

Culvert Hydraulic Report

STRUCTURE NO. _____ TEAM MEMBERS _____ INSP. DATE: _____
 COUNTY: _____ SECTION: _____ TOWNSHIP: _____ RANGE: _____

359A TYPE OF CULVERT: BOX <input type="checkbox"/> PIPE <input type="checkbox"/>	359B NUMBER OF BARRELS _____																														
359C SPAN _____ ft	359D RISE _____ ft																														
062 OVERALL CULVERT CONDITION _____ (0-9)	359E FILL _____ ft (TOP OF CULVERT TO CL GRADE)																														
071 WATERWAY ADEQUACY _____ (0-9)	327 CULVERT ALIGNMENT WITH FLOW (9-0) <table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">9</td><td style="width: 20px; text-align: center;">8</td><td style="width: 20px; text-align: center;">7</td><td style="width: 20px; text-align: center;">6</td><td style="width: 20px; text-align: center;">5</td><td style="width: 20px; text-align: center;">4</td><td style="width: 20px; text-align: center;">3</td><td style="width: 20px; text-align: center;">2</td><td style="width: 20px; text-align: center;">1</td><td style="width: 20px; text-align: center;">0</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td><td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="text-align: center;">0°</td><td style="text-align: center;">5°</td><td style="text-align: center;">10°</td><td style="text-align: center;">15°</td><td style="text-align: center;">20°</td><td style="text-align: center;">30°</td><td style="text-align: center;">45°</td><td style="text-align: center;">60°</td><td style="text-align: center;">70°</td><td style="text-align: center;">90°</td> </tr> </table>	9	8	7	6	5	4	3	2	1	0	<input type="checkbox"/>	0°	5°	10°	15°	20°	30°	45°	60°	70°	90°									
9		8	7	6	5	4	3	2	1	0																					
<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																					
0°		5°	10°	15°	20°	30°	45°	60°	70°	90°																					
323 CULVERT BARREL CONDITION _____ (0-9)		328 FLOWLINE DROP AT INLET _____ ft																													
324 CULVERT ENDS CONDITION _____ (0-9)	329 FLOWLINE DROP AT OUTLET _____ ft																														
325 DEBRIS AT INLET _____ (0-9)	330 SILT IN BARREL _____ ft																														
326 EMBANKMENT EROSION _____ (0-9)																															

113 SCOUR CRITICAL RATING

<input type="checkbox"/> 9 FOUNDATIONS SAFELY ABOVE FLOODWATER	<input type="checkbox"/> 5 LOW RISK	<input type="checkbox"/> 2 UNSTABLE, EXTENSIVE SCOUR
<input type="checkbox"/> 8 STABLE, FOUNDATIONS RESIST SCOUR	<input type="checkbox"/> 4 ACTION REQUIRED	<input type="checkbox"/> 1 FAILURE IMMINENT, CLOSED
<input type="checkbox"/> 7 SCOUR PROBLEM MITIGATED	<input type="checkbox"/> 3 UNSTABLE FOUNDATION	<input type="checkbox"/> 0 FAILED

JUSTIFICATION: _____

SOIL TYPE

CHANNEL BANK: <input type="checkbox"/> SAND & GRAVEL	<input type="checkbox"/> SANDY SILT	<input type="checkbox"/> SILT	<input type="checkbox"/> SILTY-CLAY	<input type="checkbox"/> CLAY	<input type="checkbox"/> SHALE	<input type="checkbox"/> ROCK
CHANNEL BED: <input type="checkbox"/> SAND & GRAVEL	<input type="checkbox"/> SANDY SILT	<input type="checkbox"/> SILT	<input type="checkbox"/> SILTY-CLAY	<input type="checkbox"/> CLAY	<input type="checkbox"/> SHALE	<input type="checkbox"/> ROCK

CHANNEL EVOLUTION

STAGE

PREMODIFIED CONSTRUCTED DEGRADATION THRESHOLD AGGRADATION RESTABILIZATION

CHARACTERISTICS

HEAD-CUTTING STEEP BANKS BANK SEEPAGE ALTERNATE BARS MEANDERING VEGETATED BANKS

BANK FAILURE DUE TO: ROTATION POPOUT SLAB MOVEMENT OTHER: _____

BANK BUFFER ZONE

LEFT BANK: _____ ft	WIDTH <input type="checkbox"/> TREE LINED	<input type="checkbox"/> GRASSED	<input type="checkbox"/> CULTIVATED	<input type="checkbox"/> OTHER: _____
RIGHT BANK: _____ ft	WIDTH <input type="checkbox"/> TREE LINED	<input type="checkbox"/> GRASSED	<input type="checkbox"/> CULTIVATED	<input type="checkbox"/> OTHER: _____

STRUCTURAL HYDRAULIC ASSESSMENT

HYDRAULIC STABILITY CATEGORY: STABLE LOW RISK SCOUR SUSCEPTIBLE SCOUR VULNERABLE SCOUR CRITICAL

HYDROLOGY

STREAM: _____	DRAINAGE AREA: _____ mi ²	STREAM SLOPE: _____ ft/mi
Q ₂ : _____ cfs	Q ₁₀ : _____ cfs	Q ₂₅ : _____ cfs
Q ₅₀ : _____ cfs	Q ₁₀₀ : _____ cfs	Q ₅₀₀ : _____ cfs
ELEV.: _____ ft	ELEV.: _____ ft	ELEV.: _____ ft
ELEV.: _____ ft	ELEV.: _____ ft	ELEV.: _____ ft

CULVERT INFORMATION

INLET ELEVATION: _____ ft	OUTLET ELEVATION: _____ ft	ROAD GRADE ELEV.: _____ ft
Q ₁₀₀ BASE FLOOD: _____ cfs	HW DEPTH (US END): _____ ft	WATERWAY AREA: _____ ft ²
Q ₁₀₀ BRIDGE BASE FLOOD: _____ cfs	OVERTOPPING FLOOD: _____ cfs	OVERTOPPING FREQ.: _____ yr
FLOWLINE ELEV.: _____ ft	HIGH BANK ELEV.: _____ ft	LOW ROAD ELEV.: _____ ft
CHANNEL BOTTOM WIDTH: _____ ft	INLET CREST ELEV.: _____ ft	OUTLET APRON ELEV.: _____ ft

WRITTEN BY: _____	QC BY: _____	QA BY: _____
DATE: _____	DATE: _____	DATE: _____