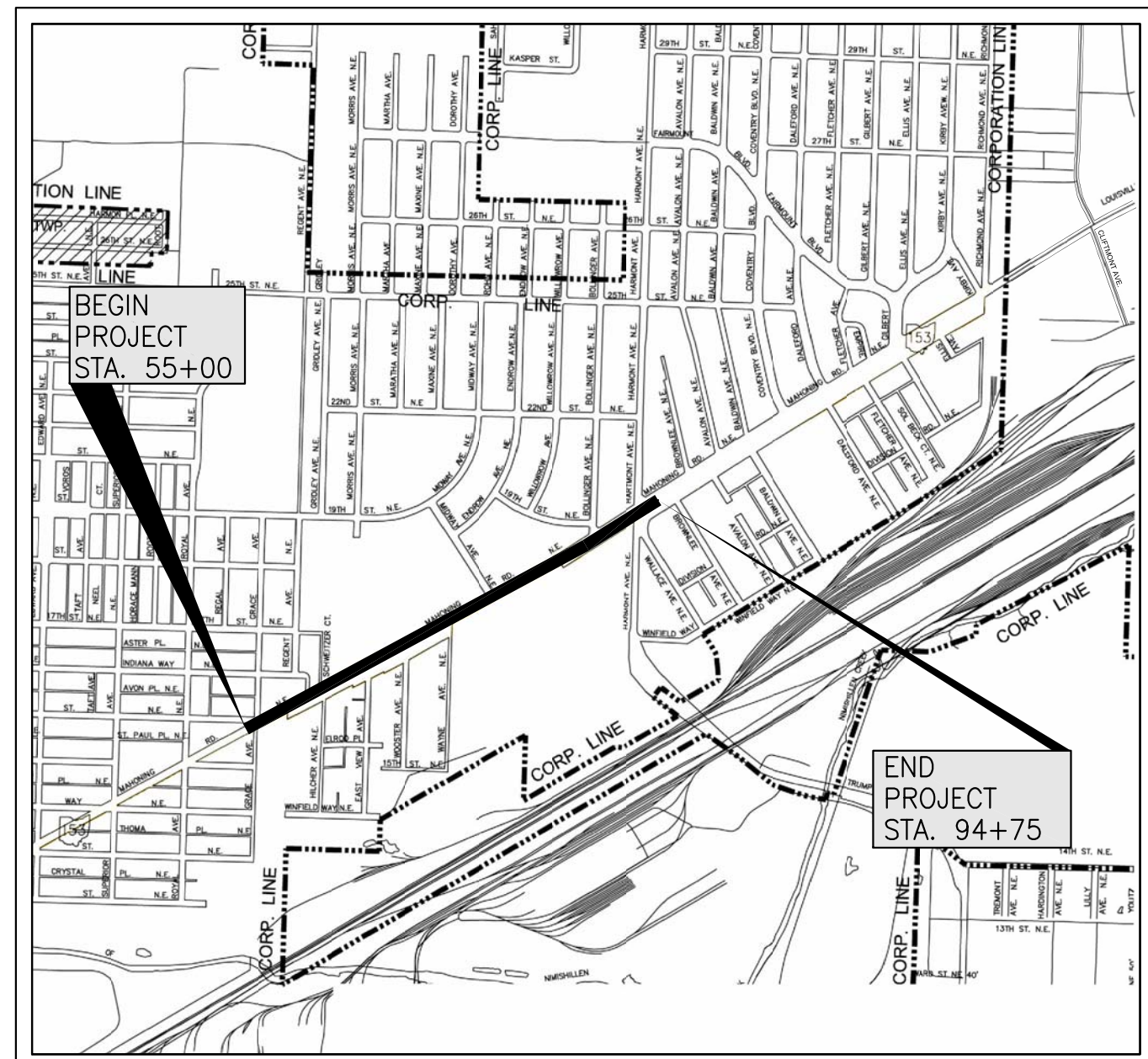
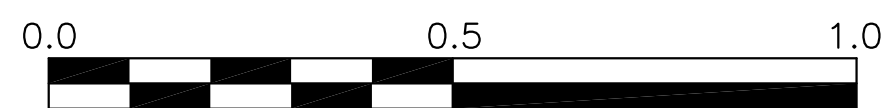


# MAHONING ROAD UTILITIES RELOCATION PROJECT

## MAHONING ROAD NE, S.R. 153: GRACE AVENUE NE TO HARMONT AVENUE NE CITY OF CANTON



LOCATION MAP



PORTION TO BE IMPROVED -----   
 STATE & FEDERAL ROUTES -----   
 OTHER ROADS -----

DESIGN DESIGNATION

CURRENT ADT (2009) ----- 10411 VPD  
 DESIGN YEAR ADT (2024) ----- 12703 VPD  
 DESIGN HOURLY VOLUME ----- 828 VPH  
 DIRECTIONAL DISTRIBUTION, D ----- 52%/48% (WB/EB)  
 TRUCKS (24 HOUR B&C) ----- 2%  
 DESIGN SPEED ----- 35 MPH  
 LEGAL SPEED ----- 35 MPH  
 DESIGN FUNCTIONAL CLASSIFICATION ----- URBAN PRINCIPAL ARTERIAL

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PROJECT DESCRIPTION

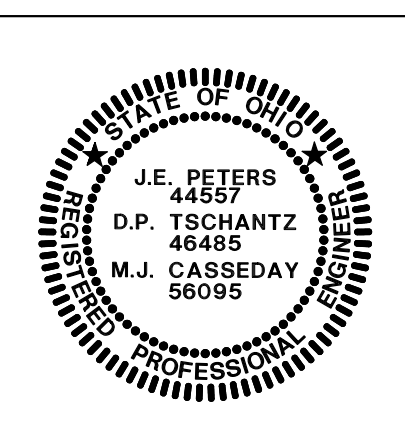
THE PROJECT WORK INVOLVES THE IMPROVEMENT OF APPROXIMATELY 0.67 MILES OF MAHONING ROAD NE, S.R. 153 BETWEEN THE GRACE AVENUE NE AND HARMONT AVENUE NE INTERSECTIONS. THE IMPROVEMENTS INCLUDE RELOCATION OF EXISTING OVERHEAD UTILITIES TO A NEW UNDERGROUND CONDUIT SYSTEM.

2010 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION AND THE CITY OF CANTON, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL, SHALL GOVERN THIS IMPROVEMENT.

APPROVED \_\_\_\_\_

DATE \_\_\_\_\_ DAN MOEGLIN, P.E., S.I.  
CANTON CITY ENGINEER



	DATE		DATE
STANDARD CONSTRUCTION DRAWINGS		ODOT SUPPLEMENTAL SPECIFICATIONS	
	ODOT	CITY OF CANTON	
BP-7.1	10-15-10	NO. 41	9-15-76
		NO. 44	4-29-89

OUPS REFERENCE NUMBERS  
 MAHONING ROAD - A831102839  
 SUPERIOR AVE - A831102847  
 WINFIELD WAY - A831102851  
 ROYAL AVE - A831102855  
 15TH STREET - A831102859  
 GRACE AVE - A831102864  
 16TH STREET - A831102868

2 WORKING DAYS

BEFORE YOU DIG

CALL TOLL FREE 800-362-2764

OHIO UTILITIES PROTECTION SERVICE

FEDERAL PROJECT NO. \_\_\_\_\_  
 PID NO. 90268  
 CONSTRUCTION PROJECT NO. \_\_\_\_\_  
 RAILROAD INVOLVEMENT NONE  
 MAHONING RD NE ECONOMIC DEVELOPMENT PROJECT

**I. PRECONSTRUCTION INCIDENTALS**

**(A) PROJECT SPECIFICATIONS/REQUIREMENTS:**

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

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

**(B) ADMINISTRATIVE REQUIREMENTS:**

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

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

**(C) PRECONSTRUCTION MEETING:**

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

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

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

**(D) PROJECT SAFETY:**

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

**(E) UNDERGROUND UTILITIES:**

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

**(F) UTILITY NOTIFICATION:**

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

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

THE PRIMARY UTILITIES WITHIN THE CITY OF CANTON AREA:

<u>NATURAL GAS DISTRIBUTION</u> DOMINION EAST OHIO GAS 320 SPRINGSIDE DR. AKRON, OHIO 44333 330-664-2409 ATTN: MARY LONG EMERGENCY NO. 1-800-521-4400	<u>TELEPHONE</u> SBC 50 WEST BOWER STREET AKRON, OHIO 44308 330-384-8057 ATTN: JIM BUETEL EMERGENCY NO. - 24 HRS. 1-800-572-4545 OPTION#4
--	--

<u>COMMUNICATIONS CABLE</u> TIME WARNER CABLE 5520 WHIPPLE AVE N.W. NORTH CANTON, OHIO 44720 330-494-9200, EXT. 87 ATTN: TIM KNIGHT	<u>ELECTRIC</u> AMERICAN ELECTRIC POWER 301 CLEVELAND AVE. S.W. P.O. BOX 24400 CANTON, OHIO 44701-4400 330-438-7762 ATTN: KEN HUOT EMERGENCY NO. 1-800-672-2017
--	---

<u>SANITARY AND STORM SEWER</u> CITY ENGINEER'S OFFICE 2436-30TH ST. N.E. CANTON, OHIO 44705 330-489-3381 ATTN: DAN MOEGLIN	<u>WATER</u> WATER DEPARTMENT 2664 HARRISBURG RD. N.E. CANTON, OHIO 44708 330-489-3310 ATTN: LEWI MILLER
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<u>NATURAL GAS TRANSMISSION</u> DOMINION EAST OHIO GAS 7015 FREEDOM AVE. N.E. NORTH CANTON, OHIO 44720 330-266-2120 ATTN: FRANK MARTIN	<u>TRAFFIC INTERCONNECT</u> CITY ENGINEER'S OFFICE 2436-30TH ST. N.E. CANTON, OHIO 44705 330-489-3370 ATTN: NICK LOUKAS
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THE CITY ENGINEER'S OFFICE IS TO BE CONTACTED DIRECTLY FOR SANITARY AND STORM SEWER AND TRAFFIC INTERCONNECT FACILITIES LOCATION: 330-489-3381.

**(G) PROPOSED PUBLIC UTILITY LOCATION IN PROPOSED SUBDIVISIONS:**

THE DEVELOPER/CONTRACTOR AND REPRESENTATIVES OF THE CITY OF CANTON SHALL MEET WITH REPRESENTATIVES OF THE VARIOUS PUBLIC UTILITY COMPANIES (EAST OHIO GAS, AMERICAN ELECTRIC POWER, AMERITECH, WARNER CABLE, ETC.) TO DETERMINE THE APPROPRIATE LOCATION FOR THESE UTILITIES WITHIN THE PROJECT SITE. ONCE AN AGREEMENT HAS BEEN REACHED, IT SHALL BE THE RESPONSIBILITY OF THE UTILITY OWNERS TO INSPECT THE INSTALLATION OF THE VARIOUS PUBLIC UTILITY LINES WITHIN THE ROAD RIGHT-OF-WAY TO ENSURE THAT CONFLICTS ARE AVOIDED AND ADEQUATE CLEARANCE AND OFFSETS WITH OTHER UTILITIES ARE MAINTAINED. UTILITY COMPANIES SHALL SUBMIT PLANS INDICATING THEIR PROPOSED IMPROVEMENTS AND FACILITIES TO THE CITY OF CANTON FOR APPROVAL. THE SITE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE INSTALLATION OF THE OTHER UTILITIES NOT OWNED BY THE CITY.

**(H) EXPLORATORY BORINGS:**

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

**(I) CONTINGENCY QUANTITIES:**

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

**II. CONSTRUCTION INCIDENTALS**

**(A) PLAN DISCREPANCIES:**

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

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

**(B) VERIFICATION OF UNDERGROUND UTILITIES:**

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

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

**(C) PROTECTION OF UTILITIES:**

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

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

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

**(D) MAINTENANCE OF UTILITY SERVICES:**

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

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

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

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

**(E) CONSTRUCTION NOISE:**

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

**(F) OPEN TRENCH CONSTRUCTION:**

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

THE DEVELOPER/CONTRACTOR SHALL FOLLOW ALL LOCAL AND STATE REGULATION, INCLUDING FEDERAL REGULATION, PART 1926, SUB PART P FOR ALL APPLICABLE REQUIREMENTS AND RESPONSIBILITIES.

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

**(G) TRENCH CLOSING AND TEMPORARY TOPPING:**

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE THE NECESSARY LEVELS OF PROTECTION AND SAFEGUARDING OF ALL OPEN TRENCHES, WHEN WORK IS EITHER COMPLETED AT THE END OF THE DAY OR SUSPENDED FOR ANY OTHER REASON.

AS A MINIMUM, THE CITY REQUIRES ALL TRENCHES TO BE TOPPED WITH 4" OF ODOT 304 LIMESTONE FOR TRENCHES WITHIN EXISTING ROADWAY PAVEMENTS WHEN THE ROADWAY WILL BE OPENED TO VEHICULAR TRAFFIC PRIOR TO PAVEMENT REPLACEMENT.

THE TRENCH TOPPING MATERIAL SHALL BE ROLLED OR OTHERWISE COMPLETED AND BE FURNISHED FLUSH WITH THE EXISTING ADJOINING PAVEMENT.

**(H) DUST CONTROL:**

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

GENERAL NOTES

SCALE: AS SHOWN

CALCULATED: PTA  
CHECKED: MJS

REVISIONS	DATE	BY

MAHONING ROAD NE. S.R. 153  
ECONOMIC DEVELOPMENT PROJECT

1  
23

PETERS, TSHANTZ & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
275 SPRINGSIDE DR., SUITE 300  
AKRON, OHIO 44308  
PHONE 330-666-9700 FAX -1465  
www.plaengineering.com

**II. CONSTRUCTION INCIDENTALS (continued)**

**(I) TESTING OF UTILITIES:**

ALL NEWLY CONSTRUCTED WATERLINES AND SANITARY SEWERS (INCLUDING LATERALS) MUST BE INSTALLED AND TESTED IN ACCORDANCE WITH APPLICABLE STANDARDS (AWWA, ETC.) PER THE OHIO ENVIRONMENTAL PROTECTION AGENCY, AND PER THE REQUIREMENTS OF THE CITY OF CANTON CITY AND WATER ENGINEERING DEPARTMENT.

SANITARY SEWERS SHALL BE TESTED BY DEVELOPER/CONTRACTOR IN ACCORDANCE WITH THE CITY OF CANTON'S SUPPLEMENTAL SPECIFICATION:

**02-00 TESTING FOR EXCESSIVE DEFLECTION FOR NON-PRESSURE THERMOPLASTIC SEWER PIPE.**

**03-00 TESTING PRACTICES FOR LOW-PRESSURE AIR TESTING OF INSTALLED, NON-PRESURE, THERMOPLASTIC SEWER PIPE.**

**04-01 STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY THE NEGATIVE AIR PRESSURE TEST.**

SANITARY AND STORM SEWERS CONSTRUCTED WITH THIS PROJECT SHALL BE TELEVISED BY THE DEVELOPER/CONTRACTOR IN ACCORDANCE WITH CITY OF CANTON'S SUPPLEMENTAL SPECIFICATION:

**05-01 SEWER TELEVISION INSPECTION AND DOCUMENTATION PROCEDURE.**

**(J) PRESERVATION OF EXISTING STRUCTURES:**

THE DEVELOPER/CONTRACTOR SHALL PERFORM WORK SO AS TO NOT DISTURB, DAMAGE OR DESTROY ANY MAILBOX, PAPER BOX, TELEPHONE OR POWER POLES, SIGNS, FENCES, RETAINING WALLS, LANDSCAPING ITEMS, ETC. ANY ITEM DAMAGED SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ANY ITEM DISTURBED OR IN CONFLICT WITH THE WORK TO BE PERFORMED SHALL BE REMOVED AND RESET AT THE CONTRACTOR'S EXPENSE UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS.

**(K) SALVAGED CASTINGS:**

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

**(L) PLUG EXISTING CONDUIT:**

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

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

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

**(M) CONSTRUCTION LAYOUT:**

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

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

**(N) EXISTING MONUMENTATION:**

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

**(O) ELEVATION DATUM:**

ALL ELEVATIONS AREA BASED ON THE NAVD 1988 DATUM.

**(P) DEWATERING OPERATIONS:**

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

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

THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS FOR THE INSTALLATION AND SUBSEQUENT REMOVAL OF DEWATERING EQUIPMENT AS MAY BE NECESSARY PER STATE AND LOCAL GOVERNING AGENCIES.

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

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

**(Q) INSPECTION:**

ALL WORK REQUIRED FOR THIS IMPROVEMENT SHALL BE SUBJECT TO INSPECTION BY THE CITY OF CANTON OR THEIR DESIGNATED REPRESENTATIVE. THE CONTRACTOR SHALL GIVE A 48 HOUR NOTICE BEFORE STARTING ANY WORK ON THIS PROJECT AND SHALL KEEP THE CITY INFORMED OF HIS/HER CONSTRUCTION SCHEDULE. NO WORK SHALL BE PERFORMED UNLESS AN AUTHORIZED INSPECTOR IS PRESENT.

**(R) FIELD OFFICE:**

THE DEVELOPER/CONTRACTOR SHALL PROVIDE A FIELD OFFICE IN ACCORDANCE WITH ODOT 619. THE FIELD OFFICE SHALL BE TYPE "A", UNLESS OTHERWISE SPECIFIED.

**III. EARTHWORK / SITE WORK**

**(A) EASEMENTS AND RIGHT-OF WAY:**

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

**(B) SUITABILITY OF SITE:**

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

**(C) REMOVAL/REPLACEMENT OF UNSUITABLE MATERIAL:**

THE DEVELOPER/CONTRACTOR SHALL UNDERCUT AND REPLACE UNSUITABLE MATERIAL ENCOUNTERED DURING INSTALLATION OF THE PROPOSED UTILITIES AND ROADWAY IN ACCORDANCE WITH O.D.O.T. ITEM No. 603 AND 203, OR AS FURTHER DESCRIBED HEREIN.

IF PLANS ALLOW FOR A CONTINGENCY ITEM FOR SUCH REMOVAL/REPLACEMENT, THE CITY WILL DOCUMENT THE LOCATION OF AREAS OF SUCH REMOVAL/REPLACEMENT FOR FINAL QUANTITY TABULATION.

**D) RESTORATION OF DISTURBED AREAS:**

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

**IV. ROADWAY / PAVEMENT / WALK / CURB**

PAVEMENTS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CITY STANDARD DRAWINGS AND APPLICABLE ODOT SPECIFICATIONS, UNLESS SPECIFIED OTHERWISE ON THE PLANS.

**(A) AGGREGATE BASE, AS PER PLAN:**

THE REQUIREMENTS OF ODOT 304 SHALL APPLY; DEVIATIONS FROM THIS ARE AS FOLLOWS;

- (1) NO OPEN HEARTH BASIC-OXYGEN STEEL OR GRANULAR SLAG SHALL BE PERMITTED.

**(B) CONCRETE WALK AND DRIVE APPROACHES AS PER PLAN:**

THE REQUIREMENTS OF ODOT 608 CONCRETE WALKS AND RAMPS SHALL APPLY; DEVIATIONS FROM THIS ARE AS FOLLOWS:

- (1) CONCRETE MIX COARSE AGGREGATE SHALL BE LIMESTONE ONLY.
- (2) EXPANSION JOINTS (1/2") SHALL BE PLACED AT THE TRANSVERSE JOINTS OF THE WALK AT INTERVALS NOT TO EXCEED 30 FEET IN LENGTH.
- (3) COLD WEATHER PRACTICES SHALL BE SUBMITTED BY THE DEVELOPER/CONTRACTOR TO THE CITY ENGINEER FOR APPROVAL. DEVELOPER/CONTRACTOR SHALL PLACE AND PROTECT ALL CONCRETE IN ACCORDANCE WITH LATEST EDITION OF ACI 306.

**(C) CAST IN PLACE CONCRETE CURB, AS PER PLAN:**

REQUIREMENTS OF ODOT 609 SHALL APPLY; DEVIATIONS FROM THIS ARE AS FOLLOWS:

- (1) CONCRETE MIX COARSE AGGREGATE SHALL BE LIMESTONE ONLY.
- (2) CONSTRUCTION JOINTS FOR STAND-UP CURB AND COMBINATION CURB/GUTTER SHALL BE DOWELED. DOWELS SHALL BE (2) #5 BAR, 18" IN LENGTH EQUALLY SPACED.
- (3) COLD WEATHER PRACTICES SHALL BE SUBMITTED BY THE DEVELOPER/CONTRACTOR TO THE CITY ENGINEER FOR APPROVAL. DEVELOPER/CONTRACTOR SHALL PLACE AND PROTECT ALL CONCRETE IN ACCORDANCE WITH LATEST EDITION OF ACI 306.
- (4) CURB SHALL BE CORED OR SLEEVED 3-1/2" FOR 3" DRAIN OUTLETS AT THE LOCATIONS DETERMINED BY CITY ENGINEER OR DEVELOPER, OR AS SPECIFIED ON PLAN. NOTCH CUTTING OF CURB IS PROHIBITED.

**(D) DROP CURB AT DRIVEWAYS:**

THE CONTRACTOR SHALL PROVIDE DROP CURB FOR ALL PROPOSED DRIVEWAYS AT THE TIME THE CONCRETE CURB IS POURED. DROP CURBS SHALL CONFORM TO CITY STANDARD DRAWING NO. 41.

WHEN THE LOCATIONS OF DRIVES ARE NOT KNOWN AT THE TIME OF CURB CONSTRUCTION, THE DROPS MAY BE SAW CUT WITH THE CITY ENGINEER'S APPROVAL

**(E) WHEELCHAIR RAMPS:**

WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ODOT STANDARD CONSTRUCTION DRAWING BP-7.1 "CURB RAMPS WITH TRUNCATED DOMES" AND USE OF WHITACRE GREER ADA PAVER, CLEAR RED (RUSTIC) #30.

**(F) RESTRICTED WORK SCHEDULE:**

NO CONCRETE FINISH WORK OR PERMANENT ASPHALT SHALL BE PLACED FROM NOVEMBER 15TH TO APRIL 15TH UNLESS WRITTEN APPROVAL IS GRANTED BY THE CITY ENGINEER.

**(G) ASPHALT/CONCRETE:**

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

GENERAL NOTES

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MAHONING ROAD NE. S.R. 153  
ECONOMIC DEVELOPMENT PROJECT

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**V. SANITARY SEWERS / STORM SEWERS**

ALL SANITARY/STORM SEWER CONDUITS AND APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO CITY SPECIFICATIONS AND ODOT 603 SPECIFICATION EFFECTIVE AT THE TIME OF CONSTRUCTION.

**(A) BEDDING:**

- (1) BEDDING SHALL BE AASHTO M 43, NUMBERS 56, 57, OR 67 LIMESTONE OR ANGULAR CRUSHED GRAVEL STONE. BEDDING SHALL EXTEND THE FULL WIDTH OF THE TRENCH. TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF PIPE PLUS 12" ON BOTH SIDES OF THE PIPE. FOR REINFORCED CONCRETE PIPE CONDUIT THE BEDDING SHALL EXTEND 3" BELOW THE BOTTOM OF PIPE AND FLUSH WITH THE TOP OF PIPE. FOR ALL OTHER SEWER CONDUITS THE BEDDING SHALL EXTEND 6" BELOW THE BOTTOM OF PIPE AND 12" ABOVE THE PIPE.

**(B) BACKFILL WITHIN THE RIGHT-OF-WAY:**

- (1) BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH ODOT 703.11, TYPE '1' GRANULAR MATERIAL (304, 411, or 617 AGGREGATE GRADATION); DEVIATIONS FROM THIS ARE AS FOLLOWS:

a) NO FOUNDRY SAND, AIR COOLED BLAST FURNACE SLAG, GRANULATED SLAG, OR OPEN HEARTH SLAG SHALL BE PERMITTED.

b) ANY EXCEPTION TO THE TYPE '1' GRANULAR MATERIAL SHALL BE WITH THE SUPPLEMENTAL APPROVAL OF THE CITY ENGINEER. FOR SUCH SUPPLEMENTAL APPROVAL THE DEVELOPER/ CONTRACTOR SHALL SUBMIT IN WRITING THE FOLLOWING:

- \* SOURCE OF THE ALTERNATE BACKFILL MATERIAL.
- \* GRADATION REPORT IN ACCORDANCE WITH AASHTO T III AND T 27.
- \* PROCTOR CURVE ANALYSIS IN ACCORDANCE WITH ASTM D 698.
- \* PROPOSED COMPACTION METHOD.

REGARDLESS OF THE CITY APPROVAL OF AN ALTERNATE BACKFILL MATERIAL, THE CONTRACTOR WILL BE REQUIRED TO USE ODOT 703.11 TYPE 1 BACKFILL IN THE TRENCH WITHIN 4 FEET OF THE FINISHED GRADE OVER SAID TRENCH.

THE CITY RESERVES THE RIGHT TO REFUSE ANY ALTERNATE BACKFILL MATERIAL THE CITY FINDS NOT CONSISTENT WITH THE MATERIAL PREVIOUSLY APPROVED BY THE CITY ENGINEER.

- (2) BACKFILL METHODS SHALL BE IN ACCORDANCE WITH ODOT 603; DEVIATION FROM THIS ARE AS FOLLOWS:

e) DEVELOPER/CONTRACTOR MAY REQUEST TO EXCEED 8" PLACEMENT LIFTS DURING BACKFILL PROCEDURE. GREATER LIFT SIZE IS SUBJECT TO THE CITY ENGINEER'S APPROVAL BASED ON THE CONTRACTOR'S PROPOSED COMPACTION METHOD AND THE BACKFILL MATERIAL.

**(C) BACKFILL OUTSIDE THE RIGHT-OF-WAY:**

- (1) BACKFILL MATERIAL AND COMPACTION SHALL BE IN ACCORDANCE WITH ODOT 603.

**(D) MANHOLES:**

- (1) PRECAST MANHOLES:

PRECAST CONCRETE MANHOLES SHALL BE IN ACCORDANCE WITH ODOT 604 AND ODOT STANDARD CONSTRUCTION DRAWING MH-3 DEVIATIONS FROM THIS ARE AS FOLLOWS:

- a) ALL MANHOLE SECTIONS SHALL HAVE 6 ±2 PERCENT AIR IN THE HARDENED CONCRETE.
- b) PRECAST BASE SHALL HAVE EXTENDED BASE OF 6" AROUND OUTSIDE CIRCUMFERENCE OF MANHOLE.
- c) GRADE RINGS SHALL BE SET IN MORTAR.
- d) GRADE RINGS, IF BRICK, SHALL BE BELDEN BRICK CO. (FINE GRIND) OR EQUAL AND MEET ASTM C32-90.
- e) MORTAR TO BE AIR ENTRAINED, HIGH STRENGTH QUALITY UNLESS OTHERWISE SPECIFIED.
- f) UNIONS IN RISER SECTIONS SHALL USE ELASTOMERIC JOINT SEALANT, CON-SEAL OR EQUAL.
- g) TOTAL HEIGHT OF GRADE RINGS USED SHALL NOT EXCEED 12".

- (2) BRICK MANHOLES: (STORM SEWER ONLY)

BRICK MANHOLES SHALL BE IN ACCORDANCE WITH ODOT 604 AND ODOT STANDARD CONSTRUCTION DRAWING MH-1 DEVIATIONS FROM THIS ARE AS FOLLOWS:

- a) CONCRETE BRICK AND CONCRETE MASONRY BLOCK ARE PROHIBITED FROM THE MATERIAL SECTION.
- b) BRICK SHALL BE MANUFACTURED BY BELDEN BRICK (FINE GRIND) OR EQUAL. BRICK SHALL MEET ASTM C32-93.
- c) MORTAR TO BE AIR ENTRAINED, HIGH STRENGTH QUALITY UNLESS OTHERWISE SPECIFIED.

- (3) MANHOLE BASE PLACED ON 6" OF #57 STONE BEDDING.

- (4) ALL EXCAVATED AREAS SHALL BE BACKFILLED WITH ODOT 703.11, TYPE '1' GRANULAR MATERIAL. BACKFILL METHODS IN ACCORDANCE WITH ODOT 603.081.

- (5) CASTINGS AS PER CITY STANDARD DRAWING # 19.

- (6) DISTANCE BETWEEN TOP OF MANHOLE CASTING AND THE TOP STEP SHALL NOT EXCEED 30".

- (7) MANHOLE STEPS SHALL BE POLYPROPYLENE IN ACCORDANCE WITH ASTM 2146-68.

- (8) CHANNELS SHALL BE CONSTRUCTED WITH CLASS 'C' CONCRETE WITH A FINISHED SMOOTH SURFACE MAINTAINING POSITIVE FLOW FROM INLET TO OUTLET.

- (9) WHEN SPECIFIED ON THE PLANS, DROP PIPES SHALL BE CONSTRUCTED FOR SANITARY CONDUITS WHICH CANNOT BE CONNECTED TO THE MANHOLE WITHIN 24 INCHES FLOW LINE TO FLOW LINE. DROP PIPES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CITY STANDARD DRAWING NO. 18 OR AS SHOWN ON THE PLANS.

**(E) CATCH BASIN:**

- (1) CATCH BASINS SHALL BE IN ACCORDANCE WITH ODOT 604, APPLICABLE ODOT CATCH BASIN STANDARD CONSTRUCTION DRAWINGS, AND APPLICABLE CITY CATCH BASIN STANDARD DRAWINGS AS PER PLAN. DEVIATIONS FROM ODOT SPECIFICATIONS ARE AS FOLLOWS:

- a) CONCRETE BLOCK IS PROHIBITED FROM THE MATERIAL SELECTION.
- b) BRICK SHALL BE MANUFACTURED BY BELDEN BRICK (FINE GRIND) OR EQUAL. BRICK SHALL MEET ASTM C32-93 GRADENESS.
- c) MORTAR TO BE AIR ENTRAINED, HIGH STRENGTH QUALITY UNLESS OTHERWISE SPECIFIED.
- d) BRICK CATCH BASINS SHALL INCLUDE:
  - \* ALL INSIDE JOINTS TO BE STRUCK AND CLOSED.
  - \* (ONE) 4" DIAMETER INLET PIPE SITUATED AWAY FROM THE ROAD SIDE OF THE BASIN.
  - \* PLASTER OUTSIDE WALLS WITH HIGH STRENGTH MORTAR, 1/2" THICK.

- e) ALL CATCH BASINS SHALL BE PLACED ON 6" OF #57 STONE BEDDING.

- f) ALL EXCAVATED AREAS SHALL BE BACKFILLED WITH ODOT 703.11, TYPE '1' GRANULAR MATERIAL. BACKFILL METHODS IN ACCORDANCE WITH ODOT 603.081.

- g) ALL KNOCKOUTS FOR INLETS AND OUTLETS PIPING SHALL BE FASHIONED NEATLY. ALL ANNULAR SPACE TO BE FILLED WITH APPROVED BRICK AND MORTAR.

- h) CHANNELS SHALL BE CONSTRUCTED WITH CLASS 'C' CONCRETE WITH A FINISHED SMOOTH SURFACE MAINTAINING POSITIVE FLOW FROM INLET TO OUTLET.

**(F) UNDERDRAINS :**

- (1) UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ODOT 605 UNDERDRAINS; DEVIATIONS FROM THIS ARE AS FOLLOWS:

- a) NO AIR-COOLED BLAST FURNACE SLAG SHALL BE PERMITTED.

**(G) ROOF DRAINS:**

- (1) THE DEVELOPER/CONTRACTOR SHALL INSTALL TWO ROOF DRAINS PER LOT UNLESS OTHERWISE SPECIFIED ON THE PLANS OR DIRECTED BY THE CITY ENGINEER.

THE ROOF DRAINS OUTLETS SHALL BE CORED OR SLEEVED THROUGH THE CURB. OPENING DIAMETER NO GREATER THAN 3-1/2" AND BOTTOM OF OPENING AT 1" ABOVE GUTTER.

THE DEVELOPER/CONTRACTOR SHALL INSTALL 3" PVC, SCHEDULE 40, CONDUIT FROM THE FACE OF THE CURB TO A POINT 1' BEYOND THE BACK OF WALK OR AT THE RIGHT-OF-WAY LINE, WHICHEVER IS GREATER.

DEVELOPER/CONTRACTOR SHALL PLACE A CONTROL JOINT IN THE SIDEWALK OVER THE ROOF DRAIN WHEN CONDUIT IS IN THE CONCRETE WALK.

- (2) CONNECTIONS TO EXISTING ROOF DRAINS SHALL BE MADE WITH NEOPRENE COUPLERS (ie FERROX) AND STAINLESS STEEL CLAMPS.

**(H) SUMP PUMP DISCHARGE CONDUIT:**

IF SUMP PUMP DISCHARGE CONDUIT IS INSTALLED WITHIN THE CITY'S RIGHT-OF-WAY, THE PIPING SHALL BE CONNECTED TO A NEW OR EXISTING STORM SEWER CONDUIT, CATCH BASIN, OR MANHOLE. CONNECTIONS TO A CONDUIT OR MANHOLE MUST HAVE A RELIEF DISCHARGE THROUGH THE CURB (SEE NOTE "G" ROOF DRAINS) AND/OR VENT STACK TO THE GROUND SURFACE, AS DEEMED NECESSARY BY THE CITY ENGINEER. ALL CONNECTIONS TO BE APPROVED BY THE CITY ENGINEER. ALL OTHER LOCATIONS OF DISCHARGE PIPING SHALL BE VERIFIED/APPROVED BY THE CITY'S BUILDING DEPARTMENT.

**(I) SANITARY LATERAL CONNECTIONS:**

- (1) ALL CONNECTIONS TO THE MAIN SEWER SHALL BE INSTALLED WITH A MANUFACTURED WYE.
- (2) THE MINIMUM SLOPE OF THE LATERALS SHALL BE 1/8" PER FT. (1%) AND THE MAXIMUM SHALL BE 1/4" PER FT. (2%) UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- (3) ALL NEW SANITARY LATERAL SHALL EXTEND 10 L.F. BEYOND THE ROAD RIGHT-OF-WAY AND SHALL HAVE A MINIMUM MAXIMUM OF 8' OF COVER AT THE RIGHT-OF-WAY, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- (4) WHEN THE DEPTH OF THE MAIN WOULD CAUSE A LATERAL TO EXCEED A 2% RATE OF GRADE, A LATERAL CONNECTION STACK SHALL BE INSTALLED AT THE MAIN. SAID STACK SHALL CONFORM TO CITY STANDARD DRAWING NO. 28.
- (5) ALL END OF LATERAL RUNS SHALL BE CAPPED W/SUITABLE AIR TIGHT PLUG AND MARKED UP TO 2' MINIMUM ABOVE GRADE WITH SUITABLE POSTS.
- (6) DEVELOPER/CONTRACTOR SHALL SUBMIT THE FOLLOWING DOCUMENTATION TO THE CITY ENGINEER FOR ALL LATERAL CONNECTIONS:
  - a) DISTANCE OF WYE FROM THE DOWNSTREAM MANHOLE.
  - b) DISTANCE ALONG THE SEWER MAIN, FROM THE DOWNSTREAM MANHOLE TO THE LATERAL CONNECTION END.
  - c) PERPENDICULAR DISTANCE FROM SEWER MAIN TO LATERAL CONNECTION END.
  - d) DEPTH OF LATERAL CONNECTION END, FROM TOP OF PROPOSED/EXISTING CURB ORIGINAL GROUND TO FLOW LINE.

