVE BEEN RESTORED.

EXCAVATED MATERIAL

ALL EXCAVATED MATERIAL AND ALL MATERIAL USED IN CONSTRUCTION OF THE WORK SHALL BE PILED IN A MANNER THAT WILL NOT ENDANGER THE WORK AND THAT WILL LEAVE DRIVEWAYS OR OTHER CONTROLS UNOBSTRUCTED AND ACCESSIBLE WHILE THE WORK IS TO BE COMPLETED. SATISFACTORY PROVISIONS SHALL BE MADE FOR STREET DRAINAGE, AND NATURAL WATERCOURSES SHALL NOT TO BE OBSTRUCTED. DURING THE PROGRESS OF THE WORK, ALL MATERIAL PILES SHALL BE KEPT TRIMMED UP AND MAINTAINED IN A NEAT MANNER. ALL EXCAVATED WASTE MATERIAL SHALL BE REMOVED FROM THE PROJECT SITE, AS DIRECTED BY THE ENGINEER. THE WASTE SITE IS TO BE PROVIDED BY THE CONTRACTOR AT NO COST TO THE CITY. UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS, ALONG WITH A LETTER FROM THE PROPOSED WASTE SITE OWNER PERMITTING SUCH AND HOLDING THE CITY HARMLESS.

PRESERVATION OF EXISTING UTILITY SERVICES

ANY EXISTING WATER LINE, SANITARY SEWER, STORM SEWER, GAS LINE OR OTHER UTILITY IN OR OUTSIDE OF THE CONSTRUCTION LIMITS, DAMAGED DURING CONSTRUCTION OF THE PROPOSED PROJECT, WILL BE REPLACED AT THAT CONTRACTORS EXPENSE.

ITEM 623. CONSTRUCTION STAKING

CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND UPON COMPLETION OF PROJECT AS-BUILT DRAWINGS ARE REQUIRED.

THIS WORK IS TO BE UNDER ITEM 623 CONSTRUCTION STAKING.

SUBSURFACE CONDITIONS

IT IS THE OBLIGATION AND RESPONSIBILITY OF THE BIDDER TO MAKE HIS OWN INVESTIGATIONS OF SUBSURFACE CONDITIONS PRIOR TO SUBMITTING HIS PROPOSAL. THE BIDDER MAY EXAMINE THE RECORDS OF ALL BORINGS, TEST EXCAVATIONS AND OTHER SUBSURFACE INVESTIGATIONS, IF ANY, MADE SOLELY FOR DESIGN PURPOSES FOR THE OWNER. SAID BORINGS, TEST EXCAVATIONS AND OTHER SUBSURFACE INVESTIGATIONS, ARE NOT A PART OF THE CONTRACT DOCUMENTS, EXCEPT TO THE EXTENT THAT THE RESULTS THEREOF ARE SPECIFICALLY SHOWN ON THE PLANS OR INCLUDED IN THE SPECIFICATIONS AND ARE NOT WARRANTED TO SHOW THE ACTUAL SUBSURFACE CONDITIONS. THE CONTRACTOR AGREES THAT THEY WILL MAKE NO CLAIM AGAINST THE OWNER OR THE ENGINEER IF, IN CARRYING OUT THE WORK, HE FINDS THAT THE ACTUAL SUBSURFACE CONDITIONS ENCOUNTERED DO NOT CONFORM TO THOSE INDICATED BY SAID BORINGS, TEST EXCAVATIONS AND OTHER SUBSURFACE INVESTIGATIONS.

PAVEMENT DESIGN

PAVEMENT DESIGN CRITERIA SHALL BE BASED UPON SITE-SPECIFIC SOIL CONDITIONS AND DRAINAGE OF THE SITE. IN CERTAIN CASES, SOIL BORINGS AND OTHER SUBSURFACE INVESTIGATIONS MAY BE NECESSARY AS REQUIRED BY THE CITY ENGINEER. ALL PAVEMENT DESIGNS AND SOILS INFORMATION SHALL BE SUBMITTED TO THE MASSILLON CITY ENGINEER FOR HIS APPROVAL PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.

RESTORATION

FOR SANITARY SEWER INSTALLED, TESTED, AND ACCEPTED UP TO MAY 15TH OF ANY CALENDAR YEAR, RESTORATION SHALL BE COMPLETE BY JUNE 30TH OF THAT YEAR. FOR INSTALLATION OF SANITARY SEWER TESTED AND ACCEPTED FROM MAY 15TH TO SEPTEMBER 30TH OF ANY CALENDAR YEAR, RESTORATION SHALL BE COMPLETE BY NOVEMBER 15TH OF THAT CALENDAR YEAR. FOR SANITARY SEWER INSTALLED, TESTED, AND ACCEPTED AFTER NOVEMBER 15TH OF ANY CALENDAR YEAR, RESTORATION SHALL BE COMPLETE BY MAY 15TH OF THE NEXT CALENDAR YEAR.

ALL SOI AREAS DISTURBED BY THE CONTRACTOR SHALL BE TOPSOILED, SEEDED AND MULCHED. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR EACH ITEM OF AFFECTED WORK. TOPSOIL, SEEDING AND MULCHING SHALL NOT BE A SEPARATE PAY ITEM. THIS INCLUDES BACKFILLING, SEEDING AND MULCHING ALONG THE EDGE OF ALL PAVEMENT RESTORATION.

PAVEMENT CROSSINGS WILL RECEIVE TYPE C PAVEMENT REPLACEMENT WITH FULL WIDTH PAVEMENT OVERLAY.

CONTRACTOR TO REPLACE ALL PAVEMENT MARKINGS. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR PAVEMENT.

CONTRACTOR TO USE HOT APPLIED JOINT CRACK SEALER ON ASPHALT PAVEMENT AT ALL ENDS AND INTERSECTIONS.

ALL TRENCHES IN ROAD RIGHT OF WAY WILL RECEIVE FULL DEPTH PREMIUM GRANULAR BACKFILL.

MAINTENANCE OF TRAFFIC

THE CONTRACTOR SHALL SUPPLY A MAINTENANCE OF TRAFFIC PLAN TO THE CITY OF ENGINEER.

MAINTENANCE OF TRAFFIC PLAN MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO ANY CONSTRUCTION COMMENCING.

ACCESSIBILITY TO PRIVATE PROPERTY

ACCESS TO ALL DRIVEWAYS AND PARKING AREAS WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES EXCEPT WHILE LAYING THE SANITARY SEWER ACROSS THE DRIVE. THE TRENCH SHALL BE BACKFILLED AT THE END OF EACH WORK DAY TO PROVIDE ACCESS. THE CONTRACTOR MUST NOTIFY EACH PROPERTY OWNER AT LEAST 24 HOURS IN ADVANCE OF CUTTING THEIR DRIVEWAY.

FINAL APPROVAL

A VIDEO TAPE WILL BE MADE BY THE CONTRACTOR AND SUBMITTED TO THE CITY PRIOR TO THE PROJECT COMMENCING. AFTER THE FINAL INVOICE IS RECEIVED THE SITE WILL BE VIDEO TAPED AGAIN BY THE CONTRACTOR. ANY DISCREPANCIES WILL BE RESOLVED PRIOR TO FINAL PAYMENT.

COST OF THIS WORK SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

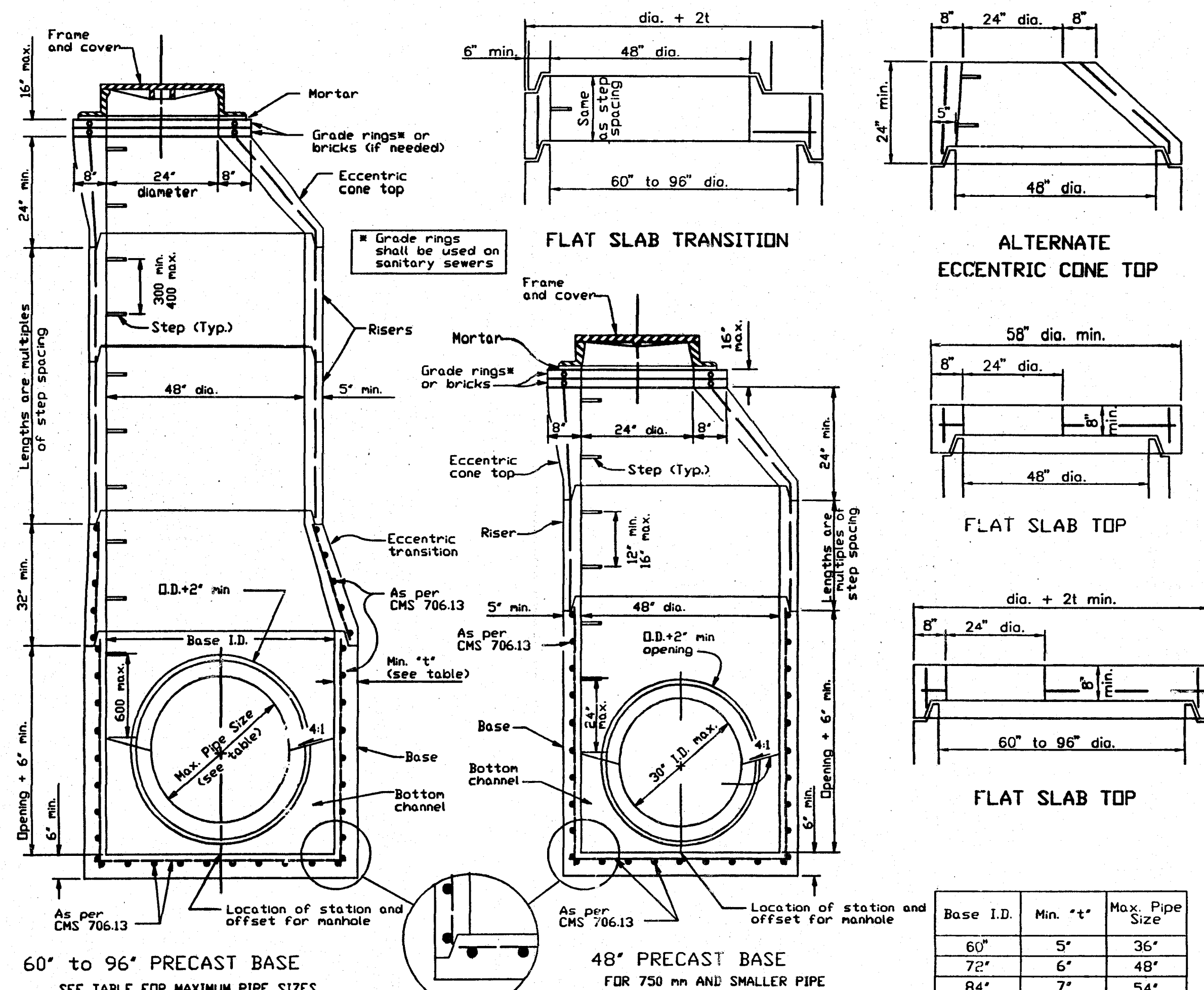


CITY OF MASSILLON
Standard General Notes
City of Massillon
Stark County, Ohio

CITY OF MASSILLON
Francis H. Cicchinelli, Jr.
Mayor

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THE CITY OF MASSILLON, OHIO
F. Weirner
DATE
Sept. 13, 1999
ELECTRONIC FILE NAME
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ACCOUNT NUMBER
STANDARD



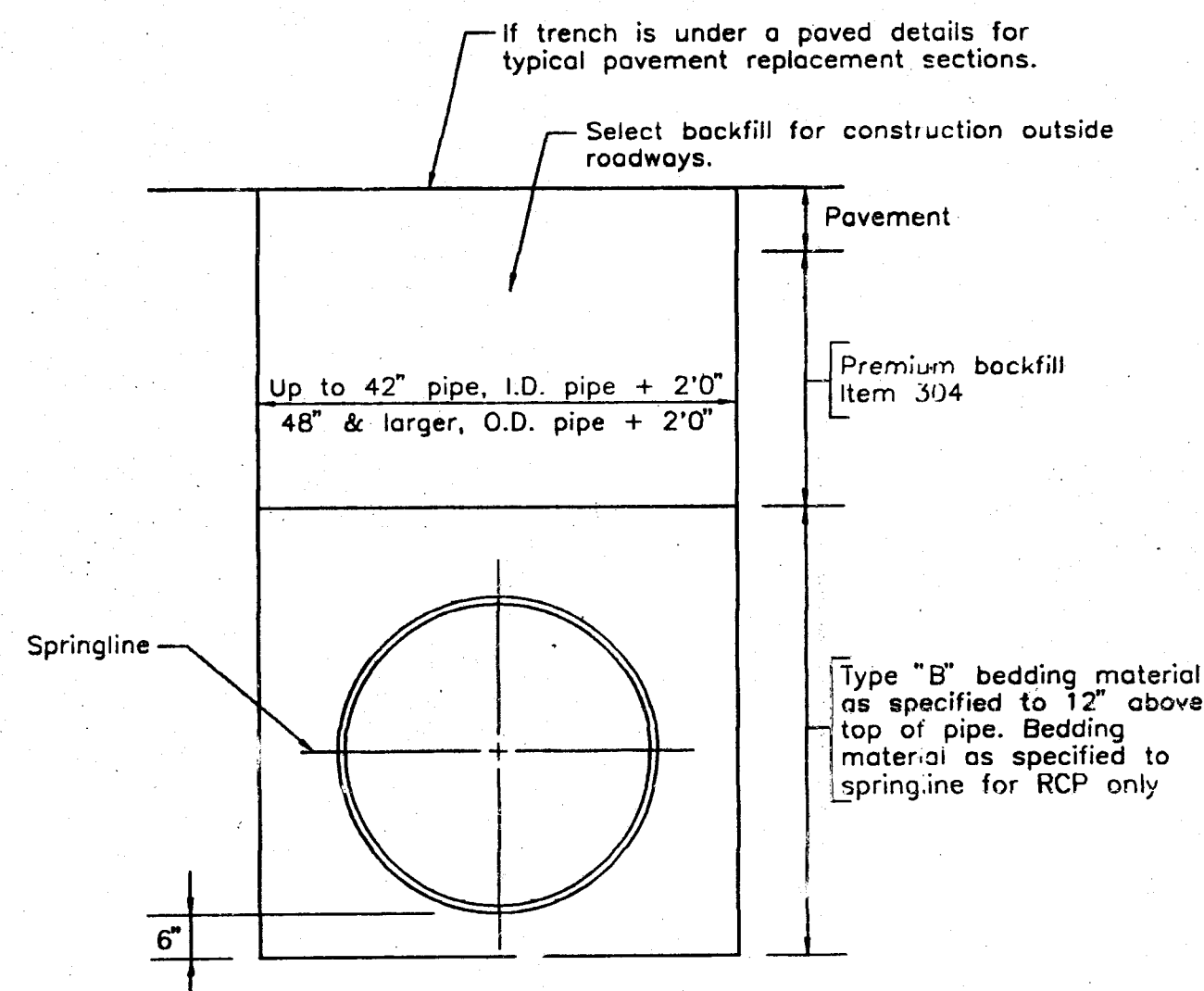
60" to 96" PRECAST BASE
SEE TABLE FOR MAXIMUM PIPE SIZES

