

# 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

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: CANC01A  
 DESIGNED BY: ERIC FALLON  
 DRAWN BY: GARY BISHOP  
 CHECKED BY: DAVE FRANK

SHEET TITLE  
**TITLE SHEET**

SCALE: NONE

SHEET 1 OF 6

INDEX OF SHEETS

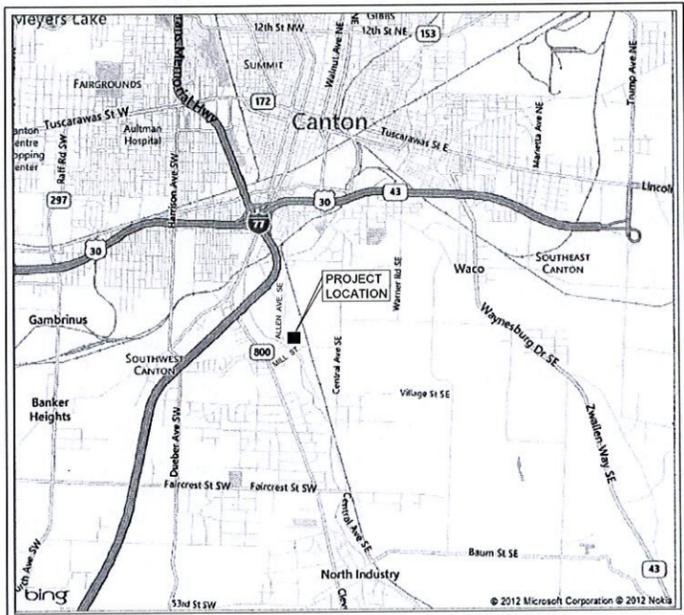
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CITY OF CANTON COUNCIL

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: *Dan Moeglin*  
 CANTON CITY ENGINEER

DATE: 2/15/13

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

User: MCARGLIO Spec: AUS-NCSMO2 File: G:\PROJECT\AK000320\B001\DRAWING\CANC01A.DWG Scale: 1:1 SavedDate: 12/12/2012 Time: 09:09 Plot Date: Carglio, Meredith: 2/11/2013: 07:35; Layout: 01

**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.**  
DOMINION 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 BOWERY 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 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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DATE: NOVEMBER 2012  
PROJECT NO.: AK000320.B001  
FILE NAME: CANGNO1A  
DESIGNED BY: ERIC FALLON  
DRAWN BY: GARY BISHOP  
CHECKED BY: DAVE FRANK

