

User: MCARIGLIO Spec: AUS-NC5M0D File: G:\PROJECT\AK000320.B001\DRAWING\CANCV01A.DWG Scale: 1:1 SavedDate: 12/12/2012 Time: 09:09 Plot Date: 2/11/2013 07:35 Layout: 01

WSI - ESI INTERCONNECTION VAULTS

GENERAL PROJECT NO. 1114 FOR CITY OF CANTON 2012

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

INDEX OF SHEETS

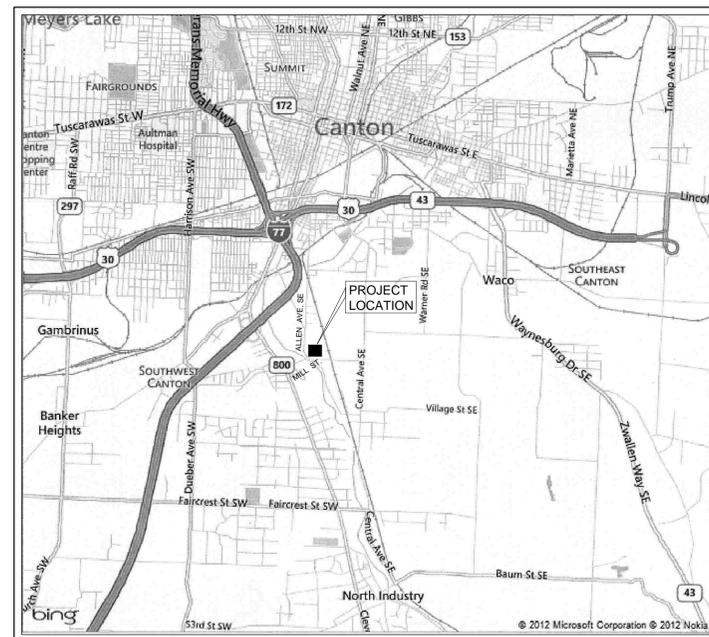
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CITY OF CANTON COUNCIL

ALLEN SCHULMAN	COUNCIL PRESIDENT
MARY M CIRELLI	MEMBER-AT-LARGE
JOE COLE	MEMBER-AT-LARGE
JAMES O BABCOCK	MEMBER-AT-LARGE

COUNCIL MEMBERS

GREG HAWK	WARD ONE
THOMAS E. WEST	WARD TWO
JAMES E. GRIFFIN	WARD THREE
CHRIS SMITH	WARD FOUR
KEVIN FISHER	WARD FIVE
DAVID R. DOUGHERTY	WARD SIX
JOHN MARIOL II	WARD SEVEN
EDMOND MACK	WARD EIGHT
FRANK MORRIS	WARD NINE



LOCATION PLAN
NO SCALE
STARK COUNTY

APPROVALS

APPROVED: _____ DATE: _____
 CANTON CITY ENGINEER

CITY OF CANTON OFFICIALS

WILLIAM J. HEALY II	MAYOR
WARREN PRICE	SERVICE DIRECTOR
DAN MOEGLIN, P.E.	CITY ENGINEER
RICHARD A. MALLONN II	AUDITOR
JOSEPH MARTUCCIO	LAW DIRECTOR

CONSULTANTS

SEALS



CITY OF CANTON, OHIO
WSI-ESI INTERCONNECTION VAULTS



NO.	DATE	ISSUED FOR	BY

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2012

DATE: NOVEMBER 2012
 PROJECT NO.: AK000320.B001
 FILE NAME: CANCV01A
 DESIGNED BY: ERIC FALLON
 DRAWN BY: GARY BISHOP
 CHECKED BY: DAVE FRANK

SHEET TITLE

TITLE SHEET

SCALE: NONE

SHEET 1 OF 6

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 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.

OHIO UTILITIES PROTECTION SERVICE: 1-800-362-2764. (CONTACT NON-MEMBERS ONLY) THE PRIMARY UTILITIES WITHIN THE CITY OF CANTON AREA:

THE PRIMARY UTILITIES WITHIN THE CITY OF CANTON AREA:

NATURAL GAS DIST./TRANS.
DOINION EAST OHIO GAS
320 SPRINGSIDE DR.
AKRON, OHIO 44333
330-664-2409
ATTN: MARY LONG
RELOCATION@DOM.COM
1-800-521-4400

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

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

COMMUNICATIONS CABLE
TIME WARNER CABLE
5520 WHIPPLE AVE N.W
NORTH CANTON, OHIO 44720
330-494-9200., EXT 87
ATTN: TIM KNIGHT

ELECTRIC
AMERICAN ELECTRIC POWER
301 CLEVELAND AVE. S.W.
PO BOX 24400
CANTON, OHIO 44701-4400
330-438-7762
ATTN: KEN HUOT
EMERGENCY NO.
1-800-672-2017

