

Raw Water and Distribution Main Dataset

FeatureClassName	wPressurizedMain
DatasetType	FeatureClass
Description	Water distribution mains.
FeatureDataset	Water
Tags	WaterDistribution, Water Distribution, Mains
ShapeType	Polyline
FeatureType	Simple
AliasName	w Mains
HasM	false
HasZ	false
SubtypeFieldName	null
DefaultSubtype	null
DSID	5070

Fields	Field Name	Type	Length	Description	AliasName	DomainName	DefaultValue	IsNullable	Precision	Scale	Required	DomainFixed
	FACILITYNUM	Integer	4	Locally assigned numeric unique identifier populated by database admin created database trigger	Facility Number	null	null	true	10	0	null	null
	FACILITYID	String	20	Locally assigned alpha-numeric unique identifier populated by database admin created database trigger	Facility Identifier	null	null	true	0	0	null	null
	LEGACYID	String	20	Former asset identifier. To be moved to a related table.	Legacy ID (Unit ID)	null	null	true	0	0	null	null
	DIAMETER	Double	8	The diameter of the asset	Diameter	plPipeDiameter	null	true	38	8	null	null
	MATERIAL	String	20	The construction material of the asset	Material	plPipeMaterial	null	true	0	0	null	null
	WATERTYPE	String	20	Identifies the type of water in the pipe	Water Type	wWaterType	null	true	0	0	null	null
	ACTIVESTATUS	String	10	Identifies whether the asset is in use, not in use or removed from the ground	Active Status	plActiveStatus	Active	true	0	0	null	null
	ACTIVEFLAG	SmallInteger	2	Identifies whether the feature is in use/active	Active Flag	BooleanDomain	1	true	5	0	null	null
	INVCLASS	String	20	The method used to establish the geographic location of the asset	Inventory Class	InventoryClass	null	true	0	0	null	null
	COLLECTEDDATE	Date	8	Date the feature was located by a surveyor	GPS Collected Date	null	null	true	0	0	null	null
	OWNEDBY	SmallInteger	2	Indicates which organization owns the asset	Owned By	AssetOwner	1	true	5	0	null	null
	MAINTBY	SmallInteger	2	Indicates which organization maintains the asset	Managed By	AssetManager	1	true	5	0	null	null
	INSTALLDATE	Date	8	The date the asset was installed	Install Date	null	null	true	0	0	null	null
	LOCATION	String	200	Text description of the geographic location (e.g. 10' west of sidewalk along Broward Blvd). Value is copied to Cityworks work order Location Details field when attached to a work order.	Location Description	null	null	true	0	0	null	null
	ADDRESS	String	50	The address or closest address to the asset. Value is copied to Cityworks work order Address field when attached to a work order.	Closest Address	null	null	true	0	0	null	null
	PURCHASEDATE	Date	8	The purchase date of the asset. Used for future asset management analysis.	Purchase Date	null	null	true	0	0	null	null
	WARRANTYDATE	Date	8	The date the warranty expires on the asset. If populated and asset is still under warranty, asset record will show up pink on the Cityworks work order.	Warranty Date	null	null	true	0	0	null	null

Raw Water and Distribution Main Dataset

FieldName	Type	Length	Description	AliasName	DomainName	DefaultValue	IsNull	Precision	Scale	Required	DomainFixed
ASSETCOST	Double	8	The replacement cost of the asset. If populated, this will be used for asset management analysis and repair/replace decisions.	Asset Cost	null	null	true	38	8	null	null
CONDITION	SmallInteger	2	The condition rating of the asset. Used by Cityworks Analytics for condition analysis output. May be calculated within a Cityworks Inspection and updated from there to GIS.	Condition Rating	null	null	true	5	0	null	null
CONDITIONDATE	Date	8	The date of the last condition assessment. Can be updated from Cityworks Inspection to the GIS.	Condition Date	null	null	true	0	0	null	null
SERVICE LIFE	SmallInteger	2	The expected number of years an asset is physically capable of continuing to operate. Used to anticipate retirement of assets and project funding needs.	Service Life	null	null	true	5	0	null	null
RUL	SmallInteger	2	The Remaining Useful Life of an asset calculated by subtracting the number of years since installation, from the service life. It will be heavily relied upon for asset management analysis.	Remaining Useful Life	null	null	true	5	0	null	null
COF	SmallInteger	2	The consequence of failure. Used in the BRE model as the impact due to asset failure.	Consequence of Failure	null	null	true	5	0	null	null
POF	SmallInteger	2	Probability of Failure. Used in the BRE model to estimate the likelihood the predicted asset (or service) failure will occur and is adjusted for backup and redundancy of the asset.	Probability of Failure	null	null	true	5	0	null	null
BRE	SmallInteger	2	Business Risk Exposure is a the product of probability of failure (POF) and consequence of failure (COF). Values range from 1 (low risk) to 100 (high risk) and is used to prioritize investments.	Business Risk Exposure	null	null	true	5	0	null	null
LASTINSPECTDATE	Date	8	The date the asset was most recently inspected	Last Inspection Date	null	null	true	0	0	null	null
LASTMAINTDATE	Date	8	The date of the most recent maintenance activity	Last Maintenance Date	null	null	true	0	0	null	null
PROJECTNUM	String	10	The City's Project Number, DE Number, or Improvement Number under which the asset was installed	City Project Number	null	null	true	0	0	null	null
FILENUM	String	10	The City's File Number used to store the as-built documents for the asset	City File Number	null	null	true	0	0	null	null
WORKORDERNUM	String	60	The work order number for performing work on the asset (Cityworks, Qalart, etc)	City Work Order Number	null	null	true	0	0	null	null
SURVEYRPTNUM	String	10	The City's Surveyor's Report Number under which the location of an asset or group of assets are captured, may be the same as the Service Request or Work Order Number	Surveyor's Report Number	null	null	true	0	0	null	null
DEPTH CASING	Double String	8	Depth to the top of pipe	Depth Casing	null	null	true	38	8	null	null
TRANSMISS	String	10	Identifies whether the main is part of the transmission system, which is comprised of pipes with a diameter of 16 inches and above.	Transmission System	YesNo	null	true	0	0	null	null
DEADEND	String	5	Identifies whether the pipe is a dead end	Dead End	YesNo	null	true	0	0	null	null
ENABLED	SmallInteger	2	Indicates if the asset is enabled within a geometric network	Enabled Flag	BooleanDomain	null	true	5	0	null	null

Raw Water and Distribution Main Dataset

FieldName	Type	Length	Description	AliasName	DomainName	DefaultValue	IsNullable	Precision	Scale	Required	DomainFixed
FIELDNOTES	String	255	Comments or notes from field staff, including surveyors, that are relevant to the asset	Field Notes	null	null	true	0	0	null	null
NOTES	String	255	GIS entry notes or comments relevant to the asset	GIS Notes	null	null	true	0	0	null	null
created_user	String	255	created_user	Created User	null	null	true	0	0	null	null
created_date	Date	8	created_date	Created Date	null	null	true	0	0	null	null
last_edited_user	String	255	last_edited_user	Last Edited User	null	null	true	0	0	null	null
last_edited_date	Date	8	last_edited_date	Last Edited Date	null	null	true	0	0	null	null
GlobalID	GlobalID	38	GlobalID	GlobalID	null	null	false	0	0	true	null

System Valve Dataset

FeatureClassName	wSystemValve
DatasetType	FeatureClass
Description	Water network valves used to isolate mains for maintenance and repair
FeatureDataset	Water
Tags	WaterDistribution, Water Distribution, System Valve
ShapeType	Point
FeatureType	Simple
AliasName	w System Valves
HasM	false
HasZ	false
SubtypeFieldName	null
DefaultSubtype	null
DSID	5065

Fields	Field Name	Type	Length	Description	AliasName	DomainName	DefaultValue	IsNullable	Precision	Scale	Required	DomainFixed
	FACILITYNUM	Integer	4	Locally assigned numeric unique identifier populated by database admin created database trigger	Facility Number	null	null	true	10	0	null	null
	FACILITYID	String	20	Locally assigned alpha-numeric unique identifier populated by database admin created database trigger	Facility Identifier	null	null	true	0	0	null	null
	LEGACYID	String	20	Former asset identifier. To be moved to a related table.	Legacy ID (Unit ID)	null	null	true	0	0	null	null
	DIAMETER	Double	8	The diameter of the asset	Diameter	piPipeDiameter	null	true	38	8	null	null
	VALVETYPE	String	50	Type of control valve	Valve Type	piSystemValveType	null	true	0	0	null	null
	WATERTYPE	String	20	Identifies the type of water in the pipe	Water Type	wWaterType	null	true	0	0	null	null
	BYPASSVALVE	SmallInteger	2	Identifies whether the asset is a bypass valve	Bypass Valve?	BooleanDomain	null	true	5	0	null	null
	ACTIVESTATUS	String	10	Identifies whether the asset is in use, not in use or removed from the ground	Active Status	piActiveStatus	Active	true	0	0	null	null
	ACTIVEFLAG	SmallInteger	2	Identifies whether the feature is in use/active	Active Flag	BooleanDomain	1	true	5	0	null	null
	INVCCLASS	String	20	The method used to establish the geographic location of the asset	Inventory Class	InventoryClass	null	true	0	0	null	null
	COLLECTEDDATE	Date	8	Date the feature was located by a surveyor	GPS Collected Date	null	null	true	0	0	null	null
	OWNEDBY	SmallInteger	2	Indicates which organization owns the asset	Owned By	AssetOwner	1	true	5	0	null	null
	MAINTBY	SmallInteger	2	Indicates which organization maintains the asset	Managed By	AssetManager	1	true	5	0	null	null
	INSTALLDATE	Date	8	The date the asset was installed	Install Date	null	null	true	0	0	null	null
	LOCATION	String	200	Text description of the geographic location (e.g. 10' west of sidewalk along Broward Blvd). Value is copied to Cityworks work order Location Details field when attached to a work order.	Location Description	null	null	true	0	0	null	null
	ADDRESS	String	50	The address or closest address to the asset. Value is copied to Cityworks work order Address field when attached to a work order.	Closest Address	null	null	true	0	0	null	null
	PURCHASEDATE	Date	8	The purchase date of the asset. Used for future asset management analysis.	Purchase Date	null	null	true	0	0	null	null
	WARRANTYDATE	Date	8	The date the warranty expires on the asset. If populated and asset is still under warranty, asset record will show up pink on the Cityworks work order.	Warranty Date	null	null	true	0	0	null	null

City of Fort Lauderdale
System Valve Dataset

FieldName	Type	Length	Description	AliasName	DomainName	DefaultValue	IsNullable	Precision	Scale	Required	DomainFixed
ASSETCOST	Double	8	The replacement cost of the asset. If populated, this will be used for asset management analysis and repair/replace decisions.	Asset Cost	null	null	true	38	8	null	null
CONDITION	SmallInteger	2	The condition rating of the asset. Used by Cityworks Analytics for condition analysis output. May be calculated within a Cityworks Inspection and updated from here to GIS.	Condition Rating	null	null	true	5	0	null	null
CONDITIONDATE	Date	8	The date of the last condition assessment. Can be updated from Cityworks Inspection to the GIS.	Condition Date	null	null	true	0	0	null	null
SERVICE LIFE	SmallInteger	2	The expected number of years an asset is physically capable of continuing to operate. Used to anticipate retirement of assets and project funding needs.	Service Life	null	null	true	5	0	null	null
RUL	SmallInteger	2	The Remaining Useful Life of an asset calculated by subtracting the number of years since installation, from the service life. It will be heavily relied upon for asset management analysis.	Remaining Useful Life	null	null	true	5	0	null	null
COF	SmallInteger	2	The consequence of failure. Used in the BRE model as the impact due to asset failure.	Consequence of Failure	null	null	true	5	0	null	null
POF	SmallInteger	2	Probability of Failure. Used in the BRE model to estimate the likelihood the predicted asset (or service) failure will occur and is adjusted for backup and redundancy of the asset.	Probability of Failure	null	null	true	5	0	null	null
BRE	SmallInteger	2	Business Risk Exposure is a the product of probability of failure (POF) and consequence of failure (COF). Values range from 1 (low risk) to 100 (high risk) and is used to prioritize investments.	Business Risk Exposure	null	null	true	5	0	null	null
LASTINSPECTDATE	Date	8	The date the asset was most recently inspected	Last Inspection Date	null	null	true	0	0	null	null
LASTMAINTDATE	Date	8	The date of the most recent maintenance activity	Last Maintenance Date	null	null	true	0	0	null	null
MANUFACTURER	String	50	The manufacturer or brand of the asset	Manufacturer	wManufacturer	null	true	0	0	null	null
SERIALNUM	String	30	The manufacturer assigned serial number of the asset. Warranties may be tied to the asset's serial number.	Serial Number	null	null	true	0	0	null	null
PROJECTNUM	String	10	The City's Project Number, DE Number, or Improvement Number under which the asset was installed	City Project Number	null	null	true	0	0	null	null
FILENUM	String	10	The City's File Number used to store the as-built documents for the asset	City File Number	null	null	true	0	0	null	null
WORKORDERNUM	String	60	The work order number for performing work on the asset (Cityworks, Calent, etc)	City Work Order Number	null	null	true	0	0	null	null
SURVEYRPTNUM	String	10	The City's Surveyor's Report Number under which the location of an asset or group of assets are captured, may be the same as the Service Request or Work Order Number	Surveyor's Report Number	null	null	true	0	0	null	null
XCOORD	Double	8	X-Coordinate of the asset (FL State Plane-East)	X Coordinate	null	null	true	38	8	null	null
YCOORD	Double	8	Y-Coordinate of the asset (FL State Plane-East)	Y Coordinate	null	null	true	38	8	null	null
ZCOORD	Double	8	Z-Coordinate of the asset	Z Coordinate	null	null	true	38	8	null	null
HDRFLAG	String	5	Identifies whether the asset is a hydrant valve	Hydrant Valve?	YesNo	null	true	0	0	null	null

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System Valve Dataset

FieldName	Type	Length	Description	AliasName	DomainName	DefaultValue	IsNull	Precision	Scale	Required	DomainFixed
DEPTH	Double	8	The depth, in feet, to the top of the nut of the asset	Depth to Nut	null	null	true	38	8	null	null
NORMALLYOPEN	SmallInteger	2	Identifies whether the asset is normally open	Normally Open?	BooleanDomain	1	true	5	0	null	null
TURNDIRECTION	String	20	The turn direction to close the asset, as in clockwise or counter clockwise	Turn Close Direction	plValveTurnDirection	null	true	0	0	null	null
TURNSTOCLOSE	Integer	4	The number of turns required to close the asset	Turns to Close	null	null	true	10	0	null	null
OPERABLE	SmallInteger	2	Identifies whether the valve or hydrant can be operated	Operable	BooleanDomain	1	true	5	0	null	null
CURROOPEN	SmallInteger	2	Identifies whether the asset is currently open	Currently Open?	BooleanDomain	null	true	5	0	null	null
ROTATION	Double	8	Map symbol rotation value	Rotation	null	null	true	38	8	null	null
ENABLED	SmallInteger	2	Indicates if the asset is enabled within a geometric network	Enabled Flag	BooleanDomain	null	true	5	0	null	null
FIELDNOTES	String	255	Comments or notes from field staff, including surveyors, that are relevant to the asset	Field Notes	null	null	true	0	0	null	null
NOTES	String	255	GIS entry notes or comments relevant to the asset	GIS Notes	null	null	true	0	0	null	null
created_user	String	255	created_user	Created User	null	null	true	0	0	null	null
created_date	Date	8	created_date	Created Date	null	null	true	0	0	null	null
last_edited_user	String	255	last_edited_user	Last Edited User	null	null	true	0	0	null	null
last_edited_date	Date	8	last_edited_date	Last Edited Date	null	null	true	0	0	null	null
GlobalID	GlobalID	38	GlobalID	GlobalID	null	null	false	0	0	true	true

EXHIBIT B
Exhibit 2

Control Valve Dataset

FeatureClassName	swControlValve
DatasetType	FeatureClass
Description	Stormwater network valves that have a flow control mechanism.
FeatureDataset	Stormwater
Tags	Stormwater
ShapeType	Point
FeatureType	Simple
AliasName	sw Control Valves
HasM	false
HasZ	false
SubtypeFieldName	null
DefaultSubtype	null
DSID	84

Fields	Field Name	Type	Length	Description	AliasName	DomainName	DefaultValue	IsNullable	Precision	Scale	Required	DomainFixed
	FACILITYNUM	Integer	4	Locally assigned numeric unique identifier populated by database admin created database trigger	Facility Number	null	null	true	10	0	null	null
	FACILITYID	String	20	Locally assigned alpha-numeric unique identifier populated by database admin created database trigger	Facility Identifier	null	null	true	0	0	null	null
	LEGACYID	String	20	Former asset identifier. To be moved to a related table.	Legacy ID (Unit ID)	null	null	true	0	0	null	null
	VALVETYPE	String	30	Type of control valve	Valve Type	plControlValveType	null	true	0	0	null	null
	DIAMETER	Double	8	The diameter of the asset	Diameter	plPipeDiameter	null	true	38	8	null	null
	ACTIVESTATUS	String	10	Identifies whether the asset is in use, not in use or removed from the ground	Active Status	plActiveStatus	Active	true	0	0	null	null
	INVCLASS	String	20	The method used to establish the geographic location of the asset	Inventory Class	InventoryClass	null	true	0	0	null	null
	COLLECTEDDATE	Date	8	Date the feature was located by a surveyor	GPS Collected Date	null	null	true	0	0	null	null
	OWNEDBY	SmallInteger	2	Indicates which organization owns the asset	Owned By	AssetOwner	1	true	5	0	null	null
	MAINTBY	SmallInteger	2	Indicates which organization maintains the asset	Managed By	AssetManager	1	true	5	0	null	null
	INSTALLDATE	Date	8	The date the asset was installed	Install Date	null	null	true	0	0	null	null
	LOCATION	String	200	Text description of the geographic location (e.g. 10' west of sidewalk along Broward Blvd). Value is copied to Cityworks work order Location Details field when attached to a work order.	Location Description	null	null	true	0	0	null	null
	ADDRESS	String	50	The address or closest address to the asset. Value is copied to Cityworks work order Address field when attached to a work order.	Closest Address	null	null	true	0	0	null	null
	PURCHASEDATE	Date	8	The purchase date of the asset. Used for future asset management analysis.	Purchase Date	null	null	true	0	0	null	null
	WARRANTYDATE	Date	8	The date the warranty expires on the asset. If populated and asset is still under warranty, asset record will show up pink on the Cityworks work order.	Warranty Date	null	null	true	0	0	null	null
	ASSETCOST	Double	8	The replacement cost of the asset. If populated, this will be used for asset management analysis and repair/replace decisions.	Asset Cost	null	null	true	38	8	null	null

Control Valve Dataset

FieldName	Type	Length	Description	AliasName	DomainName	DefaultValue	IsNullable	Precision	Scale	Required	DomainFixed
CONDITION	SmallInteger	2	The condition rating of the asset. Used by Cityworks Analytics for condition analysis output. May be calculated within a Cityworks Inspection and updated from there to GIS.	Condition Rating	piConditionPACP	null	true	5	0	null	null
CONDITIONDATE	Date	8	The date of the last condition assessment. Can be updated from Cityworks Inspection to the GIS.	Condition Date	null	null	true	0	0	null	null
SERVICELIFE	SmallInteger	2	The expected number of years an asset is physically capable of continuing to operate. Used to anticipate retirement of assets and project funding needs.	Service Life	null	null	true	5	0	null	null
RUL	SmallInteger	2	The Remaining Useful Life of an asset calculated by subtracting the number of years since installation, from the service life. It will be heavily relied upon for asset management analysis.	Remaining Useful Life	null	null	true	5	0	null	null
COF	SmallInteger	2	The consequence of failure. Used in the BRE model as the impact due to asset failure.	Consequence of Failure	null	null	true	5	0	null	null
POF	SmallInteger	2	Probability of Failure. Used in the BRE model to estimate the likelihood the predicted asset (or service) failure will occur and is adjusted for backup and redundancy of the asset.	Probability of Failure	null	null	true	5	0	null	null
BRE	SmallInteger	2	Business Risk Exposure is a the product of probability of failure (POF) and consequence of failure (COF). Values range from 1 (low risk) to 100 (high risk) and is used to prioritize investments.	Business Risk Exposure	null	null	true	5	0	null	null
LASTMAINTDATE	Date	8	The date of the most recent maintenance activity	Last Maintenance Date	null	null	true	0	0	null	null
MANUFACTURER	String	50	The manufacturer or brand of the asset	Manufacturer	swManufacturer	null	true	0	0	null	null
SERIALNUM	String	30	The manufacturer assigned serial number of the asset. Warranties are tied to serial numbers for Tidal Valves.	Serial Number	null	null	true	0	0	null	null
PROJECTNUM	String	10	The City's Project Number, DE Number, or Improvement Number under which the asset was installed	City Project Number	null	null	true	0	0	null	null
FILENUM	String	10	The City's File Number used to store the as-built documents for the asset	City File Number	null	null	true	0	0	null	null
WORKORDERNUM	String	60	The work order number for performing work on the asset (Cityworks, Galert, etc)	City Work Order Number	null	null	true	0	0	null	null
SURVEYRPTNUM	String	10	The City's Surveyor's Report Number under which the location of an asset or group of assets are captured, may be the same as the Service Request or Work Order Number	Survey Report Number	null	null	true	0	0	null	null
TOPELEV	Double	8	The Top Invert Elevation	Top Elevation	null	null	true	38	8	null	null
BOTTOOMELEV	Double	8	The Bottom Invert Elevation	Bottom Elevation	null	null	true	38	8	null	null
ORIENTATION	String	20	The cardinal direction of flow	Directional Orientation	Direction	null	true	0	0	null	null
XCOORD	Double	8	X-Coordinate of the asset (FL State Plane-East)	X Coordinate	null	null	true	38	8	null	null
YCOORD	Double	8	Y-Coordinate of the asset (FL State Plane-East)	Y Coordinate	null	null	true	38	8	null	null
ZCOORD	Double	8	Z-Coordinate of the asset	Z Coordinate	null	null	true	38	8	null	null
ANCILLARYROLE	SmallInteger	2	Identifies whether the asset participates in a geometric network as either a source or a sink	Ancillary Role	null	null	true	5	0	null	null
ROTATION	Double	8	Map symbol rotation value	Rotation	null	null	true	38	8	null	null

Control Valve Dataset

FieldName	Type	Length	Description	AliasName	DomainName	DefaultValue	IsNullable	Precision	Scale	Required	DomainFixed
ENABLED	SmallInteger	2	Indicates if the asset is enabled within a geometric network.	Enabled Flag	BooleanDomain	null	true	5	0	null	null
FIELDNOTES	String	255	Comments or notes from field staff, including surveyors, that are relevant to the asset.	Field Notes	null	null	true	0	0	null	null
NOTES	String	255	GIS entry notes or comments relevant to the asset.	GIS Notes	null	null	true	0	0	null	null
created_user	String	255	created_user	Created User	null	null	true	0	0	null	null
created_date	Date	8	created_date	Created Date	null	null	true	0	0	null	null
last_edited_user	String	255	last_edited_user	Last Edited User	null	null	true	0	0	null	null
last_edited_date	Date	8	last_edited_date	Last Edited Date	null	null	true	0	0	null	null
GlobalID	GlobalID	38	GlobalID	GlobalID	null	null	false	0	0	null	null

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FieldName	Type	Length	Description	AliasName	DomainName	DefaultValue	IsNullable	Precision	Scale	Required	DomainFixed
ASSETCOST	Double	8	The replacement cost of the asset. If populated, this will be used for asset management analysis and repair/replace decisions.	Asset Cost	null	null	true	38	8	null	null
CONDITION	SmallInteger	2	The condition rating of the asset. Used by Cityworks Analytics for condition analysis output. May be calculated within a Cityworks Inspection and updated from there to GIS.	Condition Rating	null	null	true	5	0	null	null
CONDITIONDATE	Date	8	The date of the last condition assessment. Can be updated from Cityworks Inspection to the GIS.	Condition Date	null	null	true	0	0	null	null
SERVICE LIFE	SmallInteger	2	The expected number of years an asset is physically capable of continuing to operate. Used to anticipate retirement of assets and project funding needs.	Service Life	null	null	true	5	0	null	null
RUL	SmallInteger	2	The Remaining Useful Life of an asset calculated by subtracting the number of years since installation, from the service life. It will be heavily relied upon for asset management analysis.	Remaining Useful Life	null	null	true	5	0	null	null
COF	SmallInteger	2	The consequence of failure. Used in the BRE model as the impact due to asset failure.	Consequence of Failure	null	null	true	5	0	null	null
POF	SmallInteger	2	Probability of Failure. Used in the BRE model to estimate the likelihood the predicted asset (or service) failure will occur and is adjusted for backup and redundancy of the asset.	Probability of Failure	null	null	true	5	0	null	null
BRE	SmallInteger	2	Business Risk Exposure is a the product of probability of failure (POF) and consequence of failure (COF). Values range from 1 (low risk) to 100 (high risk) and is used to prioritize investments.	Business Risk Exposure	null	null	true	5	0	null	null
LASTINSPECTDATE	Date	8	The date the asset was most recently inspected	Last Inspection Date	null	null	true	0	0	null	null
LASTSERVICE	Date	8	The date of the most recent maintenance activity	Last Service Date	null	null	true	0	0	null	null
MANUFACTURER	String	50	The manufacturer or brand of the asset	Manufacturer	wManufacturer	null	true	0	0	null	null
SERIALNUM	String	30	The manufacturer assigned serial number of the asset. Warranties may be tied to the asset's serial number.	Serial Number	null	null	true	0	0	null	null
PROJECTNUM	String	10	The City's Project Number, DE Number, or Improvement Number under which the asset was installed	City Project Number	null	null	true	0	0	null	null
FILENUM	String	10	The City's File Number used to store the as-built documents for the asset	City File Number	null	null	true	0	0	null	null
WORKORDERNUM	String	60	The work order number for performing work on the asset (Cityworks, Qalart, etc)	City Work Order Number	null	null	true	0	0	null	null
SURVEYRPTNUM	String	10	The City's Surveyor's Report Number under which the location of an asset or group of assets are captured, may be the same as the Service Request or Work Order Number	Surveyor's Report Number	null	null	true	0	0	null	null
XCOORD	Double	8	X-Coordinate of the asset (FL State Plane-East)	X Coordinate	null	null	true	38	8	null	null
YCOORD	Double	8	Y-Coordinate of the asset (FL State Plane-East)	Y Coordinate	null	null	true	38	8	null	null
ZCOORD	Double	8	Z-Coordinate of the asset	Z Coordinate	null	null	true	38	8	null	null
AUTOFLUSHDEVICE	String	10	Identifies whether the hydrant has an Automated Flushing Device attached	Auto Flushing Device	YesNo	null	true	0	0	null	null

Hydrant Dataset

FieldName	Type	Length	Description	AliasName	DomainName	DefaultValue	IsNullable	Precision	Scale	Required	DomainFixed
OPERABLE	SmallInteger	2	Indicates if the asset can be operated	Operable	BooleanDomain	null	true	5	0	null	null
TURNSTOCLOSE	Integer	4	Identifies the number of turns to close/shut off	Turns to Close	null	null	true	10	0	null	null
TURNDIRECTION	String	20	The turn direction to close the asset, as in clockwise and counter clockwise	Turn Close Direction	pValveTurnDirection	null	true	0	0	null	null
FLOW	Double	8	Flow rate in gallons/minute	Flow Rate (GPM)	null	null	true	38	8	null	null
ROTATION	Double	8	Map symbol rotation value	Rotation	null	null	true	38	8	null	null
ENABLED	SmallInteger	2	Indicates if the asset is enabled within a geometric network	Enabled Flag	BooleanDomain	null	true	5	0	null	null
FIELDNOTES	String	255	Comments or notes from field staff, including surveyors, that are relevant to the asset	Field Notes	null	null	true	0	0	null	null
NOTES	String	255	GIS entry notes or comments relevant to the asset	GIS Notes	null	null	true	0	0	null	null
created_user	String	255	created_user	Created User	null	null	true	0	0	null	null
created_date	Date	8	created_date	Created Date	null	null	true	0	0	null	null
last_edited_user	String	255	last_edited_user	Last Edited User	null	null	true	0	0	null	null
last_edited_date	Date	8	last_edited_date	Last Edited Date	null	null	true	0	0	null	null
GlobalID	GlobalID	38	GlobalID	GlobalID	null	null	false	0	0	true	null

Meter Dataset

TableName	wMeter
DataSetType	Table
Description	Water Meter assets that connect to Service Locations (based on information from WaterDistribution, Water Distribution, Water Meters
Tags	w Meters
AliasName	SubtypeField
SubtypeField	SubtypeField
DefaultSubtype	SubtypeField
DSID	5123

Fields	Type	Length	Description	AliasName	DomainName	DefaultValue	IsNullable	Precision	Scale	Required
FACILITYNUM	Integer	4	Locally assigned numeric unique identifier populated by database admin created database trigger	Facility Number	null	null	true	10	0	null
FACILITYID	String	20	Locally assigned alpha-numeric unique identifier populated by database admin created database trigger	Facility Identifier	null	null	true	0	0	null
METERNUM	String	10	Unique number generated by Utility Billing database for each meter asset (meter_no in Utility Billing database)	Meter Link Key	null	null	true	0	0	null
DIAMETER	String	10	Identified the size of meter (meter_sz in Utility Billing database)	Diameter	null	null	true	0	0	null
METERTYPE	String	10	Identifies specific meter types diameter, and number of digits on odometer (meter_tp in Utility Billing database)	Meter Type	null	null	true	0	0	null
ACTIVESTATUS	String	10	Identifies whether the asset is in use, not in use or removed from the ground	Active Status	null	null	true	0	0	null
ADDDATE	Date	8	Identifies the date the meter was initially added into Utility Billing software (add_dtm in Utility Billing database)	Add Date	null	null	true	0	0	null
SETDATE	Date	8	Identifies the date at which the meter was installed at service location (set_date in Utility Billing database)	Set Date	null	null	true	0	0	null
PULLDATE	Date	8	Identified the date at which the meter was pulled from service location (pull_date in Utility Billing database)	Pull Date	null	null	true	0	0	null
OUTDATE	Date	8	Identifies the date at which the meter was retired from the system (outserv_date in Utility Billing database)	Out of Service Date	null	null	true	0	0	null
OWNEDBY	SmallInteger	2	Indicates which organization owns the asset	Owned By	AssetOwner	1	true	5	0	null
MAINTBY	SmallInteger	2	Indicates which organization maintains the asset	Maintained By	AssetManager	null	true	5	0	null
LOCATION	String	200	Identifies the meter box location (area_served in Utility Billing database). Value is copied to Cityworks work order Location Details field when attached to a work order.	Location Description	null	null	true	0	0	null
ADDRESS	String	50	The address or closest address to the asset. Value is copied to Cityworks work order Address field when attached to a work order (address in Utility Billing database)	Address	null	null	true	0	0	null
PURCHASEDATE	Date	8	The purchase date of the asset. Used for future asset management analysis.	Purchase Date	null	null	true	0	0	null