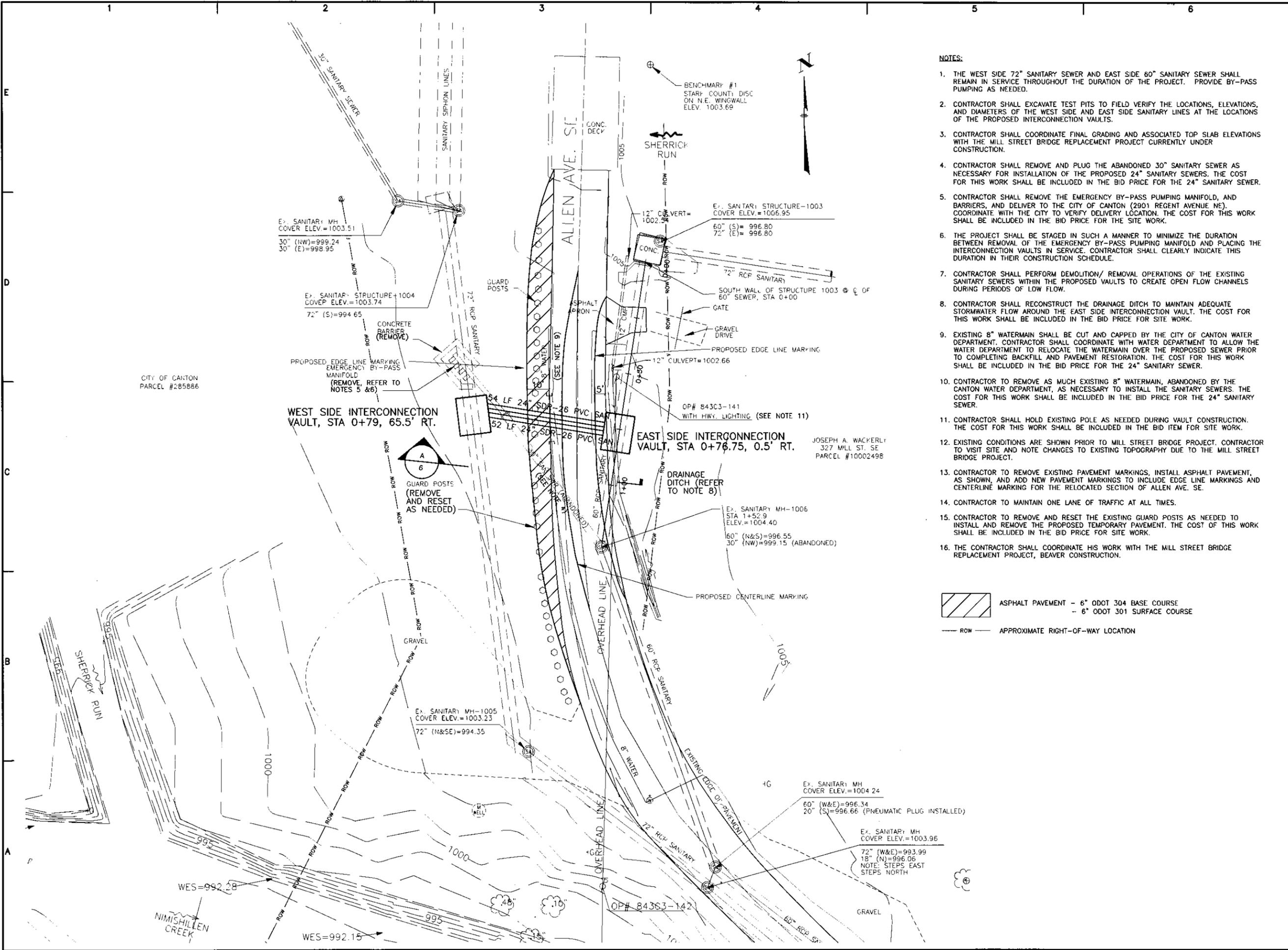
**SHEET TITLE**

**GENERAL NOTES**

SCALE: NONE

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**NOTES:**

1. THE WEST SIDE 72" SANITARY SEWER AND EAST SIDE 60" SANITARY SEWER SHALL REMAIN IN SERVICE THROUGHOUT THE DURATION OF THE PROJECT. PROVIDE BY-PASS PUMPING AS NEEDED.
2. CONTRACTOR SHALL EXCAVATE TEST PITS TO FIELD VERIFY THE LOCATIONS, ELEVATIONS, AND DIAMETERS OF THE WEST SIDE AND EAST SIDE SANITARY LINES AT THE LOCATIONS OF THE PROPOSED INTERCONNECTION VAULTS.
3. CONTRACTOR SHALL COORDINATE FINAL GRADING AND ASSOCIATED TOP SLAB ELEVATIONS WITH THE MILL STREET BRIDGE REPLACEMENT PROJECT CURRENTLY UNDER CONSTRUCTION.
4. CONTRACTOR SHALL REMOVE AND PLUG THE ABANDONED 30" SANITARY SEWER AS NECESSARY FOR INSTALLATION OF THE PROPOSED 24" SANITARY SEWERS. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE 24" SANITARY SEWER.
5. CONTRACTOR SHALL REMOVE THE EMERGENCY BY-PASS PUMPING MANIFOLD, AND BARRIERS, AND DELIVER TO THE CITY OF CANTON (2901 REGENT AVENUE NE). COORDINATE WITH THE CITY TO VERIFY DELIVERY LOCATION. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE SITE WORK.
6. THE PROJECT SHALL BE STAGED IN SUCH A MANNER TO MINIMIZE THE DURATION BETWEEN REMOVAL OF THE EMERGENCY BY-PASS PUMPING MANIFOLD AND PLACING THE INTERCONNECTION VAULTS IN SERVICE. CONTRACTOR SHALL CLEARLY INDICATE THIS DURATION IN THEIR CONSTRUCTION SCHEDULE.
7. CONTRACTOR SHALL PERFORM DEMOLITION/ REMOVAL OPERATIONS OF THE EXISTING SANITARY SEWERS WITHIN THE PROPOSED VAULTS TO CREATE OPEN FLOW CHANNELS DURING PERIODS OF LOW FLOW.
8. CONTRACTOR SHALL RECONSTRUCT THE DRAINAGE DITCH TO MAINTAIN ADEQUATE STORMWATER FLOW AROUND THE EAST SIDE INTERCONNECTION VAULT. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR SITE WORK.
9. EXISTING 8" WATERMAIN SHALL BE CUT AND CAPPED BY THE CITY OF CANTON WATER DEPARTMENT. CONTRACTOR SHALL COORDINATE WITH WATER DEPARTMENT TO ALLOW THE WATER DEPARTMENT TO RELOCATE THE WATERMAIN OVER THE PROPOSED SEWER PRIOR TO COMPLETING BACKFILL AND PAVEMENT RESTORATION. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE 24" SANITARY SEWER.
10. CONTRACTOR TO REMOVE AS MUCH EXISTING 8" WATERMAIN, ABANDONED BY THE CANTON WATER DEPARTMENT, AS NECESSARY TO INSTALL THE SANITARY SEWERS. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE 24" SANITARY SEWER.
11. CONTRACTOR SHALL HOLD EXISTING POLE AS NEEDED DURING VAULT CONSTRUCTION. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE BID ITEM FOR SITE WORK.
12. EXISTING CONDITIONS ARE SHOWN PRIOR TO MILL STREET BRIDGE PROJECT. CONTRACTOR TO VISIT SITE AND NOTE CHANGES TO EXISTING TOPOGRAPHY DUE TO THE MILL STREET BRIDGE PROJECT.
13. CONTRACTOR TO REMOVE EXISTING PAVEMENT MARKINGS, INSTALL ASPHALT PAVEMENT, AS SHOWN, AND ADD NEW PAVEMENT MARKINGS TO INCLUDE EDGE LINE MARKINGS AND CENTERLINE MARKING FOR THE RELOCATED SECTION OF ALLEN AVE. SE.
14. CONTRACTOR TO MAINTAIN ONE LANE OF TRAFFIC AT ALL TIMES.
15. CONTRACTOR TO REMOVE AND RESET THE EXISTING GUARD POSTS AS NEEDED TO INSTALL AND REMOVE THE PROPOSED TEMPORARY PAVEMENT. THE COST OF THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR SITE WORK.
16. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE MILL STREET BRIDGE REPLACEMENT PROJECT, BEAVER CONSTRUCTION.

