

STATE OF INDIANA DEPARTMENT OF NATURAL RESOURCES

PAYNETOWN SRA - MONROE LAKE WATER SYSTEM REPLACEMENT

PROJECT NO. E030286
BLOOMINGTON, INDIANA
MONROE COUNTY



PAYNETOWN SRA - MONROE LAKE
WATER SYSTEM REPLACEMENT
INDIANA DEPARTMENT OF NATURAL RESOURCES
4850 S. STATE ROAD 446
BLOOMINGTON, INDIANA 47401



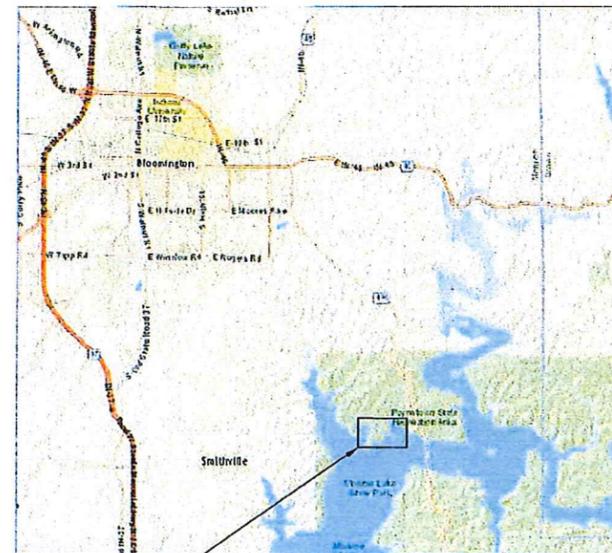
STATE OF INDIANA
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Sheet 1 of 7

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PROJECT LOCATION

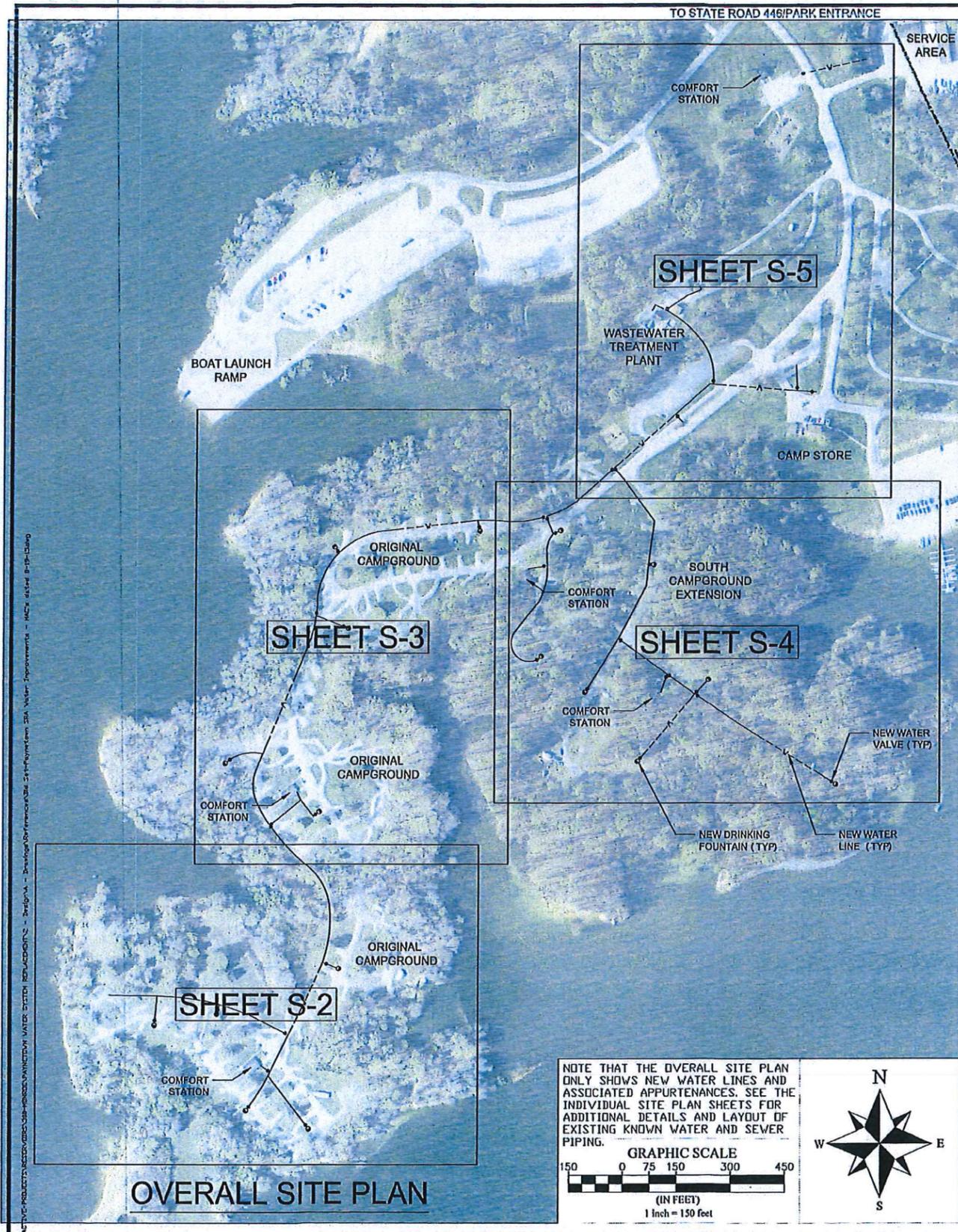
SHEET NO.	DESCRIPTION
T-1	TITLE SHEET
S-1	OVERALL SITE PLAN/GENERAL NOTES
S-2	SITE PLAN - ORIGINAL CAMPGROUND (1 OF 2)
S-3	SITE PLAN - ORIGINAL CAMPGROUND (2 OF 2)
S-4	SITE PLAN - SOUTH CAMPGROUND EXTENSION
S-5	SITE PLAN - CAMP STORE/SERVICE AREA
D-1	DETAILS