48" PRECAST BASE
FOR 750 mm AND SMALLER PIPE

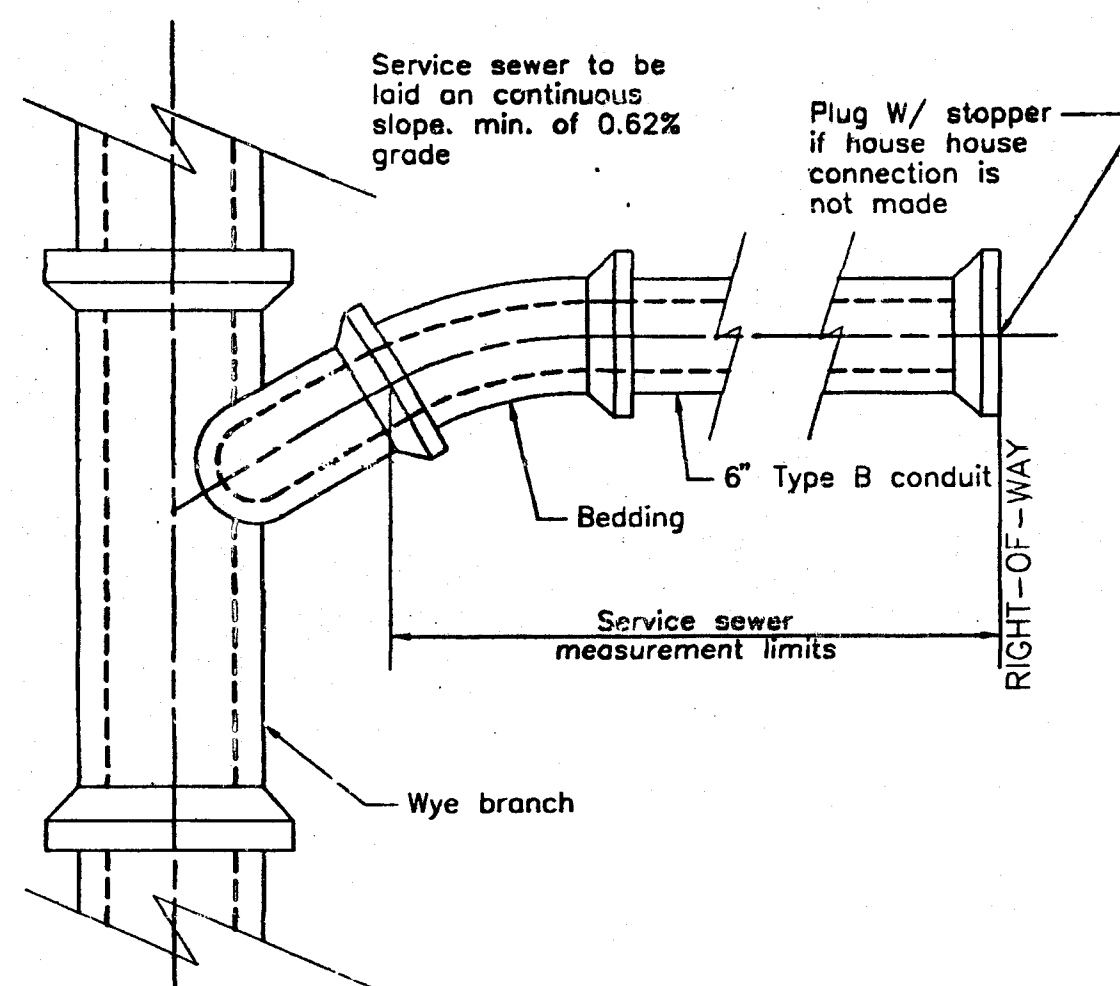
SECTION VIEWS OF REINFORCED PRECAST MANHOLES

MANHOLE TYPE 3

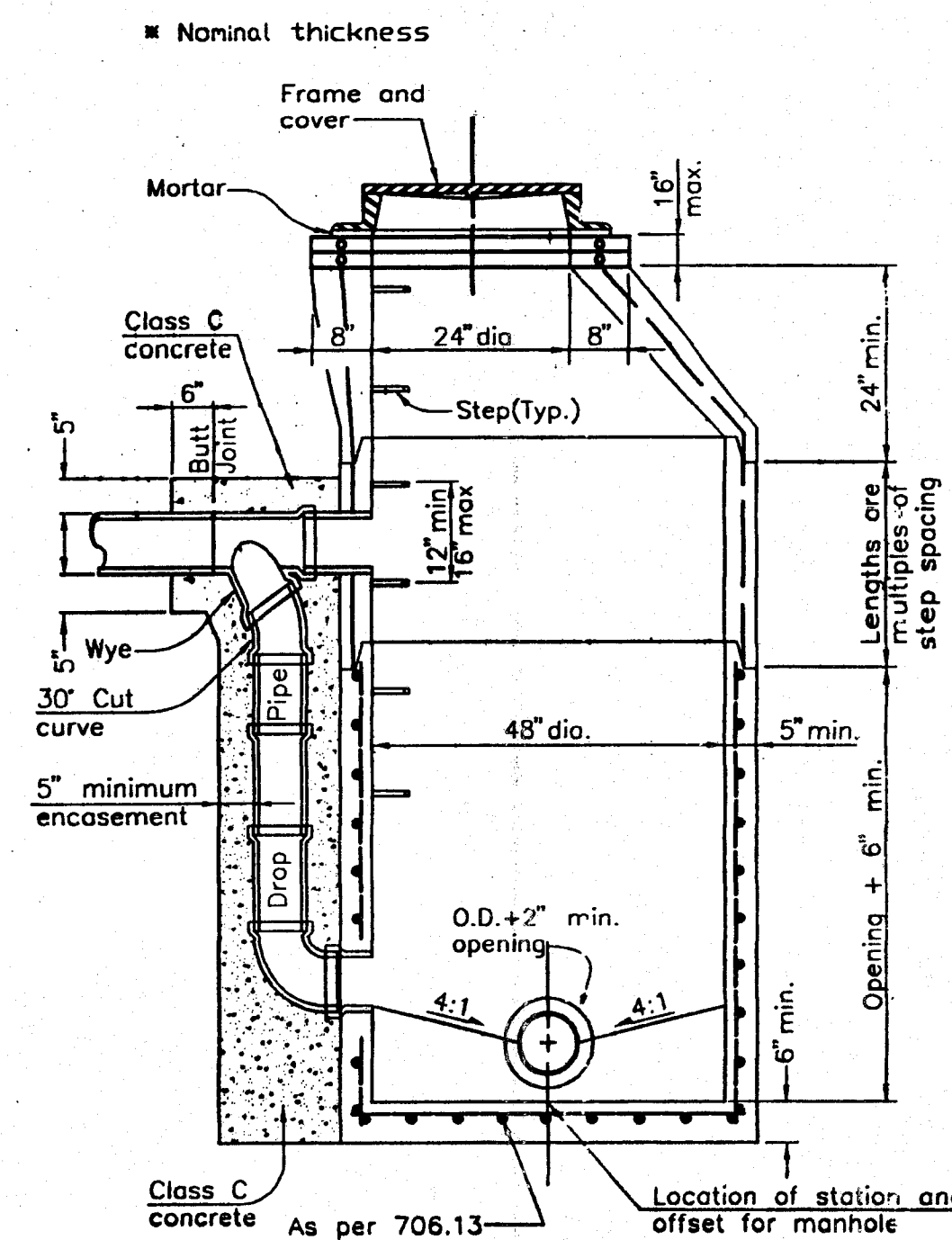
Base I.D.	Min. "t"	Max. Pipe Size
60"	5"	36"
72"	6"	48"
84"	7"	54"
90"	7 1/2"	60"
96"	8"	60"



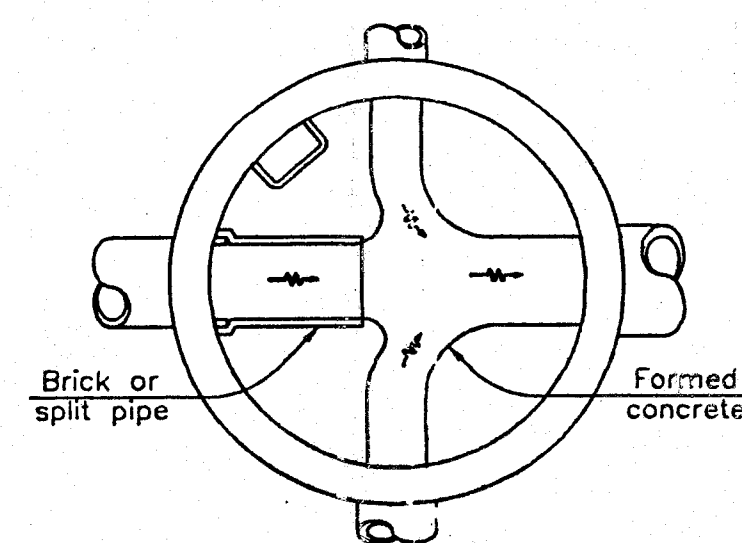
BEDDING AND TRENCH DETAIL
TYPE "B" BEDDING



STANDARD SERVICE CONNECTION

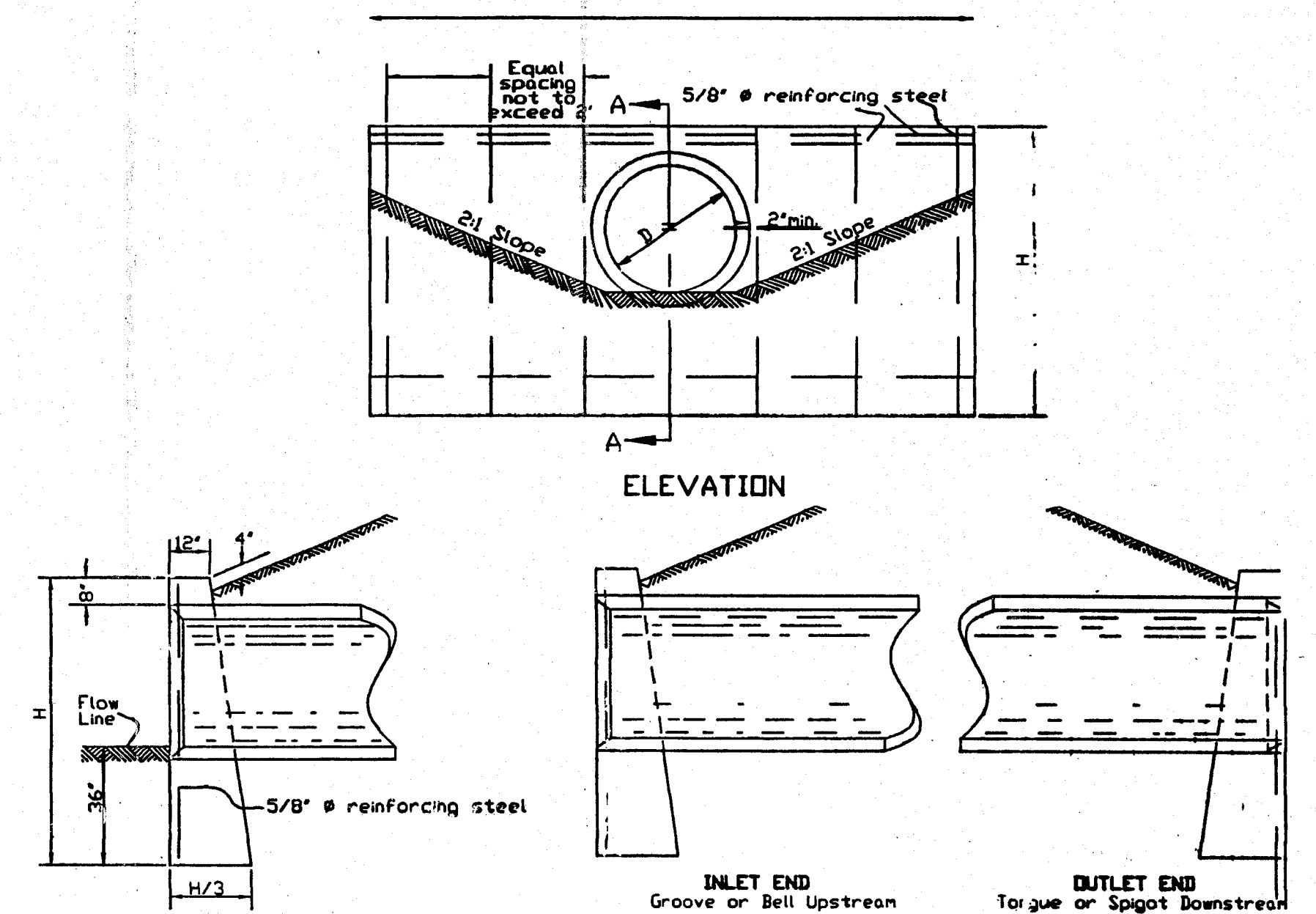


STANDARD DROP MANHOLE



SECTION BELOW SPRING LINE

Showing method of turning side drain which enter the manhole at the flowline



SECTION A-A

NO. 1 HEADWALL: Where required will be provided for non-skewed culverts having a diameter or rise of 36 inches or less.

