

CITY OF MASSILLON

CITY ENGINEER DEPARTMENT

STARK COUNTY, OHIO

LINCOLN WAY CENTER PHASE III PART C

PROJECT DESCRIPTION

RELOCATION AND REPLACEMENT OF EXISTING ROADWAY,
WALK AND NEW CURB. REPLACEMENT OF THE EXISTING
STORM SEWER IN SELECTED LOCATIONS.

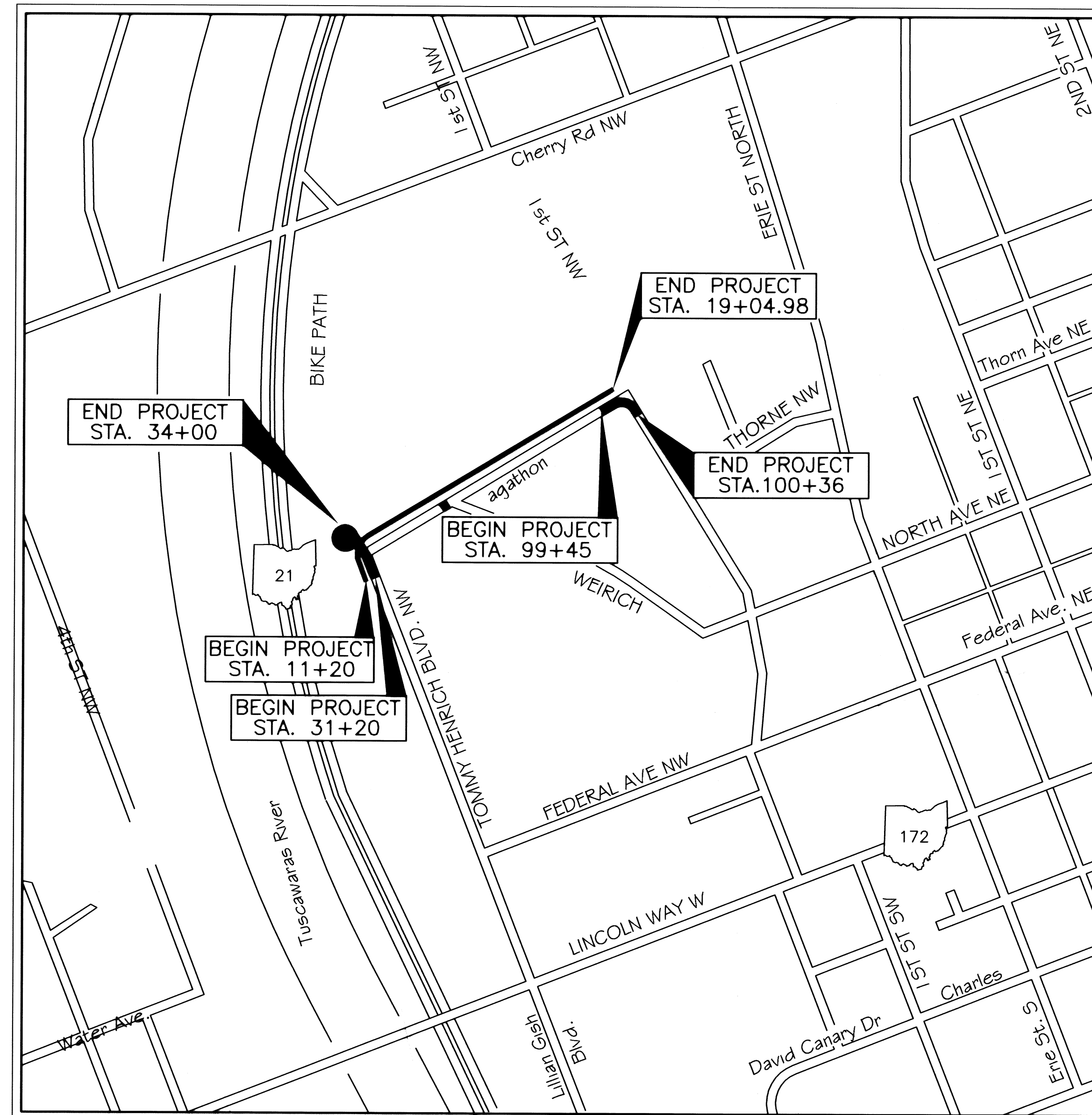
DESIGN DESIGNATION

CURRENT ADT (2001) ——— 50
DESIGN YEAR ADT (2011) ——— 72
DESIGN HOURLY VOLUME (2019) ——— 3
DIRECTIONAL DISTRIBUTION ——— N/A
TRUCKS (24 HOUR B&C) ——— N/A
DESIGN SPEED ——— 25 MPH
LEGAL SPEED ——— 25 MPH

DESIGN FUNCTIONAL CLASSIFICATION — Minor Street

CONVENTIONAL SIGNS

RIGHT OF WAY . . . EXISTING: ———, PROPOSED: ———
COUNTY LINE . . . ———
TOWNSHIP LINE . . . ———
CORPORATION LINE ———
FENCE LINE . . . EXISTING: ———, PROPOSED: ———
GUARDRAIL . . . EXISTING: ———, PROPOSED: ———
MANHOLES . . . EXISTING: ○, PROPOSED: ●, ADJUSTED: ○
CATCH BASINS . . . EXISTING: □, PROPOSED: ■, ADJUSTED: □
SIGNS 1-POST: †, 2-POST: ‡, 3-POST: ≡
EXISTING POLES . . . POWER: ⚡, TELEPHONE ⚡, LIGHT ⚡, SPAN ⚡
PROPOSED POLES . . . POWER: ⚡, TELEPHONE ⚡, LIGHT ⚡, SPAN ⚡
EXIST. UTILITIES . . . VALVE: ⚡, HYDRANT: ⚡, METERS: ⚡, GUY: ⚡



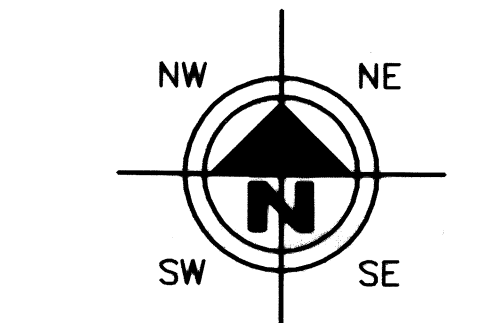
PORTION TO BE IMPROVED ———
STREETS ———

Francis H. Cicchinelli, Jr.
Mayor



INDEX OF SHEETS:

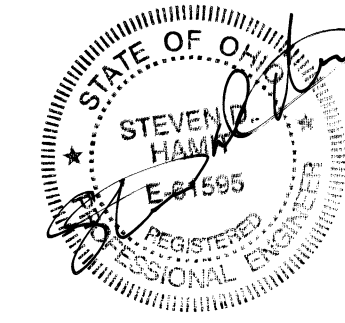
TITLE SHEET	1
SCHEMATIC PLAN	2
TYPICAL SECTIONS	3
GENERAL NOTES	4-5
GENERAL SUMMARY	6
SUBSUMMARIES AND CALCULATIONS	7
STORM WATER POLLUTION PREVENTION	8
REMOVAL PLAN	9
PLAN AND PROFILE	10-13
MISCELLANEOUS DETAILS	14-15



300 150 0 150 300
HORIZONTAL
SCALE IN FEET

DRAWN BY: FPW CHECKED BY: SDH

DATE: JAN., 2005 DATE: JAN., 2005



APPROVALS

DIRECTOR OF PUBLIC SAFETY AND SERVICE MIKE LOUDIANA DATE
CITY ENGINEER STEVEN D. HAMIT, P.E. DATE 1-22-05

OFFICIALS

FRANCIS H. CICCHINELLI, Jr. MAYOR
MIKE LOUDIANA DIRECTOR OF PUBLIC SAFETY AND SERVICE
STEVEN D. HAMIT, P.E. CITY ENGINEER
JOE ULRICH WASTE WATER TREATMENT PLANT MANAGER
PERICLES G. STERGIOS LAW DIRECTOR/PROSECUTOR
BILL HAMIT AUDITOR
PAUL LAMBERT TREASURER
MARY BETH BAILEY CLERK OF COUNCIL

COUNCIL

DENNIS HARWIG PRESIDENT
RONALD MANG 1st WARD
CHUCK MAIER 2nd WARD
KATHERINE CATAZARO-PERRY 3rd WARD
GLORIA AUTREY 4th WARD
GLENN E. GAMBER 5th WARD
TOM WEBER 6th WARD

COUNCIL AT LARGE

TIM BRYAN
PUAL MANSON

UNDERGROUND UTILITIES

TWO WORKING DAYS
BEFORE YOU DIG

CALL 1-800-362-2764 (TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

TWO WORKING DAYS
BEFORE YOU DIG

CALL 1-800-925-0988 (TOLL FREE)

OIL • GAS PRODUCERS UNDERGROUND
PROTECTION SERVICE

PLAN PREPARED BY:

CITY OF MASSILLON
Engineering Department

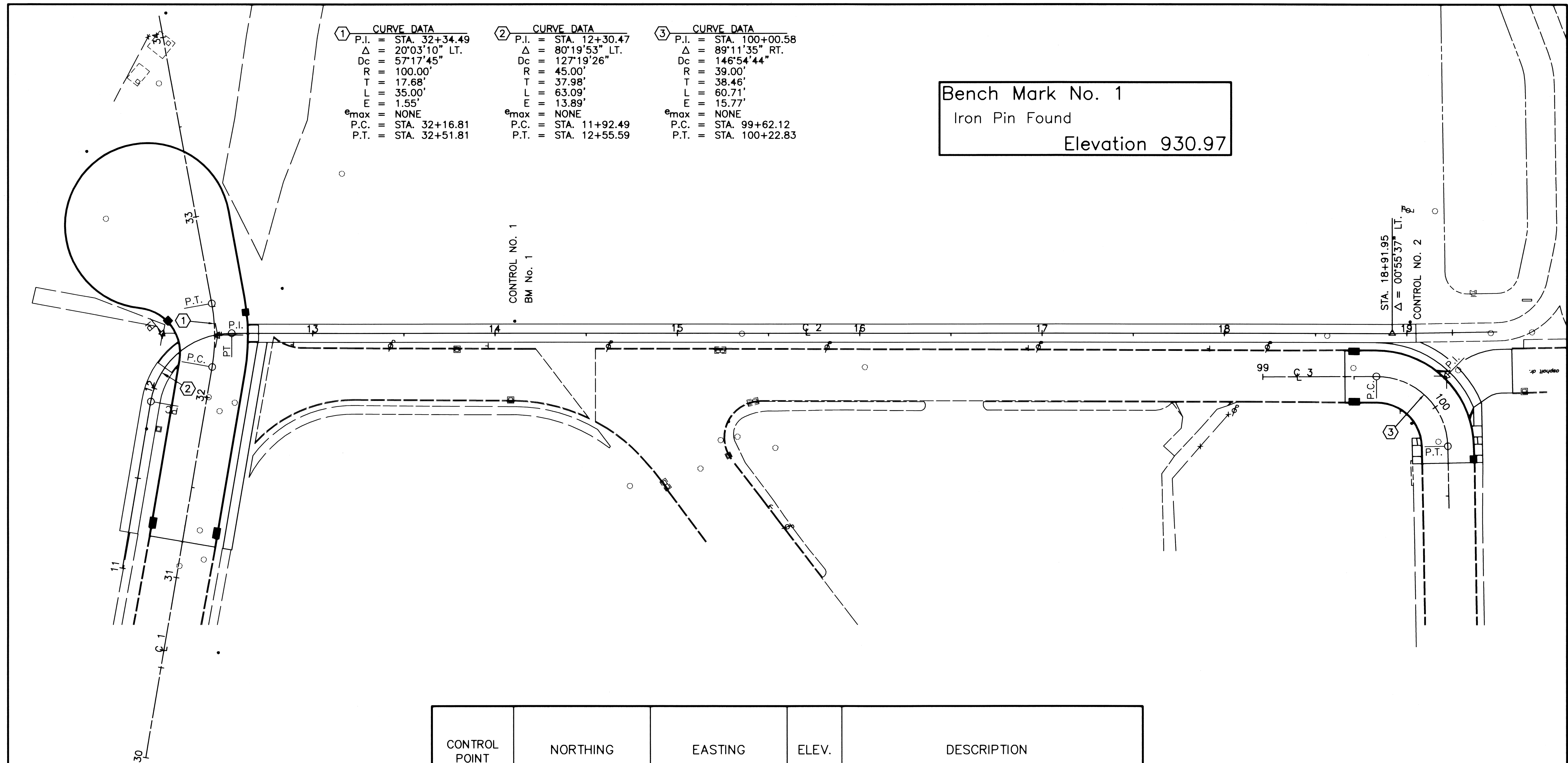
Lincoln Center Phase III Part C



REVISIONS:	
DATE	DESCRIPTION

FILE NAME: 05GM0101.DWG

ACCOUNT NUMBER 05GM01



CONTROL POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
HC-1	413798.6527	2237704.1780	930.97	HORIZONTAL CONTROL IRON PIN FOUND
HC-2	414053.4246	2238123.8932		HORIZONTAL CONTROL IRON PIN FOUND
T-1-1	413582.4806	2237618.3637		POINT ON TAN. ● STA. 31+00 (C/L 1)
PC-1	413691.0846	2237575.3469		PC OF CURVE NO. 1 (C/L 1)
PI-1	413707.5223	2237568.8361		PI OF CURVE NO. 1 (C/L 1)
PT-1	413720.7311	2237557.0838		PT OF CURVE NO. 1 (C/L 1)
T-1-2	413794.0847	2237491.8183		POINT ON TAN. ● STA. 33+50 (C/L 1)
T-2-1	413571.4330	2237590.4719		POINT ON TAN. ● STA. 11+00 (C/L 2)
PC-2	413657.4262	2237556.4110		PC OF CURVE NO. 2 (C/L 2)
PI-2	413692.7389	2237542.4241		PI OF CURVE NO. 2 (C/L 2)
PT-2	413712.4578	2237574.8861		PT OF CURVE NO. 2 (C/L 2)
T-2-2	413891.2669	2237869.2478		POINT ON TAN. ● STA. 16+00 (C/L 2)
DA-2	414042.8368	2238118.7674		DELTA ANGLE ● STA. 18+91.95 (C/L 2)
T-2-3	414060.4512	2238146.7350		POINT ON TAN. ● STA. 19+25 (C/L 2)
T-3-1	413985.6039	2238070.6634		POINT ON TAN. ● STA. 99+00 (C/L 3)
PC-3	414018.1942	2238123.5447		PC OF CURVE NO. 3 (C/L 3)
PI-3	414038.3696	2238156.2816		PI OF CURVE NO. 3 (C/L 3)
PT-3	414005.9201	2238176.9161		PT OF CURVE NO. 3 (C/L 3)
T-3-2	413982.9922	2238191.4958		POINT ON TAN. ● STA. 100+50 (C/L 3)

3015030

HORIZONTAL SCALE IN FEET

DRAWN BY:

FPW

CHECKED BY:

SDH

DATE:

Jan. 2005

DATE:

Jan. 2005

Lincoln Center Phase III Part C

Schematic Plan

City of Massillon

Stark County, Ohio

Francis H. Cicchinelli, Jr.

Mayor

REVISIONS:

DATE

DESCRIPTION

FILE NAME:

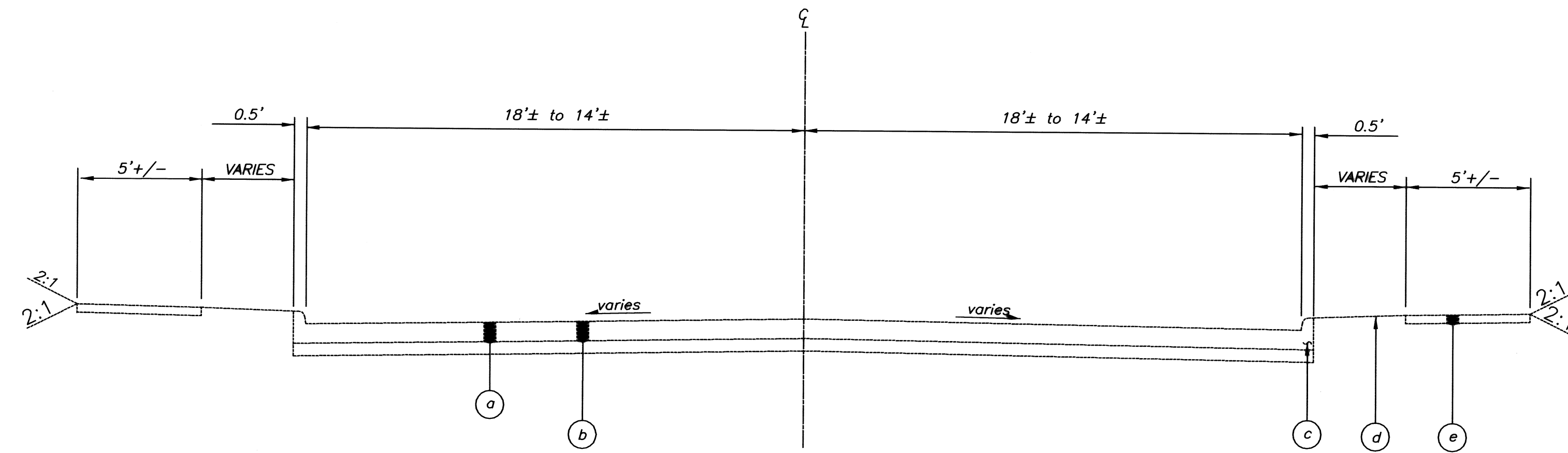
05GM0102.DWG

ACCOUNT NUMBER

05GM01

2

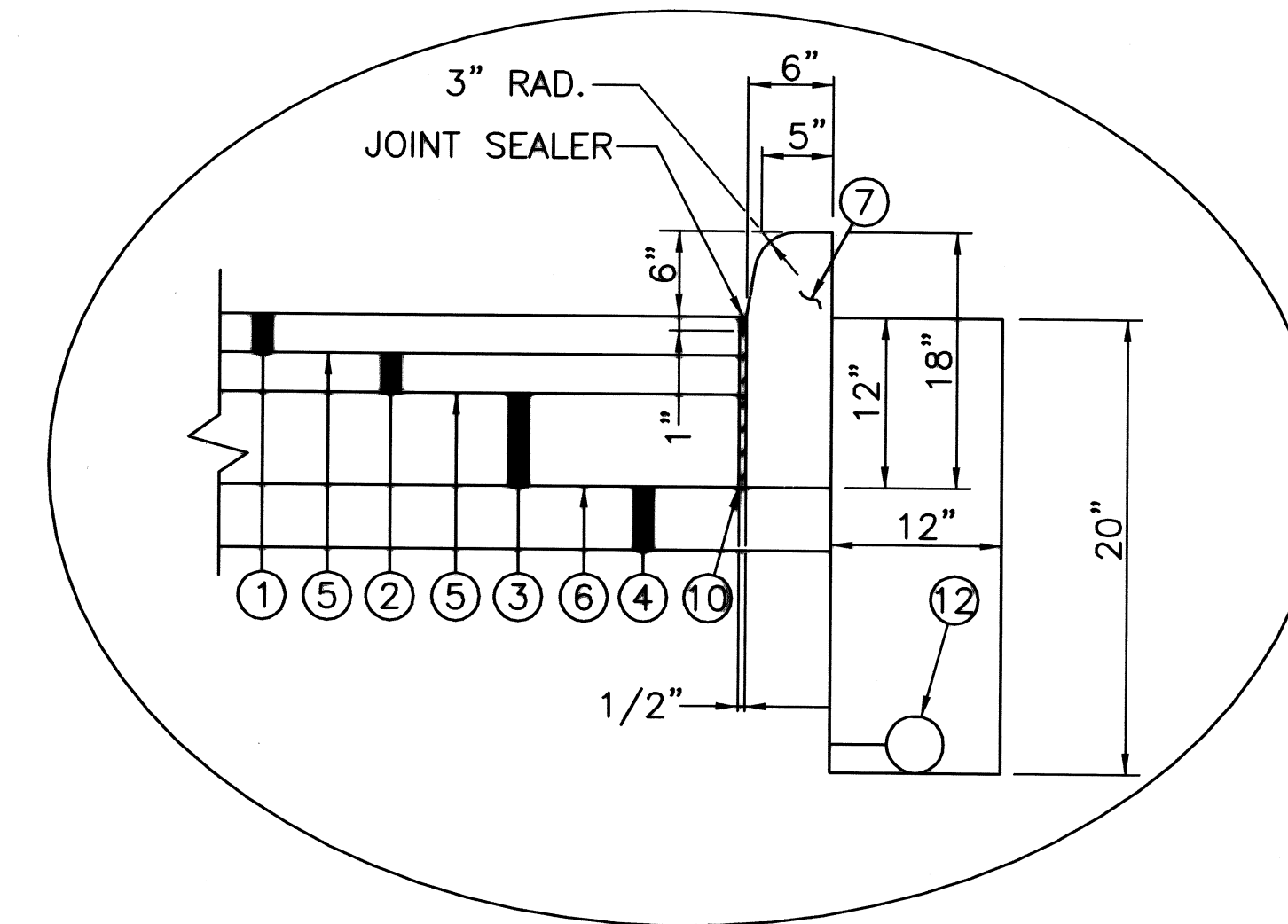
15



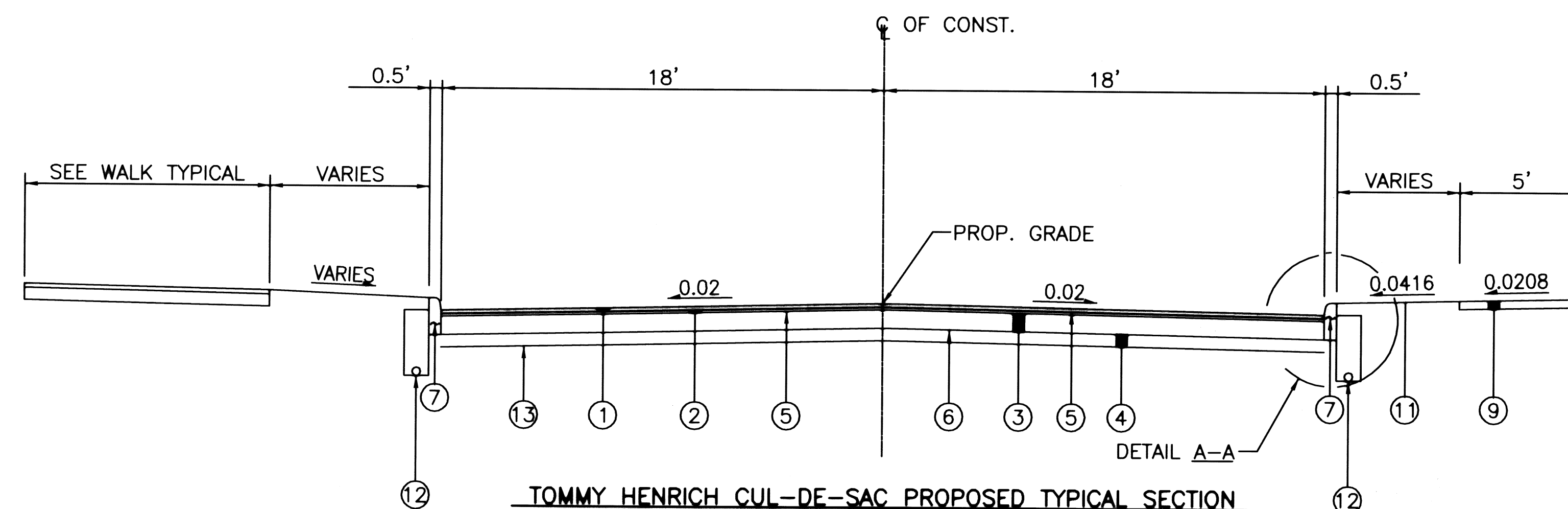
- (a) variable thickness asphalt pavement
- (b) reinforced concrete
- (c) curb
- (d) topsoil / grass strip
- (e) sidewalk

TOMMY HENRICH BLVD. AND 1st ST. NW EXISTING TYPICAL SECTION

STA. 31+20 TO STA. 33+00
STA. 99+45 TO STA. 100+36

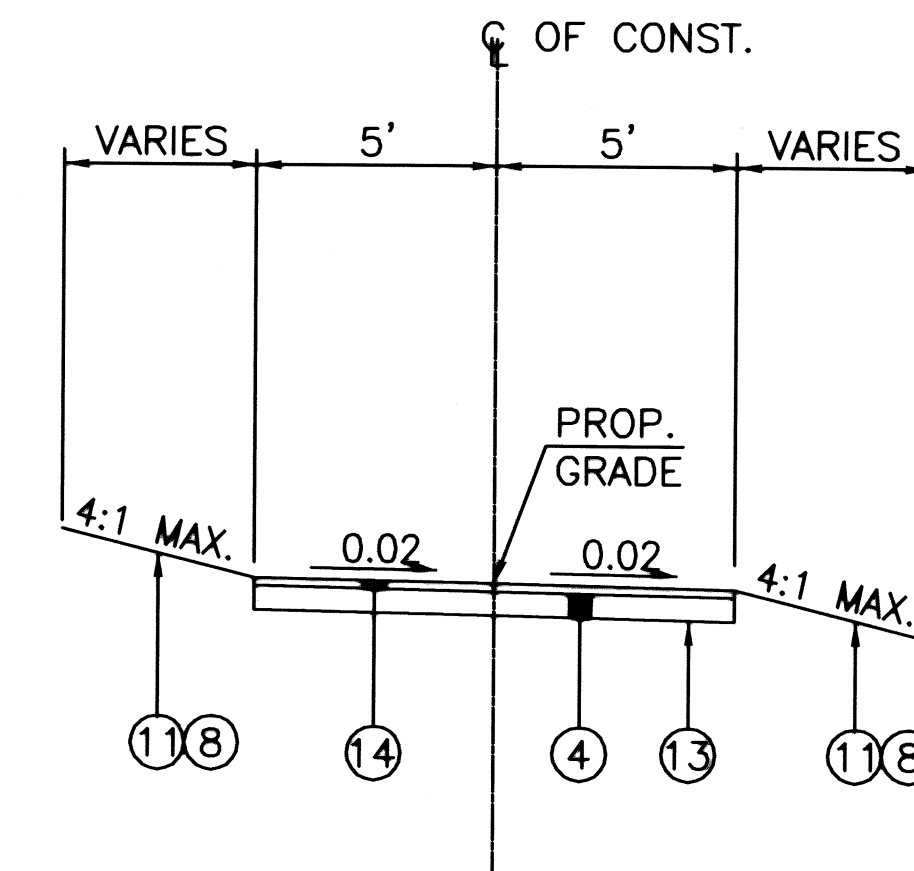


DETAIL A-A



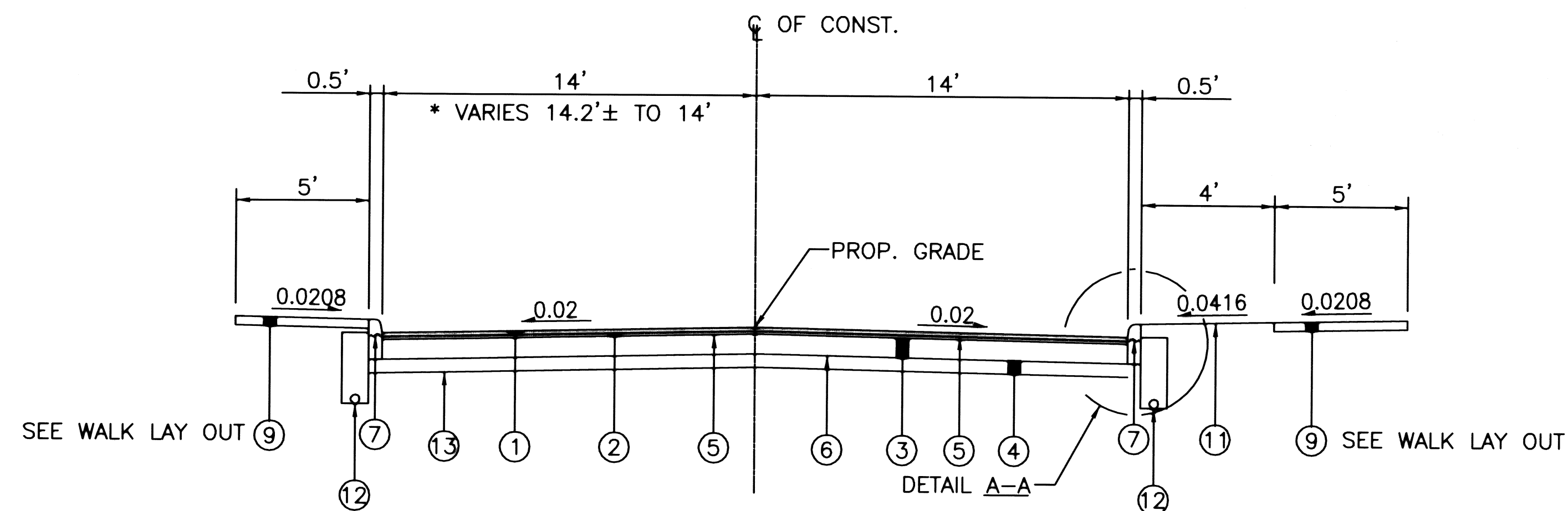
TOMMY HENRICH CUL-DE-SAC PROPOSED TYPICAL SECTION

STA. 31+20 TO STA. 32+14.64 LT.
STA. 31+20 TO STA. 33+00 RT.



WALK PROPOSED TYPICAL SECTION

STA. 99+45 TO STA. 100+36
* STA. 99+45 TO STA. 99+62.12

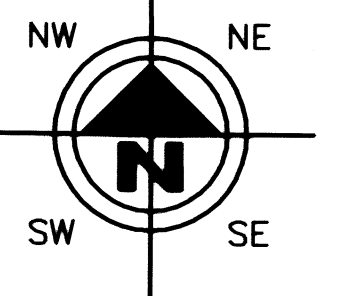


TOMMY HENRICH BLVD. AND 1st ST. NW PROPOSED TYPICAL SECTION

STA. 99+45 TO STA. 100+36
* STA. 99+45 TO STA. 99+62.12

PROPOSED LEGEND

- (1) - ITEM 448 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1
- (2) - ITEM 448 - 1 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1
- (3) - ITEM 301 - 9" BITUMINOUS AGGREGATE BASE
- (4) - ITEM 304 - 6" AGGREGATE BASE
- (5) - ITEM 407 - TACK COAT
- (6) - ITEM 408 - PRIME COAT
- (7) - ITEM 609 - CAST IN PLACE CONCRETE CURB-6"x18"
- (8) - ITEM 209 - LINEAR GRADING
- (9) - ITEM 608 - 4" CONCRETE WALK
- (10) - ITEM 705 - PREFORMED FILLERS
- (11) - ITEM 659 - SEEDING AND MULCHING
- (12) - ITEM 605 - 4" SHALLOW PIPE UNDERDRAINS
- (13) - ITEM 204 - SUBGRADE COMPACTION
- (14) - ITEM 448 - 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1



HORIZONTAL
SCALE IN FEET

DRAWN BY: FPW
CHECKED BY: SDH
DATE: JAN., 2004
DATE: JAN., 2004

Lincoln Center Phase III Part C

Typical Sections
City of Massillon
Stark County, Ohio

Francis H. Cicchinelli, Jr.
Mayor



REVISIONS:

DATE	DESCRIPTION

FILE NAME:

05GM0103.DWG

ACCOUNT NUMBER

05GM01

UTILITIES

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

AMERITECH 50 W.BOWERY, 6TH FLOOR AKRON, OH 44308 800-384-8057 RICK DELAGRANGE	CONSUMERS OHIO WATER P.O. BOX 584 MASSILLON, OH 44648 (330) 833-4156	OHIO EDISON STARK DIVISION 2600 S. ERIE ST. MASSILLON, OH 44545 (330) 833-3141	MASSILLON CABLE TV P.O. BOX 814 MASSILLON, OH 44648 (330) 833-4134	GREAT LAKES 104 6TH ST. S.W. CANTON, OH 44702 (330) 456-2454
CITY OF MASSILLON SANITARY SEWER 151 LINCOLN WAY EAST MASSILLON, OH 44646 (330) 830-1722	AT&T COMMUNICATIONS 2535 E. 40TH AVE. DENVER, CO 80205-3601 (800) 852-3786	DOMINION EAST OHIO GAS COMPANY 4725 SOUTHWAY ST. S.W. CANTON, OH 44706 (330) 478-3142 NANCY KOVACH	NORTHEAST OHIO NATURAL GAS CORP. 9081 S.R. 250 STRASBURG, OH 44680-9766 (330) 878-5589	

THE CONTRACTOR SHALL NOTIFY ALL UTILITIES 48 HOURS PRIOR TO 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
OGUPUPS - 1-800-925-0988

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.

NOTIFICATION OF SAFETY FORCES AND BUS GARAGES

THE CONTRACTOR SHALL NOTIFY ALL AGENCY LISTED BELOW AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSING OR TRAFFIC CHANGE.

MASSILLON SAFETY SERVICE 330-830-1702	MASSILLON FIRE DEPARTMENT 330-833-1053	PERRY TOWNSHIP HALL 330-833-2141	NORTH LAWRANCE FIRE DEPT. 330-832-6347
TUSCARAWAS TOWNSHIP HALL 330-832-4337	JACKSON FIRE DEPARTMENT 330-832-1553	MASSILLON POLICE DEPARTMENT 330-830-1735	MASSILLON SCHOOL BUS GARAGE 330-830-1849
JACKSON TOWNSHIP HALL 330-832-7416	PERRY FIRE DEPARTMENT 330-478-5121	JACKSON POLICE DEPARTMENT 330-497-7440	JACKSON SCHOOL BUS GARAGE 330-830-8042
PERRY POLICE DEPARTMENT 330-833-3865	PERRY SCHOOL BUS GARAGE 330-477-1300	STARK COUNTY SHERIFF 330-430-3887	TUSCARAWAS SCHOOL BUS GARAGE 330-837-7805

SARTA
330-454-5333

SUBSURFACE CONDITIONS

IT IS THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO MAKES HIS OWN INVESTIGATION OF SUBSURFACE CONDITIONS PRIOR TO SUBMITTING BID. PROSPECTIVE BIDDERS ARE TO COORDINATE WITH THE OWNER FOR ACCESS TO THE SITE FOR INSPECTIONS AND EXPLORATORY EXCAVATION. THE BIDDER SHALL CONTACT THE OWNER AT LEAST 72 HOURS IN ADVANCE OF THE DESIRED INSPECT OR EXCAVATION. THE BIDDER SHALL CONTACT O.U.P.S. AND OBTAIN LOCATIONS OF OTHER UTILITIES.

QUANTITIES

QUANTITIES ARE INDICATED FOR COMPARISON OF BIDS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY QUANTITIES BEFORE ORDERING MATERIALS. VARIATIONS FROM THE PLAN QUANTITIES SHALL BE APPROVED BY THE ENGINEER OR OWNER BEFORE MATERIALS ORDERS ARE PLACED. MATERIALS REJECTED DUE TO INCOMPATIBILITY BETWEEN ORDERED QUANTITIES AND FIELD CONDITIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

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, SEDIMENT EROSION STANDARDS.

MAINTENANCE OF TRAFFIC

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

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

SAID APPROVED DETOUR SHALL BE FORWARDED TO THE LOCAL NEWSPAPER.

ALL WORK SHALL BE PAID FOR UNDER ITEM 614 MAINTAINING TRAFFIC.

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.

CONDITIONS OF WORK

ALL WORK PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH THE U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ACT, STATE, COUNTY, AND CITY OF MASSILLON LAWS AND REGULATIONS. ALL WORK, AT ALL TIMES SHALL BE SUBJECT TO OBSERVATION BY THE OWNER AND/OR ENGINEER. ALL WORK SHALL COMPLY WITH THE CONDITIONS OF THE CONTRACT DOCUMENTS AND OHIO EPA, AND STANDARDS OF THE CITY OF MASSILLON ALL ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE, AND APPLICABLE CITY, COUNTY, STATE AND FEDERAL CODES.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE AND SATISFACTORY ACCESS TO ALL ABUTTING PROPERTIES TO THE PROJECT SITE. ADJACENT ROADS SHALL BE MAINTAINED AND KEPT CLEAN OF MUD AND OTHER DEBRIS THAT MAY BE CAUSED BY TRAFFIC EXITING THE WORK SITE. THE CONTRACTOR SHALL COORDINATE AND PROVIDE FOR ALL NECESSARY TRAFFIC CONTROL. TRAFFIC CONTROL SHALL FOLLOW THE MORE STRINGENT GUIDELINES OF THE CITY OF MISSION OR ODOT.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AND MAINTAIN FACILITIES FOR A CONSTRUCTION OFFICE, EMPLOYEE PARKING, AND EMPLOYEE SANITARY FACILITIES. ON STREET PARKING WILL NOT BE PERMITTED. THE CONTRACTOR SHALL PROVIDE FOR THE LAWFUL OFF-SITE DISPOSAL OF DEMOLITION DEBRIS AND CONSTRUCTION WASTE.

EXISTING DATA

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

EXISTING STRUCTURES, GRADES, PIPING, ETC. ARE INDICATED IN APPROXIMATE LOCATION ON THE PLAN. INFORMATION SHOWN IS NOT GUARANTED 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 NON-CONNFORMING OR CONFLICTING INFORMATION.

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 THIER DRIVEWAY.

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.

EXCAVATED MATERIAL

ALL EXCAVATED MATERIAL AND ALL MATERIAL USED IN CONSTRUCTION OF THE WORK SHALL BE PILED AND STORED 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 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.

RESTORATION

FOR SANITARY SEWER INSTALLED, TESTED, AND ACCEPTED UP TO MAY 15TH OF ANY CALENDER 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 CALENDER YEAR, RESTORATION SHALL BE COMPLETE BY NOVEMBER 15th OF THAT CALENDER YEAR. FOR SANITARY SEWER INSTALLED, TESTED, AND ACCEPTED AFTER NOVEMBER 15TH OF ANY CALENDER YEAR. RESTORATION SHALL BE COMPLETE BY MAY 15th OF THE NEXT CALENDER 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 SEPERATE 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 PAVEMANT 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.

REMOVAL AND RELOCATION OF EXISTING UTILITIES

THE CONTRACTOR IS REQUIRED TO COOPERATE WITH EACH RESPECTIVE UTILITY OWNER FOR THE REMOVAL AND RELOCATION OF ANY AND ALL UTILITIES THAT CREATE A CONFLICT WITH CONSTRUCTION OF THE PROJECT.

CONCRETE REMOVAL

ALL EXISTING CONCRETE INCLUDING CURBS, DRIVES, AND BASE ETC. WITHIN WORK LIMITS SHALL BE REMOVED AND PAID FOR UNDER:

ALL WORK SHALL BE PAID FOR UNDER ITEM 203 ROADWAY/CONCRETE REMOVAL.