ASPHALT PAVEMENT - 6" ODOT 304 BASE COURSE  
- 6" ODOT 301 SURFACE COURSE

ROW - APPROXIMATE RIGHT-OF-WAY LOCATION

**MAICOL FIRNIE** **ARCADIS**  
THE WATER DIVISION OF ARCADIS  
 LEGAL ENTITY:  
 ARCADIS U.S., INC.

---

CONSULTANTS

---

SEALS

STATE OF OHIO

ERIC M. FALLON

6-97551

REGISTERED PROFESSIONAL ENGINEER

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CITY OF CANTON, OHIO  
**WSI-ESI INTERCONNECTION VAULTS**

EST. 1805

CANTON, OHIO

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NO.	DATE	ISSUED FOR	BY

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DATE: NOVEMBER 2012

PROJECT NO.: AK000320.B001

FILE NAME: CANSIO1A

DESIGNED BY: ERIC FALLON

DRAWN BY: GARY BISHOP

CHECKED BY: DAVE FRANK

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SHEET TITLE

**SITE PLAN**

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SCALE: 1"=20'

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SHEET 3 OF 6

User: P:\MWSL\SON Spec: A15--NCSMOD File: M\_VENGEERING\PROJECTS CITY\ACTIVE\GP1114\_ALENFORD SE - 72IN SANITARY SEWER PROTECTION\DESIGN\CON-72IN CONN\CANTON VAULT DRAWINGS - ARCADIS\CAO\CANVT01A.DWG Scale: 1:1 Saved Date: 7/15/2013 Time: 09:52 Plot Date: p:\mws\son\2/15/2013 13:29 : Layout: 04

CONSULTANTS

SEALS



CITY OF CANTON, OHIO  
**WSI-ESI INTERCONNECTION VAULTS**



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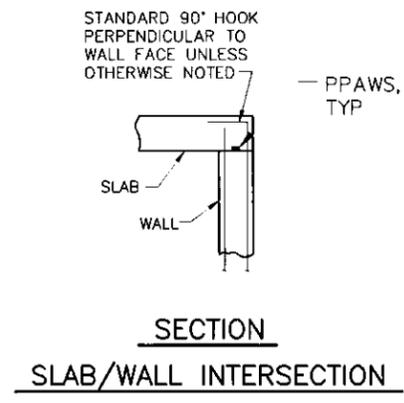
COPYRIGHT: ARCADIS U.S., INC. 2012

DATE: NOVEMBER 2012  
 PROJECT NO.: AK000320.0001  
 FILE NAME: CANVT01A  
 DESIGNED BY: LISA BOWE  
 DRAWN BY: GARY BISHOP  
 CHECKED BY: DAVE FRANK

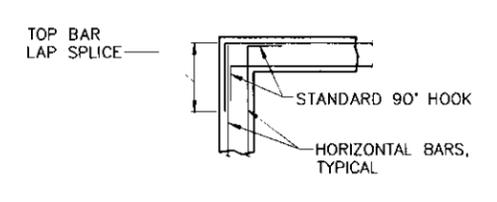
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**WSI INTERCONNECTION VAULT DETAILS**

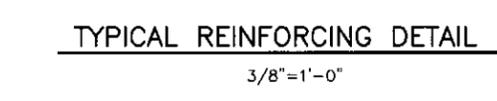
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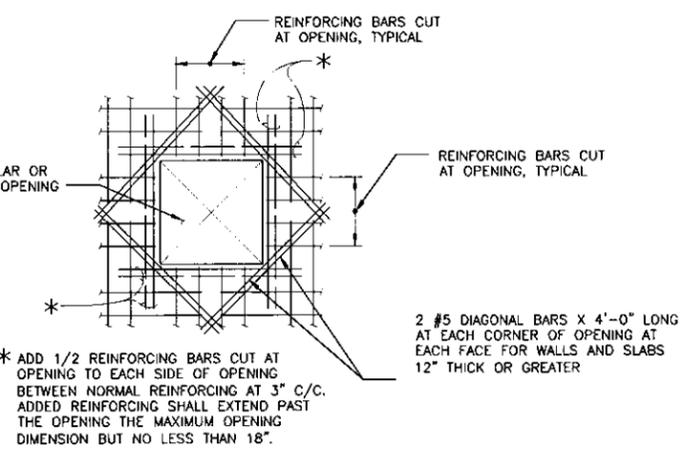
**SECTION**  
**SLAB/WALL INTERSECTION**



