CITY OF MASSILLON

CITY ENGINEERING DEPARTMENT

STARK COUNTY, OHIO

Richville Dr. SE Improvement Project

PROJECT DESCRIPTION

Work shall include pavement planing, placement of a new surface course, pavement widening to 26' with curb and gutter, drive apron reconstruction, school zone safety signing, pavement markings, and minor drainage improvement and catch basin replacement.

CONVENTIONAL SIGNS

RIGHT OF WAY	EXISTING: Ex R/W	, PROPOSED: PE-R/W	
COUNTY LINE			
TOWNSHIP LINE			
CORPORATION LINE			
FENCE LINE	EXISTING:	, PROPOSED:	
GUARDRAIL	EXISTING:	, PROPOSED:	
MANHOLES	EXISTING:	, PROPOSED:	, REHABILITATED:
CATCH BASINS	EXISTING:	, PROPOSED:	, REHABILITATED:
SIGNS	1-POST:	, 2-POST:	, 3-POST: , STREET:
EXISTING POLES	POWER:	, TELEPHONE	, LIGHT , SPAN
PROPOSED POLES	POWER:	, TELEPHONE	, LIGHT , SPAN
EXIST. UTILITIES	VALVE:	, HYDRANT:	, METERS: , GUY:

LOCATION MAP

PORTION TO BE IMPROVED

STREETS

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APPROVALS

APPROVED BY THE CITY OF MASSILLON ENGINEER THIS 31 DAY OF May, 2018

CITY ENGINEER — JASON POPIEL, P.E., CPESC — DATE 05-31-18

STATE OF OHIO — JASON M. POPIEL 67555 — REGISTERED PROFESSIONAL ENGINEER

CITY OF MASSILLON ELECTED OFFICIALS

KATHY CATAZARO–PERRY	MAYOR
ANDREA SCASSA	DIRECTOR OF LAW
JAYNE FERRERO	AUDITOR
MAUDE SLAGLE	TREASURER
COUNCIL	
CLAUDETTE O. ISTNICK	PRESIDENT
SARITA CUNNINGHAM	1st WARD
DAVID A. IRWIN	2nd WARD
YVONNE DANIELS	3rd WARD
JILL CREAMER	4th WARD
MEGAN STARRETT	5th WARD
LINDA K LITMAN	6th WARD
PAUL MANSON	AT LARGE
ED LEWIS IV	AT LARGE
MILAN CHOVAN	AT LARGE

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG

OHIO UtilitiesProtection SERVICE — Call Before You Dig 1-800-362-2764

(Non-members must be called directly)

OIL & GAS PRODUCERS UNDERGROUND PRTECTION SERVICE 1–800–925–0988

OUPS REFEFERENCE:
AU12700–763
AU12700–772
AU12700–798
AU12700–806
AU12700–831

Kathy Catazaro-Perry, Mayor

Massillon City of Champions

NW NE SW SE N

VERTICAL IN FEET 800 400 0

0 400 800 HORIZONTAL SCALE IN FEET

CHECKED BY: JP

DATE: Sept, 2017

DRAWN BY: FPW

DATE: Sept, 2017

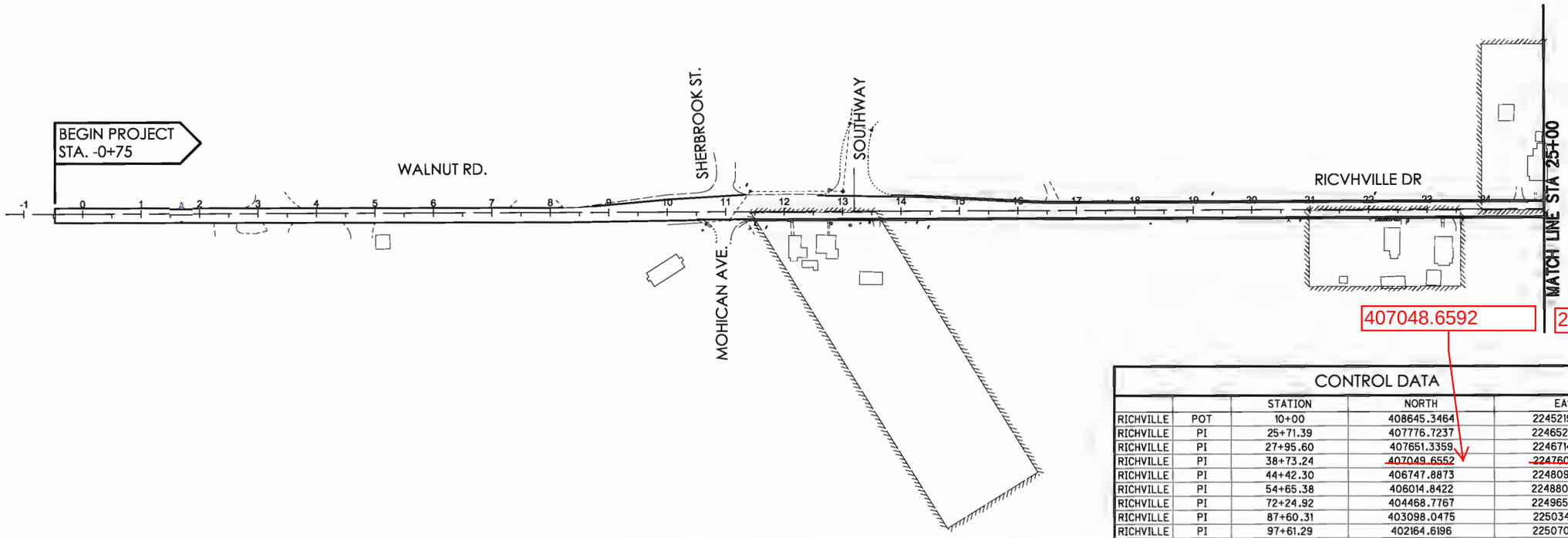
REVISIONS: DATE | DESCRIPTION

Richville Dr. SE Improvement Project
Title Sheet
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon City of Champions

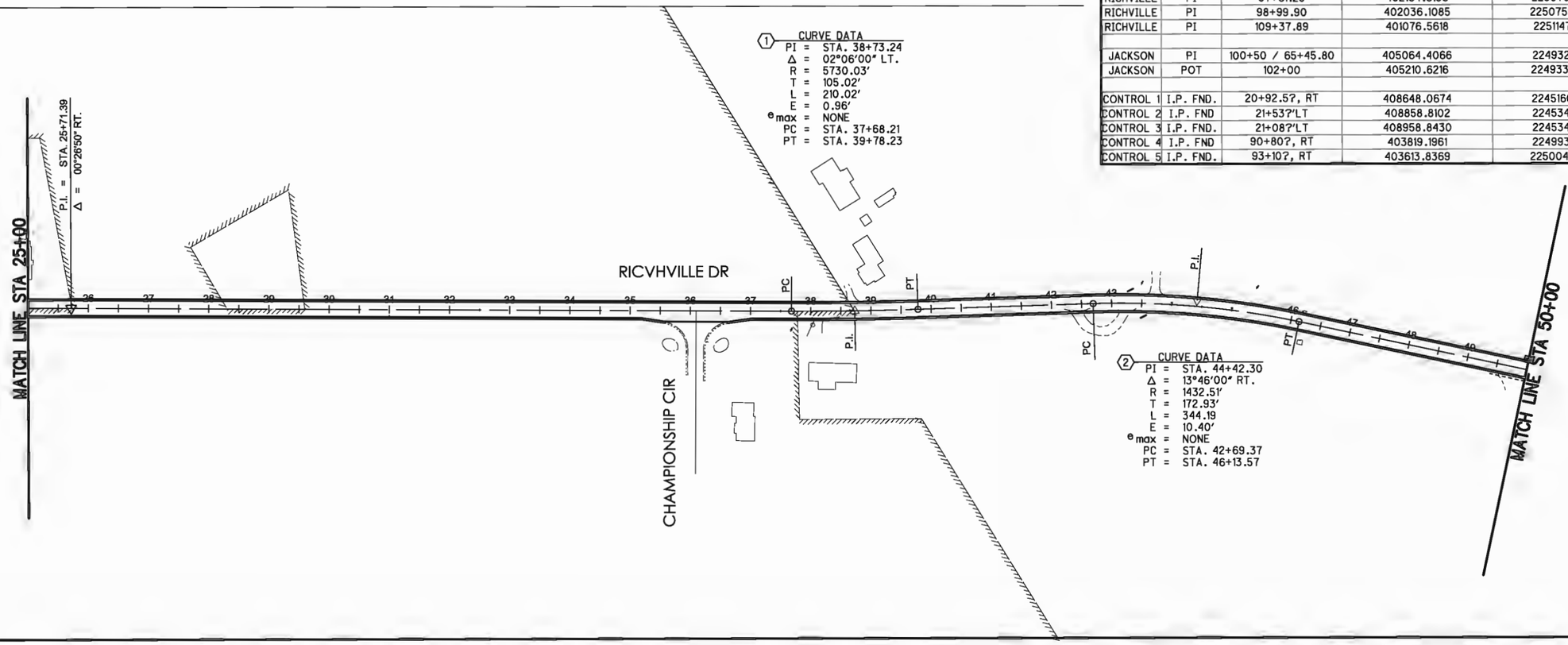
DRAWING NAME: Sht1–RichTitle

CITY NUMBER: 17st03



CONTROL DATA

		STATION	NORTH	EAST
RICHVILLE	POT	10+00	408645.3464	2245219.0643
RICHVILLE	PI	25+71.39	407776.7237	2246528.5579
RICHVILLE	PI	27+95.60	407651.3359	2246714.4206
RICHVILLE	PI	38+73.24	407049.6552	2247607.7761
RICHVILLE	PI	44+42.30	406747.8873	2248090.8931
RICHVILLE	PI	54+65.38	406014.8422	2248806.9594
RICHVILLE	PI	72+24.92	404468.7767	2249653.7692
RICHVILLE	PI	87+60.31	403098.0475	2250345.5713
RICHVILLE	PI	97+61.29	402164.6196	2250707.6510
RICHVILLE	PI	98+99.90	402036.1085	2250759.6009
RICHVILLE	PI	109+37.89	401076.5618	2251147.4920
JACKSON	PI	100+50 / 65+45.80	405064.4066	2249327.5313
JACKSON	POT	102+00	405210.6216	2249334.2772
CONTROL 1	I.P. FND.	20+92.5?, RT	408648.0674	2245160.0899
CONTROL 2	I.P. FND	21+53?'LT	408858.8102	2245346.4621
CONTROL 3	I.P. FND.	21+08?'LT	408958.8430	2245348.1665
CONTROL 4	I.P. FND	90+80?, RT	403819.1961	2249936.4913
CONTROL 5	I.P. FND.	93+10?, RT	403613.8369	2250040.5786



HORIZONTAL SCALE IN FEET

CHECKED BY: DGK

DATE: Sept, 2016

DRAWN BY: FPW

DATE: Sept, 2016

REVISIONS: DATE | DESCRIPTION

Richville Dr. Improvement Project

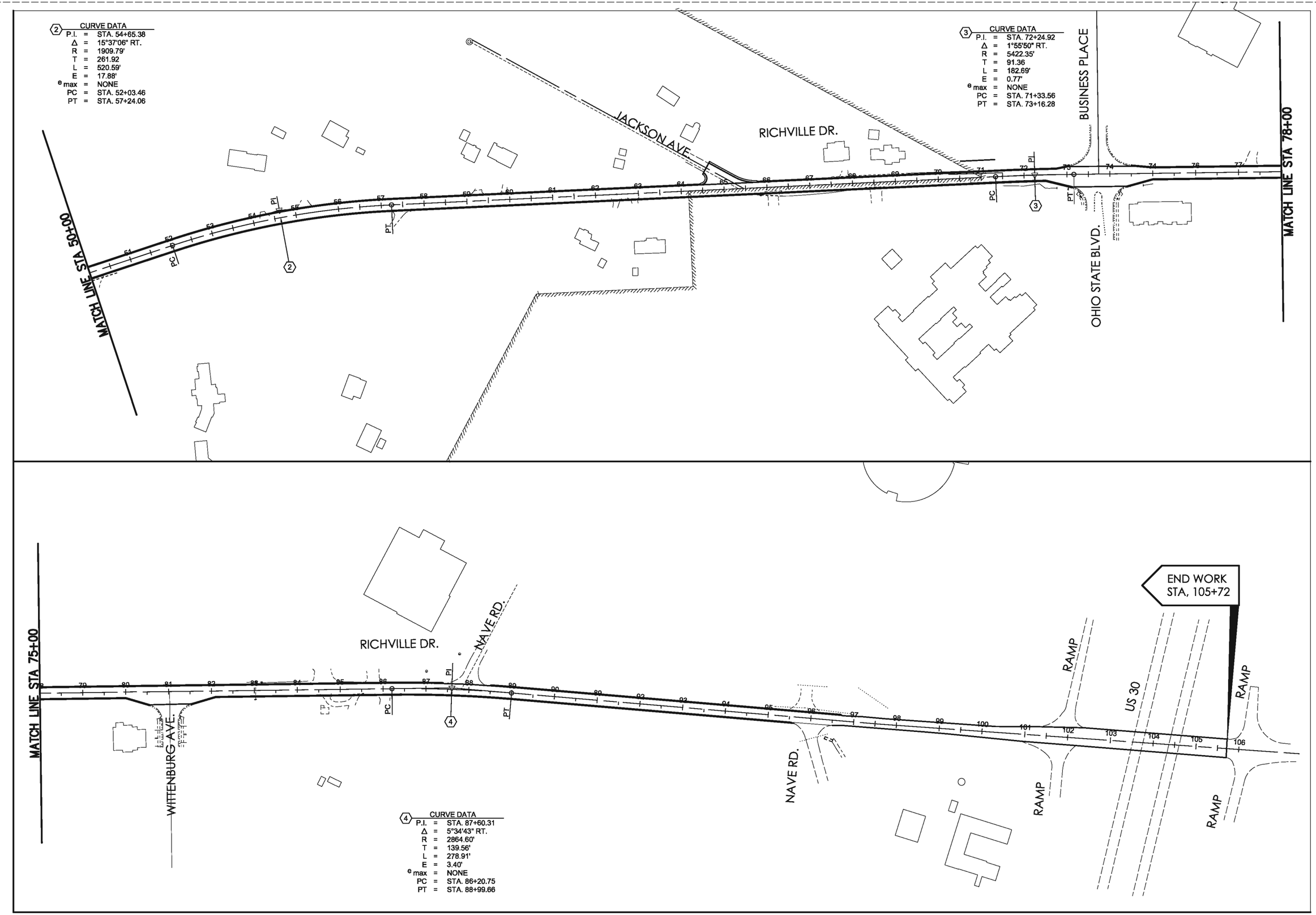
Schematic Plan Sta. -1+00 to Sta. 50+00

City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: Sht2-RichSch1

CITY NUMBER: 17ST03



VERTICAL FEET 100 50 0

0 50 100
HORIZONTAL SCALE IN FEET

CHECKED BY: DGK
DATE: Sept, 2016
DRAWN BY: FPW
DATE: Sept, 2016

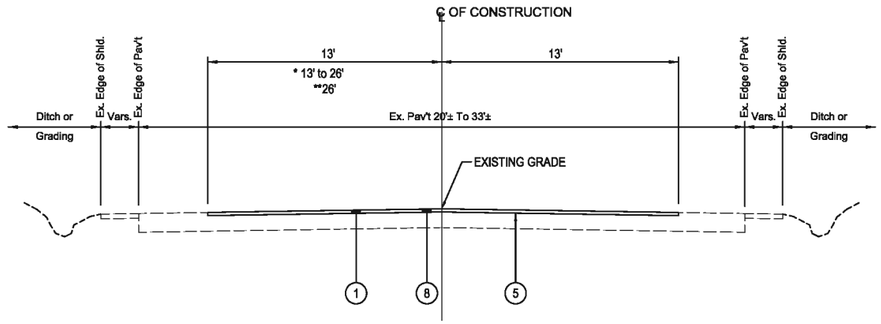
REVISIONS:

DATE	DESCRIPTION

Richville Dr. SE Improvement Project
Schematic Plan
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: Sht3–RichSch2
CITY NUMBER: 17ST03

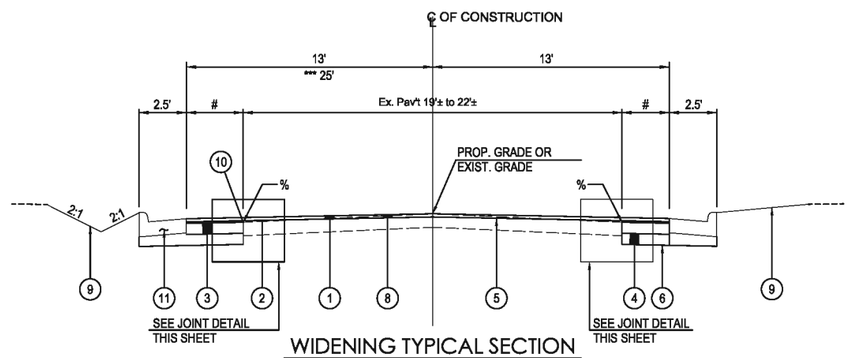


RESURFACING TYPICAL SECTION

RICHVILLE DR.
STA. -0+75 TO STA. 8+25
* STA. 8+25 TO STA. 10+50
** STA. 10+50 TO STA. 11+50

LEFT
** STA. 11+50 TO STA. 13+89.06

RIGHT
STA. 95+55 TO STA 96+70

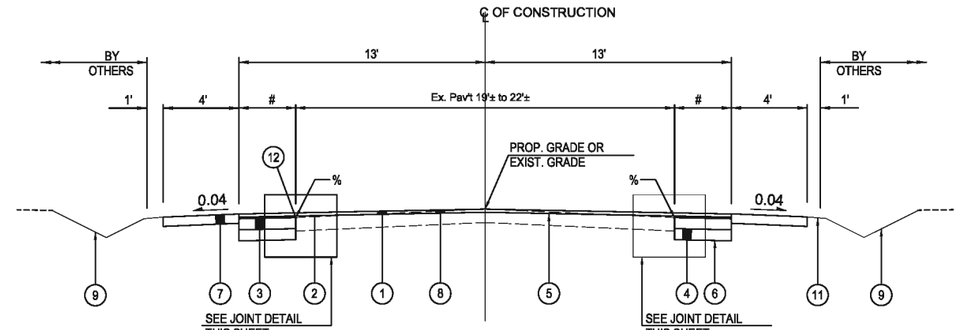


WIDENING TYPICAL SECTION

RICHVILLE DR.

LEFT
*** STA. 13+89.06 TO STA. 16+68.05
STA. 16+68.05 TO STA. 96+70

RIGHT
STA. 11+50 TO STA 95+55



WIDENING TYPICAL SECTION

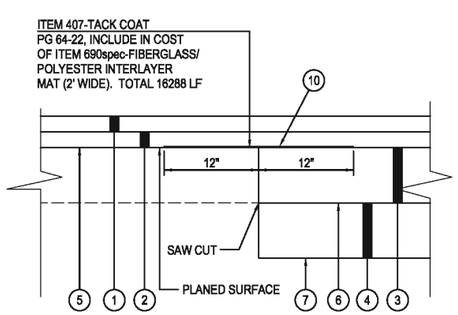
JACKSON AVE. NW
STA. 100+50 TO STA. 101+50

- AMOUNT OF WIDING IS DEPENDENT UPON THE CENTERLINE OF CONSTRUCTION. AS SHOWN ON THE PLAN AND PROFILES. AT NO TIME SHALL PAVEMENT BE WIDENED LESS THAN 1' ON ANY SIDE. THIS WORK WILL BE AS DIRECTED IN THE FIELD.

% - SAW CUT SHALL BE PER PLAN OR DETERMINED IN FIELD TO UTILIZE EXISTING PAVEMENT. COST TO BE INCLUDED IN ITEM 254 PAVEMENT PLANING.

PROPOSED LEGEND

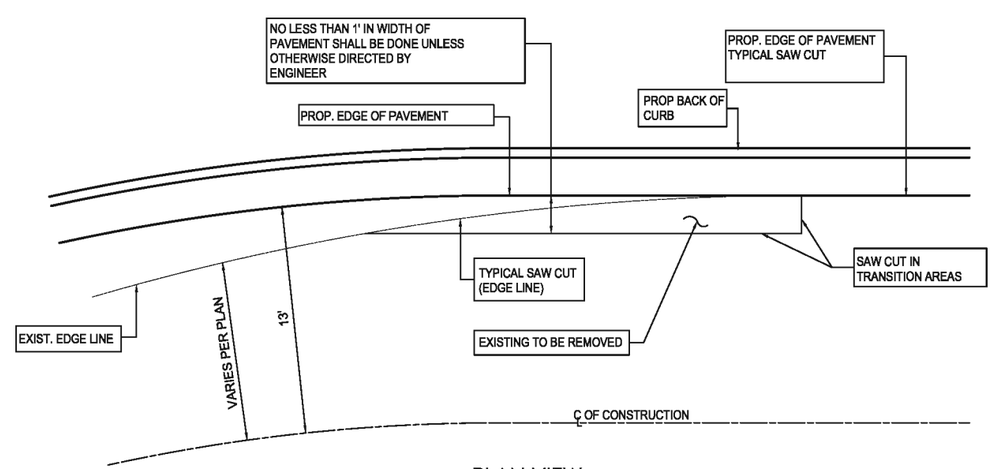
1. ITEM 448-1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22
2. ITEM 448-VARIOUS DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-28, (6" MAX. TO 0"MIN.)
3. ITEM 301-9" ASPHALT CONCRETE BASE
4. ITEM 304-6" AGGREGATE BASE
5. ITEM 407-TACK COAT
6. ITEM 204 - SUBGRADE COMPACTION
7. ITEM 448spec-6" THICK SHOULDER MATERIAL (ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-2)
8. ITEM 254-VARIES PAVEMENT PLANING (1 1/5" MAX. TO 0" MIN.)
9. ITEM 659-SEEDING AND MULCHING
10. ITEM 690spec-FIBERGLASS/POLYESTER INTERLAYER MAT (2' WIDE)
11. ITEM 609-CURB, TYPE 2



JOINT DETAIL

NOTE:

ALL JOINTS WITH EXISTING PAVEMENT SHALL RECIEVE ITEM 705.04 JOINT SEALER WORK AND MATERIAL SHALL BE INCLUDE IN COST OF ITEM 448 ASPHALT CONCRETE SURFACE COURSE TYPE 1, PG 70-22.



PLAN VIEW

RICHVILLE DR. SAW CUT IN TRANSITION AREAS

NW NE SW SE

VERTICAL IN FEET 0 2 4

HORIZONTAL SCALE IN FEET 0 2 4

CHECKED BY:

DATE: Sept, 2016

DRAWN BY: FPW

DATE: Sept, 2016

REVISIONS: DATE	DESCRIPTION

Richville Dr. SE Improvement Project
Typical Sections
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon City of Champions

DRAWING NAME: Sht4-RichTyp1

CITY NUMBER: 17st03

* 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 800-364-8057	AQUA WATER P.O. BOX 584 MASSILLON, OH. 44646 (330) 833-4156	OHIO EDISON STARK DIVISION 2600 S ERIE ST. (330) 830-7085	MASSILLON CABLE P.O. BOX 814 MASSILLON, OH. 44646 (330) 833-4134	GREAT LAKES 104 6TH ST SW CANTON, OH. 44702 (330) 456-2454
CITY OF MASSILLON SANITARY SEWER 151 LINCOLN WAY EAST MASSILLON, OH 44646 (330) 630-1722	AT&T COMMUNICATIONS 2535 E. 40TH AVE. DENVER, CO 80205-3601 (800) 852-3786	DOMINION EAST OHIO GAS COMPANY 4725 SOUTHWAY ST SW 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 330832-4337	JACKSON FIRE DEPARTMENT 330-832-1553	MASSILLON POLICE DEPARTMENT 330-830-1735	MASSILLON SCHOOL BUS GARAGE 330-830-1849
JACKSON TOWNSHIP HALL 330-632-7416	PERRY FIRE DEPARTMENT 330478-5121	JACKSON POLICE DEPARTMENT 330-497-7440	JACKSON SCHOOL BUS GARAGE 330-630-8042
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.

CONTRACTOR AVAILABILITY

THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A 24 HOUR PHONE NUMBER WHERE THE CONTRACTOR SHALL BE AVAILABLE FOR EMERGENCIES.

PRESERVATION OF PRIVATE PROPERTY

THE CONTRACTOR SHALL PERFORM WORK AS TO NOT DISTURB, DAMAGE OR DESTROY ANY TELEPHONE OR POWER POLES, SIGNS, LANDSCAPING ITEMS, ETC.. ANY ITEM DAMAGED OR DESTROYED SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE 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.

PROFILE AND ALIGNMENT

THE PROPSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. THE PROPOSED ASPHALT CONCRETE OVERLAY SHALL BE AS SHOWN ON THE TYPICAL SECTIONS.

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.

ITEM 603SPEC - PIPE CLEANOUT

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

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

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.

NW NE SW SE N

VERTICAL IN FEET 1 .5 0

1 .5 0
HORIZONTAL SCALE IN FEET

CHECKED BY: DGK
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DATE: SEPT, 2016

REVISIONS:
DATE DESCRIPTION

Richville Dr. SE Improvement Project
General Notes
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: Sht5-RichGN1
CITY NUMBER: 17st03

RESTORATION

FOR SANITARY SEWER INSTALLED, TESTED, AND ACCEPTED UP TO MAY 15TH OF ANY CALENDAR YEAR, RESTORATION SHALL BE COMPLETE BY JUNE 30th OF THAT YEAR. FOR INSTALLATION OF SANITARY SEWER TESTED AND ACCEPTED FROM MAY 15th TO SEPTEMBER 30th OF ANY CALENDAR, YEAR RESTORATION SHALL BE COMPLETE BY NOVEMBER 15th OF THAT CALENDAR YEAR. FOR SANITARY SEWER INSTALLED, TESTED, AND ACCEPTED AFTER NOVEMBER 15TH OF ANY CALENDAR YEAR. RESTORATION SHALL BE COMPLETE BY MAY 15th OF THE NEXT CALENDAR YEAR. THAT CALENDAR YEAR. FOR SANITARY SEWER INSTALLED, TESTED, AND ACCEPTED AFTER NOVEMBER 15TH OF ANY CALENDAR YEAR. RESTORATION SHALL BE COMPLETE BY MAY 15th OF THE NEXT CALENDAR YEAR.

ALL SOIL AREAS DISTURBED BY THE CONTRACTOR SHALL BE TOPSOILED, SEEDED AND MULCHED. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR EACH ITEM OF AFFECTED WORK. TOPSOIL, SEEDING AND MULCHING SHALL NOT BE A SEPARATE PAY ITEM. THIS INCLUDES BACKFILLING, SEEDING AND MULCHING ALONG THE EDGE OF ALL PAVEMENT RESTORATION.

CONTRACTOR TO REPLACE ALL PAVEMENT MARKINGS. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR PAVEMENT.

CONTRACTOR TO USE HOT APPLIED JOINT CRACK SEALER ON ASPHALT PAVEMENT AT ALL ENDS AND INTERSECTIONS.

CONTRACTOR'S EQUIPMENT - OPERATION STORAGE

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

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.

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.

DOWN SPOUTS

ALL DOWN SPOUTS UNABLE TO BE CONNECTED TO THE STORM LATERAL SHALL BE CORE DRILLED THROUGH THE CURB AS PER ENGINEER'S DIRECTION.

CURB OPENING SHALL NOT GREATER THAN A 3 1/2" DIAMETER.

THE WORK ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 609.

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. 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.

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 UNLESS OTHERWISE STATED BY CITY REPRESENTATIVE.

CONCRETE REMOVAL

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

ITEM 203 EXCAVATION INCLUDING ROADWAY

ITEM 614SPEC MAINTAINING TRAFFIC

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING AND MAINTAINING SAFE AND EFFECTIVE TRAFFIC CONTROL 24 HOURS A DAY FOR THE DURATION OF THIS PROJECT. ALL TRAFFIC CONTROL DEVICES (PAVEMENT MARKINGS, SIGNS, BARRELS, CONES, ETC.) SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.

THE CONTRACTOR SHALL DEVISE A MAINTENANCE OF TRAFFIC SCHEME WHICH SHALL BE STAMPED BY A PROFESSIONAL ENGINEER, AND PRESENT IT TO THE ENGINEER FOR APPROVAL. THE MAINTENANCE OF TRAFFIC SCHEME SHALL PRESENT, IN GENERAL, THE METHOD FOR CONDUCTING THE REQUIRED WORK IN A SAFE AND EFFICIENT MANNER.

THE PLANS SHALL INCLUDE THE FOLLOWING COMPONENTS:

PLAN VIEW AT AN APPROPRIATE SCALE TO SHOW:
- WORK AREA
- BEGIN/END STATIONING OF TAPERS, TEMPORARY MARKINGS, ETC.
- TEMPORARY PAVEMENT
- LOCATIONS OF SIGNS (EXISTING OVERHEAD SIGNS AND ALL PROPOSED, COVERED, OR MODIFIED SIGNS)
- LOCATIONS OF TYPICAL SECTIONS
- REFERENCES TO APPLICABLE STANDARD DRAWINGS

TYPICAL SECTIONS SHOWING:
- LANE WIDTHS, PAVEMENT MARKINGS, DRUMS, PCB, ETC.
- LIMITING STATIONS
- WORK AREA AND DROP-OFFS

SIGN DETAILS FOR PROPOSED SIGNS AND OVERLAYS/MODIFACATIONS

THE MAINTENANCE OF TRAFFIC SCHEME SHALL BE IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION, THE REFERENCED STANDARD CONSTRUCTION DRAWINGS INCLUDING DESIGNER NOTES, THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS), POLICY NO. 516-003(P) TRAFFIC MANAGEMENT IN WORK ZONES INTERSTATE AND OTHER FREEWAYS, ODOT LOCATION AND DESIGN MANUAL, VOLUME 1, AND ALL REQUIREMENTS DETAILED IN THESE PLANS.

THIS SUBMITTAL SHALL CONSIST OF THREE (3) COPIES OF THE PLANS FOR REVIEW AND DISTRIBUTION. NO WORK SHALL BEGIN AT THE LOCATION UNTIL THE MAINTENANCE OF TRAFFIC PLANS HAVE BEEN APPROVED BY THE CITY OF MASSILLON ENGINEER.

THE PROGRESS SCHEDULE WILL BE REQUIRED TO APPROVE THE MAINTENANCE OF TRAFFIC PLANS. THIS SCHEDULE OF OPERATIONS SHALL DETAIL THE CONTRACTOR'S WORK ACTIVITIES AND HIS METHODS OF MAINTAINING TRAFFIC DURING THESE ACTIVITIES. MAINTENANCE OF TRAFFIC PLANS SHALL BE PREPARED AND SUBMITTED TO THE CITY OF MASSILLON ENGINEER FOR APPROVAL. THESE PLANS SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CITY SHALL HAVE 14 CALENDAR DAYS TO REVIEW AND COMMENT ON THESE PLANS. THE CONTRACTOR SHALL NOT BEGIN ANY WORK REQUIRING TRAFFIC CONTROL UNTIL THE ENGINEER HAS GIVEN APPROVAL OF THE CONTRACTOR'S SEQUENCE OF OPERATIONS AND MAINTENANCE OF TRAFFIC PLANS.

THE MAINTENANCE OF TRAFFIC SCHEME SHALL TAKE INTO CONSIDERATION SNOW AND ICE OPERATIONS FROM DECEMBER 1 THROUGH MARCH 31. LANE SHIFTS, RESTRICTIONS, AND CLOSURES MAY NOT BE APPROVED IF THEY ADVERSELY AFFECT SNOW REMOVAL OPERATIONS.

THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN.

FINAL APPROVAL

A VIDEO IN THE FORM OF DVD WILL BE MADE BY THE CONTRACTOR AND SUBMITTED TO THE CITY OF MASSILLON ENGINEER PRIOR TO THE PROJECT COMMENCING. AFTER THE FINAL INVOICE IS SUBMITTED THE SITE SHALL BE VIDEOED AGAIN BY THE CONTRACTOR. ANY DISCREPANCIES WILL BE RESOLVED PRIOR TO FINAL PAYMENT. AS BUILT DRAWINGS SHALL BE CREATED BY THE CONTRACTOR AND SUBMITTED TO THE CITY OF MASSILLON ENGINEER IN A CLEAR AND LEGENDABLE MANNER PRIOR TO FINAL INVOICE.

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

ITEM 680spec - FIBERGLASS/POLYESTER INTERLAYER MAT (2' WIDE)

DESCRIPTION. THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING A FIBERGLASS/POLYESTER INTERLAYER MAT AS SHOWN ON THE PLANS AND/OR AT LOCATIONS DESIGNATED BY THE ENGINEER.

