Attachment “A”

Engineering Plans
CITY OF NORTH MIAMI
PUBLIC WORKS DEPARTMENT

CONTRACT PLANS

PROPOSED 16" D.I.P. WATER MAIN
NE 143rd STREET FROM NE 16th AVENUE TO NE 18th AVENUE
AND NE 18th AVENUE FROM NE 143rd STREET TO NE 149th STREET

MIAMI-DADE COUNTY - FLORIDA

INDEX OF PLANS

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GOVERNING STANDARDS AND SPECIFICATIONS:
- CITY OF NORTH MIAMI PUBLIC WORKS DEPARTMENT
- MIAMI-DADE WATER AND SEWER DEPARTMENT DESIGN AND CONSTRUCTION STANDARDS
- MIAMI-DADE COUNTY DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES
- MIAMI-DADE PUBLIC WORKS DEPARTMENT TRAFFIC DIVISION
- FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS (2017)
- FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS
- FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
- FLORIDA ADMINISTRATIVE CODES 62-555 AND 62-604
- 10 STATES STANDARDS FOR WASTEWATER FACILITIES
- MIAMI-DADE COUNTY DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES

BEGIN PROJECT STA 21+72.35 NE 143 ST
END PROJECT STA 30+00.00 NE 18 AVE

ISSUED FOR BIDS
JULY 11, 2017
### TABULATION OF QUANTITIES

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<th>PAY ITEM NO.</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>TOTAL</th>
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<tr>
<td>1</td>
<td>MOBILIZATION (INCLUDES STORMWATER POLLUTION PREVENTION MEASURES)</td>
<td>LS</td>
<td>1.00</td>
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<tr>
<td>2</td>
<td>MAINTENANCE OF TRAFFIC</td>
<td>LS</td>
<td>0.00</td>
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<tr>
<td>3</td>
<td>STABILIZATION OF SUBGRADE</td>
<td>SY</td>
<td>1366.00</td>
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<tr>
<td>4</td>
<td>FURNISH AND INSTALL 2&quot; CONCRETE SIDEWALK RESTORATION</td>
<td>EA</td>
<td>599.00</td>
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<td>5</td>
<td>FURNISH AND INSTALL 2&quot; CONCRETE SIDEWALK RESTORATION</td>
<td>EA</td>
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<tr>
<td>6</td>
<td>ABANDON EXISTING MAIN</td>
<td>LF</td>
<td>3021.00</td>
</tr>
<tr>
<td>7</td>
<td>RELOCATE OR ADJUST EXISTING SIGN</td>
<td>EA</td>
<td>5.00</td>
</tr>
<tr>
<td>8</td>
<td>FURNISH AND INSTALL IRRIGATION SYSTEM RESTORATION</td>
<td>EA</td>
<td>12.00</td>
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</tbody>
</table>

**PAY ITEM NOTES:**

(a) ITEM INCLUDES RECONNECTION TO EXISTING FIRE HYDRANT.

(b) MISCELLANEOUS PIECES THAT WILL BE NEEDED FOR FULL FUNCTIONING SHALL BE INCLUDED AS PART OF THE PAY ITEM.

(c) WATER MAIN INCLUDES COST OF RECONNECTION TO EXISTING LINE, INCLUDES SLEEVES AND CORP STOPS, AS REQUIRED.

(d) INCLUDES REMOVAL AND DISPOSAL OF EXISTING METER BOXES.

(e) INCLUDES THE COST OF PLUGGING AND GROUTING EXISTING MAIN.
GENERAL NOTES:


2. ALL PUBLIC LAND USES AND PRIVATE ACTIONS (USES), SURVEY MARKINGS AND/OR SURVEY MARKINGS OR CONSTRUCTION MARKINGS, SHOWN ON THE SITE PLAN OR OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, SHOULD BE MAINTAINED FOR DURATION OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE INTACTNESS OF THE SURVEY MARKINGS AND SURVEY MARKINGS SHOWN ON THE SITE PLAN OR OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF THE NATURAL GEODETIC DATUM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE NATURAL GEODETIC DATUM AND OTHER APPROPRIATE SURVEY MARKINGS SHOWN ON THE SITE PLAN OR OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.

GENERAL NOTES:

3. ALL ELEVATIONS REFER TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD).

4. AN APPROVED PAVING AND DRAINAGE PLAN MUST BE SUBMITTED TO THE CITY OF NORTH MIAMI FOR ALL VERTICAL SEPARATION. OTHER DESIGN CRITERIA MAY APPLY.


6. Utility Connections from Existing City Main to be Reused by City Listing: The Contractor to Exterior of Reused Connections shall be Reused and Determined by the City. City Listing of the System in the City of North Miami shall be Designated and Approved by the City. The Contractor shall be Responsible for all Materials to be Installed by the Contractor in the City of North Miami shall be Listed and Determined by the City. City Listing of the System in the City of North Miami shall be Designated and Approved by the City.

