Meeting Date: March 10, 2015 Agenda Item 12

REQUESTED COMMISSION ACTION:

X Consent ___ Ordinance X Resolution ___ Consideration ___ Workshop

SHORT TITLE OR MOTION: A RESOLUTION OF THE CITY COMMISION OF THE CITY OF POMPANO BEACH, FLORIDA, APPROVING AND AUTHORIZING THE PROPER CITY OFFICIALS TO EXECUTE A DISTRICT FOUR (4) AMENDMENT NUMBER NINE (9) TO LANDSCAPE INCLUSIVE MAINTENANCE MEMORANDUM OF AGREEMENT BETWEEN THE CITY OF POMPANO BEACH AND THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION FOR ADDITIONAL LANDSCAPE IMPROVEMENTS ON STATE ROAD 834 (SAMPLE ROAD) FROM MILITARY TRAIL TO STATE ROAD 5 (US 1); PROVIDING AN EFFECTIVE DATE. (NO COST)

SUMMARY OF PURPOSE AND WHY:

The City earned a FY14/15 Florida Highway Beautification Council Grant to enhance landscaping roadway medians on Sample Road (SR 834) from Military Trail to Federal Highway. In order to implement the project, the attached Amendment number nine (9) to Landscape Inclusive Maintenance Memorandum of Agreement (MOA) between the City and FDOT is required. Although there is no cost to city for this maintenance MOA, there is for the associated project with a total cost of $306,011 and City's cost share is $206,011.

QUESTIONS TO BE ANSWERED BY ORIGINATING DEPARTMENT:

(1) Origin of request for this action: Staff
(2) Primary staff contact: Robert A. McCaughan, Public Works Director Ext 4097
(3) Expiration of contract, if applicable:
(4) Fiscal impact and source of funding: Canopy Tree Trust Fund and CIP #14-222 (302-7500-530.65-12)

DEPARTMENTAL COORDINATION	DATE	DEPARTMENTAL RECOMMENDATION	DEPARTMENTAL HEAD SIGNATURE
Public Works	2/27/15	APPROVE	Robert A. McCaughan
Finance	3/2/15	APPROVE	
City Attorney	3/2/15	APPROVE	
Budget	3-2-15	APPROVE	

___ Advisory Board
___ Development Services Director
X City Manager

ACTION TAKEN BY COMMISSION:

Ordinance	Resolution	Consideration	Workshop
1st Reading	1st Reading	Results:	Results:
2nd Reading			

City Attorney's Communication #2015-632
February 23, 2015

TO: Robert A. McCaughan, Public Works Director

FROM: Jill R. Mesojedec, FRP, Paralegal

VIA: Gordon B. Linn, City Attorney

RE: Resolutions – 2013-2014 Highway Beautification Council Grant

As requested in your memorandum dated February 20, 2015, Public Works Department Memorandum No. 2015-027, I have prepared and attached the following captioned resolutions:

> **A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA, APPROVING AND AUTHORIZING THE PROPER CITY OFFICIALS TO EXECUTE A DISTRICT FOUR (4) AMENDMENT NUMBER NINE (9) TO LANDSCAPE INCLUSIVE MAINTENANCE MEMORANDUM OF AGREEMENT BETWEEN THE CITY OF POMPANO BEACH AND THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION FOR ADDITIONAL LANDSCAPE IMPROVEMENTS ON STATE ROAD 834 (SAMPLE ROAD) FROM MILITARY TRAIL TO STATE ROAD 5 (US 1); PROVIDING AN EFFECTIVE DATE.**
>
> **A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA, APPROVING AND AUTHORIZING THE PROPER CITY OFFICIALS TO EXECUTE A JOINT PARTICIPATION AGREEMENT BETWEEN THE CITY OF POMPANO BEACH AND THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION FOR LANDSCAPE IMPROVEMENTS ON STATE ROAD 834 (SAMPLE ROAD) FROM MILITARY TRAIL TO STATE ROAD 5 (US 1); PROVIDING AN EFFECTIVE DATE.**

Please feel free to contact me if I may be of further assistance.

JILL R. MESOJEDEC

/jrm
l:cor/pw/2014-373

Attachments

RESOLUTION NO. 2015- _____

CITY OF POMPANO BEACH
Broward County, Florida

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA, APPROVING AND AUTHORIZING THE PROPER CITY OFFICIALS TO EXECUTE A DISTRICT FOUR (4) AMENDMENT NUMBER NINE (9) TO LANDSCAPE INCLUSIVE MAINTENANCE MEMORANDUM OF AGREEMENT BETWEEN THE CITY OF POMPANO BEACH AND THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION FOR ADDITIONAL LANDSCAPE IMPROVEMENTS ON STATE ROAD 834 (SAMPLE ROAD) FROM MILITARY TRAIL TO STATE ROAD 5 (US 1); PROVIDING AN EFFECTIVE DATE.

BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA:

SECTION 1. That an Amendment Number Nine (9) between the City of Pompano Beach and the State of Florida Department of Transportation, a copy of which Agreement is attached hereto and incorporated by reference as if set forth in full, is hereby approved.

SECTION 2. That the proper City officials are hereby authorized to execute said Agreement between the City of Pompano Beach and the State of Florida Department of Transportation.

SECTION 3. This Resolution shall become effective upon passage.

PASSED AND ADOPTED this _____ day of _____, 2015.

_____
LAMAR FISHER, MAYOR

ATTEST:

_____
ASCELETA HAMMOND, CITY CLERK

GBL/jrm
2/23/15
I:reso/2015-217

SECTION No.(s):	**86028**
S.R. No.(s):	**834**
FM No:	**435709-1-78-01**
COUNTY:	**BROWARD COUNTY**

DISTRICT FOUR (4) AMENDMENT NUMBER NINE (9) TO STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION LANDSCAPE INCLUSIVE MEMORANDUM OF AGREEMENT

THIS AMENDMENT Number Nine (9) to the Agreement dated December 5, 2007, made and entered into this _____ day of _____ 20_____ by and between the State of Florida Department of Transportation hereinafter called the DEPARTMENT and the CITY OF POMPANO BEACH, a municipal subdivision of the State of Florida, hereinafter called the AGENCY.

W I T H N E S S E T H

WHEREAS, the parties entered into the Landscape Inclusive Maintenance of Agreement dated, December 5, 2007 for the purpose of maintaining the landscape improvements by the AGENCY on various roads including State Road 834 (Sample Road); and,

WHEREAS, the DEPARTMENT and the AGENCY have agreed to add additional landscape to be installed on State Road 834 (Sample Road) in accordance with the above referenced Agreement; and,

WHEREAS, the AGENCY by Resolution No._____ dated_____, attached hereto and by this reference made a part hereof, desires to enter into this Agreement and authorized its officers to do so; and,

NOW THEREFORE, for and in consideration of mutual benefits that flow each to the other, the parties covenant and agree as follows:

1. Pursuant to paragraph 12 of the Landscape Inclusive Maintenance Memorandum of Agreement for State Road 834 dated December 5, 2007, the DEPARTMENT will allow the AGENCY to construct additional landscape improvements or to modify an improvement located as indicated in **Exhibit "A"**, State Road 834 from Military Trail (M.P. 7.116) to State Road 5 (US 1) (M.P. 9.481). In accordance with the plans attached as **Exhibit "B".**

2. The AGENCY shall agree to maintain the additional landscape improvements in the Agreement described above according the **Exhibit "C"** Maintenance Plan, attached to this Amendment.

3. The DEPARTMENT intends to enter into a separate contract with the AGENCY to have installed said landscape improvements for an approximate amount as indicated in **Exhibit "D"** not to exceed **$306,011**.

Except as modified by this Amendment, all terms and conditions of the original Agreement and all Amendments thereto shall remain in full force and effect.

LIST OF EXHIBITS

Exhibit A - Landscape Improvements Limits and Maintenance Boundaries and Location Map
Exhibit B - Landscape Improvement Plans
Exhibit C - Maintenance Plan Landscape Improvements
Exhibit D - Approximate Cost For Landscape Improvements Under Separate Proposed JPA Agreement

In Witness whereof, the parties hereto have executed with this Amendment effective the _____day _____ year written and approved.

"CITY":

Witnesses:

CITY OF POMPANO BEACH

_____

By:_____
LAMAR FISHER, MAYOR

_____

By:_____
DENNIS W. BEACH, CITY MANAGER

Attest:

_____ (SEAL)
ASCELETA HAMMOND, CITY CLERK

Approved As To Form:

_____
GORDON B. LINN, CITY ATTORNEY

STATE OF FLORIDA
COUNTY OF BROWARD

The foregoing instrument was acknowledged before me this _____ day of _____, 2015 by **LAMAR FISHER**, as Mayor, **DENNIS W. BEACH** as City Manager and **ASCELETA HAMMOND**, as City Clerk of the City of Pompano Beach, Florida, a municipal corporation, on behalf of the municipal corporation, who are personally known to me.

NOTARY'S SEAL:

_____
NOTARY PUBLIC, STATE OF FLORIDA

_____
(Name of Acknowledger Typed, Printed or Stamped)

_____
Commission Number

POMPANO BEACH

By: _____
Chairperson/Mayor/Manager

Attest: _____(SEAL)
Clerk

Legal Review Date

_____ _____

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

By: _____
Transportation Development Director

Attest: _____(SEAL)
Executive Secretary

Legal Review Date

_____ _____
Office of the General Counsel

SECTION No.(s):	**86028**
S.R. No.(s):	**834**
FM No:	**435709-1-78-01**
COUNTY:	**BROWARD COUNTY**

EXHIBIT A

LANDSCAPE IMPROVEMENTS PROJECT LIMITS
MAINTENANCE BOUNDARIES LIMITS AND LOCATION MAP

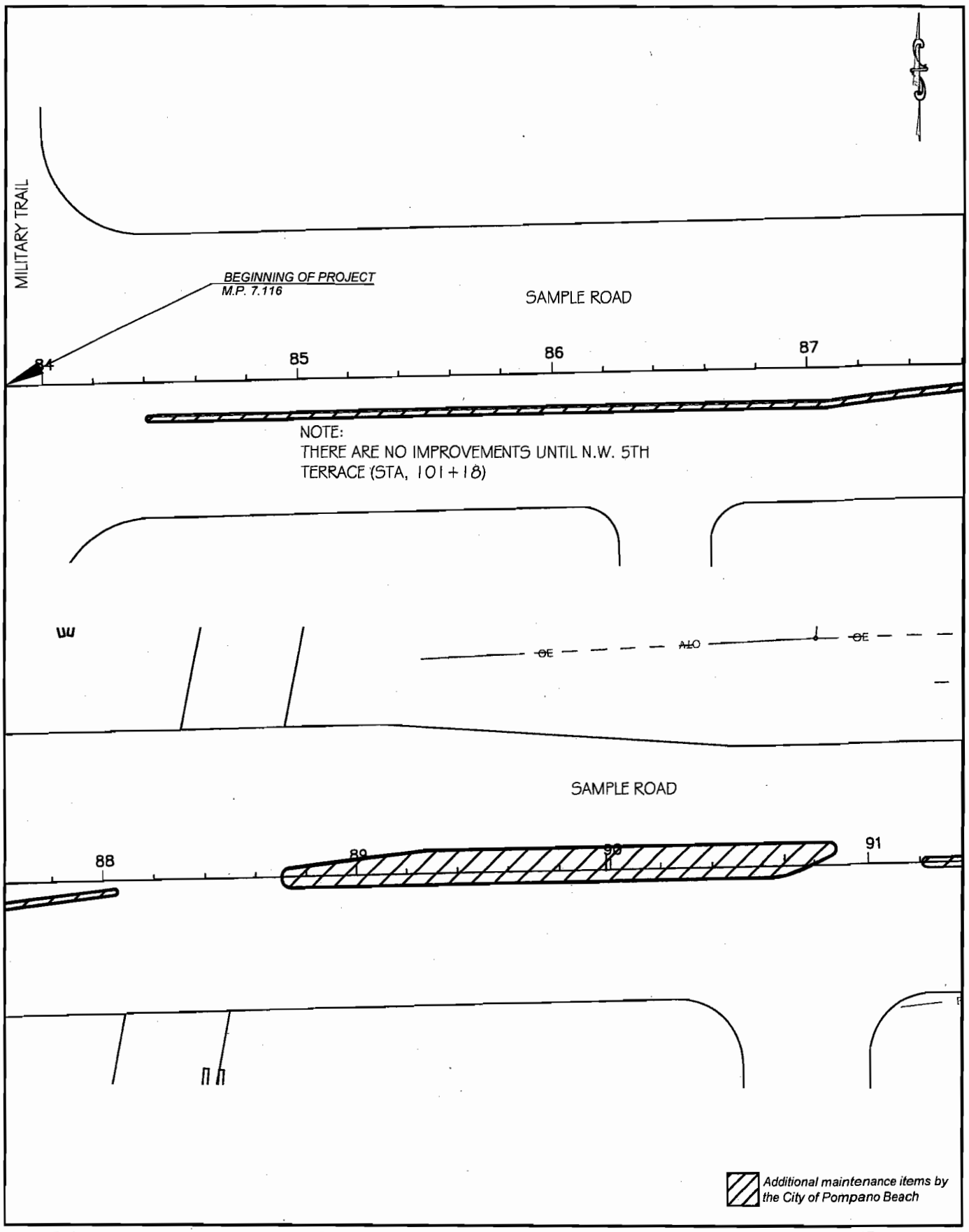
I. LANDSCAPE PROJECT LIMITS:
State Road 834 (Sample Road) from Military Trail (M.P. 7.116) to State Road 5 (US 1) (M.P. 9.481)

II. INCLUSIVE LANDSCAPE MAINTENANCE AGREEMENT LIMITS:
State Road 834 (Sample Road) from (M.P. 5.030) (Turnpike) to State Road 5 (US 1) (M.P. 9.481)

III. MAINTENANCE BOUNDARY LIMITS MAP:

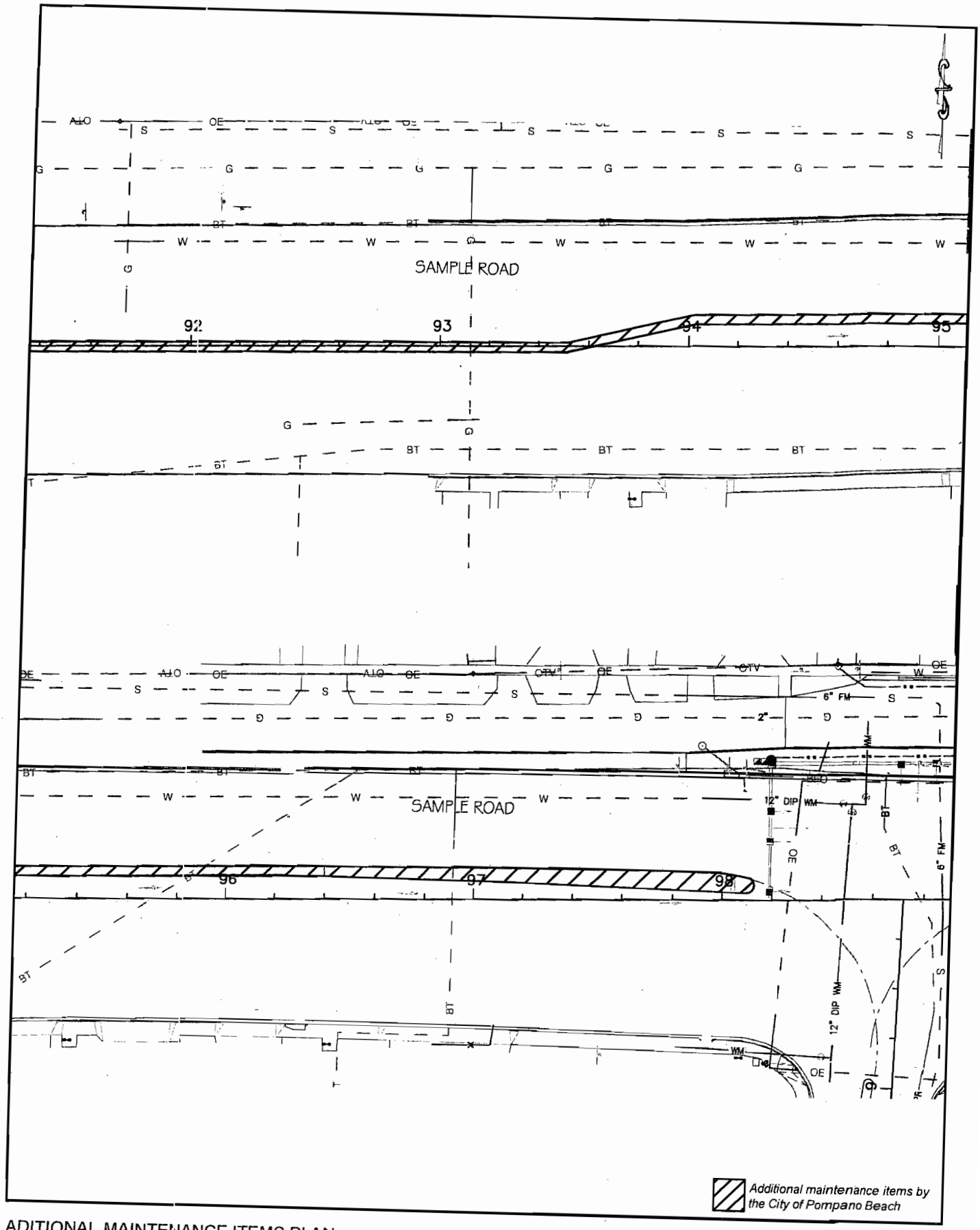
*All limits of the original agreement and amendments shall apply

Please See Attached



ADITIONAL MAINTENANCE ITEMS PLAN
SAMPLE ROAD BEAUTIFICATION GRANT
FROM MILITARY TRAIL (M.P.7.116) TO U.S.1 (S.R. 5-M.P. 9.481)

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
F.P.I: 435709-1-78-01



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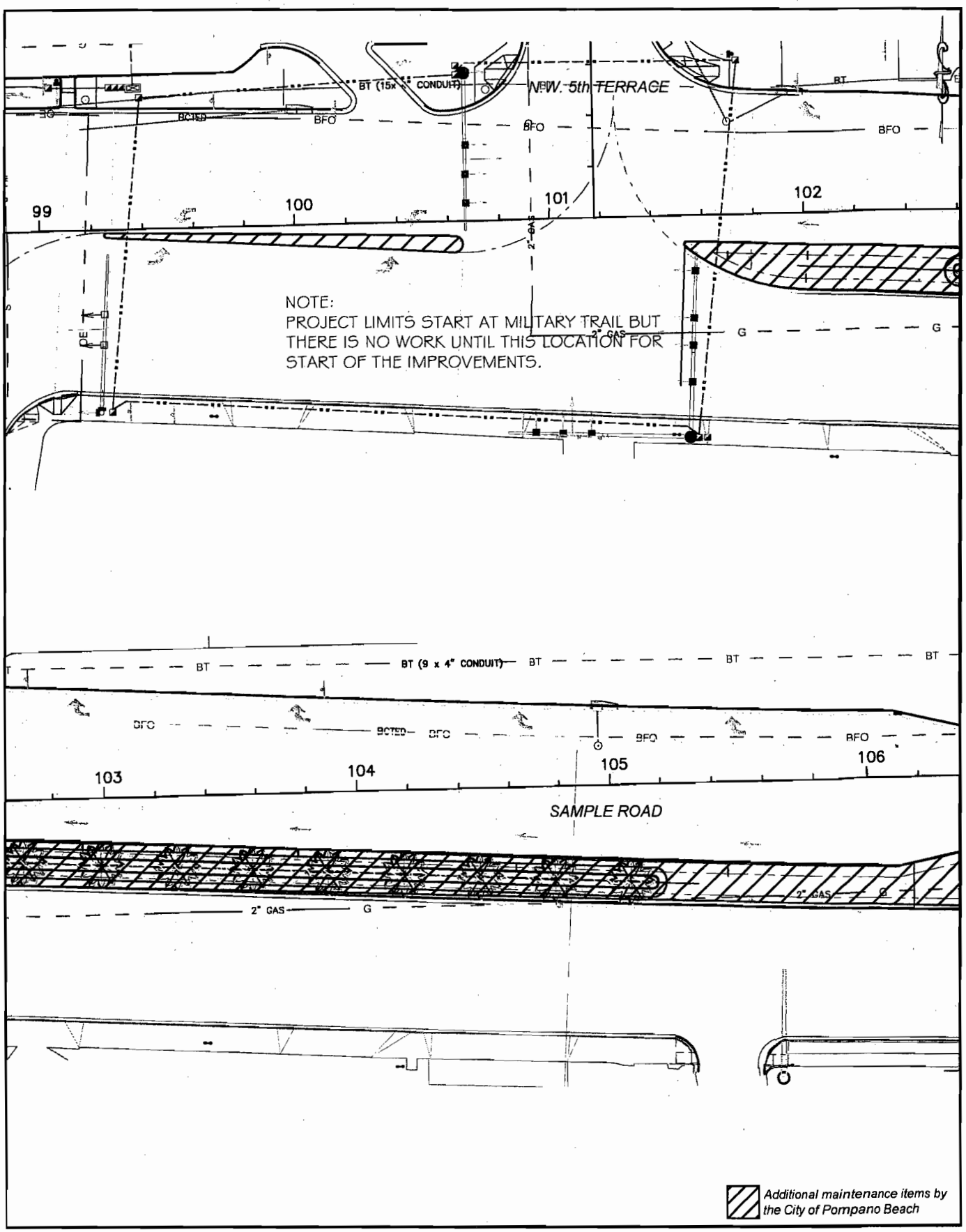

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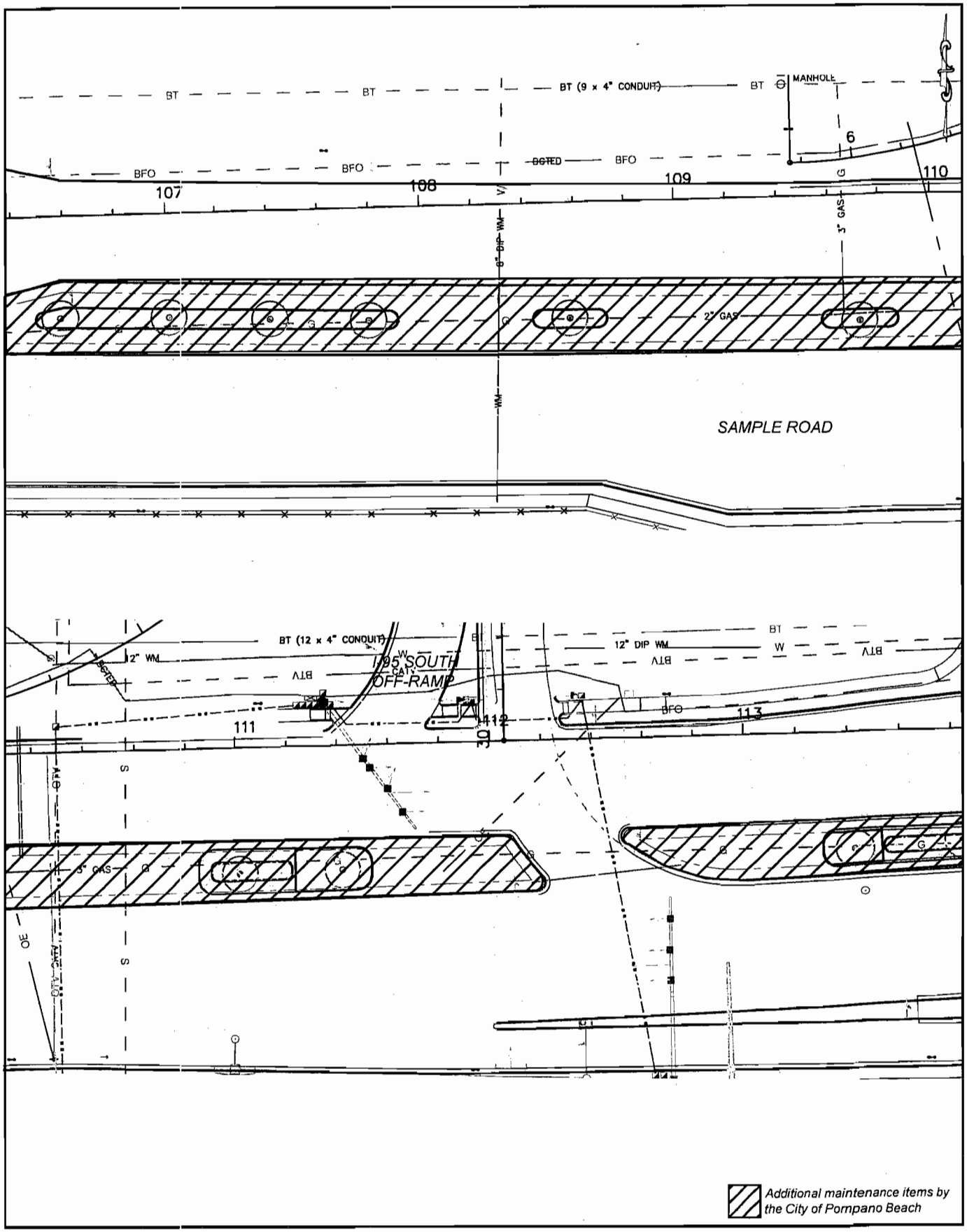

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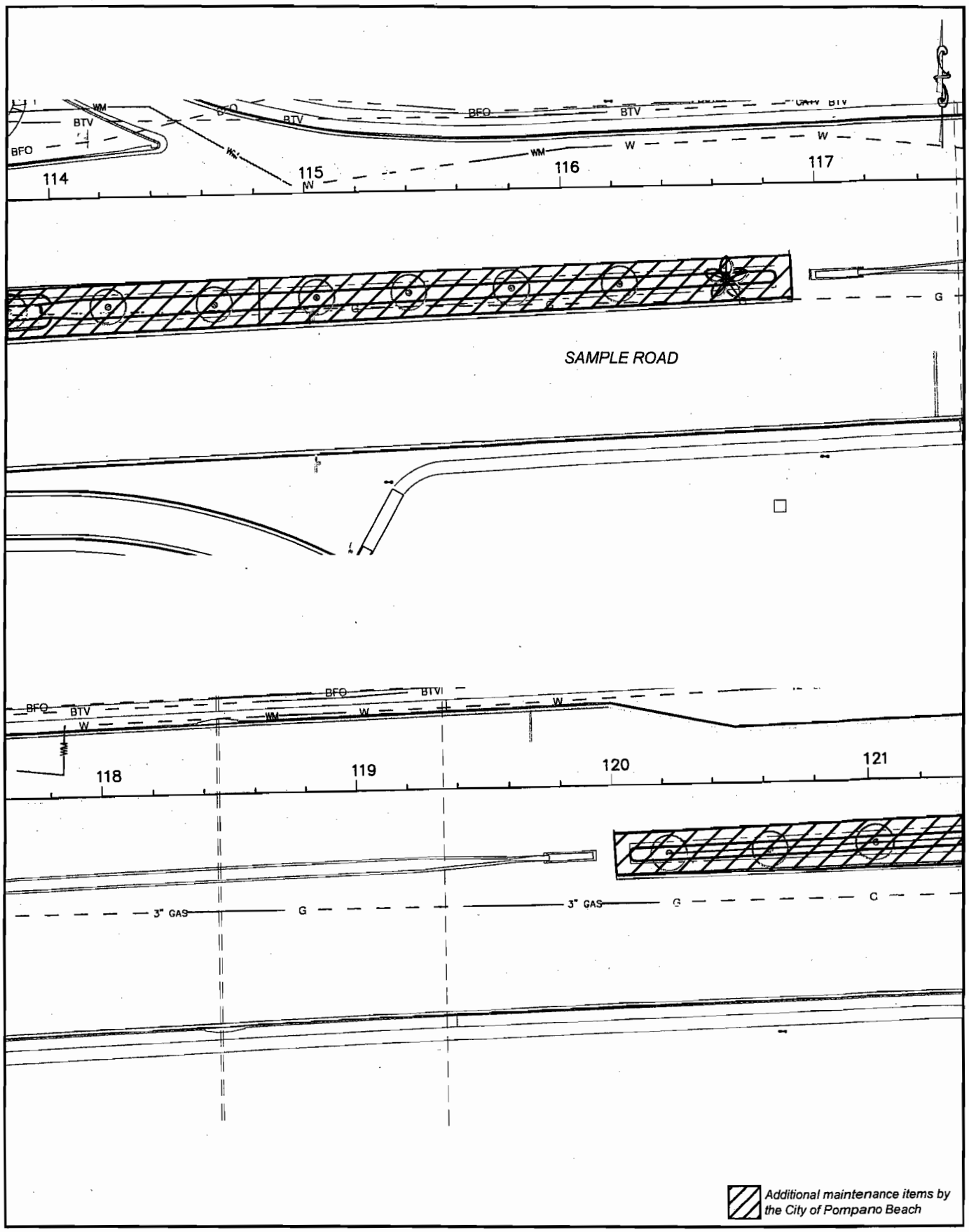

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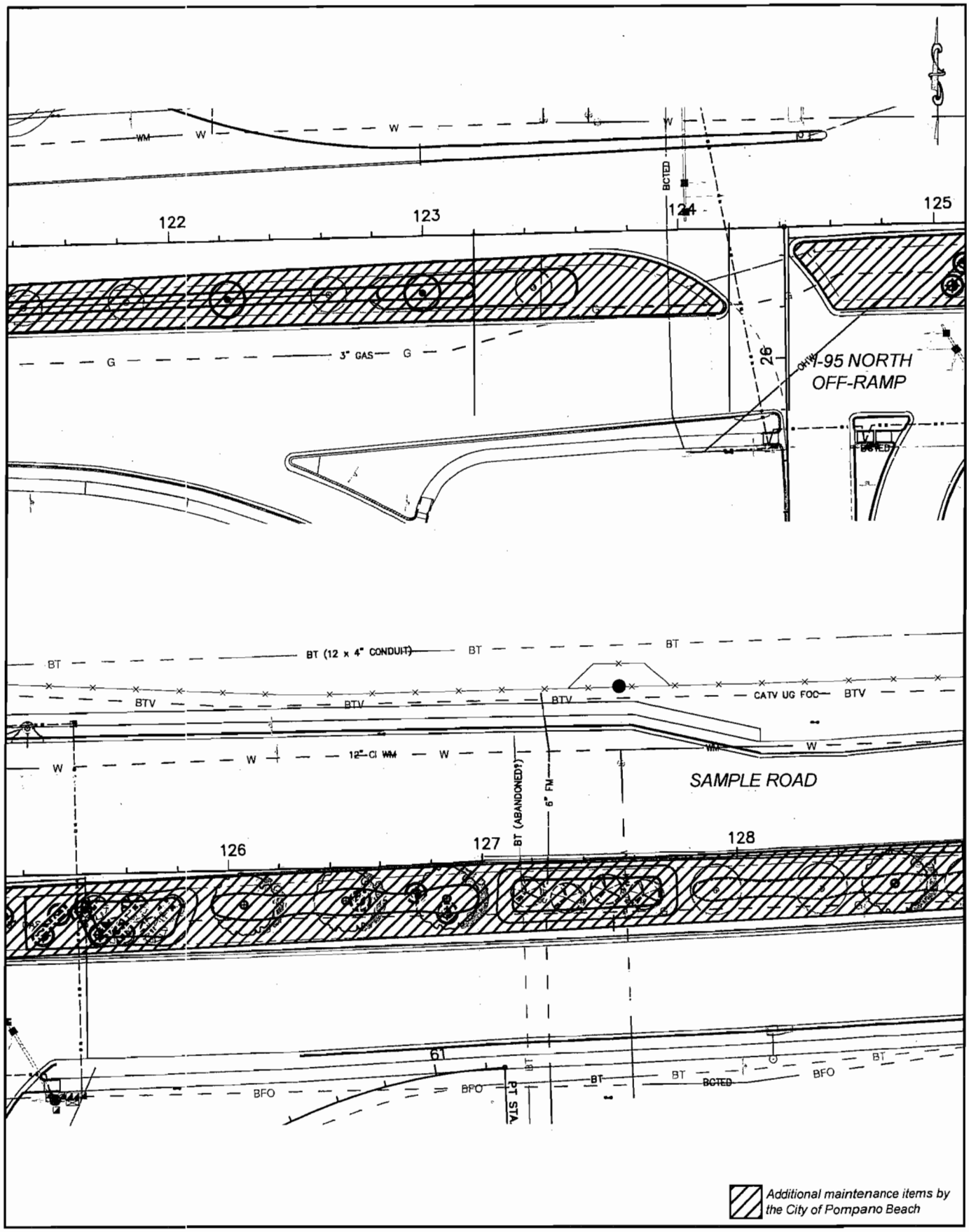

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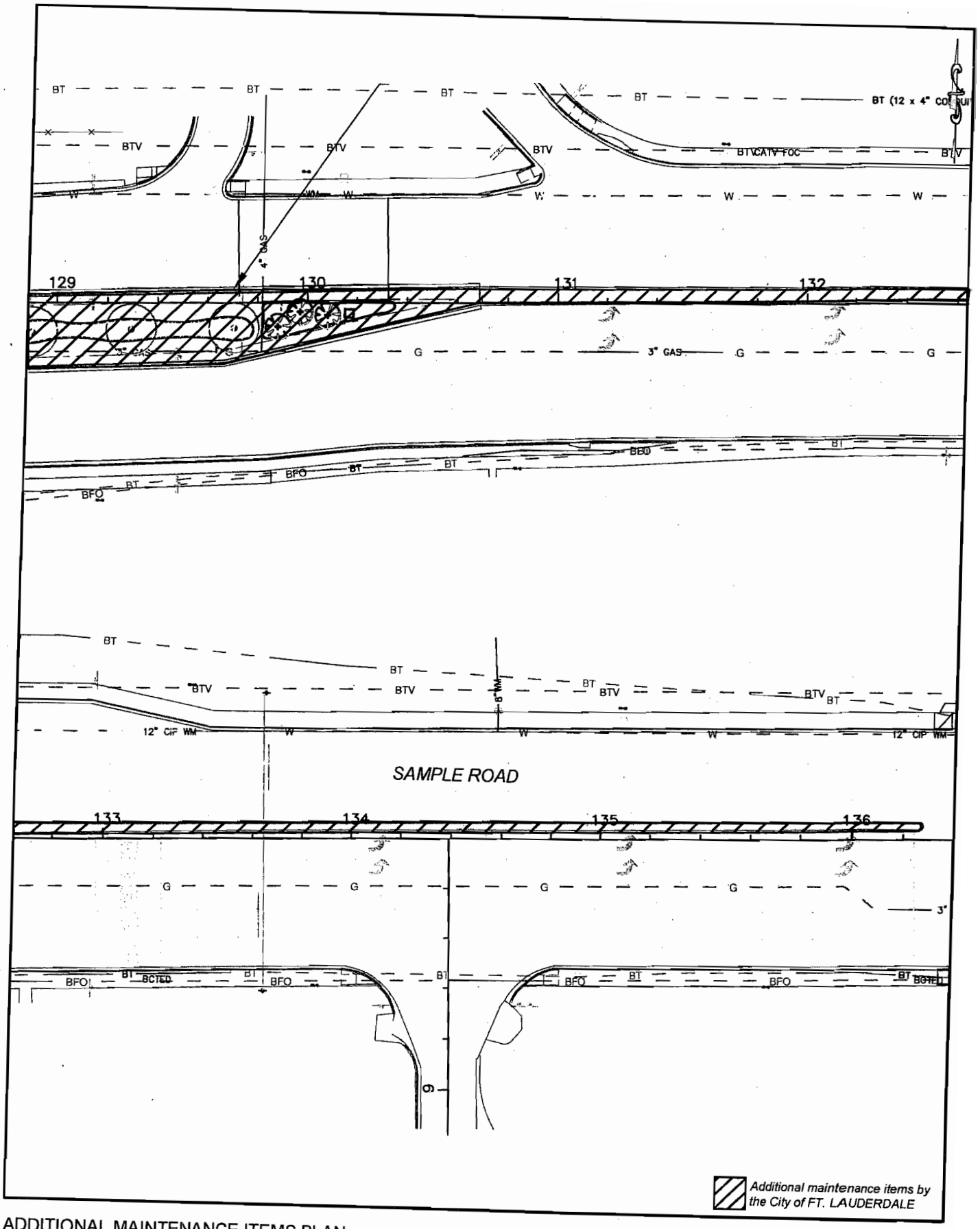

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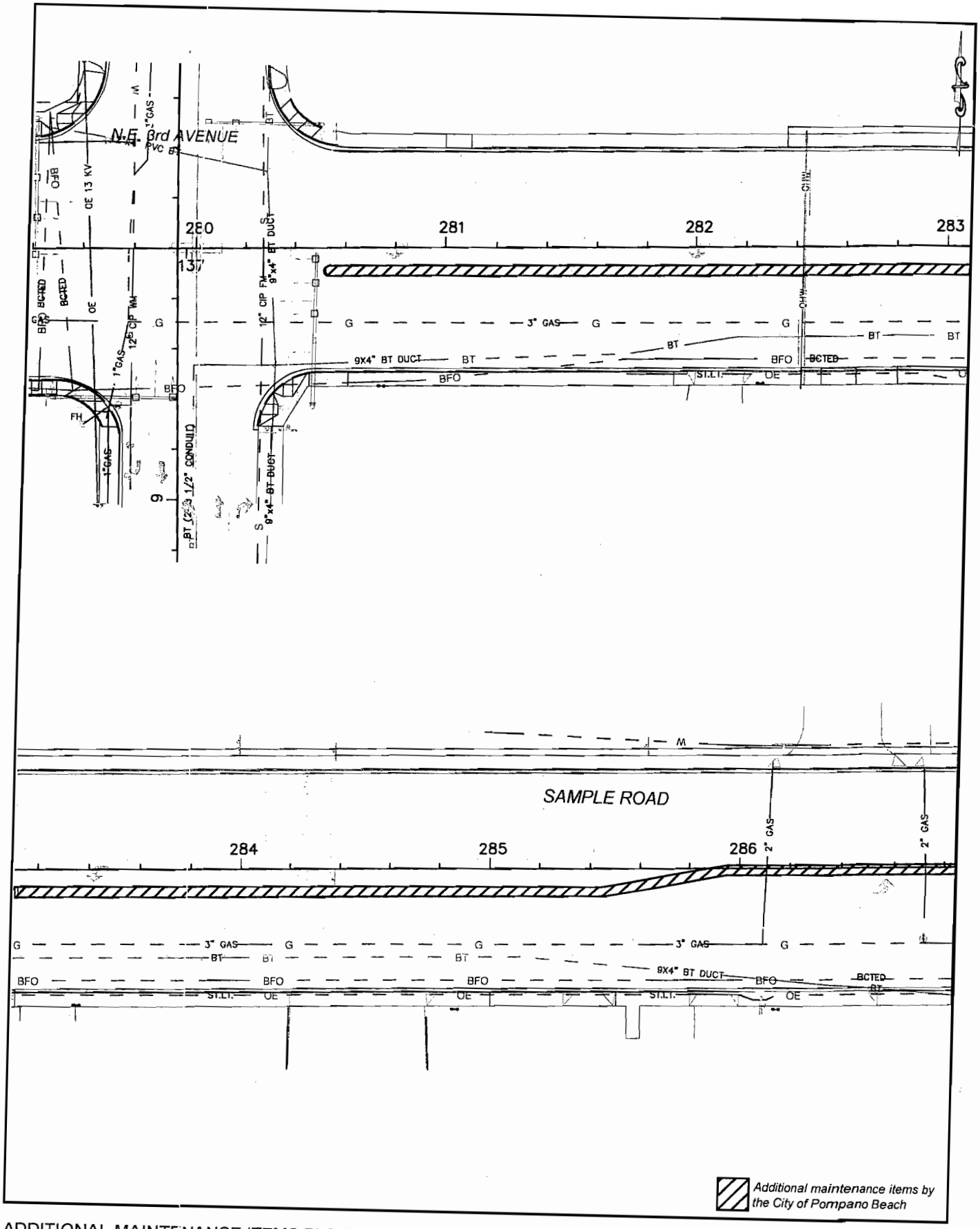

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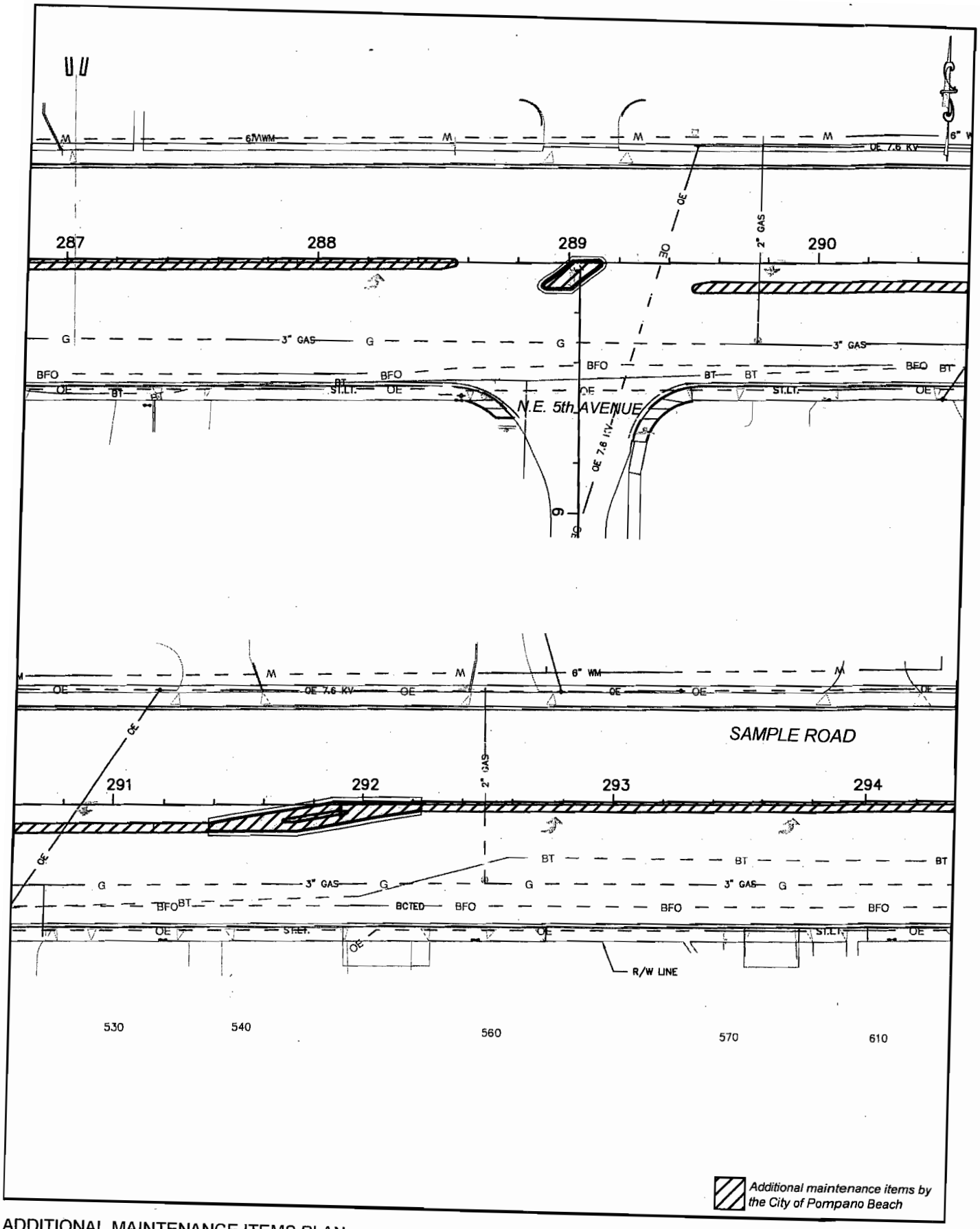

