

Scope of Work (Rev. 3 Final – Bypass Channel)

02/12/19

Milwaukee County and its project partners seek to develop fish passage at the Kletzsch Dam, and dam removal has been ruled out as an alternative. Concept sketches and hydraulic modeling was completed for various desired rock ramp fish passage alternatives, and all were found to be infeasible due to flooding and other regulatory constraints. Natural bypass channel alternatives around the river left abutment are also not feasible due to private land concerns and limited public access for maintenance and recreation. The project design intent then changed to a natural bypass channel along the river right side of the dam as the only remaining passive, non-mechanical fish passage option. To date, concept designs and 30% complete drawings have been completed, along with cost estimates and a design report.

This scope of work is intended to provide Milwaukee County with design, permitting and construction management services for Final Design of the Kletzsch Park Dam natural bypass channel. Design elements addressed in this scope of work that differ from the original scope of work (Rev.2) include:

- Hydraulic analysis of additional options including an in-river fishway (modification of alternative 3D from concepts) and a culvert within the fish bypass channel.
- Additional coordination with SEWRPC
- Excavation of a natural bypass route around the dam
- Design of a step-pool natural bypass channel system with consideration for water volumes (over dam), dam pool elevation (upstream) and attraction flow (downstream)
- Excavation and subsequent stabilization of the river right bank between the Milwaukee River and bypass channel (riprap toe and bioengineering)
- Open channel hydraulic design of bypass channel and material sizing for bioengineering and channel bed/bank materials
- Associated dewatering of inlet and outlet to prevent dam breaching during construction
- Mature tree removal
- Large scale revegetation and planting plans
- Oak Leaf Trail modification
- Bypass exit (upstream) and entrance (downstream) maintenance access
- Retaining wall design and associated grading
- Geotechnical review of retaining wall design
- Stormwater outfall relocation and headwall construction
- Manhole modification (shortening and collar replacement)
- One additional overlook
- Three additional geotechnical borings and Geotech report
- Slope^[MM1] stability analysis and geotechnical design recommendations for both sides of the bypass channel
- Specifications for the above items

The following scope of work also includes the following tasks that were originally scoped for final design but have not yet come under contract beyond 30%:

- Overlook and trail design
- Permitting

The following scope of work separates the project into a 60% deliverable product and subsequent Final Design (90/100% submittal) products. Each scope of work is shown as separate with its own associated cost estimate. Construction management tasks are not included in this scope of work.

This scope of work does not include the original contract design scope items or the 30% amendment scope items already under contract that have either been delivered or are pending delivery. These include:

- Survey and Bathymetry (completed)
- Geotechnical borings and report (completed)
- Concept designs for rock ramp and bypass channel (completed)
- Concepts, design analysis and design memo for dam repair (completed)
- 30% Plans for bypass channel (completed)
- Design report and EOPC (completed to 30%)
- Initial phase design progress meetings, regulatory meeting, and public meeting (completed)

60% Submittal Design (Bypass channel and dam repair)

Project Management

- 1.1. *Project Management* - Inter-Fluve will provide up to 24 hours of internal project management, including review of invoices, staff scheduling, meeting coordination and non-specific communication (e.g., phone calls) to support design.
- 1.2. *Weekly progress meetings* – Inter-Fluve will attend up to 6 weekly progress meetings (by phone).
- 1.3. *Response to Public Meeting comments* – Inter-Fluve will review comments received during and after public meeting #1 (January 9th, 2019), and will prepare a Tech Memo of written responses to technical questions and comments.
- 1.4. *AOC Tech Team Meeting#2* - Inter-Fluve will facilitate a meeting with the Milwaukee Estuary Fish and Wildlife Technical Advisory Committee and project partners. This meeting will be to present the 60% Design.
- 1.5. *SEWRPC Coordination* – Inter-Fluve will review SEWRPC comments and provide responses, attend a meeting with SEWRPC to discuss hydraulic model and fish passage options, and will coordinate with SEWRPC regarding review of modeled conditions.
- 1.6. *Public meeting #2* – Inter-Fluve will facilitate a public meeting to present landowners and park users with the 60% design.