CONCRETE: Concrete shall be Class C. REINFORCING STEEL: Bars shall be #5 and epoxy coated.

DETAILS AND QUANTITIES: Are shown for circular sections only. When used with reinforced elliptical concrete pipe or corrugated metal pipe arches, it will be necessary to adjust dimensions and quantities to conform to those listed for the nearest size circular pipe. The dimensions established by vertical diameter shall apply to rise, and dimensions established by horizontal diameter shall apply to span. All calculated dimensions shall be rounded to the nearest 1/4 inch. Chanfer all exposed corners 3/4 of an inch.

FOUNDATION: Where the soil borings indicate a bearing capacity of less than 2600 pounds, it will be necessary to increase the width of the footing.

HEADWALL LOCATION: To be determined by the intersection of the embankment slope at the back of the headwall at Point 'K'. The slopes adjacent to the headwall shall be 2:1.

SEWAGE TREATMENT AT HEADWALL

APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF
LETTER OF APPROVAL
HERETO ATTACHED

DIAMETER	DIMENSIONS		QUANTITIES OF HEADWALL	
	M	L	Concrete (C.Y.)	Reinforcing Steel (lbs.)
15"	5'-2"	7'-0"	1.7	41
18"	5'-5"	8'-4"	2.2	57
21"	5'-8"	9'-8"	2.8	62
24"	5'-11"	11'-0"	3.3	69
30"	6'-5"	13'-8"	4.7	92
36"	7'-0"	16'-4"	6.5	105

L = Circular Sections = $SD + 4t$
H = Elliptical or Pipe-Arch = $48 + 4t + 5$
H = Elliptical or Pipe-Arch = $D + t + 44$
D = Diameter of Pipe
S = Rise of Pipe
t = Thickness of Barrel
L = Length of Headwall
H = Height of Headwall

FULL-HEIGHT HEADWALL - HW-1

NOTES

GENERAL: With normal soil and site conditions this standard precast manhole may be used for any required manhole depth. Sections of the precast manhole shall be cast and assembled with either all tongue or all groove ends up. Lift holes may be provided in each section for handling.

TOP AND TRANSITION (OR REDUCER): This section shall be a flat slab unless an eccentric cone is specified.

BASE: Manhole No. 3 is shown with a monolithic floor and riser which may be cast in one or two operations. A permissible alternate is to cast and ship the floor and barrel separately. Openings for inlet and outlet pipes shall be provided, either when

Bottom channels may be formed of concrete, precast in the base or field constructed as shown

RISER SECTIONS: Openings for 18" and smaller inlet pipes may be either prefabricated, or cut in the field provided the sides of the pipe at the springline do not project into the manhole.

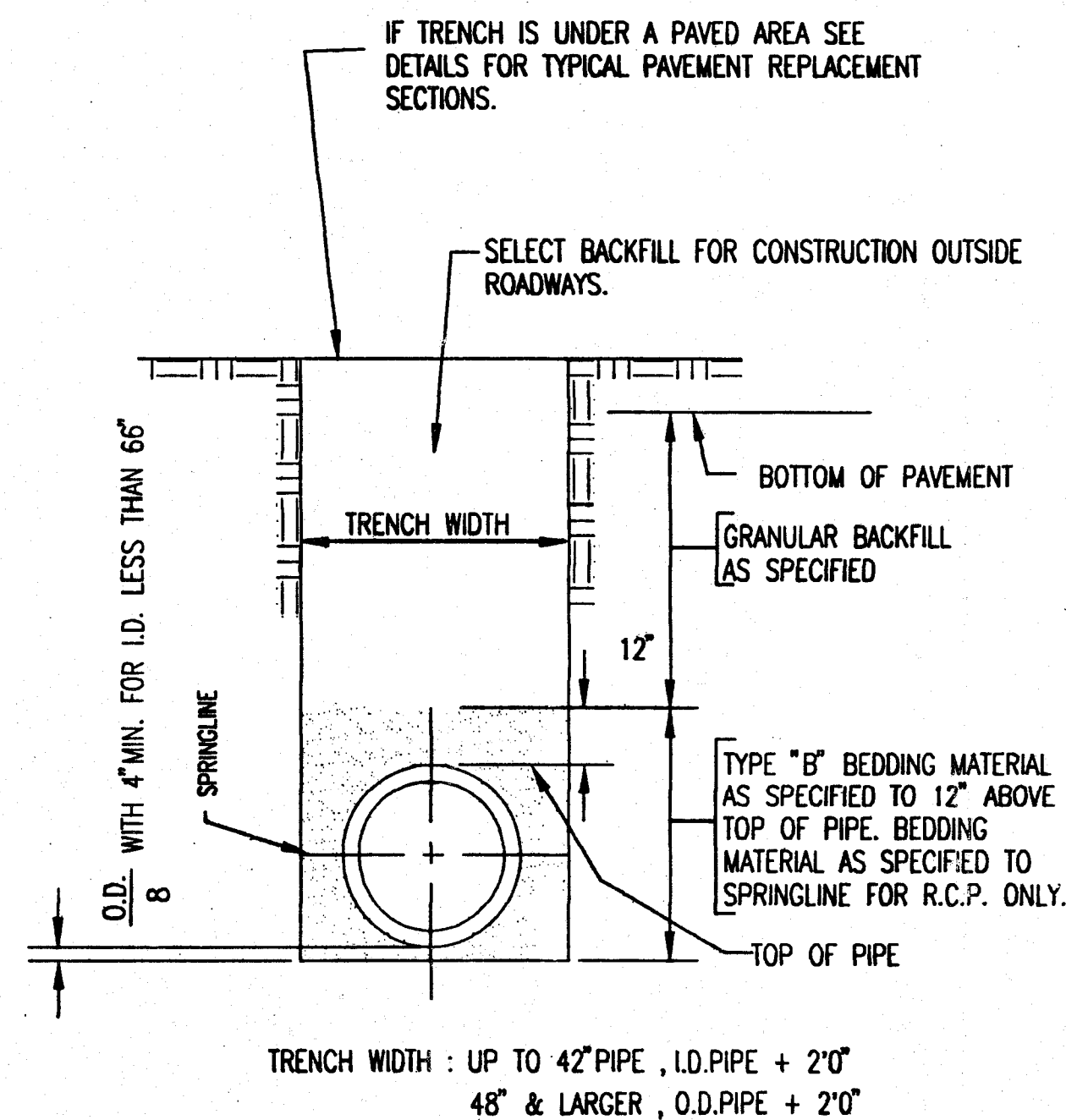
CONNECTIONS: Connections between precast manhole sections and pipes on sanitary sewers may be sealed with resilient connectors conforming to ASTM C 923.

JOINT SEAL: Seal between precast manhole sections on sanitary sewers shall be resilient and flexible gasket joints per CMS 706.11.

MATERIALS: Materials for bases and other precast sections, including reinforcement not specified hereon, shall comply with the requirements of CMS 706.13.

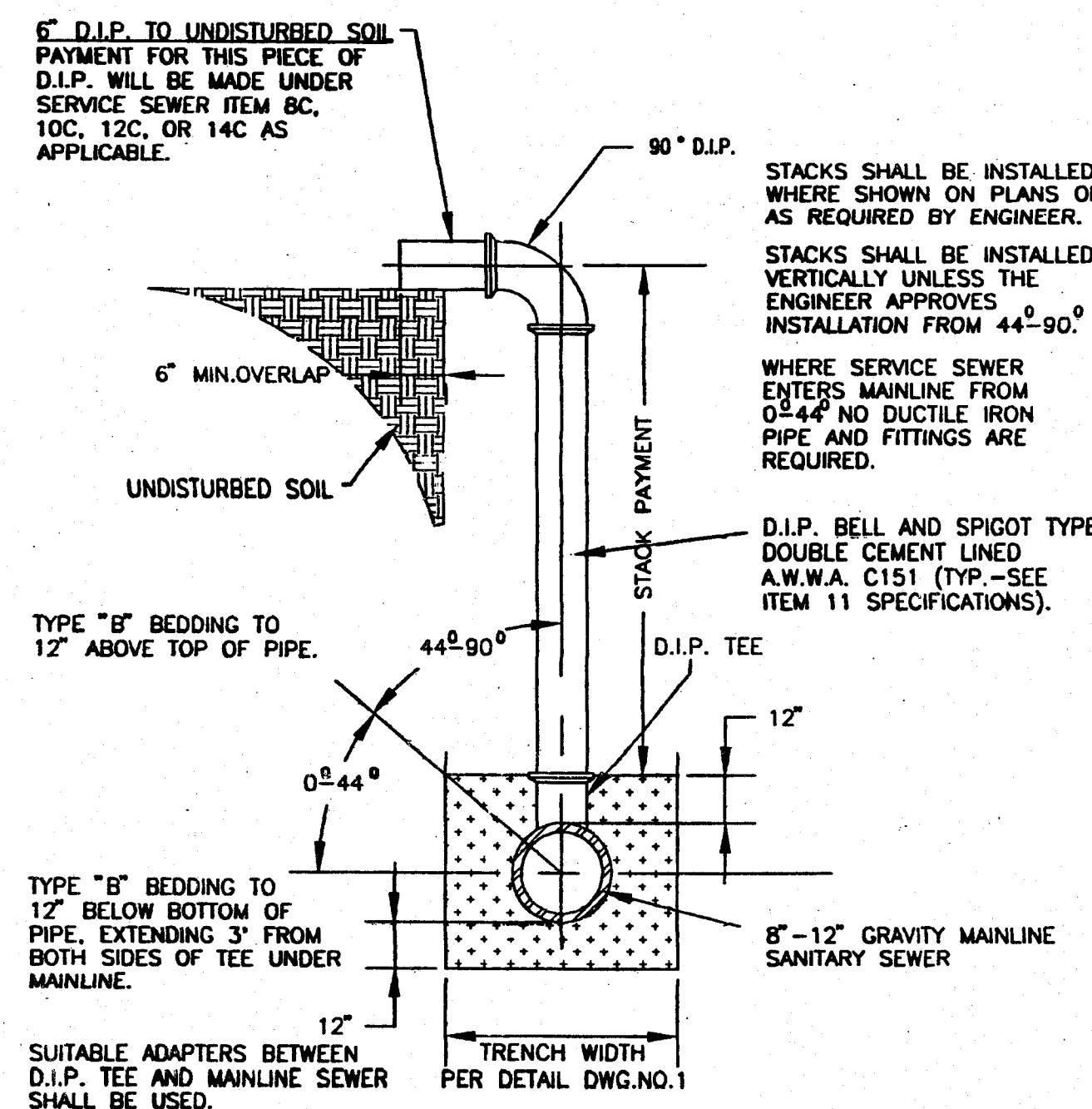
DROP PIPE: When specified on the plans, drop pipe shall be constructed as shown on MH-3.1M.

STEPS, FRAMES AND COVERS: Shall comply with the requirements set forth on MH-1.1M.

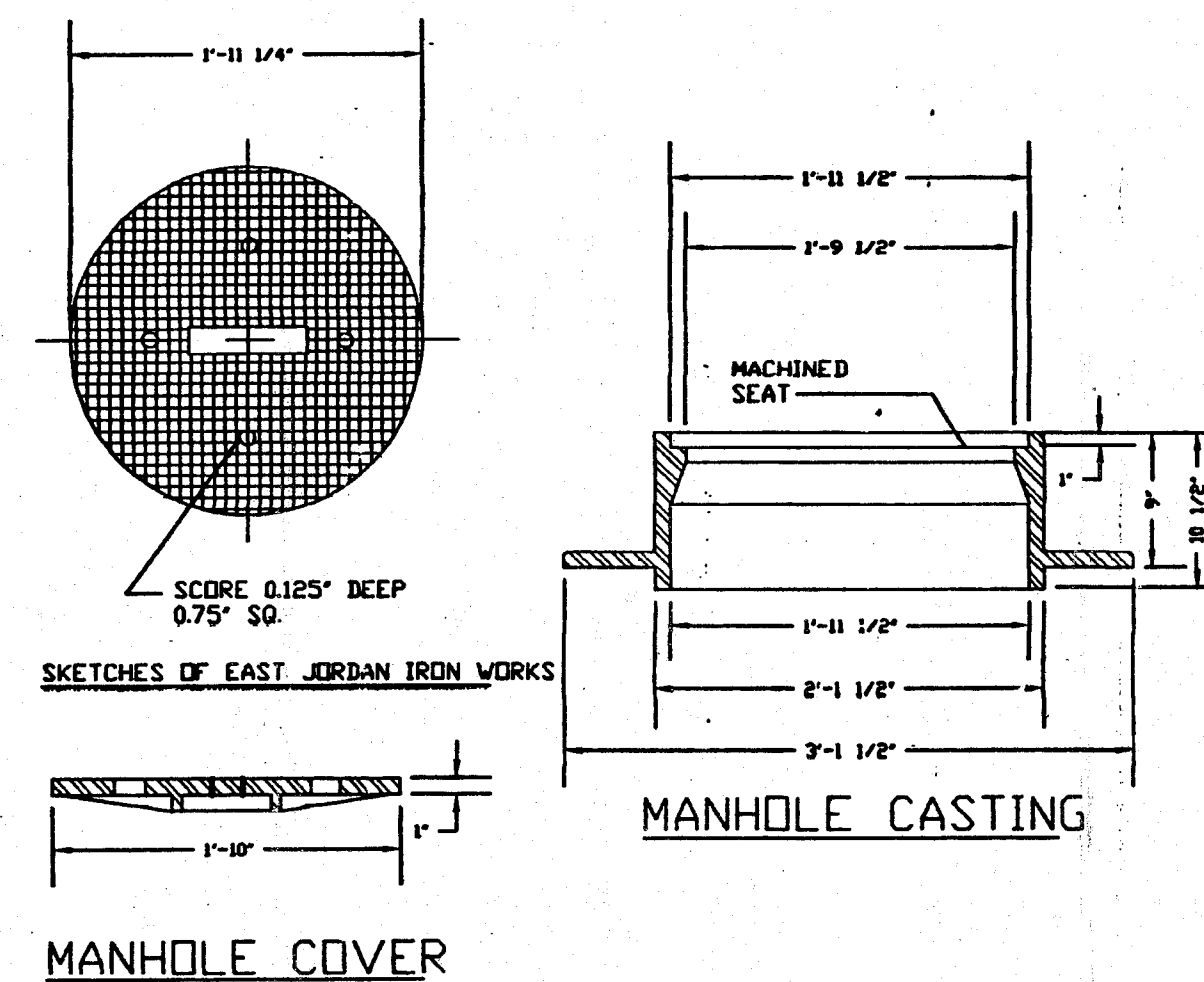


* STARK COUNTY BEDDING CLASSIFICATION TYPE B MEETS OR EXCEEDS ASTM D-2321 CLASS 1 BEDDING FOR FLEXIBLE PIPING, AND ASTM C-12, CLASS B BEDDING FOR RIGID PIPING.