Meter Dataset

FieldName	Type	Length	Description	AliasName	DomainName	DefaultValue	IsNullable	Precision	Scale	Required
WARRANTYDATE	Date	8	The date the warranty expires on the asset. If populated and asset is still under warranty, asset record will show up pink on the Cityworks work order.	Warranty Date	null	null	true	0	0	null
ASSETCOST	Double	8	The replacement cost of the asset. If populated, this will be used for asset management analysis and repair/replace decisions.	Asset Cost	null	null	true	38	8	null
CONDITION	SmallInteger	2	The condition rating of the asset. Used by Cityworks Analytics for condition analysis output. May be calculated within a Cityworks Inspection and updated from there to GIS.	Condition Rating	null	null	true	5	0	null
CONDITIONDATE	Date	8	The date of the last condition assessment. Can be updated from Cityworks Inspection to the GIS.	Condition Date	null	null	true	0	0	null
SERVICE LIFE	SmallInteger	2	The expected number of years an asset is physically capable of continuing to operate. Used to anticipate retirement of assets and project funding needs.	Service Life	null	null	true	5	0	null
RUL	SmallInteger	2	The Remaining Useful Life of an asset calculated by subtracting the number of years since installation, from the service life. It will be heavily relied upon for asset management analysis.	Remaining Useful Life	null	null	true	5	0	null
COF	SmallInteger	2	The consequence of failure. Used in the BRE model as the impact due to asset failure.	Consequence of Failure	null	null	true	5	0	null
POF	SmallInteger	2	Probability of Failure. Used in the BRE model to estimate the likelihood the predicted asset (or service) failure will occur and is adjusted for backup and redundancy of the asset.	Probability of Failure	null	null	true	5	0	null
BRE	SmallInteger	2	Business Risk Exposure is a the product of probability of failure (POF) and consequence of failure (COF). Values range from 1 (low risk) to 100 (high risk) and is used to prioritize investments.	Business Risk Exposure	null	null	true	5	0	null
LASTINSPECTDATE	Date	8	The date the asset was most recently inspected	Last Inspection Date	null	null	true	0	0	null
LASTMAINTDATE	Date	8	The date of the most recent maintenance activity	Last Maintenance Date	null	null	true	0	0	null
MANUFACTURER	String	50	The manufacturer or brand of the asset (company_cd in Utility Billing database)	Manufacturer	null	null	true	0	0	null
SERIALNUM	String	10	The manufacturer assigned serial number of the asset. Warranties may be tied to the asset's serial number (serial_no in Utility Billing database)	Meter Number	null	null	true	0	0	null
WORKORDERNUM	String	60	The work order number for performing work on the asset (Cityworks, QAlert, etc)	City Work Order Number	null	null	true	0	0	null
FIELDNOTES	String	255	Comments or notes from field staff, including surveyors, that are relevant to the asset	Field Notes	null	null	true	0	0	null
NOTES	String	255	GIS entry notes or comments relevant to the asset	GIS Notes	null	null	true	0	0	null
SYNCDATE	Date	8	The date of the most recent sync from the Utility Billing database	Sync Date	null	null	true	0	0	null
created_user	String	255	created_user	created_user	null	null	true	0	0	null
created_date	Date	8	created_date	created_date	null	null	true	0	0	null
last_edited_user	String	255	last_edited_user	last_edited_user	null	null	true	0	0	null

Meter Dataset

FieldName	Type	Length	Description	AliasName	DomainName	DefaultValue	IsNullable	Precision	Scale	Required
last_edited_date	Date	8	last_edited_date	last_edited_date	null	null	true	0	0	null
GlobalID	GlobalID	38	GlobalID	GlobalID	null	null	false	0	0	true

City of Fort Lauderdale
Field Descriptions

Field Name	Current Alias	New Alias	Current Description	New Description
ACCESS	Access	Access	How to access Valve	How to access Valve
ACCESSCHAMDIAM	Well Chamber Diameter	Well Chamber Diameter	The diameter of the receiving chamber for circular access points	The diameter of the receiving chamber for circular access points
ACCESSDIAM	Access Diameter	Access Diameter	Access diameter for the inlet	Access diameter for the inlet
ACCESSIBLE	Accessible	Accessible	Is Valve Accessible?	Is Valve Accessible?
ACCESSMAT	Access Material	Access Material	The material used to construct the access cover	The material used to construct the access cover
ACCESSRECDIAM	Receiving Chamber Diameter	Receiving Chamber Diameter	The diameter of the receiving chamber for circular access points	The diameter of the receiving chamber for circular access points
ACCESSRECLENGTH	Receiving Access Length	Receiving Access Length	The length of the receiving chamber access point	The length of the receiving chamber access point
ACCESSRECSHAPE	Receiving Access Shape	Receiving Access Shape	The shape of the receiving chamber access point	The shape of the receiving chamber access point
ACCESSRECWIDTH	Receiving Access Width	Receiving Access Width	The width of the receiving chamber access point	The width of the receiving chamber access point
ACCESSTYPE	Access Type	Access Type	Method for accessing the opening	Method for accessing the opening
ACCESSWELLENGL	Well Access Length	Well Access Length	The length of the receiving chamber access point	The length of the receiving chamber access point
ACCESSWELLSHAP	Well Access Shape	Well Access Shape	The shape of the receiving chamber access point	The shape of the receiving chamber access point
ACCESSWELLWIDT	Well Access Width	Well Access Width	The width of the receiving chamber access point	The width of the receiving chamber access point
ACCOUNTID	Account ID	Account ID	Utility billing account identifier	Utility billing account identifier
ACCOUNTNUM	Account Number	Account Number	Utility billing unique account number	Utility billing unique account number
ACTIVEFLAG	Active Flag	Active Flag	Identifies whether the feature is in use/active	Identifies whether the feature is in use/active
ACTIVESTATUS	Active Status	Active Status	Identifies whether the asset is in use, not in use or removed from the ground	Identifies whether the asset is in use, not in use or removed from the ground
ADDDATE	Add Date	Add Date	Identifies the date the meter was initially added into Utility Billing software (add_dtm in Utility Billing database)	Identifies the date the meter was initially added into Utility Billing software (add_dtm in Utility Billing database)
ADDRESS	Address	Address	Address	Address
ADDRESS	Closest Address	Closest Address	The address or closest address to the asset. Value is copied to Cityworks work order Address field when attached to a work order.	The address or closest address to the asset. Value is copied to Cityworks work order Address field when attached to a work order.
ADJUSTMENT	Adjustment Needed	Adjustment Needed	Valve Box Adjustment Needed?	Valve Box Adjustment Needed?
AGENCY	Agency Provider	Agency Provider	The name of the agency that provides the service	The name of the agency that provides the service
AGENCYURL	Agency Website	Agency Website	The website for the agency that provides the service	The website for the agency that provides the service
ANCILLARYROLE	Ancillary Role	Ancillary Role	Identifies whether the asset participates in a geometric network as either a source or a sink	Identifies whether the asset participates in a geometric network as either a source or a sink
ANGLE	Angle	Angle	The angle of the fitting when a bend is used (default of '0' when no bend is used)	The angle of the fitting when a bend is used (default of '0' when no bend is used)
AREACREW	Area Crew	Area Crew	Water customer service representative (water locator)	Water customer service representative (water locator)
AREASQFT	Area SQ Feet	Area SQ Feet	The area in square feet	The area in square feet
ASBUILTLOC	As-built Location	As-built Location	The URL or file path to the electronic as-built documents	The URL or file path to the electronic as-built documents
ASSETCOST	Asset Cost	Asset Cost	The replacement cost of the asset. If populated, this will be used for asset management analysis and repair/replace decisions.	The replacement cost of the asset. If populated, this will be used for asset management analysis and repair/replace decisions.
AUTOFLUSHDEVICE	Auto Flushing Device	Auto Flushing Device	Identifies whether the hydrant has an Automated Flushing Device attached	Identifies whether the hydrant has an Automated Flushing Device attached
AVGDISCH	Average Discharge	Average Discharge	Average Discharge	Average Discharge
BAFFLE	Baffle?	Baffle?	Identifies whether a baffle is associated with the pipe	Identifies whether a baffle is associated with the pipe
BEDMATERIAL	Bed Material	Bed Material	The material on the bed of the retention area	The material on the bed of the retention area
BLUECAP	Blue Cap?	Blue Cap?	Indicates if the hydrant has a blue cap	Indicates if the hydrant has a blue cap
BKWMATERIAL	Bank Material	Bank Material	The material on the bank of the retention area	The material on the bank of the retention area
BOOKNAME	Book Name	Book Name	The Book name for the Sewer Area. Not all areas have book names.	The Book name for the Sewer Area. Not all areas have book names.

EXHIBIT B
Exhibit 2

City of Fort Lauderdale
Field Descriptions

Field Name	Current Alias	New Alias	Current Description	New Description
BOOKNUM	Book Number	Book Number	BOOKNUM	BOOKNUM
BOTTOMAREA	Bottom Area	Bottom Area	The bottom area	The bottom area
BOTTOMBANKLEV	Bottom of Bank Elevation	Bottom of Bank Elevation	The bottom of bank elevation	The bottom of bank elevation
BOTTOMDEPTH	Bottom Depth	Bottom Depth	The bottom elevation of the well	The bottom elevation of the well
BOTTOMLEV	Bottom Elevation	Bottom Elevation	The Bottom Invert Elevation	The Bottom Invert Elevation
BOXCONDITION	Valve Box Condition	Valve Box Condition	Valve Box Condition	Valve Box Condition
BOXCONDITIONOTHER	Other Valve Box Condition	Other Valve Box Condition	Other Valve Box Condition	Other Valve Box Condition
BRE	Business Risk Exposure	Business Risk Exposure	Business Risk Exposure is a the product of probability of failure (POF) and consequence of failure (COF). Values range from 1 (low risk) to 100 (high risk) and is used to prioritize investments.	Business Risk Exposure is a the product of probability of failure (POF) and consequence of failure (COF). Values range from 1 (low risk) to 100 (high risk) and is used to prioritize investments.
BTMCLIP	Bottom Clip	Bottom Clip	The bottom elevation of the notch	The bottom elevation of the notch
BTMWIDTH	Bottom Width	Bottom Width	The bottom with of the notch	The bottom with of the notch
BYPASSVALVE	Bypass Valve?	Bypass Valve?	Identifies whether the asset is a bypass valve	Identifies whether the asset is a bypass valve
CASING	Casing	Casing	Identifies whether the asset is enclosed in casing	Identifies whether the asset is enclosed in casing
CLOSEDIR	Direction to Close	Direction to Close	Direction to close valve	Direction to close valve
COF	Consequence of Failure	Consequence of Failure	The consequence of failure. Used in the BRE model as the impact due to asset failure.	The consequence of failure. Used in the BRE model as the impact due to asset failure.
COLLAPSE	Collapse	Collapse	The severity of structural collapse observed within the asset	The severity of structural collapse observed within the asset
COLLECTEDDATE	GPS Collected Date	GPS Collected Date	Date the feature was located by a surveyor	Date the feature was located by a surveyor
COMMENTS	Comments	Comments	COMMENTS	COMMENTS
COMMENTS2	Comments 2	Comments 2	COMMENTS2	COMMENTS2
CONDITION	Condition Rating	Condition Rating	The condition rating of the asset. Used by Cityworks Analytics for condition analysis output. May be calculated within a Cityworks Inspection and updated from there to GIS.	The condition rating of the asset. Used by Cityworks Analytics for condition analysis output. May be calculated within a Cityworks Inspection and updated from there to GIS.
CONDITIONDATE	Condition Date	Condition Date	The date of the last condition assessment. Can be updated from Cityworks Inspection to the GIS.	The date of the last condition assessment. Can be updated from Cityworks Inspection to the GIS.
CONDITIONHAZEN	Condition	Condition	The condition rating of the asset as inspected by Hazen and Sawyer consulting	The condition rating of the asset as inspected by Hazen and Sawyer consulting
CONTACT	Agency Contact	Agency Contact	The contact name at the agency that provides the service	The contact name at the agency that provides the service
COORDSYS	Coordinate System	Coordinate System	Identifies the horizontal coordinate system under which assets were digitally captured and represented	Identifies the horizontal coordinate system under which assets were digitally captured and represented
created_date	created_date	created_date	created_date	created_date
CreateDate	CreateDate	CreateDate	CreateDate	CreateDate
CRITICAL	Critical Customer	Critical Customer	Flag to indicate if this is a critical customer	Flag to indicate if this is a critical customer
CURROPEN	Currently Open?	Currently Open?	Identifies whether the asset is currently open	Identifies whether the asset is currently open
CUTDEPTH	Pavement Cut Depth	Pavement Cut Depth	Pavement cut depth	Pavement cut depth
CVSHAPE	Cover Shape	Cover Shape	The shape of the manhole cover	The shape of the manhole cover
CVTYPE	Cover Type	Cover Type	The type of stormwater manhole cover	The type of stormwater manhole cover
CYCLE	Cycle	Cycle	A logical group of routes used mainly for billing purposes (cycle_cd in Utility Billing database)	A logical group of routes used mainly for billing purposes (cycle_cd in Utility Billing database)
DateInstalled	DateInstalled	DateInstalled	DateInstalled	DateInstalled
DATUM	Datum	Datum	Identifies the datum used to establish the asset's vertical elevation	Identifies the datum used to establish the asset's vertical elevation
DEADEND	Dead End	Dead End	Identifies whether the pipe is a dead end	Identifies whether the pipe is a dead end
DEBRIS	Debris	Debris	The severity of blockage observed within the asset	The severity of blockage observed within the asset
DEFICIENCIES	Deficiencies	Deficiencies	Valve deficiencies	Valve deficiencies
DENUM	City Detail Number	City Detail Number	The City's Detail Number	The City's Detail Number
DEPTH	Depth to Nut	Depth to Nut	The depth, in feet, to the top of the nut of the asset	The depth, in feet, to the top of the nut of the asset

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City of Fort Lauderdale
Field Descriptions

Field Name	Current Alias	New Alias	Current Description	New Description
DESIGNHEAD	Design Head	Design Head	Design Head	Design Head
DESIGNGPM	Design GPM	Design GPM	Design Gallons per minute	Design Gallons per minute
DEVICELC	Device Location	Device Location	Device Location from Cayenta	Device Location from Cayenta
DEVICEMAKE	Device Make	Device Make	The make/manufacturer of backflow device reported	The make/manufacturer of backflow device reported
DEVICEMODELNUM	Device Model Number	Device Model Number	The model number of backflow device reported	The model number of backflow device reported
DEVICERIALNUM	Device Serial Number	Device Serial Number	The serial number on the device	The serial number on the device
DEVICESTYPE	Device Type	Device Type	The type of backflow device reported	The type of backflow device reported
DIAMETER	Diameter	Diameter	The diameter of the asset	The diameter of the asset
DISCHDIAM	Discharge Diameter	Discharge Diameter	Diameter of pump discharge	Diameter of pump discharge
DISCHID	Discharge Identifier	Discharge Identifier	Discharge Identifier	Discharge Identifier
DISCHRGTYPE	Discharge Type	Discharge Type	The type of stormwater discharge	The type of stormwater discharge
DOCDATE	Project Date	Project Date	The date of surveyor signature for the document	The date of surveyor signature for the document
DOCLC	As-built Location	As-built Location	The URL or file path to the electronic Surveyor's Report documents	The URL or file path to the electronic Surveyor's Report documents
DOCNOTES	Project Notes	Project Notes	Relevant notes recorded for the work, the assets, or its Surveyor's Report	Relevant notes recorded for the work, the assets, or its Surveyor's Report
DOWNELEV	Downstream Elevation	Downstream Elevation	The downstream invert elevation of the pipe	The downstream invert elevation of the pipe
DYNHEAD	Total Dynamic Head	Total Dynamic Head	Dynamic Head	Dynamic Head
EASEMENTID	Easement ID	Easement ID	The unique ID to represent the specific easement record. This field will be the prefix 'EAS-' then the Easement Number. For example, 'EAS-12345'	The unique ID to represent the specific easement record. This field will be the prefix 'EAS-' then the Easement Number. For example, 'EAS-12345'
EASEMENTNUM	Easement Number	Easement Number	A unique numerical ID to represent the specific easement record. This field will be the Easement ID without the prefix 'EAS-'. For example, if the Easement ID is 'EAS-98765', the Easement Number would be '98765'	A unique numerical ID to represent the specific easement record. This field will be the Easement ID without the prefix 'EAS-'. For example, if the Easement ID is 'EAS-98765', the Easement Number would be '98765'
EASEMENTTYPE	Easement Type	Easement Type	This field is a normalized list of easement types as defined within the legal document. The purpose of this field is to assist with grouping and searching for various easement types.	This field is a normalized list of easement types as defined within the legal document. The purpose of this field is to assist with grouping and searching for various easement types.
ELEVATION	Elevation	Elevation	Elevation value for contour line	Elevation value for contour line
EMAIL	Agency Email	Agency Email	The service provider agency email	The service provider agency email
ENABLED	Enabled Flag	Enabled Flag	Indicates if the asset is enabled within a geometric network	Indicates if the asset is enabled within a geometric network
EXERCISED	Exercised	Exercised	Was valve exercised?	Was valve exercised?
FACILITYID	Facility Identifier	Facility Identifier	Locally assigned alpha-numeric unique identifier populated by database admin created database trigger	Locally assigned alpha-numeric unique identifier populated by database admin created database trigger
FACILITYNUM	Facility Number	Facility Number	Locally assigned numeric unique identifier populated by database admin created database trigger	Locally assigned numeric unique identifier populated by database admin created database trigger
FDOTTYPE	FDOT Type	FDOT Type	The Florida Department of Transportation manhole structure type	The Florida Department of Transportation manhole structure type
FEATUREID	FEATURE_ID	FEATURE_ID	Feature ID from Unknown Point	Feature ID from Unknown Point
FIELDNOTES	Field Notes	Field Notes	Comments or notes from field staff, including surveyors, that are relevant to the asset	Comments or notes from field staff, including surveyors, that are relevant to the asset
FILENUM	City File Number	City File Number	The City's File Number	The City's File Number
FITTINGTYPE	Fitting Type	Fitting Type	The type of fitting	The type of fitting
FLOW	Flow Rate (GPM)	Flow Rate (GPM)	Flow rate in gallons/minute	Flow rate in gallons/minute
FLOWDIR	Flow Direction	Flow Direction	Defines the direction of flow using geometric flow direction values	Defines the direction of flow using geometric flow direction values
FLOWRATE	Flowrate	Flowrate	The flow rating at the SCADA site	The flow rating at the SCADA site
FLOWRATEINT	Flowrate	Flowrate	The flow rating at the SCADA site, expressed as an integer	The flow rating at the SCADA site, expressed as an integer
FOLIO	Folio Number	Folio Number	Folio from BCPA	Folio from BCPA
FROMMH	From Manhole	From Manhole	The unique identifier of the From Manhole (upstream manhole)	The unique identifier of the From Manhole (upstream manhole)
GISGlobalID	Valve GlobalID	Valve GlobalID	Corresponding Valve Global ID	Corresponding Valve Global ID
GlobalID	GlobalID	GlobalID	GlobalID	GlobalID

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City of Fort Lauderdale
Field Descriptions

Field Name	Current Alias	New Alias	Current Description	New Description
GRATE	Grate?	Grate?	Identifies whether the asset	Identifies whether the outfall has a grate
HAZCONDITION	Manhole Condition	Manhole Condition	The condition of the asset	The condition of the asset
HDRFLAG	Hydrant Valve?	Hydrant Valve?	Identifies whether the asset is a hydrant valve	Identifies whether the asset is a hydrant valve
HIGHLEVEL	High Pipe Elevation	High Pipe Elevation	High pipe elevation inside manhole	High pipe elevation inside manhole
HORIZACC	Horizontal Accuracy	Horizontal Accuracy	The horizontal accuracy in feet	The horizontal accuracy in feet
ID	Irrigation Link Key	Irrigation Link Key	Unique ID to reference Tokay/Cayenta records	Unique ID to reference Tokay/Cayenta records
IMAGE1	Image 1	Image 1	The location of the 1st image showing the asset	The location of the 1st image showing the asset
IMAGE2	Image 2	Image 2	The location of the 2nd image showing the asset	The location of the 2nd image showing the asset
IMAGE3	Image 3	Image 3	The location of the 3rd image showing the asset	The location of the 3rd image showing the asset
IMPORT	Importer	Importer	User who Imported Data	User who Imported Data
IMPORTDATE	ImportDate	ImportDate	ImportDate	ImportDate
IMPROVENUM	City Improvement Number	City Improvement Number	The City's Improvement Number	The City's Improvement Number
INLETDEPTH	Inlet Height	Inlet Height	The depth of the inlet	The depth of the inlet
INLETDIAM	Inlet Diameter	Inlet Diameter	Diameter of pump inlet	Diameter of pump inlet
INLETLNGTH	Inlet Length	Inlet Length	The length of the inlet	The length of the inlet
INLETTYPE	Inlet Type	Inlet Type	The type of stormwater inlet	The type of stormwater inlet
INLETWIDTH	Inlet Width	Inlet Width	The width of the inlet	The width of the inlet
INMANHOLE	In Manhole?	In Manhole?	Identifies whether the asset is in a manhole	Identifies whether the asset is in a manhole
INSPECTIONCOMPL	Inspection Completed?	Inspection Completed?	Whether or not an inspection was completed by the City	Whether or not an inspection was completed by the City
ETE	Inspection	Inspection	Whether or not an inspection was requested by owner	Whether or not an inspection was requested by owner
INSPECTIONREQ	Inspection Requested?	Inspection Requested?	The date the asset was installed	The date the asset was installed
ST	Install Date	Install Date	Indicates which organization installed the assets	Indicates which organization installed the assets
INSTALLDATE	Install Date	Install Date	Whether or not an inspection was requested by owner	Whether or not an inspection was requested by owner
INSTALLED	Installed By	Installed By	The date the asset was installed	The date the asset was installed
INSTALLEDBY	Installed By	Installed By	Indicates which organization installed the assets	Indicates which organization installed the assets
INSTRUMENTNUM	Instrument Number	Instrument Number	INSTRUMENTNUM	INSTRUMENTNUM
INTDETAIL	City Intersection Detail	City Intersection Detail	The City's Intersection Detail	The City's Intersection Detail
INTCLASS	Inventory Class	Inventory Class	The method used to establish the geographic location of the asset	The method used to establish the geographic location of the asset
INVERT1DIAM	Invert1 Pipe Diameter	Invert1 Pipe Diameter	The diameter of the invert pipe	The diameter of the invert pipe
INVERT1DOWNPIPE	Invert 1 Down Pipe	Invert 1 Down Pipe	The unique identifier of the downstream pipe	The unique identifier of the downstream pipe
INVERT1ELEV	Invert1 Elevation	Invert1 Elevation	The invert elevation	The invert elevation
INVERT1MAT	Invert1 Pipe Material	Invert1 Pipe Material	The construction material of the invert pipe	The construction material of the invert pipe
INVERT1SHAPE	Invert1 Pipe Shape	Invert1 Pipe Shape	The shape of the invert pipe	The shape of the invert pipe
INVERT1UPPIPE	Invert 1 Up Pipe	Invert 1 Up Pipe	The unique identifier of the upstream pipe	The unique identifier of the upstream pipe
INVERT1WIDTH	Invert1 Pipe Width	Invert1 Pipe Width	The width of the invert pipe	The width of the invert pipe
INVERT2DIAM	Invert2 Pipe Diameter	Invert2 Pipe Diameter	The diameter of the invert pipe	The diameter of the invert pipe
INVERT2DOWNPIPE	Invert 2 Down Pipe	Invert 2 Down Pipe	The unique identifier of the downstream pipe	The unique identifier of the downstream pipe
INVERT2ELEV	Invert2 Elevation	Invert2 Elevation	The invert elevation	The invert elevation
INVERT2MAT	Invert2 Pipe Material	Invert2 Pipe Material	The construction material of the invert pipe	The construction material of the invert pipe
INVERT2SHAPE	Invert2 Pipe Shape	Invert2 Pipe Shape	The shape of the invert pipe	The shape of the invert pipe
INVERT2UPPIPE	Invert 2 Up Pipe	Invert 2 Up Pipe	The unique identifier of the upstream pipe	The unique identifier of the upstream pipe
INVERT2WIDTH	Invert2 Pipe Width	Invert2 Pipe Width	The width of the invert pipe	The width of the invert pipe
INVERT3DIAM	Invert 3 Pipe Diameter	Invert 3 Pipe Diameter	The diameter of the invert pipe	The diameter of the invert pipe
INVERT3DOWNPIPE	Invert 3 Down Pipe	Invert 3 Down Pipe	The unique identifier of the downstream pipe	The unique identifier of the downstream pipe
INVERT3ELEV	Invert 3 Elevation	Invert 3 Elevation	The invert elevation	The invert elevation
INVERT3MAT	Invert 3 Pipe Material	Invert 3 Pipe Material	The construction material of the invert pipe	The construction material of the invert pipe
INVERT3SHAPE	Invert 3 Pipe Shape	Invert 3 Pipe Shape	The shape of the invert pipe	The shape of the invert pipe
INVERT3UPPIPE	Invert 3 Up Pipe	Invert 3 Up Pipe	The unique identifier of the upstream pipe	The unique identifier of the upstream pipe
INVERT3WIDTH	Invert 3 Pipe Width	Invert 3 Pipe Width	The width of the invert pipe	The width of the invert pipe

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City of Fort Lauderdale
Field Descriptions

Field Name	Current Alias	New Alias	Current Description	New Description
INVERT4DIAM	Invert 4 Pipe Diameter	Invert 4 Pipe Diameter	The diameter of the invert pipe	The diameter of the invert pipe
INVERT4DOWNPIPE	Invert 4 Down Pipe	Invert 4 Down Pipe	The unique identifier of the downstream pipe	The unique identifier of the downstream pipe
INVERT4ELEV	Invert 4 Elevation	Invert 4 Elevation	The invert elevation	The invert elevation
INVERT4MAT	Invert 4 Pipe Material	Invert 4 Pipe Material	The construction material of the invert pipe	The construction material of the invert pipe
INVERT4SHAPE	Invert 4 Pipe Shape	Invert 4 Pipe Shape	The shape of the invert pipe	The shape of the invert pipe
INVERT4UPPIPE	Invert 4 Up Pipe	Invert 4 Up Pipe	The unique identifier of the upstream pipe	The unique identifier of the upstream pipe
INVERT4WIDTH	Invert 4 Pipe Width	Invert 4 Pipe Width	The width of the invert pipe	The width of the invert pipe
INVERT5DIAM	Invert 5 Pipe Diameter	Invert 5 Pipe Diameter	The diameter of the invert pipe	The diameter of the invert pipe
INVERT5DOWNPIPE	Invert 5 Down Pipe	Invert 5 Down Pipe	The unique identifier of the downstream pipe	The unique identifier of the downstream pipe
INVERT5ELEV	Invert 5 Elevation	Invert 5 Elevation	The invert elevation	The invert elevation
INVERT5MAT	Invert 5 Pipe Material	Invert 5 Pipe Material	The construction material of the invert pipe	The construction material of the invert pipe
INVERT5SHAPE	Invert 5 Pipe Shape	Invert 5 Pipe Shape	The shape of the invert pipe	The shape of the invert pipe
INVERT5UPPIPE	Invert 5 Up Pipe	Invert 5 Up Pipe	The unique identifier of the upstream pipe	The unique identifier of the upstream pipe
INVERT5WIDTH	Invert 5 Pipe Width	Invert 5 Pipe Width	The width of the invert pipe	The width of the invert pipe
INVERT6DIAM	Invert 6 Pipe Diameter	Invert 6 Pipe Diameter	The diameter of the invert pipe	The diameter of the invert pipe
INVERT6DOWNPIPE	Invert 6 Down Pipe	Invert 6 Down Pipe	The unique identifier of the downstream pipe	The unique identifier of the downstream pipe
INVERT6ELEV	Invert 6 Elevation	Invert 6 Elevation	The invert elevation	The invert elevation
INVERT6MAT	Invert 6 Pipe Material	Invert 6 Pipe Material	The construction material of the invert pipe	The construction material of the invert pipe
INVERT6SHAPE	Invert 6 Pipe Shape	Invert 6 Pipe Shape	The shape of the invert pipe	The shape of the invert pipe
INVERT6UPPIPE	Invert 6 Up Pipe	Invert 6 Up Pipe	The unique identifier of the upstream pipe	The unique identifier of the upstream pipe
INVERT6WIDTH	Invert 6 Pipe Width	Invert 6 Pipe Width	The width of the invert pipe	The width of the invert pipe
INVERTTELEV	Invert Elevation	Invert Elevation	The invert elevation	The invert elevation
last_edited_date	last_edited_date	last_edited_date	last_edited_date	last_edited_date
last_edited_user	last_edited_user	last_edited_user	last_edited_user	last_edited_user
LASTINSPECTIONDATE	Last Inspection Date	Last Inspection Date	The date the asset was most recently inspected	The date the asset was most recently inspected
LASTMAINTDATE	Date	Date	The date of the most recent maintenance activity	The date of the most recent maintenance activity
LASTSERVICE	Last Service Date	Last Service Date	The date of the most recent maintenance activity	The date of the most recent maintenance activity
LEGACYID	Legacy ID (Unit ID)	Legacy ID (Unit ID)	Former asset identifier. To be moved to a related table.	Former asset identifier. To be moved to a related table.
LENGTH	Length	Length	Length of the clamping device	Length of the clamping device
LINED	Lined	Lined	Indicates if the manhole is lined	Indicates if the manhole is lined
LINEDYEAR	Year Lined	Year Lined	The year the pipe was last lined	The year the pipe was last lined
LINERTYPE	Liner Type	Liner Type	The method used to line the pipe	The method used to line the pipe
LOCATION	Location Description	Location Description	Text description of the geographic location (e.g. 10' west of sidewalk along Broward Blvd). Value is copied to Cityworks work order Location field when attached to a work order.	Text description of the geographic location (e.g. 10' west of sidewalk along Broward Blvd). Value is copied to Cityworks work order Location field when attached to a work order.
LOCATIONDESCRIPTION	Location Description	Location Description	LocationDescription	LocationDescription
LOCATIONNUMBER	Location Number	Location Number	Utility billing location identifier	Utility billing location identifier
LOCDESC	Location Description	Location Description	LocationDescription	LocationDescription
LONGORSHORT	Long or Short	Long or Short	Whether the main is on the same side of street of meter (short side), if not then it is on the long side	Whether the main is on the same side of street of meter (short side), if not then it is on the long side
MAINSHAPE	Main Shape	Main Shape	The shape of the main	The shape of the main
MAINTBY	Managed By	Managed By	Indicates which organization maintains the asset	Indicates which organization maintains the asset
MANUFACTURER	Manufacturer	Manufacturer	The manufacturer or brand of the asset	The manufacturer or brand of the asset
MANUFACTURERTYPE	Manufacturer Type	Manufacturer Type	The manufacturer model type of the manhole structure	The manufacturer model type of the manhole structure
MASTERMETER	Master Meter?	Master Meter?	MASTERMETER	MASTERMETER
MATERIAL	Pipe Material	Pipe Material	Identifies the construction material of the pipe connection	Identifies the construction material of the pipe connection