2. Data Collection

- 2.1. *Geotechnical data collection* – Inter-Fluve team (KSA) will collect up to three additional borings related to channel construction and geotechnical stability. Assumes three 30 ft deep borings or to proposed depth of subgrade excavation.

Deliverables (Task 2):

- Tech memo of public meeting comment responses.
- Geotechnical report detailing the results of the borings.

3. 60% Design Submittal

- 3.1. *Hydraulic Modeling of Alternatives* – Inter-Fluve will conduct hydraulic modeling to examine fish passage and no-rise conditions for the following alternatives:
 - 3.1.1. *Modified Upstream Ramp Extension* – Inter-Fluve will use a 1-D model to evaluate no rise and passage conditions for this option, which features a fish bypass channel parallel to flow along river right, entirely upstream of the spillway and cutting through the spillway.
 - 3.1.2. *Culvert Options* – Inter-Fluve will model three culvert options within the proposed 30% bypass channel. One will include a short segment of culvert upstream, a second short culvert downstream, and a longer segment of culvert. These are designed in an attempt to save large oak trees from excavation along river right.

- 3.2. *Design analysis* – Details for the preferred alternative will be evaluated using a 1-D and/or 2-D hydraulic model. Entrance and exit hydraulic conditions will be evaluated for grading options, and flows over the spillway will be manipulated to determine the best configuration for fish attraction and passage. Step-pool channel bed and bank details will be modeled, and bank grading plans will be incorporated. Attraction flow and passage entrance configurations will be examined to maximize attraction flow near the dam.
- 3.2.1. *Dewatering plan development* – Inter-Fluve will develop schematic dewatering plan boundaries for installation of upstream and downstream transitions. These may include coffer dam construction or basic dewatering recommendations (e.g. bulk bags).
- 3.2.2. *Planting plan development* – Inter-Fluve will work with Milwaukee County Parks to develop seed, plug and plant lists, densities and locations, including plant protection options and warranty conditions.
- 3.2.3. *Grading plan coordination* – Inter-Fluve will develop grading plan sheets in coordination with SEH and KSA. Grading plans will be footprint plans, while SEH will develop plan view and section details for trails and other park amenities.
- 3.2.4. *Culvert design* – Inter-Fluve will coordinate with Contech (structural engineering) regarding fish bypass culvert design integration. Inter-Fluve assumes a natural bed through either a partially buried pipe, or an open bottom pipe or box culvert. KSA will provide review of structural designs and geotechnical engineering considerations for subgrade design, subgrade excavation, backfill and culvert placement.
- 3.3. *Slope Stability Analysis* – The Inter-Fluve team (KSA lead) will complete a slope stability analysis for both sides of the natural bypass channel. This report will include recommendations for remedial measures to achieve adequate slope stability. Slope stability analysis will include analysis of differential head between the Milwaukee River and the bypass channel. Analysis should include potential seepage issues.
- 3.4. *Headwall design* – The bypass channel will intersect an existing storm sewer pipe midway through the channel profile. KSA will complete final design of the new pipe terminus, including headwall and energy dissipation. Design will be completed in coordination with Inter-Fluve engineers to coordinate transition to the bypass channel. This assumes that the shortened pipe is in good condition and not in need of replacement, and so does not include design for pipe replacement. Includes coordination with the City of Glendale Engineering Department.
- 3.5. *Recreational boating access and Oak Leaf Trail modification* – The Inter-Fluve team (SEH lead) will complete 60% design for a recreational boating takeout access site at the upstream end of the natural bypass channel and angler boating access downstream of the bypass. This includes an access trail, fencing, bordering elements (e.g. block stone)

and integration with any proposed retaining walls. SEH will also modify the existing Oak Leaf Trail and integrate the design into the Inter-Fluve bypass channel design.

3.5.1. *Retaining walls* – The Inter-Fluve team (SEH lead) will design natural looking (rounded or slab stone, or stone facing) modular pre-fabricated retaining wall installations within and adjacent to the bypass channel feature to support recreational boating features and modifications to the Oak Leaf Trail. This includes coordination with Inter-Fluve regarding slope grading and coordination with KSA regarding slope stability analysis of retaining wall features. Assumes the use of modular retaining wall components designed by the manufacturer.