ABBREVIATION LIST

CI	CAST IRON PIPE
CISP	CAST IRON SOIL PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
LF	LINEAL FEET
MH	MANHOLE
PL	FLEXIBLE POLYETHYLENE PIPE
PVC	POLYVINYL CHLORIDE PIPE
VCP	VITRIFIED CLAY PIPE

LEGEND

	EXISTING WATER LINE
	NEW WATER LINE
	EXISTING SANITARY SEWER
	EXISTING FORCE MAIN
	EXISTING WATER VALVE
	NEW WATER VALVE
	EXISTING DRINKING FOUNTAIN
	NEW DRINKING FOUNTAIN
	EXISTING MANHOLE



SUMMARY OF WORK/GENERAL NOTES

WORK CONSISTS OF FURNISHING AND INSTALLING UNDERGROUND WATER LINES AND APPURTENANCES USING OPEN CUT OR THE HORIZONTAL DIRECTIONAL DRILLING (HDD) METHOD OF INSTALLATION. WORK SHALL INCLUDE ALL SERVICES, EQUIPMENT, MATERIALS, AND LABOR FOR THE COMPLETE AND PROPER INSTALLATION, TESTING, SITE RESTORATION TO PRE-CONSTRUCTION CONDITIONS AND ENVIRONMENTAL PROTECTION.

PHASE 1 INCLUDES THE INSTALLATION OF APPROXIMATELY 3,635 LF OF 3-INCH THROUGH 3/4-INCH WATER LINE IN THE ORIGINAL CAMPGROUND AREA AS WELL AS APPROXIMATELY 900 LF OF 4-INCH WATER LINE RUNNING FROM THE CAMP STORE TO THE ORIGINAL CAMPGROUND AREA. PHASE 2 INCLUDES THE INSTALLATION OF APPROXIMATELY 2,450 LF OF 3-INCH THROUGH 3/4-INCH WATER LINE IN THE SOUTH CAMPGROUND EXTENSION AND CAMP STORE AREAS. AREA. CONTRACTORS SHALL PROVIDE A COST ASSOCIATED WITH PHASE 1 AND PHASE 2.

ALL WATER LINES TO BE ABANDONED IN PLACE ARE TO BE DEMOLISHED TO BELOW GRADE AND CAPPED A MINIMUM OF 2 FEET BELOW GRADE.