City of Fort Lauderdale
Field Descriptions

Field Name	Current Alias	New Alias	Current Description	New Description
MAXOPDISC	Max Operating Discharge	Max Operating Discharge	Maximum Operating Discharge flow	Maximum Operating Discharge flow
MAXOPHEAD	Max Operating Head	Max Operating Head	Maximum Operating Head	Maximum Operating Head
METERLOC	Meter Location Description	Meter Location Description	Meter Location from Cayenta	Meter Location from Cayenta
METERNUM	Meter Link Key	Meter Link Key	Unique number generated by Utility Billing database for each meter asset (meter_no in Utility Billing database)	Unique number generated by Utility Billing database for each meter asset (meter_no in Utility Billing database)
METERSEQUENCE	Meter Sequence	Meter Sequence	An incrementor for meters at a given service (meter_seq in Utility Billing database)	An incrementor for meters at a given service (meter_seq in Utility Billing database)
METERMETER	Meter Type	Meter Type	Identifies specific meter types diameter, and number of digits on odometer (meter_tp in Utility Billing database)	Identifies specific meter types diameter, and number of digits on odometer (meter_tp in Utility Billing database)
METERMETER	Metered Service?	Metered Service?	Identifies whether the service connection is metered	Identifies whether the service connection is metered
MHTYPE	Manhole Type	Manhole Type	The type of manhole	The type of manhole
MODCOMMENTS	Modification Comments	Modification Comments	Used to record information pertaining to changes of the easement. For example, if the easement changes in width due to the vacation of a portion of the original easement this information may be noted here.	Used to record information pertaining to changes of the easement. For example, if the easement changes in width due to the vacation of a portion of the original easement this information may be noted here.
NAME	Name	Name	The name of the facility or location	The name of the facility or location
NEEDSCLEANING	Needs Cleaning	Needs Cleaning	Does inlet need cleaning?	Does inlet need cleaning?
NEEDSREPAIR	Needs Repair	Needs Repair	Does inlet need repair?	Does inlet need repair?
NORMALLYOPEN	Normally Open?	Normally Open?	Identifies whether the asset is normally open	Identifies whether the asset is normally open
NOTES	Notes	Notes	Notes	Notes
NUMNOTCH	GIS Notes	GIS Notes	GIS entry notes or comments relevant to the asset	GIS entry notes or comments relevant to the asset
NUMOFBAFFLE	Number of Notches	Number of Notches	The number of notches on the weir	The number of notches on the weir
NUMOFCHAM	Number of Baffles	Number of Baffles	Identifies the number of baffles	Identifies the number of baffles
NUMOFWEIR	Number of Chambers	Number of Chambers	The number of chambers	The number of chambers
OPDATE	Number of Weirs	Number of Weirs	The number of weirs	The number of weirs
OPENPOSITION	Operational Date	Operational Date	Date when the facility was put into service	Date when the facility was put into service
OPERABLE	Opening Position	Opening Position	The opening position	The opening position
OPERABLE	Operable	Operable	Operable	Operable
OPERABLE	Operable	Operable	Identifies whether the valve or hydrant can be operated	Identifies whether the valve or hydrant can be operated
ORIENTATION	Directional Orientation	Directional Orientation	The cardinal direction of flow	The cardinal direction of flow
ORIFICE	Orifice?	Orifice?	Indicates whether the weir has an orifice	Indicates whether the weir has an orifice
OUTDATE	Out of Service Date	Out of Service Date	Identifies the date at which the meter was retired from the system (outserv_date in Utility Billing database)	Identifies the date at which the meter was retired from the system (outserv_date in Utility Billing database)
OUTFALLLOC	Outfall Location	Outfall Location	Location of the outfall relative to its connected drainage asset	Location of the outfall relative to its connected drainage asset
OUTFLOWELEV	Outflow Elevation	Outflow Elevation	Outflow elevation	Outflow elevation
OWNEDBY	Owned By	Owned By	Indicates which organization owns the asset	Indicates which organization owns the asset
OWNER	Owner	Owner	Owner from Cayenta	Owner from Cayenta
PAGENUM	Page Number	Page Number	PAGENUM	PAGENUM
PARCELID	Parcel ID	Parcel ID	Identifies Parcel ID of service location (parcel_id in Utility Billing database)	Identifies Parcel ID of service location (parcel_id in Utility Billing database)
PEAKDISCH	Peak Discharge	Peak Discharge	Peak Discharge	Peak Discharge
PERFDEPTH	Perforated Depth	Perforated Depth	The perforated pipe depth of the well	The perforated pipe depth of the well
PERMIT	Permitted	Permitted	A flag used to indicate whether the discharge point is permitted	A flag used to indicate whether the discharge point is permitted
PERMITID	Permit Identifier	Permit Identifier	Unique permit identifier	Unique permit identifier
PHONE	Agency Phone	Agency Phone	The service provider agency contact phone number	The service provider agency contact phone number
PIPETYPE	Pipe Type	Pipe Type	The type of pipe	The type of pipe

City of Fort Lauderdale
Field Descriptions

Field Name	Current Alias	New Alias	Current Description	New Description
POF	Probability of Failure	Probability of Failure	Probability of Failure. Used in the BRE model to estimate the likelihood the predicted asset (or service) failure will occur and is adjusted for backup and redundancy of the asset.	Probability of Failure. Used in the BRE model to estimate the likelihood the predicted asset (or service) failure will occur and is adjusted for backup and redundancy of the asset.
PONDTYPE	Pond Type	Pond Type	The type of stormwater pond	The type of stormwater pond
POSITION	Position	Position	What is the Valve's position?	What is the Valve's position?
POSITIONLEFT	What position was the valve left in?	What position was the valve left in?		
PRESSURE	Pressure	Pressure	The pressure reading at the SCADA site	The pressure reading at the SCADA site
PRESSUREINT	Pressure	Pressure	The pressure reading at the SCADA site, expressed as an integer	The pressure reading at the SCADA site, expressed as an integer
PROJDATE	Project Date	Project Date	The date the project was considered completed by the City	The date the project was considered completed by the City
PROJECTNAME	Project Name	Project Name	The name of the project	The name of the project
PROJECTNUM	City Project Number	City Project Number	The City's Project Number under which the asset was installed	The City's Project Number under which the asset was installed
PROJMANAGER	Project Manager	Project Manager	The Project Manager	The Project Manager
PROJNOTES	Project Notes	Project Notes	Relevant notes recorded for the project, its assets or its document records	Relevant notes recorded for the project, its assets or its document records
PULLDATE	Pull Date	Pull Date	Identified the date at which the meter was pulled from service location (pull_date in Utility Billing database)	Identified the date at which the meter was pulled from service location (pull_date in Utility Billing database)
PUMPTYPE	Pump Type	Pump Type	The type of water pump	The type of water pump
PURCHASEDATE	Purchase Date	Purchase Date	The purchase date of the asset. Used for future asset management analysis.	The purchase date of the asset. Used for future asset management analysis.
QALERTNUM	QAlertNum	QAlertNum	QAlertNum	QAlertNum
QALERTNUM	Enter QAlert Number	Enter QAlert Number	QAlert Number	QAlert Number
QNUMBER	Q Number	Q Number	Q Alert Number if applicable	Q Alert Number if applicable
QTR	QTR	QTR	Quarter Section	Quarter Section
RATEDFLOW	Rated Flow	Rated Flow	The rated flow typically defined by manufacturer	The rated flow typically defined by manufacturer
RATEDPRESS	Rated Pressure	Rated Pressure	The rated pressure typically defined by manufacturer	The rated pressure typically defined by manufacturer
RECCHAMWIDTH	Receiving Chamber Width	Receiving Chamber Width	The width of the receiving chamber of the well	The width of the receiving chamber of the well
RECORDEDNAME	Recorded Name	Recorded Name	The actual recorded easement name as it is written within the legal document (i.e. Utility Easement, Drainage Easement, Drainage Utility Easement, Stormwater Easement, etc)	The actual recorded easement name as it is written within the legal document (i.e. Utility Easement, Drainage Easement, Drainage Utility Easement, Stormwater Easement, etc)
REFERRED	Referred for repair or replacement?	Referred for repair or replacement?	Referred for repair or replacement	Referred for repair or replacement
REQUESTOR	Requestor	Requestor	The City staff member who made the initial request for the work	The City staff member who made the initial request for the work
RIMELEV	Rim Elevation	Rim Elevation	The elevation of the inlet rim	The elevation of the inlet rim
RISE	Rise	Rise	The top of the weir elevation	The top of the weir elevation
ROTATION	Rotation	Rotation	Map symbol rotation value	Map symbol rotation value
ROUTE	Route	Route	A route used for meter reading purposes (route_no in Utility Billing database)	A route used for meter reading purposes (route_no in Utility Billing database)
RPM	RPM	RPM	The rate of rotation of the impeller in Revolutions per Minute	The rate of rotation of the impeller in Revolutions per Minute
RUL	Remaining Useful Life	Remaining Useful Life	The Remaining Useful Life of an asset calculated by subtracting the number of years since installation, from the service life. It will be heavily relied upon for asset management analysis.	The Remaining Useful Life of an asset calculated by subtracting the number of years since installation, from the service life. It will be heavily relied upon for asset management analysis.
SERIALNUM	Serial Number	Serial Number	The manufacturer assigned serial number of the asset. Warranties may be tied to the asset's serial number.	The manufacturer assigned serial number of the asset. Warranties may be tied to the asset's serial number.
SERVICELIFE	Service Life	Service Life	The expected number of years an asset is physically capable of continuing to operate. Used to anticipate retirement of assets and project funding needs.	The expected number of years an asset is physically capable of continuing to operate. Used to anticipate retirement of assets and project funding needs.
SERVICESEQUENCE	Service Sequence	Service Sequence	An innumerator of services at a given location (service_seq in Utility Billing database)	An innumerator of services at a given location (service_seq in Utility Billing database)

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City of Fort Lauderdale
Field Descriptions

Field Name	Current Alias	New Alias	Current Description	New Description
SERVICE TYPE	Service Type	Service Type	Identifies the type of service the location supplied (service_type_dsc in Utility Billing database)	Identifies the type of service the location supplied (service_type_dsc in Utility Billing database)
SERVICE TYPE	Service Type	Service Type	The type of service connection	The type of service connection
SET DATE	Set Date	Set Date	Identifies the date at which the meter was installed at service location (set_date in Utility Billing database)	Identifies the date at which the meter was installed at service location (set_date in Utility Billing database)
SEWER CREW	Sewer Crew	Sewer Crew	Sewer customer service representative (sewer locator)	Sewer customer service representative (sewer locator)
SHUT OFF HEAD	Shutoff Head	Shutoff Head	Shut off Head	Shut off Head
SIDESLOPE	Slope	Slope	The slope on the side of the retention area	The slope on the side of the retention area
SKIMMER	Skimmer?	Skimmer?	Indicates whether the weir has a skimmer	Indicates whether the weir has a skimmer
SLOPE	Slope	Slope	The slope of the pipe	The slope of the pipe
SOLID PIPE DEPTH	Solid Pipe Depth	Solid Pipe Depth	The solid pipe depth of the well	The solid pipe depth of the well
STAMPED ID	Stamped ID	Stamped ID	The ID the Fire Hydrant is currently stamped with	The ID the Fire Hydrant is currently stamped with
STATUS	Status	Status	Status of backflow inventory	Status of backflow inventory
STRUCTURE DEPTH	Structure Depth	Structure Depth	The depth of the well structure	The depth of the well structure
STRUCTURE ID	Structure ID	Structure ID	The unique identifier of the associated structure as a string. Structure could be a Pollution Control Structure, a manhole, an inlet or a drainage well chamber.	The unique identifier of the associated structure as a string. Structure could be a Pollution Control Structure, a manhole, an inlet or a drainage well chamber.
STRUCTURE LENGTH	Structure Length	Structure Length	The length of the well structure	The length of the well structure
STRUCTURE TYPE	Structure Type	Structure Type	The type of water structure	The type of water structure
STRUCTURE WIDTH	Structure Width	Structure Width	The width of the well structure	The width of the well structure
SUBMITTED BY	SubmittedBy	SubmittedBy	SubmittedBy	SubmittedBy
SUMFLOW	Flow Summary	Flow Summary	The sum of flow	The sum of flow
SUMP HEIGHT	Sump Height	Sump Height	Identifies the height of the sump in inches	Identifies the height of the sump in inches
SURVEY COMPANY	Survey Company	Survey Company	The agency in which the surveyor was employed	The agency in which the surveyor was employed
SURVEYOR	Surveyor	Surveyor	Identifies the surveyor who signed off on the as-builts	Identifies the surveyor who signed off on the as-builts
SURVEY RETURN	Survey Returned?	Survey Returned?	Whether or not the Survey was returned by owner	Whether or not the Survey was returned by owner
SURVEY REPORT NUMBER	Surveyor's Report Number	Surveyor's Report Number	The City's Surveyor's Report Number under which the location of an asset or group of assets are captured, may be the same as the Service Request or Work Order Number	The City's Surveyor's Report Number under which the location of an asset or group of assets are captured, may be the same as the Service Request or Work Order Number
SYNC DATE	Sync Date	Sync Date	The date of the most recent sync from the Utility Billing database	The date of the most recent sync from the Utility Billing database
TEST TURNS	Number of exercise turns	Number of exercise turns	Number of test turns (exercise)	Number of test turns (exercise)
TEST TURNS COMMENTS	Test Turns Comments	Test Turns Comments	Test Turns Comments	Test Turns Comments
TO MANHOLE	To Manhole	To Manhole	The unique identifier of the To Manhole (downstream manhole)	The unique identifier of the To Manhole (downstream manhole)
TOP AREA	Top Area	Top Area	The top area	The top area
TOP BANK ELEVATION	Top of Bank Elevation	Top of Bank Elevation	The Top of bank elevation	The Top of bank elevation
TOP CASING ELEVATION	Top Casing Elevation	Top Casing Elevation	The top of casing elevation	The top of casing elevation
TOP CLIP	Top Clip	Top Clip	The top elevation of the notch	The top elevation of the notch
TOPELEV	Top Elevation	Top Elevation	The Top Invert Elevation	The Top Invert Elevation
TOP WIDTH	Top Width	Top Width	The top width of the notch	The top width of the notch
TORQUE	Torque	Torque	Torque	Torque
TRANSMISSION SYSTEM	Transmission System	Transmission System	Identifies whether the main is part of the transmission system, which is compromised of pipes with a diameter of 16 inches and above.	Identifies whether the main is part of the transmission system, which is compromised of pipes with a diameter of 16 inches and above.
TURN DIRECTION	Turn Close Direction	Turn Close Direction	The turn direction to close the asset, as in clockwise or counter clockwise	The turn direction to close the asset, as in clockwise or counter clockwise
NUMBER OF TURNS (MAX)	Number of turns (max)	Number of turns (max)	Number of turns to open valve (max)	Number of turns to open valve (max)
TURNSTO CLOSE	Turns to Close	Turns to Close	The number of turns required to close the asset	The number of turns required to close the asset
CLAMP TYPE	Clamp Type	Clamp Type	The type of repair clamp	The type of repair clamp

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City of Fort Lauderdale
Field Descriptions

Field Name	Current Alias	New Alias	Current Description	New Description
UPELEV	Upstream Elevation	Upstream Elevation	The upstream invert elevation of the pipe	The upstream invert elevation of the pipe
URL	URL	URL	A URL to the specific SCADA instrument	A URL to the specific SCADA instrument
VACCERTDATE	Vacation Certification Date	Vacation Certification Date	If the easement has been vacated, this field is used to record the date the Engineering Certificate was signed.	If the easement has been vacated, this field is used to record the date the Engineering Certificate was signed.
VACRESOLUTIONDATE	Vacation Resolution Date	Vacation Resolution Date	This field is used to record the date the resolution for vacation was recorded.	This field is used to record the date the resolution for vacation was recorded.
VALVETYPE	Valve Type	Valve Type	Type of control valve	Type of control valve
VERTACC	Vertical Accuracy	Vertical Accuracy	The vertical accuracy in feet	The vertical accuracy in feet
VERTDATUM	Vertical Datum	Vertical Datum	Identifies the datum used to establish the asset's vertical elevation	Identifies the datum used to establish the asset's vertical elevation
VISIBLE	Visible	Visible	Is inlet visible?	Is inlet visible?
VLVOP	Is valve operable?	Is valve operable?	Is valve operable?	Is valve operable?
VOLUME	Volume	Volume	The volume of detention area	The volume of detention area
WALLMATERIAL	Wall Material	Wall Material	The material used to construct the manhole wall	The material used to construct the manhole wall
WARRANTYDATE	Warranty Date	Warranty Date	The date the warranty expires on the asset. If populated and asset is still under warranty, asset record will show up pink on the Cityworks work order.	The date the warranty expires on the asset. If populated and asset is still under warranty, asset record will show up pink on the Cityworks work order.
WATERELEV	Water Elevation	Water Elevation	The water elevation	The water elevation
WATERTYPE	Water Type	Water Type	Identifies the type of water in the pipe	Identifies the type of water in the pipe
WEIGHT	Weight	Weight	The weight of the pump in pounds	The weight of the pump in pounds
WEIRPRESENT	Weir Present?	Weir Present?	Identifies whether there is a weir present	Identifies whether there is a weir present
WEIRSHAPE	Shape	Shape	The shape of the weir	The shape of the weir
WEIRTYPE	Weir Type	Weir Type	The type of weir	The type of weir
WELLCHAMDIAM	Well Chamber Diameter	Well Chamber Diameter	The diameter of the well chamber	The diameter of the well chamber
WELLCHAMWIDTH	Well Chamber Width	Well Chamber Width	The width of the well chamber	The width of the well chamber
WIDTH	Width	Width	The width of the easement in feet as defined within the recorded easement document.	The width of the easement in feet as defined within the recorded easement document.
WINGWALL	Wing Walls?	Wing Walls?	Indicates whether the weir has wing walls	Indicates whether the weir has wing walls
WMATERIAL	Material	Material	The material used to construct the weir	The material used to construct the weir
WOASBUILTLOC	Work Order As-built City Work Order Number	Work Order As-built City Work Order Number	The URL or filepath to the electronic as-built document from a work order	The URL or filepath to the electronic as-built document from a work order
WORKORDERNUM	City Work Order Number	City Work Order Number	The work order number for performing work on the asset (Cityworks, Galert, etc)	The work order number for performing work on the asset (Cityworks, Galert, etc)
XCOORD	X Coordinate	X Coordinate	X-Coordinate of the asset (FL State Plane-East)	X-Coordinate of the asset (FL State Plane-East)
YCOORD	Y Coordinate	Y Coordinate	Y-Coordinate of the asset (FL State Plane-East)	Y-Coordinate of the asset (FL State Plane-East)
ZCOORD	Z Coordinate	Z Coordinate	Z-Coordinate of the asset	Z-Coordinate of the asset

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Domain Descriptions

Domain Name	Current Description	New Description
AssetManager	Indicates the manager of the asset	Indicates the manager of the asset
AssetOwner	Indicates the owner of the asset	Indicates the owner of the asset
BackflowDeviceType	Backflow Device Type	Backflow Device Type
BackflowInspectionStatus	BackflowInspectionStatus	BackflowInspectionStatus
BooleanDomain	A 0/1 boolean domain	A 0/1 boolean domain
BooleanSymbolValue	Valid values are Yes and No	Valid values are Yes and No
Datum	Vertical Datum for Elevation Data (COFL Domain)	Vertical Datum for Elevation Data (COFL Domain)
Direction	A general description of cardinal direction	A general description of cardinal direction
EasementStatus	Indicates if an easement is dedicated or vacated	Indicates if an easement is dedicated or vacated
EasementType	The type of easement recorded	The type of easement recorded
HorizontalAlignment	Valid horizontal symbol alignment values	Valid horizontal symbol alignment values
InventoryClass	Source of the location of the asset (COFL Domain)	Source of the location of the asset (COFL Domain)
LastEditor	Last Editor of the Feature Class	Last Editor of the Feature Class
piAccessDiameter	Valid range of infrastructure access diameters	Valid range of infrastructure access diameters
piAccessType	List of infrastructure access types	List of infrastructure access types
piActiveStatus	Identifies whether the asset is in use, not in use or removed from the ground	Identifies whether the asset is in use, not in use or removed from the ground
piConditionIIMM	International Infrastructure Management Manual (IIMM) Condition Grading	International Infrastructure Management Manual (IIMM) Condition Grading
piConditionPACP	NASSCO Pipeline Assessment Certification Program (PACP) condition rating	NASSCO Pipeline Assessment Certification Program (PACP) condition rating
piControlValveType	List of Infrastructure Control Valve Types	List of Infrastructure Control Valve Types
piDischargePointType	List of Infrastructure Discharge Point Types	List of Infrastructure Discharge Point Types
piFittingType	List of pipe fitting types	List of pipe fitting types
piInletTypes	List of inlet types	List of inlet types
piLiningMethod	The pipe lining method based on LACP and PACP standards	The pipe lining method based on LACP and PACP standards
piManholeCoverShape	List of Infrastructure Manhole Cover Types	List of Infrastructure Manhole Cover Types
piManholeCoverType	List of Infrastructure Manhole Cover Types	List of Infrastructure Manhole Cover Types
piManholeType	List of Infrastructure Manhole Types	List of Infrastructure Manhole Types
piPipeDiameter	A list of pipe diameters	A list of pipe diameters
piPipeMaterial	The list of pipe materials types based on the NASSCO standards	The list of pipe materials types based on the NASSCO standards
piPipeShape	Sanitary and stormwater pipe shapes	Sanitary and stormwater pipe shapes
piSystemValveType	List of system valve types	List of system valve types
piValveTurnDirection	Direction of turn for valves in a utility system	Direction of turn for valves in a utility system
piValveTurnDirection	Direction of turn for valves in a utility system	Direction of turn for valves in a utility system
piValveUse	Listing of different uses for valves in a utility system	Listing of different uses for valves in a utility system
ServiceProviderAgency	The names of agencies that provide services (COFL)	The names of agencies that provide services (COFL)
SeverityIndicator	Indicates the severity of blockage and/or structural collapse observed within the asset	Indicates the severity of blockage and/or structural collapse observed within the asset
swManufacturer	List of manufacturers of stormwater assets	List of manufacturers of stormwater assets
swNetworkStructureType	Stormwater network structure types	Stormwater network structure types
swOpenPosition	The opening position of a stormwater control baffle	The opening position of a stormwater control baffle
swOutfallLocation	Indicates the location of an outfall asset (COFL Domain)	Indicates the location of an outfall asset (COFL Domain)
swPipeType	Indicates the type of stormwater pipe (COFL Domain)	Indicates the type of stormwater pipe (COFL Domain)
swPollControlDeviceType	Lists the type of pollution control device	Lists the type of pollution control device
swPollControlStructureType	Lists the type of pollution control structure	Lists the type of pollution control structure
swPondType	Indicates the type of stormwater pond (COFL Domain)	Indicates the type of stormwater pond (COFL Domain)
swWeirShape	The shape of the stormwater weir	The shape of the stormwater weir
swWeirType	The type of weir	The type of weir
swWellAccessShape	The shape of a stormwater access point	The shape of a stormwater access point
swWellAccessShape	Indicates whether the main is on the same side of street of meter (short side), if not then it is on the long side	Indicates whether the main is on the same side of street of meter (short side), if not then it is on the long side
wLongShort		

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Domain Descriptions

Domain Name	Current Description	New Description
wManufacturer	List of manufacturers of water distribution system assets	List of manufacturers of water distribution system assets
wPumpType	The type of water pump in the water distribution system	The type of water pump in the water distribution system
wServicePointType	The types of service points in a water distribution system	The types of service points in a water distribution system
wStructureType	The type of structures associated with a water distribution system	The type of structures associated with a water distribution system
wWaterType	The type of water flowing through pipes in a water distribution system	The type of water flowing through pipes in a water distribution system
Yes/No	A yes/no indicator	A yes/no indicator

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Domains / Coded Values

Current Code	Current Name	New Code	New Name
0	Not Rated	0	Not Rated
0.75	3/4"	0.75	3/4"
1	1"	1	1"
-1	Other	-1	Other
1.25	1 1/4"	1.25	1 1/4"
1.5	1 1/2"	1.5	1 1/2"
10	10"	10	10"
102	102"	102	102"
11	11"	11	11"
12	12"	12	12"
13	13"	13	13"
14	14"	14	14"
15	15"	15	15"
16	16"	16	16"
18	18"	18	18"
19	19"	19	19"
2	2"	2	2"
2.5	2 1/2"	2.5	2 1/2"
20	20"	20	20"
21	21"	21	21"
22	22"	22	22"
23	23"	23	23"
24	24"	24	24"
27	27"	27	27"
27" Diameter	27" Diameter	27" Diameter	27" Diameter
29	NGVD 29	29	NGVD 29
3	3"	3	3"
30	30"	30	30"
33	33"	33	33"
36	36"	36	36"
4	4"	4	4"
40	40"	40	40"
41	41"	41	41"
42	42"	42	42"
42" Diameter	42" Diameter	42" Diameter	42" Diameter
45	45"	45	45"
48	48"	48	48"
5	Other	5	Other
52	52"	52	52"
54	54"	54	54"
6	6"	6	6"
60	60"	60	60"
66	66"	66	66"
72	72"	72	72"
75	75"	75	75"
8	8"	8	8"
84	84"	84	84"
88	NAVD 88	88	NAVD 88
-88	Not Applicable	-88	Not Applicable
96	96"	96	96"
-99	Unknown	-99	Unknown

Domains / Coded Values

Current Code	Current Name	New Code	New Name
A	Arched	A	Arched
Abandoned	Abandoned	Abandoned	Abandoned
Abandoned-Live	Abandoned-Live	Abandoned-Live	Abandoned-Live
ABS	ABS Plastic	ABS	ABS Plastic
ACCTCLOSED	NIA Account Closed	ACCTCLOSED	NIA Account Closed
ACP	Asbestos Cement	ACP	Asbestos Cement
Active	Active	Active	Active
ADA Compliant	ADA Compliant	ADA Compliant	ADA Compliant
Adjustable Weir	Adjustable Weir	Adjustable Weir	Adjustable Weir
Air Control	Air Control	Air Control	Air Control
Air Gap	Air Gap	Air Gap	Air Gap
AIR GAP*	AIR GAP*	AIR GAP*	AIR GAP*
Air Release	Air Release	Air Release	Air Release
Altitude	Altitude	Altitude	Altitude
ALU	Aluminum pipe	ALU	Aluminum pipe
Aluminum Baffle	Aluminum Baffle	Aluminum Baffle	Aluminum Baffle
American Darling	American Darling	American Darling	American Darling
American Flow	American Flow	American Flow	American Flow
ASP	Asphalt	ASP	Asphalt
Atmospheric Vacuum	Atmospheric Vacuum	Atmospheric Vacuum	Atmospheric Vacuum
AVB	AVB	AVB	AVB
Axial Flow	Axial Flow	Axial Flow	Axial Flow
Backflow Control	Backflow Control	Backflow Control	Backflow Control
Backflow Preventor	Backflow Preventor	Backflow Preventor	Backflow Preventor
Ball	Ball	Ball	Ball
Bend	Bend	Bend	Bend
Blowoff	Blowoff	Blowoff	Blowoff
BMP	Brick Masonry	BMP	Brick Masonry
Bottom of Headwall	Bottom of Headwall	Bottom of Headwall	Bottom of Headwall
Bottom Opening	Bottom Opening	Bottom Opening	Bottom Opening
Bottom Pipe	Bottom Pipe	Bottom Pipe	Bottom Pipe
Bottom Seawall	Bottom of Seawall	Bottom Seawall	Bottom of Seawall
BR	Brick	BR	Brick
Broad-Crested	Broad-Crested	Broad-Crested	Broad-Crested
Broward County	Broward County	Broward County	Broward County
Broward County GIS	Broward County GIS	Broward County GIS	Broward County GIS
Broward County Property Appraiser	Broward County Property Appraiser's Office	Broward County Property Appraiser	Broward County Property Appraiser's Office
Broward County Public Schools	Broward County Public Schools	Broward County Public Schools	Broward County Public Schools
Broward Sheriff's Office	Broward Sheriff's Office	Broward Sheriff's Office	Broward Sheriff's Office
Butterfly - Sidemount	Butterfly - Sidemount	Butterfly - Sidemount	Butterfly - Sidemount
Butterfly - Unknown Orientation	Butterfly - Unknown Orientation	Butterfly - Unknown Orientation	Butterfly - Unknown Orientation
Butterfly - Vertical	Butterfly - Vertical	Butterfly - Vertical	Butterfly - Vertical
Bypass	Bypass	Bypass	Bypass
C	Complete	C	Complete
CAL	Corrugated Aluminum	CAL	Corrugated Aluminum
Cap	Cap	Cap	Cap
Catchbasin	Catchbasin	Catchbasin	Catchbasin
CCPP	Centrifugally Cast Concrete Pipe Liner	CCPP	Centrifugally Cast Concrete Pipe Liner
Centrifugal Other	Centrifugal Other	Centrifugal Other	Centrifugal Other
Centrifugal Split Case	Centrifugal Split Case	Centrifugal Split Case	Centrifugal Split Case
Check	Check	Check	Check