3.5.1.1. SEH will submit for review photographs of up to four options for modular pre-fabricated retaining walls.

3.6. *Overlook design* – The Inter-Fluve team (SEH lead) will create 60% submittal designs for overlooks designed in the 30% submittal phase. KSA will lead the structural design for the overlooks.

3.7. *Curb and gutter relocation and restoration* – Within the project footprint, the project team (SEH lead) will complete the 60% submittal for modifications to the North Milwaukee River Parkway, including removal of parallel parking (asphalt, curb and gutter), redesign of the adjacent modified road, ground and trail surfaces, subgrades, soils and curb and gutter infrastructure. Includes coordination with Milwaukee County.

3.8. *Design drawings (Dam repair)* – Inter-Fluve team (KSA) will develop progress submittal design drawings for dam repair (90% complete level). A 60% submittal will not be included. Comments and markups received for the 90% submittal will be incorporated into the next submittal. The dam repair drawings will be a stand-alone sheet set.

3.8.1. *Design report* – KSA will update the concept design report to reflect final designs for dam repair.

3.9. *Design drawings (Bypass channel and amenities)* – Inter-Fluve will develop progress submittal design drawings for the bypass channel (60% complete level). Comments and markups received for the 60% submittal will be incorporated into the next submittal. The following sheets are expected for the drawings, including:

- Cover and site location (1 sheet)
- Existing conditions and erosion control (1 sheet)
- Erosion control details (1 sheet)
- Site plan and sequencing (1 sheet)
- Dewatering and coffer dam locations (1 sheet)
- Dam repair (separate sheet set – stand alone)
- Plan view and profile of finish conditions (1 sheets)
- Grading plan (1 sheet)
- Grading cross sections (1 sheets)
- Bank and tie-in detail sheets (2 sheets)
- Typical cross sections of bypass channel bed and bank treatments (1 sheet)

- Typical cross sections of Milwaukee River bank treatments (1 sheet)
- Plan views of overlook, access and amenities (4 sheets)
- Typical details (up to 10 sheets)
- Planting plan (2 sheets)
- Boring results (4 sheets)

3.10. *Technical specifications* – Technical specifications and bid item list for designed elements will be included with the 60% design submittal. Includes input on Milwaukee County FAQs. Inter-Fluve will provide review and comment for Project Manual sections to be completed by Milwaukee County (General requirements and contract boilerplate, FAQs).

Deliverables (Task 3)

- HEC-RAS model output
- Design drawings as described in 11x17" PDF format.
- Basis of design memo (60%) with opinion of probable cost in electronic PDF format.
- Technical specifications (60%) in electronic PDF format.

Assumptions (Task 3)

- This scope assumes that the previously completed work regarding No Rise certification will suffice for permit submittals. This scope does not include analysis, permitting or support work for Letter of Map Revision or Conditional Letter of Map Revision.
- Scope assumes that the project design will be allowed to construct the bypass channel over the MMSD 24" sanitary sewer crossing, and that no special protective measures (e.g. vibration monitoring, protective layering) will be required.
- This scope assumes there will be no requirement to sample river sediment or excavated material for contaminant testing, and that no permitting effort is needed for contaminated sediment or soil disposal.
- This scope of work does not include cultural resources permitting or related work.
- Project Manual preparation, including contract documents, will be completed by Milwaukee County.
- Schedule assumes 7-day turnaround for project partner comments to designs.

4. Permitting and Environmental Compliance Support

- 4.1. *Quality Assurance Project Plan (QAPP)* – Inter-Fluve will complete the QAPP application and coordinate with the WDNR AOC Coordinator regarding submittal requirements unique to the project.
- 4.2. *Permitting* – Depending on the proposed project activities associated with the final design, permits for impacts to wetlands and waterways could be needed for the project to fulfill the requirements of Wisconsin statute NR 103 and Section 404 of the Clean Water Act. Based on the scope of the project, anticipated permits needed include a

Chapter 30/31 approval from the State of Wisconsin and from the U.S. Army Corps of Engineers (ACOE). The following is assumed to be needed for permit applications:

- Project description
- Project purpose and need
- Project sequence of operations
- Discussion, maps and figures needed to describe resource (archaeological, wetland, waterway, threatened and endangered species habitat) impacts above the Ordinary High-Water Mark (OHWM)
- Discussion of hydraulic analysis
- Sediment control plan
- Discussion of Avoidance, Minimization and Compensation
- Review of Notice of Pending Application and publish Public Notice in local newspaper (Assumes \$300 publishing cost)

4.3. Following Milwaukee County review of the application and incorporation of comments on the drafts, a final version of the application will be generated. An electronic copy of the State of Wisconsin Permit Applications will be provided to Milwaukee County for electronic transfer through the WAMS system. Permits will be provided electronically to Milwaukee County, along with five hard copies for distribution and submittal to the ACOE.

