

THE CITY OF CANTON WATER DEPARTMENT

CANTON SOUTH WATERLINE EXTENSION PHASE 1, 2 & 3

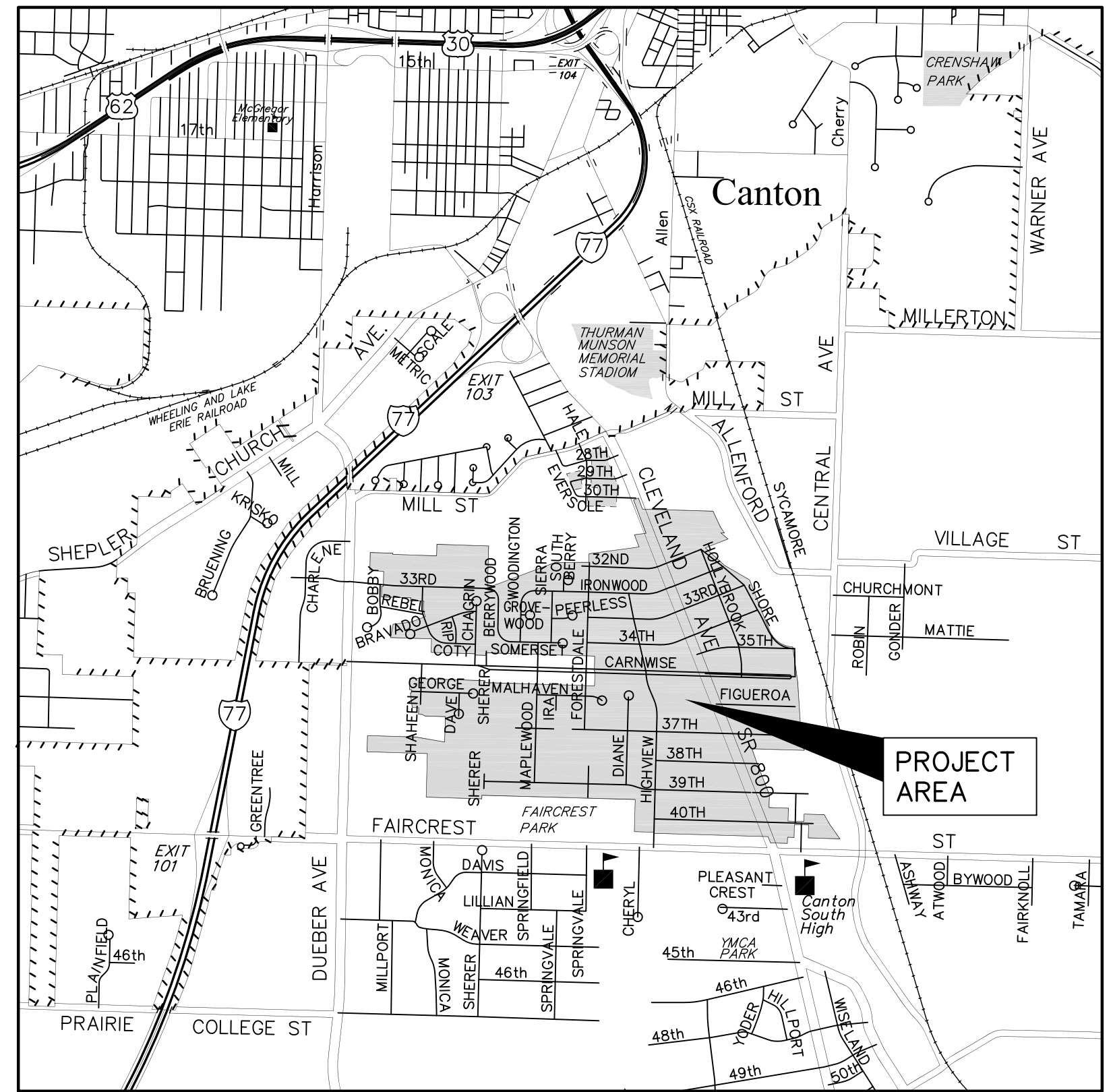
LOCATED IN THE CANTON TOWNSHIP
STARK COUNTY, OHIO

OCTOBER 2018

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PHASE 1 IS ONLY BEING BID AT THIS TIME



LOCATION MAP
(NOT TO SCALE)

LATITUDE: N40°45'28" LONGITUDE: W81°22'41"

CANTON CITY OFFICIALS:

MAYOR	THOMAS M. BERNABEI
DIRECTOR OF PUBLIC SERVICE	JOHN M. HIGHMAN
CANTON WATER DEPT. SUPERINTENDENT	TYLER S. CONVERSE

MEMBERS OF CANTON CITY COUNCIL:

COUNCIL PRESIDENT	ALLEN SCHULMAN
WARD 1	GREG HAWK
WARD 2	NATE CHESTER III
WARD 3	JASON SCAGLIONE
WARD 4	CHRIS SMITH
WARD 5	ROBERT FISHER
WARD 6	KEVIN HALL
WARD 7	JOHN MARIOL II
WARD 8	PETER FERGUSON
WARD 9	FRANK MORRIS
AT LARGE	COREY MINOR SMITH
AT LARGE	BILL SMUCKLER
AT LARGE	JAMES BABCOCK

EARTH DISTURBED AREA (E.D.A.)

PROJECT EARTH DISTURBED AREA:	3.9 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	1.0 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	4.9 ACRES

PLAN APPROVALS:

WATERLINE IS APPROVED BY THE CITY OF CANTON WATER DEPARTMENT THIS 15 DAY OF May, 2018.

Tyler S. Converse
TYLER S. CONVERSE – SUPERINTENDENT

WATERLINE PERMIT-TO-INSTALL HAS BEEN RECEIVED FROM THE OHIO EPA THIS 14th DAY OF SEPTEMBER, 2018.

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

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

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: **1-800-925-0988**

ENGINEERS SEAL:
(FOR PHASE 1 ONLY)

SIGNED: _____
DATE: 5-8-18

ENGINEERS SEAL:
(FOR PHASE 2 ONLY)

SIGNED: _____
DATE: _____

ENGINEERS SEAL:
(FOR PHASE 3 ONLY)

SIGNED: _____
DATE: _____

LEGEND – PHASE 1:

AGG.	AGGREGATE	MH	MANHOLE
APPROX.	APPROXIMATE	MFR.	MANUFACTURE(ER)
ASPH.	ASPHALT	MTL.	MATERIAL(S)
BL OR B/L	BASE LINE	MAX.	MAXIMUM
BM	BENCH MARK	MECH.	MECHANIC(AL)
BIT.	BITUMINOUS	MJ	MECHANICAL JOINT
BLK.	BLOCK	MGD	MILLION GALLONS PER DAY
BLKG.	BLOCKING	MIN.	MINIMUM
BLDG	BUILDING	MISC.	MISCELLANEOUS
CI	CAST IRON	N	NORTH OR NORTHING
C.I.P.CONC.	CAST-IN-PLACE CONCRETE	NE	NORTHEAST
CB	CATCH BASIN	N.T.S.	NOT TO SCALE
CEM.	CEMENT	NW	NORTHWEST
C/L	CENTERLINE	O.D.	OUTSIDE DIAMETER
C-C OR C/C	CENTER TO CENTER	PNT.	PAINT(ED)
CLD	CENTERLINE DITCH	PVMT.	PAVEMENT
CONC.	CONCRETE	PED	PEDESTAL
CMP	CORRUGATED METAL PIPE	PKF	PK NAIL FOUND
CMU	CONCRETE MASONRY UNIT	PKS	PK NAIL SET
CONN.	CONNECTION	PT.	TANGENT POINT
CONST.	CONSTRUCTION	PE	POLYETHYLENE OR PLAIN END
CONT.	CONTINUOUS	PVC	POLYVINYL CHLORIDE
CFM	CUBIC FEET PER MINUTE	PVCO	POLYVINYL CHLORIDE MOLECULARLY ORIENTED
CF	CUBIC FOOT	PCF	POUNDS PER CUBIC FOOT
CY	CUBIC YARD	PLF	POUNDS PER LINEAL FOOT
CTS	COPPER TUBING SIZE	PROP.	PROPOSED
DET.	DETAIL	PSF	POUNDS PER SQUARE FOOT
DIA.	DIAMETER	PSI	POUNDS PER SQUARE INCH
DIM.	DIMENSION	P/L OR R	PROPERTY LINE
D.T.	DRAIN TILE	RCP	REINFORCED CONCRETE PIPE
DWG.	DRAWING	REQ'D	REQUIRED
DR.	DRIVE OR DIMENSION RATIO	R/W	RIGHT OF WAY
DI	DUCTILE IRON	S	SOUTH
DIP	DUCTILE IRON PIPE	SAN	SANITARY SEWER
E	EAST OR ELECTRIC OR EASTING	SE	SOUTHEAST
EA	EACH	SHT.	SHEET
EASE	EASEMENT	SPEC.	SPECIFICATION(S)
ELEC.	ELECTRIC(AL)	SWLK	SIDEWALK
EL. OR ELEV.	ELEVATION	SQ.	SQUARE
EOP	EDGE OF PAVEMENT	SF	SQUARE FEET
EQPT.	EQUIPMENT	SY	SQUARE YARD
EX. OR EXIST	EXISTING	S. STL.	STAINLESS STEEL
EXT.	EXTERIOR	STD.	STANDARD
FO	FIBER OPTIC	STA.	STATION
FT	FEET OR FOOT	S.D.	STORM DRAIN
FH	FIRE HYDRANT	STM	STORM SEWER
FPVC	FUSIBLE POLYVINYL CHLORIDE	SW	SOUTHWEST
GAL	GALLON	TEL.	TELEPHONE
GPM	GALLONS PER MINUTE	TEMP	TEMPORARY
GPH	GALLONS PER HOUR	THK.	THICK(NESS)
G	GAS	TOC.	TOP OF CASTING
GT	GAS TEST	TYP.	TYPICAL
GEN	GENERAL	UGT	UNDERGROUND TELEPHONE
GR OR GRAV	GRAVEL	UGE	UNDERGROUND ELECTRIC
HDD	HORIZONTAL DIRECTIONAL DRILL	U.N.O.	UNLESS NOTED OTHERWISE
HT.	HEIGHT	VIT. OR VCP	VITRIFIED CLAY PIPE
HDPE	HIGH DENSITY POLYETHYLENE	W	WEST
HOR.	HORIZONTAL	WG	WATER GAGE
HP	HORSEPOWER OR HIGH POINT	WH	WATER HEATER OR WALL HYDRANT
HPPP	HIGH PRESSURE PETROLEUM PRODUCTS PIPELINE	WTR	WATER
HSE	HOUSE	W/L	WATERLINE
I.D.	INSIDE DIAMETER	WM	WATER MAIN
INSUL.	INSULATE	W/S	WHITE STRIPE
INT.	INTERIOR	W	WITH
INV.	INVERT	W/O	WITHOUT
IP	IRON PIN	YH	YARD HYDRANT
IPS	IRON PIN SET		
IPF	IRON PIN FOUND		
LB	POUND		
LF	LINEAL FEET		
X	EXISTING FENCE	---	EXISTING CONTOUR
R/W	RIGHT-OF-WAY	o	GAS MARKER
---	PROPERTY LINE, PROPERTY PIN	o W	WATER MARKER, WATER METER
T	EXISTING UNDERGROUND TELECOMMUNICATIONS	o	ELEC. PULL BOX, ELEC. PED. BOX
UGE	EXISTING UNDERGROUND ELECTRIC	o	LAMP POST, GROUND LIGHT
G	GUARDRAIL	o	GUY WIRE, CABLE POLE
G	EXISTING GAS LINE, GAS METER, GAS SERVICE VALVE	o	POWER POLE
STS	EXISTING STORM SEWER, CATCH BASIN, MANHOLE (12" DIA. AND UNDER)	o	IRON PIN FOUND, BENCH MARK
==	EXISTING STORM SEWER/CULVERT, INLET, CATCH BASIN, MANHOLE (OVER 12" DIA.)	o	MAILBOX, SIGN
SAS	EXISTING SANITARY SEWER AND SANITARY MANHOLE	o	TREE, BUSHES
W	EXISTING WATERLINE (12" DIA. AND UNDER), FIRE HYDRANT, SERVICE WITH SERVICE VALVE, LINE VALVE AND WATER MANHOLE.	o	TELECOMMUNICATIONS PEDESTAL
W	NEW WATERLINE, CAP, FIRE HYDRANT, LINE VALVE AND WATER SERVICE	o	MAIL BOX
		o YD	YARD DRAIN
		o	PAVEMENT AND DRIVEWAY REPLACEMENT

LEGEND – PHASE 2:

SEE SHEET 3

LEGEND – PHASE 3:

---	PROPERTY LINE	o	EXIST. STORM MANHOLE
---	CENTERLINE	o	EXIST. CATCH BASIN
Ex R/W	EXIST. RIGHT-OF-WAY	o	EXIST. YARD DRAIN
R/W	PROP. RIGHT-OF-WAY	o	EXIST. HYDRANT
---	QUARTER SECTION LINE	o	EXIST. WATER SERVICE VALVE
---	SECTION LINE	o	EXIST. WATER GATE VALVE
////	CORPORATION LINE	o	EXIST. UTILITY POLE
o SAN	EXIST. SANITARY SEWER	o	DECIDUOUS TREE
---	EXIST. STORM SEWER	o	EXIST. GAS METER
---	EXIST. WATER MAIN	o	PROPOSED FIRE HYDRANT
W W	PROP. WATER MAIN	o	PROPOSED WATER GATE VALVE
---	EXIST. GAS LINE	o	EXIST. VALVE (NOT FIELD LOCATED)
##	BASELINE	o	PROPOSED BLOW OFF ASSEMBLY
---	EXIST. SANITARY LATERAL	o	PROPOSED PLUG OR CAP
o	EXIST. STORM MANHOLE	o	H.P. HIGH PRESSURE ZONE
o	EXIST. CATCH BASIN	o	L.P. LOW PRESSURE ZONE
o	EXIST. YARD DRAIN	o	PROPOSED (#-SIZE) INCH, WATER SERVICE CONNECTION
o	EXIST. HYDRANT	(H##, V##)	CANTON WATER DEPT. (HYDRANT AND VALVE NUMBERS)
o	EXIST. WATER SERVICE VALVE	o	PROPOSED ROADWAY TRENCH PAY LIMITS / PAVEMENT REPLACEMENT (SEE DETAIL SHT. 9)
o	EXIST. WATER GATE VALVE		
o	EXIST. UTILITY POLE		
o	DECIDUOUS TREE		
o	EXIST. GAS METER		
o	PROPOSED FIRE HYDRANT		
o	PROPOSED WATER GATE VALVE		
o	EXIST. VALVE (NOT FIELD LOCATED)		
o	PROPOSED BLOW OFF ASSEMBLY		
o	PROPOSED PLUG OR CAP		
o	H.P. HIGH PRESSURE ZONE		
o	L.P. LOW PRESSURE ZONE		
o	PROPOSED (#-SIZE) INCH, WATER SERVICE CONNECTION		
(H##, V##)	CANTON WATER DEPT. (HYDRANT AND VALVE NUMBERS)		
o	PROPOSED ROADWAY TRENCH PAY LIMITS / PAVEMENT REPLACEMENT (SEE DETAIL SHT. 9)		

GENERAL NOTE:

THIS IS A STANDARD SYMBOLS AND ABBREVIATIONS SHEET. SOME SYMBOLS AND ABBREVIATIONS DISPLAYED HERE MAY NOT APPEAR ON SUBSEQUENT PLAN SET SHEETS.

LEGENDS AND SYMBOLS

CANTON SOUTH WATERLINE EXTENSION

Plans Prepared By
The City of Canton
Water Department
 2064 Hamburg Rd. N.E. • Canton, Ohio 44705
 (330) 488-3310



CALCULATED
BDB
CHECKED

LEGEND - PHASE 2:

EXISTING LINETYPES

FENCE, GENERAL	
FENCE, BARBED WIRE	
FENCE, CHAIN LINK	
FENCE, ORNAMENTAL	
FENCE, ELECTRIC	
FENCE, VINYL	
FENCE, WOOD	
FENCE, WOVEN WIRE	
CABLE RAIL	
GUARDRAIL	
HANDRAIL	

CABLE T.V., ABANDONED	
CABLE T.V.	
CABLE T.V., OH	
CABLE T.V., UG	
CABLE T.V., SERVICE	
CABLE T.V., SERVICE OH	
CABLE T.V., SERVICE UG	

COMBINED SEWER, ABANDONED	
COMBINED SEWER	
COMBINED SEWER	

COMMUNICATION, ABANDONED	
COMMUNICATION	
COMMUNICATION, OH	
COMMUNICATION, UG	
COMMUNICATION, SERVICE	
COMMUNICATION, SERVICE OH	
COMMUNICATION, SERVICE, UG	

ELECTRIC, ABANDONED	
ELECTRIC, DUCT BANK	
ELECTRIC	
ELECTRIC, OH	
ELECTRIC, UG	
ELECTRIC, SERVICE	
ELECTRIC, SERVICE OH	
ELECTRIC, SERVICE, UG	

FIBER OPTIC, ABANDONED	
FIBER OPTIC, DUCT BANK	
FIBER OPTIC	
FIBER OPTIC, OH	
FIBER OPTIC, UG	
FIBER OPTIC, SERVICE	
FIBER OPTIC, SERVICE OH	
FIBER OPTIC, SERVICE, UG	

FUEL LINE, ABANDONED	
FUEL LINE	

GAS, ABANDONED	
GAS	
GAS, SERVICE	

MISC. ABANDONED	
MISC. UTILITY	
MISC. UTILITY, OH	
MISC. UTILITY, UG	
MISC. UTILITY, SERVICE	
MISC. UTILITY, SERVICE OH	
MISC. UTILITY, SERVICE, UG	

SANITARY, ABANDONED	
SANITARY FORCE MAIN	
SANITARY SEWER	
SANITARY LEACH LINE	
SANITARY SEWER, DOUBLE	
SANITARY SEWER, SERVICE	

STEAM TUNNEL, ABANDONED	
STEAM TUNNEL	

EXISTING LINETYPES

STORM SEWER, ABANDONED	
STORM CULVERT	
STORM SEWER	
STORM SEWER, DOUBLE	
STORM, ROOF DRAIN	
STORM, UNDERDRAIN	

TELEPHONE, ABANDONED	
TELEPHONE	
TELEPHONE, OH	
TELEPHONE, UG	
TELEPHONE, SERVICE	
TELEPHONE, SERVICE OH	
TELEPHONE, SERVICE, UG	

TRAFFIC, ABANDONED	
TRAFFIC LINE	
TRAFFIC LINE, OH	
TRAFFIC LINE, UG	
TRAFFIC, LOOP WIRE	
TRAFFIC, SPAN WIRE	

WATER LINE, ABANDONED	
WATER LINE	
WATER LINE, DOUBLE	
WATER LINE, SERVICE	

BRUSH LINE	
BUSH LINE	
TREE LINE	
MAJOR CONTOUR	
MINOR CONTOUR	
WATER EDGE	

COUNTY LINE	
CORPORATION LINE	
ANNEXATION AREA	
SECTION LINE	
TOWNSHIP LINE	
FLOOD PLAIN LIMIT	
WETLAND LIMIT	
FARM LINE	
BOUNDARY LINE	
PROPERTY LINE	
LEASE LINE	
RIGHT-OF-WAY LINE	
RIGHT-OF-WAY C/L	
SETBACK, BUILDING	
SETBACK, PARKING	
SURVEY STATIONING	

PROPOSED LINETYPES

WATER LINE	
WATER LINE, DOUBLE	
WATER LINE, SERVICE	

GENERAL LINETYPE NOTES

- THIS IS A STANDARD SHEET SHOWING COMMONLY USED LINETYPES. ALL LINETYPES ARE NOT NECESSARILY USED ON THIS PROJECT.

GENERAL SYMBOLOGY NOTES

- THIS IS A STANDARD SHEET SHOWING COMMONLY USED SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
- ADDITIONAL SYMBOLOGY OR DIAGRAMMATICAL LEGENDS MAY BE SHOWN ON INDIVIDUAL SHEETS FOR SCHEDULES, DIAGRAMS, DETAILS, SCHEMATICS, ETC.

EXISTING SYMBOLS

SANITARY MANHOLE	
SANITARY CLEANOUT	
SANITARY LINE CAP	
SANITARY LINE PAINT MARKING	
SANITARY STRUCTURE NUMBER	
SANITARY VENT PIPE	
STORM MANHOLE	
STORM MANHOLE	
CURB INLET	
CURB INLET (DOUBLE)	
CATCH BASIN	
CATCH BASIN (ROUND LID)	
CATCH BASIN (DOME)	
CATCH BASIN (SIDE INLET)	
DRAIN	
DOWNSPOUT	
STORM CLEANOUT	
STORM LINE CAP	
STORM ENDWALL	
STORM HEADWALL	
STORM LINE PAINT MARKING	
STORM STRUCTURE NUMBER	
ROCK CHANNEL PROTECTION	
SURFACE DRAINAGE FLOW	
STORM FLOOD ROUTING ARROW	
FIRE HYDRANT	
WATER SIAMESE CONNECTION	
WATER VALVE	
WATER VALVE BOX	
WATER METER	
WATER METER PIT	
WATER LINE REDUCER	
WATER LINE CAP	
WATER LINE PLUG	
WATER WELL	
WATER LINE PAINT MARKING	
WATER LINE MARKER	
POST INDICATOR VALVE	
WATER MANHOLE	
WATER CORPORATION STOP	
WATER FLUSHING ASSEMBLY	
WATER FIXTURE	
WATER FITTING (TEE)	
WATER FITTING (CROSS)	
WATER FITTING (45° WYE)	
WATER FITTING (11.25°)	
WATER FITTING (22.50°)	
WATER FITTING (45°)	
WATER FITTING (90°)	
IRRIGATION SPRINKLER HEAD	
IRRIGATION CONTROL BOX	
IRRIGATION BOX	
STEAM MANHOLE	
STEAM VENT	
COMBINED SEWER MANHOLE	
GAS LIGHT POST (YARD)	
GAS MANHOLE	
GAS VALVE	
GAS VALVE BOX	
GAS	
GAS METER	
GAS REGULATOR	
GAS VENT PIPE	
GAS LINE MARKER	
GAS LINE PAINT MARKING	
GAS LINE FIXTURE	
GAS	
ELECTRIC LIGHT POST (YARD)	
ELECTRIC MANHOLE	
ELECTRIC PULL BOX	
ELECTRIC CONTROL BOX	
ELECTRIC JUNCTION BOX	
ELECTRIC VAULT BOX	
ELECTRIC METER	
ELECTRIC PEDESTAL	
ELECTRIC RISER BOX	
ELECTRIC TRANSFORMER	
AIR CONDITION UNIT	

EXISTING SYMBOLS

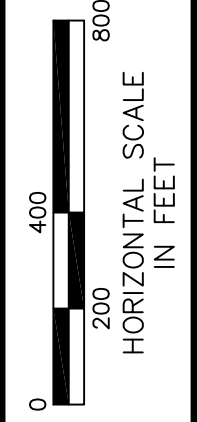
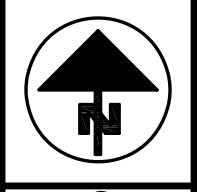
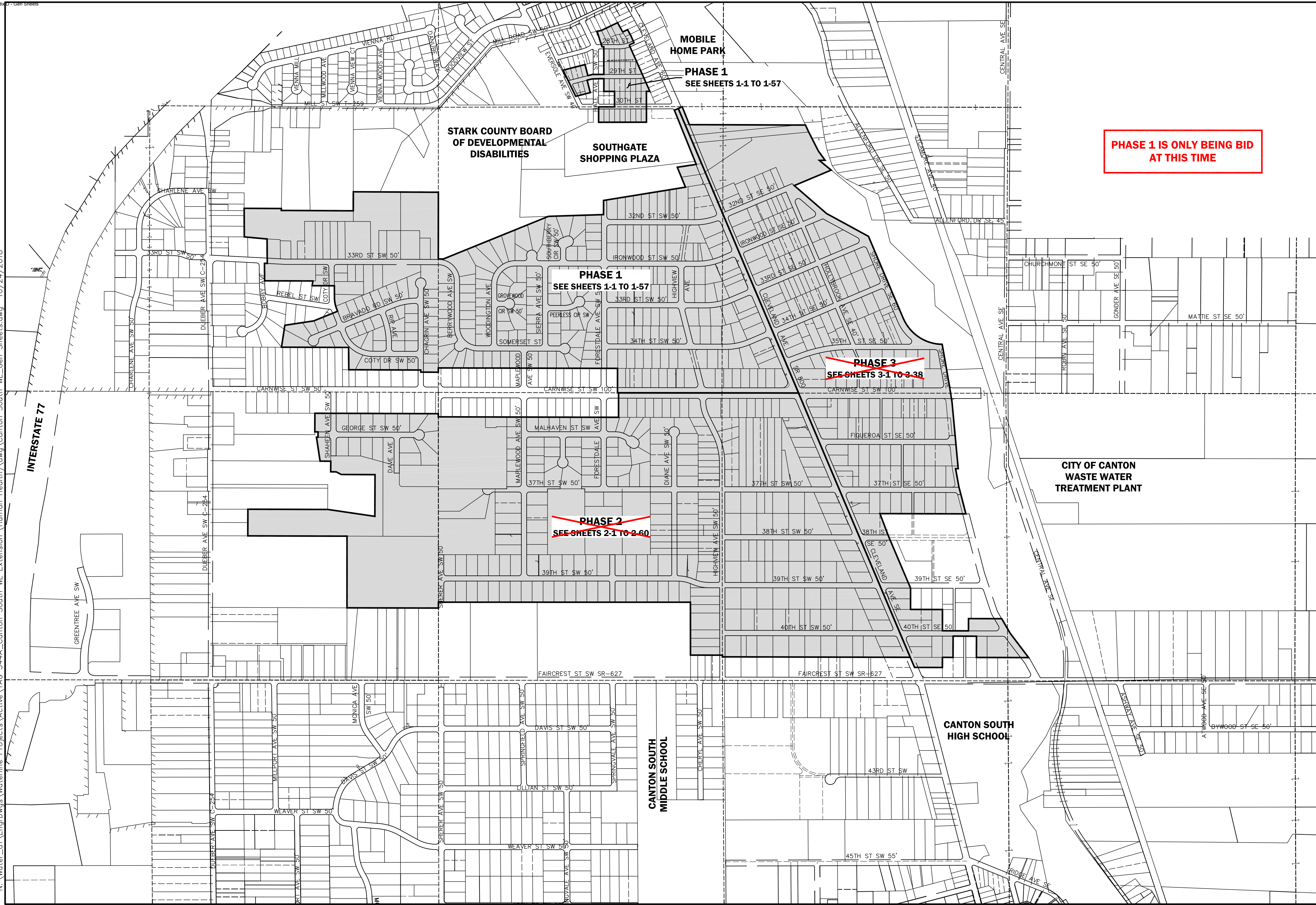
ELECTRIC GROUND LIGHT	
ELECTRIC LINE PAINT MARKING	
CABLE TV MANHOLE	
CABLE TV PEDESTAL	
CABLE TV SATELLITE DISH	
CABLE TV PAINT MARKING	
TELEPHONE MANHOLE	
TELEPHONE PULL BOX	
TELEPHONE PEDESTAL	
TELEPHONE RISER BOX	
TELEPHONE LINE PAINT MARKING	
TELEPHONE PAY PHONE	
FIBER OPTIC PULL BOX	
FIBER OPTIC CABLE MANHOLE	
FIBER OPTIC CABLE PAINT MARKING	
FIBER OPTIC CABLE MARKER	
TRAFFIC CONTROL MANHOLE	
TRAFFIC CONTROL BOX	
TRAFFIC CONTROL PAINT MARKING	
TRAFFIC PULL BOX	
TRAFFIC SIGNAL PEDESTAL	
UNKNOWN, PULL BOX	
UNKNOWN, CLEANOUT	
UNKNOWN, MANHOLE	
UNKNOWN, VALVE	
UNKNOWN, PEDESTAL	
UNKNOWN, UTILITY END NOT LOCATED	
MONITORING WELL	
TEST WELL	
WATER WELL	
SOIL BORING	
SWAMP	
POLE, ELECTRIC	
POLE, TELEPHONE	
POLE, LIGHT	
POLE, LIGHT, DECORATIVE	
POLE, LIGHT-OVERHEAD	
POLE, CABLE TV	
POLE, UTILITY	
POLE, GENERAL	
POLE, TRAFFIC CONTROL	
POLE, GUY	
POLE, BRACE	
POLE, ELECTRIC/TELEPHONE	
POLE, ELECTRIC W/LIGHT	
POLE, ELECTRIC/CABLE TV	
POLE, ELECTRIC/TELEPHONE/LIGHT	
POLE, ELECTRIC/TELEPHONE/CABLE TV	
POLE, ELEC./TELE./LIGHT/CABLE TV	
POLE, TELEPHONE/LIGHT	
POLE, TELEPHONE/CABLE TV	
POLE, TELEPHONE/LIGHT/CABLE TV	
POLE, CABLE TV W/LIGHT	
POLE, GUY WIRE	
SIGN	
SIGN, DOUBLE SIDED	
SIGN, DUAL POST	
SIGN, RAILROAD	
POST	
BOLLARD	
DELINEATOR POST	
PARKING BUMPER BLOCK	
HANDICAP PARKING SYMBOL	
HANDICAP PARKING SYMBOL	
HANDICAP DETECTABLE WARNING	
MAILBOX	
PAPERBOX	
PARKING METER	
GRAVE HEADSTONE	
EX. BARBEQUE GRILL	
VACUUM	

EXISTING SYMBOLS

FUEL PUMP	
FLAG POLE	
RAISED PAVEMENT MARKER	
GUARDRAIL, CENTER POST	
GUARDRAIL, TERMINAL POST	
GUARDRAIL, BOTTOM POST	
GUARDRAIL, TOP POST	
FENCE POST	
PICNIC TABLE	
BENCH	
DECIDUOUS TREE	
EVERGREEN TREE	
STUMP	
BUSH	
PVMT. MARKING, LANE ARROW	
PVMT. MARKING, LANE ARROW	
PVMT. MARKING, LANE ARROW	
PVMT. MARKING, LANE ARROW	
PVMT. MARKING, LANE ARROW	
PVMT. MARKING, LANE ARROW	
PVMT. MARKING, LANE ARROW	
PVMT. MARKING, LANE ARROW	
PVMT. MARKING, LANE ARROW	
PVMT. MARKING, BICYCLE LANE	
PVMT. MARKING, SYMBOL	
PVMT. MARKING WORD, BICYCLE	
PVMT. MARKING WORD, LANE	
PVMT. MARKING WORD, ONLY	
PVMT. MARKING WORD, RAILROAD	
PVMT. MARKING WORD, SCHOOL	
IRON PIN FOUND	
SOLID IRON PIN FOUND	
IRON PIPE FOUND	
DRILL HOLE FOUND	
CHISELED "X" FOUND	
MONUMENT BOX FOUND	
MONUMENT CONCRETE FOUND	
MONUMENT RIGHT-OF-WAY FOUND	
PK NAIL FOUND	
MAG NAIL FOUND	
SPIKE FOUND	
HUB FOUND	
AXLE FOUND	
WOOD POST FOUND	
CORNER STONE FOUND	
AERIAL TARGET FOUND	
GPS CONTROL FOUND	
BENCHMARK FOUND	

PROPOSED SYMBOLS

FIRE HYDRANT	
FIRE HYDRANT, ADJUST	
WATER SIAMESE CONNECTION	
WATER VALVE	
WATER VALVE BOX	
WATER METER	
WATER LINE REDUCER	
WATER LINE CAP	
WATER LINE PLUG	
WATER WELL	
WATER LINE MARKER	
POST INDICATOR VALVE	
WATER MANHOLE	
WATER CORPORATION STOP	
WATER FLUSH	

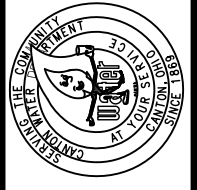


CALCULATED
BDB
CHECKED

PHASE LIMITS
SCHEMATIC PLAN

CANTON SOUTH
WATERLINE EXTENSION

Plans Prepared By
**The City of Canton
Water Department**
2864 Harrisburg Rd., N.E. • Canton, Ohio 44705
(330) 489-3310



I. PRECONSTRUCTION INCIDENTALS**(A) PROJECT SPECIFICATIONS/REQUIREMENTS:**

ALL WORK REQUIRED TO COMPLETE THIS IMPROVEMENT SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATIONS/REQUIREMENTS OF THE CITY OF CANTON AND THE LATEST EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, EXCEPT AS HEREIN AMENDED. IN THE CASE OF A CONFLICT BETWEEN THE CITY OF CANTON AND THE OHIO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS/REQUIREMENTS, THE CITY OF CANTON REQUIREMENTS WILL TAKE PRECEDENCE, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

THE DEVELOPER/CONTRACTOR SHALL COMPLY WITH THE CITY OF CANTON SUPPLEMENTAL SPECIFICATION 01-00 PROJECT DOCUMENTATION AND SUBMITTAL REQUIREMENTS.

(B) ADMINISTRATIVE REQUIREMENTS:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY COMPLYING WITH ALL THE ADMINISTRATIVE DUTIES HEREIN CONTAINED.

THE DEVELOPER/CONTRACTOR SHALL DESIGNATE TO THE CITY AN EMPLOYEE RESPONSIBLE FOR CORRESPONDENCE, NOTIFICATIONS, AND SUBMITTALS PERTINENT TO THE PROJECT.

(C) PRECONSTRUCTION MEETING:

A PRECONSTRUCTION MEETING WITH THE DEVELOPER, CONTRACTOR, REPRESENTATIVES OF ALL UTILITY COMPANIES, THE CITY OF CANTON ENGINEERING DEPARTMENT AND THE CITY OF CANTON WATER DEPARTMENT IS REQUIRED FOR THIS PROJECT PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.

~~FOR SUBDIVISION DEVELOPMENTS, THE DEVELOPER SHALL CONTACT THE CITY ENGINEER'S OFFICE TO ARRANGE A MEETING DATE. THE DEVELOPER WILL CONTACT THE ABOVE AGENCIES TO CONFIRM THE MEETING DATE.~~

FOR CITY GENERAL PROJECTS, THE CITY ENGINEER WILL CONTACT THE CONTRACTOR TO ARRANGE A MEETING DATE. THE CITY ENGINEER WILL CONTACT THE ABOVE AGENCIES TO CONFIRM THE MEETING DATE.

IF THE PROPOSED PROJECT LAND-DISTURBANCE AREA IS ONE (1) OR MORE ACRES, A SEPARATE PRE-CONSTRUCTION MEETING IS ALSO REQUIRED. THIS MEETING SHALL OCCUR ON-SITE BETWEEN THE CONTRACTOR AND THE STARK SOIL & WATER CONSERVATION DISTRICT (SWCD). THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING THIS MEETING. NO LAND-DISTURBANCE ACTIVITIES SHALL START UNTIL SAID MEETING HAS OCCURRED AND APPROVAL HAS BEEN GRANTED BY STARK SWCD.

(D) PROJECT SAFETY:

THE CONTRACTOR SHALL MAINTAIN A SAFE WORKING ENVIRONMENT AT THE PROJECT SITE AT ALL TIMES. THE CONTRACTOR SHALL PROPERLY SUPPORT AND/OR MAINTAIN ALL EXCAVATIONS PER APPLICABLE SAFETY REQUIREMENTS AND COMPLY WITH ALL O.S.H.A. REGULATIONS. APPROPRIATE BARRICADES, WARNING LIGHTS, SIGNS, FENCING, ETC. SHALL BE ERECTED AROUND THE CONSTRUCTION AREA DURING ALL NON-WORKING HOURS TO ALERT PERSONS OF THE POTENTIAL DANGER ASSOCIATED WITH THE AREA UNDER CONSTRUCTION AS WELL AS TO PREVENT ACCESS BY UNAUTHORIZED PERSONNEL TO THE CONSTRUCTION SITE/AREA. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE SAFETY OF THE GENERAL PUBLIC AS WELL AS ALL CONSTRUCTION PERSONNEL. PUBLIC STREETS SHALL BE KEPT CLEAN AND FREE OF DEBRIS (MUD, STONE, ETC.) AT ALL TIMES. THE CONTRACTOR SHALL ALERT ALL LOCAL EMERGENCY AGENCIES (FIRE, POLICE, AMBULANCE, ETC.) OF THE NATURE OF THE PROPOSED PROJECT PRIOR TO BEGINNING AND CONSTRUCTION ACTIVITY. ACCESS FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.

(E) UNDERGROUND UTILITIES:

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS WERE OBTAINED BY FIELD OBSERVATIONS, FROM EXISTING RECORDS, AND/OR FROM THE OWNERS OF THE RESPECTIVE UTILITIES. THE INFORMATION AS SHOWN IS BELIEVED TO BE CORRECT; HOWEVER, THE COMPLETENESS AND ACCURACY OF THIS INFORMATION CANNOT BE GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT ALL THE VARIOUS UTILITY COMPANIES (PUBLIC AND PRIVATE) TO VERIFY THE EXISTENCE, LIMITS AND/OR LOCATION OF ANY UTILITIES WHICH MAY BE ALONG THE ROUTE OR WITHIN THE VICINITY OF THIS IMPROVEMENT.

(F) UTILITY NOTIFICATION:

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING OPERATIONS ON THIS PROJECT, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER, THE REGISTERED UTILITY PROTECTION AGENCY/SERVICE, AND THE OWNERS OF ANY OTHER UTILITIES (PUBLIC AND/OR PRIVATE) THAT MAY HAVE UTILITY LINES OR FACILITIES WITHIN THE VICINITY OF THIS PROJECT BUT WHO ARE NOT MEMBERS OF THE REGISTERED UTILITY PROTECTION SERVICE. THE OWNERS OF ANY UNDERGROUND UTILITY FACILITY SHALL, WITHIN 48 HOURS AFTER NOTICE IS RECEIVED, EXCLUDING SATURDAYS, SUNDAYS AND OTHER LEGAL HOLIDAYS; STAKE, MARK OR OTHERWISE DESIGNATE THE EXISTENCE AND/OR LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING AND/OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO WORKING DAYS AHEAD OF THE PLANNED CONSTRUCTION.

OHIO UTILITIES PROTECTION SERVICE: 1-800-362-2764 (CONTACT NON-MEMBERS DIRECTLY).

THE PRIMARY UTILITIES WITHIN THE CITY OF CANTON AREA:

NATURAL GAS DIST./TRANS.

DOMINION ENERGY
320 SPRINGSIDE DR., SUITE 320
AKRON, OHIO 44333
330-664-2782
ATTN: BILL SNYDER
RELOCATION@DOM.COM
EMERGENCY NO.
1-800-521-4400

COMMUNICATIONS CABLE

TIME WARNER CABLE
5520 WHIPPLE AVE N.W.
NORTH CANTON, OHIO 44720
330-494-9200
EXT. 330-555-3009
ATTN: RON ICKES

SANITARY SEWER

STARK COUNTY METROPOLITAN
SEWER DISTRICT
P.O. BOX 9972
1701 MAHONING ROAD NE
CANTON, OHIO 44711
330-451-2303
ATTN: JAMES TROIKE

TELEPHONE

AT&T
50 WEST BOWER STREET
AKRON, OHIO 44308
330-384-8057
ATTN: JIM BUETEL

EMERGENCY NO. - 24 HRS.
1-800-572-4545 OPTION#4

ELECTRIC

AMERICAN ELECTRIC POWER
301 CLEVELAND AVE. S.W.
P.O. BOX 24400
CANTON, OHIO 44701-4400
ATTN: KATHY MOSSBARGER
330-438-7762
ATTN: RAY ZITNEY
330-438-7718

WATER

WATER DEPARTMENT
2664 HARRISBURG RD. N.E.
CANTON, OHIO 44708
330-438-6569
ATTN: BRENT BURRIER

(G) PROPOSED PUBLIC UTILITY LOCATION IN PROPOSED SUBDIVISIONS:



(H) EXPLORATORY BORINGS:

EXPLORATORY SOIL BORING INFORMATION IS NOT THE RESPONSIBILITY OF THE CITY OF CANTON. IT IS THE DEVELOPER/CONTRACTOR RESPONSIBILITY TO REVIEW ANY AND ALL INFORMATION AVAILABLE. IF DEVELOPER/CONTRACTOR REQUESTS TO DRILL AND OR EXCAVATE WITHIN THE CITY'S R/W, THE DEVELOPER/CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AT LEAST 3 WORKING DAYS PRIOR TO THIS WORK. THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITY NOTIFICATION, AS SPECIFIED, ALL TRAFFIC CONTROL, PREMIUM BACKFILL, AND COMPACTION AND RESTORATION, AS NECESSARY.

(I) CONTINGENCY QUANTITIES:

WHEN SPECIFIED ON PLANS OR SPECIFICATIONS, CONTINGENCY QUANTITIES ARE TO BE PERFORMED ONLY UNDER DIRECTION OF THE CITY ENGINEER. THE DEVELOPER/CONTRACTOR SHALL NOT ORDER ANY CONTINGENCY MATERIAL OR PERFORM ANY WORK UNTIL DIRECTED BY THE ENGINEER. THE ACTUAL WORK LOCATION AND QUANTITIES FOR SUCH ITEMS SHALL BE DOCUMENTED BY THE DEVELOPER/CONTRACTOR AND THE ENGINEER.

II. CONSTRUCTION INCIDENTALS**(A) PLAN DISCREPANCIES:**

ANY DISCREPANCIES FROM THE PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER SO THAT THE APPROPRIATE ADJUSTMENTS IN ALIGNMENT AND/OR GRADE MAY BE MADE PRIOR TO THE START OF CONSTRUCTION OR THE CONTINUATION OF THE SAME.

FAILURE BY THE DEVELOPER/CONTRACTOR TO VERIFY AND/OR DETERMINE EXISTING INFORMATION AS INDICATED WILL RESULT IN THE CONTRACTOR BEING RESPONSIBLE FOR ANY CHANGES NECESSARY TO COMPLETE THE WORK SPECIFIED WITHOUT ADDITIONAL COMPENSATION.

(B) VERIFICATION OF UNDERGROUND UTILITIES:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXISTENCE AS WELL AS THE ACTUAL LOCATION, ALIGNMENT, AND ELEVATIONS OF ALL EXISTING UTILITIES/FACILITIES WITHIN AND/OR ADJACENT TO THE GENERAL LIMITS OF THESE IMPROVEMENTS INCLUDING WATERLINES, SANITARY AND STORM SEWERS, GAS LINES, COMMUNICATION LINES/BANKS, ELECTRIC LINES, ETC. THIS MAY REQUIRE EXPLORATORY EXCAVATIONS TO BE PERFORMED BY THE CONTRACTOR FOR WHICH HE WILL NOT BE REIMBURSED. THE CONTRACTOR SHALL NOT ASSUME THAT EXISTING UTILITIES/CONDUITS WERE INSTALLED AT TYPICAL/STANDARD DEPTHS OR AT UNIFORM SLOPES/GRADES/DEPTHS BETWEEN ACCESS POINTS (CATCH BASINS, MANHOLES, JUNCTION CHAMBERS, ETC.)

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

(C) PROTECTION OF UTILITIES:

THE DEVELOPER/CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT AND SUPPORT EXISTING UTILITIES ENCOUNTERED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS AS APPROVED BY THE OWNERS OF THE UTILITY AND THE CITY ENGINEER.

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO CLOSELY COORDINATE THEIR WORK WITH ALL UTILITY COMPANIES; ANY POTENTIAL DELAYS WILL NOT BE THE RESPONSIBILITY OF THE CITY.

THE CONTRACTOR SHOULD EXPECT AT A MINIMUM ONE SANITARY SEWER LATERAL, ONE ROOF DRAIN, ONE WATER SERVICE, AND ONE GAS SERVICE FOR EACH LOT. ANY OF THE ABOVE UTILITIES DAMAGED DUE TO THE CONTRACTOR'S WORK SHALL BE RESTORED TO THE UTILITY OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS.

(D) MAINTENANCE OF UTILITY SERVICES:

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN UTILITY SERVICES AT ALL TIMES.

WATER SERVICE MAY BE INTERRUPTED FOR LIMITED PERIODS (4 HOURS MAXIMUM) DURING CONNECTION BETWEEN EXISTING WATER LINES AND RELOCATED/NEW WATER MAINS WHICH CANNOT BE COMPLETED OTHERWISE. NO SHUT DOWN SHALL OCCUR WITHOUT WRITTEN PERMISSION OF THE CITY OF CANTON WATER DEPARTMENT. PROPERTY OWNERS AFFECTED BY APPROVED INTERRUPTED SERVICE SHALL BE NOTIFIED 48 HOURS IN ADVANCE BY THE CONTRACTOR.

STORM SEWER AND SANITARY SEWER SERVICES SHALL BE MAINTAINED WITHOUT INTERRUPTION, UNLESS APPROVED BY THE CITY ENGINEER.

IN THE EVENT THAT CONSTRUCTION DISRUPTS THE FLOW OF A SANITARY SEWER, THE CONTRACTOR SHALL IMMEDIATELY RECTIFY THE DISRUPTED SEWER BY EITHER TEMPORARILY FLUMING WITH MATERIALS ACCEPTABLE TO THE ENGINEER OR BYPASSING WITH PUMPS. COST OF MAINTAINING AND REPAIR OF SANITARY SEWERS DISTURBED BY CONSTRUCTION SHALL BE AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS.

(E) CONSTRUCTION NOISE:

CONSTRUCTION NOISE ASSOCIATED WITH ANY IMPROVEMENT PROJECT SHALL BE LIMITED TO LEVELS COMMENSURABLE WITH ADJOINING LAND AND THEIR ASSOCIATED USAGE AS DETERMINED BY THE CITY ENGINEER. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICES SHALL NOT BE OPERATED BETWEEN THE HOURS OF 7:00 P.M. AND 7:00 A.M. UNLESS AUTHORIZED BY THE CITY ENGINEER.

(F) OPEN TRENCH CONSTRUCTION:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION/TRENCHING PRACTICES FOR THE PROPOSED IMPROVEMENT, OR AS FURTHER SHOWN ON THE PLANS AND SPECIFICATIONS.

THE DEVELOPER/CONTRACTOR SHALL FOLLOW ALL APPLICABLE LOCAL AND STATE SAFETY REGULATIONS, INCLUDING CODE OF FEDERAL REGULATIONS, PART 1926 (SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION), SUBPART P (EXCAVATIONS), FOR ALL APPLICABLE REQUIREMENTS AND RESPONSIBILITIES.

PRIOR TO COMMENCING CONSTRUCTION, THE DEVELOPER/CONTRACTOR SHALL NOTIFY THE CITY ENGINEER OF THE PROJECT'S ASSIGNED "COMPETENT PERSON" IN OSHA EXCAVATION STANDARDS.

(G) TRENCH CLOSING AND TEMPORARY TOPPING:


THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE THE NECESSARY LEVELS OF PROTECTION AND SAFEGUARDING OF ALL OPEN TRENCHES, WHEN WORK IS EITHER COMPLETED AT THE END OF THE DAY OR SUSPENDED FOR ANY OTHER REASON. ANY VEHICULAR DAMAGE CAUSED BY THE CONTRACTOR'S TRENCH SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COVER SAID DAMAGES.

~~FOR TRENCH SURFACE REQUIREMENTS, REFER TO NOTE 4 ON CITY STANDARD DRAWING NO. 19.~~ 

FOR TRENCH SURFACE REQUIREMENTS, REFER TO THE MISCELLANEOUS DETAILS.

(H) DUST CONTROL:

THE DEVELOPER/CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. SUFFICIENT QUANTITIES OF CALCIUM CHLORIDE SHALL BE STORED ON THE JOB SITE AT ALL TIMES TO BE USED FOR DUST CONTROL.

(I) TESTING OF UTILITIES: **(J) PRESERVATION AND RESTORATION OF DISTURBED FEATURES:**

EXISTING DRIVES, BERMS, LAWNS, PAVEMENTS, CURBS, SIDEWALKS, SIGNS, MAILBOXES, FENCES, RETAINING WALLS, LANDSCAPING ITEMS, OR OTHER APPURTENANCES DISTURBED DURING CONSTRUCTION BUT NOT SPECIFICALLY DESIGNATED FOR REMOVAL/REPLACEMENT SHALL BE RESTORED BY THE DEVELOPER/CONTRACTOR AT HIS EXPENSE TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO DISTURBANCE AND TO THE COMPLETE SATISFACTION OF THE CITY ENGINEER.

RESTORATION OF EXISTING ROADWAYS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY, TOWNSHIP, COUNTY, AND/OR OTHER AGENCIES HAVING AUTHORITY. COST FOR THE RESTORATION OF THESE ITEMS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR, UNLESS OTHERWISE SPECIFIED IN THE PLANS OR SPECIFICATIONS. NO PUBLIC ROADWAY SHALL BE DISTURBED WITHOUT PRIOR WRITTEN APPROVAL FROM THE GOVERNING AGENCY AND ACQUISITION OF NECESSARY PERMITS.


(K) PRE-CONSTRUCTION VIDEOTAPING:

PRIOR TO THE DELIVERY OF ANY EQUIPMENT, MATERIALS OR SUPPLIES TO ANY WORK SITE, OR TO THE BEGINNING OF ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL PROVIDE PRECONSTRUCTION VIDEOTAPING FOR THE PURPOSE OF ESTABLISHING THE EXISTING SURFACE CONDITIONS IN ALL OF THE AREAS OF THE CONSTRUCTION OR OF INTENDED USE BY THE CONTRACTOR.

GROUND VIDEOTAPING SHALL CONSIST OF TELEVISIONING, IN COLOR, THE SURFACE FEATURES ALONG THE ENTIRE LENGTH OF THE PROJECT. ALL WORK AND STORAGE AREAS AND ALL INTERSECTING ROADWAYS SHALL ALSO BE TELEVIEWED. PRIOR TO PERFORMING THE WORK, ALL AREAS TO BE INVENTORIED SHALL BE INVESTIGATED VISUALLY WITH NOTATIONS MADE OF ITEMS NOT READILY VISIBLE BY VIDEO.

ALL COSTS ASSOCIATED WITH THE WORK, INCLUDING PROVIDING ALL MATERIALS, LABOR, EQUIPMENT, TESTING, AND ALL OTHER INCIDENTAL, MISCELLANEOUS AND RELATED ITEMS, SHALL BE INCLUDE IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

REVISIONS/COMMENTS:

 ANY REFERENCE TO "THE CITY ENGINEER" WITHIN THE GENERAL NOTES SHALL MEAN THE CANTON WATER DEPARTMENT SUPERINTENDENT.

 NOT APPLICABLE TO THIS PROJECT

 REFER TO SECTION VIII. WATER MAIN/SERVICES

II. CONSTRUCTION INCIDENTALS (continued)**(L) SALVAGED CASTINGS:**

WHEN DIRECTED BY THE CITY ENGINEER, ALL METAL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED ON SITE OR DELIVERED TO A LOCATION DESIGNATED BY THE CITY ENGINEER.

(M) PLUG EXISTING CONDUIT: 

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

BULKHEADS SHALL CONSIST OF BRICK AND/OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

PAYMENT FOR PLUGGING OF EXISTING CONDUIT FOR ABANDONMENT SHALL BE INCLUDED IN THE UNIT BID OF THE VARIOUS ITEMS OF THE PROJECT.

(N) CONSTRUCTION LAYOUT:

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT UTILIZING PERTINENT PLAN DATA. THE CITY ENGINEER WILL NOT BE RESPONSIBLE FOR STAKING HORIZONTAL OR VERTICAL CONTROL. CONSTRUCTION LAYOUT SHALL BE IN ACCORDANCE WITH ODOT 623 CONSTRUCTION LAYOUT STAKES.

AT THE CITY ENGINEER'S REQUEST, THE CONTRACTOR SHALL MAKE AVAILABLE ALL SURVEY FIELD NOTES FOR REVIEW.

(O) EXISTING MONUMENTATION:

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

(P) ELEVATION DATUM:

ALL ELEVATIONS ARE BASED ON THE **NAVD 1988 DATUM.**

(Q) DEWATERING OPERATIONS:

WHEN DEEMED NECESSARY, THE DEVELOPER/CONTRACTOR MAY INSTALL DEWATERING EQUIPMENT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

THE PROPOSED LOCATION OF WELL POINTS, HEADER PIPE, ELECTRICAL DISTRIBUTION, GENERATORS AND DISCHARGE PIPES, ETC. SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR.

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS FOR THE INSTALLATION AND SUBSEQUENT REMOVAL OF DEWATERING EQUIPMENT AS WELL AS PROPER WATER DISCHARGE PROCEDURES AS MAY BE REQUIRED PER STATE AND LOCAL GOVERNING AGENCIES.

INSTALLATION OF ALL ELECTRICAL EQUIPMENT, INCLUDING GROUNDING AND PROTECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR.

DEVELOPER/CONTRACTOR SHALL PROVIDE ALL COMBUSTIBLE ENGINE DRIVEN GENERATORS WITH "HOSPITAL GRADE" MUFFLERS. MUFFLERS SHALL BE RATED, AT A MAXIMUM OF 67 dB AT 23 FEET AWAY RUNNING FULL LOAD.

(R) INSPECTION:

FOLLOWING THE PRE-CONSTRUCTION MEETING(S) AND ESTABLISHMENT OF AN APPROVED SCHEDULE, THE CONTRACTOR SHALL GIVE A MINIMUM 48 HOUR NOTICE BEFORE STARTING ANY WORK ON THIS PROJECT AND SHALL KEEP THE CITY INFORMED OF HIS/HER CONSTRUCTION SCHEDULE. ALL WORK REQUIRED FOR THIS IMPROVEMENT SHALL BE SUBJECT TO INSPECTION BY THE CITY OF CANTON OR THEIR DESIGNATED REPRESENTATIVE. NO WORK SHALL BE PERFORMED WITHOUT AN AUTHORIZED INSPECTOR PRESENT, UNLESS OTHERWISE APPROVED.

(S) FIELD OFFICE:

IF A PAY ITEM IS PROVIDED, THE DEVELOPER/CONTRACTOR SHALL PROVIDE A FIELD OFFICE IN ACCORDANCE WITH ODOT 619. THE FIELD OFFICE SHALL BE TYPE 'A', UNLESS OTHERWISE SPECIFIED.

III. EARTHWORK / SITE WORK**(A) EASEMENTS AND RIGHT-OF WAY:**

THE DEVELOPER/CONTRACTOR SHALL STAY WITHIN THE DESIGNATED PROPERTIES, EASEMENTS, AND/OR RIGHT-OF-WAY PROVIDED FOR THE PROJECT AT ALL TIMES. NO MATERIAL SHALL BE STORED NOR ANY WORK PERFORMED ON PRIVATE PROPERTY UNLESS OTHERWISE APPROVED. DISTURBANCE OF EXISTING FEATURES AND/OR IMPROVEMENTS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND AS APPROVED BY THE CITY ENGINEER/PROPERTY OWNER.

(B) SUITABILITY OF SITE:

THE CITY OF CANTON SHALL NOT BE RESPONSIBLE FOR THE TYPE AND/OR SUITABILITY OF THE MATERIAL UNDERLYING THE PROJECT SITE. THE DEVELOPER/CONTRACTOR MUST APPRAISE THEMSELVES OF ANY EXISTING SITE CONDITIONS WHICH MAY AFFECT THEIR BID OR THE PERFORMANCE OF THE REQUIRED WORK. THE DEVELOPER/CONTRACTOR SHALL PERFORM ANY INVESTIGATIONS AND/OR TESTING NECESSARY TO ADEQUATELY DETERMINE/ESTIMATE TO THEIR SATISFACTION ALL SITE CONDITIONS WHICH COULD AFFECT THE PERFORMANCE OF THE PROPOSED IMPROVEMENTS. THIS COULD INCLUDE, BUT NOT BE LIMITED TO, UNSUITABLE AND/OR UNSTABLE SOIL/SUBSURFACE CONDITIONS, ROCK, WATER (PERCHED OR FREE), SPRINGS, ETC.

(C) REMOVAL/REPLACEMENT OF UNSUITABLE MATERIAL:

THE DEVELOPER/CONTRACTOR SHALL UNDERCUT AND REPLACE UNSUITABLE MATERIAL ENCOUNTERED DURING INSTALLATION OF THE PROPOSED UTILITIES AND ROADWAY UNTIL SUCH CONDITIONS ARE CORRECTED AND APPROVED BY THE PROJECT ENGINEER. THE UNSUITABLE MATERIAL SHALL BE REPLACED WITH GRAVEL. THE GRAVEL SIZE/TYPE SHALL BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER.

THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE UTILITY UNLESS THE PLANS ALLOW FOR A CONTINGENCY ITEM FOR REMOVAL/REPLACEMENT OF UNSUITABLE MATERIAL. IF SO, THE CITY WILL DOCUMENT THE LOCATION OF SUCH AREAS FOR FINAL QUANTITY TABULATION.

(D) CLEARING AND GRUBBING AND REMOVAL OF MISC. ITEMS:

THE COST OF CLEARING AND GRUBBING, TREE REMOVAL, REMOVAL OF EXISTING PAVEMENT, SIDEWALK, CURB, MANHOLES, CATCH BASINS OR OTHER STRUCTURES ARE TO BE INCLUDED IN THE UNIT PRICE BID FOR ALL ITEMS IN THE PROPOSAL UNLESS LISTED AS A SEPARATE PAY ITEM.

(E) RESTORATION OF DISTURBED AREAS:

EXISTING DRIVES, BERMS, LAWNS, PAVEMENTS, CURBS, SIDEWALKS, SIGNS, MAILBOXES OR OTHER APPURTENANCES DISTURBED DURING CONSTRUCTION BUT NOT SPECIFICALLY DESIGNATED FOR REMOVAL/REPLACEMENT SHALL BE RESTORED TO A CONDITION EQUAL TO THAT WHICH EXISTED PRIOR TO CONSTRUCTION AND TO THE COMPLETE SATISFACTION OF THE WATER DEPARTMENT. RESTORATION OF EXISTING ROADWAYS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY, TOWNSHIP, COUNTY, AND/OR OTHER AGENCIES HAVING AUTHORITY. COST FOR THE RESTORATION OF THESE ITEMS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO PUBLIC ROADWAY SHALL BE DISTURBED WITHOUT PRIOR WRITTEN APPROVAL FROM THE GOVERNING AGENCY AND ACQUISITION OF NECESSARY PERMITS.

(F) SEEDING AND MULCHING:

ALL SOIL AREAS DISTURBED BY THIS PROJECT SHALL BE RESTORED WITH TOPSOIL (MIN. 4" THICK), SEEDED AND MULCHED IN ACCORDANCE WITH ODOT ITEM 659. THE APPROPRIATE CLASS OF SEED THAT IS USED SHALL MATCH THE EXISTING, ADJACENT VEGETATION. THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ALL ITEMS IN THE PROPOSAL UNLESS LISTED AS A SEPARATE PAY ITEM.

IV. ROADWAY / DRIVE APPROACHES / WALK / CURB**(A) PAVEMENT STANDARDS:**

 SEE MISCELLANEOUS DETAILS

(B) RESTRICTED WORK SCHEDULE:

1. NO CONCRETE FINISH WORK OR PERMANENT ASPHALT SHALL BE PLACED FROM NOVEMBER 15TH TO APRIL 15TH UNLESS WRITTEN APPROVAL IS GRANTED BY THE CITY ENGINEER.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF THEIR UTILITY CUTS AND TRENCHES DURING THIS RESTRICTED TIME PERIOD.
3. ALL STEEL PLATES SHALL BE REMOVED FROM THE ROADWAY AT THE END OF EACH DAY UNLESS APPROVAL IS GRANTED BY THE CITY ENGINEER.
4. NO ADDITIONAL COMPENSATION WILL BE APPROVED FOR THE WORK AND/OR MATERIALS REQUIRED TO MAINTAIN THE UTILITY TRENCHES THROUGHOUT THIS RESTRICTED TIME PERIOD.

(C) ASPHALT/CONCRETE:

IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE OF BEGINNING WORK WHICH REQUIRES COMPACTION TESTING AND/OR PRE-POUR INSPECTION PRIOR TO PLACEMENT OF ASPHALT OR CONCRETE. WORK SHALL NOT PROCEED UNTIL TESTING AND/OR INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE CITY ENGINEER.

V. SANITARY SEWERS / STORM SEWERS**(A) SEWER STANDARDS:**

ALL SANITARY/STORM SEWER CONDUITS AND APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO APPLICABLE CITY STANDARD DRAWINGS AND SPECIFICATIONS (LISTED BELOW) AND ODOT SPECIFICATIONS EFFECTIVE AT THE TIME OF CONSTRUCTION, UNLESS SPECIFIED OTHERWISE ON THE PLANS.

CITY STANDARD DRAWING NO.:**CATCH BASINS**

- 1 "CURB INLET CATCH BASIN"
- 2 "CURB INLET WATER QUALITY CATCH BASIN"
- 3 "HILLSIDE CURB INLET CATCH BASIN"
- 4 "SQUARE-TOP CATCH BASIN"
- 5 "SQUARE-TOP WATER QUALITY CATCH BASIN"

MANHOLES

- 10 "PRECAST STORM OR SANITARY MANHOLE"
- 11 "OUTSIDE DROP CONNECTION FOR SANITARY MANHOLE"
- 12 "MANHOLE COVER"

CONDUITS AND TRENCHES

- 18 "HOUSE CONNECTION STACK"
- 19 "UTILITY TRENCH REQUIREMENTS"
- 20 "SANITARY SEWERS AND LATERALS"
- 21 "CONCRETE ENCASEMENT DETAIL"
- 22 "DOWNSPOUT OUTLET (NON-CURBED STREET)"
- 23 "DOWNSPOUT OUTLET (CURBED STREET)"
- 24 "GROUNDWATER DRAIN LINE CONNECTION"

DRIVEWAYS, CURBS, AND PAVEMENT

- 32 "TYPICAL SECTION - LOCAL STREET"

VI. STORM WATER POLLUTION PREVENTION:**(A) FOR PROJECTS ONE (1) ACRE OR MORE OF TOTAL LAND-DISTURBANCE:**

A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION SITE STORMWATER GENERAL PERMIT WILL BE REQUIRED FROM THE OHIO EPA. THE NOTICE OF INTENT (NOI), PREPARED BY THE CITY, AND OHIO EPA NPDES CONSTRUCTION SITE STORM WATER GENERAL PERMIT SHALL BE PROVIDED TO THE CONTRACTOR BY CITY PERSONNEL AT THE PRE CONSTRUCTION MEETING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREPARE AND IMPLEMENT A STORMWATER POLLUTION PREVENTION PLAN (SWP3).

THE CONTRACTOR AND HIS REPRESENTATIVES SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE PERMIT AS WELL AS THE SWP3. ALL ACTIVITIES AND PRACTICES SHALL ALSO COMPLY WITH THE CURRENT EDITIONS OF THE CITY OF CANTON STORM WATER MANAGEMENT MANUAL AND THE OHIO DEPARTMENT OF NATURAL RESOURCES' RAINWATER AND LAND DEVELOPMENT MANUAL, AS APPLICABLE. SUCH PROJECTS ARE ALSO SUBJECT TO INSPECTION BY THE CITY OF CANTON AND/OR ITS AUTHORIZED REPRESENTATIVES (I.E. STARK SWCD) TO ENSURE COMPLIANCE WITH PERMIT AND SWP3 REQUIREMENTS AND LOCAL STORM WATER QUALITY REGULATIONS.

