

CITY OF MASSILLON
CIVPRO ENGINEERING
STARK COUNTY, OHIO
Millennium Blvd SE Roadway Extension

PROJECT DESCRIPTION

EXTENSION OF MILLENNIUM BLVD SE INCLUDING ROADWAY, DRAINAGE, AND SANITARY SEWER.

CONVENTIONAL SIGNS

RIGHT OF WAY . . . EXISTING: _____, PROPOSED: _____
COUNTY LINE . . . _____
TOWNSHIP LINE . . . _____
CORPORATION LINE . . . _____
FENCE LINE . . . EXISTING: _____, PROPOSED: _____
GUARDRAIL . . . EXISTING: _____, PROPOSED: _____
MANHOLES . . . EXISTING: (M), PROPOSED: (M), REHABILITATED: (M)
CATCH BASINS . . . EXISTING: (CB), PROPOSED: (CB), REHABILITATED: (CB)
SIGNS . . . 1-POST: (1P), 2-POST: (2P), 3-POST: (3P), STREET: (S)
EXISTING POLES . . . POWER: (P), TELEPHONE: (T), LIGHT: (L), SPAN: (S)
PROPOSED POLES . . . POWER: (P), TELEPHONE: (T), LIGHT: (L), SPAN: (S)
EXIST. UTILITIES . . . VALVE: (V), HYDRANT: (H), METERS: (M), GUY: (G)

PERMIT TO INSTALL

SANITARY SEWER PERMIT TO INSTALL (P.T.I.) HAS BEEN RECEIVED FROM THE OHIO
ENVIRONMENTAL PROTECTION AGENCY PROTECTION AGENCY THIS _____ DAY
OF _____, 20____.
PTI No. _____

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY
TWO WORKING DAYS
BEFORE YOU DIG
1-800-925-0988 (TOLL FREE)
OIL & GAS PRODUCERS UNDERGROUND
PROTECTION SERVICE

PLAN PREPARED BY:
CIVPRO ENGINEERING
6256 Walnut Ridge Cir NW
North Canton, Ohio 44720
OWNER:
MASSILLON DEVELOPMENT FOUNDATION
137 Lincoln Way East
Massillon, Ohio 44646



LOCATION MAP

PORTION TO BE IMPROVED . . . _____
STREETS . . . _____



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APPROVALS

APPROVED BY THE CITY OF MASSILLON ENGINEER THIS 6th DAY OF July, 2015
CITY ENGINEER KEITH A. DYLEWSKI, P.E., P.S. DATE _____

CITY OF MASSILLON ELECTED OFFICIALS

KATHY CATAZARO-PERRY MAYOR
PERICLES G. STERGIOS LAW DIRECTOR/PROSECUTOR
JAYNE FERRERO AUDITOR
MAUDE SLAGLE TREASURER
COUNCIL
TONY M. TOWNSEND PRESIDENT
SARITA CUNNINGHAM-HEDDERLY 1st WARD
NANCY HALTER 2nd WARD
ANDREA SCASSA 3rd WARD
SHADDRICK STINSON 4th WARD
MEGAN STARRETT 5th WARD
ED LEWIS 6th WARD
PAUL MANSON AT LARGE
MICHELLE DEL RIO-KELLER AT LARGE
MILAN CHOVAN AT LARGE

North arrow and scale bar (0 to 300 feet).
Horizontal scale in feet.
Checked by: KAD
Date: May 2015
Drawn by: FPW
Date: May, 2015
Revisions table:
Title Sheet
City of Massillon
Stark County, Ohio
Millennium Blvd SE Roadway Extension
CIVPRO ENGINEERING
6256 WALNUT RIDGE CIR NW NORTH CANTON, OH 44720
PHONE: (330) 268-3734 FAX: (330) 470-1285
WWW.CIVPROENGINEERING.COM
Drawing Name: Neocom8Title
Project Number:
1 / 28

ITEM 448--1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64--22

MILLENNIUM BLVD SE

STA. 36+45.00 TO STA. 65+47.81
((2902.81*36)*0.125)/27

STA. 65+47.81 TO STA. 66+19.81
(4816.99*0.125)/27

CINCINNAT AVE SE

STA. 63+00 TO STA. 65+00
((200*36)*0.125)/27

	=	483.80	CY
	=	22.30	CY
	=	33.33	CY
TOTAL	=	539.43	CY

ITEM 448--1 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64--22

MILLENNIUM BLVD SE

STA. 36+45.00 TO STA. 65+47.81
((2902.81*36)*0.125)/27

STA. 65+47.81 TO STA. 66+19.81
(4816.99*0.125)/27

CINCINNAT AVE SE

STA. 63+00 TO STA. 65+00
((200*36)*0.125)/27

	=	483.80	CY
	=	22.30	CY
	=	33.33	CY
TOTAL	=	539.43	CY

ITEM 301--9" ASPHALT CONCRETE BASE

MILLENNIUM BLVD SE

STA. 36+45.00 TO STA. 65+47.81
((2902.81*36)*0.75)/27

STA. 65+47.81 TO STA. 66+19.81
(4816.99*0.75)/27

CINCINNAT AVE SE

STA. 63+00 TO STA. 65+00
((200*36)*0.75)/27

	=	2902.81	CY
	=	133.81	CY
	=	200.00	CY
TOTAL	=	3236.62	CY

ITEM 304--6" AGGREGATE BASE

MILLENNIUM BLVD SE

STA. 36+45.00 TO STA. 65+47.81
((2902.81*41)*0.5)/27

STA. 65+47.81 TO STA. 66+17.31
(4816.99*0.5)/27

CINCINNAT AVE SE

STA. 63+00 TO STA. 65+00
((200*41)*0.5)/27

	=	2203.99	CY
	=	89.20	CY
	=	151.85	CY
TOTAL	=	2445.04	CY

ITEM 407--TACK COAT (0.08 GAL./S.Y.)

MILLENNIUM BLVD SE

STA. 36+45.00 TO STA. 65+47.81
((2902.81*36)/9)*0.08

STA. 65+47.81 TO STA. 66+19.81
(4816.99/9)*0.08

CINCINNAT AVE SE

STA. 63+00 TO STA. 65+00
((200*36)/9)*0.08

	=	928.90	GAL
	=	42.82	GAL
	=	64.00	GAL
TOTAL	=	1035.72	GAL

ITEM 408--PRIME COAT (0.40 GAL./S.Y.)

MILLENNIUM BLVD SE

STA. 36+45.00 TO STA. 65+47.81
((2902.81*36)/9)*0.40

STA. 65+47.81 TO STA. 66+19.81
(4816.99/9)*0.40

CINCINNAT AVE SE

STA. 63+00 TO STA. 65+00
((200*36)/9)*0.40

	=	4644.50	GAL
	=	214.09	GAL
	=	320.00	GAL
TOTAL	=	5178.59	GAL

ITEM 609--CURB, TYPE 2

RIGHT

MILLENNIUM BLVD SE

STA. 36+45.00 TO STA. 65+47.81
36+45 -- 65+47.81

STA. 65+47.81 TO STA. 66+17.81
(109.17)

CINCINNAT AVE SE

STA. 63+00 TO STA. 63+10
63+00 -- 63+10

STA. 64+90.00 TO STA. 65+00
64+90.00 -- 65+00

LEFT

MILLENNIUM BLVD SE

STA. 36+45.00 TO STA. 65+47.81
36+45 -- 65+47.81

STA. 65+47.81 TO STA. 66+17.81
(109.17)

CINCINNAT AVE SE

STA. 63+00 TO STA. 65+00
63+00 -- 65+00

	=	2902.81	LF
	=	109.47	LF
	=	10	LF
	=	10	LF
	=	2902.81	LF
	=	109.47	LF
	=	200	LF
TOTAL	=	6244.56	LF

ITEM 605--4" SHALLOW PIPE UNDERDRAINS

RIGHT

MILLENNIUM BLVD SE

STA. 36+45.00 TO STA. 65+47.81
36+45 -- 65+47.81

STA. 65+47.81 TO STA. 66+17.81
(109.17)

CINCINNAT AVE SE

STA. 63+00 TO STA. 63+10
63+00 -- 63+10

STA. 64+90.00 TO STA. 65+00
64+90.00 -- 65+00

LEFT

MILLENNIUM BLVD SE

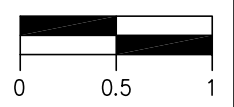
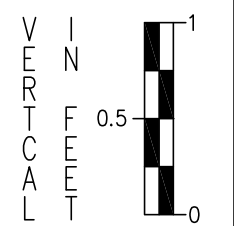
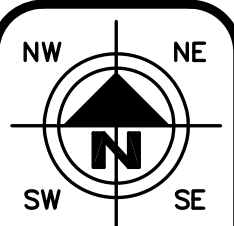
STA. 36+45.00 TO STA. 65+47.81
36+45 -- 65+47.81

STA. 65+47.81 TO STA. 66+17.81
(109.17)

CINCINNAT AVE SE

STA. 63+00 TO STA. 65+00
63+00 -- 65+00

	=	2902.81	LF
	=	109.47	LF
	=	10	LF
	=	10	LF
	=	2902.81	LF
	=	109.47	LF
	=	200	LF
TOTAL	=	6244.56	LF



HORIZONTAL
SCALE IN FEET

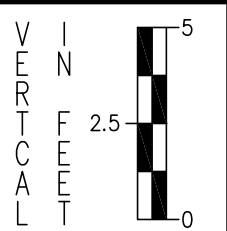
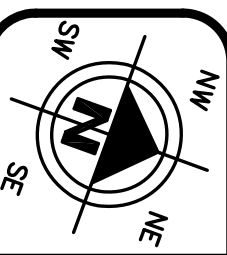
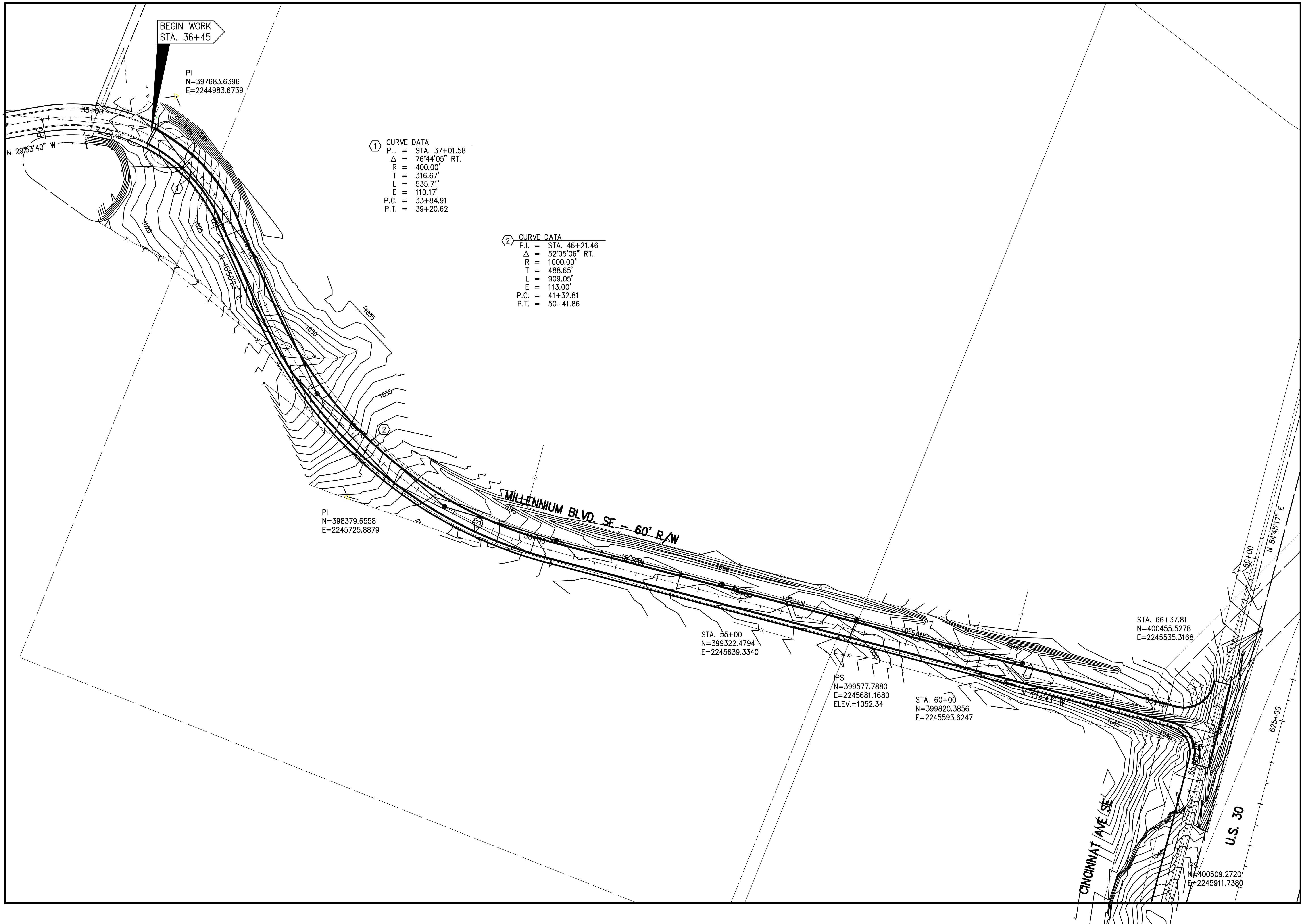
CHECKED BY:
KAD
DATE:
MAY, 2012
DRAWN BY:
FPW
DATE:
MAY, 2012

REVISIONS:	DESCRIPTION	
	DATE	

Millennium Blvd SE Roadway Extension
Calculations
City of Massillon
Stark County, Ohio



DRAWING NAME:
Neocom8Scale
PROJECT NUMBER:



HORIZONTAL
SCALE IN FEET

CHECKED BY:
KAD
DATE:
MAY, 2015
DRAWN BY:
FPW
DATE:
MAY, 2015

REVISIONS:	DESCRIPTION	
	DATE	

Millennium Blvd SE Roadway Extension
Schematic Plan
City of Massillon
Stark County, Ohio



DRAWING NAME:
NeocomSch
PROJECT NUMBER:

* THE FOLLOWING NOTES ARE CITY OF MASSILLON STANDARD NOTES AND MAY NOT BE APPLICABLE TO ALL PROJECTS.

UTILITIES

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

AT&T 50 W.BOWERY, 6TH FLOOR AKRON, OH 44308 800-384-8057	AQUA WATER P.O. BOX 584 MASSILLON, OH 44648 (330) 833-4156	OHIO EDISON STARK DIVISION 2600 S. ERIE ST. MASSILLON, OH 44545 (330) 830-7085	MASSILLON CABLE TV P.O. BOX 814 MASSILLON, OH 44648 (330) 833-4134	GREAT LAKES 104 6TH ST. S.W. CANTON, OH 44702 (330) 456-2454
CITY OF MASSILLON SANITARY SEWER 151 LINCOLN WAY EAST MASSILLON, OH 44646 (330) 830-1722	AT&T COMMUNICATIONS 2535 E. 40TH AVE. DENVER, CO 80205-3601 (800) 852-3786	DOMINION EAST OHIO GAS COMPANY 4725 SOUTHWAY ST. S.W. CANTON, OH 44706 (330) 478-3142	NORTHEAST OHIO NATURAL GAS CORP. 9081 S.R. 250 STRASBURG, OH 44680-9766 (330) 878-5589	

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

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE SHOWN AT APPROXIMATE LOCATIONS AND WHERE OBTAINED AS REQUIRED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 OF THE OHIO REVISED CODE

OUPS - 1-800-362-2764
OGUPUPS - 1-800-925-0988

DATUM ELEVATION

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

STATIONING

ALL STATIONING SHOWN IS REFERENCED TO THE BASELINE AS SHOWN.

NOTIFICATION OF SAFETY FORCES AND BUS GARAGES

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

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

SUBSURFACE CONDITIONS

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

QUANTITIES

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

CONSTRUCTION SPECIFICATIONS & STANDARDS

ALL CONSTRUCTION IS TO BE COMPLETED ACCORDING TO THE CURRENT CITY OF MASSILLON SPECIFICATIONS AND STANDARDS, AND THE LATEST EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. WHEN A CONFLICT ARISES BETWEEN THE CITY OF MASSILLON AND ODOT'S STANDARDS, THE MORE STRINGENT STANDARD WILL BE USED AT THE DISCRETION OF THE CITY OF MASSILLON ENGINEER. THE CONTRACTOR SHALL FOLLOW ALL OSHA AND ADA REGULATIONS AND REQUIREMENTS.

PRESERVATION OF EXISTING UTILITY SERVICES

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

PRESERVATION OF PRIVATE PROPERTY

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

ACCESSIBILITY TO PRIVATE PROPERTY

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

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE CONTRACTOR SHALL PROVIDE FOR THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

REMOVAL OF TREES OR STUMPS

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

GRADING AND FILLING OPERATIONS

THE PLACEMENT OF COMPACTED AGGREGATE SHALL NOT EXTEND PAST THE EXISTING GRADED SHOULDERS. NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN ANY WETLANDS OR STREAMS, UNLESS THE REQUIRED STATE AND/OR FEDERAL PERMITS HAVE BEEN OBTAINED IN ACCORDANCE WITH ALL APPLICABLE STATE AND/OR FEDERAL LAWS AND REGULATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY WETLANDS OR STREAMS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT. A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE BID FORM FOR ITEM201SPEC, CLEARING AND GRUBBING. THIS ITEM SHALL INCLUDE ALL PROVISIONS AS SET FORTH IN THE 2008 ODOT SPECIFICATIONS. REMOVAL ITEMS MAY INCLUDE TREES, STUMPS, AND BRUSH AS DETERMINED BY THE CITY ENGINEER.

ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201SPEC, CLEARING AND GRUBBING.

PRESERVATION OF PROPERTY CORNERS AND SURVEY MARKERS

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

REMOVAL AND RELOCATION OF EXISTING UTILITIES

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

CROSSING OR CONNECTING TO EXISTING PIPES AND UTILITIES

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

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

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

REVIEW OF SANITARY AND DRAINAGE FACILITIES

AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK SHALL BE COMPLETED BEFORE AND AFTER WORK HAS COMMENCED. FINAL ACCEPTANCE BY THE CITY OF MASSILLON WILL NOT OCCUR UNTIL AFTER SAID INSPECTION. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE OBSERVATIONS SHALL BE PROVIDED IN WRITING BY THE CONTRACTOR TO THE CITY OF MASSILLON.

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

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

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

ITEM 407. TACK COAT

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

ITEM 408. BITUMINOUS PRIME COAT

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

ITEM 659. TOPSOIL, SEEDING AND MULCHING

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

THE CITY SHALL APPROVE SEED MIX PRIOR TO APPLICATION TO BE USED THROUGHOUT CONSTRUCTION LIMITS.

CONDITIONS OF WORK

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

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

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

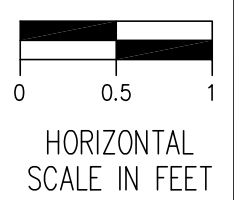
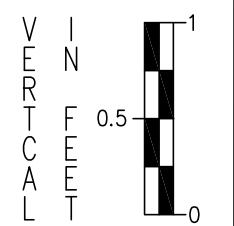
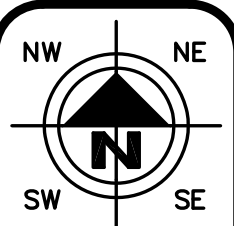
EXISTING DATA

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

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

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

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



CHECKED BY:	KAD
DATE:	MAY, 2012
DRAWN BY:	FPW
DATE:	MAY, 2012

REVISIONS:	DESCRIPTION		
	DATE		

Millennium Blvd SE Roadway Extension
General Notes
City of Massillon
Stark County, Ohio



DRAWING NAME:	Neocom8gn1
PROJECT NUMBER:	

EXCAVATED MATERIAL

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

WORKING AREA

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

ITEM 207SPEC EROSION CONTROL

THE CONTRACTOR SHALL PREPARE AND SUBMIT A STORM WATER POLLUTION CONTROL PLAN TO THE CITY OF MASSILLON ENGINEER TO BE FORWARDED TO THE APPROPRIATE PERMITTING AGENCIES. SAID PLAN MUST COMPLY WITH THE MOST CURRENT RULES AND REGULATIONS OF THE CITY OF MASSILLON.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING AND MAINTAINING STORM WATER POLLUTION CONTROL PLAN 24 HOURS A DAY FOR THE DURATION OF THIS PROJECT. ALL DEVICES (SILT FENCE, INLET PROTECTION, ROCK CHANNEL, ETC.) SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.

THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 207SPEC – EROSION CONTROL

CONDITIONS OF WORK

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

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE AND SATISFACTORY ACCESS TO ALL ABUTTING PROPERTIES TO THE PROJECT SITE. ADJACENT ROADS SHALL BE MAINTAINED AND KEPT CLEAN OF MUD AND OTHER DEBRIS THAT MAY BE CAUSED BY TRAFFIC EXITING THE WORK SITE. THE CONTRACTOR SHALL COORDINATE AND PROVIDE FOR ALL NECESSARY TRAFFIC CONTROL. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH CURRENT CITY OF MASSILLON RULES AND REGULATIONS AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

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

CLEAN WATER STATEMENT

ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

RELATION TO WATER MAINS

SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.

SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER.

AIR TESTING AS PER ASTM F1417

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

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

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

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

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

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

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

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

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

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

WATER (HYDROSTATIC) TEST

THE LEAKAGE EXFILTRATION OR INFILTRATION SHALL NOT EXCEED 100 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY [9L/(MM OF PIPE DIAMETER KM D)] FOR ANY SECTION OF THE SYSTEM. AN EXFILTRATION OR INFILTRATION TEST SHALL BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET (0.6 M).

NEGATIVE AIR PRESSURE (VACUUM) TESTING OF MANHOLES AS PER ASTM C-1244

PREPARATION OF THE MANHOLE:

- A. ALL LIFT HOLES SHALL BE PLUGGED.
- B. ALL PIPES ENTERING THE MANHOLE SHALL BE TEMPORARILY PLUGGED, TAKING CARE TO SECURELY BRACE THE PIPES AND PLUGS TO PREVENT THEM FROM BEING DRAWN INTO THE MANHOLE.

PROCEDURE:

- A. THE TEST HEAD SHALL BE PLACED AT THE TOP OF THE MANHOLE IN ACCORDANCE WITH THE MANUFACTURER’S RECOMMENDATIONS.
- B. A VACUUM OF 10 IN. OF MERCURY SHALL BE DRAWN ON THE MANHOLE, THE VALVE ON THE VACUUM LINE OF THE TEST HEAD CLOSED, AND THE VACUUM PUMP SHUT OFF. THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO 9 IN OF MERCURY.
- C. THE MANHOLE SHALL PASS IF THE TIME FOR THE VACUUM READING TO DROP FROM 10 IN. OF MERCURY TO 9 IN. OF MERCURY MEETS OR EXCEEDS THE VALUES INDICATED IN TABLE BELOW.

DEPTH (FT)	MINIMUM TEST TIMES FOR MANHOLES									
	DIAMETER, IN.									
	30	33	36	42	48	54	60	66	72	
	TIME, IN SECONDS									
8	11	12	14	17	20	23	26	29	33	
10	14	15	18	21	25	29	33	36	41	
12	17	18	21	25	30	35	39	43	49	
14	20	21	25	30	35	41	46	51	57	
16	22	24	39	34	40	46	52	58	67	
18	25	27	32	38	45	52	59	65	73	
20	28	30	35	42	50	53	65	72	81	

SANITARY SEWER SPECIFICATIONS

SANITARY SEWER CONSTRUCTION PROPOSED FOR THIS PROJECT SHALL CONFORM TO THE LATEST CITY OF MASSILLON STANDARDS AND CONSTRUCTION AND MATERIALS SPECIFICATIONS, TEN STATE STANDARDS, AND THE LATEST EDITION OF THE ODOT CMS, OR MODIFIED BY THE CONTRACT DRAWINGS. IF A CONFLICT ARISES BETWEEN SAID STANDARDS IT SHALL BE AT THE DISCRETION OF THE CITY OF MASSILLON ENGINEER AS TO WHICH STANDARD SHALL GOVERN. THE PROJECT CONTRACT DRAWNGS SHALL GOVERN UNLESS NOTED OTHERWISE.

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

BACKFILL IN SEWER TRENCHES SHALL CONFORM TO ODOT ITEM 603.10 AND BE PLACED IN LAYERS SUFFICIENT TO MEET THE COMPACTION REQUIREMENT OF 100% OF MAXIMUM LABORATORY DRY DENSITY PER ASTM D–698 AND THOROUGHLY COMPACTED WITH MACHINE MOUNDED COMPACTION EQUIPMENT. THE PLACING OF BACKFILL MATERIAL SHALL BE CONTINUED UNTIL THE TRENCH IS ENTIRELY FILLED AND COMPACTED WITH THE APPROVED GRANULAR MATERIAL TO THE GRADE CALLED FOR ON THE CONTRACT DRAWINGS. EXCAVATED MATERIAL CONFORMING TO ODOT ITEM 203 SHALL BE USED FOR BACKFILLING EXISTING STRUCTURES (AFTER REMOVAL) ONLY. CRUSHED GRAVEL CONFORMING TO GRADATION REQUIREMENTS OF ODOT ITEM 304 OR APPROVED EQUAL AS SHOWN IN ODOT TABLE 703–1 SHALL BE USED FOR BACKFILLING ALL SEWER TRENCH AREAS SHOWN ON THE PLANS AND AS DIRECTED BY THE CITY OF MASSILLON ENGINEER. FLOODING, JETTING, OR PUDDLING OF BACKFILL MATERIAL WILL NOT BE PERMITTED UNLESS APPROVED BY THE CITY OF MASSILLON ENGINEER. COMPACTION TESTING OF THE BACKFILL BY A GEOTECHNICAL ENGINEER MAY BE REQUIRED BY THE OWNER AT THE EXPENSE OF THE CONTRACTOR.

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

PRIOR TO FINAL PAYMENT FOR AND ACCEPTANCE OF SANITARY SEWER INSTALLATION THE RESULTS OF THE AIR PRESSURE TESTS, TELEVISION TESTS AND MADREL TESTS SHALL BE FORWARDED TO THE CITY OF MASSILLON ENGINEER.

DEFLECTION TESTING

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

TABLE A
INSIDE DIAMETERS FOR DEFLECTION MEASUREMENTS
OF ASTM D 3034 SDR 35 / SDR 21 PVC SEWER PIPE

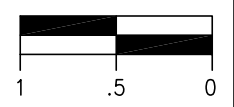
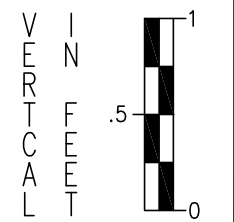
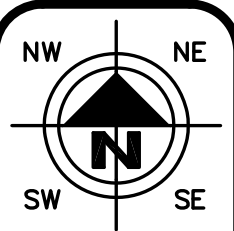
SIZE	SDR	AVG. O.D.	BASE I.D.	DEFLECTION MANDREL
6"	35	6.275	5.742	5.54
8"	35	8.400	7.665	7.28
10"	35	10.500	9.563	9.08
12"	35	12.500	11.361	10.79

TELEVISION TESTING

ALL SANITARY SEWERS, 8–INCH DIAMETER AND LARGER, MUST PASS AN INTERNAL TELEVISION INSPECTION. THE CONTRACTOR SHALL PROVIDE A COMPLETE INTERNAL INSPECTION DVD TO THE CITY OF MASSILLON ENGINEERING DEPARTMENT. THE RECORDING PROCEDURE SHALL BE IN ACCORDANCE WITH CITY OF MASSILLON ENGINEERING DEPARTMENT STANDARDS.

LEAKAGE TESTS

LEAKAGE TESTS SHALL BE PERFORMED WHICH MAY INCLUDE APPROPRIATE WATER OR LOW PRESSURE AIR TESTING. THE TESTING METHODS SELECTED SHOULD TAKE INTO CONSIDERATION THE RANGE IN GROUNDWATER ELEVATIONS DURING THE TEST AND ANTICIPATED DURING THE DESIGN LIFE OF THE SEWER COMPLETED AND ACCEPTED.



HORIZONTAL SCALE IN FEET

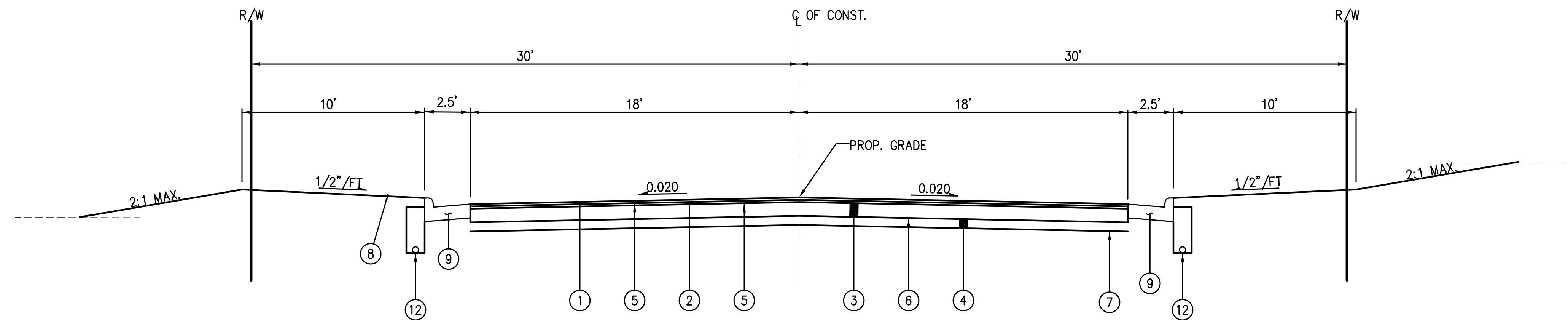
CHECKED BY:	KAD
DATE:	MAY, 2012
DRAWN BY:	FPW
DATE:	MAY, 2012

REVISENS:	DESCRIPTION	
	DATE	

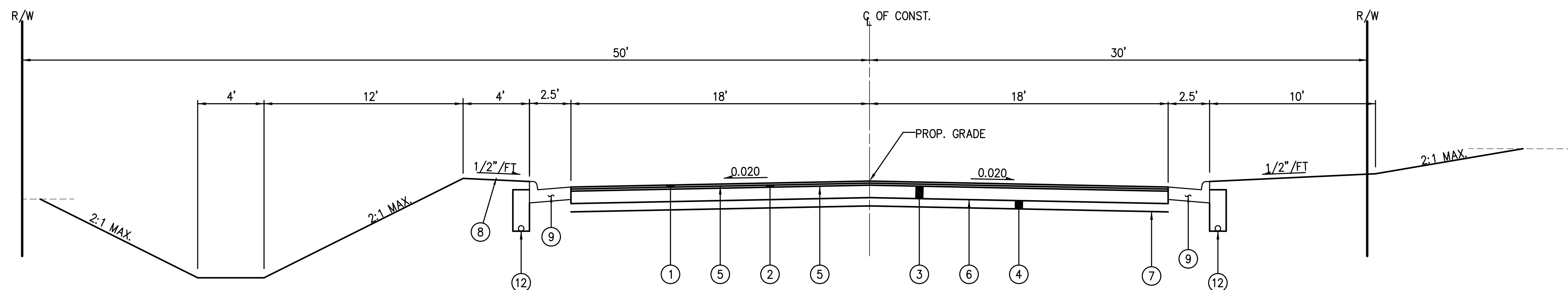
Millennium Blvd SE Roadway Extension
General Notes
City of Massillon
Stark County, Ohio



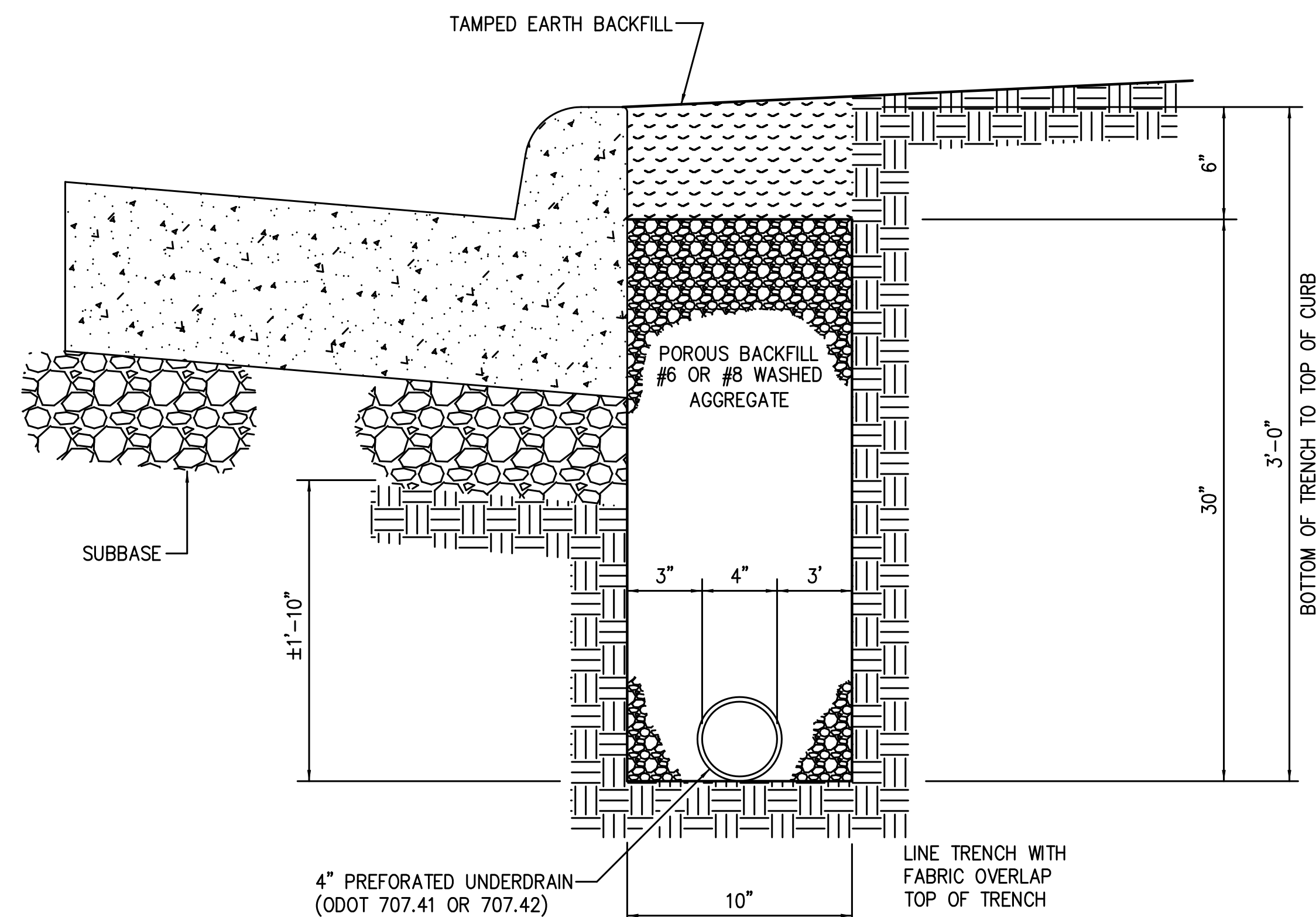
DRAWING NAME:	Neocom8gn2
PROJECT NUMBER:	



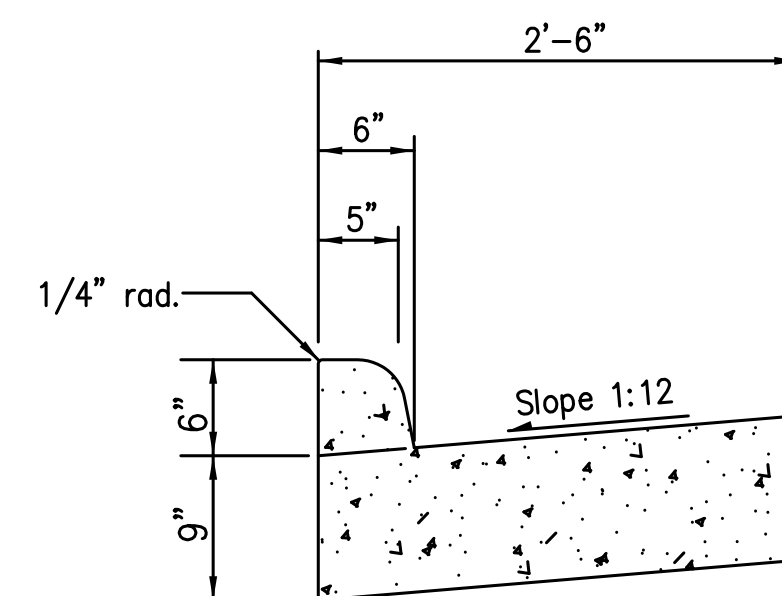
MILLENNIUM BLVD. SE TYPICAL SECTION
STA. 0+03.36 TO STA. 2+00.00



CINCINNATI AVE. SE TYPICAL SECTION
STA. 0+03.36 TO STA. 2+00.00



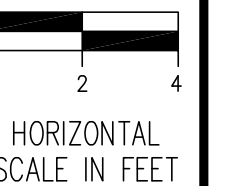
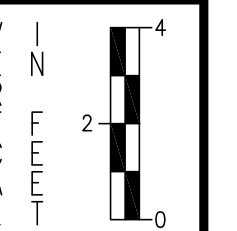
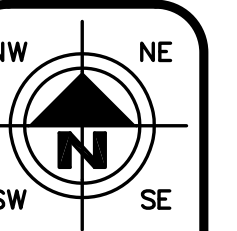
ITEM 605-4\"/>



ITEM 609-CURB, TYPE 2

PROPOSED LEGEND

- ① - ITEM 448-1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22
- ② - ITEM 448-1 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22
- ③ - ITEM 301-9" ASPHALT CONCRETE BASE
- ④ - ITEM 304-6" AGGREGATE BASE
- ⑤ - ITEM 407-TACK COAT (0.08 GAL./S.Y.)
- ⑥ - ITEM 408-PRIME COAT (0.40 GAL./S.Y.)
- ⑦ - ITEM 204-SUBGRADE COMPACTION
- ⑧ - ITEM 659-SEEDING AND MULCHING
- ⑨ - ITEM 609-CURB, TYPE 2
- ⑪ - ITEM 705-HOT APPLIED JOINT SEALER(REQUIRED)
- ⑫ - ITEM 605-4" SHALLOW PIPE UNDERDRAINS



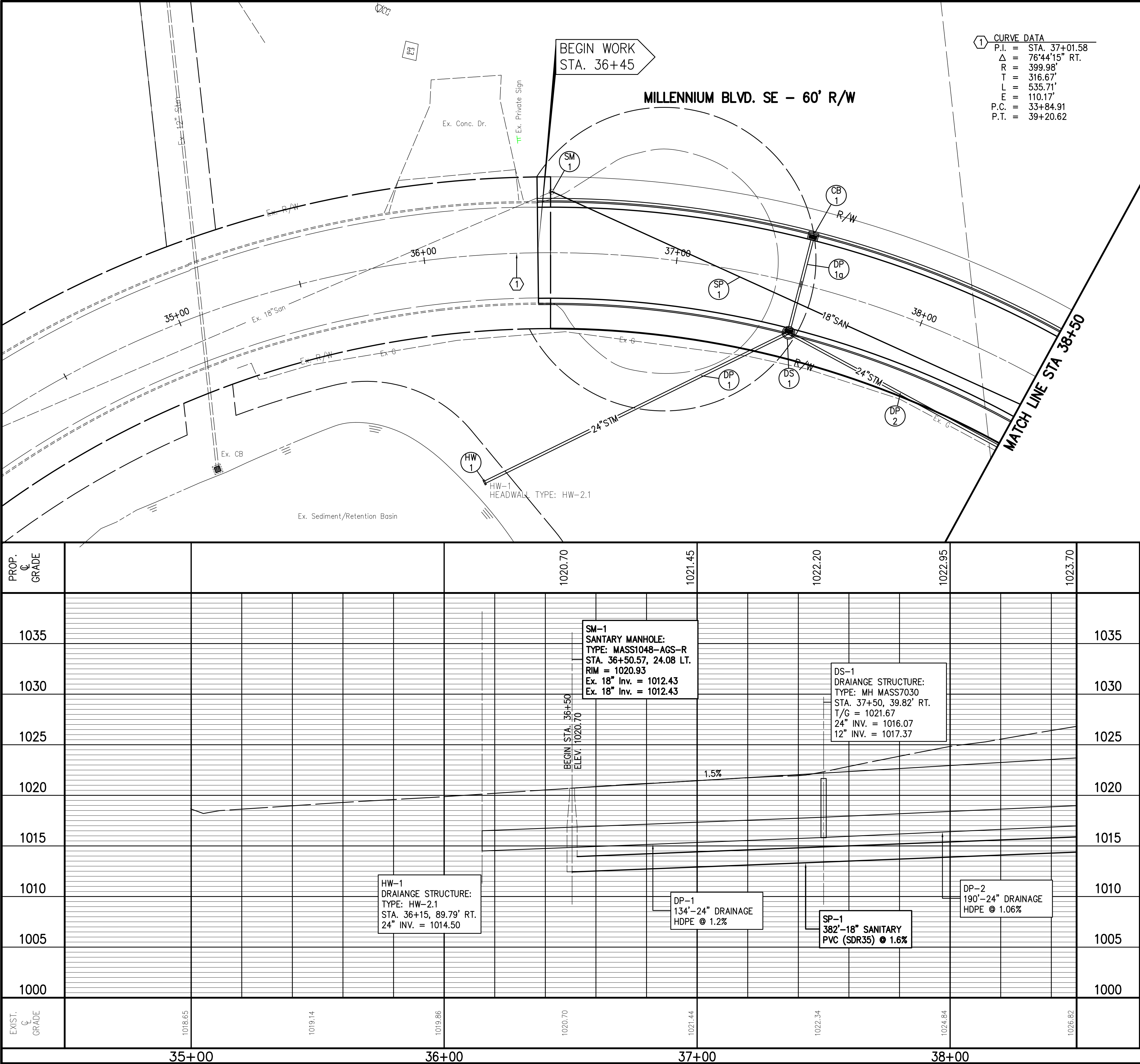
CHECKED BY:
KAD
DATE:
May, 2015
DRAWN BY:
FPW
DATE:
May, 2015