4.4. *Floodplain Development Permit Application (City of Glendale)* – Inter-Fluve assumes 4 hours for completing documentation and coordination with City staff.

4.5. *No Rise Certification* – Inter-Fluve will coordinate with the City Floodplain Engineer and provide the necessary documentation for no-rise certification. We assume 4 hours.

4.6. *Section 01330 Form and FAQ Form* – Inter-Fluve will fill out both the Section 01330 and FAQ forms, to be provided by Milwaukee County.

Deliverables (Task 4):

- Extracted CAD exhibits and area calculations as needed for permit applications.
- Completed permit applications as described

Assumptions (Task 4):

- Permit fees to be paid by Milwaukee County.
- Scope assumes no public meeting.
- CLOMR/LOMR services are not included
- Assumes no restoration and/or Mitigation Plan for wetland impacts
- Permitting activities for sediment removal, dredging or sediment or excavation disposal are not included in this scope of work.

Final Design Submittal (Bypass channel and dam repair)

Project Management

- 1.1. *Project Management* - Inter-Fluve will provide up to 24 hours of internal project management, including review of invoices, staff scheduling, meeting coordination and non-specific communication (e.g., phone calls) to support design.
- 1.2. *Weekly progress meetings* – Inter-Fluve will attend up to 6 weekly progress meetings (by phone).
- 1.3. *AOC Tech Team Meeting#3* - Inter-Fluve will facilitate a meeting with the Milwaukee Estuary Fish and Wildlife Technical Advisory Committee and project partners. This meeting will be to present the 60% Design.
- 1.4. *SEWRPC Coordination* – Inter-Fluve will review SEWRPC comments and provide responses, attend a meeting with SEWRPC to discuss hydraulic model and fish passage options, and will coordinate with SEWRPC regarding review of modeled conditions.

2. Data Collection

- 2.1. NA

Deliverables (Task 2):

3. 90% Design Submittal

- 3.1. *Design analysis* – Designs will be reviewed, including model runs, assumptions, plansheet details and quantities. Material sizing (e.g. bed material, fabric, plantings) will be completed.
 - 3.1.1. *Dewatering plan development* – Inter-Fluve will finalize recommended dewatering plans installation of upstream and downstream transitions. These may include coffer dam construction or basic dewatering recommendations (e.g. bulk bags).
 - 3.1.2. *Planting plan development* – Inter-Fluve will finalize seed, plug and plant lists, densities and locations, including plant protection options and warranty conditions.
 - 3.1.3. *Grading plan coordination* – Inter-Fluve will finalize grading plan sheets in coordination with SEH and KSA. Grading plans will be footprint plans, while SEH will finalize plan view and section details for trails and other park amenities.
 - 3.1.4. *Culvert design* – Inter-Fluve will integrate Contech (structural engineering) culvert designs into the overall planset.
- 3.2. *Headwall design* – The bypass channel will intersect an existing storm sewer pipe midway through the channel profile. KSA will complete final design of the new pipe terminus, including headwall and energy dissipation. Design will be completed in coordination with Inter-Fluve engineers to coordinate transition to the bypass channel. This assumes that the shortened pipe is in good condition and not in need of

replacement, and so does not include design for pipe replacement. Includes coordination with the City of Glendale Engineering Department.

3.3. *Recreational boating access and Oak Leaf Trail modification* – The Inter-Fluve team (SEH lead) will complete 90% and 100% complete designs for a recreational boating takeout access site at the upstream end of the natural bypass channel and angler boating access downstream of the bypass. Designs will be based on the 60% submittal and comments.