City of Fort Lauderdale
Domains / Coded Values

Current Code	Current Name	New Code	New Name
CheckMate	CheckMate	CheckMate	CheckMate
CJP	Cured in Place	CJP	Cured in Place
CJPP	Cured in Place	CJPP	Cured in Place
Circle	Circle	Circle	Circle
Circular	Circular	Circular	Circular
City of Fort Lauderdale	City of Fort Lauderdale	City of Fort Lauderdale	City of Fort Lauderdale
City of Tamarac	City of Tamarac	City of Tamarac	City of Tamarac
CITY-HALLAshokV	CITY-HALLAshokV	CITY-HALLAshokV	CITY-HALLAshokV
CITY-HALLDavidRu	CITY-HALLDavidRu	CITY-HALLDavidRu	CITY-HALLDavidRu
CITY-HALLHalingH	CITY-HALLHalingH	CITY-HALLHalingH	CITY-HALLHalingH
CITY-HALLIanW	CITY-HALLIanW	CITY-HALLIanW	CITY-HALLIanW
CITY-HALLKearyC	CITY-HALLKearyC	CITY-HALLKearyC	CITY-HALLKearyC
CITY-HALLLuciah	CITY-HALLLuciah	CITY-HALLLuciah	CITY-HALLLuciah
CITY-HALLRollinM	CITY-HALLRollinM	CITY-HALLRollinM	CITY-HALLRollinM
CLA	CLA	CLA	CLA
Clockwise	Clockwise	Clockwise	Clockwise
Closed Lid Manhole	Closed Lid Manhole	Closed Lid Manhole	Closed Lid Manhole
Clow	Clow	Clow	Clow
CMP	Corrugated Metal	CMP	Corrugated Metal
Combination	Combination	Combination	Combination
Commercial	Commercial	Commercial	Commercial
CompleteCR	Complete Customer Reported	CompleteCR	Complete Customer Reported
CompleteFV	Complete Field Verified	CompleteFV	Complete Field Verified
Compound	Compound	Compound	Compound
CON	Conflict	CON	Conflict
CONC	Concrete (Non-Reinforced)	CONC	Concrete (Non-Reinforced)
Cone	Cone	Cone	Cone
Counter-Clockwise	Counter-Clockwise	Counter-Clockwise	Counter-Clockwise
Coupling	Coupling	Coupling	Coupling
Cover	Cover	Cover	Cover
CPEL	Corrugated Polyethylene	CPEL	Corrugated Polyethylene
Cross	Cross	Cross	Cross
CSB	Concrete Segments (Bolted)	CSB	Concrete Segments (Bolted)
CSTL	Corrugated Steel	CSTL	Corrugated Steel
CSU	Concrete Segments (Unbolted)	CSU	Concrete Segments (Unbolted)
CT	Clay Tile	CT	Clay Tile
CUP	Copper	CUP	Copper
Curb	Curb	Curb	Curb
Curb Cover	Curb Cover	Curb Cover	Curb Cover
DC	DC	DC	DC
DCDA	DCDA	DCDA	DCDA
Dedicated	Dedicated	Dedicated	Dedicated
Detention	Detention	Detention	Detention
DGPS	DGPS (1-meter)	DGPS	DGPS (1-meter)
DIP	Ductile Iron	DIP	Ductile Iron
Discharge Structure	Discharge Structure	Discharge Structure	Discharge Structure
DIV	DIV	DIV	DIV
Diversion Chamber	Diversion Chamber	Diversion Chamber	Diversion Chamber
Diversion Point	Diversion Point	Diversion Point	Diversion Point
Domestic	Domestic	Domestic	Domestic
Door	Door	Door	Door

EXHIBIT B
Exhibit 2

Domains / Coded Values

Current Code	Current Name	New Code	New Name
Double Check	Double Check	Double Check	Double Check
Drainage	Drainage Easement	Drainage	Drainage Easement
DRP	Drop	DRP	Drop
DryWell	DryWell	DryWell	DryWell
E	Egg-Shaped	E	Egg-Shaped
EAR	Earthen	EAR	Earthen
EARGEO	Earth & Geotextile	EARGEO	Earth & Geotextile
East	East	East	East
East/West	East/West	East/West	East/West
Enclosed Storage Facility	Enclosed Storage Facility	Enclosed Storage Facility	Enclosed Storage Facility
Endpoint	Pipe End	Endpoint	Pipe End
Expansion Joint	Expansion Joint	Expansion Joint	Expansion Joint
FF	Fold and Form or Deform/Reform	FF	Fold and Form or Deform/Reform
Fiber Glass Shout	Fiber Glass Shout	Fiber Glass Shout	Fiber Glass Shout
Fire	Fire	Fire	Fire
Fort Lauderdale GIS/Automated Process	Fort Lauderdale GIS/Automated Process	Fort Lauderdale GIS/Automated Process	Fort Lauderdale GIS/Automated Process
Fort Lauderdale/Engineering Bureau	Fort Lauderdale/Engineering Bureau	Fort Lauderdale/Engineering Bureau	Fort Lauderdale/Engineering Bureau
Fort Lauderdale/Police	Fort Lauderdale/Police	Fort Lauderdale/Police	Fort Lauderdale/Police
FRP	Fiberglass Reinforced	FRP	Fiberglass Reinforced
Gate - Sidemount	Gate - Sidemount	Gate - Sidemount	Gate - Sidemount
Gate - Unknown Orientation	Gate - Unknown Orientation	Gate - Unknown Orientation	Gate - Unknown Orientation
Gate - Vertical	Gate - Vertical	Gate - Vertical	Gate - Vertical
GEO	Geotextile	GEO	Geotextile
GIP	Galvanized Pipe	GIP	Galvanized Pipe
GIS	GIS Entry	GIS	GIS Entry
GPS	GPS (< 1-foot)	GPS	GPS (< 1-foot)
GPS-Converted	GPS Asbuilt Converted (< 1-foot)	GPS-Converted	GPS Asbuilt Converted (< 1-foot)
Grate	Grate	Grate	Grate
Grated-City	Grated-City	Grated-City	Grated-City
Grated-FDOT	Grated-FDOT	Grated-FDOT	Grated-FDOT
GRC	Glass Reinforced Cement	GRC	Glass Reinforced Cement
H	Horseshoe	H	Horseshoe
Hand	Hand	Hand	Hand
HDPE	High Density Polyethylene	HDPE	High Density Polyethylene
Horizontal	Horizontal	Horizontal	Horizontal
Hydrant	Hydrant	Hydrant	Hydrant
Inactive	Inactive	Inactive	Inactive
Inactive-Plugged	Inactive-Plugged	Inactive-Plugged	Inactive-Plugged
Industrial	Industrial	Industrial	Industrial
Injection Well	Injection Well	Injection Well	Injection Well
Intake	Intake	Intake	Intake
Invert	Invert	Invert	Invert
Iowa	Iowa	Iowa	Iowa
Irregular	Irregular	Irregular	Irregular
Irrigation	Irrigation	Irrigation	Irrigation
Jet	Jet	Jet	Jet
Junction Chamber	Junction Chamber	Junction Chamber	Junction Chamber
Kennedy	Kennedy	Kennedy	Kennedy
Labyrinth	Labyrinth	Labyrinth	Labyrinth
Large - Water Tight	Large - Water Tight	Large - Water Tight	Large - Water Tight
LayFlat	LayFlat	LayFlat	LayFlat

Domains / Coded Values

Current Code	Current Name	New Code	New Name
LEAD	Lead	LEAD	Lead
Lid	Lid	Lid	Lid
Lift Station	Lift Station	Lift Station	Lift Station
Long	Long	Long	Long
M and H	M and H	M and H	M and H
Meter Station	Meter Station	Meter Station	Meter Station
Middle of Headwall	Middle of Headwall	Middle of Headwall	Middle of Headwall
Middle of Seawall	Middle of Seawall	Middle of Seawall	Middle of Seawall
Minimum Energy Loss	Minimum Energy Loss	Minimum Energy Loss	Minimum Energy Loss
Monitoring Well	Monitoring Well	Monitoring Well	Monitoring Well
Mueller	Mueller	Mueller	Mueller
N	N	N	N
Natural Bank	Natural Bank	Natural Bank	Natural Bank
No Service	No Service	No Service	No Service
Non-District	Non-District	Non-District	Non-District
NONE	NONE	NONE	NONE
Non-Utility	Non-Utility Easement	Non-Utility	Non-Utility Easement
North	North	North	North
North/South	North/South	North	North/South
Northeast	Northeast	Northeast	Northeast
Northeast/Northwest	Northeast/Northwest	Northeast/Northwest	Northeast/Northwest
Northeast/Southwest	Northeast/Southwest	Northeast/Southwest	Northeast/Southwest
Northwest	Northwest	Northwest	Northwest
Northwest/Southeast	Northwest/Southeast	Northwest/Southeast	Northwest/Southeast
Not Found	Not Found	Not Found	Not Found
Nutrient Separating Baffle Box	Nutrient Separating Baffle Box	Nutrient Separating Baffle Box	Nutrient Separating Baffle Box
O	Oval (Elliptical)	O	Oval (Elliptical)
OB	Oblong	OB	Oblong
Offset	Offset	Offset	Offset
Open	Open	Open	Open
Open Lid Manhole	Open Lid Manhole	Open Lid Manhole	Open Lid Manhole
OTH	OTH	OTH	OTH
Other	Other	Other	Other
Outfall	Outfall	Outfall	Outfall
Over Under	Over Under	Over Under	Over Under
Overflow	Overflow	Overflow	Overflow
P	Partial	P	Partial
PBL	Polybutylene	PBL	Polybutylene
PCCP	Pre-Stressed Concrete Cylinder	PCCP	Pre-Stressed Concrete Cylinder
PE	Polyethylene	PE	Polyethylene
PERF	Perforated	PERF	Perforated
Plug	Plug	Plug	Plug
Potable Water	Potable Water	Potable Water	Potable Water
PP	Polypropylene	PP	Polypropylene
Pressure Reducer	Pressure Reducer	Pressure Reducer	Pressure Reducer
Pressure Vacuum	Pressure Vacuum	Pressure Vacuum	Pressure Vacuum
Process Water	Process Water	Process Water	Process Water
Production Well	Production Well	Production Well	Production Well
PSC	Plastic/Steel Composite	PSC	Plastic/Steel Composite
PUBLIC SERVJonSt	PUBLIC SERVJonSt	PUBLIC SERVJonSt	PUBLIC SERVJonSt
Pump Station	Pump Station	Pump Station	Pump Station

Domains / Coded Values

Current Code	Current Name	New Code	New Name
PVB	PVB	PVB	PVB
PVC	Polyvinyl Chloride	PVC	Polyvinyl Chloride
R	Rectangular	R	Rectangular
Raw Water	Raw Water	Raw Water	Raw Water
RCP	Reinforced Concrete	RCP	Reinforced Concrete
RCPC	Reinforced concrete pipe w/ cylinder	RCPC	Reinforced concrete pipe w/ cylinder
Rear Yard	Rear Yard	Rear Yard	Rear Yard
Reciprocating	Reciprocating	Reciprocating	Reciprocating
Reclaimed Water	Reclaimed Water	Reclaimed Water	Reclaimed Water
Rectangular	Rectangular	Rectangular	Rectangular
Rectangle	Rectangle	Rectangle	Rectangle
Reducer	Reducer	Reducer	Reducer
Reducing Cross	Reducing Cross	Reducing Cross	Reducing Cross
Reducing Tee	Reducing Tee	Reducing Tee	Reducing Tee
RedValve	RedValve	RedValve	RedValve
Removed	Removed	Removed	Removed
Retention	Retention	Retention	Retention
Roof	Roof	Roof	Roof
Rotary	Rotary	Rotary	Rotary
Round	Round	Round	Round
Roundway	Roundway	Roundway	Roundway
RPDA	RPDA	RPDA	RPDA
RPM	Reinforced Plastic (Truss)	RPM	Reinforced Plastic (Truss)
RPZ	Reduced Pressure Zone	RPZ	Reduced Pressure Zone
S	Square	S	Square
Salt Water	Salt Water	Salt Water	Salt Water
SB	Segmented Block	SB	Segmented Block
SED	Sedimentation	SED	Sedimentation
Sewer	Sewer Easement	Sewer	Sewer Easement
Sharp-Crested	Sharp-Crested	Sharp-Crested	Sharp-Crested
Short	Short	Short	Short
Shutoff/Isolation	Shutoff/Isolation	Shutoff/Isolation	Shutoff/Isolation
Simple Check	Simple Check	Simple Check	Simple Check
Sleeve	Sleeve	Sleeve	Sleeve
SN	Segmented Panel	SN	Segmented Panel
Snubber	Snubber	Snubber	Snubber
SOLID	Solid	SOLID	Solid
Solid-City	Solid-City	Solid-City	Solid-City
Solid-FDOT	Solid-FDOT	Solid-FDOT	Solid-FDOT
South	South	South	South
Southeast	Southeast	Southeast	Southeast
Southeast/Southwest	Southeast/Southwest	Southeast/Southwest	Southeast/Southwest
Southwest	Southwest	Southwest	Southwest
SP	Segmented Pipe	SP	Segmented Pipe
SPL	Split	SPL	Split
Split Manhole	Split Manhole	Split Manhole	Split Manhole
Square	Square	Square	Square
Standard	Standard	Standard	Standard
Standard Outlet	Standard Outlet	Standard Outlet	Standard Outlet
Standard W/ Ears	Standard W/ Ears	Standard W/ Ears	Standard W/ Ears

EXHIBIT B
Exhibit 2

Domains / Coded Values

Current Code	Current Name	New Code	New Name
Standard W/ Lock	Standard W/ Lock	Standard W/ Lock	Standard W/ Lock
STD	Standard	STD	Standard
STL	Stainless Steel	STL	Stainless Steel
Storage Basin	Storage Basin	Storage Basin	Storage Basin
Storage Tank	Storage Tank	Storage Tank	Storage Tank
Suntree	Suntree	Suntree	Suntree
Surge Relief	Surge Relief	Surge Relief	Surge Relief
SW	Spiral Wound	SW	Spiral Wound
T	Trapezoidal	T	Trapezoidal
Tap	Tap	Tap	Tap
Tapping	Tapping	Tapping	Tapping
Tapping Tee	Tapping Tee	Tapping Tee	Tapping Tee
Tee	Tee	Tee	Tee
Tidal	Tidal	Tidal	Tidal
Tide Chamber	Tide Chamber	Tide Chamber	Tide Chamber
TideFlex	TideFlex	TideFlex	TideFlex
Top of Headwall	Top of Headwall	Top of Headwall	Top of Headwall
Top of Pipe	Top of Pipe	Top of Pipe	Top of Pipe
Top of Seawall	Top of Seawall	Top of Seawall	Top of Seawall
Top Opening	Top Opening	Top Opening	Top Opening
Transition	Transition	Transition	Transition
Trapezoid	Trapezoid	Trapezoid	Trapezoid
Treated Water	Treated Water	Treated Water	Treated Water
Treatment Plant	Treatment Plant	Treatment Plant	Treatment Plant
TRI	Triangular	TRI	Triangular
TRM	Terminal	TRM	Terminal
TTE	Transite	TTE	Transite
Turbine	Turbine	Turbine	Turbine
U	Unknown/Inaccessible	U	Unknown/Inaccessible
UN	Unknown	UN	Unknown
UNK	Unknown	UNK	Unknown
Unknown	Unknown	Unknown	Unknown
Upflow Filtration System	Upflow Filtration System	Upflow Filtration System	Upflow Filtration System
US Pipe	US Pipe	US Pipe	US Pipe
Utility	Utility Easement	Utility	Utility Easement
Vacated	Vacated	Vacated	Vacated
Vacuum	Vacuum	Vacuum	Vacuum
Vacuum Breaker	Vacuum Breaker	Vacuum Breaker	Vacuum Breaker
Vacuum Release	Vacuum Release	Vacuum Release	Vacuum Release
Valley	Valley	Valley	Valley
Valley Cover	Valley Cover	Valley Cover	Valley Cover
Vault	Vault	Vault	Vault
VCP	Vitrified Clay	VCP	Vitrified Clay
Vertical	Vertical	Vertical	Vertical
Virtual Junction	Virtual Junction	Virtual Junction	Virtual Junction
V-Notch	V-Notch	V-Notch	V-Notch
V-Notched	V-Notched	V-Notched	V-Notched
WaStop	WaStop	WaStop	WaStop
Water	Water Easement	Water	Water Easement
Water Tight	Water Tight	Water Tight	Water Tight
WD	Wood	WD	Wood

EXHIBIT B
Exhibit 2

Domains / Coded Values

Current Code	Current Name	New Code	New Name
WEI	Weir	WEI	Weir
Well - Pressurized	Well - Pressurized	Well - Pressurized	Well - Pressurized
Well - Unpressurized	Well - Unpressurized	Well - Unpressurized	Well - Unpressurized
West	West	West	West
Wetlands Biofilter	Wetlands Biofilter	Wetlands Biofilter	Wetlands Biofilter
Wye	Wye	Wye	Wye
XX	Not Known	XX	Not Known
XXX	Unknown	XXX	Unknown
Y	Yes	Y	Yes
Z	Other	Z	Other
ZZ	Other	ZZ	Other
ZZZ	Other	ZZZ	Other



EXHIBIT B
Exhibit 2



FLORIDA DEPARTMENT OF Environmental Protection

Southeast District Office
3301 Gun Club Road, MSC 7210-1
West Palm Beach, FL 33406
561-681-6600

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

July 24, 2020

Chris Lagerbloom, City Manager
City of Fort Lauderdale
100 N. Andrews Ave.
Fort Lauderdale, FL 33301
clagerbloom@fortlauderdale.gov

Re: City of Fort Lauderdale Public Water System
PW Facility ID #4060486
OGC Case #19-1637

Dear Mr. Lagerbloom:

Enclosed is the executed Consent Order to resolve the above referenced case. This copy is for your records. Please be mindful of all required deadlines within the Order to ensure compliance.

Should you have any questions or comments, please contact Zach Shulman at 561-681-6623 or via e-mail at Zachary.Shulman@floridadep.gov.

Your cooperation in this matter will be appreciated.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jason Andreotta".

Jason Andreotta
Director, Southeast District
Florida Department of Environmental Protection

Enclosure

cc: Lea Crandall, OGC
Raj Verma, Public Works Director
Alain Boileau, City Attorney
Rick Johnson, Utilities Manager
Fred Aschauer, Attorney

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faschauer@llw-law.com

www.FloridaDEP.gov

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OF FLORIDA DEPARTMENT)	IN THE OFFICE OF THE
OF ENVIRONMENTAL PROTECTION)	SOUTHEAST DISTRICT
)	
v.)	OGC FILE NO. 19-1637
)	
CITY OF FORT LAUDERDALE)	
)	
_____)	

CONSENT ORDER

This Consent Order ("Order") is entered into between the State of Florida Department of Environmental Protection ("Department") and the City of Fort Lauderdale ("Respondent") to reach settlement of certain matters at issue between the Department and Respondent.

The Department finds and Respondent neither admits nor denies the following:

1. The Department is the administrative agency of the State of Florida having the power and duty to protect Florida's water resources and to administer and enforce the provisions of the Florida Safe Drinking Water Act, Sections 403.850, et seq., Florida Statutes ("F.S."), and the rules promulgated and authorized in Title 62, Florida Administrative Code ("F.A.C."). The Department has jurisdiction over the matters addressed in this Order.
2. Respondent is a municipal corporation in the State of Florida and a person within the meaning of Section 403.031(5), F.S.
3. Respondent is the owner and is responsible for the operation of the City of Fort Lauderdale's Community Water System, PWS No. 4060486, located at 4321 NW 9th Avenue, in Broward County, Florida ("System").
4. The Department finds that the following violations occurred:
 - a) Respondent failed to properly exercise/maintain isolation valves in accordance with equipment's manufacturing guideline or the System's preventative maintenance program, in violation of sub-section 62-555.350(2), F.A.C. Specifically, on July 17th, 2019, a source water main break of the public water system occurred that led to the issuance of a city-wide boil water notice. Review of the incident report concluded that Respondent was unable to quickly isolate

DEP vs. City of Fort Lauderdale
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the damage and redirect flow. Inaccurate maps of valve locations contributed to the extended time it took to correct in addition to isolation valves not being properly exercised/maintained.

b) Respondent failed to submit notifications to the Department following events that required the issuance of a boil water notice, in violation of subsection 62- 555.350(10), F.A.C. Specifically, an office file review of other abnormal events concluded that from the time that the Department acquired regulatory jurisdiction of Broward County public water systems in 2018; there were a total of 3 events that required the issuance of a boil water notice where the Department received no notification. The events are as follows:

Date of Event	Location of Event	Population Impacted
February 13, 2019	NW 7 th Ave & NW 14 th Way	343 Service Connections
April 23, 2019	NE 6 th Ct (1942 NE 6 th Ct)	Greater than 200 Service Connections
December 27, 2019	Isle of Venice	Population Greater than 350

Having reached a resolution of the matter Respondent and the Department mutually agree and it is

ORDERED:

5. Respondent shall comply with the following corrective actions within the stated time periods:

a) Within 60 days of the effective date of this Order, the Respondent shall submit a preventative maintenance plan to the Department for review that, at a minimum, exercises 100% of the source water line valves within the first year and 20% of the source water line valves annually thereafter, with the purpose of exercising all such source water line valves in a 5-year period. If the Department has any comments on the proposed plan, it will provide such comments within 15 days of receipt.

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OGC No. 19-1637

b) Beginning no later than January 1, 2021, Respondent shall implement the preventative maintenance plan referenced in sub-paragraph 5(a) above.

c) Upon implementation of the preventative maintenance plan referenced in sub-paragraph 5(a) above, Respondent shall submit annual reports for 2 years to the Department showing the number of source water line valves exercised. Upon implementation of the maintenance plan, reports shall be submitted to the Department no later than 13 months for the first year, and no later than 25 months for the second year. The reports shall demonstrate that 100% of source water line valves were exercised within the first year of the preventative maintenance plan and at least 20% of source water line valves were exercised in the second year of the preventative maintenance plan. Consistent with its permit for the System, Respondent shall also maintain annual records on the number of exercised valves and have such records available for Department review upon request.

d) Within 60 days of the effective date of this Order, Respondent shall submit a plan for developing a complete map of the existing water supply network within the city's geographic boundaries, including all existing source and distribution mains, control valves, and directional flow routes, to the Department for review and comment. Mapping of the services lines may be accomplished through mapping of the meters/meter boxes. If the Department has any comments on the proposed plan, it will provide such comments within 30 days of receipt. Directional flows, including flows to any facility not belonging to the Respondent, will be shown on the maps. Inactive mains and related appurtenances with shut-off valves should be illustrated and highlighted to define their unique operational status. Maps will be maintained in such a manner that they can be accessed quickly and easily by maintenance and repair crews at all times and from multiple locations, to facilitate a prompt and efficient response to emergencies. As new construction is completed, the Respondent will incorporate as-built drawings of the new components into the maps.

e) Within 36 months of the effective date of this Order, the Respondent shall complete all mapping and certify to the Department in writing that mapping is complete in accordance with the terms of sub-paragraph 5(d) above.

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OGC No. 19-1637

6. Notwithstanding any other time periods described above, Respondent shall complete all corrective actions required by paragraph 5 on or before August 1, 2023 and be in full compliance with chapter 62-555, F.A.C., other than those excused delays agreed to by Parties, as described in Paragraph 12.

7. Within 30 days of the effective date of this Order, Respondent shall pay the Department \$ 19,099.65 in settlement of the regulatory matters addressed in this Order. This amount includes \$ 5,000.00 for civil penalties, \$ 13,599.65 for a delayed economic benefit and \$ 500.00 for costs and expenses incurred by the Department during the investigation of this matter and the preparation and tracking of this Order. The civil penalties are apportioned as follows: \$ 1,000.00 for each of the three water main breaks that were not reported to the Department, \$ 1,000.00 for a failure to maintain or update system maps and the preventative maintenance program; and \$ 1,000.00 for failure to adequately respond to an emergency.

8. Respondent shall make all payments required by this Order by cashier's check, money order or on-line payment. Cashier's check or money order shall be made payable to the "Department of Environmental Protection" and shall include both the OGC number assigned to this Order and the notation "Water Quality Assurance Trust Fund." Online payments by e-check can be made by going to the DEP Business Portal at: <http://www.fldepportal.com/go/pay/>. It will take a number of days after this order becomes final, effective and filed with the Clerk of the Department before ability to make online payment is available.

9. In lieu of making the cash payment of \$ 19,099.65 in civil penalties as set forth in paragraph 7 above, Respondent has elected to off-set this amount by implementing an in-kind penalty project, which has been approved by the Department. The proposed in-kind project attached hereto and incorporated herein as "Exhibit B" has been approved by the Department and involves the construction of 1,100 feet of exfiltration trench for flood mitigation within Hector Park at an estimated cost of \$ 600,000.00, which is at least one and a half times the civil penalty established in paragraph 7 of this Order. Notwithstanding the election to implement an in-kind project, payment of the remaining \$500.00 in costs must be paid within 30 days of

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the effective date of the Consent Order. Respondent shall comply with all the requirements and time frames in Exhibit A entitled In-Kind Projects.

10. Except as otherwise provided, all submittals and payments required by this Order shall be sent to the Department of Environmental Protection, Southeast District, 3301 Gun Club Road, MSC 7210-1, West Palm Beach, FL 33406 or via e-mail at SED.Drinkingwater@FloridaDEP.gov, attention Zach Shulman.

11. Respondent shall allow all authorized representatives of the Department access to the System at reasonable times for the purpose of determining compliance with the terms of this Order and the rules and statutes administered by the Department.

12. If any event, including administrative or judicial challenges by third parties unrelated to Respondent, occurs which causes delay or the reasonable likelihood of delay in complying with the requirements of this Order, Respondent shall have the burden of proving the delay was or will be caused by circumstances beyond the reasonable control of Respondent and could not have been or cannot be overcome by Respondent's due diligence. Neither economic circumstances nor the failure of a contractor, subcontractor, materialman, or other agent (collectively referred to as "contractor") to whom responsibility for performance is delegated to meet contractually imposed deadlines shall be considered circumstances beyond the control of Respondent (unless the cause of the contractor's late performance was also beyond the contractor's control). Upon occurrence of an event causing delay, or upon becoming aware of a potential for delay, Respondent shall notify the Department by the next working day and shall, within seven calendar days notify the Department in writing of (a) the anticipated length and cause of the delay, (b) the measures taken or to be taken to prevent or minimize the delay, and (c) the timetable by which Respondent intends to implement these measures. If the parties can agree that the delay or anticipated delay has been or will be caused by circumstances beyond the reasonable control of Respondent, the time for performance hereunder shall be extended. The agreement to extend compliance must identify the provision or provisions extended, the new compliance date or dates, and the additional measures Respondent must take to avoid or minimize the delay, if any. Failure of Respondent to comply with the notice requirements of this paragraph

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in a timely manner constitutes a waiver of Respondent's right to request an extension of time for compliance for those circumstances.

13. The Department, for and in consideration of the complete and timely performance by Respondent of all the obligations agreed to in this Order, hereby conditionally waives its right to seek judicial imposition of damages or civil penalties for the violations described above up to the date of the filing of this Order. This waiver is conditioned upon Respondent's complete compliance with all of the terms of this Order.

14. This Order is a settlement of the Department's civil and administrative authority arising under Florida law to resolve the matters addressed herein. This Order is not a settlement of any criminal liabilities which may arise under Florida law, nor is it a settlement of any violation which may be prosecuted criminally or civilly under federal law. Entry of this Order does not relieve Respondent of the need to comply with applicable federal, state, or local laws, rules, or ordinances.

15. The Department hereby expressly reserves the right to initiate appropriate legal action to address any violations of statutes or rules administered by the Department that are not specifically resolved by this Order.

16. Respondent is fully aware that a violation of the terms of this Order may subject Respondent to judicial imposition of damages, civil penalties up to \$10,000.00 per day per violation, and criminal penalties.

17. Respondent acknowledges and waives its right to an administrative hearing pursuant to sections 120.569 and 120.57, F.S., on the terms of this Order. Respondent also acknowledges and waives its right to appeal the terms of this Order pursuant to section 120.68, F.S.

18. Electronic signatures or other versions of the parties' signatures, such as .pdf or facsimile, shall be valid and have the same force and effect as originals. No modifications of the terms of this Order will be effective until reduced to writing, executed by both Respondent and the Department, and filed with the clerk of the Department.

19. The terms and conditions set forth in this Order may be enforced in a court of competent jurisdiction pursuant to sections 120.69 and 403.121, F.S. Failure to comply with the

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terms of this Order constitutes a violation of section 403.161(1)(b), F.S.

20. This Consent Order is a final order of the Department pursuant to section 120.52(7), F.S., and it is final and effective on the date filed with the Clerk of the Department unless a Petition for Administrative Hearing is filed in accordance with Chapter 120, F.S. Upon the timely filing of a petition, this Consent Order will not be effective until further order of the Department.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF CONSENT ORDER

Persons who are not parties to this Consent Order, but whose substantial interests are affected by it, have a right to petition for an administrative hearing under sections 120.569 and 120.57, Florida Statutes. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition concerning this Consent Order means that the Department's final action may be different from the position it has taken in the Consent Order.

The petition for administrative hearing must contain all of the following information:

- a) The OGC Number assigned to this Consent Order;
- b) The name, address, and telephone number of each petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding;
- c) An explanation of how the petitioner's substantial interests will be affected by the Consent Order;
- d) A statement of when and how the petitioner received notice of the Consent Order;
- e) Either a statement of all material facts disputed by the petitioner or a statement that the petitioner does not dispute any material facts;
- f) A statement of the specific facts the petitioner contends warrant reversal or modification of the Consent Order;
- g) A statement of the rules or statutes the petitioner contends require reversal or modification of the Consent Order; and
- h) A statement of the relief sought by the petitioner, stating precisely the action

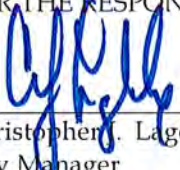
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petitioner wishes the Department to take with respect to the Consent Order.

The petition must be filed (received) at the Department's Office of General Counsel, 3900 Commonwealth Boulevard, MS# 35, Tallahassee, Florida 32399-3000 or received via electronic correspondence at Agency_Clerk@floridadep.gov, within 21 days of receipt of this notice. A copy of the petition must also be mailed at the time of filing to the District Office at 3301 Gun Club Road, MSC 7210-1, West Palm Beach, FL 33406. Failure to file a petition within the 21-day period constitutes a person's waiver of the right to request an administrative hearing and to participate as a party to this proceeding under sections 120.569 and 120.57, Florida Statutes. Before the deadline for filing a petition, a person whose substantial interests are affected by this Consent Order may choose to pursue mediation as an alternative remedy under section 120.573, Florida Statutes. Choosing mediation will not adversely affect such person's right to request an administrative hearing if mediation does not result in a settlement. Additional information about mediation is provided in section 120.573, Florida Statutes and Rule 62-110.106(12), Florida Administrative Code.

