

**EXHIBIT 4**  
**AUTHORIZATION OF CHANGE IN SERVICE**

<b>CONTRACT NAME:</b>	Castle Forest Channel Improvements (C680)	<b>NUMBER:</b>	219-069
<b>CONTRACTOR:</b>	HDR Engineering, Inc.		
<b>ORIG. CONTRACT DATE:</b>	1/31/18	<b>RESOLUTION NO:</b>	
<b>CITY REPRESENTATIVE:</b>	Rey Garcia, PE	<b>DEPT:</b>	
<b>DATE:</b>	7/20/22	<b>ACIS NO.:</b>	2

**DESCRIPTION OF WORK TO BE ADDED TO OR DELETED FROM SCOPE OF SERVICES:**

Change in Service #3 is to develop the PS&E package for design alternative 2 identified in the PER. Services include H&H modeling to optimize an off-site development detention pond (Mystic Canyon) along with providing engineering design of ponds, storm drains and channel improvements. This phase of the project will implement design components that reduce the 1% annual chance flood risk for the Castle Forest Subdivision.

Original Contract Amount:		\$	\$155,862.00
Previous <b>Increases/Decreases</b> in Contract Amount:		\$	\$24,472.00
<b>CURRENT CONTRACT AMOUNT:</b>		\$	\$180,334.00
This <b>Increase/Decrease</b> in Contract Amount:		\$	\$283,868.00
<b>REVISED CONTRACT AMOUNT:</b>		\$	\$464,202.00

**CONTRACTOR:**

Warrix, Todd Clay Digitally signed by Warrix, Todd Clay  
Date: 2022.07.20 16:04:17 -05'00'

Signature

Todd Warrix, PE / Associate Vice President

Print Full Name / Title (if not in individual capacity)

7/20/20

Date

**CITY:**

Signature

Date

Print Name / Title

***City Department Use Only Below This Line (PM, POC, etc.).***

Account Number(s):	Amount	Date
#	\$	
#	\$	
#	\$	

## **Castle Forest Channel (CIP No. 680) Engineering Design Services Scope and Fee**

The City of San Marcos (COSM) previously contracted HDR Engineering, Inc. (HDR) to develop a Preliminary Engineering Report (PER) to identify and mitigate the drainage issues in the Castle Forest Subdivision area. The PER dated January 6, 2022, was approved by the COSM and they have requested that HDR develop the plans, details and specification documents for Alternative 2, identified in the report. This document outlines the scope, schedule and fee associated with the development of the engineering design documents for the Castle Forest Channel (CIP No. 680). The proposed improvements include the following:

- 3 storm-drain system extensions
- 300 feet of channel conveyance improvements
- 2 detention ponds

The Castle Forest subdivision is downstream of a proposed residential development that HDR will consider in the H&H modeling updates as part of the design phase. It is assumed that flows from the offsite detention pond proposed by the upstream development can be re-configured to provide similar flows to the Castle Forest subdivisions, as seen in the PER, which will allow the Alternative 2 design to provide the flood risk reduction as proposed.

During the H&H update, HDR will optimize the upstream development detention pond and if it is determined by HDR that portions of the proposed Alternative 2 improvements can be minimized or eliminated, they will incorporate additional design components provided in Alternative 1 of the PER, if agreed by COSM. Design components will be added to the design as long as the OPCC for all of the proposed Castle Forest Drainage improvements does not exceed the cost of Alternative 2 as outlined in the PER. Any infrastructure improvements above and beyond the Alternative 2 OPCC would not be part of this scope and be considered additional services. The design components may include storm drain system improvements, culvert improvements or channel conveyance improvements. The additional design request will not consider those that require real estate acquisition or additional permitting outside of the current scope of services.

The scope to complete the work defined is as follows:

### **I. Project Management**

- a. HDR will attend one virtual Project Kick-off Meeting at the COSM and develop the project agenda and meeting minutes.
- b. HDR will attend project milestone meetings at the 60%, 90% and 100% submittals to review the comments provided by COSM and develop the project agenda and meeting minutes.
- c. HDR will prepare monthly progress reports and invoices for the project.
- d. HDR will provide project initiation, controls, and staff and sub-consultant coordination throughout the duration of the project.