3.3.1. *Retaining walls* – The Inter-Fluve team (SEH lead) will finalize retaining wall design and integrate into the overall planset. Designs will be based on the 60% submittal and comments.

3.4. *Overlook design* – The Inter-Fluve team (SEH lead) will create 90% and 100% complete designs for overlooks designed in the 60% submittal phase.

3.5. *Curb and gutter relocation and restoration* – Within the project footprint, the project team (SEH lead) will complete the 90% and 100% complete designs for modifications to the North Milwaukee River Parkway.

3.6. *Design drawings (Dam repair)* – Completed

3.7. *Design drawings (Bypass channel and amenities)* – Inter-Fluve will develop progress submittal design drawings for the bypass channel (90% complete level). Comments and markups received for the 90% submittal will be incorporated into the next submittal.

The following sheets are expected for the drawings, including:

- Cover and site location (1 sheet)
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- Boring results (4 sheets)

3.8. *Technical specifications* – Technical specifications and bid item list for designed elements will be included with the 90% design submittal. Includes input on Milwaukee County FAQs. Inter-Fluve will provide review and comment for Project Manual sections to be completed by Milwaukee County (General requirements and contract boilerplate, FAQs).

Deliverables (Task 3)

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Assumptions (Task 3)

- This scope assumes that the previously completed work regarding No Rise certification will suffice for permit submittals. This scope does not include analysis, permitting or support work for Letter of Map Revision or Conditional Letter of Map Revision.
- Scope assumes that the project design will be allowed to construct the bypass channel over the MMSD 24" sanitary sewer crossing, and that no special protective measures (e.g. vibration monitoring, protective layering) will be required.
- This scope assumes there will be no requirement to sample river sediment or excavated material for contaminant testing, and that no permitting effort is needed for contaminated sediment or soil disposal.
- Project Manual preparation, including contract documents, will be completed by Milwaukee County.
- Schedule assumes 7-day turnaround for project partner comments to designs.

4. Permitting and Environmental Compliance Support

- 4.1. Quality Assurance Project Plan (QAPP) – Inter-Fluve will update the QAPP application as needed.
- 4.2. Permitting – Inter-Fluve (SEH lead) will update permit applications as needed following DNR and USACE comment to the permit application.
- 4.3. Floodplain Development Permit Application (City of Glendale) – Inter-Fluve assumes 4 hours for completing documentation and coordination with City staff.
- 4.4. No Rise Certification – Inter-Fluve will coordinate with the City Engineer and provide the necessary documentation for no-rise certification. We assume 4 hours.
- 4.5. Section 01330 Form and FAQ Form – Inter-Fluve will assist in updating fill out both the Section 01330 and FAQ forms, to be provided by Milwaukee County.

Deliverables (Task 4):

- Extracted CAD exhibits and area calculations as needed for permit applications.
- Completed permit applications as described

Assumptions (Task 4):

- Permit fees to be paid by Milwaukee County.
- Scope assumes no public meeting.

- CLOMR/LOMR services are not included
- Assumes no restoration and/or Mitigation Plan for wetland impacts
- Permitting activities for sediment removal, dredging or sediment or excavation disposal are not included in this scope of work.
- This scope of work does not include cultural resources permitting or related work.
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Kletzsch Park Dam - InterFluve consultant fees

P548-17632

1-Mar-19

Project Title	Fish Passage	Overlook - Access	Dam Repairs	
Consultant: (Contractual Design)				
Conceptual Plan - Original Agreement	\$ 56,704	\$ 14,900	\$ 6,084	
Fee Increase 1 - wetland delineation	\$ 2,238			
Fee Increase 2 - Additional Fish Passage Alternative	\$ 20,068			
Fee Increase 3 - 30% Design West Bank Bypass	\$ 43,073			
Fee Increase 4 - Add Alternatives, 60% to 100% Design	\$ 169,170	\$ 23,469	\$ 27,188	
Estimated Fee Inc 5 - Bidding and Construction Oversight	\$ 29,000	\$ 3,000	\$ 3,000	
Contingency	\$ 20,000			
Subtotal Consultant	\$ 340,253	\$ 41,369	\$ 36,272	\$ 417,894