A PRE-CONSTRUCTION MEETING INITIATED BY THE CONTRACTOR IS REQUIRED ON-SITE WITH THE STARK SWCD PRIOR TO ANY LAND-DISTURBING ACTIVITIES. THE CONTRACTOR SHALL ABIDE BY ALL ORDERS ISSUED BY THE CITY AND/OR STARK SWCD PURSUANT TO INSPECTION OF THE PROJECT SITE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING THE CO PERMITTEE NOTICE OF INTENT FOR COVERAGE UNDER OHIO EPA CONSTRUCTION SITE STORMWATER GENERAL PERMIT AND SUBMITTING TO THE OHIO EPA FOR THEIR APPROVAL, ALONG WITH THE DEVELOPMENT OF A SWP3, BEFORE CONSTRUCTION ACTIVITY CAN TAKE PLACE. THE SWP3 MUST ALSO BE REVIEWED AND APPROVED BY THE STARK SWCD BEFORE CONSTRUCTION ACTIVITY CAN TAKE PLACE.

(B) FOR PROJECTS LESS THAN ONE (1) ACRE OF TOTAL LAND-DISTURBANCE:



VII. TRAFFIC:**(A) MAINTAINING TRAFFIC:**

THE CONTRACTOR SHALL MAINTAIN TRAFFIC ADJACENT TO AND THROUGH THE PROJECT AS DESCRIBED BELOW AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE OHIO DEPARTMENT OF TRANSPORTATION MANUAL OF CONSTRUCTION AND MATERIALS SPECIFICATIONS ITEM 614 MAINTAINING TRAFFIC. THE CONTRACTOR SHALL FURNISH, MAINTAIN, AND REMOVE ALL SIGNS, FLAGS, FLAGMEN, WATCHMEN, BARRICADES, SIGN SUPPORTS, CONES, BARRELS, AND INCIDENTALS IN CONFORMANCE WITH THE MOST RECENT REVISIONS OF THE CURRENT EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. INTERFERENCE WITH VEHICULAR TRAFFIC SHALL BE KEPT TO A MINIMUM AT ALL TIMES. ALL OPEN TRENCHES AND EXCAVATIONS SHALL BE PROTECTED WITH DRUMS, BARRICADES, OR BARRIERS. ACCESS SHALL BE MAINTAINED AT ALL TIMES FOR EMERGENCY AND FIRE DEPARTMENT VEHICLES.


ANY TEMPORARY ROADWAY CLOSING MUST BE APPROVED IN WRITING BY THE CITY TRAFFIC ENGINEER AND ANY OTHER PUBLIC AGENCY HAVING JURISDICTION. THE CONTRACTOR SHALL NOTIFY THE TRAFFIC ENGINEER AT LEAST 72 HOURS IN ADVANCE OF ANY SUCH CLOSINGS FOR PUBLICATION AND EMERGENCY AGENCY NOTIFICATION.

(B) RESIDENTIAL AND BUSINESS AREAS:

THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL RESIDENCES AND BUSINESSES DURING CONSTRUCTION. IN THE EVENT A DRIVE ACCESS NEEDS TO BE CLOSED, THE CONTRACTOR SHALL GIVE NOTICE OF CLOSURE AND DURATION TO THE PROPERTY OWNER 24 HOURS IN ADVANCE. CONTRACTOR SHALL ARRANGE FOR ALTERNATE PARKING AND REASONABLE ACCESS FOR THOSE PROPERTY OWNERS AFFECTED BY DRIVE CLOSURES.

(C) EXISTING STREET NAME AND TRAFFIC CONTROL SIGNS:

WHERE WORK REQUIRES THE MOVEMENT OF EXISTING SIGNS (STOP SIGNS, SPEED LIMIT SIGNS, NO PARKING SIGNS, ETC.). THE CONTRACTOR IS REQUIRED TO MAINTAIN THE FUNCTION OF ALL TRAFFIC CONTROL SIGNS. ALL SIGNS REMOVED BY THE CONTRACTOR SHALL BE STORED ON SITE AND REINSTALLED BY THE CONTRACTOR.

(D) NEW STREET NAME & TRAFFIC CONTROL SIGNS: 

~~ALL STREET NAME AND TRAFFIC CONTROL SIGNS SHALL COME COMPLETE AND BE MADE IN ACCORDANCE WITH THE CITY OF CANTON SIGN AND PAINT DEPARTMENT SPECIFICATIONS. GENERALLY, ALL SIGNS SHALL HAVE III-INTENSITY SHEETING AND BE MADE WITH .080-56/52 ALUMINUM. STREET NAME SIGNS SHALL BE MADE WITH WHITE UPPER AND LOWER CASE LETTERING ON GREEN BACKGROUND USING 9" BLANKS, BE DOUBLED SIDED W/RADIUS CORNERS AND HAVE 6" NAME AND 3" SUFFIXES. ALL SIGN RELATED HARDWARE IS TO BE INCLUDED, SUCH AS 6" HEAVY DUTY U-CHANNEL CAPS AND STREET NAME CROSSES.~~

~~FOR SUBDIVISION DEVELOPMENTS, ALL PERMANENT STREET NAME SIGNS AND TRAFFIC CONTROL SIGNS SHALL BE FURNISHED AND INSTALLED BY THE DEVELOPER/CONTRACTOR.~~

(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 BEARS 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.

REVISIONS/COMMENTS:

-  ANY REFERENCE TO "THE CITY ENGINEER" WITHIN THE GENERAL NOTES SHALL MEAN THE CANTON WATER DEPARTMENT SUPERINTENDENT.
-  NOT APPLICABLE TO THIS PROJECT
-  REFER TO SECTION VIII. WATER MAIN/SERVICES

VIII. WATER MAIN / 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.
- MAINS – WATER MAINS SHALL BE CLASS 52 (8" AND UNDER), CLASS 53 (12") OR CLASS 54 (OVER 12") DUCTILE IRON, MEETING AWWA C151 WITH PUSH JOINTS. THE OUTSIDE SURFACE OF ALL DUCTILE IRON PIPE, FITTINGS AND APPURTENANCES SHALL BE SHOP COATED WITH ASPHALTIC 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 AS DIRECTED. THE CONTRACTOR SHALL HAVE SUFFICIENT COATING MATERIALS AVAILABLE AT THE JOB SITE PRIOR TO LAYING THE PIPE. THE INTERIOR OF ALL PIPES AND FITTINGS SHALL BE LINED WITH CEMENT MORTAR AND SEAL COATED IN COMPLETE CONFORMANCE WITH AWWA C104, OR THE LATEST REVISION.
- ALL DUCTILE IRON PIPE, INCLUDING FITTINGS, BENDS, TEES, VALVES AND APPURTENANCES BURIED UNDERGROUND, SHALL BE ENCASED WITH 8 MIL. POLYETHYLENE FILM CONFORMING TO AWWA C105.
- WHEN PLASTIC PIPE IS USED, A TRACER WIRE SHALL BE INSTALLED ON TOP OF THE PIPE.
 - THE TRACER WIRE SHALL BE #14 AWG COPPER CLAD STEEL WIRE WITH 30 MILS OF HIGH-DENSITY POLYETHYLENE (HDPE) INSULATION.
 - THE TRACER WIRE SHALL BE INSTALLED IN A CONTINUOUS FASHION WITH THE WIRE ON TOP OF THE WATER MAIN AND SECURE TO THE MAIN EVERY FIVE (5) FEET WITH TAPE.
 - THE TRACER WIRE SHALL BE BROUGHT TO THE SURFACE AT EVERY VALVE BOX AND/OR AS CALLED OUT IN THE DRAWINGS. TRACER WIRE SHALL BE BROUGHT TO THE SURFACE AT LEAST EVERY ONE THOUSAND (1,000) FEET.
 - IF THE WIRE COATING GETS DAMAGED, REPAIR DAMAGED COATING WITH ELECTRICAL TAPE.
 - THE TRACER WIRE SHALL PASS A CONTINUITY TEST BEFORE THE WATERLINE INSTALLATION IS ACCEPTED.
- THE MINIMUM COVER OVER WATER MAINS SHALL BE 4'-6" FROM GROUND SURFACE TO THE BARREL OF THE PIPE.
- PIPE LENGTHS MAY BE DEFLECTED AT THE JOINT, IF REQUIRED, AT ONE-HALF THE DEGREE RECOMMENDED BY THE MANUFACTURER.
- FITTINGS SHALL BE DUCTILE IRON AND BE RATED FOR 250 PSI WORKING PRESSURE IN ACCORDANCE WITH AWWA C110 OR AWWA C153. FITTINGS SHALL INCLUDE, BUT NOT LIMITED TO BENDS, TEES, SLEEVES, COUPLINGS, CROSSES, REDUCERS AND CAPS.
- ANY FITTINGS OR VALVES ADJACENT TO A TEE OR CROSS SHALL BE ANCHORED TO THE TEE OR CROSS WITH EITHER THE USE OF AN ANCHOR TEE OR ANCHOR CROSS AND/OR ANCHOR COUPLINGS.
- VALVES – THE ITEMS COVERED BY THIS SPECIFICATION SHALL MEET ALL APPLICABLE AWWA C509 OR C515 STANDARDS AND THE FOLLOWING: ALL VALVES SHALL BE NON-RISING STEM, IRON BODY, RESILIENT WEDGE DISC. THE DESIGN OF THE THRUST COLLAR SHALL BE SUCH THAT THE THRUST COLLAR IS SEALED FROM LINE PRESSURE BY MEANS OF AN "O" RING SEAL. ALL VALVES SHALL BE FURNISHED WITH A TWO (2) INCH SQUARE OPERATING NUT, OPEN RIGHT. ALL VALVES SHALL BE FURNISHED WITH MECHANICAL JOINT END CONNECTIONS. THE STEM SHALL BE PROTECTED FROM EXTERNAL GRIT BY A WEATHER SHIELD AND AN UPPER "O" RING. STEM SHALL BE LUBRICATED. GATE COATING SHALL HAVE A MINIMUM THICKNESS OF 10 MILS. VALVE SHALL BE TESTED AT THE RATED WORKING PRESSURE OF 250 PSI WITH NO LEAKAGE. SHELL TEST OF 500 PSI SHALL BE APPLIED TO BODY WITH VALVE IN THE OPEN POSITION WITH NO LEAKAGE THROUGH THE METAL, STEM SEALS OR JOINTS. VALVE MUST HAVE TRADITIONAL STUFFING BOX. ALL BOLTING MATERIAL IN THE THRUST COLLAR AND BONNET SHALL BE #316 SS BOLTS. ALL VALVES WITH ACCESSORIES PACK (FLANGES, RUBBERS, NUTS, BOLTS)
- ALL VALVE BOXES SHALL BE HEAVY DUTY, THREE (3) PIECE SCREW TYPE, WITH "WATER" LIDS.
- FLUSHING AND DISINFECTION OF WATER MAINS SHALL BE IN ACCORDANCE WITH AWWA C651.
- ALL WATER LINE PRESSURE TESTING SHALL CONFORM TO AWWA C600.
- WATER MAINS SHALL BE INSTALLED AND BACKFILLED PER O.D.O.T. ITEM 638.
- WATER LINES 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 SHALL 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 RESTRAINED. POURED-IN-PLACE CONCRETE THRUST BLOCKS SHALL ALSO BE PROVIDED AT/FOR EACH BENDS, FITTING, 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. WHEN DIRECTED BY THE CITY, TIE RODS ARE TO BE 3/4 INCH DIAMETER. TWO TIE RODS ARE REQUIRED FOR AN 8 INCH PIPE, AND FOUR TIE RODS ARE REQUIRED FOR 12 INCH AND GREATER PIPE.
- IN ADDITION TO THE RESTRAINT OF ALL BENDS, FITTINGS, TEES, VALVES, DEAD ENDS, ETC., THE CONTRACTOR SHALL ALSO SECURE/RESTRAIN ALL JOINTS FOR AT LEAST THREE (3) PIPE JOINTS (50 LF MIN.) BEYOND EACH DEAD END, BEND, FITTING, VALVE, TEE, ETC. UTILIZING MEGALUGS, FIELD LOK GASKETS, OR APPROVED EQUALS.
- THE CONTRACTOR SHALL PROVIDE 18" VERTICAL CLEARANCE BETWEEN PROPOSED WATERLINES AND ANY SANITARY OR STORM SEWERS. WHEN 18" CLEARANCE CANNOT BE OBTAINED:
 - FOR STORM SEWERS, CONCRETE ENCASE THE STORM SEWER PIPE, 6 FT. ON EACH SIDE OF WATER MAIN.
 - FOR SANITARY SEWERS, REPLACE THE SANITARY SEWER PIPE WITH PVC C900 PIPE, 10 FT. ON EACH SIDE OF WATER MAIN. APPROVED COUPLINGS SHALL BE USED TO TIE ONTO THE EXISTING SEWER.
 THE CONTRACTOR SHALL MAINTAIN TEN (10) FOOT HORIZONTAL CLEARANCE BETWEEN WATERLINES/SERVICES AND SANITARY OR STORM SEWERS.
- HYDRANTS – THE FIRE HYDRANT SETTING SHALL INCLUDE THE HYDRANT, ANCHOR TEE, VALVE, VALVE BOX, 6 INCH DUCTILE IRON (CLASS 52) PIPING AND ALL FITTINGS NEEDED FOR PROPER INSTALLATION TO FINAL GRADE. 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 SHALL BE INSTALLED WITH THE PUMPER NOZZLE FACING THE STREET. ALL FIRE HYDRANT THREADS SHALL BE LUBRICATED WITH A FOOD GRADE LUBRICANT AND OPERATED UPON INSTALLATION.
- CUT-IN SLEEVES FOR TIE-IN TO EXISTING WATER MAINS SHALL BE SMITH BLAIR 441 SLEEVES WITH #316 SS BOLTS.
- ALL WATER TAPS AND SERVICES MUST BE INSTALLED BEFORE ANY PAVEMENT FOR THE PROPOSED ROADWAY HAS BEEN PLACED. THE CONTRACTOR SHALL MAKE ALL SERVICE TAPS ON THE WATER MAIN.
- THE WATER TAPS AND SERVICES THAT ARE SHOWN ON THE PLANS ARE FOR REPRESENTATION PURPOSE ONLY. PRIOR TO MAKING THE TAP, THE CONTRACTOR SHALL CONTACT THE HOMEOWNER TO VERIFY THE LOCATION OF THEIR EXISTING WELL AND SHALL ADJUST THE TAP LOCATION ACCORDINGLY. IF THE HOMEOWNER IS NOT HOME AND THE CONTRACTOR CAN NOT CONTACT THEM, THEN THE CONTRACTOR SHALL LEAVE A DOOR HANGER (OR SIMILAR) AT THE RESIDENCE. THE DOOR HANGERS SHALL BE PREPARED BY THE CONTRACTOR AND THE VERBIAGE ON THE DOOR HANGERS SHALL BE APPROVED BY THE CANTON WATER DEPARTMENT PRIOR TO HANDING OUT. IF THE HOMEOWNER CAN NOT BE CONTACTED AFTER SEVERAL "DOCUMENTED" ATTEMPTS, THEN THE TAP LOCATION SHALL BE CENTERED ON THE RESIDENCE.
- THE PROPOSED WATER SERVICES AND TAPS SHALL BE 1" UNLESS NOTED OTHERWISE ON THE PLANS.
- TWO (2) 1" TAPS SHALL BE MADE FOR ALL DUPLEXES.
- ANY SERVICE, OR WATERLINE 2" AND UNDER, TO THE FAR SIDE OF THE STREET SHALL BE PUSHED OR BORED UNDER THE PAVEMENT. TRENCHING ACROSS THE ROAD IS NOT PERMITTED.
- THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY PRECAUTIONS TO PROTECT AND MAINTAIN IN SERVICE, ANY EXISTING WATER MAINS AND/OR SERVICES 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 HOPE TUBING, CTS, PE4710. 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:
 - 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.
- POLYETHYLENE WATER MAIN AND SERVICE TUBING 2" AND UNDER SHALL BE COPPER TUBE SIZE, SDR 9, WITH A MINIMUM PRESSURE CLASS OF 200 PSI AND MEET STANDARDS ASTM-D2737 PE4710 AND AWWA C901. THE ACCEPTABLE TUBING IS CP CHEM PERFORMANCE PIPE DRISCOPEX 5100-ULTRA-LINE, CHARTER PLASTICS INC. BLUE ICE, ENDOT ENDOPURE AND ADS POLYFLEX.

- THE PROPOSED FACILITIES SHALL MAINTAIN A MINIMUM 35 PSI PRESSURE DELIVERED TO THE CURB STOP DURING NORMAL OPERATING CONDITIONS.
- A MINIMUM PRESSURE OF 20 PSI AT GROUND LEVEL SHALL BE MAINTAINED AT ALL POINTS IN THE DISTRIBUTION SYSTEM UNDER ALL CONDITIONS OF FLOW.
- BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS.
- WHEN AN EXISTING WATER MAIN MUST BE SHUT DOWN TO PERFORM REQUIRED WORK, THE CONTRACTOR SHALL NOTIFY THE PROPERTIES TO BE AFFECTED A MINIMUM OF 24 HOURS IN ADVANCE 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 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 SURROUNDING PAVEMENT OR FINISHED SURFACE TREATMENTS WHEN THE PROJECT IS COMPLETED.
- ANY DIGGING WITHIN THE RIGHT-OF-WAY OF ANY STREET REQUIRES A ROAD OPENING PERMIT. PLEASE CONTACT THE APPROPRIATE GOVERNMENTAL ENTITY FOR INFORMATION REGARDING THE PERMITTING PROCESS AND/OR FEES DUE.
- THE CONTRACTOR SHALL REPLACE ANY TRAFFIC SIGNAL LOOP DETECTOR WIRE DAMAGED DURING THE WATERLINE INSTALLATION. THIS COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
- THE CONTRACTOR SHALL REPLACE ANY ROADWAY PAVEMENT MARKINGS DAMAGED OR REMOVED DURING THIS PROJECT. THE PAVEMENT MARKINGS SHALL BE PER THE GOVERNING AUTHORITY'S SPECIFICATIONS. THIS COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
- THE CONTRACTOR SHALL REPLACE ANY PRIVATE IRRIGATION SYSTEMS AND/OR UNDERGROUND ELECTRIC FENCES THAT ARE DAMAGED OR REMOVED DURING THE WATERLINE CONSTRUCTION. THIS COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
- VALVES THAT ARE CALLED OUT TO BE ABANDONED SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO ABANDON EXISTING WATER VALVES. THIS ITEM SHALL ALSO INCLUDE ANY NECESSARY EXCAVATION AND BACKFILL REQUIRED. VALVES SHALL BE CLOSED AND HAVE THE TOP 6" OF THE CASTING REMOVED. VALVES IN PAVEMENT SHALL BE FILLED WITH CONCRETE WITH THE TOP 6" MATCHING THE EXISTING PAVEMENT COMPOSITION. VALVES IN YARD AREA SHALL BE FILLED WITH SAND.
- FIRE HYDRANTS THAT ARE CALLED OUT TO BE REMOVED SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO REMOVE THE FIRE HYDRANT, HYDRANT VALVE AND PLUG THE HYDRANT TEE.
- FOR WATERLINES CALLED OUT TO BE ABANDONED, THE CONTRACTOR SHALL PLUG AND ABANDON THE EXISTING WATERLINE WITH A DUCTILE IRON PLUG OR AS DIRECTED BY THE CANTON WATER DEPARTMENT.
- REMOVAL OF ANY EXISTING THRUST BLOCKS WILL BE CONSIDERED INCIDENTAL TO THE OVERALL PROJECT COST.

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.




X. DOMINION EAST OHIO (DEO) NOTES:

- 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 HUMRICHOUER (330-478-3757).
- DEO = DOMINION ENERGY OHIO, 1-800-362-7557.

XI. ENVIRONMENTAL PROTECTION MEASURES:**(A) PROHIBITED CONSTRUCTION ACTIVITIES:**

- DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL OR TREES, BRUSH AND OTHER DEBRIS IN ANY STREAM CORRIDOR, FLOOD PLAIN, ANY WETLANDS, ANY SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS EVEN WITH THE PERMISSION OF THE PROPERTY OWNER.
- STOCKPILING MATERIALS OR STORING CONSTRUCTION EQUIPMENT AND VEHICLES IN ENVIRONMENTALLY SENSITIVE AREAS, INCLUDING WITHIN THE DRIPLINE OF TREES, TO REMAIN OR ON PROPERTY, PUBLIC OR PRIVATE, NOT SPECIFIED FOR SUCH PURPOSES ON THE PLANS.
- INDISCRIMINATE, ARBITRARY OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAMS OR STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS.
- PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS DIRECTLY INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM SEWERS; ALL SUCH WATER MUST BE PROPERLY FILTERED OR SETTLED TO REMOVE SILT PRIOR TO RELEASE.
- DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE AND OTHER HARMFUL WASTE INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS, OR INTO NATURAL OR MAN-MADE CHANNELS.
- PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF ANY STREAM.
- DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA.
- OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT.
- DISCHARGING INJURIOUS SILICA DUST CONCENTRATIONS INTO THE ATMOSPHERE RESULTING FROM BREAKING, CUTTING, CHIPPING, DRILLING, BUFFING, GRINDING, POLISHING, SHAPING OR SURFACING CLOSER THAN 200 FEET TO PLACES OF RESIDENCES OR COMMERCIAL, PROFESSIONAL, QUASI-PUBLIC OR PUBLIC PLACES OF HUMAN OCCUPATION.
- RUNNING WELL POINT OR PUMP DISCHARGE LINES THROUGH PRIVATE PROPERTY OR PUBLIC PROPERTY AND RIGHTS-OF-WAY WITHOUT THE WRITTEN PERMISSION OF THE PROPERTY OWNER AND THE CONSENT OF THE PROJECT ENGINEER.
- OPERATIONS ENTAILING THE USE OF VIBRATORY HAMMERS OR COMPACTORS OUTSIDE THE HOURS OF 8:00 A.M. AND 5:00 P.M., OR OUTSIDE THE HOURS ALLOWED FOR CONSTRUCTION BY LOCAL ORDINANCES OR REGULATIONS.
- CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE OR BOULEVARD WITHOUT THE PRIOR CONSENT OF MUNICIPAL OFFICIALS AND THE PROJECT ENGINEER, AND CLOSING CLEAR ACCESS BY (1) FIRE PROTECTION EQUIPMENT AND EMERGENCY VEHICLES; (2) THE PUBLIC TO ANY COMMERCIAL OR PROFESSIONAL PLACE OF BUSINESS, QUASI-PUBLIC OR PUBLIC ESTABLISHMENT, OR PLACE OF RESIDENCE; OR, (3) VEHICLES TO DRIVEWAYS WITHOUT PROVIDING ALTERNATE ACCESS.

REVISIONS/COMMENTS:

-  ANY REFERENCE TO "THE CITY ENGINEER" WITHIN THE GENERAL NOTES SHALL MEAN THE CANTON WATER DEPARTMENT SUPERINTENDENT.
-  NOT APPLICABLE TO THIS PROJECT
-  REFER TO SECTION VIII. WATER MAIN/SERVICES

XI. ENVIRONMENTAL PROTECTION MEASURES (CONT.):**(B) EROSION AND SEDIMENTATION CONTROL:**

- WORK MUST COMMENCE ONLY AFTER IT IS AUTHORIZED BY THE APPROPRIATE STORM WATER POLLUTION PREVENTION PLAN/NOTICE OF INTENT AND, IF APPLICABLE, THE LOCAL STORM WATER REGULATORY AUTHORITY.
- INSTALL EROSION AND SEDIMENT CONTROL MEASURES, AS APPROPRIATE, ACCORDING TO OHIO EPA'S STORM WATER TECHNICAL ASSISTANCE RAINWATER AND LAND DEVELOPMENT MANUAL STANDARDS AND SPECIFICATIONS (FORMERLY PRODUCED AND REGULATED BY ODNR) OR EQUIVALENT FOR TECHNIQUES. THESE MEASURES ARE TO BE MAINTAINED IN EFFECTIVE WORKING CONDITION DURING CONSTRUCTION AND UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
(HTTP://EPA.OHIO.GOV/DSW/STORM/TECHNICAL_GUIDANCE.ASPX)
- SITE CLEARING AND GRUBBING MUST COMMENCE ONLY WHEN THE CONTRACTOR IS PREPARED TO START CONSTRUCTION. TO MINIMIZE DISTURBANCE, REMOVE ONLY THOSE TREES, SHRUBS, AND GRASSES THAT MUST BE REMOVED FOR CONSTRUCTION; PROTECT THE REST TO PRESERVE THEIR AESTHETIC, HABITAT AND EROSION CONTROL BENEFITS.
- PROPERLY INSTALLED SEDIMENT CONTROL BARRIERS (E.G., SILT FENCES, STRAW BALES, ETC.) MUST BE LOCATED ON SLOPES, ALONG STREAMS AND DRAINAGE WAYS, AROUND DRAINAGE STRUCTURES, AND ANYWHERE ELSE THAT EXPOSED SOIL COULD RUN OFF AND CREATE SEDIMENT PROBLEMS. ALL SEDIMENT CONTROL MEASURES (INCLUDING SEDIMENT BASINS AND DIVERSION CHANNELS) MUST BE IN PLACE PRIOR TO STARTING CONSTRUCTION.
- IF APPLICABLE, DIVERSION CHANNELS MUST BE CONSTRUCTED AROUND THE CONSTRUCTION SITE TO COLLECT RUNOFF AND PREVENT SILT AND OTHER ERODED MATERIALS FROM ENTERING LOCAL DRAINAGE COURSES. DIVERSION CHANNELS MUST BE STABILIZED BY SEEDING OR RIP-RAP OR LINED WITH PLASTIC, AND FLOW TO TEMPORARY SEDIMENTATION BASINS.
- STAGING AREAS MUST NOT BE SITED IN LOCATIONS THAT REQUIRE EXCESSIVE CLEARING OR THAT ARE CLOSE TO STREAM BANKS, WETLANDS OR OTHER WATER RESOURCES. IF THIS SITUATION IS UNAVOIDABLE, APPROVAL OF THE STAGING AREA BY OHIO EPA, DIVISION OF ENVIRONMENTAL AND FINANCIAL ASSISTANCE IS NECESSARY.
- EXISTING TOPSOIL THAT IS TO BE REUSED MUST BE STOCKPILED AND REPLACED UPON FINAL GRADING. STOCKPILED TOPSOIL MUST BE PROTECTED WITH SILT BARRIERS AND TEMPORARY SEEDING OR A COVERING SUCH AS ANCHORED STRAW MULCH.
- EXCESS SOIL THAT IS STOCKPILED MUST BE EITHER REMOVED TO A LOCATION THAT IS NOT IN A SURFACE WATER, INCLUDING A WETLAND OR PERMANENTLY STABILIZED WITHIN 15 DAYS OF THE COMPLETION OF CONSTRUCTION.
- EXCAVATED MATERIALS MUST BE STOCKPILED ON THE UPHILL SIDE OF TRENCHES ON FLAT GROUND THAT IS NOT IN A WETLAND OR OTHER SURFACE WATER.
- DISTURBED LAND EXPOSED LONGER THAN 15 DAYS MUST BE TEMPORARILY STABILIZED BY SEEDING AND MULCHING OR MULCHING ALONE.
- AS CONSTRUCTION IS COMPLETED, PERMANENTLY STABILIZE EACH DISTURBED AREA WITH PERENNIAL VEGETATION. IF FINAL GRADING AND SEEDING WILL NOT OCCUR WITHIN 30 DAYS, ALL DISTURBED AREAS MUST BE TEMPORARILY SEEDED AND/OR MULCHED IMMEDIATELY.
- FINAL GRADING MUST BE CONSISTENT WITH PRE-CONSTRUCTION TOPOGRAPHY TO MAINTAIN DRAINAGE AND AESTHETICS.
- NO MORE THAN 200 FEET OF TRENCH MUST BE OPEN AT ANY TIME. MINIMIZE THE AREA DISTURBED FOR TRENCH OPENING, LAYING OF PIPE AND BACKFILLING.
- ALL TRENCHES MUST BE BACKFILLED IMMEDIATELY AFTER PIPE INSTALLATION; COMPACT AND SEED AND/OR MULCH TRENCHES IN UNPAVED AREAS WITHIN 15 DAYS AFTER THEY HAVE BEEN OPENED TO REDUCE EROSION.
- LARGE-SCALE CONSTRUCTION MUST BE RESEDED IN STAGES TO PREVENT EROSION WHEN SEASONAL CONDITIONS PERMIT. WITHIN 15 DAYS AFTER A SPAN HAS BEEN COMPLETED, THE CONTRACTOR MUST PLACE ALL TOPSOIL, FINE GRADE, SEED, FERTILIZE, AND MULCH ALL AREAS DISTURBED BY ACTIVITIES ASSOCIATED WITH THE CONSTRUCTION OF THAT SECTION OF PIPE.
- SLOPES EXCEEDING 15 PERCENT OR TENDING TO BE UNSTABLE MUST BE STABILIZED WITH WATER DIVERSION BERMS, SODDING, OR THE USE OF JUTE OR EXCELSIOR BLANKETS.
- WHEN BORROW MATERIAL IS OBTAINED FROM NON-COMMERCIAL SOURCES, CONTROL EROSION CONTROLS OF THE BORROW SITE DURING CONSTRUCTION TO PREVENT SEDIMENT FROM ENTERING STREAMS OR OTHER WATER BODIES. WASTE OR DISPOSAL AREAS AND CONSTRUCTION ROADS MUST BE LOCATED AND CONSTRUCTED IN A MANNER WHICH PREVENTS SEDIMENT FROM ENTERING STREAMS. TEMPORARY EROSION CONTROL BARRIERS AND LIMITED SITE CLEARING MUST BE USED AS NEEDED. BORROW MATERIAL MUST BE CLEAN, NON-CONTAMINATED MATERIAL THAT WOULD OTHERWISE BE DISPOSED IN A SOLID WASTE OR C&DD LANDFILL.

- UNPAVED AREAS MUST BE WET DOWN AS NECESSARY USING WATER OR ANOTHER ENVIRONMENTALLY BENIGN SUBSTANCE DURING CONSTRUCTION TO MINIMIZE DUST.
- IF WORK IS SUSPENDED FOR ANY REASON, THE CONTRACTOR MUST MAINTAIN THE SOIL EROSION AND SEDIMENTATION CONTROLS IN GOOD OPERATING CONDITION DURING THE SUSPENSION OF WORK. ALSO, WHEN SEASONAL CONDITIONS PERMIT AND THE SUSPENSION OF WORK IS EXPECTED TO EXCEED A PERIOD OF ONE MONTH, THE CONTRACTOR MUST PLACE TOPSOIL, FINE GRADE, SEED, FERTILIZE, AND MULCH ALL DISTURBED AREAS LEFT EXPOSED WHEN WORK IS STOPPED.
- WHEN WORKING ADJACENT TO A WATERWAY, THE CONTRACTOR MUST MAINTAIN A BUFFER ZONE OF UNDISTURBED VEGETATION BETWEEN THE WORK AREA AND THE WATERWAY (50FT). IF A BUFFER ZONE OF VEGETATION CANNOT PREVENT SILTATION OF THE WATERWAY, SILT BARRIERS MUST ALSO BE INSTALLED BY THE CONTRACTOR IN THESE AREAS TO PREVENT SEDIMENT-LADEN RUNOFF FROM ENTERING THE WATERWAY.
- MATERIAL EXCAVATED FROM BORING PITS (FOR JACK AND BORE LOCATIONS) MUST BE SURROUNDED WITH SILT BARRIERS AT SUFFICIENT DISTANCE TO ENSURE THEIR INTEGRITY AND EFFECTIVENESS OF PREVENTING EROSION OF THE EXCAVATED PIT MATERIAL. ALL TRENCH SPOILS MUST BE STOCKPILED ON THE SIDE OF THE TRENCH AWAY FROM THE WATERWAY, AND A LINE OF SILT BARRIERS MUST BE ESTABLISHED ALONG THE EDGE OF CONSTRUCTION ON THE CONTOUR BETWEEN THE TRENCH AND THE WATERWAY.
- ON A DAILY BASIS, CONTRACTOR MUST REMOVE ALL MUD, SOIL, AND DEBRIS THAT MAY BE TRACKED ONTO EXISTING STREETS, DRIVES, OR WALKS BY HIS EQUIPMENT OR THAT OF SUBCONTRACTORS OR SUPPLIERS.
- ALL MATERIALS TO BE DISPOSED OF OFF-SITE MUST BE DISPOSED OF IN AN ENVIRONMENTALLY SOUND MANNER IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. NO EXCESS MATERIALS ARE TO BE DISPOSED OF IN ANY WETLAND, FLOOD PLAIN, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS. EROSION CONTROL MEASURES AT THE DISPOSAL SITE MUST BE INSTALLED AND MAINTAINED UNTIL DISPOSAL IS COMPLETE AND THE DISPOSAL SITE IS PERMANENTLY STABILIZED. PLEASE NOTE THAT THE CONTRACTOR STILL BEARS THIS RESPONSIBILITY IF EXCAVATED SOIL IS DONATED.

(C) TRAFFIC CONTROL:

- AT LEAST ONE LANE OF TRAFFIC MUST BE MAINTAINED ALONG THE TRAVEL ROUTE TO THE CONSTRUCTION SITE.
- ACCESS FOR EMERGENCY VEHICLES MUST BE MAINTAINED AT ALL TIMES.
- TRENCHES MUST NOT BE LEFT OPEN AT THE END OF A WORK DAY, WHERE PRACTICAL; ANY OPEN TRENCH MUST BE PROPERLY IDENTIFIED AND BARRICADED FOR SAFETY PURPOSES.
- THE CONTRACTOR MUST PROVIDE, ERECT AND MAINTAIN ALL NECESSARY BARRICADES, LIGHTS, REFLECTORS, WARNING SIGNS, FLAG PERSON(S), AND ALL OTHER APPROPRIATE MEASURES NECESSARY FOR THE PROTECTION OF THE WORK SITE AND FOR PUBLIC SAFETY.
- PRIOR TO CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE OR BOULEVARD, THE CONTRACTOR MUST HAVE CONSENT FROM LOCAL OFFICIALS AND THE PROJECT ENGINEER.

(D) AIR POLLUTION/NOISE CONTROL:

- CONSTRUCTION NEAR RESIDENTIAL OR COMMERCIAL AREAS MUST BE LIMITED TO DAYTIME HOURS.
- CONSTRUCTION EQUIPMENT MUST BE PROVIDED WITH INTAKE SILENCERS AND MUFFLERS, AS REQUIRED BY SAFETY STANDARDS.
- ALL CONSTRUCTION VEHICLES MUST BE EQUIPPED WITH PROPER EMISSIONS CONTROL EQUIPMENT.
- ALL EQUIPMENT AND MACHINERY MUST BE MAINTAINED TO MINIMIZE EXHAUST EMISSIONS AND NOISE.

(E) TREES/VEGETATION PROTECTION:

- THE PROJECT IS LOCATED WITHIN THE RANGE OF THE INDIANA BAT (MYOTIS SODALIS), A FEDERALLY-ENDANGERED SPECIES, AND THE NORTHERN LONG-EARED BAT (MYOTIS SEPTENTRIONALIS), A SPECIES THAT IS FEDERALLY LISTED AS THREATENED. BOTH SPECIES ARE PROTECTED UNDER THE ENDANGERED SPECIES ACT. UNAVOIDABLE CUTTING OR TRIMMING OF TREES WITH SUITABLE ROOSTING AND BROOD REARING HABITAT FOR THE BAT (TREE SPECIES WITH EXFOLIATING BARK, LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES OR CAVITIES), MUST BE PERFORMED ONLY BEFORE APRIL 1 OR AFTER SEPTEMBER 30 WHEN THE BAT WOULD NOT BE USING SUCH HABITAT. IF THIS TIME FRAME CANNOT BE FOLLOWED, THE U.S. FISH & WILDLIFE SERVICE (614-416-8993) MUST BE CONTACTED PRIOR TO CUTTING FOR GUIDANCE TO CONDUCT AN EMERGENCE SURVEY TO DOCUMENT THE ABSENCE OR PRESENCE OF THE BATS.

- TREE REMOVAL MUST BE LIMITED TO THAT NECESSARY FOR CONSTRUCTION AND MUST BE EXPLICITLY IDENTIFIED AND APPROVED BY THE PROJECT ENGINEER.
- TREE REMOVAL WILL BE PERFORMED IN A MANNER SO AS NOT TO INJURE THE REMAINING TREES.
- FOR PROJECTS WHERE TREE REMOVAL CANNOT BE CLEARLY IDENTIFIED PRIOR TO CONSTRUCTION, THE CONTRACTOR AND PROJECT ENGINEER MUST WALK THE PROJECT SITE TO DESIGNATE THE TREES THAT ARE TO BE SAVED. TREES TO BE SAVED MUST BE CLEARLY MARKED BY PAINT WITH THE LETTER "S". TREES TO BE PROTECTED BY AN APPROPRIATE BARRIER MUST BE MARKED WITH AN "S" ENCLOSED WITH A CIRCLE.
- SELECTIVE PRUNING OF TREE LIMBS PRIOR TO INITIATION OF CONSTRUCTION MUST BE USED WHERE NECESSARY FOR OPERATION OF EQUIPMENT.
- SOIL, HEAVY EQUIPMENT AND OTHER MATERIAL MUST NOT BE STORED NEXT TO OR WITHIN THE DRIP-LINE OF TREES. OPERATION OF EQUIPMENT IN THIS AREA MUST ALSO BE AVOIDED.
- PRESERVATION OF PRIVATE LANDSCAPING MUST TAKE PRECEDENCE OVER REMOVAL. IF REMOVAL OR DAMAGE IS UNAVOIDABLE, EXISTING VEGETATION MUST BE REPAIRED OR REPLACED "IN-KIND" UNLESS THE PROPERTY OWNER SPECIFIES OTHERWISE. IF TREES/SHRUBS CANNOT BE REPLACED IN THE SAME LOCATION DUE TO PROJECT LIMITATIONS, RELOCATION MUST BE CONSIDERED.
- WHEN TREES ARE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR MUST REPAIR ALL INJURIES TO BARK, TRUNKS, LIMBS AND ROOTS BY PROPERLY DRESSING, CUTTING, BRACING, OR COMPENSATORY PRUNING, USING ONLY TREE SURGERY METHODS, TOOLS AND MATERIALS.

(F) DEWATERING:

- ALL DEWATERING FLOWS ARE TO BE SETTLED IN SEDIMENTATION BASINS OR DIRECTED THROUGH FILTERING DEVICES BEFORE DISCHARGE TO STABILIZED SITES, SUCH AS STREAMS OR STORM SEWERS; NOT ONTO EXPOSED SOILS, STREAM BANKS OR ANY OTHER SITE WHERE THE FLOW COULD CAUSE EROSION.
- SEDIMENT FROM CONSTRUCTION OPERATIONS MUST NOT BE PERMITTED TO ENTER THE STORM SEWER SYSTEM. WHEN CONSTRUCTION OCCURS NEAR STORM SEWER INLETS, EROSION CONTROL MEASURES SUCH AS INLET FILTERS AND STRAW BALES MUST BE USED TO PREVENT SEDIMENT FROM ENTERING THE STORM SEWERS. IF DEWATERING IS NECESSARY, FLOWS MUST BE FILTERED BEFORE ENTERING STORM DRAINS OR STREAMS.

(G) STREAM CROSSINGS:

- IN-STREAM WORK IS ALLOWED ONLY WITH THE APPROPRIATE AUTHORIZATIONS FROM THE U.S. ARMY CORPS OF ENGINEERS, OHIO EPA-DIVISION OF SURFACE WATER, OHIO DEPARTMENT OF NATURAL RESOURCES AND U.S. FISH AND WILDLIFE SERVICE.
- WHEN CLEARING VEGETATION PRIOR TO INITIATING STREAM CROSSING WORK, STREAMBANK TREES, SHRUBS, AND OTHER VEGETATION MUST BE LEFT IN PLACE TO HELP CONTROL EROSION; WHERE EQUIPMENT OPERATION REQUIRES TREE REMOVAL, STUMPS AND ROOTS ARE TO REMAIN IN PLACE TO HELP ANCHOR THE STREAMBANK.
- PRIOR TO THE STARTING ANY STREAM CROSSING WORK, SILT BARRIERS MUST BE PLACED ALONG THE BANKS WHERE VEGETATION REMOVAL HAS OCCURRED OR IS ANTICIPATED, OR EXPOSED SOIL EXISTS. SPOILS OR OTHER FILL MATERIALS ARE NOT TO BE STOCKPILED WITHIN 50 FEET OF THE STREAM.
- CONSTRUCTION WITHIN A STREAM MUST BE CONTINUED UNTIL COMPLETED. A STREAM CROSSING MUST NOT BE INITIATED UNLESS THE CONTRACTOR IS PREPARED TO FINISH THE WORK IMMEDIATELY, AND TIME AND WEATHER CONSTRAINTS HAVE BEEN PROVIDED FOR. RESTRICT STREAM CROSSING WORK TO PERIODS OF DRY WEATHER AND LOW-FLOW OR NO-FLOW CONDITIONS.
- RESTORATION MUST INCLUDE THE RE-ESTABLISHMENT OF CHANNEL CONTOURS AND BANK STABILIZATION, AND MUST START IMMEDIATELY AFTER THE CROSSING IS COMPLETED. STREAM BANKS MUST BE RESTORED TO THEIR ORIGINAL LINE AND GRADE, STABILIZED WITH MATERIALS SUCH AS EROSION CONTROL MATTING, AND REVEGETATED.
- WHEN USING OPEN CUT METHODS FOR LAYING SEWER PIPE OR WATER MAINS ACROSS INTERMITTENT OR VERY SMALL STREAMS:
 - THE STREAM CROSSING AND ASSOCIATED RESTORATION MUST BE PERFORMED WITHIN A 48-HOUR PERIOD.
 - THE STREAM CROSSING AND ASSOCIATED RESTORATION MUST BE PERFORMED WITHIN A ONE-WEEK (SEVEN DAY) PERIOD IF THE CROSSING INVOLVES TEMPORARY DIVERSION OF A SMALL TO MODERATE SIZE STREAM AND ENCASUREMENT OF THE SEWER IN CONCRETE.
 - CONSTRUCT A COFFER DAM TO KEEP THE STREAM FROM CONTINUALLY FLOWING THROUGH THE DISTURBED AREA. STAGE CONSTRUCTION SUCH THAT THE COFFERDAM IS CONFINED TO ONE-HALF OF THE CHANNEL AND IS COMPLETED AND STABILIZED BEFORE MOVING TO THE OTHER SIDE OF THE CHANNEL. COFFERDAM MATERIALS MUST BE CLEAN, NON-ERODIBLE MATERIAL APPROVED BY OHIO EPA-DIVISION OF SURFACE WATER AND THE U.S. ARMY CORPS OF ENGINEERS.

- MATERIAL EXCAVATED FROM THE TRENCH MUST BE PLACED AT LEAST 50 FT. FROM THE STREAM BANKS BEHIND ENTRENCHED SILT FENCE AND NOT IN FORESTED OR WETLAND AREAS, OR OTHER WATERS OF THE STATE.
- THE ONLY FILL PERMITTED IN THE CHANNEL IS CLEAN AGGREGATE STONE OR ROCK. NO SOIL OR OTHER FINE ERODIBLE MATERIAL MUST BE PLACED IN THE CHANNEL. THIS RESTRICTION INCLUDES ALL FILL OF TEMPORARY CROSSINGS, DIVERSIONS AND TRENCH BACKFILL WHEN PLACED IN FLOWING WATER. IF THE STREAM FLOW IS DIVERTED AWAY FROM CONSTRUCTION ACTIVITY, THE MATERIAL ORIGINALLY EXCAVATED FROM THE TRENCH MAY BE USED TO BACKFILL THE TRENCH.
- ACCEPTABLE FLOW DIVERSION PROCEDURES SUCH AS BYPASS PUMPING, TEMPORARY PARALLEL STREAM CHANNELS, COFFERDAMS, OR TEMPORARY DIKES MUST BE USED. THE DIVERSION PROCEDURE MUST BE CONDUCTED IN SUCH A FASHION TO PREVENT THE DISCHARGE OF ALL SPOILS, SILTS, CONSTRUCTION DEBRIS, OR EXCAVATED MATERIALS INTO THE STREAM WATER. THE COMPLETE CROSSING MUST NOT IMPEDE THE FLOW OF WATER OR CREATE AN IMPOUNDMENT OF WATER UPSTREAM OF THE CROSSING.
- THE WIDTH OF THE EASEMENT FOR THE STREAM CROSSING MUST BE RESTRICTED TO ONLY THAT NECESSARY TO PERFORM THE WORK.
- MATERIAL EXCAVATED FROM BORING PITS (FOR JACK AND BORE CROSSINGS) MUST BE SURROUNDED WITH PROPERLY INSTALLED AND MAINTAINED SILT FENCES OR HAY BALES TO PREVENT EROSION OF THE EXCAVATED PIT MATERIAL.
- CONSTRUCTION EQUIPMENT MUST BE KEPT OUT OF THE STREAM CHANNEL EXCEPT DURING ACTUAL PIPE INSTALLATION. EQUIPMENT SHOULD BE FITTED WITH BALLOON TIRES OR SOME OTHER METHOD TO DISTRIBUTE THE WEIGHT OF THE EQUIPMENT. CROSSING AND IN STREAM WORK SHOULD NOT BE IN RIFFLE AREAS.
- FOR HORIZONTALLY-DIRECTIONALLY BORED STREAM CROSSINGS, A FRAC-OUT CONTINGENCY PLAN AND ADHERENCE TO THE PLAN IS REQUIRED.

(H) ARCHAEOLOGICAL/HISTORICAL RESOURCES:

CONTRACTORS AND SUBCONTRACTORS ARE REQUIRED UNDER OHIO REVISED CODE SECTION 149.53 TO NOTIFY THE OHIO HISTORICAL SOCIETY AND THE OHIO HISTORIC SITE PRESERVATION BOARD OF ARCHAEOLOGICAL DISCOVERIES LOCATED IN THE PROJECT AREA, AND TO COOPERATE WITH THOSE ENTITIES IN ARCHAEOLOGICAL AND HISTORIC SURVEYS AND SALVAGE EFFORTS IF SUCH DISCOVERIES ARE UNCOVERED WITHIN THE PROJECT AREA.

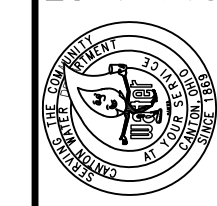
CONTACT: STATE HISTORIC PRESERVATION OFFICE
PHONE: (614) 298-2000

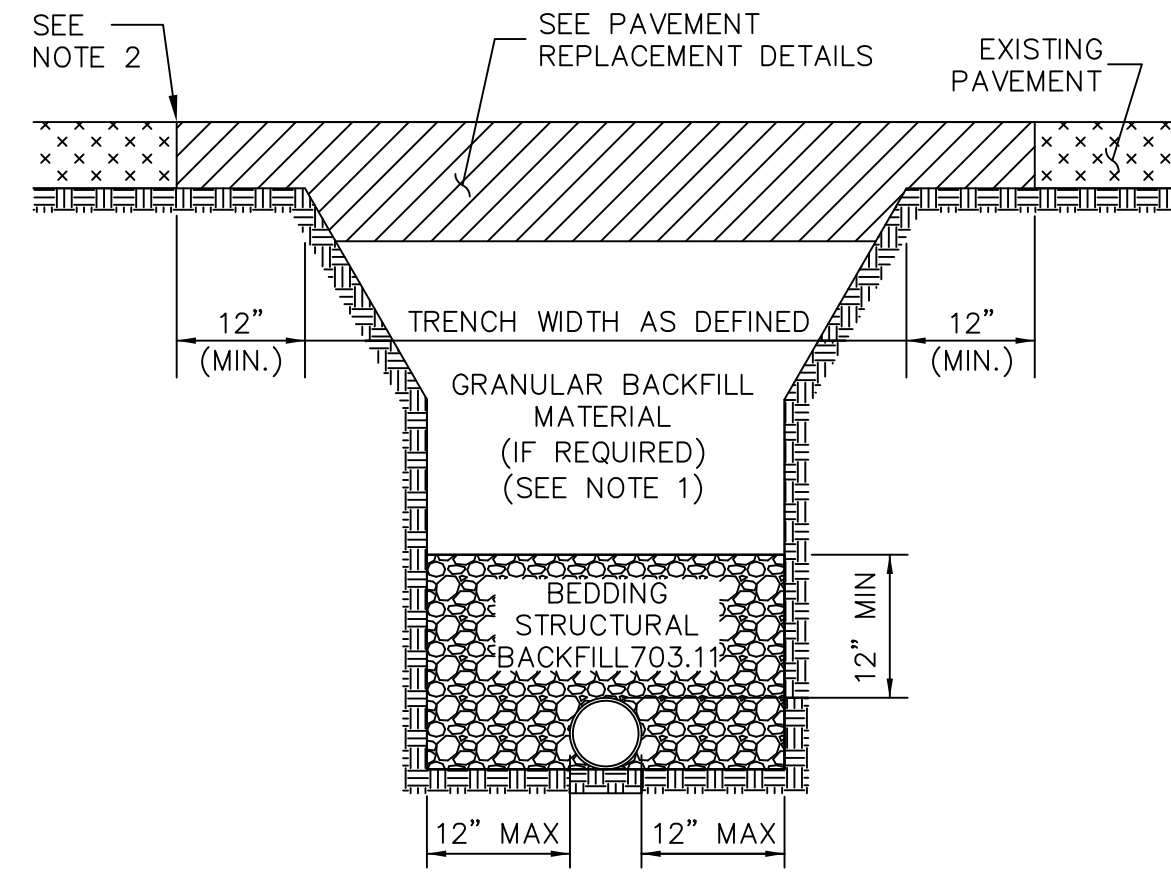
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GENERAL NOTES

CANTON SOUTH
WATERLINE EXTENSION

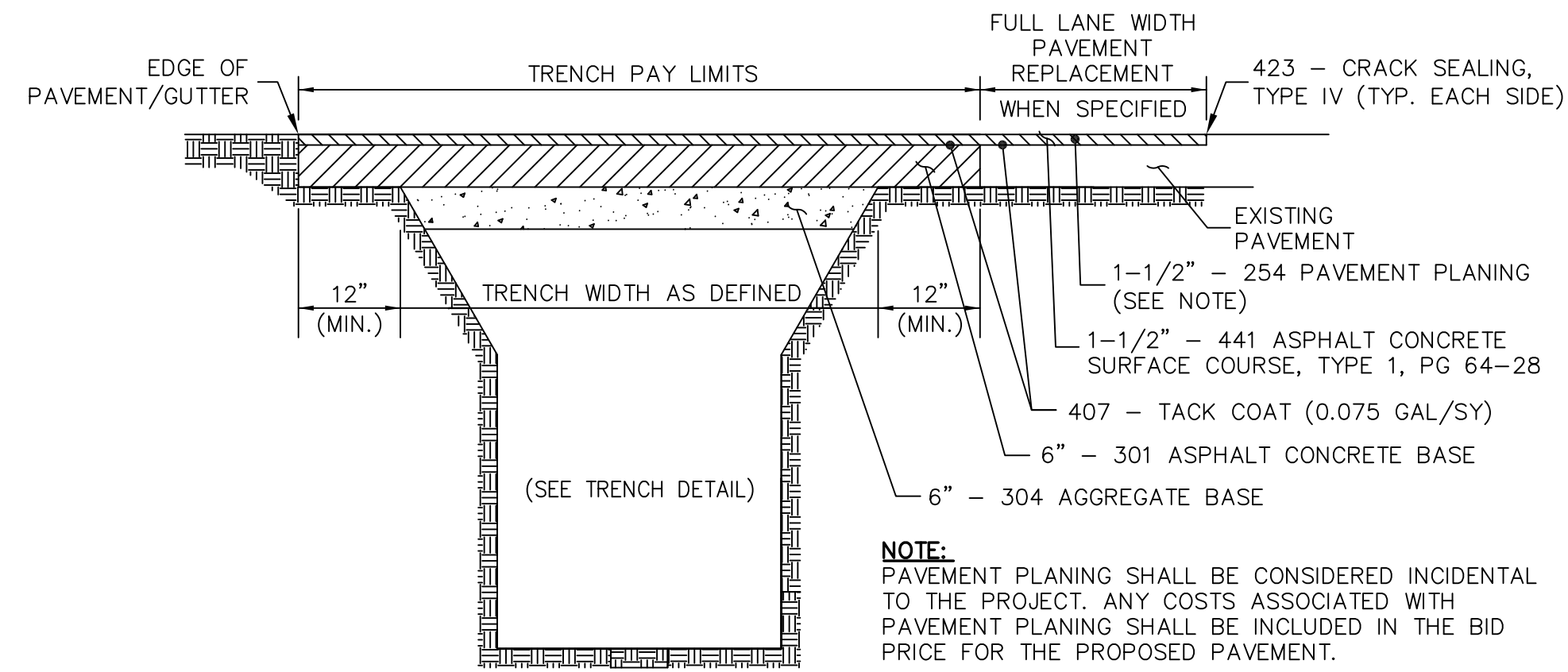
Plans Prepared By
The City of Canton
Water Department
2064 Hamburg Rd. N.E. • Canton, Ohio 44705
(330) 488-3310





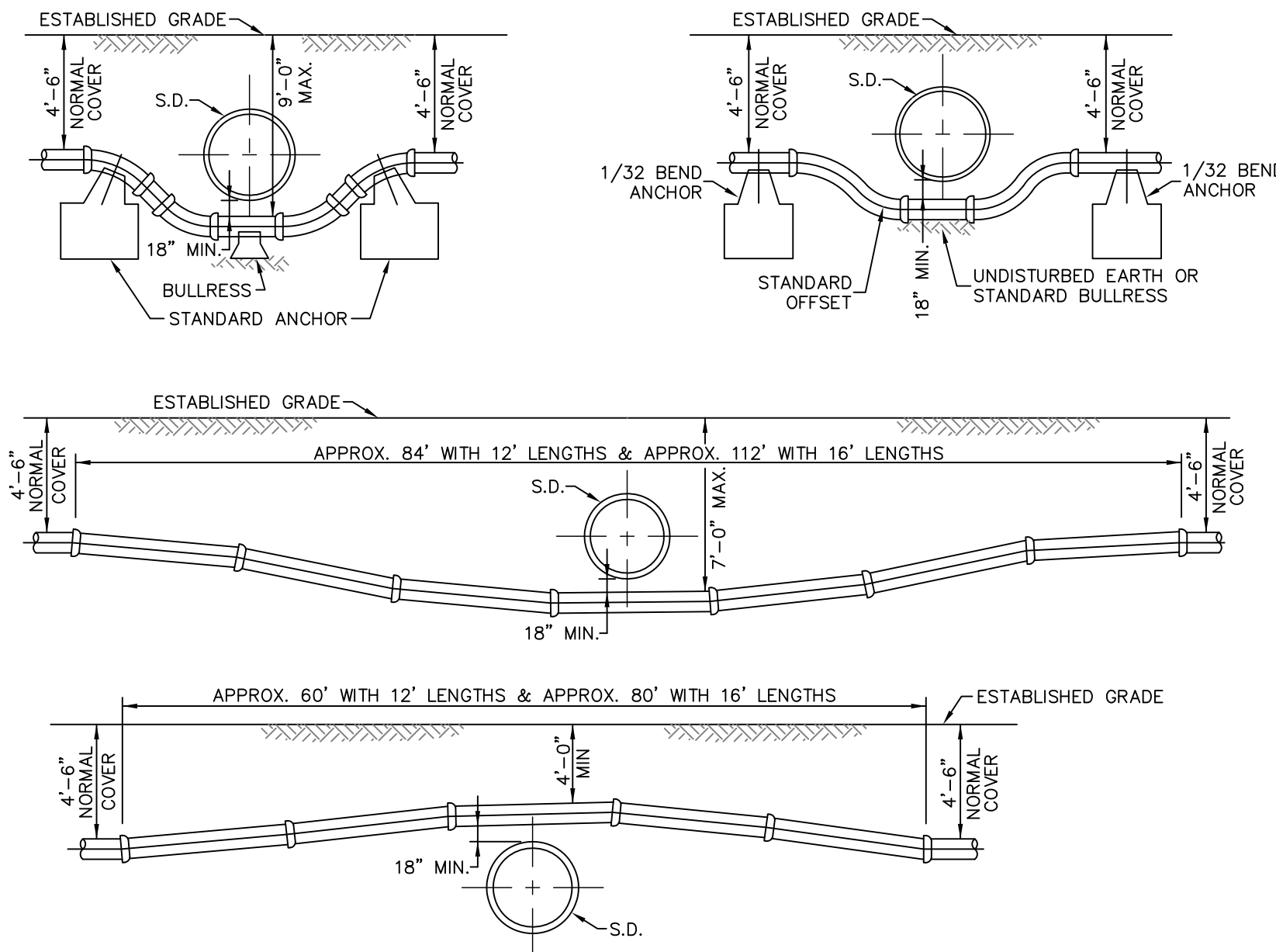
- NOTES:
1. CHECK WITH LOCAL AUTHORITY HAVING JURISDICTION WITHIN THE RIGHT-OF-WAY REGARDING BACKFILL REQUIREMENTS.
 2. SAW CUT EXISTING PAVEMENT, SEAL ASPHALT JOINT PER ODOT ITEM 423 - CRACK SEALING, TYPE IV. INCLUDE COST IN BID PRICE FOR THE PROPOSED PAVEMENT.
 3. IF ADJACENT PAVEMENT IS DAMAGED OR UNDERMINED DURING CONSTRUCTION, ADDITIONAL PAVEMENT SHALL BE SAW CUT AND REMOVED IN ORDER TO PROVIDE A SOUND PAVEMENT EDGE.
 4. IN THE EVENT THAT THE SAW CUT WOULD LIE WITHIN 3 FEET OF THE EDGE OF PAVEMENT OR FACE OF CURB, THE PAVEMENT REPLACEMENT SHALL EXTEND TO THE EDGE OF PAVEMENT OR FACE OF CURB.

TRENCH DETAIL FOR D.I.P.
(C175)

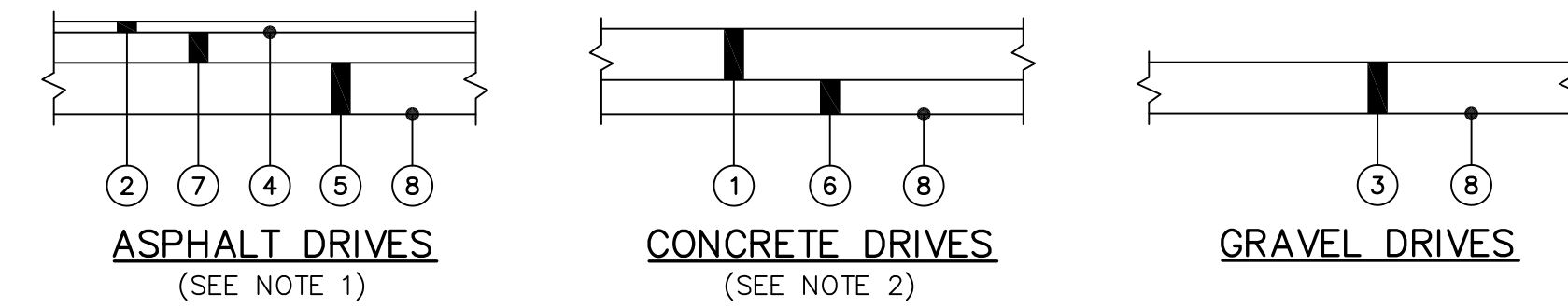


NOTE:
PAVEMENT PLANING SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. ANY COSTS ASSOCIATED WITH PAVEMENT PLANING SHALL BE INCLUDED IN THE BID PRICE FOR THE PROPOSED PAVEMENT.

PAVEMENT REPLACEMENT DETAIL - ROADWAY



WATER MAIN CROSSING STORM DRAIN
(C187)



- 1 ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT (6" FOR RESIDENTIAL, 7" FOR COMMERCIAL)
- 2 ITEM 441 - 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-28
- 3 ITEM 410 - 6" TRAFFIC COMPACTED SURFACE, TYPE 'C' (CRUSHED LIMESTONE)
- 4 ITEM 407 - TACK COAT (0.075 GAL/SY)
- 5 ITEM 304 - 6" AGGREGATE BASE
- 6 ITEM 304 - 4" AGGREGATE BASE
- 7 ITEM 301 - 3-1/2" ASPHALT CONCRETE BASE, PG 64-22
- 8 ITEM 204 - SUBGRADE COMPACTION (INCIDENTAL)

NOTES:

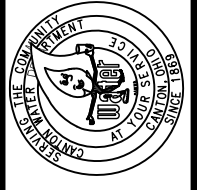
1. THE PAVEMENT REPLACEMENT SECTION TO BE USED FOR COMMERCIAL, ASPHALT DRIVES SHALL BE PER THE ROADWAY PAVEMENT SECTION.
2. IF THE CONCRETE DRIVE REPLACEMENT LIMITS FALL WITHIN FOUR (4) FEET OF AN EXISTING JOINT, THEN THE CONCRETE REPLACEMENT LIMITS SHALL EXTEND TO THE NEAREST JOINT.

PAVEMENT REPLACEMENT DETAIL
RESIDENTIAL DRIVES

MISCELLANEOUS DETAILS

CANTON SOUTH WATERLINE EXTENSION

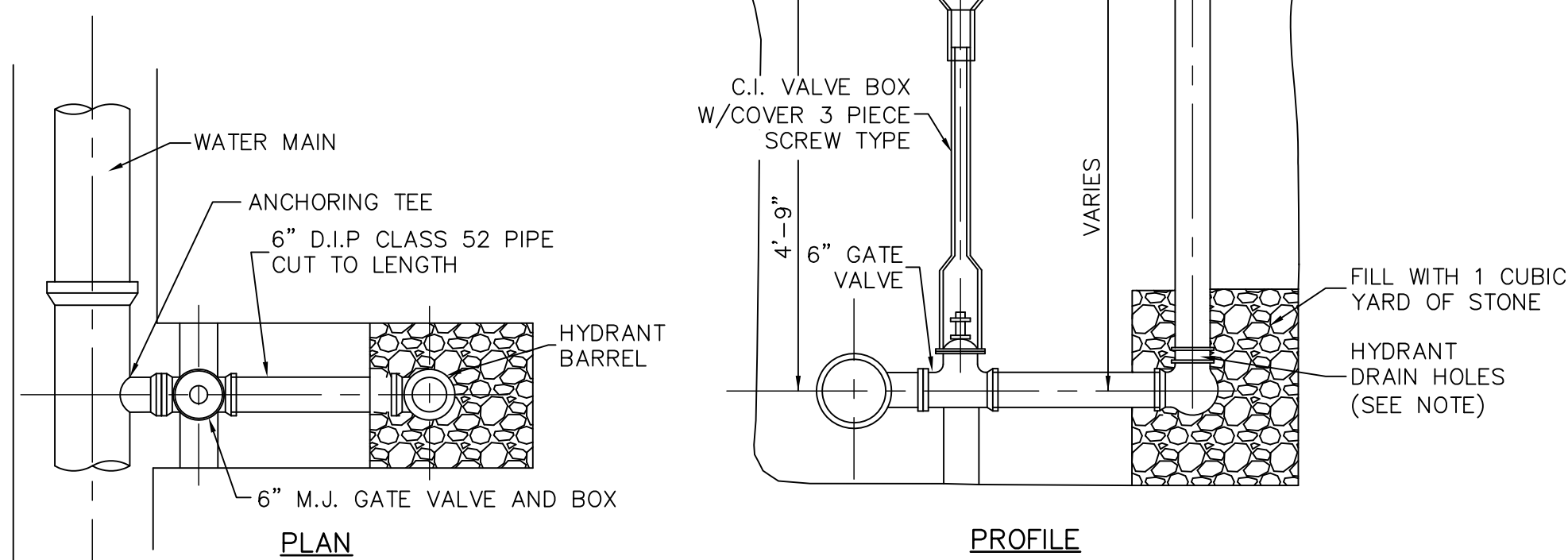
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(330) 488-3310



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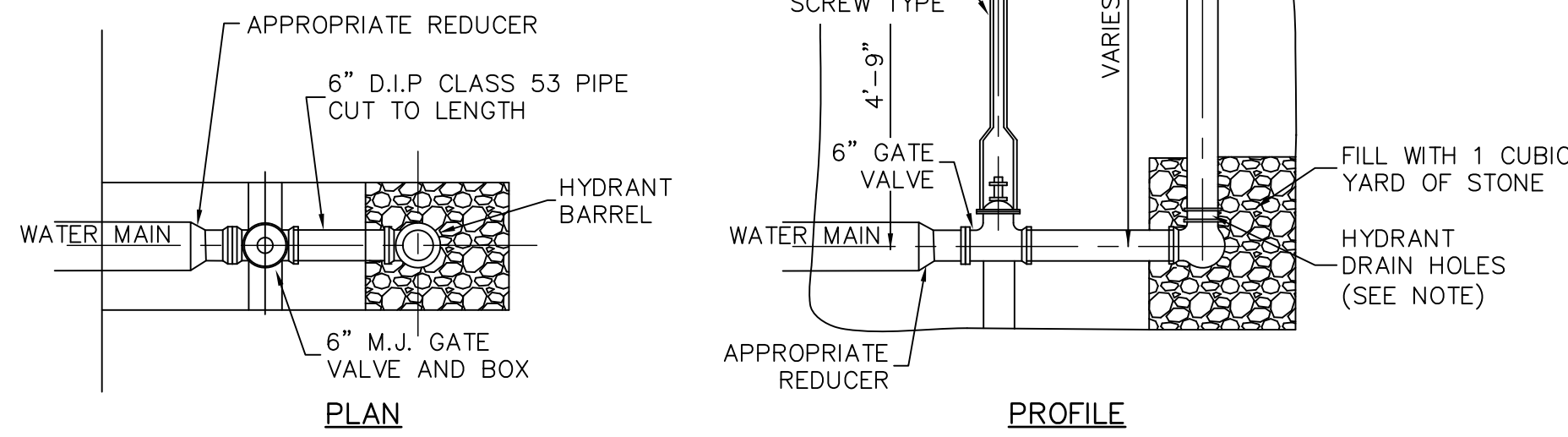
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NOTE:
WHERE A HYDRANT IS LOCATED WITHIN 10 FEET OF A STORM SEWER, PROVIDE A HYDRANT CONTAINING A DRAIN RING WITH THREADED DRAIN HOLES, ADAPTER, AND 3/4" HDPE TUBING. RUN TUBING TO AN ENGINEER APPROVED DISCHARGE LOCATION TO MAINTAIN 10 FEET SEPARATION FROM SEWERS.