**VI. EROSION CONTROL:**

**(A) TEMPORARY SOIL EROSION AND SEDIMENT CONTROL:**

THE CONTRACTOR SHALL PREVENT AND/OR REDUCE AND CONTROL SOIL EROSION RESULTING FROM THE PROPOSED IMPROVEMENTS. THE USE OF SILT FENCING, JUTE MATING, TEMPORARY SEEDING, SOD, SILT CHECKS, INLET PROTECTION AROUND ALL CATCH BASINS, AND STABILIZED CONSTRUCTION ENTRANCE(S) ETC. WILL BE REQUIRED. SEDIMENT CONTROL STRUCTURES/DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL RAINWATER AND LAND DEVELOPMENT - OHIO'S STANDARDS FOR STORM WATER MANAGEMENT LAND DEVELOPMENT AND URBAN STREAM PROTECTION, SECOND EDITION DATED 1996. SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUED INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS SET FORTH ON THE APPROVED STORM WATER POLLUTION PREVENTION PLAN IF APPLICABLE, OR ON THE DETAILED CONSTRUCTION PLANS.

**(B) ROCK CHANNEL PROTECTION, AS PER PLAN:**

ROCK CHANNEL PROTECTION, IF REQUIRED, SHALL MEET THE REQUIREMENTS OF ODOT ITEM 601. GEOTEXTILE FABRIC SHALL BE PLACED UNDER ALL ROCK CHANNEL PROTECTION AND SHALL MEET THE REQUIREMENTS OF ODOT ITEM 712.09 GEOTEXTILE FABRICS, TYPE 'B' (FILTER BLANKETS FOR ROCK CHANNEL PROTECTION). REFER TO DETAILED PLAN DRAWINGS FOR THE SPECIFIC LOCATION, TYPE, LENGTH, WIDTH AND THICKNESS OF THE ROCK CHANNEL PROTECTION.

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**VII. TRAFFIC:**

**(A) MAINTAINING TRAFFIC:**

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

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

**(B) RESIDENTIAL AND BUSINESS AREAS:**

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

**(C) EXISTING STREET NAME AND TRAFFIC CONTROL SIGNS:**

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

**(D) NEW STREET NAME & TRAFFIC CONTROL SIGNS:**

ALL STREET NAME AND TRAFFIC CONTROL SIGNS SHALL COME COMPLETE AND BE MADE IN ACCORDANCE WITH THE CITY OF CANTON SIGN AND PAINT DEPARTMENT SPECIFICATIONS. GENERALLY, ALL SIGNS SHALL HAVE HI-INTENSITY SHEETING AND BE MADE WITH .080 50/52 ALUMINUM. STREET NAME SIGNS SHALL BE MADE WITH WHITE UPPER AND LOWER CASE LETTERING ON GREEN BACKGROUND USING 9" BLANKS, BE DOUBLED SIDED W/RADIUS CORNERS AND HAVE 6" NAME AND 3" SUFFIXES. ALL SIGN RELATED HARDWARE IS TO BE INCLUDED, SUCH AS 6" HEAVY DUTY U-CHANNEL CAPS AND STREET NAME CROSSES.

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

**(E) EXISTING TRAFFIC SIGNALS:**

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

**(F) NEW TRAFFIC SIGNALIZATION:**

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

**(G) TRAFFIC CONTROL PLAN:**

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

**VIII. WATER MAIN / SERVICES:**

**(A) WATER MAINS/SERVICES:**

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

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

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

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

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

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

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

FIRE HYDRANTS SHALL BE MUELLER A423 MEETING THE CITY OF CANTON WATER DEPARTMENT STANDARDS AND REQUIREMENTS. ALL COSTS FOR THE 6" PIPING ASSOCIATED WITH THE INSTALLATION OF FIRE HYDRANTS SHALL BE INCLUDED WITH THE FIRE HYDRANT PAY ITEM. ALL HYDRANTS WILL BE INSTALLED WITH THE PUMPER NOZZLE FACING THE STREET.

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

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

BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS.

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

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

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

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

SERVICE BRANCHES WILL BE INSTALLED AS PER O.D.O.T ITEM 638.16 WITH THE FOLLOWING EXCEPTIONS:

1. WHEN A SERVICE BRANCH IS DISTURBED FOR LOWERING, RAISING, EXTENDING OR SHORTENING ON THE PROPERTY SIDE ON THE SERVICE STOP, IT SHALL BE REPLACED WITH NEW MATERIALS FROM THE CORPORATION STOP TO THE SERVICE STOP.

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

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

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

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

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

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

**IX. POST CONSTRUCTION INCIDENTALS**

**(A) AS-BUILT DRAWINGS (PRIVATE PROJECTS):**

AS-BUILT REPRODUCIBLE MYLAR'S SHALL BE PROVIDED TO THE CITY OF CANTON BY THE DESIGN ENGINEER AT THE COMPLETION OF THE PROJECT. THE CONSTRUCTION BOND WILL NOT BE RELEASED UNTIL THE AS-BUILT DRAWINGS HAVE BEEN ACCEPTED.

**(B) PROPOSED MONUMENTATION:**

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

**(C) RELEASE OF RETAINER/BONDS:**

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

**GENERAL NOTES**

REVISIONS	DATE	BY

**MAHONING ROAD NE. S.R. 153  
ECONOMIC DEVELOPMENT PROJECT**

**4  
23**

PETERS, TSHANTZ & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
275 SPRINGSIDE DR., SUITE 300  
CANTON, OHIO 44705  
PHONE 330-666-9700 FAX -1465  
www.plaengineering.com

REF. NO.	ITEM	SHEET NUMBER								ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
		DE-1	DE-2	DE-3	DE-4	DE-5	DE-6	DE-7	DE-8					
1	625	164	820	253			70			1307	FOOT	CONDUIT, PVC-40, 2", DIRECT BURIED		
2	625	885	950	544			400	80		2859	FOOT	CONDUIT, PVC-40, 3", DIRECT BURIED		
3	625	2554	3548	2615	2655	2304	2824	2381	1890	20771	FOOT	CONDUIT, PVC-40, 4", DIRECT BURIED		
4	625	316								316	FOOT	DUCT BANK, PVC-40, 2-6", CONCRETE ENCASED	DE-12	
5	625	155	210	158	180	75	88	62	180	1108	FOOT	TRENCH IN PAVED AREA, AS PER PLAN	DE-12	
6	625	295	150	75	170	74	85	12	195	1056	FOOT	TRENCH IN SIDEWALK	DE-12	
7	625	225	677	610	438	360	536	480	455	3781	FOOT	TRENCH IN LAWN AREA	DE-12	
8	625	575	263			121	123	104		1186	FOOT	TRENCH IN ASPHALT PARKING AND DRIVE AREAS	DE-12	
9	625		12			25				37	FOOT	TRENCHING IN CONCRETE DRIVES		
10	625	20	310							330	FOOT	TRENCH IN GRAVEL AREAS		
11	625	93	435	462						990	FOOT	DISTRIBUTION CABLE, 1/C # 2 AWG, 600V		
12	625	375	1185							1560	FOOT	DISTRIBUTION CABLE, 1/C # 3/0 AWG, 600V		
13	625						240			240	FOOT	DISTRIBUTION CABLE, 1/C 500 KCMIL, 600V		
14	625	1								1	EACH	STUB UP, TELEPHONE CROSSBOX		
15	625	1								1	EACH	STUB UP, CATV NETWORK NODE		
16	625	2	2	1			1			6	EACH	STUB-UP, POWER PEDESTAL	DE-15	
17	625	3	4	5	2	1	2	2	1	20	EACH	STUB-UP, TELEPHONE PEDESTAL	DE-15	
18	625	4	4	5	3	2	2	3	2	25	EACH	STUB UP, CATV PEDESTAL	DE-15	
19	625	2	6	2						10	EACH	STUB-UP, TELEPHONE, BUILDING/DEMARCATON, PVC-40, 1-2"		
20	625						1			1	EACH	STUB-UP, TELEPHONE, BLDG/DEMARCATON, PVC-40, 1-4"		
21	625	2	6	2			1			11	EACH	STUB-UP, CATV, BLDG/DEMARCATON, PVC-40, 1-2"		
22	625	4	3	2						9	EACH	STUB UP, RISER POLE, PVC-40, 1-3"	DE-14	
23	625	3	2	3	1	4	2	2	4	21	EACH	STUB UP, RISER POLE, PVC-40, 1-4"	DE-14	
24	625	2								2	EACH	STUB UP, RISER POLE, PVC-40, 1-6"	DE-14	
25	625		2				1	1	2	6	EACH	BRACKET ASSEMBLY, STAND-OFF, RISER POLE, 4-4" CONDUITS MAX	DE-14	
26	625	2		1				1		4	EACH	FIBERGLASS BOXPAD INSTALLATION, SINGLE-PHASE TRANSFORMER	DE-15	
27	625						1			1	EACH	BOXPAD, PRECAST CONCRETE, THREE-PHASE TRANSFORMER	DE-14	
28	625	1								1	EACH	VAULT, PRECAST CONCRETE, SWITCHGEAR, 12'L X 6'W X 6'-6"H	DE-14	
29	625				1					1	EACH	PULL BOX, REINFORCED POLYMER CONCRETE, 30" X 48" X 24" D, "AT&T - TELEPHONE" LOGO		
30	625	1			2				1	4	EACH	PULL BOX, REINFORCED POLYMER CONCRETE, 30" X 48" X 24" D, "TWC - CATV" LOGO		
31	625			1				1		2	EACH	GROUND SLEEVE INSTALLATION, THREE-PHASE JUNCTION ENCLOSURE	DE-15	
32	625		1							1	EACH	MANHOLE, REINFORCED POLYMER CONCRETE, 48" DIA X 48" DEEP, "AT&T - TELEPHONE" LOGO - INSTALLATION ONLY	DE-14	
33	625	1				1			1	3	EACH	PROMSIONS FOR TRAFFIC SIGNAL CONTROLLER SERVICE		
34	625	1			1		1		1	4	EACH	PROMSIONS FOR LIGHTING CONTROL PANEL SERVICE		
35	SPECIAL	1								1	LUMP SUM	SERVICE REVISION, TYPE 1	DE-9	
36	SPECIAL	1								1	LUMP SUM	SERVICE REVISION, TYPE 2	DE-9	
37	SPECIAL		1							1	LUMP SUM	SERVICE REVISION, TYPE 3	DE-9	
38	SPECIAL		1							1	LUMP SUM	SERVICE REVISION, TYPE 4A	DE-9A	
39	SPECIAL		1							1	LUMP SUM	SERVICE REVISION, TYPE 4B	DE-9A	
40	SPECIAL		1							1	LUMP SUM	SERVICE REVISION, TYPE 5	DE-10	
41	SPECIAL		1							1	LUMP SUM	SERVICE REVISION, TYPE 6	DE-10	
42	SPECIAL		1							1	LUMP SUM	SERVICE REVISION, TYPE 7	DE-10	
43	SPECIAL		1							1	LUMP SUM	SERVICE REVISION, TYPE 8	DE-10	
44	SPECIAL			1						1	LUMP SUM	SERVICE REVISION, TYPE 9	DE-11	
45	SPECIAL			1						1	LUMP SUM	SERVICE REVISION, TYPE 10	DE-11	
46	SPECIAL						1			1	LUMP SUM	SERVICE REVISION, TYPE 11	DE-11	
47	SPECIAL						1			1	LUMP SUM	SERVICE REVISION, TYPE 12	DE-11	

CALCULATED: PTA  
CHECKED: MJS

SCALE: AS SHOWN

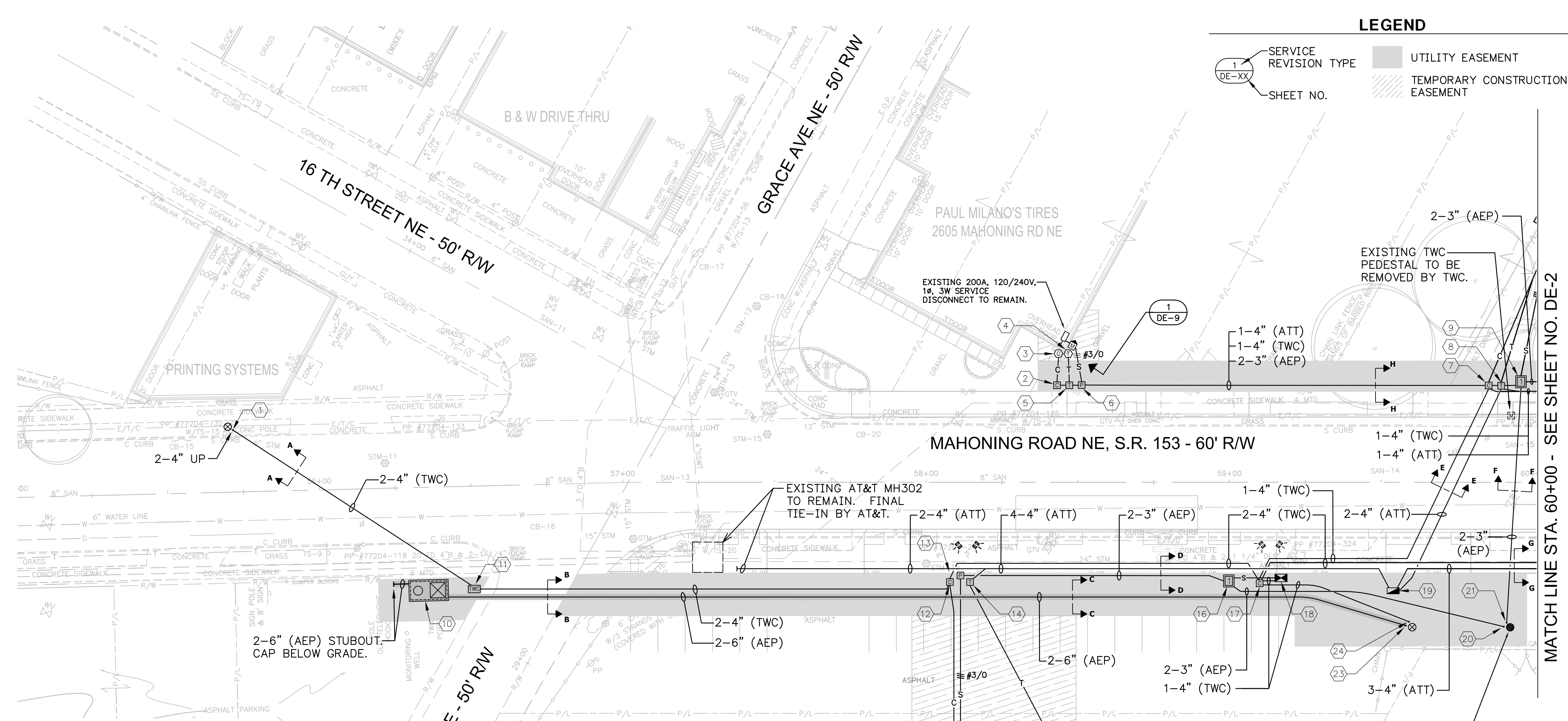
GENERAL SUMMARY

REVISIONS	DATE	BY

PETERS, TSCHANTZ & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
275 SPRINGSIDE DR., SUITE 300  
PHONE 330-686-9702 FAX -4465  
www.plaengineering.com

MAHONING ROAD NE. S.R. 153  
ECONOMIC DEVELOPMENT PROJECT

57-10-05 (DE-1) THRU (DE-8) MAHONING RD EDP, CANTON - CDS - CONDUIT SYSTEM PLANS.DWG on 07/22/11 at 09:46 by DRW



**LEGEND**

- 1 DE-XX SERVICE REVISION TYPE
- 2 DE-XX SHEET NO.
- ▨ UTILITY EASEMENT
- ▨ TEMPORARY CONSTRUCTION EASEMENT

0 10' 20' 40'

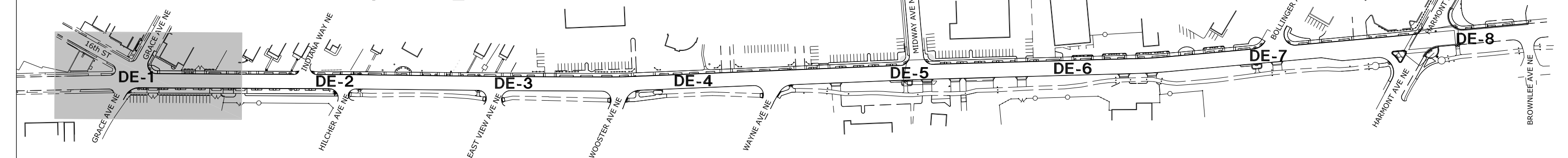
HORIZONTAL SCALE  
1" = 20'

CALCULATED: PTA  
CHECKED: MUS

**MAHONING ROAD NE - SHEET DE-1**

REF. NO.	DESCRIPTION	STATION	OFFSET	SIDE
1	STUB UP, RISER POLE, PVC-40, 2-4"	55 + 71.95	20.5	LT
2	STUB UP, CATV PEDESTAL	58 + 43.15	32.0	LT
3	STUB-UP, CATV, BLDG/DEMARCATON, PVC-40, 1-2"	58 + 43.6	42.4	LT
4	STUB-UP, TELEPHONE, BUILDING/DEMARCATON, PVC-40, 1-2"	58 + 46.8	42.5	LT
5	STUB-UP, TELEPHONE PEDESTAL	58 + 47.2	32.0	LT
6	STUB-UP, POWER PEDESTAL	58 + 51.28	32.0	LT
7	STUB UP, CATV PEDESTAL	59 + 85.5	31.9	LT
8	STUB-UP, TELEPHONE PEDESTAL	59 + 89.6	31.9	LT
9	FIBERGLASS BOXPAD INSTALLATION, SINGLE-PHASE TRANSFORMER	59 + 96.1	33.2	LT
10	VAULT, PRECAST CONCRETE, SWITCHGEAR, PRECAST CONC., 12L X 6'W X 6'-6"H	56 + 35.2	34.0	RT
11	PULL BOX REINFORCED POLYMER CONCRETE, 30" X 48" X 24" D, "TWC - CATV" LOGO	56 + 50.2	33.8	RT
12	STUB UP, CATV PEDESTAL	58 + 07.9	32.9	RT
13	STUB-UP, POWER PEDESTAL	58 + 11.3	30.8	RT
14	STUB-UP, TELEPHONE PEDESTAL	58 + 14.5	32.9	RT
15	STUB-UP, CATV, BLDG/DEMARCATON, PVC-40, 1-2"	58 + 15.4	111.9	RT
16	FIBERGLASS BOXPAD INSTALLATION, SINGLE-PHASE TRANSFORMER	58 + 99.8	32.5	RT
17	STUB UP, CATV PEDESTAL	59 + 10.0	33.3	RT
18	STUB UP, CATV NETWORK NODE	59 + 17.0	31.5	RT
19	STUB UP, TELEPHONE CROSSBOX	59 + 54.0	35.8	RT
20	STUB UP, RISER POLE, PVC-40, 2-3"	59 + 90.4	47.6	RT
21	STUB UP, RISER POLE, PVC-40, 2-3"	59 + 91.4	46.3	RT
22	STUB-UP, TELEPHONE, BUILDING/DEMARCATON, PVC-40, 1-2"	58 + 43.0	89.3	RT
23	STUB UP, RISER POLE, PVC-40, 2-6"	59 + 58.1	48.2	RT
24	STUB UP, RISER POLE, PVC-40, 1-4"	59 + 59.0	46.0	RT

**KEY PLAN - MAHONING ROAD NE**



**CONDUIT SYSTEM PLAN**  
STA. 55+00 TO STA. 60+00

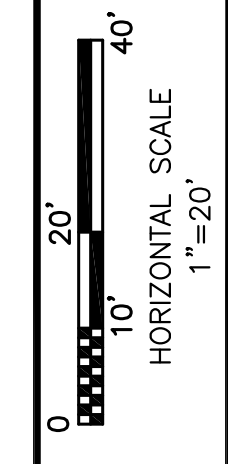
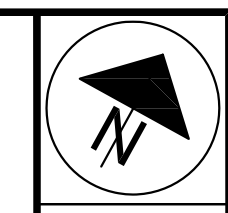
REVISIONS

DATE	BY

**MAHONING ROAD NE, S.R. 153**  
ECONOMIC DEVELOPMENT PROJECT

PETERS, TSCHANZ & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
275 SPRINGSIDE DR., SUITE 300  
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www.ptaengineering.com

**LEGEND**



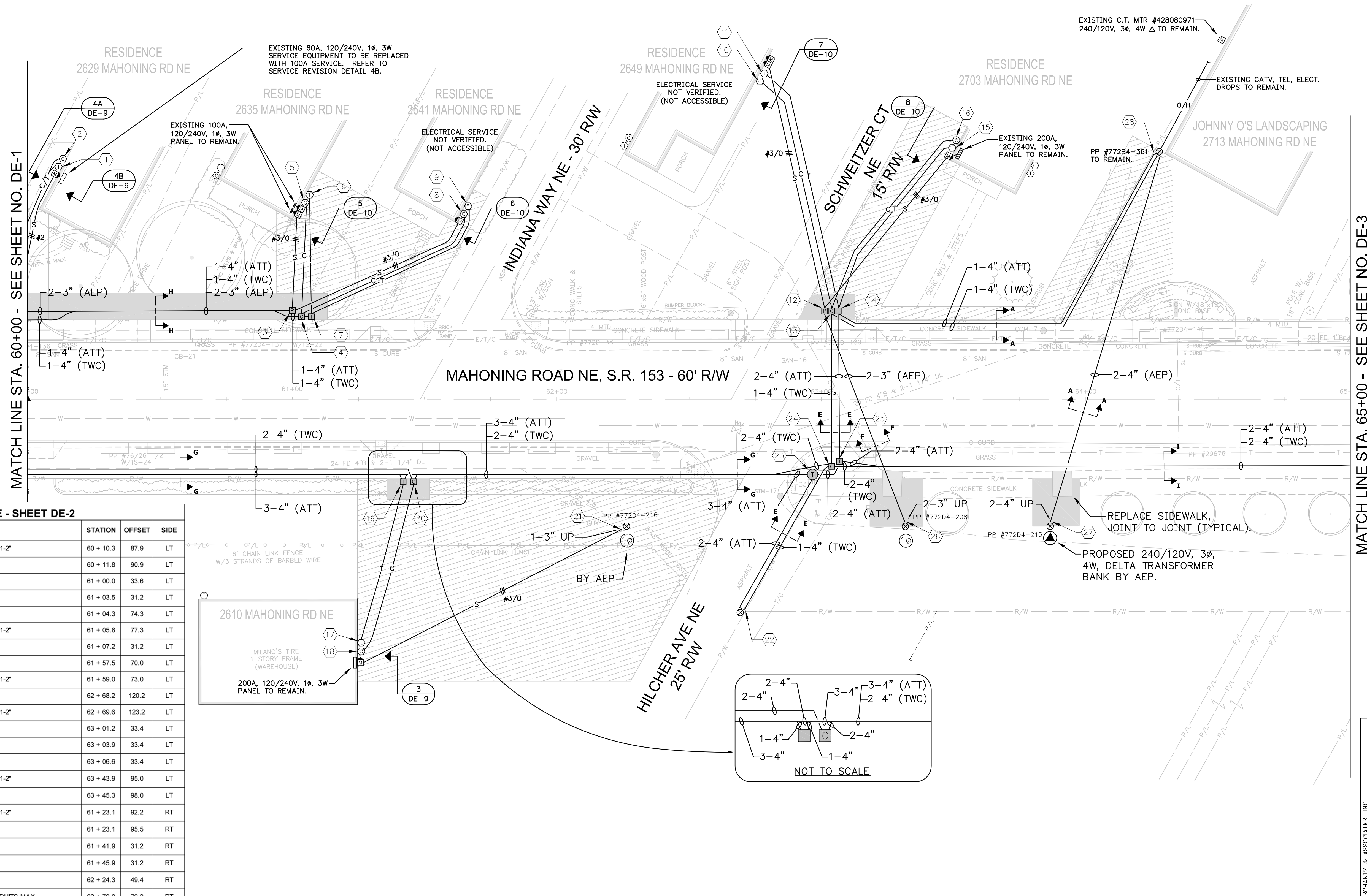
CALCULATED: PTA  
CHECKED: MUS

**CONDUIT SYSTEM PLAN**  
STA. 60+00 TO STA. 65+00

REVISIONS	DATE	BY

**MAHONING ROAD NE, S.R. 153**  
**ECONOMIC DEVELOPMENT PROJECT**

7  
23



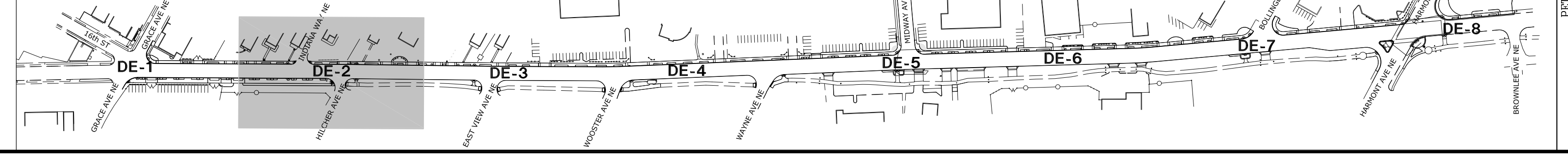
MATCH LINE STA. 60+00 - SEE SHEET NO. DE-1

MATCH LINE STA. 65+00 - SEE SHEET NO. DE-3

**MAHONING ROAD NE - SHEET DE-2**

REF. NO.	DESCRIPTION	STATION	OFFSET	SIDE
1	STUB-UP, TELEPHONE, BUILDING/DEMARCATION, PVC-40, 1-2"	60 + 10.3	87.9	LT
2	STUB-UP, CATV, BLDG/DEMARCATION, PVC-40, 1-2"	60 + 11.8	90.9	LT
3	STUB UP, POWER PEDESTAL	61 + 00.0	33.6	LT
4	STUB UP, CATV PEDESTAL	61 + 03.5	31.2	LT
5	STUB-UP, CATV, BLDG/DEMARCATION, PVC-40, 1-2"	61 + 04.3	74.3	LT
6	STUB-UP, TELEPHONE, BUILDING/DEMARCATION, PVC-40, 1-2"	61 + 05.8	77.3	LT
7	STUB UP, TELEPHONE PEDESTAL	61 + 07.2	31.2	LT
8	STUB-UP, CATV, BLDG/DEMARCATION, PVC-40, 1-2"	61 + 57.5	70.0	LT
9	STUB-UP, TELEPHONE, BUILDING/DEMARCATION, PVC-40, 1-2"	61 + 59.0	73.0	LT
10	STUB-UP, CATV, BLDG/DEMARCATION, PVC-40, 1-2"	62 + 68.2	120.2	LT
11	STUB-UP, TELEPHONE, BUILDING/DEMARCATION, PVC-40, 1-2"	62 + 69.6	123.2	LT
12	STUB UP, POWER PEDESTAL	63 + 01.2	33.4	LT
13	STUB UP, CATV PEDESTAL	63 + 03.9	33.4	LT
14	STUB UP, TELEPHONE PEDESTAL	63 + 06.6	33.4	LT
15	STUB-UP, TELEPHONE, BUILDING/DEMARCATION, PVC-40, 1-2"	63 + 43.9	95.0	LT
16	STUB-UP, CATV, BLDG/DEMARCATION, PVC-40, 1-2"	63 + 45.3	98.0	LT
17	STUB-UP, TELEPHONE, BUILDING/DEMARCATION, PVC-40, 1-2"	61 + 23.1	92.2	RT
18	STUB-UP, CATV, BLDG/DEMARCATION, PVC-40, 1-2"	61 + 23.1	95.5	RT
19	STUB UP, TELEPHONE PEDESTAL	61 + 41.9	31.2	RT
20	STUB UP, CATV PEDESTAL	61 + 45.9	31.2	RT
21	STUB UP, RISER POLE, PVC-40, 1-3"	62 + 24.3	49.4	RT
22	BRACKET ASSEMBLY, STAND-OFF, RISER POLE, 4-4" CONDUITS MAX	62 + 70.0	79.2	RT
23	MANHOLE INSTALLATION, REINFORCED POLYMER CONCRETE, 48" DIA X 48" DEEP, "AT&T - TELEPHONE" LOGO	62 + 96.7	28.5	RT
24	STUB UP, CATV PEDESTAL	63 + 03.9	25.4	RT
25	STUB UP, TELEPHONE PEDESTAL	63 + 06.9	23.5	RT
26	STUB UP, RISER POLE, PVC-40, 2-3"	63 + 31.4	46.2	RT
27	STUB UP, RISER POLE, PVC-40, 2-4"	63 + 86.6	46.2	RT
28	BRACKET ASSEMBLY, STAND-OFF, RISER POLE, 4-4" CONDUITS MAX	64 + 27.1	92.5	LT

**KEY PLAN - MAHONING ROAD NE**

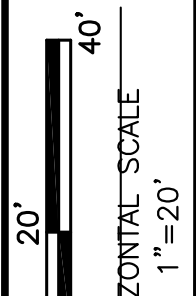
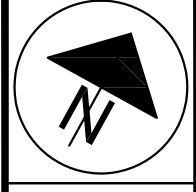


57-10-02 (DE-1 THRU DE-8) MAHONING RD EDP, CAUTION - CDS - CONDUIT SYSTEM PLANS.DWG on 07/22/11 at 09:46 by DRW

PETERS, TSCHANZ & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
275 SPRINGSIDE DR., SUITE 300  
PHONE 330-668-3702 FAX 4185  
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**LEGEND**



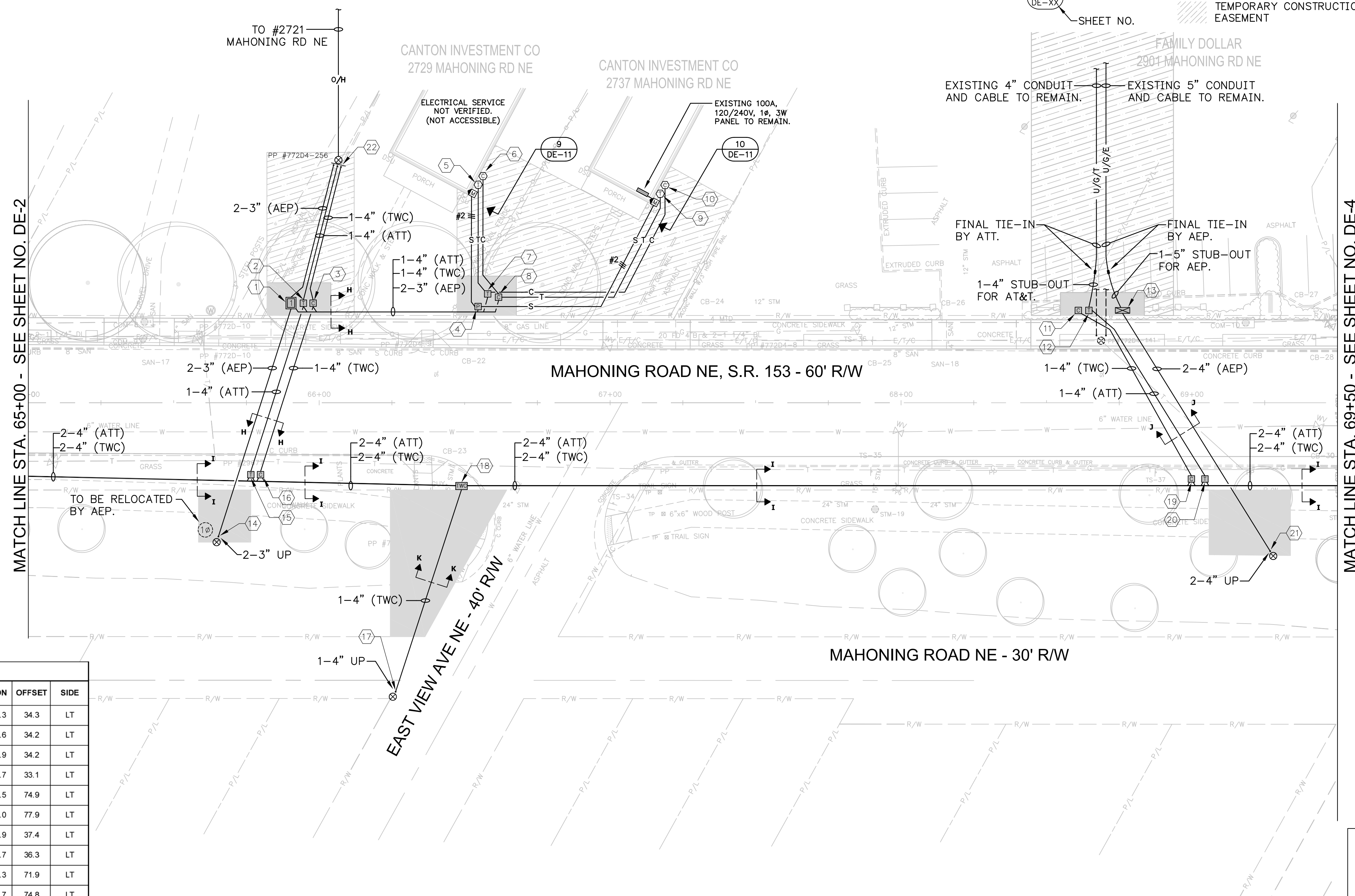
CALCULATED: PTA  
CHECKED: MUS

CONDUIT SYSTEM PLAN  
STA. 65+00 TO STA. 69+50

NO.	DATE	BY

MAHONING ROAD NE, S.R. 153  
ECONOMIC DEVELOPMENT PROJECT

8  
23



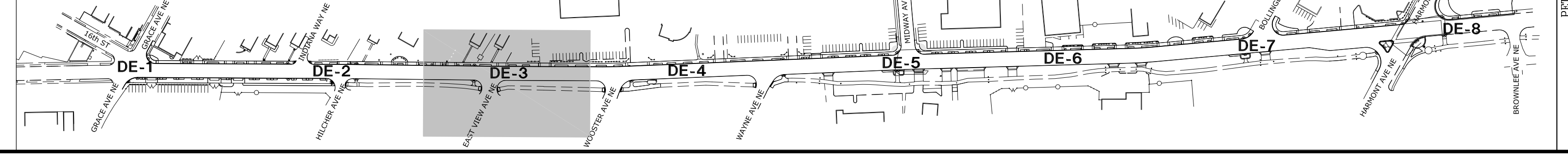
MATCH LINE STA. 65+00 - SEE SHEET NO. DE-2

MATCH LINE STA. 69+50 - SEE SHEET NO. DE-4

**MAHONING ROAD NE - SHEET DE-3**

REF. NO.	DESCRIPTION	STATION	OFFSET	SIDE
1	FIBERGLASS BOXPAD INSTALLATION, SINGLE-PHASE TRANSFORMER	65 + 90.3	34.3	LT
2	STUB UP, TELEPHONE PEDESTAL	65 + 94.6	34.2	LT
3	STUB UP, CATV PEDESTAL	65 + 97.9	34.2	LT
4	STUB UP, POWER PEDESTAL	66 + 54.7	33.1	LT
5	STUB-UP, TELEPHONE, BUILDING/DEMARICATION, PVC-40, 1-2"	66 + 48.5	74.9	LT
6	STUB-UP, CATV, BLDG/DEMARICATION, PVC-40, 1-2"	66 + 50.0	77.9	LT
7	STUB UP, TELEPHONE PEDESTAL	66 + 57.9	37.4	LT
8	STUB UP, CATV PEDESTAL	66 + 61.7	36.3	LT
9	STUB-UP, TELEPHONE, BUILDING/DEMARICATION, PVC-40, 1-2"	67 + 15.3	71.9	LT
10	STUB-UP, CATV, BLDG/DEMARICATION, PVC-40, 1-2"	67 + 16.7	74.8	LT
11	STUB UP, CATV PEDESTAL	68 + 60.9	31.8	LT
12	STUB UP, TELEPHONE PEDESTAL	68 + 64.6	31.7	LT
13	GROUND SLEEVE INSTALLATION, THREE-PHASE JUNCTION ENCLOSURE	68 + 76.1	31.8	LT
14	STUB UP, RISER POLE, PVC-40, 2-3"	65 + 65.4	46.0	RT
15	STUB UP, TELEPHONE PEDESTAL	65 + 76.5	24.7	RT
16	STUB UP, CATV PEDESTAL	65 + 79.8	24.7	RT
17	STUB UP, RISER POLE, PVC-40, 1-4"	66 + 26.3	99.4	RT
18	PULL BOX REINFORCED POLYMER CONCRETE, 30" X 48" X 24" D, "TWC - CATV" LOGO	66 + 48.9	28.5	RT
19	STUB UP, CATV PEDESTAL	68 + 99.8	26.2	RT
20	STUB UP, TELEPHONE PEDESTAL	69 + 04.4	26.2	RT
21	STUB UP, RISER POLE, PVC-40, 2-4"	69 + 26.9	51.0	RT
22	BRACKET ASSEMBLY, STAND-OFF, RISER POLE, 4-4" CONDUITS MAX	66 + 06.6	81.9	LT

