

**DEPARTMENT OF THE ARMY
CONSENT TO EASEMENT
TO USE CORPS OF ENGINEERS RIGHT-OF-WAY**

Consent No. DACW17-9-16-0163
Project: Intracoastal Waterway,
Jacksonville to Miami,
Broward County, Florida
Tract Nos. 1102 and 16400E

THIS CONSENT TO EASEMENT AGREEMENT, made by and between the **UNITED STATES OF AMERICA, DEPARTMENT OF THE ARMY**, hereinafter referred to as the "Government", acting by and through the District Chief of Real Estate, Real Estate Contracting Officer, U.S. Army Corps of Engineers, Jacksonville District, hereinafter referred to as "said officer," and the **CITY OF FORT LAUDERDALE, FLORIDA** hereinafter referred to as the "Grantee":

WHEREAS, the Government has acquired a right-of-way easement over the above-numbered tracts of land, which easement, by its terms, reserves to the Government, in perpetuity, the right to use said easement for the construction, improvement, and maintenance of the Intracoastal Waterway, Jacksonville to Miami, Broward County, Florida; and

WHEREAS, the Grantee has requested permission to install, use, maintain, repair, remove, and replace a 20-inch diameter water main and 16-inch diameter wastewater force main in, on, across, over, and under a portion of the lands identified as Tract Nos. 1102 and 16400E, Section 12, Township 50 South, Range 42 East, Broward County, Florida. The area comprising 0.23 of an acre, more or less, is shown in red on Exhibit "A" attached hereto and made a part hereof.

NOW THEREFORE, this consent is granted and accepted under the following conditions:

1. That it is understood that this consent is effective only insofar as the property rights of the Government in the land to be occupied are concerned and that it does not relieve the Grantee from the necessity of obtaining grants from the owners of the fee and/or other interests, therein, nor does it obviate the requirement that the Grantee obtain State or local assent required by law for the activity authorized herein.
2. That any proposed improvements or use authorized herein shall not be commenced until appropriate rights have been obtained by the Grantee from the record owners and encumbrancers of the fee title to the lands involved, or until the Grantee has obtained all Federal, State, or local permits required by law.

3. That the proposed improvements or use authorized herein shall be consistent with the terms and conditions of this consent; and that any improvements or use not specifically identified and authorized shall constitute a violation of the terms and conditions of this consent which may result in a revocation of this consent and in the institution of such legal proceedings as the Government may consider appropriate, whether or not this consent has been revoked or modified.
4. That the exercise of the privileges hereby consented to shall be without cost or expense to the Government and under the supervision of and subject to the approval of the said officer having immediate jurisdiction over the property and subject to such regulations as he may from time to time prescribe, including, but not limited to, the specific conditions, requirements, and specifications set forth in paragraph 14 below.
5. That the Grantee shall supervise and maintain the said improvements and cause it to be inspected at reasonable intervals, and shall immediately repair any damage found therein as a result of such inspection, or when requested by said officer to repair any defects. Upon completion of the installation of said improvements or the making of any repairs thereto, the premises shall be restored immediately by the Grantee, at the Grantee's own expense, to the same condition as that in which they existed prior to the commencement of such work, to the satisfaction of said officer.
6. That any property of the Government damaged or destroyed by the Grantee incident to the exercise of the privileges herein granted shall be promptly repaired or replaced by the Grantee to the satisfaction of the said officer, or in lieu of such repair or replacement, the Grantee shall, if so required by said officer and at his option, pay to the Government an amount sufficient to compensate for the loss sustained by the Government by reason of damage to or destruction of Government property.
7. That the Government shall not be responsible for damages to the property or injuries to persons which may arise from or be incident to the exercise of the privileges herein granted, or for damages to the property of the Grantee, or for damages to the property or injuries to the person of the Grantee, or the persons of the Grantee's officers, agents, servants, or employees, or others who may be on said premises at the invitation of the Grantees or the invitation of one of them, arising from Governmental activities on or in the vicinity of the said premises, and the Grantee shall hold the Government harmless from any and all claims to the extent allowed by law.
8. That the Government shall in no case be liable for any damage, either hidden or known, to any improvements herein authorized which may be caused by any action of the Government, under the rights obtained in its easements, or that may result from the future operations undertaken by the Government, and no claim or right to compensation shall accrue from such damage, and if further operations of the Government require the alteration or removal of any improvements herein authorized, the Grantees shall, upon due notice, from said officer, alter or remove said improvements without expense to the

Government and subject to the supervision and approval of the said officer and no claim for damages shall be made against the Government on account of such alterations or removal.

9. That construction and/or operation, maintenance, and use of any improvements incident to the exercise of the privileges herein granted shall be in such a manner as not to conflict with the rights of the Government, nor to interfere with the operations by the Government under such rights nor to endanger lives and safety of the public.

10. That this consent may be terminated by the Government or said officer upon reasonable notice to the Grantee if the Government or said officer shall determine that any improvements or use to which consent is herein granted interferes with the use of said land or any part thereof by the Government, and this consent may be annulled and forfeited by the declaration of the Government or said officer for failure to comply with any or all of the provisions and conditions of this consent, or for nonuse for a period of two (2) years, or for abandonment.

11. That upon relinquishment, termination, revocation, forfeiture, or annulment of this consent, the Grantee shall vacate the premises, remove all property of the Grantee therefrom, and restore the premises to a condition satisfactory to the said officer. If the Grantee shall fail or neglect to remove the said property and so restore the premises, then at the option of the Government or said officer, the said property shall either become the property of the Government without compensation therefor, or the Government or said officer, may cause it to be removed, and the premises to be so restored at the expense of the Grantee, and no claim for damages against the Government, or its officer or agents, shall be created by or made on account of such removal and restoration.

12. That the Grantee within the limits of its respective legal powers shall comply with all Federal, interstate, State, and/or local governmental regulations, conditions, or instructions for the protection of the environment and all other matters as they relate to real property interests granted herein.

13. That the Grantee shall not remove or disturb, or cause or permit to be removed or disturbed, any historical, archeological, architectural, or other cultural artifacts, relics, vestiges, remains, or objects of antiquity. In the event such items are discovered on the premises, the Grantee shall immediately notify the District Engineer, Jacksonville District, Post Office Box 4970, Jacksonville, Florida 32232-0019, and the site and the material shall be protected by the Grantee from further disturbance until a professional examination of them can be made or until a clearance to proceed is authorized by the District Engineer.

14. That construction shall be in accordance with the drawings attached hereto and made a part hereof as Exhibit "B" and with Department of the Army Permit

No. SAJ-2016-00427, incorporated herein by reference. That no additional structures shall be constructed waterward of the Government's right-of-way line and that any structures currently within the right-of-way must be removed by the Grantee, at Grantee's expense, if future needs of the Government so require.

15. That this consent may not be transferred to a third party without the prior written notice to the Chief, Real Estate Division, U.S. Army Corps of Engineers, Jacksonville District, Post Office Box 4970, Jacksonville, Florida 32232-0019, and by the transferee's written agreement to comply with and be bound by all the terms and conditions of this consent. In addition, if the Grantee transfers the improvements authorized herein by conveyance of realty, the deed shall reference this consent and the terms and conditions herein and the consent shall be recorded along with the deed in the Registrar of Deeds or with other appropriate official.

This consent is not subject to Title 10, United States Code, Section 2662.

IN WITNESS WHEREOF, I have hereunto set my hand, by authority of the Secretary of the Army, this _____ day of _____, 2016.

UNITED STATES OF AMERICA

BY: _____
AUDREY C. ORMEROD
District Chief of Real Estate
Real Estate Contracting Officer
U.S. Army Engineer District
Jacksonville, Florida

AGREED TO AND ACCEPTED

WITNESS:

CITY OF FORT LAUDERDALE, FLORIDA,
a municipal corporation of the State of
Florida

[Witness print or type name]

By: _____
John P. "Jack" Seiler, Mayor

[Witness print or type name]

Lee R. Feldman, City Manager

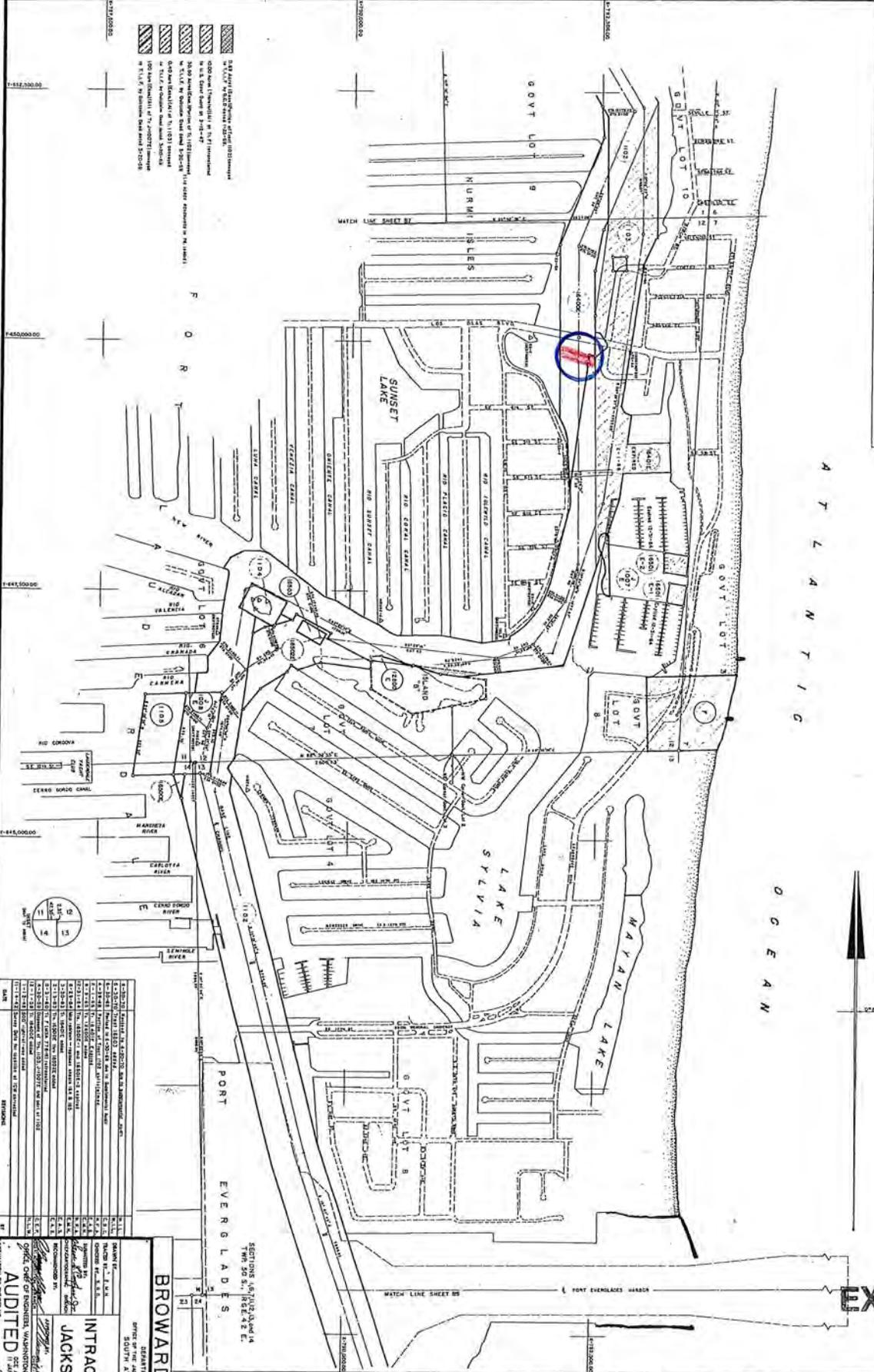
ATTEST:

Jeffrey A. Modarelli, City Clerk

APPROVED AS TO FORM:
Cynthia A. Everett, City Attorney

By: _____
Robert B. Dunckel
Assistant City Attorney

TRACT REGISTER OF ACQUISITION PRIOR TO JAN. 1943 (CIVIL)		R E M A R K S	
TRACT NO.	LAND OWNER	A C R E A G E	REMARKS
1	GOVT	1.88	
2	GOVT	1.88	
3	GOVT	1.88	
4	GOVT	1.88	
5	GOVT	1.88	
6	GOVT	1.88	
7	GOVT	1.88	
8	GOVT	1.88	
9	GOVT	1.88	
10	GOVT	1.88	
11	GOVT	1.88	
12	GOVT	1.88	
13	GOVT	1.88	
14	GOVT	1.88	
15	GOVT	1.88	
16	GOVT	1.88	
17	GOVT	1.88	
18	GOVT	1.88	
19	GOVT	1.88	
20	GOVT	1.88	
21	GOVT	1.88	
22	GOVT	1.88	
23	GOVT	1.88	
24	GOVT	1.88	
25	GOVT	1.88	
26	GOVT	1.88	
27	GOVT	1.88	
28	GOVT	1.88	
29	GOVT	1.88	
30	GOVT	1.88	
31	GOVT	1.88	
32	GOVT	1.88	
33	GOVT	1.88	
34	GOVT	1.88	
35	GOVT	1.88	
36	GOVT	1.88	
37	GOVT	1.88	
38	GOVT	1.88	
39	GOVT	1.88	
40	GOVT	1.88	
41	GOVT	1.88	
42	GOVT	1.88	
43	GOVT	1.88	
44	GOVT	1.88	
45	GOVT	1.88	
46	GOVT	1.88	
47	GOVT	1.88	
48	GOVT	1.88	
49	GOVT	1.88	
50	GOVT	1.88	
51	GOVT	1.88	
52	GOVT	1.88	
53	GOVT	1.88	
54	GOVT	1.88	
55	GOVT	1.88	
56	GOVT	1.88	
57	GOVT	1.88	
58	GOVT	1.88	
59	GOVT	1.88	
60	GOVT	1.88	
61	GOVT	1.88	
62	GOVT	1.88	
63	GOVT	1.88	
64	GOVT	1.88	
65	GOVT	1.88	
66	GOVT	1.88	
67	GOVT	1.88	
68	GOVT	1.88	
69	GOVT	1.88	
70	GOVT	1.88	
71	GOVT	1.88	
72	GOVT	1.88	
73	GOVT	1.88	
74	GOVT	1.88	
75	GOVT	1.88	
76	GOVT	1.88	
77	GOVT	1.88	
78	GOVT	1.88	
79	GOVT	1.88	
80	GOVT	1.88	
81	GOVT	1.88	
82	GOVT	1.88	
83	GOVT	1.88	
84	GOVT	1.88	
85	GOVT	1.88	
86	GOVT	1.88	
87	GOVT	1.88	
88	GOVT	1.88	
89	GOVT	1.88	
90	GOVT	1.88	
91	GOVT	1.88	
92	GOVT	1.88	
93	GOVT	1.88	
94	GOVT	1.88	
95	GOVT	1.88	
96	GOVT	1.88	
97	GOVT	1.88	
98	GOVT	1.88	
99	GOVT	1.88	
100	GOVT	1.88	