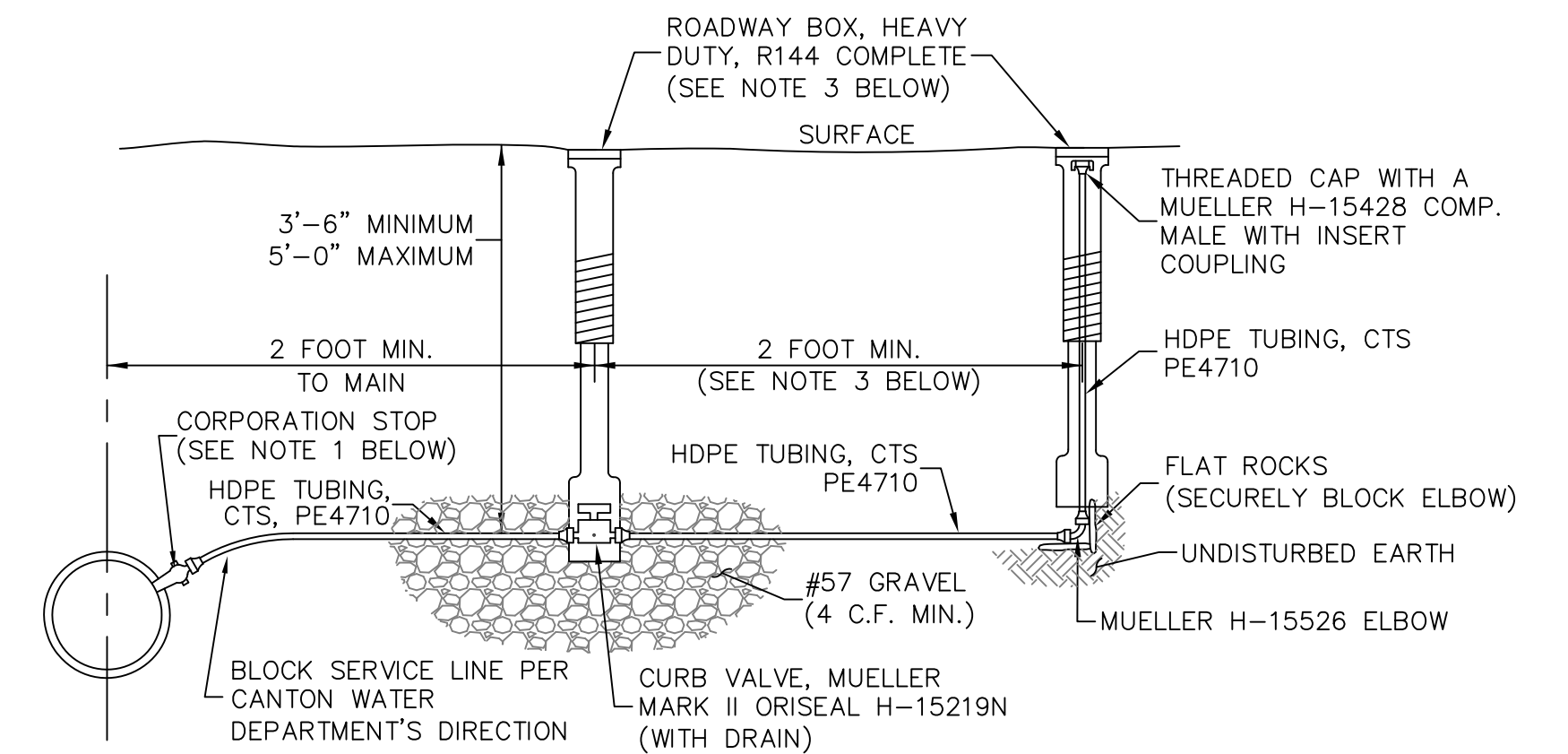


HYDRANT SETTING (C71)

NOTE:
WHERE A HYDRANT IS LOCATED WITHIN 10 FEET OF A STORM SEWER, PROVIDE A HYDRANT CONTAINING A DRAIN RING WITH THREADED DRAIN HOLES, ADAPTER, AND 3/4" HDPE TUBING. RUN TUBING TO AN ENGINEER APPROVED DISCHARGE LOCATION TO MAINTAIN 10 FEET SEPARATION FROM SEWERS.

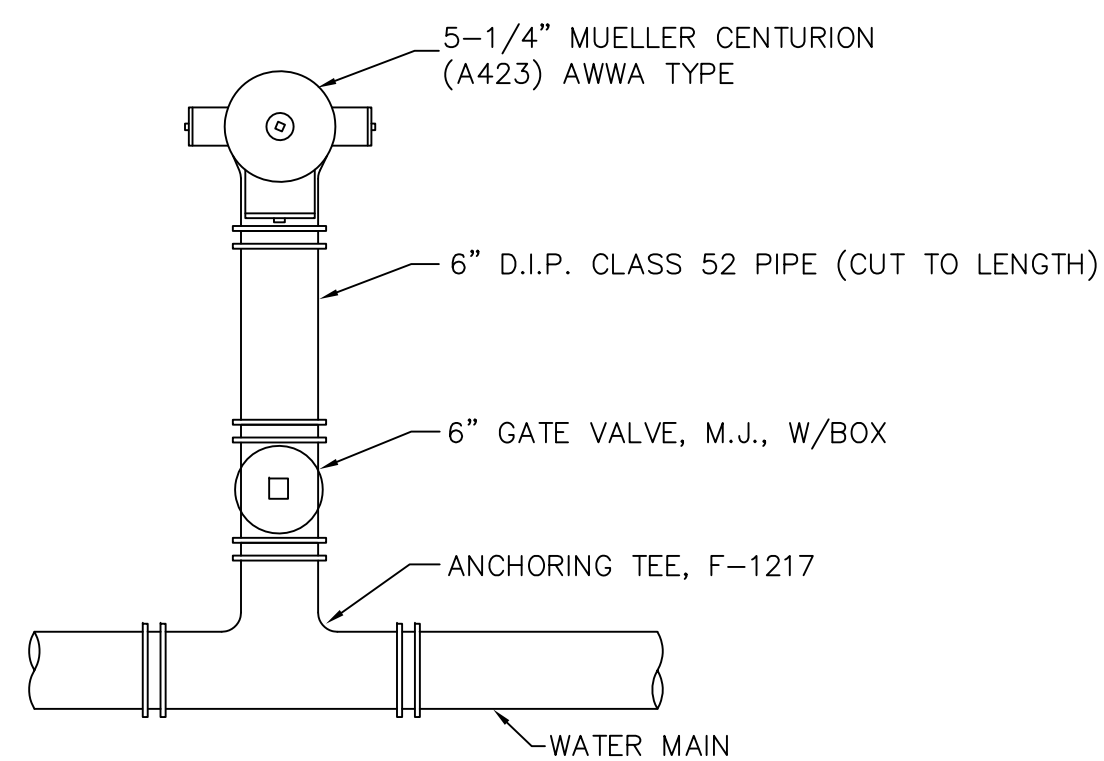


HYDRANT SETTING - CUL-DE-SAC (C71)



- NOTES:**
- CORPORATION STOP AND ASSEMBLY SHALL BE AS FOLLOWS:
 1" CORP. STOP ON DIP: INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION.
 1" CORP. STOP ON PVC C909: INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
 1 1/2" CORP. STOP: INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
 2" CORP. STOP: INSTALL AT A 45° ANGLE, A MUELLER H-10003 CORPORATION STOP WITH 2" IRON TOP, A STANDARD NO LEAD BRASS 45° ELBOW AND A MUELLER H-15428 COMPRESSION MALE WITH INSERT COUPLING. ASSEMBLY SHALL ALSO CONSIST OF A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
 - A SERVICE CLAMP MUST BE USED WHEN THE MAIN SIZE IS 2 INCH OR SMALLER.
 - HEAVY DUTY VALVE BOXES, COMPLETE, MUST BE USED IN PLACE OF ROADWAY BOXES WHEN THE CURB VALVE IS LOCATED IN ROADWAYS OR ASPHALT DRIVES.
 - BRASS REDUCING BUSHINGS OR SWIVEL ELLS WILL NOT BE ALLOWED.
 - APPROVED EQUALS MAY BE USED IN PLACE OF SPECIFIED ITEMS.

STANDARD BLOW-OFF ASSEMBLY (C135)



HYDRANT SETTINGS CONSIST OF HYDRANT, VALVE, VALVE BOX, FITTINGS AND MATERIALS SHOWN OR SPECIFIED WHICH ARE NEEDED FOR PROPER INSTALLATION.

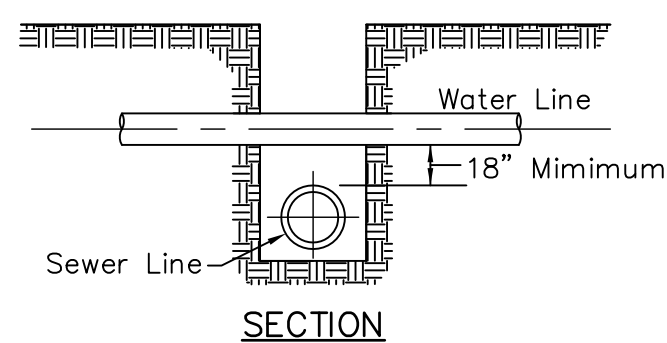
SEE SPECIFICATIONS FOR MORE INFORMATION ABOUT MATERIALS, SETTING HYDRANTS AND DRAINAGE REQUIREMENTS.

IF RESTRAINED JOINT FITTINGS CANNOT BE USED, (2) TIE RODS AND (4) EYE BOLTS WITH NUTS AND WASHERS MUST BE USED.

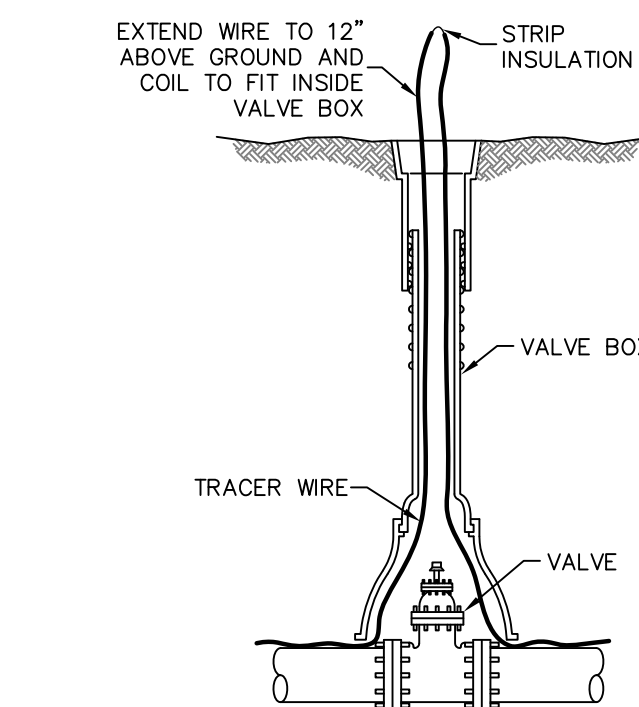
FIGURES SUCH AS F-1217 INDICATE CLOW CORPORATION STYLES. USE THIS BRAND OR APPROVED EQUAL.

ALL HYDRANTS ARE TO BE INSTALLED WITH THE PUMPER NOZZLE FACING THE STREET.

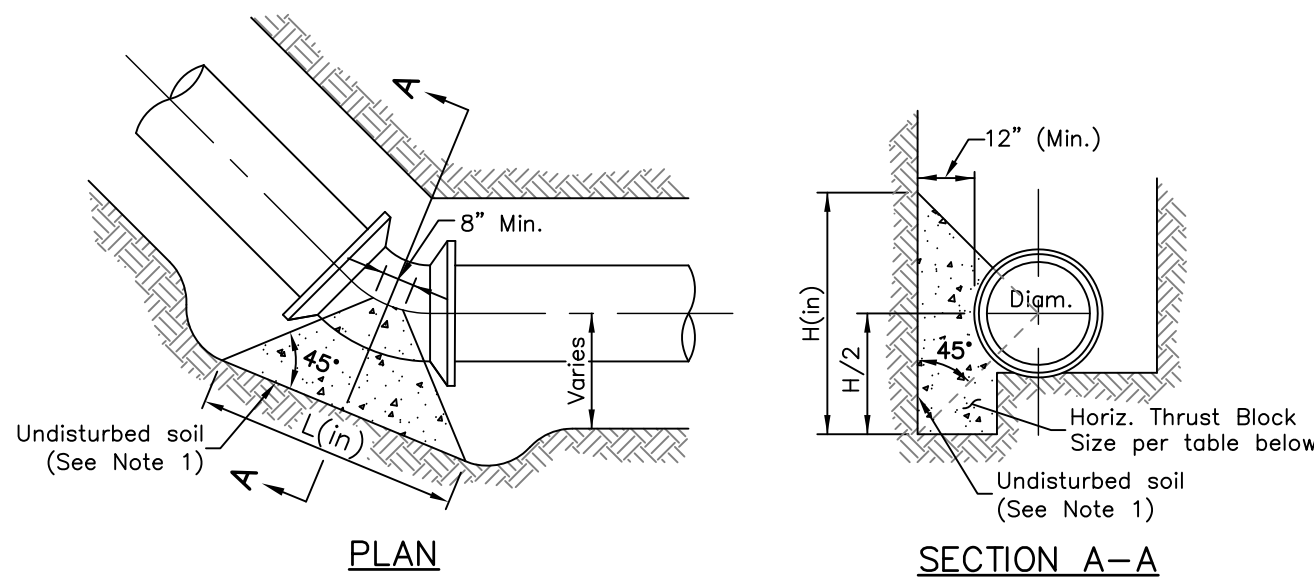
HYDRANT CONNECTION (C70)



VERTICAL WATER MAIN CLEARANCE (C186)



TRACER WIRE AT VALVE BOX DETAIL (C401)

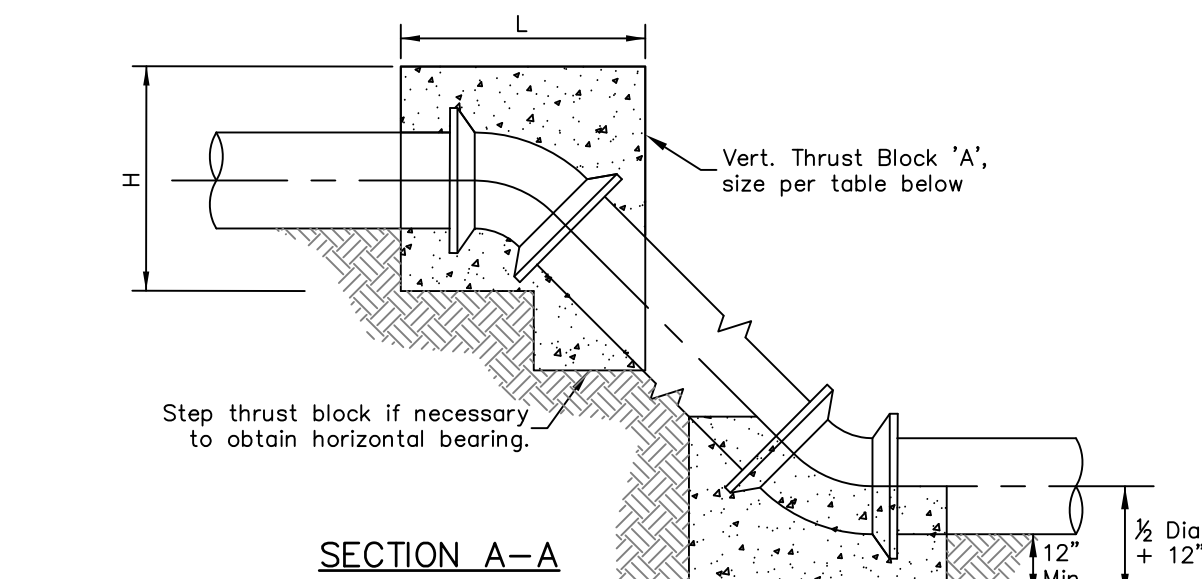
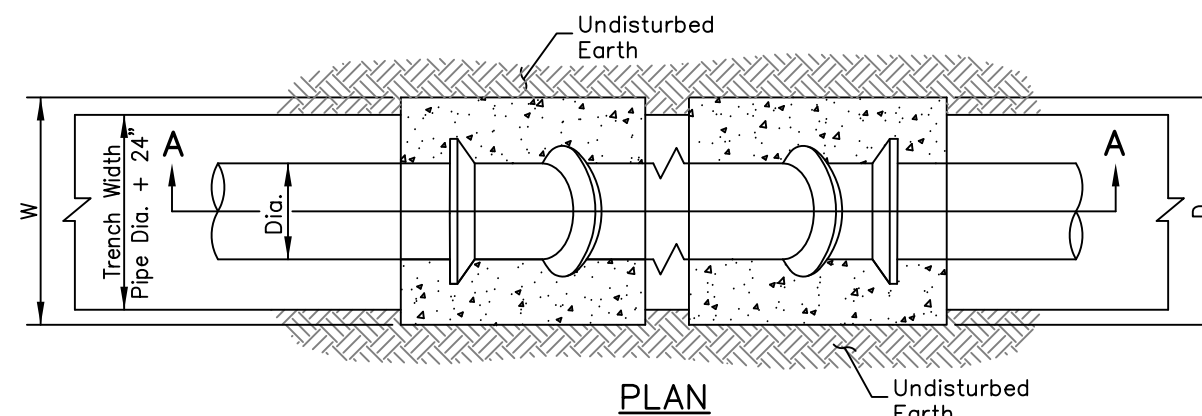


NOTES:

- Thrust blocks shall be placed against undisturbed soil. Where it is not possible, the fill between the bearing surface and undisturbed soil must be compacted to at least 90% Standard Proctor density.
- Pipe, bolts, nuts and fittings shall be wrapped with polyethylene film to prevent corrosion and concrete adhesion.
- All joints to be Megalugged.

SIZE OF PIPE	DEGREE OF BEND							
	11 1/4°		22 1/2°		45°		90°	
	L	H	L	H	L	H	L	H
6"	16	8	16	10	24	14	32	18
8"	16	10	21	14	31	18	44	24
12"	21	16	32	20	48	26	66	36
16"	29	20	42	28	66	34	90	46
20"	37	24	50	36	73	48	107	60
24"	46	28	64	40	93	54	128	72

HORIZONTAL THRUST BLOCKS (C130)

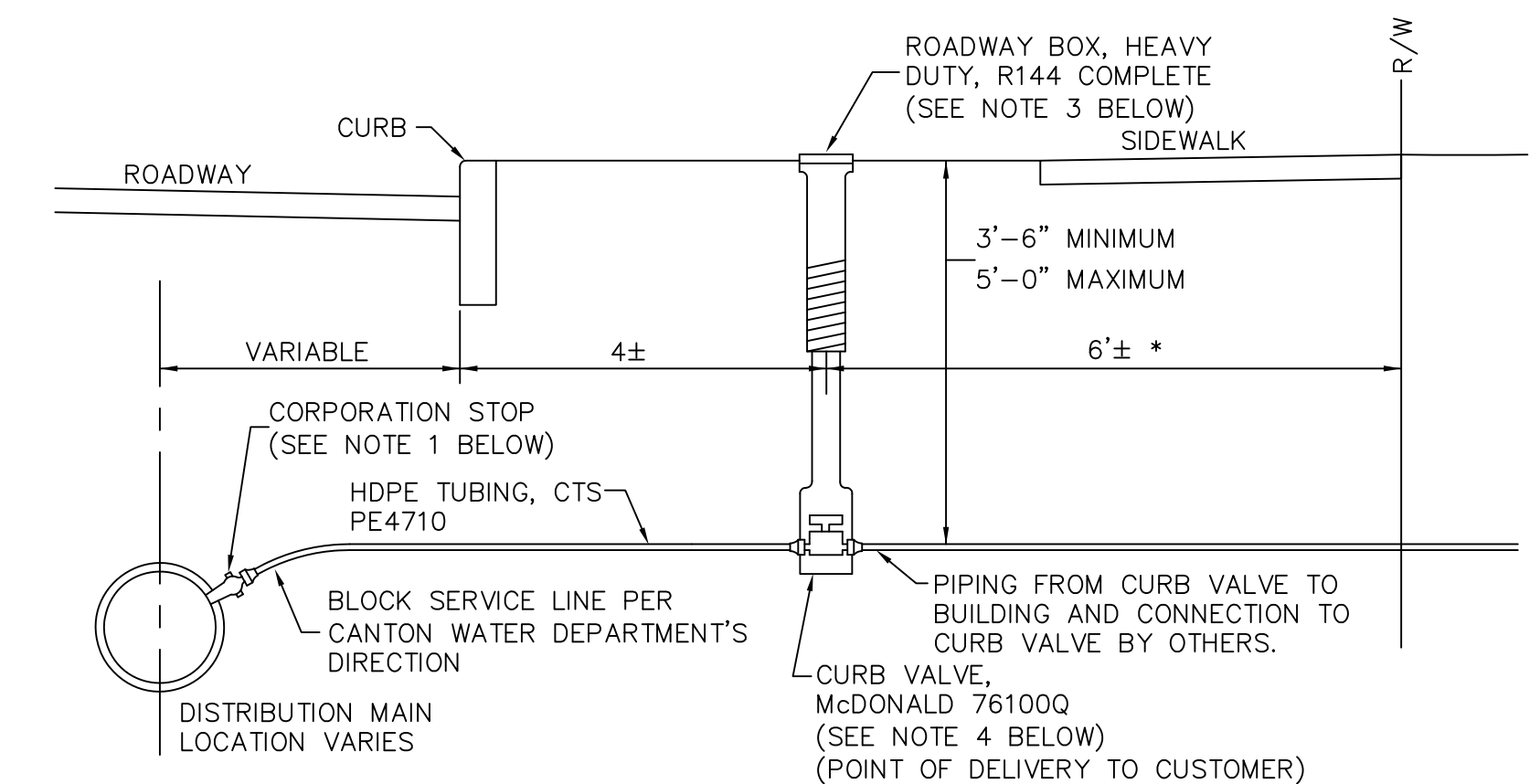


NOTES:

- Pipe, bolts, nuts and fittings shall be wrapped with polyethylene film to prevent corrosion and concrete adhesion.
- Thrust blocks to be centered on bend horizontally.
- Thrust block 'A' shall be off centered on bend vertically to shift the majority of the block above the fitting.
- All joints to be Megalugged.
- Concrete thrust blocks to be placed on all vertical bends.

SIZE OF PIPE	DEGREE OF BEND											
	11 1/4°			22 1/2°			45°					
	L	W	H	V (cy)	L	W	H	V (cy)	L	W	H	V (cy)
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	55	65	39	3.0	65	65	65	5.6
20"	40	56	50	2.4	57	66	59	4.8	82	74	68	8.8
24"	48	60	60	3.5	67	72	66	6.9	91	91	72	12.7

CONCRETE THRUST BLOCKS FOR VERTICAL BENDS ON WATER MAINS (POURED IN PLACE, CLASS C) (C147)



NOTES:

- CORPORATION STOP AND ASSEMBLY SHALL BE AS FOLLOWS:
 1" CORP. STOP ON DIP: INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION.
 1" CORP. STOP ON PVC C909: INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
 1 1/2" CORP. STOP: INSTALL AT THE 2:00 POSITION, A MUELLER B-25008 CORPORATION STOP WITH A COMPRESSION CONNECTION AND A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
 2" CORP. STOP: INSTALL AT A 45° ANGLE, A MUELLER H-10003 CORPORATION STOP WITH 2" IRON TOP, A STANDARD NO LEAD BRASS 45° ELBOW AND A MUELLER H-15428 COMPRESSION MALE WITH INSERT COUPLING. ASSEMBLY SHALL ALSO CONSIST OF A FORD, STAINLESS STEEL, EPOXY COATED TAPPING SADDLE (FC202 STYLE).
- A SERVICE CLAMP MUST BE USED WHEN THE MAIN SIZE IS 2 INCH OR SMALLER.
- HEAVY DUTY VALVE BOXES, COMPLETE, MUST BE USED IN PLACE OF ROADWAY BOXES WHEN THE CURB VALVE IS LOCATED IN ROADWAYS OR ASPHALT DRIVES.
- WHEN CONNECTING A NEW 1" SERVICE TO AN EXISTING 3/4" SERVICE, THE CURB VALVE SIZE SHALL BE A 1"x3/4" REDUCING CURB VALVE.
- BRASS REDUCING BUSHINGS OR SWIVEL ELLS WILL NOT BE ALLOWED.
- APPROVED EQUALS MAY BE USED IN PLACE OF SPECIFIED ITEMS.

TYPICAL WATER SERVICE (C94)

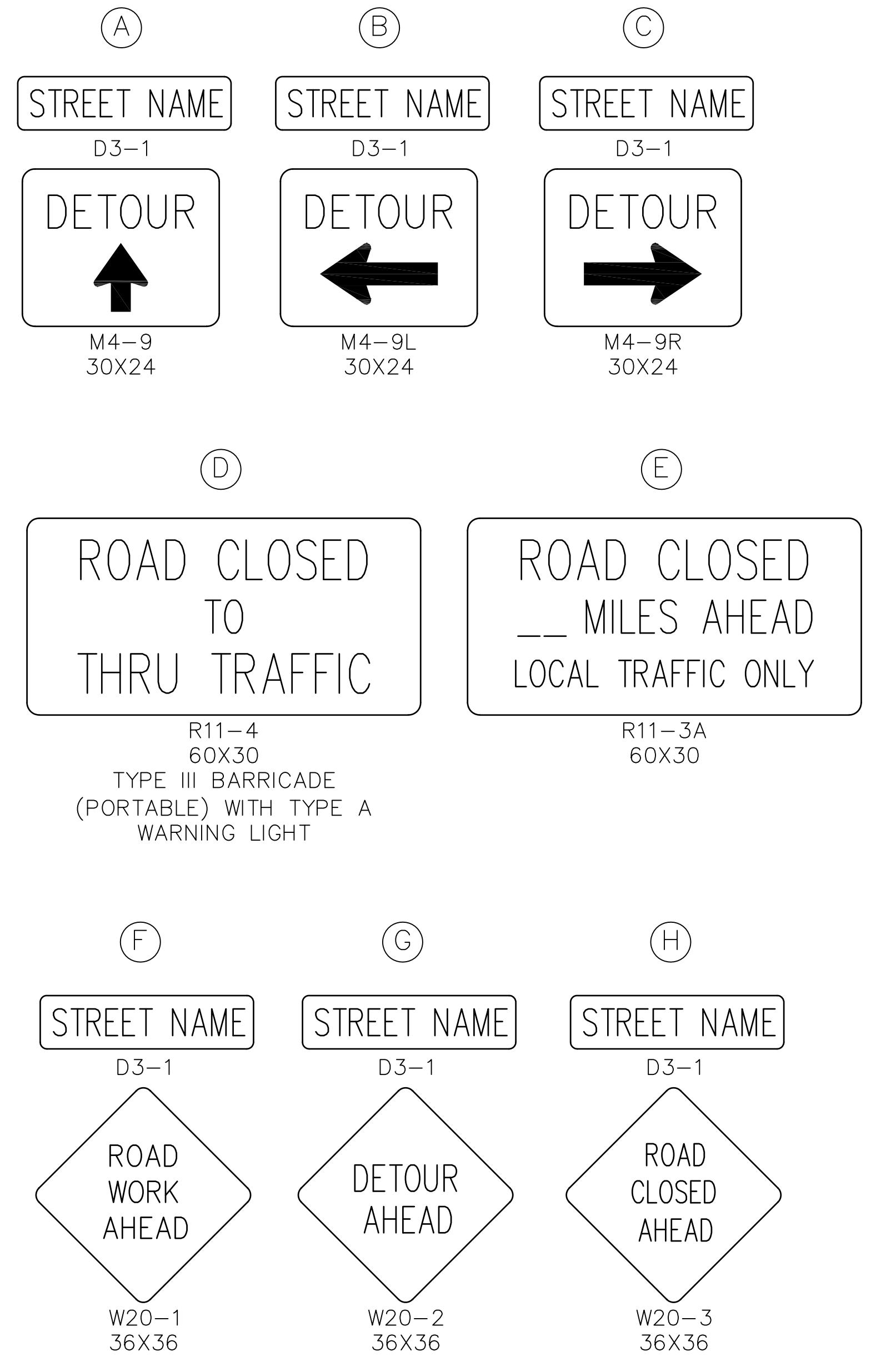
WATERLINE DETAILS

CANTON SOUTH WATERLINE EXTENSION

Plans Prepared By:
The City of Canton Water Department
2064 Hamburg Rd. N.E. • Canton, Ohio 44705
(330) 488-3310



CALCULATED
BDB
CHECKED

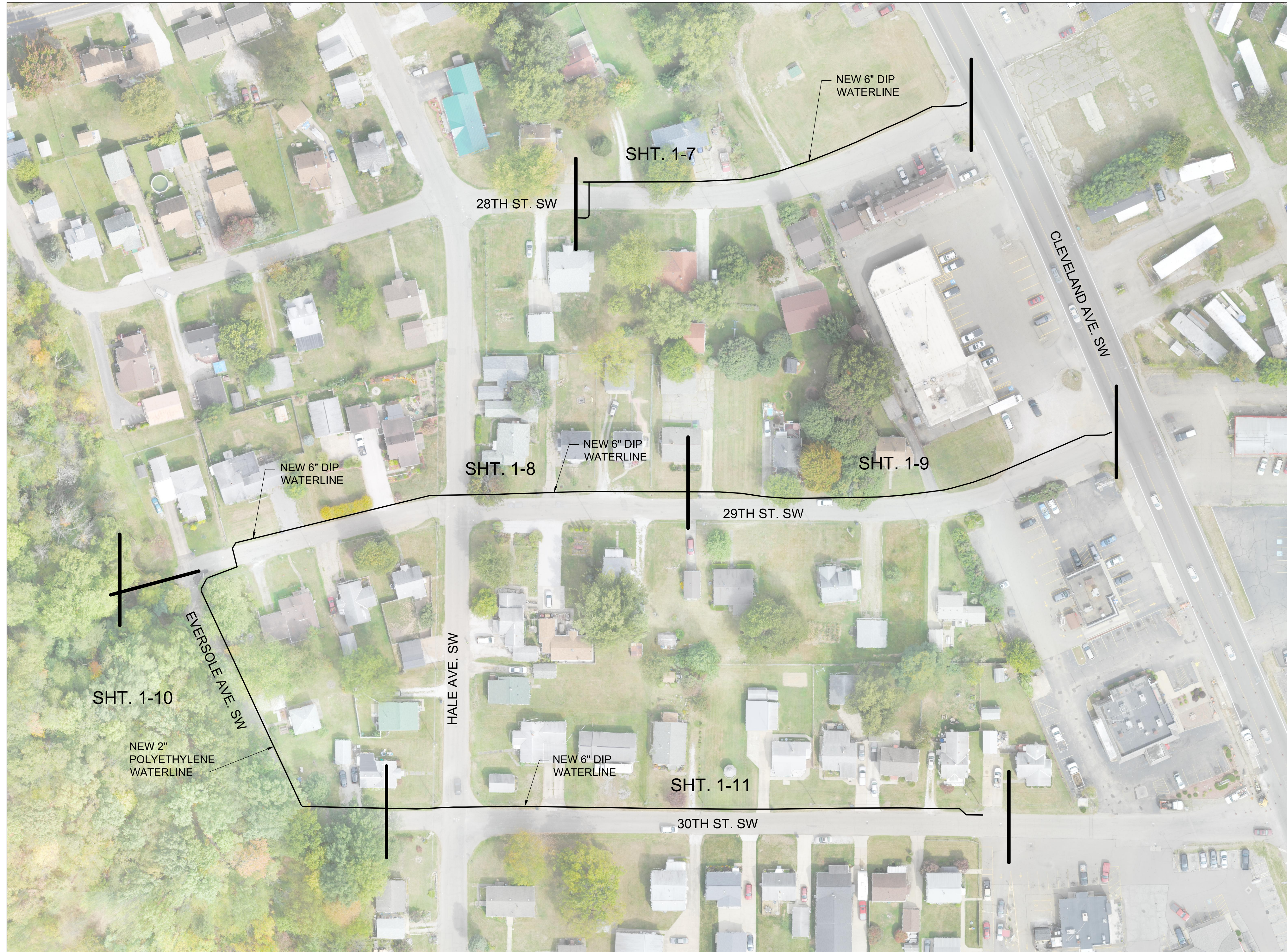


MAINTENANCE OF TRAFFIC TEMPLATE

CANTON SOUTH
WATERLINE EXTENSION

Plans Prepared By
**The City of Canton
Water Department**
2664 Harrisburg Rd., N.E. • Canton, Ohio 44705
(330) 489-3310

11
11



CANTON WATERLINE PHASE 1 (NORTH AREA)

SCALE: NONE



BURGESS & NIPLE

100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

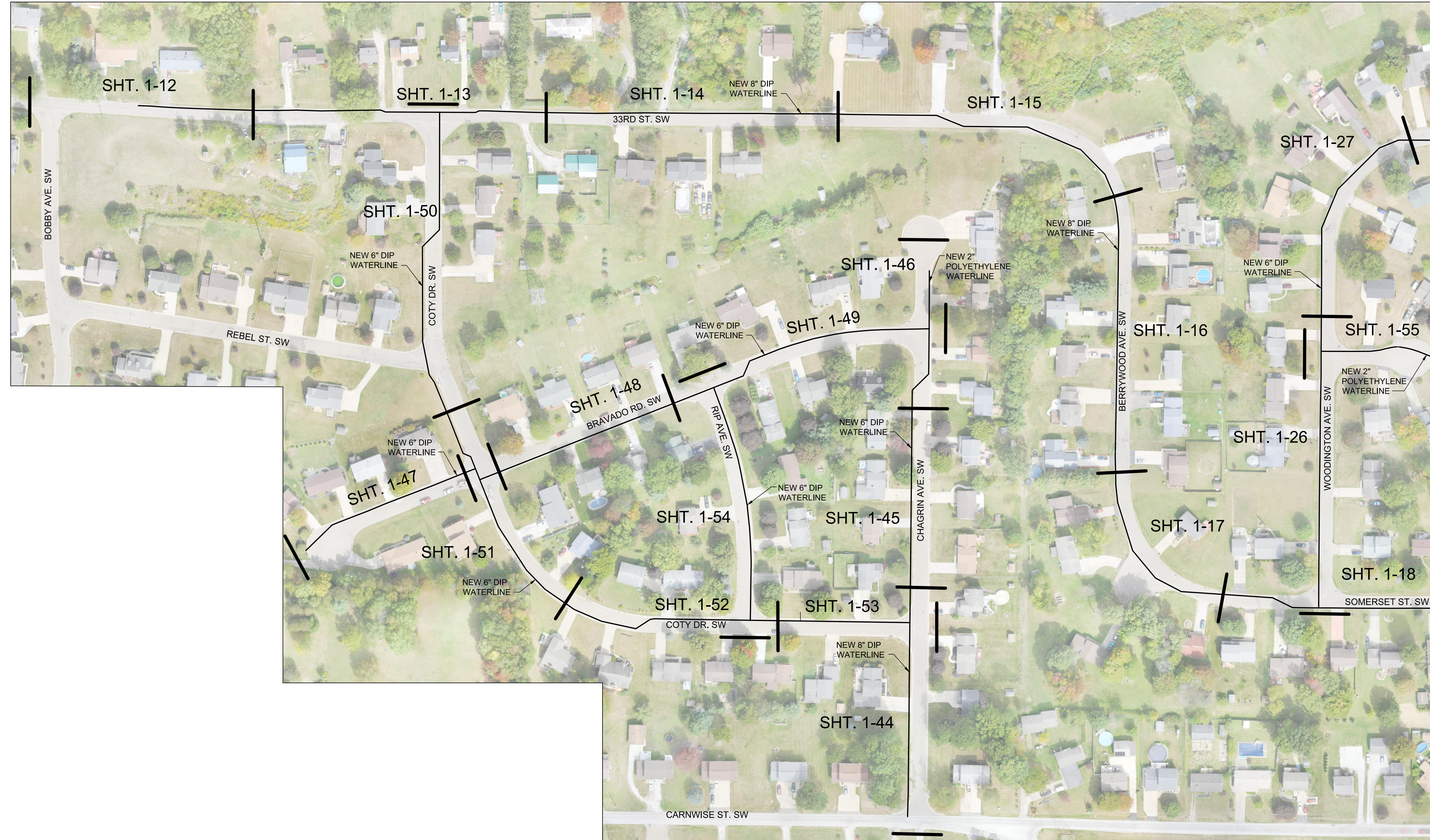
REVISIONS	
NO.	DESCRIPTION

JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRH
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: NONE

SCHEMATIC NORTH AREA

1-1

SHEET: 1-1 OF 1-57



MATCH LINE
SEE SHT. 1-3

CANTON WATERLINE PHASE 1 (SOUTHWEST AREA)

SCALE: NONE



BURGESS & NIPLE

100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

NO.	DESCRIPTION	REVISIONS	
		DATE	

JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRR
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: NONE

SCHEMATIC
SOUTHWEST AREA

1-2

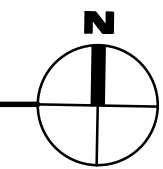
SHEET: 1-2 OF 1-57

MATCH LINE
SEE SHT. 1-2



CANTON WATERLINE PHASE 1 (SOUTHEAST AREA)

SCALE: NONE



BURGESS & NIPLE

100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

NO.	DESCRIPTION	REVISIONS	
		DATE	

JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRR
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: NONE

SCHEMATIC
SOUTHEAST AREA

1-3

SHEET: 1-3 OF 1-57

28TH ST. SW

LINE TABLE: ALIGNMENTS table with columns: LINE #, LENGTH, DIRECTION, START POINT, END POINT. Rows L1 to L12.

29TH ST. SW

LINE TABLE: ALIGNMENTS table with columns: LINE #, LENGTH, DIRECTION, START POINT, END POINT. Rows L13 to L32.

EVERSOLE AVE. SW

LINE TABLE: ALIGNMENTS table with columns: LINE #, LENGTH, DIRECTION, START POINT, END POINT. Rows L34 to L46.

30TH ST. SW

LINE TABLE: ALIGNMENTS table with columns: LINE #, LENGTH, DIRECTION, START POINT, END POINT. Rows L47 to L60.

32ND ST. SW

LINE TABLE: ALIGNMENTS table with columns: LINE #, LENGTH, DIRECTION, START POINT, END POINT. Rows L110 to L121.

33RD ST. SW

LINE TABLE: ALIGNMENTS table with columns: LINE #, LENGTH, DIRECTION, START POINT, END POINT. Rows L122 to L135.

33RD ST. SW - BERRY WOOD AVE. SW - SOMERSET ST. SW

LINE TABLE: ALIGNMENTS table with columns: LINE #, LENGTH, DIRECTION, START POINT, END POINT. Rows L61 to L109.

34TH ST. SW

LINE TABLE: ALIGNMENTS table with columns: LINE #, LENGTH, DIRECTION, START POINT, END POINT. Rows L136 to L148.

WOODINGTON AVE. SW AND IRONWOOD ST. SW

LINE TABLE: ALIGNMENTS table with columns: LINE #, LENGTH, DIRECTION, START POINT, END POINT. Rows L166 to L206.

BURGESS & NIPLÉ

100 WEST ERIE STREET PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION CITY OF CANTON WATER DEPARTMENT

Table with columns: NO., DESCRIPTION, DATE, REVISIONS.

JOB NO: PR55936

DATE: MAY 2018

DESIGNED BY: RRH

DRAWN BY: TSM

CHECKED BY: TMA

APPROVED BY: TMA

SCALE: NONE

LINE TABLE 1

1-5

SHEET: 1-5 OF 1-57

FORESTDALE AVE. SW

LINE TABLE: ALIGNMENTS				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L149	268.53	N2° 11' 38.27"E	N:399531.31, E:2277503.81	N:399799.64, E:2277514.09
L150	268.53	N2° 11' 38.27"E	N:399531.31, E:2277503.81	N:399799.64, E:2277514.09
L151	96.30	N2° 30' 45.97"E	N:399799.64, E:2277514.09	N:399895.85, E:2277518.31
L152	44.19	N2° 31' 39.02"E	N:399895.85, E:2277518.31	N:399940.00, E:2277520.26
L153	26.49	N2° 27' 30.55"E	N:399940.00, E:2277520.26	N:399966.46, E:2277521.39
L154	299.40	N1° 42' 27.47"E	N:399966.46, E:2277521.39	N:400265.73, E:2277530.32
L155	64.14	N1° 17' 36.42"E	N:400265.73, E:2277530.32	N:400329.85, E:2277531.76
L156	62.86	N1° 17' 25.69"E	N:400329.85, E:2277531.76	N:400392.70, E:2277533.18
L157	290.20	N1° 52' 21.71"E	N:400392.70, E:2277533.18	N:400682.75, E:2277542.66
L158	37.00	N2° 37' 01.46"E	N:400682.75, E:2277542.66	N:400719.71, E:2277544.35
L159	31.59	N1° 09' 52.21"E	N:400719.71, E:2277544.35	N:400751.30, E:2277544.99
L160	282.08	N1° 43' 38.87"E	N:400751.30, E:2277544.99	N:401033.25, E:2277553.50
L161	73.83	N1° 45' 24.19"E	N:401033.25, E:2277553.50	N:401107.05, E:2277555.76
L162	8.27	N1° 47' 37.74"E	N:401107.05, E:2277555.76	N:401115.31, E:2277556.02
L163	49.46	N2° 04' 37.50"W	N:401115.31, E:2277556.02	N:401164.74, E:2277554.23
L164	49.47	N6° 20' 39.34"W	N:401164.74, E:2277554.23	N:401213.90, E:2277548.76
L165	49.38	N10° 23' 39.93"W	N:401213.90, E:2277548.76	N:401262.48, E:2277539.85

MAPLEWOOD AVE. SW

LINE TABLE: ALIGNMENTS				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L207	148.08	N1° 29' 53.77"E	N:399552.23, E:2276755.44	N:399700.26, E:2276759.32
L208	198.70	N1° 24' 46.06"E	N:399700.26, E:2276759.32	N:399898.90, E:2276764.22
L209	23.36	N1° 25' 22.17"E	N:399898.90, E:2276764.22	N:399922.25, E:2276764.80
L210	19.39	N1° 19' 55.75"E	N:399922.25, E:2276764.80	N:399941.63, E:2276765.25

SIERRA AVE. SW

LINE TABLE: ALIGNMENTS				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L211	37.80	N2° 42' 38.26"E	N:399934.80, E:2276961.88	N:399972.55, E:2276963.67
L212	66.27	N2° 43' 37.68"E	N:399972.55, E:2276963.67	N:400038.74, E:2276966.82
L213	48.72	N1° 19' 30.16"E	N:400038.74, E:2276966.82	N:400087.45, E:2276967.95
L214	29.70	N2° 07' 36.44"E	N:400087.45, E:2276967.95	N:400117.13, E:2276969.05
L215	33.85	N0° 41' 28.95"W	N:400117.13, E:2276969.05	N:400150.98, E:2276968.64
L216	131.40	N1° 47' 30.23"E	N:400150.98, E:2276968.64	N:400282.31, E:2276972.75
L217	26.69	N2° 13' 45.35"E	N:400282.31, E:2276972.75	N:400308.98, E:2276973.79
L218	131.86	N2° 13' 38.55"E	N:400308.98, E:2276973.79	N:400440.74, E:2276978.91
L219	32.87	N0° 39' 13.46"W	N:400440.74, E:2276978.91	N:400473.60, E:2276978.54
L220	115.33	N1° 25' 31.36"E	N:400473.60, E:2276978.54	N:400588.89, E:2276981.41
L221	113.80	N2° 33' 07.71"E	N:400588.89, E:2276981.41	N:400702.58, E:2276986.47
L222	32.24	N2° 32' 25.92"E	N:400702.58, E:2276986.47	N:400734.79, E:2276987.90

PEERLESS CIR. SW

LINE TABLE: ALIGNMENTS				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L223	25.03	N89° 26' 57.97"E	N:400308.98, E:2276973.79	N:400309.22, E:2276998.81
L224	88.40	N89° 27' 53.11"E	N:400309.22, E:2276998.81	N:400310.05, E:2277087.21
L225	66.11	N88° 43' 26.38"E	N:400310.05, E:2277087.21	N:400311.52, E:2277153.30
L226	33.08	N85° 15' 14.95"E	N:400311.52, E:2277153.30	N:400314.25, E:2277186.26
L227	16.54	N80° 57' 37.95"E	N:400314.25, E:2277186.26	N:400316.85, E:2277202.59
L228	16.50	N76° 52' 41.98"E	N:400316.85, E:2277202.59	N:400320.60, E:2277218.66
L229	16.47	N72° 50' 18.48"E	N:400320.60, E:2277218.66	N:400325.46, E:2277234.41
L230	16.58	N67° 46' 26.11"E	N:400325.46, E:2277234.41	N:400331.73, E:2277249.75
L231	16.49	N63° 15' 23.36"E	N:400331.73, E:2277249.75	N:400339.15, E:2277264.48
L232	32.18	N57° 12' 30.01"E	N:400339.15, E:2277264.48	N:400356.58, E:2277291.53
L233	16.34	N51° 29' 40.26"E	N:400356.58, E:2277291.53	N:400366.75, E:2277304.32

SOUTHBERRY CIR. SW

LINE TABLE: ALIGNMENTS				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L234	20.28	N1° 27' 26.96"E	N:400731.06, E:2277158.04	N:400751.33, E:2277158.55
L235	127.07	N1° 26' 21.66"E	N:400751.33, E:2277158.55	N:400878.36, E:2277161.74
L236	15.89	N6° 43' 57.28"E	N:400878.36, E:2277161.74	N:400894.14, E:2277163.61
L237	8.73	N15° 00' 13.31"E	N:400894.14, E:2277163.61	N:400902.57, E:2277165.87
L238	7.11	N15° 29' 11.87"E	N:400902.57, E:2277165.87	N:400909.43, E:2277167.77
L239	7.98	N28° 26' 03.80"E	N:400909.43, E:2277167.77	N:400916.45, E:2277171.57
L240	7.76	N32° 43' 31.19"E	N:400916.45, E:2277171.57	N:400922.97, E:2277175.76
L241	7.73	N42° 23' 45.72"E	N:400922.97, E:2277175.76	N:400928.68, E:2277180.98
L242	8.24	N58° 48' 53.35"E	N:400928.68, E:2277180.98	N:400932.95, E:2277188.02
L243	7.97	N64° 21' 33.91"E	N:400932.95, E:2277188.02	N:400936.40, E:2277195.21
L244	7.90	N72° 49' 12.90"E	N:400936.40, E:2277195.21	N:400938.73, E:2277202.75
L245	15.75	N82° 26' 08.04"E	N:400938.73, E:2277202.75	N:400940.80, E:2277218.36

IRONWOOD EXTENSION

LINE TABLE: ALIGNMENTS				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L246	24.62	N4° 42' 48.77"E	N:400737.68, E:2276855.95	N:400762.22, E:2276857.97
L247	65.07	N4° 46' 29.44"E	N:400762.22, E:2276857.97	N:400827.06, E:2276863.39

GROVEWOOD CIR. SW

LINE TABLE: ALIGNMENTS				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L248	26.70	S89° 19' 14.18"E	N:400365.06, E:2276494.73	N:400364.74, E:2276521.43
L249	124.88	S89° 19' 03.46"E	N:400364.74, E:2276521.43	N:400363.25, E:2276646.30

COTY DR. SW

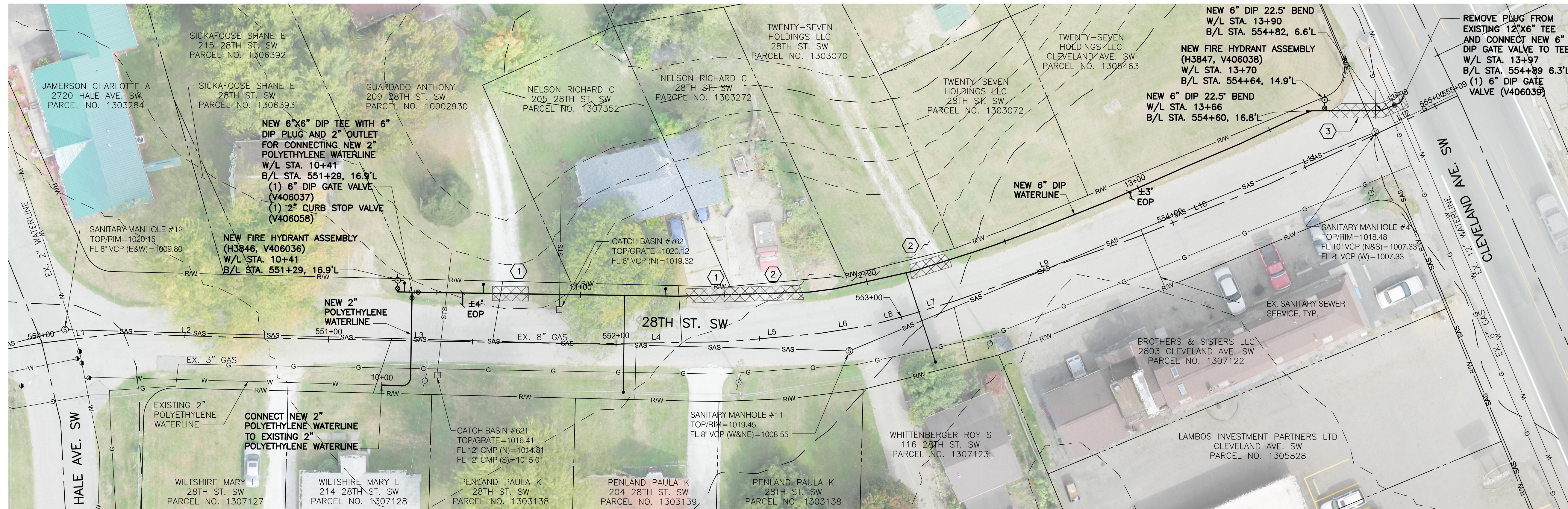
LINE TABLE: ALIGNMENTS				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L250	39.43	S0° 50' 00.18"W	N:400804.93, E:2274977.01	N:400765.50, E:2274976.43
L251	277.84	S0° 48' 01.47"W	N:400765.50, E:2274976.43	N:400487.69, E:2274972.55
L252	49.41	S1° 35' 03.27"E	N:400487.69, E:2274972.55	N:400438.29, E:2274973.92
L253	31.94	S3° 26' 23.79"E	N:400438.29, E:2274973.92	N:400406.41, E:2274975.84
L254	17.91	S7° 04' 19.34"E	N:400406.41, E:2274975.84	N:400388.64, E:2274978.04
L255	26.71	S16° 56' 47.03"E	N:400388.64, E:2274978.04	N:400363.09, E:2274985.82
L256	161.68	S20° 53' 37.60"E	N:400363.09, E:2274985.82	N:400212.04, E:2275043.49
L257	18.48	S19° 31' 16.28"E	N:400212.04, E:2275043.49	N:400194.62, E:2275049.99
L258	105.45	S22° 26' 30.25"E	N:400194.62, E:2275049.99	N:400097.16, E:2275089.61
L259	33.21	S27° 33' 05.25"E	N:400097.16, E:2275089.61	N:400067.72, E:2275105.28
L260	16.65	S32° 33' 22.39"E	N:400067.72, E:2275105.28	N:400053.68, E:2275114.24
L261	16.64	S36° 07' 37.85"E	N:400053.68, E:2275114.24	N:400040.24, E:2275124.05
L262	16.66	S39° 30' 45.83"E	N:400040.24, E:2275124.05	N:400027.38, E:2275134.65
L263	16.66	S42° 57' 04.03"E	N:400027.38, E:2275134.65	N:400015.19, E:2275146.00
L264	16.66	S46° 27' 37.49"E	N:400015.19, E:2275146.00	N:400003.71, E:2275158.08
L265	16.67	S49° 58' 27.73"E	N:400003.71, E:2275158.08	N:399992.99, E:2275170.84
L266	33.26	S54° 51' 42.18"E	N:399992.99, E:2275170.84	N:399973.85, E:2275198.04
L267	16.71	S59° 59' 12.89"E	N:399973.85, E:2275198.04	N:399965.49, E:2275212.51
L268	16.59	S63° 51' 54.58"E	N:399965.49, E:2275212.51	N:399958.19, E:2275227.40
L269	33.19	S67° 58' 16.08"E	N:399958.19, E:2275227.40	N:399945.73, E:2275258.18
L270	31.20	S71° 42' 14.89"E	N:399945.73, E:2275258.18	N:399935.94, E:2275287.80
L271	18.26	S78° 12' 34.65"E	N:399935.94, E:2275287.80	N:399932.21, E:2275305.67
L272	18.80	S83° 06' 39.61"E	N:399932.21, E:2275305.67	N:399929.95, E:2275324.34
L273	18.69	S85° 29' 42.79"E	N:399929.95, E:2275324.34	N:399928.49, E:2275342.97
L274	45.37	S87° 34' 48.21"E	N:399928.49, E:2275342.97	N:399926.57, E:2275388.30
L275	104.48	S88° 59' 58.69"E	N:399926.57, E:2275388.30	N:399924.75, E:2275492.77
L276	189.59	S88° 04' 54.14"E	N:399924.75, E:2275492.77	N:399918.40, E:2275682.25
L277	81.94	S89° 16' 04.58"E	N:399918.40, E:2275682.25	N:399917.35, E:2275764.18
L278	29.85	S89° 19' 56.83"E	N:399917.35, E:2275764.18	N:399917.01, E:2275794.03

CHAGRIN AVE. SW

LINE TABLE: ALIGNMENTS				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L279	29.64	N2° 00' 14.74"E	N:399585.89, E:2275782.53	N:399615.51, E:2275783.57
L280	274.64	N2° 01' 42.14"E	N:399615.51, E:2275783.57	N:399889.98, E:2275793.29
L281	27.04	N1° 34' 27.29"E	N:399889.98, E:2275793.29	N:399917.01, E:2275794.03
L282	246.13	N1° 35' 10.87"E	N:399917.01, E:2275794.03	N:400163.04, E:2275800.85
L283	244.58	N1° 47' 19.63"E	N:400163.04, E:2275800.85	N:400407.49, E:2275808.48
L284	10.11	N1° 27' 50.69"E	N:400407.49, E:2275808.48	N:400417.60, E:2275808.74
L285	103.75	N1° 34' 09.18"E	N:400417.60, E:2275808.74	N:400521.31, E:2275811.58
L286	64.86	N1° 16' 15.51"W	N:400521.31, E:2275811.58	N:400586.15, E:2275810.14

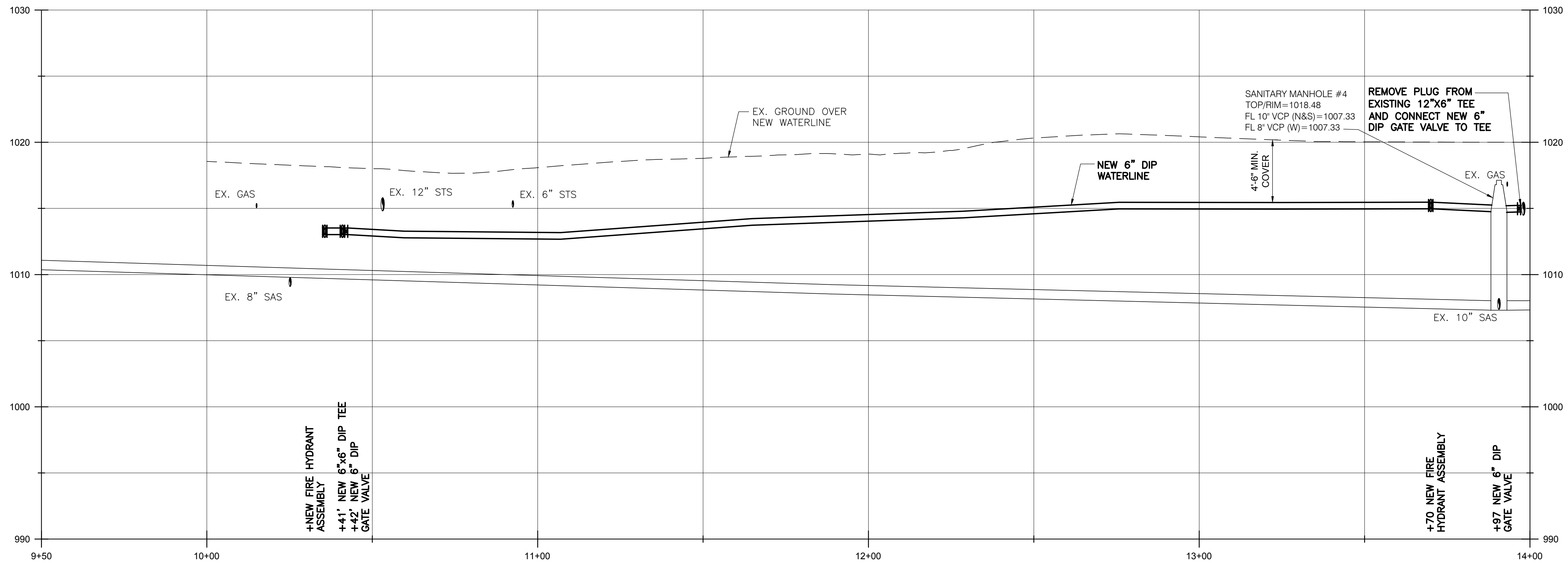
BRAVADO RD. SW

LINE TABLE: ALIGNMENTS				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L287	15.46	N29° 45' 01.12"E	N:400062.33, E:2274784.53	N:400075.75, E:2274792.20
L288	15.65	N37° 33' 58.49"E	N:400075.75, E:2274792.20	N:400088.15, E:2274801.74
L289	15.56	N44° 53' 26.42"E	N:400088.15, E:2274801.74	N:400099.17, E:2274812.73
L290	15.24	N55° 03' 10.96"E	N:400099.17, E:2274812.73	N:400107.90, E:2274825.22
L291	15.59	N61° 34' 35.29"E	N:400107.90, E:2274825.22	N:400115.32, E:2274838.93
L292	15.92	N65° 53' 36.53"E	N:400115.32, E:2274838.93	N:400121.82, E:2274853.45
L293	80.96	N68° 53' 21.32"E	N:400121.82, E:2274853.45	N:400150.98, E:2274928.98
L294	114.34	N70° 13' 30.69"E	N:400150.98, E:2274928.98	N:400189.67, E:2275036.56
L295	13.99	N69° 14' 47.87"E	N:400189.67, E:2275036.56	N:400194.62, E:2275049.99
L296	12.46	N69° 57' 57.09"E	N:400194.62, E:2275049.99	N:400198.89, E:2275061.37
L297	399.36	N69° 31' 51.31"E	N:400198.89, E:2275061.37	N:400338.55, E:2275435.52
L298	125.20	N69° 30' 12.26"E		



- ① 16 SY MAXIMUM ASPHALT DRIVE REPLACEMENT, TOTAL THIS SHEET.
- ② 22 SY MAXIMUM GRAVEL DRIVE REPLACEMENT, TOTAL THIS SHEET.
- ③ 15 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

SCALE:
 1" = 20' (HORIZ.)
 1" = 5" (VERT.)