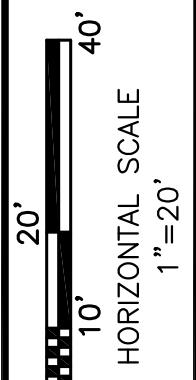
**KEY PLAN - MAHONING ROAD NE**



57-10-05 (DE-1 THRU DE-8) MAHONING RD EDP, CANTON - CDS - CONDUIT SYSTEM PLANS.DWG on 07/22/11 at 09:46 by DRW

PETERS, TSCHANZ & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
275 SPRINGSIDE DR., SUITE 300  
PHONE 330-668-3702 FAX 4165  
www.ptaengineering.com

**LEGEND**



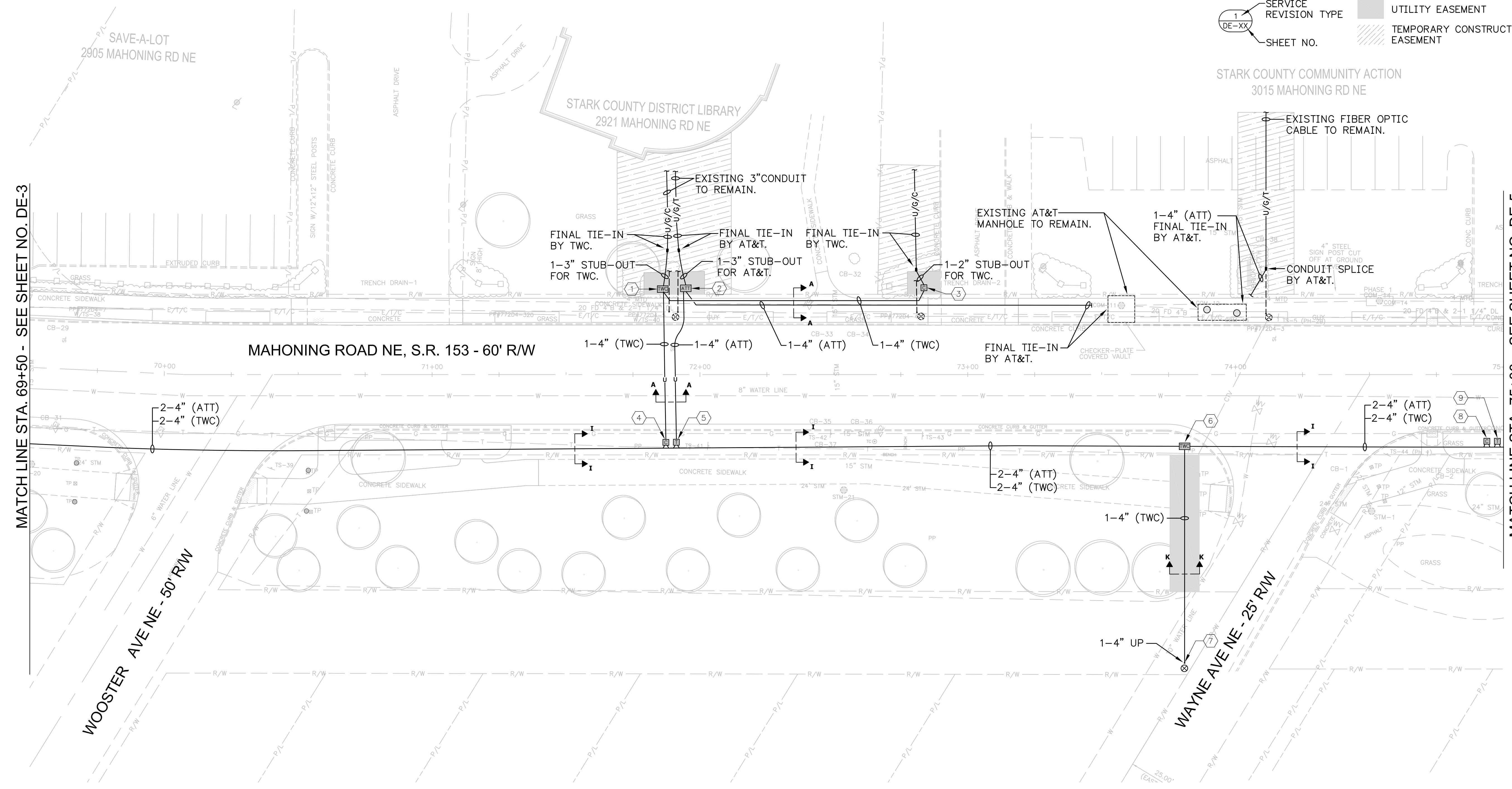
CALCULATED: PTA  
CHECKED: MUS

**CONDUIT SYSTEM PLAN**  
STA. 69+50 TO STA. 75+00

REVISIONS	DATE	BY

**MAHONING ROAD NE, S.R. 153**  
ECONOMIC DEVELOPMENT PROJECT

9  
23



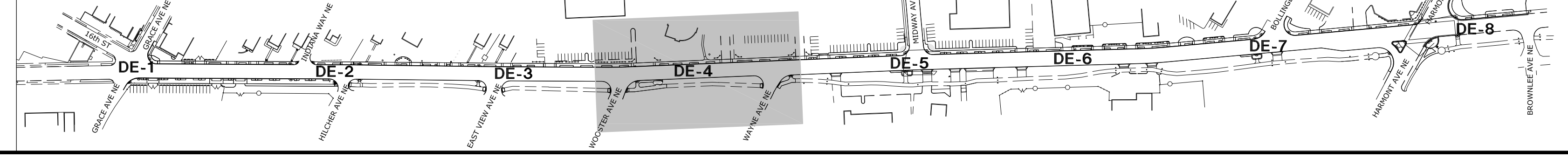
MATCH LINE STA. 69+50 - SEE SHEET NO. DE-3

MATCH LINE STA. 75+00 - SEE SHEET NO. DE-5

**MAHONING ROAD NE - SHEET DE-4**

REF. NO.	DESCRIPTION	STATION	OFFSET	SIDE
1	PULL BOX REINFORCED POLYMER CONCRETE, 30" X 48" X 24" D, "TWC - CATV" LOGO	71 + 86.0	32.1	LT
2	PULL BOX REINFORCED POLYMER CONCRETE, 30" X 48" X 24" D, "AT&T - TELEPHONE" LOGO	71 + 94.6	32.2	LT
3	STUB UP, CATV PEDESTAL	72 + 83.6	32.5	LT
4	STUB UP, CATV PEDESTAL	71 + 87.2	25.3	RT
5	STUB UP, TELEPHONE PEDESTAL	71 + 91.1	25.3	RT
6	PULL BOX REINFORCED POLYMER CONCRETE, 30" X 48" X 24" D, "TWC - CATV" LOGO	73 + 80.9	26.7	RT
7	STUB UP, RISER POLE, PVC-40, 1-4"	73 + 80.9	107.7	RT
8	STUB UP, CATV PEDESTAL	74 + 93.8	23.8	RT
9	STUB UP, TELEPHONE PEDESTAL	74 + 97.7	23.8	RT

**KEY PLAN - MAHONING ROAD NE**

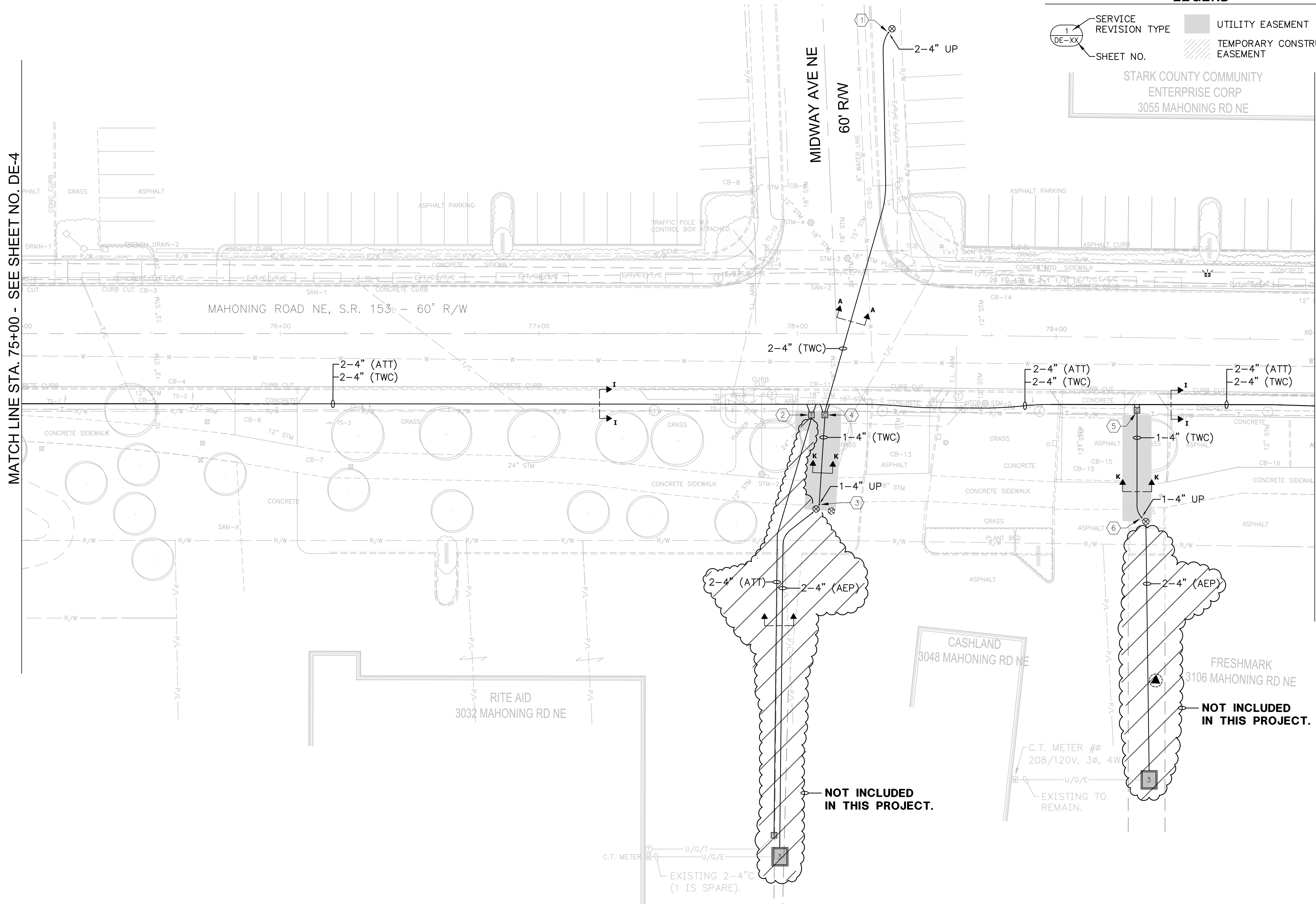


57-10-05 (DE-1 THRU DE-8) MAHONING RD EDP, CAUTION - CDS - CONDUIT SYSTEM PLANS.DWG on 07/22/11 at 09:46 by DRW

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CONSULTING ENGINEERS  
275 SPRINGSIDE DR., SUITE 300  
PHONE 330-668-3702 FAX 4185  
www.ptaengineering.com

57-10-02 (DE-1 THRU DE-8) MAHONING RD. EDP, CANTON - CDS - CONDUIT SYSTEM PLANS.DWG on 07/22/11 at 09:46 by DRW

MATCH LINE STA. 75+00 - SEE SHEET NO. DE-4



**LEGEND**

- 1 SERVICE REVISION TYPE
- DE-XX SHEET NO.
- UTILITY EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT

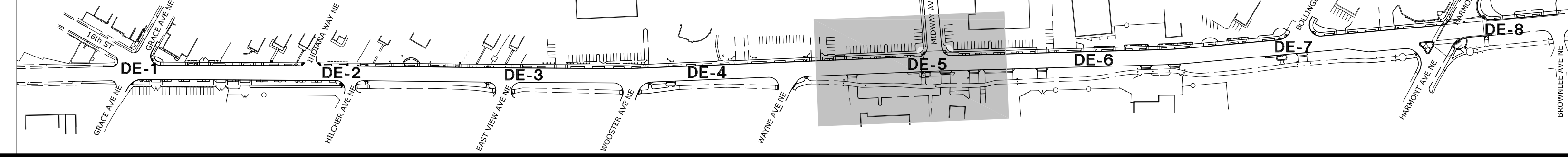
CALCULATED:	PTA
CHECKED:	MJS

**CONDUIT SYSTEM PLAN**  
STA. 75+00 TO STA. 80+00

**MAHONING ROAD NE - SHEET DE-5**

REF. NO.	DESCRIPTION	STATION	OFFSET	SIDE
1	STUB UP, RISER POLE, PVC-40, 2-4"	78 + 29.2	116.7	LT
2	STUB UP, TELEPHONE PEDESTAL	78 + 05.4	31.5	RT
3	STUB UP, RISER POLE, PVC-40, 1-4"	78 + 08.4	66.2	RT
4	STUB UP, CATV PEDESTAL	78 + 10.6	31.4	RT
5	STUB UP, CATV PEDESTAL	79 + 31.7	28.0	RT
6	STUB UP, RISER POLE, PVC-40, 1-4"	79 + 34.1	69.6	RT

**KEY PLAN - MAHONING ROAD NE**



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 www.ptaengineering.com

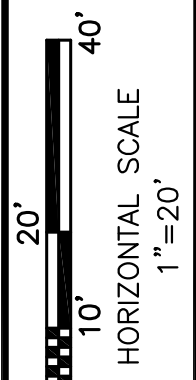
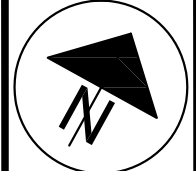
**MAHONING ROAD NE, S.R. 153**  
**ECONOMIC DEVELOPMENT PROJECT**

REVISIONS  

NO.	DATE	BY

10  
23

**LEGEND**



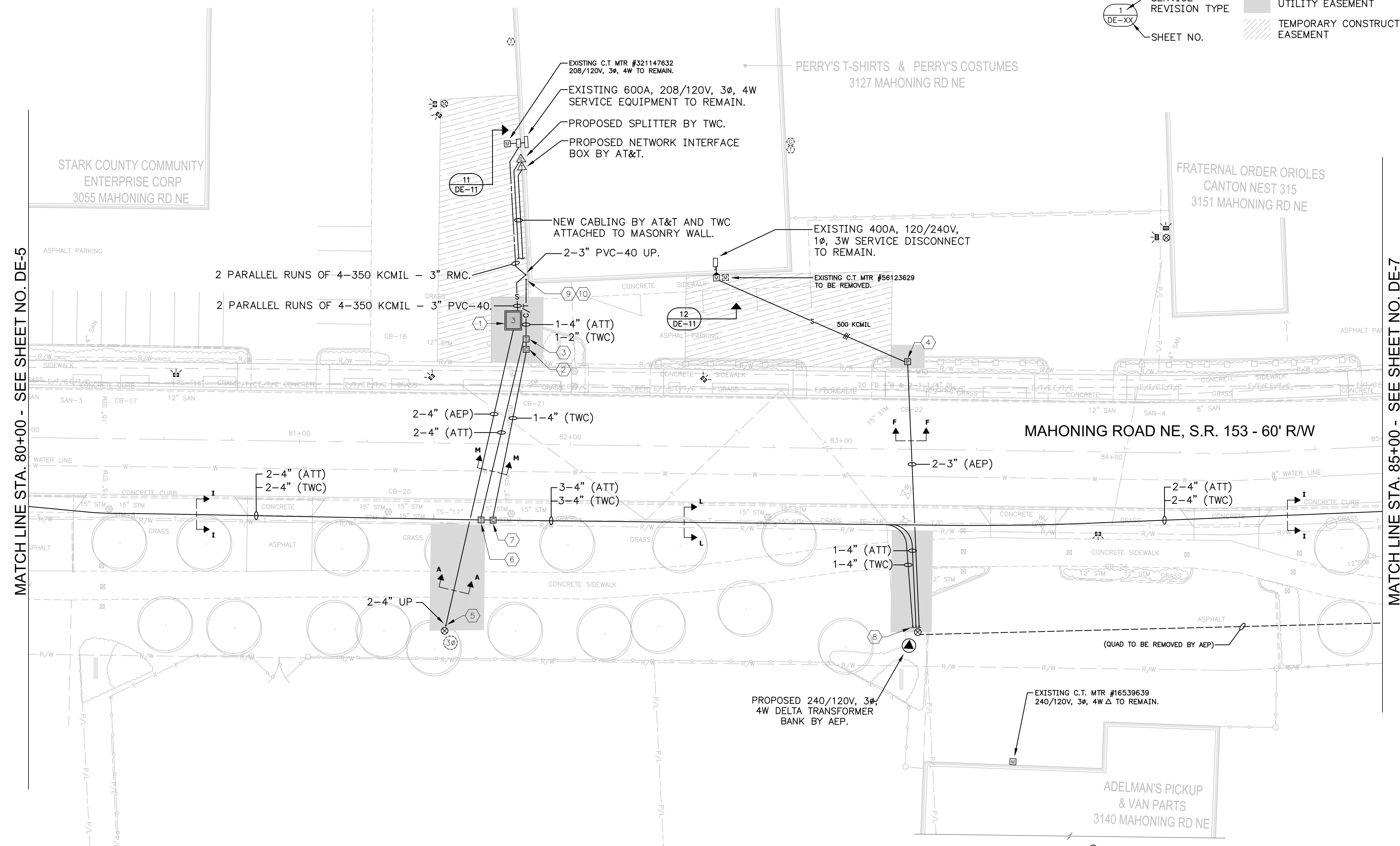
CALCULATED: PTA  
CHECKED: MUS

**CONDUIT SYSTEM PLAN**  
STA. 80+00 TO STA. 85+00

REVISIONS	DATE	BY

**MAHONING ROAD NE, S.R. 153**  
ECONOMIC DEVELOPMENT PROJECT

11  
23



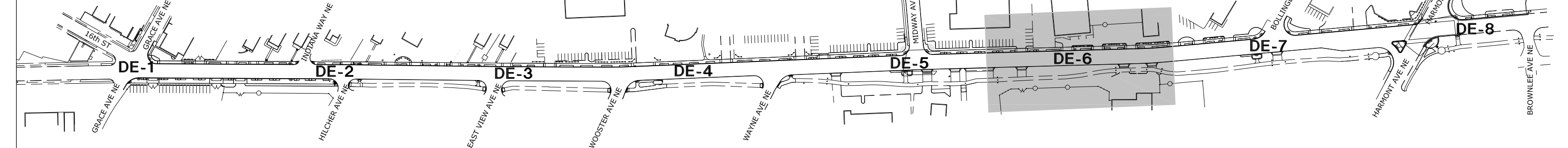
MATCH LINE STA. 80+00 - SEE SHEET NO. DE-5

MATCH LINE STA. 85+00 - SEE SHEET NO. DE-7

**MAHONING ROAD NE - SHEET DE-6**

REF. NO.	DESCRIPTION	STATION	OFFSET	SIDE
1	BOX/PAD, PRECAST CONCRETE, THREE-PHASE TRANSFORMER	81 + 78.4	45.7	LT
2	STUB UP, CATV PEDESTAL	81 + 83.3	35.0	LT
3	STUB UP, TELEPHONE PEDESTAL	81 + 83.3	38.8	LT
4	STUB UP, POWER PEDESTAL	83 + 24.2	32.4	LT
5	STUB UP, RISER POLE, PVC-40, 2-4"	81 + 55.0	67.4	RT
6	STUB UP, TELEPHONE PEDESTAL	81 + 67.5	28.2	RT
7	STUB UP, CATV PEDESTAL	81 + 71.9	28.2	RT
8	BRACKET ASSEMBLY, STAND-OFF, RISER POLE, 4-4" CONDUITS MAX	83 + 28.5	65.8	RT
9	STUB-UP, TELEPHONE, BUILDING/DEMARICATION, PVC-40, 1-4"	81 + 84.0	60.8	LT
10	STUB-UP, CATV, BLDG/DEMARICATION, PVC-40, 1-2"	81 + 84.0	60.8	LT

**KEY PLAN - MAHONING ROAD NE**

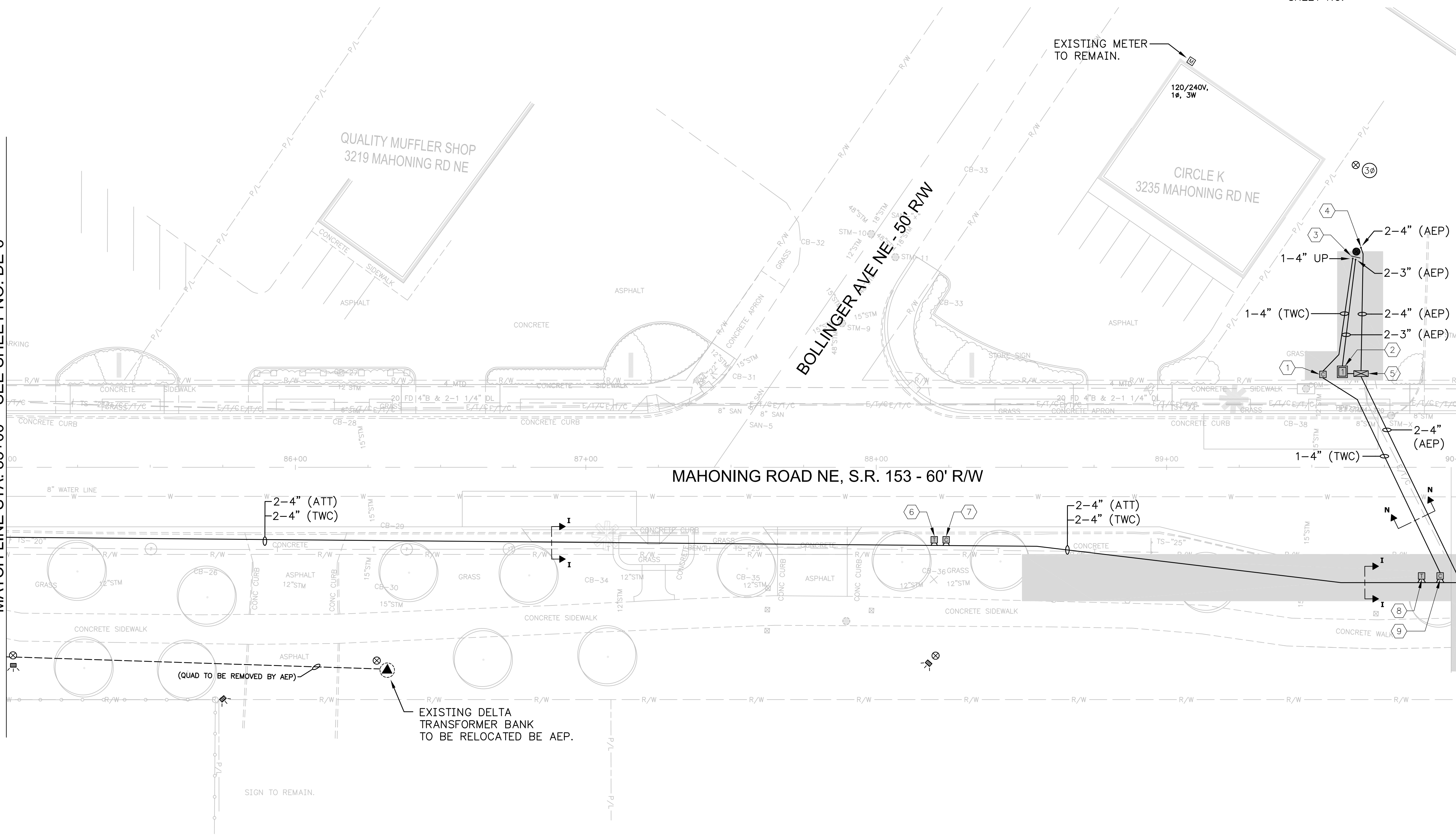


57-10-05 (DE-1 THRU DE-8) MAHONING RD EDP, CANTON - CDS - CONDUIT SYSTEM PLANS.DWG on 07/22/11 at 09:46 by DRW

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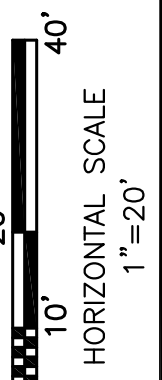
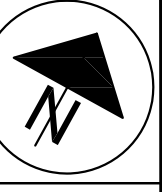
57-10-02 (DE-1 THRU DE-8) MAHONING RD. EDP, CADDN - CDS - CONDUIT SYSTEM PLANS.DWG on 07/22/11 at 09:46 by DRW

MATCH LINE STA. 85+00 - SEE SHEET NO. DE-6



**LEGEND**

- 1 DE-XX SERVICE REVISION TYPE
- SHEET NO.
- UTILITY EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT



CALCULATED: PTA  
CHECKED: MUS

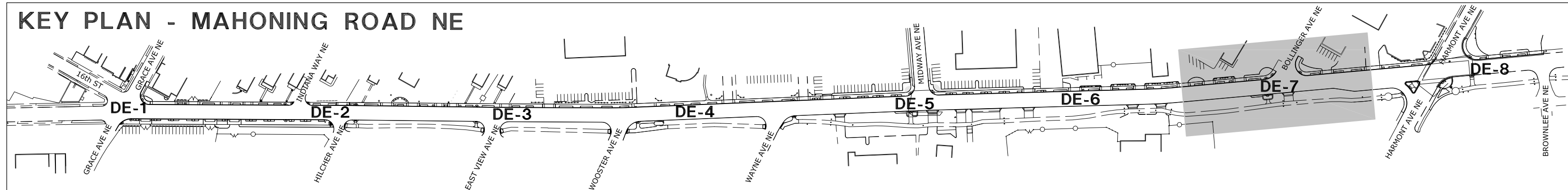
**CONDUIT SYSTEM PLAN**  
STA. 85+00 TO STA. 90+00

REVISIONS	DATE	BY

**MAHONING ROAD NE - SHEET DE-7**

REF. NO.	DESCRIPTION	STATION	OFFSET	SIDE
1	STUB UP, CATV PEDESTAL	89 + 53.8	32.0	LT
2	FIBERGLASS BOX/PAD INSTALLATION, SINGLE-PHASE TRANSFORMER	89 + 60.5	32.9	LT
3	BRACKET ASSEMBLY, STAND-OFF, RISER POLE, 4-4" CONDUITS MAX	89 + 65.1	72.5	LT
4	STUB UP, RISER POLE, PVC-40, 2-4"	89 + 66.9	75.7	LT
5	GROUND SLEEVE INSTALLATION, THREE-PHASE JUNCTION ENCLOSURE	89 + 66.9	32.3	LT
6	STUB UP, TELEPHONE PEDESTAL	88 + 20.0	25.0	RT
7	STUB UP, CATV PEDESTAL	88 + 24.1	25.0	RT
8	STUB UP, TELEPHONE PEDESTAL	89 + 87.8	37.4	RT
9	STUB UP, CATV PEDESTAL	89 + 94.2	37.4	RT

**KEY PLAN - MAHONING ROAD NE**

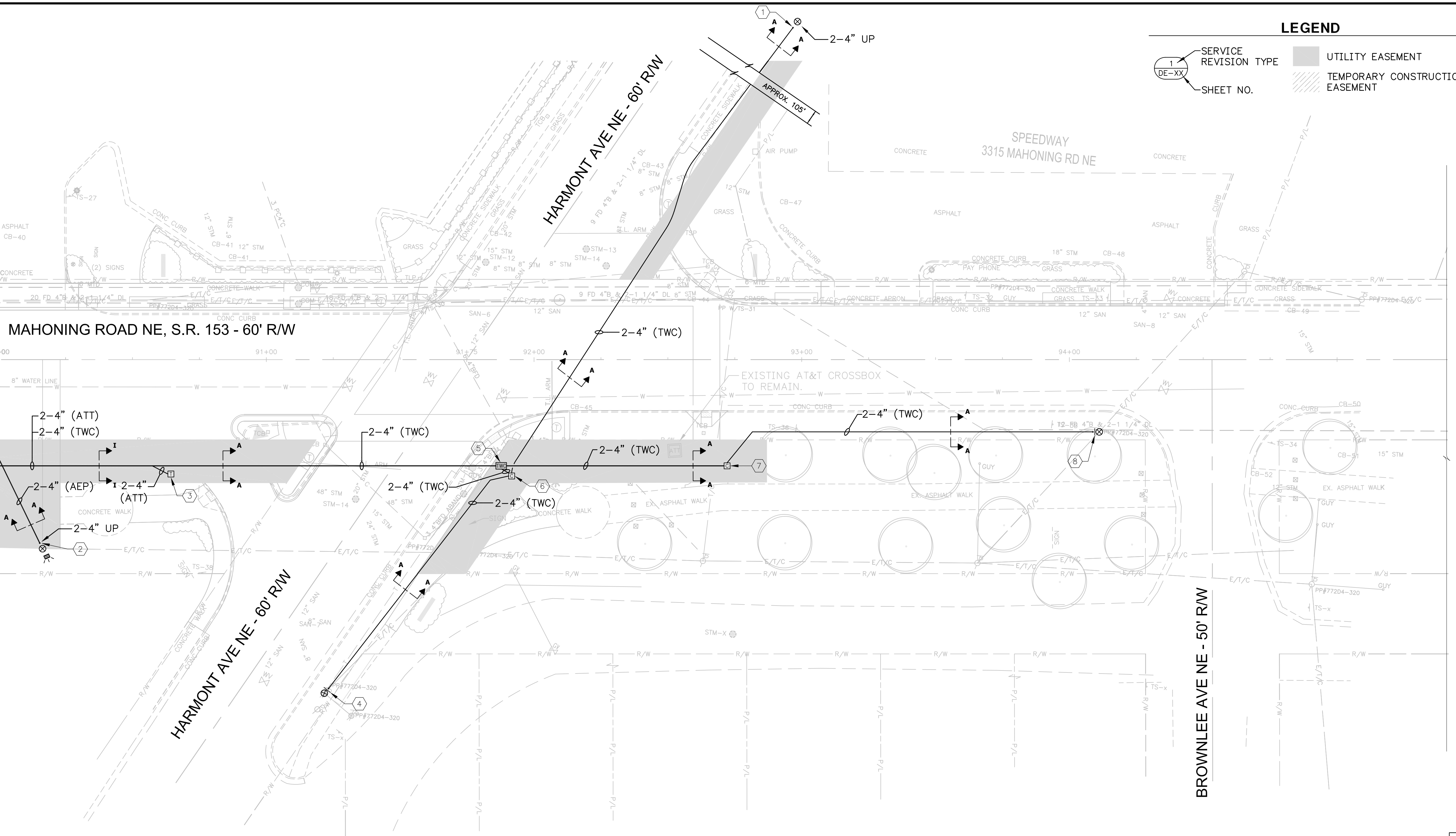


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**MAHONING ROAD NE, S.R. 153**  
**ECONOMIC DEVELOPMENT PROJECT**

57-10-02 (DE-1 THRU DE-8) MAHONING RD EDP, CAUTION - CDS - CONDUIT SYSTEM PLANS.DWG on 07/22/11 at 09:46 by DRW

MATCH LINE STA. 90+00 - SEE SHEET NO. DE-7



**LEGEND**

- 1 DE-XX SERVICE REVISION TYPE
- 1 SHEET NO.
- UTILITY EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT

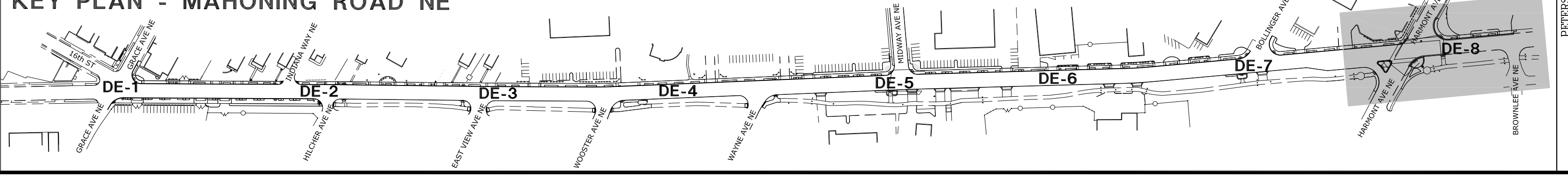
CALCULATED:	PTA
CHECKED:	MJS

**CONDUIT SYSTEM PLAN**  
STA. 90+00 TO STA. 95+00

**MAHONING ROAD NE - SHEET DE-8**

REF. NO.	DESCRIPTION	STATION	OFFSET	SIDE
1	STUB UP, RISER POLE, PVC-40, 2-4"			
2	STUB UP, RISER POLE, PVC-40, 2-4"	90 + 15.3	68.5	RT
3	STUB UP, TELEPHONE PEDESTAL	90 + 64.3	42.8	RT
4	BRACKET ASSEMBLY, STAND-OFF, RISER POLE, 4-4" CONDUITS MAX	91 + 22.7	123.5	RT
5	PULL BOX, REINFORCED POLYMER CONCRETE, 30" X 48" X 24" D, "TWC - CATV" LOGO	91 + 87.7	39.7	RT
6	STUB UP, CATV PEDESTAL	91 + 91.7	43.5	RT
7	STUB UP, CATV PEDESTAL	92 + 72.1	39.7	RT
8	BRACKET ASSEMBLY, STAND-OFF, RISER POLE, 4-4" CONDUITS MAX	94 + 09.5	27.0	RT