MATERIALS. FIBERGLASS/POLYESTER INTERLAYER MAT SHALL BE CONSTRUCTED OF A BLEND OF FIBERGLASS, POLYESTER AND ADHESIVE. IT SHALL MEET THE FOLLOWING PHYSICAL REQUIREMENTS:

PROPERTY TEST METHOD UNITS TYPICAL VALUE MASS PER UNIT AREA ASTM D 5261G/SM(OZ/SY)136 (4.0)TENSILE STRENGTH, MD ASTM D 4595-86KN/M (LB/IN) 6.1 (35)ELONGATION AT MAX. LOAD, MDASTM D 4595-86PERCENT1.5TENSILE STRENGTH, CDASTM D 4595-86KN/M(LB/IN)5.3 (30)ELONGATION AT MAX LOAD, MD ASTM D 4595-86PERCENT1.5 MELTING POINT ASTM D276'C ('F)>230(>450) ASPHALT ABSORPTION TEX-616-JGAL/SY0.21 SHRINK AGETEX-616-J PERCENT 0

NOTE CONDITIONS FOR TENSILE STRENGTH MEASUREMENTS:
SAMPLE WIDTH: 8 INCHES GAGE LENGTH:

A. ALL MAT MANUFACTURING PROCEDURES SHALL BE ISO (INTERNATIONAL STANDARDS ORGANIZATION)-9002 CERTIFIED
B. THE MAT MANUFACTURER SHALL FURNISH CERTIFIED TEST DATA COVERING PHYSICAL AND ENGINEERING PROPERTIES OF THE MAT. A LETTER OF CERTIFICATION STATING THE MAT COMPLIES WITH SPECIFICATION REQUIREMENTS SHALL BE FURNISHED WITH EACH SHIPMENT.
C. SPECIAL CONSIDERATION IF WARRANTED FOR RECYCLED MATERIALS CAN BE ALLOCATED.

THE FABRIC SHALL NOT BE DEGRADED BY SUNLIGHT BUT SHOULD BE PROTECTED FROM MOISTURE DURING STORAGE.

THE ASPHALT SEALANT SHALL BE PG64-22 MEETING THE REQUIREMENTS OF 702.01.

CERTIFICATION SHALL BE FURNISHED IN ACCORDANCE WITH 101.061 BEFORE THE FABRIC IS PLACED. THE ENGINEER MAY REQUIRE SAMPLING FOR TESTING PURPOSES AS DIRECTED BY THE LABORATORY.

NW NE SW SE N

VERTICAL IN FEET 1 .5 0

HORIZONTAL SCALE IN FEET 1 .5 0

CHECKED BY: DGK
DATE: Sept, 2016
DRAWN BY: FPW
DATE: Sept, 2016

REVISIONS: DESCRIPTION DATE

Richville Dr. SE Improvement Project
General Notes
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon City of Champions

DRAWING NAME: Sht6-RichGN2.DWG
CITY NUMBER: 17ST03

GENERAL SUMMARY

SHEET No. 4	5	8	9	10	12	13	14	15	17	45b	ITEM	GRAND TOTAL	UNIT	DESCRIPTION
														ROADWAY
	1										201	1	LUMP	CLEARING AND GRUBBING
						31	136	30			202	300	LF	PIPE REMOVED
											202	2	EACH	STRUCTURE REMOVED
											203	2239.70	CY	EXCAVATION INCLUDING ROADWAY
											203	1227.30	CY	EMBANKMENT
											204	8582.00	SY	SUBGRADE COMPACTION
											204	16.00	HOURS	PROOF ROLLING
														EROSION CONTROL
	1										207SPEC	1	LUMP	EROSION CONTROL
	1										659SPEC	1	LUMP	TOPSOIL, SEEDING AND MULCHING
														PAVEMENT
											251	300	SY	PARTIAL DEPTH PAVEMENT REPAIR
											253	300	SY	FULL DEPTH PAVEMENT REPAIR
											254	3038	SY	PAVEMENT PLANING
		1339									301	1339	CY	ASPHALT CONCRETE BASE
		895									304	895	CY	AGGREGATE BASE
		2278									407	2278	GAL	TACK COAT
		1431									441	1431	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22
		1350									441	1350.0	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
		200									448SPEC	200	SY	ASPHALT DRIVE
		226									452	226	SY	6" NONREINFORCED CONCRETE PAVEMENT
		176									452	176	SY	9" NONREINFORCED CONCRETE PAVEMENT
											608	50	SF	CURB RAMP ADA SPEC
			28	12					450		608	490	SF	CONCRETE WALK
		16177									609	16177	LF	CONCRETE CURB GUTTER, TYPE 2
16288											690SPEC	3620	SY	2' FIBERGLASS/POLYESTER INTERLAYER MAT
											705	200	GAL.	JOINT SEALER
														DRAINAGE
							35				611	35	EACH	12" TYPE B CONDUIT
					15					14	611	29	EACH	24" TYPE B CONDUIT
					1						611	1	EACH	ODOT HW-3 TYPE A
							1				611	1	EACH	CATCH BASIN MASS7505
			1								611	1	EACH	CATCH BASIN MASSV5622
						1	3	1			611	5	EACH	CATCH BASIN MASS V5622-R
														SANITARY
											611	0	EACH	SANITARY MANHOLE REHABILITATION
														TRAFFIC CONTROL
										2.03	643	2.03	MILE	4" YELLOW CENTERLINE, TYPE 2, (2-DIRECTION, NO-PASSING)
										0.36	643	0.36	MILE	4" WHITE EDGE LINE, TYPE 2, (2-DIRECTION)
										580	644	580	LF	6" CHANNELIZING LANE TYPE 2
										60	644	60	LF	12" STOP LINE, TYPE 2
										100	644	100	LF	8" CROSSWALK LINE, TYPE 2
										6	644	6	EACH	LANE ARROW, TYPE 2
										1	630SPEC	1	LUMP	SCHOOL ZONE MARKING
														MAINTENANCE OF TRAFFIC
	1										614SPEC	LUMP	LUMP	MAINTAINING TRAFFIC
	1										619	LUMP	LUMP	FIELD OFFICE
	1										623	LUMP	LUMP	CONSTRUCTION STAKING
	1										624	LUMP	LUMP	MOBILIZATION

NW NE SW SE N

VERTICAL SCALE IN FEET 0 0.5 1

HORIZONTAL SCALE IN FEET 0 0.5 1

CHECKED BY: JP
DATE: May, 2018
DRAWN BY: FPW
DATE: May, 2018

REVISIONS: DATE | DESCRIPTION

Richville Dr. SE Improvement Project
Calculations
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: Sh08-RichSum
CITY NUMBER: 17s103

ITEM 301 BITUMINOUS AGGREGATE BASE

(WA-1) = (876.97) (9/12) (1/27)	16.3 CU YD
(WA-2) = (1575.03) (9/12) (1/27)	29.2 CU YD
(WA-3) = (2746.94) (9/12) (1/27)	50.9 CU YD
(WA-4) = (2250.02) (9/12) (1/27)	41.7 CU YD
SHT - 10	
(WA-5) = (1262.5) (9/12) (1/27)	23.4 CU YD
(WA-6) = (1000) (9/12) (1/27)	18.6 CU YD
(WA-7) = (1650) (9/12) (1/27)	30.6 CU YD
(WA-8) = (1249.72) (9/12) (1/27)	23.2 CU YD
SHT - 11	
(WA-9) = (749.92) (9/12) (1/27)	13.9 CU YD
(WA-10) = (1399.93) (9/12) (1/27)	25.9 CU YD
(WA-11) = (499.54) (9/12) (1/27)	9.3 CU YD
(WA-12) = (139.63) (9/12) (1/27)	2.6 CU YD
(WA-13) = (1411.96) (9/12) (1/27)	26.2 CU YD
SHT - 12	
(WA-14) = (600.76) (9/12) (1/27)	11.2 CU YD
(WA-15) = (2322.11) (9/12) (1/27)	43.0 CU YD
(WA-16) = (3456.37) (9/12) (1/27)	64.0 CU YD
(WA-17) = (499.01) (9/12) (1/27)	9.3 CU YD
SHT - 13	
(WA-18) = (4461.54) (9/12) (1/27)	82.7 CU YD
(WA-19) = (498.06) (9/12) (1/27)	9.3 CU YD
(WA-20) = (1317.92) (9/12) (1/27)	24.4 CU YD
(WA-21) = (1062.45) (9/12) (1/27)	19.7 CU YD
SHT - 14	
(WA-22) = (1210.34) (9/12) (1/27)	22.5 CU YD
(WA-23) = (38.48) (9/12) (1/27)	0.8 CU YD
(WA-24) = (2000) (9/12) (1/27)	37.1 CU YD
(WA-25) = (657.02) (9/12) (1/27)	12.2 CU YD
(WA-26) = (1650) (9/12) (1/27)	30.6 CU YD
SHT - 15	
(WA-27) = (1181.9) (9/12) (1/27)	21.9 CU YD
(WA-28) = (173.0) (9/12) (1/27)	3.2 CU YD
(WA-29) = (357.17) (9/12) (1/27)	6.6 CU YD
(WA-30) = (93.31) (9/12) (1/27)	1.8 CU YD
(WA-31) = (500) (9/12) (1/27)	9.3 CU YD
(WA-32) = (2050) (9/12) (1/27)	38 CU YD
SHT - 16	
(WA-33) = (500) (9/12) (1/27)	9.3 CU YD
(WA-34) = (61.44) (9/12) (1/27)	1.2 CU YD
(WA-35) = (1365.10) (9/12) (1/27)	25.3 CU YD
(WA-36) = (310.36) (9/12) (1/27)	5.8 CU YD
(WA-37) = (492.27) (9/12) (1/27)	9.2 CU YD
(WA-38) = (1407.99) (9/12) (1/27)	26.1 CU YD
SHT - 17	
(WA-39) = (1500) (9/12) (1/27)	27.8 CU YD
(WA-40) = (1000) (9/12) (1/27)	18.6 CU YD
(WA-41) = (510) (9/12) (1/27)	9.5 CU YD
(WA-42) = (109.72) (9/12) (1/27)	2.1 CU YD
TOTAL ITEM 301 =	1338.85 CU YD
USED:	1339 CU YD

ITEM 304 AGGREGATE BASE

(WA-1) = (598.89) (6/12) (1/27)	16.3 CU YD
(WA-2) = (700.00) (6/12) (1/27)	29.2 CU YD
(WA-3) = (1497.00) (6/12) (1/27)	50.9 CU YD
(WA-4) = (1000.00) (6/12) (1/27)	41.7 CU YD
SHT - 10	
(WA-5) = (2512.50) (6/12) (1/27)	23.4 CU YD
(WA-6) = (2250.00) (6/12) (1/27)	18.6 CU YD
(WA-7) = (3089.53) (6/12) (1/27)	30.6 CU YD
(WA-8) = (2249.54) (6/12) (1/27)	23.2 CU YD
SHT - 11	
(WA-9) = (1999.92) (6/12) (1/27)	13.9 CU YD
(WA-10) = (2649.93) (6/12) (1/27)	25.9 CU YD
(WA-11) = (1748.24) (6/12) (1/27)	9.3 CU YD
(WA-12) = (279.87) (6/12) (1/27)	2.6 CU YD
(WA-13) = (2264.50) (6/12) (1/27)	26.2 CU YD
SHT - 12	
(WA-14) = (1856.50) (6/12) (1/27)	11.2 CU YD
(WA-15) = (3606.17) (6/12) (1/27)	43.0 CU YD
(WA-16) = (4709.19) (6/12) (1/27)	64.0 CU YD
(WA-17) = (1746.19) (6/12) (1/27)	9.3 CU YD
SHT - 13	
(WA-18) = (5717.08) (6/12) (1/27)	82.7 CU YD
(WA-19) = (1742.53) (6/12) (1/27)	9.3 CU YD
(WA-20) = (2572.10) (6/12) (1/27)	24.4 CU YD
(WA-21) = (2308.27) (6/12) (1/27)	19.7 CU YD
SHT - 14	
(WA-22) = (2460.39) (6/12) (1/27)	22.5 CU YD
(WA-23) = (186.32) (6/12) (1/27)	0.8 CU YD
(WA-24) = (3250.00) (6/12) (1/27)	37.1 CU YD
(WA-25) = (2062.36) (6/12) (1/27)	12.2 CU YD
(WA-26) = (2900.00) (6/12) (1/27)	30.6 CU YD
SHT - 15	
(WA-27) = (1946.03) (6/12) (1/27)	21.9 CU YD
(WA-26) = (296.36) (6/12) (1/27)	3.2 CU YD
(WA-29) = (1143.29) (6/12) (1/27)	6.6 CU YD
(WA-30) = (250.41) (6/12) (1/27)	1.8 CU YD
(WA-31) = (1750.00) (6/12) (1/27)	9.3 CU YD
(WA-32) = (3299.73) (6/12) (1/27)	38 CU YD
SHT - 16	
(WA-33) = (1750.00) (6/12) (1/27)	9.3 CU YD
(WA-34) = (204.55) (6/12) (1/27)	1.2 CU YD
(WA-35) = (2239.07) (6/12) (1/27)	25.3 CU YD
(WA-36) = (927.37) (6/12) (1/27)	5.8 CU YD
(WA-37) = (872.47) (6/12) (1/27)	9.2 CU YD
(WA-38) = (2654.52) (6/12) (1/27)	26.1 CU YD

CONTINUE ITEM 304 AGGREGATE BASE

SHT - 17	
(WA-39) = (2750.00) (6/12) (1/27)	27.8 CU YD
(WA-40) = (2250.00) (6/12) (1/27)	18.6 CU YD
(WA-41) = (935.00) (6/12) (1/27)	9.5 CU YD
(WA-42) = (246.86) (6/12) (1/27)	2.1 CU YD
TOTAL ITEM 301 =	894.3 CU YD
USED:	895 CU YD

ITEM 407 TACK COAT

(Walnut Sta.-0+75 to Sta. 8+25) (900) (26) (1/9) (0.08)	208 GAL
(Walnut Sta. 8+25 to Sta. 10+50) (225) [(26+39) 1/2] (1/9) (0.08)	21.7 GAL
(Walnut / Richville Sta. 10+50 to Sta. 13+89.06) (339.06) (39) (1/9) (0.08)	117.54 GAL
(Richville Sta. 13+89.06 to Sta. 16+68.05) (278.99) [(39+26) 1/2] (1/9) (0.08)	80.60 GAL
(Richville Sta. 16+68.05 to Sta. 96+70) (8001.95) (26) (1/9) (0.08)	1849.34 GAL
TOTAL ITEM 407 =	2277.18 Gal.
USED:	2278 Gal.

ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 (448)

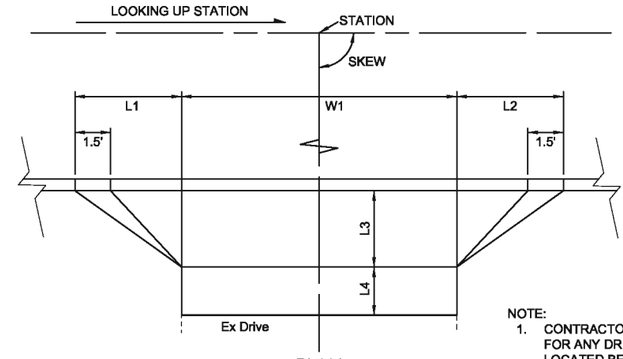
(Walnut / Richville Sta. 11+50 to Sta. 13+89.06) (239.06) (39) (0.125) (1/27)	43.17 CU YD
(Richville Sta. 13+89.06 to Sta. 16+68.05) (278.99) [(39+26) 1/2] (0.125) (1/27)	41.98 CU YD
(Richville Sta. 16+68.05 to Sta. 96+70) (6001.95) (26) (0.125) (1/27)	963.20 CU YD
TOTAL ITEM 448 =	1430.30 CU YD
USED:	1431 CU YD

ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG 64-22

(Walnut Sta.-0+75 to Sta. 8+25) (900) (26) (0.125 (1/27)	108.33 CU YD
(Walnut Sta. 8+25 to Sta. 10+50) (225) [(26+39) 1/2] (0.125) (1/27)	33.85 CU YD
(Walnut / Richville Sta. 10+50 to Sta. 13+89.06) (339.06) (39) (0.125) (1/27)	61.22 CU YD
(Richville Sta. 13+89.06 to Sta. 16+68.05) (278.99) [(39+26) 1/2] (0.125) (1/27)	41.98 CU YD
(Richville Sta. 16+66.05 to Sta. 96+70) (6001.95) (26) (0.125) (1/27)	963.20 CU YD
(Jackson Sta. 64+46.06 to Sta. 65+85) (2522.40) (0.125) (1/27)	11.68 CU YD
(Richville Sta. 96+70 to Sta. 100+00) (330) (24) (0.125) (1/27)	36.67 CU YD
(Richville Sta. 100+00 to Sta. 101+30) (130) [(24+36) 1/2] (0.125) (1/27)	18.06 CU YD
(Jackson Sta. 64+46.06 to Sta. 65+85) (442) (36) (0.125) (1/27)	73.67 CU YD
TOTAL ITEM 448 =	1348.65 CU YD
USED:	1350 CU YD

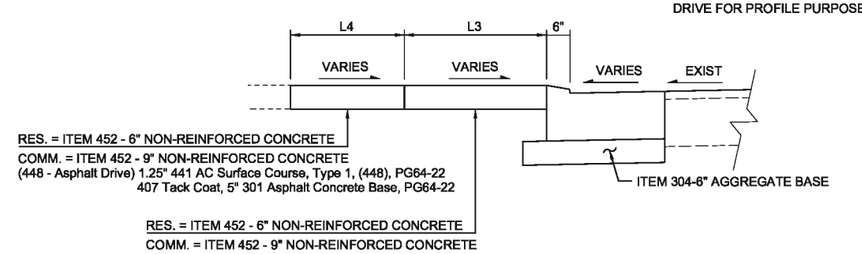
ITEM 609 CURB, TYPE 2

Right	
Richville Sta. 11+50 to Sta. 35+55	2405 LF
Richville Sta. 36+60 to Sta. 73+12	3652 LF
Richville Sta. 74+40 to Sta. 80+55	615 LF
Richville Sta. 51+53 to Sta. 95+62	1409 LF
Left	
Richville Sta. 13+89.06 to Sta. 73+55	2405 LF
Richville Sta. 74+50 to Sta. 87+50	3652 LF
Richville Sta. 88+40 to Sta. 96+70	615 LF
TOTAL ITEM 448 =	16177 LF



PLAN

NOTE:
1. CONTRACTOR SHALL BE RESPONIBLE FOR ANY DRIVE RESTORATION LOCATED BEYOND (L-3). (L-4) QUANTITY SHALL BE PAID FOR ONLY TO ADJUST DRIVE FOR PROFILE PURPOSES ONLY.



SECTION VIEW

REF. No.	STATION	SIDE	SKEW	L-1	L-2	L-3	L-4	W-1	452 6" NON-REINFORCED CONCRETE PAVEMENT	452 9" NON-REINFORCED CONCRETE PAVEMENT	448spec ASPHALT DRIVE
									SY	SY	SY
DR-1	13+58.47	RT	90°00'00"	5.5	5.5	4		11.5	7.6		
DR-2	16+58.81	LT	90°00'00"	5.5	5.5	4		28	14.9		
DR-3	22+07.51	RT	90°00'00"	5.5	5.5	4		8.5	6.3		
DR-4	22+60	RT	90°00'00"	5.5	5.5	4		9	6.5		
DR-5	23+52.81	RT	90°00'00"	5.5	5.5	4		14	8.7		
DR-6	24+57.62	LT	90°00'00"	5.5	5.5	4		15.5	9.4		
DR-7	38+11.87	RT	90°00'00"	5.5	5.5	4		15.5	9.4		
DR-6	38+68.33	LT	90°00'00"	5.5	5.5	4		15.5	9.4		
DR-9	42+45	RT	90°00'00"	5.5	6	4		19		11.5	
DR-10	43+19.43	RT	90°00'00"	5.5	9	4		17		10.8	
DR-11	43+73.08	LT	90°00'00"	5.5	5.5	4		18.5		10.7	
DR-12	49+92.1	RT	90°00'00"	5.5	5.5	4		72	34.5		
DR-13	54+25.26	LT	90°00'00"	5.5	5.5	4		11.5	7.6		
DR-14	55+22.44	LT	90°00'00"	5.5	5.5	4		29	15.4		
DR-15	57+42.44	RT	90°00'00"	5.5	9	4		28	15.7		
DR-16	59+25.21	LT	90°00'00"	5.5	5.5	4		22	12.3		
DR-17	59+88.16	LT	90°00'00"	5.5	5.5	4		13.5	8.5		
DR-18	62+47+75	RT	90°00'00"	5.5	5.5	4		14	8.7		
DR-19	62+90.68	RT	90°00'00"	5.5	5.5	4		14.5	8.9		
DR-20	66+13.85	RT	90°00'00"	5.5	5.5	4		26.5	14.3		
DR-21	67+81.78	LT	90°00'00"	5.5	5.5	4		20	11.4		
DR-22	68+54.13	RT	90°00'00"	5.5	5.5	4		28		14.9	
DR-23	77+28.46	LT	90°00'00"	5.5	5.5	4		31	16.3		
DR-24	77+40.85	RT	90°00'00"	5.5	5.5	4		20.5		11.6	
DR-25	84+67.14	LT	90°00'00"	5.5	5.5	4		64		30.9	
DR-26	84+69.20	RT	90°00'00"	5.5	5.5	4		15		9.2	
DR-27	85+33.57	RT	90°00'00"	5.5	5.5	4		17.5		10.3	
DR-28	85+78.54	LT	90°00'00"	5.5	5.5	4		35		18	
DR-29	86+03.82	RT	90°00'00"	5.5	5.5	4		26		14	
DR-30	95+84.73	LT	90°00'00"	10.5	10.5	4		66		34	
TOTALS CARRIED TO GENERAL SUMMARY									225.8	175.9	200

PER ENGINEERS DIRECTION ONLY FOR THE PURPOSES OF GRADING

NW NE SW SE N

VERTICAL FEET 1 0.5 0

0 0.5 1
HORIZONTAL SCALE IN FEET

CHECKED BY: JP
DATE: Sept, 2016
DRAWN BY: FPW
DATE: Sept, 2016

REVISIONS:
DATE | DESCRIPTION

Richville Dr. SE Improvement Project
Calculations
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: Sht8–RichCalc
CITY NUMBER: 17st03

BEGIN WORK
STA. -0+75

BEGIN RESURFACING
STA. 0+75

CITY OF MASSILLON

Sherbrook St. SE – 60' R/W

Richville Dr. SE – 60' R/W

Southway Ave. SE – 60' R/W

Mohican Ave. SE – 60' R/W

PERRY TOWNSHIP

Ex R/W

Ex CB

Ex 12" Stm

Ex MH

Ex. Mast Arm W/ Controller

Ex. Post

Ex. Walk

Ex. Bush

Ex. GM

Ex. Mast Arm

Ex. Gravel Dr

Ex. Guys

Ex 12" Ditch

Ex. Gravel Dr.

BEGIN WIDENING RT
STA. 11+50

BEGIN WIDENING LT.
STA. 13+89.06

BEGIN TRANSITION
STA. 14+00, 20' LT

SAW CUT

MATCH LINE STA 15+00

Res. #1758

Res. #2528

Res. #2522

CB-1
TYPE: MASSV5622
STA. 11+69, 14' RT.
T/G = FIELD DETERMINED
*2" STM INV = EXISTING

(1) CURB CURVE DATA
P.I. = STA 14+18.13, 27' LT
Δ = 02°58'35" RT.
R = 765.00'
T = 18.14'
L = 37.95
E = 0.26'
P.C. = STA 14+00 27' LT
P.T. = STA 14+37.94, 25.97' LT

(2) CURB CURVE DATA
P.I. = STA. 16+48.90, 15' LT
Δ = 02°58'35" LT.
R = 735.00'
T = 19.09'
L = 38.18'
E = 0.25'
P.C. = STA.16+29.33, 15.99' LT
P.T. = STA. 16+67.99, 15.00' LT

Res. #1945

Richville Dr. SE – 60' R/W

Ex. Guy

Ex. Field Drive

DROP CURB
STA. 17+00, 15' LT.

Ex. Ditch

Ex. 12" Cmp

Ex. Headwall

END TRANSITION
STA. 15+00, 11' LT

Ex. 24" HDPE

Ex. Hydrant

DROP CURB
STA. 17+00, 15' RT.

Ex. Gas Marker

MATCH LINE STA 20+00

HORIZONTAL SCALE IN FEET

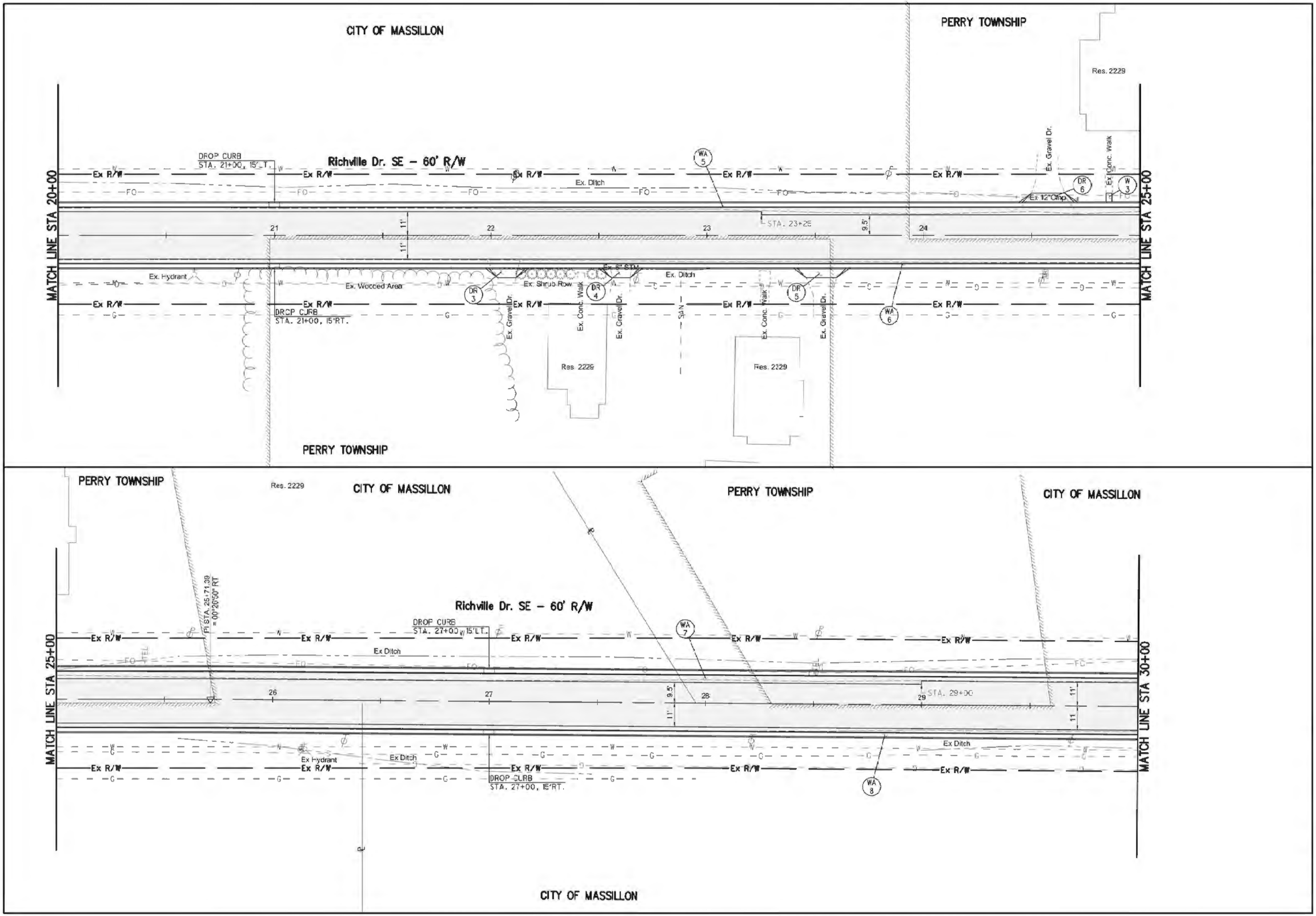
CHECKED BY: DGH
DATE: Sept. 2016
DRAWN BY: FPW
DATE: Sept. 2016

REVISIONS:
DATE DESCRIPTION

Richville Dr SE Improvement Project
Richville Dr. – Sta. 10+00.00 to Sta. 20+00.00
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME:
Sht9-Rich10-20
CITY NUMBER:
17st03



HORIZONTAL SCALE IN FEET

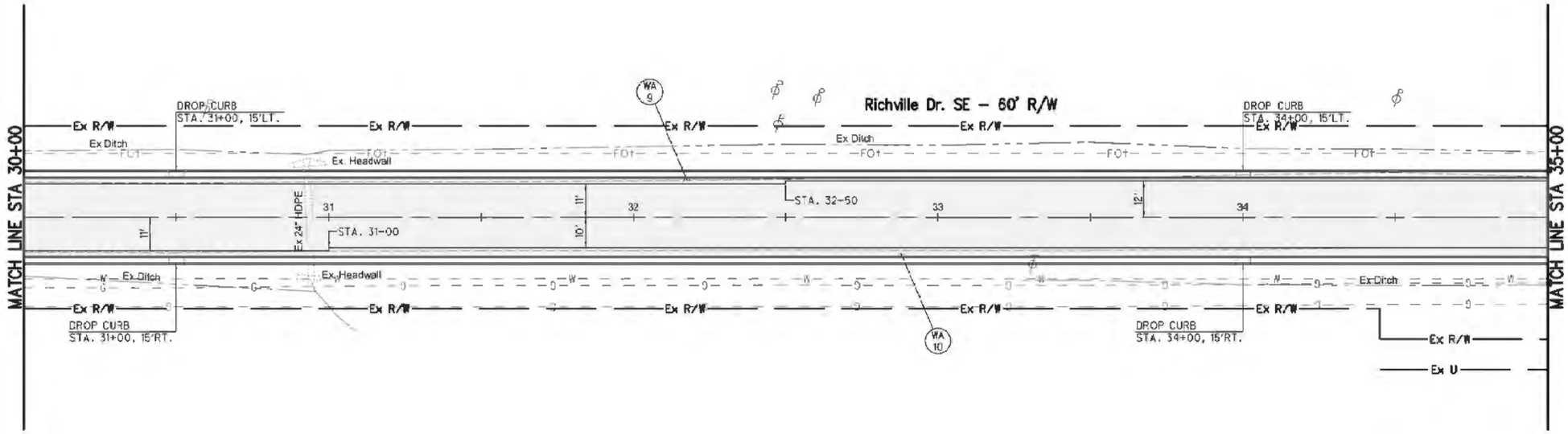
CHECKED BY: DGK
DATE: Sept. 2016
DRAWN BY: FPW
DATE: Sept. 2016

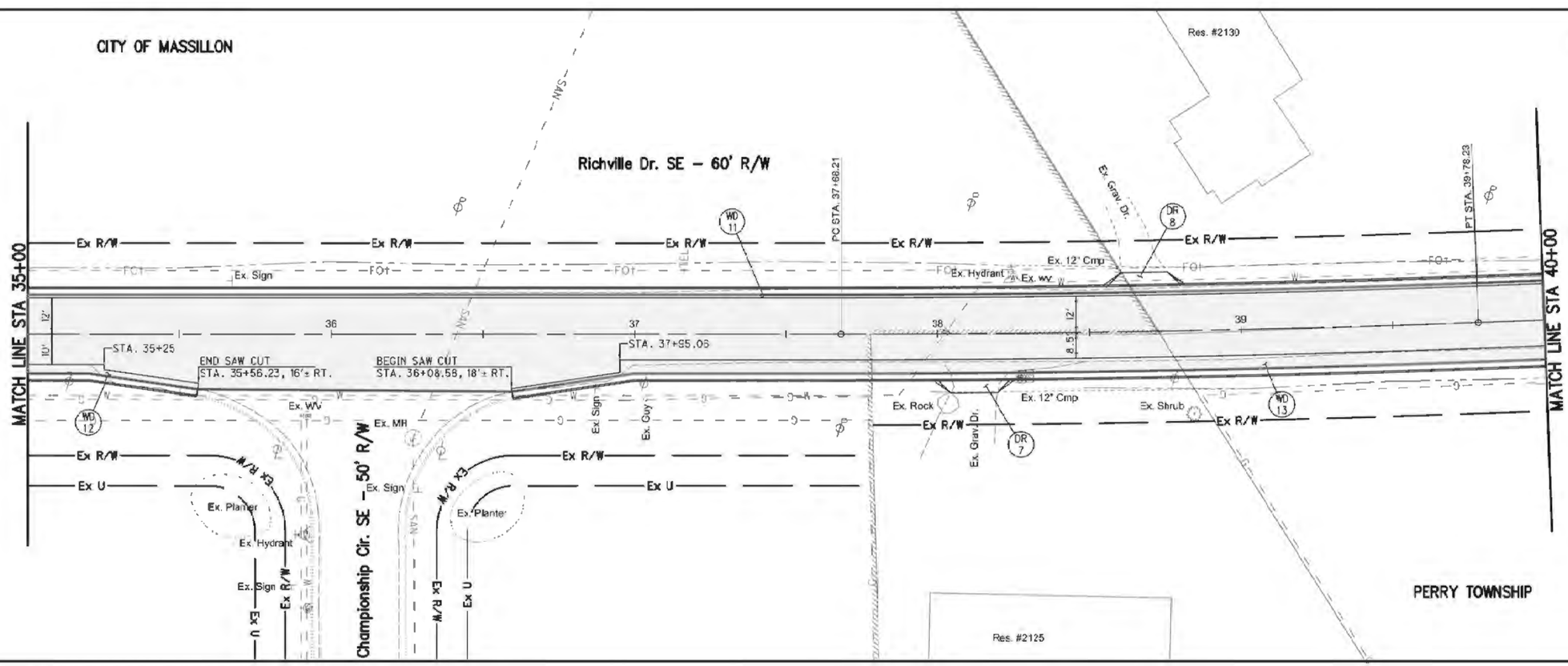
REVISIONS:
DATE DESCRIPTION

Richville Dr SE Improvement Project
Richville Dr. – Sta. 20+00.00 to Sta. 30+00.00
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: Sht10-Rick20-30P
CITY NUMBER: 17sty03





