

W
Wolverton & Associates
N C O R P O R A T E D
Consulting Engineers & Land Surveyors

5300 Oakbrook Parkway • Suite 150 • Norcross, Georgia 30093
Phone: (770) 441-9070 • Fax: (770) 441-9070
E-Mail: info@wolverton.com

SEWER: CITY OF MASSILLON
ONE JAMES DUNCAN PLAZA
MASSILLON, OHIO 44646

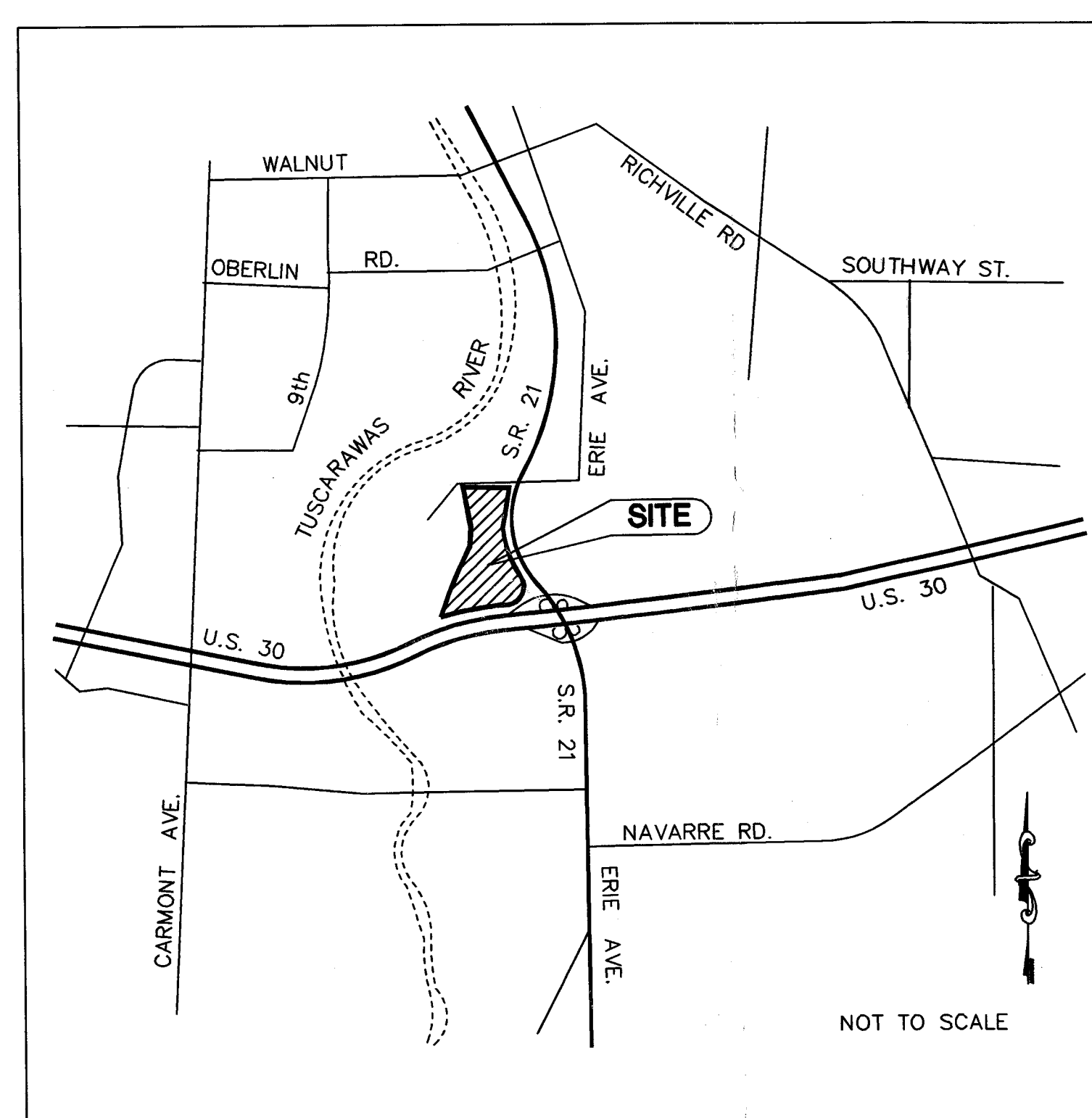
WATER: CONSUMERS OHIO
123 THIRD STREET, SE
MASSILLON, OH 44648 — 0584
CONTACT: MR. DONALD SNYDER
PHONE: (330) 832-5764 EXT 205

