CONSTRUCTION DRAWINGS

SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA PHASE 1

AUGLAIZE AND PERRY TOWNSHIPS, ALLEN COUNTY, OHIO

JUNE, 2013

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CONVENTIONAL SIGNS

BASELINE		12+00
RIGHT-OF-WAY		R/W
EDGE OF PAVEMENT		
GAS LINE		
UNDERGROUND TELEPHONE		T
OIL LINE		
SEWER		
FENCE		
WATER	EXISTING	PROPOSED
FIRE HYDRANT	EXISTING	PROPOSED
VALVES	EXISTING	PROPOSED
METERS	WATER WM	GAS GM
SERVICE VALVES	WATER	GAS
CATCH BASIN	EXISTING	
MANHOLE	EXISTING	
BUSH	EXISTING	
STUMP	EXISTING	
TREE	EXISTING	
POLES	POWER P TELEPHONE T LIGHT POLE ¢	
MAIL BOX	MB	
ASPHALT DRIVE	A	
CONCRETE DRIVE	C	
STONE DRIVE	S	
DO NOT DISTURB	DND	
GRANULAR BACKFILL	G.B.	
PERMANENT EASEMENT		
TEMPORARY EASEMENT		

VICINITY MAP

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

WE, THE UNDERSIGNED, HEREBY APPROVE AND ACCEPT THESE DRAWINGS AND THE SPECIFICATIONS FOR THIS PROJECT.

ALLEN WATER DISTRICT
Robert Murphy DATE 8-26-13

DIRECTOR OF UTILITIES
Michael Cogan DATE 8-26-13

OHIO ENVIRONMENTAL PROTECTION AGENCY
BY LETTER DATE OCTOBER 13, 2013

SPECIFICATIONS

THE CITY OF LIMA DEPARTMENT OF UTILITIES GENERAL SPECIFICATIONS FOR WATERLINES, THE PROJECT SPECIFICATIONS AND THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS DATED JANUARY 1, 2010, INCLUDING CHANGES LISTED IN THE PROPOSAL, SHALL GOVERN THE MAKING OF THIS IMPROVEMENT.

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

DESIGN AGENCY
KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Eaton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
TITLE SHEET

4/17/15 Southeast Phase I - As Built - pec
Bruce Insley - KK

PREPARED BWA	CHECKED JRM
DATE 8-21-13	DRAWING NO. C-949

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ITEM NO.	DESCRIPTION	QUANTITY	UNIT	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27			ITEM NO.
201	CLEARING AND GRUBBING		LUMP																									201
201	TREE REMOVED 18" SIZE	5	EACH						1	1				3														201
201	TREE REMOVED 30" SIZE	2	EACH			2																						201
201	TREE REMOVED 48" SIZE		EACH																									201
201	STUMP REMOVED 18" SIZE	7	EACH						4					3														201
201	STUMP REMOVED 30" SIZE		EACH																									201
201	STUMP REMOVED 48" SIZE		EACH																									201
202	GUARDRAIL, REMOVE AND REINSTALL	36	LF																					36				202
202	FENCE, REMOVE AND REINSTALL	115	LF						40						75													202
202	MAILBOX, REMOVE AND REINSTALL	17	EACH			2	1	1	2	2	9																	202
202	STREET SIGN, REMOVE AND REINSTALL	14	EACH	3				1	2	1	1								2	1		2			1			202
602	*CONCRETE MASONRY	10	CY																									602
603	*REPLACE PIPE, TYPE A 12" I.D. AND UNDER	500	LF																									603
603	*REPLACE PIPE, TYPE A OVER 12" I.D.	200	LF																									603
603	*REPLACE PIPE, TYPE B 12" I.D. AND UNDER	100	LF																									603
603	*REPLACE PIPE, TYPE B OVER 12" I.D.	50	LF																									603
603	REPLACE 12" CMP DRIVE PIPE	180	LF				20	82	12	66																		603
604	*CATCH BASIN, REPLACED	2	EACH																									604
614	MAINTAINING TRAFFIC		LUMP																									614
659	SEEDING AND MULCHING, CLASS 1	9965	SY	100	118	1397	292	927	330	596	1311		86	1394	877				433		11	941	1119		33			659
659	SEEDING AND MULCHING, CLASS 2	16152	SY	203	1416		1262		980	889		1438	1373		492	1556	1556	1556	647	663	1256		367	500				659
801	10" D.I. WATERLINE W/ FITTINGS & POLYETHYLENE ENCASEMENT	140	LF																					140				801
801	12" D.I. WATERLINE W/ FITTINGS & POLYETHYLENE ENCASEMENT	24922	LF	202	1400	1402	1405	874	1212	1373	1310	1306	1330	1360	1400	1400	1400	1400	993	657	1136	970	1400	758	234			801
801	10" RESILIENT SEAT GATE VALVE W/ VALVE BOX	1	EACH																					1				801
801	12" RESILIENT SEAT GATE VALVE W/ VALVE BOX	27	EACH	1	1		1	2	2	1	1	2	2	1	1	1	1	1	1	1	2	1	1	1	2			801
801	FIRE HYDRANT ASSEMBLY, TYPE A	13	EACH		2	1		1	1		3		2											2	1			801
801	FIRE HYDRANT ASSEMBLY, TYPE B	43	EACH	1	1	1	3	1	2	3		3		3	3	3	3	2	3	1	3	3	3		1			801
801	DOUBLE WRAP POLYETHYLENE ENCASEMENT FOR 12" WL	110	LF					110																				801
801	*12" NITRILE GASKETS	10	EACH																									801
802	12" D.I. WATERLINE W/ POLYETHYLENE ENCASEMENT INSTALLED BY HDD METHODS	2400	LF	360				100		30	90	40		40					60		200	430		650	400			802
809	CASING, INSTALLED BY BORING FOR 12" D.I. WATERLINE	60	LF																	60								809
812	GRANULAR BACKFILL (#57)	2757	CY		14	448	70	139	234	174	788	62	21	131	88				30		16	68	62	147	265			812
817	ASPHALT DRIVE REPAIR – HEAVY DUTY	226	SY											21										104	101			817
817	ASPHALT DRIVE REPAIR – STANDARD	123	SY			48		24		10	21			12								8						817
817	CONCRETE DRIVE REPAIR	36	SY					10			13			13														817
817	STONE DRIVE REPAIR	380	SY		12	34	9		10	18	37		18	33	90	21			17			43	37					817
817	CONCRETE SIDEWALK REPAIR	25	SF												25													817
899	ABANDON BOOSTER PUMP STATION		LUMP																									899
3000	PRECONSTRUCTION AUDIO-VIDEO DOCUMENTATION		LUMP																									3000
	SWP3 – EROSION CONTROL																											
207	*INLET PROTECTION USING SEDIGUARD OR SIMILAR	22	EACH	1	1	1		2		2	1	2		1							2	4	1		4			207
207	*TEMPORARY SEEDING (ODOT 207.02 & CLASS 7)	8300	SY																									207
207	*TEMPORARY SEDIMENT & EROSION CONTROL		LUMP																									207
207	*EROSION CONTROL MAT TYPE E (ODOT ITEM 712.11 E)	100	SY																									207
	* ENGINEER'S QUANTITY																											

DESIGN AGENCY
KOHLI & KALHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Bellefontaine Road, Lima, Ohio 45805 419-227-1133

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
SHEET LAYOUT QUANTITIES

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO C-949

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GENERAL NOTES

UTILITIES: THE ENGINEER CONTACTED OHIO UTILITIES PROTECTION SERVICE (OUPS) FOR THE LOCATION AND DEPTH OF EXISTING UNDERGROUND UTILITIES IN THE SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA THE (OUPS) REFERENCE NUMBERS FOR THE ABOVE PROJECT ARE AS FOLLOWS:

BREESE ROAD	A-235-600-076	DECEMBER 21, 2012
SCHOOLER ROAD	A-235-600-078	DECEMBER 21, 2012
HANTHORN ROAD	A-300-801-708	JANUARY 8, 2013
BELLEFONTAINE ROAD (S. R. 117)	A-300-801-716	JANUARY 8, 2013

THE CONTRACTOR SHALL CONTACT THE OHIO UTILITIES PROTECTION SERVICE (OUPS) AT 800-362-2764 AT LEAST TWO WORKING DAYS PRIOR TO PLANNED WORK.

THE FOLLOWING UTILITIES SERVE THE AREA WITHIN THE SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA AND HAVE FACILITIES WHICH MAY INTERFERE WITH CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE UTILITIES BEFORE THE WORK BEGINS AND WORK WITH THEM WHEN WORK IS ADJACENT TO THEIR FACILITIES. ANY AND ALL WORK REQUIRED FOR ADJUSTMENT OF PRIVATE UTILITIES SHALL BE DONE BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS.

WATER	CITY OF LIMA	419-221-5175
SAN. SEWERS	ALLEN COUNTY SANITARY ENGINEER	419-228-3700
ELECTRIC	AMERICAN ELECTRIC POWER	800-672-2231
	MID OHIO ENERGY	888-382-6732
	ODOT	419-222-9055
PHONE	CENTURYLINK	800-407-5411
	AT&T	419-245-5588
	QUEST	419-872-8534
	NKTELCO	419-753-2457
GAS	DOMINION EAST OHIO GAS	419-227-5416
CABLE VISION	TIME WARNER CABLE	419-331-2288
PIPELINE	BUCKEYE PIPELINE	877-530-5685

GAS LINE LOCATIONS SHOWN WERE LOCATED FROM FIELD MARKINGS AND SUPPLEMENTED WITH INFORMATION FROM MAPS SUPPLIED BY DOMINION.