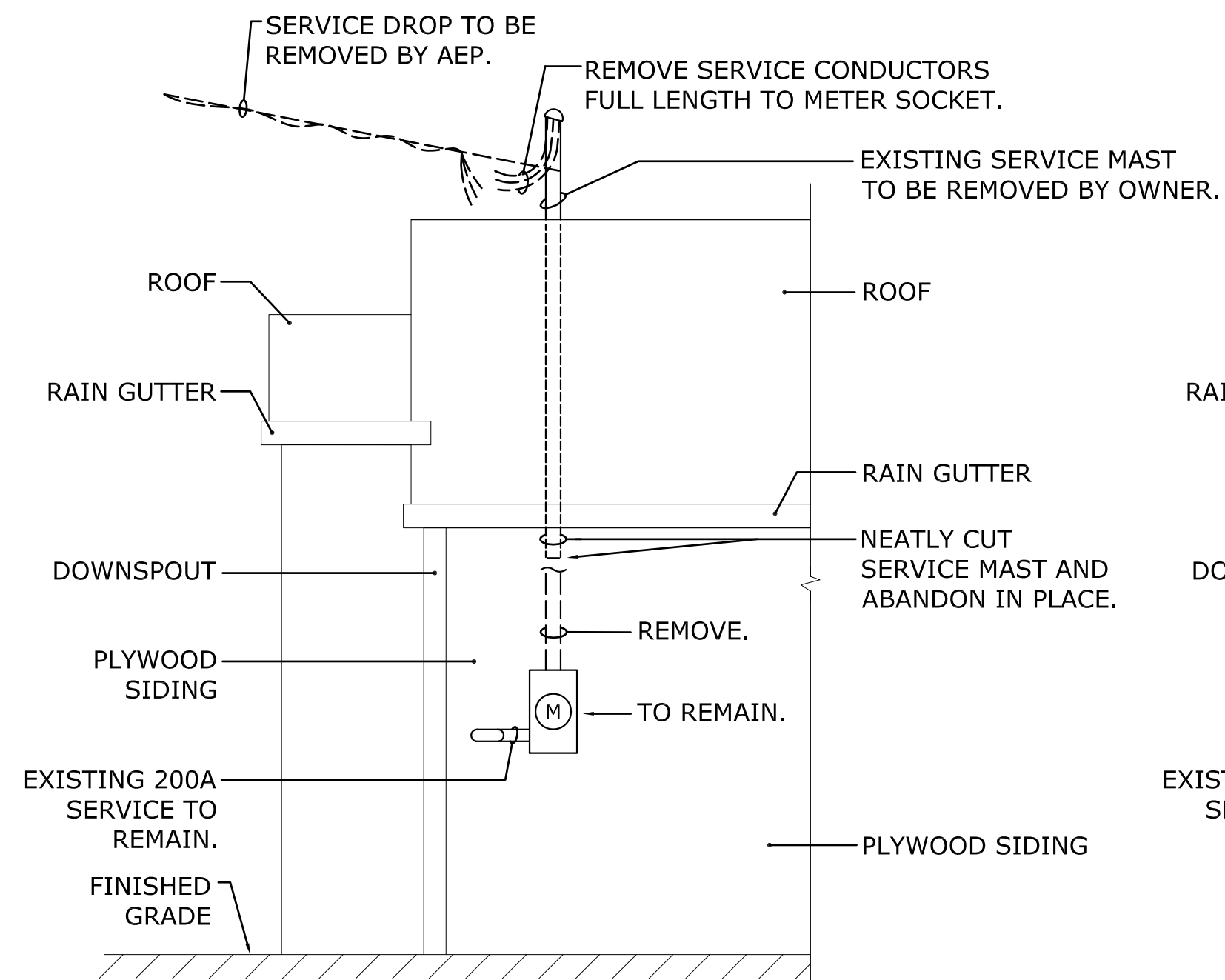
**KEY PLAN - MAHONING ROAD NE**



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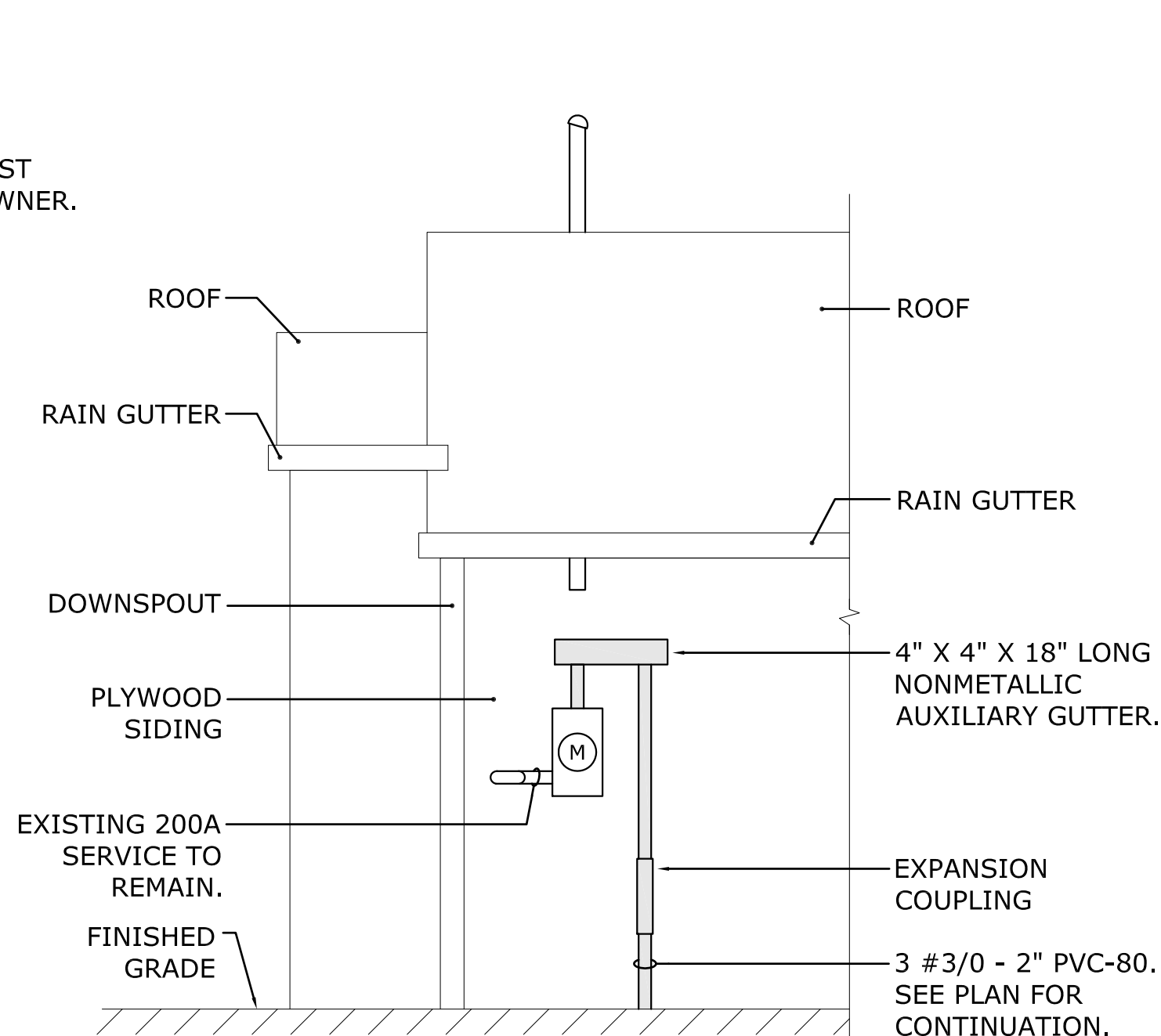
**MAHONING ROAD NE, S.R. 153**  
**ECONOMIC DEVELOPMENT PROJECT**

REVISIONS	DATE	BY



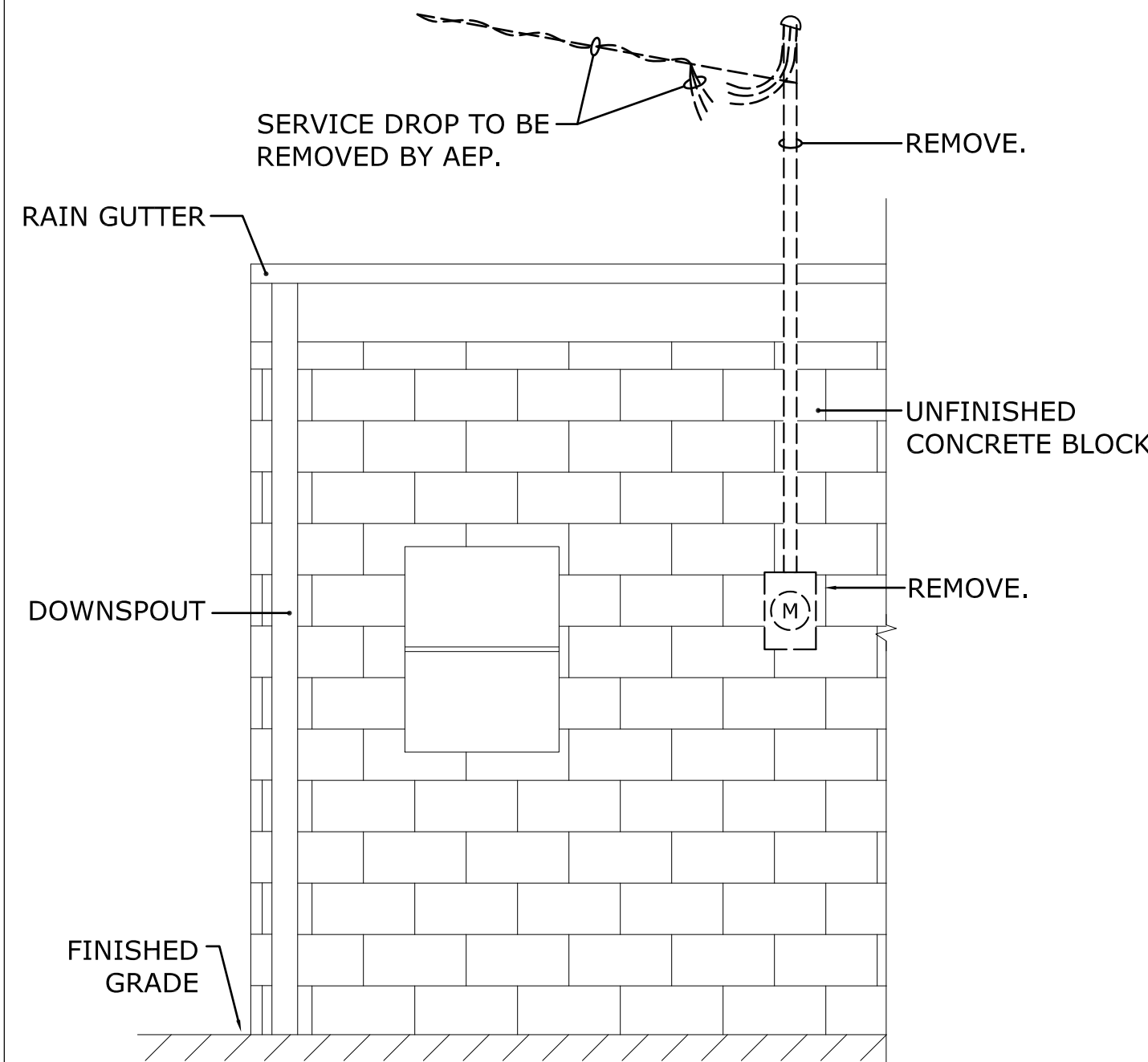
**DEMOLITION**

**SERVICE REVISION TYPE 1**  
 (#2605 MAHONING ROAD NE)



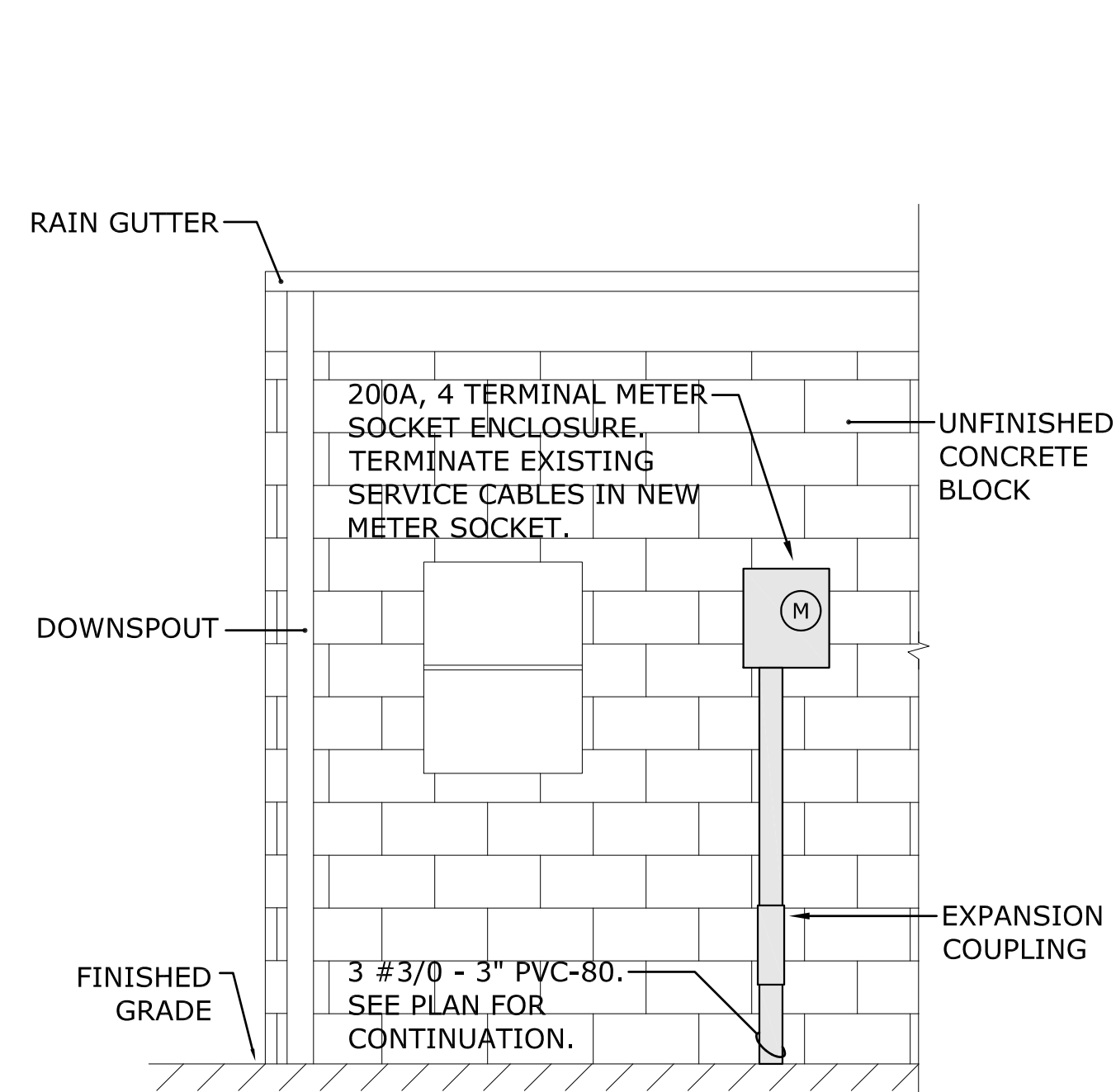
**REVISED CONDITIONS**

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



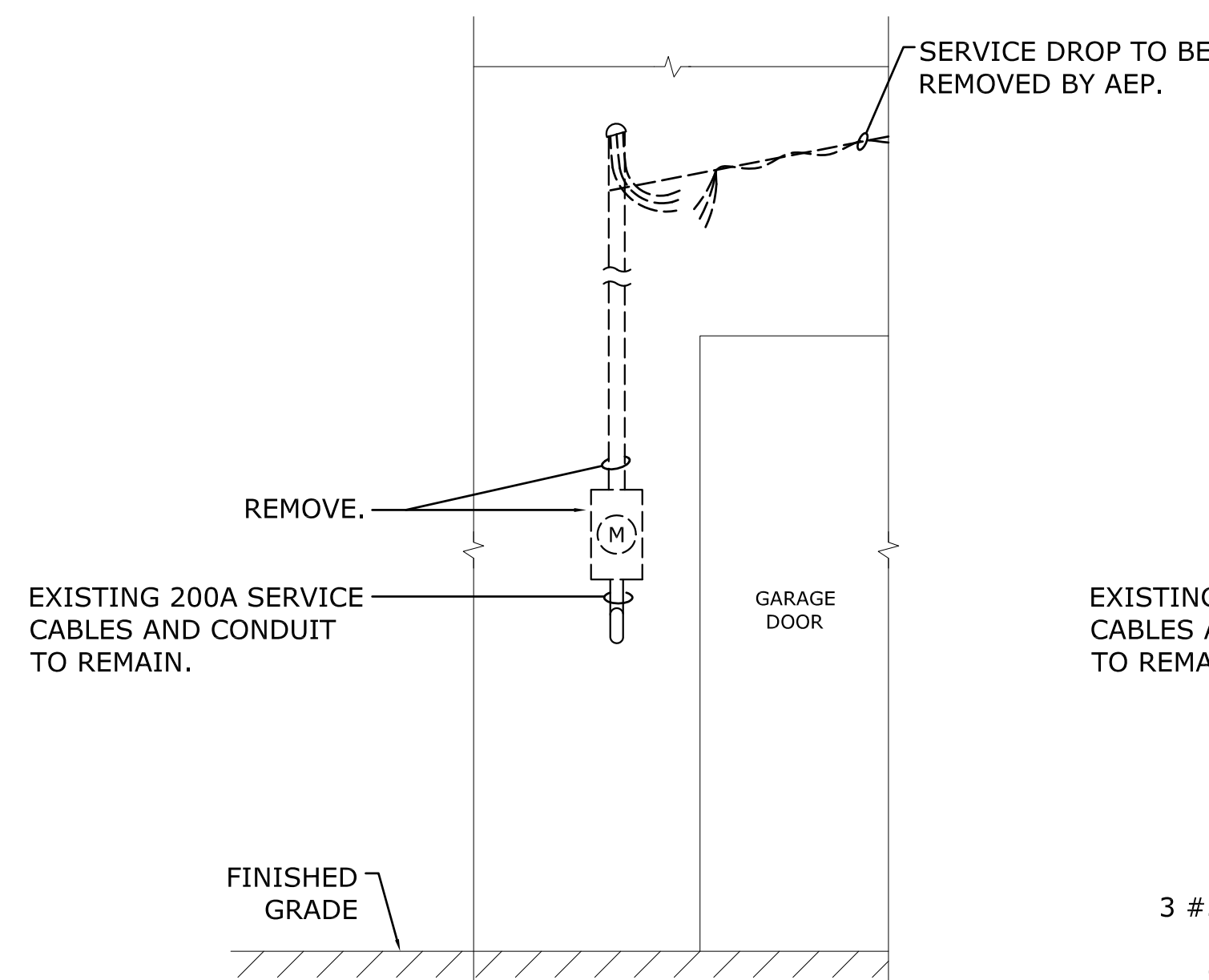
**DEMOLITION**

**SERVICE REVISION TYPE 2**  
 (#2610 "B" MAHONING ROAD NE)



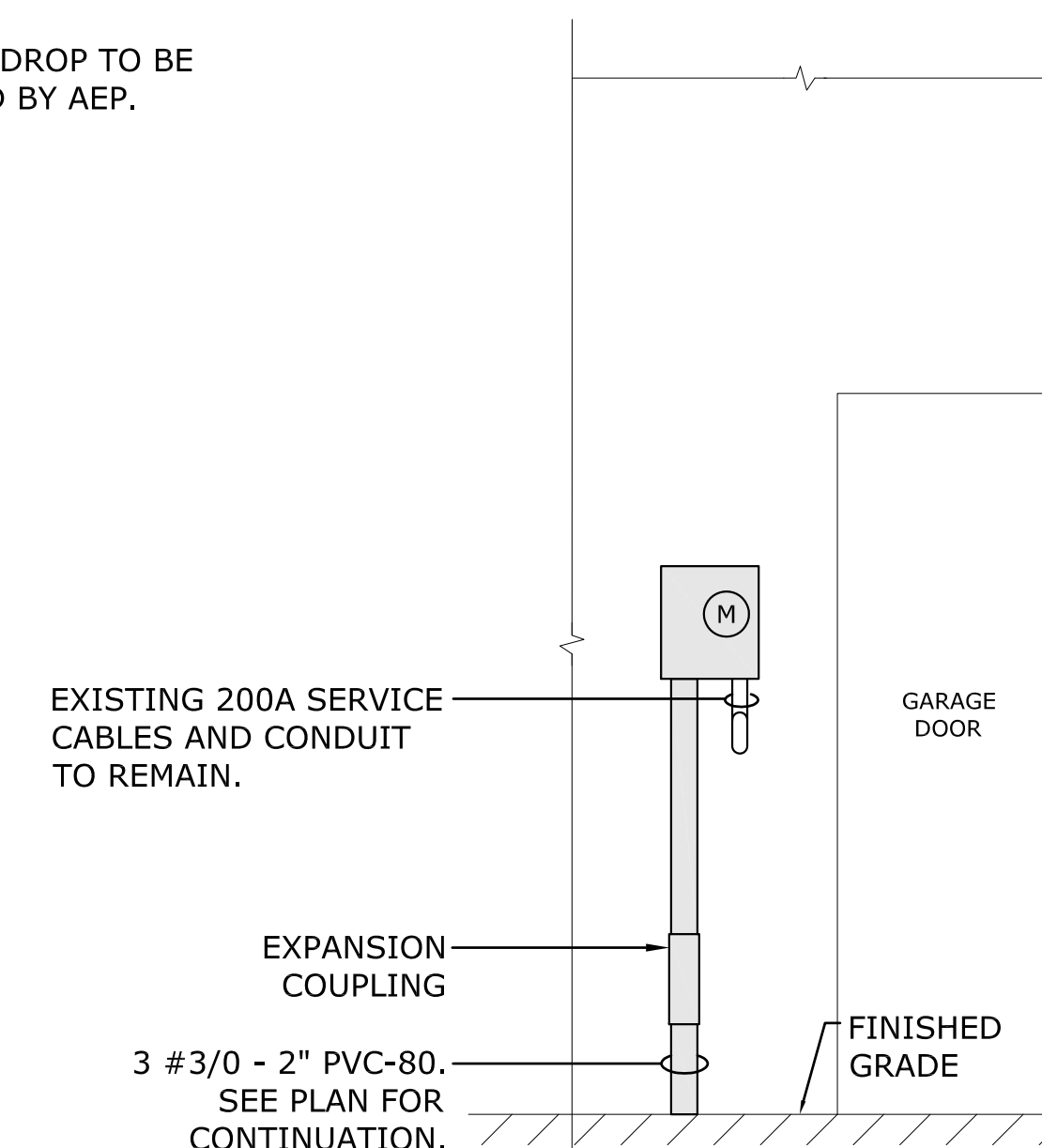
**REVISED CONDITIONS**

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



**DEMOLITION**

**SERVICE REVISION TYPE 3**  
 (#2610 MAHONING ROAD NE)



**REVISED CONDITIONS**

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

**NOTES:**

1. ALL EQUIPMENT SHOWN AS DASHED SHALL BE REMOVED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
2. ALL EQUIPMENT SHOWN AS SHADED SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER THE SERVICE REVISION PAY ITEMS.
3. ALL HOLES OR DAMAGE CAUSED BY THE REMOVAL OF EXISTING WORK OR THE INSTALLATION OF NEW WORK SHALL BE PROPERLY PATCHED, REPAIRED AND PAINTED BY THE CONTRACTOR TO MATCH EXISTING SURFACES.

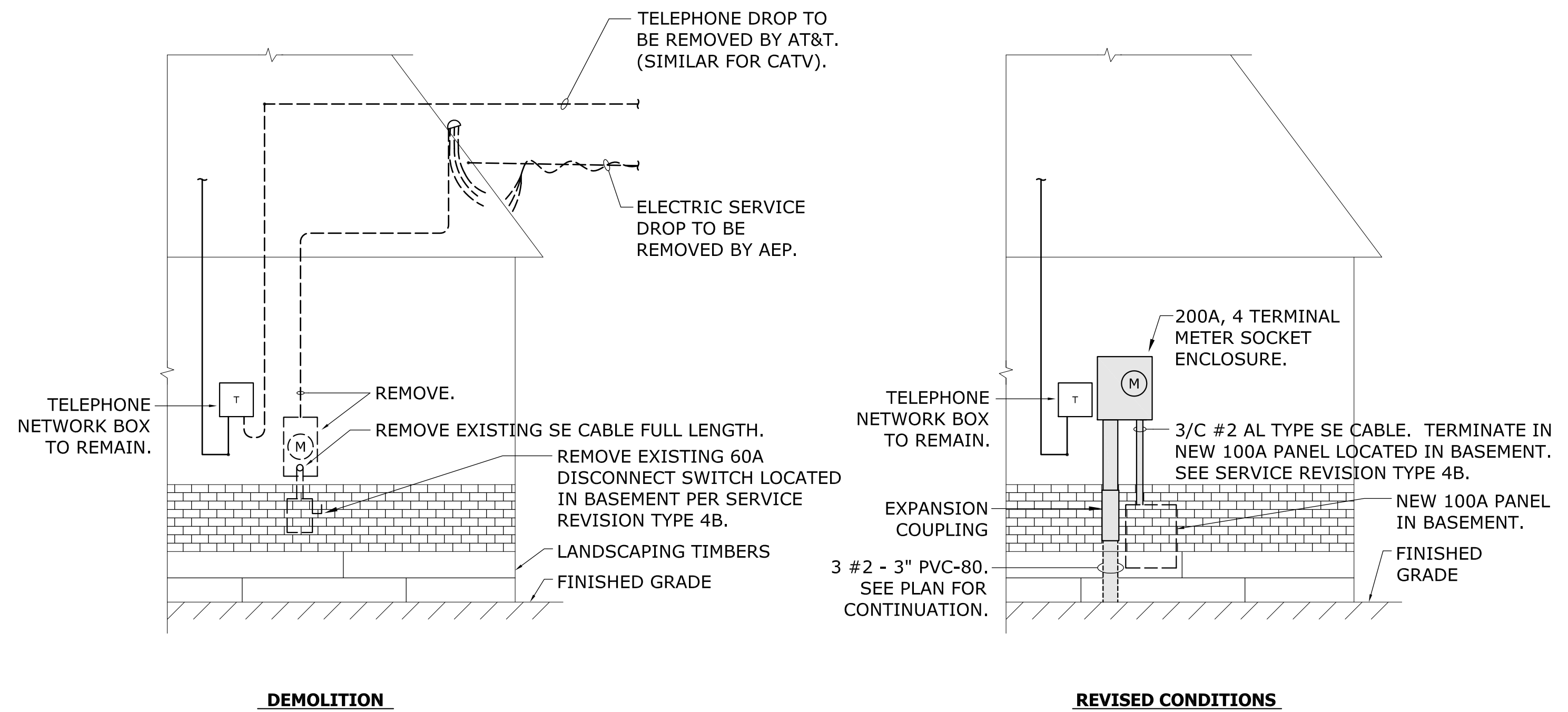
SCALE: AS SHOWN  
 CALCULATED: PTA  
 CHECKED: MJU

**SERVICE REVISION DETAILS**

REVISIONS	DATE	BY

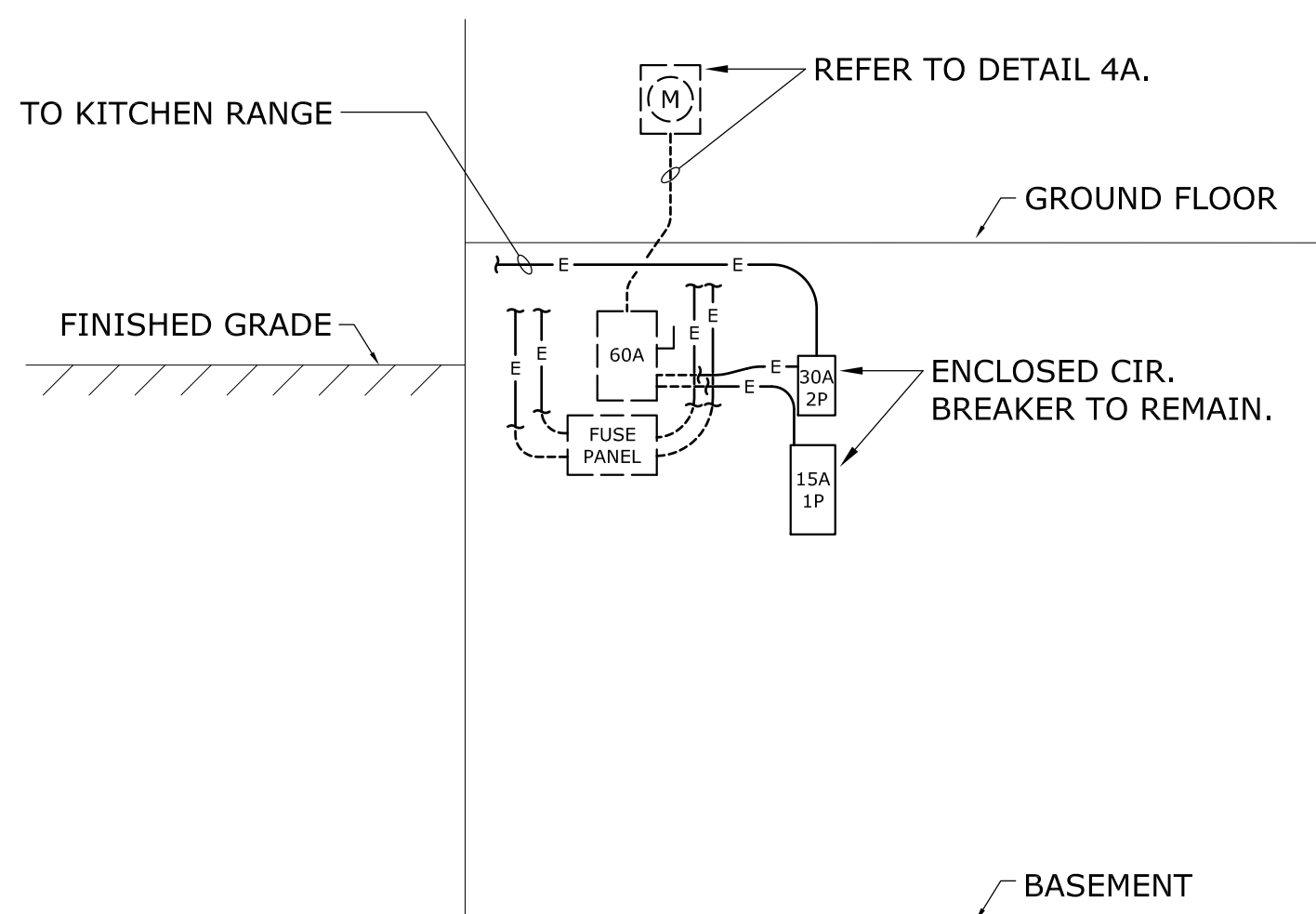
PETERS, TSCHANZ & ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 275 SPRINGSIDE DR., SUITE 300  
 WILSONVILLE, OR 97148  
 PHONE 503-686-3702 FAX -4185  
 www.ptaengineering.com

**MAHONING ROAD NE, S.R. 153  
 ECONOMIC DEVELOPMENT PROJECT**

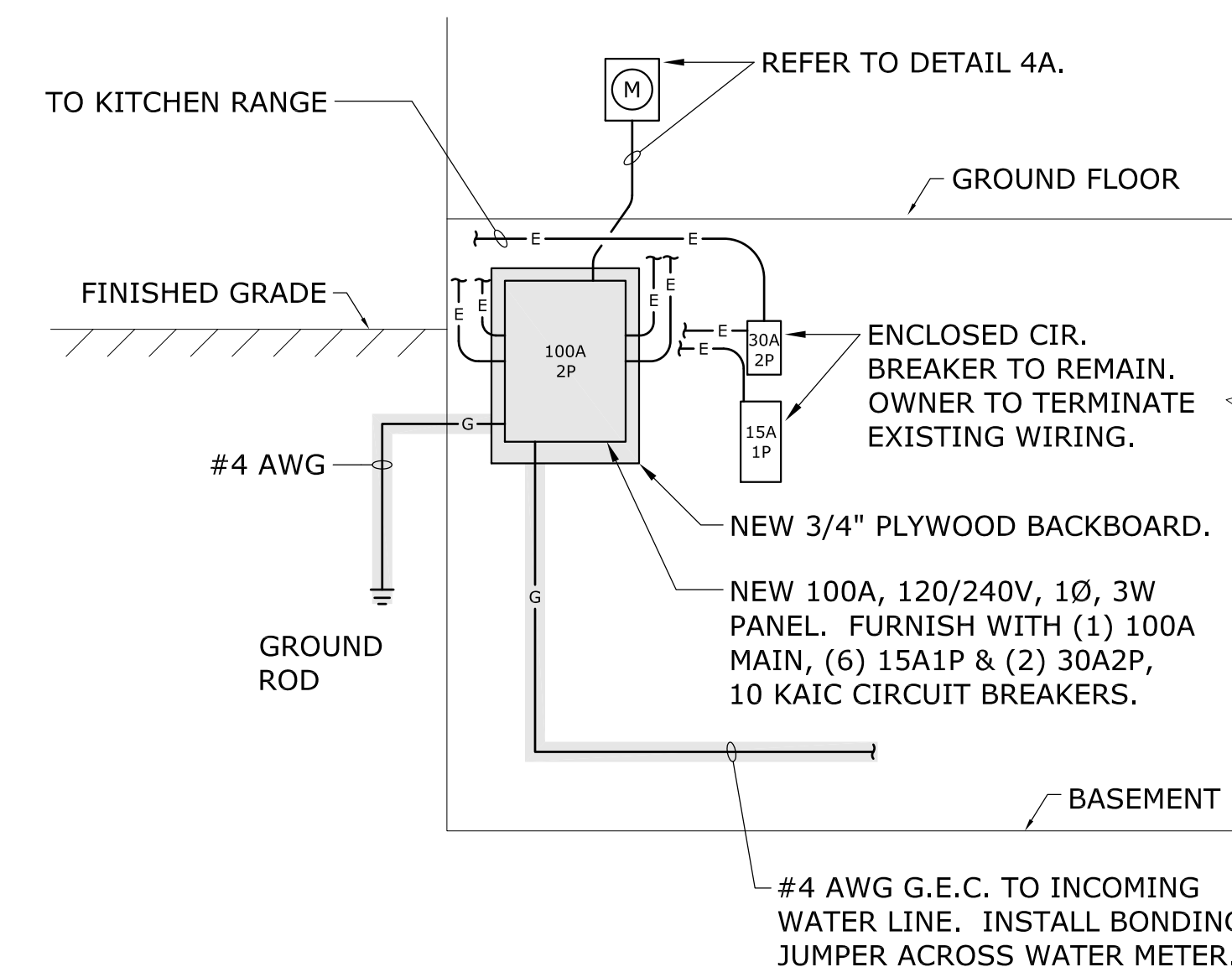


**SERVICE REVISION TYPE 4A**  
(#2629 MAHONING ROAD NE)

NOT TO SCALE



**SERVICE REVISION TYPE 4B**  
(#2629 MAHONING ROAD NE)



**SERVICE REVISION TYPE 4B**

NOT TO SCALE

**NOTES:**

1. ALL EQUIPMENT SHOWN AS DASHED SHALL BE REMOVED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
2. ALL EQUIPMENT SHOWN AS SHADED SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER THE SERVICE REVISION PAY ITEMS.
3. ALL HOLES OR DAMAGE CAUSED BY THE REMOVAL OF EXISTING WORK OR THE INSTALLATION OF NEW WORK SHALL BE PROPERLY PATCHED, REPAIRED AND PAINTED BY THE CONTRACTOR TO MATCH EXISTING SURFACES.

