

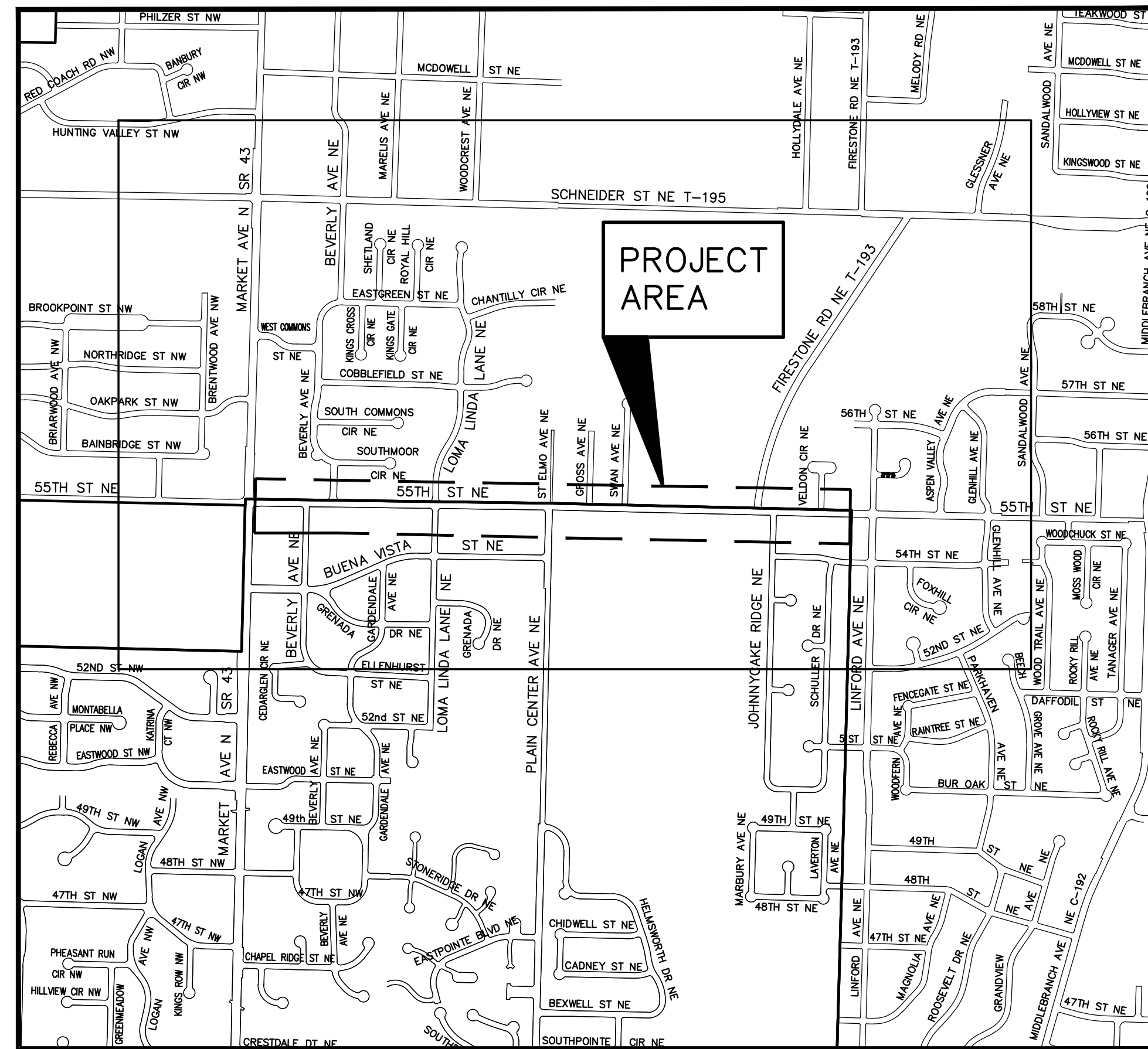
CITY OF CANTON

55TH STREET N.E. STORM SEWER PROJECT NO. G.P. 1125

*STARK COUNTY, STATE OF OHIO
AUGUST 2013*

INDEX OF SHEETS

TITLE SHEET	C1
ABBREVIATIONS AND SYMBOLS	C2
SCHEMATIC PLAN	C2A,C2B
TYPICAL SECTIONS	C3,C3A
GENERAL NOTES AND MISCELLANEOUS DETAILS	C4,C4A-C6A
MAINTENANCE OF TRAFFIC	C7
STORMWATER POLLUTION PREVENTION NOTES	C8
STORMWATER POLLUTION PREVENTION PLAN	C9-C9A
GENERAL SUMMARY	C10-C11
ROADWAY SUBSUMMARY	C12
DRAINAGE SUBSUMMARY	C13-13A
CALCULATIONS AND DRIVEWAY TABLE	C14
PLAN AND PROFILE 55TH STREET	C15-C25
CROSS SECTIONS 55TH STREET	C26-C50
PLAN AND PROFILE BEVERLY	C51-C52
PLAN AND PROFILE PLAIN CENTER	C53-C54
INTERSECTION DETAILS	C55-C56
CANTON STANDARDS	C57-C60



VICINITY MAP
SCALE: 1"=1000'

CITY OFFICIALS

MAYOR	WILLIAM J. HEALY II
DIRECTOR OF PUBLIC SERVICE	WARREN PRICE
CITY ENGINEER	DANIEL J. MOEGLIN
CITY TREASURER	ROBERT SCHIRACK
LAW DIRECTOR	JOSEPH MARTUCCIO

CITY COUNCIL

COUNCIL PRESIDENT	ALLEN SCHULMAN
WARD 1	GREG HAWK
WARD 2	THOMAS E. WEST
WARD 3	JAMES E. GRIFFIN
WARD 4	CHRIS SMITH
WARD 5	KEVIN FISHER
WARD 6	DAVID R. DOUGHERTY
WARD 7	JAMES MARIOL II
WARD 8	EDWARD MACK
WARD 9	FRANK MORRIS
AT LARGE	MARY M. CIRELLI
AT LARGE	JOE COLE
AT LARGE	JAMES BABCOCK

APPROVAL

2010 SPECIFICATIONS

THE 2010 STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, AND THE CITY OF CANTON SHALL GOVERN THIS IMPROVEMENT.

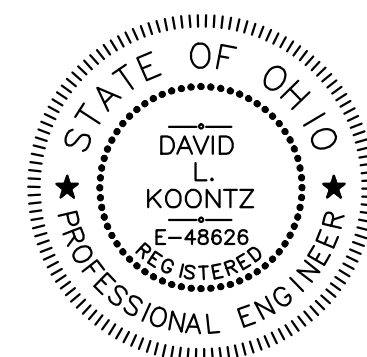
APPROVED: _____ DATE: _____

DANIEL J. MOEGLIN, P.E.
CITY ENGINEER

PLANS PREPARED BY:



220 MARKET AVENUE SOUTH, SUITE 750
CANTON, OH 44702
330-455-7733



DAVID L. KOONTZ
Reg. Engineer No. E-48626

DATE

UNDERGROUND UTILITIES
2 WORKING DAYS
BEFORE YOU DIG
1-800-362-2764
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS MUST BE CALLED DIRECTLY
1-800-925-0988
OIL & GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY CTI ENGINEERS, INC. WHICH SHALL BE DEEMED THE AUTHOR AND WHICH SHALL RETAIN ALL STATUTORY AND COMMON LAW RIGHTS, INCLUDING COPYRIGHTS. THIS DRAWING SHALL NOT BE SCANNED, COPIED, OR DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN CONSENT OF CTI ENGINEERS, INC. CTI ENGINEERS, INC. CANNOT GUARANTEE THAT ELECTRONIC COPIES OF THIS DRAWING ARE EXACT DUPLICATES OF THE SEALED ORIGINAL DRAWING. IN THE EVENT OF A CONFLICT BETWEEN AN ELECTRONIC COPY AND THE SEALED ORIGINAL, THE SEALED ORIGINAL SHALL GOVERN.

ABBREVIATIONS

A	ACP ASBESTOS CEMENT PIPE ADJT ADJUSTABLE AFF ABOVE FINISHED FLOOR ALT ALTERNATIVE @ AT ASPH ASPHALT AVG AVERAGE	E	FIG FIGURE FIN FINISHED FM FORCE MAIN FT FEET OR FOOT	R	RAD RADIUS RCP REINFORCED CONCRETE PIPE RD ROOF DRAIN RED REDUCER REINF REINFORCING REQ'D REQUIRED R&R REMOVE AND REPLACE R/W RIGHT OF WAY
B	BIP BLACK IRON PIPE BF BOTTOM FACE B/L BASELINE BM BENCHMARK BOS BOTTOM OF SLAB BOT BOTTOM	G	GALV GALVANIZED GEN GENERAL GM GAS MAIN GRD GRADE OR GRADING	S	SAN SLAB, SOUTH SCH SANITARY SEC SCHEDULE SEC SECTION SEG BLK SEGMENTAL SEWER BLOCK SEW SEWER SF SQUARE FEET SHT SHEET SJ SAW JOINT SPEC SPECIFICATION SQ SQUARE S STL STAINLESS STEEL STA STATION STD STANDARD STL STEEL STM STORM SEWER STR STORM SY SQUARE YARD
C	CB CATCH BASIN CF CUBIC FEET CI CAST IRON CIP CAST IRON PIPE C, C/L CENTERLINE C/C CENTERLINE TO CENTERLINE CL CLEAR CMP CORRUGATED METAL PIPE CO CLEAN OUT CON CONCENTRIC CONC CONCRETE CJ CONSTRUCTION JOINT CONTR JT CONTRACTION JOINT CONST CONSTRUCTION CPP CORRUGATED PLASTIC PIPE CY CUBIC YARD	H	HPT HIGH POINT I INVERT IP IRON PIN J JOINT L LINEAR FEET LPT LOW POINT LT LEFT	T	TF TOP FACE T TOP TOB TOP OF BANK TOS TOP OF SLAB T&B TOP AND BOTTOM TYP TYPICAL
D	DEMO DEMOLITION DIA DIAMETER DIP DUCTILE IRON PIPE DWG DRAWING	M	M MAIN MAX MAXIMUM MB MAILBOX MH MANHOLE MISC MISCELLANEOUS MIN MINIMUM MJ MECHANICAL JOINT MK MARK	V	VAR VARIES VCP VITRIFIED CLAY PIPE
E	EF EAST FACE EL ELEVATION EST ESTIMATED EW EACH WAY EX EXISTING	N	N NORTH NTS NOT TO SCALE	W	W WATER, WIDE, OR WEST WM WATER MAIN W/ WITH W/O WITHOUT
		O	OC ON CENTER OD OUTSIDE DIAMETER ODOT OHIO DEPARTMENT OF TRANSPORTATION OF OUTSIDE FACE OHU OVERHEAD UTILITIES		
		P	PE PLAIN END E PROPERTY LINE PRCP PRESTRESSED REINFORCED CONCRETE PIPE PSF POUNDS PER SQUARE FOOT PSI POUNDS PER SQUARE INCH PVMT PAVEMENT		

SITE PLAN SYMBOLS

	BORING SITE		STORM MANHOLE
	EXISTING FENCE		CATCH BASIN
	PROPOSED FENCE		SANITARY MANHOLE
	EXISTING GUARDRAIL, PROPOSED GUARDRAIL		POWER POLE
	PROPERTY LINE		POWER/LIGHT POLE
	CENTERLINE LINE		TELEPHONE POLE
	BASELINE		GUY WIRE ANCHOR
	RIGHT OF WAY LINE		TELEPHONE PEDESTAL
	PROPOSED CONTOUR		TELEPHONE MANHOLE/VAULT
	EXISTING CONTOUR		PAY TELEPHONE
	NEW GRADE SPOT ELEVATION		ELECTRIC METER
	EXISTING GRADE SPOT ELEVATION		GAS LINE MARKER
	EDGE OF WATER		GAS VALVE
	DRAINAGE FLOW		GAS METER
	DRILL HOLE FOUND		WATER VALVE
	MAG NAIL FOUND		HYDRANT
	P.K. NAIL FOUND		WATER LINE MARKER
	IRON BAR/PIPE FOUND		POST/BOLLARD
	MINE SPIKE FOUND		TRAFFIC PULL-BOX
	CONTROL POINT		SIGNAL SUPPORT POLE
	MONUMENT FOUND		TRAFFIC CONTROL PEDESTAL
	AXLE FOUND		SIGN
			DECIDUOUS TREE
			BUSH/SHRUB

TEXT LEGEND

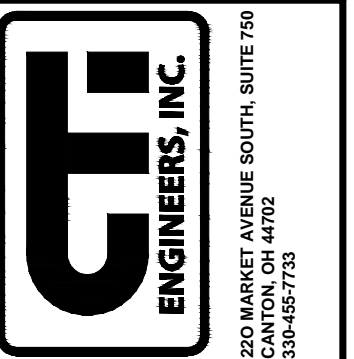
<i>EXISTING TEXT</i>	SLANTED AND LIGHTER TEXT - EXISTING FEATURES
PROPOSED TEXT	UPRIGHT AND BOLDER TEXT - PROPOSED WORK

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE CITY OF CANTON, OHIO. THE CITY OF CANTON, OHIO, ENGINEERS, INC. MAKES NO WARRANTY, EXPRESS OR IMPLIED, THAT THIS DRAWING OR ANY PART THEREOF IS ACCURATE OR COMPLETE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY AND COMPLETENESS OF THE INFORMATION PROVIDED HEREIN. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES.

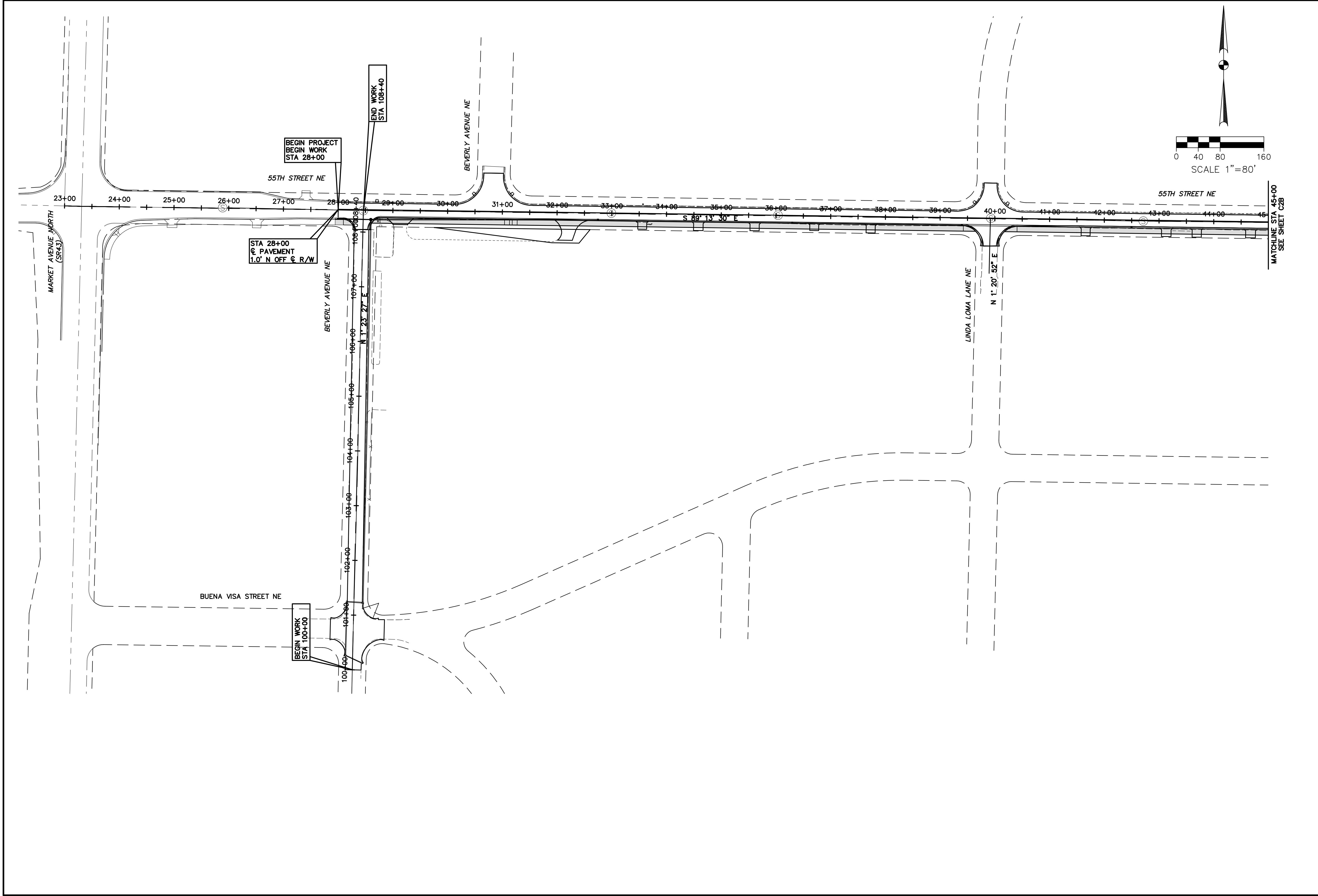
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

NO.	DESCRIPTIONS	DATE	BY	APP'D

CITY OF CANTON, OHIO
55TH STREET NE
STORM SEWER IMPROVEMENTS
ABBREVIATIONS AND SYMBOLS

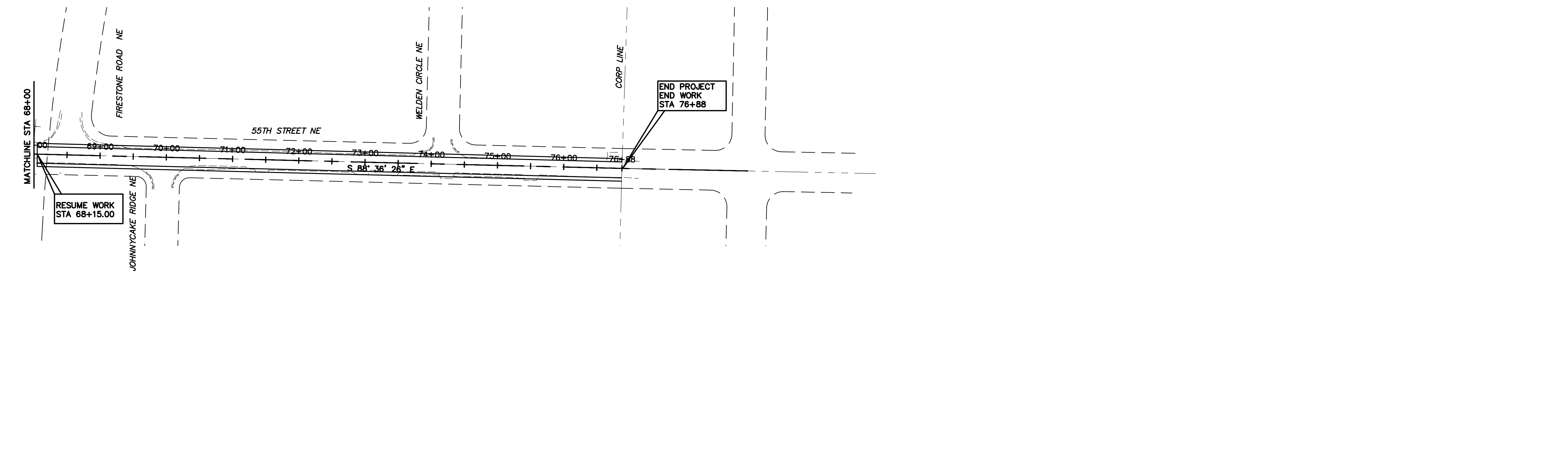
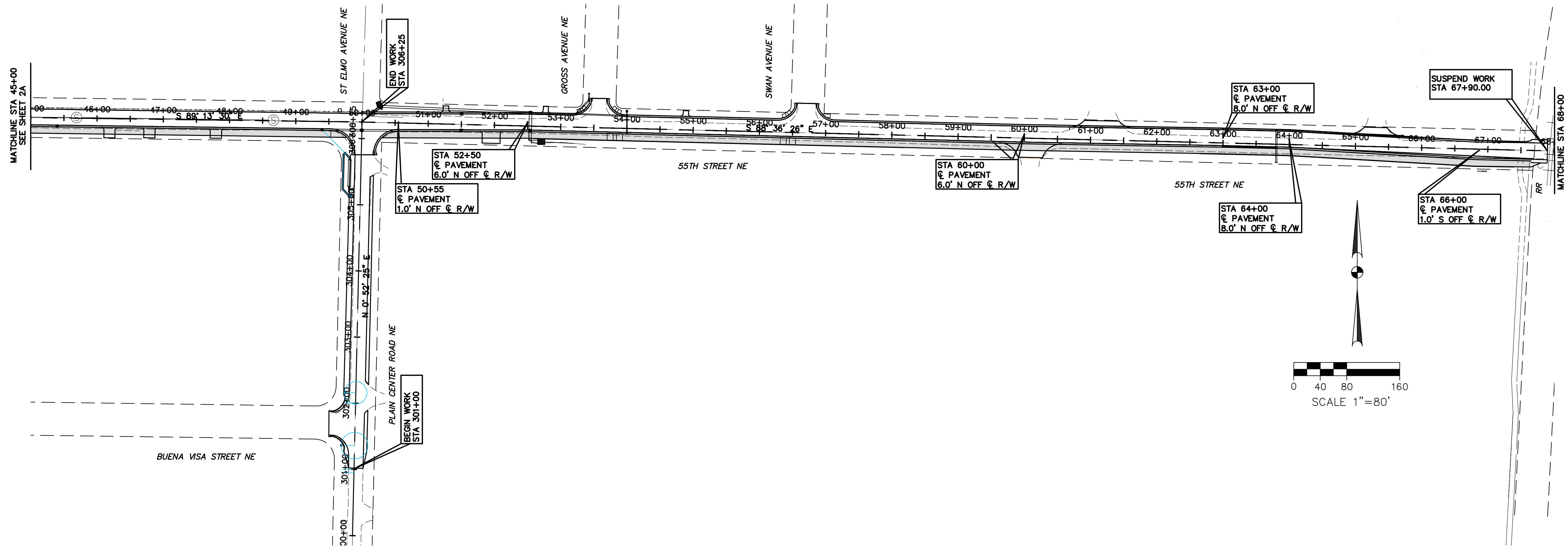


JOB NO. E10025
DATE 8/2013
SCALE NONE
SHEET NO. C2



CITY OF CANTON, OHIO 55TH STREET NE STORM SEWER IMPROVEMENTS SCHEMATIC PLAN		GF ENGINEERS, INC. <small>220 MARKET AVENUE SOUTH, SUITE 750 CANTON, OHIO 44702 330-452-7372</small>																												
DESIGNED BY	DLK	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">NO.</th> <th style="width: 65%;">DESCRIPTIONS</th> <th style="width: 10%;">DATE</th> <th style="width: 20%;">BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DESCRIPTIONS	DATE	BY																								
NO.	DESCRIPTIONS		DATE	BY																										
DRAWN BY	AJP																													
CHECKED BY	DLK																													
APPROVED BY	DLK																													
JOB NO.	E10025	DATE	8/2013																											
SCALE	AS NOTED	SHEET NO.	C2A																											

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR AND WHICH SHALL BE RETURNED TO THE AUTHOR UPON COMPLETION OF THE PROJECT. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE AUTHOR. THE AUTHOR MAKES NO WARRANTY, REPRESENTATION OR GUARANTEE THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION AND THE SEALED ORIGINAL SHALL GOVERN.



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR AND WHICH SHALL BE RETURNED TO THE AUTHOR UPON COMPLETION OF THE PROJECT. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. THE USER OF THIS DRAWING AGREES TO HOLD THE ENGINEER HARMLESS FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING REASONABLE ATTORNEY'S FEES, THAT MAY BE ASSERTED AGAINST THE ENGINEER OR HIS FIRM AS A RESULT OF THE USER'S USE OF THIS DRAWING. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND THE SEALED ORIGINAL SHALL GOVERN.

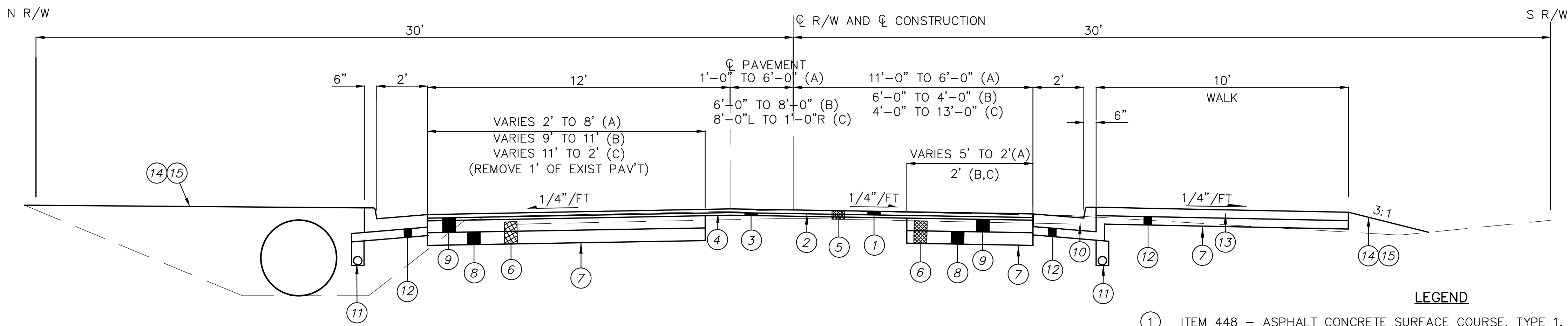
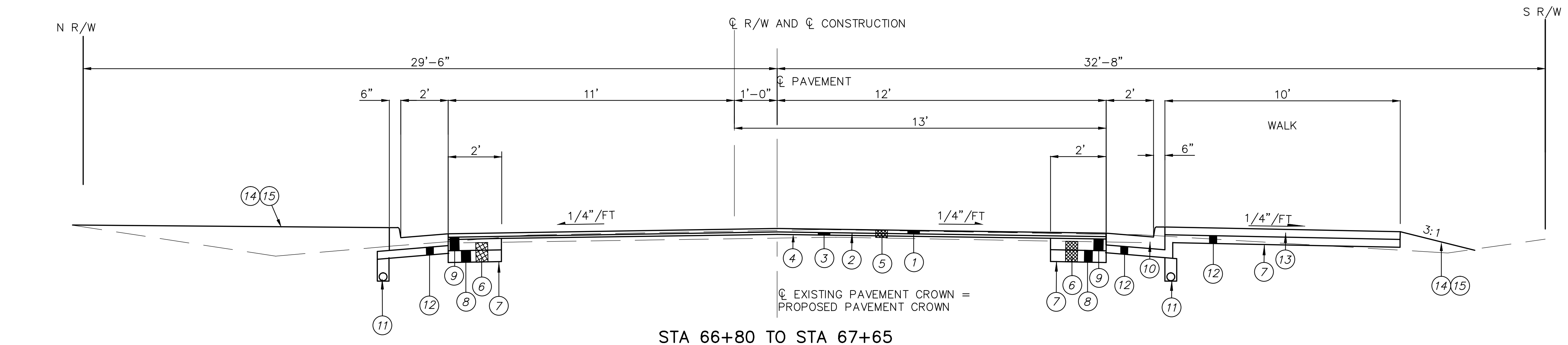
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS	
NO.	DESCRIPTIONS

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 SCHEMATIC PLAN



JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C2B



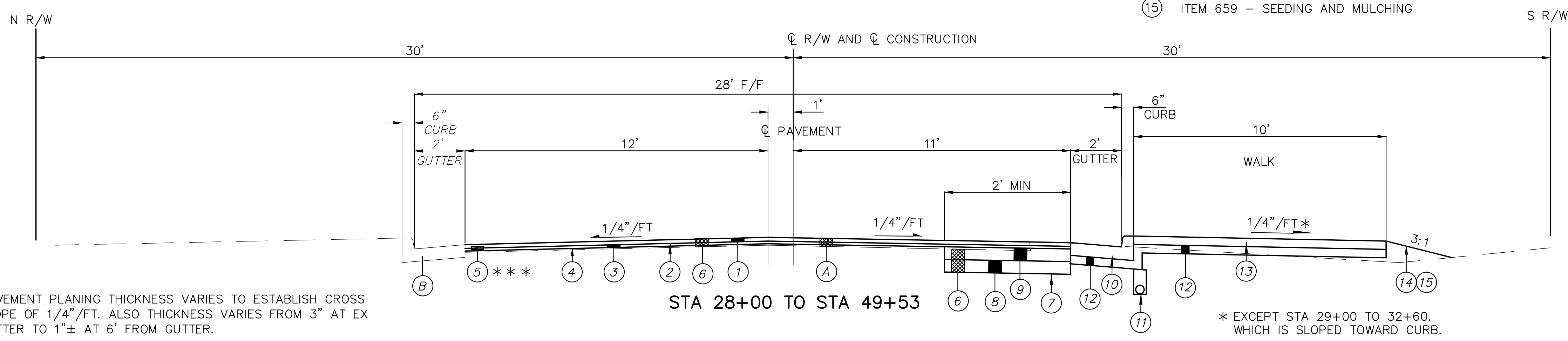
EXISTING LEGEND
 (A) EX. PAVEMENT (THICKNESS UNKNOWN)
 (B) EX. CURB AND GUTTER

STA 50+55 TO STA 52+50 (A)
 STA 60+00 TO STA 63+00 (B)
 STA 64+00 TO STA 66+80 (C)

** ASPHALT CONCRETE INTERMEDIATE COURSE THICKNESS VARIES TO ESTABLISH CROSS SLOPE OF 1/4"/FT ESPECIALLY STA. 50+55 TO STA. 66+80

LEGEND

- ① ITEM 448 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG. 70-22, T = 1.75"
- ② ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (0.04 GAL./S.Y)
- ③ ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG. 64-22 T = 1.0" +/- **
- ④ ITEM 254 - PAVEMENT PLANING, T = 1.0" +/- AS PER PLAN ***
- ⑤ ITEM 203 - TACK COAT (0.075 GAL./S.Y.)
- ⑥ ITEM 204 - EXCAVATION
- ⑦ ITEM 304 - SUBGRADE COMPACTION
- ⑧ ITEM 301 - AGGREGATE BASE, 6" THICK (8A 5" THICK)
- ⑨ ITEM 609 - ASPHALT BASE, 6" THICK (9A 3.25" THICK)
- ⑩ ITEM 605 - COMBINATION CURB AND GUTTER, TYPE 2 (TC EL = CL EL + 1" TYP)
- ⑪ ITEM 304 - 4" PIPE UNDERDRAIN W/ NO.8 STONE, AS PER STD DRAWING 32
- ⑫ ITEM 304 - AGGREGATE BASE, 4" THICK
- ⑬ ITEM 608 - 4" CONCRETE WALK
- ⑭ ITEM 653 - TOPSOIL FURNISHED AND PLACED, 3" THICK
- ⑮ ITEM 659 - SEEDING AND MULCHING



*** PAVEMENT PLANING THICKNESS VARIES TO ESTABLISH CROSS SLOPE OF 1/4"/FT. ALSO THICKNESS VARIES FROM 3" AT EX GUTTER TO 1"± AT 6' FROM GUTTER.

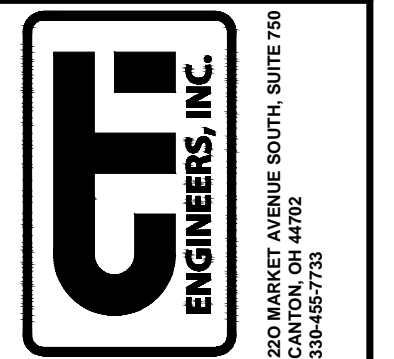
* EXCEPT STA 29+00 TO 32+60. WHICH IS SLOPED TOWARD CURB.

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. THE AUTHOR AND WHICH SHALL RETAIN ALL RIGHTS AND COMMON LAW RIGHTS, INCLUDING COPYRIGHTS, IN THIS DRAWING. NO PART OF THIS DRAWING IS TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER. THE ENGINEER'S LIABILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT AND DOES NOT INCLUDE ANY OTHER SERVICES. THE ENGINEER'S LIABILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT AND DOES NOT INCLUDE ANY OTHER SERVICES. THE ENGINEER'S LIABILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT AND DOES NOT INCLUDE ANY OTHER SERVICES.

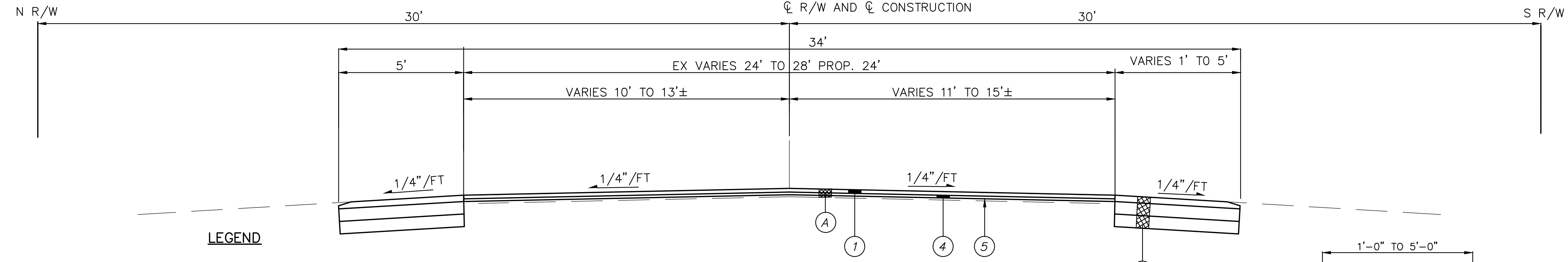
NO.	REVISIONS	DATE	BY	APP'D

DESIGNED BY: DLK
 DRAWN BY: AJP
 CHECKED BY: DLK
 APPROVED BY: DLK

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 TYPICAL SECTIONS



JOB NO.	E10025
DATE	8/2013
SCALE	NONE
SHEET NO.	C3



LEGEND

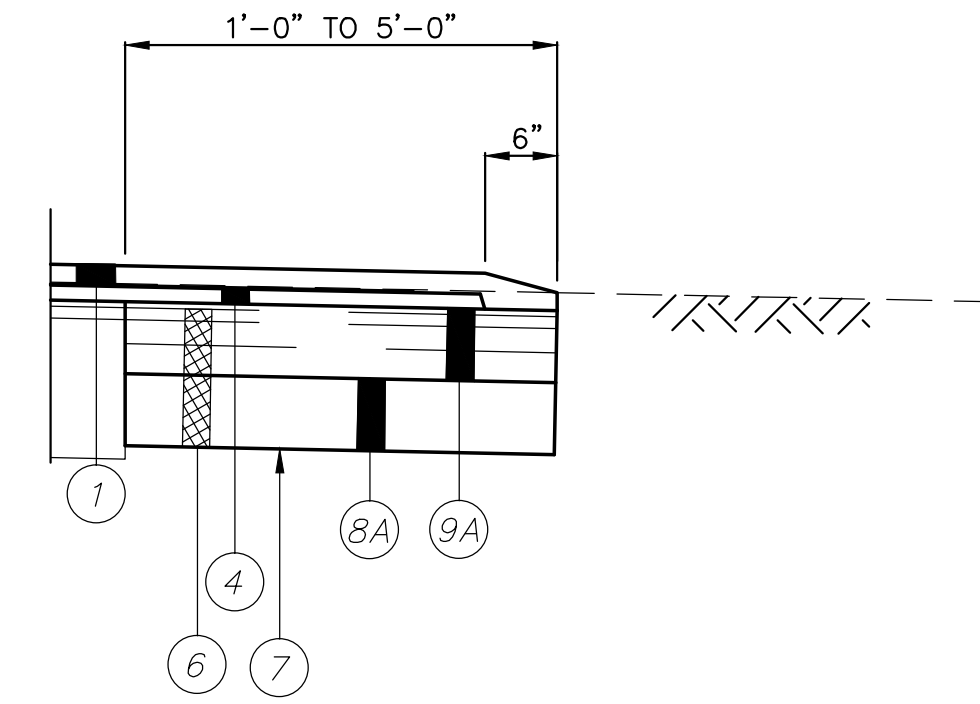
- ① ITEM 448 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG. 70-22, T = 1.75"
- ② ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (0.04 GAL./S.Y.)
- ③ ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG. 64-22 T = 1.0"+/- **
- ④ ITEM 254 - PAVEMENT PLANING, T = 1.0" +/- AS PER PLAN
- ⑤ ITEM 203 - TACK COAT (0.075 GAL./S.Y.)
- ⑥ ITEM 204 - EXCAVATION
- ⑦ ITEM 304 - SUBGRADE COMPACTION
- ⑧ ITEM 301 - AGGREGATE BASE, 6" THICK (8A 5" THICK)
- ⑨ ITEM 609 - ASPHALT BASE, 6" THICK (9A 3.25" THICK)
- ⑩ ITEM 605 - COMBINATION CURB AND GUTTER, TYPE 2 (TC EL = CL EL + 1" TYP)
- ⑪ ITEM 304 - 4" PIPE UNDERDRAIN W/ NO.8 STONE, AS PER STD DRAWING 32
- ⑫ ITEM 304 - AGGREGATE BASE, 4" THICK
- ⑬ ITEM 608 - 4" CONCRETE WALK
- ⑭ ITEM 653 - TOPSOIL FURNISHED AND PLACED, 3" THICK
- ⑮ ITEM 659 - SEEDING AND MULCHING

STA 67+65 TO STA 76+88
(SUSPEND WORK AT RAILROAD TRACKS)
STA 100+00 TO STA 108+04.62
(BEVERLY)
STA 300+00 TO STA 305+75.52
(PLAIN CENTER)

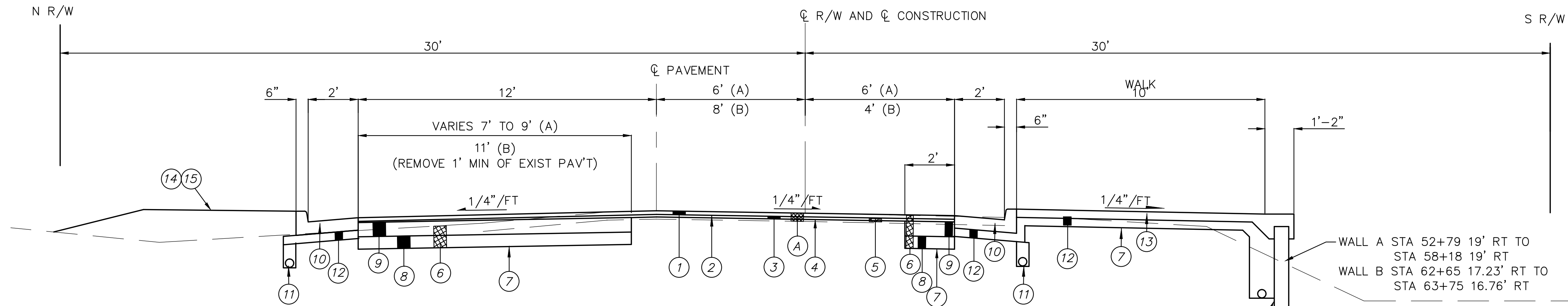
EXISTING LEGEND

- Ⓐ EX. PAVEMENT (THICKNESS UNKNOWN)
- Ⓑ EX. CURB AND GUTTER

** ASPHALT CONCRETE INTERMEDIATE COURSE
THICKNESS VARIES TO ESTABLISH CROSS SLOPE OF
1/4" / FT ESPECIALLY STA. 50+55 TO STA. 66+80

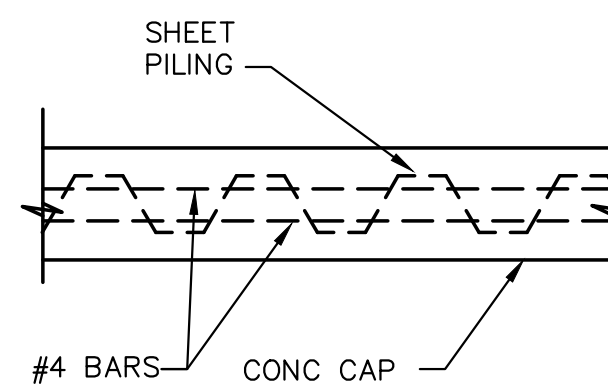


EDGE DETAIL
STA 67+69 TO STA 76+88



STA 52+50 TO STA 60+00 (A)
STA 63+00 TO STA 64+00 (B)

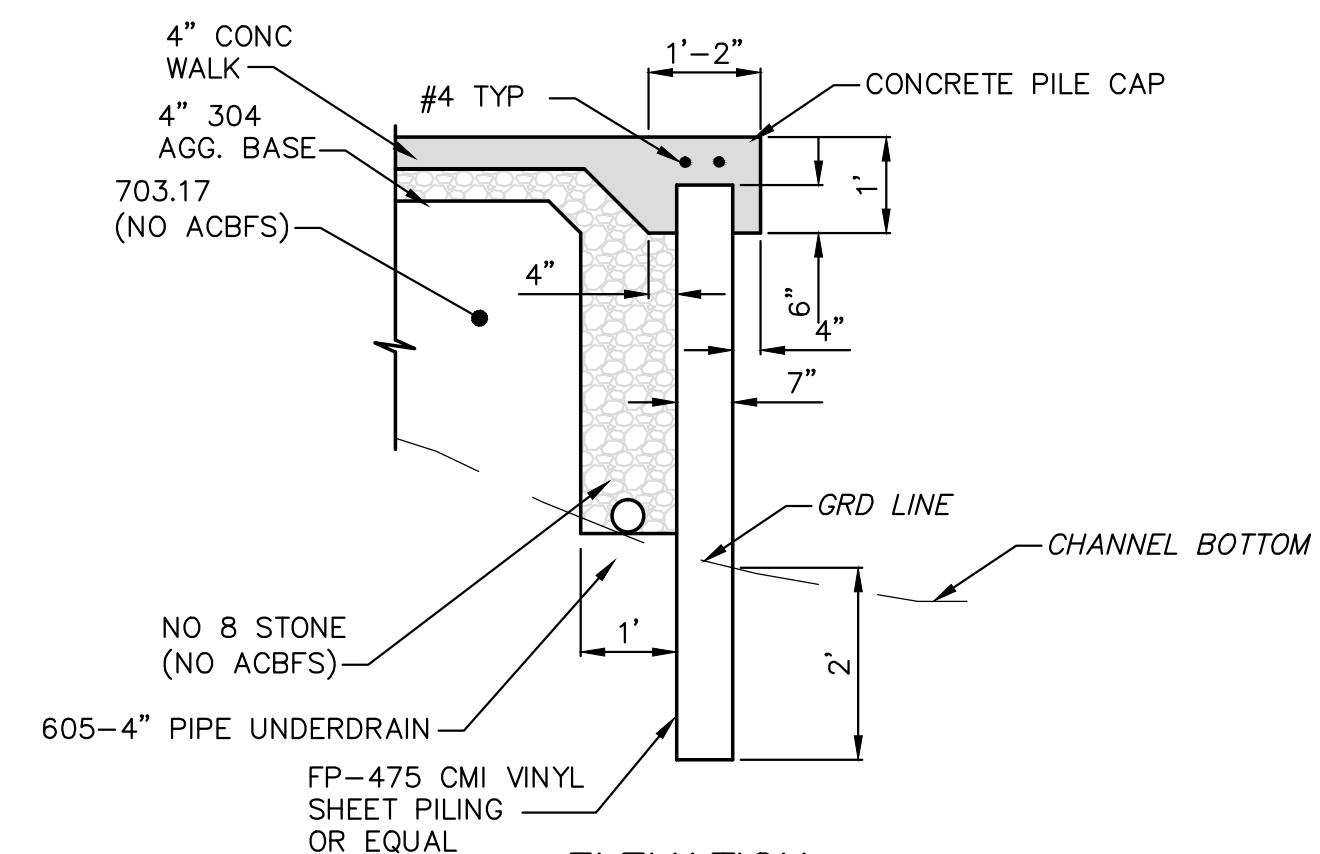
SEE RETAINING WALL
DETAIL THIS SHEET



PLAN

NOTES:

- 1. ACBFS - AIR COOLED BLAST FURNACE SLAG
- 2. PILE CAP TO BE POURED MONOLITHIC WITH WALK
- 3. 4" PIPE UNDERDRAIN TO HAVE POSITIVE OUTLET TO CHANNEL.



ELEVATION

RETAINING WALL DETAIL

SCALE: NONE

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED, OR TRANSMITTED IN ANY FORM OR BY ANY OTHER MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE CITY OF CANTON, OHIO. THE CITY OF CANTON, OHIO, DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, AND THE CITY OF CANTON, OHIO, SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING. THE ORIGINAL COPY AND THE SEALED ORIGINAL SHALL GOVERN.

NO.	REVISIONS	DATE	BY	APP'D

DESIGNED BY: DLK
DRAWN BY: AJP
CHECKED BY: DLK
APPROVED BY: DLK

CITY OF CANTON, OHIO
55TH STREET NE
STORM SEWER IMPROVEMENTS
TYPICAL SECTIONS



JOB NO.	E10025
DATE	8/2013
SCALE	NONE
SHEET NO.	C3A

VII. TRAFFIC (continued)

(E) EXISTING TRAFFIC SIGNALS:

WHERE WORK REQUIRES INTERFERENCE WITH EXISTING SIGNALIZATION IN THE INTERSECTIONS, ALL WORK SHALL BE COORDINATED THROUGH THE CITY ENGINEER. THE CONTRACTOR SHALL NOT ALTER ANY SIGNALIZATION WITHOUT THE CITY ENGINEER'S AUTHORIZATION.

(F) NEW TRAFFIC SIGNALIZATION:

ALL NEW OR MODIFIED TRAFFIC SIGNALIZATION AT INTERSECTIONS SHALL BE IN ACCORDANCE WITH CITY TRAFFIC ENGINEERING TRAFFIC CONTROL GENERAL NOTES AND ODOT SPECIFICATIONS; WITH SPECIAL EMPHASIS ON ODOT ITEMS 625, 632, 633, 732, AND 733 WHICH DEALS WITH TRAFFIC CONTROL.

(G) TRAFFIC CONTROL PLAN:

THE DEVELOPER/CONTRACTOR SHALL SUBMIT TO THE CITY ENGINEER A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH CITY SUPPLEMENTAL SPECIFICATION 01-00. DETOURS, IF NECESSARY, SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO PLAN SUBMISSION.

VIII. WATER MAIN / SERVICES:

(A) WATER MAINS/SERVICES:

ALL WATER MAINS, SERVICES AND APPURTENANCES SHALL BE DESIGNED AND CONSTRUCTED ACCORDING TO THE CITY OF CANTON WATER DEPARTMENT REQUIREMENTS AND SPECIFICATIONS IN EFFECT AT THE TIME OF CONSTRUCTION. ANY DEVIATION FROM THE PLANS AFFECTING THE WATER SYSTEM MUST BE APPROVED BY THE CANTON WATER DEPARTMENT.

FOR NEW DEVELOPMENTS INSIDE THE CITY, ALL WATER MAIN PIPE MATERIAL FITTINGS, BENDS, VALVES, VALVE BOXES, MEGALUGS, GASKETS AND HYDRANTS WILL BE SUPPLIED BY THE CITY OF CANTON. THE CONTRACTOR WILL BE RESPONSIBLE FOR TRANSPORTING MATERIALS TO THE PROJECT SITE. BACKFILL, BEDDING, THRUST BLOCKING, ETC. AND ASSOCIATED LABOR IS THE RESPONSIBILITY OF THE CONTRACTOR.

WATER MAINS SHALL BE CLASS 53 (12" AND UNDER) OR CLASS 54 (OVER 12") DUCTILE IRON MEETING AWWA C-151 WITH PUSH JOINTS. THE MINIMUM COVER OVER WATER MAINS SHALL BE 4'-6" FROM GROUND SURFACE TO THE BARREL OF THE PIPE. THE OUTSIDE SURFACE OF ALL DUCTILE IRON PIPE, FITTINGS, AND APPURTENANCES SHALL BE SHOP COATED WITH EITHER A COAL TAR OR ASPHALT BASE BITUMINOUS MATERIAL. IF THE COATING MATERIAL IS FOUND TO BE DAMAGED PRIOR TO THE PIPE TRENCH BEING BACKFILLED, THE CONTRACTOR SHALL PROVIDE AN ADDITIONAL APPROVED MATERIAL AS REQUIRED TO REPAIR THE DAMAGES. THE CONTRACTOR SHALL HAVE SUFFICIENT COATING MATERIAL AVAILABLE AT THE JOB SITE PRIOR TO LAYING THE PIPE. THE INTERIOR OF ALL PIPES AND FITTINGS SHALL BE LINED WITH DOUBLE CEMENT MORTAR AND SEAL COATED IN COMPLETE CONFORMANCE WITH AWWA C-104, OR THE LATEST REVISION. FITTINGS SHALL BE RATED FOR 250 PSI WORKING PRESSURE IN ACCORDANCE WITH AWWA C-153. PIPE LENGTHS MAY BE DEFLECTED AT THE JOINT IF REQUIRED, AT ONE-HALF THE DEGREE RECOMMENDED BY THE MANUFACTURER. WATER SERVICES WILL BE INSTALLED BY THE CITY OF CANTON AND PAID FOR BY THE OWNER/DEVELOPER. DISINFECTION OF WATER MAINS SHALL BE IN ACCORDANCE WITH AWWA C-651. ALL WATER LINE PRESSURE TESTING SHALL CONFORM TO AWWA C-600.

WATER MAINS SHALL BE INSTALLED AND BACKFILLED PER O.D.O.T. ITEM 638. WATERLINES LOCATED WITHIN THE LIMITS OF OR WITHIN A 1/2 TO 1 SLOPE OF EXISTING AND/OR PROPOSED ROADWAYS, PARKING AREAS, BUILDINGS, SIDEWALKS, AND/OR DRIVES SHALL BE INSTALLED AS TYPE B CONDUITS. ALL OTHER WATER MAINS MAY BE INSTALLED AS TYPE C CONDUITS. BEDDING SHALL BE AS SPECIFIED, EXCEPT THAT SLAG WILL NOT BE PERMITTED.

ALL BENDS, FITTINGS, TEES, VALVES, DEAD ENDS, ETC. SHALL BE SECURED EQUAL. POURED-IN-PLACED CONCRETE THRUST BLOCKS SHALL ALSO BE PROVIDED AT/FOR EACH BEND, FITTINGS, TEE, DEAD END, ETC. THIS BLOCKING SHALL BE CAREFULLY PLACED TO ENSURE IT IS POSITIONED PROPERLY TO WITHSTAND THE RESULTANT FORCES AT EACH BEND, FITTING, ETC. AND SHALL BEAR ON STABLE UNDISTURBED GROUND CAPABLE OF WITHSTANDING THE POTENTIAL LOADING.

IN ADDITION TO THE RESTRAINT OF ALL BENDS, FITTINGS, TEES, VALVES, DEAD END, ETC. THE CONTRACTOR SHALL ALSO SECURE/RESTRAIN ALL JOINTS FOR AT LEAST THREE (3) PIPE JOINTS (50 LF MIN.) ON BOTH SIDES OF EACH DEAD END, BEND, FITTING, VALVE, TEE, ETC. UTILIZING MEGALUGS, FIELD LOK GASKETS, OR APPROVED EQUAL.

THE CONTRACTOR SHALL PROVIDE 18" VERTICAL CLEARANCE BETWEEN PROPOSED WATERLINES AND ANY SANITARY SEWERS. WHEN 18" CLEARANCE BETWEEN A WATERLINE AND SANITARY SEWER CANNOT BE OBTAINED THE CONTRACTOR SHALL PROVIDE CONCRETE ENCASUREMENT AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE 12" MINIMUM CLEARANCE BETWEEN WATERLINE AND STORM SEWER. THE CONTRACTOR SHALL MAINTAIN TEN (10) FOOT HORIZONTAL CLEARANCE BETWEEN WATERLINES/SERVICES AND SANITARY SEWERS AND FOUR (4) FOOT HORIZONTAL CLEARANCE BETWEEN WATERLINES/SERVICES AND STORM SEWERS.

THE FIRE HYDRANT SETTING SHALL INCLUDE THE HYDRANT, ANCHOR TEE, VALVE, VALVE BOX, 6 INCH PIPING AND ALL FITTINGS NEEDED FOR PROPER INSTALLATION. FIRE HYDRANTS SHALL BE MUELLER A423 MEETING THE CITY OF CANTON WATER DEPARTMENT STANDARDS AND REQUIREMENTS. ALL COSTS FOR THE 6" PIPING ASSOCIATED WITH THE INSTALLATION OF FIRE HYDRANTS SHALL BE INCLUDED WITH THE FIRE HYDRANT PAY ITEM. ALL HYDRANTS WILL BE INSTALLED WITH THE PUMPER NOZZLE FACING THE STREET.

ALL WATER SERVICES MUST BE INSTALLED BEFORE ANY PAVEMENT FOR THE PROPOSED ROADWAYS HAS BEEN PLACED. CONTRACTOR IS NOT TO MAKE ANY SERVICE TAPS ON THE WATER MAIN. THE CANTON WATER DEPARTMENT WILL MAKE ALL SERVICE TAPS.

THE PROPOSED FACILITIES WILL MAINTAIN A MINIMUM 35 PSI PRESSURE DELIVERED TO THE CURB STOP DURING NORMAL OPERATING CONDITIONS.

BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS.

ALL DUCTILE IRON PIPE, INCLUDING FITTINGS AND APPURTENANCES BURIED UNDERGROUND, SHALL BE ENCASED WITH 8 MIL POLYETHYLENE FILM CONFORMING TO AWWA C105.

POLYETHYLENE WATER MAIN AND SERVICE TUBING 2" AND UNDER SHALL BE COPPER TUBE SIZE AND MEET STANDARDS ASTM-D2737 PE3408 AND AWWA C906. THE ONLY ACCEPTED TUBING IS CP CHEM PERFORMANCE PIPE DRISCOPEX 5100-ULTRA-LINE.

THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY PRECAUTIONS TO PROTECT AND MAINTAIN IN SERVICE, ANY EXISTING WATER MAINS EXPOSED DURING CONSTRUCTION.

ANY WATER SERVICE LINE THAT IS BROKEN, CUT OR OTHERWISE DAMAGED, SHALL BE REPLACED FROM THE CORPORATION STOP TO THE CURB STOP WITH A SINGLE PIECE OF PLASTIC SERVICE LINE (DRISCOPEX). NO SPLICING OF THE SERVICE LINE WILL BE PERMITTED.

SERVICE BRANCHES WILL BE INSTALLED AS PER O.D.O.T ITEM 638.16 WITH THE FOLLOWING EXCEPTIONS:
 1. WHEN A SERVICE BRANCH IS DISTURBED FOR LOWERING, RAISING, EXTENDING OR SHORTENING ON THE PROPERTY SIDE ON THE SERVICE STOP, IT SHALL BE REPLACED WITH NEW MATERIALS FROM THE CORPORATION STOP TO THE SERVICE STOP.

IN A STREET IMPROVEMENT, NO EXISTING WATER CURB BOX WILL BE LEFT IN THE PAVEMENT, CURB AND GUTTER OR SIDEWALK. THE CURB BOX WILL BE MOVED TO A SUITABLE LOCATION DETERMINED BY THE CANTON WATER DEPARTMENT. WHEN THE CURB BOX IS MOVED ALL NEW MATERIAL WILL BE USED FROM THE CORPORATION STOP TO THE CURB STOP WHICH IS A SINGLE PIECE OF PLASTIC SERVICE LINE (DRISCOPEX). NO SPLICING OF THE SERVICE LINE WILL BE PERMITTED. A NEW TAP (CORPORATION STOP) AND CURB STOP AND BOX MAY ALSO BE REQUIRED. THE DETERMINATION WILL BE MADE BY THE CANTON WATER DEPARTMENT.

ALL WATER MAINS WILL BE INSTALLED UNDER THE PAVEMENT WITH A MINIMUM OF 3 FEET FROM THE EDGE OF PAVEMENT OR THE CURB AND/OR GUTTER. IN EXISTING STREETS, A SAW CUT WILL BE MADE TO ENSURE A CLEAN EDGE.

WHEN AN EXISTING WATER MAIN MUST BE SHUT DOWN TO PERFORM REQUIRED WORK, THE PROPERTIES TO BE EFFECTED SHALL BE GIVEN A MINIMUM 24 HOUR NOTICE OF SAID SHUT DOWN. THE WORK WILL BE SCHEDULED AND COORDINATED TO MINIMIZE THE TIME THE MAIN IS OUT OF SERVICE.

THE CONTRACTOR SHALL NOTIFY THE CITY 48 HOURS IN ADVANCE OF ANY SHUT DOWN OF AN EXISTING WATER MAIN. THE CONTRACTOR WILL NOT OPERATE ANY VALVES. VALVES WILL BE OPERATED BY CANTON WATER DEPARTMENT PERSONNEL ONLY. VALVES DAMAGED BY THE CONTRACTOR'S OPERATION WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

ALL VALVE BOXES WILL BE ADJUSTED TO FINAL GRADE OF THE PAVEMENT WHEN THE PROJECT IS COMPLETED.

ANY COMMERCIAL OR INDUSTRIAL WATER SERVICE MUST HAVE SITE AND PLUMBING PLANS SUBMITTED TO THE CANTON WATER DEPARTMENT ENGINEERING OFFICE FOR APPROVAL. THE CANTON WATER DEPARTMENT WILL REVIEW THE PLANS AND MAKE COMMENTS. CORRECTIONS MUST BE MADE AND RESUBMITTED. PRICE ESTIMATES WILL NOT BE ISSUED AND SERVICE TAPS WILL NOT BE MADE UNTIL THE PLANS HAVE BEEN APPROVED BY THE CANTON WATER DEPARTMENT.

IX. POST CONSTRUCTION INCIDENTALS

(A) AS-BUILT DRAWINGS:

AS-BUILT REPRODUCIBLE MYLARS SHALL BE PROVIDED TO THE CITY OF CANTON BY THE DESIGN ENGINEER AT THE COMPLETION OF THE PROJECT. AS-BUILT INFORMATION CONSISTS OF POST-CONSTRUCTION FIELD SURVEY DATA OF THE LOCATION, FLOWLINE ELEVATIONS, AND TOP-OF-GRATE/RIM ELEVATIONS FOR ALL STORM AND SANITARY STRUCTURES CONSTRUCTED AND/OR IMPACTED BY THE PROJECT.

FOR PRIVATE PROJECTS, THE CONSTRUCTION BOND WILL NOT BE RELEASED UNTIL THE AS-BUILT DRAWINGS HAVE BEEN ACCEPTED.

(B) PROPOSED MONUMENTATION:

THE DEVELOPER'S/CONTRACTOR'S SURVEYOR SHALL NOTIFY THE CITY ENGINEER IN WRITING UPON THE COMPLETION OF MONUMENTS BEING SET AS PER PLAN OR RECORD PLAT.

(C) RELEASE OF RETAINER/BONDS:

PRIOR TO THE RELEASE OF RETAINER/CONSTRUCTION BOND BY THE CITY OF CANTON, THE CONTRACTOR SHALL HAVE COMPLETED THE ENGINEER'S PROJECT PUNCHLIST AND SUBMIT FINAL WAIVER OF LIEN, IN ACCORDANCE WITH CITY SS 01-00.

OUPS REFERENCE NUMBERS PRE-PLANNING
OUPS REFERENCE # A130801902 55TH STREET NE, SOUTHSIDE
OUPS REFERENCE # A130801909 55TH STREET NE, NORTHSIDE
OUPS REFERENCE # A130801912 BEVERLY AVE, NE
OUPS REFERENCE # A130801920 PLAIN CENTER AVE, NE

DEOG NOTE:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE LATERAL AND SUBJACENT SUPPORT OF DOMINION'S PIPELINE(S), IN COMPLIANCE TO 29 CFR, PART 1926, SUBPART P, (SAFE EXCAVATION & SHORING). ONE-FOOT MINIMUM VERTICAL AND HORIZONTAL CLEARANCE MUST BE MAINTAINED BETWEEN DOMINION EAST OHIO'S (DEO) EXISTING PIPELINE(S) AND ALL OTHER IMPROVEMENTS. EXTREME CARE SHOULD BE TAKEN NOT TO HARM ANY DEO FACILITY (PIPELINES, ETC.) OR APPURTENANCE (PIPE COATING, TRACER WIRE, CATHODIC PROTECTION TEST STATION WIRES & DEVICES, VALVE BOXES, ETC.). DEO FACILITIES MUST BE PROTECTED WITH A TARP DURING BRIDGE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE AND LIABLE FOR ENSURING THAT ALL DEO EXISTING FACILITIES, ABOVE AND BELOW GROUND, REMAIN UNDAMAGED, ACCESSIBLE AND IN WORKING ORDER. THE CROSSING OF DEO'S PIPELINE WITH ANOTHER STEEL FACILITY MAY CREATE A POTENTIAL CORROSION ISSUE FOR THE PROPOSED FACILITY AND THE EXISTING DEO FACILITY. PLEASE CONTACT DOMINION'S CORROSION DEPARTMENT: DAVE CUTLIP (330-266-2121), RICK McDONALD (330-266-2122), OR AL HUMRICHOUSSER (330-478-3757).

DEO = THE EAST OHIO GAS COMPANY, DBA DOMINION EAST OHIO, 1-800-362-7557.

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY CITY ENGINEERING WHICH SHALL BE RETURNED TO THE AUTHOR AND WHICH SHALL RETAIN ALL STATUTORY RIGHTS. THIS DRAWING IS NOT TO BE REPRODUCED, COPIED, OR DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN PERMISSION OF CITY ENGINEERING. CITY ENGINEERING, INC. CANNOT GUARANTEE THAT ELECTRONIC COPIES OF THIS DRAWING ARE AN EXACT REPRESENTATION OF THE ORIGINAL DRAWING. IN THE EVENT OF A CONFLICT BETWEEN AN ELECTRONIC COPY AND THE SEALED ORIGINAL, THE SEALED ORIGINAL SHALL GOVERN.