SANITARY AND STORM SEWER
CITY ENGINEER'S OFFICE
2436-30TH ST. N.E.
CANTON, OHIO 44705
330-489-3381
ATTN: DAN MOEGLIN

WATER
WATER DEPARTMENT
2664 HARRISBURG RD. N.E.
CANTON, OHIO 44708
330-489-3310
ATTN: LEWI MILLER

TRAFFIC INTERCONNECT
CITY ENGINEER'S OFFICE
2430-30TH ST. N.E.
CANTON, OHIO 44705
330-489-3381
ATTN: NICK LOUKAS

THE CITY ENGINEER'S OFFICE IS TO BE CONTACTED DIRECTLY FOR SANITARY AND STORM SEWER AND TRAFFIC INTERCONNECT FACILITIES LOCATION: 330-489-3381

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 REGULATIONS. APPROPRIATE BARRICADES, WARNING LIGHTS, SIGNS, FENCING, ETC. SHALL BE ERECTED AROUND THE CONSTRUCTION AREA DURING ALL NON WORKING HOURS TO ALERT PERSONS OF THE POTENTIAL DANGER ASSOCIATED WITH THE AREA UNDER CONSTRUCTION AS WELL AS TO PREVENT ACCESS BY UNAUTHORIZED PERSONNEL TO THE CONSTRUCTION SITE/AREA. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE SAFETY OF THE GENERAL PUBLIC AS WELL AS ALL CONSTRUCTION PERSONNEL. PUBLIC STREETS SHALL BE KEPT CLEAN AND FREE OF DEBRIS (MUD, STONE, ECT.) 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.

PLAN DISCREPANCIES:

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

FAILURE BY THE 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.

VERIFICATION OF UNDERGROUND UTILITIES:

THE 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 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.

PROTECTION OF UTILITIES:

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

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

CONSTRUCTION NOISE:

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

OPEN TRENCH CONSTRUCTION:

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

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

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

TRENCH CLOSING AND TEMPORARY TOPPING:

THE 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.

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

PRESERVATION AND RESTORATION OF DISTURBED FEATURES:

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

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

CONSTRUCTION LAYOUT:

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

EXISTING MONUMENTATION:

THE CONTRACTOR SHALL PRESERVE ALL CORNERSTONES, IRON PINS, CONCRETE MONUMENTS AND/OR ANY TYPE OF LAND MONUMENT. THE CONTRACTOR SHALL HAVE ALL MONUMENTS IN 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.

SUITABILITY OF SITE:

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

REFER TO CITY STANDARD DRAWING NO. 19 FOR ADDITIONAL DETAILS.

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 MATERIAL 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 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 BY THE CITY TRAFFIC ENGINEER AND OTHER PUBLIC AGENCIES 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.

TRAFFIC CONTROL PLAN:

THE 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.



The Water Division of ARCADIS
LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS



CITY OF CANTON, OHIO
WSI-ESI INTERCONNECTION VAULTS



NO.	DATE	ISSUED FOR	BY

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2012

DATE: NOVEMBER 2012
PROJECT NO.: AK000320.B001
FILE NAME: CANGN01A
DESIGNED BY: ERIC FALLON
DRAWN BY: GARY BISHOP
CHECKED BY: DAVE FRANK

SHEET TITLE

GENERAL NOTES

SCALE: NONE

User: MCARIGLIO Spec: AUS-NC5MOD File: G:\PROJECT\AK000320\B001\DRAWING\CANGN01A.DWG Scale: 1:1 SavedDate: 12/12/2012 Time: 09:08 Plot Date: 2/11/2013 07:36 : Layout: 02

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SEALS



CITY OF CANTON, OHIO
WSI-ESI INTERCONNECTION VAULTS



NO.	DATE	ISSUED FOR	BY

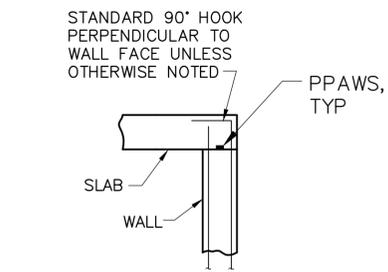
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DATE: NOVEMBER 2012
 PROJECT NO.: AK000320.B001
 FILE NAME: CANVTO1A
 DESIGNED BY: LISA BOWE
 DRAWN BY: GARY BISHOP
 CHECKED BY: DAVE FRANK