CALCULATED: PTA  
CHECKED: MJS  
SCALE: AS SHOWN

**SERVICE REVISION DETAILS**

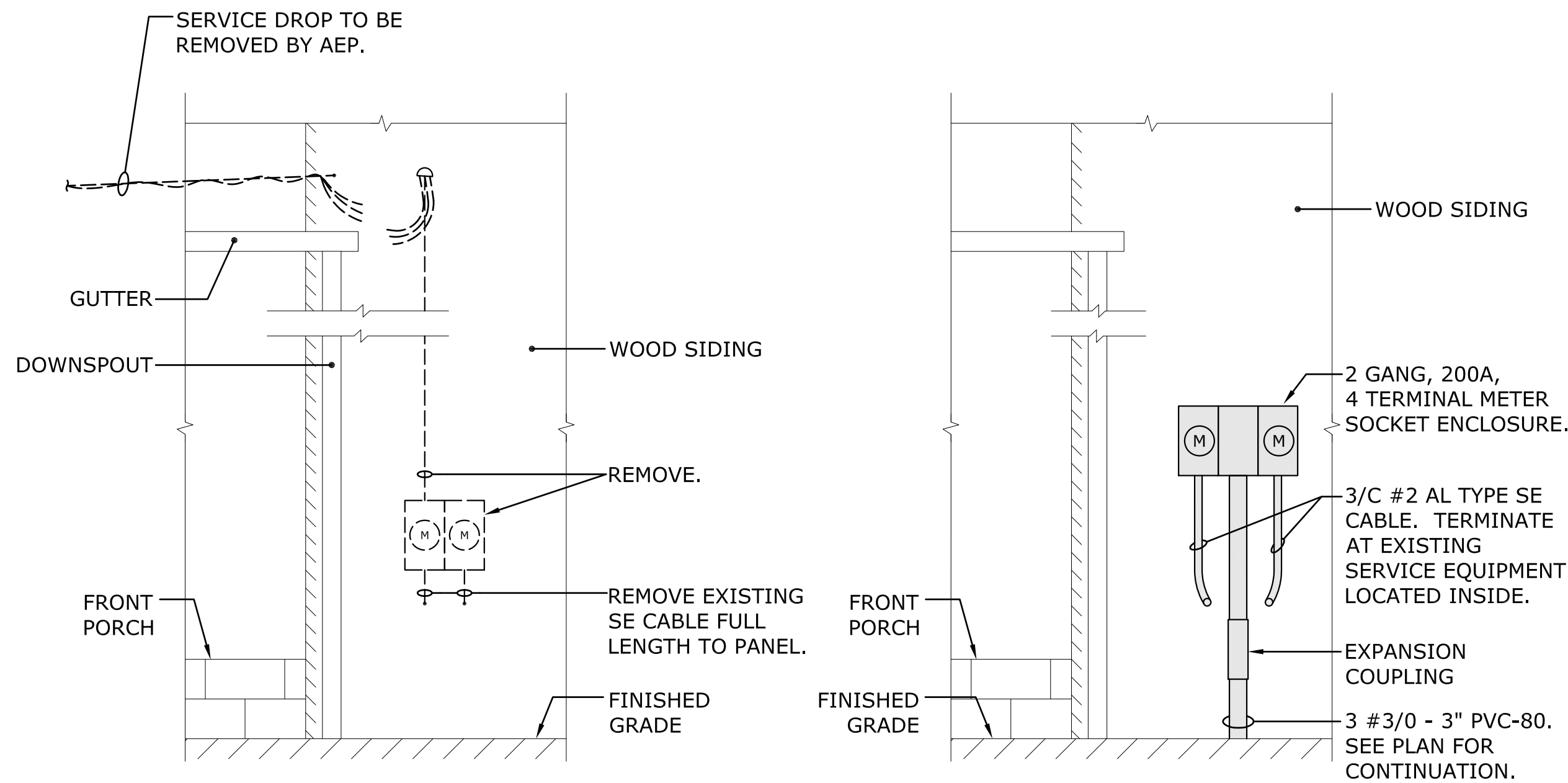
REVISIONS	DATE	BY

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CONSULTING ENGINEERS  
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PHONE 330-686-3702 FAX -4185  
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**MAHONING ROAD NE, S.R. 153**  
**ECONOMIC DEVELOPMENT PROJECT**

57-10-05 (DE-9A) MAHONING RD EDP, CANTON - CDS - DETAILS.DWG on 03/07/11 at 15:21 by DRM



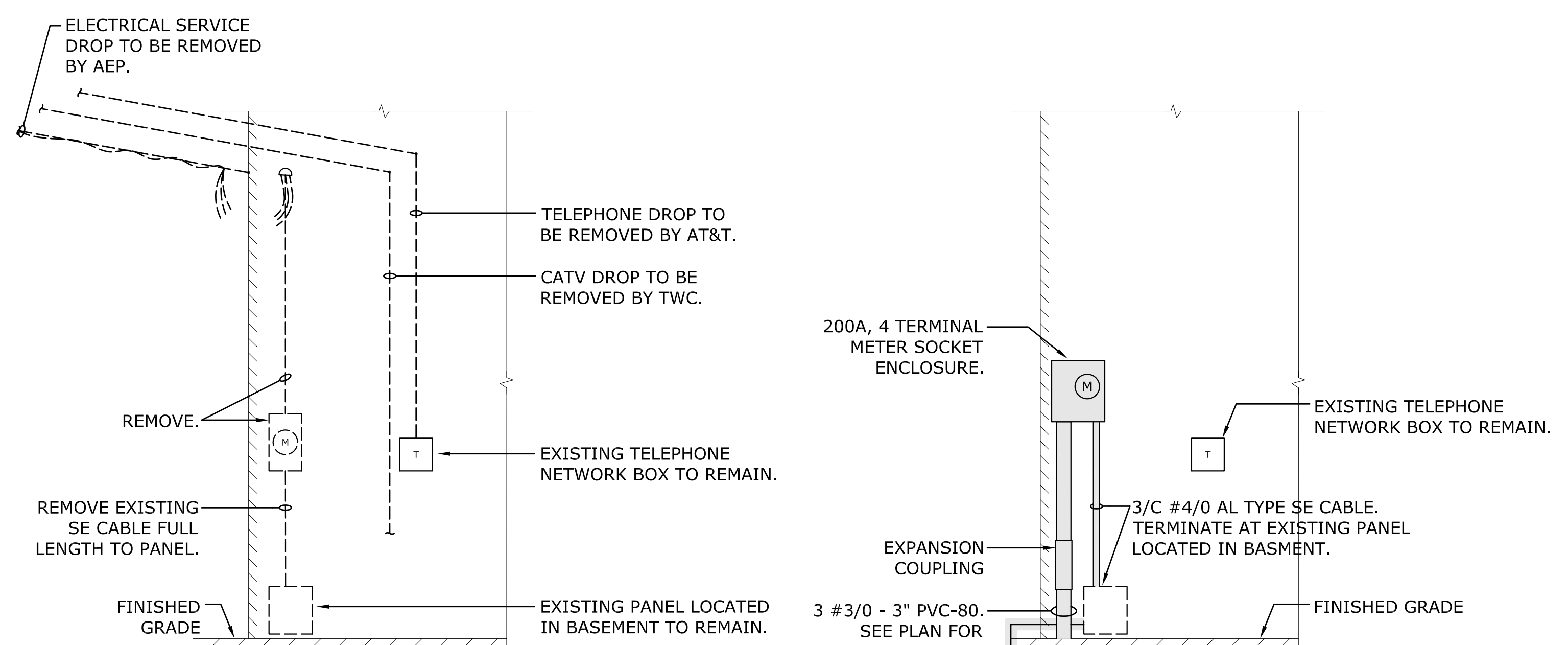


**DEMOLITION**

**REVISED CONDITIONS**

**SERVICE REVISION TYPE 5**  
(#2635 MAHONING ROAD NE)

NOT TO SCALE

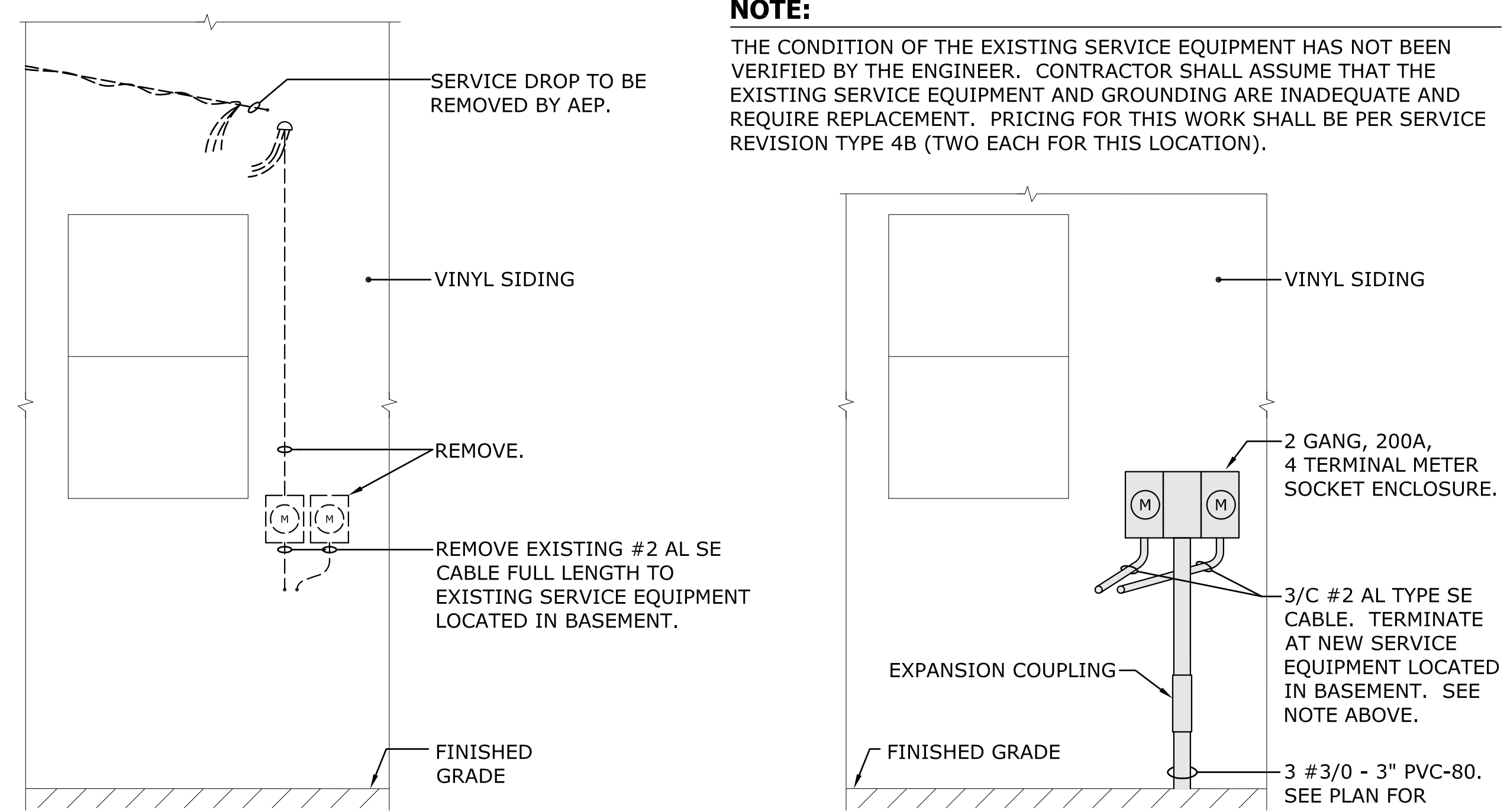


**DEMOLITION**

**REVISED CONDITIONS**

**SERVICE REVISION TYPE 6**  
(#2641 MAHONING ROAD NE)

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



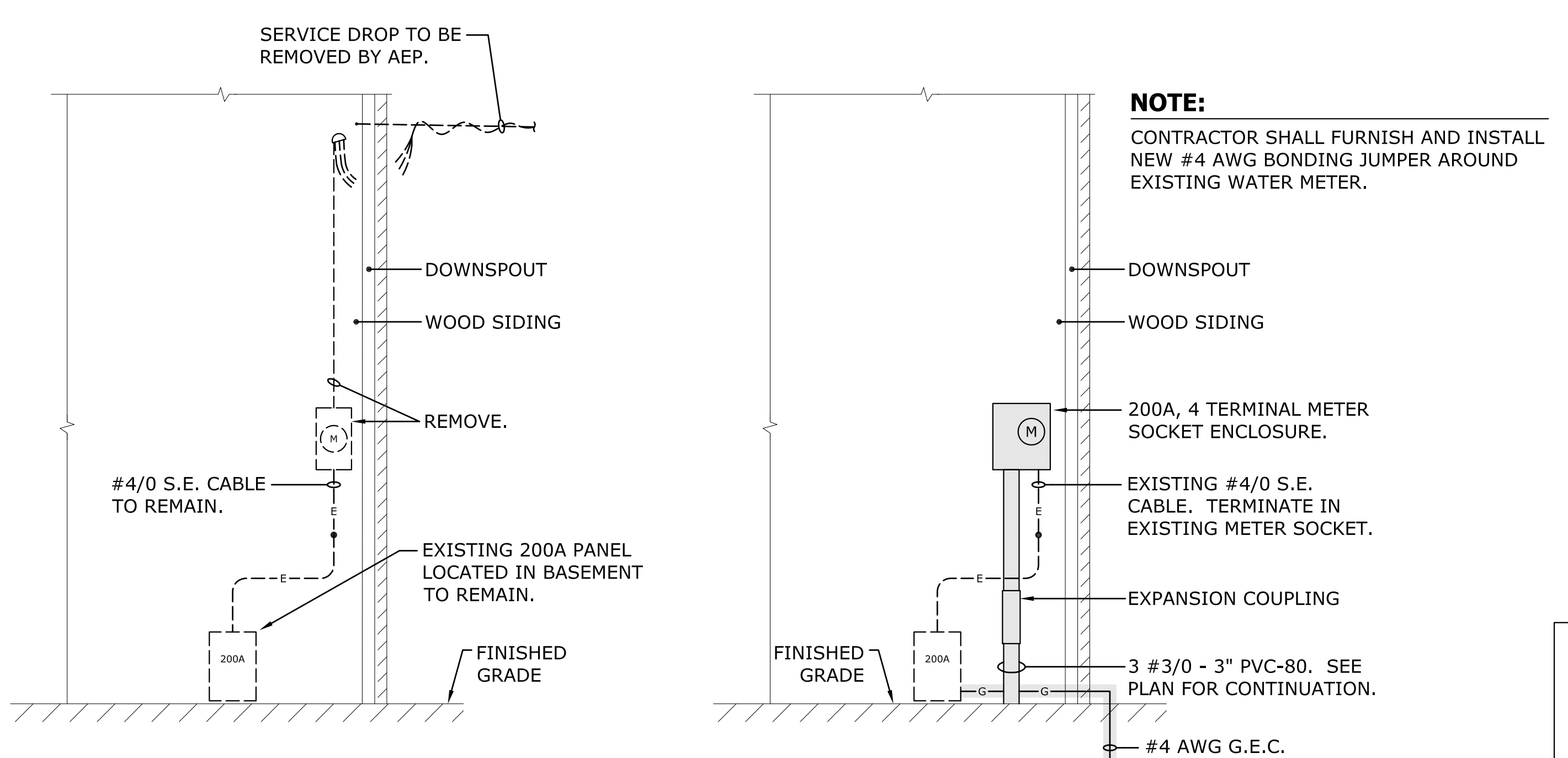
**DEMOLITION**

**REVISED CONDITIONS**

**SERVICE REVISION TYPE 7**  
(#2649 MAHONING ROAD NE)

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

**NOTE:**  
THE CONDITION OF THE EXISTING SERVICE EQUIPMENT HAS NOT BEEN VERIFIED BY THE ENGINEER. CONTRACTOR SHALL ASSUME THAT THE EXISTING SERVICE EQUIPMENT AND GROUNDING ARE INADEQUATE AND REQUIRE REPLACEMENT. PRICING FOR THIS WORK SHALL BE PER SERVICE REVISION TYPE 4B (TWO EACH FOR THIS LOCATION).



**DEMOLITION**

**REVISED CONDITIONS**

**SERVICE REVISION TYPE 8**  
(#2703 MAHONING ROAD NE)

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

**NOTE:**  
CONTRACTOR SHALL FURNISH AND INSTALL NEW #4 AWG BONDING JUMPER AROUND EXISTING WATER METER.

- NOTES:**
1. ALL EQUIPMENT SHOWN AS DASHED SHALL BE REMOVED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
  2. ALL EQUIPMENT SHOWN AS SHADED SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER THE SERVICE REVISION PAY ITEMS.
  3. ALL HOLES OR DAMAGE CAUSED BY THE REMOVAL OF EXISTING WORK OR THE INSTALLATION OF NEW WORK SHALL BE PROPERLY PATCHED, REPAIRED AND PAINTED BY THE CONTRACTOR TO MATCH EXISTING SURFACES.

CALCULATED: PTA  
CHECKED: MJJ  
SCALE: AS SHOWN

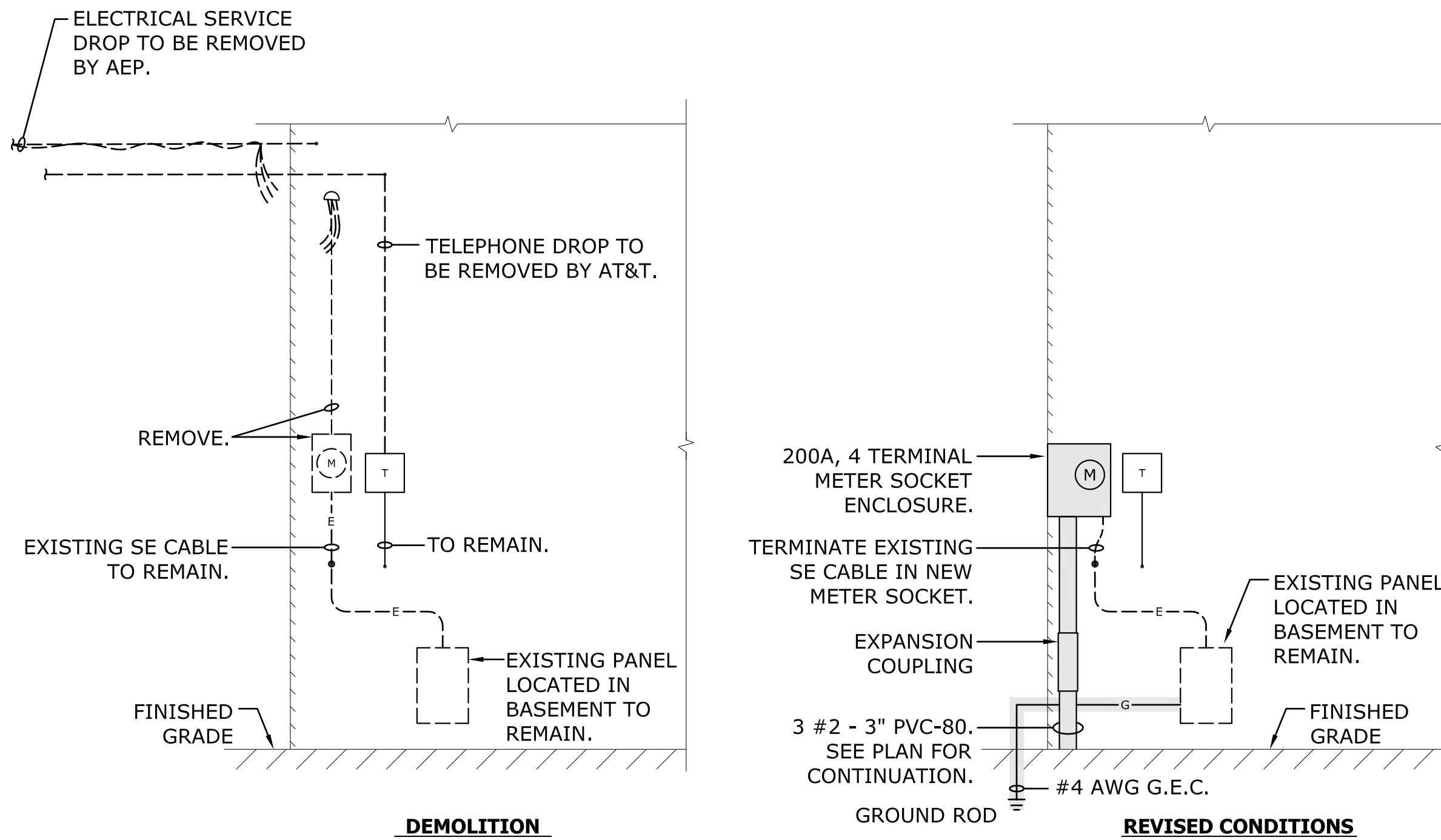
SERVICE REVISION DETAILS

REVISIONS	DATE	BY

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CONSULTING ENGINEERS  
275 SPRINGSIDE DR., SUITE 300  
PHOENIX, AZ 85028-3702 FAX -4185  
www.plaengineering.com

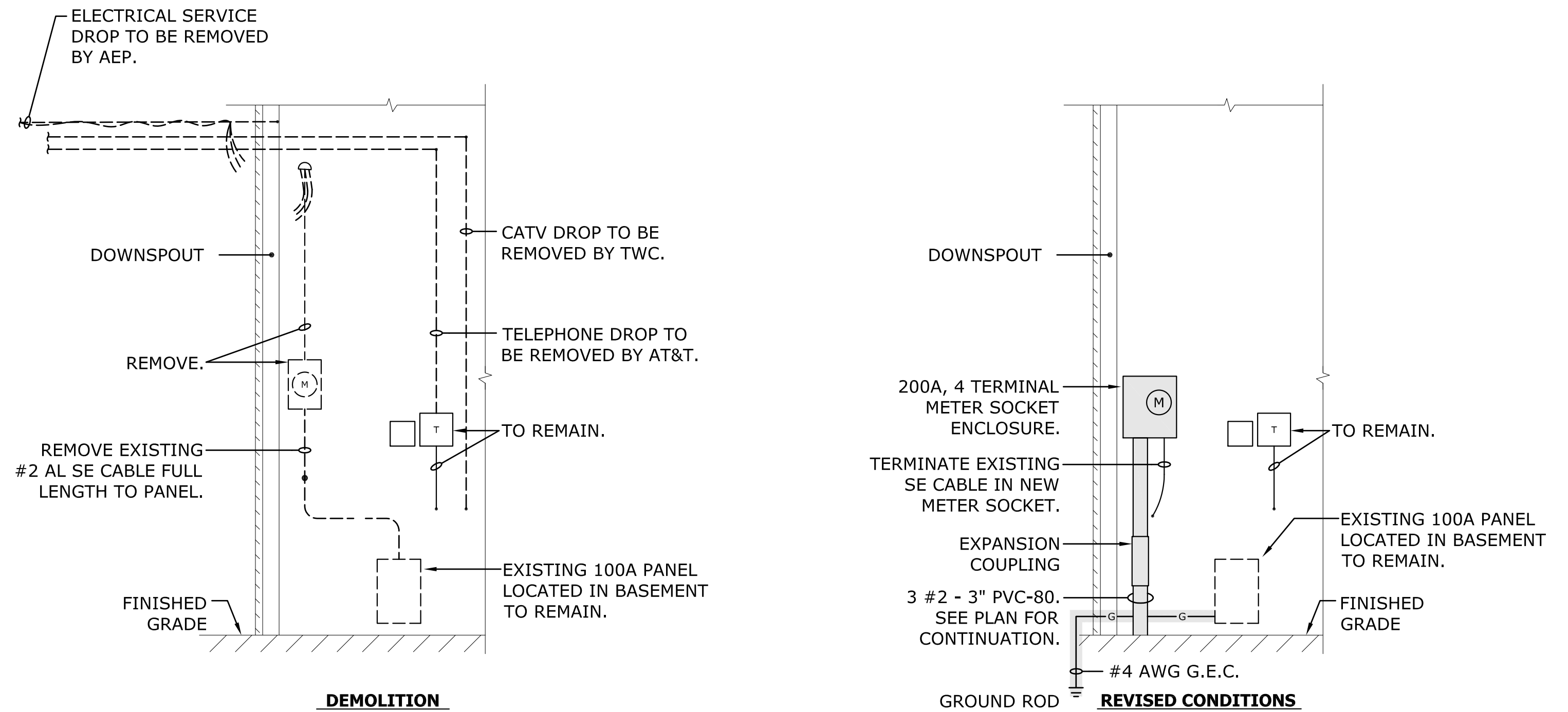
MAHONING ROAD NE, S.R. 153  
ECONOMIC DEVELOPMENT PROJECT

57-10-05 (DE-10) MAHONING RD EDP, CANTON - CDS - DETAILS.DWG on 03/07/11 at 15:20 by DRM



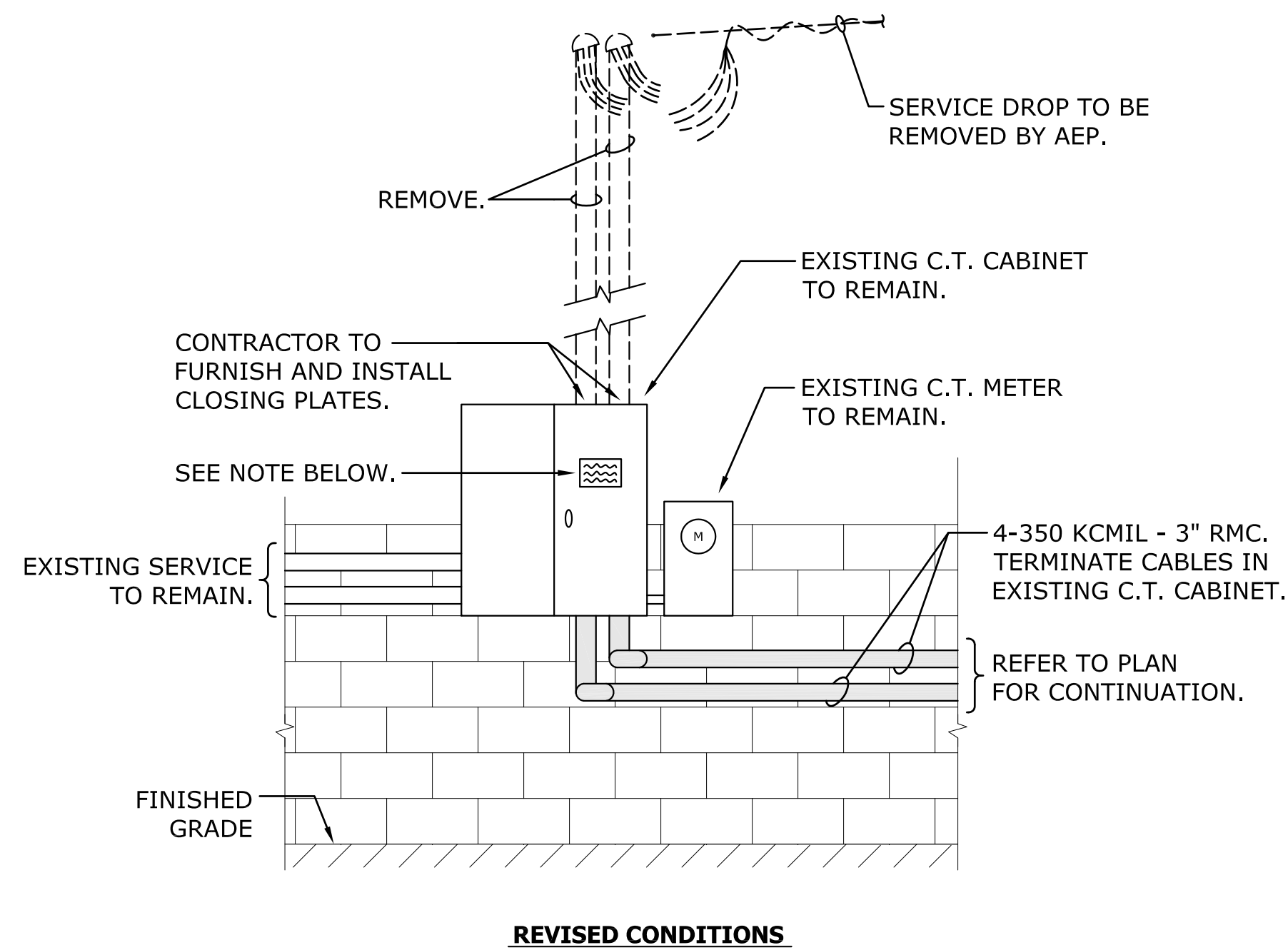
**SERVICE REVISION TYPE 9**  
 (#2729 MAHONING ROAD NE)

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



**SERVICE REVISION TYPE 10**  
 (#2737 MAHONING ROAD NE)

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

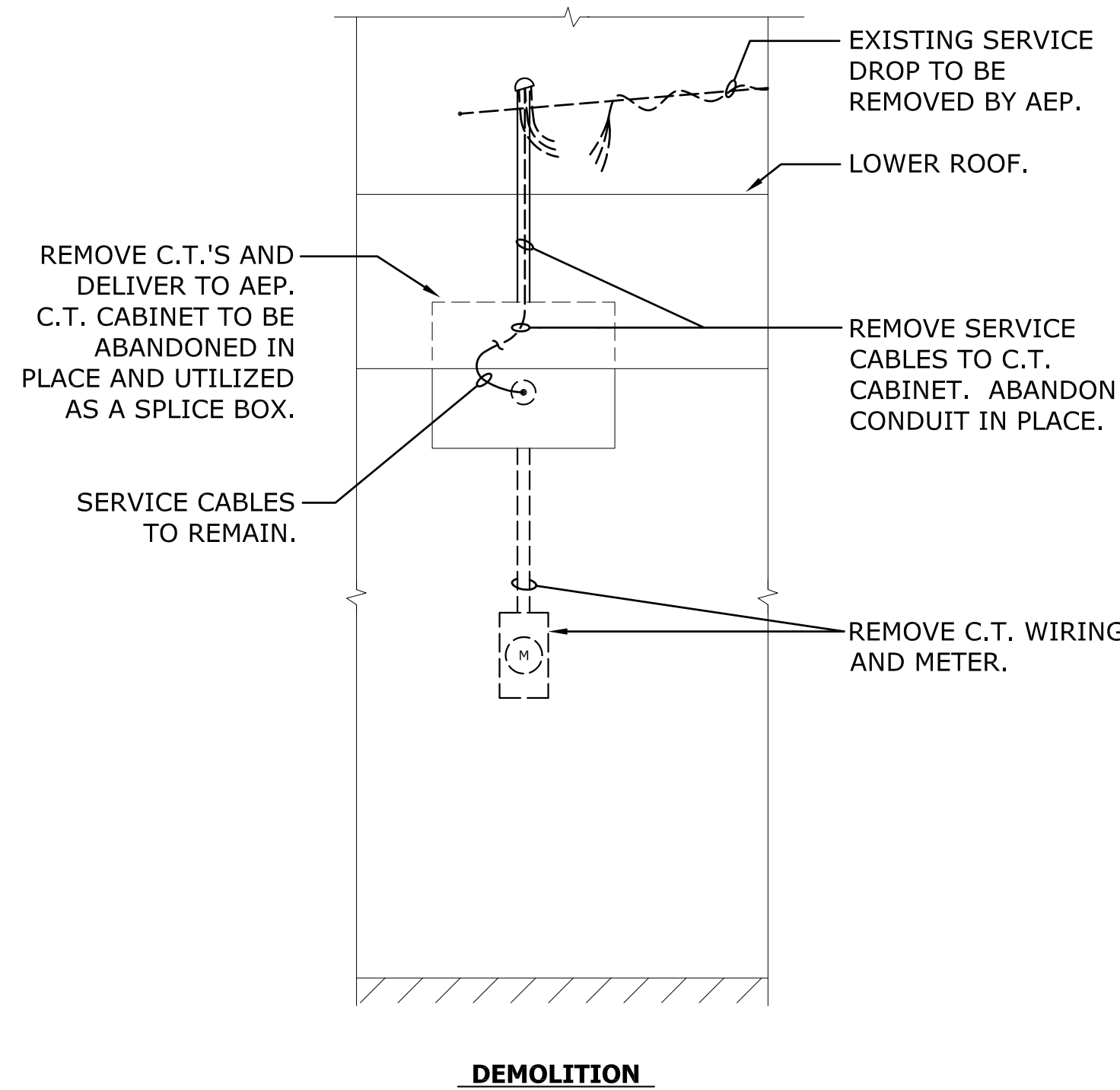


**NOTE:**

FURNISH AND INSTALL ENGRAVED PLAQUE "BUILDING SERVED BY A SECOND SERVICE LOCATED ON THE SOUTH SIDE OF THE BUILDING.". FURNISH AND INSTALL A SECOND PLAQUE AT THE SERVICE DISCONNECT LOCATED IMMEDIATELY INSIDE THE BUILDING.

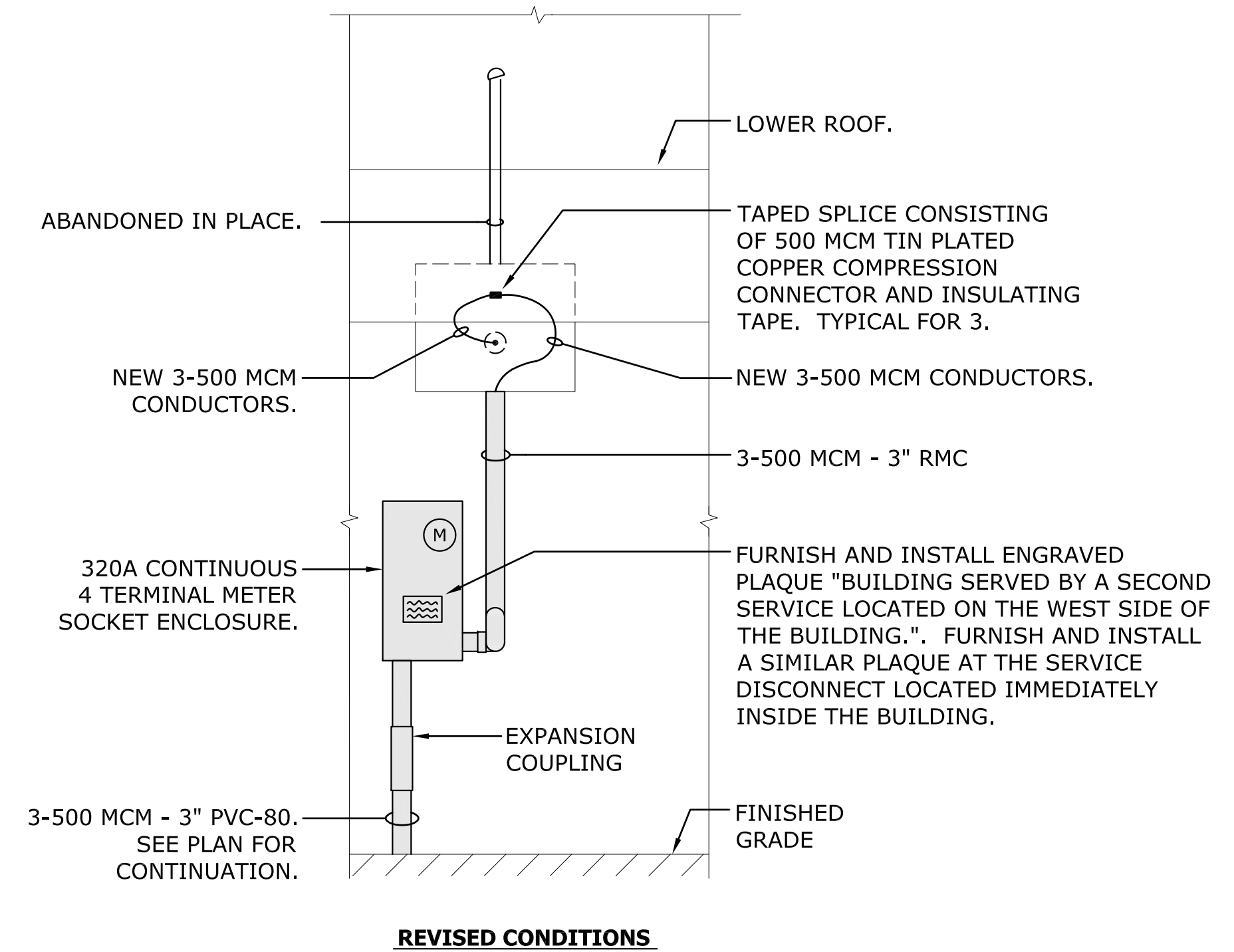
**SERVICE REVISION TYPE 11**  
 (#3127 MAHONING ROAD NE - WEST SIDE OF BLDG)

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



**SERVICE REVISION TYPE 12**

(#3131 MAHONING ROAD NE - SOUTH SIDE OF BLDG)



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

**NOTES:**

1. ALL EQUIPMENT SHOWN AS DASHED SHALL BE REMOVED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
2. ALL EQUIPMENT SHOWN AS SHADED SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER THE SERVICE REVISION PAY ITEMS.
3. ALL HOLES OR DAMAGE CAUSED BY THE REMOVAL OF EXISTING WORK OR THE INSTALLATION OF NEW WORK SHALL BE PROPERLY PATCHED, REPAIRED AND PAINTED BY THE CONTRACTOR TO MATCH EXISTING SURFACES.