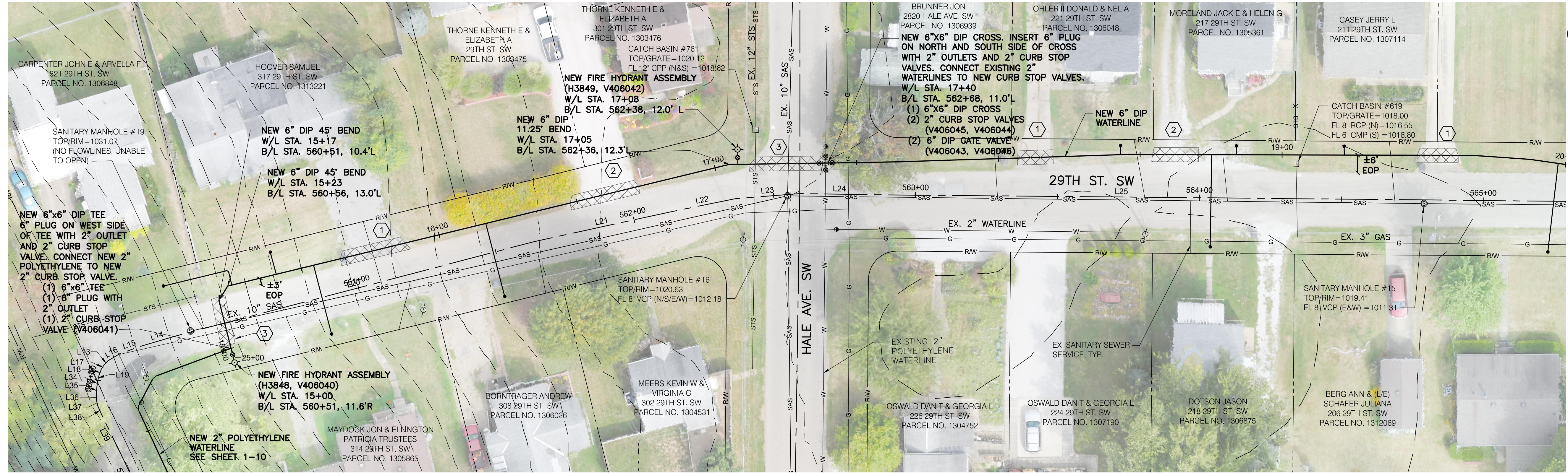
BURGESS & NIPLÉ
 100 WEST ERIE STREET
 PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
 CITY OF CANTON
 WATER DEPARTMENT

NO.	DESCRIPTION	DATE

JOB NO: PR55936
 DATE: MAY 2018
 DESIGNED BY: RRH
 DRAWN BY: TSM
 CHECKED BY: TMA
 APPROVED BY: TMA
 SCALE: AS NOTED

28TH STREET

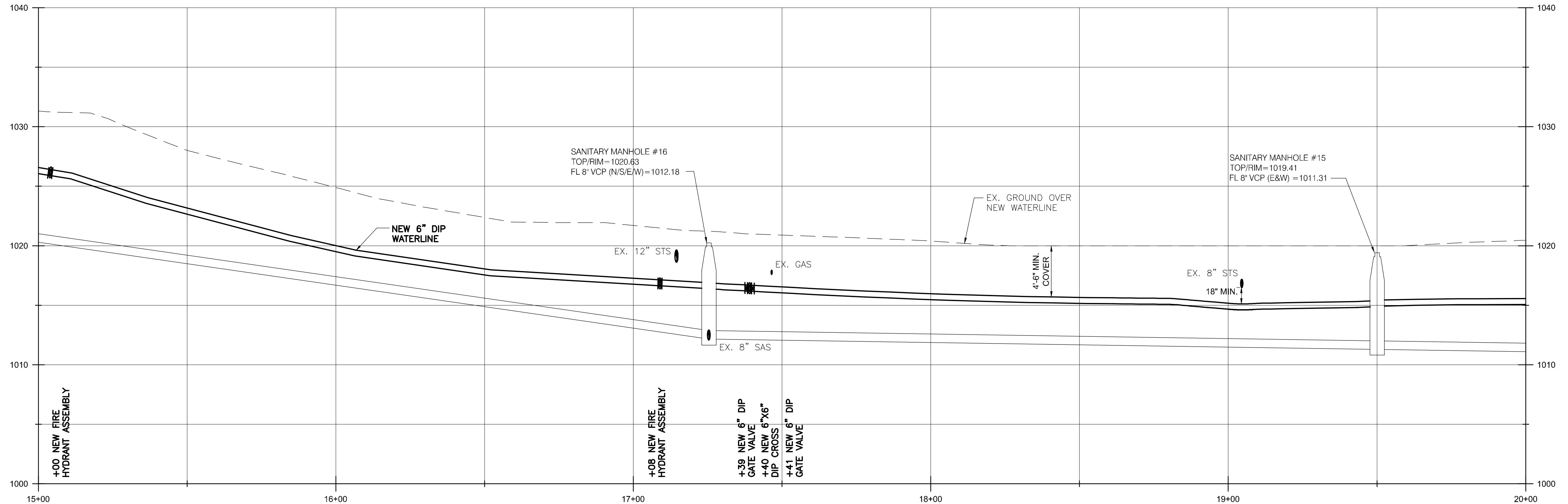


MATCH LINE W/L STA. 20+00
SEE SHT. 1-9

- ① 28 SY MAXIMUM ASPHALT DRIVE REPLACEMENT, TOTAL THIS SHEET.
- ② 23 SY MAXIMUM CONCRETE DRIVE REPLACEMENT, TOTAL THIS SHEET.
- ③ 29 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:
 1. BEFORE AND AFTER INSTALLING THE LONG SERVICE/BORE FOR 314 & 308 29TH ST. SW, THE CONTRACTOR SHALL TELEWISE THE SANITARY SEWER IN THE VICINITY OF THE SERVICE CROSSING. IF THE BORE CAUSED DAMAGE TO THE SANITARY SEWER, THE CONTRACTOR SHALL REPAIR THE SEWER TO MATCH PRE-BORE CONDITIONS. ALL COSTS ASSOCIATED WITH THIS REPAIR WILL BE COVERED BY THE PRIME CONTRACTOR, AT NO COST TO THE PROJECT. THE COST TO TELEWISE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

SCALE:
 1" = 20' (HORIZ.)
 1" = 5' (VERT.)



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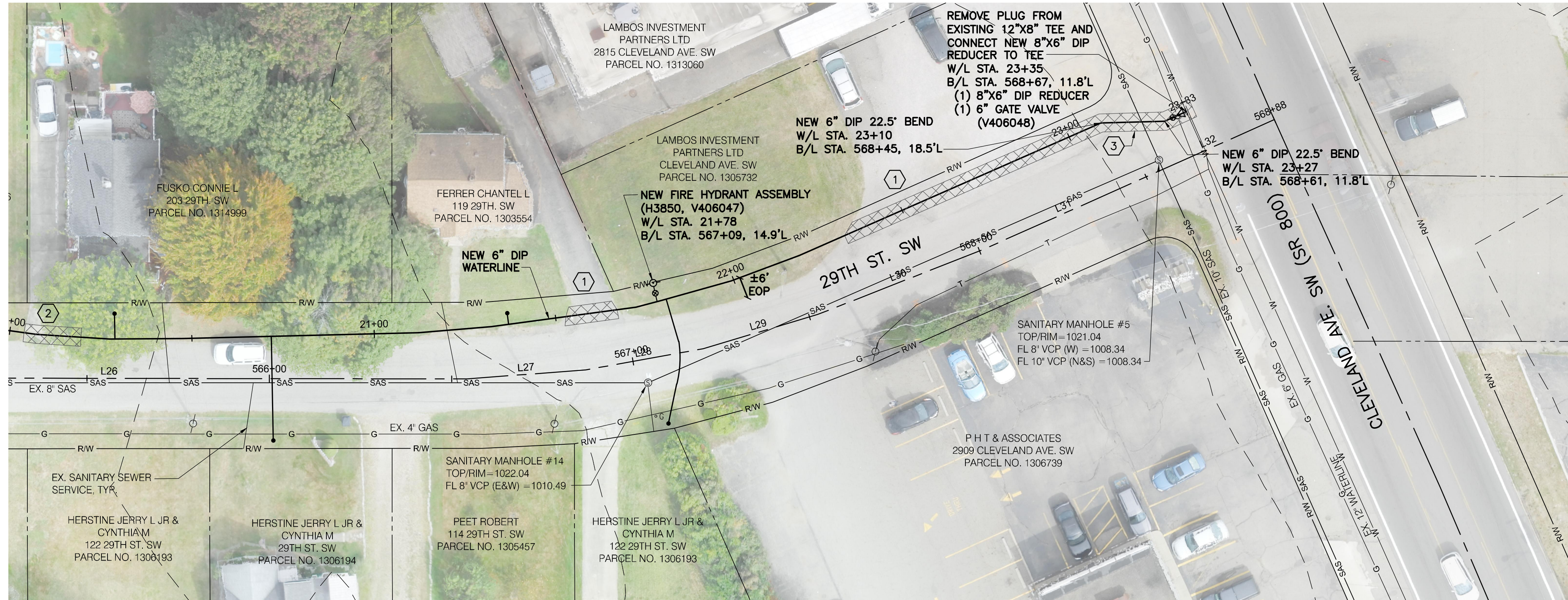
CANTON SOUTH WATERLINE EXTENSION
 CITY OF CANTON
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 SCALE: AS NOTED

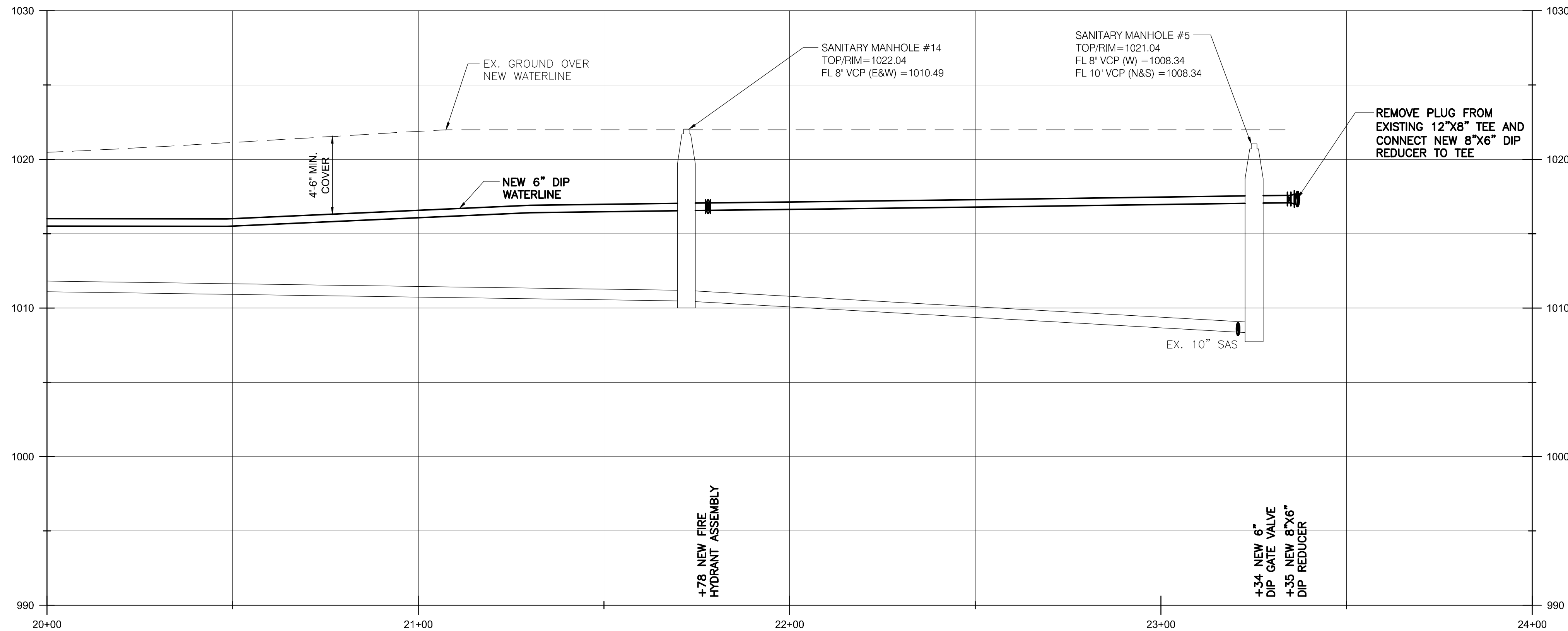
29TH STREET

MATCH LINE W/L STA. 20+00
SEE SHT. 1-8



- ① 60 SY MAXIMUM ASPHALT DRIVE REPLACEMENT, TOTAL THIS SHEET.
- ② 9 SY MAXIMUM CONCRETE DRIVE REPLACEMENT, TOTAL THIS SHEET.
- ③ 5 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)



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100 WEST ERIE STREET
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CANTON SOUTH WATERLINE EXTENSION
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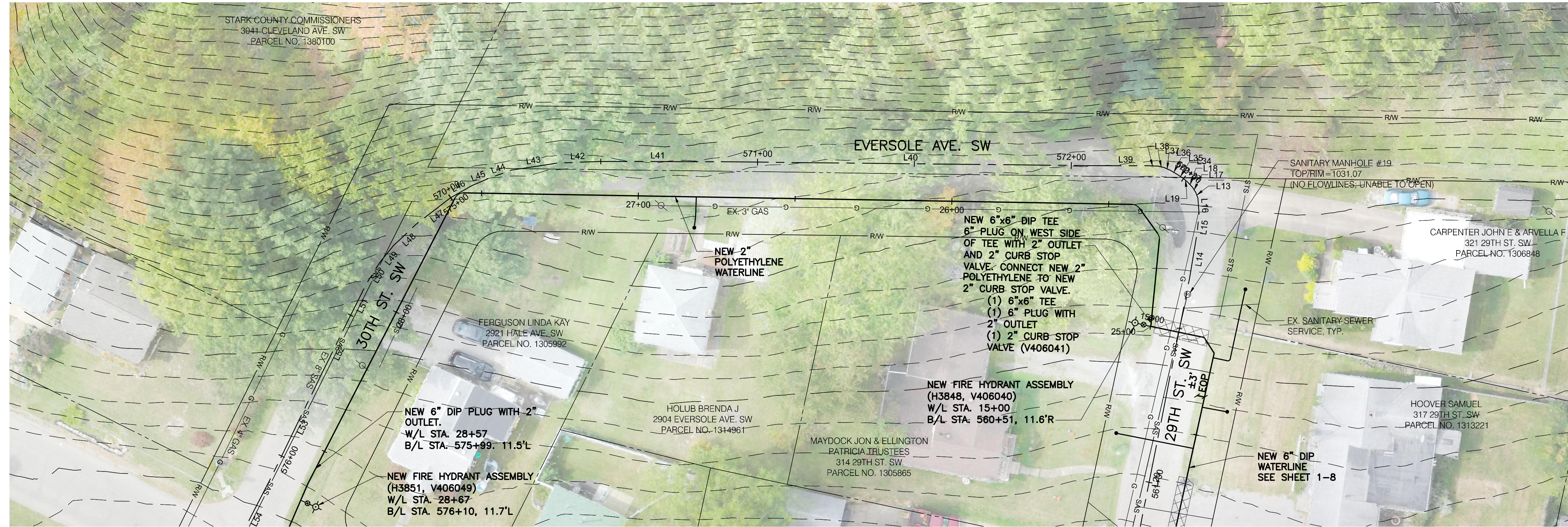
NO.	DESCRIPTION	REVISIONS	
		DATE	

JOB NO: PR55936
DATE: MAY 2018
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CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

29TH STREET

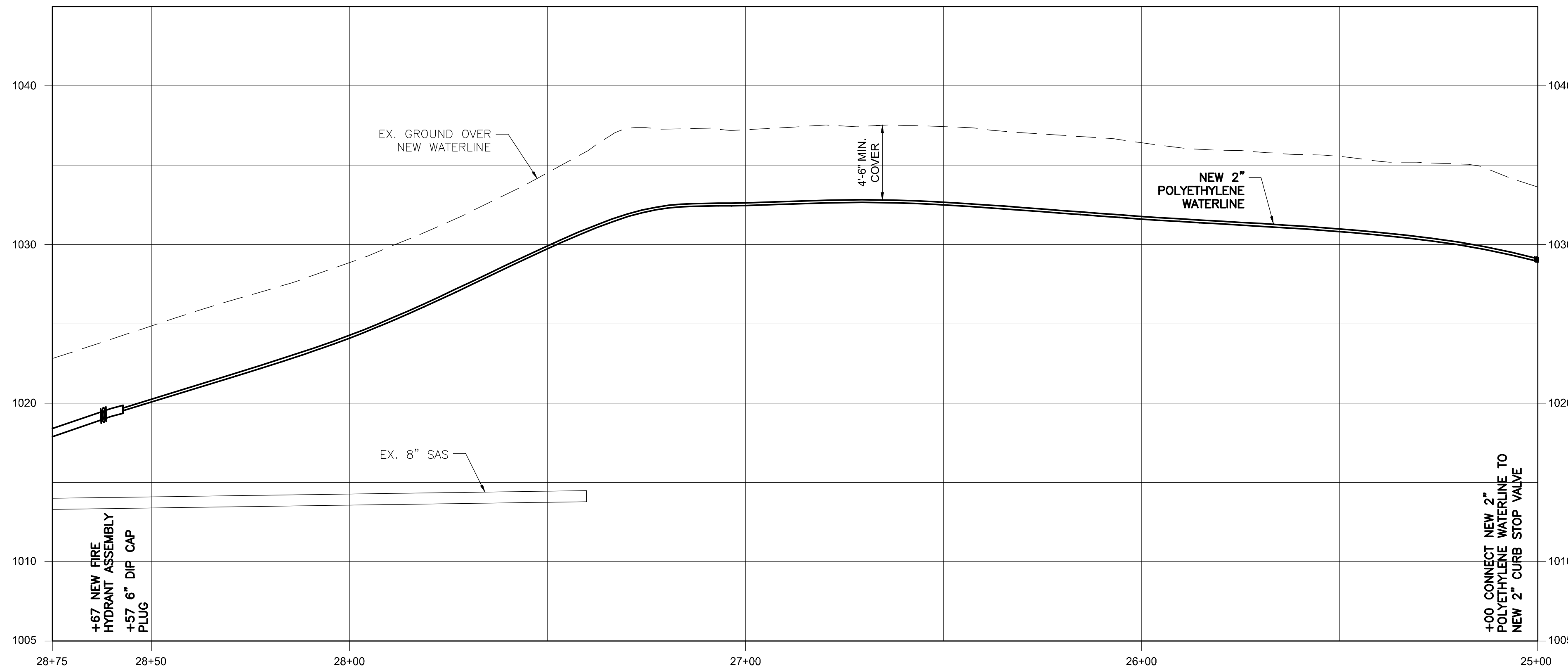
1-9

SHEET: 1-9 OF 1-57



MATCH LINE W/L STA. 28+75
SEE SHT. 1-11

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



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100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
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NO.	DESCRIPTION	DATE

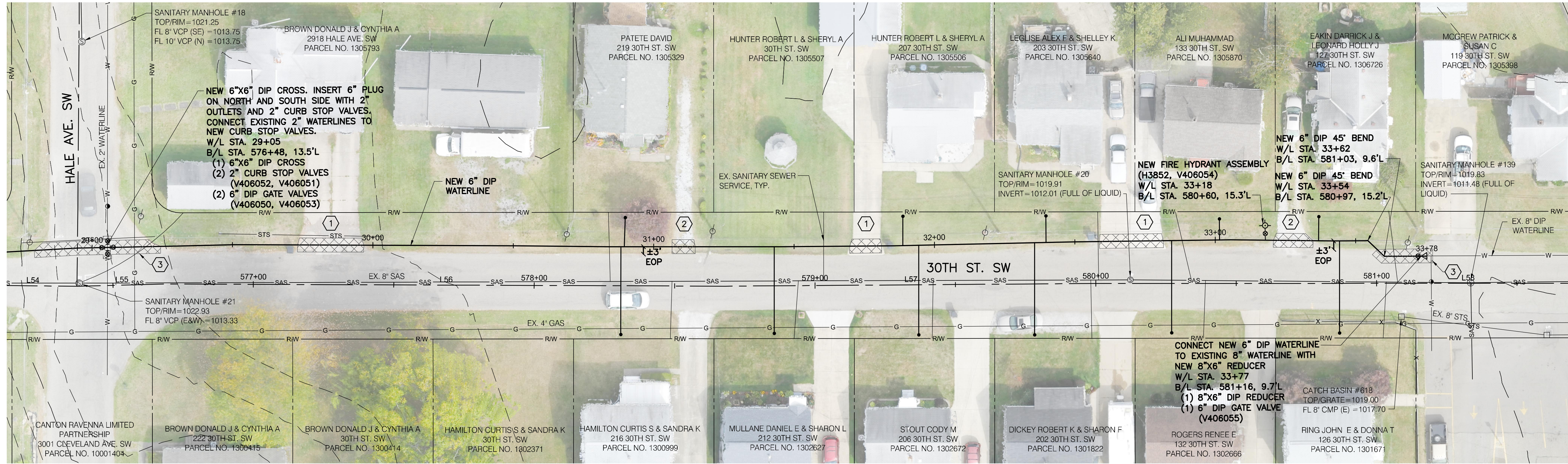
JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRH
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: NONE

EVERSOLE AVE

1-10

SHEET: 1-10 OF 1-57

MATCH LINE W/L STA. 28+75
SEE SHT. 1-10

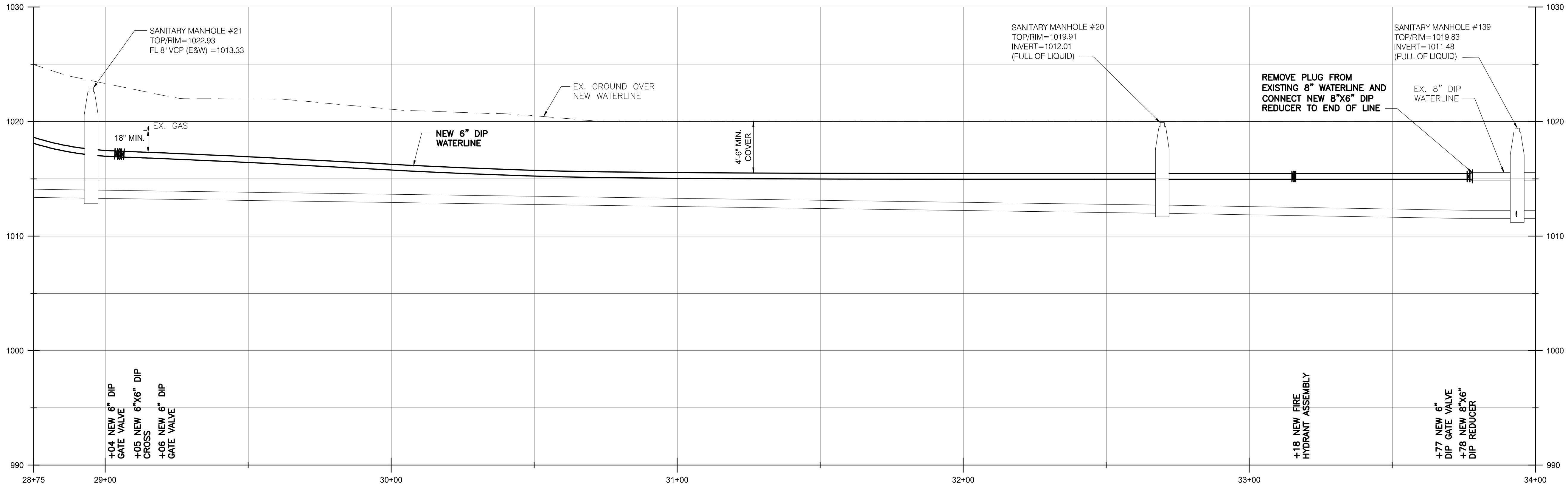


- ① 32 SY MAXIMUM CONCRETE DRIVE REPLACEMENT, TOTAL THIS SHEET.
- ② 12 SY MAXIMUM GRAVEL DRIVE REPLACEMENT, TOTAL THIS SHEET.
- ③ 37 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

1. BEFORE AND AFTER INSTALLING THE LONG SERVICE/BORE FOR 216, 212, 206, 202, 132 & 126 30TH ST. SW, THE CONTRACTOR SHALL TELEWISE THE SANITARY SEWER IN THE VICINITY OF THE SERVICE CROSSING. IF THE BORE CAUSED DAMAGE TO THE SANITARY SEWER, THE CONTRACTOR SHALL REPAIR THE SEWER TO MATCH PRE-BORE CONDITIONS. ALL COSTS ASSOCIATED WITH THIS REPAIR WILL BE COVERED BY THE PRIME CONTRACTOR, AT NO COST TO THE PROJECT. THE COST TO TELEWISE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



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CANTON SOUTH WATERLINE EXTENSION
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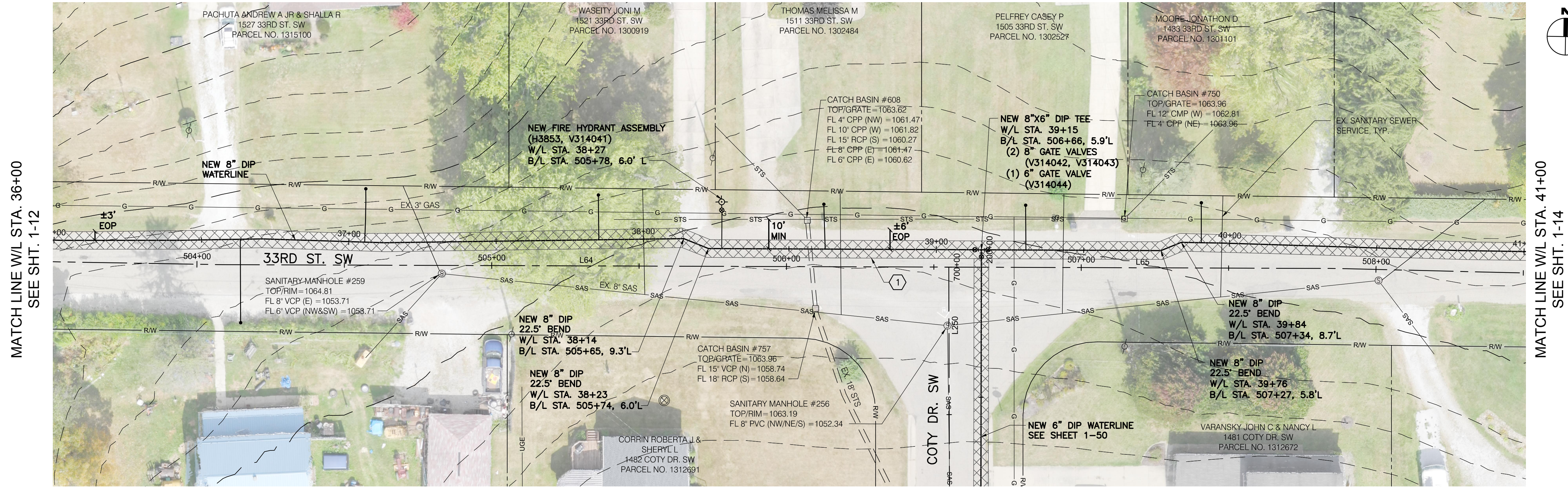
NO.	DESCRIPTION	DATE

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CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

30TH STREET

1-11

SHEET: 1-11 OF 1-57

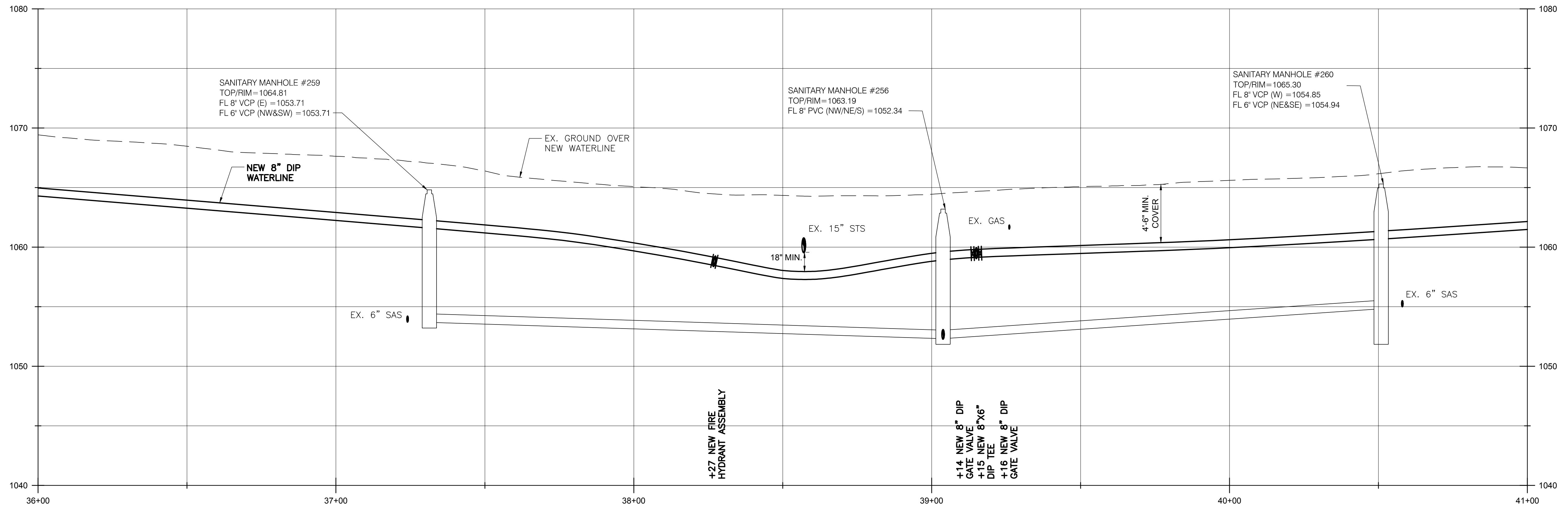


MATCHLINE W/L STA. 36+00
SEE SHT. 1-12

MATCHLINE W/L STA. 41+00
SEE SHT. 1-14

① 334 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)



1080
1070
1060
1050
1040

36+00 37+00 38+00 39+00 40+00 41+00

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PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
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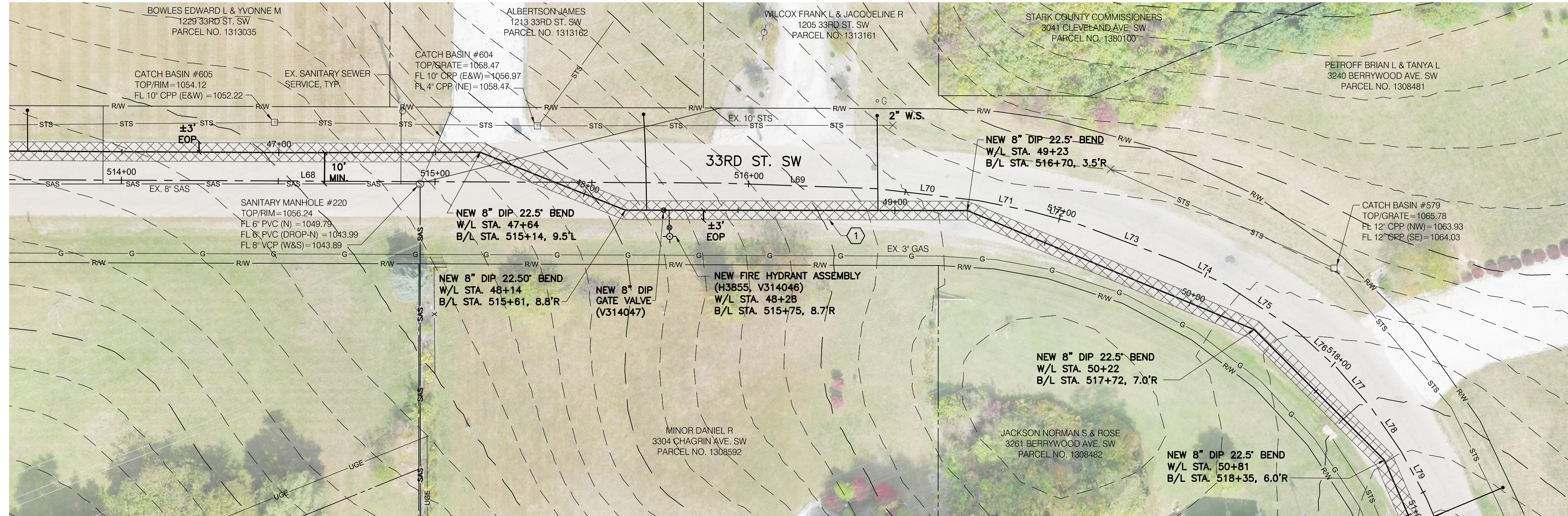
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SCALE: AS NOTED

33RD STREET SW

1-13
SHEET 1-13 OF 1-57

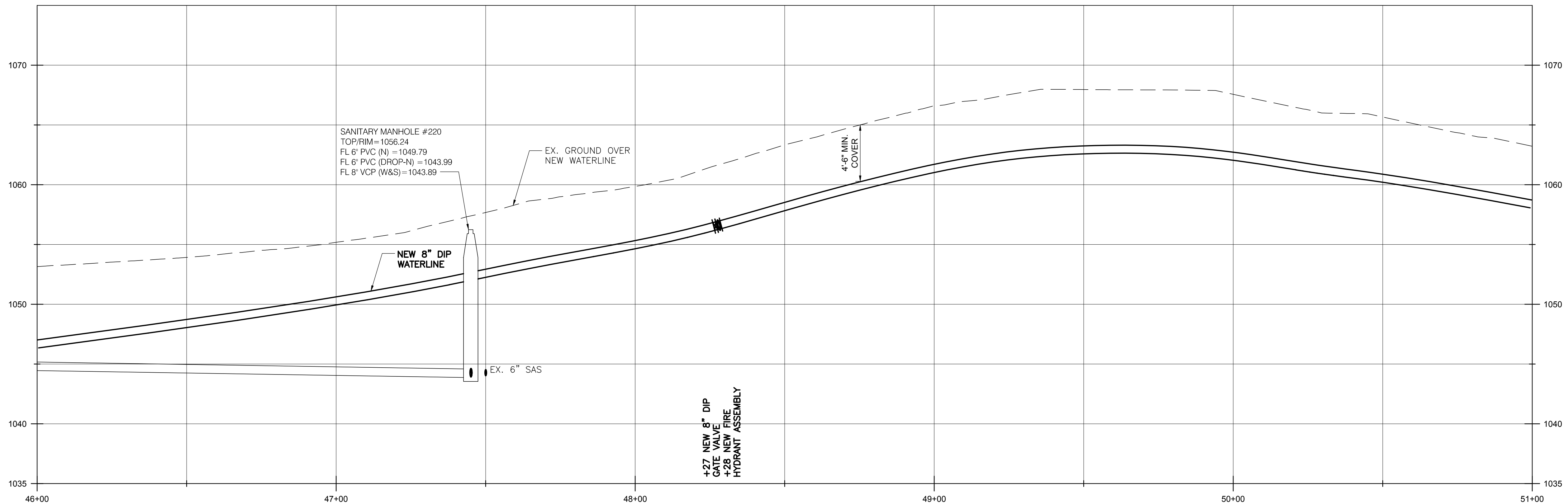
MATCH LINE W/L STA. 46+00
SEE SHT. 1-14



1 334 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)

MATCH LINE W/L STA. 51+00
SEE SHT. 1-16



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CANTON SOUTH WATERLINE EXTENSION
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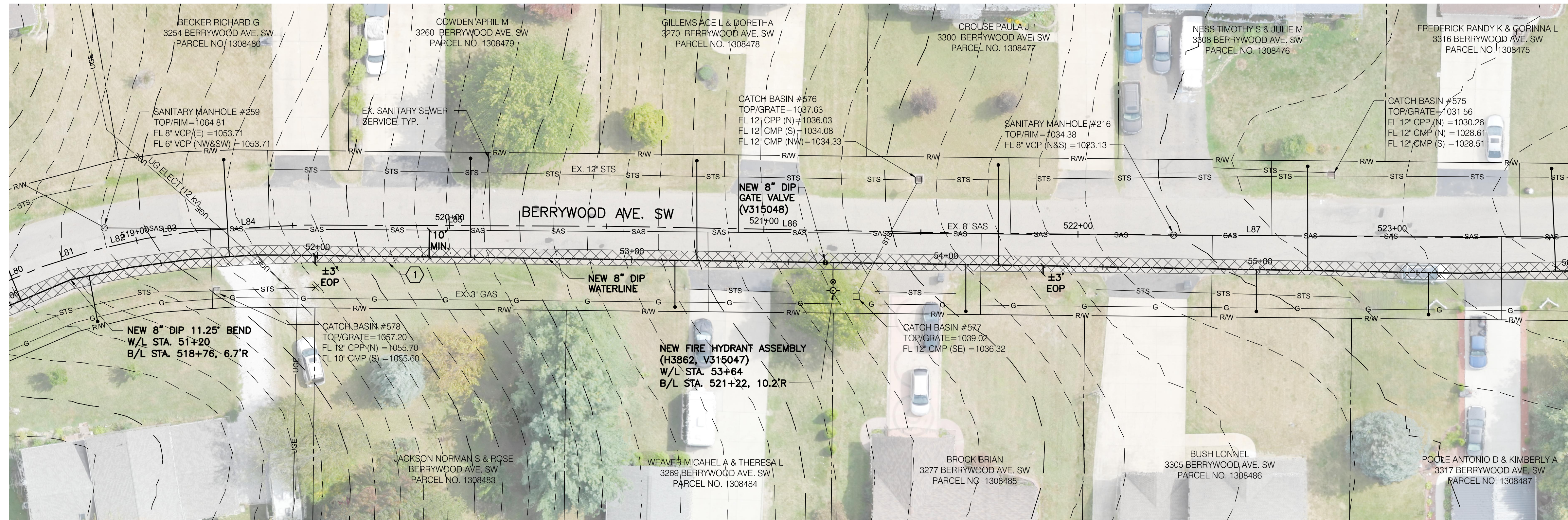
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SCALE: AS NOTED

33RD STREET SW

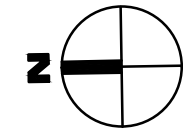
1-15

SHEET: 1-15 OF 1-57

MATCH LINE W/L STA. 51+00
SEE SHT. 1-15



MATCH LINE W/L STA. 56+00
SEE SHT. 1-17

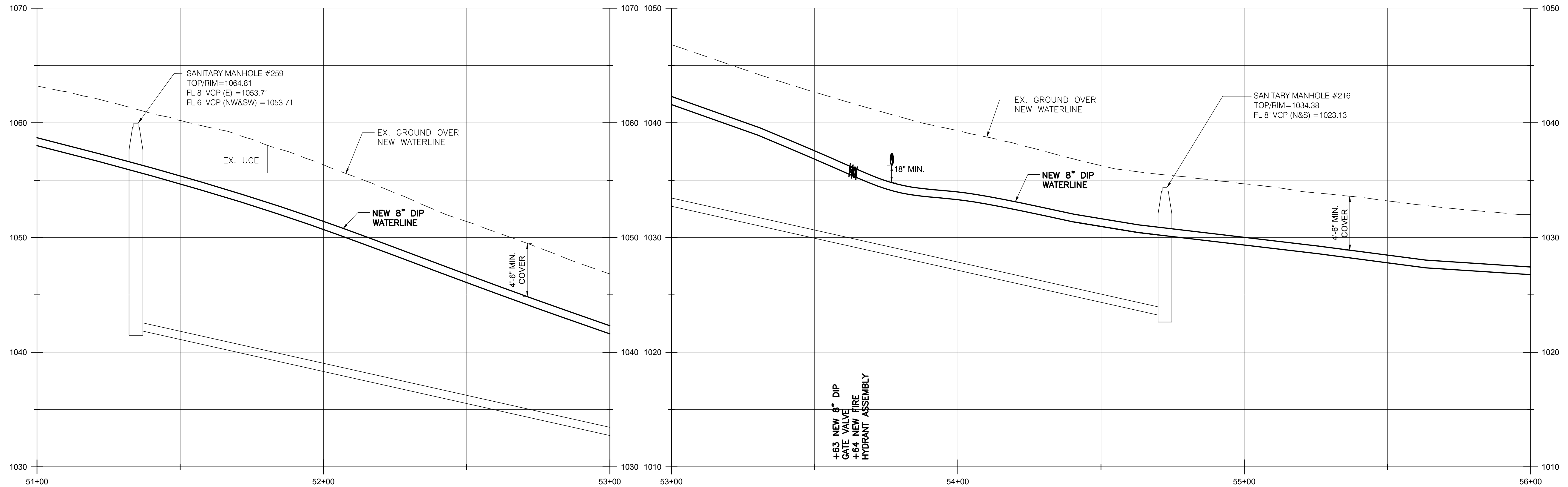


① 334 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

1. ANYTIME THE PROPOSED WATERLINE CROSSES AN UNDERGROUND, 12 kv, ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT AEP A MINIMUM OF 1 WEEK IN ADVANCE OF SAID CROSSING TO DE-ENERGIZE THE LINE. ALL OSHA ENERGY CLEARANCES SHALL BE FOLLOWED WHEN WORKING AROUND ELECTRICAL LINES. ALL COSTS ASSOCIATED WITH DE-ENERGIZING THE ELECTRICAL LINES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)



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100 WEST ERIE STREET
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CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
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NO.	DESCRIPTION	DATE

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SCALE: AS NOTED

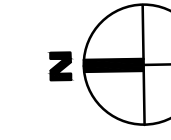
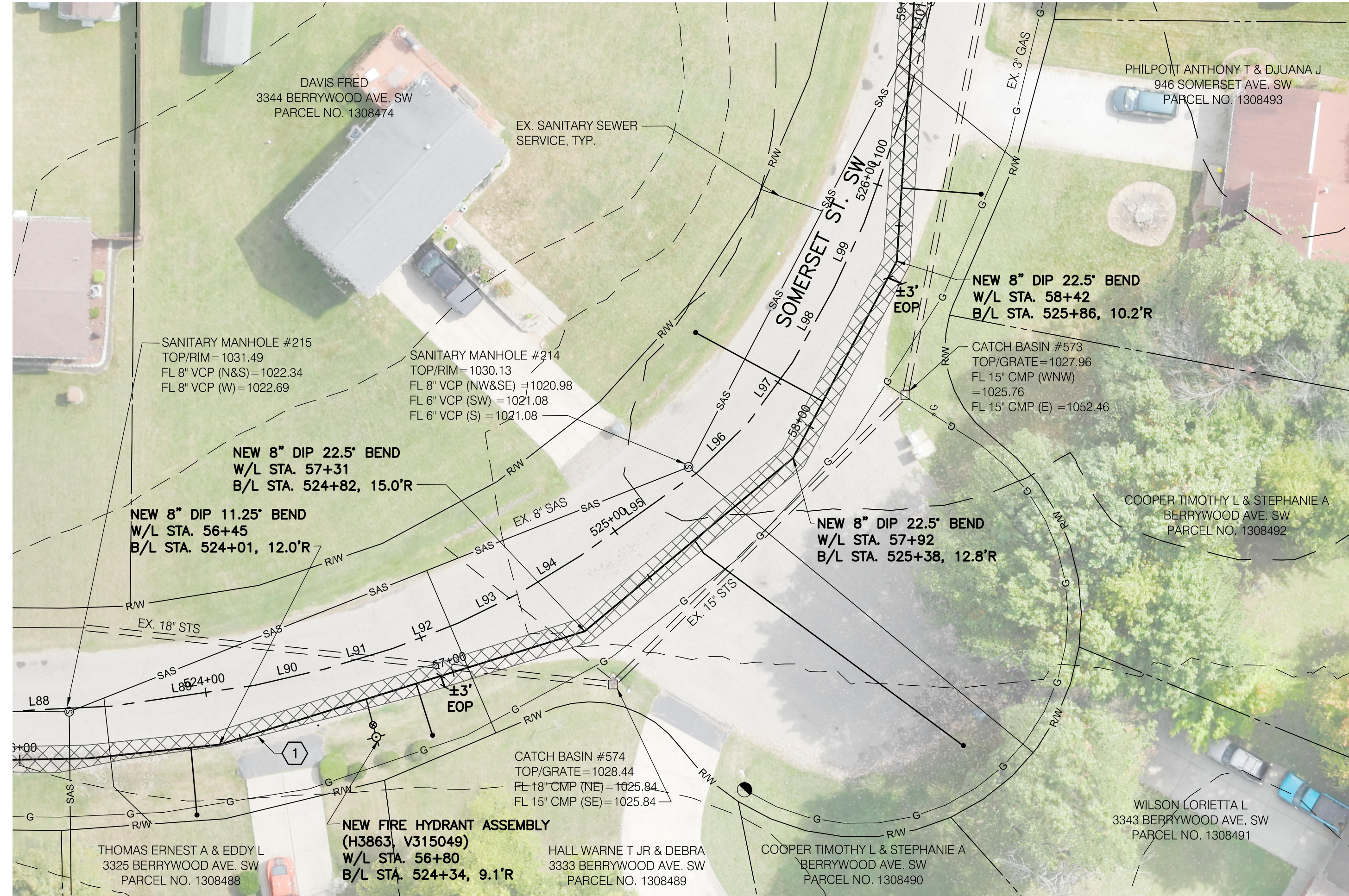
BERRYWOOD AVE SW

1-16

SHEET: 1-16 OF 1-57

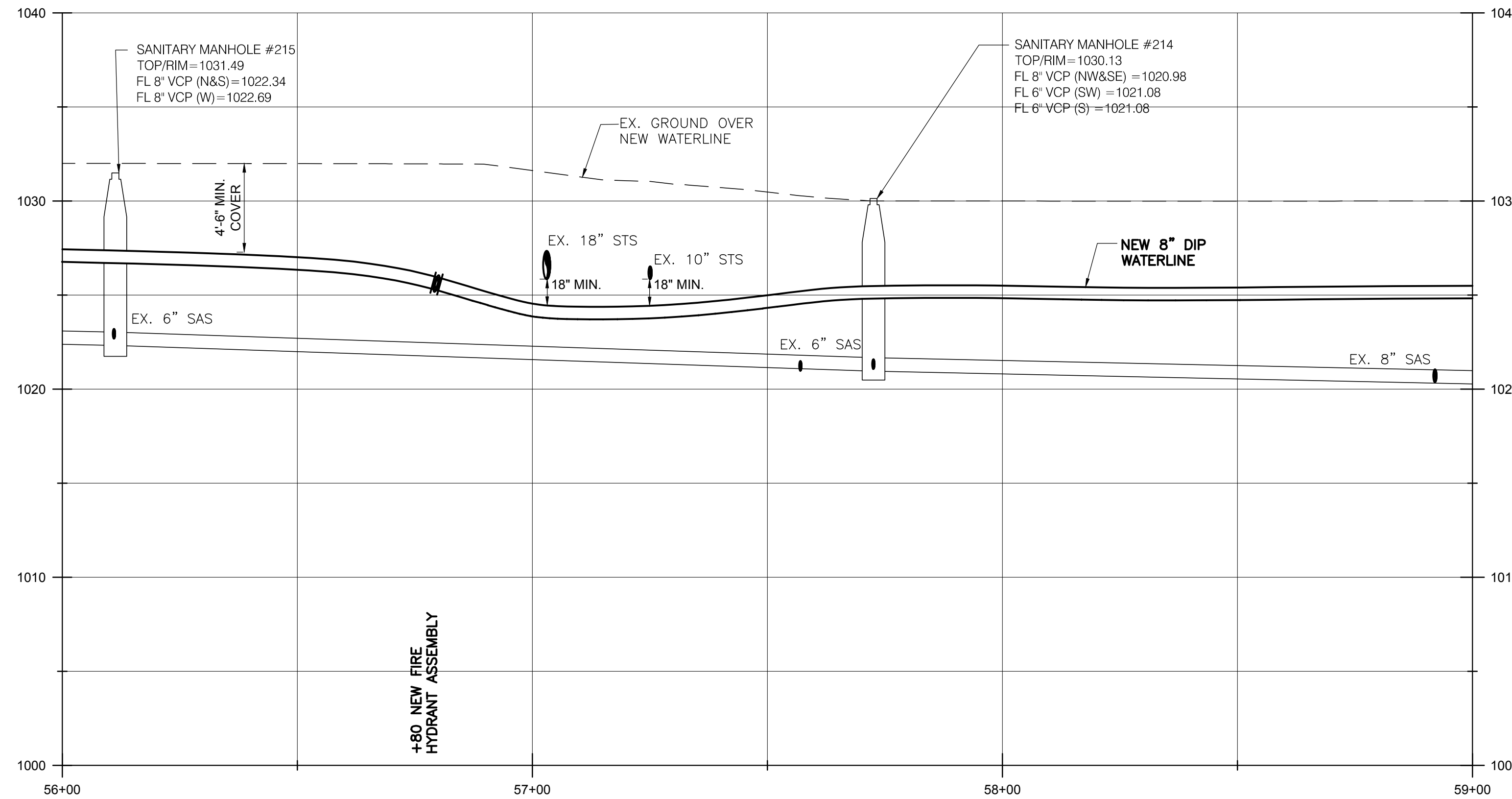
MATCH LINE W/L STA. 59+00
SEE SHT. 1-18

MATCH LINE W/L STA. 56+00
SEE SHT. 1-16



1 200 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



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100 WEST ERIE STREET
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CANTON SOUTH WATERLINE EXTENSION
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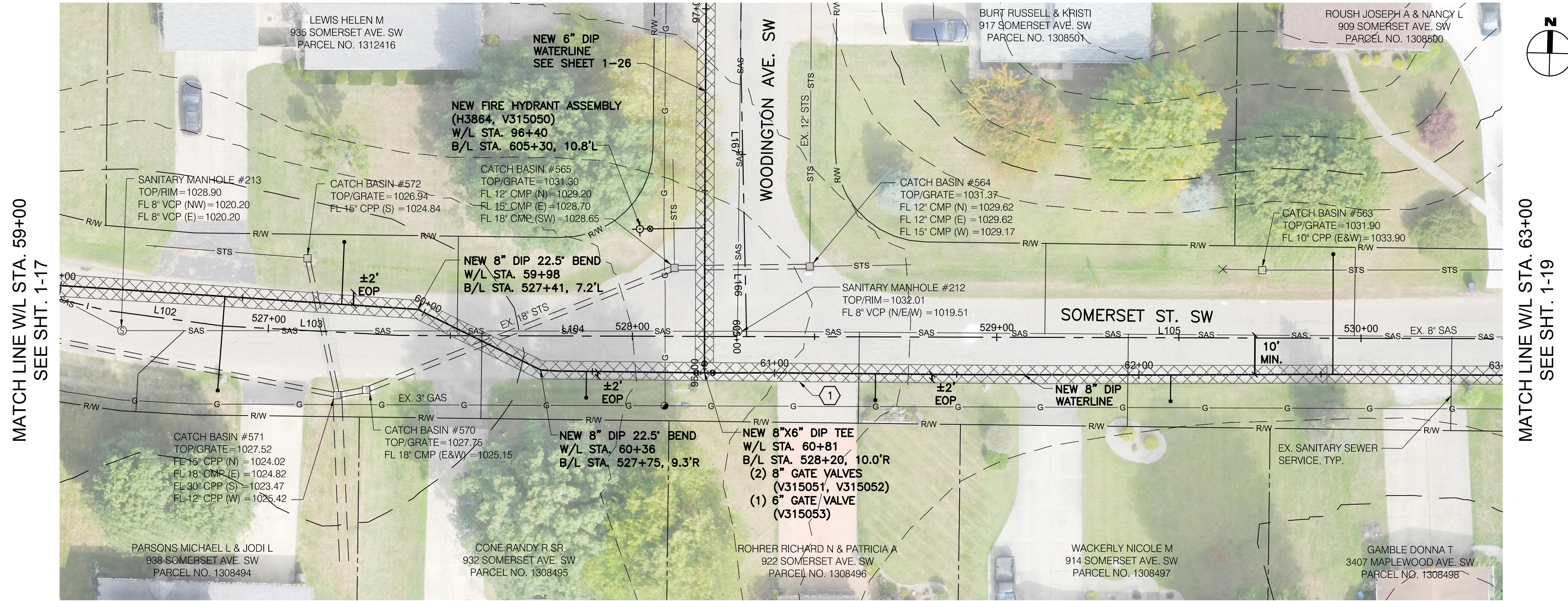
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APPROVED BY: TMA
SCALE: AS NOTED

BERRYWOOD AVE SW

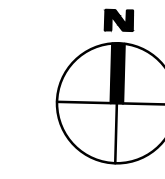
1-17

SHEET: 1-17 OF 1-57



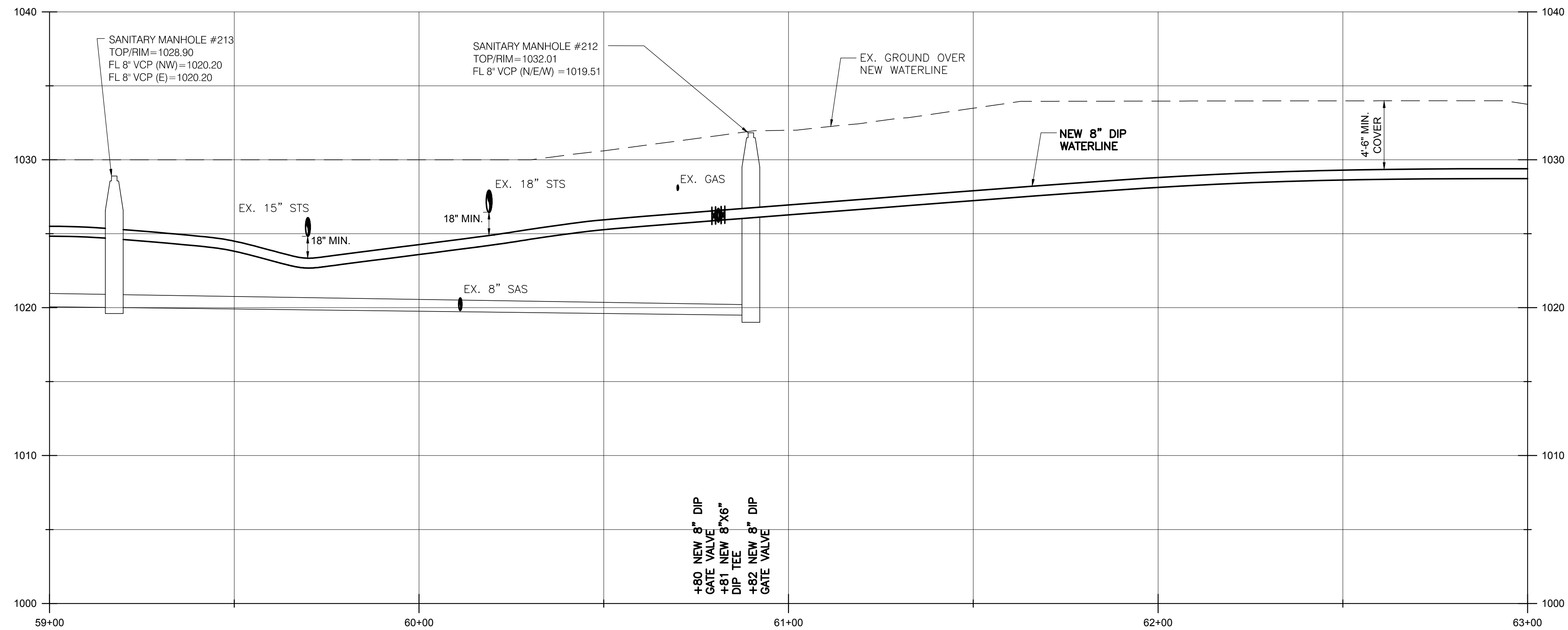
MATCH LINE W/L STA. 59+00
SEE SHT. 1-17

MATCH LINE W/L STA. 63+00
SEE SHT. 1-19



① 223 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



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100 WEST ERIE STREET
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CANTON SOUTH WATERLINE EXTENSION
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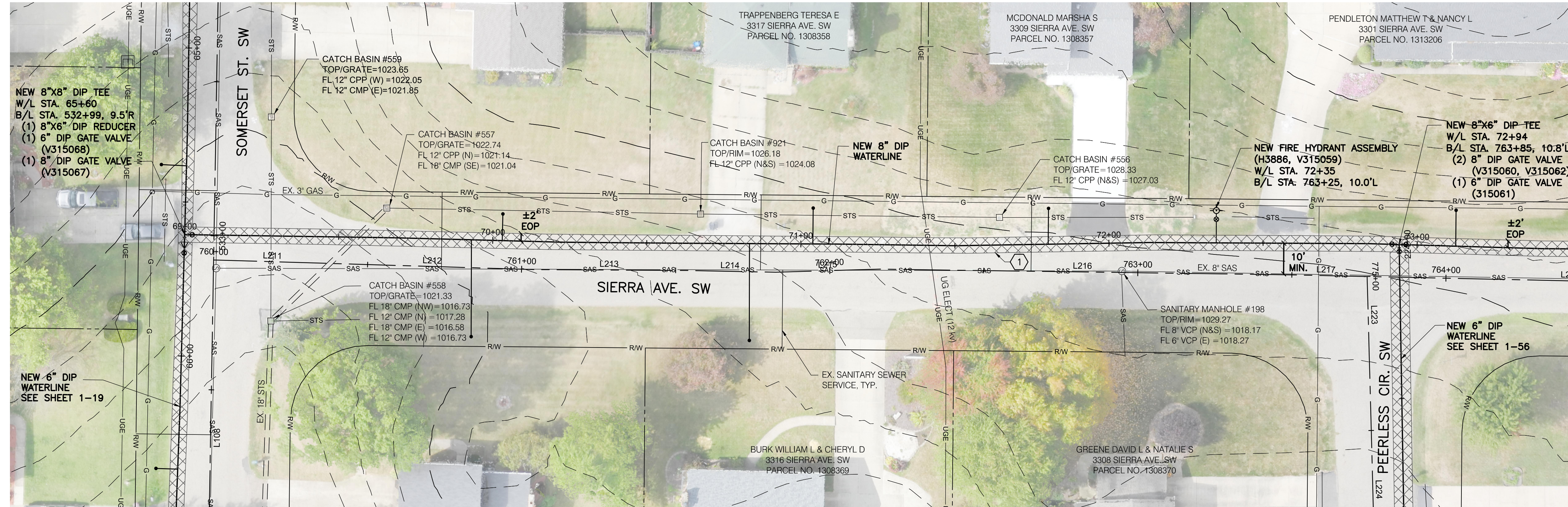
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APPROVED BY: TMA
SCALE: AS NOTED

SOMERSET STREET

1-18

SHEET: 1-18 OF 1-57



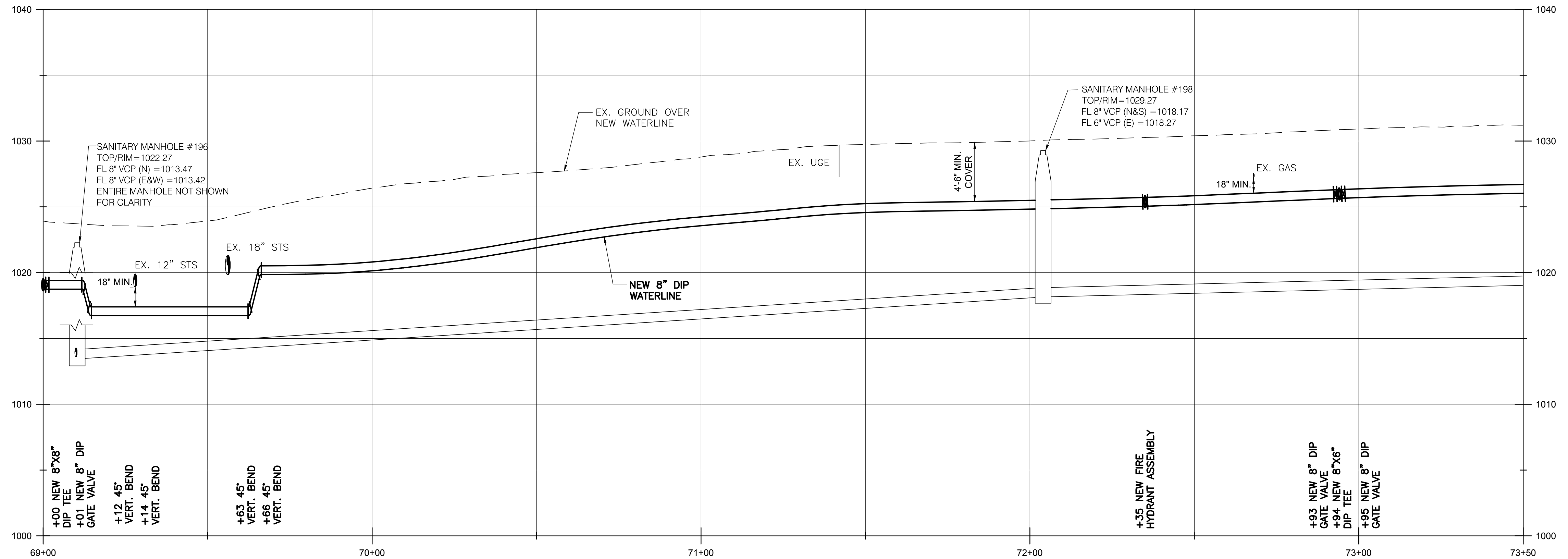
1 250 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

- ANYTIME THE PROPOSED WATERLINE CROSSES AN UNDERGROUND, 12 kv, ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT AEP A MINIMUM OF 1 WEEK IN ADVANCE OF SAID CROSSING TO DE-ENERGIZE THE LINE. ALL OASHA ENERGY CLEARANCES SHALL BE FOLLOWED WHEN WORKING AROUND ELECTRICAL LINES. ALL COSTS ASSOCIATED WITH DE-ENERGIZING THE ELECTRICAL LINES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

SCALE:
 1" = 20' (HORIZ.)
 1" = 5" (VERT.)