WORK NEAR UTILITY LINES; SPECIAL CARE IS TO BE USED WHEN EXCAVATING NEAR UTILITY LINES. SHORING MAY BE REQUIRED TO PREVENT DAMAGE TO THE LINES.

PERMITS: THE COUNTY WILL PROVIDE THE NECESSARY PERMISSION TO CONSTRUCT THE WATERLINES ON STATE, COUNTY AND TOWNSHIP RIGHTS-OF-WAY. THE CONTRACTOR MUST OBTAIN PERMITS FROM THE COUNTY ENGINEER'S OFFICE AS WORK PROGRESSES FOR THE INDIVIDUAL LOCATIONS.

BRIDGE LOAD LIMITS; CONTRACTOR IS TO BE AWARE OF BRIDGES IN THE COUNTY THAT HAVE POSTED LOAD LIMITS. SEE LIST ON THIS PAGE.

MAINTAINING LOCAL TRAFFIC; THE WORK SHALL BE SCHEDULED SO THAT LOCAL TRAFFIC CAN ENTER AND EXIT THE WORK AREA WITH LITTLE INCONVENIENCE. OTHER PROVISIONS FOR MAINTAINING TRAFFIC ARE SET FORTH IN THE SPECIFICATIONS.

GRANULAR BACKFILL; GRANULAR BACKFILL OVER PIPE LOCATED UNDER PAVEMENT, DRIVEWAYS, BERMS AND PARKING AREAS SHALL EXTEND FROM PIPE BEDDING UP TO THE SURFACE. WHEN PIPE IS PARALLEL WITH AND 4 FEET OR MORE OUTSIDE THE EDGE OF PAVEMENT, GRANULAR BACKFILL SHALL BE PROVIDED UP TO A POINT X' BELOW THE SURFACE WHERE X = DISTANCE BETWEEN EDGE OF PAVEMENT AND CENTERLINE OF SEWER LESS 4 FEET. THE BALANCE OF THE TRENCH SHALL BE BACKFILLED WITH SELECT SOIL BACKFILL.

SEEDING AND MULCHING; QUANTITIES (ITEM 659) SHOWN ARE FOR RESEEDING DISTURBED AREAS ALONG THE PAVEMENT AND OTHER MOWABLE AREAS. DISTURBED AREAS THROUGH AGRICULTURAL AREAS AND OTHER OPEN AREAS SHALL BE SEEDED WITH A TEMPORARY SEED MIXTURE.

POSTED BRIDGES LOCATED IN ALLEN COUNTY

Load Limits

	SFN	Jur	Bridge No.	Road Name	Suff Rat	% OH Legal	Posted	Date Posted	Yr Blt	Yr Reh	Max Spn	Hrz Clr	In ADT
1	0239089	T	JAC-T0 221-2.16	FISHER RD.	15.9	0 %	CLOSED	11/21/1996	1924		42	18.8	167
2	0253898	T	SUG-T0 87-0.5	HOOK-WALTZ RD.	24.1	0 %	CLOSED	9/22/2010	1921	1982	57	16	158
3	0243329	T	MON-T0 87-4.71	HOOK WALTZ RD.	18.3	65 %	10	5/15/2013	1925		24	18.7	145
4	0246607	C	PER-C0 166-0.08	REAM RD.	22.5	85 %	10	11/20/2008	1930		34	20.7	145
5	0241172	C	MAR-C0 46-0.79	KIGGINS RD.	53.4	150 %	12	5/30/2013	1955		25	20.2	145
6	0243396	C	MON-C0 165-3.83	SLABTOWN RD.	78.6	100 %	12	5/30/2013	1963		32	24	1461
7	0230324	T	AMA-T0 113-0.24	SHAFFER RD.	70	100 %	13	5/30/2013	1964		28	28	145
8	0253960	C	SUG-C0 93-3.12	GOMER RD.	59.3	75 %	14	4/29/2009	1951		50	20	1537
9	0238672	C	JAC-C0 222-2.56	NAPOLEON RD.	13.1	75 %	15	5/15/2013	1928		50	21.6	1162
10	0230308	C	AMA-C0 77-5.5	GRUBB RD	26.5	80 %	15	4/29/2009	1946	1970	20	28	939
11	0232505	T	AME-T0 108-0.85	NEELY RD.	6.2	50 %	15	10/27/2010	1919	1961	22	22	1693
12	0254134	C	SUG-C0 88-3.95	LINCOLN HWY.	21.2	90 %	15	5/15/2013	1927		40	24.2	760
13	0241091	C	MAR-C0 84-6.49	STATE RD.	45.4	65 %	20	8/5/2009	1948		63	24.2	1265
14	0241113	C	MAR-C0 84-8.73	STATE RD.	21.6	115 %	20	12/1/2000	1935		16	24	831
15	0243450	C	MON-C0 173-0.1	THAYER RD.	23.5	85 %	20	12/9/1999	1925	1983	18	25	717
16	0249874	T	SHA-T0 144-5	HUME RD.	35	70 %	20	4/29/2009	1933		23	20	73
17	0249777	T	SHA-T0 140-2.24	ZURMEHLY RD.	23.8	50 %	20	3/20/2012	1950		60	20	3078
18	0247839	T	RIC-T0 227-0.14	SWANEY RD.	74.9	100 %	21	5/30/2013	1962	1978	29	24	290
19	0241156	C	MAR-C0 43-0.06	ACADIA RD.	55.6	90 %	25	3/16/2012	1954		50	22	610
20	0243655	T	MON-T0 257-0.74	WENTZ RD.	88	100 %	25	5/30/2013	1965		30	28	73
21	0249807	C	SHA-C0 142-5.36	BREESE RD.	60.1	100 %	26	5/30/2013	1958		41	20.1	3700
22	0249610	T	AME-ML 11-0.1	LIMA - COLLETT ST.	31.6	80 %	30	5/15/2013	1963		59	32	8262
23	0245372	T	BTH-ML 504-0.3	LIMA - CENTRAL AVE	25.2	75 %	30	4/29/2009	1972		63	30	5500
24	0254118	C	SUG-C0 88-2.62	LINCOLN HWY.	42.6	80 %	32	3/16/2012	1929	1972	20	43.8	947

Total No. Bridges w/ Load Limits 24

Printed Wednesday, May 29, 2013 *Page 1 of 1*

RECAP OF SPECIFICATIONS

12" WATERLINE: CL 350 DI CONFORMING WITH ANSI/AWWA C151/A21.51 AND ANSI/AWWA C150/A21.50. LINING CONFORMING TO ANSI/AWWA C104/A21.4

WATERLINE FITTINGS: ANSI/AWWA C110/A21.10 OR ANSI/AWWAC153/A21.53

VALVES: RESILIENT SEATED AWWA C509

FIRE HYDRANT: AWWA C-502 W/STAR NOZZLE CLOW EDDY MODEL F-2641

POLYETHYLENE ENCASEMENT: BLUE, 8 MIL. ANSI/AWWA C105/A21.5

HYDROSTATIC TEST: AWWA C600

STERILIZATION: AWWA C651

Storm Tile Repaired During Construction

	Date	Station	Size	Length
BREESE ROAD	12/2/2013	5+58	10	23
		6+81	10	68
		10+12	10	4
		12+19	10	46
	12/3/2013	15+22	10	8
		20+15	8	2
		20+62	6	3
	12/4/2013	23+38	8	8
		23+85	6	3
		26+35	4	8
		26+50	4	10
		27+14	4	3
		29+02	6	10
		29+17	4	6
	12/5/2013	29+98	6	3
		30+18	6	5
	12/9/2013	42+75	4	5
		57+05	4	6
SCHOOLER ROAD	12/17/2013	10+00	4	3
		26+50	6	5
HANTHORN ROAD	12/18/2013	11+00	4	50
	12/19/2013	19+75	6	4
		23+50	6	5
	1/13/2014	25+85	6	4
		26+02	4	4
		26+30	4	3
		28+13	4	5
		28+60	4	4
		29+55	4	3
		30+20	4	3
		30+61	4	3
	1/14/2014	32+03	6	27
		32+45	6	23
		34+12	4	5
		36+80	4	4
		37+65	4	5
	1/15/2014	40+03	4	4
		40+98	4	4
		43+26	4	4
		43+75	6	11
		44+70	4	4
	1/16/2014	45+45	4	4
	1/20/2014	53+53	8	8
		74+97	8	5
	2/4/2014	91+30	6	3
BELEFONTAINE ROAD	2/6/2014	30+78	4	3
	2/10/2014	34+97	4	2
	2/11/2014	38+54	4	4
		39+26	4	4
		39+40	6	5
		39+46	6	5
		39+50	10	6
	2/12/2014	41+21	4	4
		94+88	8	9
			Total	470

TREE AND/OR STUMP REMOVAL: COSTS TO REMOVE TREES, STUMPS AND BUSHES ARE TO BE INCLUDED IN THE PRICE UNDER ITEM 201 CLEARING AND GRUBBING. NO SEPARATE PAYMENT WILL BE MADE FOR TREE, STUMP OR BUSH REMOVAL. TREES, PLANTS AND SHRUBBERY NOT TO BE REMOVED SHALL BE CAREFULLY PROTECTED DURING THE PROGRESS OF THE WORK. IF TREES CAN BE SAVED BY MOVING THE SEWER LOCATION, THIS WILL BE DONE WHERE POSSIBLE.