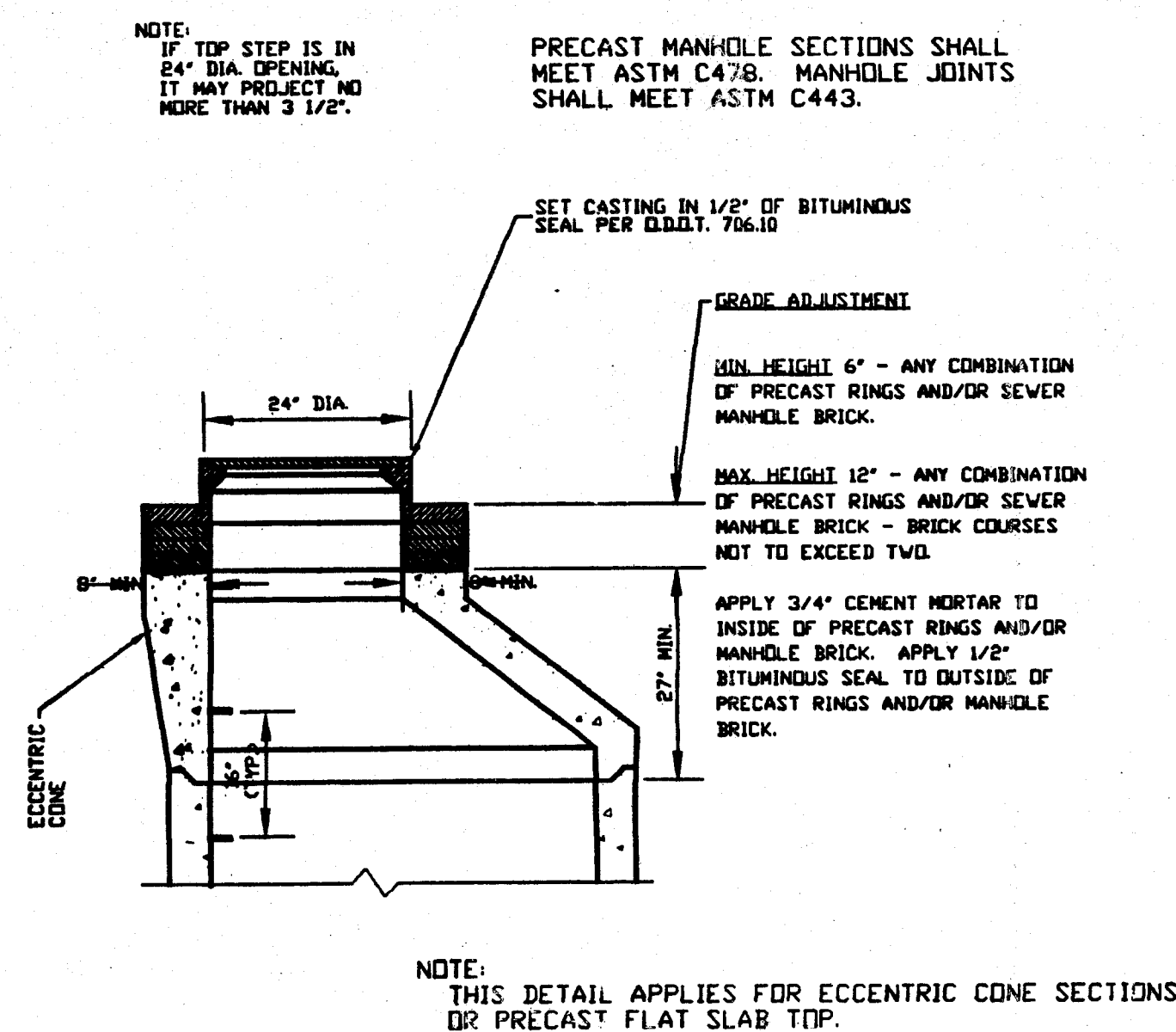
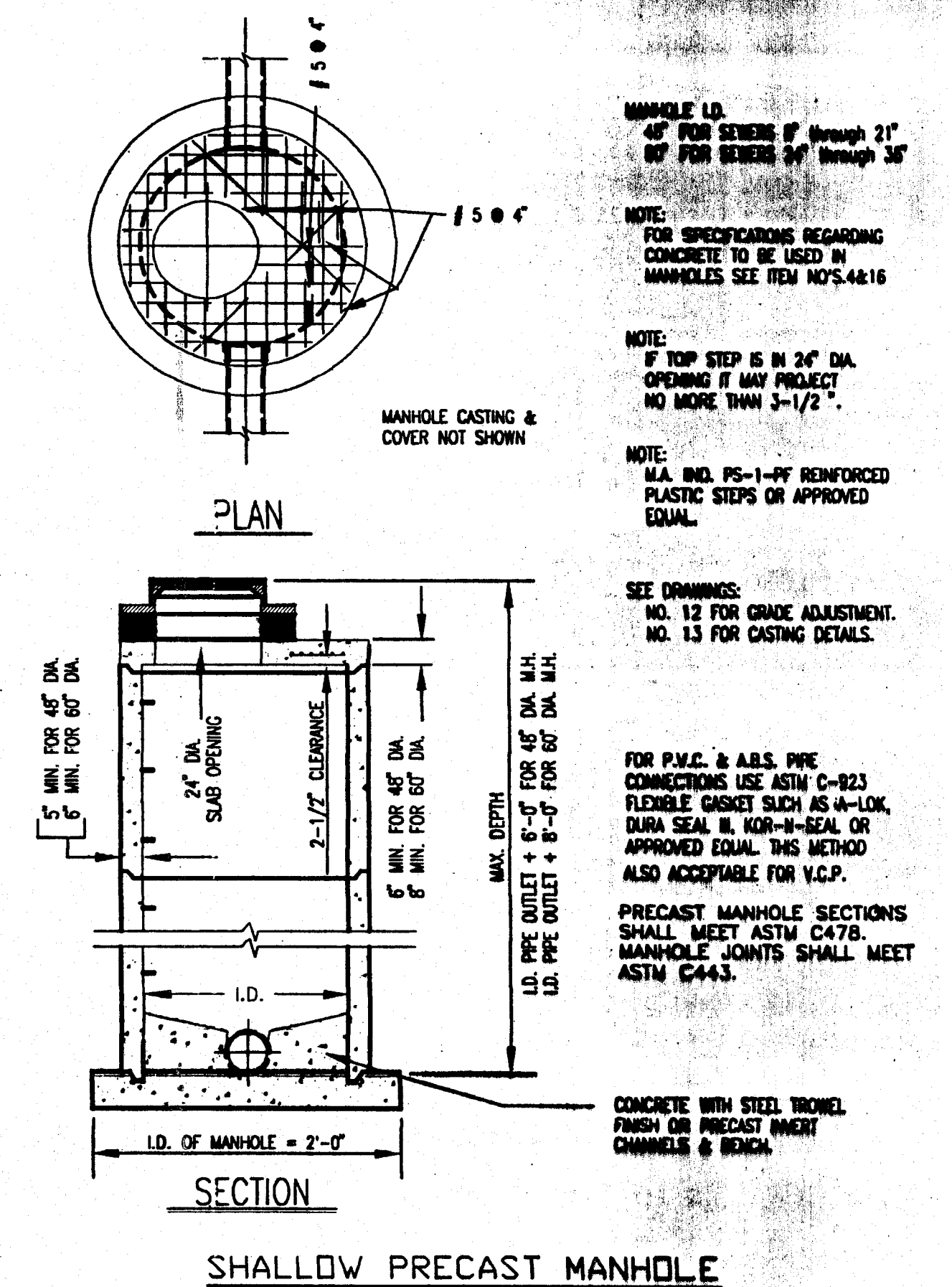
BEDDING AND TRENCH DETAIL TYPE "B" BEDDING