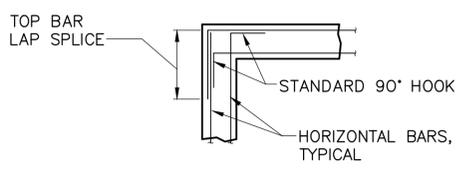
SHEET TITLE

WSI INTERCONNECTION VAULT DETAILS

SCALE: AS NOTED

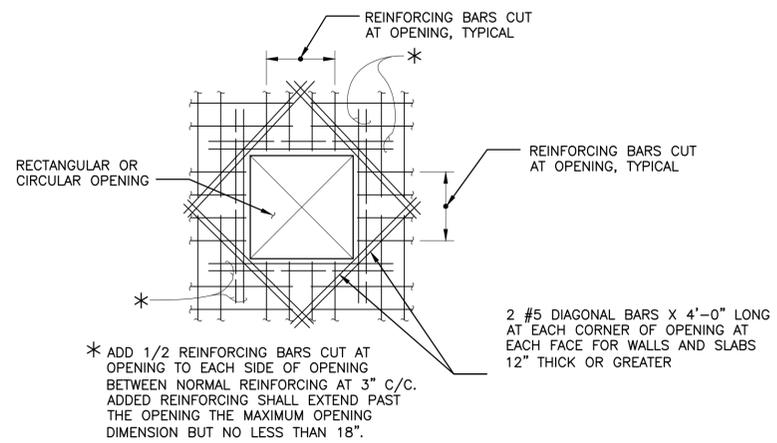


**SECTION
 SLAB/WALL INTERSECTION**



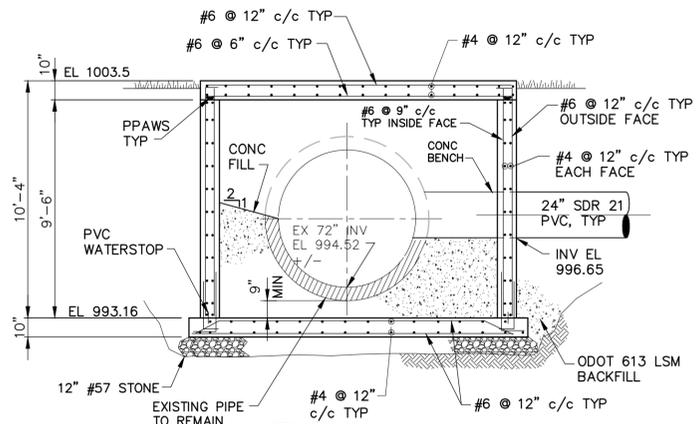
**SECTIONAL PLAN
 TYPICAL WALL INTERSECTION**

TYPICAL REINFORCING DETAIL
 3/8" = 1'-0"

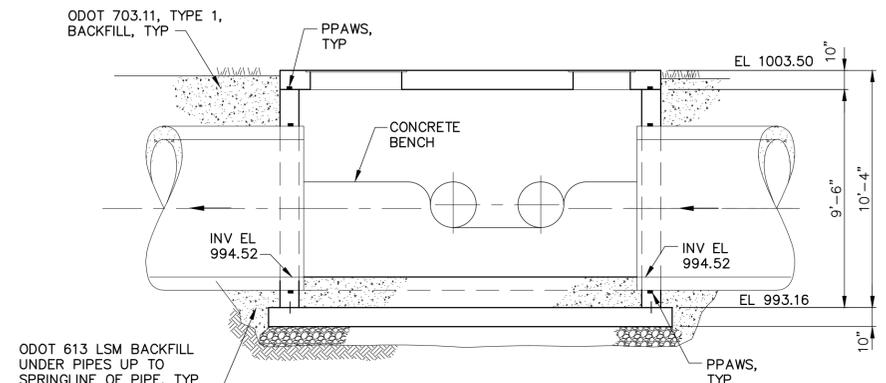


PLAN OR ELEVATION

TYPICAL REINFORCING AROUND OPENINGS IN WALLS
 1/2" = 1'-0"