PROJECT MAP

DEF. OF THE ARMY
ENGINEERING DIVISION

LOCATION OF PROJECT: BROWARD COUNTY, FLORIDA, SOUTH ATLANTIC DISTRICT, JACKSONVILLE

ARMY AREA: THIRD

DATE: 1943

SCALE: AS SHOWN

ACQUISITION

TOTAL ACRES ACQUIRED: _____

BY: _____

FOR: _____

DISPOSAL

TOTAL ACRES DISPOSED OF: _____

BY: _____

FOR: _____

LEGEND

RESERVATION LINE: _____

TRACT BOUNDARY: _____

CONTROL LINE: _____

DISPOSAL: _____

BROWARD COUNTY

DEPARTMENT OF THE ARMY
OFFICE OF THE DISTRICT ENGINEER
SOUTH ATLANTIC DIVISION

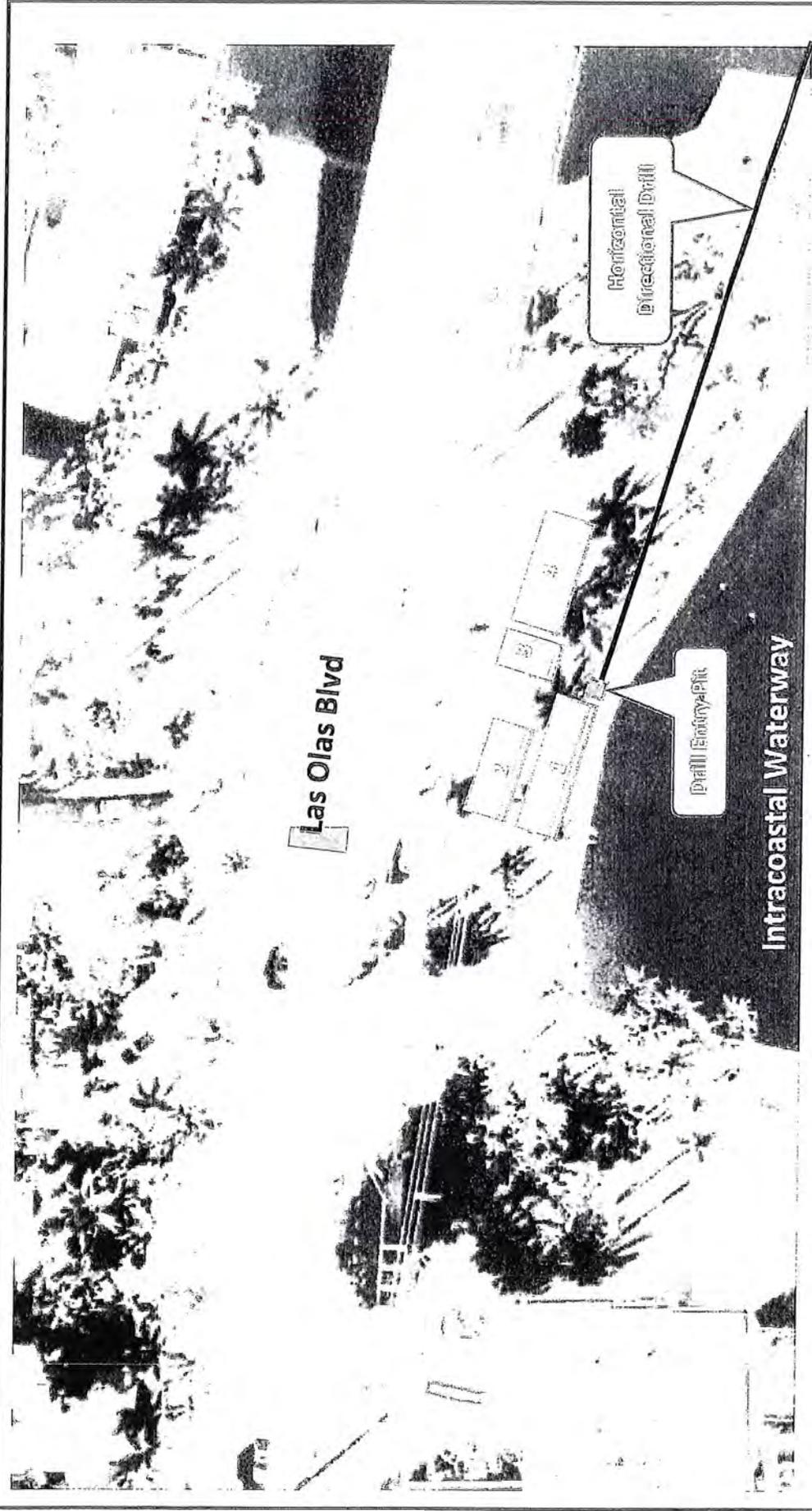
REAL ESTATE

INTRACASTAL WATERWAY
JACKSONVILLE TO MIAMI

DATE: 1943

ENGINEER: _____

AUDITED: _____



Equipment:

1. Drill Rig
2. Drill Pipe Laydown
3. HDPE Lined Drill Cuttings Settlement Pit
4. Mud Tanks and Pumps

Note:

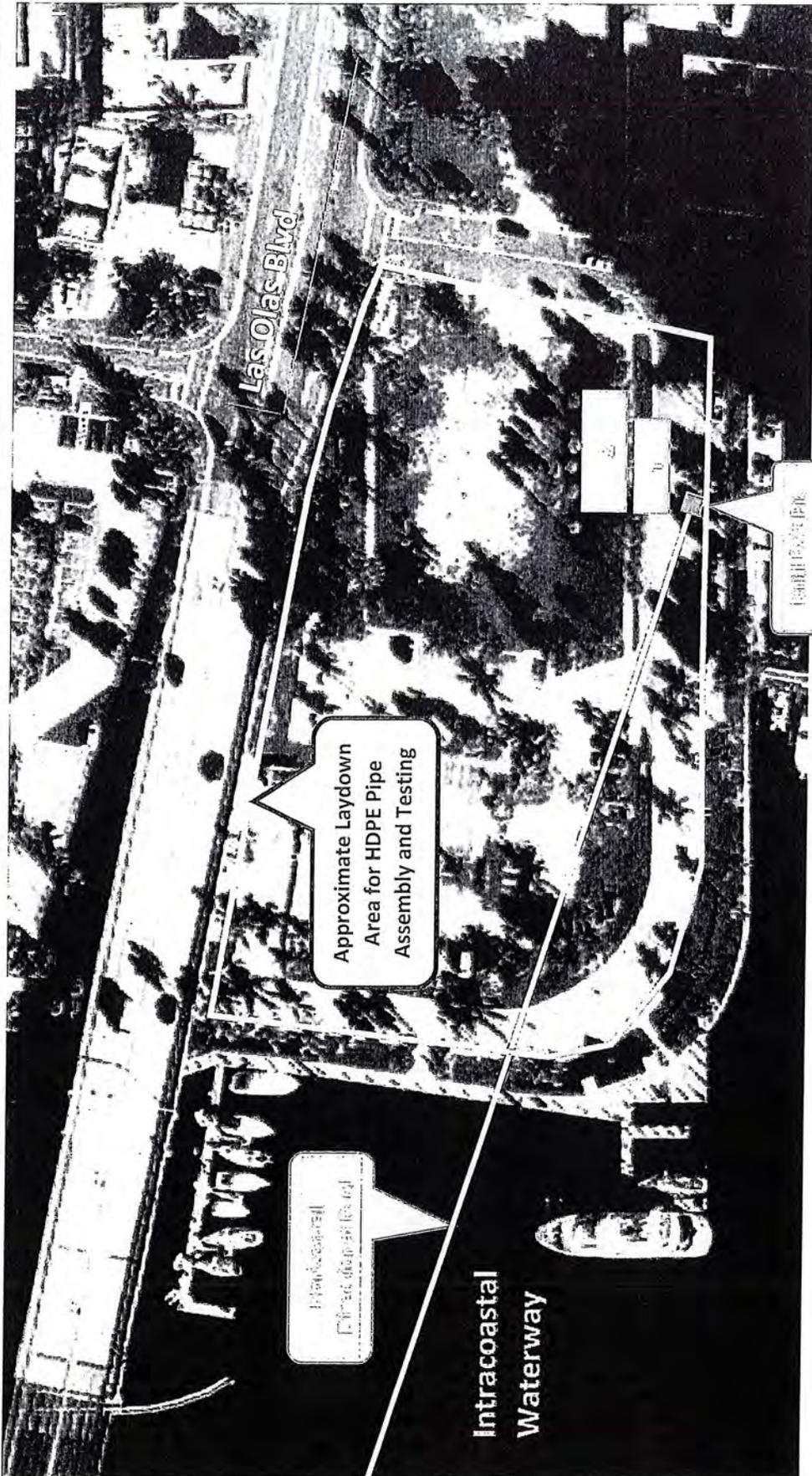
1. This plan is provided for conceptual purposes. The actual staging area plan shall be developed by the engineer retained by the design build firm.



Approximate Scale
 1" = 50'
 When printed on
 8.5"x11" paper

**Staging Area Conceptual Plan
 Drill Entry Area**

**SKETCH
 SK-1**



Equipment:

1. Drill Pipe Laydown
2. HDPE Lined Drill Cuttings Holding Pit

Note:

1. This plan is provided for conceptual purposes. The actual staging area plan shall be developed by the engineer retained by the design build firm.

Hazen

EXHIBIT "B"

CAN# 10478

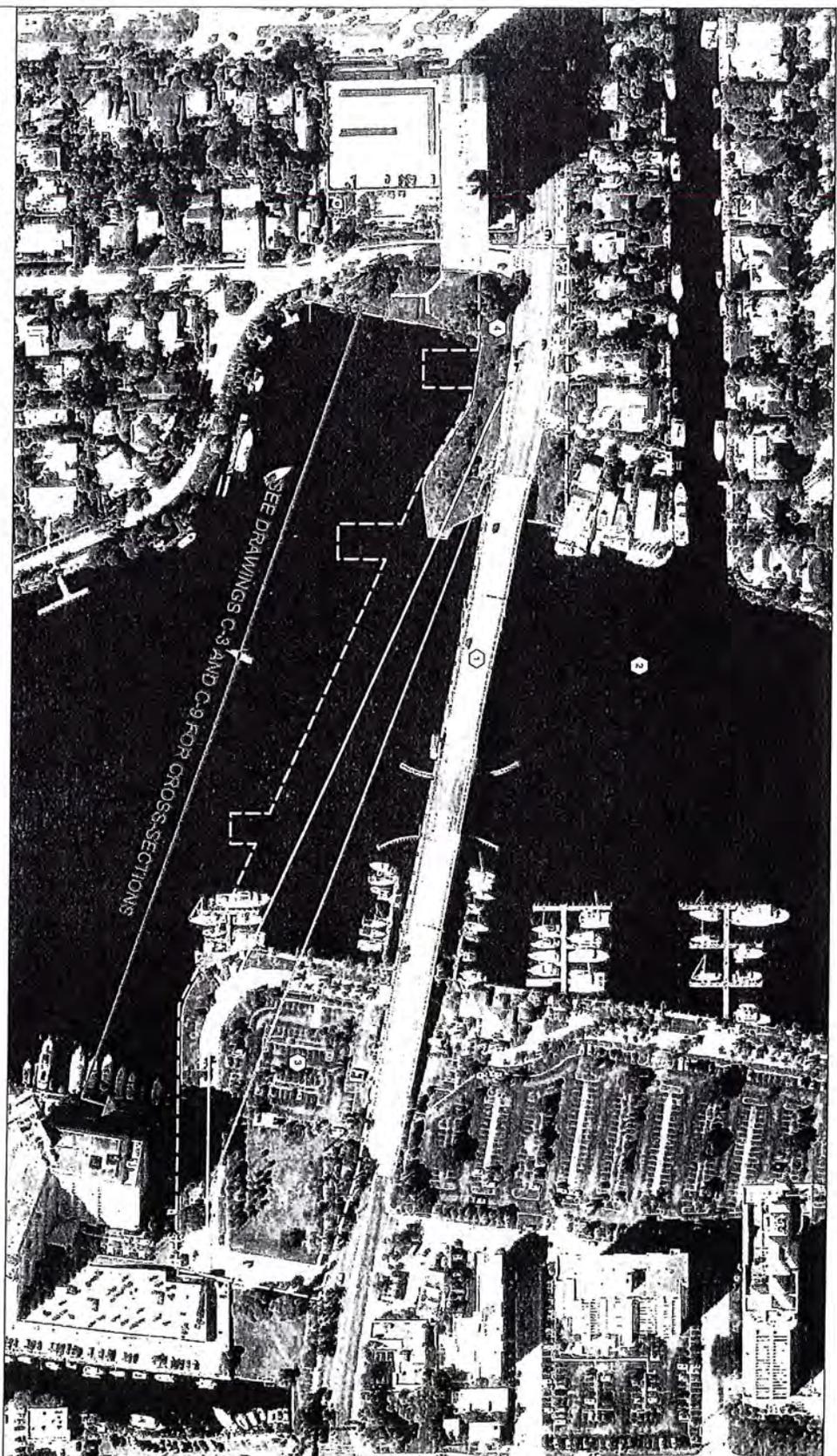
Exhibit 1

9 of 24

Approximate Scale
1" = 65'
When printed on
8.5"x11" paper

**Staging Area Conceptual Plan
Drill Exit Area**

**SKETCH
SK-2**



SEE DRAWINGS C-3 AND C-9 FOR CROSS-SECTIONS

Location Information:
 Township: 50S
 Range: 42E
 Section: 12

City of Fort Lauderdale
 Water Main Relocation and
 New Wastewater Force Main at Las Olas Blvd

HDD CONCEPTUAL PLAN
 Sketch 3

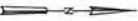

Hazen
 HAZEN AND SAWYER, L.L.P.
 4050 HOLLYWOOD BLVD, SUITE 2000
 HOUSTON, TEXAS 77031
 CERTIFICATE OF AUTHORIZATION NO. 12771