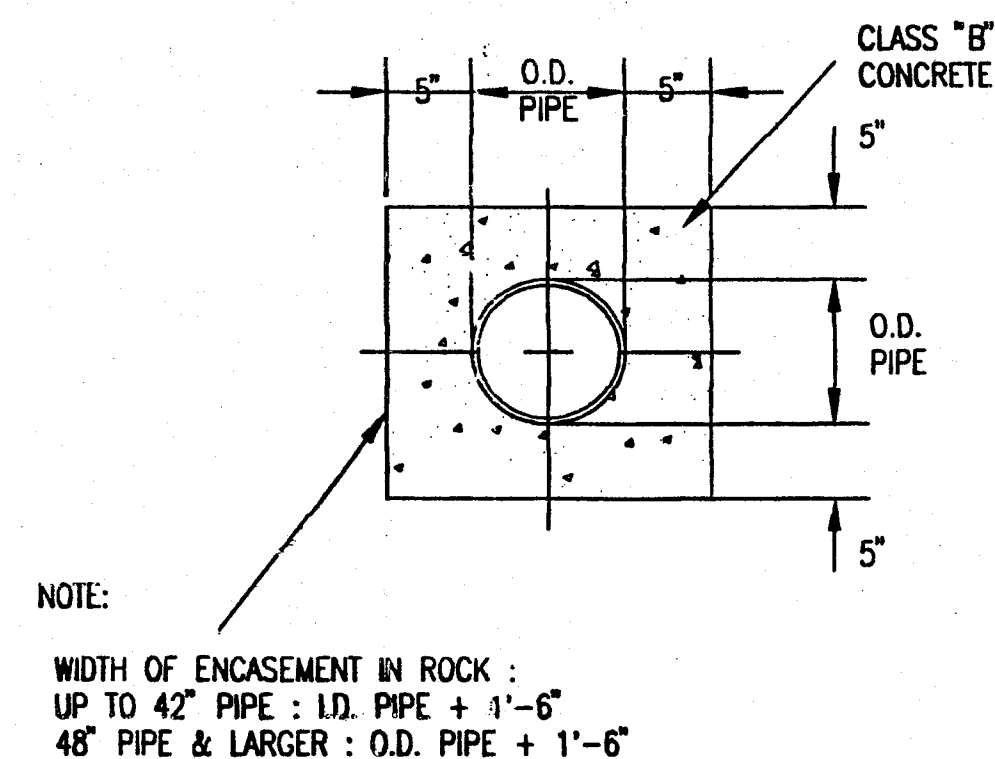
SERVICE STACK 8"-12" MAINLINE



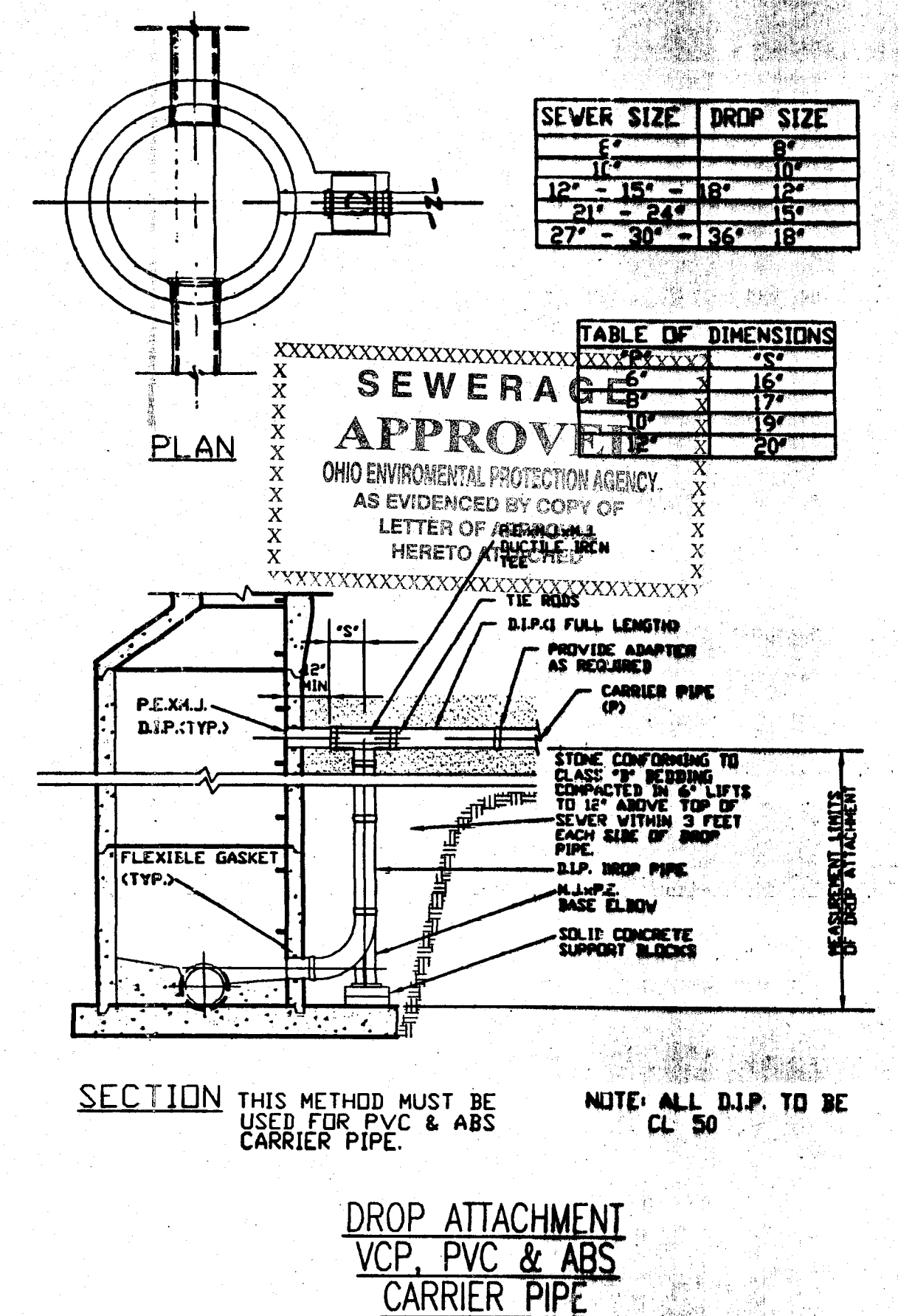
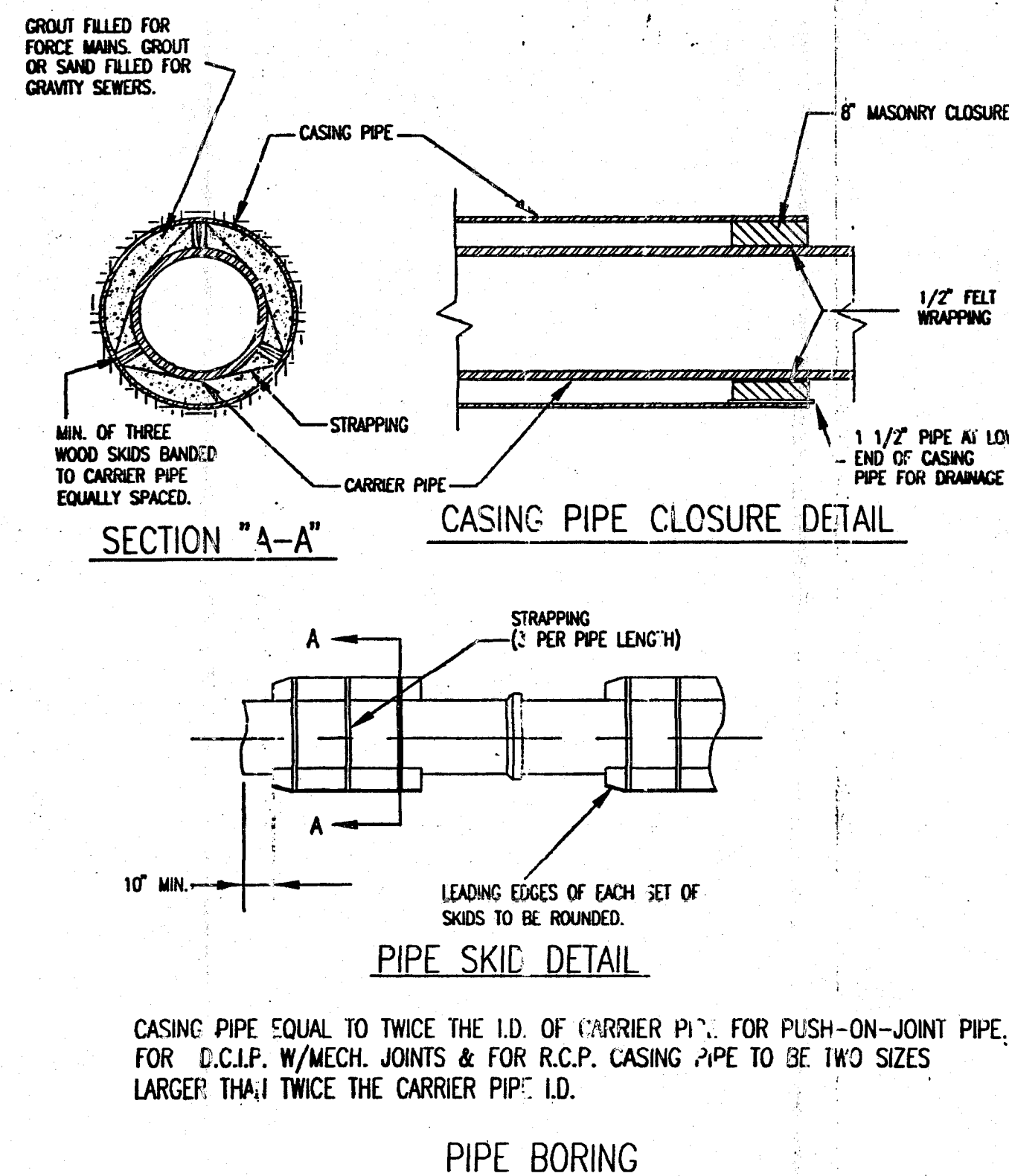
MANHOLE CASTING AND COVER

