Geosyntec consultants

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June 24, 2024

Kyle B. Arrison, Director
Transportation, Stormwater, Construction Services
City of Pinellas Park
Public Works Operation Center
6250 82nd Ave,
Pinellas Park, Fl 33781

Subject: **Proposal for Jan Cory Subdivision Stormwater Improvements**
Professional Services Continuing Contract 23.004
Pinellas Park, Florida

Dear Mr. Arrison

Geosyntec Consultants, Inc. (Geosyntec) is pleased to provide this proposal for providing our services for the above referenced project.

BACKGROUND

The project area is in the neighborhood bounded to the north by 90th Avenue North, to the south by 86th Avenue and Pinellas Park Ditch 1, the east by 66th Street, and the west by 70th Street North.

The City desires a stormwater improvement study be conducted to develop practical stormwater infrastructure improvement alternatives to address the reported drainage deficiencies, including the potential to fill in the ditch that runs along 68th Street North.

The study will include performing a drainage evaluation of the contributing basin and modeling for the mean annual/ 24-hour, 10 year/6-&24-hour, 25-year/24-hour, and 100-year/24-hour design storms for the drainage system. The study will include evaluating permitting requirements, including a preliminary meeting with the Southwest Florida Water Management District (SWFWMD) to determine if permitting is needed for the alternatives. The recommendations will include research into accessibility for construction and maintenance of the proposed improvements and anticipated costing for current, 5-year, and 10-year projections.

SCOPE OF WORK

The consultant shall perform the following scope of services to meet the goals of the project.

1. **TASK 1: Project Kick-off**
    - 1.1. Attend a **Project Kick-off Meeting** to discuss problem issues with the City to discuss project scope and goals.
    - 1.2. Prepare email meeting summary.
2. **TASK 2: Data Collection and Compilation**
    - 2.1. Compile GIS data including aerial photos, topography data, parcels, roads, land use, soils,

political boundaries, watersheds, hydrography, national wetland inventory, FEMA floodzones, etc. to support the evaluation fo the project area.

2.2. Obtain and compile copies of relevant plans and permits in the vicinity of the project to support understanding of stormwater infrastructure and drainage patterns.

2.3. Obtain copies of any drainage reports associated with the area and associated hydrological and watershed modeling data from the available from the City.

2.4. Obtain complaint logs or other records of flooding from City stormwater maintenance staff.

3. TASK 3: Desktop Evaluation

3.1. Review and process GIS data for data relevant to project such as land use types, soils hydrologic class, city limits, and floodzone designations.

3.2. Generate Digital Elevation Model (DEM) from collected City or SWFWMD topographic data sources.

3.3. Review and process collected plans and permits for drainage infrastructure and other data relevant to project. Digitize drainage infrastructure in GIS.

4. **TASK 4: Field Reconnaissance** – consisting of observation of conditions at the project area, observations of drainage infrastructure and inspection of problem areas.

4.1. **Field Reconnaissance by Geosyntec staff –** This will include an investigation plan including a map of drainage infrastructure digitized during the desktop evaluation with questionable areas marked on the map to be investigated in the field. This will be followed by one field visit by two staff for up to one day to perform condition inspections including detailed inspection of problem areas, mapping/measurement of pertinent drainage infrastructure features, and photographic documentation. This will be followed by compilation of field conditions and photographic data collected during the field visit, including reported and observed problem areas. Any areas of immediate maintenance needs observed will be communicated to the City.

5. **TASK 5: Existing Condition Analysis** – Develop and execute an existing condition hydrologic & hydraulic (H&H) ICPR V4 computer model. The model will be developed based on available topographic survey and topographical LiDAR data. The model network will be developed in GIS to depict model data graphically and exported for execution in ICPR. Results will be provided in tabular and graphical format. This effort will include:

5.1. Develop hydraulic model network in local level of detail consisting of points (nodes) and polylines (links) in GIS to establish general drainage system connectivity. The model network will include the drainage structures (manholes and inlets) in the project area as well as a boundary condition. Connectivity between the aforementioned drainage features such as storm pipes will also be included in the model network.

5.2. Delineate subbasin areas using the digital elevation model, plans and permit data, field observations and topographic survey data. A subbasin area will be delineated for each runoff collecting drainage feature included in the model network.