TELEPHONE: AMERITECH
500 WEST BOWERY STREET
AKRON, OH 44308
CONTACTS: MRS. MAUREEN WILLIAMS
PHONE: (330) 384-3586

GAS: EAST OHIO GAS
4725 SOUTHWAY STREET
CANTON, OH 44706-1936
CONTACTS: MR. MICHAEL STANFAR
PHONE: (330) 478-3127

ELECTRIC: OHIO EDISON
1910 WEST MARKET STREET
FAIRLAWN BUILDING ONE
AKRON, OH 44313
CONTACTS: MR.

NORTHEAST OHIO
9081 US 250
STRASBURG, OH 44680
CONTACTS: MR. JOE KAMARA
PHONE: 1-800-848-5589



GOVERNMENTAL AGENCIES

SITE PLAN APPROVAL
CITY OF MASSILLON
ONE JAMES DUNCAN PLAZA
MASSILLON, OHIO 44646
CONTACTS:
CITY ENGINEER: MR. STEVE HAMIT (330) 830-1722

CONSTRUCTION SEDIMENT CONTROL PLAN
STARK COUNTY NATURAL RESOURCE CONSERVATION SERVICE
2311 COLUMBUS ROAD NE
CANTON, OHIO 44705
CONTACTS: JULIE BERBARI (330) 489-4476

BUILDING CODE OFFICIAL
CITY OF MASSILLON
ONE JAMES DUNCAN PLAZA
MASSILLON, OHIO 44646
CONTACTS:
CHIEF BUILDING OFFICIAL: MR. JIM WITHERSPOON (330) 830-1724


ENGINEER-

Wolverton & Associates
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5300 Oakbrook Parkway • Suite 150 • Norcross, Georgia 30093
Phone: (770) 447-8999 • Fax: (770) 447-9070
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**DEVELOPER-
DEVILLE-THF-MASSILLON
DEVELOPMENT L.L.C.
2127 INNERBELT BUSINESS CENTER DR.
SUITE 200
ST. LOUIS, MO. 63114
314-429-0900 PHONE**