NO.	DESCRIPTIONS	REVISIONS	
		DATE	BY

DESIGNED BY DLK	APP'D BY
DRAWN BY AJP	DATE
CHECKED BY DLK	
APPROVED BY DLK	



CITY OF CANTON, OHIO 55TH STREET NE
STORM SEWER IMPROVEMENTS GENERAL NOTES
JOB NO. E10025
DATE 8/2013
SCALE NOT TO SCALE
SHEET NO. C6

ITEM SPECIAL – SANITARY SEWER LATERAL RELOCATION, AS PER PLAN

THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPLACING A PORTION OF THE SANITARY SEWER LATERAL WHERE IT CONFLICTS WITH THE PROPOSED STORM SEWER. THE SIZE AND TYPE OF PIPE MATERIAL SHALL BE EQUAL TO, OR BETTER THAN, THE EXISTING PIPE, AND THE MATERIALS AND METHOD OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE CITY OF CANTON SPECIFICATIONS AND AS FOLLOWS:

- ALL SANITARY GRAVITY SEWER SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 IN ACCORDANCE WITH ASTM D-3034. JOINTS SHALL CONFORM TO ASTM D 3212. BEDDING AND BACKFILL SHALL BE IN ACCORDANCE WITH CITY STD. 19 "UTILITY TRENCH REQUIREMENTS".
- ALL CONNECTIONS TO THE NEW LATERALS SHALL BE INSTALLED WITH A MANUFACTURED WYE, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
- THE MINIMUM/ MAXIMUM SLOPE OF THE LATERAL 1/8" TO 1/4" PER FOOT (1% TO 2%), UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
- ALL EXISTING SANITARY LATERALS TO BE RELOCATED SHALL BE REPLACED TO THE RIGHT OF WAY. THE COST OF OF ALL FITTINGS, BENDS WYES, ECT SHALL BE INCLUDED IN THE UNIT COST FOR EACH LATERAL.
- ALL CONNECTIONS FROM THE EXISTING PIPE TO NEW PIPE SHALL BE MADE USING FURNO CO STRONGBACK COUPLERS, OR COMPARABLE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- EXISTING SANITARY LATERAL UNCOVERED AND BEING REPLACED BY NEW LINES AT DIFFERENT ALIGNMENTS SHALL BE PLUGGED AND ABANDONED IN PLACE. THE COST FOR THE ABANDONMENT SHALL BE INCLUDED IN THE UNIT PRICE OF THE RELOCATION.

PAYMENT SHALL BE BASED ON THE ACTUAL LENGTH OF PIPE REPLACED.

ITEM SPECIAL – SANITARY SEWER LATERAL RELOCATION, AS PER PLAN SEE C13, C13A

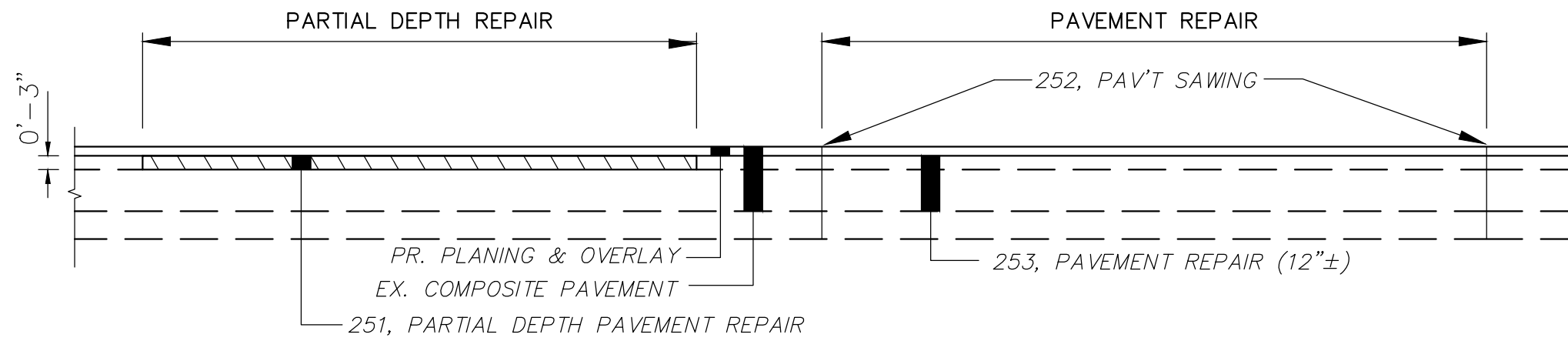
ITEM SPECIAL – STORM DRAIN CONNECTION, AS PER PLAN

THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF CONNECTING AN EXISTING STORM DRAIN TO THE PROPOSED GUTTER AND/OR STORM SEWER. THE SIZE AND TYPE OF PIPE MATERIAL AND THE MATERIALS AND METHOD OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE CITY OF CANTON STANDARD DRAWING NO. 23 OR STANDARD DRAWING NO. 24. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF PIPES CONNECTED.

ITEM SPECIAL – STORM DRAIN CONNECTION, AS PER PLAN 20 EACH

ITEM 201 – CLEARING AND GRUBBING

THIS ITEM OF WORK SHALL INCLUDE THE REMOVAL OF PERSONAL PROPERTY WITHIN THE RIGHT OF WAY. THIS PERSONAL PROPERTY SHALL BE SET BEHIND THE RIGHT OF WAY LINE FOR REUSE BY THE PROPERTY OWNER. THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 201 – CLEARING AND GRUBBING.



ITEM 251 – PARTIAL DEPTH PAVEMENT REPAIR

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPAIRING EXISTING LOCATIONS EXHIBITING SURFACE DETERIORATION AND PLACING 3"± OF ITEM 448 ASPHALT CONCRETE, TYPE 2. THE ASPHALT CONCRETE SHALL BE COMPACTED WITH A TYPE 1 PNEUMATIC TIRE ROLLER AND A STEEL WHEEL ROLLER AS PER 401.13. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITH THE PROJECT. ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. THE REMOVAL MAY BE BY MILLING MACHINE OR BY SAW-CUTTING AND EXCAVATING; IN EITHER CASE, THE COST OF REMOVAL IS INCLUDED IN THE PRICE BID FOR THE REPAIR. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 7 DAYS OF THE COMPLETION OF MAINLINE PLANING. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REPAIR.

251, PARTIAL DEPTH PAVEMENT REPAIR 100 SQ YD

ITEM 253 – PAVEMENT REPAIR

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 12"± 301 ASPHALT CONCRETE BASE, PG64-22. THE MAXIMUM COMPACTED DEPTH OF ANY ONE LAYER SHALL BE 6 INCHES. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 7 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. THE REMOVAL MAY BE BY MILLING MACHINE OR BY SAW-CUTTING AND EXCAVATING; IN EITHER CASE, THE COST OF REMOVAL IS INCLUDED IN THE PRICE BID FOR THE REPAIR. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED TO THE LIMITS DESIGNED BY THE ENGINEER.

253, PAVEMENT REPAIR 100 CU YD

ITEM 604 CURB INLET CATCH BASIN, CITY STD. NO. 1, AS PER PLAN

ITEM 604 CURB INLET CATCH BASIN, CITY STD. NO. 1 DOUBLE

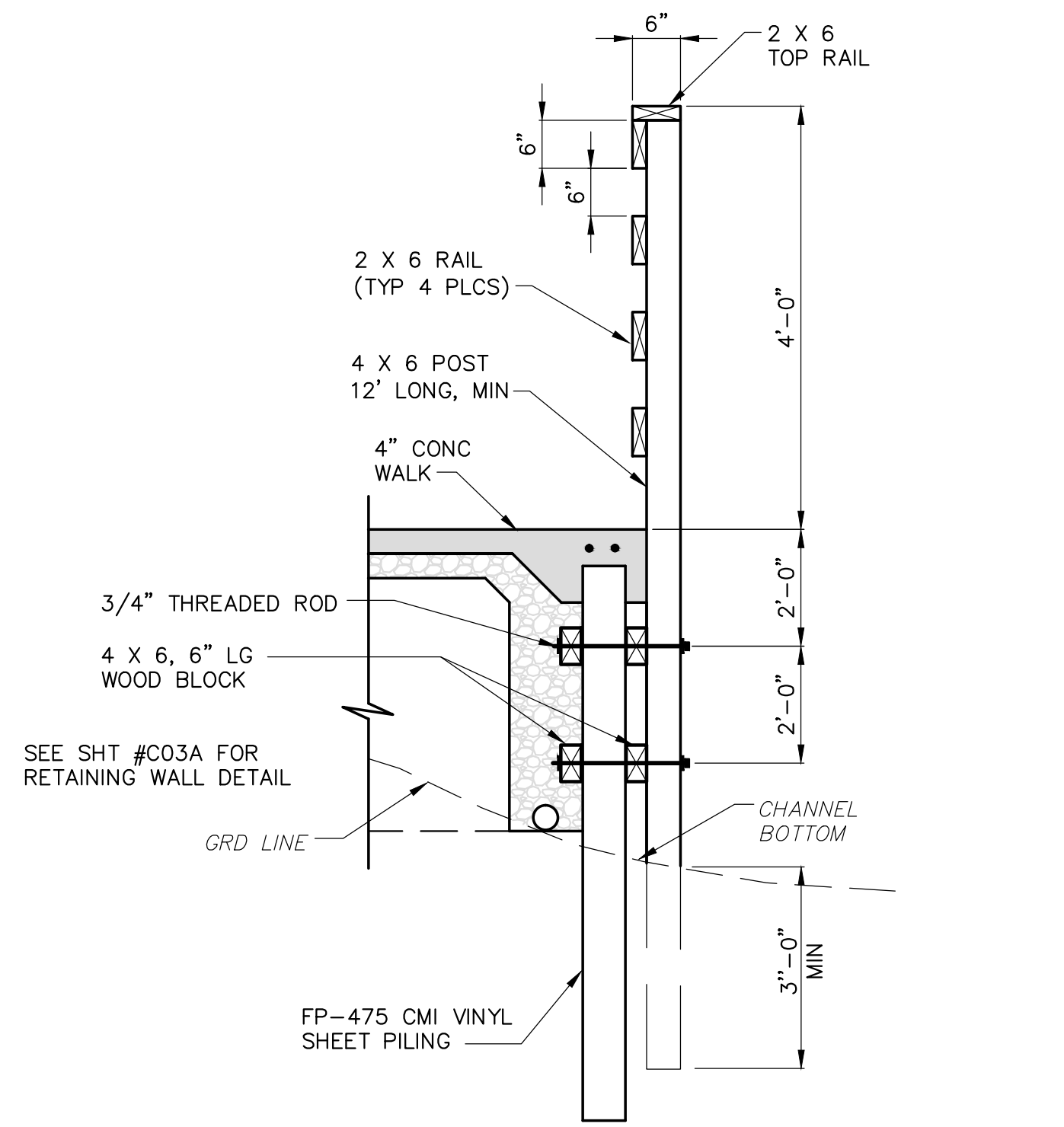
ITEM 604 CURB INLET CATCH BASIN, CITY STD. NO. 1 DOUBLE, AS PER PLAN

THESE ITEMS SHALL CONFORM TO CITY STANDARD DRAWING NO. 1, WITH MODIFICATIONS AS REQUIRED TO ACCOMMODATE A LARGER THROUGH PIPE AND/OR A DOUBLE GRATE AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING FOR EACH CATCH BASIN TO THE CITY ENGINEER FOR APPROVAL.

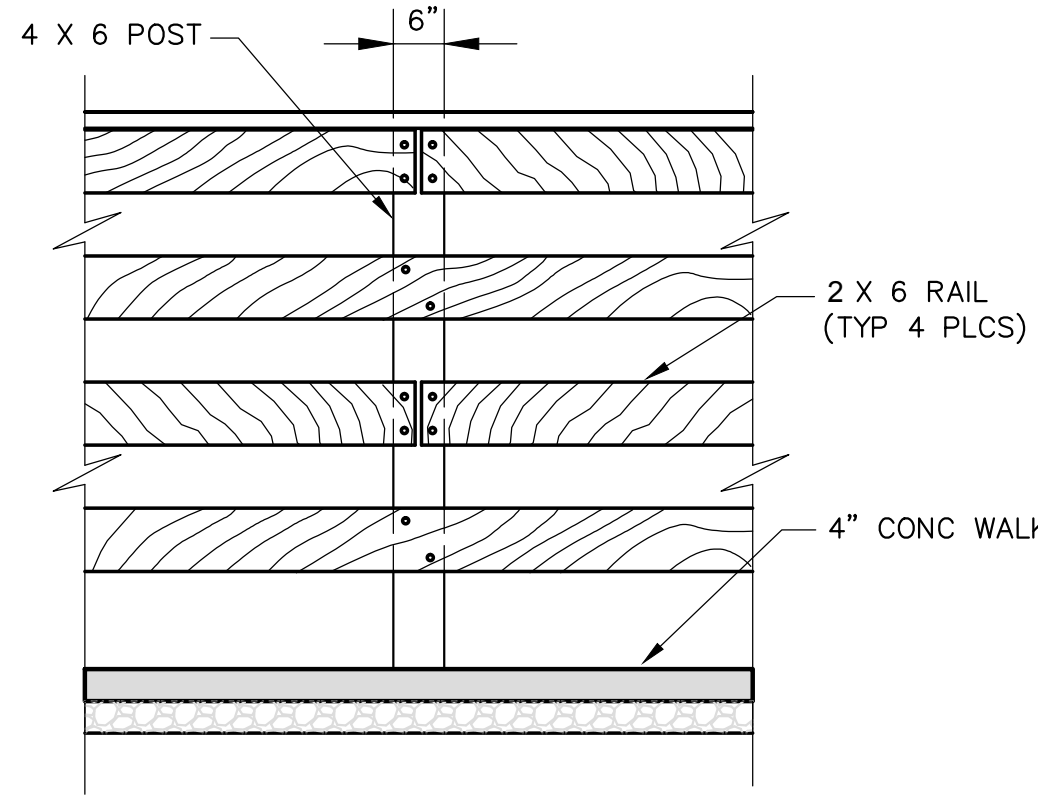
ITEM SPECIAL – WOODEN FENCE, AS PER PLAN

THIS ITEM SHALL CONSIST OF PROVIDING AND INSTALLING A WOODEN FENCE ALONG THE SIDEWALK ALONG AND APPROACHING THE SHEET-PILE RETAINING WALL. THE SIZE AND TYPE OF FENCE MATERIAL AND METHOD OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE DETAIL DRAWING SHOWN HEREIN. PAYMENT SHALL BE BASED ON THE ACTUAL LENGTH OF FENCE CONSTRUCTED.

ITEM SPECIAL – WOODEN FENCE, AS PER PLAN 1,056 FEET



SECTION



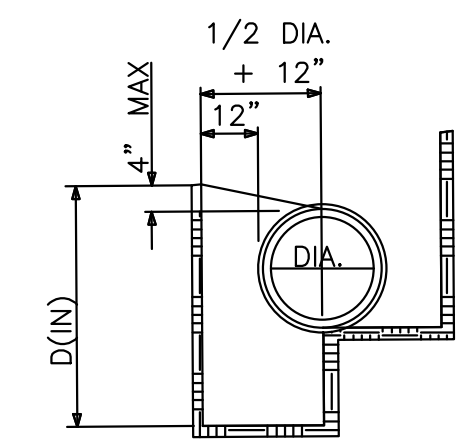
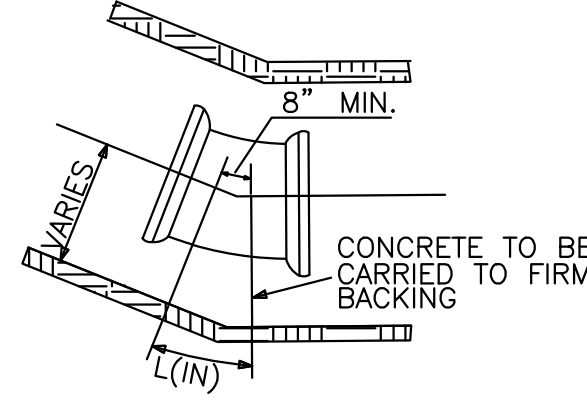
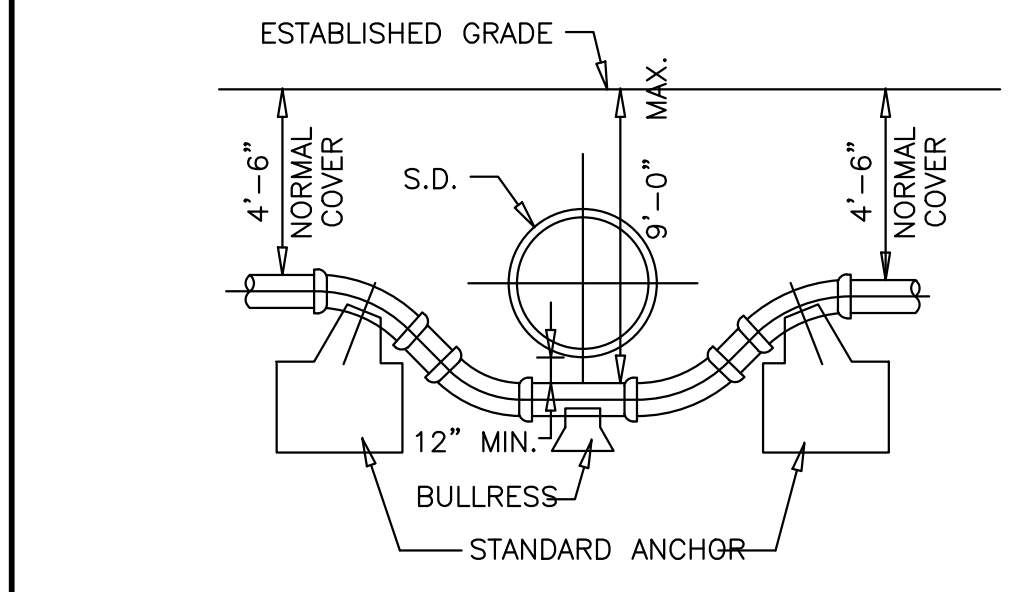
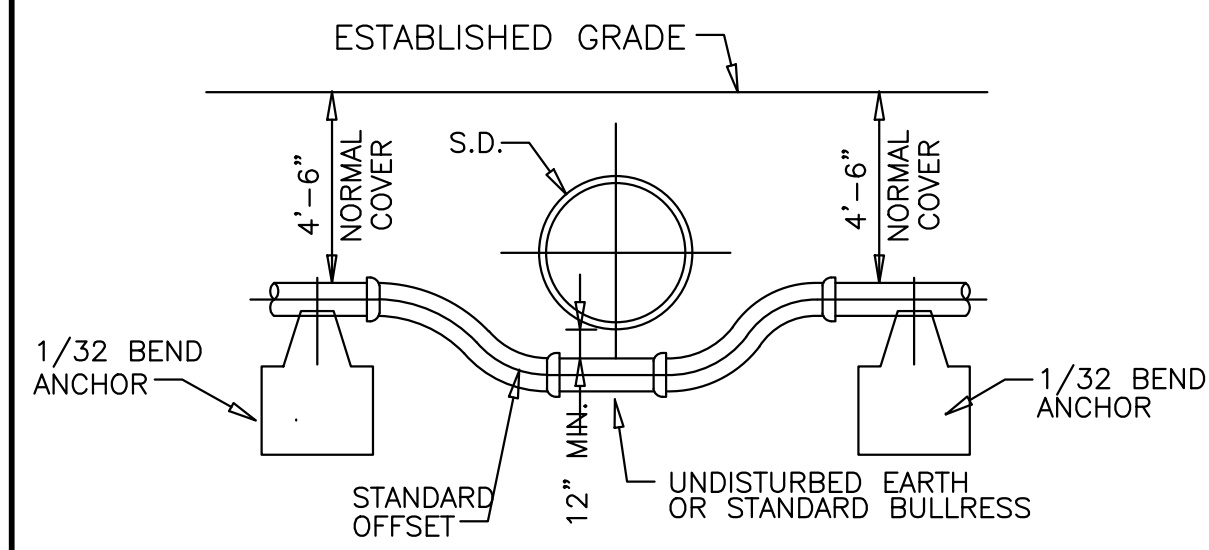
ELEVATION

TREATED LUMBER:

- RAILS: 2 X 6 X 8'-0" LG
- TOP RAIL: 2 X 6 X 8'-0" LG
- POSTS: 4 X 6 @ 8'-0" C/C
- SCREWS: #10 X 3" COUNTERSINKING-HEAD STAINLESS STEEL DECK SCREWS

FENCE DETAIL

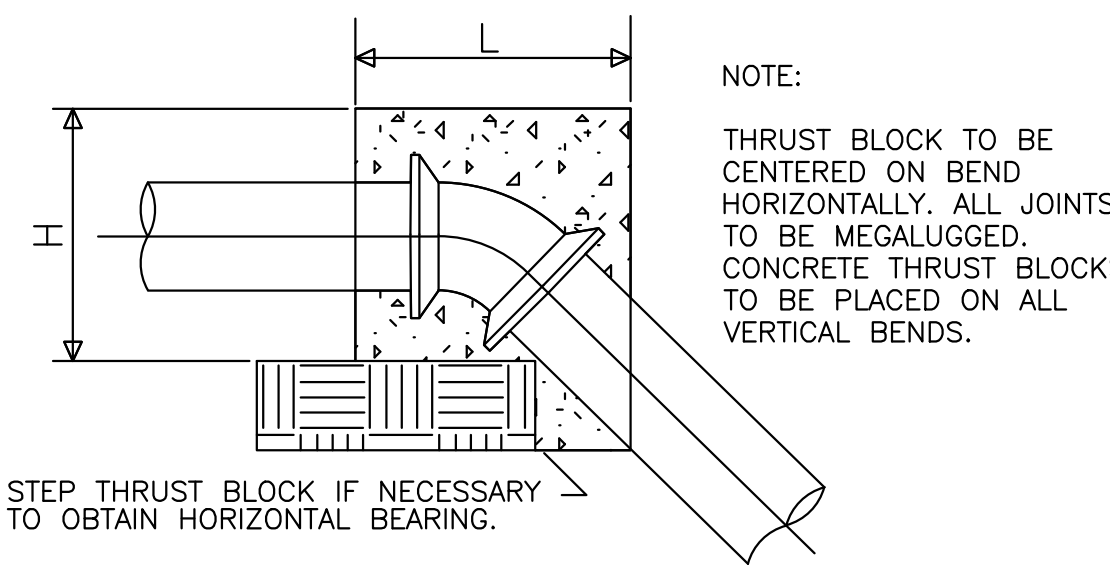
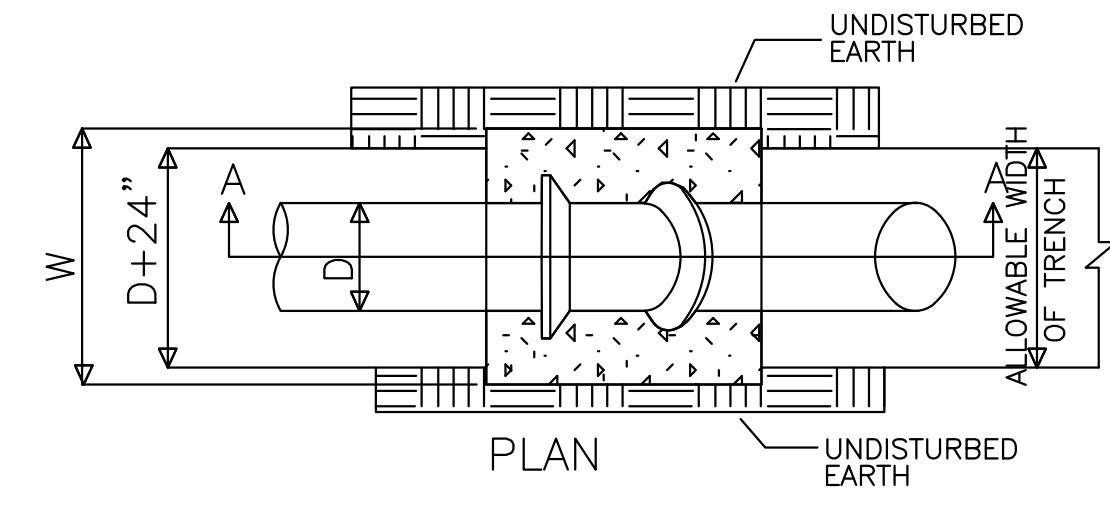
SCALE: 1/2"=1'-0"



SIZE OF PIPE	45°		90°	
	L	D	L	D
6"	19	14	28	18
8"	29	16	40	24
12"	44	24	56	40
16"	60	36	76	56

HORIZONTAL THRUST BLOCKS

(C130)



NOTE: THRUST BLOCK TO BE CENTERED ON BEND HORIZONTALLY. ALL JOINTS TO BE MEGALUGGED. CONCRETE THRUST BLOCKS TO BE PLACED ON ALL VERTICAL BENDS.

STEP THRUST BLOCK IF NECESSARY TO OBTAIN HORIZONTAL BEARING.

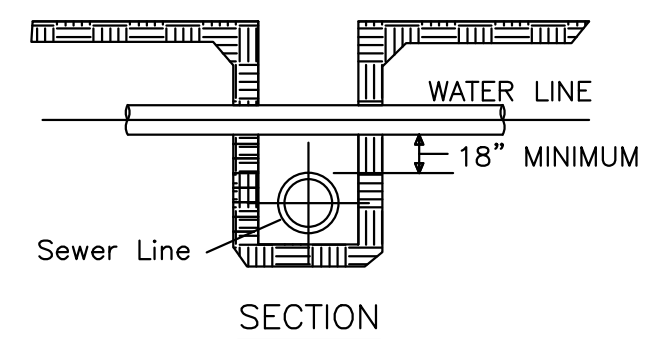
SECTION A-A

DEGREE OF BEND

SIZE OF PIPE	11 1/4°				22 1/2°				45°			
	L	W	H	V cu. yds	L	W	H	V cu. yds	L	W	H	V cu. yds
6"	12	48	18	0.2	15	43	36	0.5	28	55	24	0.8
8"	12	63	24	0.4	18	57	34	0.7	36	57	33	1.4
12"	20	54	36	0.8	37	62	37	1.7	48	62	51	3.1
16"	31	65	38	1.6	60	65	39	3.0	65	65	65	5.6

CONCRETE THRUST BLOCKS FOR VERTICAL BENDS ON WATER MAINS

POURED IN PLACE (CLASS C) (C147)



VERTICAL WATER MAIN CLEARANCE

(C186)

ITEM SPECIAL – WATERLINE RELOCATION, AS PER PLAN

THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPLACING A PORTION OF THE WATERLINE WHERE IT CONFLICTS WITH THE PROPOSED STORM SEWER. THE SIZE AND TYPE OF PIPE MATERIAL SHALL BE EQUAL TO, OR BETTER THAN, THE EXISTING PIPE, AND THE MATERIALS AND METHOD OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE DETAIL SHOWN HEREIN AND THE CITY OF CANTON SPECIFICATIONS. PAYMENT SHALL BE BASED ON THE ACTUAL LENGTH OF PIPE REPLACED.

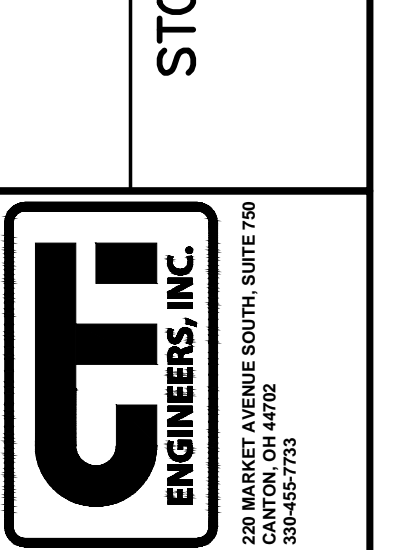
ITEM SPECIAL – WATERLINE RELOCATION, AS PER PLAN 175 FEET

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. THE AUTHOR AND WHICH SHALL REMAIN ALL STATUTORY RIGHTS IN THIS DRAWING SHALL BE RESERVED FOR THE CITY OF CANTON, OHIO. THIS DRAWING IS NOT TO BE REPRODUCED, COPIED, OR DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN PERMISSION OF THE CITY OF CANTON, OHIO. CITY OF CANTON, OHIO, CANNOT GUARANTEE THAT ELECTRONIC COPIES OF THIS DRAWING ARE AN EXACT COPY OF THE ORIGINAL. IN THE EVENT OF A CONFLICT BETWEEN AN ELECTRONIC COPY AND THE SEALED ORIGINAL, THE SEALED ORIGINAL SHALL GOVERN.

NO.	DESCRIPTIONS	REVISIONS	
		DATE	BY

DESIGNED BY: DLK
 DRAWN BY: AJP
 CHECKED BY: DLK
 APPROVED BY: DLK

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 GENERAL NOTES AND
 MISCELLANEOUS DETAILS



JOB NO. E10025
DATE 8/2013
SCALE NOT TO SCALE
SHEET NO. C6A



CANTON WATER WORKS
 STANDARD DRAWINGS

ITEM 614 – MAINTAINING TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTAINING TRAFFIC ON 55TH STREET, BEVERLY AVE AND PLAIN CENTER AVE. IN ACCORDANCE WITH THE TEMPORARY TRAFFIC CONTROL MANUAL (TTCM) AND STANDARD DRAWINGS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD), CURRENT EDITION, LATEST REVISIONS, THE CONSTRUCTION AND MATERIALS SPECIFICATIONS (CMS) AND THE FOLLOWING:

1. A MINIMUM OF ONE TEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED DURING CONSTRUCTION OF THIS WORK.
2. THE INTERSECTION OF 55TH ST. AND PLAIN CENTER AVE. SHALL BE CONSTRUCTED BY WEEKEND CLOSURES.
3. ACCESS AT 55TH ST. INTERSECTING ROADWAYS, RESIDENTIAL STREETS, AND COMMERCIAL DRIVES SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT RESIDENTIAL STREETS AND COMMERCIAL DRIVES MAY BE CLOSED FOR SHORT PERIODS, NOT TO EXCEED 20 MINUTES, BY THE USE OF FLAGGERS. ACCESS SHALL BE AVAILABLE FOR EMERGENCY VEHICLES AT ALL TIMES.
4. THE CONTRACTOR SHALL INFORM THE CITY ENGINEERS OFFICE (330-489-3381), THREE (3) DAYS PRIOR TO IMPLEMENTATION OF ANY WORK ZONE RESTRICTIONS THAT WILL REDUCE THE WIDTH OR VERTICAL CLEARANCE OF ANY LANE ON WHICH TRAFFIC WILL BE MAINTAINED DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND SUBSEQUENTLY REMOVE ALL FLAGS, BARRICADES, SIGNS, SIGN SUPPORTS, AND FURNISH AND MAINTAIN ALL FLAGGERS AND INCIDENTALS RELATED THERETO.
6. ONLY DURING OFF-PEAK PERIODS (I.E. ANY PERIOD OTHER THAN WEEKDAYS 6-8AM AND 2-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL WORK ZONE DEVICES NECESSARY FOR EACH CONSTRUCTION PHASE.

INTERIM COMPLETION DATE

MAY 9, 2014 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND DISINCENTIVES OF \$1,000 SHALL BE ASSESSED FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO THE TRAFFIC BEYOND THE SPECIFIED LIMIT. THE CONTRACTOR MAY CLOSE LANES PRIOR TO APRIL 1 WITH WRITTEN APPROVAL FROM THE CANTON CITY ENGINEER.

PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION AS DETERMINED BY THE ENGINEER.

METHOD OF PAYMENT

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT BID PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

NOTIFICATION

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES AT LEAST ONE WEEK PRIOR TO THE START OF CONSTRUCTION, AND AT LEAST 72 HOURS BEFORE IMPLEMENTING ANY ROAD CLOSING TO TRAFFIC:

THE OHIO STATE HIGHWAY PATROL CANTON PATROL POST 330-433-6200	NORTH CANTON EMS EMERGENCY SERVICES 330-497-4899
THE STARK COUNTY SHERIFF 330-430-3800	CITY OF CANTON POLICE DEPARTMENT 330-489-3100
PLAIN TOWNSHIP FIRE DEPARTMENT 330-492-4089	CITY OF CANTON FIRE DEPARTMENT 330-489-3411
NORTH CANTON POLICE DEPARTMENT 330-499-5911	PLAIN LOCAL SCHOOLS 330-492-1918
NORTH CANTON FIRE DEPARTMENT 330-499-3404	

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSE. TRAFFIC CONTROL SHALL BE AS PER MT-97-11.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. FROM THE TIME THE EXCAVATION BEGINS ON THE TRENCH WIDENING, THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS PLACED AT TEN (10) FOOT INTERVALS. THE LENGTH OF WIDENING OPEN AT ANY ONE TIME SHALL NOT BE GREATER THAN THAT WHICH CAN BE COMPLETED WITHIN 14 CALENDAR DAYS. ALL PROPOSED SUBBASE AND 302 BASE MATERIAL SHALL BE COMPLETED IN A CONTINUOUS OPERATION. SEE MT-101.90 FOR DROP-OFF REQUIREMENTS.

ITEM 614 – LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE

USE OF LAW ENFORCEMENT OFFICERS (LEOs) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COSTS. LEOs SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

-DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

-DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

-FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOs SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN THE WORK ZONES.

-WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

LEOs SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOs WORK AT THE DIRECTION OF THE CONTRACTOR, THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOs. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOs DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT INTO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOs WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614 – LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE XXX HOUR

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

CONTRACTOR'S EQUIPMENT – OPERATION AND STORAGE

A QUALIFIED FLAGGER SHALL BE EMPLOYED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT, PAVERS, ROLLERS AND OTHER EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY WHEN PAVING OPERATIONS ARE SCHEDULED TO CONTINUE WITHIN THE NEXT WORKDAY. OTHERWISE THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA OUTSIDE THE R/W, THE LOCATION OF WHICH SHALL HAVE PRIOR APPROVAL OF THE ENGINEER, WHEN PARKING ALONG THE HIGHWAY THE EQUIPMENT SHALL BE PLACED AND DELINEATED AS PER 614.03. NO EQUIPMENT SHALL BE PARKED IN THE MEDIAN OF THE HIGHWAY. ADEQUATE BARRICADES AND LIGHTS SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA. NO EQUIPMENT SHALL BE PARKED ON PRIVATE PROPERTY UNLESS PRIOR APPROVAL OF THE OWNER AND THE PROJECT ENGINEER/SUPERVISOR HAS BEEN GRANTED.

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL SHALL HAVE NO OTHER CONSTRUCTION RELATED DUTIES. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614-MAINTAINING TRAFFIC.

ADVANCE NOTICE TO PAVE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSED TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

ITEM 614 – WORK ZONE PAVEMENT MARKINGS, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 614.11, ALL CLASS 1 EDGE LINES, LANE LINES, CENTER LINES AND DOTTED LINES SHALL BE 6 INCHES WIDE AND CHANNELIZING MARKINGS SHALL BE 8 INCHES WIDE. THE APPLICATION RATES FOR THE 6 INCH LINES SHALL BE 1.5 TIMES THE RATES SPECIFIED FOR 4 INCH LINES IN THE TABLE 614.11-1.

ALTERNATE MAINTENANCE OF TRAFFIC PLANS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THERE FROM NO ALTERNATE PLANS SHALL BE PLACED IN EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING BY THE ODOT DISTRICT CONSTRUCTION ENGINEER.

COVERING OF SIGNS

THE CONTRACTOR WILL COVER ANY EXISTING AND/OR PROPOSED SIGN INSTALLATION WHICH IS IN CONFLICT WITH THE MAINTENANCE OF TRAFFIC PLANS. THE SIGNS SHALL BE COVERED IN SUCH A MANNER AS TO AVOID DAMAGING THE SIGN WHEN THE COVER IS REMOVED. THE COVER SHALL BE TOTALLY OPAQUE AND COVERS THE ENTIRE SIGN FACE. THE USE OF ADHESIVE TAPE APPLIED DIRECTLY TO THE SIGN FACE IS STRICTLY PROHIBITED. THE CONTRACTOR WILL PROVIDE ALL OF THE "CLOSED" PLAQUES NECESSARY. THE OVERLAY MAY BE RIVETED TO THE SIGN. THE CONTRACTOR SHALL PROVIDE ALL OF THE PLAQUES, SIGNS, AND SIGN PANELS NECESSARY.

UNLESS SEPARATELY ITEMIZED IN THE PLAN, THE LUMP SUM PRICE BID FOR ITEM 614 – MAINTAINING TRAFFIC SHALL INCLUDE ALL COSTS NECESSARY TO COVER AND/OR MODIFY CONFLICTING SIGN INSTALLATIONS.

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY CTE ENGINEERS, INC. AND WHICH SHALL REMAIN THE PROPERTY OF CTE ENGINEERS, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE PRIOR WRITTEN CONSENT OF CTE ENGINEERS, INC. CTE ENGINEERS, INC. CANNOT GUARANTEE THAT ELECTRONIC COPIES OF THIS DRAWING ARE EXACT REPRODUCTIONS OF THE ORIGINAL DRAWING. IN THE EVENT OF A DISCREPANCY BETWEEN THE ELECTRONIC COPY AND THE SEALED ORIGINAL, THE SEALED ORIGINAL SHALL GOVERN.

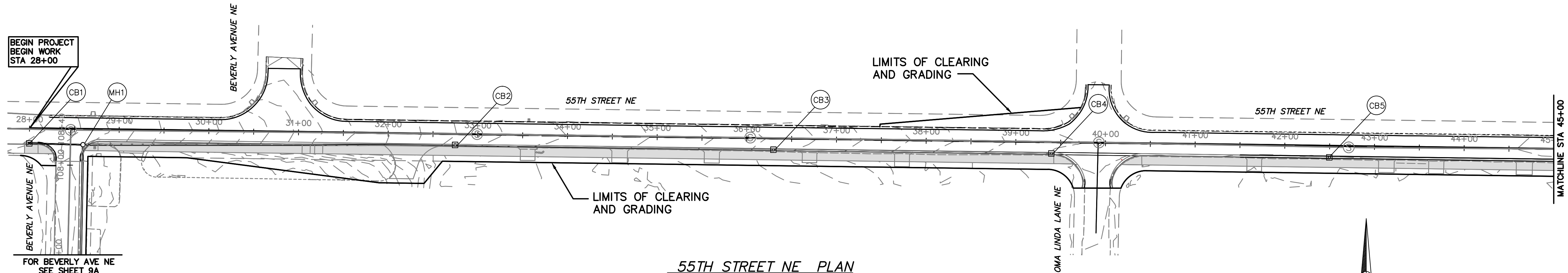
NO.	DESCRIPTIONS	REVISIONS		DATE	BY	APP'D
		NO.	DESCRIPTIONS			
DESIGNED BY	DLK					
DRAWN BY	AJP					
CHECKED BY	DLK					
APPROVED BY	DLK					

CITY OF CANTON, OHIO
55TH STREET NE

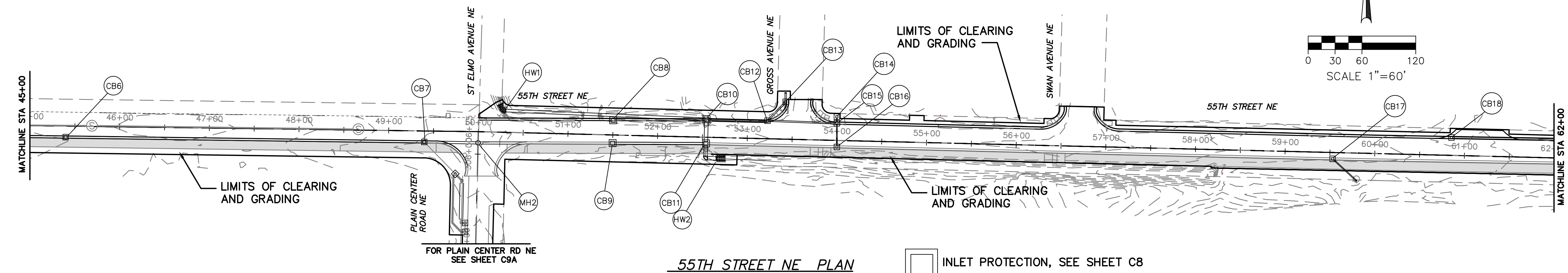
STORM SEWER IMPROVEMENTS
MAINTENANCE OF TRAFFIC
NOTES



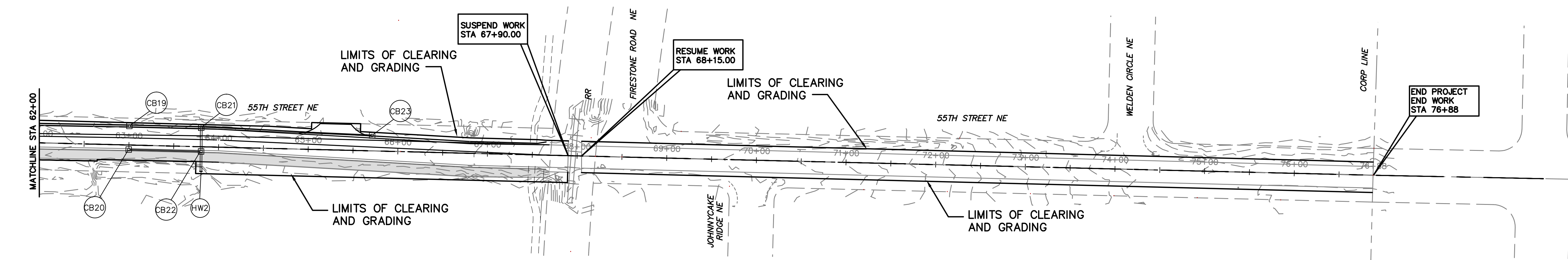
JOB NO.	E10025
DATE	8/2013
SCALE	
SHEET NO.	C7



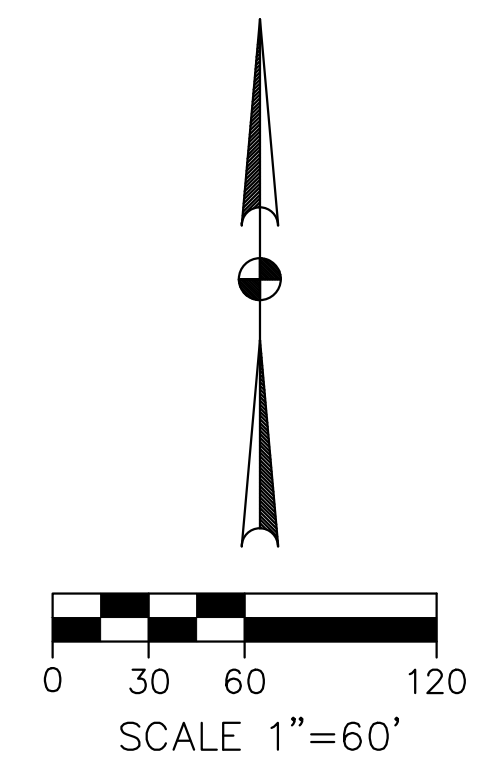
55TH STREET NE PLAN



55TH STREET NE PLAN



55TH STREET NE PLAN



INLET PROTECTION, SEE SHEET C8

CONTRACTOR TO PROVIDE SILT FENCE ALONG THE LOW EDGE OF ALL DISTRIBUTED AREAS AND INLET PROTECTION AT EXISTING AND PROPOSED INLETS.

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR AND WHICH SHALL BE RETURNED TO THE AUTHOR UPON COMPLETION OF THE PROJECT. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE AUTHOR. THE AUTHOR MAKES NO WARRANTY, EXPRESS OR IMPLIED, FOR THE ACCURACY, COMPLETENESS, OR SUITABILITY OF THIS DRAWING FOR ANY PARTICULAR PURPOSE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING ALL INFORMATION AND CONDITIONS PRIOR TO CONSTRUCTION. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING ALL INFORMATION AND CONDITIONS PRIOR TO CONSTRUCTION. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING ALL INFORMATION AND CONDITIONS PRIOR TO CONSTRUCTION.

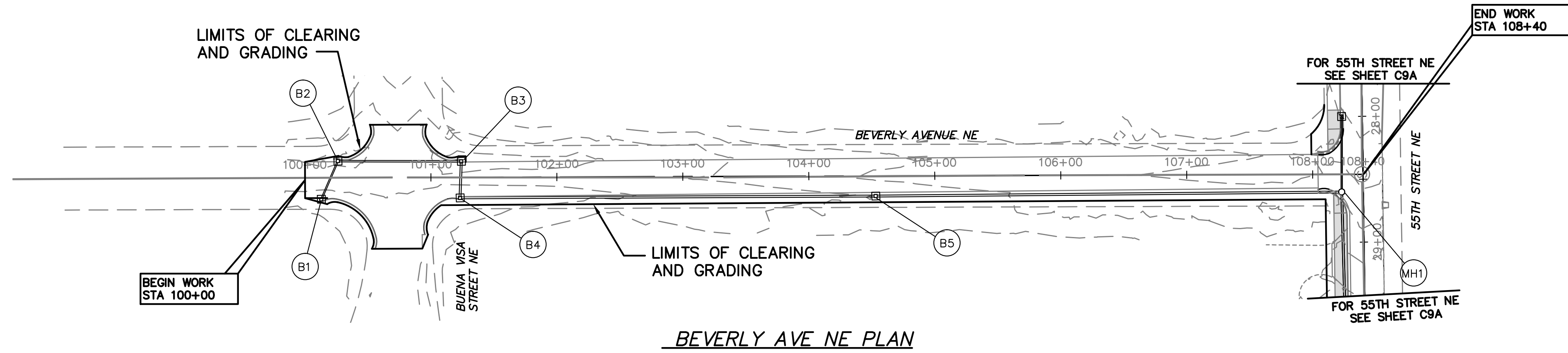
NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY	DLK
DRAWN BY	AJP
CHECKED BY	DLK
APPROVED BY	DLK

CITY OF CANTON, OHIO
55TH STREET NE
STORM SEWER IMPROVEMENTS
SWPP PLAN

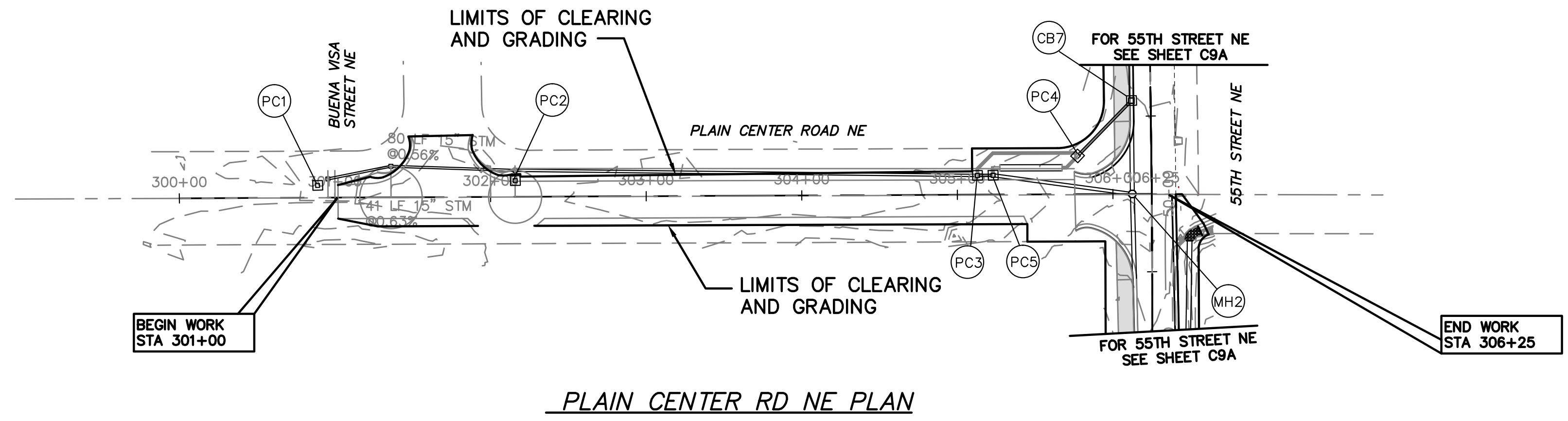


JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C9



 INLET PROTECTION, SEE SHEET C8

CONTRACTOR TO PROVIDE SILT FENCE ALONG THE LOW EDGE OF ALL DISTRIBUTED AREAS AND INLET PROTECTION AT EXISTING AND PROPOSED INLETS.



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE ENGINEER AND WHICH SHALL REMAIN THE PROPERTY OF THE ENGINEER. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER. THE ENGINEER MAKES NO WARRANTY, EXPRESS OR IMPLIED, FOR THE ACCURACY, COMPLETENESS, OR SUITABILITY OF THIS DRAWING. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED TO THE ENGINEER. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS IN THIS DRAWING OR FOR ANY DAMAGE TO PERSONS OR PROPERTY ARISING FROM THE USE OF THIS DRAWING. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO PERSONS OR PROPERTY ARISING FROM THE USE OF THIS DRAWING. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO PERSONS OR PROPERTY ARISING FROM THE USE OF THIS DRAWING.

DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS		BY		DATE	
NO.	DESCRIPTIONS				

CITY OF CANTON, OHIO
55TH STREET NE
STORM SEWER IMPROVEMENTS
SWPPP PLAN



JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C9A

REF. NO.	ITEM NO.	SHEET NUMBER					ITEM NO.	GRAND TOTAL	UNIT	DESCRIPTION	SHEET
		6A	12	13A	14	N/A					
ROADWAY											
1	201	1					1	LUMP SUM	CLEARING AND GRUBBING		
2	202					1	1	EACH	STRUCTURE REMOVED (BOX CULVERT AND WINGWALLS)		
3	202			540			540	L.F.	PIPE REMOVED - UNDER 24"		
4	202			45			45	L.F.	PIPE REMOVED - 24" OR OVER,		
5	202				256		256	S.Y.	PAVEMENT REMOVED (CONCRETE DRIVEWAY)		
6	202			5			5	EACH	CATCH BASIN OR INLET REMOVED		
7	203		1655				1655	C.Y.	EXCAVATION		
8	203		551				551	C.Y.	EXCAVATION UNDERCUT SUBGRADE, AS DIRECTED		
9	203		1235				1235	C.Y.	EMBANKMENT		
10	203					550	550	C.Y.	STONE FOR SUBGRADE REPLACEMENT, AS DIRECTED		
11	204		9802				9802	S.Y.	SUBGRADE COMPACTION		
12	204					100	100	S.Y.	GEOTEXTILE FOR SUBGRADE STABILIZATION, AS DIRECTED		
13	204					1000	1000	S.Y.	GEOGRID FOR SUBGRADE STABILIZATION, AS DIRECTED		
14	613					50	50	C.Y.	LOW STRENGTH MORTAR BACKFILL, AS DIRECTED		
EROSION CONTROL											
15	653					200	200	C.Y.	TOPSOIL FURNISHED AND PLACED, 3" THICK		
16	659				2191	209	2400	S.Y.	SEEDING AND MULCHING		
17	832					1	1	LUMP SUM	STORM WATER POLLUTION PREVENTION PLAN	8	
18	832					1	1	LUMP SUM	EROSION CONTROL	8	
DRAINAGE											
19	601			12			12	C.Y.	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER FABRIC		
20	602			2			2	C.Y.	CONCRETE MASONRY		
21	603	20					20	EACH	STORM DRAIN CONNECTION, AS PER PLAN	6A	
22	603			593			593	FOOT	12 INCH STORM SEWER		
23	603			4			4	EACH	12 INCH STORM SEWER 45° BEND		
24	603			1			1	EACH	12 INCH STORM SEWER 90° BEND		
25	603			416			416	FOOT	15 INCH STORM SEWER		
26	603			2267			2267	FOOT	18 INCH STORM SEWER		
27	603			310			310	FOOT	21 INCH STORM SEWER		
28	603			807			807	FOOT	24 INCH STORM SEWER		
29	603			714			714	FOOT	30 INCH STORM SEWER		
30	603			224			224	FOOT	36 INCH STORM SEWER		
31	603			61			61	FOOT	48 INCH STORM SEWER		
32	603			1			1	EACH	48 INCH STORM SEWER 90° MITERED ELBOW		
33	603			120			120	FOOT	SANITARY SEWER LATERAL RELOCATION, AS PER PLAN	13A	
34	604			2			2	EACH	STORM MANHOLE		
35	604			5			5	EACH	CURB INLET CATCH BASIN, CITY STD. NO. 1		
36	604			14			14	EACH	CURB INLET CATCH BASIN, CITY STD. NO. 1, AS PER PLAN	13A	
37	604			3			3	EACH	DOUBLE CURB INLET CATCH BASIN, CITY STD. NO. 1 DOUBLE	13A	
38	604			4			4	EACH	DOUBLE CURB INLET CATCH BASIN, CITY STD. NO. 1 DOUBLE, AS PER PLAN	13A	

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. THE AUTHOR AND WHICH SHALL REMAIN ALL STATUTORY AND COMMON LAW RIGHTS, INCLUDING COPYRIGHTS, IN THIS DRAWING. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED BY THE ENGINEER. THE ENGINEER DOES NOT WARRANT, GUARANTEE, OR MAKE ANY REPRESENTATIONS AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION, DATA, OR MATERIALS PROVIDED BY OTHERS. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS IN THE EVENT OF A CONFLICT BETWEEN AN ELECTRONIC COPY AND THE SEALED ORIGINAL. THE SEALED ORIGINAL SHALL GOVERN.

DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS	
NO.	DESCRIPTIONS

CITY OF CANTON, OHIO
55TH STREET NE
STORM SEWER IMPROVEMENTS
GENERAL SUMMARY



JOB NO. E10025
DATE 8/2013
SCALE
SHEET NO. C10

REF. NO.	ITEM NO.	SHEET NUMBER					ITEM NO.	GRAND TOTAL	UNIT	DESCRIPTION	SHEET
		6A	12	13A	14	N/A					
DRAINAGE CONTINUED											
39	604			7			7	EACH	SQUARE-TOP CATCH BASIN		
40	604			14			14	EACH	MANHOLE ADJUSTED TO GRADE		
41	604			1		1	2	EACH	MONUMENT BOX ADJUSTED TO GRADE		
42	604			0		2	2	EACH	VALVE BOX ADJUSTED TO GRADE		
43	605						6540	FOOT	4 INCH PIPE UNDERDRAIN, AS PER PLAN	3, 3A	
44	SPEC					5	5	EACH	INLET STORM WATER QUALITY DEVICES, AS DIRECTED		
45	SPEC			1			1	LUMP SUM	STORM WATER QUALITY UNIT, AS PER PLAN	54	
PAVEMENT											
46	251	100					100	S.Y.	PARTIAL DEPTH PAVEMENT REPAIR		
47	253	100					100	C.Y.	PAVEMENT REPAIR		
48	254		10657				10657	S.Y.	PAVEMENT PLANING, ASPHALT CONCRETE		
49	301		526				526	C.Y.	ASPHALT CONCRETE BASE		
50	304		943				943	C.Y.	AGGREGATE BASE		
51	407		1309				1309	GAL	TACK COAT AT 0.075 G/SY		
52	407		426				426	GAL	TACK COAT FOR INTERMEDIATE COURSE AT 0.04 G/SY		
53	448		296				296	C.Y.	ASPHALT CONCRETE INTERMEDIATE, TYPE 2, 1.0" AVG.		
54	448		848				848	C.Y.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, 1.75"		
55	451		356				356	S.Y.	7" REINFORCED CONCRETE PAVEMENT (COMM. DRIVEWAY)		
56	452		407				407	S.Y.	6" NON-REINFORCED CONCRETE PAVEMENT (RES. DRIVEWAY)		
57	608		29053				29053	SQ. FT.	CONCRETE SIDEWALK, 4" THICK		
58	608		7				7	EACH	CURB RAMPS, TYPES A1 OR A2		
59	608		13				13	EACH	CURB RAMPS, TYPES B2 OR B3		
60	609		290				290	FOOT	TYPE 1 STD. CONCRETE CURB		
61	609		5730				5730	FOOT	TYPE 2 STD. CONCRETE COMBINED CURB AND GUTTER		
TRAFFIC CONTROL											
62	642					1	1	MILE	CENTER LINE, TYPE 2		
63	642					0.3	0.3	MILE	EDGE LINE, TYPE 2		
64	642					200	200	FOOT	STOP LINE, TYPE 2		
65	642					500	500	FOOT	CROSSWALK LINE, TYPE 2		
66	642					2	2	EACH	SCHOOL SYMBOL MARKING		
MAINTENANCE OF TRAFFIC											
67	614					1	1	LUMP SUM	MAINTAINING TRAFFIC, COMPLETE		
MISCELLANEOUS											
68	SPEC					3643	3643	SQ. FT.	VINYL SHEET SHEET PILING		
69	607	1056					1056	FOOT	FENCE, AS PER PLAN	6A	
70	623					1	1	LUMP SUM	CONSTRUCTION LAYOUT STAKES		
71	624					1	1	LUMP SUM	MOBILIZATION		
72	638		175				175	FOOT	WATERLINE RELOCATION AS PER PLAN	12	
73	1385					1	1	LUMP SUM	PRECONSTRUCTION VIDEOTAPE		

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY C.T. ENVIRONMENTAL, INC. WHICH SHALL BE DEEMED TO BE THE PROPERTY OF C.T. ENVIRONMENTAL, INC. AND NO COMMON LAW RIGHTS INCLUDING STATUTORY RIGHTS OF COPYRIGHT OR PATENT SHALL BE ASSERTED AGAINST THIS DRAWING. THIS DRAWING SHALL NOT BE LOANED, COPIED, OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF C.T. ENVIRONMENTAL, INC. C.T. ENVIRONMENTAL, INC. CANNOT GUARANTEE THAT THIS DRAWING IS COMPLETE OR ACCURATE. IN THE EVENT OF A CONFLICT BETWEEN AN ELECTRONIC COPY AND A SEALED ORIGINAL, THE SEALED ORIGINAL SHALL GOVERN.

DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 GENERAL SUMMARY



JOB NO.	E10025
DATE	8/2013
SCALE	
SHEET NO.	C11

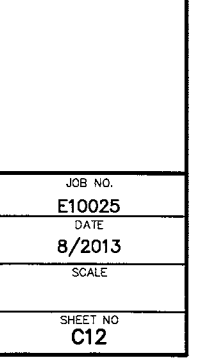
SHEET	STATION		PAVEMENT WIDTH			SEGMENT LENGTH	203				204		254	FOR INFO ONLY		301	304		407		448		451	452	604	604		605	608	608	608	609	609	638	
	FROM	TO	FT.	L	R		FT.	C.Y.	C.Y.	C.Y.	C.Y.	S.Y.	S.Y.	S.Y.	IN.	C.Y.	C.Y.	C.Y.	C.Y.	GAL.	GAL.	C.Y.	C.Y.	S.Y.	S.Y.	EA	EA	EA	FT	S.F.	EA	EA	FT	EA	
16	2800	3300	24	0.0	2.0	500	19	37			250	511	1333	1.3	48	19	19	31	100	53	37	65	0	166				500	2510.5	3	3		500		
17	3300	3800	24	0.0	2.0	500	19	37			250	556	1333	1.3	48	19	19	45	100	53	37	65	148				500	3668				500			
18	3800	4300	24	0.0	2.0	500	19	37			250	483	1333	1.3	48	19	19	45	100	53	37	65	30				500	3683.6	2	2		500			
19	4300	4800	24	0.0	2.0	500	19	37			250	556	1333	1.3	48	19	19	41	100	53	37	85	184				500	3347.6				500			
20	4800	5000	24	0.0	2.0	200	7	15			100	189	533	1.3	19	7	7	19	40	21	15	26				1	1	200	1500		1		200		
SUBTOTAL PHASE A (WEST OF PLAIN CENTER)						2200	81	163	254	211	1100	2294	5867	7	212	81	81	182	440	235	163	285	361	166	0	7	1	2200	14710	5	6		2200	0	
20	5000	5250	24	5.0	3.5	250	39	79			417	236	667	1.0	19	39	39	15	50	27	19	32	31	45			500	1243.2		1		500			
21	5250	5800	24	8.0	2.0	550	102	204			1008	611	1467	1.0	41	102	102	61	110	59	41	71	15				1100	4962.3		6		1100			
22	5800	6000	24	9.0	2.0	200	41	81			389	222	533	1.0	15	41	41	20	40	21	15	26		44			400	1603.1				400			
22	6000	6300	24	10.0	2.0	300	67	133			617	333	800	1.0	22	67	67	31	60	32	22	39		58			600	2481.6				600			
23	6300	6400	24	11.0	2.0	100	24	48			217	111	267	1.0	7	24	24	12	20	11	7	13					200	1000				200			
23	6400	6765	24	7.5	2.0	365	64	128			649	406	973	1.0	27	64	64	38	73	39	27	47		44			730	3053.1	2			730			
23	6765	6790	30	4.0	7.0	25	3	7			31		83	1.0	2	3	4		6	3	2	4					0			0		0			
24	6810	7300	30	3.0	4.0	490	42	85			381				34	53			123	0	0	79					0					0			
25	7300	7688	30	3.0	7.0	388	48	96			431				39	60			97	0	0	63					2					0			
SUBTOTAL PHASE B (EAST OF PLAIN CENTER)						2868	431	861	289	1024	4139	1919	4790	7	133	413	454	177	579	192	133	375	46	190	0	3	0	3530	14243	2	7		3530	0	
51	10000	10500	28			500													117	0	0	76					2					210			
52	10500	10830	28			330													77	0	0	50					1					0			
53	30090	30500	22	3.0	3.0	410	30	61			273				25	38			75	0	0	49					1				80	0			
54	30500	30615	22	3.0	3.0	115	9	17			77				7	11			21	0	0	14					0					0			
SUBTOTAL PHASE C (BEVERLY AND PLAIN CENTER)						1355	39	78	0	0	350	0	0	0	0	32	49	0	290	0	0	188	0	0	0	4	0	0	0	0	0	0	290	0	0
TOTALS CARRIED TO GENERAL SUMMARY						6223	561	1102	553	1235	5589	4213	10657	14	345	526	564	359	1309	426	296	848	407	356	0	14	1	5730	29053	7	13	290	5730	0	

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY C.T. ENVIRONMENTAL, INC. WHICH SHALL BE DEEMED TO BE THE PROPERTY OF C.T. ENVIRONMENTAL, INC. AND COMMON LAW RIGHTS, INCLUDING COPYRIGHTS AND PATENT RIGHTS, SHALL NOT BE SCANNED, COPIED, OR REPRODUCED IN ANY MANNER FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF C.T. ENVIRONMENTAL, INC. ANY UNAUTHORIZED USE OF THIS DRAWING OR ELECTRONIC COPIES OF THIS DRAWING MAY BE SUBJECT TO LEGAL ACTION. THE SEAL OF THE ORIGINAL DRAWING SHALL GOVERN.

NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY: DLK
 DRAWN BY: AJP
 CHECKED BY: DLK
 APPROVED BY: DLK

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 ROADWAY SUBSUMMARY



230 MARKET AVENUE SOUTH, SUITE 750
 CANTON, OH 44702
 330-462-7700

JOB NO. E10025
 DATE 8/2013
 SCALE
 SHEET NO. C12

SHEET	REF	SIDE	202			601	602	603								604							638	603			
			PIPE REMOVED - 24" AND UNDER FT	PIPE REMOVED - OVER 24" FT	CATCH BASIN OR INLET REMOVED EA	ROCK CHANNEL PROTECTION CY	HEADWALL CY	12-INCH STORM SEWER, TYPE B FT.	15-INCH STORM SEWER, TYPE B FT.	18-INCH STORM SEWER, TYPE B FT.	21-INCH STORM SEWER, TYPE B FT.	24-INCH STORM SEWER, TYPE B FT.	30-INCH STORM SEWER, TYPE B FT.	36-INCH STORM SEWER, TYPE B FT.	48-INCH STORM SEWER, TYPE B FT.	CURB INLET CATCH BASIN, CITY STD. NO. 1 EA.	CURB INLET CATCH BASIN, CITY STD. NO. 1, AS PER PLAN EA.	CURB INLET DOUBLE CATCH BASIN, CITY STD. NO. 1-D EA.	CURB INLET DOUBLE CATCH BASIN, CITY STD. NO. 1-D, AS PER PLAN EA.	SQUARE-TOP CATCH BASIN EA.	MANHOLE EA.	STORMWATER QUALITY UNIT, AS PER PLAN EA.	12" - 45° BEND EA.	12" - 90° BEND EA.	48" - 90° BEND EA.	WATERLINE RELOCATION AS PER PLAN FT	SANITARY SEWER LATERAL RELOCATIONS, AS PER PLAN FT
16	CB1	R						60							1											30	
16	MH1	R																		1							30
16	CB2	R														1											
17	CB3	R														1											
17	CB3N	L						256																			
18	CB4	R											310			1										30	
18	CB5	R											290														
19	CB6	R													400												90
20	CB7	R													50												
20	MH2	R														60											
20	HW1	L		20		4.4	0.76																				
20	CB8	L																									
20	CB9	R																									
20	CB10	L		25																							
20	CB11	R																									
20	B1	R																									
20	HW2	R				4.4	1.10																				
21	CB12	L																									
21	CB13	L																									
21	CB14	L																									
21	CB15	L	85																								
21	CB16	R																									
SUBTOTAL THIS SHT			85	45	0	9	1.86	359	0	936	310	668	714	224	61	1	8	2	3	2	2	0	0	0	1	90	120

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. THE AUTHOR AND WHICH SHALL RETAIN ALL STATUTORY AND COMMON LAW RIGHTS, INCLUDING COPYRIGHTS, IN THIS DRAWING. NO PART OF THIS DRAWING IS TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS, IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE PRIOR WRITTEN PERMISSION OF THE ENGINEER. THE CITY OF CANTON, OHIO, ENGINEERS, INC. CANNOT GUARANTEE THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE. ELECTRONIC COPIES OF THIS DRAWING ARE EXACT REPRODUCTIONS OF THE ORIGINAL DRAWING. ANY CHANGES TO THIS DRAWING SHALL BE MADE TO THE ORIGINAL DRAWING. THE ORIGINAL DRAWING SHALL BE THE AUTHORITY IN THE EVENT OF A DISCREPANCY BETWEEN THE ORIGINAL DRAWING AND THE SEALED ORIGINAL. THE SEALED ORIGINAL SHALL GOVERN.

DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS			
NO.	DESCRIPTIONS	DATE	BY
APP'D			

CITY OF CANTON, OHIO
55TH STREET NE
STORM SEWER IMPROVEMENTS
DRAINAGE SUBSUMMARY



JOB NO.
E10025
DATE
8/2013
SCALE
NOT TO SCALE
SHEET NO.
C13

SHEET	REF	SIDE	202			601	602	603								604							638	603			
			PIPE REMOVED - 24" AND UNDER	PIPE REMOVED - OVER 24"	CATCH BASIN OR INLET REMOVED	ROCK CHANNEL PROTECTION	HEADWALL	12-INCH STORM SEWER, TYPE B	15-INCH STORM SEWER, TYPE B	18-INCH STORM SEWER, TYPE B	21-INCH STORM SEWER, TYPE B	24-INCH STORM SEWER, TYPE B	30-INCH STORM SEWER, TYPE B	36-INCH STORM SEWER, TYPE B	48-INCH STORM SEWER, TYPE B	CURB INLET CATCH BASIN, CITY STD. NO. 1	CURB INLET CATCH BASIN, CITY STD. NO. 1, AS PER PLAN	CURB INLET DOUBLE CATCH BASIN, CITY STD. NO. 1-D	CURB INLET DOUBLE CATCH BASIN, CITY STD. NO. 1-D, AS PER PLAN	SQUARE-TOP CATCH BASIN	MANHOLE	STORMWATER QUALITY UNIT, APP	12" - 45° BEND	12" - 90° BEND	48" - 90° BEND	WATERLINE RELOCATION AS PER PLAN	SANITARY SEWER LATERAL RELOCATIONS, AS PER PLAN
L / R	FT	FT	EA	CY	CY	FT.	FT.	FT.	FT.	FT.	FT.	FT.	FT.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.
22	CB17	R					36							1													
22	CB18	L	215		2					215																	
23	CB19	L								80							1										
23	CB20	R						81																			
23	CB21	L	27		1																				30		
23	CB22	R	22																								
23	HW3	R				3.3	0.46																				
23	CB23	L	191		2					191																	
51	B1	R						33																			
51	B2	L								98																	
51	B3	L																									
51	B4	R																									
51	B5	R																									
53	PC1	L								127									1								
53	PC2	L																	1								
54	PC3	L								72									1				3				
54	PC4	L								12									1		1	1	1		55		
54	PC5	L														90			1								
SUBTOTAL THIS SHT			455	0	5	3	0.46	234	416	1331	0	139	0	0	0	4	6	1	1	5	0	1	4	1	0	85	0
TOTALS TO GEN SUM			540	45	5	12	2	593	416	2267	310	807	714	224	61	5	14	3	4	7	2	1	4	1	1	175	120

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. THE AUTHOR AND WHICH SHALL RETAIN ALL STATUTORY AND COMMON LAW RIGHTS, INCLUDING COPYRIGHTS, IN THIS DRAWING. NO PART OF THIS DRAWING IS TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE ENGINEER. THE CITY OF CANTON, OHIO, ENGINEERS, INC. CANNOT GUARANTEE THAT THIS DRAWING IS ACCURATE OR COMPLETE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS	
NO.	DESCRIPTIONS

ENGINEERS, INC.
 220 MARKET AVENUE SOUTH, SUITE 700
 CANTON, OHIO 44702
 330-485-7370

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 DRAINAGE SUBSUMMARY

JOB NO.
E10025
 DATE
8/2013
 SCALE
NOT TO SCALE
 SHEET NO.
C13A

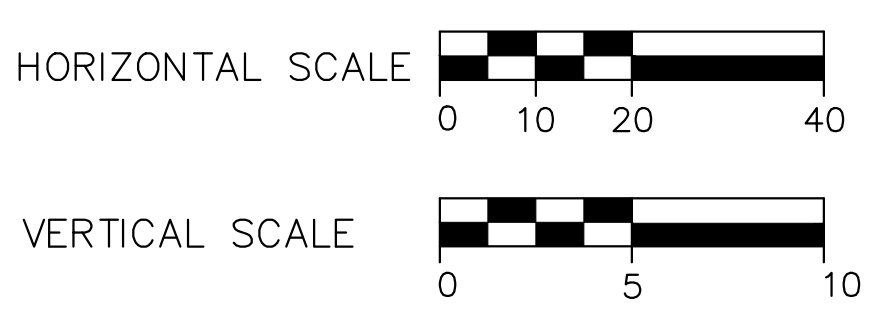
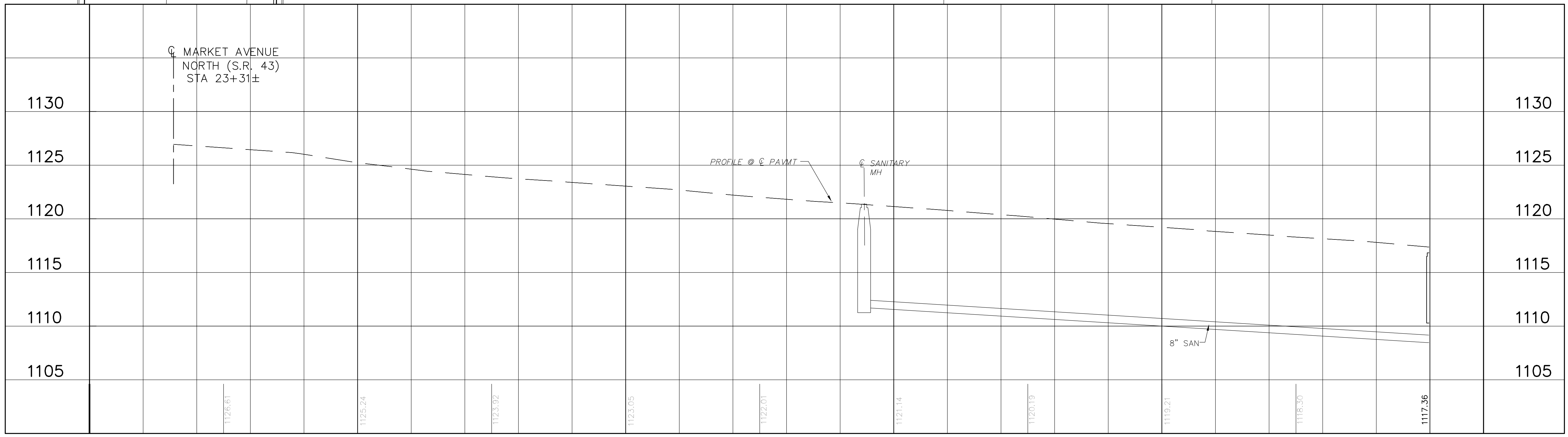
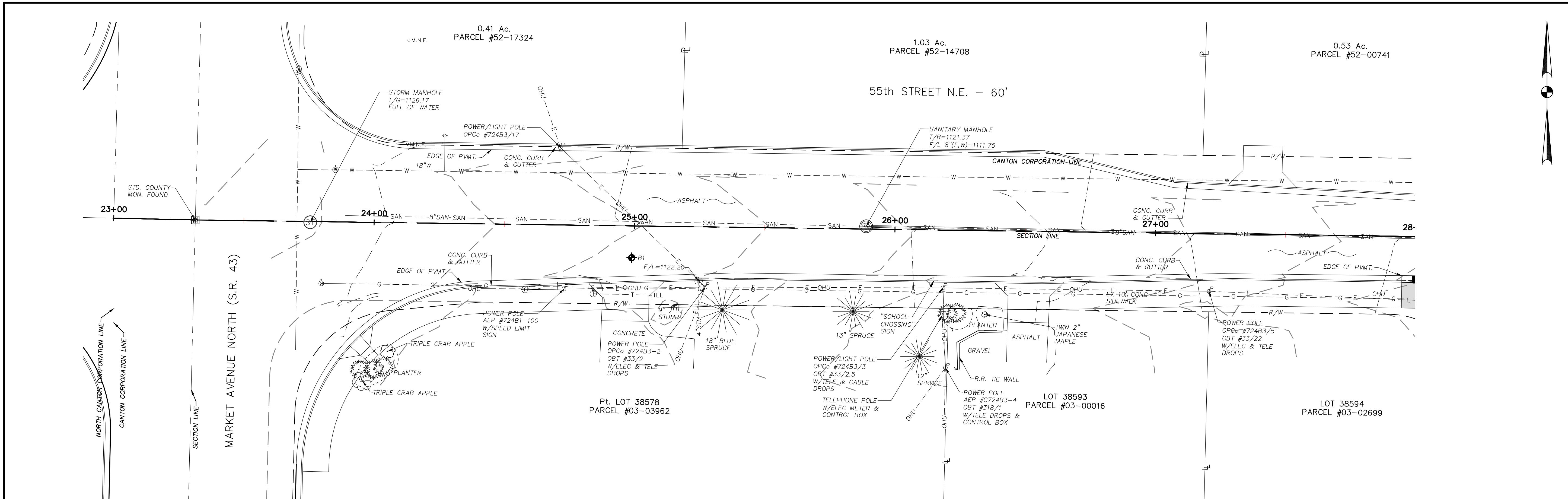
STATION	END AREA		SECTION VOLUME		ACCU. VOLUME	
	CUT	FILL	CUT	FILL	CUT	FILL
28+00	0.6	1.2				
			1.1	2.2	1.1	2.2
28+50	0.0	0.0				
			0.7	1.1	1.9	3.3
29+00	0.4	0.6				
			10.4	1.1	12.2	4.4
29+50	5.2	0.0				
			11.1	0.0	23.3	4.4
30+00	0.8	0.0				
			5.6	0.0	28.9	4.4
30+50	2.2	0.0				
			38.5	0.0	67.4	4.4
31+00	18.6	0.0				
			43.0	1.1	110.4	5.6
31+50	4.6	0.6				
			15.2	1.1	125.6	6.7
32+00	3.6	0.0				
			13.7	0.0	139.3	6.7
32+50	3.8	0.0				
			12.2	0.4	151.5	7.0
33+00	2.8	0.2				
			7.4	0.7	158.9	7.8
33+50	1.2	0.2				
			3.3	3.0	162.2	10.7
34+00	0.6	1.4				
			4.4	3.0	166.7	13.7
34+50	1.8	0.2				
			6.3	1.1	173.0	14.8
35+00	1.6	0.4				
			7.4	0.9	180.4	15.7
35+50	2.4	0.1				
			13.3	0.2	193.7	15.9
36+00	4.8	0.0				
			11.5	0.2	205.2	16.1
36+50	1.4	0.1				
			4.1	0.4	209.3	16.5
37+00	0.8	0.1				
			1.9	0.6	211.1	17.0
37+50	0.2	0.2				
			0.4	1.5	211.5	18.5
38+00	0.0	0.6				
			1.9	2.2	213.3	20.7
38+50	1.0	0.6				
			3.5	2.2	216.9	23.0
39+00	0.9	0.6				
			1.7	1.1	218.5	24.1
39+50	0.0	0.0				
			0.0	0.0	218.5	24.1
40+00	0.0	0.0				
			0.0	0.0	218.5	24.1
40+50	0.0	0.0				
			5.9	2.2	224.4	26.3
41+00	3.2	1.2				
			5.9	9.3	230.4	35.6
41+50	0.0	3.8				
			0.0	12.0	230.4	47.6
42+00	0.0	2.7				
			1.5	6.5	231.9	54.1
42+50	0.8	0.8				
			3.0	2.2	234.8	56.3
43+00	0.8	0.4				
			2.2	4.4	237.0	60.7
43+50	0.4	2.0				
			1.1	5.2	238.1	65.9
44+00	0.2	0.8				
			0.7	2.2	238.9	68.1
44+50	0.2	0.4				
			0.4	3.7	239.3	71.9
45+00	0.0	1.6				
			5.2	3.0	244.4	74.8
45+50	2.8	0.0				
			5.2	1.5	249.6	76.3
46+00	0.0	0.8				
			0.0	4.1	249.6	80.4
46+50	0.0	1.4				
			0.0	18.5	249.6	98.9
47+00	0.0	8.6				
			0.0	24.8	249.6	123.7
47+50	0.0	4.8				
			0.0	13.7	249.6	137.4
48+00	0.0	2.6				
			0.0	7.0	249.6	144.4
48+50	0.0	1.2				
			0.4	4.1	250.0	148.5
49+00	0.2	1.0				
			2.2	2.0	252.2	150.6
49+50	1.0	0.1				
			1.9	0.2	254.1	150.7
50+00	0.0	0.0				
			0.0	60.6	254.1	211.3
					SUM 28+00 - 50+00	
50+50	0.0	32.7				

STATION	END AREA		SECTION VOLUME		ACCU. VOLUME	
	CUT	FILL	CUT	FILL	CUT	FILL
50+50	0.0	32.7				
			0.0	127.2	0.0	127.2
51+00	0.0	36.0				
			1.5	116.3	1.5	243.5
51+50	0.8	26.8				
			1.5	129.6	3.0	373.1
52+00	0.0	43.2				
			0.0	152.2	3.0	525.4
52+50	0.0	39.0				
			0.4	83.3	3.3	608.7
53+00	0.2	6.0				
			0.7	16.7	4.1	625.4
53+50	0.2	3.0				
			0.6	13.3	4.6	638.7
54+00	0.1	4.2				
			1.3	20.7	5.9	659.4
54+50	0.6	7.0				
			3.3	18.9	9.3	678.3
55+00	1.2	3.2				
			2.2	23.3	11.5	701.7
55+50	0.0	9.4				
			0.0	32.4	11.5	734.1
56+00	0.0	8.1				
			0.0	21.3	11.5	755.4
56+50	0.0	3.4				
			0.4	9.6	11.9	765.0
57+00	0.2	1.8				
			9.6	4.4	21.5	769.4
57+50	5.0	0.6				
			13.0	1.7	34.4	771.1
58+00	2.0	0.3				
			13.0	6.5	47.4	777.6
58+50	5.0	3.2				
			18.1	11.1	65.6	788.7
59+00	4.8	2.8				
			19.6	9.6	85.2	798.3
59+50	5.8	2.4				
			24.1	4.4	109.3	802.8
60+00	7.2	0.0				
			25.9	0.0	135.2	802.8
60+50	6.8	0.0				
			23.7	1.1	158.9	803.9
61+00	6.0	0.6				
			19.3	3.0	178.1	806.9
61+50	4.4	1.0				
			11.5	3.3	189.6	810.2
62+00	1.8	0.8				
			7.0	3.5	196.7	813.7
62+50	2.0	1.1				
			11.5	2.4	208.1	816.1
63+00	4.2	0.2				
			24.1	1.1	232.2	817.2
63+50	8.8	0.4				
			18.5	5.6	250.7	822.8
64+00	1.2	2.6				
			5.2	14.1	255.9	836.9
64+50	1.6	5.0				
			5.2	20.7	261.1	857.6
65+00	1.2	6.2				
			6.7	23.3	267.8	880.9
65+50	2.4	6.4				
			9.6	43.3	277.4	924.3
66+00	2.8	17.0				
			13.3	65.7	290.7	990.0
66+50	4.4	18.5				
			8.1	34.3	298.9	1024.3
67+00	0.0	0.0				
			0.0	0.0	298.9	1024.3
67+50	0.0	0.0				
			0.0	0.0	298.9	1024.3
					SUM 50+50 - 67+50	

DRIVEWAYS TABLE																	
SHEET	NO	STA	SIDE	WIDTH	D/W MATL	TYPE	CL OFFSET TO:				2' OR TD	STRAIGHT	FLARE	FLARE	ITEM 452 6" CONC. PAV'T. SY	ITEM 451 7" CONC. PAV'T. SY	ITEM 202 PAV'T. REMOVAL SY
							TD	B/CB	B/WALK	MIN LGTH							
C16	DR-1	29+14.75	RT	24	ASPHALT	COMM	25.50	15.50	25.50	10.00	13.5	36.0	10.0	11.1		47.1	
C16	DR-2	32+20.03	RT	28	ASPHALT	COMM	50.00	15.50	25.50	34.50	34.5	107.3	10.0	11.1		118.4	
C17	DR-3	33+55	RT	16	CONCRETE		27.90	15.50	25.50	12.40	13.5	24.0	5.0	5.6	29.6		24.0
C17	DR-4	34+60	RT	16	CONCRETE		29.50	15.50	25.50	14.00	13.5	24.0	5.0	5.6	29.6		24.0
C17	DR-5	35+61.11	RT	16	CONCRETE		27.90	15.50	25.50	12.40	13.5	24.0	5.0	5.6	29.6		24.0
C17	DR-6	36+70.54	RT	16	ASPHALT		26.10	15.50	25.50	10.60	13.5	24.0	5.0	5.6	29.6		
C17	DR-7	37+73	RT	16	ASPHALT		29.00	15.50	25.50	13.50	13.5	24.0	5.0	5.6	29.6		
C18	DR-8	41+66.63	RT	16	CONCRETE		29.50	15.50	25.50	14.00	13.5	24.0	5.0	5.6	29.6		24.0
C19	DR-9	43+12.37	RT	16	CONCRETE		28.30	15.50	25.50	12.80	13.5	24.0	5.0	5.6	29.6		24.0
C19	DR-10	43+68.65	RT	16	CONCRETE		29.00	15.50	25.50	13.50	13.5	24.0	5.0	5.6	29.6		24.0
C19	DR-11	44+67.97	RT	18	CONCRETE		28.70	15.50	25.50	13.20	13.5	27.0	5.0	5.6	32.6		27.0
C19	DR-12	46+19.24	RT	16	CONCRETE		29.30	15.50	25.50	13.80	13.5	24.0	5.0	5.6	29.6		24.0
C19	DR-13	46+79.59	RT	16	CONCRETE		28.20	15.50	25.50	12.70	13.5	24.0	5.0	5.6	29.6		24.0
C19	DR-14	47+79.73	RT	18	CONCRETE		27.40	15.50	25.50	11.90	13.5	27.0	5.0	5.6	32.6		27.0
C20	DR-15	51+25.59	LT	8	CONCRETE		27.40	18.00		9.40	11.0	9.8	5.0	5.6	15.3		9.8
C20	DR-16	51+96	RT	18	ASPHALT		27.00	9.50	19.50	17.50	19.5	39.0	5.0	5.6		44.6	
C20	DR-17	52+76.90	LT	8	LIMESTONE		30.50	18.00		12.50	11.0	9.8	5.0	5.6	15.3		
C21	DR-18	54+87.71	LT	8	GRAVEL		29.00	18.00		11.00	11.0	9.8	5.0	5.6	15.3		
C22	DR-19	60+12.03	RT	27	ASPHALT	COMM	22.60	18.00	28.00	4.60	11.0	33.0	10.0	11.1		44.1	
C22	DR-20	61+16.62	LT	38	ASPHALT	COMM	36.70	18.00		18.70	11.0	46.4	10.0	11.1		57.6	
C23	DR-21	65+30.86	LT	27	ASPHALT	COMM	29.00	18.00		11.00	11.0	33.0	10.0	11.1		44.1	
															406.7	355.9	255.8

NOTE: DRIVES WILL EXTEND TO 29' EXCEPT AT STA 32+20.

RETAINING WALLS TABLE																	
WALL	STA	EXPOSED HT	WALL HT	WALL AREA (SF)	ACCUM. WALL AREA (SF)	SUM											AVG
						5260	5300	5350	5400								



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE PRIOR WRITTEN CONSENT OF THE CITY OF CANTON, OHIO. THE CITY OF CANTON, OHIO, CANNOT GUARANTEE THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE. THE USER OF THIS DRAWING AGREES TO HOLD THE CITY OF CANTON, OHIO HARMLESS FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING REASONABLE ATTORNEY'S FEES, THAT MAY BE ASSERTED AGAINST THE CITY OF CANTON, OHIO, BY ANY THIRD PARTY AS A RESULT OF THE USER'S RELIANCE ON THIS DRAWING. THE SEALED ORIGINAL COPY AND THE SEALED ORIGINAL SHALL GOVERN.

NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY: DLK
 DRAWN BY: AJP
 CHECKED BY: DLK
 APPROVED BY: DLK

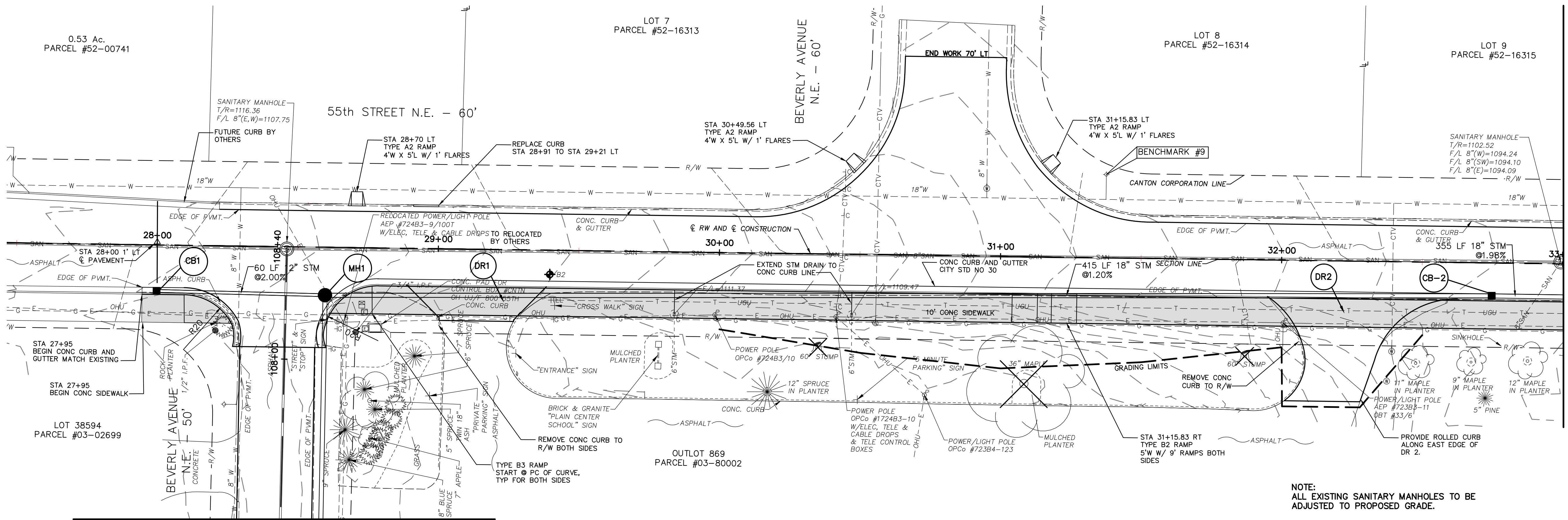


CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 PLAN AND PROFILE
 STA 23+00 TO STA 28+00

JOB NO. E10025
 DATE 8/2013
 SCALE AS NOTED
 SHEET NO. C15

REFERENCE ONLY

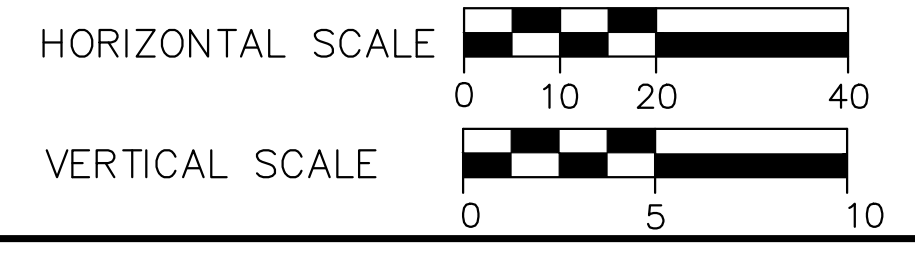
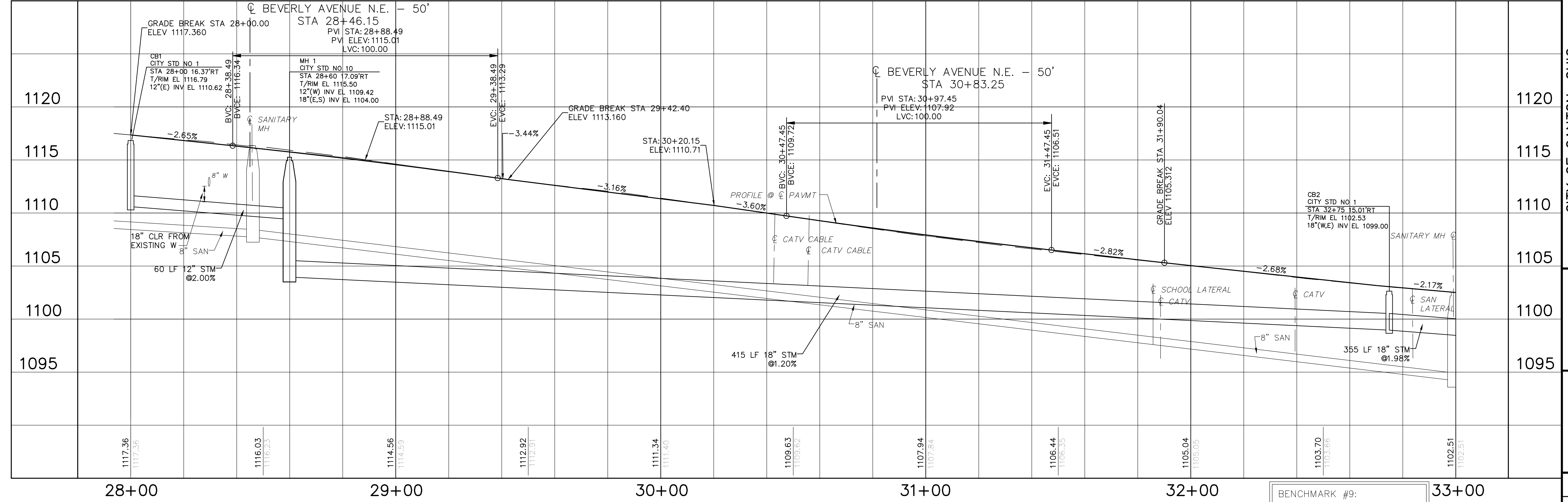
E:\10025-02 CANTON 55TH ST. STORM SEWER FINAL DESIGN\C15-C25 55TH STR PP SHITS.DWG, 16 28-33PP2, 08/21/2013 10:53 AM



MATCH LINE
SEE SHEET C17

NOTE:
ALL EXISTING SANITARY MANHOLES TO BE
ADJUSTED TO PROPOSED GRADE.

FOR BEVERLY AVE SEE SHT C51



BENCHMARK #9:
TOP OF HYDRANT AT WORD
'OPEN' AT N.E. CORNER OF
BEVERLY & 55th
EL. 1108.30

NO.	DESCRIPTIONS	DATE	BY	APP'D

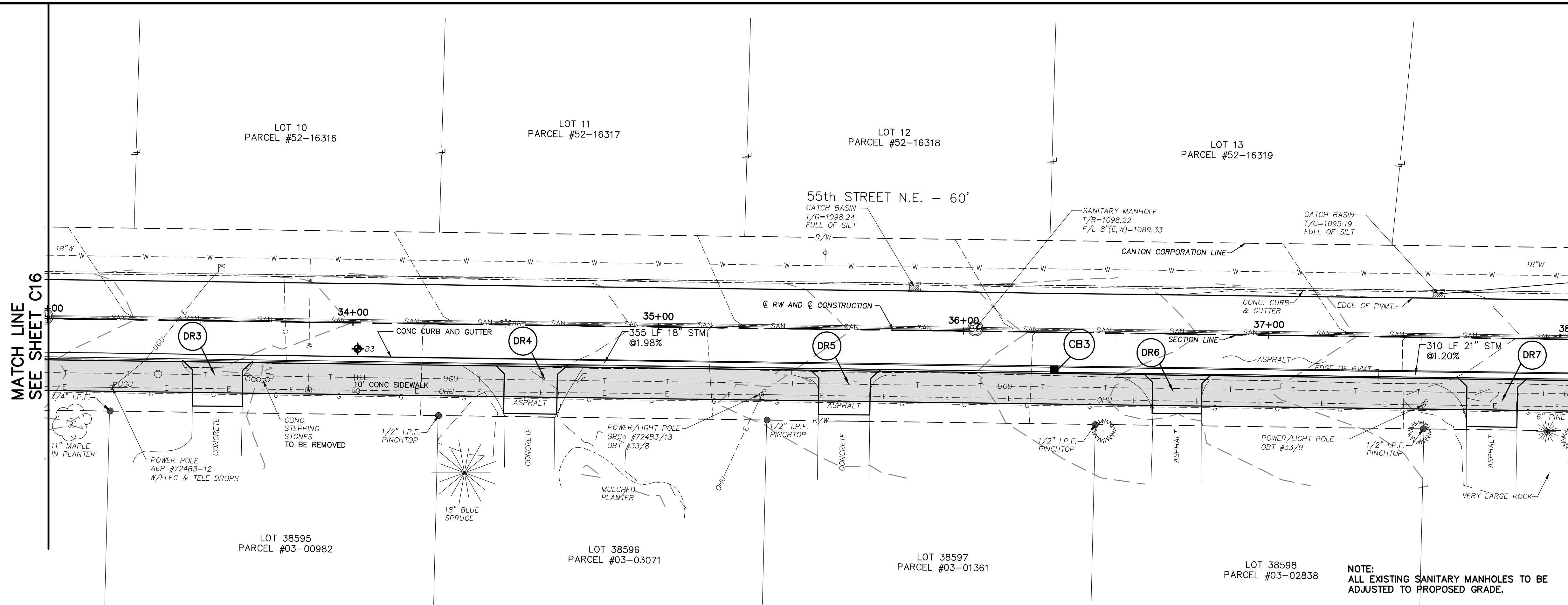
DESIGNED BY: DLK
DRAWN BY: AJP
CHECKED BY: DLK
APPROVED BY: DLK

CITY OF CANTON, OHIO
55TH STREET NE
STORM SEWER IMPROVEMENTS
PLAN AND PROFILE
STA 28+00 TO STA 33+00

GF
ENGINEERS, INC.
220 MARKET AVENUE SOUTH, SUITE 700
CANTON, OHIO 44702
330-489-7370

JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO C16

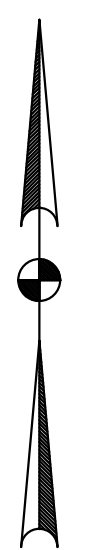
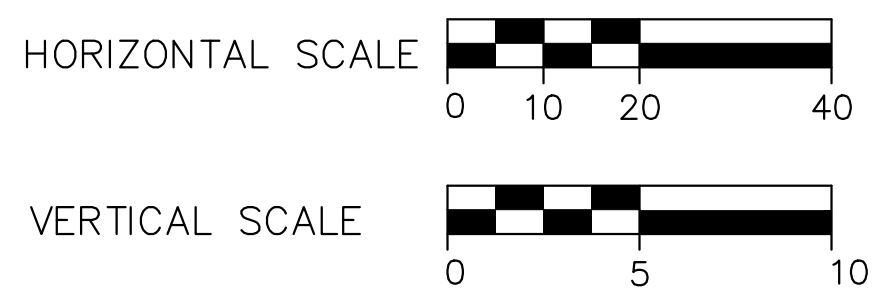
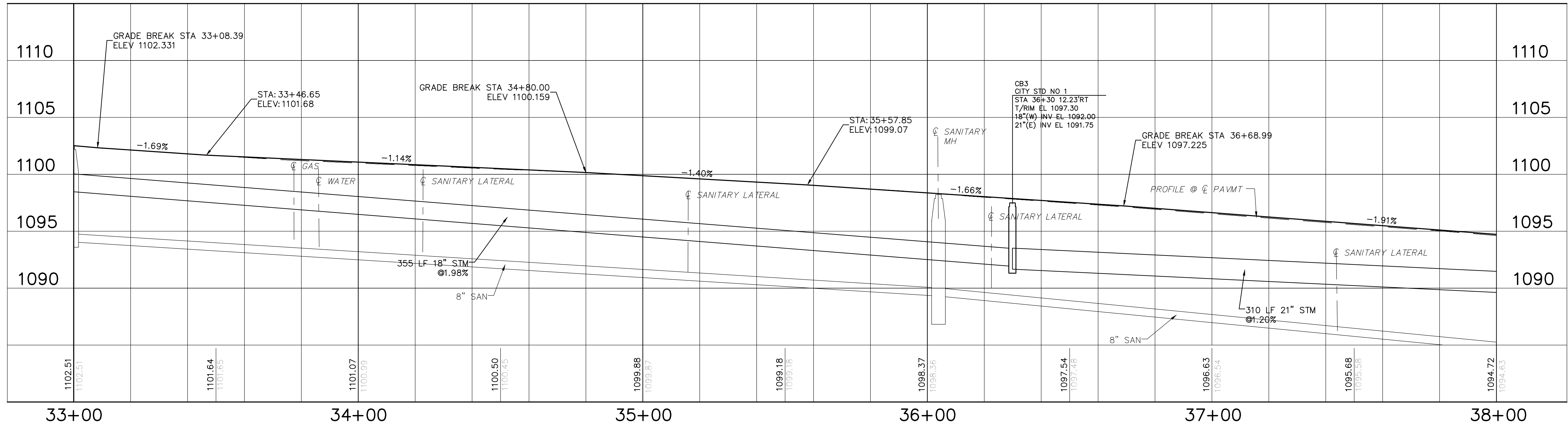
THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR AND WHICH SHALL BE RETURNED TO THE AUTHOR UPON COMPLETION OF THE PROJECT. NO PART OF THIS DRAWING SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE AUTHOR. ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN PERMISSION OF THE AUTHOR IS PROHIBITED. THE AUTHOR MAKES NO WARRANTY, EXPRESS OR IMPLIED, THAT THIS DRAWING IS FREE FROM ERRORS OR OMISSIONS. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED TO THE AUTHOR. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED TO THE AUTHOR. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED TO THE AUTHOR.



MATCH LINE SEE SHEET C18

MATCH LINE SEE SHEET C16

NOTE: ALL EXISTING SANITARY MANHOLES TO BE ADJUSTED TO PROPOSED GRADE.

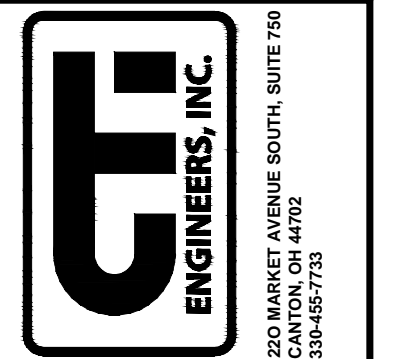


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR AND WHICH SHALL BE KEPT IN ALL ORIGINAL AND COMMON LAW RIGHTS, INCLUDING COPYRIGHTS, AND SHALL BE LOANED TO THE CLIENT FOR THE CLIENT'S USE ONLY. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE AUTHOR. THE AUTHOR MAKES NO ENVIRONMENTAL OR ENGINEERING GUARANTEE THAT ELECTRONIC COPIES OF THIS DRAWING ARE EXACT IN THE SENSE OF THE ORIGINAL DRAWING. THE ORIGINAL COPY AND THE SEALED ORIGINAL SHALL GOVERN.

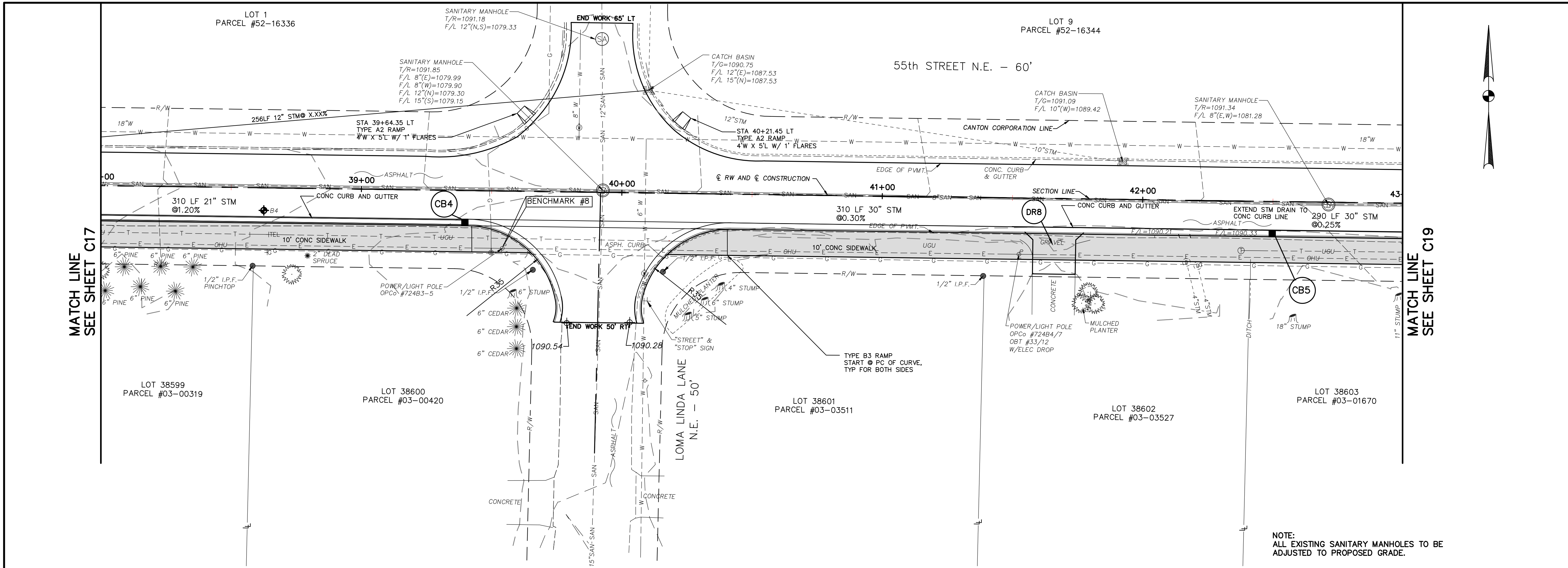
NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY: DLK
 DRAWN BY: AJP
 CHECKED BY: DLK
 APPROVED BY: DLK

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 PLAN AND PROFILE
 STA 33+00 TO STA 38+00



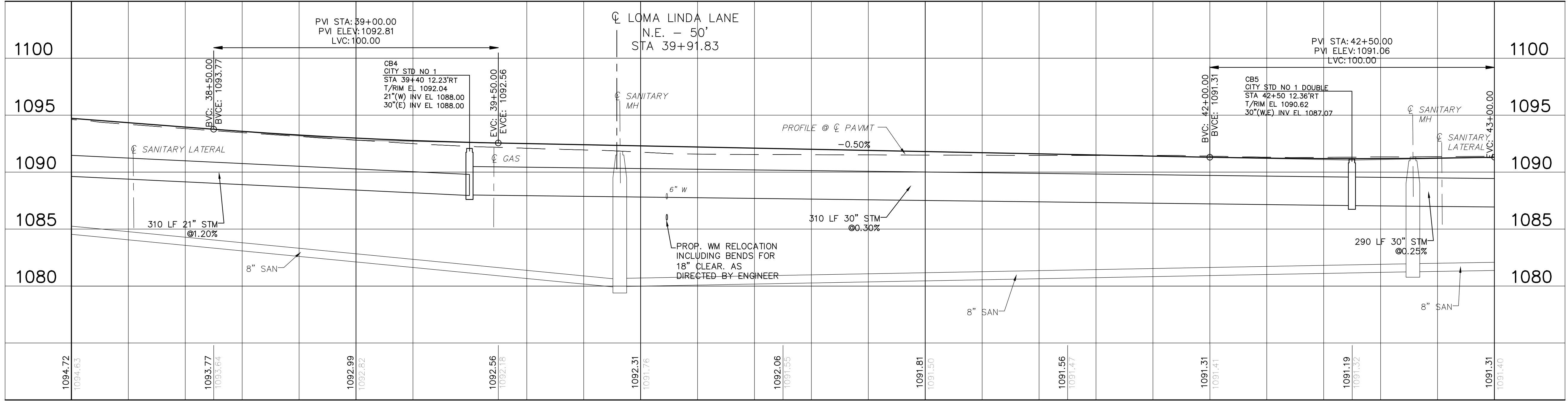
JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C17



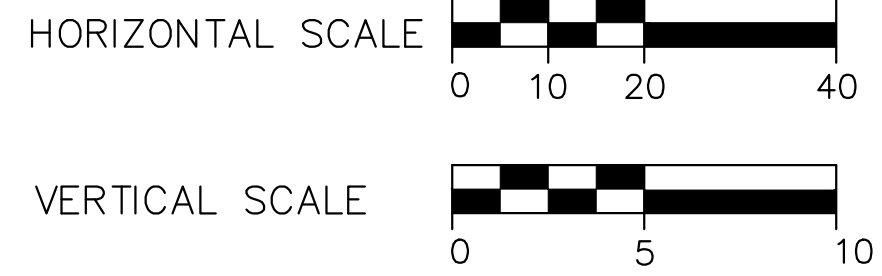
MATCH LINE
SEE SHEET C17

MATCH LINE
SEE SHEET C19

NOTE:
ALL EXISTING SANITARY MANHOLES TO BE
ADJUSTED TO PROPOSED GRADE.



BENCHMARK #8:
GIN GEAR SET 1' UP NORTH
SIDE POLE AEP #724B3-15 AT
S.W. CORNER LOMA LINDA &
55th
EL. 1092.47



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN ALL RIGHTS AND COMMON LAW RIGHTS, INCLUDING COPYRIGHTS, AND DISTRIBUTION TO OTHERS IN ANY FORM OR FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE AUTHOR. THE AUTHOR MAKES NO ENVIRONMENTAL OR SOCIAL GUARANTEE THAT ELECTRONIC COPIES OF THIS DRAWING ARE EXACT IN THE SENSE OF THE ORIGINAL DRAWING. THE AUTHOR SHALL GOVERN.

NO.	DESCRIPTIONS	DATE	BY	APP'D

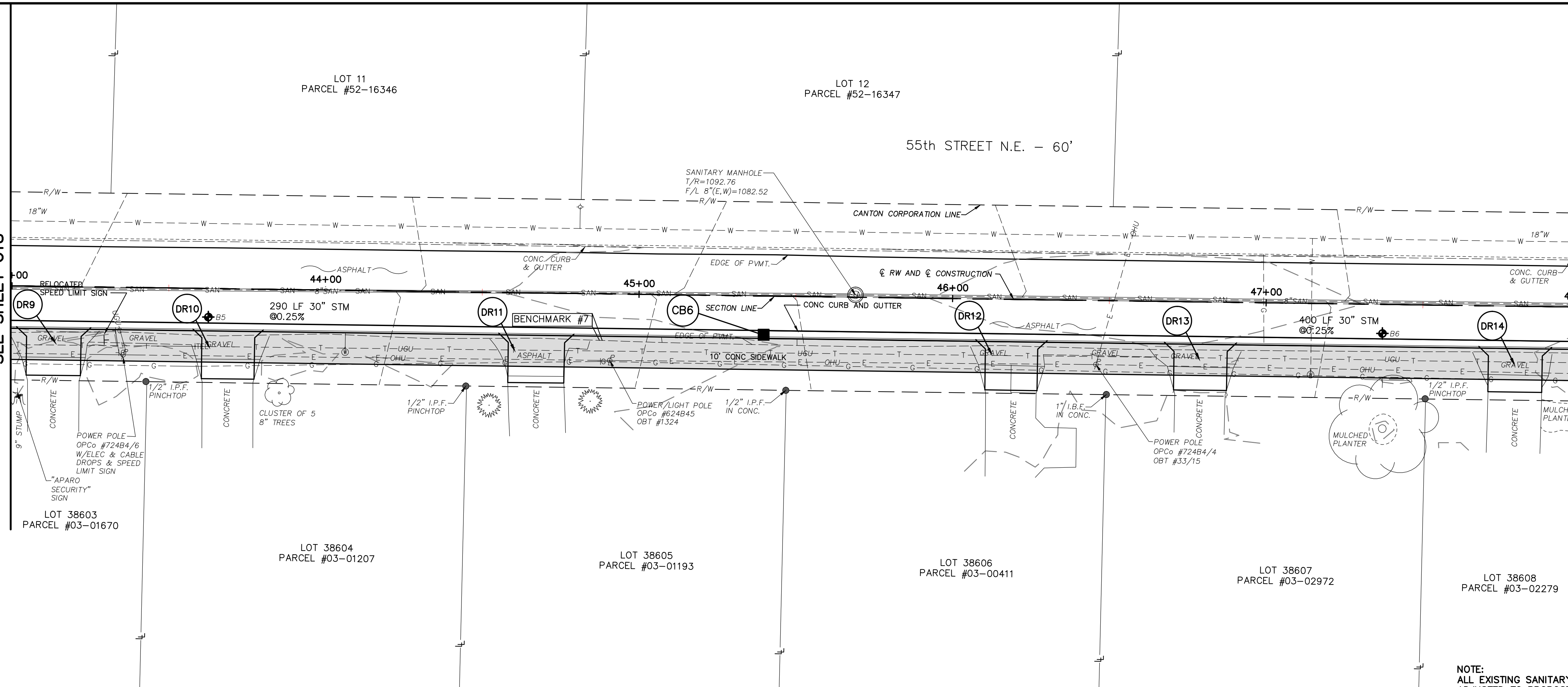
DESIGNED BY: DLK
DRAWN BY: AJP
CHECKED BY: DLK
APPROVED BY: DLK

CITY OF CANTON, OHIO
55TH STREET N.E.
STORM SEWER IMPROVEMENTS
PLAN AND PROFILE
STA 38+00 TO STA 43+00

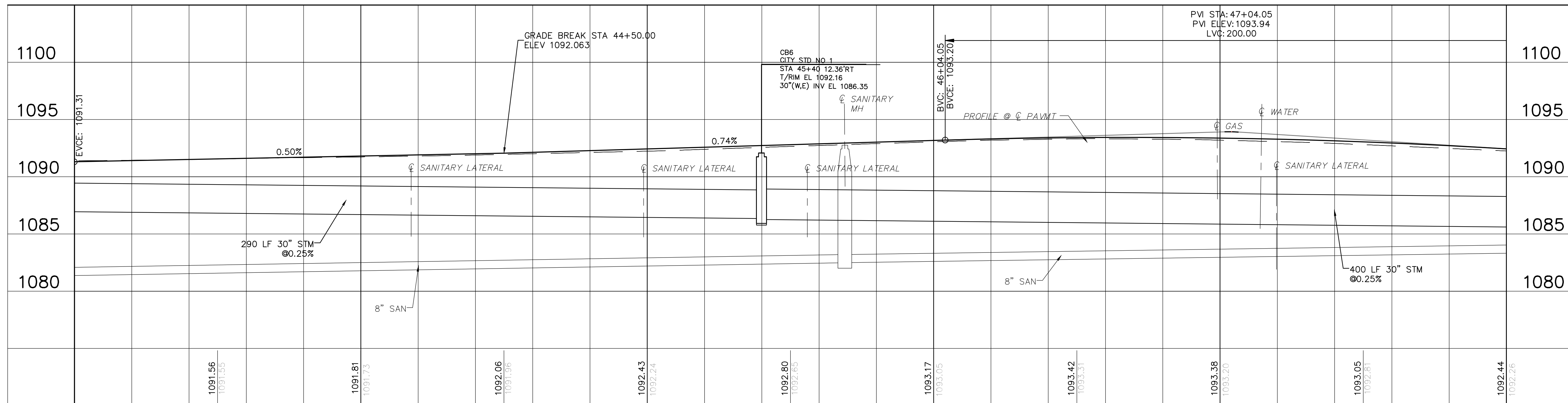
JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO C18

MATCH LINE
SEE SHEET C18

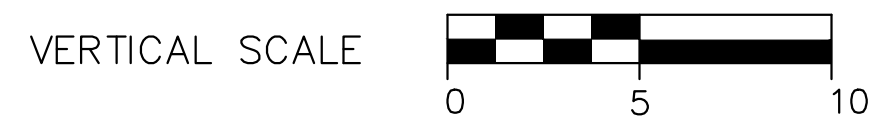
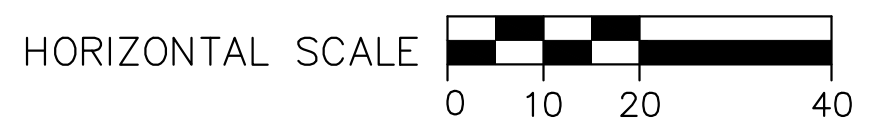
MATCH LINE
SEE SHEET C20



NOTE:
ALL EXISTING SANITARY MANHOLES TO BE
ADJUSTED TO PROPOSED GRADE.



BENCHMARK #7:
GIN GEAR SET 1' UP SOUTH
SIDE POLE AEP #624B4-5
SOUTH SIDE 55th IN FRONT OF
HSE #1324
EL 1092.85



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN ALL RIGHTS AND COMMON LAW RIGHTS, INCLUDING COPYRIGHTS, AND DISTRIBUTION TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE AUTHOR. THE AUTHOR MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, IN THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

NO.	DESCRIPTIONS	DATE	BY	APP'D

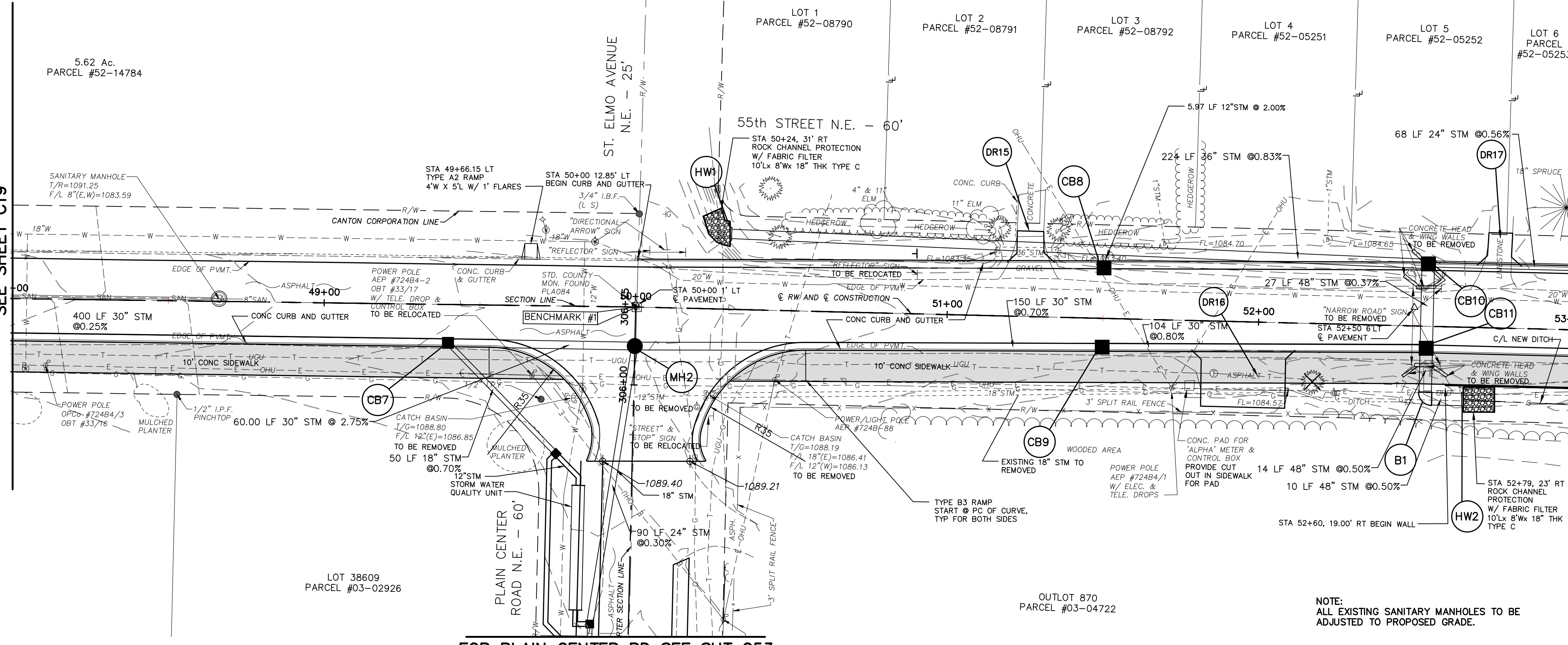
DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
DLK	AJP	DLK	DLK

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 PLAN AND PROFILE
 STA 43+00 TO STA 48+00

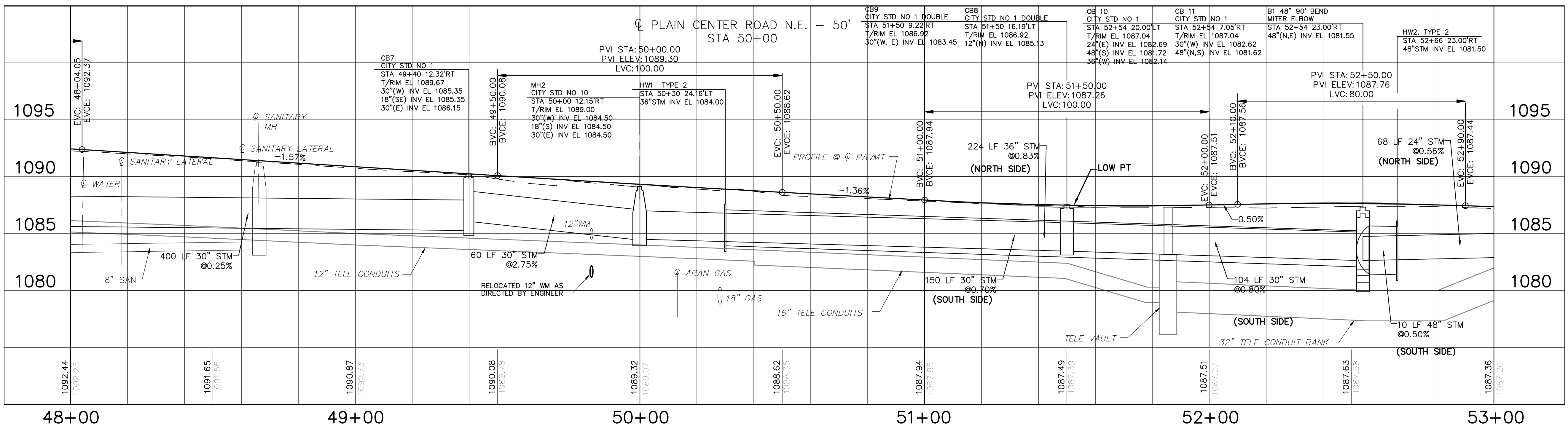
JOB NO. E10025
 DATE 8/2013
 SCALE AS NOTED
 SHEET NO C19

MATCH LINE
SEE SHEET C19

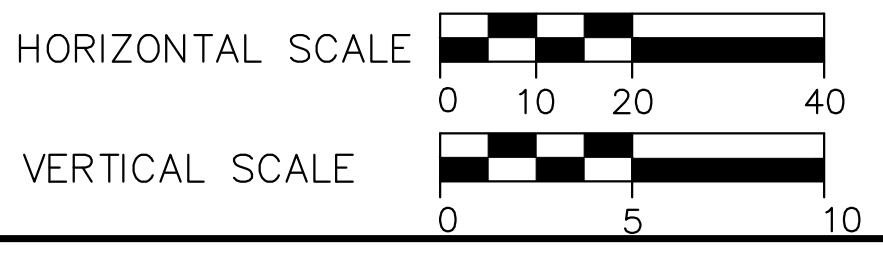
MATCH LINE
SEE SHEET C21



FOR PLAIN CENTER RD SEE SHT C53



BENCHMARK #1:
STANDARD COUNTY MONUMENT
FOUND AT INTERSECTION OF
55th & PLAIN CENTER -
PLA084
EL 1089.06

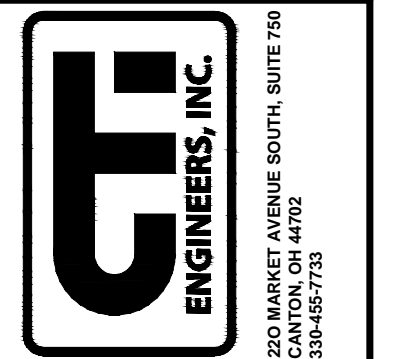


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY ENGINEERS, INC. THE AUTHOR AND WHICH SHALL REMAIN ALL RIGHTS RESERVED. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF ENGINEERS, INC. ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN PERMISSION OF ENGINEERS, INC. ENGINEERS, INC. CAN MAKE NO WARRANTY, EXPRESS OR IMPLIED, FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED IN THIS DRAWING. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREON. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREON. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREON.

NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY: DLK
DRAWN BY: AJP
CHECKED BY: DLK
APPROVED BY: DLK

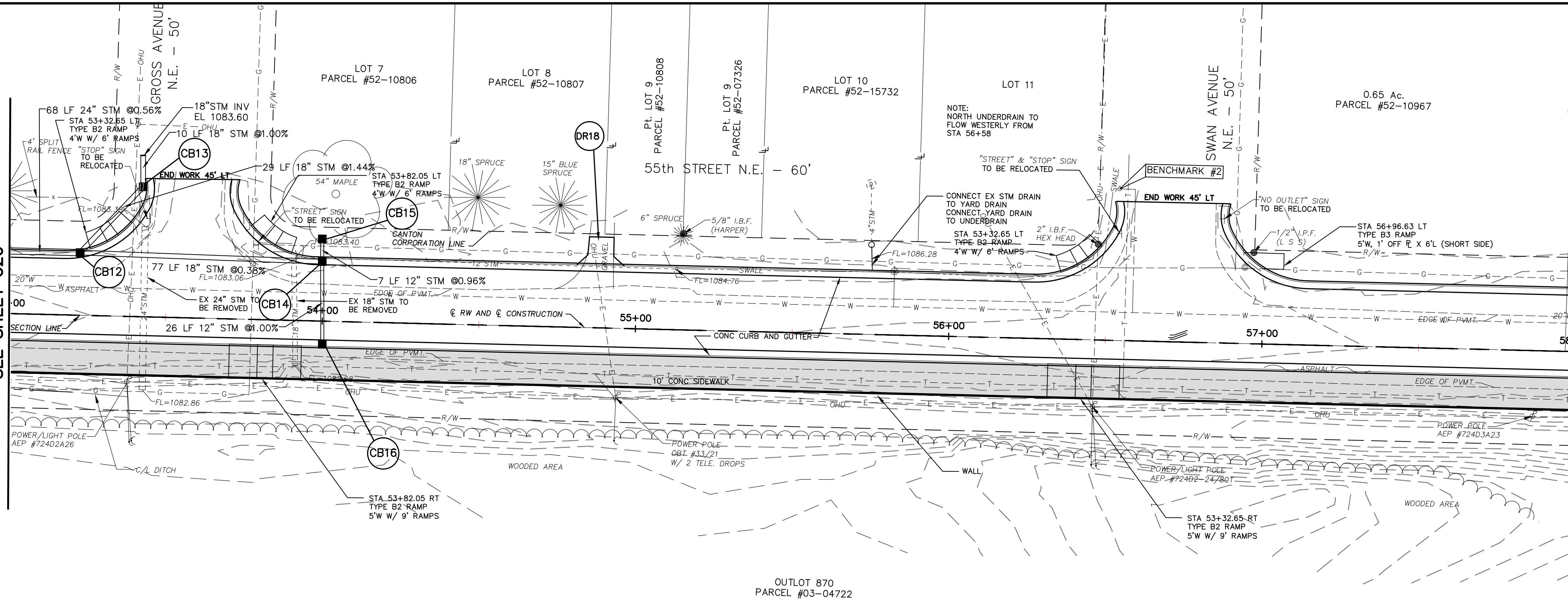
CITY OF CANTON, OHIO
55TH STREET N.E.
STORM SEWER IMPROVEMENTS
PLAN AND PROFILE
STA 48+00 TO STA 53+00



JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO C20

MATCH LINE
SEE SHEET C20

MATCH LINE
SEE SHEET C22



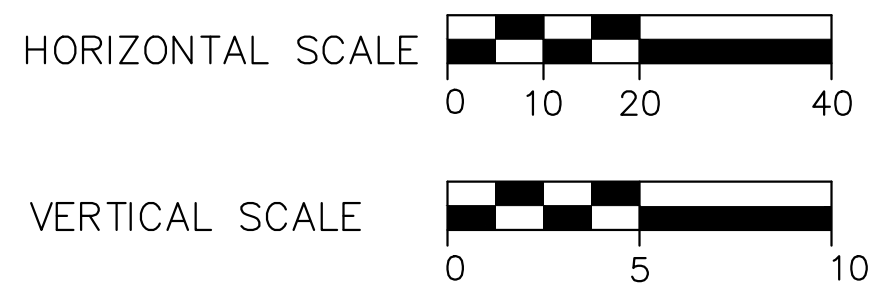
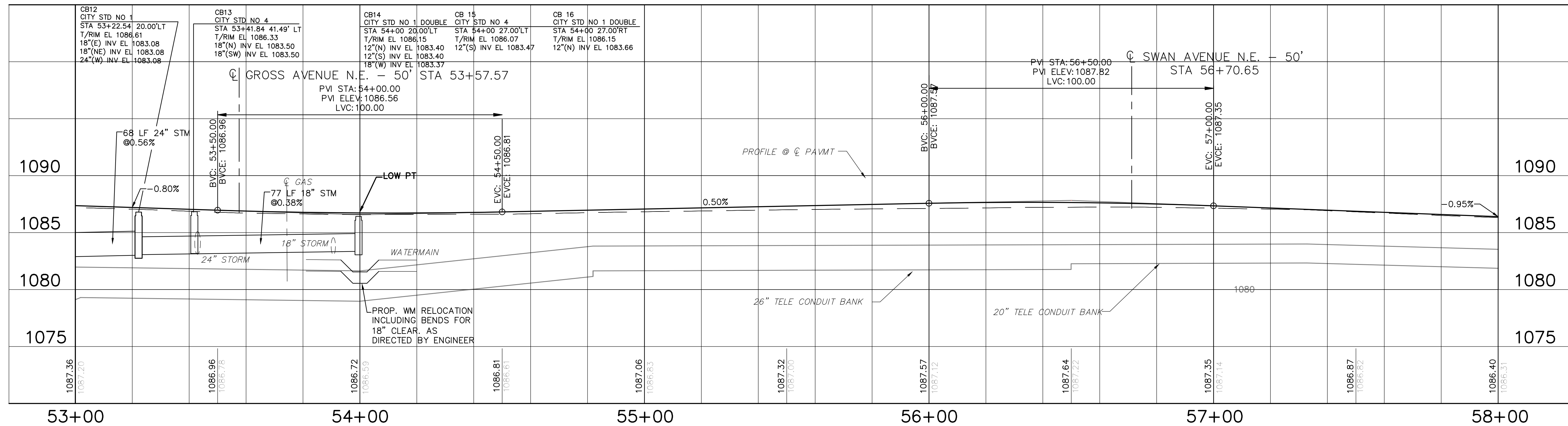
THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN ALL RIGHTS RESERVED. THE AUTHOR AND WHICH SHALL REMAIN ALL RIGHTS RESERVED. ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE AUTHOR IS STRICTLY PROHIBITED. THE AUTHOR MAKES NO WARRANTY, EXPRESS OR IMPLIED, FOR THE ACCURACY, COMPLETENESS, OR SUITABILITY OF THIS DRAWING FOR ANY PARTICULAR PURPOSE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING ALL INFORMATION AND CONDITIONS PRIOR TO CONSTRUCTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING ALL INFORMATION AND CONDITIONS PRIOR TO CONSTRUCTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING ALL INFORMATION AND CONDITIONS PRIOR TO CONSTRUCTION.

NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY: DLK
 DRAWN BY: AJP
 CHECKED BY: DLK
 APPROVED BY: DLK

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 PLAN AND PROFILE
 STA 53+00 TO STA 58+00

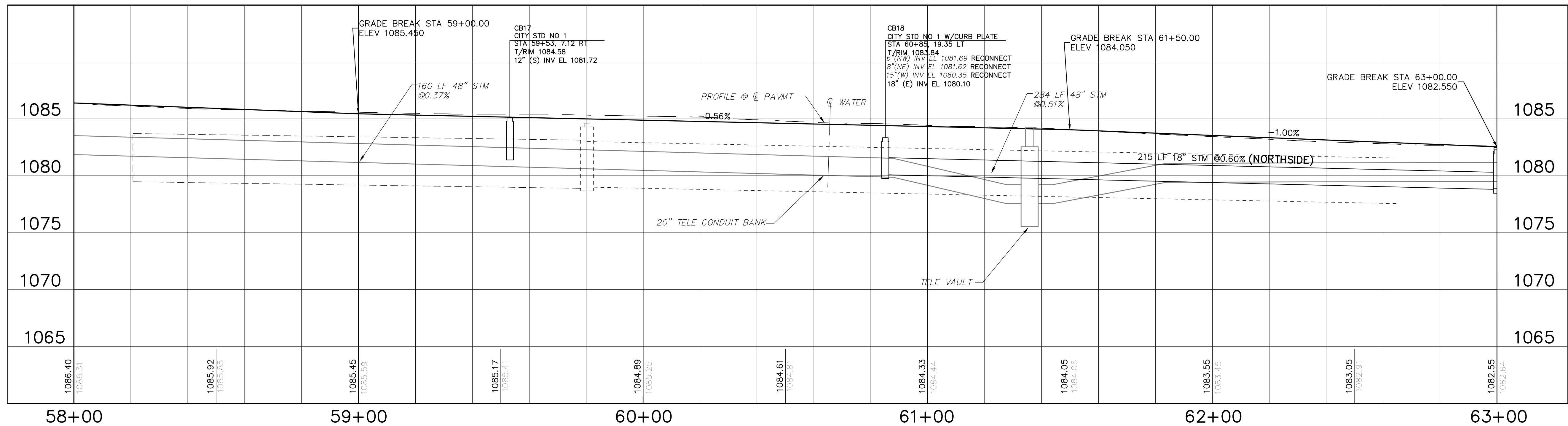
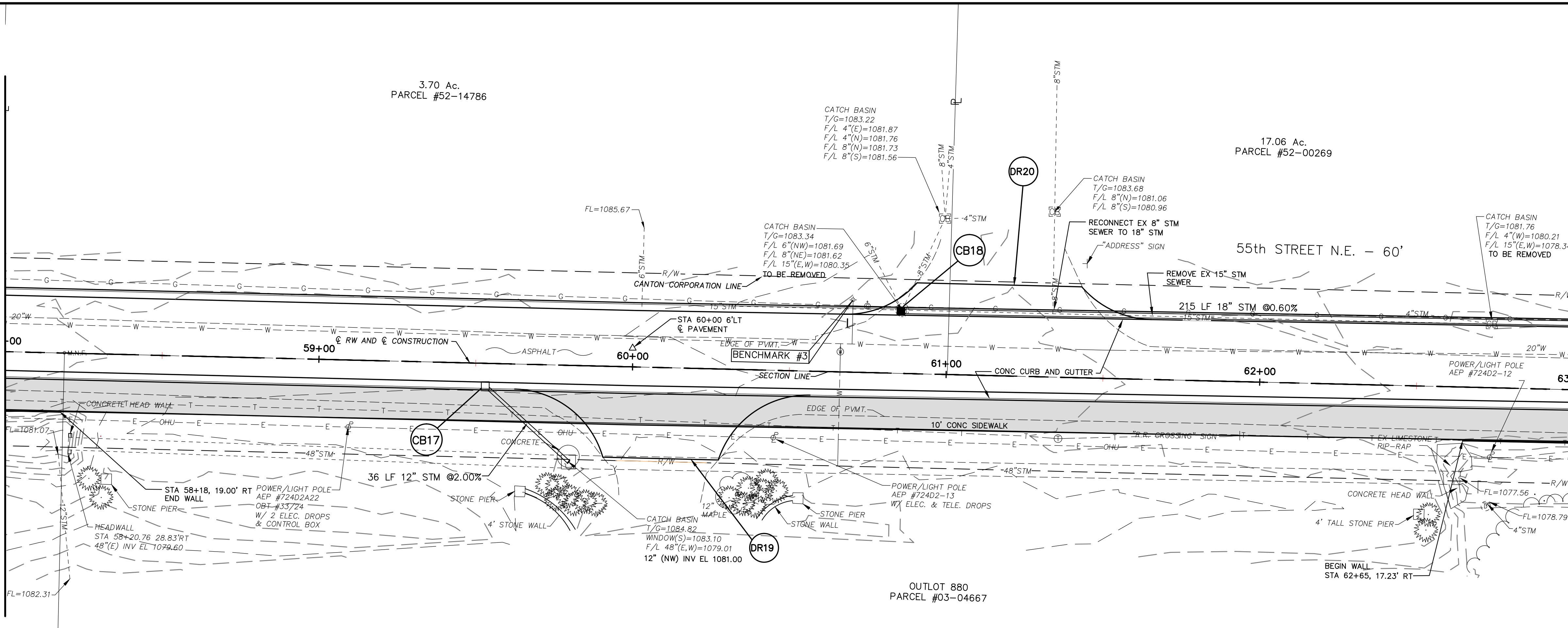
GF ENGINEERS, INC.
 220 MARKET AVENUE SOUTH, SUITE 700
 CANTON, OHIO 44702
 330-489-7372



BENCHMARK #2:
 TOP OF HYDRANT AT WORD
 'OPEN' ON SOUTH SIDE AT
 INTERSECTION OF SWAN & 55th
 EL 1089.30

MATCH LINE
SEE SHEET C21

MATCH LINE
SEE SHEET C23



BENCHMARK #3:
TOP OF HYDRANT AT WORD
'OPEN' ON SOUTH SIDE AT N.W.
CORNER OF DRIVE TO RICE'S &
55th
EL 1085.79



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR AND WHICH SHALL BE KEPT IN THE OFFICE OF THE AUTHOR. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE AUTHOR. THE AUTHOR ASSUMES NO LIABILITY FOR ANY ERRORS OR OMISSIONS IN THIS DRAWING. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

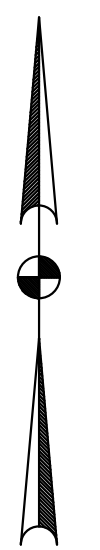
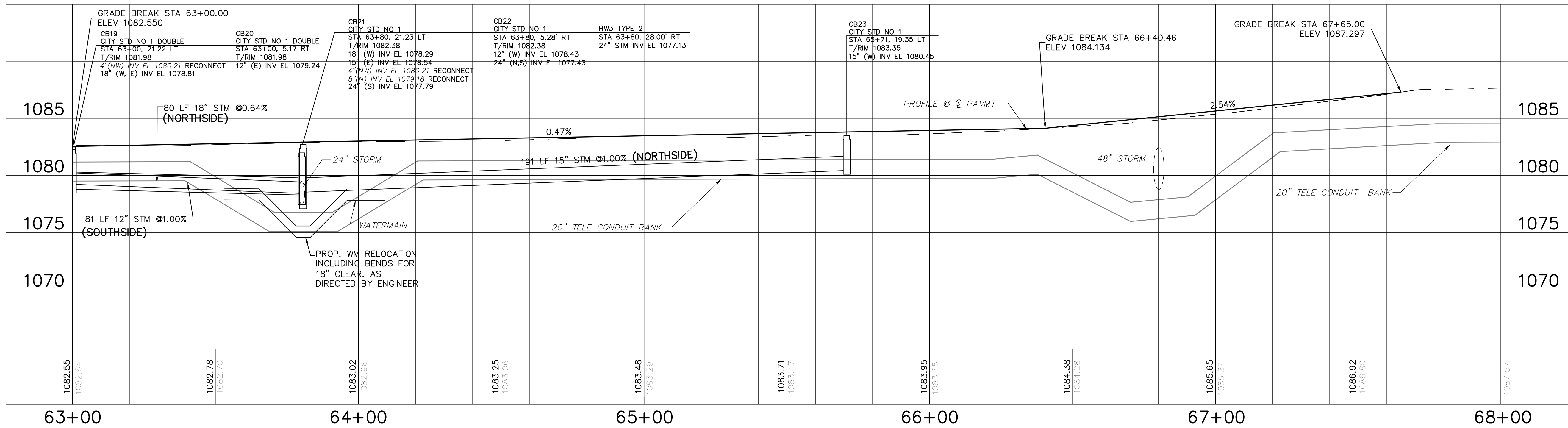
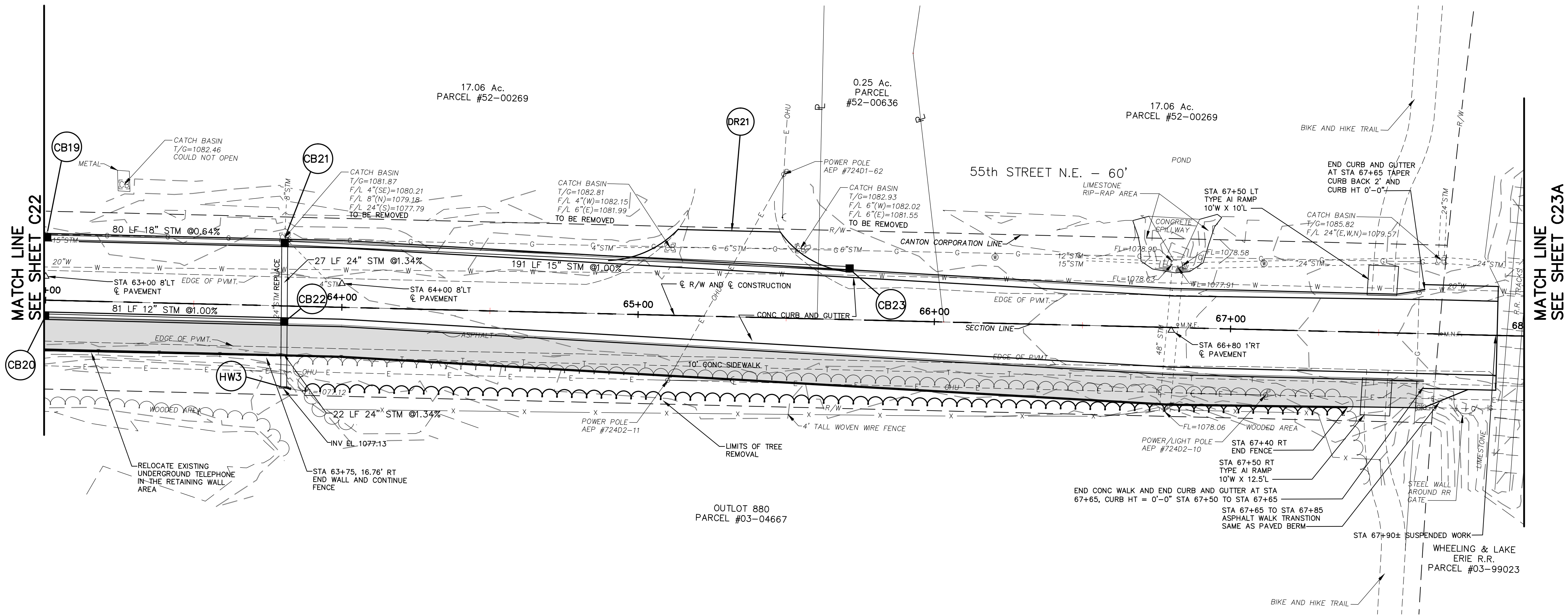
NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY: DLK
DRAWN BY: AJP
CHECKED BY: DLK
APPROVED BY: DLK

CITY OF CANTON, OHIO
55TH STREET NE
STORM SEWER IMPROVEMENTS
PLAN AND PROFILE
STA 58+00 TO STA 63+00



JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C22

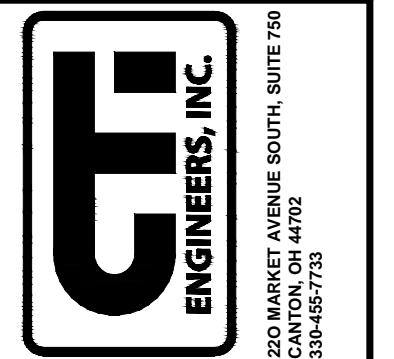


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR AND WHICH SHALL BE LOANED TO THE CLIENT FOR THE PURPOSES OF THE PROJECT ONLY. IT IS NOT TO BE REPRODUCED, COPIED, OR DISTRIBUTED TO OTHERS IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF THE AUTHOR. THE AUTHOR ASSUMES NO LIABILITY FOR ANY OTHER PURPOSES OR PROJECTS WITHOUT PRIOR WRITTEN PERMISSION. THE AUTHOR CAN MAKE NO WARRANTY, EXPRESS OR IMPLIED, REGARDING THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION PROVIDED IN THIS DRAWING. THE CLIENT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CLIENT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CLIENT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

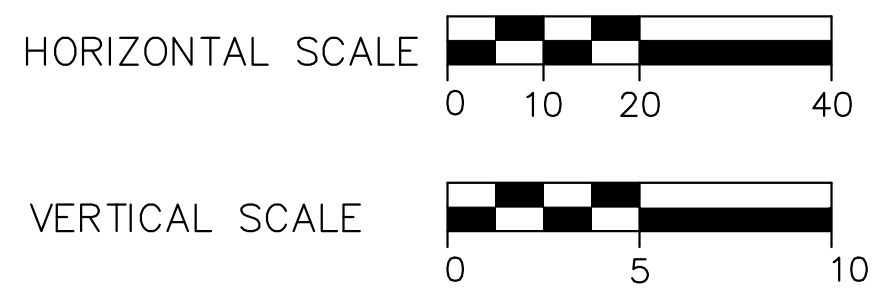
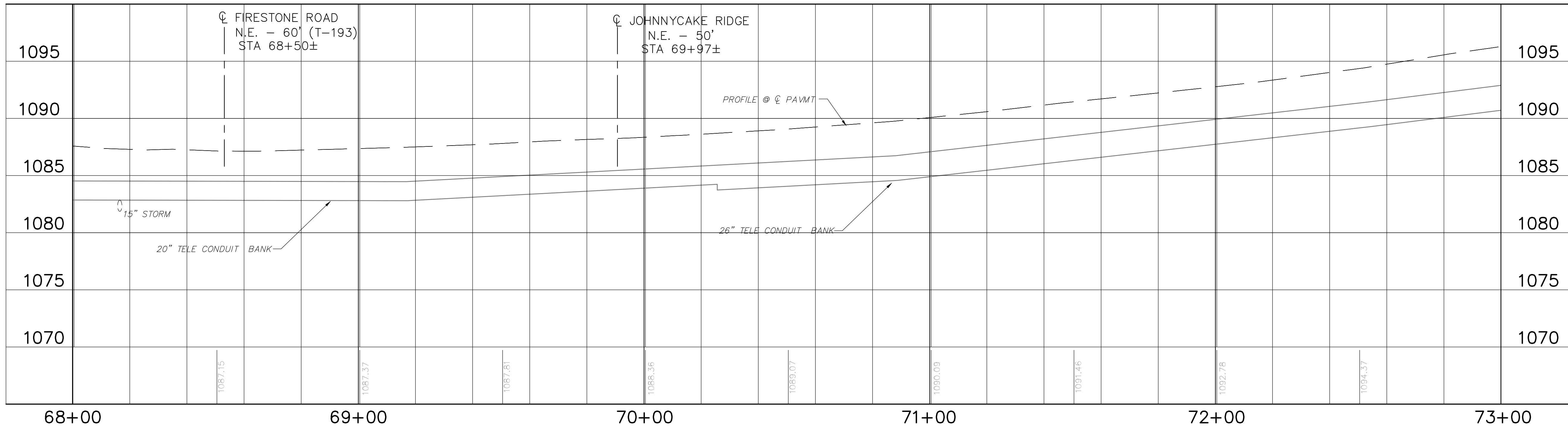
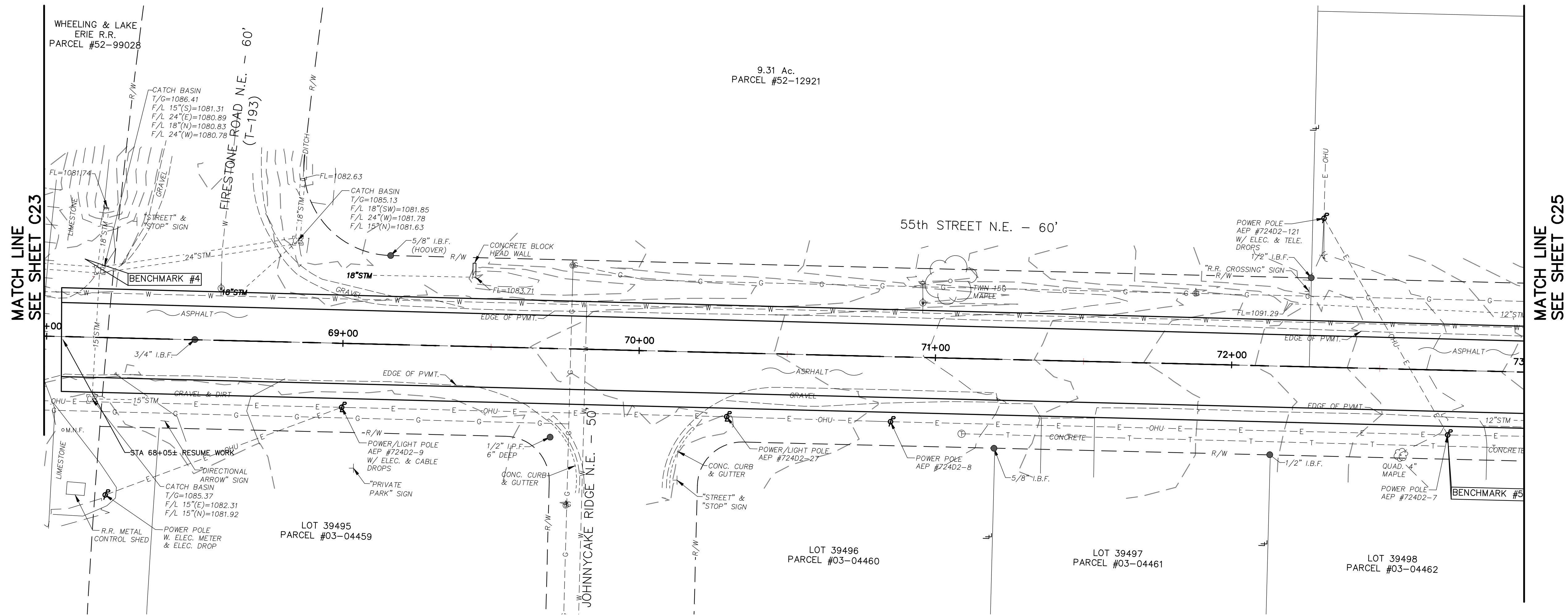
NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY: DLK
 DRAWN BY: AJP
 CHECKED BY: DLK
 APPROVED BY: DLK

CITY OF CANTON, OHIO
 55TH STREET N.E.
 STORM SEWER IMPROVEMENTS
 PLAN AND PROFILE
 STA 63+00 TO STA 68+00



JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C23



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE AUTHOR. THE AUTHOR MAKES NO WARRANTY, EXPRESS OR IMPLIED, THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE, COMPLETE, OR CURRENT. THE USER OF THIS DRAWING AGREES TO INDEMNIFY AND HOLD THE AUTHOR HARMLESS FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING REASONABLE ATTORNEY'S FEES, ARISING OUT OF OR RESULTING FROM THE USE OF THIS DRAWING. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

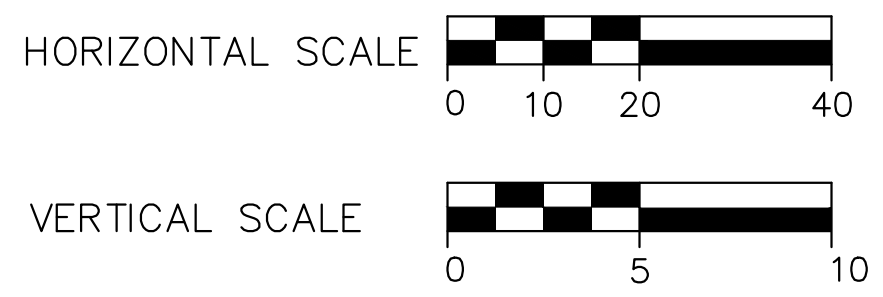
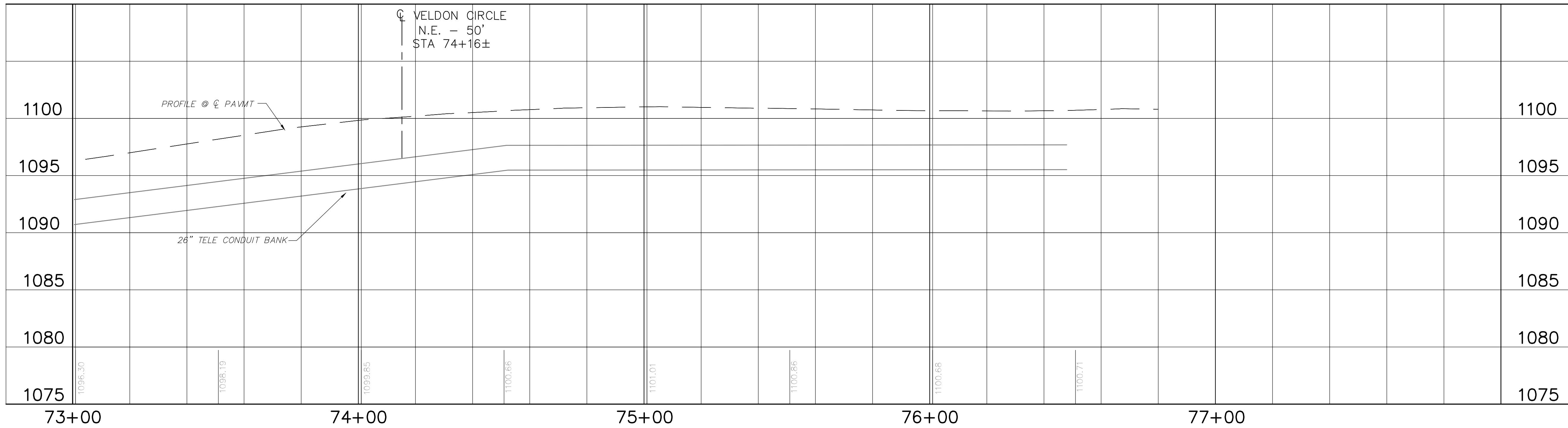
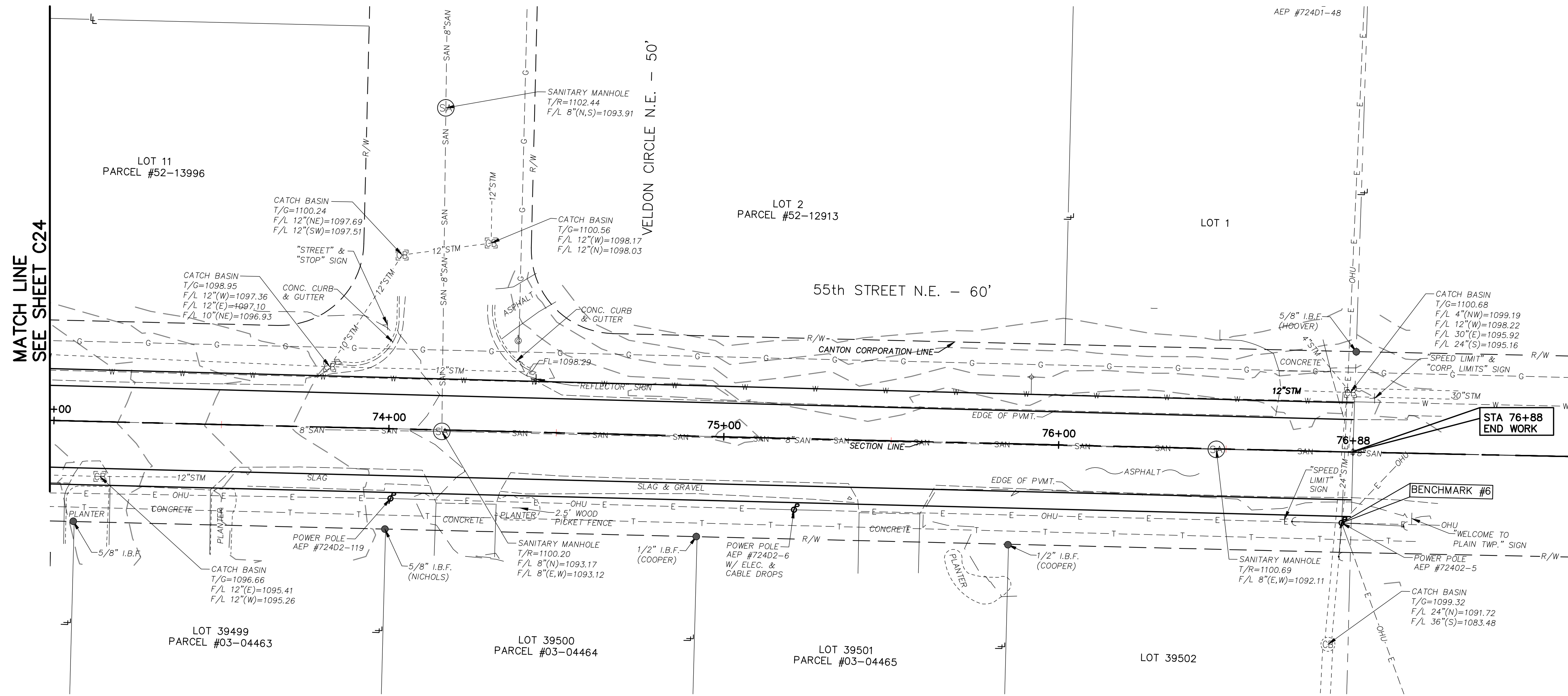
NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY: DLK
 DRAWN BY: AJP
 CHECKED BY: DLK
 APPROVED BY: DLK

CITY OF CANTON, OHIO
 55TH STREET N.E.
 STORM SEWER IMPROVEMENTS
 PLAN AND PROFILE
 STA 68+00 TO STA 73+00



JOB NO. E10025
 DATE 8/2013
 SCALE AS NOTED
 SHEET NO. C24



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR AND WHICH SHALL BE RETURNED TO THE AUTHOR UPON COMPLETION OF THE PROJECT. NO PART OF THIS DRAWING SHALL BE REPRODUCED, COPIED, OR DISTRIBUTED TO OTHERS IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE AUTHOR. THE AUTHOR ASSUMES NO LIABILITY FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE AUTHOR. THE AUTHOR'S LIABILITY IS LIMITED TO THE DESIGN OF THE PROJECT AND THE SEALS OF THE ENGINEER AND ARCHITECT SHALL GOVERN.

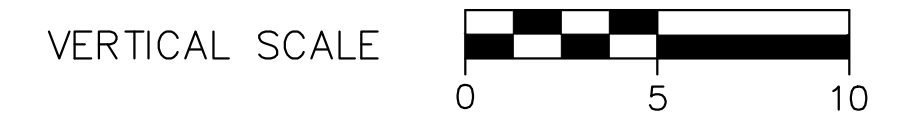
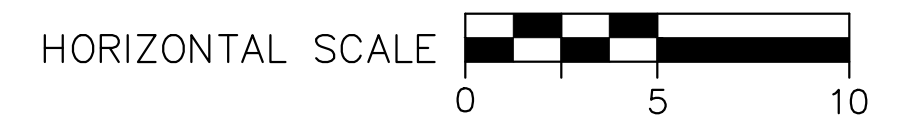
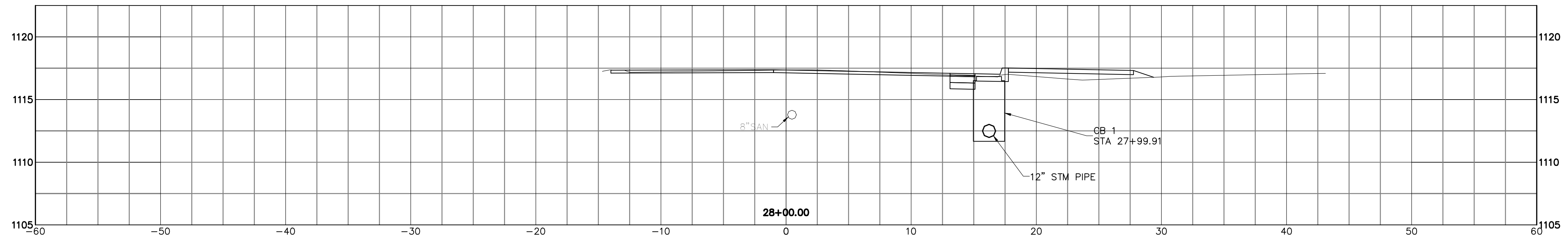
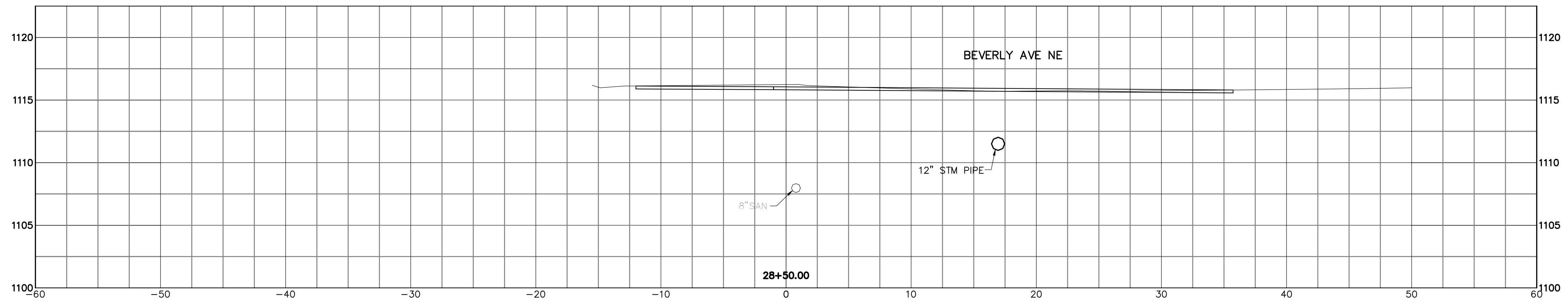
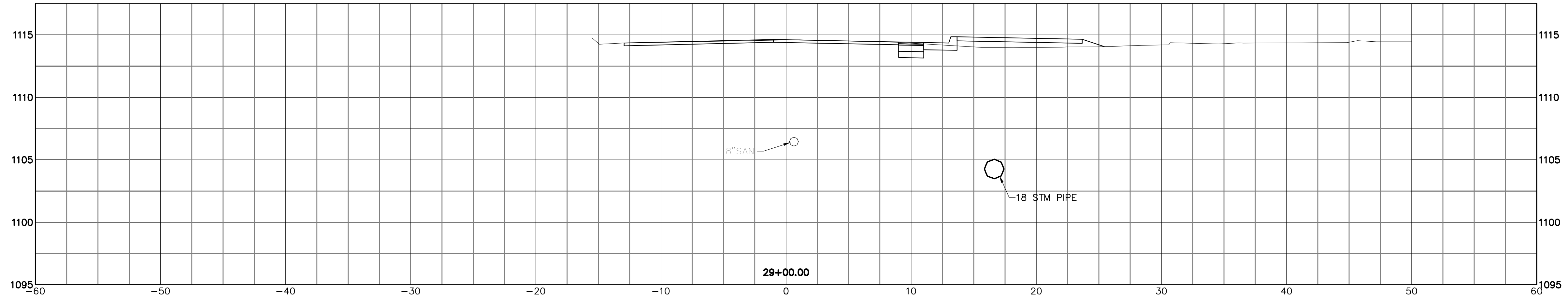
NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY: DLK
 DRAWN BY: AJP
 CHECKED BY: DLK
 APPROVED BY: DLK

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 PLAN AND PROFILE
 STA 68+00 TO STA 73+00



JOB NO. E10025
 DATE 8/2013
 SCALE AS NOTED
 SHEET NO. C25

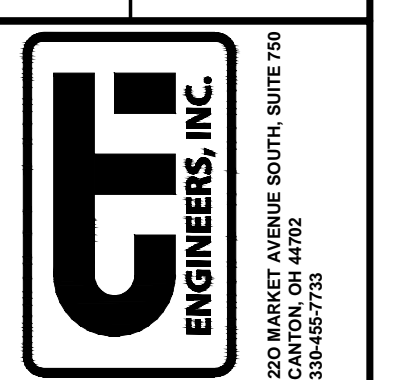


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS THE PROPERTY OF THE CITY OF CANTON, OHIO AND SHALL REMAIN THE PROPERTY OF THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER. THE CITY OF CANTON, OHIO DOES NOT WARRANT THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE CITY OF CANTON, OHIO SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING. THE CITY OF CANTON, OHIO SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING. THE CITY OF CANTON, OHIO SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING.

REVISIONS	
NO.	DESCRIPTIONS

DESIGNED BY	DLK
DRAWN BY	AJP
CHECKED BY	DLK
APPROVED BY	DLK

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 28+00 TO STA 29+00



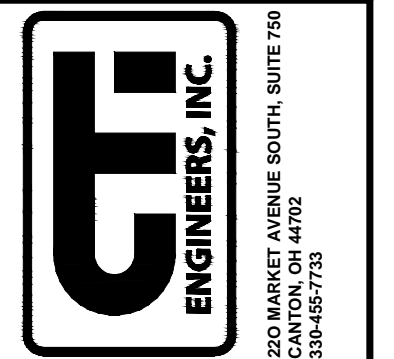
JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C26

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE ENGINEER. THE CITY OF CANTON, OHIO, ENGINEERS, INC. CANNOT GUARANTEE THAT ELECTRONIC COPIES OF THIS DRAWING ARE EXACT REPRODUCTIONS OF THE ORIGINAL DRAWING. IN THE EVENT OF A DISCREPANCY BETWEEN AN ELECTRONIC COPY AND THE SEALED ORIGINAL, THE SEALED ORIGINAL SHALL GOVERN.

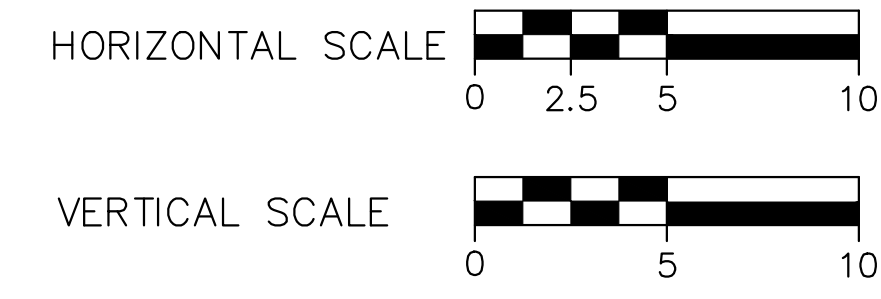
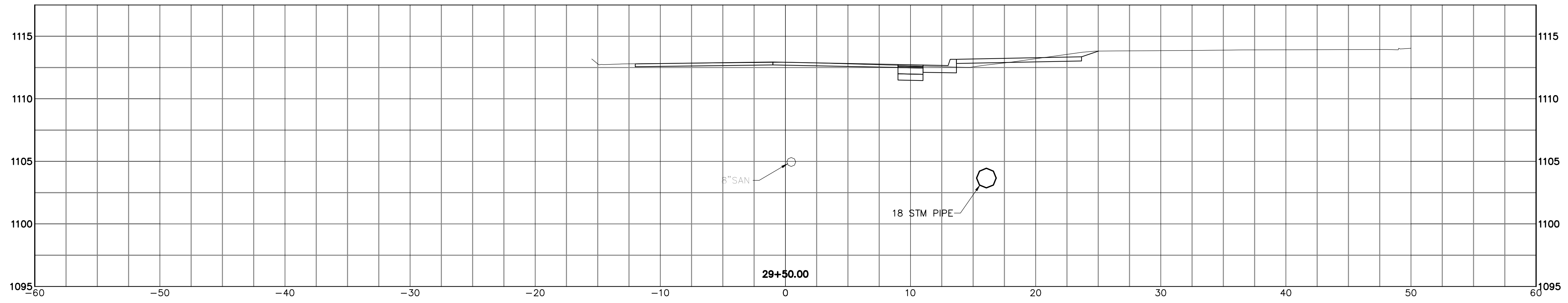
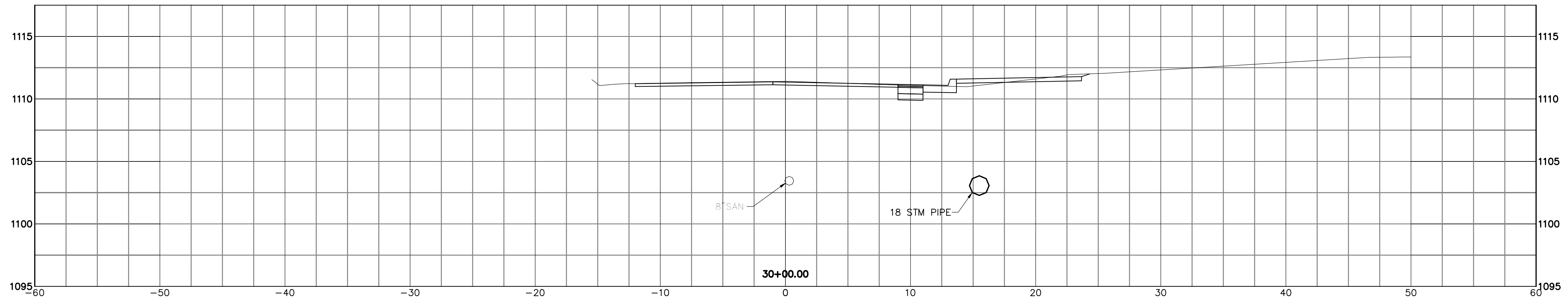
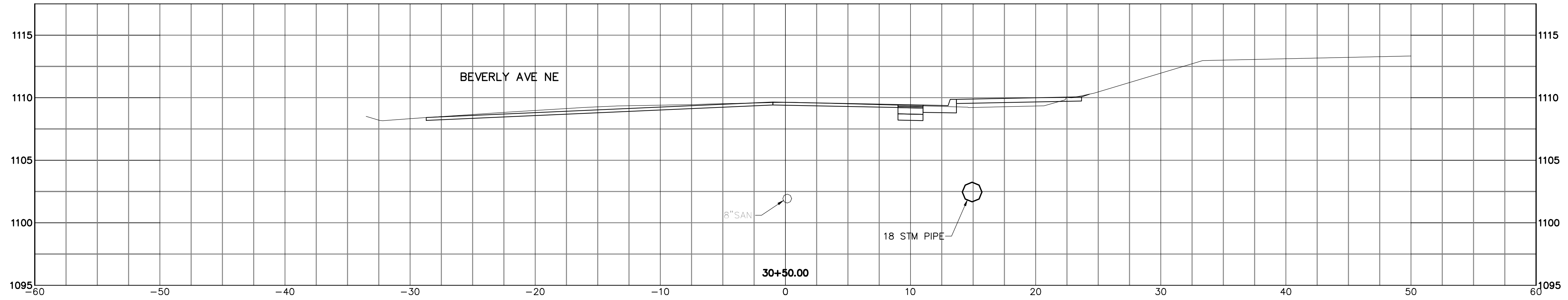
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

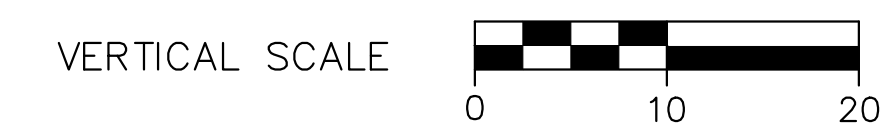
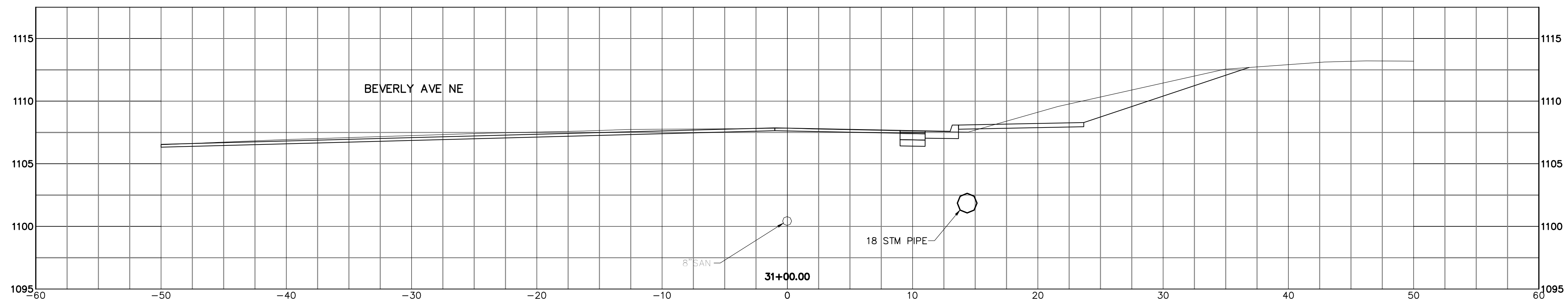
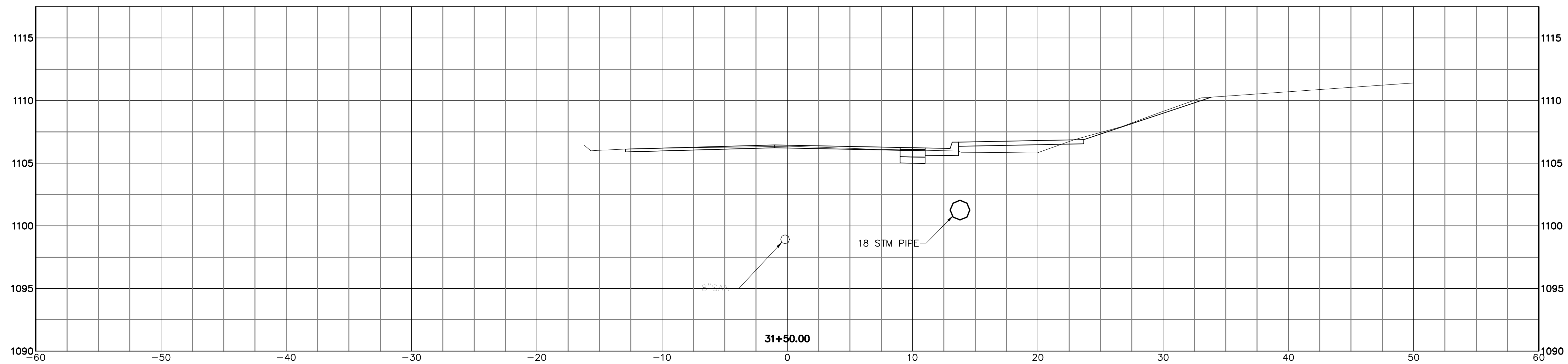
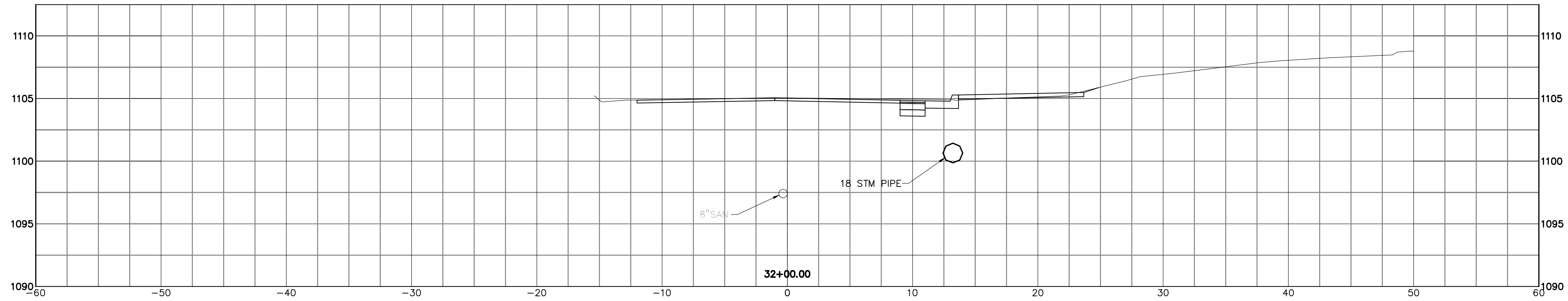
REVISIONS		DATE	BY	APP'D
NO.	DESCRIPTIONS			

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 29+50 TO STA 30+50



JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C27





THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS THE PROPERTY OF THE CITY OF CANTON, OHIO, AND COMMON LAW RIGHTS, INCLUDING COPYRIGHTS, ARE RESERVED. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE CITY OF CANTON, OHIO. THE CITY OF CANTON, OHIO, DOES NOT WARRANT THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE CITY OF CANTON, OHIO, SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING. THE CITY OF CANTON, OHIO, SHALL BE THE SOLE ARBITRATOR OF ANY DISPUTE ARISING FROM THE USE OF THIS DRAWING. THE SEALED ORIGINAL SHALL GOVERN.

REVISIONS		DATE	BY	APP'D
NO.	DESCRIPTIONS			

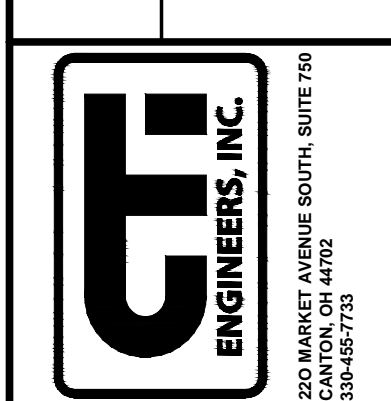
DESIGNED BY
DLK

DRAWN BY
AJP

CHECKED BY
DLK

APPROVED BY
DLK

CITY OF CANTON, OHIO
55TH STREET NE
STORM SEWER IMPROVEMENTS
XSECTIONS
STA 31+00 TO STA 32+00

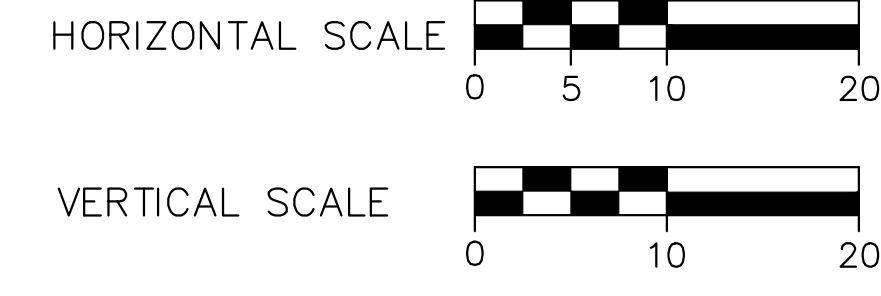
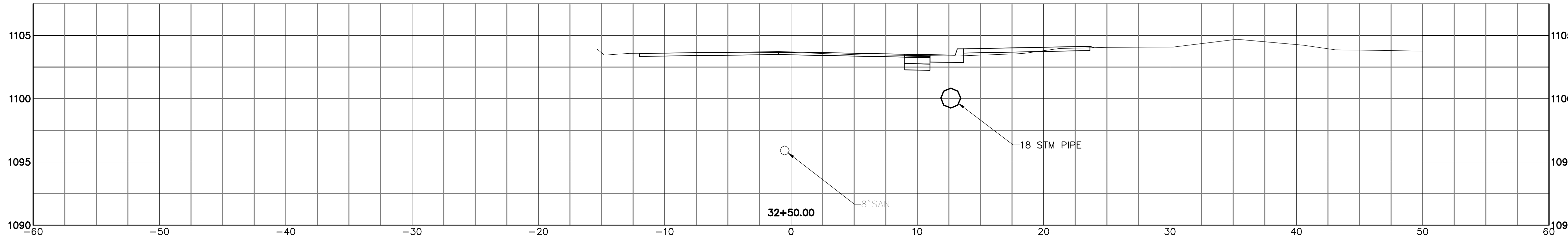
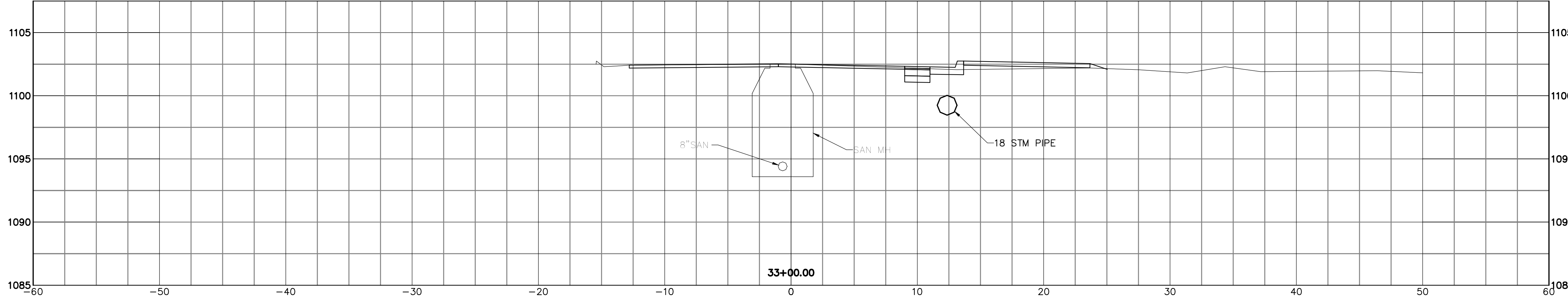
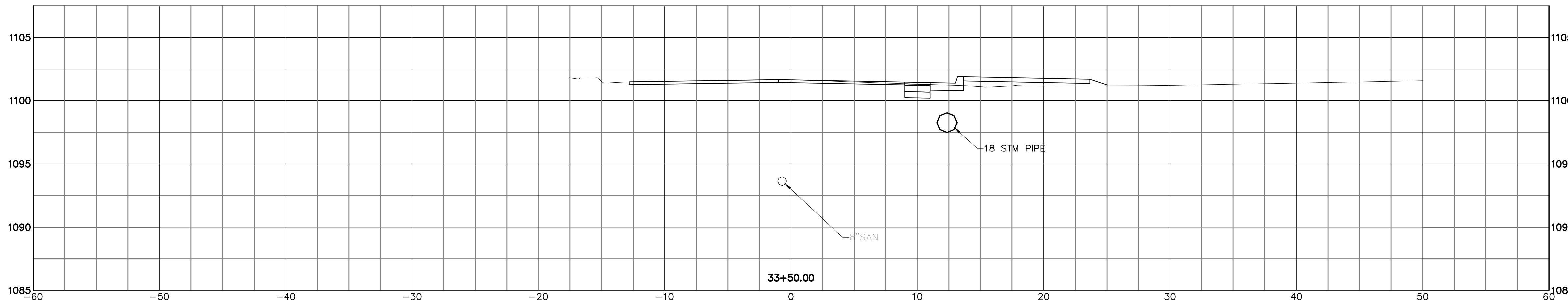


JOB NO.
E10025

DATE
8/2013

SCALE
AS NOTED

SHEET NO.
C28



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE AUTHOR. THE AUTHOR MAKES NO WARRANTY, EXPRESS OR IMPLIED, THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE, COMPLETE, OR CURRENT. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREON. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREON. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREON.

DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS			
NO.	DESCRIPTIONS	DATE	BY

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 32+50 TO STA 33+50



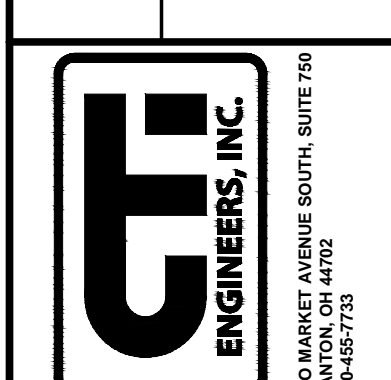
JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C29

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN CONSENT OF THE AUTHOR. THE AUTHOR MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE ACCURACY, COMPLETENESS, OR SUITABILITY OF THE INFORMATION PROVIDED HEREON. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

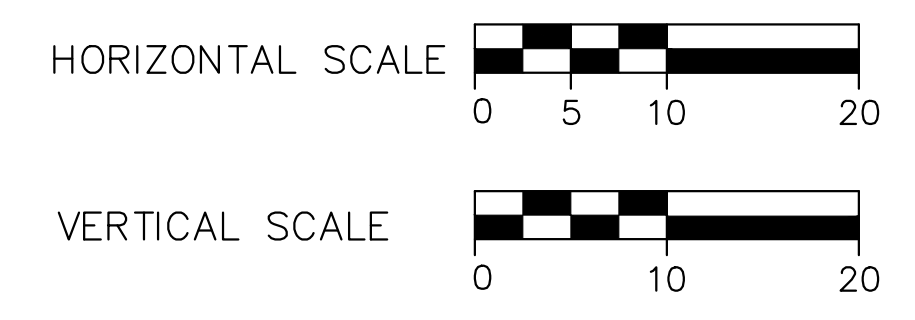
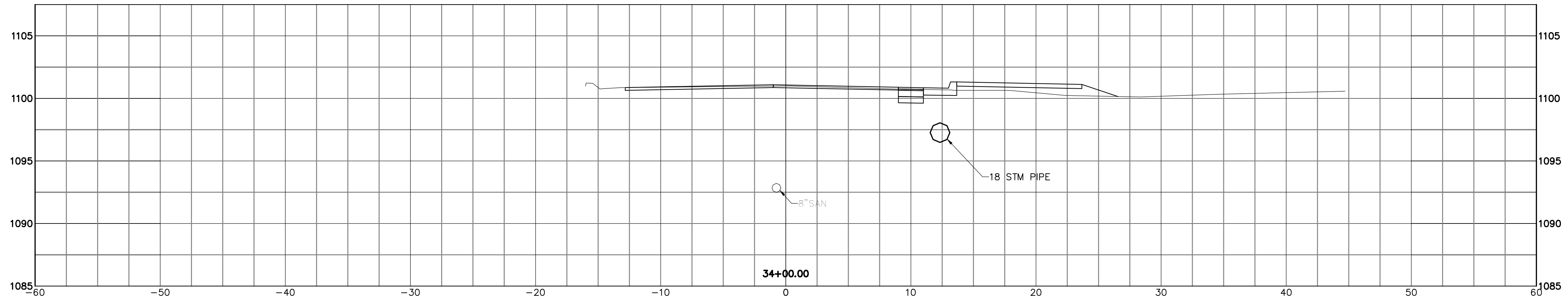
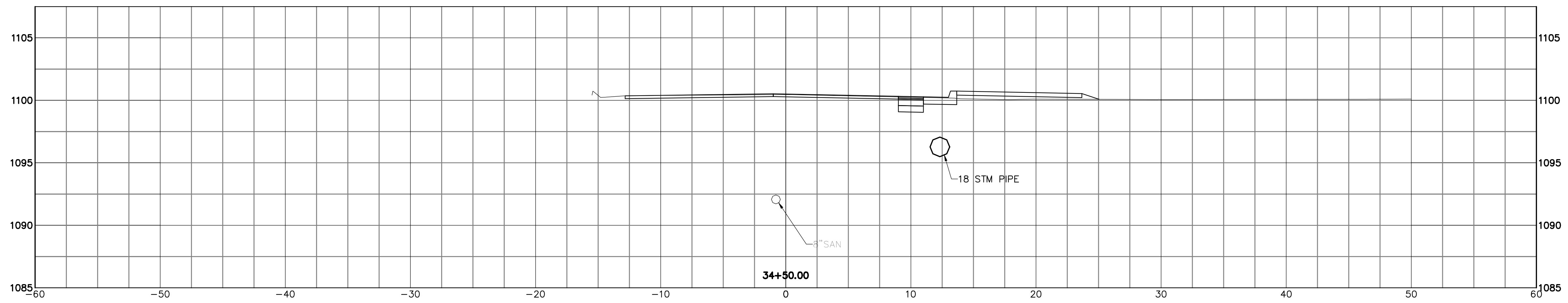
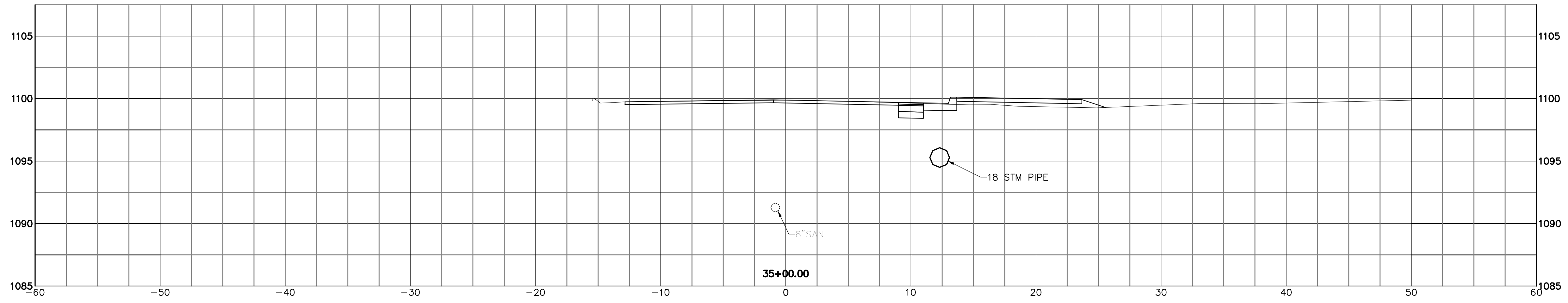
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

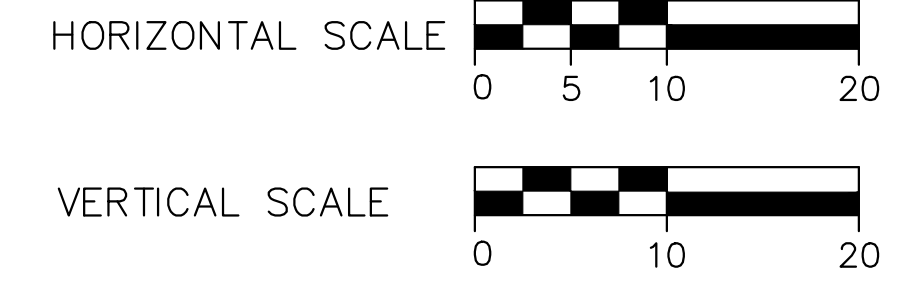
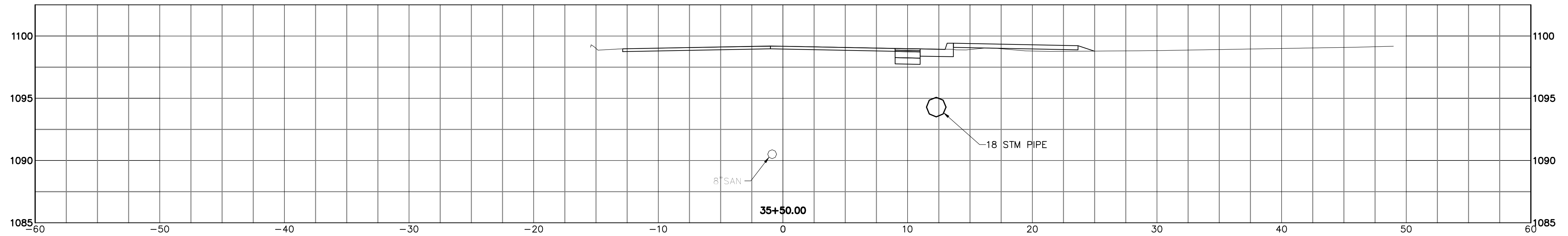
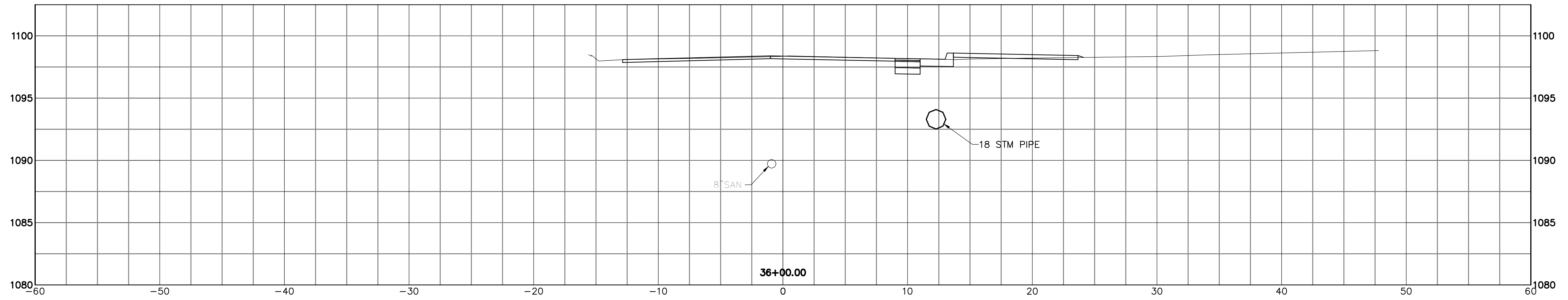
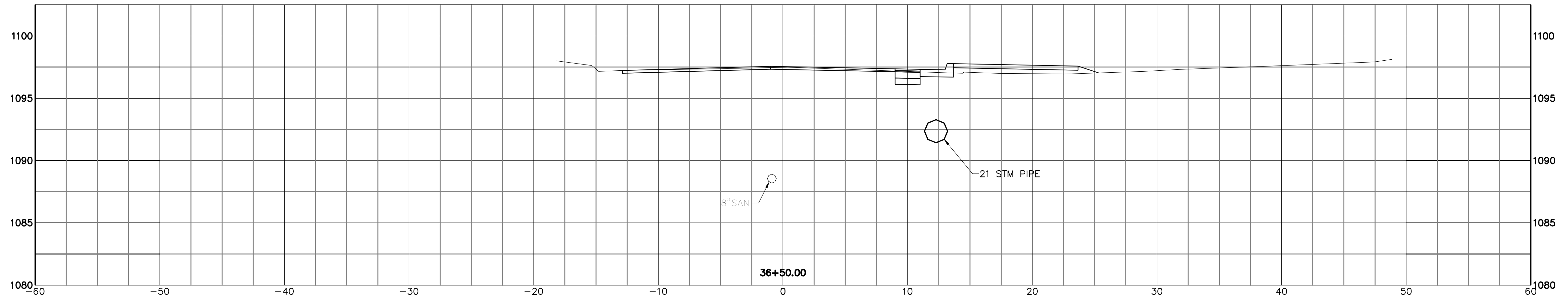
REVISIONS		DATE	BY
NO.	DESCRIPTIONS		

CITY OF CANTON, OHIO
55TH STREET NE
STORM SEWER IMPROVEMENTS
XSECTIONS
STA 34+00 TO STA 35+00



JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C30



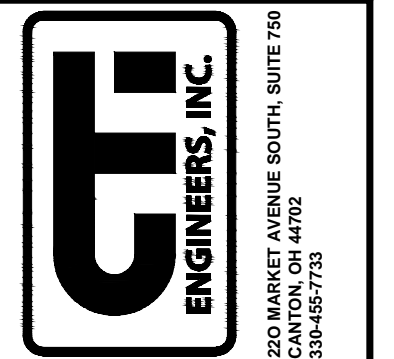


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE AUTHOR. THE AUTHOR ASSUMES NO LIABILITY FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION. THE AUTHOR DOES NOT WARRANT THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

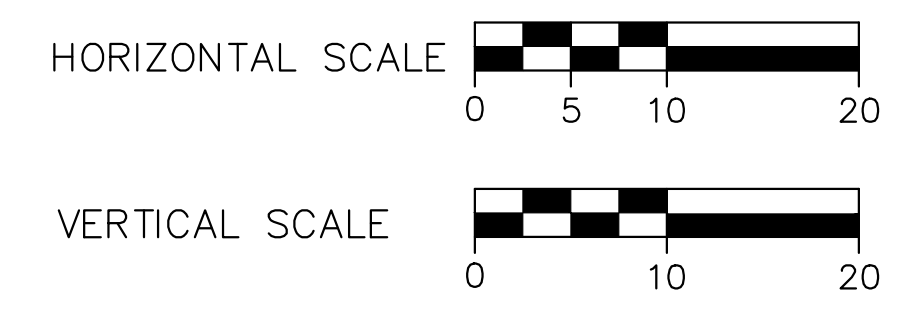
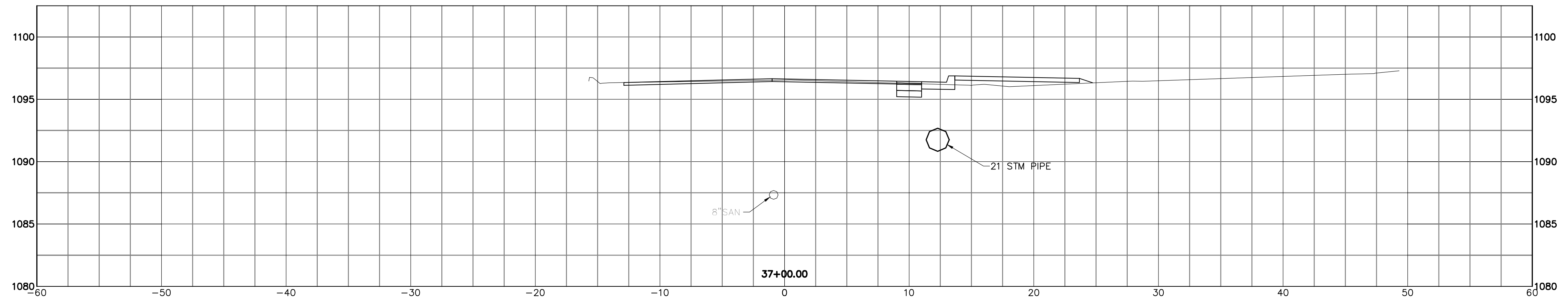
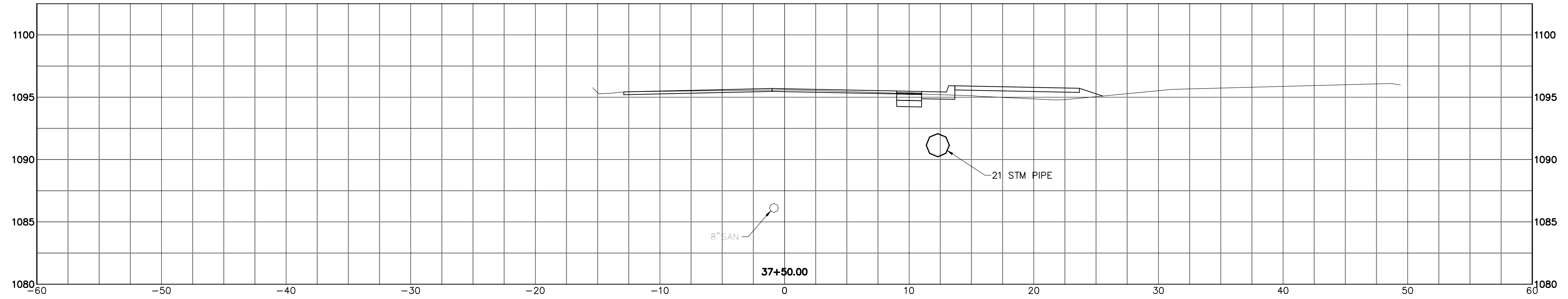
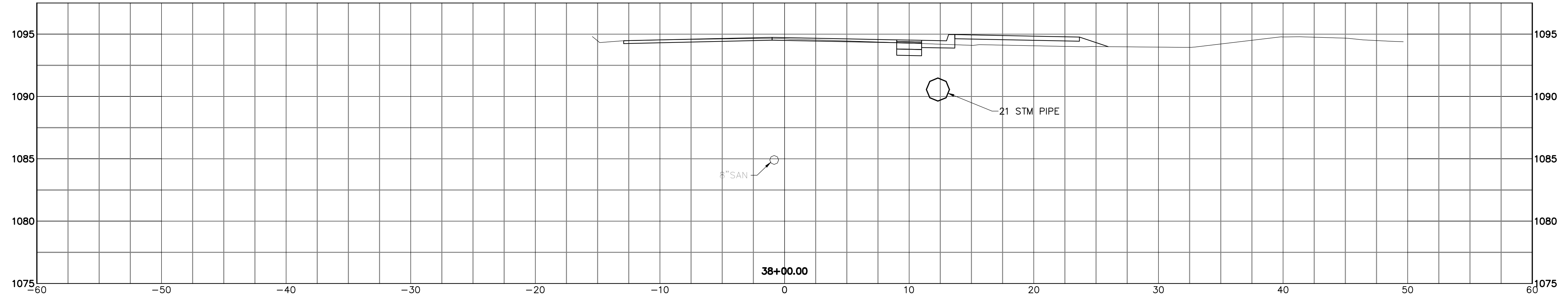
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS		DATE	BY
NO.	DESCRIPTIONS		

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 35+50 TO STA 36+50



JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C31

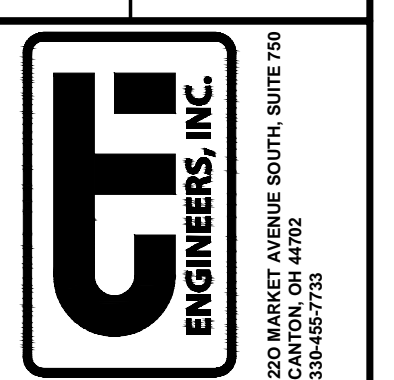


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED HEREON. THE ENGINEER DOES NOT WARRANT THAT THE INFORMATION CONTAINED HEREIN IS COMPLETELY ACCURATE OR THAT THE INFORMATION WILL BE USEFUL FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR CONSULTATION WITH THE ENGINEER. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED HEREON. THE ENGINEER DOES NOT WARRANT THAT THE INFORMATION CONTAINED HEREIN IS COMPLETELY ACCURATE OR THAT THE INFORMATION WILL BE USEFUL FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR CONSULTATION WITH THE ENGINEER. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED HEREON. THE ENGINEER DOES NOT WARRANT THAT THE INFORMATION CONTAINED HEREIN IS COMPLETELY ACCURATE OR THAT THE INFORMATION WILL BE USEFUL FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR CONSULTATION WITH THE ENGINEER.

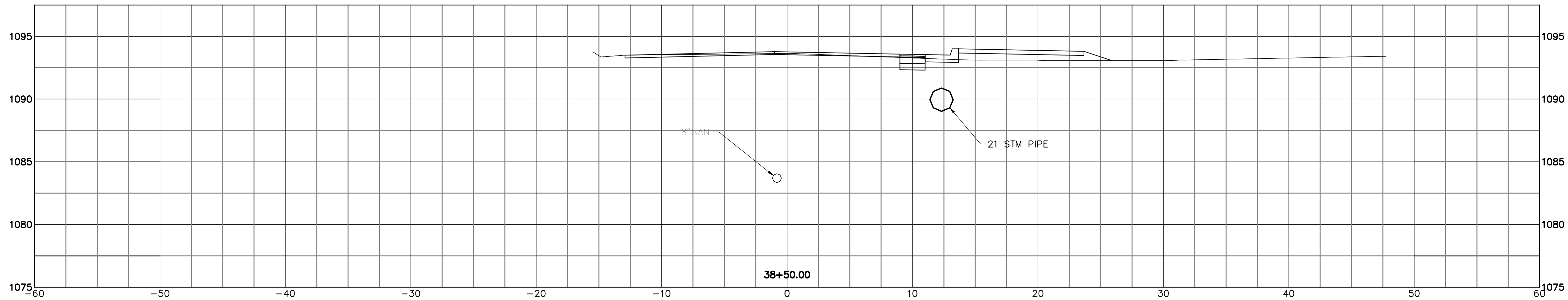
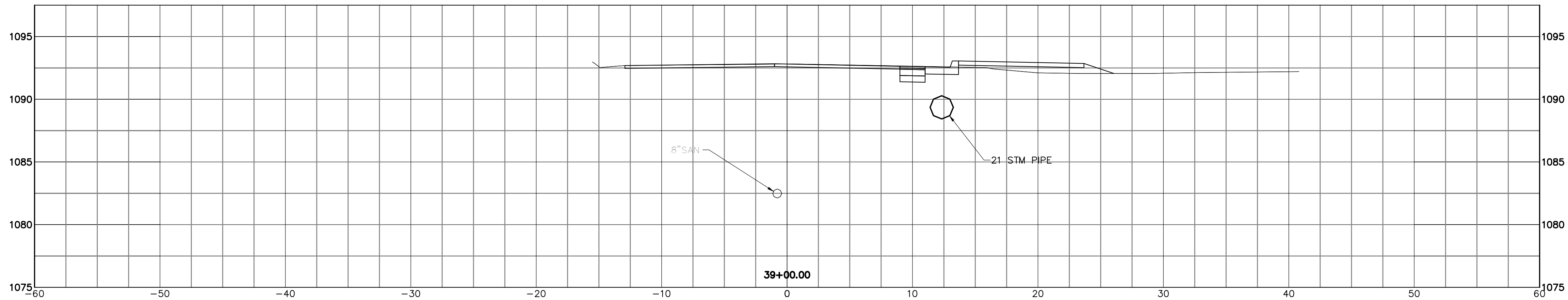
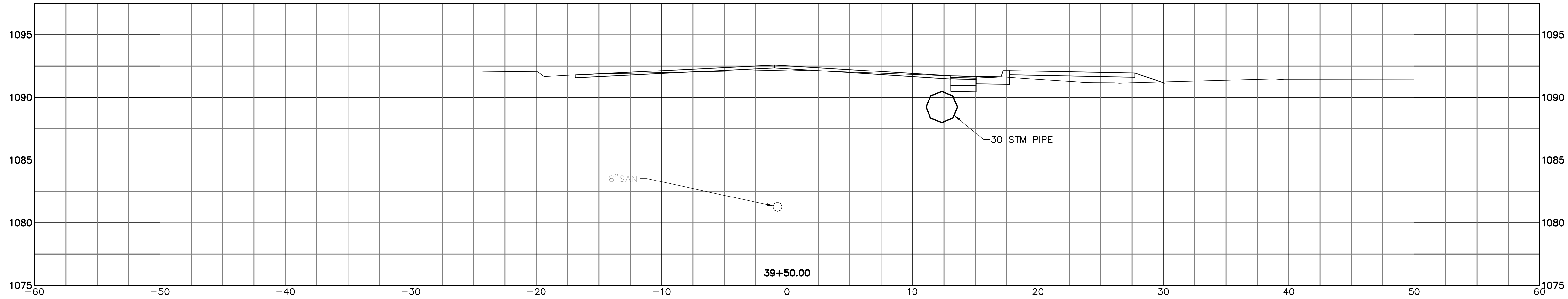
REVISIONS		DATE	BY	APP'D
NO.	DESCRIPTIONS			

DESIGNED BY: DLK
 DRAWN BY: AJP
 CHECKED BY: DLK
 APPROVED BY: DLK

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 37+00 TO STA 38+00



JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C32



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. THE AUTHOR AND WHICH SHALL RETAIN ALL RIGHTS, INCLUDING COPYRIGHTS, IN THIS DRAWING. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION FROM THE ENGINEER. THE CITY ENGINEER'S OFFICE CANNOT GUARANTEE THAT THE INFORMATION ON THIS DRAWING IS ACCURATE. ELECTRONIC COPIES OF THIS DRAWING ARE EXACT REPRODUCTIONS OF THE ORIGINAL DRAWING. IN THE EVENT OF A DISCREPANCY BETWEEN THE ELECTRONIC COPY AND THE SEALED ORIGINAL, THE SEALED ORIGINAL SHALL GOVERN.

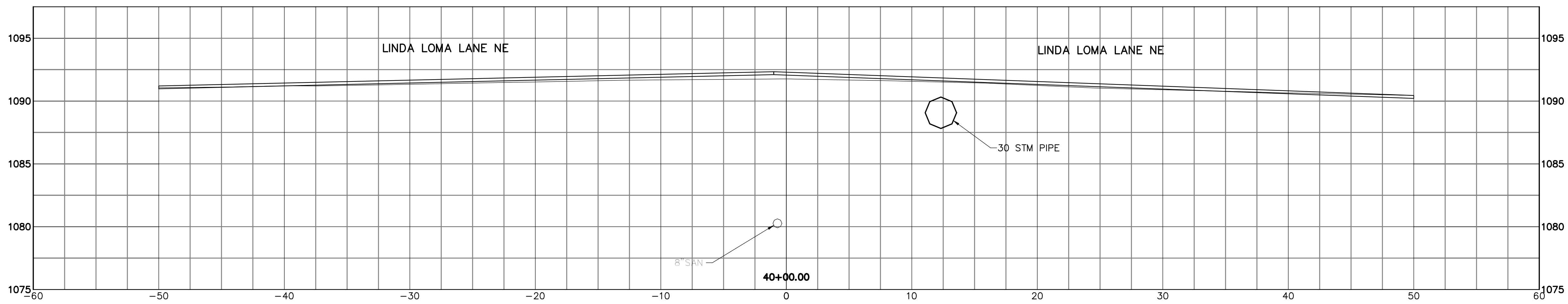
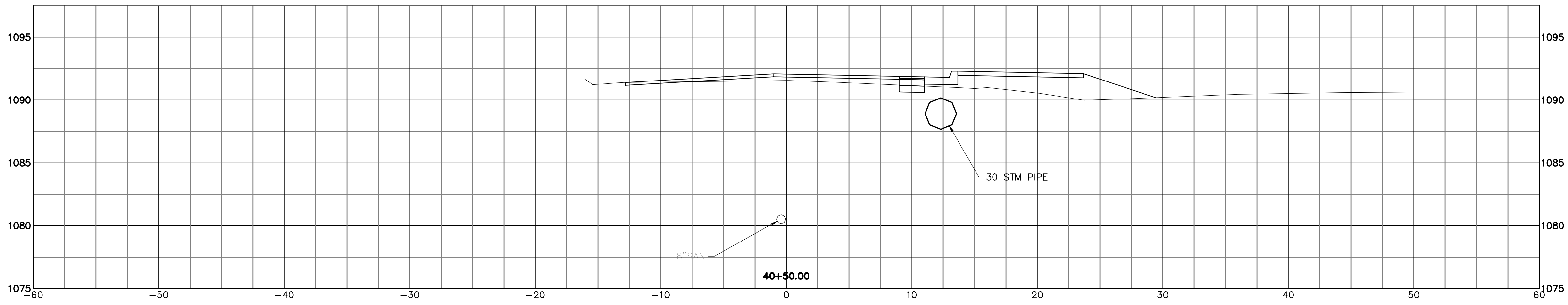
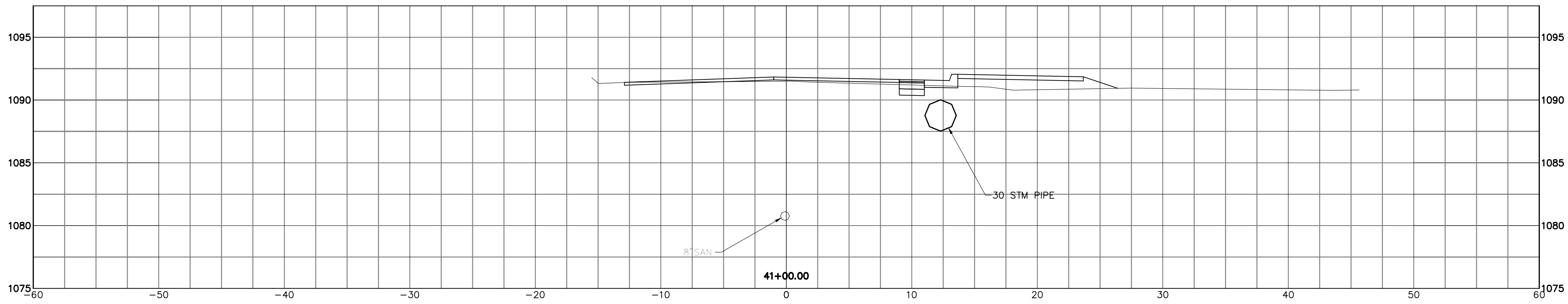
REVISIONS	
NO.	DESCRIPTIONS

DESIGNED BY	DLK
DRAWN BY	AJP
CHECKED BY	DLK
APPROVED BY	DLK

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 38+50 TO STA 39+50



JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C33

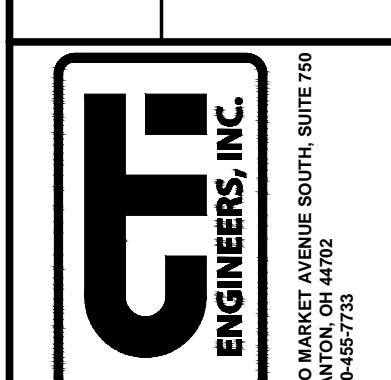


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE AUTHOR. THE AUTHOR MAKES NO WARRANTY, EXPRESS OR IMPLIED, THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREON. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREON. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREON.

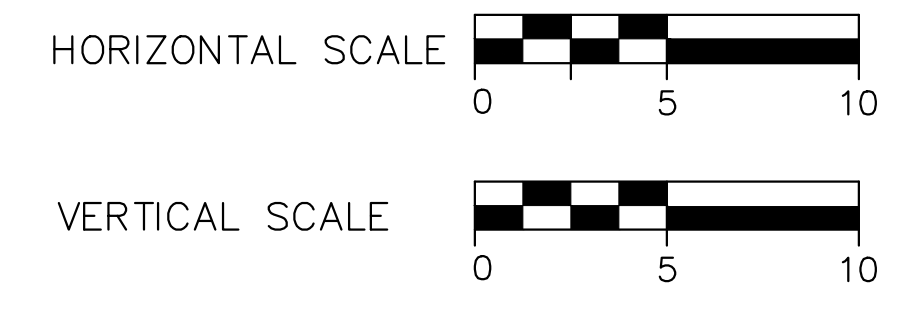
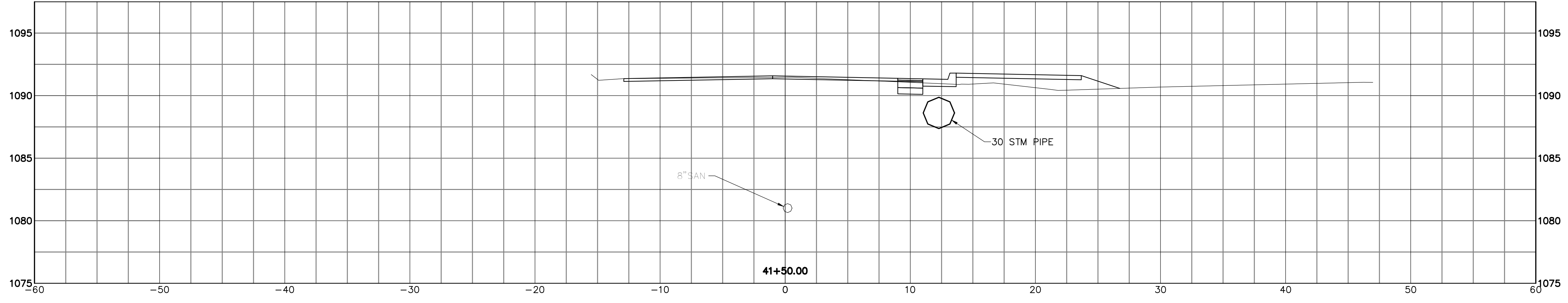
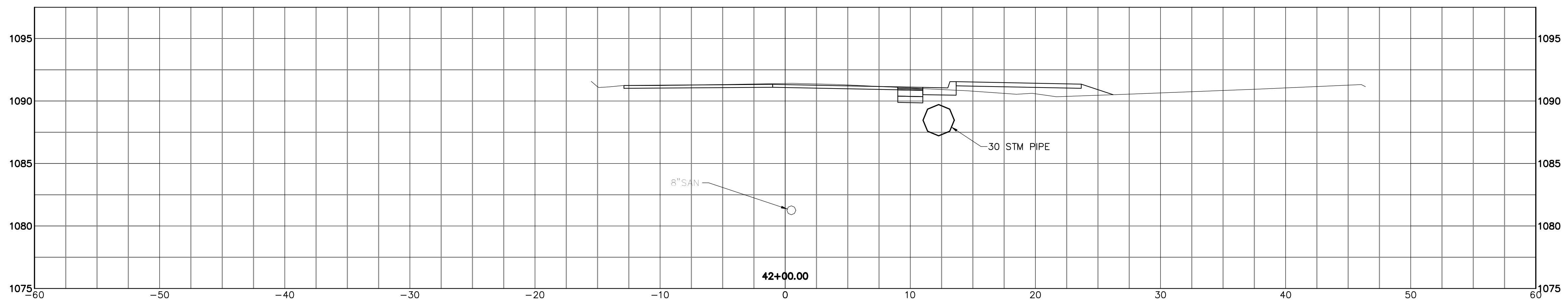
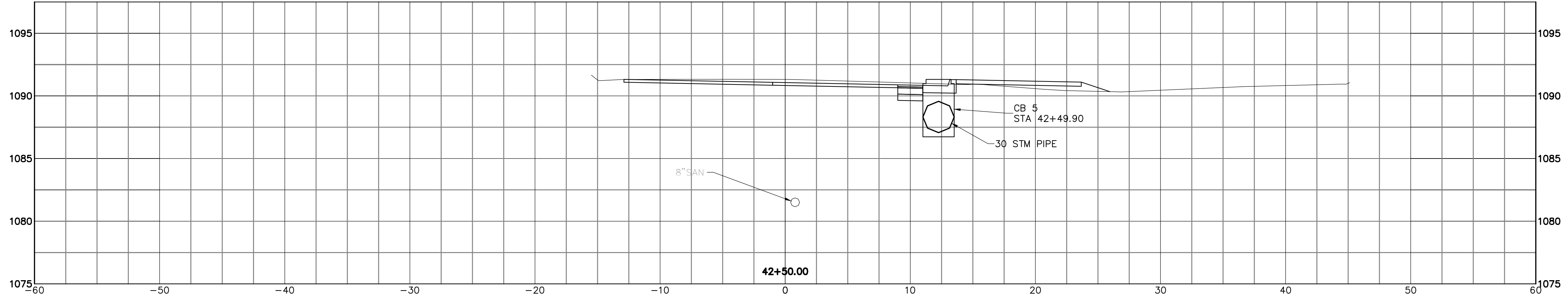
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS		DATE	BY	APP'D
NO.	DESCRIPTIONS			

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 40+00 TO STA 41+00



JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C34

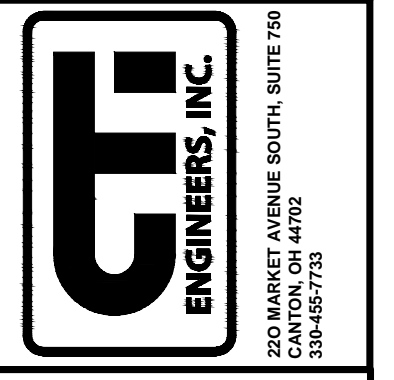


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR AND WHICH SHALL BE RETURNED TO THE AUTHOR UPON COMPLETION OF THE PROJECT. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE AUTHOR. THE AUTHOR MAKES NO WARRANTY, EXPRESS OR IMPLIED, THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

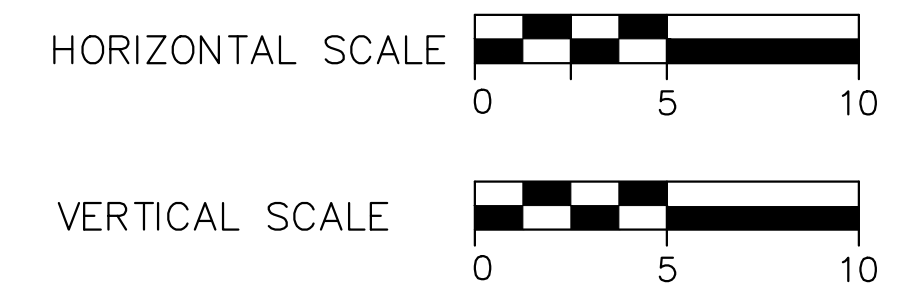
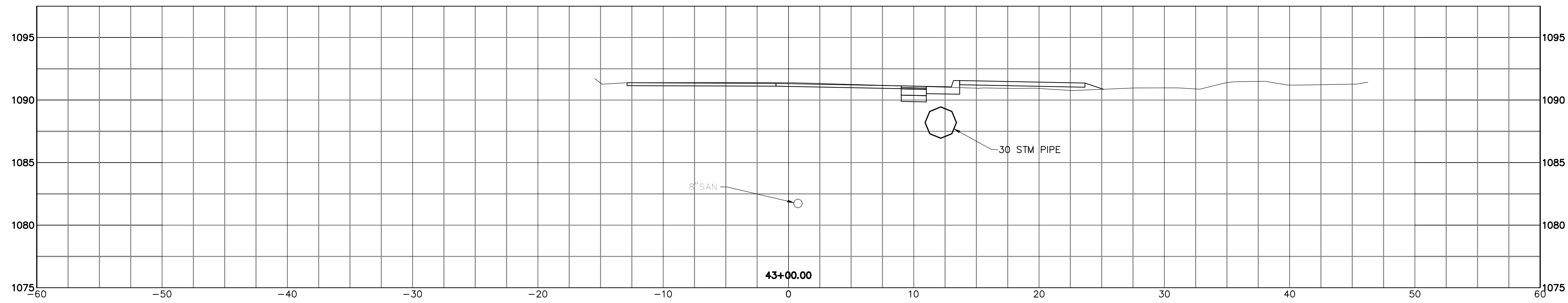
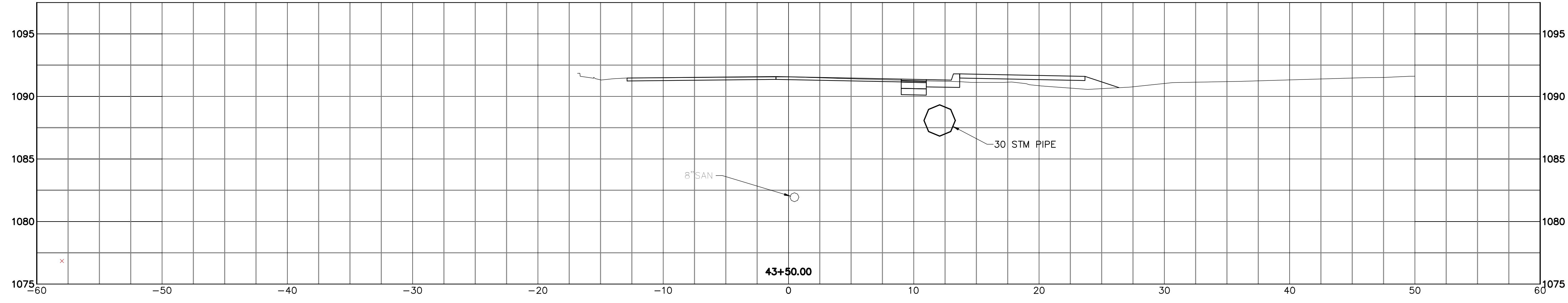
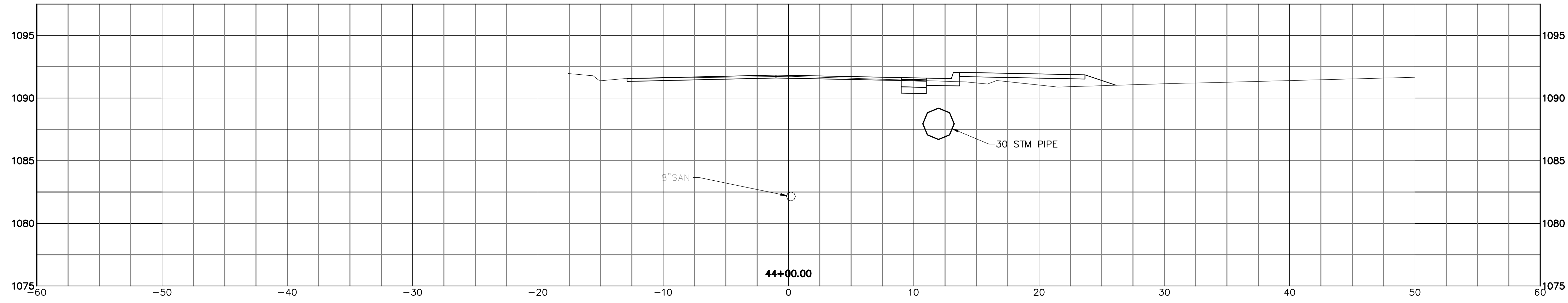
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS		DATE	BY	APP'D
NO.	DESCRIPTIONS			

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 41+50 TO STA 42+50



JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C35

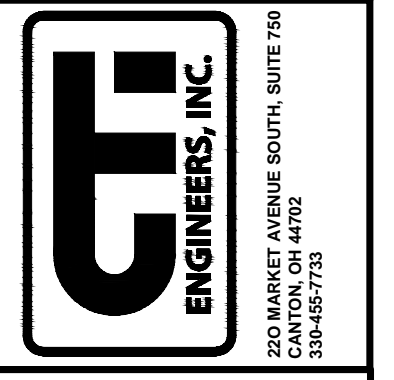


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE CITY OF CANTON, OHIO. THE USER OF THIS DRAWING AGREES TO HOLD THE CITY OF CANTON, OHIO HARMLESS FROM AND AGAINST ALL LIABILITY, DAMAGES, LOSSES, AND EXPENSES, INCLUDING REASONABLE ATTORNEY'S FEES, THAT MAY BE INCURRED BY THE CITY OF CANTON, OHIO, AS A RESULT OF THE USER'S USE OF THIS DRAWING. THE USER OF THIS DRAWING AGREES TO HOLD THE CITY OF CANTON, OHIO HARMLESS FROM AND AGAINST ALL LIABILITY, DAMAGES, LOSSES, AND EXPENSES, INCLUDING REASONABLE ATTORNEY'S FEES, THAT MAY BE INCURRED BY THE CITY OF CANTON, OHIO, AS A RESULT OF THE USER'S USE OF THIS DRAWING.

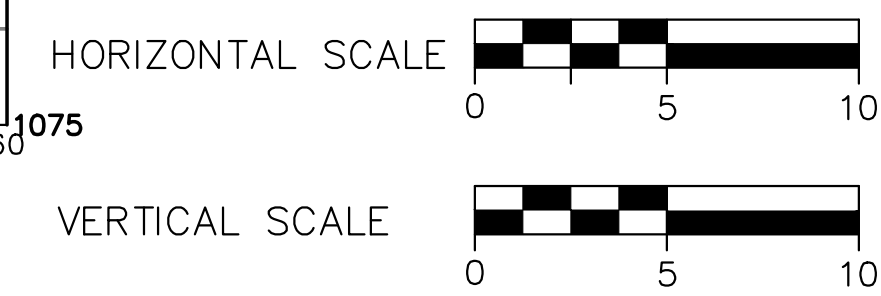
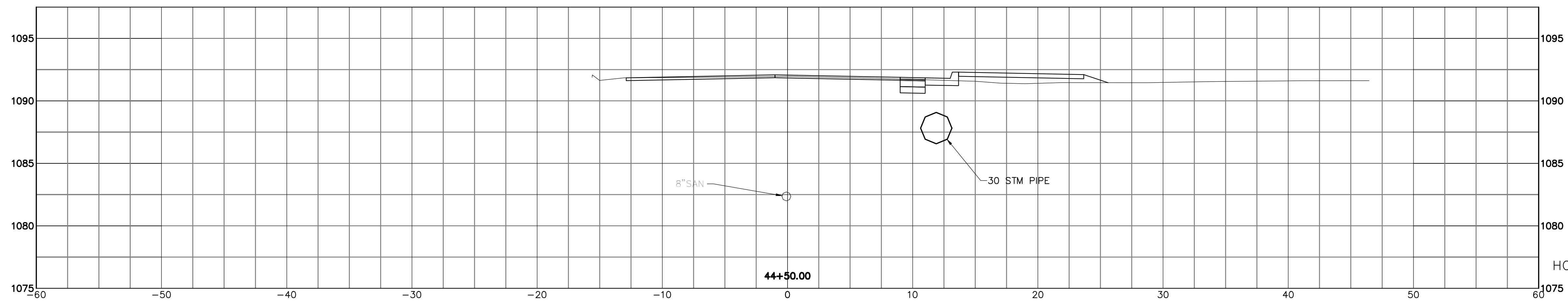
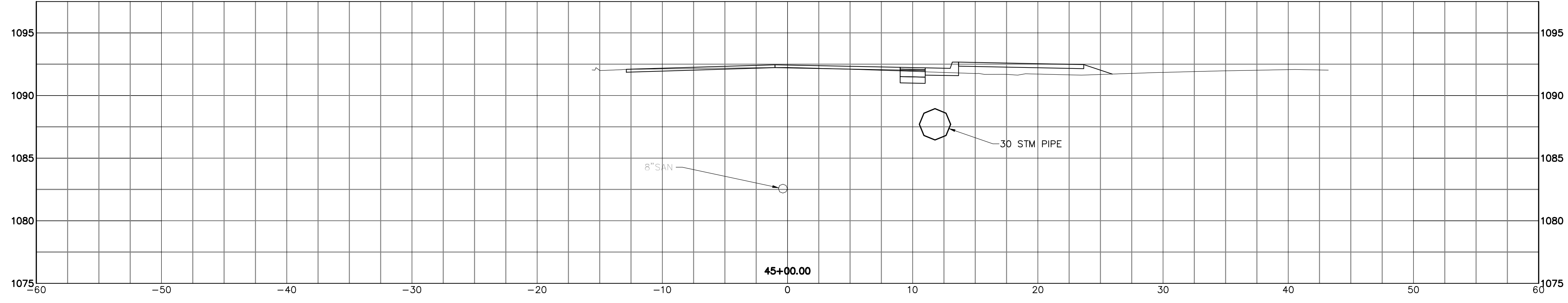
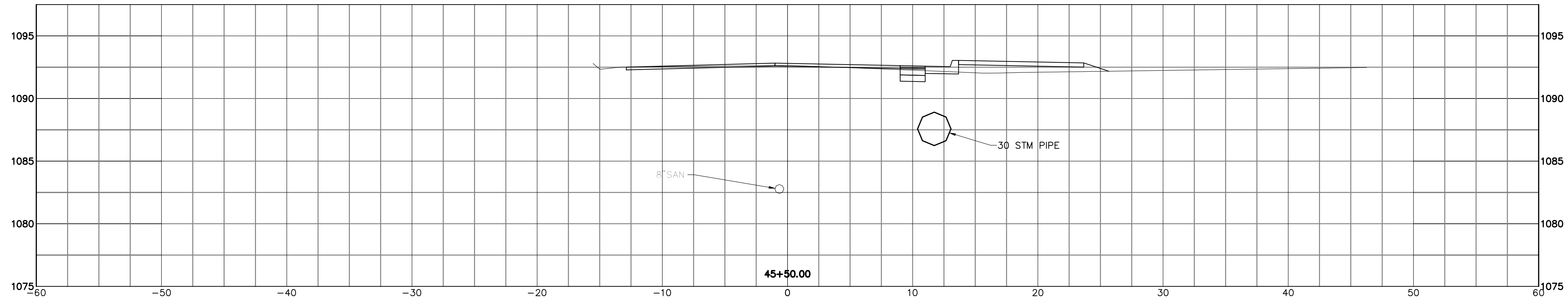
REVISIONS	
NO.	DESCRIPTIONS

DESIGNED BY	DLK
DRAWN BY	AJP
CHECKED BY	DLK
APPROVED BY	DLK

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 43+00 TO STA 44+00



JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C36

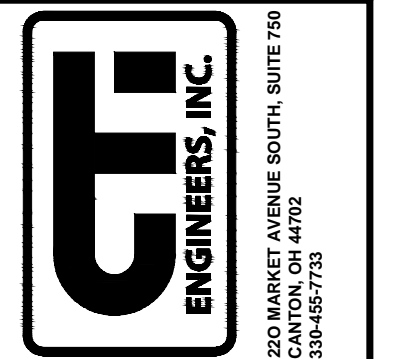


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE ENGINEER AND SHALL REMAIN THE PROPERTY OF THE ENGINEER. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN CONSENT OF THE ENGINEER. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED AND DOES NOT INCLUDE CONSTRUCTION OF THE PROJECT OR THE QUALITY OF THE WORKMANSHIP THEREON. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED AND DOES NOT INCLUDE CONSTRUCTION OF THE PROJECT OR THE QUALITY OF THE WORKMANSHIP THEREON. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED AND DOES NOT INCLUDE CONSTRUCTION OF THE PROJECT OR THE QUALITY OF THE WORKMANSHIP THEREON.

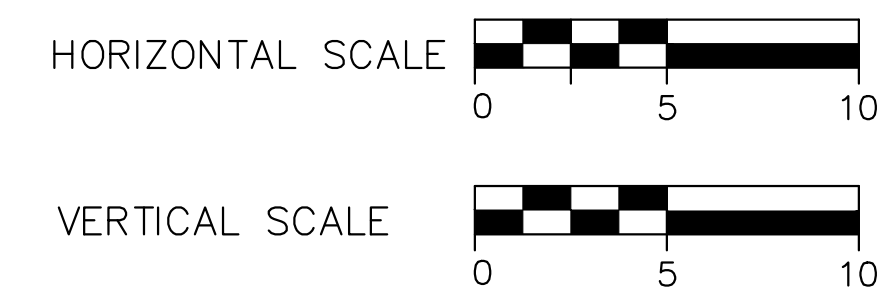
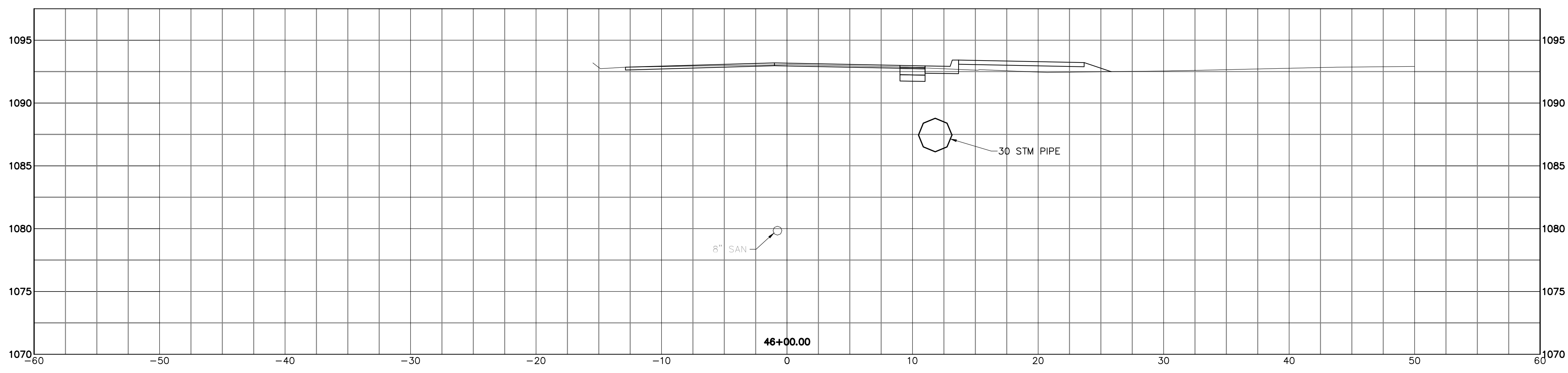
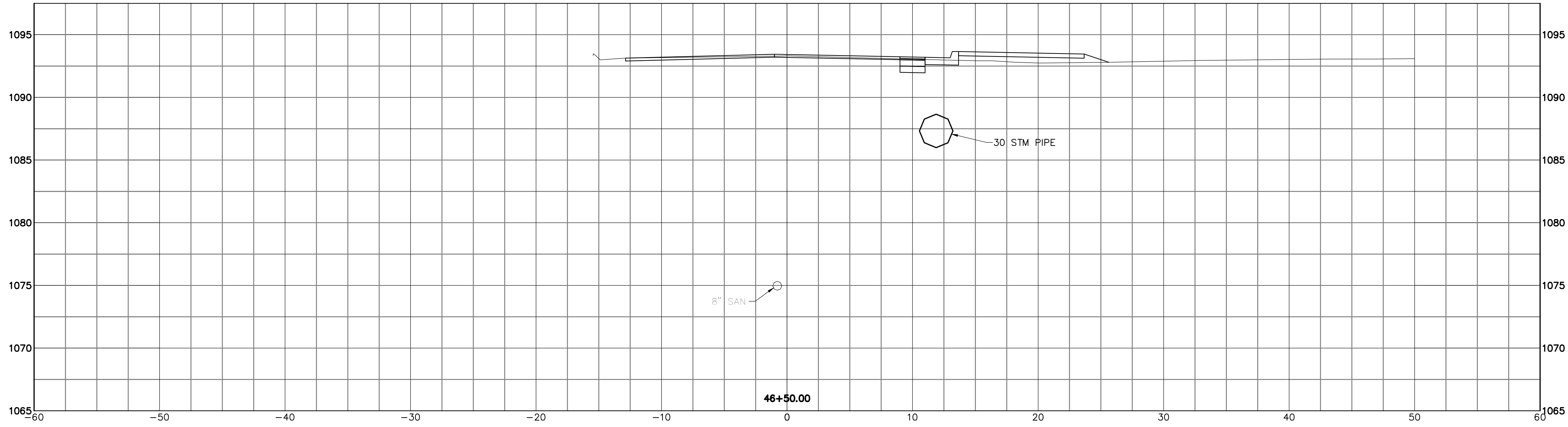
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS		BY APP'D	
NO.	DESCRIPTIONS	DATE	

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 44+50 TO STA 45+50



JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C37



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS THE PROPERTY OF THE CITY OF CANTON, OHIO AND SHALL REMAIN THE PROPERTY OF THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE CITY OF CANTON, OHIO. THE CITY OF CANTON, OHIO DOES NOT WARRANT THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE CITY OF CANTON, OHIO SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING. THE CITY OF CANTON, OHIO SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING. THE CITY OF CANTON, OHIO SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING.

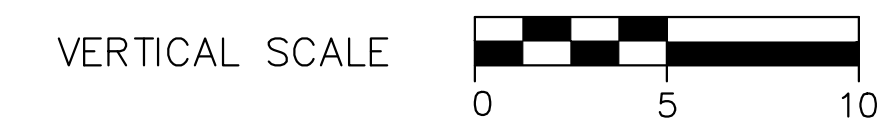
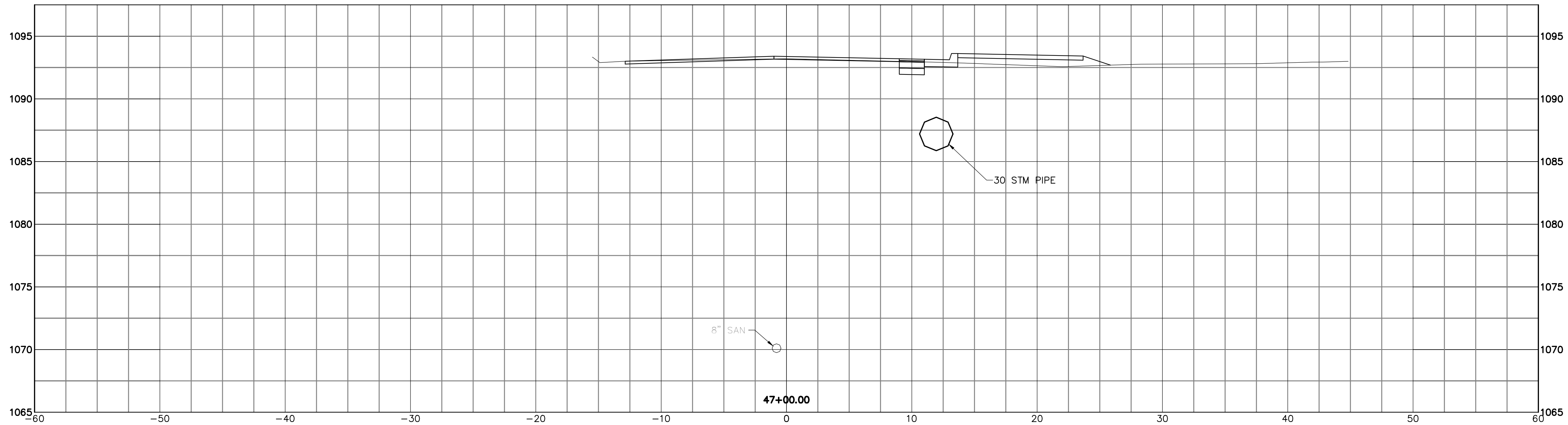
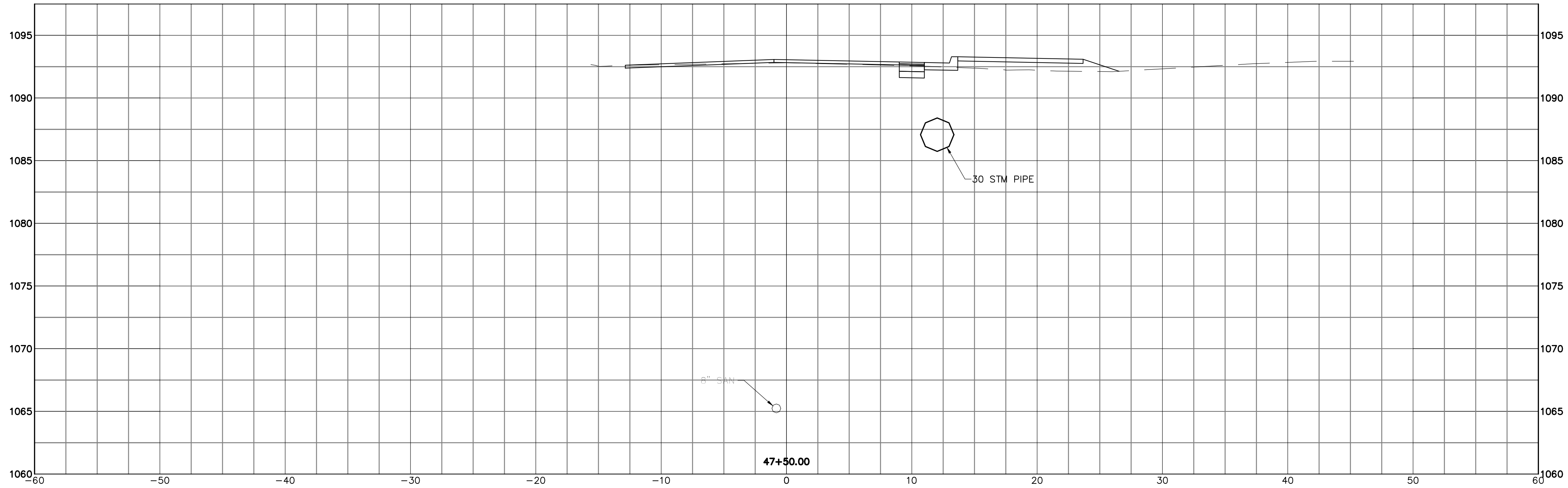
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS			
NO.	DESCRIPTIONS	DATE	BY

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 46+00 TO STA 46+50



JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C38



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE AUTHOR. THE AUTHOR MAKES NO WARRANTY, EXPRESS OR IMPLIED, THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE, COMPLETE, OR CURRENT. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION AND THE SEALED ORIGINAL SHALL GOVERN.

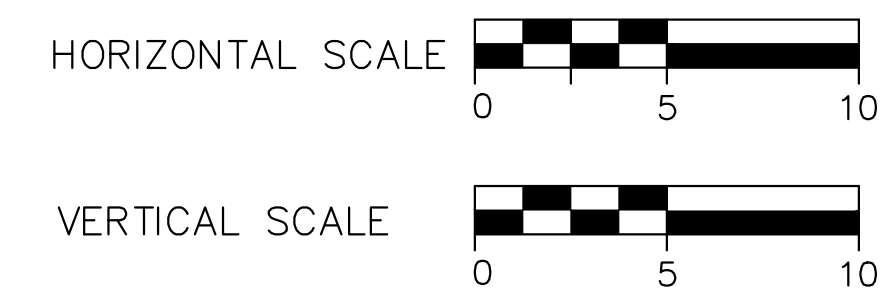
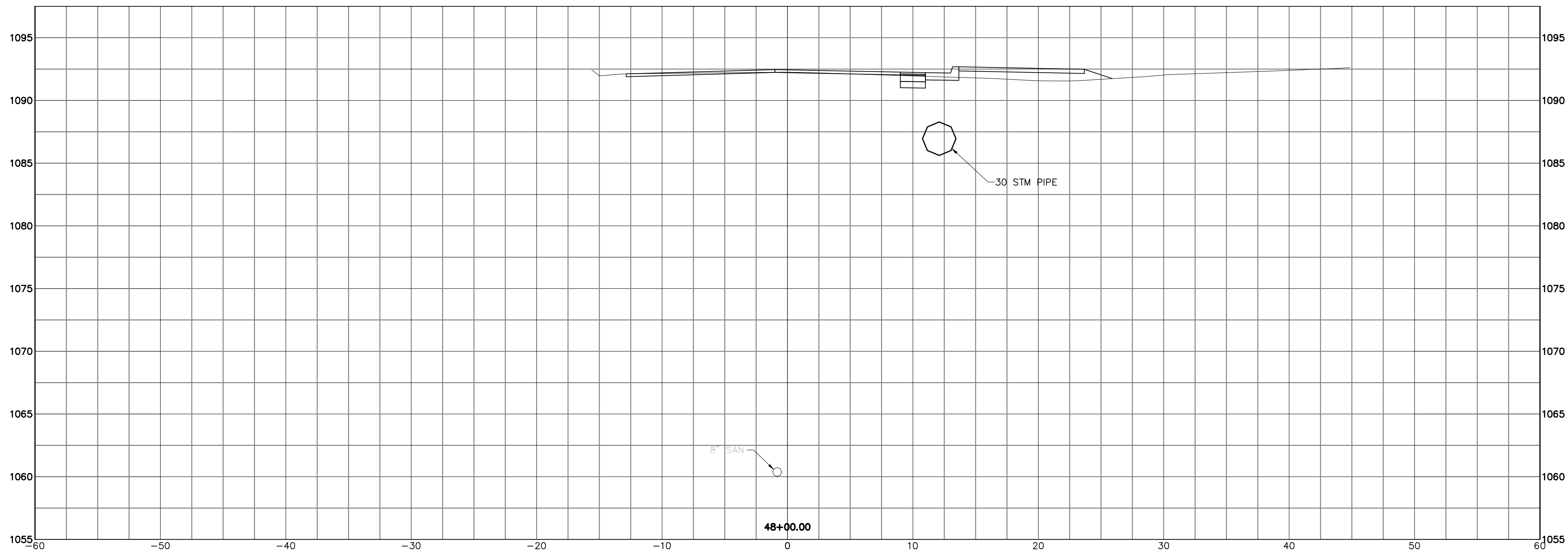
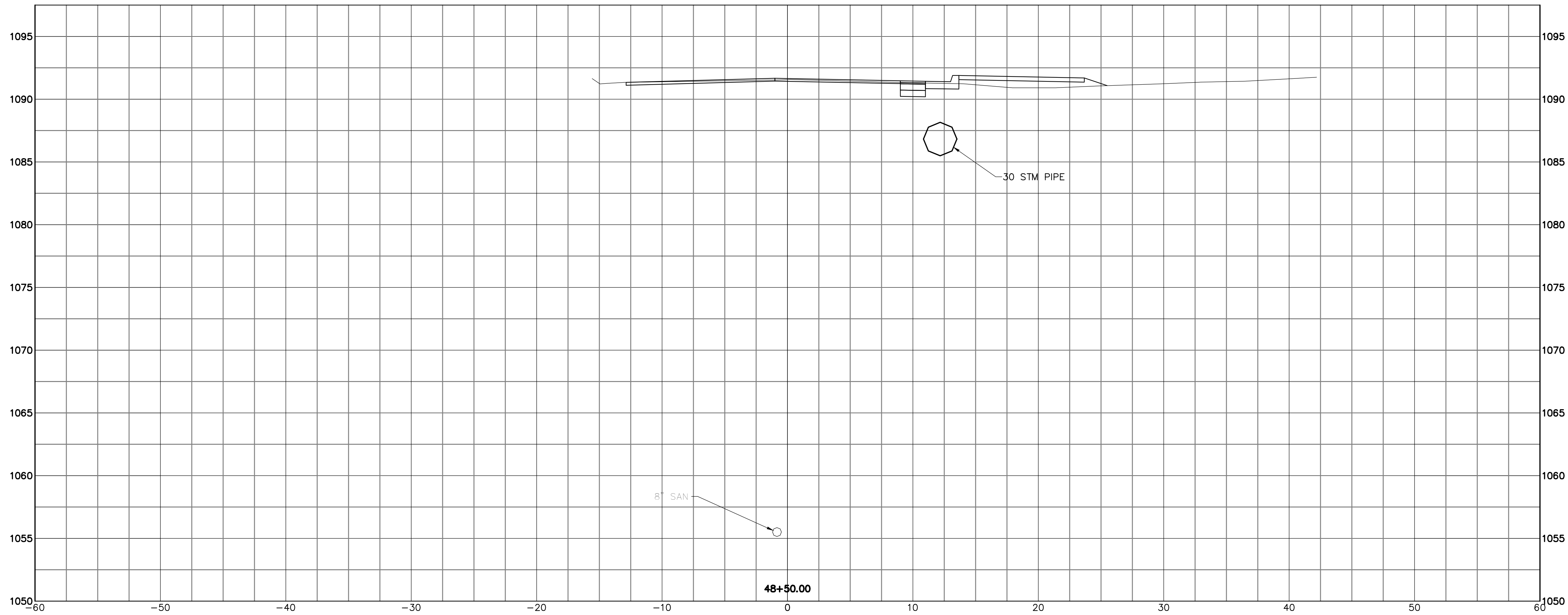
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS			
NO.	DESCRIPTIONS	DATE	BY

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 47+00 TO STA 47+50



JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C39



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE ENGINEER AND THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE ENGINEER AND THE AUTHOR AND WHICH SHALL BE KEPT IN THE OFFICE OF THE ENGINEER AND THE AUTHOR. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER AND THE AUTHOR. THE ENGINEER AND THE AUTHOR MAKE NO WARRANTY, EXPRESS OR IMPLIED, THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE. THE ENGINEER AND THE AUTHOR SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS IN THIS DRAWING OR FOR ANY DAMAGE TO PERSONS OR PROPERTY ARISING FROM THE USE OF THIS DRAWING. THE ENGINEER AND THE AUTHOR SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO PERSONS OR PROPERTY ARISING FROM THE USE OF THIS DRAWING. THE ENGINEER AND THE AUTHOR SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO PERSONS OR PROPERTY ARISING FROM THE USE OF THIS DRAWING.