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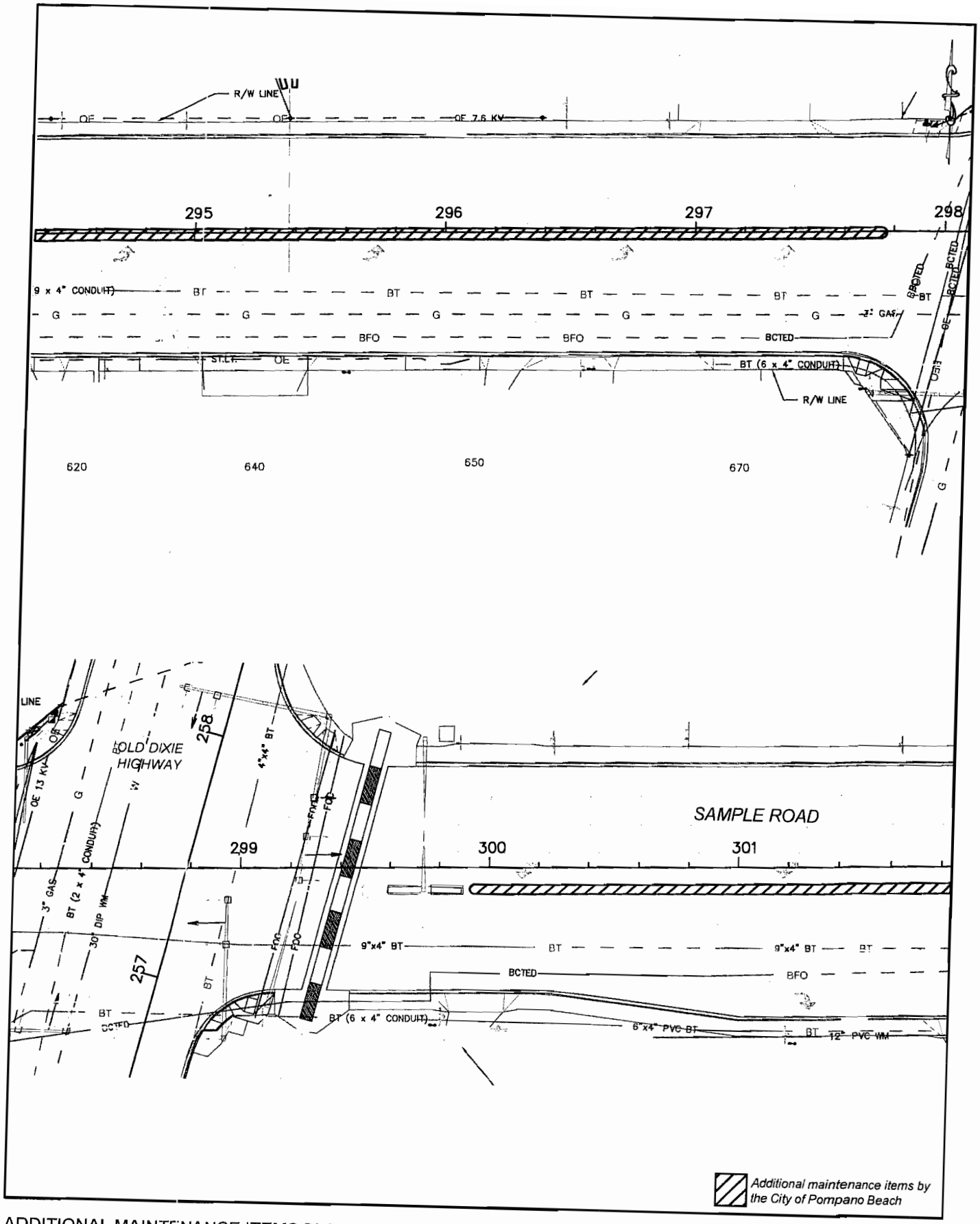

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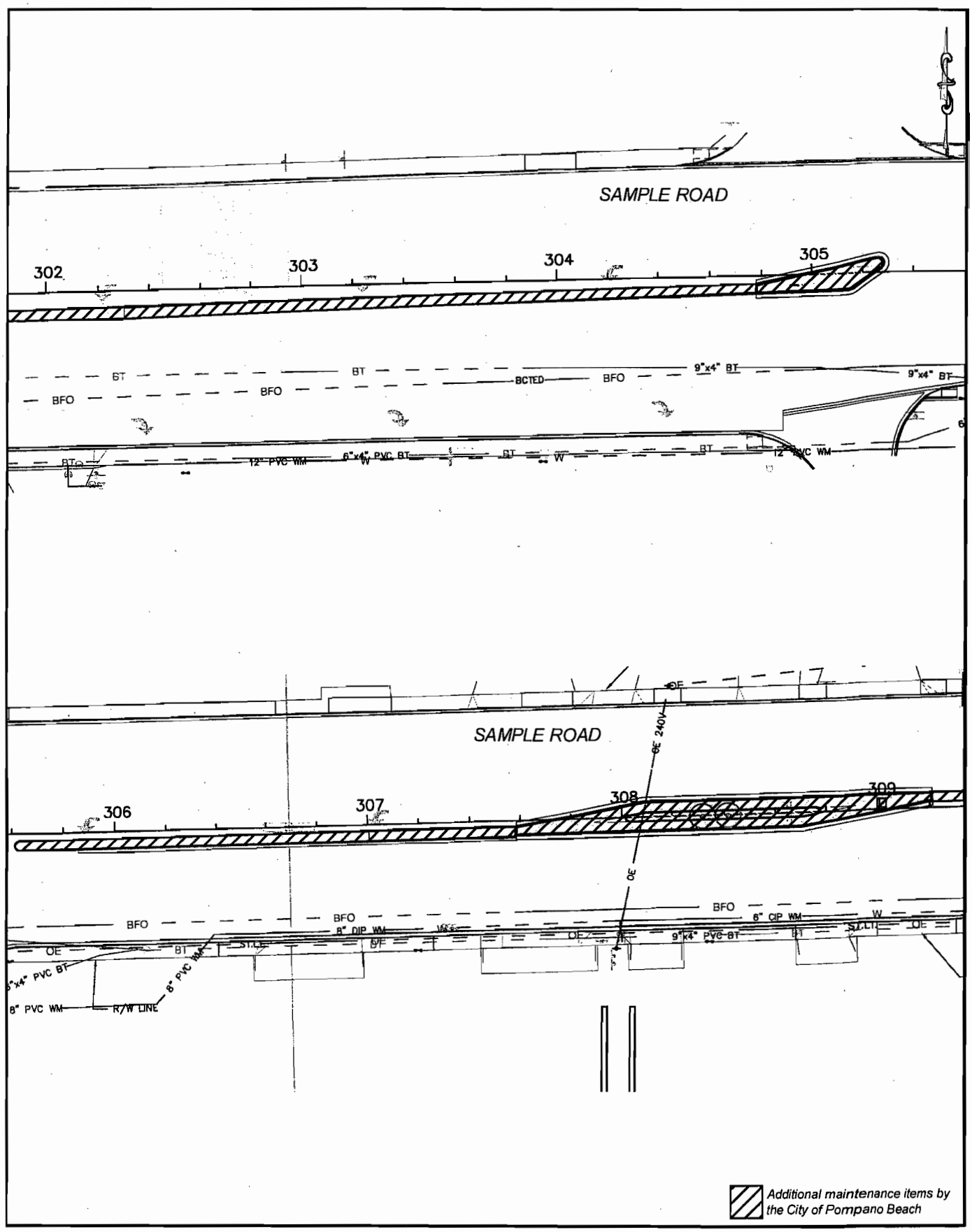

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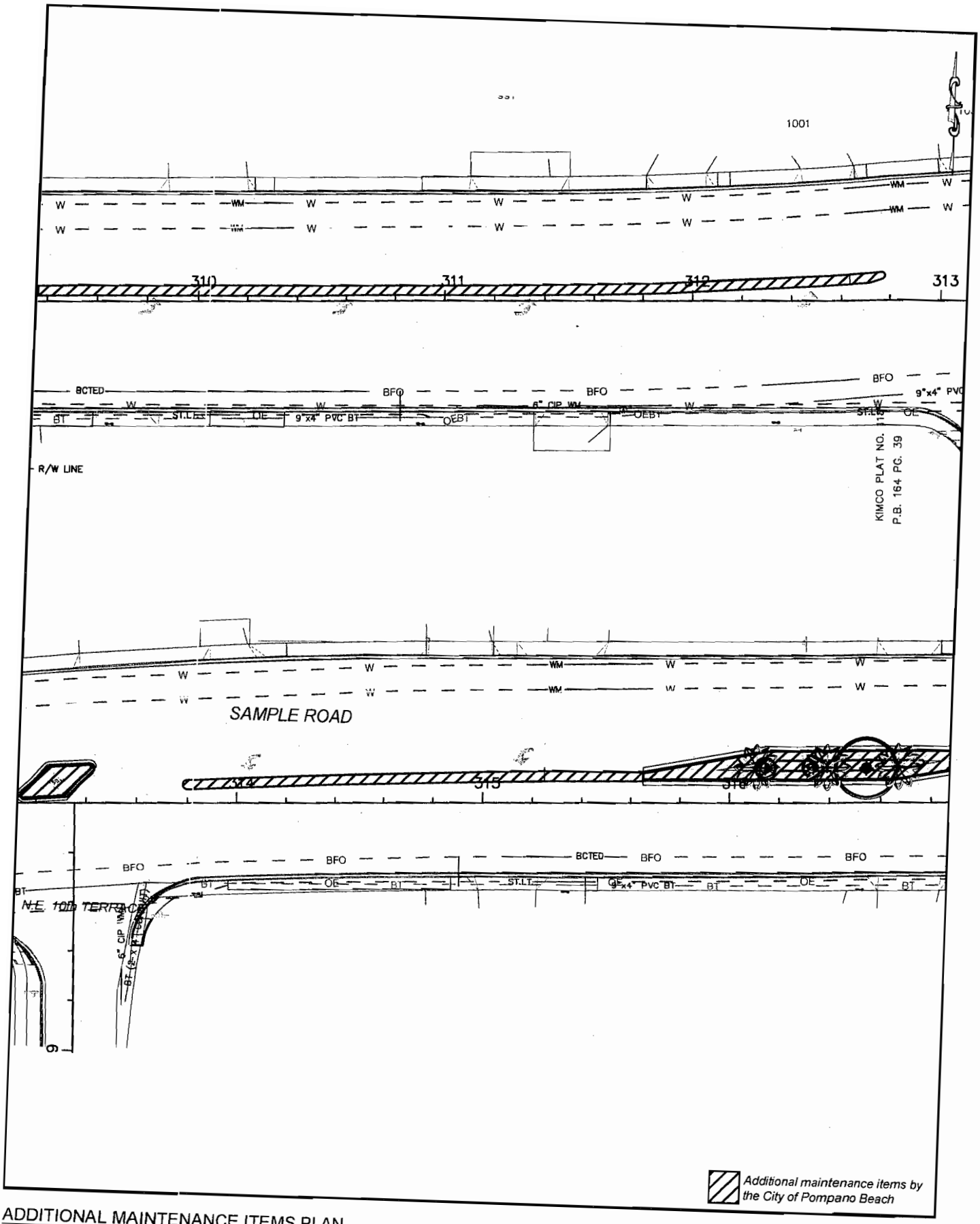

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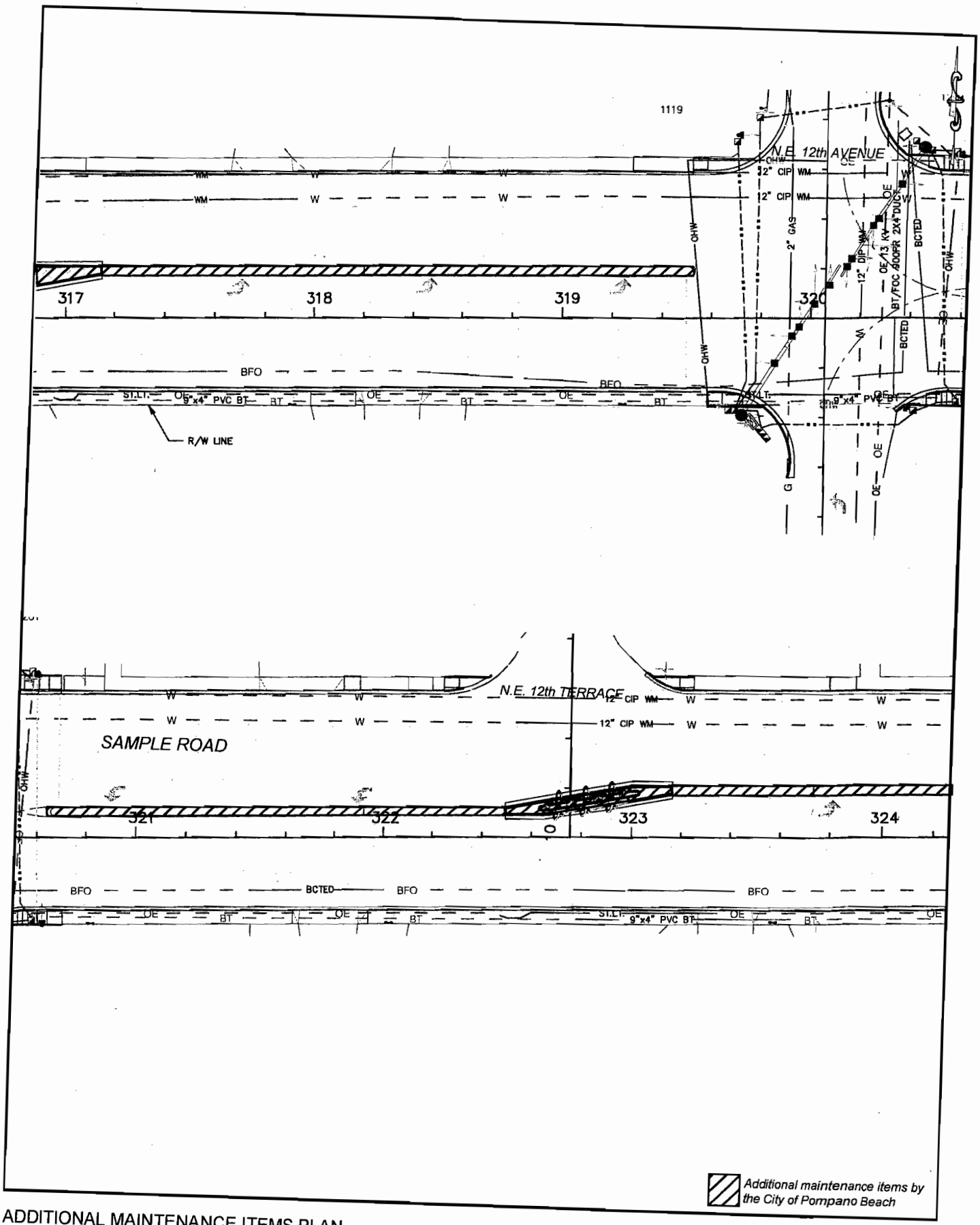

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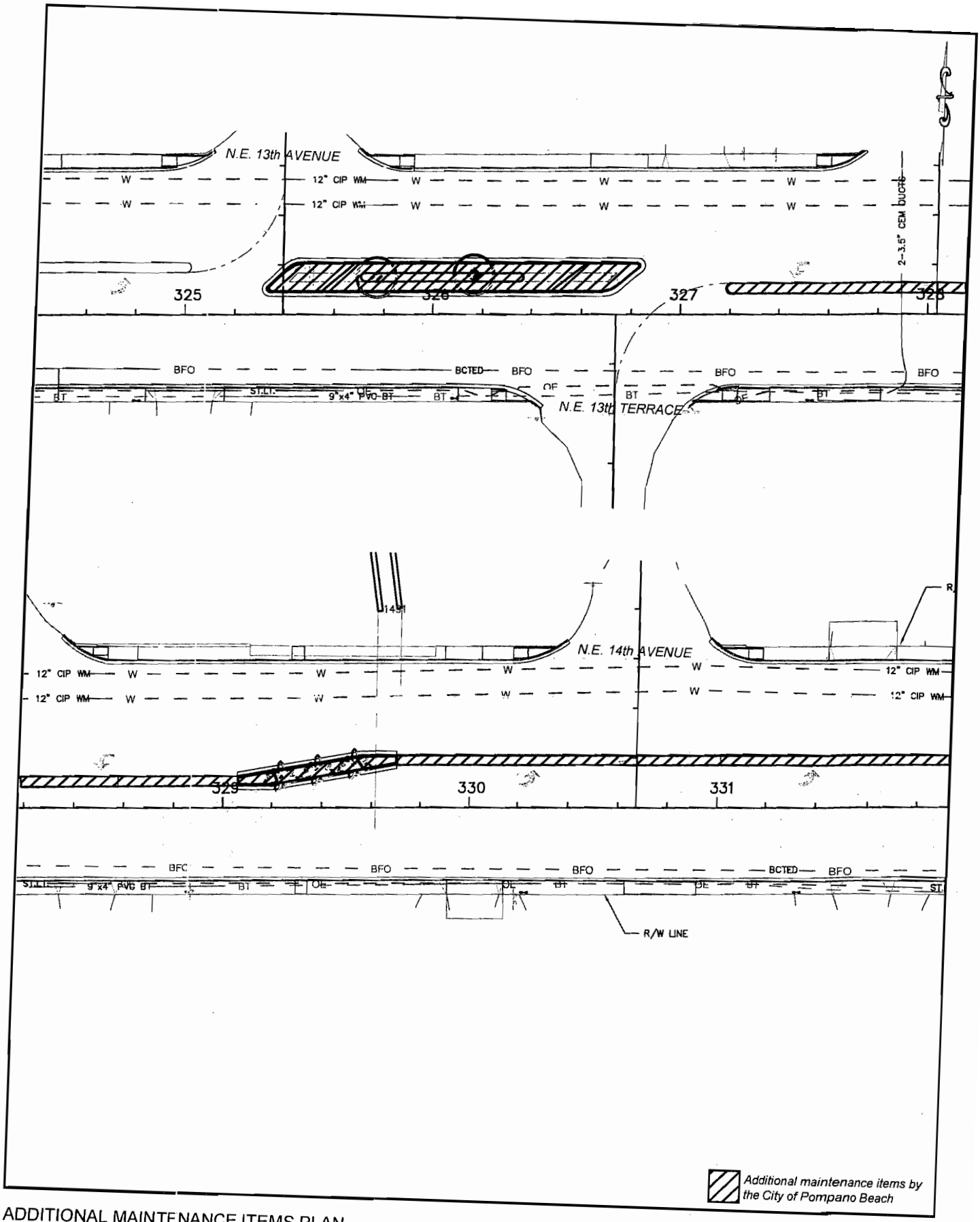

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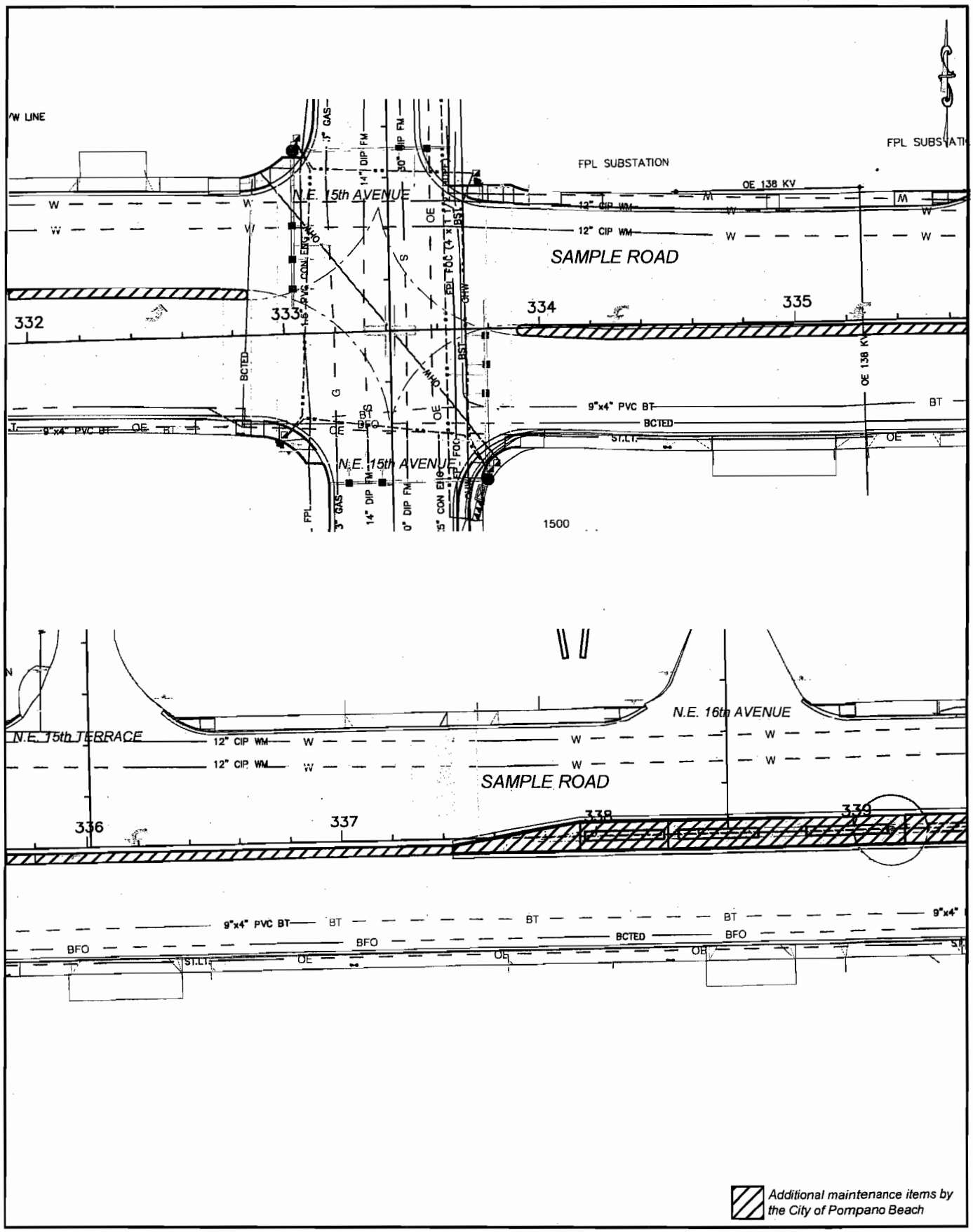

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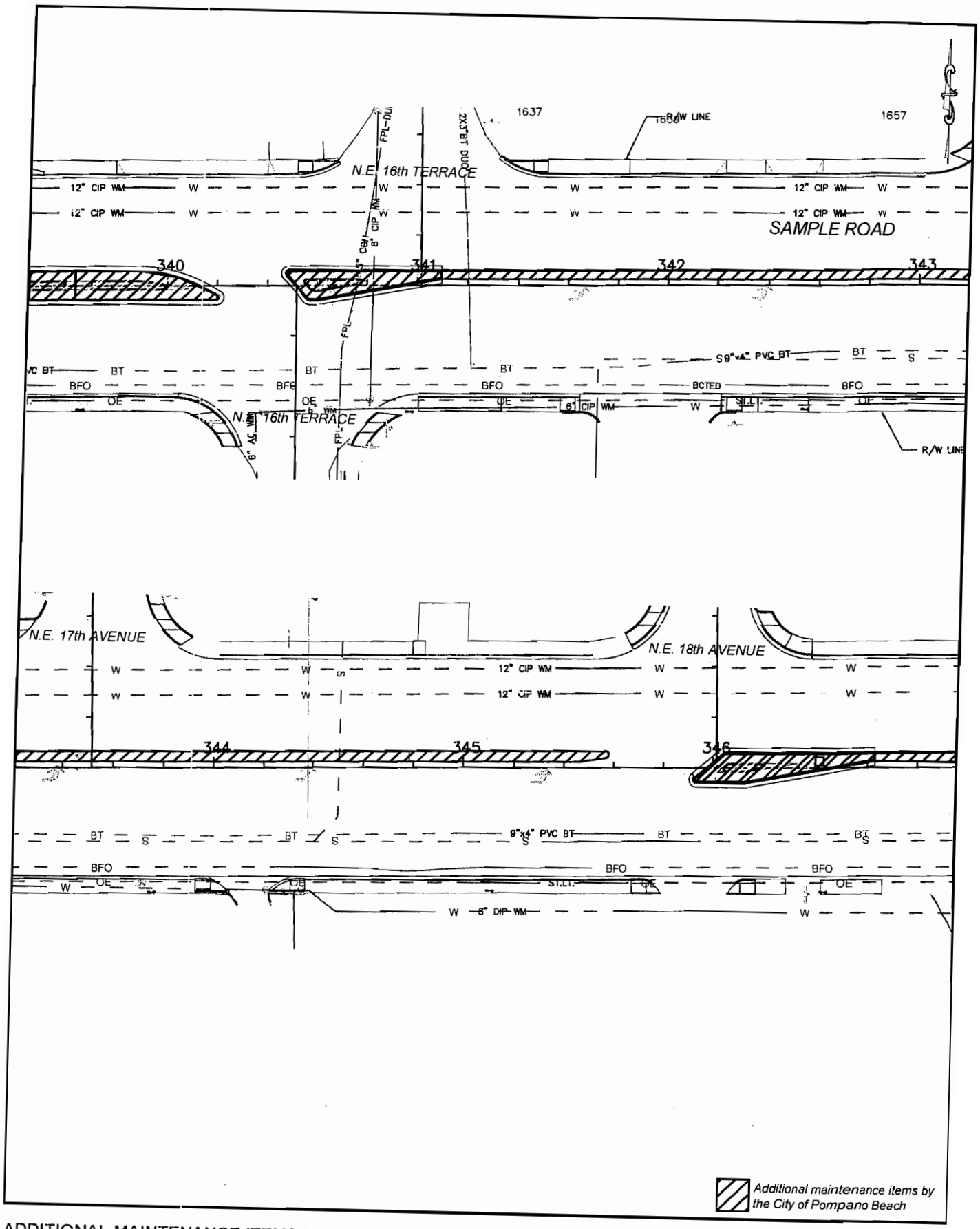

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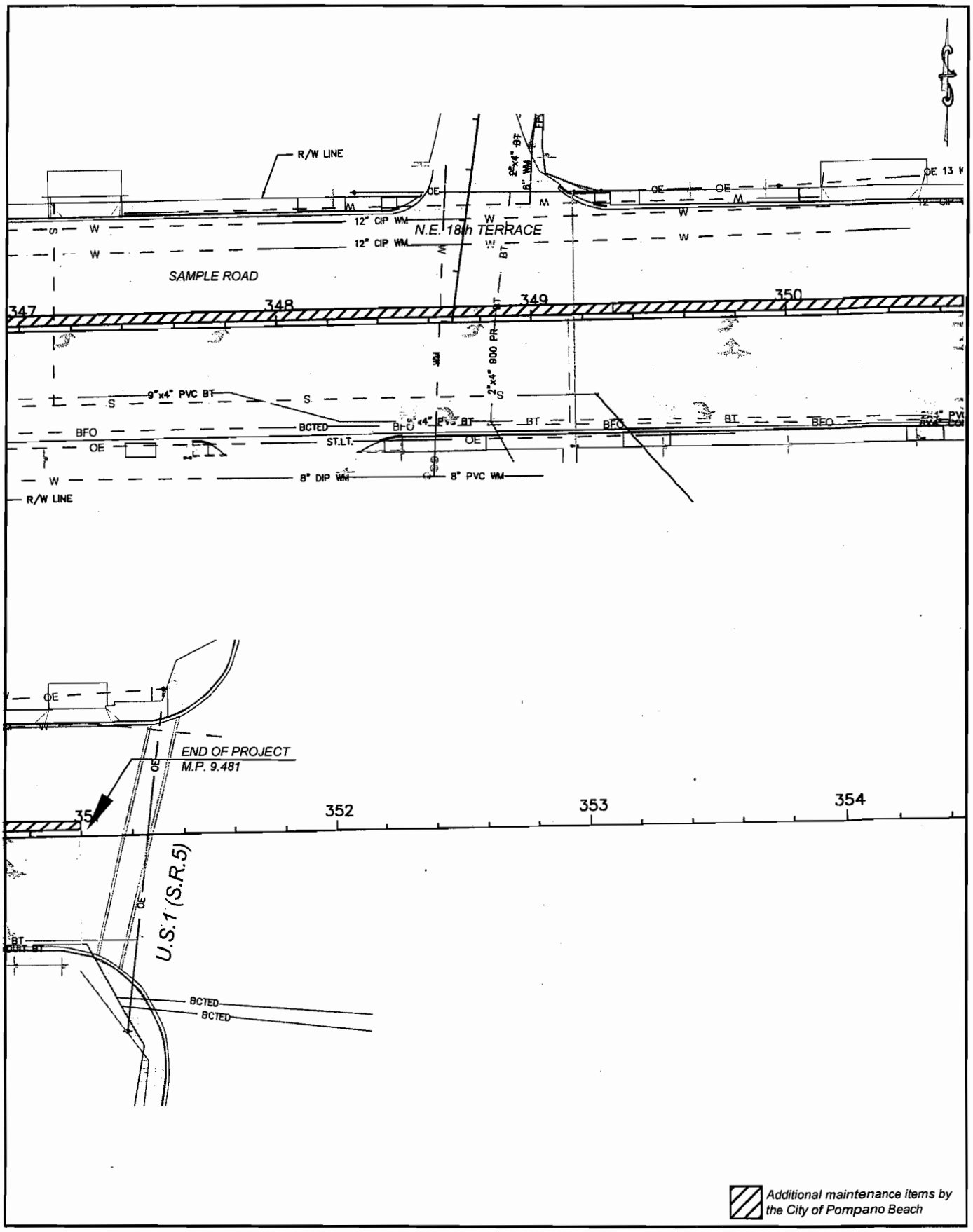

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
F.P.I: 435709-1-78-01

SECTION No.(s):	**86028**
S.R. No.(s):	**834**
FM No:	**435709-1-78-01**
COUNTY:	**BROWARD COUNTY**

EXHIBIT B

LANDSCAPE IMPROVEMENT PLANS

The AGENCY agrees to install the landscape improvements in accordance with the plans and specifications attached hereto and incorporated herein.

Please see attached plans prepared by: Michael D. Conner RLA
Calvin & Giordano
Date: December 16, 2014

Sheets 0-50

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

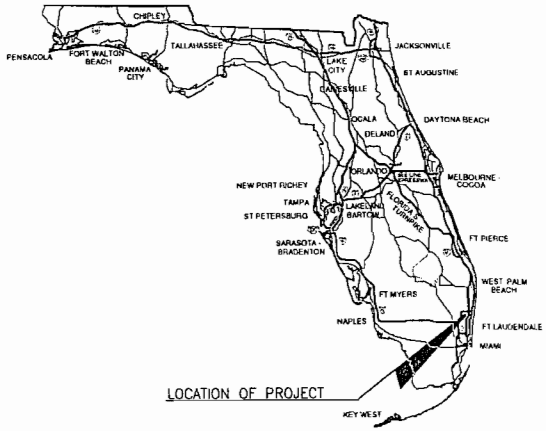
FINANCIAL PROJECT ID: 435709-1-78-01

BROWARD COUNTY (33064)

STATE ROAD NO. S.R. 834

LANDSCAPE PLANS

S.R. 834 (SAMPLE ROAD)
FROM MILITARY TRAIL (M.P. 7.116) TO
U.S.1 (S.R. 5 - M.P. 9.481)

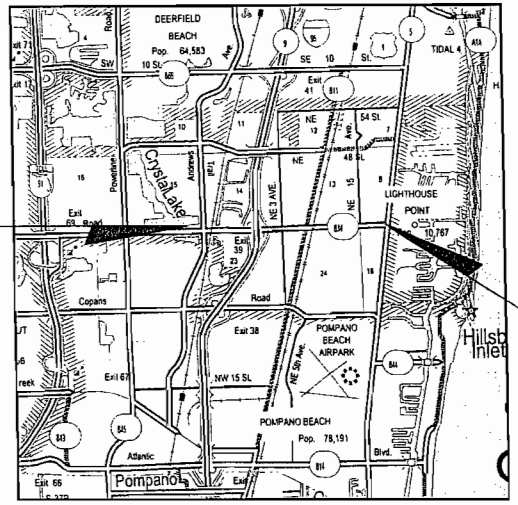


LOCATION OF PROJECT

INDEX OF LANDSCAPE PLANS

SHEET NO.	SHEET DESCRIPTION
0	COVER SHEET
1	OVERALL KEY PLAN AND LANDSCAPE NOTES
2 - 3	PLANTING SCHEDULES
4 - 18	LANDSCAPE PLAN
19 - 21	IRRIGATION NOTES
22	IRRIGATION SCHEDULES
23 - 46	IRRIGATION PLAN
47 - 49	IRRIGATION DETAILS
50	TRAFFIC CONTROL PLAN

BEGIN PROJECT
S.R. S.R. 834
M.P. 7.116



END PROJECT
S.R. S.R. 834
M.P. 9.481

N

PLANS PREPARED BY:
Calvin, Giordano & Associates, Inc.
EXCEPTIONAL SOLUTIONS
1800 Elite Drive, Suite 600, Fort Lauderdale, Florida 33316
Phone: 954.921.7781 • Fax: 954.921.8007
Certificate of Authorization: C000000339
VENDOR ID NO 65-001-3649

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

GOVERNING STANDARDS AND SPECIFICATIONS:
Florida Department of Transportation, 2015 Design Standards and revised Index Drawings as appended herein, and 2015 Standard Specifications for Road and Bridge Construction, as amended by Contract Documents.

For Design Standards click on the "Design Standards" link at the following web site:
http://www.dot.state.fl.us/rddesign/

For the Standard Specifications for Road and Bridge Construction click on the "Specifications" link at the following web site:
http://www.dot.state.fl.us/specificationsoffice/

S.R. S.R. 834 DESIGN SPEED: 45MPH

MAINTAINING AGENCY: CITY OF POMPANO BEACH
Contact: Robert McCaughan
Public Works Director

City of Pompano Beach
1201 NE 5th Ave
Pompano Beach, FL 33060
954-786-4097
Robert.McCaughan@copbfl.com

KEY SHEET REVISIONS	
DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments
9/26/14	REVISIONS PER E.R.C. COMMENTS
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT
12/16/14	Revised For FDOT Agreements

LANDSCAPE PLANS
ARCHITECT OF RECORD: MICHAEL CONNER, R.L.A.

R.L.A. NO.: LICENSE No.1181

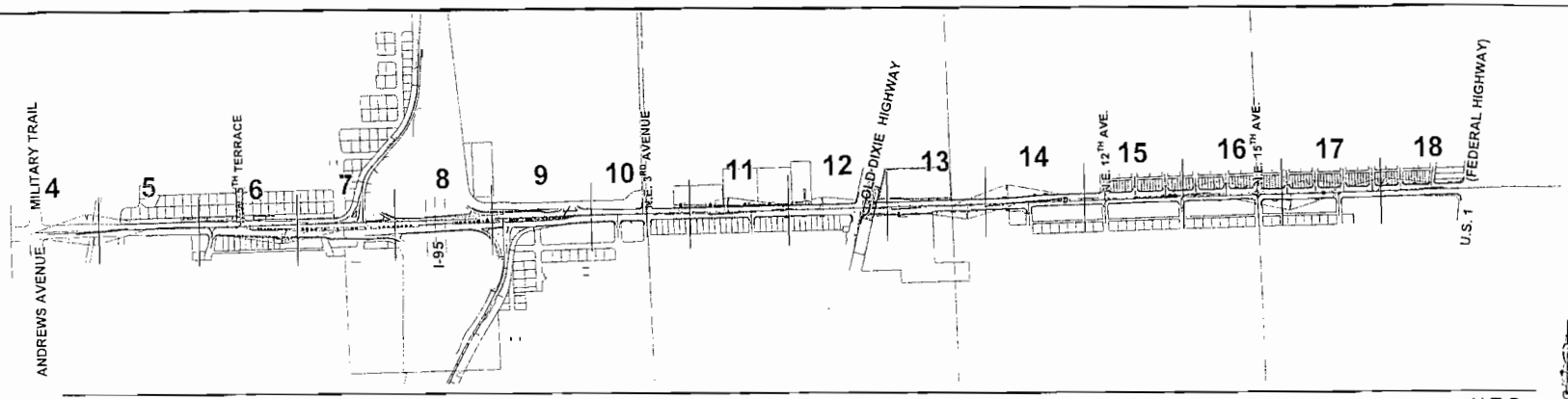
12-16-14

DECEMBER 16,2014

FISCAL YEAR	SHEET NO.
2014	0

FDOT PROJECT MANAGER: ELISABETH HASSETT, RLA (FDOT DISTRICT IV LANDSCAPE ARCHITECT)

USER: aperedo 12/16/2014 5:37:02 PM P:\Projects\2013\136147 Florida Highway Beautification Grant Application\CADD Files\Drawings\136147-L-FDOT-COVER.dwg



OVERALL KEY MAP

N.T.S.

GENERAL NOTES:

1. GOVERNING STANDARDS FOR CONSTRUCTION & INSTALLATION SHALL BE AS PER THE FLORIDA DEPARTMENT OF TRANSPORTATION, STANDARDS INDEX 544 AND REVISED INDEX DRAWINGS AS APPENDED HEREIN, AND 2015 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION,PLEASE NOTE THAT GOVERNING SPECIFICATIONS FOR LANDSCAPE INSTALLATION SHALL BE BY MODIFIED SPECIAL PROVISION (MSP) AS PROVIDED IN TECHNICAL SPECIFICATION AND BID DOCUMENTS.

2. FDOT INDEX CAN BE FOUND AT THE FOLLOWING WEBPAGE: http://www.dot.state.fl.us/rddesign/DesignStandards/Standards.shtm

3. STATE LAW MANDATES CONTACTING "SUNSHINE STATE ONE-CALL OF FLORIDA, INC." AT 811 OR 1-800-432-4770, AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

4. CONTRACTOR SHALL VIDEO TAPE WORK AREAS BEFORE (WORK COMMENCES) TO IDENTIFY EXISTING CONDITIONS, IF CEI NOT PRESENT ON PROJECT. DAMAGES TO CURBS AND ASPHALT DURING CONSTRUCTION SHALL BE REPAIRED AND/OR REPLACED BY CONTRACTOR TO THE SATISFACTION OF F.D.O.T., THESE REPAIRS OR REPLACEMENTS BY CONTRACTOR SHALL BE AT HIS SOLE EXPENSE.

5. CONTRACTOR(S) MUST OBTAIN FDOT PERMITS, AND SEPARATE LANDSCAPE, IRRIGATION & TREE RELOCATION/REMOVAL PERMITS FROM THE GOVERNING AGENCIES, AS REQUIRED.

6. LANDSCAPE CONTRACTOR MUST CALL THE LANDSCAPE INSPECTOR WITH THE GOVERNING AGENCY TO SCHEDULE A PRE CONSTRUCTION MEETING, ALONG WITH THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT PRIOR TO ANY SITE PREPARATION.

7. ALL CLEARING, GRUBBING, EXCAVATION, FILL AND DISPOSAL OF ALL CONSTRUCTION MATERIAL IS INCIDENTAL TO WORK, AND SHALL BE INCLUDED IN THE CONTRACT.

8. CONTRACTOR SHALL CONTACT F.D.O.T. 'OPERATIONS' FOR DIRECTION AS TO THE DISPOSAL OF EXCAVATED FILL. BROWARD OPERATIONS: CONTACT ADRIAN CROUCH MAINTENANCE PROGRAM MANAGER AT (954) 958-7643.

9. CONTRACTOR SHALL MAINTAIN CLEAR SIGHT AT MEDIAN OPENINGS FOR VEHICLES TURNING ACROSS ONCOMING TRAFFIC, AS DEFINED PER F.D.O.T. INDEX 546, EXCEPT WHERE SIGNALIZED INTERSECTIONS THAT DO NOT GO FLASHING.

10. CONTRACTOR SHALL MAINTAIN A HORIZONTAL CLEAR ZONE, AS DEFINED PER F.D.O.T. INDEX 700.

11. CONTRACTOR SHALL INSURE THAT NO SIGNS WILL BE BLOCKED DURING NEW MEDIAN PLANTING, AND THAT NO PLANT MATERIAL WILL BE BLOCKING ANY SIGN.

TREE PROTECTION NOTE:

12. CONTRACTOR SHOULD PROVIDE TREE PROTECTION FOR ANY EXISTING TREE AND PALMS TO REMAIN PER F.D.O.T. STANDARD INDEX 544, LANDSCAPE INSTALLATION CURRENT EDITION

PLANTING NOTES:

13. CONTRACTOR SHALL INSTALL PLANT MATERIAL AS DETAILED IN F.D.O.T. INDEX 544 LANDSCAPE INSTALLATION, LANDSCAPE INSTALLATION CURRENT EDITION

14. CYPRESS MULCH IS NOT PERMITTED ON FDOT RIGHT OF WAY. CONTRACTOR SHALL PROVIDE 3" RECYCLED MULCH CERTIFIED BY THE MULCH AND SOIL COUNCIL (MSC). SUBMIT PROOF OF CERTIFICATION TO THE FDOT DISTRICT OPERATIONS PERMIT LANDSCAPE INSPECTOR UPON INSPECTION.

UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY

- BE ADVISED THAT UNDERGROUND UTILITIES SHOWN ON PLANS ARE APPROXIMATIONS, AND MAY NOT REFLECT ALL EXISTING UNDERGROUND UTILITIES.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALL 811 OR 1-800-432-4770 (SUNSHINE STATE ONE CALL) A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION, AS PER CHAPTER 556 OF THE FLORIDA STATUES.

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA, ITS THE LAW!

811 or 1-800-432-4770

SUNSHINE STATE ONE CALL OF FLORIDA, INC.