Kletzsch Park Dam - Additional Alternatives - Fee Inc 2

Client Name Milwaukee County Parks

INTER-FLUVE, INC.
ESTIMATED HOURS
BY RESOURCE

	Principal	Pr	Staff	Tech Staff	Clerical	Fish Passage
	\$212	\$150	\$123	\$100	\$64	Total
Task 1: Initial Reconnaissance & Site Investigation						
1.1 - Existing Data Review	0	0	0	0	0	\$0
1.2 - Geomorphic Field Investigation & Survey	0	0	0	0	0	\$0
1.3 - Hydrology	0	0	0	0	0	\$0
Task 2 - Geomorphic Field Investigation and Site Survey	0	0	0	0	0	\$0
SUBTOTAL	0	0	0	0	0	\$0
TASK 1 ESTIMATE \$0						
Task 2: Hydrology & Hydraulics						
2.1 Hydrology Analysis	0	0	0	0	0	\$0
2.2 Hydraulic Modeling	0	0	100	0	2	\$12,428
2.3 Reporting	0	0	0	0	0	\$0
SUBTOTAL	0	0	100	0	2	\$12,428
TASK 2 ESTIMATE \$12,428						
Task 3: Conceptual Design						
3.1 - Conceptual Design Drawings	0	0	0	0	0	\$0
3.2 - Conceptual Design Report	0	10	40	0	2	\$6,548
SUBTOTAL	0	10	40	0	2	\$6,548
TASK 3 ESTIMATE \$6,548						
Task 4: Detailed Design						
4.1 - Construction Drawings	0	0	0	0	0	\$0
4.2 - Cost Estimation	0	0	0	0	0	\$0
4.3 - Specifications	0	0	0	0	0	\$0
4.2 - Design Reporting	0	0	0	0	0	\$0
SUBTOTAL	0	0	0	0	0	\$0
TASK 4 ESTIMATE \$0						
Task 5: Meetings & Project Coordination						
Meetings & Project Coordination	0	4	4	0	0	\$1,092
SUBTOTAL	0	4	4	0	0	\$1,092
TASK 5 ESTIMATE \$1,092						
TOTAL ESTIMATE \$20,068						
LABOR TOTAL						\$20,068

Kletzsch Park Dam Fish Passage - 30% Fish Passage Design - Fee Increase 3

Client Name Milwaukee County Parks

INTER-FLUVE, INC.

KSingh

	Principal	Sr. Staff	Staff	Tech Staff	Clerical	Total	Total
Task 1: Subsurface Evaluation	\$212	\$150	\$123	\$100	\$64		
1.1 - Geotechnical Data Collection	0	8	0	0	2	\$1,328	6573
1.2 - Laboratory Analysis	0	0	0	0	0	\$0	1740
1.3 - Geotechnical Investigation Report	0	2	0	0	2	\$428	3000
SUB TOTAL	0	10	0	0	4		
TASK 1 ESTIMATE	\$1,756					\$1,756	\$11,313
Task 2: Preliminary Design (30%)							
2.1 Preliminary Design	2	16	8	0	0	\$3,808	0
2.2 Design Drawings	0	8	0	60	0	\$7,200	
2.3 Preliminary Basis of Design Memo	2	16	16	0	2	\$4,920	0
SUB TOTAL	4	40	24	60	2		0
TASK 2 ESTIMATE	\$15,928					\$15,928	
Task 3: Hydraulic Analysis							
3.1 - Design Hydraulic Analysis	0	4	40	0	0	\$5,520	0
3.2 - Regulatory Hydraulic Analysis	0	4	20	0	0	\$3,060	0
SUB TOTAL	0	8	60	0	0		0
TASK 3 ESTIMATE	\$8,580					\$8,580	
Task 4: Meetings and Project Coordination							
4.1 - Project Coordination	0	8	4	4	2	\$2,220	0
4.2 - Design Review Meetings	0	12	12	0	0	\$3,276	0
SUB TOTAL	0	20	16	4	2		0
TASK 4 ESTIMATE	\$5,496					\$5,496	\$11,313