21. Rules referenced in this Order are available at
<http://www.dep.state.fl.us/legal/Rules/rulelist.htm>

FOR THE RESPONDENT:



Christopher J. Lagerbloom
City Manager

0721 2020
Date

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DONE AND ORDERED this 24th day of July, 2020, in Orange County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Jason Andreotta
Director
Southeast District

Filed, on this date, pursuant to section 120.52, F.S., with the designated Department Clerk,
receipt of which is hereby acknowledged.



Clerk

July 24, 2020

Date

Copies furnished to:

Lea Crandall, Agency Clerk
Mail Station 35

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Exhibit A

In-Kind Projects

I. Proposal

- a. Within 180 days of the effective day of this Order or in accordance with the approved schedule submitted, Respondent shall complete the entire in-kind project.
- b. During the implementation of the in-kind project, Respondent shall place appropriate sign(s) at the project site indicating that Respondent's involvement with the project is the result of a Department enforcement action. Respondent may remove the sign(s) after the project has been completed. However, after the project has been completed Respondent shall not post any sign(s) at the site indicating that the reason for the project was anything other than a Department enforcement action.
- c. In the event Respondent fails to timely submit any requested information to the Department, fails to complete implementation of the in-kind project or otherwise fails to comply with any provision of this paragraph, the in-kind penalty project option shall be forfeited, and the entire amount of civil penalties shall be due from the Respondent to the Department within 30 days of Department notice. If the in-kind penalty project is terminated and Respondent timely remits the \$19,099.65 penalty, no additional penalties shall be assessed under paragraph 9 for failure to complete the requirement of this paragraph.
- d. Within 15 days of completing the in-kind project, Respondent shall notify the Department, by electronic mail, of the project completion and request a verification letter from the Department. Respondent shall submit supporting information verifying that the project was completed in accordance with the approved proposal and documentation showing the actual costs incurred to complete the project. These costs shall not include those incurred in developing the proposal or obtaining approval from the Department for the project.
- e. If upon review of the notification of completion, the Department determines that the project cannot be accepted due to a substantially incomplete notification of completion or due to substantial deviations from the approved in-kind project; Respondent shall be notified,

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in writing, of the reason(s) which prevent the acceptance of the project. Respondent shall correct and redress all the matters at issue and submit, by certified mail, a new notification of completion within 15 days of receipt of the Department's notice. If upon review of the new submittal, the Department determines that the in-kind project is still incomplete or not in accordance with the approved proposal, the in-kind penalty project option shall be forfeited, and the entire amount of civil penalty shall be due from the Respondent to the Department within 30 days of Department notice. If the in-kind penalty project is terminated and Respondent timely remits the \$19,099.65, no additional penalties shall be assessed under paragraph 9 for failure to complete the requirements of this paragraph.

Exhibit B

In-kind Project, Proposed Consent Order, OGC Case # 19-1637

City of Fort Lauderdale

The City is proposing the following stormwater water quality improvements as an in-kind project required in the proposed consent order, OGC Case #19-1637.

The prospective project lies in the area bounded by Ponce de Leon Drive on the north, SE 11th Street on the south and east and SE 9th Avenue on the west. Within this area lies a small neighborhood park, called Hector Park. The topography of this area is like a bowl with high water table conditions. The neighborhood is old and is built upon predominantly fine sandy soils. With very little green area for retention, pollutants resulting from storm events are discharged directly into the Tarpon River. In December 2019, the City had two sewer force main breaks in the Rio-Vista neighborhood (in the vicinity of Hector Park) which spewed several million gallons of raw sewage into the Tarpon River.

Over the next six months, the City will complete installation of new wastewater pipes. Initially, it intended to restore the Hector Park to its original condition, clean the catchbasins and repave the streets. However, the City would be willing to include flood mitigation by creating approximately 1,100 feet of exfiltration trench at an estimated cost of \$600,000. This will not only minimize water logging in this low-lying area, it would also improve the water quality by trapping pollutants and sediments in the exfiltration system first before discharging into the Tarpon River. Additionally, this will improve our compliance with the NPDES permit.

If approved, staff will begin finalizing the construction plans and complete this work within 12 months of the project approval.

May 27, 2020
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EXHIBIT B
Exhibit 2

CAM #22-1089
Exhibit 5B
Page 48 of 100



Map Created by: September 11, 2019

**CITY OF FORT LAUDERDALE
GENERAL CONDITIONS**

These instructions and conditions are standard for all contracts for commodities or services issued through the City of Fort Lauderdale Procurement Services Division. The City may delete, supersede, or modify any of these standard instructions for a particular contract by indicating such change in the Invitation to Bid (ITB) Special Conditions, Technical Specifications, Instructions, Proposal Pages, Addenda, and Legal Advertisement. In this general conditions document, Invitation to Bid (ITB), Request for Qualifications (RFQ), and Request for Proposal (RFP) are interchangeable.

PART I BIDDER PROPOSAL PAGE(S) CONDITIONS:

- 1.01 BIDDER ADDRESS:** The City maintains automated vendor address lists that have been generated for each specific Commodity Class item through our bid issuing service, BidSync. Notices of Invitations to Bid (ITB'S) are sent by e-mail to the selection of bidders who have fully registered with BidSync or faxed (if applicable) to every vendor on those lists, who may then view the bid documents online. Bidders who have been informed of a bid's availability in any other manner are responsible for registering with BidSync in order to view the bid documents. There is no fee for doing so. If you wish bid notifications be provided to another e-mail address or fax, please contact BidSync. If you wish purchase orders sent to a different address, please so indicate in your bid response. If you wish payments sent to a different address, please so indicate on your invoice.
- 1.02 DELIVERY:** Time will be of the essence for any orders placed as a result of this ITB. The City reserves the right to cancel any orders, or part thereof, without obligation if delivery is not made in accordance with the schedule specified by the Bidder and accepted by the City.
- 1.03 PACKING SLIPS:** It will be the responsibility of the awarded Contractor, to attach all packing slips to the OUTSIDE of each shipment. Packing slips must provide a detailed description of what is to be received and reference the City of Fort Lauderdale purchase order number that is associated with the shipment. Failure to provide a detailed packing slip attached to the outside of shipment may result in refusal of shipment at Contractor's expense.
- 1.04 PAYMENT TERMS AND CASH DISCOUNTS:** Payment terms, unless otherwise stated in this ITB, will be considered to be net 45 days after the date of satisfactory delivery at the place of acceptance and receipt of correct invoice at the office specified, whichever occurs last. Bidder may offer cash discounts for prompt payment but they will not be considered in determination of award. If a Bidder offers a discount, it is understood that the discount time will be computed from the date of satisfactory delivery, at the place of acceptance, and receipt of correct invoice, at the office specified, whichever occurs last.
- 1.05 TOTAL BID DISCOUNT:** If Bidder offers a discount for award of all items listed in the bid, such discount shall be deducted from the total of the firm's net unit prices bid and shall be considered in tabulation and award of bid.
- 1.06 BIDS FIRM FOR ACCEPTANCE:** Bidder warrants, by virtue of bidding, that the bid and the prices quoted in the bid will be firm for acceptance by the City for a period of one hundred twenty (120) days from the date of bid opening unless otherwise stated in the ITB.
- 1.07 VARIANCES:** For purposes of bid evaluation, Bidder's must indicate any variances, no matter how slight, from ITB General Conditions, Special Conditions, Specifications or Addenda in the space provided in the ITB. No variations or exceptions by a Bidder will be considered or deemed a part of the bid submitted unless such variances or exceptions are listed in the bid and referenced in the space provided on the bidder proposal pages. If variances are not stated, or referenced as required, it will be assumed that the product or service fully complies with the City's terms, conditions, and specifications.
- By receiving a bid, City does not necessarily accept any variances contained in the bid. All variances submitted are subject to review and approval by the City. If any bid contains material variances that, in the City's sole opinion, make that bid conditional in nature, the City reserves the right to reject the bid or part of the bid that is declared by the City as conditional.
- 1.08 NO BIDS:** If you do not intend to bid please indicate the reason, such as insufficient time to respond, do not offer product or service, unable to meet specifications, schedule would not permit, or any other reason, in the space provided in this ITB. Failure to bid or return no bid comments prior to the bid due and opening date and time, indicated in this ITB, may result in your firm being deleted from our Bidder's registration list for the Commodity Class Item requested in this ITB.
- 1.09 MINORITY AND WOMEN BUSINESS ENTERPRISE PARTICIPATION AND BUSINESS DEFINITIONS:** The City of Fort Lauderdale wants to increase the participation of Minority Business Enterprises (MBE), Women Business Enterprises (WBE), and Small Business Enterprises (SBE) in its procurement activities. If your firm qualifies in accordance with the below definitions please indicate in the space provided in this ITB.

Minority Business Enterprise (MBE) "A Minority Business" is a business enterprise that is owned or controlled by one or more socially or economically disadvantaged persons. Such disadvantage may arise from cultural, racial, chronic economic circumstances or background or other similar cause. Such persons include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

The term "Minority Business Enterprise" means a business at least 51 percent of which is owned by minority group members or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by minority group members. For the purpose of the preceding sentence, minority group members are citizens of the United States who include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

Women Business Enterprise (WBE) a "Women Owned or Controlled Business" is a business enterprise at least 51 percent of which is owned by females or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by females.

Small Business Enterprise (SBE) "Small Business" means a corporation, partnership, sole proprietorship, or other legal entity formed for the purpose of making a profit, which is independently owned and operated, has either fewer than 100 employees or less than \$1,000,000 in annual gross receipts.

BLACK, which includes persons having origins in any of the Black racial groups of Africa.

WHITE, which includes persons whose origins are Anglo-Saxon and Europeans and persons of Indo-European decent including Pakistani and East Indian.
 HISPANIC, which includes persons of Mexican, Puerto Rican, Cuban, Central and South American, or other Spanish culture or origin, regardless of race.
 NATIVE AMERICAN, which includes persons whose origins are American Indians, Eskimos, Aleuts, or Native Hawaiians.
 ASIAN AMERICAN, which includes persons having origin in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

1.10 MINORITY-WOMEN BUSINESS ENTERPRISE PARTICIPATION

It is the desire of the City of Fort Lauderdale to increase the participation of minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the City does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms. Proposers are requested to include in their proposals a narrative describing their past accomplishments and intended actions in this area. If proposers are considering minority or women owned enterprise participation in their proposal, those firms, and their specific duties have to be identified in the proposal. If a proposer is considered for award, he or she will be asked to meet with City staff so that the intended MBE/WBE participation can be formalized and included in the subsequent contract.

1.11 SCRUTINIZED COMPANIES

As to any contract for goods or services of \$1 million or more and as to the renewal of any contract for goods or services of \$1 million or more, subject to *Odebrecht Construction, Inc., v. Prasad*, 876 F.Supp.2d 1305 (S.D. Fla. 2012), affirmed, *Odebrecht Construction, Inc., v. Secretary, Florida Department of Transportation*, 715 F.3d 1268 (11th Cir. 2013), with regard to the "Cuba Amendment," the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and that it does not have business operations in Cuba or Syria, as provided in section 287.135, Florida Statutes (2019), as may be amended or revised. As to any contract for goods or services of any amount and as to the renewal of any contract for goods or services of any amount, the Contractor certifies that it is not on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2019), and that it is not engaged in a boycott of Israel. The City may terminate this Agreement at the City's option if the Contractor is found to have submitted a false certification as provided under subsection (5) of section 287.135, Florida Statutes (2019), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2019), or is engaged in a boycott of Israel, or has been engaged in business operations in Cuba or Syria, as defined in Section 287.135, Florida Statutes (2019), as may be amended or revised.

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1.12 DEBARRED OR SUSPENDED BIDDERS OR PROPOSERS

The bidder or proposer certifies, by submission of a response to this solicitation, that neither it nor its principals and subcontractors are presently debarred or suspended by any Federal department or agency.

Part II. DEFINITIONS/ORDER OF PRECEDENCE:

2.01 **BIDDING DEFINITIONS** The City will use the following definitions in its general conditions, special conditions, technical specifications, instructions to bidders, addenda and any other document used in the bidding process:

INVITATION TO BID (ITB) The solicitation document used for soliciting competitive sealed bids for goods or services.

INVITATION TO NEGOTIATE (ITN) All solicitation documents, regardless of medium, whether attached to or incorporated by reference in solicitations for responses from firms that invite proposals from interested and qualified firms so the city may enter into negotiations with the firm(s) determined most capable of providing the required goods or services.

REQUEST FOR PROPOSALS (RFP) A solicitation method used for soliciting competitive sealed proposals to determine the best value among proposals for goods or services for which price may not be the prevailing factor in award of the contract, or the scope of work, specifications or contract terms and conditions may be difficult to define. Such solicitation will consider the qualifications of the proposers along with evaluation of each proposal using identified and generally weighted evaluation criteria. RFPs may include price criteria whenever feasible, at the discretion of the city.

REQUEST FOR QUALIFICATIONS (RFQ) A solicitation method used for requesting statements of qualifications in order to determine the most qualified proposer for professional services.

BID – a price and terms quote received in response to an ITB.

PROPOSAL – a proposal received in response to an RFP.

BIDDER – Person or firm submitting a Bid.

PROPOSER – Person or firm submitting a Proposal.

RESPONSIVE BIDDER – A firm who has submitted a bid, offer, quote, or response which conforms in all material respects to the competitive solicitation document and all of its requirements.

RESPONSIBLE BIDDER – A firm who is fully capable of meeting all requirements of the solicitation and subsequent contract. The respondent must possess the full capability, including financial and technical, ability, business judgment, experience, qualifications, facilities, equipment, integrity, capability, and reliability, in all respects to perform fully the contract requirements and assure good faith performance as determined by the city.

FIRST RANKED PROPOSER – That Proposer, responding to a City RFP, whose Proposal is deemed by the City, the most advantageous to the City after applying the evaluation criteria contained in the RFP.

SELLER – Successful Bidder or Proposer who is awarded a Purchase Order or Contract to provide goods or services to the City.

CONTRACTOR – Any firm having a contract with the city. Also referred to as a "Vendor".

CONTRACT – All types of agreements, including purchase orders, for procurement of supplies, services, and construction, regardless of what these agreements may be called.

CONSULTANT – A firm providing professional services for the city.

- 2.02 **SPECIAL CONDITIONS:** Any and all Special Conditions contained in this ITB that may be in variance or conflict with these General Conditions shall have precedence over these General Conditions. If no changes or deletions to General Conditions are made in the Special Conditions, then the General Conditions shall prevail in their entirety.

PART III. BIDDING AND AWARD PROCEDURES:

- 3.01 **SUBMISSION AND RECEIPT OF BIDS:** To receive consideration, bids must be received prior to the bid opening date and time. Unless otherwise specified, Bidders should use the proposal forms provided by the City. These forms may be duplicated, but failure to use the forms may cause the bid to be rejected. Any erasures or corrections on the bid must be made in ink and initialed by Bidder in ink. All information submitted by the Bidder shall be printed, typewritten or filled in with pen and ink. Bids shall be signed in ink. Separate bids must be submitted for each ITB issued by the City in separate sealed envelopes properly marked. When a particular ITB or RFP requires multiple copies of bids or proposals they may be included in a single envelope or package properly sealed and identified. Only send bids via facsimile transmission (FAX) if the ITB specifically states that bids sent via FAX will be considered. If such a statement is not included in the ITB, bids sent via FAX will be rejected. Bids will be publicly opened in the Procurement Office, or other designated area, in the presence of Bidders, the public, and City staff. Bidders and the public are invited and encouraged to attend bid openings. Bids will be tabulated and made available for review by Bidder's and the public in accordance with applicable regulations.
- 3.02 **MODEL NUMBER CORRECTIONS:** If the model number for the make specified in this ITB is incorrect, or no longer available and replaced with an updated model with new specifications, the Bidder shall enter the correct model number on the bidder proposal page. In the case of an updated model with new specifications, Bidder shall provide adequate information to allow the City to determine if the model bid meets the City's requirements.
- 3.03 **PRICES QUOTED:** Deduct trade discounts, and quote firm net prices. Give both unit price and extended total. In the case of a discrepancy in computing the amount of the bid, the unit price quoted will govern. All prices quoted shall be F.O.B. destination, freight prepaid (Bidder pays and bears freight charges, Bidder owns goods in transit and files any claims), unless otherwise stated in Special Conditions. Each item must be bid separately. No attempt shall be made to tie any item or items contained in the ITB with any other business with the City.
- 3.04 **TAXES:** The City of Fort Lauderdale is exempt from Federal Excise and Florida Sales taxes on direct purchase of tangible property. Exemption number for EIN is 59-6000319, and State Sales tax exemption number is 85-8013875578C-1.
- 3.05 **WARRANTIES OF USAGE:** Any quantities listed in this ITB as estimated or projected are provided for tabulation and information purposes only. No warranty or guarantee of quantities is given or implied. It is understood that the Contractor will furnish the City's needs as they arise.
- 3.06 **APPROVED EQUAL:** When the technical specifications call for a brand name, manufacturer, make, model, or vendor catalog number with acceptance of APPROVED EQUAL, it shall be for the purpose of establishing a level of quality and features desired and acceptable to the City. In such cases, the City will be receptive to any unit that would be considered by qualified City personnel as an approved equal. In that the specified make and model represent a level of quality and features desired by the City, the Bidder must state clearly in the bid any variance from those specifications. It is the Bidder's responsibility to provide adequate information, in the bid, to enable the City to ensure that the bid meets the required criteria. If adequate information is not submitted with the bid, it may be rejected. The City will be the sole judge in determining if the item bid qualifies as an approved equal.
- 3.07 **MINIMUM AND MANDATORY TECHNICAL SPECIFICATIONS:** The technical specifications may include items that are considered minimum, mandatory, or required. If any Bidder is unable to meet or exceed these items, and feels that the technical specifications are overly restrictive, the bidder must notify the Procurement Services Division immediately. Such notification must be received by the Procurement Services Division prior to the deadline contained in the ITB, for questions of a material nature, or prior to five (5) days before bid due and open date, whichever occurs first. If no such notification is received prior to that deadline, the City will consider the technical specifications to be acceptable to all bidders.
- 3.08 **MISTAKES:** Bidders are cautioned to examine all terms, conditions, specifications, drawings, exhibits, addenda, delivery instructions and special conditions pertaining to the ITB. Failure of the Bidder to examine all pertinent documents shall not entitle the bidder to any relief from the conditions imposed in the contract.
- 3.09 **SAMPLES AND DEMONSTRATIONS:** Samples or inspection of product may be requested to determine suitability. Unless otherwise specified in Special Conditions, samples shall be requested after the date of bid opening, and if requested should be received by the City within seven (7) working days of request. Samples, when requested, must be furnished free of expense to the City and if not used in testing or destroyed, will upon request of the Bidder, be returned within thirty (30) days of bid award at Bidder's expense. When required, the City may request full demonstrations of units prior to award. When such demonstrations are requested, the Bidder shall respond promptly and arrange a demonstration at a convenient location. Failure to provide samples or demonstrations as specified by the City may result in rejection of a bid.
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- 3.10 **LIFE CYCLE COSTING:** If so specified in the ITB, the City may elect to evaluate equipment proposed on the basis of total cost of ownership. In using Life Cycle Costing, factors such as the following may be considered: estimated useful life, maintenance costs, cost of supplies, labor intensity, energy usage, environmental impact, and residual value. The City reserves the right to use those or other applicable criteria, in its sole opinion that will most accurately estimate total cost of use and ownership.
- 3.11 **BIDDING ITEMS WITH RECYCLED CONTENT:** In addressing environmental concerns, the City of Fort Lauderdale encourages Bidders to submit bids or alternate bids containing items with recycled content. When submitting bids containing items with recycled content, Bidder shall provide documentation adequate for the City to verify the recycled content. The City prefers packaging consisting of materials that are degradable or able to be recycled. When specifically stated in the ITB, the City may give preference to bids containing items manufactured with recycled material or packaging that is able to be recycled.

- 3.12 **USE OF OTHER GOVERNMENTAL CONTRACTS:** The City reserves the right to reject any part or all of any bids received and utilize other available governmental contracts, if such action is in its best interest.
- 3.13 **QUALIFICATIONS/INSPECTION:** Bids will only be considered from firms normally engaged in providing the types of commodities/services specified herein. The City reserves the right to inspect the Bidder's facilities, equipment, personnel, and organization at any time, or to take any other action necessary to determine Bidder's ability to perform. The Procurement Director reserves the right to reject bids where evidence or evaluation is determined to indicate inability to perform.
- 3.14 **BID SURETY:** If Special Conditions require a bid security, it shall be submitted in the amount stated. A bid security can be in the form of a bid bond or cashier's check. Bid security will be returned to the unsuccessful bidders as soon as practicable after opening of bids. Bid security will be returned to the successful bidder after acceptance of the performance bond, if required; acceptance of insurance coverage, if required; and full execution of contract documents, if required; or conditions as stated in Special Conditions.
- 3.15 **PUBLIC RECORDS/TRADE SECRETS/COPYRIGHT:** The Proposer's response to the RFP is a public record pursuant to Florida law, which is subject to disclosure by the City under the State of Florida Public Records Law, Florida Statutes Chapter 119.07 ("Public Records Law"). The City shall permit public access to all documents, papers, letters or other material submitted in connection with this RFP and the Contract to be executed for this RFP, subject to the provisions of Chapter 119.07 of the Florida Statutes.

Any language contained in the Proposer's response to the RFP purporting to require confidentiality of any portion of the Proposer's response to the RFP, except to the extent that certain information is in the City's opinion a Trade Secret pursuant to Florida law, shall be void. If a Proposer submits any documents or other information to the City which the Proposer claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Proposer shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Proposer must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Proposer's response to the RFP constitutes a Trade Secret. The city's determination of whether an exemption applies shall be final, and the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agents, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as public records. In addition, the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agents, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as exempt from disclosure or confidential. Proposals bearing copyright symbols or otherwise purporting to be subject to copyright protection in full or in part may be rejected. The proposer authorizes the City to publish, copy, and reproduce any and all documents submitted to the City bearing copyright symbols or otherwise purporting to be subject to copyright protection.

EXCEPT FOR CLEARLY MARKED PORTIONS THAT ARE BONA FIDE TRADE SECRETS PURSUANT TO FLORIDA LAW, DO NOT MARK YOUR RESPONSE TO THE RFP AS PROPRIETARY OR CONFIDENTIAL. DO NOT MARK YOUR RESPONSE TO THE RFP OR ANY PART THEREOF AS COPYRIGHTED.

- 3.16 **PROHIBITION OF INTEREST:** No contract will be awarded to a bidding firm who has City elected officials, officers or employees affiliated with it, unless the bidding firm has fully complied with current Florida State Statutes and City Ordinances relating to this issue. Bidders must disclose any such affiliation. Failure to disclose any such affiliation will result in disqualification of the Bidder and removal of the Bidder from the City's bidder lists and prohibition from engaging in any business with the City.
- 3.17 **RESERVATIONS FOR AWARD AND REJECTION OF BIDS:** The City reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variations to specifications contained in bids, and minor irregularities in the bidding process. The City also reserves the right to award the contract on a split order basis, lump sum basis, individual item basis, or such combination as shall best serve the interest of the City. The City reserves the right to make an award to the responsive and responsible bidder whose product or service meets the terms, conditions, and specifications of the ITB and whose bid is considered to best serve the City's interest. In determining the responsiveness of the offer and the responsibility of the Bidder, the following shall be considered when applicable: the ability, capacity and skill of the Bidder to perform as required; whether the Bidder can perform promptly, or within the time specified, without delay or interference; the character, integrity, reputation, judgment, experience and efficiency of the Bidder; the quality of past performance by the Bidder; the previous and existing compliance by the Bidder with related laws and ordinances; the sufficiency of the Bidder's financial resources; the availability, quality and adaptability of the Bidder's supplies or services to the required use; the ability of the Bidder to provide future maintenance, service or parts; the number and scope of conditions attached to the bid.
- If the ITB provides for a contract trial period, the City reserves the right, in the event the selected bidder does not perform satisfactorily, to award a trial period to the next ranked bidder or to award a contract to the next ranked bidder; if that bidder has successfully provided services to the City in the past. This procedure to continue until a bidder is selected or the contract is re-bid, at the sole option of the City.
- 3.18 **LEGAL REQUIREMENTS:** Applicable provisions of all federal, state, county laws, and local ordinances, rules and regulations, shall govern development, submittal and evaluation of all bids received in response hereto and shall govern any and all claims and disputes which may arise between person(s) submitting a bid response hereto and the City by and through its officers, employees and authorized representatives, or any other person, natural or otherwise; and lack of knowledge by any bidder shall not constitute a cognizable defense against the legal effect thereof.
- 3.19 **BID PROTEST PROCEDURE:** Any proposer or bidder who is not recommended for award of a contract and who alleges a failure by the city to follow the city's procurement ordinance or any applicable law may protest to the chief procurement officer, by delivering a letter of protest to the director of finance within five (5) days after a notice of intent to award is posted on the city's web site at the following url: <https://www.fortlauderdale.gov/departments/finance/procurement-services/notices-of-intent-to-award>

The complete protest ordinance may be found on the city's web site at the following url: https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeid=coor_ch2ad_artvfi_div2pr_s2-182direpr

PART IV BONDS AND INSURANCE

- 4.01 **PERFORMANCE BOND:** If a performance bond is required in Special Conditions, the Contractor shall within fifteen (15) working days after notification of award, furnish to the City a Performance Bond, payable to the City of Fort Lauderdale, Florida, in the face amount specified in Special Conditions as surety for faithful

performance under the terms and conditions of the contract. If the bond is on an annual coverage basis, renewal for each succeeding year shall be submitted to the City thirty (30) days prior to the termination date of the existing Performance Bond. The Performance Bond must be executed by a surety company of recognized standing, authorized to do business in the State of Florida and having a resident agent.

Acknowledgement and agreement is given by both parties that the amount herein set for the Performance Bond is not intended to be nor shall be deemed to be in the nature of liquidated damages nor is it intended to limit the liability of the Contractor to the City in the event of a material breach of this Agreement by the Contractor.

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4.02 INSURANCE: The Contractor shall assume full responsibility and expense to obtain all necessary insurance as required by City or specified in Special Conditions.

The Contractor shall provide to the Procurement Services Division original certificates of coverage and receive notification of approval of those certificates by the City's Risk Manager prior to engaging in any activities under this contract. The Contractor's insurance is subject to the approval of the City's Risk Manager. The certificates must list the City as an **ADDITIONAL INSURED for General Liability Insurance** and shall have no less than thirty (30) days written notice of cancellation or material change. Further modification of the insurance requirements may be made at the sole discretion of the City's Risk Manager if circumstances change or adequate protection of the City is not presented. Bidder, by submitting the bid, agrees to abide by such modifications.

PART V PURCHASE ORDER AND CONTRACT TERMS:

5.01 COMPLIANCE WITH SPECIFICATIONS, LATE DELIVERIES/PENALTIES: Items offered may be tested for compliance with bid specifications. Items delivered which do not conform to bid specifications may be rejected and returned at Contractor's expense. Any violation resulting in contract termination for cause or delivery of items not conforming to specifications, or late delivery may also result in:

- Bidder's name being removed from the City's bidder's mailing list for a specified period and Bidder will not be recommended for any award during that period.
- All City Departments being advised to refrain from doing business with the Bidder.
- All other remedies in law or equity.

5.02 ACCEPTANCE, CONDITION, AND PACKAGING: The material delivered in response to ITB award shall remain the property of the Seller until a physical inspection is made and the material accepted to the satisfaction of the City. The material must comply fully with the terms of the ITB, be of the required quality, new, and the latest model. All containers shall be suitable for storage and shipment by common carrier, and all prices shall include standard commercial packaging. The City will not accept substitutes of any kind. Any substitutes or material not meeting specifications will be returned at the Bidder's expense. Payment will be made only after City receipt and acceptance of materials or services.

5.03 SAFETY STANDARDS: All manufactured items and fabricated assemblies shall comply with applicable requirements of the Occupation Safety and Health Act of 1970 as amended.

5.04 ASBESTOS STATEMENT: All material supplied must be 100% asbestos free. Bidder, by virtue of bidding, certifies that if awarded any portion of the ITB the bidder will supply only material or equipment that is 100% asbestos free.

5.05 OTHER GOVERNMENTAL ENTITIES: If the Bidder is awarded a contract as a result of this ITB, the bidder may, if the bidder has sufficient capacity or quantities available, provide to other governmental agencies, so requesting, the products or services awarded in accordance with the terms and conditions of the ITB and resulting contract. Prices shall be F.O.B. delivered to the requesting agency.

5.06 VERBAL INSTRUCTIONS PROCEDURE: No negotiations, decisions, or actions shall be initiated or executed by the Contractor as a result of any discussions with any City employee. Only those communications which are in writing from an authorized City representative may be considered. Only written communications from Contractors, which are assigned by a person designated as authorized to bind the Contractor, will be recognized by the City as duly authorized expressions on behalf of Contractors.

5.07 INDEPENDENT CONTRACTOR: The Contractor is an independent contractor under this Agreement. Personal services provided by the Proposer shall be by employees of the Contractor and subject to supervision by the Contractor, and not as officers, employees, or agents of the City. Personnel policies, tax responsibilities, social security, health insurance, employee benefits, procurement policies unless otherwise stated in this ITB, and other similar administrative procedures applicable to services rendered under this contract shall be those of the Contractor.

5.08 INDEMNITY/HOLD HARMLESS AGREEMENT: Contractor shall protect and defend at Contractor's expense, counsel being subject to the City's approval, and indemnify and hold harmless the City and the City's officers, employees, volunteers, and agents from and against any and all losses, penalties, fines, damages, settlements, judgments, claims, costs, charges, expenses, or liabilities, including any award of attorney fees and any award of costs, in connection with or arising directly or indirectly out of any act or omission by the Contractor or by any officer, employee, agent, invitee, subcontractor, or sublicensee of the Contractor. Without limiting the foregoing, any and all such claims, suits, or other actions relating to personal injury, death, damage to property, defects in materials or workmanship, actual or alleged violations of any applicable statute, ordinance, administrative order, rule or regulation, or decree of any court shall be included in the indemnity hereunder.

5.09 TERMINATION FOR CAUSE: If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner its obligations under this Agreement, or if the Contractor shall violate any of the provisions of this Agreement, the City may upon written notice to the Contractor terminate the right of the Contractor to proceed under this Agreement, or with such part or parts of the Agreement as to which there has been default, and may hold the Contractor liable for any damages caused to the City by reason of such default and termination. In the event of such termination, any completed services performed by the Contractor under this Agreement shall, at the option of the City, become the City's property and the Contractor shall be entitled to receive equitable compensation for any work completed to the satisfaction of

the City. The Contractor, however, shall not be relieved of liability to the City for damages sustained by the City by reason of any breach of the Agreement by the Contractor, and the City may withhold any payments to the Contractor for the purpose of setoff until such time as the amount of damages due to the City from the Contractor can be determined.