12-16-14

DECEMBER 16,2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
9/26/14	REVISIONS PER E.R.C. COMMENTS		
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD: MICHAEL CONNER, R.L.A., LICENSE No.1181
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Certificate of Authorization LC0000329
VENDOR I.D. NO. 65-901-3669

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

OVERALL KEY PLAN AND LANDSCAPE NOTES

SHEET NO. 1

TABULATION OF QUANTITIES / PLANT SCHEDULE

PAY ITEM NO.	PAY SIZE	SYM	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	MAXIMUM MAINTAINED SIZE	SPACING	NATIVE	DROUGHT TOLERANT	UNIT	SHEET NUMBERS 4 PLAN	4 FINAL	5 PLAN	5 FINAL	6 PLAN	6 FINAL	7 PLAN	7 FINAL	TOTAL FOR SHEETS 4 TO 7 PLAN	TOTAL FOR SHEETS 4 TO 7 FINAL	GRAND TOTAL PLAN	GRAND TOTAL FINAL
N/A	N/A	BIS	Bismarckia nobilis 'Silver'	Silver Bismarkia Palm	14' O.A., 4'C.T.	N/A	N/A			EA.					9				9		12	
N/A	N/A	BUL	Bulnesia arborea	Bulnesia Tree	14' HT X 6',2"DBH	N/A	N/A		Yes	EA.											4	
N/A	N/A	QVL	Quercus virginiana	Live Oak Tree	18' HT.X 9',3"DBH	N/A	N/A	Yes	Yes	EA.											4	
N/A	N/A	PES	Ptychosperma elegans	Solitaire Palm - Single	12'-16' C.T.	N/A	N/A			EA.											6	
N/A	N/A	VMS	Veitchia montgomeryana	Veitchia Montgomeryana	12'-16' C.T.	N/A	N/A			EA.											8	
N/A	N/A	ALL	Allamanda cathartica	Allamanda Shrubs	3 Gal., 24"X18"	36"	30" O.C.			EA.					217				217		290	
N/A	N/A	BRO	Aechmia blanchetiana	Bromeliads	3 Gal., 15"X15"	30"	36" O.C.			EA.											52	
N/A	N/A	CRI	Crinum augustum 'Queen Emma'	Crinum Lily	3 Gal., 24"X24"	36"	36" O.C.			EA.							54		54		214	
N/A	N/A	DUR	Duranta erecta 'Gold Mound'	Gold Mound	3 Gal., 18"X18"	24"	24" O.C.			EA.											329	
N/A	N/A	FAX	Tripsacum dactyloides	Fakahatchee Grass	3 Gal., 24"X24"	36"	36" O.C.	Yes		EA.							168		168		327	
N/A	N/A	FMG	Ficus microcarpa	Green Island Ficus	3 Gal., 15"X15"	18"	24" O.C.		Yes	EA.					421		180		601		1743	
N/A	N/A	SPA	Spartina bakeri	Sand Cord Grass	3 Gal., 24"X24"	36"	24" O.C.	Yes	Yes	EA.							150		150		1020	
N/A	N/A	SSF		St. Augustine Floratam Sod	G.C.	N/A	N/A			EA.					4543		15162		19705		38756	
N/A	N/A	PMP	Podocarpus macrophillis 'Pringles'	Dwarf Podocarpus	3 Gal., 12"X12"	18"	18" O.C.		Yes	EA.											402	
N/A	N/A	HDS	Helianthus debilis	Dune Sunflower	1 Gal., 12"X12"	18"	15" O.C.	Yes		S.F.							540		540		1985	
N/A	N/A	CUP	Cuphea Hyssopifolia	False/Mexican Heather	1 Gal., 8"X8"	15"	15" O.C.			EA.											1487	
N/A	N/A	SET	Tradescantia Pallida 'Purpurea'	Purple Queen	1 Gal., 8"X8"	12"	15" O.C.		Yes	EA.											405	

PAY ITEM NO.	PAY SIZE	SYM	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	MAXIMUM MAINTAINED SIZE	SPACING	NATIVE	DROUGHT TOLERANT	UNIT	SHEET NUMBERS 8 PLAN	8 FINAL	9 PLAN	9 FINAL	10 PLAN	10 FINAL	11 PLAN	11 FINAL	TOTAL FOR SHEETS 8 TO 11 PLAN	TOTAL FOR SHEETS 8 TO 11 FINAL	GRAND TOTAL PLAN	GRAND TOTAL FINAL
N/A	N/A	BIS	Bismarckia nobilis 'Silver'	Silver Bismarkia Palm	14' O.A., 4'C.T.	N/A	N/A			EA.											12	
N/A	N/A	BUL	Bulnesia arborea	Bulnesia Tree	14' HT X 6',2"DBH	N/A	N/A		Yes	EA.			4						4		4	
N/A	N/A	QVL	Quercus virginiana	Live Oak Tree	18' HT.X 9',3"DBH	N/A	N/A	Yes	Yes	EA.			4						4		4	
N/A	N/A	PES	Ptychosperma elegans	Solitaire Palm - Single	12'-16' C.T.	N/A	N/A			EA.											6	
N/A	N/A	VMS	Veitchia montgomeryana	Veitchia Montgomeryana	12'-16' C.T.	N/A	N/A			EA.			8						8		8	
N/A	N/A	ALL	Allamanda cathartica	Allamanda Shrubs	3 Gal., 24"X18"	36"	30" O.C.			EA.											290	
N/A	N/A	BRO	Aechmia blanchetiana	Bromeliads	3 Gal., 15"X15"	30"	36" O.C.			EA.											52	
N/A	N/A	CRI	Crinum augustum 'Queen Emma'	Crinum Lily	3 Gal., 24"X24"	36"	36" O.C.			EA.	24		108						132		214	
N/A	N/A	DUR	Duranta erecta 'Gold Mound'	Gold Mound	3 Gal., 18"X18"	24"	24" O.C.			EA.			178				12		190		329	
N/A	N/A	FAX	Tripsacum dactyloides	Fakahatchee Grass	3 Gal., 24"X24"	36"	36" O.C.	Yes		EA.	159								159		327	
N/A	N/A	FMG	Ficus microcarpa	Green Island Ficus	3 Gal., 15"X15"	18"	24" O.C.		Yes	EA.	65		288				118		471		1743	
N/A	N/A	SPA	Spartina bakeri	Sand Cord Grass	3 Gal., 24"X24"	36"	24" O.C.	Yes	Yes	EA.	275		595						870		1020	
N/A	N/A	SSF		St. Augustine Floratam Sod	G.C.	N/A	N/A			EA.	6673		12378						19051		38756	
N/A	N/A	PMP	Podocarpus macrophillis 'Pringles'	Dwarf Podocarpus	3 Gal., 12"X12"	18"	18" O.C.		Yes	EA.											402	
N/A	N/A	HDS	Helianthus debilis	Dune Sunflower	1 Gal., 12"X12"	18"	15" O.C.	Yes		S.F.	240		445						685		1985	
N/A	N/A	CUP	Cuphea Hyssopifolia	False/Mexican Heather	1 Gal., 8"X8"	15"	15" O.C.			EA.											1487	
N/A	N/A	SET	Tradescantia Pallida 'Purpurea'	Purple Queen	1 Gal., 8"X8"	12"	15" O.C.		Yes	EA.							80		80		405	

12-16-14

DECEMBER 16,2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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9/26/14	REVISIONS PER E.R.C. COMMENTS		
0/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD MICHAEL CORNER, R.L.A. LICENSE No 1181
Calvin, Giordano & Associates, Inc.
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Certificate of Authorization LC0000330
VENDOR I.D. NO. 65-001-3869

SAMPLE ROAD BEAUTIFICATION GRANT		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

PLANTING SCHEDULES

SHEET NO. 2

TABULATION OF QUANTITIES / PLANT SCHEDULE

PAY ITEM NO	PAY SIZE	SYM	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	MAXIMUM MAINTAINED SIZE	SPACING	NATIVE	DROUGHT TOLERANT	UNIT	SHEET NUMBERS 12 PLAN	12 FINAL	13 PLAN	13 FINAL	14 PLAN	14 FINAL	15 PLAN	15 FINAL	TOTAL FOR SHEETS 12 TO 15 PLAN	TOTAL FOR SHEETS 12 TO 15 FINAL	GRAND TOTAL PLAN	GRAND TOTAL FINAL
N/A	N/A	BIS	Bismarckia nobilis 'Silver'	Silver Bismarkia Palm	14' O.A., 4'C.T.	N/A	N/A			EA.					3				3		12	
N/A	N/A	BUL	Bulnesia arborea	Bulnesia Tree	14' HT X 6',2"DBH	N/A	N/A		Yes	EA.											4	
N/A	N/A	QVL	Quercus virginiana	Live Oak Tree	18' HT.X 9',3"DBH	N/A	N/A	Yes	Yes	EA.											4	
N/A	N/A	PES	Ptychosperma elegans	Solitaire Palm - Single	12'-16' C.T.	N/A	N/A			EA.							3		3		6	
N/A	N/A	VMS	Veitchia montgomeryana	Veitchia Montgomeryana	12'-16' C.T.	N/A	N/A			EA.											8	
N/A	N/A	ALL	Allamanda cathartica	Allamanda Shrubs	3 Gal., 24"X18"	36"	30" O.C.			EA.					45				45		290	
N/A	N/A	BRO	Aechmia blanchetiana	Bromeliads	3 Gal., 15"X15"	30"	36" O.C.			EA.							36		36		52	
N/A	N/A	CRI	Crinum augustum 'Queen Emma'	Crinum Lily	3 Gal., 24"X24"	36"	36" O.C.			EA.							10		10		214	
N/A	N/A	DUR	Duranta erecta 'Gold Mound'	Gold Mound	3 Gal., 18"X18"	24"	24" O.C.			EA.			67						67		329	
N/A	N/A	FAX	Tripsacum dactyloides	Fakahatchee Grass	3 Gal., 24"X24"	36"	36" O.C.	Yes		EA.											327	
N/A	N/A	FMG	Ficus microcarpa	Green Island Ficus	3 Gal., 15"X15"	18"	24" O.C.		Yes	EA.			273		238				511		1743	
N/A	N/A	SPA	Spartina bakeri	Sand Cord Grass	3 Gal., 24"X24"	36"	24" O.C.	Yes	Yes	EA.											1020	
N/A	N/A	SSF		St. Augustine Floratam Sod	G.C.	N/A	N/A			EA.											38756	
N/A	N/A	PMP	Podocarpus macrophillis 'Pringles'	Dwarf Podocarpus	3 Gal., 12"X12"	18"	18" O.C.		Yes	EA.							200		200		402	
N/A	N/A	HDS	Helianthus debilis	Dune Sunflower	1 Gal., 12"X12"	18"	15" O.C.	Yes		S.F.							350		350		1985	
N/A	N/A	CUP	Cuphea Hyssopifolia	False/Mexican Heather	1 Gal., 8"X8"	15"	15" O.C.			EA.							487		487		1487	
N/A	N/A	SET	Tradescantia Pallida 'Purpurea'	Purple Queen	1 Gal., 8"X8"	12"	15" O.C.		Yes	EA.			195		130				325		405	

PAY ITEM NO	PAY SIZE	SYM	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	MAXIMUM MAINTAINED SIZE	SPACING	NATIVE	DROUGHT TOLERANT	UNIT	SHEET NUMBERS 16 PLAN	16 FINAL	17 PLAN	17 FINAL	18 PLAN	18 FINAL	- PLAN	- FINAL	TOTAL FOR SHEETS 16 TO 18 PLAN	TOTAL FOR SHEETS 16 TO 18 FINAL	GRAND TOTAL PLAN	GRAND TOTAL FINAL
N/A	N/A	BIS	Bismarckia nobilis 'Silver'	Silver Bismarkia Palm	14' O.A., 4'C.T.	N/A	N/A			EA.											12	
N/A	N/A	BUL	Bulnesia arborea	Bulnesia Tree	14' HT X 6',2"DBH	N/A	N/A		Yes	EA.											4	
N/A	N/A	QVL	Quercus virginiana	Live Oak Tree	18' HT.X 9',3"DBH	N/A	N/A	Yes	Yes	EA.											4	
N/A	N/A	PES	Ptychosperma elegans	Solitaire Palm - Single	12'-16' C.T.	N/A	N/A			EA.	3								3		6	
N/A	N/A	VMS	Veitchia montgomeryana	Veitchia Montgomeryana	12'-16' C.T.	N/A	N/A			EA.											8	
N/A	N/A	ALL	Allamanda cathartica	Allamanda Shrubs	3 Gal., 24"X18"	36"	30" O.C.			EA.			28						28		290	
N/A	N/A	BRO	Aechmia blanchetiana	Bromeliads	3 Gal., 15"X15"	30"	36" O.C.			EA.	16								16		52	
N/A	N/A	CRI	Crinum augustum 'Queen Emma'	Crinum Lily	3 Gal., 24"X24"	36"	36" O.C.			EA.	18								18		214	
N/A	N/A	DUR	Duranta erecta 'Gold Mound'	Gold Mound	3 Gal., 18"X18"	24"	24" O.C.			EA.			72						72		329	
N/A	N/A	FAX	Tripsacum dactyloides	Fakahatchee Grass	3 Gal., 24"X24"	36"	36" O.C.	Yes		EA.											327	
N/A	N/A	FMG	Ficus microcarpa	Green Island Ficus	3 Gal., 15"X15"	18"	24" O.C.		Yes	EA.			160						160		1743	
N/A	N/A	SPA	Spartina bakeri	Sand Cord Grass	3 Gal., 24"X24"	36"	24" O.C.	Yes	Yes	EA.											1020	
N/A	N/A	SSF		St. Augustine Floratam Sod	G.C.	N/A	N/A			EA.											38756	
N/A	N/A	PMP	Podocarpus macrophillis 'Pringles'	Dwarf Podocarpus	3 Gal., 12"X12"	18"	18" O.C.		Yes	EA.			172		30				202		402	
N/A	N/A	HDS	Helianthus debilis	Dune Sunflower	1 Gal., 12"X12"	18"	15" O.C.	Yes		S.F.			410						410		1985	
N/A	N/A	CUP	Cuphea Hyssopifolia	False/Mexican Heather	1 Gal., 8"X8"	15"	15" O.C.			EA.			755		245				1000		1487	
N/A	N/A	SET	Tradescantia Pallida 'Purpurea'	Purple Queen	1 Gal., 8"X8"	12"	15" O.C.		Yes	EA.											405	

LB 1181
12-16-14

DECEMBER 16,2014

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
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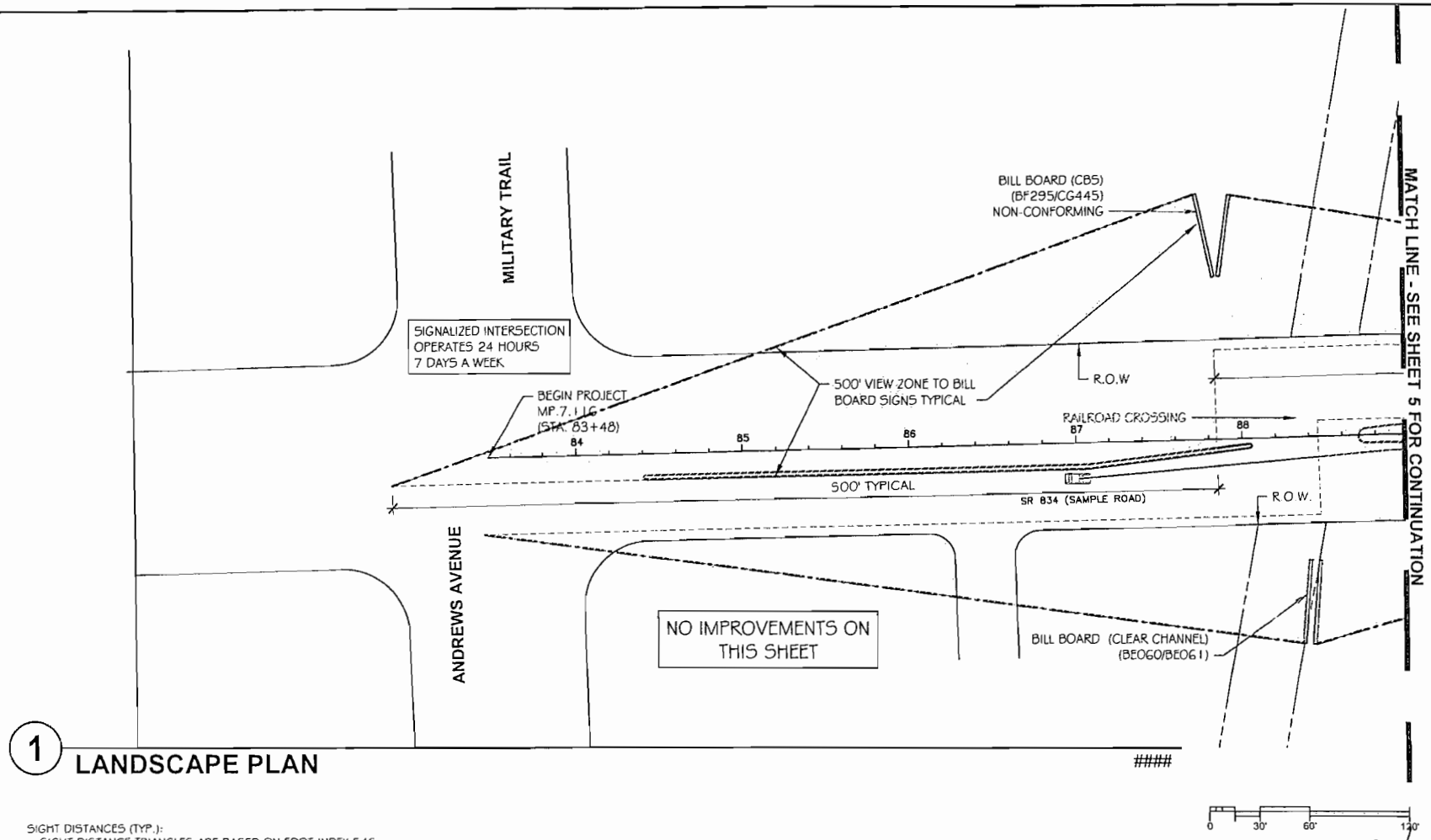
Certificate of Authorization LC000000339
VENDOR I.D. NO. 55-001-3609

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

PLANTING SCHEDULES

SHEET NO. 3



1 **LANDSCAPE PLAN**

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SIGHT DISTANCES (TYP.):
- SIGHT DISTANCE TRIANGLES ARE BASED ON FDOT INDEX 546, 6 LANE DIVIDED HIGHWAY WITH MEDIANS LESS THAN 22', DESIGN SPEED OF 45MPH.
- CARS ENTERING ROAD FROM SIDE STREETS MUST HAVE A CLEAR LINE OF SIGHT FOR 625 FT.
- CARS WAITING TO CROSS FROM A DIRECTIONAL MEDIAN MUST BE ABLE TO SEE 430 FT.

LA 1181
12-16-14

DECEMBER 16,2014

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Certificate of Authorization LC0000539
VENDOR I.D. NO. 65-001-3869

SAMPLE ROAD BEAUTIFICATION GRANT		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

SHEET NO. 4

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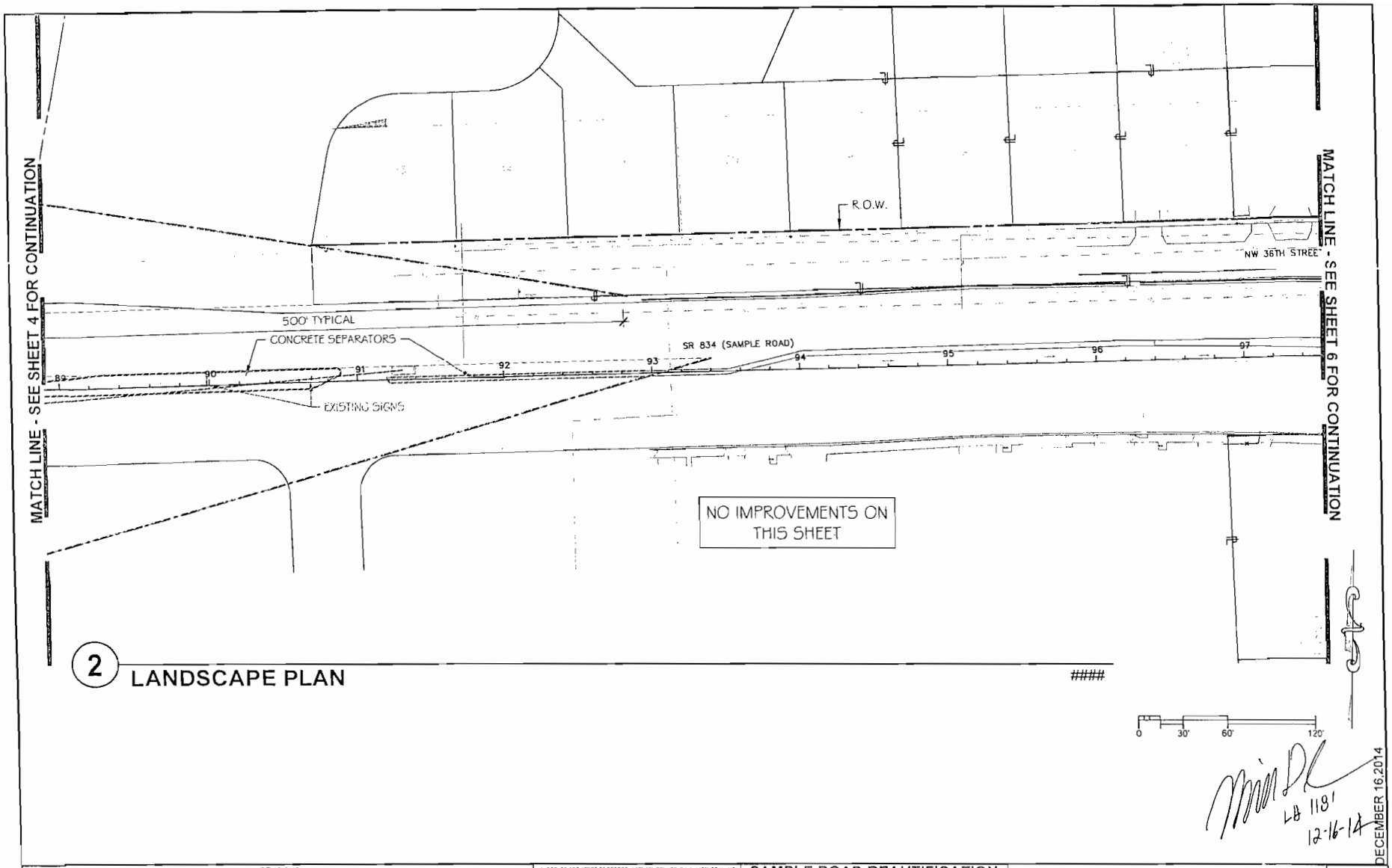

2 LANDSCAPE PLAN

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LB 1181
12-16-14

DECEMBER 16,2014

REVISIONS			
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9/26/14	REVISIONS PER E.R.C. COMMENTS		
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

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Certificate of Authorization LC0000239
VENDOR I.D. NO. 65-601-3909

SAMPLE ROAD BEAUTIFICATION GRANT		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

SHEET NO. 5

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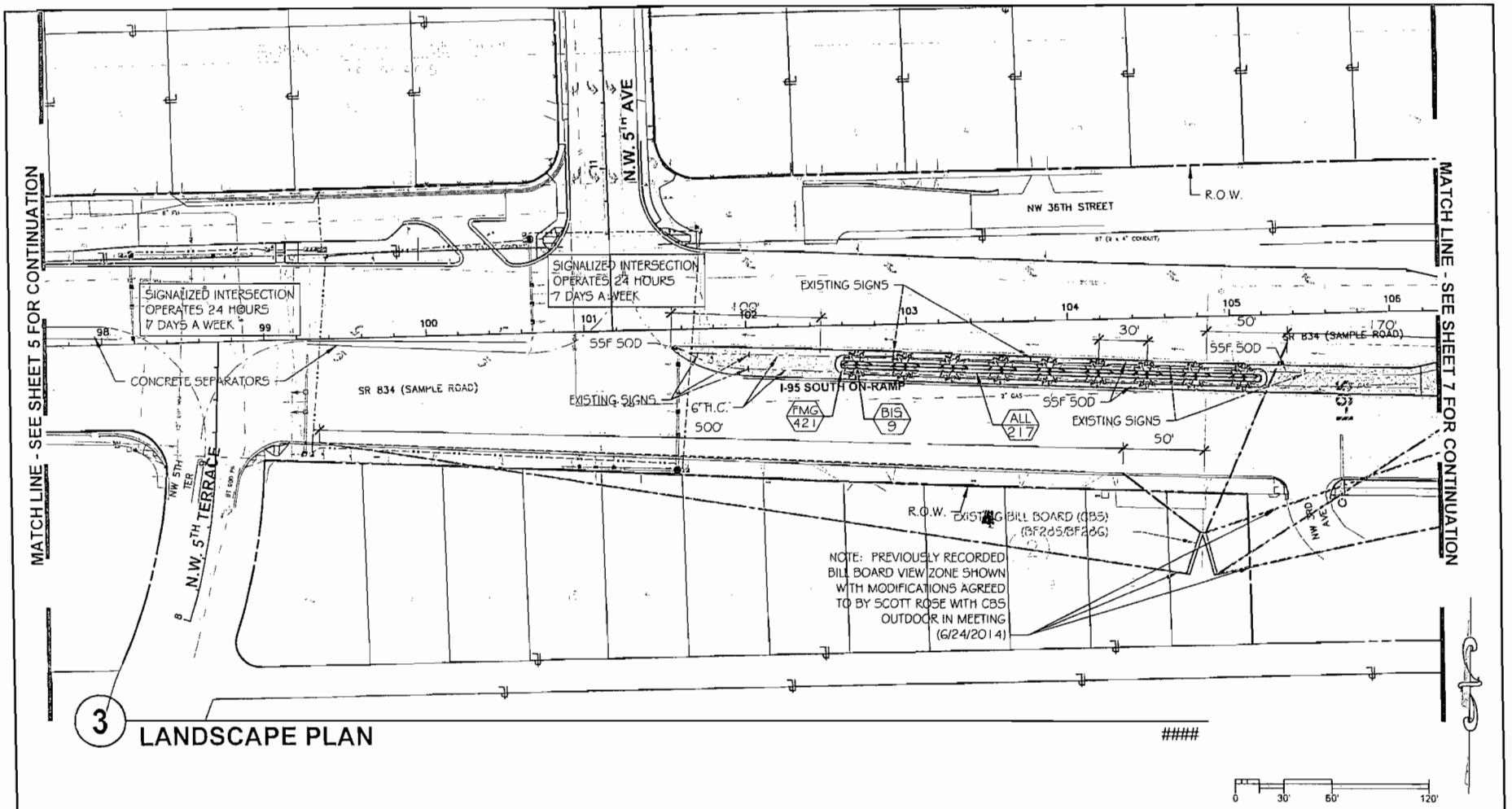

3 LANDSCAPE PLAN

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DECEMBER 16,2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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9/26/14	REVISIONS PER E.R.C. COMMENTS		
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LANDSCAPE ARCHITECT OF RECORD: MICHAEL CONNER, R.L.A., LICENSE No.1181

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Certificate of Authorization LC0000339
VENDOR I.D. NO. 65-001-3869

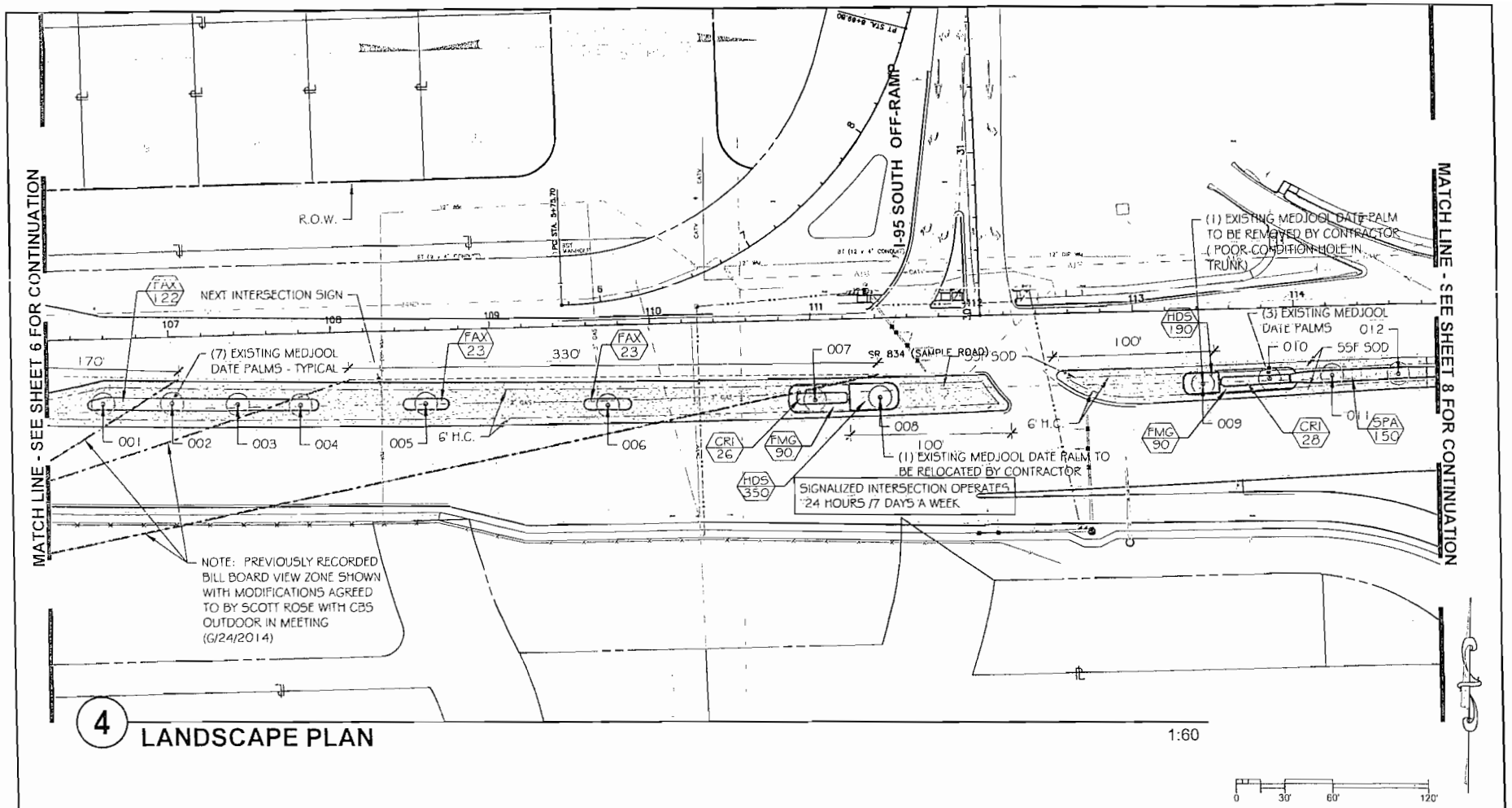
SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

SHEET NO. 6

USER: apereda 12/16/2014 5:17:24 PM P:\Projects\2013\136147 Florida Highway Beautification Grant Application\CADD Files\Drawings\136147-L101-PLANTING_PLANS.dwg



4 LANDSCAPE PLAN

1:60

DECEMBER 16,2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
0/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD: MICHAEL CONNER, R.L.A., LICENSE No.1181

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Certificate of Authorization LC00000339
VENDOR I.D. NO. 65-001-3559

SAMPLE ROAD BEAUTIFICATION GRANT		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

SHEET NO. 7

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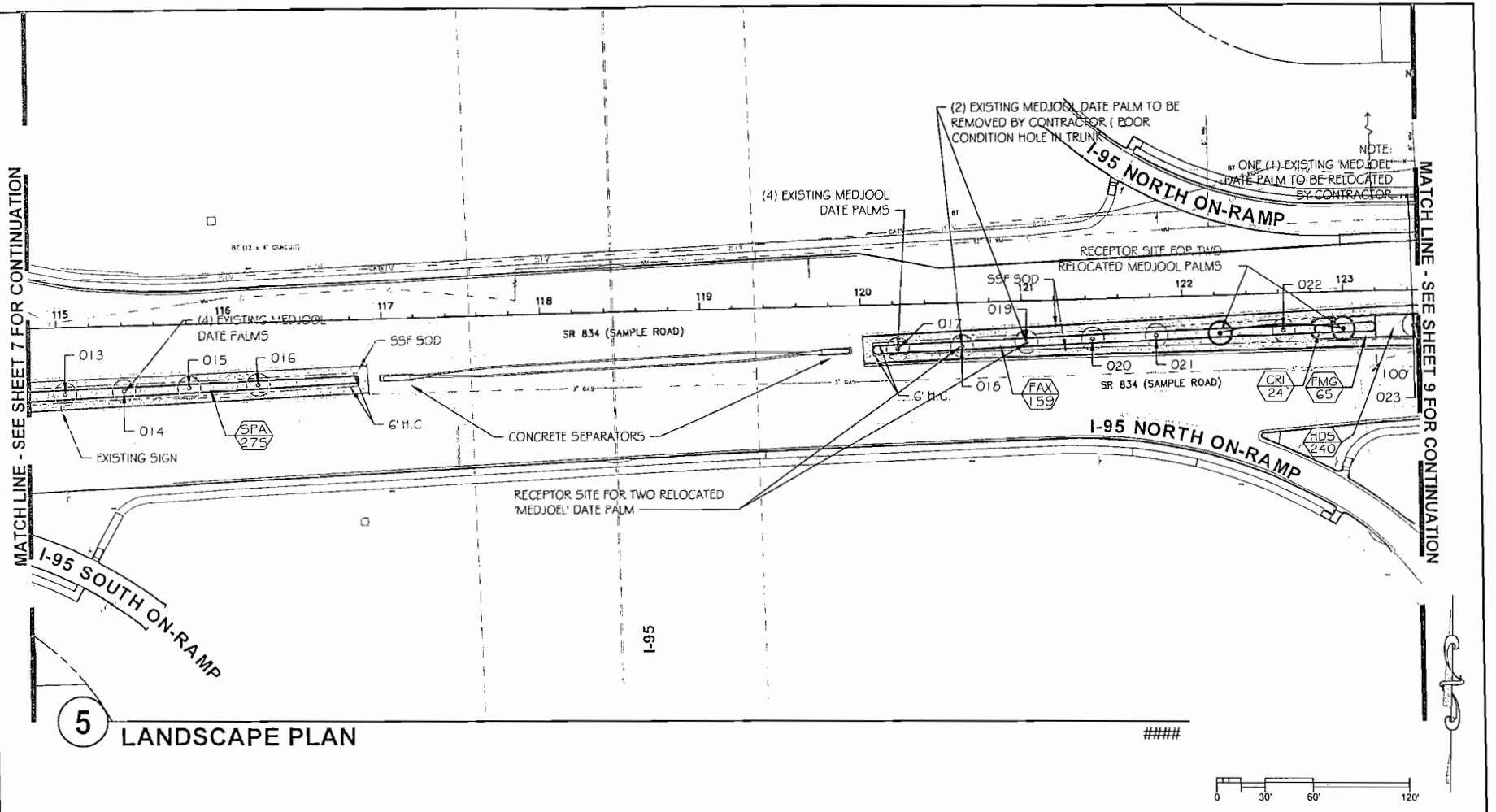

5 LANDSCAPE PLAN

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Mike PL
LA 1181
12-16-14

DECEMBER 16,2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
9/26/14	REVISIONS PER E.R.C. COMMENTS		
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD MICHAEL CONNER, R.L.A., LICENSE No.1181
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Certificate of Authorization LC00000039
VENDOR I.D. NO. 65-001-3889

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

SHEET NO. 8

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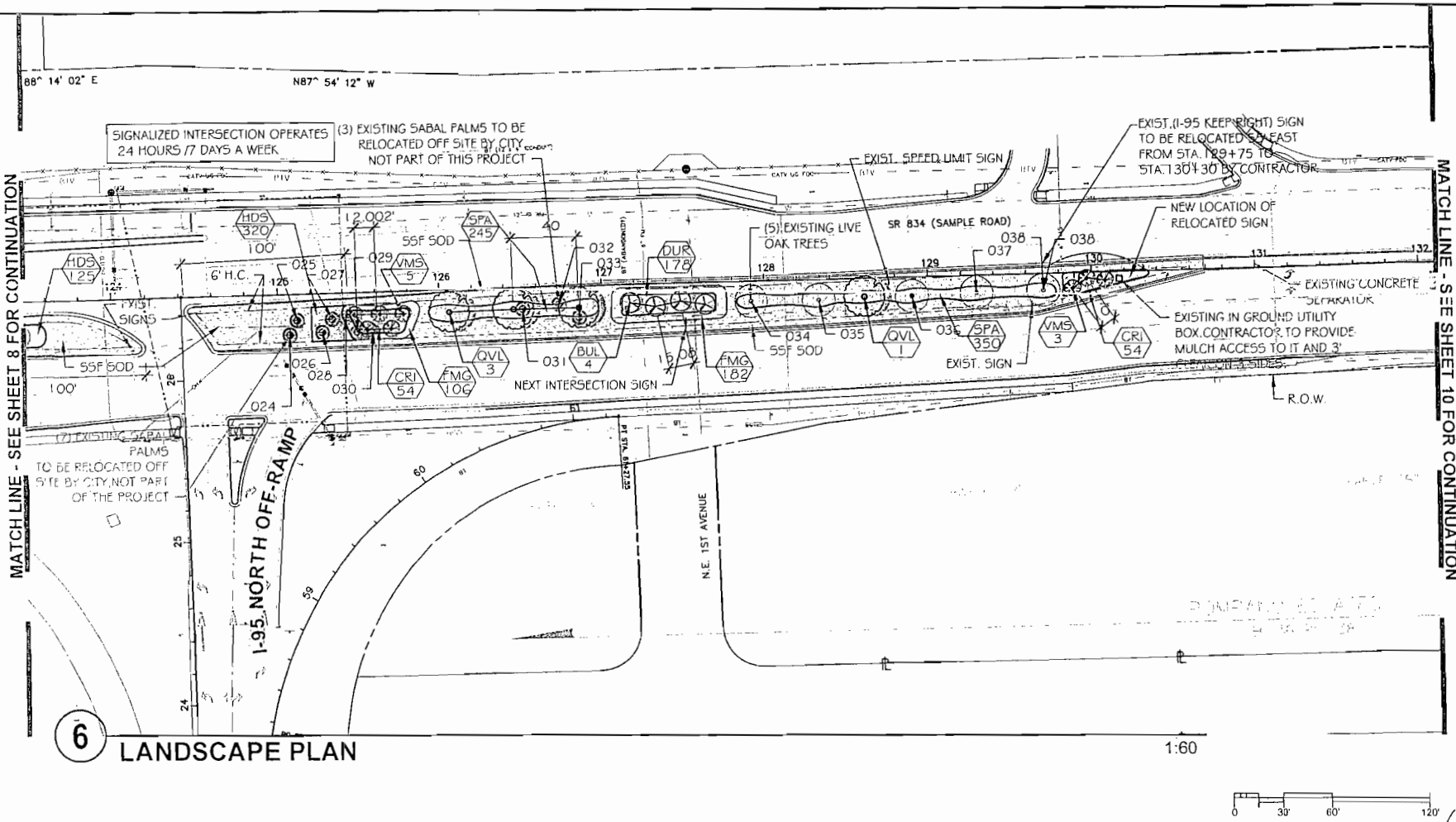

6 LANDSCAPE PLAN 1:60

LA 1131
12-16-14

DECEMBER 16,2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
0/31/14	SECOND REVISIONS PER E.R.C.COMMENT		
12/16/14	Revised For FDOT Agreements		

LANDSCAPE ARCHITECT OF RECORD MICHAEL CONNER, R.L.A., LICENSE No.1181
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Certificate of Authorization LC00000339
VENDOR I.D. NO. 65-0013869

SAMPLE ROAD BEAUTIFICATION GRANT		
ROAD NO	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

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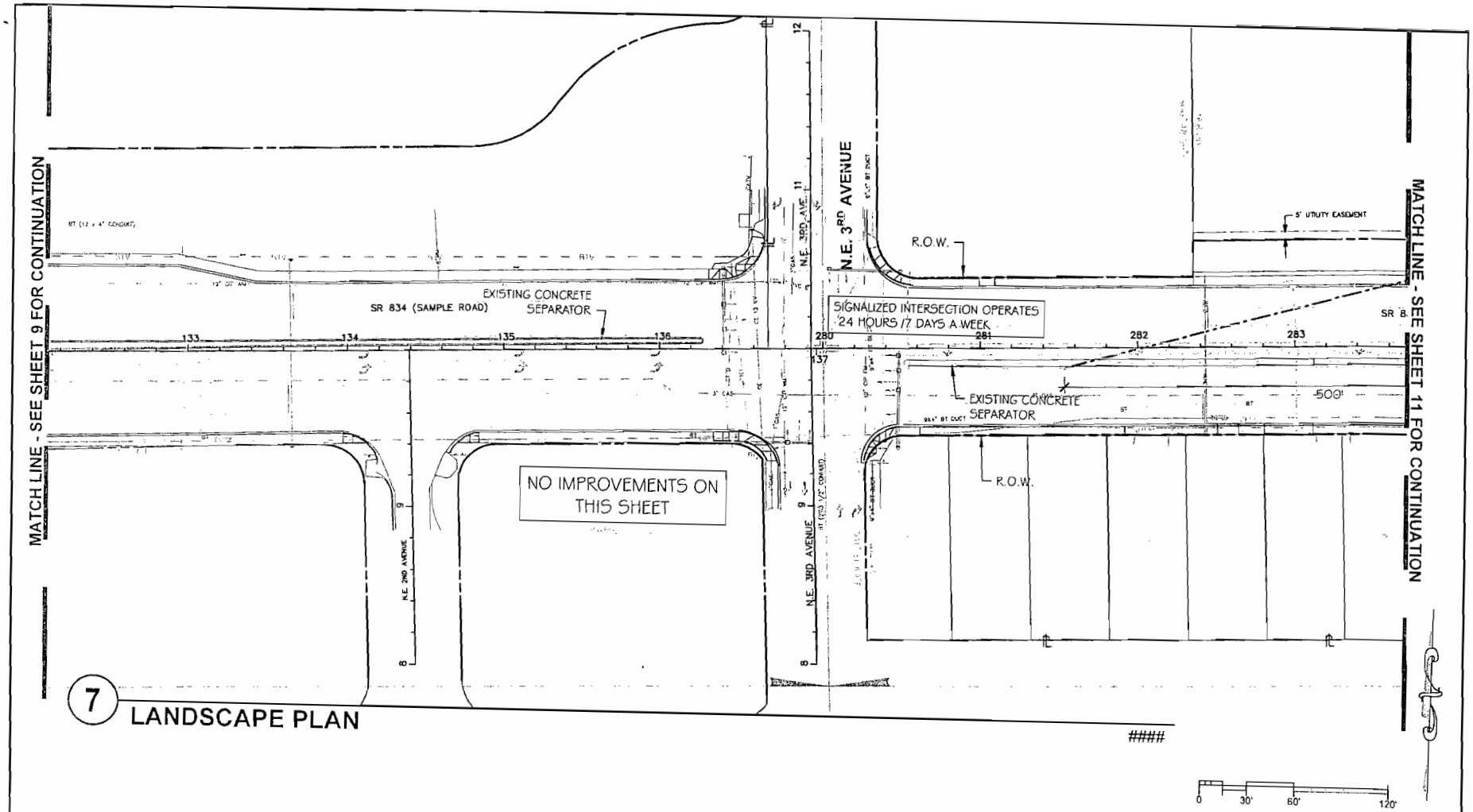