TREE REMOVAL SHALL BE LIMITED TO THAT NECESSARY FOR CONSTRUCTION. TREE REMOVAL WILL BE COMPLETED BETWEEN THE DATES OF SEPTEMBER 15 TO APRIL 1. NO TREE REMOVAL WILL BE PERMITTED OUTSIDE OF STREET RIGHTS-OF-WAY OR PERMANENT EASEMENT LIMITS.

TREES WHICH ARE NOT REMOVED SHALL BE PROTECTED FROM DAMAGE WHEN REMOVING ADJACENT TREES. SOIL OR OTHER FILL MATERIAL SHALL NOT BE STORED NEXT TO OR WITHIN THE DRIP-LINE OF TREES.

"AS CONSTRUCTED DRAWINGS"; THE CONTRACTOR SHALL KEEP AN ACCURATE RECORD OF ALL DEVIATIONS FROM THE DRAWINGS AND MAKE THIS INFORMATION AVAILABLE DURING WORKING HOURS. AT THE COMPLETION OF WORK, THE CONTRACTOR SHALL GIVE TO THE COUNTY A MARKED-UP SET OF DRAWINGS SHOWING ALL DEVIATIONS AND ALL SEWER CONNECTION LOCATIONS.

THE CONTRACTOR SHALL MAINTAIN TRAFFIC DURING CONSTRUCTION.

WHEN CROSSING THE PAVEMENT, PROVIDE BARRELS AND FLAGGERS TO DESIGNATE THE LANE OF TRAVEL IN ORDER TO MAINTAIN TRAFFIC FLOW.

WHEN WORKING PARALLEL TO THE PAVEMENT PROVIDE BARRELS TO DESIGNATE THE WORK ZONE AND MAINTAIN TRAFFIC FLOW. PROVIDE FLAGGERS FOR TRUCKS ENTERING AND EXISTING THE DESIGNATED WORK ZONE.

WATERLINE GENERAL NOTES:

THE CONTRACTOR IS TO SCHEDULE WORK WITH THE CITY OF LIMA UTILITIES DEPARTMENT BEFORE MAKING CONNECTIONS TO EXISTING LINES.

ALL WATERLINES TO HAVE MINIMUM 4 FEET OF COVER OR AS SHOWN.

ALL WATERLINE SHALL HAVE 18 INCHES OF VERTICAL SEPARATION AND 10 FEET HORIZONTAL SEPARATION WITH SANITARY SEWERS AND HAVE NO CONTACT OR ENTRY WITH SEWER MANHOLES.

ALL WATERLINES, VALVES, FITTINGS, ETC. ARE TO BE WRAPPED WITH 8 MIL BLUE POLYETHYLENE MATERIAL AND TAPED IN ACCORDANCE WITH ANSI/AWWA C105/A21.5.

ALL TRENCHES WITHIN 6' OF PAVEMENT OR UNDER PAVEMENT, DRIVEWAYS, SIDEWALKS, ETC. SHALL BE BACKFILLED WITH GRANULAR MATERIAL CONFORMING WITH ODOT ITEM 703.11 TYPE 3 (#57).

HYDROSTATIC TESTING IN ACCORDANCE WITH AWWA C-600 AND STERILIZATION IN ACCORDANCE WITH AWWA C-651 TO BE COMPLETED UNDER THE DIRECTION OF THE PROJECT INSPECTOR. ALL WATER WITH CHLORINE SOLUTION SHALL BE DISCHARGED TO THE SANITARY SEWER SYSTEM.

ALL FITTINGS AND VALVES SHALL BE BLOCKED AS SHOWN ON THE STANDARD DETAILS. RESTRAINED MECHANICAL JOINTS SUCH AS SERIES 1100 MEGALUG BY EBBA IRON, INC. OR EQUAL MAY BE USED WITH OWNERS APPROVAL.

THE CONTRACTOR IS TO SEED DISTURBED AREAS OUTSIDE OF DRIVEWAYS AND PARKING AREAS. MAXIMUM PAY WIDTH IS 9' WIDE ALONG PAVEMENT, AND 25' WIDE IN AREAS AWAY FROM PAVEMENT. ALL AREAS DISTURBED OUTSIDE THESE LIMITS SHALL BE SEEDED AT THE CONTRACTOR'S EXPENSE.

SPECIAL NOTES

THE CITY OF LIMA DEPARTMENT OF UTILITIES WILL COMPLETE THE VARIOUS CONNECTIONS AND SERVICES AFTER TESTING HAS BEEN COMPLETED AND THE NEW MAIN ACCEPTED BY THE OWNER.

1 10-4-2013 BWA REV.

DESIGN AGENCY
KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Bellefontaine Road, Lima, Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
GENERAL NOTES

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949

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NOTE:
THESE ILLUSTRATIONS FOR REFERENCE ONLY
ACTUAL DIMENSIONS OF THRUST RESTRAINT
TO BE DETERMINED BY ENGINEER OR DEPT.
OF UTILITIES REPRESENTATIVE

FILE NAME: DPN5

DETAIL PAGE NUMBER 5

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS
CONCRETE THRUST RESTRAINT

DRAWN:	DATE:	
K.SHOEMAKER	10/26/10	DETAIL PAGE NUMBER 5

FILE NAME: DPN7

DETAIL PAGE NUMBER 7

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS
POLY WRAP INSTALLATION

DRAWN:	DATE:	
K.SHOEMAKER	10/26/10	DETAIL PAGE NUMBER 7

NOTE: ALL EXPOSED BOLTS AND FITTINGS INCLUDING LOWER BARREL OF HYDRANT TO BE WRAPPED IN 8 MIL BLUE POLYETHYLENE.

TYPE A FIRE HYDRANT

FILE NAME: DPN1

DETAIL PAGE NUMBER 1

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS
TYPICAL HYDRANT INSTALLATION

DRAWN:	DATE:	
K.SHOEMAKER	10/26/10	DETAIL PAGE NUMBER 1

SEE ADDITIONAL INFORMATION IN GENERAL SPECIFICATIONS PAGE 8

FILE NAME: DPN8

DETAIL PAGE NUMBER 8

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS
CASING DETAIL

DRAWN:	DATE:	
K.SHOEMAKER	10/26/10	DETAIL PAGE NUMBER 8

TYPICAL VALVE AND DEAD END INSTALLATION

FILE NAME: DPN6

DETAIL PAGE NUMBER 6

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS
VALVE AND PLUGGED/CAPPED DEAD END

DRAWN:	DATE:	
K.SHOEMAKER	10/26/10	DETAIL PAGE NUMBER 6

NOTE: ALL EXPOSED BOLTS AND FITTINGS INCLUDING LOWER BARREL OF HYDRANT TO BE WRAPPED IN 8 MIL BLUE POLYETHYLENE.

TYPE B FIRE HYDRANT

FILE NAME: DPN2

DETAIL PAGE NUMBER 2

CITY of LIMA, DEPT. of UTILITIES
WATERLINE GENERAL SPECIFICATIONS
HYDRANT INST. (COMB. HYD. TEE & 90° BEND)

DRAWN:	DATE:	
K.SHOEMAKER	10/26/10	DETAIL PAGE NUMBER 2

TYPE A BACKFILL SHALL BE ODOT ITEM 703.11 TYPE 3 (#57 STONE)

TYPE B BACKFILL SHALL BE NATURAL SOIL FREE OF STONES LARGER THAN 2", VEGETATION, DEBRIS OR FROZEN MATERIAL.

TYPE C BACKFILL SHALL BE NATURAL SOIL FREE OF STONES LARGER THAN 6", VEGETATION, DEBRIS OR FROZEN MATERIAL.

TRENCH BACKFILL MATERIAL

1. UNDER PAVEMENT AND DRIVES USE TYPE A GRANULAR BACKFILL PLACED IN LAYERS AND COMPACTED TO 95% OF MAXIMUM DRY WEIGHT AS DETERMINED BY ASTM D-698 (AASHTO T99 METHOD C) OR OTHER APPROVED METHOD.

2. WITHIN 4 FEET OF PAVEMENT, USE TYPE A BACKFILL TO WITHIN 12 INCHES OF SURFACE. REMAINDER OF TRENCH TO BE BACKFILLED USING TYPE B BACKFILL WITH TOP 6 INCHES BEING TOPSOIL.

3. NOT UNDER PAVEMENT USE TYPE B AND TYPE C EXCAVATED MATERIAL TAMPED IN 6 INCH LAYERS TO 98% OF MAXIMUM DRY WEIGHT AS DETERMINED BY ASTM D-698 (AASHTO T99 METHOD C) OR OTHER APPROVED METHOD.

TYPICAL TRENCH DETAILS
N.T.S.

REPLACEMENT PIPE – TYPE A CONDUIT (SAME SIZE AS EXISTING)

PROVIDE A CONCRETE COLLAR OR OTHER ACCEPTABLE MEANS OF JOINING PIPE SUCH AS A FERNCO FLEXIBLE COUPLING WITH STAINLESS STEEL CLAMPS.