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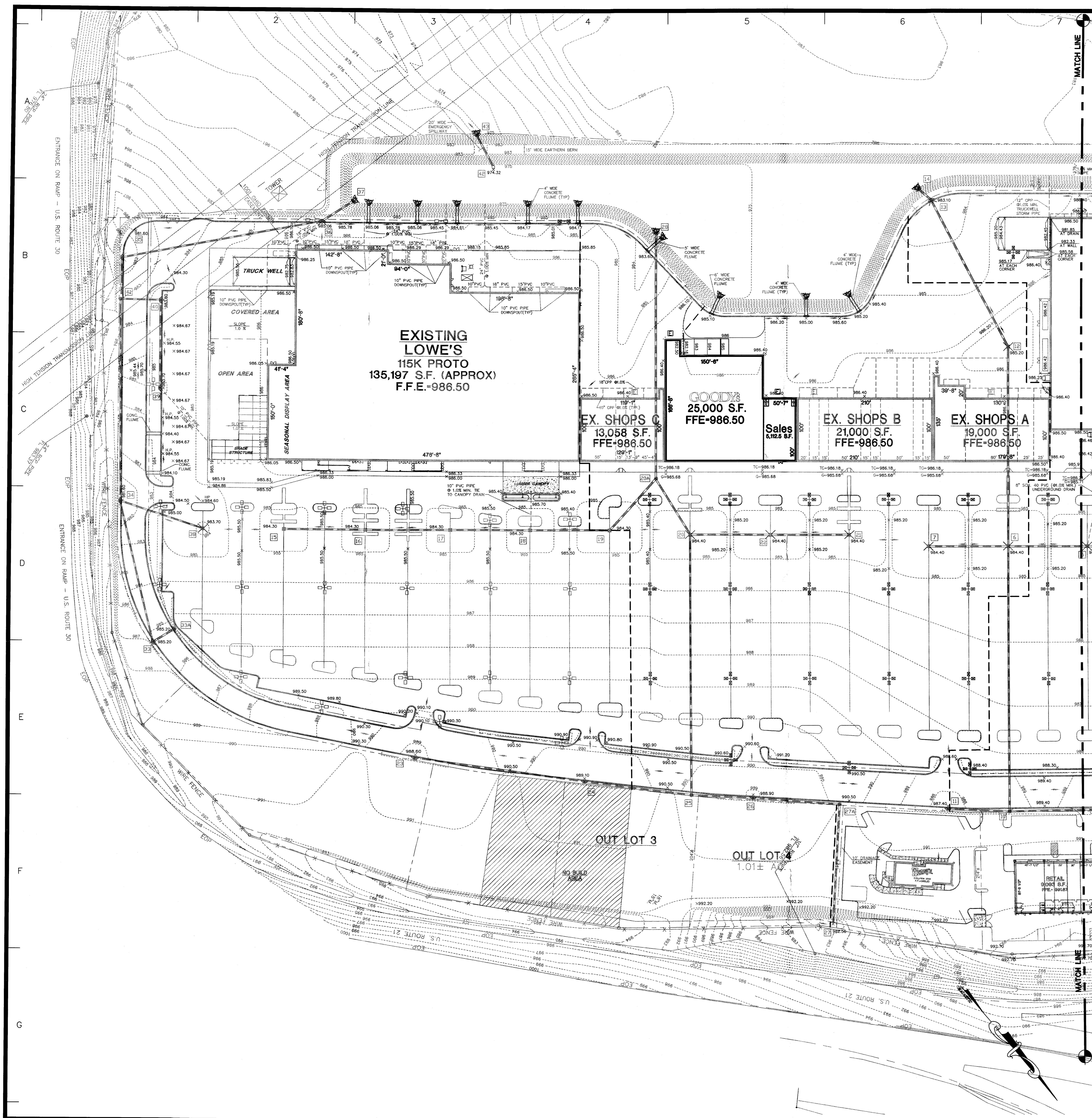
1. THE SITEWORK FOR THIS PROJECT SHALL MEET OR EXCEED THE STANDARD SITEWORK SPECIFICATIONS.
2. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.



Project Title
**PROPOSED
GOODY'S @ MASSILLON MARKET PLACE
STATE ROUTE #21 AND ERIE DRIVE
MASSILLON, OHIO**

Project Developer
DEDEVILLE-THF-MASSILLON
DEVELOPMENT L.L.C.
21217 INNERBELT BUSINESS CENTER DR.
ST. LOUIS, MO 63114

SHEET NUMBER
C-0



GRADING/DRAINAGE PLAN LEGEND

- STORM SEWER PIPING
- JUNCTION BOX STRUCTURE
- DRAINAGE STRUCTURE INDICATOR
- DOUBLE WING CATCH BASIN
- DROP INLET
- SINGLE WING CATCH BASIN
- SLOPE ARROW
- CONCRETE FLUME
- FLARED END SECTION
- RIP RAP APRON
- PRECAST HEADWALL STRUCTURE
- TOP OF CONCRETE
- FINISHED PAVEMENT GRADE

- A. Reinforced Concrete Pipe (RCP) - Class II unless otherwise class type is indicated on construction drawings. Installed with flexible plastic, bitumen gaskets at joints. Manufactured in accordance with AASHTO M 188 731, Type B. Installed in strict accordance with pipe manufacturer's recommendations.
- B. Corrugated Polyethylene Pipe (CPE) - Smooth interior. AASHTO Designation M252 and M253, minimum diameter of 48-inches. Only permitted with proprietary indication on construction drawings. Pipe shall be installed in accordance with pipe manufacturer's installation guidelines for "Jointed Storm Drainage Applications".
- C. Acceptable manufacturers: Advanced Drainage Systems, Inc. "ADS N-12", HANCOCK, INC. "H-12", or approved equal.