7 LANDSCAPE PLAN

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Mimi DL
LA 1181
12-16-14

DECEMBER 16,2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
9/26/14	REVISIONS PER E.R.C. COMMENTS		
0/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD: MICHAEL CONIER, R.L.A., LICENSE No.1181

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VENDOR I.D. NO. 65-001-3869

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

SHEET NO. 10

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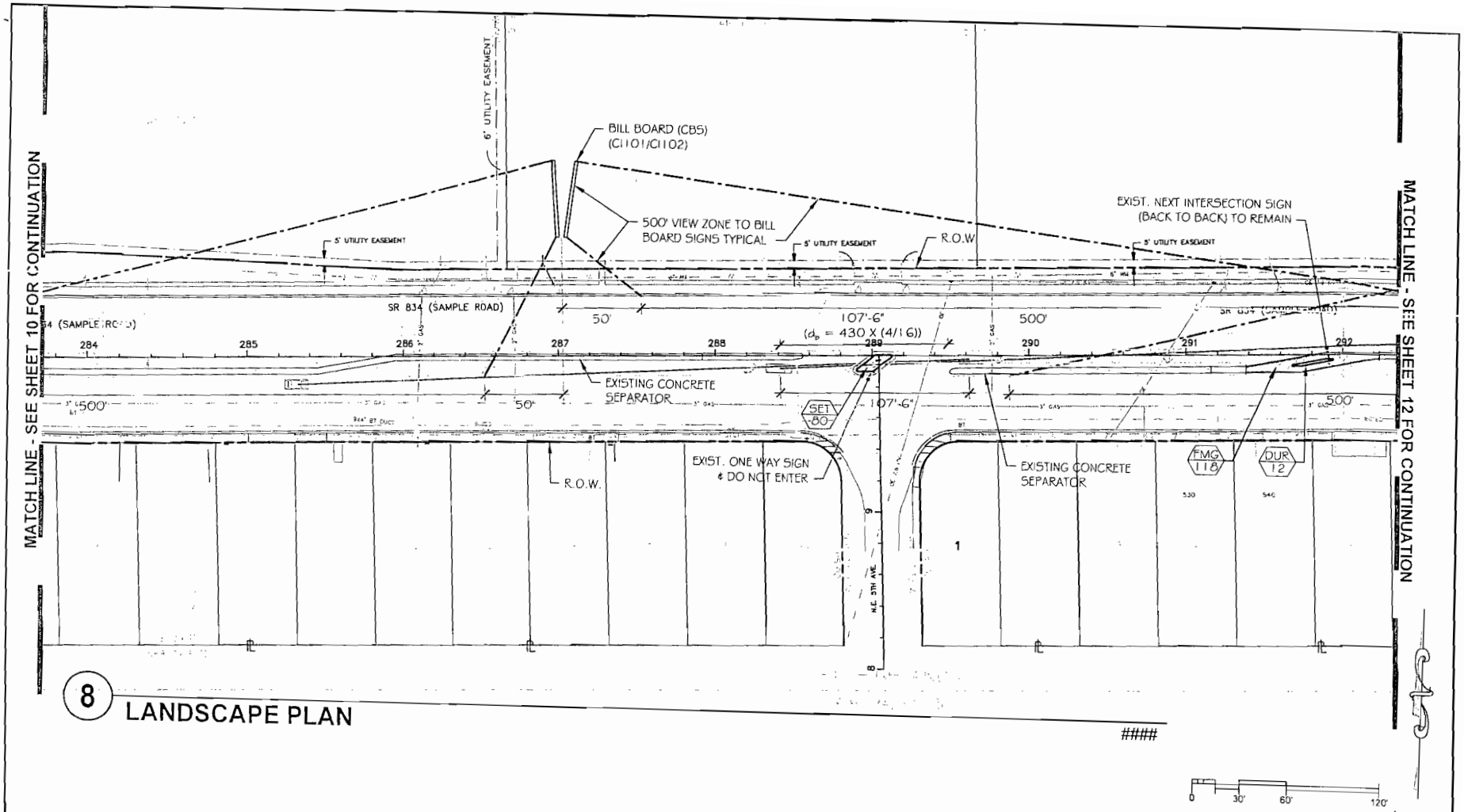

8 LANDSCAPE PLAN

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Lk 1181
12-16-14

DECEMBER 16,2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD: MICHAEL CONNER, R.L.A., LICENSE No.1181

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Certificate of Authorization LC6000339
VENDOR I.D. NO. 65-091-3869

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

SHEET NO. 11

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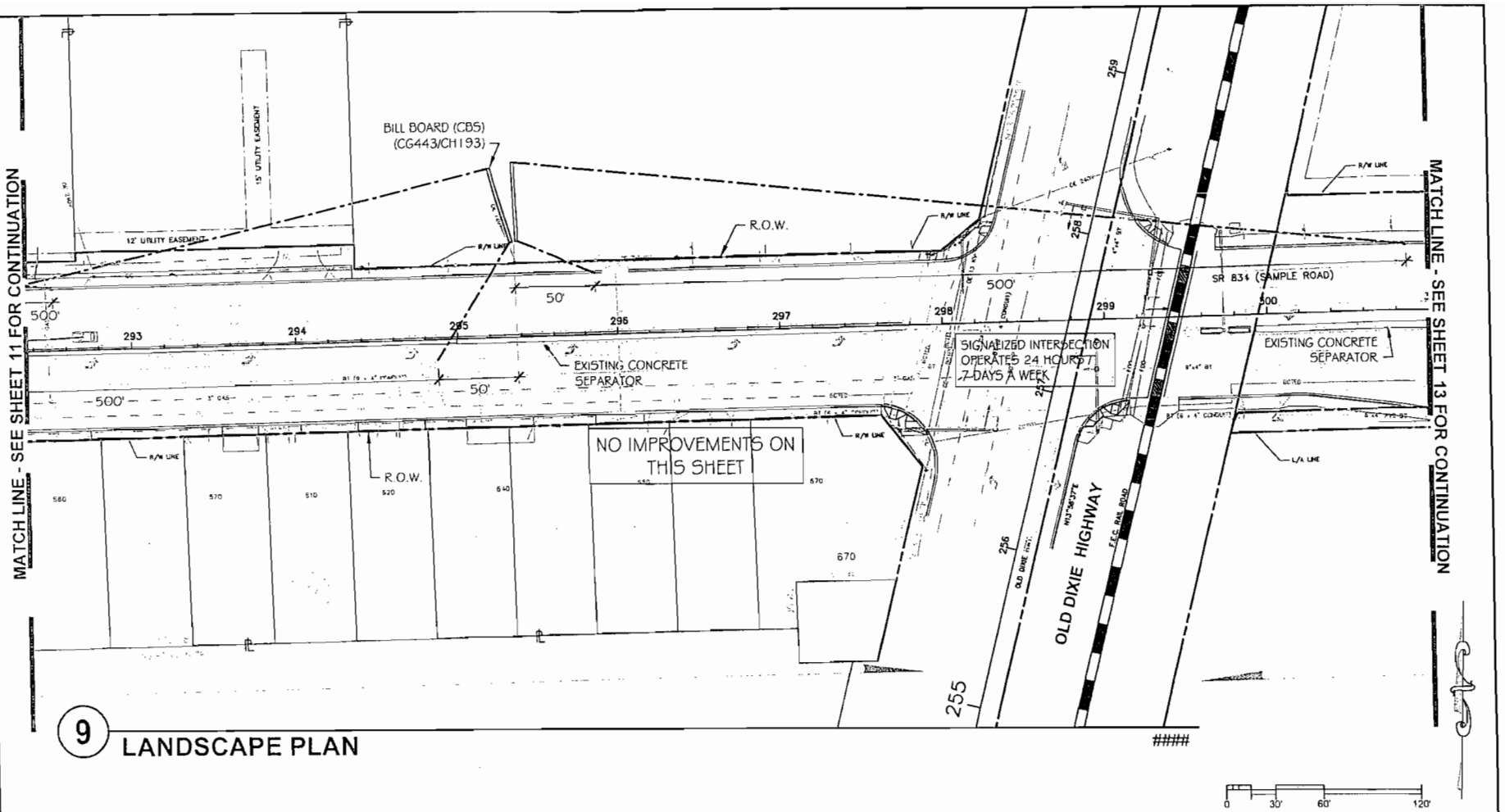

9 LANDSCAPE PLAN

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DECEMBER 16,2014

LA 1181
12-16-14

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
0/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD: MICHAEL CONVER, R.L.A. LICENSE No.1181

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Certificate of Authorization LC0000339
VENDOR I.D. NO. 85-001-2869

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

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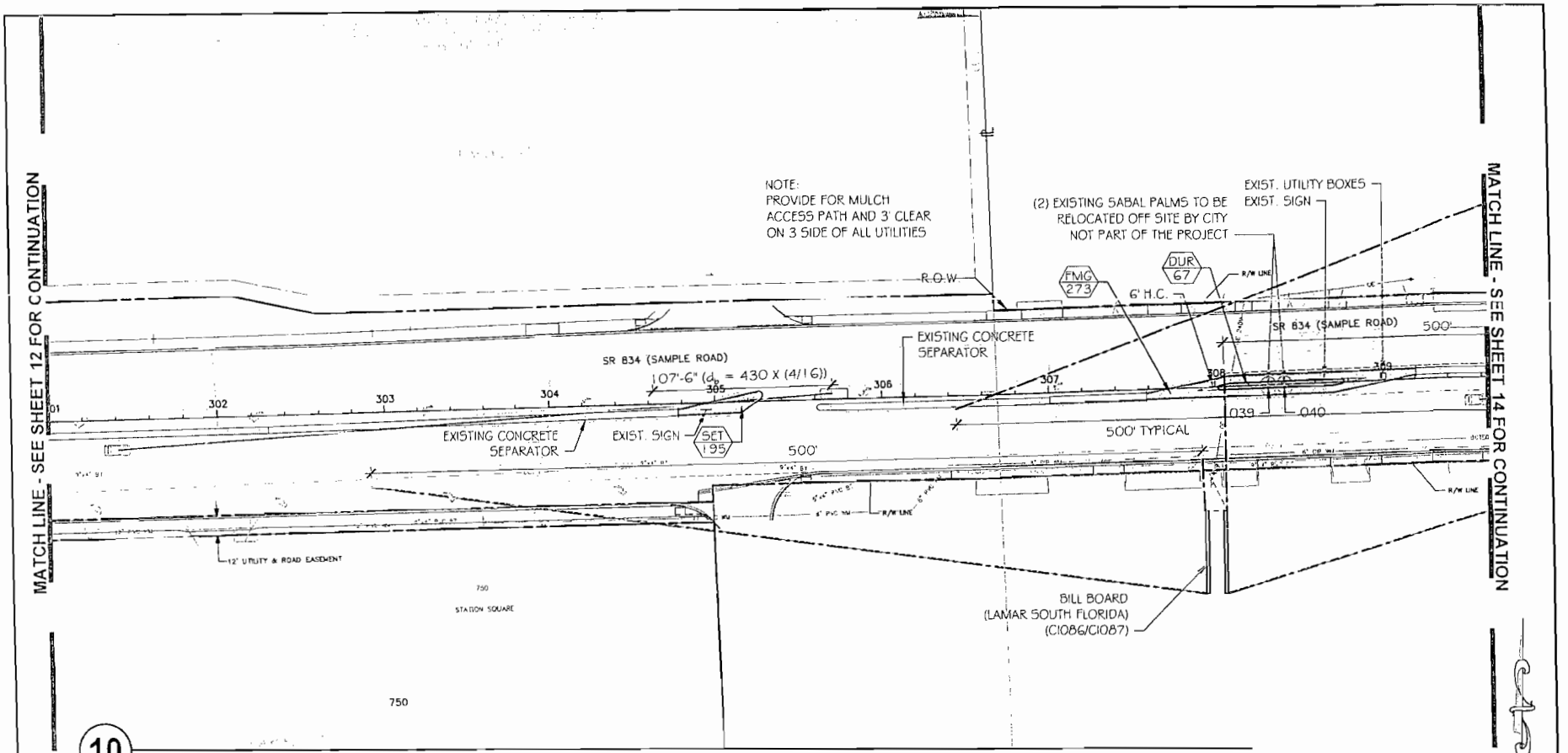

10 LANDSCAPE PLAN

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Minn D. C
LA1181
12-16-14

DECEMBER 16,2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD: MICHAEL CONNER, R.L.A., LICENSE No.1181

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VENDOR I.D. NO. 65-001-3869

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

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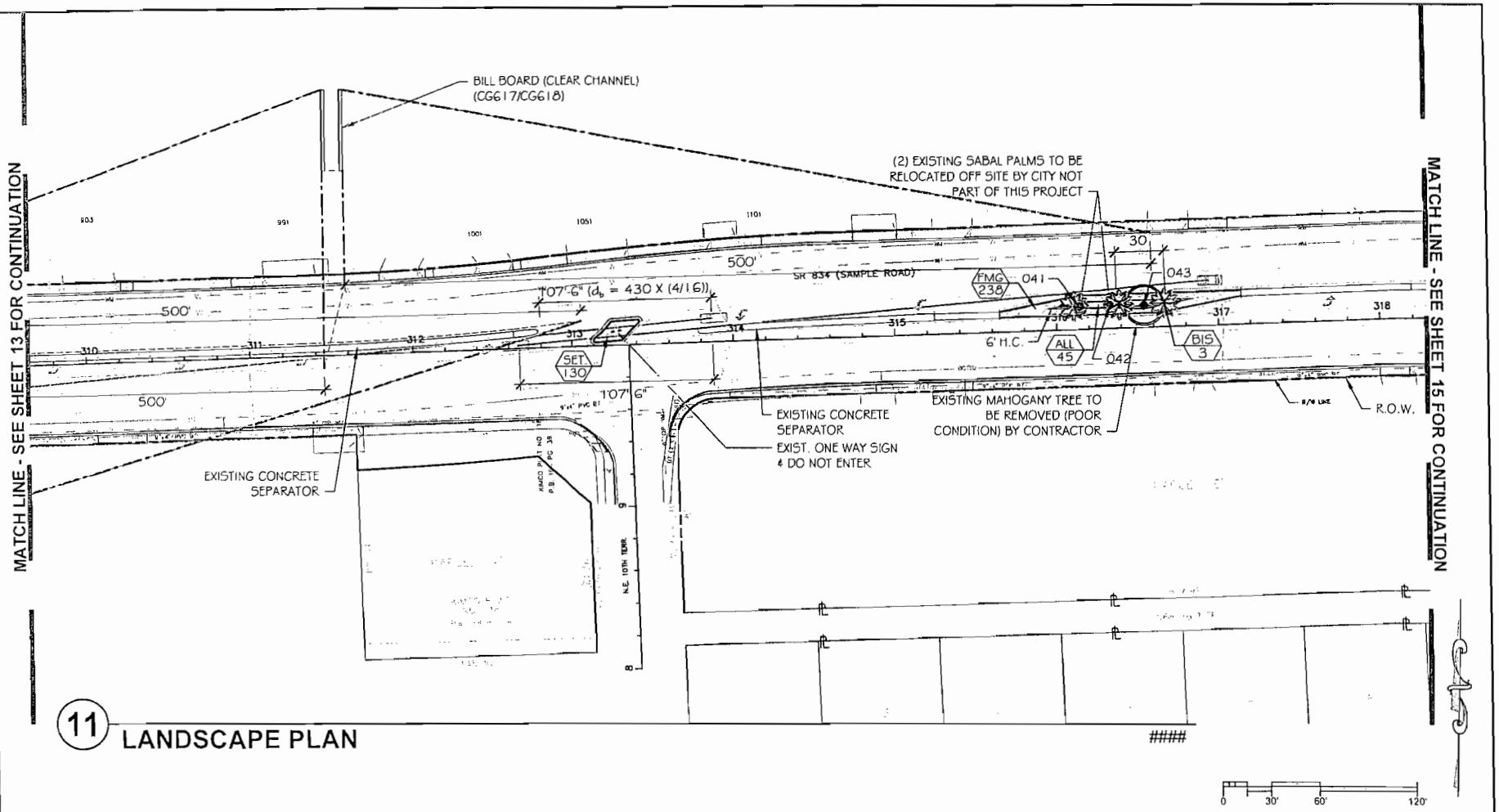

11 LANDSCAPE PLAN

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DECEMBER 16,2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD MICHAEL CONNER R.L.A. LICENSE No.1181

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Certificate of Authorization LC0000339
VENDOR I.D. NO. 65-001-3669

SAMPLE ROAD BEAUTIFICATION GRANT		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

SHEET NO. 14

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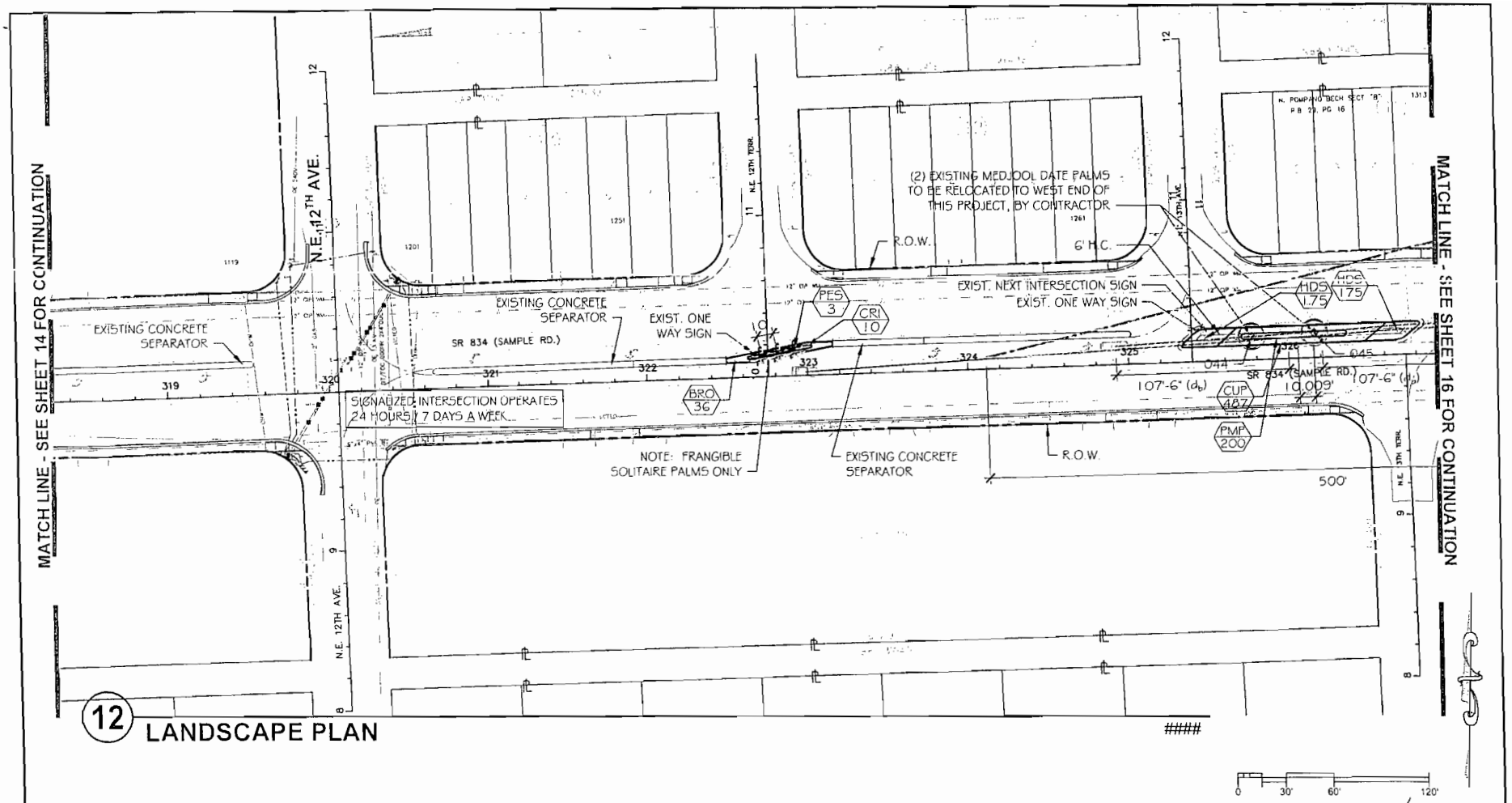

12 LANDSCAPE PLAN

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Minn P.L.
LA#101
12-16-14

DECEMBER 16, 2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD MICHAEL CONNER, R.L.A. LICENSE No.1181
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VENDOR I.D. NO. 65-001-3669

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

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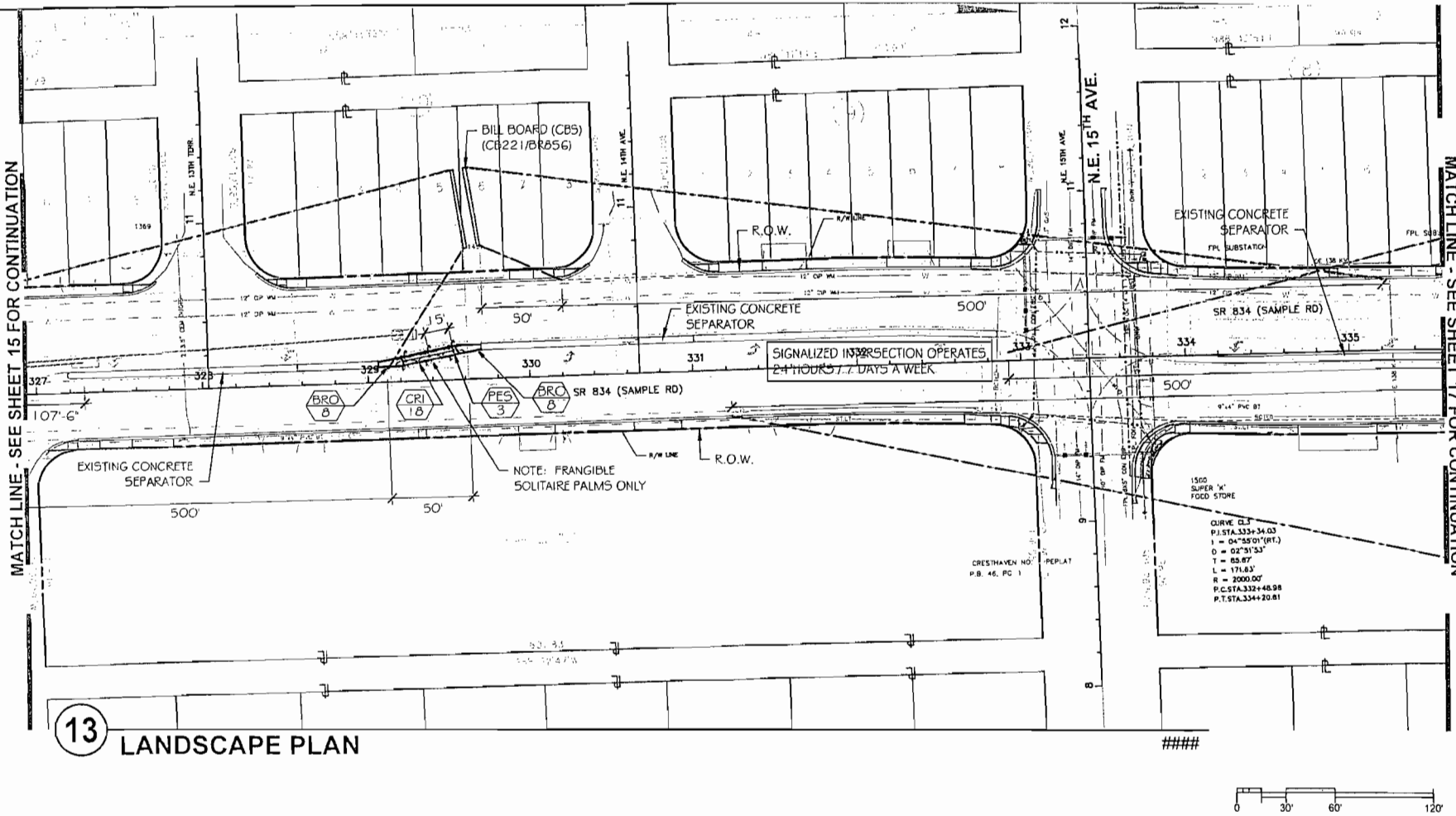

13 LANDSCAPE PLAN

LA 1181
12-16-14

DECEMBER 16,2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
9/26/14	REVISIONS PER E.R.C. COMMENTS		
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD: MICHAEL CORNER, R.L.A., LICENSE No.1181

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Certificate of Authorization LC0000339
VENDOR I.D. NO. 65-001-3869

SAMPLE ROAD BEAUTIFICATION GRANT		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

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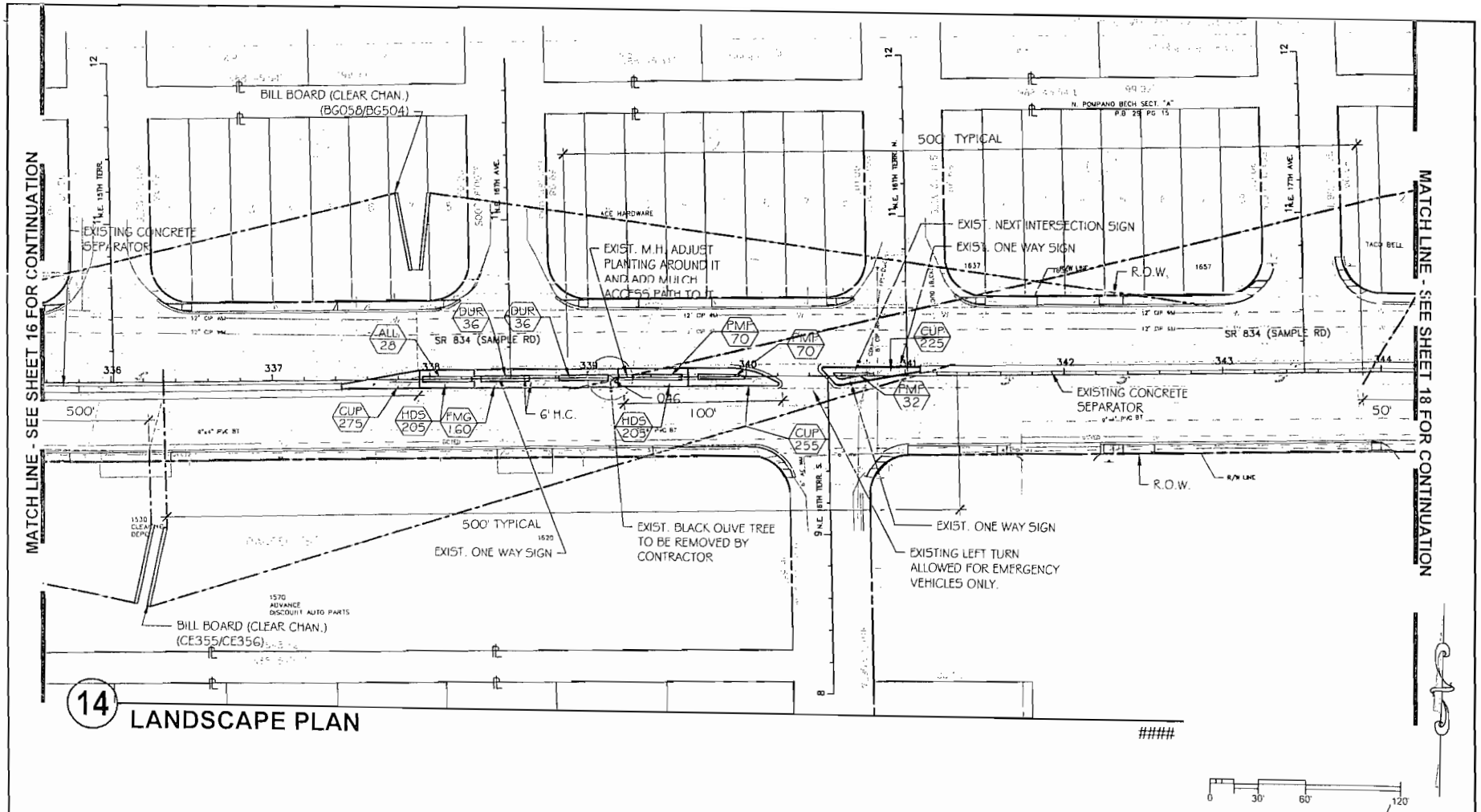

14 LANDSCAPE PLAN

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LA1181
12-16-14

DECEMBER 16,2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD: MICHAEL CONNER, R.L.A., LICENSE No.1181
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Certificate of Authorization LC0000339
VENDOR I.D. NO. 65-001-3609

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

SHEET NO. 17

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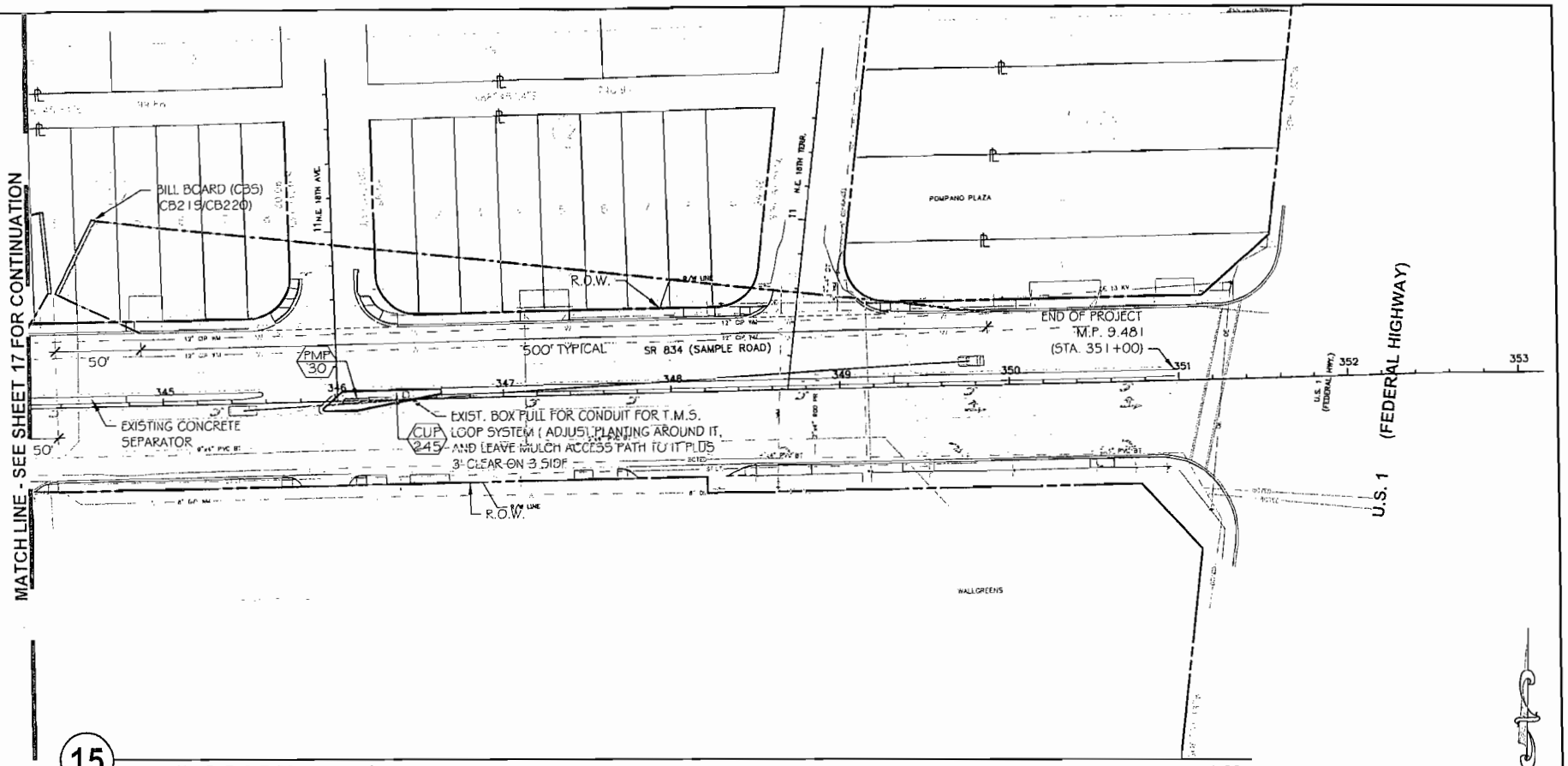

15 LANDSCAPE PLAN

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0 30' 60' 120'

DECEMBER 16,2014

LA1181
12-16-14

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
0/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD: MICHAEL CONNER, R.L.A., LICENSE No.1181
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Certificate of Authorization LC0000039
VENDOR I.D. NO. 85-001-3869

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

LANDSCAPE PLAN

SHEET NO. 18

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IRRIGATION NOTES & SPECIFICATIONS:

THE SYSTEM HAS BEEN DESIGNED TO CONFORM WITH THE REQUIREMENTS OF ALL APPLICABLE CODES. SHOULD ANY CONFLICT EXIST, THE REQUIREMENTS OF THE CODES SHALL PREVAIL. IT IS THE RESPONSIBILITY OF THE OWNER/INSTALLATION CONTRACTOR TO INSURE THE ENTIRE SYSTEM IS INSTALLED ACCORDING TO ALL APPLICABLE LAWS, RULES, REGULATIONS AND CONVENTIONS. IRRIGATION CONTRACTOR RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS ACCORDING TO FEDERAL, STATE AND LOCAL LAWS.

THE SCOPE OF WORK IS SHOWN ON THE PLANS, NOTES AND DETAILS. THE IRRIGATION CONTRACTOR SHALL BE CERTIFIED AS A CERTIFIED IRRIGATION CONTRACTOR BY THE IRRIGATION ASSOCIATION. THE CERTIFICATION SHALL BE CURRENT AND IN GOOD STANDING.

THE WORK:

THE WORK SPECIFIED IN THIS SECTION CONSISTS OF FURNISHING ALL COMPONENTS NECESSARY FOR THE INSTALLATION, TESTING, AND DELIVERY OF A COMPLETE, FULLY FUNCTIONAL AUTOMATIC LANDSCAPE IRRIGATION SYSTEM THAT COMPLETELY COMPLIES WITH THE IRRIGATION PLANS, SPECIFICATIONS, NOTES, DETAILS AND ALL APPLICABLE LAWS, REGULATIONS, CODES AND ORDINANCES. THIS WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, THE PROVIDING OF ALL REQUIRED MATERIAL (PIPE, VALVES, FITTINGS, CONTROLLERS, WIRE, PRIMER, GLUE, ETC.), LAYOUT, PROTECTION TO THE PUBLIC, EXCAVATION, ASSEMBLY, INSTALLATION, BACK FILLING, COMPACTING, REPAIR OF ROAD SURFACES, CONTROLLER AND LOW VOLTAGE FEEDS TO VALVES, CLEANUP, MAINTENANCE, GUARANTEE AND AS-BUILT PLANS

ALL IRRIGATED AREAS SHALL PROVIDE 100% HEAD-TO-HEAD COVERAGE FROM A FULLY AUTOMATIC IRRIGATION SYSTEM WITH A RAIN SHUT-OFF DEVICE(SENSOR). THE RAIN SHUT-OFF DEVICE (SENSOR) SHALL BE INSTALLED TO PREVENT ACCIDENTAL ACTIVATION BY ADJACENT IRRIGATION HEADS. ALL WATERING PROCEDURES SHALL CONFORM TO LOCAL CODES, AS WELL AS THIS PROJECT'S REGIONAL WATER MANAGEMENT DISTRICT RESTRICTIONS AND REGULATIONS. THESE PLANS HAVE BEEN DESIGNED TO SATISFY/EXCEED THE FLORIDA BUILDING CODE (FBC) APPENDIX F & THE FLORIDA IRRIGATION SOCIETY STANDARDS AND SPECIFICATIONS FOR TURF AND LANDSCAPE IRRIGATION SYSTEMS, FOURTH EDITION.

CONTRACTOR SHALL VERIFY LOCATION AND CONDITION OF ALL UNDERGROUND UTILITIES 48 HOURS PRIOR TO COMMENCEMENT OF WORK.

IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE THEMSELVES WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, PAVED SURFACES, CURBS, STRUCTURES AND UTILITIES. CONTRACTOR SHALL NOT INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS, OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT DO NOT MATCH IRRIGATION PLANS OR HAVE NOT BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS, OR DIFFERENCES, SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER AUTHORIZED REPRESENTATIVE. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

IRRIGATION CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS DAMAGED BY THEIR WORK. IRRIGATION CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE LANDSCAPE CONTRACTOR & OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS UNDER ROADWAYS AND PAVING, ETC.

THE CONTRACTOR SHALL TAKE IMMEDIATE STEPS TO REPAIR, REPLACE, OR RESTORE ALL SERVICES TO ANY UTILITIES WHICH ARE DISRUPTED DUE TO THEIR OPERATIONS. ALL COSTS INVOLVED IN DISRUPTION OF SERVICE AND REPAIRS DUE TO NEGLIGENCE ON THE PART OF THE CONTRACTOR SHALL BE THEIR RESPONSIBILITY.

POINT OF CONNECTION (P.O.C.):

THIS PROJECT CONSISTS OF SEVERAL P.O.C.(S). THERE ARE TWO NEW HOOVER PUMPING SYSTEMS (PUMP STATION MODEL: HCF-5PD-230/3-E-8,W,2 AND TWO NEW 4" WELLS. THIS P.O.C. MUST BE CAPABLE OF DELIVERING A MINIMUM OF 80 GPM AT 120 TDH) AND 6 NEW WATER METERS WITH PRESSURE VACCUM BREAKERS SIZE PER SCHEDULE & PLANS.

PRIOR TO PURCHASE OF PUMPING SYSTEM IRRIGATION CONTRACTOR SHALL CHECK/VERIFY:

1. CONTRACTOR SHALL HIRE A FLORIDA LICENSED WELL DRILLER FOR INSTALLATION OF NEW WELL. WELL DRILLER SHALL TEST WELL AND PROVIDE IRRIGATION CONTRACTOR WITH A CAPACITY-DRAWDOWN CURVE OF NEW WELL.
2. STATIC SUCTION LIFT FOR THE PUMP STATION CAN NOT EXCEED 12'. IF THIS MAXIMUM IS EXCEEDED, DO NO PROCEED WITHOUT WRITTEN PERMISSION FROM THE OWNER/OWNER'S REPRESENTATIVE.
3. THE WATER QUALITY TO ENSURE IT IS SUITABLE FOR LANDSCAPE PLANTINGS. USE THE SERVICES OF A REPUTABLE, LICENSED LABORATORY ONLY. IF THE WATER IS DETERMINED SUITABLE CONTINUE IRRIGATION INSTALLATION, IF THE WATER QUALITY IS UNSUITABLE, DO NO PROCEED WITHOUT WRITTEN DIRECTION FROM THE OWNER/OWNER'S REPRESENTATIVE.
4. IF A HIGH IRON CONTENT (OR OTHER STAIN PRODUCING COMPOUND) IS DETECTED, ADVISE THE OWNER/OWNER'S REPRESENTATIVE. DO NOT PROCEED WITHOUT WRITTEN PERMISSION. IF STAINING IS A CONCERN, A CHEMICAL FEED PUMP SYSTEM MAY NEED TO BE INSTALLED BY THE PUMP SYSTEM MANUFACTURER. CONTACT HOOVER PUMPING SYSTEMS FOR A WRITTEN ESTIMATE TO BE PROVIDED FOR APPROVAL BY OWNER/OWNER'S REPRESENTATIVE.

CONTRACTOR TO VERIFY THESE MINIMUM CONDITIONS CAN BE MET PRIOR TO THE BEGINNING OF INSTALLATION. IF THE CONDITIONS CAN NOT BE MET, THE CONTRACTOR MUST NOTIFY THE DESIGNER PRIOR TO PROCEEDING WITH THE WORK. IF THE CONTRACTOR DOES NOT DO SO, THE CONTRACTOR PROCEEDS AT THEIR OWN RISK AND BECOMES RESPONSIBLE FOR ANY FUTURE WORK REQUIRED TO MAKE THE SYSTEM PERFORM AS REQUIRED.

THE PIPE:

PIPE LOCATIONS SHOWN ON THE PLAN ARE SCHEMATIC AND SHALL BE ADJUSTED IN THE FIELD. WHEN LAYING OUT MAINLINES PLACE A MAXIMUM OF 18" AWAY FROM EITHER THE BACK OF CURB, FRONT OF WALK, BACK OF WALK, OR OTHER HARDSCAPE TO ALLOW FOR EASE IN LOCATING AND PROTECTION FROM PHYSICAL DAMAGE. INSTALL ALL LATERAL PIPE NEAR EDGES OF PAVEMENT OR AGAINST BUILDINGS WHENEVER POSSIBLE TO ALLOW SPACE FOR PLANT ROOT BALLS. ALWAYS INSTALL PIPING INSIDE PROJECT PROPERTIES BOUNDARY.

ALL PIPES ARE TO ALWAYS BE PLACED IN PLANTING BEDS IF IT IS NECESSARY TO HAVE PIPING UNDER HARDSCAPES, SUCH AS ROADS, THE PIPES MUST BE SLEEVED USING DIRECTIONAL BORING PER THE DETAILS ON THE PLANS NO OPEN TRENCHING SHALL BE ALLOWED.

PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED, BUT SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED. ALL DAMAGED AND REJECTED PIPE SHALL BE REMOVED FROM THE SITE AT THE TIME OF SAID REJECTION.

MAINLINE SHALL BE SCHEDULE 40 SOLVENT-WELD PVC WITH SCHEDULE 40 PVC SOLVENT-WELD FITTINGS, SIZE AS SHOWN ON PLANS.

CONTRACTOR TO ENSURE ALL MAINLINE PIPING IS PROPERLY SET IN TRENCH. CONTRACTOR SHALL REFER TO PIPE MANUFACTURERS RECOMMENDED INSTALLATION PRACTICES FOR FURTHER DIRECTION.