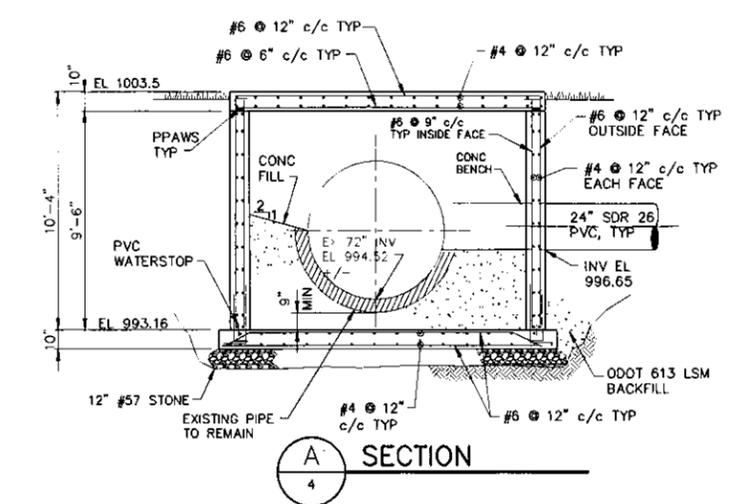
**SECTIONAL PLAN**  
**TYPICAL WALL INTERSECTION**



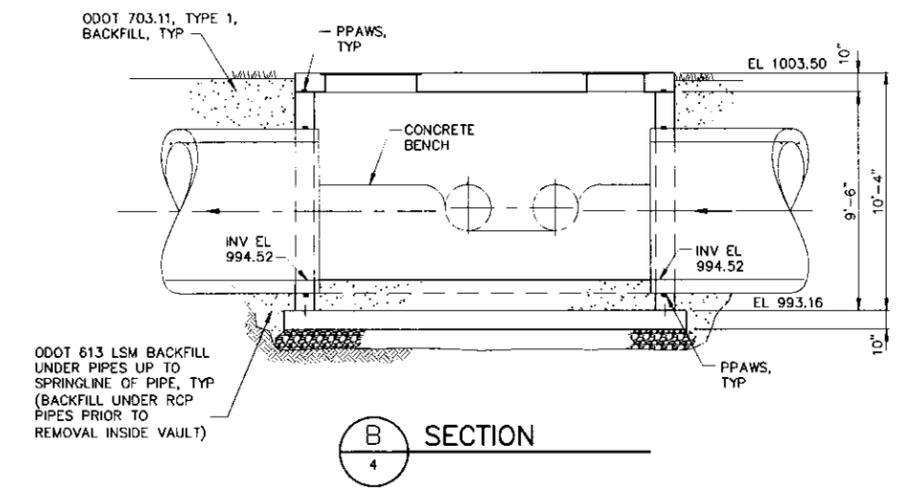
**TYPICAL REINFORCING DETAIL**  
 3/8"=1'-0"