EXISTING DRAINAGE PIPE MINIMUM OF 2' OF UNDISTURBED BEARING SURFACE

COMPACTED GRANULAR BACKFILL UNDER PIPE

THE CONTRACTOR SHALL RESTORE ALL EXISTING DRAINAGE DISTURBED DURING TIE WORK. REPLACEMENT PIPE FOR DRAINAGE CROSSING THE TRENCH SHALL BE TYPE A CONDUIT AS SPECIFIED UNDER 603.02. DRAINAGE PIPE PARALLEL TO THE TRENCH SHALL BE REPLACED WITH TYPE B CONDUIT AS SPECIFIED UNDER 603.02. TYPE OF CONDUIT SHALL BE DETERMINED BY THE ENGINEER.

*PAY LENGTH FOR ALL DRAINAGE PIPES SHALL BE PAID IN ACCORDANCE WITH ITEM 603.09 AND 603.10. QUANTITIES TO BE USED AT THE DIRECTION OF THE ENGINEER ARE ESTABLISHED IN THE BID SCHEDULE.

DRAINAGE REPLACEMENT
ITEM 603

RESTRAINED MECHANICAL JOINT
NTS

DESIGN AGENCY
KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
CONSTRUCTION DETAILS

PREPARED	CHECKED
BWA	JRM

DATE	DRAWING NO
8-21-13	C-949

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NOTE: DRILL DOWEL REROD INTO THE EXISTING CONCRETE AND ADD REROD TO THE NEW POUR.

NOTE: IN THE WINTER MONTHS, COLD MIX SHALL BE USED INSTEAD OF 448 AND REPLACED WITH 448 IN THE SPRING.

CONCRETE PAVEMENT

BEDDING DETAILS

BACKFILL UNDER THE ROADWAY SHALL BE FULL DEPTH OF STRUCTURAL BACKFILL, TYPE 1 WET FROM QUARRY COMPACTED AS DIRECTED BY THE ALLEN COUNTY ENGINEER IN 6" LIFTS (MAX.). MINIMUM HORIZONTAL DISTANCE OF GRANULAR BACKFILL SHALL BE 4' BACK OF CURB OR 6' BACK OF EDGE OF PAVEMENT

CONTRACTOR SHALL PERFORM ONE OF THE FOLLOWING:

1. BACKFILL THE TRENCH AS SPECIFIED ABOVE AND IMMEDIATELY PAVE WITH 448 GRADE HOT MIX; OR

2. BACKFILL TRENCH WITH STONE AS SPECIFIED AND PATCH TEMPORARILY WITH COLD MIX. LATER, THE COLD MIX SHALL BE REMOVED, THE STONE SHALL BE FLOODED WITH WATER TO OBTAIN COMPACTION AND THE CUT SHALL BE PAVED WITH 448 GRADE HOT MIX

FLEXIBLE PAVEMENT

A. Asphalt Drive Repair – Heavy Duty 5" of 448 in 2 (two) coarses (1 ½" over 3 ½") over 12" compacted 304 aggregate.
B. Asphalt Drive Repair – Standard 4" of 448 in 2 (two) coarses (1 ½" over 2 ½") over 7" compacted 304 aggregate.
C. Concrete Drive Repair – 7" of 452 over 7" compacted 304 aggregate.
D. Stone Drive Repair – 3" of 411 over 7" compacted 304 aggregate.

REVISIONS			ALLEN COUNTY, OHIO
NO.	DATE	BY	COUNTY ENGINEER
1	8-26-03	TJP	
2	10-5-06	RJM	PAVEMENT - REPLACEMENT ABOVE ROAD CUTS
3	1-26-11	RJM	
			STANDARD CONSTRUCTION DRAWING RC-1
			DRAWN BY: RJM APPROVED BY: T.J. PIPER

ALLEN COUNTY ENGINEER'S OFFICE STANDARD CONSTRUCTION DRAWING – RC-1

LONGITUDINAL UTILITY INSTALLATION AND FIRE HYDRANT LOCATION DETAIL

NOTES:

1. LONGITUDINAL UTILITY INSTALLATIONS WITHIN THE RIGHT-OF-WAY LIMITS SHALL BE LOCATED BETWEEN THE ROADSIDE DITCH AND RIGHT-OF-WAY LINE. THE PREFERRED UTILITY POLE LOCATION IS 1'-0" FROM THE RIGHT-OF-WAY LINE AND THE PREFERRED FIRE HYDRANT LOCATION IS 2'-0" FROM THE RIGHT-OF-WAY LINE. UNDER NO CIRCUMSTANCES WILL A FIRE HYDRANT BE PERMITTED CLOSER THAN SIX (6) FEET TO THE EDGE OF PAVEMENT. THE DISTANCE FROM THE TOP OF THE LOWER BARREL OF THE FIRE HYDRANT TO THE GROUND LEVEL SHALL BE BETWEEN TWO (2) INCHES MINIMUM AND SIX (6) INCHES MAXIMUM. SEE THE RESPECTIVE TOWNSHIP FOR FIRE HYDRANT SPECIFICATIONS.
2. SEE ALLEN COUNTY STANDARD CONSTRUCTION DRAWINGS BFR-1, BFT-1 AND BFT-2 FOR ADDITIONAL SPECIFICATIONS.
3. NO OPEN CUTTING OF A COUNTY ROADWAY WILL BE PERMITTED.
4. TRACKED EQUIPMENT SHALL NOT BE PERMITTED ON THE ROADWAY. OPERATION OF CONSTRUCTION EQUIPMENT FROM OR ON THE ROADWAY SHALL BE PROHIBITED UNLESS WRITTEN APPROVAL IS GRANTED BY THE ALLEN COUNTY ENGINEER. IF ANY PAVEMENT OR SHOULDERS/BERMS IS/ARE DAMAGED EITHER BY CONSTRUCTION, CONSTRUCTION EQUIPMENT OR BY EXCESSIVE WEIGHT, THE PERMITEE SHALL MAKE COMPLETE RESTORATION AS DIRECTED BY THE COUNTY ENGINEER.
5. THE PAVEMENT AND BERMS MUST BE KEPT CLEAN OF DIRT, MUD AND DEBRIS AT ALL TIMES. EXCAVATED MATERIALS SHALL NOT BE PILED, BROADCAST OR STOCKPILED UPON THE ROAD SURFACE. MATERIAL IS TO BE LOADED ONTO TRUCKS AS EXCAVATED FOR REMOVAL OR REUSE.
6. NO TRENCH SHALL BE EXCAVATED TO A WIDTH WHICH EXCEEDS EIGHTEEN (18) INCHES MORE THAN THE OUTSIDE DIAMETER OF THE PIPE BEING INSTALLED.
7. ALL WORK REQUIRING PERSONNEL OR VEHICLES WITHIN ALLEN COUNTY ROAD RIGHT-OF-WAY SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND ITEM 614 (MAINTAIN TRAFFIC) OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS, LATEST EDITIONS.
8. ROADSIDE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES. ONLY THE ALLEN COUNTY ENGINEER WILL DETERMINE IF A STORM SEWER NEEDS TO BE RELOCATED AND IT SHALL BE RELOCATED IN A MANNER AND WITH MATERIALS APPROVED BY THE ALLEN COUNTY ENGINEER. A SEPARATION OF ONE (1) FOOT BETWEEN THE UTILITY AND THE STORM SEWER IS REQUIRED, WITH THE STORM SEWER BEING ABOVE THE UTILITY.
9. ALL OPEN CUTS OF DRIVEWAYS SHALL BE COORDINATED WITH THE LANDOWNERS AND THE DRIVEWAY SHALL BE RESTORED TO A CONDITION AS GOOD OR BETTER THAN EXISTED PRIOR TO THE WORK AND MUST MEET THE SPECIFICATIONS OF ALLEN COUNTY STANDARD CONSTRUCTION DRAWINGS DW-1, DW-2 AND/OR DW-3.
10. THE ROAD RIGHT-OF-WAY SHALL BE RESTORED TO A CONDITION AS GOOD AS OR BETTER THAN EXISTED PRIOR TO THE WORK. ALL DISTURBED VEGETATION IS TO BE SEEDED AND MULCHED AS SPECIFIED BY THE ALLEN COUNTY ENGINEER.

REVISIONS			ALLEN COUNTY, OHIO
NO.	DATE	BY	COUNTY ENGINEER
			LONGITUDINAL UTILITY INSTALLATION AND FIRE HYDRANT LOCATION DETAIL
			STANDARD CONSTRUCTION DRAWING LUI-1
			DRAWN BY: RJM APPROVED BY: T.J. PIPER

ALLEN COUNTY ENGINEER'S OFFICE STANDARD CONSTRUCTION DRAWING – LUI-1

GRANULAR BACKFILL OF BORE PITS

BORE PIT BETWEEN 4'-0" FROM THE EDGE OF PAVEMENT AND ROADSIDE DITCH

BORE PIT BEYOND FLOWLINE OF ROADSIDE DITCH

NOTES:

1. ANY UTILITY PLACED UNDER THE ROADWAY SHALL BE WITHIN A CASING APPROVED BY THE ALLEN COUNTY ENGINEER AND THE RESPECTIVE UTILITY.
2. ALL UTILITIES PLACED UNDER THE ROADWAY SHALL BE A MINIMUM OF 36" BELOW THE SURFACE OF THE GROUND AT THE DITCH FLOW LINE.
3. BORE PITS SHALL BE A MINIMUM OF 4'-0" FROM THE EDGE OF PAVEMENT.
4. ANY BORE PIT BETWEEN 4'-0" OF THE EDGE OF PAVEMENT AND THE FLOWLINE OF THE ROADSIDE DITCH SHALL BE BACKFILLED TO WITHIN 1'-0" OF THE GROUND SURFACE WITH COMPACTED STRUCTURAL BACKFILL, TYPE 3 IN 6" LIFTS (MAX.).
5. ANY BORE PIT BEYOND THE FLOWLINE OF THE ROADSIDE DITCH SHALL BE BACKFILLED AT A 1:1 SLOPE WITH COMPACTED STRUCTURAL BACKFILL, TYPE 3 IN 6" LIFTS (MAX).
6. SEE ALLEN COUNTY STANDARD CONSTRUCTION DRAWING LUI-1 FOR ADDITIONAL DETAILS.