SITE GRADING NOTES

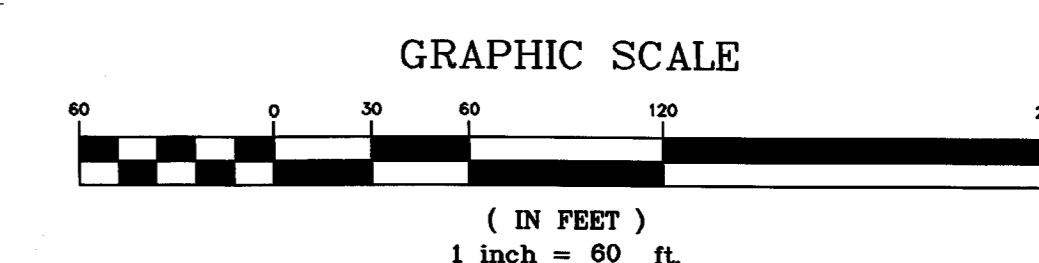
- CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE. UTILITIES ARE TO BE REMOVED TO THE RIGHT-OF-WAY.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED. SLOPES STEEPER THAN 3:1 SHALL (AFTER TOPSOIL, SEEDING, AND MULCHING) BE COVERED WITH CUREX BLANKETS BY AMERICAN EXCELSIOR COMPANY OR EQUAL.
- ALL DISTURBED AREAS NOT OTHERWISE COVERED BY BUILDINGS OR PAVEMENT SHALL RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
- PRECAST STRUCTURES MAY BE USED AT CONTRACTORS OPTION.
- ALL CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 P.S.I.
- EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
- EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
- STORM PIPE TO BE AS FOLLOWS:

EXISTING DRAINAGE SCHEDULE

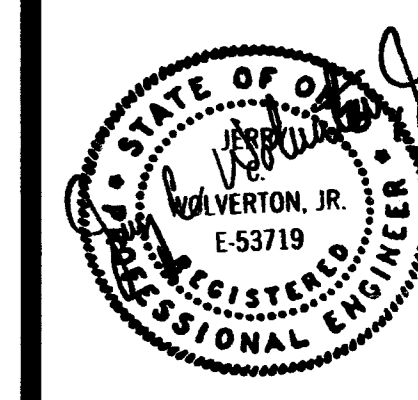
STRUCTURE NUMBER	STRUCTURE TYPE	CHANGING	INVERT IN	ELEVATION	PIPE LENGTH FEET	PIPE TYPE	PERCENT SLOPE
19	DROP INLET	984.50	977.47	977.47	107	36" RCP	0.50%
19-20A	-	-	-	-	-	-	-
20A	JUNCTION BOX	985.50	978.84(20)	978.84	363	60" RCP	0.50%
20A-20	-	-	978.84(10)	-	-	-	-
28	HEADWALL	-	-	975.03	-	-	-
21	DROP INLET	984.40	-	980.50	-	-	-
21-22	-	-	-	-	122	24" CIP	0.75%
22	DROP INLET	984.40	979.58	979.58	-	-	-
22-20	-	-	-	-	122	24" CIP	0.75%
20	DROP INLET	984.40	978.84(22)	977.45	-	-	-
20-20A	-	-	977.84(20)	-	102	54" RCP	0.50%