### **II. Data Collection**

- a. HDR will conduct up to 2 site visits to observe field conditions and check survey data for reasonableness.
- b. HDR will manage the topographic survey data collection provided by sub-consultant. Topographic survey will include: culverts, trees (including diameter and species), curbs, storm drains, inlets, manholes, and city-owned and franchise utility appurtenances above ground or exposed (valves and meters, utility poles, etc.) in the project area. Existing

property boundaries, right-of-way, and easements will be provided based on available plat maps and record data. A formal boundary field survey will not be conducted. Finished floor elevations for identified houses will be collected for inclusion in evaluation of the floodplain limits. HDR will provide the COSM a map of identified houses for finished floor survey for concurrence prior to collecting data. Topographic data scope and fee can be seen in **Attachment A**.

- c. The City will provide HDR with the latest drainage design concepts proposed for the Mystic Canyon development located northwest of Castle Forest including stormwater detention pond characteristics to incorporate into the project hydrologic model.
- d. HDR will manage the utility identification and location of conflicting existing franchise utilities in the project area with the owner of each utility including requesting utility mapping.
- e. HDR will conduct on-site delineation survey of aquatic sites to document extent of potential waters of the U.S., including streams, excavated channels, and wetlands. The routine on-site delineation will be conducted in accordance with the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual and 2010 Great Plains Regional Supplements.
- f. HDR will prepare delineation report and proposed Jurisdictional Determination (JD) report summarizing the findings of the delineation of potential waters of the U.S. The proposed JD will be based on the pre-2015 rules currently in effect (i.e., Rapanos Guidance).
- g. HDR will perform evaluation of vegetation community types with the potential to serve as suitable habitat for Migratory Bird nesting areas.

### **III. Texas Water Development Board (TWDB) Flood Infrastructure Fund (FIF) Environmental Documentation**

- a. HDR will prepare and submit the Categorical Exclusion (CE) / Determination of No Effect Request Form for the COSM to submit to the TWDB for the FIF application.
- b. HDR will prepare and submit up to five agency letters on the proposed project with a description and map to get information for the TWDB environmental review.
- c. HDR will respond to up to two rounds of questions and/or requests for information from TWDB on the environmental documentation.

### **IV. Update Hydrology and Hydraulic Models**

- a. HDR will utilize drainage plans by others (provided by COSM) for the upstream development to verify offsite flows and re-configure pond size and outfall size using InfoWorks ICM (ICM). HDR will compare existing and proposed flows and utilize the proposed development plans to create the proposed conditions and make recommendations to modifications.
- b. HDR will update the ICM modeling developed during the PER including:
  - i. Update the proposed channel, storm drain, and detention pond design elements for the chosen alternative with new information from upstream development.
  - ii. Update the model with survey data
  - iii. Update the model with Atlas 14 data
- c. HDR will verify that the proposed model updates still address flooding as defined in the PER.
- d. HDR will verify proposed design does not increase flows or WSEL's downstream of the channel to the next confluence.
- e. HDR will make minor modifications (e.g., minor adjustment to manhole locations, pipe diameters, etc.) to the chosen alternative design if necessary to meet COSM criteria. If major revisions are required, HDR reserves the right to renegotiate the scope and fee.
- f. After updating the upstream detention pond configuration, HDR will evaluate the Alternative 2 design as outlined in the PER and add or remove design components as necessary. If additional flood mitigation infrastructure is added, the total OPCC must not exceed what is

defined in the PER for Alternative 2. Additional survey may be required, but is not part of this scope of services and would be considered additional services.