PVC PIPE JOINT COMPOUND AND PRIMER: SLOW-DRYING, HEAVY DUTY CEMENT AND TINTED (PURPLE) PRIMER THAT IS COMPATIBLE WITH THE CEMENT. THE PVC CEMENT SHALL BE WELD-ON 2711 (GREY, SLOW-DRYING, HEAVY DUTY) AND THE PRIMER SHALL BE WELD-ON P70 (PURPLE TINTED, COMPATIBLE WITH CEMENT), OR APPROVED EQUALS.

ELECTRICAL POWER SUPPLY:

ELECTRICAL SUPPLY FOR PUMPING STATION IS TO BE PROVIDED BY CITY. CONTRACTOR TO COORDINATE WITH LOCAL UTILITIES FOR THE INSTALLATION OF, AND CONNECTION TO, SITE AVAILABLE POWER SUPPLY'S FOR REQUIRED ELECTRICAL COMPONENTS AS SET FORTH IN THE IRRIGATION PLANS.

ALL ELECTRICAL TO COMPLY WITH THE NATIONAL ELECTRICAL CODE AND ANY, AND ALL, OTHER APPLICABLE ELECTRICAL CODES, LAWS AND REGULATIONS. A LICENSED ELECTRICIAN SHALL PERFORM ALL ELECTRICAL HOOK-UPS. POWER FOR PUMP(S) SHALL BE ACCORDING TO PUMP MANUFACTURERS SPECIFICATIONS AS SET FORTH IN THESE PLANS.

WIRING:

IRRIGATION CONTROL WIRE SHALL BE THERMOPLASTIC SOLID COPPER, SINGLE CONDUCTOR, LOW VOLTAGE IRRIGATION CONTROLLER WIRE; SUITABLE FOR DIRECT BURIAL AND CONTINUOUS OPERATION AT RATED VOLTAGES.

ALL WIRE SHALL BE RUN IN BURIED ELECTRICAL CONDUIT ALONGSIDE THE MAINLINE. AT ALL VALVE BOXES COIL WIRE AROUND A 3/4" PIECE OF PVC PIPE TO MAKE A COIL USING 30 LINEAR INCHES OF WIRE. MAKE ELECTRICAL CONNECTIONS WITH 3M-DBY,DBR CONNECTORS.

NUMBER ALL WIRES, USING AN ELECTRICAL BOOK OF NUMBERS, ACCORDING TO THE PLANS. NUMBER WIRES IN ALL VALVE BOXES, JUNCTION BOXES AND AT THE CONTROLLER.

WIRE SIZED, NUMBERED AND COLORED AS FOLLOWS:

- #12 WHITE FOR COMMON
- #12 SPARE BLACK COMMON
- #14 RED FOR HOT WIRES
- #14 SPARE YELLOW HOT WIRE

SPARE WIRES:

LEAVING EACH CONTROLLER, RUN FOUR SPARE WIRES IN BOTH DIRECTIONS (EIGHT SPARE WIRES TOTAL). INSTALL AS 1 COMMON SPARES (2 TOTAL) AND 3 HOT WIRES (6 TOTAL). LOOP THESE WIRES INTO EACH RCV ALONG THEIR PATH AND TERMINATE IN THE LAST VALVE BOX CONTROLLED BY THE WIRES RESPECTIVE CONTROLLER. THE LOOP INTO EACH VALVE BOX CONTROLLED BY THE WIRES RESPECTIVE CONTROLLER. THE LOOP INTO EACH VALVE BOX SHALL EXTEND UP INTO THE VALVE BOX A MINIMUM OF 8" AND BE READILY ACCESSIBLE BY OPENING THE VALVE BOX LID. THESE WIRES MUST BE ALL NUMBERED AND COLOR CODED AS REQUIRED IN THESE PLANS.

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REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOT comments (Added sheet)		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
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SAMPLE ROAD BEAUTIFICATION GRANT		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION NOTES

SHEET NO. 19

CONTROLLER GROUNDING:
CONTRACTOR TO VERIFY THAT THE EARTH TO GROUND RESISTANCE DOES NOT EXCEED 10 OHMS AT THE PUMP STATION CONTROLLER. CONTRACTOR SHALL PROVIDE A WRITTEN CERTIFICATION, ON A LICENSED ELECTRICAL CONTRACTORS LETTER HEAD, SHOWING THE DATE OF THE TEST, CONTROLLER LOCATION, AND TEST RESULTS.

IF, GROUND RESISTANCE EXCEEDS 10 OHMS CONTRACTOR SHALL UTILIZE 5/8"X10' COPPER CLAD GROUNDING ROD & PLATES AS DETAILED "GROUNDING PLATE DESIGN DETAIL", AND RE-TEST.

LAYOUT:
LAY OUT IRRIGATION SYSTEM MAINLINES AND LATERAL LINES. MAKE THE NECESSARY ADJUSTMENTS AS REQUIRED TO TAKE INTO ACCOUNT ALL SITE OBSTRUCTIONS AND LIMITATIONS PRIOR TO EXCAVATING TRENCHES.

STAKE ALL SPRINKLER HEAD LOCATIONS. ADJUST LOCATION AND MAKE THE NECESSARY MODIFICATIONS TO NOZZLE TYPES, ETC. REQUIRED TO INSURE 100% HEAD TO HEAD COVERAGE. REFER TO THE EDGE OF PAVEMENT DETAIL ON THE IRRIGATION DETAIL SHEET.

SPRAY HEADS SHALL BE INSTALLED 4" FROM SIDEWALKS OR CURBED ROADWAYS AND 12" FROM UNCURBED ROADWAYS AND BUILDING FOUNDATIONS. ROTORS SHALL BE INSTALLED 4" FROM SIDEWALKS OR CURBED ROADWAYS, 12" FROM BUILDING FOUNDATIONS, AND 36" FROM UNCURBED ROADWAYS.

SHRUB HEADS SHALL BE SET AT A MINIMUM OF 18" OFF SIDEWALKS, ROADWAY CURBING, AND/OR ANY OTHER HARDSCAPED AREAS. SHRUB HEADS SHALL BE INSTALLED TO A STANDARD HEIGHT OF 4" BELOW MAINTAINED HEIGHT OF PLANTS AND SHALL BE INSTALLED A MINIMUM OF 6" WITHIN PLANTED MASSES TO BE LESS VISIBLE AND OFFER PROTECTION. PAINT ALL SHRUB RISERS WITH FLAT BLACK OR FOREST GREEN PAINT.

LOCATE VALVES PRIOR TO EXCAVATION. INSURE THAT THEIR LOCATION PROVIDES FOR EASY ACCESS AND THAT THERE IS NO INTERFERENCE WITH PHYSICAL STRUCTURES, PLANTS, TREES, POLES, ETC. VALVE BOXES MUST BE PLACED A MINIMUM OF 12" AND A MAXIMUM OF 18" FROM THE EDGE OF PAVEMENT, CURBS, ETC. AND THE TOP OF THE BOX MUST BE 2" ABOVE FINISH GRADE.

VALVES:
SEQUENCE ALL VALVES SO THAT THE FARTHEST VALVE FROM THE P.O.C. OPERATES FIRST AND THE CLOSEST TO THE P.O.C. OPERATES LAST. ADJUST THE FLOW CONTROL ON EACH RCV TO ENSURE SHUT OFF IN 10 SECONDS AFTER DEACTIVATION BY THE IRRIGATION CONTROLLER.

EQUIPMENT:
ALL POP-UP HEADS AND SHRUB RISERS SHALL BE PRESSURE COMPENSATING. ALL POP-UP HEADS SHALL BE MOUNTED PER DETAILS ON THE PLANS.
ALL SPRINKLER EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS, AND ACCORDING TO LOCAL AND STATE LAWS.

TRENCHING:
EXCAVATE STRAIGHT AND VERTICAL TRENCHES WITH SMOOTH, FLAT OR SLOPING BOTTOMS. TRENCH WIDTH AND DEPTH SHOULD BE SUFFICIENT TO ALLOW FOR THE PROPER VERTICAL AND HORIZONTAL SEPARATION BETWEEN PIPING AS SHOWN IN THE PIPE INSTALLATION DETAIL ON THE DETAIL SHEET.

PROTECT EXISTING LANDSCAPED AREAS. REMOVE AND REPLANT ANY DAMAGED PLANT MATERIAL UPON JOB COMPLETION. THE REPLACEMENT MATERIAL SHALL BE OF THE SAME GENUS AND SPECIES, AND OF THE SIZE OF THE MATERIAL IT IS REPLACING. THE FINAL DETERMINATION AS TO WHAT NEEDS TO BE REPLACED AND THE ACCEPTABILITY OF THE REPLACEMENT MATERIAL SHALL BE SOLELY UP TO THE OWNER OR OWNER'S REPRESENTATIVE.

INSTALLATION:
SOLVENT WELD PIPE: CUT ALL PIPE SQUARE AND DEBURR. CLEAN PIPE AND FITTINGS OF FOREIGN MATERIAL; THEN APPLY A SMALL AMOUNT OF PRIMER WHILE ENSURING THAT ANY EXCESS IS WIPED OFF IMAWEDIATELY. PRIMER SHOULD NOT PUDDLE OR DRIP FROM PIPE OR FITTINGS. NEXT APPLY A THIN COAT OF PVC CEMENT; FIRST APPLY A THIN LAYER TO THE PIPE, NEXT A THIN LAYER INSIDE THE FITTING, AND FINALLY ANOTHER VERY THIN LAYER ON THE PIPE. INSERT THE PIPE INTO THE FITTING. INSURE THAT THE PIPE IS INSERTED TO THE BOTTOM OF THE FITTING, THEN TURN THE PIPE A 1/4 TURN AND HOLD FOR 10 SECONDS. MAKE SURE THAT THE PIPE DOESN'T RECEDE FROM THE FITTING. IF THE PIPE ISN'T AT THE BOTTOM OF THE FITTING UPON COMPLETION, THE GLUE JOINT IS UNACCEPTABLE AND MUST BE DISCARDED.
PIPES MUST CURE A MINIMUM OF 30 MINUTES PRIOR TO HANDLING AND PLACING INTO TRENCHES. A LONGER CURING TIME MAY BE REQUIRED; REFER TO THE MANUFACTURER'S SPECIFICATIONS. THE PIPE MUST CURE A MINIMUM OF 24 HOURS PRIOR TO FILLING WITH WATER.

BACK FILL
THE BACK FILL 4" BELOW AND 4" ABOVE ALL PIPING SHALL BE OF CLEAN SAND AND ANYTHING BEYOND THAT IN THE TRENCH CAN BE OF NATIVE MATERIAL BUT NOTHING LARGER THAN 1" IN DIAMETER.
MAIN LINE PIPE DEPTH MEASURED TO THE TOP OF PIPE SHALL BE 36" MINIMUM, WITH A 36" MINIMUM AT VEHICULAR CROSSINGS.
LATERAL LINE DEPTHS MEASURED TO TOP OF PIPE SHALL BE: AS PER "TYPICAL IRRIGATION TRENCH WITHIN R.O.W. DETAIL", ON SHEET 48.

CONTRACTOR SHALL BACKFILL ALL PIPING, BOTH MAINLINE AND LATERALS, PRIOR TO PERFORMING ANY PRESSURE TESTS. THE PIPE SHALL BE BACKFILLED WITH THE EXCEPTION OF 2' ON EACH SIDE OF EVERY JOINT (BELL FITTINGS, 90'S, TEES, 45'S, ETC.). THESE JOINTS SHALL NOT BE BACKFILLED UNTIL ALL PIPING HAS SATISFACTORILY PASSED ITS APPROPRIATE PRESSURE TEST AS OUTLINED BELOW.

FLUSHING:
PRIOR TO THE PLACEMENT OF HEADS, FLUSH ALL LINES FOR A MINIMUM OF 10 MINUTES OR UNTIL LINES ARE COMPLETELY CLEAN OF DEBRIS, WHICHEVER IS LONGER. USE SCREENS IN HEADS AND ADJUST HEADS FOR PROPER COVERAGE AVOIDING EXCESS WATER ON WALLS, WALKS AND PAVING

TESTING:
REMOVE ALL REMOTE CONTROL VALVES AND CAP USING A THREADED CAP. FILL MAINLINE WITH WATER AND PRESSURIZE THE SYSTEM TO 125 PSI. MONITOR THE SYSTEM PRESSURE AT TWO GAUGE LOCATIONS; THE GAUGE LOCATIONS MUST BE AT OPPOSITE ENDS OF THE MAINLINE. WITH THE SAME RESPECTIVE PRESSURES, MONITOR THE GAUGES FOR TWO HOURS. THERE CAN BE NO LOSS IN PRESSURE AT EITHER GAUGE FOR SOLVENT-WELDED PIPE. THIS PROCEDURE MUST BE FOLLOWED UNTIL THE MAINLINE PASSES THE TEST.

THE LATERAL LINES MUST BE FILLED AND VISUALLY CHECKED FOR LEAKS. ANY LEAKS DETECTED MUST BE REPAIRED. NO PRESSURE TEST OF THE LATERAL LINES IS REQUIRED.

ONCE THE MAINLINE AND LATERAL LINES HAVE PASSED THEIR RESPECTIVE TESTS, AND THE SYSTEM IS COMPLETELY OPERATIONAL, A COVERAGE TEST AND DEMONSTRATION OF THE SYSTEM IS REQUIRED. THE IRRIGATION CONTRACTOR MUST DEMONSTRATE TO THE OWNER, OR HIS/HER REPRESENTATIVE THAT PROPER COVERAGE IS OBTAINED AND THAT THE SYSTEM WORKS AUTOMATICALLY FROM THE CONTROLLER. THIS DEMONSTRATION REQUIRES THAT EACH ZONE IS TURNED ON, IN THE PROPER SEQUENCE AS SHOWN ON THE PLANS, FROM THE CONTROLLER. EACH ZONE WILL BE INSPECTED FOR PROPER COVERAGE AND FUNCTION. THE DETERMINATION OF PROPER COVERAGE AND FUNCTION IS AT THE SOLE DISCRETION OF THE OWNER OR OWNER'S REPRESENTATIVE.

OPERATIONAL TESTING - UPON COMPLETION OF BACK FILLING, FINISH GRADING AND CONTOURING, TEST THE ENTIRE SYSTEM FOR PROPER OPERATION; INCLUDING ELECTRICALLY ACTUATING THE REMOTE CONTROL VALVES. RUN EACH ZONE UNTIL WATER BEGINS TO PUDDLE OR RUN OFF. THIS WILL ALLOW YOU TO DETERMINE THE NUMBER OF IRRIGATION START TIMES NECESSARY TO MEET THE WEEKLY EVAPOTRANSPIRATION REQUIREMENTS OF THE PLANTING MATERIAL IN EACH ZONE. IN SANDY SOILS NO PUDDLING WILL OCCUR, INSTEAD; CALCULATE THE REQUIRED RUN TIMES.

SUBMITTALS:
THE CONTRACTOR MUST SUBMIT FOR APPROVAL, PRIOR TO INSTALLATION, (5) COPIES OF THE MANUFACTURER'S CUT SHEETS/SPECIFICATIONS FOR ALL COMPONENTS TO BE USED IN THE IRRIGATION SYSTEM.
AFTER PROJECT COMPLETION
AS A CONDITION OF FINAL ACCEPTANCE, THE IRRIGATION CONTRACTOR SHALL PROVIDE THE OWNER WITH:
1. IRRIGATION AS-BUILTS: A HIGH QUALITY, ACCURATE, AND LEGIBLE SET OF AS-BUILT DRAWINGS UTILIZING A SUB-FOOT GLOBAL POSITIONING SYSTEM (GPS) TO ACCURATELY LOCATE ALL MAINLINES, SLEEVES, REMOTE CONTROL VALVES, GATE VALVES, INDEPENDENT WIRE RUNS, SPLICE BOXES, CONTROLLERS, HIGH VOLTAGE SUPPLY SOURCES/CONDUIT PATH, CONTROL MECHANISMS, SENSORS, WELLS, AND WATER SOURCE CONNECTIONS IN FLORIDA EAST STATE PLANE COORDINATES (NAD 83) AND CORS 96 FORMAT. THE DATA COLLECTED SHALL BE IN POINT FORMAT AND INCLUDE AN ID FOR EACH DATA POINT WITH MANUFACTURER, TYPE, SIZE AND DEPTH. ALL MAINLINE AND INDEPENDENT RUNS OF WIRE SHALL BE LOCATED EVERY 30' FOR STRAIGHT RUNS AND AT EVERY CHANGE OF DIRECTION. SLEEVES WILL BE LOCATED AT END POINTS AND EVERY 20' OF LENGTH. ALL UNDERGROUND ITEMS SHALL INCLUDE DEPTH IN INCH FORMAT. THESE POINTS ONCE COLLECTED SHALL BE IMPORTED INTO AN AUTOCAD DWG GEO-REFERENCED BASE FILE TO BE LABELED ACCORDINGLY. THE COMPLETED AS-BUILT SHALL BE A GEO-REFERENCED DWF FILE AND DELIVERED TO THE OWNER ON A COMPACT DISK (CD).
2. CONTROLLER CHARTS: UPON COMPLETION OF "AS-BUILT" PREPARE CONTROLLER CHARTS ONE PER CONTROLLER. INDICATE ON EACH CHART THE AREA CONTROLLED BY A REMOTE CONTROL VALVE (USING A DIFFERENT COLOR FOR EACH ZONE). THIS CHART SHALL BE HERMETICALLY SEALED INSIDE TWO 2-MIL PIECES OF CLEAR PLASTIC.
3. GROUNDING CERTIFICATION: PROVIDE GROUND CERTIFICATION RESULTS FOR EACH CONTROLLER AND PUMP PANEL GROUNDING GRID INSTALLED. THIS MUST BE ON A LICENSED ELECTRICIAN LETTER HEAD INDICATING LOCATION TESTED (USING IR PLAN SYMBOLS), DATE, TIME, TEST METHOD, AND TESTING RESULTS.

INSPECTIONS AND COORDINATION MEETINGS REQUIRED:
1. PRE-CONSTRUCTION MEETING - DESIGNER AND CONTRACTOR TO REVIEW ENTIRE INSTALL PROCESS AND SCHEDULE WITH OWNER/GENERAL CONTRACTOR.
2. MAINLINE PRESSURE TEST - ALL MAINLINE SHALL BE PRESSURE TESTED ACCORDING TO THIS DESIGNS REQUIREMENTS.
3. COVERAGE AND OPERATIONAL TEST
4. FINAL INSPECTION
5. PUNCH LIST INSPECTION

FINAL ACCEPTANCE OF THE IRRIGATION SYSTEM WILL BE GIVEN AFTER THE FOLLOWING DOCUMENTS AND CONDITIONS HAVE BEEN COMPLETED AND APPROVED. FINAL PAYMENT WILL NOT BE RELEASED UNTIL THESE CONDITIONS ARE SATISFIED:
1. ALL ABOVE INSPECTIONS ARE COMPLETED, DOCUMENTED, AND APPROVED BY OWNER.
2. COMPLETION AND ACCEPTANCE OF 'AS-BUILT' DRAWINGS.
3. ACCEPTANCE OF REQUIRED CONTROLLER CHARTS AND PLACEMENT INSIDE OF CONTROLLERS.
4. ALL OTHER SUBMITTALS HAVE BEEN MADE TO THE SATISFACTION OF THE OWNER.

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DATE	DESCRIPTION	DATE	DESCRIPTION
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SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION NOTES

SHEET NO. 20

SINGLE CENTRIFUGAL PUMP SYSTEM (PRESSURE DEMAND)

PURPOSE.
TO PROVIDE A COMPLETE PREFABRICATED SKID MOUNTED PRESSURE DEMAND CENTRIFUGAL PUMP SYSTEM FROM A SOLE SOURCE COMPANY, HEREIN AFTER REFERRED TO AS THE "MANUFACTURER", WHOSE PRIMARY BUSINESS IS THE MANUFACTURE OF PREFABRICATED PUMP SYSTEMS. THE MANUFACTURER WILL MANUFACTURE, FLOW TEST, INSTALL AND WARRANT THE SYSTEM TO MEET ALL SPECIFIED OPERATING REQUIREMENTS DESCRIBED BELOW AND IN THE SYSTEM DETAIL. FOR PURPOSES OF THE BID, THE SYSTEM SHALL BE A MODEL HCF-5PD-230/3-E-8.W.2 AS MANUFACTURED BY HOOVER PUMPING SYSTEMS OF POMPANO BEACH, FLORIDA USA 954-971-7350 SPECIFIED BELOW AND SHOWN ON THE PLAN DETAILS. THIS SPECIFICATION DESCRIBES THE GENERAL COMPONENTS AND MINIMAL OPERATING REQUIREMENTS AND SHALL NOT BE CONSTRUED AS A MANUFACTURING GUIDE OR COMPLETE LIST OF REQUIRED SYSTEM COMPONENTS AND APPURTENANCES.

AFTER AWARD OF BID, THE CONTRACTOR SHALL SUBMIT SEVEN (7) COMPLETE COPIES OF THE SHOP DRAWINGS TO THE DESIGNER FOR APPROVAL, PRIOR TO SYSTEM ORDER PLACEMENT. THE SUBMITTAL SHALL CONTAIN CUT SHEETS FOR ALL SYSTEM COMPONENTS, INCLUDING: MANUFACTURER BROCHURE SHOWING PREFABRICATED PUMP SYSTEMS MANUFACTURING IS THE PRIMARY BUSINESS OF THE MANUFACTURER OR DIVISION PROPOSED TO MANUFACTURE THE SYSTEM, WRITTEN SPECIFICATIONS, DIMENSIONED LAYOUT DETAIL, ELECTRICAL SCHEMATIC, PRODUCT SHEETS FOR ALL MAIN COMPONENTS, UNDERWRITERS LABORATORY ELECTRICAL CONTROL PANEL AND "PACKAGED PUMPING SYSTEM" MANUFACTURER'S FILE NUMBERS, LIST OF 6 PROJECTS WITH SIMILAR OPERATING SYSTEMS WITH CURRENT NAME AND PHONE NUMBER OF PERSON RESPONSIBLE FOR SYSTEM OPERATION, MANUFACTURER'S INSURANCE CERTIFICATE FOR GENERAL LIABILITY SHOWING MINIMUM COVERAGE OF $1 MILLION, AND WRITTEN CERTIFICATION FROM THE MANUFACTURER STATING THE PROPOSED SYSTEM MEETS ALL REQUIREMENTS DESCRIBED IN THIS SPECIFICATION, THE DETAIL AND THE BID DOCUMENTS.

IF THE DATA SUBMITTED IS DETERMINED TO BE AN EQUAL BY THE DESIGNER THE CONTRACTOR WILL BE NOTIFIED PRIOR TO ORDERING.

FIBERGLASS ENCLOSURE:
THE PUMP STATION SHALL BE PROTECTED BY A FIBERGLASS ENCLOSURE WITH CHEMICAL AND ULTRAVIOLET RESISTANT OPEN MOLD RESIN WITH EXTERIOR FINISH THAT IS UNIFORM IN COLOR AND TEXTURE, REINFORCED WITH FIBERGLASS AND STIFFENERS FOR RIGIDITY. THE ENCLOSURE SHALL OPEN CLEAR OF THE EQUIPMENT FOR EASE OF SERVICE WITH THE AID OF GAS FILLED STRUTS, A STAINLESS STEEL HINGE AND LATCHING LOCKABLE HANDLE. THE ENCLOSURE SHALL BE OF DIMENSIONS ADEQUATE TO CONTAIN THE PUMP SYSTEM MOUNTED ON THE SKID AS SHOWN ON THE SYSTEM DETAIL.

MOUNTING ASSEMBLY:
THE PUMP STATION SHALL BE MOUNTED ON A PREFABRICATED ALUMINUM OR HOT DIPPED GALVANIZED SKID. PEDESTALS SHALL BE PROVIDED TO MOUNT THE PUMP MOTOR AND CONTROL PANEL ASSEMBLIES. THE ENTIRE STATION SHALL BE INSTALLED ON A REINFORCED CONCRETE SLAB SIZED AS NOTED ON THE SYSTEM DETAIL.

PUMP AND MOTOR:
THE PUMP SHALL BE A SINGLE-STAGE END-SUCTION CENTRIFUGAL TYPE, WITH THE LIQUID END MOUNTED DIRECTLY TO THE MOTOR ENCLOSURE TO ALLOW REAR PULL OUT OF THE ENTIRE MOTOR. A PRESSURE SENSOR FOR LOSS OF PRIME PROTECTION SHALL BE MOUNTED INTO THE PUMP VOLUTE.

THE SYSTEM WILL BE DESIGNED FOR OPERATION AT 3,450 RPM. THE PUMP DRIVING MOTOR SHALL BE OF THE SQUIRREL CAGE INDUCTION TYPE. THE MOTOR SHALL BE SUITABLE FOR FULL VOLTAGE STARTING AT 60 HZ. THE MOTOR ENCLOSURE SHALL BE TOTALLY ENCLOSED FAN COOLED.

THE MAIN MOTOR SHALL BE RATED AT 5 HP AT 60 HZ. MOTOR WILL NOT EXCEED 1 OHP WHEN ONLY SINGLE PHASE ELECTRIC SERVICE IS AVAILABLE

PUMP STATION PERFORMANCE:
THE REQUIRED PUMP PERFORMANCE WITH A MAXIMUM OF 12 FT. OF SUCTION LIFT IS AS FOLLOWS:
A) DISCHARGE PRESSURE OF 51 PSI, B) MAXIMUM REQUIRED FLOW OF 80 GPM, AND C) MINIMUM REQUIRED FLOW OF 25 GPM.

IRRIGATION PUMP CONTROL PANEL:
THE CONTROL PANEL ASSEMBLY SHALL BE UNDERWRITERS LABORATORIES LISTED IN ACCORDANCE WITH SECTION 508A FOR "ENCLOSED INDUSTRIAL CONTROL PANELS." ALL CONTROL DEVICES AND ELECTRONIC AUTO-SENSORY CIRCUITRY SHALL BE HOUSED IN A SELF-CONTAINED WEATHER-RESISTANT NEMA 4 OR 4X-CONTROL CABINET. AN ELECTRICAL SCHEMATIC SHALL BE PERMANENTLY MOUNTED INSIDE THE CABINET. THE CONTROL CABINET SHALL CONTAIN THE FOLLOWING PROTECTION AND CONTROL EQUIPMENT:

OPERATION
THIS STATION OPERATES AS A PRESSURE DEMAND, NO-FLOW RETIREMENT SYSTEM. SYSTEM FEATURES INCLUDE LOSS OF PRIME PROTECTION, LOW-PRESSURE PROTECTION, AND PUMP THERMAL PROTECTION. THE SYSTEM IS EQUIPPED WITH A 'HAND-OFF-AUTO' (H-O-A) SELECTOR SWITCH, AND A 'RESET-NORMAL-OVERRIDE' SELECTOR SWITCH. THE SELF-DIAGNOSTIC CONTROL PANEL ASSEMBLY INCLUDES STATUS INDICATOR LIGHTS FOR LOSS OF PRIME, LOW PRESSURE, AND PUMP OVERHEAT. PUMP HOUR METER AND AUXILIARY CONTACTS ARE ALSO PROVIDED.

PRESSURE DEMAND
THE PUMP STARTS WHEN THE MAINLINE PRESSURE DROPS BELOW THE SETTING OF THE START PRESSURE SWITCH.

NO-FLOW RETIREMENT
THE PUMP SHUTS OFF IF WATER STOPS FLOWING FOR 15 SECONDS.

LOSS OF PRIME PROTECTION
IF THE SYSTEM PRESSURE REMAINS BELOW THE START PRESSURE, AND THERE IS NO FLOW OF WATER THROUGH THE SYSTEM DURING PUMP OPERATION FOR 45 SECONDS, THE PUMP WILL SHUT OFF AND THE 'LOSS OF PRIME' LIGHT WILL TURN ON. THE SYSTEM WILL REMAIN OFF UNTIL 'RESET'.

LOW PRESSURE PROTECTION
IF THE MAINLINE PRESSURE FALLS BELOW THE START PRESSURE FOR 12 MINUTES DURING PUMP OPERATION, THE PUMP WILL SHUT OFF, AND THE 'LOW PRESSURE' LIGHT WILL TURN ON. THE SYSTEM WILL REMAIN OFF UNTIL 'RESET'.

THERMAL PROTECTION
IF THE TEMPERATURE AT THE PUMP VOLUTE EXCEEDS 43C AFTER AT LEAST 3 MINUTES OF PUMP OPERATION, THE PUMP WILL SHUT OFF, AND THE 'PUMP OVERHEAT' LIGHT WILL TURN ON. THE SYSTEM WILL REMAIN OFF UNTIL 'RESET'.

HAND - OFF AUTO SWITCH
THE PUMP IS EQUIPPED WITH AN H-O-A SELECTOR SWITCH THAT OPERATES AS FOLLOWS:

POSITION		FUNCTION
HAND	-	MANUAL PUMP START. THIS POSITION OVERRIDES ALL PROTECTIVE FEATURES AND START CONTROLS.
OFF	-	PUMP WILL NOT RUN.
AUTO	-	PUMP WILL START AUTOMATICALLY. IN THIS POSITION, ALL START CONTROLS AND PROTECTIVE FEATURES ARE ACTIVE.

RESET - NORMAL - OVERRIDE SWITCH
THE STATION IS EQUIPPED WITH AN OVERRIDE SELECTOR SWITCH THAT OPERATES AS FOLLOWS:

POSITION		FUNCTION
RESET	-	RESETS ALL SYSTEM FAILURES.
NORMAL	-	LOW-PRESSURE PROTECTION IS ACTIVE.
OVERRIDE	-	LOW-PRESSURE PROTECTION IS DISABLED.

ELAPSED RUN-TIME METER
THE PUMP IS EQUIPPED WITH AN HOUR METER WHICH RECORDS TOTAL PUMP RUN TIME.

PROTECTION EQUIPMENT
- FRONT OPERATED MAIN POWER DISCONNECT
- TIME DELAYED MOTOR STARTER FUSES FOR MOTOR SHORT CIRCUIT PROTECTION
- FULL VOLTAGE CLASS 10 IEC MOTOR STARTER
- METAL OXIDE VARISTORS (MOV) FOR TRANSIENT VOLTAGE SUPPRESSION PER PHASE
- FUSED CONTROL CIRCUITRY WITH BLOWN FUSE LIGHTED INDICATOR FOR EACH CIRCUIT

PENETRATION STANDARD REQUIREMENTS:
ALL CONTROL PANEL PENETRATIONS SHALL BE PERFORMED BY A LICENSED ELECTRICIAN TO MINIMUM NEMA 4X REQUIREMENTS, AND COMPLIANT WITH INTERNATIONAL ELECTROTECHNICAL COMMISSIONS (IEC) IP56 RATING UNDER ITS IP CODE, TO PROTECT AGAINST DUST INGRESSION AND AGAINST ANY HARMFUL EFFECTS FROM WATER PROJECTED IN POWERFUL JETS FROM ANY DIRECTION AND PROTECTION AGAINST CORROSION.

DISCHARGE PIPE MANIFOLD:
THE PIPE DISCHARGE MANIFOLD SHALL BE CONSTRUCTED OF GALVANIZED STEEL PIPE WITH GALVANIZED ROLL GROOVE FITTINGS. A FLOW-SWITCH, PRESSURE GAUGE AND HOSE BIB WILL BE PROVIDED ON THE STATION DISCHARGE. A WAFER TYPE BUTTERFLY VALVE WILL BE PROVIDED AT PUMP STATION DISCHARGE. A HYDROPNEUMATIC TANK WITH AIR/WATER SEPARATION BLADDER WILL BE CONNECTED TO THE DISCHARGE HEADER AS SHOWN ON THE SYSTEM DETAIL TO SUPPLY REPLACEMENT WATER WHEN THE PUMP IS NOT OPERATING.

SUCTION LINE:
THE MINIMUM SIZE SUCTION LINE SHALL BE 3" DIAMETER OR LARGER AS REQUIRED FOR A MAXIMUM OF 5 FEET PER SECOND VELOCITY FLOW. IF A REDUCING FITTING IS REQUIRED AT THE PUMP SUCTION, AN ECCENTRIC REDUCER SHALL BE INSTALLED. ANY ABOVE GROUND PIPE AT THE PUMP SYSTEM EXPOSED TO SUNLIGHT SHALL BE SCHEDULE 40 GALVANIZED STEEL WITH GALVANIZED ROLL GROOVE FITTINGS. SUCTION PIPE AND FITTINGS SHALL BE HDPE HEAT FUSED.

WELL SOURCE: THE PUMP SUCTION LINE SHALL RUN FROM THE PUMP TO THE CUSTOMER SUPPLIED WELL TEE WITH HOT DIPPED GALVANIZED OR HIGH DENSITY POLYETHYLENE HDPE PIPING. SWING CHECK VALVE PLACED AT THE WELL TEE.

IRRIGATION CONTROLLER:
A RAIN BIRD ESPLXME MODEL 8 STATION CONTROLLER AND RAIN SENSOR SHALL BE MOUNTED ON THE PUMP SYSTEM. THE CONTROLLER SHALL BE POWERED FROM A FUSE BLOCK IN THE PUMP SYSTEM CONTROL PANEL.

WARRANTIES:
PRIOR TO SHIPPING, THE MANUFACTURER SHALL FLOW TEST THE SYSTEM AND SUBMIT A CERTIFIED REPORT TO THE DESIGNER STATING THE SYSTEM IS WITHIN 1% + OR - OF THE SPECIFIED FLOW RATE AND PRESSURE, AND MEETS THE OPERATIONAL REQUIREMENTS.

THE MANUFACTURER OF THE PUMPING STATION SHALL WARRANT ALL COMPONENTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF MANUFACTURE.
PN12836

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REVISIONS

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SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION NOTES

SHEET NO. 21

USER: opereda 12/16/2014 5:19:56 PM P:\Projects\2013\136147 Florida Highway Beautification Grant Application\CADD Files\Drawings\136147-U010-IRRIGATION_NOTES.dwg

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL	QTY	ARC	PSI	GPM	RADIUS
	Rain Bird 1812-SAM-PRS 15 Strip Series	11	EST	30	0.61	4'x15'
	Rain Bird 1812-SAM-PRS 15 Strip Series	8	LCS	30	0.49	4'x15'
	Rain Bird 1812-SAM-PRS 15 Strip Series	23	SST	30	1.21	4'x30'
6	Rain Bird 1812-SAM-PRS 5 Series MPR	16	180	30	0.20	5'
6	Rain Bird 1812-SAM-PRS 5 Series MPR	4	90	30	0.10	5'
8	Rain Bird 1812-SAM-PRS 8 Series MPR	55	180	30	0.52	8'
8	Rain Bird 1812-SAM-PRS 8 Series MPR	4	90	30	0.26	8'
8	Rain Bird 1812-SAM-PRS 8 Series MPR	3	120	30	0.35	8'
10	Rain Bird 1812-SAM-PRS 10 Series MPR	23	180	30	0.79	10'
10	Rain Bird 1812-SAM-PRS 10 Series MPR	1	120	30	0.53	10'
12	Rain Bird 1812-SAM-PRS 12 Series MPR	92	180	30	1.30	12'
12	Rain Bird 1812-SAM-PRS 12 Series MPR	3	120	30	0.87	12'
15	Rain Bird 1812-SAM-PRS 15 Series MPR	2	120	30	1.23	15'
M	Hunter MP1000 PROS-06-CV	16	45-210	40		14'
K	Hunter MP2000 PROS-06-CV	145	45-210	40		19'
B	Hunter MP3000 PROS-06-CV	98	45-210	40		30'
T	Hunter MP Corner PROS-06-CV	3	Adj	40		13'
	Hunter MP Strip PROS-06-CV	1	LCS	40	0.22	5'x15'
	Hunter MP Strip PROS-06-CV	1	RCS	40	0.22	5'x15'
O	Hunter MP1000 PROS-12-CV	10	360	40	0.75	14'
	Irrigation Lateral Line: PVC Class 200 SDR 21 PVC Class 200 irrigation pipe. Only lateral transition pipe sizes 1" and above are indicated on the plan, with all others being 3/4" in size.			8,915 l.f.		
	Irrigation Mainline: PVC Schedule 40 PVC Schedule 40 irrigation pipe.			1,955 l.f.		
	Directional Boring Sleeve: HDPE DR11 Typical Direction Boring sleeve for irrigation, as per FDOT INDEX 591			1,855 l.f.		

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PESB 1", 1-1/2", 2" Traffic Rated Industrial Valves.	18
BF	Febco 765 1" Pressure Vacuum Breaker, brass with ball valve SOV. Install 12" (305MM) above highest downstream outlet and the highest point in the downstream piping.	3
BF	Febco 765 3/4" Pressure Vacuum Breaker, brass with ball valve SOV.	3
C1	Rain Bird TBOS2-CM1 and TBOS2-FTUS Battery-Operated Controller with one field transmitter.	4
C4	Rain Bird TBOS2-CM4 and TBOS2-FTUS Battery-Operated Controller.	1
C2	Rain Bird TBOS2-CM2 and TBOS2-FTUS Battery-Operated Controller.	2
R	Rain Bird RSD-CEx Rain Sensing Device, conduit mount.	7
M1	Water Meter 3/4"	1
M2	Water Meter 3/4"	1
M3	Water Meter 1"	1
M4	Water Meter 1"	1
M5	Water Meter 1"	1
M6	Water Meter 3/4"	1
P1	New Irrigation Pump & Well #1	1
P2	New Irrigation Pump & Well #2	1

Valve Callout

LA 1181
12-16-14

DECEMBER 16,2014

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
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9/26/14	REVISIONS PER E.R.C. COMMENTS		
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD MICHAEL CONNER, R.L.A., LICENSE No.1181
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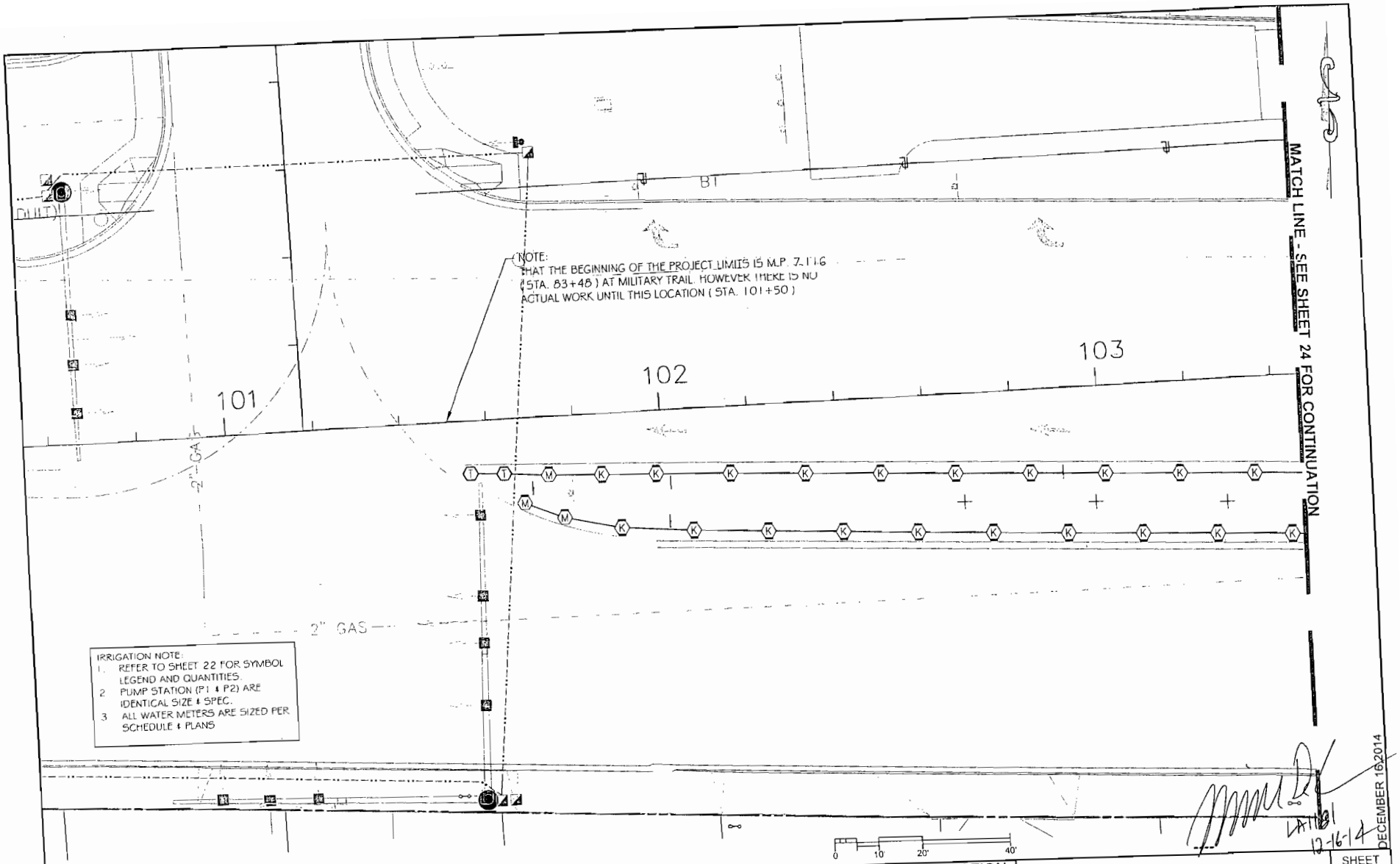
VENDOR I.D. NO. 65-001-3869