5.3. Refine land use polygons based on latest aerial photography and field observations to support generation of curve numbers for subbasin hydrologic calculations.

5.4. Parameterize hydraulic model features using available plans, permits, topographic survey, and field observations data. This task will include:

- Extracting cross-section and stage-area data from DEM.
- Establishing node initial and warning stages.
- Input link inverts and other specific hydraulic parameters.
- Establish model boundary conditions.
- Parameterize hydrologic model features including calculating subbasin curve numbers, time of concentration, areas, and peaking factor.

5.5. Setup and execute simulations in ICPR to include evaluation of flooding level of service (LOS) conditions for the Mean Annual / 24-hour, 10-year / 6- & 24-hour, 25-year / 24-hour, and 100-year / 24-hour design storm events using SWFWMD rainfall distributions as appropriate along with corresponding rainfall depths.

- Evaluate model performance including resolving mass balance issues, node and link instabilities, and review model results for extrapolation issues.
- Execute refined model simulations after resolving mass balance, instability, and extrapolation issues.

5.6. Assess Level of Service (LOS) of drainage infrastructure using model results by comparing model peak stage results to model node warning stages in a summary table. Preliminary flood inundation information will be developed for the design storms in GIS to support this analysis.

5.7. Evaluate floodplain issues – determine whether project area is in existing FEMA floodzone and evaluate potential impacts to design. Note the scope does not include delineation FEMA floodplains.

5.8. Confirm and map problem areas of concern based on model results and previous review of complaint logs and maintenance concerns.

6. **TASK 6: Alternatives Analysis -** Develop up to 3 improvement concepts to improve drainage, water quality, and system maintainability. This task will include the following subtasks:

6.1. Develop proposed improvement conceptual design alternatives.

6.2. Develop proposed conditions hydrologic and hydraulic model – revise existing conditions model network and subbasins affected by proposed alternatives. Revise hydraulic and hydrologic parameters as needed.

6.3. Setup and execute proposed conditions model simulations to include same storm events as existing conditions analysis.

- Evaluate performance of proposed conceptual design and model – Revise proposed conceptual improvement as needed. Also, resolve any mass balance, instability, and extrapolation issues.
- Execute refined model simulations after proposed concept revisions, resolving mass balance, instability, and extrapolation issues.

6.4. Assess LOS of proposed drainage infrastructure improvements from model results by comparing existing and proposed conditions model peak stage results to model node warning stages. Prepare a tabular comparison of existing and proposed conditions node peak stages.

6.5. Develop preliminary GIS based design sketches of the proposed alternatives with plan, profile, and typical cross-sections proposed improvements as appropriate. Projections of construction cost will be estimated as well as a summary of implementation factors and

considerations. Opportunities to improve water quality will also be evaluated qualitatively.

7. **TASK 7: Draft Drainage Improvements Technical Memorandum** - for City review summarizing the existing conditions and improvement conceptualization. A summary of the data collected during the desktop evaluation and field reconnaissance will also be included. The memorandum will include exhibits and backup calculations sufficient to support the conclusions and recommendations. Preparation of the memorandum will include the following subtasks:

    7.1. Introduction Narrative

    7.2. Problem Description Narrative

    7.3. Data Collection and Review Narrative including survey summary

    7.4. Existing Conditions Evaluation Narrative

    7.5. Improvement Concepts Narrative

    7.6. Conclusions and Recommendations Narrative

    7.7. Prepare Figures and Tabular Results Summaries – The following is anticipated. All figures are anticipated to be 11"x17" size.

    - Project Vicinity Map
    - Project Site Map
    - Drainage Complaints and Problem Area Map
    - Drainage Infrastructure Map
    - DEM Map
    - Soils and Land Use Map
    - FEMA Floodplains Map
    - Subbasin Map
    - Existing Conditions Model Node-Link and LOS Evaluation Map
    - Preliminary Proposed Improvement Plan, Profile, and Cross-Section Sketches (GIS based)
    - Proposed Conditions Model Node-Link and LOS Evaluation Map
    - Tabular Summaries of all existing and proposed conditions model results.