**v. 60% Design Submittal**

- a. HDR will develop engineering designs and plans in conformance with the COSM Stormwater Technical Manual and the Transportation Design Criteria Manual.
- b. HDR will prepare the 60% design submittal following the COSM Engineering/CIP Plan Review Checklist dated 1/13/2020 as found on the City website, including the following documents:
  - i. Draft Cover Page
  - ii. Draft General Notes
  - iii. Draft Project Layout and Survey Sheet
  - iv. Draft Construction Phasing
  - v. Draft Traffic Control Plan
  - vi. Draft Typical Sections
  - vii. Draft Erosion and Sediment Control Plans
  - viii. Draft Drainage Plans (channel, detention and storm drain plan sheets)
  - ix. Draft Storm Drain and Channel Profiles
  - x. Draft Utility Relocation Plans (City-owned water and sanitary sewer only)
  - xi. Draft Design Details
  - xii. Draft Engineer's OPCC
  - xiii. ROW and Easement Exhibit Map
- c. Plans will be developed using Microstation and digital files will be submitted in such format.
- d. Deliverables include 2 hard copies each of 11 x 17 plan set, drainage report, OPCC. Supporting data used to develop the submittal will be included in a digital submittal.
- e. HDR will develop a permitting evaluation technical memorandum based on the 60% Design and the delineation of potential waters of the U.S. and proposed JD report. The report will summarize anticipated impacts to waters of the U.S., describe permitting requirements, and provide recommendations to secure necessary permits or an Approved JD from the USACE, if necessary.
- f. Tree Ordinance Review: HDR will review the tree survey findings and proposed extent of grading to evaluate impacts to protected trees (9 inches to 23 inches) and heritage trees (>24 inches) and review of potential tree avoidance, minimization and mitigation opportunities, if necessary.
- g. Provide formal response to COSM comments.

**vi. 90% Design Submittal**

- a. HDR will develop engineering designs and plans in conformance with the COSM Stormwater Technical Manual and the Transportation Design Criteria Manual.
- b. The 90% submittal will follow the COSM Engineering/CIP Plan Review Checklist dated 1/13/2020 as found on the City website, and will include the following documents:
  - i. Draft Cover Page
  - ii. Draft General Notes
  - iii. Draft Quantity Table
  - iv. Draft Project Layout and Survey Sheet
  - v. Draft Construction Phasing
  - vi. Draft Traffic Control Plan
  - vii. Draft Typical Sections

- viii. Draft Erosion and Sediment Control Plans
  - ix. Draft Drainage Plans (channel, detention and storm drain plan sheets)
  - x. Draft Storm Drain and Channel Profiles
  - xi. Draft Utility Relocation Plans (City-owned water and sanitary sewer only)
  - xii. Draft Design Details
  - xiii. Draft Specifications
  - xiv. Final Permits as requires (USACE, TCEQ)
  - xv. Draft Engineer's OPCC
- c. Plans will be developed using Microstation and digital files will be submitted in such format.
- d. Deliverables include 2 hard copies each of 11 x 17 plan set, drainage report, OPCC, Specification and required permits. Supporting data used to develop the submittal will be included in a digital submittal.
- e. Formal response to COSM QC comments.

#### **VII. 100% Design Submittal**

- a. HDR will finalize engineering designs and plans in conformance with the COSM Stormwater Technical Manual and the Transportation Design Criteria Manual.
- b. The 100% submittal will follow the COSM Engineering/CIP Plan Review Checklist dated 1/13/2020 as found on the City website, and will include the following final signed and sealed documents:
  - i. Cover Page
  - ii. General Notes
  - iii. Quantity Table
  - iv. Project Layout and Survey Sheet
  - v. Construction Phasing
  - vi. Traffic Control Plan
  - vii. Typical Sections
  - viii. Erosion and Sediment Control Plans
  - ix. Drainage Plans
  - x. Storm Drain Profiles
  - xi. Utility Relocation Plans (City-owned water and sanitary sewer only)
  - xii. Design Details
  - xiii. Specifications
  - xiv. Engineer's OPCC
- c. Plans will be developed using Microstation and digital files will be submitted in such format.
- d. Deliverables include 2 hard copies each of 11 x 17 plan set, drainage report, OPCC, and Specification. Supporting data used to develop the submittal will be included in a digital submittal.