- 5.10 **TERMINATION FOR CONVENIENCE:** The City reserves the right, in the City's best interest as determined by the City, to cancel any contract by giving written notice to the Contractor thirty (30) days prior to the effective date of such cancellation.
- 5.11 **CANCELLATION FOR UNAPPROPRIATED FUNDS:** The obligation of the City for payment to a Contractor is limited to the availability of funds appropriated in a current fiscal period, and continuation of the contract into a subsequent fiscal period is subject to appropriation of funds, unless otherwise authorized by law.
- 5.12 **RECORDS/AUDIT:** The Contractor shall maintain during the term of the contract all books of account, reports and records in accordance with generally accepted accounting practices and standards for records directly related to this contract. The Contractor agrees to make available to the City Auditor or the City Auditor's designee, during normal business hours and in Broward, Miami-Dade or Palm Beach Counties, all books of account, reports, and records relating to this contract. The Contractor shall retain all books of account, reports, and records relating to this contract for the duration of the contract and for three years after the final payment under this Agreement, until all pending audits, investigations or litigation matters relating to the contract are closed, or until expiration of the records retention period prescribed by Florida law or the records retention schedules adopted by the Division of Library and Information Services of the Florida Department of State, whichever is later.
- 5.13 **PERMITS, TAXES, LICENSES:** The successful Contractor shall, at his/her/its own expense, obtain all necessary permits, pay all licenses, fees and taxes, required to comply with all local ordinances, state and federal laws, rules and regulations applicable to business to be carried out under this contract.
- 5.14 **LAWS/ORDINANCES:** The Contractor shall observe and comply with all Federal, state, local and municipal laws, ordinances rules and regulations that would apply to this contract.

NON-DISCRIMINATION: The Contractor shall not, in any of its activities, including employment, discriminate against any individual on the basis of race, color, national origin, age, religion, creed, sex, disability, sexual orientation, gender, gender identity, gender expression, marital status, or any other protected classification as defined by applicable law.

1. The Contractor certifies and represents that the Contractor will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, (2019), as may be amended or revised, ("Section 2-187"), during the entire term of this Agreement.
2. The failure of the Contractor to comply with Section 2-187 shall be deemed to be a material breach of this Agreement, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.
3. The City may terminate this Agreement if the Contractor fails to comply with Section 2-187.
4. The City may retain all monies due or to become due until the Contractor complies with Section 2-187.
5. The Contractor may be subject to debarment or suspension proceedings. Such proceedings will be consistent with the procedures in section 2-183 of the Code of Ordinances of the City of Fort Lauderdale, Florida.

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- 5.15 **UNUSUAL CIRCUMSTANCES:** If during a contract term where costs to the City are to remain firm or adjustments are restricted by a percentage or CPI cap, unusual circumstances that could not have been foreseen by either party of the contract occur, and those circumstances significantly affect the Contractor's cost in providing the required prior items or services, then the Contractor may request adjustments to the costs to the City to reflect the changed circumstances. The circumstances must be beyond the control of the Contractor, and the requested adjustments must be fully documented. The City may, after examination, refuse to accept the adjusted costs if they are not properly documented, increases are considered to be excessive, or decreases are considered to be insufficient. In the event the City does not wish to accept the adjusted costs and the matter cannot be resolved to the satisfaction of the City, the City will reserve the following options:
1. The contract can be canceled by the City upon giving thirty (30) days written notice to the Contractor with no penalty to the City or Contractor. The Contractor shall fill all City requirements submitted to the Contractor until the termination date contained in the notice.
 2. The City requires the Contractor to continue to provide the items and services at the firm fixed (non-adjusted) cost until the termination of the contract term then in effect.
 3. If the City, in its interest and in its sole opinion, determines that the Contractor in a capricious manner attempted to use this section of the contract to relieve Contractor of a legitimate obligation under the contract, and no unusual circumstances had occurred, the City reserves the right to take any and all action under law or equity. Such action shall include, but not be limited to, declaring the Contractor in default and disqualifying Contractor from receiving any business from the City for a stated period of time.

If the City does agree to adjusted costs, these adjusted costs shall not be invoiced to the City until the Contractor receives notice in writing signed by a person authorized to bind the City in such matters.

- 5.16 **ELIGIBILITY:** If applicable, the Contractor must first register with the Florida Department of State in accordance with Florida Statutes, prior to entering into a contract with the City.
- 5.17 **PATENTS AND ROYALTIES:** The Contractor, without exception, shall defend, indemnify, and hold harmless the City and the City's employees, officers, employees, volunteers, and agents from and against liability of any nature and kind, including cost and expenses for or on account of any copyrighted, patented or un-patented invention, process, or article manufactured or used in the performance of the contract, including their use by the City. If the Contractor uses any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood without exception that the bid prices shall include any and all royalties or costs arising from the use of such design, device, or materials in any way involved in the work.

5.18 **ASSIGNMENT:** Contractor shall not transfer or assign the performance required by this ITB without the prior written consent of the City. Any award issued pursuant to this ITB, and the monies, which may become due hereunder, are not assignable except with the prior written approval of the City Commission or the City Manager or City Manager's designee, depending on original award approval.

5.19 **GOVERNING LAW; VENUE:** The Contract shall be governed by and construed in accordance with the laws of the State of Florida. Venue for any lawsuit by either party against the other party or otherwise arising out of the Contract, and for any other legal proceeding, shall be in the courts in and for Broward County, Florida, or in the event of federal jurisdiction, in the Southern District of Florida.

5.20 **PUBLIC RECORDS:**

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT PRRCONTRACT@FORTLAUDERDALE.GOV, 954-828-5002, CITY CLERK'S OFFICE, 100 N. ANDREWS AVENUE, FORT LAUDERDALE, FLORIDA 33301.

Contractor shall comply with public records laws, and Contractor shall:

1. Keep and maintain public records required by the City to perform the service.
2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2019), as may be amended or revised, or as otherwise provided by law.
3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the City.
4. Upon completion of the Contract, transfer, at no cost, to the City all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the Contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the Contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

BID/PROPOSAL CERTIFICATION

Please Note: It is the sole responsibility of the bidder to ensure that his bid is submitted electronically through www.BidSync.com prior to the bid opening date and time listed. Paper bid submittals will not be accepted. All fields below must be completed. If the field does not apply to you, please note N/A in that field.

If you are a foreign corporation, you may be required to obtain a certificate of authority from the department of state, in accordance with Florida Statute §607.1501 (visit <http://www.dos.state.fl.us/>).

Company: (Legal Registration)

EIN (Optional):

Address:

City:

State:

Zip:

Telephone No.:

FAX No.:

Email:

Delivery: Calendar days after receipt of Purchase Order (**section 1.02 of General Conditions**):

Total Bid Discount (**section 1.05 of General Conditions**):

Check box if your firm qualifies for MBE / SBE / WBE (**section 1.09 of General Conditions**): ☐

ADDENDUM ACKNOWLEDGEMENT - Proposer acknowledges that the following addenda have been received and are included in the proposal:

<u>Addendum No.</u>	<u>Date Issued</u>	<u>Addendum No.</u>	<u>Date Issued</u>	<u>Addendum No.</u>	<u>Date Issued</u>

VARIANCES: If you take exception or have variances to any term, condition, specification, scope of service, or requirement in this competitive solicitation you must specify such exception or variance in the space provided below or reference in the space provided below all variances contained on other pages within your response. Additional pages may be attached if necessary. No exceptions or variances will be deemed to be part of the response submitted unless such is listed and contained in the space provided below. The City does not, by virtue of submitting a variance, necessarily accept any variances. If no statement is contained in the below space, it is hereby implied that your response is in full compliance with this competitive solicitation. If you do not have variances, simply mark N/A. **You must also click the "Take Exception" button.**

The below signatory hereby agrees to furnish the following article(s) or services at the price(s) and terms stated subject to all instructions, conditions, specifications addenda, legal advertisement, and conditions contained in the bid/proposal.

I have read all attachments including the specifications and fully understand what is required. By submitting this signed proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this bid/proposal. The below signatory also hereby agrees, by virtue of submitting or attempting to submit a response, that in no event shall the City's liability for respondent's direct, indirect, incidental, consequential, special or exemplary damages,

expenses, or lost profits arising out of this competitive solicitation process, including but not limited to public advertisement, bid conferences, site visits, evaluations, oral presentations, or award proceedings exceed the amount of Five Hundred Dollars (\$500.00). This limitation shall not apply to claims arising under any provision of indemnification or the City's protest ordinance contained in this competitive solicitation.

Submitted by:

Name (printed)

Signature

Date

Title

Revised 4/28/2020

NON-COLLUSION STATEMENT:

By signing this offer, the vendor/contractor certifies that this offer is made independently and free from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g. ownership of five (5) percent or more).

3.4. Immediate family members (spouse, parents and children) are also prohibited from contracting with the City subject to the same general rules.

Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.

NAME**RELATIONSHIPS**

In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.

Authorized Signature

Title

Name (Printed)

Date

**CONTRACTOR'S CERTIFICATE OF COMPLIANCE WITH
NON-DISCRIMINATION PROVISIONS OF THE CONTRACT**

The completed and signed form should be returned with the Contractor's submittal. If not provided with submittal, the Contractor must submit within three business days of City's request. Contractor may be deemed non-responsive for failure to fully comply within stated timeframes.

Pursuant to City Ordinance Sec. 2-187(c), bidders must certify compliance with the Non-Discrimination provision of the ordinance.

The Contractor shall not, in any of his/her/its activities, including employment, discriminate against any individual on the basis of race, color, national origin, religion, creed, sex, disability, sexual orientation, gender, gender identity, gender expression, or marital status.

1. The Contractor certifies and represents that he/she/it will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, as amended by Ordinance C-18-33 (collectively, "Section 2-187").
2. The failure of the Contractor to comply with Section 2-187 shall be deemed to be a material breach of this Agreement, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.
3. The City may terminate this Agreement if the Contractor fails to comply with Section 2-187.
4. The City may retain all monies due or to become due until the Contractor complies with Section 2-187.
5. The Contractor may be subject to debarment or suspension proceedings. Such proceedings will be consistent with the procedures in section 2-183 of the Code of Ordinances of the City of Fort Lauderdale, Florida.

Authorized Signature

Print Name and Title

Date

LOCAL BUSINESS PREFERENCE CERTIFICATION STATEMENT

Section 2-186, Code of Ordinances of the City of Fort Lauderdale, (Ordinance No. C-17-26), provides for a local business preference.

In order to be considered for a local business preference, a bidder must include the Local Business Preference Certification Statement of this bid/proposal, as applicable to the local business preference class claimed **at the time of bid submittal**.

Upon formal request of the City, based on the application of a Local Business Preference, the Bidder shall, within ten (10) calendar days, submit the following documentation for the Local Business Preference Class claimed:

- a) Copy of City of Fort Lauderdale current year business tax receipt, **or** Broward County current year business tax receipt, **and**
- b) List of the names of all employees of the bidder and evidence of employees' residences within the geographic bounds of the City of Fort Lauderdale or Broward County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

Failure to comply at time of bid submittal shall result in the bidder being found ineligible for the local business preference.

THE COMPLETE LOCAL BUSINESS PREFERENCE ORDINANCE MAY BE FOUND ON THE CITY'S WEB SITE AT THE FOLLOWING LINK: https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeId=COOR_CH2AD_ARTVFI_DIV2PR_S2-186LOBUPR&showChanges=true

Definitions: The term "Business" shall mean a person, firm, corporation or other business entity which is duly licensed and authorized to engage in a particular work in the State of Florida. Business shall be broken down into four (4) types of classes:

1. Class A Business – shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone and staffed with full-time employees within the limits of the City, **and** shall maintain a staffing level for the proposed work of at least fifty percent (50%) who are residents of the City of Fort Lauderdale.
2. Class B Business - shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the City, **or** shall maintain a staffing level for the proposed work of at least fifty percent (50%) who are residents of the City of Fort Lauderdale.
3. Class C Business - shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of Broward County.
4. Class D Business – shall mean any Business that does not qualify as either a Class A, Class B, or Class C business.

LOCAL BUSINESS PREFERENCE CERTIFICATION STATEMENT

The Business identified below certifies that it qualifies for the local business preference classification as indicated herein, and further certifies and agrees that it will re-affirm its local preference classification annually no later than thirty (30) calendar days prior to the anniversary of the date of a contract awarded pursuant to this bid/proposal. Violation of the foregoing provision may result in contract termination.

- | | | |
|-----|-----------------|--|
| (1) | (Business Name) | is a Class A Business as defined in City of Fort Lauderdale Ordinance No. C-17-26, Sec. 2-186. A copy of the City of Fort Lauderdale current year Business Tax Receipt <u>and</u> a complete list of full-time employees and evidence of their addresses shall be provided within ten (10) calendar days of a formal request by the City. |
| (2) | (Business Name) | is a Class B Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec. 2-186. A copy of the Business Tax Receipt <u>or</u> a complete list of full-time employees and evidence of their addresses shall be provided within ten (10) calendar days of a formal request by the City. |
| (3) | (Business Name) | is a Class C Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec. 2-186. A copy of the Broward County Business Tax Receipt shall be provided within ten (10) calendar days of a formal request by the City. |
| (4) | (Business Name) | is a Class D Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec. 2-186, and does not qualify for Local Preference consideration. |
| (5) | (Business Name) | requests a Conditional Class A classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent to meet the requirements shall be provided to the City within three (3) months of entering into a contract with the City. |
| (6) | (Business Name) | requests a Conditional Class B classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent to meet the requirements shall be provided to the City within three (3) months of entering into a contract with the City. |

BIDDER'S COMPANY:

AUTHORIZED
COMPANY
PERSON:

PRINT NAME

SIGNATURE

DATE

Forms Non-ISO – Revised 7/2/2021

**DISADVANTAGED BUSINESS ENTERPRISE (DBE) PREFERENCE**

Section 2-185, Code of Ordinances of the City of Fort Lauderdale, provides for a disadvantaged business enterprise preference.

In order to be considered for a DBE Preference, a bidder must include a certification from a government agency, as applicable to the DBE Preference class claimed **at the time of bid submittal**.

Upon formal request of the City, based on the application of a DBE Preference the Bidder shall, within **ten (10)** calendar days, submit the following documentation to the DBE Class claimed:

- a) Copy of City of Fort Lauderdale current year business tax receipt, **or** Broward County current year business tax receipt, **or** State of Florida active registration **and/or**
- b) List of the names of all employees of the bidder and evidence of employees' residences within the geographic bounds of the City of Fort Lauderdale or Broward County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

Failure to comply at time of bid submittal shall result in the bidder being found ineligible for the disadvantaged business enterprise preference.

THE COMPLETE DBE PREFERENCE ORDINANCE MAY BE FOUND ON THE CITY'S WEB SITE AT THE FOLLOWING LINK: https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeId=COOR_CH2AD_ARTVFI_DIV2PR_S2-185EQOPDIBUEN&showChanges=true

Definitions

- a. The term "disadvantaged class 1 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the City, and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- b. The term "disadvantaged class 2 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business within the limits of the City with full-time employees and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- c. The term "disadvantaged class 3 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the Tri-County area and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- d. The term "disadvantaged class 4 enterprise" shall mean any disadvantaged business enterprise that does not qualify as a Class 1, Class 2, or Class 3 business, but is located in the State of Florida and provides supporting documentation of its disadvantaged certification as established in the City's Procurement Manual.

DISADVANTAGED BUSINESS ENTERPRISE CERTIFICATION STATEMENT

The Business identified below certifies that it qualifies for the disadvantaged business enterprise preference classification as indicated herein, and further certifies and agrees that it will re-affirm its preference classification annually no later than **thirty (30)** calendar days prior to the anniversary of the date of a contract awarded pursuant to this solicitation. Violation of the foregoing provision may result in contract termination.

- | | | |
|-----|-----------------|--|
| (1) | (Business Name) | is a disadvantaged Class 1 enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the City, and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual. |
| (2) | (Business Name) | is a disadvantaged Class 2 enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business within the limits of the City with full-time employee(s) and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual. |
| (3) | (Business Name) | is a disadvantaged Class 3 enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the Tri-County area and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual. |
| (4) | (Business Name) | is a disadvantaged Class 4 enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that does not qualify as a Class 1, Class 2, or Class 3 business, but is located in the State of Florida and provides supporting documentation of its disadvantaged certification as established in the City's Procurement Manual. |
| (5) | (Business Name) | requests a Conditional Class 1 classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent to meet the requirements shall be provided to the City within three (3) months of entering into a contract with the City. |
| (6) | (Business Name) | requests a Conditional Class 2 classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent to meet the requirements shall be provided to the City within three (3) months of entering into a contract with the City. |

BIDDER'S COMPANY:

AUTHORIZED
COMPANY
PERSON:

PRINT NAME

SIGNATURE

DATE

Forms Non-Iso – revised 7/2/2021

E-VERIFY AFFIRMATION STATEMENT

RFP/Bid /Contract No:

Project Description:

Contractor/Proposer/Bidder acknowledges and agrees to utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of,

- (a) all persons employed by Contractor/Proposer/Bidder to perform employment duties within Florida during the term of the Contract, and,
- (b) all persons (including subcontractors/vendors) assigned by Contractor/Proposer/Bidder to perform work pursuant to the Contract.

The Contractor/Proposer/Bidder acknowledges and agrees that use of the U.S. Department of Homeland Security's E-Verify System during the term of the Contract is a condition of the Contract.

Contractor/Proposer/ Bidder Company Name:

Authorized Company Person's Signature:

Authorized Company Person's Title:

Date:

9/15/2020

REFERENCES

A minimum of three (3) references shall be provided:

1. Company Name: _____

Address: _____ //

Contact: _____

Phone #: _____

Email: _____

Contract Value: _____

Year: _____

Description: _____ //

2. Company Name: _____

Address: _____ //

Contact: _____

Phone #: _____

Email: _____

Contract Value: _____

Year: _____

Description: _____ //

3. Company Name: _____

Address: _____ //

Contact: _____

Phone #: _____

Email: _____

Contract Value: _____

Year: _____

Description: _____ //

4. Company Name: _____

Address: _____ //

Contact: _____

Phone #: _____ Email: _____

Contract Value: _____ Year: _____

Description: _____ //

5. Company Name: _____

Address: _____ //

Contact: _____

Phone #: _____ Email: _____

Contract Value: _____ Year: _____

Description: _____ //



City of Fort Lauderdale • Procurement Services Division
100 N. Andrews Avenue, 619 • Fort Lauderdale, Florida 33301
954-828-5933 Fax 954-828-5576
purchase@fortlauderdale.gov

ADDENDUM NO. 1

**RFQ No. 12665-1026
WATER CONSENT ORDER PROGRAM MANAGEMENT AND MAPPING
SERVICES**

ISSUED: May 23, 2022

This addendum is being issued to make the following changes:

1. The opening date has been changed to Monday, June 27, 2022 at 2:00PM Local Time.

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

Or call in (audio only)

[+1 954-686-7296,696755482#](#) United States, Fort Lauderdale

Phone Conference ID: 696 755 482#

All other terms, conditions, and specifications remain unchanged.

Erick Martinez
Senior Procurement Specialist

Company Name: _____
(please print)

Bidder's Signature: _____

Date: _____



City of Fort Lauderdale • Procurement Services Division
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ADDENDUM NO. 2

**RFQ No. 12665-1026
WATER CONSENT ORDER PROGRAM MANAGEMENT AND MAPPING
SERVICES**

ISSUED: June 16, 2022

This addendum is being issued to make the following changes:

1. The following new section is hereby added to Section III, "Scope of Services" of this solicitation.

- Section 3.5 "Incentive – Disincentive" (see attached)

All other terms, conditions, and specifications remain unchanged.

Erick Martinez
Senior Procurement Specialist

Company Name: _____
(please print)

Bidder's Signature: _____

Date: _____

RFQ No. 12665-1026
Water Consent Order Program
Management and Mapping Services
Section III – Scope of Services

Section 3.5 Incentive - Disincentive.

The City desires to expedite the professional services on this Contract to reduce the time to complete the program management, reporting the FDEP, data collection, survey, and georeferenced mapping of the water infrastructure, and assistance with the water line valves exercise program to comply and meet the civil enforcement actions mandates by FDEP Consent Agreement. While the FDEP deadline for this work is July 23, 2022, the City recognizes that this scope will require 18 to 24 months to complete.

In order to achieve this, an incentive - disincentive provision is established for the Contract. The total "incentive payment" or disincentive deduction shall not exceed \$750,000.00. The City will pay the "Consultant" an "incentive payment" in the amount of \$3,000.00, for each calendar day the actual completion date precedes the Original Contract Time and subject to the conditions precedent set forth below. The term "Original Contract Time" as used in this Article will mean the number of calendar days established for completion of the work in the Contract on the date the Contract was executed. The term "calendar day" as used in this Article will mean every day shown on the calendar. Calendar days will be consecutively counted from commencement of Contract Time regardless of weather, weekends, holidays, suspensions of Contractor's operations, delays or other events as described herein. For purposes of the calculation and the determination of entitlement to the "incentive payment" stated above, the Original Contract Time will not be adjusted for any reason, cause or circumstance whatsoever, regardless of fault, save and except in the instance of a catastrophic event (i.e., hurricane or a declared state of emergency).

The parties anticipate that delays may be caused by or arise from any number of events during the course of the Contract, including, but not limited to, work performed, work deleted, change orders, supplemental agreements, delays, disruptions, time extensions, extra work, actions of suppliers, subconsultants, actions by third parties, weather, weekends, holidays, or other such events, forces or factors sometimes experienced in this type of work. Such delays or events and their potential impacts on performance by the Consultant are specifically contemplated and acknowledged by the parties in entering into this Contract, and shall not extend the Original Contract Time for purposes of calculation of the "incentive payment" set forth above. Further, any and all costs or impacts whatsoever incurred by the Consultant in accelerating the Consultant's work to overcome or absorb such delays or events in an effort to complete the Contract prior to expiration of the Original Contract Time, regardless of whether the Contractor successfully does so or not, shall be the sole responsibility of the Consultant in every instance.

In the event of a catastrophic event (i.e., hurricane or a declared state of emergency) directly and substantially affecting the Consultant's services on the Contract, the Contractor and the City shall agree as to the number of calendar days to extend the Original Contract Time so that such extended Original Contract Time will be used in calculation of the "incentive payment". In the event the Contractor and City are unable to agree to the number of Calendar Days to extend the Original Contract Time, the City will unilaterally determine the number of calendar days to extend the Original Contract Time reasonably necessary and due solely to such catastrophic event and the Contractor shall have no right whatsoever to contest such determination, save and except that the Contractor establishes that the number of calendar days determined by the City were arbitrary or without any reasonable basis.

However, notwithstanding anything above to the contrary, upon the Consultant's written request being made directly to the Director of Public Works, with copies provided to both the City Manager and the

RFQ No. 12665-1026
Water Consent Order Program
Management and Mapping Services
Section III – Scope of Services

City Attorney, the City reserves unto the Director of Public Works, in his sole and absolute discretion, according to the parameters set forth below, the authority to make a determination to either fully enforce the above provisions with no modification, modify the "Original Contract Time" by moving it, or both modify the "Original Contract Time" by moving it and also modify the "incentive amount" by reducing it.

No modification of this "Incentive-Disincentive" provision will be considered by the Director of Public Works for any impacts, whatsoever, beyond the reasonable control of the Consultant, for which the effect results in a time extension of less than 15% of the time remaining in the period from the first day of occurrence of such impact to the expiration of the "Original Contract Time". Furthermore, as to any such impact, for which the effect results in a time extension of 15% or more of the time remaining in the period from the first day of occurrence of such impact to the expiration of the "Original Contract Time," no modification of this "Incentive- Disincentive" provision will be considered by the Director of Public Works unless the Consultant clearly establishes that it has continuously from the beginning of the project aggressively, efficiently and effectively pursued the achievement of the "incentive payment". This would include the utilization of any and all reasonably available means and methods to overcome all impacts and accelerate the work so as to still achieve the "incentive payment", and that, but for this impact, the Consultant would have otherwise earned the "incentive payment" provided in the original Contract. Also, to the extent the request is submitted in writing to the Director of Public Works within twenty (20) calendar days or more prior to the expiration of the "Original Contract Time," the Consultant must also continue to aggressively, efficiently, and effectively pursue the completion of the "Incentive-Disincentive" work. This would include the utilization of any and all reasonably available means and methods to overcome all impacts and accelerate the work, until a determination is made by the Director of Public Works or twenty (20) calendar days has expired since such written request was received by the Director of Public Works. There shall be no right of any kind on behalf of the Consultant to challenge or otherwise seek review or appeal in any forum, of any determination made by the Director of Public Works under this provision.

The Consultant shall have no rights under the Contract to make any claim arising out of this incentive payment provision except as is expressly set forth in this Article.

As conditions precedent to the Consultant's entitlement to any "incentive payment" the Consultant must:

- (1) Deliver in-hand to the City any and all claims, in full accordance and subject to the limitations in this solicitation and subsequent Contract.
- (2) Actually complete the Contract and obtain final acceptance by the City prior to expiration of the Original Contract Time.
- (3) The Consultant shall notify the City in writing, within 60 days after final acceptance of the Contract by the City, that the Consultant elects to be paid the "incentive payment" which the Consultant is eligible to be paid based on the actual final acceptance date, and such written notice shall constitute a full and complete waiver, release and acknowledgment of satisfaction by the Consultant of any and all claims, causes of action, issues, demands, disputes, matters or controversies, of any nature or kind whatsoever, known or unknown, against the City, its employees, officers, agents, representatives, consultants, and their respective employees, officers

RFQ No. 12665-1026
Water Consent Order Program
Management and Mapping Services
Section III – Scope of Services

and representatives, the Consultant has or may have, including, but not limited to, work performed, work deleted, change orders, supplemental agreements, delays, disruptions, time extensions, extra work, permitting issues, actions of suppliers, subconsultants, actions by third parties, weather, weekends, holidays, or other such events, forces or factors sometimes experienced in this type of work, lost profits, prime mark-up on subcontractor work, acceleration costs, any and all direct and indirect costs, any other adverse impacts, events, conditions, circumstances or potential damages, on or pertaining to, or as to or arising out of the Contract. This waiver, release and acknowledgment of satisfaction shall be all- inclusive and absolute, save and except any routine City final estimating quantity adjustments.

Should the Consultant fail to actually complete the Contract and obtain final acceptance by the City prior to expiration of the Original Contract Time, or should the Consultant, having timely completed the Contract and obtained final acceptance by the City prior to expiration of the Original Contract Time but having failed to timely request the "incentive payment" for any reason, or to fully waive, release and acknowledge satisfaction as set forth in paragraph (3) above, the Consultant shall have no right to any payment whatsoever under this Article. Notwithstanding the Consultant's election or non-election of the "incentive payment" under this provision, the disincentive provision applies to all circumstances where the work in the Contract is not finally accepted by the Allowable Contract Time.

Should the Consultant fail to complete the Contract on or before expiration of the Allowable Contract Time, as adjusted in accordance with the provisions herein, the City shall deduct \$3,000.00 for each calendar day completion exceeds the Allowable Contract Time, from the monies otherwise due the Consultant. The term "Allowable Contract Time" as used in this Article shall mean the Original Contract Time plus adjustments as allowed herein. This deduction shall be the disincentive for the Consultant's failing to timely complete the Contract. Section II, "General Terms and Conditions," Article 2.30, "Liquidated Damages for Failure to Perform" shall remain in effect and is applicable. **Note: Deductions will only be applied if the FDEP accesses fines against the city for non-compliance with the Consent Order.**

In the event the Consultant elects to exercise this "incentive payment" provision, should this provision conflict with any other provision of the Contract, the Contract shall be interpreted in accordance with this provision.

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Question and Answers for Bid #12665-1026 - Water Consent Order Program Management and Mapping Services

Overall Bid Questions

Question 1

In reference to Section 4.2 of the RFQ, it states: "The City prefers that responses be no more than 100 pages in one complete pdf document". Will the required forms, including Standard Form 330, be excluded from the 100-page count? (Submitted: Apr 26, 2022 1:22:55 PM EDT)

Answer

- The required forms, including Standard Form 330, are included in the 100-page count. (Answered: May 17, 2022 8:30:58 AM EDT)



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purchase@fortlauderdale.gov

ADDENDUM NO. 2

RFQ No. 12665-1026 WATER CONSENT ORDER PROGRAM MANAGEMENT AND MAPPING SERVICES

ISSUED: June 16, 2022

This addendum is being issued to make the following changes:

1. The following new section is hereby added to Section III, "Scope of Services" of this solicitation.

- Section 3.5 "Incentive – Disincentive" (see attached)

All other terms, conditions, and specifications remain unchanged.

Erick Martinez
Senior Procurement Specialist

Company Name: _____
(please print)

Bidder's Signature: _____

Date: _____

Section 3.5 Incentive - Disincentive.

The City desires to expedite the professional services on this Contract to reduce the time to complete the program management, reporting the FDEP, data collection, survey, and georeferenced mapping of the water infrastructure, and assistance with the water line valves exercise program to comply and meet the civil enforcement actions mandates by FDEP Consent Agreement. While the FDEP deadline for this work is July 23, 2022, the City recognizes that this scope will require 18 to 24 months to complete.

In order to achieve this, an incentive - disincentive provision is established for the Contract. The total "incentive payment" or disincentive deduction shall not exceed \$750,000.00. The City will pay the "Consultant" an "incentive payment" in the amount of \$3,000.00, for each calendar day the actual completion date precedes the Original Contract Time and subject to the conditions precedent set forth below. The term "Original Contract Time" as used in this Article will mean the number of calendar days established for completion of the work in the Contract on the date the Contract was executed. The term "calendar day" as used in this Article will mean every day shown on the calendar. Calendar days will be consecutively counted from commencement of Contract Time regardless of weather, weekends, holidays, suspensions of Contractor's operations, delays or other events as described herein. For purposes of the calculation and the determination of entitlement to the "incentive payment" stated above, the Original Contract Time will not be adjusted for any reason, cause or circumstance whatsoever, regardless of fault, save and except in the instance of a catastrophic event (i.e., hurricane or a declared state of emergency).