    7.8. QA/QC Review – Draft Technical Memorandum

    7.9. Compile Electronic Deliverables including and PDF copy of technical memorandum and ICPR files.

8. **TASK 8: SWFWMD Coordination** – Upon concurrence with the City on the recommended improvements, schedule a permit determination meeting with the SWFWMD.

    8.1. Coordinate Meeting & Prepare Meeting Agenda/Exhibits.

    8.2. Attend Meeting and Prepare Email Meeting summary to attendees.

9. **TASK 9: Final Stormwater Improvements Technical Memorandum** – for City documentation purposes prior to moving on to the Design Phase.

    9.1. Incorporate City Comments from draft report and SWFWMD permit input.

    9.2. QA/QC Review – Final Technical Memorandum

    9.3. Compile Electronic Deliverables including and PDF copy of technical memorandum and ICPR files.

10. **TASK 10: Project Management -** consisting of the following tasks:

    10.1 Project administration setup

    10.2 Management and QA/QC of project staff

    10.3 Project tracking, schedule updates, miscellaneous project meetings, status reports, etc.

DELIVERABLES

a) Draft and final memorandums – digital PDF copy shall be submitted for the City's review along with ICPR model files. No hard copies are included.

SCOPE ASSUMPTIONS

i. The City will make all pertinent data available to Geosyntec, including copies of all scanned documents. Hard copy documents will be made available for scanning.

ii. This scope of services has assumed that the consultant will not be involved in any public involvement meetings during the duration of the project.

iii. Ecological services related to wetland delineations, threatened and endangered species surveys, etc., are assumed not to be necessary for this project and are not included in this proposal.

iv. The scope includes no design or construction support services.

v. The scope includes no geotechnical investigations or topographical survey.

vi. The scope does not include water quality loading calculations.

BUDGET ESTIMATE

Geosyntec proposes to provide the services discussed herein for **$99,904.54** on a lump sum basis, in accordance with the terms and conditions specified herein and pursuant to Professional Services Continuing Contract 23.004. The lump sum amount is based on our estimated budget for performing these services, which includes the labor and other direct costs necessary to complete the work scope described in the proposal, as detailed in **Attachment A**.

Project efforts will be billed to the City on a lump sum task percent complete basis, based on the major tasks defined in the cost build-up spreadsheet in **Attachment A**. Invoices will be structured to list project tasks (and subconsultant / combined other direct cost) with accomplished percent complete, then corresponding budget invoiced, overall budget expended and overall budget remaining.

SCHEDULE

Geosyntec can begin work immediately upon receipt of the Notice to Proceed (NTP) and proceed per the estimated schedule below. We expect completion within approximately 182 days from NTP.

	Number of Weeks From NTP
Task 1 – Project Kick-off	1
Task 2 – Data Collection and Compilation	6
Task 3 – Desktop Evaluation	10
Task 4 – Field Reconnaissance	12

CLOSURE

We appreciate the opportunity to work with the City on this project. Should you have any questions or comments regarding this proposal, please do not hesitate to contact us at (727) 330-9964.

Sincerely,
Geosyntec Consultants, Inc.

Scott M. Deitche, ENV SP
Senior Principal, Project Manager
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Nick Hartshorn, PE
Water Resources Engineer
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Attachments A – Manhour and Fee Estimate