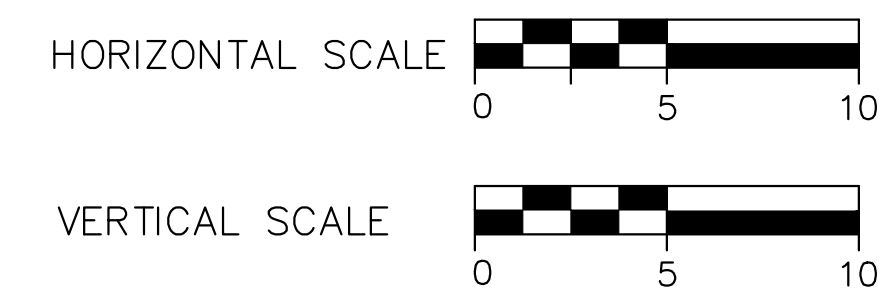
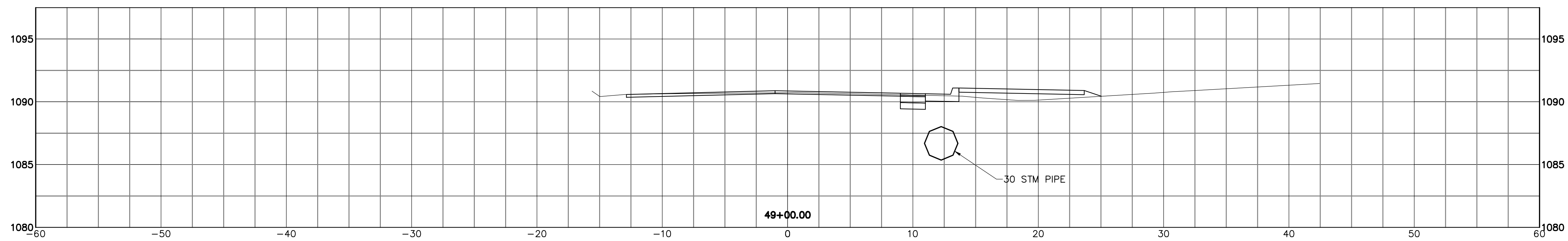
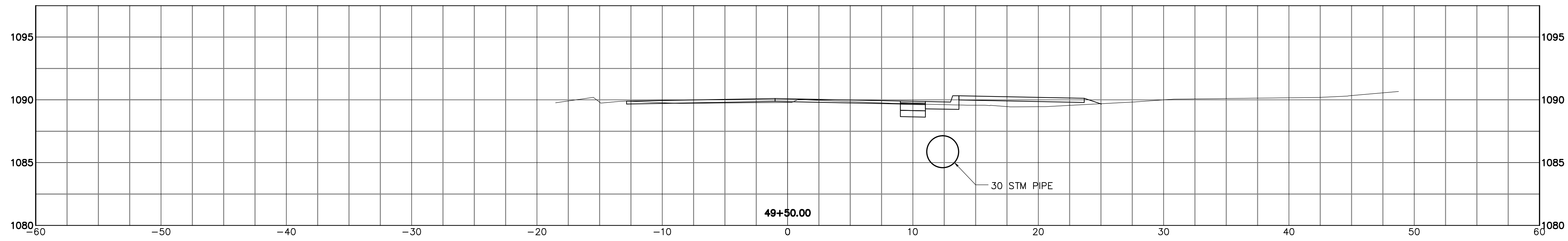
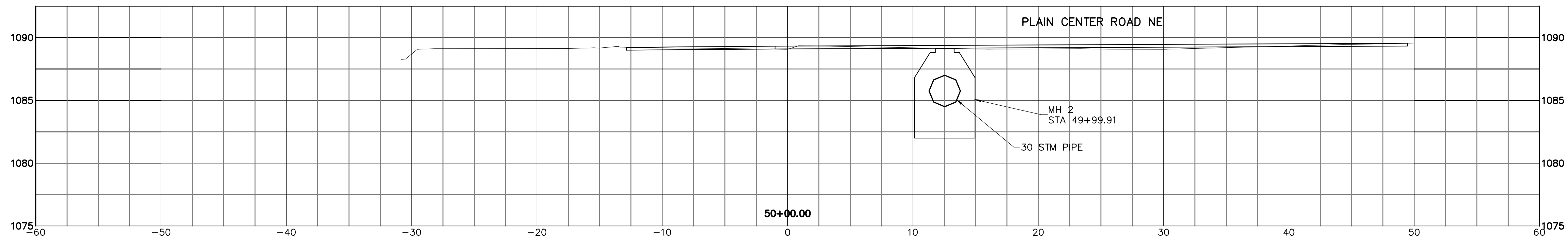
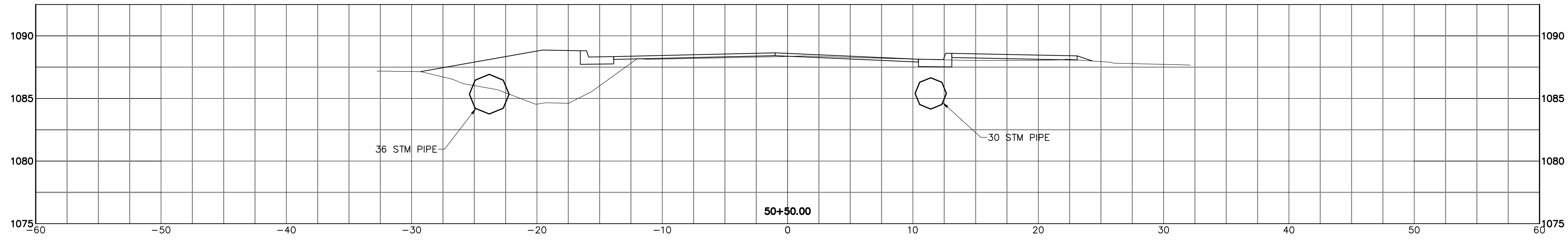
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS		DATE	BY
NO.	DESCRIPTIONS		

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 48+00 TO STA 48+50



JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C40



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE CITY OF CANTON, OHIO. THE CITY OF CANTON, OHIO, SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY OF CANTON, OHIO, SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY OF CANTON, OHIO, SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON.

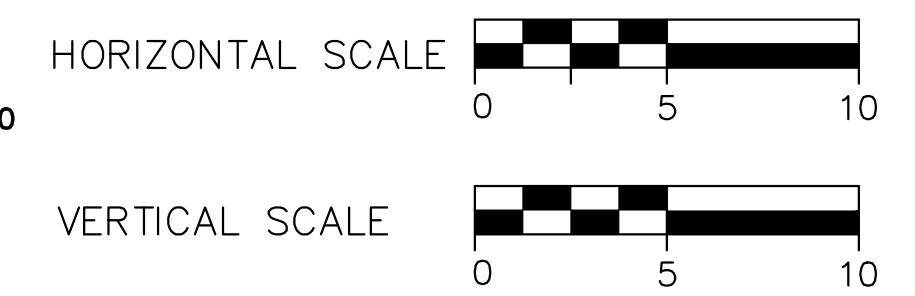
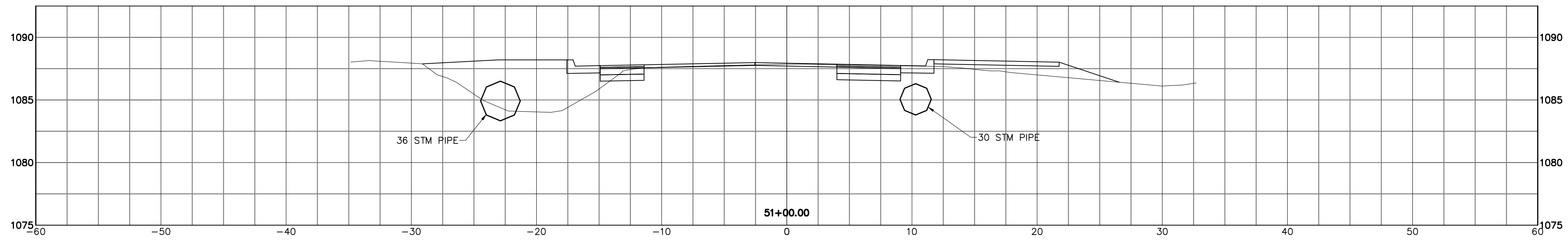
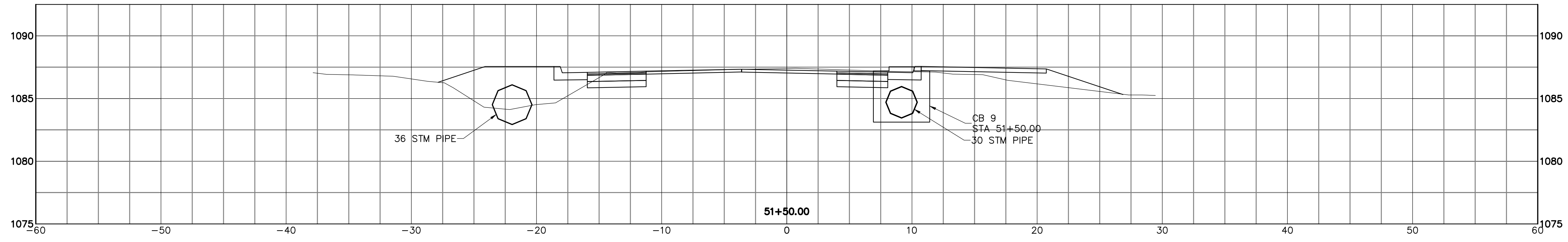
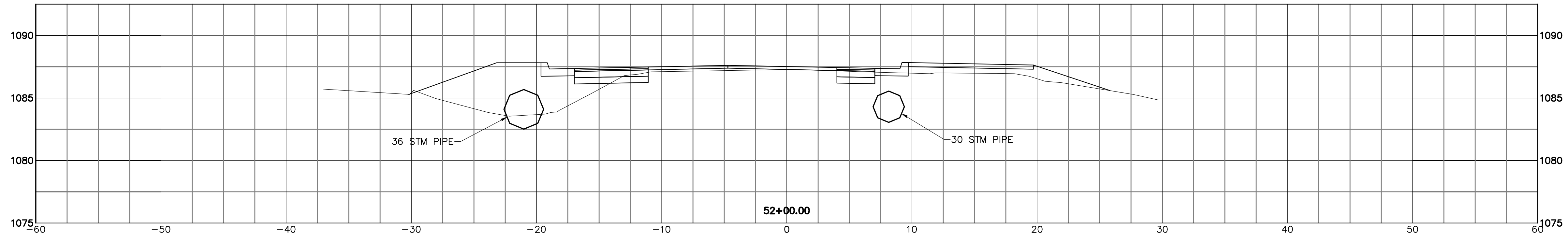
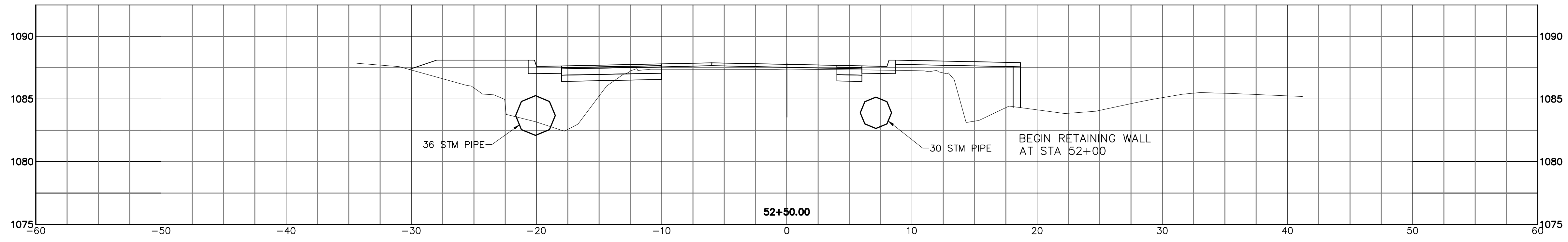
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS		DATE		BY	
NO.	DESCRIPTIONS				

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 49+00 TO STA 50+50



JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C41

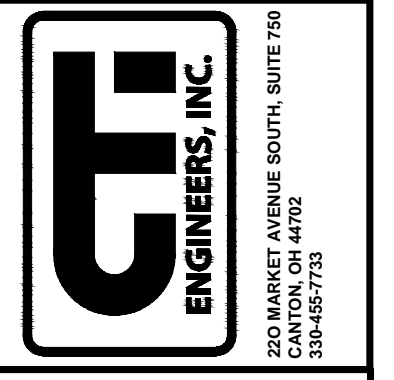


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE ENGINEER. THE CITY OF CANTON, OHIO, ENGINEERS, INC. CANNOT GUARANTEE THAT ELECTRONIC COPIES OF THIS DRAWING ARE EXACT REPRESENTATIONS OF THE ORIGINAL DRAWING. IN THE EVENT OF A DISCREPANCY BETWEEN THE ELECTRONIC COPY AND THE SEALED ORIGINAL, THE SEALED ORIGINAL SHALL GOVERN.

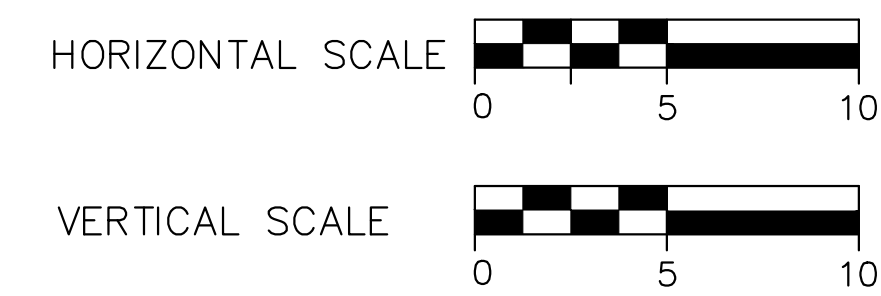
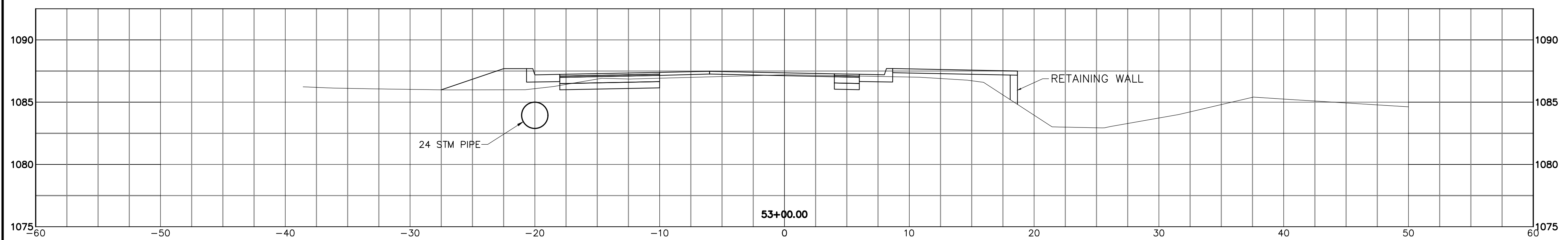
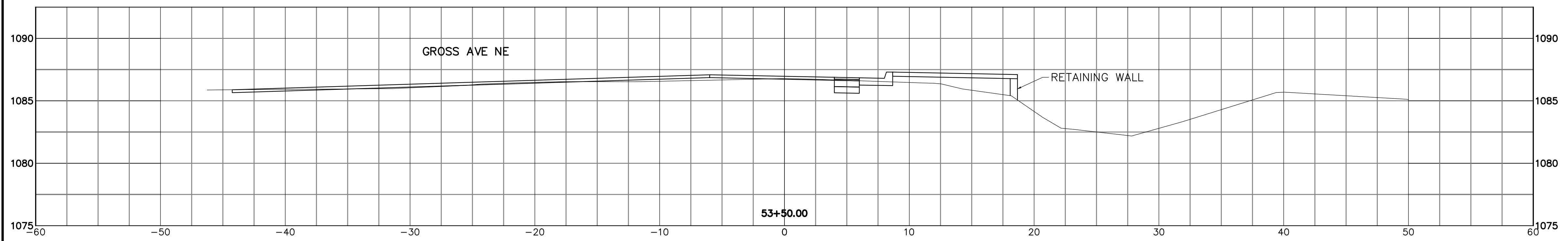
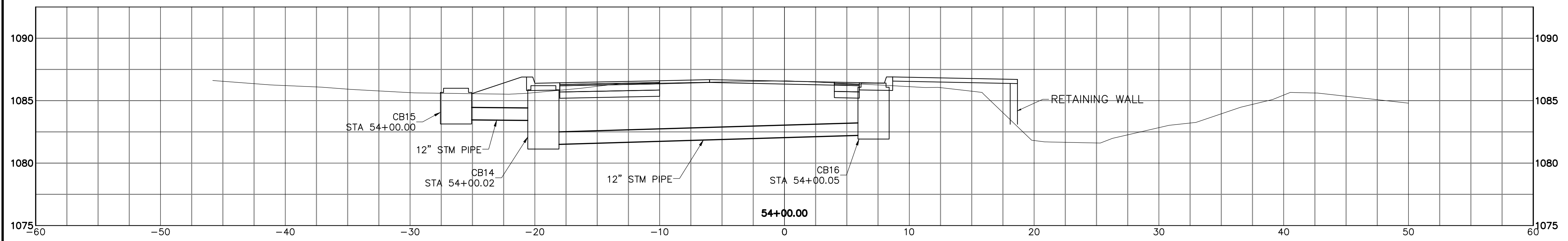
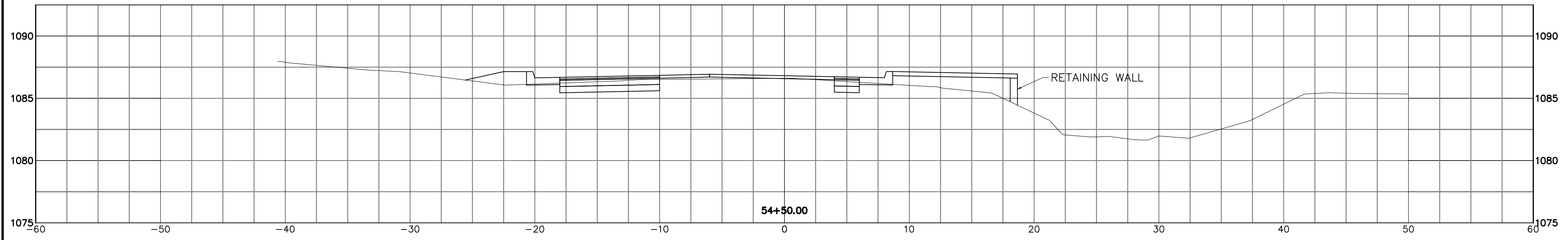
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK	AJP	DLK	AJP	DLK	DLK	DLK	DLK

REVISIONS		DATE	BY	APP'D
NO.	DESCRIPTIONS			

CITY OF CANTON, OHIO
55TH STREET NE
STORM SEWER IMPROVEMENTS
XSECTIONS
STA 51+00 TO STA 52+50



JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C42



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. THE AUTHOR AND WHICH SHALL RETAIN ALL RIGHTS, INCLUDING COMMON LAW RIGHTS, INCLUDING COPYRIGHTS, IN THIS DRAWING. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE ENGINEER. THE CITY OF CANTON, OHIO, ENGINEERS, INC. CANNOT GUARANTEE THAT THE INFORMATION CONTAINED IN THIS DRAWING IS ACCURATE OR COMPLETE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

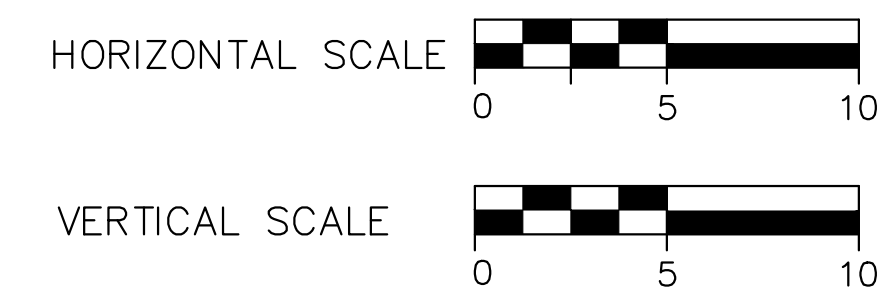
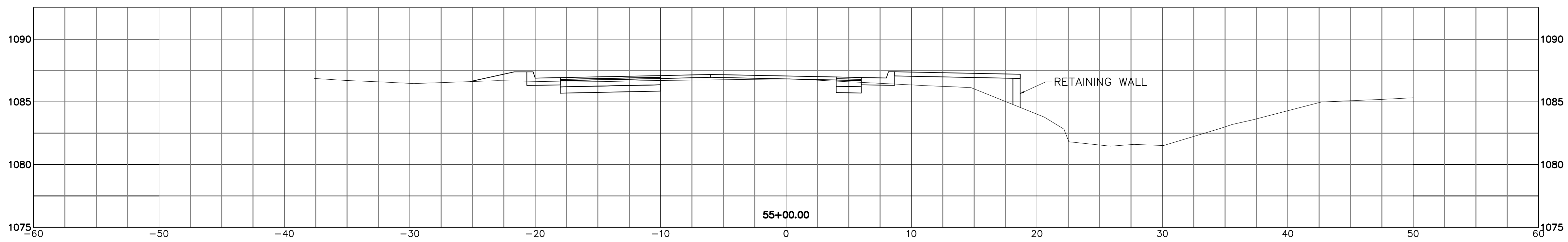
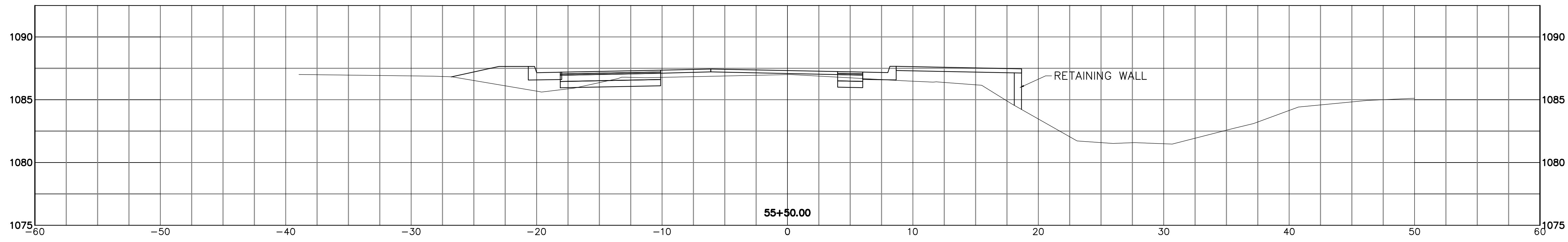
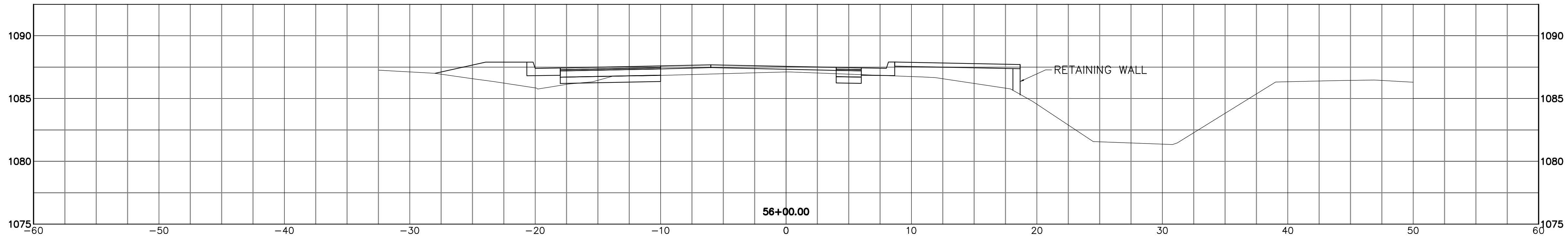
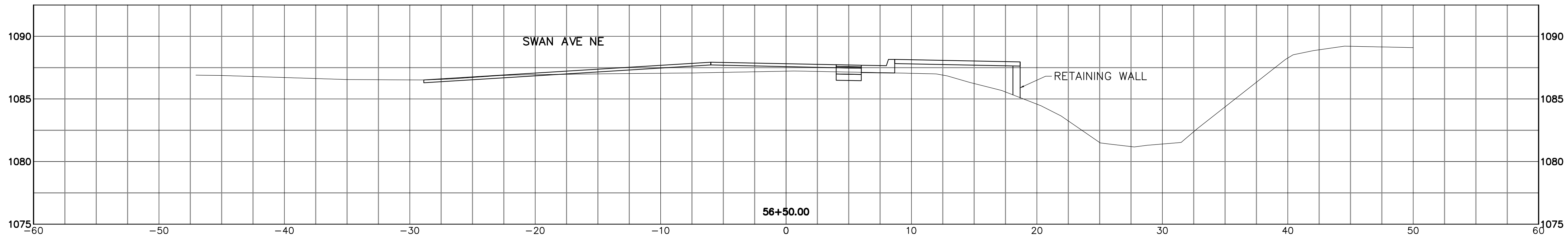
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS		DATE	BY	APP'D
NO.	DESCRIPTIONS			

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 53+00 TO STA 54+50



JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C43

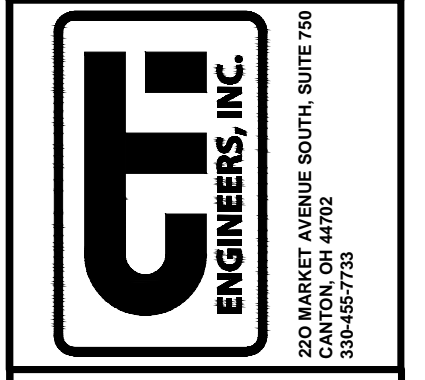


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS THE PROPERTY OF THE CITY OF CANTON, OHIO AND SHALL REMAIN THE PROPERTY OF THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE CITY OF CANTON, OHIO. THE CITY OF CANTON, OHIO DOES NOT WARRANT THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE CITY OF CANTON, OHIO SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING. THE SEaled ORIGINAL SHALL GOVERN.

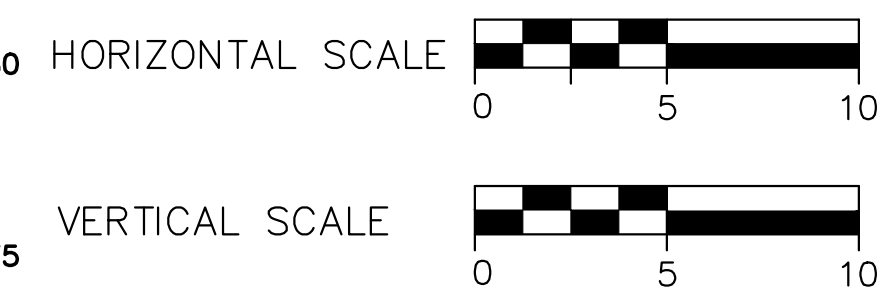
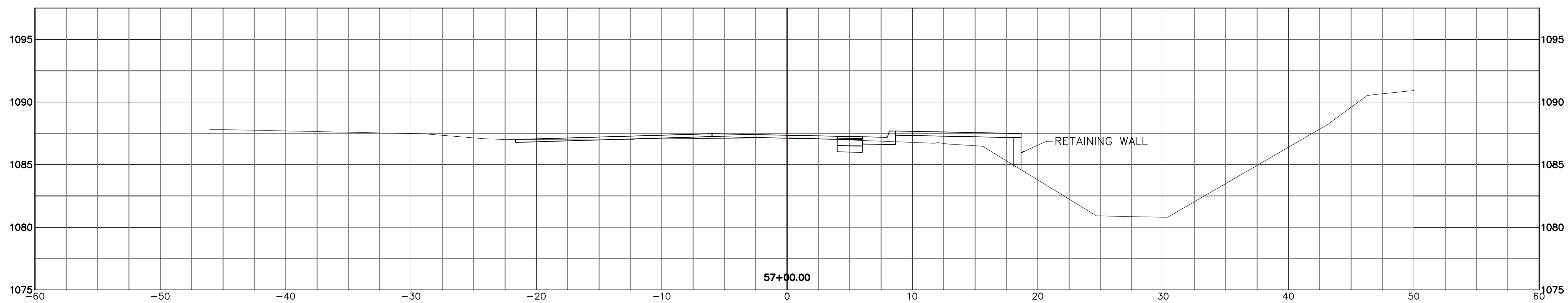
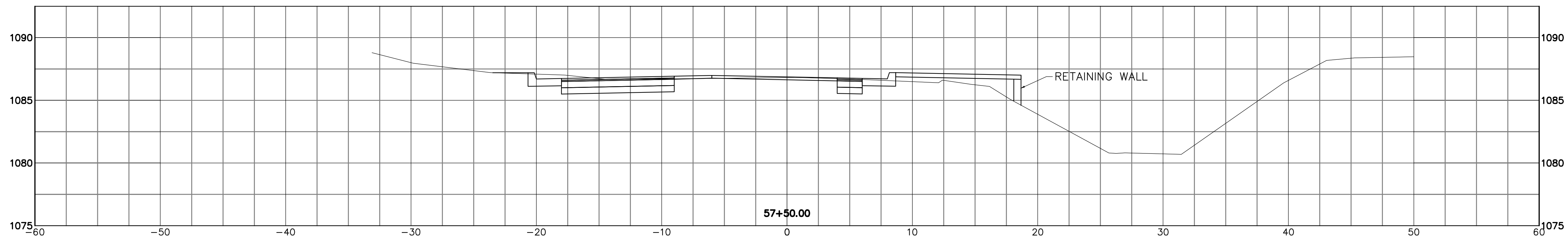
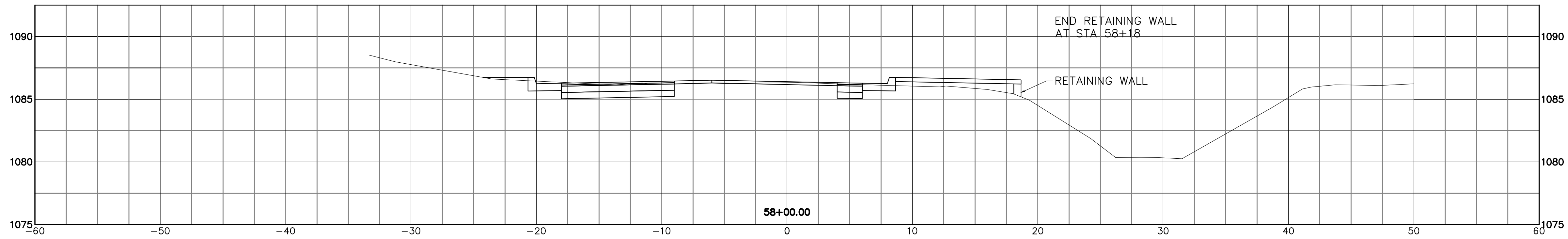
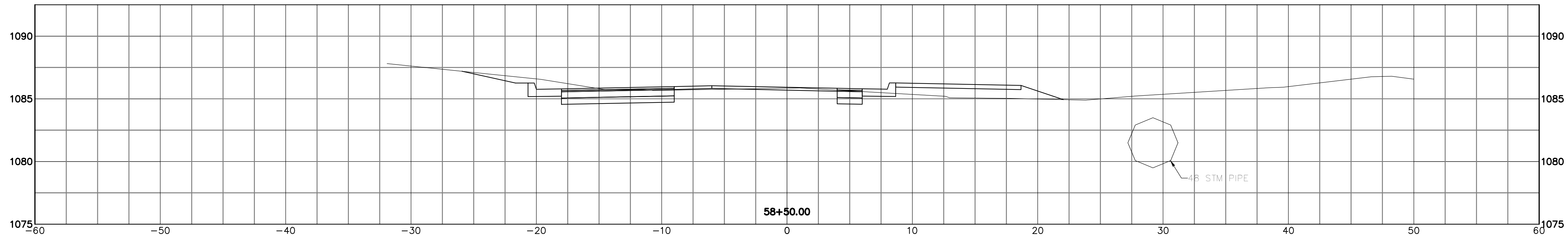
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS			
NO.	DESCRIPTIONS	DATE	BY

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 55+00 TO STA 56+50



JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C44



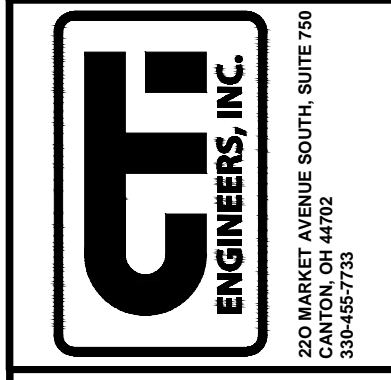
THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED AND DOES NOT INCLUDE CONSTRUCTION OF THE PROJECT OR THE QUALITY OF THE WORKMANSHIP THEREON. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED AND DOES NOT INCLUDE CONSTRUCTION OF THE PROJECT OR THE QUALITY OF THE WORKMANSHIP THEREON. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED AND DOES NOT INCLUDE CONSTRUCTION OF THE PROJECT OR THE QUALITY OF THE WORKMANSHIP THEREON.

DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

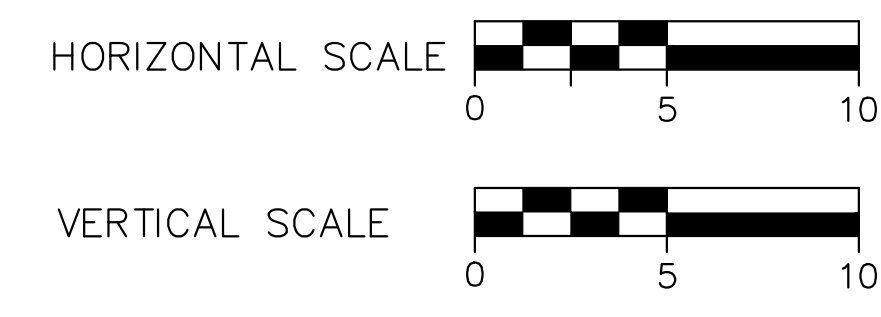
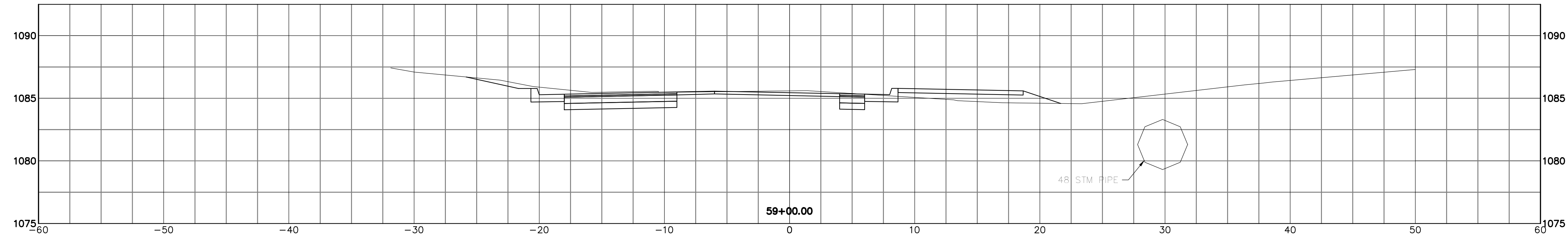
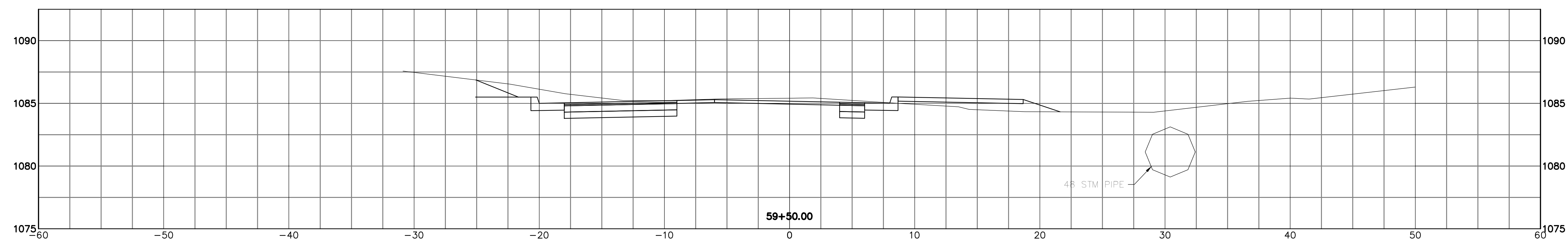
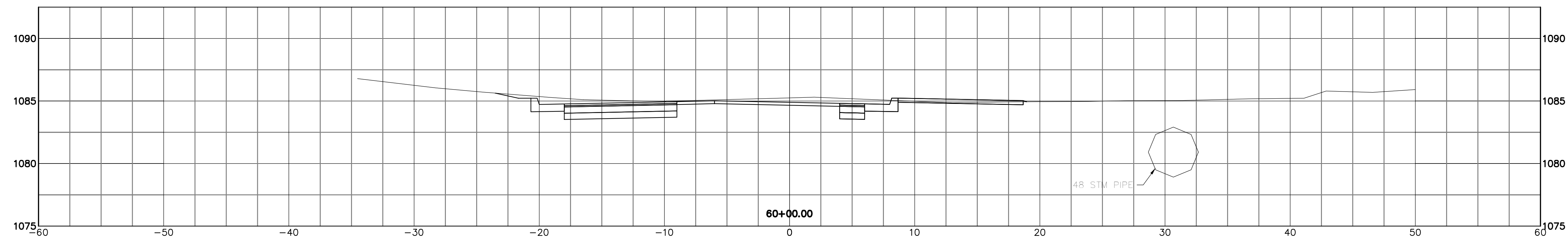
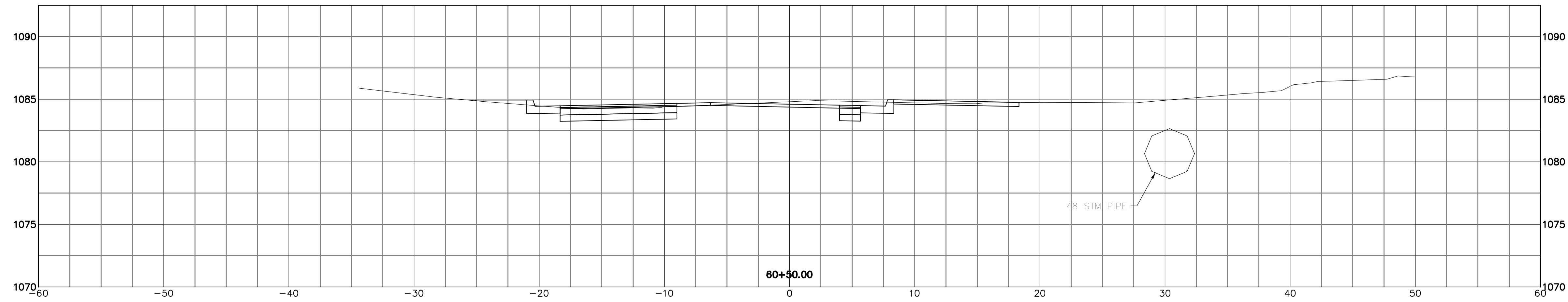
REVISIONS		BY	
NO.	DESCRIPTIONS	DATE	APP'D

CITY OF CANTON, OHIO
55TH STREET NE

STORM SEWER IMPROVEMENTS
XSECTIONS
STA 57+00 TO STA 58+50



JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C45

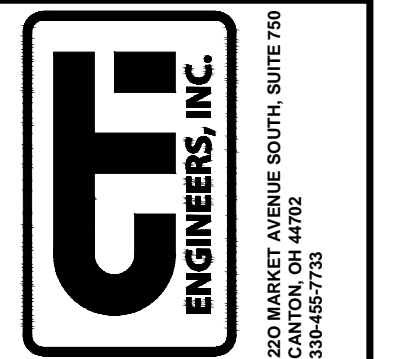


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE CITY OF CANTON, OHIO. THE CITY OF CANTON, OHIO, SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THIS DRAWING. THE CITY OF CANTON, OHIO, SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THIS DRAWING. THE CITY OF CANTON, OHIO, SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THIS DRAWING.

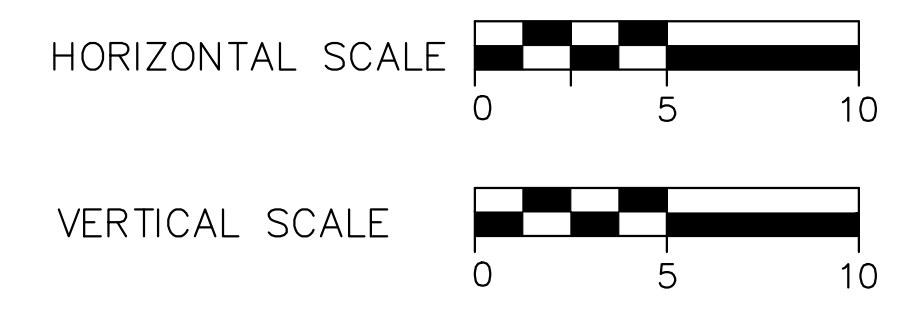
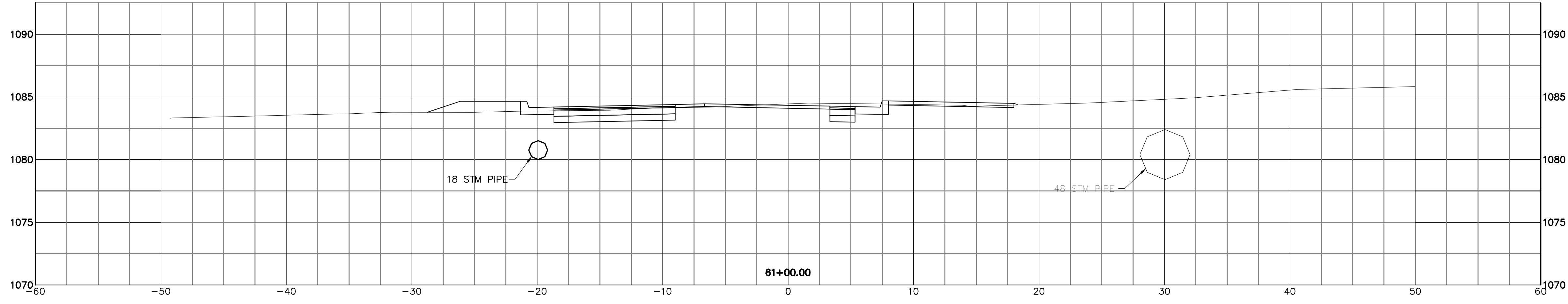
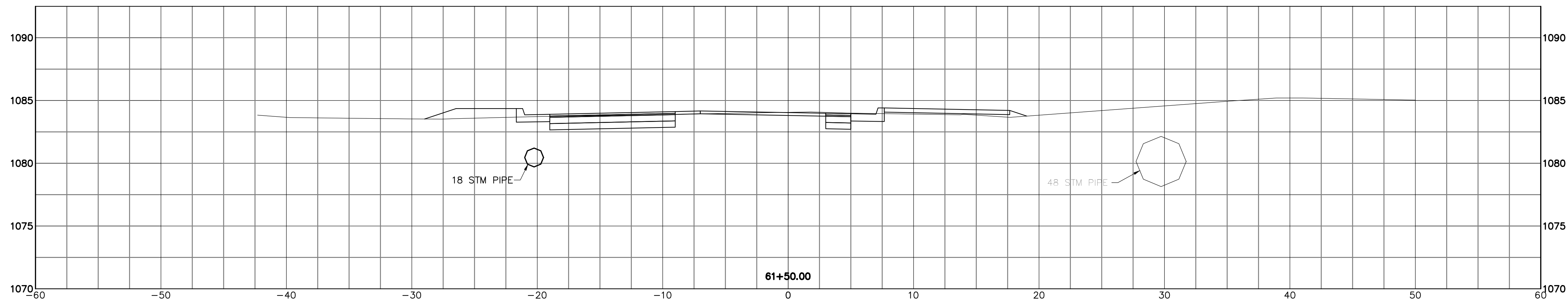
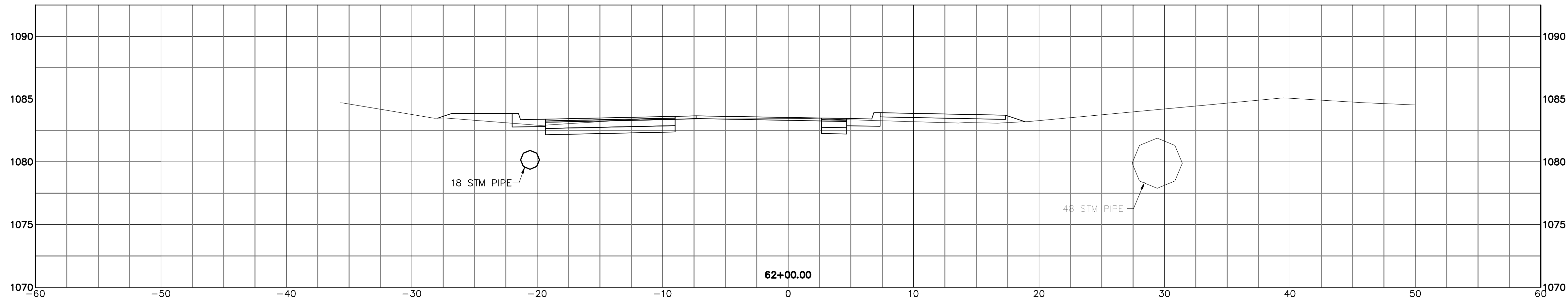
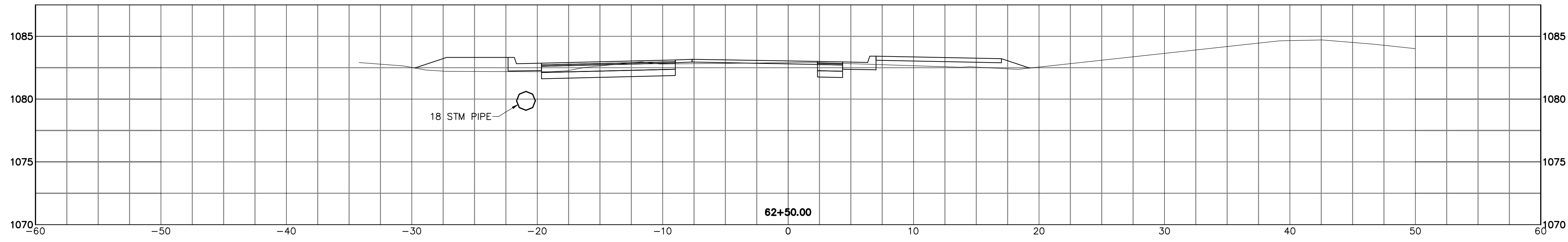
REVISIONS	
NO.	DESCRIPTIONS

DESIGNED BY	DLK
DRAWN BY	AJP
CHECKED BY	DLK
APPROVED BY	DLK

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 59+00 TO STA 60+50



JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C46

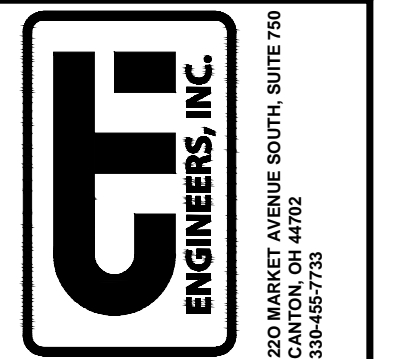


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE CITY OF CANTON, OHIO. THE CITY OF CANTON, OHIO, SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY OF CANTON, OHIO, SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE CITY OF CANTON, OHIO, SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON.

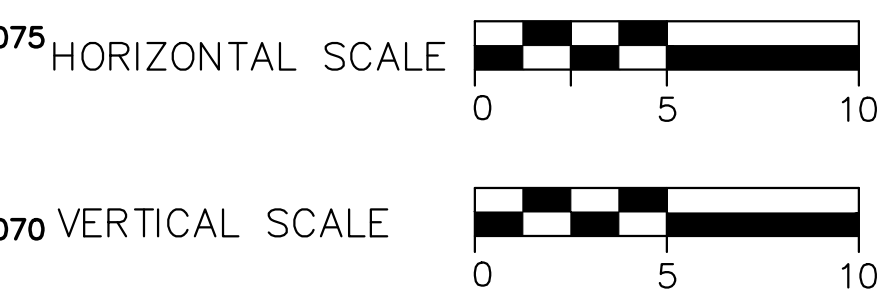
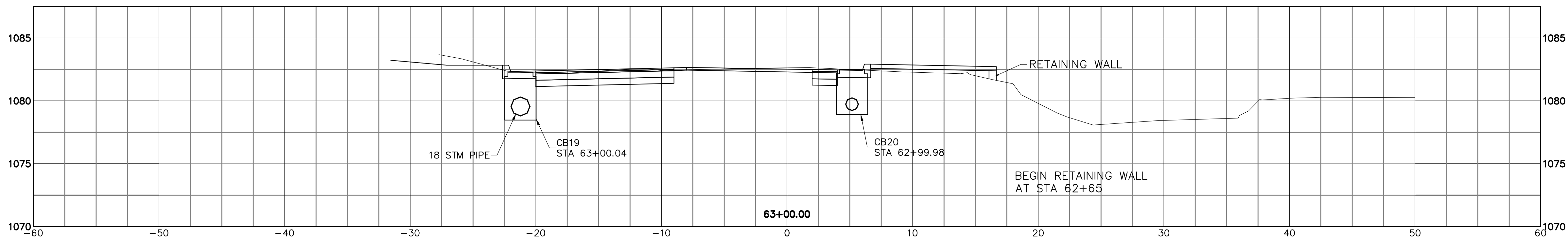
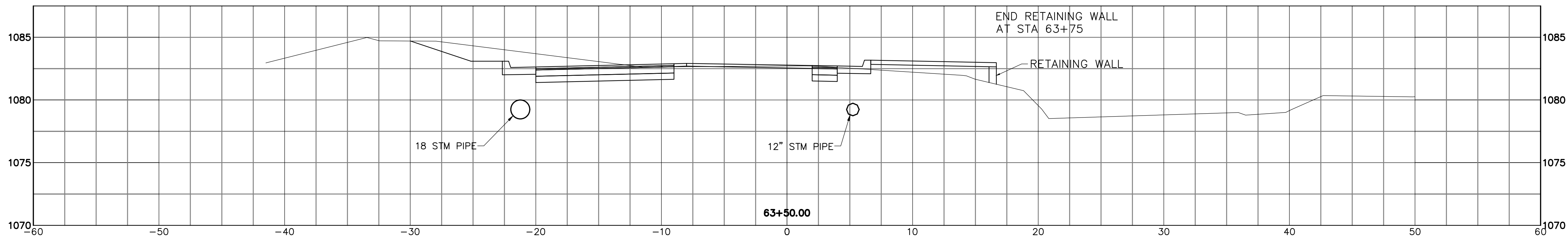
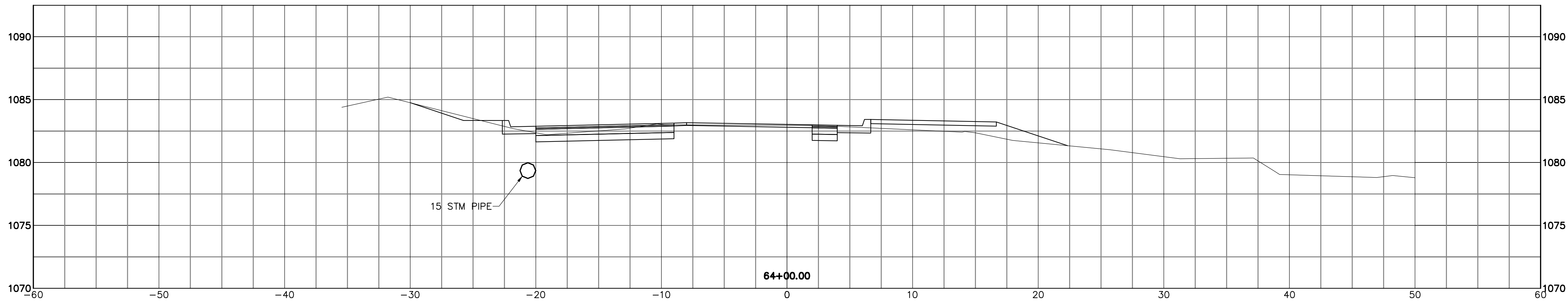
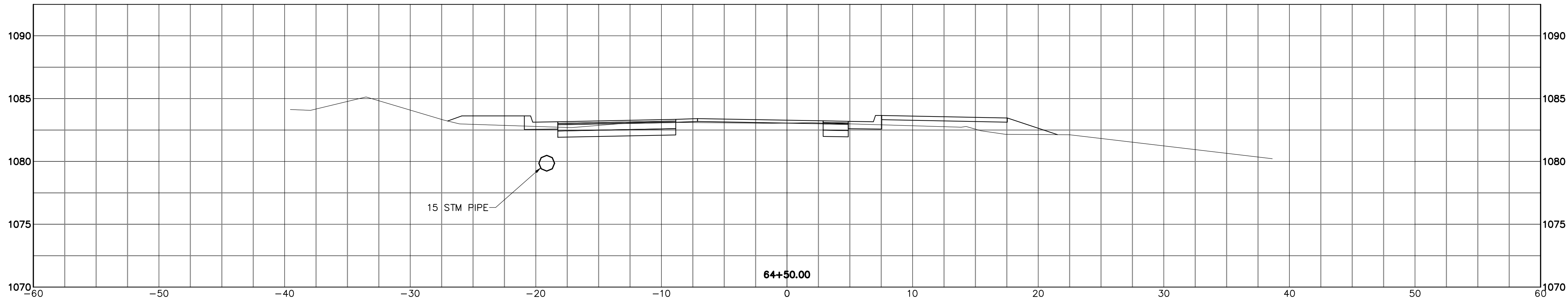
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS		DATE		BY	
NO.	DESCRIPTIONS				APP'D

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 61+00 TO STA 62+50



JOB NO.	E10025
DATE	8/2013
SCALE	AS NOTED
SHEET NO.	C47



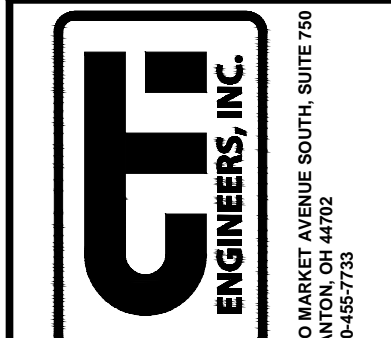
THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE CITY OF CANTON, OHIO. THE CITY OF CANTON, OHIO, SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING. THE CITY OF CANTON, OHIO, SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING. THE CITY OF CANTON, OHIO, SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING.

DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK	AJP	DLK	AJP	DLK	DLK	DLK	DLK

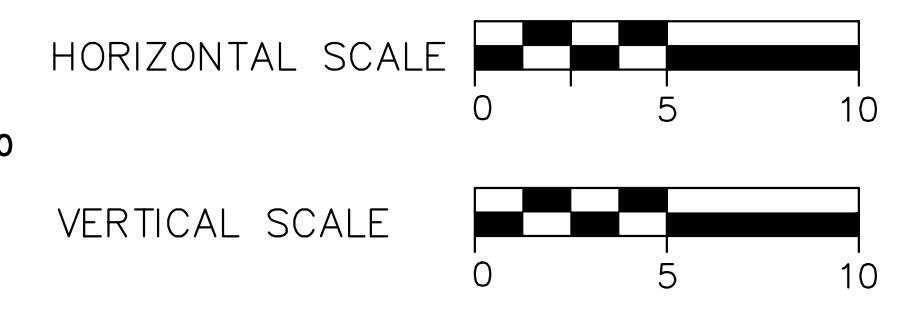
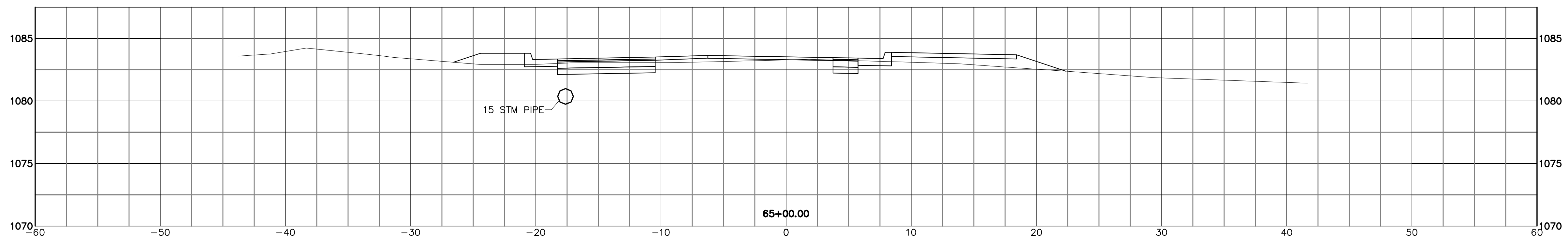
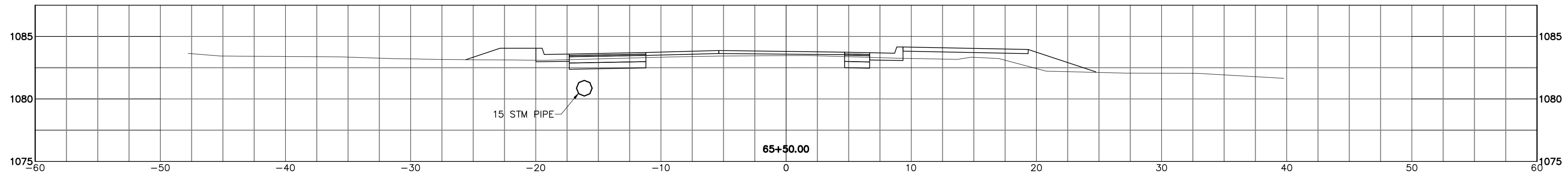
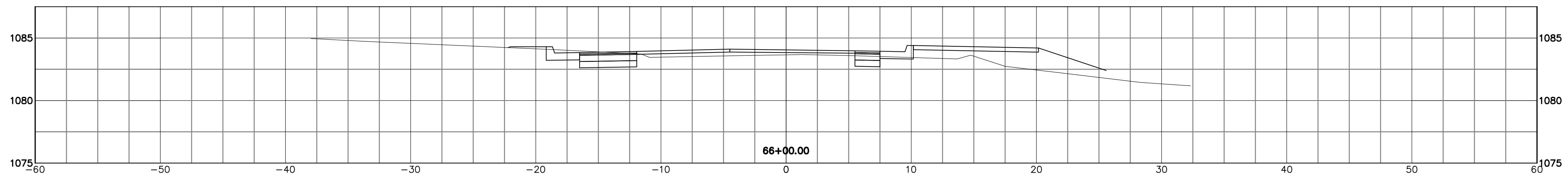
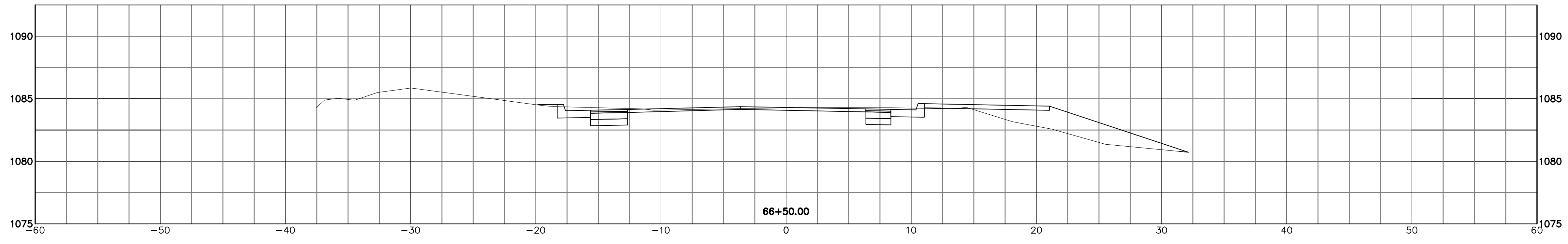
REVISIONS	
NO.	DESCRIPTIONS

DATE	BY

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 63+00 TO STA 64+50



JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C48

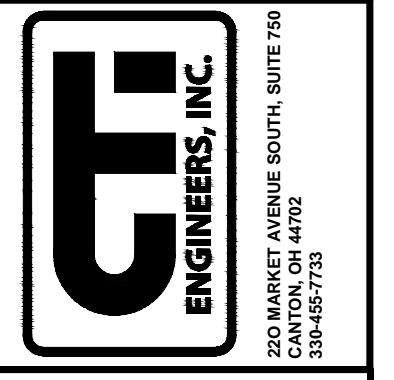


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE CITY OF CANTON, OHIO. THE CITY OF CANTON, OHIO, SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THIS DRAWING. THE CITY OF CANTON, OHIO, SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THIS DRAWING. THE CITY OF CANTON, OHIO, SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THIS DRAWING.

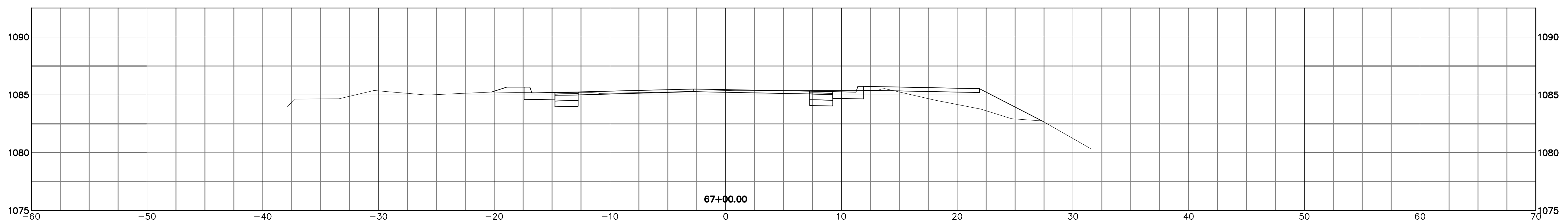
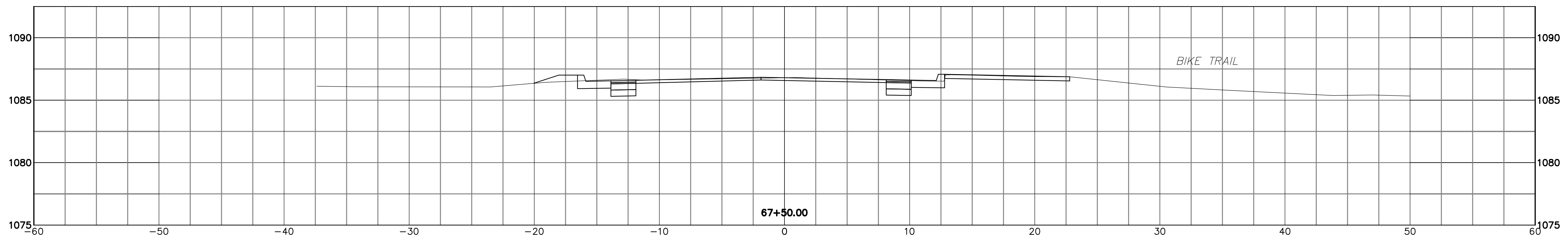
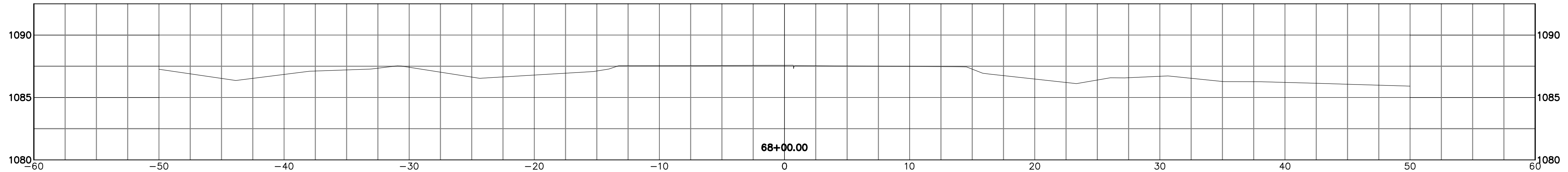
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS		BY	
NO.	DESCRIPTIONS	DATE	APP'D

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 65+00 TO STA 66+50



JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C49

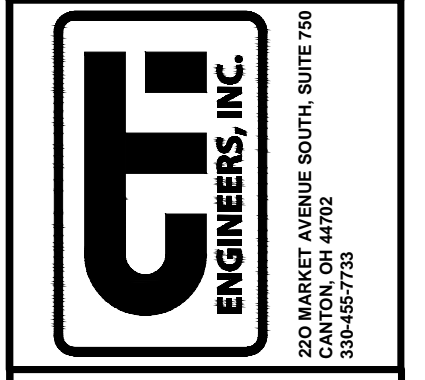


THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. THE AUTHOR AND WHICH SHALL RETAIN ALL STATUTORY AND COMMON LAW RIGHTS, INCLUDING COPYRIGHTS, IN THIS DRAWING. NO PART OF THIS DRAWING IS TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION FROM THE ENGINEER OF RECORD. THE CITY OF CANTON, OHIO, ENGINEER OF RECORD, CANTON ENGINEERS, INC. CANNOT GUARANTEE THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE OR COMPLETE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPLICABLE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPLICABLE AGENCIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPLICABLE AGENCIES.