1 RICHVILLE DR. SE CURVE DATA

P.I.	=	STA. 35+73.24
Δ	=	02°06'00" LT.
R	=	5730.03'
T	=	105.02'
L	=	210.02'
E	=	0.96'
P.C.	=	STA. 37+68.21
P.T.	=	STA. 39+78.23

HORIZONTAL SCALE IN FEET

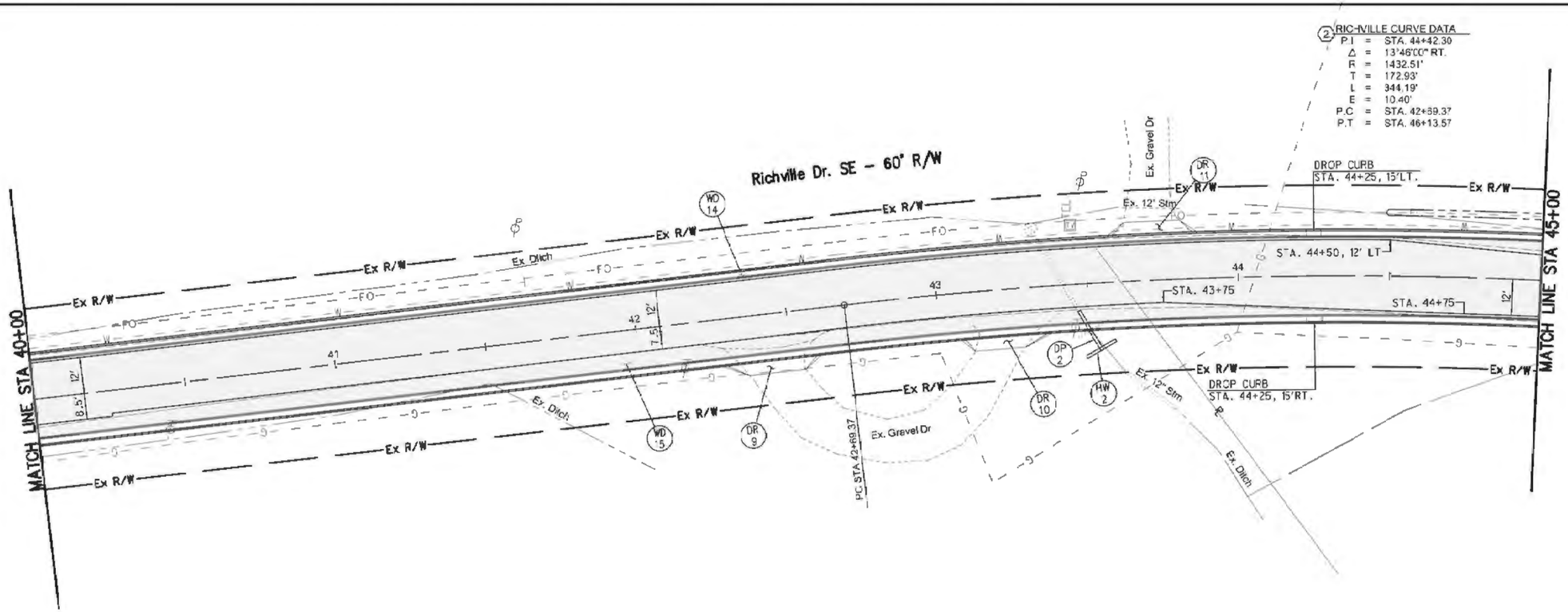
CHECKED BY: DGH
DATE: Sept. 2016
DRAWN BY: FPW
DATE: Sept. 2016

REVISIONS:
DATE | DESCRIPTION

Richville Dr SE Rehabilitation - - -
Richville Dr. - Sta. 30+00.00 to Sta. 40+00.00
City of Massillon
Stark County, Ohio

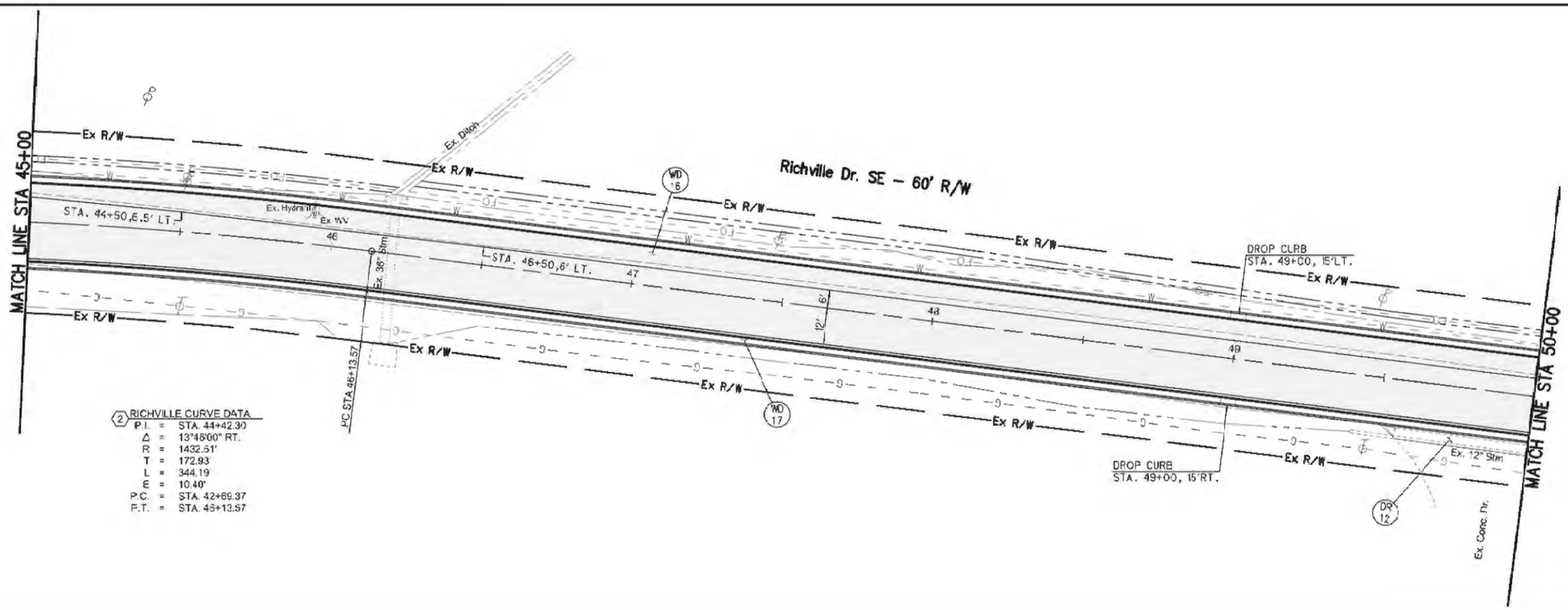
Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: Sht11-Rich30-40
CITY NUMBER: 17st03



2 RICHVILLE CURVE DATA

P.I	=	STA. 44+42.30
Δ	=	13°46'00" RT.
R	=	1432.51'
T	=	172.93'
L	=	344.19'
E	=	10.40'
P.C	=	STA. 42+69.37
P.T	=	STA. 46+13.57



2 RICHVILLE CURVE DATA

P.I.	=	STA. 44+42.30
Δ	=	13°46'00" RT.
R	=	1432.51'
T	=	172.93'
L	=	344.19'
E	=	10.40'
P.C.	=	STA. 42+69.37
P.T.	=	STA. 46+13.57

NW NE SW SE N

VERTICAL 1" = 10'

HORIZONTAL SCALE IN FEET 0 10 20

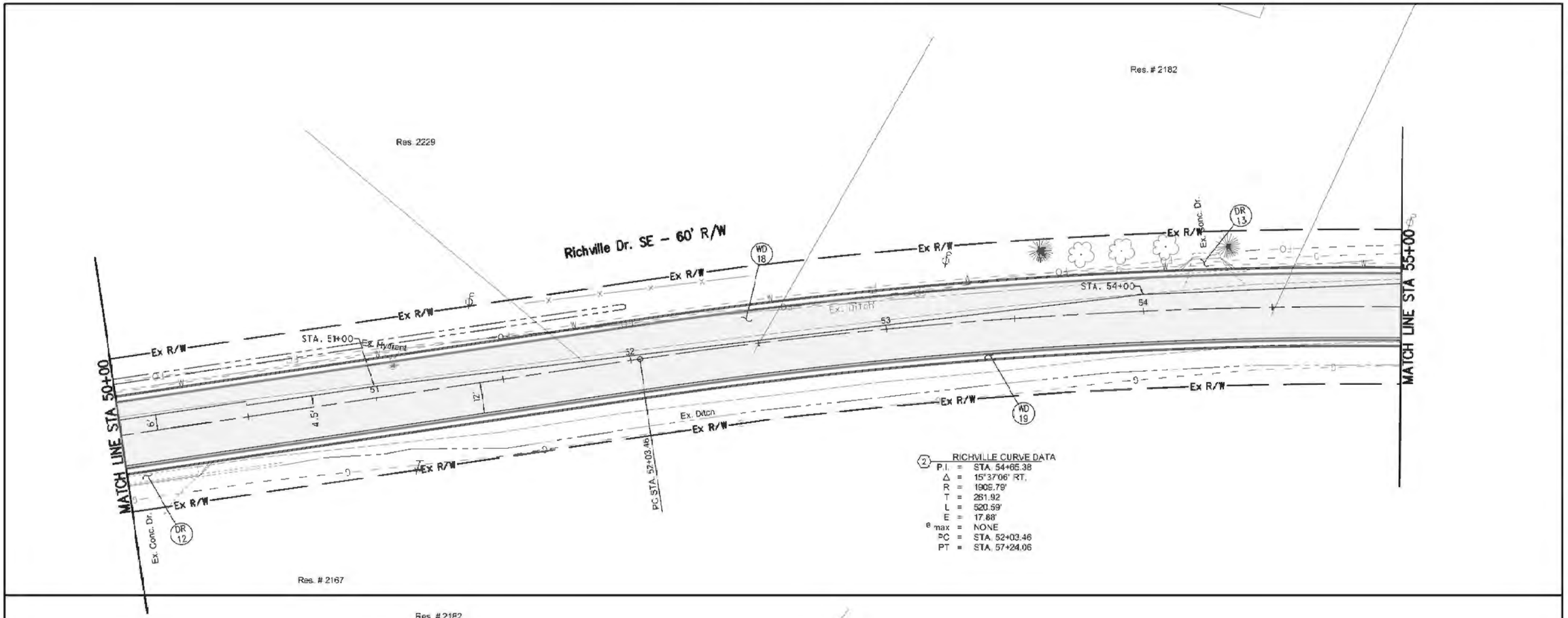
CHECKED BY: DGK
DATE: Sept. 2016
DRAWN BY: FPW
DATE: Sept. 2016

REVISIONS:
DATE DESCRIPTION

Richville Dr SE Improvement Project
Richville Dr. – Sta. 40+00.00 to Sta. 50+00.00
City of Massillon
Stark County, Ohio

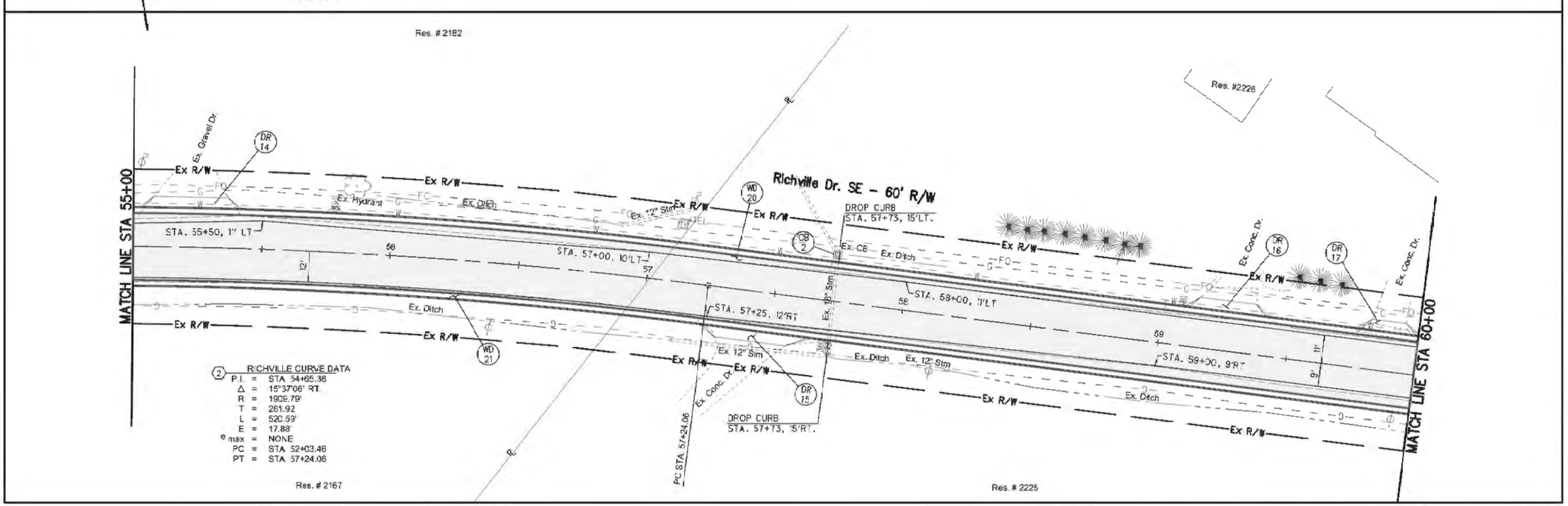
Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: Sht12–Rich40–50
CITY NUMBER: 17st03



② RICHVILLE CURVE DATA

P.I.	=	STA. 54+65.38
Δ	=	15°37'06" RT.
R	=	1909.79'
T	=	261.92
L	=	520.59'
E	=	17.88'
e_{max}	=	NONE
PC	=	STA. 52+03.46
PT	=	STA. 57+24.06



② RICHVILLE CURVE DATA

P.I.	=	STA. 54+65.38
Δ	=	15°37'06" RT.
R	=	1909.79'
T	=	261.92
L	=	520.59'
E	=	17.88'
e_{max}	=	NONE
PC	=	STA. 52+03.46
PT	=	STA. 57+24.06

HORIZONTAL SCALE IN FEET

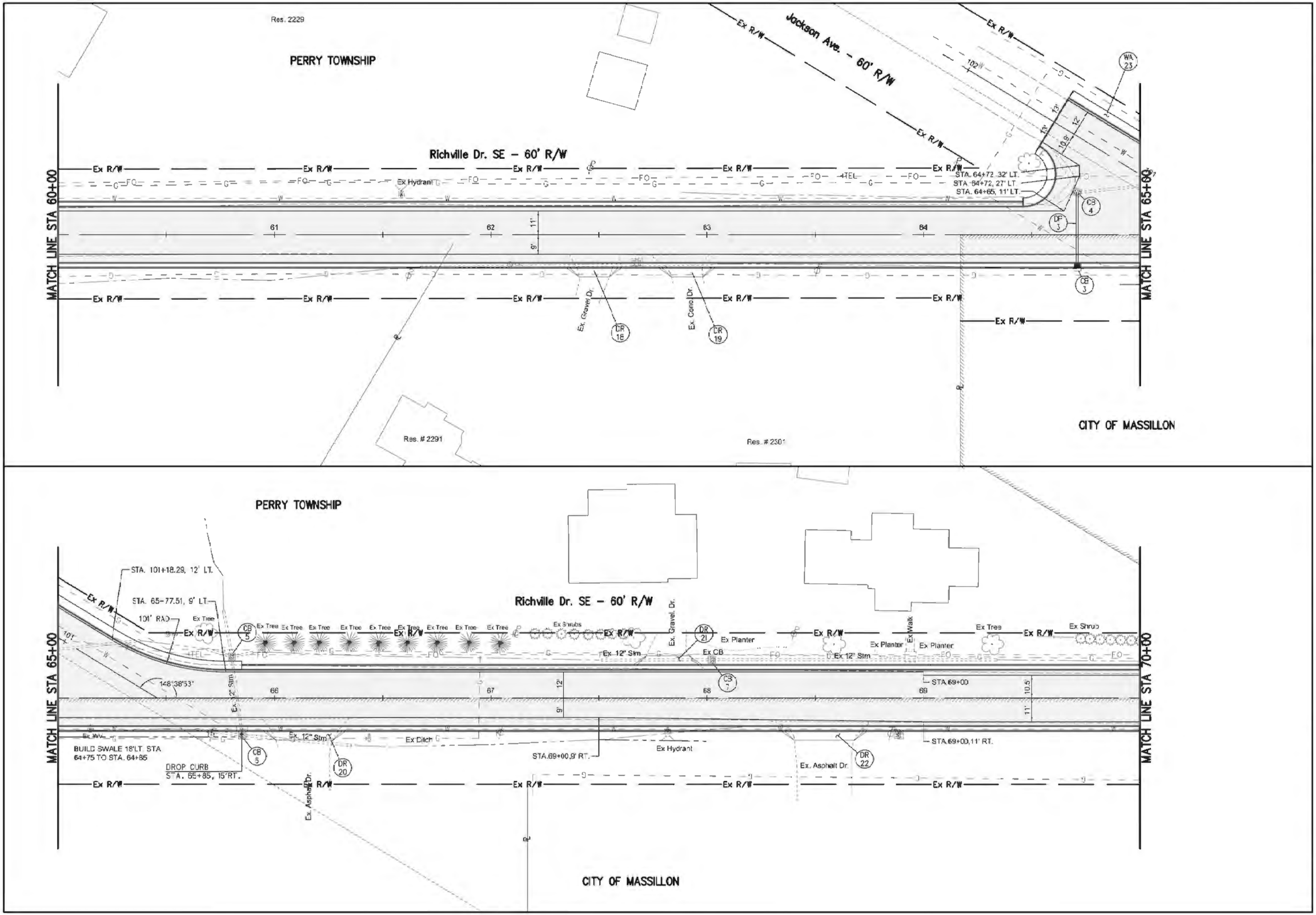
CHECKED BY: DGK
DATE: Sept. 2016
DRAWN BY: FPW
DATE: Sept. 2016

REVISIONS:
DATE DESCRIPTION

Richville Dr SE Rehabilitation
Richville Dr. – Sta. 50+00.00 to Sta. 60+00.00
City of Massillon
Stark County, Ohio

kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: Sht:3-Rich:50-60P
CITY NUMBER: 17st03



HORIZONTAL SCALE IN FEET

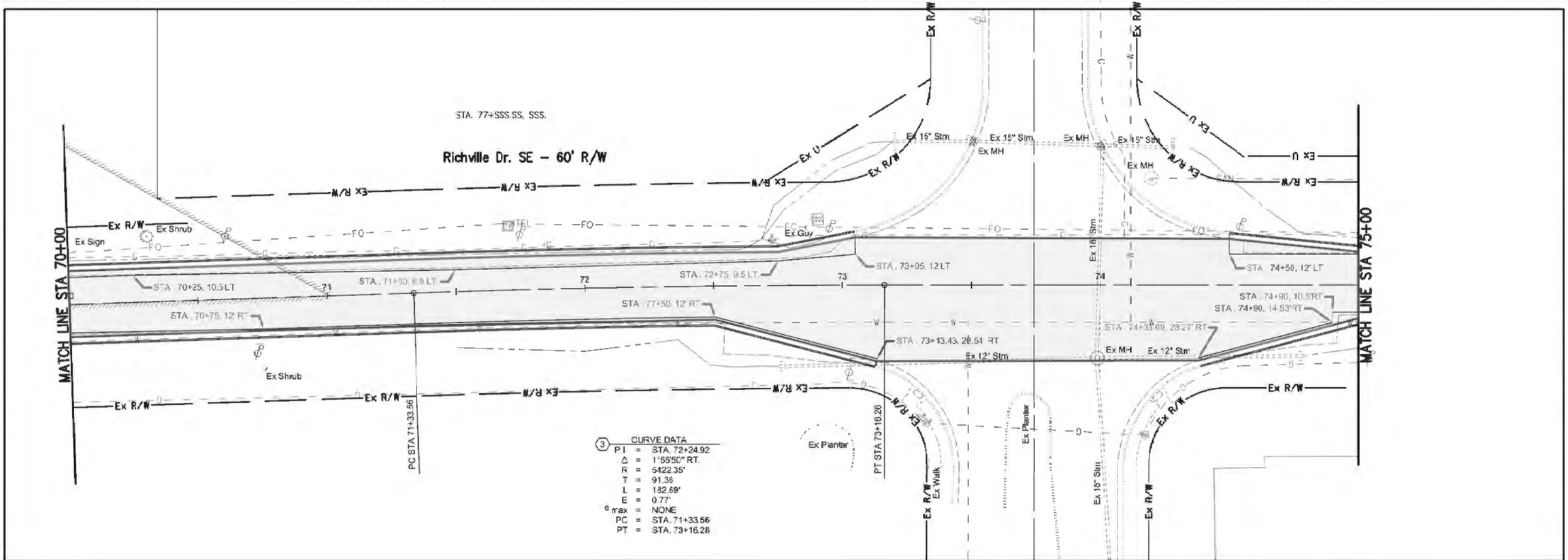
CHECKED BY: DGH
DATE: Sept. 2016
DRAWN BY: FPW
DATE: Sept. 2016

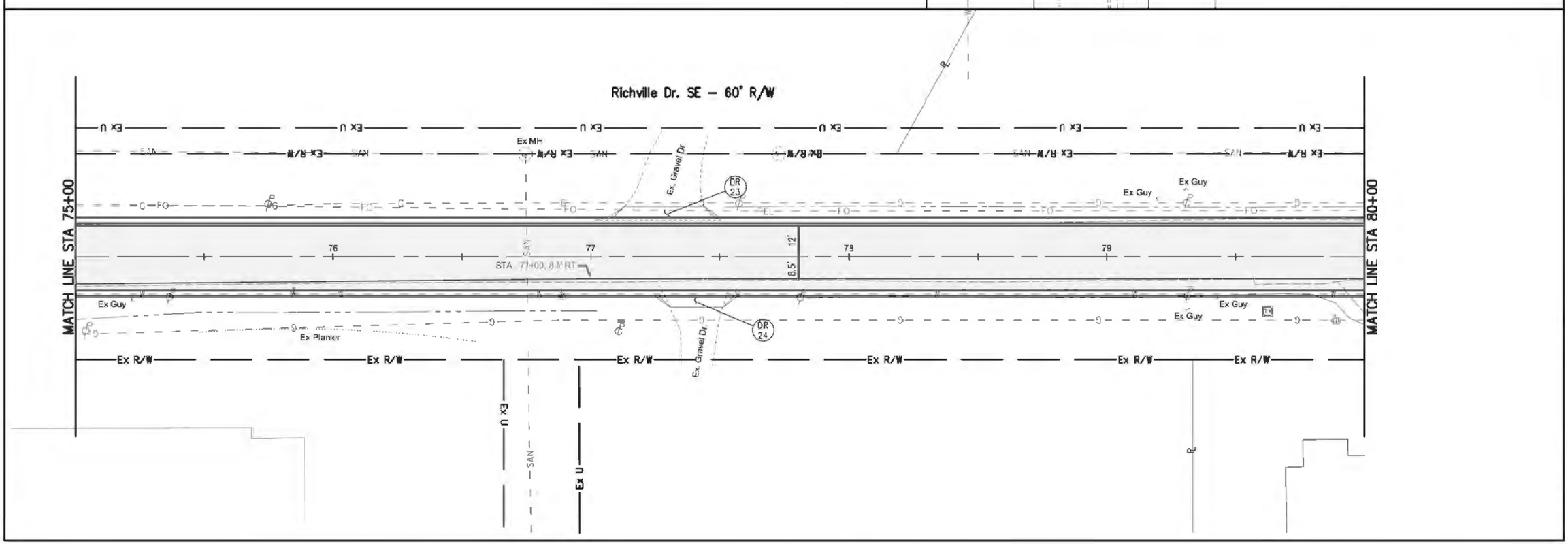
REVISIONS:
DATE DESCRIPTION

Richville Dr SE Improvement Project
Richville Dr. - Sta. 60+00.00 to Sta. 70+00.00
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: Sht14-Richpp60-70P
CITY NUMBER: 17st03





HORIZONTAL SCALE IN FEET

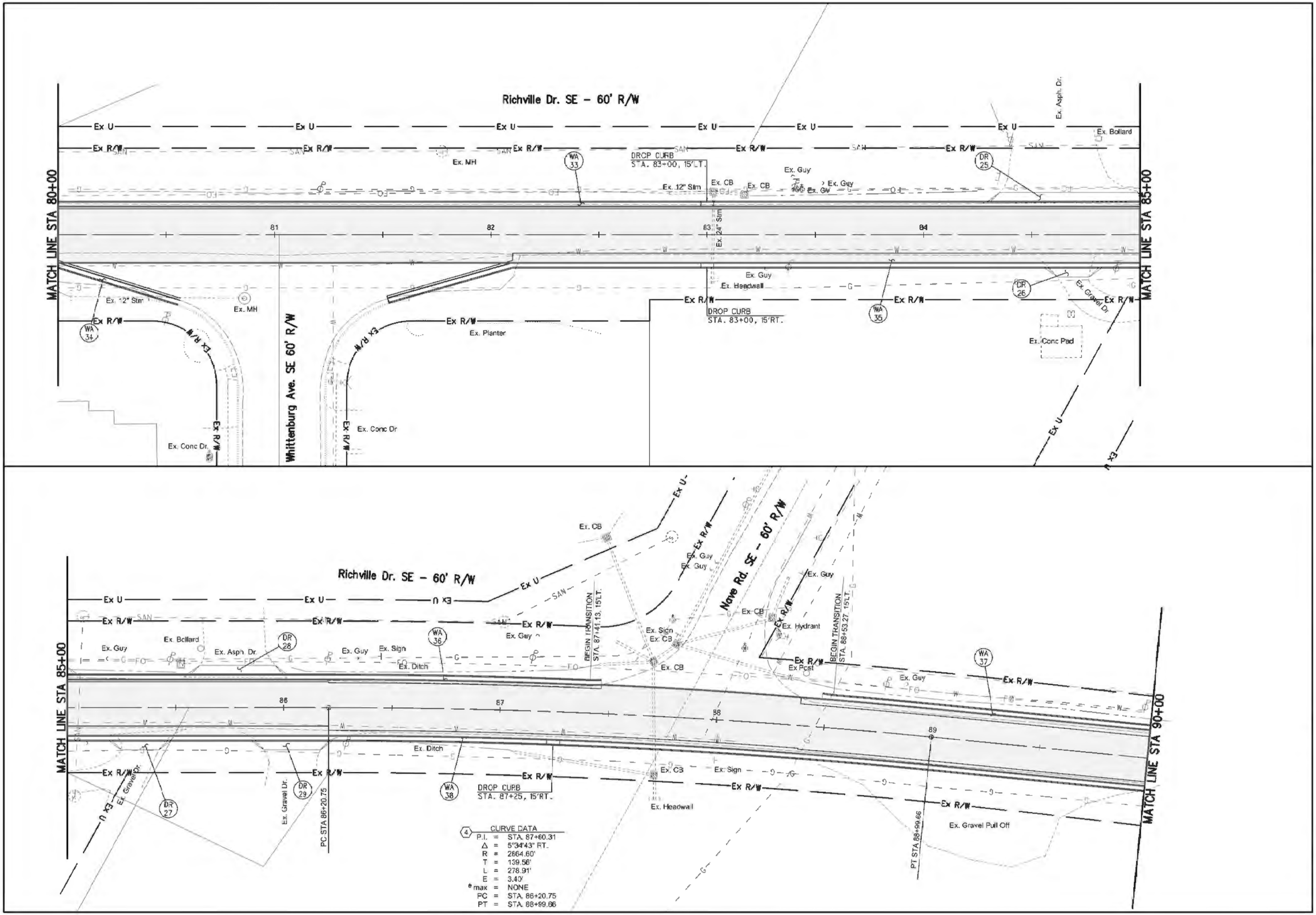
CHECKED BY: DGK
DATE: Sept. 2016
DRAWN BY: FPW
DATE: Sept. 2016

REVISIONS:
DATE DESCRIPTION

Richville Dr SE Improvement Plan
Richville Dr. – Sta. 70+00.00 to Sta. 80+00.00
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: Sht'5-Rich70-80P
CITY NUMBER: 17st03



HORIZONTAL SCALE IN FEET

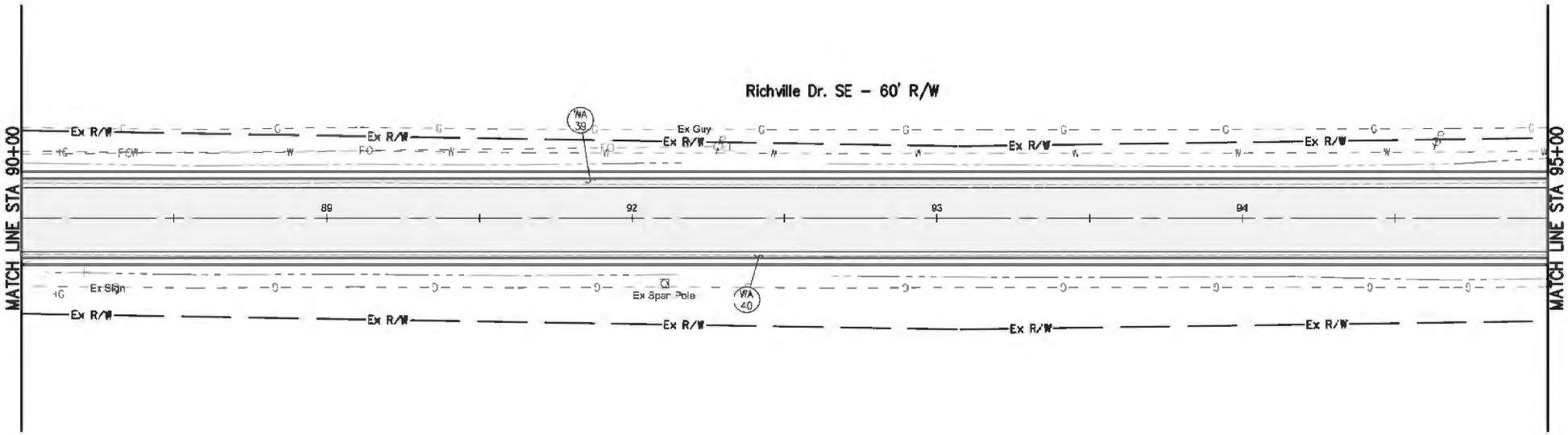
CHECKED BY: FPW
DATE: Sept. 2016
DRAWN BY: FPW
DATE: Sept. 2016

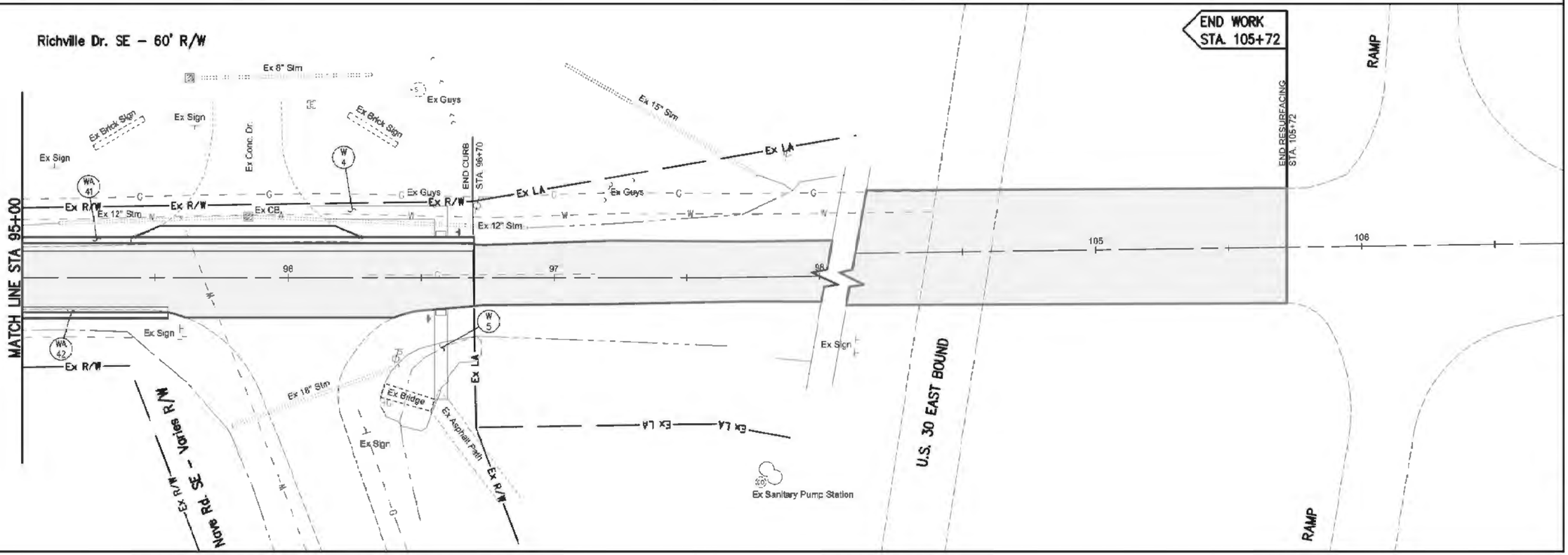
REVISIONS:
DATE DESCRIPTION

Richville Dr SE Rehabilitation
Richville Dr. – Sta. 80+00.00 to Sta. 90+00.00
City of Massillon
Stark County, Ohio