#### **VIII. Cultural Resource Investigations**

The project is anticipated to require evaluation for compliance with the Texas Antiquities Code, Section 191.052. Specifically, a project for a county, municipality, or an entity created under Section 52, Article III, or Section 59, Article XVI, Texas Constitution, requires advance project review if the project affects a cumulative area larger than five acres or disturbs a cumulative area of more than 5,000 cubic yards, whichever measure is triggered first, or if the project is inside a designated historic district or recorded archeological site. HDR will:

- a. Prepare Texas Antiquities Permit Application: HDR will compile an antiquities permit application including the following components:

- i. The Texas Historical Commission's (THC) antiquities permit application form,
  - ii. A review of the THC's Archeological Sites Atlas for recorded cultural resources within a mile of the project area, and
  - iii. A scope of work (SOW) according to the THC survey standards.
  - iv. The permit application and SOW will be submitted to the client for approval and signature prior to submission to the THC.
- b. Conduct Phase I Archaeological Survey: HDR will conduct a Phase I Archaeological Survey of the entire project area. The survey will include shovel testing and photo documentation of the project area according to the SOW outlined and approved in the permit.
- c. Prepare Cultural Resources Survey Report: HDR will prepare a report in compliance with the guidelines published by the Council of Texas Archeologists, the THC, and the Secretary of the Interior's Guidelines. The report will include an introductory chapter discussing the conditions of the survey, a chapter treating the environmental and geological setting of the project area, a chapter discussing the prehistoric and historic cultural contexts of the project area including previous research in the area, a chapter regarding survey methodology, a chapter explaining the results of this survey, and finally a chapter summarizing our recommendations. The report will be submitted to the client for review and approval prior to submittal to the THC.

**IX. Bid Phase Services**

- a. HDR will assist the COSM project manager in preparing the Project Manual (Bid Documents) as outlined in Section 8 of the COSM Transportation Design Criteria Manual.
  - i. Final development and assembly of the Project Manual (Bid Documents) will be provided by COSM.
- b. HDR will attend the Pre-Bid Meeting and bring 1 set of bid documents and will be prepared to respond to contractor questions.
- c. HDR will attend the bid opening and receive 1 copy of each bid submitted.
- d. HDR will review the bids, check for errors or obvious imbalances and perform a D&B report of the low bidder.
- e. HDR will prepare and submit the bid tabulation and provide written recommendation regarding award of the contract to the City.

**X. Water Pollution Abatement Plan (WPAP)**

A WPAP is required because the project area is located in the Edwards Aquifer Recharge Zone and includes excavation which is a regulated activity. A licensed professional geoscientist (PG) will conduct a Geologic Assessment (GA) of the project area following Texas Commission on Environmental Quality (TCEQ) guidelines. HDR will develop a WPAP and submit it to the TCEQ along with the GA and 100% plans for review and approval. The COSM will be responsible for directly paying the associated WPAP application fees to the TCEQ.

**XI. Assumptions**

- a. All project meetings will be virtual.
- b. COSM will perform all easement and ROW acquisitions.
- c. Topographic data used for final H&H modeling and design of improvements will include existing LiDAR terrain data developed by others, as provided to HDR by the COSM, and supplemented with field topographic survey data provided by HDR's survey subconsultant as outlined above.
- d. OPCC will be based on other recent COSM projects as provided by COSM, City of Austin, City of San Antonio, and TXDOT unit bid prices. OPCC's provided by HDR are made on the

basis of information available to HDR and on the basis of HDR's experience and represent the judgment of an experienced and qualified professional engineer. However, since HDR has no control over cost escalation over time, the cost of labor, materials, equipment or services furnished by others, contractor's methods of determining prices, or over competitive bidding or market conditions, HDR does not guarantee that proposals, bids, or actual project or construction cost will not vary from the OPCC's prepared by HDR.