57-10-05 (DE-11) MAHONING RD EDP, CANTON - CDS - DETAILS.DWG on 03/08/11 at 11:40 by DRM

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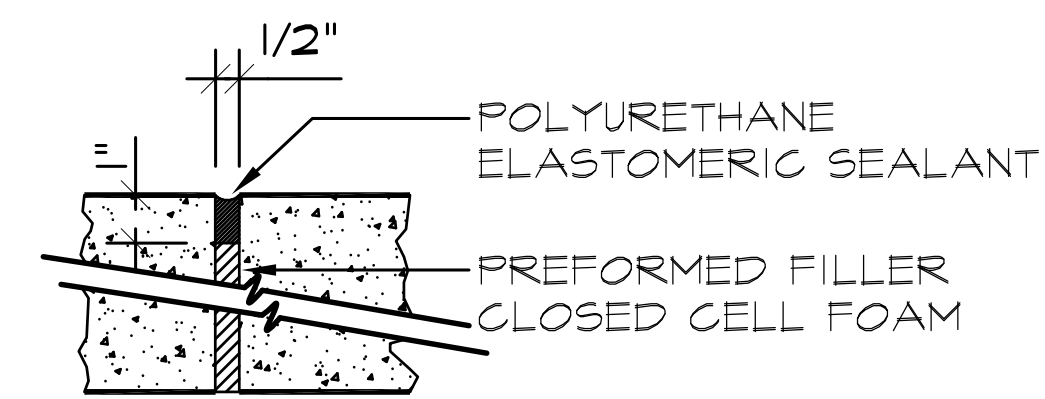
MAHONING ROAD NE, S.R. 153  
 ECONOMIC DEVELOPMENT PROJECT

REVISIONS	DATE	BY

CALCULATED: PTA  
 CHECKED: MJS

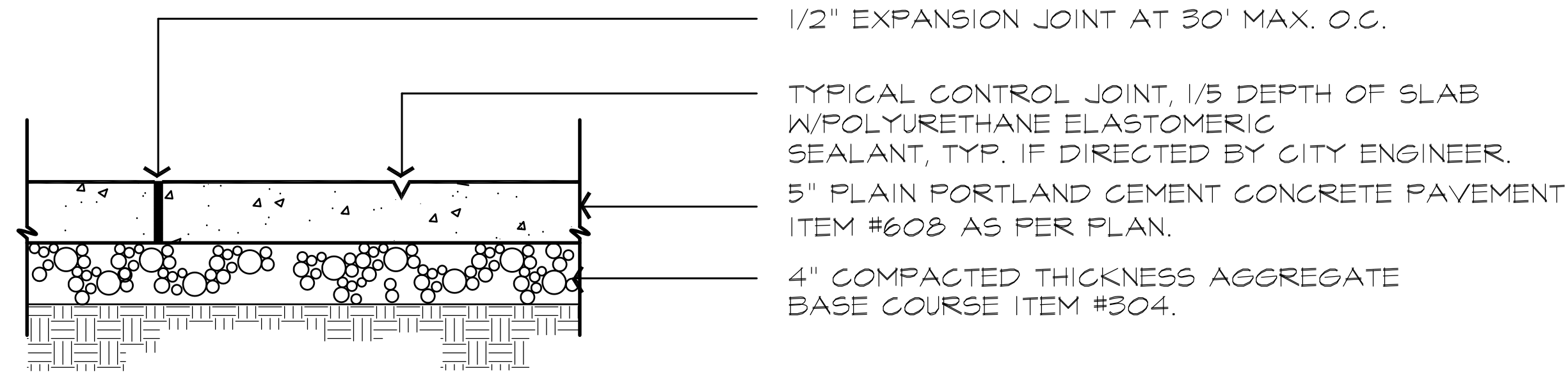
SERVICE REVISION DETAILS

SCALE: AS SHOWN



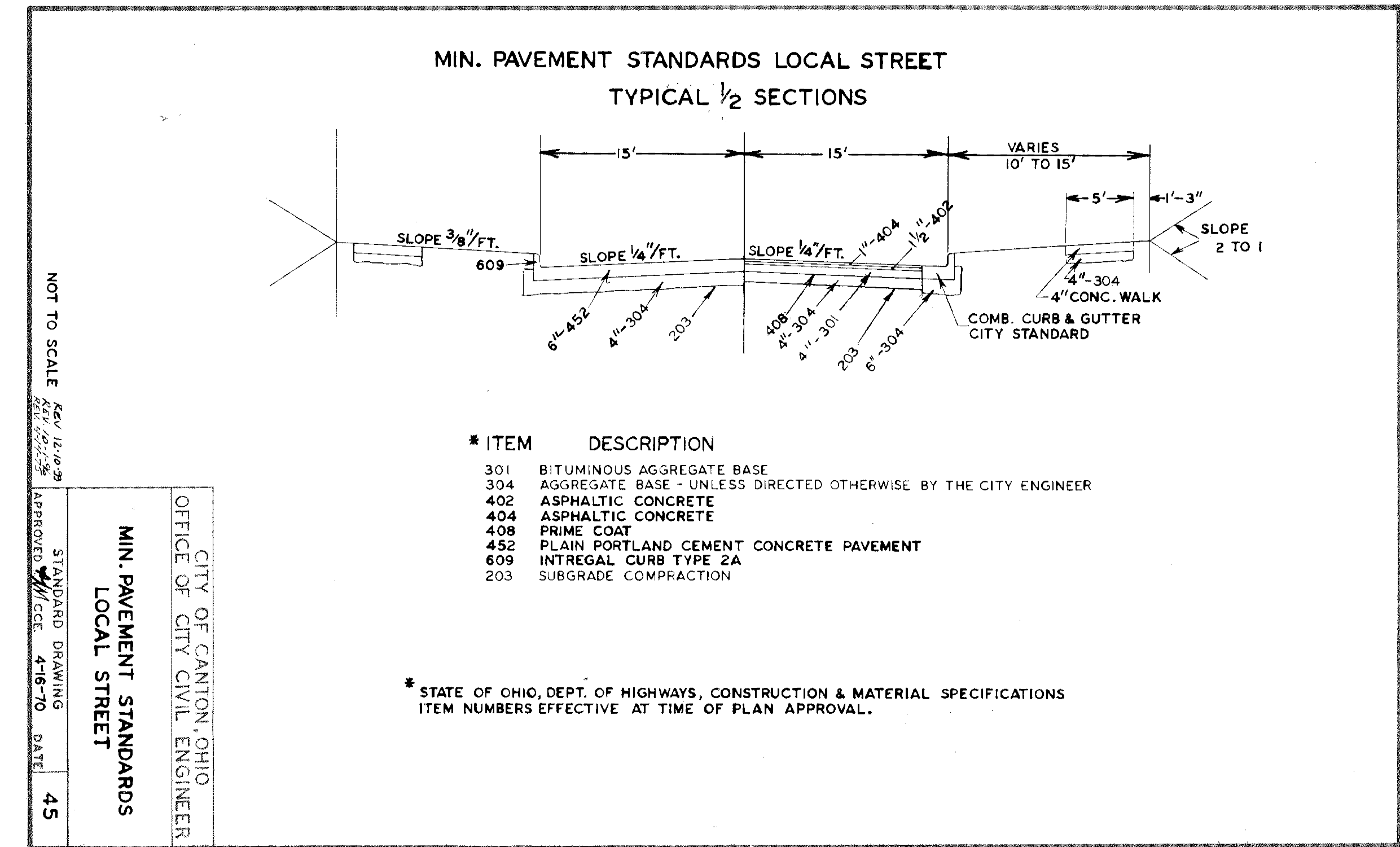
EXPANSION JOINT DETAIL  
NOT TO SCALE

- NOTES:
- EXPANSION JOINTS TO BE 30' MAX. O.C.
  - CONTROL JOINTS TO BE @ 4' O.C. OR AS SHOWN ON PLAN.
  - PROVIDE LIGHT BROOM FINISH ON ALL CONCRETE SURFACES AFTER JOINT & EDGE TOOLING. PROVIDE 1/4" RADIUS ON ALL SLAB EDGES.
  - SAWCUT CONTRACTION JOINTS MAY BE USED IF APPROVED BY THE CITY ENGINEER.



CONCRETE WALK PAVEMENT DETAIL

NOT TO SCALE



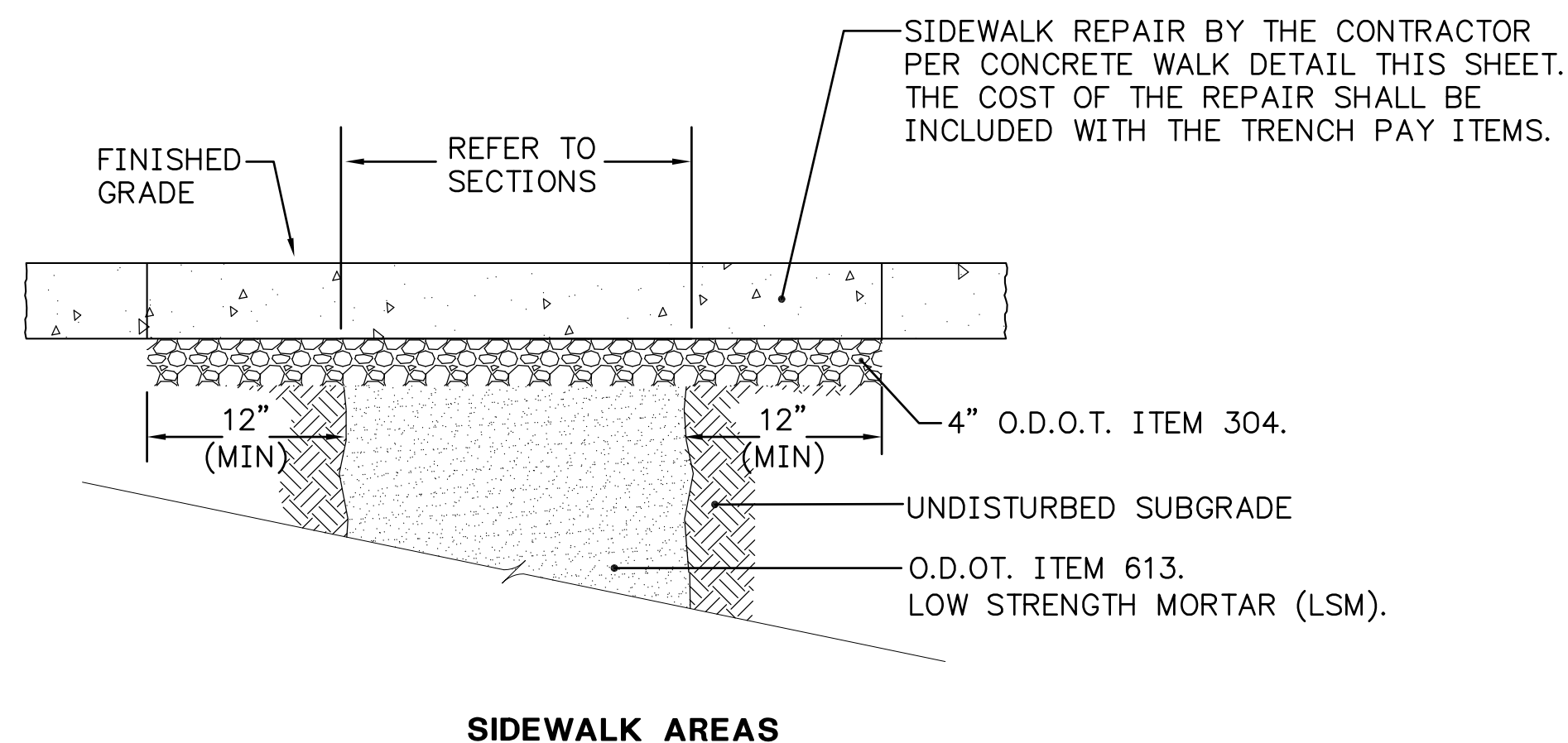
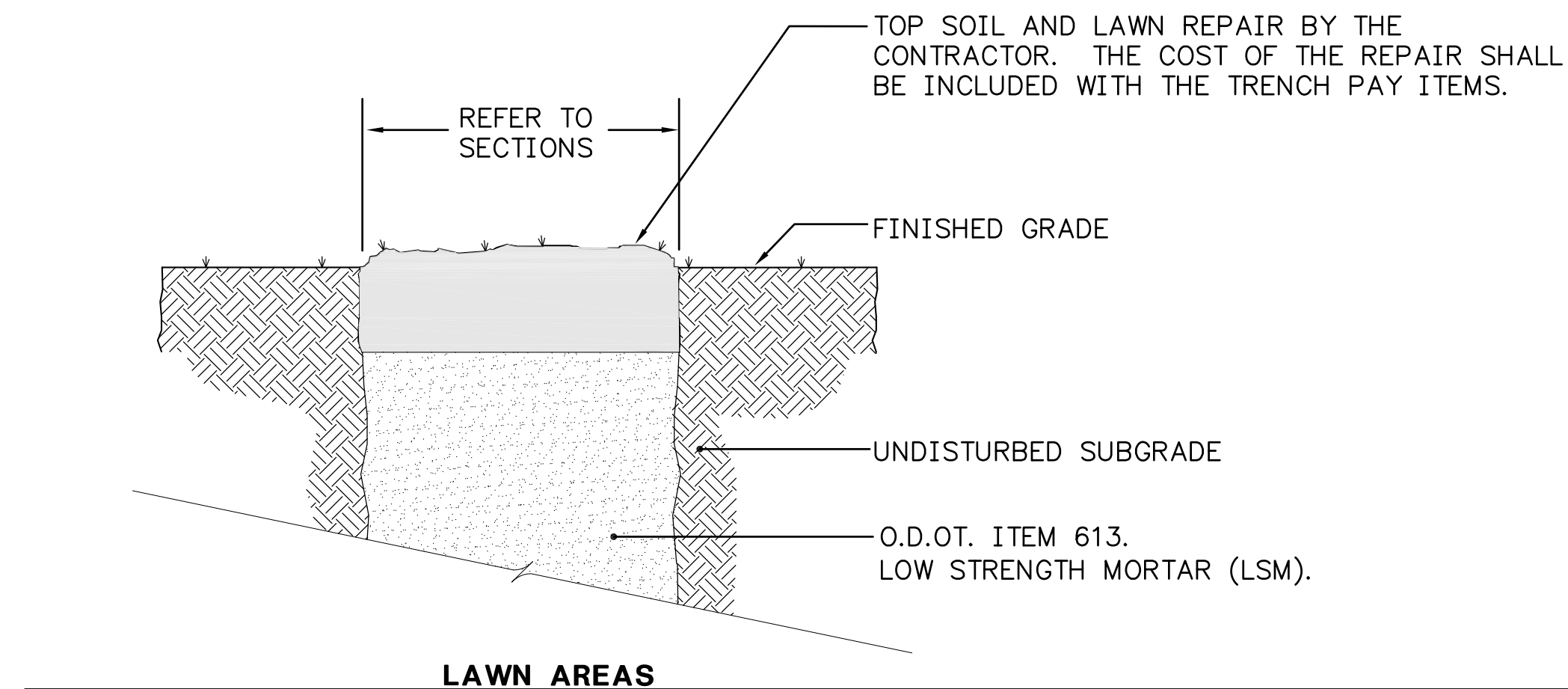
NOT TO SCALE  
REV. 12/02  
APPROVED BY DATE 4-16-70 DATE 45  
STANDARD DRAWING  
MIN. PAVEMENT STANDARDS  
LOCAL STREET  
CITY OF CANTON, OHIO  
OFFICE OF CITY CIVIL ENGINEER

* ITEM	DESCRIPTION
301	BITUMINOUS AGGREGATE BASE
304	AGGREGATE BASE - UNLESS DIRECTED OTHERWISE BY THE CITY ENGINEER
402	ASPHALTIC CONCRETE
404	ASPHALTIC CONCRETE
408	PRIME COAT
452	PLAIN PORTLAND CEMENT CONCRETE PAVEMENT
609	INTRTEGRAL CURB TYPE 2A
203	SUBGRADE COMPACTION

\* STATE OF OHIO, DEPT. OF HIGHWAYS, CONSTRUCTION & MATERIAL SPECIFICATIONS  
ITEM NUMBERS EFFECTIVE AT TIME OF PLAN APPROVAL.

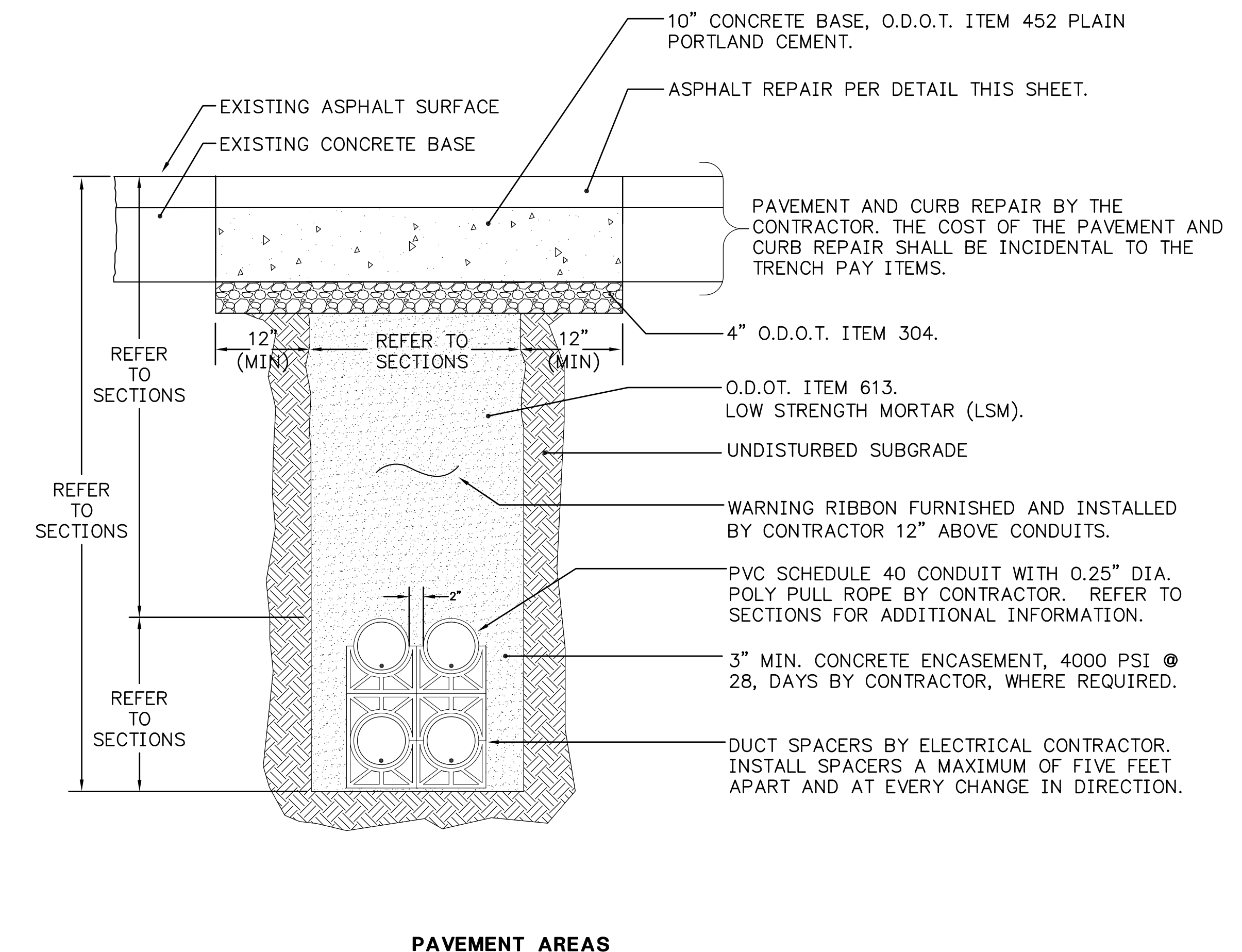
PAVEMENT REPAIR DETAIL

NOT TO SCALE



TRENCH AND BACKFILL DETAILS - TYPICAL

NOT TO SCALE



PAVEMENT AREAS

SCALE: AS SHOWN

CALCULATED: PTA  
CHECKED: MJS

TRENCH AND BACKFILL DETAILS

DATE BY

REVISIONS

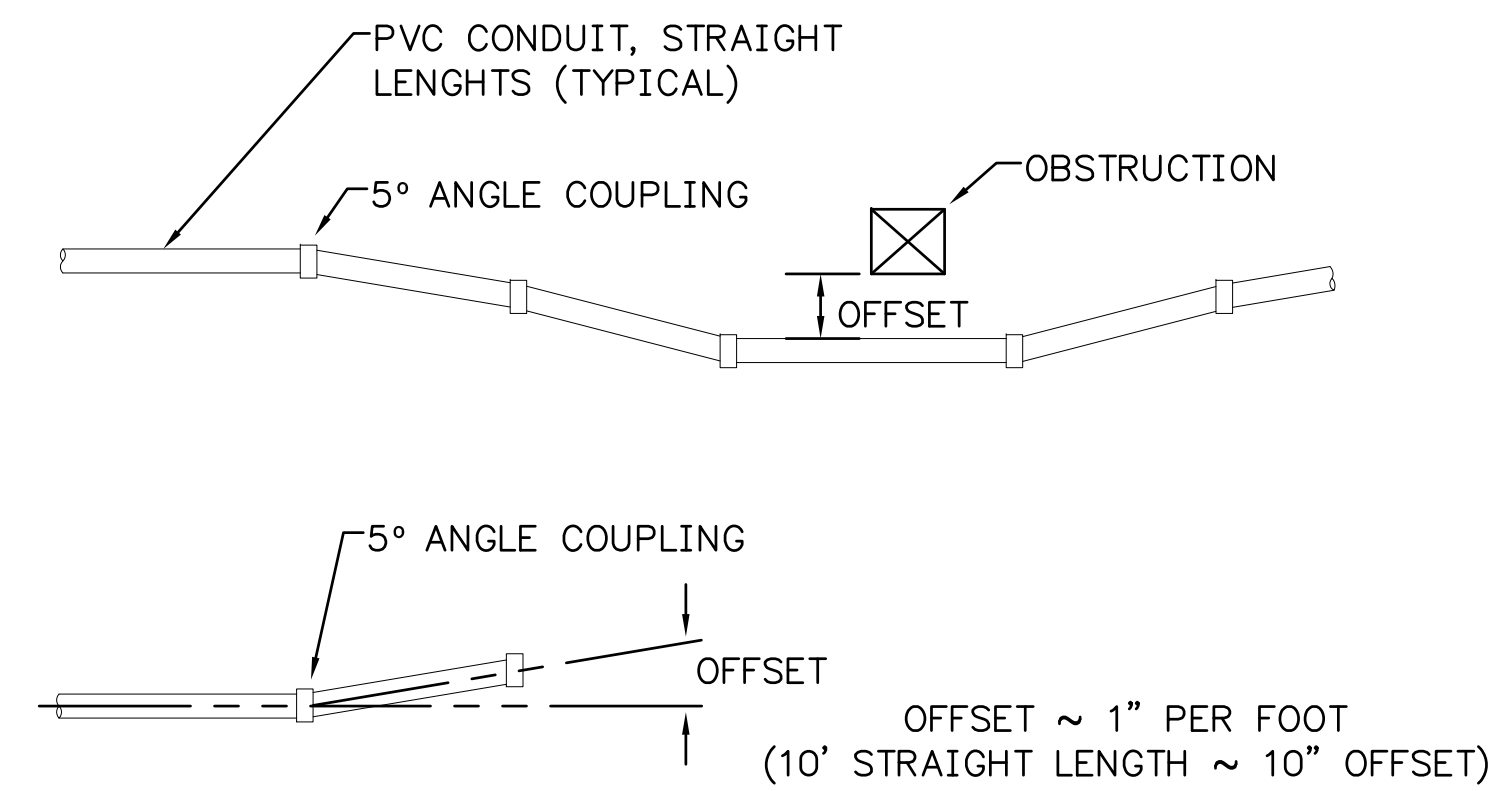
MAHONING ROAD NE. S.R. 153  
ECONOMIC DEVELOPMENT PROJECT

18  
23

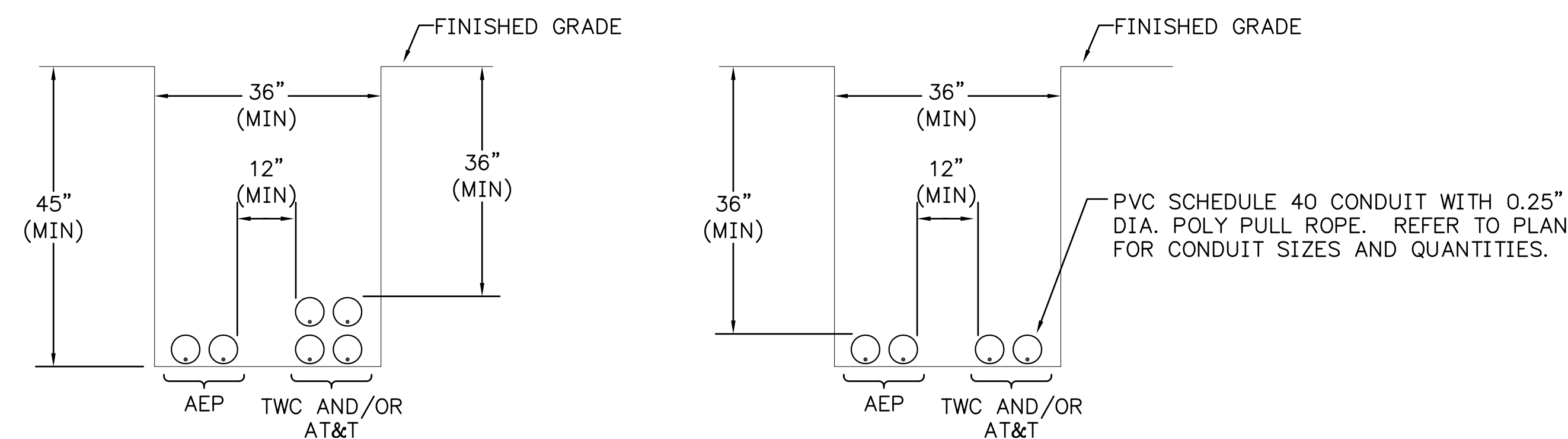
PETERS, TSCHANZ & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
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PHONE 330-686-3702 FAX -4185  
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## DRAWING NOTES:

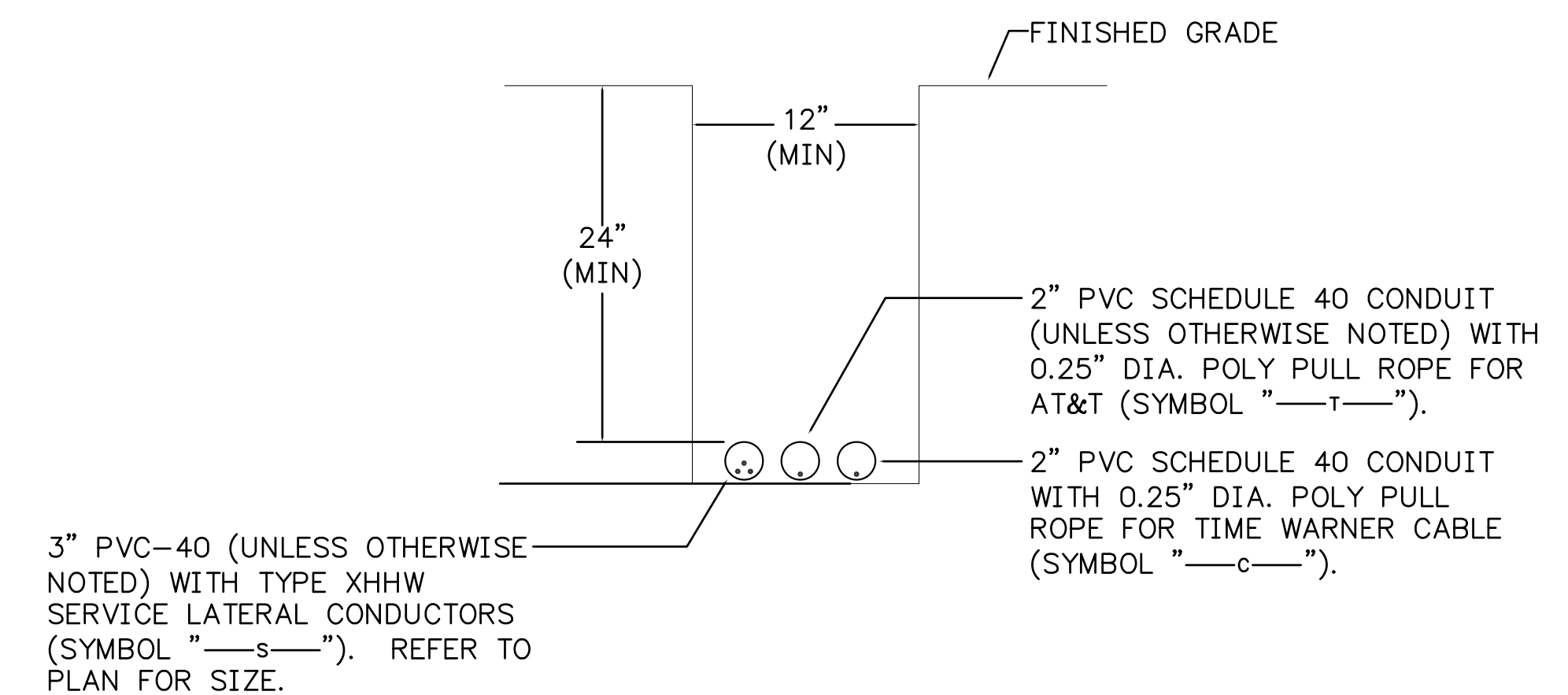
1. ALL CONDUITS SHALL BE PVC SCHEDULE 40, FURNISHED AND INSTALLED BY THE CONTRACTOR WITH A 0.25" DIA. POLYETHYLENE PULL ROPE.
2. IF IT IS DETERMINED THAT MAINTAINING COVER OVER THE CONDUIT SYSTEM IS NOT POSSIBLE DUE TO CONFLICTS WITH OTHER UTILITIES, THE AMOUNT OF COVER MAY BE REDUCED AS FOLLOWS:
  - A. TIME WARNER CABLE AND AT&T  
COVER MAY BE REDUCED TO 24" IN ISOLATED AREAS WITH PRIOR APPROVAL OF THE CITY OF CANTON DIVISION OF ENGINEERING AND CONSTRUCTION, AND THE AFFECTED UTILITY. SUPPLEMENTAL PROTECTION IN THE FORM OF CONCRETE OVER THE CONDUIT SYSTEM, IF REQUIRED, SHALL BE INCIDENTAL TO THE COST OF THE UNIT PRICE BID FOR THE CONDUIT PAY ITEM.
  - B. AMERICAN ELECTRIC POWER (AEP)  
COVER SHOWN ON THE TRENCH SECTIONS ARE MINIMUM VALUES. INCREASE BURIAL DEPTH WHERE REQUIRED IN ISOLATED AREAS TO AVOID CONFLICTS WITH EXISTING UNDERGROUND UTILITIES. ALL COSTS ASSOCIATED WITH INCREASING COVER SHALL BE INCIDENTAL TO THE COST OF THE UNIT PRICE BID FOR THE CONDUIT SYSTEM PAY ITEM.



**CONDUIT OFFSET DETAIL** NOT TO SCALE  
(ITEM IS INCIDENTAL WITH THE CONDUIT PAY ITEMS)



**JOINT-USE TRENCH - TYPICAL** NOT TO SCALE



**SERVICE LATERAL TRENCH - TYPICAL** NOT TO SCALE

CALCULATED: PTA  
CHECKED: MJJ  
SCALE: AS SHOWN

## TRENCH SECTIONS

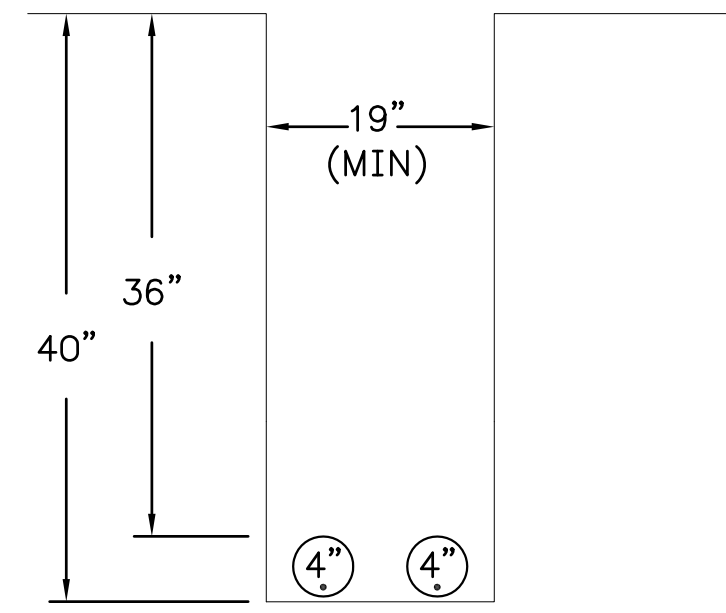
REVISIONS	DATE	BY

PETERS, TSCHANZ & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
275 SPRINGSIDE DR., SUITE 300  
CANTON, OHIO 44705  
PHONE 330-686-3702 FAX -4185  
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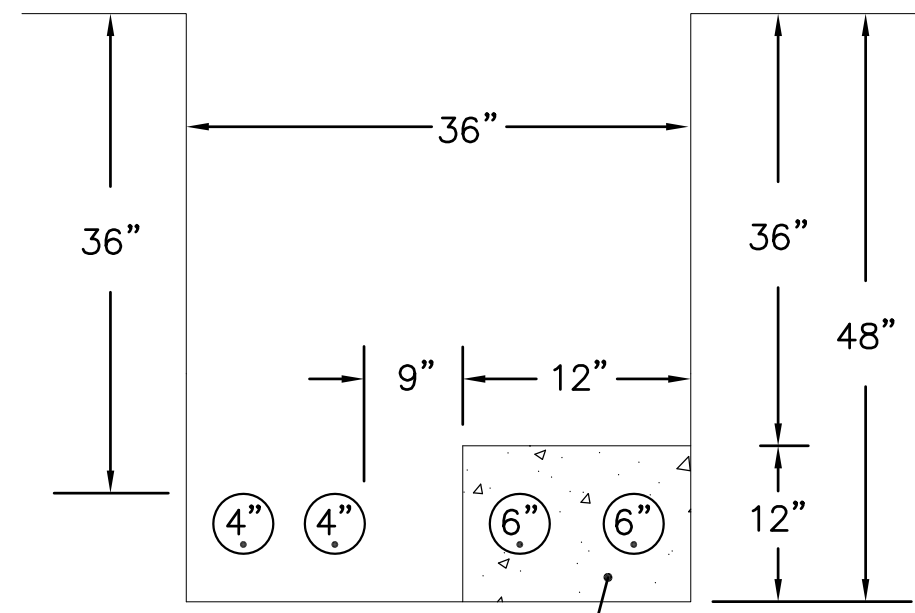
MAHONING ROAD NE. S.R. 153  
ECONOMIC DEVELOPMENT PROJECT

**DRAWING NOTES:**

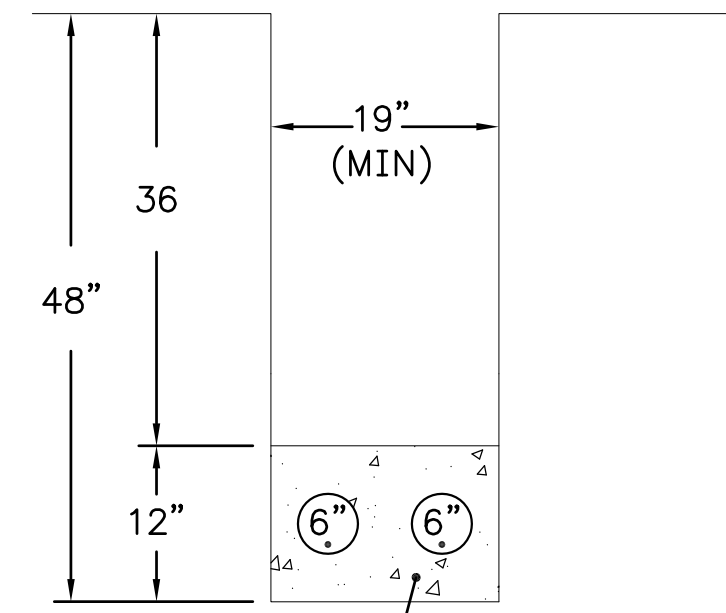
1. ALL CONDUITS SHALL BE PVC SCHEDULE 40, FURNISHED AND INSTALLED BY THE CONTRACTOR WITH A 0.25" DIA. POLYETHYLENE PULL ROPE.