REVISIONS:	DESCRIPTION
DATE	

Millennium Blvd SE Roadway Extension
Typical Section
City of Massillon
Stark County, Ohio



DRAWING NAME:
Neocom Typ1
PROJECT NUMBER:



REF. No.	SIDE	STATION		ITEM	QUANTITY	UNIT	TOTAL
		FROM	TO				
CB-1	LT	37+50	37+50	MH MASS-7030	1	EACH	1
DS-1	RT	37+50	37+50	ODOT TYPE HW-2.1	1	EACH	1
DP-1a	RT/LT	37+50	37+50	24" TYPE B CONDUIT (HDPE)	40	LF	40
DP-1	RT	36+15	37+50	24" TYPE B CONDUIT (HDPE)	134	LF	134
DP-2	RT	37+50	39+50	24" TYPE B CONDUIT (HDPE)	190	LF	190
HW-1	RT	36+15	36+15	18" SANITARY PVC (SDR35)	1	LF	1
SM-1	LT	36+50.57	36+50.57	18" SANITARY PVC (SDR35)	1	LF	1
SP-1	RT/LT	36+50	40+25	382' 18" SANITARY PVC (SDR35)	382	LF	382
TOTALS CARRIED TO GENERAL SUMMARY							

1" = 20'

1" = 5'

0 10 20

0 5 10 15 20

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET

CHECKED BY: KAD

DATE: MAY, 2015

DRAWN BY: FPW

DATE: MAY, 2015

REVISIONS:

DATE	DESCRIPTION

Millennium Blvd SE Roadway Extension

Millennium Blvd. SE Plan and Profile Sta. 35+50 to Sta 38+50

City of Massillon

Stark County, Ohio

CIVIL ENGINEERING

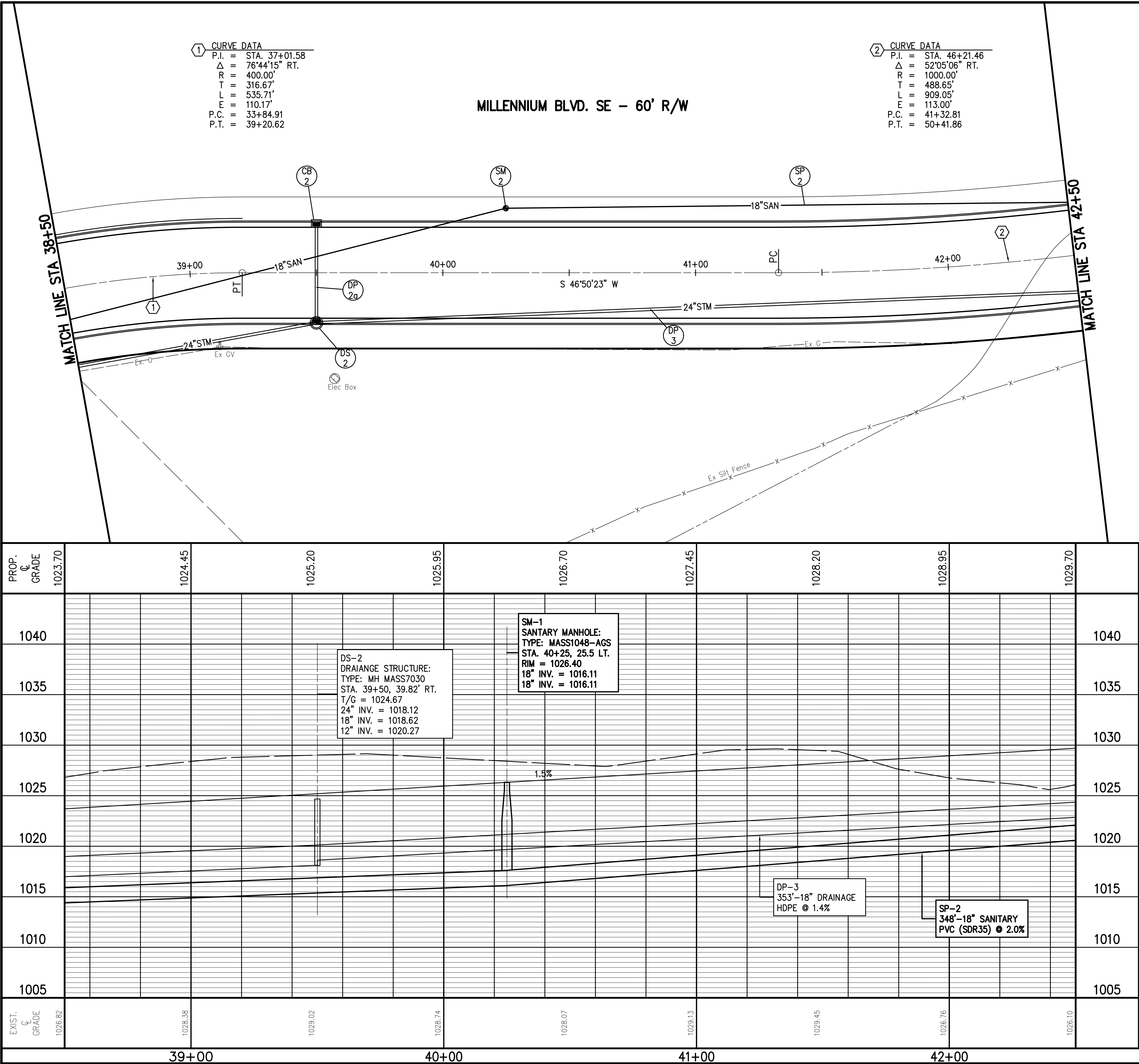
6259 MAINT RD SE NW WYOMING, OH 44395

PHONE: (330) 268-3734 FAX: (330) 472-1285

WWW.CIVILENGINEERING.COM

DRAWING NAME: Neocomp1

PROJECT NUMBER: 7 / 28



REF. No.	SIDE	STATION		ITEM	QUANTITY	UNIT	TOTAL
		FROM	TO				
DS-2	RT	39+50	39+50	18" SANITARY	1	LF	1
CB-2	LT	39+50	39+50	18" B TYPE B CONDUIT (HDPE)	1	LF	1
SM-2	LT	40+25	40+25	12" B TYPE B CONDUIT (HDPE)	1	LF	1
DP-2a	RT/LT	39+50	39+50	MASS-1048AGS	1	EACH	1
DP-3	RT	39+50	43+00	MASS-7030	1	EACH	1
SP-2	LT	40+25	43+75	MASS-7030	1	EACH	1
TOTALS CARRIED TO GENERAL SUMMARY					1		1

CIVIL ENGINEERING
6225 MILLIT RD SE NW WYOMING, OH 44793
PHONE: (330) 268-3734 FAX: (330) 470-1285
WWW.CIVILENGINEERING.COM

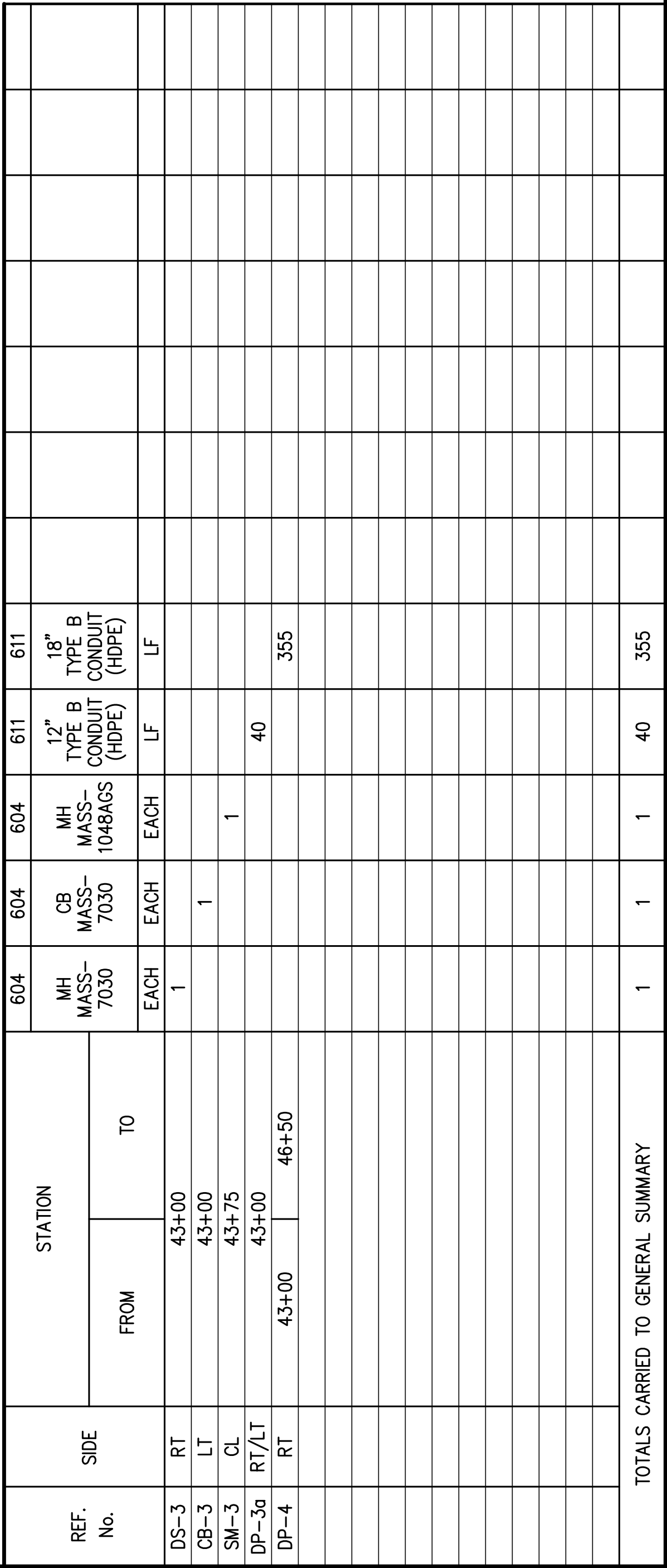
DRAWING NAME: Neocompp2
PROJECT NUMBER: 8/28

Millennium Blvd SE Roadway Extension
Millennium Blvd. SE Plan and Profile Sta. 39+50 to Sta 42+50
City of Massillon
Stark County, Ohio

CHECKED BY: KAD
DATE: MAY, 2015
DRAWN BY: FPW
DATE: MAY, 2015

REVISIONS: DATE DESCRIPTION

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



Millennium Blvd SE Roadway Extension
Millennium Blvd. SE Plan and Profile Sta. 42+50 to Sta 45+50
 City of Massillon
 Stark County, Ohio



CIVPRO
ENGINEERING

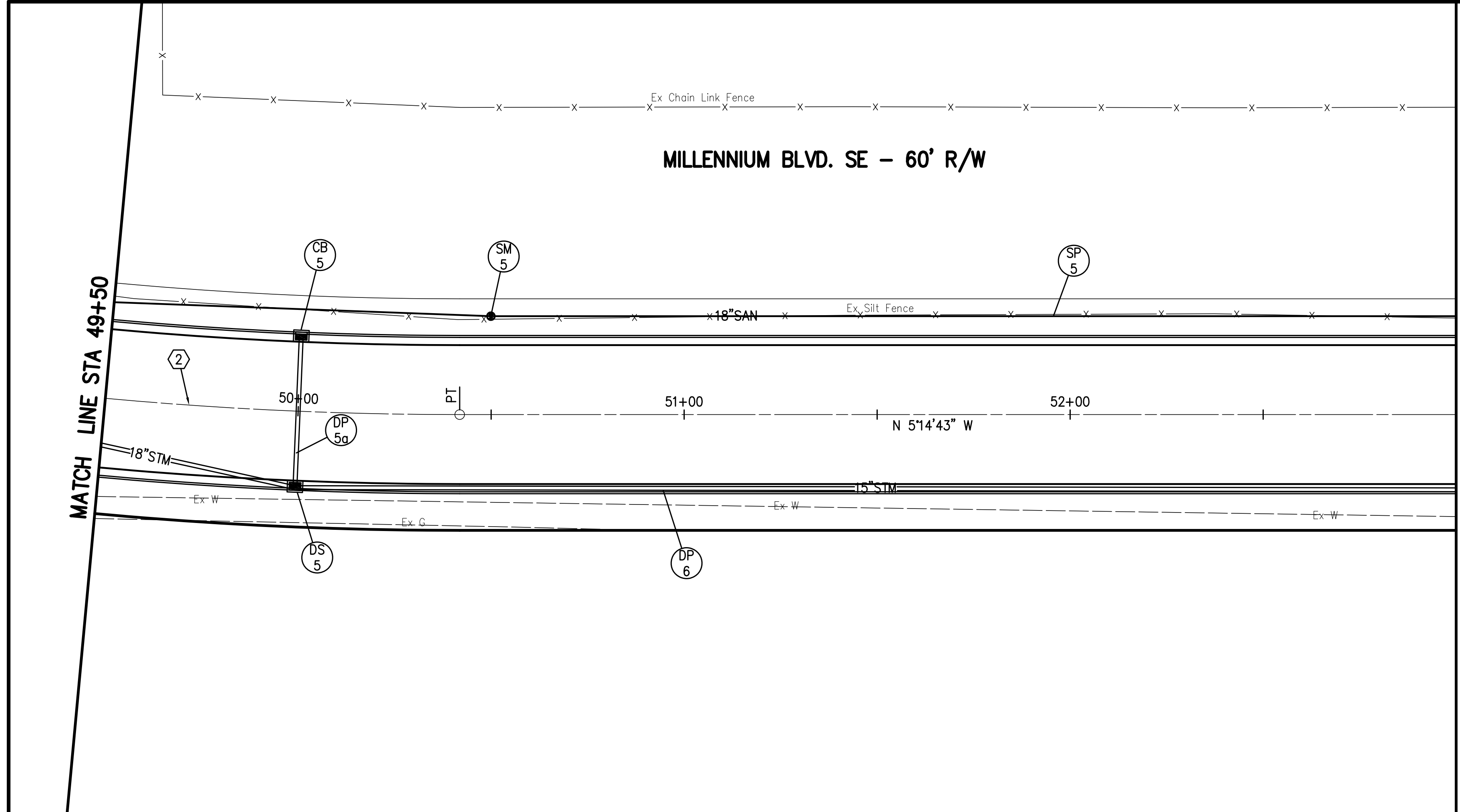
ENGINEERS-SURVEYORS-CONSTRUCTION MANAGERS
6256 WALNUT RIDGE CIRCLE NW NORTH CANTON, OH 44720
PHONE: (330) 286-3734 FAX: (330) 470-1265
WWW.CIVPROENGINEERING.COM

DRAWING NAME:
Neocompp3

PROJECT NUMBER:

9

28



CURVE DATA	
P.I. =	STA. 46+21.46
Δ =	52°05'06" RT.
R =	1000.00'
T =	488.65'
L =	909.05'
E =	113.00'
P.C. =	41+32.81
P.T. =	50+41.86






HORIZONTAL
SCALE IN FEET

CHECKED BY: **KAD**

DATE: **MAY, 2015**

DRAWN BY: **FPW**

DATE: **MAY, 2015**

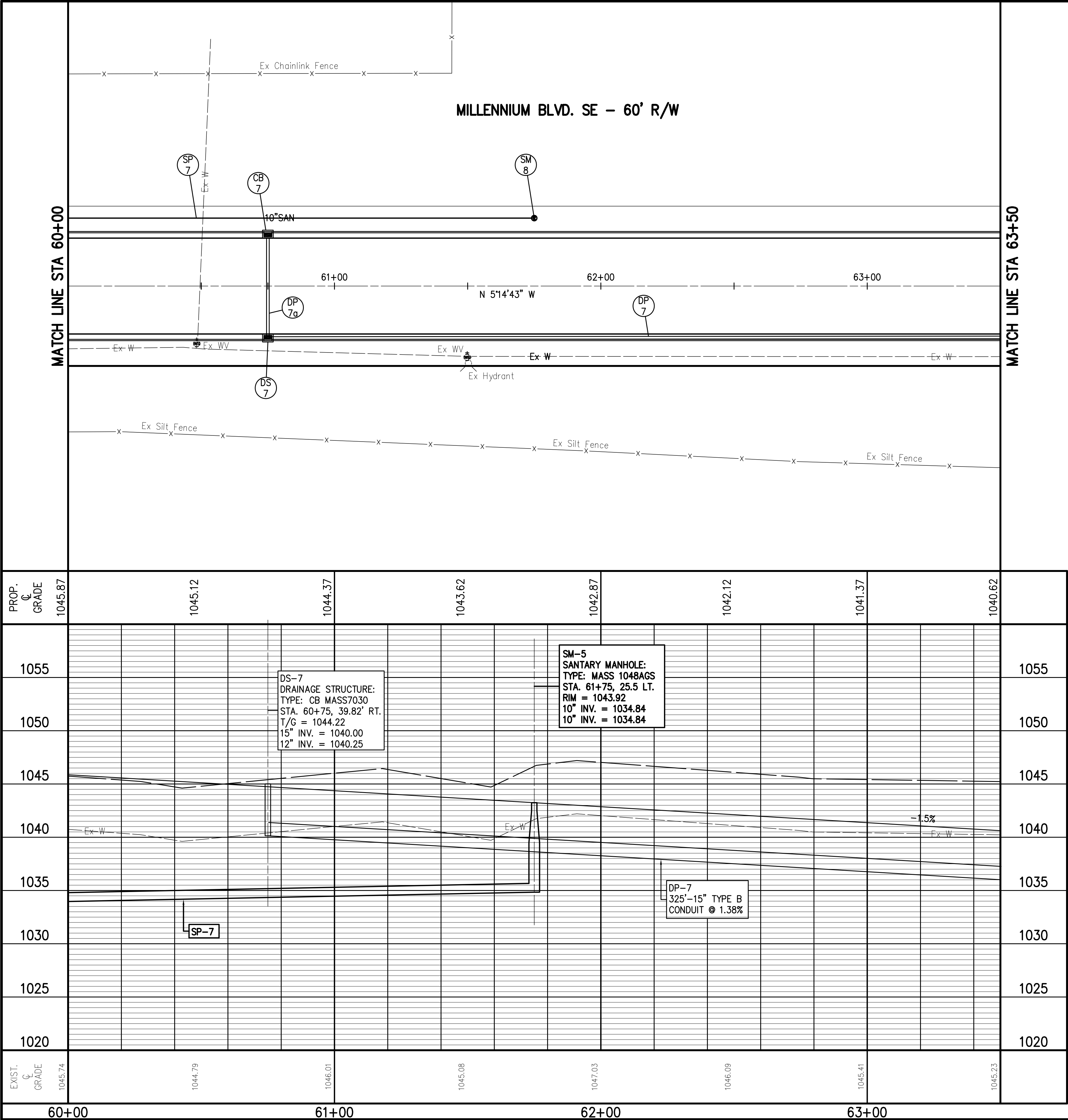
REVISONS:	DESCRIPTION	DATE	DATE	DATE

Millennium Blvd SE Roadway Extension
Millennium Blvd. SE Plan and Profile Sta. 49+50 to Sta 53+00
 City of Massillon
 Stark County, Ohio

CIVPRO
ENGINEERING
ENGINEERS-SURVEYORS-CONSTRUCTION MANAGERS
6256 WALNUT ROCE OR NW NORTH CANTON, OH 44720
PHONE: (330) 268-3734 FAX: (330) 470-1285
WWW.CIVPROENGINEERING.COM

DRAWING NAME:
Neocompp5

PROJECT NUMBER:



REF. No.	SIDE	STATION		ITEM	QUANTITY	UNIT	REMARKS
		FROM	TO				
DS-7	RT	60+75	60+75	1	1	1	
CB-7	LT	60+75	60+75	1	1	1	
DP-7a	RT/LT	60+75	64+00	40	40	40	
DP-7	RT	60+75	61+75	1	1	1	
SM-8	LT	61+75	61+75	1	1	1	
TOTALS CARRIED TO GENERAL SUMMARY							

AS

NS

SE

SW

0

10

20

0

2.5

5

HORIZONTAL SCALE IN FEET

CHECKED BY: KAD

DATE: MAY, 2015

DRAWN BY: FPW

DATE: MAY, 2015

REVISIONS:

DATE

DESCRIPTION

Millennium Blvd SE Roadway Extension

Millennium Blvd. SE Plan and Profile Sta. 60+00 to Sta 63+50

City of Massillon

Stark County, Ohio

CIVIL ENGINEERING

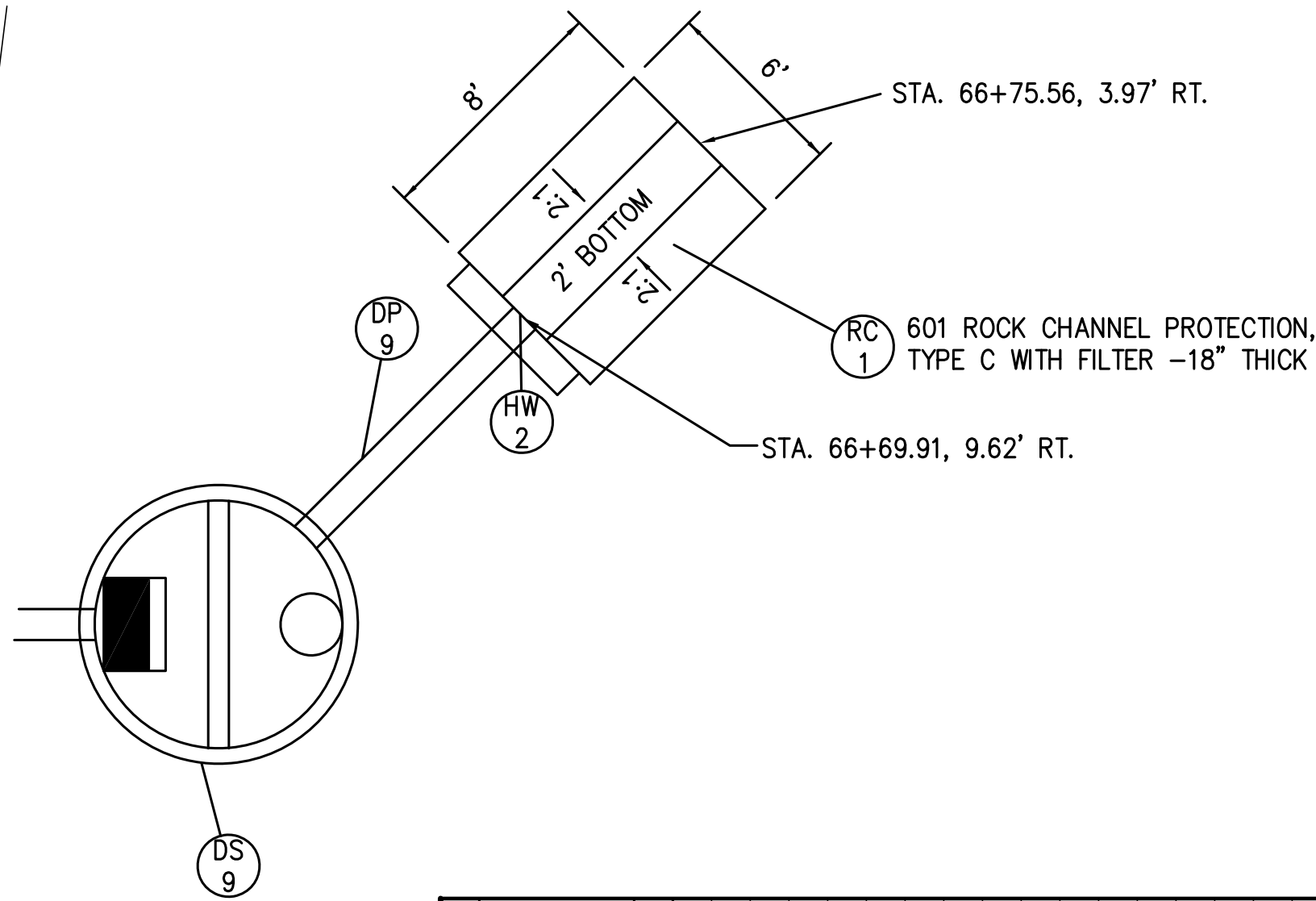
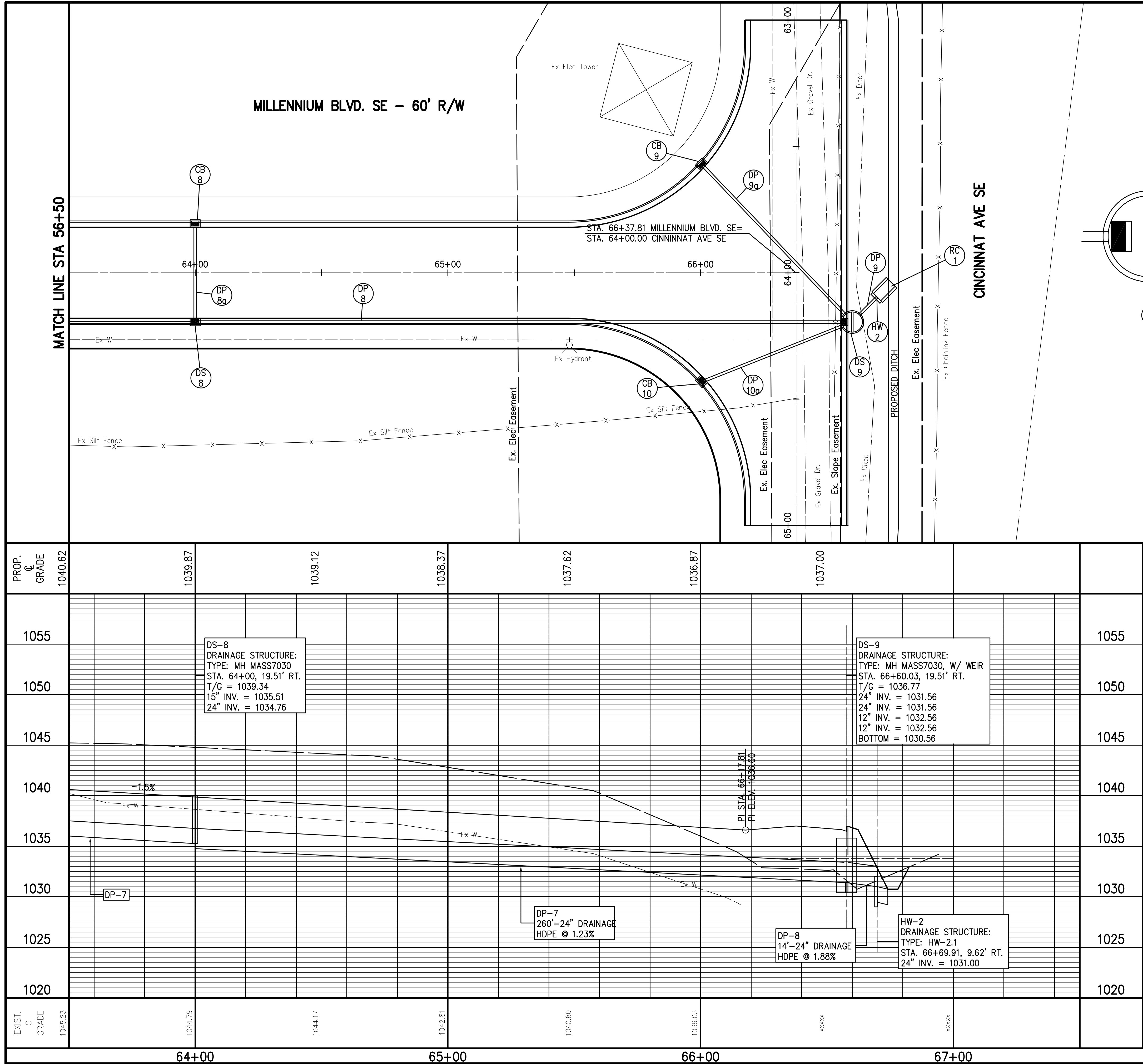
6255 MAINT RD SE NW NORTH CANTON, OH 44705

PHONE: (330) 268-3734 FAX: (330) 470-1285

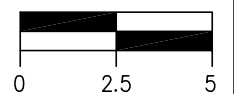
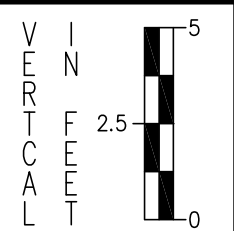
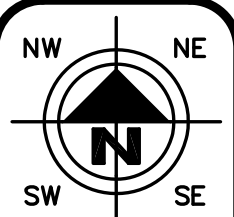
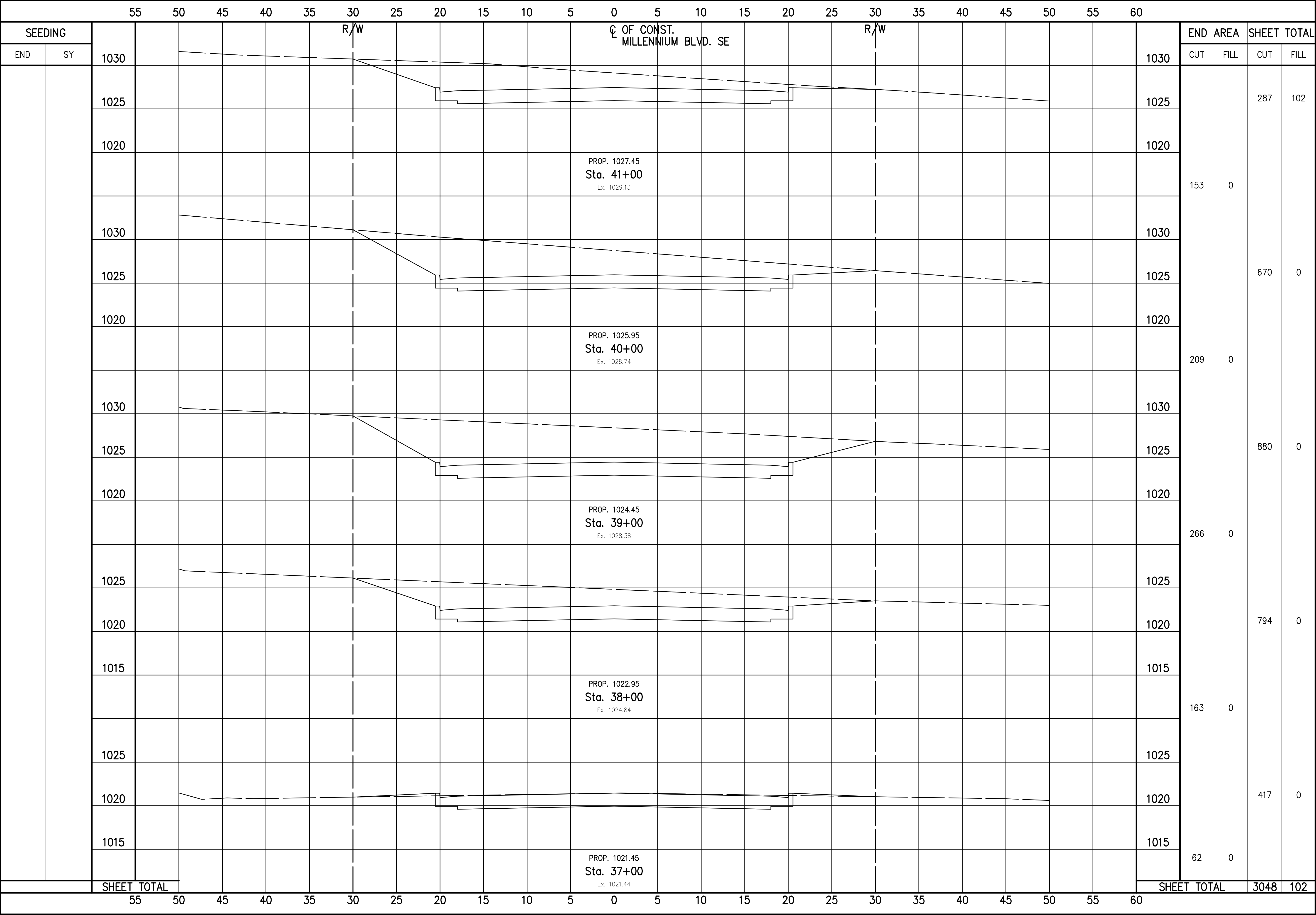
WWW.CIVILENGINEERING.COM

DRAWING NAME: Neocomp8

PROJECT NUMBER: 14 / 28



REF. No.	SIDE	STATION		604	MH MASS-7030	604	MH MASS-7030 W/ WEIR	604	CB MASS-7030	604	ODOT TYPE HW-2.1	604	12" TYPE B CONDUIT (HDPE)	611	24" TYPE B CONDUIT (HDPE)	611	ROCK CHANNEL PROTECTION TYPE C W/ FILTER							
		FROM	TO																					
DS-8	RT		64+00	1																				
DS-9	RT		66+60.03				1																	
CB-8	LT		64+00						1															
DP-8a	RT/LT																							
DP-8	RT		64+00																					
DP-9	RT		66+60.03																					
HW-2	RT		66+69.91								1													
RC-1	RT		66+69.91															8						
TOTALS CARRIED TO GENERAL SUMMARY				1	1	1	1	1	1	1	1	40	274	8										



HORIZONTAL SCALE IN FEET

CHECKED BY: KAD

DATE: Sept, 2012

DRAWN BY: FPW

DATE: Sept, 2012

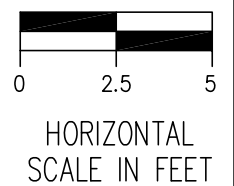
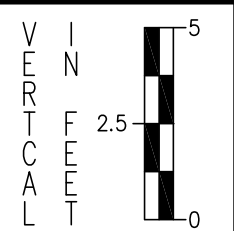
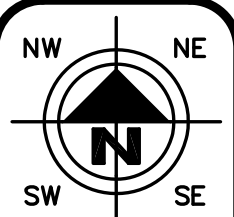
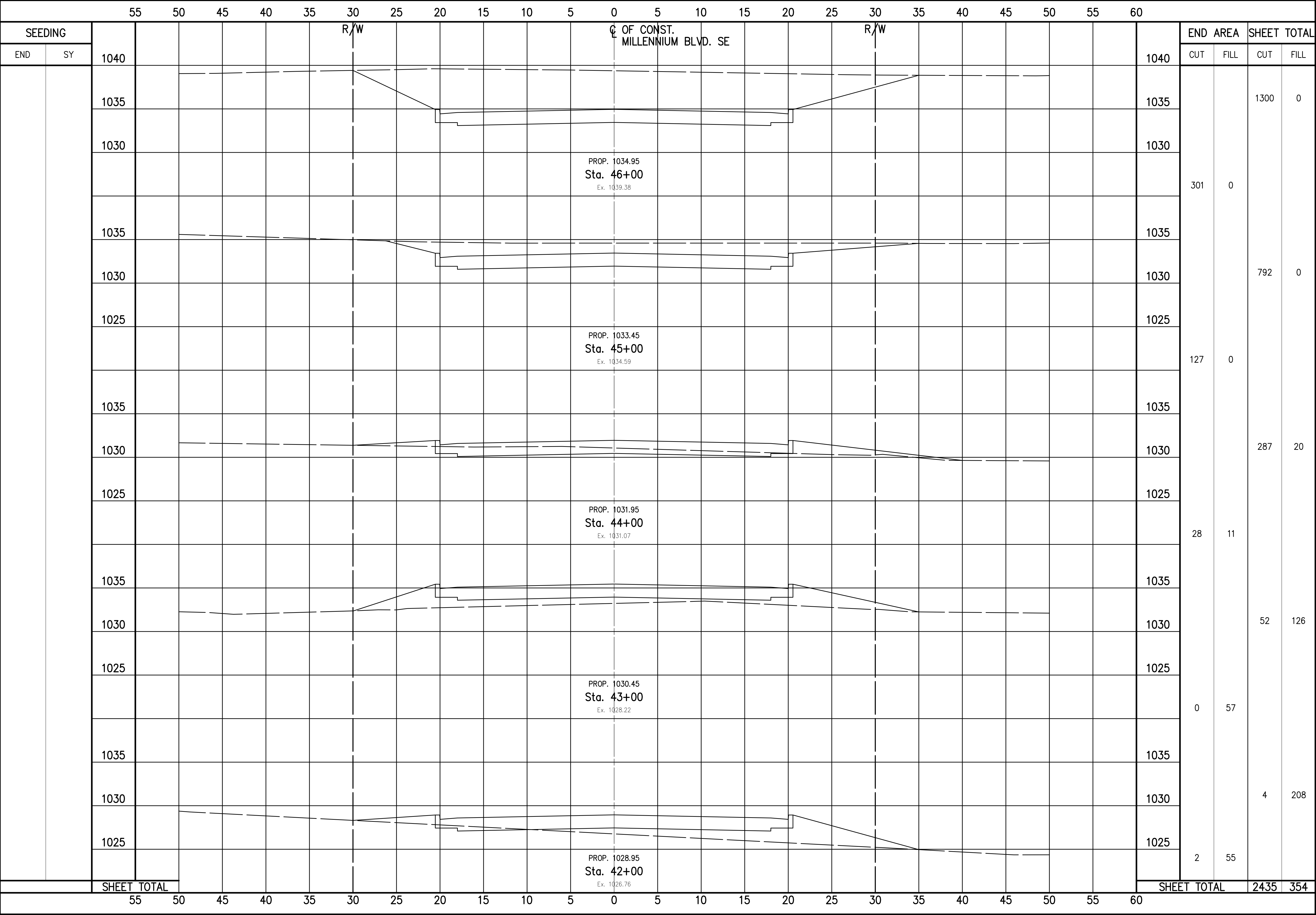
REVISIONS:	DESCRIPTION	
	DATE	

Millennium Blvd SE Roadway Extension
Millennium Blvd. SE Cross Sections Sta. 37+00 to Sta 41+00
City of Massillon
Stark County, Ohio



DRAWING NAME: Neocom8Title

PROJECT NUMBER:



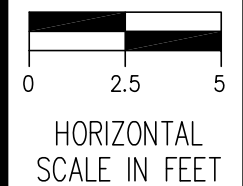
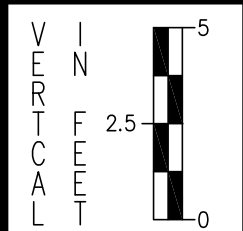
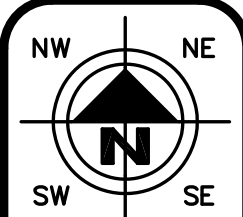
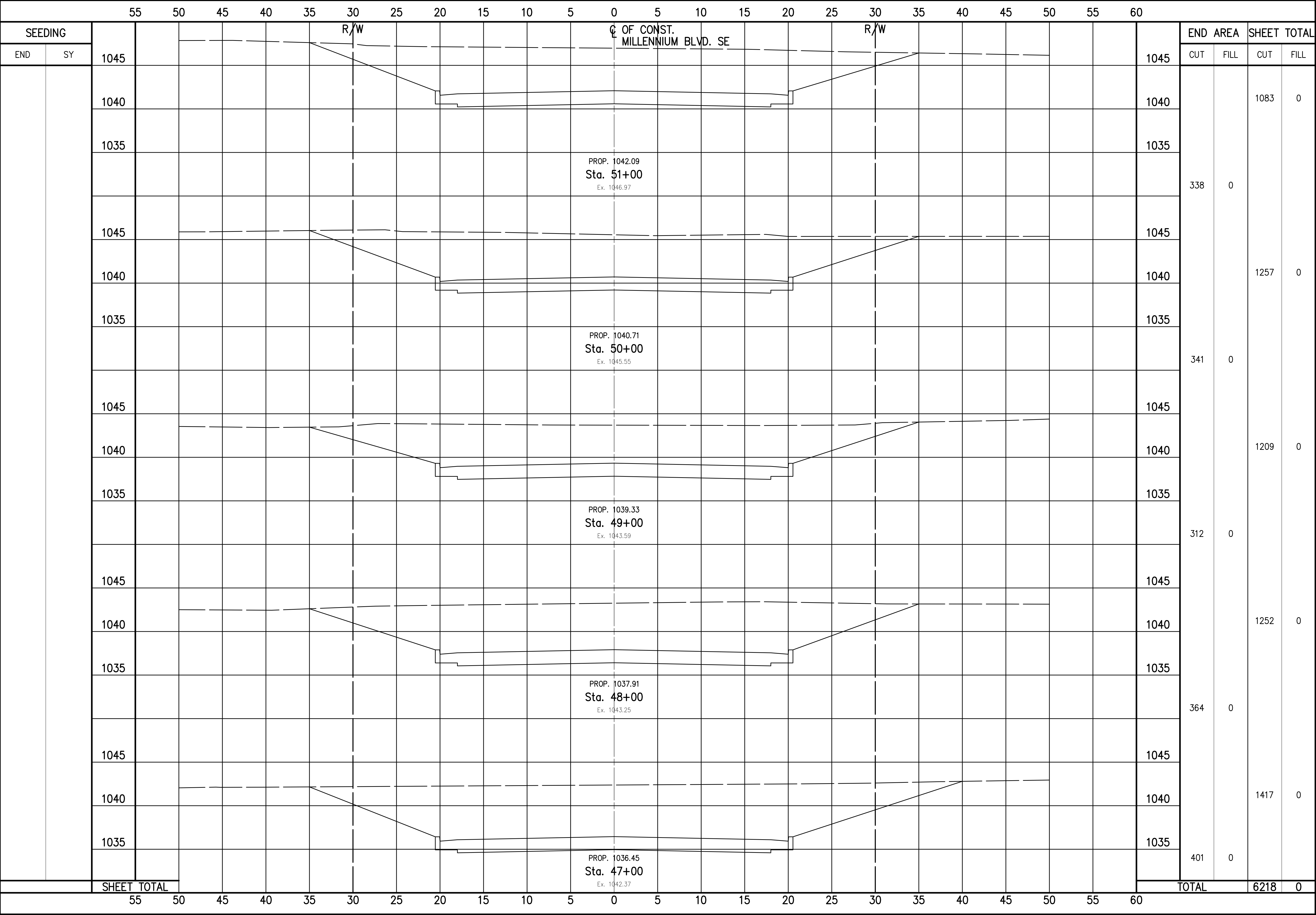
CHECKED BY:
KAD
DATE:
Sept, 2012
DRAWN BY:
FPW
DATE:
Sept, 2012