ITEM 623. CONSTRUCTION STAKING

CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND AS-BUILT DRAWINGS. THIS WORK IS TO BE PERFORMED UNDER ITEM 623 CONSTRUCTION STAKING.

DRAWN BY:	CHECKED BY:
FPW	SDH
DATE:	DATE:
Jan. 2005	Jan., 2005

Lincoln Center Phase III Part C
General Notes
City of Massillon
Stark County, Ohio

Francis H. Cicchinelli, Jr.



REVISIONS:	
DATE	DESCRIPTION
ELECTRONIC FILE NAME:	
05GM0104.DWG	
ACCOUNT NUMBER	
02SS02	

MANHOLES, CATCH BASINS, INLETS AND PIPES REMOVED OR ABANDONED

ALL CASTING, PRE-CAST STRUCTURES 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 – MARK LIGHTFOOT AT 330-833-5746. ANY UNWANTED MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR.

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 EXTISMATING 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.

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 GRDE 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.

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

ITEM 604. MASS C1-1

CATCH BASINS SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 604 EXCEPT THAT THE GRATES SHALL BE NEENAH NO. R-3246-A WITH NO DUMP NO WASTE OR EAST JORDON NO. 7510 WITH FISH BACK OR APPROVED EQUALS.

ITEM 604. MASS C1-2

CATCH BASINS SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 604 EXCEPT THAT THE GRATES SHALL BE EAST JORDON NO. 7511 WITH FISH BACK OR APPROVED EQUALS.

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. THIS SHALL ALSO INCLUDE THE REPLACEMENT AND REMOVAL OF ALL WALK EXTENSION DISTURB DO TO CURB PLACEMENT

ITEM 659. SEEDING AND MULCHING

ITEM 659 SHALL BE APPLIED TO ALL EXPOSED SOIL AREAS DISTURBED DURING CONSTRUCTION. SUCH AS SPECIFIED IN ITEM 659 AND IS NOT LIMITED TO JUST TOPSOIL, SEEDING AND MULCHING. 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. ALL ABOVE SAID WORK SHALL BE PAID FOR UNDER

ITEM 659, SEEDING AND MULCHING LUMP SUM BID

ITEM SPECIAL – PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING CONDUITS SPECIFIED IN THE FIELD. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 203.05. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL – PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

THE FOLLOWING ESTIMATE QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

SPECIAL, PIPE CLEANOUT 1000 L.F.

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 CONSTRUCTED 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 VARIOUS 203 ITEMS.

ALL COSTS OF THE ABOVE SAID WORK SHALL BE INCLUDED IN ITEM 653 TOPSOIL FURNISHED AND PLACED

BULK HEAD

BULK HEADS MAY BE REQUIRED DO TO THE REMOVAL OF AN EXISTING PIPE OR STRUCTURE CONTRACTOR SHALL PLACE BULK HEADS AS DIRECTED BY ENGINEER.

ALL COSTS OF THE ABOVE SAID WORK SHALL BE INCLUDED IN ITEM 202 PIPE REMOVED

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 FEILD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BT 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 BT 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.

WORKING AREA

NO EXCAVATION WITH SIDE SLOPES STEEPER THAN 2:1 AND/OR DEEPER THAN 2', OPEN CASTINGS AND PIPES SHALL BE LEFT EXPOSED WHEN THE SITE IS UNATTENDED BY THE CONTRACTOR. THE CONTRACTOR SHALL SECURE ALL SUCH EXCAVATIONS, OPEN CASTINGS AND PIPES AGAINST UNAUTHORIZED ENTRY COVERING WITH STEEL PLATES, TEMPORARY BACKFILLING, FENCING AND SECURITY SERVICES SHALL BE INCLUDED IN THE PRICE BID FOR THE WORK.

ITEM 207SPEC. EROSION CONTROL

THE CONTRACTOR SHALL PREPARE AND SUBMIT A STORM WATER POLLUTION CONTROL PLAN TO THE CITY OF MASSILLON ENGINEER TO BE FORWARDED TO OBTAIN A PERMIT. THE STORM WATER POLLUTION CONTROL PLAN SHALL AN EFFECTIVE PLAN. SAID PLAN MUST COMPLY W/ THE OHIO DEPARTMENT OF NATURAL RESOURCES. THE OHIO EVIROMETAL SOIL AND WATER CONSERVATION DISTRICT AND THE CITY OF MASSILLON BEST MANAGEMENT PRACTICES.

BECAUSE OF THE LINEAR NATURE OF THIS PROJECT. THE PLAN WILL VARY DAILY BASED UPON THE CONTRACTORS MEANS AND METHODS OF CONSTRUCTION. THE CITY AND ALL LOCAL, STATE AND FEDERAL AGENCIES WILL MONITOR THE CONSTRUCTION SITE AND THE CHOSEN METHOD OF SOIL EROSION CONTROL. THE CONTRACTOR WILL BE HELD TO FOLLOWING THE IMPLEMENTATION AS NECESSARY TO PROTECT THE INTEGRITY OF THE STORM SEWERS AND THE WATER'S OF THE STATE OF OHIO.

BELOW IS A NUMBER OF MISC. ITEMS WHICH MAYBE USED BUT NOT LIMITED TO.

ITEM 870 – COMMERCIAL FERTILIZER
ITEM 870 – REPAIR SEEDING AND MULCHING
ITEM 870 – WATER

ITEM 877 – TEMPORARY SEEDING AND MULCHING
ITEM 877 – TEMPORARY FILTER FABRIC FENCE
ITEM 877 – TEMPORARY INLET PROTECTION

ALL COSTS OF THE ABOVE SAID WORK SHALL BE INCLUDED IN ITEM 207SPEC EROSION CONTROL.

REMOVAL OF TRAFFIC CONTROL DEVICES AND PRECAST STRUCTURES

ALL TRAFFIC CONTROL DEVICES AND PRE-CAST STRUCTURES WITH CASTINGS SHALL BE REMOVED IN A WAY NOT TO DAMAGE. SAID ITEMS SHALL BE STORED UNTIL THEY CAN BE TRANSPORTED TO THE CITY GARAGE BY THE CONTRACTOR. THE CONTRACTOR MUST COORDINATE SAID DELIVERIES WITH MARK LIGHTFOOT AT (330)833-5746.

ALL OF THE ABOVE SAID WORK SHALL BE INCLUDED IN PERTINENT 202 ITEM.

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. AS BUILT DRAWING SHALL BE CREATED BY THE CONTRACTOR AND SUBMITTED TO THE CITY IN A CLEAR AND LEDGABLE MANNER PRIOR TO FINAL INVOICE.


COST OF THIS WORK SHALL BE INCLUDED IN ITEM 623 CONSTRUCTION STAKING

DRAWN BY:	CHECKED BY:
FPW	SDH
DATE:	DATE:
Jan. 2005	Jan. 2005

Lincoln Center Phase III Part C

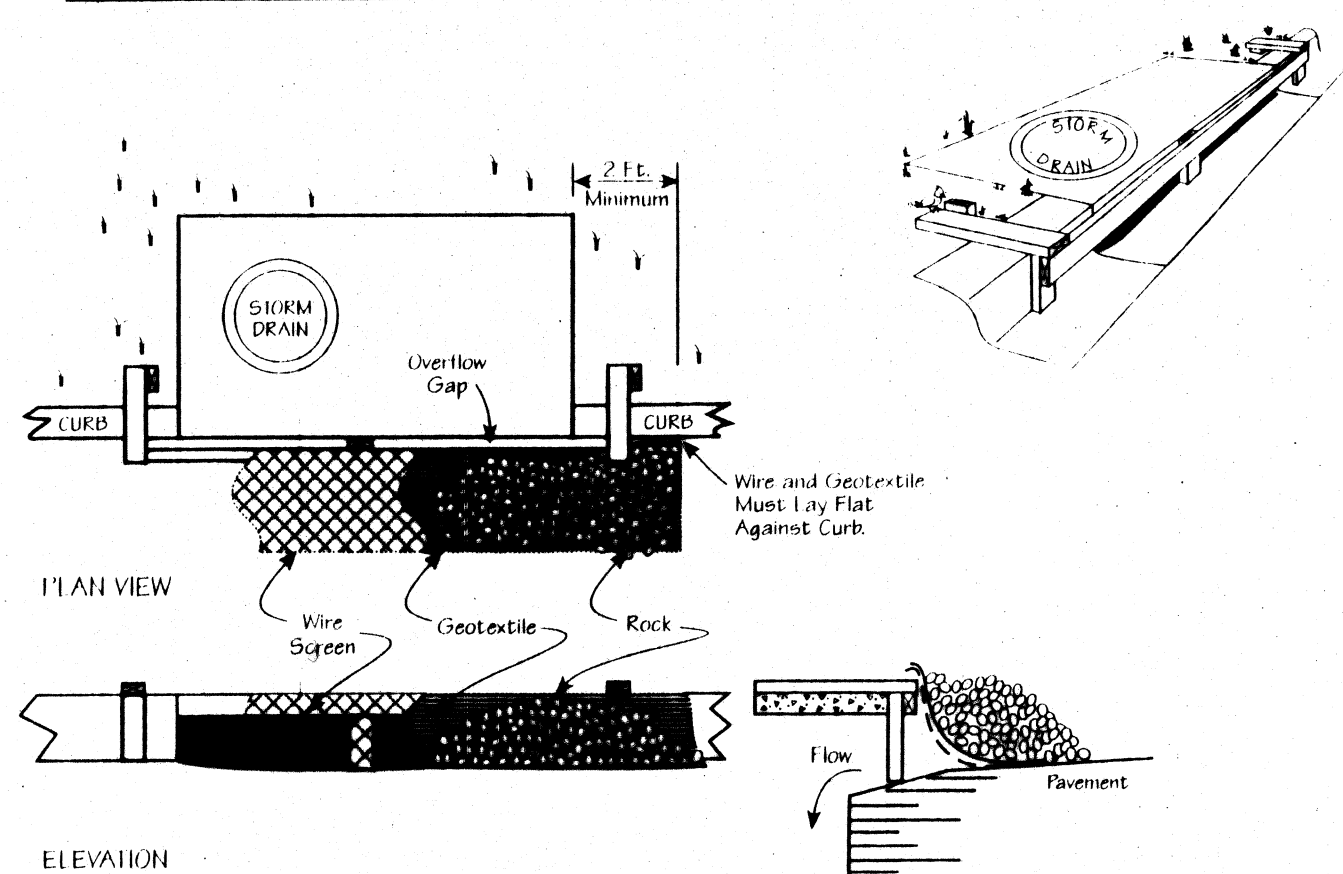
General Notes
City of Massillon
Stark County, Ohio

Francis H. Cicchinelli, Jr.
Mayor



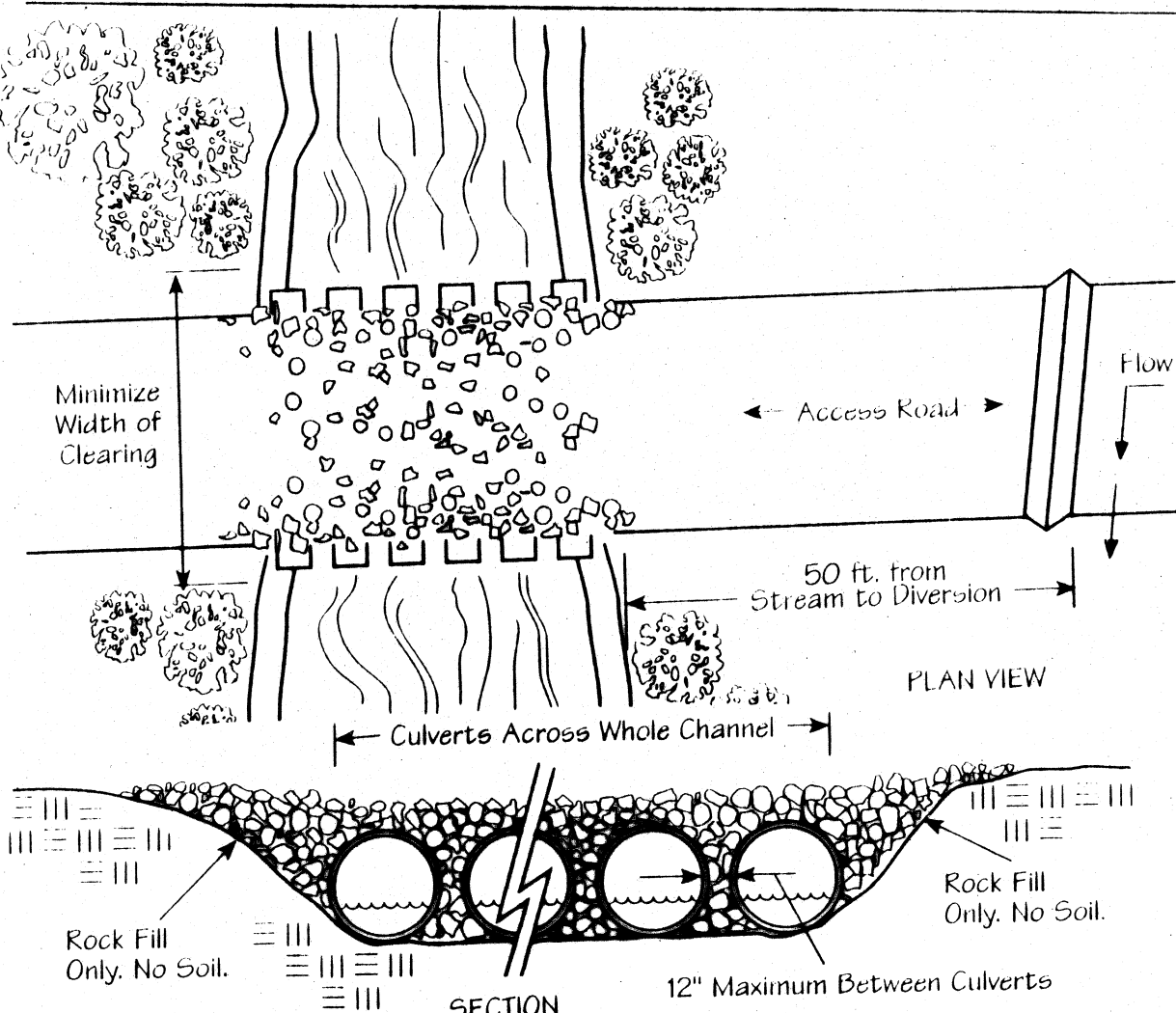
REVISIONS:	
DATE	DESCRIPTION
FILE NAME: 05GM0105.DWG	
ACCOUNT NUMBER 05GM01	

Curb Inlet Protection



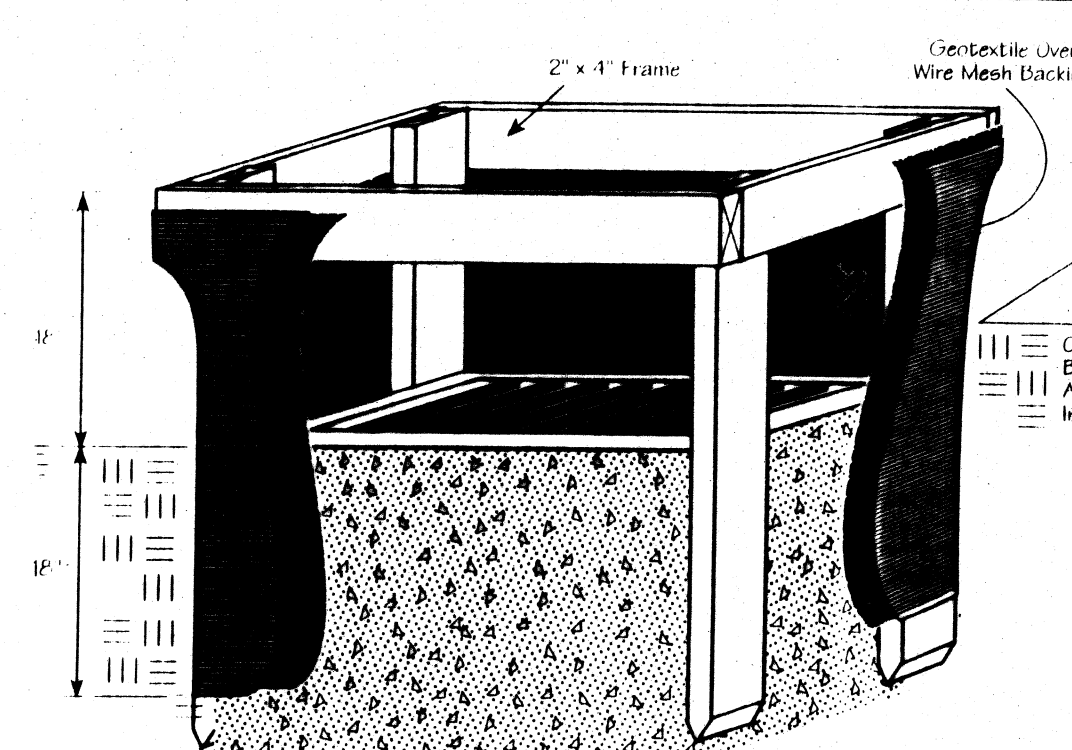
- Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational.
- The wooden frame is to be constructed of 2-by-4-in. construction-grade lumber. The end spacers shall be a minimum of 1 ft. beyond both ends of the throat opening. The anchors shall be nailed to 2-by-4-in. stakes driven on the opposite side of the curb.
- The wire mesh shall be of sufficient strength to support fabric and stone. It shall be a continuous piece with a minimum width of 30 in. and 4 ft. longer than the throat length of the inlet, 2 ft. on each side.
- Geotextile cloth shall have an equivalent opening size (EOS) of 20-40 sieve and be resistant to sunlight. It shall be at least the same size as the wire mesh.
- The wire mesh and geotextile cloth shall be formed to the concrete gutter and against the face of the curb on both sides of the inlet and securely fastened to the 2-by-4-in. frame.
- Two-inch stone shall be placed over the wire mesh and geotextile in such a manner as to prevent water from entering the inlet under or around the geotextile cloth.

Culvert Stream Crossing



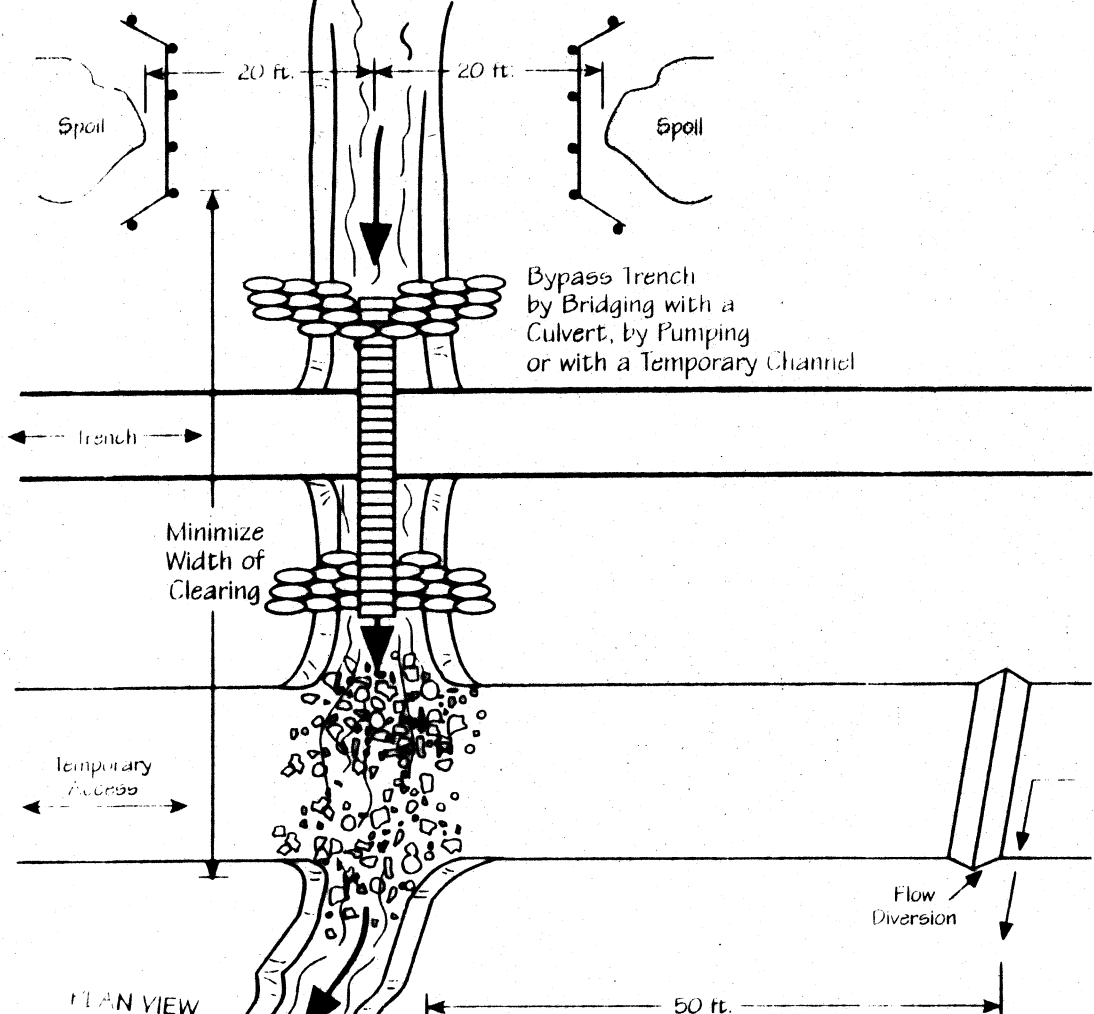
- Stream Disturbance-Disturbance to the stream shall be kept to a minimum. Streambank vegetation shall be preserved to the maximum extent practical and the stream crossing shall be as narrow as practical.
- Clearing shall be done by cutting NOT grubbing. The roots and stumps shall be left in place to help stabilize the banks and accelerate revegetation.
- To minimize interference with fish spawning and migration, crossing construction should be avoided where practical from March 15 through June 15.
- Water shall not be allowed to flow along the road directly to the stream. Diversions and swales shall direct runoff away from the access road to a sediment-control practice.
- Placement-Culverts shall be placed on the existing streambed to avoid a drop or waterfall at the downstream end of the pipe, which would be a barrier to fish migration. Crossings shall be made in deep, slow-moving pools, the culvert diameter may be reduced to twice the depth of normal stream flow. The minimum size culvert that may be used is 18 in.
- Number of Culverts-There shall be sufficient number of culverts to completely cross the stream channel from streambank to streambank with no more than a 12 in. space between each one.
- Fill and Surface Material-All material placed in the stream channel, around the culverts and on the surface of the crossing shall be stone, rock or aggregate. ODOT No. 1 shall be the minimum acceptable size. To prevent washouts, larger stone and rock may be used and they may be placed in gabion mattresses. NO SOIL SHALL BE USED IN THE CONSTRUCTION OF A STREAM CROSSING OR PLACED IN THE STREAM CHANNEL.
- Removal-Aggregate stone and rock used for this structure does not need to be removed. Care should be taken so that any aggregate left does not create an impoundment or impede fish passage. All pipes, culverts, gabions or structures must be removed.
- Stabilization-Streambanks shall be stabilized. Plantings shall include woody vegetation where practical.

Inlet Protection in Swales, Ditch Lines or Yard Inlets



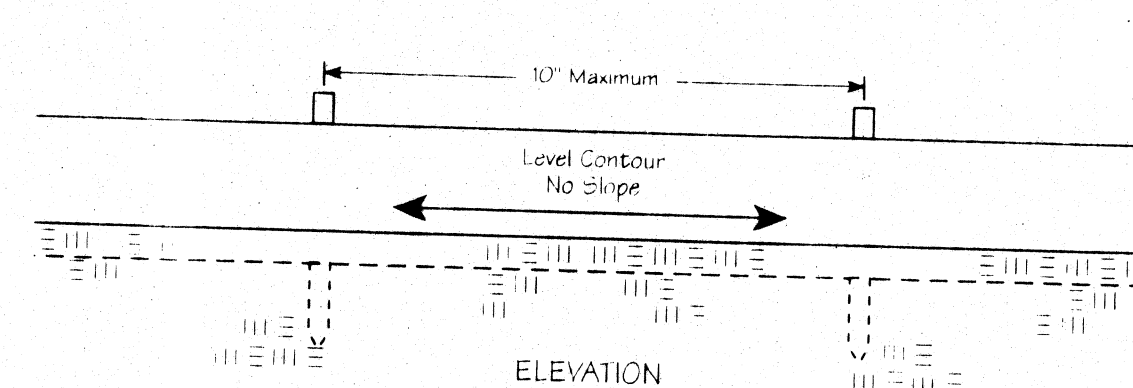
- Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational.
- The earth around the inlet shall be excavated completely to a depth of at least 18 in.
- The wooden frame shall be constructed of 2-by-4-in. construction-grade lumber. The 2-by-4-in. posts shall be driven 1 ft. into the ground at four corners of the inlet and the top portion of 2-by-4-in. frame assembled using the overlap joint shown. The top of the frame shall be at least 6 in. below adjacent roads if ponded water would pose a safety hazard to traffic.
- Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stretched tightly around the frame and fastened securely to the frame.
- Geotextile shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall be stretched tightly around the frame and fastened securely. It shall extend from the top of the frame to 18 in. below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastened to the same post.
- Backfill shall be placed around the inlet in compacted 6 in. layers until the earth is even with notch elevation on ends and top elevation on sides.
- A compacted earth dike or a check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression and if runoff bypassing the inlet will not flow to a settling pond. The top of earth dikes shall be at least 6 in. higher than the top of the frame.

Small Stream Utility Crossing



- When site conditions allow, one of the following shall be used to divert stream flow or otherwise keep the flow away from construction activity.
 - Drill or bore the utility lines under the stream channel.
 - Construct a cofferdam or barricade of sheet piling, sandbags or a turbidity curtain to keep the stream from continually flowing through the disturbed areas. Turbidity curtains shall be a pre-assembled system and used only parallel to flow.
 - Stage construction by confining first one-half of the channel until work there is completed and stabilized, then move to the other side to complete the crossing.
 - Route the stream flow around the work area by bridging the trench with a rigid culvert, pumping, or constructing a temporary channel. Temporary channels shall be stabilized by rock or a geotextile completely lining the channel bottom and side slopes.
- Crossing Width-The width of clearing shall be minimized through the riparian area. The limits of disturbance shall be as narrow as possible including not only construction operations with the channel itself but also clearing done through the vegetation growing on the streambanks.
- Clearing shall be done by cutting NOT grubbing. The roots and stumps shall be left in place to help stabilize the banks and accelerate revegetation.
- Material excavated from the trench shall be placed at least 20 ft. from the streambanks.
- To the extent other constraints allow, stream shall be crossed during periods of low flow.
- Duration of Construction-The time between initial disturbance of the stream and final stabilization shall be kept to a minimum. Construction shall not begin on the crossing until the utility line is in place within 10 ft. of the streambank.
- Fill Placed Within the Channel-The only fill permitted in the channel should be clean aggregate, stone or rock. No soil or other fine erodible material shall be placed in the channel. This restriction includes all fill for temporary crossings, diversions, and trench backfill when placed in flowing water. If the stream flow is diverted away from construction activity the material originally excavated from the trench may be used to backfill the trench.
- Streambank Restorations-Streambanks shall be restored to their original line and grade and stabilized with riprap or vegetative bank stabilization.
- Runoff Control Along the Right-of-Way-To prevent sediment laden runoff from flowing to the stream, runoff shall be diverted with water bar or swales to a sediment trapping practice a minimum of 50 ft. from the stream.
- Dewatering or pumping water containing sediment shall not be discharge directly to a stream. The flow shall be routed through a settling pond, dewatering sump or a flat, well-vegetated area adequate for removing sediment before the pumped water reaches the stream.
- Dewatering operations shall not cause significant reductions in stream temperatures. If groundwater is to be discharged in high volumes during summer months, it shall first be routed through a settling pond or overland through a flat well-vegetated area.
- Permits-In addition to these specifications, stream crossings shall conform to the rules and regulations of the U.S. Army Corps of Engineers for in-stream modifications (404 permits) and Ohio Environmental Protection Agency's State Water Quality Certification (401 permits).

Silt Fence



- Silt fence shall be constructed before upslope land disturbance begins.
- All silt fence shall be placed as close to the contour as possible so that water will not concentrate at low points in the fence and so that small swales or depressions which may carry small concentrated flows to the silt fence are dissipated along its length.
- To prevent water ponded by the silt fence from flowing around the ends, each end shall be constructed upslope so that the ends are at a higher elevation.
- Where possible, silt fence shall be placed on the flattest area available.
- Where possible, vegetation shall be preserved for 5 ft. (or as much as possible) upslope from the silt fence. If vegetation is removed, it shall be reestablished within 7 days from the installation of the silt fence.
- The height of the silt fence shall be a minimum of 16 in. above the original ground surface.
- The silt fence shall be placed in a trench cut a minimum of 6 in. deep. The trench shall be cut with a trencher, cable laying machine, or other suitable device which will ensure an adequately uniform trench depth.

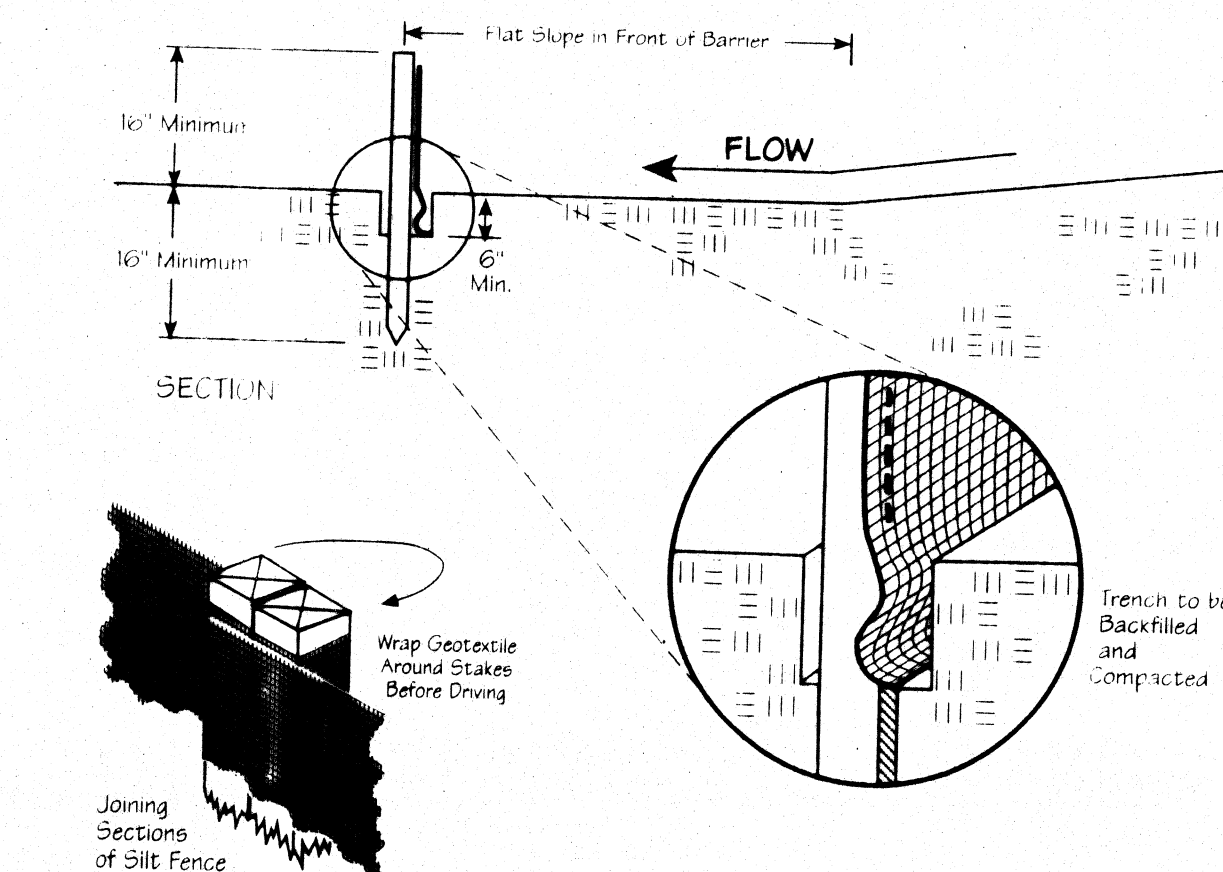
Criteria for Silt Fence Materials

- Fence Posts-The length shall be a minimum of 32 in. long. Wood posts will be 2-by-2-in. hardwood of sound quality. The maximum spacing between posts shall be 10 ft.
- Silt Fence Fabric shall be ODOT Type C Geotextile Fabric or as described by the chart below:

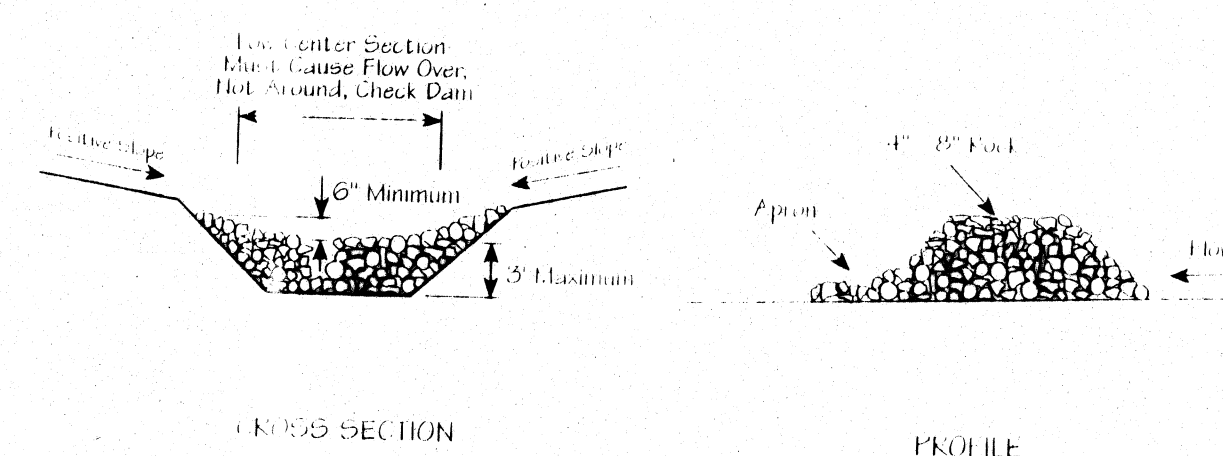
Fabric Properties	
Minimum Tensile Strength	120 lbs.
Maximum Elongation at 60 lbs.	50%
Minimum Puncture Strength	50 lbs.
Minimum Tear Strength	40 lbs.
Minimum Burst Strength	200 psi
Apparent Opening Size	≤ 0.84mm
Minimum Permeability	1X10 ⁻¹⁰ sec ⁻¹
Ultraviolet Exposure Strength Retention	70%

Mulching

- Mulch and/or other appropriate vegetative practices shall be applied to disturbed areas within 7 days of grading if the area is to remain dormant (undisturbed) for more than 45 days or on areas and portions of the site which can be brought to final grade.
- Mulch shall consist of one of the following:
 - Straw-Straw shall be unrotted small grain straw applied at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The straw mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000-sq.-ft. sections and place two 45-lb. bales of straw in each section.
 - Hydroseeders-Wood cellulose fiber should be used at 2,000 lb./ac. or 46 lb./1,000 sq. ft.
 - Other-Other acceptable mulches include mulch matings applied according to manufacturer's recommendations or wood chips applied at 10-20 tons/ac.
- Mulch Anchoring-Mulch shall be anchored immediately to minimize loss by wind or runoff. The following are acceptable methods for anchoring mulch.
 - Mechanical-Use a disk, crimper, or similar type tool set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but be left generally longer than 6 in.
 - Mulch Nettings-Use according to the manufacturer's recommendations, following all placement and anchoring suggestions. Use in areas of water concentration and steep slopes to hold mulch in place.
 - Asphalt Emulsion-For straw mulch, apply at the rate of 160 gal./ac. (0.1 gal./sq.) into the mulch as it is being applied or as recommended by the manufacturer.
 - Synthetic Binders-For straw mulch, synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer.
 - Wood Cellulose Fiber-Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 lb./acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal. of wood cellulose fiber.



Check Dam



- The check dam shall be constructed of 4 8-in.-diameter stone, placed so that it completely covers the width of the channel.
- The top of the check dam shall be constructed so that the center is approximately 6 in. lower than the outer edges, so water will flow across the center and not around the ends.
- The maximum height of the check dam at the center of the weir shall not exceed 3 ft.
- Spacing between dams shall be as shown in the plans or by the following table:

Check Dam Spacing				
Dam Height (ft.)	Channel Slope			
	< 5%	5 - 10%	10 - 15%	15 - 20%
1	65 ft.	30 ft.	20 ft.	15 ft.
2	130 ft.	65 ft.	40 ft.	30 ft.
3	200 ft.	100 ft.	65 ft.	50 ft.

NOTE

THE DETAILS SHOWN ON THIS SHEET ARE STORM WATER BEST MANAGEMENT PRACTICES FROM (RAINWATER AND LAND DEVELOPMENT) OHIO'S STANDARDS FOR STORM WATER MANAGEMENT LAND DEVELOPMENT AND URBAN STREAM PROTECTION. THE CONTRACTOR SHALL USE THE ADJACENT OR PROVIDE A DETAIL PROPOSAL WHEN CREATING, IMPLEMENTING THE SWP3 PLAN AS REQUIRED BY THE CITY AND THE STARK SOIL & WATER CONSERVATION DISTRICT.