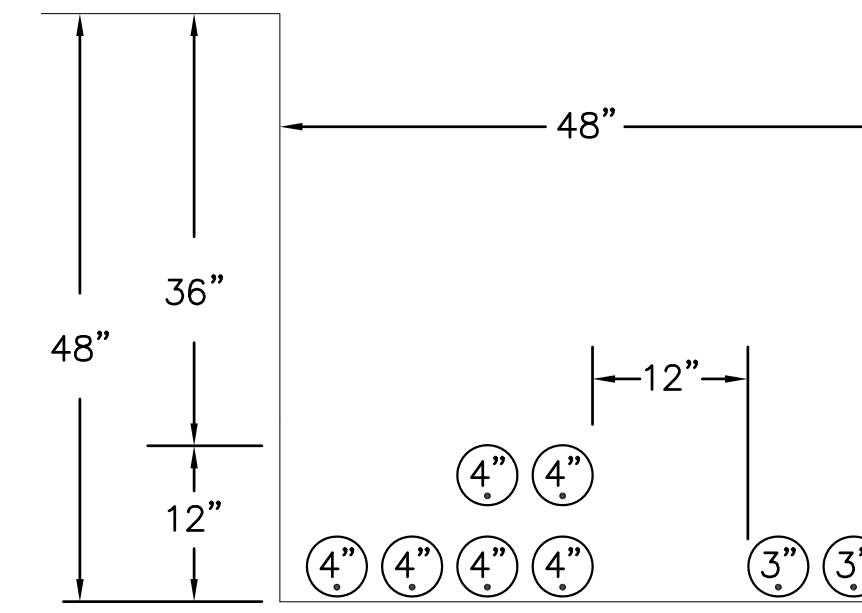
**SECTION A-A**



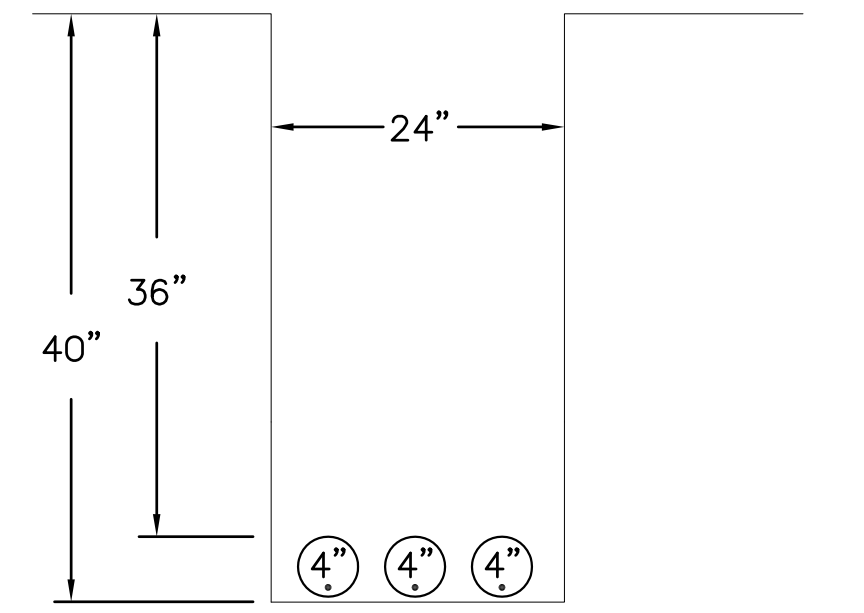
**SECTION B-B**



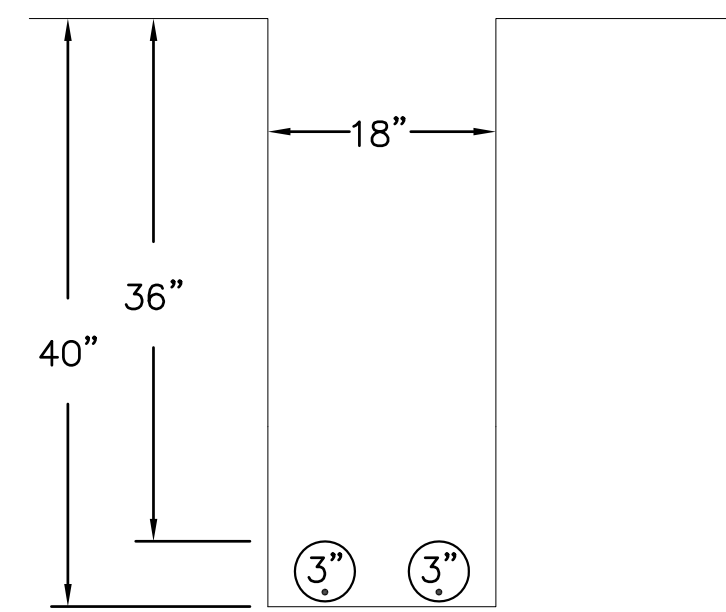
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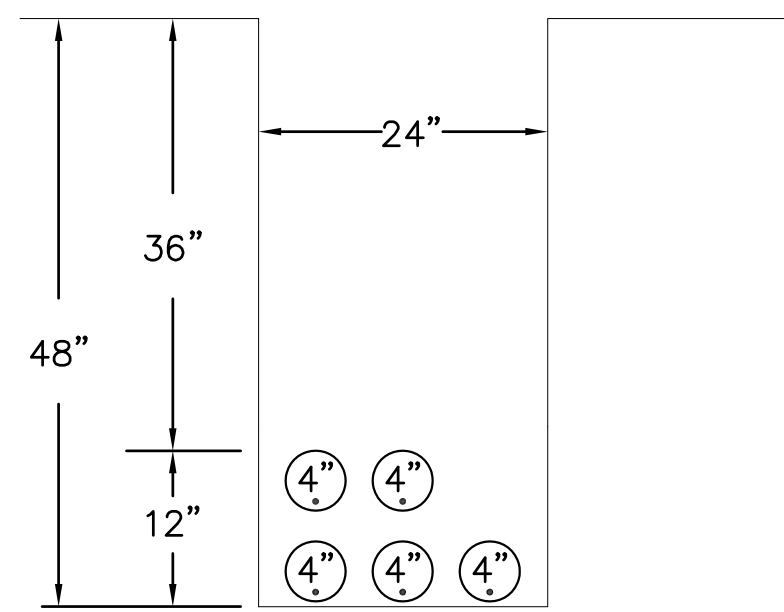
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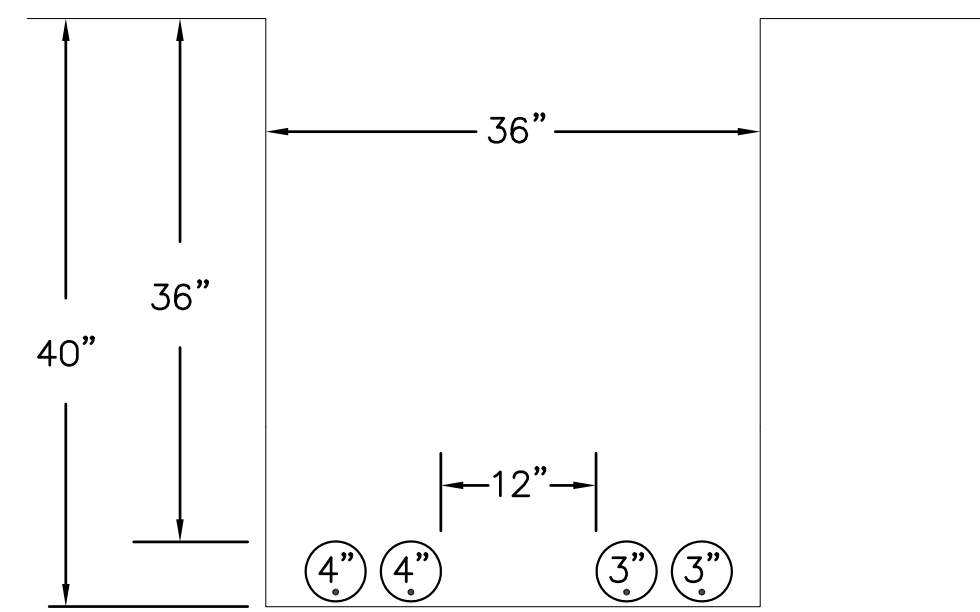
**SECTION E-E**



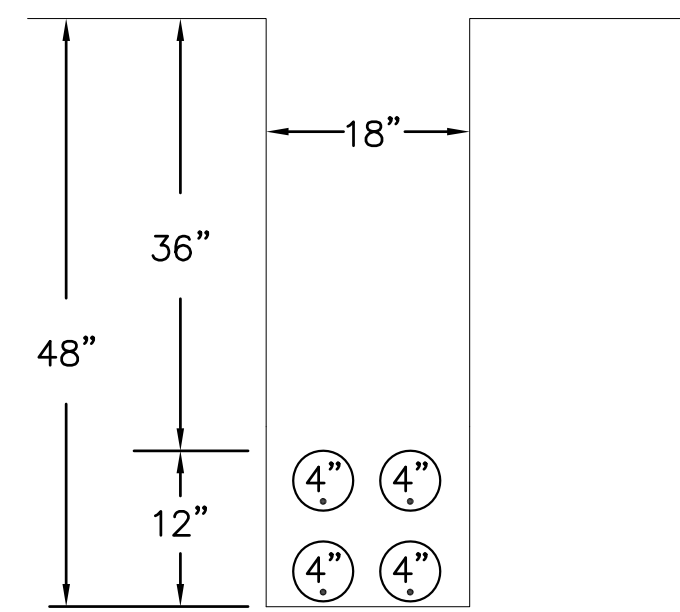
**SECTION F-F**



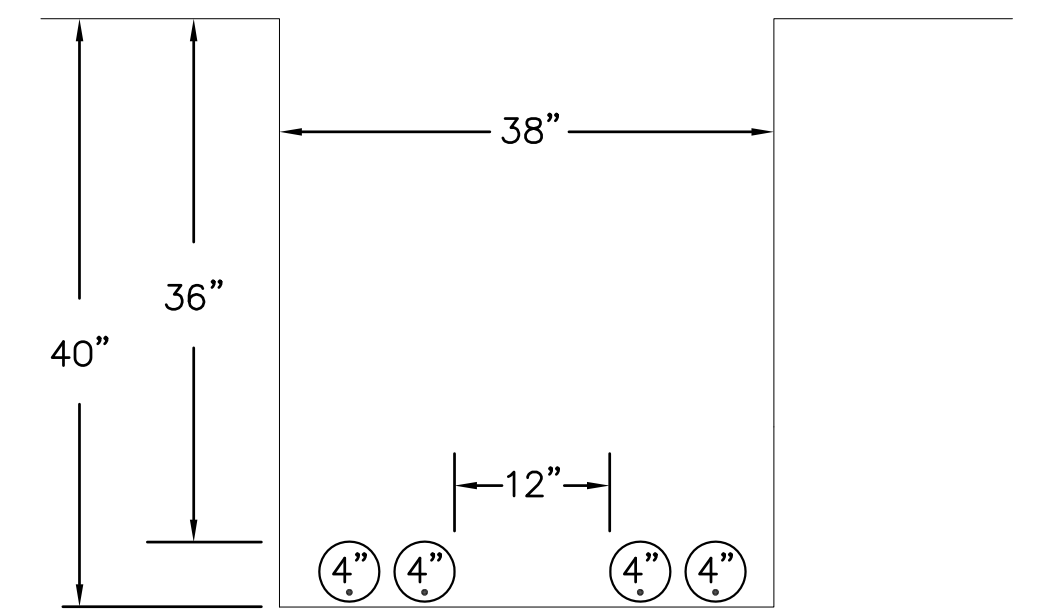
**SECTION G-G**



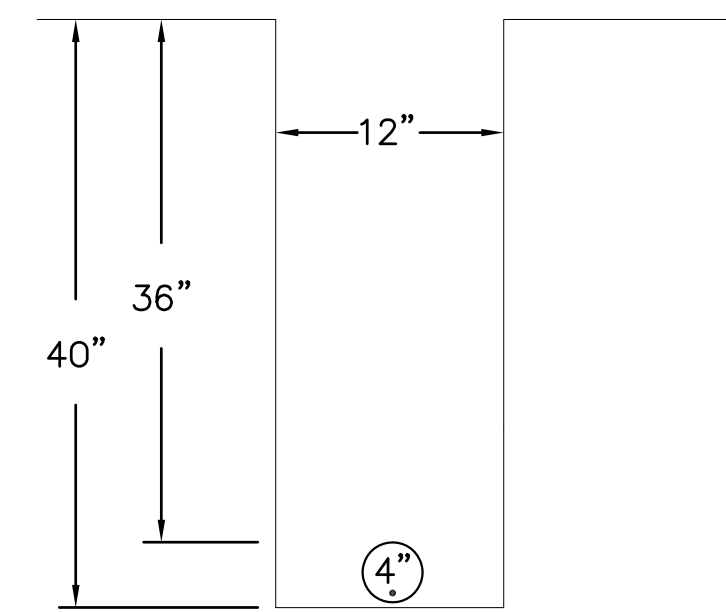
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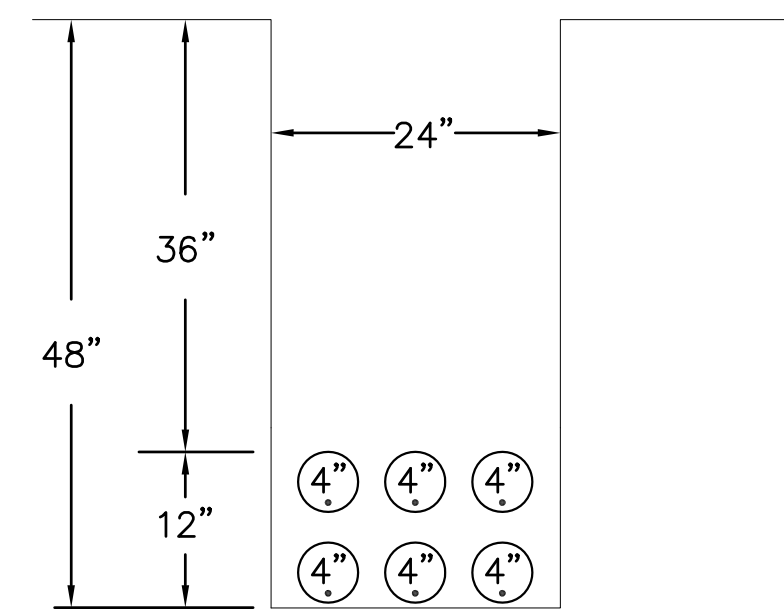
**SECTION I-I**



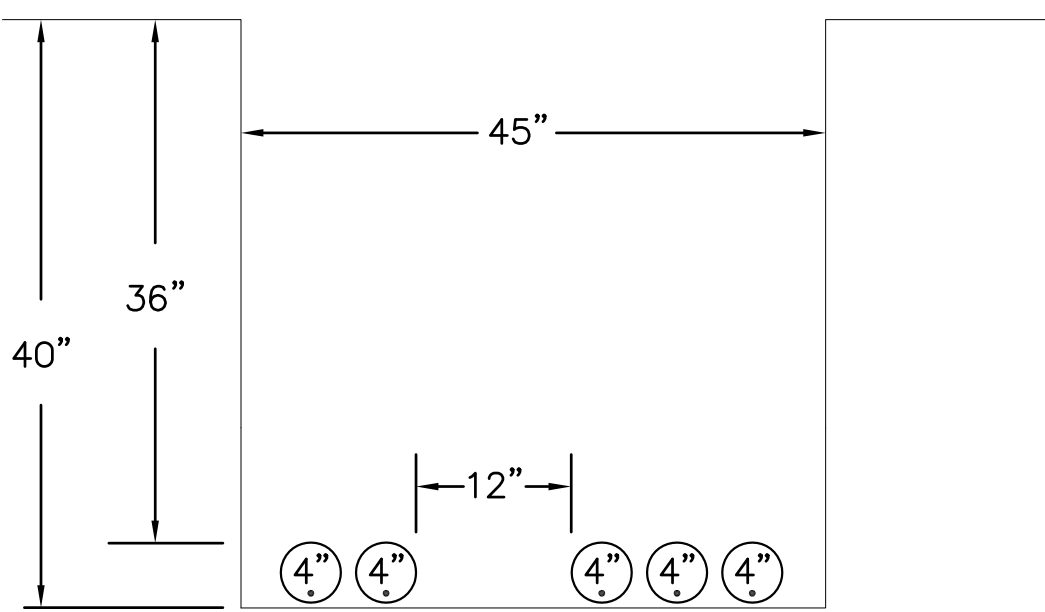
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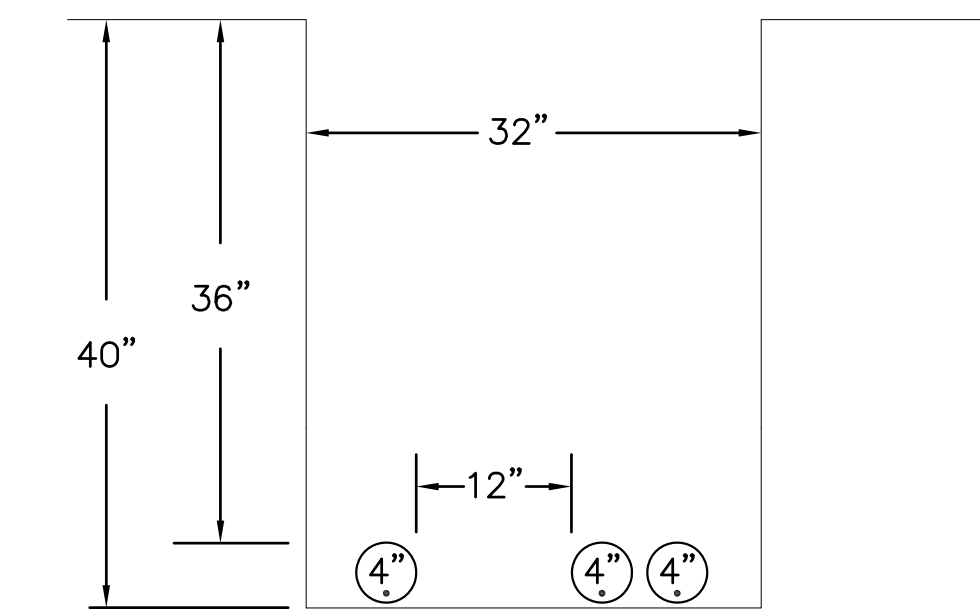
**SECTION K-K**



**SECTION L-L**



**SECTION M-M**



**SECTION N-N**

CALCULATED: PTA  
CHECKED: MJJ  
SCALE: AS SHOWN

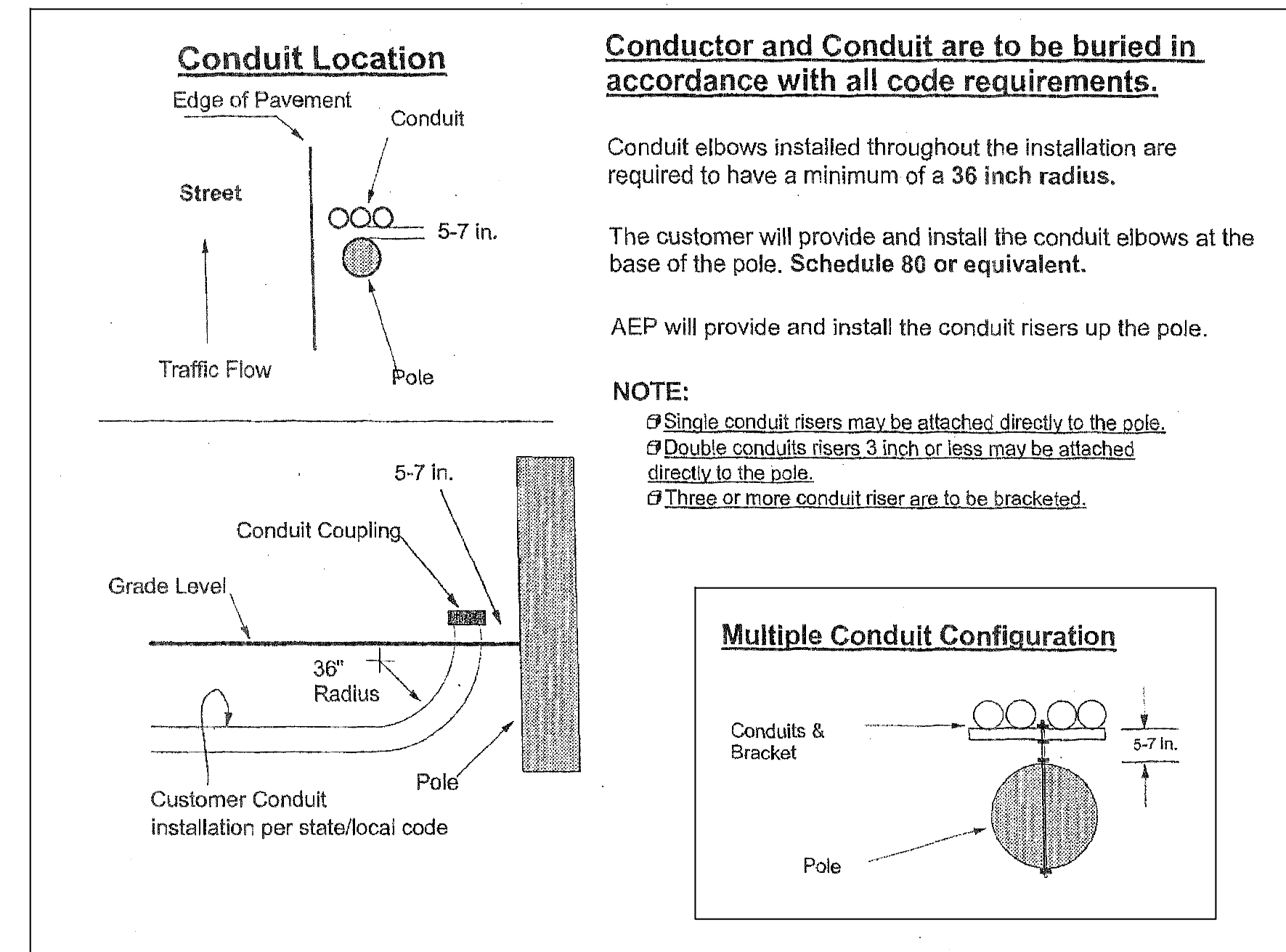
**TRENCH SECTIONS**

REVISIONS	DATE	BY

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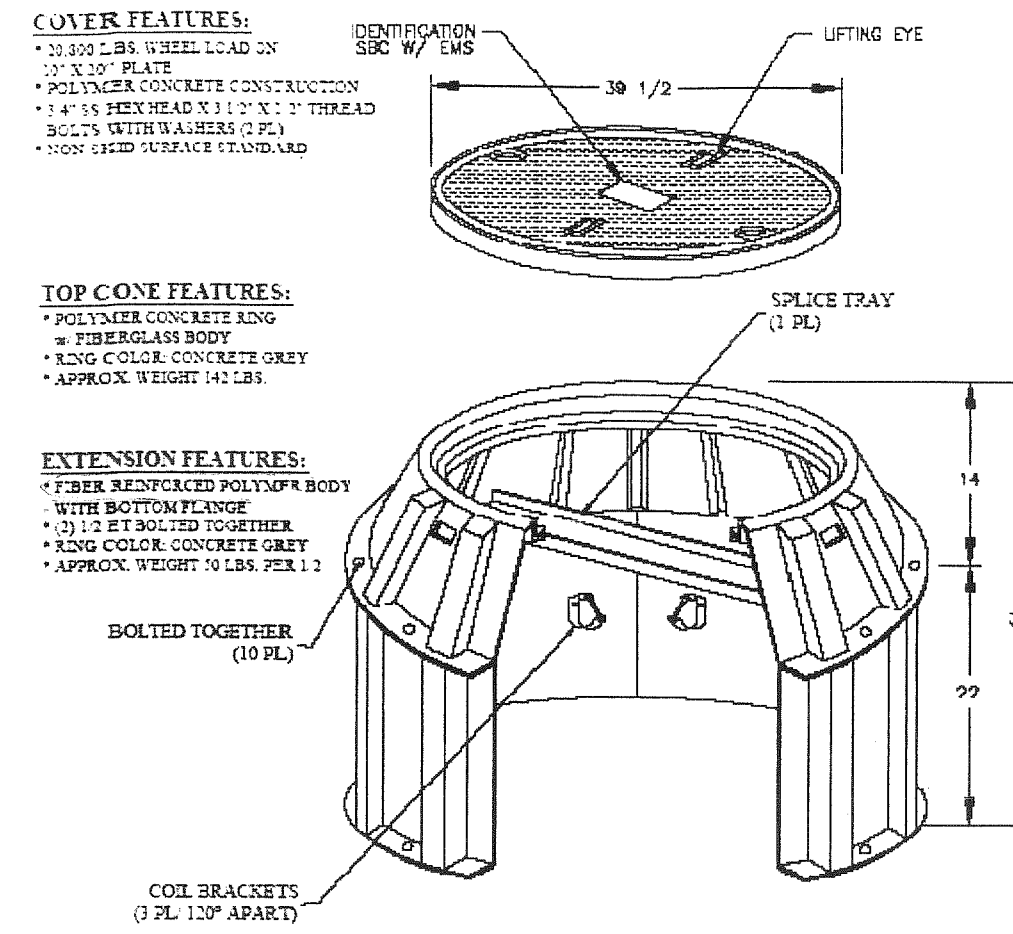
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ECONOMIC DEVELOPMENT PROJECT**

### AEP Pole & Conduit Configuration



STUB-UP, RISER POLE - TYPICAL

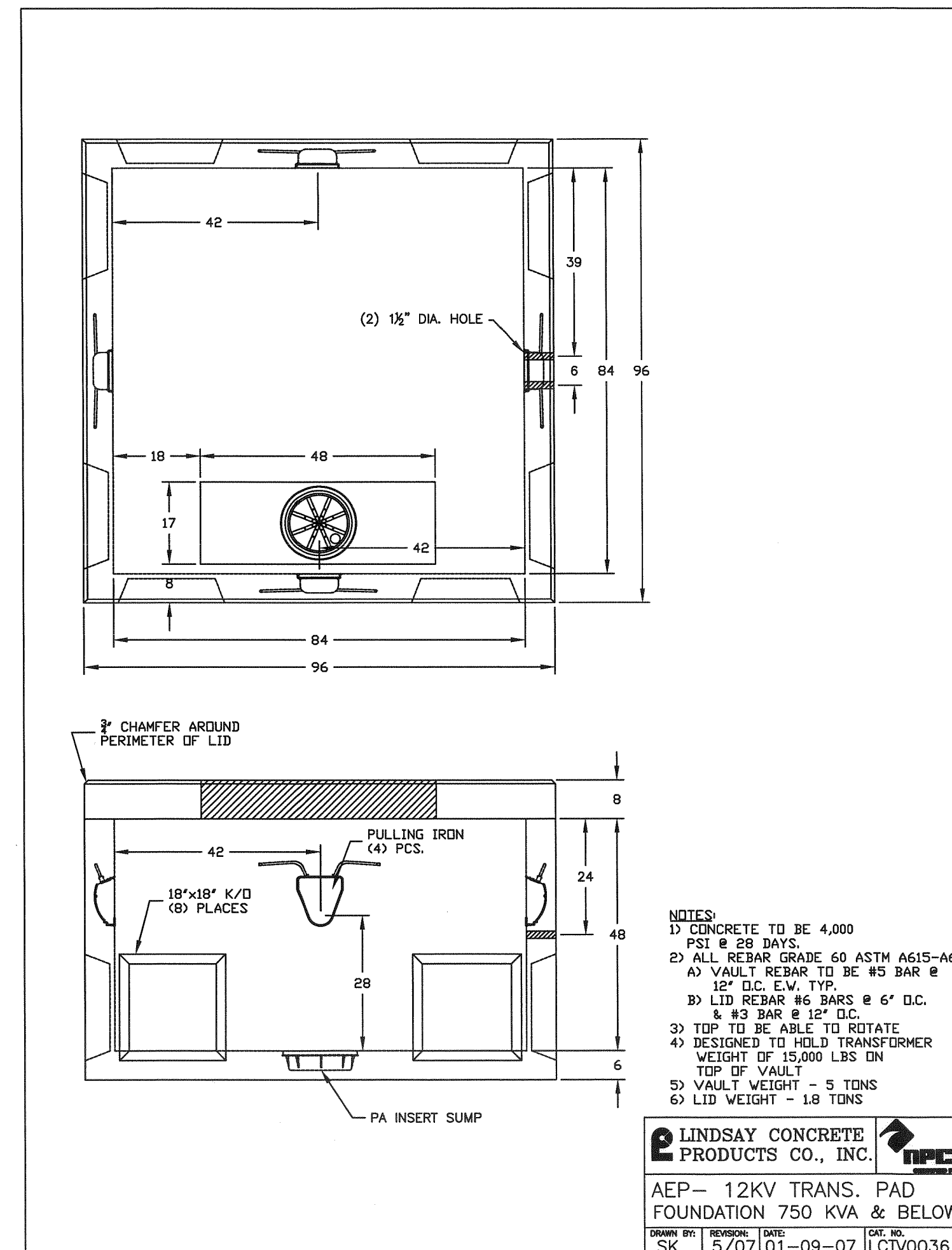
NOT TO SCALE



- NOTES:**
- FIBERGLASS MANHOLE SHALL BE FURNISHED BY AT&T AND INSTALLED BY CONTRACTOR.
  - INSTALL MANHOLE ON 6" OF COMPACTED GRAVEL BASE.
  - MANHOLE COVER SHALL BE FLUSH WITH FINISHED GRADE.

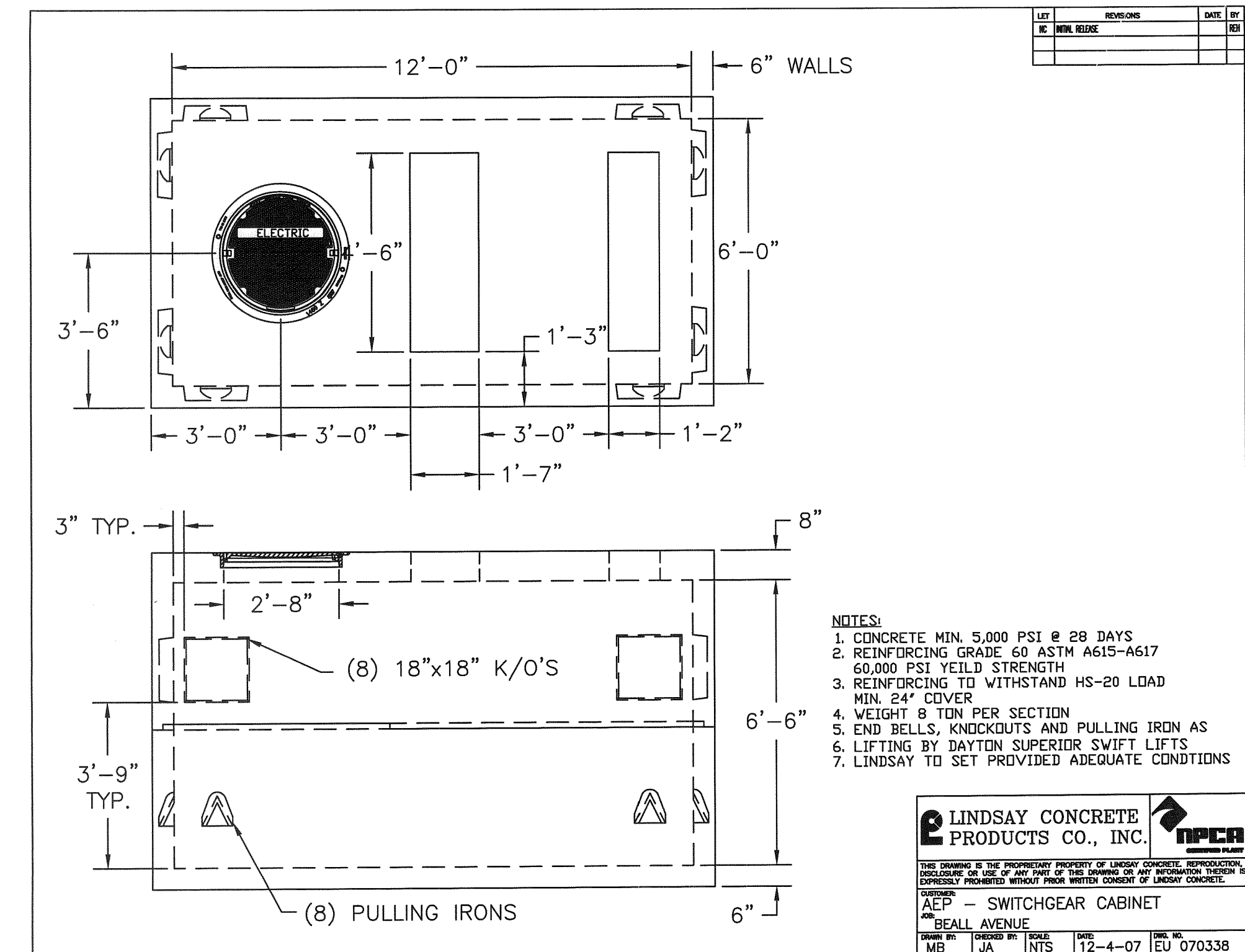
MANHOLE, REINFORCED POLYMER CONCRETE - INSTALLATION ONLY (SYMBOL "M")