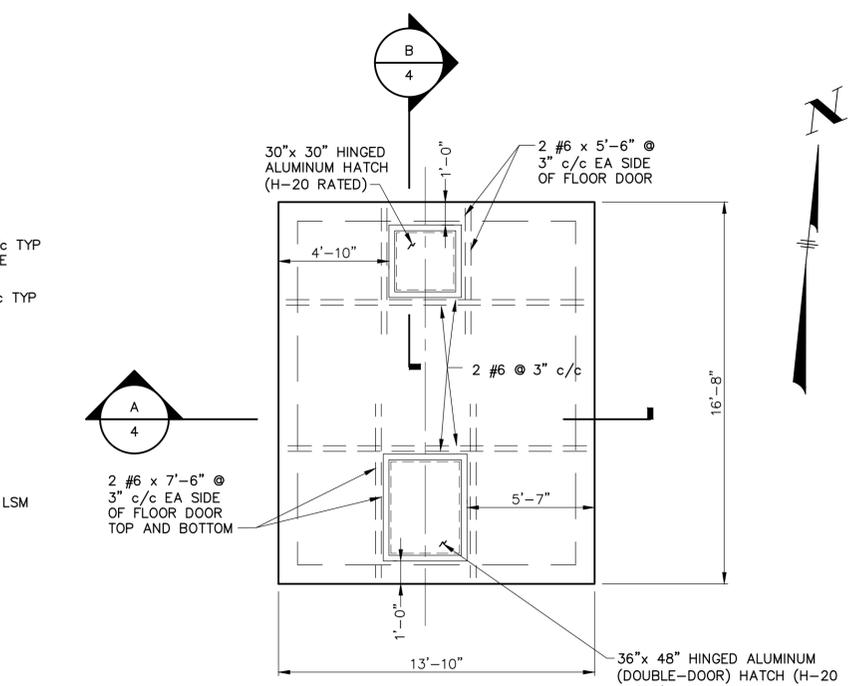
**SECTION
 A**



**SECTION
 B**

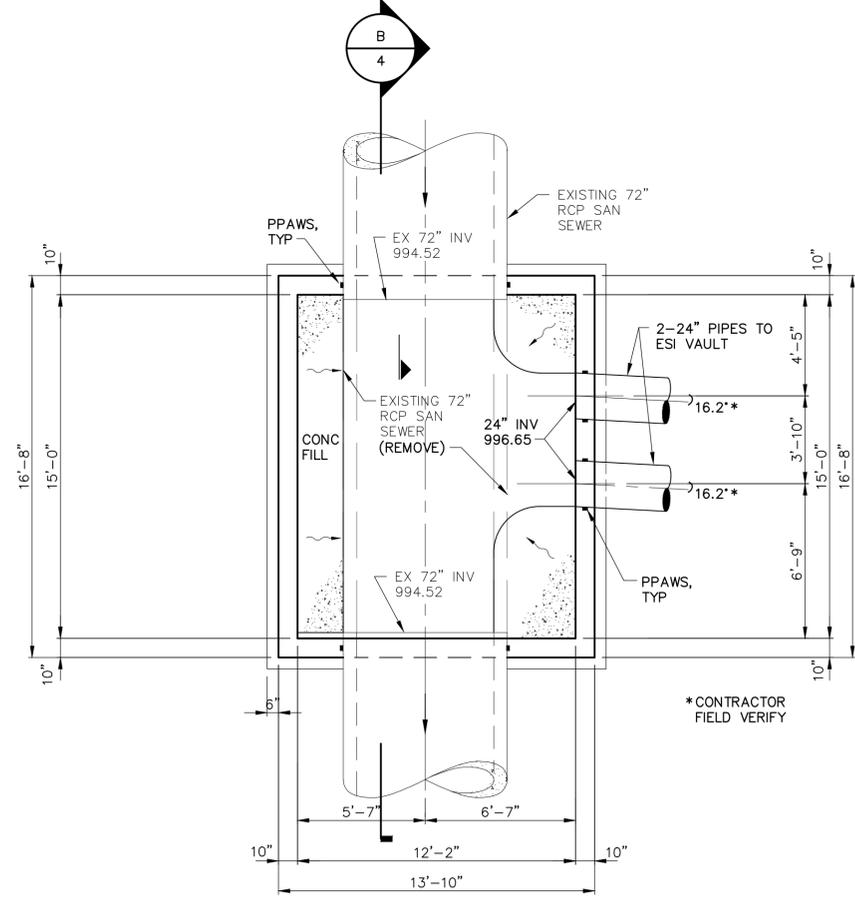
CONTRACTOR NOTES:

- EXISTING RCP PIPE SHALL BE SUPPORTED AS REQUIRED ACROSS EXCAVATION DURING VAULT CONSTRUCTION



PLAN

1/4" = 1'-0"



SECTION

1/4" = 1'-0"

WEST SIDE INTERCONNECTION VAULT

User: MCARIGLIO Spec: AUS-NC5MOD File: G:\PROJECT\AK000320.B001\DRAWING\CANVTO1A.DWG Scale: 1:1 SavedDate: 2/8/2013 Time: 15:31 Plot Date: Coriglio, Meredith: 2/11/2013: 07:38 Layout: 04

User: MCARIGLIO Spec: AUS-NCSMGD File: G:\PROJECT\AK000320.B001\DRAWING\CANVT02A.DWG Scale: 1:1 SavedDate: 2/8/2013 11:54:47 Plot Date: Cariglio, Meredith; 2/11/2013; 07:40; Layout: 05