REVISIONS			ALLEN COUNTY, OHIO
NO.	DATE	BY	COUNTY ENGINEER
1	8-26-03	RJM	
2	10-5-06	RJM	GRANULAR BACKFILL OF BORE PITS
3	1-26-11	RJM	
			STANDARD CONSTRUCTION DRAWING BPB-1
			DRAWN BY: RJM APPROVED BY: T.J. PIPER

ALLEN COUNTY ENGINEER'S OFFICE STANDARD CONSTRUCTION DRAWING – BPB-1

GRANULAR BACKFILL OF TRENCHES PARALLEL TO ROADWAYS

TRENCH WITHIN 4'-0" OF EDGE OF PAVEMENT

TRENCH BETWEEN 4'-0" OF EDGE OF PAVEMENT AND ROADSIDE DITCH

TRENCH BEYOND FLOWLINE OF ROADSIDE DITCH

NOTES:

1. ANY TRENCH WITHIN 4'-0" OF THE EDGE OF PAVEMENT SHALL BE BACKFILLED COMPLETELY WITH COMPACTED STRUCTURAL BACKFILL, TYPE 1 WET FROM QUARRY IN 6" LIFTS (MAX).
2. ANY TRENCH BETWEEN 4'-0" OF THE EDGE OF PAVEMENT AND THE FLOWLINE OF THE ROADSIDE DITCH SHALL BE BACKFILLED TO WITHIN 1'-0" OF THE GROUND SURFACE WITH COMPACTED STRUCTURAL BACKFILL, TYPE 3 IN 6" LIFTS (MAX).
3. ANY TRENCH BEYOND THE FLOWLINE OF THE ROADSIDE DITCH SHALL BE BACKFILLED AT A 1:1 SLOPE WITH COMPACTED STRUCTURAL BACKFILL, TYPE 3 IN 6" LIFTS (MAX.).
4. SEE ALLEN COUNTY STANDARD CONSTRUCTION DRAWING LUI-1 FOR ADDITIONAL DETAILS.

REVISIONS			ALLEN COUNTY, OHIO
NO.	DATE	BY	COUNTY ENGINEER
1	8-26-03	RJM	
2	10-5-06	RJM	GRANULAR BACKFILL OF TRENCHES PARALLEL TO ROADWAYS
3	1-26-11	RJM	
			STANDARD CONSTRUCTION DRAWING BFT-2
			DRAWN BY: RJM APPROVED BY: T.J. PIPER

ALLEN COUNTY ENGINEER'S OFFICE STANDARD CONSTRUCTION DRAWING – BFT-2

1 10-4-2013 BWA REV.

DESIGN AGENCY
KOHLI & KALLHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Bolton Ravage, Lima, Ohio 45805 419-227-1133

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
CONSTRUCTION DETAILS

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949
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EROSION AND SEDIMENTATION CONTROL

1. EROSION AND SEDIMENTATION CONTROL PRACTICES SHALL BE INSTALLED TO NATURAL RESOURCES CONSERVATION SERVICE OR EQUIVALENT STANDARDS AND SPECIFICATIONS FOR PARTICULAR TECHNIQUES. THE PRACTICES ARE TO BE MAINTAINED IN EFFECTIVE WORKING CONDITION DURING CONSTRUCTION AND UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

2. CLEARING AND GRUBBING SHALL NOT COMMENCE UNTIL THE CONTRACTOR IS PREPARED TO START CONSTRUCTION.

3. EXISTING TOPSOIL THAT IS TO BE REUSED SHALL BE STOCKPILED AND REPLACED UPON FINAL GRADING. STOCKPILED TOPSOIL SHALL BE PROTECTED WITH SILT BARRIERS AND TEMPORARY SEEDING OR A COVERING SUCH AS ANCHORED STRAW MULCH.

4. EXCAVATED MATERIALS SHALL BE STOCKPILED ON THE UPHILL SIDE OF TRENCHES.

5. ONLY THOSE TREES, SHRUBS, AND GRASSES THAT MUST BE REMOVED FOR CONSTRUCTION MAY BE REMOVED; PROTECT THE REST TO PRESERVE THEIR AESTHETIC, HABITAT, AND EROSION CONTROL VALUES.

6. DISTURBED LAND EXPOSED LONGER THAN 15 DAYS SHALL BE TEMPORARILY STABILIZED BY SEEDING AND MULCHING OR MULCHING ALONE.

7. AS CONSTRUCTION IS COMPLETED, PERMANENTLY STABILIZE EACH DISTURBED AREA WITH PERENNIAL VEGETATION. IF FINAL GRADING AND SEEDING WILL NOT OCCUR WITHIN 30 DAYS, ALL DISTURBED AREAS SHALL BE TEMPORARILY SEEDED AND/OR MULCHED IMMEDIATELY.

8. FINAL GRADING SHALL BE CONSISTENT WITH PRE-CONSTRUCTION TOPOGRAPHY TO MAINTAIN DRAINAGE AND AESTHETICS.

9. NO MORE THAN 200 FEET OF TRENCH SHALL BE OPEN AT ANY TIME. MINIMIZE THE AREA DISTURBED FOR TRENCH OPENING, LAYING OF PIPE, AND BACKFILLING.

10. TRENCHES SHALL BE BACKFILLED IMMEDIATELY; COMPACT AND SEED AND/OR MULCH TRENCHES IN UNPAVED AREAS WITHIN 15 DAYS AFTER THEY HAVE BEEN OPENED.

11. UNPAVED AREAS SHALL BE WET DOWN AS NECESSARY USING WATER OR OTHER ENVIRONMENTALLY BENIGN SUBSTANCE DURING CONSTRUCTION TO MINIMIZE DUST.

12. IF WORK IS SUSPENDED FOR ANY REASON, THE CONTRACTOR SHALL MAINTAIN THE SOIL EROSION AND SEDIMENTATION CONTROLS IN GOOD OPERATING CONDITION DURING THE SUSPENSION OF THE WORK. ALSO, WHEN SEASONAL CONDITIONS PERMIT AND THE SUSPENSION OF WORK IS EXPECTED TO EXCEED A PERIOD OF ONE MONTH, THE CONTRACTOR SHALL PLACE TOPSOIL, FINE GRADE, SEED, FERTILIZE, AND MULCH ALL DISTURBED AREAS LEFT EXPOSED WHEN WORK IS STOPPED.

13. MATERIAL EXCAVATED FROM BORING PITS (FOR JACK AND BORE LOCATIONS) SHALL BE SURROUNDED WITH SILT BARRIERS AT SUFFICIENT DISTANCE TO ENSURE THEIR INTEGRITY AND EFFECTIVENESS.

14. CONTRACTOR SHALL REMOVE DAILY ALL MUD, SOIL, AND DEBRIS THAT MAY BE TRACKED ONTO EXISTING STREETS, DRIVES, OR WALKS BY HIS EQUIPMENT OR THAT OF SUBCONTRACTORS OR SUPPLIERS.

15. ALL MATERIALS TO BE DISPOSED OF OFF-SITE MUST BE DISPOSED OF IN AN ENVIRONMENTALLY SOUND MANNER IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. NO EXCESS MATERIALS ARE TO BE DISPOSED OF IN ANY WETLAND, FLOOD PLAIN, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS. EROSION CONTROL MEASURES AT THE DISPOSAL SITE MUST BE INSTALLED AND MAINTAINED UNTIL DISPOSAL IS COMPLETE AND THE DISPOSAL SITE IS PERMANENTLY STABILIZED.

FLOODPLAINS / WETLANDS

1. WHEN PIPELINE CONSTRUCTION TAKES PLACE IN FLOODPLAINS AND WETLANDS, THE CONTRACTOR SHALL PLACE BULKHEADS OF CLAY SOIL ACROSS THE TRENCH AT 100 FOOT INTERVALS TO RESIST THE MOVEMENT OF GROUNDWATER THROUGH GRANULAR MATERIAL. SUCH BULKHEADS SHALL BE CAREFULLY COMPACTED AND SHALL EXTEND APPROXIMATELY 3 FEET IN A DIRECTION PARALLEL TO THE PIPE AND SHALL EXTEND FROM THE BOTTOM OF THE TRENCH TO A HEIGHT OF 6 INCHES ABOVE THE GROUNDWATER TABLE OR THE TOP OF THE GRANULAR FILL MATERIAL, WHICHEVER IS HIGHER.

TRAFFIC CONTROL

1. AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED ALONG THE TRAVEL ROUTE TO THE CONSTRUCTION SITE.

2. ACCESS SHALL BE MAINTAINED FOR EMERGENCY VEHICLES AT ALL TIMES.

3. NO TRENCH SHALL BE LEFT OPEN AT THE END OF THE WORK DAY.

4. ANY CONSTRUCTION EQUIPMENT OR EXCAVATIONS NEAR ROADS SHALL BE MARKED WITH LIGHTS OR REFLECTORS.

5. THE CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN ALL NECESSARY BARRICADES, WARNING SIGNS, DANGER SIGNALS, FLAGGERS, WATCHERS, AND ALL OTHER APPROPRIATE PRECAUTIONS NECESSARY TO THE PROTECTION OF THE WORK AND FOR SAFETY.