Kathy Catazzaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: Sht16-RichE0-90P
CITY NUMBER: 17st03





HORIZONTAL SCALE IN FEET

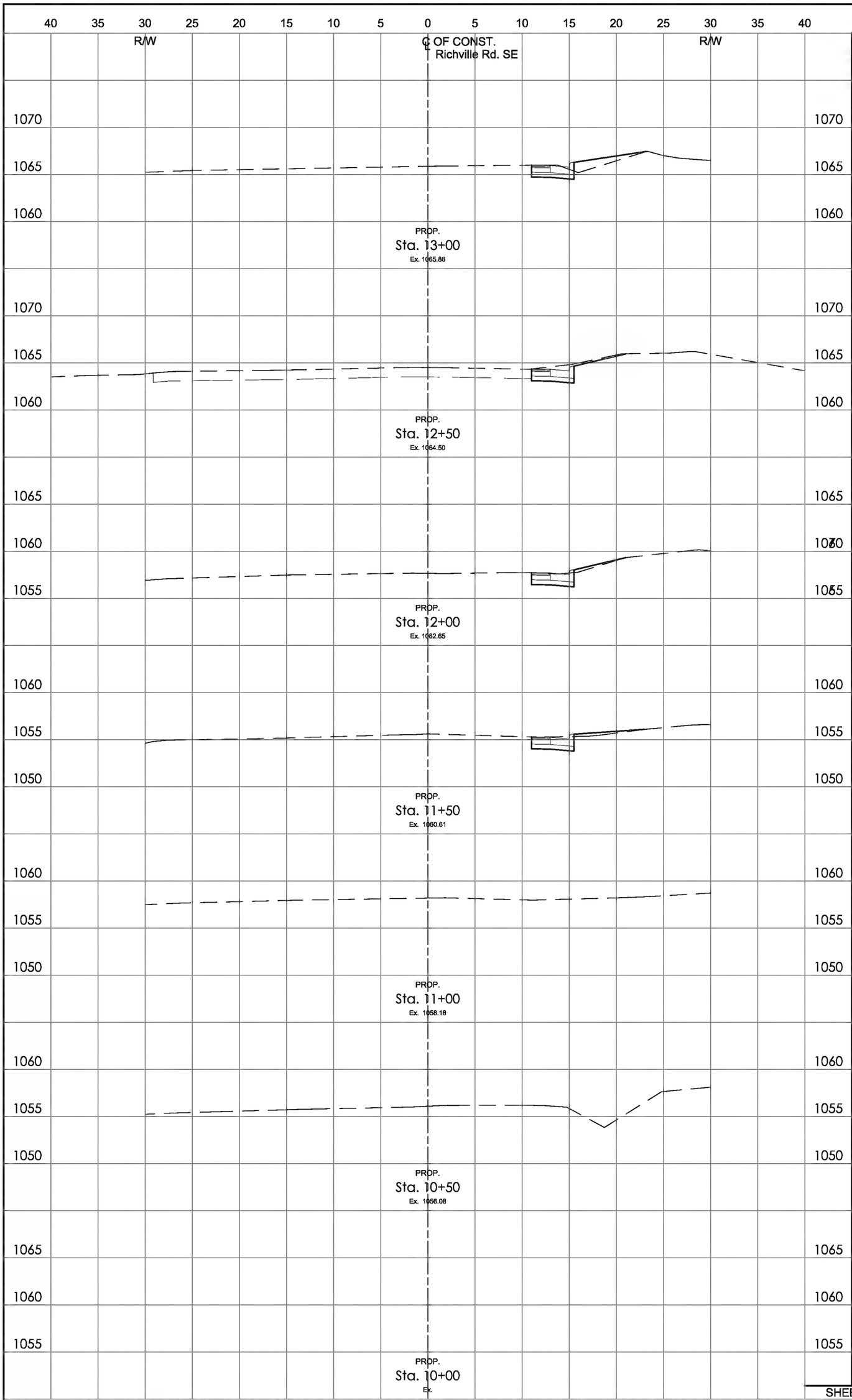
CHECKED BY: DGK
DATE: Sept. 2016
DRAWN BY: FPW
DATE: Sept. 2016

REVISIONS:
DATE DESCRIPTION

Richville Dr SE Improvement Project
Richville Dr. – Sta. 90+00.00 to Sta. 105+72
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: Sh:17-Rich90-100F
CITY NUMBER: 17st03



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
			10.9	2.3
	5.7	4.7		
			12.5	0.9
	7.8	0		
			12.5	4.4
	5.8	1		
			10.9	2.3
	6	1.5		
SHEET TOTAL			47.3	11.9

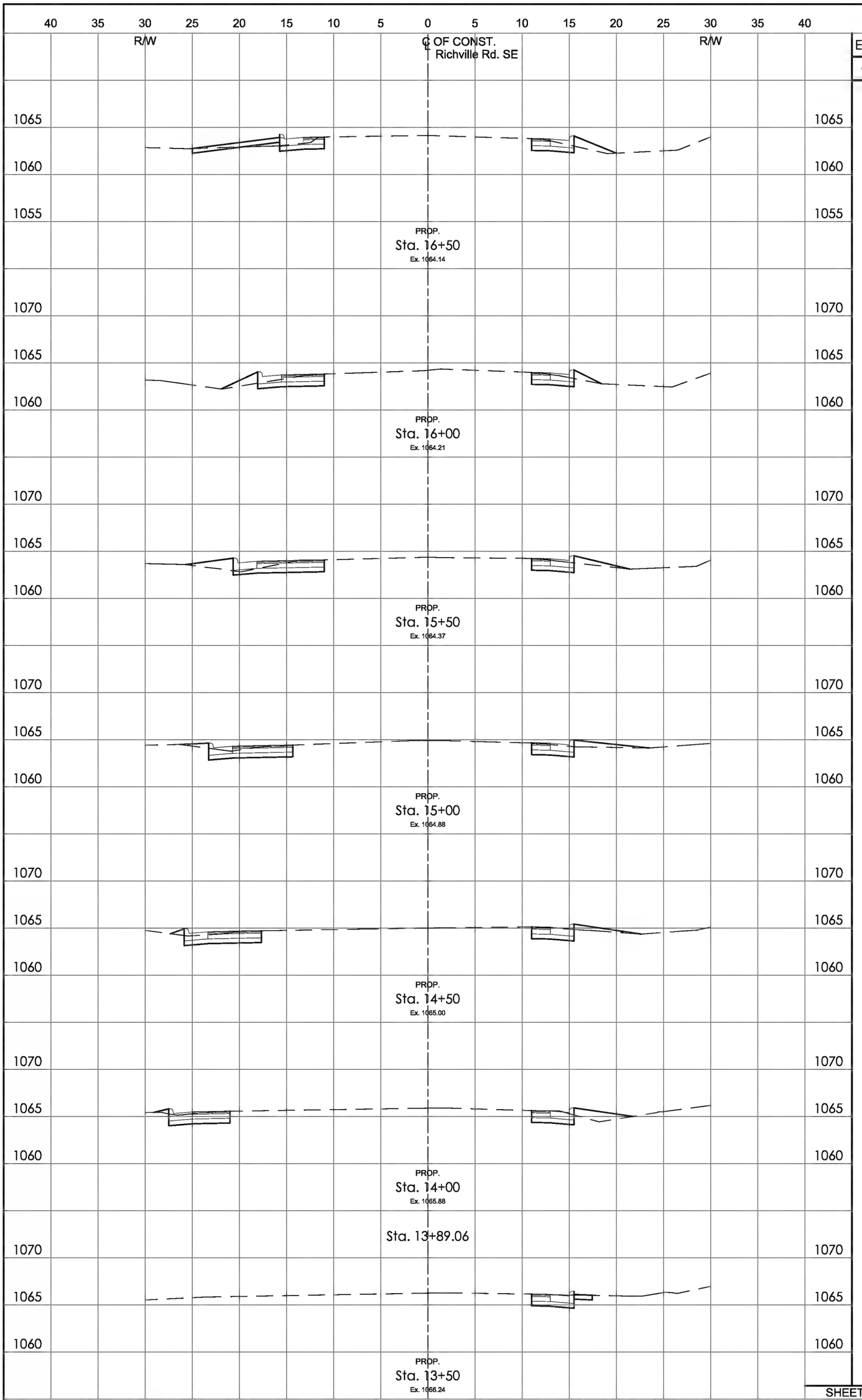
CITY NUMBER: 17br003
DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 10+00 to Sta. 13+00
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
5 2.5 0
VERTICAL SCALE IN FEET
5 2.5 0



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
			16.0	5.9
	8.1	3.9		
			18.1	7.2
	11.5	3.9		
			23.4	8.9
	13.8	5.7		
			26.1	8.7
	14.4	3.7		
			26.6	5.7
	14.3	2.5		
			25.2	6.8
	12.9	4.8		
			5.2	1.9
	12.9	4.8		
			14.1	3.5
	6.6	0		
SHEET TOTAL			154.9	48.7

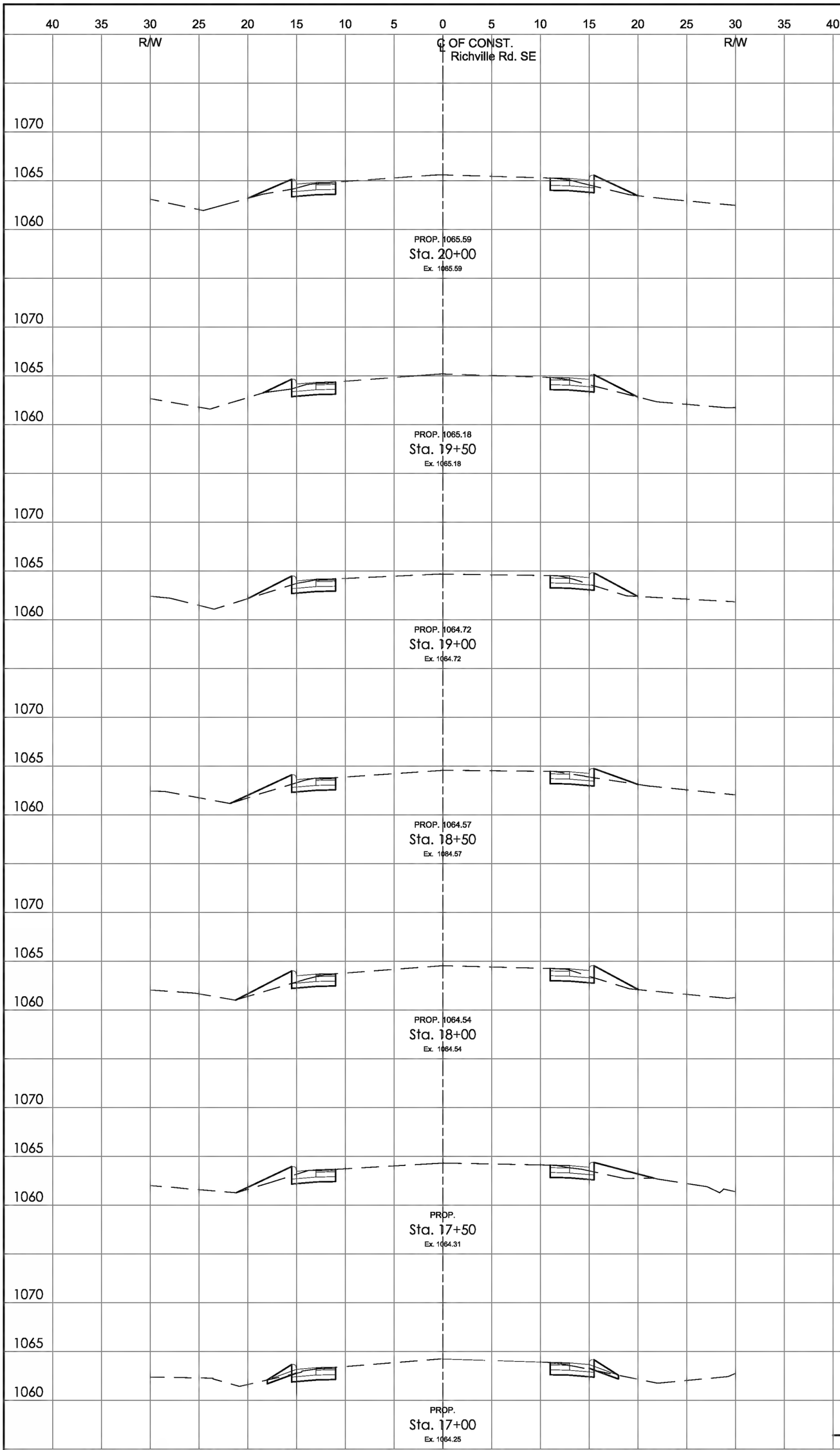
CITY NUMBER: 17MR03
DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 13+50 to Sta. 16+50
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
5 2.5 0
VERTICAL SCALE IN FEET
5 2.5 0



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	9.5	4.8	17.5	9.8
	9.7	4.1	17.8	8.2
	9.4	13.1	17.7	15.9
	9.8	5	17.8	16.8
	8.7	6.9	17.1	11.0
	9.9	6.8	17.2	12.7
	9.2	2.5	17.7	8.6
SHEET TOTAL			122.8	83.1

20 / 45

CITY NUMBER: 17br003

DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor

Massillon
City of Champions

Richville Rd SE Improvement Project

Cross Sections Sta. 17+00 to Sta. 20+00

City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016

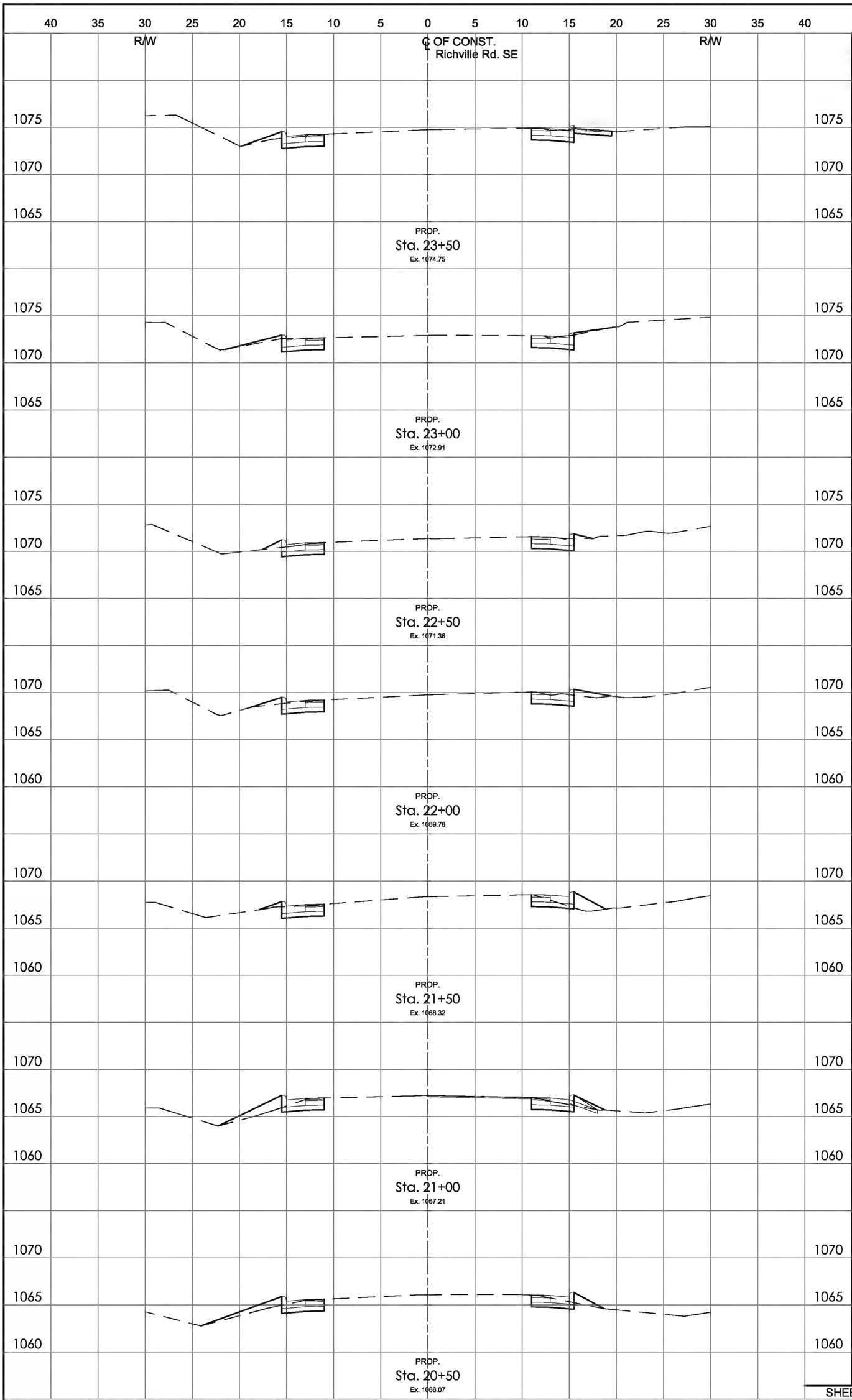
DRAWN BY: XXXX

DATE: Sept. 2016

CHECKED BY: XXX

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	10.4	2.4	16.7	8.4
	11.7	2	20.5	4.1
	10.7	1.8	20.7	3.5
	10.6	2.8	91.7	4.3
	8.1	4	17.3	6.3
	8.8	6.4	15.6	9.6
	9.4	5.8	16.9	11.3
SHEET TOTAL			127.4	47.5

21 / 45

CITY NUMBER: 17HC03

DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor

Massillon
City of Champions

Richville Rd SE Improvement Project

Cross Sections Sta. 20+50 to Sta. 23+50

City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016

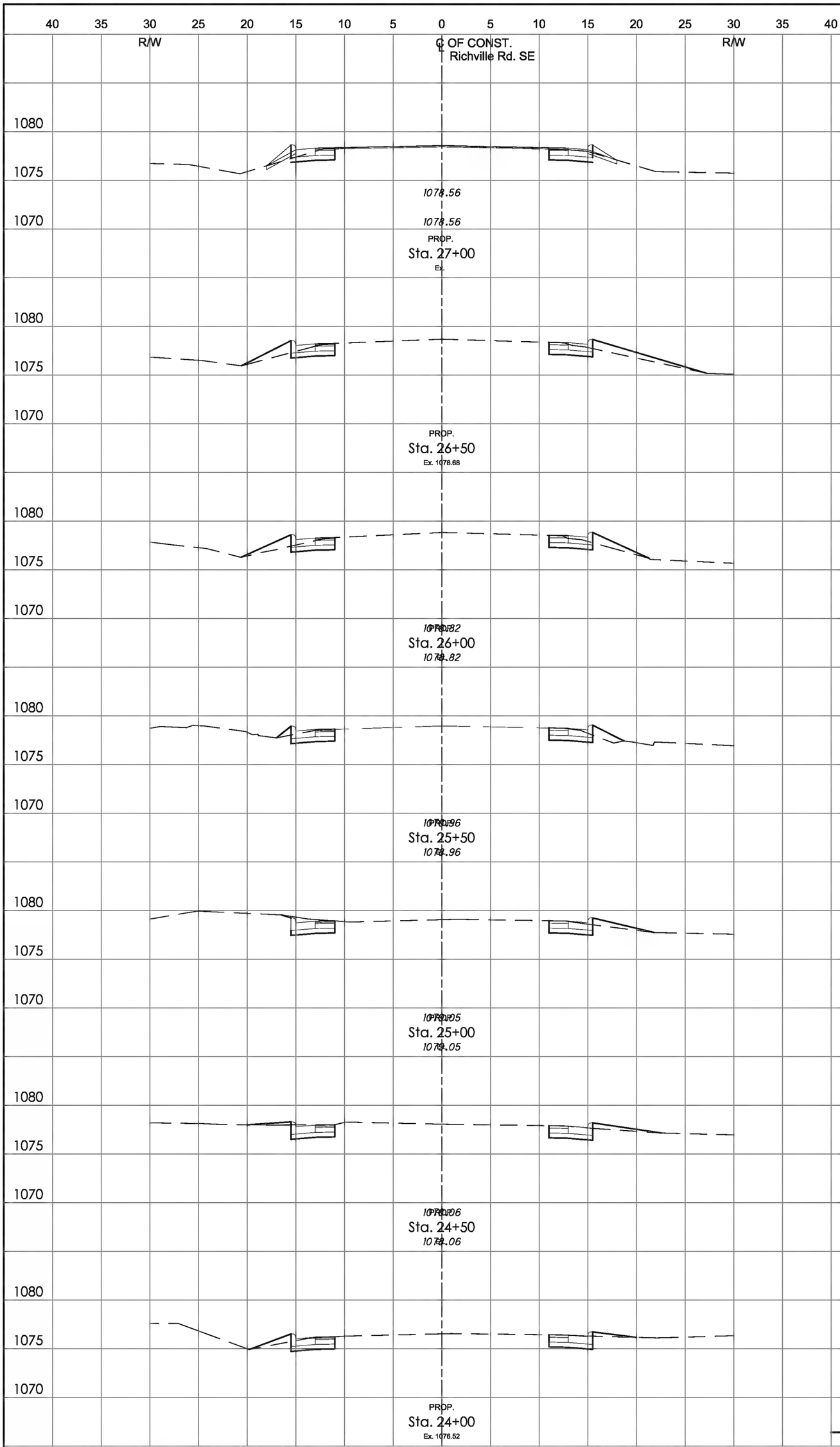
DRAWN BY: XXXX

DATE: Sept. 2016

CHECKED BY: XXX

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
			16.3	9.3
	8.7	2.7		
			16.5	10..6
	9.1	8.7		
			16.8	13.6
	9	6		
			17.7	8.3
	10.1	2.3		
			20.7	4.8
	12.3	2.2		
			21.9	4.5
	11.4	2.7		
			17.6	8.7
	7.6	6.7		
SHEET TOTAL			XXXX	XXXX

22 / 45

CITY NUMBER: 17br03

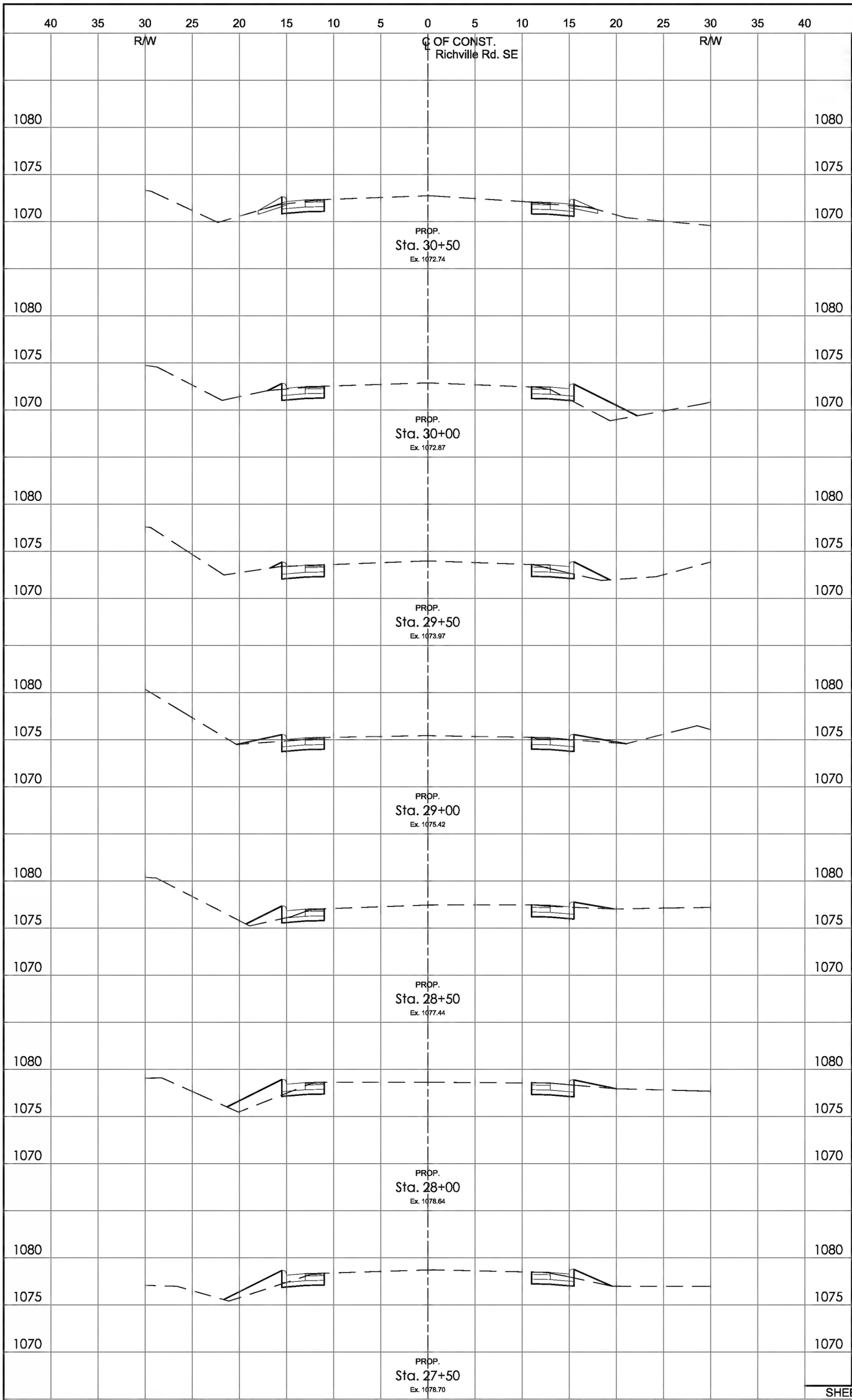
DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 24+00 to Sta. 27+00
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
5 2.5 0
VERTICAL SCALE IN FEET
5 2.5 0



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	9.9	1.7	17.4	5.6
	8.9	10.6	17.4	11.4
	9.5	3.1	17.0	12.7
	10.2	3.3	18.2	5.9
	9.4	1.1	18.1	6.9
	9.3	8.3	17.3	11.5
	8.9	7.3	16.9	14.4
SHEET TOTAL			122.4	68.3

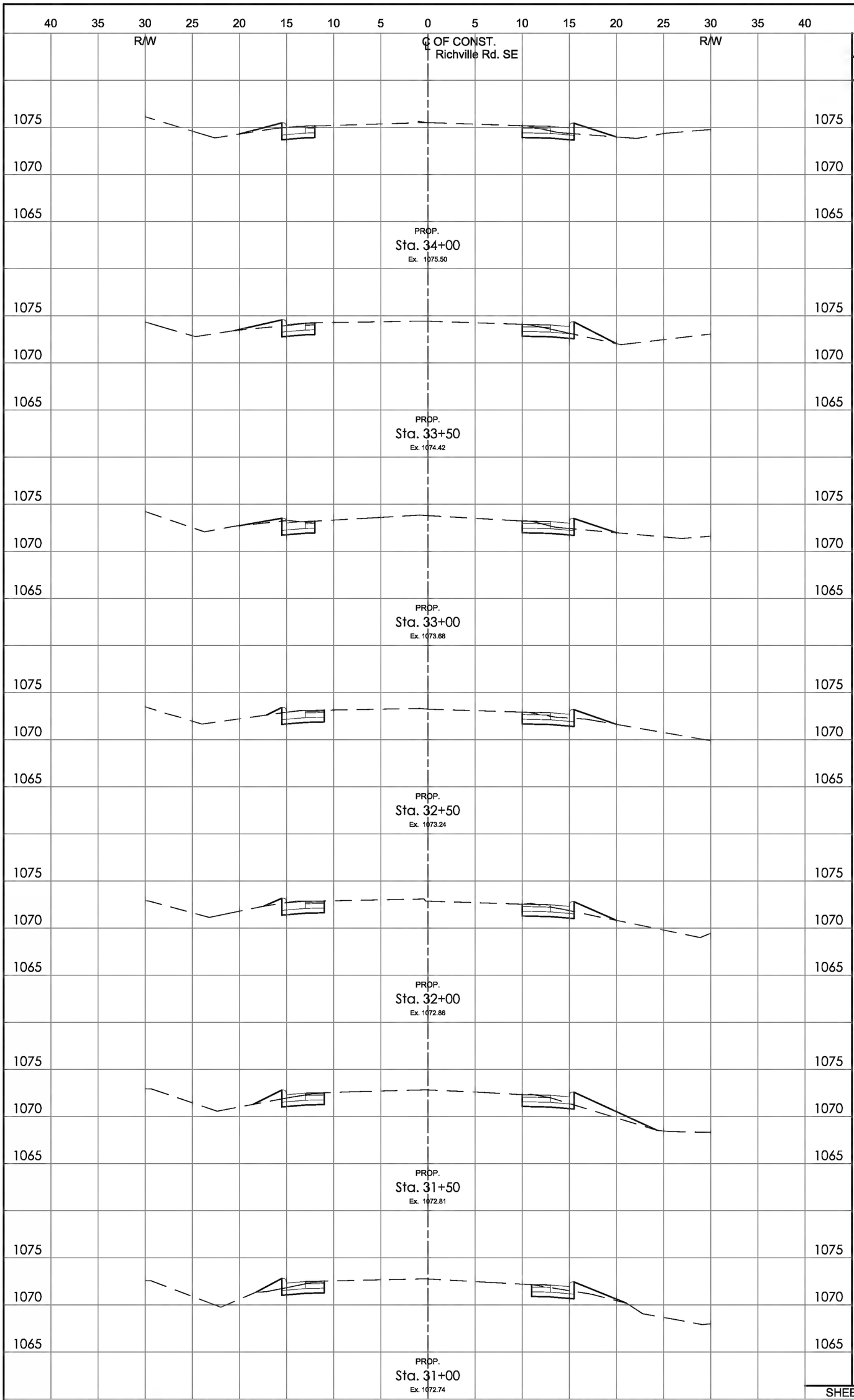
CITY NUMBER: 17ph03
DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 27+50 to Sta. 30+50
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
VERTICAL SCALE IN FEET



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
			19.3	5.0
	9.3	3.7		
			16.9	7.7
	9	4.6		
			17.4	7.2
	9.8	3.2		
			19.4	5.3
	11.1	2.5		
			21	5.0
	11.6	2.9		
			19.9	9.3
	9.9	7.1		
			17.4	10.6
	8.9	4.3		
SHEET TOTAL			131.3	50.0

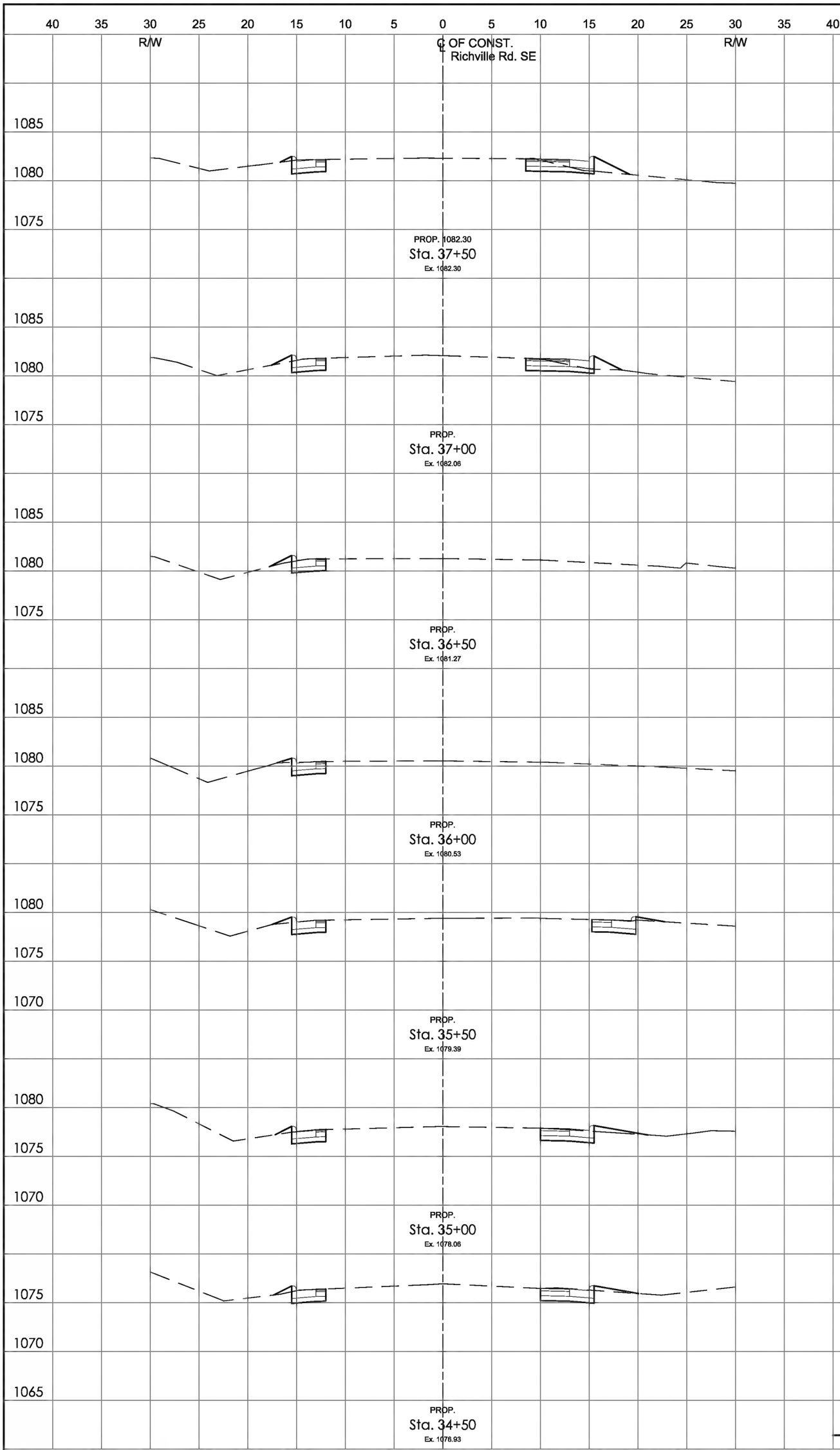
CITY NUMBER: 17br003
DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 31+00 to Sta. 34+00
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
5 2.5 0
VERTICAL SCALE IN FEET
5 2.5 0