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CITY OF CANTON, OHIO
WSI-ESI INTERCONNECTION VAULTS



NO.	DATE	ISSUED FOR	BY

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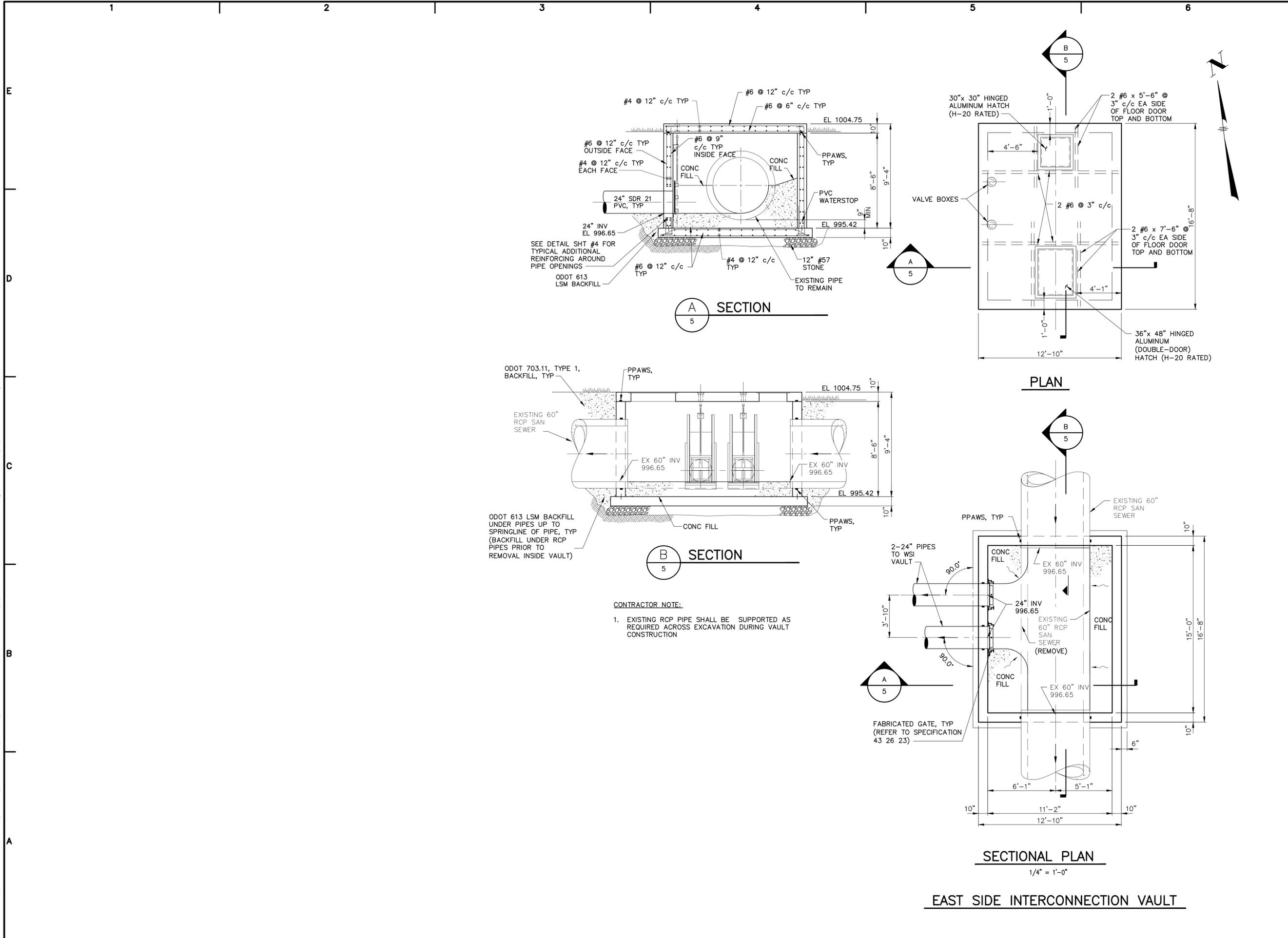
DATE: NOVEMBER 2012
 PROJECT NO.: AK000320.B001
 FILE NAME: CANVT02A
 DESIGNED BY: LISA BOWE
 DRAWN BY: GARY BISHOP
 CHECKED BY: DAVE FRANK

SHEET TITLE

ESI INTERCONNECTION VAULT DETAILS

SCALE: 1/4"=1'-0"

SHEET 5 OF 6



CONSULTANTS

SEALS



CITY OF CANTON, OHIO
WSI-ESI INTERCONNECTION VAULTS



NO.	DATE	ISSUED FOR	BY

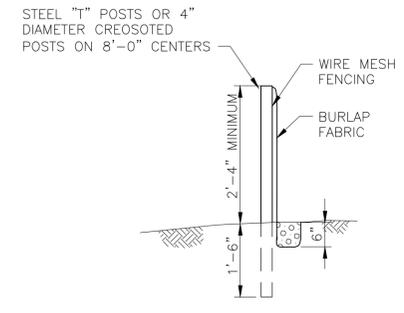
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DATE: NOVEMBER 2012
 PROJECT NO.: AK000320.B001
 FILE NAME: CANMD01A
 DESIGNED BY: ERIC FALLOM
 DRAWN BY: GARY BISHOP
 CHECKED BY: DAVE FRANK

SHEET TITLE
MISCELLANEOUS DETAILS AND SECTION

SCALE: NONE

SHEET 6 OF 6



TEMPORARY SILT FENCE DETAIL
 NO SCALE

CONTRACTOR TO RESTORE PAVEMENT THROUGH SANITARY AND WATER TRENCHES WITH 6" ASPHALT CONCRETE BASE (ODOT 301)

1 2 3 4 5 6

NOTES:

1. **BEDDING:**
 MATERIALS SHALL BE AASHTO M 43 NO. 56, 57, OR 67 CRUSHED STONE. NO ALTERNATES UNLESS APPROVED BY THE CITY ENGINEER. PRIVATE UTILITIES MAY TYPICALLY PROVIDE ALTERNATE BEDDING MATERIAL AS APPROVED BY THE CITY ENGINEER.