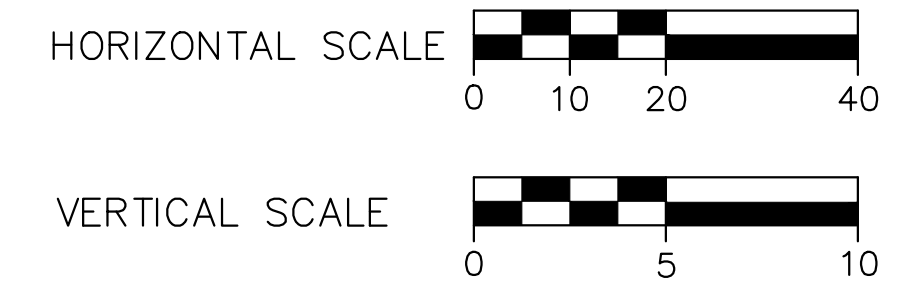
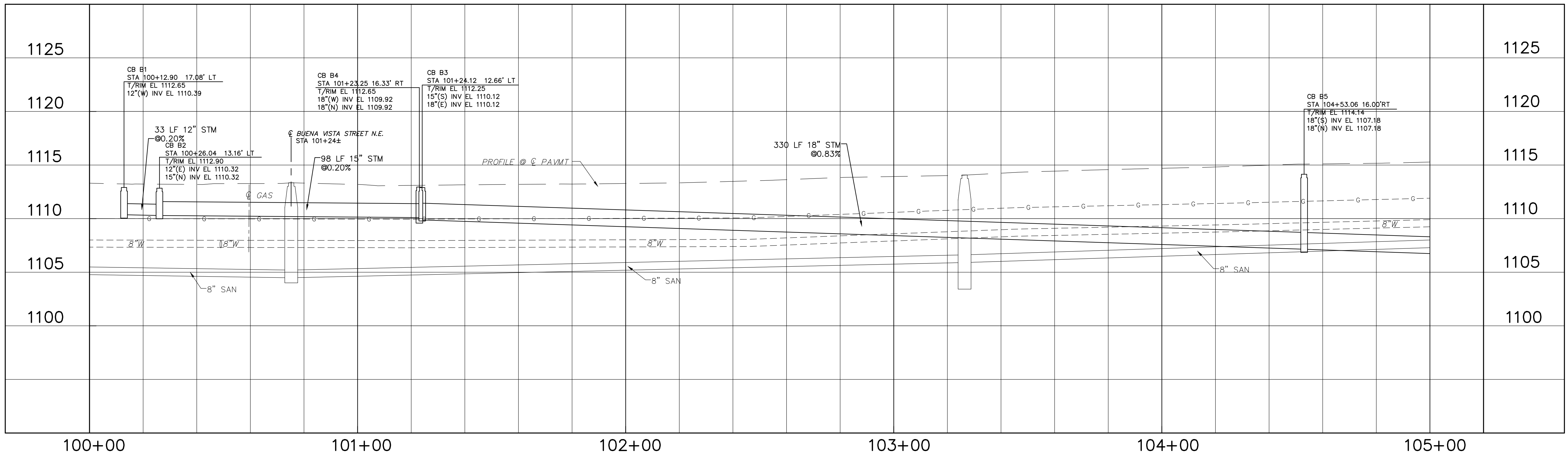
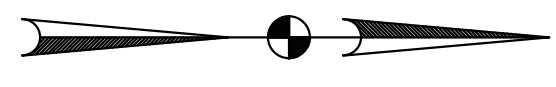
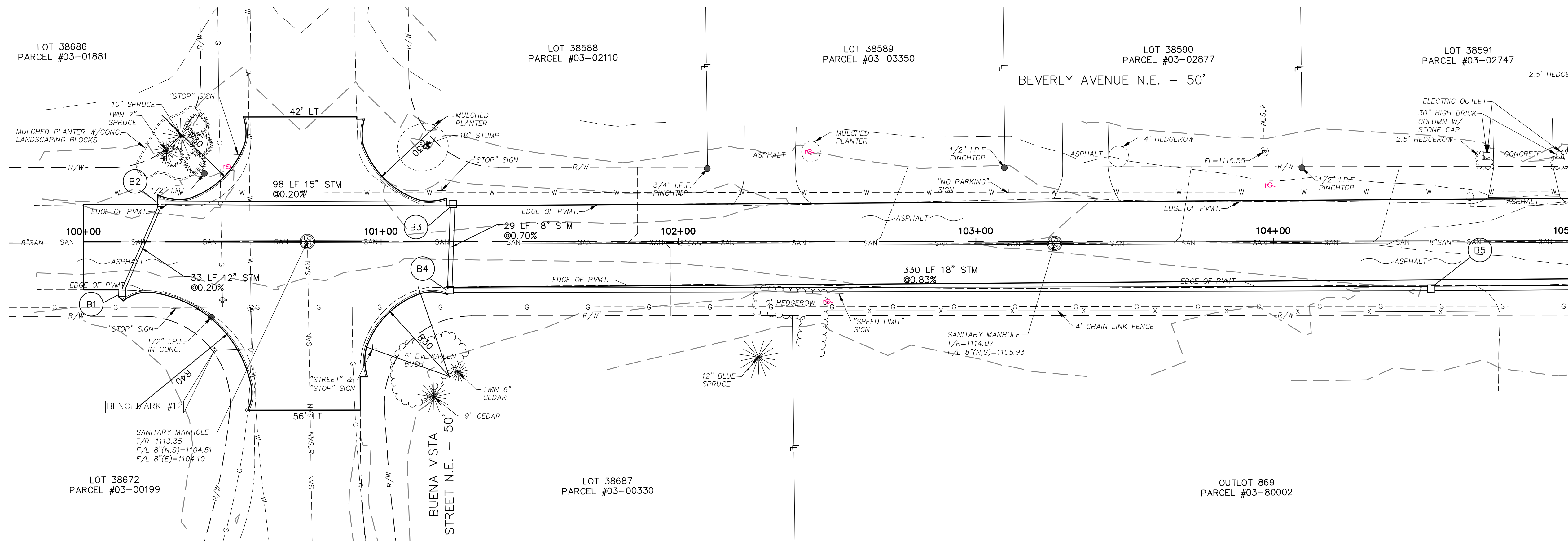
DESIGNED BY		DRAWN BY		CHECKED BY		APPROVED BY	
DLK		AJP		DLK		DLK	

REVISIONS		DATE		BY	
NO.	DESCRIPTIONS				APP'D

CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 XSECTIONS
 STA 67+00 TO STA 68+00



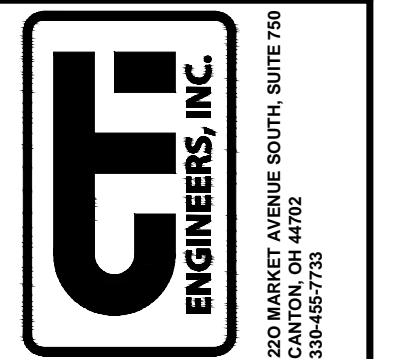
JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C50



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR AND WHICH SHALL BE RETURNED TO THE AUTHOR UPON COMPLETION OF THE PROJECT. IT IS NOT TO BE REPRODUCED, COPIED, OR DISTRIBUTED TO OTHERS IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF THE AUTHOR. ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN PERMISSION OF THE AUTHOR IS PROHIBITED. THE AUTHOR MAKES NO WARRANTY, EXPRESS OR IMPLIED, REGARDING THE ACCURACY, COMPLETENESS, OR SUITABILITY OF THE INFORMATION PROVIDED IN THIS DRAWING. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED TO THE AUTHOR. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED TO THE AUTHOR. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED TO THE AUTHOR.

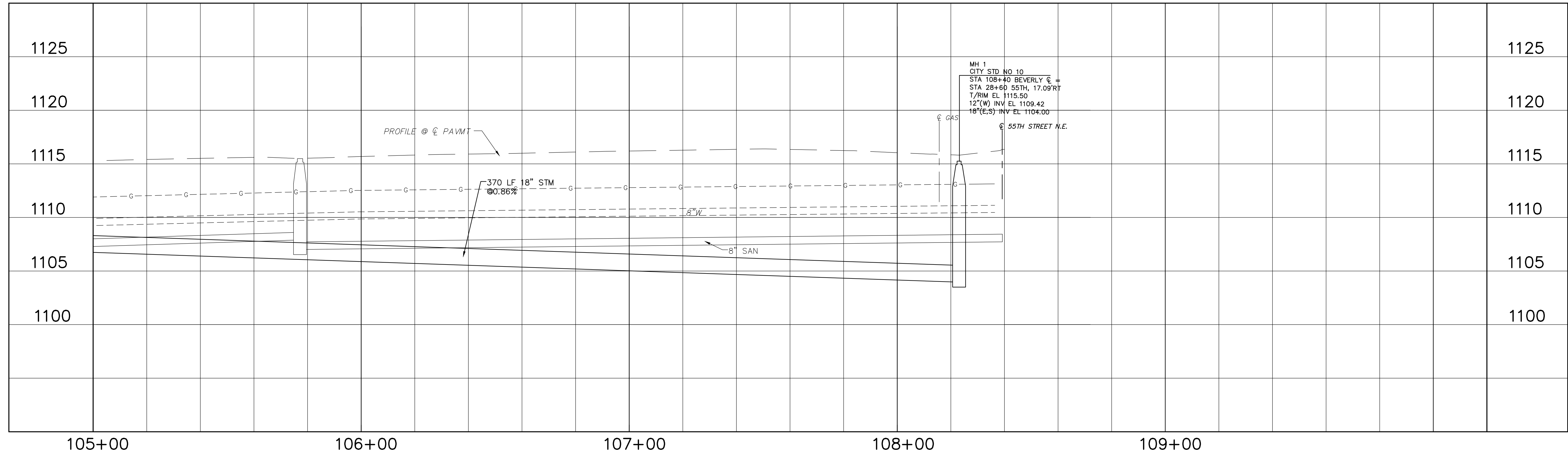
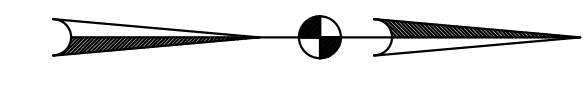
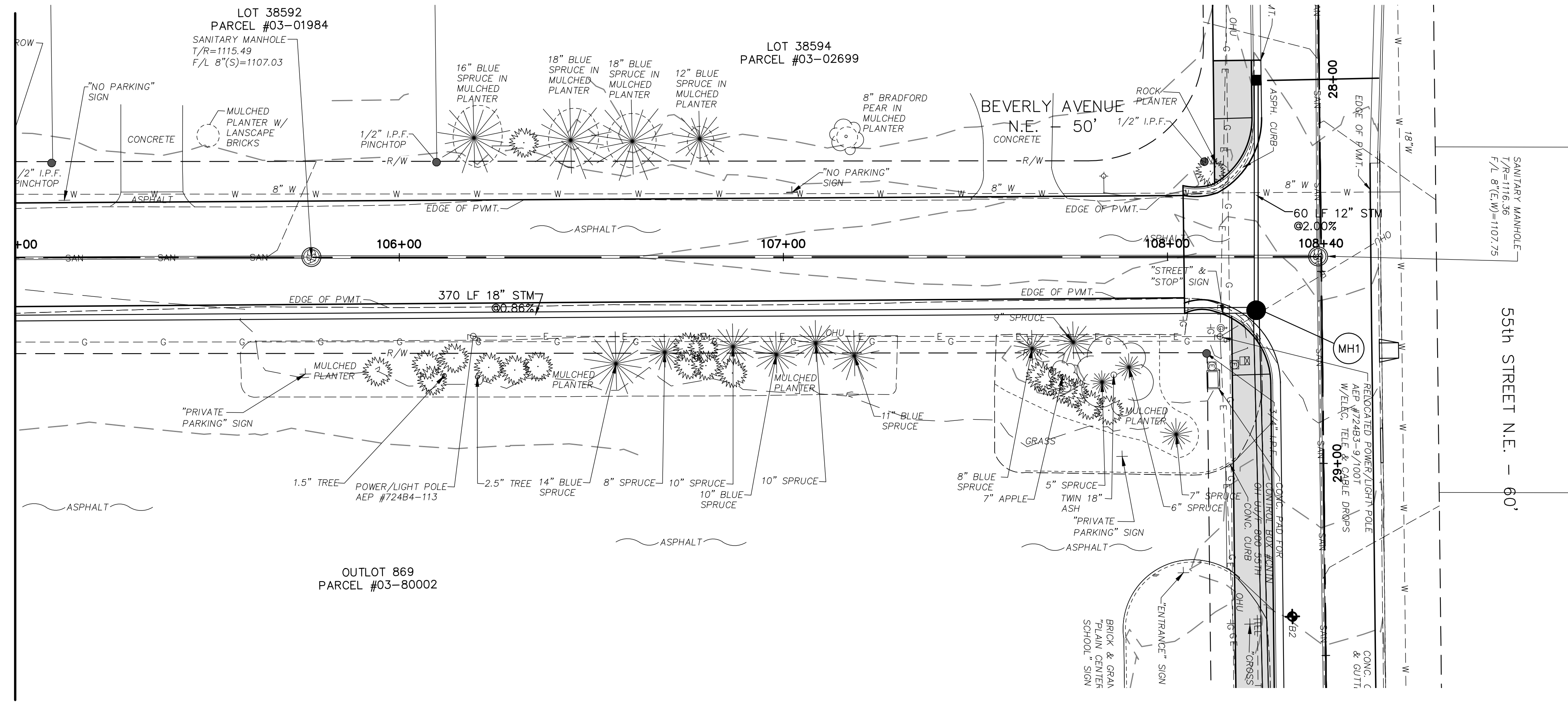
NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY: DLK
 DRAWN BY: AJP
 CHECKED BY: DLK
 APPROVED BY: DLK



CITY OF CANTON, OHIO 55TH STREET NE
STORM SEWER IMPROVEMENTS BEVERLY PLAN AND PROFILE STA 100+00 TO STA 105+00
JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO. C51

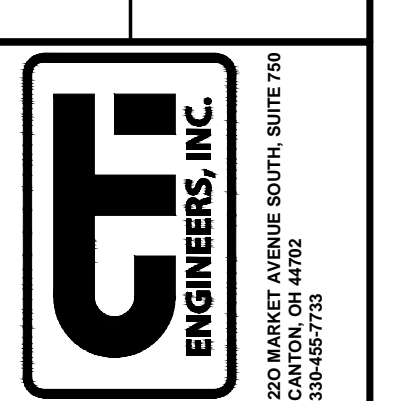
MATCH LINE
SEE SHEET C51



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR AND WHICH SHALL BE RETURNED TO THE AUTHOR UPON COMPLETION OF THE PROJECT. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE PRIOR WRITTEN CONSENT OF THE AUTHOR. THE AUTHOR MAKES NO WARRANTY, EXPRESS OR IMPLIED, THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE, COMPLETE, OR THAT THE DRAWING WILL BE EXACTLY AS SHOWN. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREIN. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREIN. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREIN.

NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY: DLK
 DRAWN BY: AJP
 CHECKED BY: DLK
 APPROVED BY: DLK

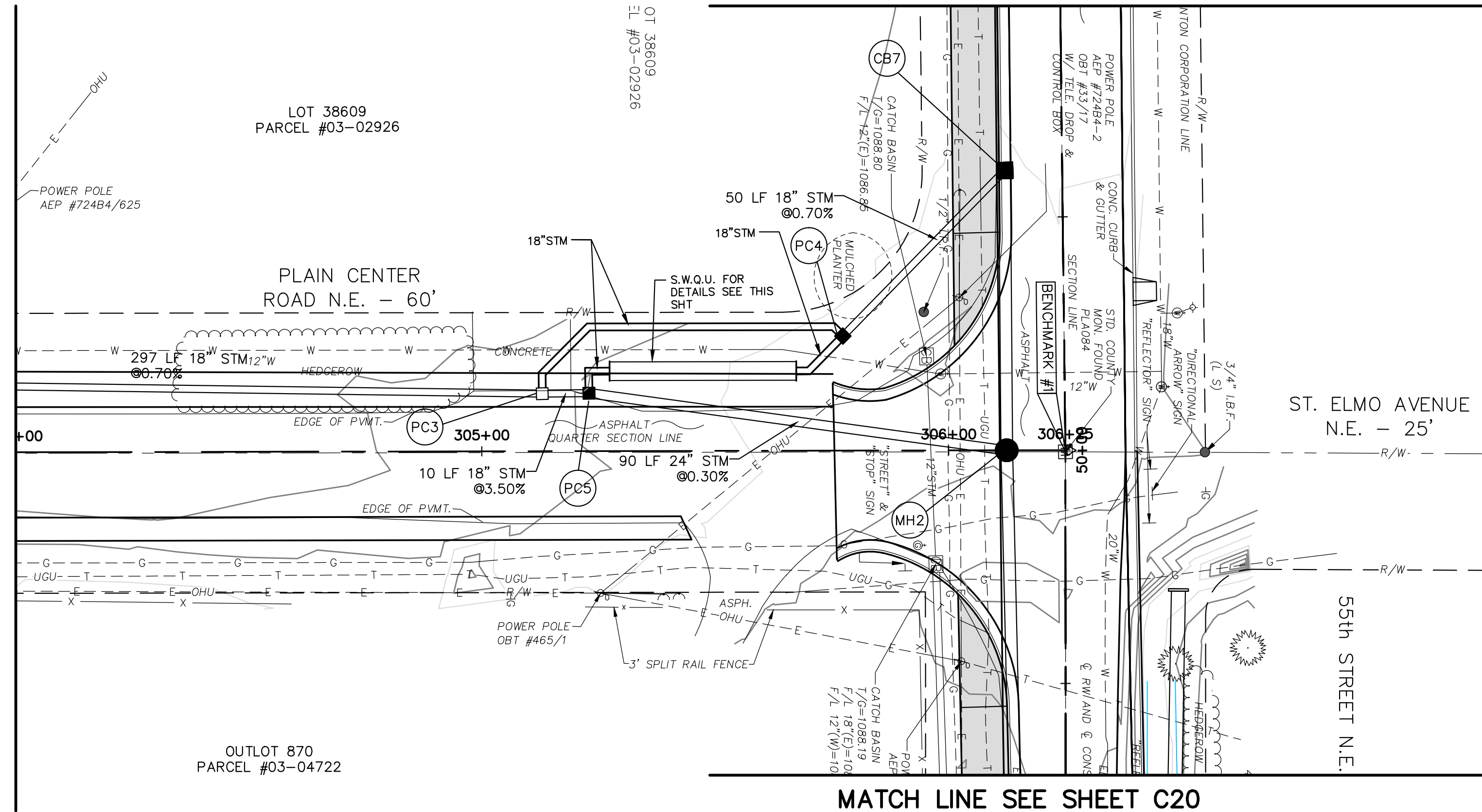


CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 BEVERLY PLAN AND PROFILE
 STA 105+00 TO END

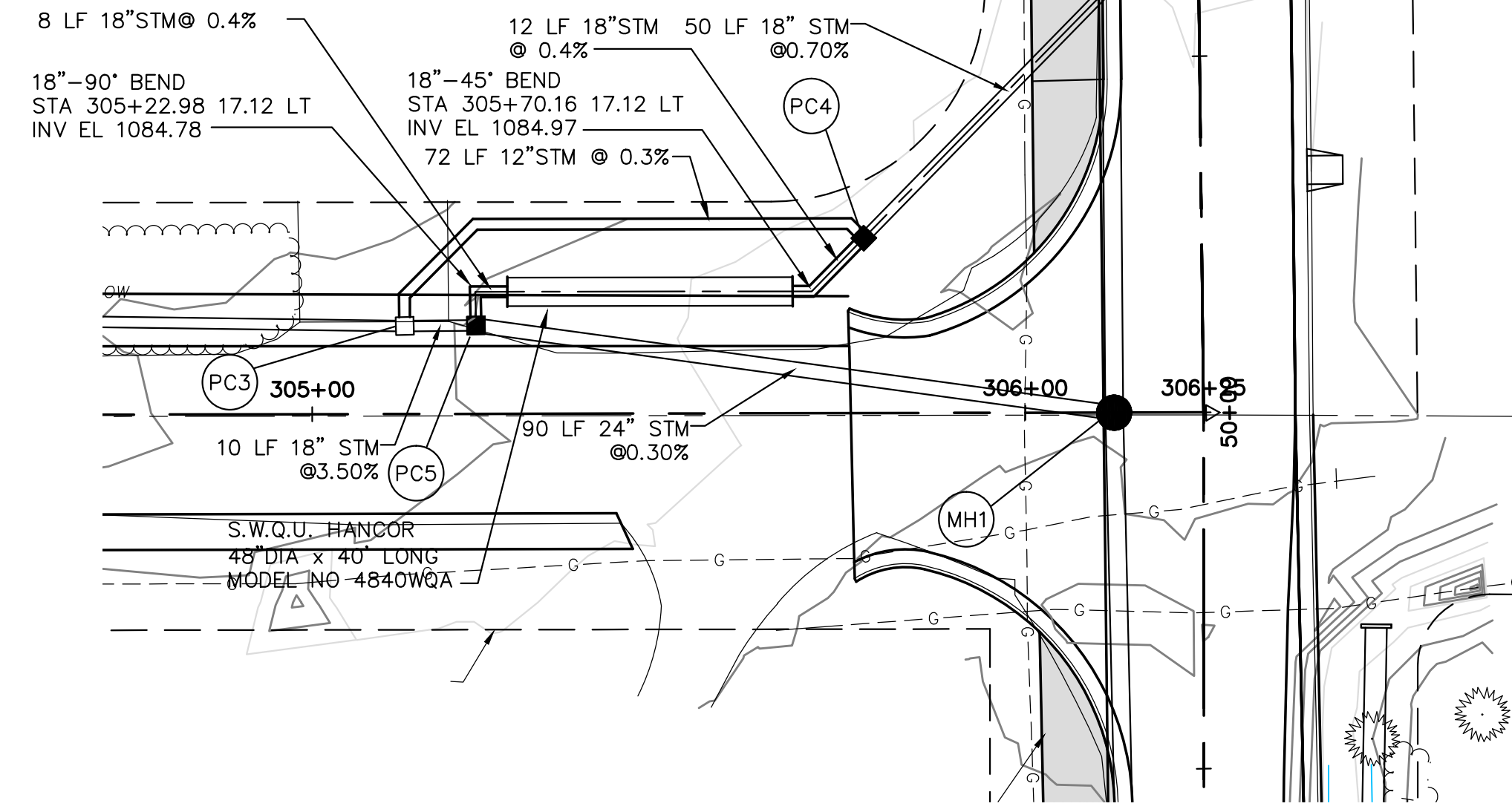
JOB NO. E10025
 DATE 8/2013
 SCALE AS NOTED
 SHEET NO C52

MATCH LINE SEE SHEET C20

MATCH LINE
SEE SHEET C53

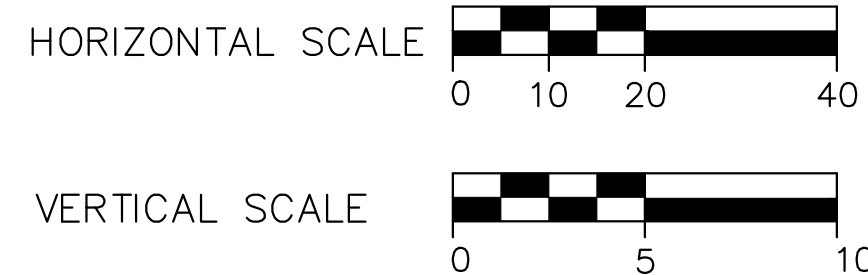
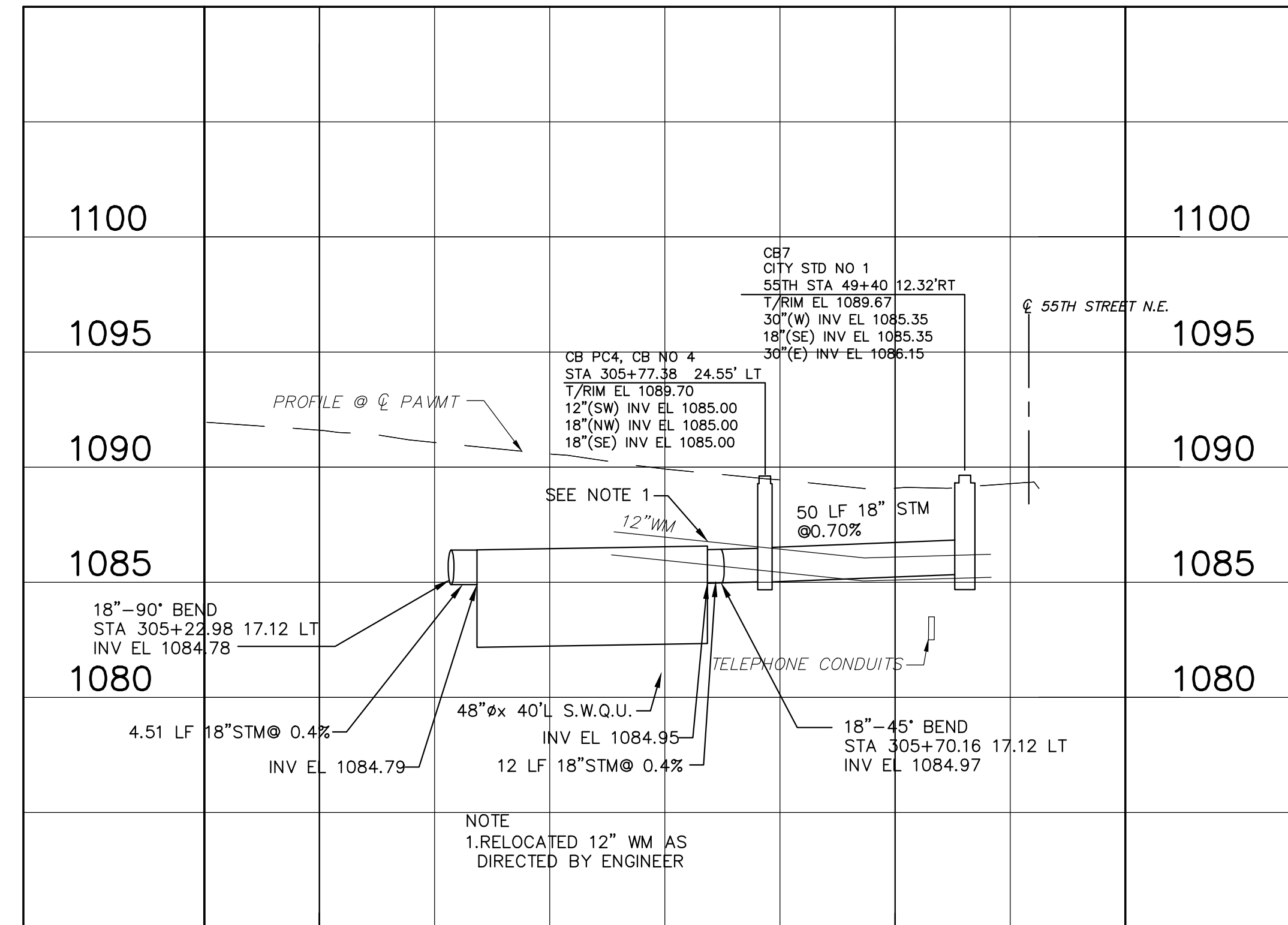
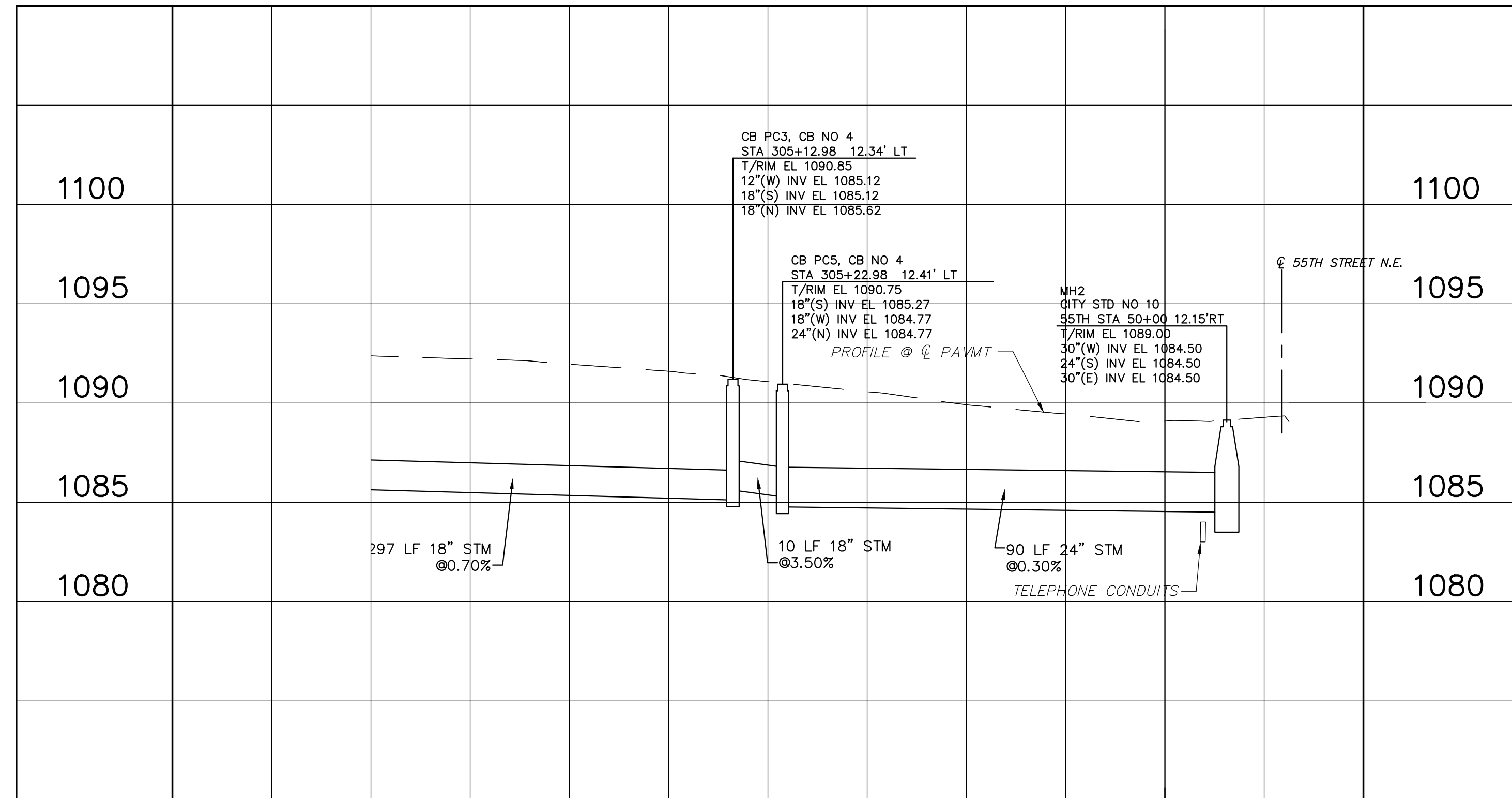


MATCH LINE SEE SHEET C20



STORM WATER QUALITY UNIT PLAN

SCALE: 1"=20'



THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR AND WHICH SHALL BE LOANED TO THE CLIENT FOR THE PROJECT ONLY. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE AUTHOR. THE AUTHOR ASSUMES NO LIABILITY FOR ANY ENVIRONMENTAL INCONVENIENCE OR DAMAGE THAT MAY OCCUR AS A RESULT OF THIS DRAWING. THE EXACT ELECTRONIC COPIES OF THIS DRAWING ARE EXACT IN THE USE OF THE ORIGINAL DRAWING. ANY REPRODUCTION OF THIS DRAWING IN ANY FORM SHALL BE THE PROPERTY OF THE AUTHOR AND SHALL GOVERN.

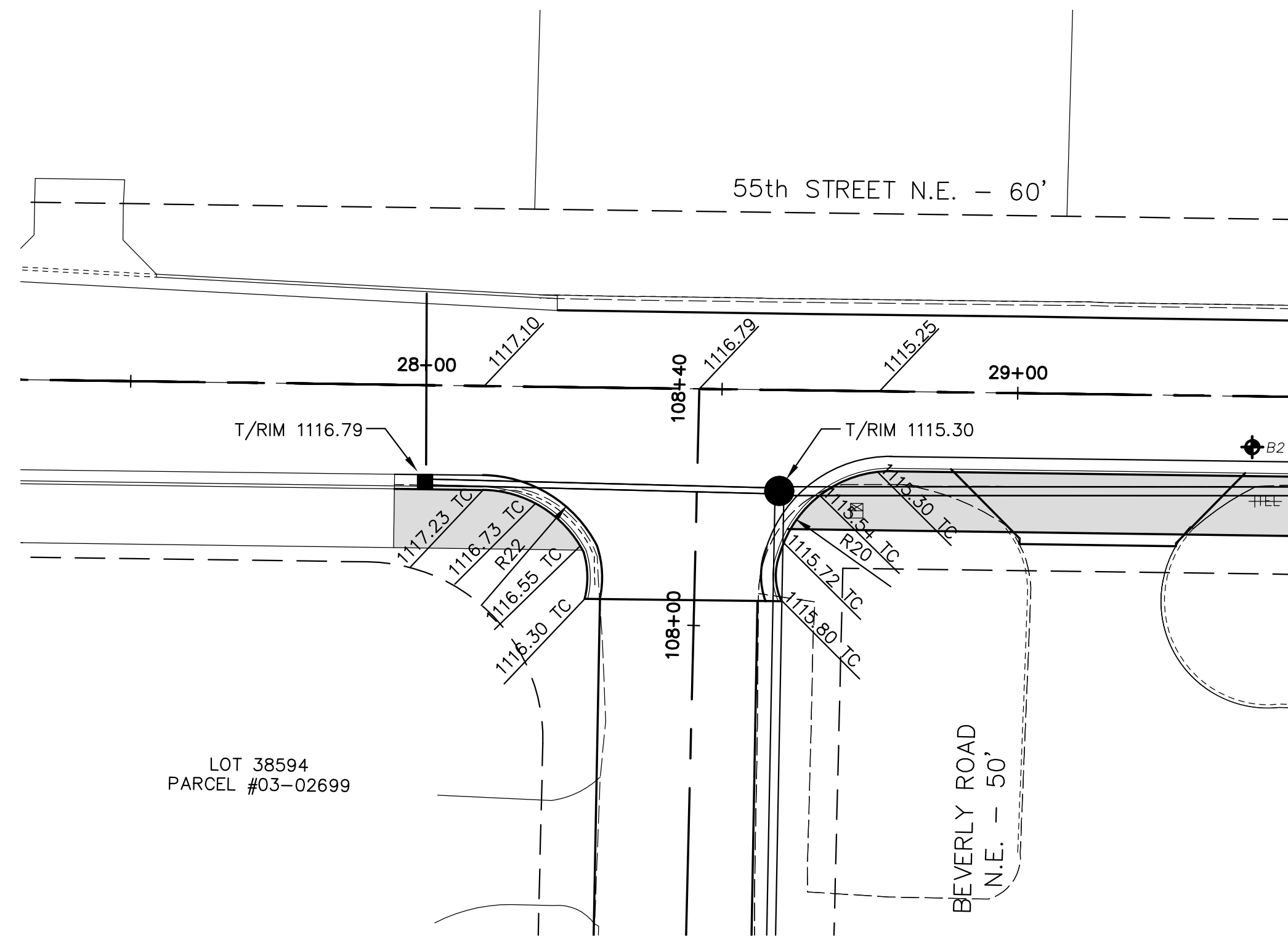
NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY: DLK
DRAWN BY: AJP
CHECKED BY: DLK
APPROVED BY: DLK

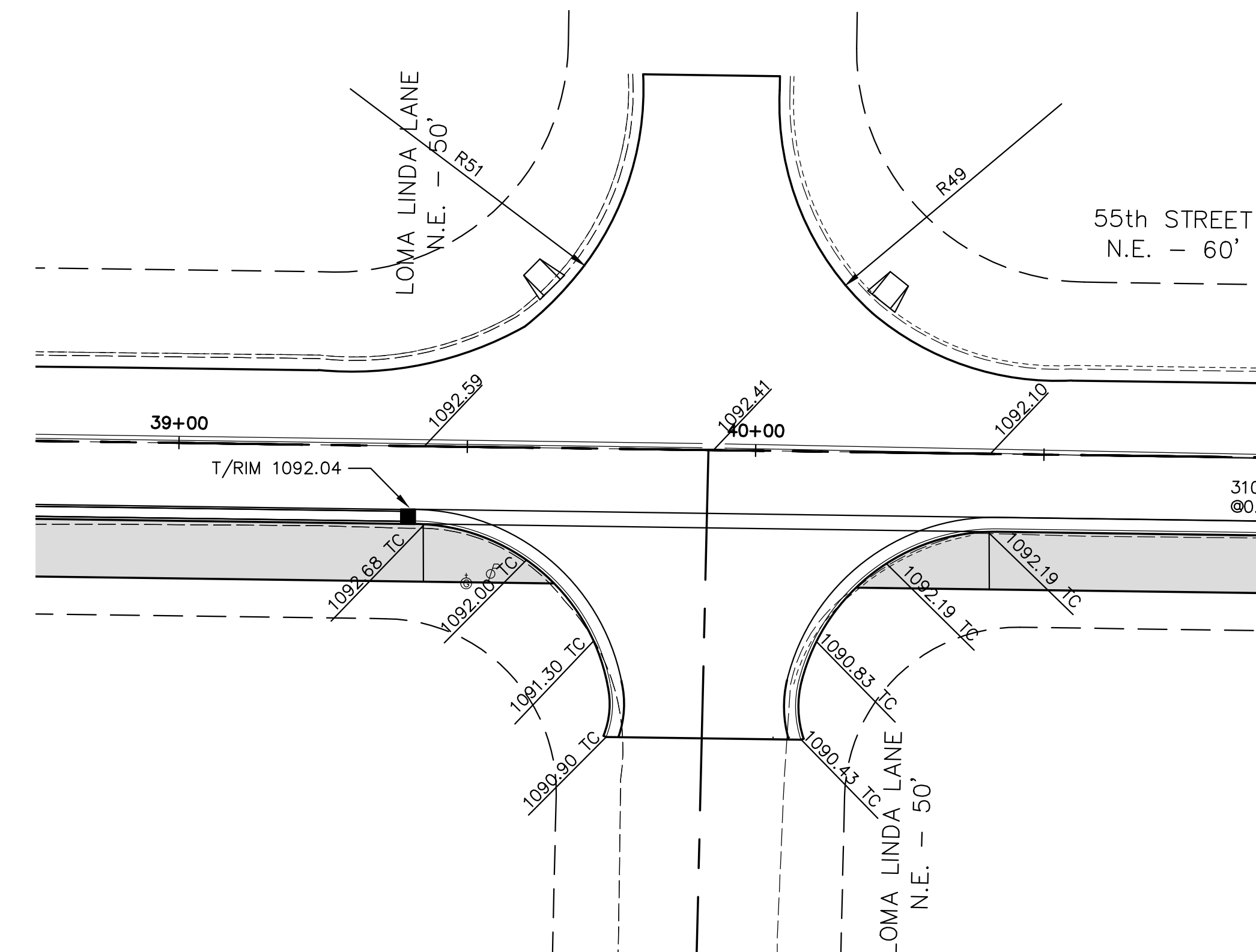


CITY OF CANTON, OHIO
55TH STREET N.E.
STORM SEWER IMPROVEMENTS
PLAIN CENTER PLAN AND PROFILE
STA 304+00 TO END

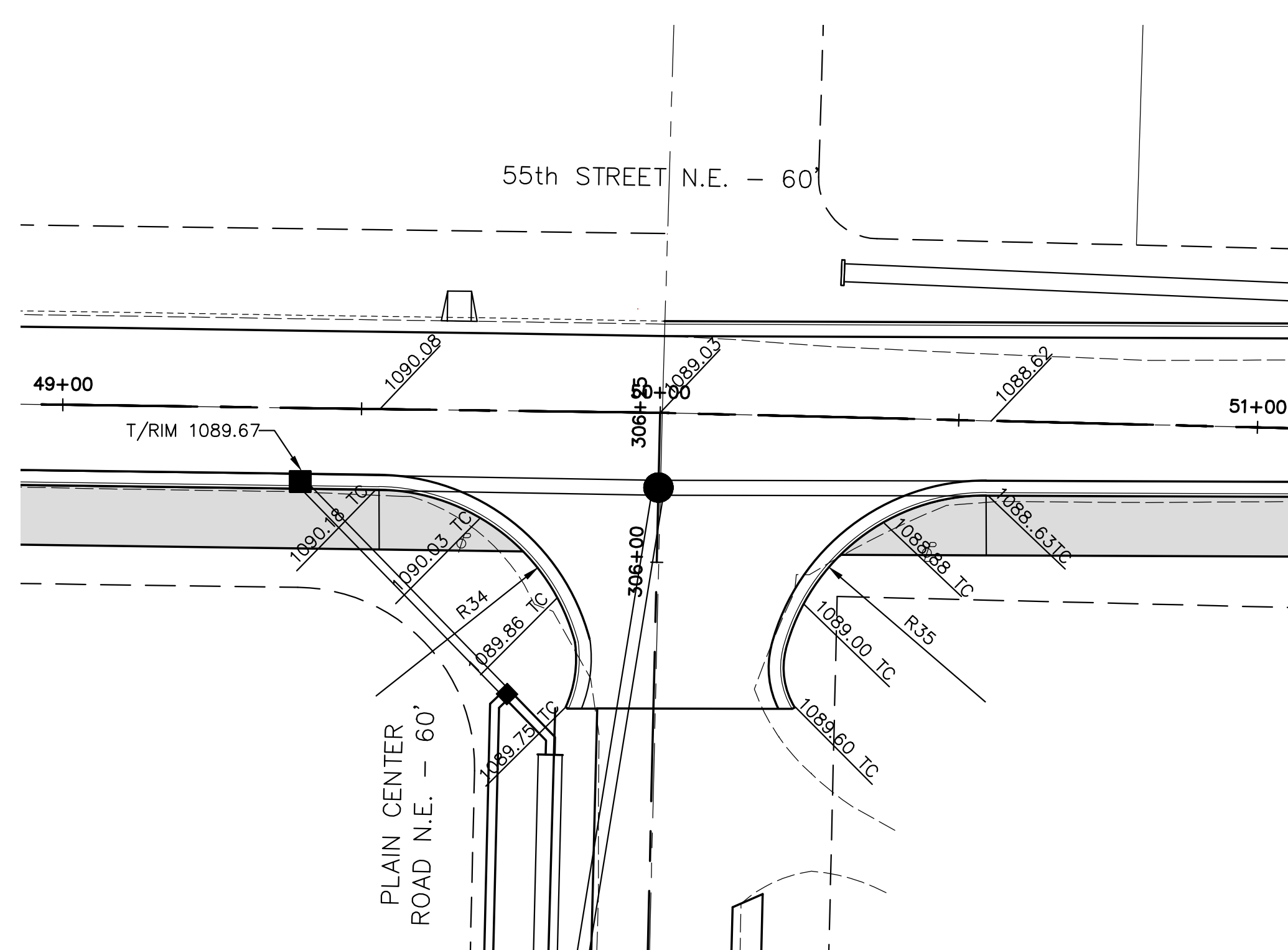
JOB NO. E10025
DATE 8/2013
SCALE AS NOTED
SHEET NO C54



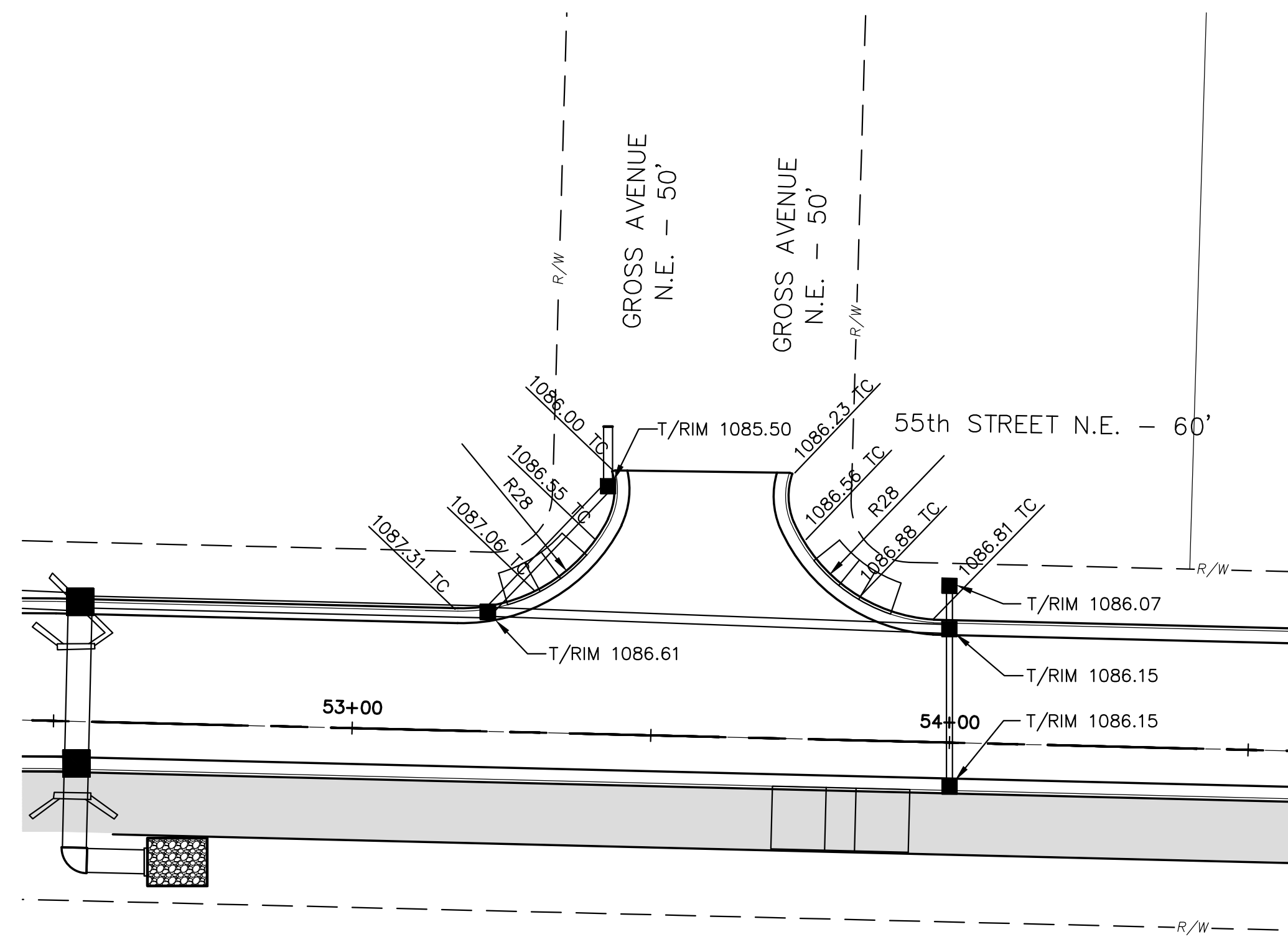
55TH AND BEVERLY (SOUTH)



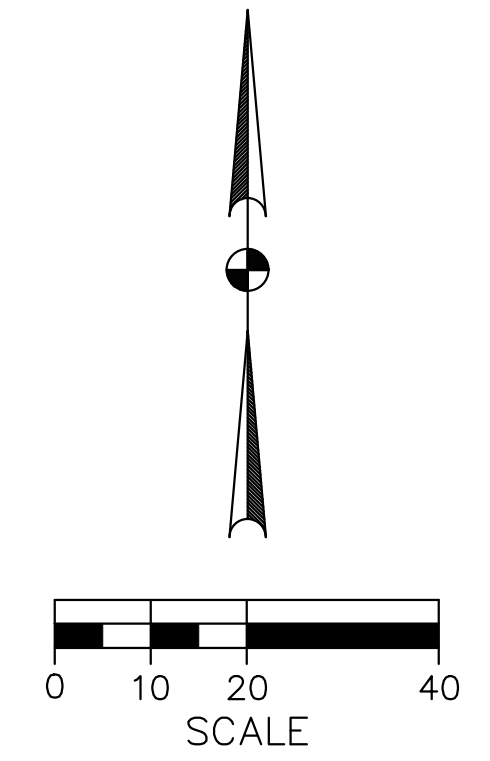
55TH AND LOMA LINDA



55TH AND PLAIN CENTER



55TH AND GROSS AVENUE



- NOTES FOR END TAPERS:
- TYPE 2: CURB SHALL BE TAPER DOWN FROM 6" HIGH TO 1" HIGH OVER THE LAST 10'.
 - TYPE 6: CURB SHALL BE TAPER DOWN FROM 6" HIGH TO 1" HIGH AND TAPER BACK 2'-0" OVER THE LAST 10'.
 - THE T/C ELEVATIONS LISTED DO NOT REFLECT THIS TAPER.

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR AND WHICH SHALL NOT BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS IN ANY FORM OR USED FOR ANY OTHER PURPOSE OR PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER. THE ENGINEER MAKES NO WARRANTY, EXPRESS OR IMPLIED, FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREIN. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREIN. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREIN. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED HEREIN.

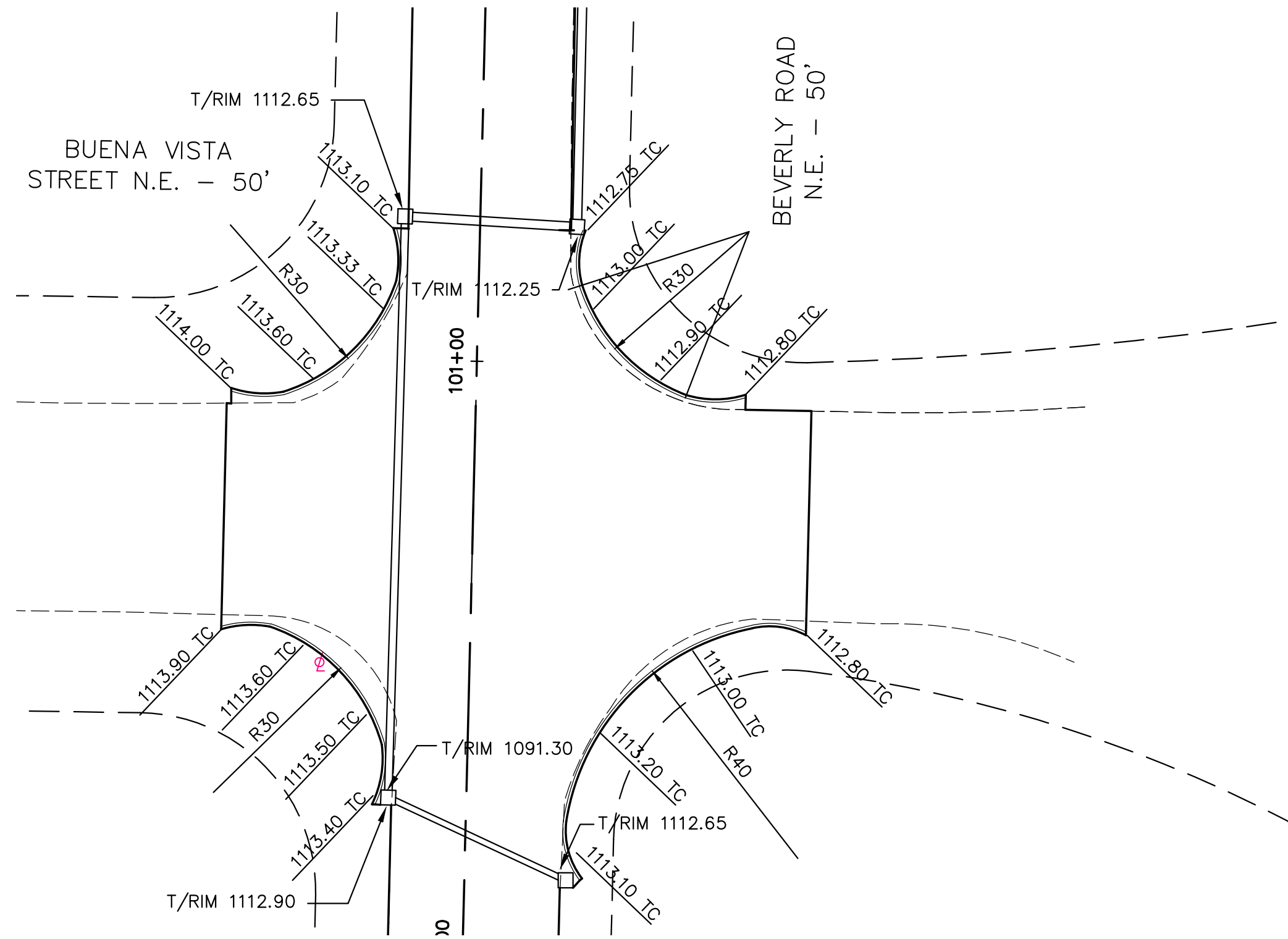
NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY: DLK
 DRAWN BY: AJP
 CHECKED BY: DLK
 APPROVED BY: DLK

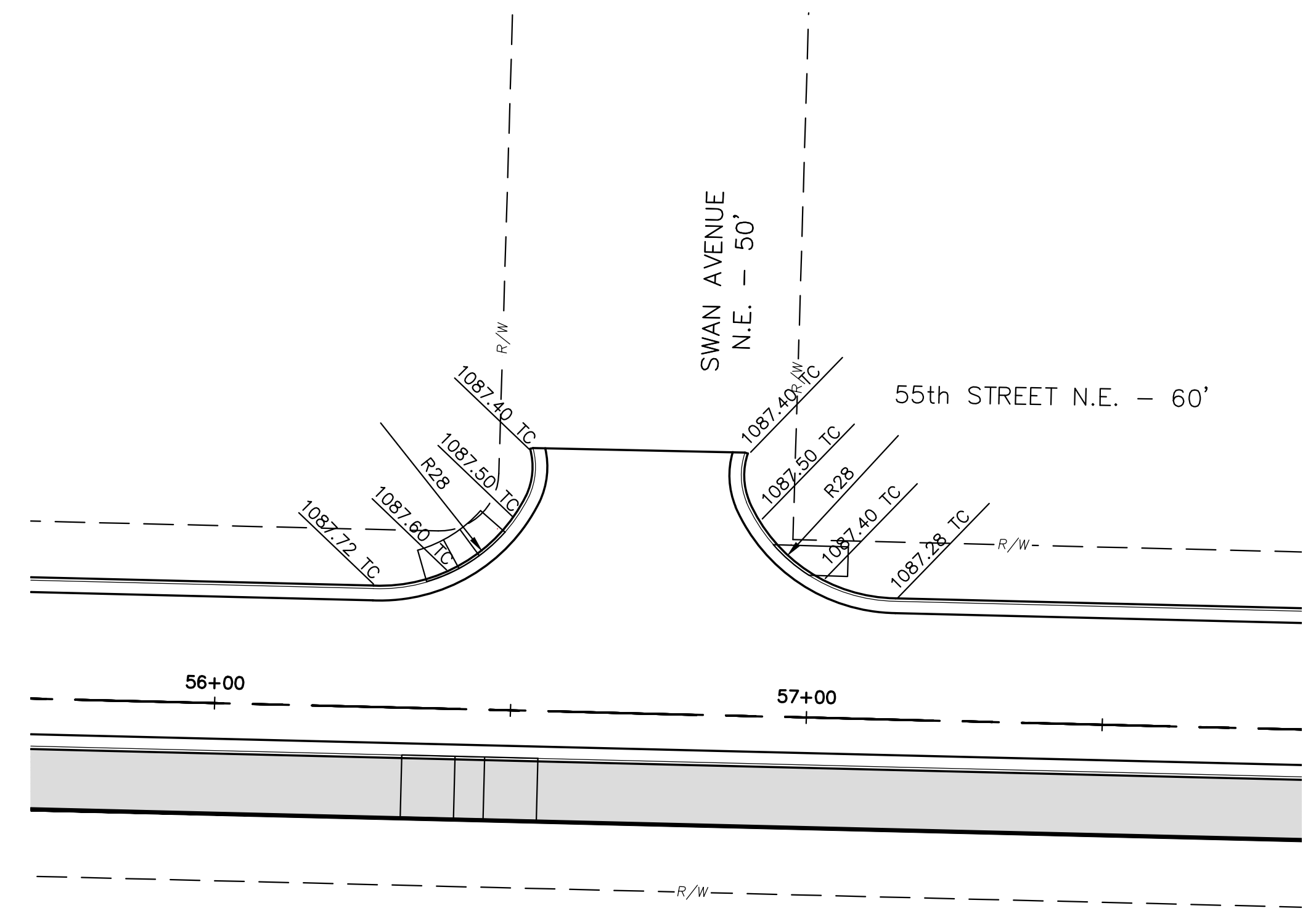
CITY OF CANTON, OHIO
 55TH STREET N.E.
 STORM SEWER IMPROVEMENTS
 INTERSECTION DETAILS



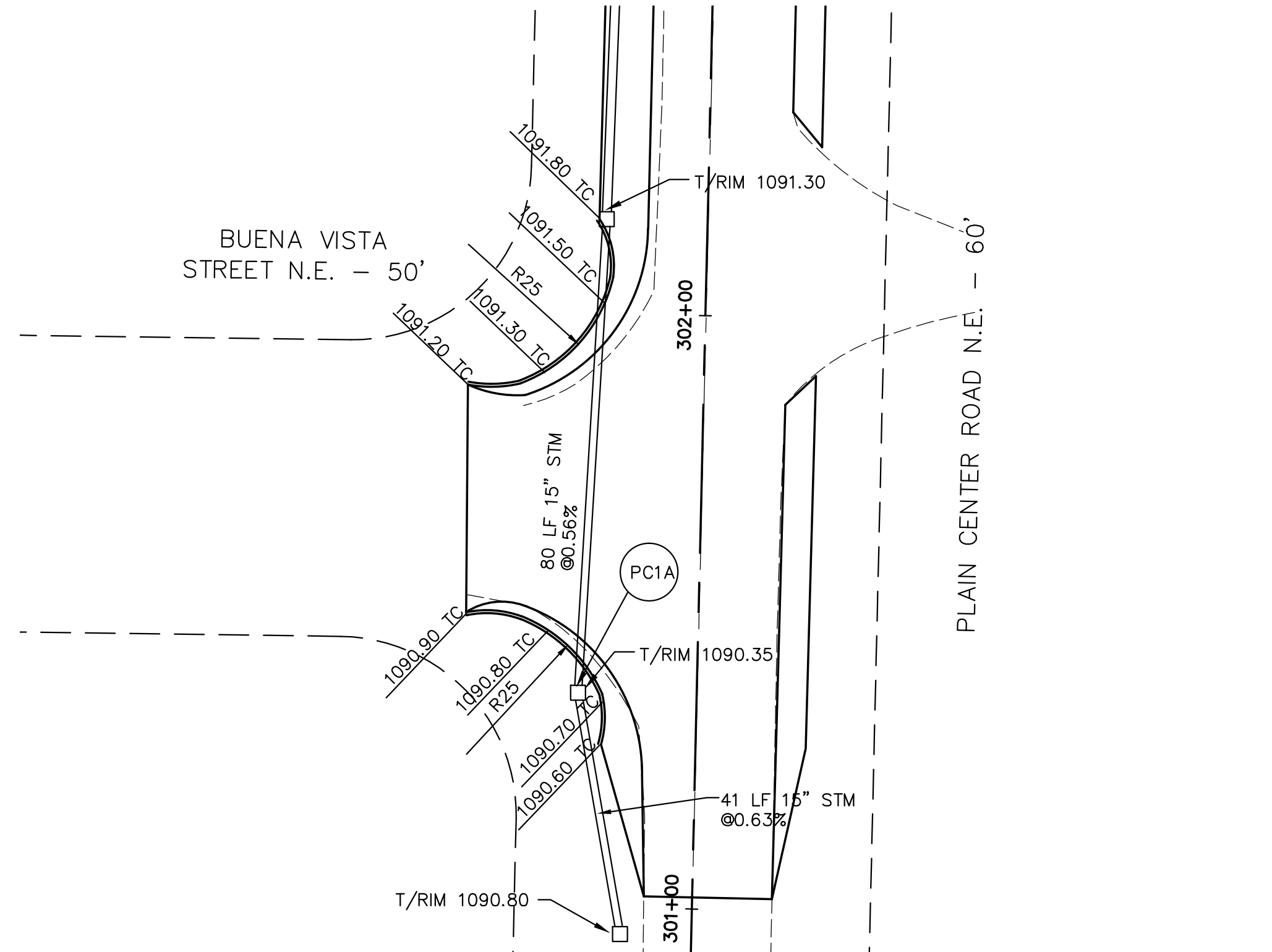
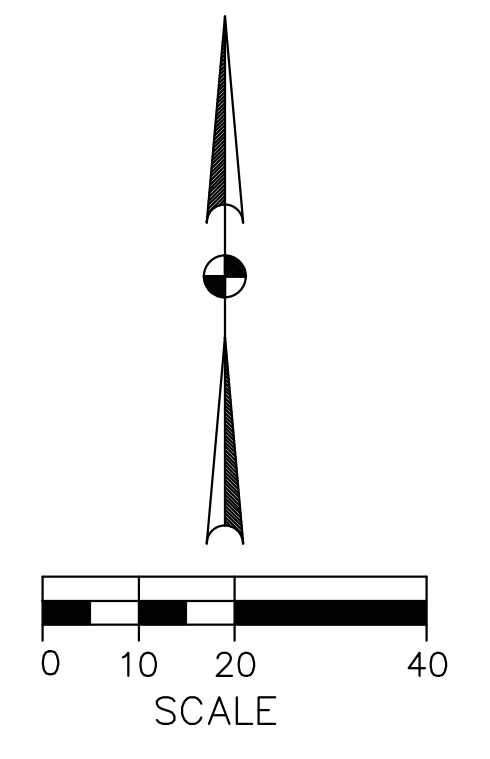
JOB NO. E10025
 DATE 8/2013
 SCALE 1"=20'
 SHEET NO. C55



BUENA VISTA AND BEVERLY



55TH AND SWAN AVENUE



BUENA VISTA AND PLAIN CENTER

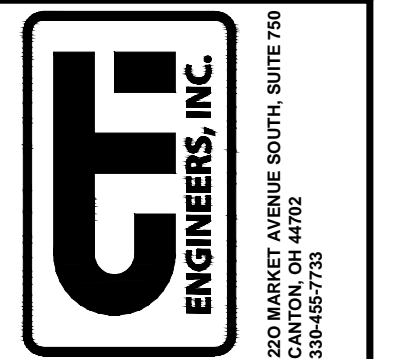
NOTES FOR END TAPERS:

1. TYPE 2: CURB SHALL BE TAPER DOWN FROM 6" HIGH TO 1" HIGH OVER THE LAST 10'.
2. TYPE 6: CURB SHALL BE TAPER DOWN FROM 6" HIGH TO 1" HIGH AND TAPER BACK 2'-0" OVER THE LAST 10'. THE T/C ELEVATION DO NOT REFLECT THIS TAPER.