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
			19.4	5.3
	9.8	3.1		
			18.8	5.3
	10.5	2.6		
			13.7	3.1
	4.3	0.7		
			8.1	0.9
	4.5	0.3		
			13.5	1.2
	10.1	2.2		
			19.3	3.0
	10.7	2.2		
			20.6	3.6
	11.5	1.7		
SHEET TOTAL			113.4	22.3

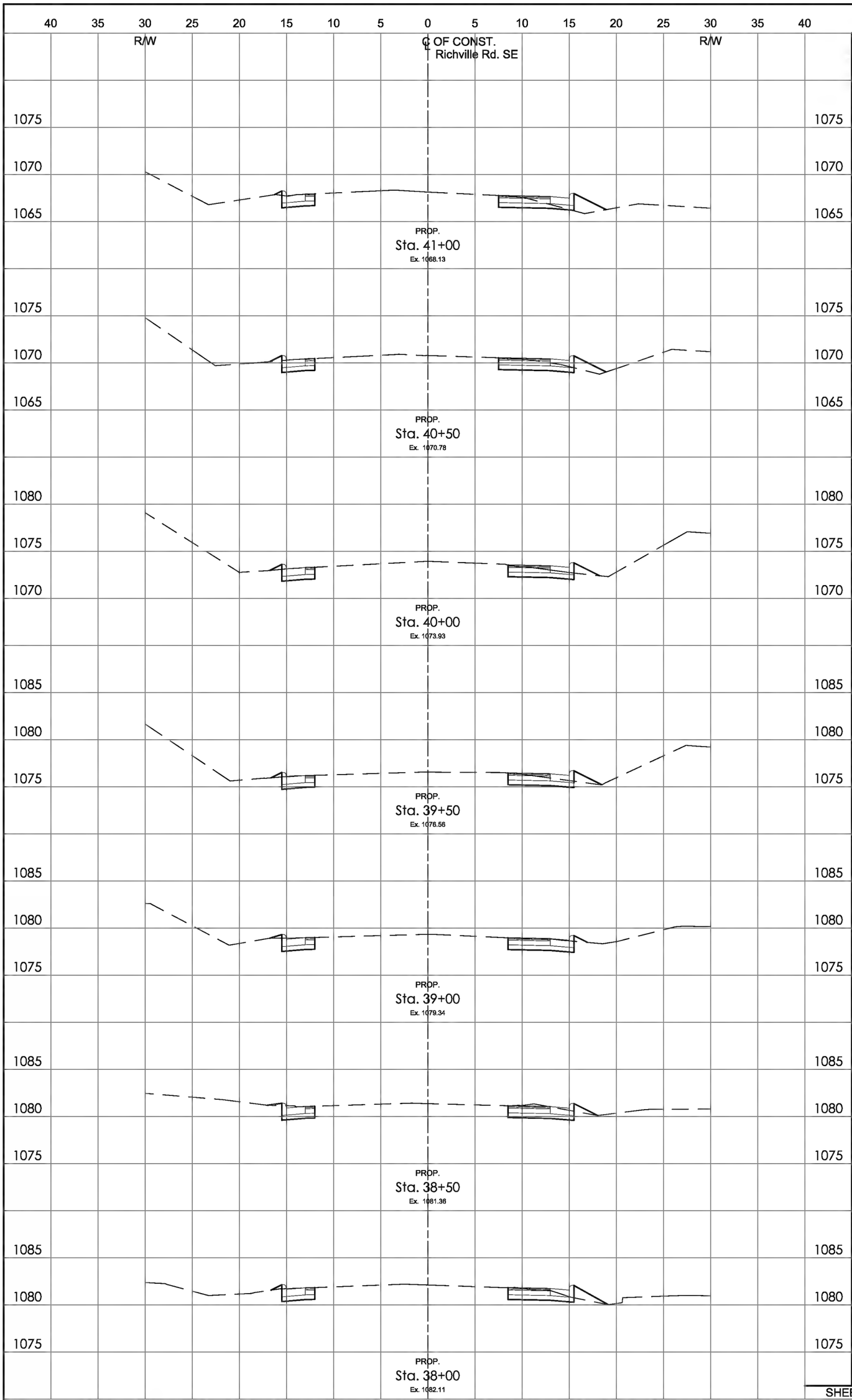
CITY NUMBER: 17br03
DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 34+50 to Sta. 37+50
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
5 2.5 0
VERTICAL SCALE IN FEET
5 2.5 0



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Sta. 41+00	9.9	3.9	17	9.5
Sta. 40+50	12.1	3.1	20.4	6.5
Sta. 40+00	11	1.8	21.4	4.5
Sta. 39+50	10.9	1.9	20.3	3.4
Sta. 39+00	13	0.6	22.1	2.3
Sta. 38+50	13.6	1.2	24.6	1.7
Sta. 38+00	11.2	2.6	23.0	3.5
SHEET TOTAL			148.8	31.5

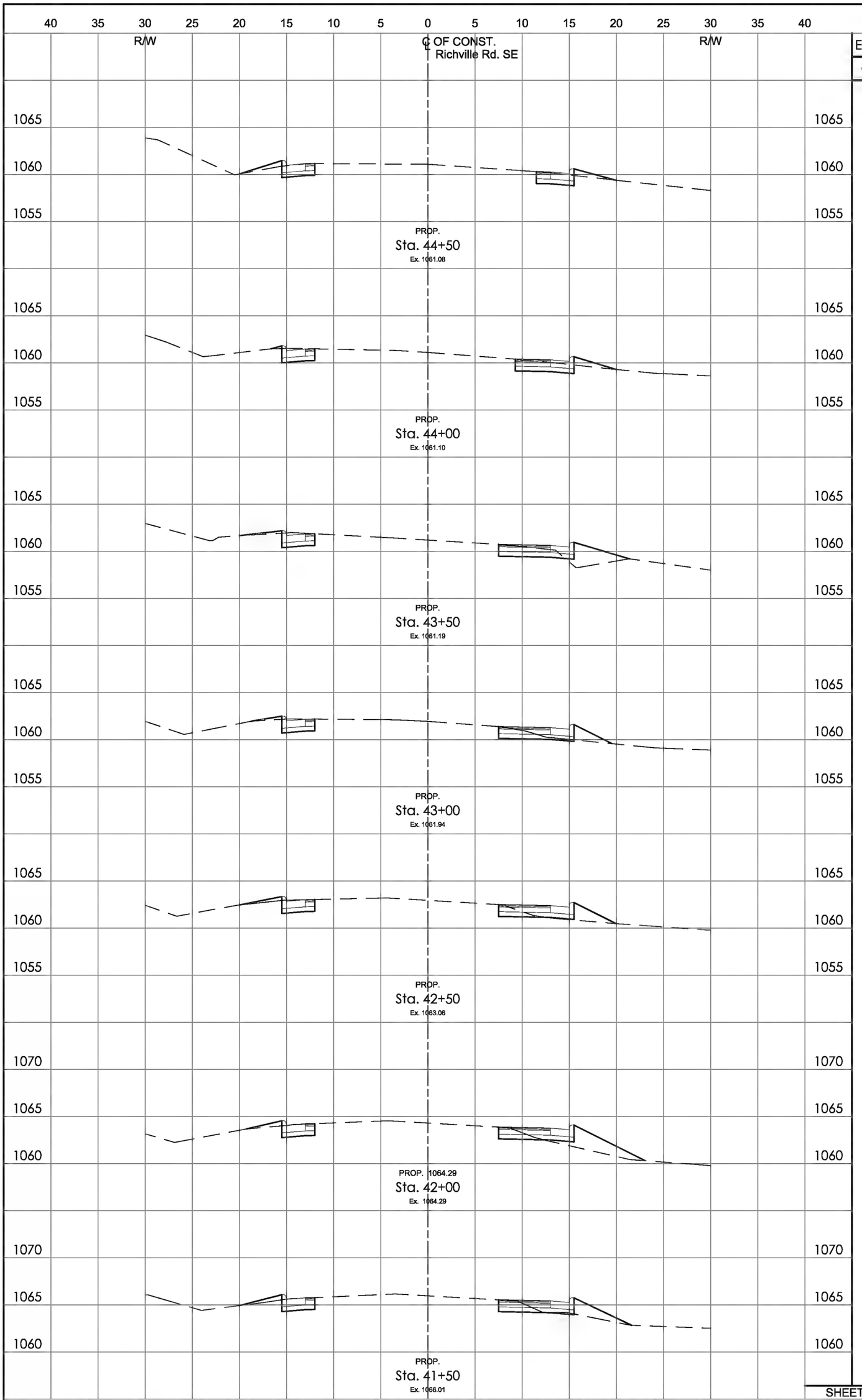
CITY NUMBER: 17ST03
DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 38+00 to Sta. 41+00
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
5 2.5 0
VERTICAL SCALE IN FEET
5 2.5 0



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Sta. 44+50	8.9	2.9	20.8	6.1
Sta. 44+00	11.3	2.2	18.7	4.7
Sta. 43+50	11.5	8.9	21.1	10.3
Sta. 43+00	9.9	3.8	19.8	11.8
Sta. 42+50	7.3	5	15.9	3.5
Sta. 42+00	7.8	11.4	14.0	10.6
Sta. 41+50	8.5	6.4	15.1	16.5
SHEET TOTAL			125.5	72.7

27 / 45

CITY NUMBER: 17HC03

DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor

Massillon
City of Champions

Richville Rd SE Improvement Project

Cross Sections Sta. 41+50 to Sta. 44+50

City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016

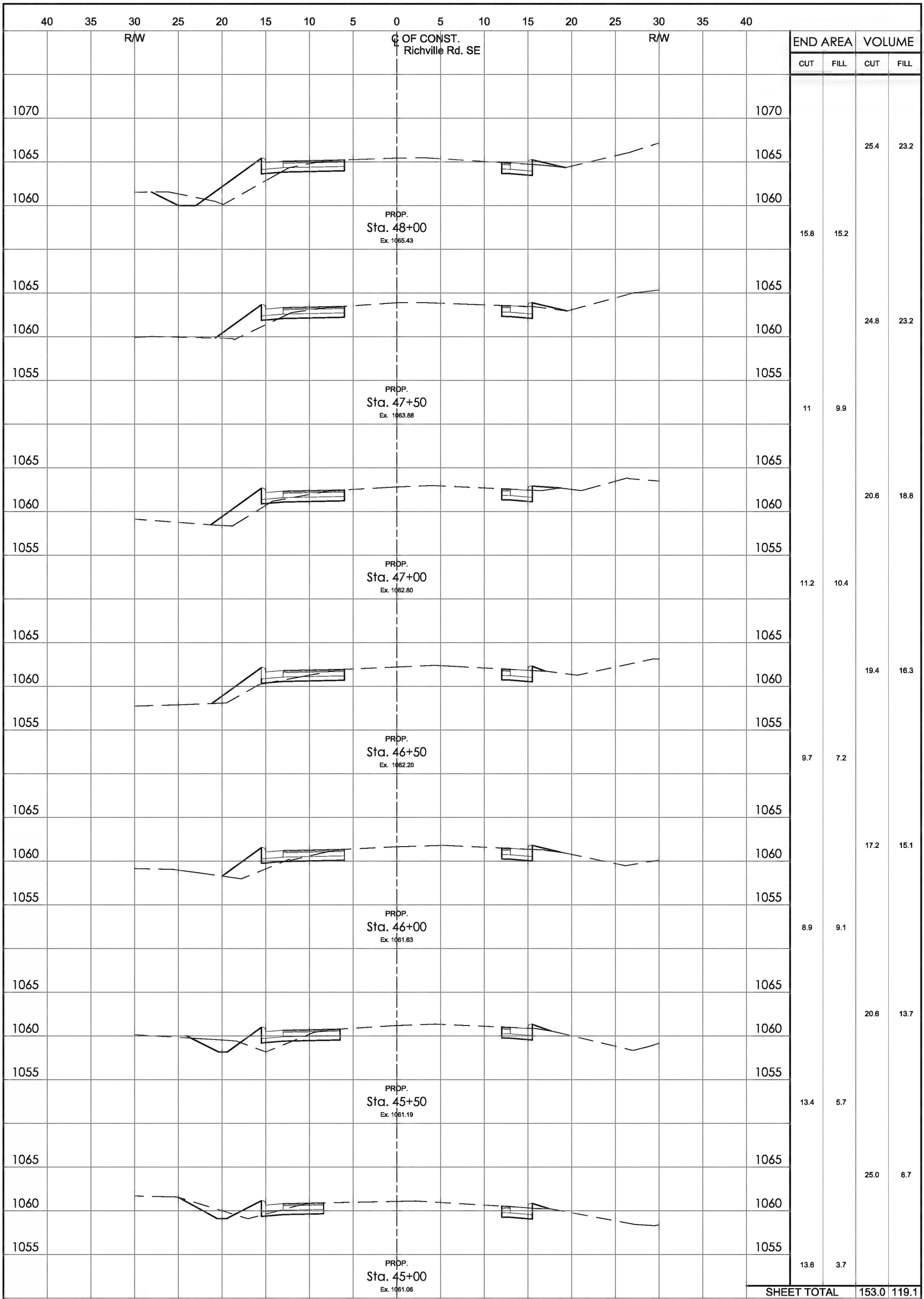
DRAWN BY: XXXX

DATE: Sept. 2016

CHECKED BY: XXX

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
			25.4	23.2
	15.8	15.2		
			24.8	23.2
	11	9.9		
			20.6	18.8
	11.2	10.4		
			19.4	16.3
	9.7	7.2		
			17.2	15.1
	8.9	9.1		
			20.6	13.7
	13.4	5.7		
			25.0	8.7
	13.6	3.7		
SHEET TOTAL			153.0	119.1

28 / 45

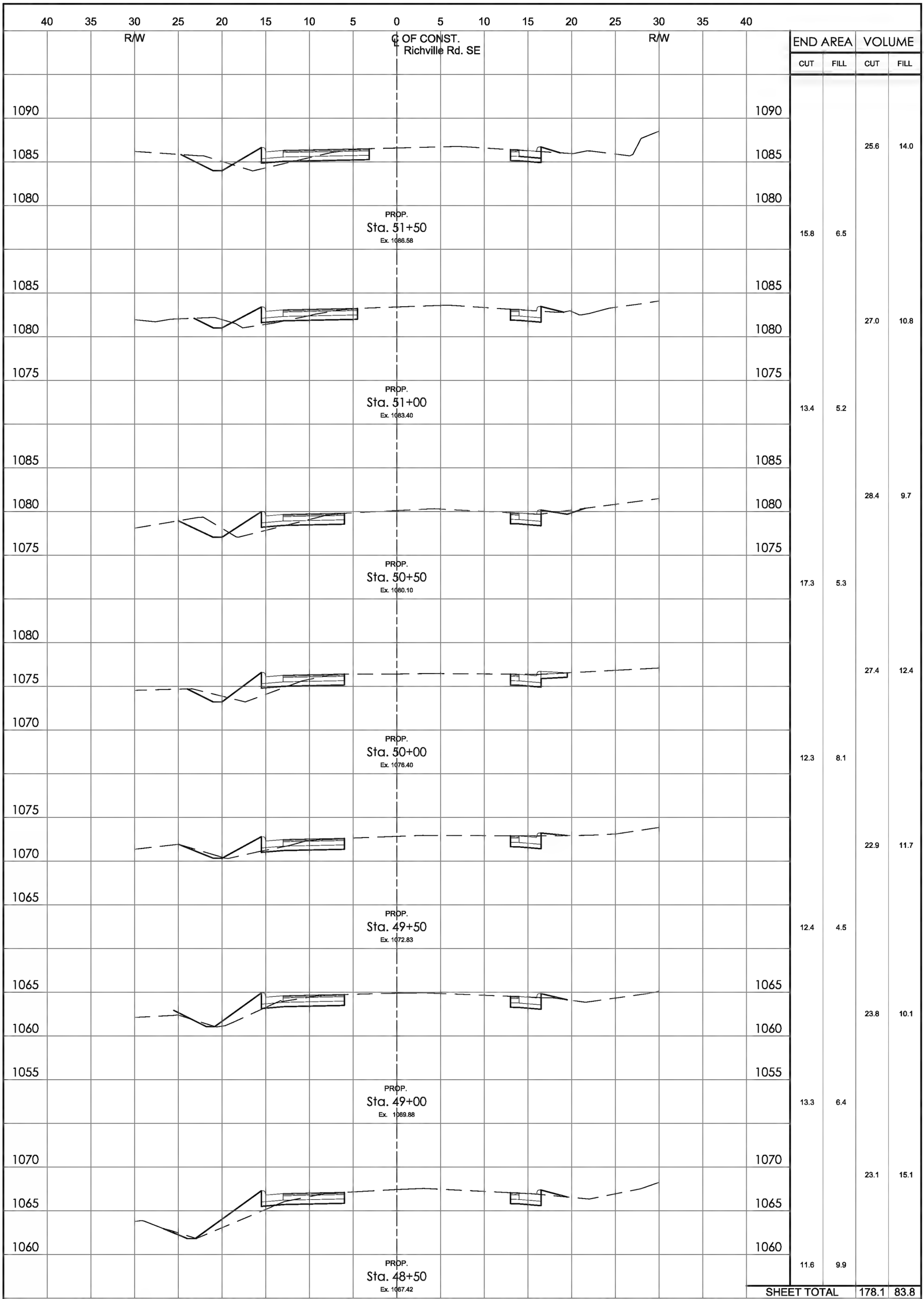
DRAWING NAME: xxxx.DWG
CITY NUMBER: 17xx03

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 45+00 to Sta. 48+00
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
5 2.5 0
VERTICAL SCALE IN FEET
5 2.5 0



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
			25.6	14.0
	15.8	6.5		
			27.0	10.8
	13.4	5.2		
			28.4	9.7
	17.3	5.3		
			27.4	12.4
	12.3	8.1		
			22.9	11.7
	12.4	4.5		
			23.8	10.1
	13.3	6.4		
			23.1	15.1
	11.6	9.9		
SHEET TOTAL			178.1	83.8

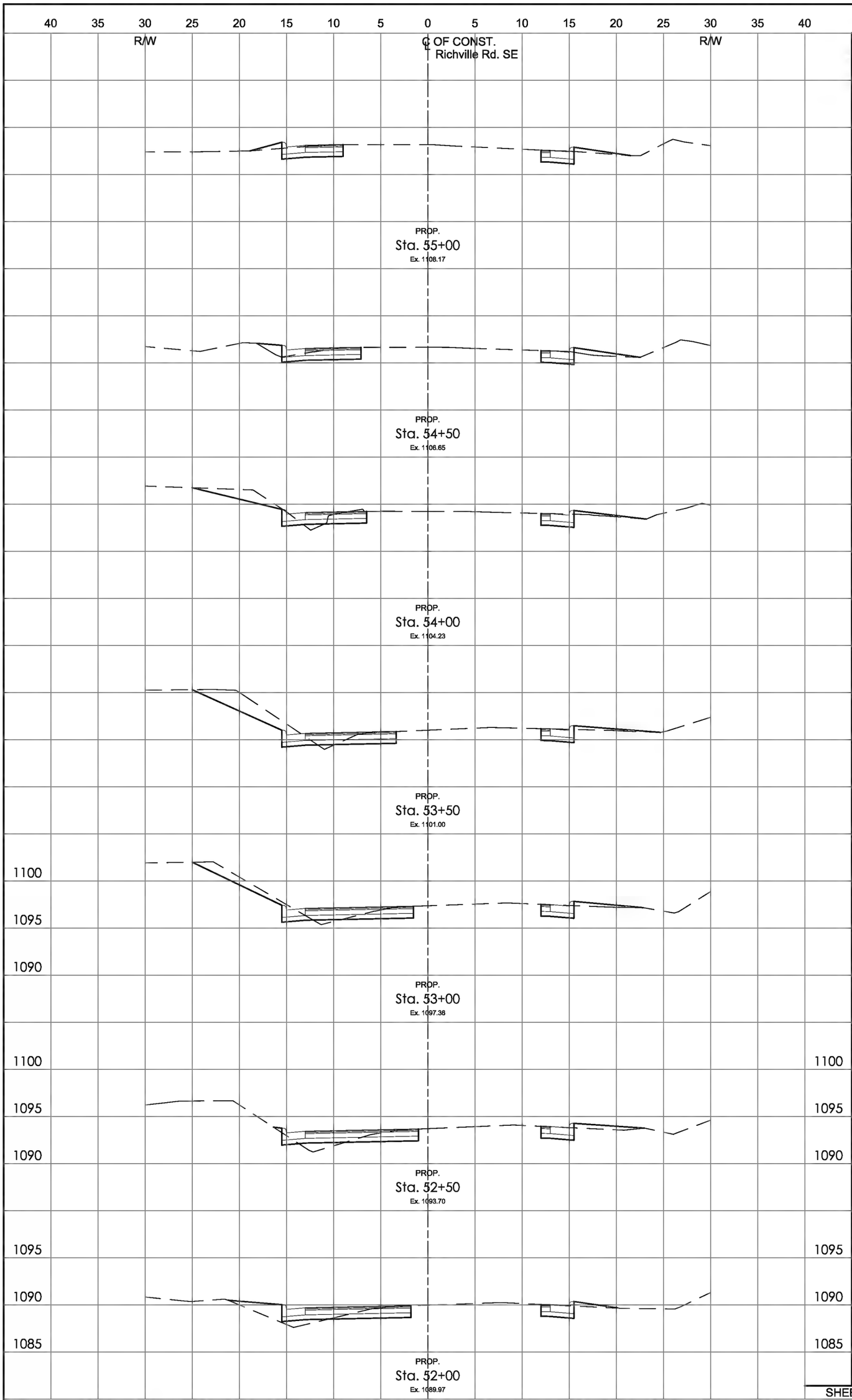
CITY NUMBER: 17ec03
DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 48+50 to Sta. 51+50
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
VERTICAL SCALE IN FEET



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
			20.6	4.3
	12	2.5		
			22.9	5.9
	12.7	3.9		
			28.3	5.5
	17.9	2		
			42.6	4.0
	28.1	2.3		
			45.5	4.4
	21	2.5		
			29.5	7.0
	10.9	5.1		
			21.0	12.7
	11.8	8.6		
SHEET TOTAL			210.4	43.8

30 / 45

CITY NUMBER: 17br03

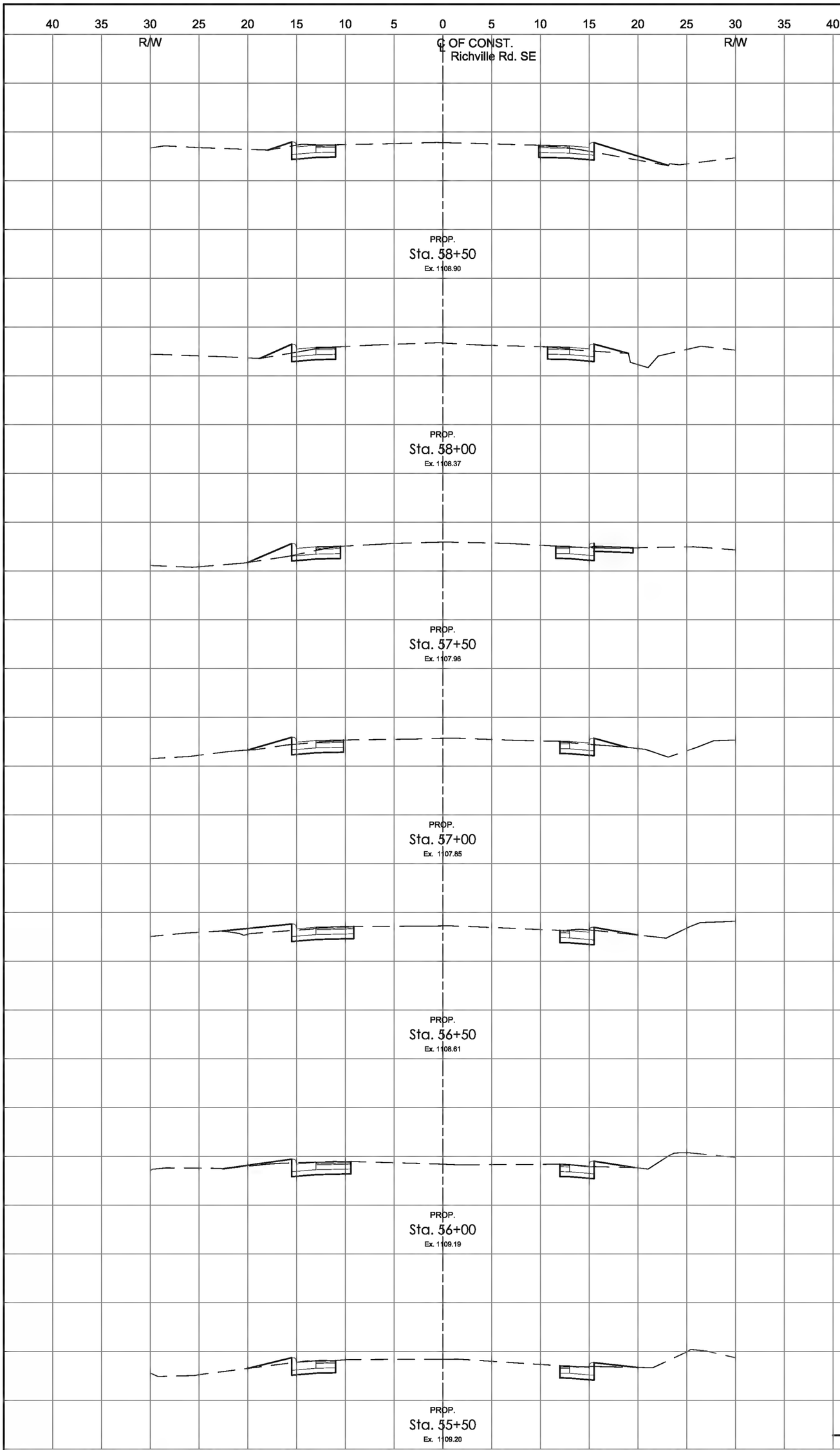
DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 52+00 to Sta. 55+00
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
5 2.5 0
VERTICAL SCALE IN FEET
0 2.5 5



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		23.3	5.4
11.9	4.2		
		20.4	6.5
10.1	2.8		
		18.1	6.0
9.5	3.7		
		18.0	6.2
9.9	3.0		
		20.6	6.6
12.4	4.2		
		23.0	6.0
12.4	2.3		
		20.9	4.1
10.2	2.1		
SHEET TOTAL		144.4	40.7

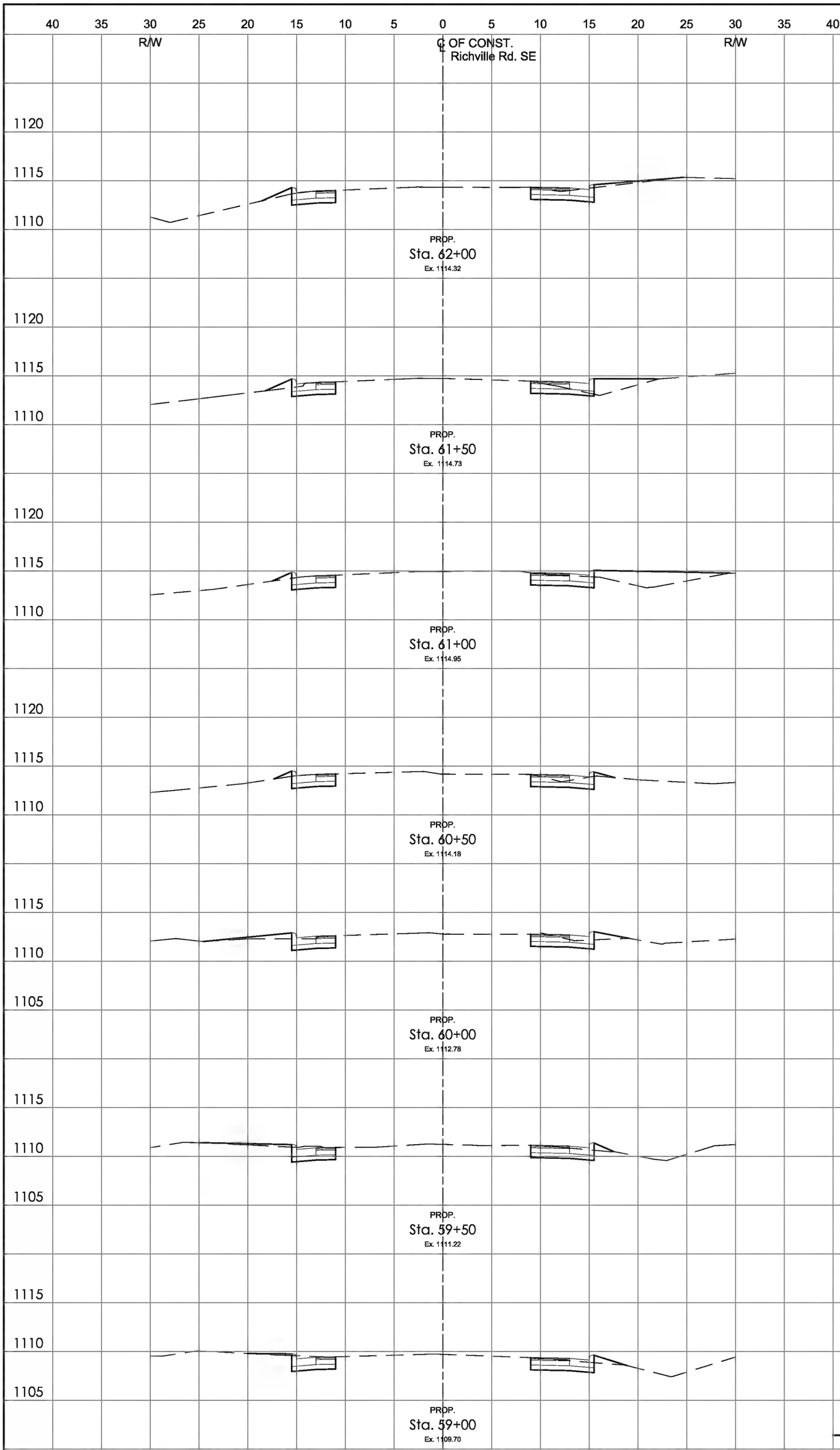
CITY NUMBER: 17e003
DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 55+50 to Sta. 58+50
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
5 2.5 0
VERTICAL SCALE IN FEET
5 2.5 0



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
			24.5	4.0
	12.7	2.4		
			20.8	9.1
	9.8	7.4		
			20.7	19.8
	12.6	14		
			22.3	13.8
	11.5	0.9		
			21.6	3.8
	11.9	3.2		
			23.7	4.8
	13.7	2		
			25.0	3.3
	13.3	1.6		
SHEET TOTAL			158.7	58.6