**PLAN OR ELEVATION**  
**TYPICAL REINFORCING AROUND OPENINGS IN WALLS**  
 1/2"=1'-0"

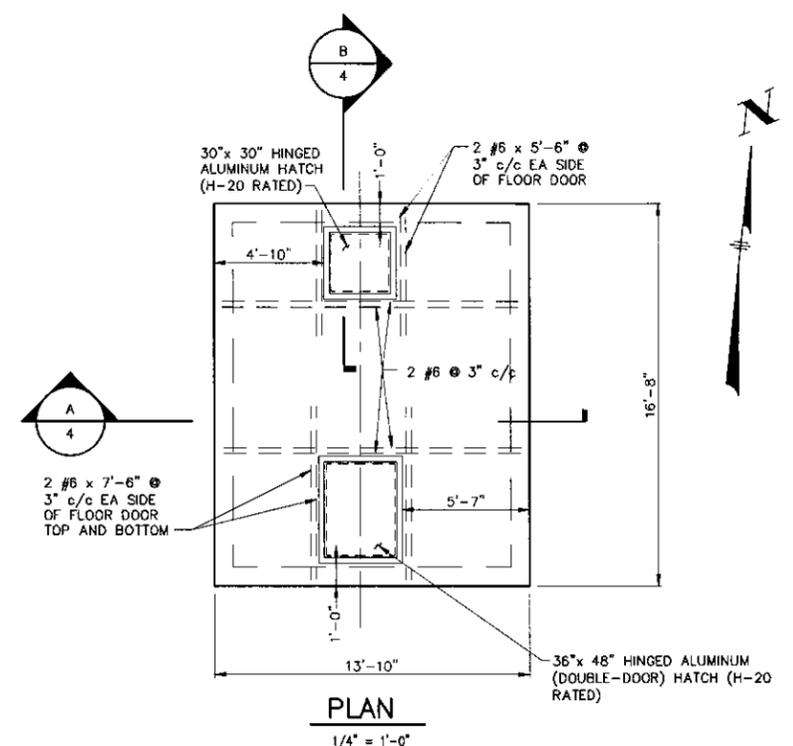


**SECTION**  
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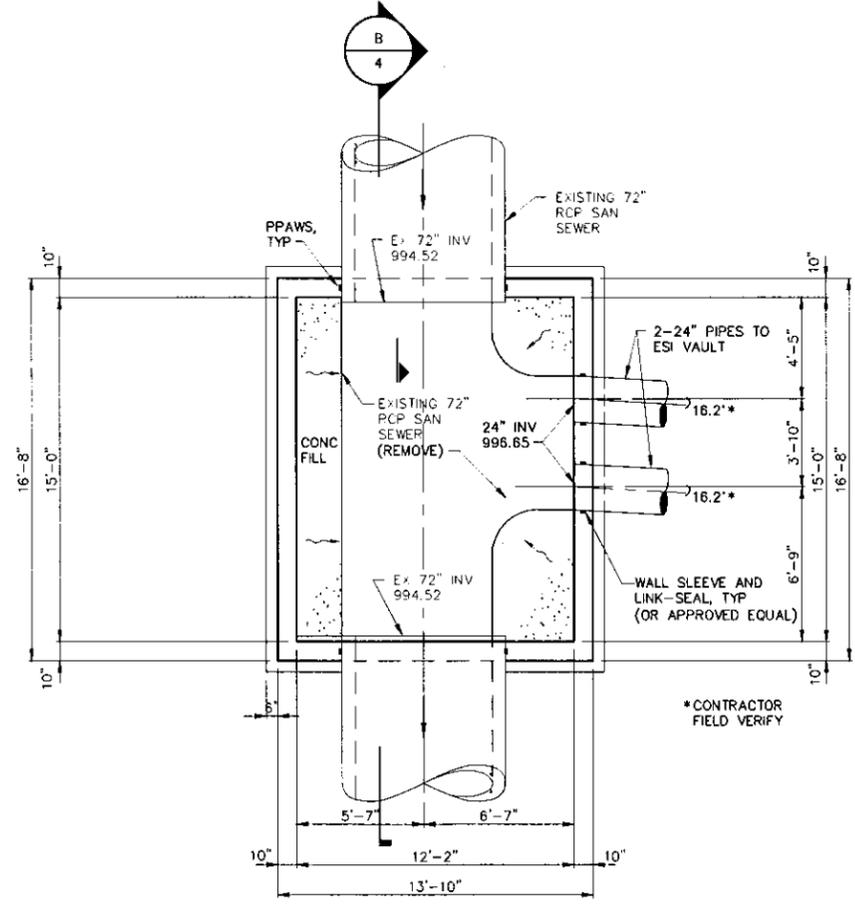


**SECTION**  
 B  
 4

- CONTRACTOR NOTES:**
- EXISTING RCP PIPE SHALL BE SUPPORTED AS REQUIRED ACROSS EXCAVATION DURING VAULT CONSTRUCTION



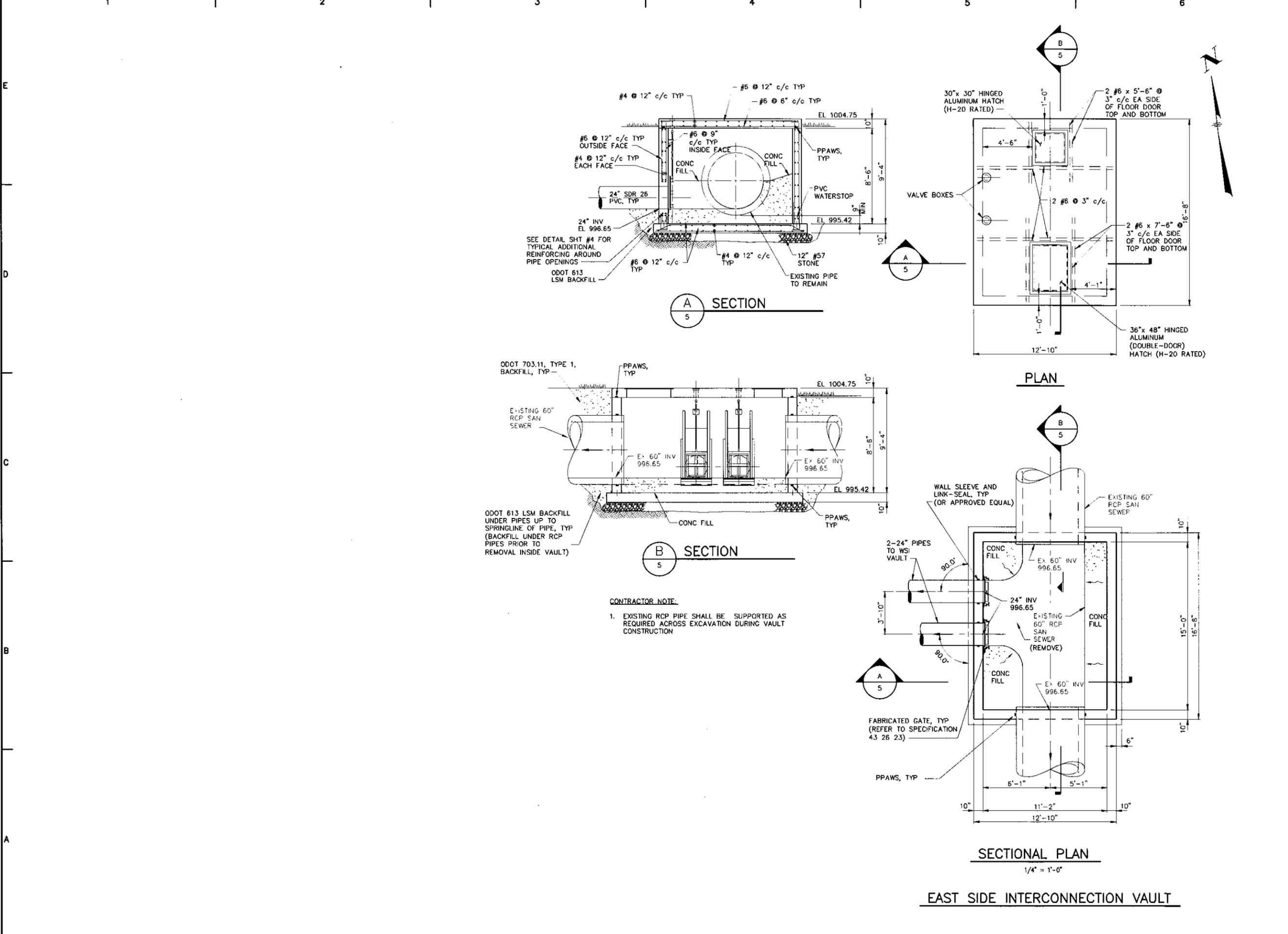
**PLAN**  
 1/4" = 1'-0"