6. PRIOR TO CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE, OR BOULEVARD, THE CONTRACTOR SHALL HAVE CONSENT FROM LOCAL OFFICIALS AND THE ENGINEER.

AIR POLLUTION / NOISE CONTROL

1. CONSTRUCTION SHALL BE LIMITED TO DAYTIME HOURS.

2. CONSTRUCTION EQUIPMENT SHALL BE PROVIDED WITH INTAKE SILENCERS AND MUFFLERS, AS REQUIRED BY SAFETY STANDARDS.

3. ALL CONSTRUCTION VEHICLES SHALL BE EQUIPPED WITH PROPER EMISSIONS CONTROL EQUIPMENT.

4. ALL EQUIPMENT AND MACHINERY SHALL BE MAINTAINED TO MINIMIZE EXHAUST EMISSIONS AND NOISE.

TREES / VEGETATION PROTECTION

1. TREE REMOVAL SHALL BE LIMITED TO THAT NECESSARY FOR CONSTRUCTION AND SHALL BE LIMITED TO THE PERMANENT EASEMENT UNLESS EXPLICITLY PERMITTED BY THE ENGINEER.

2. NO TREE REMOVAL SHALL BE PERMITTED OUTSIDE THE TEMPORARY EASEMENT WITHOUT PERMISSION OF THE ENGINEER.

3. TREES WHICH ARE NOT TO BE REMOVED SHALL BE PROTECTED FROM INJURY BY TREES BEING FELLED.

4. PRIOR TO CLEARING, THE CONTRACTOR AND ENGINEER SHALL WALK THE ACQUIRED EASEMENTS AND DESIGNATE THE TREES THAT ARE TO BE SAVED. TREES TO BE SAVED SHALL BE CLEARLY MARKED BY PAINT WITH THE LETTER "S". TREES TO BE PROTECTED BY AN APPROPRIATE BARRIER SHALL BE MARKED WITH A "S" ENCLOSED ON A CIRCLE.

5. SOIL AND OTHER MATERIAL SHALL NOT BE STORED NEXT TO OR WITHIN THE DRIP-LINE OF TREES.

6. PRESERVATION OF LANDSCAPING SHOULD TAKE PRECEDENCE OVER REMOVAL. IF REMOVAL OR DAMAGE IS UNAVOIDABLE, EXISTING VEGETATION SHALL BE REPAIRED OR REPLACED "IN-KIND" UNLESS THE LAND OWNER SPECIFIES OTHERWISE.

7. IF TREES/SHRUBS CANNOT BE REPLACED IN THE SAME LOCATION DUE TO INSTALLATION OF THE WATER OR SEWER LINES, RELOCATION OF THE TREES/SHRUBS SHALL BE CONSIDERED.

8. THE CONTRACTOR SHALL REPAIR ALL INJURIES TO BARK, TRUNKS, LIMBS, AND ROOTS OF REMAINING VEGETATION BY PROPERLY DRESSING, CUTTING, AND BRACING, USING ONLY APPROVED TREE SURGERY METHODS, TOOLS, AND MATERIALS. WHEN ROOTS ARE DAMAGED DURING EXCAVATION, THE ABOVE-GROUND PORTION OF THE TREE SHALL BE PRUNED TO COMPENSATE.

9. SELECTIVE PRUNING OF TREE LIMBS PRIOR TO CONSTRUCTION SHALL ONLY BE DONE WITHIN ESTABLISHED EASEMENTS WHERE REMOVAL IS NECESSARY FOR OPERATION OF EQUIPMENT.

10. LIMIT THE USE OF RIP-RAP TO AREAS WHERE STREAM FLOW CONDITIONS PRECLUDE VEGETATIVE STABILIZATION.

DEWATERING

1. ALL DEWATERING FLOWS SHALL BE SETTLED IN SILTATION BASINS OR DIRECTED THROUGH FILTERING DEVICES BEFORE DISCHARGE TO STABILIZED SITES, SUCH AS STREAMS OR STORM SEWERS, NOT ONTO EXPOSED SOILS, STREAM BANKS, OR ANY OTHER SITE WHERE THE FLOW COULD CAUSE EROSION.

2. SILT FROM CONSTRUCTION SITES SHALL NOT BE PERMITTED TO ENTER STORM SEWERS. WHEN CONSTRUCTION OCCURS NEAR STORM SEWER INLETS, EROSION CONTROL MEASURES SUCH AS INLET FILTERS SHALL BE USED TO PREVENT SILT FROM ENTERING THE STORM SEWERS.

3. ALL WATER SHALL BE CONVEYED FROM THE CONSTRUCTION SITE IN A CLOSED CONDUIT. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DRAINAGE DITCHES.

ARCHAEOLOGICAL / HISTORICAL RESOURCES

1. CONTRACTORS AND SUBCONTRACTORS ARE REQUIRED UNDER OHIO REVISED CODE SECTION 149.53 TO NOTIFY THE OHIO HISTORICAL SOCIETY AND THE OHIO HISTORIC SITE PRESERVATION BOARD OF ARCHAEOLOGICAL DISCOVERIES IN THE PROJECT AREA, AND TO COOPERATE WITH THOSE ENTITIES IN ARCHAEOLOGICAL AND HISTORIC SURVEYS AND SALVAGE EFFORTS.

CONTACT: OHIO HISTORIC PRESERVATION OFFICE
PHONE: 614-297-2470

PROHIBITED CONSTRUCTION ACTIVITIES

1. DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL OR TREES, BRUSH, AND OTHER DEBRIS IN ANY STREAM CORRIDOR, ANY WETLANDS, ANY SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS.

2. STOCKPILING MATERIALS OR STORING CONSTRUCTION EQUIPMENT AND VEHICLES ON PROPERTY NOT SPECIFIED ON THE PLANS BY THE ENGINEER FOR SUCH PURPOSES.

3. INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS.

4. PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS DIRECTLY INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM SEWERS; ALL SUCH WATER SHALL BE PROPERLY FILTERED OR SETTLED TO REMOVE SILT PRIOR TO RELEASE.

5. DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE, OR OTHER HARMFUL WASTE INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS, OR INTO ANY NATURAL OR MAN-MADE CHANNELS.

6. PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF ANY STREAM.

7. DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA.

8. OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT.

9. DISCHARGING INJURIOUS SILICA DUST CONCENTRATIONS INTO THE ATMOSPHERE RESULTING FROM BREAKING, CUTTING, CHIPPING, DRILLING, BUFFING, GRINDING, POLISHING, SHAPING OR SURFACING CLOSER THAN 200 FEET TO PLACES OF RESIDENCES OR COMMERCIAL, PROFESSIONAL, QUASI-PUBLIC, OR PUBLIC PLACES OF HUMAN OCCUPATION.

10. RUNNING WELL POINT OR PUMP DISCHARGE LINES THROUGH PRIVATE PROPERTY OR PUBLIC PROPERTY AND RIGHTS-OF-WAY WITHOUT THE WRITTEN PERMISSION OF THE PROPERTY OWNER AND THE CONSENT OF THE ENGINEER.

11. OPERATIONS ENTAILING THE USE OF VIBRATORY HAMMERS OR COMPACTORS OUTSIDE THE HOURS OF 8:00 A.M. AND 5:00 P.M. OR OUTSIDE THE HOURS ALLOWED FOR CONSTRUCTION BY LOCAL ORDINANCES OR REGULATIONS.

12. CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE, OR BOULEVARD WITHOUT THE PRIOR CONSENT OF MUNICIPAL OFFICIALS AND THE ENGINEER, AND CLOSING CLEAR ACCESS:

- BY FIRE PROTECTION EQUIPMENT AND EMERGENCY VEHICLES;
- BY THE PUBLIC TO ANY COMMERCIAL OR PROFESSIONAL PLACE OF BUSINESS, QUASI-PUBLIC OR PUBLIC ESTABLISHMENT, OR RESIDENCE; OR
- BY VEHICLES TO DRIVEWAYS WITHOUT PROVIDING ALTERNATE ACCESS.

STRAW BALE FILTER DIKE

CONSTRUCT SEDIMENT FENCE ON LOW SIDE OF EXCAVATIONS AND SOIL STOCKPILES TO PREVENT SEDIMENT FROM BEING WASHED INTO THE DRAINAGE SYSTEM.

LOCATE POSTS DOWNSIDE OF FABRIC TO HELP SUPPORT FENCING.