Geosyntec consultants

ATTACHMENT A

MANHOUR AND FEE ESTIMATE

EXHIBIT A1 - FEE ESTIMATE

JAN CORY SUBDIVISION STORMWATER IMPROVEMENTS

Pinellas Park, Florida

Date: **06/24/24**

Contract: **Professional Services Continuing Contract 23.004**

Task	Activity	Senior Principal Rate = $295.00 Manhours	Senior Principal Cost	Senior Professional Rate = $255.00 Manhours	Senior Professional Cost	Project Professional Rate = $230.00 Manhours	Project Professional Cost	Senior Staff Professional Rate = $180.00 Manhours	Senior Staff Professional Cost	Staff Professional Rate = $155.00 Manhours	Staff Professional Cost	Senior Drafter/Senior CADD Operator Rate = $145.00 Manhours	Senior Drafter/Senior CADD Operator Cost	Clerical Rate = $70.00 Manhours	Clerical Cost	Basic Activity Amount	Man-hours by Activity	Average Hourly Rate
1	**Project Kick-off**																	
1.1	Project Kick-off Meeting	2	$590.00		$0.00	2	$460.00		$0.00		$0.00		$0.00		$0.00	$1,050.00	4	$262.50
1.2	Email Meeting Summary	0.5	$147.50		$0.00	1	$230.00		$0.00		$0.00		$0.00	1	$70.00	$447.50	2.5	$179.00
SUBTOTAL		**2.5**	**$737.50**	**0**	**$0.00**	**3**	**$690.00**	**0**	**$0.00**	**0**	**$0.00**	**0**	**$0.00**	**1**	**$70.00**	**$1,497.50**	**6.5**	**$230.38**
2	**Data Collection and Compilation**																	
2.1	Compile GIS Data		$0.00		$0.00	1	$230.00	1	$180.00	5	$775.00		$0.00		$0.00	$1,185.00	7	$169.29
2.2	Compile Plans and Permits		$0.00		$0.00	1	$230.00	1	$180.00	3	$465.00		$0.00		$0.00	$875.00	5	$175.00
2.3	Compile Master Plan and Other Reports Data		$0.00		$0.00	1	$230.00	1	$180.00	3	$465.00		$0.00		$0.00	$875.00	5	$175.00
2.4	Compile Complaints Logs		$0.00		$0.00	1	$230.00		$0.00	2	$310.00		$0.00		$0.00	$540.00	3	$180.00
SUBTOTAL		**0**	**$0.00**	**0**	**$0.00**	**4**	**$920.00**	**3**	**$540.00**	**13**	**$2,015.00**	**0**	**$0.00**	**0**	**$0.00**	**$3,475.00**	**20**	**$173.75**
3	**Desktop Evaluation**																	
3.1	Review and process GIS data		$0.00		$0.00	2	$460.00	2	$360.00	10	$1,550.00		$0.00		$0.00	$2,370.00	14	$169.29
3.2	Generate Digital Elevation Model		$0.00		$0.00	1	$230.00	2	$360.00	6	$930.00		$0.00		$0.00	$1,520.00	9	$168.89
3.3	Review and Process Infrastructure Data		$0.00		$0.00	2	$460.00	2	$360.00	10	$1,550.00		$0.00		$0.00	$2,370.00	14	$169.29