32 / 45

CITY NUMBER: 17HC03

DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor

Massillon
City of Champions

Richville Rd SE Improvement Project

Cross Sections Sta. 59+00 to Sta. 62+00

City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016

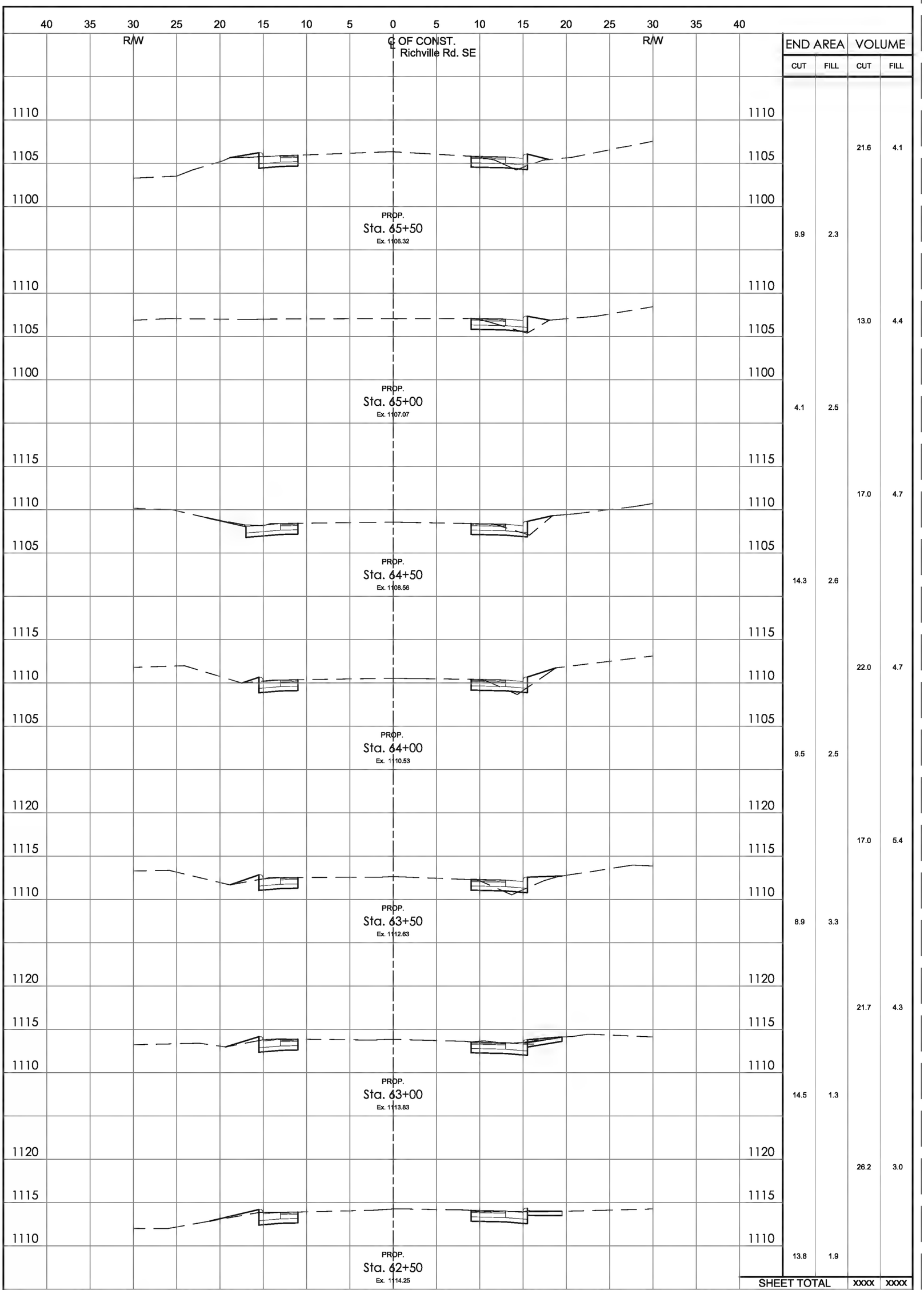
DRAWN BY: XXXX

DATE: Sept. 2016

CHECKED BY: XXX

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	9.9	2.3	21.6	4.1
	4.1	2.5	13.0	4.4
	14.3	2.6	17.0	4.7
	9.5	2.5	22.0	4.7
	8.9	3.3	17.0	5.4
	14.5	1.3	21.7	4.3
	13.8	1.9	26.2	3.0
SHEET TOTAL			XXXX	XXXX

33 / 45

CITY NUMBER: 17br03

DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor

Massillon
City of Champions

Richville Rd SE Improvement Project

Cross Sections Sta. 62+50 to Sta. 65+50

City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016

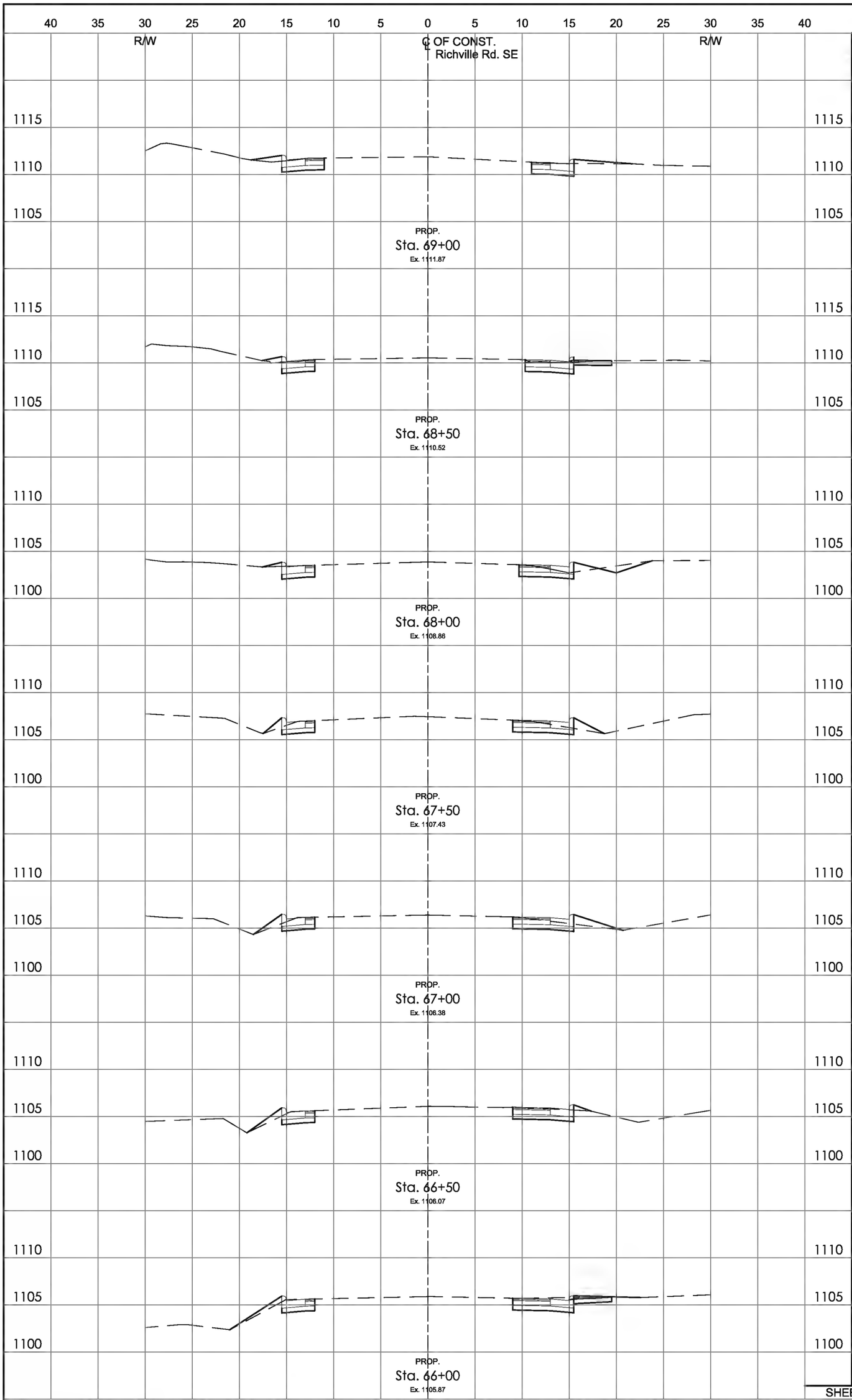
DRAWN BY: XXXX

DATE: Sept. 2016

CHECKED BY: XXX

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Sta. 69+00	11.0	2.5	19.5	13.7
Sta. 68+50	9.8	1.7	19.3	3.9
Sta. 68+00	12.1	1.8	20.3	3.2
Sta. 67+50	10.4	2.8	20.8	4.3
Sta. 67+00	10.5	4.1	19.4	6.4
Sta. 66+50	12.1	2.1	20.9	5.7
Sta. 66+00	13.4	2.1	23.6	3.9
SHEET TOTAL			143.8	41.1

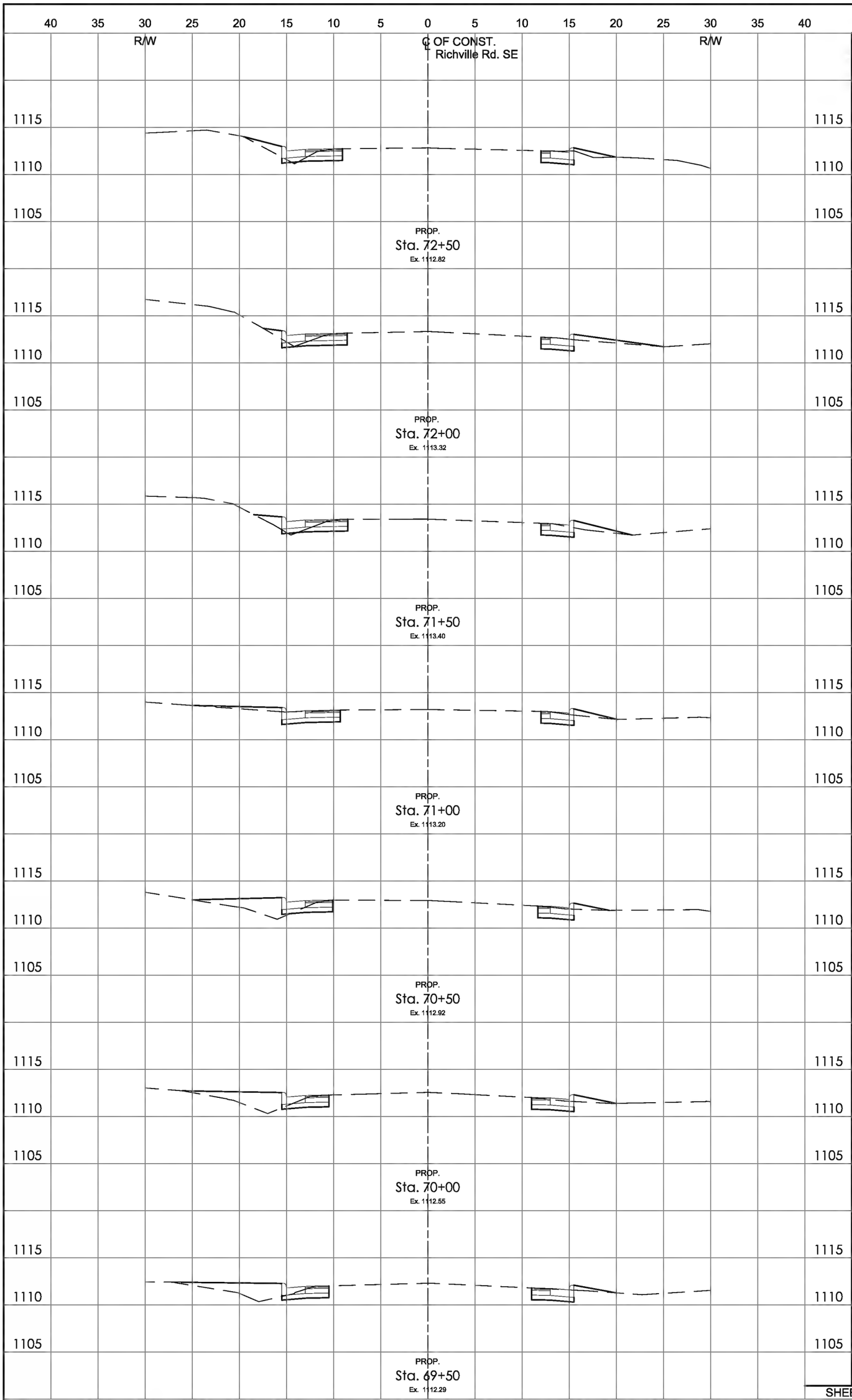
CITY NUMBER: 17ph03
DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 66+00 to Sta. 69+00
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
VERTICAL SCALE IN FEET



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	9.1	4.2	xxx	xxxx
	9.5	3.5	xxxx	xxx
	8.5	4.7	xxxx	xxxx
	11.8	3.6	xxx	xxxx
	7.7	11	xxx	xxx
	9.3	13.1	xxx	xxx
	10.1	12.3		
SHEET TOTAL			128.1	86.1

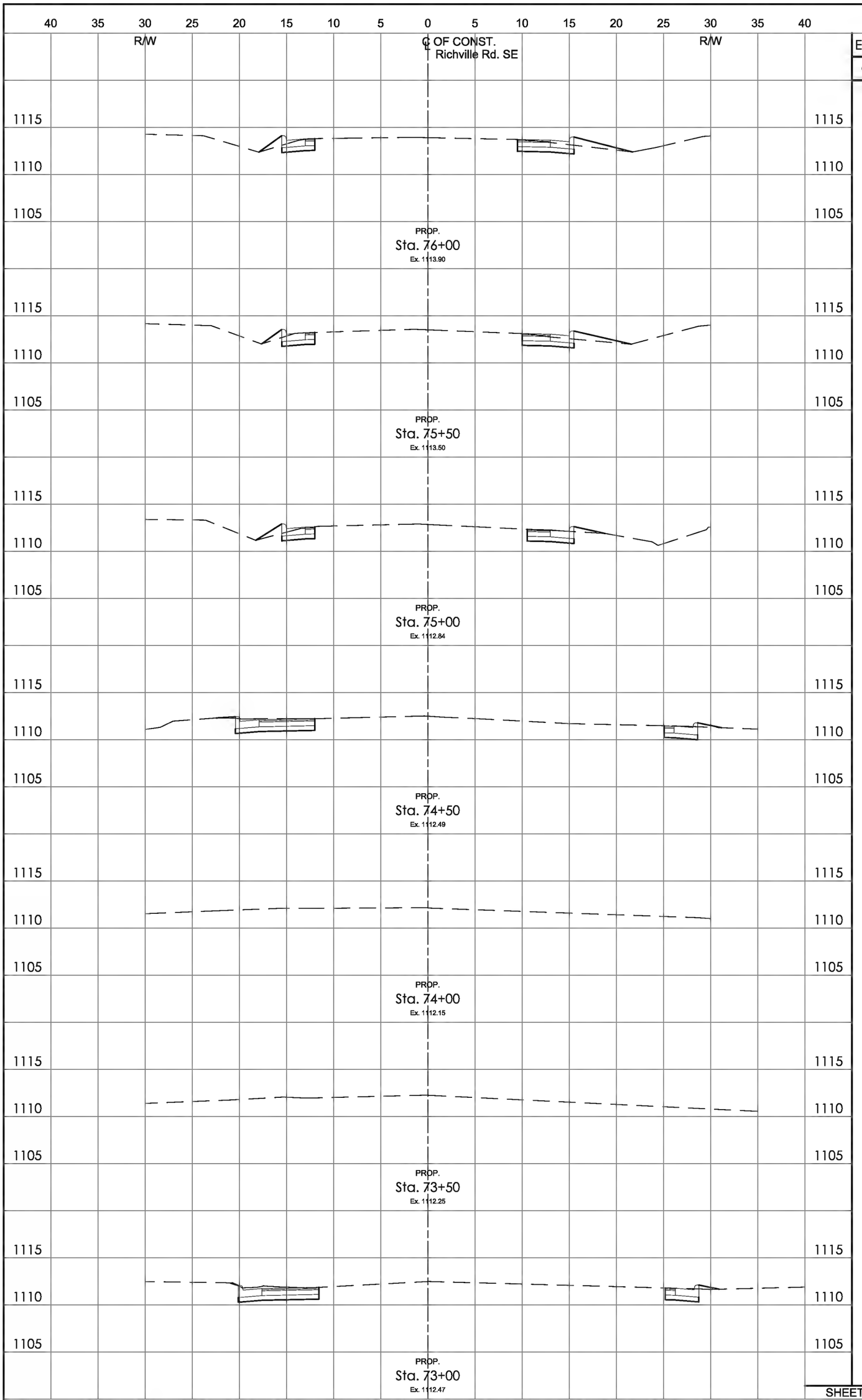
DRAWING NAME: xxxx.DWG
CITY NUMBER: 17xx03

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 69+50 to Sta. 72+50
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
5 2.5 0
VERTICAL SCALE IN FEET
5 2.5 0



END AREA		VOLUME	
CUT	FILL	CUT	FILL
10.1	4	19.5	6.6
10	3.5	18.6	6.9
9.7	2.3	18.2	5.4
15.9	0.7	23.7	2.8
16.4	0.5		
SHEET TOTAL		80.1	21.7

36 / 45

CITY NUMBER: 17br03

DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor

Massillon
City of Champions

Richville Rd SE Improvement Project

Cross Sections Sta. 73+00 to Sta. 76+00

City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016

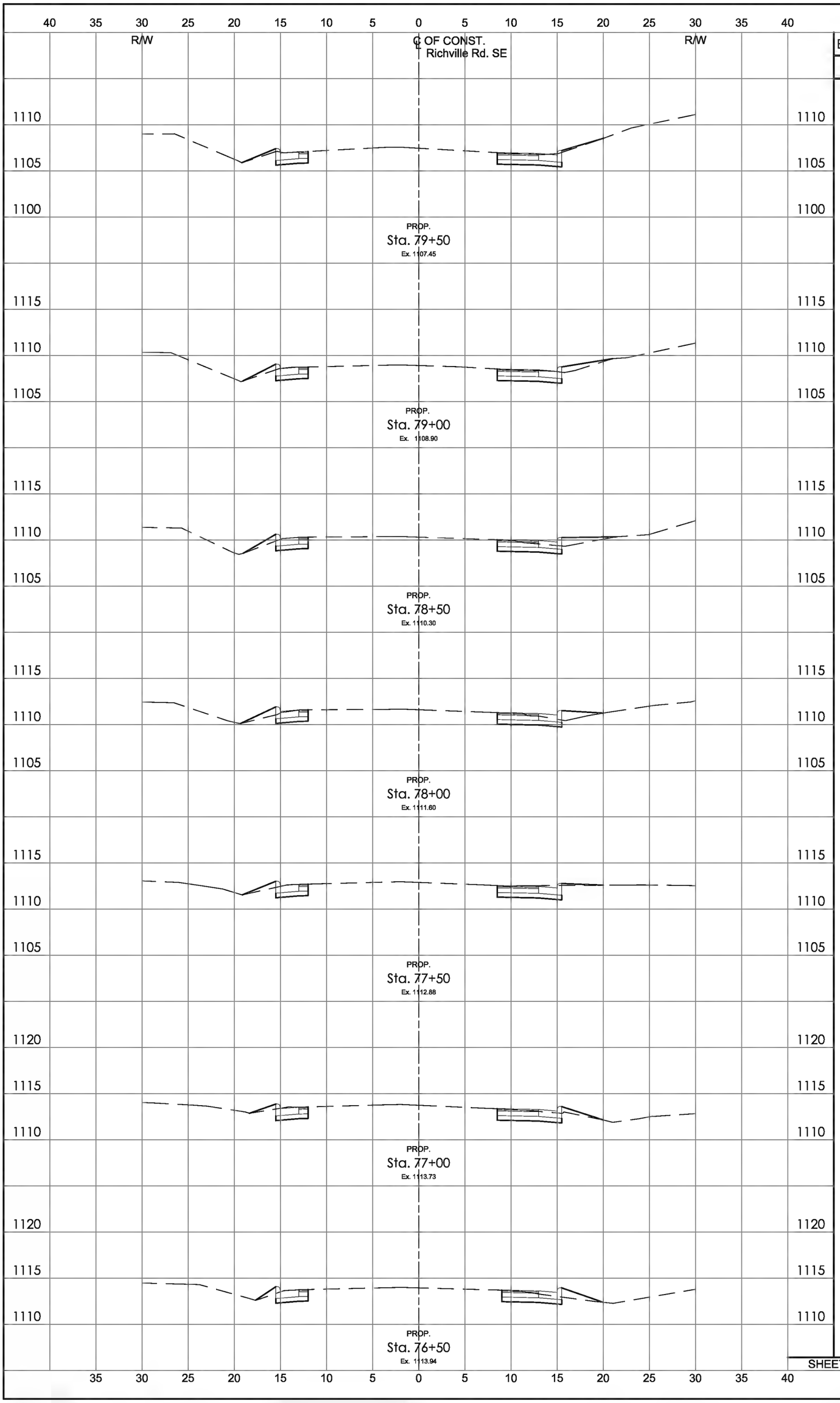
DRAWN BY: XXXX

DATE: Sept. 2016

CHECKED BY: XXX

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	13.1	1.1	20.6	2.8
	12.9	3.2	24.1	4.0
	11.4	4.2	22.5	6.9
	11.5	4.3	21.2	7.9
	13.6	1.7	23.2	5.6
	12.3	2.4	24.0	3.8
	11	3.1	21.6	5.1
SHEET TOTAL			157.2	35.9

37 / 45

CITY NUMBER: 17br03

DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor

Massillon
City of Champions

Richville Rd SE Improvement Project

Cross Sections Sta. 76+50 to Sta. 79+50

City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016

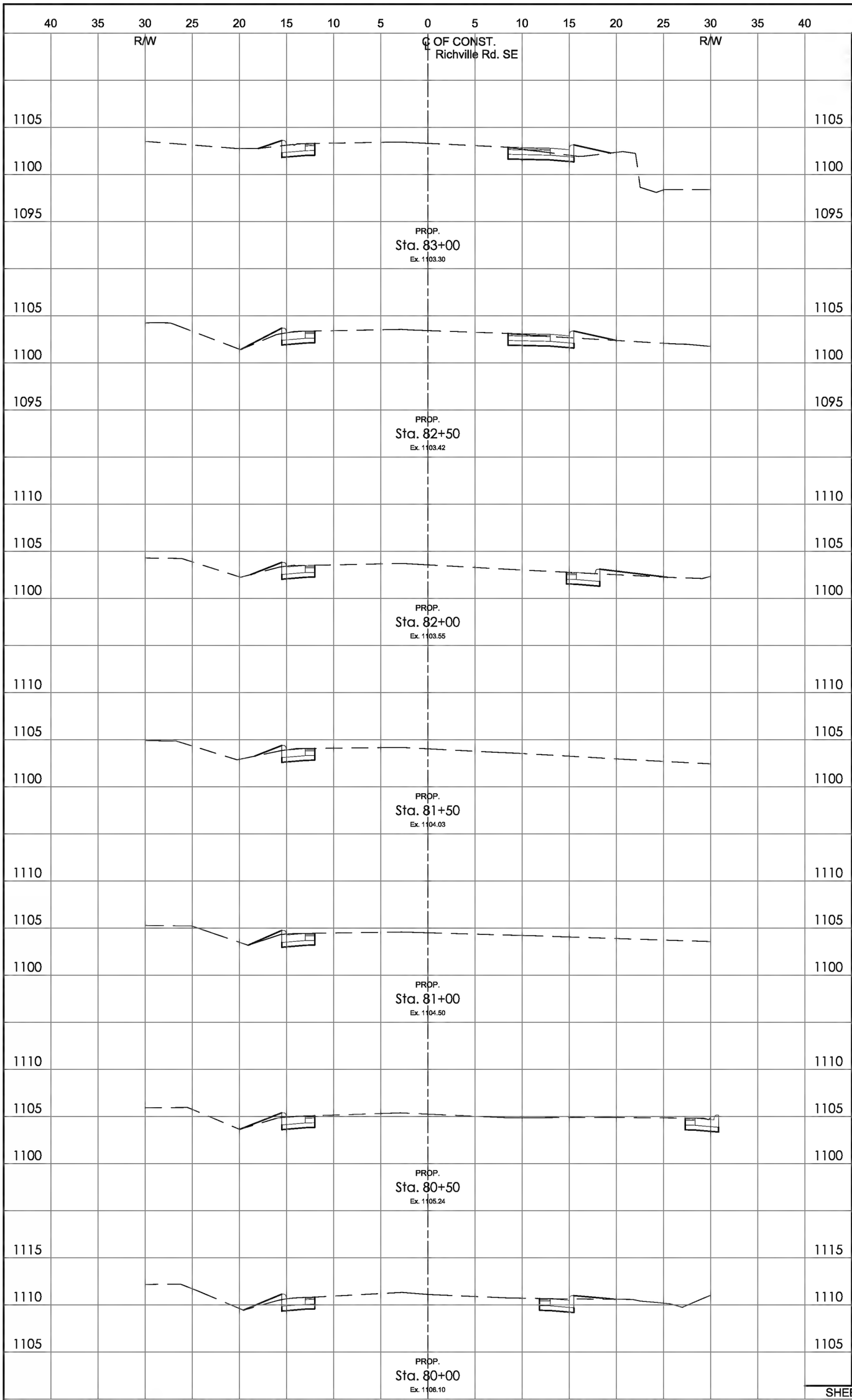
DRAWN BY: XXXX

DATE: Sept. 2016

CHECKED BY: XXX

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET



END AREA		VOLUME	
CUT	FILL	CUT	FILL
10.5	3.2	17.3	9.4
12	2.8	20.8	5.6
9.1	2.4	19.5	4.8
4.5	0.8	12.6	3.0
4.6	0.7	8.4	1.4
9.2	1	12.8	1.6
9.2	1.9	17.0	2.7
SHEET TOTAL		108.5	28.4

38 / 45

CITY NUMBER: 17e003

DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor

Massillon
City of Champions

Richville Rd SE Improvement Project

Cross Sections Sta. 80+00 to Sta. 83+00

City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016

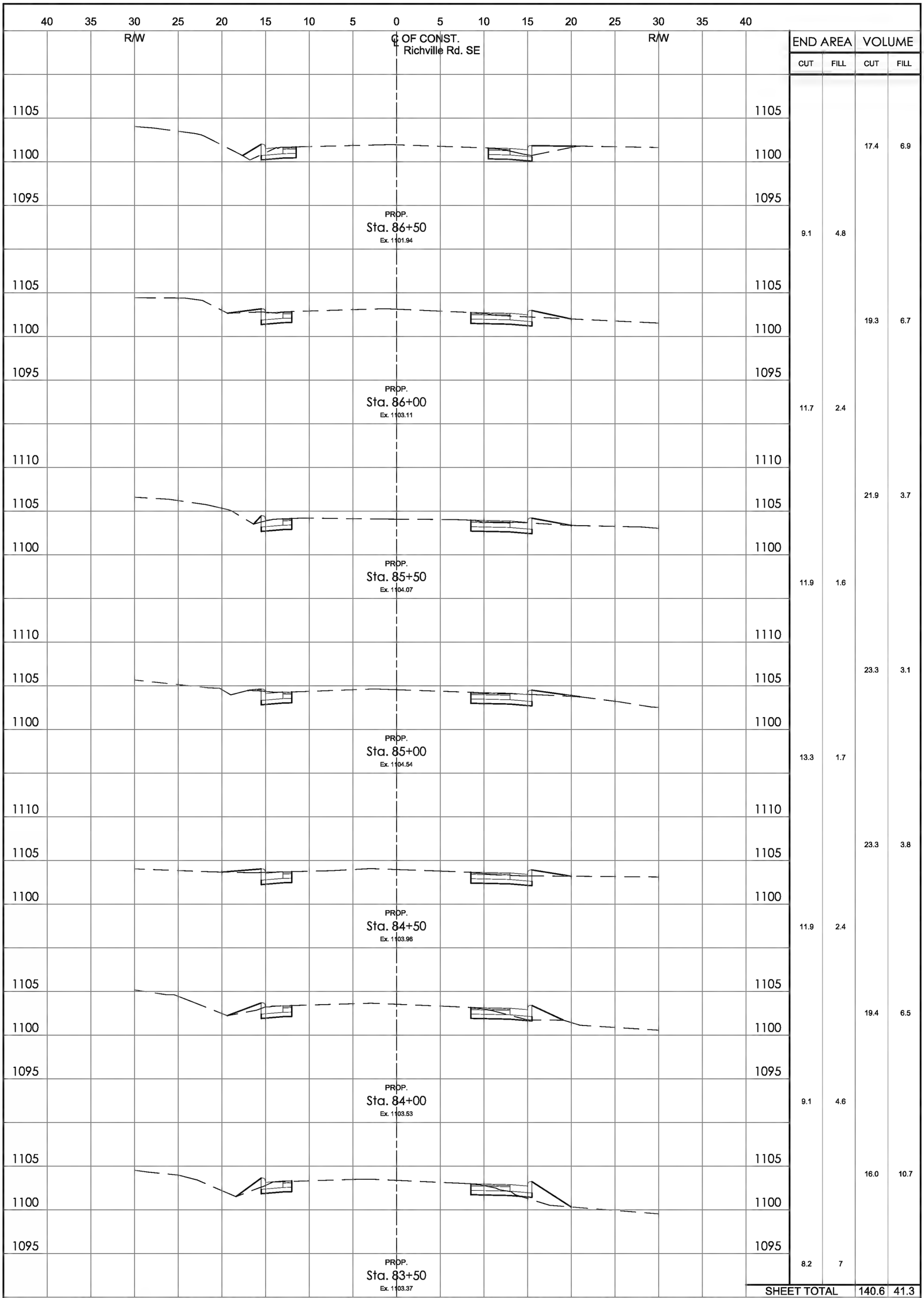
DRAWN BY: XXXX

DATE: Sept. 2016

CHECKED BY: XXX

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	9.1	4.8	17.4	6.9
	11.7	2.4	19.3	6.7
	11.9	1.6	21.9	3.7
	13.3	1.7	23.3	3.1
	11.9	2.4	23.3	3.8
	9.1	4.6	19.4	6.5
	8.2	7	16.0	10.7
SHEET TOTAL			140.6	41.3

39 / 45

CITY NUMBER: 17br03

DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor

Massillon
City of Champions

Richville Rd SE Improvement Project

Cross Sections Sta. 83+50 to Sta. 86+50

City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016

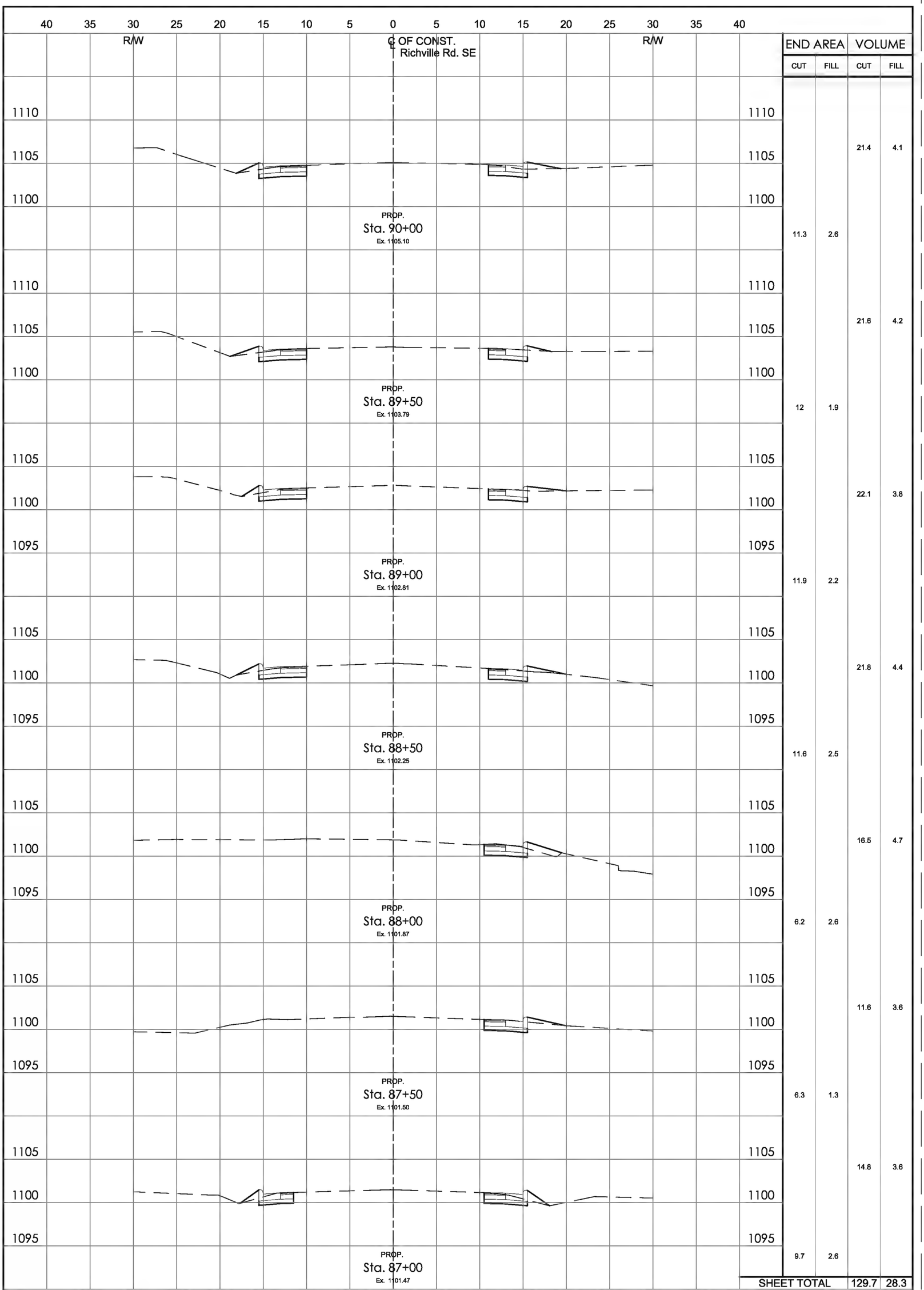
DRAWN BY: XXXX

DATE: Sept. 2016

CHECKED BY: XXX

HORIZONTAL SCALE IN FEET

VERTICAL SCALE IN FEET



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	11.3	2.6	21.4	4.1
	12	1.9	21.6	4.2
	11.9	2.2	22.1	3.8
	11.6	2.5	21.8	4.4
	6.2	2.6	16.5	4.7
	6.3	1.3	11.6	3.6
	9.7	2.6	14.8	3.6
SHEET TOTAL			129.7	28.3