MATCH LINE W/L STA. 73+50
 SEE SHT. 1-21



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CANTON SOUTH WATERLINE EXTENSION
 CITY OF CANTON
 WATER DEPARTMENT

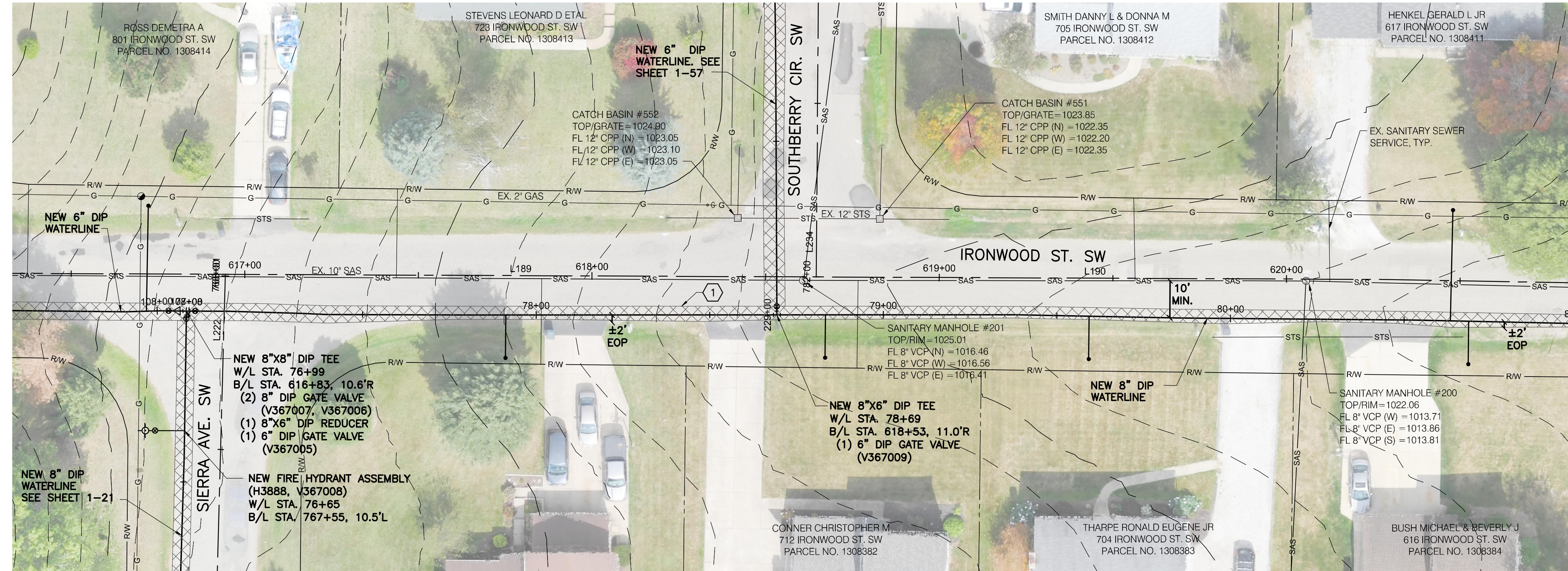
NO.	DESCRIPTION	REVISIONS	
		DATE	

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 APPROVED BY: TMA
 SCALE: AS NOTED

SIERRA AVE SW

1-20

SHEET: 1-20 OF 1-57



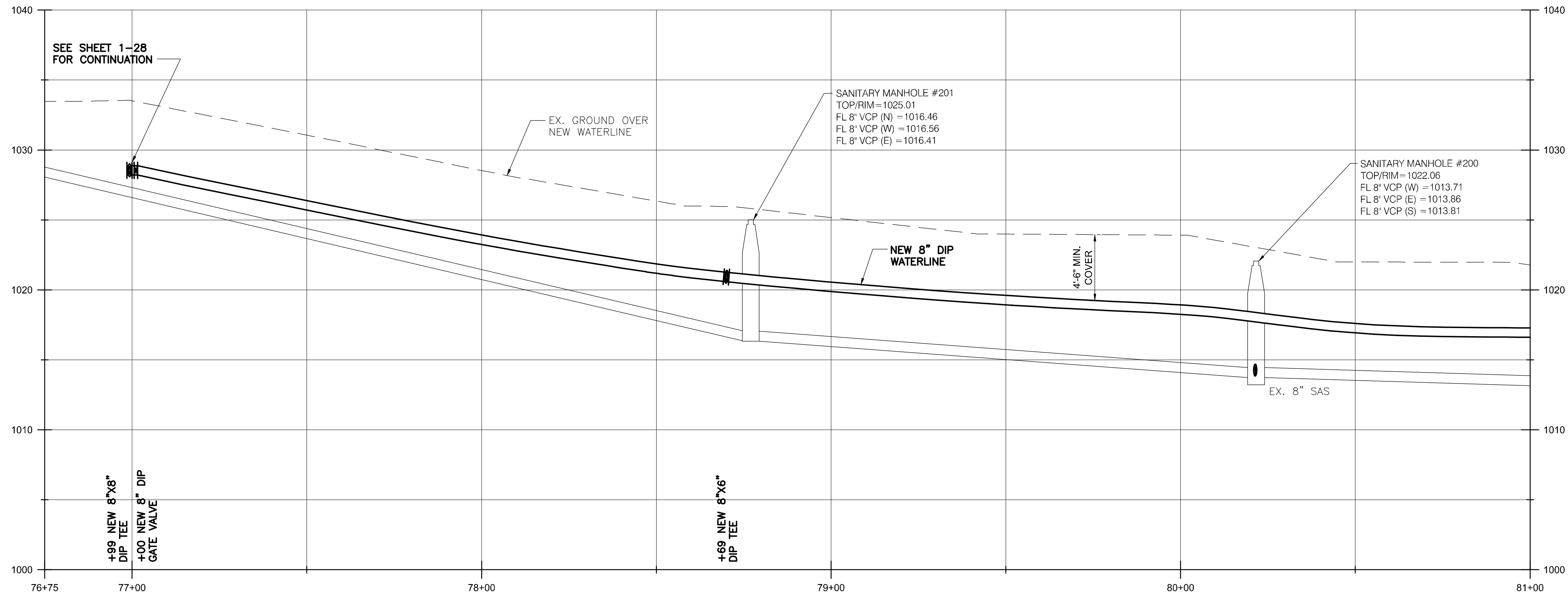
1 237 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

1. BEFORE AND AFTER INSTALLING THE LONG SERVICE/BORE FOR 617 & 801 IRONWOOD ST. SW, THE CONTRACTOR SHALL TELEWISE THE SANITARY SEWER IN THE VICINITY OF THE SERVICE CROSSING, IF THE BORE CAUSED DAMAGE TO THE SANITARY SEWER, THE CONTRACTOR SHALL REPAIR THE SEWER TO MATCH PRE-BORE CONDITIONS. ALL COSTS ASSOCIATED WITH THIS REPAIR WILL BE COVERED BY THE PRIME CONTRACTOR, AT NO COST TO THE PROJECT. THE COST TO TELEWISE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

2. FOR AREAS WHERE EXISTING SANITARY SEWER AND PROPOSED WATERLINE ARE SHOWN TO BE AT SIMILAR ELEVATIONS, THE CONTRACTOR SHALL INSTALL THE PROPOSED WATERLINE IN A MANNER TO AVOID DAMAGE AND CONFLICTS WITH EXISTING SANITARY SEWER SERVICE LATERALS, FOR WHICH THE VERTICAL ORIENTATION AND ELEVATIONS ARE UNKNOWN. CONTRACTOR SHALL BE PREPARED TO INSTALL THE PROPOSED WATERLINE AT A LOWER ELEVATION AS NECESSARY TO AVOID SUCH CONFLICTS, THE COST OF WHICH SHALL BE INCLUDED IN THE BID PRICE PER LINEAL FOOT OF WATERLINE.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



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CANTON SOUTH WATERLINE EXTENSION
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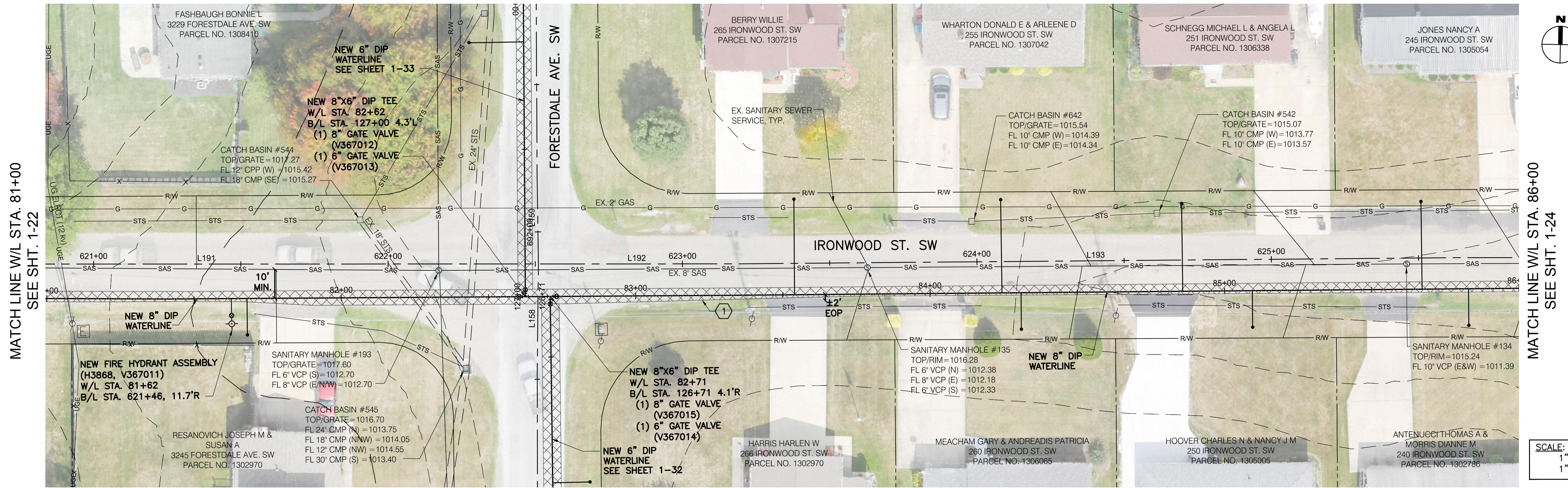
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SCALE: AS NOTED

IRONWOOD STREET SW

1-22

SHEET: 1-22 OF 1-57



MATCH LINE W/L STA. 81+00
SEE SHT. 1-22

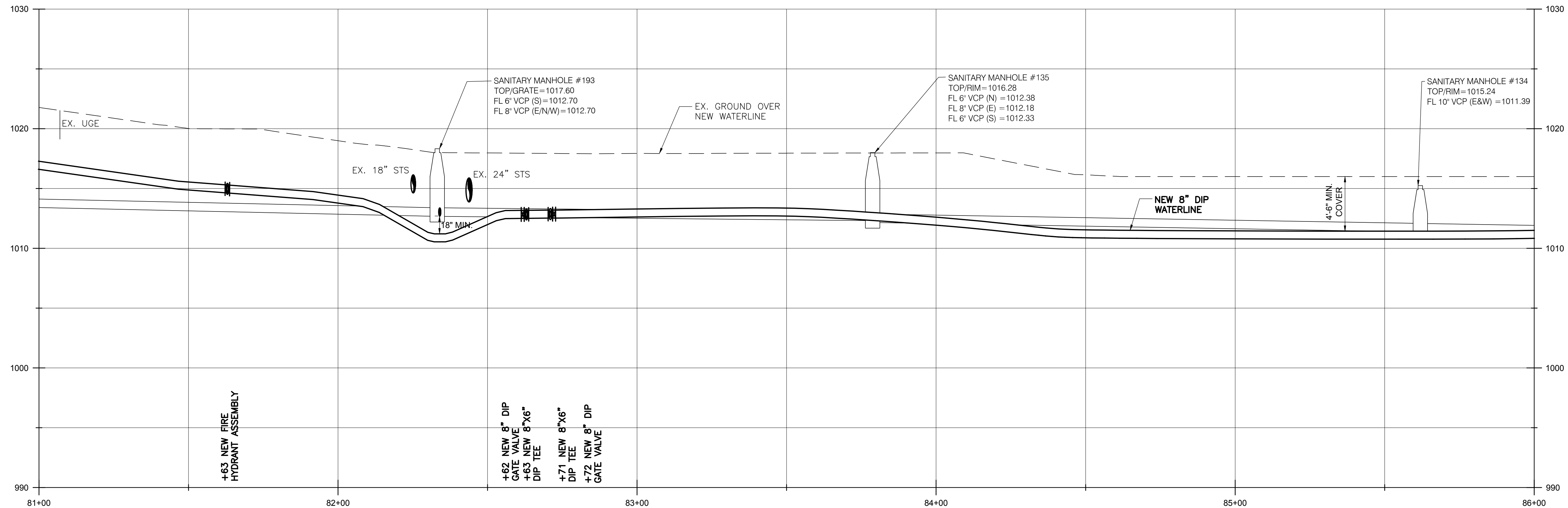
MATCH LINE W/L STA. 86+00
SEE SHT. 1-24

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)

1 278 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

- ANYTIME THE PROPOSED WATERLINE CROSSES AN UNDERGROUND, 12 kv, ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT AEP A MINIMUM OF 1 WEEK IN ADVANCE OF SAID CROSSING TO DE-ENERGIZE THE LINE. ALL OASHA ENERGY CLEARANCES SHALL BE FOLLOWED WHEN WORKING AROUND ELECTRICAL LINES. ALL COSTS ASSOCIATED WITH DE-ENERGIZING THE ELECTRICAL LINES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
- BEFORE AND AFTER INSTALLING THE LONG SERVICE/BORE FOR 265, 255, 251 & 245 IRONWOOD ST. SW, THE CONTRACTOR SHALL TELEWISE THE SANITARY SEWER IN THE VICINITY OF THE SERVICE CROSSING. IF THE BORE CAUSED DAMAGE TO THE SANITARY SEWER, THE CONTRACTOR SHALL REPAIR THE SEWER TO MATCH PRE-BORE CONDITIONS. ALL COSTS ASSOCIATED WITH THIS REPAIR WILL BE COVERED BY THE PRIME CONTRACTOR, AT NO COST TO THE PROJECT. THE COST TO TELEWISE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
- FOR AREAS WHERE EXISTING SANITARY SEWER AND PROPOSED WATERLINE ARE SHOWN TO BE AT SIMILAR ELEVATIONS, THE CONTRACTOR SHALL INSTALL THE PROPOSED WATERLINE IN A MANNER TO AVOID DAMAGE AND CONFLICTS WITH EXISTING SANITARY SEWER SERVICE LATERALS, FOR WHICH THE VERTICAL ORIENTATION AND ELEVATIONS ARE UNKNOWN. CONTRACTOR SHALL BE PREPARED TO INSTALL THE PROPOSED WATERLINE AT A LOWER ELEVATION AS NECESSARY TO AVOID SUCH CONFLICTS, THE COST OF WHICH SHALL BE INCLUDED IN THE BID PRICE PER LINEAL FOOT OF WATERLINE.



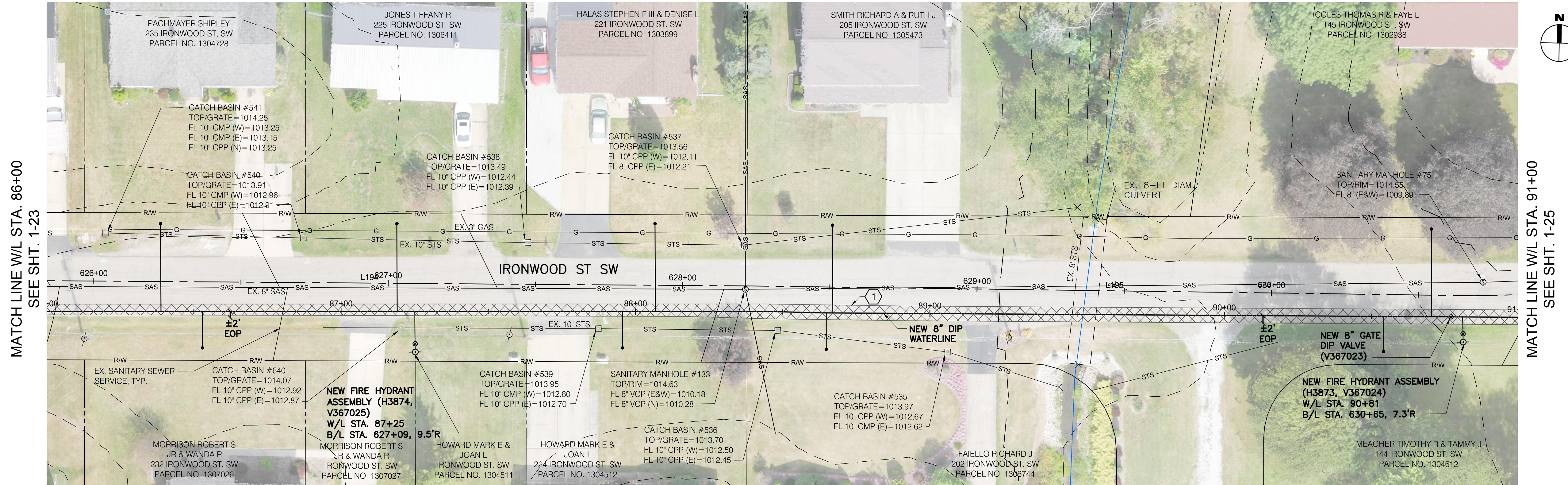
BURGESS & NIPLÉ
100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

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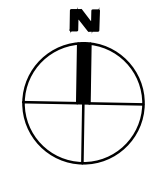
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SCALE: AS NOTED

IRONWOOD STREET SW



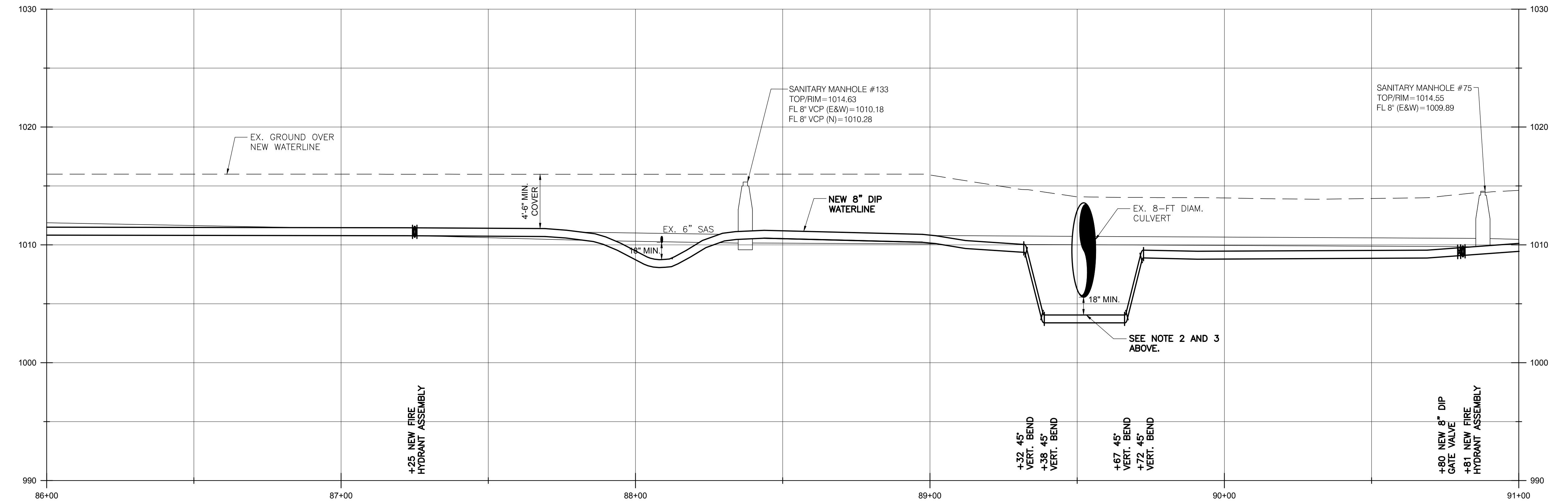
MATCH LINE W/L STA. 86+00
SEE SHT. 1-23

MATCH LINE W/L STA. 91+00
SEE SHT. 1-25



- NOTES:
1. BEFORE AND AFTER INSTALLING THE LONG SERVICE/BORE FOR 221, 205, 145, 235 & 225 IRONWOOD ST. SW, THE CONTRACTOR SHALL TELEVISION THE SANITARY SEWER IN THE VICINITY OF THE SERVICE CROSSING. IF THE BORE CAUSED DAMAGE TO THE SANITARY SEWER, THE CONTRACTOR SHALL REPAIR THE SEWER TO MATCH PRE-BORE CONDITIONS. ALL COSTS ASSOCIATED WITH THIS REPAIR WILL BE COVERED BY THE PRIME CONTRACTOR, AT NO COST TO THE PROJECT. THE COST TO TELEVISION SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
 2. THE WATERLINE, BENDS AND FITTINGS USED TO GO UNDER THE 8-FT DIAMETER CULVERT SHALL BE DOUBLE WRAPPED WITH POLYETHYLENE FILM WHEN THE DEPTH EXCEEDS 7 FEET.
 3. THE VOID BETWEEN THE 8' DIAMETER CULVERT AND TOP OF WATERLINE SHALL BE FILLED WITH LOW STRENGTH MORTAR UNLESS APPROVED OTHERWISE BY THE ONSITE CITY REPRESENTATIVE.
 4. FOR AREAS WHERE EXISTING SANITARY SEWER AND PROPOSED WATERLINE ARE SHOWN TO BE AT SIMILAR ELEVATIONS, THE CONTRACTOR SHALL INSTALL THE PROPOSED WATERLINE IN A MANNER TO AVOID DAMAGE AND CONFLICTS WITH EXISTING SANITARY SEWER SERVICE LATERALS, FOR WHICH THE VERTICAL ORIENTATION AND ELEVATIONS ARE UNKNOWN. CONTRACTOR SHALL BE PREPARED TO INSTALL THE PROPOSED WATERLINE AT A LOWER ELEVATION AS NECESSARY TO AVOID SUCH CONFLICTS. THE COST OF WHICH SHALL BE INCLUDED IN THE BID PRICE PER LINEAL FOOT OF WATERLINE.

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)



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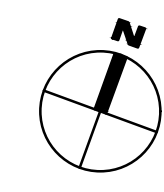
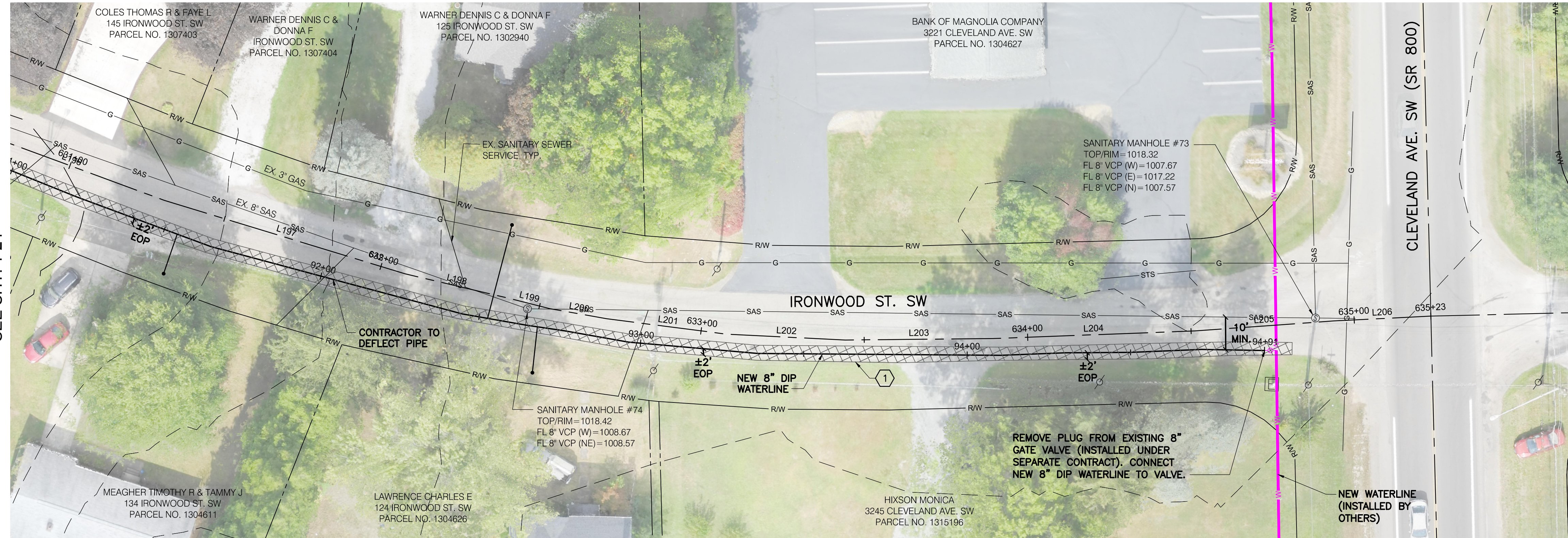
CANTON SOUTH WATERLINE EXTENSION
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IRONWOOD STREET SW

MATCH LINE W/L STA. 91+00
SEE SHT. 1-24

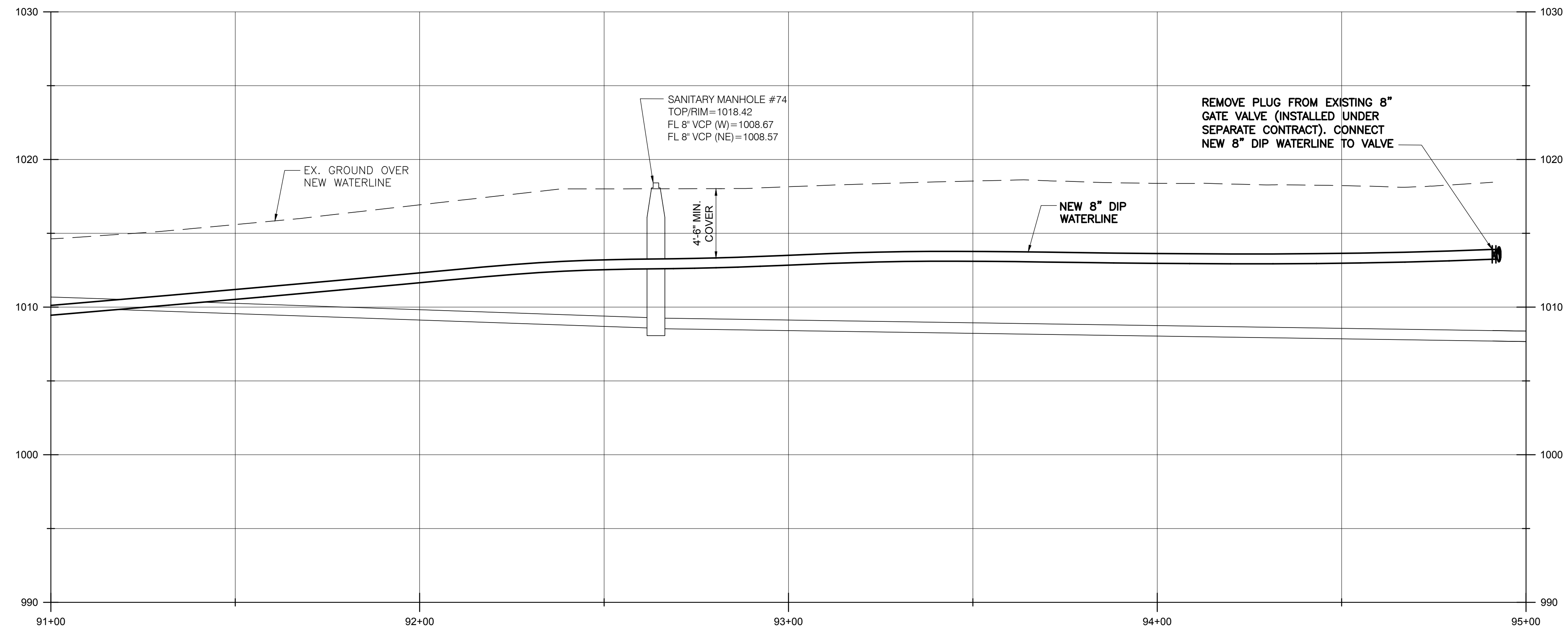


1 223 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

1. FOR AREAS WHERE EXISTING SANITARY SEWER AND PROPOSED WATERLINE ARE SHOWN TO BE AT SIMILAR ELEVATIONS, THE CONTRACTOR SHALL INSTALL THE PROPOSED WATERLINE IN A MANNER TO AVOID DAMAGE AND CONFLICTS WITH EXISTING SANITARY SEWER SERVICE LATERALS, FOR WHICH THE VERTICAL ORIENTATION AND ELEVATIONS ARE UNKNOWN. CONTRACTOR SHALL BE PREPARED TO INSTALL THE PROPOSED WATERLINE AT A LOWER ELEVATION AS NECESSARY TO AVOID SUCH CONFLICTS, THE COST OF WHICH SHALL BE INCLUDED IN THE BID PRICE PER LINEAL FOOT OF WATERLINE.

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)



BURGESS & NIPLÉ
100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

NO.	DESCRIPTION	DATE

JOB NO: PR55936

DATE: MAY 2018

DESIGNED BY: RRH

DRAWN BY: TSM

CHECKED BY: TMA

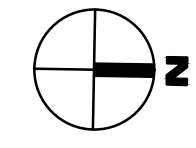
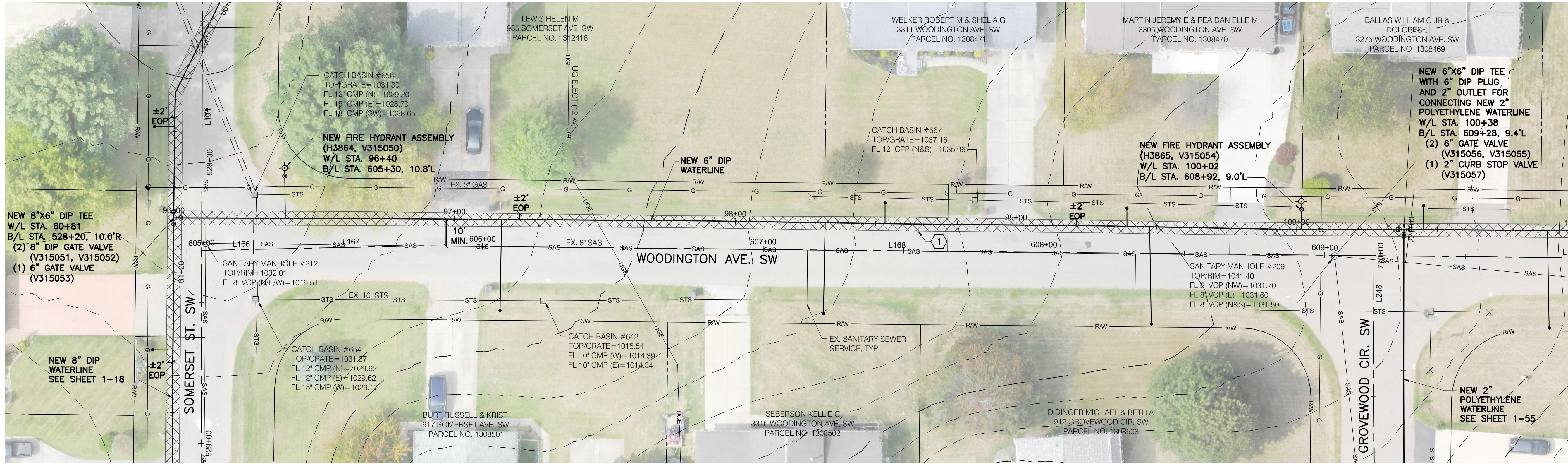
APPROVED BY: TMA

SCALE: AS NOTED

IRONWOOD STREET SW

1-25

SHEET: 1-25 OF 1-57

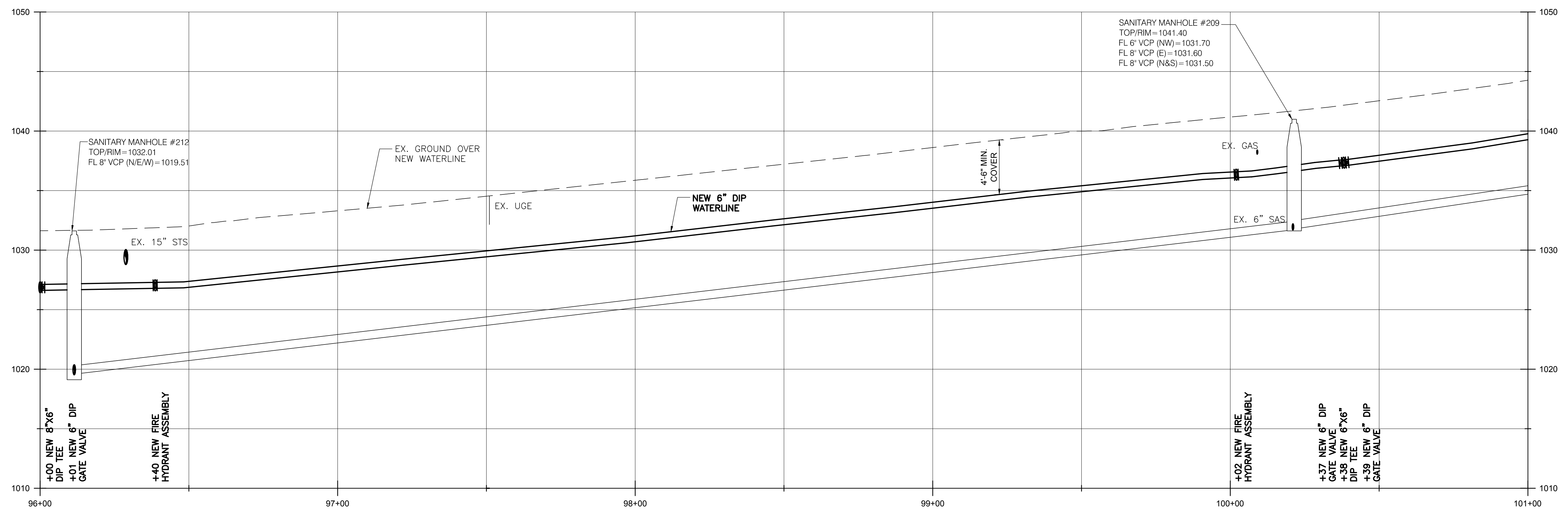


MATCH LINE W/L STA. 101+00
SEE SHT. 1-24

1 278 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:
1. ANYTIME THE PROPOSED WATERLINE CROSSES AN UNDERGROUND, 12 kv, ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT AEP A MINIMUM OF 1 WEEK IN ADVANCE OF SAID CROSSING TO DE-ENERGIZE THE LINE. ALL OASHA ENERGY CLEARANCES SHALL BE FOLLOWED WHEN WORKING AROUND ELECTRICAL LINES. ALL COSTS ASSOCIATED WITH DE-ENERGIZING THE ELECTRICAL LINES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



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100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

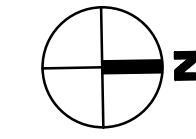
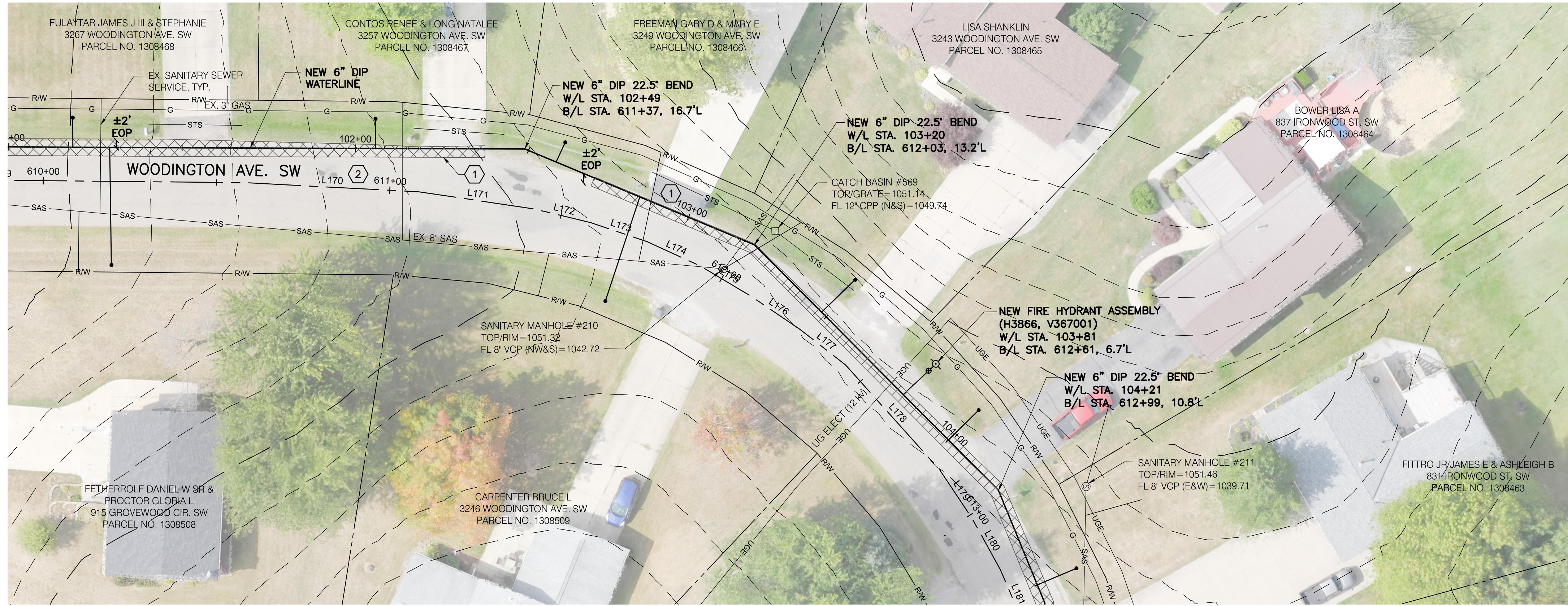
NO.	DESCRIPTION	DATE

JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRH
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

WOODINGTON AVE

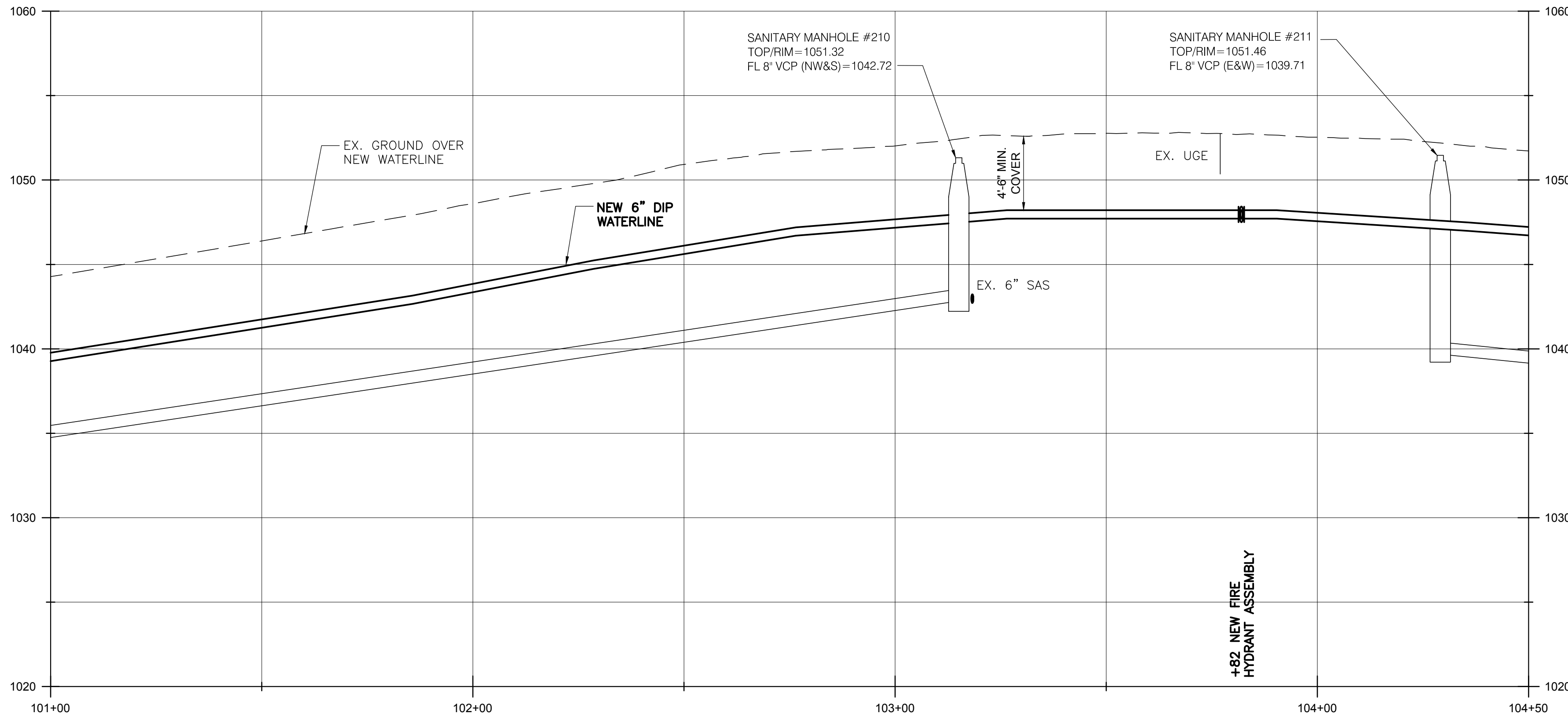
1-26
SHEET: 1-26 OF 1-57

MATCH LINE W/L STA. 101+00
SEE SHT. 1-26



MATCH LINE W/L STA. 104+50
SEE SHT. 1-28

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)



- ① 35 SY MAXIMUM ASPHALT DRIVE REPLACEMENT, TOTAL THIS SHEET.
- ② 195 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

1. ANYTIME THE PROPOSED WATERLINE CROSSES AN UNDERGROUND, 12 kv, ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT AEP A MINIMUM OF 1 WEEK IN ADVANCE OF SAID CROSSING TO DE-ENERGIZE THE LINE. ALL OASHA ENERGY CLEARANCES SHALL BE FOLLOWED WHEN WORKING AROUND ELECTRICAL LINES. ALL COSTS ASSOCIATED WITH DE-ENERGIZING THE ELECTRICAL LINES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

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100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

NO.	DESCRIPTION	REVISIONS	
		DATE	

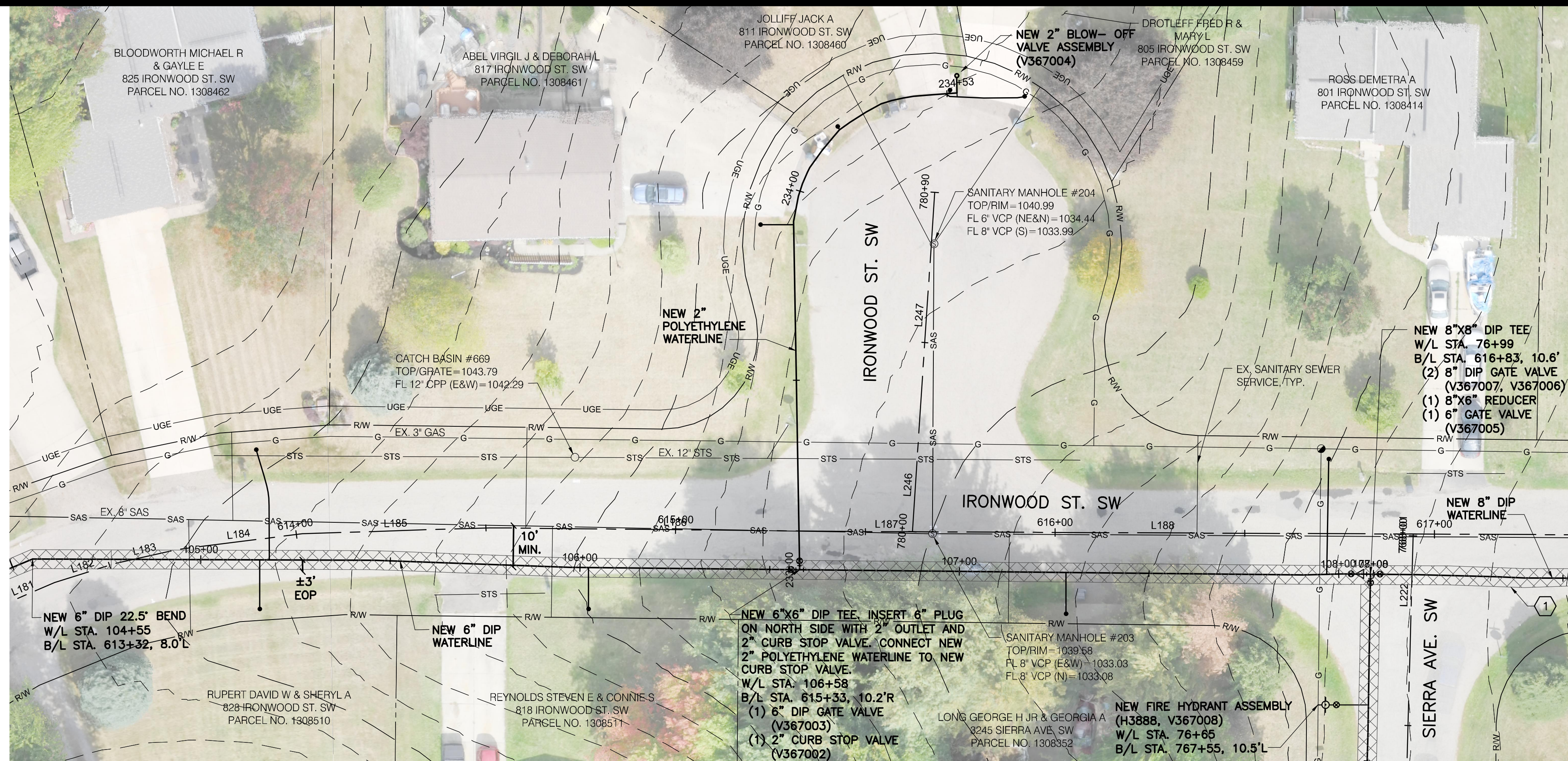
JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRH
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

WOODINGTON AVE

1-27

SHEET: 1-27 OF 1-57

MATCH LINE W/L STA. 104+50
SEE SHT. 1-27



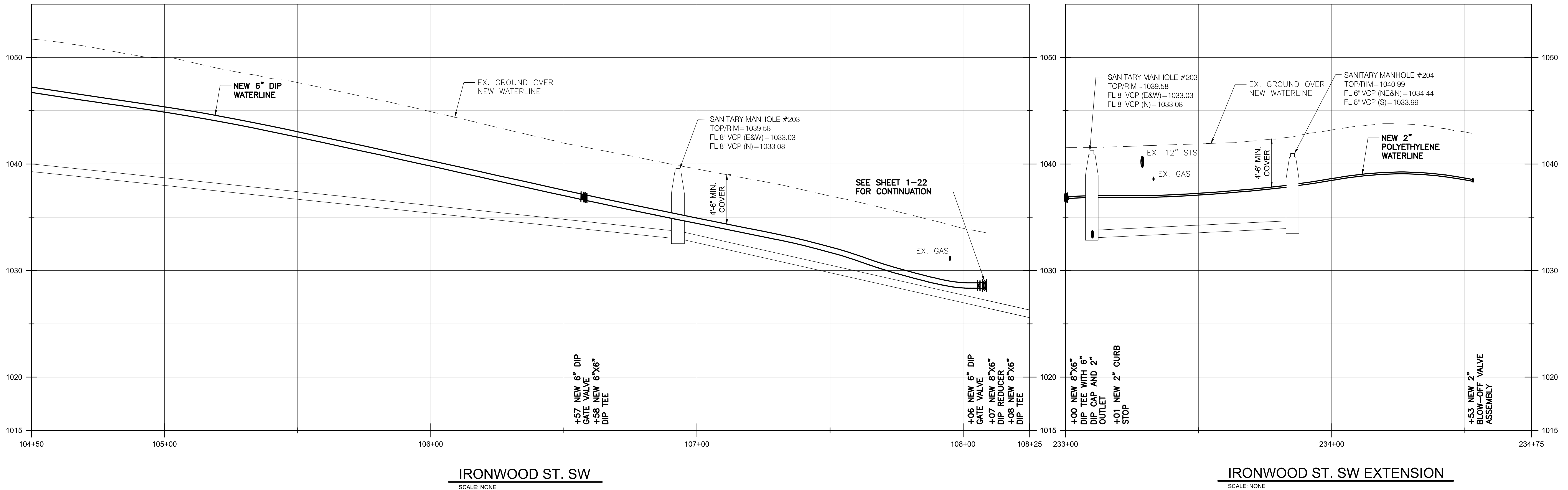
NOTES:

- BEFORE AND AFTER INSTALLING THE LONG SERVICE/BORE FOR 801 IRONWOOD ST. SW, THE CONTRACTOR SHALL TELEWISE THE SANITARY SEWER IN THE VICINITY OF THE SERVICE CROSSING. IF THE BORE CAUSED DAMAGE TO THE SANITARY SEWER, THE CONTRACTOR SHALL REPAIR THE SEWER TO MATCH PRE-BORE CONDITIONS. ALL COSTS ASSOCIATED WITH THIS REPAIR WILL BE COVERED BY THE PRIME CONTRACTOR, AT NO COST TO THE PROJECT. THE COST TO TELEWISE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
- FOR AREAS WHERE EXISTING SANITARY SEWER AND PROPOSED WATERLINE ARE SHOWN TO BE AT SIMILAR ELEVATIONS, THE CONTRACTOR SHALL INSTALL THE PROPOSED WATERLINE IN A MANNER TO AVOID DAMAGE AND CONFLICTS WITH EXISTING SANITARY SEWER SERVICE LATERALS, FOR WHICH THE VERTICAL ORIENTATION AND ELEVATIONS ARE UNKNOWN. CONTRACTOR SHALL BE PREPARED TO INSTALL THE PROPOSED WATERLINE AT A LOWER ELEVATION AS NECESSARY TO AVOID SUCH CONFLICTS, THE COST OF WHICH SHALL BE INCLUDED IN THE BID PRICE PER LINEAL FOOT OF WATERLINE.

MATCH LINE
SEE SHT. 1-22

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)

① 209 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.



IRONWOOD ST. SW
SCALE: NONE

IRONWOOD ST. SW EXTENSION
SCALE: NONE

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100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

NO.	DESCRIPTION	DATE

JOB NO: PR55936

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DESIGNED BY: RRH

DRAWN BY: TSM

CHECKED BY: TMA

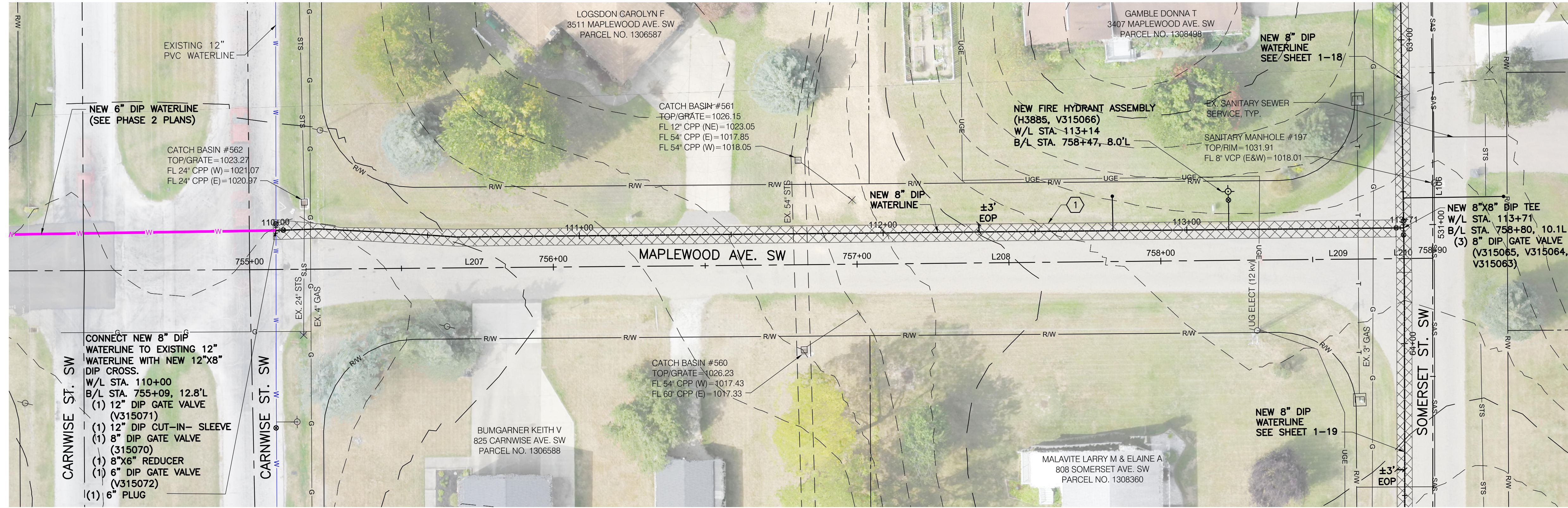
APPROVED BY: TMA

SCALE: AS NOTED

IRONWOOD ST SW

1-28

SHEET: 1-28 OF 1-57

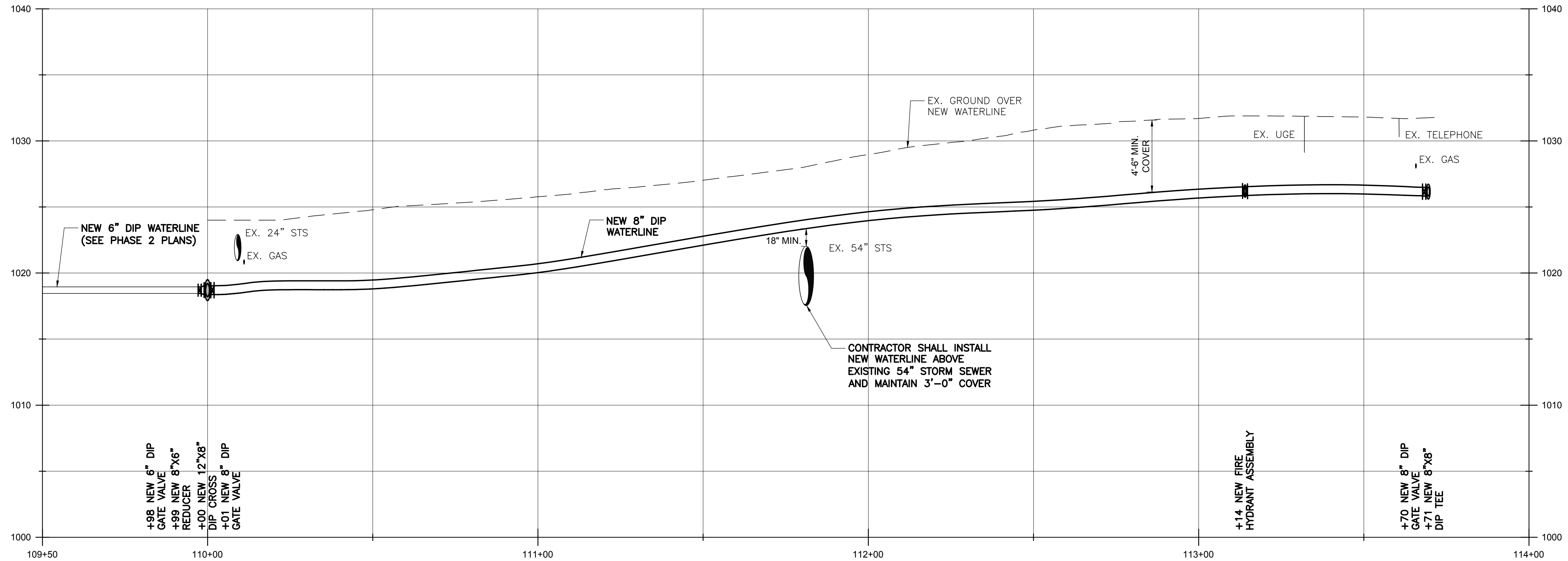


1 230 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

1. ANYTIME THE PROPOSED WATERLINE CROSSES AN UNDERGROUND, 12 kv. ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT AEP A MINIMUM OF 1 WEEK IN ADVANCE OF SAID CROSSING TO DE-ENERGIZE THE LINE. ALL OASHA ENERGY CLEARANCES SHALL BE FOLLOWED WHEN WORKING AROUND ELECTRICAL LINES. ALL COSTS ASSOCIATED WITH DE-ENERGIZING THE ELECTRICAL LINES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

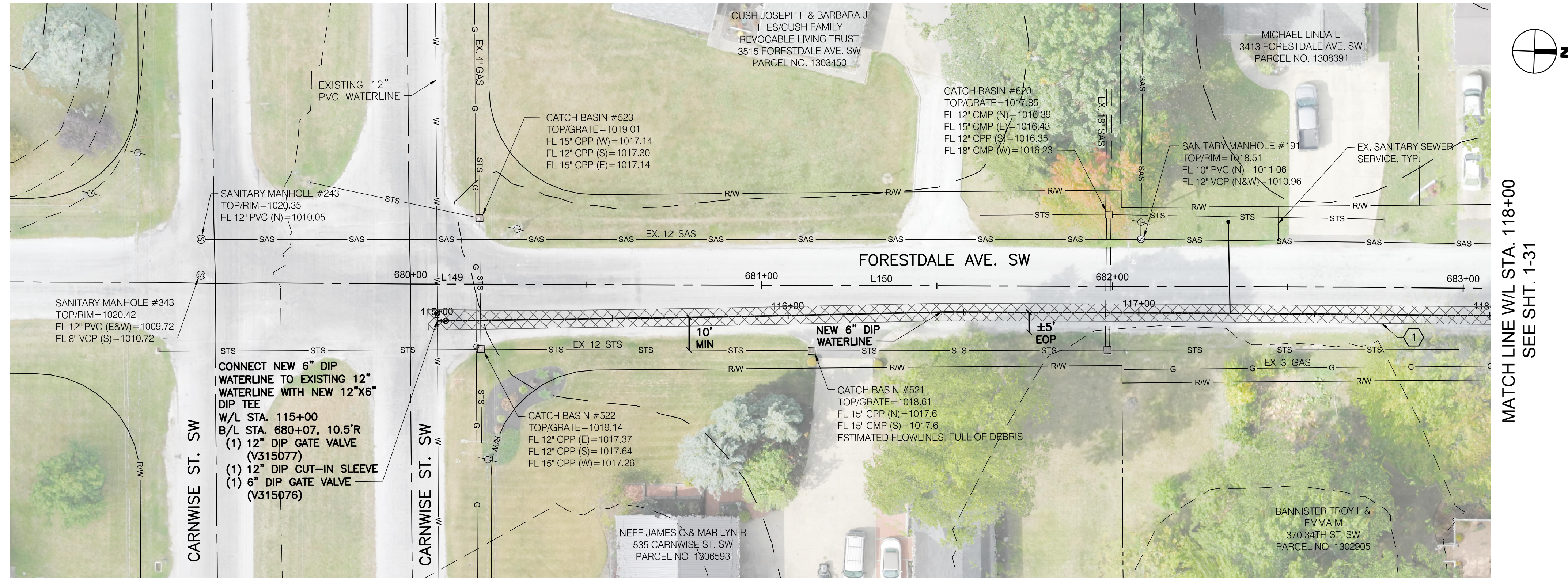
SCALE:
 1" = 20' (HORIZ.)
 1" = 5' (VERT.)



NO.	DESCRIPTION	DATE

JOB NO: PR55936
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 CHECKED BY: TMA
 APPROVED BY: TMA
 SCALE: AS NOTED

MAPLEWOOD AVE

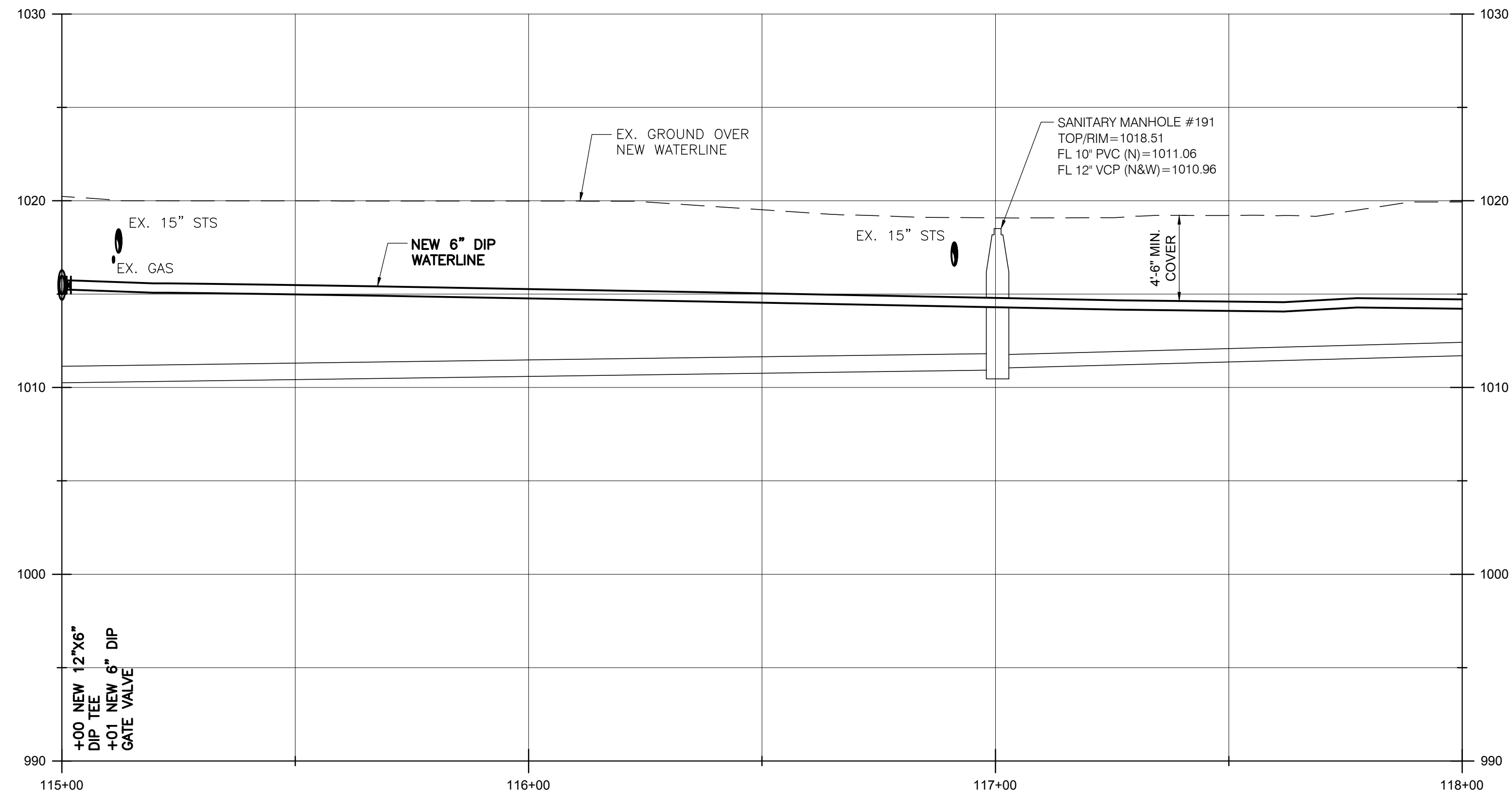


1 167 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

- BEFORE AND AFTER INSTALLING THE LONG SERVICE/BORE FOR 3413 FORESTDALE AVE. SW, THE CONTRACTOR SHALL TELEWISE THE SANITARY SEWER IN THE VICINITY OF THE SERVICE CROSSING. IF THE BORE CAUSED DAMAGE TO THE SANITARY SEWER, THE CONTRACTOR SHALL REPAIR THE SEWER TO MATCH PRE-BORE CONDITIONS. ALL COSTS ASSOCIATED WITH THIS REPAIR WILL BE COVERED BY THE PRIME CONTRACTOR, AT NO COST TO THE PROJECT. THE COST TO TELEWISE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)



BURGESS & NIPLÉ

100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
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WATER DEPARTMENT

NO.	DESCRIPTION	DATE

JOB NO: PR55936

DATE: MAY 2018

DESIGNED BY: RRR

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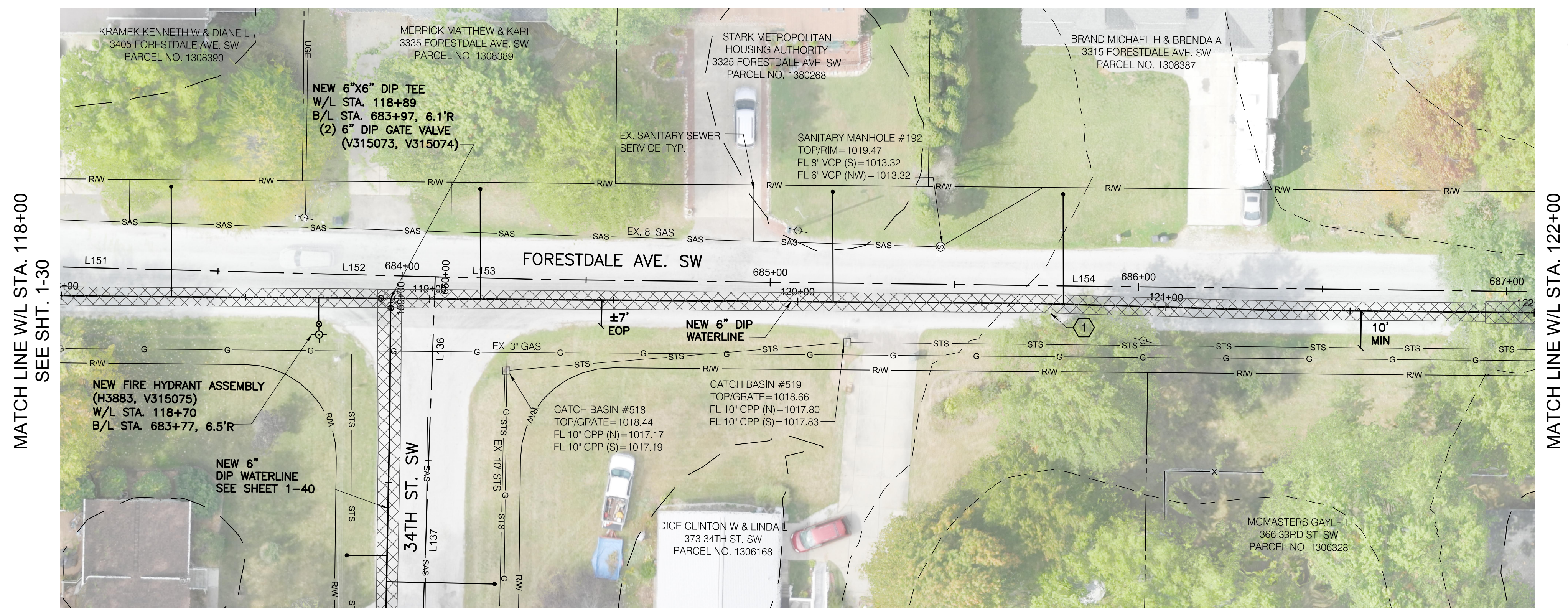
APPROVED BY: TMA

SCALE: AS NOTED

FORESTDALE AVE SW

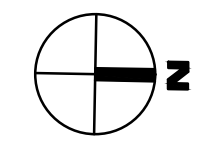
1-30

SHEET: 1-30 OF 1-57



MATCH LINE W/L STA. 118+00
SEE SHT. 1-30

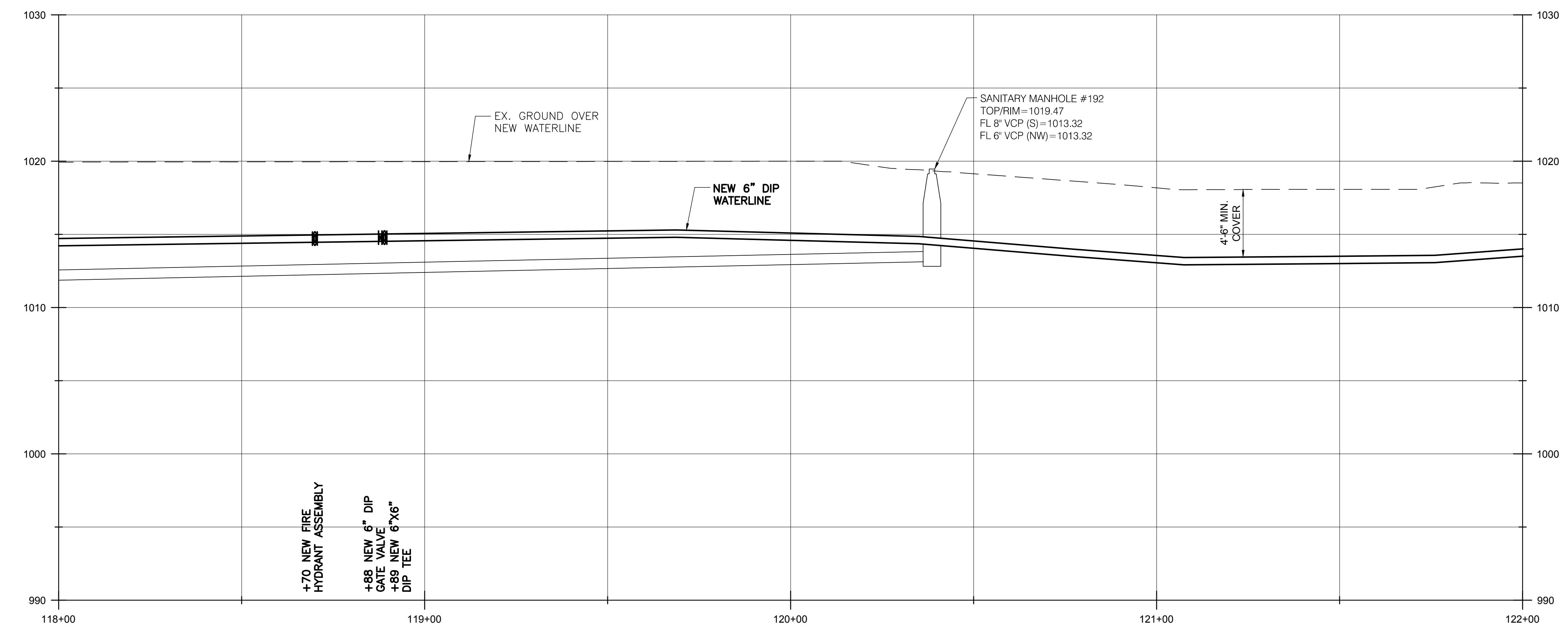
MATCH LINE W/L STA. 122+00
SEE SHT. 1-32



① 223 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

- NOTES:**
- BEFORE AND AFTER INSTALLING THE LONG SERVICE/BORE FOR 3405, 3335 & 3325 FORESTDALE AVE. SW, THE CONTRACTOR SHALL TELEWISE THE SANITARY SEWER IN THE VICINITY OF THE SERVICE CROSSING. IF THE BORE CAUSED DAMAGE TO THE SANITARY SEWER, THE CONTRACTOR SHALL REPAIR THE SEWER TO MATCH PRE-BORE CONDITIONS. ALL COSTS ASSOCIATED WITH THIS REPAIR WILL BE COVERED BY THE PRIME CONTRACTOR, AT NO COST TO THE PROJECT. THE COST TO TELEWISE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
 - FOR AREAS WHERE EXISTING SANITARY SEWER AND PROPOSED WATERLINE ARE SHOWN TO BE AT SIMILAR ELEVATIONS, THE CONTRACTOR SHALL INSTALL THE PROPOSED WATERLINE IN A MANNER TO AVOID DAMAGE AND CONFLICTS WITH EXISTING SANITARY SEWER SERVICE LATERALS, FOR WHICH THE VERTICAL ORIENTATION AND ELEVATIONS ARE UNKNOWN. CONTRACTOR SHALL BE PREPARED TO INSTALL THE PROPOSED WATERLINE AT A LOWER ELEVATION AS NECESSARY TO AVOID SUCH CONFLICTS, THE COST OF WHICH SHALL BE INCLUDED IN THE BID PRICE PER LINEAL FOOT OF WATERLINE.