GRADING PLAN



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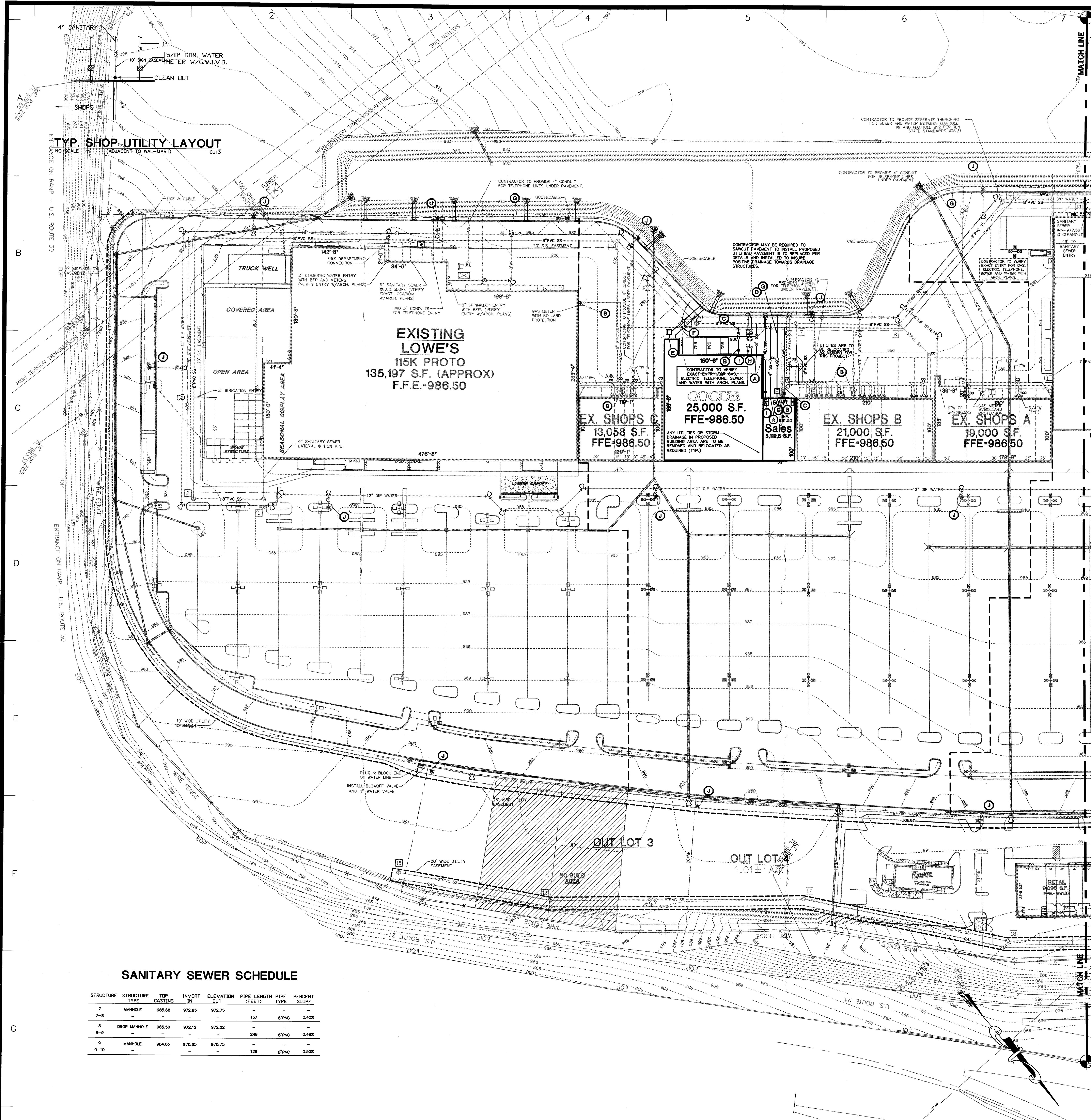