NOT TO SCALE



BOXPAD, PRECAST CONCRETE, THREE-PHASE TRANSFORMER

NOT TO SCALE



VAULT, PRECAST CONCRETE, SWITCHGEAR, 12'L x 6'W x 6'-6"H

NOT TO SCALE

CALCULATED: PTA, CHECKED: MJS, SCALE: AS SHOWN

REVISIONS

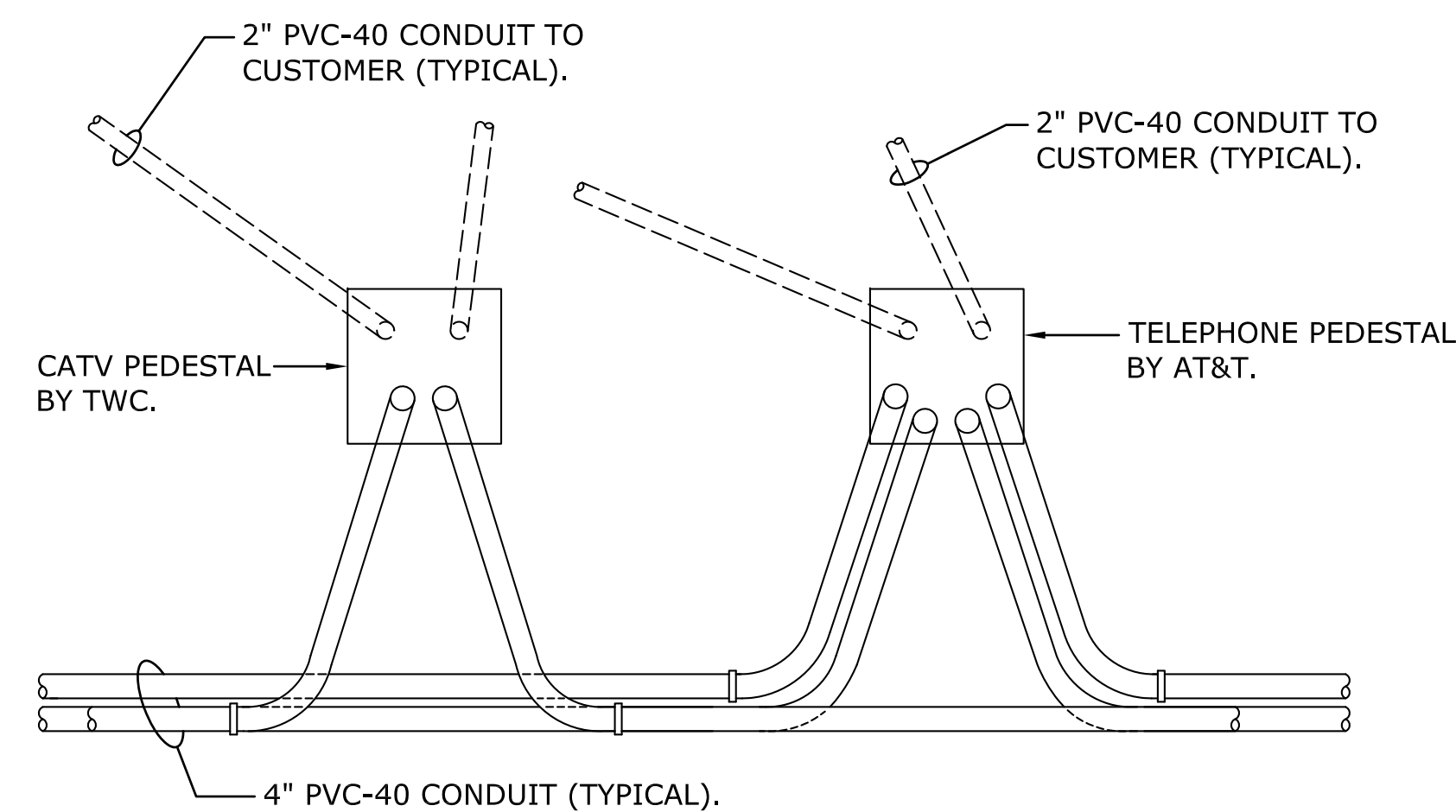
DATE BY

DETAILS

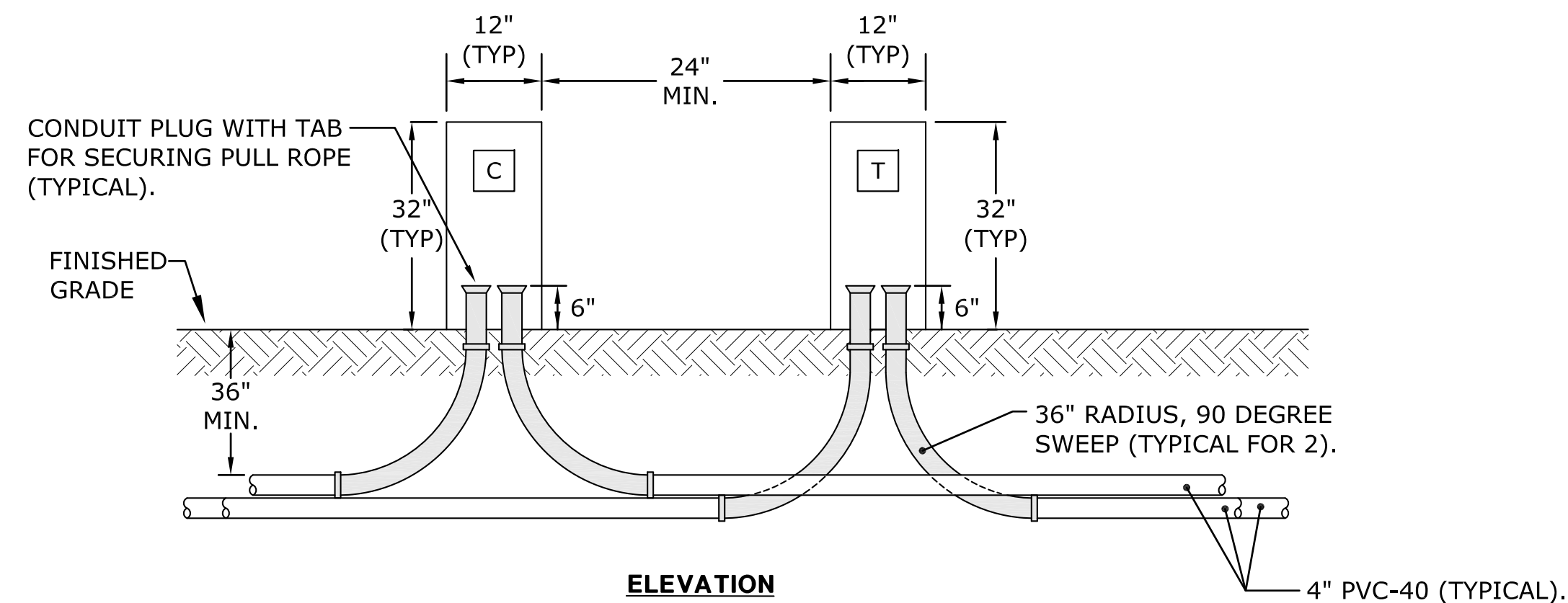
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23

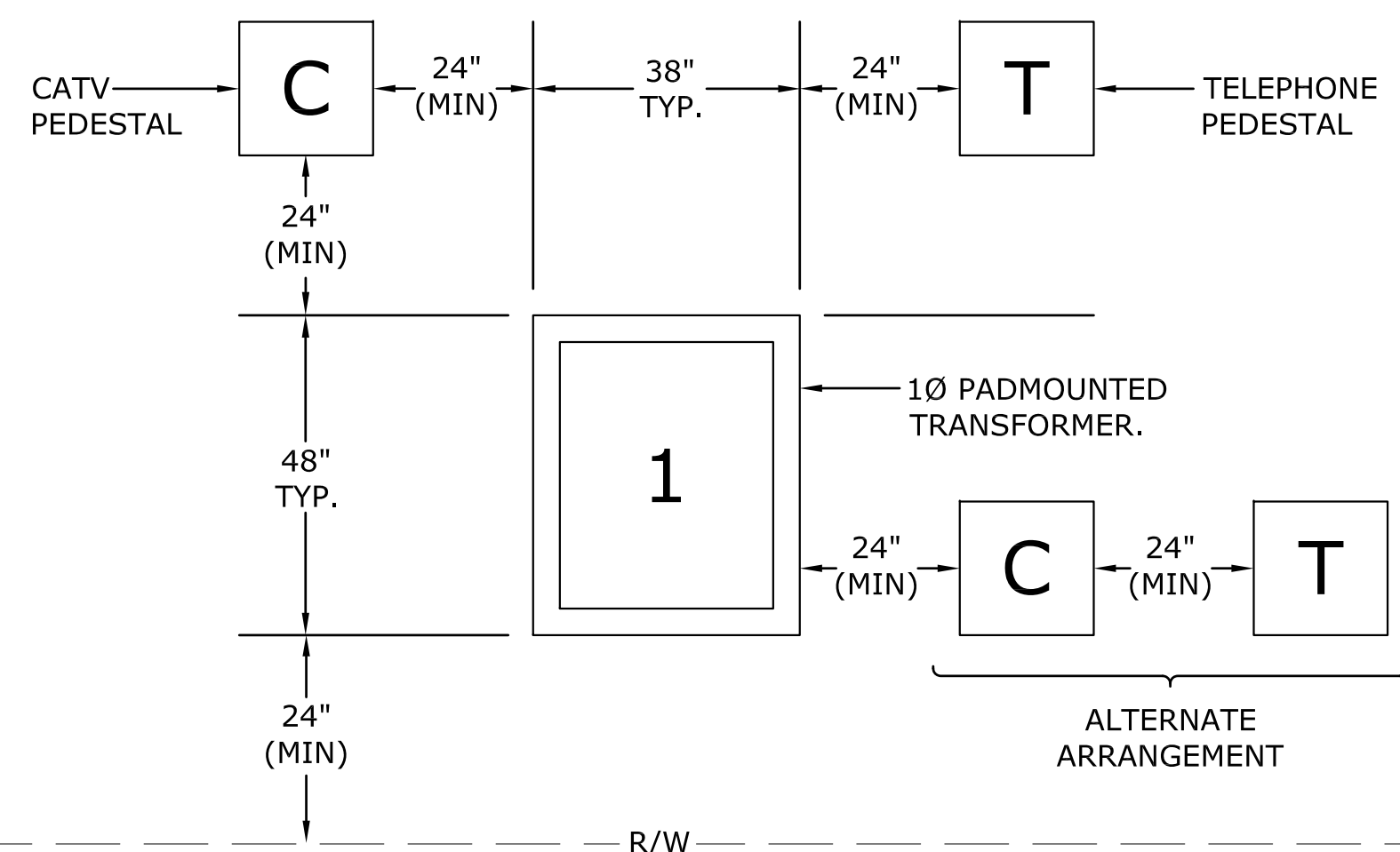


PLAN

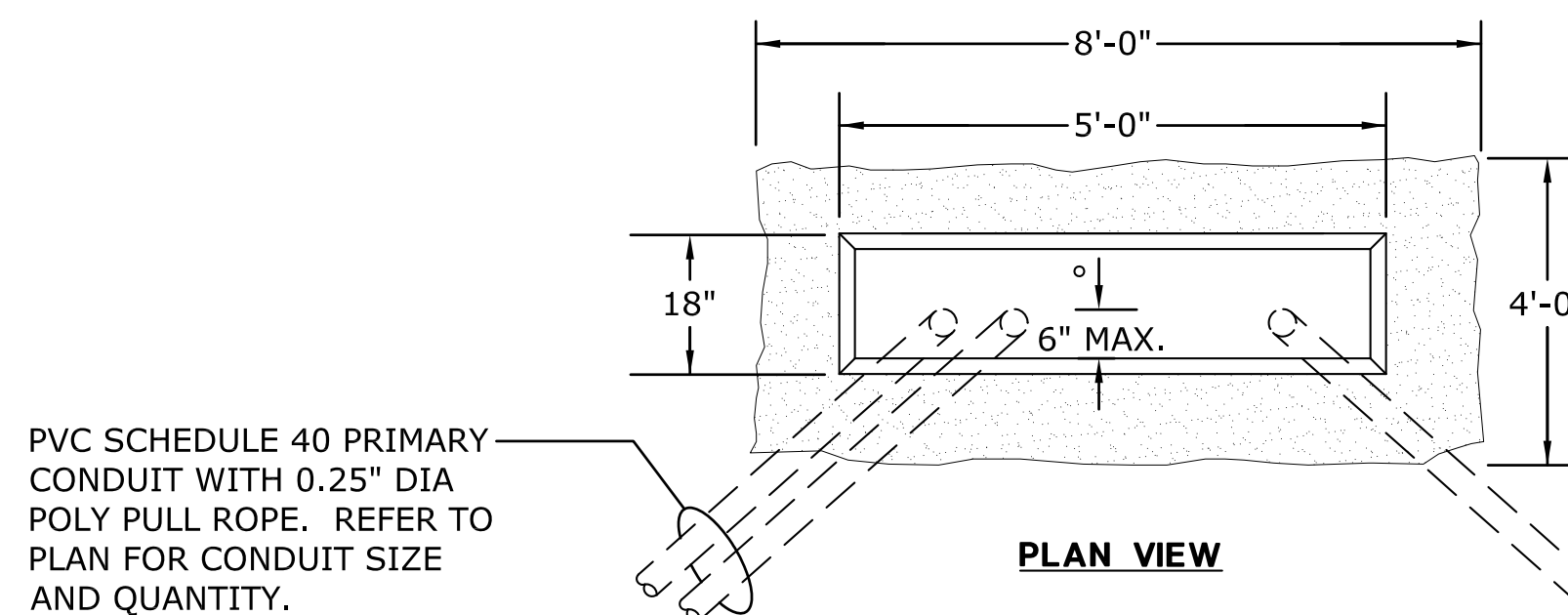


ELEVATION

**STUB UP, PEDESTAL, CATV AND TELEPHONE** NOT TO SCALE  
(SYMBOLS "C" AND "T"; SIMILAR FOR "E")

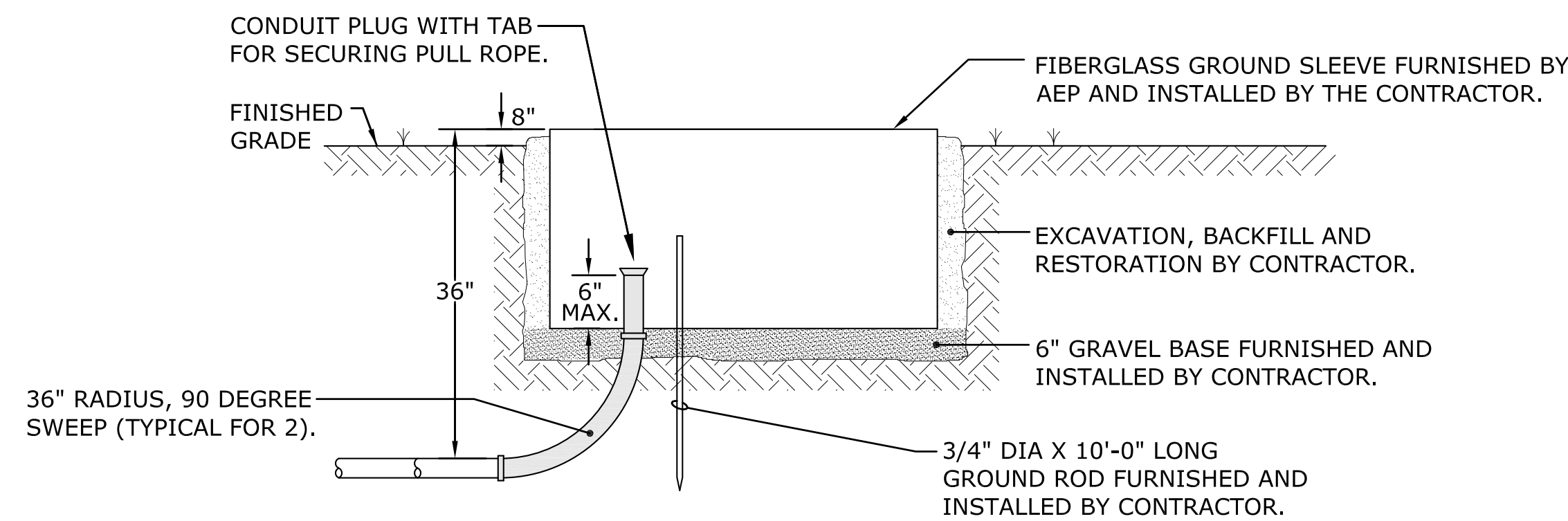


**UTILITY EQUIPMENT CLEARANCE DETAIL - TYPICAL** NOT TO SCALE



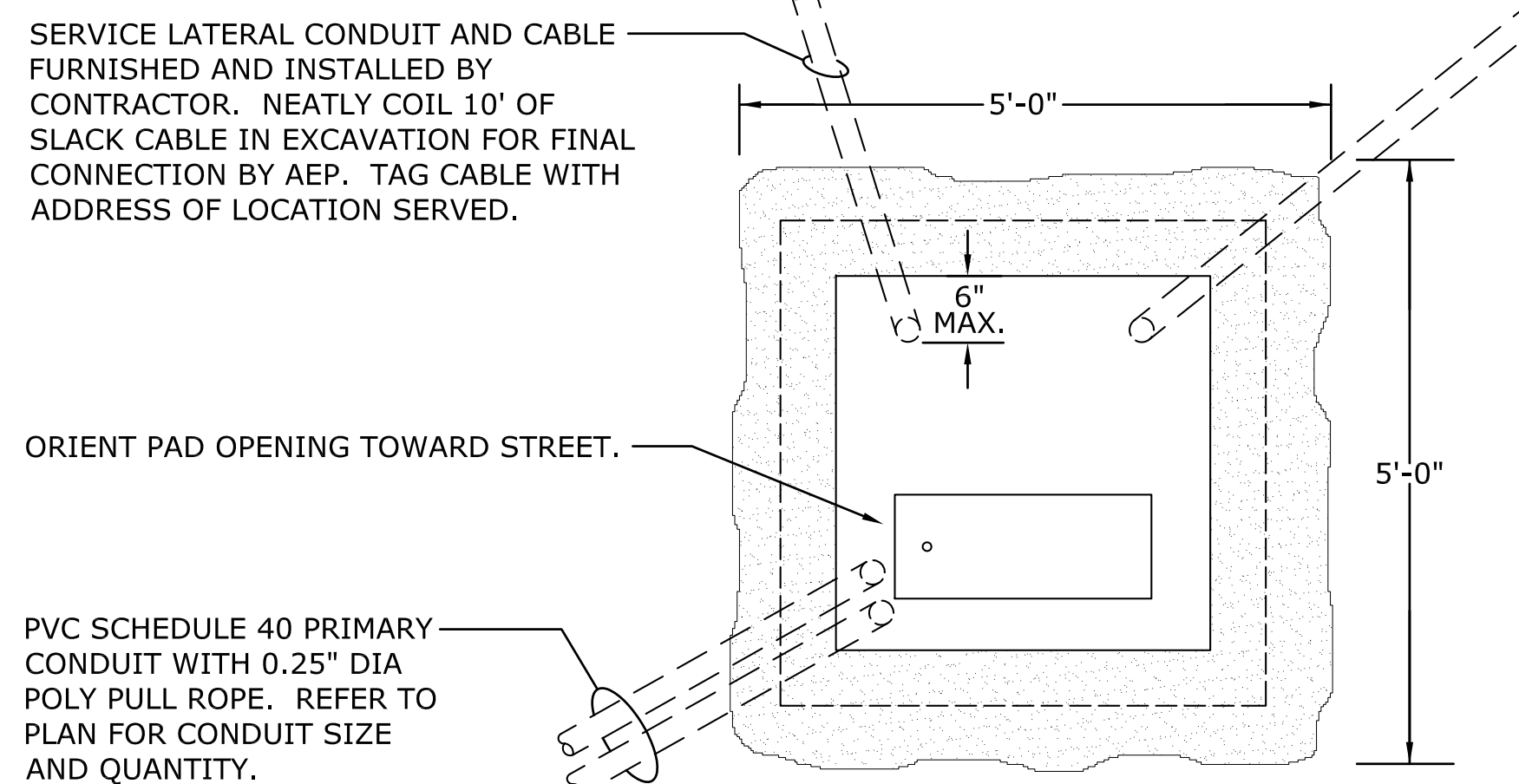
PLAN VIEW

PVC SCHEDULE 40 PRIMARY CONDUIT WITH 0.25" DIA POLY PULL ROPE. REFER TO PLAN FOR CONDUIT SIZE AND QUANTITY.



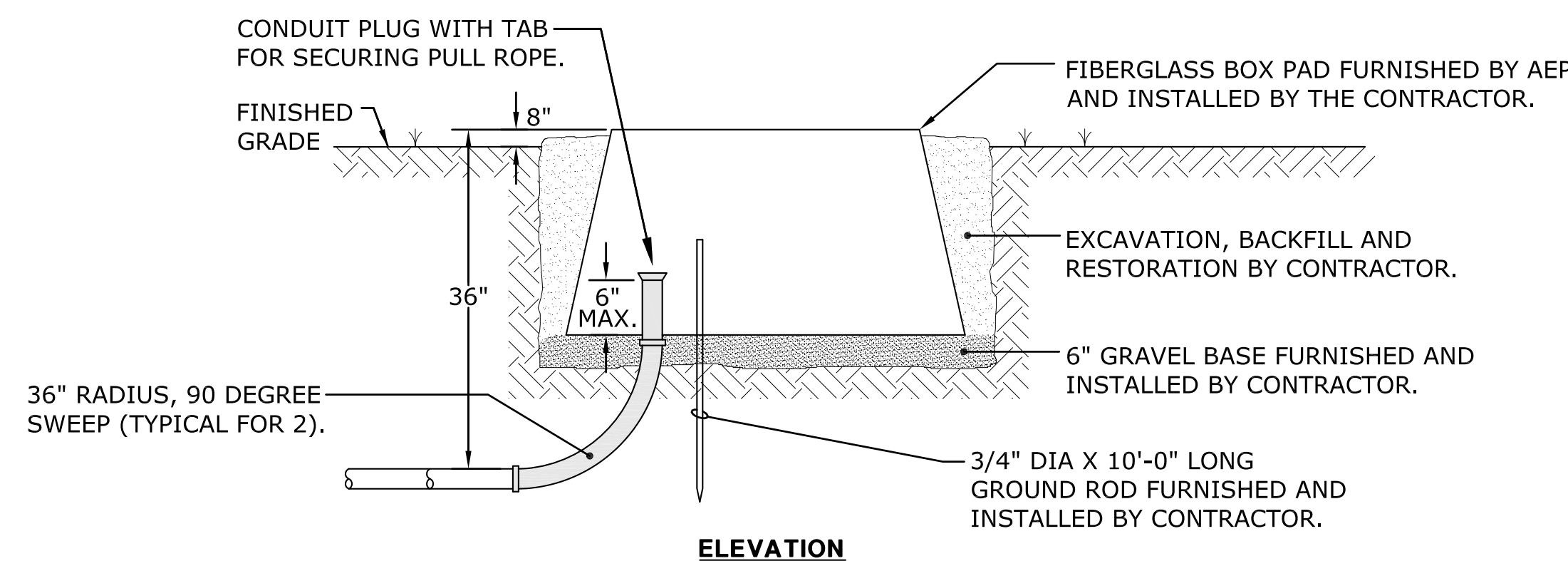
ELEVATION

**GROUND SLEEVE INSTALLATION, THREE-PHASE JUNCTION ENCLOSURE** NOT TO SCALE  
(SYMBOL "E")



PLAN VIEW

PVC SCHEDULE 40 PRIMARY CONDUIT WITH 0.25" DIA POLY PULL ROPE. REFER TO PLAN FOR CONDUIT SIZE AND QUANTITY.



ELEVATION

**FIBERGLASS BOXPAD INSTALLATION, SINGLE-PHASE TRANSFORMER** NOT TO SCALE  
(SYMBOL "F")

**NOTE:**  
1. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LIMITS OF THE UTILITY EASEMENT AND ENSURING THAT ALL CONDUITS AND STUB UPS ARE LOCATED WITHIN SAID EASEMENT.

SCALE: AS SHOWN

CALCULATED: PTA  
CHECKED: MJS

DETAILS

REVISIONS

DATE BY

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ECONOMIC DEVELOPMENT PROJECT

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23

# SYMBOLS

- ⊗ EXISTING UTILITY POLE TO BE REMOVED BY OTHERS.
- ⊗ NEW UTILITY POLE TO BE FURNISHED AND INSTALLED BY OTHERS.
- ⊗ PVC SCHEDULE 80 CONDUIT STUB-UP FURNISHED AND INSTALLED BY THE CONTRACTOR AT EXISTING UTILITY POLE. INSTALL STUB-UP AT EXACT LOCATION DESIGNATED BY THE UTILITY.
- ⊗: PVC SCHEDULE 80 CONDUIT STUB-UP WITH STAND-OFF BRACKET FURNISHED AND INSTALLED BY THE CONTRACTOR ON EXISTING UTILITY POLE. INSTALL STUB-UPS AND STAND-OFF BRACKET AT EXACT LOCATION DESIGNATED BY THE UTILITY.
- : SIMILAR TO "⊗:" EXCEPT NEW UTILITY POLE TO BE FURNISHED AND INSTALLED BY OTHERS.
- ⊗] DUCT BANK STUB-UP FURNISHED AND INSTALLED BY THE CONTRACTOR AT EXISTING UTILITY POLE. INSTALL STUB-UP AT EXACT LOCATION DESIGNATED BY AMERICAN ELECTRIC POWER (AEP).
- ⚡ EXISTING FLOOD LIGHT TO BE REMOVED BY AEP.
- ⚡ EXISTING FLOOD LIGHT TO REMAIN AND BE MAINTAINED.
- ⊗] EXISTING SINGLE-PHASE POLE MOUNTED TRANSFORMER TO BE REMOVED OR RELOCATED BY AEP.
- ⊗] EXISTING SINGLE-PHASE POLE MOUNTED TRANSFORMER TO REMAIN AND BE MAINTAINED.
- ⚡ EXISTING THREE-PHASE DELTA CONNECTED TRANSFORMER BANK TO BE REMOVED OR RELOCATED BY AEP.
- ⚡ EXISTING THREE-PHASE DELTA CONNECTED TRANSFORMER BANK TO REMAIN AND BE MAINTAINED.
- ⊗] EXISTING THREE-PHASE, GROUNDED WYE CONNECTED TRANSFORMER BANK TO REMAIN AND BE MAINTAINED.
- ⊗] EXISTING METER SOCKET ENCLOSURE TO REMAIN AND BE MAINTAINED.
- ⊗] NEW METER SOCKET ENCLOSURE WITH UNDERGROUND FEED TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR TO REPLACE EXISTING METER SOCKET ENCLOSURE WITH OVERHEAD FEED. REFER TO SPECIFICATIONS AND SERVICE REVISION DETAILS FOR ADDITIONAL INFORMATION.
- ⊗] AEP POWER PEDESTAL - CONTRACTOR TO PREPARE SITE FOR PEDESTAL, STUB-UP ELECTRICAL SYSTEM CONDUITS 6" ABOVE FINISHED GRADE, AND CAP CONDUIT WITH PLUGS. AEP TO FURNISH, INSTALL AND WIRE POWER PEDESTAL.
- ⊗] AT&T TELEPHONE PEDESTAL - CONTRACTOR TO PREPARE SITE FOR PEDESTAL, STUB-UP TELEPHONE SYSTEM CONDUITS 6" ABOVE FINISHED GRADE, AND CAP CONDUIT WITH PLUGS. AT&T TO FURNISH, INSTALL AND WIRE TELEPHONE PEDESTAL.
- ⊗] TWC CATV PEDESTAL - CONTRACTOR TO PREPARE SITE FOR PEDESTAL, STUB-UP CATV SYSTEM CONDUITS 6" ABOVE FINISHED GRADE, AND CAP CONDUIT WITH PLUGS. TIME WARNER CABLE TO FURNISH, INSTALL AND WIRE PEDESTAL.
- ⊗] EXISTING AT&T TELEPHONE SERVICE DEMARCATION POINT TO BE ABANDONED BY AT&T.
- ⊗] NEW AT&T TELEPHONE SERVICE DEMARCATION POINT - CONTRACTOR TO STUB-UP TELEPHONE SERVICE CONDUIT 12" ABOVE FINISHED GRADE AND CAP WITH CONDUIT PLUG. STUB-UP TO BE TIGHT TO BUILDING AND WITHIN 20' OF THE ELECTRICAL SERVICE GROUNDING ELECTRODE. AT&T TO FURNISH, INSTALL AND WIRE TELEPHONE SERVICE.
- ⊗] EXISTING TWC CATV SERVICE POINT TO BE ABANDONED BY TIME WARNER CABLE.
- ⊗] NEW TWC CATV SERVICE POINT - CONTRACTOR TO STUB-UP CATV SERVICE CONDUIT 12" ABOVE FINISHED GRADE AND CAP WITH CONDUIT PLUG. STUB-UP TO BE TIGHT TO BUILDING AND WITHIN 20' OF THE ELECTRICAL SERVICE GROUNDING ELECTRODE. TWC TO FURNISH, INSTALL AND WIRE CATV SERVICE.
- ⊗] AT&T PULLBOX - REINFORCED POLYMER CONCRETE PULLBOX, 30" X 48" X 24" DEEP FURNISHED AND INSTALLED BY THE CONTRACTOR. BOX SHALL BE NESTABLE TYPE WITH OPEN BOTTOM, AND RATED 22,500 LBS DESIGN LOAD / 33,750 LBS TEST LOAD. COVER SHALL BE HEAVY DUTY POLYMER CONCRETE RATED 15,000 LBS DESIGN / 22,000 LBS TEST, WITH SKID RESISTANT SURFACE, CONCRETE GREY COLOR, PULL SLOTS, TWO STAINLESS STEEL HEXHEAD COVER BOLTS AND "AT&T - TELEPHONE" LOGO CAST IN COVER. PROVIDE 6" GRAVEL BASE FOR DRAINAGE. INSTALL PULLBOX SO THAT COVER IS FLUSH WITH FINISHED GRADE.
- ⊗] TWC PULLBOX - SIMILAR TO "⊗]" EXCEPT WITH "TWC - CATV" LOGO.
- ⊗] PROPOSED AT&T PADMOUNTED CROSSBOX FURNISHED AND INSTALLED BY AT&T. CONTRACTOR TO STUB-UP NEW TELEPHONE SYSTEM CONDUITS AT EXACT LOCATION DESIGNATED BY AT&T.
- ⊗] FIBERGLASS MANHOLE, 48" DIA X 38" DEEP, WITH FRAME AND COVER, FURNISHED BY AT&T AND INSTALLED BY CONTRACTOR ON 6" COMPACTED GRAVEL BASE. INSTALL MANHOLE SO THAT COVER IS FLUSH WITH FINISHED GRADE.
- ⊗] PROPOSED TIME WARNER CABLE POWER SUPPLY. CONTRACTOR TO STUB-UP NEW CATV SYSTEM CONDUITS AT EXACT LOCATION DESIGNATED BY TWC.
- ⊗] AEP SINGLE-PHASE PADMOUNTED TRANSFORMER - FIBERGLASS BOXPAD TO BE FURNISHED BY AMERICAN ELECTRIC POWER (AEP) AND INSTALLED BY THE CONTRACTOR PER AEP REQUIREMENTS. CONTRACTOR SHALL PROVIDE ALL EXCAVATION, 6" GRAVEL BASE, BACKFILL, GROUND ROD AND RESTORATION. AEP TO FURNISH, INSTALL, AND WIRE THE SINGLE-PHASE PADMOUNTED TRANSFORMER.
- ⊗] AEP THREE-PHASE PRIMARY JUNCTION ENCLOSURE - FIBERGLASS GROUND SLEEVE TO BE FURNISHED BY AMERICAN ELECTRIC POWER (AEP) AND INSTALLED BY THE CONTRACTOR PER AEP REQUIREMENTS. CONTRACTOR SHALL PROVIDE ALL EXCAVATION, 6" GRAVEL BASE, BACKFILL, GROUND ROD AND RESTORATION. AEP TO FURNISH, INSTALL, AND WIRE THREE-PHASE CABINET.
- ⊗] AEP THREE-PHASE PADMOUNTED TRANSFORMER - CONTRACTOR SHALL FURNISH AND INSTALL A 8'-0" L X 8'-0" W X 5'-0" DEEP (OUTSIDE DIMENSIONS) PRECAST CONCRETE BOXPAD FOUNDATION INCLUDING ALL EXCAVATION, 6" GRAVEL BASE, BACKFILL AND RESTORATION. AEP TO FURNISH, INSTALL, AND WIRE THE THREE-PHASE PADMOUNTED TRANSFORMER.
- ⊗] AEP SWITCHGEAR VAULT - 12'-0" L X 6'-0" WIDE X 6'-6" HIGH (INSIDE DIMENSIONS) PRECAST CONCRETE VAULT WITH AASHTO-20 LOAD RATING, FURNISHED AND INSTALLED BY THE CONTRACTOR. VAULT SHALL BE FURNISHED COMPLETE WITH FRAME AND COVER, PULLING IRONS, CABLE RACKS, KNOCKOUTS, AND GROUNDING. INSTALL VAULT ON 12" COMPACTED GRAVEL BASE. REFER TO DETAILS ON SHEET XX OF PLANS AND SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
- ⊗] FUTURE LIGHTING CONTROL PANEL WITH METERED SERVICE FURNISHED AND INSTALLED BY OTHERS UNDER A SEPARATE PROJECT.
- EXISTING CONDUCTORS AND/OR CONDUIT TO BE REMOVED BY THE CONTRACTOR UNLESS OTHERWISE NOTED ON PLAN.
- o/h- EXISTING OVERHEAD UTILITY CONDUCTORS AND/OR CABLING TO REMAIN AND BE MAINTAINED.
- u/g/e- EXISTING UNDERGROUND ELECTRICAL CONDUCTORS TO REMAIN AND BE MAINTAINED.
- u/g/t- EXISTING UNDERGROUND TELEPHONE CABLING TO REMAIN AND BE MAINTAINED.
- A  
←A  
→A  
←A CONCRETE ENCASED PVC SCHEDULE 40 DUCT BANK FURNISHED AND INSTALLED BY THE CONTRACTOR AT 36" MINIMUM BELOW FINISHED GRADE FOR AMERICAN ELECTRIC POWER (AEP) DISTRIBUTION SYSTEM. CONTRACTOR SHALL FURNISH AND INSTALL A 0.25" DIAMETER POLYPROPYLENE PULL ROPE IN ALL EMPTY CONDUITS. AEP TO FURNISH, INSTALL AND TERMINATE ALL CABLING.
- 2-4" DIRECT BURIED PVC SCHEDULE 40 CONDUIT FURNISHED AND INSTALLED BY THE CONTRACTOR AT 36" MINIMUM BELOW FINISHED GRADE. CONDUIT SIZES AS INDICATED ON PLAN. CONTRACTOR SHALL FURNISH AND INSTALL A 0.25" DIAMETER POLYPROPYLENE PULL ROPE IN ALL EMPTY CONDUITS.
- 3/4" / 5-# DIRECT BURIED 3" PVC SCHEDULE 40 (UNLESS OTHERWISE NOTED) CONDUIT FOR ELECTRICAL SERVICE LATERALS FURNISHED AND INSTALLED BY THE CONTRACTOR AT 24" MINIMUM BELOW FINISHED GRADE. CONTRACTOR SHALL FURNISH AND INSTALL QUANTITY OF TYPE XHHW CONDUCTORS INDICATED BY HASH MARKS. REFER TO PLAN FOR CONDUCTOR SIZE.
- T- DIRECT BURIED 2" PVC SCHEDULE 40 (UNLESS OTHERWISE NOTED) TELEPHONE SERVICE CONDUIT FURNISHED AND INSTALLED BY THE CONTRACTOR AT 24" MINIMUM BELOW GRADE. INSTALL CONDUIT IN A COMMON TRENCH WITH THE ELECTRICAL SERVICE LATERAL. CONTRACTOR SHALL FURNISH AND INSTALL A 0.25" DIAMETER POLYPROPYLENE PULL ROPE IN ALL EMPTY CONDUITS.
- C- DIRECT BURIED 2" PVC SCHEDULE 40 (UNLESS OTHERWISE NOTED) CATV SERVICE CONDUIT FURNISHED AND INSTALLED BY THE CONTRACTOR AT 24" MINIMUM BELOW FINISHED GRADE. INSTALL CONDUIT IN A COMMON TRENCH WITH THE ELECTRICAL SERVICE LATERAL. CONTRACTOR SHALL FURNISH AND INSTALL A 0.25" DIAMETER POLYPROPYLENE PULL ROPE IN ALL EMPTY CONDUITS.
- GALVANIZED RIGID METAL CONDUIT FURNISHED BY THE CONTRACTOR AND INSTALLED EXPOSED ON SURFACE OF MASONRY WALL WITH QUANTITY AND SIZE OF TYPE XHHW COPPER CONDUCTORS AS INDICATED ON THE PLANS. PAINT CONDUIT (TWO COATS MINIMUM) TO MATCH EXISTING SURFACE.

57-10-05 (DE-16) MAHONING RD EDP, CANTON - CDS - SYMBOLS.DWG on 03/08/11 at 13:02 by DRM

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CALCULATED: PTA  
 CHECKED: MJS

SCALE: AS SHOWN

# SYMBOLS