- e. COSM will be responsible for developing the construction contract procurement and agreement documents (Division 00), HDR will assist by providing project specific information for these sections.
- f. City of San Marcos development permitting or TXDOT permitting will not be required.
- g. It is anticipated the project will not require a USACE Clean Water Act, Section 404 permit, or will meet the general conditions for a non-notifying USACE Nationwide (i.e., General) Permit.
- h. Geotechnical investigation will not be required for the design of this project.
- i. Structural engineering services will not be required as part of this project. Culverts will be based on COSM or TXDOT standards.
- j. Subsurface Utility Engineering (SUE) will not be required for the design of this project. All utility location and depth for City owned utilities will be provided by COSM or the utility based on plans and records. If determined SUE survey is needed the COSM will contract this service through others.
- k. From the PER document, it was noted that there were 2 sanitary sewer main conflicts and 6 residential sanitary sewer service line conflicts. If additional conflicts are noted during the development of the design documents, additional scope and fee will be provided to COSM for relocation design.
- l. From the PER document, it was noted that there were 2 water main conflicts and 5 water service lines. If additional conflicts are noted during the development of the design documents, additional scope and fee will be provided to COSM for relocation design.
- m. Existing franchise utility conflict relocation coordination is not included in this scope of work. From the PER document, no franchise utility conflicts were identified.
- n. Scour analysis at culverts will not be required.
- o. Construction observation, field visits and on-site representation is not part of this scope and fee.
- p. Substantial/final walk through, punch-lists, pay application reviews, and development of record drawings is not part of this scope and fee.
- q. CLOMR and LOMR are not required for the construction of this project.
- r. Right-of-entry (ROE) will be granted for all segments of the project area to be surveyed, and ROE to the entire project area will be available upon receiving notice to proceed with field activities.
- s. The City will be responsible for obtaining ROE for all properties requiring survey.
- t. A cultural resources phase II testing report is not included. The current scope and fee assume no NRHP site testing or mitigation.
- u. The current estimate assumes no route adjustments after the 30% design requiring additional cultural resource surveys.
- v. The current cost estimate assumes no more than 2 archaeological sites will be identified as part of the survey.
- w. The current cost estimate assumes one mobilization and access to all properties.
- x. Any delays due to changes in the alignment, inclement weather, or parcel access issues may increase field costs and result in supplemental fee requests.
- y. Any modification to the scope and service mandated by regulatory authorities will necessitate an updated scope and fee estimate.

- z. The City of San Marcos will coordinate tree mitigation for the project within City owned property, if necessary.
- aa. HDR is not responsible for project delays resulting from agency review times.

**XII. Additional Services**

- a. Additional services not included in this scope of work are listed below:
  - i. Utility relocation coordination services for franchise utilities.
  - ii. Development erosion control design outside of the project area
  - iii. Construction Phase Services not outlined in the scope above or outside of the limits set.
  - iv. Attendance at Public Meetings
  - v. Attendance at City Council Meetings
  - vi. Construction Phase Field Visits
  - vii. Pre-construction migratory bird nest surveys
  - viii. Cultural resource Phase II testing surveys and report (if required)
  - ix. USACE pre-construction notification for a nationwide permit (if required) and/or request for an Approved JD
  - x. TWDB Environmental Data Form, Environmental Information Document, or other environmental document to support full environmental review.

**XIII. Schedule**

- a. HDR proposes a total design schedule of approximately **8 months** for design plus review time needed by COSM. The following provides a detailed schedule of the proposed deliverables.
  - i. 60% Submittal – 120 calendar days from written NTP.
  - ii. 90% Submittal – 75 calendar days after 60% review meeting and receipt of COSM review comments.
  - iii. 100% Submittal – 45 calendar days after 90% plans are approved.
- b. WPAP schedule: The WPAP will be delivered at the 100% design submittal. TCEQ requires 100% plans to enter their review process. TCEQ takes approximately 45 calendar days to review and provide comments. The process of addressing comments and final approval is approximately 60 calendar days.
- c. Cultural Resources schedule: Coordination with THC can begin at the 60% design stage once depths of excavation and project limits/activities are defined. From that point to report completion would be 150 calendar days.