7. All New Connections from Existing City Main to be Reused by City Listing: The Contractor to Exterior of Reused Connections shall be Reused and Determined by the City. City Listing of the System in the City of North Miami shall be Listed and Determined by the City. The Contractor shall be Responsible for all Materials to be Installed by the Contractor in the City of North Miami shall be Listed and Determined by the City.

8. All existing connections from existing city main to be reused by city listing: the contractor to exterior of reused connections shall be reused and determined by the city. city listing of the system in the city of north miami shall be designated and approved by the city. the contractor shall be responsible for all materials to be installed by the contractor in the city of north miami shall be listed and determined by the city. city listing of the system in the city of north miami shall be designated and approved by the city.
STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

1. APPROVED STATE, LOCAL PLANS OR STORM WATER PERMITS.
2. ALL OF THE CONTROLS SHALL BE MAINTAINED AT ALL TIMES.
3. ALL SYNTHETIC BALE BACKED BY FENCE.
4. APPLY FERTILIZERS AND PESTICIDES ACCORDING TO STANDARD SPECIFICATIONS, DESIGN AND SPECIAL PROVISIONS.
5. VISIT www.dep.state.fl.us/water/stormwater/npdes/ SPECIFICATIONS, DESIGN AND SPECIAL PROVISIONS.

NOTES:

3. ALL CONTROLS SHALL BE INSPECTED DAILY.
4. ALL OF THE CONTROLS SHALL BE MAINTAINED AT ALL TIMES.
5. APPROVED STATE, LOCAL PLANS OR STORM WATER PERMITS.
6. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

B. GENERAL

1. APPROVED STATE, LOCAL PLANS OR STORM WATER PERMITS.
2. ALL OF THE CONTROLS SHALL BE MAINTAINED AT ALL TIMES.
3. ALL SYNTHETIC BALE BACKED BY FENCE.

NOTES:

1. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

DITCH BOTTOM INLET STRUCTURE POLLUTION PROTECTION OR APPROVED BMP EQUAL PER FOOT AND FFOOT STANDARDS

CONCRETE OR BRICK

FILTER FABRIC TYPE E-1

CONCRETE OR BRICK

PARTIAL INLET COMPLETED INLET DITCH BOTTOM INLET

PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

SILT FENCE APPLICATIONS

SILT FENCE DETAIL SECTIONS

Type III Silt Fence

Type III Silt Fence

Type III Silt Fence

NOTES:

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2. ALL OF THE CONTROLS SHALL BE MAINTAINED AT ALL TIMES.
3. ALL SYNTHETIC BALE BACKED BY FENCE.
DETAIL NOTES:

1. THE CITY OF NORTH MIAMI PUBLIC WORKS DEPARTMENT - WATER AND SEWER DIVISION DEFAULTS TO M-DWASD WATER AND SEWER DEPARTMENT'S (M-DWASD) STANDARD SPECIFICATIONS AND DETAILS FOR DESIGN AND CONSTRUCTION. THESE DETAILS ARE FOR REFERENCE ONLY.

2. CONTRACTOR TO COORDINATE WITH THE CITY OF NORTH MIAMI AND M-DWASD TO ENSURE THE MOST CURRENT CONSTRUCTION STANDARDS AND DETAILS ARE ADHERED TO.

3. THE E.O.R. DOES NOT TAKE RESPONSIBILITY FOR THE DESIGN OF THESE DETAILS AS THEY HAVE BEEN PROVIDED TO MEET REGULATORY AGENCY REQUIREMENTS.

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2. CONTRACTOR TO COORDINATE WITH THE CITY OF NORTH MIAMI AND M-DWASD TO ENSURE THE MOST CURRENT CONSTRUCTION STANDARDS AND DETAILS ARE ADHERED TO.

3. THE E.O.R. DOES NOT TAKE RESPONSIBILITY FOR THE DESIGN OF THESE DETAILS AS THEY HAVE BEEN PROVIDED TO MEET REGULATORY AGENCY REQUIREMENTS.
1. The City of North Miami Public Works Department – Water and Sewer Division defaults to using the City’s Water and Sewer Department’s standard specifications and details for design and construction. These details are for reference only.

2. Contractor is to coordinate with the City of North Miami and M-DWASD to ensure the most current construction standards and details are adhered to.

3. The E.O.R. does not take responsibility for the design of these details as they have been provided to meet regulatory agency requirements.

**ELEVATION**

- City of North Miami Public Works Department – Water and Sewer Division
- Standard Specifications and Details for Design and Construction
- These details are for reference only.