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION SCHEDULES

SHEET NO. 22



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12-16-14

DECEMBER 16, 2014

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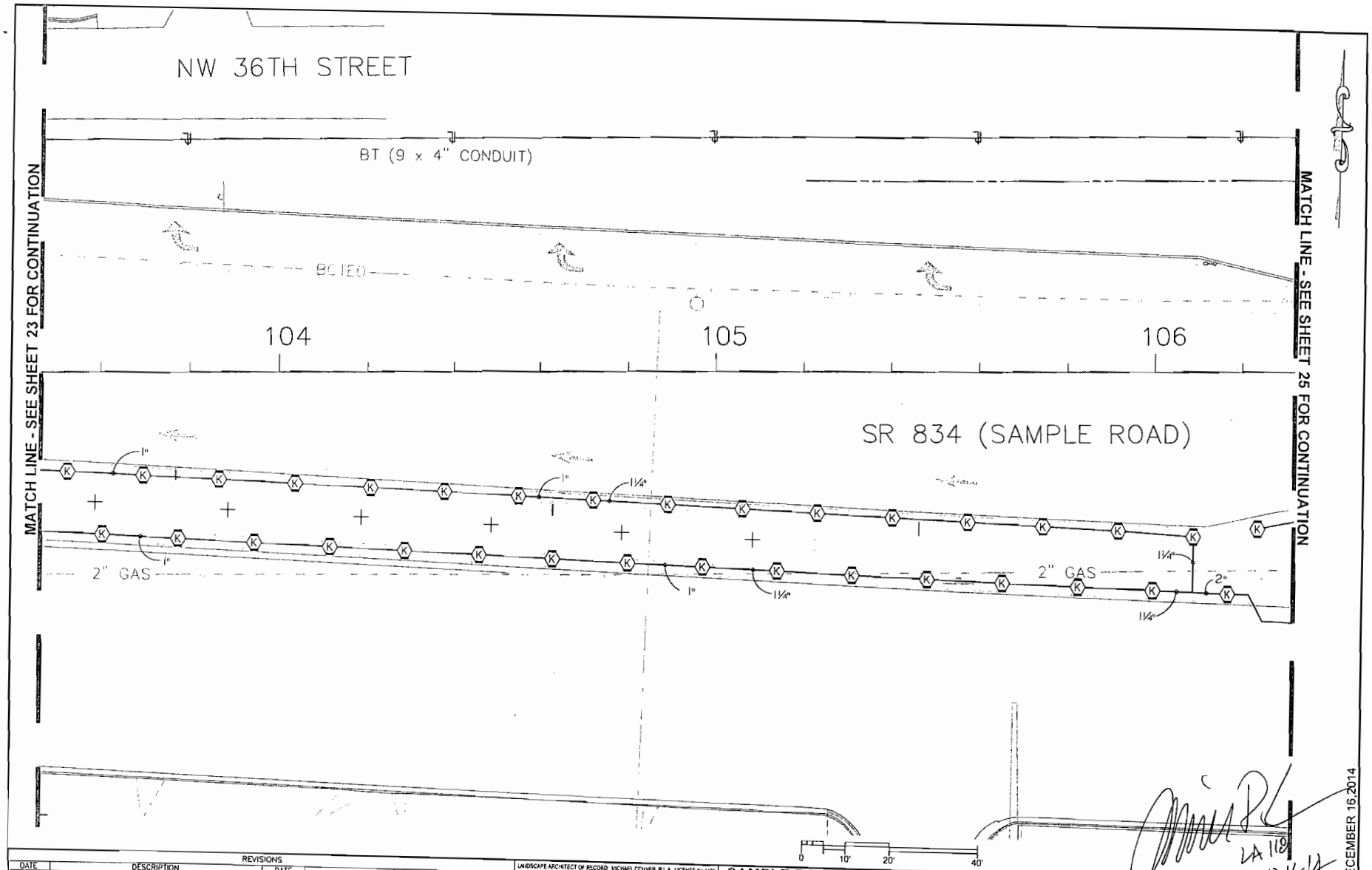
SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 23



REVISIONS			
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10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

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Certificate of Authorization LC000000335
VENDOR I.D. NO. 65-001-3469

SAMPLE ROAD BEAUTIFICATION GRANT		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

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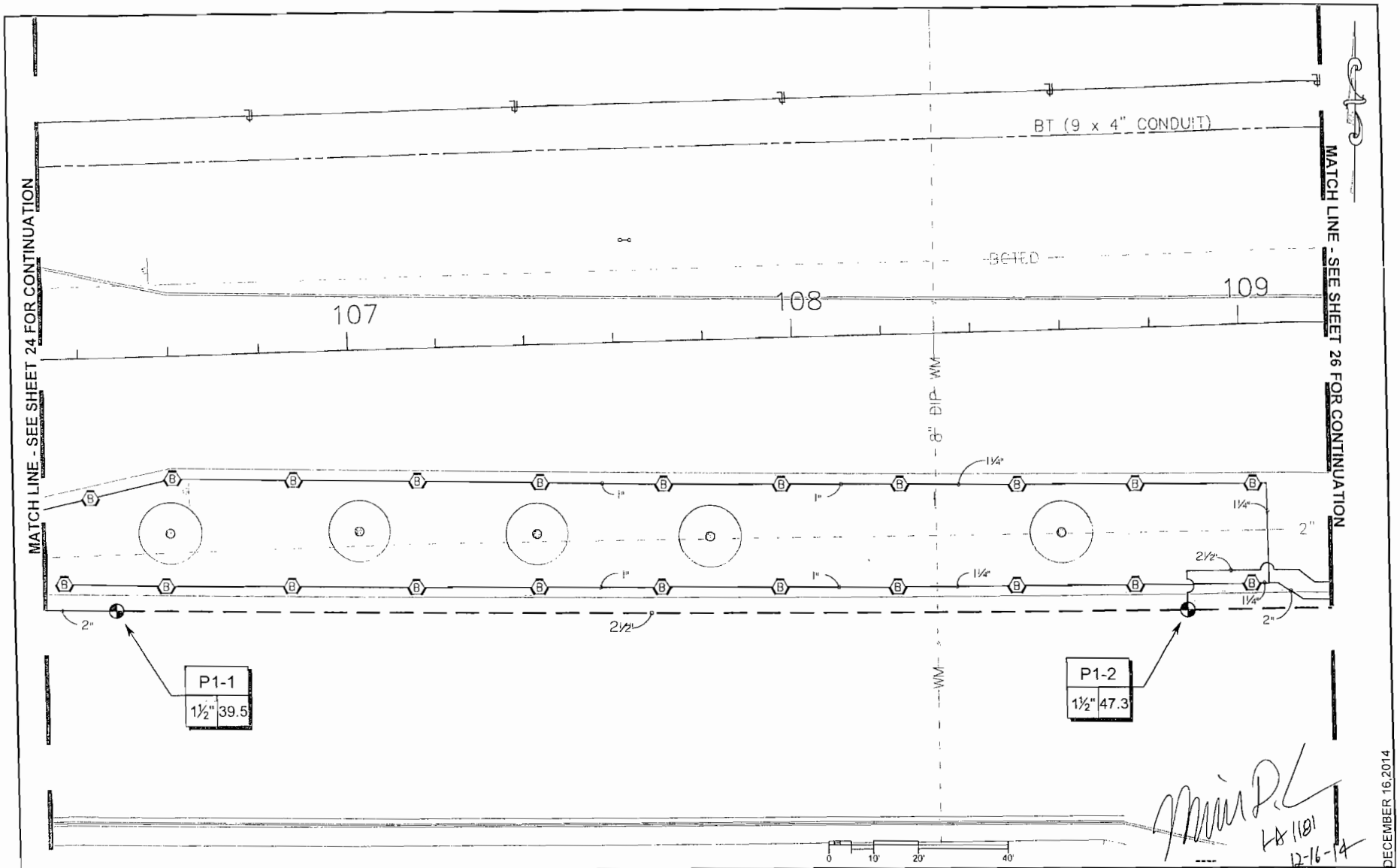

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12-16-14

DECEMBER 16,2014

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VENDOR I.D. NO. 65-001-3669

SAMPLE ROAD BEAUTIFICATION GRANT		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 25

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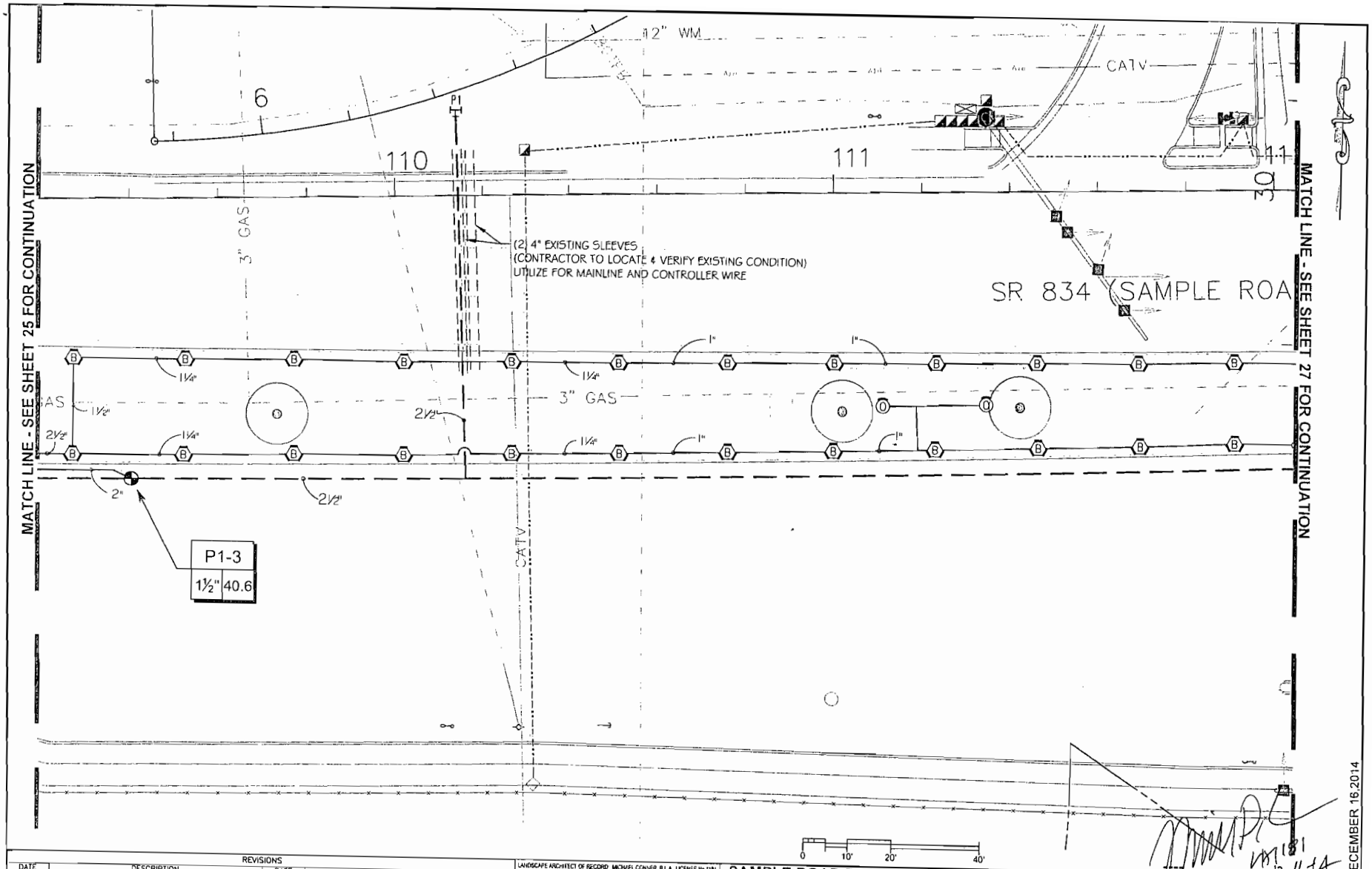

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VENDOR I.D. NO. 65-501-3869

SAMPLE ROAD BEAUTIFICATION GRANT		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

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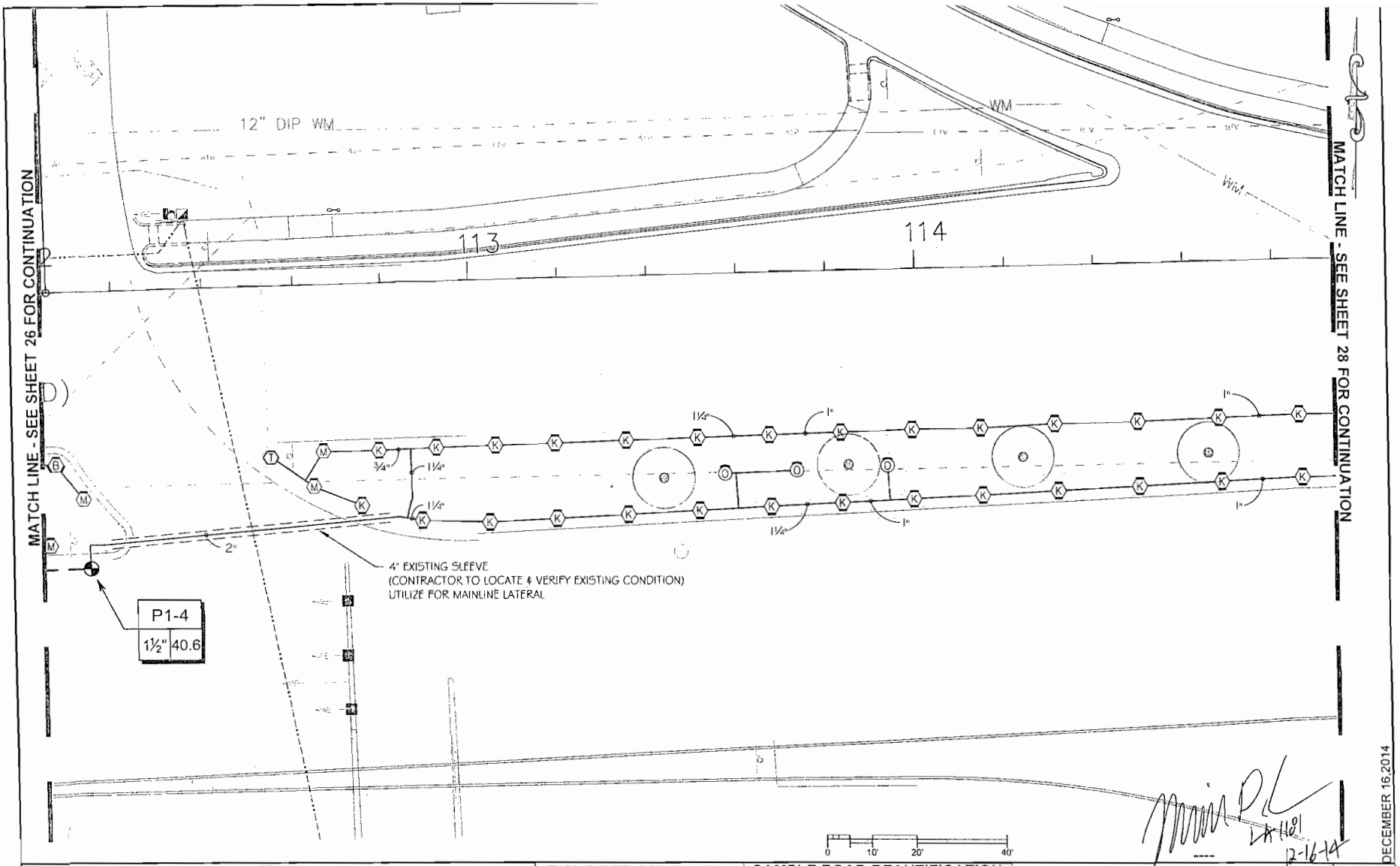

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VENDOR I.D. NO. 65-001-2869

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

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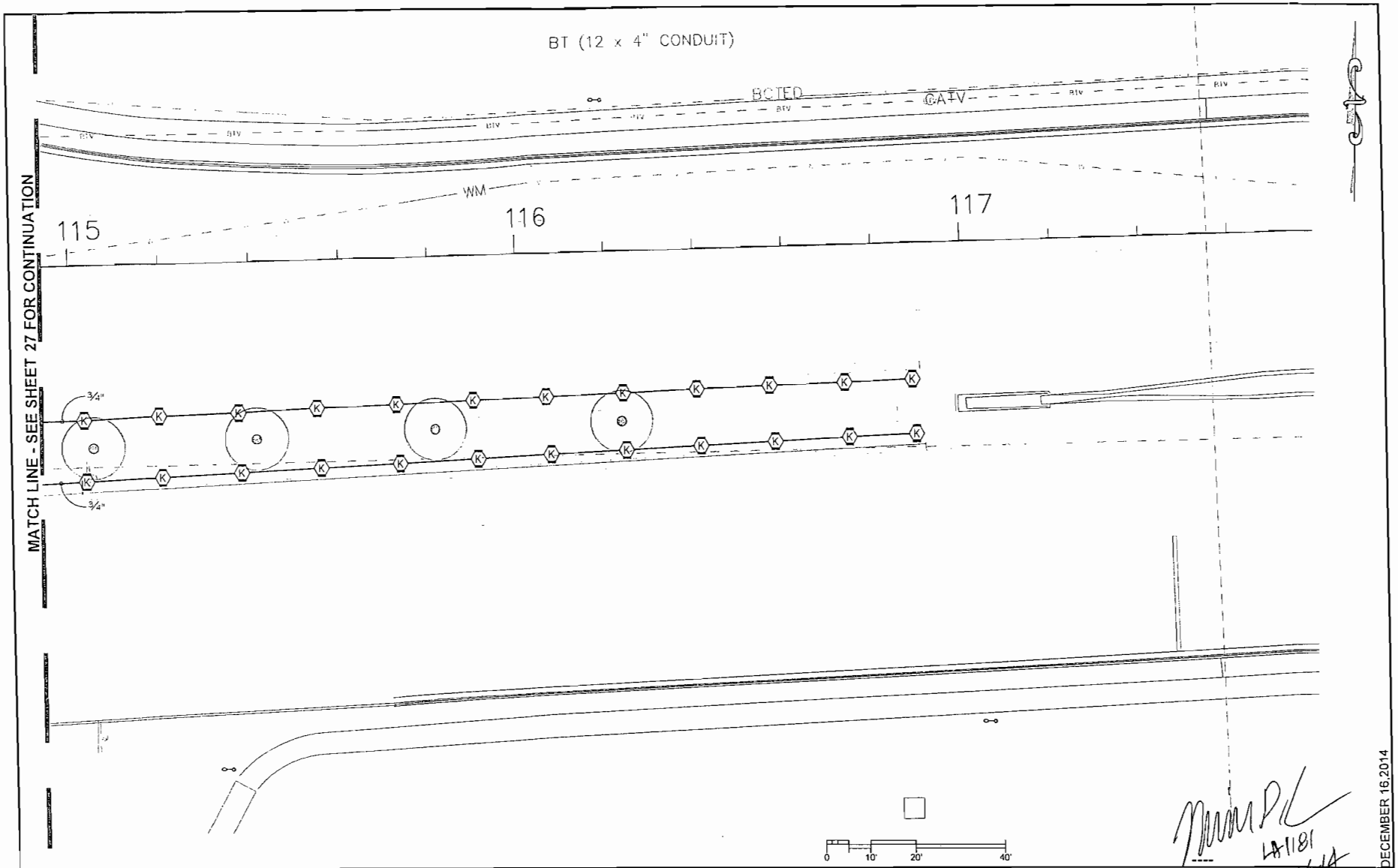

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Certificate of Authorization: LC0000332
VENDOR I.D. NO. 65-001-3669

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

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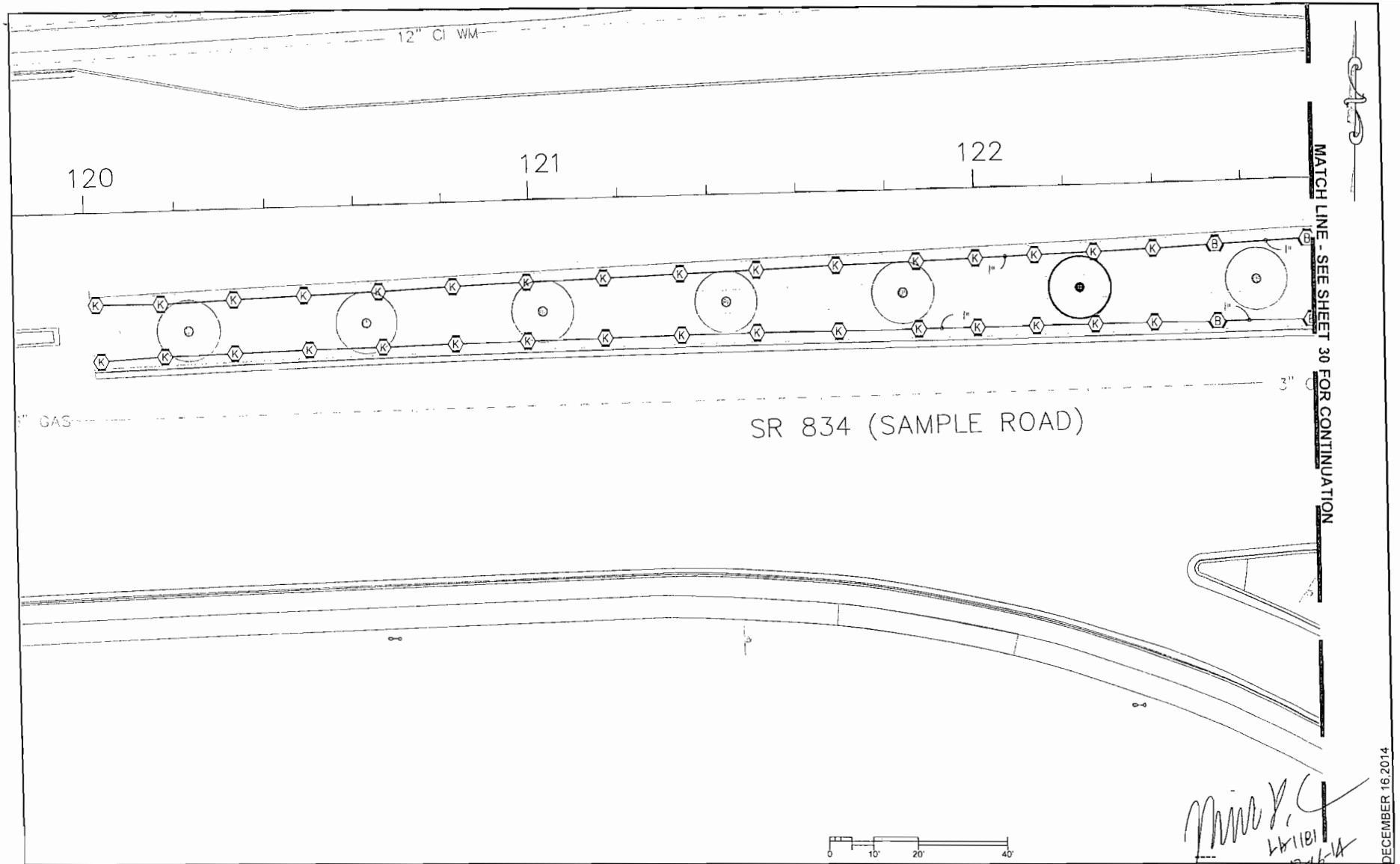

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VENDOR I.D. NO. 65-601-3659

SAMPLE ROAD BEAUTIFICATION GRANT		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

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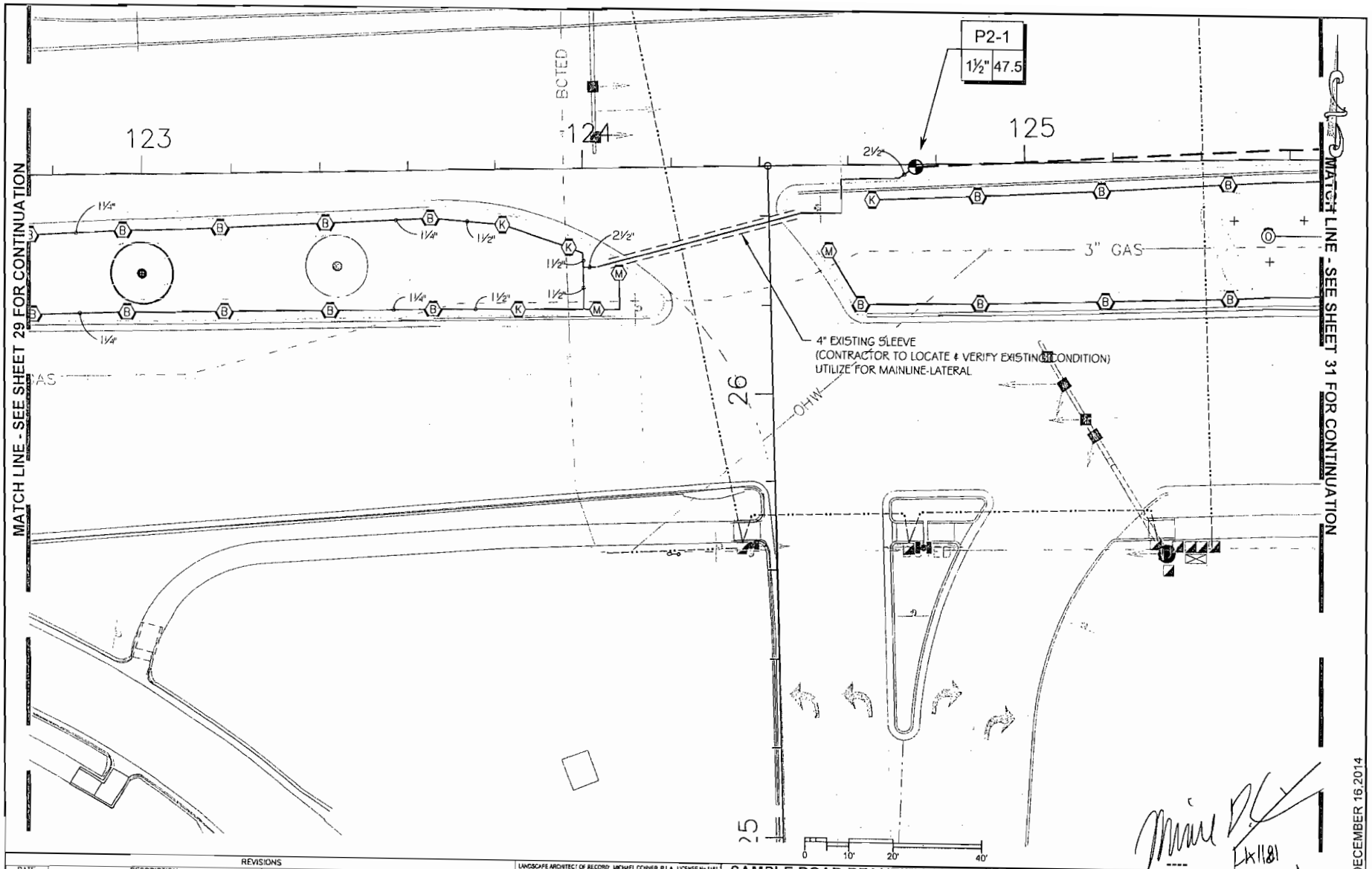

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Certificate of Authorization LC00000339
VENDOR I.D. NO. 65-001-3469

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

12-16-14

SHEET NO. 30

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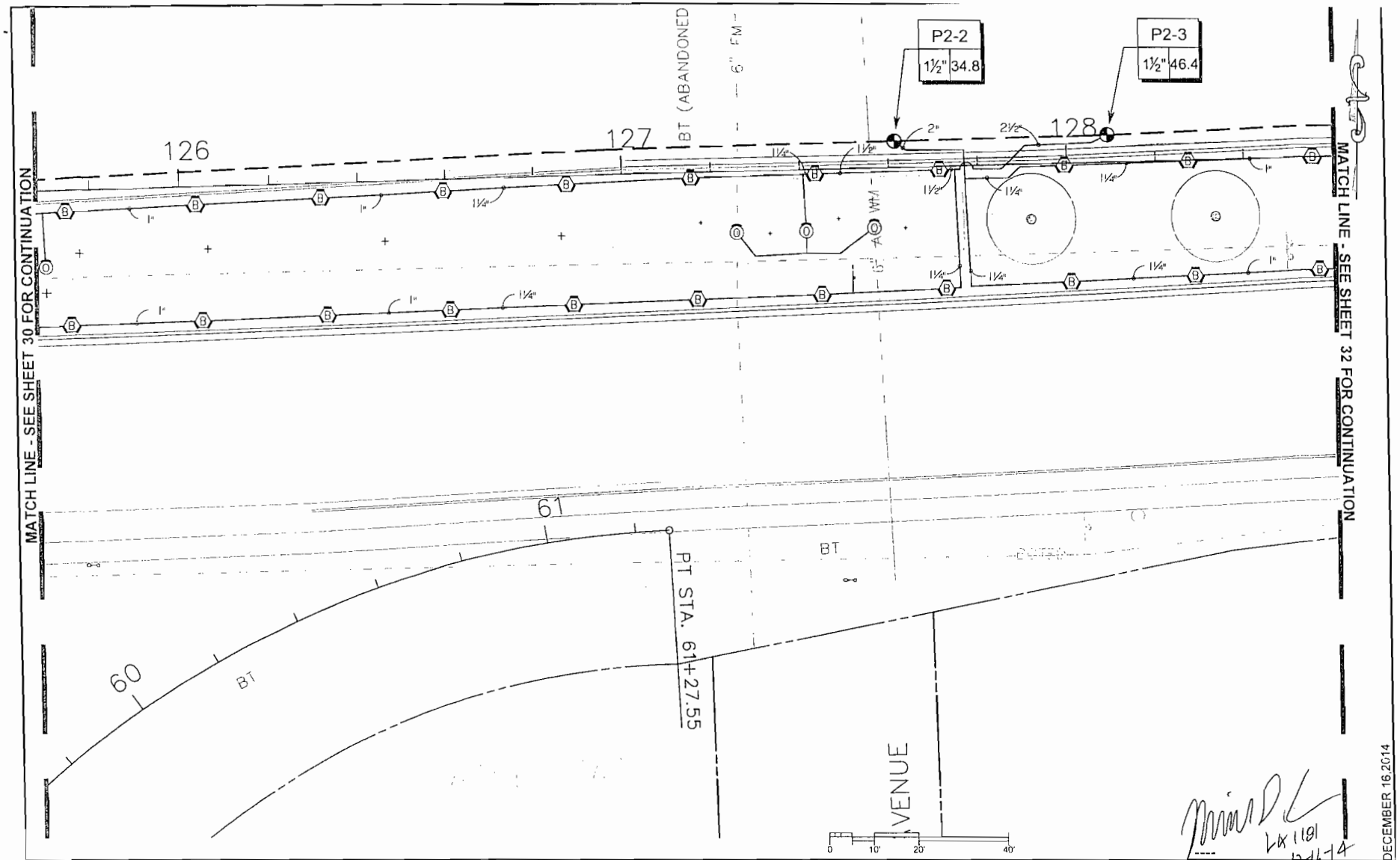

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12-16-14

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments (Added sheet)		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

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VENDOR I.D. NO. 65-001-3895

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 31

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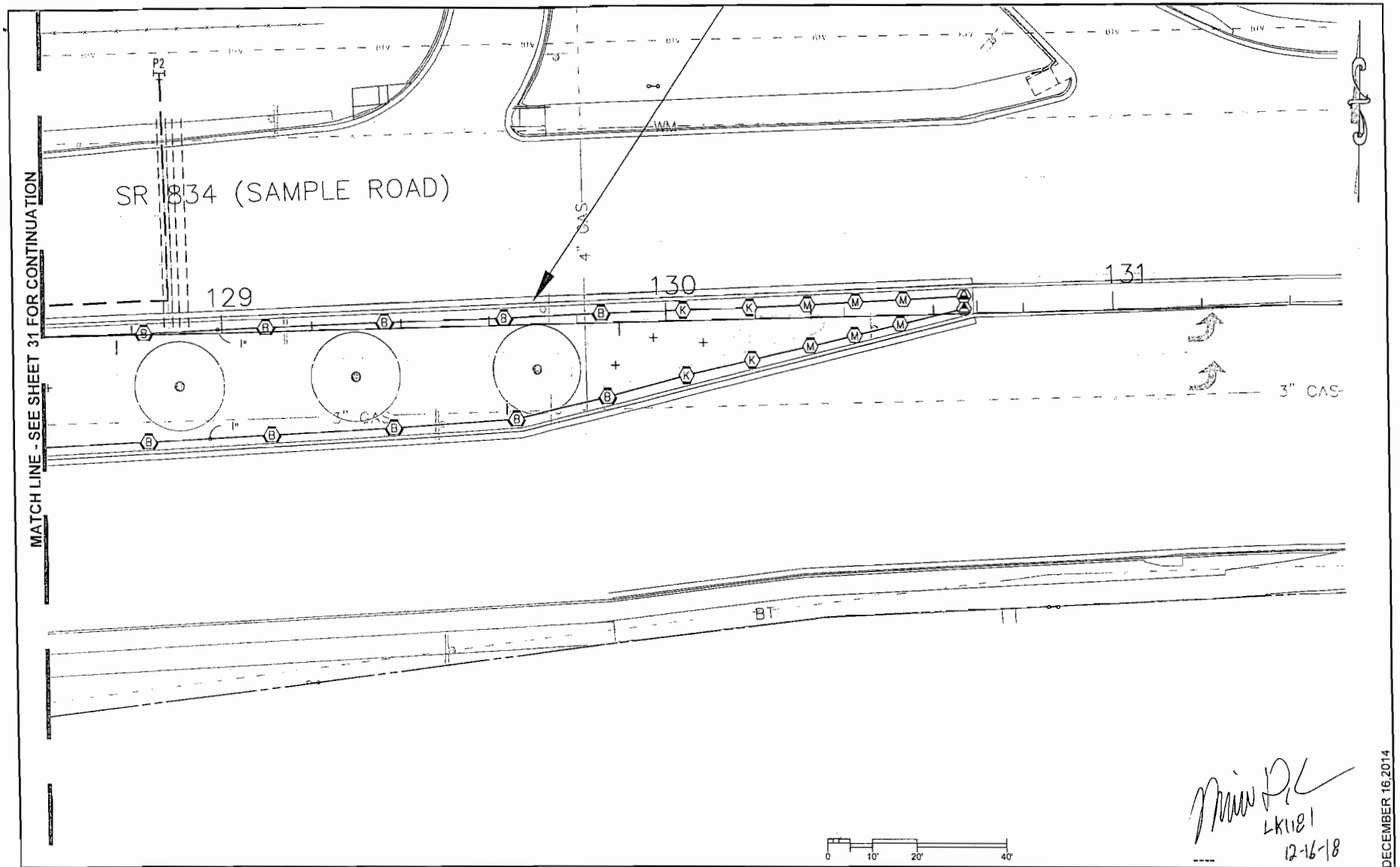

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12-16-18

DECEMBER 16,2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments (Added sheet)		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

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Certificate of Authorization LC0000339
VENDOR I.D. NO. 85-0013869

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 32

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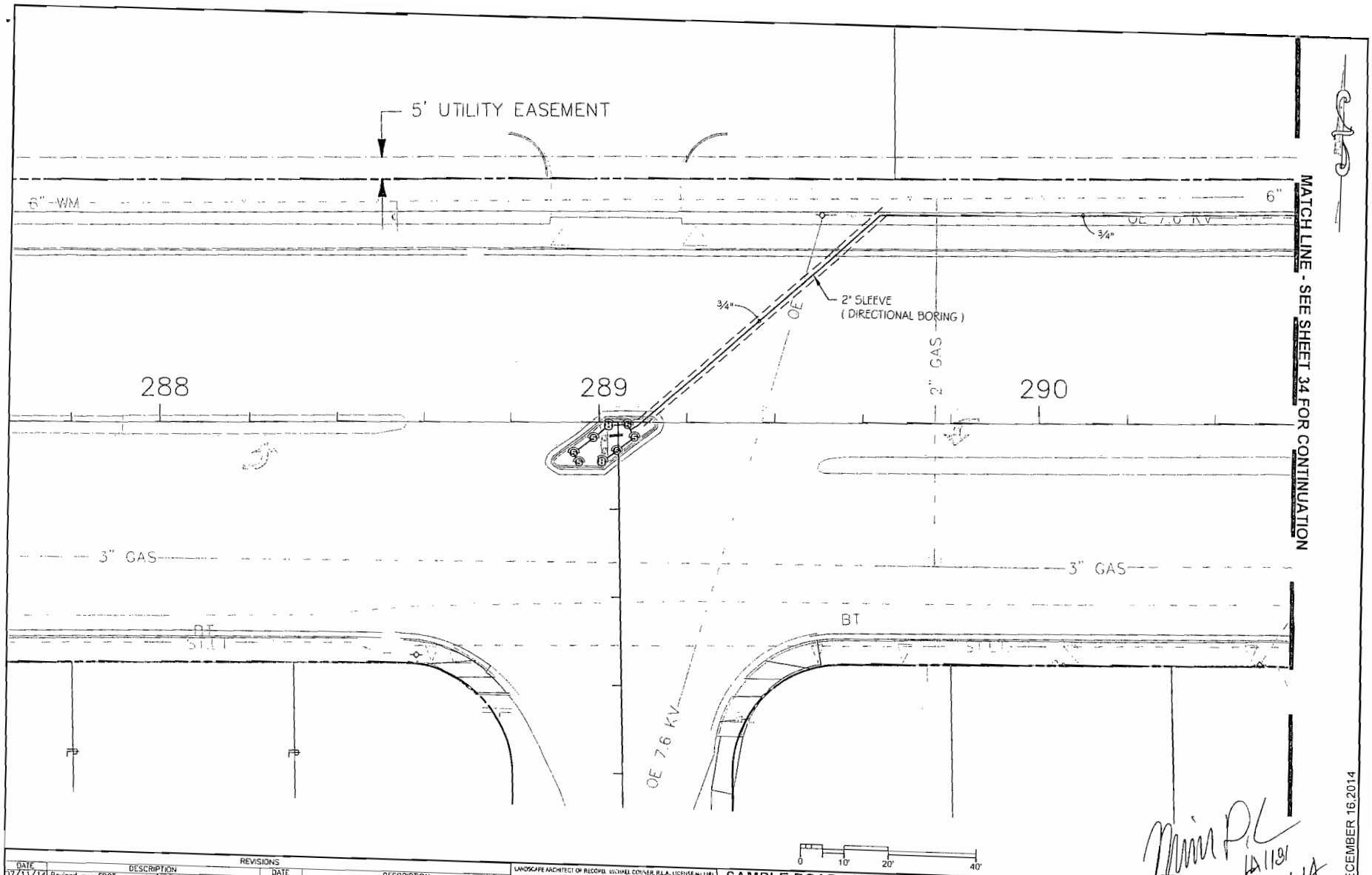

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9/26/14	REVISIONS PER E.R.C. COMMENTS		
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VENDOR I.D. NO. 59-001-3816

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

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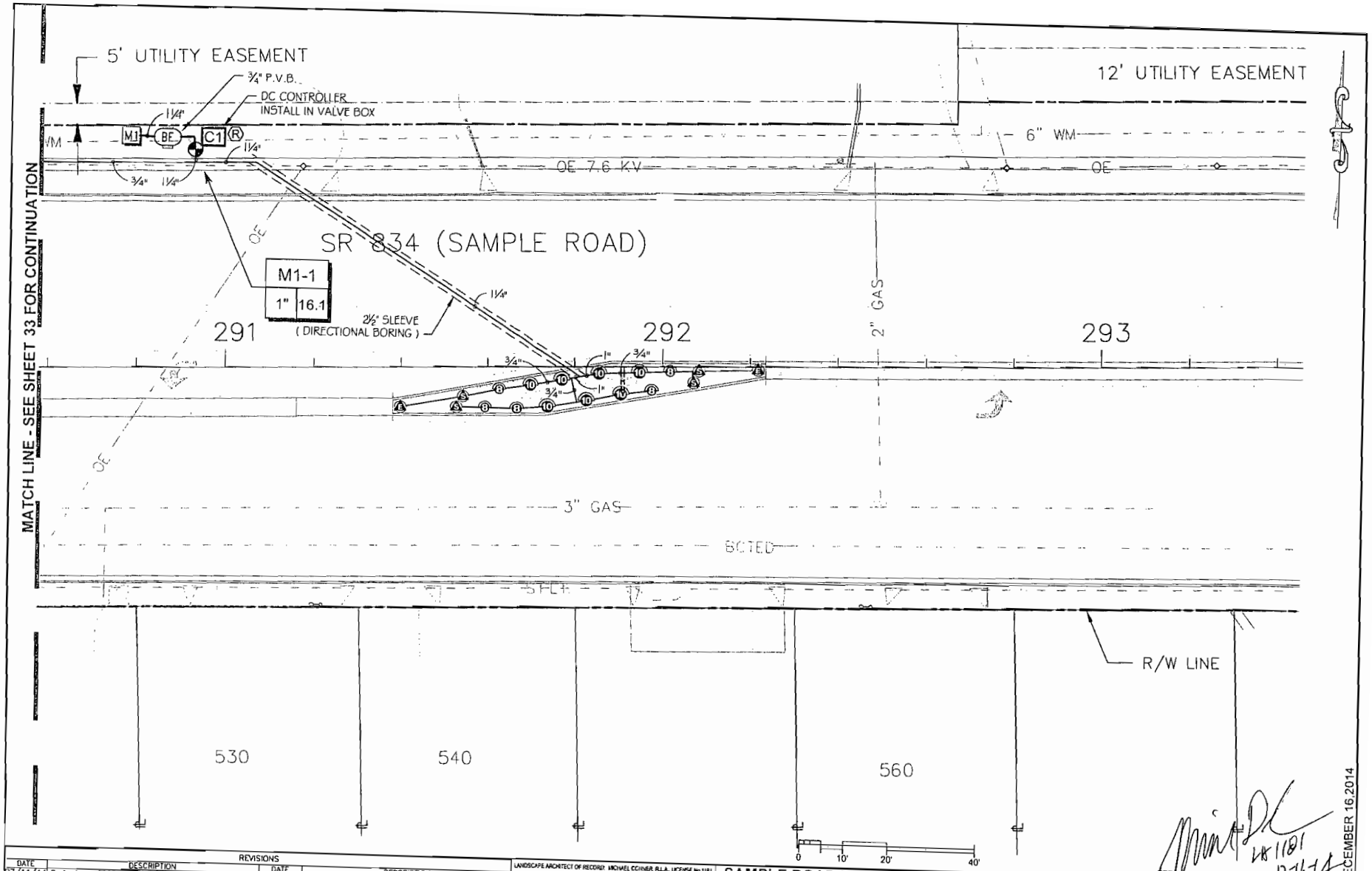

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VENDOR I.D. NO. 65-001-3869

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SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 34