Project Title
PROPOSED
GOODY'S @ MASSILLON MARKET PLACE
MASSILLON MARKETPLACE BOULEVARD
MASSILLON, OHIO

REVISIONS BY

NO.	DESCRIPTION	DATE	BY

DRAWN BY PDR
CHECKED BY TS
DATE 03/31/04
SCALE 1" = 60'
JOB No. 04-122
SHEET NUMBER
C-2
OF SHEETS



NOTE:
1) CONTRACTOR TO PROVIDE 24" WIDE BY 3' DEEP TRENCH BEHIND REAR DRIVE FOR ELECTRICAL, PHONE AND CABLE.
2) TRANSFORMER LOCATIONS BEHIND SHOPS AND MINI ANCHOR A AND MINI ANCHOR B ARE SHOWN AS SUGGESTION ONLY. EXACT LOCATION TO BE DETERMINED BY CONTRACTOR, ARCHITECTS, AND ELECTRIC COMPANY.

- UTILITY PLAN LEGEND**
- ELEC — ELECTRICAL CONDUIT
 - TELE — TELEPHONE CONDUIT
 - 8"SS — SANITARY SEWER PIPE
 - 8" — FIRE PIPING
 - 3"W — WATER PIPING
 - GAS — GAS PIPING
 - DR — DRAINAGE STRUCTURE INDICATOR
 - HY — FIRE HYDRANT
 - CB — THRUST BLOCK
 - DIP — DUCTILE IRON PIPE

- UTILITY LEGEND**
- A 8" SANITARY SEWER LATERAL AT MINIMUM 1% SLOPE. SEE INVERTS FOR ACTUAL SLOPE. COORDINATE WITH ARCHITECTURAL PLANS.
 - B GAS ENTRY WITH GAS METER. CONTRACTOR RESPONSIBLE FOR INSTALLING PIPE BOLLARD PROTECTION AT METER. CONTRACTOR SHALL COORDINATE WITH GAS COMPANY FOR TYPING OF INDIVIDUAL METERS.
 - C CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH NORTHEAST OHIO GAS COMPANY REGARDING THE SIZE AND INSTALLATION OF GAS SERVICE LINE (TYPICAL). THE CONTRACTOR IN CONJUNCTION WITH GAS COMPANY SHALL DETERMINE THE AMOUNT OF GAS LINE THE CONTRACTOR MAY BE REQUIRED TO PROVIDE OUTSIDE THE GAS COMPANY ALLOWANCE. GAS COMPANY WILL INSTALL LINE, VALVES, METERS, ETC. CONTRACTOR WILL BE RESPONSIBLE FOR TRENCHING, BEDDING, AND BACKFILL OF TRENCH AS REQUIRED BY GAS COMPANY. CONTRACTOR IS RESPONSIBLE FOR ALL COST INVOLVED.
 - D UNDERGROUND ELECTRIC SERVICE FROM POLE TO BUILDING. CONTRACTOR IS RESPONSIBLE FOR ALL TRENCHING, BEDDING, CONDUIT, CABLES, PULL, WRES, SECONDARY CONDUCTIONS, BACKFILL, ETC., WHICH MAY BE REQUIRED BY ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH POWER COMPANIES. THE CONTRACTOR IN CONJUNCTION WITH THE UTILITY COMPANIES SHALL DETERMINE THE AMOUNT OF UTILITY LINE HE IS TO PROVIDE OUTSIDE THE UTILITY COMPANIES ALLOWANCE.
 - E PROPOSED LOCATION OF TRANSFORMER PAD. CONTRACTOR TO VERIFY EXACT LOCATION AND SIZE WITH POWER COMPANY PRIOR TO INSTALLATION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF CONCRETE PAD, CONDUIT AND PIPE BOLLARDS AS REQUIRED BY THE ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH THE ELECTRIC COMPANY.
 - F UNDERGROUND TELEPHONE FROM POLE TO BUILDING. CONTRACTOR TO VERIFY EXACT LOCATION AND SIZE WITH TELEPHONE COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH TELEPHONE COMPANY. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF (2) 3" CONDUITS UNDER PAVED AREAS.
 - G CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE UTILITY COMPANIES FOR THE INSTALLATION OF UTILITY LINES. CONTRACTOR SHALL COORDINATE THE TYPING OF INDIVIDUAL METERS WITH THE UTILITY COMPANIES. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO INSURE PROPER SEPARATION BETWEEN OVERHEAD LINES AND UNDERGROUND LINES. SEE NOTE 5, E, & F FOR ADDITIONAL NOTES PERTAINING TO ELECTRICAL AND TELEPHONE LINES.
 - H DOMESTIC WATERLINE ENTRY WITH METER PER LOCAL WATER COMPANY REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ANY APPURTENANCES ON THE DOMESTIC LINE IN SIDE BLDG. SUCH AS BACKFLOW PREVENTION DEVICES, GATE VALVES, ETC. WHICH MAY BE REQUIRED. CONTRACTOR TO COORDINATE WITH WATER COMPANY.
 - I SPRINKLER ENTRY. CONTRACTOR SHALL BE REQUIRED TO INSTALL ANY APPURTENANCES ON THE SPRINKLER LINE SUCH AS, BUT NOT LIMITED TO, A SINGLE DETECTOR CHECK BACKFLOW PREVENTION DEVICE, IN SERIES WITH A CHECK VALVE, GATE VALVE, OR DOUBLE DETECTOR CHECK, ETC. MEETING WATER COMPANY SPECIFICATIONS. BACKFLOW PREVENTOR TO BE LOCATED INSIDE THE BUILDING. CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL PLANS.
 - J EXISTING FIRE HYDRANT AND ASSEMBLY, TYPICAL AS INDICATED. CONTRACTOR TO PROVIDE PIPE BOLLARD PROTECTION WHEN SHOWN.