**XIV. Cost**

- a. The total hourly not-to-exceed (NTE) fee for the scope of services described above is **\$283,868**. A detailed breakdown of the fee is provided as **Attachment B** to this document. This does not include fees for those services outlined in **Section IX – Additional Services**.



## ATTACHMENT A

www.mwmdesigngroup.com

Date: June 30, 2022  
Contract: City of San Marcos On-call Engineering  
Project: Castle Forest Channel Drainage Improvements  
Client: HDR  
Contact: Ron J. Branyon, PE, CFM, CSM  
San Antonio Water Resources Lead | Associate  
Address: 613 N.W. Loop 410, Suite 700  
San Antonio, TX 78216-5507  
Phone: D 210.841.2922 M 210.912.7105  
Email: ronald.branyon@hdrinc.com  
Attachment: Exhibit "A" – Limits of Survey  
Exhibit "B" – Fee Breakdown

As requested, MWM DesignGroup is submitting this proposal for providing professional services on the above referenced project. Services shall be limited to the areas approximately shown on Exhibit "A" and will be provided in accordance with following:

### Scope of Services

1. Perform GPS survey to establish horizontal and vertical control based on Texas State Plane, Central Zone NAD 83(2011) and NAVD 88.
2. Obtain approximate finished floor elevation of approx. 91 habitable structures approximately shown on Exhibit "A". Survey shall be performed utilizing reflector-less equipment.
3. Obtain miscellaneous data to supplement LIDAR mapping within the 1 area as defined on Exhibit "A".
4. Obtain location and invert elevation of storm drain manholes and culverts shown on Exhibit "A".
5. Obtain cross section data at the 4 locations approximately shown on Exhibit "A". Survey shall include tree survey within the cross section area.
6. Provide drawing showing data outlined above as one base map on 22"x 34" sheet size at a scale of 1" = 20' and as an AutoCAD Civil3D 2018 file utilizing the National Cad Standard (NCS).

Services can begin as soon as written authorization is received and can be completed in about 6 weeks (predicated upon suitable weather conditions).

MWM DesignGroup proposes to provide the services outlined above for a lump sum amount of \$24,341.00. The fee breakdown is shown on Exhibit "B".

### Excluded Services

Services that are not provided under this Agreement specifically include but are not limited to: obtaining right of entry to affected private properties; boundary surveys or delineation of ROW/Boundary lines; acquiring certificates/abstracts of title, title commitments, title and easement reports or research and mapping of existing easements; topographic surveys; research and mapping of underground utilities; surveys in support of environmental surveys performed by others; surveys in support of geotechnical investigation services provided by others; surveys in support of SUE services provided by others; construction phase surveys, and other services or expenses which may become necessary for the completion of this project, but which are not reasonably anticipatable at this time. Such services may be performed as Additional Services to this Agreement, if authorized by Client.



**Land Surveying**

Complaints on the land surveying services provided by MWM DesignGroup can be directed to the Texas Board of Professional Engineers and Land Surveyors, 1917 S. Interstate 35, Austin, Texas 78741, (512) 440-7723. MWM DesignGroup TBPLS Firm Registration No.: 10065600.

If you concur, please include this proposal as part of the task order for the above referenced project.

**Approved:**

A handwritten signature in blue ink, reading 'Eduardo O. Mendez', written over a horizontal line.