REVISIONS:	DESCRIPTION	
	DATE	

Millennium Blvd SE Roadway Extension
Millennium Blvd. SE Cross Sections Sta. 42+00 to Sta 46+00
City of Massillon
Stark County, Ohio



DRAWING NAME:
Neocom8Title
PROJECT NUMBER:



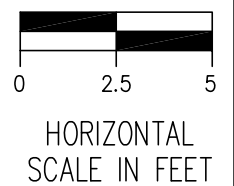
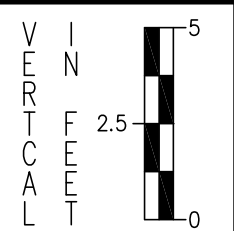
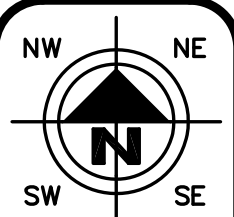
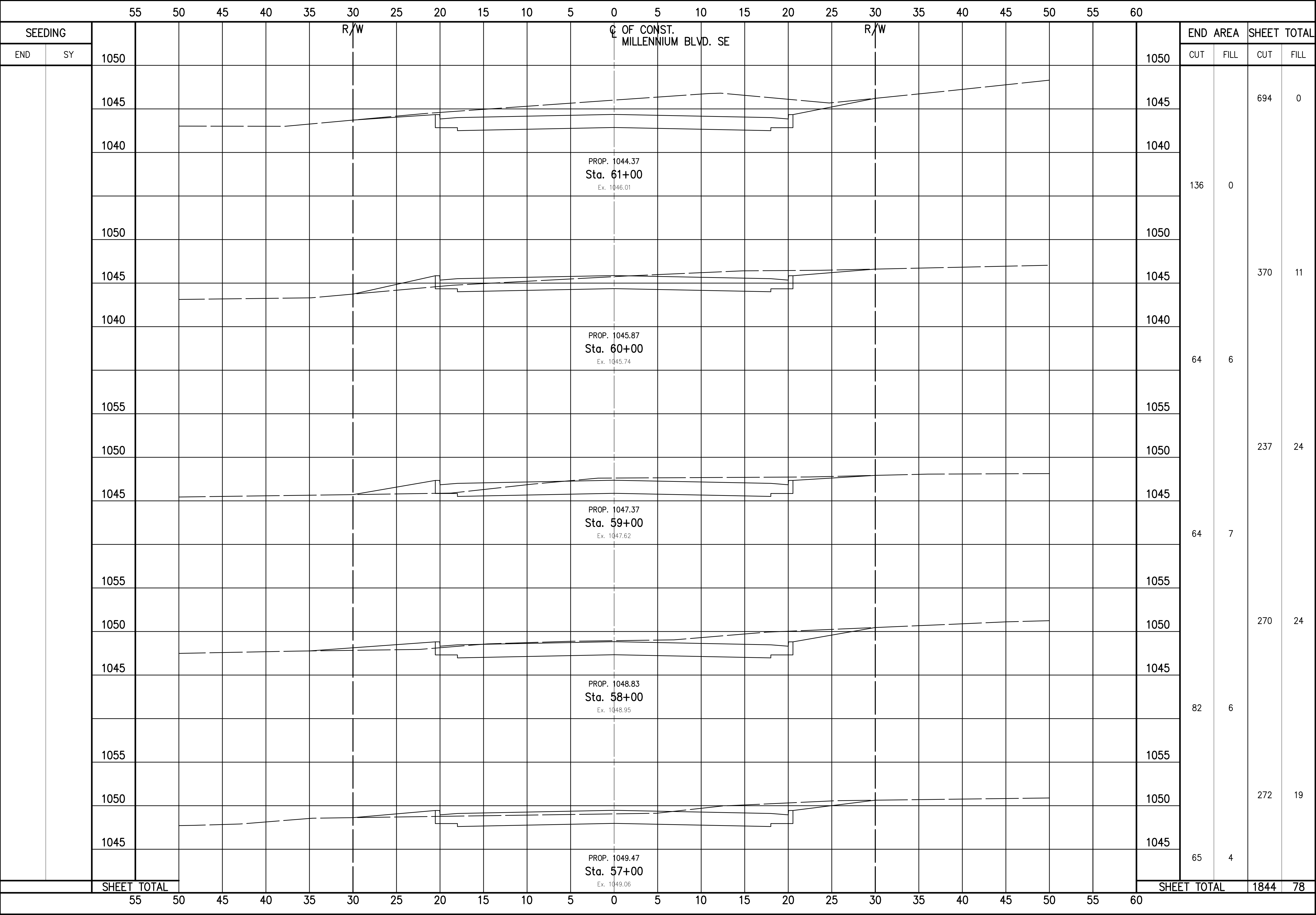
CHECKED BY: KAD
DATE: Sept, 2012
DRAWN BY: FPW
DATE: Sept, 2012

REVISIONS:		DESCRIPTION
DATE		

Millennium Blvd SE Roadway Extension
Millennium Blvd. SE Cross Sections Sta. 46+00 to Sta 51+00
City of Massillon
Stark County, Ohio



DRAWING NAME: Neocom8Title
PROJECT NUMBER:



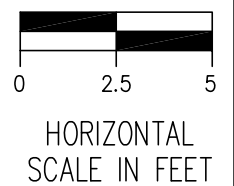
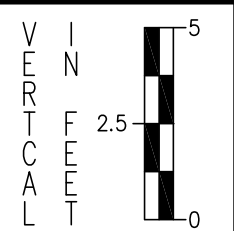
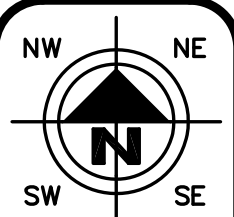
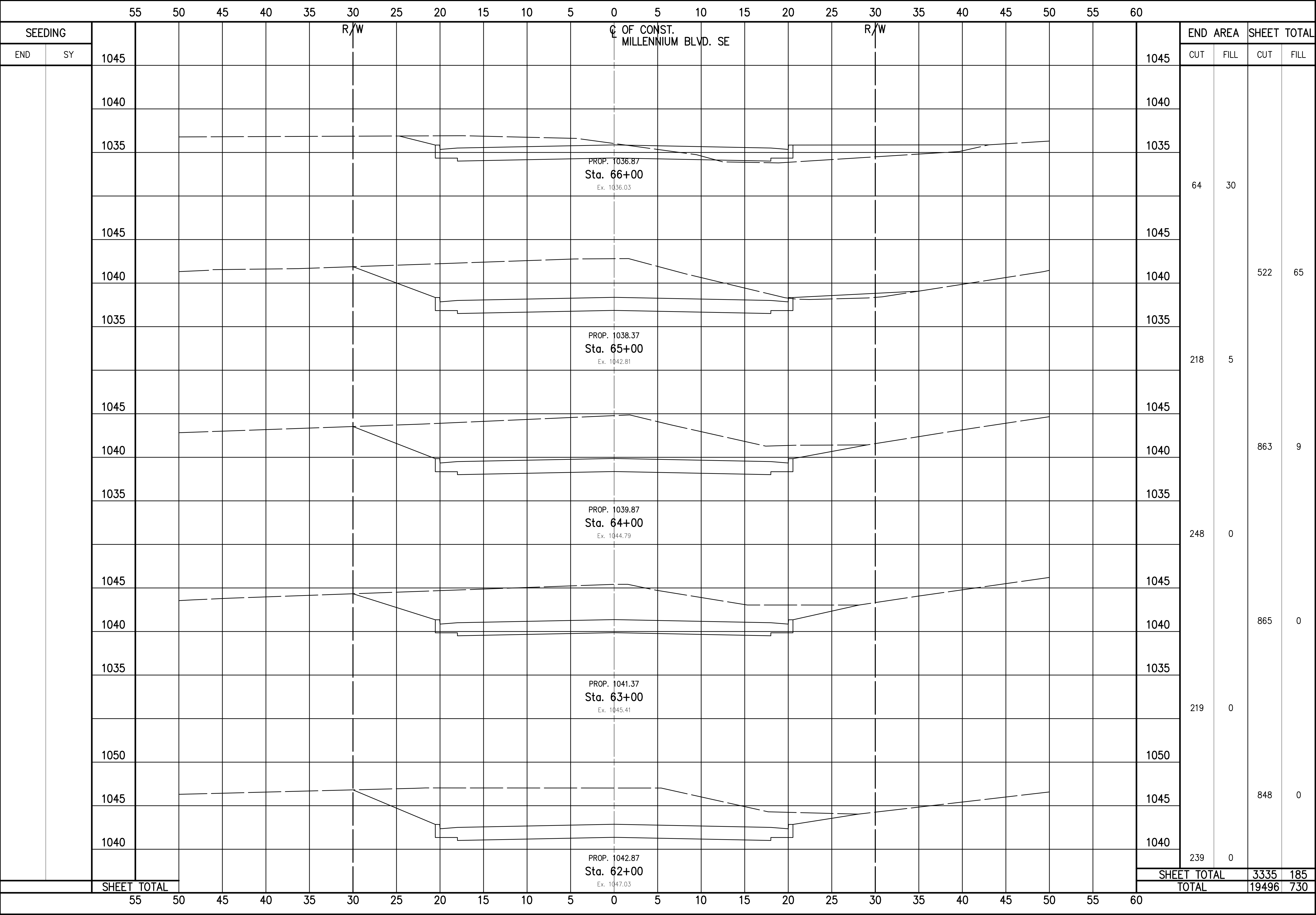
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DATE: Sept, 2012
DRAWN BY: FPW
DATE: Sept, 2012

REVISIONS:	DESCRIPTION	
	DATE	

Millennium Blvd SE Roadway Extension
Millennium Blvd. SE Cross Sections Sta. 57+00 to Sta 61+00
City of Massillon
Stark County, Ohio



DRAWING NAME: Neocom8Title
PROJECT NUMBER:



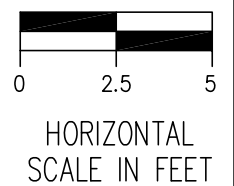
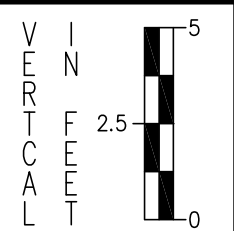
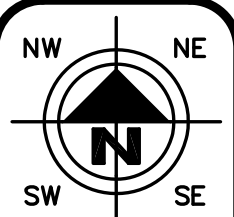
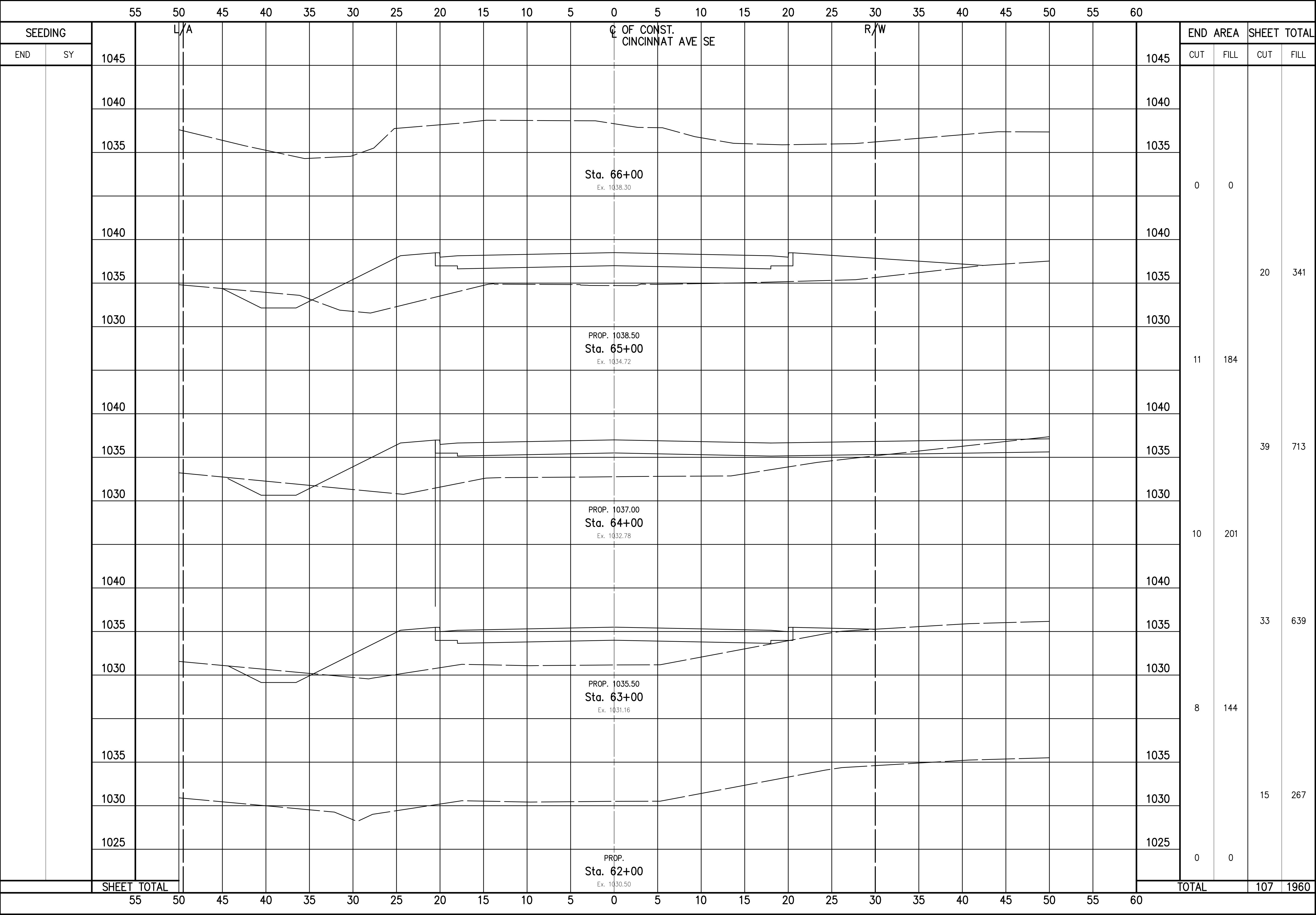
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DRAWN BY: FPW
DATE: Sept, 2012

REVISE	DESCRIPTION	
	DATE	

Millennium Blvd SE Roadway Extension
Millennium Blvd. SE Cross Sections Sta. 62+00 to Sta 66+00
City of Massillon
Stark County, Ohio



DRAWING NAME: Neocom8Title
PROJECT NUMBER: 22 / 28



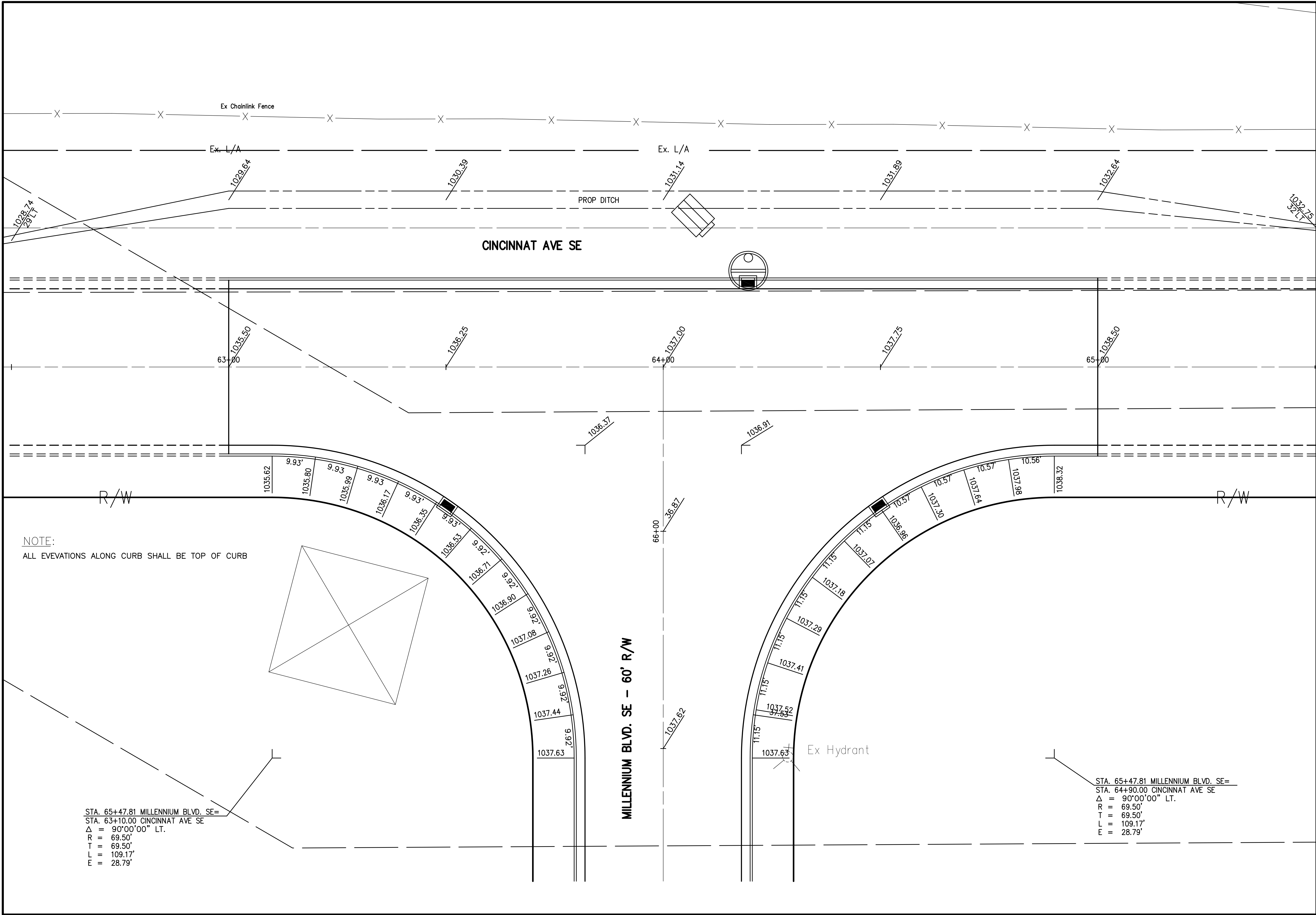
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KAD
DATE:
Sept, 2012
DRAWN BY:
FPW
DATE:
Sept, 2012

REVISIONS:	DESCRIPTION	
	DATE	

Millennium Blvd SE Roadway Extension
Cincinnati Ave SE Cross Sections Sta. 62+00 to Sta. 66+00
City of Massillon
Stark County, Ohio



DRAWING NAME:
Neocom8Title
PROJECT NUMBER:



NW

NE

SW

SE

0

5

2.5

0

0

10

20

HORIZONTAL

SCALE IN FEET

CHECKED BY:

KAD

DATE:

MAY, 2015

DRAWN BY:

FPW

DATE:

MAY, 2015

REVISIONS:	DATE	DESCRIPTION

Millennium Blvd SE Roadway Extension

Cincinnat Ave. SE Plan and Profile Sta. 62+00 to Sta 66+00

City of Massillon

Stark County, Ohio

CIVIPRO

ENGINEERING

ENGINEERS-SURVEYORS-CONSTRUCTION MANAGERS

6255 WALNUT RIDGE DR NW NORTH CANTON, OH 44720

PHONE: (330) 268-3744 FAX: (330) 470-1285

WWW.CIVIPROENGINEERING.COM

DRAWING NAME:

Neocompp10

PROJECT NUMBER:

24

28

CB-
TYPE:
STA. _____
T/C = _____
12" INV. = _____

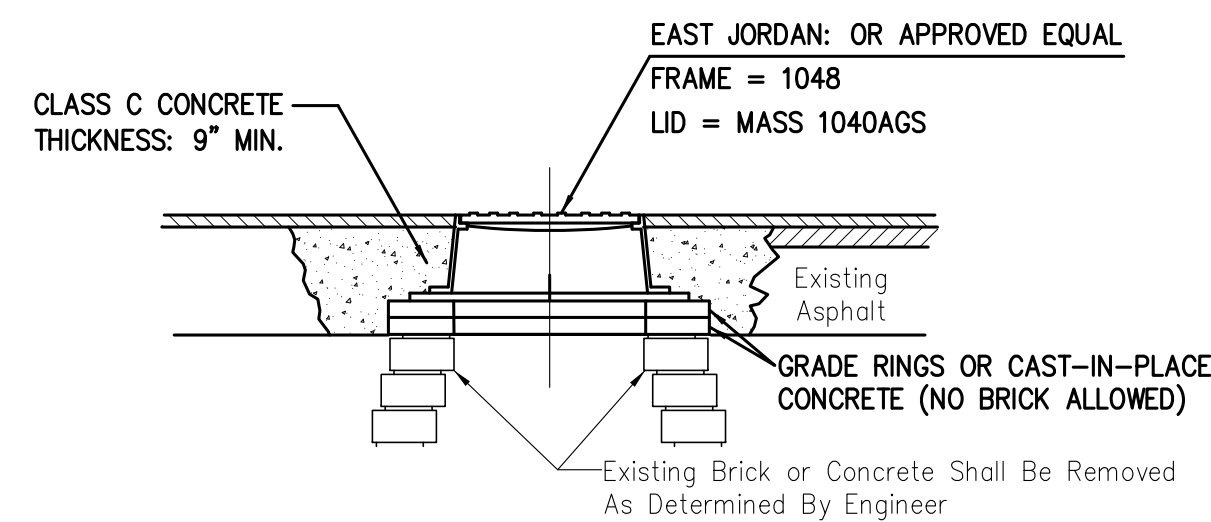
Q OF MILLENNIUM BLVD. SE

DS-
SEE PLAN AND PROFILE

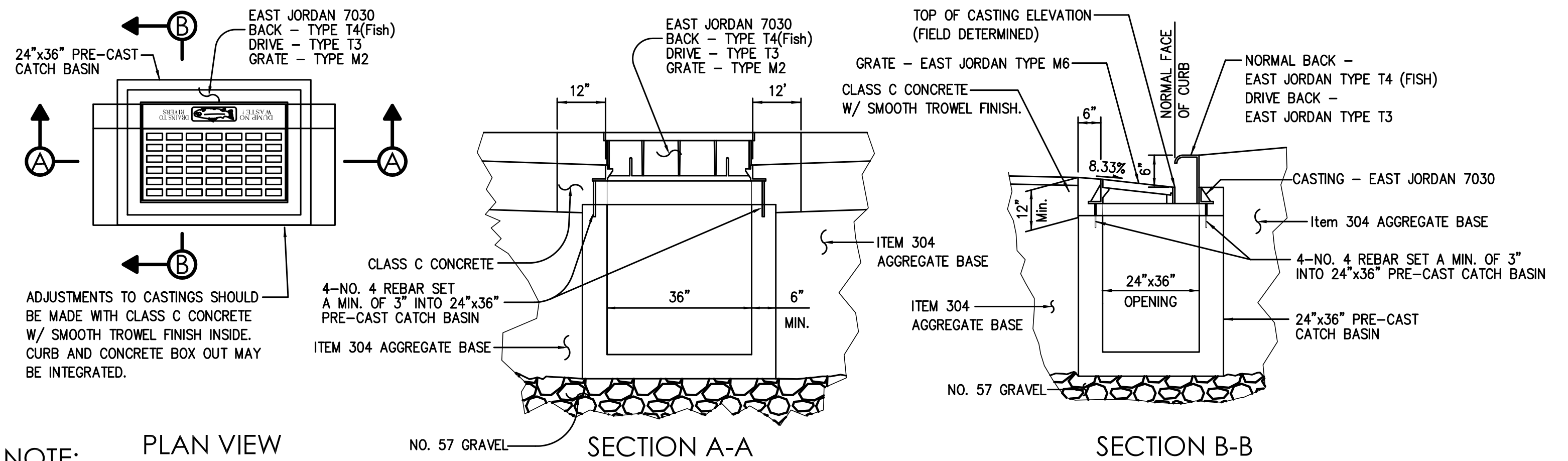
DP-
40'-12" TYPE B
CONDUIT @ 1.0%

REF	TYPE	STATION	OFFSET	T/G	INVERT	INVERT
CB-1	CB-MASS7030	37+50	20'	1021.67	1017.77	
CB-2	CB-MASS7030	39+50	20'	1024.67	1020.67	
CB-3	CB-MASS7030	43+00	20'	1029.92	1025.82	
CB-4	CB-MASS7030	46+50	20'	1035.17	1031.17	
CB-5	CB-MASS7030	50+00	20'	1040.18	1036.18	
CB-6	CB-MASS7030	53+50	20'	1045.01	1040.01	
CB-7	CB-MASS7030	60+75	20'	1044.22	1040.65	
CB-8	CB-MASS7030	64+00	20'	1039.34	1035.91	

12" CONDUIT CROSSING TYPICAL SECTION

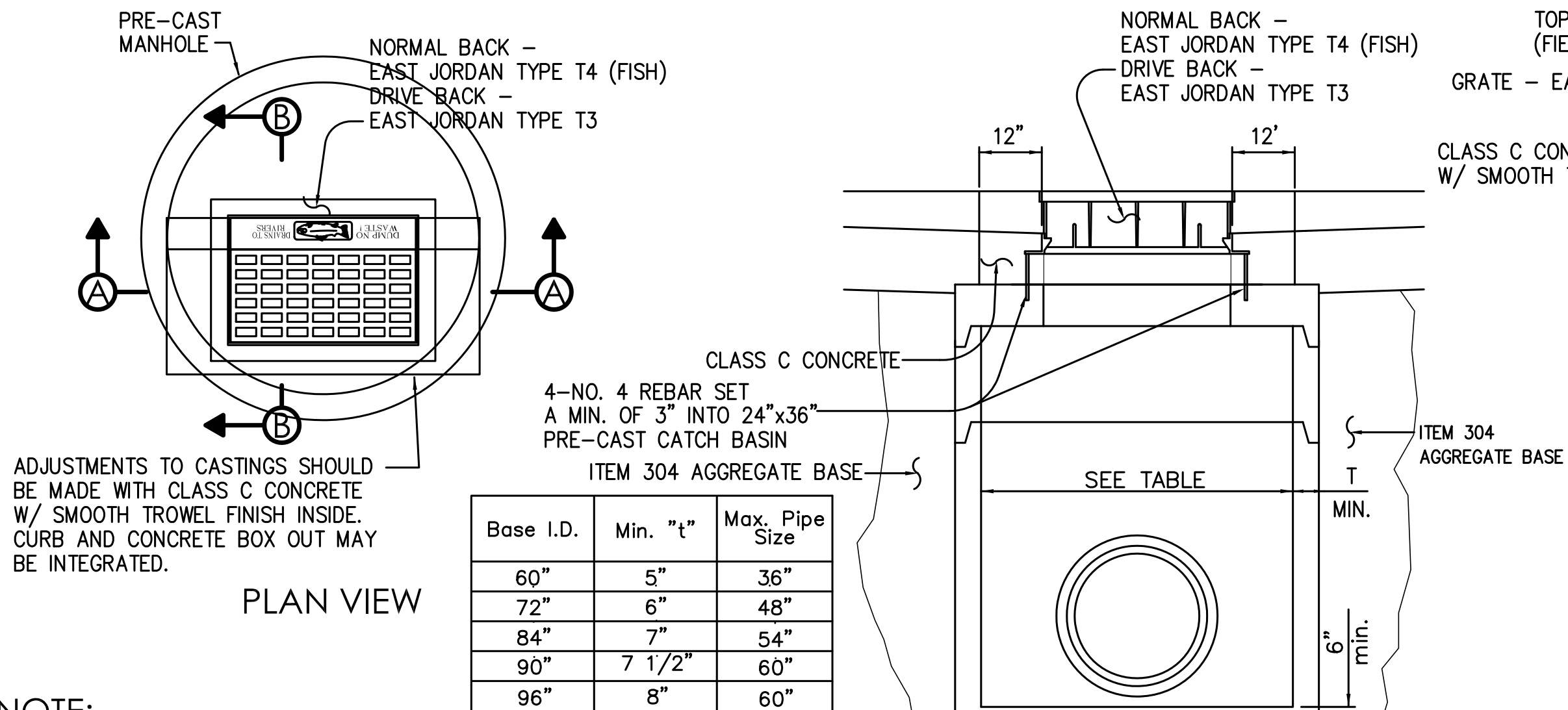


NOTE: ALL CASTINGS, LIDS AND GRATES ARE TO BE CAREFULLY REMOVED AND
STORED BY THE CONTRACTOR FOR SALVAGE BY THE CITY OF MASSILLON
ITEM 604 SANITARY MANHOLE MASS1048-R
WORK SHALL INCLUDED ALL REMOVAL AND DISPOSAL OF EXISTING

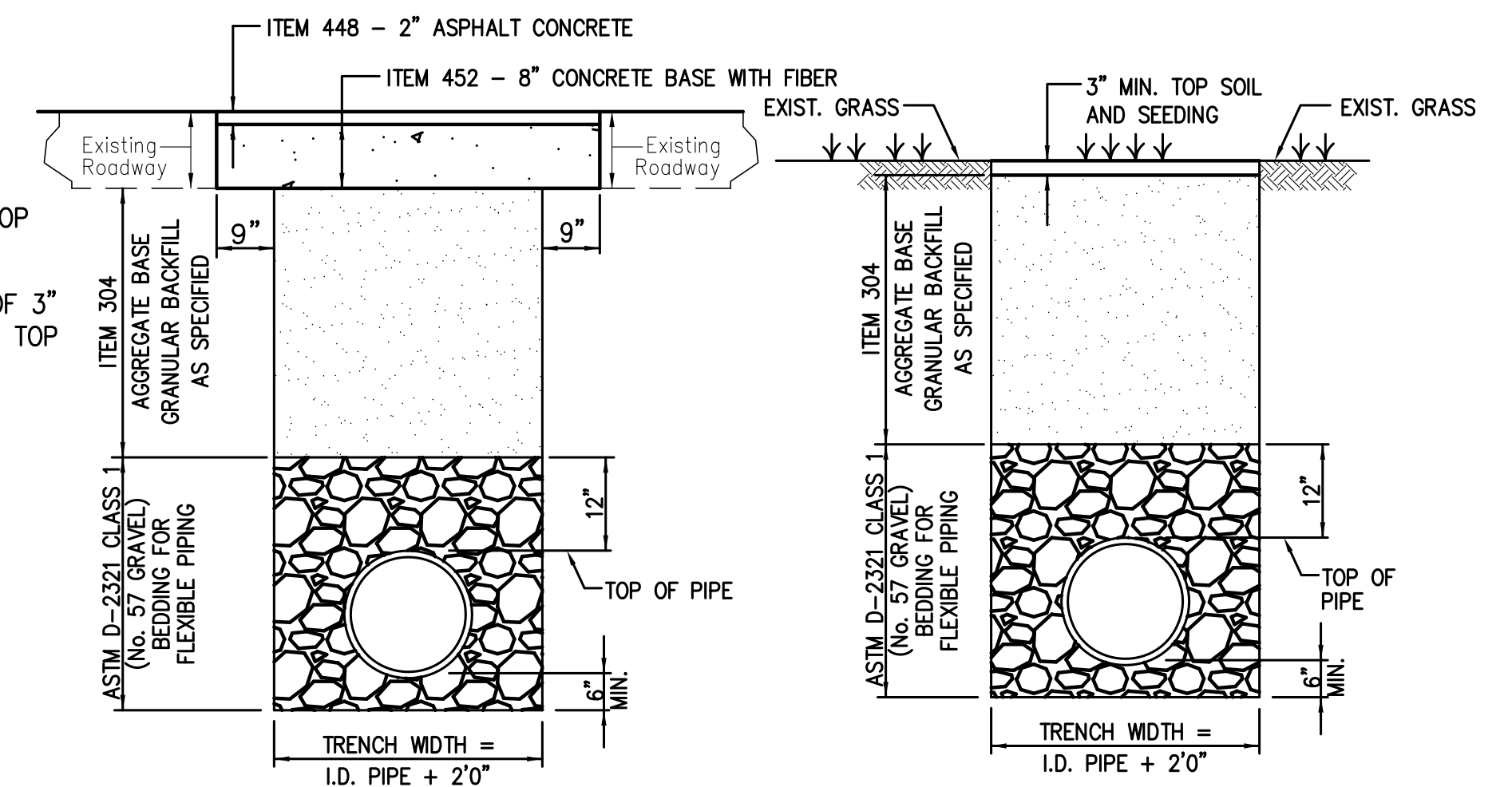
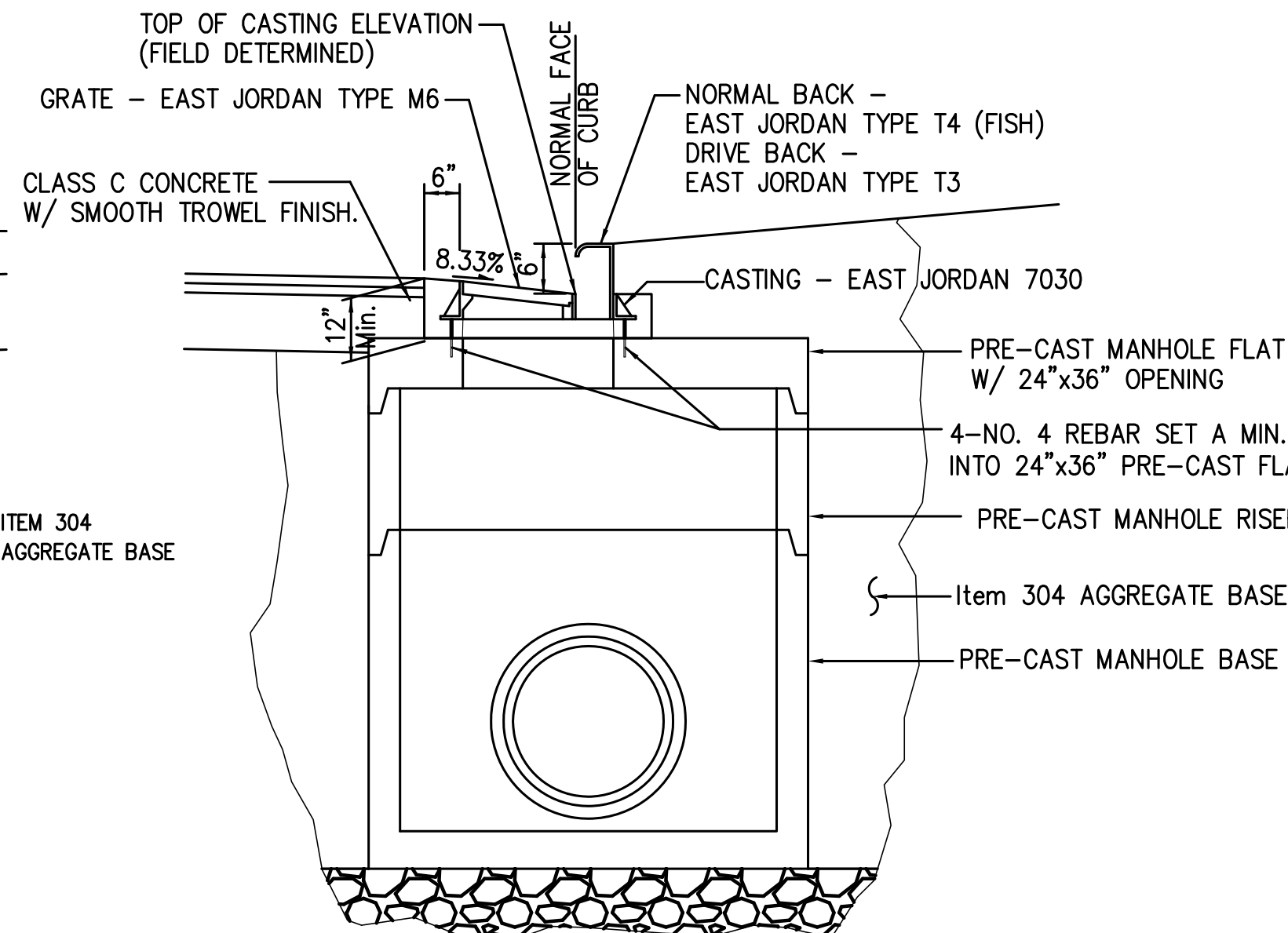


NOTE:
ALL MATERIAL AND LABOR TO PERFORM THE PROPER INSTALLATION OF TYPE
ITEM 604 CB-MASS7030 SHALL BE INCLUDED IN THE UNIT PRICE BID. THIS INCLUDES
BUT NOT LIMITED TO THE REMOVAL OF EXISTING STRUCTURES, CONDUIT, ROADWAY,
CURB, INSTALLATION OF 57 GRAVEL, ITEM 304 AGGREGATE BASE, JOINT SEALER
CONDUIT PIPE, FERNCO, CLASS C CONCRETE, CONCRETE COLLAR, AND CURBING.

ITEM 604 CB-MASS7030

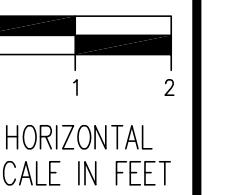
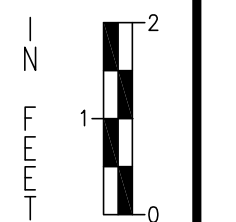
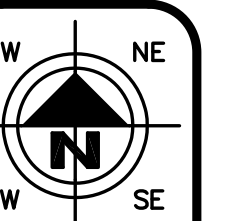


NOTE:
ALL MATERIAL AND LABOR TO PERFORM THE PROPER INSTALLATION OF TYPE
ITEM 604 MH-MASS7030 SHALL BE INCLUDED IN THE UNIT PRICE BID. THIS INCLUDES
BUT NOT LIMITED TO THE REMOVAL OF EXISTING STRUCTURES, CONDUIT, ROADWAY,
CURB, INSTALLATION OF 57 GRAVEL, ITEM 304 AGGREGATE BASE, JOINT SEALER
CONDUIT PIPE, FERNCO, CLASS C CONCRETE, CONCRETE COLLAR, AND CURBING.



ALL MATERIALS AND LABOR INCLUDED IN ITEM 603

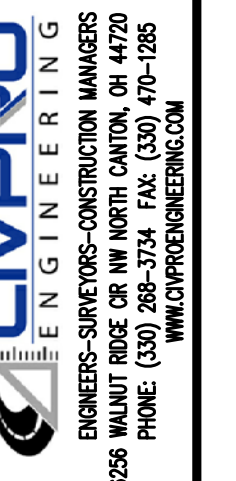
ALL MATERIALS AND LABOR INCLUDED IN ITEM 603



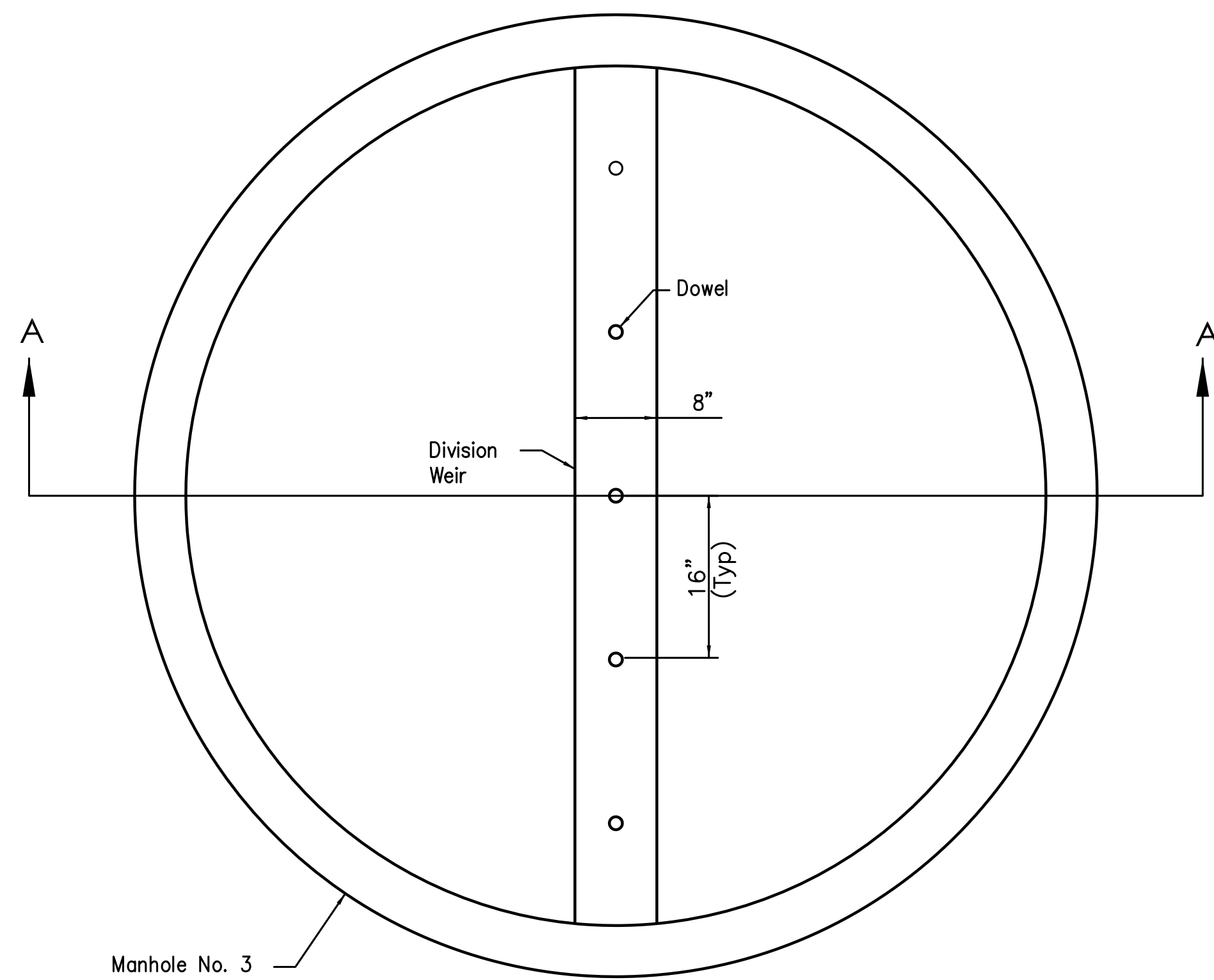
CHECKED BY:
KAD
DATE:
March, 2014
DRAWN BY:
FPW
DATE:
March, 2014