ALL EXISTING DRINKING FOUNTAINS ARE TO BE DEMOLISHED TO BELOW GRADE WITH THE EXISTING PIPING CAPPED A MINIMUM OF 2 FEET BELOW GRADE. THE FINAL LOCATIONS OF NEW DRINKING FOUNTAINS ARE TO BE COORDINATED WITH THE PROPERTY MANAGER.

HIGH DENSITY POLYETHYLENE (HDPE) PIPE SHALL MEET THE REQUIREMENTS OF AWWA C901 AND ASTM D2239. INSTALLATION OF PIPING SYSTEMS USING THE HDD METHOD SHALL MEET THE REQUIREMENTS OF ASTM F1962. HDPE PIPE SHALL HAVE A NOMINAL IRON PIPE SIZE AND DIMENSION RATIO OF 11.

THE CONTRACTOR SHALL STRING A10 GAUGE (WITH OPEN CUT INSTALLATION) OR A 6 GAUGE (WITH HDD INSTALLATION) SOLID COPPER WIRE WITH INSULATION SUITABLE FOR DIRECT BURIAL IN TO BE INSTALLED WITH THE WATER LINE. ADDITIONAL WIRES MAY BE PULLED TO MAKE SURE THERE IS AT LEAST ONE SOUNDING WIRE FOR EACH SECTION OF PIPE INSTALLED TO PERMIT THE PIPE TO BE LOCATED BY THE OWNER'S PIPE LOCATOR. ATTACH THE LOCATOR WIRE TO THE WATER LINE APPROXIMATELY EVERY 15-FEET WITH PLASTIC TIE CABLES. SPLICES SHALL BE ACCOMPLISHED UTILIZING A WATERTIGHT SPLICE KIT, 3M DBR-6 OR SIMILAR RESIN TYPE SPLICE KIT. THE CONTRACTOR SHALL TEST THE CONTINUITY OF THE LOCATOR WIRE UTILIZING THE SAME TECHNOLOGY USED BY THE OWNER OR A METHOD OF THE OWNER'S CHOOSING. IF CONTINUITY TESTS FAIL, THE CONTRACTOR MAY REPAIR THE FAILURE IF IT CAN BE LOCATED, OR A NEW TRACER CABLE MAY BE RETRENCHED OVER THE PIPE.

ALL NEW PIPING AND CONNECTIONS TO EXISTING PIPING SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AWWA C600-10. ALL NEW PIPING SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C651-05.

GATE VALVES SHALL BE NON-RISING, MECHANICAL JOINT, RESILIENT WEDGE WITH CAST IRON BODY, REMOVABLE CAST IRON BONNET AND OPERATING NUT. PROVIDE STAINLESS STEEL BONNET BOLTS, STUDS AND NUTS. FOR DIRECT BURIAL VALVES EXTEND SHAFTS TO GRADE AND EQUIP WITH ADJUSTABLE TYPE, CAST IRON, VALVE BOXES. PROVIDE ONE TEE WRENCHES FOR EACH SIZE AND TYPE OF OPERATING NUT. SHALL BE DESIGNED FOR A WORKING PRESSURE OF 200 PSI AND PROVIDE A CLEAR UNOBSTRUCTED WATERWAY WHEN FULLY OPEN. VALVES SHALL MEET THE REQUIREMENTS OF AWWA C509 AND OPEN BY TURNING COUNTERCLOCKWISE.

CURB VALVES SHALL BE MUELLER MARK II ORISEAL OR EQUAL. CURB VALVES ARE TO BE PROVIDED WITH CAST IRON CURB BOXES COMPLETE WITH COVER. BOXES SHALL BE EXTENSION TYPE AND SCREW OR SLIDE TYPE ADJUSTMENT. CURB VALVES ARE TO BE PROVIDED WITH STATIONARY ROD. PROVIDE ONE VALVE WRENCH OR CURB BOX KEY FOR EACH TYPE OF VALVE SUPPLIED.

BESIDES THE SHOWN EXISTING WATER AND SEWER LINES THE EXISTING SITE UTILITIES ARE UNKNOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL UTILITIES WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL ALSO VERIFY THE LOCATION AND SIZE OF ALL SHOWN UTILITIES.

ALL PAVEMENT IS ASPHALT WITH THE EXCEPTION OF INDIVIDUAL CAMPGROUND SITES WHICH ARE GRAVEL.

