

Appendix B—Site Investigation Form

Hydraulic Structure—Initial Site Examination Form

The site examination form is intended for use at sites where a new or replacement crossing structure is being planned, whether a bridge, low-water crossing, or significant culvert. The form can be used as a checklist to ensure the basic information needed for preliminary site assessment is collected. Although it is simple, a completed form assembles a good amount of site information for structure selection and design. Accurate site surveys, including channel longitudinal profile and cross sections, are also necessary to complete the design.

For simple sites, this information may be adequate for design. Complicated sites will usually require additional field surveys and site investigations.

HYDRAULIC STRUCTURE INITIAL SITE EXAMINATION FORM			
(DATA SHEET FOR FORDS, BRIDGES, AND CULVERTS) (INCLUDE SITE SURVEY, LONGITUDINAL PROFILE, AND CROSS SECTIONS)			
FOREST		ROAD (TRAIL) NAME	
STRUCTURE NAME		STREAM NAME	
STRUCTURE NUMBER	LOCATION		
	SECTION	TOWNSHIP	RANGE
A. HYDROLOGIC & HYDRAULIC DATA			
1. SHOW ON A 15 MINUTE TOPOGRAPHIC MAP		2. NAME OF CLOSEST GAUGING STATION	
DRAINAGE AREA		DISTANCE.	MILES
3A. MANNING'S ROUGHNESS COEFFICIENT (N)	500-FT UPSTREAM:	3B. AVERAGE STREAMBED SLOPE	500-FT DOWNSTREAM:
4. DESCRIBE CHARACTER OF STREAM BED MATERIAL AND STREAM BANKS WITHIN THE 1,000-FOOT AREA			
5A. AMOUNT OF DEBRIS IN CHANNEL		5B. TYPE OF DEBRIS	
6. WATER ELEVATIONS			
6A. DATE AND FLOW DEPTH AT TIME OF SURVEY	6B. ESTIMATED BASE FLOW DEPTH	OCCURS	MONTH
			6C. ESTIMATED EXTREME HIGH WATER DEPTH (HOW DETERMINED?)
6D. CAUSE AND SEASON OF FLOODS			
B. OTHER CHANNEL CHARACTERISTICS			
1. NOTE EVIDENCE OF INSTABILITY OF BANKS OR SCOUR			
2A. STRAIGHT CHANNEL, OR NOTE DEGREE OF SINUOSITY		2B. HIGH FLOW ANGLE OF APPROACH (PARALLEL OR IMPINGING?)	
3. CHANNEL STABILITY (AGGRADATION, DOWNCUTTING, LATERAL CHANNEL MIGRATION, ETC)			
4. CHANNEL CLASSIFICATION (ROSGEN OR OTHER)			
5. CHANNEL ENTRENCHMENT (RATIO = FLOOD-PRONE/BANKFULL WIDTH)			
6. UPSTREAM/DOWNSTREAM STRUCTURES AFFECTING SITE (DAMS, BRIDGES, ETC.)			
7. OTHER SITE ASSESSMENT FACTORS			
C. FOUNDATION CONDITIONS			
1. CHARACTER OF SURFACE OR LOCAL MATERIALS			
2. ESTIMATED DEPTH TO BEDROCK FEET	2A. BEDROCK TYPE AND CONDITION		
3. ANY SPECIAL FOUNDATION CONDITIONS? INVESTIGATION NEEDED? EXPLAIN			
D. EXISTING STRUCTURE			
1. TYPE OF EXISTING STRUCTURE	1A. NUMBER AND LENGTH OF SPANS	1B. TYPE OF CULVERT	1C. SIZE
2. WATERWAY OPENING FEET WIDE OR SQUARE FEET		2A. WATERWAY ADEQUATE? <input type="checkbox"/> YES <input type="checkbox"/> NO	
3. STRUCTURE AFFECTED BY DEBRIS <input type="checkbox"/> ICE <input type="checkbox"/> DAMAGE <input type="checkbox"/> SCOUR <input type="checkbox"/>		4. DOES STRUCTURE CONSTRICT THE NATURAL CHANNEL YES <input type="checkbox"/> NO <input type="checkbox"/>	
5. CONDITION OF EXISTING STRUCTURE			

E. PROPOSED STRUCTURE		
1. BRIDGE OR LOW-WATER CROSSING TYPE		1A. LOADING (JUSTIFY IF OTHER THAN HS 20)
1B. WIDTH	1C. SUBSTRUCTURE OR SPECIAL NEEDS	
2. TYPE OF CULVERT		2A. SIZE
2B. CULVERT DESIGN ISSUES?		
2C. CORROSION OR ABRASION CONCERNS?		2D. TYPE OF FILL MATERIAL TO BE USED
F. MISCELLANEOUS DATA		
1. TIME AND DURATION OF CONSTRUCTION SEASON	2. RIPRAP IS AVAILABLE YES <input type="checkbox"/> NO <input type="checkbox"/>	2A. DISTANCE FROM SITE AT _____ MILES
2B. DESCRIPTION OF RIPRAP MATERIAL		
3. TRAFFIC CONTROL AND SAFETY NEEDS		
4. ROADWAY ALIGNMENT AND GRADE (ADEQUATE?)		
5. CHANNEL OR STRUCTURE ALIGNMENT CHANGES RECOMMENDED (SHOW ON COPY OF SITE PLAN)		
6. ARE DIKES OR BANK PROTECTION REQUIRED TO CONTROL FLOW (SHOW ON COPY OF SITE PLAN)		
7. DESCRIPTION OF ON-SITE CONSTRUCTION MATERIAL TO BE USED		
8. STORAGE AND/OR WASTE AREAS AVAILABLE FOR CONSTRUCTION (LOCATION, SIZE, AND DESCRIPTION)		
9. WHAT IS THE MAXIMUM LENGTH OF GIRDERS THAT CAN BE HAULED TO THE SITE? FEET		
10. METHOD OF CONSTRUCTION CONTRACT <input type="checkbox"/> FORCE ACCOUNT <input type="checkbox"/> TIMBER PURCHASER <input type="checkbox"/>		
11. OTHER REMARKS AND SPECIAL RECOMMENDATIONS		
G. FISH AND OTHER WILDLIFE PASSAGE CONSIDERATIONS		
1A. IS FISH PASSAGE REQUIRED? YES <input type="checkbox"/> NO <input type="checkbox"/>	1B. IF YES, WHAT SPECIES AND LIFE STAGES?	2. IS PASSAGE FOR OTHER SPECIES REQUIRED? (TERRESTRIAL, CRAWLING, SWIMMING) YES <input type="checkbox"/> NO <input type="checkbox"/> WHICH?
3. SPECIAL/IMPORTANT CONSIDERATIONS FOR HABITAT PROTECTION?		
4. FOREST BIOLOGIST RECOMMENDATIONS		
PREPARED BY:	DATE	FOREST ENGINEER REVIEW: _____ DATE
FIELD SITE SKETCH, LONGITUDINAL PROFILE, AND CROSS-SECTIONS		

Adapted From: Form R5-7700-71