INTER-FLUVE ESTIMATE	\$31,760	TOTAL	\$31,760
KS-A ESTIMATE	\$11,313		
TOTAL ESTIMATE	\$43,073		

Kletzsch Park Dam Bypass Channel

Milwaukee County

FR 1-10-4

60% Design Submittal

Part B



Inter-fluve
Task Estimate

Tom Sear
Task Estimate

SEH
Task Estimate

KSA
Task Estimate

Project Team
Task Estimate

	Inter-fluve Task Estimate	Tom Sear Task Estimate	SEH Task Estimate	KSA Task Estimate	Project Team Task Estimate	Fish Passage	Overlook/Access	Dam Repairs
Task 1 - Project management								
Weekly progress meetings/calls (3)	\$1,162	\$0	\$1,044	\$0	\$2,206	2206		2206
Design review meetings (1)	\$1,124	\$240	\$436	\$0	\$1,800	1364	436	1800
General PM	\$3,372	\$0	\$0	\$0	\$3,372	2700	372	3372
Public Meeting #2 and follow up/comments	\$2,010	\$0	\$0	\$0	\$2,010	2010		2010
SUB-TOTAL	\$7,668	\$240	\$1,480	\$0	\$7,378	8280	808	9388
TASK 1.0 ESTIMATE								

	Inter-fluve Task Estimate	Tom Sear Task Estimate	SEH Task Estimate	KSA Task Estimate	Project Team Task Estimate	Fish Passage	Overlook/Access	Dam Repairs
Task 4a - 60% Design Submittal								
Design analysis/channel Design	\$0	\$0	\$0	\$0	\$0			
Design analysis/dam repair	\$0	\$0	\$0	\$1,909	\$1,909	1909		1909
Additional borings (4) and Geotech Report	\$731	\$0	\$0	\$2,108	\$2,108	1900	208	2108
Dewatering and planting plan	\$4,752	\$0	\$436	\$468	\$1,199	731	468	1199
Culvert Design and integration	\$0	\$0	\$0	\$4,972	\$10,160	9724	436	10160
Slope Stability Analysis	\$946	\$0	\$0	\$0	\$0			0
Sewer Outfall Design	\$358	\$0	\$0	\$2,334	\$3,280	3280		3280
Retaining Wall	\$920	\$0	\$1,235	\$3,025	\$4,618	4618		4618
Inlet Structure	\$920	\$0	\$0	\$0	\$920	920		920
Manhole modification	\$358	\$0	\$1,463	\$0	\$2,383	920	1,463	2383
Curb and Gutter	\$508	\$0	\$1,816	\$0	\$2,174	1674	500	2174
Oak Leaf Trail Realignment	\$14,744	\$960	\$2,789	\$0	\$3,297	2797	500	3297
Design drawings - 60%	\$6,960	\$240	\$6,339	\$5,746	\$27,789	17450	6339	27789
Tech Specs - 60%	\$31,197	\$0	\$951	\$1,507	\$9,658	7200	951	9658
SUB-TOTAL	\$31,197	\$1,200	\$15,029	\$1,200	\$69,495	51,214	10,397	69,495
TASK 4a ESTIMATE								

	Inter-fluve Task Estimate	Tom Sear Task Estimate	SEH Task Estimate	KSA Task Estimate	Project Team Task Estimate	Fish Passage	Overlook/Access	Dam Repairs
Task 5 - Permitting								
QA/P	\$0	\$0	\$0	\$0	\$0			0
Wetland Delineation	\$131	\$0	\$0	\$0	\$131	131		131
Permit documentation/application	\$131	\$0	\$5,175	\$0	\$5,306	3306	1000	5306
Floodplain Development permit	\$131	\$0	\$920	\$0	\$1,051	1051		1051
No rise certification	\$1,048	\$0	\$0	\$0	\$1,048	1048		1048
Water management review	\$131	\$0	\$230	\$0	\$361	361		361
County forms/FAQ support	\$131	\$0	\$0	\$0	\$131	131		131
Permitting table	\$0	\$0	\$436	\$0	\$0	436		436
Construction/permitting schedule	\$0	\$0	\$109	\$0	\$0	109		109
SUB-TOTAL	\$1,701	\$0	\$50	\$0	\$8,028	6,573	1,000	8,573
TASK 5.0 ESTIMATE								

TOTAL ESTIMATE (60% Submittal Part B)

\$ 66,067 \$ 12,205 \$ 9,184 \$ 87,456