EXHIBIT "B"
 4 of 18

CAM #16-1047

Exhibit 1

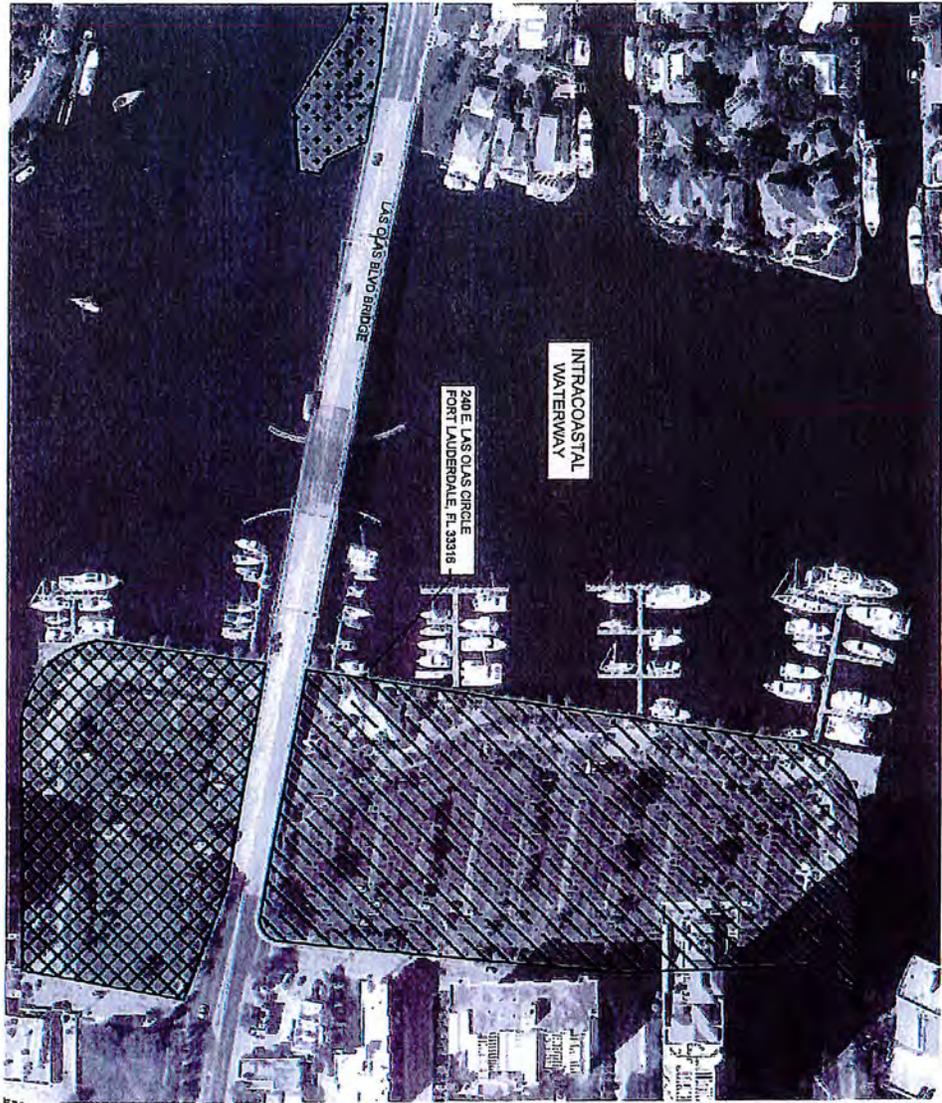
10 of 24

KEY NOTES

- ① 1" - 1/2" (100') SCALE
- ② SYSTEMS/UTILITY RELOCATION
- ③ CENTER OF GRAVITY/VERTICAL ALIGNMENT
- ④ UTILITY CROSSINGS

LEGEND

- Proposed force main pipe
- Proposed service water pipe
- Proposed water line (12" dia)
- Utility
- Proposed wastewater force main



STAGING PLAN
MIS



Hazen
and Sawyer
INCORPORATED
10000 W. BOULEVARD
FORT LAUDERDALE, FL 33328
TEL: 954.473.1111
WWW.HAZENANDSAWYER.COM

LOCATION INFORMATION:

TOWNSHIP: 50 S
RANGE: 42 E
SECTION: 12
LATITUDE: 26° 07' 31" N
LONGITUDE: 80° 06' 29" W

KEYED NOTES:

- 1 THE AREA INDICATED IS OWNED BY THE CITY OF FORT LAUDERDALE. CITY OF FORT LAUDERDALE IS THE DESIGNATED AGENCY FOR THE PROJECT. REQUEST THE OWNER WILL PROVIDE A CONSTRUCTION SCHEDULE FOR PROJECT NO. 11800 UPON REQUEST.
- 2 THE AREA INDICATED IS OWNED BY THE CITY OF FORT LAUDERDALE. THIS AREA CAN BE USED FOR STAGING THE HOPE PIPE FOR WELDING AND THE MILL BACK OF THE SUBADDED PAVEMENT.
- 3 THE AREA INDICATED IS OWNED BY THE CITY OF FORT LAUDERDALE. THIS AREA CAN BE USED FOR STAGING OF THE DIRECTIONAL DRILLING EQUIPMENT.

LEGEND:

- 1 AREA FOR CITY PROJECT No. 11800
- 2 AREA FOR CITY PROJECT No. 11800 AND 12196
- 3 AREA FOR CITY PROJECT No. 12196



NOT FOR CONSTRUCTION OR BID

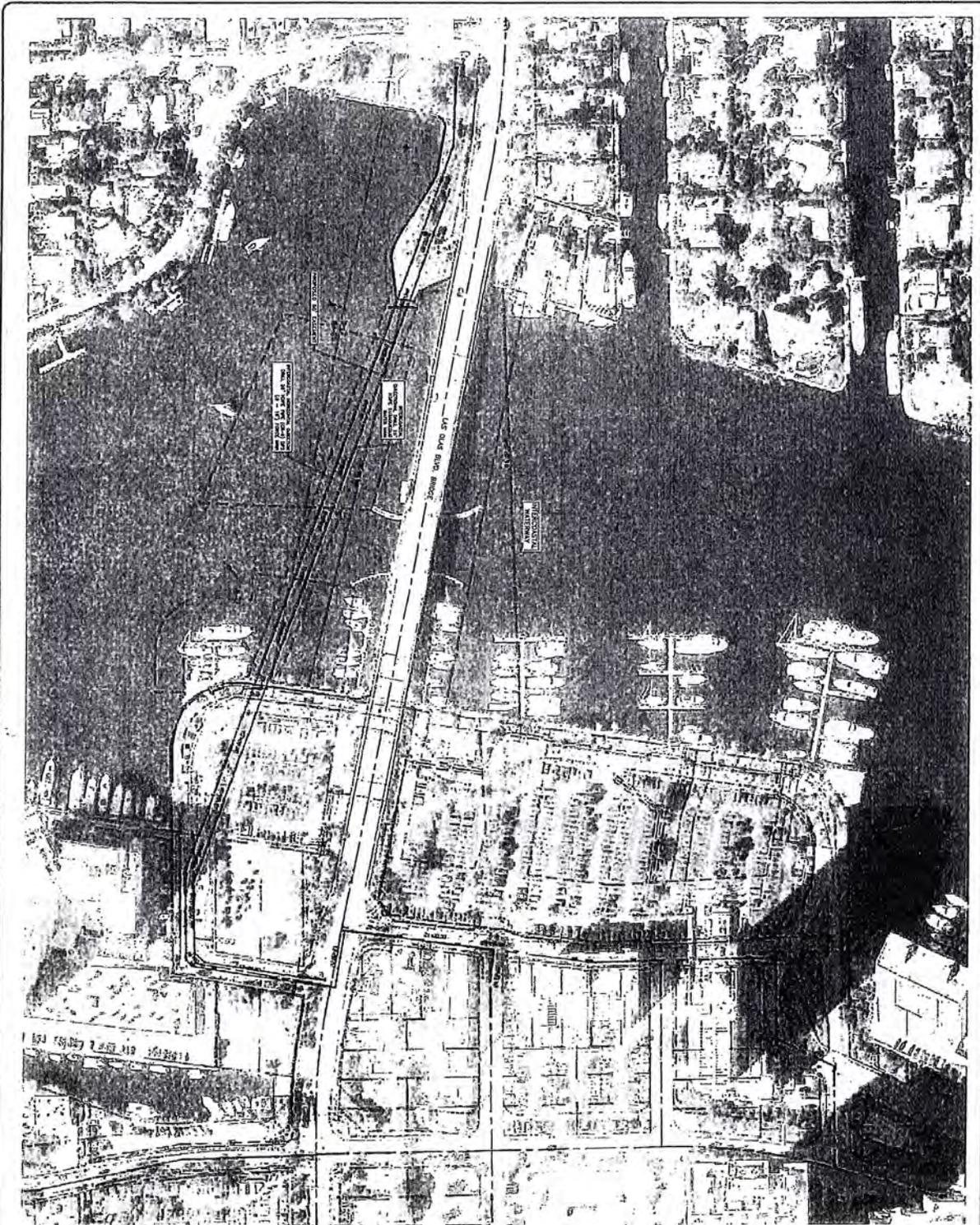
PROJECT # 12196 RELOCATION OF EX. 16" WM & INSTALLATION OF 16" FM RELOCATION OF 16" WATER MAIN E. LAS OLAS BLVD.	SHEET NO. G-1 OF 1
--	-----------------------------

REVISIONS		
NO	DATE	DESCRIPTION

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

DRAWN BY: LMS	DATE: 02/20/16	ENGINEER: GEORGE A. BROWN, PE
DESIGNED BY: CAB	SCALE: N/A	REG. NO. 56078
CHECKED BY: PJC	NTS	ISS. 5/4/16
FIELD BOOK: N/A		

CAM #16-1047
Exhibit 1
12 of 24
EXHIBIT "B"
60F18



NOTE:
 THE PURPOSE OF THIS SHEET
 IS TO PROVIDE AN OVERALL
 CONCEPTUAL PLAN OF THE
 PROPOSED PLAN OF THE
 WATER MAIN DIRECTION
 DRILLS.



NOT FOR CONSTRUCTION OR BID

PROJECT NO.	12196
SHEET NO.	C-1
TOTAL SHEETS	12
DATE	12/15/11

PROJECT # 12196
 RELOCATION OF EX. 16" WM
 & INSTALLATION OF 16" FM
 OVERALL PLAN
 E. LAS OLAS BLVD.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

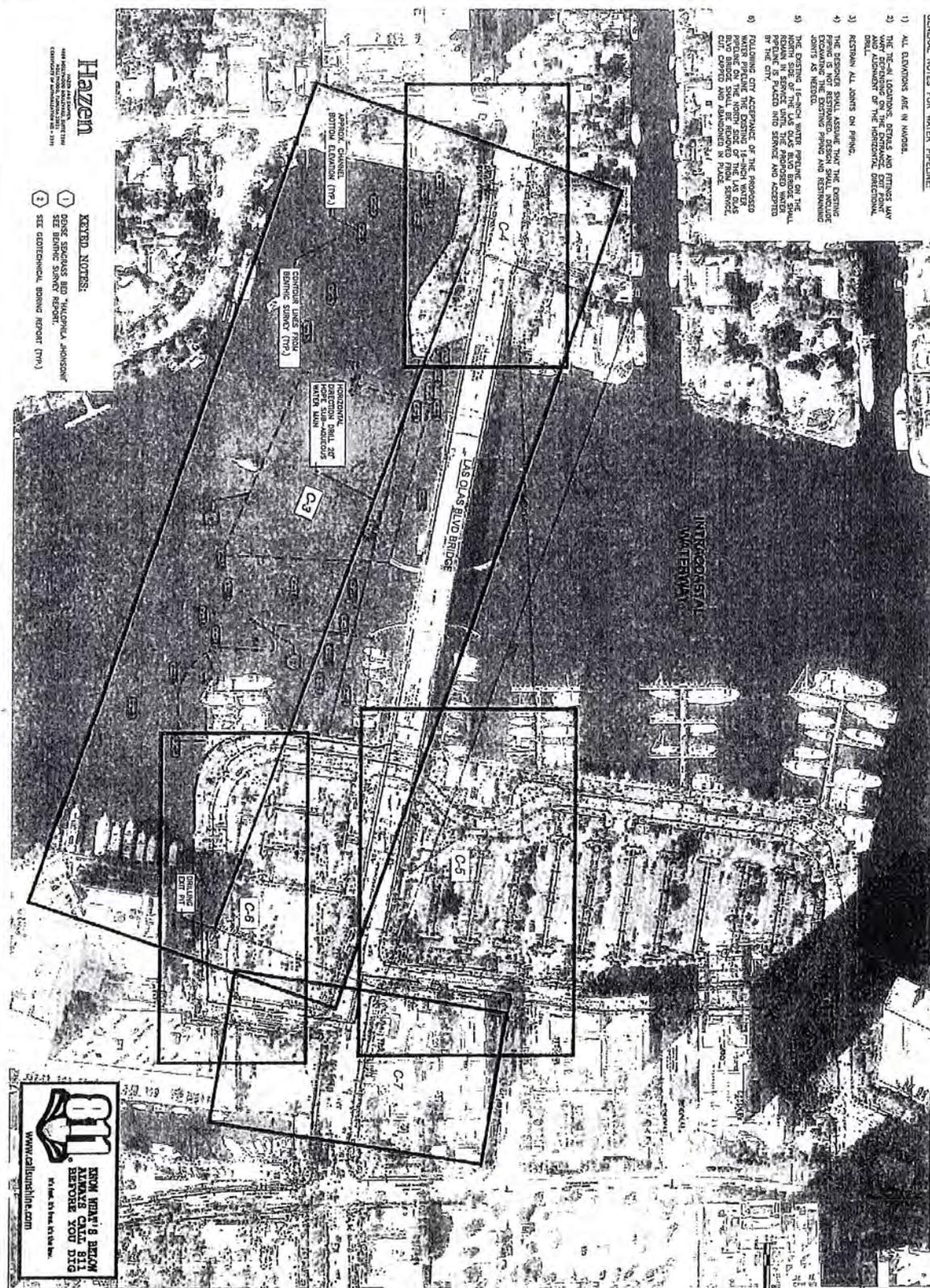
 CITY OF FORT LAUDERDALE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

DESIGNED BY:	DATE:	ENGINEER:
CHECKED BY:	SCALE:	DATE:
FIELD BOOK:	1"=60'	12/15/11

EXHIBIT B
 7 of 18

GENERAL NOTES FOR WATER PRELIM:

- 1) ALL ELEVATIONS ARE IN FEET.
- 2) THE "N" LOCATIONS, DINGS AND FITTINGS ARE TO BE PLACED IN ACCORDANCE WITH THE SCHEDULED SPECIFICATIONS AND APPROVED BY THE ENGINEER, STRUCTURAL DIVISION.
- 3) RESTRAIN ALL JOINTS ON PIPING.
- 4) THE DESIGNER SHALL ASSURE THAT THE EXISTING PIPING IS NOT EXCEEDING DESIGN LIFE. EXISTING JOINTS AS NOTED.
- 5) THE EXISTING 16-INCH WATER PIPING ON THE ROUTE TO BE RELOCATED SHALL BE REMOVED. THE PRELIM IS PLACED INTO SERVICE AND ACCEPTED BY THE CITY.
- 6) FOLLOWING CUT AND FILL OF THE PROPOSED PIPING ON THE NORTH SIDE OF THE LAS OLAS BLVD BRIDGE AND ADJACENT IN PLACE CUT, COVERED AND ADJACENT IN PLACE.