Eduardo O. Mendez, RPLS  
Principal | Sr. Vice President  
MWM DesignGroup

6/30/2022  
Date



## Exhibit "B"

TASK AND DESCRIPTION			Lic Prof I /		2 Person	TOTAL	COST
		Licensed Prof IV	Project Manager	Sr. Technician	Field Crew	HOURS	
	HOURLY RATE	\$320.00	\$145.00	\$125.00	\$187.00		
Misc. Surveys							
1. Establish control		2	9		23	34	\$6,246.00
2. Floor elevations		2	3		29	34	\$6,498.00
3. Misc. surveys to supplement LiDAR		4	4	12	24	44	\$7,848.00
4. Locate/Invert of storm drain MH's and culverts		1	3	6	12	22	\$3,749.00
SUBTOTAL		9	19	18	88	134	\$24,341.00
DIRECT EXPENSE							
LUMP SUM TOTAL							\$24,341.00

ATTACHMENT B - Fee Breakdown

	Principal	Project Manager	QA/QC	Sr Hydraulic Modeler	Project Design Engineer	Graduate Engineer	Engineering Designer	Utility Engineer	CAD Technician	Sr CADD Technician	GIS Analyst 1	Environmental Scientist Sr.	Environmental Scientist II	Archeologist PM	Archeologist Princ. Inv	Archeologist Crew Chief	Historian Princ. Inv	GIS Analyst 2	Project Administrator	Project Controller	Project Accounting	Sr Project Accounting			
Hourly Rate-->	\$371.70	\$284.71	\$252.19	\$249.02	\$164.43	\$127.60	\$148.07	\$210.22	\$93.63	\$112.48	\$93.40	\$238.10	\$143.76	\$214.75	\$138.58	\$77.73	\$164.98	\$107.91	\$107.68	\$116.30	\$112.32	\$154.35	Subtotal	Expenses	Total Fee
Task																									
I. Project Management																									
Kick-Off Meeting		2			2	4																	\$1,409.00		\$1,409.00
Project Milestone Meetings (4)		4			6	8													2				\$3,362.00		\$3,362.00
Monthly Progress Reports and Invoices		10			10																12	8	\$7,076.00		\$7,076.00
Staff and Sub-Consultant Management		12																			2		\$3,642.00		\$3,642.00
Project initiation and project document control	1	10																		6	2		\$4,142.00		\$4,142.00
Subtotal	1	38	0	0	18	12	0	0	0	0	0	0	0	0	0	0	0	0	2	6	16	8			\$19,631.00
II. Data Collection																									
Site Visits (2)					8	8																	\$2,337.00	\$300	\$2,637.00
Survey		2								2													\$795.00	\$24,341	\$25,136.00
Obtain and review offsite development drainage design		1		2	2	2				2													\$1,592.00		\$1,592.00
Utility Location Request		1				24				2													\$3,573.00		\$3,573.00
Delineation Survey of Potential Waters of the U.S.		1	1									4	16					10					\$4,869.00		\$4,869.00
Waters of the U.S. Delineation Report		1	1								2	6	16					12					\$5,748.00	\$150	\$5,898.00
Vegetation / Migratory Bird Habitat Eval												2	8					4					\$2,058.00		\$2,058.00
Subtotal	0	6	2	2	10	34	0	0	0	6	2	12	40	0	0	0	0	26	0	0	0	0			\$45,763.00
III. TWDB FIF Env Doc																									
CE / Determination of No Effect Form												2	16					2					\$2,993.00		\$2,993.00
Agency Letters												2	16					2					\$2,993.00		\$2,993.00
Response to Comments / Questions												4	16					2					\$3,469.00		\$3,469.00
Subtotal	0	0	0	0	0	0	0	0	0	0	0	8	48	0	0	0	0	6	0	0	0	0			\$9,455.00
IV. H&H Model Updates																									
Verify development H&H and optimize pond outfall and size		2	4	8	24	20																	\$10,443.00		\$10,443.00
Update ICM Model with development plans		2	2	4	12	8					4												\$5,064.00		\$5,064.00
Update ICM Model with Survey		1	1	6	12	20																	\$6,557.00		\$6,557.00