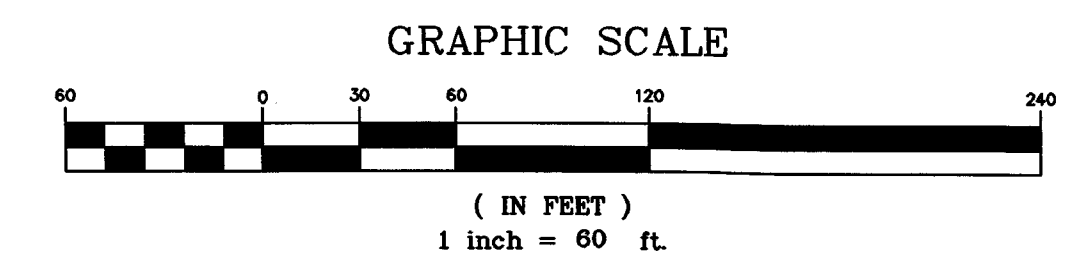
- UTILITY PLAN NOTES**
- ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
 - CONTRACTOR SHALL NOTIFY THE UTILITY (WATER, SEWER, ETC.) AUTHORITIES A MINIMUM OF 72 HOURS PRIOR TO THE START OF ANY CONSTRUCTION WORK IN THE AFFECTED AREAS.
 - SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
 - (a) 8", 10" & 18" PVC SDR35 PER ASTM D 3034, FOR PIPES LESS THAN 12' DEEP.
 - (b) 8", 10" & 18" PVC SDR26 PER ASTM D 3034, FOR PIPES MORE THAN 12' DEEP.
 - (c) 6" PVC SCHEDULE 40, IN LOWE'S AREA TO BE SDR35.
 - (d) DUCTILE IRON PIPE PER ANSI A21.51 — 1976 (AWWA C151-76) AND (AWWA C111) WITH DUCTILE IRON FITTINGS.
 - PIPE FITTINGS:
 - PVC — SHALL MEET EXTRA STRENGTH MINIMUM OF SDR-35. FITTINGS 6" AND SMALLER SHALL BE PVC WITH PUSH-ON JOINT.
 - PUBLIC WATER LINES SHALL BE AS FOLLOWS:
 - (a) 6", 8" OR 12" LINES SHALL BE DUCTILE IRON PIPE PER ANSI/AWWA C151/A21.51. DUCTILE IRON PIPE SHALL BE COATED OUTSIDE WITH A BUTYRUS IN ACCORDANCE WITH ANSI/AWWA/C151/A21.51. THE PIPE INTERIOR SHALL BE CEMENT MORTAR LINED AND IN COMPLIANCE WITH THE LATEST REVISION OF ANSI/AWWA C104/A21.4. THE CEMENT MORTAR LINING SHALL BE DOUBLE THICKNESS.
 - (b) WATER SERVICE LINES 2" AND SMALLER SHALL BE COPPER PIPE TYPE K MEETING THE REQUIREMENTS OF ASTM STANDARD B88.
 - MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
 - ALL UTILITIES SHOULD BE KEPT TEN (10') APART (PARALLEL) OR WHEN CROSSING 18" APART (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).
 - CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3'-6" COVER ON ALL WATER LINES.
 - IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATERLINES (STARK COUNTY TO BE NOTIFIED), SANITARY LINES, STORM LINES, AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING. THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BOLLING AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE. MEETING THE REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11(AWWA C-151) (CLASS 50). WHEN A STORM PIPE CROSSES OVER A SANITARY SEWER AND THE VERTICAL CLEARANCE IS LESS THAN TWO (2) FEET, THE SANITARY SEWER MUST BE ENCASED IN CONCRETE THROUGH THE CROSSING AND FOR TEN (10) LINEAL FEET EACH SIDE OF THE CROSSING UNLESS OTHERWISE DIRECTED BY THE DISTRICT. SEWERS SHALL BE DEEP ENOUGH TO RECEIVE FLOW FROM BASEMENTS AND TO PREVENT FREEZING.
 - UNDERGROUND LINES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
 - ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
 - EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
 - REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES AND SEWER LINES.
 - CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES WITH REGARD TO MATERIALS INSTALLATION, TESTING AND CLEANING OF THE WATER AND SEWER LINES.
 - THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
 - ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
 - IN ACCORDANCE WITH TEN STATE STANDARDS, THE CITY OF MASSILLON AGREES THAT SANITARY SEWER RIGS OF MORE THAN 400 FEET ARE ACCEPTABLE AND MAINTAINABLE.
 - EXISTING INFORMATION SHOWN IS FROM DESIGN PLANS PREPARED BY WOLVERTON & ASSOCIATES. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND NOTIFYING ENGINEER OF ANY CONFLICTS. CONTRACTOR MAY HAVE AS-BUILT SURVEY PREPARED AT HIS COST.