**DETAIL NOTES:**

- Hazel H. Vazquez, P.E., License No. 51143

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**SECTION**

- Typical profile for underground installation
- Details include:
  - Service connections
  - Valve positions
  - Grade adjustments

**PLAN**

- Typical plan view
- Details include:
  - Pipe layout
  - Valve locations
  - Access points

**SIDE VIEW**

- Typical side elevation view
- Details include:
  - Pipe dimensions
  - Valve orientations
  - Connections

---

**NOTCH DETAIL**

- Typical notch detail for underground installation
- Details include:
  - Pipe size
  - Notch dimensions
  - Drainage provisions

**HINGE DETAIL**

- Typical hinge detail for underground installation
- Details include:
  - Hinge type
  - Mounting positions
  - Adjustment mechanisms

---

**SECTION**

- Typical cross-sectional view
- Details include:
  - Pipe cross-sections
  - Valve cross-sections
  - Connections

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- Typical plan layout
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**SIDE VIEW**

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PHASE NOTES:
Install new 16-inch main along NE 18 Avenue and connections.

DESCRIPTION

1. Lane closures shall not be permitted during school speed zone hours where such
   zone until all labor and material are available for the construction in that area.
2. Lane closure shall occur only during non-peak hours on non-event
days/weekends. Non peak hours are:
   5:00 AM to 3:30 PM weekdays and weekends
   9:00 PM to 1:30 AM Sunday through Thursday nights
   11:00 PM to 7:00 AM Friday and Saturday nights
3. Traffic Control Plans for all Phases are designed for non-peak hours only. The
   traffic and travel ways shall not be altered by the Contractor to create a work
   zone until all labor and material are available for the construction in that area.
4. All work shall be performed during daytime only with the exception of milling &
   resurfacing and striping to be performed at nighttime.
5. Arrow on the TCP denote the direction of traffic only and do not reflect pavement
   markings unless specifically noted.
6. Lane closures shall not be permitted during school speed zone hours where such
   closures will affect traffic flow in the vicinity of the school speed zones.
7. Regulatory speed established within work zone travel ways shall be the posted
   speed (20 mph) reduced speed and regulatory speed signs shall be installed on
   separate posts in accordance with the Standard Indices.
8. Arrows on the TCP denote the direction of traffic only and do not reflect pavement
   markings unless specifically noted.
9. Traffic Control Plans for all Phases are designed for non-peak hours only. The
   traffic and travel ways shall not be altered by the Contractor to create a work
   zone until all labor and material are available for the construction in that area.
10. Lane closures shall not be permitted during school speed zone hours where such
    closures will affect traffic flow in the vicinity of the school speed zones.
11. Regulatory speed established within work zone travel ways shall be the posted
    speed (20 mph) reduced speed and regulatory speed signs shall be installed on
    separate posts in accordance with the Standard Indices.

DROP OFFS:
12. For drop offs, the Contractor's attention is directed to Standard Index No. 600.
    Sheet 10 of 15. The Contractor shall use shoulder treatment detail when no
    barriers are required in the plans.

MARKINGS:
13. Cost of removal of Work Zone Pavement Markings (including paint, removal
    tape and markers) regardless of method, to be included in the related
    pavement markings/markers pay items. Cost of removal of pavement markings
    and markers existing prior to construction, to be included in Maintenance of
    Traffic, LS.
14. Temporary lane transitions, shifts, and crossovers shall have solid lane and
    edge lines for the length of the transition, shift or crossover. In addition,
    solid lane and edge lines shall extend 100 ft on tangent beyond each end of
    the transition, shift, or crossover. Exception shall be through intersections
    where 2-ft skill lines will be placed.
15. All temporary stripes and markings shall be painted only, unless otherwise
    specified on the plans or approved by the Engineer.
NOTES:
- THE JOE ART INDICES ARE FOR REFERENCE ONLY. R.J. BEHAR & COMPANY DOES NOT ASSUME ANY RESPONSIBILITY OR ANY LIABILITY FOR HOW THE CONTRACTOR EXECUTES THEIR ART.
- CONTRACTOR IS RESPONSIBLE FOR PREPARING AND SUBMITTING THEIR ART PLAN FOR APPROVAL OF THE CITY THAT MEETS ARTS AND JOE STANDARDS.