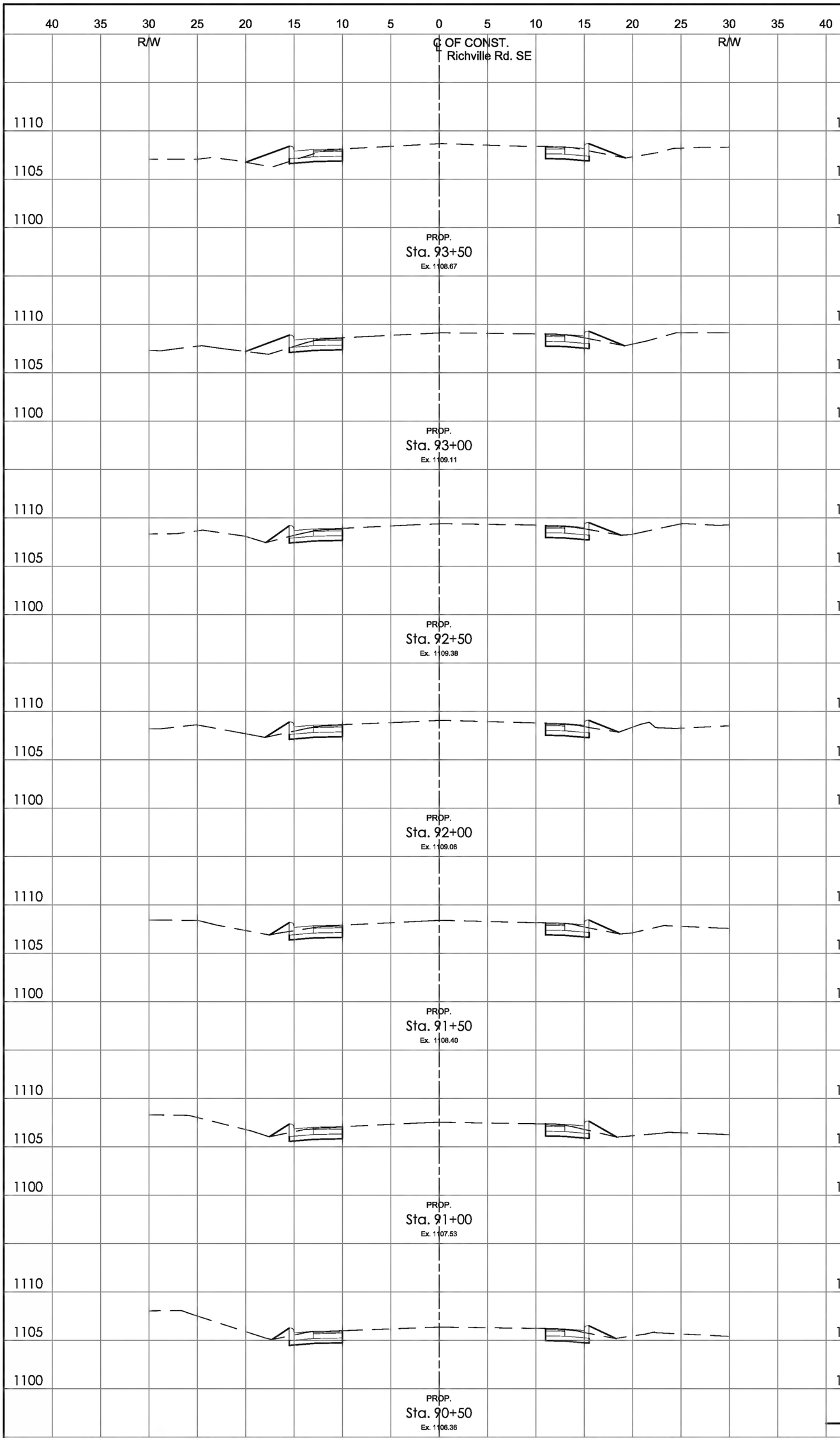
CITY NUMBER: 17HK03
DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 87+00 to Sta. 90+00
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
VERTICAL SCALE IN FEET



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
			18.2	11.1
Sta. 93+50	10	6.1		
			19.2	10.6
Sta. 93+00	10.7	5.4		
			20.1	7.4
Sta. 92+50	11.0	2.6		
			20.4	4.6
Sta. 92+00	11.0	2.4		
			20.6	4.3
Sta. 91+50	11.2	2.2		
			20.6	4.2
Sta. 91+00	11.0	2.3		
			21.1	3.8
Sta. 90+50	11.8	1.8		
SHEET TOTAL			140.1	46.0

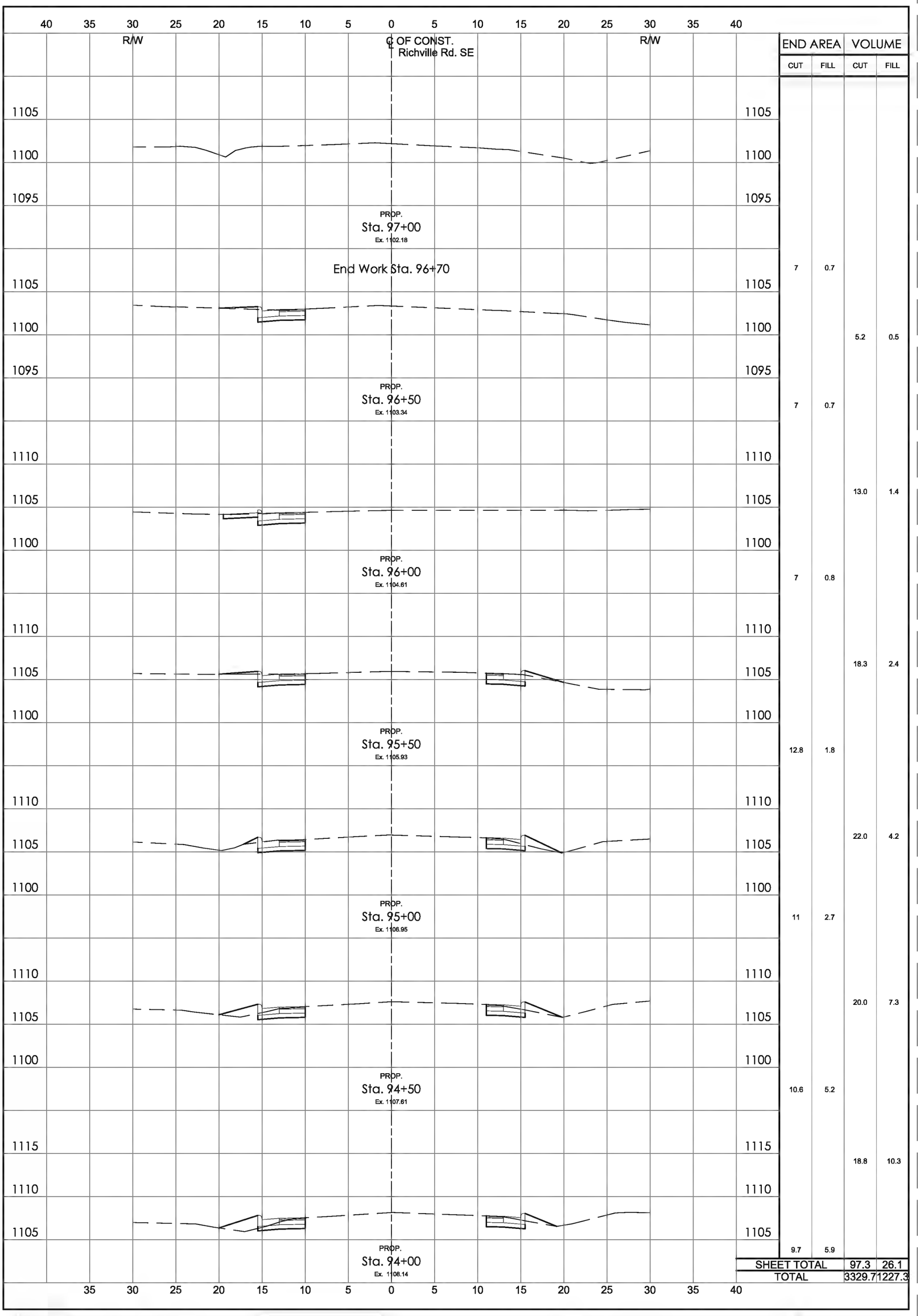
CITY NUMBER: 17ph03
DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

Richville Rd SE Improvement Project
Cross Sections Sta. 90+50 to Sta. 93+50
City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016
DRAWN BY: XXXX
DATE: Sept. 2016
CHECKED BY: XXX
HORIZONTAL SCALE IN FEET
5 2.5 0
VERTICAL SCALE IN FEET
5 2.5 0



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	7	0.7		
			5.2	0.5
	7	0.7		
			13.0	1.4
	7	0.8		
			18.3	2.4
	12.8	1.8		
			22.0	4.2
	11	2.7		
			20.0	7.3
	10.6	5.2		
			18.8	10.3
	9.7	5.9		
SHEET TOTAL			97.3	26.1
TOTAL			3329.7	1227.3

42 / 45

CITY NUMBER: 17ec03

DRAWING NAME: xxxx.DWG

Kathy Catazaro-Perry, Mayor

Massillon
City of Champions

Richville Rd SE Improvement Project

Cross Sections Sta. 10+00 to Sta. 20+00

City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

DATE: Sept. 2016

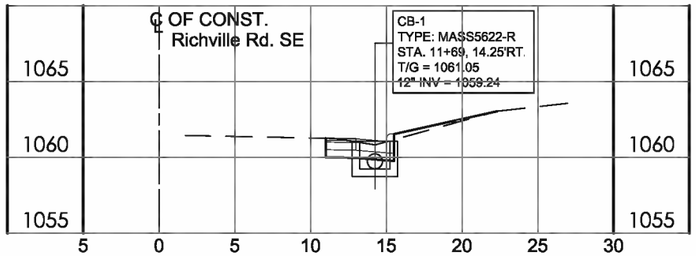
DRAWN BY: XXXX

DATE: Sept. 2016

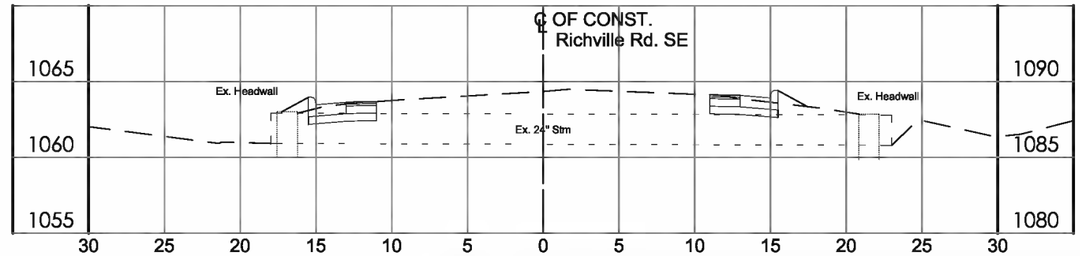
CHECKED BY: XXX

HORIZONTAL SCALE IN FEET

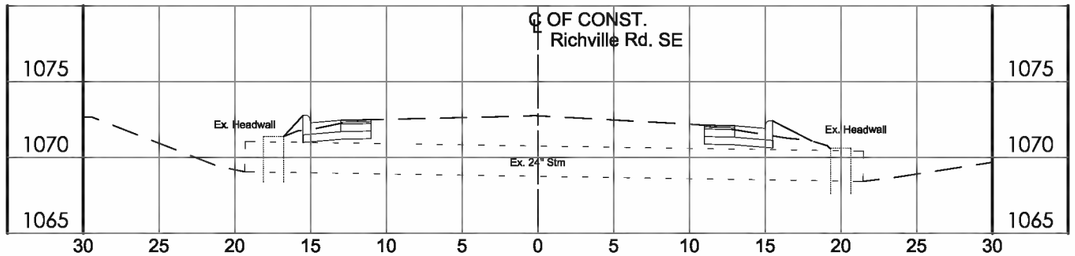
VERTICAL SCALE IN FEET



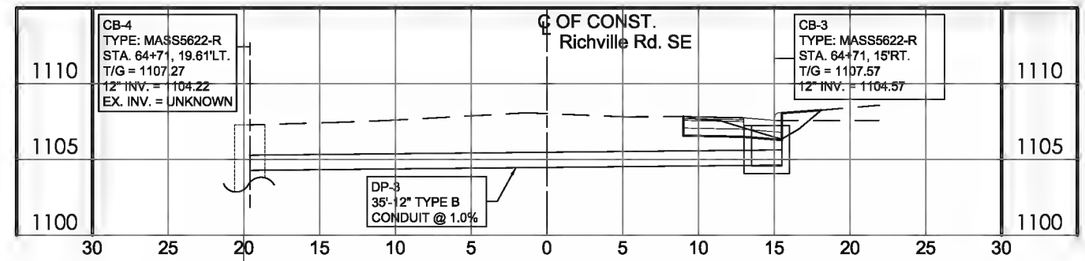
Catch Basin 1 - Sta. 11+69



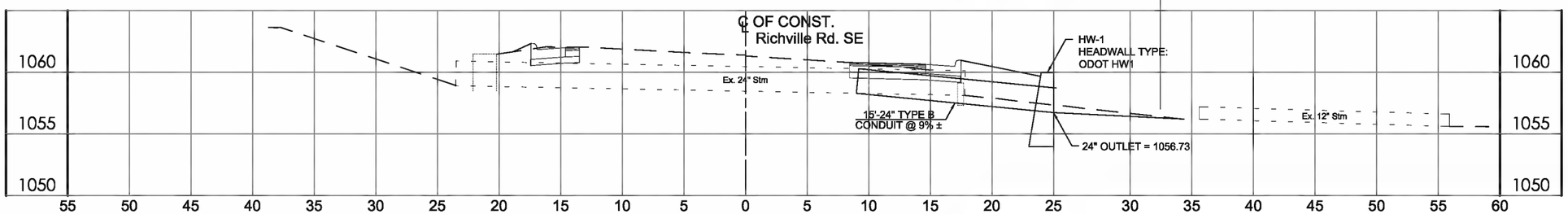
Culvert No. 1 - Sta. 17+57.67, Skew = 89°00'35"



Culvert No. 2 - Sta. 30+93.63, Skew = 92°13'43"

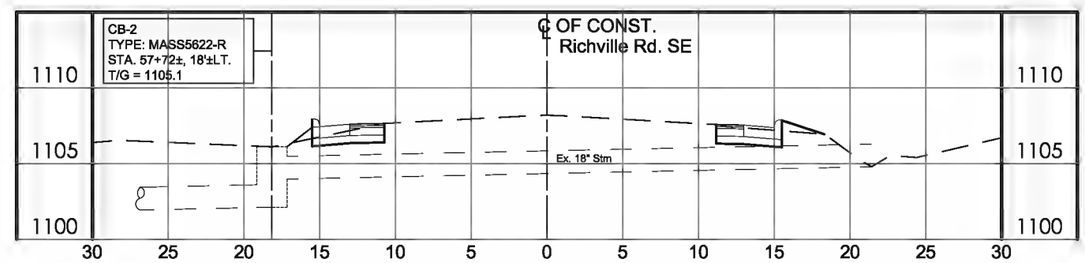


Catch Basin 4 AND 3 Sta. 64+71

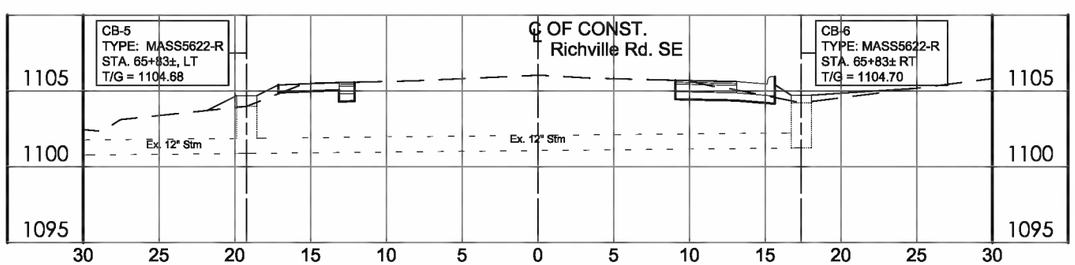


Culvert No. 3 - Sta. 43+42.13, Skew = 117°15'04"

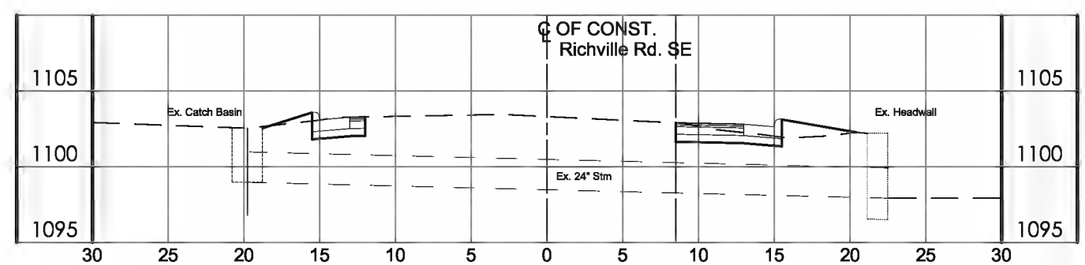
Culvert No. 4 - Sta. 46+20.12, Skew = 92°32'23"



Culvert No. 5 - Sta. 57+72.73, Skew = 91°11'31"



Culvert No. 6 - Sta. 65+82.87, Skew = 97°37'20"



Culvert No. 7 - Sta. 83+02.80, Skew = 89°07'43"

NW NE SW SE N

VERTICAL — N — FEET 5 2.5 0

5 2.5 0
HORIZONTAL SCALE IN FEET

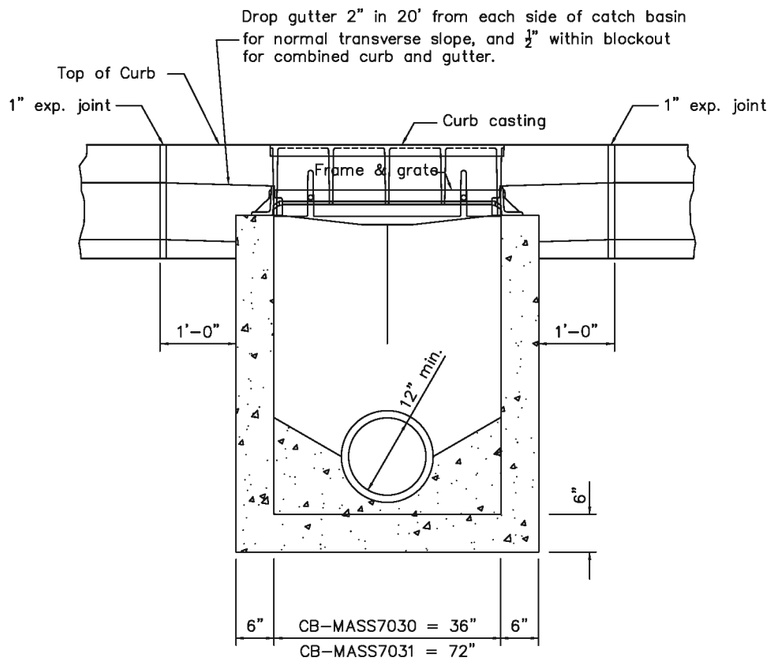
CHECKED BY: JP
DATE: Sept, 2016
DRAWN BY: FPW
DATE: Sept, 2016

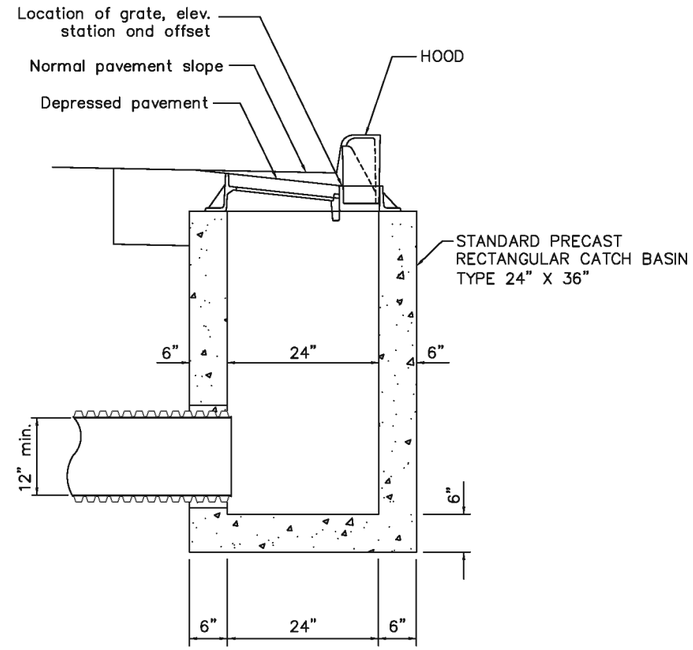
REVISIONS:
DATE | DESCRIPTION

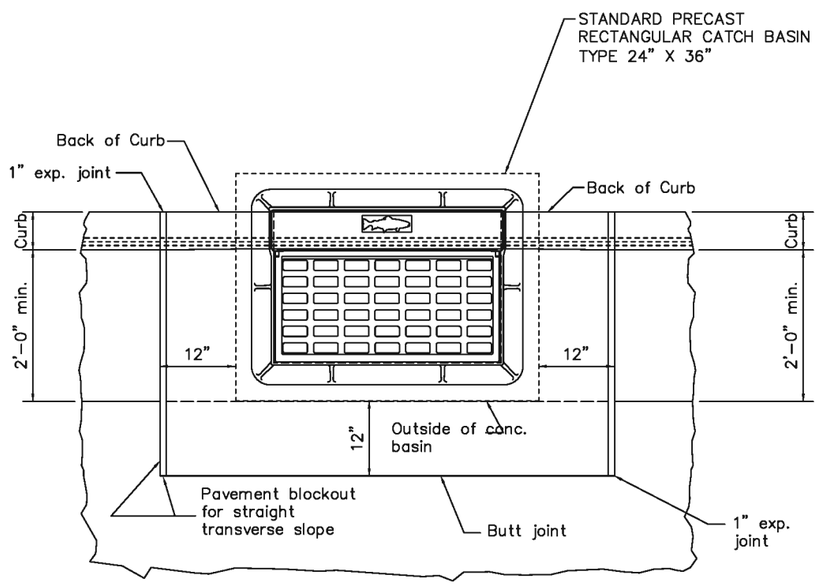
Richville Rd SE Improvement Project
Cross Sections Sta. 10+00 to Sta. 20+00
City of Massillon
Stark County, Ohio

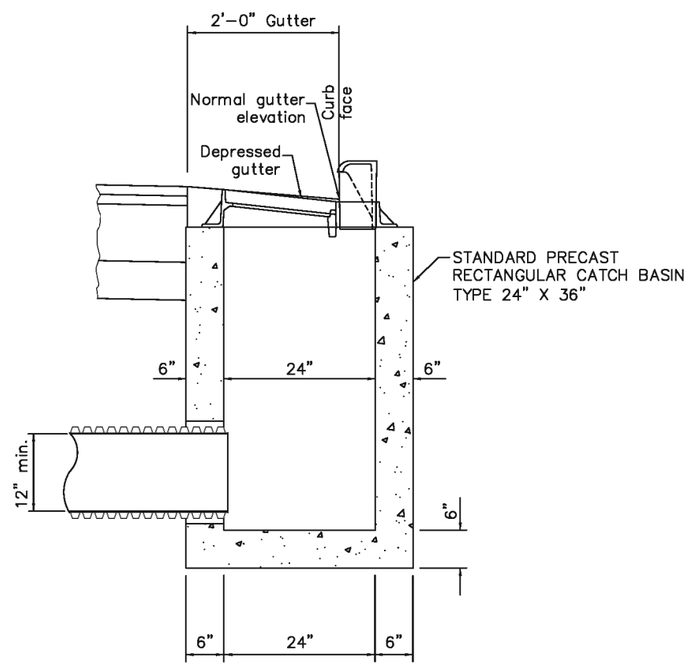
Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: xxxx.DWG
CITY NUMBER: 17st03









GRATES: Two required. For details, see EJ 7030Z. provide Grate M2 unless the plans specifically require the bicycle safety grate.

CASTINGS: Provide a design essentially the same and equally as strong as the the one shown. Below is a list of approved EJ

Frame	=	7030 Z, 7031 Z
Grate	=	7030 M2,
	=	7030 M3 for bicycle safety
Hood	=	7030 T1
		7030 T3 for drop curb areas

BEARING AREAS: Fit and finish the frame and grate to provide a firm seat and even seat. No projections are permitted on bearing areas, and grate must seat in its frame without rocking.

PRECAST CONSTRUCTION: Meet CMS 706.13 concrete requirements. Provide precast walls at least 6" thick with sufficient reinforcing to permit shipping and placement without damage. Reduce the wall thickness from the outside.

MINIMUM DEPTH: The minimum depth is per the cover requirements for that pipe type.

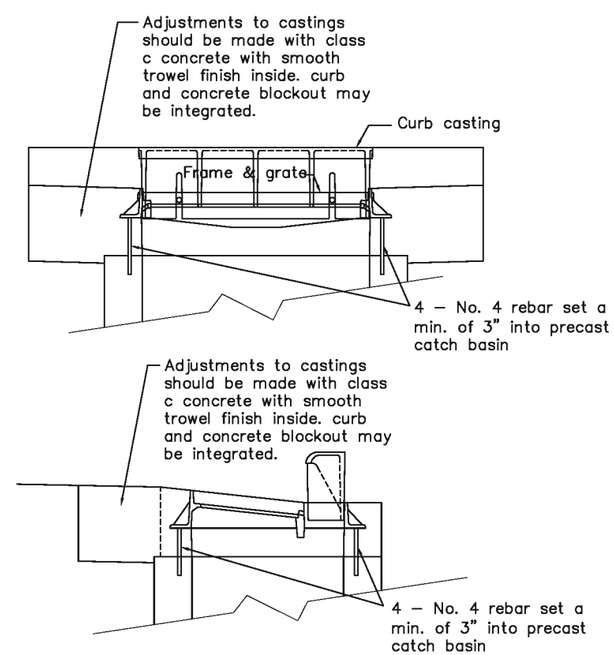
OPENINGS: Obtain the Engineer's approval for any pipe opening greater than 4" from the outside of the pipe to the structure. Fill all voids per CMS 611.

DOWELS: Furnish four 1"x18" dowels for concrete pavement or gutter blockout. See SCD BP–2.2 for dowel details.

BLOCKOUT: Pave blockouts with 4000 psi compressive strength concrete in PCC pavement or gutter. Blockouts are paid for as part of the catch basin quantities because of the castings. Cast a 4000 psi compressive strength concrete apron, the size of the 2'–0" gutter blockout, in place in asphalt pavement (no dowels required) with the cost included in the catch basin bid price. No deduction is made in curb quantities.

PAYMENT: All materials and labor, including excavation and backfilling, are paid for under Item 611Spec – Catch Basin, Mass7030.

ADJUSTMENT: No brick shall be used to adjust castings height. See Adjustment detail this sheet.



CASTING ADJUSTMENT

NW NE SW SE N

VERTICAL FEET 200 100 0

HORIZONTAL SCALE IN FEET 200 100 0

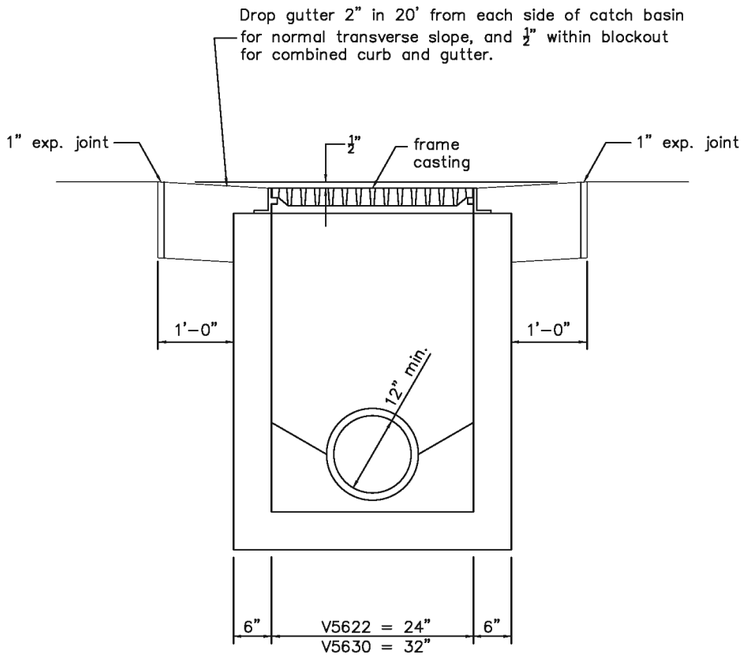
CHECKED BY: DGK
DATE: Sept, 2016
DRAWN BY: FPW
DATE: Sept, 2016

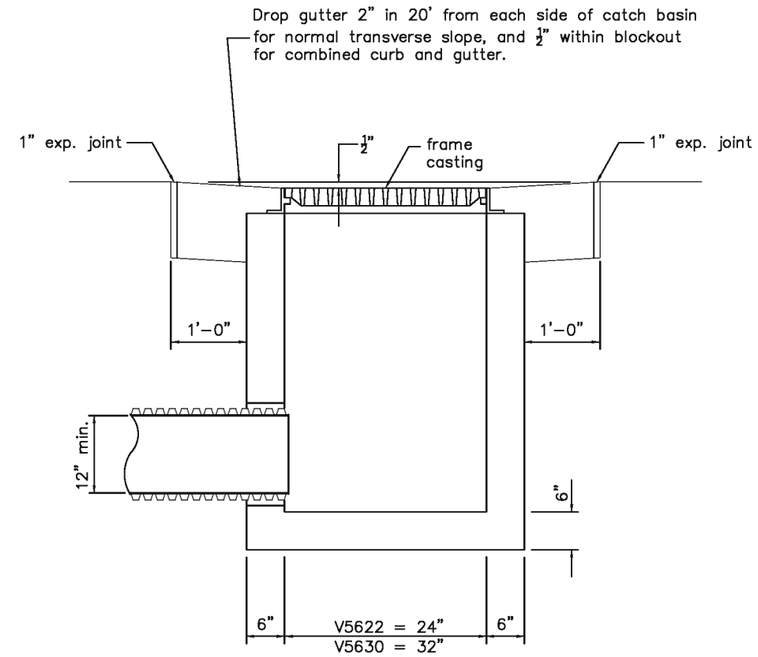
REVISIONS: DATE	DESCRIPTION

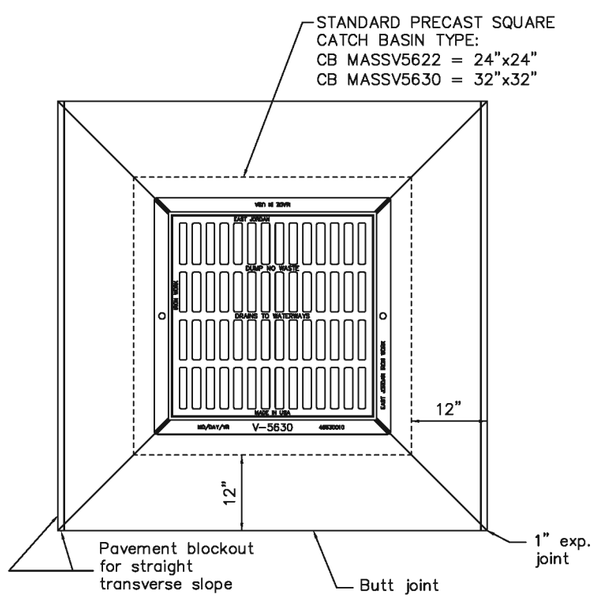
Massillon Standard Construction Details
CB–MASS7030 AND CB–MASS7031
City of Massillon
Stark County, Ohio

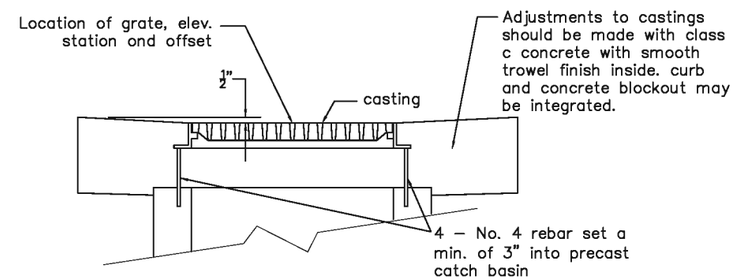
Kathy Catazaro-Perry, Mayor
Massillon City of Champions

DRAWING NAME: Drainagedet.DWG
CITY NUMBER: 2015

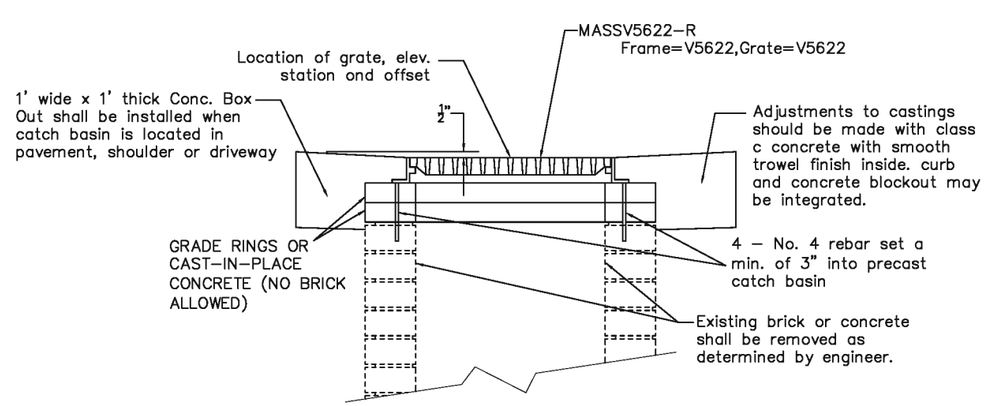








CASTING ADJUSTMENT



ITEM 611 CATCH BASIN MASSV5622-R

GRATES: Two required. For details, see EJ V5630. provide Grate V5630 unless the plans specifically require different grate.