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12-16-14

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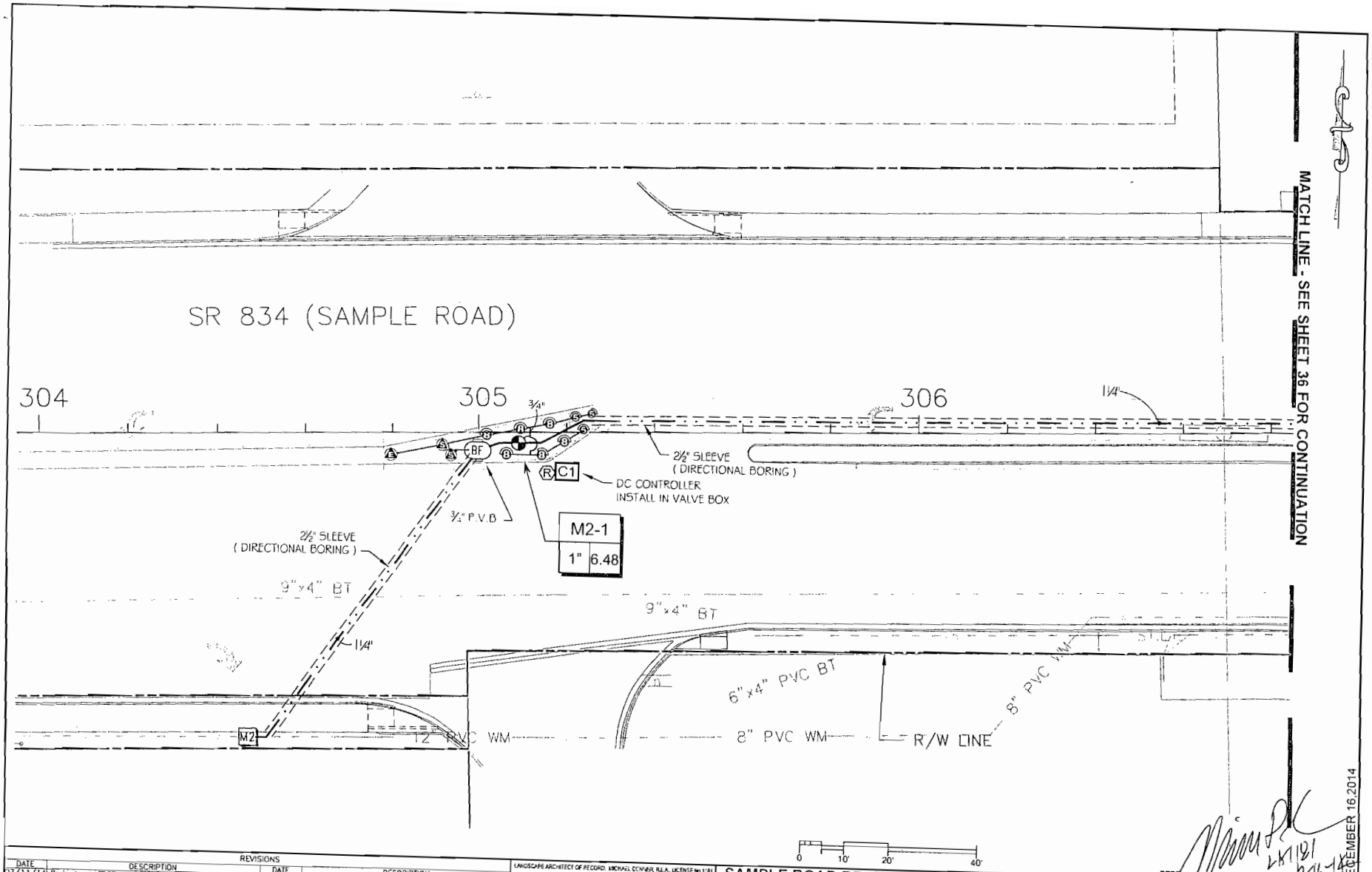

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REVISIONS			
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Certificate of Authorization LC000.00339
VENDOR I.D. NO. 65-001-3808

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 35

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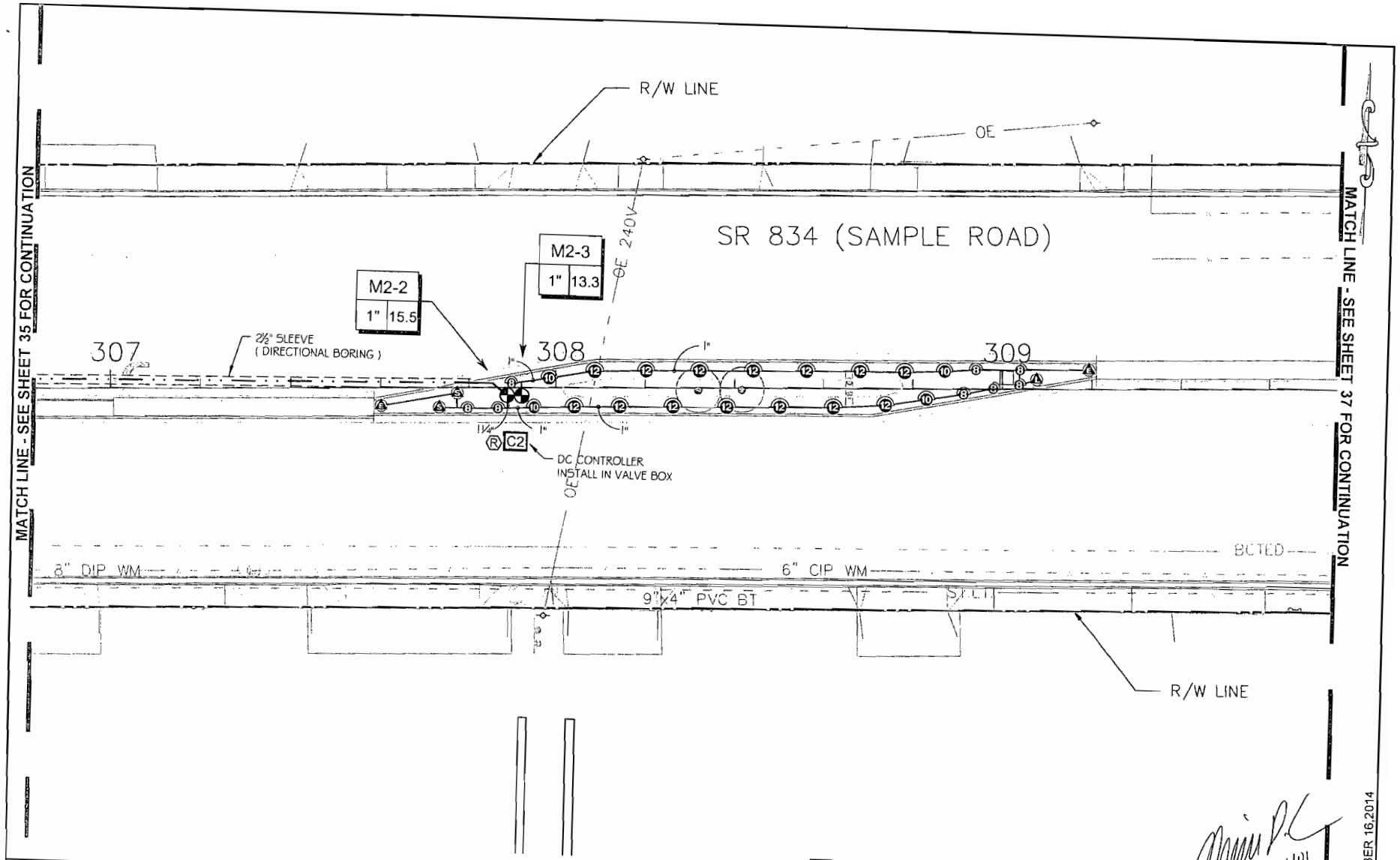

REVISIONS			
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10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

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Certificate of Authorization LC0000339
VENDOR I.D. NO. 65-091-3869

0 10' 20' 40'

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 36

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12-16-14

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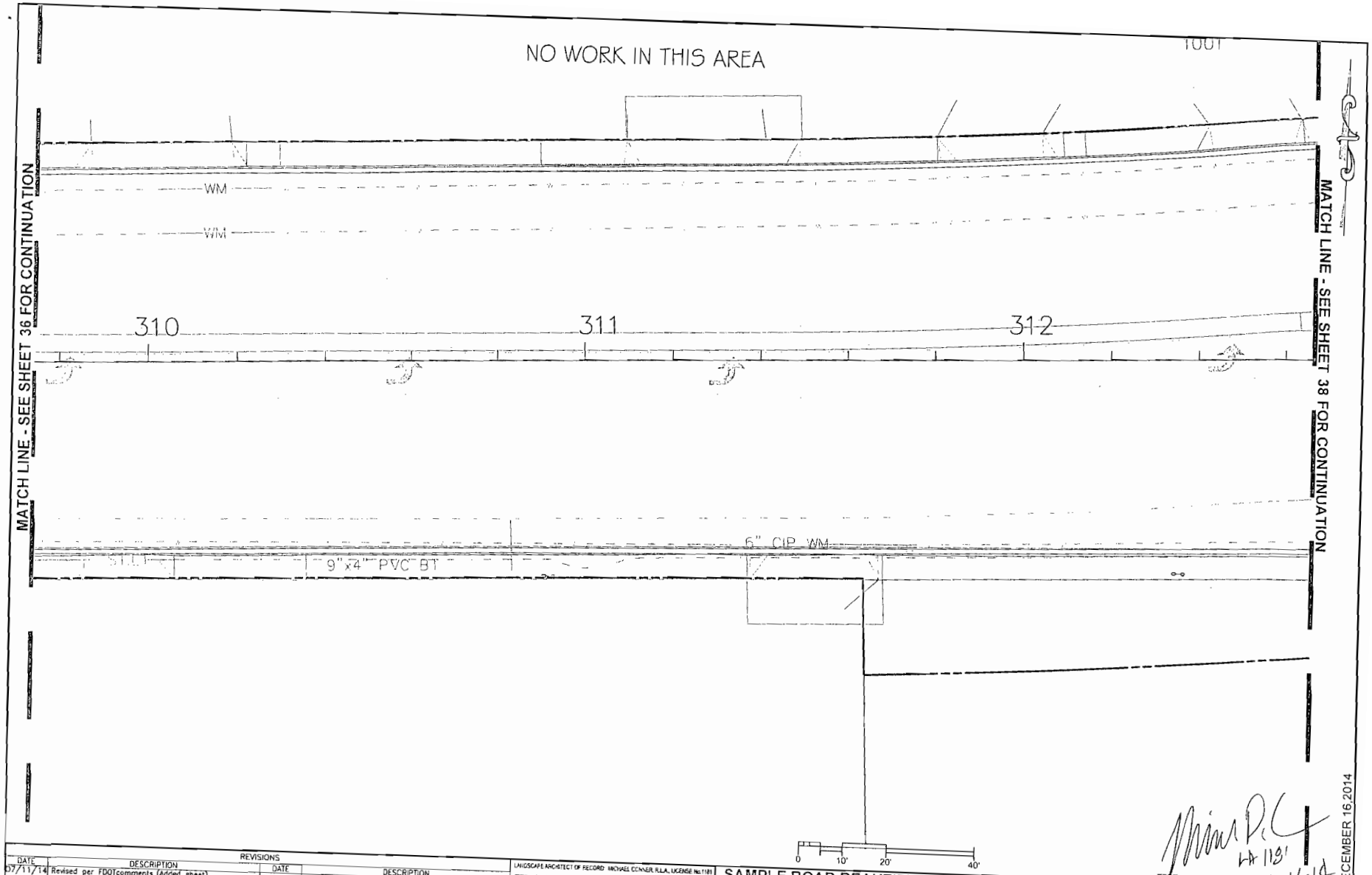

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VENDOR I.D. NO. 65-091-2863

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SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 37

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12-16-14

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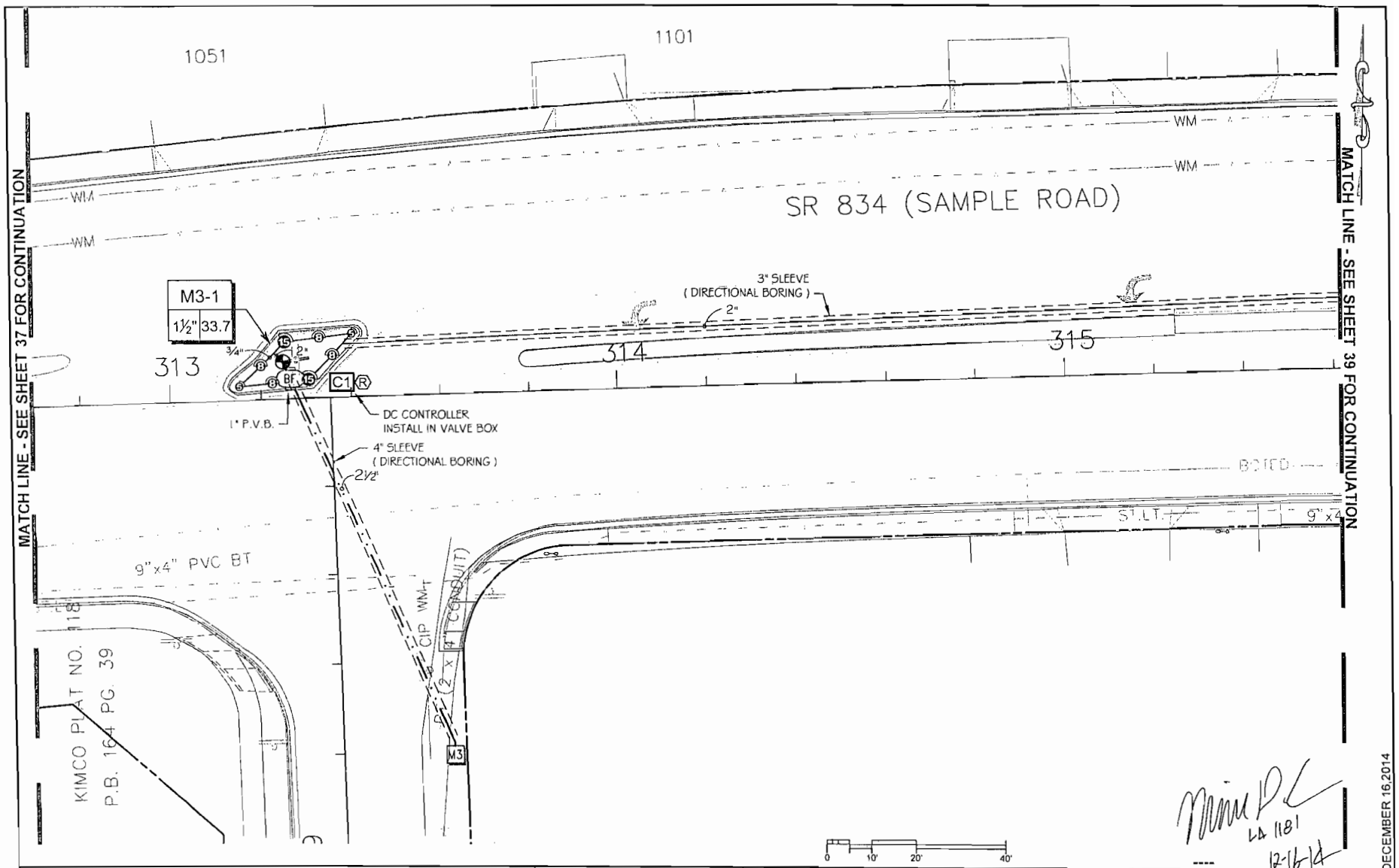

LA 1181
12-16-14

DECEMBER 16,2014

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments (Added sheet)		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

LANDSCAPE ARCHITECT OF RECORD: MICHAEL CONNER, R.L.A. LICENSE No.1181

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Certificate of Authorization LC00000339
VENDOR I.D. NO. 85-001-3869

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 38

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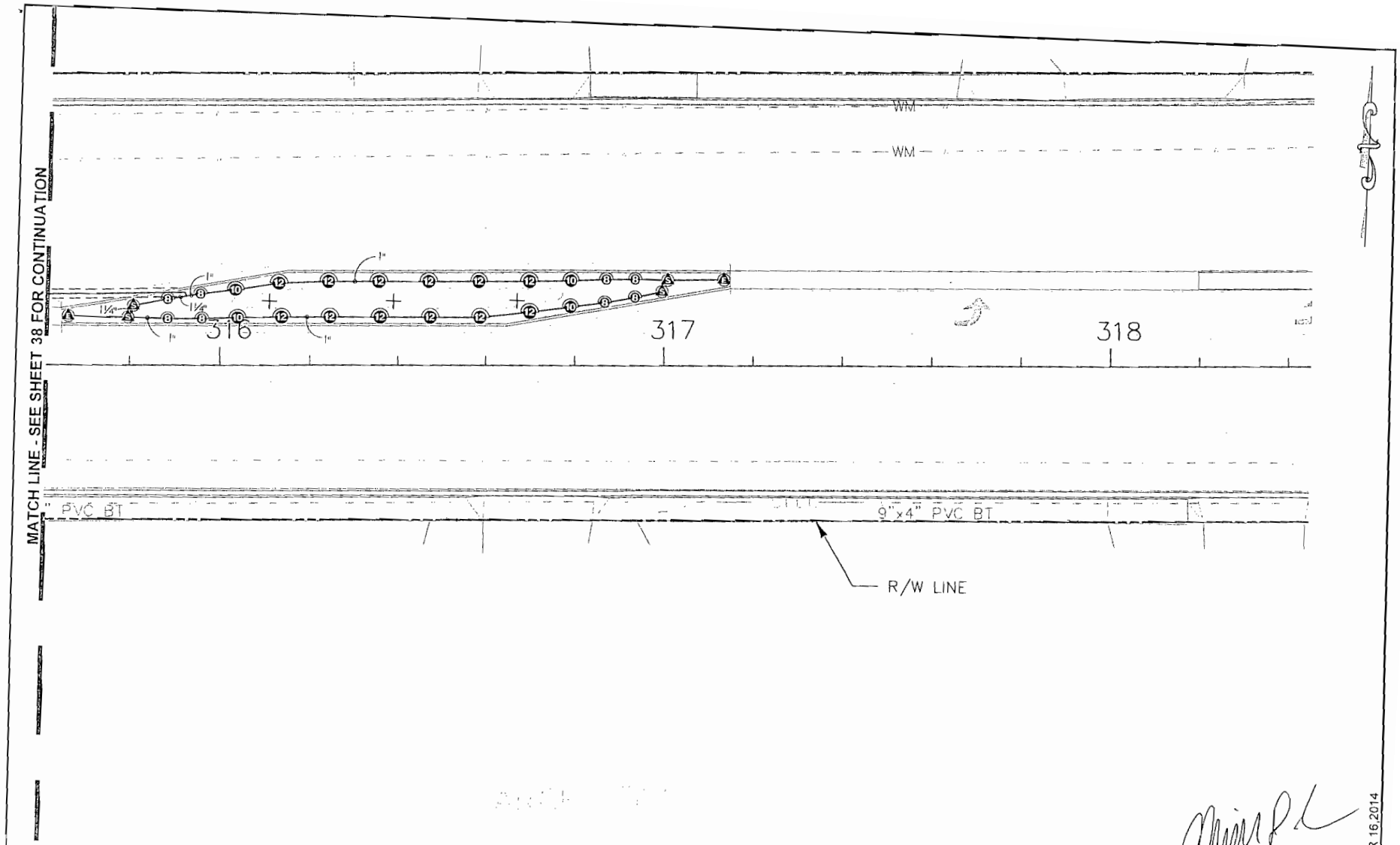

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VENDOR I.D. NO. 65-001-3869

0 10' 20' 40'

SAMPLE ROAD BEAUTIFICATION GRANT		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 39

LA 1181
12-16-14

DECEMBER 16,2014

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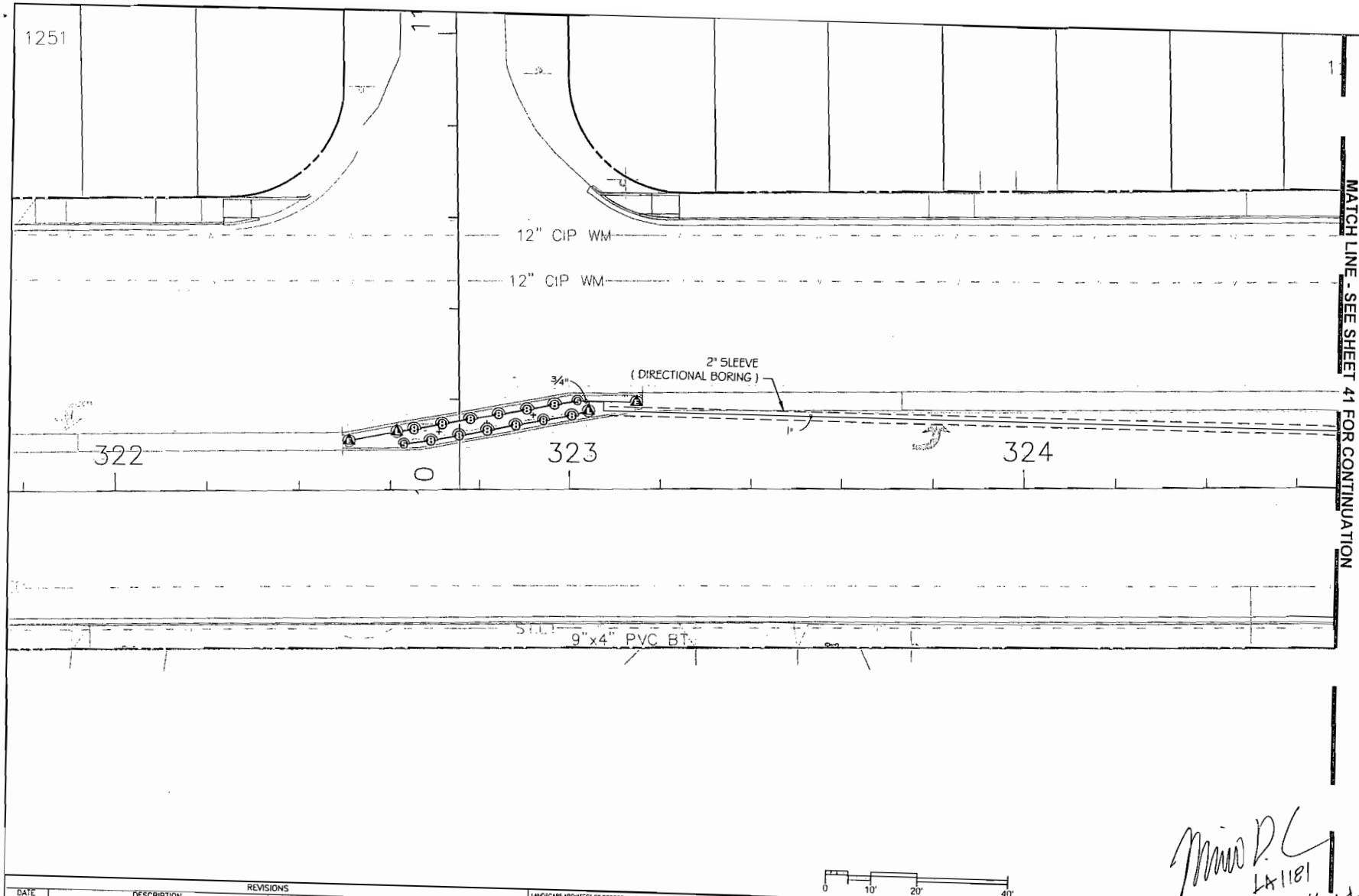

0 10' 20' 40'

LA1181
12-16-14

DECEMBER 16,2014

REVISIONS			
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LANDSCAPE ARCHITECT OF RECORD MICHAEL CORNER, R.L.A. LICENSE No.1181

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VENDOR I.D. NO. 65-001-3809

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 40

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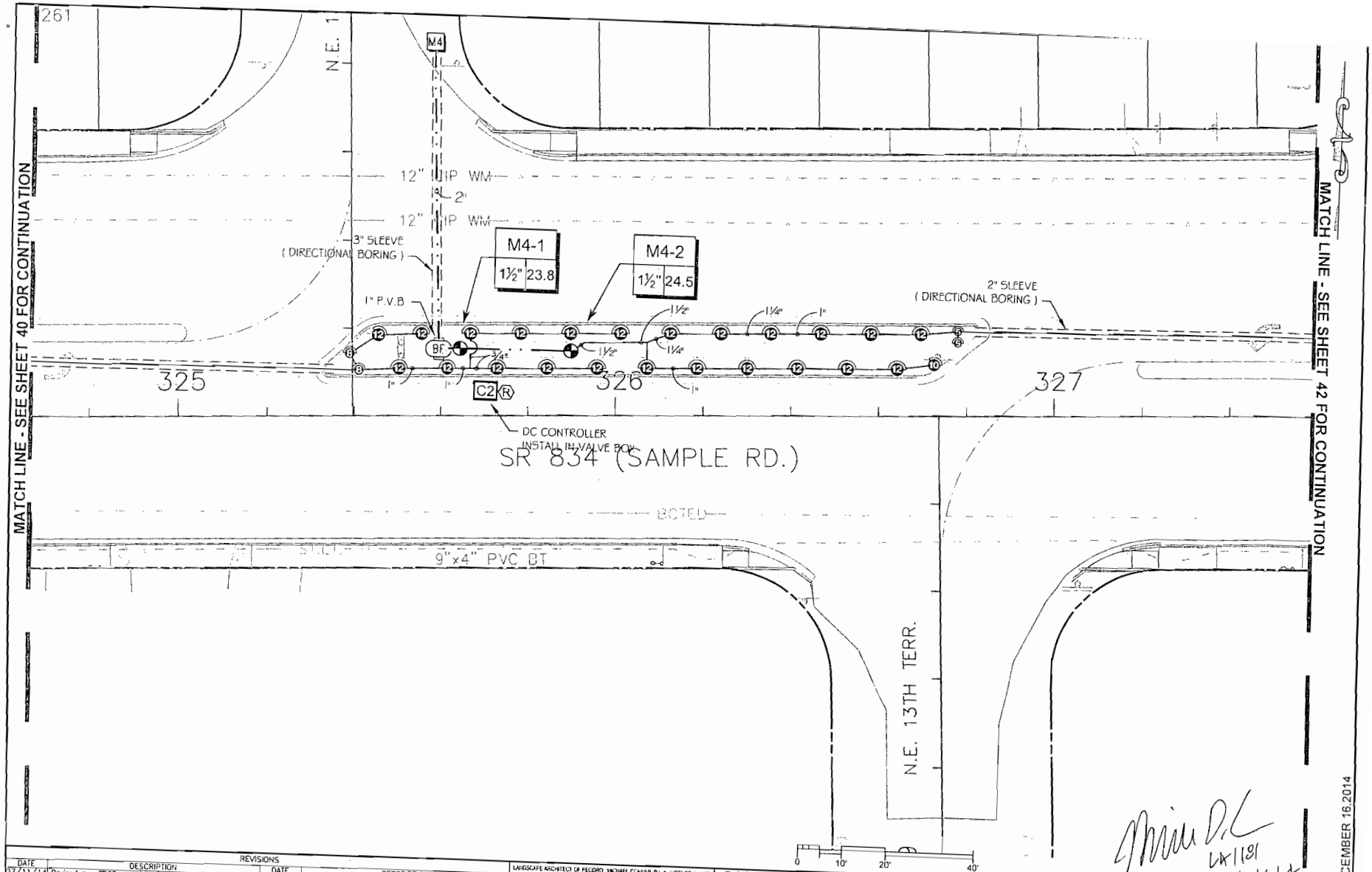

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VENDOR I.D. NO. 65-091-3869

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 41

DECEMBER 16,2014

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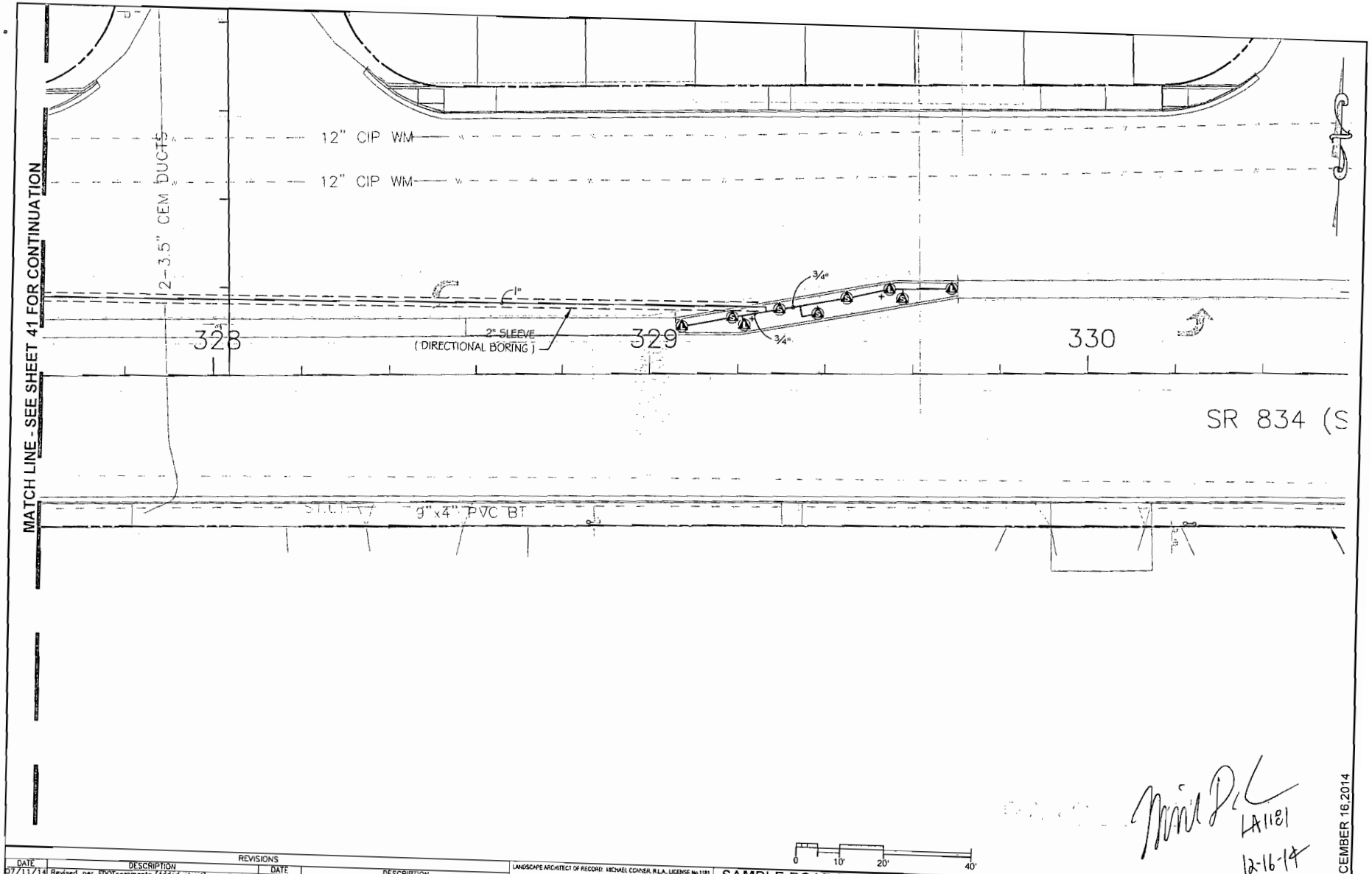

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LANDSCAPE ARCHITECT OF RECORD: MICHAEL CONNER, R.L.A., LICENSE No.1181

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VENDOR I.D. NO. 65-001-3879

USER: apereda

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 42

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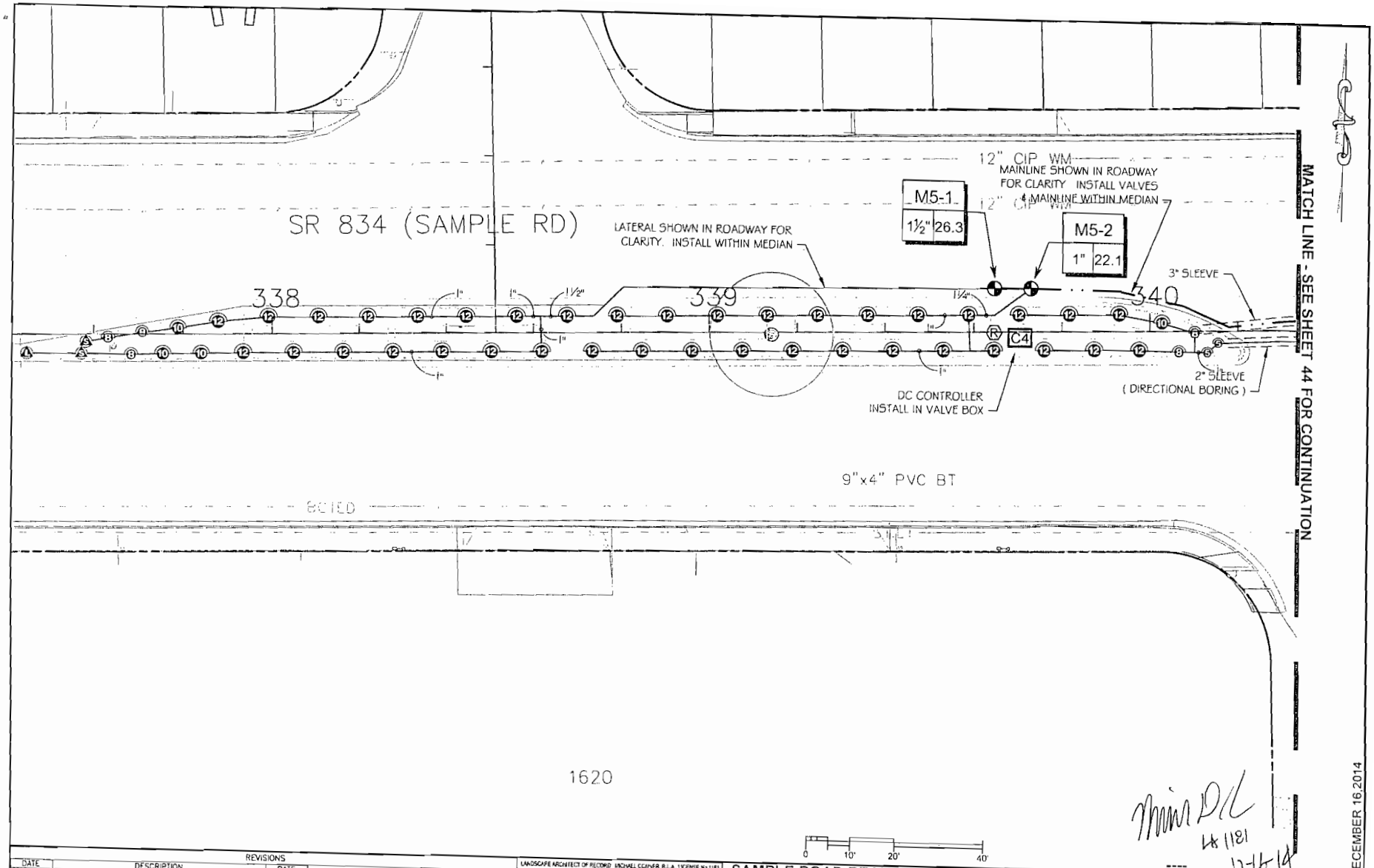

MATCH LINE - SEE SHEET 44 FOR CONTINUATION

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SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 43

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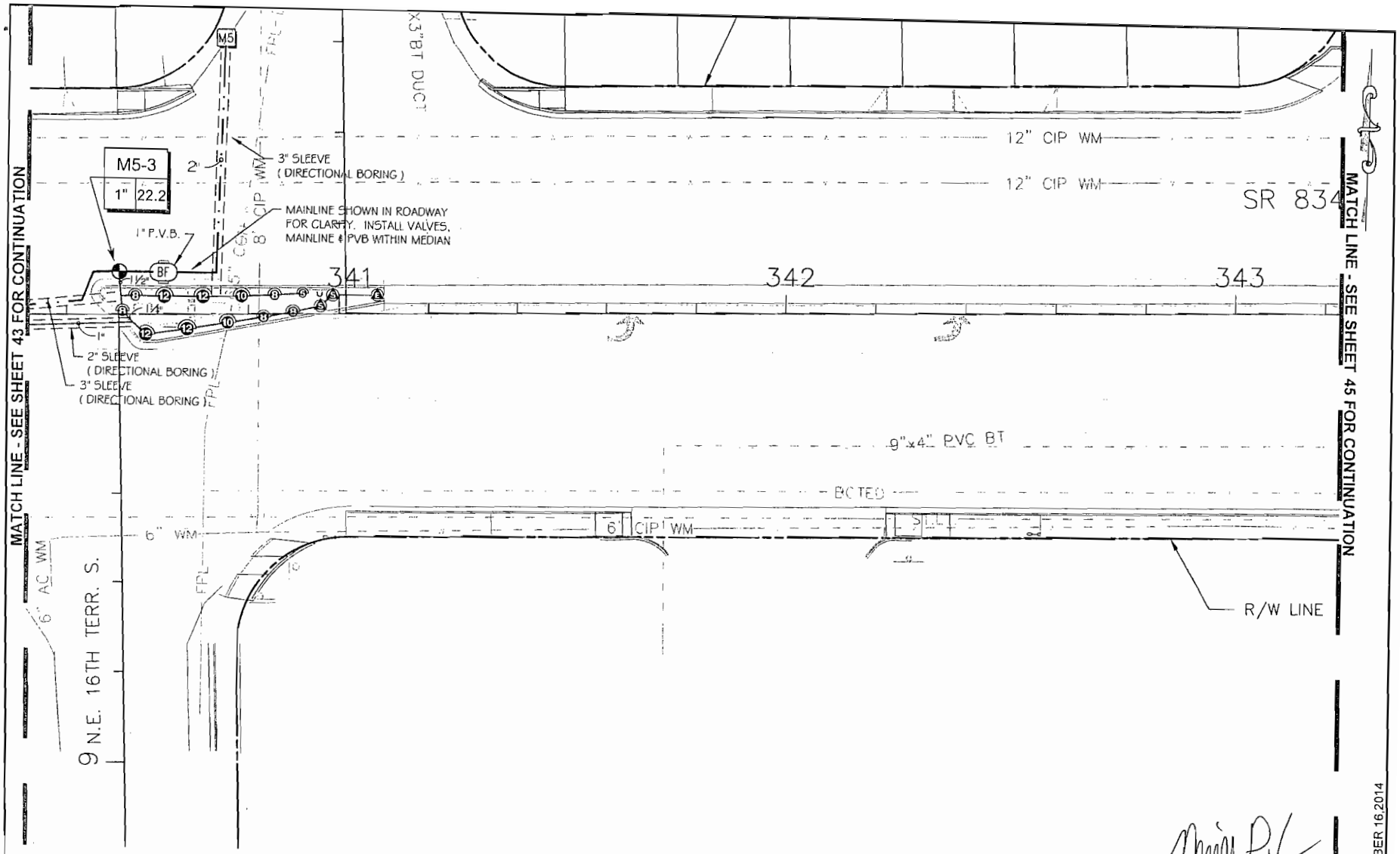

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VENDOR I.D. NO. 65-291-3865

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 44

DECEMBER 16,2014

12-16-14

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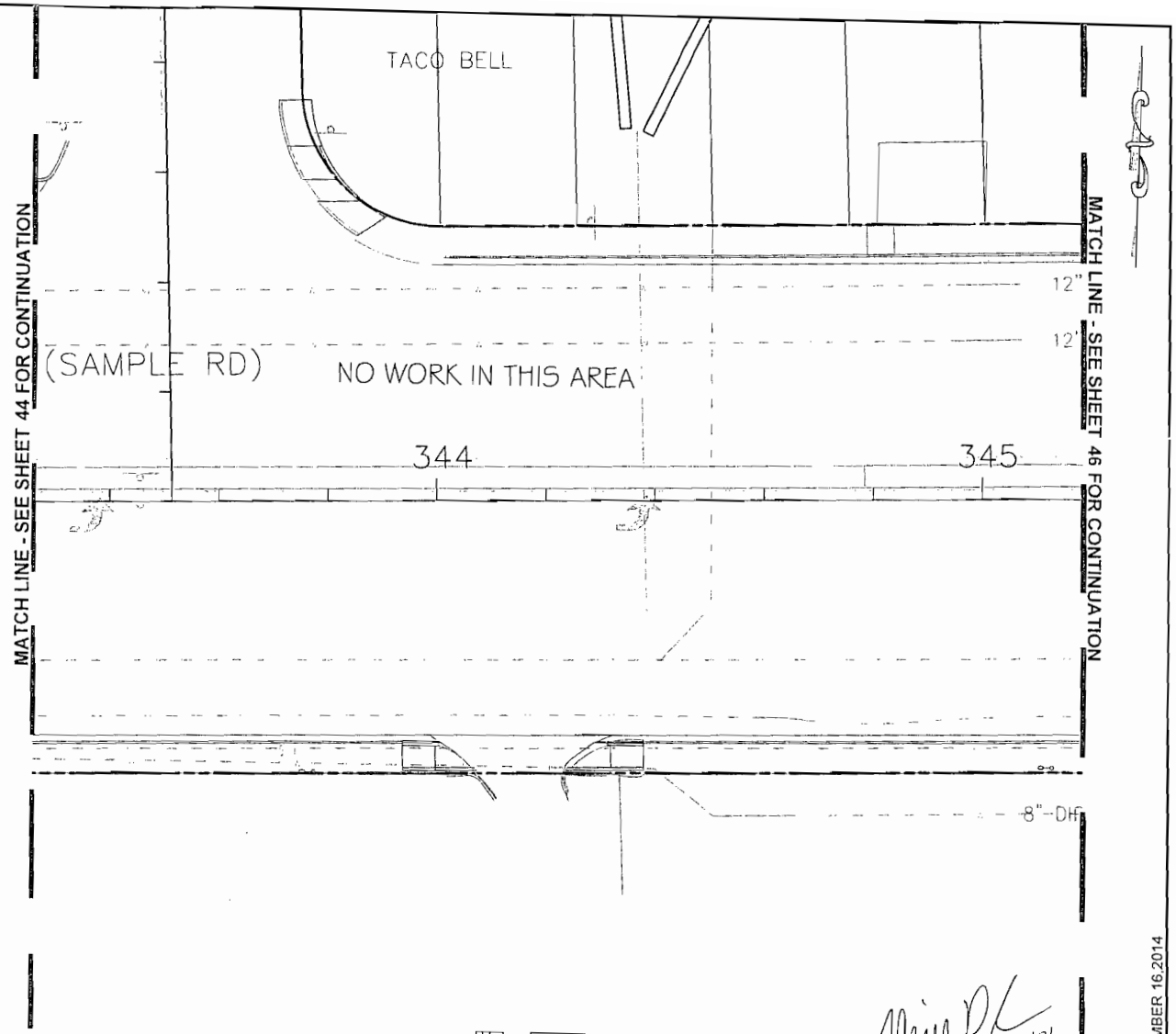

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12-16-14

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SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

SHEET NO. 45

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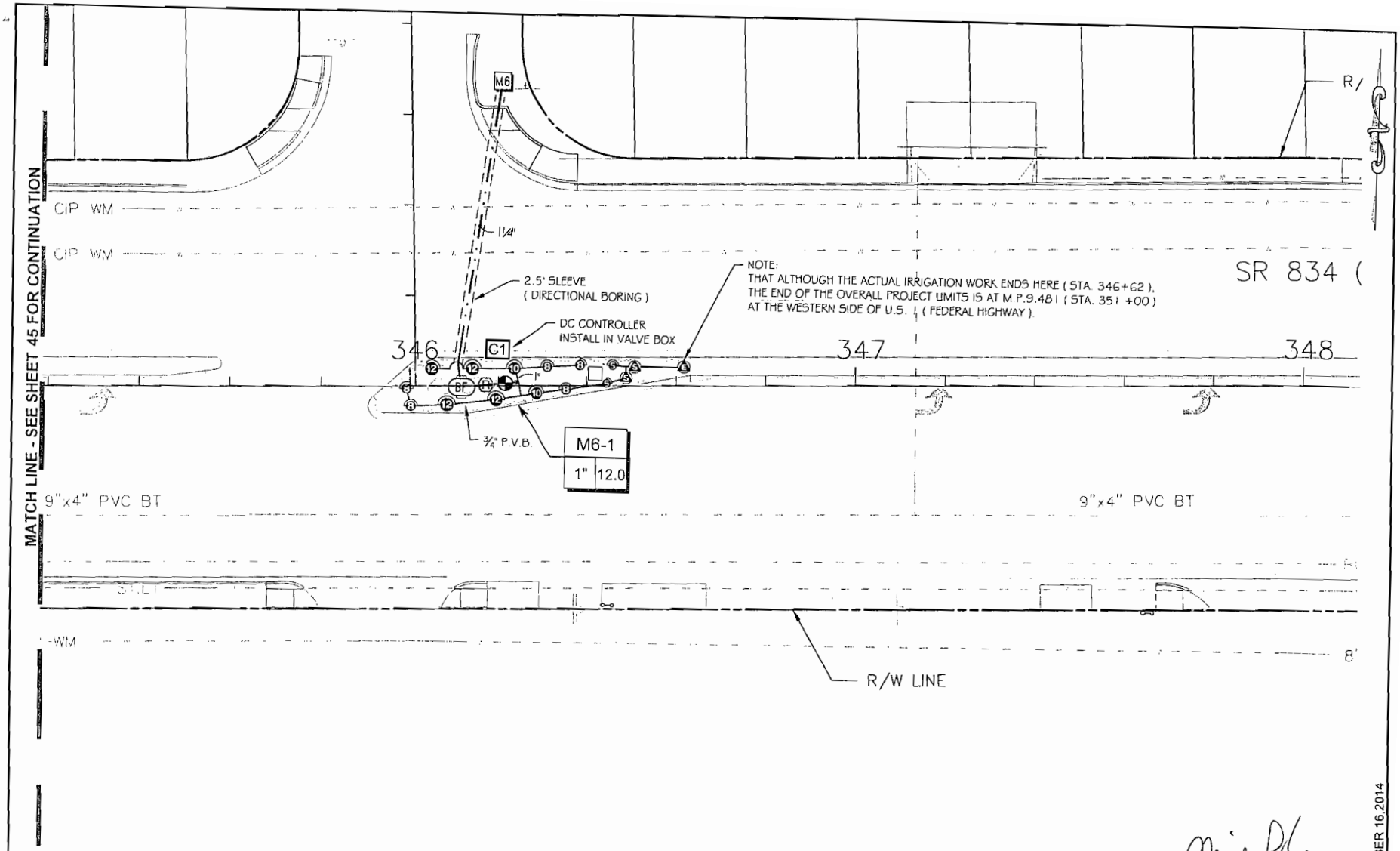

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VENDOR I.D. NO. 65-001-3889

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION PLAN

LA 1181
12-16-14

SHEET NO. 46

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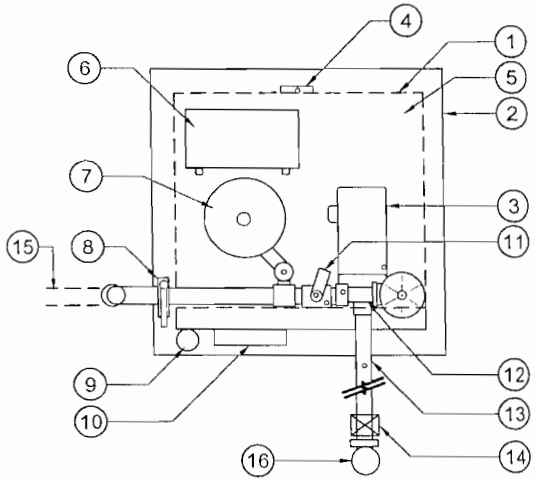
NOTE: SUCTION PIPE SHALL BE SCHED 40 GALVANIZED STEEL WITH GALVANIZED ROLL GROOVE FITTINGS FROM THE PUMP TO THE WELL TEE. CHECK VALVES 3" AND LARGER SHALL BE SWING TYPE, 2" AND SMALLER SHALL BE POPPET STYLE.