SCALE:
 1" = 20' (HORIZ.)
 1" = 5' (VERT.)



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 100 WEST ERIE STREET
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CANTON SOUTH WATERLINE EXTENSION
 CITY OF CANTON
 WATER DEPARTMENT

REVISIONS	
NO.	DESCRIPTION

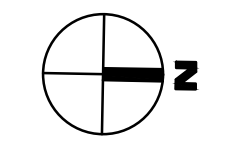
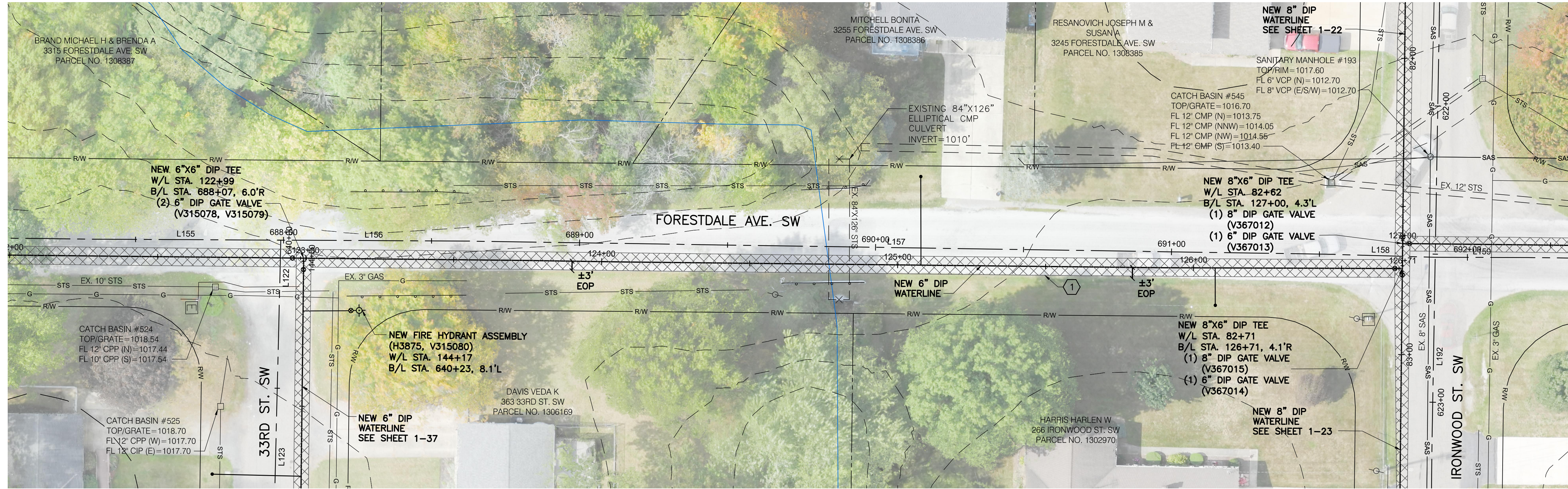
JOB NO: PR55936
 DATE: MAY 2018
 DESIGNED BY: RRH
 DRAWN BY: TSM
 CHECKED BY: TMA
 APPROVED BY: TMA
 SCALE: AS NOTED

FORESTDALE AVE SW

1-31

SHEET: 1-31 OF 1-57

MATCH LINE W/L STA. 122+00
SEE SHT. 1-31

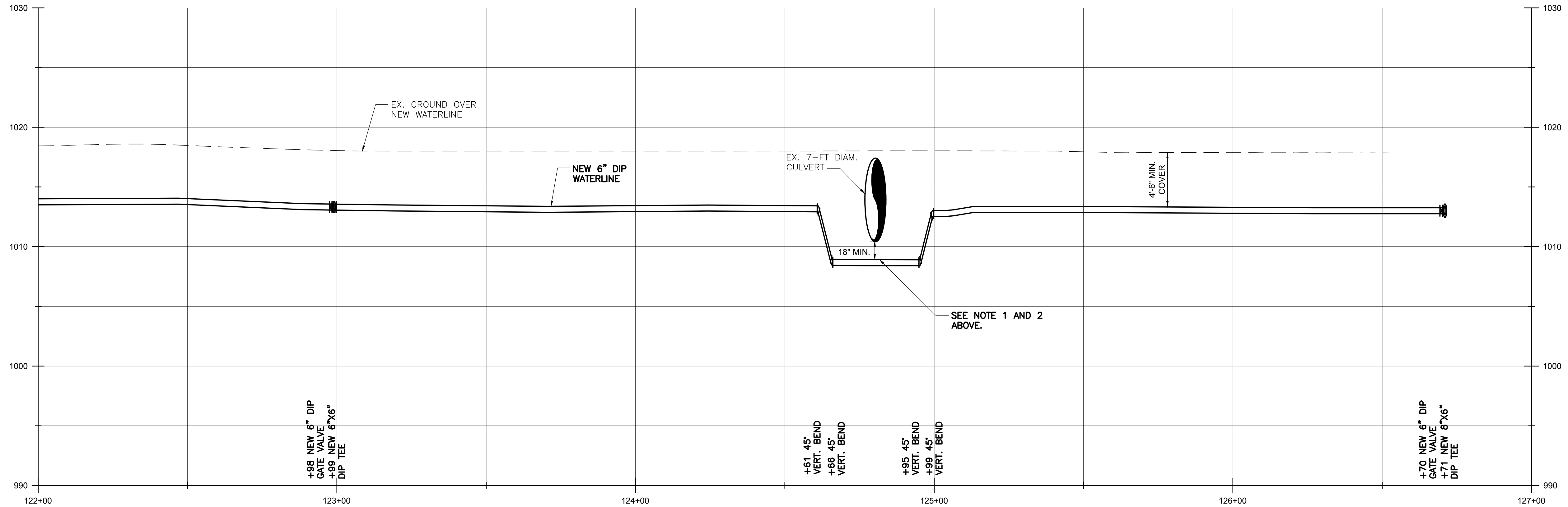


① 334 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

1. THE WATERLINE, BENDS AND FITTINGS USED TO GO UNDER THE 7-FT DIAMETER CULVERT SHALL BE DOUBLE WRAPPED WITH POLYETHYLENE FILM WHEN THE DEPTH EXCEEDS 7 FEET.
2. THE VOID BETWEEN THE 7-FT DIAMETER CULVERT AND TOP OF WATERLINE SHALL BE FILLED WITH LOW STRENGTH MORTAR UNLESS APPROVED OTHERWISE BY THE ONSITE CITY REPRESENTATIVE.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



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100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

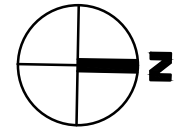
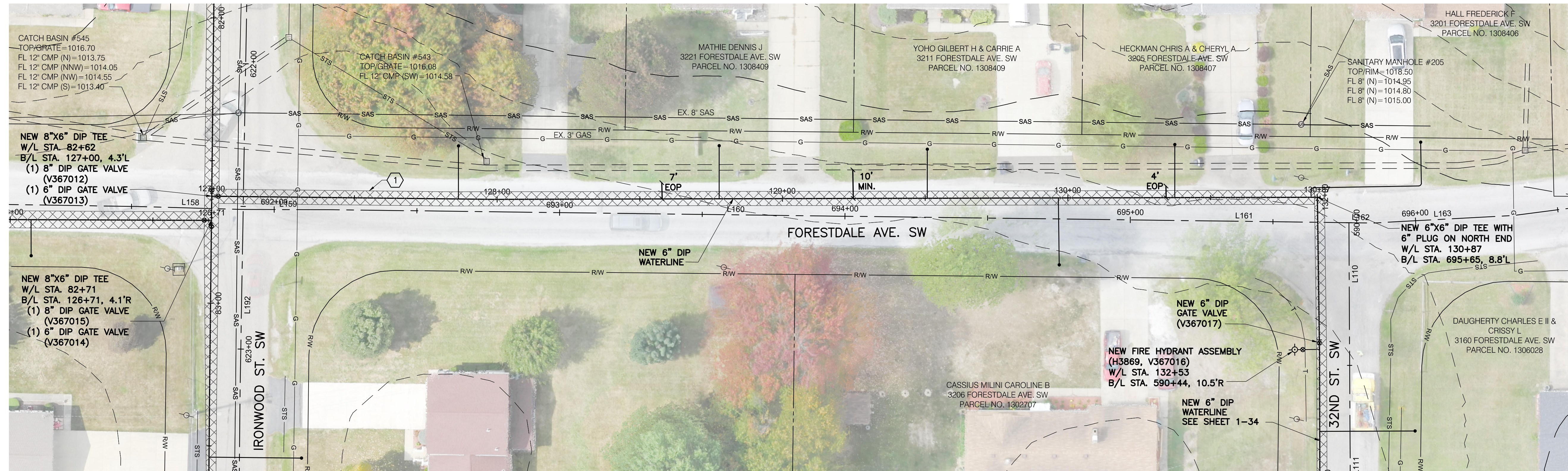
CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

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CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

FORESTDALE AVE SW

1-32
SHEET: 1-32 OF 1-57

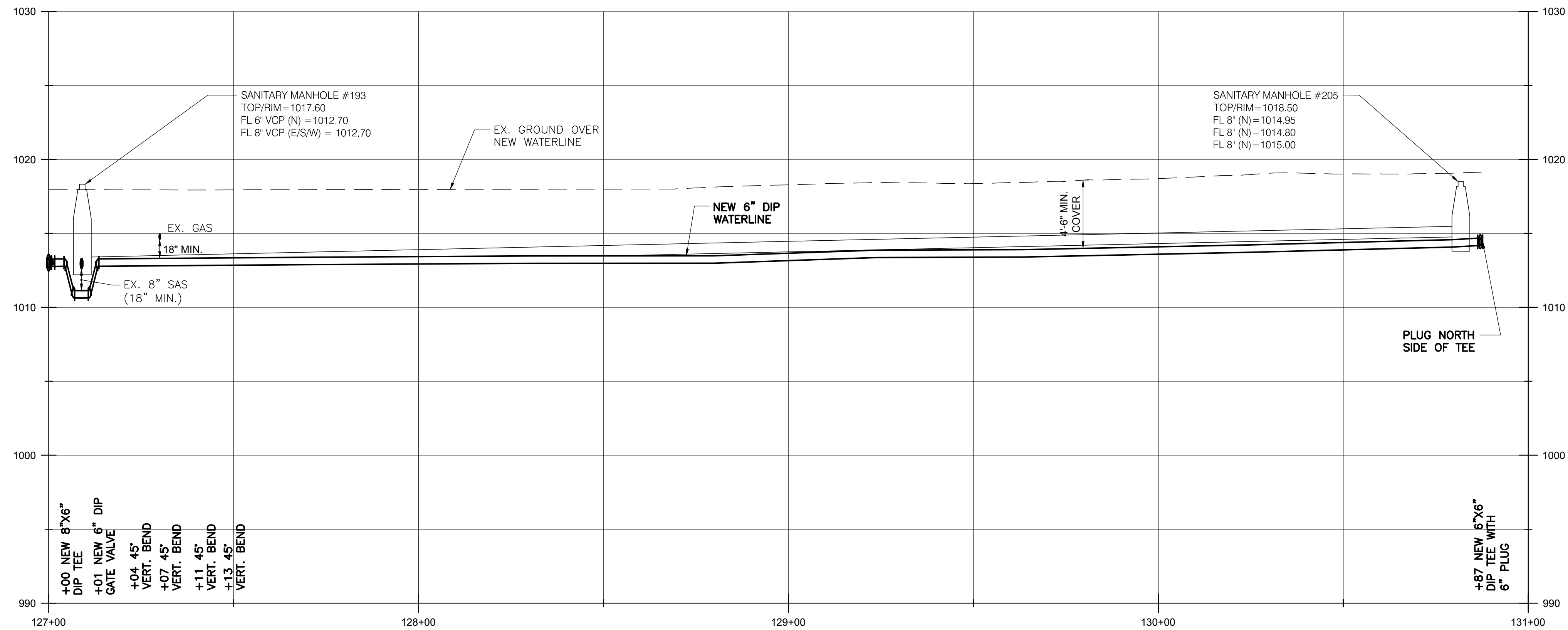


1 223 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

- FOR AREAS WHERE EXISTING SANITARY SEWER AND PROPOSED WATERLINE ARE SHOWN TO BE AT SIMILAR ELEVATIONS, THE CONTRACTOR SHALL INSTALL THE PROPOSED WATERLINE IN A MANNER TO AVOID DAMAGE AND CONFLICTS WITH EXISTING SANITARY SEWER SERVICE LATERALS, FOR WHICH THE VERTICAL ORIENTATION AND ELEVATIONS ARE UNKNOWN. CONTRACTOR SHALL BE PREPARED TO INSTALL THE PROPOSED WATERLINE AT A LOWER ELEVATION AS NECESSARY TO AVOID SUCH CONFLICTS, THE COST OF WHICH SHALL BE INCLUDED IN THE BID PRICE PER LINEAL FOOT OF WATERLINE.

SCALE:
 1" = 20' (HORIZ.)
 1" = 5' (VERT.)



BURGESS & NIPLÉ
 100 WEST ERIE STREET
 PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
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 WATER DEPARTMENT

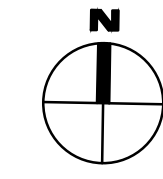
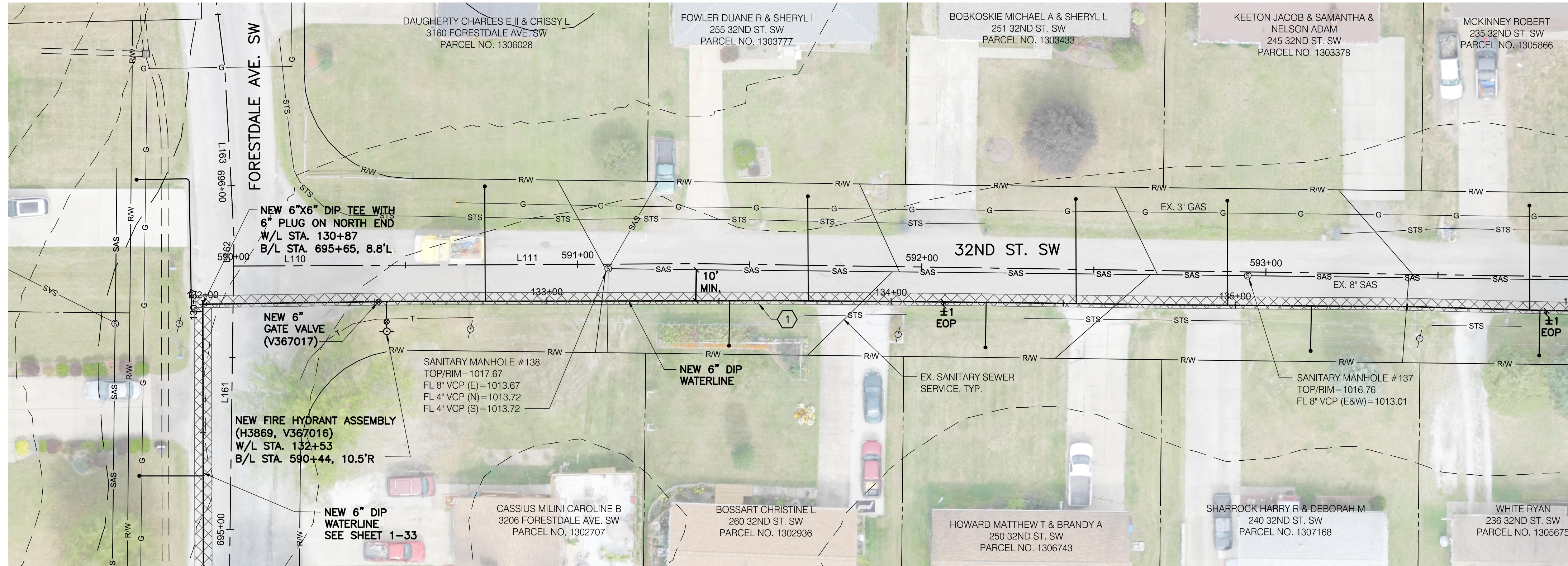
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 APPROVED BY: TMA
 SCALE: AS NOTED

FORESTDALE AVE SW

1-33

SHEET 1-33 OF 1-57



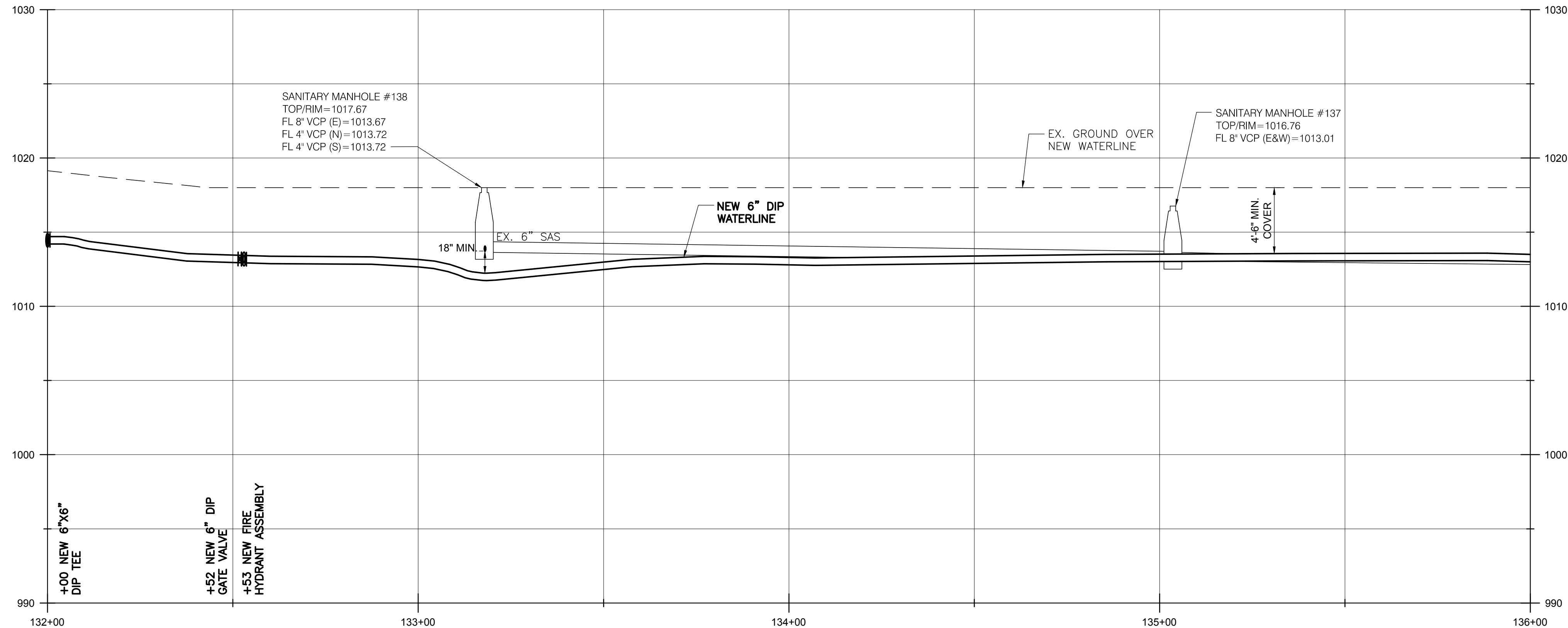
MATCH LINE W/L STA. 136+00
SEE SHT. 1-35

1 223 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

- BEFORE AND AFTER INSTALLING THE LONG SERVICE/BORE FOR 255, 251, 245 & 235 32ND ST. SW, THE CONTRACTOR SHALL TELEWISE THE SANITARY SEWER IN THE VICINITY OF THE SERVICE CROSSING. IF THE BORE CAUSED DAMAGE TO THE SANITARY SEWER, THE CONTRACTOR SHALL REPAIR THE SEWER TO MATCH PRE-BORE CONDITIONS. ALL COSTS ASSOCIATED WITH THIS REPAIR WILL BE COVERED BY THE PRIME CONTRACTOR, AT NO COST TO THE PROJECT. THE COST TO TELEWISE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
- FOR AREAS WHERE EXISTING SANITARY SEWER AND PROPOSED WATERLINE ARE SHOWN TO BE AT SIMILAR ELEVATIONS, THE CONTRACTOR SHALL INSTALL THE PROPOSED WATERLINE IN A MANNER TO AVOID DAMAGE AND CONFLICTS WITH EXISTING SANITARY SEWER SERVICE LATERALS, FOR WHICH THE VERTICAL ORIENTATION AND ELEVATIONS ARE UNKNOWN. CONTRACTOR SHALL BE PREPARED TO INSTALL THE PROPOSED WATERLINE AT A LOWER ELEVATION AS NECESSARY TO AVOID SUCH CONFLICTS, THE COST OF WHICH SHALL BE INCLUDED IN THE BID PRICE PER LINEAL FOOT OF WATERLINE.

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)



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100 WEST ERIE STREET
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CANTON SOUTH WATERLINE EXTENSION
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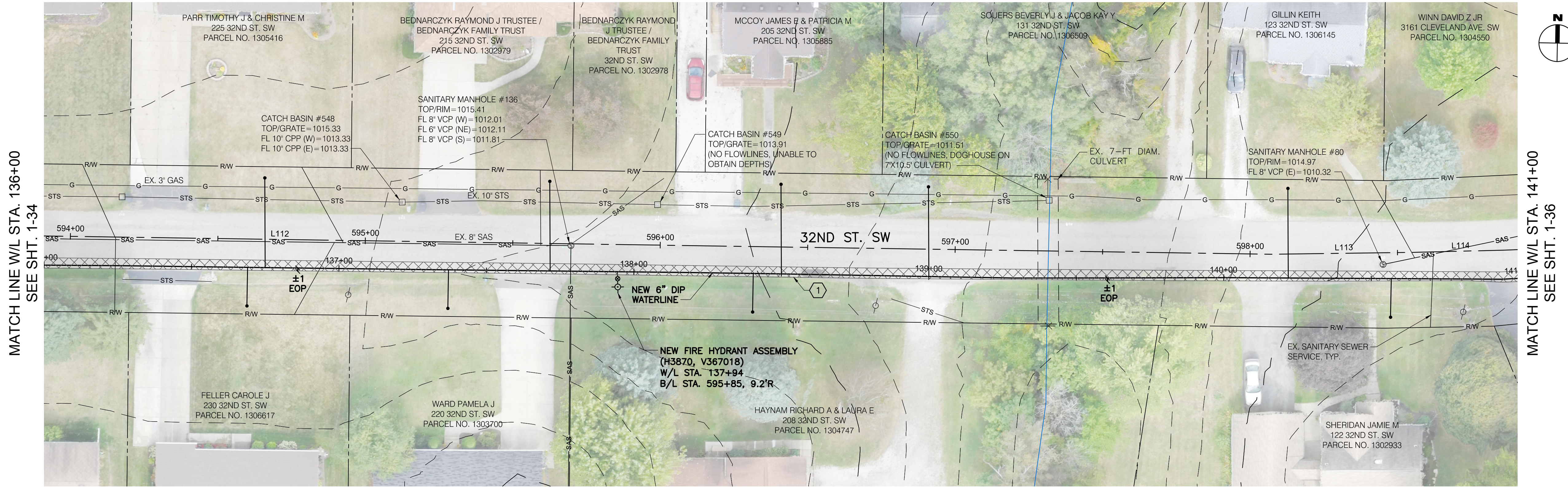
APPROVED BY: TMA

SCALE: AS NOTED

32ND STREET SW

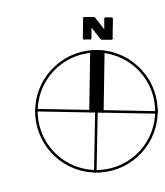
1-34

SHEET: 1-34 OF 1-57



MATCH LINE W/L STA. 136+00
SEE SHT. 1-34

MATCH LINE W/L STA. 141+00
SEE SHT. 1-36

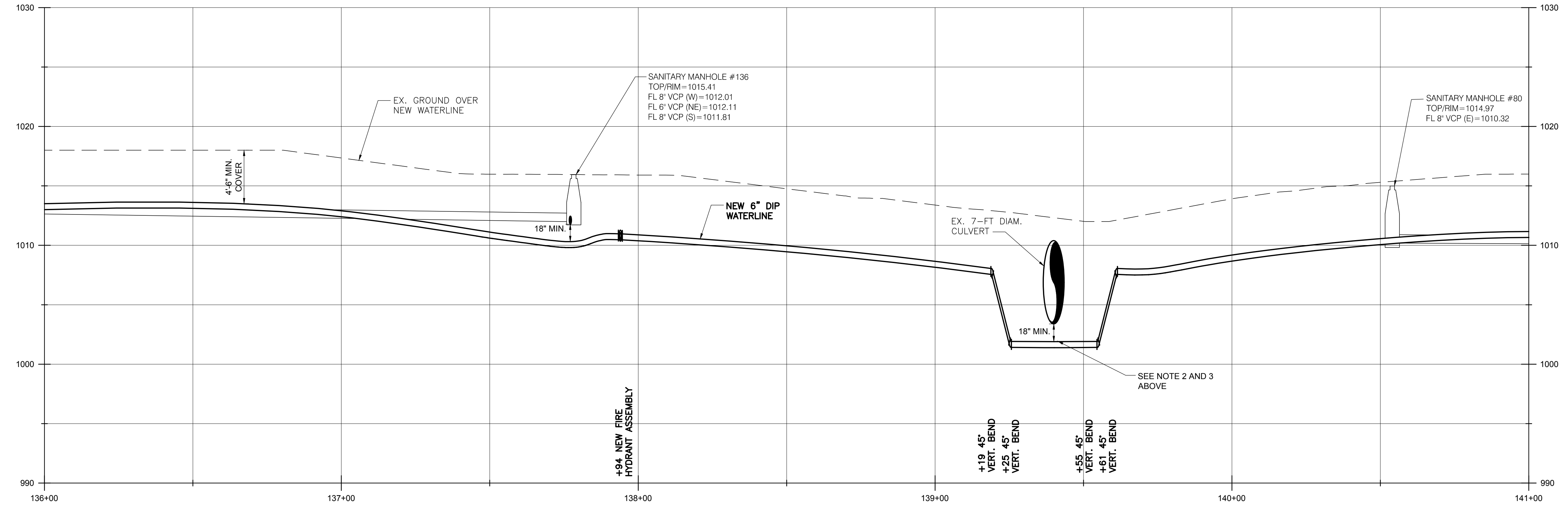


1 278 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

- BEFORE AND AFTER INSTALLING THE LONG SERVICE/BORE FOR 225 & 215 32ND ST. SW, THE CONTRACTOR SHALL TELEWISE THE SANITARY SEWER IN THE VICINITY OF THE SERVICE CROSSING. IF THE BORE CAUSED DAMAGE TO THE SANITARY SEWER, THE CONTRACTOR SHALL REPAIR THE SEWER TO MATCH PRE-BORE CONDITIONS. ALL COSTS ASSOCIATED WITH THIS REPAIR WILL BE COVERED BY THE PRIME CONTRACTOR, AT NO COST TO THE PROJECT. THE COST TO TELEWISE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
- THE WATERLINE, BENDS AND FITTINGS USED TO GO UNDER THE 7-FIT DIAMETER CULVERT SHALL BE DOUBLE WRAPPED WITH POLYETHYLENE FILM WHEN THE DEPTH EXCEEDS 7 FEET.
- THE VOID BETWEEN THE 7-FIT DIAMETER CULVERT AND TOP OF WATERLINE SHALL BE FILLED WITH LOW STRENGTH MORTAR UNLESS APPROVED OTHERWISE BY THE ONSITE CITY REPRESENTATIVE.
- FOR AREAS WHERE EXISTING SANITARY SEWER AND PROPOSED WATERLINE ARE SHOWN TO BE AT SIMILAR ELEVATIONS, THE CONTRACTOR SHALL INSTALL THE PROPOSED WATERLINE IN A MANNER TO AVOID DAMAGE AND CONFLICTS WITH EXISTING SANITARY SEWER SERVICE LATERALS, FOR WHICH THE VERTICAL ORIENTATION AND ELEVATIONS ARE UNKNOWN. CONTRACTOR SHALL BE PREPARED TO INSTALL THE PROPOSED WATERLINE AT A LOWER ELEVATION AS NECESSARY TO AVOID SUCH CONFLICTS, THE COST OF WHICH SHALL BE INCLUDED IN THE BID PRICE PER LINEAL FOOT OF WATERLINE.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



BURGESS & NIPLE
100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

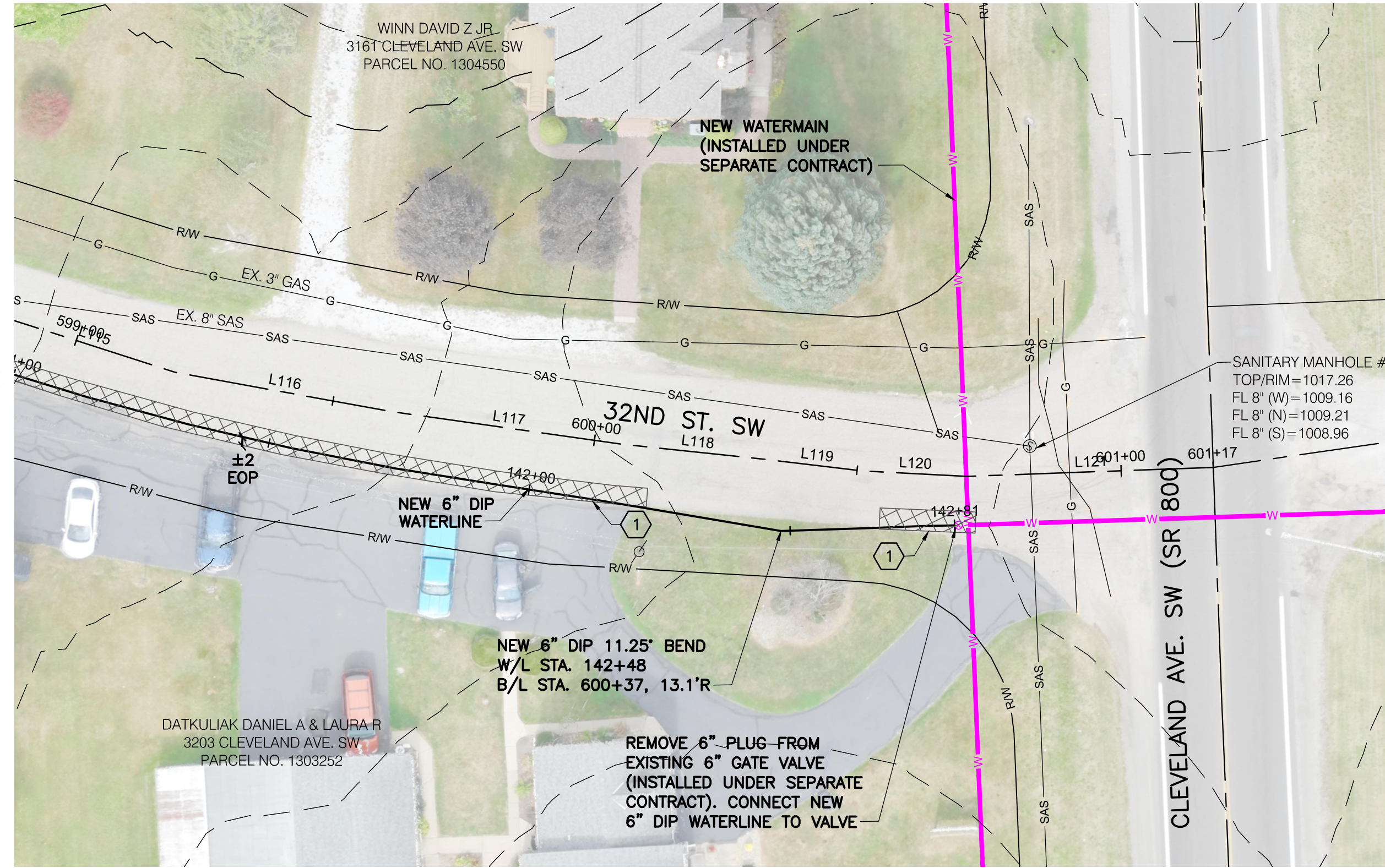
CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

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32ND STREET SW

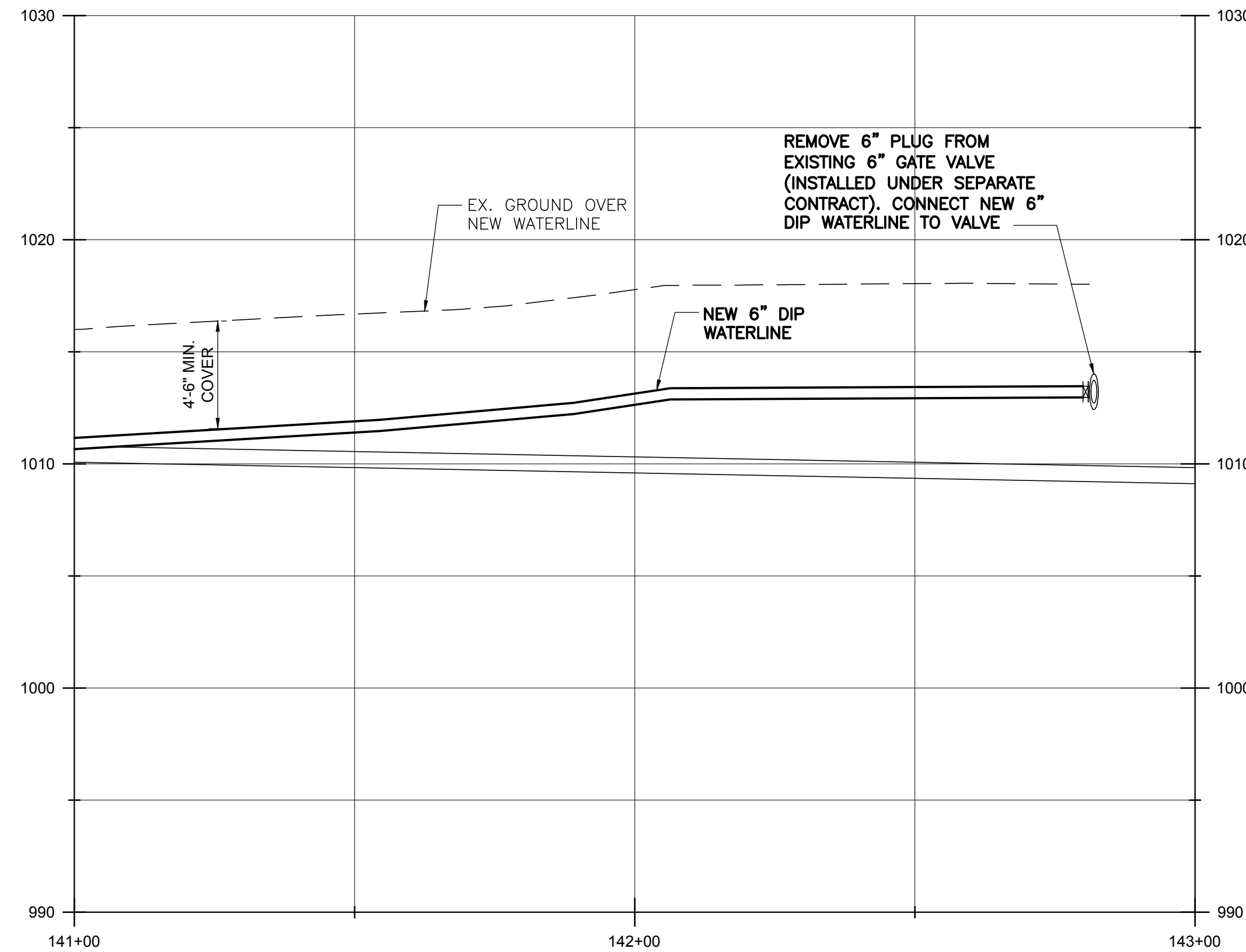
MATCH LINE W/L STA. 141+00
SEE SHT. 1-35



1 53 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:
1. FOR AREAS WHERE EXISTING SANITARY SEWER AND PROPOSED WATERLINE ARE SHOWN TO BE AT SIMILAR ELEVATIONS, THE CONTRACTOR SHALL INSTALL THE PROPOSED WATERLINE IN A MANNER TO AVOID DAMAGE AND CONFLICTS WITH EXISTING SANITARY SEWER SERVICE LATERALS, FOR WHICH THE VERTICAL ORIENTATION AND ELEVATIONS ARE UNKNOWN. CONTRACTOR SHALL BE PREPARED TO INSTALL THE PROPOSED WATERLINE AT A LOWER ELEVATION AS NECESSARY TO AVOID SUCH CONFLICTS, THE COST OF WHICH SHALL BE INCLUDED IN THE BID PRICE PER LINEAL FOOT OF WATERLINE.

SCALE:
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1" = 5' (VERT.)



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CANTON SOUTH WATERLINE EXTENSION
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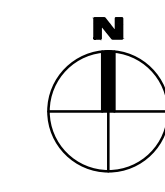
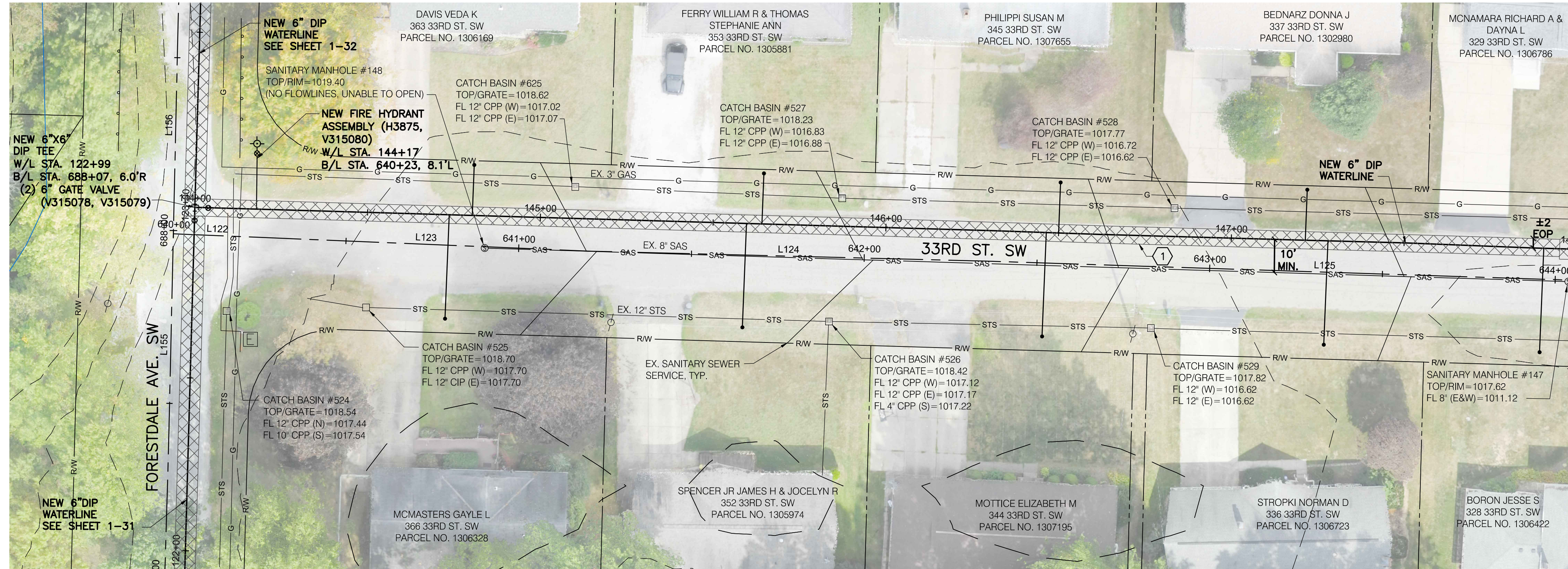
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SCALE: AS NOTED

32ND STREET SW

1-36

SHEET: 1-36 OF 1-57



MATCH LINE W/L STA. 148+00
SEE SHT. 1-38

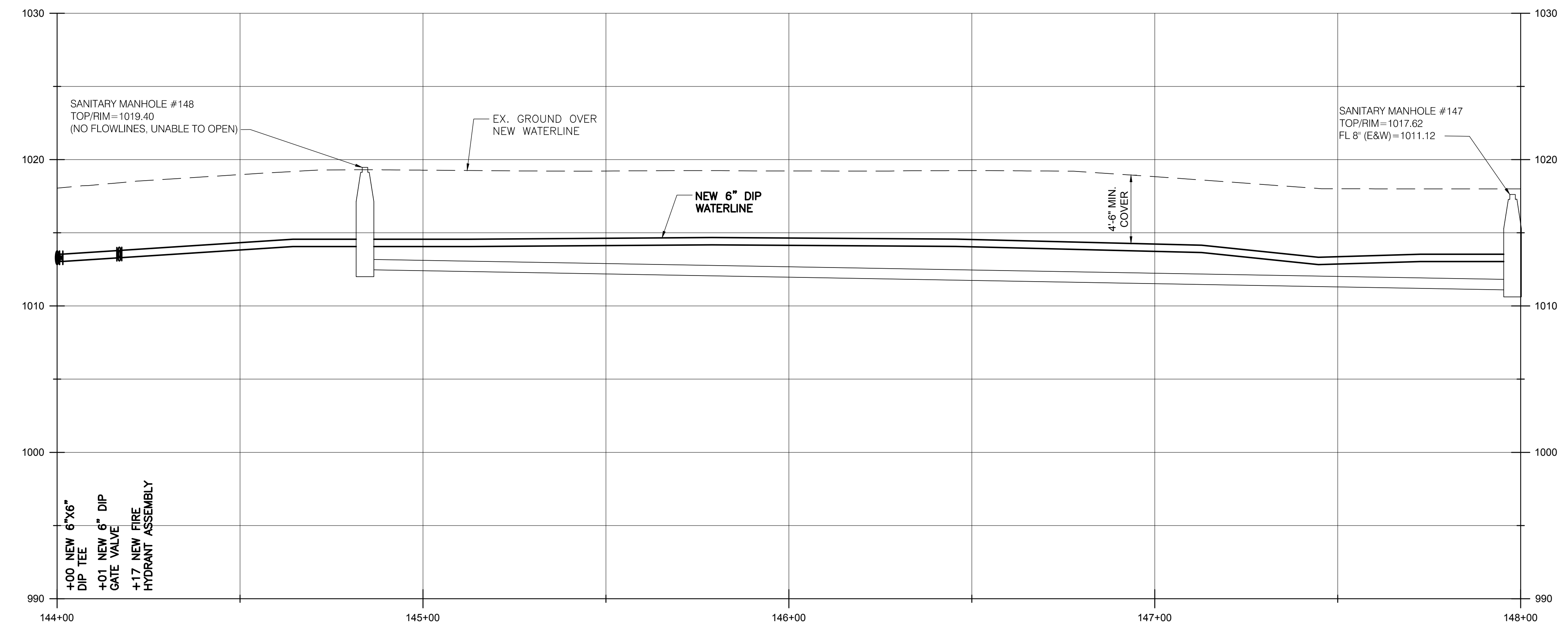
① 223 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

1. BEFORE AND AFTER INSTALLING THE LONG SERVICE/BORE FOR 352, 344, 336 & 328 33RD ST. SW, THE CONTRACTOR SHALL TELEWISE THE SANITARY SEWER IN THE VICINITY OF THE SERVICE CROSSING. IF THE BORE CAUSED DAMAGE TO THE SANITARY SEWER, THE CONTRACTOR SHALL REPAIR THE SEWER TO MATCH PRE-BORE CONDITIONS. ALL COSTS ASSOCIATED WITH THIS REPAIR WILL BE COVERED BY THE PRIME CONTRACTOR, AT NO COST TO THE PROJECT. THE COST TO TELEWISE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

2. FOR AREAS WHERE EXISTING SANITARY SEWER AND PROPOSED WATERLINE ARE SHOWN TO BE AT SIMILAR ELEVATIONS, THE CONTRACTOR SHALL INSTALL THE PROPOSED WATERLINE IN A MANNER TO AVOID DAMAGE AND CONFLICTS WITH EXISTING SANITARY SEWER SERVICE LATERALS, FOR WHICH THE VERTICAL ORIENTATION AND ELEVATIONS ARE UNKNOWN. CONTRACTOR SHALL BE PREPARED TO INSTALL THE PROPOSED WATERLINE AT A LOWER ELEVATION AS NECESSARY TO AVOID SUCH CONFLICTS, THE COST OF WHICH SHALL BE INCLUDED IN THE BID PRICE PER LINEAL FOOT OF WATERLINE.

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)



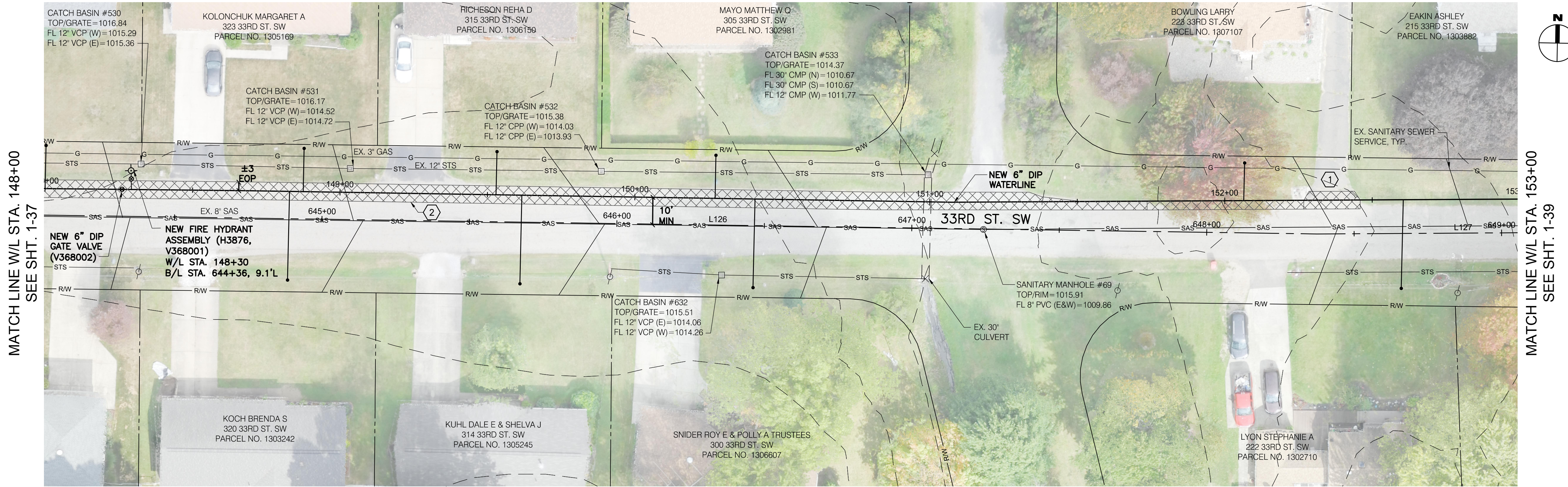
BURGESS & NIPLÉ
100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

NO.	DESCRIPTION	DATE

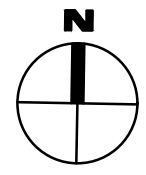
JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRR
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

33RD STREET SW



MATCH LINE W/L STA. 148+00
SEE SHT. 1-37

MATCH LINE W/L STA. 153+00
SEE SHT. 1-39

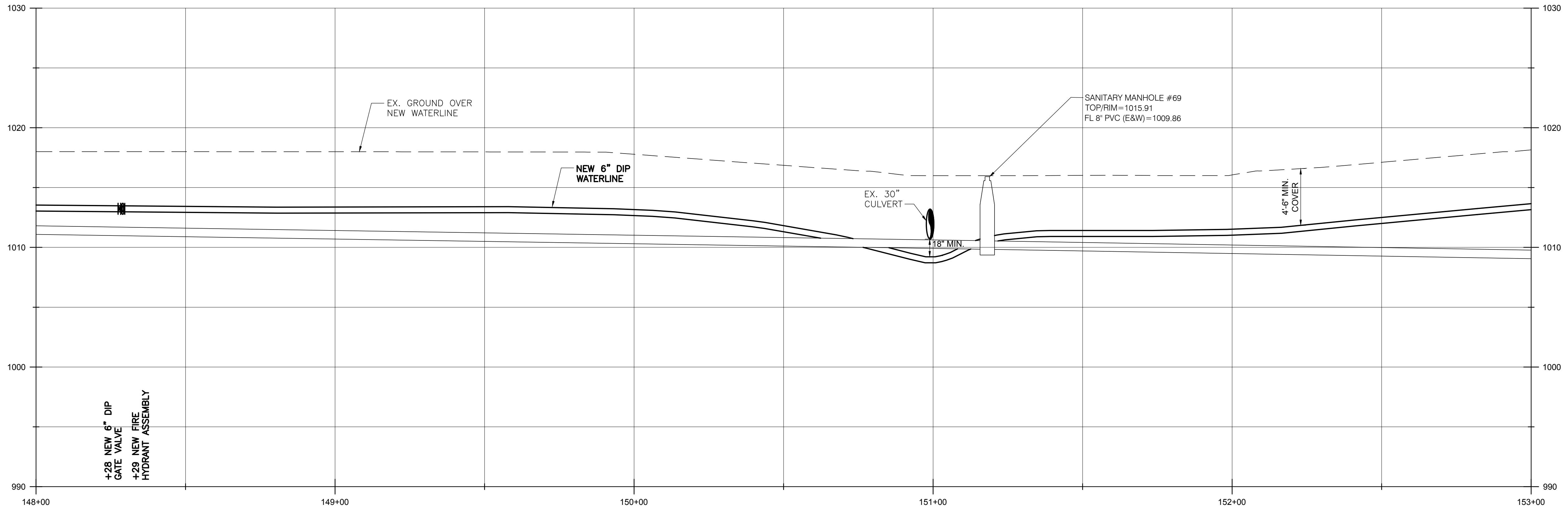


- ① 15 SY MAXIMUM ASPHALT DRIVE REPLACEMENT, TOTAL THIS SHEET.
- ② 334 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

1. BEFORE AND AFTER INSTALLING THE LONG SERVICE/BORE FOR 320, 314 & 300 33RD ST. SW, THE CONTRACTOR SHALL TELEWISE THE SANITARY SEWER IN THE VICINITY OF THE SERVICE CROSSING. IF THE BORE CAUSED DAMAGE TO THE SANITARY SEWER, THE CONTRACTOR SHALL REPAIR THE SEWER TO MATCH PRE-BORE CONDITIONS. ALL COSTS ASSOCIATED WITH THIS REPAIR WILL BE COVERED BY THE PRIME CONTRACTOR, AT NO COST TO THE PROJECT. THE COST TO TELEWISE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
2. FOR AREAS WHERE EXISTING SANITARY SEWER AND PROPOSED WATERLINE ARE SHOWN TO BE AT SIMILAR ELEVATIONS, THE CONTRACTOR SHALL INSTALL THE PROPOSED WATERLINE IN A MANNER TO AVOID DAMAGE AND CONFLICTS WITH EXISTING SANITARY SEWER SERVICE LATERALS, FOR WHICH THE VERTICAL ORIENTATION AND ELEVATIONS ARE UNKNOWN. CONTRACTOR SHALL BE PREPARED TO INSTALL THE PROPOSED WATERLINE AT A LOWER ELEVATION AS NECESSARY TO AVOID SUCH CONFLICTS, THE COST OF WHICH SHALL BE INCLUDED IN THE BID PRICE PER LINEAL FOOT OF WATERLINE.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



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CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

NO.	DESCRIPTION	DATE

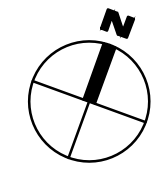
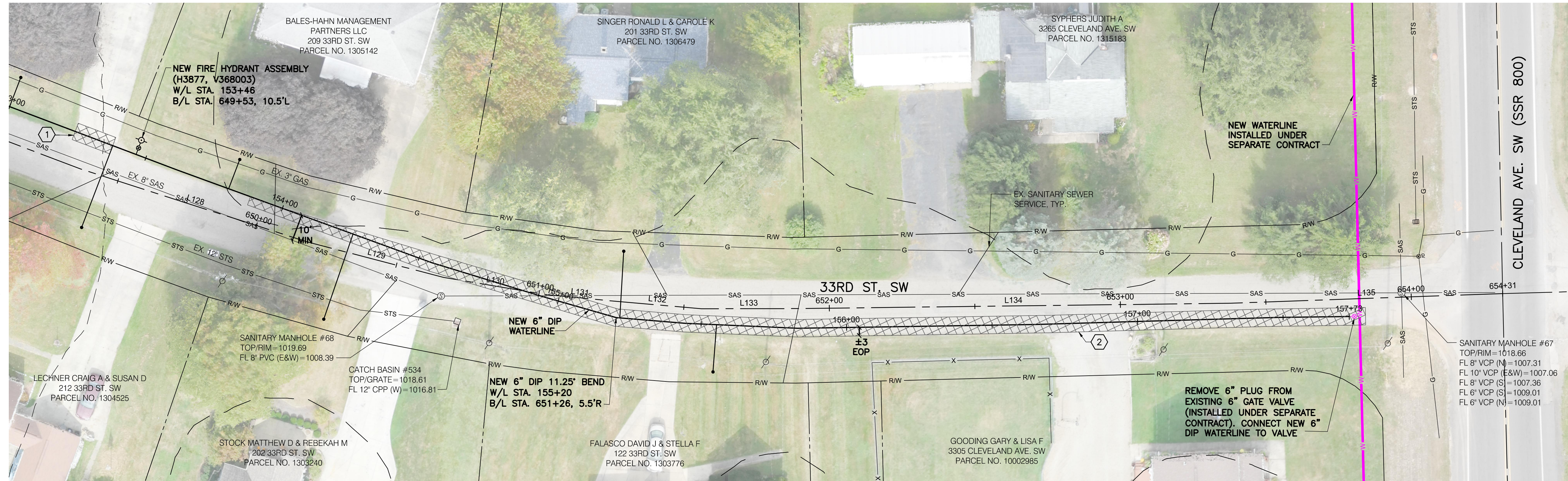
JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRH
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

33RD STREET SW

1-38

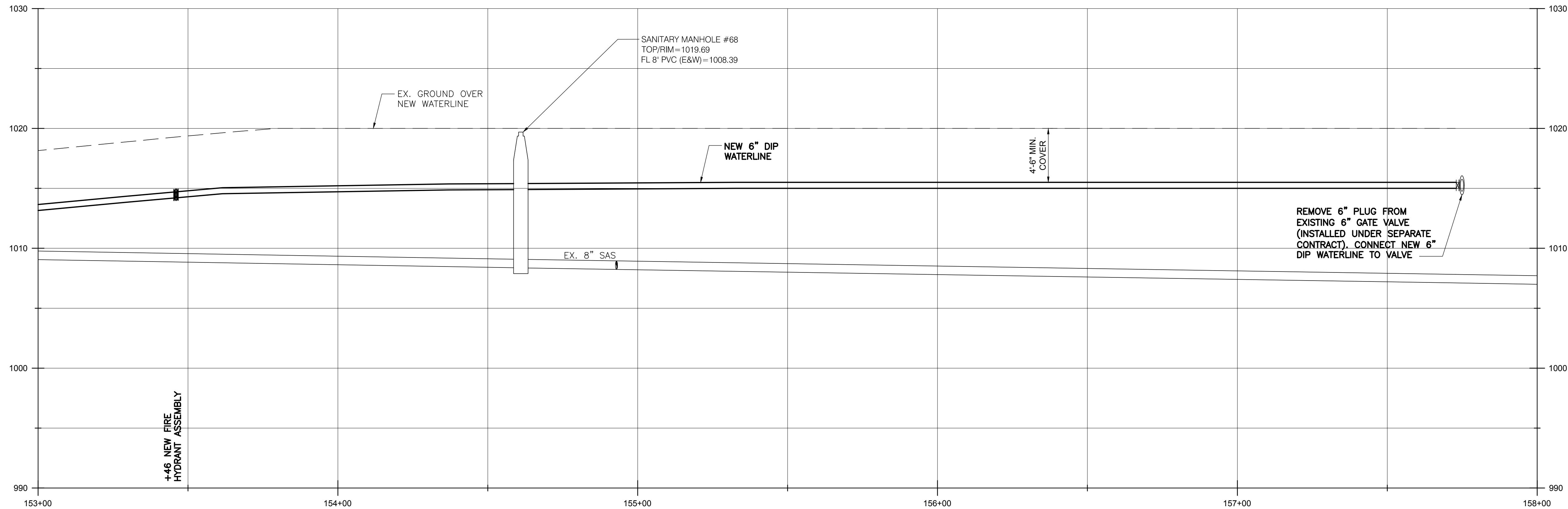
SHEET: 1-38 OF 1-57

MATCH LINE W/L STA. 153+00
SEE SHT. 1-38



- ① 110 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.
- ① 247 SY MAXIMUM GRAVEL PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)



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CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

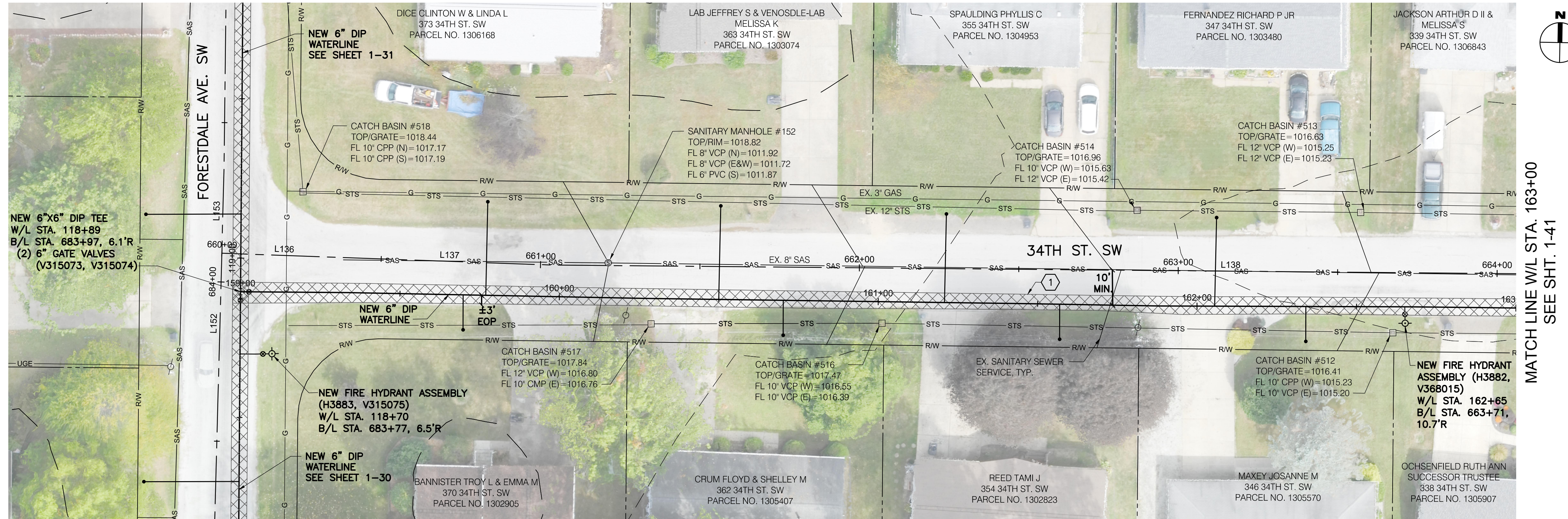
NO.	DESCRIPTION	DATE

JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRH
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

33RD STREET SW

1-39

SHEET: 1-39 OF 1-57

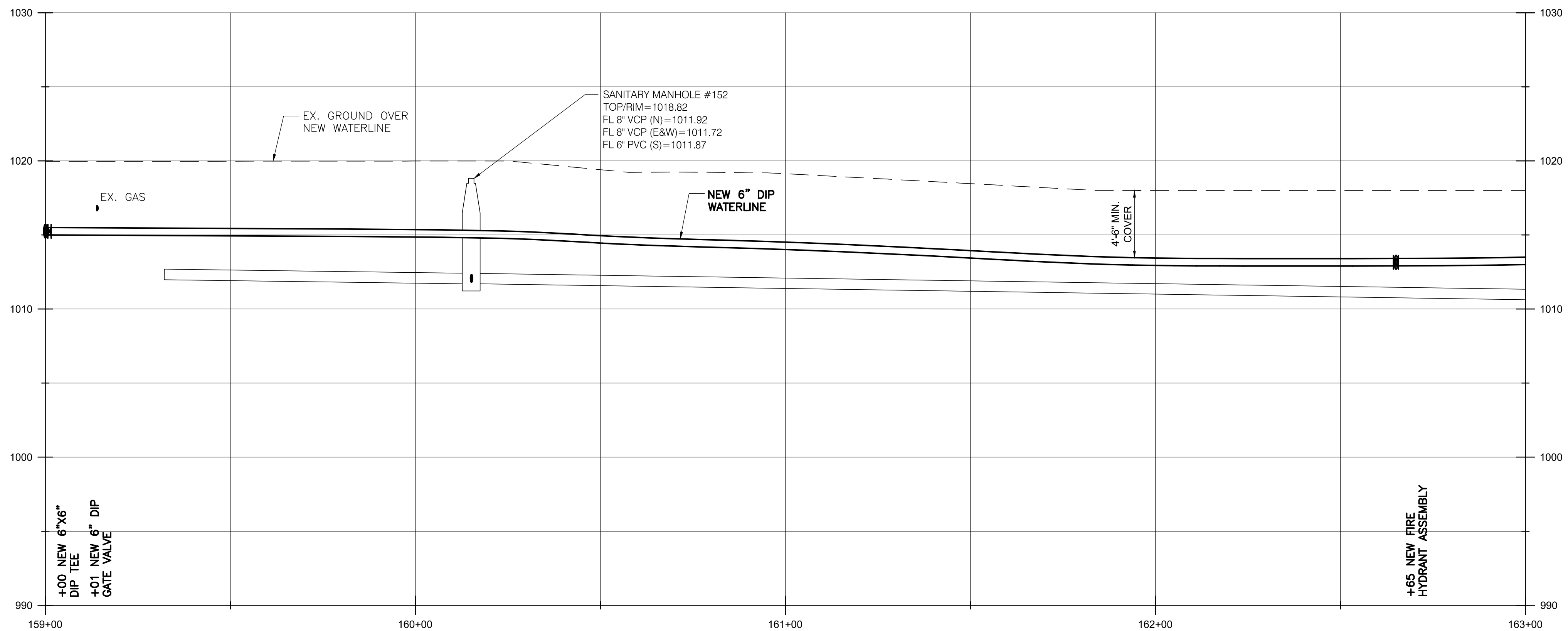


1 267 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

- BEFORE AND AFTER INSTALLING THE LONG SERVICE/BORE FOR 363, 355 & 347 34TH ST. SW, THE CONTRACTOR SHALL TELEVISION THE SANITARY SEWER IN THE VICINITY OF THE SERVICE CROSSING. IF THE BORE CAUSED DAMAGE TO THE SANITARY SEWER, THE CONTRACTOR SHALL REPAIR THE SEWER TO MATCH PRE-BORE CONDITIONS. ALL COSTS ASSOCIATED WITH THIS REPAIR WILL BE COVERED BY THE PRIME CONTRACTOR, AT NO COST TO THE PROJECT. THE COST TO TELEVISION SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

SCALE:
 1" = 20' (HORIZ.)
 1" = 5' (VERT.)