Lincoln Center Phase III Part C

Storm Water Pollution Prevention
City of Massillon
Stark County, Ohio

Francis H. Cicchinelli, Jr.
Mayor

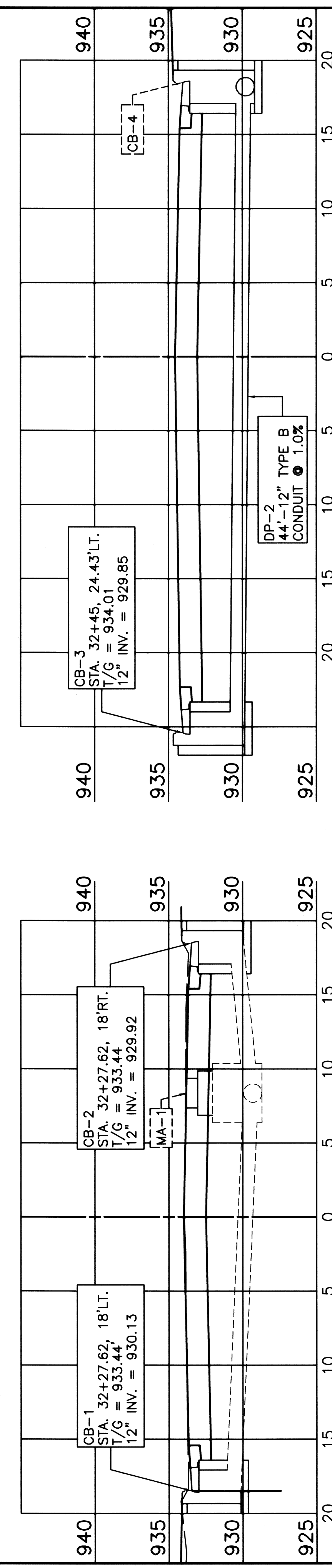
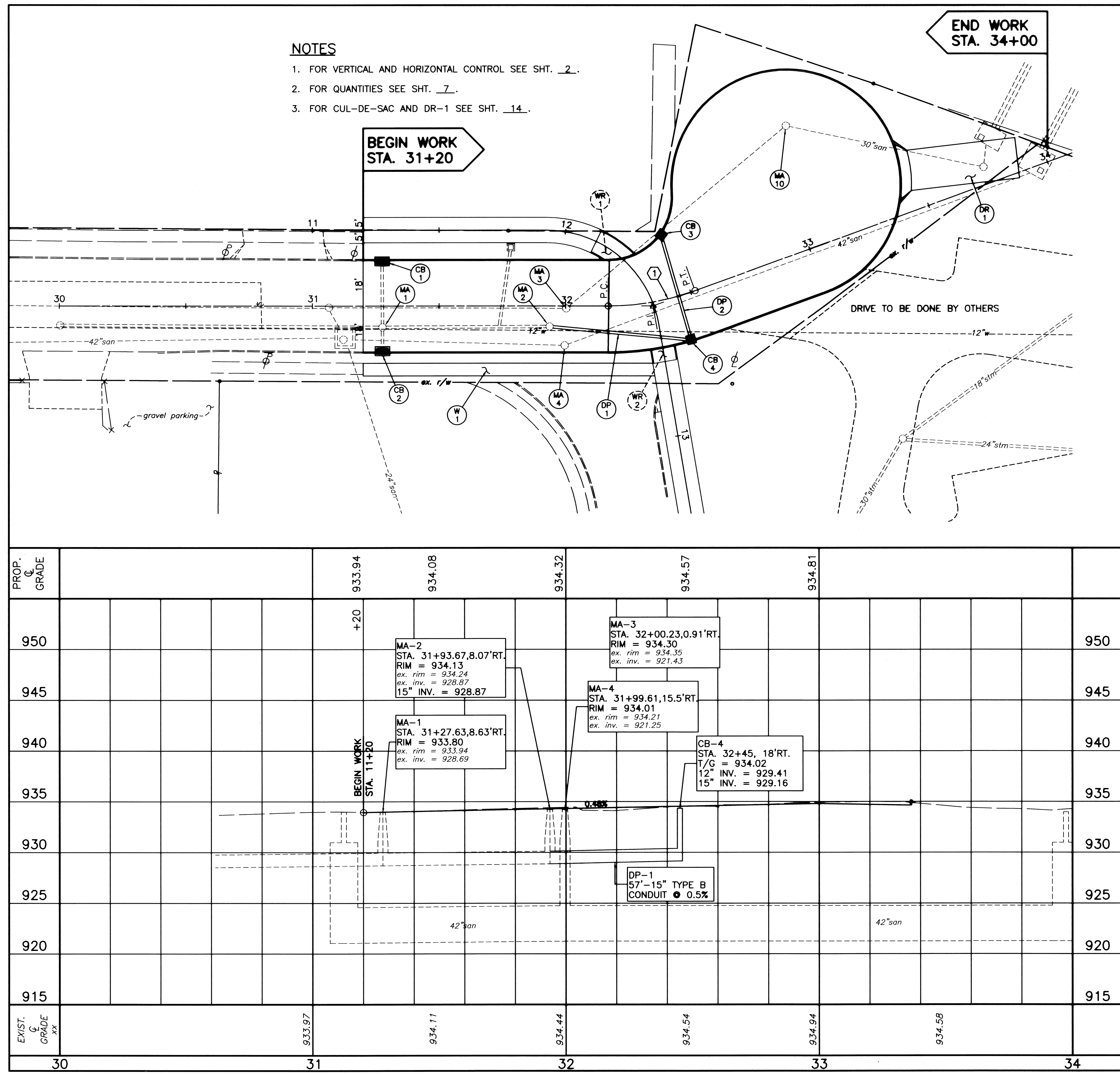
VERSSILLION
Means More!

REVISIONS:

DATE	DESCRIPTION

FILE NAME: _____

ACCOUNT NUMBER _____



HORIZONTAL SCALE IN FEET

DRAWN BY: FPW	CHECKED BY: SDH
DATE: Jan. 2004	DATE: Jan. 2004

Lincoln Center Phase III Part C

Tommy Henrich Cul-De-Sac Plan and Profile Sta. 31+00 to Sta. 34+00

City of Massillon
Stark County, Ohio

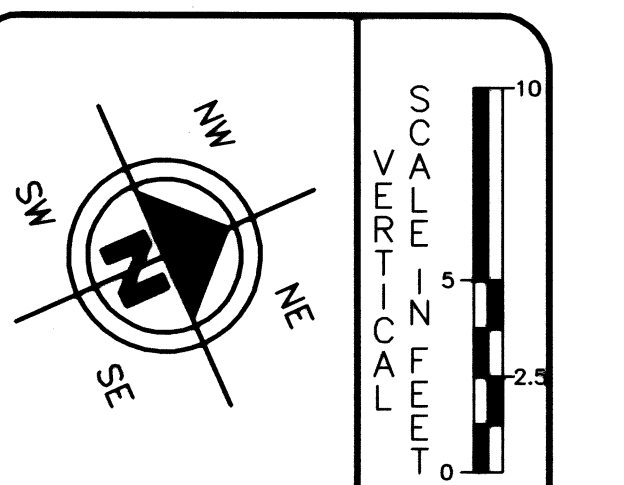
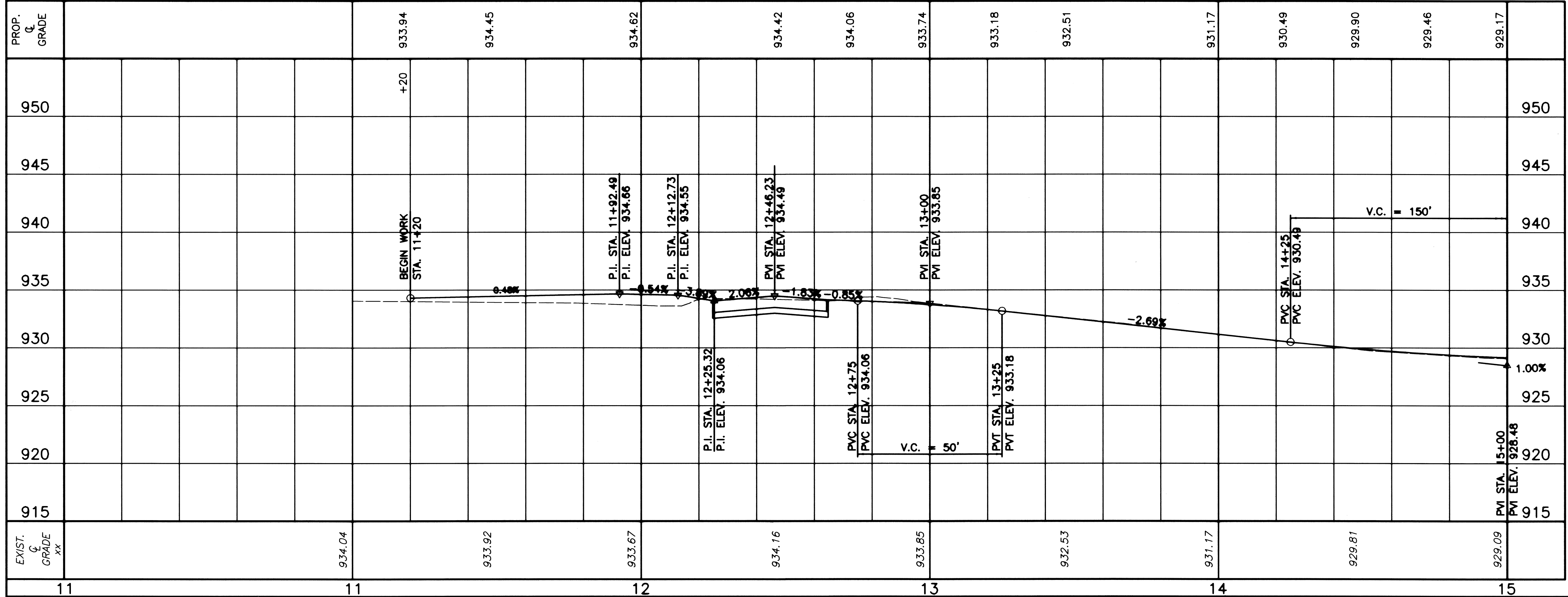
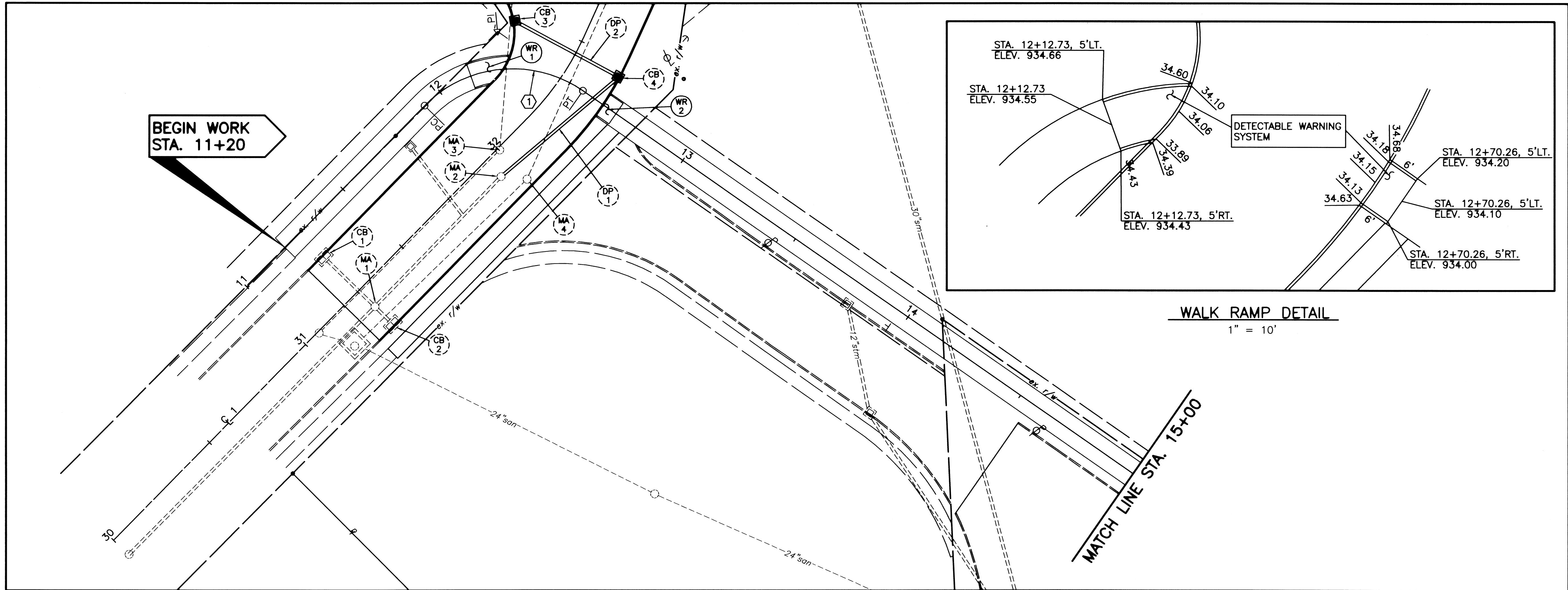
Francis H. Cicchinelli, Jr.
Mayor

REVISIONS:	
DATE	DESCRIPTION

FILE NAME:
05GM0110.DWG

ACCOUNT NUMBER
05GM01

10
15



HORIZONTAL
SCALE IN FEET

DRAWN BY: FPW
CHECKED BY: SDH

DATE: Jan. 2005
DATE: Jan. 2005

Lincoln Center Phase III Phase C

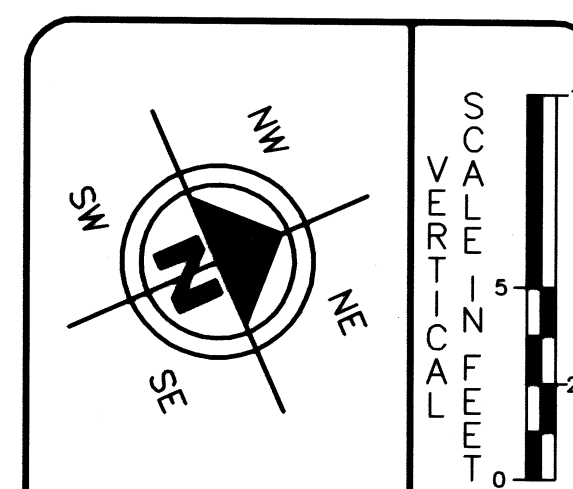
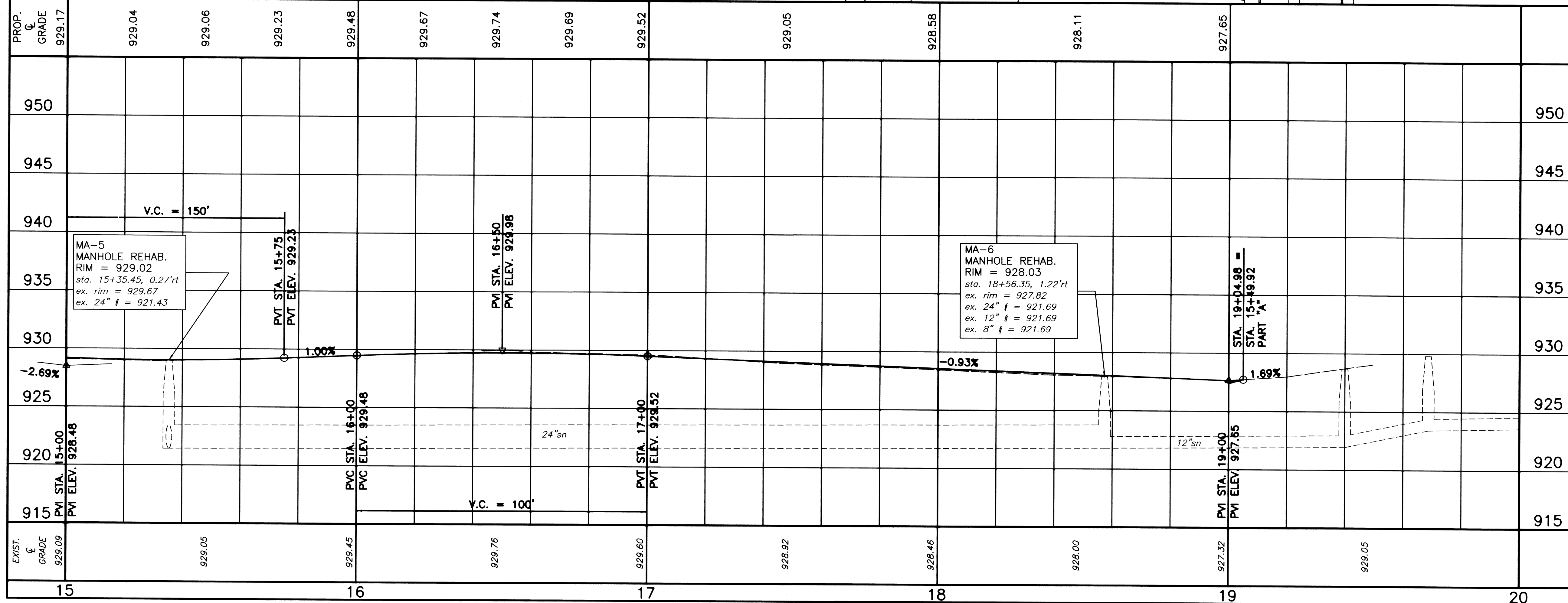
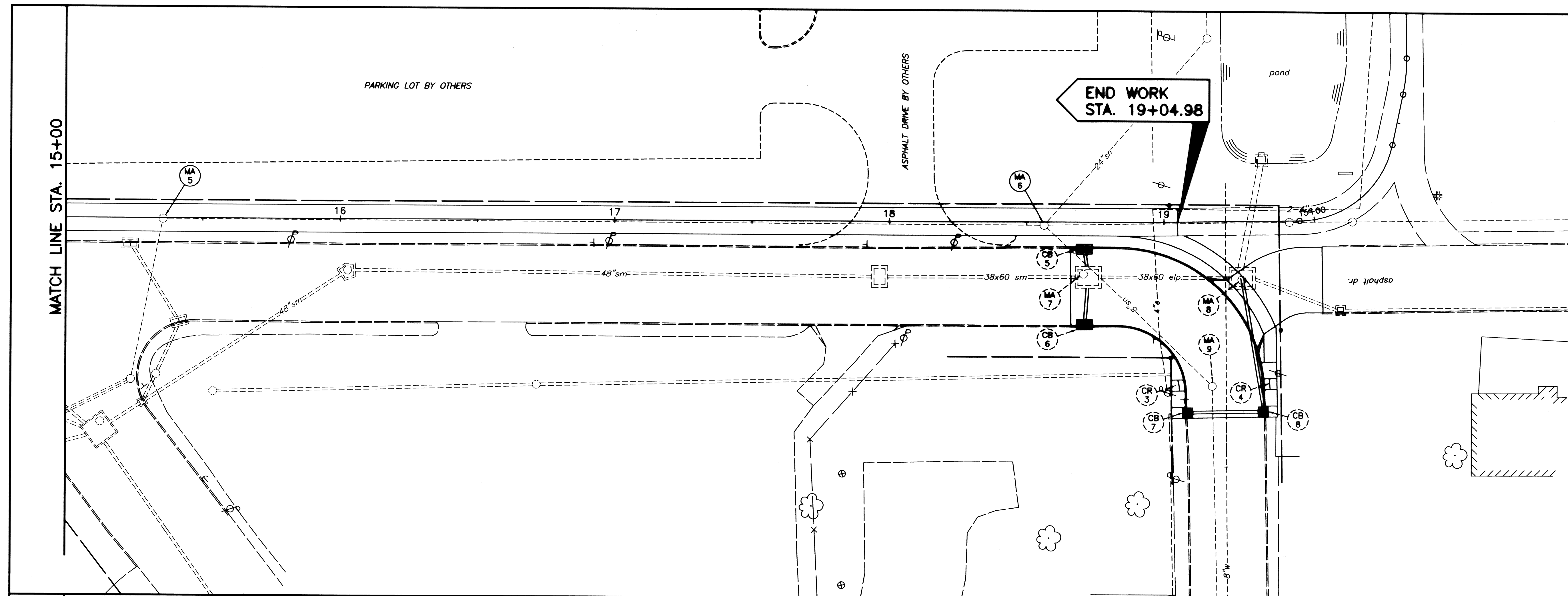
Walk Plan and Profile Sta. 11+00 to Sta. 15+00
City of Massillon
Stark County, Ohio

Francis H. Cicchinelli, Jr.
Mayor



REVISIONS:	
DATE	DESCRIPTION

FILE NAME:
05GM0111.DWG
ACCOUNT NUMBER
05GM01

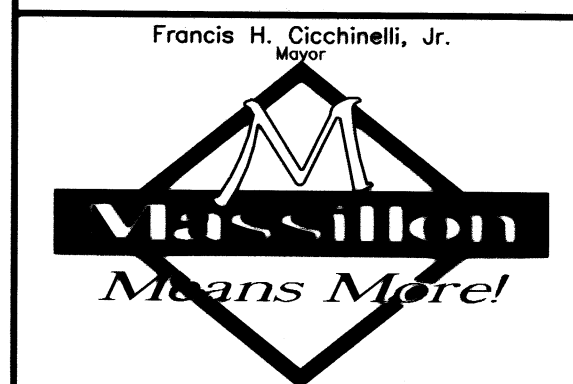


HORIZONTAL
SCALE IN FEET

DRAWN BY: FPW
CHECKED BY: SDH
DATE: Jan. 2005
DATE: Jan. 2005

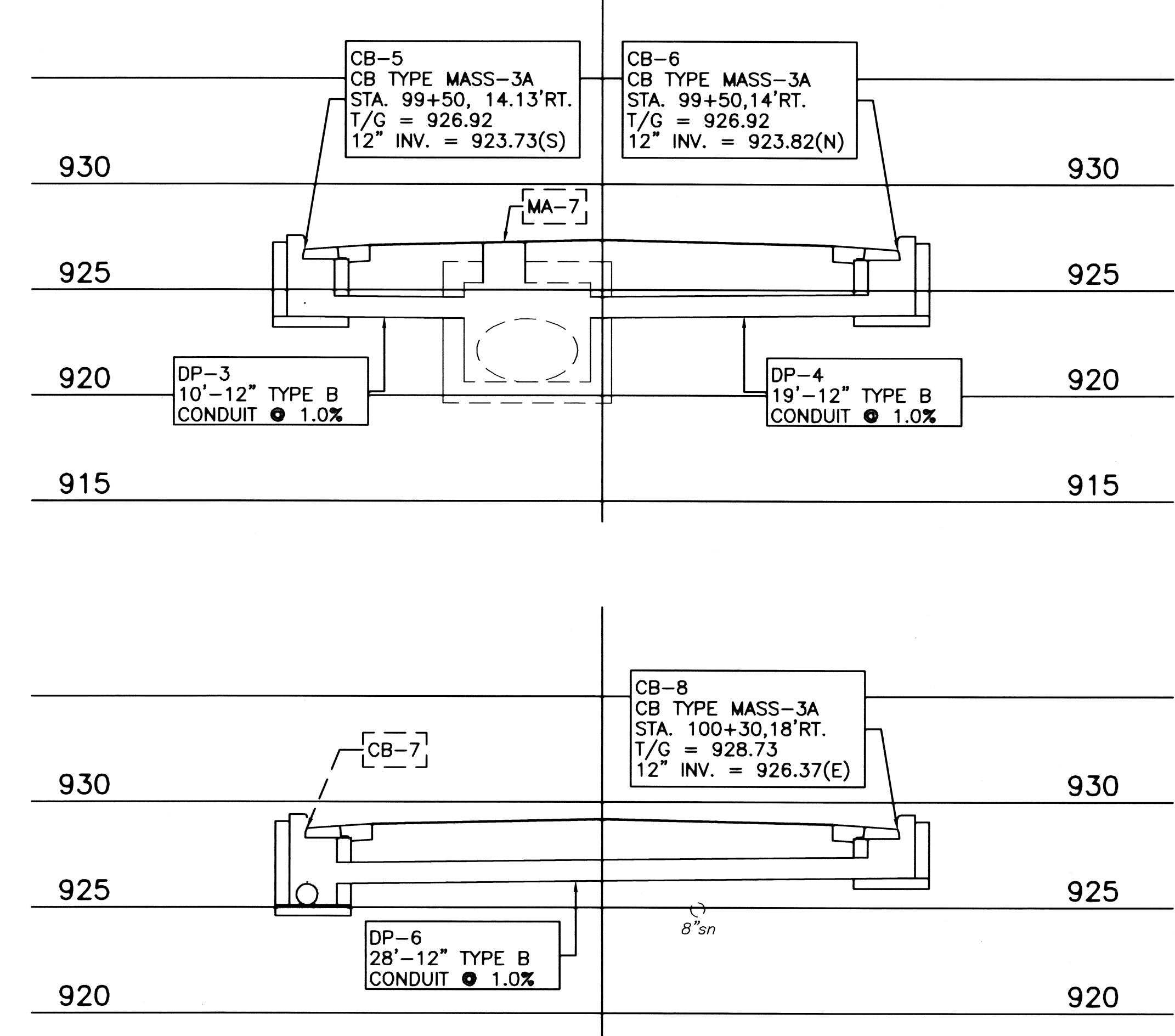
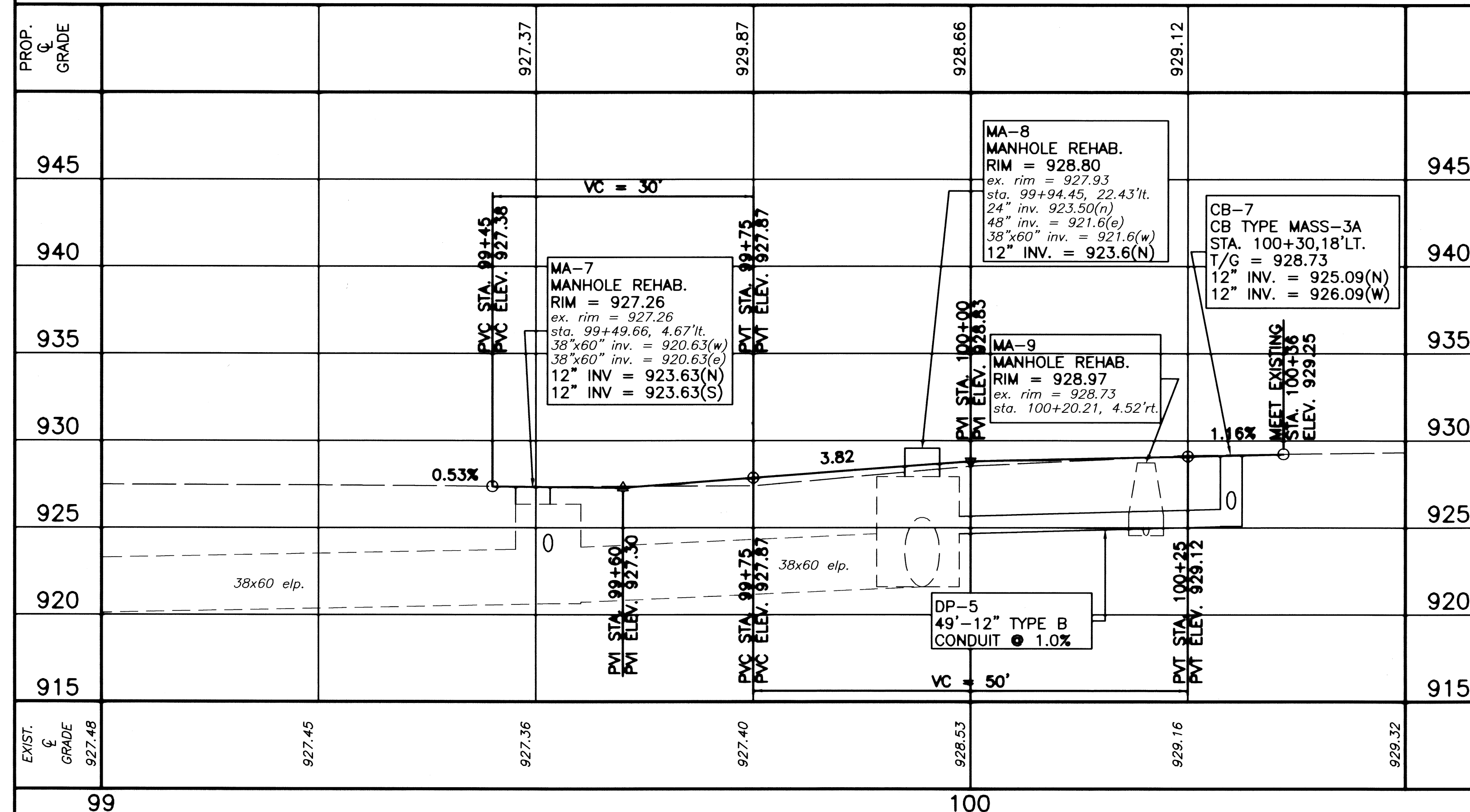
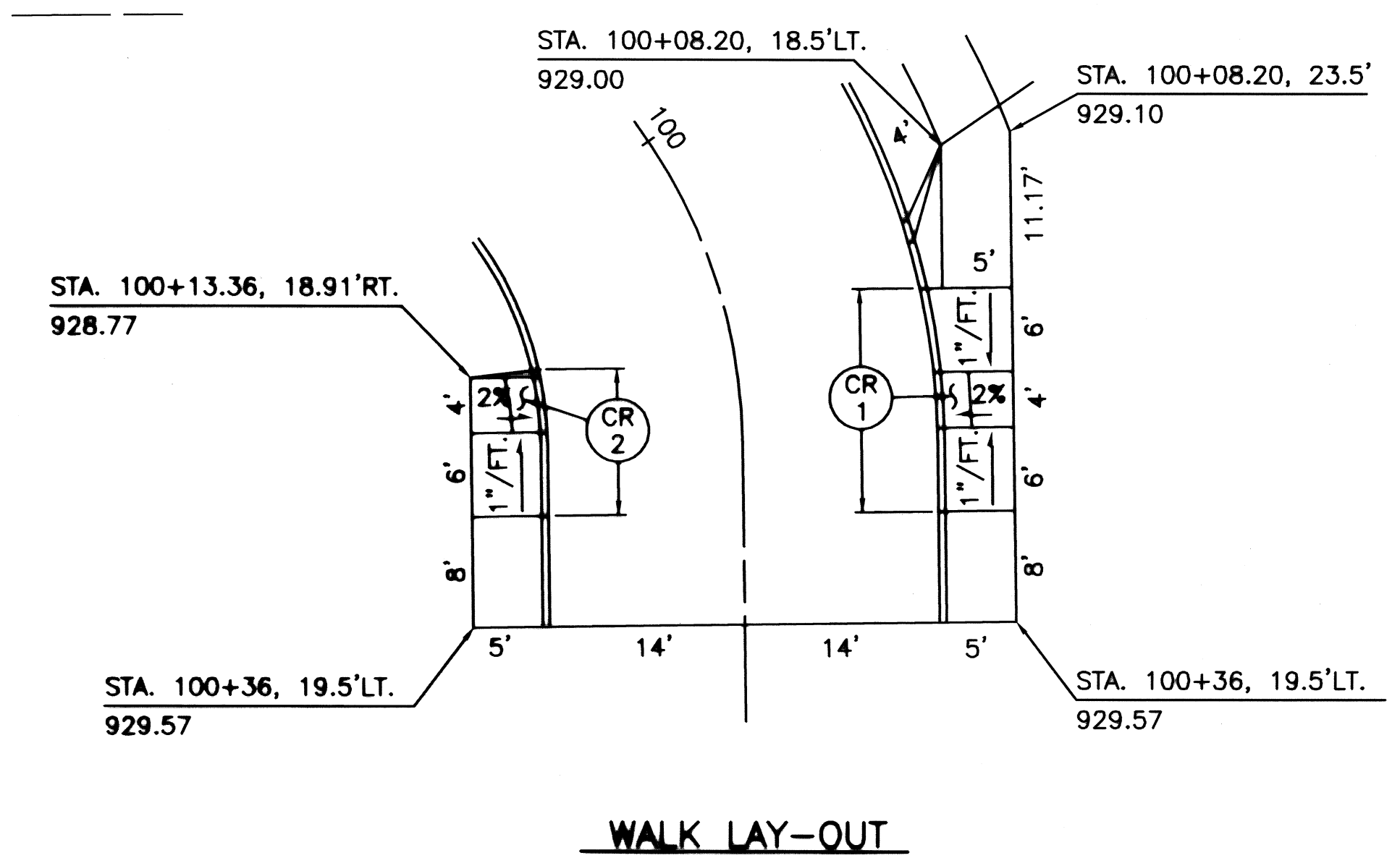
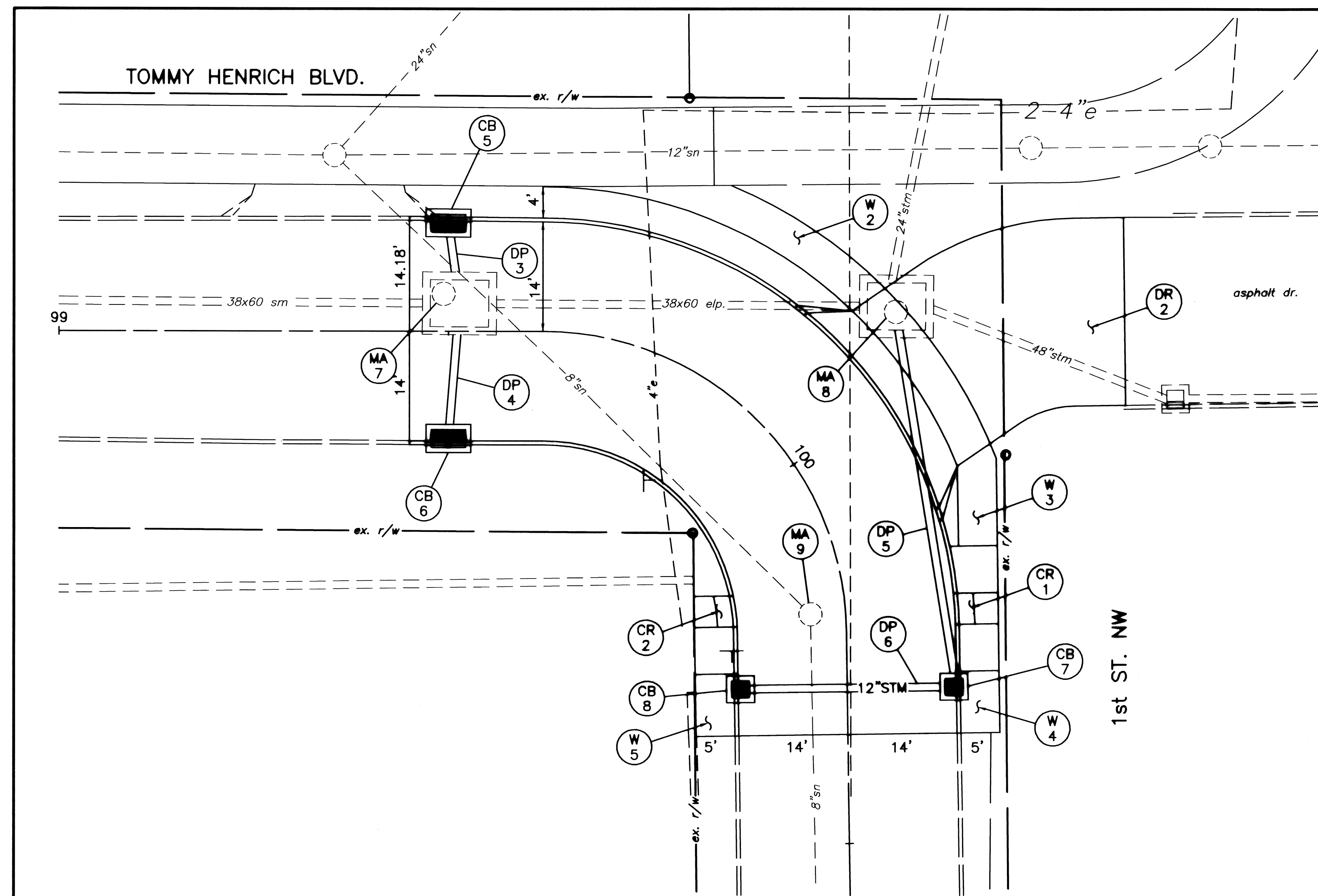
Lincoln Center Phase III Part C

Walk Plan and Profile Sta. 11+00 to Sta. 15+00
City of Massillon
Stark County, Ohio