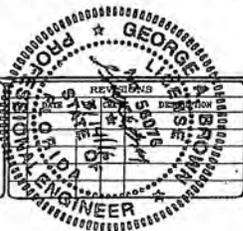


Hazen
 ANDERSON
 ENGINEERS
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301
 TEL: 561-557-1111
 FAX: 561-557-1112

- KEYED NOTES:**
- 1) DONE SURVEYS AND "N" LOCATIONS
 - 2) SEE BENCHMARK SURVEY REPORT.
 - 3) SEE GEOTECHNICAL BENCHMARK REPORT (TNS)

NOT FOR CONSTRUCTION OR BID

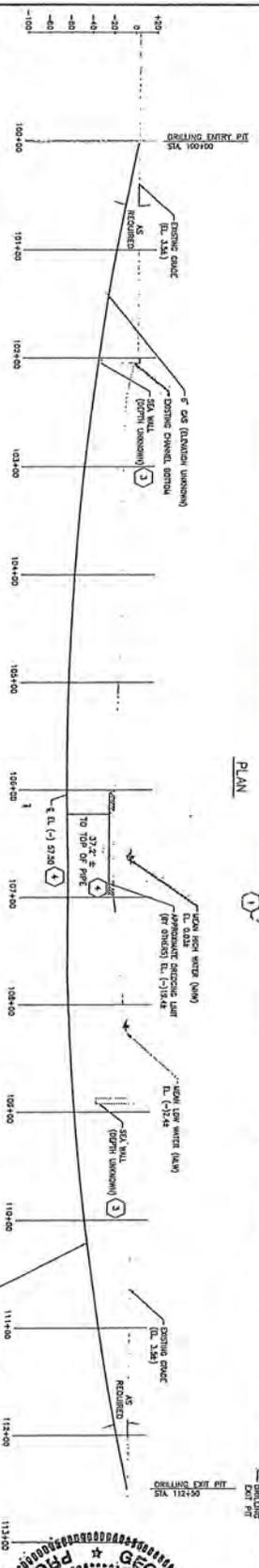
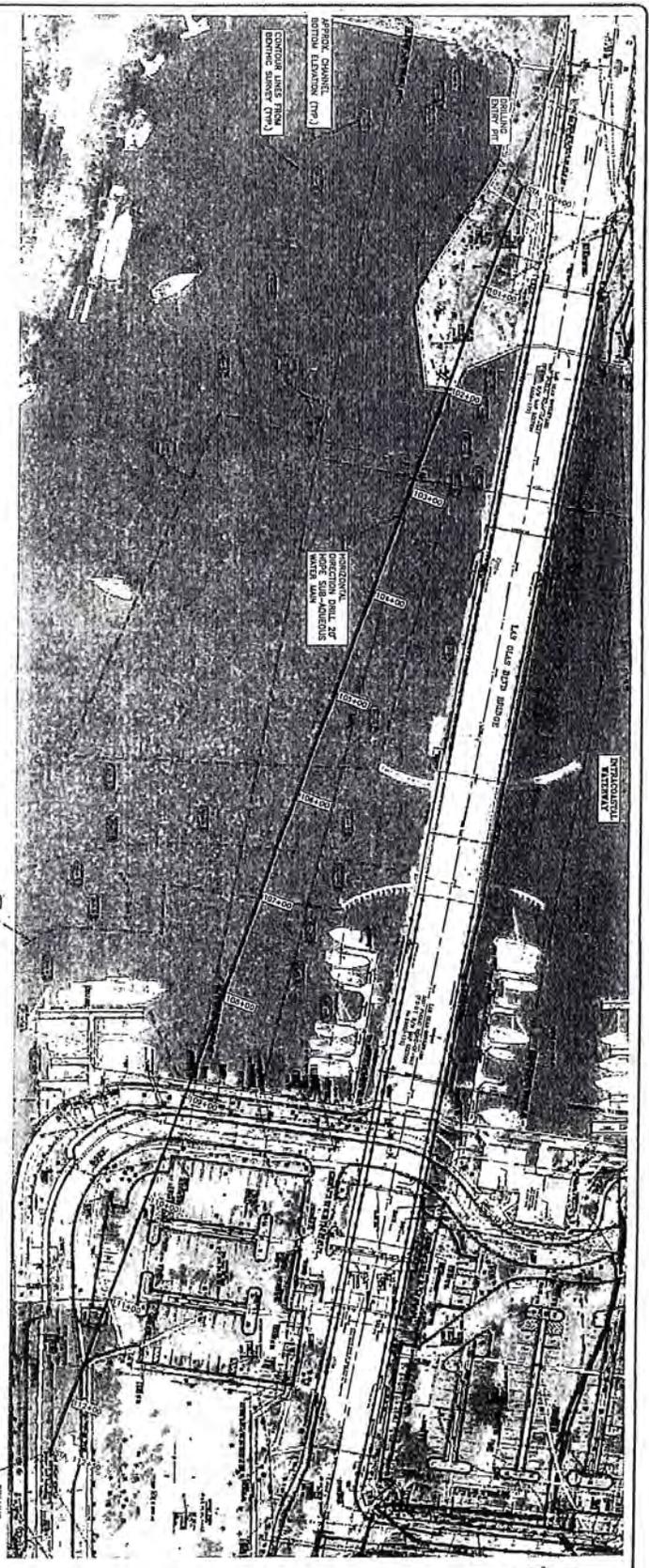
PROJECT # 12196 RELOCATION OF EX. 16" WM & INSTALLATION OF 16" FM RELOCATION OF 16" WATER MAIN E. LAS OLAS BLVD.	DATE: 02/20/16 SCALE: 1"=50' FIELD BOOK: N/A	ENGINEER: GEORGE A. BROTH, PE REG. NO. 55072 EXPIRES 3/31/18
--	--	---



CITY OF FORT LAUDERDALE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

DATE: 02/20/16	SCALE: 1"=50'
FIELD BOOK: N/A	

EXHIBIT "B"



GENERAL NOTES FOR WATER PIPELINE:

- 1) ALL ELEVATIONS ARE IN FEET.
- 2) THE EXISTING CHANNEL, GUTTERS AND FITTINGS ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.
- 3) THE DESIGNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF FORT LAUDERDALE.
- 4) THE DESIGNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF FORT LAUDERDALE.
- 5) THE DESIGNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF FORT LAUDERDALE.

NOTED NOTES:

- 1) SEE GEOTECHNICAL REPORT FOR SOIL CONDITIONS.
- 2) SEE GEOTECHNICAL REPORT FOR SOIL CONDITIONS.
- 3) SEE GEOTECHNICAL REPORT FOR SOIL CONDITIONS.
- 4) SEE GEOTECHNICAL REPORT FOR SOIL CONDITIONS.
- 5) SEE GEOTECHNICAL REPORT FOR SOIL CONDITIONS.

LEGEND:

- EXISTING
- APPROX. ALIGNMENT OF PROPOSED HOSE SUB-ARCADE
- PROPOSED CHANNEL
- PROPOSED HOSE SUB-ARCADE



Hazen
 AND SAWYER, INC.
 17th St., Ft. Lauderdale, FL 33304
 www.hazensawyer.com
 1-800-451-6841

NOT FOR CONSTRUCTION OR BIDDING

PROJECT # 121916
RELOCATION & INSTALLATION OF WATER MAIN
RELOCATION OF WATER MAIN
E. LAS OLAS BLVD

REVISIONS

NO.	DATE	DESCRIPTION

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

DESIGNED BY: GPB
CHECKED BY: PJC
DATE: 02/20/16
SCALE: 1"=50'-0"
FIELD BOOK: N/A

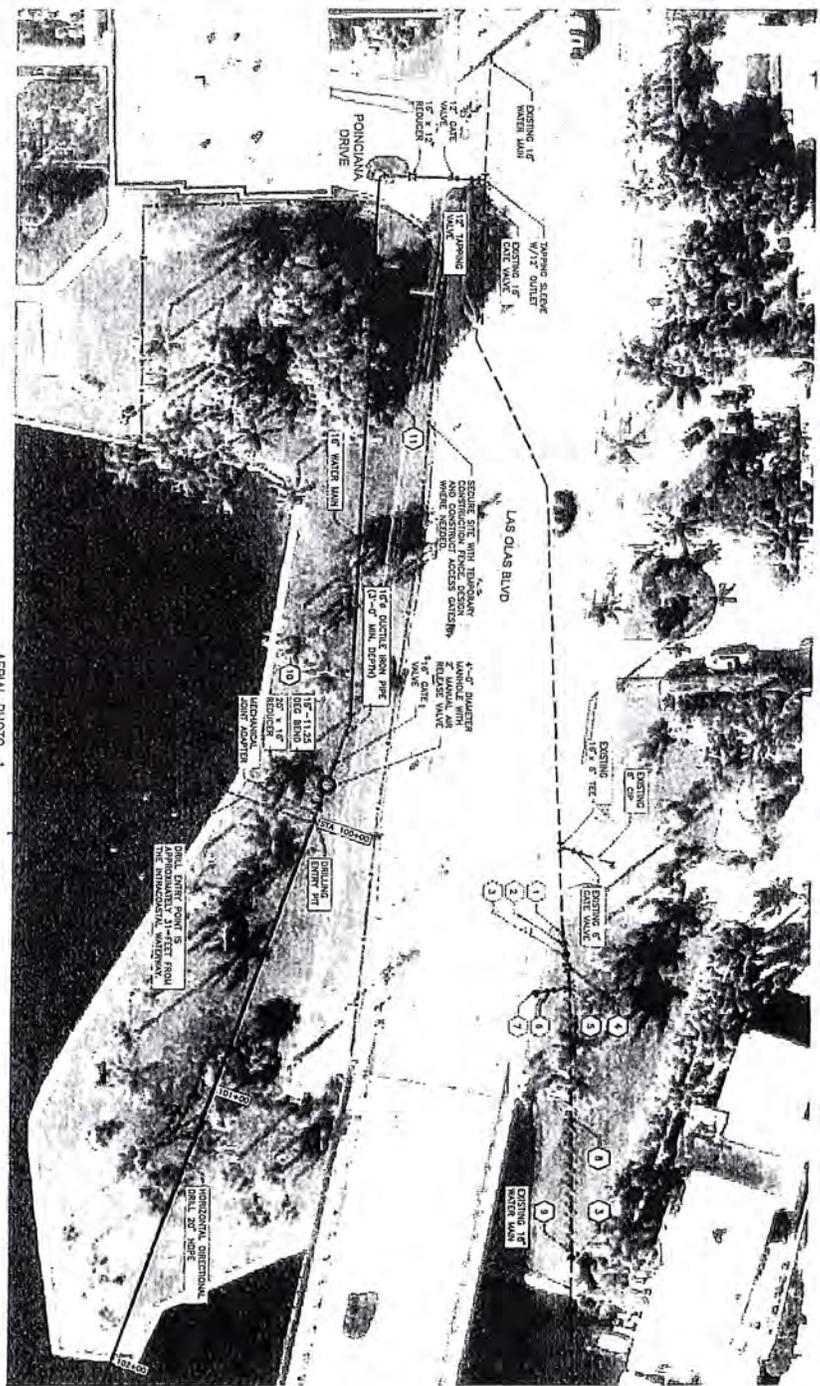
ENGINEER: GEORGE A. BIRDEN, P.E.
REG. NO. 56078
EXPIRES 3/31/16

EXHIBIT "B"
90F18

TITLE: C-3
DATE: 12/18/15
SCALE: 1"=50'-0"
NO.: 4



HAZEN
 1000 WEST 10TH AVENUE
 SUITE 1000
 FORT LAUDERDALE, FLORIDA 33304
 TEL: 954-875-7100
 WWW.HAZEN.COM



GENERAL NOTES FOR WATER PIPELINE:

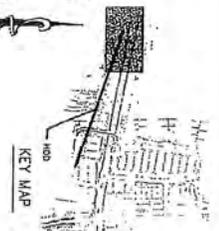
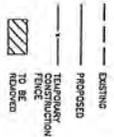
- 1) ALL REVISIONS ARE IN RED.
- 2) THE DESIGN LOCATIONS, DEPTH AND FITTINGS MAY VARY FROM THE INFORMATION ON THE ORIGINAL, ORIGINAL PLAN.
- 3) RESTAIN ALL JOINTS ON SPANS.
- 4) THE DESIGNER SHALL ASSURE THAT THE EXISTING LOCATION OF THE EXISTING PIPING AND RESTRAINING PIPING IS NOT RESTRICTED DESIGN SHALL INCLUDE LOCATING THE EXISTING PIPING AND RESTRAINING PIPING IN SERVICE UNTIL THE PROPOSED WATER MAIN IS INSTALLED AND THE EXISTING WATER MAIN IS REMOVED.
- 5) A TOPOGRAPHIC SURVEY FOR CITY ROAD CUT 11900 THAT CONTAINS EXISTING UNDERPASSING UTILITY ROWLINE IS AVAILABLE FROM THE CITY OF FORT LAUDERDALE.

AERIAL PHOTO 1

KEYED NOTES:

- 1) EXISTING WATER MAIN FOR VALVE ON EXISTING 16" WATER MAIN. REMOVE VALVE MANHOLE.
- 2) EXISTING AS RELOCATE VALVE MANHOLE.
- 3) INSTALL TEMPORARY LINE STOP.
- 4) INSTALL 16" x 8" REDUCER.
- 5) INSTALL FITTINGS, SPIGOTS AND ACCESSORIES AS REQUIRED FOR A COMPLETE AND PROPER SYSTEM.
- 6) REMOVE TREE IF REQUIRED FOR ACCESS.
- 7) INSTALL 8" DATE VALVE.
- 8) REMOVE EXISTING 16" WATER MAIN SURFACE.
- 9) INSTALL CUT AND CAP ON EXISTING 16" WATER MAIN.
- 10) RELOCATE TIE AS REQUIRED.
- 11) REMOVE TREE IF REQUIRED FOR ACCESS.