UTILITY COMPANY APPROVAL BY:
NAME (PRINT):
COMPANY:
SIGNATURE AND DATE:

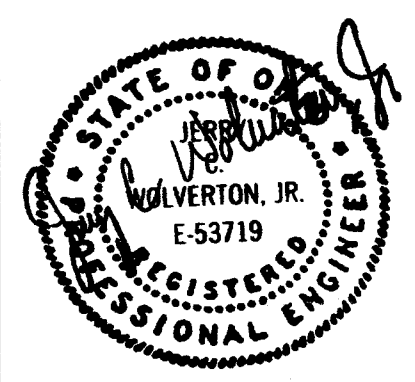
SANITARY SEWER SCHEDULE

STRUCTURE TYPE	STRUCTURE INVERT	TOP CASTING IN	INVERT ELEVATION	PIPE LENGTH (FEET)	PIPE TYPE	PERCENT SLOPE
7	MANHOLE	985.55	972.85	157	8" PVC	0.40%
7-8	—	—	—	—	—	—
8	DROP MANHOLE	985.50	972.12	—	8" PVC	0.48%
8-9	—	—	—	246	8" PVC	—
9	MANHOLE	984.85	970.85	—	8" PVC	0.50%
9-10	—	—	—	128	8" PVC	—

UTILITY PLAN



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