REVISIONS:	
DATE	DESCRIPTION

FILE NAME: 05GM0112.DWG
ACCOUNT NUMBER: 05GM01



Lincoln Center Phase III Phase C

Tommy Henrich and 1st St. Path Plan and Profile Sta. 99+00 to Sta. 100+50

City of Massillon
Stark County, Ohio

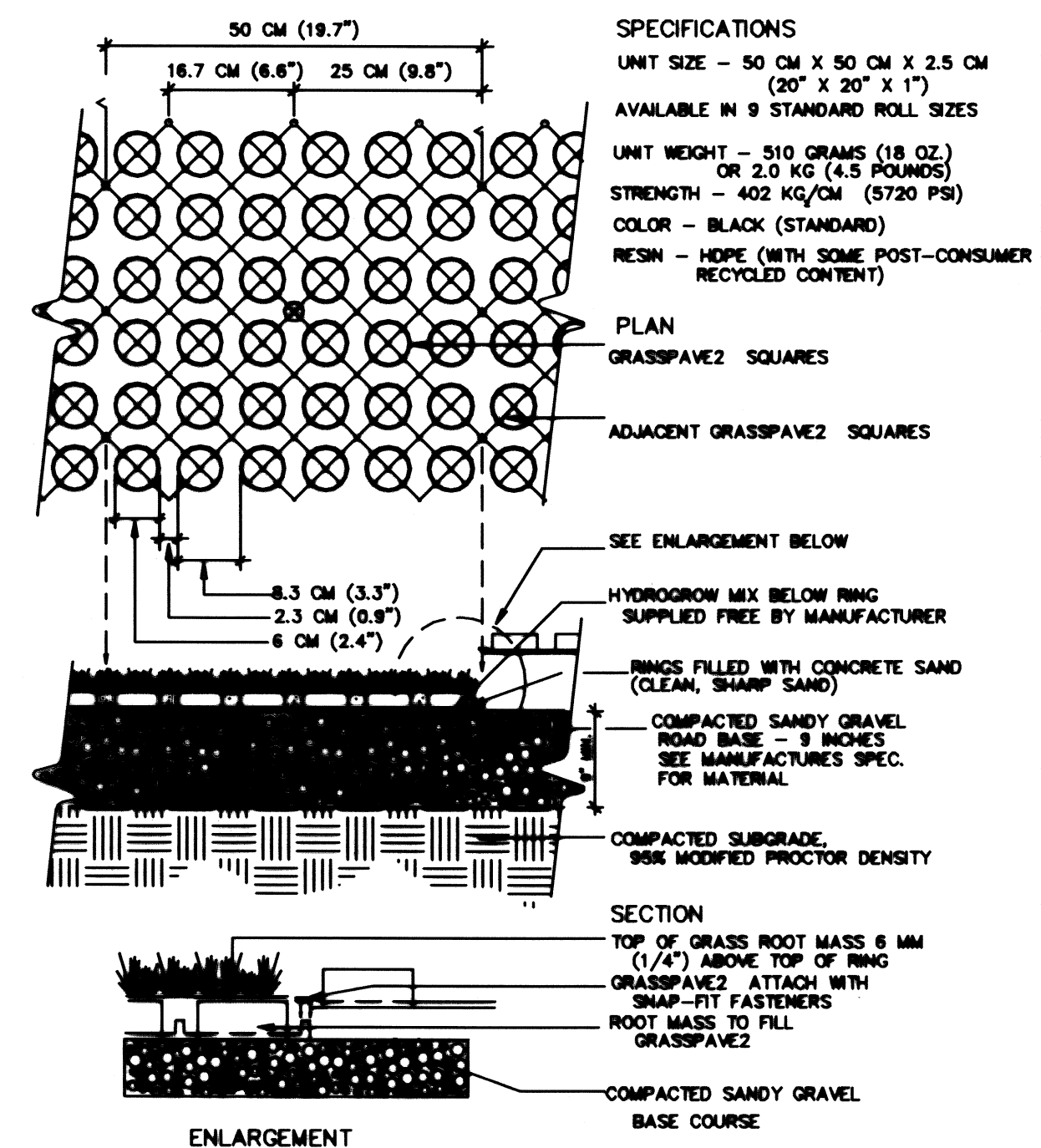
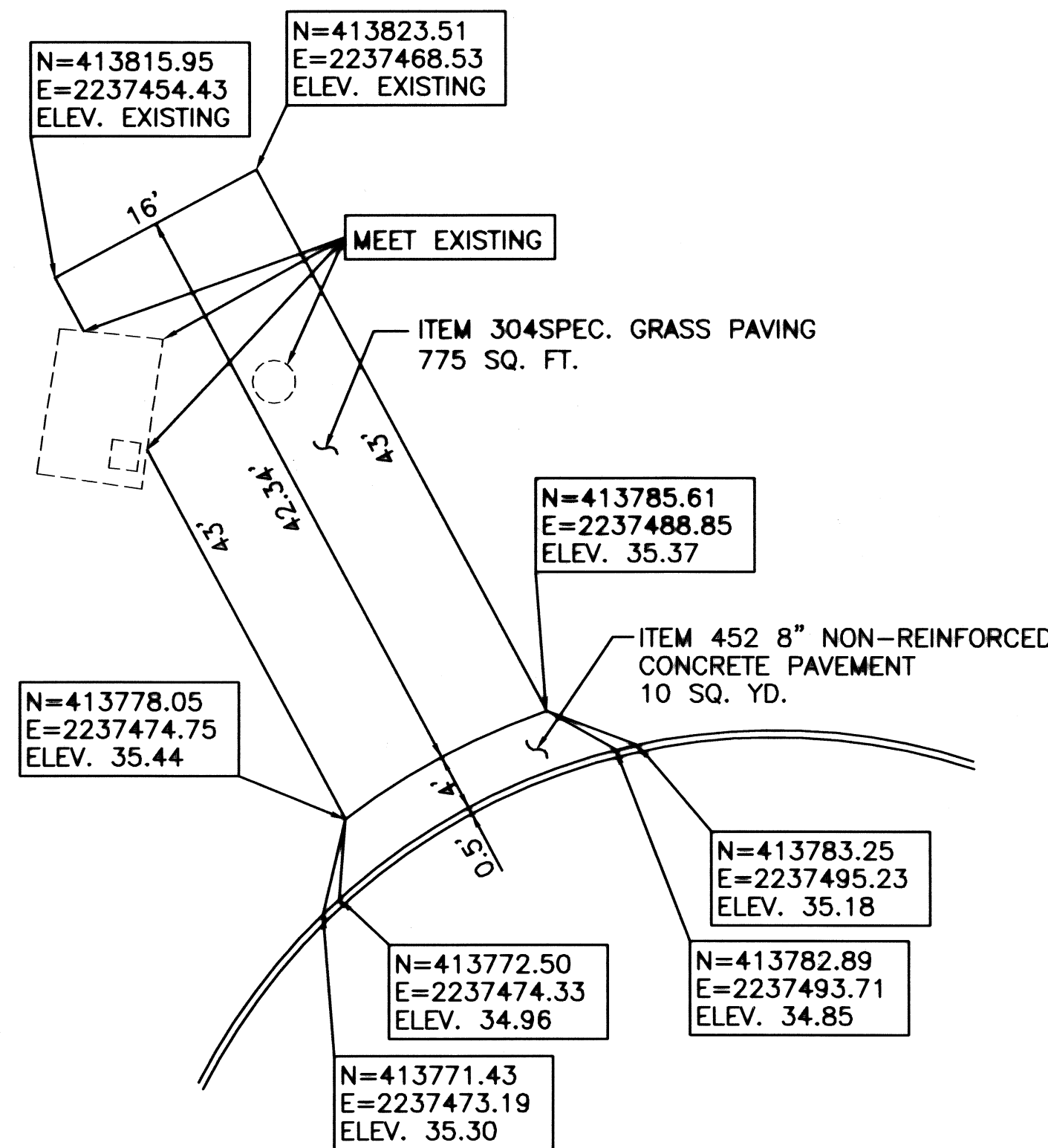
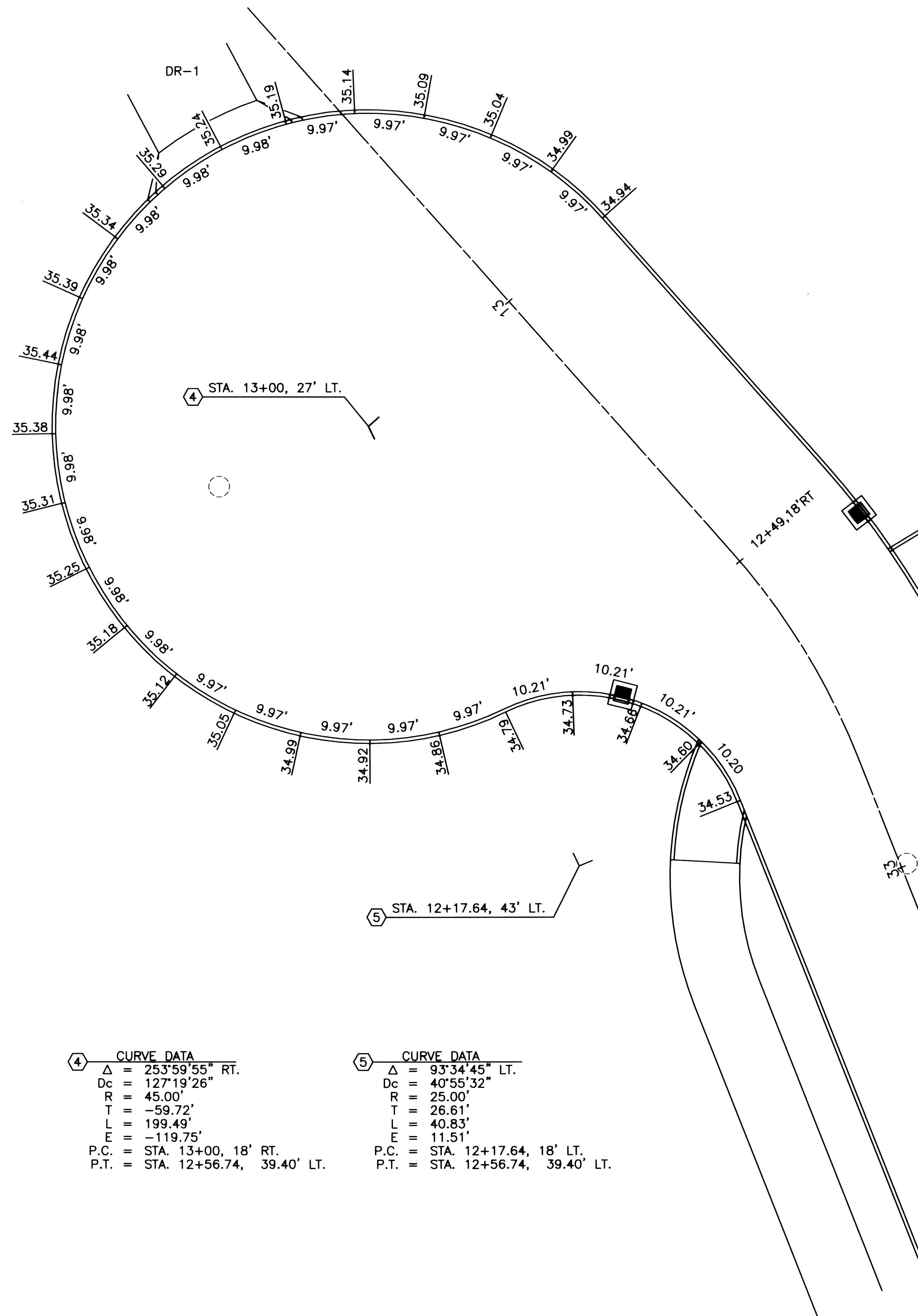
Francis H. Cicchinelli, Jr.
Professional Engineer
No. 10400

REVISIONS:	
DATE	DESCRIPTION

FILE NAME: 05GM0113.DWG

ACCOUNT NUMBER: 05GM01

13 / 15

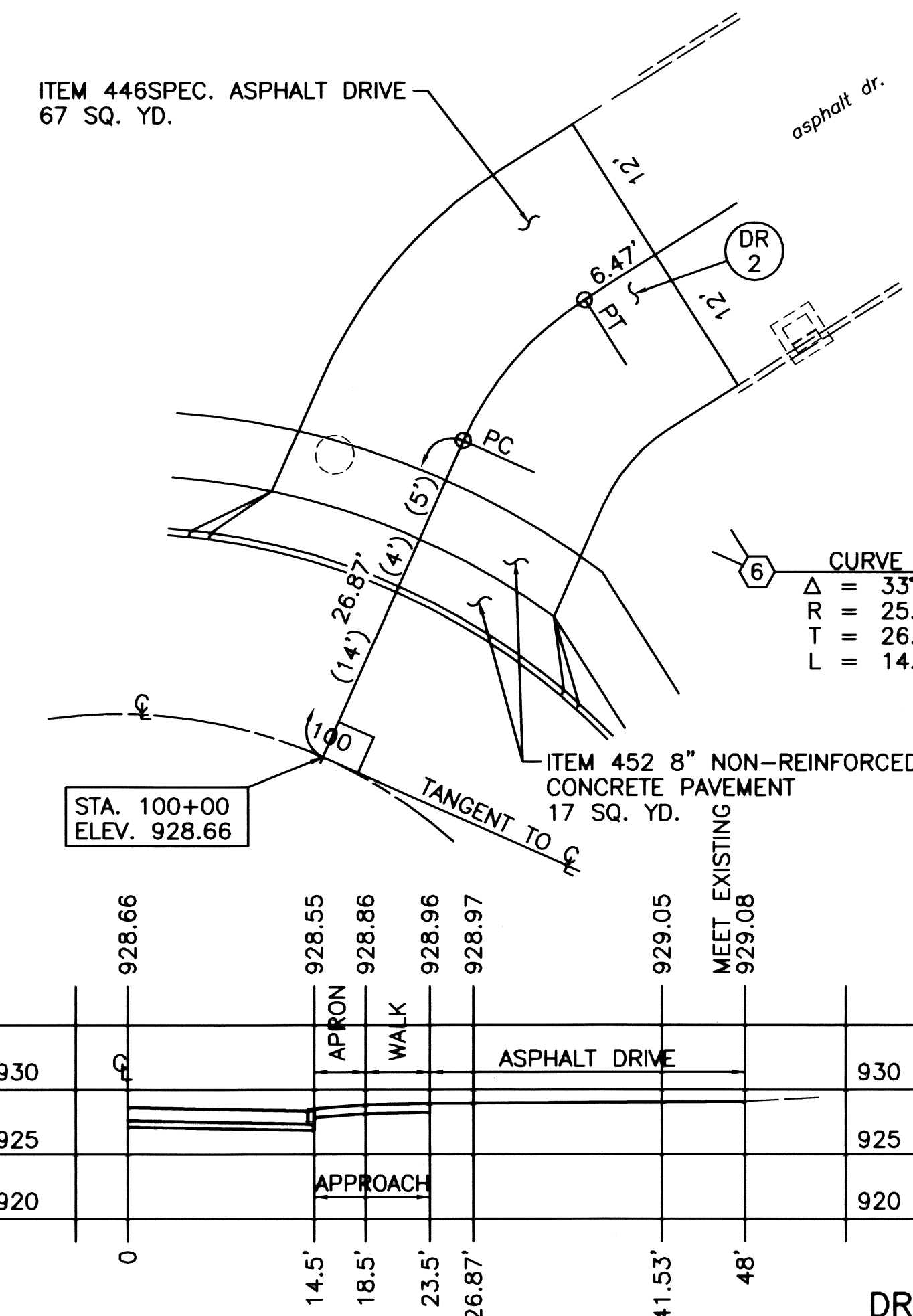


ITEM 304SPEC GRASS PAVING

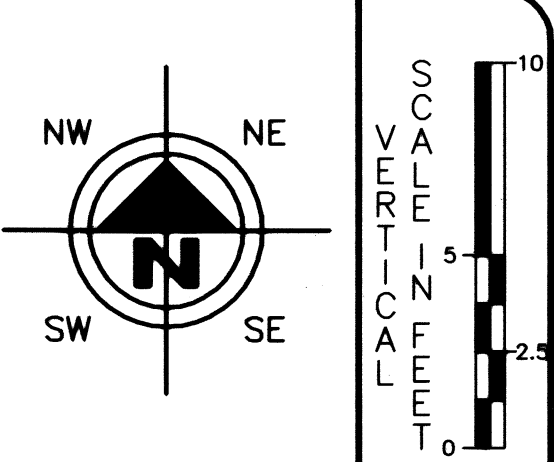
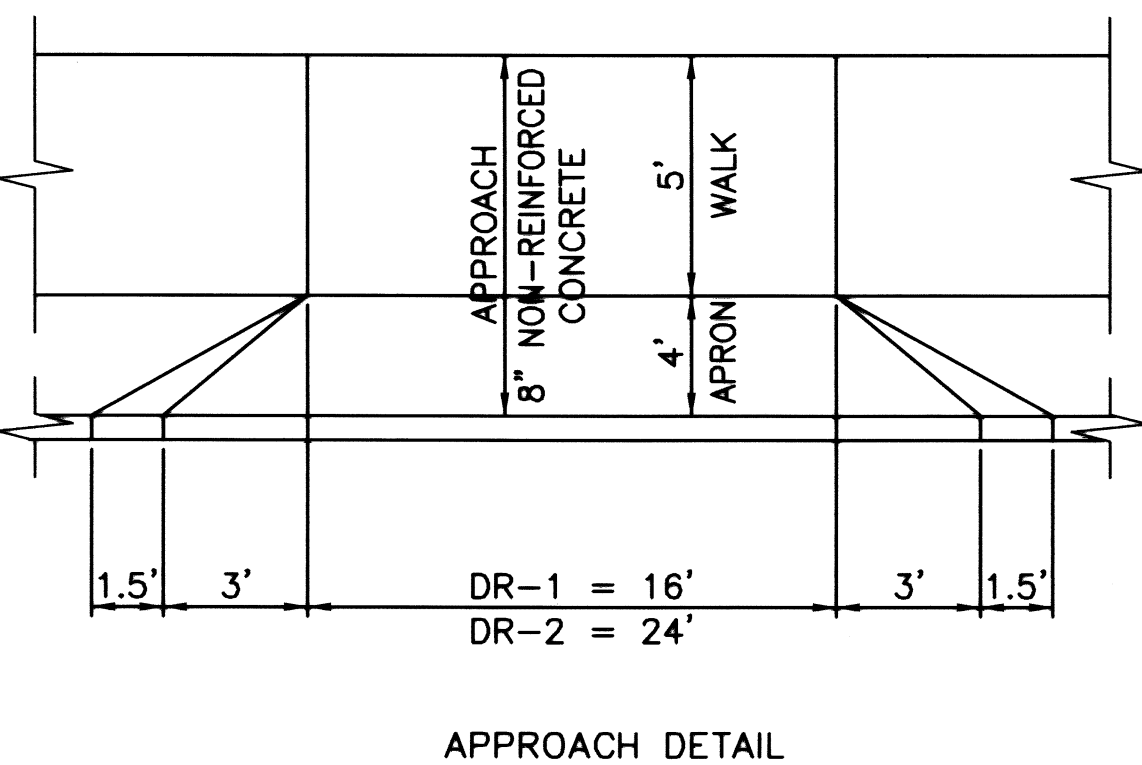
NOT TO SCALE
Invincible
Structures, Inc.
SPEC.DWG

1600 Jackson St., Ste. 310
COLUMBIA, OHIO 43002
800-233-1840 OR 303-233-8383
FAX: 800-233-1822 OR
303-233-8882
www.invinciblestructures.com
rev. 08/04
OR APPROVED EQUAL

DR-1



DR-2



HORIZONTAL
SCALE IN FEET

DRAWN BY: FPW
CHECKED BY: SDH

DATE: May 27, 2003
DATE: June 11, 2003

Lincoln Way West Rehabilitation
Miscellaneous Details
City of Massillon
Stark County, Ohio

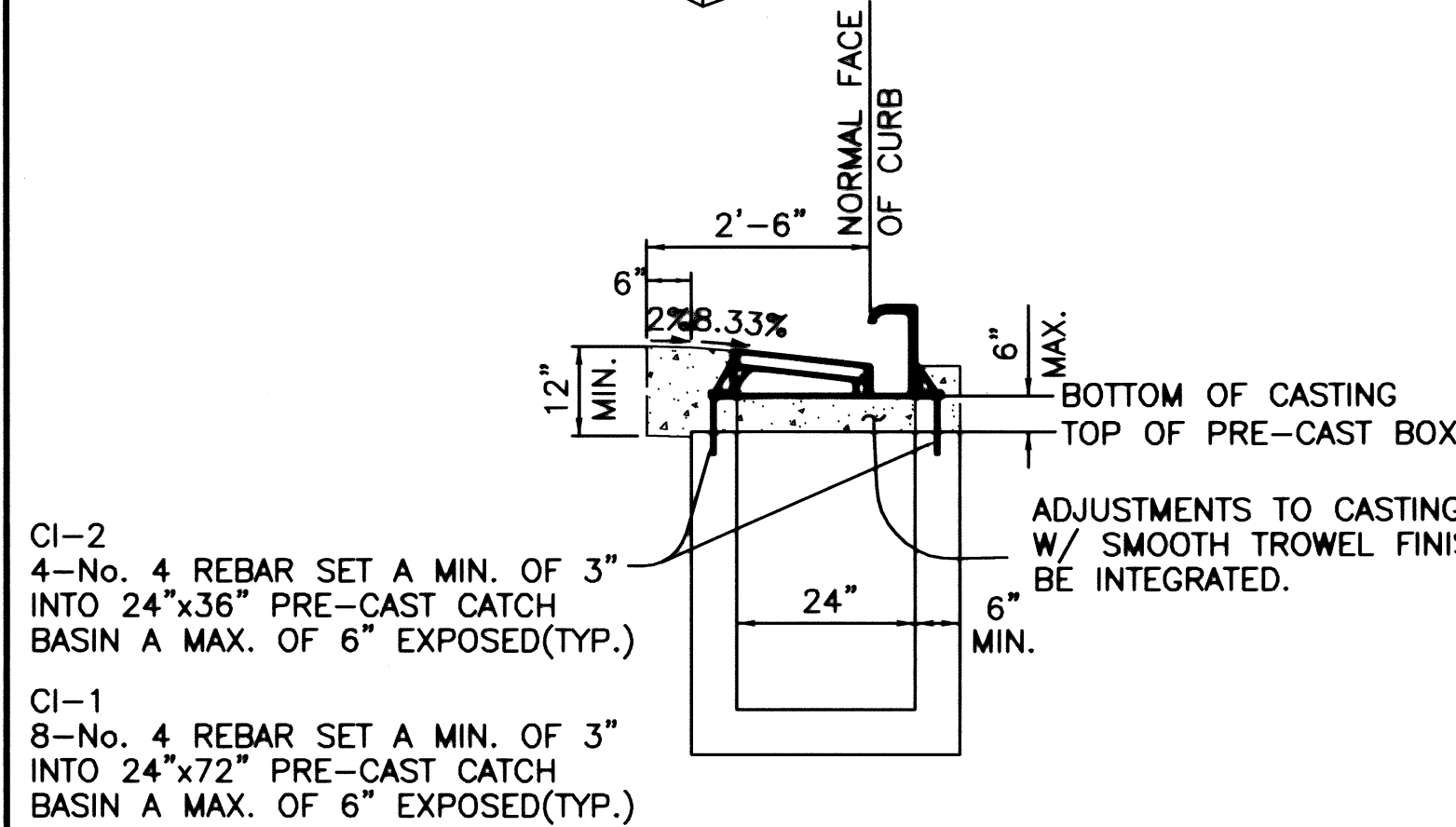


REVISIONS:

DATE	DESCRIPTION

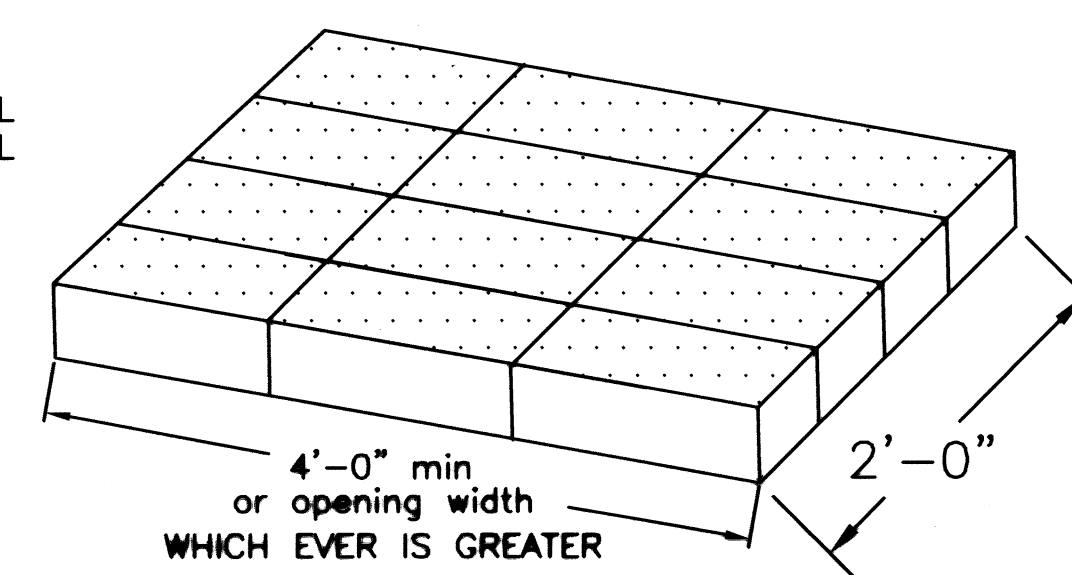
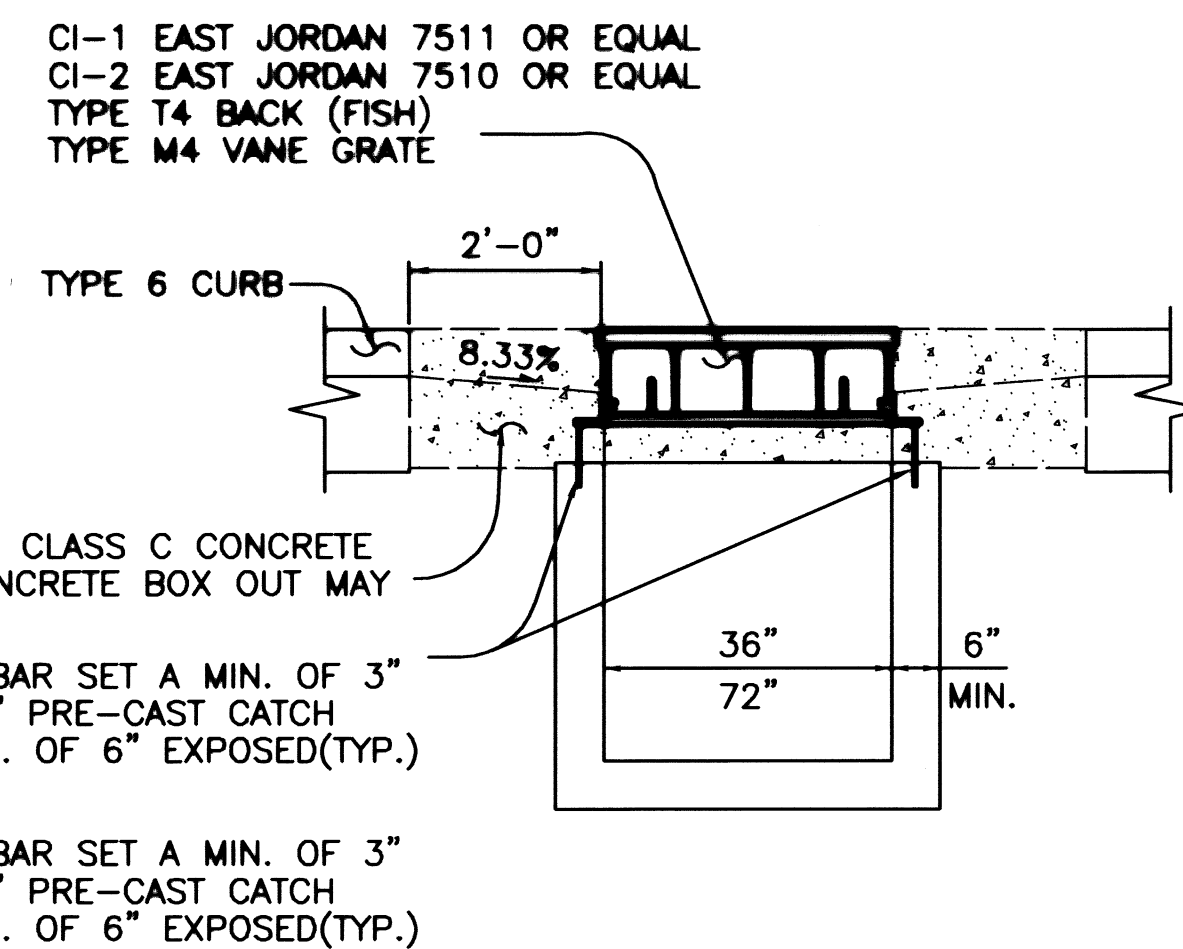
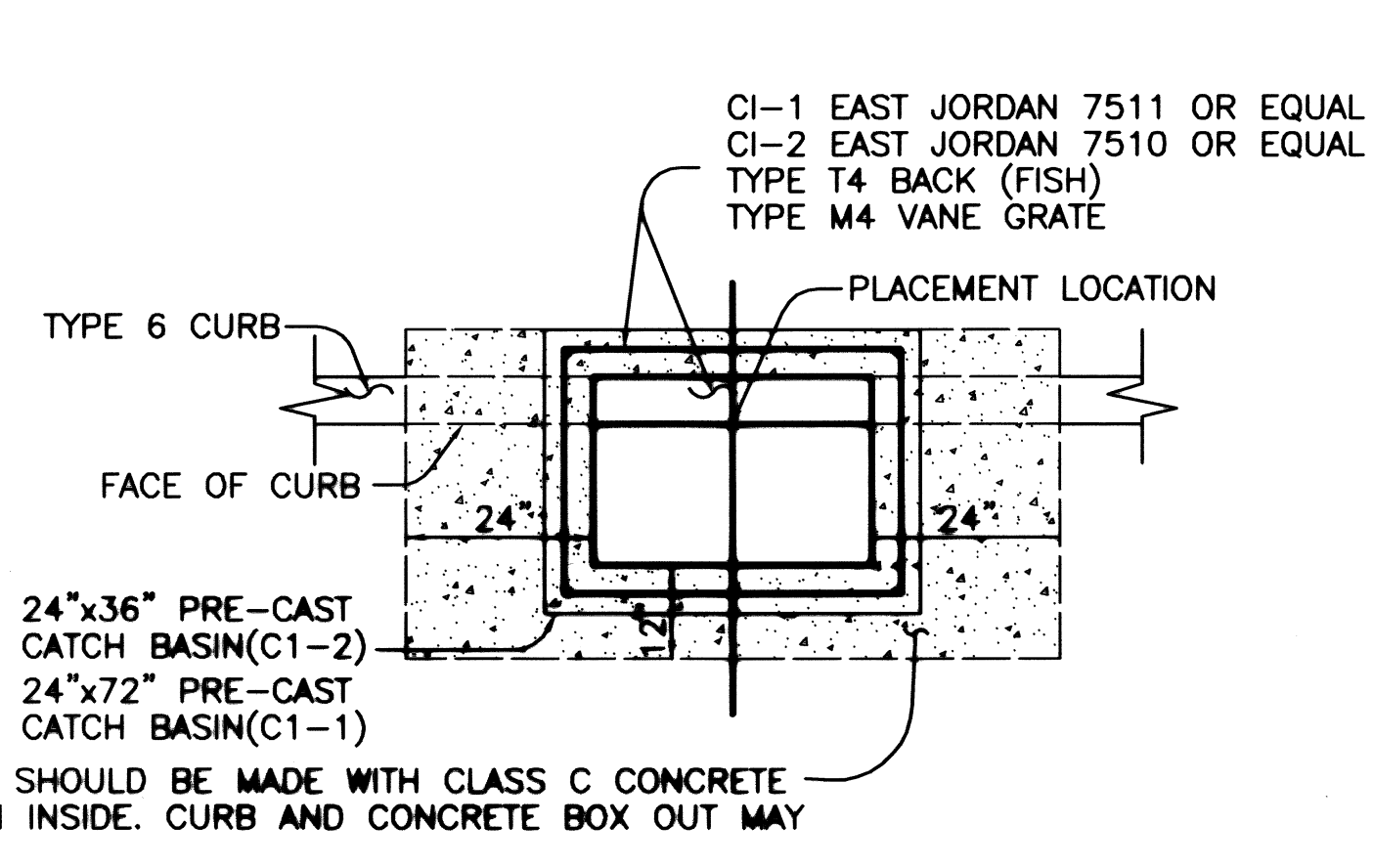
ELECTRONIC FILE NAME:
05GM0114.DWG

ACCOUNT NUMBER
05GM01



NOTE

CI-1 WILL REQUIRE A S6x12.5x3'±1" PLACED AS DIERDITED IN FIELD

PAVERS TO MEET ASTM C 902 CLASS SX
OR APPROVED EQUAL

NOTES

SURFACE TEXTURE: Texture of concrete surfaces shall be obtained by coarse brooming transverse to the ramp slopes and shall be rougher than the adjacent walk

TRUNCATED DOME: Install detectable warnings (truncated domes) for a distance of 24" from the back of curb for the entire width of the ramp opening.

Pavers will meet ASTM C 902 Class SX, Type 1, or C 936, or C 1272 Type R.

ACCEPTABLE MANUFACTURERS AND PRODUCTS ARE AS FOLLOWS:

- | | | | |
|-----|--|-----|--|
| 1.) | Whitacre-Greer Fireproofing Company
1400 South Mahoning Ave.
Alliance, OH 44601
1-800-WG PAVER
ADA Paver, 4"x8"x2-1/4" Clear Red, Rustic, #30 | 3.) | Endicott Clay Products
P.O. Box 17
Fairbury, NE 68352
(402) 729-5804
Handicap Detectable Warning Paver,
4"x8"x2-1/4", Red Blend |
| 2.) | Hanover Architectural Products
240 Bender Road
Hanover, PA 17331
(717) 637-0500
Detectable Warning Paver, 12"x12"x2" or
24"x24"x2", Red or Quarry Red | | |

Pavers will be laid on top of a 4" unreinforced concrete base. Setting bed and joints to be mortared in accordance with manufacturer's instruction, or with a maximum 1/2" thick bed of latex modified cement mortar. Mortar joints to a width not greater than 5/32" and not less than 1/16". Pavers shall not be directly touching each other unless they have spacing bars.

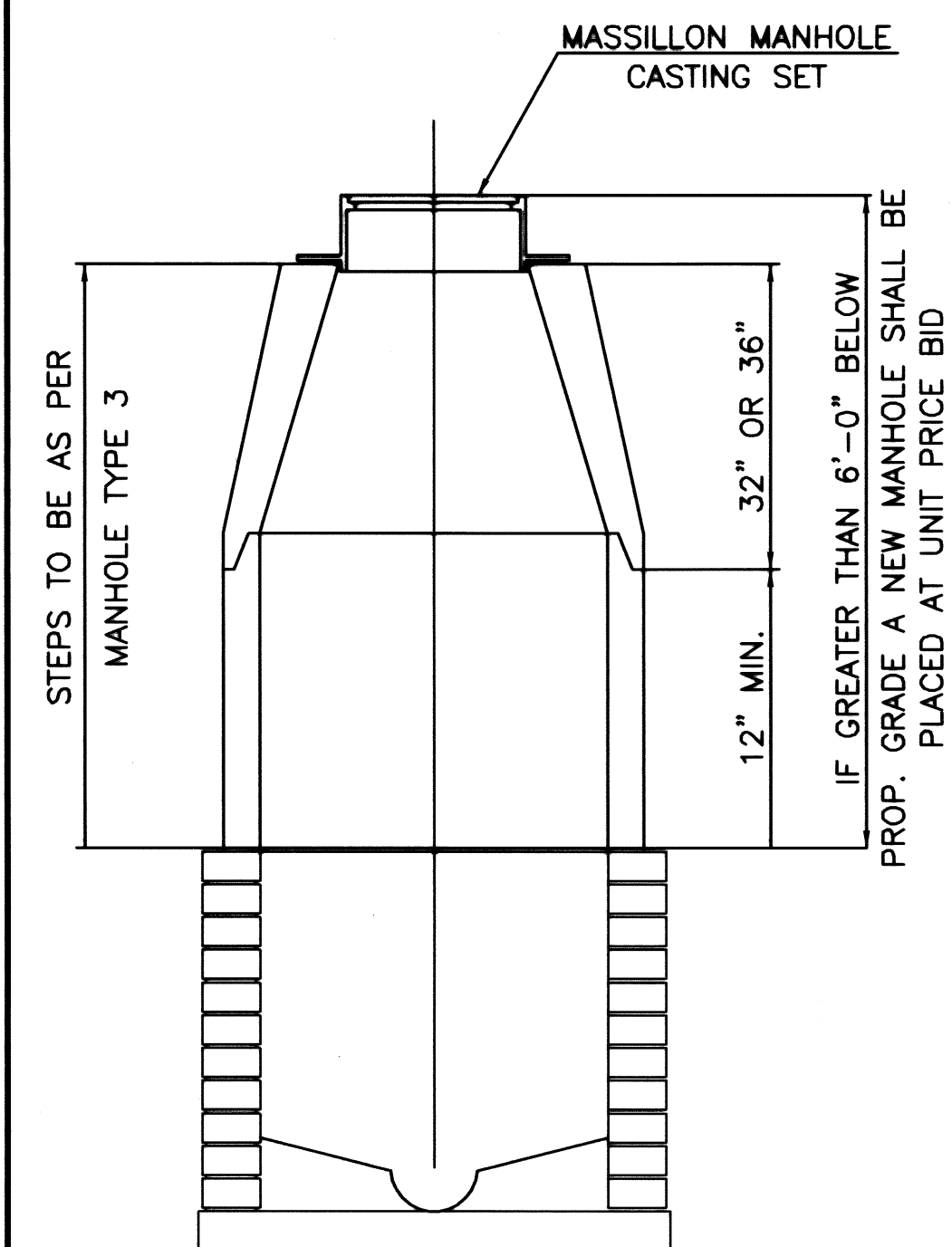
Mortared joints are to be flush with top surface and struck so as to give a smooth surface. Pavers shall be laid such that joints are level with adjoining joints so as to provide a smooth transition from brick to brick and brick to concrete surface.

The surface of any two adjacent units should not differ by more than 1/8" in height. Bricks shall be placed in a running bond pattern. Face of all brick shall be clean of cement and protected so as to avoid chipping during construction.

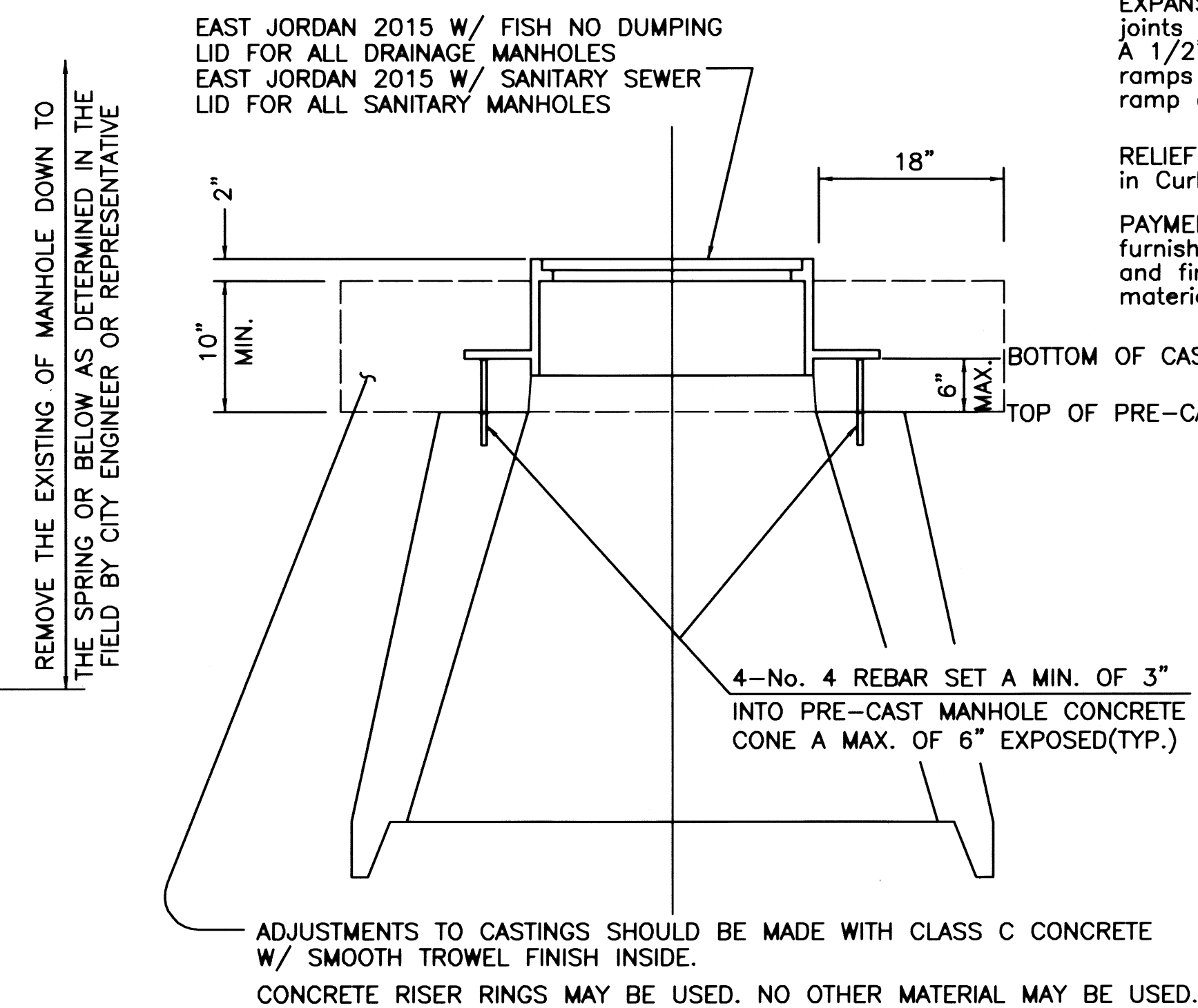
EXPANSION JOINTS: shall be provided in the curb ramp as extensions of walk joints and consistent with item 608.03 requirements for a new concrete walk. A 1/2" Item 705.03 expansion joint filler shall be provided around the edge of ramps built in existing concrete walk. Lines shown on this drawing indicate the ramp edge and slope changes and are not necessarily joint lines.