REVISIONS:	DESCRIPTION
DATE	

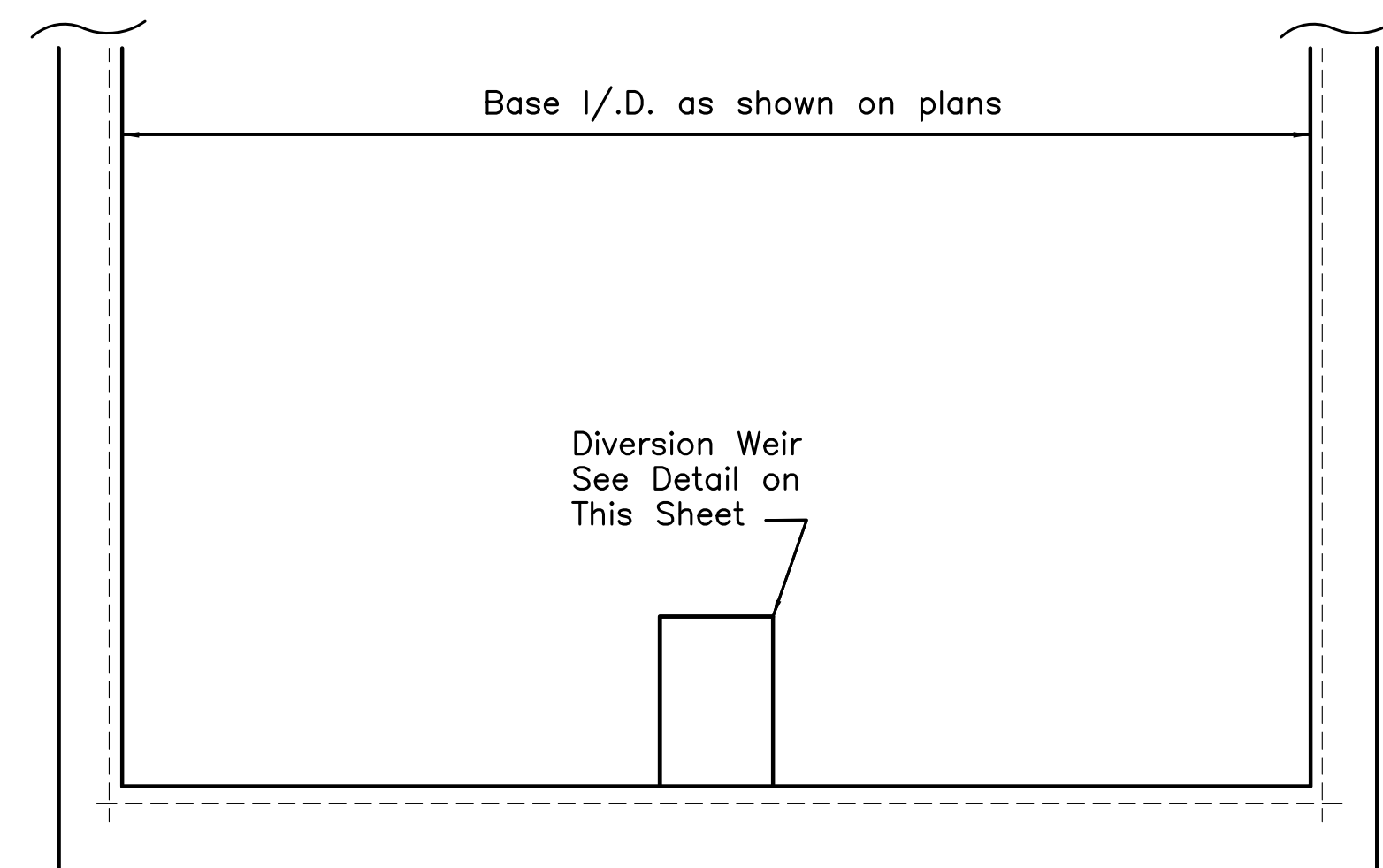
Millennium Blvd SE Roadway Extension
Drainage Details
City of Massillon
Stark County, Ohio



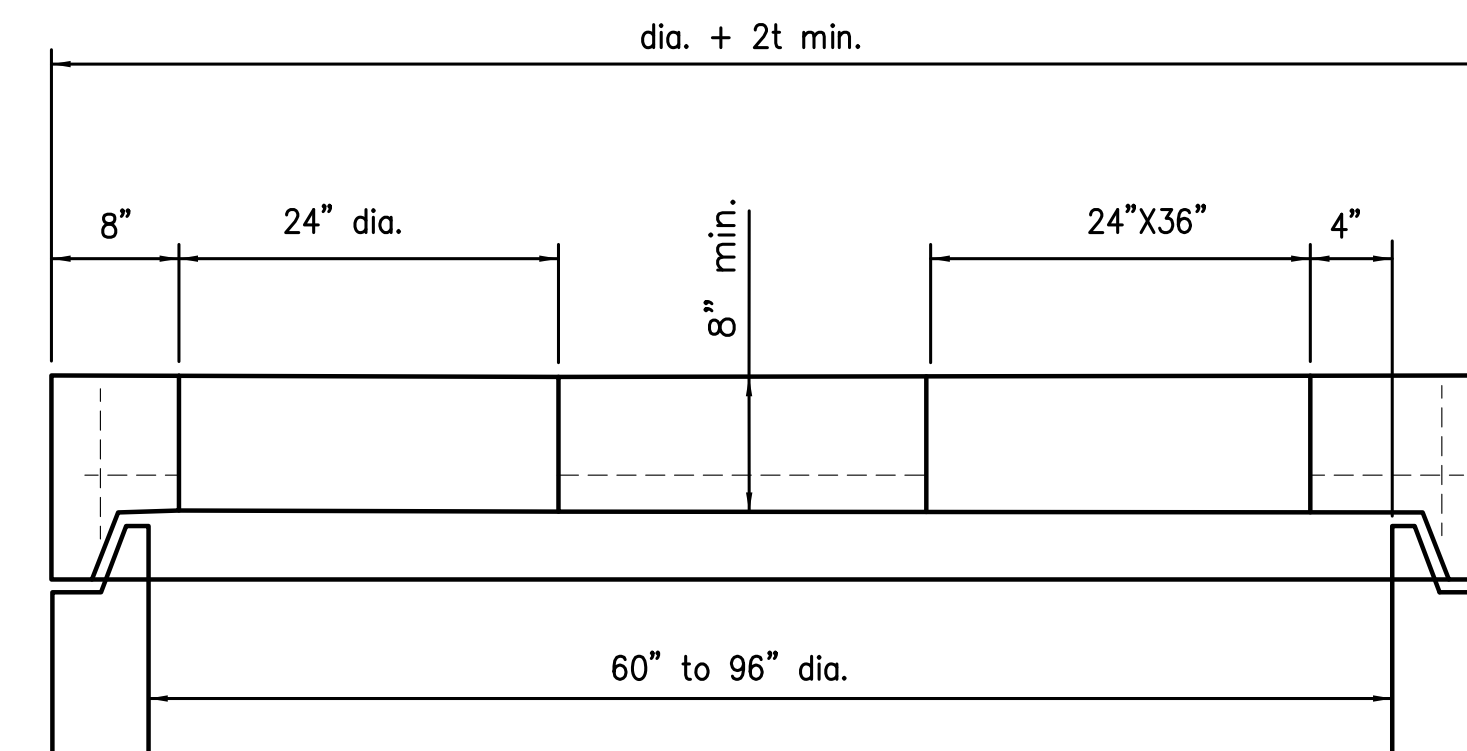
DRAWING NAME:
NeocomDetail1
PROJECT NUMBER:



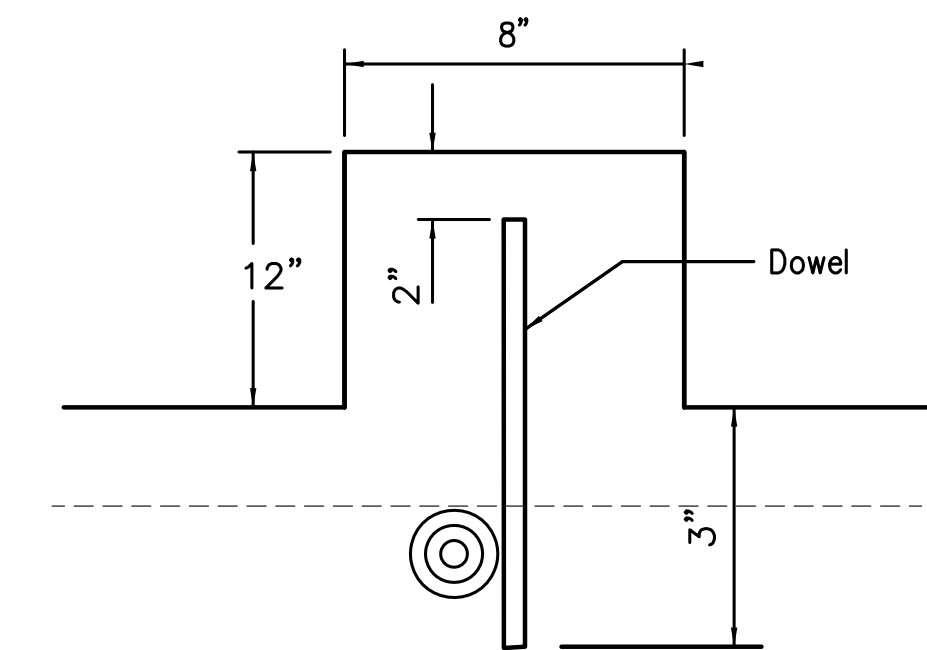
MANHOLE NO. 3 W/
84" BASE I.D. AND 12" WEIR
(NTS)



SECTION A-A
(NTS)



FLAT SLAB TOP



* Furnish weir height as shown in plans.

DIVERSION WEIRN DETAIL
(NTS)

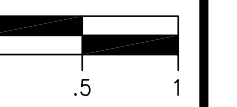
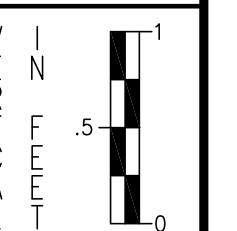
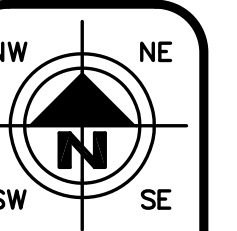
NOTE

MANHOLE NO. W/ 84" BASE I.D. AND 12" DIVERSION WEIR:

Furnish manhole base with precast diversion weir or construct diversion weir from Structural Concrete, 4000 psi compressive strength concrete or Brick and Masonry Units conforming to CMS 611. A bottom channel section for the manhole is not required when a diversion weir is specified on the plans.

Place diversion weir perpendicular to flow of inflowing trunk sewer. Dowel concrete or masonry units into the base of the manhole to a depth of 3" using epoxy coated #4 reinforcing bars. Start dowels at the center of the diversion weir and space 16" on center across the entire weir.

All materials and labor , included, excavation and backfill, are for at the contract price for **ITEM 611 - MH-MASS7030 WITH 84" I.D. AND 12" DIVERSION WEIR.**



HORIZONTAL
SCALE IN FEET

CHECKED BY:
KAD

DATE:
May, 2015

DRAWN BY:
FPW

DATE:
May, 2015

REVISIONS:	DESCRIPTION
DATE	

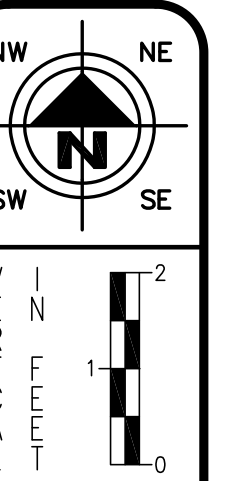
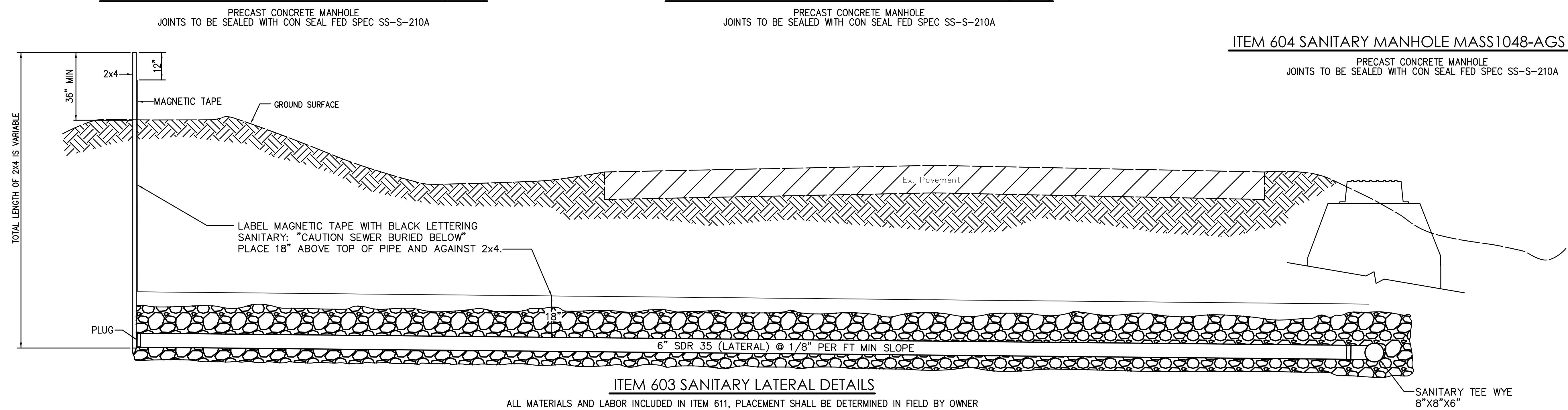
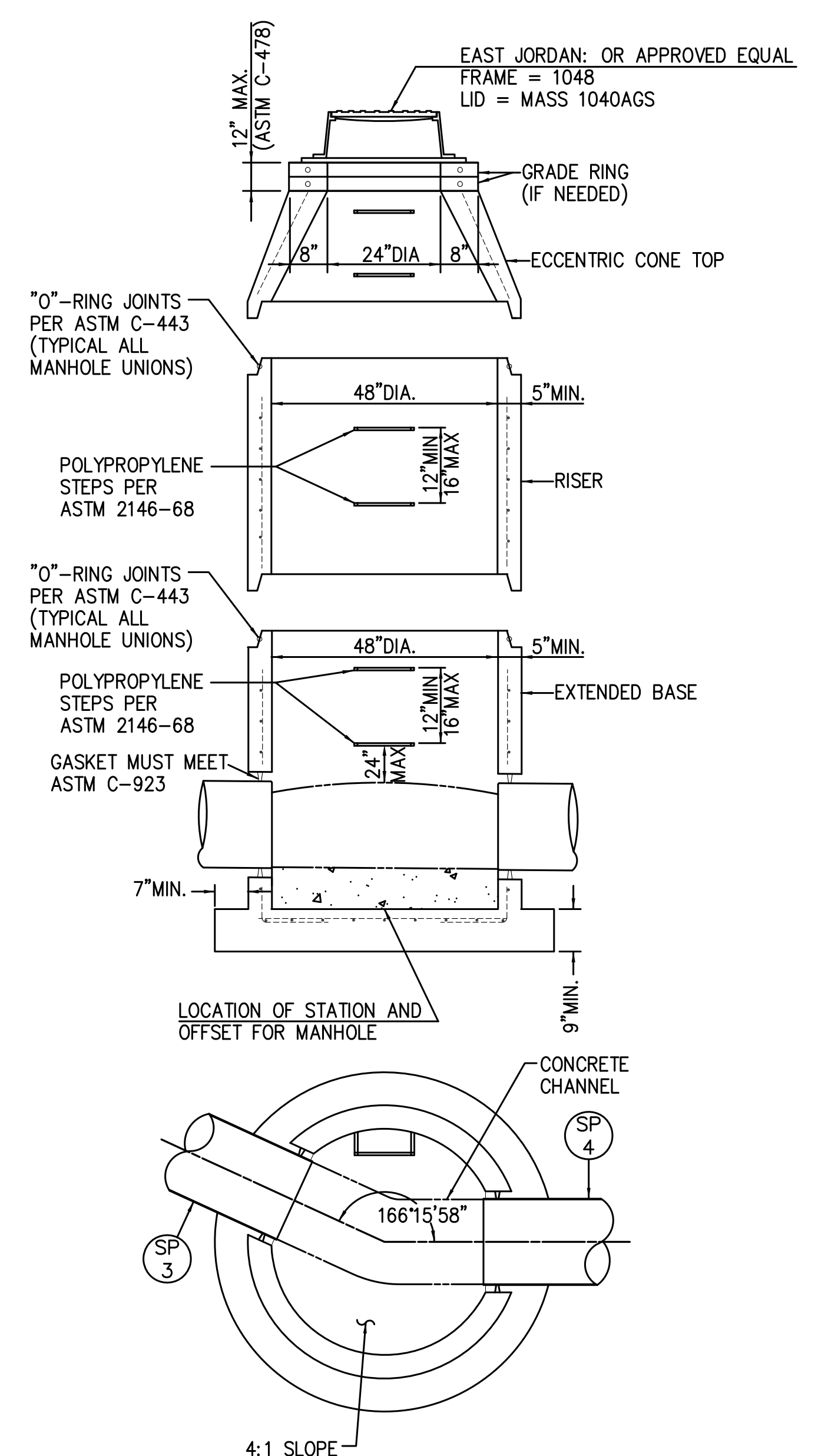
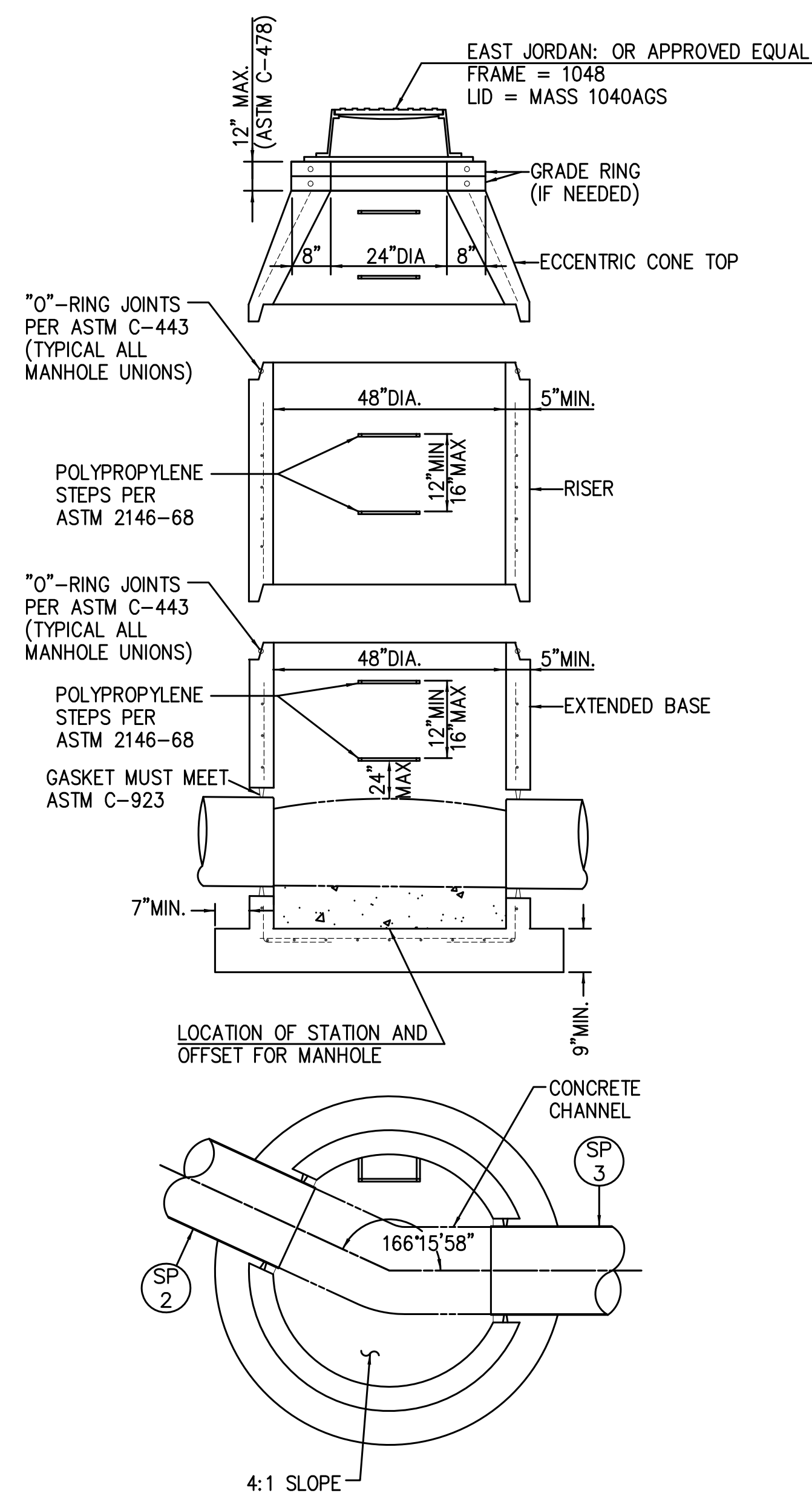
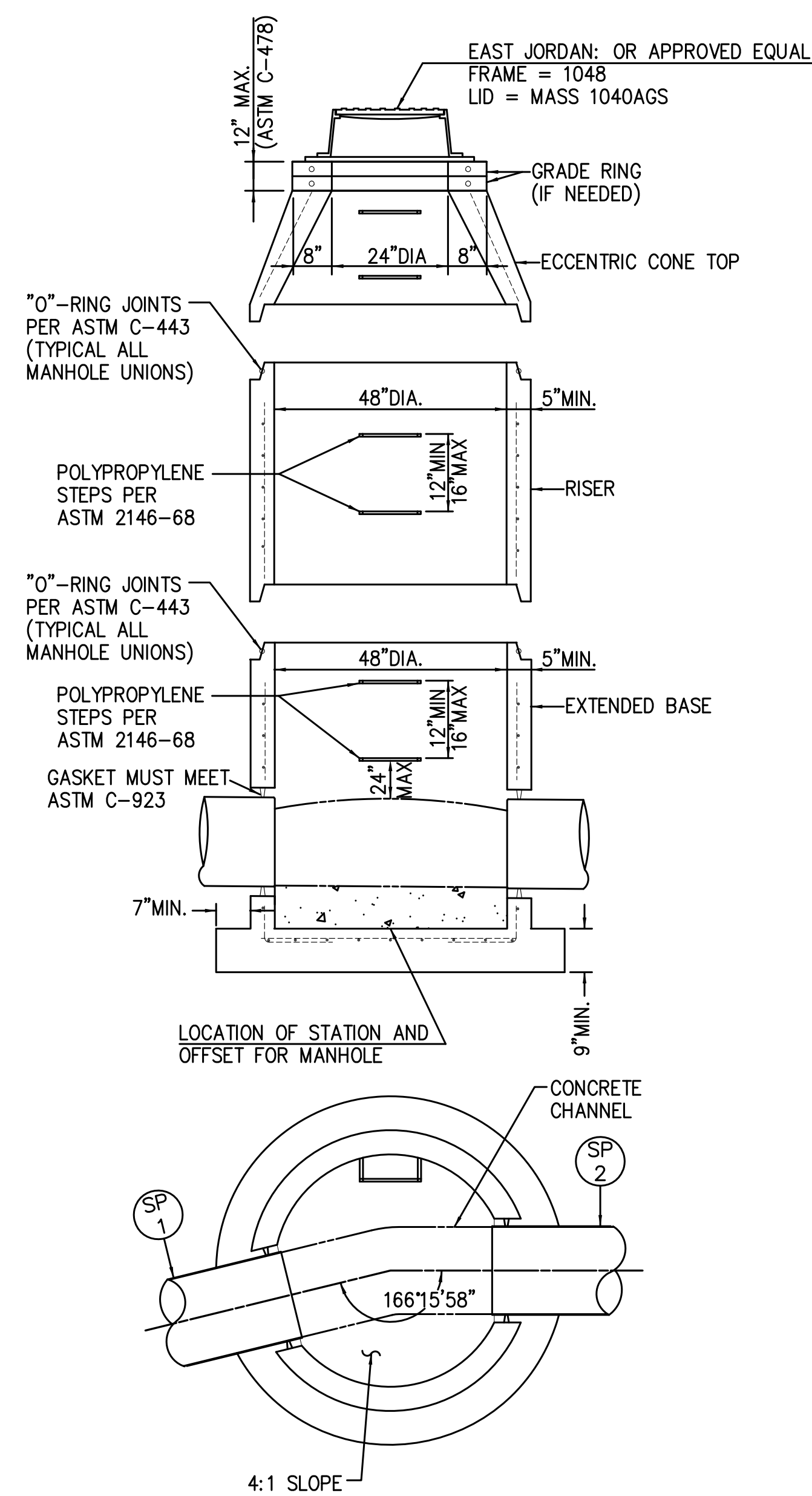
Millennium Blvd SE Roadway Extension
Drainage Detail
City of Massillon
Stark County, Ohio