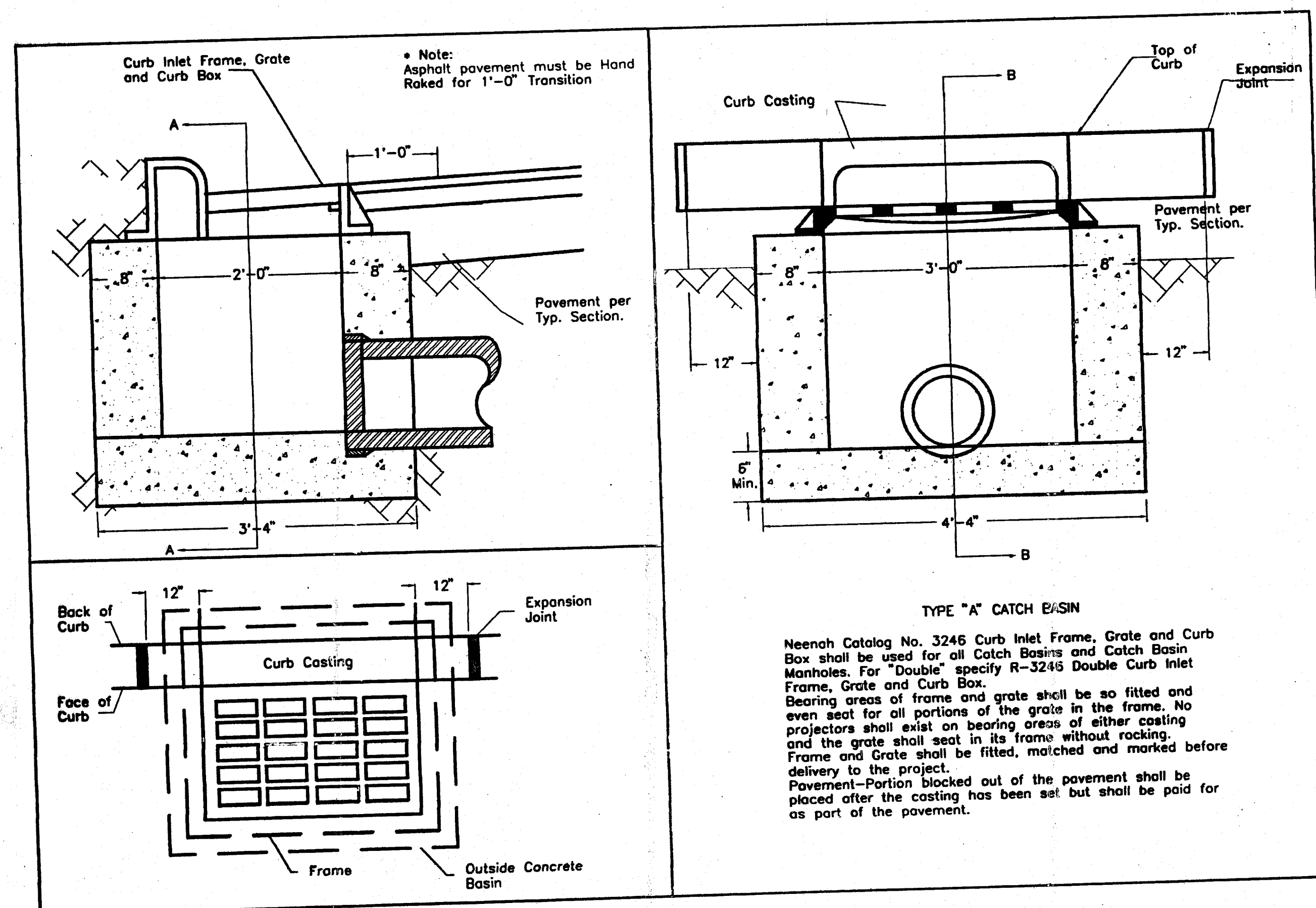


MANHOLE GRADE ADJUSTMENT DETAIL

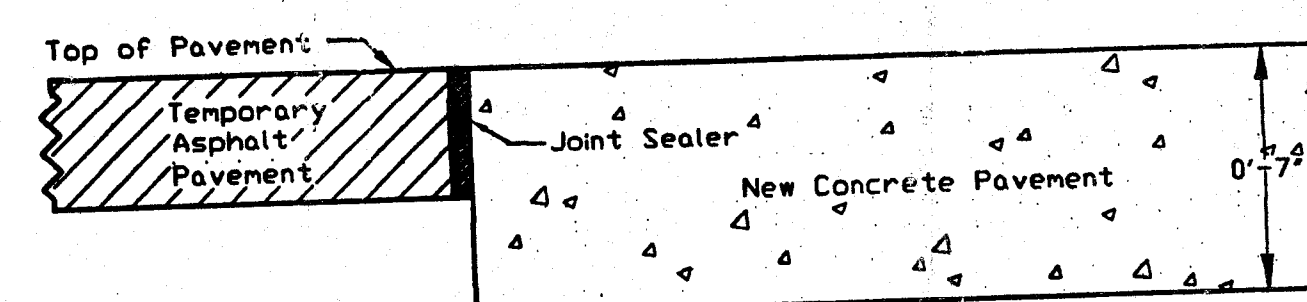


PIPE ENCASEMENT

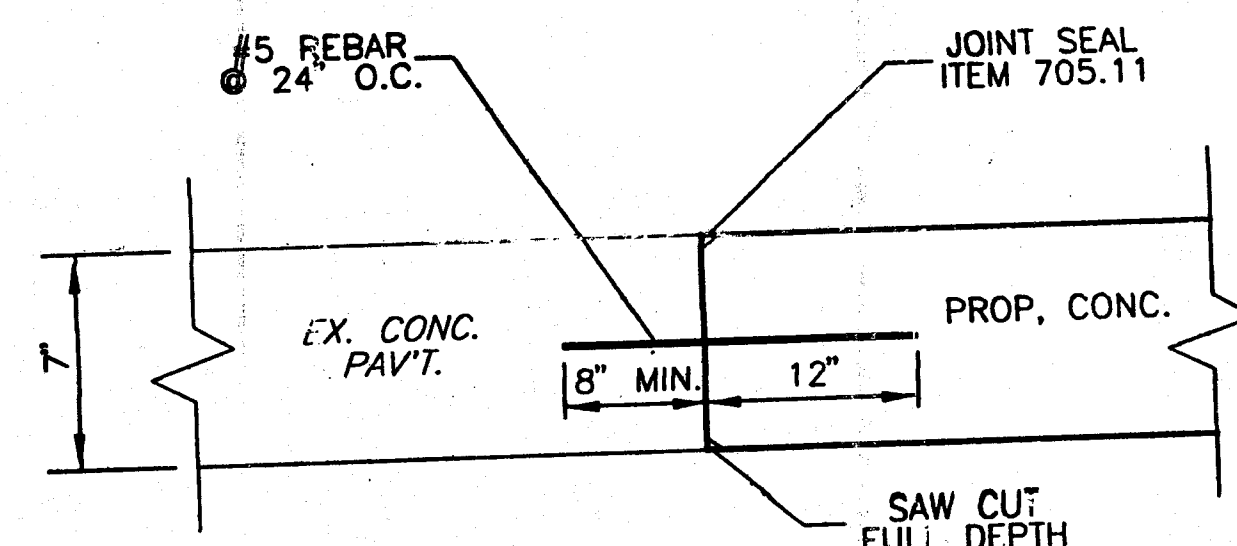




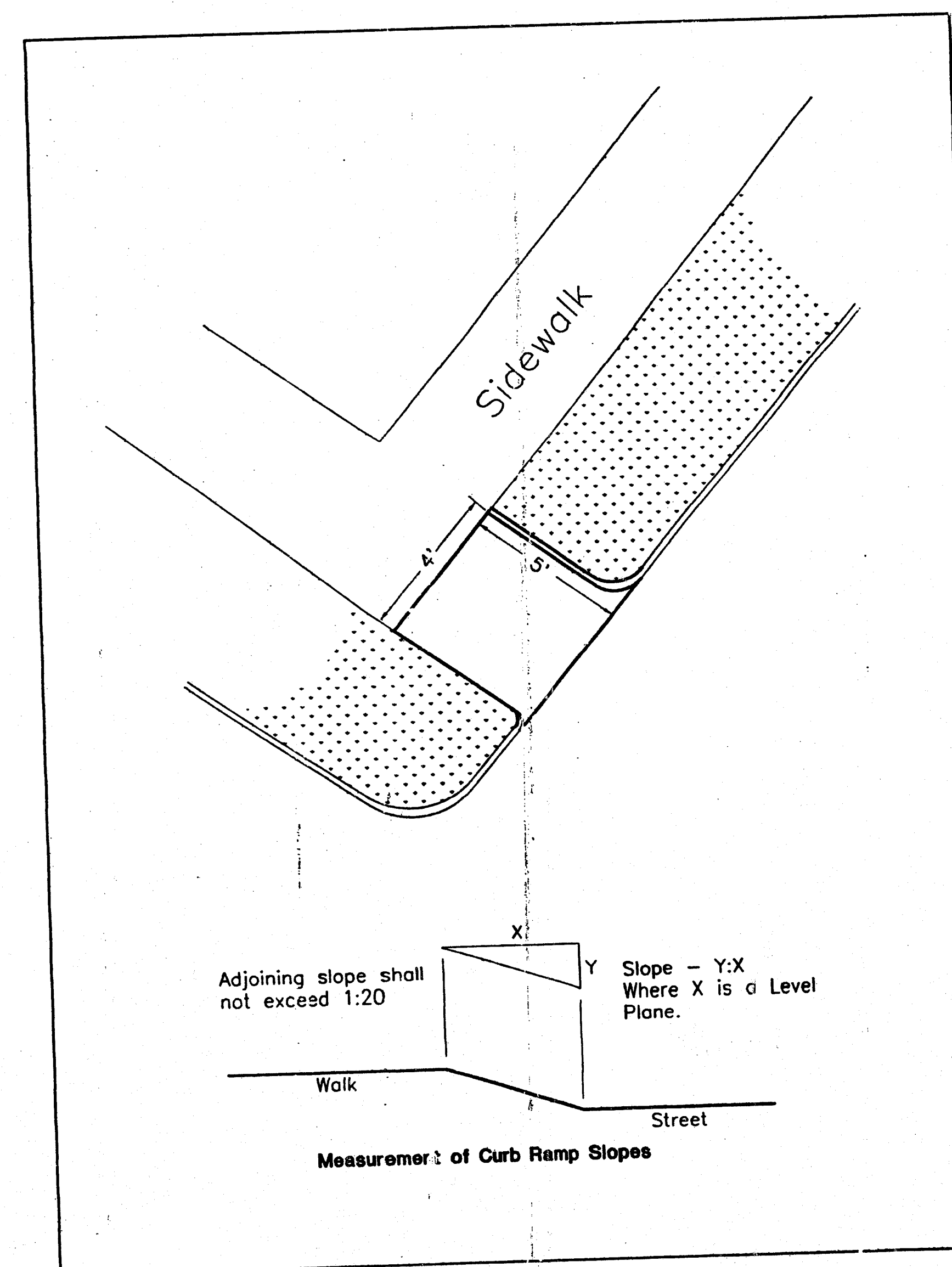
TYPE "A" CATCH BASIN
NOT TO SCALE



TEMPORARY ASPHALT/CONCRETE PAVEMENT DETAIL
NOT TO SCALE



CONC. PAVEMENT JOINT DETAIL
NOT TO SCALE



HANDICAP RAMP
NOT TO SCALE

SANITARY SEWER

CONSTRUCTION NOTES:

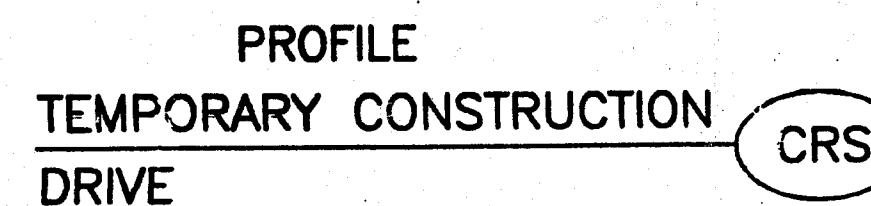
- A. FLEXIBLE GASKETS ON SEWER LINES SHOULD MEET SECTION 34.6 34.6 IN TEN STATE STANDARDS AND ASTM SPEC. D-923.
- B. MANHOLE ADJUSTMENTS TO GRADE SHALL BE 1/2" OR LESS. USE PRECAST COLLARS AND A MAXIMUM OF TWO COURSES OF BRICK IF NECESSARY AND SHALL FOLLOW ASTM SPEC C-32.
- C. LEAKAGE TEST LIMITS ARE 100 GAL/IN DIAMETER/MILE/DAY.

DEFLECTION TEST NOTES:

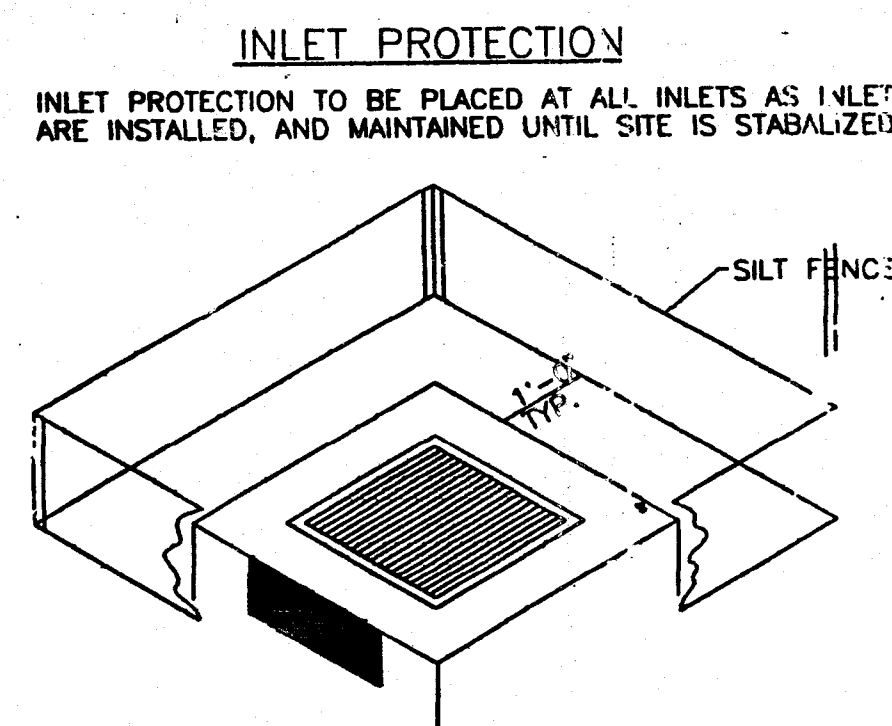
- A. DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM.
- B. NO PIPE SHALL EXCEED A DEFLECTION OF 5 PERCENT. IF DEFLECTION EXCEEDS 5 PERCENT, RELACEMENT OR CORRECTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH REQUIREMENTS IN THE APPROVED SPECIFICATIONS.
- C. THE RIGID BALL OR MANDREL USED FOR THE DEFLECTION TEST SHALL HAVE A DIAMETER NOT LESS THAN 95 PERCENT OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE DEPENDING ON WHICH IS SPECIFIED IN THE ASTM SPECIFICATION, INCLUDING THE APPENDIX TO WHICH THE PIPE IS MANUFACTURED. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.



SWPPP DETAILS
WEST BROOK ESTATES - PHASE II



1. STONE SIZE-- TWO-INCH STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT
2. LENGTH-- THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 50 FEET.
3. THICKNESS-- THE STONE LAYER SHALL BE AT LEAST 6 INCHES THICK.
4. WIDTH-- THE ENTRANCE SHALL BE AT LEAST 15 FEET WIDE.
5. BEDDING-- A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. IT SHALL HAVE A GRAB TENSILE STRENGTH OF AT LEAST 200 LBS. AND A MULLEN BURST STRENGTH OF AT LEAST 190 LBS.
6. CULVERT-- A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FLOWING ACROSS THE ENTRANCE FROM BEING DIRECTED OUT ONTO PAVED SURFACES.



SILT FENCE FILTER FOR INLETS

NOTE:

1. INSTALL SILT FENCE ENTIRELY AROUND EACH INLET AND MAINTAIN AS REQUIRED.
2. UPON INSTALLATION OF CONCRETE PAVEMENT WITH INTEGRAL CURB, MAINTAIN SILT FENCE BEHIND THE CURB (OR PLACE STRAW BALES).
3. MAINTAIN THE SILT FENCE (OR STRAW BALES) BEHIND THE CURB UNTIL GRASS IN THE TREE LAWN AREA IS ESTABLISHED.

REGULAR INSPECTION AND MAINTENANCE WILL BE PROVIDED FOR ALL EROSION AND SEDIMENT CONTROL PRACTICES. PERMANENT RECORDS OF MAINTENANCE AND INSPECTIONS MUST BE KEPT THROUGHOUT THE CONSTRUCTION PERIOD. INSPECTIONS MUST BE MADE A MINIMUM OF EVERY SEVEN DAYS AND IMMEDIATELY AFTER STORM EVENTS GREATER THAN 0.5 INCHES OF RAIN IN A 24 HOUR PERIOD. PROVIDE NAME OF INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTION AND CORRECTIVE MEASURES TAKEN.

FIELD OF INTEREST		SOIL PROTECTION CHART											
		J	F	M	A	M	J	J	A	S	O	N	D
STABILIZATION TYPE													
PERMANENT SEEDING				*	*	*	*	*	*	*	*	*	*
DORMANT SEEDING			*	*	*	*	*	*	*	*	*	*	*
TEMPORARY SEEDING				*	*	*	*	*	*	*	*	*	*
SODDING				*	*	*	*	*	*	*	*	*	*
MULCHING		*	*	*	*	*	*	*	*	*	*	*	*
** IRRIGATION NEEDED DURING JUNE THRU AUGUST													
*** IRRIGATION NEEDED FOR 2-3 WEEKS AFTER APPLYING SOD													

NTS	1. SITE VEGETATION				
	X	201.03	18.596	ACRE	SITE CLEARING LIMITS (DENUDED AREA)
	2. SEDIMENT CONTROL MEASURES				

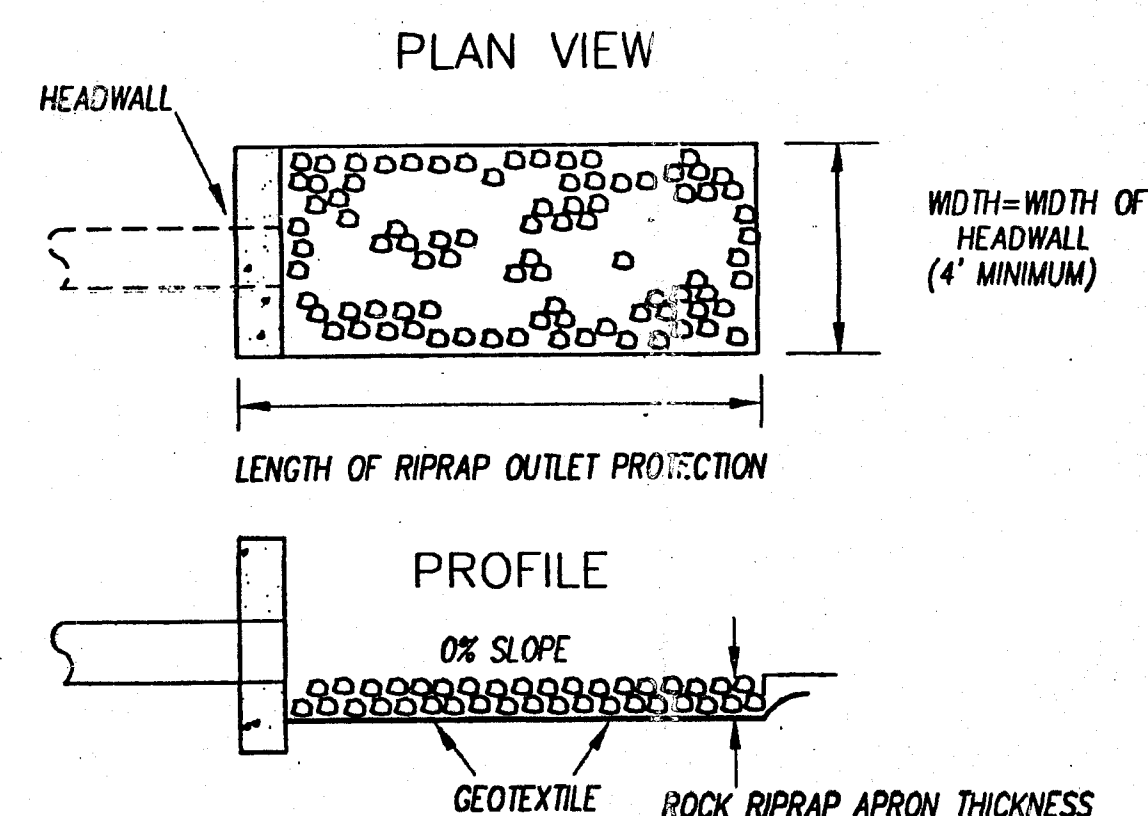
3. SITE GRADING				
TSM	207	20.437	ACRE	TEMP. SEEDING & MULCHING MIX NO.
FS	207	X	S.Y.	VEGETATIVE FILTER STRIP
DP	207	X	S.Y.	DITCH PROTECTION
	651	X	C.Y.	TOPSOIL STOCKPILE
CRS	703.01	X	TONS	CONST. ROAD STABILIZATION #1 AGGREGATE

5. MISCELLANEOUS				
SCD	207	X	EA.	SILTATION CHECK DAM
EM	670	X	S.Y.	EROSION CONTROL MAT

SITE DESCRIPTION (MARK ONE)			
SUBDIVISION	<u>X</u>	TOTAL AREA	<u>20.437</u>
COMMERCIAL	<u> </u>	PRE-DEV. RUNOFF COEFF.	<u>0.3</u>
RESIDENTIAL	<u> </u>	AREA TO BE CLEARED	<u>18.586</u>
P.U.D.	<u> </u>	AREA TO BE EXCAVATED	<u>18.586</u>
OTHER	<u> </u>	POST. DEV. RUNOFF COEFF.	<u>0.45</u>

[illegible]

SITE LOCATION INFORMATION		LATITUDE <u>40°45'17" W</u>		LONGITUDE <u>81°35'30" E</u>	
CITY OF MASSILLON		STARKE		OHIO	
TOWNSHIP		COUNTY		STATE	
TUSCARAWAS		WEST SIIPPO CREEK			
NAME OF WATERSHED / RECEIVING WATERS					
WEST BROOK ESTATES -- PHASE 1				44314	
PROJECT NAME				ZIP CODE	
A.R. LOCKHART DEVELOPEMENT Co.				330-748-8520	
DEVELOPER				PHONE	
800 WEST WATERLOO RD., AKRON, OHIO					
DEVELOPER ADDRESS					



1. THE SUBGRADE FOR THE FILTER AND RIPRAP SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES AS SHOWN ON THE PLAN.
2. THE RIPRAP SHALL CONFORM TO THE GRADING LIMITS AS SHOWN ON THE PLANS.
3. GEOTEXTILE SHALL BE MOVEN OR MONOWOVEN MONOFILAMENT YARN AND SHALL MEET THE FOLLOWING:
 - THICKNESS 20-60 MILLS
 - GRAB STRENGTH 90-120 LB
 - ASTM D-1777 and ASTM D-1682
4. RIPRAP MAY BE PLACED BY EQUIPMENT BUT SHALL BE PLACED IN A MANNER TO PREVENT DAMAGE TO THE GEOTEXTILE.