RELIEF JOINTS: must be provide at all points of continuous slope changes in Curb Type A and Type C.

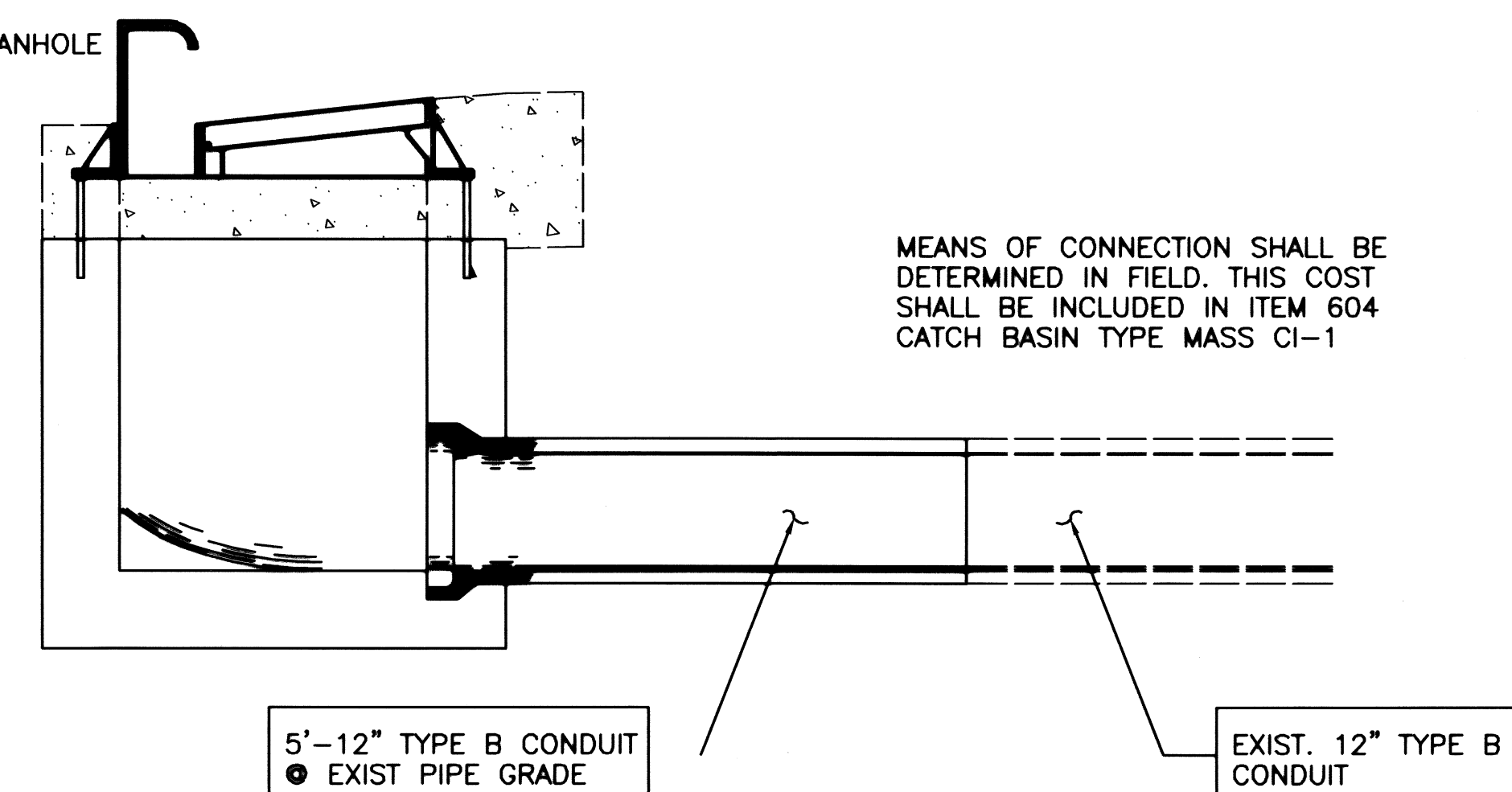
PAYMENT: Item 608, CURB RAMP AND WALK RAMP, EACH, shall include the cost of furnishing and installing all materials (including truncated domes,) grading, forming and finishing of the curb and walk of the curb ramp and removal of any existing material to perform such work



Massillon Manhole Rehabilitation



Massillon Manhole Casting Set



CB-1 AND CB-2

DRAWN BY: FPW	CHECKED BY: SDH
DATE: Jan., 2005	DATE: Jan., 2004

Lincoln Center Phase III Part C
Miscellaneous Details
City of Massillon
Stark County, Ohio

Francis H. Cicchinelli, Jr.

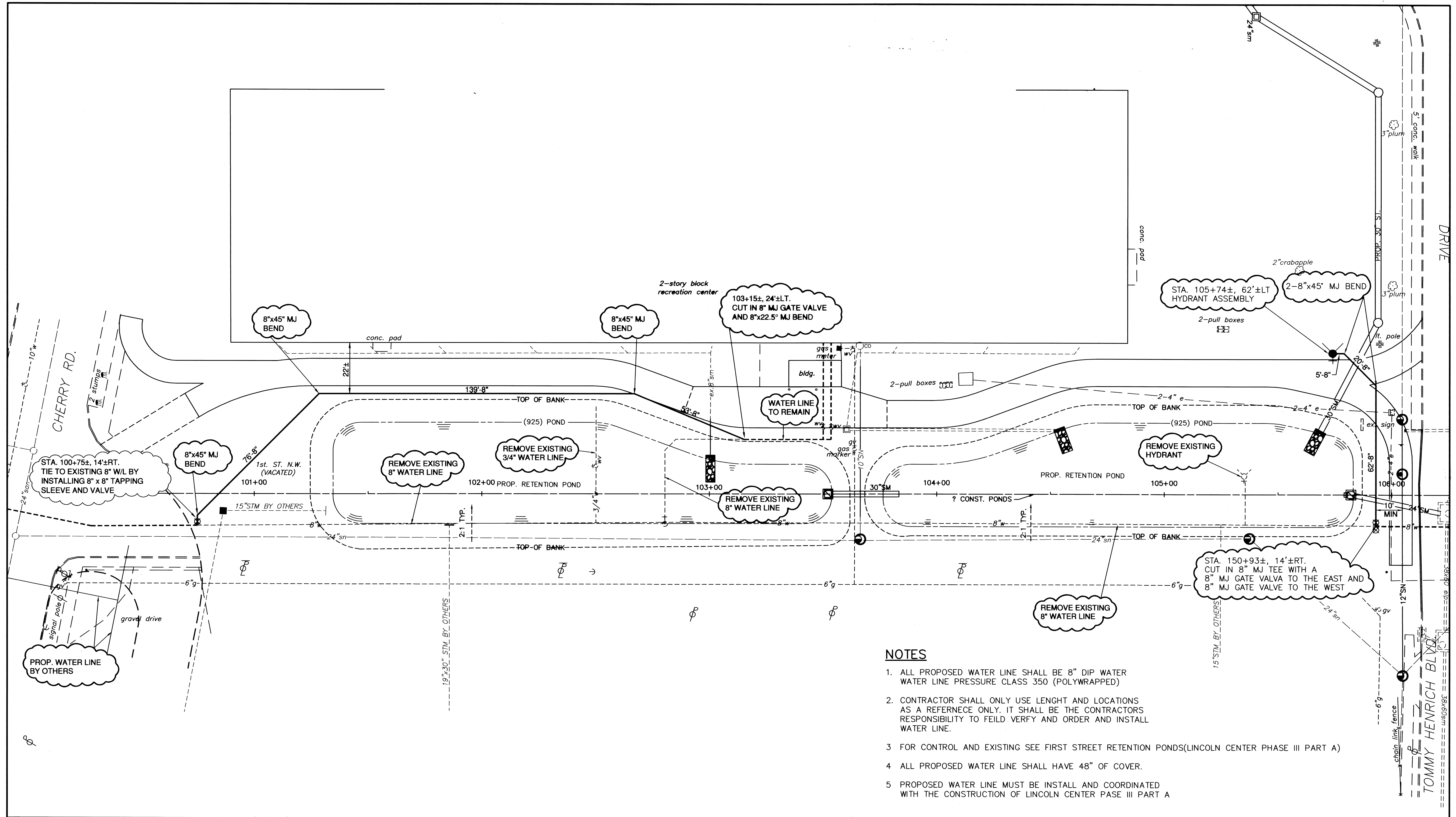


REVISIONS:

[illegible]

FILE NAME:
05GM0115.DWG

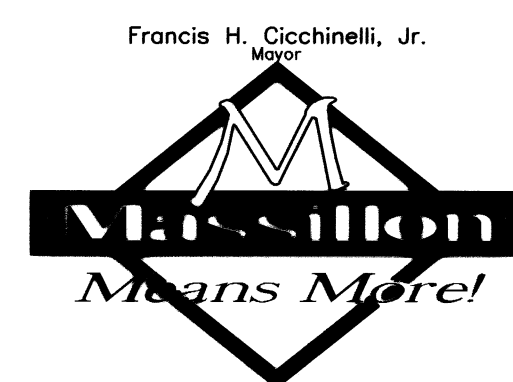
ACCOUNT NUMBER
05GM01



NOTES

- ALL PROPOSED WATER LINE SHALL BE 8" DIP WATER WATER LINE PRESSURE CLASS 350 (POLYWRAPPED)
- CONTRACTOR SHALL ONLY USE LENGHT AND LOCATIONS AS A REFERNECE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FEILD VERFY AND ORDER AND INSTALL WATER LINE.
- FOR CONTROL AND EXISTING SEE FIRST STREET RETENTION PONDS(LINCOLN CENTER PHASE III PART A)
- ALL PROPOSED WATER LINE SHALL HAVE 48" OF COVER.
- PROPOSED WATER LINE MUST BE INSTALL AND COORDINATED WITH THE CONSTRUCTION OF LINCOLN CENTER PASE III PART A

REVISIONS:	
DATE	DESCRIPTION



Lincoln Center Phase III Phase A Alternate A

Water Line Relocation
City of Massillon
Stark County, Ohio

FILE NAME:
05GM0111.DWG

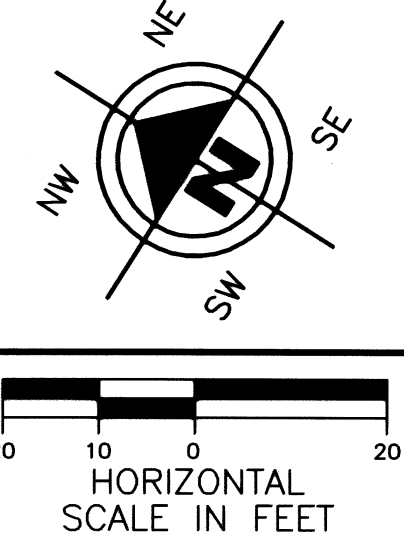
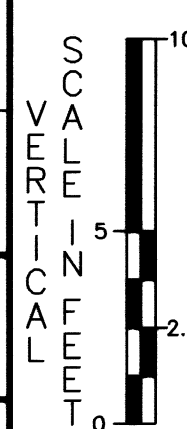
ACCOUNT NUMBER
05GM01

DRAWN BY:
FPW

CHECKED BY:
SDH

DATE:
Jan. 2005

DATE:
Jan. 2005



1

1

CITY OF MASSILLON
FIRST STREET RETENTION PONDS
STARK COUNTY, OHIO

PROJECT DESCRIPTION

CONSTRUCTION OF DETENTION BASINS AND
BIKEWAY IN VACATED SECTION OF 1st STREET NW.

CONVENTIONAL SIGNS

RIGHT OF WAY •• EXISTING: ———, PROPOSED: ———
COUNTY LINE ••• ———
TOWNSHIP LINE •• ———
CORPORATION LINE ———
FENCE LINE ••• EXISTING: —x—x—, PROPOSED: —x—x—
GUARDRAIL ••• EXISTING: —o—o—, PROPOSED: —●—●—
MANHOLES ••• EXISTING: ○, PROPOSED: ●, ADJUSTED: ●
CATCH BASINS •• EXISTING: □, PROPOSED: ■, ADJUSTED: ■
SIGNS ••••• 1-POST: †, 2-POST: ‡, 3-POST: ‡
EXISTING POLES •• POWER: ⚡, TELEPHONE ⚡, LIGHT ⚡, SPAN ⚡
PROPOSED POLES • POWER: ⚡, TELEPHONE ⚡, LIGHT ⚡, SPAN ⚡
EXIST. UTILITIES • VALVE: ⚙, HYDRANT: ⚡, METERS: ⚡ / ⚡, GUY: ⚡

UNDERGROUND UTILITIES

TWO WORKING DAYS
BEFORE YOU DIG

CALL 1-800-362-2764 (TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

TWO WORKING DAYS
BEFORE YOU DIG

CALL 1-800-925-0988 (TOLL FREE)

OIL & GAS PRODUCERS UNDERGROUND
PROTECTION SERVICE

PERMIT TO INSTALL

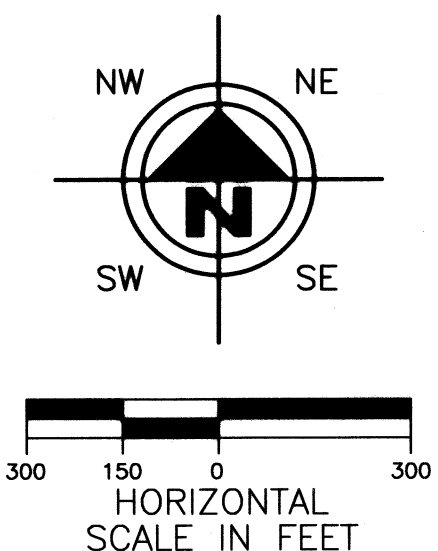
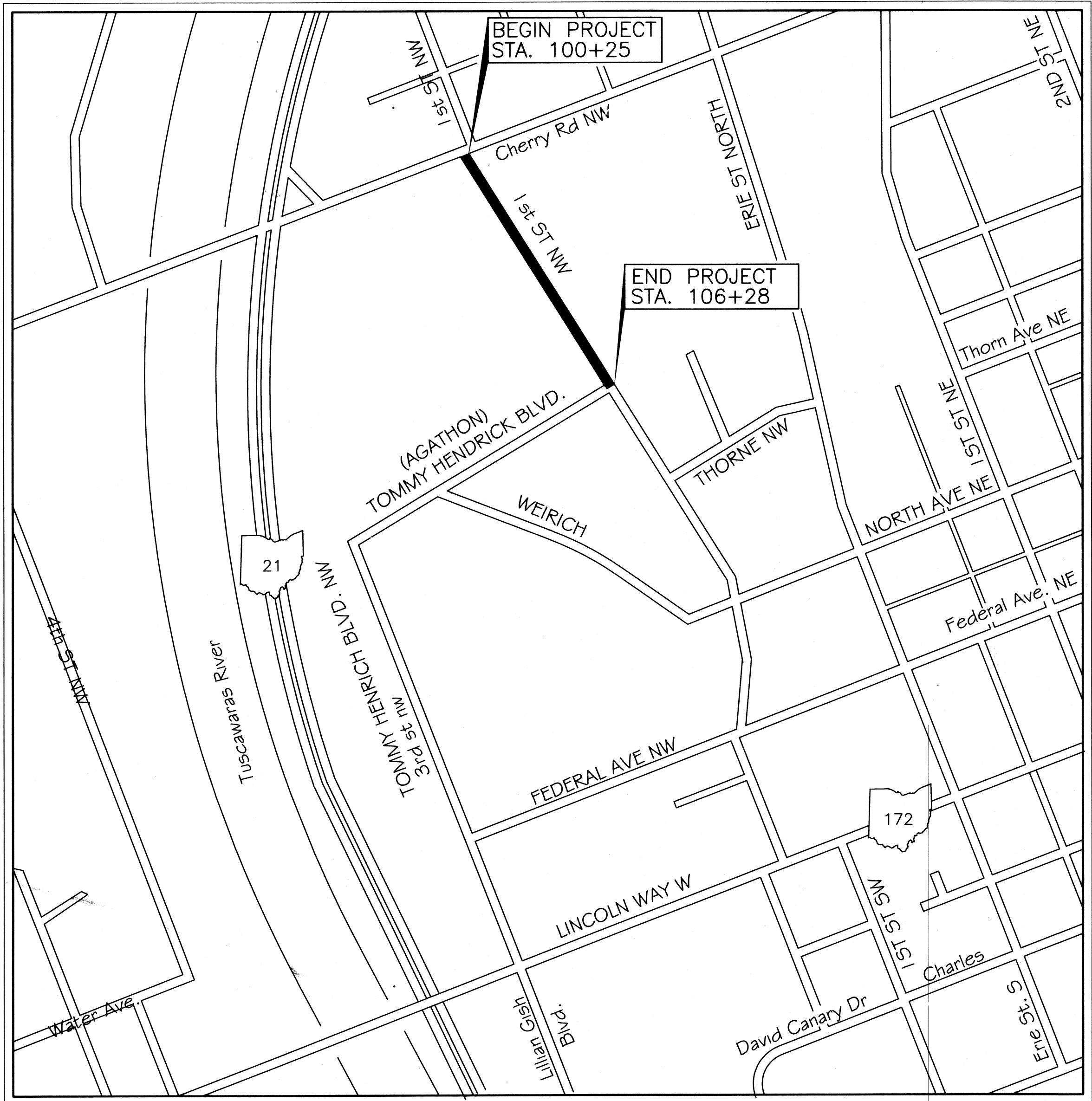
SANITARY SEWER PERMIT TO INSTALL (P.T.I.) HAS BEEN
RECEIVED FROM THE OHIO ENVIROMENTAL PROTECTION AGENCY
THIS _____ DAY OF _____, 20____.

(Owner)
CITY OF MASSILLON
Engineering Department
151 Lincoln Way East
Massillon, Ohio 44646
Phone (330) 830-1722
Fax (330) 830-1786

Plan Prepared By:
McCOY ASSOCIATES, INC.
CONSULTING ENGINEERS
367 GHENT RD.
AKRON, OH. 44333
(330) 668-4727



Mitchell A. McCoy 1/6/05
MITCHELL A. MCCOY, P.E. DATE



PORTION TO BE IMPROVED
STREETS ———

Francis H. Cicchinelli, Jr.
Mayor



INDEX OF SHEETS:

TITLE SHEET ••••• 1
TYPICAL SECTION ••••• 2
GENERAL NOTES AND SUMMARY ••••• 3-7
STORM WATER POLLUTION PREVENTION PLAN NOTES • 8
SITE PLAN ••••• 9
PLAN AND PROFILE: RETENTION PONDS ••••• 10-11
PLAN AND PROFILE: BIKE PATH ••••• 12-13

ODOT STANDARD CONSTRUCTION DRAWINGS		SUPPLEMENTAL SPECIFICATIONS	
BP-5.1	7/28/00	832	4/17/04
CB-1.2	7/19/02	833	2/12/03
HW-2.2	7/19/02	908	4/18/03
MH-1.1	7/19/02		
MH-1.2	7/19/02		
DM-1.4	7-19-02		

APPROVALS

Alan W. Climer 1/06/05
DIRECTOR OF PUBLIC SAFETY AND SERVICE ALAN W. CLIMER DATE

CITY ENGINEER STEVEN D. HAMIT, P.E. DATE

OFFICIALS

FRANCIS H. CICHINELLI, Jr. ••••• MAYOR
ALAN W. CLIMER ••••• DIRECTOR OF PUBLIC SAFETY AND SERVICE
STEVEN D. HAMIT, P.E. ••••• CITY ENGINEER
JOSEPH R. ULRICH ••••• WASTE WATER TREATMENT PLANT MANAGER
PERICLES G. STERGIOS ••••• LAW DIRECTOR/PROSECUTOR
BILL HAMIT ••••• AUDITOR
PAUL LAMBERT ••••• TREASURER
MARY BETH BAILEY ••••• CLERK OF COUNCIL

COUNCIL

DENNIS D. HARWIG ••••• PRESIDENT
RONALD MANG ••••• 1st WARD
CHUCK MAIER ••••• 2nd WARD
KATHERINE CATAZARO-PERRY ••••• 3rd WARD
GLORIA A. AUTREY ••••• 4th WARD
GLENN E. GAMBER ••••• 5th WARD
TOM WEBER ••••• 6th WARD

COUNCIL AT LARGE

MIKE LOUDIANA
TIM BRYAN
PAUL MANSON

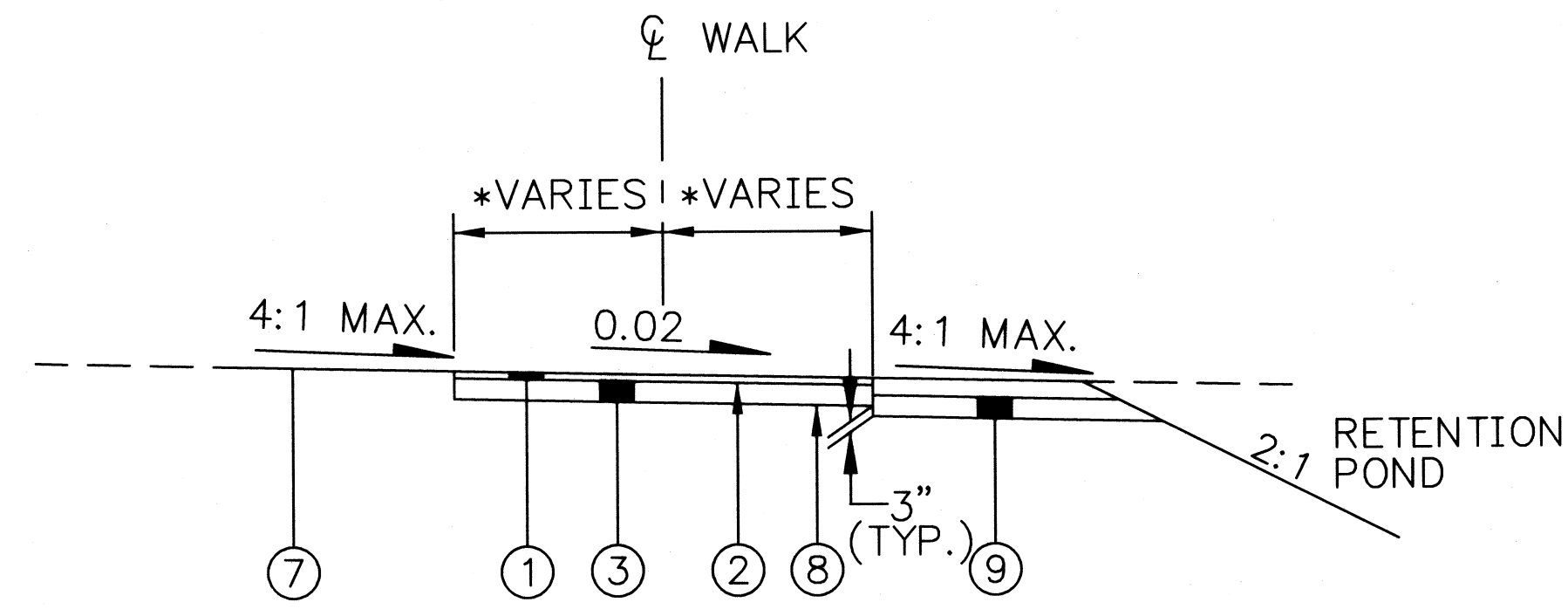
DRAWN DATE
HMD 12/04
CHECKED DATE
REG 12/04

CITY OF MASSILLON
FIRST STREET RETENTION PONDS

McCOY ASSOCIATES, INC.
CONSULTING ENGINEERS
367 GHENT RD., SUITE 1A, AKRON, OH. 44333
PH. (330) 668-4727 FAX (330) 666-0778

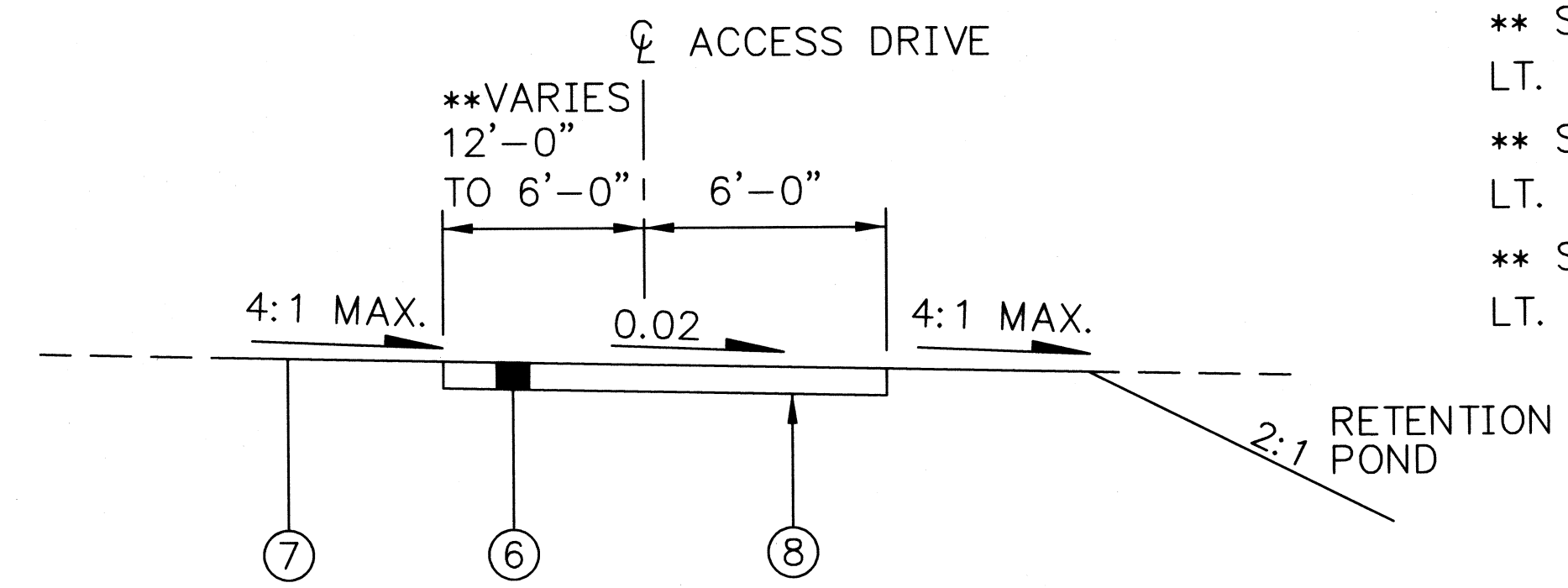
1
13

L:\Drawings\04145.dwg TYPICAL SECTIONS.dwg January 07 2005 2:01pm By:Roger



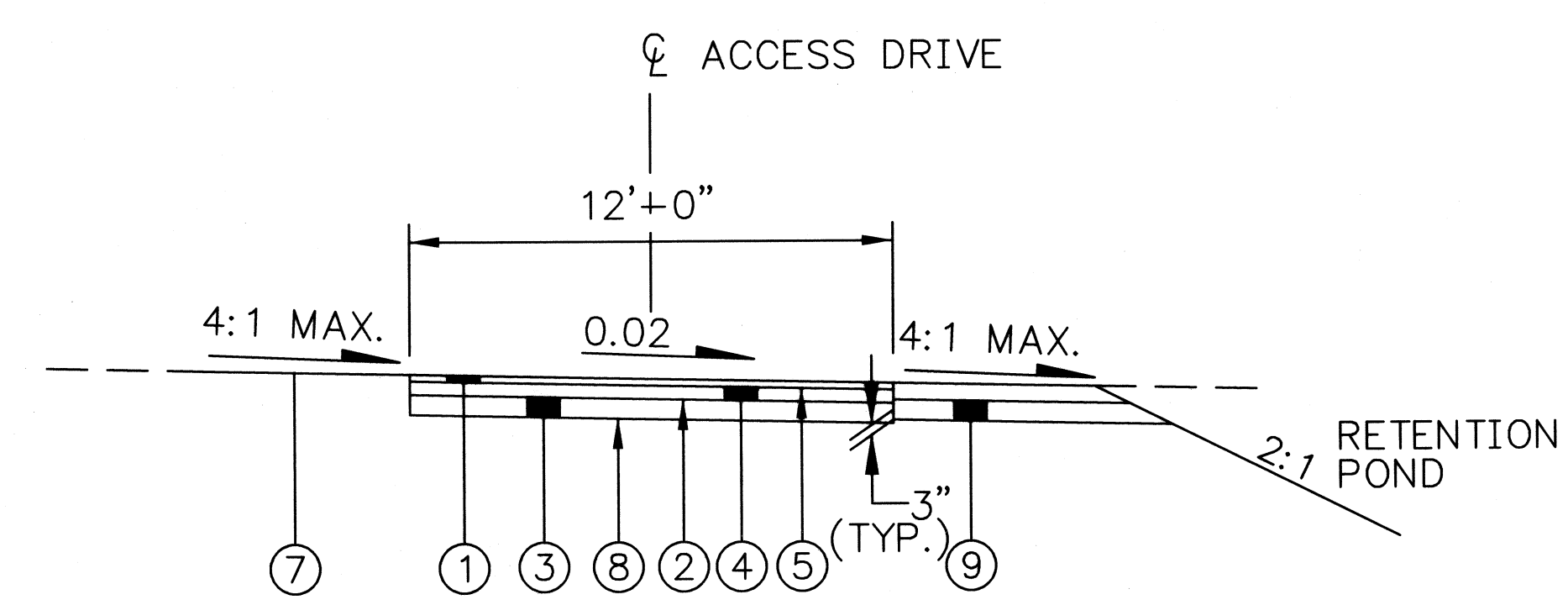
PROPOSED WALK SECTION

STA. 9+05.62, LEG A TO STA. 10+00.00, LEG A = 94.38 FT.
STA. 14+26.21, CL TO STA. 15+49.92, CL = 123.71 FT.
TOTAL = 218.09 FT.



PROPOSED ACCESS/EMERGENCY DRIVE SECTION - CONCRETE

STA. 11+68.22, CL TO STA. 12+56.30, CL = 88.08 FT.
TOTAL = 88.08 FT.



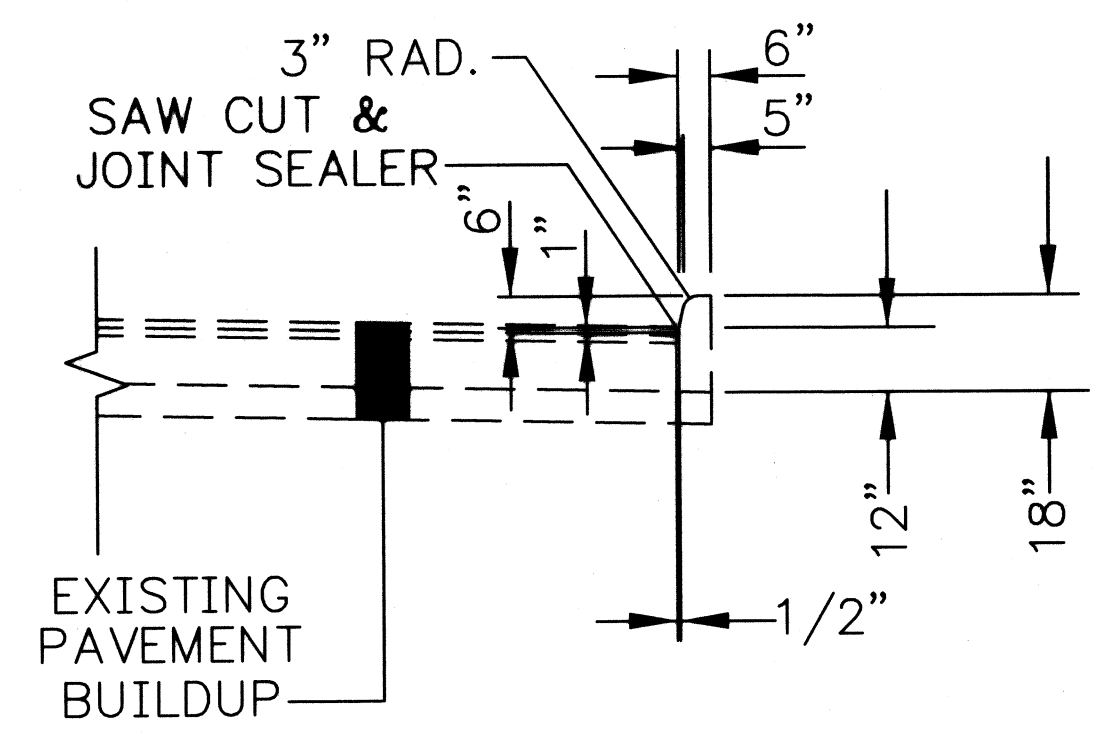
PROPOSED ACCESS/EMERGENCY DRIVE SECTION - ASPHALT

STA. 9+03.80, CL TO STA. 11+68.22, CL = 264.42 FT.
STA. 12+56.30, CL TO STA. 14+26.21, CL = 169.91 FT.
STA. 14+26.21, LEG B TO STA. 14+98.69, LEG B = 72.48 FT.
TOTAL = 506.81 FT.

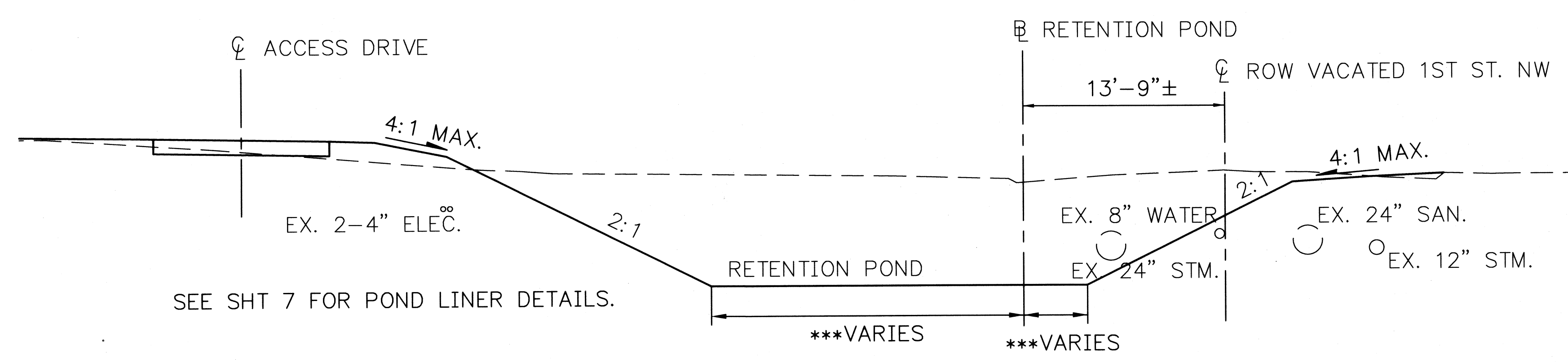
* STA. 9+05.62, LEG A TO STA. 10+00.00, LEG A:
LT. SIDE: 5'-0"
RT. SIDE: 5'-0"
* STA. 14+26.21, CL TO STA. 15+05.51, CL:
LT. SIDE: VARIES 6'-0" TO 5'-0"
RT. SIDE: VARIES 6'-0" TO 5'-0"
* STA. 15+05.51, CL TO STA. 15+49.92, CL:
LT. SIDE: 5'-0"
RT. SIDE: 5'-0"

** STA. 11+68.22, CL TO STA. 11+95.37, CL:
LT. SIDE: VARIES 6'-0" TO 12'-0"
** STA. 11+95.37, CL TO STA. 12+36.30, CL:
LT. SIDE: 12'-0"
** STA. 12+36.30, CL TO STA. 12+56.30, CL:
LT. SIDE: VARIES 12'-0" TO 6'-0"

- PROPOSED LEGEND**
- ① ITEM 448 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22
 - ② ITEM 408 PRIME COAT
 - ③ ITEM 304 6" AGGREGATE BASE
 - ④ ITEM 301 4" ASPHALT CONCRETE BASE, PG 64-22
 - ⑤ ITEM 407 TACK COAT
 - ⑥ ITEM 452 8" NON-REINFORCED CONCRETE PAVEMENT
 - ⑦ ITEM 659 SEEDING AND MULCHING
 - ⑧ ITEM 204 SUBGRADE COMPACTION
 - ⑨ ITEM 605 AGGREGATE DRAIN



TYPE 6 CURB DETAIL



PROPOSED ACCESS DRIVE & POND SECTION

STA. 101+44.63, CL TO STA. 103+43.82, CL
STA. 103+86.40, CL TO STA. 105+73.02, CL

BOTTOM POND WIDTH DIMENSIONS

*** STA. 101+44.63 TO STA. 102+52.65:
LT. SIDE: 21'-4"
RT. SIDE: 3'-8"
*** STA. 102+52.65 TO STA. 103+02.65:
LT. SIDE: VARIES 21'-4" TO 3'-8"
RT. SIDE: 3'-8"
*** STA. 103+02.65 TO STA. 103+43.82:
LT. SIDE: 3'-8"
RT. SIDE: 3'-8"

*** STA. 103+86.40 TO STA. 104+14.89:
LT. SIDE: 3'-8"
RT. SIDE: 4'-4"
*** STA. 104+14.89 TO STA. 104+64.89:
LT. SIDE: VARIES 3'-8" TO 21'-4"
RT. SIDE: 4'-4"
*** STA. 104+64.89 TO STA. 105+48.30:
LT. SIDE: 21'-4"
RT. SIDE: 4'-4"
*** STA. 105+48.30 TO STA. 105+73.02:
LT. SIDE: VARIES 21'-4" TO 15'-9"
RT. SIDE: 4'-4"

ITEM 605 - AGGREGATE DRAIN LOCATIONS

RT. SIDE: STA. 9+50, CL
RT. SIDE: STA. 10+00, CL
RT. SIDE: STA. 10+50, CL
RT. SIDE: STA. 11+00, CL
RT. SIDE: STA. 12+00, CL
RT. SIDE: STA. 12+50, CL
RT. SIDE: STA. 13+00, CL
RT. SIDE: STA. 13+50, CL
RT. SIDE: STA. 14+00, CL
RT. SIDE: STA. 14+50, CL
RT. SIDE: STA. 15+50, CL

CITY OF MASSILLON
FIRST STREET RETENTION PONDS
TYPICAL SECTIONS & DETAILS

McCOY ASSOCIATES, INC.
CONSULTING ENGINEERS
367 GHENT RD., SUITE 1A, AKRON, OH. 44333
PH. (330) 668-4727 FAX (330) 666-0778

L:\Drawings\04145\dwg\GENNOTE.dwg January 07 2005 2:03pm By:Roger

UTILITIES

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

SBC 50 W.BOWERY, 6TH FLOOR AKRON, OH 44308 330-384-8057 SABRENA LAMPLEY	AQUA WATER P.O. BOX 584 MASSILLON, OH 44648 (330) 833-4156 DON SNYDER	OHIO EDISON 1910 W. MARKET STREET BLDG. #1 AKRON, OHIO 43313 (330) 384-4931 JEFF KNAPP
CITY OF MASSILLON SANITARY SEWER 151 LINCOLN WAY EAST MASSILLON, OH 44646 (330) 830-1722	DOMINION EAST OHIO 4725 SOUTHWAY ST. S.W. CANTON, OH 44706 (330) 478-3136 STEVE CROWL	
MASSILLON PARKS & RECREATION DEPARTMENT (FOR EXIST. IRRIGATION SYSTEM) 505 ERIE STREET NORTH MASSILLON, OHIO 44646 330-832-1621		

THE CONTRACTOR SHALL NOTIFY ALL UTILITIES 48 HOURS PRIOR TO 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

NOTIFICATION OF SAFETY FORCES AND BUS GARAGES

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

MASSILLON SAFETY SERVICE 330-830-1702	MASSILLON FIRE DEPARTMENT 330-833-1053
TUSCARAWAS TOWNSHIP HALL 330-832-4337	JACKSON FIRE DEPARTMENT 330-832-1553
JACKSON TOWNSHIP HALL 330-832-7416	PERRY FIRE DEPARTMENT 330-478-5121
PERRY TOWNSHIP HALL 330-833-2141	NORTH LAWGRANCE FIRE DEPT. 330-832-6347
MASSILLON POLICE DEPARTMENT 330-830-1735	MASSILLON SCHOOL BUS GARAGE 330-830-1849
JACKSON POLICE DEPARTMENT 330-497-7440	JACKSON SCHOOL BUS GARAGE 330-830-8042
PERRY POLICE DEPARTMENT 330-833-3865	PERRY SCHOOL BUS GARAGE 330-477-1300
STARK COUNTY SHERIFF 330-430-3887	TUSCARAWAS SCHOOL BUS GARAGE 330-837-7805
SARTA 330-454-5333	

CONSTRUCTION SPECIFICATIONS & STANDARDS

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF MASSILLON SPECIFICATIONS AND STANDARDS, THE LATEST EDITION OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS AND ALL OSHA AND ADA REGULATIONS AND REQUIREMENTS.