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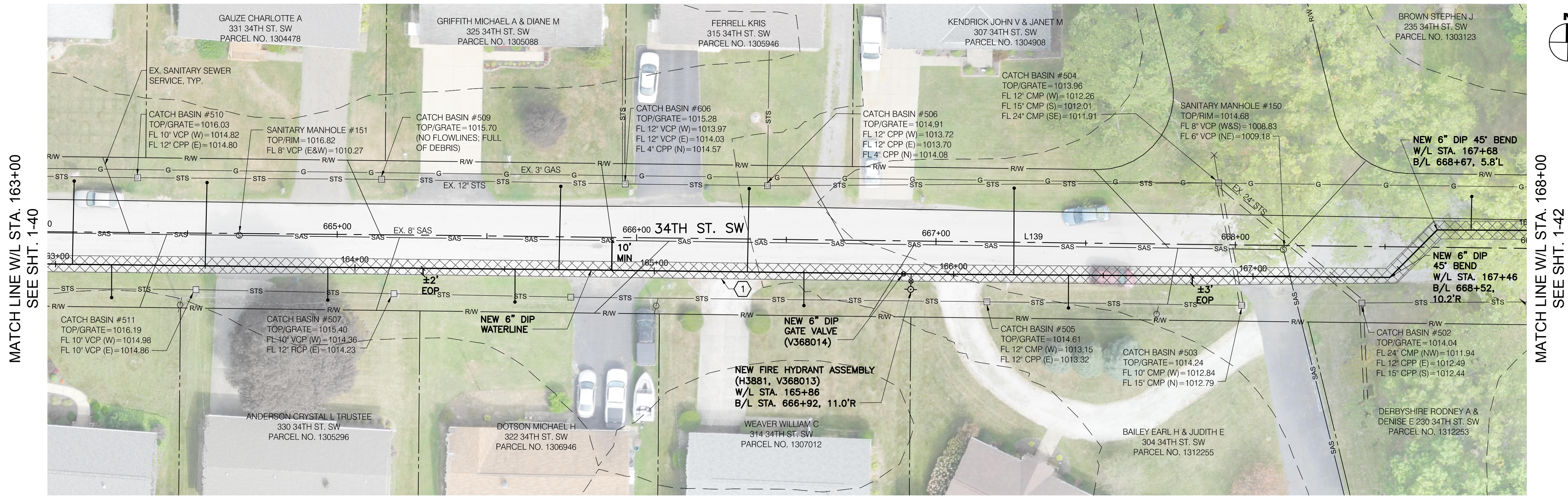
100 WEST ERIE STREET
 PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
 CITY OF CANTON
 WATER DEPARTMENT

NO.	DESCRIPTION	DATE
		REVISIONS

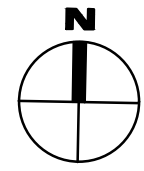
JOB NO: PR55936
 DATE: MAY 2018
 DESIGNED BY: RRH
 DRAWN BY: TSM
 CHECKED BY: TMA
 APPROVED BY: TMA
 SCALE: AS NOTED

34TH STREET SW



MATCH LINE W/L STA. 163+00
SEE SHT. 1-40

MATCH LINE W/L STA. 168+00
SEE SHT. 1-42

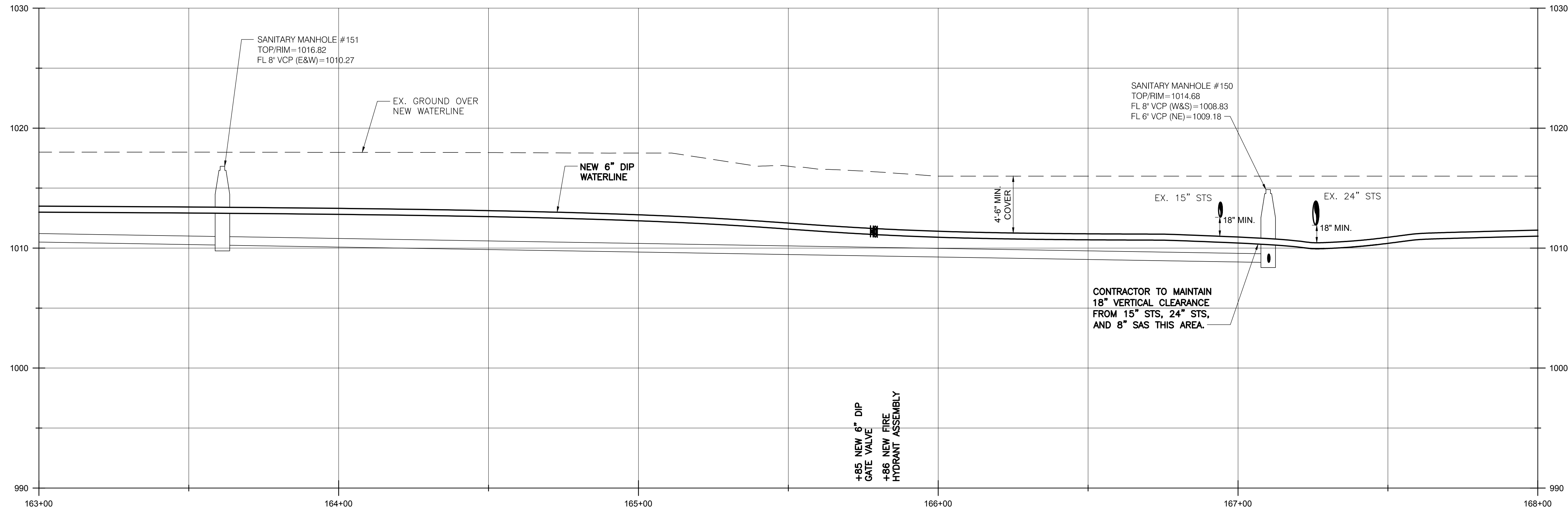


1 334 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

- BEFORE AND AFTER INSTALLING THE LONG SERVICE/BORE FOR 331, 325, 315, 307 & 339 34TH ST. SW, THE CONTRACTOR SHALL TELEVISION THE SANITARY SEWER IN THE VICINITY OF THE SERVICE CROSSING. IF THE BORE CAUSED DAMAGE TO THE SANITARY SEWER, THE CONTRACTOR SHALL REPAIR THE SEWER TO MATCH PRE-BORE CONDITIONS. ALL COSTS ASSOCIATED WITH THIS REPAIR WILL BE COVERED BY THE PRIME CONTRACTOR, AT NO COST TO THE PROJECT. THE COST TO TELEVISION SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
- FOR AREAS WHERE EXISTING SANITARY SEWER AND PROPOSED WATERLINE ARE SHOWN TO BE AT SIMILAR ELEVATIONS, THE CONTRACTOR SHALL INSTALL THE PROPOSED WATERLINE IN A MANNER TO AVOID DAMAGE AND CONFLICTS WITH EXISTING SANITARY SEWER SERVICE LATERALS, FOR WHICH THE VERTICAL ORIENTATION AND ELEVATIONS ARE UNKNOWN. CONTRACTOR SHALL BE PREPARED TO INSTALL THE PROPOSED WATERLINE AT A LOWER ELEVATION AS NECESSARY TO AVOID SUCH CONFLICTS, THE COST OF WHICH SHALL BE INCLUDED IN THE BID PRICE PER LINEAL FOOT OF WATERLINE.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



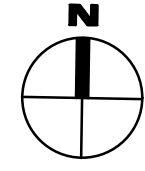
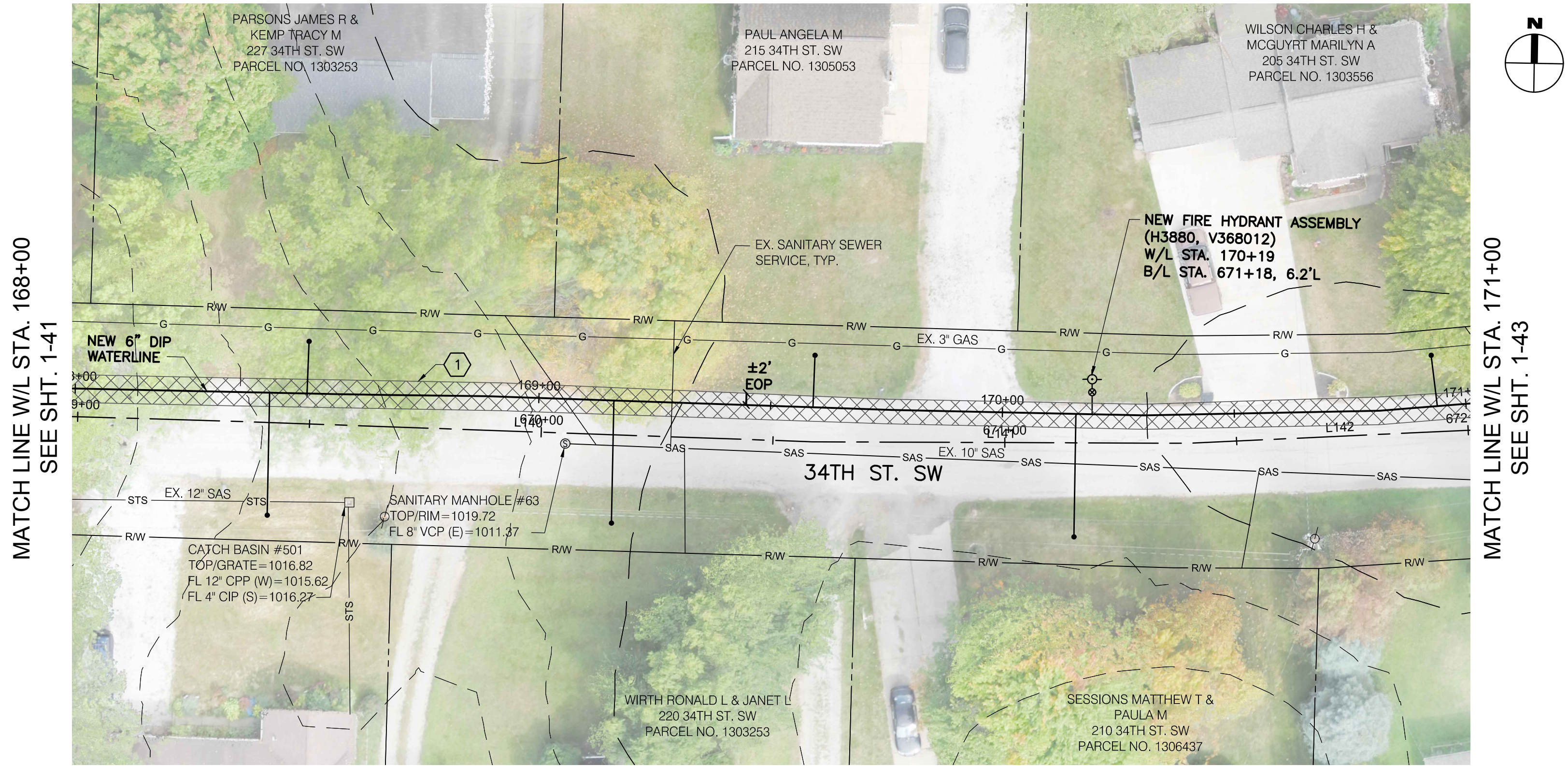
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100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

NO.	DESCRIPTION	DATE

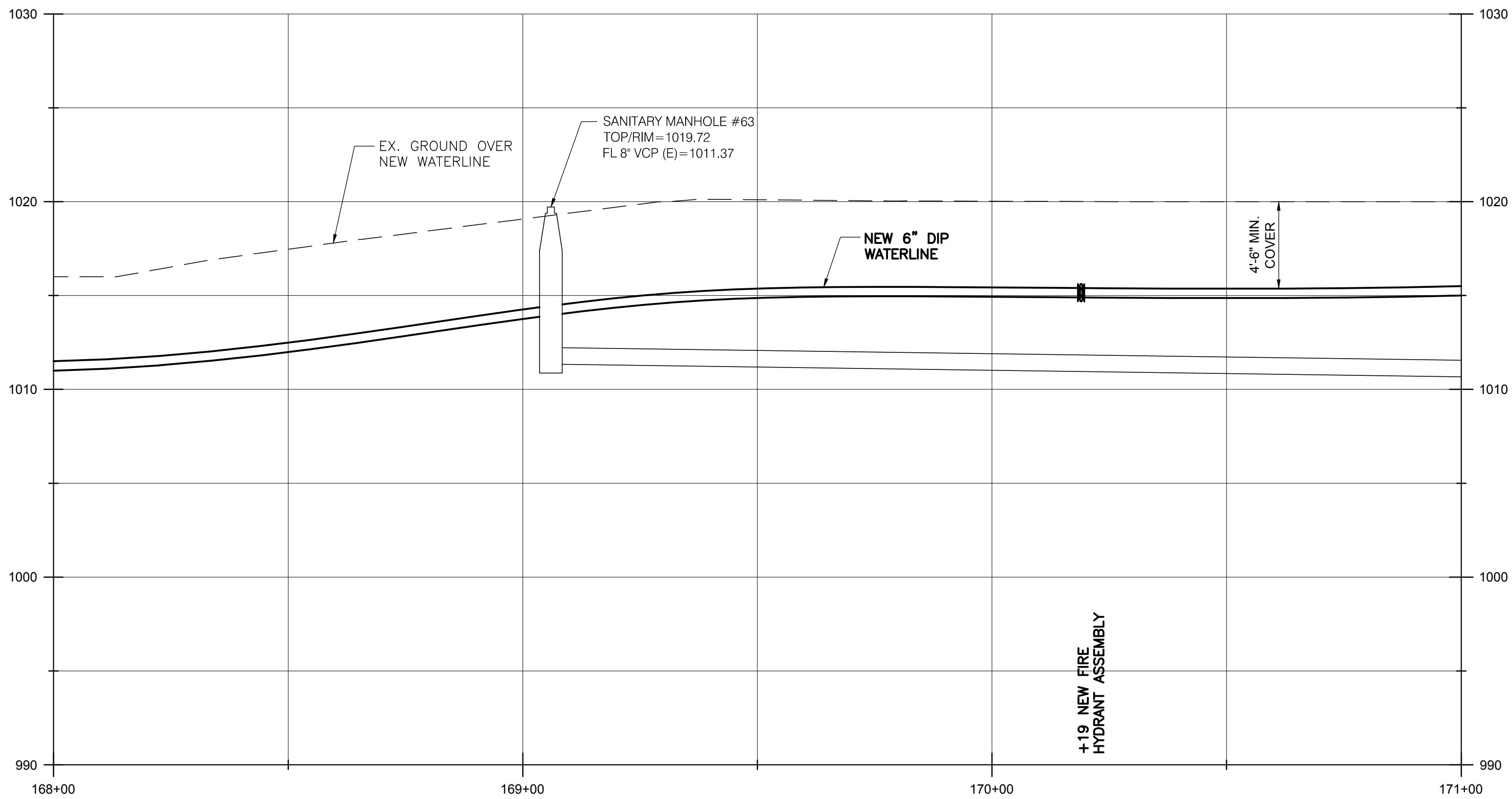
JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRR
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

34TH STREET SW



① 167 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)



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CANTON SOUTH WATERLINE EXTENSION
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WATER DEPARTMENT

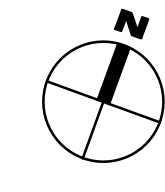
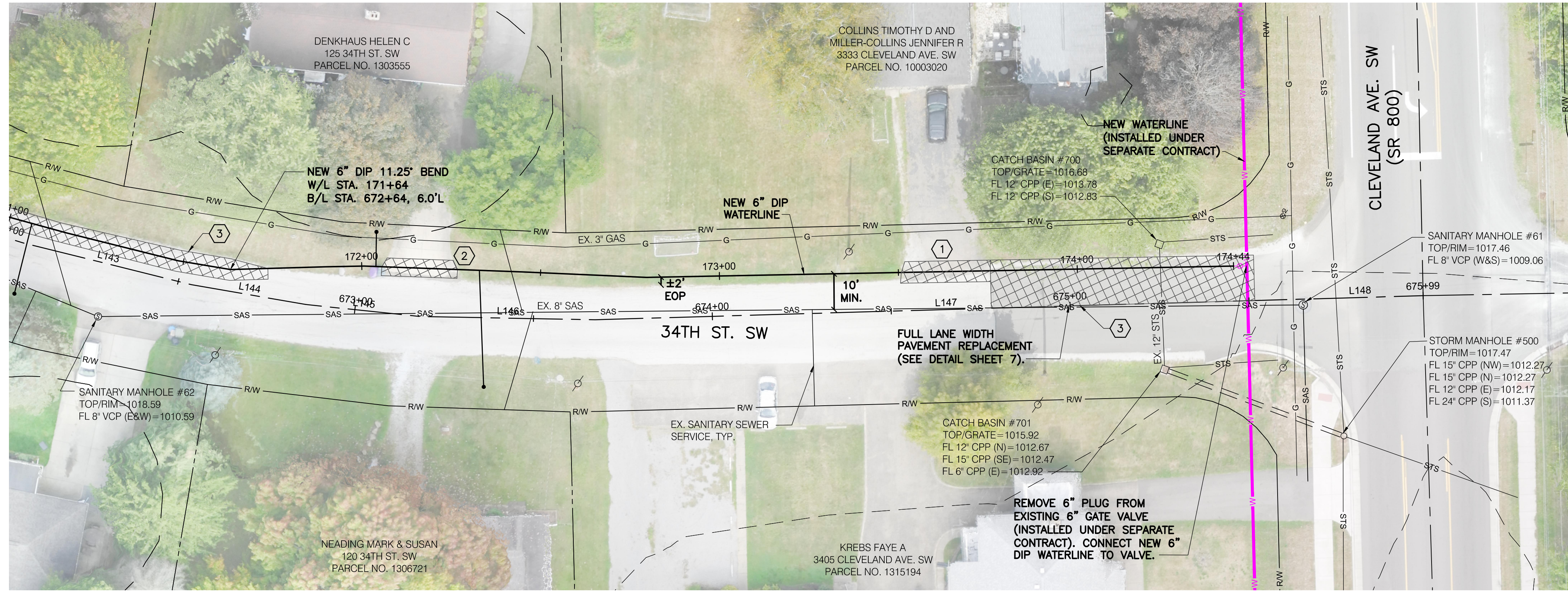
REVISIONS		
NO.	DESCRIPTION	DATE

JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRR
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

34TH STREET SW

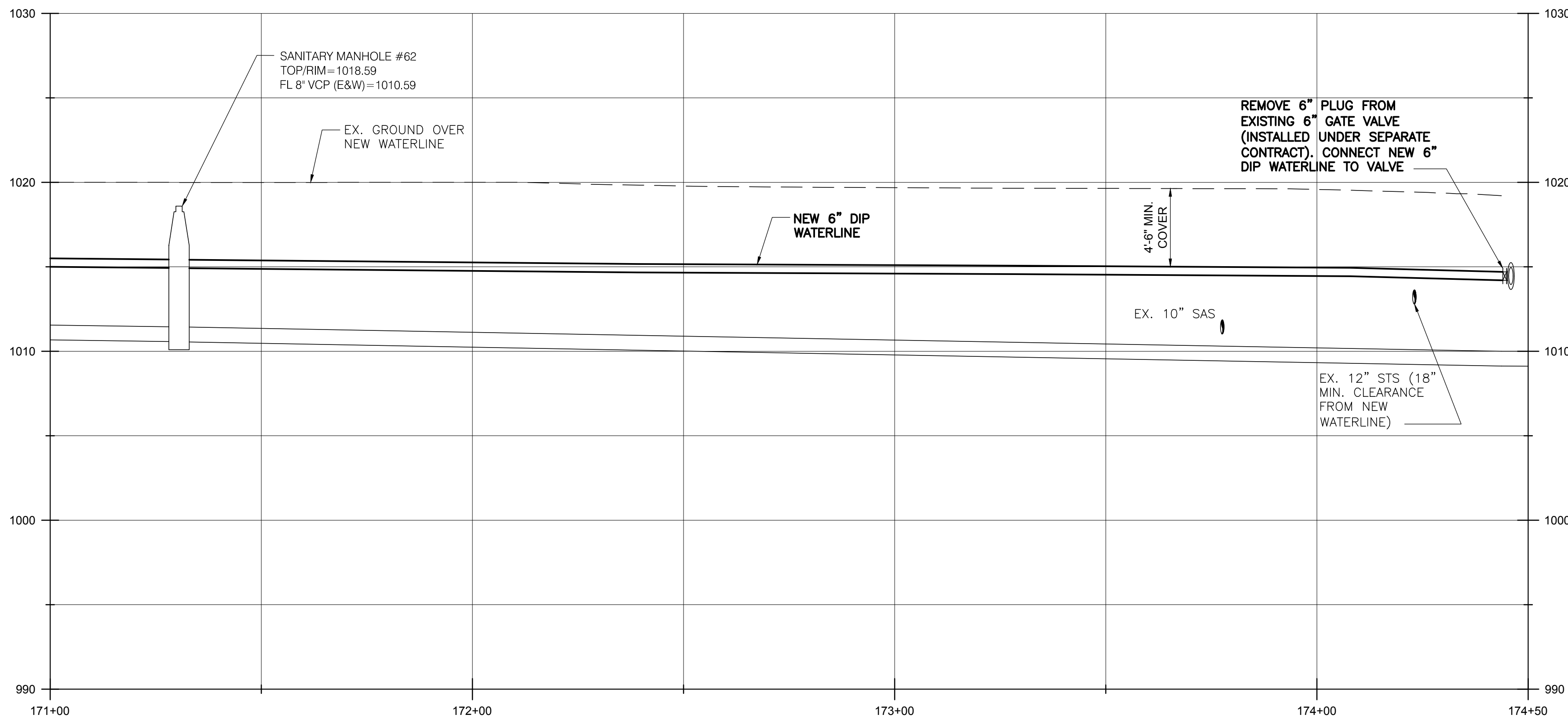
1-42
SHEET: 1-42 OF 1-57

MATCH LINE W/L STA. 171+00
SEE SHT. 1-42



- ① 17 SY MAXIMUM ASPHALT DRIVE REPLACEMENT, TOTAL THIS SHEET.
- ② 12 SY MAXIMUM CONCRETE DRIVE REPLACEMENT, TOTAL THIS SHEET.
- ③ 154 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



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CANTON SOUTH WATERLINE EXTENSION
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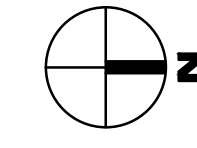
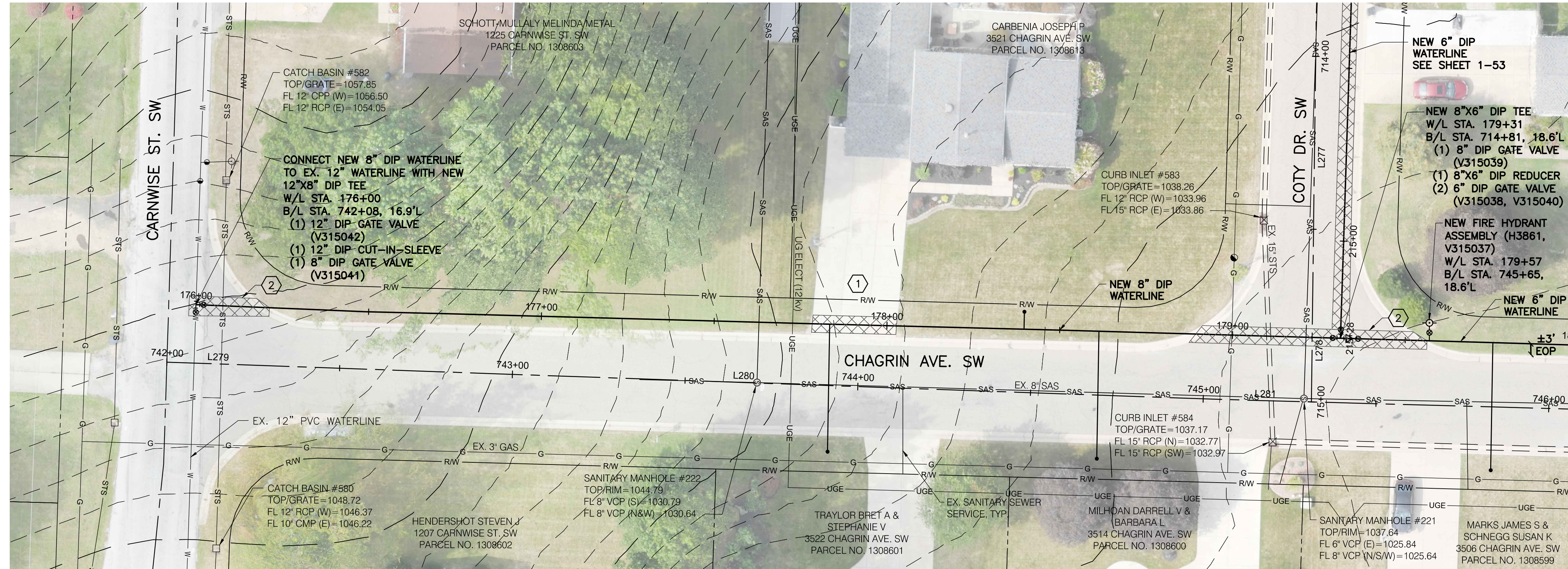
NO.	DESCRIPTION	DATE

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CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

34TH STREET SW

1-43

SHEET: 1-43 OF 1-57



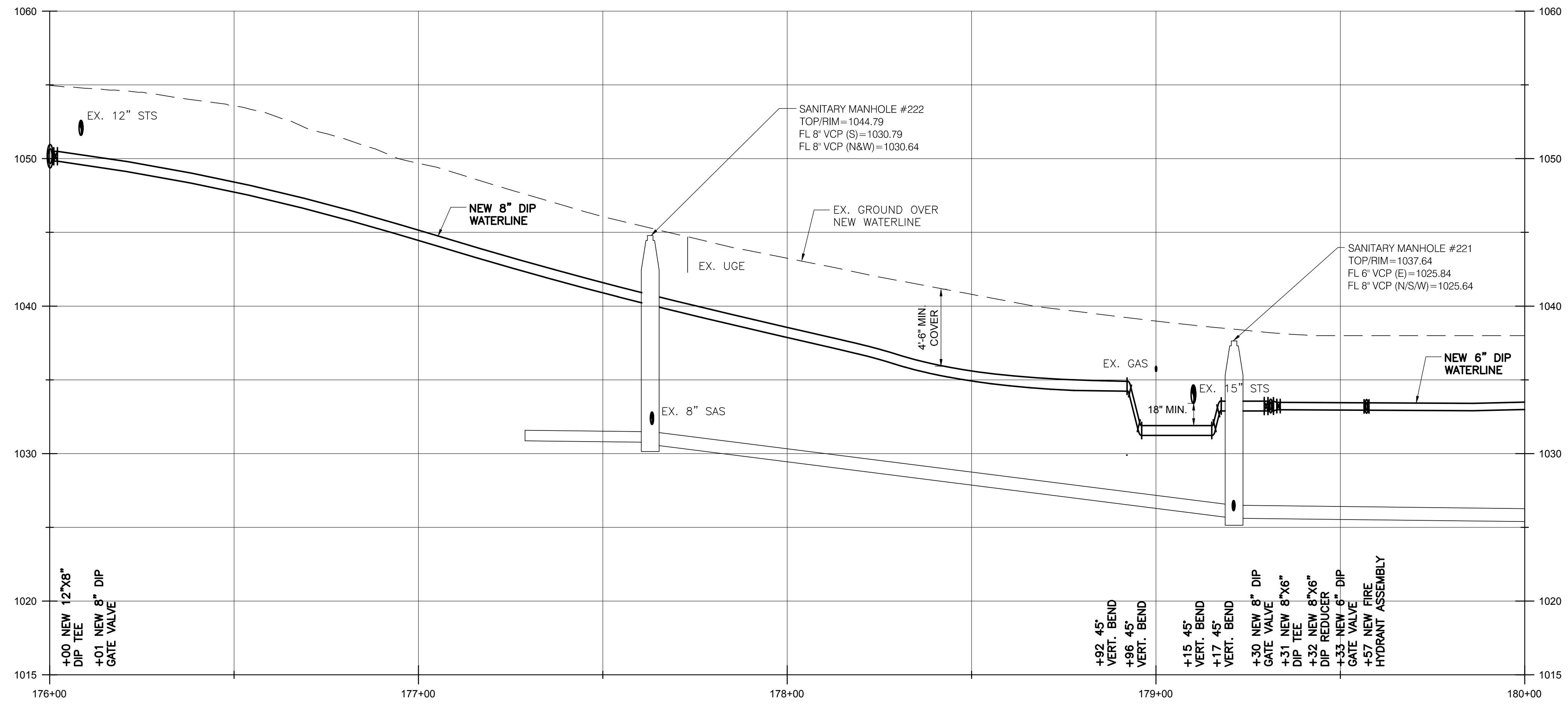
MATCH LINE W/L STA. 180+00
SEE SHT. 1-45

- ① 14 SY MAXIMUM CONCRETE DRIVE REPLACEMENT, TOTAL THIS SHEET.
- ② 51 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

1. ANYTIME THE PROPOSED WATERLINE CROSSES AN UNDERGROUND, 12 kv. ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT AEP A MINIMUM OF 1 WEEK IN ADVANCE OF SAID CROSSING TO DE-ENERGIZE THE LINE. ALL OSHA ENERGY CLEARANCES SHALL BE FOLLOWED WHEN WORKING AROUND ELECTRICAL LINES. ALL COSTS ASSOCIATED WITH DE-ENERGIZING THE ELECTRICAL LINES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



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CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

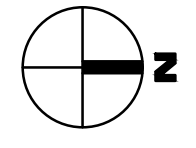
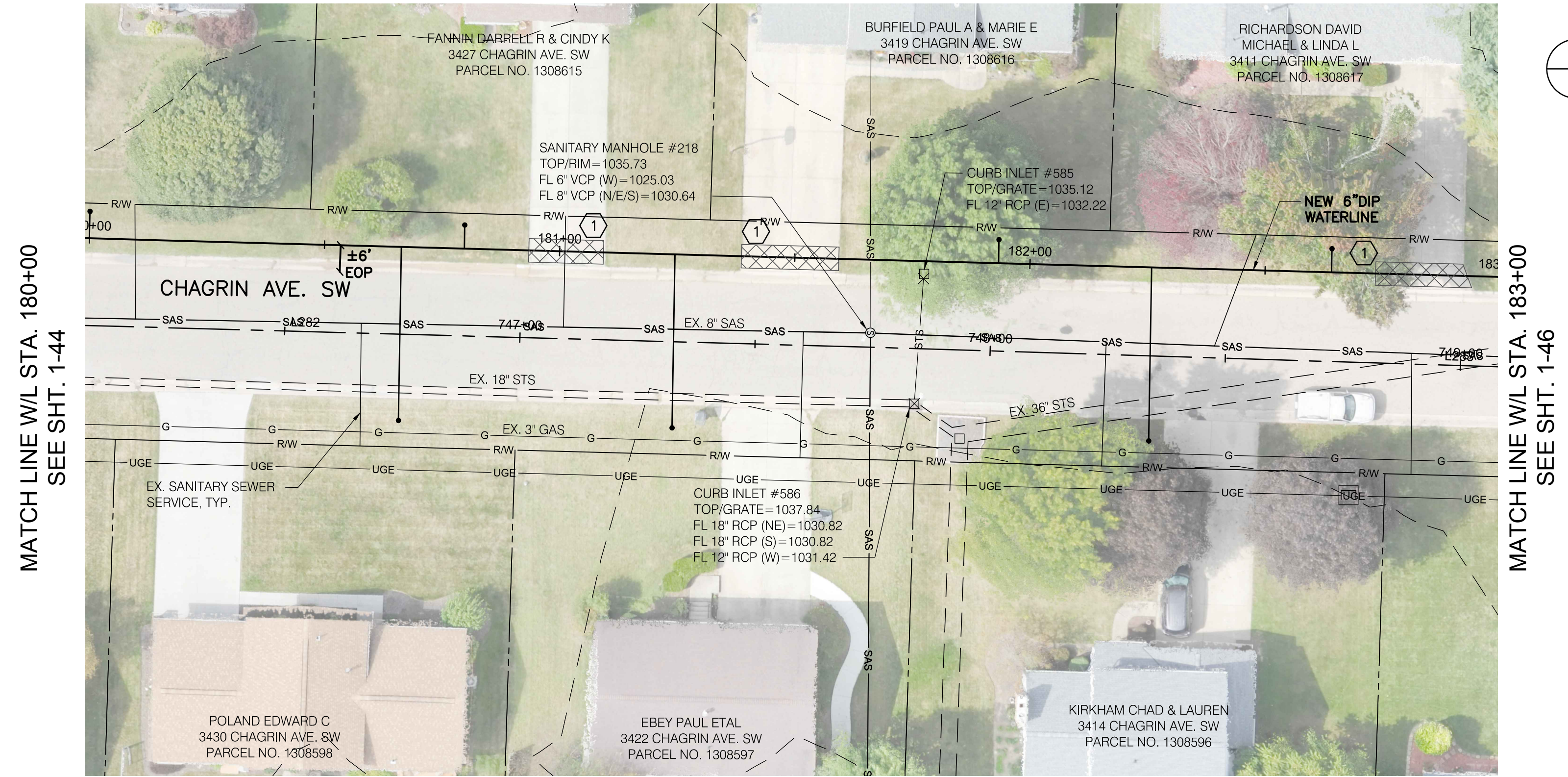
NO.	DESCRIPTION	REVISIONS	
		DATE	

JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRRH
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

CHAGRIN AVE SW

1-44

SHEET: 1-44 OF 1-57

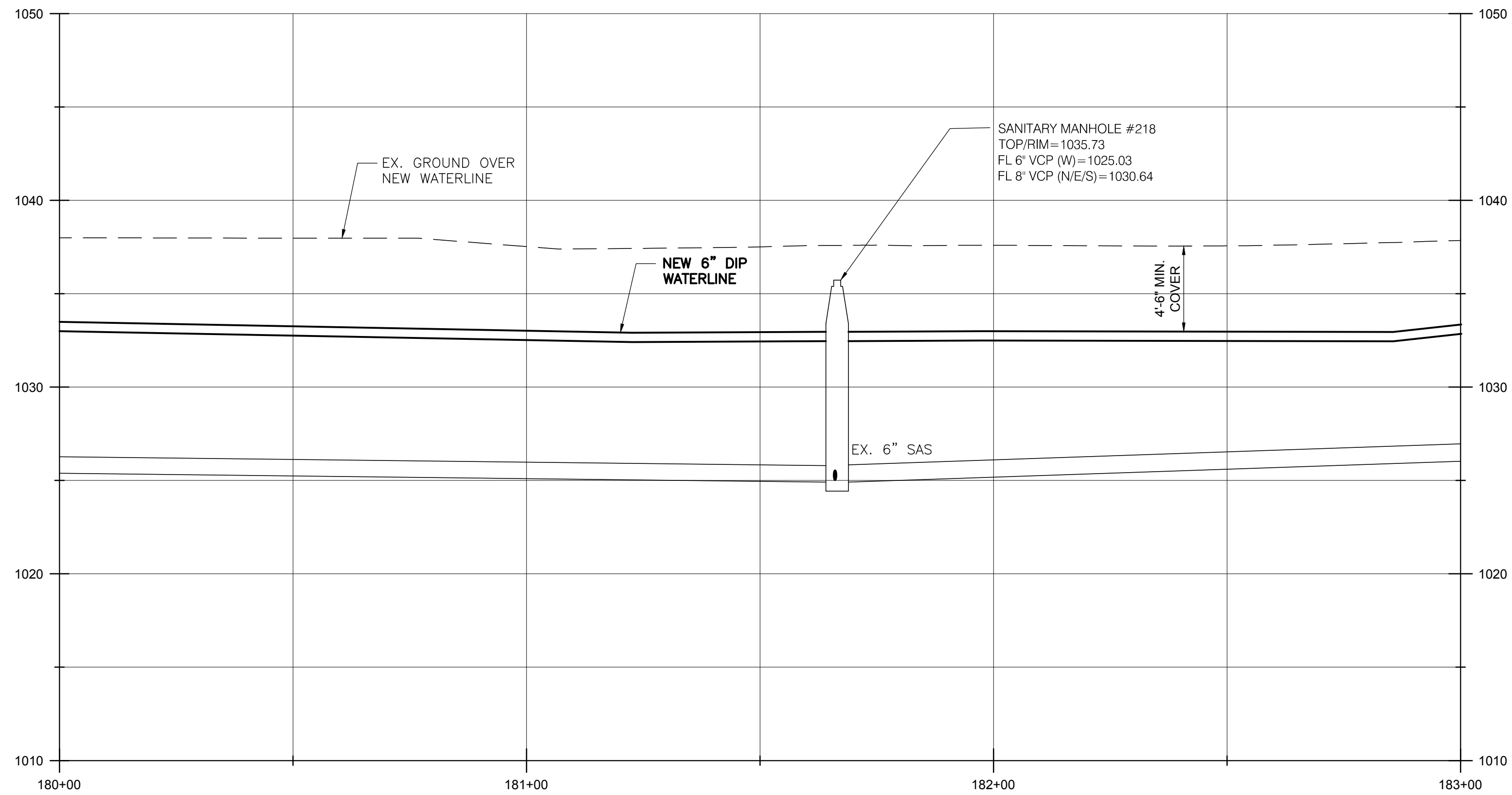


MATCH LINE W/ STA. 180+00
SEE SHT. 1-44

MATCH LINE W/ STA. 183+00
SEE SHT. 1-46

① 32 SY MAXIMUM CONCRETE DRIVE REPLACEMENT, TOTAL THIS SHEET.

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)



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CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
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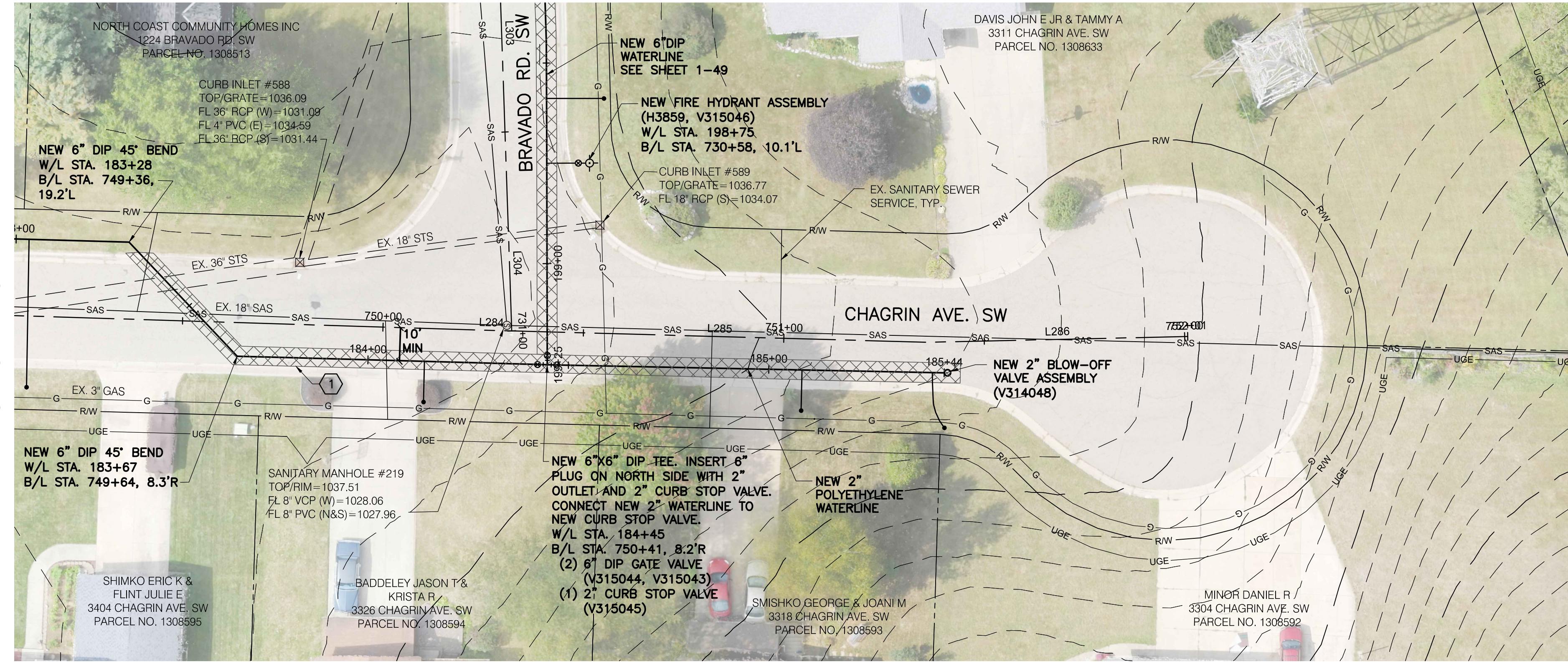
NO.	DESCRIPTION	DATE

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CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

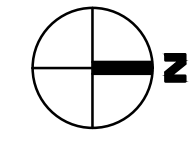
CHAGRIN AVE SW

1-45

SHEET: 1-45 OF 1-57



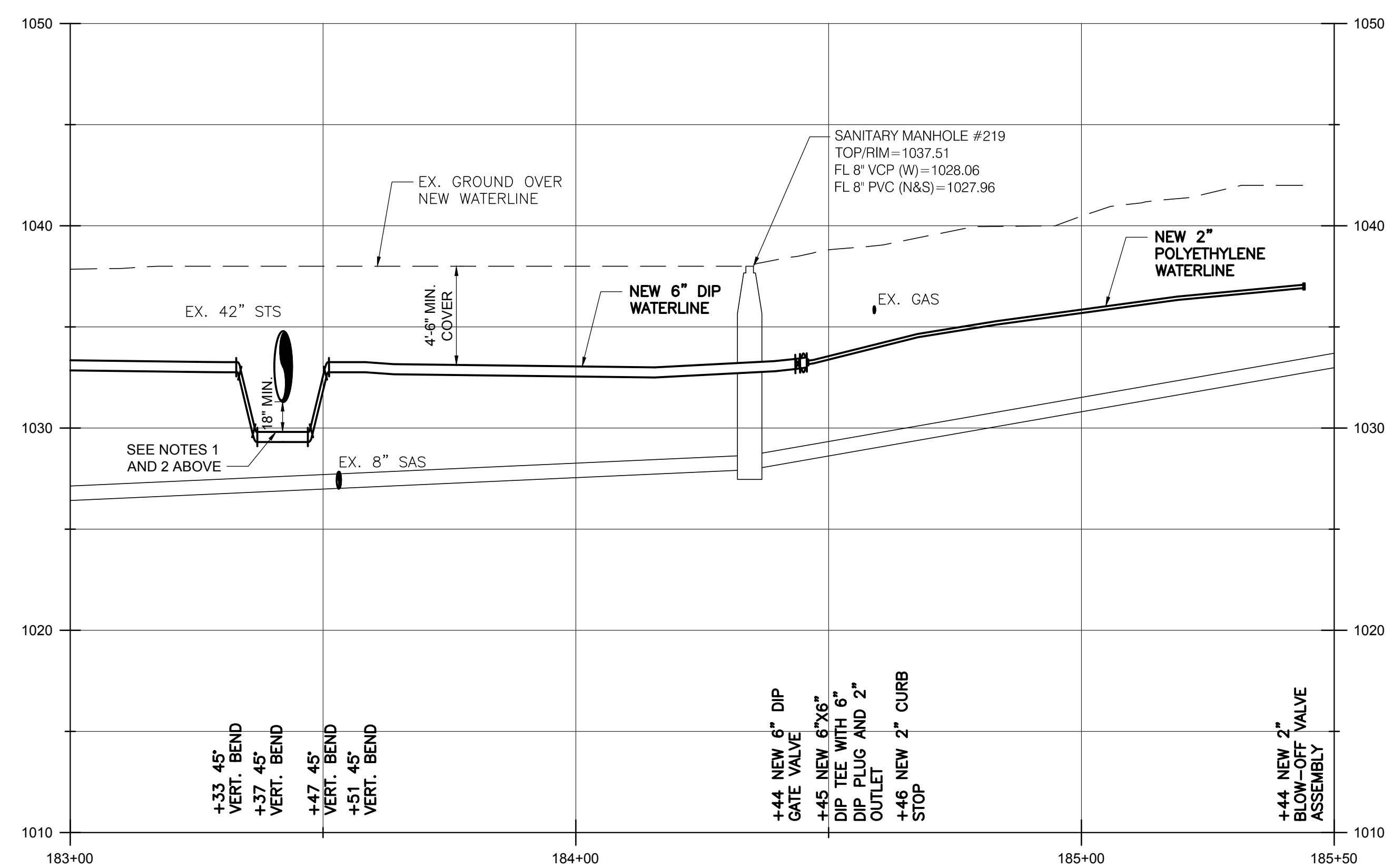
MATCH LINE W/L STA. 183+00
SEE SHT. 1-45



1 114 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

- NOTES:**
1. THE WATERLINE, BENDS AND FITTINGS USED TO GO UNDER THE 42-INCH DIAMETER STORM SEWER SHALL BE DOUBLE WRAPPED WITH POLYETHYLENE FILM WHEN THE DEPTH EXCEEDS 7 FEET.
 2. THE VOID BETWEEN THE 42-INCH DIAMETER STORM SEWER AND TOP OF WATERLINE SHALL BE FILLED WITH LOW STRENGTH MORTAR UNLESS APPROVED OTHERWISE BY THE ONSITE CITY REPRESENTATIVE.

SCALE:
1" = 20" (HORIZ.)
1" = 5" (VERT.)



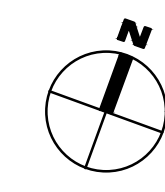
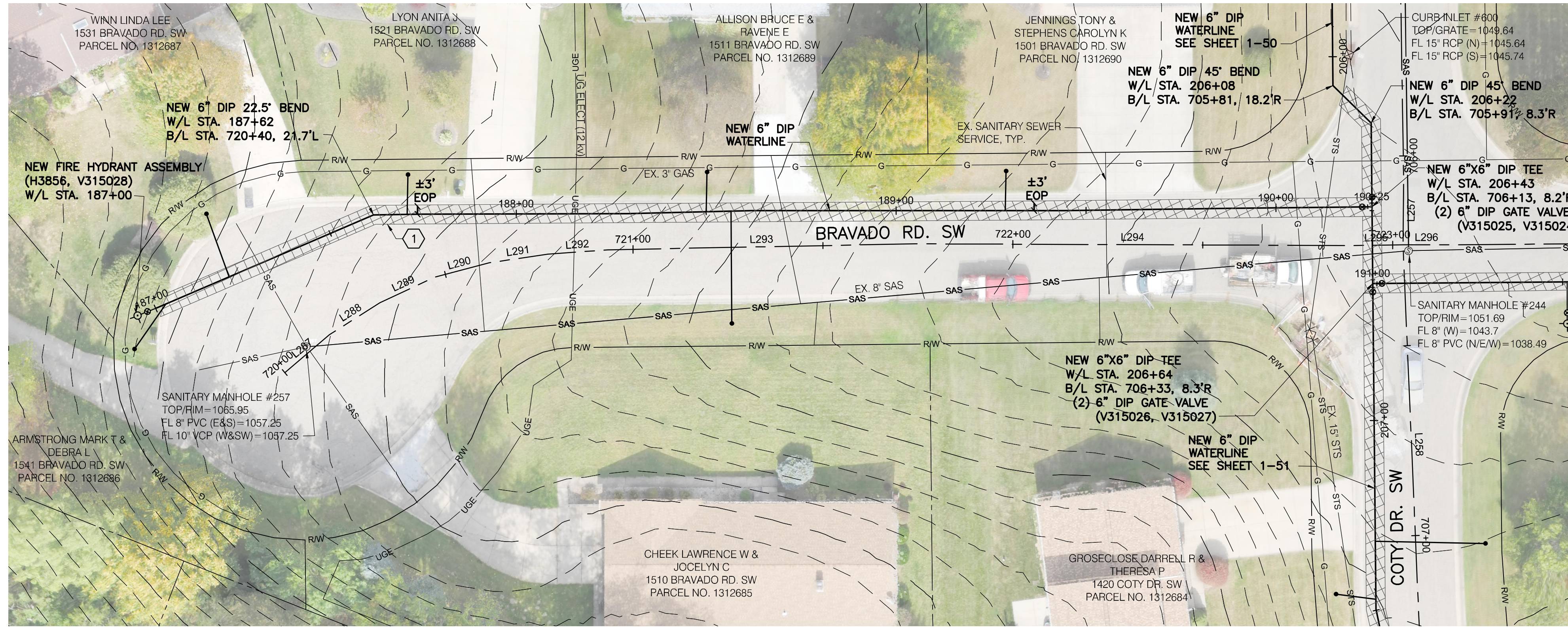
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CANTON SOUTH WATERLINE EXTENSION
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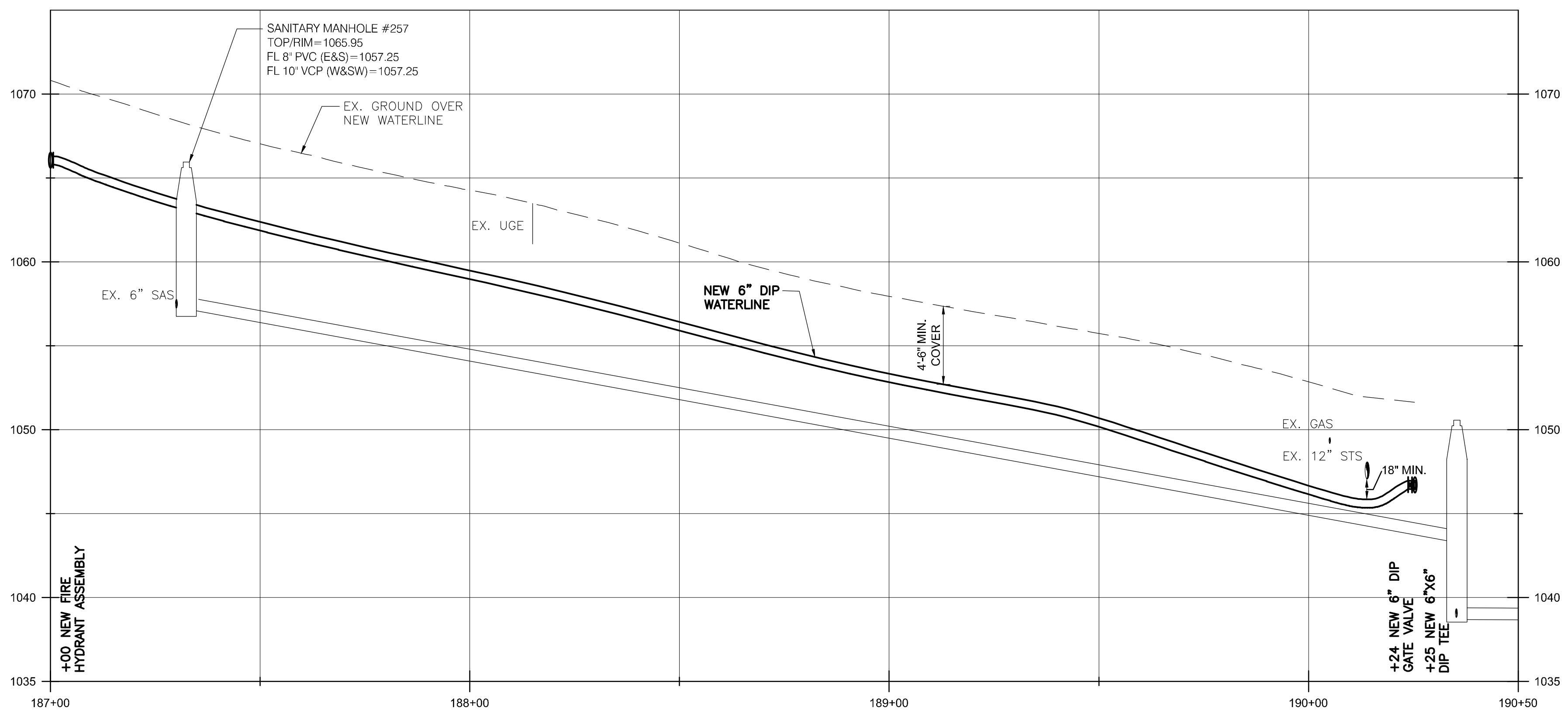
CHAGRIN AVE SW



1 181 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:
 1. ANYTIME THE PROPOSED WATERLINE CROSSES AN UNDERGROUND, 12 kv, ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT AEP A MINIMUM OF 1 WEEK IN ADVANCE OF SAID CROSSING TO DE-ENERGIZE THE LINE. ALL OSHA ENERGY CLEARANCES SHALL BE FOLLOWED WHEN WORKING AROUND ELECTRICAL LINES. ALL COSTS ASSOCIATED WITH DE-ENERGIZING THE ELECTRICAL LINES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

SCALE:
 1" = 20' (HORIZ.)
 1" = 5" (VERT.)