The parties anticipate that delays may be caused by or arise from any number of events during the course of the Contract, including, but not limited to, work performed, work deleted, change orders, supplemental agreements, delays, disruptions, time extensions, extra work, actions of suppliers, subconsultants, actions by third parties, weather, weekends, holidays, or other such events, forces or factors sometimes experienced in this type of work. Such delays or events and their potential impacts on performance by the Consultant are specifically contemplated and acknowledged by the parties in entering into this Contract, and shall not extend the Original Contract Time for purposes of calculation of the "incentive payment" set forth above. Further, any and all costs or impacts whatsoever incurred by the Consultant in accelerating the Consultant's work to overcome or absorb such delays or events in an effort to complete the Contract prior to expiration of the Original Contract Time, regardless of whether the Contractor successfully does so or not, shall be the sole responsibility of the Consultant in every instance.

In the event of a catastrophic event (i.e., hurricane or a declared state of emergency) directly and substantially affecting the Consultant's services on the Contract, the Contractor and the City shall agree as to the number of calendar days to extend the Original Contract Time so that such extended Original Contract Time will be used in calculation of the "incentive payment". In the event the Contractor and City are unable to agree to the number of Calendar Days to extend the Original Contract Time, the City will unilaterally determine the number of calendar days to extend the Original Contract Time reasonably necessary and due solely to such catastrophic event and the Contractor shall have no right whatsoever to contest such determination, save and except that the Contractor establishes that the number of calendar days determined by the City were arbitrary or without any reasonable basis.

However, notwithstanding anything above to the contrary, upon the Consultant's written request being made directly to the Director of Public Works, with copies provided to both the City Manager and the

City Attorney, the City reserves unto the Director of Public Works, in his sole and absolute discretion, according to the parameters set forth below, the authority to make a determination to either fully enforce the above provisions with no modification, modify the “Original Contract Time” by moving it, or both modify the “Original Contract Time” by moving it and also modify the “incentive amount” by reducing it.

No modification of this “Incentive-Disincentive” provision will be considered by the Director of Public Works for any impacts, whatsoever, beyond the reasonable control of the Consultant, for which the effect results in a time extension of less than 15% of the time remaining in the period from the first day of occurrence of such impact to the expiration of the “Original Contract Time”. Furthermore, as to any such impact, for which the effect results in a time extension of 15% or more of the time remaining in the period from the first day of occurrence of such impact to the expiration of the “Original Contract Time,” no modification of this “Incentive- Disincentive” provision will be considered by the Director of Public Works unless the Consultant clearly establishes that it has continuously from the beginning of the project aggressively, efficiently and effectively pursued the achievement of the “incentive payment”. This would include the utilization of any and all reasonably available means and methods to overcome all impacts and accelerate the work so as to still achieve the “incentive payment”, and that, but for this impact, the Consultant would have otherwise earned the “incentive payment” provided in the original Contract. Also, to the extent the request is submitted in writing to the Director of Public Works within twenty (20) calendar days or more prior to the expiration of the “Original Contract Time,” the Consultant must also continue to aggressively, efficiently, and effectively pursue the completion of the “Incentive-Disincentive” work. This would include the utilization of any and all reasonably available means and methods to overcome all impacts and accelerate the work, until a determination is made by the Director of Public Works or twenty (20) calendar days has expired since such written request was received by the Director of Public Works. There shall be no right of any kind on behalf of the Consultant to challenge or otherwise seek review or appeal in any forum, of any determination made by the Director of Public Works under this provision.

The Consultant shall have no rights under the Contract to make any claim arising out of this incentive payment provision except as is expressly set forth in this Article.

As conditions precedent to the Consultant’s entitlement to any “incentive payment” the Consultant must:

- (1) Deliver in-hand to the City any and all claims, in full accordance and subject to the limitations in this solicitation and subsequent Contract.
- (2) Actually complete the Contract and obtain final acceptance by the City prior to expiration of the Original Contract Time.
- (3) The Consultant shall notify the City in writing, within 60 days after final acceptance of the Contract by the City, that the Consultant elects to be paid the “incentive payment” which the Consultant is eligible to be paid based on the actual final acceptance date, and such written notice shall constitute a full and complete waiver, release and acknowledgment of satisfaction by the Consultant of any and all claims, causes of action, issues, demands, disputes, matters or controversies, of any nature or kind whatsoever, known or unknown, against the City, its employees, officers, agents, representatives, consultants, and their respective employees, officers

RFQ No. 12665-1026
Water Consent Order Program
Management and Mapping Services
Section III – Scope of Services

and representatives, the Consultant has or may have, including, but not limited to, work performed, work deleted, change orders, supplemental agreements, delays, disruptions, time extensions, extra work, permitting issues, actions of suppliers, subconsultants, actions by third parties, weather, weekends, holidays, or other such events, forces or factors sometimes experienced in this type of work, lost profits, prime mark-up on subcontractor work, acceleration costs, any and all direct and indirect costs, any other adverse impacts, events, conditions, circumstances or potential damages, on or pertaining to, or as to or arising out of the Contract. This waiver, release and acknowledgment of satisfaction shall be all- inclusive and absolute, save and except any routine City final estimating quantity adjustments.

Should the Consultant fail to actually complete the Contract and obtain final acceptance by the City prior to expiration of the Original Contract Time, or should the Consultant, having timely completed the Contract and obtained final acceptance by the City prior to expiration of the Original Contract Time but having failed to timely request the “incentive payment” for any reason, or to fully waive, release and acknowledge satisfaction as set forth in paragraph (3) above, the Consultant shall have no right to any payment whatsoever under this Article. Notwithstanding the Consultant’s election or non-election of the “incentive payment” under this provision, the disincentive provision applies to all circumstances where the work in the Contract is not finally accepted by the Allowable Contract Time.

Should the Consultant fail to complete the Contract on or before expiration of the Allowable Contract Time, as adjusted in accordance with the provisions herein, the City shall deduct \$3,000.00 for each calendar day completion exceeds the Allowable Contract Time, from the monies otherwise due the Consultant. The term “Allowable Contract Time” as used in this Article shall mean the Original Contract Time plus adjustments as allowed herein. This deduction shall be the disincentive for the Consultant’s failing to timely complete the Contract. Section II, “General Terms and Conditions,” Article 2.30, “Liquidated Damages for Failure to Perform” shall remain in effect and is applicable. **Note: Deductions will only be applied if the FDEP assesses fines against the city for non-compliance with the Consent Order.**

In the event the Consultant elects to exercise this “incentive payment” provision, should this provision conflict with any other provision of the Contract, the Contract shall be interpreted in accordance with this provision.

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Craven Thompson
& Associates, Inc.
3563 NW 53rd Street
Fort Lauderdale, Florida 33309

PREPARED FOR



IN ASSOCIATION WITH:

Hazen



REQUEST FOR QUALIFICATIONS WATER CONSENT ORDER PROGRAM MANAGEMENT AND MAPPING SERVICES

RFQ # 12665-1026

JUNE 27, 2022

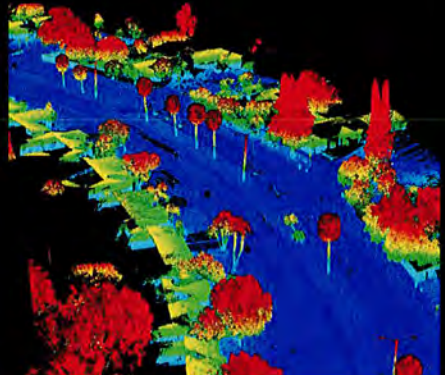
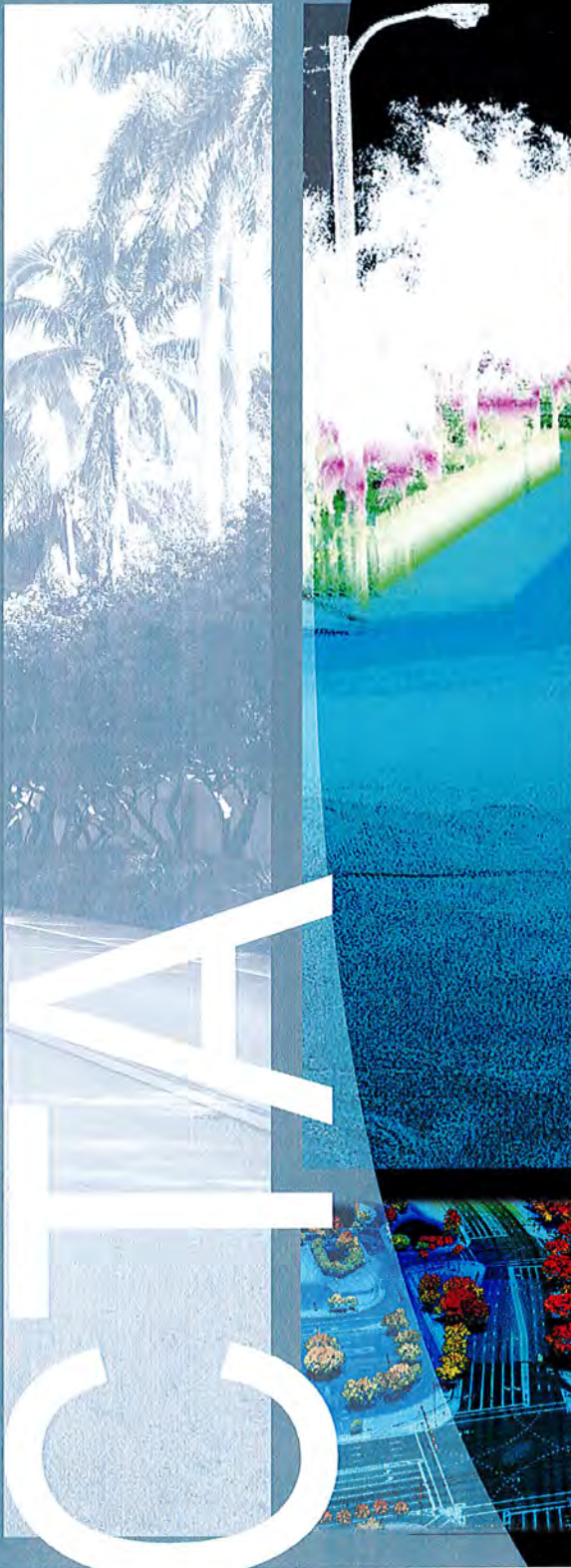


EXHIBIT D
Exhibit 2

LETTER OF INTEREST



June 27, 2022

Attn: Eric Martinez
Senior Procurement Specialist
City of Fort Lauderdale
Procurement Services Division
100 N. Andrews Avenue, 6th Floor
Fort Lauderdale, Florida 33301

**RE: WATER CONSENT ORDER PROGRAM MANAGEMENT AND MAPPING SERVICES
CITY RFQ # 12665-1026**

Mr. Martinez and Selection Committee Members:

Craven Thompson and Associates, Inc. is pleased to submit this Statement of Qualifications for your consideration in response to the **City of Fort Lauderdale's** Request for Qualifications for *"Water Consent Order Program Management and Mapping Services"*.

We understand the importance of the services required under this RFQ in meeting the City's obligations in the Water Consent Order from FDEP. Due to the limited timeframe to complete and certify the mapping of the water distribution system, we do not believe that meeting the July 24, 2023 deadline stipulated in the Consent Order is achievable under normal conditions, so we have provided two different approaches to the data collection process for the City to consider. One approach will renegotiate both the mapping plan and the timeframe that would be more cost-effective for the City, and a second approach that will meet the current timeframe, utilizing high-tech software, hardware, and personnel, but carries with it a more costly outcome. No matter which approach the City decides upon, it is our intent to expedite the mapping and certification process to the greatest extent possible.

Our team's relationship with the City and with FDEP will allow us to guide the project through the process and bring about a favorable outcome to both entities. We intend to utilize innovative, high tech, and time saving solutions to the various challenges of the project to reduce the project schedule and increase the efficiency of our effort.

Our preferred approach for consideration would be to revisit the water distribution mapping plan with the City and FDEP. We believe that the actual intent of the scope in the Consent Order differs significantly from the scope identified in the WGI water distribution system mapping plan. With a modified plan, which will meet the Consent Order intent, we can significantly reduce the overall time that it will take to complete and certify the system data collection and mapping.

Considering the condensed timeframe under which these services are to be performed, we assembled a team of consultants very familiar with the City of Fort Lauderdale. Craven Thompson as prime consultant, and Hazen and Sawyer, and Woolpert as major subconsultants constitute a team currently working on the Sanitary Sewer Consent Order program management, data collection & mapping (Hazen and Sawyer, Craven Thompson) and the implementation of the Cityworks Asset Management System (Woolpert) for the City of Fort Lauderdale. Each firm is a known entity to City staff and have a proven reliability and expertise with very similar tasks. We believe that this is a great asset to the City as they will not be subject to a "learning curve" as they will with other consultant teams.

We have also included a large number of survey/data collection and S.U.E. subconsultants for the project after a careful review of the WGI Water Mapping Plan and noting the size and complexity of the City's water assets. The required staffing levels necessitated the large number of survey/data collection and S.U.E. firms necessary to meet Consent Order requirements. The following is a list of the Craven Thompson Team members and their roles:

- **Craven & Thompson (Prime)**
Project Director, Survey Project Management, GIS / Data Collection, Subcontractor Coordination / Management

LETTER OF INTEREST



- **Hazen and Sawyer (Sub-consultant)** - Contract Program Management, Oversight of Valve Exercising Program, Reports and City / FDEP Coordination & Liaison
- **Woolpert, Inc. (Sub-consultant)** - GIS Coordination & Management/Data Collection/QA-QC/City Works Integration

Companies, Subconsultants, and Data Collection Responsibilities:

Company	Task 1	Task 2	Survey Crews
Craven, Thompson	Project Manager / Survey	Project Manager / GIS / Survey / Coordination	2 Survey
Hazen and Sawyer	Program Management	Program Management	N/A
Woolpert	Survey	GIS / Mobile-Aerial Lidar/ Subsurface Utility Mapping	2 Survey / S.U.E.
Keith & Associates	Survey	Mobile Lidar/ Subsurface Utility Mapping	2 Survey / S.U.E.
Surveying and Mapping (SAM)	Survey	Mobile Lidar/ Subsurface Utility Mapping	2 Survey / S.U.E.
Manuel G. Vera	Survey	Mobile Lidar/Subsurface Utility Mapping	2 Survey / S.U.E.
Craig A. Smith	Survey	Subsurface Utility Mapping	2 Survey / S.U.E.
Ritzel-Mason	Survey	Subsurface Utility Mapping	1 Survey / S.U.E.
InfraMap	Survey	Subsurface Utility Mapping	1 Survey / S.U.E.
Zeman Consulting	Survey	Subsurface Utility Mapping	1 Survey / S.U.E.
Gibbs Land Surveying	Survey		1 Survey
Stoner & Associates	Survey		2 Survey
McLaughlin Engi.	Survey		2 Survey
MOT Plans.com	Maintenance of Traffic	Maintenance of Traffic	3 Crews
Pure Technologies, dba Wachs Water Services (Xylem)	Valve Conditioning / Exercising		

Mr. Patrick J. Gibney, P.E. of Craven Thompson will serve as Project Director for this contract. He will have overall responsibility and authority over all personnel, both Craven Thompson and subconsultants, on this project. Mr. Gibney has been involved in managing a number of City of Fort Lauderdale projects over the past ten years.

Authorized Representative/Principal-In-Charge/Project Director:

Patrick J. Gibney, P.E., Vice President, Engineering, Craven Thompson & Associates, Inc.
Phone: (954) 739-6400 / Fax: (954) 739-6409 / Email: pgibney@craventhompson.com

Mr. Khamis Al-Omari, P.E. (Hazen and Sawyer) will act as the Program Manager under this contract. Mr. Al-Omari currently serves as the Program Manager for the City of Fort Lauderdale Sewer Design and Implementation Consent Order Program. He is responsible for the program budget, schedule controls, risk management, and reporting. Mr. Richard Pryce, P.S.M. of Craven Thompson will act as the Project Manager for this task as the primary focus of this RFQ is the survey/data collection and G.I.S. Mapping of the City's water system. Mr. Pryce managed these services for the mapping services under the Sanitary Sewer Consent Order, and also managed the survey/data collection and G.I.S. mapping of the City's stormwater assets as a subconsultant to Hazen and Sawyer for the City's Stormwater Master Plan.

We sincerely appreciate the opportunity of providing this response to the City of Fort Lauderdale and hope to continue to build upon the relationship we have with the City and staff.

Sincerely,

CRAVEN THOMPSON & ASSOCIATES, INC.

PATRICK J. GIBNEY, P.E.
Vice President, Engineering

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EXHIBIT D
Exhibit 2

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Section 4.2.2: Executive Summary

Section 4.2.2

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SECTION 4.2.2: EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

We understand the importance of the services required under this RFQ in meeting the City's obligations in the Water Consent Order from FDEP. Due to the limited timeframe to complete and certify the mapping of the water distribution system, we do not believe that meeting the July 24, 2023 deadline stipulated in the Consent Order is achievable under normal conditions so we have provided two different approaches to the data collection portion of the project for the City to consider as part of our submittal. One approach will renegotiate both the mapping plan and the timeframe that would be more cost effective for the City, and a second approach that will meet the current timeframe, utilizing high tech software, hardware, and personnel, but carries with it a more costly outcome.

We have enlisted a large number of subconsultants to provide surveying, mapping, and Level A and Level B Subsurface Utility Engineering (S.U.E.) Services as identified in the Water Distribution System Mapping Plan developed by WGI and accepted by the Florida Department of Environmental Protection (FDEP). This Craven Thompson Team along with major subconsultants, Hazen and Sawyer (Program Management), and Woolpert, Inc. (Mapping and G.I.S. integration) provides the City with the most highly qualified team with the greatest ability to deliver the project successfully. We are fully capable and willing to work with the City and FDEP to satisfy the intent of the Consent Order.

The Craven Thompson Team has worked together and separately on several successful projects for the City of Fort Lauderdale over the past ten years. The advantage of this team is that the City already knows our capabilities and the quality of our work and can rest assured that we will deliver what we commit to in the most efficient and cost-effective way possible. The Team members are very familiar with the City of Fort Lauderdale's requirements for program management, survey\GIS data collection, GIS processing, quality control, mapping, and maintaining the integrity of the GIS data due to our (Craven\Hazen) previous projects on the Sanitary and Storm Sewer systems and for Woolpert's work on the Cityworks Asset Management Software. We all take our work seriously and will be able to provide the city with a comfort level on our ability to complete and deliver what's needed for this project.

Achieving success on this project requires a team who fully understands the City's processes, distribution system, GIS, Cityworks, data models and asset management principles. This Craven Thompson Team not only meets all of those requirements, our team members have worked together on multiple projects, which will result in greater efficiency and effectiveness in working toward aggressive deadlines.

We have a clear line of sight of the required goals and objectives. In our approach, we describe our ability to partner with the City, which has been proven with our work on the Sewer Consent Program, to develop a Plan to transition active Consent Order projects without losing any of the momentum you have already built. We will continue to operate under a "right-sized" Program Management umbrella. This approach requires a large contingent of qualified surveyors, engineers, as well as project controls, GIS and Cityworks personnel who have experience successfully delivering projects in the Fort Lauderdale public works environment. Our team was specifically constructed to deliver such a talent pool to the City. This is not a project to learn on. It is a program that demands wealth of prior knowledge and experience.

Section 4.2.3: Firm Qualifications and Experience

Section 4.2.3

EXHIBIT D

Exhibit 2

FIRM QUALIFICATIONS AND EXPERIENCE

Craven Thompson & Associates, Inc. has worked with the City of Fort Lauderdale since the creation of the firm in 1962, sixty years ago. We have provided civil engineering, surveying, project management, landscape architecture, G.I.S. mapping, and construction services on the many projects we have successfully completed for the City. Our subconsultant, Hazen and Sawyer also has extensive experience with the City of Fort Lauderdale including many projects and programs where Hazen and Sawyer and Craven Thompson have teamed together to provide our joint expertise to the City.

In 2016, Hazen and Sawyer, was awarded the Stormwater Master Plan Modeling and Design Implementation Engineering Consulting Services by the City of Fort Lauderdale. Craven Thompson, providing subconsultant services to Hazen and Sawyer under this contract, performed a surveying and stormwater inventory/data collection task that involved providing detailed information about the land surface characteristics, the hydrographic features and the stormwater infrastructure throughout the City of Fort Lauderdale. Craven Thompson had aerial photogrammetry subconsultant, Pickett & Associates that developed a high-resolution aerial LiDAR survey of the City of Fort Lauderdale. Craven Thompson prepared an extensive vertical and horizontal GPS control network to an extremely high level of accuracy for the Lidar Survey. We also verified the accuracy of the LiDAR by performing traditional survey topographic checks of various points within the survey limits, as well as acquired the drainage inverts, and other pertinent vertical information not visible to the aerial photogrammetry. This included, but was not limited to: storm manholes, catch basins, junction boxes, culverts headwalls and pipe ends. Information such as pipe diameters, pipe materials, pipe geometrics, inverts, the existence of exfiltration trench and/or pollution retardant baffles, headwall treatment and materials, seawall locations and elevations, canal cross sections, drainage pumps, retention and detention area geometrics, and swale locations were obtained.

Using this information, we prepared Digital Elevation Models (DEM) from the Lidar for use in the stormwater modeling task. We also delivered the information obtained to the City in the original (.las) format and the final surface models in Geotiff format for use in ArcGIS.

In 2017, the City of Fort Lauderdale entered into Consent Order No. 16-1487 with the Florida Department of Environmental Protection (FDEP) to improve sanitary sewer service within the City. The City hired Hazen and Sawyer to act as program manager for the projects necessary under this Consent Order. Craven Thompson, as a subconsultant to Hazen and Sawyer was tasked with developing a Sanitary Sewer Mapping Plan for approval by FDEP, developing a network of high-accuracy survey benchmarks and performing survey-grade Global Position System (GPS) calibrations throughout the City, and finally, developing a complete map of the wastewater collection and transmission system for the entire City service area.

Incorporating the survey control established for the Stormwater project, Craven Thompson created City-Wide Benchmarks (BM) including the establishment of primary and secondary vertical control benchmarks around the perimeter and throughout each of the 52 designated Data Collection Zones (established by Craven Thompson). This project also utilized the same horizontal datum and coordinate system as the stormwater data collection, in order to keep all utilities relative to the same survey control within City limits. After establishing the primary and

SECTION 4.2.3: FIRM QUALIFICATIONS AND EXPERIENCE



secondary vertical control benchmarks, a concrete monument with a brass disc (stamped with the Data Collection Zone designation) was set at a central location within each data collection zone. A GPS Static Survey was performed with a minimum of four (4) hours of GPS satellite observations collected at 1-second intervals and processed through the National Geodetic Survey (NGS) Opus program to provide accurate horizontal positioning.

We then developed Global Positioning System (GPS) localized calibration networks for each of the 52 Data Collection Zones. This was accomplished by using the primary vertical control benchmarks surrounding each zone and occupying them until the Dilution of Precision (DOP) in both the Position (PDOP) and the Vertical (VDOP) levels is acceptable. Acceptable levels fall between levels 1 and 2 with highest precisions being closer to 1.

Craven Thompson then moved to the data collection phase of the sanitary sewer mapping. We completed the field data collection for approximately 5,917 sanitary manholes, 190 sanitary pump stations, 15 meters, and 80 miles of pressurized force mains. Craven Thompson updated the City sanitary sewer GIS geodatabase with data from accepted as-built drawings, field data collection, operation and maintenance markups, and as-built drawings. At the conclusion of the sanitary sewer mapping, we provided a written response to FDEP certifying that mapping of the existing sewer system was completed as required by the Consent Order.

Standard Form 330

See the attached Standard Form 330s for the prime and subconsultants.

ARCHITECT - ENGINEER QUALIFICATIONS**PART I - CONTRACT-SPECIFIC QUALIFICATIONS****A. CONTRACT INFORMATION**

1. TITLE AND LOCATION (City and State)

Water Consent Order Program Management and Mapping Services, Fort Lauderdale, Florida

2. PUBLIC NOTICE DATE

April 22, 2022

3. SOLICITATION OR PROJECT NUMBER

RFQ No. 12665-1026

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE

Richard D. Pryce, P.S.M., Vice President, Surveying & G.I.S.

5. NAME OF FIRM

Craven Thompson & Associates, Inc.

6. TELEPHONE NUMBER

(954) 739-6400

7. FAX NUMBER

(954) 739-6409

8. E-MAIL ADDRESS

rpryce@craventhompson.com

C. PROPOSED TEAM

(Complete this section for the prime contractor and all key subcontractors.)

	(Check)			9. FIRM NAME <input type="checkbox"/> CHECK IF BRANCH OFFICE	10. ADDRESS	11. ROLE IN THIS CONTRACT
	PRIME	JOINT VENTURE	SUBCONTRACTOR			
a.	X			Craven Thompson & Assoc. <input type="checkbox"/> CHECK IF BRANCH OFFICE	3563 NW 53 rd Street Fort Lauderdale, Florida, 33309	Survey Project Management, GIS / Data Collection, Sub Coord. / Mgt.
b.			X	Hazen and Sawyer <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	999 Ponce de Leon Blvd., # 1150 Coral Gables, Florida 33431	Program Management
c.			X	Hazen and Sawyer <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	7870 E. Kemper Road, #300 Cincinnati, Ohio 45249	Program Management
d.			X	Hazen and Sawyer <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	One S. Street, #1150 Baltimore, MD 21202	Program Management
e.			X	Woolpert, Inc. <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	6100 Blue Lagoon Dr., #440 Miami, Florida 33126	GIS Coordination/ QA-QC / City Works Integration / Management
f.			X	Keith and Associates <input type="checkbox"/> CHECK IF BRANCH OFFICE	301 East Atlantic Blvd. Pompano Beach, Florida 33060	Surveying, Mobile LiDAR, S.U.E. Services
g.			X	Surveying and Mapping (SAM) <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	1800 Pembroke Drive, Suite 300 Orlando, Florida 32810	Surveying, Mobile LiDAR, S.U.E. Services
h.			X	Surveying and Mapping (SAM) <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	2844 Pablo Avenue Tallahassee, Florida 32308	Surveying, Mobile LiDAR, S.U.E. Services
i.			X	Manuel G. Vera & Assoc. <input type="checkbox"/> CHECK IF BRANCH OFFICE	13960 SW 47 th Street Miami, Florida 33175	Surveying, Mobile LiDAR, S.U.E. Services
j.			X	Craig A. Smith & Associates <input type="checkbox"/> CHECK IF BRANCH OFFICE	21045 Commercial Trail Boca Raton, Florida 33486	Surveying & S.U.E. Services
k.			X	Ritzel-Mason <input type="checkbox"/> CHECK IF BRANCH OFFICE	5119 Beachwood Road Delray Beach, Florida 33484	Surveying & S.U.E. Services
l.			X	InfraMap Corp. <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	1100 N. Florida Mango Road, #D West Palm Beach, Florida 33409	Surveying & S.U.E. Services
m.			X	Zeman Consulting Group <input type="checkbox"/> CHECK IF BRANCH OFFICE	3970 RCA Blvd., Suite 7750 Palm Beach Gardens, FL 33410	Surveying & S.U.E. Services
n.			X	Gibbs Land Surveyors <input type="checkbox"/> CHECK IF BRANCH OFFICE	2131 Hollywood Blvd., #204 Hollywood, Florida 33020	Surveying Services
o.			X	Stoner & Associates <input type="checkbox"/> CHECK IF BRANCH OFFICE	4341 SW 62 nd Avenue Davie, Florida 33314	Surveying Services
p.			X	McLaughlin Engineering <input type="checkbox"/> CHECK IF BRANCH OFFICE	1700 NW 64 th Street, Suite 400 Fort Lauderdale, Florida 33309	Surveying Services
q.			X	MOTPlans.Com <input type="checkbox"/> CHECK IF BRANCH OFFICE	631 NE 45 th Street Oakland Park, Florida	Maintenance of Traffic
r.			X	WachsWater (a Xylem brand) <input type="checkbox"/> CHECK IF BRANCH OFFICE	8920 State Route 108, Suite D Columbia, MD 21045	Valve Conditioning / Exercising

D. ORGANIZATIONAL CHART OF PROPOSED TEAM☒ (Attached)

STANDARD FORM 330

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EXHIBIT D
Exhibit 2

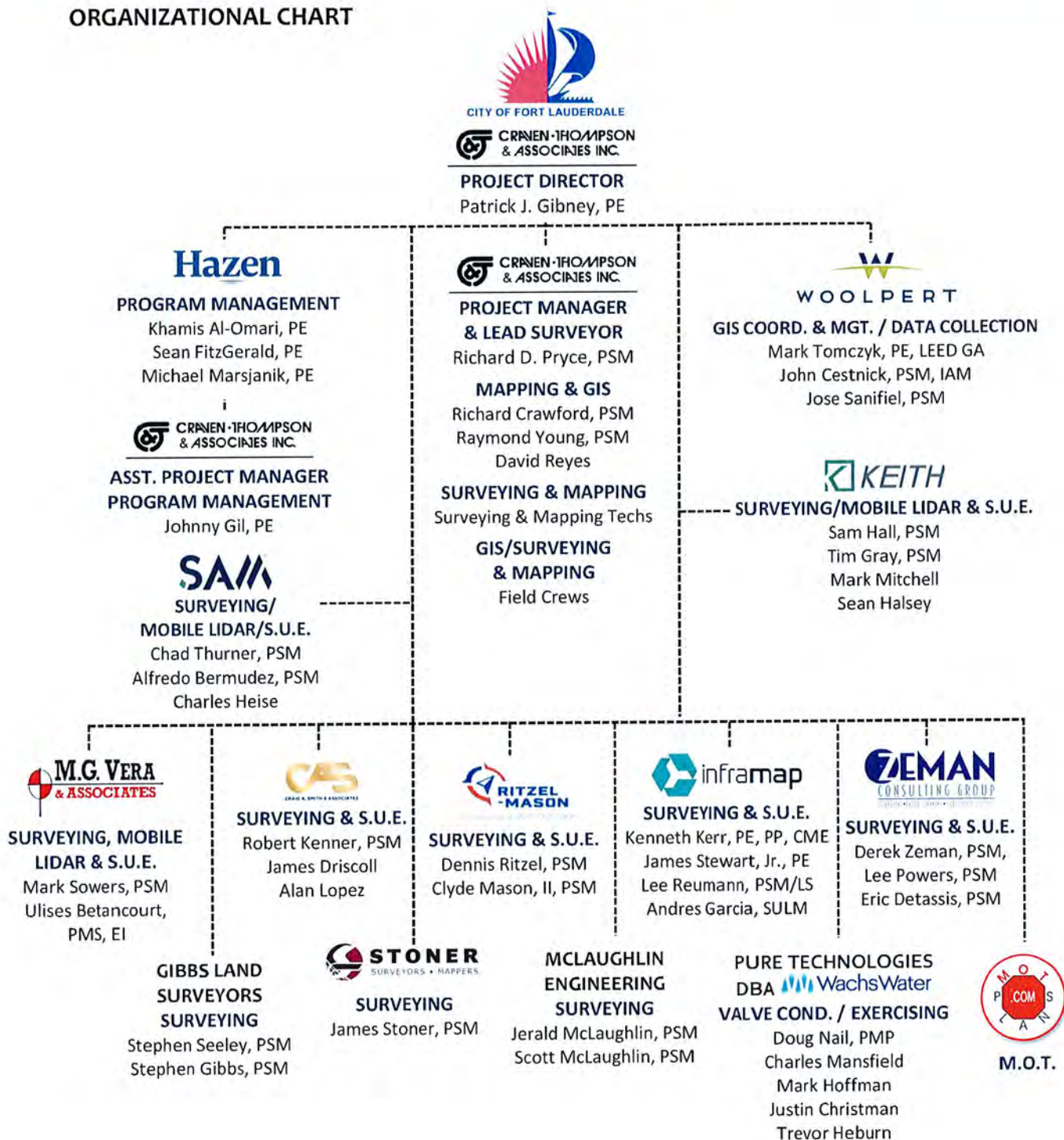
CAM #22-1089

Exhibit 5B

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PART I - CONTRACT-SPECIFIC QUALIFICATIONS