BEDDING WIDTH TABLE

PIPE TYPE	MIN. WIDTH, TYP.	MAX. WIDTH, TYP.
NON-RIGID PIPE (PVC, HDPE, CMP, ALUMINUM)	PIPE I.D. x 1.25 + 1'-0"	PIPE O.D. + 2'-0"
RIGID PIPE (DUCTILE IRON)	PIPE I.D. x 1.33 (CONC., VIT. CLAY, PUCITILE IRON)	PIPE O.D. + 2'-0"

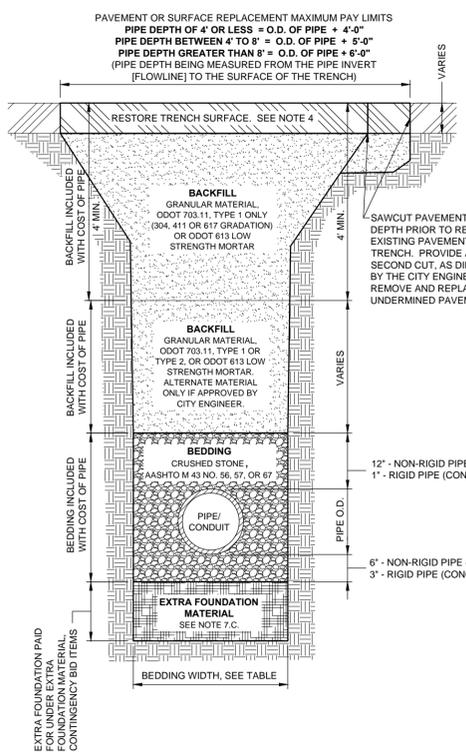
CENTER PIPE HORIZONTALLY WITHIN BEDDING AREA. ANY DEVIATION TO TYPICAL BEDDING REQUIREMENTS ARE SUBJECT TO THE DISCRETION OF THE CITY ENGINEER.

THE BEDDING LIMITS SHOWN APPLY IN ALL CASES EXCEPT FOR WHEN PIPE MANUFACTURER SPECIFIES A BEDDING WIDTH DIFFERENT FROM THAT SHOWN AND THE CITY ENGINEER PERMITS SAME.

2. **BACKFILL:**

BACKFILL WITHIN THE PUBLIC STREET R.W.:
 MATERIALS SHALL BE ODOT 703.11, TYPE 1 GRANULAR MATERIAL (304, 411, OR 617 AGGREGATE GRADATION) OR TYPE 2 GRANULAR MATERIAL, OR ODOT 613, LOW STRENGTH MORTAR. DEVIATIONS FROM THIS ARE AS FOLLOWS:
 A) NO FOUNDRY SAND OR SLAG IS PERMITTED.
 B) ALTERNATE GRANULAR MATERIAL SHALL BE PERMITTED ONLY WITH THE SUPPLEMENTAL APPROVAL OF THE CITY ENGINEER. TO PETITION 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 11 AND T 27.
 * PROCTOR CURVE ANALYSIS IN ACCORDANCE WITH ASTM D 698.
 * PROPOSED COMPACTION METHOD.
 THE CITY ENGINEER RESERVES THE RIGHT TO REFUSE ANY ALTERNATE BACKFILL MATERIAL, REGARDLESS OF APPROVAL OF SIMILAR MATERIAL ON A PREVIOUS PROJECT.
 THE CITY ENGINEER FURTHER RESERVES THE RIGHT TO REFUSE ANY ALTERNATE BACKFILL MATERIAL THE CITY FINDS NOT CONSISTENT WITH THE APPROVED SOURCE, GRADATION REPORT, PROCTOR REPORT, OR COMPACTION METHOD.
 C) ODOT 703.11, TYPE 2, OR ALTERNATE MATERIALS ARE NOT PERMITTED WITHIN 4 FEET OF THE TRENCH SURFACE, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

BACKFILL OUTSIDE OF THE PUBLIC STREET R.W.:
 FOLLOW MATERIAL AND METHODS FOR BACKFILL IN ACCORDANCE WITH ODOT 603.



NOTES: (CONTINUED)

3. **COMPACTION:**
 ALL BACKFILL SHALL BE PLACED IN LAYERS NOT TO EXCEED 12-INCHES LOOSE DEPTH AND COMPACTED BY APPROVED MECHANICAL MEANS. JETTING IS NOT APPROVED WITHOUT THE CITY ENGINEER'S APPROVAL. BUCKET COMPACTION MUST BE SUPPLEMENTED WITH VIBRATION OR TAMPING EQUIPMENT AS DIRECTED. ANY MODIFICATIONS TO THESE REQUIREMENTS MUST BE APPROVED BY THE CITY ENGINEER.