DRAWING NAME:
NeocomDetail2

PROJECT NUMBER:

26 / 28

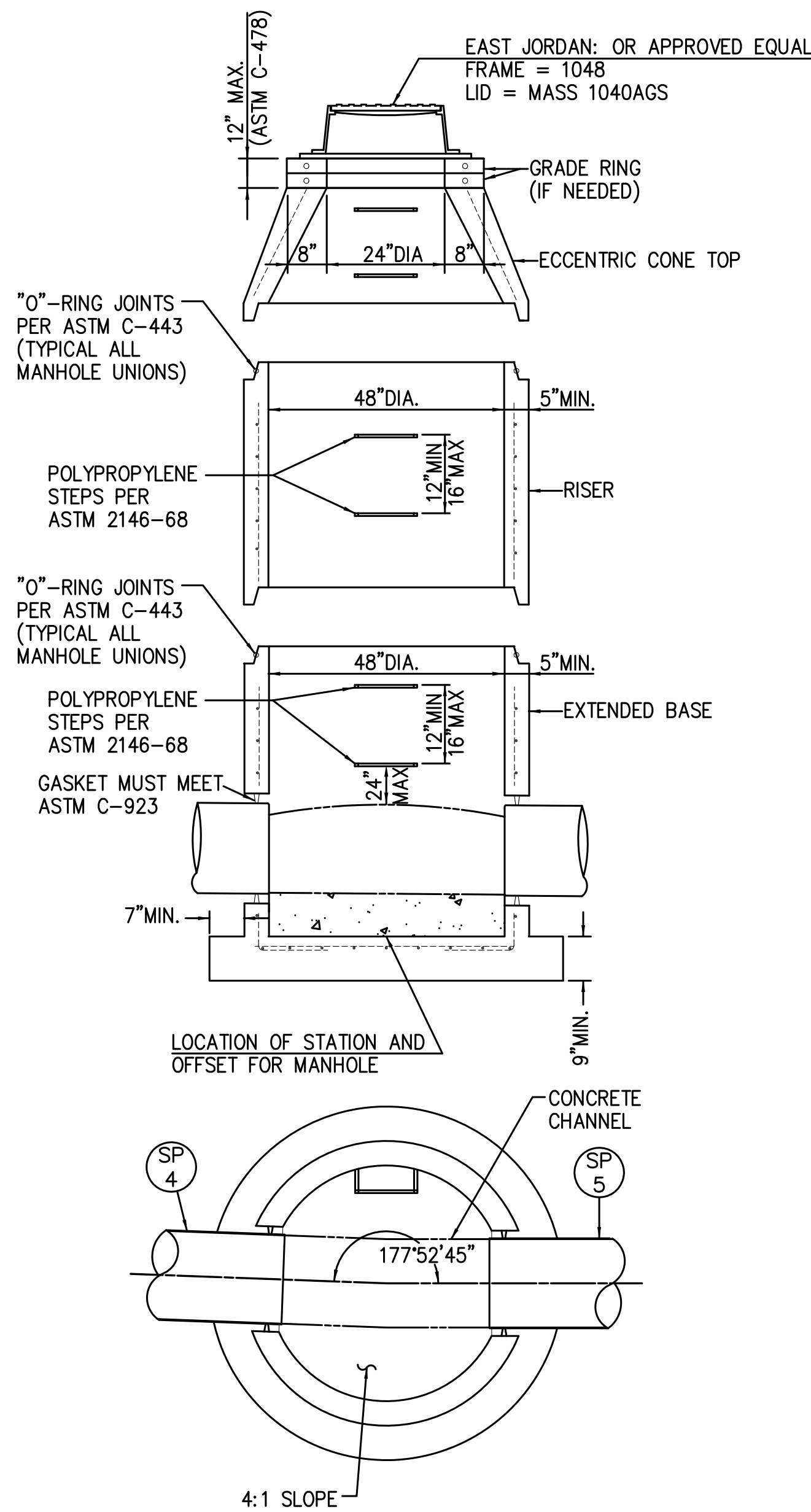


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CHECKED BY: KAD	
DATE: May, 2015	
DRAWN BY: FPW	
DATE: May, 2015	
DATE	DESCRIPTION
5/1/2015	Text Revised

Sanitary Details
City of Massillon
Stark County, Ohio

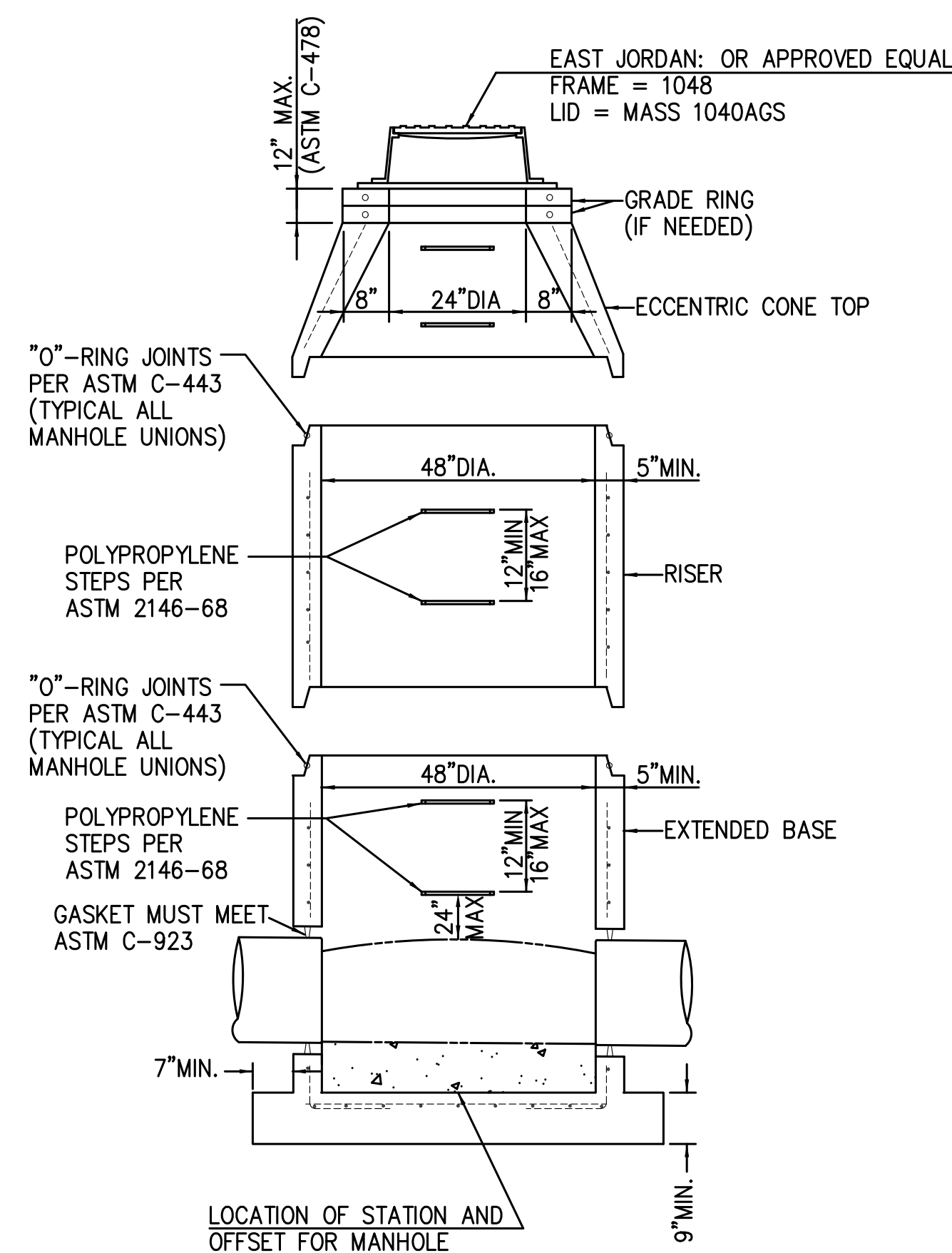
CIPRO
ENGINEERING
ENGINEERS-SURVYORS-CONSTRUCTION MANAGERS
256 WALNUT RIDGE CIR NW NORTH CANTON, OH 44720
PHONE: (330) 268-3734 FAX: (330) 470-1285
WWW.CIPROENGINEERING.COM

DRAWING NAME:
NeoSanDTL01



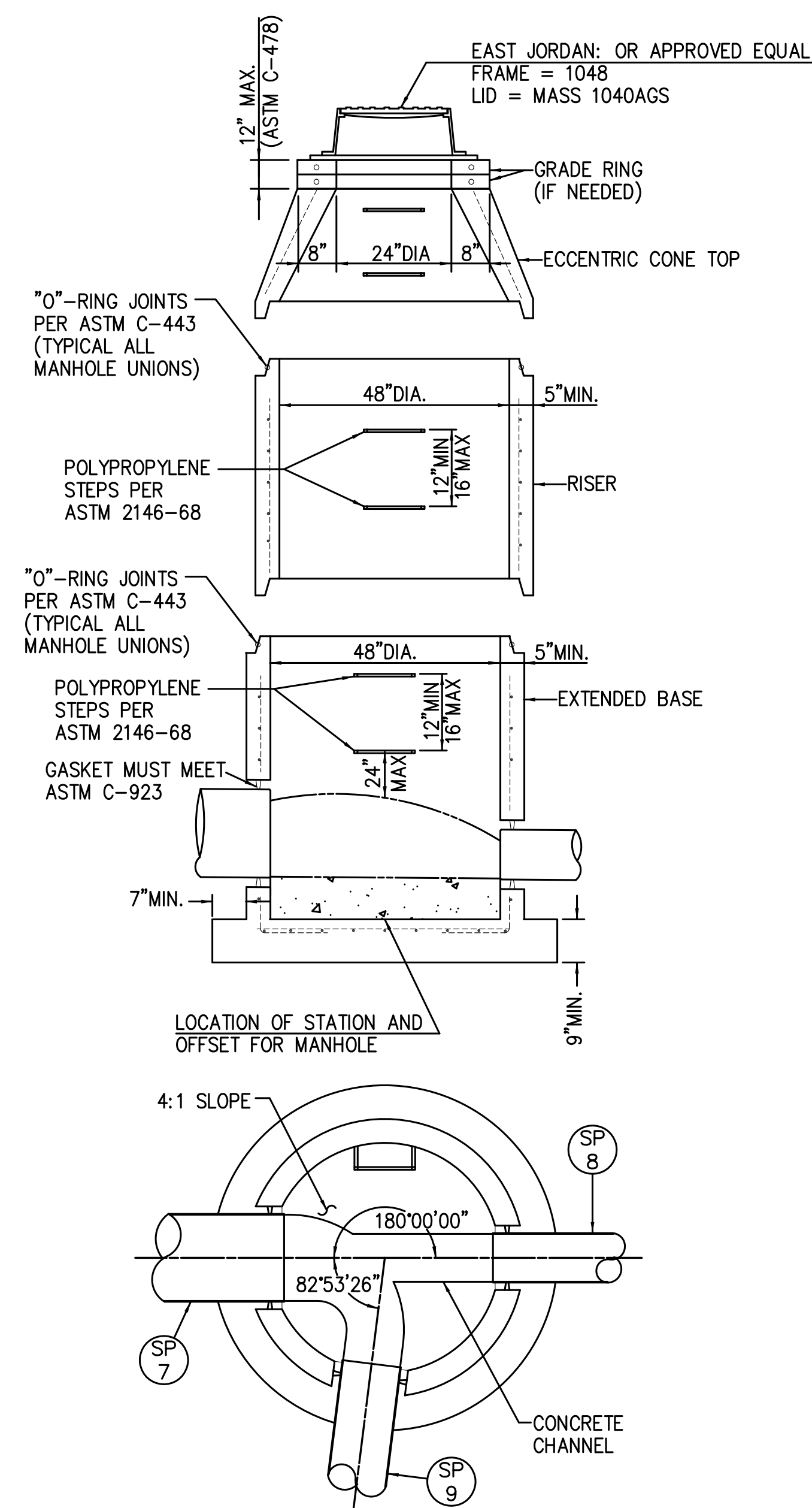
ITEM 604 SANITARY MANHOLE MASS1048-AGS (SM-5)

PRECAST CONCRETE MANHOLE
JOINTS TO BE SEALED WITH CON SEAL FED SPEC SS-S-210A



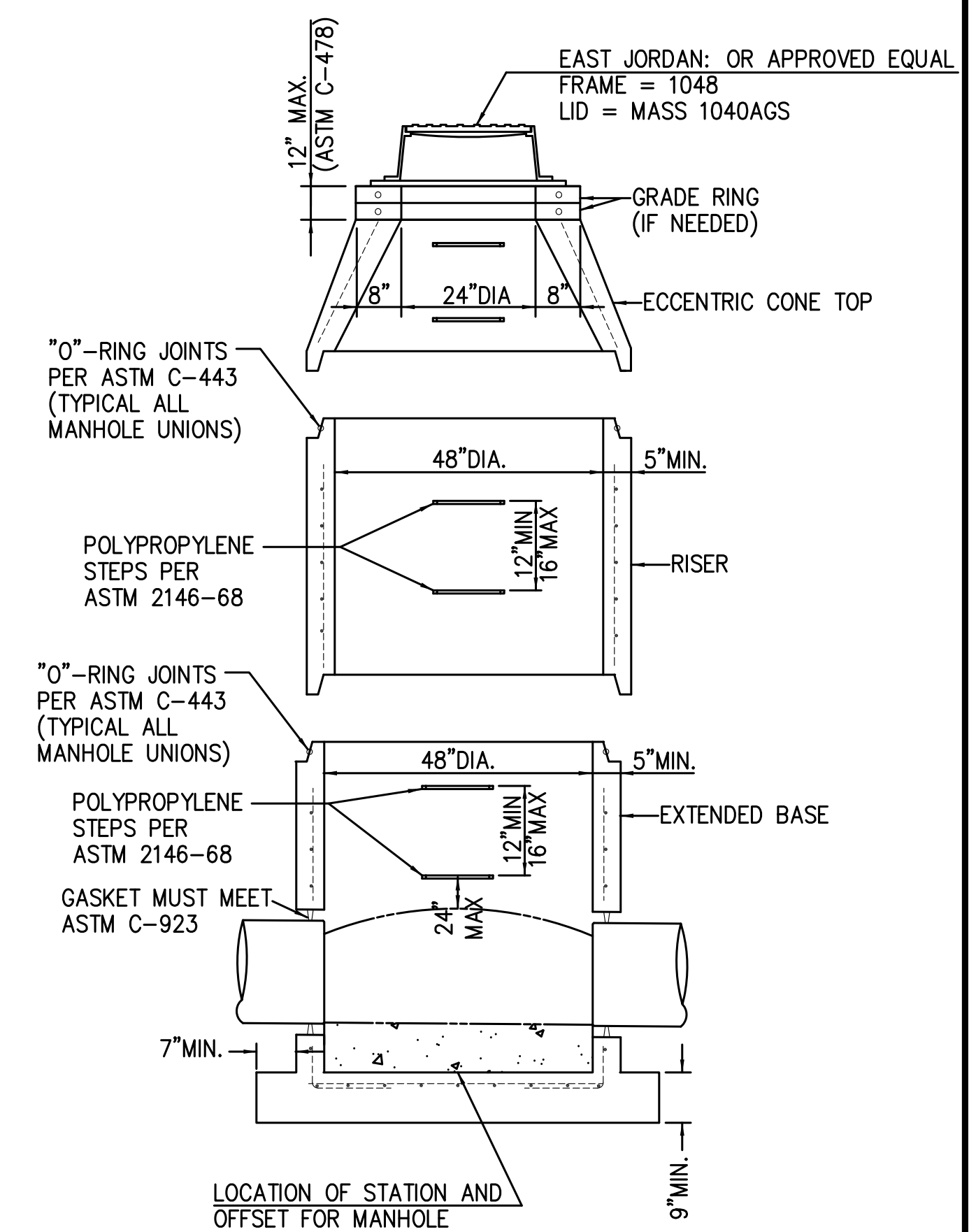
ITEM 604 SANITARY MANHOLE MASS1048-AGS (SM-6)

PRECAST CONCRETE MANHOLE
JOINTS TO BE SEALED WITH CON SEAL FED SPEC SS-S-210A



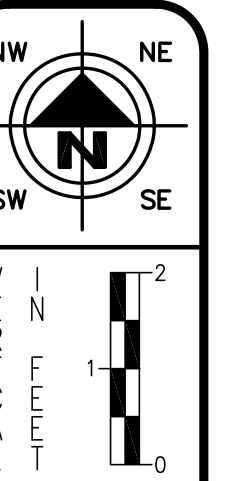
ITEM 604 SANITARY MANHOLE MASS1048-AGS (SM-7)

PRECAST CONCRETE MANHOLE
JOINTS TO BE SEALED WITH CON SEAL FED SPEC SS-S-210A



ITEM 604 SANITARY MANHOLE MASS1048-AGS (SM-8)

PRECAST CONCRETE MANHOLE
JOINTS TO BE SEALED WITH CON SEAL FED SPEC SS-S-210A



HORIZONTAL
SCALE IN FEET

CHECKED BY:
KAD
DATE:
May, 2015
DRAWN BY:
FPW
DATE:
May, 2015

REV	DESCRIPTION	DATE
1	Text Revised	6/1/2015

Millennium Blvd SE Roadway Extension
Sanitary Details
City of Massillon
Stark County, Ohio

CIVILPRO
ENGINEERING
6208 MAINT RD SE NW
CANTON, OH 44705
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