LEGEND:



NOT FOR CONSTRUCTION OR BID

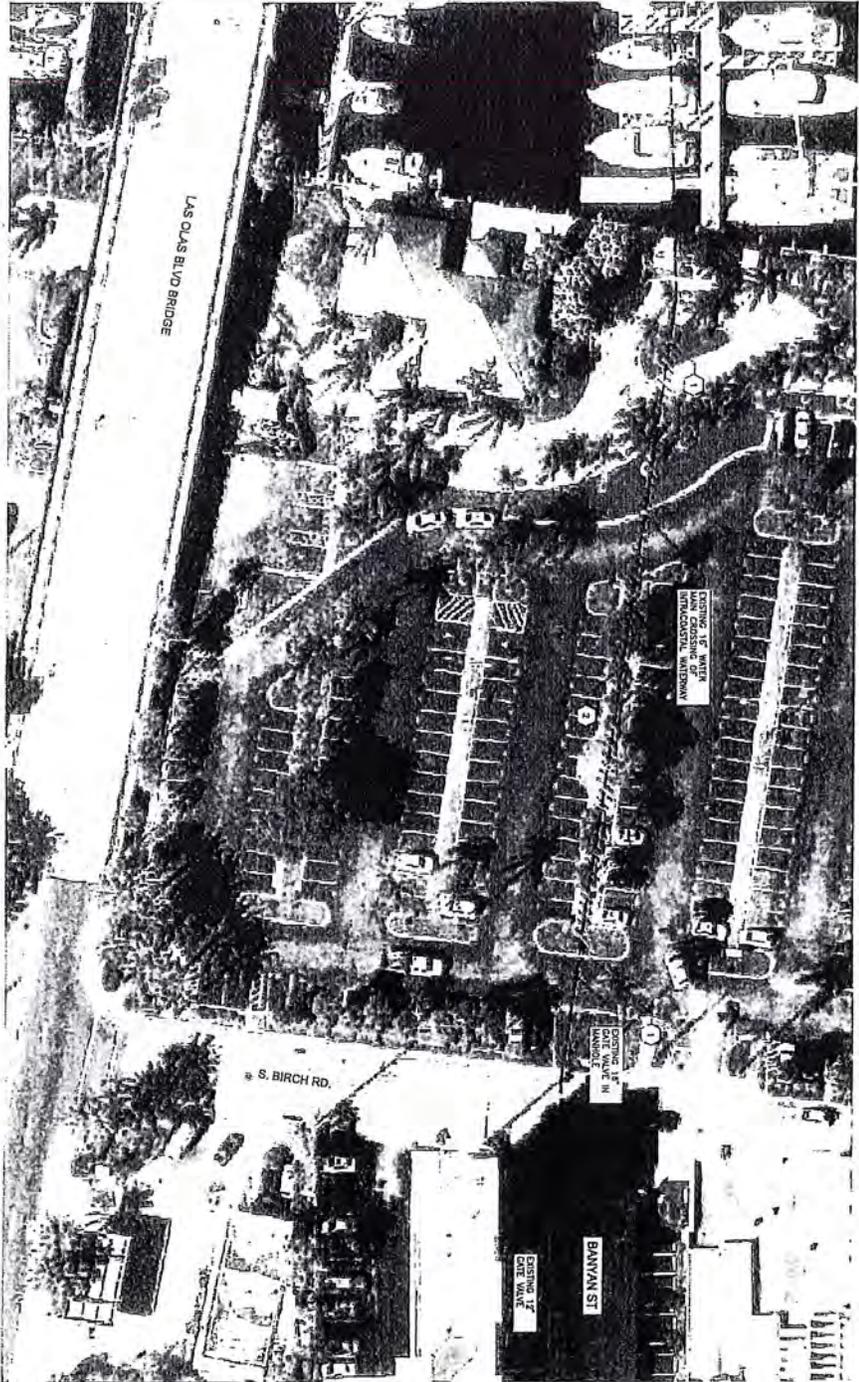
PROJECT #	12196
RELOCATION OF EX. 16" WM	
& INSTALLATION OF 16" FM	
RELOCATION OF 16" WATER MAIN	
E. LAS OLAS BLVD.	
SHEET NO.	C-4
OF	5
TOTAL SHEETS	13
DRAWING FILE NO.	12196-001-WMTR
DATE	4-19-11

REVISIONS		
NO.	DATE	DESCRIPTION

CITY OF FORT LAUDERDALE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

DRAWN BY:	CPB	DATE:	02/20/11
DESIGNED BY:	GAB	SCALE:	N/A
CHECKED BY:	PJC	FILED NO.:	N/A
DATE:	02/20/11	ENGINEER:	GEORGE A. BROWN, P.E.
SCALE:	N/A	REG. NO.:	56076
FILED NO.:	N/A	EXPIRES:	02/19/18

EXHIBIT 66 B



AERIAL PHOTO 2

NTS

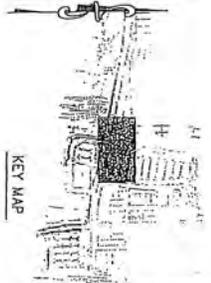


Hazen
 4000 W. UNIVERSITY BLVD
 SUITE 200
 FORT LAUDERDALE, FL 33309
 (954) 470-1100
 www.hazensawyer.com

- GENERAL NOTES FOR WATER PIPELINE:**
- 1) ALL DIMENSIONS ARE IN INCHES.
 - 2) THE TIE-IN LOCATIONS, DETAILS AND FITTINGS MAY VARY FROM THE TYPICAL DETAILS SHOWN. THE ALIGNMENT OF THE HORIZONTAL, VERTICAL, SLOPE, AND RESTRICTIONS SHALL BE AS SHOWN.
 - 3) RESTRICTIONS ALL JOINTS ON PIPE.
 - 4) THE DESIGNER SHALL ASSURE THAT THE EXISTING PIPELINE IS NOT RESTRICTED. DESIGN SHALL INCLUDE SLOPING OF THE EXISTING PIPE AND RESTRICTIONS TO BE MAINTAINED.
 - 5) THE EXISTING 16" WATER MAINS SHALL BE REMOVED FROM THE NORTH SIDE OF THE LAS OLAS BLVD BRIDGE SHALL BE REMOVED FROM THE SOUTH SIDE OF THE LAS OLAS BLVD BRIDGE AND REINSTALLED BY THE CITY.
 - 6) FOLLOWING CITY ACCEPTANCE OF THE PROPOSED PIPELINE, THE CITY SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE PIPELINE ON THE NORTH SIDE OF THE LAS OLAS BLVD BRIDGE AND ABANDONED IN FIELD SERVICE, UNLESS INDICATED AS "OTHER" TAGS SHOWN HEREIN.
 - 7) NOT ALL EXISTING UTILITIES ARE SHOWN FOR CLARITY. AVAILABLE UNDERGROUND UTILITIES IN THE PROJECT AREA SHALL BE IDENTIFIED BY THE CITY ENGINEER. DESIGN CRITERIA INCLUDE OCCURRENCE.
 - 8) A TOPOGRAPHIC SURVEY FOR CITY PROJECT 11900 SHALL BE CONDUCTED. EXISTING UNDERGROUND UTILITIES TO BE MAINTAINED SHALL BE IDENTIFIED FROM THE CITY OPEN RECORDS.

KEYED NOTES:

- 1) CUT CAP EXISTING 16" WATER MAIN.
- 2) REMOVE EXISTING 16" WATER MAIN AND RESTORE SURFACE.



NOT FOR CONSTRUCTION OR BID

PROJECT #	12196
RELOCATION OF EX. 16" WM & INSTALLATION OF 16" FM	
RELOCATION OF 16" WATER MAIN	
E. LAS OLAS BLVD.	
SHEET NO.	6
TOTAL SHEETS	19
DATE	12/18/16
SCALE	AS SHOWN

REVISIONS			
NO.	DATE	BY	DESCRIPTION

CITY OF FORT LAUDERDALE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

DESIGN BY:	DATE:	ENGINEER:
CHKD BY:	12/22/16	GEORGE A. BROWN, PE
DATE:		REG. NO. 56076
SCALE:		DATE: 12/16/16
DESIGNED BY:	SCALE:	
CHKD BY:		
DATE:		
SCALE:		
DATE:		
SCALE:		

EXHIBIT 'B'
 11 OF 18



HAZEN AND SANDERS
INCORPORATED
11911
www.hazensanders.com



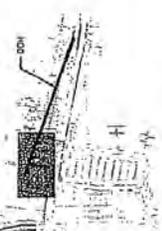
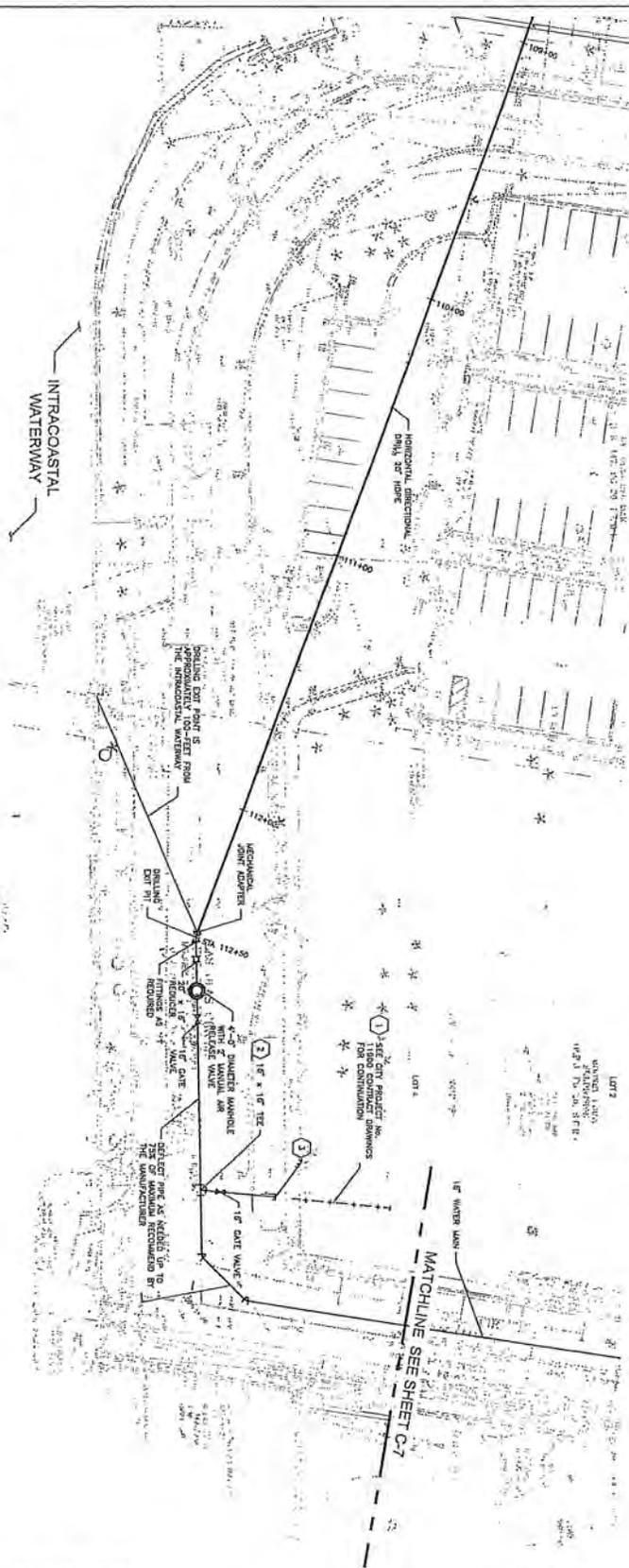
- GENERAL NOTES FOR WATER PIPELINE:**
- 1) ALL EXISTING ARE IN PLACE.
 - 2) THE TIE-IN LOCATIONS, DETAILS AND FITTINGS MAY VARY DEPENDING ON THE EXISTING EXIST POINT AND LOCATION OF THE HOISTING OPERATIONAL DRILL.
 - 3) RESTRAIN ALL JOINTS.
 - 4) THE DESIGN ENGINEER SHALL ASSURE THAT THE INCLUDE EXISTING WITH EXISTING DESIGN AND RESTRAINING JOINTS AS NEEDED.

PARTIAL PLAN 1
1"=20'-0"

- KEYED NOTES:**
- 1) THE LOCATION SHOWN FOR THE WATER PIPING TO BE CONSTRUCTED UNDER CITY PROJECT No. 11900 IS APPROXIMATE. ADJUST LOCATIONS TO THE CITY TO CORRESPOND WITH THE LOCATION OF THE WATER MAINS TO BE CONSTRUCTED UNDER CITY PROJECT No. 11900.
 - 2) DESIGN AND INSTALL 16" DIA. STEEL COUPLER AND PIPING AS SHOWN TO MAKE THE CONNECTION WITH THE PIPING TO BE CONSTRUCTED UNDER CITY PROJECT No. 11900.

LEGEND:

EXISTING
PROPOSED
1" WATER MAIN TO BE CONSTRUCTED UNDER CITY PROJECT No. 11900



NOT FOR CONSTRUCTION OR BID

PROJECT #	12196
RELOCATION OF EX. 16" WM	
& INSTALLATION OF 16" FM	
RELOCATION OF 16" WATER MAIN	
E. LAS OLAS BLVD.	
OBJECT NO.	07
TOTAL	7
CON. FILE NO. -000-WMT	
DRAWING FILE NO.	13
	4-131-11

REVISIONS			
NO.	DATE	BY	DESCRIPTION

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE

180 North Andrews Avenue, Fort Lauderdale, Florida 33301

DRAWN BY:	DATE:
LMF	02/20/16
CHECKED BY:	SCALE:
PJC	1"=20'
FIELD BOOK:	N/A

ENGINEER: GEORGE A. BROWN, PE
REG. NO. 58076
DATE: 2/24/16

TELEPHONE: 954-877-6449
FAX:

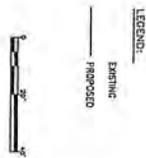
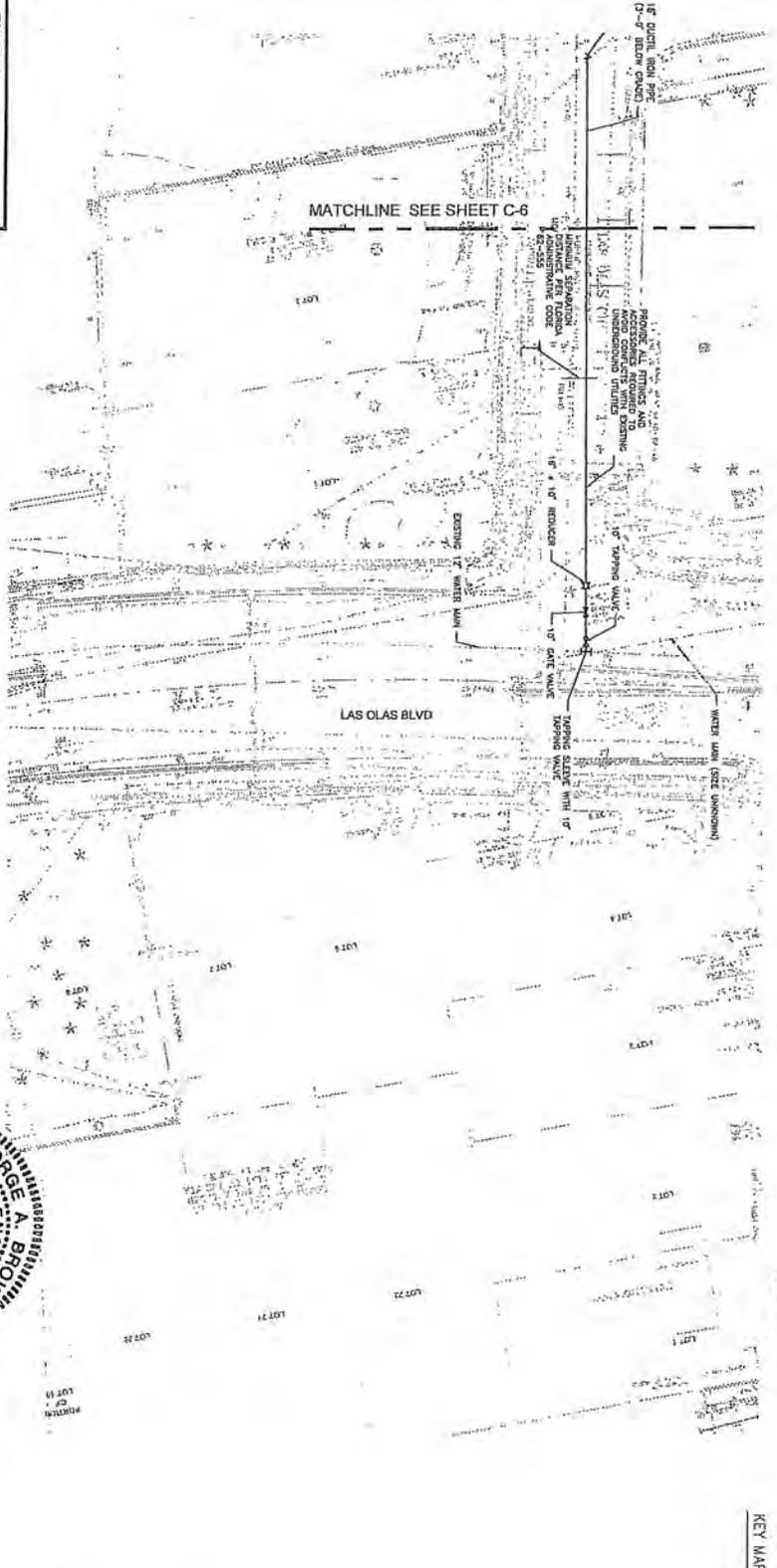
EXHIBIT B
12 of 18

Hazen
 ENGINEERING ARCHITECTURE
 13198-007-AWATER
 13198-007-AWATER
 13198-007-AWATER



- GENERAL NOTES FOR WATER PRELIM:
- 1) ALL ELEVATIONS ARE IN MGDDB.
 - 2) RESTRAIN ALL JOINTS ON SPONGE.
 - 3) THE DESIGN ENGINEER SHALL ASSURE THAT THE PROPOSED DESIGN IS NOT RESTRICTED TO ANY ONE RESTRAINING JOINTS AS NEEDED.

PARTIAL PLAN 2
 1"=40'-0"



NOT FOR CONSTRUCTION OR BID

TOTAL	13
DATE	07/20/16
PROJECT #	12196
DESCRIPTION	RELOCATION OF EX. 16" WM & INSTALLATION OF 16" FM RELOCATION OF 16" WATER MAIN E. LAS OLAS BLVD.
DATE	07/20/16
BY	LSB
DESCRIPTION	REVISIONS

NO.	DATE	BY	CHKD	DESCRIPTION

CITY OF FORT LAUDERDALE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

DESIGNED BY	LSB
CHECKED BY	PAC
SCALE	1"=20'
FIELD BOOK	N/A

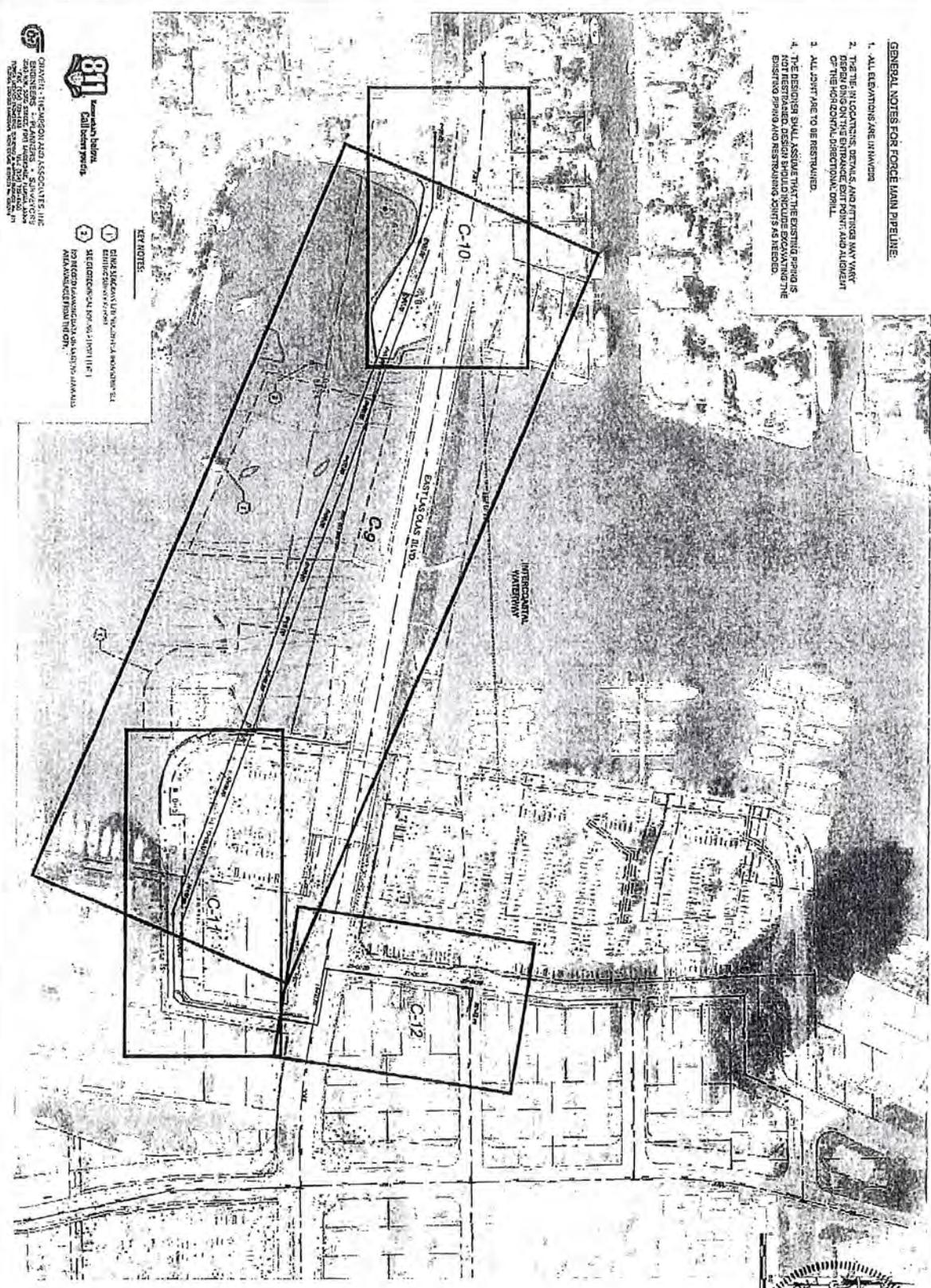
ENGINEER: GEORGE A. BROWN, P.E.
 REG. NO. 56076
 DATE: 5/4/16

EXHIBIT 66B
 13aF18

811
 Call Before You Dig
 CHARTERED MEMBER OF THE NATIONAL ASSOCIATION OF PUBLIC UTILITIES ENGINEERS
 1-800-4-A-DIG
 www.callbeforeyoudig.com

KEY NOTES:
 1. EXISTING 16" WATER MAIN TO BE RELOCATED TO THE EAST SIDE OF EAST LAS OLAS BLVD.
 2. NEW 16" WATER MAIN TO BE INSTALLED TO THE WEST SIDE OF EAST LAS OLAS BLVD.
 3. ALL EXISTING AND PROPOSED MAINS TO BE INSTALLED AT A DEPTH OF 4'-0" UNLESS OTHERWISE NOTED.

- GENERAL NOTES FOR FORCE MAIN PIPELINE:**
1. ALL RELATIONS ARE IN HANDED
 2. THE TYPE, LOCATION, DEPTH, AND FITTINGS MAY VARY DEPENDING ON THE ENTRANCE, EXIT POINT, AND ALIGNMENT OF THE HORIZONTAL DIRECTIONAL DRILL.
 3. ALL JOINTS ARE TO BE RESTRAINED.
 4. THE RESURFACING SHALL BE DONE WITHIN THE EXISTING PAVED AND NOT RESTRAINED. RESURFACING TO BE DONE WITHIN THE EXISTING PAVED AND RESTRAINED JOINTS AS NEEDED.



NOT FOR CONSTRUCTION OR BID

SHEET NO. **C-8** OF **12**
 DATE: 03/21/2018
 DRAWN BY: JLD
 CHECKED BY: JLD

PROJECT # 12196
RELOCATION OF EX. 16" WM
& INSTALLATION OF 16" FM
PROPOSED FORCE MAIN KEY MAP
E. LAS OLAS BLVD.

REVISIONS				
NO.	DATE	BY	ISSUED	DESCRIPTION

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

Professional Engineer Seal for Peter W. ... License No. ... State of Florida. Includes a date stamp: 03/21/2018.

EXHIBIT "B"
 14 OF 18



811
Call us today

GENERAL NOTES FOR WATER PROFILE

1. ALL DIMENSIONS ARE IN FEET AND INCHES.
2. THE 16" FORCE MAIN IS TO BE INSTALLED AT THE PROPOSED LOCATION AND DEPTH INDICATED ON THE DRAWING.
3. THE PROPOSED 16" FORCE MAIN IS TO BE INSTALLED AT THE PROPOSED LOCATION AND DEPTH INDICATED ON THE DRAWING.
4. THE PROPOSED 16" FORCE MAIN IS TO BE INSTALLED AT THE PROPOSED LOCATION AND DEPTH INDICATED ON THE DRAWING.
5. THE PROPOSED 16" FORCE MAIN IS TO BE INSTALLED AT THE PROPOSED LOCATION AND DEPTH INDICATED ON THE DRAWING.

REVISIONS

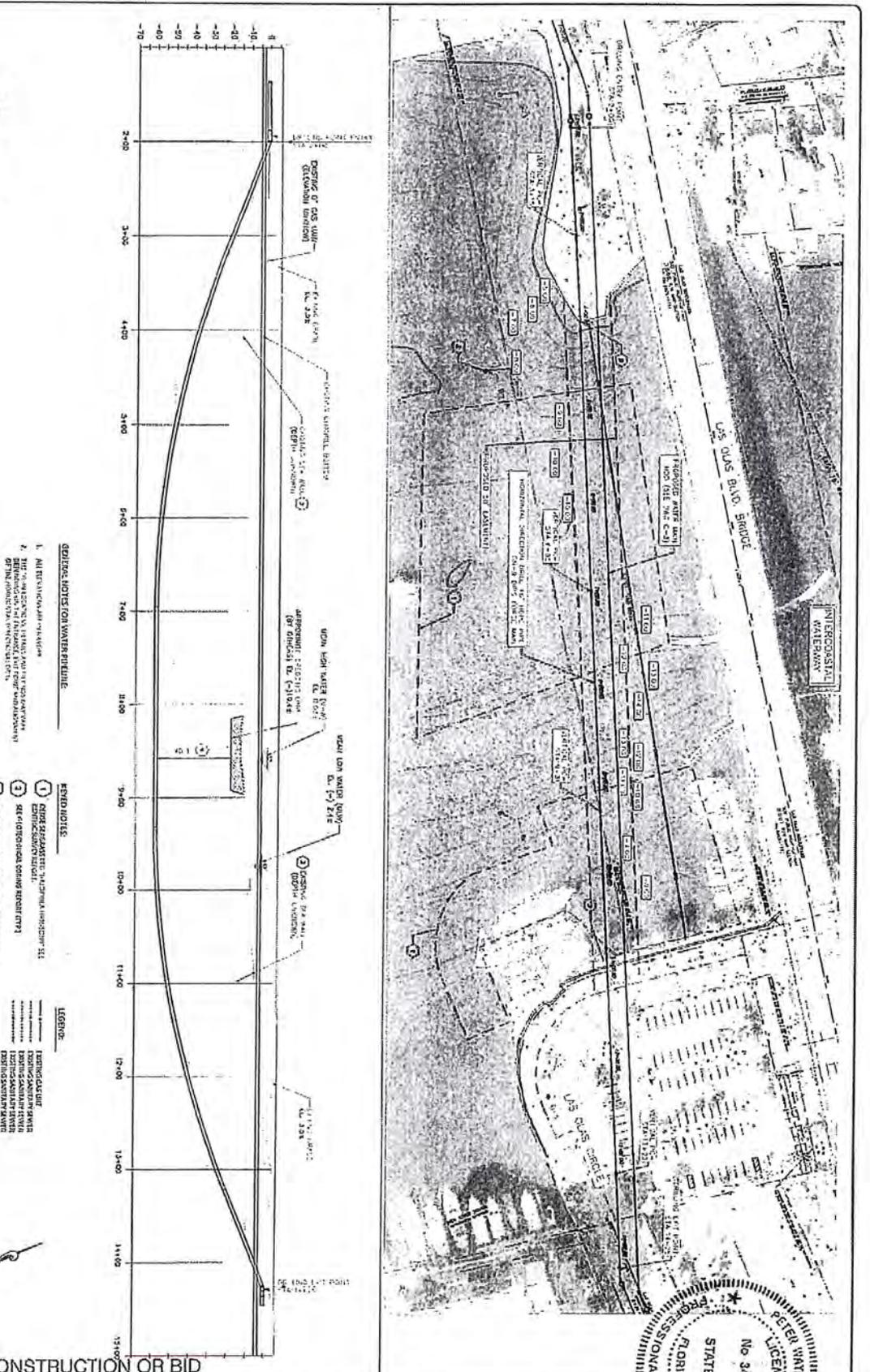
NO.	DATE	BY	DESCRIPTION
1			FOR RECORD
2			FOR RECORD
3			FOR RECORD
4			FOR RECORD
5			FOR RECORD