PROVIDE MINIMUM OF 4' CLEARANCE ON ALL SIDES OF PUMP SYSTEMS

OPTIONAL FEATURES TO INCLUDE:
(1) IRRIGATION CONTROLLER RAIN BIRD ESPLXME, 8 STATIONS, WITH RAIN SENSOR ON 8' POLE.
(1) PRESSURE TANK FOR PRESSURE DEMAND SYSTEMS

SAFETY FEATURES PRESSURE DEMAND:
-TRANSIENT SURGE
-LOSS OF PRIME
-PUMP OVERHEAT



1. FIBERGLASS REINFORCED ENCLOSURE 4'L X 4'W X 4'H CLAM SHELL DESIGN FOREST GREEN GELCOAT STIPPLED FINISH
2. 4" THICK 53 1/2" X 53 1/2" REINFORCED CONCRETE PAD
3. CENTRIFUGAL PUMP 5 HP (HIGH EFFICIENCY TEFC MOTOR)
4. LOCKABLE HANDLE
5. 48" X 48" ALUMINUM SKID
6. CONTROL PANEL ASSEMBLY (U L. LISTED) MAINTAIN 42" CLEARANCE
7. PRESSURE TANK
8. DISCHARGE ISOLATION VALVE
9. RAIN SENSOR ON 8' POLE
10. IRRIGATION CONTROLLER
11. FLOW SWITCH
12. GALV. STEEL DISCH. HDR.
13. SUCTION LINE
14. SWING CHECK VALVE
15. IRRIGATION MAIN
16. WELL TEE BY WELL DRILLER WITH SCREEN IN WELL TEE

PUMP PERFORMANCE:
80 GPM @ 120 TDH, 50-55 PSI DISCHARGE PRESSURE

HOOVER PUMPING MODEL: HCF-5PD-230/3-E-8,W,Z
Pompano Beach, Florida, Tel: 954-971-7350

FILE PN12836.DWG 1%3

FIBERGLASS ENCLOSED SINGLE WELL SUCTION
PRESSURE DEMAND

1 5-IR-PUMP-HOOV-03 N.T.S.

5 H.P. CENTRIFUGAL PUMP SYSTEM DETAIL (P1 & P2)

REVISIONS

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LANDSCAPE ARCHITECT OF RECORD: MICHAEL CONNER, R.L.A., LICENSE No.1181

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Certificate of Authorization LC0000339
VENDOR I.D. NO. 43-001 3895

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION DETAILS

12-16-14

SHEET NO. 47

DECEMBER 16 2014

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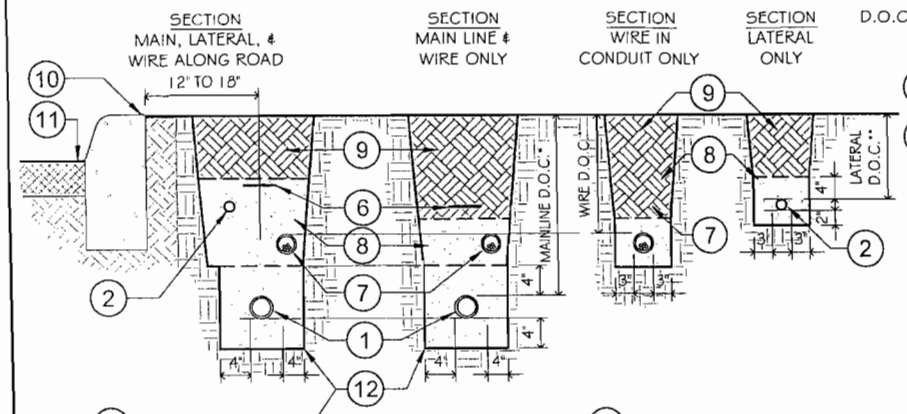
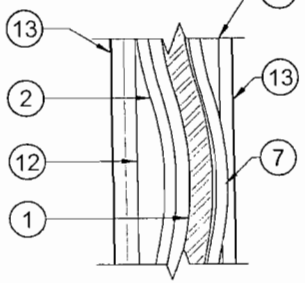


D.O.C. = DEPTH OF COVER, REFER TO TABLE BELOW.

1. IRRIGATION MAIN LINE
2. IRRIGATION LATERAL (SNAKE ALL SOLVENT WELD PLASTIC PIPE IN TRENCH, AS SHOWN)
6. IDENTIFICATION TAPE: APPROVED MAGNETIC TAPE SHALL BE INSTALLED DIRECTLY ABOVE IRRIGATION WATER MAIN. TAPE SHALL NOT BE DEEPER THAN 24" BELOW FINISHED GRADE WITH A MINIMUM OF 12" ABOVE WATER MAIN. CONTRACTOR SHALL CONTACT OWNER/OWNER'S REPRESENTATIVE FOR APPROVAL.
7. LOW VOLTAGE CONTROLLER WIRE IN CONDUIT (TWICE THE DIAMETER OF WIRE BUNDLE WITHIN)
8. INITIAL BACKFILL TO BE FREE OF ROCKS OR STONES LARGER THAN 3/4" DIAMETER. MIN. OF 4" COVER - TYPICAL
9. SALVAGED EXCAVATED FILL COMPACTED TO ORIGINAL DENSITY (TYP.)
10. BACK OF CURB (IN CASES WHERE NO CURB IS PRESENT CONTRACTOR SHALL KEEP MAIN LINE 12" - 18" FROM EDGE OF PAVEMENT)
11. PAVED VEHICULAR USE AREA
12. BOTTOM OF TRENCH
13. TOP OF TRENCH



PLAN VIEW
MAIN, LATERAL, & WIRE IN SAME TRENCH ALONG ROAD

PIPE SIZE (I.D.)	* MIN. DEPTH OF COVER FOR MAIN LINES: MAIN LINES (ALL AREA)	* MIN. DEPTH OF COVER FOR MAIN LINES: WIRE & CONDUIT (ALL AREAS)	** MIN. DEPTH OF COVER FOR LATERAL LINES: NON-TRAFFIC AREAS	** MIN. DEPTH OF COVER FOR LATERAL LINES: VEHICULAR TRAFFIC AREAS
3/4" TO 1"	36"	30"	12"	36"
1 1/4" TO 2"			18"	36"
2 1/2" TO 3"			18"	36"
4" TO 5"			24"	36"
6" AND LARGER			30"	36"

NOTE: ALL PIPE BENEATH PAVED SURFACES MUST BE SLEEVED: 3282-20 3282-21

2 TYPICAL IRRIGATION TRENCH WITHIN R.O.W. DETAIL

328020-04

N.T.S.

KEYNOTE SCHEDULE

SYMBOL	32 EXTERIOR IMPROVEMENTS
3282-20	SLEEVE BELOW ALL HARDSCAPE ELEMENTS (PAVED SURFACES, PRIVATE ROADS, WALKS, CONCRETE PADS, PAVERS, ETC.) WITH HDPE DR11. (THE SLEEVE DIAMETER SHALL BE A MINIMUM OF TWO PIPE SIZES LARGER THAN THE DIAMETER OF THE PIPE OR THE WIRE BUNDLE TRAVELING WITHIN IT. THE MINIMUM SLEEVE SIZE SHALL BE 2" INSIDE DIAMETER). ALL ROADWAY CROSSINGS IN EXISTING PAVEMENT SHALL BE DIRECTIONAL BORING, UNLESS WRITTEN PERMISSION HAS BEEN GRANTED FOR ROADWAY CUTTING. ALL SLEEVES SHALL BE CAPPED WITH A PVC SCH. 40 SLEEVE CAP, USE DUCT TAPE TO SECURE IN PLACE AND KEEP DEBRIS OUT. SPARE SLEEVES SHALL BE SEALED WITH PIPE JOINT CEMENT AND A PVC SCH. 40 SLEEVE CAP. IMMEDIATELY MARK SLEEVE LOCATION BY PLACING A 2" PVC SCH 40 PIPE (LENGTH EQUAL TO THE DEPTH OF COVER) VERTICALLY OVER SLEEVE END CAP WITH A YELLOW RAINBIRD 6300 PVC END CAP (FLUSH WITH FINISH GRADE & CEMENTED TO VERTICAL PVC PIPE).
3282-21	ALL IRRIGATION SLEEVES WITHIN PUBLIC RIGHT-OF-WAYS SHALL BE INSTALLED AS PER FLORIDA DEPARTMENT OF TRANSPORTATION(FDOT) DESIGN STANDARDS INDEX NO. 591-LANDSCAPE IRRIGATION SLEEVES, AND INDEX NO. 17721-CONDUIT INSTALLATION DETAILS.

DECEMBER 16,2014

LA 1181 12-16-14

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Certificate of Authorization LC0000339
VENDOR I.D. NO. 65-001-3669

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION DETAILS

SHEET NO. 48

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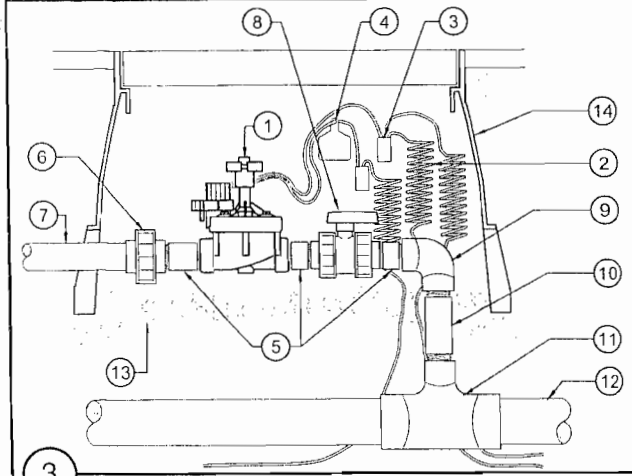
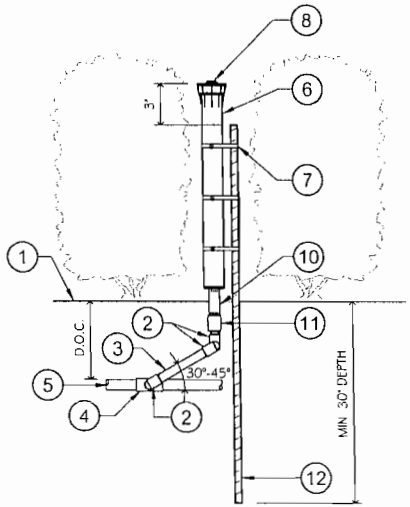


1. REMOTE CONTROL VALVE RAINBIRD PESB SERIES, SIZE PER PLAN & SCHEDULE
2. 30-INCH LINEAR LENGTH OF CONTROL WIRE, COILED
3. WATERPROOF CONNECTION RAIN BIRD SPLICE-1 (1 OF 2)
4. ID TAG: RAIN BIRD VID SERIES
5. PVC SCHEDULE 80 NIPPLE (2" LENGTH) TYP
6. PVC SCH 80 UNION (TxT)
7. LATERAL (SIZE PER PLAN)
8. TRUE UNION BALL VALVE (TxT)
9. PVC SCH 40 ELL
10. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
11. PVC SCH 40 TEE OR ELL
12. PVC MAINLINE
13. DRAIN ROCK 12" MIN. DEPTH
14. IRRIGATION VALVE ENCLOSURE (MIN. 12X20 VEHICULAR RATED BOX & COVER).

NTS

3 GLOBE REMOTE CONTROL VALVE DETAIL

CONTRACTOR SHALL USE THESE METHODS FOR INSTALLATION OF SPRAYS OR ROTARY SPRINKLERS WITHIN SHRUB BED AREAS.



TYPICAL SWING JOINT
(3-ELL OPTION)

1. FINISH GRADE
2. 1/2" HIGH DENSITY POLYETHYLENE (MARLEX) STREET ELL
3. SCH 80 NIPPLE (LENGTH AS REQUIRED)
4. SCH 40 LATERAL TEE (SST) OR ELL (ST), INSTALL THREAD OUTLET SIDEWAYS
5. LATERAL PIPE
6. POP-UP SPRAY BODY (SEE PLANS & SCHEDULE FOR TYPE)
7. BLACK NYLON TIE STRAPS (TOTAL OF 3 PER RISER) EQUALLY SPACED
8. SPRAY NOZZLE (PER PLAN & SCHEDULE)
9. SHRUBS (REFER TO PLANTING PLAN & SCHEDULE FOR SHRUB MAINTAINED HEIGHT)
10. PVC UVR ("BROWNLINE") SCH 80 NIPPLE (LENGTH AS REQUIRED)
11. SCH 40 THREADED COUPLER
12. 3/4" PVC SCV 40 PIPE (PAINTED BLACK)

NOTE: CONTRACTOR SHALL PROVIDE MANUFACTURER'S CUT SHEETS IF USING RE-MANUFACTURERED SWING JOINTS, FOR APPROVAL PRIOR TO ORDERING.

4 328403.23-03
SHRUB 12" POP-UP ON RISER

N.T.S.

Mini P.L
Lx 1181
12-16-14

DECEMBER 16,2014

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Phone 954.921.7781 • Fax 954.921.8807
Certificate of Authorization LC00000339
VENDOR I.D. NO. 65-001-3869

SAMPLE ROAD BEAUTIFICATION GRANT

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

IRRIGATION DETAILS

SHEET NO. 49

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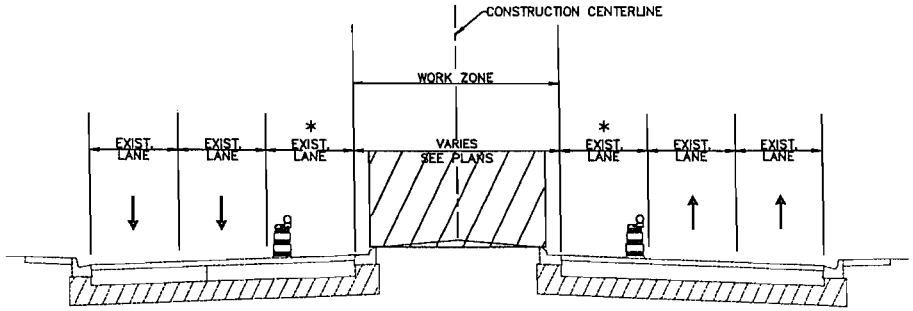
TRAFFIC CONTROL PLAN - GENERAL NOTES

1. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH LATEST FDOT DESIGN STANDARDS INDEX 600 SERIES, MUTCD 2009 AND PROJECT PLANS.
2. THE REGULATORY SPEED LIMIT FOR S.R. 834/SAMPLE RD. DURING CONSTRUCTION SHALL BE MAINTAINED AT THE EXISTING POSTED SPEED LIMIT.
3. EXISTING SIGNS SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE DIRECTED BY THE PROJECT ADMINISTRATOR.
4. THE CONTRACTOR SHALL PROVIDE A 24 HOUR EMERGENCY CONTACT NAME AND NUMBER.
5. TRAFFIC AND TRAVEL WAYS SHALL NOT BE ALTERED BY THE CONTRACTOR TO CREATE A WORK ZONE UNTIL ALL LABOR AND MATERIALS ARE AVAILABLE FOR THE CONSTRUCTION OF THAT PARTICULAR AREA. ALL LANES OF TRAFFIC SHALL BE OPEN DURING INACTIVE WORK PERIODS. ALL WORK ZONE SIGNS SHALL BE COVERED PER INDEX 600 OR REMOVED DURING INACTIVE WORK PERIODS.
6. FULL TIME FLORIDA CERTIFIED MOT SUPERVISOR SHALL BE ON SITE WHEN CONTRACTOR IS WORKING AND SHALL BE ON CALL FOR EMERGENCIES WHEN THE CONTRACTOR IS NOT WORKING. COPY OF HIS/HER CURRENT CERTIFICATION SHALL BECOME PART OF PROJECT FILE.
7. ALL LANES ON S.R. 834/SAMPLE RD. MUST BE OPEN FOR TRAFFIC DURING AN EVACUATION NOTICE FOR A HURRICANE OR OTHER CATASTROPHIC EVENT AND SHALL REMAIN OPEN FOR THE DURATION OF THE EVACUATION OR EVENT AS DIRECTED BY THE ENGINEER.
8. WORK ZONE MAINLINE LANE CLOSURE TIME RESTRICTIONS:

   NORMAL WORK HOURS WILL BE LIMITED TO MONDAY THROUGH FRIDAY FROM 9:00 AM TO 4:00 PM.

   LANE CLOSURE WILL BE LIMITED TO EITHER THE LANE ADJACENT TO THE MEDIAN OR THE OUTSIDE BUT NOT BOTH AT ANY GIVEN TIME.

   NO LANE CLOSURE ARE PERMITTED ON HOLIDAYS.
9. AT THE DISCRETION OF THE ENGINEER, IF A LANE CLOSING CAUSES EXTENDED CONGESTION, THE CONTRACTOR SHALL BE DIRECTED TO REOPEN THE CLOSED LANE(S) UNTIL SUCH TIME AS TRAFFIC FLOW HAS RETURNED TO AN ACCEPTABLE LEVEL.
10. THE CONTRACTOR SHALL NOT STORE MATERIALS OR EQUIPMENT WITHIN THE CLEAR ZONE DURING CONSTRUCTION ACTIVITY PERIOD, THE CONTRACTOR SHALL LIMIT THE STORAGE OF MATERIAL AND EQUIPMENT TO THE WORK ZONE AREA.
11. WHEN WORKING IN MEDIANS NEAR THE ENTRANCE OR EXIT TO I-95, STAGING AND CONSTRUCTION EQUIPMENT SHALL BE PLACED TO AVOID CLOSURE OF ANY LANES ON THE RAMPS FROM I-95.
12. ARROWS IN TRAFFIC CONTROL PLAN DENOTE THE DIRECTION OF TRAFFIC ONLY AND DO NOT REFLECT PAVEMENT MARKINGS.



FOR WORK IN MEDIAN FOLLOW DESIGN STANDARD INDEXES 600, 613 AND 616.

WORK IN MEDIAN

* IF MEDIAN WORK OCCURS ADJACENT TO AN EXISTING LEFT TURN LANE, THE TAPER AND TURN LANE SHALL BE CLOSED AND THE INSIDE THROUGH LANE CAN REMAIN OPEN.

MAINTANANCE OF TRAFFIC SCHOOL/PEDESTRIAN NOTES

1. ON DAYS THAT SCHOOL IS IN SESSION, THE CONTRACTOR'S WORK SCHEDULE WITHIN THE SCHOOL ZONE MAY BE REDUCED BASED ON ACTUAL WORK ACTIVITIES IN THE SCHOOL ZONE. ANY CHANGES IN THE MAINTENANCE OF TRAFFIC WORK SCHEDULES WITHIN SCHOOL ZONES SHOULD BE DISCUSSED DURING THE MANDATORY PRECONSTRUCTION SCHOOL SAFETY MEETING.
2. ALL WORK REQUIRED AT DESIGNATED SCHOOL CROSSINGS AND PEDESTRIAN CROSSINGS SHALL BE RESTORED TO A SAFE WALKABLE PATH BETWEEN THE SCHOOL ZONE HOURS.
3. THIRTY (30) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE SPECIAL PROJECTS COORDINATOR AT BROWARD COUNTY TRAFFIC ENGINEERING DIVISION, (954) 847-2671, TO ARRANGE A PRE-CONSTRUCTION SCHOOL SAFETY MEETING.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE BROWARD COUNTY SCHOOL BOARD PUPIL TRANSPORTATION DEPARTMENT TO ARRANGE A PRE-CONSTRUCTION SCHOOL BUS ROUTE MEETING AT THE FOLLOWING:
   - RUTH MASTERS ROUTING (754) 321-4400 EXT. # 2309
     ruth.masters@broward.schools.com
   - VINCENT HARRELL STUDENT TRANSPORTATION & FLEET SERVICE (754) 321-4472
     vincent.harrell@browardschools.com
   - MARY TOCHTERMANN STUDENT TRANSPORTATION & FLEET SERVICE (754) 321-4400 EXT. # 2006
     mary.tochtermann@browardschools.com

THIS MEETING IS TO DETERMINE ALL BUS ROUTES AND TO MAKE ANY NECESSARY ARRANGEMENTS OR REROUTING. THIS MEETING SHALL INCLUDE THE SPECIAL PROJECTS COORDINATOR FROM BROWARD COUNTY TRAFFIC ENGINEERING DIVISION, (954) 847-2671.

JENNA REE MARTINETTI LICENSE No 69035 STATE OF FLORIDA PROFESSIONAL ENGINEER

DECEMBER 16,2014

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
07/11/14	Revised per FDOTcomments (Added sheet)		
9/26/14	REVISIONS PER E.R.C. COMMENTS		
10/31/14	SECOND REVISIONS PER E.R.C.COMMENT		

ENGINEER OF RECORD JENNA MARTINETTI P.E., LICENSE No 69035

Calvin, Giordano & Associates, Inc.
EXCEPTIONAL SOLUTIONS
1800 Eller Drive, Suite 600, Fort Lauderdale, Florida 33316
Phone: 954.921.7781 • Fax: 954.921.8807
Certificate of Authorization EC0000339
VENDOR I.D. NO. 65-0313869

SAMPLE ROAD BEAUTIFICATION GRANT		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 834	BROWARD	435709-1-78-01

TRAFFIC CONTROL PLAN

SHEET NO. 50

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SECTION No.(s):	**86028**
S.R. No.(s):	**834**
FM No:	**435709-1-78-01**
COUNTY:	**BROWARD COUNTY**

EXHIBIT C

LANDSCAPE IMPROVEMENT MAINTENANCE PLANS

MAINTENANCE PLAN
Landscape Improvements

Project State Road No(s):	**State Road 834 (Sample Road)**
Project Limits:	**From Military Trail (M.P. 7.116) to State Road 5 (US 1) (M.P. 9.481)**
FM No(s):	**435709-1-78-01**
Maintaining Agency:	**City of Pompano Beach**
RLA of Record:	**Michael D. Conner (LA0001181)**
Date:	**September 25, 2014**

I. GENERAL MAINTENANCE REQUIREMENTS AND RECOMMENDATIONS:

The purpose of a plan for the landscape improvements maintenance practices is to allow the plant material on your project to thrive in a safe and vigorous manner while fulfilling their intended purpose and conserving our natural resources. Plantings and all other landscape improvements shall be maintained to avoid potential roadway hazards and to provide required clear visibility, accessibility, clearance, and setbacks as set forth by Florida Department of Transportation (FDOT) governing standards and specifications: *FDOT Design Standards, FDOT Plans Preparation Manual Vol. I, Chapter 2.11* and *FDOT Standard Specifications for Road and Bridge Construction,* as amended by contract documents, and all other requirements set forth by the District 4 Operations Maintenance Engineer. The initial portion of the Maintenance Plan describes general maintenance requirements and recommendations. The concluding section provides recommendations prepared by the Registered Landscape Architect of Record specific to the attached approved plans.

WATERING REQUIREMENTS

Watering is a critical concern for not only the maintenance of healthy plant material but also for observing water conservation practices. The amount of water to apply at any one time varies with the weather, drainage conditions and water holding capacity of the soil. For plant materials that have been established, it is imperative that any mandated water restrictions be fully conformed to on FDOT roadways.

Proper watering techniques should provide even and thorough water dispersal to wet the entire root zone, but not saturate the soil or over-spray onto travel lanes.

IRRIGATION SYSTEM

The Agency shall ensure there are no roadway overspray or irrigation activities during daytime hours (most notably "rush hour" traffic periods). It is imperative the irrigation controller is properly set to run early enough that the watering process will be entirely completed before high traffic periods, while adhering to mandated water restrictions. To ensure water conservation, the Agency shall monitor the system for water leaks and the rain sensors to ensure they are functioning properly so that the system shuts down when there is sufficient rainfall.

INTEGRATED PLANT MANAGEMENT
An assessment of each planting area's soil is recommended to periodically determine the nutrient levels needed to sustain healthy, vigorous plant growth.

Palms, shrubs, trees and turf areas shall be fertilized in such a manner and frequency to ensure that the plant material remains healthy and vigorously growing. Establishment of an integrated pest management program is encouraged to ensure healthy plants, which are free of disease and pests.

MULCHING
Mulch planting beds in such a manner as to prevent weed growth, retain moisture to the plants, protect against soil erosion and nutrient loss, maintain a more uniform soil temperature, and improve the appearance of the planting beds. Avoid mulch mounded up on the trunks of trees, palms, and the base of shrubs to encourage air movement in this area which aids in lowering disease susceptibility. Cypress mulch is prohibited on state right of way.

PRUNING
All pruning, and the associated safety criteria, shall be performed according to American National Standard Institute (ANSI) A300 standards and shall be supervised by an International Society of Arboriculture (ISA) Certified Arborist. Pruning shall be carried out with the health and natural growth of plant materials in mind, to specific pruning heights maintaining clear visibility for motorists, and provide vertical clearance for pedestrian, bicyclist, and truck traffic where applicable. Visibility windows must be maintained free of view obstructions, and all trees and palms must be maintained to prevent potential roadway and pedestrian hazards, all palms are to be kept fruit free. The specific pruning heights are determined by understanding the designer's intent when selecting and placing the plants. The intended mature maintained height and spread of plants are noted on the plans (See Exhibit B.) and see Part II. Specific Requirements and Recommendations for guidelines. The understory plant materials selected for use within the restricted planting areas (Limits of Clear Sight) are to be maintained at a height in compliance with *FDOT Design Standards* Index 546; Page 6 of 6, Window Detail. Vertical tree heights must meet *FDOT Maintenance Rating Program* (MRP) standards.

STAKING AND GUYING
All staking materials, except for replacements, are to be removed by the completion of FDOT warranty period or at one year (whichever comes first). Any subsequent staking and guying activities by the Agency must adhere to *FDOT Design Standards* guidelines (See Index 544). The Agency shall closely monitor staking and guying attachment materials so that they are securely fastened to avoid potential roadway hazards.

TURF MOWING:
All grassed areas are to be mowed and trimmed with sufficient frequency to maintain a deep, healthy root system while providing a neat and clean appearance to the urban landscape. All turf efforts, mowing, curb/sidewalk edging and turf condition, must at a minimum, meet *FDOT Maintenance Rating Program* (MRP).

LITTER CONTROL:
The project site shall remain as litter free as practicable. It is recommended to recycle this litter to avoid unnecessary waste by its reuse. Litter removal efforts must meet *FDOT Maintenance Rating Program* (MRP) standards.

WEEDING/HERBICIDE
All planting areas shall be maintained as weed free as practicable by enlisting integrated pest management practices in areas specified on the plans and maintaining proper mulch levels. Extreme care is recommended if using a chemical herbicide to avoid overspray onto plant materials. It is the applicator's responsibility to restore any damage, resulting from overspray to the plantings, per the approved plans.

PLANT REPLACEMENT
Plant replacement shall be the same species and specification as the approved plan. Move and replace all plant materials that may conflict with utility relocations and service. Only plants graded Florida #1 or better, per the *Florida Department of Agriculture and Consumer Services, Grades and Standards for Nursery Plants* are permitted on FDOT roadways. Should it become necessary to change the species, a general use permit is required from FDOT for approval by the FDOT District Landscape Architect.

HARDSCAPE (SPECIALTY SURFACING)
All tree grates and specialty surfacing (if applicable) shall be maintained in such a manner as to prevent any potential tripping hazards and protect damage to the pavers and tree grates. Final surface tolerance from grade elevations shall, at a minimum, meet the most current *Interlocking Concrete Pavement Institute (ICPI), Guide Specifications for Pavers on an Aggregate Base, Section 23 14 13 Interlocking Concrete Pavers*, Part 3.05. If the specialty surfacing or tree grates become damaged, they shall be replaced with the same type and specification as the approved plan.

HARDSCAPE (NON-STANDARD) TRAVELWAY SURFACING
It shall be the responsibility of the AGENCY to restore an unacceptable ride condition of the roadway, including asphalt pavement (if applicable), caused or contributed by the installation or failure of non-standard surfacing, and/or the header curb, on the Department of Transportation right-of-way within the limits of this Agreement. Pavement restoration areas or "patches" will have a minimum length of 10-ft, measured from the edge of the header curb, and a width to cover full lanes for each lane affected by the restoration.

Pavement restoration will be performed in accordance with the most current edition of the *FDOT Standard Specifications for Road and Bridge Construction*, and the *FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System.*

It shall be the responsibility of the AGENCY to maintain all signs located within a non-standard surfacing area. Such maintenance to be provided by the AGENCY shall include repair and replacement of the sign panel, post, and base.

HARDSCAPE (LANDSCAPE ACCENT LIGHTING)
Landscape accent lighting shall be maintained in such a manner as to prolong the life of the lighting fixture and prevent potential safety hazards. If the lighting fixtures and their system

become damaged, they shall be replaced with the same type and specification as the approved plan. Landscape lighting shall meet requirements for the sea turtle nesting and hatching.

MAINTENANCE OF TRAFFIC CONTROL

Reference the FDOT website regarding the selection of the proper traffic control requirements to be provided during routine maintenance and / or new installations of this DOT roadway.

VEGETATION MANAGEMENT AT OUTDOOR ADVERTISING (ODA)

To avoid conflicts with permitted outdoor advertising, please reference the State of Florida website regarding the vegetation management of outdoor advertising. This website provides a portal to search the FDOT Outdoor Advertising Inventory Management System Database. The database contains an inventory of outdoor advertising structures, permits and other related information maintained by the Department.

Also, reference the *Florida Highway Beautification Program* website link for "*Vegetation Management at ODA signs*" "Florida Statutes" and "Florida Administrative Code" related to vegetation management at outdoor advertising sign, permit applications for vegetation management and determining mitigation value of roadside vegetation.

II. SPECIFIC PROJECT SITE MAINTENANCE REQUIREMENTS AND RECOMMENDATIONS

The only specific maintenance requirements for the planting design for this project, other than those outlined and specified in Part I, are as follows:

1. The Shrub Allamanda shall be maintained at maximum height of 36".
2. The Crinum Lilies, Fakahatchee Grass, and Sand Cordgrass do not need to be pruned or trimmed back. They are located in areas that do not have sight distance restrictions, and therefore can be left natural. They should be self-heading at about 36" height. However, the Fakahatchee Grass and Sand Cordgrass may be headed back once in the spring, if desired.
3. Likewise, the Bromeliads do not need to be trimmed back necessarily, in order to keep them at about 30" height. They are located in areas that do not have sight distance restrictions, and therefore can be left natural. If an individual plant does get too large, then it should be removed completely, not just trimmed back.
4. The Gold Mound and Green Island Ficus, while not located within any sight distance restricted area, shall be maintained at a maximum height of 24" and 18" respectively.
5. The plant materials that are located within sight distance restrictions are the Dwarf Podocarpus 'Pringles', Dune sunflower, False/Mexican Heather, and Purple Queen. They shall be kept at a maximum height of 15" to 18".

REFERENCES

This reference list is provided as a courtesy. The list may not contain the most current websites. The most current references must be accessed for up to date information.

Accessible Sidewalk (ADA)
http://www.access-board.gov/guidelines-and-standards/streets-sidewalks

Americans with Disabilities Act (ADA) (ADAAG)
http://www.ada.gov/2010ADAstandards_index.htm

American National Standard Institute, *ANSI A300, (Part 1) for Tree Care Operations – Trees, Shrub, and Other Woody Plant Maintenance – Standard Practices (Pruning)*, available for purchase
http://webstore.ansi.org

Florida Department of Agriculture and Consumer Services, Division of Plant Industry, *Florida Grades and Standards for Nursery Plants*
http://www.freshfromflorida.com/Divisions-Offices/Plant-Industry/Bureaus-and-Services/Bureau-of-Plant-and-Apiary-Inspection/Plant-Inspection#pubs

Florida Department of Business & Professional Regulation (DBPR), Florida Building Commission, 2012 Florida Accessibility Code for Building and Construction
http://www.floridabuilding.org/fbc/committees/accessibility/aac/Changes_to_Law/Florida_Accessibility_Code_2012_ICC_FINAL.pdf

Florida Department of Transportation, *FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System, Index 544 Landscape Installation*
http://www.dot.state.fl.us/rddesign/DS/15/IDx/00544.pdf

Florida Department of Transportation, *FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System, Index 546 Sight Distance at Intersections*
http://www.dot.state.fl.us/rddesign/DS/15/IDx/00546.pdf

Florida Department of Transportation, *FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System, Index 600 Traffic Control through Work Zones*
http://www.dot.state.fl.us/rddesign/DS/15/IDx/00600.pdf

Florida Department of Transportation, *FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System, Index 700 Roadside Offsets*
http://www.dot.state.fl.us/rddesign/DS/15/IDx/00700.pdf

Florida Department of Transportation, *FDOT Plans Preparation Manual (PPM) Vol. I Chapter 2.11 Horizontal Clearance*
Table 2.11.5 Horizontal Clearance to Trees
Table 2.11.11 Recoverable Terrain
http://www.dot.state.fl.us/rddesign/PPMManual/2014PPM.shtm

Florida Department of Transportation, *FDOT Standard Specifications for Road and Bridge Construction, Section 580 Landscape Installation*
http://www.dot.state.fl.us/specificationsoffice/Maintenance/Jan15/Files/SS5800000.doc

Florida Department of Transportation, Landscape Architecture Website
www.MyFloridaBeautiful.com

Florida Department of Transportation, *Maintenance Rating Program Handbook*
http://www.dot.state.fl.us/statemaintenanceoffice/MaintRatingProgram.shtm

Florida Department of Transportation Outdoor Advertising Database
http://www2.dot.state.fl.us/rightofway/

Florida Exotic Pest Plant Council Invasive Plant Lists
http://www.fleppc.org/list/list.htm

Florida Irrigation Society
http://www.fisstate.org

Florida Power and Light (FPL), *Plant the Right Tree in the Right Place*
http://www.fpl.com/residential/trees/right_tree_right_place.shtml

A Guide to Roadside Vegetation Management
http://www.dot.state.fl.us/statemaintenanceoffice/DOT%20Final%20(3)Turf%20Management%20Guide%20UF.pdf

Interlocking Concrete Pavement Institute (ICPI)
http://www.icpi.org/

International Society of Arboriculture (ISA)
www.isa-arbor.com

UF IFAS: *Selecting Tropical and Subtropical Tree Species for Wind Resistance*
http://edis.ifas.ufl.edu/pdffiles/FR/FR17500.pdf

U.S. Department of Transportation, Federal Highway Administration, *Manual on Uniform Traffic Control Devices*
http://www.mutcd.fhwa.dot.gov

SECTION No.(s):	**86028**
S.R. No.(s):	**834**
FM No:	**435709-1-78-01**
COUNTY:	**BROWARD COUNTY**

EXHIBIT D

APPROXIMATE COST FOR LANDSCAPE IMPROVEMENTS UNDER SEPARATE PROPOSED JPA AGREEMENT

This Exhibit forms an integral part of the DISTRICT FOUR (4) LANDSCAPE MAINTENANCE MEMORANDUM OF AGREEMENT between the State of Florida, Department of Transportation and the AGENCY.

$306,011.00

COST ESTIMATE:
Sample Road - Florida Highway Beautification Council Grant
FPID # 435709-1-78-01
Date: 10/29/2014

Item	Description	Qty.	Unit Cost	Total Cost
1. Bulnesia Tree	2"DBH 14' ht. x 6' spr.	4	$350	$1,400
2. Silver Bismarkia Palm	14' o.a. ht.4'C.T.	12	$1,000	$12,000
3. Solitaire Palm, Single	18 '- 22' o.a ht., 12' - 16' c.t.	6	$400	$2,400
4. Mongomery Palm, Single	18' - 22' o.a. ht., 12' -16' c.t.	8	$450	$3,600
6. Live Oak Tree	3" DBH 18' ht. x 9' spr.	4	$500	$2,000
7. 'Green Island' Ficus	3 gal., 15" ht.x 15"spr, 24"o.c.	1743	$8	$13,944
8. Shrub Allamanda	3 gal., 24" ht.x 18" spr, 30"o.c.	290	$8	$2,320
9. Sand Cordgrass	3 gal., 24" ht.x 24" spr, 24"o.c.	1020	$8	$8,160
10. 'Queen Emma' Crinum Lily	3 gal., 24" ht.x 24" spr, 36"o.c.	214	$9	$1,926
11. Bromeliads	3 gal., 15" ht.x 15"spr, 36"o.c.	52	$15	$780
12. Gold Mound	3 gal., 18" ht.x 18"spr, 24"o.c.	329	$8	$2,632
13. Fakahatchee Grass	3 gal., 24" ht.x 24" spr, 36"o.c.	327	$8	$2,616
14. Sod	St. Augustine 'Floratam' Sod (S.F.)	38756	$0.30	$11,627
15. Site Mobilization / General Requirements	Mobilization / General Conditions	1	$5,000	$5,000
16. MOT	Maintenance of Traffic	1	$7,500	$7,500
17. Removal of Existing Mahogany Tree	30' ht.	1	$1,500	$1,500
18. Removal of Existing Black Olive Tree	35' ht.	1	$1,500	$1,500
19. Relocate Sabal Palms (Off-site, by the City) ***	20' - 25' o.a. ht.	12	$300	$3,600
20. Relocate 'Medjool' Date Palms	15' c.t.	4	$2,500	$10,000
21. Removal of Existing Grass	Spray and Remove Existing Sod (S.Y.)	7115	$3	$21,345
22. Bed Preparation / Planting Soil	Spread 80 /20 Mix - 2" Depth (C.Y.)	395	$30	$11,850
23. Well & Pump Stations	Install Well & Pump Station (w / elec.)	2	$10,000	$20,000
24. Electric Service & Meter ***	Install New Electric Service & Meter	2	$5,000	$10,000
25. Water Taps & Meters ***	Tap Water Main & Install Water Meter	6	$2,500	$15,000
26. Permit Fees ***	Permit Fees, Incl. Impact Fees	1	$10,000	$10,000
27. Backflow Preventors	Install Backflow Prevention Devices	6	$500	$3,000
28. Solar or Battery Operated Controllers	Install New Solar / Battery Controllers	6	$300	$1,800
29. Irrigation Mainline	Install New Irr. Main, per Plans (L.F.)	1200	$20	$24,000
30. Electric Valves	Install New Elec. Valves & Valve Boxes	7	$400	$2,800
31. Irigation System, Incl. Laterals, Heads, etc.	Install New Irrigation System	1	$10,000	$10,000
32. Directional Bores, Sleeves	Sizes & Locations per Plans (L.F.)	1550	$30	$46,500
33. 1 Year Warranty and Maintenance of New Plants	Per FDOT Specs. / Per Month	12	$1,000	$12,000
34. Dwarf Podocarpus 'Pringles'	3 gal., 12" ht. x 12" spr., 18" o.c.	402	$8	$3,216
35. Dune Sunflower	1 gal., 12" ht. x 12" spr., 15" o.c.	1985	$4	$7,940
36. False/Mexican Heather	1 gal., 8" ht. x 10" spr., 15" o.c.	1487	$5	$7,435
37. Purple Queen	1 gal., 8" ht. x 8" spr., 15" o.c.	405	$4	$1,620
38 Removal of existing 'medjool' date palms	15'c.t.	3	$1,000	$3,000
			Total Cost	**$306,011**

*** Denotes an item of work that the City of Pompano Beach may perform outside of the scope of this project.