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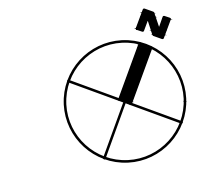
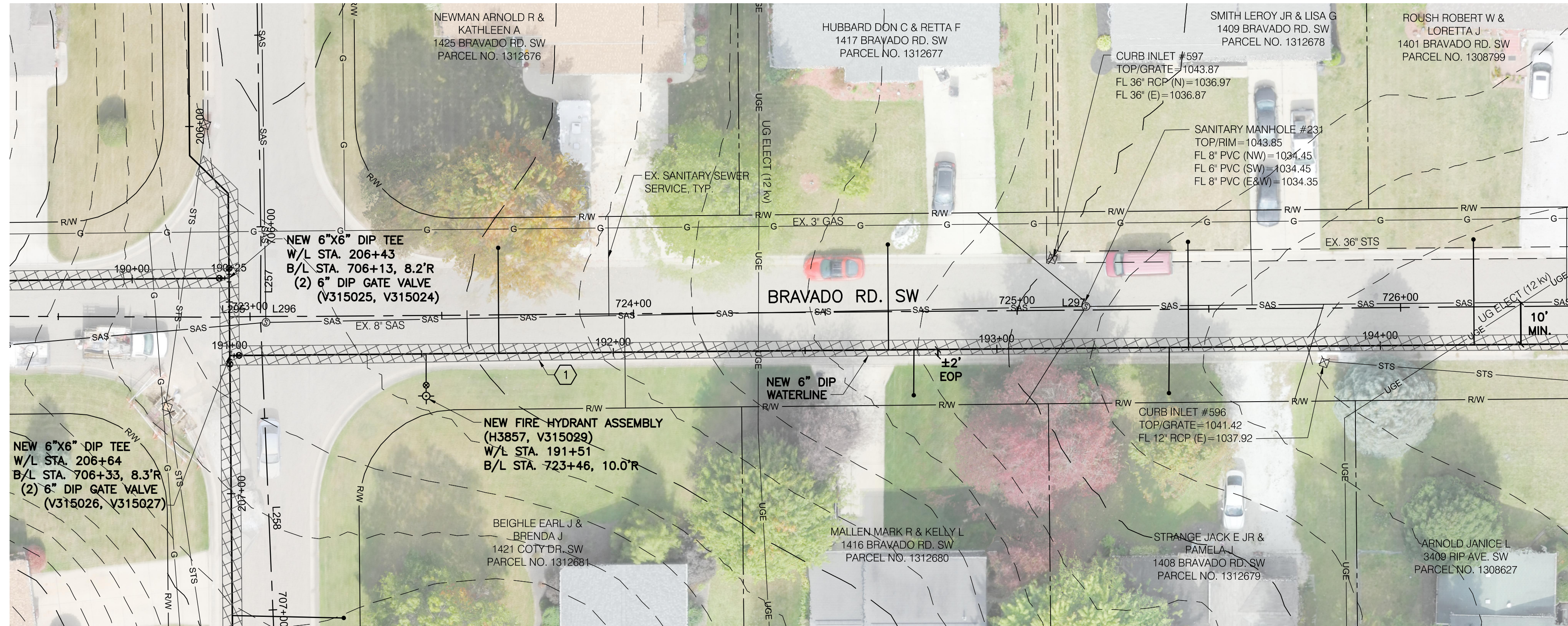
CANTON SOUTH WATERLINE EXTENSION
 CITY OF CANTON
 WATER DEPARTMENT

NO.	DESCRIPTION	DATE

JOB NO: PR55936
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 DESIGNED BY: RRH
 DRAWN BY: TSM
 CHECKED BY: TMA
 APPROVED BY: TMA
 SCALE: AS NOTED

BRAVADO RD SW

1-47
 SHEET: 1-47 OF 1-57

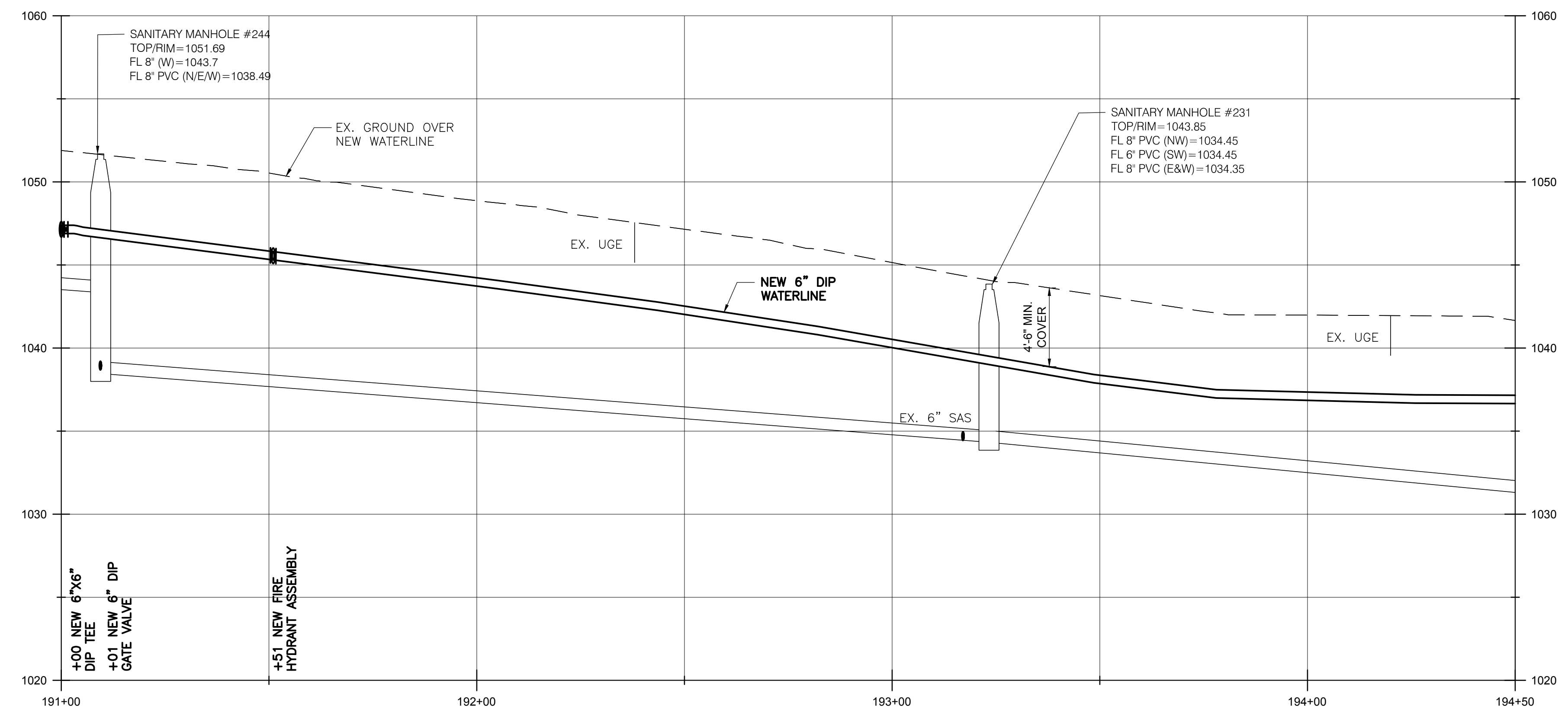


MATCH LINE W/L STA. 194+50
SEE SHT. 1-49

① 195 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:
1. ANYTIME THE PROPOSED WATERLINE CROSSES AN UNDERGROUND, 12 kv. ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT AEP A MINIMUM OF 1 WEEK IN ADVANCE OF SAID CROSSING TO DE-ENERGIZE THE LINE. ALL OASHA ENERGY CLEARANCES SHALL BE FOLLOWED WHEN WORKING AROUND ELECTRICAL LINES. ALL COSTS ASSOCIATED WITH DE-ENERGIZING THE ELECTRICAL LINES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



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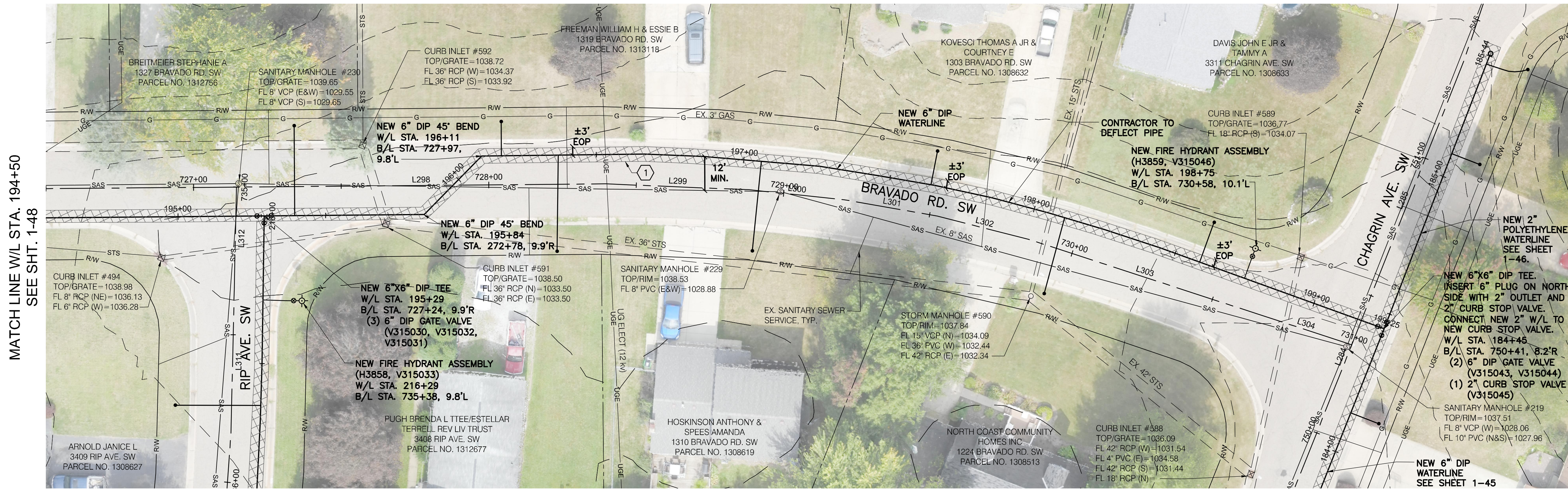
CANTON SOUTH WATERLINE EXTENSION
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WATER DEPARTMENT

NO.	DESCRIPTION	DATE

JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRR
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

BRAVADO RD SW

1-48
SHEET: 1-48 OF 1-57



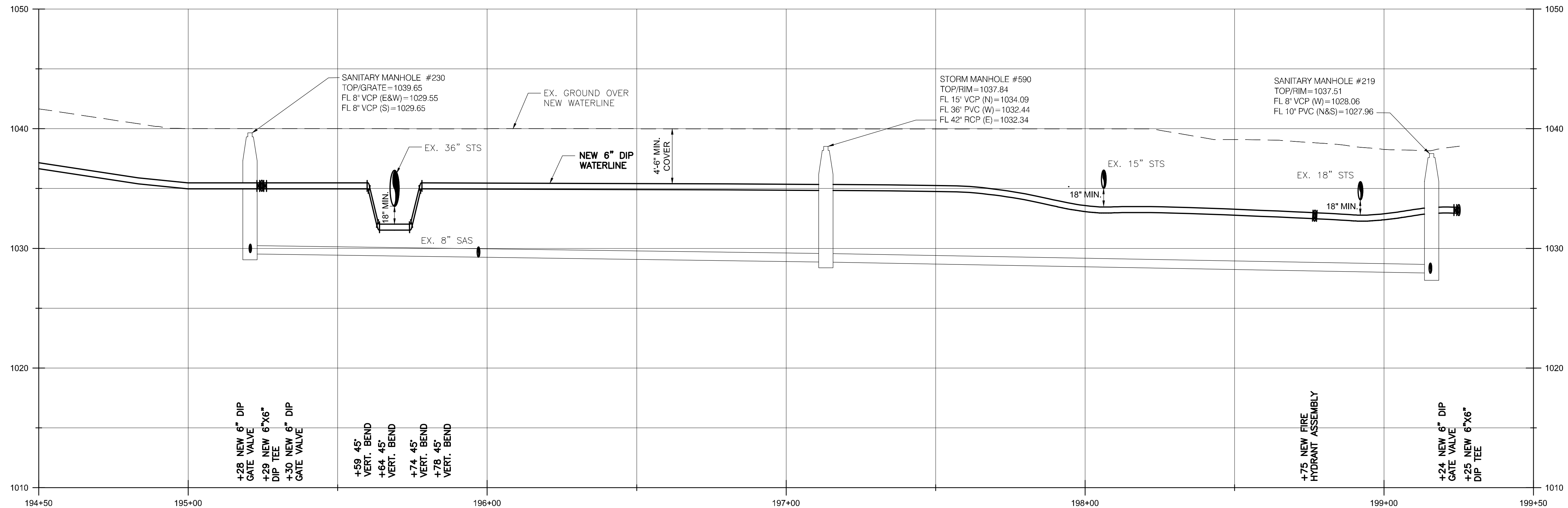
MATCH LINE W/L STA. 194+50
SEE SHT. 1-48

① 264 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

- ANYTIME THE PROPOSED WATERLINE CROSSES AN UNDERGROUND, 12 KV, ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT AEP A MINIMUM OF 1 WEEK IN ADVANCE OF SAID CROSSING TO DE-ENERGIZE THE LINE. ALL OASHA ENERGY CLEARANCES SHALL BE FOLLOWED WHEN WORKING AROUND ELECTRICAL LINES. ALL COSTS ASSOCIATED WITH DE-ENERGIZING THE ELECTRICAL LINES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



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PAINESVILLE, OHIO 44077

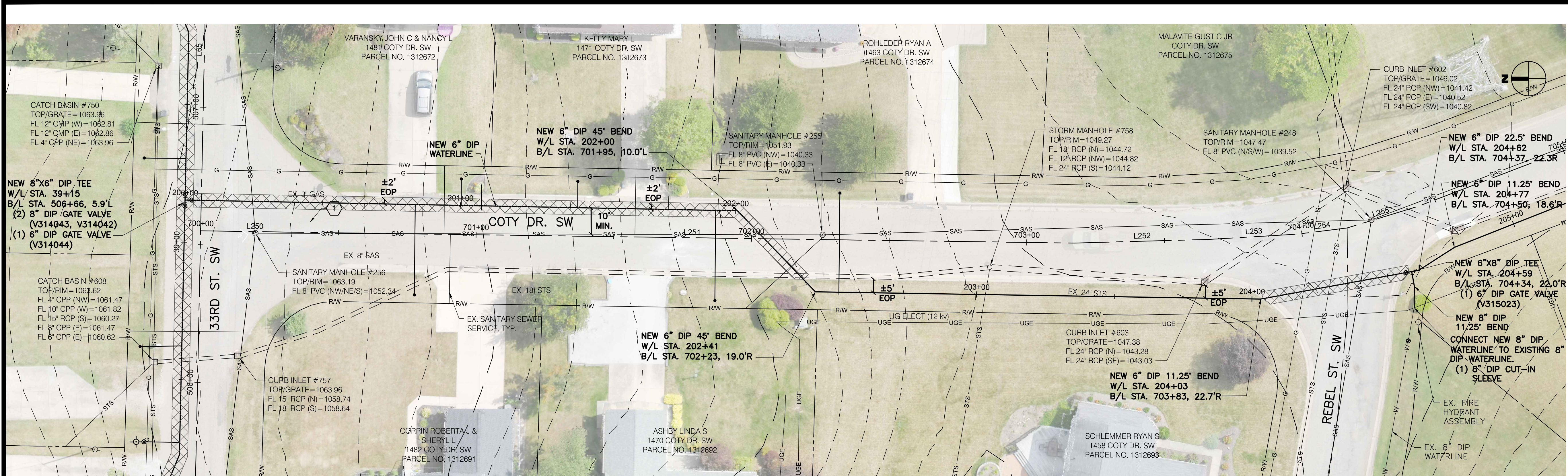
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BRAVADO RD SW

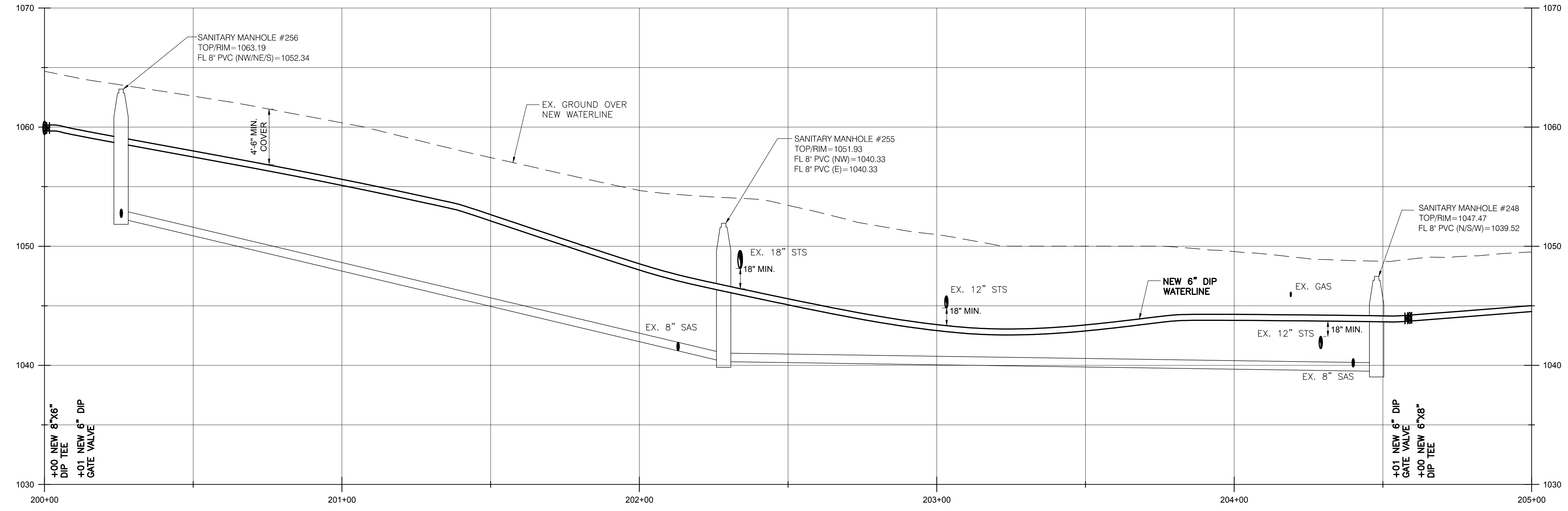
P:\PR55936\Cadd\Sheets\1-50 COTY DR SW.dwg 5/29/2018 4:08:30 PM Hrusovsky, Robert



NOTES:
 1. ANYTIME THE PROPOSED WATERLINE CROSSES AN UNDERGROUND, 12 kv, ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT AEP A MINIMUM OF 1 WEEK IN ADVANCE OF SAID CROSSING TO DE-ENERGIZE THE LINE. ALL OASHA ENERGY CLEARANCES SHALL BE FOLLOWED WHEN WORKING AROUND ELECTRICAL LINES. ALL COSTS ASSOCIATED WITH DE-ENERGIZING THE ELECTRICAL LINES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

① 158 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

SCALE:
 1" = 20' (HORIZ.)
 1" = 5" (VERT.)



MATCH LINE WL STA. 205+50
SEE SHT. 1-51

BURGESS & NIPLÉ
 100 WEST ERIE STREET
 PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
 CITY OF CANTON
 WATER DEPARTMENT

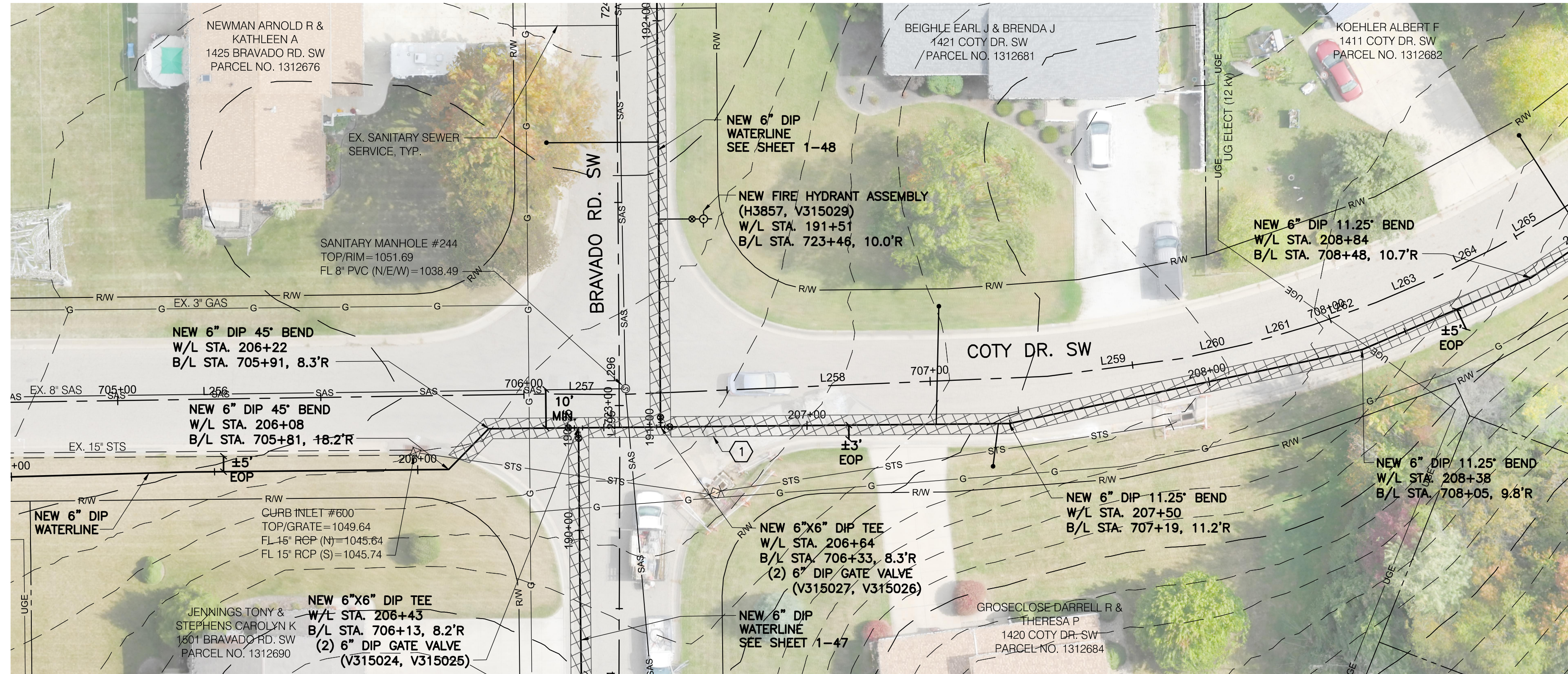
NO.	DESCRIPTION	DATE

JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRRH
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

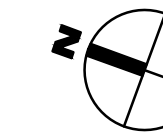
COTY DR SW

1-50
 SHEET: 1-50 OF 1-57

MATCH LINE W/L STA. 205+00
SEE SHT. 1-50



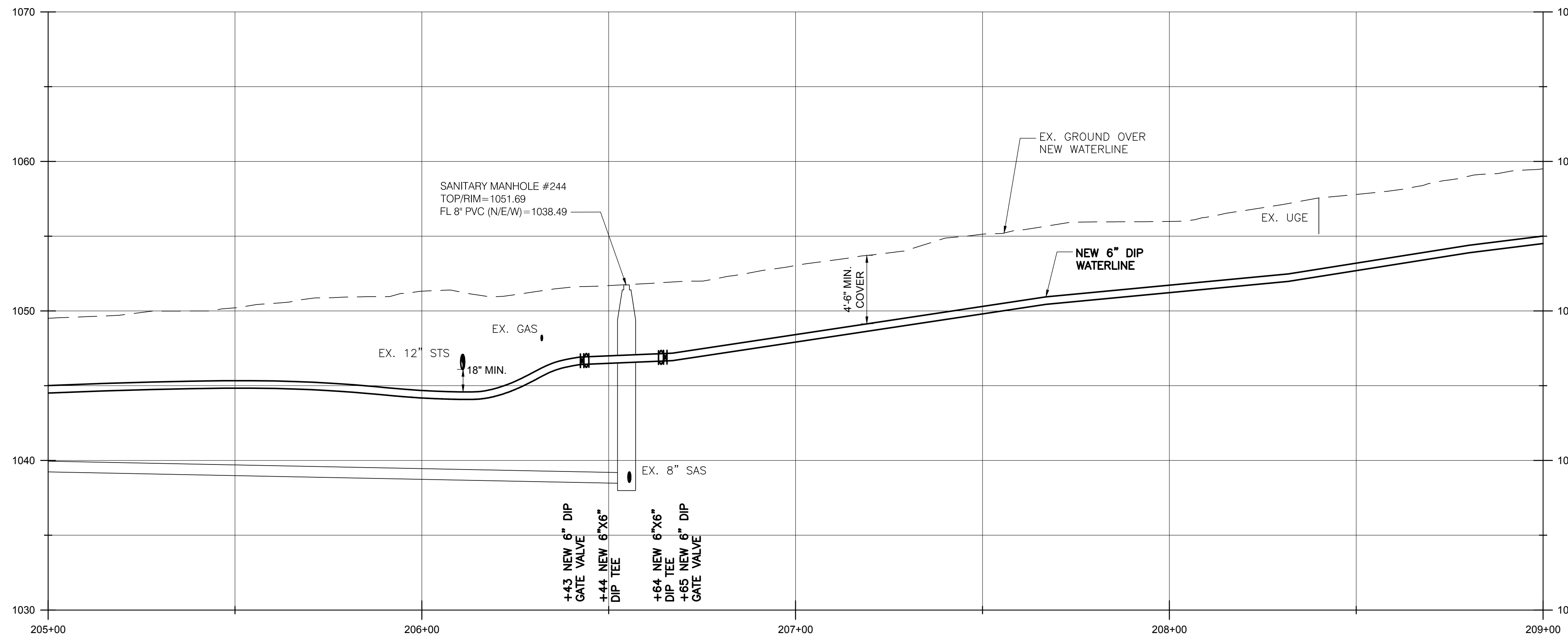
MATCH LINE W/L STA. 209+00
SEE SHT. 1-52



1 162 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

- NOTES:**
- ANYTIME THE PROPOSED WATERLINE CROSSES AN UNDERGROUND, 12 KV, ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT AEP A MINIMUM OF 1 WEEK IN ADVANCE OF SAID CROSSING TO DE-ENERGIZE THE LINE. ALL OSHA ENERGY CLEARANCES SHALL BE FOLLOWED WHEN WORKING AROUND ELECTRICAL LINES. ALL COSTS ASSOCIATED WITH DE-ENERGIZING THE ELECTRICAL LINES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



BURGESS & NIPLÉ
100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

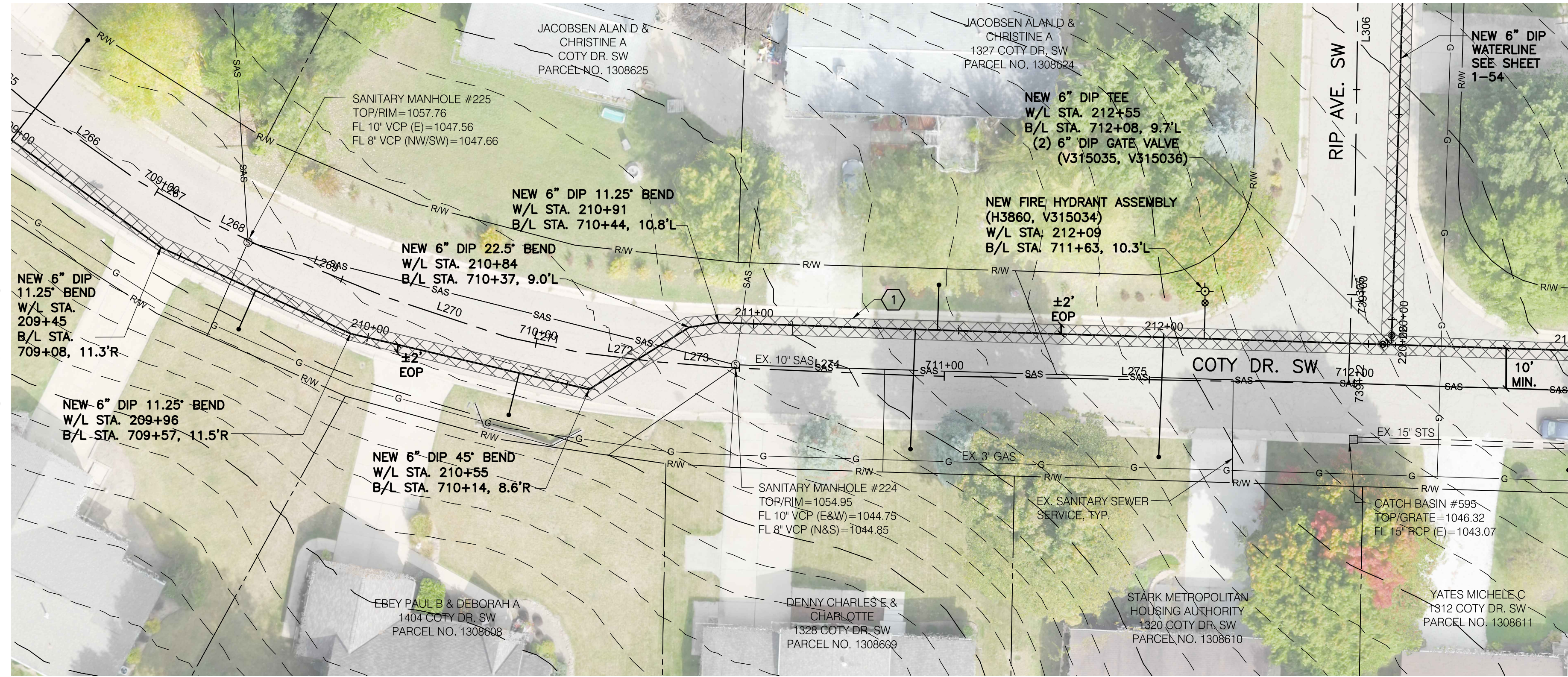
NO.	DESCRIPTION	REVISIONS	
		DATE	

JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRR
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

COTY DR SW

1-51
SHEET: 1-51 OF 1-57

MATCH LINE W/L STA. 209+00
SEE SHT. 1-51

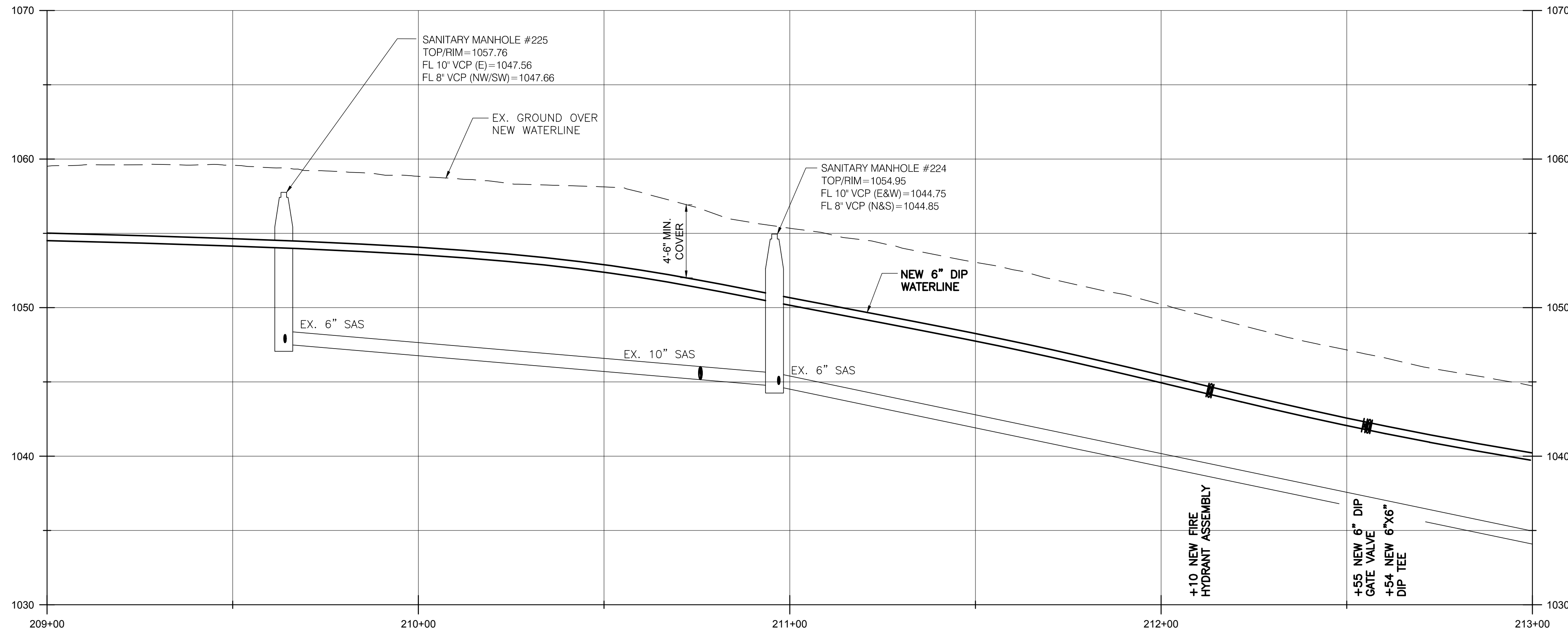


MATCH LINE W/L STA. 213+00
SEE SHT. 1-53



1 223 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

SCALE:
1" = 20' (HORIZ.)
1" = 5' (VERT.)



BURGESS & NIPLÉ

100 WEST ERIE STREET
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CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

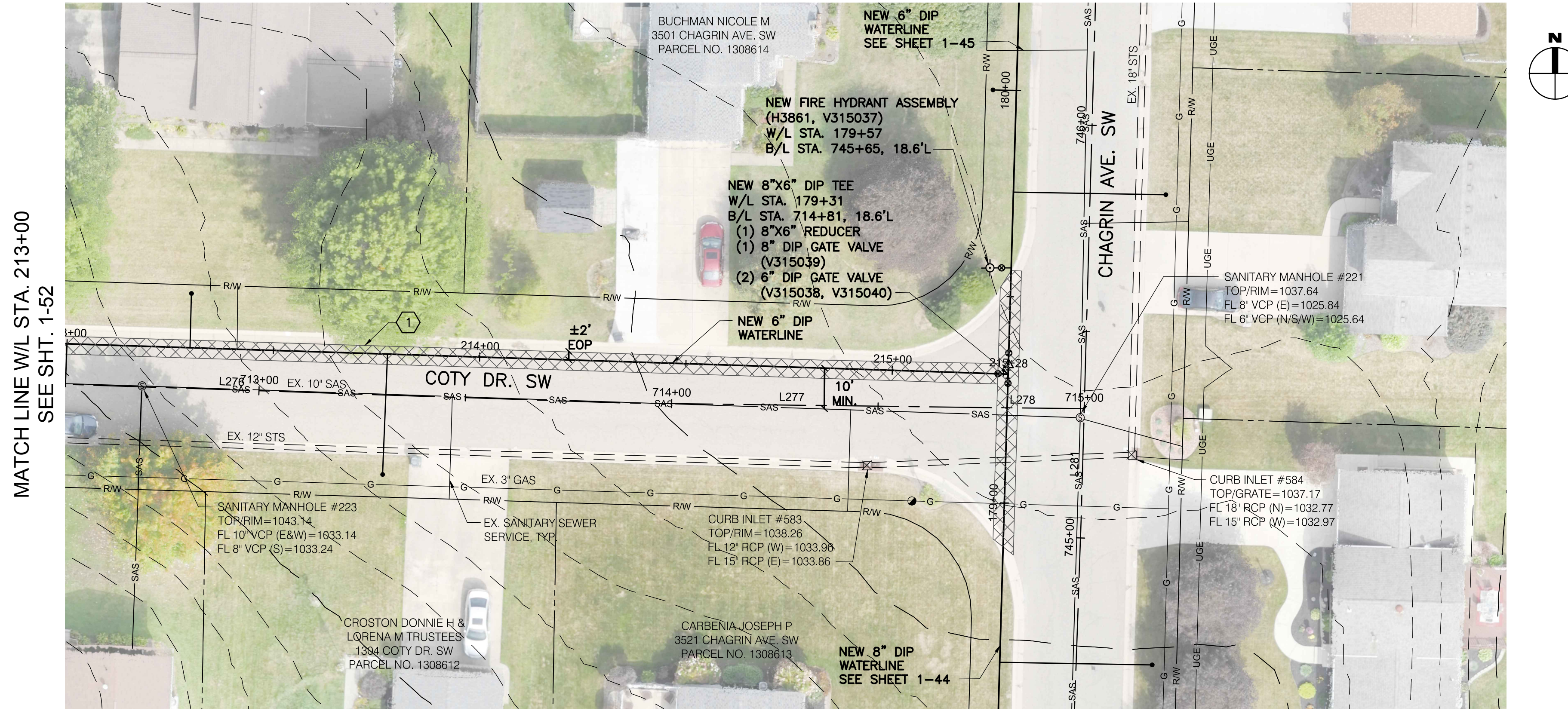
NO.	DESCRIPTION	DATE

JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRH
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

COTY DR SW

1-52

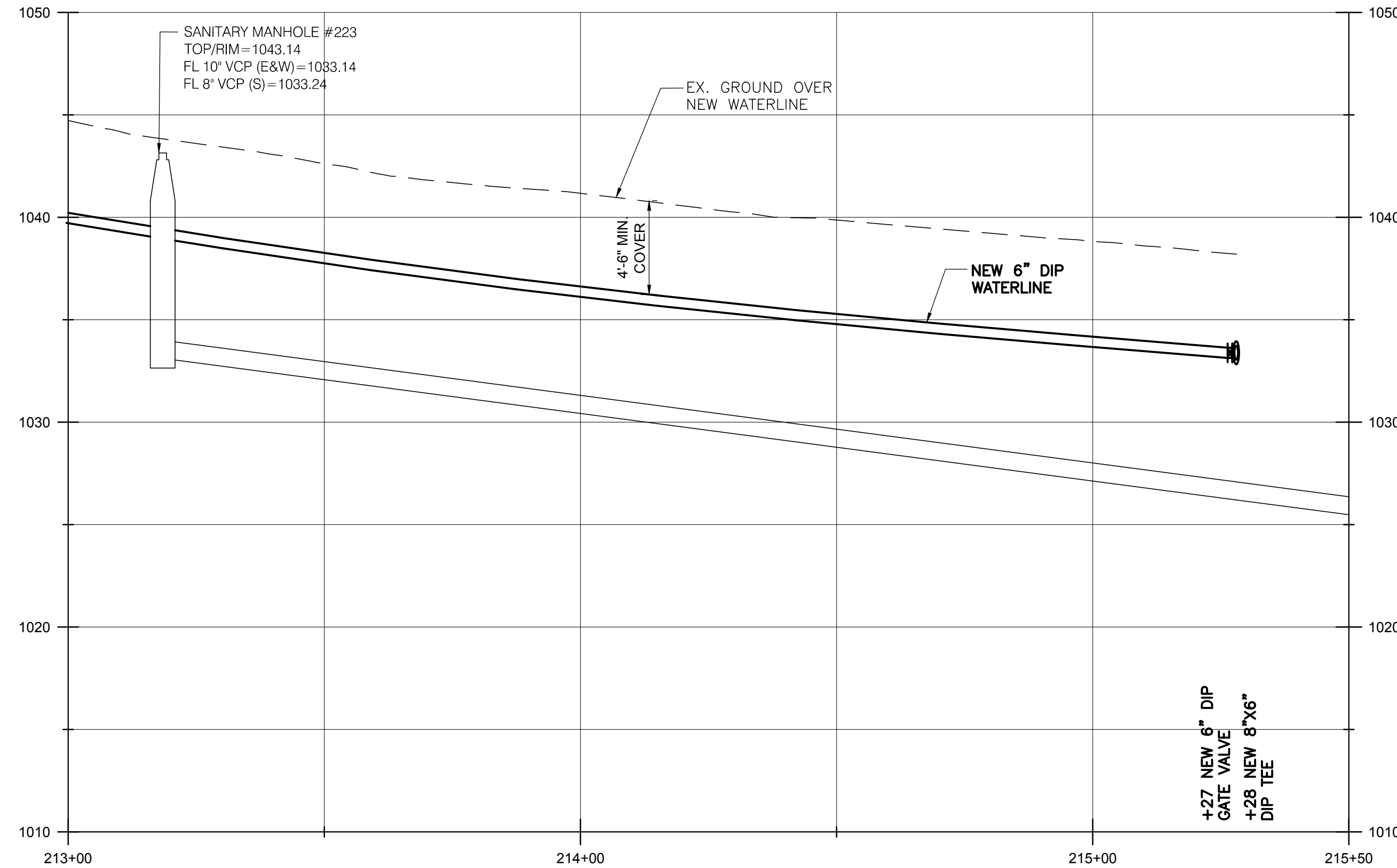
SHEET: 1-52 OF 1-57



MATCH LINE W/L STA. 213+00
SEE SHT. 1-52

1 139 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

SCALE:
1" = 20' (HORIZ.)
1" = 5" (VERT.)



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100 WEST ERIE STREET
PAINESVILLE, OHIO 44077

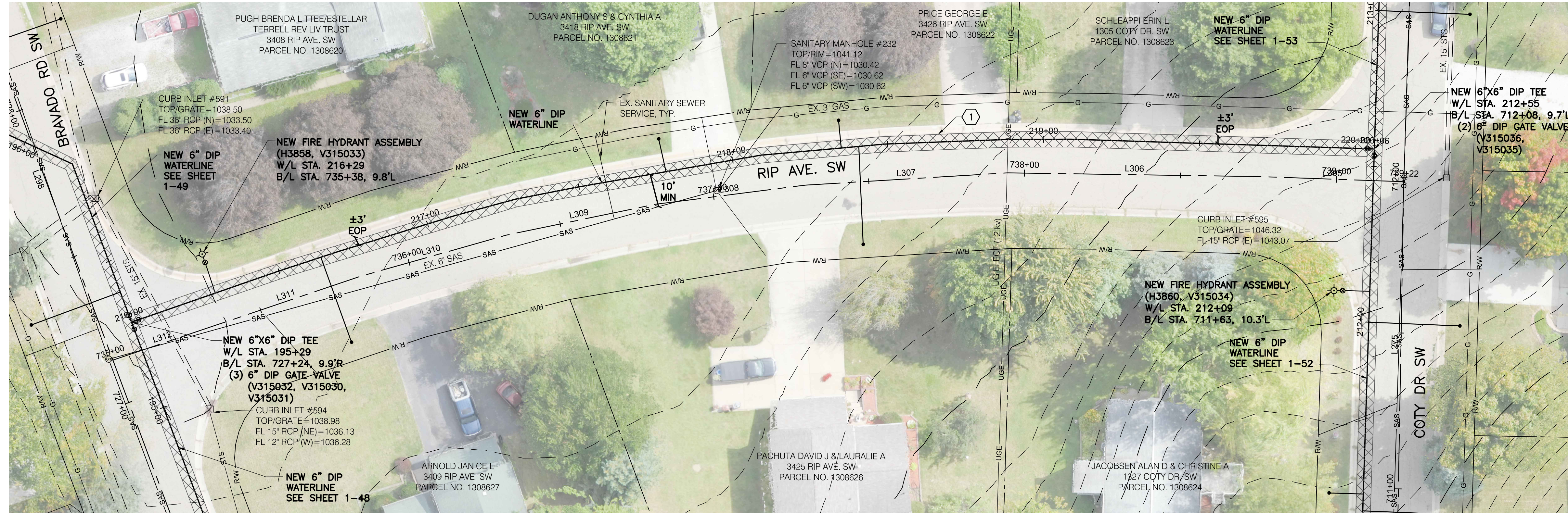
CANTON SOUTH WATERLINE EXTENSION
CITY OF CANTON
WATER DEPARTMENT

NO.	DESCRIPTION	REVISIONS	
		DATE	

JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRR
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

COTY DR SW

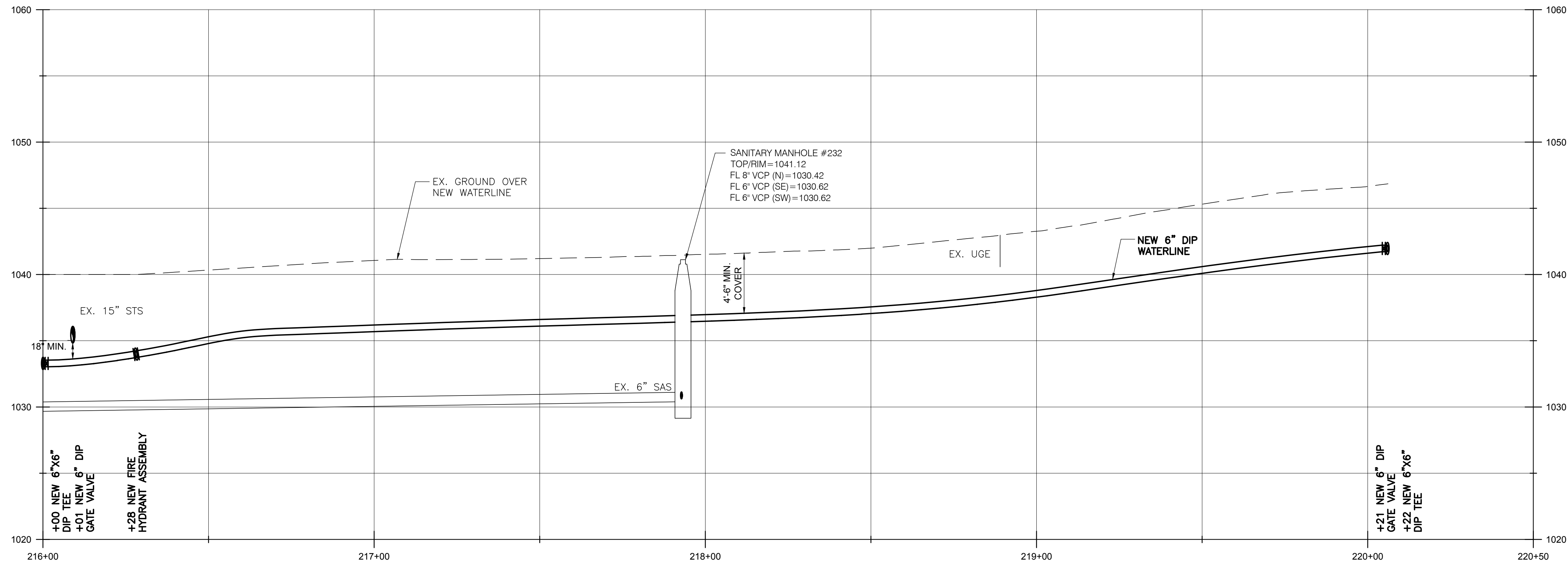
1-53
SHEET: 1-53 OF 1-57



① 226 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:
 1. ANYTIME THE PROPOSED WATERLINE CROSSES AN UNDERGROUND, 12 kv, ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT AEP A MINIMUM OF 1 WEEK IN ADVANCE OF SAID CROSSING TO DE-ENERGIZE THE LINE. ALL OASHA ENERGY CLEARANCES SHALL BE FOLLOWED WHEN WORKING AROUND ELECTRICAL LINES. ALL COSTS ASSOCIATED WITH DE-ENERGIZING THE ELECTRICAL LINES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

SCALE:
 1" = 20' (HORIZ.)
 1" = 5' (VERT.)



BURGESS & NIPLÉ

100 WEST ERIE STREET
 PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
 CITY OF CANTON
 WATER DEPARTMENT

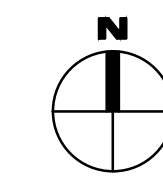
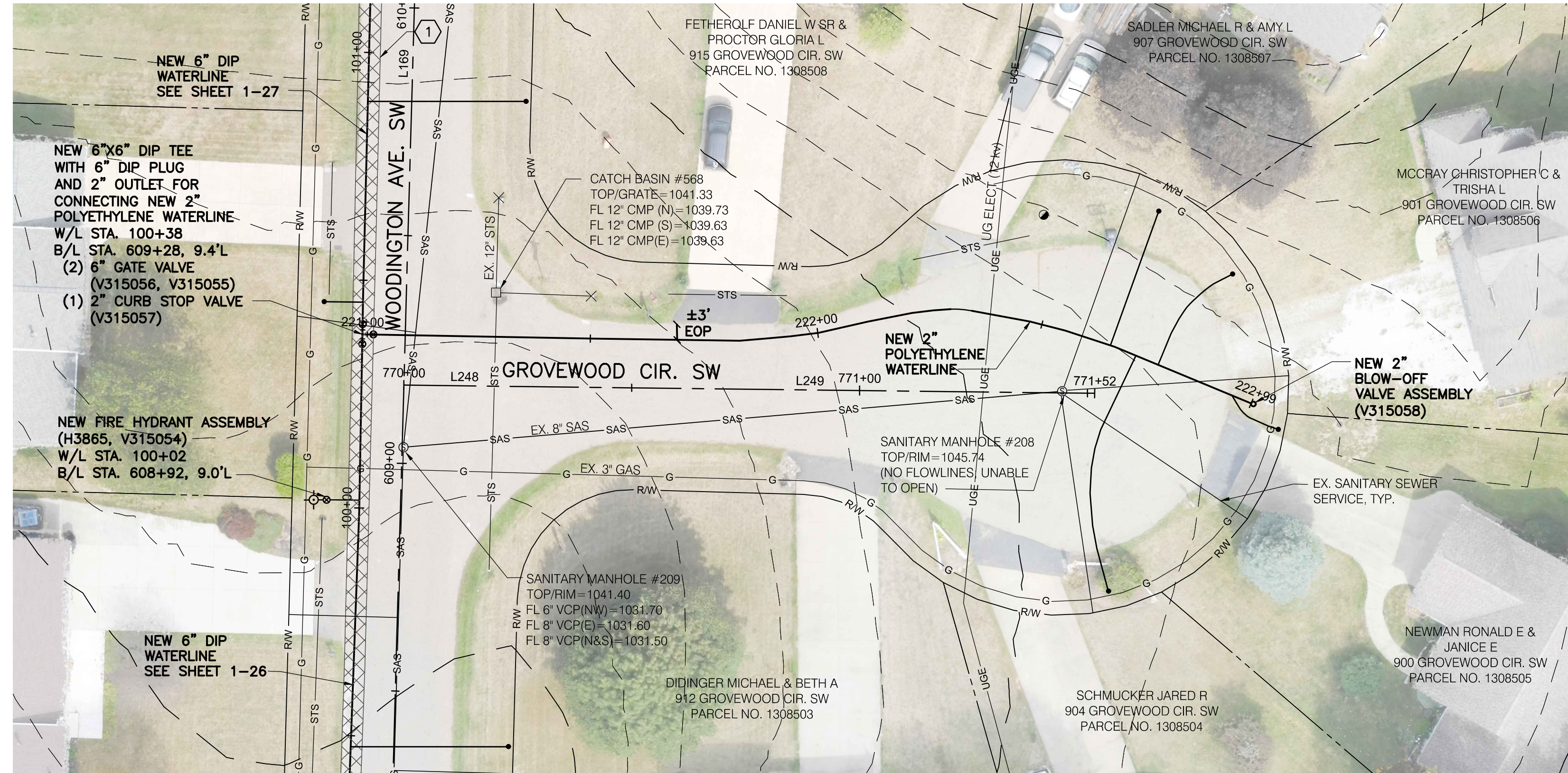
NO.	DESCRIPTION	REVISIONS	
		DATE	

JOB NO: PR55936
DATE: MAY 2018
DESIGNED BY: RRRH
DRAWN BY: TSM
CHECKED BY: TMA
APPROVED BY: TMA
SCALE: AS NOTED

RIP AVE

1-54

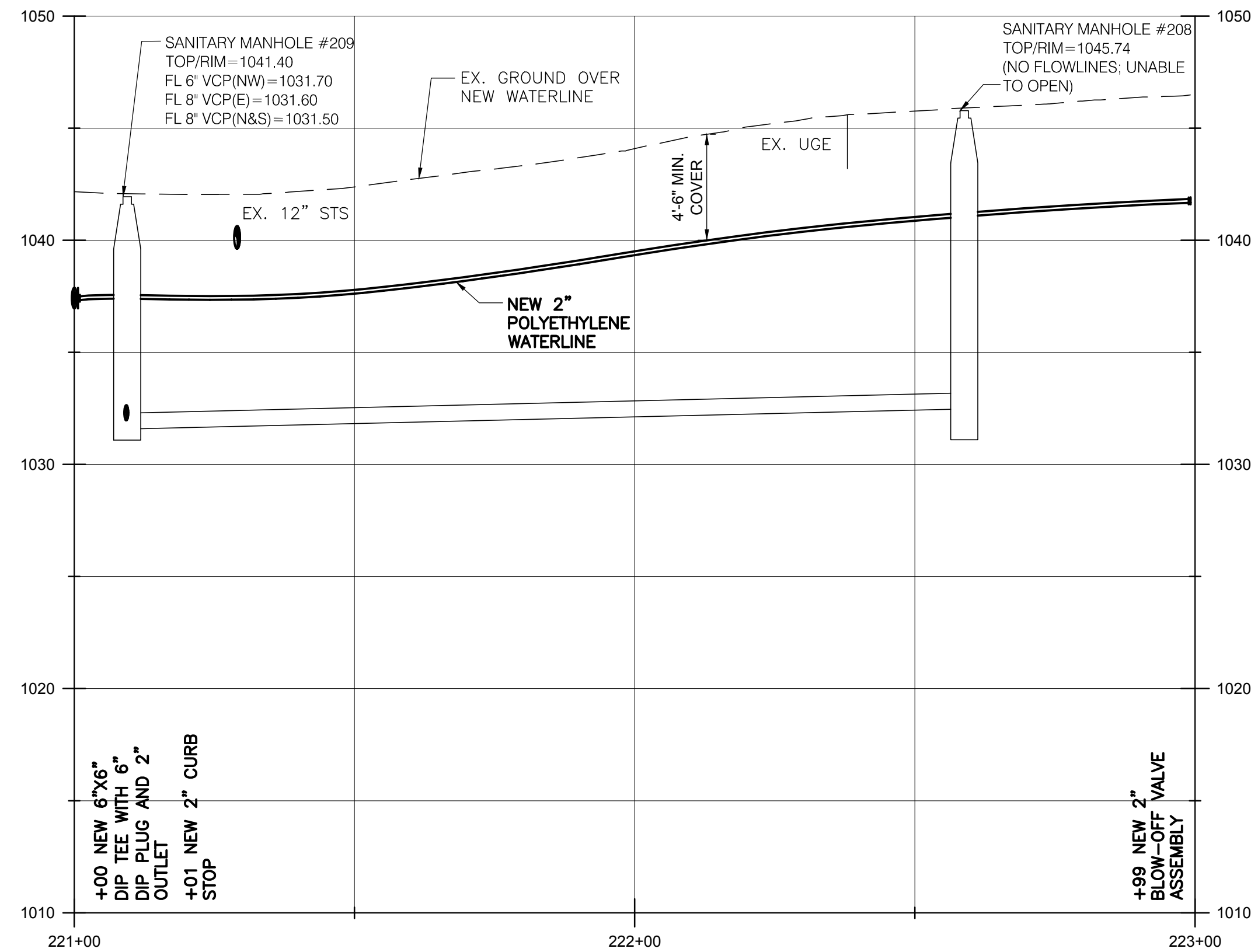
SHEET: 1-54 OF 1-57



NOTES:

- ANYTIME THE PROPOSED WATERLINE CROSSES AN UNDERGROUND, 12 kv, ELECTRICAL LINE, THE CONTRACTOR SHALL CONTACT AEP A MINIMUM OF 1 WEEK IN ADVANCE OF SAID CROSSING TO DE-ENERGIZE THE LINE. ALL OASHA ENERGY CLEARANCES SHALL BE FOLLOWED WHEN WORKING AROUND ELECTRICAL LINES. ALL COSTS ASSOCIATED WITH DE-ENERGIZING THE ELECTRICAL LINES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.

SCALE:
 1" = 20' (HORIZ.)
 1" = 5' (VERT.)



BURGESS & NIPLÉ

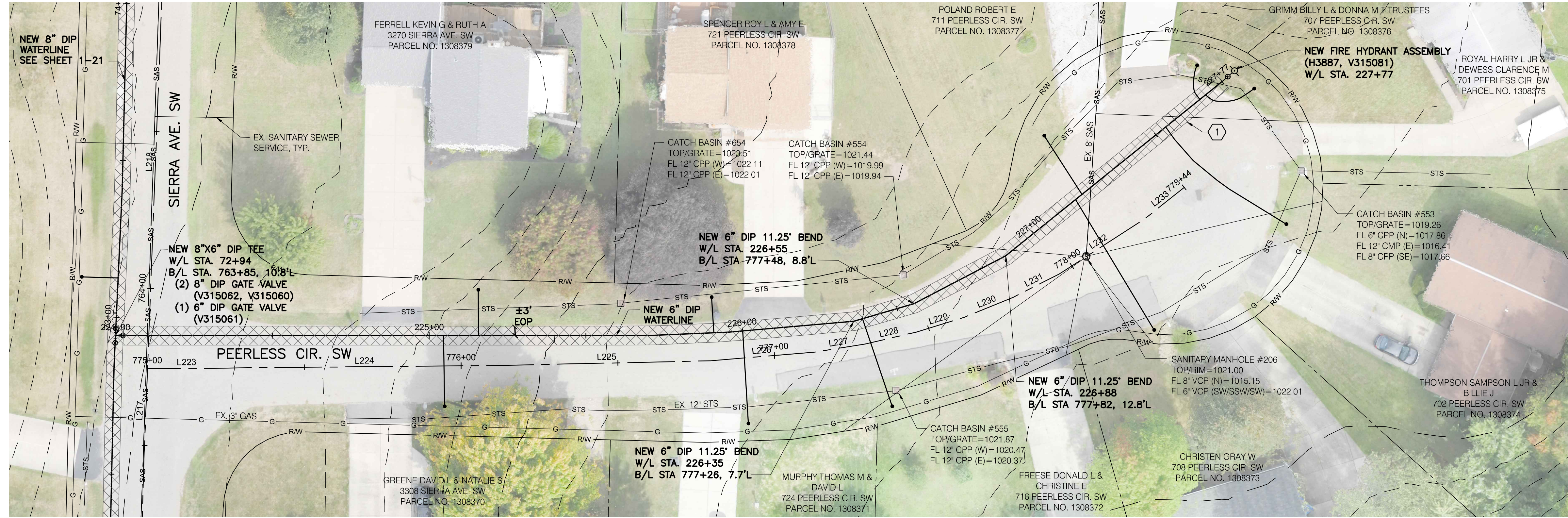
100 WEST ERIE STREET
 PAINESVILLE, OHIO 44077

CANTON SOUTH WATERLINE EXTENSION
 CITY OF CANTON
 WATER DEPARTMENT

REVISIONS	
NO.	DESCRIPTION

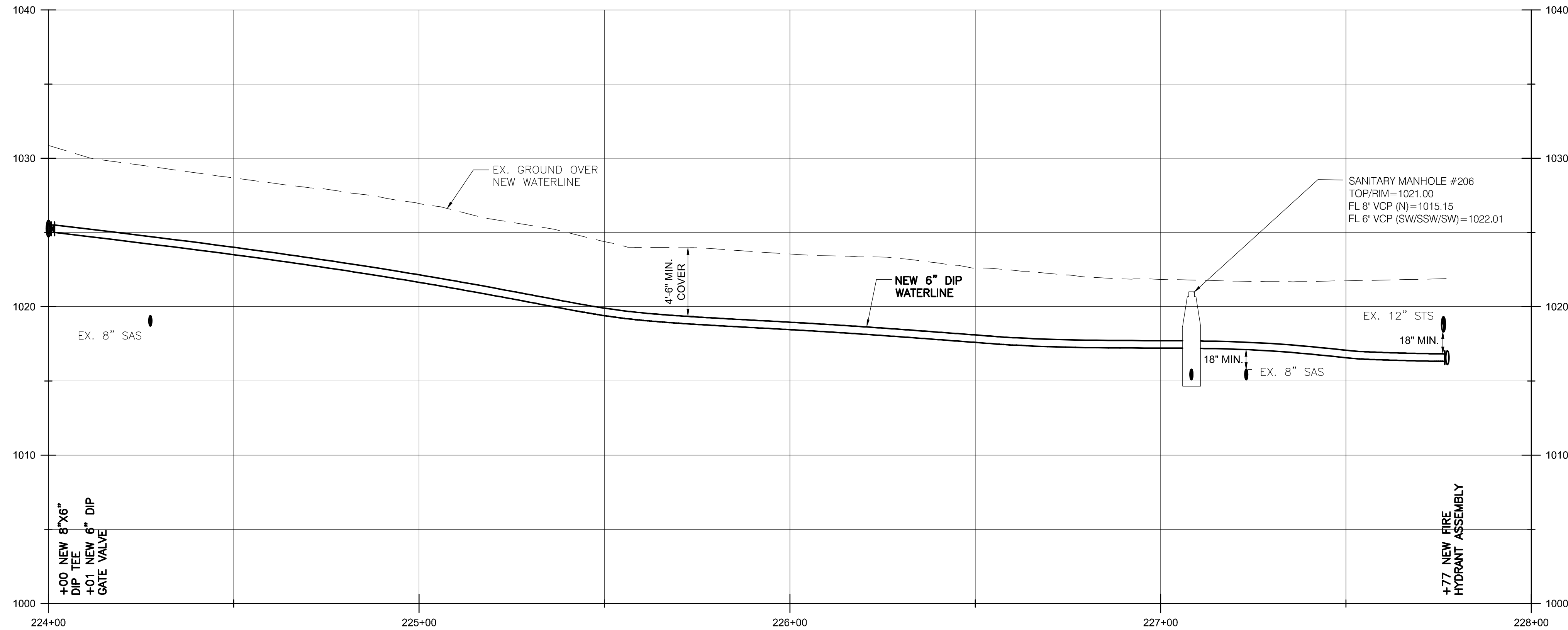
JOB NO: PR55936
 DATE: MAY 2018
 DESIGNED BY: RRR
 DRAWN BY: TSM
 CHECKED BY: TMA
 APPROVED BY: TMA
 SCALE: AS NOTED

GROVEWOOD CIR SW



1 250 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

SCALE:
 1" = 20' (HORIZ.)
 1" = 5' (VERT.)



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CANTON SOUTH WATERLINE EXTENSION
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 WATER DEPARTMENT

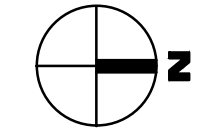
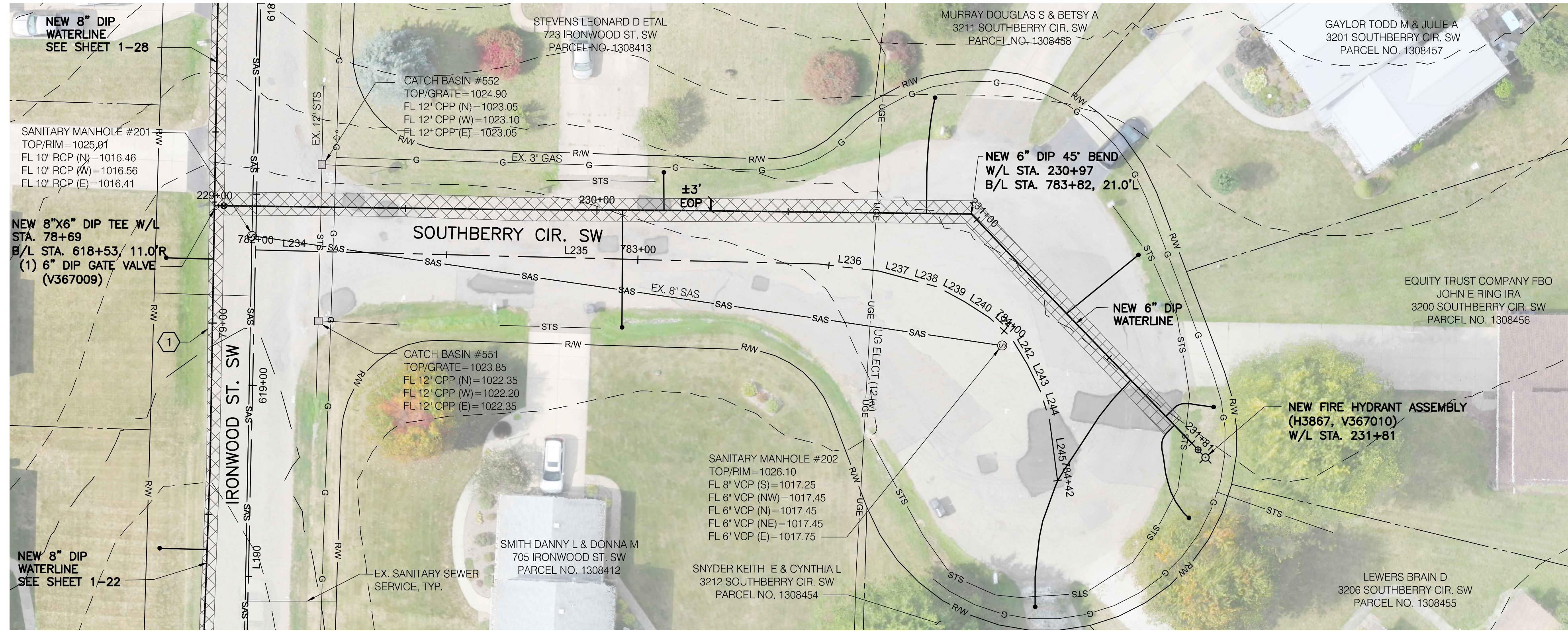
NO.	DESCRIPTION	REVISIONS	
		DATE	

JOB NO: PR55936
 DATE: MAY 2018
 DESIGNED BY: RRH
 DRAWN BY: TSM
 CHECKED BY: TMA
 APPROVED BY: TMA
 SCALE: AS NOTED

PEERLESS CIR SW

1-56

SHEET: 1-56 OF 1-57

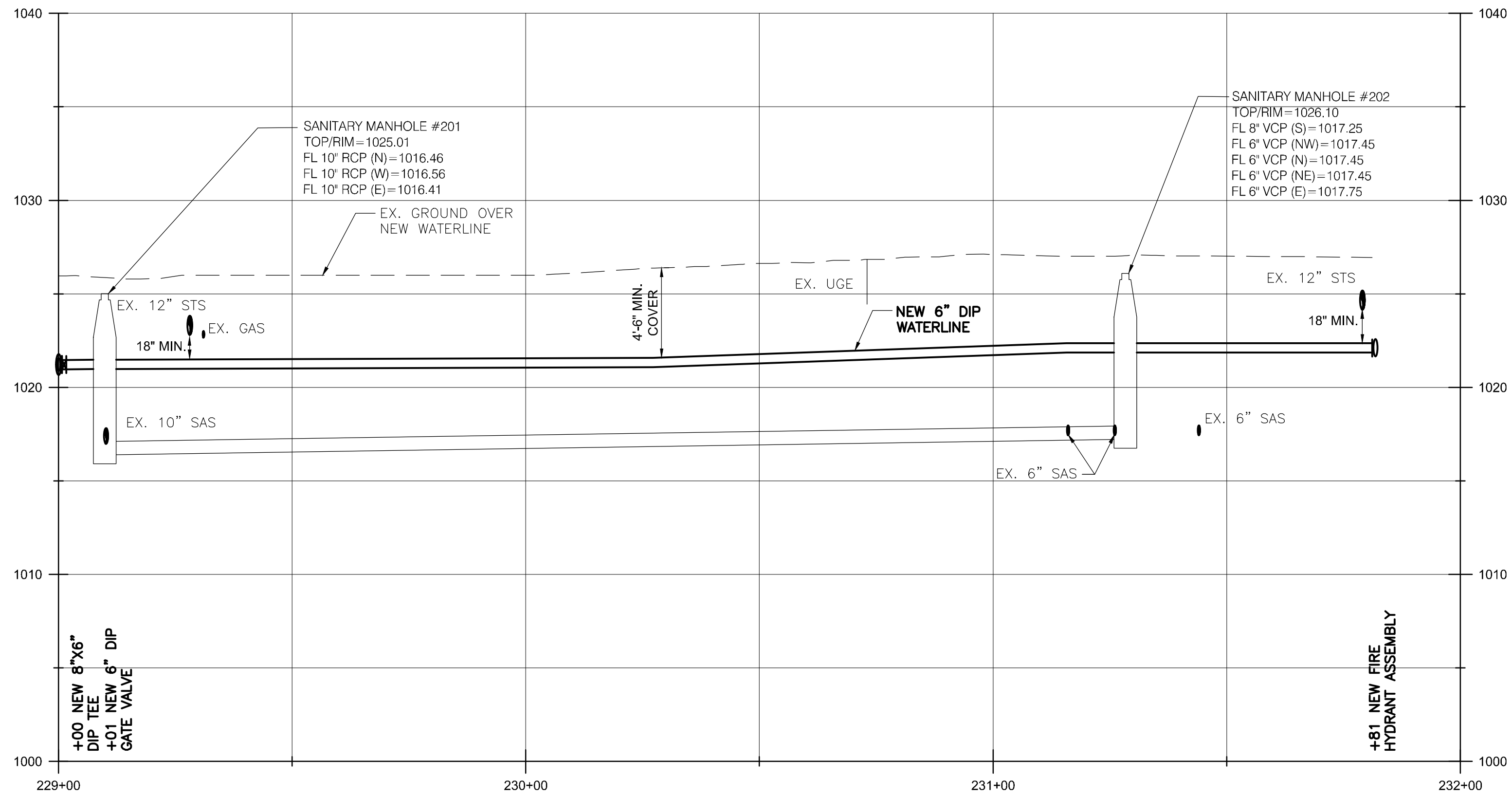


1 182 SY MAXIMUM ASPHALT PAVEMENT REPLACEMENT, TOTAL THIS SHEET.

NOTES:

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 1" = 5" (VERT.)



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CANTON SOUTH WATERLINE EXTENSION
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 SCALE: AS NOTED

SOUTHBERRY CIR SW

1-57

SHEET: 1-57 OF 1-57