LEGEND

- 16" FORCE MAIN



NOT FOR CONSTRUCTION OR BID



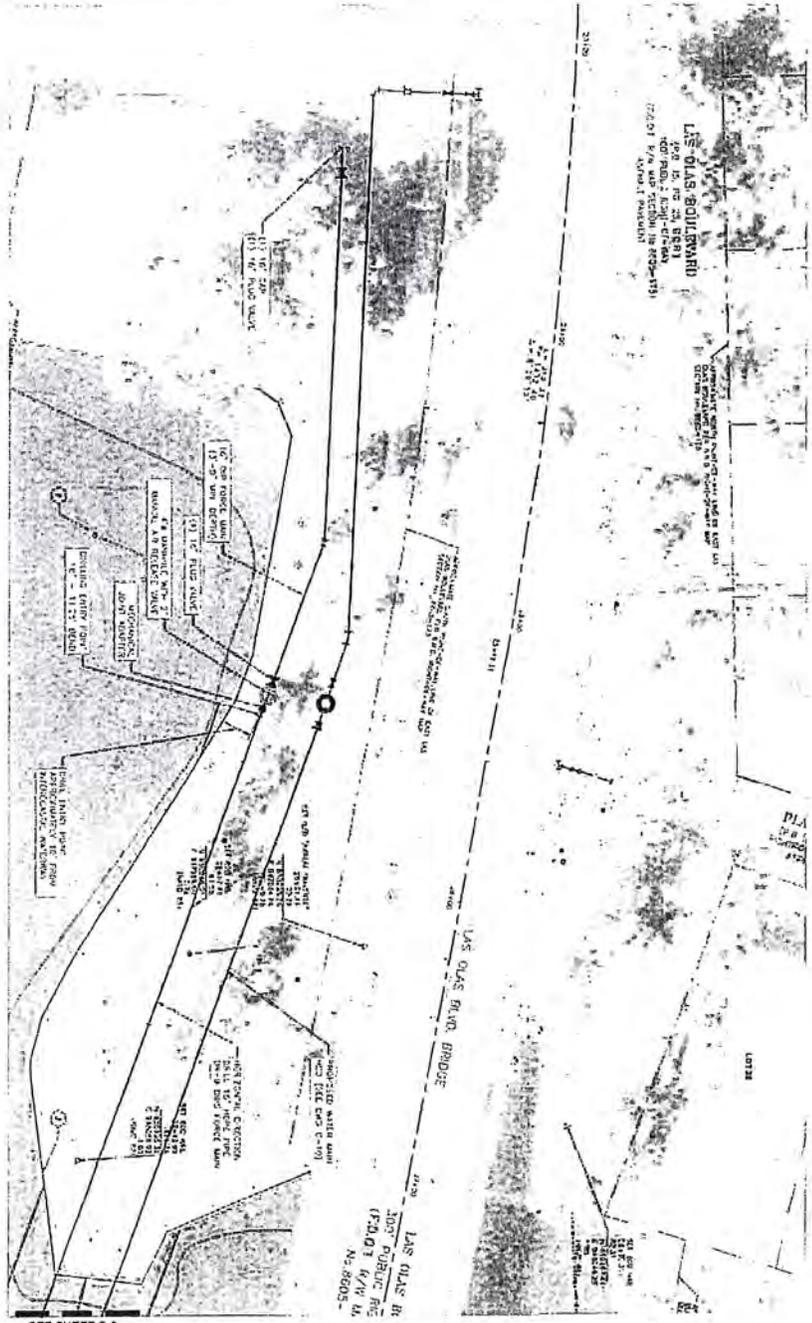
PROJECT # 12196
RELOCATION OF EX. 16" WM
& INSTALLATION OF 16" FM
PROPOSED 16" FORCE MAIN
E. LAS OLAS BLVD.

NO.	DATE	BY	DESCR.

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

PROFESSIONAL ENGINEER
PETER WATKINS
No. 3476
STATE OF FLORIDA
3/11/16

OSWEGO ENGINEERING AND SURVEYING, INC.
 1101 S.W. 15th Avenue, Fort Lauderdale, FL 33304
 PHONE: (954) 576-1100 FAX: (954) 576-1101
 WWW.OSWEGOENGINEERING.COM

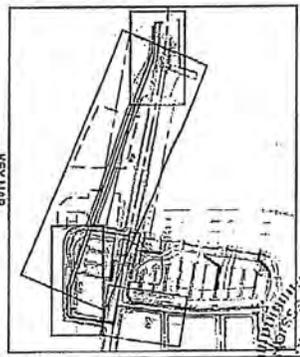


- GENERAL NOTES FOR WATER MAINS:**
1. ALL DEPTHS ARE IN FEET.
 2. THE DEPTH TO THE TOP OF THE FORCE MAIN SHALL BE AS SHOWN ON THIS PLAN. THE DEPTH TO THE BOTTOM OF THE FORCE MAIN SHALL BE AS SHOWN ON THIS PLAN.
 3. REVISIONS TO THIS PLAN SHALL BE SHOWN ON THIS PLAN.
 4. THE FORCE MAIN SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER MAINS, 2015 EDITION.

- KEY NOTES:**
1. SEE SHEET C-3
 2. SEE SHEET C-4
 3. SEE SHEET C-5

LEGEND:

(Symbol)	EXISTING ASSURANCE
(Symbol)	EXISTING SANITARY SEWER
(Symbol)	EXISTING WATER MAIN
(Symbol)	PROPOSED 16" FORCE MAIN



NOT FOR CONSTRUCTION OR BID

PROJECT # 12198
RELOCATION OF EX. 16" WM & INSTALLATION OF 16" FM
PROPOSED 16" FORCE MAIN
E. LAS OLAS BLVD.

REVISIONS				
NO.	DATE	BY	HOW	DESCRIPTION

CITY OF FORT LAUDERDALE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING & ARCHITECTURE

150 North Andrews Avenue, Fort Lauderdale, Florida 33301

DATE: 12/16/18
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]

EXHIBIT "B"
 16 OF 18



 CH2M HILL CONSULTANTS ASSOCIATES, INC.

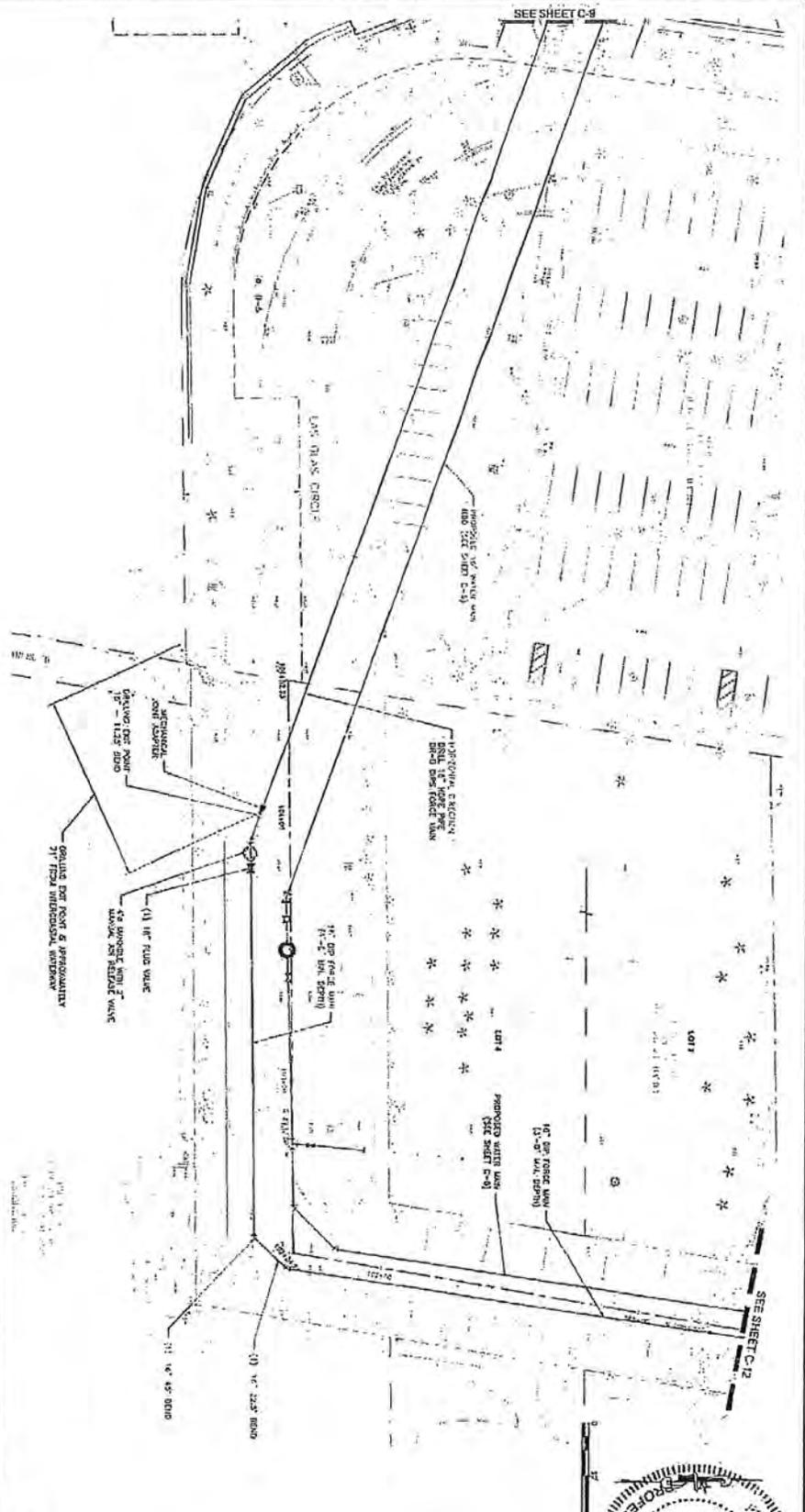
 10000 W. BOULEVARD, SUITE 100

 FORT LAUDERDALE, FLORIDA 33304

 PHONE: (954) 473-1000

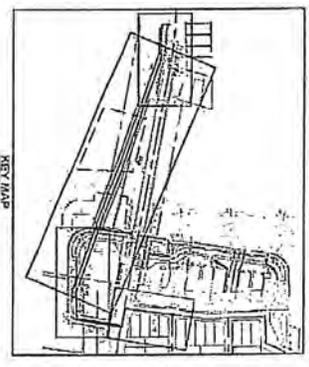
 FAX: (954) 473-1001

 WWW.CH2MHILL.COM



- GENERAL NOTES FOR VENDOR PERUSE**
1. ALL ELEVATIONS ARE IN FEET.
 2. THE CITY OF FORT LAUDERDALE, FLORIDA AND FORT LAUDERDALE WATER & SEWER DEPARTMENT SHALL BE THE AUTHORITY FOR THE LOCATION OF ALL UTILITIES.
 3. VERIFY ALL UTILITIES BEFORE CONSTRUCTION.
 4. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND THE PROPOSED FORCE MAIN LOCATION.

- LEGEND**
- 16" FORCE MAIN
 - 16" WATER MAIN
 - 16" SANITARY SEWER
 - 16" GAS MAIN
 - 16" TELEPHONE
 - 16" CABLE
 - 16" FIBER OPTIC
 - 16" ELECTRIC
 - 16" RAILROAD
 - 16" HIGHWAY
 - 16" AIRCRAFT
 - 16" OTHER



NOT FOR CONSTRUCTION OR BID

PROJECT NO.	C-11
DATE	12/13/11
ISSUE	12
BY	12/13/11
CHKD	12/13/11
APP'D	12/13/11

PROJECT # 12196
RELOCATION OF EX. 16" WM
& INSTALLATION OF 16" FM
PROPOSED 16" FORCE MAIN
E. LAS OLAS BLVD.

NO.	DATE	BY	CHKD	DESCRIPTION


CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301





 GENERAL INSPECTION AND ASSURANCE OF THE
 ACCURACY OF THE INFORMATION AND DATA
 CONTAINED HEREIN IS LIMITED TO THE
 INFORMATION PROVIDED BY THE CLIENT AND
 DOES NOT CONSTITUTE A GUARANTEE OF
 THE ACCURACY OF THE INFORMATION
 PROVIDED BY THE CLIENT.



- GENERAL NOTES FOR WATER MAINS**
1. ALL TRENCHES ARE TO BE 18" DEEP.
 2. ALL TRENCHES ARE TO BE 18" WIDE.
 3. ALL TRENCHES ARE TO BE 18" HIGH.
 4. ALL TRENCHES ARE TO BE 18" LONG.