SUBTOTAL		**0**	**$0.00**	**0**	**$0.00**	**5**	**$1,150.00**	**6**	**$1,080.00**	**26**	**$4,030.00**	**0**	**$0.00**	**0**	**$0.00**	**$6,260.00**	**37**	**$169.19**
4	**Field Reconnaissance**																	
4.1	Field Reconnaissance by Geosyntec staff		$0.00		$0.00		$0.00	4	$720.00	12	$1,860.00		$0.00		$0.00	$2,580.00	16	$161.25
SUBTOTAL		**0**	**$0.00**	**0**	**$0.00**	**0**	**$0.00**	**4**	**$720.00**	**12**	**$1,860.00**	**0**	**$0.00**	**0**	**$0.00**	**$2,580.00**	**16**	**$161.25**
5	**Existing Condition Analysis**																	
5.1	Develop Model Network		$0.00		$0.00	3	$690.00	4	$720.00	14	$2,170.00		$0.00		$0.00	$3,580.00	21	$170.48
5.2	Delineate Subbasin Areas		$0.00		$0.00	6	$1,380.00	6	$1,080.00	20	$3,100.00		$0.00		$0.00	$5,560.00	32	$173.75
5.3	Refine Land Use		$0.00		$0.00	2	$460.00	2	$360.00	4	$620.00		$0.00		$0.00	$1,440.00	8	$180.00
5.4	Parameterize Model Features		$0.00		$0.00	6	$1,380.00	4	$720.00	18	$2,790.00		$0.00		$0.00	$4,890.00	28	$174.64
5.5	Setup and Execute Model		$0.00		$0.00	2	$460.00	2	$360.00	8	$1,240.00		$0.00		$0.00	$2,060.00	12	$171.67
5.6	Assess Existing LOS		$0.00		$0.00	3	$690.00	2	$360.00	10	$1,550.00		$0.00		$0.00	$2,600.00	15	$173.33
5.7	Evaluate Floodplain Issues		$0.00		$0.00	2	$460.00	1	$180.00	1	$155.00		$0.00		$0.00	$795.00	4	$198.75
5.8	Confirm and Map Problem Areas		$0.00		$0.00	2	$460.00	2	$360.00	6	$930.00		$0.00		$0.00	$1,750.00	10	$175.00
SUBTOTAL		**0**	**$0.00**	**0**	**$0.00**	**26**	**$5,980.00**	**23**	**$4,140.00**	**81**	**$12,555.00**	**0**	**$0.00**	**0**	**$0.00**	**$22,675.00**	**130**	**$174.42**
6	**Alternative Analysis**																	
6.1	Develop Proposed Improvement Concepts		$0.00		$0.00	6	$1,380.00	10	$1,800.00	18	$2,790.00	14	$2,030.00		$0.00	$8,000.00	48	$166.67
6.2	Develop Proposed Conditions Models		$0.00		$0.00	2	$460.00	6	$1,080.00	20	$3,100.00		$0.00		$0.00	$4,640.00	28	$165.71
6.3	Setup and Execute Proposed Model		$0.00		$0.00	4	$920.00	4	$720.00	8	$1,240.00		$0.00		$0.00	$2,880.00	16	$180.00
6.4	Assess Proposed Conditions LOS		$0.00		$0.00	2	$460.00	4	$720.00	8	$1,240.00		$0.00		$0.00	$2,420.00	14	$172.86
6.5	Develop Preliminary Improvement Sketches		$0.00		$0.00	4	$920.00	8	$1,440.00	16	$2,480.00	12	$1,740.00		$0.00	$6,580.00	40	$164.50
SUBTOTAL		**0**	**$0.00**	**0**	**$0.00**	**18**	**$4,140.00**	**32**	**$5,760.00**	**70**	**$10,850.00**	**26**	**$3,770.00**	**0**	**$0.00**	**$24,520.00**	**146**	**$167.95**