4. **SURFACE:**
 TRENCHES SHALL BE TOPPED WITH 4" OF ODOT 304 LIMESTONE OR ASPHALT GRINDINGS WITHIN EXISTING STREET PAVEMENTS WHEN THE STREET WILL BE OPENED TO VEHICULAR TRAFFIC PRIOR TO PAVEMENT REPLACEMENT. THE TRENCH TOPPING MATERIAL SHALL BE ROLLED OR OTHERWISE COMPLETED FLUSH WITH THE ADJOINING PAVEMENT.

STREET RESTORATION:
 CONCRETE OR ASPHALT STREET PAVEMENT SHALL BE REPLACED IN ACCORDANCE WITH CITY STD. DWG. NO. 32 - BRICK OR ASPHALT BRICK COMPOSITE STREET PAVEMENT SHALL BE REPLACED IN ACCORDANCE WITH CITY STD. DWG. NO. 31.

SIDEWALK, CURB, AND DRIVEWAY RESTORATION:
 DRIVEWAY SURFACES SHALL BE REPLACED IN ACCORDANCE WITH THE CURRENT EDITION OF THE CITY OF CANTON SPECIFICATIONS FOR THE CONSTRUCTION, REPAIR, AND REPLACEMENT OF SIDEWALKS, CURBS, AND DRIVEWAYS; AND CITY STD. DWG. NOS. 28 THRU 33.

LAWN RESTORATION:
 LAWN SURFACES SHALL BE REPLACED WITH A MINIMUM OF 4" TOPSOIL, SEEDED, AND MULCHED. SEED MIX SHALL CONFORM TO ADJOINING LAWN GRASS.

5. **CONSTRUCTION METHODS** FOR BEDDING AND BACKFILL SHALL CONFORM WITH ODOT 603, UNLESS STATED OTHERWISE HEREIN.

6. **ODOT REFERENCES** ARE FROM THE CURRENT ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. ANY DISCREPANCIES SHALL BE SUBJECT TO THE CITY ENGINEER'S DISCRETION.

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

APPROVED DATE:	REVISIONS
JAN 2012	DESCRIPTION DATE BY
APPROVED BY: CDB, RMB, SLH	REVISIONS TO NOTES 7 & 8 6/4/2012 CDB
DRAWING FILE NAME: ce_19.dwg	

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

NOTES: (CONTINUED)

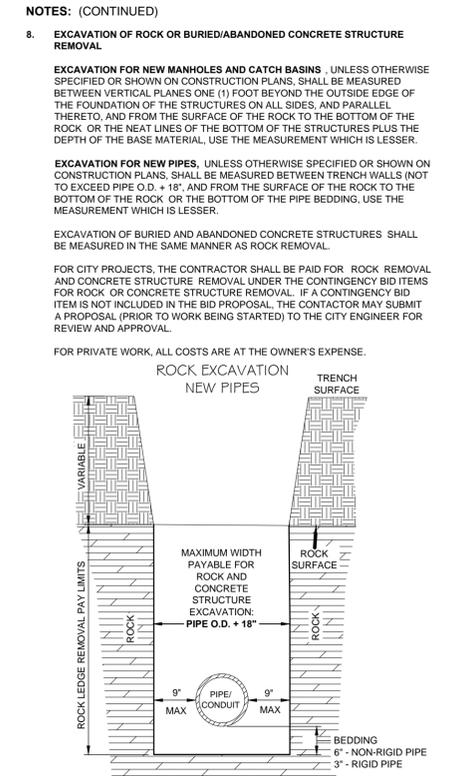
7. **PAY LIMITS**

A) **BEDDING AND BACKFILL** IS INCLUDED IN WITH THE COST OF PIPE UNLESS BID OTHERWISE.

B) **PAVEMENT RESTORATION:** THE WIDTH MEASUREMENT OVER THE TRENCH FOR PAVEMENT RESTORATION SHALL NOT EXCEED THE OUTSIDE DIAMETER (O.D.) OF PIPE PLUS A SET MEASUREMENT DEPENDENT ON DEPTH OF PIPE. AREA MEASUREMENTS AT MANHOLE AND CATCH BASIN STRUCTURES SHALL NOT EXCEED THE AREA OF THE BASE OF THE STRUCTURE + 3'-0" OFFSET AREA AROUND THE STRUCTURE'S BASE.