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TYPICAL SECTION
NE 143 ST
FROM NE 16 AVE TO NE 18 AVE

TYPICAL SECTION
NE 18 AVE
FROM NE 143 ST TO SOUTH OF NE 146 ST

TYPICAL SECTION
NE 18 AVE
NORTH OF NE 146 ST TO NE 149 ST

1. MILLING AND RESURFACING
   MILL & RATE AUTOMATICAL CONCRETE SURFACE
   CONCRETE RESTORATION
   MILL & RATE ASPHALTIC CONCRETE SURFACE
   CONCRETE RESTORATION

2. FULL DEPTH RESTORATION
   FULL DEPTH RESTORATION
   FULL DEPTH RESTORATION
   FULL DEPTH RESTORATION
   FULL DEPTH RESTORATION
   FULL DEPTH RESTORATION
   FULL DEPTH RESTORATION
   FULL DEPTH RESTORATION
   FULL DEPTH RESTORATION

3. SIDEWALK RESTORATION
   SIDEWALK RESTORATION
   SIDEWALK RESTORATION
   SIDEWALK RESTORATION
   SIDEWALK RESTORATION
   SIDEWALK RESTORATION
   SIDEWALK RESTORATION
   SIDEWALK RESTORATION
   SIDEWALK RESTORATION

4. SOD RESTORATION
   SOD RESTORATION
   SOD RESTORATION
   SOD RESTORATION
   SOD RESTORATION
   SOD RESTORATION
   SOD RESTORATION
   SOD RESTORATION
   SOD RESTORATION

LIMITS OF CLEARING AND GRUBBING
FROM NE 16 AVE TO NE 18 AVE
NE 143 ST
FROM NE 143 ST TO SOUTH OF NE 146 ST
NE 18 AVE
NORTH OF NE 146 ST TO NE 149 ST

ENGINEER.
PRIOR TO CONSTRUCTION AND SUBMIT TO THE CITY AND
OR BETTER PERFORM FIELD CONDITIONS INVENTORY
RESTORE EXISTING SOD AREAS TO EXISTING CONDITIONS
SOD RESTORATION
STANDARDS 310 (2017).

WATER MAIN RESTORE SIDEWALK PER FDOT DESIGN
AT LOCATIONS DAMAGED BY CONSTRUCTION OF THE NEW
SIDEWALK RESTORATION
USE THE GREATER THICKNESS.

*IF EXIST. THICKNESS VARIES FROM THE PROPOSED
REFER TO M-DWASD DETAIL GS 1.9

12" STABILIZED SUBGRADE (LBR 40)
8" BASE COURSE (LBR 100), PRIMED ENTIRE WIDTH*
1" SUPERPAVE SURFACE COURSE
FULL DEPTH RESTORATION
CONCRETE SURFACE COURSE
COURSE RESURFACE 1" SUPERPAVE ASPHALTIC
MILL 1" EXIST ASPHALTIC CONCRETE SURFACE
MILLING AND RESURFACING
### SUMMARY OF VERIFIED UTILITIES

<table>
<thead>
<tr>
<th>Vvh #</th>
<th>UTILITY DESCRIPTION (Owner, type)</th>
<th>SIZE</th>
<th>MATERIALS</th>
<th>B/L and/or C/L</th>
<th>EXISTING GROUND ELEVATION</th>
<th>TOP ELEVATION</th>
<th>COMMENTS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>BASELINE N.E. 143 STREET</td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>MIAMI DOWA WATER &amp; SEWER, WATER</td>
<td>36''</td>
<td>WRAP-STEEL</td>
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<tr>
<td>6</td>
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<td>WRAP-STEEL</td>
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</tbody>
</table>

### LIMITS:

N.E. 143th STREET from N.E. 16th Avenue to N.E. 18th Avenue, and N.E. 18th Avenue from N.E. 143th STREET to N.E. 148th STREET

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### SURVEYORS NOTES:

1. SURVEY WAS PERFORMED BY F.R. ALEMAN AND ASSOCIATES, INC.
2. VERTICAL INFORMATION IS RELATIVE TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NVD 29).
3. STATION AND OFFSET REFER TO THE BASELINE OF SURVEY SHOWN ON ALIGNMENT FILE (ALIGN01.dgn) AND GEOPAK FILE "jobwl.gpk," AS PROVIDED BY R. J. SEHAR.
4. PROJECT LIMITS U.S. SURVEY FEET.
**Water Main Improvements**  
North Miami, Florida

**Geotechnical Engineering Services**  
7111-14-281

**SOILS PROFILES**

**NOTES**
- Encountered groundwater table
- Groundwater may be encountered in the upper 10 ft of drilling
- Numbers to the left of borings indicate SPT value, top of penetration and they were obtained using an automatic hammer, unless otherwise noted.
- Denotes depth in feet from existing ground surface

**LEGEND**
- Topsoil
- Gravelly Sand
- Sand
- Limestone

**BORINGS LOCATION PLAN**  
Approximate Location of SPT Borings

**Engineer of Record:** RAJ KRISHNASAMY, P.E.  
PE License Number: 53567

**Drawn by:** RAJ KRISHNASAMY, P.E.  
PE License Number: 53567

**Checked by:** RAJ KRISHNASAMY, P.E.  
PE License Number: 53567

**Project Number:** 7111-14-281

**Certificate of Authorization:** 28073

**Sheet:** G-1