CASTINGS: Provide a design essentially the same and equally as strong as the the one shown. Below is a list of approved EJ

MASS–V5622
Frame = V5622
Grate = V5622
MASS–V5630
Frame = V5630
Grate = V5630

BEARING AREAS: Fit and finish the frame and grate to provide a firm seat and even seat. No projections are permitted on bearing areas, and grate must seat in its frame without rocking.

PRECAST CONSTRUCTION: Meet CMS 706.13 concrete requirements. Provide precast walls at least 6" thick with sufficient reinforcing to permit shipping and placement without damage. Reduce the wall thickness from the outside.

MINIMUM DEPTH: The minimum depth is per the cover requirements for that pipe type.

OPENINGS: Obtain the Engineer's approval for any pipe opening greater than 4" from the outside of the pipe to the structure. Fill all voids per CMS 611.

DOWELS: Furnish four 1"x18" dowels for concrete pavement or gutter blockout. See SCD BP–2.2 for dowel details.

BLOCKOUT: Pave blockouts with 4000 psi compressive strength concrete in PCC pavement or gutter. Blockouts are paid for as part of the catch basin quantities because of the castings. Cast a 4000 psi compressive strength concrete apron, the size of the 2'–0" gutter blockout, in place in asphalt pavement (no dowels required) with the cost included in the catch basin bid price. No deduction is made in curb quantities.

PAYMENT: All materials and labor, including excavation and backfilling, are paid for under Item 611Spec – Catch Basin, Massv5630.

ADJUSTMENT: No brick shall be used to adjust castings height. See Adjustment detail this sheet.

ITEM 611 - CATCH BASIN MASSV5622-R

DESCRIPTION: All castings, lids and grates are to be carefully removed and stored by the contractor for salvage by the city of Massillon. Removal and disposal of existing brick or concrete for proper installation of new casting and grate. Replace detortated brick and mortar. Patch existing walls as needed. Set new casting and grate per adjustment detail.

BLOCKOUT: Pave blockouts with 4000 psi compressive strength concrete in PCC pavement or gutter. Blockouts are paid for as part of the catch basin quantities because of the castings. Cast a 4000 psi compressive strength concrete apron, the size of the 2'–0" gutter blockout, in place in asphalt pavement (no dowels required) with the cost included in the catch basin bid price. No deduction is made in curb quantities.

PAYMENT: All materials and labor, including excavation and backfilling, are paid for under ITEM 611–CATCH BASIN MASSV5622–R.

ADJUSTMENT: No brick shall be used to adjust castings height. See Adjustment detail this sheet.

ITEM 611 CATCH BASIN MASSV5622-R

NW NE SW SE N

VERTICAL FEET 200 100 0

HORIZONTAL SCALE IN FEET 200 100 0

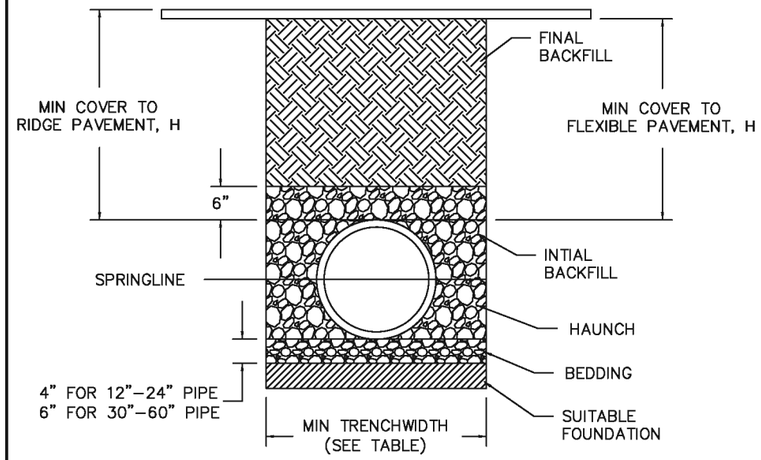
CHECKED BY: DGK
DATE: Sept, 2016
DRAWN BY: FPW
DATE: Sept, 2016

REVISIONS: DATE | DESCRIPTION

Massillon Standard Construction Details
CB–MASSV5622 AND CB–MASSV5630
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon City of Champions

DRAWING NAME: Drainagedet.DWG
CITY NUMBER: 2015



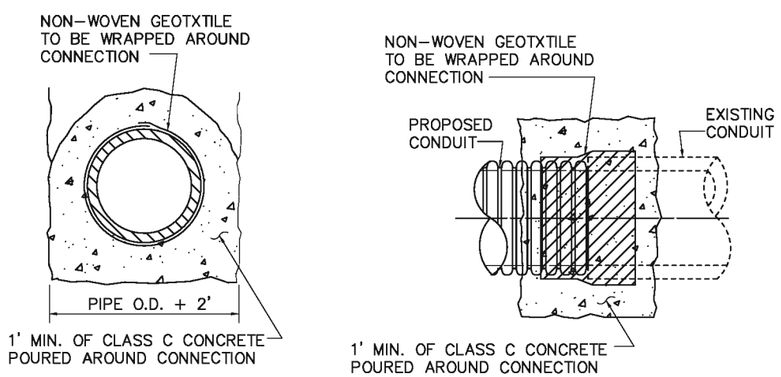
RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21'
6"	23'
8"	26'
10"	28'
12"	30'
15"	34'
18"	39'
24"	48'
30"	56'
36"	64'
42"	72'
48"	80'
54"	88'
60"	96'

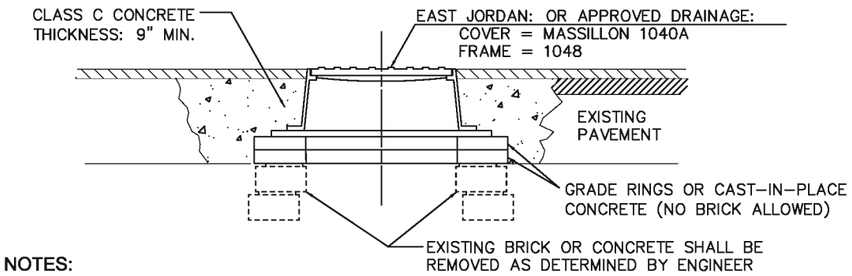
NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE APPLICATION", LATEST ADDITION
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III, PER MANUFACTURERS AND ODOT ITEM 611 REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICHNESS SHALL BE 4" FOR 4"-24"; 6" FOR 30"-60".
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO THE GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54" TO 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIDGE PAVEMENT.

TRENCHING DETAIL FOR PIPE



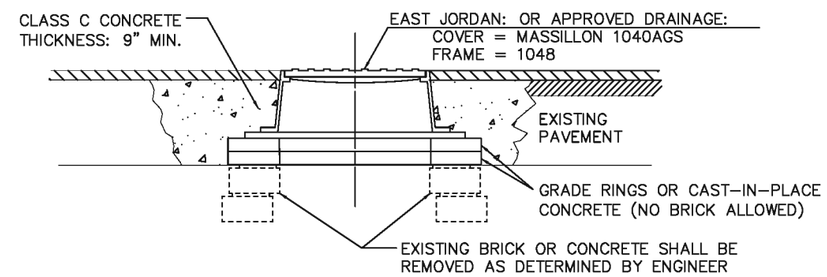
CONCRETE COLLAR



NOTES:

1. ALL CASTINGS, LIDS AND GRATES ARE TO BE CAREFULLY REMOVED AND STORED BY THE CONTRACTOR FOR SALVAGE BY THE CITY OF MASSILLON.
2. WORK SHALL INCLUDED ALL REMOVAL AND DISPOSAL OF EXISTING.

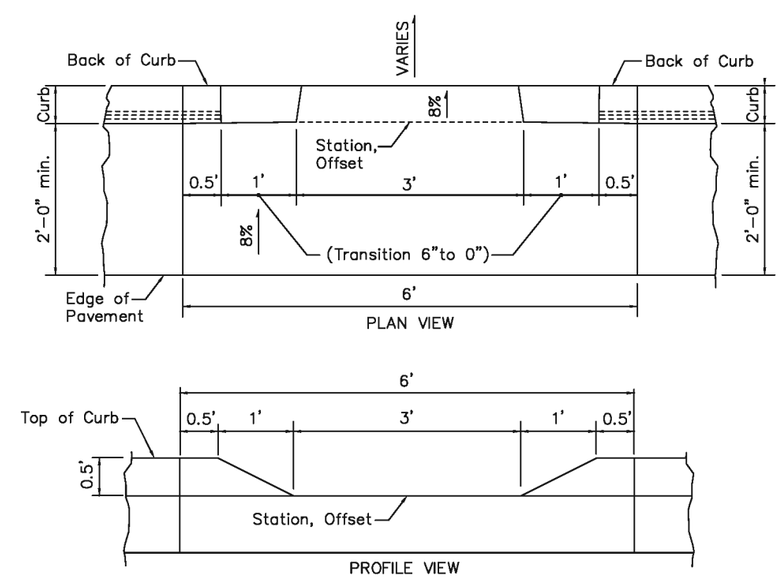
ITEM 604 DRAINAGE MANHOLE MASS1048-R



NOTES:

1. ALL CASTINGS, LIDS AND GRATES ARE TO BE CAREFULLY REMOVED AND STORED BY THE CONTRACTOR FOR SALVAGE BY THE CITY OF MASSILLON.
2. WORK SHALL INCLUDED ALL REMOVAL AND DISPOSAL OF EXISTING.

ITEM 604 SANITARY MANHOLE MASS1048-R



DROP CURB FOR DRAINAGE

PAID FOR UNDER ITEM 603 – CONCRETE AND GUTTER, TYPE 2

NW NE SW SE N

VERTICAL FEET 200 100 0

HORIZONTAL SCALE IN FEET 200 100 0

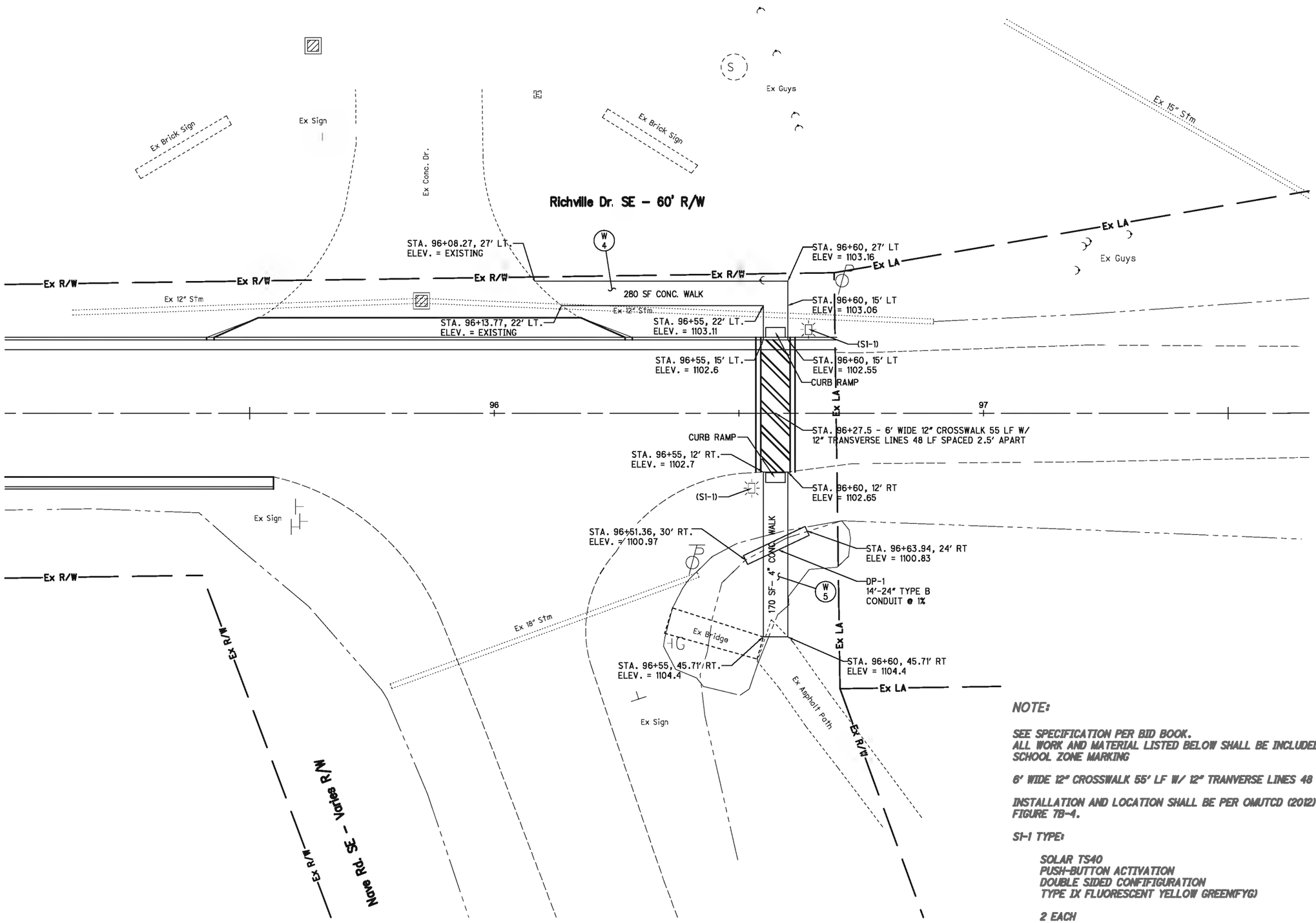
CHECKED BY: DGK
DATE: Sept, 2016
DRAWN BY: FPW
DATE: Sept, 2016

REVISIONS: DATE | DESCRIPTION

Massillon Standard Construction Details
Miscellaneous Details
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon City of Champions

DRAWING NAME: Drainagedet.DWG
CITY NUMBER: 2015



NOTE:

SEE SPECIFICATION PER BID BOOK.
ALL WORK AND MATERIAL LISTED BELOW SHALL BE INCLUDED IN ITEM 630SPEC SCHOOL ZONE MARKING

6' WIDE 12" CROSSWALK 55' LF W/ 12" TRANVERSE LINES 48 LF

INSTALLATION AND LOCATION SHALL BE PER OMUTCD (2012) PART 7, FIGURE 7B-4.

S1-1 TYPE:

SOLAR TS40
PUSH-BUTTON ACTIVATION
DOUBLE SIDED CONFIFIGURATION
TYPE IX FLUORESCENT YELLOW GREEN(FYG)

2 EACH

VERTICAL IN FEET 10 5 0

HORIZONTAL SCALE IN FEET 0 5 10

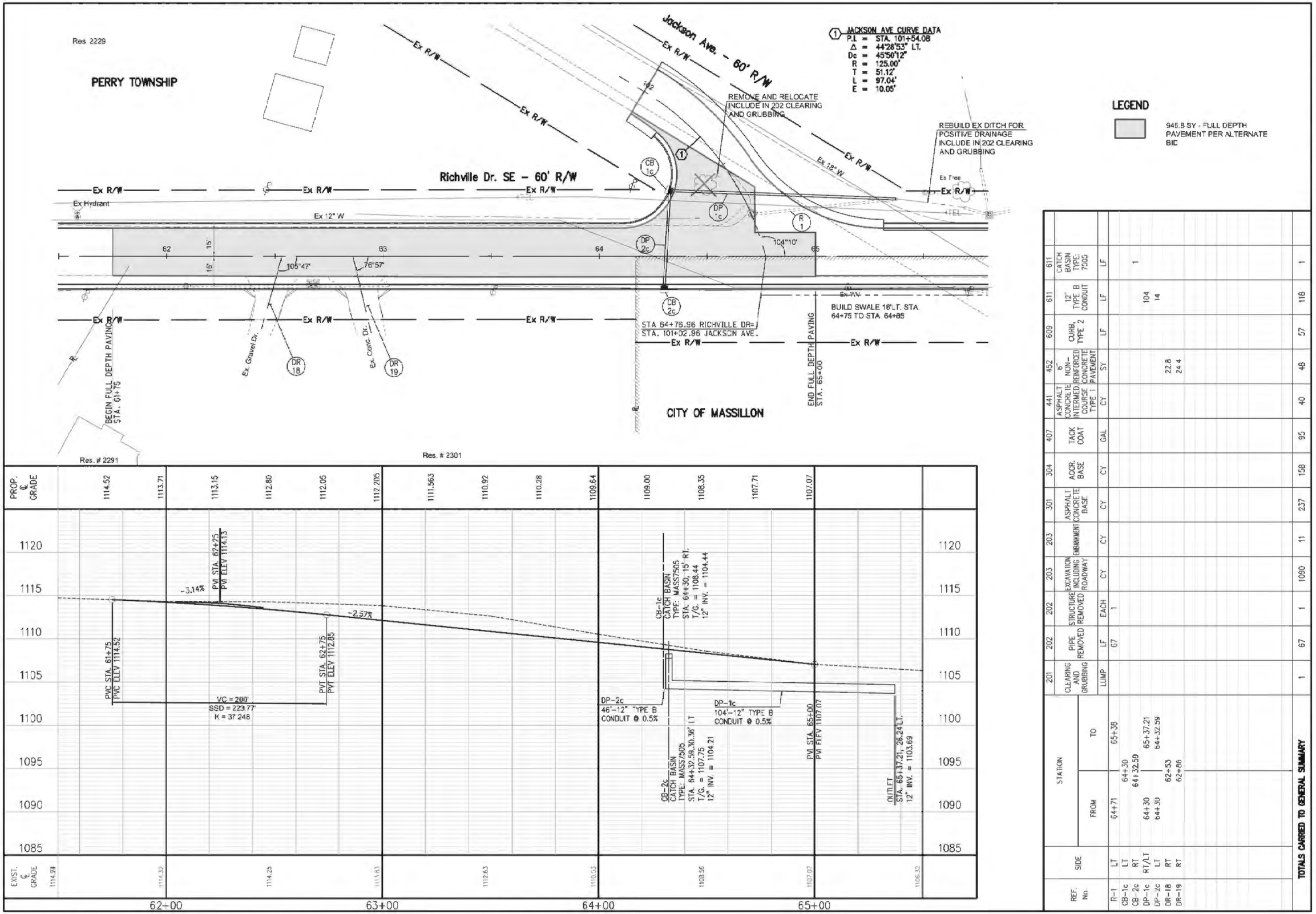
CHECKED BY: DGK
DATE: Sept, 2016
DRAWN BY: FPW
DATE: Sept, 2016

REVISIONS: DATE DESCRIPTION

Richville Dr SE Improvement Project
School Crossing Plan
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: Sht17-Rich90-100P
CITY NUMBER: 17#03



REF. No.	SIDE	STATION FROM	STATION TO	201 CLEARING AND GRUBBING	202 PIPE REMOVED	202 STRUCTURE REMOVED	203 EXCAVATION INCLUDING ROADWAY	203 EMBANKMENT	301 ASPHALT CONCRETE BASE	304 AGGR. BASE	407 TACK COAT	441 ASPHALT CONCRETE INTERMED. COURSE TYPE 1	452 6" NON-REINFORCED CONCRETE PAVEMENT	609 CURB, TYPE 2	611 12" TYPE B CONDUIT	611 CATCH BASIN TYPE: 7505
				LUMP	LF	EACH	CY	CY	CY	CY	GAL	CY	SY	LF	LF	LF
R-1	LT	64+71	65+38		67	1										1
CB-1c	LT	64+30													104	
CB-2c	RT	64+32.59													14	
DP-1c	RT/LT	64+30	65+37.21													
DP-2c	LT	64+30	64+32.59													
DR-18	RT	62+53											22.8			
DR-19	RT	62+86											24.4			
TOTALS CARRED TO GENERAL SUMMARY				1	67	1	1090	11	237	158	95	40	48	57	118	1

REVISIONS:
DATE DESCRIPTION

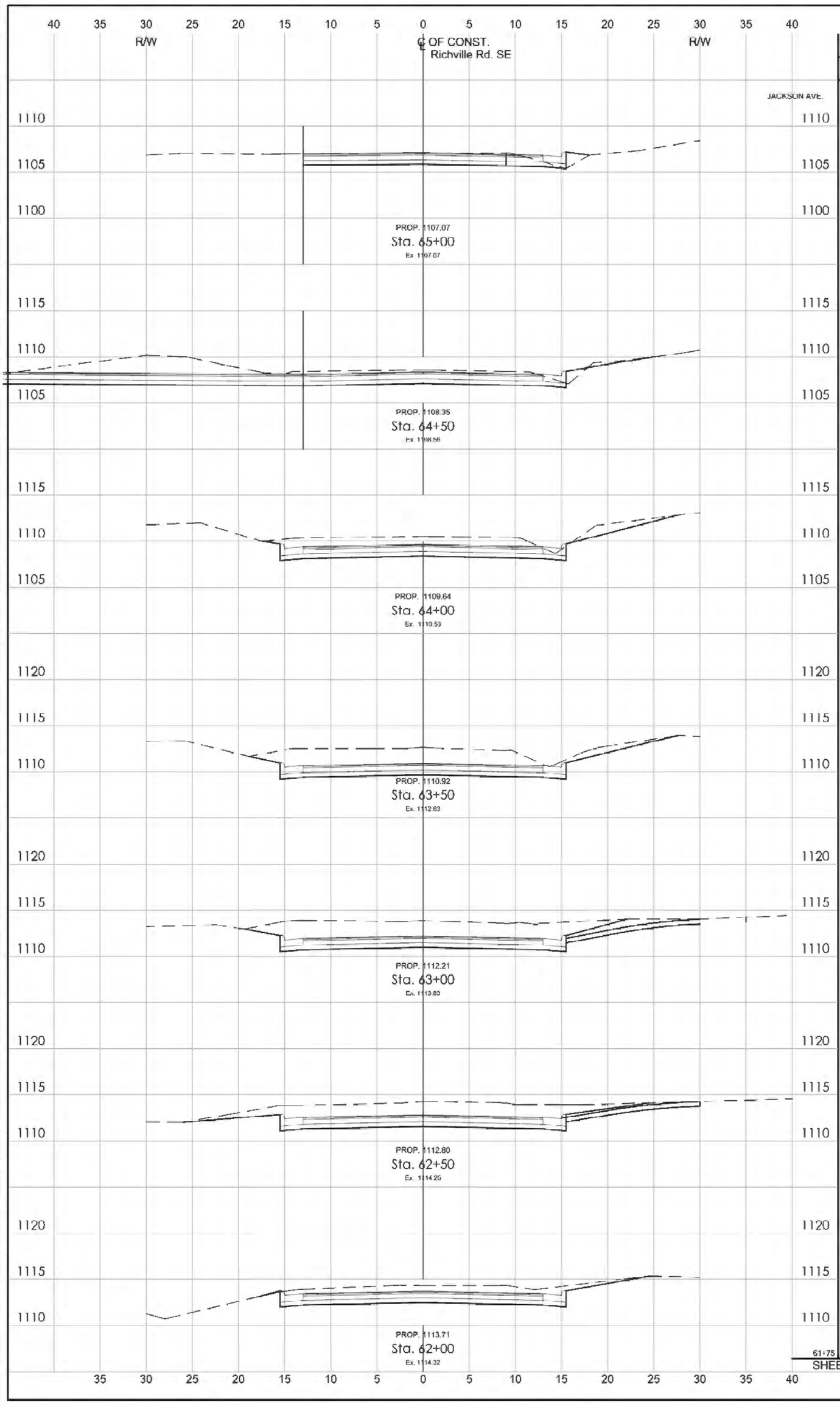
HORIZONTAL SCALE IN FEET

CHECKED BY: JP
DATE:
DRAWN BY: FPW
DATE: DEC. 2017

Richville Dr SE Improvement Project
Richville Dr. - Sta. 60+00.00 to Sta. 65+00
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: RichvilleCourty.DWG
CITY NUMBER: 17ST03
ALT1



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
			57.1	5
	34.7	2.3		
			108.3	3.8
	82.3	1.8		
			157.1	1.7
	87.3	0		
			167.4	0
	93.5	0		
			191.9	0
	113.7	0		
			200.6	0
	102.9	0		
			151.3	0.2
	60.5	0.2		
			56.0	0.2
61+75	60.5	0.2		
SHEET TOTAL			1089.7	10.9

ALT2

DRAWING NAME: RichvilleCross1.DWG

CITY NUMBER: 1TS103

Kathy Catazaro-Perry, Mayor

Massillon
City of Champions

Richville Rd SE Improvement Project

Cross Sections Sta. 59+00 to Sta. 62+00

City of Massillon
Stark County, Ohio

REVISIONS:
DATE DESCRIPTION

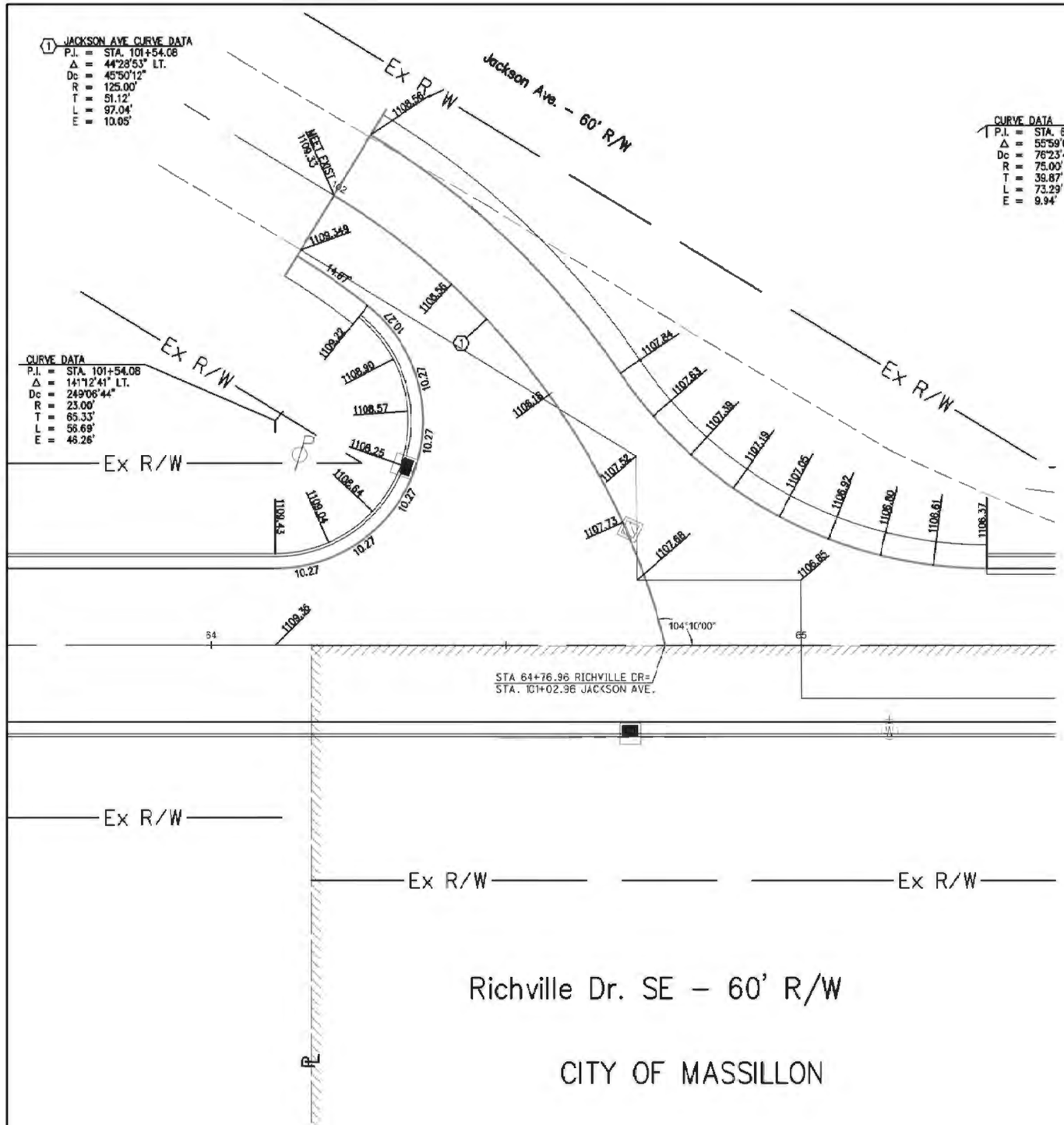
DATE: March, 2018

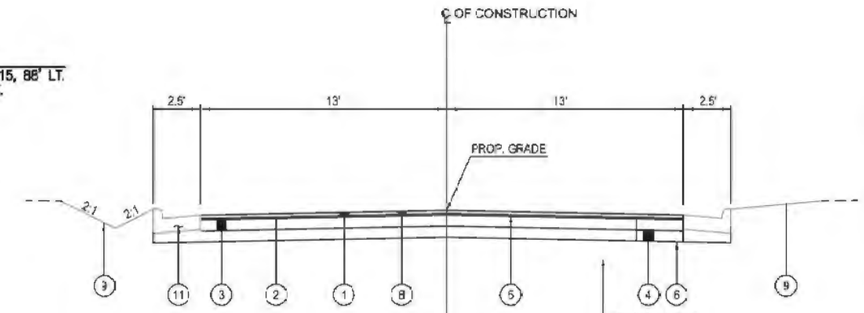
DRAWN BY: FPW

DATE: Feb. 2018

CHECKED BY: JP

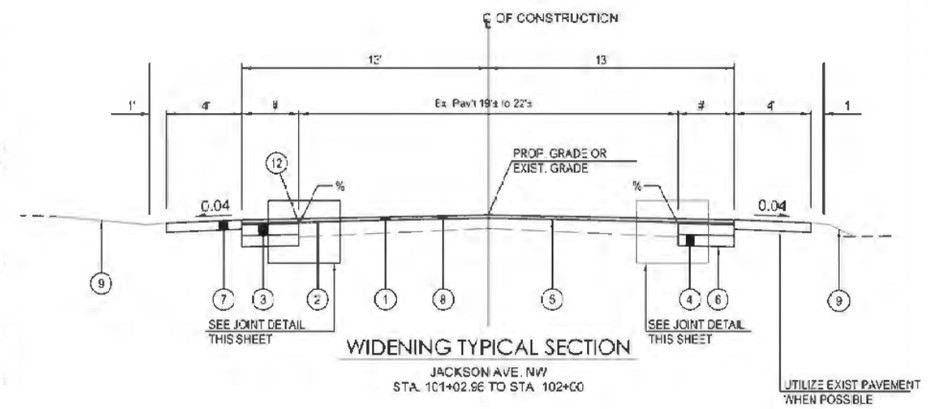
HORIZONTAL SCALE IN FEET





WIDENING TYPICAL SECTION

RICHVILLE DR.
STA 61+75 TO STA. 65+00



WIDENING TYPICAL SECTION

JACKSON AVE. NW
STA. 101+02.96 TO STA. 102+00

#- AMOUNT OF WIDING IS DEPENDENT UPON THE CENTERLINE OF CONSTRUCTION, AS SHOWN ON THE PLAN AND PROFILES. AT NO TIME SHALL PAVEMENT BE WIDENED LESS THAN 1' ON ANY SIDE. THIS WORK WILL BE AS DIRECTED IN THE FIELD.

%- SAW CUT SHALL BE PER PLAN OR DETERMINED IN FIELD TO UTILIZE EXISTING PAVEMENT. COST TO BE INCLUDED IN ITEM 254 PAVEMENT PLANING.

PROPOSED LEGEND

1. - ITEM 441-1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG 64-22
2. - ITEM 441-1 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) PG 64-28
3. - ITEM 301-9" ASPHALT CONCRETE BASE
4. - ITEM 304-6" AGGREGATE BASE
5. - ITEM 407-TACK COAT
6. - ITEM 204 - SUBGRADE COMPACTION
7. - ITEM 441-6" THICK SHOULDER MATERIAL (ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) PG 64-2)
8. - ITEM 254-VARIES PAVEMENT PLANING (1 1/5" MAX TO 0" MIN.)
9. - ITEM 659-SEEDING AND MULCHING
10. - ITEM 690spec-FIBERGLASS/POLYESTER INTERLAYER MAT (2' WIDE)
11. - ITEM 609-CURB, TYPE 2

VERTICAL 1 IN. = 5 FEET

HORIZONTAL SCALE IN FEET

CHECKED BY: JP
DATE:

DRAWN BY: FPW
DATE: DEC. 2017

REVISIONS:
DATE | DESCRIPTION

Richville Dr SE Improvement Project
Richville Dr. and Southway Intersection Detail
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City of Champions

DRAWING NAME: RichvilleCounty.DWG
CITY NUMBER 17ST03
ALT3