FILTER FABRIC FENCE

INLET PROTECTION

THREE DIMENSIONAL NATURAL FIBER INLET PROTECTION DEVICE (SEDIGUARD BY EARTH SUPPORT SYSTEMS OR APPROVED EQUIVALENT)

DESIGN AGENCY
KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Bolton Ridge, Lima, Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
GENERAL NOTES
ENVIRONMENTAL

PREPARED	CHECKED
BWA	JRM

DATE	DRAWING NO
8-21-13	C-949

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PROVIDE INLET PROTECTION

PROVIDE EROSION CONTROL MATTING

PROVIDE SILT FENCE AS NEEDED

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1133

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
EROSION CONTROL PLAN

PREPARED	CHECKED
BWA	JRM

DATE	DRAWING NO
8-21-13	C-949

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PROVIDE INLET PROTECTION

PROVIDE EROSION CONTROL MATTING

PROVIDE SILT FENCE AS NEEDED

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2344 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
EROSION CONTROL PLAN

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PLAN VIEW ONLY

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KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2224 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE
IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
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CP MB 1 ELEV. 926.99
N 375826.19, E 1538252.83
TOP OF MONUMENT BOX AT
BREESE ROAD & BOWMAN ROAD

CP 79 ELEV. 933.13
N 375834.77, E 1539034.91
CHISELED "X" IN SOUTH RIM OF TELEPHONE MANHOLE
ON NORTH SIDE OF BREESE ROAD 5' WEST OF FIBER
OPTIC CABLE WARNING POST

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

BREESE ROAD

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Bellon Ridge, Lima, Ohio 45805 419-227-1135

SCALE IN FEET
0 5 10 50 100

PROJECT
SOUTHEAST REGIONAL WATERLINE
IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949

7
28

CP 79 ELEV. 933.13
N 375834.77, E 1539034.91
CHISELED "X" IN SOUTH RIM OF TELEPHONE MANHOLE ON NORTH SIDE OF BREESE ROAD 5' WEST OF FIBER OPTIC CABLE WARNING POST

CP MB 2 ELEV. 961.60
N 375777.88, E 1540910.86
TOP OF MONUMENT BOX ½ MILE EAST OF BOWMAN ROAD ON BREESE ROAD

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

BREESE ROAD

0 50 100
0 5 10
SCALE IN FEET

KOHLI & KALHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2224 Baton Rouge Lima Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM

DATE 8-21-13
DRAWING NO. C-949

8
28

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CP 78 ELEV. 969.40
N 375771.54, E 1542132.18
MAG NAIL SET IN SOUTHEAST CORNER OF CATCH BASIN ON NORTH SIDE OF ROAD 75'± EAST OF ADDRESS SIGN 3595 BREESE ROAD ¼ MILE WEST OF SCHOOLER ROAD

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

BREESE ROAD

SCALE IN FEET: 0 5 10 50 100

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2224 Baker Ridge, Lima Ohio 45805 419-227-1135

PROJECT: SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1 ALLEN CO., OHIO

SUBJECT: PLAN & PROFILE

PREPARED: BWA
CHECKED: JRM
DATE: 8-21-13
DRAWING NO.: C-949

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CP MB 3 ELEV. 965.27
N 375728.13, E 1543571.12
TOP OF MONUMENT BOX AT
BREESE ROAD & SCHOOLER ROAD

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

BREESE ROAD

SCALE IN FEET
0 5 10 50 100

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE
IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949

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CP MB 3 ELEV. 965.27
N 375728.13, E 1543571.12
TOP OF MONUMENT BOX AT
BREESE ROAD & SCHOOLER ROAD

BM 77 ELEV. 976.11
T BAR SET 8.5' OFF EAST EDGE
OF PAVEMENT OPPOSITE ADDRESS
SIGN 3470 SCHOOLER ROAD ¼
MILE± SOUTH OF MCPHERON ROAD

REV. PROJ. REC.
4-13-2015 BWA

SCHOOLER ROAD

SCALE IN FEET
0 5 10
0 50 100

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949

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BM 77 ELEV. 976.11
T BAR SET 8.5' OFF EAST EDGE OF PAVEMENT OPPOSITE ADDRESS SIGN 3470 SCHOOLER ROAD ¼ MILE± SOUTH OF MCPHERON ROAD

CP MB 4 ELEV. 976.50
N 378383.10, E 1543607.43
TOP OF MONUMENT BOX AT SCHOOLER ROAD & MCPHERON ROAD

REV. PROJ. REC.
4-13-2015 BWA

SCHOOLER ROAD

SCALE IN FEET
0 50 100
0 5 10

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE 1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949

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CP MB 4 ELEV. 976.50
N 378383.10, E 1543607.43
TOP OF MONUMENT BOX AT SCHOOLER ROAD & MCPHERON ROAD

BM 76 ELEV. 975.21
T BAR SET 5' OFF WEST EDGE OF PAVEMENT 65' SOUTH OF ADDRESS SIGN 2930 SCHOOLER ROAD ¼ MILE± SOUTH OF HAWTHORN ROAD

REV. PROJ. REC.
4-13-2015 BWA

SCHOOLER ROAD

SCALE IN FEET
0 50 100
0 5 10

KOHL & KALHER ASSOCIATES, INC.
ENGINEERING SURVEYORS
2244 Bilton Rough Lima, Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949

13/28

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BM 76 ELEV. 975.21
T BAR SET 5' OFF WEST EDGE OF PAVEMENT 65' SOUTH OF ADDRESS SIGN 2930 SCHOOLER ROAD ¼ MILE± SOUTH OF HANTHORN ROAD

CP MB 5 ELEV. 962.37
N 381037.49, E 1543645.62
TOP OF MONUMENT BOX AT SCHOOLER ROAD & HANTHORN ROAD

REV. PROJ. REC.
4-13-2015 BWA

SCHOOLER ROAD

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

SCALE IN FEET
0 50 100
0 5 10

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949

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CP MB 5 ELEV. 962.37
N 381037.49, E 1543645.62
TOP OF MONUMENT BOX AT SCHOOLER ROAD & HANTHORN ROAD

CP 73 ELEV. 961.04
N 380999.52, E 1544169.99
MAG NAIL SET IN SOUTHEAST CORNER OF 3.8' X 5.5' CATCH BASIN ON SOUTH SIDE OF HANTHORN ROAD WEST OF AIRPORT DRIVE

CP 70 ELEV. 974.50
N 380992.82, E 1544955.89
CHISELED "X" ON NORTH SIDE OF FORCE MAIN CLEAN OUT ON SOUTH SIDE OF HANTHORN ROAD OPPOSITE AIRPORT DRIVE

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

HANTHORN ROAD

SCALE IN FEET: 0 50 100 / 0 5 10

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Eastern Rd.Lima, Ohio 45805 419-227-1135

PROJECT: SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1 ALLEN CO., OHIO

SUBJECT: PLAN & PROFILE

PREPARED BWA | CHECKED JRM

DATE 8-21-13 | DRAWING NO. C-949

15/28

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CP 70 ELEV. 974.50
N 380992.82, E 1544955.89
CHISELED "X" ON NORTH SIDE OF FORCE MAIN CLEANOUT ON SOUTH SIDE OF HANTHORN ROAD OPPOSITE AIRPORT DRIVE

CP MB 6 ELEV. 973.43
N380985.71, E1546314.96
TOP OF MONUMENT BOX ½ MILE EAST OF SCHOOLER ROAD ON HANTHORN ROAD

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

HANTHORN ROAD

SCALE IN FEET: 0 5 10 50 100

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Eaton Rouge Lane, Cinci 45805 419-227-1135

PROJECT: SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT: PLAN & PROFILE

PREPARED BWA | CHECKED JRM

DATE 8-21-13 | DRAWING NO. C-949

16/28

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CP MB 6 ELEV. 973.43
N380985.71, E1546314.96
TOP OF MONUMENT BOX ½ MILE EAST OF
SCHOOLER ROAD ON HANTHORN ROAD

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

HANTHORN ROAD

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Bacon Ridge, Lima, Ohio 45805 419-227-1135

0 50 100
0 5 10
SCALE IN FEET

PROJECT
SOUTHEAST REGIONAL WATERLINE
IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949

17
28

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BM MB 7 ELEV. 987.53
N380934.87, E1548988.54
TOP OF MONUMENT BOX 1 MILE EAST OF SCHOOLER ROAD ON HANTHORN ROAD

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

HANTHORN ROAD

0 50 100
0 5 10
SCALE IN FEET

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Bilton Ridge, Lima, Ohio 45805 419-227-1125

PROJECT
SOUTHEAST REGIONAL WATERLINE
IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM

DATE 8-21-13
DRAWING NO. C-949

18
28

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BM MB 7 ELEV. 987.53
N380934.87, E1548988.54
TOP OF MONUMENT BOX 1 MILE EAST OF SCHOOLER ROAD ON HANTHORN ROAD

BM 69 ELEV. 990.37
MAG SPIKE IN SOUTH SIDE OF OHIO POWER COMPANY POWER POLE #924-22 ON NORTH SIDE OF HANTHORN ROAD
(TELEPHONE PEDESTAL ON WEST SIDE OF POLE)

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

HANTHORN ROAD

SCALE IN FEET
0 5 10 50 100

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949

19
28

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BM 69 ELEV. 990.37
MAG SPIKE IN SOUTH SIDE OF OHIO POWER COMPANY POWER POLE #924-22 ON NORTH SIDE OF HANTHORN ROAD
(TELEPHONE PEDESTAL ON WEST SIDE OF POLE)

CP MB 8 ELEV. 1000.97
N380865.47, E1551626.84
TOP OF MONUMENT BOX 1½ MILE EAST OF SCHOOLER ROAD ON HANTHORN ROAD

CP 64 ELEV. 998.73
N 380835.56, E 1552018.57
MAG NAIL SET IN SOUTHEAST CORNER OF CATCH BASIN ON SOUTH SIDE OF ROAD AT 5490 HANTHORN ROAD