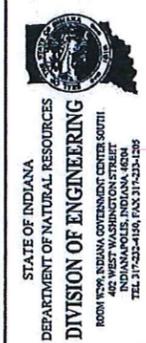
IF THE HDD METHOD OF INSTALLATION IS USED, THE CONTRACTOR SHALL MAINTAIN DAILY LOG OF DRILLING OPERATIONS AND A GUIDANCE SYSTEM LOG WITH A COPY GIVEN TO THE ENGINEER AT THE COMPLETION OF THE PROJECT.

AS-BUILT DRAWINGS SHALL BE CERTIFIED AS ACCURATE BY THE CONTRACTOR. MODIFICATION TO THE WATER LINE LAYOUT BETWEEN CONNECTION POINTS CAN BE MADE WITH PRE-APPROVAL FROM ENGINEER.



Created by:

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Project Number	E030286
Engineer Number	
Designer	WSP
Design Date	8/19/2015
Checker	WSP
Check Date	8/19/2015
Scale	1" = 150'
Client Approval	
File Number	300-130
Drawing Number	S-1
Sheet	2 of 7

SEE SHEET S-5 FOR CONTINUATION

SEE SHEET S-3 FOR CONTINUATION



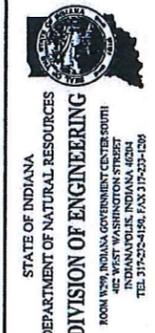
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GRAPHIC SCALE
(IN FEET)
1 Inch = 40 feet