LEGEND
 --- 18" WATER MAIN
 --- 12" WATER MAIN
 --- 8" WATER MAIN
 --- 6" WATER MAIN
 --- 4" WATER MAIN
 --- 3" WATER MAIN
 --- 2" WATER MAIN
 --- 1" WATER MAIN
 --- 1/2" WATER MAIN
 --- 1/4" WATER MAIN
 --- 1/8" WATER MAIN
 --- 1/16" WATER MAIN
 --- 1/32" WATER MAIN
 --- 1/64" WATER MAIN
 --- 1/128" WATER MAIN
 --- 1/256" WATER MAIN
 --- 1/512" WATER MAIN
 --- 1/1024" WATER MAIN
 --- 1/2048" WATER MAIN
 --- 1/4096" WATER MAIN
 --- 1/8192" WATER MAIN
 --- 1/16384" WATER MAIN
 --- 1/32768" WATER MAIN
 --- 1/65536" WATER MAIN
 --- 1/131072" WATER MAIN
 --- 1/262144" WATER MAIN
 --- 1/524288" WATER MAIN
 --- 1/1048576" WATER MAIN
 --- 1/2097152" WATER MAIN
 --- 1/4194304" WATER MAIN
 --- 1/8388608" WATER MAIN
 --- 1/16777216" WATER MAIN
 --- 1/33554432" WATER MAIN
 --- 1/67108864" WATER MAIN
 --- 1/134217728" WATER MAIN
 --- 1/268435456" WATER MAIN
 --- 1/536870912" WATER MAIN
 --- 1/1073741824" WATER MAIN
 --- 1/2147483648" WATER MAIN
 --- 1/4294967296" WATER MAIN
 --- 1/8589934592" WATER MAIN
 --- 1/17179869184" WATER MAIN
 --- 1/34359738368" WATER MAIN
 --- 1/68719476736" WATER MAIN
 --- 1/137438953472" WATER MAIN
 --- 1/274877906944" WATER MAIN
 --- 1/549755813888" WATER MAIN
 --- 1/1099511627776" WATER MAIN
 --- 1/2199023255552" WATER MAIN
 --- 1/4398046511104" WATER MAIN
 --- 1/8796093022208" WATER MAIN
 --- 1/17592186044416" WATER MAIN
 --- 1/35184372088832" WATER MAIN
 --- 1/70368744177664" WATER MAIN
 --- 1/140737488355328" WATER MAIN
 --- 1/281474976710656" WATER MAIN
 --- 1/562949953421312" WATER MAIN
 --- 1/1125899906842624" WATER MAIN
 --- 1/2251799813685248" WATER MAIN
 --- 1/4503599627370496" WATER MAIN
 --- 1/9007199254740992" WATER MAIN
 --- 1/18014398509481984" WATER MAIN
 --- 1/36028797018963968" WATER MAIN
 --- 1/72057594037927936" WATER MAIN
 --- 1/144115188075855872" WATER MAIN
 --- 1/288230376151711744" WATER MAIN
 --- 1/576460752303423488" WATER MAIN
 --- 1/1152921504606846976" WATER MAIN
 --- 1/2305843009213693952" WATER MAIN
 --- 1/4611686018427387904" WATER MAIN
 --- 1/9223372036854775808" WATER MAIN
 --- 1/18446744073709551616" WATER MAIN
 --- 1/36893488147419103232" WATER MAIN
 --- 1/73786976294838206464" WATER MAIN
 --- 1/147573952589676412928" WATER MAIN
 --- 1/295147905179352825856" WATER MAIN
 --- 1/590295810358705651712" WATER MAIN
 --- 1/1180591620717411303424" WATER MAIN
 --- 1/2361183241434822606848" WATER MAIN
 --- 1/4722366482869645213696" WATER MAIN
 --- 1/9444732965739290427392" WATER MAIN
 --- 1/18889465931478580854784" WATER MAIN
 --- 1/37778931862957161709568" WATER MAIN
 --- 1/75557863725914323419136" WATER MAIN
 --- 1/151115727451828646838272" WATER MAIN
 --- 1/302231454903657293676544" WATER MAIN
 --- 1/604462909807314587353088" WATER MAIN
 --- 1/1208925819614629174706176" WATER MAIN
 --- 1/2417851639229258349412352" WATER MAIN
 --- 1/4835703278458516698824704" WATER MAIN
 --- 1/9671406556917033397649408" WATER MAIN
 --- 1/19342813113834066795298816" WATER MAIN
 --- 1/38685626227668133590597632" WATER MAIN
 --- 1/77371252455336267181195264" WATER MAIN
 --- 1/154742504910672534362390528" WATER MAIN
 --- 1/309485009821345068724781056" WATER MAIN
 --- 1/618970019642690137449562112" WATER MAIN
 --- 1/1237940039285380274899244224" WATER MAIN
 --- 1/2475880078570760549798488448" WATER MAIN
 --- 1/4951760157141521099596976896" WATER MAIN
 --- 1/9903520314283042199193953792" WATER MAIN
 --- 1/19807040628566084398387907584" WATER MAIN
 --- 1/39614081257132168796775815168" WATER MAIN
 --- 1/79228162514264337593551630336" WATER MAIN
 --- 1/158456325028528675187103260672" WATER MAIN
 --- 1/316912650057057350374206521344" WATER MAIN
 --- 1/633825300114114700748413042688" WATER MAIN
 --- 1/1267650600228229401496826085376" WATER MAIN
 --- 1/2535301200456458802993652170752" WATER MAIN
 --- 1/5070602400912917605987304341504" WATER MAIN
 --- 1/10141204801825835211974608683008" WATER MAIN
 --- 1/20282409603651670423949217366016" WATER MAIN
 --- 1/40564819207303340847898434732032" WATER MAIN
 --- 1/81129638414606681695796869464064" WATER MAIN
 --- 1/162259276832013363391593789328128" WATER MAIN
 --- 1/324518553664026726783187578656256" WATER MAIN
 --- 1/649037107328053453566375157312512" WATER MAIN
 --- 1/129807421465610690713275234625024" WATER MAIN
 --- 1/259614842931221381426550469250048" WATER MAIN
 --- 1/519229685862442762853100938500096" WATER MAIN
 --- 1/103845937172488552570620187600192" WATER MAIN
 --- 1/207691874344977105141240375200384" WATER MAIN
 --- 1/415383748689954210282480750400768" WATER MAIN
 --- 1/830767497379908420564961500801536" WATER MAIN
 --- 1/166153499475981684112992301603072" WATER MAIN
 --- 1/332306998951963368225984603206144" WATER MAIN
 --- 1/6646139979039267364519692064122288" WATER MAIN
 --- 1/1329227995807853472903938412244576" WATER MAIN
 --- 1/2658455991615706945807876824489152" WATER MAIN
 --- 1/5316911983231413891615753648978304" WATER MAIN
 --- 1/1063382396646282778323150729795608" WATER MAIN
 --- 1/2126764793292565556646301459591216" WATER MAIN
 --- 1/4253529586585131113292602919182432" WATER MAIN
 --- 1/8507059173170262226585205838364864" WATER MAIN
 --- 1/17014118346340524453170411676729728" WATER MAIN
 --- 1/34028236692681048906340823353459456" WATER MAIN
 --- 1/68056473385362097812681646706918912" WATER MAIN
 --- 1/136112946770724195625363293413837824" WATER MAIN
 --- 1/272225893541448391250726586827675648" WATER MAIN
 --- 1/544451787082896782501453173655351296" WATER MAIN
 --- 1/1088903574165793565002906367110702592" WATER MAIN
 --- 1/2177807148331587130005812734221405184" WATER MAIN
 --- 1/435561429666317426001162546844281024" WATER MAIN
 --- 1/871122859332634852002325093688562048" WATER MAIN
 --- 1/174224571866526970400465018737712416" WATER MAIN
 --- 1/348449143733053940800930037475424832" WATER MAIN
 --- 1/696898287466107881601860074950849664" WATER MAIN
 --- 1/1393796574932215763203720149901699296" WATER MAIN
 --- 1/2787593149864431526407440299803398592" WATER MAIN
 --- 1/5575186299728863052814880599606797184" WATER MAIN
 --- 1/11150372599457726105629761199213594368" WATER MAIN
 --- 1/2230074519891545221125952239842718912" WATER MAIN
 --- 1/4460149039783090442251904479685437824" WATER MAIN
 --- 1/8920298079566180884503808959370875648" WATER MAIN
 --- 1/17840596159132361769007617918741751296" WATER MAIN
 --- 1/35681192318264723538015235837483502592" WATER MAIN
 --- 1/71362384636529447076030471674967005184" WATER MAIN
 --- 1/142724769273058894152060943349934010368" WATER MAIN
 --- 1/285449538546117788304121886699868020736" WATER MAIN
 --- 1/570899077092235576608243773399736041472" WATER MAIN
 --- 1/1141798154184471153216487546799472082944" WATER MAIN
 --- 1/2283596308368942306432975093598944165888" WATER MAIN
 --- 1/4567192616737884612865950187197888331776" WATER MAIN
 --- 1/9134385233475769225731900374395776663552" WATER MAIN
 --- 1/18268770466951538451463807487911553327104" WATER MAIN
 --- 1/36537540933903076902927614975823106654208" WATER MAIN
 --- 1/73075081867806153805855229951646213308416" WATER MAIN
 --- 1/14615016373561230761171045990329246616832" WATER MAIN
 --- 1/29230032747122461522342091880658493233664" WATER MAIN
 --- 1/58460065494244923044684183761316986467328" WATER MAIN
 --- 1/116920130988489846089368367522633932814656" WATER MAIN
 --- 1/233840261976979692178736735045267865629312" WATER MAIN
 --- 1/46768052395395938435747347009053573125824" WATER MAIN
 --- 1/93536104790791876871494644018107146251648" WATER MAIN
 --- 1/187072209581583753742999288362144292513296" WATER MAIN
 --- 1/374144419163167507485998576724288584225792" WATER MAIN
 --- 1/748288838326335014971997153448577168451584" WATER MAIN
 --- 1/1496577676652670039839943068971553369031168" WATER MAIN
 --- 1/2993155353305340079679886137943106773802336" WATER MAIN
 --- 1/5986310706610680159359772275886213516044704" WATER MAIN
 --- 1/1197262141322136031871954551773226703208896" WATER MAIN
 --- 1/2394524282644272063743909103546453406417792" WATER MAIN
 --- 1/4789048565288544127487818207092906812835584" WATER MAIN
 --- 1/9578097130577088254975636414185813625671168" WATER MAIN
 --- 1/19156194261154175199513272828371651042336" WATER MAIN
 --- 1/38312388522308350399026545656743302084672" WATER MAIN
 --- 1/76624777044616700798053091313486604169344" WATER MAIN
 --- 1/15324955408923340159610618262697320833888" WATER MAIN
 --- 1/30649910817846680319221236525394641667776" WATER MAIN
 --- 1/6129982163569336063844247305078928335552" WATER MAIN
 --- 1/12259964327138672127688494610157856671104" WATER MAIN
 --- 1/24519928654277344255376989220315713342208" WATER MAIN
 --- 1/4903985730855468851075397844063142684416" WATER MAIN
 --- 1/98079714617109377021507956881262853688832" WATER MAIN
 --- 1/1961594292422187540430159137625270737776" WATER MAIN
 --- 1/3923188584844375080860318275250541475552" WATER MAIN
 --- 1/7846377169688750161720636550401082951104" WATER MAIN
 --- 1/15692754339377500323441273000802165122208" WATER MAIN
 --- 1/31385508678755000646882546001604330244416" WATER MAIN
 --- 1/62771017357510001289365092003208660488832" WATER MAIN
 --- 1/125542034715020002578730184006417320977664" WATER MAIN
 --- 1/251084069430040005157460368012834641955528" WATER MAIN
 --- 1/50216813886008001031492073602566923911104" WATER MAIN
 --- 1/100433627772016002062984147205133847822208" WATER MAIN
 --- 1/200867255544032004125968294410267695644416" WATER MAIN
 --- 1/401734511088064008251936588820535391288832" WATER MAIN
 --- 1/803469022176128016503873177641070782577664" WATER MAIN
 --- 1/160693804435225603200774355528214155155328" WATER MAIN
 --- 1/3213876088704512064015487110564283103110656" WATER MAIN
 --- 1/64277521774090241280309742211285562062211136" WATER MAIN
 --- 1/12855504354818048256061948442571124442222272" WATER MAIN
 --- 1/2571100870963609651201239688514224848844444444" WATER MAIN
 --- 1/5142201741927219302402479377028449777888888" WATER MAIN
 --- 1/10284403493854438604804958754056995557777777" WATER MAIN
 --- 1/20568806987708877209609917508113911115555555" WATER MAIN
 --- 1/4113761397541775441921983501622722222222222" WATER MAIN
 --- 1/82275227950835508838439670032454444444444444" WATER MAIN
 --- 1/164550457901671017676879340064908888888888888" WATER MAIN
 --- 1/329100915803342035353758680129817777777777777" WATER MAIN
 --- 1/65820183160668407070751736025963555555555555" WATER MAIN
 --- 1/1316403663213368141415035200519271111111111111" WATER MAIN
 --- 1/263280732642673628283007040103842222222222222" WATER MAIN
 --- 1/526561465285347256566014080207684444444444444" WATER MAIN
 --- 1/105312293057069511313320280415368888888888888" WATER MAIN
 --- 1/210624586114139022626640560830737777777777777" WATER MAIN
 --- 1/421249172228278045253281121661475555555555555" WATER MAIN
 --- 1/842498344456556090506562433322911111111111111" WATER MAIN
 --- 1/168499668911311218101312866645582222222222222" WATER MAIN
 --- 1/33699933782262243620262573317164444444444444" WATER MAIN
 --- 1/67399867564524487240525146634328888888888888" WATER MAIN
 --- 1/134799735129048974481050293268577777777777777" WATER MAIN
 --- 1/269599470258097948962100586537155555555555555" WATER MAIN
 --- 1/539198940516195897924201173074311111111111111" WATER MAIN
 --- 1/107839788103239179584802346014862222222222222" WATER MAIN
 --- 1/215679576206478359169604692029724444444444444" WATER MAIN
 --- 1/43135915241295671833920938405944888888888888" WATER MAIN
 --- 1/862718304825913436678418760118897777777777777" WATER MAIN
 --- 1/172543660965182687335683542037795555555555555" WATER MAIN
 --- 1/345087321930365374671367084075591111111111111" WATER MAIN
 --- 1/690174643860730749342734168151182222222222222" WATER MAIN
 --- 1/138034928772146149868546833630234444444444444" WATER MAIN
 --- 1/27606985754429229973709367266046888888888888" WATER MAIN
 --- 1/552139715088584599474187345320937777777777777" WATER MAIN
 --- 1/110427943017716919894837460641875555555555555" WATER MAIN
 --- 1/220855886035433839789674921283751111111111111" WATER MAIN
 --- 1/44171177207086767957934984256742222222222222" WATER MAIN
 --- 1/88342354414173535915869968513484444444444444" WATER MAIN
 --- 1/17668470882834707183173993702696888888888888" WATER MAIN
 --- 1/353369417656694143663479874053937777777777777" WATER MAIN
 --- 1/70673883531338828732695974810787555555555555" WATER MAIN
 --- 1/141347767062677657465391949621575111111111111" WATER MAIN
 --- 1/282695534125355314930783899243142222222222222" WATER MAIN
 --- 1/565391068250710629861567798486284444444444444" WATER MAIN
 --- 1/11307821365014212597231355969725688888888888" WATER MAIN
 --- 1/226156427300284251944627119394513777777777777" WATER MAIN
 --- 1/452312854600568503889254397789027555555555555" WATER MAIN
 --- 1/904625709201137007778508755577805511111111111" WATER MAIN
 --- 1/180925141840227401555701751155610222222222222" WATER MAIN
 --- 1/361850283680454803111403502311224444444444444" WATER MAIN
 --- 1/72370056736090960622280700462248888888888888" WATER MAIN
 --- 1/144740113472181921244561409324977777777777777" WATER MAIN
 --- 1/289480226944363842489122808649955555555555555" WATER MAIN
 --- 1/578960453888727684978245617299911111111111111" WATER MAIN
 --- 1/115792090777745536995649123599922222222222222" WATER MAIN
 --- 1/23158418155549107399129824719984444444444444" WATER MAIN
 --- 1/46316836311098214798259649439968888888888888" WATER MAIN
 --- 1/92633672622196429596519298879937777777777777" WATER MAIN
 --- 1/185267345244392851993185837759755555555555555" WATER MAIN
 --- 1/370534690488785703986371675519511111111111111" WATER MAIN
 --- 1/74106938097757140797274335103022222222222222" WATER MAIN
 --- 1/14821387619551428155444667020604444444444444" WATER MAIN
 --- 1/29642775239102856311089334041208888888888888" WATER MAIN
 --- 1/592855504782057126221786680824177777777777777" WATER MAIN
 --- 1/118571100956411425243573361648355555555555555" WATER MAIN
 --- 1/237142201912822850487146723296711111111111111" WATER MAIN
 --- 1/47428440382564570097429346559342222222222222"