ORGANIZATIONAL CHART



E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME Patrick J. Gibney, P.E.	13. ROLE IN THIS CONTRACT Project Director	14. YEARS EXPERIENCE <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; border-bottom: 1px solid black;">a. TOTAL</td> <td style="width: 50%; border-bottom: 1px solid black;">b. WITH CURRENT FIRM</td> </tr> <tr> <td style="text-align: center;">35</td> <td style="text-align: center;">29</td> </tr> </table>		a. TOTAL	b. WITH CURRENT FIRM	35	29
a. TOTAL	b. WITH CURRENT FIRM						
35	29						
15. FIRM NAME AND LOCATION (City and State) Craven Thompson & Associates, Inc., 3563 NW 53 rd Street, Fort Lauderdale, Florida 33309							
16. EDUCATION (DEGREE AND SPECIALIZATION) Rutgers, The State University, Bachelor of Science, Civil Engineering (1987)		17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Engineer - Florida No. 49428 (1995)					
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) American Society of Civil Engineers, FDOT Pre-Qualified Roadway Construction Engineering Inspection							

19. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
	Eastside Master Infrastructure Project – Phases 2 & 3 Davie, Florida		2015	2018
a.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Gibney managed the project which included: 5,075 linear feet of 8" watermain, 5,140 linear feet of 12" watermain, 11,455 linear feet of 8" sanitary gravity sewer, 2,945 linear feet of 16" sanitary forcemain, 18,940 linear feet of storm sewer, 41,000 square yards of swale regrading, and over 20,000 SY of roadway reconstruction.			
	Installation of New Redundant Bypass Line (Zone 4B & 4C) – 54" FM, Fort Lauderdale, Florida		2020	2021
b.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Director - The project involved the installation of 54" nominal OD HDPE Force Main by Horizontal Directional Drill (HDD), with sections of open cut trench installation of 16" HDPE Force Main. The total length of Horizontal Directional Drill (HDD) 54" OD HDPE Force Main is 3,223 Linear Feet in length which was proposed to minimize the disturbance to the community and limit the amount of pavement restoration, with an additional 653 Linear Feet of 16" HDPE Force Main installed by open cut trench.			
	Las Olas Watermain and Forcemain Design Criteria Package Fort Lauderdale, Florida		2015	2016
c.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The purpose of this \$3.1 Million project, completed in December 2016, was to deepen a critical 20-inch water main crossing of the ICW along with adding a new 16-inch sewage force main to enhance system reliability.			
	Pump Station A-13 & Sewer Redirection East of Federal Highway Fort Lauderdale, Florida		2015	2019
d.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm This project was for the construction of Lift Station A-13, located at the southeast corner of Southeast 2 nd Court and Southeast 8 th Avenue. The project scope included the construction of an 18-inch diameter gravity sanitary sewer system and the connection to an existing active sanitary sewer manhole located at the intersection of Federal Highway and Broward Boulevard to the new lift station.			
	South Middle River Force Main Crossing – 16" Redundant Pipe Fort Lauderdale, Florida		2020 - 2021	2020 - 2021
e.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Director - The project involved the installation of 16" nominal OD HDPE Force Main under the South Middle River Waterway, with sections of open cut trench installation of 16" PVC Force Main. The total length of subaqueous crossing of 16" HDPE Force Main is 1092 Linear Feet (LF) in length, with an additional 832 Linear Feet (LF) of 16" PVC Force Main installed by open cut trench.			



STANDARD FORM 330
4.2.3 | Page 5

EXHIBIT D
Exhibit 2

CAM #22-1089
Exhibit 5B
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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person.)

12. NAME Richard D. Pryce, P.S.M.	13. ROLE IN THIS CONTRACT Project Manager GIS, Surveying, Data Collection & Mapping	14. YEARS EXPERIENCE	
		TOTAL 49	b. WITH CURRENT FIRM 16
15. FIRM NAME AND LOCATION (City and State) Craven Thompson & Associates, Inc., 3563 NW 53 rd Street, Fort Lauderdale, Florida 33309			
16. EDUCATION (DEGREE AND SPECIALIZATION) Certificate in advanced GIS & Remote Sensing, BCC (2002) Advanced ESRI ARCINFO & ARCIMS Training (ESRI,) 2004		17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Surveyor and Mapper Florida No. 4038 (1983)	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) - Chairman FSMS GIS Committee - State & County Chapters, Florida Surveying & Mapping Society			

19. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
a.	Fort Lauderdale Sanitary Sewer Mapping - GIS and Surveying Fort Lauderdale, Florida	2018 - 2019	Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Principal Survey /GIS Manager. Responsible for establishing Primary and Secondary Vertical Control with over 3000 new benchmarks for Sanitary Sewer Mapping of the City, including As-built/Inventory 5,917 Sanitary Manholes, 190 pump Stations, 15 meters, and 80 miles of force mains and their associated valves.		
b.	Fort Lauderdale Stormwater Master Plan – GIS and Surveying Fort Lauderdale, Florida	2016 - 2017	Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Principal Survey Manager. Responsible for LiDAR of the City, As-built/Inventory 5,400 Stormwater Features for GIS Model. Collected and evaluated 5,400 storm structures with Rims, Inverts, Pipe Size, material, and research As-built records of the city in the Stormwater system and provide the data in ArcGIS Geodatabase.		
c.	Seminole Tribe of Florida Stormwater Data Collection/GIS Hollywood, Florida	2020-2021	Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Survey Project Manager – Craven Thompson updated the Tribe's stormwater GIS information through entering as-built data, and surveying the hundreds of stormwater/drainage structures located on the reservation. During the data collection phase, the GPS locations of structures, canals, retention areas and ditches were captured with X-Y-Z coordinate values in the data collector. In addition, details such as pipe sizes, material, inverts, weirs, and structure condition were obtained in the field.		
d.	City of North Miami Beach Water & Sewer GIS North Miami Beach, Florida	2014 - 2016	Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The purpose of the 25,600-Acre Service Area Project was to provide the city with the complete GIS product of their water and sanitary system. This involved the conversion of the City's existing water and sanitary sewer infrastructure, from an AutoCAD drawing file format to the industry standard, Environmental Systems Research Institute (ESRI) Geographic Information System (GIS) format.		
e.	Stormwater GIS/Data Collection Project North Miami Beach, Florida	2017 - 2018	Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The City is divided into six (6) zones and that structure/pipe data was collected within each zone and identified by zone and structure numbers. GIS data was collected and processed utilizing the City's existing Unit ID naming system in the geodatabase. The Craven Thompson data was collected by a Unique ID. We provided the City with a copy of the updated geodatabase with all the proposed data fields to be collected for review. The GIS data collected consisted of: Structure type (junction, inlet, control structure, drainage well): Pipes, Culvert and Outfalls, and Headwalls and Seawalls.		



E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person.)

12. NAME Richard G. Crawford, Jr., P.S.M.	13. ROLE IN THIS CONTRACT GIS, Surveying, Data Collection & Mapping	14. YEARS EXPERIENCE	
		TOTAL 37	b. WITH CURRENT FIRM 1
15. FIRM NAME AND LOCATION (City and State) Craven Thompson & Associates, Inc., 3563 NW 53 rd Street, Fort Lauderdale, Florida 33309			
16. EDUCATION (DEGREE AND SPECIALIZATION) Associates of Science in Land Surveying (1994) Associates of Arts in Architecture (1986)		17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Surveyor and Mapper Florida No. LS5371 (1994)	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Florida Surveying & Mapping Society - Broward Chapter			

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (City and State) Sanitary Sewer Mapping - Control Surveying Fort Lauderdale, Florida	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2019	CONSTRUCTION (If applicable) Not Applicable
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE: <input type="checkbox"/> Check if project performed with current firm a. Survey Project Manager - Responsible for establishing Primary and Secondary Vertical Control with over 3,000 new benchmarks for Sanitary Sewer Mapping of the City, including As-built/Inventory 5,917 Sanitary Manholes, 190 pump Stations, 15 meters, and 80 miles of force mains and their associated valves. (Mr. Crawford worked on this project while employed by another company, as a subconsultant to Craven Thompson).		
(1) TITLE AND LOCATION (City and State) Citywide Benchmarks Pompano Beach, Florida	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2014 - 2015	CONSTRUCTION (If applicable) Not Applicable
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE: <input type="checkbox"/> Check if project performed with current firm b. Survey Project Manager - Responsible for establishing Primary and Secondary Vertical First Order Control to establish new city benchmarks to support a Storm Drainage Study.		
(1) TITLE AND LOCATION (City and State) Modeling and Design Implementation of Stormwater Master Plan Fort Lauderdale, Florida	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2014 - 2015	CONSTRUCTION (If applicable) Not Applicable
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE: <input type="checkbox"/> Check if project performed with current firm c. Project Surveyor - Responsible for directing survey data collection, GIS analysis, and assisting others team members. Provided oversight for field data acquisition of storm water infrastructure attributes needed to populate an existing GIS Database. (Mr. Crawford worked on this project while employed by another company, as a subconsultant to Craven Thompson).		
(1) TITLE AND LOCATION (City and State) FDOT, District 4 and District 6 Districtwide Miscellaneous Services Contract, South Florida	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 1993 - 2005	CONSTRUCTION (If applicable) Not Applicable
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE: <input type="checkbox"/> Check if project performed with current firm d. Project Surveyor - Supervised a wide variety of land surveying assignments throughout Southeast Florida region as a Project Surveyor in responsible charge. Utilized GNSS, and conventional land surveying techniques to perform digital terrain modeling, subsurface utility locations (SUE), boundary determinations, sewage infrastructure analysis, bridge details, control surveys, and right-of-way establishment.		
(1) TITLE AND LOCATION (City and State) Broward County UAZ 110 / 111 & 113 Water Sewer Improvements 113B, Lauderhill, Florida	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2018 - 2019	CONSTRUCTION (If applicable) Not Applicable
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE: <input type="checkbox"/> Check if project performed with current firm e. Project Surveyor/Field Coordinator - Mapping, Field Coordination, Survey Data Processing. Responsible for establishing Primary and Secondary Vertical Control for Drone Mapping including flying, and processing drone data.		



E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person.)

12. NAME Raymond Young, P.S.M.	13. ROLE IN THIS CONTRACT GIS, Surveying, Data Collection & Mapping	14. YEARS EXPERIENCE	
		TOTAL 41	b. WITH CURRENT FIRM 29
15. FIRM NAME AND LOCATION (City and State) Craven Thompson & Associates, Inc., 3563 NW 53 rd Street, Fort Lauderdale, Florida 33309			
16. EDUCATION (DEGREE AND SPECIALIZATION)		17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Surveyor and Mapper Florida No. 5799	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Florida Society of Professional Surveyors and Mappers			

19. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
a.	Fort Lauderdale Sanitary Sewer System GIS & Surveying Fort Lauderdale, Florida	2018 - 2019	Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Craven Thompson established Primary and Secondary Vertical Control with over 3,000 new benchmarks for Sanitary Sewer Mapping of the City, including As-built/Inventory of Manholes, Pump Stations, meters, valves, air valves and 80 miles of force mains.		
b.	Nova Southeastern University – Parking Garage Construction Layout Davie, Florida	2018 - 2019	Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Surveyor. Craven Thompson calculated the position of, and field staked seventy-seven (77) pilings for the parking garage at NSU. We placed a 60d nail or 5/8" iron rod at the center of each piling.		
c.	Hydrographic and Storm Water Infrastructure Survey Greenacres, Florida	2014	Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager. Along with our sub-consultant, Craven Thompson created a survey from high-resolution, low-level LiDAR and ground surveying. The survey included roadways and canal cross-sections for proposed Drainage Improvements. Also, included Right-of-way surveys, storm drains, canals and ditches along 1 st Street in the Original Section area of the City of Greenacres and a portion of Lake Worth Canal E-3 (cross sectioned).		
d.	City of North Miami Beach Water & Sewer GIS North Miami Beach, Florida	2014 - 2016	Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project surveyor/GIS. Data Collection and G.I.S. Specialist - The purpose of the 25,600 Acre Service Area Project was to provide the city with the complete GIS product of their water and sanitary system. This involved the conversion of the City's existing water and sanitary sewer infrastructure, from an AutoCAD drawing file format to the industry standard, Environmental Systems Research Institute (ESRI) Geographic Information System (GIS) format.		
e.	Seminole Tribe of Florida Stormwater Data Collection/GIS Hollywood, Florida	2020 - 2021	Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project surveyor/GIS - Craven Thompson updated the Tribe's stormwater GIS information through entering as-built data, and surveying the hundreds of stormwater/drainage structures located on the reservation. During the data collection phase, the GPS locations of structures, canals, retention areas and ditches were captured with X-Y-Z coordinate values in the data collector. In addition, details such as pipe sizes, material, inverts, weirs, and structure condition were obtained in the field.		



E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person.)

12. NAME David Reyes	13. ROLE IN THIS CONTRACT G.I.S., Surveying, Data Collection & Mapping	14. YEARS EXPERIENCE	
		TOTAL 28	b. WITH CURRENT FIRM 8
15. FIRM NAME AND LOCATION (City and State) Craven Thompson & Associates, Inc., 3563 NW 53 rd Street, Fort Lauderdale, Florida 33309			
16. EDUCATION (DEGREE AND SPECIALIZATION) Multiple Continuing Education programs in Surveying, GIS, and Mapping technologies.		17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Certified Survey Technician Level III, FL, 2003 FDOT Maintenance of Traffic, FL	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)			

19. RELEVANT PROJECTS

a.	(1) TITLE AND LOCATION (City and State) Fort Lauderdale Sanitary Sewer System GIS & Surveying Fort Lauderdale, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2018 - 2019	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Craven Thompson established Primary and Secondary Vertical Control with over 3,000 new benchmarks for Sanitary Sewer Mapping of the City, including As-built/Inventory of Manholes, Pump Stations, meters, valves, air valves and 80 miles of force mains.		
b.	(1) TITLE AND LOCATION (City and State) Seminole Tribe of Florida Stormwater Data Collection/GIS Hollywood, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2020 - 2021	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Data Collection and G.I.S. Specialist -. Craven Thompson updated the Tribe's stormwater GIS information through entering as-built data, and surveying the hundreds of stormwater/drainage structures located on the reservation. During the data collection phase, the GPS locations of structures, canals, retention areas and ditches were captured with X-Y-Z coordinate values in the data collector. In addition, details such as pipe sizes, material, inverts, weirs, and structure condition were obtained in the field.		
c.	(1) TITLE AND LOCATION (City and State) Fort Lauderdale Storm Water Master Plan - GIS & Surveying Fort Lauderdale, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2016 - 2017	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Data Collection and G.I.S. Specialist - Responsible for LiDAR of the City, As-built/Inventory 5,400 Stormwater Features for GIS Model. Collected and evaluated 5,400 storm structures with Rims, Inverts, Pipe Size, material, and research As-built records of the city in the Stormwater system and provide the data to the City in ArcGIS Geodatabase.		
d.	(1) TITLE AND LOCATION (City and State) Stormwater GIS/Data Collection Project North Miami Beach, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2017 - 2018	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Data Collection and G.I.S. Specialist - The City is divided into six (6) zones and that structure/pipe data was collected within each zone and identified by zone and structure numbers. GIS data was collected and processed utilizing the City's existing Unit ID naming system in the geodatabase. The Craven Thompson data was collected by a Unique ID. We provided the City with a copy of the updated geodatabase with all the proposed data fields to be collected for review.		
e.	(1) TITLE AND LOCATION (City and State) City of North Miami Beach Water & Sewer GIS North Miami Beach, Florida	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2014 - 2016	CONSTRUCTION (If applicable) Not Applicable
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Data Collection and G.I.S. Specialist - The purpose of the 25,600 Acre Service Area Project was to provide the city with the complete GIS product of their water and sanitary system. This involved the conversion of the City's existing water and sanitary sewer infrastructure, from an AutoCAD drawing file format to the industry standard, Environmental Systems Research Institute (ESRI) Geographic Information System (GIS) format.		



E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person.)

12. NAME Johnny Gil, P.E.	13. ROLE IN THIS CONTRACT Assistant Program Manager	14. YEARS EXPERIENCE	
		TOTAL 12	b. WITH CURRENT FIRM 7
15. FIRM NAME AND LOCATION (City and State) Craven Thompson & Associates, Inc., 3563 NW 53 rd Street, Fort Lauderdale, Florida 33309			
16. EDUCATION (DEGREE AND SPECIALIZATION) Masters of Science, Civil Engineering - Structures (2010) Bachelor of Science, Civil Engineering (2008)		17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Civil Engineering, State of Florida No. 78613 (2015)	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Technical Skills: AutoCAD Civil 3D, Microstation, GTSTRUDL, STAAD, ETABS, MathCAD, Matlab, Primavera, Project Planner, Microsoft PowerPoint, Advanced Excel Programming, Word, ICPR3, Cascade			

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
a. City of Fort Lauderdale Wastewater Consent Order Program (OGC No 16-1487) – Program Management Services, Fort Lauderdale	2019	Present
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Responsibilities include periodically gathering project status information, producing monthly progress reports, and Semi-Annual Reports, maintaining and consistently updating the overall Consent Order Program Master Schedule, recording and archiving of project completion and certification documentation, coordinating presentation graphics, assembling program status updates, drafting project notifications for project completions and Milestone achievements to the Florida Department of Environmental Protection (FDEP).		
b. Project Delivery Plan - Bid Package 10 Oakland Park, Florida	2012-2014	2012-2014
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Responsible for the layout, replacement and upgrade design of approximately 10,000 LF of water main and 2,000 LF of force main throughout the City of Oakland Park. Design required coordination with existing utilities and permitting with City, County and State Agencies.		
c. City of Miami Gardens, Vista Verde Drainage Design Miami Gardens, Florida	2013-2014	2015
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Responsible for creating a drainage model of the Vista Verde Neighborhood and preparing a complete set of drainage plans and cost estimate. Design included pipe sizing, grading and coordination with concurrent Dade County water main installation.		
d. Floranada Road Roundabout and Traffic Calming Improvements City of Oakland Park, Florida	2013 - 2014	2015
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Engineer - Assisted project manager in preparation of contract documents, including revisions to plans and quantity take-offs.		
e. NE 38 th Street Complete Streets Project Oakland Park, florida	2011	2015
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Assisted project manager coordination for Complete Street LAP funded improvements through FDOT. Prepared preliminary roadway design plans, including quantity take-offs.		



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 1
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21. TITLE AND LOCATION (CITY AND STATE) Fort Lauderdale Sanitary Sewer System GIS & Surveying Fort Lauderdale, Florida		22. YEAR COMPLETED PROFESSIONAL SERVICES 2018-2019 (Data Collection)		CONSTRUCTION (If applicable) Not Applicable
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23. PROJECT OWNER'S INFORMATION				
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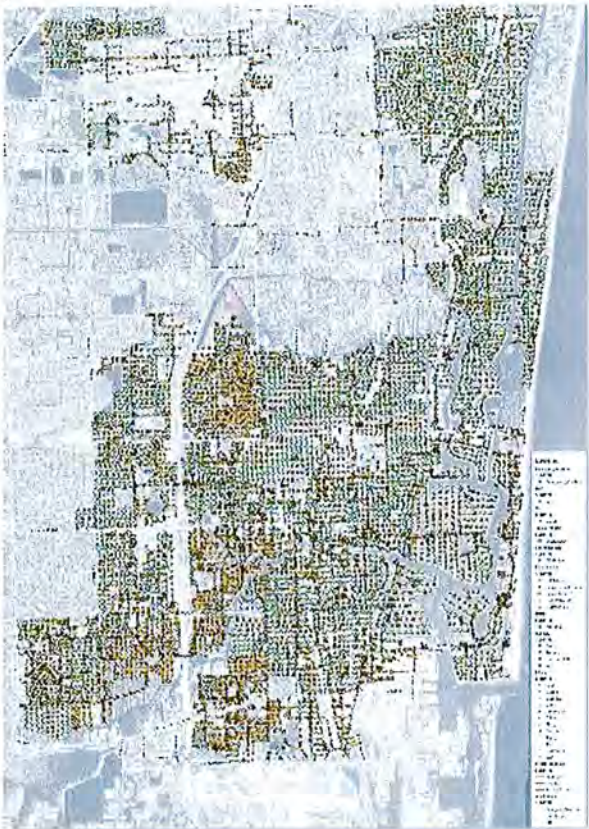
a. PROJECT OWNER City of Fort Lauderdale (Owner) Hazen & Sawyer (Client)		b. POINT OF CONTACT NAME Mr. Jorge Holguin, Sr. Project Mgr. Ms. Patricia Carney, V.P.	c. POINT OF CONTACT TELEPHONE NUMBER (954) 828-5675 / jholguin@fortlauderdale.gov (954) 987-0066 / pcarney@hazenandsawyer.com	
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT <i>(Include scope, size, and cost)</i>				
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Craven Thompson established Primary and Secondary Vertical Control with over 3,000 new benchmarks for Sanitary Sewer Mapping of the City, including As-built/Inventory of Manholes, pump Stations, meters, valves, air valves and 80 miles of force mains. During Sewer Mapping Phase I, the Benchmarks and GPS Control monuments were established for each of the 52 Data Collection Zones (DCZ). The benchmarks and monuments were utilized with a GPS base station during the feature data acquisition phase. Phase II included multiple feature data acquisitions for the City's GIS System and for certain areas to be thoroughly modeled. The data acquisition features collected as part of this Phase included 5908 manholes, 190 Pump Stations, 15 Meters, and 80 miles of pressure pipes with 752 valves and 285 Air release valves.

The initial work on this phase focused on the 5,908 manholes identified under Phase I. These features required the most of the field work and acquisition time. The manholes were divided into two categories, those that needed to be modeled completely, including 1,163 manholes which needed complete horizontal and vertical as-built information inside and out, and another 4,745 manholes which need only a minimum of horizontal and vertical information, being the rim and the inside bottom of structure.

Craven Thompson collected and updated manhole GIS geodatabase. We utilized the Trimble Terraflex program to extract the database fields from the GIS manhole feature class inside of an electronic data collector (Samsung or Ipad) for collecting the structure and pipe information inside of each manhole, pump stations and valve vaults.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
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a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Sub-consultant – G.I.S./Surveying & Mapping
b.	(1) FIRM NAME Hazen & Sawyer	(2) FIRM LOCATION <i>(City and State)</i> 4000 Hollywood Blvd., Suite 750-N Hollywood, Florida 33021	(3) Role Prime - Program Manager for Consent Order
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 2
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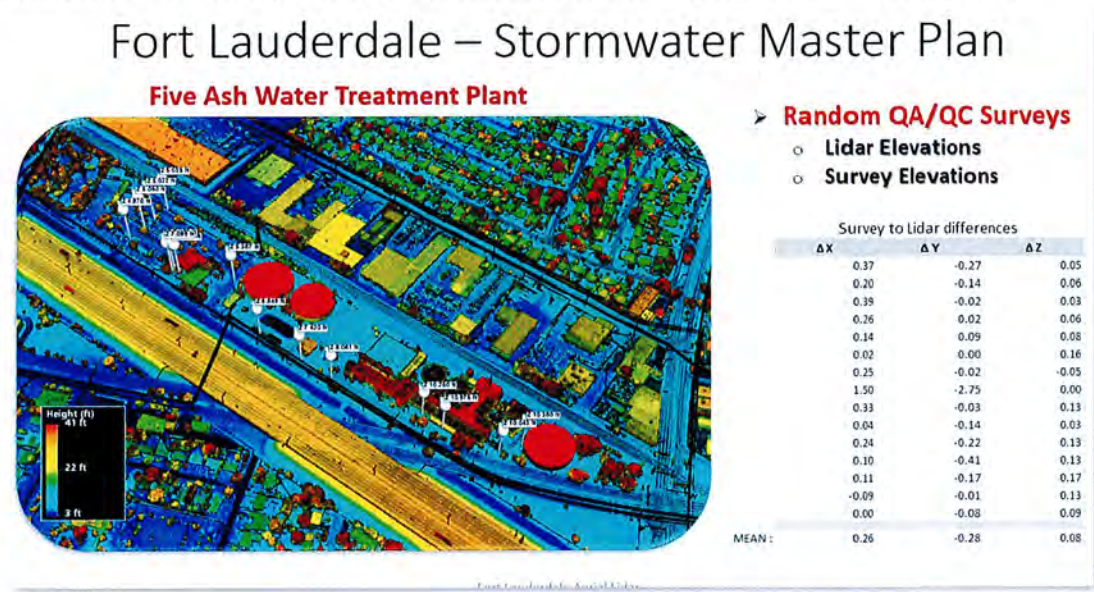
21. TITLE AND LOCATION (CITY AND STATE) Fort Lauderdale Storm Water Master Plan - GIS & Surveying Fort Lauderdale, Florida		22. YEAR COMPLETED PROFESSIONAL SERVICES 2016 - 2017 (Data Collection)	CONSTRUCTION (If applicable) Not Applicable
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23. PROJECT OWNER'S INFORMATION		
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a. PROJECT OWNER City of Fort Lauderdale (Owner) Hazen & Sawyer (Client)	b. POINT OF CONTACT NAME Mr. Rares Petrica, PE, Sr. Project Mgr. Ms. Patricia Carney, V.P.	c. POINT OF CONTACT TELEPHONE NUMBER (954) 828-6720 / Rpetrica@fortlauderdale.gov (954) 987-0066 / pcarney@hazenandsawyer.com
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Craven Thompson performed surveying, and an As-built/Inventory 5,400 Stormwater Features for GIS City-Wide Stormwater Model. The survey limits of this project are described as the entire City limits of Fort Lauderdale. The City was flown with high density aerial LIDAR to a vertical accuracy of 0.15 feet across the entire City. From the Lidar we created a 2-foot grid Digital Elevation Model of the ground for modeling drainage flow. This required a GPS Control Network, and 309 ground control for the flight, performed over 5,000 verification shots on hard surfaces at major roadways across the city. The second part of this survey was to collect and evaluate 5,400 storm structures with Rims, Inverts, Pipe Size, material, and research As-built records of the City in the Stormwater system and provide the data to the City in ArcGIS Geodatabase conforming to their GIS Model Schema.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Sub-consultant – G.I.S./Surveying & Mapping
b.	(1) FIRM NAME Hazen & Sawyer	(2) FIRM LOCATION <i>(City and State)</i> 4000 Hollywood Blvd., Suite 750-N Hollywood, Florida 33021	(3) Role Prime - Stormwater Master Plan Development
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 3
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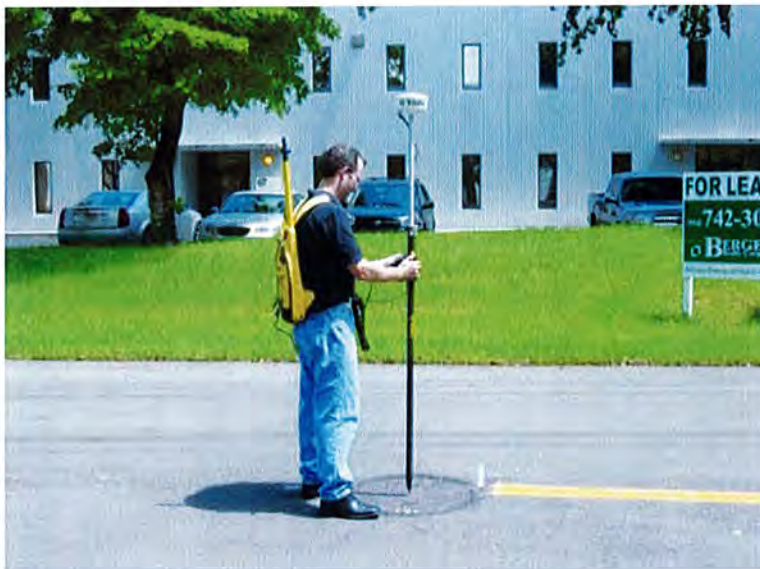
21. TITLE AND LOCATION (CITY AND STATE) Stormwater GIS/Data Collection Project North Miami Beach, Florida		22. YEAR COMPLETED PROFESSIONAL SERVICES 2017 - 2018 (Data Collection)	CONSTRUCTION (If applicable) Not Applicable
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23. PROJECT OWNER'S INFORMATION		
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a. PROJECT OWNER City of North Miami Beach	b. POINT OF CONTACT NAME Mr. D. Chidi Tobias Civil Engineer	c. POINT OF CONTACT TELEPHONE NUMBER Phone: (305) 947-7581 ext. 2313 Email: Chidi.Tobias@citynmb.com
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT <i>(Include scope, size, and cost)</i>

The City is divided into six (6) zones and that structure/pipe data was collected within each zone and identified by zone and structure numbers. GIS data was collected and processed utilizing the City's existing Unit ID naming system in the geodatabase. The Craven Thompson data was collected by a Unique ID. Craven Thompson provided the City with a copy of the updated geodatabase with all the proposed data fields to be collected for review. The GIS data collected consists of: Structure type (junction, inlet, control structure, drainage well); Pipes, Culvert and Outfalls, and Headwalls and Seawalls.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT		
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a.	(1) FIRM NAME Craven Thompson & Associates, Inc.	(2) FIRM LOCATION <i>(City and State)</i> 3563 NW 53 rd Street Fort Lauderdale, Florida 33309	(3) Role Prime - G.I.S/Surveying & Mapping
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
c.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role
d.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) Role