**SECTION**  
 1/4" = 1'-0"

**WEST SIDE INTERCONNECTION VAULT**

User: P:\MILSON\_Spec-AUS-NC\SMOD\_Fir.M.\ENGINEERING\PROJECTS\_CTY\ACTIVE\OP1114\_ALLENFORD\_SF - 72IN SANITARY SEWER PROTECTION\DESIGN\EDM-72IN CONN\CANTON VAULT DRAWINGS - ARCADIS\CAD\CANYT02A.DWG Scale: 1:1 SavedDate: 2/15/2013 Time: 09:53 Plot Date: 2/15/2013 13:37:1 Layout: 05



**MALCOLM PIRNIE** **ARCADIS**  
 LEGAL ENTITY:  
 ARCADIS U.S., INC.

CONSULTANTS

SEALS

STATE OF OHIO  
 LISA A. BOWE  
 E-573869  
 REGISTERED PROFESSIONAL ENGINEER

CITY OF CANTON, OHIO  
 WSI-ESI INTERCONNECTION VAULTS

EST. 1805  
 CANTON, OHIO

NO.	DATE	ISSUED FOR	BY

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DATE: NOVEMBER 2012  
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 FILE NAME: CANYT02A  
 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

User: P:\MIS\SON Spc: AUS-NCS\KDD File: M\_VEN\ENGINEERING\PROJECTS\GTY\ACTIVE\GTY114 - ALLEN RD SE - 72IN SANITARY SEWER PROTECTION\DESIGN\CON-72IN CONN\CANTON VAULT DRAWINGS - ARCADIS\CAD\CANN001A.DWG Scale: 1:1 SheetDate: 2/15/2013 Time: 13:35 Plot Date: 2/15/2013 13:36 Layout: 06

**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**

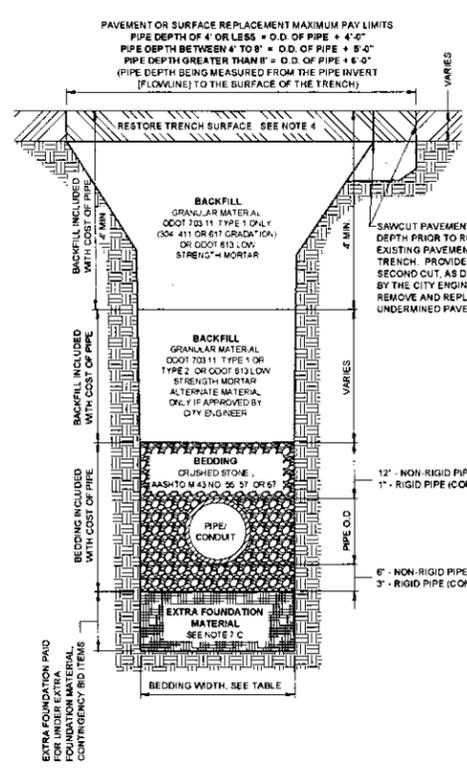
PIPE TYPE	MIN. WIDTH, TYP.	MAX. WIDTH, TYP.
NON-RIGID PIPE (PVC, HDPE, CMP, ALUMINUM)	PIPE I.D. x 1.25 + 1'-0"	PIPE O.D. + 2'-0"
RIGID PIPE (CONC. VIT. CLAY, DUCTILE IRON)	PIPE I.D. x 1.33	PIPE O.D. + 2'-0"