ROCK OUTLET PROTECTION

XXXXXXXXXXXXXXXXXXXX
X SEWERAGE
X APPROVED
X OHIO ENVIRONMENTAL PROTECTION AGENCY
X AS EVIDENCED BY COPY OF
X LETTER OF APPROVAL
X HERETO ATTACHED
X

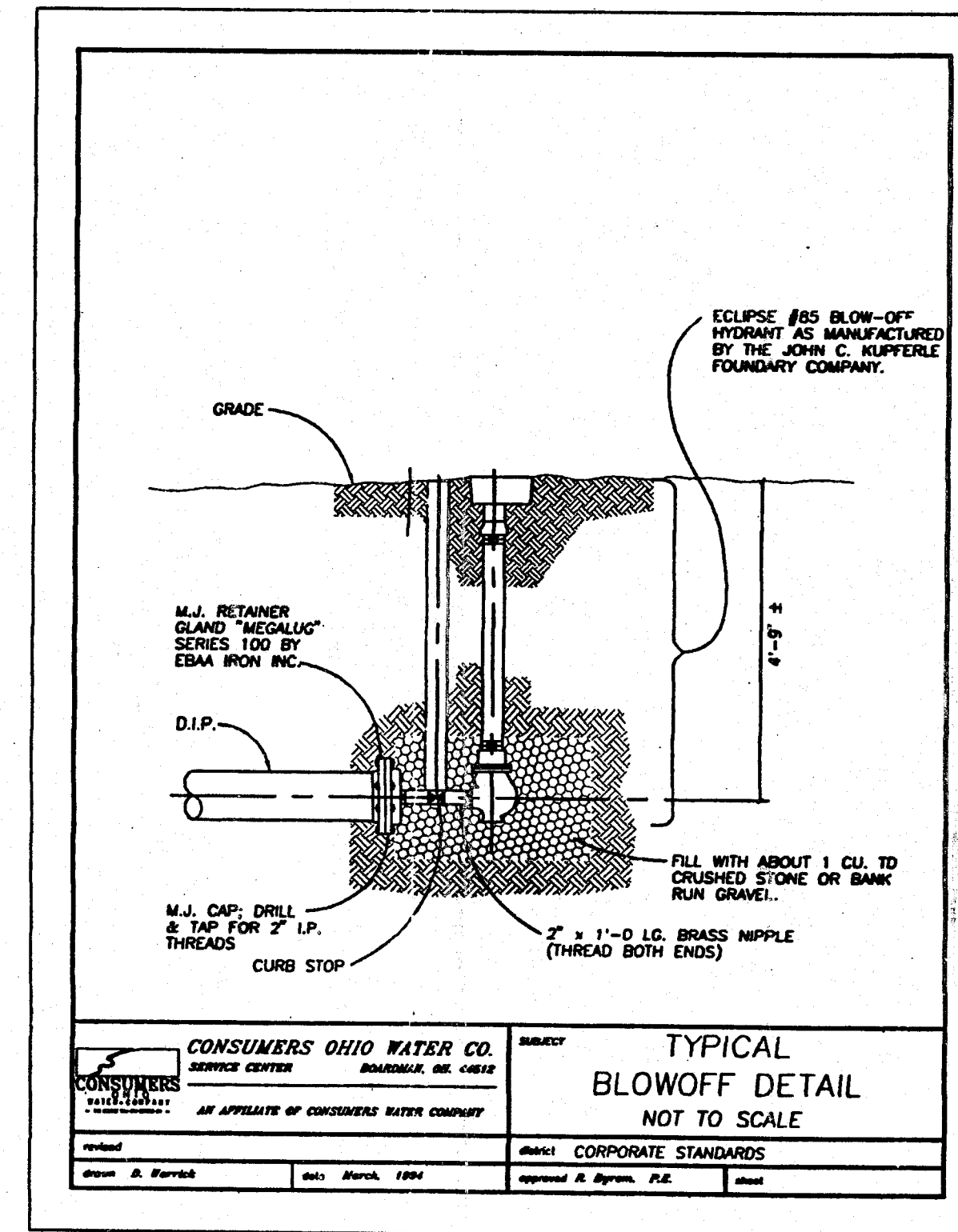
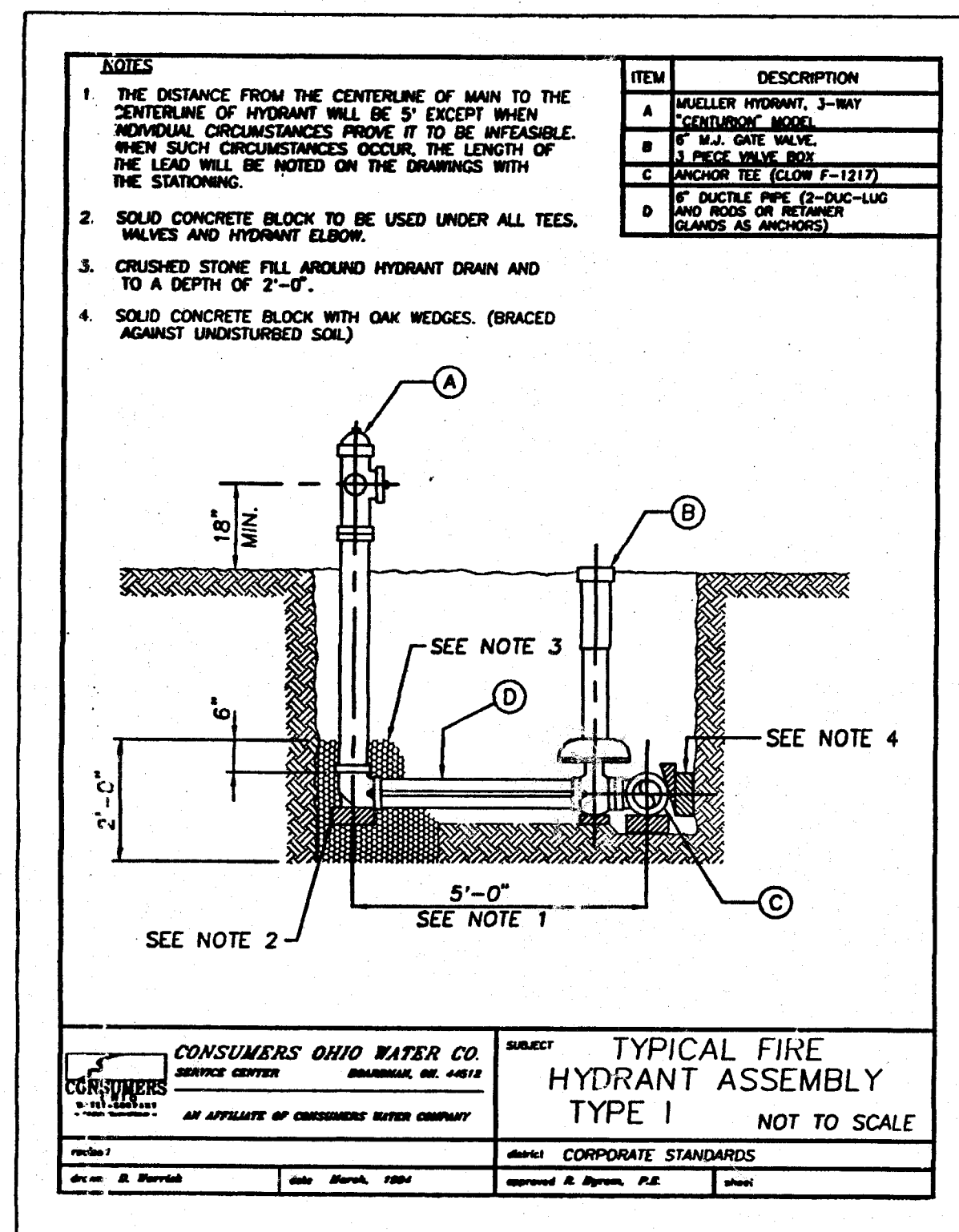
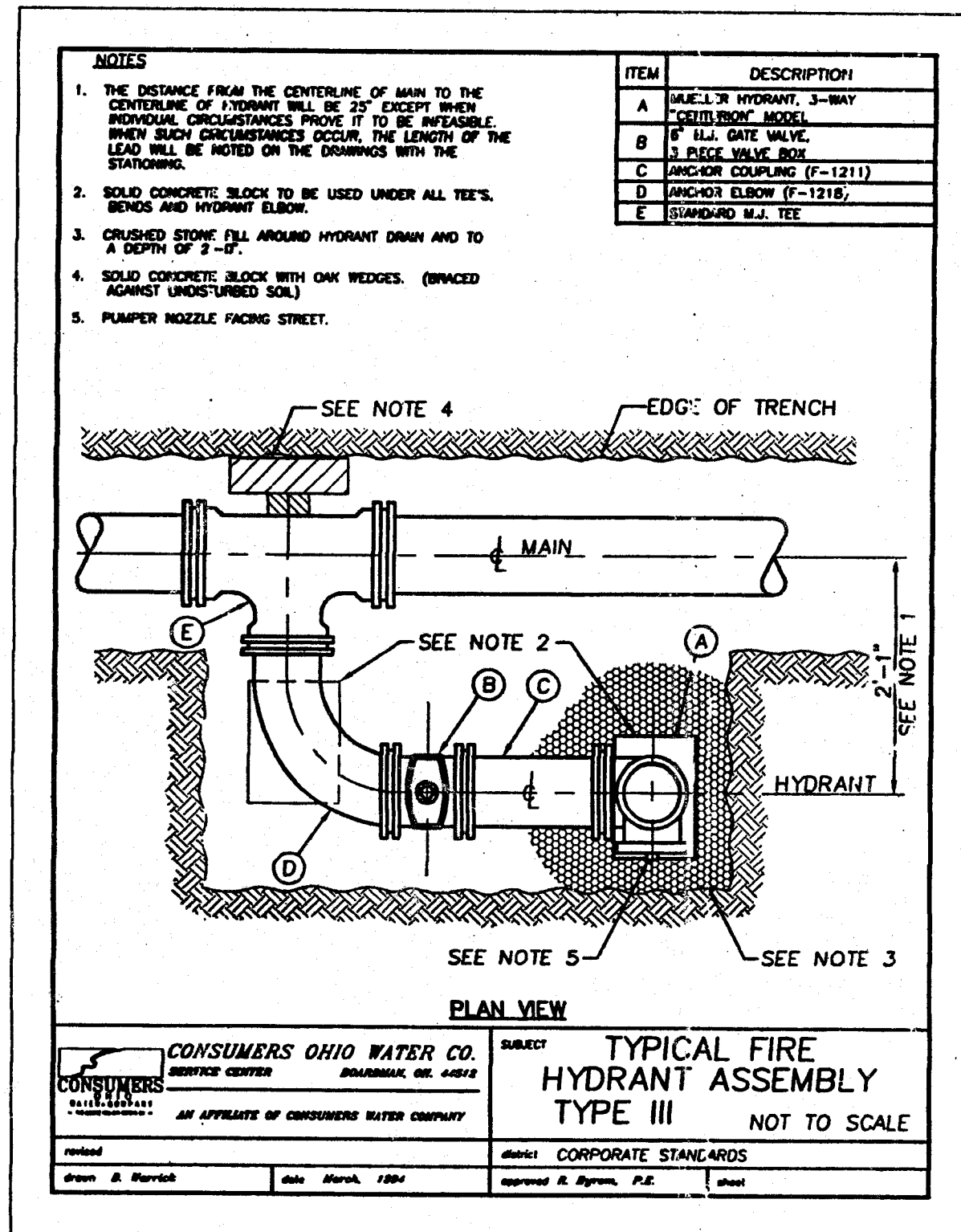
**WEST BROOK ESTATES-PHASE I
SWEEP AND MISCELLANEOUS DETAILS**