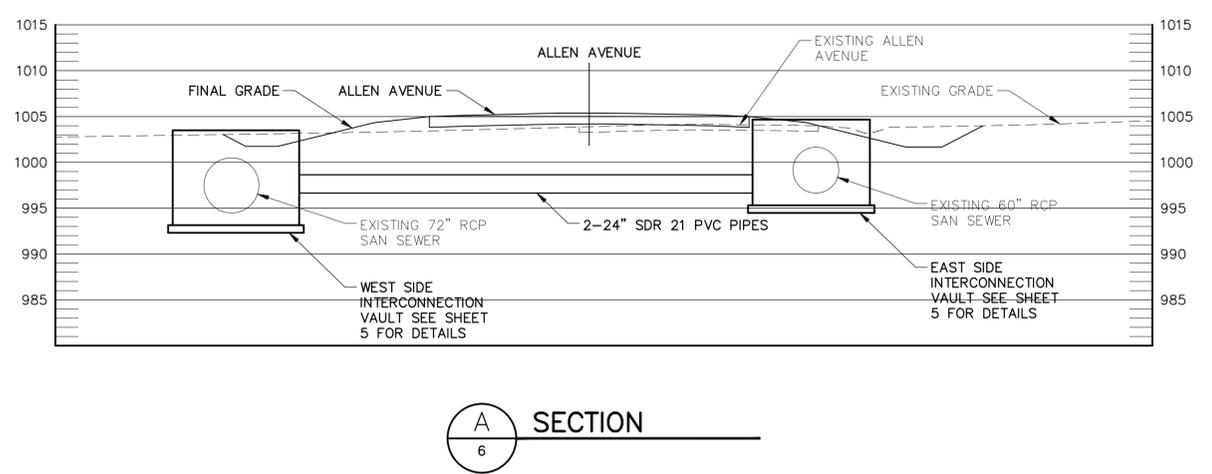
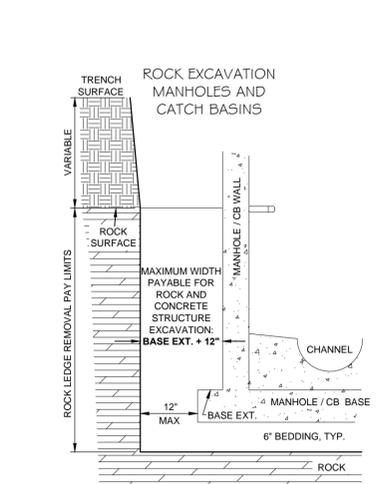
C) **EXTRA FOUNDATION MATERIAL:**
 WHEN IN THE OPINION OF THE CITY ENGINEER, SOFT/UNSTABLE MATERIALS ARE ENCOUNTERED WHICH ARE UNSUITABLE FOR BEDDING FOUNDATION, SAID MATERIAL SHALL BE REMOVED BY THE CONTRACTOR TO THE DEPTH DIRECTED BY THE ENGINEER AND REPLACED WITH SUITABLE MATERIAL.
 FOR CITY PROJECTS, THE PAYABLE WIDTH OF THE EXTRA FOUNDATION MATERIAL SHALL NOT EXCEED THE LESSER OF THE APPLICABLE MINIMUM OR MAXIMUM TYPICAL BEDDING WIDTH, AS NOTED ON SHEET 1 OF STD. DWG. NO. 19. THE CONTRACTOR SHALL BE PAID FOR OVER EXCAVATION AND BEDDING FOUNDATION MATERIAL UNDER THE CONTINGENCY BID ITEMS FOR EXTRA FOUNDATION MATERIAL.
 FOR PRIVATE WORK, ALL COSTS ARE AT THE OWNER'S EXPENSE.
 EXTRA FOUNDATION MATERIAL, OPTION A, B, C, & D, MAY BE USED IN ANY COMBINATION AS DIRECTED BY THE CITY ENGINEER:
 OPTION A: CRUSHED STONE, AASHTO M 43 NO. 1 AND/OR 2
 OPTION B: CRUSHED STONE, AASHTO M 43 NO. 56, 57, OR 67
 OPTION C: ODOT 703.11, TYPE 1 (304, 411 OR 617 GRADATION)
 OPTION D: TENSAR GEOGRID T1100, OR APPROVED EQUAL

ITEM	QTY.	UNIT	DESCRIPTION
603	C.Y.	EXTRA FOUNDATION, OPTION A (#1, #2 STONE)	
603	C.Y.	EXTRA FOUNDATION, OPTION B (#56, 57, 67 STONE)	
603	C.Y.	EXTRA FOUNDATION, OPTION C (304, 411, 617)	
603	S.F.	EXTRA FOUNDATION, OPTION D (GEOGRID)	



ROCK AND BURIED & ABANDONED CONCRETE STRUCTURE REMOVAL, CONTINGENCY BID ITEMS

ITEM	QTY.	UNIT	DESCRIPTION
603	C.Y.	ROCK REMOVAL	
603	C.Y.	CONCRETE STRUCTURE REMOVAL	



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

APPROVED DATE:	REVISIONS
JAN 2012	DESCRIPTION DATE BY
APPROVED BY: CDB, RMB, SLH	REVISIONS TO NOTES 7 & 8 6/4/2012 CDB
DRAWING FILE NAME: ce_19.dwg	

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

User: MCARIGLIO Spec: AUS-NCSMD01 File: G:\PROJECT\AK000320.B001\DRAWING\CANMD01A.DWG Scale: 1:1 SavedDate: 2/8/2013 11:55:11 Plot Date: Cargillo, Meredith; 2/11/2013; 07:41:1; Layout: 06