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, 617) AGGREGATE GRADATION OR TYPE 2 GRANULAR MATERIAL OR ODOT 813, 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. LETTING 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. 22 - BRUSH OR ASPHALT BRUSH.~~  
~~COMPOSITE STREET PAVEMENT SHALL BE REPLACED IN ACCORDANCE WITH CITY STD. DWG. NO. 51.~~

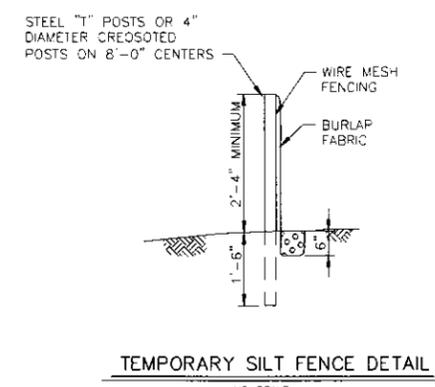
**SIDEWALK, CURB, AND DRIVEWAY RESTORATION:**  
DRIVEWAY SURFACES SHALL BE REPLACED IN ACCORDANCE WITH THE CURRENT EDITION OF THE CITY OF CANTON SPECIFICATIONS FOR THE CONSTRUCTION, REPAIR, AND REPLACEMENT OF SIDEWALKS, CURBS, AND DRIVEWAYS AND CITY STD. DWG. NOS. 28 THRU 33.

**LAWN RESTORATION:**  
LAWN SURFACES SHALL BE REPLACED WITH A MINIMUM OF 4" TOPSOIL SEED, 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.

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



TEMPORARY SILT FENCE DETAIL  
NO SCALE

OFFICE OF THE CITY ENGINEER  
CANTON, OHIO  
DANIEL J. MOEGLIN, P.E., CITY ENGINEER  
2436 39th St. NE 44705 330-489-3381 www.cantonohio.gov/engineering

APPROVED DATE	REVISIONS	DESCRIPTION	DATE	BY
JAN 2012				
		REVISIONS TO NOTES 7 & 8	6-4-2012	CDB

APPROVED BY: CDB, RMB, SLH  
DRAWING FILE NAME: ce\_19.dwg

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

**NOTES: (CONTINUED)**

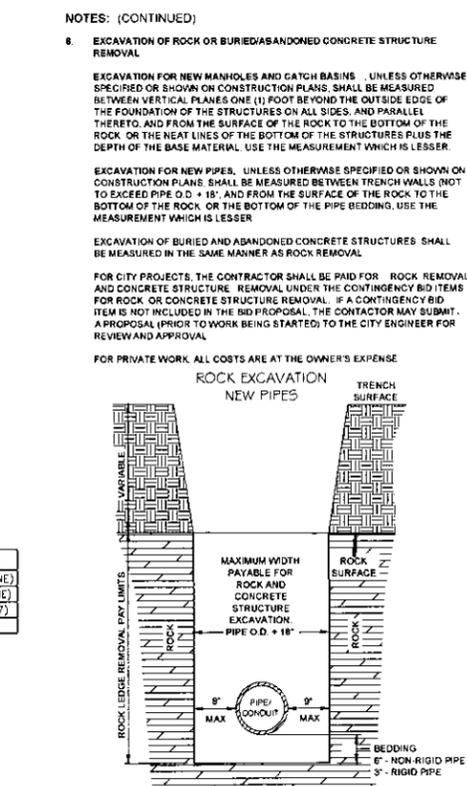
7. **PAY LIMITS**

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, S. 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. 18. 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 GEORID 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 (GEORID)



**NOTES: (CONTINUED)**

8. **EXCAVATION OF ROCK OR BURIED/ABANDONED CONCRETE STRUCTURE REMOVAL**  
EXCAVATION FOR NEW MANHOLES AND CATCH BASINS, UNLESS OTHERWISE SPECIFIED OR SHOWN ON CONSTRUCTION PLANS, SHALL BE MEASURED BETWEEN VERTICAL PLANES ONE (1) FOOT BEYOND THE OUTSIDE EDGE OF THE FOUNDATION OF THE STRUCTURES ON ALL SIDES, AND PARALLEL THERETO, AND FROM THE SURFACE OF THE ROCK TO THE BOTTOM OF THE ROCK OR THE NEAT LINES OF THE BOTTOM OF THE STRUCTURES PLUS THE DEPTH OF THE BASE MATERIAL. USE THE MEASUREMENT WHICH IS LESSER.