THE UNIVERSITY OF CHICAGO

2

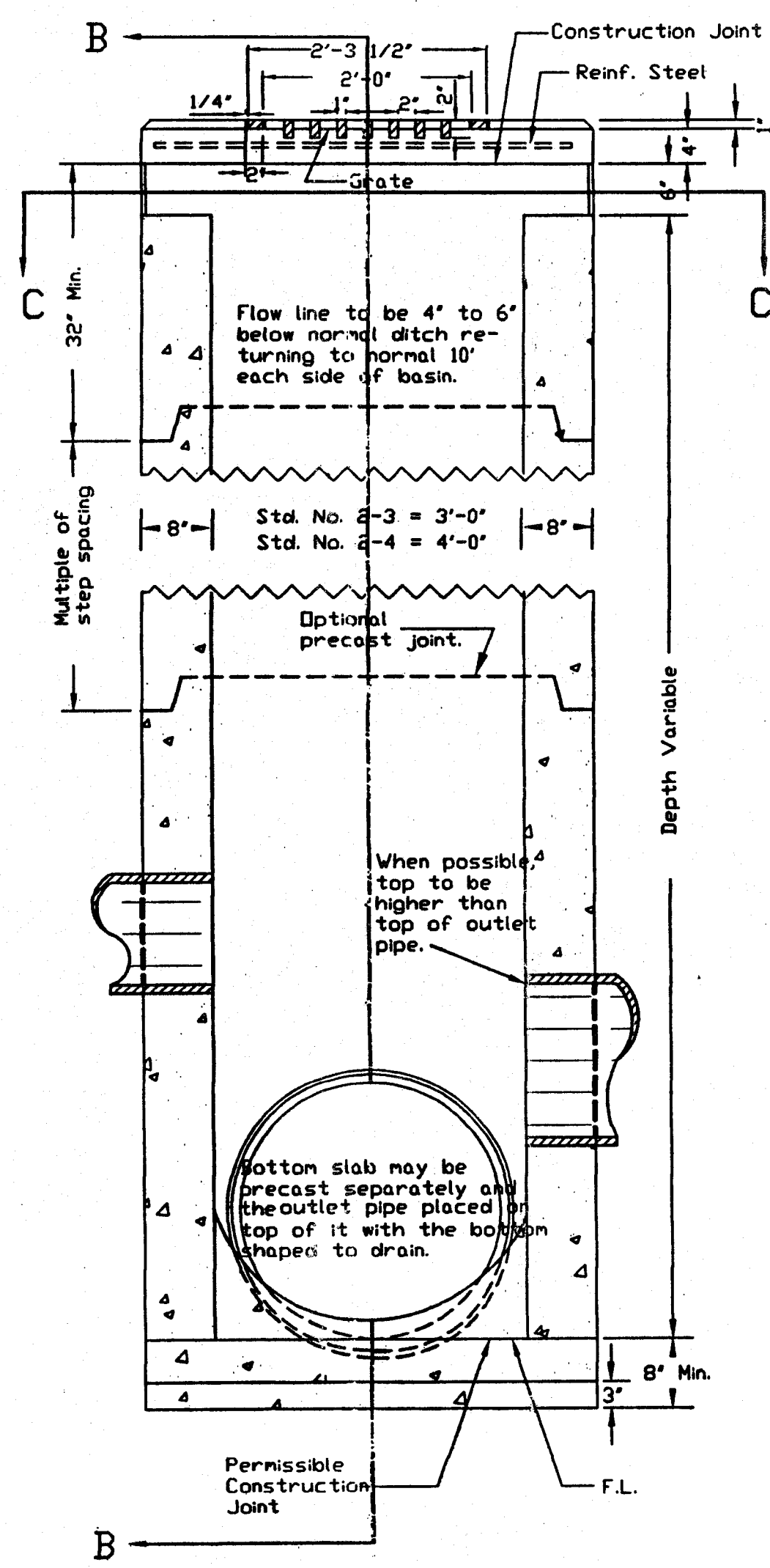


SWPPP DETAIL
WEST BROOK ESTATES - PHASE 1

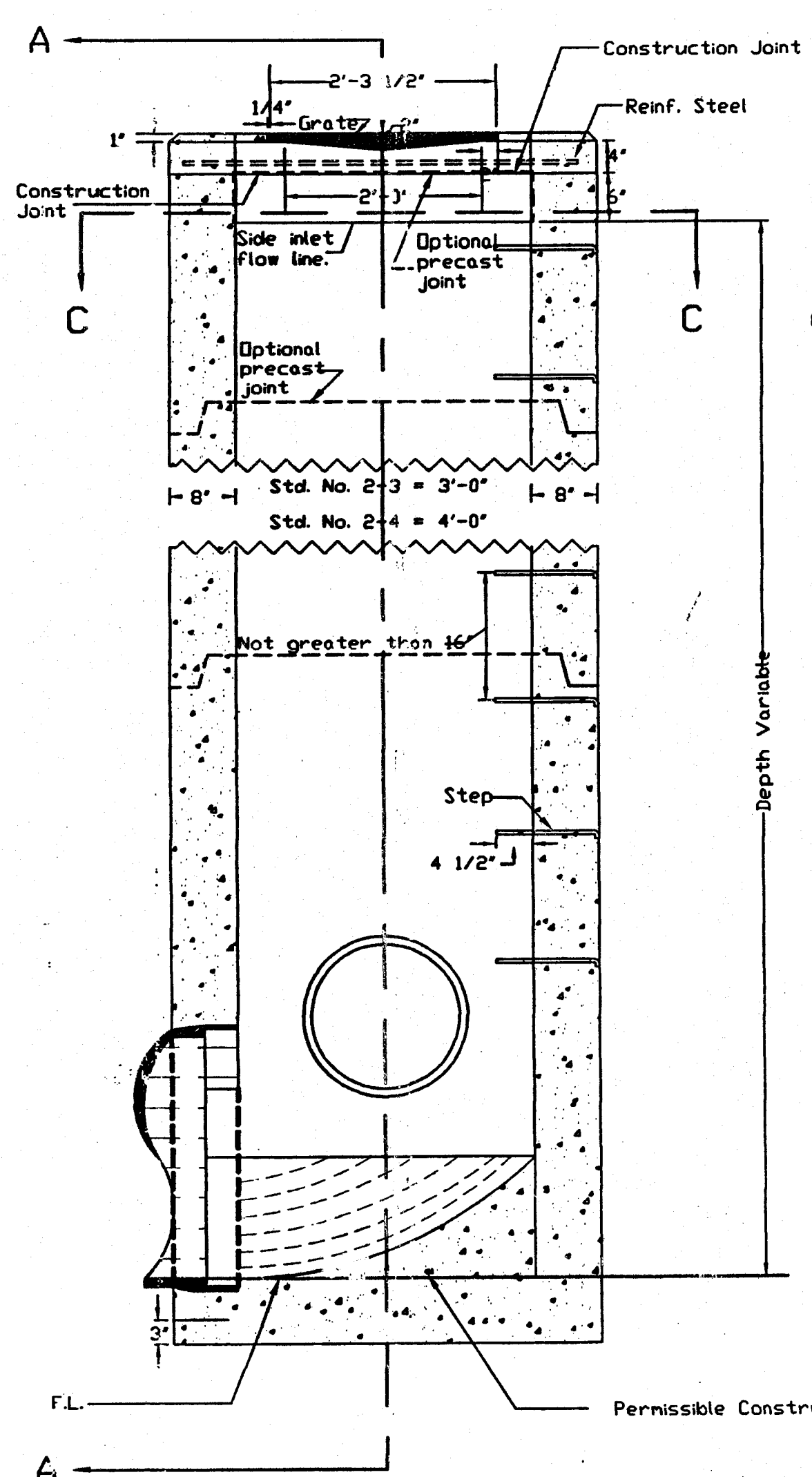


XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
 X SEWERAGE X
 X APPROVED X
 X OHIO ENVIRONMENTAL PROTECTION AGENCY X
 X AS EVIDENCED BY COPY OF X
 X LETTER OF APPROVAL X
 X HERETO ATTACHED X
 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX

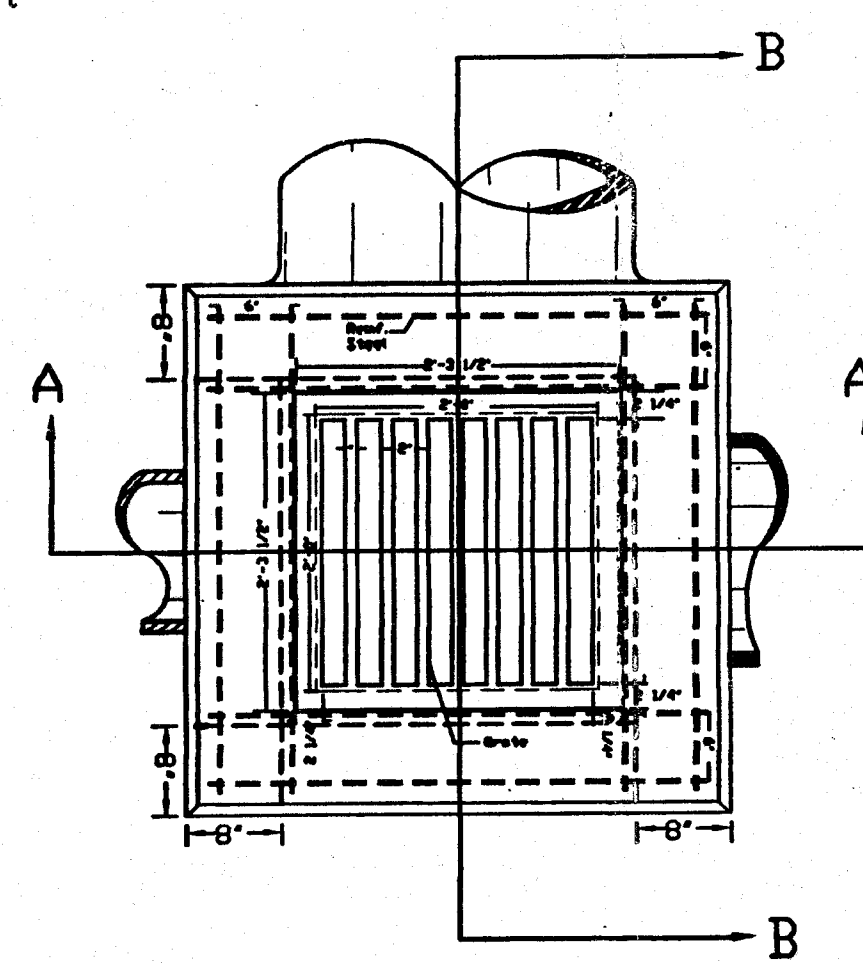
STANDARD NO. 2-3 & No. 2-4 CATCH BASINS



SECTION A-A

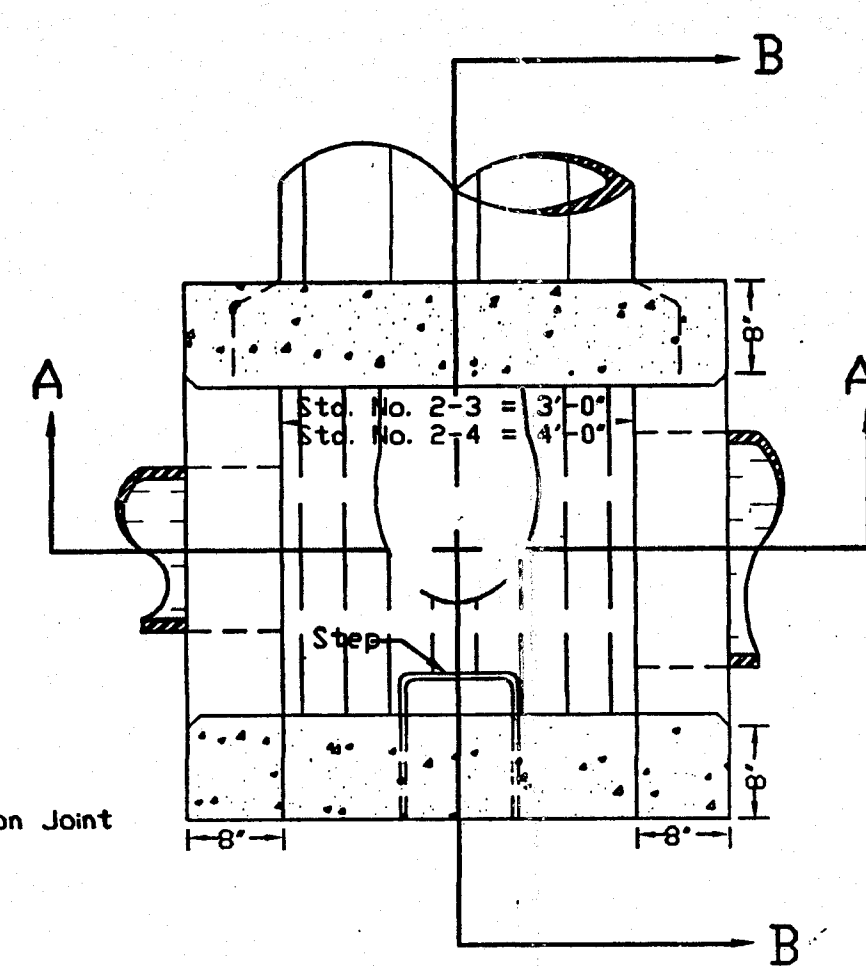


SECTION B-B



PLAN

ALL GRATE EDGES TO BE ROUNDED 1/4" RADIUS



SECTION C-C

GRATING - The design shall be essentially the same and equally as strong as the one shown hereon.

Minimum weight 120 lbs. BRICK, concrete block or cast-in-place walls shall have a nominal thickness of 8 inches. Precast walls shall have a minimum thickness of 6 inches and be reinforced sufficiently to permit shipping and handling without damage.

CONCRETE, cast-in-place, to be Class C. All precast concrete shall meet the requirements of 706.13 with 6 ±2% air void content in the hardened concrete and be marked with the catch basin number.

REINFORCING in the top to be No. 4 bars 6" center to center. For Standard No. 2-3 use 8 bars and for Standard 2-4 use 12 bars.

OPENINGS for pipes shall be +2" when prefabricated or field cut. LOCATION and elevation when given on the plans is top center of the grate. When side openings are provided, elevation shall be the Flow Line of the side inlet.

SIDE INLETS shall be provided only when specified on the plans.

STEPS shall be provided where the depth exceeds 72" and shall meet the requirements of MH-1.

CATCH BASIN SIZE	OUTLET PIPE SIZE
2-3	12" TO 33"
2-4	36" TO 42"

INLETS OVER 12 FEET IN DEPTH shall be precast or cast-in-place concrete, reinforced with No. 4 bars on 12" centers both vertically and horizontally with 2" clearance from inside wall face.