EXHIBIT A1 - FEE ESTIMATE

JAN CORY SUBDIVISION STORMWATER IMPROVEMENTS

Pinellas Park, Florida

Date: **06/24/24**

Contract: **Professional Services Continuing Contract 23.004**

Task	Activity	Senior Principal Rate = $295.00 Manhours	Senior Principal Cost	Senior Professional Rate = $255.00 Manhours	Senior Professional Cost	Project Professional Rate = $230.00 Manhours	Project Professional Cost	Senior Staff Professional Rate = $180.00 Manhours	Senior Staff Professional Cost	Staff Professional Rate = $155.00 Manhours	Staff Professional Cost	Senior Drafter/Senior CADD Operator Rate = $145.00 Manhours	Senior Drafter/Senior CADD Operator Cost	Clerical Rate = $70.00 Manhours	Clerical Cost	Basic Activity Amount	Man-hours by Activity	Average Hourly Rate
7	**Draft Drainage Improvements Memorandum**																	
7.1	Executive Summary		$0.00		$0.00	1	$230.00	2	$360.00	2	$310.00		$0.00		$0.00	$900.00	5	$180.00
7.2	Introduction Narrative		$0.00		$0.00	1	$230.00	1	$180.00	1	$155.00		$0.00		$0.00	$565.00	3	$188.33
7.3	Problem Description Narrative		$0.00		$0.00	1	$230.00	1	$180.00	1	$155.00		$0.00		$0.00	$565.00	3	$188.33
7.4	Data Collection and Review Narrative		$0.00		$0.00	1	$230.00	2	$360.00	2	$310.00		$0.00		$0.00	$900.00	5	$180.00
7.5	Existing Conditions Evaluation		$0.00		$0.00	2	$460.00	4	$720.00	8	$1,240.00		$0.00		$0.00	$2,420.00	14	$172.86
7.6	Improvement Concept Narrative		$0.00		$0.00	2	$460.00	6	$1,080.00	20	$3,100.00		$0.00		$0.00	$4,640.00	28	$165.71
7.7	Conclusions and Recommendations		$0.00		$0.00	1	$230.00	2	$360.00	4	$620.00		$0.00		$0.00	$1,210.00	7	$172.86
7.8	Prepare Figures and Tabular Results		$0.00		$0.00	1	$230.00	6	$1,080.00		$0.00	38	$5,510.00		$0.00	$6,820.00	45	$151.56
7.9	QA/QC Review	2	$590.00	4	$1,020.00		$0.00		$0.00		$0.00		$0.00		$0.00	$1,610.00	6	$268.33
7.10	Compile Deliverables and Submit to City		$0.00		$0.00		$0.00	1	$180.00	2	$310.00		$0.00		$0.00	$490.00	3	$163.33
SUBTOTAL		**2**	**$590.00**	**4**	**$1,020.00**	**10**	**$2,300.00**	**25**	**$4,500.00**	**40**	**$6,200.00**	**38**	**$5,510.00**	**0**	**$0.00**	**$20,120.00**	**119**	**$169.08**
8	**SWFWMD Coordination**																	
8.1	Coordinate Meeting and Prepare Exhibits		$0.00		$0.00	4	$920.00		$0.00		$0.00		$0.00		$0.00	$920.00	4	$230.00
8.2	Attend Meeting and Prepare Summary	2	$590.00		$0.00	4	$920.00		$0.00		$0.00		$0.00		$0.00	$1,510.00	6	$251.67
SUBTOTAL		**2**	**$590.00**	**0**	**$0.00**	**8**	**$1,840.00**	**0**	**$0.00**	**0**	**$0.00**	**0**	**$0.00**	**0**	**$0.00**	**$2,430.00**	**10**	**$243.00**
9	**Final Drainage Improvements Memorandum**																	
9.1	Incorporate City/SWFWMD Comments and Revise Report		$0.00		$0.00	2	$460.00	6	$1,080.00	18	$2,790.00	10	$1,450.00		$0.00	$5,780.00	36	$160.56
9.2	QA/QC Review	1	$295.00	2	$510.00		$0.00		$0.00		$0.00		$0.00		$0.00	$805.00	3	$268.33
9.3	Compile Deliverables and Submit to City		$0.00		$0.00		$0.00	1	$180.00	2	$310.00		$0.00		$0.00	$490.00	3	$163.33
SUBTOTAL		**1**	**$295.00**	**2**	**$510.00**	**2**	**$460.00**	**7**	**$1,260.00**	**20**	**$3,100.00**	**10**	**$1,450.00**	**0**	**$0.00**	**$7,075.00**	**42**	**$168.45**
10	**Project Management**																	
10.1	Project Administration Setup	1	$295.00		$0.00		$0.00		$0.00		$0.00		$0.00	2	$140.00	$435.00	3	$145.00
10.2	Management and QA/QC of project staff	6	$1,770.00	8	$2,040.00		$0.00		$0.00		$0.00		$0.00		$0.00	$3,810.00	14	$272.14
10.3	Project tracking, schedule updates, meetings, status reports, etc.	6	$1,770.00		$0.00	12	$2,760.00		$0.00		$0.00		$0.00		$0.00	$4,530.00	18	$251.67
SUBTOTAL		**13**	**$3,835.00**	**8**	**$2,040.00**	**12**	**$2,760.00**	**0**	**$0.00**	**0**	**$0.00**	**0**	**$0.00**	**2**	**$140.00**	**$8,775.00**	**35**	**$250.71**
SUB-TOTAL (LUMP SUM FEE):		**20.5**	**$6,047.50**	**14**	**$3,570.00**	**88**	**$20,240.00**	**100**	**$18,000.00**	**262**	**$40,610.00**	**74**	**$10,730.00**	**3**	**$210.00**	**$99,407.50**	**561.5**	

SUBCONSULTANTS

Name	*M/WBE/ SDV Status*	*Amount*	*Percentage*
			0.0%
Total Subconsultant Fees:		**$0.00**	0.0%

TOTAL LUMP SUM FEE COMPUTATIONS

(1) Salary Cost (from above)	=	$99,407.50
(2) Other Direct Costs (0.5% of Salary Cost)	+	$497.04
(3) Subtotal (Consultant's Fees) [(1)+(2)]	=	$99,904.54
(4) Subconsultant's Fees (from left)	+	$0.00
Proposed Total Lump Sum Fee [(3)+(4)]	=	**$99,904.54**

Geosyntec consultants