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE AUTHOR. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, DISTRIBUTED TO OTHERS OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE AUTHOR. THE AUTHOR ASSUMES NO LIABILITY FOR ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE AUTHOR. THE AUTHOR'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED BY THE AUTHOR. THE AUTHOR'S LIABILITY DOES NOT INCLUDE CONSEQUENTIAL DAMAGES. THE AUTHOR'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED BY THE AUTHOR. THE AUTHOR'S LIABILITY DOES NOT INCLUDE CONSEQUENTIAL DAMAGES. THE AUTHOR'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED BY THE AUTHOR. THE AUTHOR'S LIABILITY DOES NOT INCLUDE CONSEQUENTIAL DAMAGES.

NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY: DLK
 DRAWN BY: AJP
 CHECKED BY: DLK
 APPROVED BY: DLK



CITY OF CANTON, OHIO
 55TH STREET NE
 STORM SEWER IMPROVEMENTS
 INTERSECTION DETAILS

JOB NO.
E10025
 DATE
8/2013
 SCALE
1"=20'
 SHEET NO.
C56

NOTES:

1. ALL WORK SHALL CONFORM TO ODOT ITEM 604 EXCEPT AS OTHERWISE NOTED HEREIN.
2. PRECAST CONCRETE OR BRICK CATCH BASINS ARE ALLOWED AS NOTED HEREIN.
3. IF THE CATCH BASIN WILL BE USED WITH TRAFFIC BEARING APPLICATION, THE PRECAST CONCRETE PORTION OF AN ODOT 2-22 CATCH BASIN MAY BE USED. HOWEVER, THE INLET FRAME AND GRATE AS SPECIFIED HEREIN SHALL BE USED IN LIEU OF THE ODOT 2-22 "LAY-IN" GRATE. ALL ANNUAL SPACE REMAINING BETWEEN THE BOTTOM OF THE INLET FRAME AND THE TOP OF THE PRECAST SECTION SHALL BE FILLED WITH CEMENT GROUT OR CLASS "C" CONCRETE. IF THE CATCH BASIN WILL BE USED IN A NON-TRAFFIC-BEARING APPLICATION, AN ODOT 2-22 CATCH BASIN MAY BE USED WITH THE STANDARD "LAY-IN" GRATE.
4. ALL CONCRETE SHALL CONFORM TO ODOT ITEM 409 CLASS C (4000 PSI).
5. A CONCRETE CHANNEL SHALL BE POURED INTO THE BOTTOM OF THE CATCH BASIN USING CLASS "C" CONCRETE. THE CHANNEL SHALL TAPER FROM 9" THICKNESS TO 2" MIN. THICKNESS AT THE LOWEST SEWER INVERT AND SHALL BE FINISHED WITH A SMOOTH SURFACE.
6. THE EXCAVATED AREA AROUND THE CATCH BASIN SHALL BE BACKFILLED WITH ODOT ITEM 703.11, TYPE 1 (304, 411, OR 617) COMPACTED IN 8" LIFTS. NO FOUNDRY SAND OR SLAG PERMITTED.
7. WHERE CATCH BASIN WILL BE LOCATED WITHIN CROSSWALK, AT ADA RAMP, OR IN DESIGNATED BIKE LANE, CASTING SHALL BE EAST JORDAN IRON WORKS EJWV 5250 INLET WITH Y-562080 ADA GRATE OR NENAH R-3065-A INLET WITH TYPE "L" GRATE, OR EQUAL, APPROVED BY CITY ENGINEER. AS APPLICABLE, GRATE SHALL BE ORIENTED SUCH THAT THE LONG OPENINGS ARE PERPENDICULAR TO NORMAL DIRECTION OF BICYCLE TRAFFIC FLOW. IN OTHER LOCATIONS, CASTING SHALL BE EJWV 5250 OR NENAH R-3065 INLET AND STANDARD GRATE MAY BE USED. IN ALL LOCATIONS, GRATE MUST INCLUDE "ECO-SENSITIVE" MARKINGS SUCH AS "DUMP NO WASTE, DRAINS TO STREAM" AND AN AQUATIC LIFE LOGO. THE LETTERING AND LOGO SHALL BE RAISED OR RECESSED AND INTEGRAL WITH THE CASTING. ALTERNATE NOTATION OR LOGO IS SUBJECT TO THE CITY ENGINEER'S APPROVAL.
8. ALL OPENINGS AND KNOCKOUTS FOR INLET AND OUTLET PIPING SHALL BE FASHIONED NEATLY. ALL ANNUAL SPACE SHALL BE FILLED WITH CEMENT GROUT, BRICK AND MORTAR, OR CLASS "C" CONCRETE.
9. ODOT REFERENCES ARE FROM THE CURRENT ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. ANY DISCREPANCIES SHALL BE SUBJECT TO THE CITY ENGINEER'S DISCRETION.

BRICK CATCH BASINS ARE ACCEPTABLE AND SHALL BE CONSTRUCTED PER THIS DRAWING AND THE FOLLOWING SPECIFICATIONS:

1. PROVIDE CLAY BRICK (ASTM C-32-83) WALLS WITH FULL MORTAR (ASTM C-91 & C-150, AIR-ENTRAINED PORTLAND CEMENT) JOINTS. CONCRETE & CEMENT BLOCKS/BRICKS ARE PROHIBITED FOR NEW OR RECONSTRUCTED BASINS.
2. THE CATCH BASIN SHALL HAVE A CONCRETE BASE (MINIMUM 6" THICKNESS) EXTENDING 6" BEYOND OUTSIDE OF FOUR WALLS OF CATCH BASIN.
3. EVERY SEVENTH COURSE MUST BE A STRETCHER COURSE.
4. WALLS SHALL BE MINIMUM 8" THICK.
5. PLASTER OUTSIDE WALLS WITH 1/2" NON-SHRINK MORTAR. INSIDE JOINTS MUST BE NEATLY STRUCK AND CLOSED.

PRECAST CONCRETE CATCH BASINS ARE ACCEPTABLE AND SHALL BE CONSTRUCTED PER THIS DRAWING AND THE FOLLOWING SPECIFICATIONS:

1. THE PRECAST UNIT SHALL CONFORM TO ODOT ITEM 706.13.
2. PRECAST WALLS AND BOTTOM SHALL HAVE A MINIMUM THICKNESS OF 6".
3. A 6" CONCRETE BASE EXTENSION IS REQUIRED ON ALL FOUR SIDES WHEN DEPTH (TOP OF GRATE TO LOWEST PIPE INVERT) EXCEEDS 4 FEET.
4. STACKED PRECAST SECTIONS MUST HAVE A TONGUE/GROOVE JOINT AND A BUTYL SEALANT.
5. SHOP DRAWING OF THE PRECAST UNIT SHALL BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL.

PLAN VIEW
NOT TO SCALE

SECTION A-A
NOT TO SCALE

STANDARD DRAWING NO. 4
SQUARE-TOP CATCH BASIN
SHEET 1 OF 1

OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE: MAR 2012
APPROVED BY: CDB, RMB, SLH
DRAWING FILE NAME: ce_04.dwg

REVISIONS	DESCRIPTION	DATE	BY

NOTES:

MANHOLE NO. 3 W/ BASE 1.0, AND "E" WEIR

ALTERNATE ECCENTRIC CONE TOP
ONLY IF SPECIFIED SEE NOTE 2

FLAT SLAB TRANSITION
ONLY IF SPECIFIED SEE NOTE 2

FLAT SLAB TOP
ONLY IF SPECIFIED SEE NOTE 2

FLAT SLAB TOP
ONLY IF SPECIFIED SEE NOTE 2

DI VERSI ON WEIR DETAIL
ONLY IF SPECIFIED SEE NOTE 2

SECTION A-A
NOT TO SCALE

SECTION B-B
NOT TO SCALE

THE CITY'S STANDARD MANHOLE FOR SANITARY AND STORM SEWERS IS THE ODOT MH-3 WITH THE MODIFICATIONS NOTED. SEE SHEET 30F 3 FOR CITY'S MODIFICATION NOTES.

NOTES:

MANHOLE NO. 3 W/ BASE 1.0, AND "E" WEIR WITH PRECAST CONCRETE WALLS. PRECAST CONCRETE WALLS SHALL BE CAST OR BRICK AND MORTAR WITH CONFORMING TO THIS DRAWING. A 6" CONCRETE CHANNEL SHALL BE POURED INTO THE BOTTOM OF THE CATCH BASIN USING CLASS "C" CONCRETE. THE CHANNEL SHALL TAPER FROM 9" THICKNESS TO 2" MIN. THICKNESS AT THE LOWEST SEWER INVERT AND SHALL BE FINISHED WITH A SMOOTH SURFACE.

Place diversion well perpendicular to flow of influent from system. Down concrete or masonry into the base of the diversion well to depth of 4 feet above the base of the manhole. Start access of the center of the diversion well on the manhole. The diversion well shall be cast in place.

All materials and labor, including excavation and backfill, shall conform to the current ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. ANY DISCREPANCIES SHALL BE SUBJECT TO THE CITY ENGINEER'S DISCRETION.

STANDARD DRAWING NO. 10
PRECAST STORM OR SANITARY MANHOLE
SHEET 2 OF 3

OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE: JAN 2012
APPROVED BY: CDB, RMB, SLH
DRAWING FILE NAME: ce_10.dwg

REVISIONS	DESCRIPTION	DATE	BY

NOTES:

1. ALL WORK SHALL CONFORM TO ODOT ITEM 604 EXCEPT AS OTHERWISE NOTED HEREIN.
2. PRECAST CONCRETE OR BRICK CATCH BASINS ARE ALLOWED AS NOTED HEREIN.
3. ALL CONCRETE SHALL CONFORM TO ODOT ITEM 409 CLASS C (4000 PSI).
4. WHEN STREET PROFILE SLOPE IS 5% OR STEEPER, CONSTRUCT CATCH BASIN IN ACCORDANCE WITH CITY STD. DWG. NO. 3.
5. A CONCRETE CHANNEL SHALL BE POURED INTO THE BOTTOM OF THE CATCH BASIN USING CLASS "C" CONCRETE. THE CHANNEL SHALL TAPER FROM 9" THICKNESS TO 2" MIN. THICKNESS AT THE LOWEST SEWER INVERT AND SHALL BE FINISHED WITH A SMOOTH SURFACE.
6. THE EXCAVATED AREA AROUND THE CATCH BASIN SHALL BE BACKFILLED WITH ODOT ITEM 703.11, TYPE 1 (304, 411, OR 617) COMPACTED IN 8" LIFTS OR ODOT ITEM 613, NO FOUNDRY SAND OR SLAG PERMITTED.
7. EXPANSION JOINT MATERIAL SHALL CONFORM TO ODOT ITEM 705.03. 1" OF JOINT SEALER (705.04) SHALL BE PLACED OVER EXPANSION JOINTS.
8. CASTINGS SHALL BE EAST JORDAN 7030 CURB INLET WITH TYPE T1 BACK AND TYPE M6 VANE GRATE, NENAH R-3067-L, OR EQUAL, APPROVED BY CITY ENGINEER (GRATE USED SHALL NOT BE SPECIFICALLY IDENTIFIED BY MANUFACTURER AS NOT SUITABLE FOR BICYCLE TRAFFIC). THE CASTING BACK (HOOD) MUST INCLUDE "ECO-SENSITIVE" MARKINGS SUCH AS "DUMP NO WASTE, DRAINS TO STREAM" AND AN AQUATIC LIFE LOGO. THE LETTERING AND LOGO SHALL BE RAISED OR RECESSED AND INTEGRAL WITH THE CASTING OF THE BACK. ALTERNATE NOTATION OR LOGO IS SUBJECT TO THE CITY ENGINEER'S APPROVAL.
9. ALL OPENINGS AND KNOCKOUTS FOR INLET AND OUTLET PIPING SHALL BE FASHIONED NEATLY. ALL ANNUAL SPACE SHALL BE FILLED WITH CEMENT GROUT, BRICK AND MORTAR, OR CLASS "C" CONCRETE.
10. ONE 4" DIAMETER INLET PIPE SHALL BE INSTALLED ON THE SIDE OF THE CATCH BASIN OPPOSITE THE STREET (AS SHOWN).
11. KNOCK-OUT PANELS ARE NOT ALLOWED UNLESS PRE-APPROVED BY THE CITY ENGINEER.
12. ODOT REFERENCES ARE FROM THE CURRENT ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. ANY DISCREPANCIES SHALL BE SUBJECT TO THE CITY ENGINEER'S DISCRETION.

BRICK CATCH BASINS ARE ACCEPTABLE AND SHALL BE CONSTRUCTED PER THIS DRAWING AND THE FOLLOWING SPECIFICATIONS:

1. PROVIDE CLAY BRICK (ASTM C-32-83) WALLS WITH FULL MORTAR (ASTM C-91 & C-150, AIR-ENTRAINED PORTLAND CEMENT) JOINTS. CONCRETE & CEMENT BLOCKS/BRICKS ARE PROHIBITED FOR NEW OR RECONSTRUCTED BASINS.
2. THE CATCH BASIN SHALL HAVE A CONCRETE BASE (MINIMUM 6" THICKNESS) EXTENDING 6" BEYOND OUTSIDE OF FOUR WALLS OF CATCH BASIN.
3. EVERY SEVENTH COURSE MUST BE A STRETCHER COURSE.
4. WALLS SHALL BE MINIMUM 8" THICK.
5. PLASTER OUTSIDE WALLS WITH 1/2" NON-SHRINK MORTAR. INSIDE JOINTS MUST BE NEATLY STRUCK AND CLOSED.

PRECAST CONCRETE CATCH BASINS ARE ACCEPTABLE AND SHALL BE CONSTRUCTED PER THIS DRAWING AND THE FOLLOWING SPECIFICATIONS:

1. THE PRECAST UNIT CONFORMS TO ODOT ITEM 706.13.
2. PRECAST WALLS AND BOTTOM SHALL HAVE A MINIMUM THICKNESS OF 6".
3. A 6" CONCRETE BASE EXTENSION IS REQUIRED ON ALL FOUR SIDES WHEN DEPTH (TOP OF GRATE TO LOWEST PIPE INVERT) EXCEEDS 4 FEET.
4. STACKED PRECAST SECTIONS MUST HAVE A TONGUE/GROOVE JOINT AND A BUTYL SEALANT.
5. SHOP DRAWING OF THE PRECAST UNIT SHALL BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL.

PLAN VIEW
NOT TO SCALE

SECTION A-A
NOT TO SCALE

SECTION B-B
NOT TO SCALE

STANDARD DRAWING NO. 1
CURB INLET CATCH BASIN
SHEET 1 OF 1

OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE: MAR 2012
APPROVED BY: CDB, RMB, SLH
DRAWING FILE NAME: ce_01.dwg

REVISIONS	DESCRIPTION	DATE	BY

NOTES:

THE CITY'S STANDARD MANHOLE FOR SANITARY AND STORM SEWERS IS THE ODOT MH-3 WITH THE MODIFICATIONS NOTED. SEE SHEET 30F 3 FOR CITY'S MODIFICATION NOTES.

ALTERNATE CORNER DETAIL

SECTION VIEWS OF REINFORCED PRECAST MANHOLES

MAXIMUM PIPE SIZES

BASE I.D.	MIN. "E"	MAX. PIPE SIZE
60" (1500)	5" (125)	36" (900)
72" (1800)	6" (150)	48" (1200)
84" (2100)	7" (175)	60" (1500)
96" (2400)	7 1/2" (188)	60" (1500)
108" (2700)	8" (200)	60" (1500)
120" (3000)	8" (200)	72" (1800)

LEGEND

Reconstruct to grade only. Approved materials are kept on file by the Office of Materials Management.

STANDARD DRAWING NO. 10
PRECAST STORM OR SANITARY MANHOLE
SHEET 1 OF 3

OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE: JAN 2012
APPROVED BY: CDB, RMB, SLH
DRAWING FILE NAME: ce_10.dwg

REVISIONS	DESCRIPTION	DATE	BY

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. THE AUTHOR AND WHICH SHALL REMAIN ALL RIGHTS, INCLUDING COPYRIGHTS, AND COMMON LAW RIGHTS, INCLUDING COPYRIGHTS, IN THIS DRAWING ARE RESERVED FOR THE CITY OF CANTON, OHIO. THIS DRAWING IS NOT TO BE REPRODUCED, COPIED, OR DISTRIBUTED TO OTHERS IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF THE CITY OF CANTON, OHIO. ANY OTHER PURPOSE OR PROJECT WITHOUT PRIOR WRITTEN PERMISSION OF THE CITY OF CANTON, OHIO IS STRICTLY PROHIBITED. THE CITY OF CANTON, OHIO MAKES NO WARRANTY, REPRESENTATION, OR GUARANTEE THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE, COMPLETE, OR UP-TO-DATE. THE CITY OF CANTON, OHIO SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING OUT OF OR FROM THE USE OF THIS DRAWING. THE CITY OF CANTON, OHIO SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING OUT OF OR FROM THE USE OF THIS DRAWING. THE CITY OF CANTON, OHIO SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING OUT OF OR FROM THE USE OF THIS DRAWING.

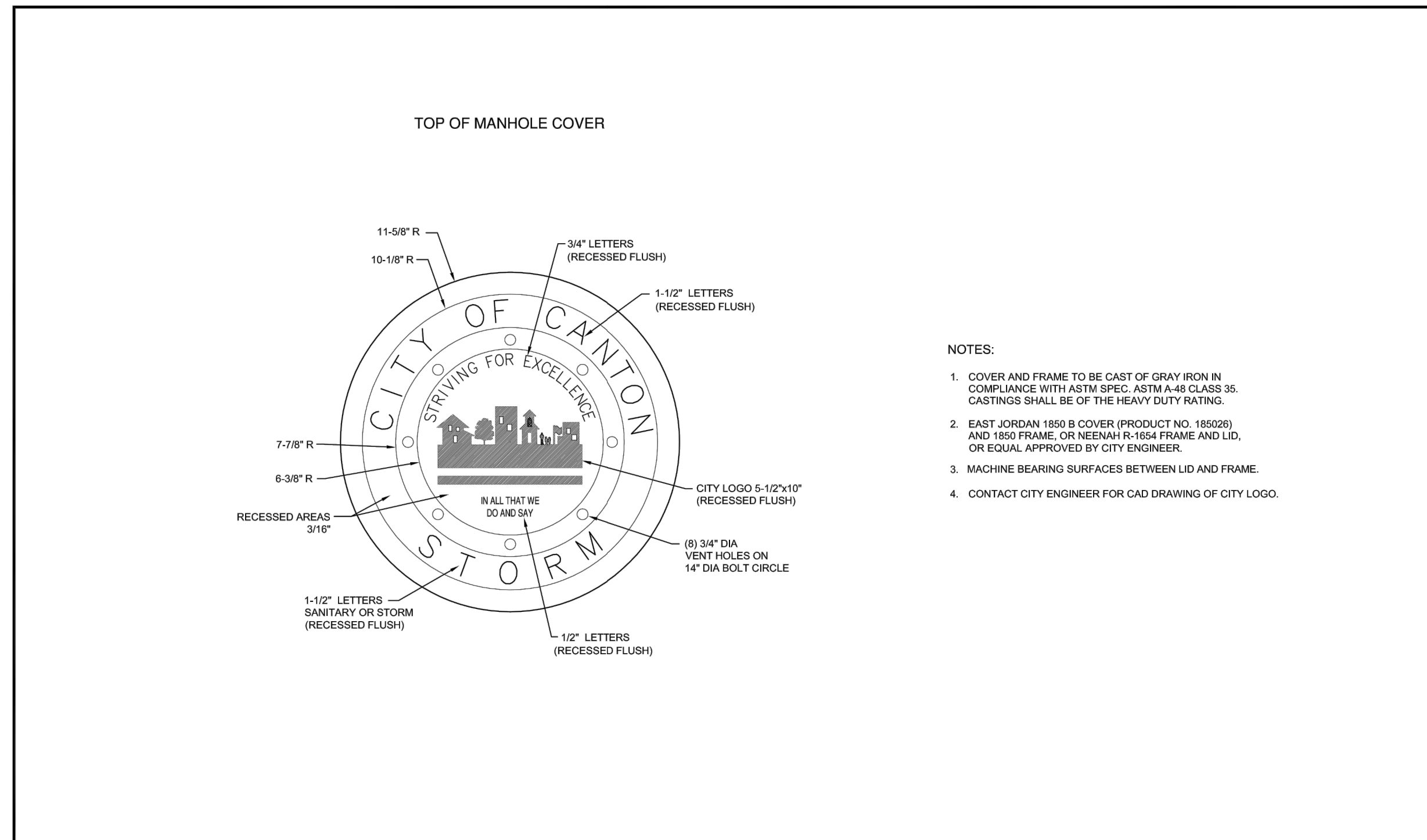
NO.	DESCRIPTIONS	DATE	BY

DESIGNED BY: DLK
DRAWN BY: AJP
CHECKED BY: DLK
APPROVED BY: DLK

CITY OF CANTON, OHIO
55TH STREET NE
STORM SEWER IMPROVEMENTS
CITY OF CANTON
STANDARD DRAWINGS

ENGINEERS, INC.
220 MARKET AVENUE SOUTH, SUITE 700
CANTON, OHIO 44702
330-485-7270

JOB NO.
E10025
DATE
8/2013
SCALE
NONE
SHEET NO
C57



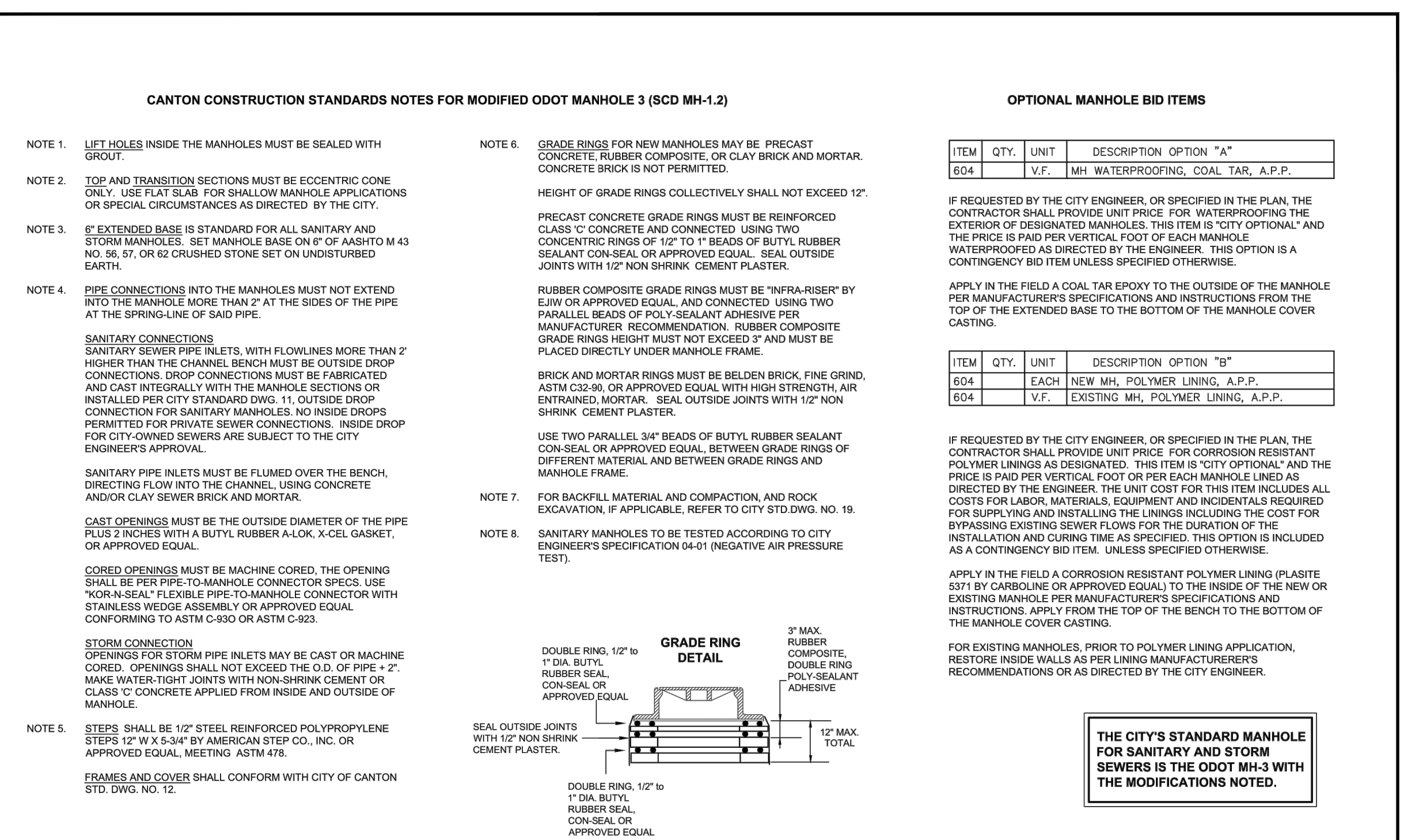
- NOTES:**
- COVER AND FRAME TO BE CAST OF GRAY IRON IN COMPLIANCE WITH ASTM SPEC. ASTM A-48 CLASS 35. CASTINGS SHALL BE OF THE HEAVY DUTY RATING.
 - EAST JORDAN 1850 B COVER (PRODUCT NO. 185028) AND 1850 FRAME, OR REENAH R-1654 FRAME AND LID, OR EQUAL APPROVED BY CITY ENGINEER.
 - MACHINE BEARING SURFACES BETWEEN LID AND FRAME.
 - CONTACT CITY ENGINEER FOR CAD DRAWING OF CITY LOGO.

OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE: JAN 2012
APPROVED BY: CDB, RMB, SLH
DRAWING FILE NAME: ce_12.dwg

REVISIONS			
DESCRIPTION	DATE	BY	

STANDARD DRAWING NO. 12
MANHOLE COVER
SHEET 1 OF 1



OPTIONAL MANHOLE BID ITEMS

ITEM	QTY.	UNIT	DESCRIPTION	OPTION "A"
604	V.F.	MH	WATERPROOFING, COAL TAR, A.P.P.	

IF REQUESTED BY THE CITY ENGINEER, OR SPECIFIED IN THE PLAN, THE CONTRACTOR SHALL PROVIDE UNIT PRICE FOR WATERPROOFING THE EXTERIOR OF DESIGNATED MANHOLES. THIS ITEM IS "CITY OPTIONAL" AND THE PRICE IS PAID PER VERTICAL FOOT OF EACH MANHOLE WATERPROOFED AS DIRECTED BY THE ENGINEER. THIS OPTION IS A CONTINGENCY BID ITEM UNLESS SPECIFIED OTHERWISE.

APPLY IN THE FIELD A COAL TAR EPOXY TO THE OUTSIDE OF THE MANHOLE PER MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS FROM THE TOP OF THE EXTENDED BASE TO THE BOTTOM OF THE MANHOLE COVER CASTING.

ITEM	QTY.	UNIT	DESCRIPTION	OPTION "B"
604	EACH		NEW MH. POLYMER LINING, A.P.P.	
604	V.F.		EXISTING MH. POLYMER LINING, A.P.P.	

IF REQUESTED BY THE CITY ENGINEER, OR SPECIFIED IN THE PLAN, THE CONTRACTOR SHALL PROVIDE UNIT PRICE FOR CORROSION RESISTANT POLYMER LININGS AS DESIGNATED. THIS ITEM IS "CITY OPTIONAL" AND THE PRICE IS PAID PER VERTICAL FOOT OR PER EACH MANHOLE LINED AS DIRECTED BY THE ENGINEER. THE UNIT COST FOR THIS ITEM INCLUDES ALL COSTS FOR LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED FOR SUPPLYING AND INSTALLING THE LININGS INCLUDING THE COST FOR BYPASSING EXISTING SEWER FLOWS FOR THE DURATION OF THE INSTALLATION AND CURING TIME AS SPECIFIED. THIS OPTION IS INCLUDED AS A CONTINGENCY BID ITEM UNLESS SPECIFIED OTHERWISE.

APPLY IN THE FIELD A CORROSION RESISTANT POLYMER LINING (PLASTE 5371 BY CARBOLINE OR APPROVED EQUIVALENT) TO THE INSIDE OF THE NEW OR EXISTING MANHOLE PER MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS. APPLY FROM THE TOP OF THE BENCH TO THE BOTTOM OF THE MANHOLE COVER CASTING.

FOR EXISTING MANHOLES, PRIOR TO POLYMER LINING APPLICATION, RESTORE INSIDE WALLS AS PER LINING MANUFACTURER'S RECOMMENDATIONS OR AS DIRECTED BY THE CITY ENGINEER.

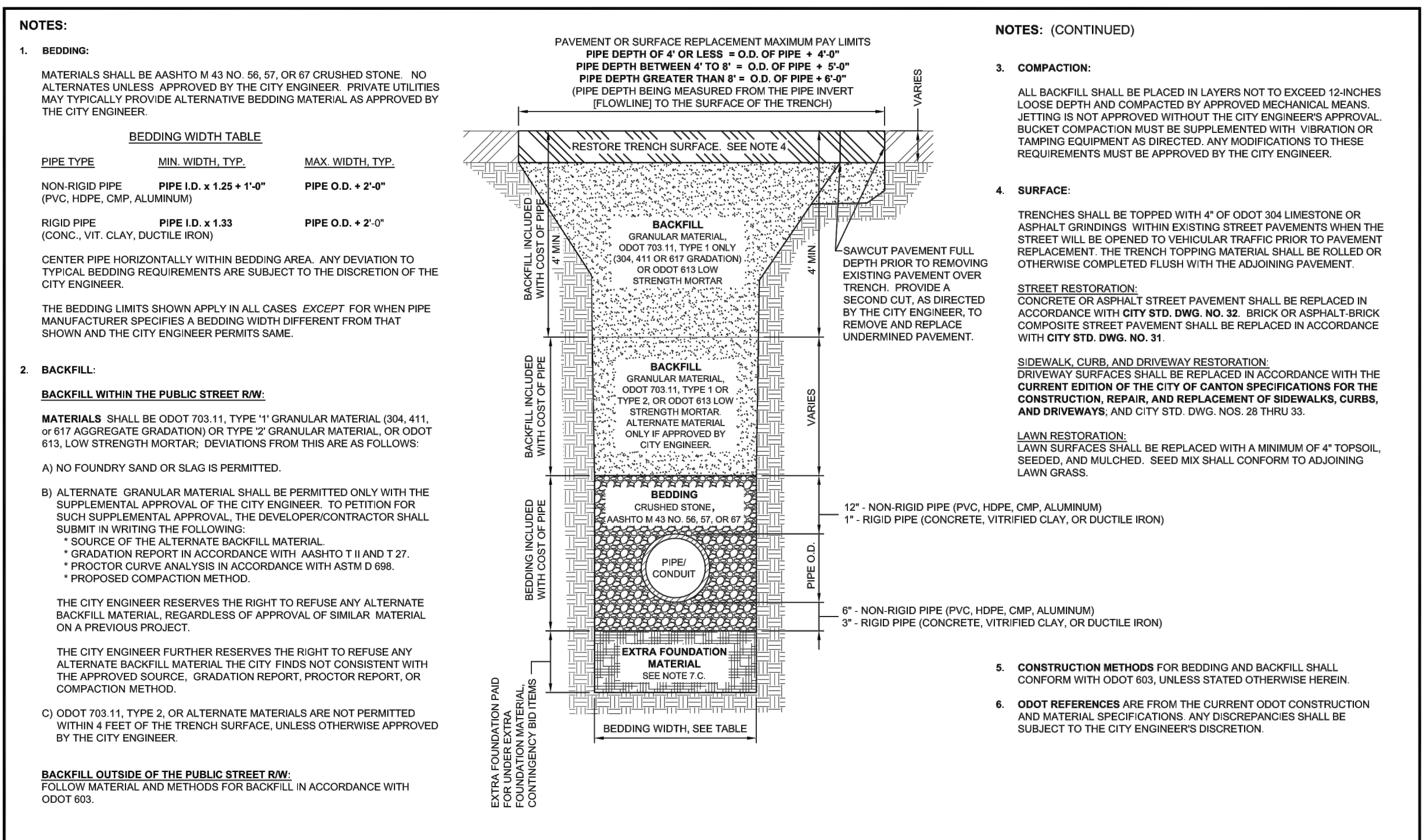
THE CITY'S STANDARD MANHOLE FOR SANITARY AND STORM SEWERS IS THE ODOT MH-3 WITH THE MODIFICATIONS NOTED.

OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE: JAN 2012
APPROVED BY: CDB, RMB, SLH
DRAWING FILE NAME: ce_10.dwg

REVISIONS			
DESCRIPTION	DATE	BY	

STANDARD DRAWING NO. 10
PRECAST STORM OR SANITARY MANHOLE
SHEET 3 OF 3

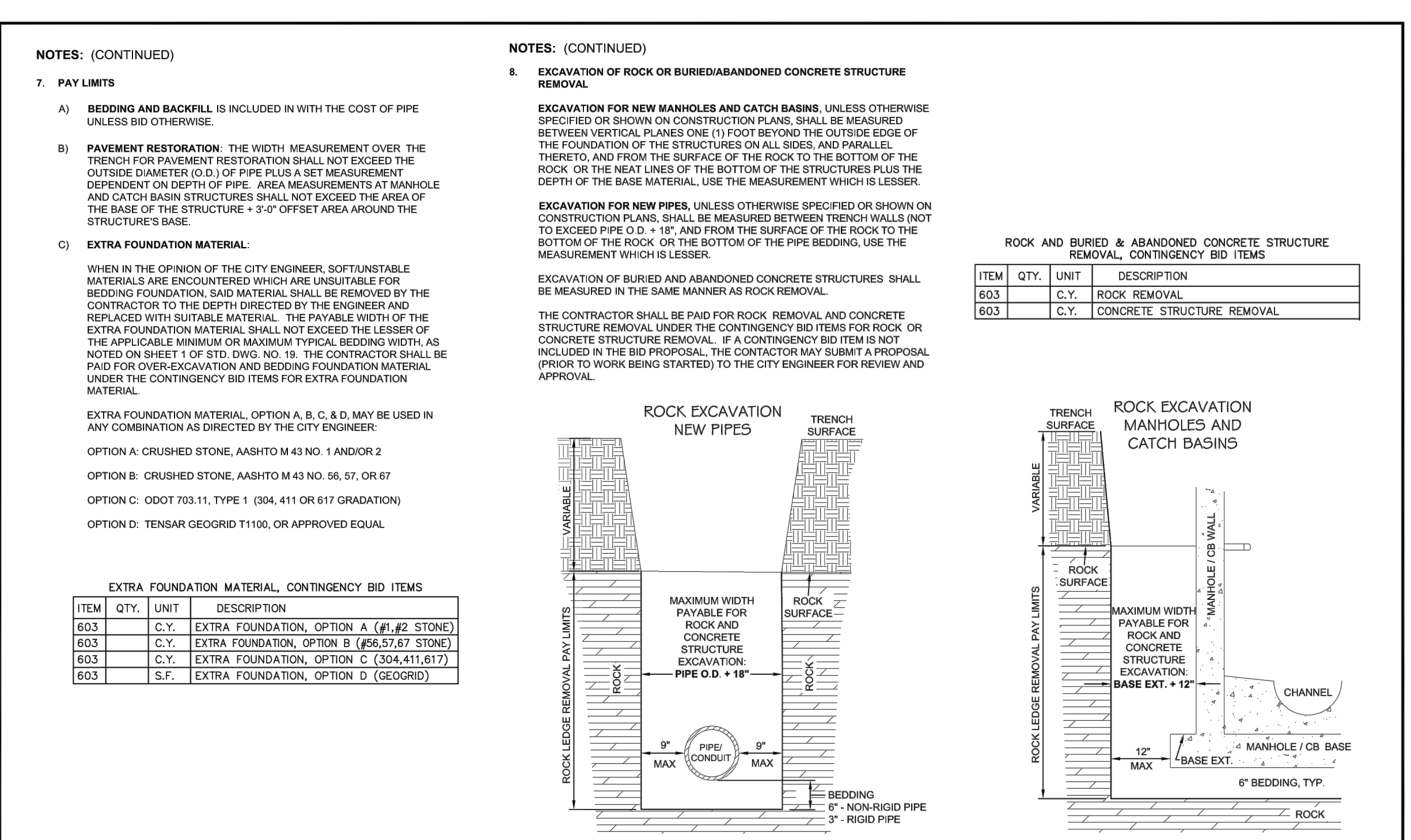


OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE: JAN 2012
APPROVED BY: CDB, RMB, SLH
DRAWING FILE NAME: ce_19.dwg

REVISIONS			
DESCRIPTION	DATE	BY	

STANDARD DRAWING NO. 19
UTILITY TRENCH REQUIREMENTS
SHEET 1 OF 2



OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE: JAN 2012
APPROVED BY: CDB, RMB, SLH
DRAWING FILE NAME: ce_19.dwg

REVISIONS			
DESCRIPTION	DATE	BY	

STANDARD DRAWING NO. 19
UTILITY TRENCH REQUIREMENTS
SHEET 2 OF 2

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. THE AUTHOR AND WHICH SHALL REMAIN THE PROPERTY OF THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, OR DISTRIBUTED TO OTHERS IN ANY FORM OR BY ANY OTHER MEANS WITHOUT THE WRITTEN PERMISSION OF THE CITY OF CANTON, OHIO. THE CITY OF CANTON, OHIO, MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, THAT THIS DRAWING OR THE INFORMATION CONTAINED THEREIN IS ACCURATE, COMPLETE, OR UP-TO-DATE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY AND COMPLETENESS OF THE INFORMATION CONTAINED HEREIN. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES.

NO.	DESCRIPTIONS	DATE	BY	APP'D

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
DLK	AJP	DLK	DLK

CITY OF CANTON, OHIO
55TH STREET NE
STORM SEWER IMPROVEMENTS
CITY OF CANTON
STANDARD DRAWINGS

JOB NO.
E10025
DATE
8/2013
SCALE
NONE
SHEET NO
C58

ENGINEERS, INC.
220 MARKET AVENUE SOUTH, SUITE 100
CANTON, OHIO 44702
330-485-7270

STANDARD DRAWING NO. 23
DOWNSPOUT OUTLET
 (CURBED STREET)
 SHEET 1 OF 1

OFFICE OF THE CITY ENGINEER
 CANTON, OHIO
 DANIEL J. MOEGLIN, P.E., CITY ENGINEER
 2436 30th St. NE #4705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE: MAR 2012
 APPROVED BY: CDB, RMB, SLH
 DRAWING FILE NAME: ce_23.dwg

ITEM	MATERIAL TYPE	QUANTITY	UNIT
3" DOWNSPOUT	PVC SCH. 40 (707.43 OR 707.45)	VARIES	FT.
3" CAP (AS NEEDED)	PVC (707.43 OR 707.45) OR HDPE (707.32 OR 707.33)	1	EACH
3"x4" REDUCER (AS NEEDED)	PVC (707.43 OR 707.45) OR HDPE (707.32 OR 707.33)	1	EACH
4" DOWNSPOUT (AS NEEDED)	PVC (707.43 OR 707.45) OR HDPE (707.32 OR 707.33)	VARIES	FT.
4" TEE (OPTIONAL), CONTINGENCY	PVC (707.43 OR 707.45) OR HDPE (707.32 OR 707.33)	1	EACH
4" RISER (OPTIONAL), CONTINGENCY	PVC (707.43 OR 707.45) OR HDPE (707.32 OR 707.33)	VARIES	FT.
4" CAP WITH DRAIN HOLES (OPTIONAL), CONTINGENCY	PVC (707.43 OR 707.45) OR HDPE (707.32 OR 707.33)	1	EACH
COUPLER (AS NEEDED)	NEOPRENE WITH STAINLESS STEEL CLAMPS	1	EACH

STANDARD DRAWING NO. 28
DRIVE APPROACH
 WITH SIDEWALK AGAINST CURB
 SHEET 1 OF 1

OFFICE OF THE CITY ENGINEER
 CANTON, OHIO
 DANIEL J. MOEGLIN, P.E., CITY ENGINEER
 2436 30th St. NE #4705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE: MAR 2012
 APPROVED BY: CDB, RMB, SLH
 DRAWING FILE NAME: ce_28.dwg

REVISIONS	DESCRIPTION	DATE	BY
1	NOTE MODIFICATIONS	4/10/12	CDB

STANDARD DRAWING NO. 24
GROUNDWATER DRAIN LINE CONNECTION
 SHEET 1 OF 1

OFFICE OF THE CITY ENGINEER
 CANTON, OHIO
 DANIEL J. MOEGLIN, P.E., CITY ENGINEER
 2436 30th St. NE #4705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE: MAR 2012
 APPROVED BY: CDB, RMB
 DRAWING FILE NAME: ce_24.dwg

ITEM	MATERIAL TYPE	QUANTITY	UNIT
3" OVERFLOW PIPE	PVC SCH. 40 (707.43 OR 707.45)	VARIES	FT.
3"x4" REDUCER	PVC (707.43 OR 707.45) OR HDPE (707.32 OR 707.33)	1	EACH
APPROVED CONNECTION	(SEE NOTE 5)		
4" STORM LATERAL	PVC (SDR 35; 707.45) OR HDPE (707.33) WITH BELL AND SPIGOT RUBBER-GASKETED JOINTS	VARIES	FT.
4" TEMPORARY CAP	PVC (707.43 OR 707.45) OR HDPE (707.32 OR 707.33)	1	EACH
4" BENDS	PVC (707.43 OR 707.45) OR HDPE (707.32 OR 707.33)	VARIES	EACH
4" RISER	PVC (707.43 OR 707.45) OR HDPE (707.32 OR 707.33)	VARIES	FT.
4" CROSS	PVC (707.43 OR 707.45) OR HDPE (707.32 OR 707.33)	1	EACH
4" CAP WITH DRAIN HOLES	PVC (707.43 OR 707.45) OR HDPE (707.32 OR 707.33)	1	EACH
4" CAP (AS NEEDED)	PVC (707.43 OR 707.45) OR HDPE (707.32 OR 707.33)	1	EACH
COUPLER (AS NEEDED)	NEOPRENE WITH STAINLESS STEEL CLAMPS	1	EACH

STANDARD DRAWING NO. 30
CONCRETE CURB AND COMBINED CURB & GUTTER
 SHEET 1 OF 1

OFFICE OF THE CITY ENGINEER
 CANTON, OHIO
 DANIEL J. MOEGLIN, P.E., CITY ENGINEER
 2436 30th St. NE #4705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE: MAR 2012
 APPROVED BY: RMB
 DRAWING FILE NAME: ce_30.dwg

REVISIONS	DESCRIPTION	DATE	BY
1			

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
DLK	AJP	DLK	DLK

NO.	DESCRIPTIONS	DATE	BY

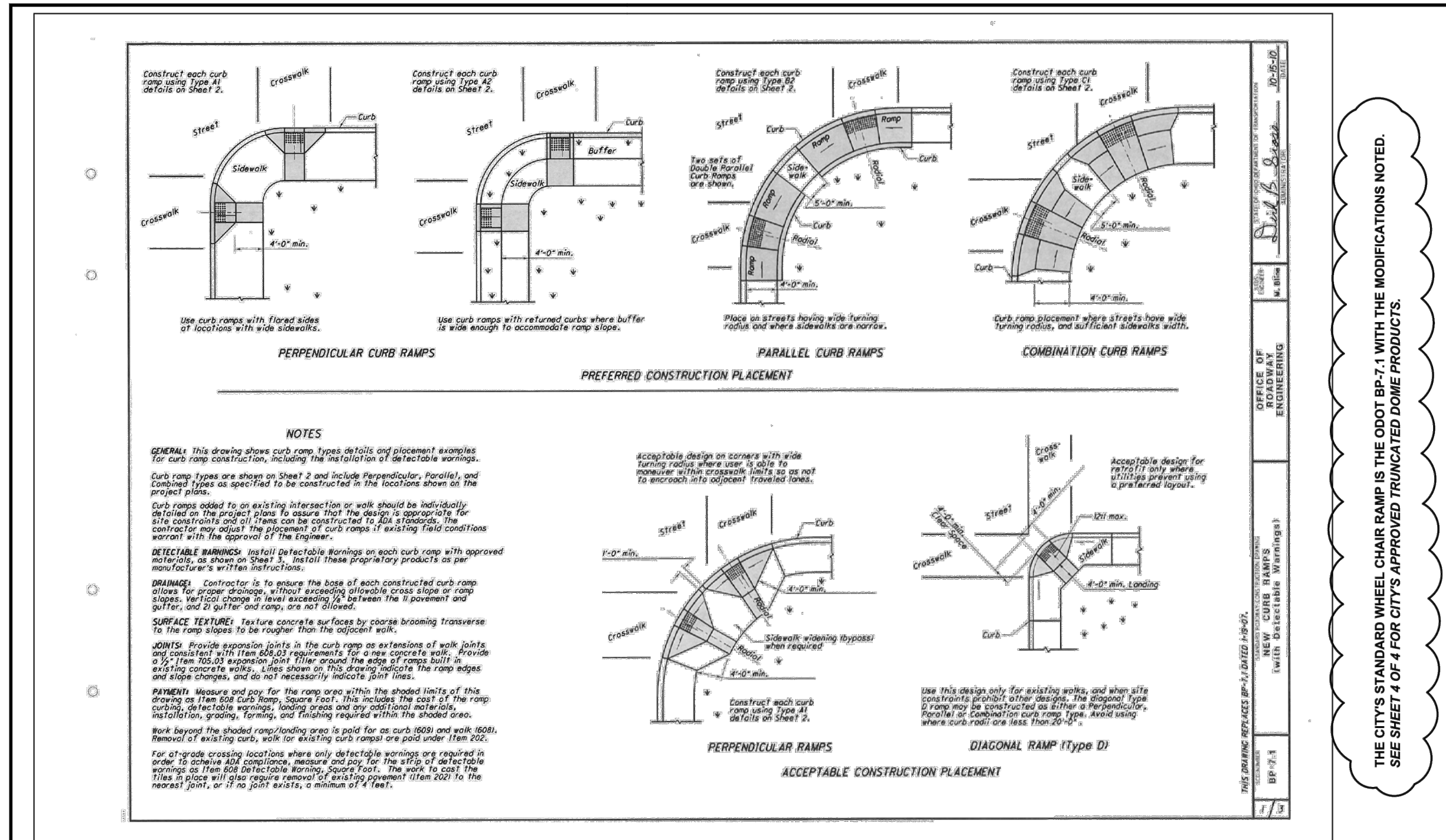
CITY OF CANTON, OHIO
 55TH STREET NE

STORM SEWER IMPROVEMENTS
 CITY OF CANTON
 STANDARD DRAWINGS

ENGINEERS, INC.
 220 MARKET AVENUE SOUTH, SUITE 700
 CANTON, OHIO 44702
 330-487-7270

JOB NO.
 E10025
 DATE
 8/2013
 SCALE
 NONE
 SHEET NO.
 C59

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY ENGINEERS, INC. AND COMMON LAW RIGHTS, INCLUDING COPYRIGHTS, AND ALL RIGHTS RESERVED. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED ON THE DRAWING. IT IS NOT TO BE REPRODUCED, COPIED, OR DISTRIBUTED TO OTHERS IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF ENGINEERS, INC. ENGINEERS, INC. CANNOT BE HELD RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY OCCUR IN THE COURSE OF THE DESIGN OR CONSTRUCTION OF THE PROJECT. THE USER OF THIS DRAWING AGREES TO HOLD ENGINEERS, INC. HARMLESS FROM AND AGAINST ALL SUCH CLAIMS. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AUTHORITIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AUTHORITIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AUTHORITIES.

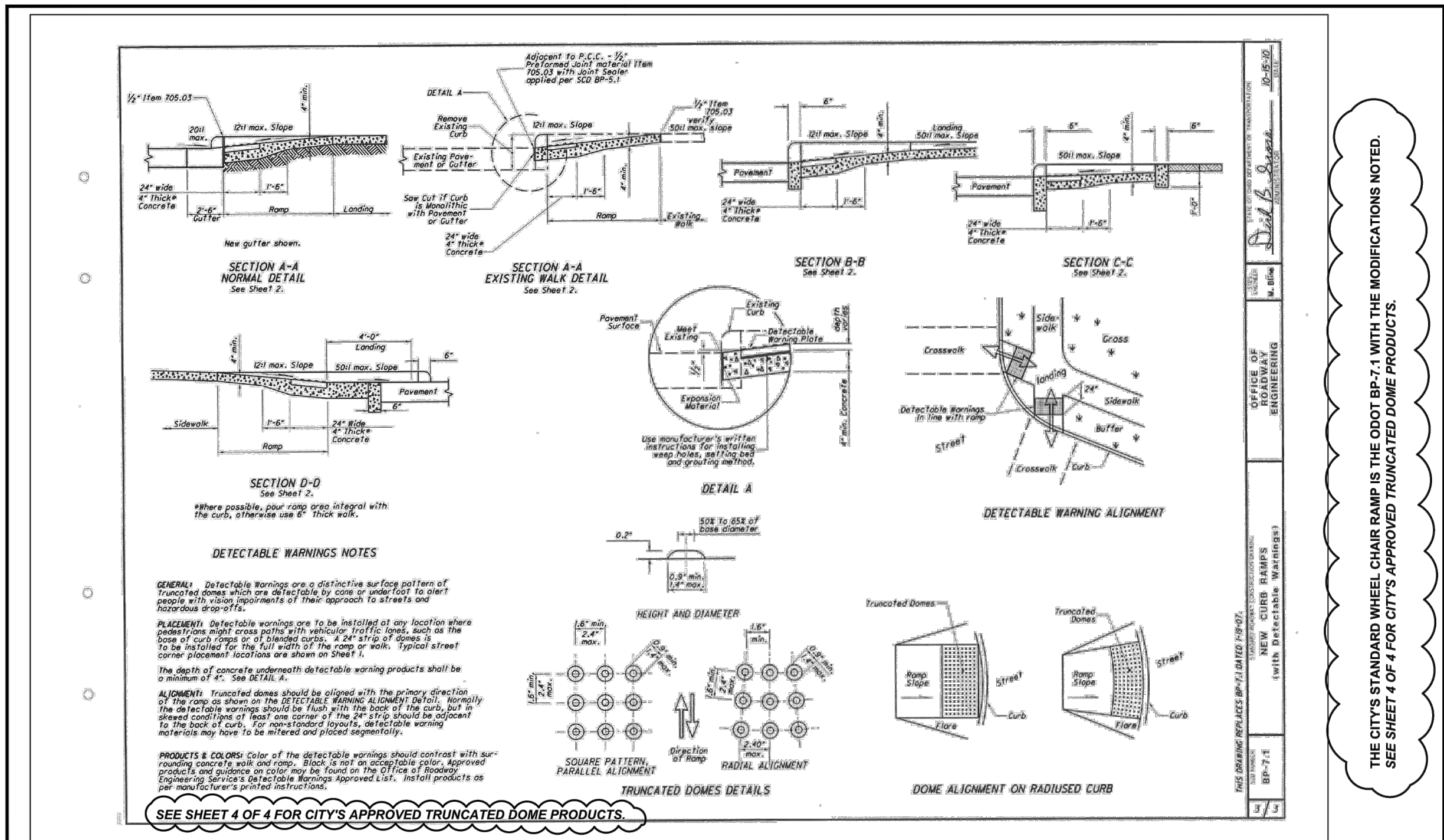


OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3388 www.cantonohio.gov/engineering

APPROVED DATE: MAY 2012
APPROVED BY: RMB
DRAWING FILE NAME: ce_33.dwg

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	REVISIONS	6/29/12	RMB

STANDARD DRAWING NO. 33
WHEEL CHAIR RAMP
SHEET 1 OF 4

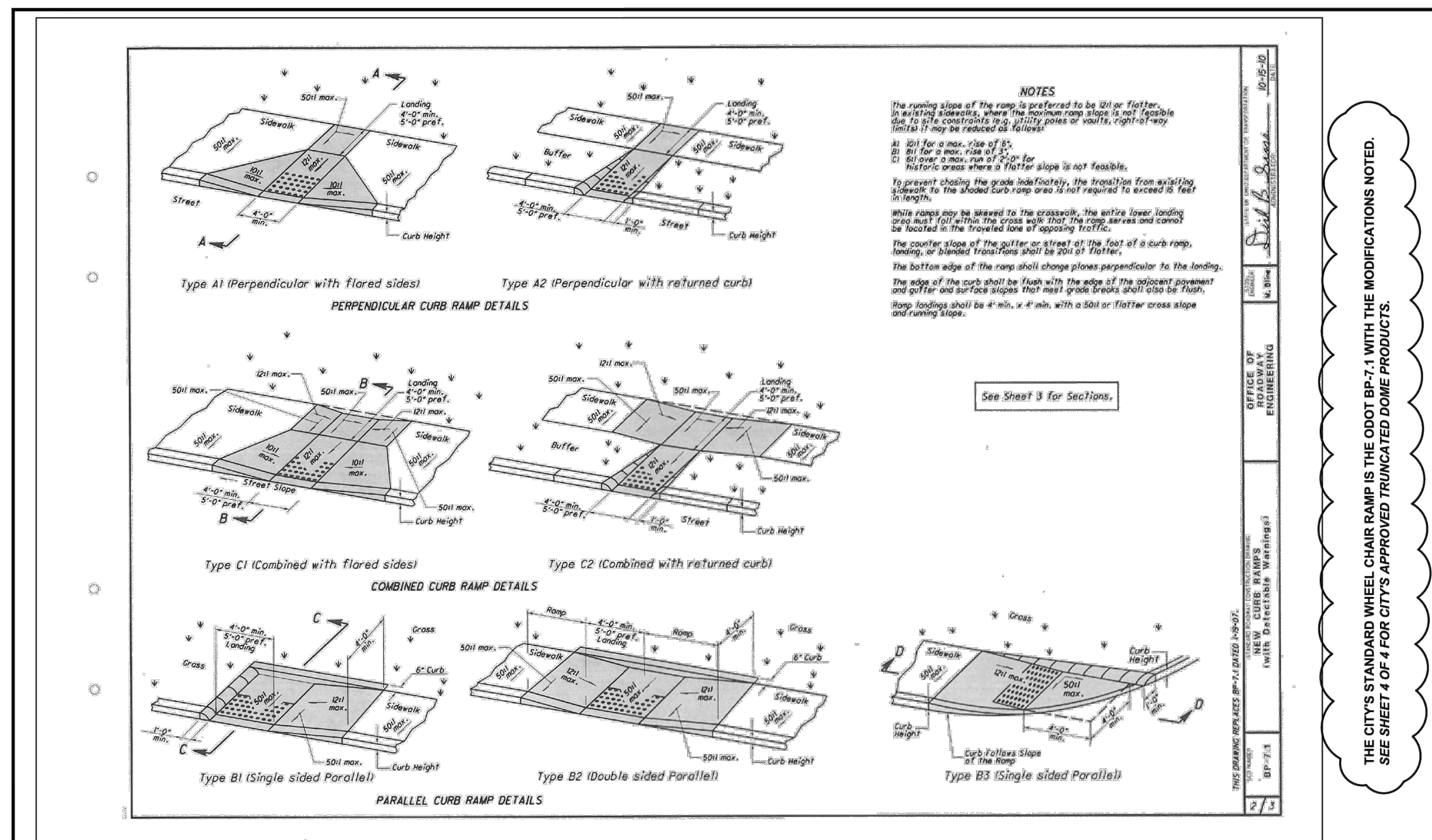


OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3388 www.cantonohio.gov/engineering

APPROVED DATE: MAY 2012
APPROVED BY: RMB
DRAWING FILE NAME: ce_33.dwg

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	REVISIONS	6/29/12	RMB

STANDARD DRAWING NO. 33
WHEEL CHAIR RAMP
SHEET 3 OF 4

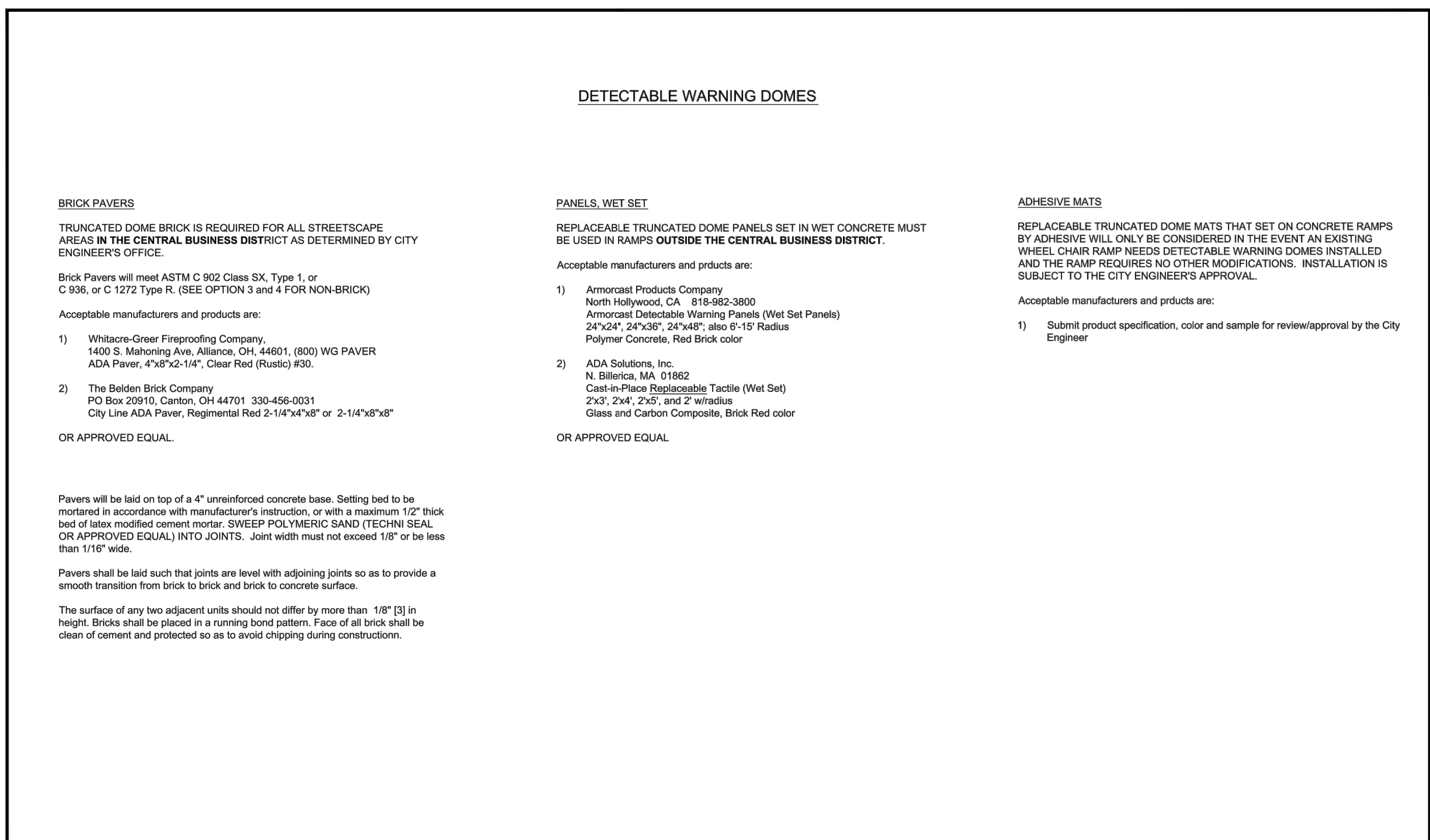


OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3388 www.cantonohio.gov/engineering

APPROVED DATE: MAY 2012
APPROVED BY: RMB
DRAWING FILE NAME: ce_33.dwg

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	REVISIONS	6/29/12	RMB

STANDARD DRAWING NO. 33
WHEEL CHAIR RAMP
SHEET 2 OF 4



OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3388 www.cantonohio.gov/engineering

APPROVED DATE: MAY 2012
APPROVED BY: RMB
DRAWING FILE NAME: ce_33.dwg

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	REVISIONS	6/29/12	RMB

STANDARD DRAWING NO. 33
WHEEL CHAIR RAMP
SHEET 4 OF 4

THIS DRAWING IS AN INSTRUMENT OF SERVICE OWNED BY THE CITY OF CANTON, OHIO. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, OR DISTRIBUTED TO OTHERS IN ANY FORM OR BY ANY OTHER MEANS WITHOUT THE WRITTEN CONSENT OF THE CITY OF CANTON, OHIO. THE CITY OF CANTON, OHIO, MAKES NO WARRANTY, EXPRESS OR IMPLIED, FOR THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION CONTAINED HEREIN. THE CITY OF CANTON, OHIO, SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING. THE ORIGINAL COPY OF THIS DRAWING SHALL BE KEPT IN THE OFFICE OF THE CITY ENGINEER, CITY OF CANTON, OHIO.

DESIGNED BY	NO.	DESCRIPTIONS	DATE	BY
DLK				APPD
DRAWN BY				
CHECKED BY				
APPROVED BY				

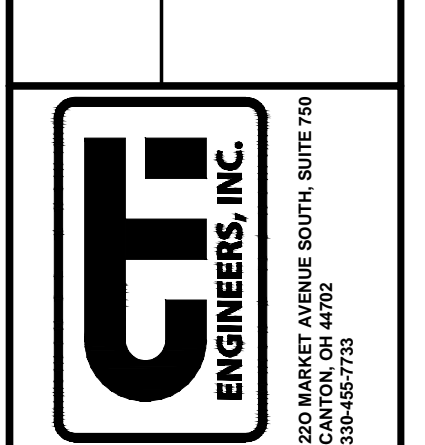
OFFICE OF THE CITY ENGINEER
CANTON, OHIO
DANIEL J. MOEGLIN, P.E., CITY ENGINEER
2436 30th St. NE 44705 330-489-3388 www.cantonohio.gov/engineering

APPROVED DATE: MAY 2012
APPROVED BY: RMB
DRAWING FILE NAME: ce_33.dwg

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	REVISIONS	6/29/12	RMB

STANDARD DRAWING NO. 33
WHEEL CHAIR RAMP
SHEET 4 OF 4

CITY OF CANTON, OHIO
55TH STREET NE
STORM SEWER IMPROVEMENTS
CITY OF CANTON
STANDARD DRAWINGS



JOB NO.	E10025
DATE	8/2013
SCALE	NONE
SHEET NO.	C60