Verify Chosen Alternative		2	1	2	4	4																	\$2,488.00		\$2,488.00
Check downstream impacts		1		2	4	2																	\$1,696.00		\$1,696.00
Modify chosen alternative		2		4	8																		\$2,881.00		\$2,881.00
Preliminary Drainage Report and Models		2	1	4	24	12					2								2				\$7,798.00	\$100	\$7,798.00
Optimize design components		2			8	12																	\$3,417.00		\$3,417.00
Subtotal	0	14	9	30	96	78	0	0	0	0	6	0	0	0	0	0	0	0	2	0	0	0			\$40,344.00
V. 60% Submittal																									
60% Plans		8	8	4	40	60	20		100	20													\$34,099.00	\$100	\$34,199.00
Utility Relocation Plans and Coordination		2	1			32		16		50													\$13,893.00		\$13,893.00
Draft OPCC		2	1		4	16																	\$3,521.00		\$3,521.00
Environmental Impact Assessment & Permitting Evaluation		1	2									8	16	8				4					\$7,144.00		\$7,144.00
Formal Response to 60% Comments		1			4	8																	\$1,964.00		\$1,964.00
Subtotal	0	14	12	4	48	116	20	16	100	70	0	8	16	8	0	0	0	4	0	0	0	0			\$60,721.00
VI. 90% Submittal																									
90% Plans		4	8		24	48	16		80	16													\$24,887.00	\$100	\$24,987.00
Utility Relocation Plans and Coordination		2	1		1	16		8		24													\$7,409.00		\$7,409.00
Final Drainage Report and Models		1	1	4	8	24					2								1				\$6,206.00	\$100	\$6,306.00
Draft OPCC		1	1		1	8																	\$1,723.00		\$1,723.00
Draft Specifications		1	1		8	16																	\$4,541.00		\$4,541.00
Tree Impact Evaluation		1										4	20					4		6			\$4,545.00		\$4,545.00
Formal Response to 90% Comments		1			4	8																	\$1,964.00		\$1,964.00
Subtotal	0	11	12	4	46	120	16	8	80	40	2	4	20	0	0	0	0	4	7	0	0	0			\$51,475.00
VI. 100 % Submittal																									
Signed and Sealed Plans		1	2		16	20	4		40	8													\$11,210.00	\$100	\$11,310.00
Signed and Sealed Utility Relocation Plans		1	1		1	8		4		16													\$4,363.00		\$4,363.00
Final OPCC		1	1		1	4																	\$1,212.00		\$1,212.00
Final Specifications		1	1		4	8													2				\$2,431.00		\$2,431.00
Subtotal	0	4	5	0	22	40	4	4	40	24	0	0	0	0	0	0	0	0	2	0	0	0			\$19,316.00
VII. Cultrual Resources Investigation																									
Antiques Permit Application and Cultural Phase I Survey		1	4									8		4	20	82	6	8					\$15,056.00	\$202	\$15,258.00
Subtotal	0	1	4	0	0	0	0	0	0	0	0	8	0	4	20	82	6	8	0	0	0	0			\$15,258.00
VIII. Bid Phase Services																									
Bid Services		8			20	8														4			\$7,018.00	\$250	\$7,268.00
Subtotal	0	8	0	0	20	8	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0			\$7,268.00
IX. Water Pollution Abatement Plan (WPAP)																									
Geologic Assessment												20						4					\$5,194.00	\$100	\$5,294.00
WPAP		1										16	32					6					\$9,343.00		\$9,343.00
Subtotal	0	1	0	0	0	0	0	0	0	0	0	36	32	0	0	0	0	10	0	0	0	0			\$14,637.00
Total hours subtotal	1	88	40	40	240	400	40	28	220	140	10	68	156	8	0	0	0	50	13	6	16	8	\$258,025.00	\$25,843.00	\$283,868.00
Total Fee Subtotal	\$372.00	\$25,055.00	\$10,088.00	\$9,961.00	\$39,463.00	\$51,041.00	\$5,923.00	\$5,887.00	\$20,599.00	\$15,747.00	\$935.00	\$16,192.00	\$22,428.00	\$1,719.00	\$0.00	\$0.00	\$0.00	\$5,396.00	\$1,400.00	\$698.00	\$1,798.00	\$1,237.00	Total Project Fee		\$283,868.00