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

HANTHORN ROAD

0 50 100
0 5 10
SCALE IN FEET

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1132

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949

20
28

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CP MB 8 ELEV. 1000.97
N380865.47, E1551626.84
TOP OF MONUMENT BOX 1½ MILE EAST OF SCHOOLER ROAD ON HANTHORN ROAD

CP 64 ELEV. 998.73
N 380835.56, E 1552018.57
MAG NAIL SET IN SOUTHEAST CORNER OF CATCH BASIN ON SOUTH SIDE OF ROAD AT 5490 HANTHORN ROAD

CP 63 ELEV. 1003.75
N380826.38, E1552969.66
5/8" REBAR FOUND AT POINT OF INTERSECTION OF 90° BEND IN HANTHORN ROAD

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Bellon Ruggs Lima Ohio 45805 419-227-1185

SCALE IN FEET
0 5 10 50 100

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949

21
28

CP 63 ELEV. 1003.75
N380826.38, E1552969.66
5/8" REBAR FOUND AT POINT OF INTERSECTION OF 90° BEND IN HANTHORN ROAD

BM 62 ELEV. 993.49
N 381442.36, E 1553019.65
MAG NAIL SET IN NORTHEAST CORNER OF CATCH BASIN AT SOUTHEAST CORNER OF HANTHORN ROAD AND SR 117, BELLEFONTAINE ROAD

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

HANTHORN ROAD

SCALE IN FEET: 0 5 10 / 0 50 100

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Bison Ridge, Lima, Ohio 45805 419-227-1135

PROJECT: SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT: PLAN & PROFILE

PREPARED: BWA
CHECKED: JRM
DATE: 8-21-13
DRAWING NO.: C-949

22/28

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BM 62 ELEV. 993.49
N 381442.36, E 1553019.65
MAG NAIL SET IN NORTHEAST CORNER OF CATCH BASIN AT SOUTHEAST CORNER OF HANTHORN ROAD AND SR 117, BELLEFONTAINE ROAD

REV. PROJ. REC.
4-13-2015 BWA

BELLEFONTAINE ROAD

0 50 100
0 5 10
SCALE IN FEET

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Bison Ridge, Lima Ohio 45805 419-227-1125

PROJECT
SOUTHEAST REGIONAL WATERLINE
IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949

23
28

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CP 1159 ELEV. 1000.69
N380593.39, E1554355.91
ODOT R/W MARKER ON NORTHEAST SIDE OF BELLEFONTAINE ROAD AT HOUSE 5901

BM#30 ELEV. 999.93
MAGNAIL SET IN THE SOUTHWEST SIDE OF OHIO POWER CO. POLE #925-8 ON NORTHEAST SIDE OF BELLEFONTAINE ROAD AT HOUSE 5901.

BM 29 ELEV. 994.61
DRILL HOLE SET IN THE WEST CORNER OF 2'X2' CATCH BASIN ON THE NORTHEAST SIDE OF BELLEFONTAINE ROAD 70' WEST OF STEEL TOWER.

CP #1157
N380447.8138, E1554562.8540
IRON ROD AT SOUTHWEST CORNER OF PROPERTY AT 5979 BELLEFONTAINE ROAD.

REV. PROJ. REC.
4-13-2015 BWA

BELLEFONTAINE ROAD

0 50 100
0 5 10
SCALE IN FEET

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Bacon Ridge, Lima, Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE
IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949

24
28

BM 27 ELEV. 972.93
MAGNAIL SET IN SOUTHWEST FACE OF OHIO POWER CO. POLE #925-121 ON THE NORTHEAST SIDE OF BELLEFONTAINE ROAD IN FRONT OF HOUSE 6167

BM 26 ELEV. 964.56
MAGNAIL SET IN SOUTHWEST FACE OF UTLITY POLE OPCO#925-128 ON THE NORTHEAST SIDE OF BELLEFONTAINE ROAD OPPOSITE HOUSE 6240

CP 1204
N379529.9916, E1555874.1760
IRON ROD ON NORTHEAST SIDE OF BELLEFONTAINE ROAD OPPOSITE HOUSE 6240.

BM 26 ELEV. 957.06
MAGNAIL SET IN SOUTHWEST FACE OF OHIO POWER CO. POLE #925-130 ON THE NORTHEAST SIDE OF BELLEFONTAINE ROAD OPPOSITE HOUSE 6330

REV. PROJ. REC.
4-13-2015 BWA

BELLEFONTAINE ROAD

SCALE IN FEET: 0 5 10 50 100

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Bixton Rd., Lima, Ohio 45805 419-227-1135

PROJECT: SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1 ALLEN CO., OHIO

SUBJECT: PLAN & PROFILE

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DATE 8-21-13 | DRAWING NO. C-949

25/28

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BM 24 ELEV. 949.86
MAGNAIL IN NORTHEAST SIDE OF OHIO POWER CO. POLE #925B3/43 ON NORTHEAST SIDE OF BELLEFONTAINE ROAD OPPOSITE HOUSES 6390 AND 6400.

CP #1205 ELEV 949.095
N379042.3437, E1556572.0340
IRON ROD ON NORTHEAST SIDE OF BELLEFONTAINE ROAD OPPOSITE HOUSES 6390 AND 6400.

BM 23 ELEV. 942.48
DRILL HOLE NEAR THE SOUTHERNMOST CORNER OF CONCRETE PAD FOR "HAWK" GAS STATION SIGN AT NORTHWEST CORNER OF BELLEFONTAINE ROAD AND BRENTLINGER ROAD.

BM 22 ELEV. 942.26
DRILL HOLE SET NEAR SOUTHERNMOST CORNER OF SOUTH HEADWALL AT RUDOLPH FOODS DRIVEWAY OPPOSITE HOUSE 6526 BELLEFONTAINE ROAD

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

BELLEFONTAINE ROAD

SCALE IN FEET
0 50 100
0 5 10

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Bieber Ridge, Lima, Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
PLAN & PROFILE

PREPARED BWA
CHECKED JRM
DATE 8-21-13
DRAWING NO. C-949

26
28

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BM 21 ELEV. 939.64
MAGNAIL IN SOUTHWEST FACE OF OHIO POWER CO. POLE #925B3/293 ON NORTHEAST SIDE OF BELLEFONTAINE ROAD. FIRST POLE SOUTH OF DITCH

CP 10284 ELEV. 938.04
N378172.09, E1557709.80
T-BAR AT NORTH WEST CORNER OF McPHERON ROAD AND BELLEFONTAINE ROAD

BM 16 ELEV. 939.67
MAGNAIL IN EAST FACE OF OHIO POWER CO. POLE #825B3/8 ON SOUTHEAST CORNER OF BELLEFONTAINE ROAD AND KATRINA ROAD.

CP4581 ELEV. 939.45
N378113.75, E1557897.30
T-BAR AT SOUTHEAST CORNER OF KATRINA ROAD AND BELLEFONTAINE ROAD

REV. PROJ. REC.
4-13-2015 BWA
PLAN VIEW ONLY

BELLEFONTAINE ROAD – KATRINA ROAD

SCALE IN FEET: 0 50 100 / 0 5 10

KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Easton Rouge Lima, Ohio 45805 419-227-1135

PROJECT: SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1 ALLEN CO., OHIO

SUBJECT: PLAN & PROFILE

PREPARED BWA | CHECKED JRM

DATE 8-21-13 | DRAWING NO. C-949

27/28

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EXTERIOR PLAN

SECTION A-A

DESIGN CRITERIA

Controls CONSTANT RUN

Power Service: 230 Volts, 1 Phase, 60 Cycle

PUMP DATA

Type: VERT., CLOSE CPLD., END SUCTION

Pump 1
Capacity: 138 G.P.M. AT 95 FEET T.D.H.
Size: 1 1/2" X 2" X 6"
Motor: 5 H.P., 3500 R.P.M.

Pump 2
Capacity: 138 G.P.M. AT 95 FEET T.D.H.
Size: 1 1/2" X 2" X 6"
Motor: 5 H.P., 3500 R.P.M.

INTERIOR PLAN

ITEMS OF WORK

CONTACT CITY BEFORE STATING WORK.

1. REMOVE ELECTRIC SERVICE – BY AEP (METER NUMBER NYD221051864SNNA8)
2. REMOVE EXISTING CONCRETE MANHOLE, 12" CHECK VALVE AND AND OTHER FLANGED PIPING AS REQUIRED. REPLACE PIPING WITH 12" WATERLINE AND STRAIGHT STYLE COUPLING. WRAP PIPE WITH POLYETHYLENE ENCASEMENT, BACKFILL WITH GRANULAR MATERIAL AND REPAIR PAVEMENT AS REQUIRED.
3. CLOSE VALVES ON 4" LINES. REMOVE 4" PIPING. PLUG AND BLOCK VALVES
4. REMOVE BOOSTER STATION AND PIPING
5. BACKFILL EXCAVATIONS
6. LEVEL SITE. SEED AND MULCH DISTURBED AREA.

SITE PLAN
SCALE 1"=50'

1 10-4-2013 BWA REV.

DESIGN AGENCY
KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Bellon Ridge, Lima, Ohio 45805 419-227-1135

PROJECT
SOUTHEAST REGIONAL WATERLINE IMPROVEMENT AREA, PHASE1
ALLEN CO., OHIO

SUBJECT
ABANDON EXISTING BOOSTER PUMP STATION

PREPARED	CHECKED
BWA	JRM
DATE 8-21-13	DRAWING NO. C-949

28/28

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