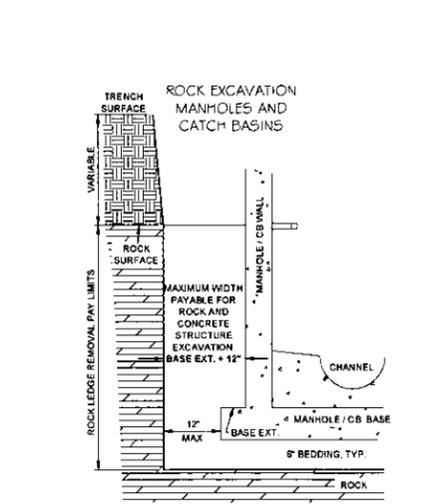
EXCAVATION FOR NEW PIPES, UNLESS OTHERWISE SPECIFIED OR SHOWN ON CONSTRUCTION PLANS, SHALL BE MEASURED BETWEEN TRENCH WALLS (NOT TO EXCEED PIPE O.D. + 18"), AND FROM THE SURFACE OF THE ROCK TO THE BOTTOM OF THE ROCK OR THE BOTTOM OF THE PIPE BEDDING. USE THE MEASUREMENT WHICH IS LESSER.

EXCAVATION OF BURIED AND ABANDONED CONCRETE STRUCTURES SHALL BE MEASURED IN THE SAME MANNER AS ROCK REMOVAL.

FOR CITY PROJECTS, THE CONTRACTOR SHALL BE PAID FOR ROCK REMOVAL AND CONCRETE STRUCTURE REMOVAL UNDER THE CONTINGENCY BID ITEMS FOR ROCK OR CONCRETE STRUCTURE REMOVAL. IF A CONTINGENCY BID ITEM IS NOT INCLUDED IN THE BID PROPOSAL, THE CONTRACTOR MAY SUBMIT A PROPOSAL PRIOR TO WORK BEING STARTED, TO THE CITY ENGINEER FOR REVIEW AND APPROVAL.

FOR PRIVATE WORK, ALL COSTS ARE AT THE OWNER'S EXPENSE.

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

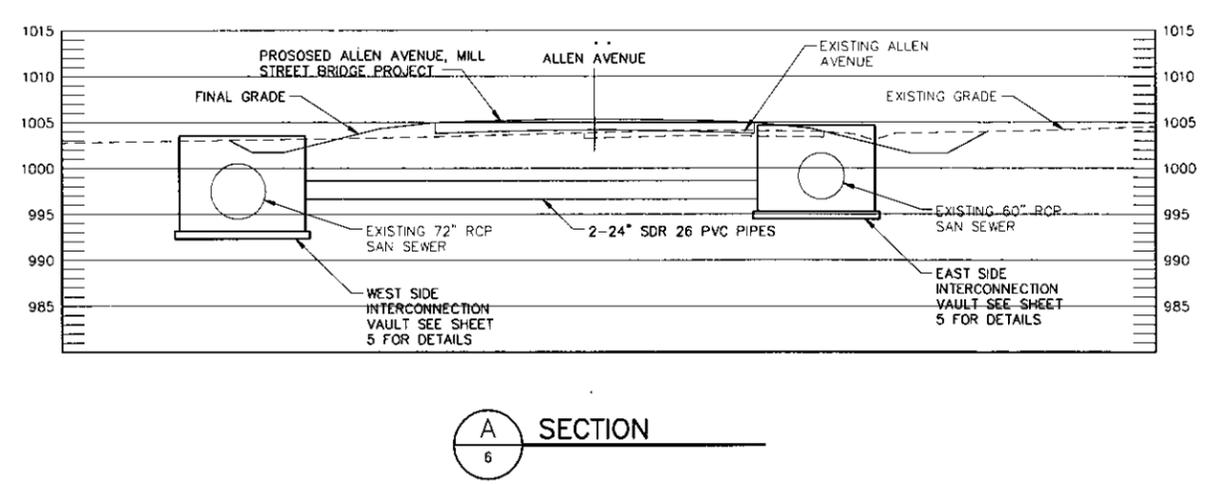


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APPROVED DATE	REVISIONS	DESCRIPTION	DATE	BY
JAN 2012				
		REVISIONS TO NOTES 7 & 8	6-4-2012	CDB

APPROVED BY: CDB, RMB, SLH  
DRAWING FILE NAME: ce\_19.dwg

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



A SECTION  
6

**MALCOLM PIRNIE** **ARCADIS**  
THE WATER DIVISION OF ARCADIS  
LEGAL ENTITY: ARCADIS U.S., INC.

**CONSULTANTS**

**SEALS**

STATE OF OHIO  
ERIC M. FALLON  
E-67551  
REGISTERED PROFESSIONAL ENGINEER

CITY OF CANTON, OHIO  
**WSI-ESI INTERCONNECTION VAULTS**

EST. 1805  
CANTON, OHIO

NO.	DATE	ISSUED FOR	BY

COPYRIGHT: ARCADIS U.S., INC. 2012

DATE: NOVEMBER 2012

PROJECT NO.: AK000320.B001

FILE NAME: CANN001A

DESIGNED BY: ERIC FALLON

DRAWN BY: GARY BISHOP

CHECKED BY: DAVE FRANK

SHEET TITLE

**MISCELLANEOUS DETAILS AND SECTION**

SCALE: NONE

SHEET 6 OF 6