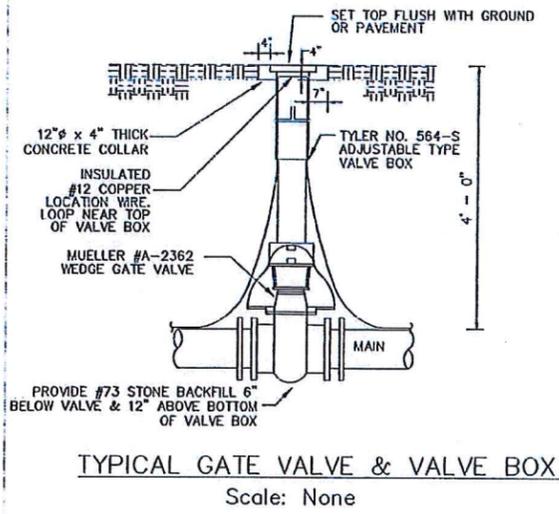
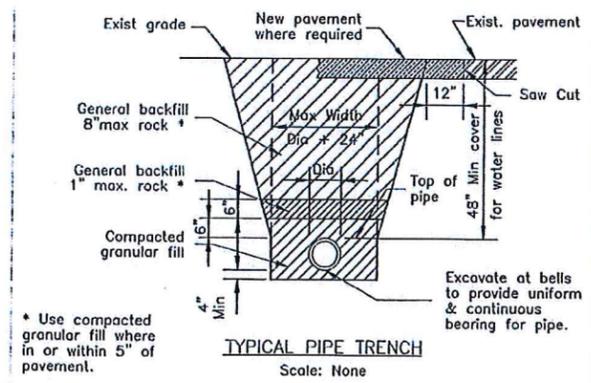
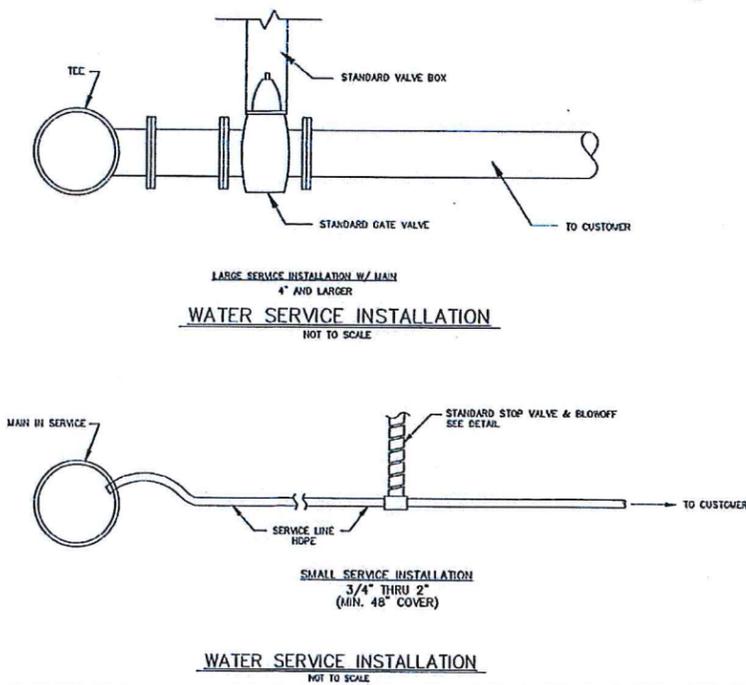
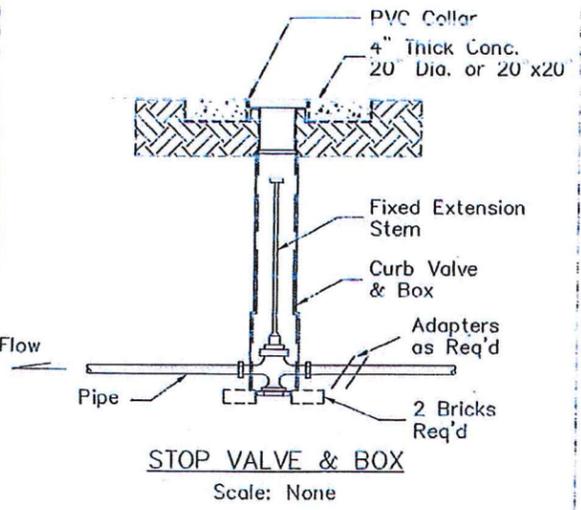
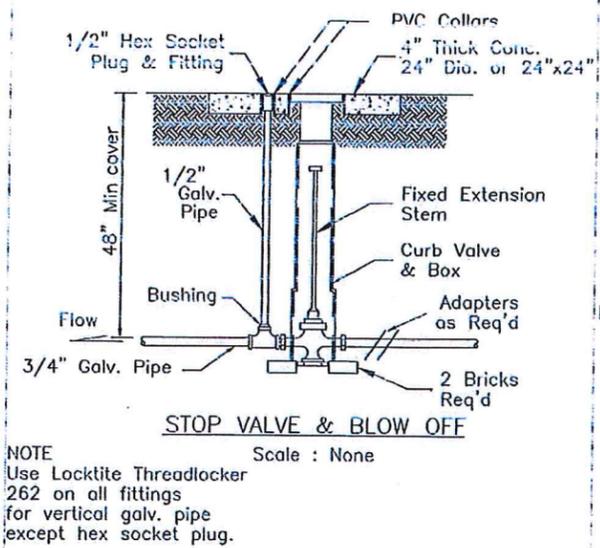
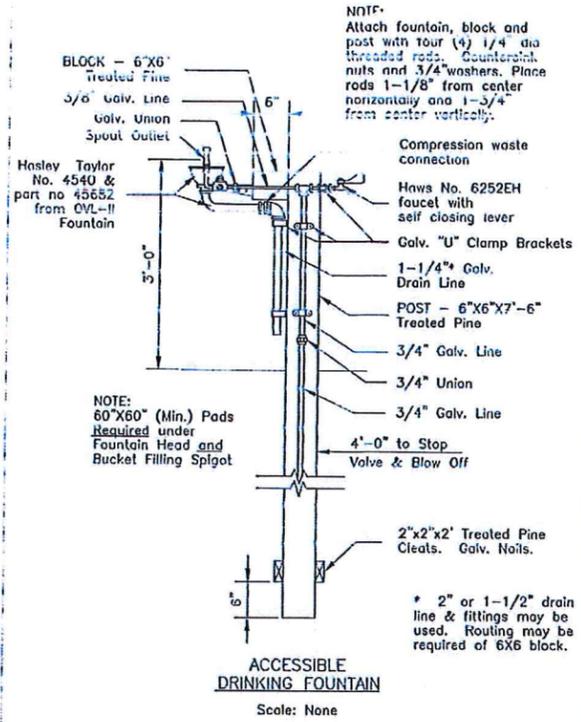
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Sheet	5 of 7



8/27/15
WSP

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Sheet **D-1** of 7

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