DATUM ELEVATION

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

REMOVAL OF TREES OR STUMPS

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

ALL TREES REMOVED SHALL BE RELOCATED IN THE FIELD TO A LOCATION DETERMINED BY THE CITY.

SITE COORDINATION

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE CONSTRUCTION ACTIVITIES ON THE ADJACENT SITE TO THE WEST AS NEEDED.

REMOVAL AND RELOCATION OF EXISTING UTILITIES

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

MAINTENANCE OF TRAFFIC

THE AREA OF 1st STREET NW WITHIN THE PROJECT LIMITS WILL BE VACATED AND CLOSED BY THE CITY OF MASSILLON.

VEHICULAR ACCESS TO THE RECREATION CENTER REAR SERVICE DOORS SHALL BE MAINTAINED.

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 SHALL BE MADE BY THE CONTRACTOR AND SUBMITTED TO THE CITY PRIOR TO THE PROJECT COMMENCING. AFTER THE FINAL INVOICE IS RECEIVED THE SITE SHALL 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.

ITEM 202 PAVEMENT REMOVAL

ALL EXISTING CONCRETE AND ASPHALT INCLUDING CURBS, DRIVES, WALK, UNDERDRAINS AND BASE ETC. WITHIN WITHIN WORK LIMIT SHALL BE REMOVED AND PAID FOR UNDER

ITEM 202 PAVEMENT REMOVAL LUMP SUM

CONDITIONS OF WORK

ALL WORK PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH THE U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ACT, STATE, COUNTY, AND CITY OF MASSILLON LAWS AND REGULATIONS. ALL WORK, AT ALL TIMES SHALL BE SUBJECT TO OBSERVATION BY THE OWNER AND/OR ENGINEER. ALL WORK SHALL COMPLY WITH THE CONDITIONS OF THE CONTRACT DOCUMENTS AND OHIO EPA, AND STANDARDS OF THE CITY OF MASSILLON ALL ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE, AND APPLICABLE CITY, COUNTY, STATE AND FEDERAL CODES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE AND SATISFACTORY ACCESS TO ALL ABUTTING PROPERTIES TO THE PROJECT SITE. ADJACENT ROADS SHALL BE MAINTAINED AND KEPT CLEAN OF MUD AND OTHER DEBRIS THAT MAY BE CAUSED BY TRAFFIC EXITING THE WORK SITE. THE CONTRACTOR SHALL COORDINATE AND PROVIDE FOR ALL NECESSARY TRAFFIC CONTROL. TRAFFIC CONTROL SHALL FOLLOW THE MORE STRINGENT GUIDELINES OF THE CITY OF MASSILLON OR ODOT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AND MAINTAIN FACILITIES FOR A CONSTRUCTION OFFICE, EMPLOYEE PARKING, AND EMPLOYEE SANITARY FACILITIES. ON STREET PARKING WILL NOT BE PERMITTED. THE CONTRACTOR SHALL PROVIDE FOR THE LAWFUL OFF-SITE DISPOSAL OF DEMOLITION DEBRIS AND CONSTRUCTION WASTE.

WORKING AREA

NO EXCAVATION WITH SIDE SLOPES STEEPER THAN 2:1 AND/OR DEEPER THAN 2', OPEN CASTINGS AND PIPES SHALL BE LEFT EXPOSED WHEN THE SITE IS UNATTENDED BY THE CONTRACTOR. THE CONTRACTOR SHALL SECURE ALL SUCH EXCAVATIONS, OPEN CASTINGS AND PIPES AGAINST UNAUTHORIZED ENTRY COVERING WITH STEEL PLATES, TEMPORARY BACKFILLING, FENCING AND SECURITY SERVICES SHALL BE INCLUDED IN THE PRICE BID FOR THE WORK.

QUANTITIES

QUANTITIES ARE INDICATED FOR COMPARISON OF BIDS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY QUANTITIES BEFORE ORDERING MATERIALS. VARIATIONS FROM THE PLAN QUANTITIES SHALL BE APPROVED BY THE ENGINEER OR OWNER BEFORE MATERIALS ORDERS ARE PLACE. MATERIALS REJECTED DUE TO INCOMPATIBILITY BETWEEN ORDERED QUANTITIES AND FIELD CONDITIONS SHALL BE REPLACE AT THE CONTRACTOR'S EXPENSE.

WATER RELOCATION

THE CONTRACTOR IS TO COORDINATE HIS WORK WITH THE WATERLINE RELOCATION WORK BY AQUA WATER.

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 NON-CONFORMING OR CONFLICTING INFORMATION.

CONTRACTOR AVAILABILITY

THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A 24 HOUR PHONE NUMBER WHERE THE CONTRACTOR, WILL 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. AS DIRECTED IN THE FIELD, EXCESS SOIL EXCAVATED FROM THE SITE SHALL BE DISPOSED OF ON A CITY OWNED LOT.

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.

REMOVAL OF IRRIGATION SYSTEM

CONTRACTOR SHALL REMOVE AND SALVAGE IRRIGATION SYSTEM VALVES, CONTROLS, SPRINKLER HEADS, BOXES AND LIDS. SALVAGED IRRIGATION EQUIPMENT SHALL BE DELIVERED TO THE MASSILLON PARKS AND RECREATION DEPARTMENT. THIS WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 202, RELOCATION OF EXISTING UTILITIES.

ITEM 204. PROOF ROLLING

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM 609. TYPE 6 CONCRETE CURB

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

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.

DRAWN

DATE

REG 12/04

CHECKED

DATE

BAB 12/04

CITY OF MASSILLON

FIRST STREET RETENTION PONDS

GENERAL NOTES

McCOY ASSOCIATES, INC.

CONSULTING ENGINEERS

367 GHEWT RD., SUITE 1A, AKRON, OH. 44333

PH. (330) 668-4727 FAX (330) 666-0778

3

13

L:\Drawings\04145\dwg\GENNOTE.dwg January 07 2005 2:03pm By:Roger

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.

SUBSURFACE CONDITIONS

IT IS THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO MAKES HIS OWN INVESTIGATION OF SUBSURFACE CONDITIONS PRIOR TO SUBMITTING BID. PROSPECTIVE BIDDERS ARE TO COORDINATE WITH THE OWNER FOR ACCESS TO THE SITE FOR INSPECTIONS AND EXPLORATORY EXCAVATION. THE BIDDER SHALL CONTACT THE OWNER AT LEAST 72 HOURS IN ADVANCE OF THE DESIRED INSPECTION OR EXCAVATION AND THE BIDDER SHALL CONTACT O.U.P.S. AND OBTAIN LOCATIONS OF OTHER UTILITIES.

ITEM 659. SEEDING, MULCHING AND TOPSOIL

SEEDING, MULCHING AND TOPSOIL SHALL BE APPLIED TO ALL EXPOSED SOIL BETWEEN THE RIGHT OF WAY LINES, AND WITHIN THE CONSTRUCTIONS LIMITS FOR AREAS OUT- SIDE THE RIGHT OF WAY LINES DISTURBED DURING CONSTRUCTION.

THE PRICE BID FOR SEEDING, MULCHING AND TOPSOIL SHALL INCLUDE:

TOPSOIL, SEEDING AND MULCHING, REPAIR SEEDING AND MULCHING, INTER-SEEDING, COMMERCIAL FERTILIZER, LIME, AND WATER.

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

TOPSOIL STOCKPILED FROM SITE WITHIN THE CONSTRUCTION LIMITS MAY BE USED, PROVIDED THAT THE TOPSOIL COMPLIES WITH ITEM 659.

ITEM 659, SEEDING, MULCHING AND TOPSOIL LUMP SUM BID

EROSION CONTROL

THE CONTRACTOR SHALL PREPARE AND SUBMIT A STORM WATER POLLUTION CONTROL PLAN TO THE CITY OF MASSILLON ENGINEER TO BE FORWARDED TO OBTAIN A PERMIT. THE STORM WATER POLLUTION CONTROL PLAN SHALL BE AN EFFECTIVE PLAN. SAID PLAN MUST COMPLY WITH THE OHIO DEPARTMENT OF NATURAL RESOURCES, THE OHIO ENVIRONMENTAL SOIL AND WATER CONSERVATION DISTRICT AND THE CITY OF MASSILLON BEST MANAGEMENT PRACTICES.

BECAUSE OF THE LINEAR NATURE OF THIS PROJECT THE PLAN WILL VARY DAILY BASED UPON THE CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION. THE CITY AND ALL LOCAL, STATE AND FEDERAL AGENCIES WILL MONITOR THE CONSTRUCTION SITE AND THE CHOSEN METHOD OF SOIL EROSION CONTROL. THE CONTRACTOR WILL BE HELD TO FOLLOWING THE IMPLEMENTATION AS NECESSARY TO PROTECT THE INTEGRITY OF THE STORM SEWERS AND THE WATER'S OF THE STATE OF OHIO.

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.

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.

ITEM 604. MANHOLE NO. 3 & CATCH BASIN 2-3

ALL CATCH BASINS AND MANHOLES INCLUDING RISERS, SHALL BE CONSTRUCTED OF CLASS C CONCRETE. USE OF BRICK OR BLOCK IS NOT ALLOWED.

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 BT 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.

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 - MARK LIGHTFOOT AT 330-833-5746.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR OTHER 603 CONDUIT ITEMS.

ITEM 604. CATCH BASIN GRATE

EXISTING CATCH BASINS SHALL BE MODIFIED BY REPLACING THE EXISTING GRATES WITHBICYCLE SAFE GRATES. QUANTITIES AND LOCATIONS ARE SHOWN IN THE PLANS AND SHALL BE PAID FOR AT THE CONTRACT PRICE FOR ITEM 604, EACH, CATCH BASIN GRATE, TYPE .

ITEM SPECIAL - PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING CONDUIT.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER LINEAR FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

THE COST TO PLUG EXISTING CONDUIT WILL BE INCLUDED IN THE UNIT PRICE FOR PIPE REMOVED.

RESTORATION

FOR SANITARY SEWER AND STORM SEWER INSTALLED, TESTED, AND ACCEPTED UP TO MAY 15TH OF ANY CALENDER 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 CALENDER YEAR, RESTORATION SHALL BE COMPLETE BY NOVEMBER 15TH OF THAT CALENDER YEAR. FOR SANITARY SEWER AND STORM SEWER INSTALLED, TESTED, AND ACCEPTED AFTER NOVEMBER 15TH OF ANY CALENDER 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 SEPERATE PAY ITEM. THIS INCLUDES BACKFILLING, SEEDING AND MULCHING ALONG THE EDGE OF ALL PAVEMENT RESTORATION.

FOR PAVEMENT CROSSINGS THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION OF PIPES UNDER ITEM 603.

ITEM 301 ASPHALT CONCRETE BASE, PG64-22	1	CU. YDS.
ITEM 304 AGGREGATE BASE	2	CU. YDS.
ITEM 407 TACK COAT	1	GALLON
ITEM 408 PRIME COAT	3	GALLON
ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22	1	CU. YDS.

THE ABOVE CONTIGENCY QUANTITY IS BASED ON THICKNESSES DETERMINED IN THE FIELD AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH. THE TRENCH WIDTH WAS ASSUMED TO EQUAL THE SPAN TIMES 1.25 PLUS ONE FOOT.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

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.

SANITARY / STORM WORK

THE FOLLOWING CONDUIT TYPES MAY BE USED FOR SANITARY SEWER: 707.44 SDR35, 706.08, 706.03, 706.02 WITH JOINTS SHALL MEET ASTM-3212 JOINTS.

THE FOLLOWING CONDUIT TYPES MAY BE USED FOR STORM SEWER WITH MORE THAN (2) TWO FOOT OF COVER: 707.42, 706.08, 706.02, WITH JOINTS AS PER 706.10 OR 706.11, 707.33.

THE FOLLOWING CONDUIT TYPES MAY BE USED FOR STORM SEWER WITH LESS THAN (2) TWO FOOT OF COVER: 706.02 WITH JOINTS AS PER 706.10 OR 706.11.

ALL SANITARY SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO THE CITY OF MASSILLON ENGINEERING DEPARTMENT SPECIFICATIONS IN EFFECT AT TIME OF CONSTRUCTION.

MINIMUM COVER OVER SANITARY SEWER SHALL BE 3 FEET.

MAINTAIN MINIMUM 10 FEET HORIZONTAL AND 18 INCHES VERTICAL SEPARATION AT ALL POINT BETWEEN WATER AND SAINTARY SEWER LINES.

MINIMUM VERITICAL CLEARANCE BETWEEN SANITARY SEWER AND STORM SEWER IS 12 INCHES.

SANITARY MANHOLE SPECIFICATIONS SHALL MEET ASTM C-478 AND C-443.

BEDDING SPECIFICATIONS SHALL MEET ASTM D-2321, CLASS II.

ITEM SPECIAL - PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING CONDUITS SPECIFIED AS DIRECTED IN THE FIELD. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 203.05. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT. THE FOLLOWING ESTIMATE QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

SPECIAL, PIPE CLEANOUT 100 FT.

DRAWN

REG

CHECKED

BAB

DATE

12/04

DATE

12/04

CITY OF MASSILLON

FIRST STREET RETENTION PONDS

GENERAL NOTES

McCOY ASSOCIATES, INC.

CONSULTING ENGINEERS

367 GHENT RD., SUITE 1A, AKRON, OH. 44333

PH. (330) 666-4727 FAX (330) 666-0778

4

13

L:\Drawings\04145\dwg\GENNOTE.dwg January 07 2005 2:03pm By:Roger

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 TIEING INTO THE EXISTING SEWER IS PERFORMED AND/OR THE EXISTING SANITARY LINE IS PLUGGED AND/OR REMOVED. ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

PIPE PRICE SHALL INCLUDE ALL APPURTENANCES NECESSARY TO MAKE CONNECTIONS, BENDS, ETC.

SEWER INSPECTIONS AND TESTS

ALL SANITARY SEWERS 8" DIAMETER AND LARGER, MUST PASS INTERNAL TELE-VISION 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.

ALL SANITARY MANHOLES SHALL BE AIR/VACUUM TESTED IN ACCORDANCE WITH ASTM C-1244.

PIPE DEFLECTION TESTS SHALL BE PERFORMED ACCORDING TO GLUMRB SECTION 33.85 AND ASTM SPECIFICATION FOR THE PIPE BEING TESTED. THE ALLOWABLE DEFLECTION RATE SHALL NOT EXCEED 5%.

AIR TEST SPECIFICATIONS SHALL MEET ASTM F-1417.

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

WATER TEST

THE LEAKAGE EXFILTRATION OR INFILTRATION SHALL NOT EXCEED 100 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY (0.02m^3 /mm of pipe dia./km/DAY) FOR ANY SECTION OF THE SYSTEM. AN EXFILTRATION OR INFILTRATION TEST SHALL BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET (600 mm)

SANITARY SEWER SPECIFICATIONS

SANITARY SEWER CONSTRUCTION CONTEMPLATED FOR THIS PROJECT SHALL CONFORM TO THE LATEST CITY OF MASSILLON STANDARD CONSTRUCTION AND MATERIALS SPECIFICATIONS OR AS MODIFIED BY THE CONTRACT DRAWINGS. THE PROJECT CONTRACT DRAWINGS SHALL GOVERN.

SANITARY GRAVITY SEWER PIPE AND FITTINGS SHALL BE PVC SDR 35 CONFORMING TO ASTM D-3034. PVC COMPOUNDS SHALL CONFORM TO ASTM D-1784 PVC PIPE AND FITTINGS SHALL HAVE BELL AND SPIGOT TYPE JOINTS CONFORMING TO ASTM D-3212 AND GASKETS CONFORMING TO ASTM F-477.

BACKFILL IN SEWER TRENCHES SHALL BE PLACED IN LAYERS SUFFICIENT TO MEET THE COMPACTION REQUIREMENT OF 100% OF MAXIMUM LABORATORY DRY DENSITY PER ASTM D-698 AND THOROUGHLY COMPACTED WITH MACHINE MOUNDED COMPACTION EQUIPMENT. THE PLACING OF BACKFILL MATERIAL SHALL BE CONTINUED UNTIL THE TRENCH IS ENTIRELY FILLED AND COMPACTED TO THE GRADE CALLED FOR ON THE CONTRACT DRAWINGS. EXCAVATED MATERIAL

CONFORMING TO ODOT 203 SHALL BE USED FOR BACKFILLING EXISTING STRUCTURES (AFTER REMOVAL) ONLY. CRUSHED GRAVEL CONFORMING TO GRADATION REQUIREMENTS OF ODOT ITEM 304 AS SHOWN IN ODOT TABLE 703-1 SHALL BE USED FOR BACKFILLING ALL SEWER TRENCHES, AREAS SHOWN ON THE PLANS AND AS DIRECTED BY THE OWNER. FLOODING, JETTING, OR PUDDLING OF BACKFILL MATERIAL WILL NOT BE PERMITTED. COMPACTION TESTING OF THE BACKFILL BY A GEOTECHNICAL ENGINEER MAY BE REQUIRED BY THE OWNER.

SANITARY SEWERS SHALL BE AIR TESTED FOR LEAKAGE AND MANDREL TESTED FOR DEFLECTION. THE MAXIMUM ALLOWABLE PIPE DEFLECTION SHALL BE 5%.

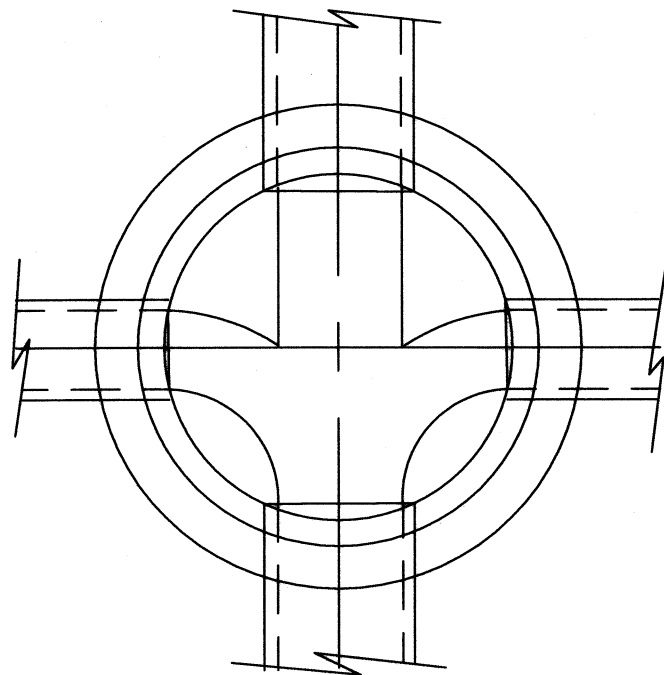
PRIOR TO FINAL PAYMENT FOR AND ACCEPTANCE OF SEWER INSTALLATION THE RESULTS OF THE AIR PRESSURE TESTS AND MANDREL TESTS SHALL BE FORWARDED TO THE ENGINEER OR OWNER.

INFILTRATION AND EXFILTRATION TESTING OF MANHOLES

INFILTRATION OR EXFILTRATION OF MANHOLES SHALL NOT EXCEED 100 GALLONS PER DAY. ALL CASTINGS HAVING CONTACT WITH SEWAGE OR DRAINING INTO THE SANITARY SEWER SHALL BE TESTED AND SHALL COMPLY WITH THE ABOVE STATED LIMIT. THE FOLLOWING PROCEDURE SHALL BE FOLLOWED:

- A. TESTS MUST BE COMPLETED AND ACCEPTED BEFORE A MANHOLE OR WET WELL IS OPENED FOR EXPOSURE TO THE SEWAGE SYSTEM
- B. ALL LINES ENTERING AND LEAVING THE CASTING SHALL BE PLUGGED WITH PNEUMATIC PLUGS AS DESCRIBED IN NOTE 10 ABOVE
- C. THE CASTING SHALL BE FILLED WITH WATER TO A DEPTH OF 3 FEET ABOVE THE CROWN OF THE HIGHEST PIPE THROUGH THE WALL OF THE CASTING, OR 3 FEET ABOVE THE WATER TABLE, WHICH EVER IS HIGHER. ALLOW THE WATER TO STAND FOR 1 HOUR TO ALLOW FOR ABSORPTION INTO THE CASTING MATERIAL. REFILL TO THE 3 FOOT LEVEL AND ALLOW TO STAND FOR 2 HOURS. IF THE WATER LEVEL DROPS LESS THAN THE AMOUNT SHOWN IN TABLE B, THE MANHOLE SHALL BE DEEMED TO HAVE PASSED THE INFILTRATION/ EXFILTRATION TEST.

(VALUES IN INCHES)	
INSIDE DIAMETER	ALLOWABLE DROP IN LEVEL
48	1.0
60	1.5
72	2.0



PLAN

NOTE:

- 1. IF TOP STEP IS IN 24" DIA. OPENING IT MAY PROJECT NO MORE THAN 3 1/2".
- 2. M.A. IND. PS-1-PF STEPS OR APPROVED EQUAL.
- 3. FOR PVC & ABS 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 VCP.
- 4. PRE CAST MANHOLES SECTIONS CONCRETE CONSTRUCTION SHALL MEET ASTM C-478.
- 5. MANHOLE JOINTS SHALL MEET ASTM C-443.
- 6. MANHOLE AIR TESTING WILL BE IN ACCORDANCE WITH ASTM C-1244
- 7. MANHOLE ADJUSTMENTS TO GRADE WILL BE NO GREATER THAN 18", USING PRECAST COLLARS MEETING ASTM C-32 OR AS DETAILED ON MASSILLON MANHOLE CASTING SET

SANITARY MANHOLE DETAIL

DEFLECTION TESTING

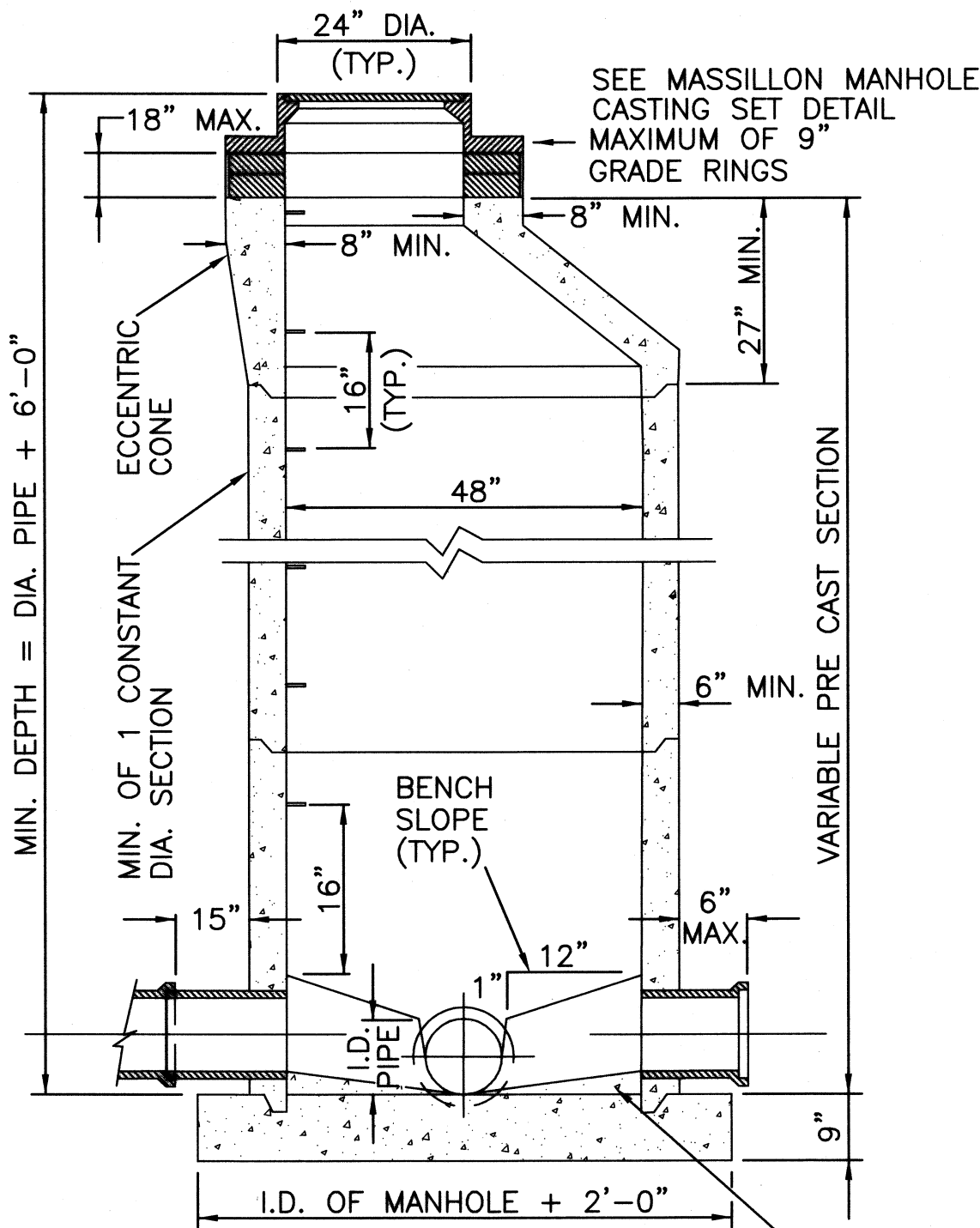
MAXIMUM ALLOWABLE PIPE DEFLECTION (REDUCTION IN VERTICAL INSIDE DIAMETER) SHALL BE 5%. DEFLECTION TESTS OF PIPE SHALL BE PERFORMED NOT SOONER THAN 30 DAYS AFTER THE BACKFILL HAS BEEN PLACED AN BEFORE FINAL ACCEPTANCE. LOCATIONS WITH EXCESS DEFLECTION SHALL BE EXCAVATED AND REPAIRED BY RE-BEDDING OR REPLACEMENT OF THE PIPE. DEVICES FOR TESTING INCLUDE A DEFLECTOMETER METER, OR PROPERLY SIZED "60, NO-GO" MANDREL OR SEWER BALL. THE DEFLECTION TESTING MUST BE CONDUCTED WITHOUT MECHANICAL PULLING DEVICES. FOR THE PURPOSE OF DEFLECTION MEASUREMENTS, THE BASE INSIDE PIPE DIAMETERS WITHOUT DEFLECTION ARE PROVIDED IN TABLE A. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE APPLIED TO THESE BASE INSIDE DIAMETER IN DETERMINING THE MINIMUM PERMISSIBLE DIAMETER. IT MUST BE EMPHASIZED THAT TO INSURE ACCURATE TESTING, THE LINES MUST BE THOROUGHLY CLEANED.

ITEM 604. SANITARY MANHOLE. RECONSTRUCTED TO GRADE

THE CONTRACTOR SHALL ADJUST THE SANITARY MANHOLE TO THE PROPOSED ELEVATION SHOWN. THE EXISTING FRAME AND COVER SHALL BE REMOVED CAREFULLY AND STORED ON THE SITE FOR SALVAGE BY THE CITY. THE CONTRACTOR SHALL INSTALL A NEW FRAME AND COVER TO THE PROPOSED ELEVATION SHOWN. THE FRAME AND COVER SHALL HAVE MACHINED BEARING SURFACES AND GASKET SEAL AND SHALL MEET ALL CITY OF MASSILLON SPECIFICATIONS.

ITEM SPECIAL – TIDEFLEX TF-1 CURVED BILL

THE CONTRACTOR SHALL INSTALL A TIDEFLEX TF-1 FLAT BOTTOM CURVED BILL CHECK VALVE DEVICE (RED VALVE CO.; 700 NORTH BELL AVE.; CARNEGIE, PA, 15106; PH:412-279-0044) OR AN APPROVED EQUAL AT THE LOCATION SHOWN AND IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.



SECTION

CONCRETE WITH STEEL TROWELL FINISHED OR PRE CAST INVERT CHANNELS AND BENCH.

L:\Drawings\04145\dwg\GENNOTE.dwg January 07 2005 2:03pm By:Roger

AIR TESTING AS PER ASTM F1417

AIR TESTING WILL BE CONDUCTED AS THE PROJECT IS BEING INSTALLED. AT NO TIME WILL MORE THAN 900 FEET OF PIPE BE INSTALLED BEFORE AIR TESTING IS PERFORMED. SEWAGE WILL NOT BE DIVERTED TO ANY SECTION OF PIPE, REGARDLESS OF LENGTH, UNTIL ALL TESTING IS COMPLETED AND ACCEPTED.

AFTER BACKFILLING A MANHOLE TO MANHOLE REACH OF SANITARY SEWER LINE, THE CONTRACTOR SHALL, AT HIS EXPENSE, CONDUCT THE LINE ACCEPTANCE TESTS. THE TESTS SHALL BE PERFORMED ACCORDING TO THE STATED PROCEDURES AND UNDER THE SUPERVISION OF THE OWNER AND/OR ENGINEER.

EQUIPMENT USED SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS AND BE APPROVED BY THE ENGINEER:

1. PNEUMATIC PLUGS SHALL HAVE A SEALING LENGTH EQUAL TO OR A GREATER THAN THE DIAMETER OF THE PIPE BEING INSPECTED.
2. PNEUMATIC PLUGS SHALL RESIST INTERNAL TEST PRESSURES WITHOUT REQUIRED EXTERNAL BRACING OR BLOCKING.
3. ALL AIR USED SHALL PASS THROUGH A SINGLE CONTROL PANEL.
4. THREE INDIVIDUAL HOSES SHALL BE USED FOR THE FOLLOWING CONNECTIONS:
 - a. FROM CONTROL PANEL TO PNEUMATIC PLUGS FOR INFLATION
 - b. FROM CONTROL PANEL TO SEALED LINE FOR INTRODUCING THE LOW PRESSURE AIR
 - c. FROM SEALED LINE TO CONTROL PANEL FOR CONTINUALLY AIR PRESSURE RISE IN THE SEALED LINE

TEST EQUIPMENT TESTING PROCEDURES SHALL BE AS FOLLOWS: ALL PNEUMATIC PLUGS SHALL BE SEAL TESTED BEFORE BEING USED IN THE ACTUAL TEST INSTALLATION. ONE LENGTH OF PIPE SHALL BE LAID ON THE GROUND AN SEALED AT BOTH ENDS WITH THE PNEUMATIC PLUGS TO BE CHECKED. THE SEALED PIPE SHALL BE PRESSURED TO 5 PSIG. THE PLUGS MUST HOLD AGAINST THIS PRESSURE WITHOUT HAVING TO BE BRACED.

AFTER A MANHOLE TO MANHOLE REACH OF PIPE HAS BEEN BACKFILLED AND CLEANED, AND THE PNEUMATIC PLUGS ARE CHECKED BY THE ABOVE PROCEDURE, THE PLUGS SHALL BE PLACED IN THE LINE AT EACH MANHOLE. LOW PRESSURE AIR SHALL BE SLOWLY INTRODUCED INTO THIS SEALED LINE UNTIL THE INTERNAL AIR PRESSURE REACHES APPROXIMATELY 4 PSIG.

AT LEAST TWO MINUTES SHALL BE ALLOWED FOR THE AIR PRESSURE TO STABILIZE. WHEN THE PRESSURE HAS STABILIZED AND IS AT OR ABOVE 3.5 PSIG, THE AIR HOSE FROM THE CONTROL PANEL TO THE AIR SUPPLY SHALL BE DISCONNECTED. THE PORTION OF THE LINE BEING TESTED SHALL BE TERMED "ACCEPTABLE" IF THE TIME REQUIRED IN MINUTES FOR THE PRESSURE TO DECREASE FROM 3.5 TO 2.5 PSIG (GREATER THEN THE AVERAGE BACK PRESSURE OF ANY GROUNDWATER THAT MAY BE OVER THE PIPE) SHALL NOT BE LESS THAN THE TIME SHOWN FOR THE GIVEN DIAMETERS IN THE FOLLOWING TABLE:

PIPE DIAMETER IN.	MINIMUM TIME MINUTES	LENGTH FOR MINUTES TIME, FT.	TIME FOR LONGER LENGTH, S	SPECIFICATION TIME LENGTH (L) SHOWN, MINUTES							
				100 FT.	150 FT.	200 FT.	250 FT.	300 FT.	350 FT.	400 FT.	450 FT.
4	3:46	597	0.380 L	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	0.854 L	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24
8	7:34	298	1.520 L	7:34	7:34	7:34	7:36	7:36	8:52	10:08	11:24
10	9:26	239	2.374 L	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	198	3.416 L	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	6.342 L	14:10	14:10	17:46	22:15	26:42	31:09	35:36	40:04
18	17:0	133	7.692 L	17:00	19:13	25:38	32:09	38:27	44:52	51:16	57:41
21	19:50	114	10.470 L	19:50	26:10	36:54	43:37	52:21	81:00	69:48	78:31
24	22:40	99	13.674 L	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33
27	25:30	88	17.306 L	28:51	43:16	57:41	72:07	86:32	100:57	115:22	129:48
30	28:20	80	21.366 L	35:37	53:25	71:13	89:02	106:50	124:38	142:26	160:15
33	31:10	72	25.852 L	49:05	64:38	86:10	107:43	129:16	150:43	172:21	193:53
36	34:00	66	30.768 L	51:17	76:55	102:34	128:12	153:50	170:29	205:07	230:46

IN AREAS WHERE GROUND WATER IS KNOWN TO EXIST, THE CONTRACTOR SHALL INSTALL A 1/2 INCH DIAMETER CAPPED PIPE NIPPLE APPROXIMATELY 10 INCHES LONG, THROUGH THE MANHOLE WALL ON TOP OF ONE OF THE SANITARY SEWER LINES ENTERING THE MANHOLE. THIS SHALL BE DONE AT THE TIME THE SANITARY SEWER LINE IS INSTALLED. IMMEDIATELY PRIOR TO THE PERFORMANCE OF THE LINE ACCEPTABILITY TEST, THE GROUND WATER SHALL BE DETERMINED BY REMOVING THE PIPE CAP, BLOWING AIR THROUGH THE PIPE NIPPLE IN THE GROUND SO AS TO CLEAR IT, AND THEN CONNECTING A CLEAR PLASTIC TUBE TO THE NIPPLE. THE PLASTIC TUBE SHALL BE VERTICAL AND A MEASUREMENT OF THE HEIGHT, IN FEET OF WATER OVER THE INVERT OF THE PIPE, SHALL BE TAKEN AFTER THE WATER HAS STOPPED RISING IN THIS PLASTIC TUBE. AIR TEST PRESSURE IS TO BE INCREASED BY 0.433 PSI FOR EACH FOOT THE GROUND WATER IS ABOVE THE INVERT OF THE SEWER LINE BEING TESTED. THE ALLOWABLE DROP OF ONE POUND AND THE TIMING OF THE TEST REMAIN THE SAME.

IF A LINE ACCEPTABILITY TEST IS BEING CONDUCTED ON MORE THAN ONE MANHOLE REACH OF PIPE, THE ENTIRE SECTION BEING TESTED SHALL MEET THE LINE ACCEPTABILITY REQUIREMENTS AS IF ONLY ONE (1) OF THE MANHOLE REACHES IN THE SECTION WERE BEING TESTED.

ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
ROADWAY				
201	11000	LUMP	LUMP	CLEARING AND GRUBBING
202	23000	LUMP	LUMP	PAVEMENT REMOVAL
202	34900	622	FT	PIPE REMOVED
202	58000	3	EA	MANHOLE REMOVED
202	58100	5	EA	CATCH BASIN REMOVED
202	98000	LUMP	LUMP	REMOVAL MISC. REMOVAL OF EXISTING UTILITIES
203	10000	5615	CU YD	EXCAVATION
203	20000	505	CU YD	EMBANKMENT
204	10000	1339	SQ YD	SUBGRADE COMPACTION
204	45000	1	HOUR	PROOF ROLLING
614	11000	LUMP	LUMP	MAINTAINING TRAFFIC
623	10000	LUMP	LUMP	CONSTRUCTION LAYOUT STAKES
624	10000	LUMP	LUMP	MOBILIZATION
SPECIAL		LUMP	LUMP	LOWER ELECTRONIC CONDUIT AT 30" CROSSING
EROSION CONTROL				
601	32200	17	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
659	10000	LUMP	LUMP	SEEDING, MULCHING AND TOPSOIL
832	10000	1	EA	STORM WATER POLLUTION PREVENTION PLAN
832	20000	LUMP	LUMP	EROSION CONTROL
DRAINAGE				
602	20000	1.91	CU YD	CONCRETE MASONRY
603	02000	17	FT	8" CONDUIT, TYPE C
603	06100	50	FT	15" CONDUIT, TYPE C
603	10600	43	FT	24" CONDUIT, TYPE C
603	13600	250	FT	30" CONDUIT, TYPE C
603	52304	20	FT	19" x 30" CONDUIT, TYPE C, 706.04
604	04900	1	EA	CATCH BASIN 2-3 W/ SIDE INLETS
604	04900	1	EA	CATCH BASIN 2-3
604	09000	1	EA	CATCH BASIN ADJUSTED TO GRADE
604	09900	1	EA	CATCH BASIN GRATE
604	31500	2	EA	MANHOLE, NO. 3
604	98000	2	EA	DRAINAGE MISC. CONCRETE ENCASEMENT
605	31100	249	FT	AGGREGATE DRAINS
SPECIAL		100	FT	PIPE CLEANOUT
SANITARY				
603	03100	66	FT	10" CONDUIT, TYPE B
603	04400	112	FT	12" CONDUIT, TYPE B
604	31500	1	EA	MANHOLE, NO. 3
604	35501	1	EA	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN
PAVEMENT				
301	46000	76	CU YD	ASPHALT CONCRETE BASE, PG64-22
304	20000	157	CU YD	AGGREGATE BASE
407	10000	55	GALLON	TACK COAT
408	10000	374	GALLON	PRIME COAT
448	47020	53	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
452	12000	162	SQ YD	8" NON-REINFORCED CONCRETE PAVEMENT
609	26000	56	FT	CURB, TYPE 6
SPECIAL		463	SQ FT	GRASS PAVING
RETENTION POND				
SPECIAL		769.6	CU YD	#8 GRAVEL, AS PER PLAN
SPECIAL		20778	SF	POND LINER, AS PER PLAN
SPECIAL		1	EA	CHECK VALVE, AS PER PLAN
TRAFFIC CONTROL				
630	85000	3	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE

CITY OF MASSILLON
FIRST STREET RETENTION PONDS
GENERAL NOTES/GENERAL SUMMARY

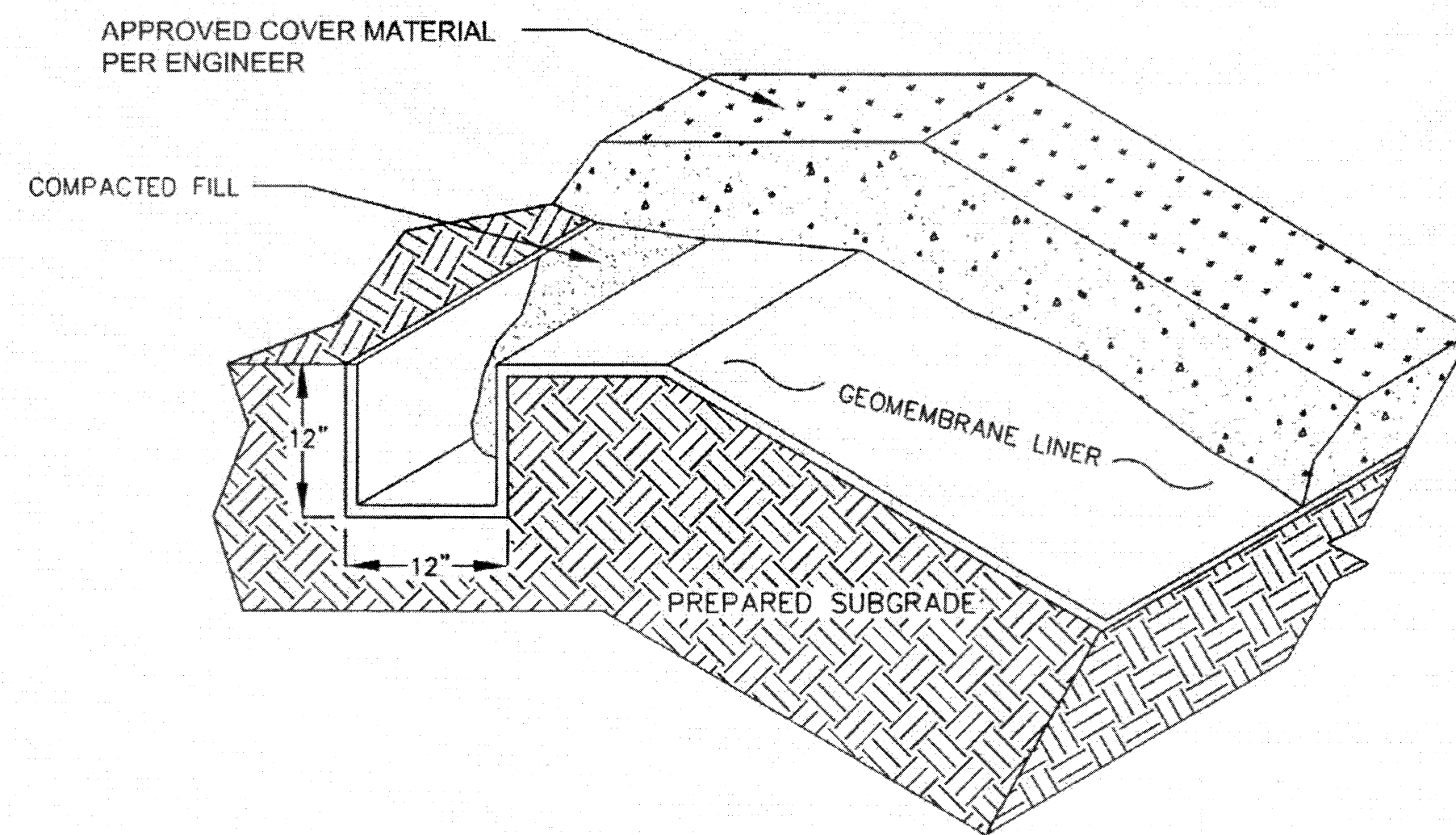
McCOY ASSOCIATES, INC.
CONSULTING ENGINEERS
367 GHEINT RD., SUITE 1A, AKRON, OH. 44333
PH. (330) 668-4727 FAX (330) 666-0778

NOTES:

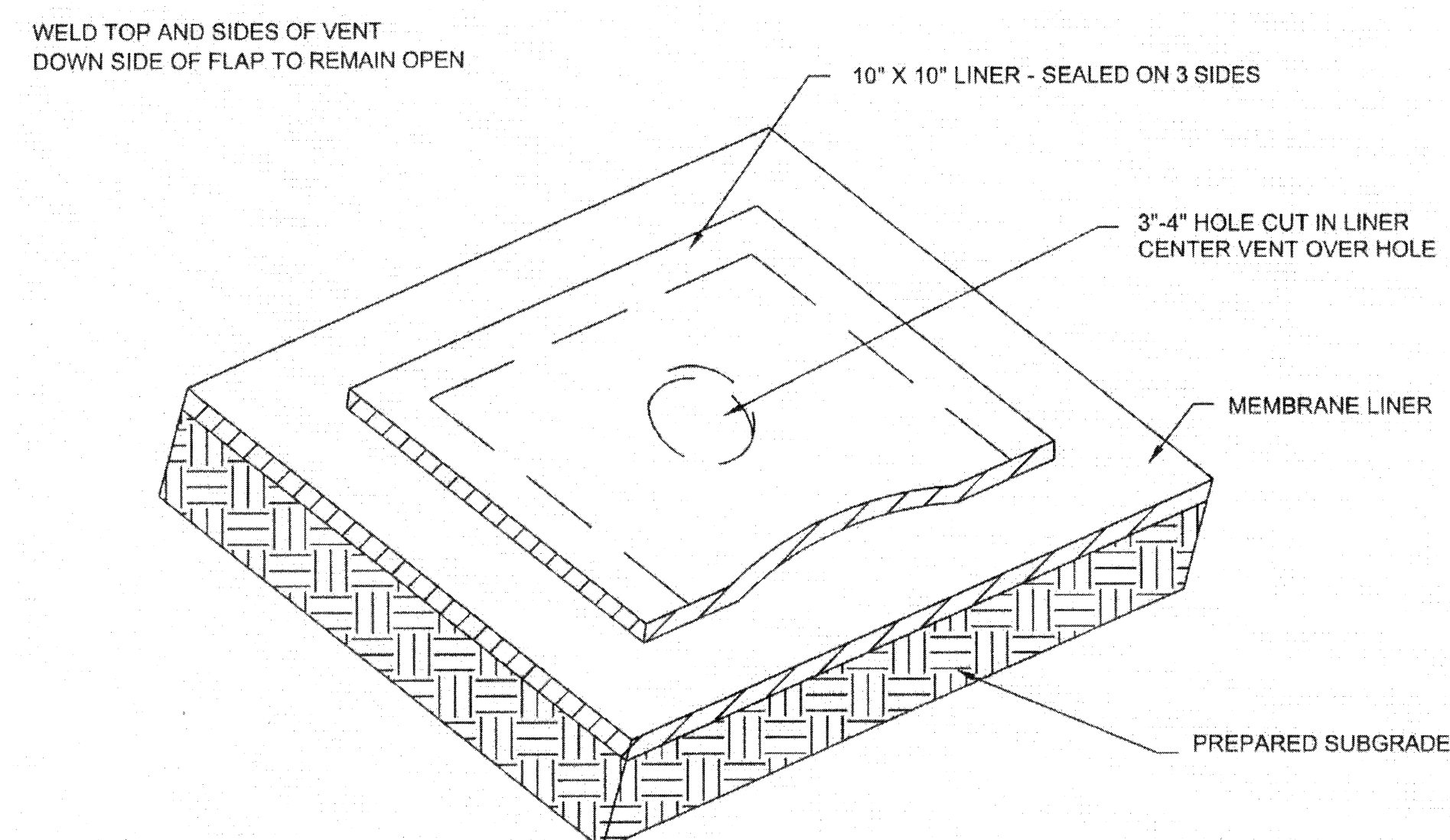
- 1) APPROVED COVER MATERIAL SHALL CONSIST OF ROUNDED, #8 GRAVEL OR RIVER ROCK. COVER MATERIAL SHALL CONSIST OF A MINIMUM THICKNESS OF 12", AND COVER THE ENTIRE EXPOSED SURFACE OF THE LINER. THE LINER SHALL BE INSTALLED UP TO THE NORMAL SURFACE WATER ELEVATION OF 925.00.
- 2) LINER SHALL BE A PVC BURIED MEMBRANE LINER AS MANUFACTURED BY:
WATERSAVER COMPANY, INC.
ATTN: MARK DESANDRE
P.O. BOX 815
LEMONT, PA. 16851
FAX: (814) 692-7598
PHONE: (814) 692-7599
watersaver.com
OR APPROVED EQUAL.
A REPRESENTATIVE FROM THE MANUFACTURER SHALL BE ONSITE DURING THE FIRST DAY OF INSTALLATION TO ASSIST THE CONTRACTOR IN PROPER INSTALLATION OF THE LINER.
- 3) THE LINER MAY BE DEPRESSED UNDER ANY PIPE WITH AN INVERT ELEVATION OF 925.00 OR HIGHER. FOR ANY PIPE WHOSE INVERT IS WITHIN THE LIMITS OF THE PROPOSED LINER A PIPE BOOT SHALL BE INSTALLED ACCORDING TO THE PIPE BOOT DETAIL.
- 4) ALL MISC. ITEMS INCLUDING VENTS, BOOTS, ANCHORING, ETC. SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE POND LINER.
- 5) GRASS PAVING SHALL BE GRASSPAVE^2 AS MANUFACTURED BY:
INVISIBLE STRUCTURES, INC.
1600 JACKSON ST.
GOLDEN, CO. 80401
1-800-233-1510
invisible_structures.com
OR APPROVED EQUAL.

ALL MATERIALS FOR INSTALLATION SHALL BE INCLUDED IN THE UNIT BID PRICE.

- 6) ALL MATERIALS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURES RECOMMENDATIONS.

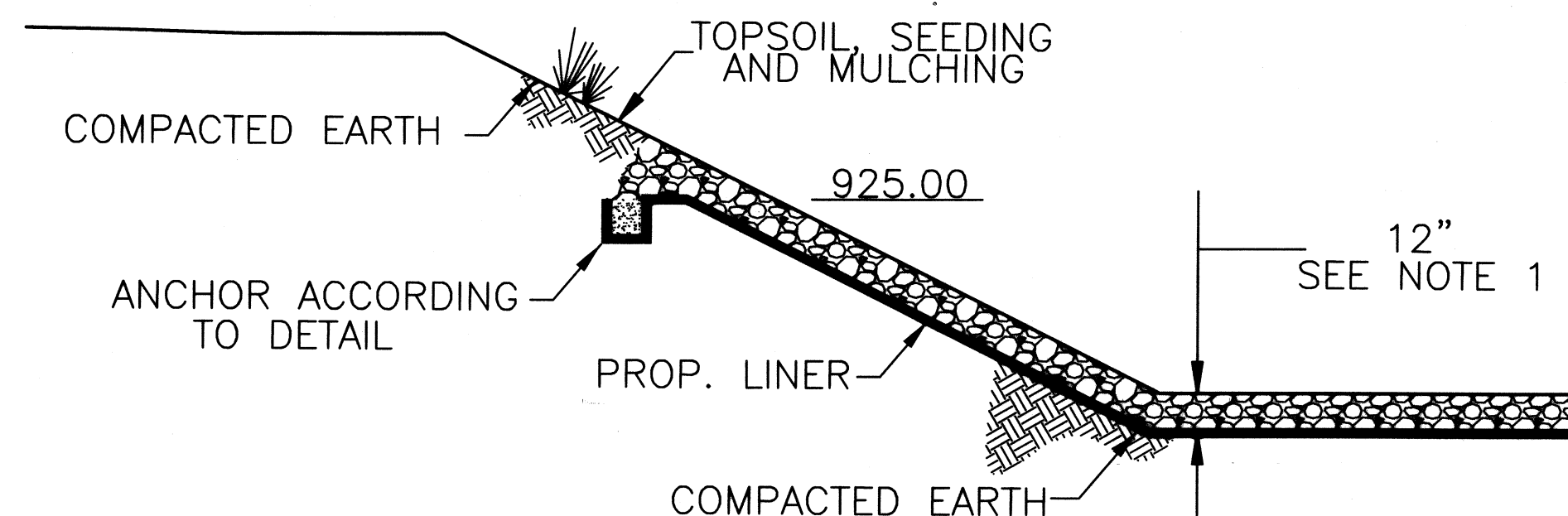


ANCHOR TRENCH DETAIL
N.T.S.

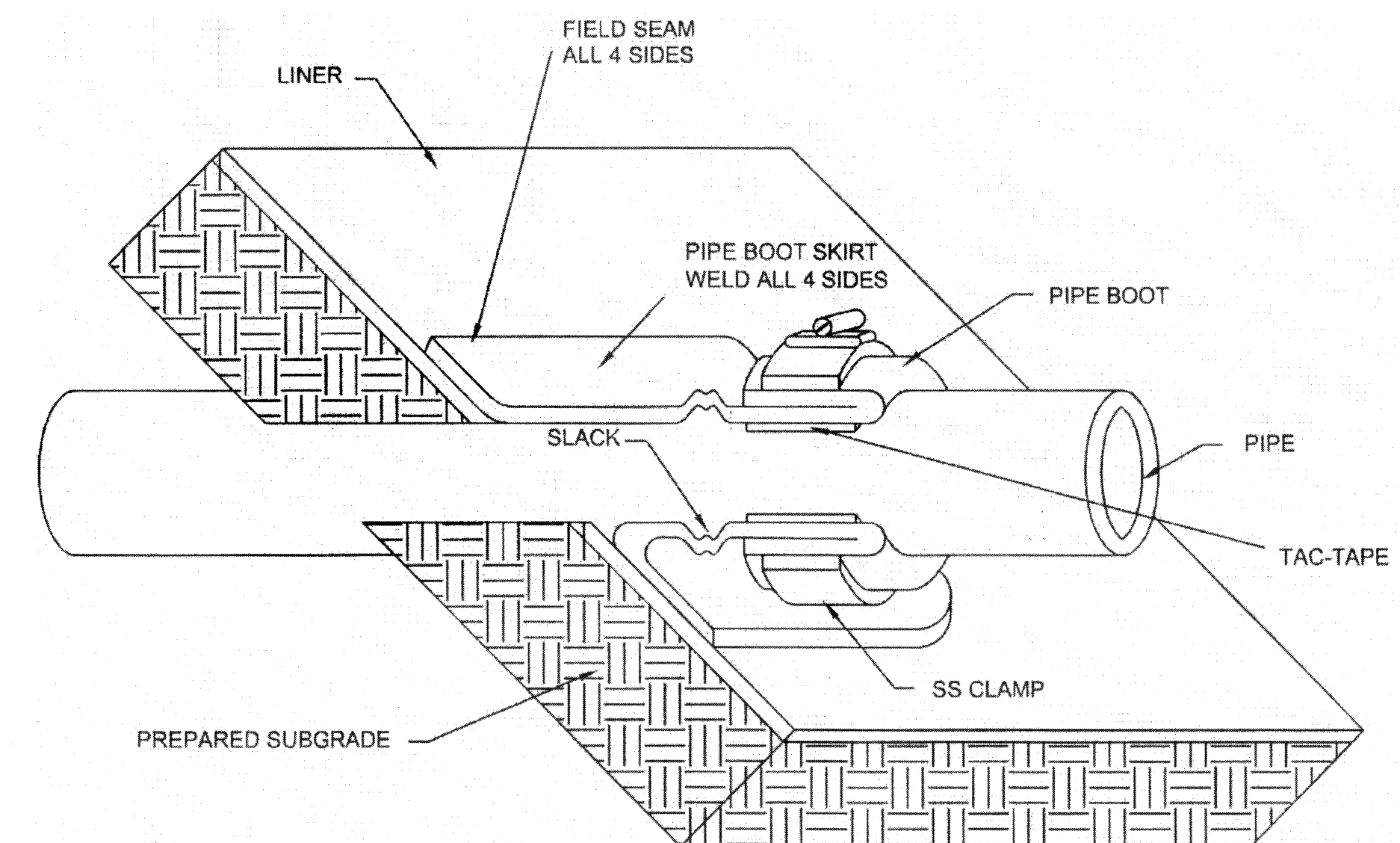


CONTRACTOR SHALL INSTALL 4 EQUALLY SPACED VENTS PER BASIN

FLAP - TYPE VENT DETAIL
N.T.S.



BASIN LINER DETAIL
N.T.S.

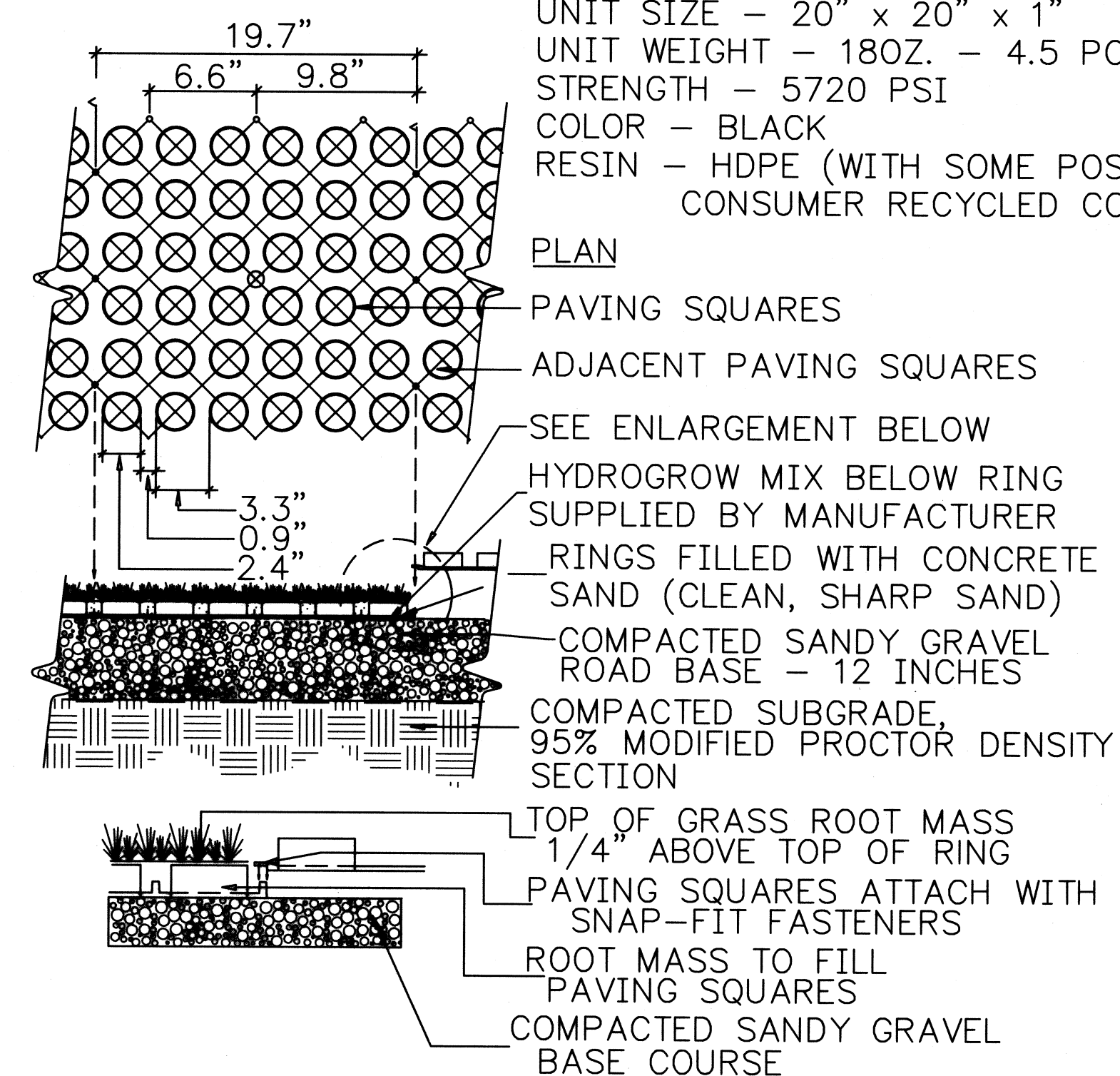


PIPE BOOT DETAIL
N.T.S.

SPECIFICATIONS

UNIT SIZE - 20" x 20" x 1"
UNIT WEIGHT - 180Z. - 4.5 POUNDS
STRENGTH - 5720 PSI
COLOR - BLACK
RESIN - HDPE (WITH SOME POST
CONSUMER RECYCLED CONTENT)

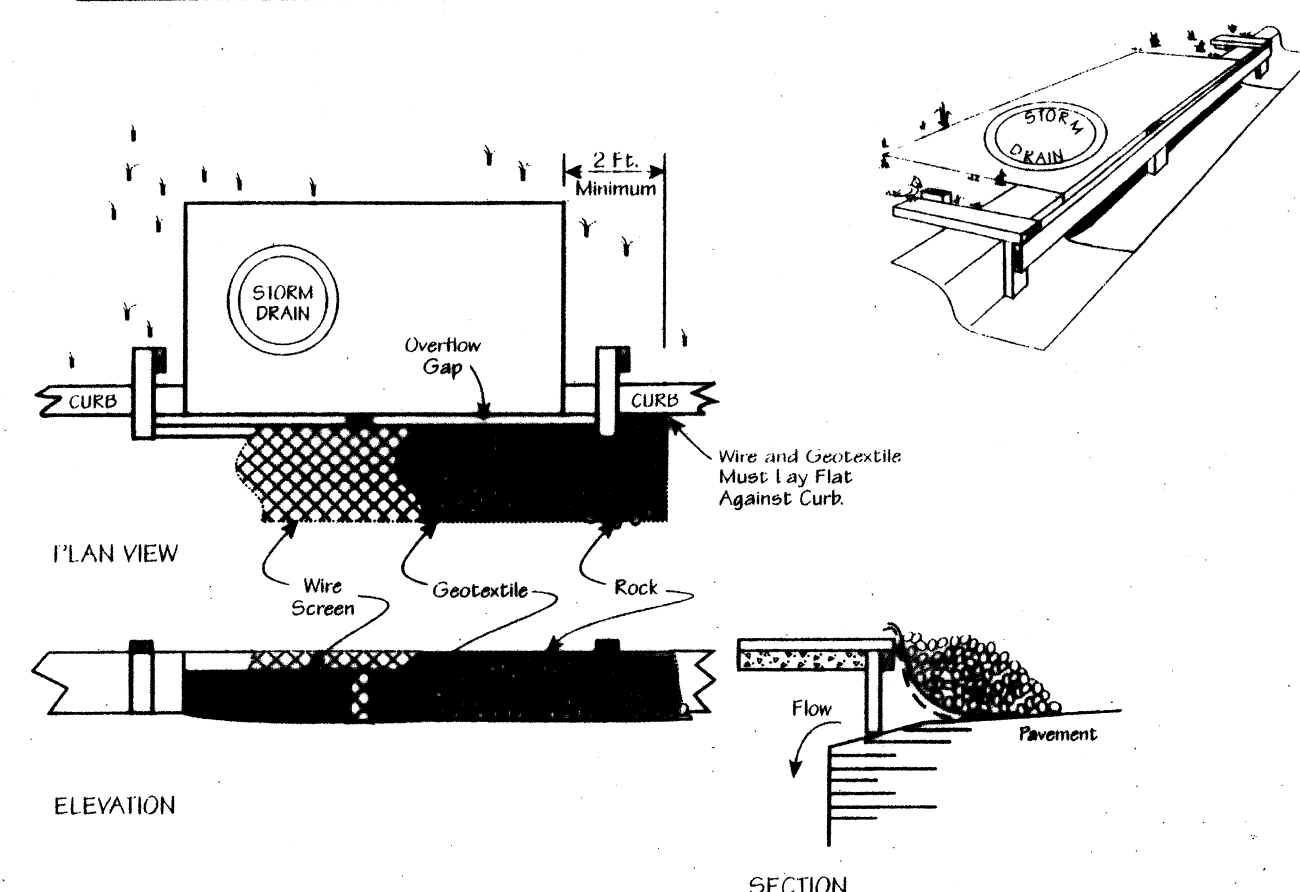
PLAN



NOTE: GRASS/PLANT TYPES SHALL BE SPECIFIED BY THE CITY OF MASSILLON

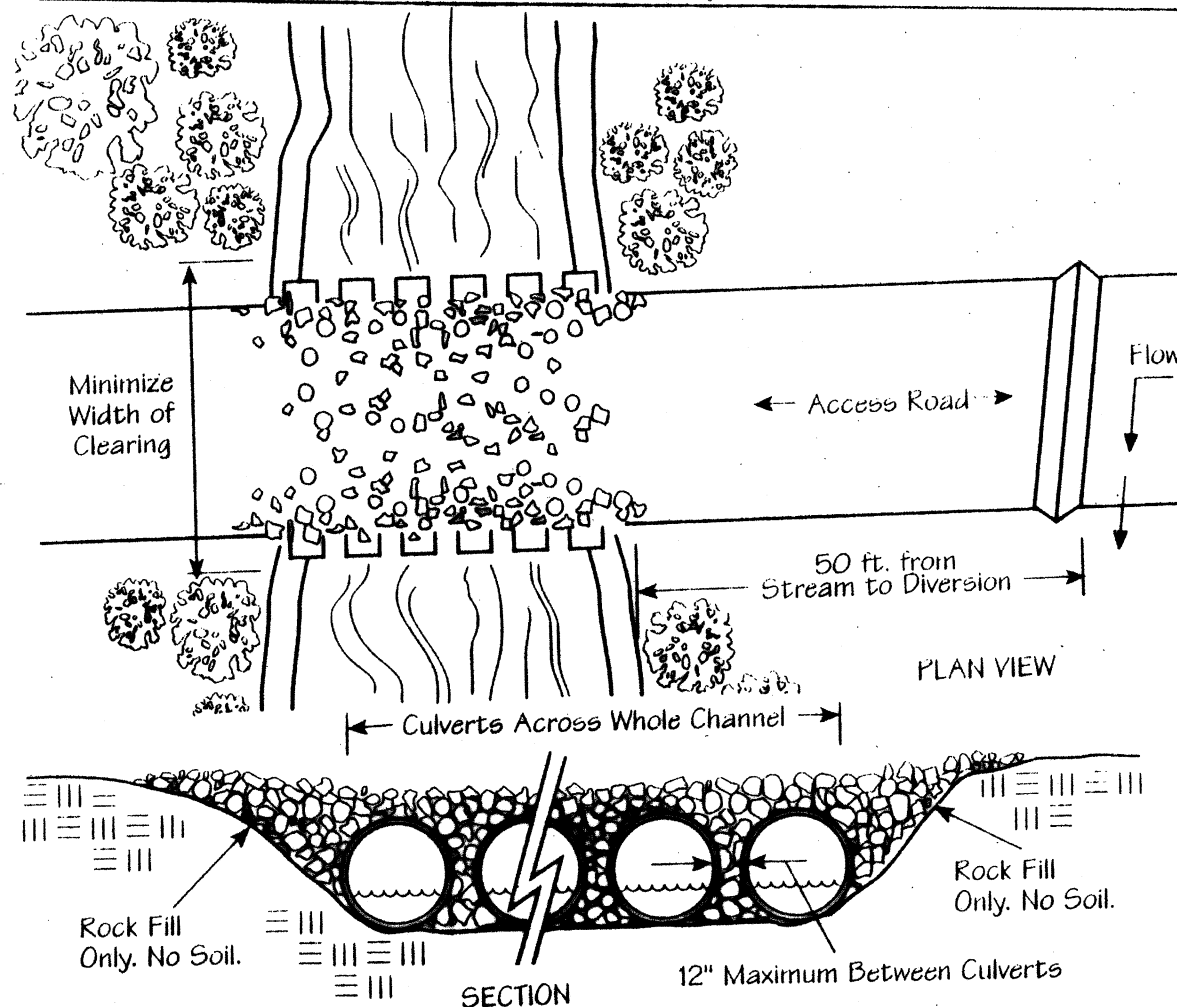
TYPICAL GRASS PAVING DETAIL
N.T.S.

Curb Inlet Protection



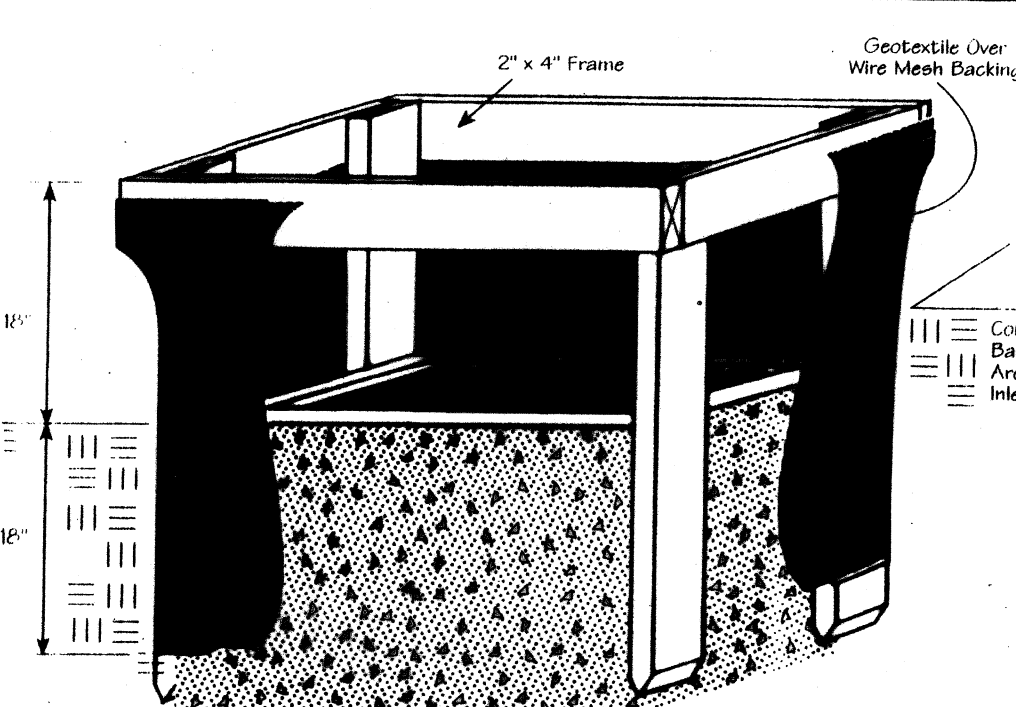
1. Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational.
2. The wooden frame is to be constructed of 2-by-4-in. construction-grade lumber. The end spacers shall be a minimum of 1 ft. beyond both ends of the throat opening. The anchors shall be nailed to 2-by-4-in. stakes driven on the opposite side of the curb.
3. The wire mesh shall be of sufficient strength to support fabric and stone. It shall be a continuous piece with a minimum width of 30 in. and 4 ft. longer than the throat length of the inlet, 2 ft. on each side.
4. Geotextile cloth shall have an equivalent opening size (EOS) of 20-40 sieve and be resistant to sunlight. It shall be at least the same size as the wire mesh.
5. The wire mesh and geotextile cloth shall be formed to the concrete gutter and against the face of the curb on both sides of the inlet and securely fastened to the 2-by-4-in. frame.
6. Two-inch stone shall be placed over the wire mesh and geotextile in such a manner as to prevent water from entering the inlet under or around the geotextile cloth.

Culvert Stream Crossing



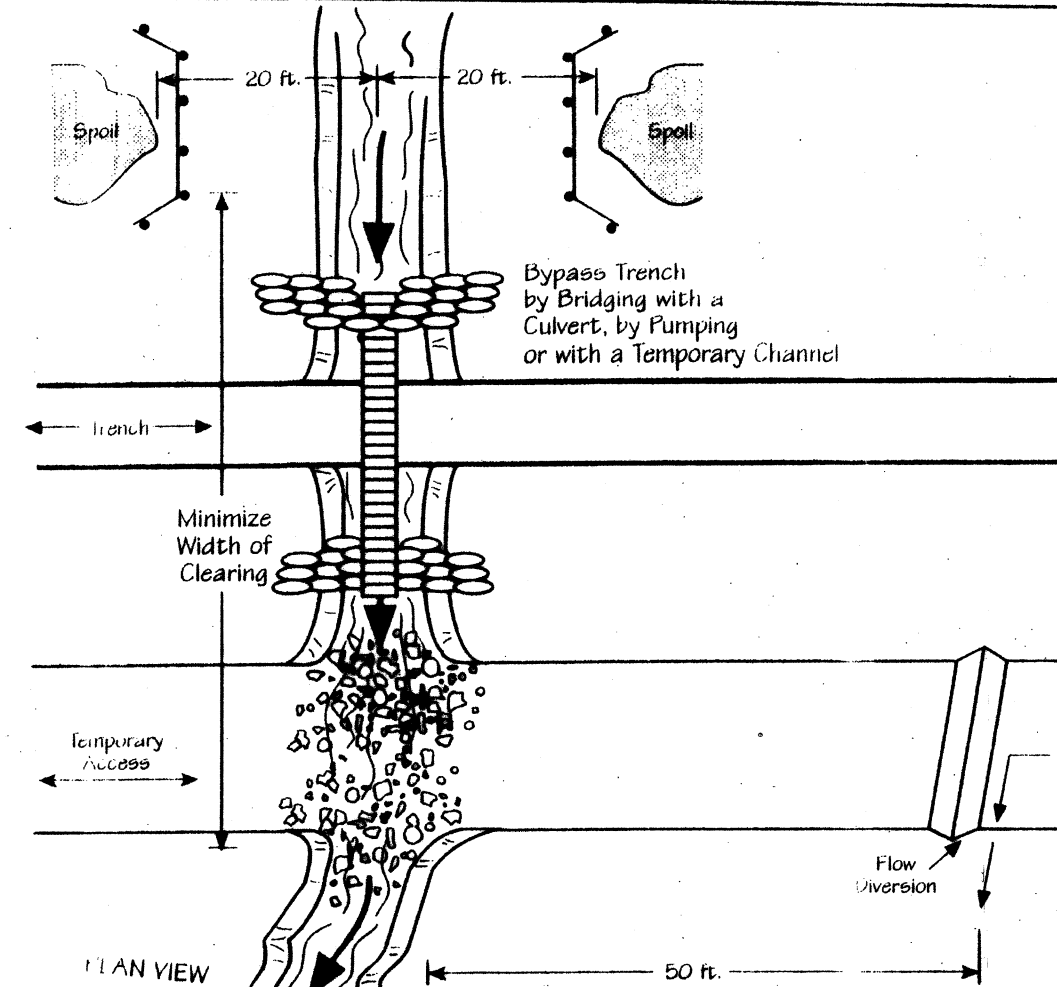
1. Stream Disturbance--Disturbance to the stream shall be kept to a minimum. Streambank vegetation shall be preserved to the maximum extent practical and the stream crossing shall be as narrow as practical.
2. Clearing shall be done by cutting NOT grubbing. The roots and stumps shall be left in place to help stabilize the banks and accelerate revegetation.
3. To minimize interference with fish spawning and migration, crossing construction should be avoided where practical from March 15 through June 15.
4. Water shall not be allowed to flow along the road directly to the stream. Diversions and swales shall direct runoff away from the access road to a sediment-control practice.
5. Placement--Culverts shall be placed on the existing streambed to avoid a drop or waterfall at the downstream end of the pipe, which would be a barrier to fish migration. Crossings shall be made in shallow areas rather than deep pools where possible.
6. Culvert Size--Culvert diameter shall be at least three times the depth of normal stream flow at the point of the stream crossing. If the crossing must be placed in deep, slow-moving pools, the culvert diameter may be reduced to twice the depth of normal stream flow. The minimum size culvert that may be used is 18 in.
7. Number of Culverts--There shall be sufficient number of culverts to completely cross the stream channel from streambank to streambank with no more than a 12-in. space between each one.
8. Fill and Surface Material--All material placed in the stream channel, around the culverts and on the surface of the crossing shall be stone, rock or aggregate. ODOT No. 1 shall be the minimum acceptable size. To prevent washouts, larger stone and rock may be used and they may be placed in gabion mattresses. NO SOIL SHALL BE USED IN THE CONSTRUCTION OF A STREAM CROSSING OR PLACED IN THE STREAM CHANNEL.
9. Removal--Aggregate stone and rock used for this structure does not need to be removed. Care should be taken so that any aggregate left does not create an impoundment or impede fish passage. All pipes, culverts, gabions or structures must be removed.
10. Stabilization--Streambanks shall be stabilized. Plantings shall include woody vegetation where practical.

Inlet Protection in Swales, Ditch Lines or Yard Inlets



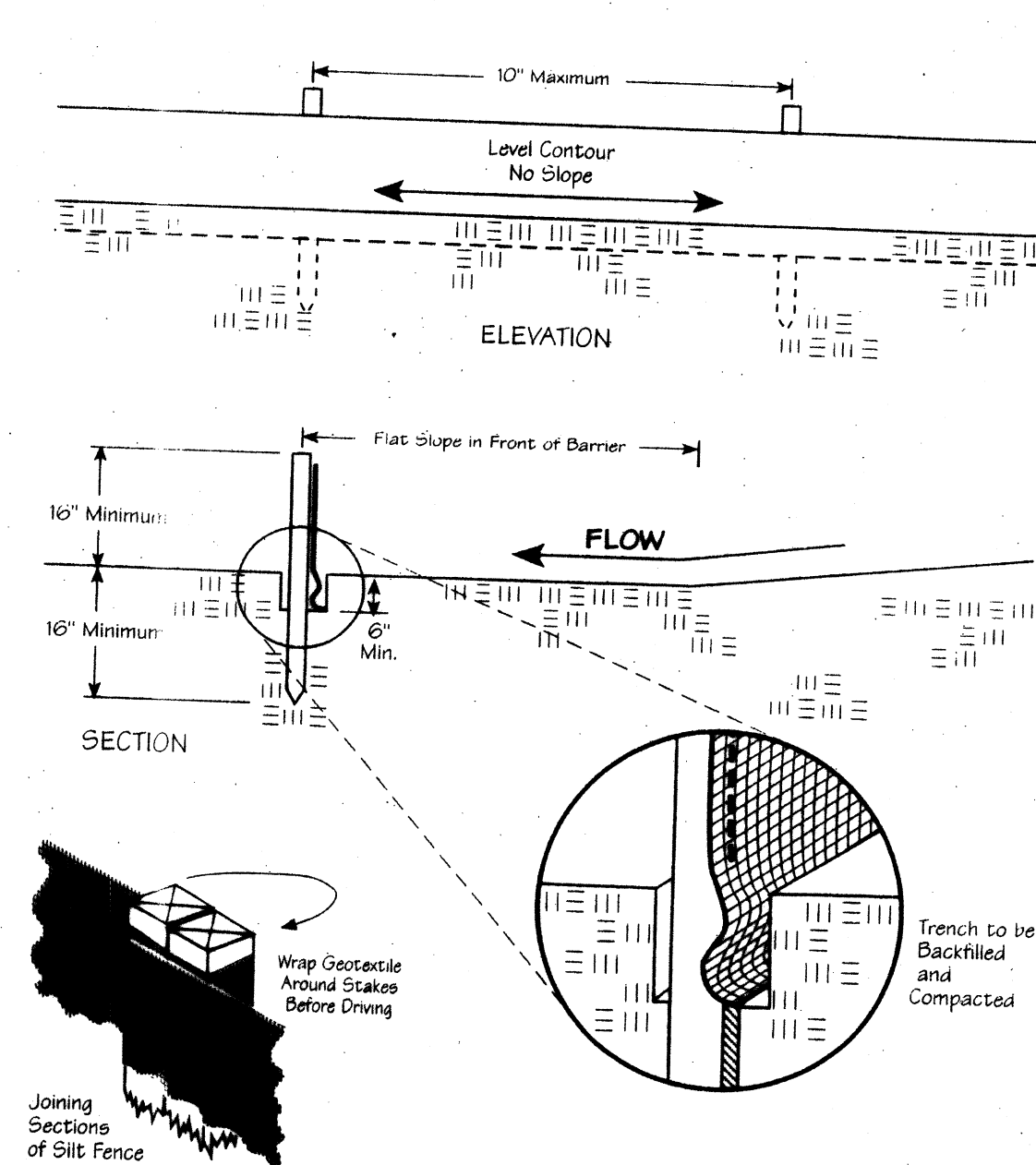
1. Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational.
2. The earth around the inlet shall be excavated completely to a depth of at least 18 in.
3. The wooden frame shall be constructed of 2-by-4-in. posts shall be driven 1 ft. into the ground at four corners of the inlet and the top portion of 2-by-4-in. frame assembled using the overlap joint shown. The top of the frame shall be at least 6 in. below adjacent roads if ponded water would pose a safety hazard to traffic.
4. Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stretched tightly around the frame and fastened securely to the frame.
5. Geotextile shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall be stretched tightly around the frame and fastened securely. It shall extend from the top of the frame to 18 in. below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastened to the same post.
6. Backfill shall be placed around the inlet in compacted 6 in. layers until the earth is even with notch elevation on ends and top elevation on sides.
7. A compacted earth dike or a check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression and if runoff bypassing the inlet will not flow to a settling pond. The top of earth dikes shall be at least 6 in. higher than the top of the frame.

Small Stream Utility Crossing



1. When site conditions allow, one of the following shall be used to divert stream flow or otherwise keep the flow away from construction activity.
 - Drill or bore the utility lines under the stream channel.
2. Crossing Width--The width of clearing shall be minimized through the riparian area. The limits of disturbance shall be as narrow as possible including not only construction operations within the channel itself but also clearing done through the vegetation growing on the streambanks.
3. Clearing shall be done by cutting NOT grubbing. The roots and stumps shall be left in place to help stabilize the banks and accelerate revegetation.
4. Material excavated from the trench shall be placed at least 20 ft. from the streambanks.
5. To the extent other constraints allow, stream shall be crossed during periods of low flow.
6. Duration of Construction--The time between initial disturbance of the stream and final stabilization shall be kept to a minimum. Construction shall not begin in the crossing until the utility line is in place to within 10 ft. of the streambank.
7. Fill Placed Within the Channel--The only fill permitted in the channel should be clean aggregate, stone or rock. No soil or other fine erodible material shall be placed in the channel. This restriction includes all fill for temporary crossings, diversions, and trench backfill when placed in flowing water. If the stream flow is diverted away from construction activity the material originally excavated from the trench may be used to backfill the trench.
8. Streambank Restorations Streambanks shall be restored to their original line and grade and stabilized with riprap or vegetative bank stabilization.
9. Runoff Control Along the Right-of-Way--To prevent sediment-laden runoff from flowing to the stream, runoff shall be diverted with water bar or swales to a sediment trapping practice a minimum of 50 ft. from the stream.
10. Dewatering or pumping water containing sediment shall not be discharge directly to a stream. The flow shall be routed through a settling pond, dewatering sump or a flat, well-vegetated area adequate for removing sediment before the pumped water reaches the stream.
11. Dewatering operations shall not cause significant reductions in stream temperatures. If groundwater is to be discharged in high volumes during summer months, it shall first be routed through a settling pond or overland through a flat well-vegetated area.
12. Permits--In addition to these specifications, stream crossings shall conform to the rules and regulations of the U.S. Army Corps of Engineers for in-stream modifications (404 permits) and Ohio Environmental Protection Agency's State Water Quality Certification (401 permits).

Silt Fence



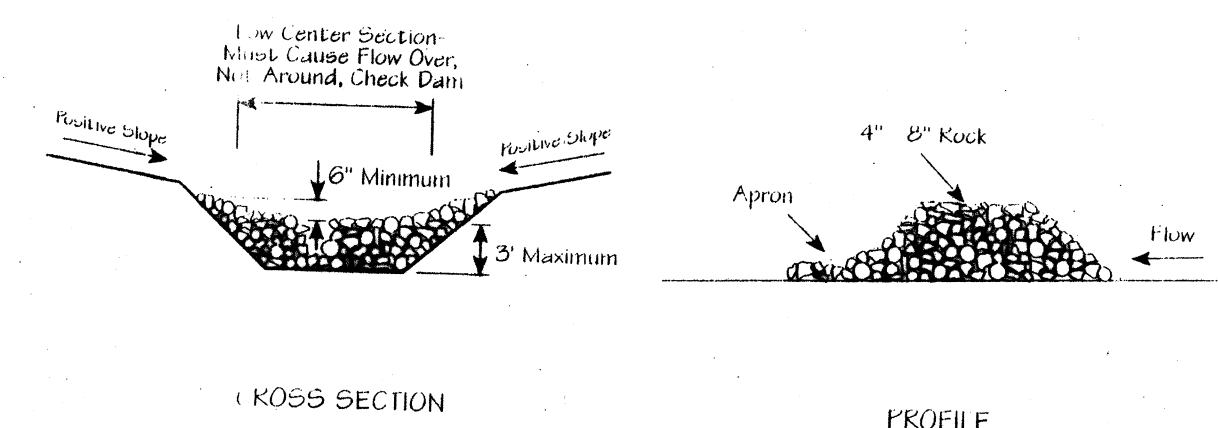
1. Silt fence shall be constructed before upslope land disturbance begins.
2. All silt fence shall be placed as close to the contour as possible so that water will not concentrate at low points in the fence and so that small swales or depressions which may carry small concentrated flows to the silt fence are dissipated along its length.
3. To prevent water ponded by the silt fence from flowing around the ends, each end shall be constructed upslope so that the ends are at a higher elevation.
4. Where possible, silt fence shall be placed on the flattest area available.
5. Where possible, vegetation shall be preserved for 5 ft. (or as much as possible) upslope from the silt fence. If vegetation is removed, it shall be reestablished within 7 days from the installation of the silt fence.
6. The height of the silt fence shall be a minimum of 18 in. above the original ground surface.
7. The silt fence shall be placed in a trench cut a minimum of 6 in. deep. The trench shall be cut with a trencher, cable laying machine, or other suitable device which will ensure an adequately uniform trench depth.
8. The silt fence shall be placed with the stakes on the downslope side of the geotextile and so that 8 in. of cloth are below the ground surface. Excess material shall lay on the bottom of the 6-in.-deep trench. The trench shall be backfilled and compacted.
9. Seams between section of silt fence shall be overlapped with the end stakes of each section wrapped together before driving into the ground.
10. Maintenance--Silt fence shall allow runoff to pass only as diffuse flow through the geotextile. If runoff overtops the silt fence, flows under or around the ends, or in any other way becomes a concentrated flow, one of the following shall be performed, as appropriate: 1) The layout of the silt fence shall be changed, 2) Accumulated sediment shall be removed, or 3) Other practices shall be installed.

Fabric Properties	
Minimum Tensile Strength	120 lbs.
Minimum Elongation at 80 lbs.	60%
Minimum Puncture Strength	60 lbs.
Minimum Tear Strength	40 lbs.
Minimum Burst Strength	200 psi
Apparent Opening Size	≤ 0.84mm
Minimum Permeability	1X10 ⁻⁴ sec ⁻¹
Ultraviolet Exposure Strength Retention	70%

Mulching

1. Mulch and/or other appropriate vegetative practices shall be applied to disturbed areas within 7 days of grading if the area is to remain dormant (undisturbed) for more than 45 days or on areas and portions of the site which can be brought to final grade.
2. Mulch shall consist of one of the following:
 - Straw--Straw shall be unrotted small grain straw applied at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The straw mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000-sq.-ft. sections and place two 45-lb. bales of straw in each section.
 - Hydroseeders--Wood cellulose fiber should be used at 2,000 lb./ac. or 46 lb./1,000 sq. ft.
 - Other--Other acceptable mulches include mulch matings applied according to manufacturer's recommendations or wood chips applied at 10-20 tons/ac.
3. Mulch Anchoring--Mulch shall be anchored immediately to minimize loss by wind or runoff. The following are acceptable methods for anchoring mulch.
 - Mechanical--Use a disk, crimper, or similar type tool set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but be left generally longer than 6 in.
 - Mulch Nettings--Use according to the manufacturer's recommendations, following all placement and anchoring suggestions. Use in areas of water concentration and steep slopes to hold mulch in place.
 - Asphalt Emulsion--For straw mulch, apply at the rate of 160 gal./ac. (0.1 gal./sq.) into the mulch as it is being applied or as recommended by the manufacturer.
 - Synthetic Binders--For straw mulch, synthetic binders such as Acrylic DLR (Agri Tac), DCA-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer.
 - Wood Cellulose Fiber--Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 lb./acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal. of wood cellulose fiber.

Check Dam



1. The check dam shall be constructed of 4-8 in.-diameter stone, placed so that it completely covers the width of the channel.
2. The top of the check dam shall be constructed so that the center is approximately 6 in. lower than the outer edges, so water will flow across the center and not around the ends.
3. The maximum height of the check dam at the center of the weir shall not exceed 3 ft.
4. Spacing between dams shall be as shown in the plans or by the following table:

Check Dam Spacing				
Dam Height (ft.)	Channel Slope			
	< 5%	5 - 10%	10 - 15%	15 - 20%
1	65 ft.	30 ft.	20 ft.	15 ft.
2	130 ft.	65 ft.	40 ft.	30 ft.
3	200 ft.	100 ft.	65 ft.	50 ft.

NOTE

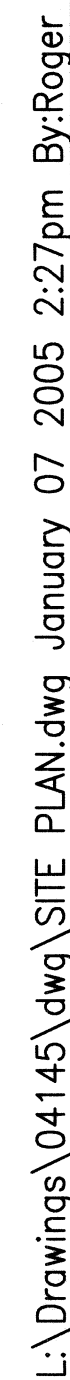
THE DETAILS SHOWN ON THIS SHEET ARE STORM WATER BEST MANAGEMENT PRACTICES FROM (RAINWATER AND LAND DEVELOPMENT) OHIO'S STANDARDS FOR STORM WATER MANAGEMENT LAND DEVELOPMENT AND URBAN STREAM PROTECTION. THE CONTRACTOR SHALL USE THE ADJACENT OR PROVIDE A DETAIL PROPOSAL WHEN CREATING, IMPLEMENTING THE SWP3 PLAN AS REQUIRED BY THE CITY AND THE STARK SOIL & WATER CONSERVATION DISTRICT.

DRAWN DATE
HMD 12/04CHECKED DATE
REG 12/04

CITY OF MASSILLON
FIRST STREET RETENTION PONDS
STORM WATER POLLUTION PREVENTION PLAN NOTES

McCOY ASSOCIATES, INC.
CONSULTING ENGINEERS

367 GHEENT RD., SUITE 1A, AKRON, OH. 44333
PH. (330) 668-4727 FAX (330) 666-0778



NUMBER	C1	C2	C3	C4	C5	C6	C7
P.I. STATION	9+73.36	11+33.67	11+86.72	12+87.46	13+40.47	14+32.86	14+86.28
Δ	31°19'46" RT.	20°02'45" RT.	20°02'45" LT.	20°02'45" LT.	20°02'45" RT.	12°38'42" RT.	77°21'18" RT.
DEGREE OF CURVE — ARC	57°17'45"	114°35'30"	114°35'30"	95°29'35"	95°29'35"	95°29'35"	163°42'08"
RADIUS	100.00	50.00	50.00	60.00	60.00	60.00	35.00
TANGENT	28.04	8.84	8.84	10.60	10.60	6.65	28.02
ARC LENGTH	54.68	17.49	17.49	20.99	20.99	13.24	47.25
CHORD LENGTH	54.00	17.40	17.40	20.89	20.89	13.21	43.75
CHORD DIRECTION	S 47°52'05" E	S 22°10'49" E	N 22°10'49" W	N 42°13'35" W	N 42°13'35" W	N 25°52'51" W	S 19°07'09" W
P.C. STA.	9+45.32	11+24.84	11+77.88	12+76.85	13+29.86	14+26.21	14+58.26
P.T. STA.	10+00.00	11+42.33	11+95.37	12+97.85	13+50.85	14+39.45	15+05.51

P.T. STA. 10+00.00, ☺ CONST. ACCESS DRIVE = STA. 10+00.00, ☺ CONST. WALK, LEG A
P.C. STA. 14+26.21, ☺ CONST. ACCESS DRIVE = STA. 14+26.21, ☺ CONST. ACCESS DRIVE, LEG B = STA. 14+26.21, ☺ CONST. WALK

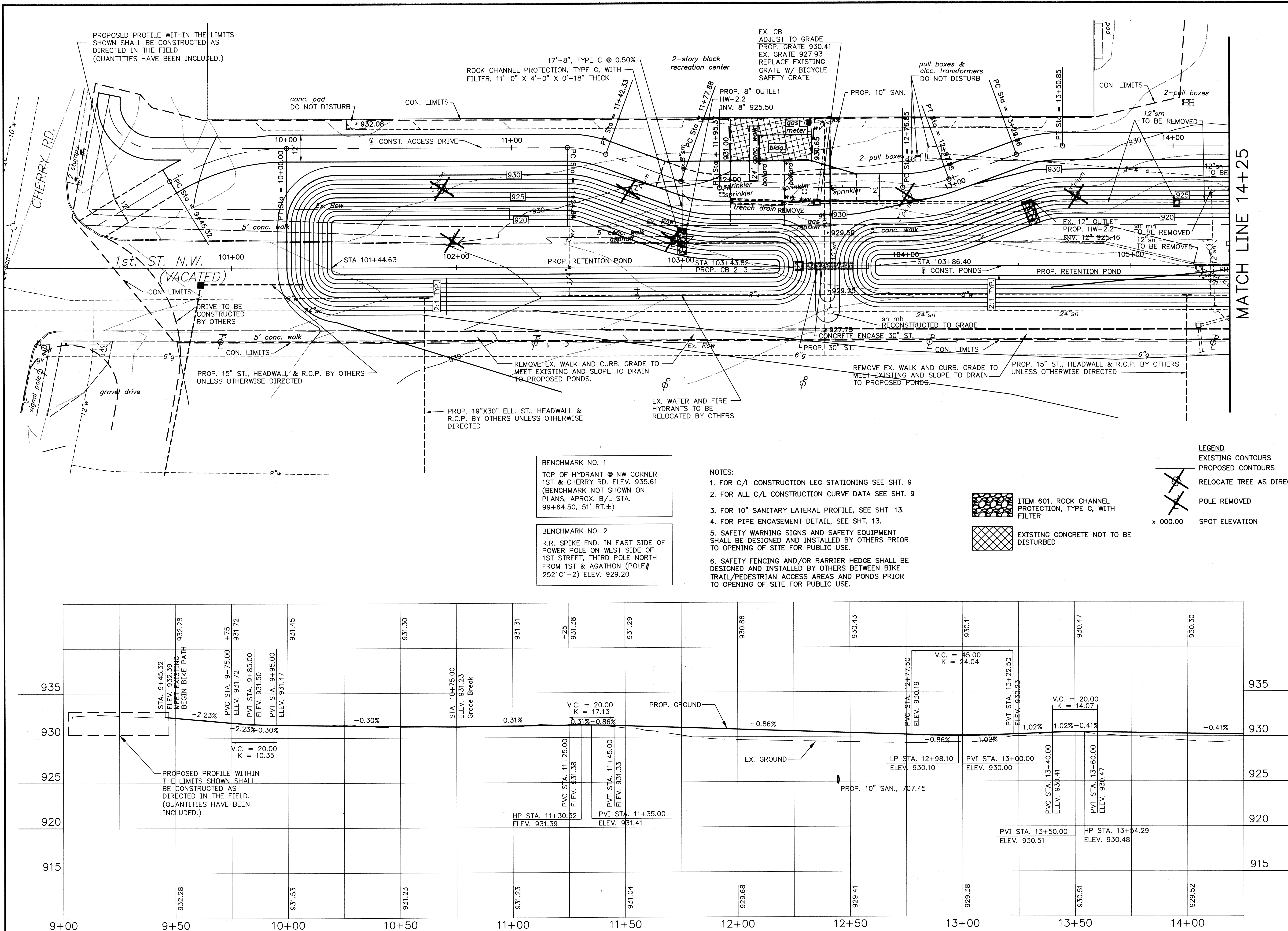
NUMBER	C8-LEG A	C9-LEG B
P.I. STATION, LEG	9+29.98	14+81.17
Δ	101°13'18" LT.	47°33'50" LT.
DEGREE OF CURVE — ARC	286°28'44"	127°19'26"
RADIUS	20.00	45.00
TANGENT	24.36	19.83
ARC LENGTH	35.33	37.36
CHORD LENGTH	30.91	36.29
CHORD DIRECTION	S 18°24'27" W	S 55°59'07" E
P.C. STA.	9+05.62	14+61.34
P.T. STA.	9+40.95	14+98.69

BENCHMARK NO. 1

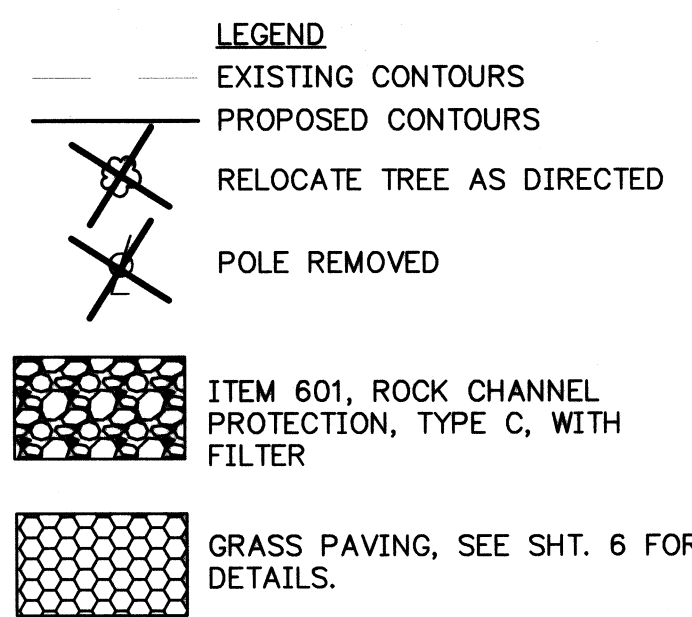
BENCHMARK NO. 2

R.R. SPIKE FND. IN EAST SIDE OF
POWER POLE ON WEST SIDE OF
1ST STREET, THIRD POLE NORTH
FROM 1ST & AGATHON (POLE#
2521C1-2) ELEV. 929.20

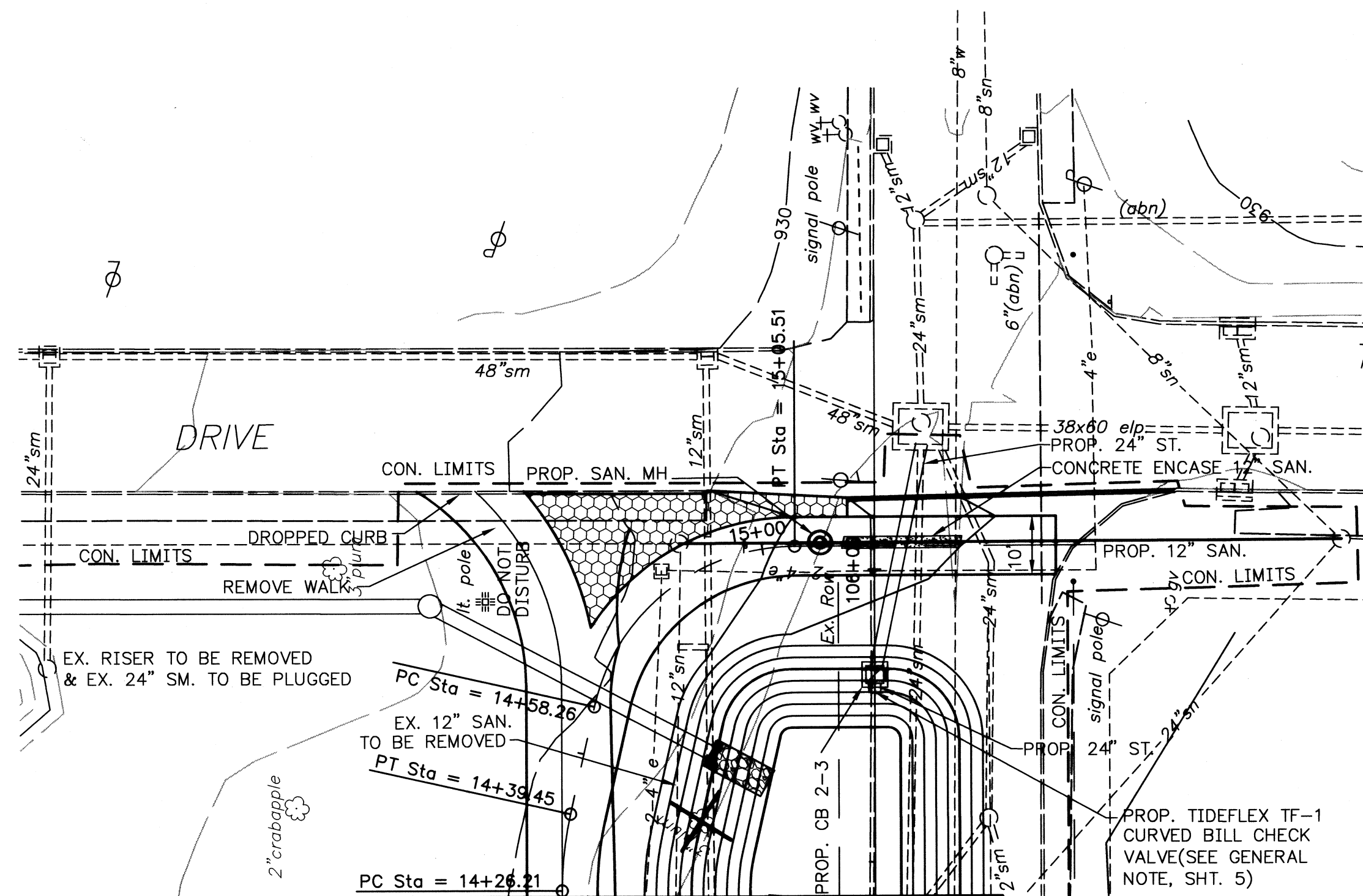
PROP. PROFILE OF 12" SANITARY @ STA. 106+04.63, @



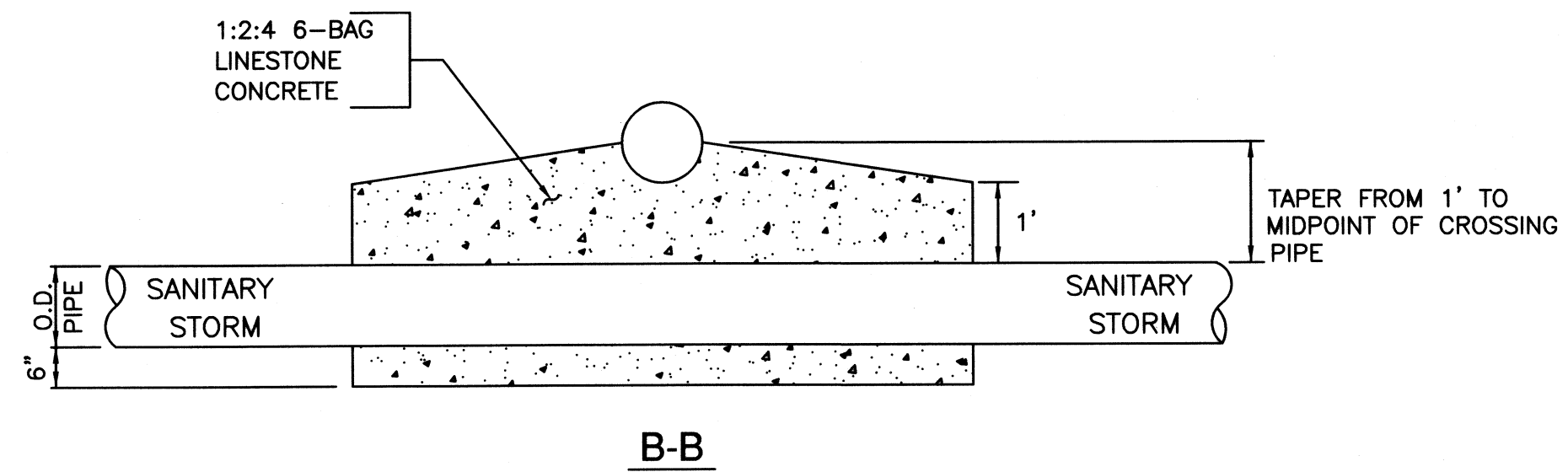
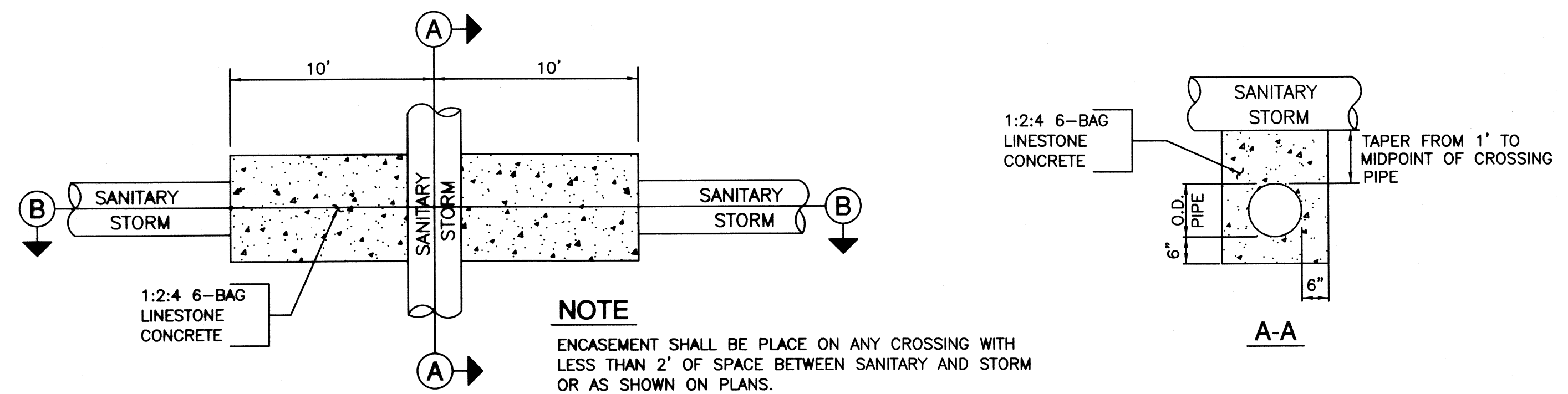
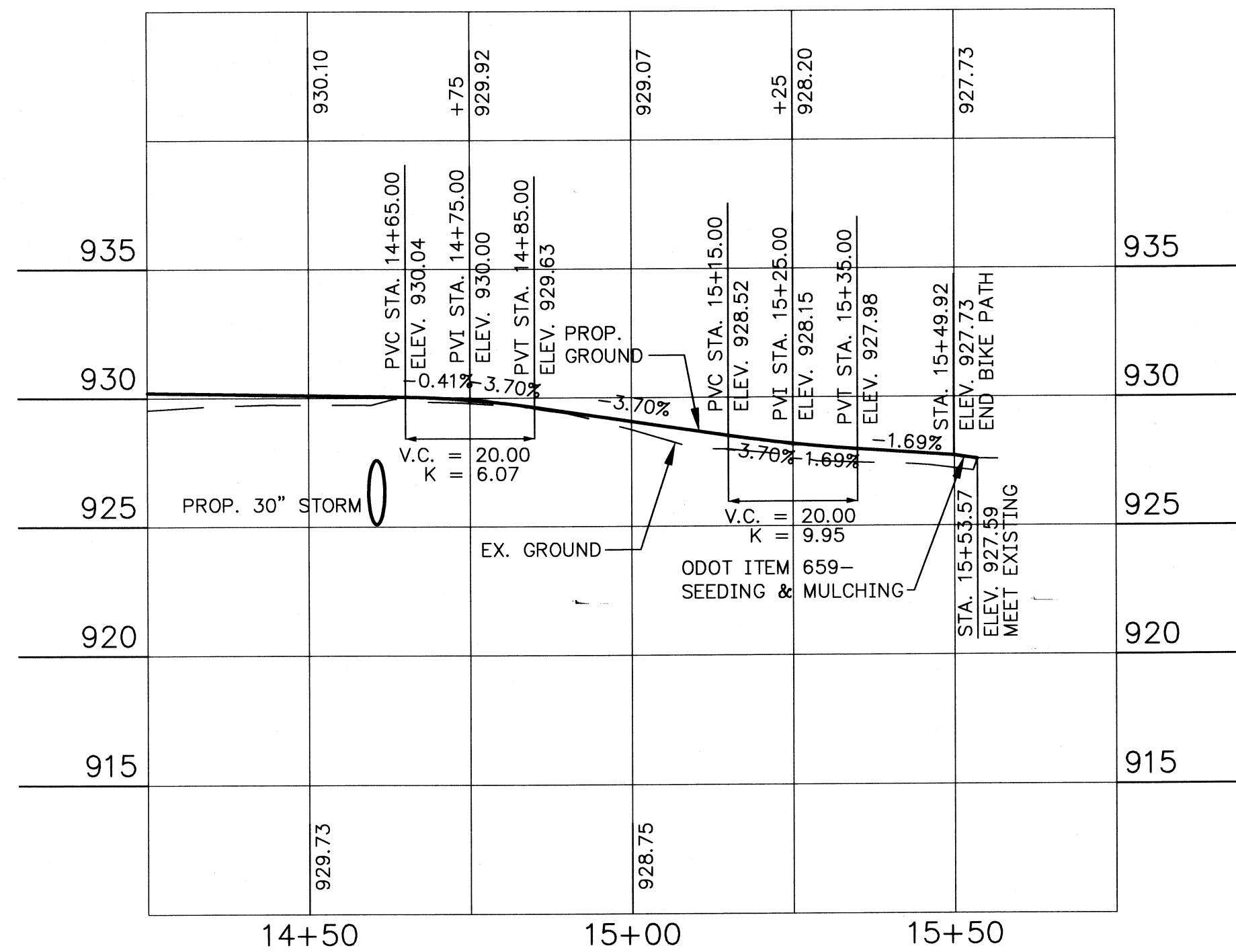
L:\Drawings\04145\dwg\GROA0PL4A.dwg January 07 2005 2:38pm By:Roger



- NOTES:**
1. FOR C/L CONSTRUCTION LEG STATIONING SEE SHT. 9
 2. FOR ALL C/L CONSTRUCTION CURVE DATA SEE SHT. 9
 3. FOR 10" SANITARY LATERAL PROFILE, SEE SHT. 13.
 4. SAFETY WARNING SIGNS AND SAFETY EQUIPMENT SHALL BE DESIGNED AND INSTALLED BY OTHERS PRIOR TO OPENING OF SITE FOR PUBLIC USE.
 5. SAFETY FENCING AND/OR BARRIER HEDGE SHALL BE DESIGNED AND INSTALLED BY OTHERS BETWEEN BIKE TRAIL/PEDESTRIAN ACCESS AREAS AND PONDS PRIOR TO OPENING OF SITE FOR PUBLIC USE.



MATCH LINE 14+25

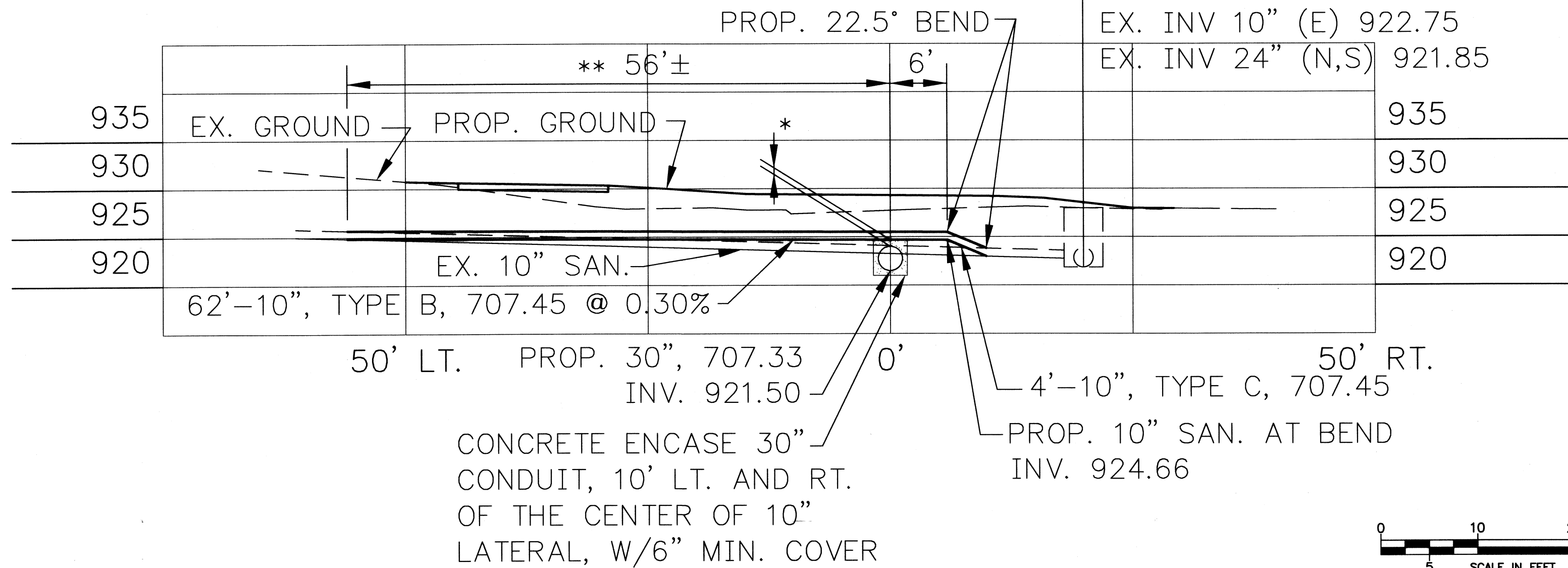


PIPE ENCASEMENT

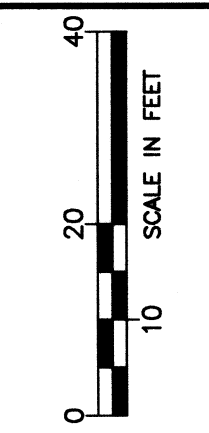
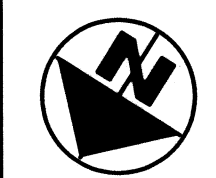
PAY FOR UNDER ITEM 603 CONDUIT TYPE B

** OR AS REQUIRED TO MEET EXISTING AT 0.30%

* 8" CLEARANCE (CROWN TO INVERT)



PROP. PROFILE OF 10" SANITARY LATERAL @ STA. 103+66.40, B/L



DRAWN DATE 12/04
REG 12/04
CHECKED DATE 12/04
BAB

CITY OF MASSILLON
FIRST STREET RETENTION PONDS
PLAN & PROFILE, ACCESS DRIVE STA. 14+25 TO STA. 15+00

McCOY ASSOCIATES, INC.
CONSULTING ENGINEERS
367 GHENT RD., SUITE 1A, AKRON, OH. 44333
PH. (330) 668-4727 FAX (330) 666-0778

13
13