

REVIEW BY FORT BEND COUNTY COMMISSIONERS COURT

On this 8th day of March, 2016, Commissioners Court came on to be heard and reviewed the accompanying notice of LECON, Inc.

Job Location 1323 Bittersweet Dr., Richmond, TX 77406

Date 2/22/2016 Bond No. no bond required, Permit No. 2016-5641 to make use of certain Fort Bend County property subject to, "A Revised Order Regulating the Laying, Construction, Maintenance, and Repair of Buried Cables, Conduits, and Pole Lines, In, Under, Across or Along Roads, Streets, Highways, and Drainage Ditches in Fort Bend County, Texas, Under the Jurisdiction of the Commissioners Court of Fort Bend County, Texas," as passed by the Commissioners Court of Fort Bend County, Texas the 3rd day of August, 1987, recorded in Volume _____ of the Minutes of the Commissioners Court of Fort Bend County, Texas, to the extent that such order is not inconsistent with Article 1436a, Vernon's Texas Civil Statutes. Upon Motion of Commissioner Meyers, seconded by Commissioner Patterson, duly put and carried, it is ORDERED, ADJUDGED AND DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

Notes:

1. Evidence of review by the Commissioners Court must be kept on the job site and failure to do so constitutes grounds for job shutdown.
2. Written notices are required:
 - a. 48 hours in advance of construction start up, and
 - b. when construction is completed and ready for final inspection
 Mail notices to: Permit Administrator
 Fort Bend County Engineering
 301 Jackson Street
 Richmond, Texas 77469
 281-633-7500
3. This permit expires one (1) year from date of permit if construction has not commenced.

By: Charles O. Duff
for County Engineer

Presented to Commissioners Court and approved.
Recorded in Volume 3-08-16 12I
Minutes of Commissioners Court

By: N/A
Drainage District Engineer/Manager

Clerk of Commissioners Court
By: Ronda Wilts
Deputy

County of Fort Bend

Engineering Department

301 Jackson Street
Richmond, Texas 77469

Johnny Ortega
Permit Administrator

Phone: (281) 633-7500

Permit Application Review Form For Cable, Conduit, and Pole Line Activity In Fort Bend County

Permit No. 2016-5641

The following "Notice of Proposed Cable, Conduit, and/or Pole Line activity in Fort Bend County" and accompanying attachments have been reviewed and the notice conforms to appropriate regulations set by Commissioner's Court of Fort Bend County, Texas.

- (1) Complete Application Form:
- a. Name of road, street, and/or drainage ditch affected.
 - b. Vicinity map showing course of directions
 - c. Plans and specifications
- (2) Bond:
- District Attorney, approval when applicable.
Perpetual bond currently posted.
- No: _____
Amount: _____
- Performance bond submitted.
- No: no bond required
Amount: _____
Cashier's Check
- No: _____
Amount: _____
- (3) Verbal permission given for emergencies, to start construction before approved in Commissioner's Court.

Precinct Engineer Acknowledgment

Date

Precinct Commissioner Acknowledgment

Date

(4)

Drainage District Approval when applicable

We have reviewed this project and agree it meets minimum requirements.

Johnny Ortega CFM

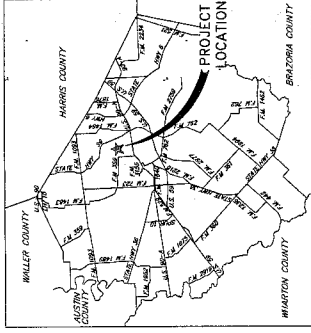
Johnny Ortega CFM/Permit Administrator

2/22/2016

Date

CONFORMED CONSTRUCTION SET

CONSTRUCTION OF THE GROVE 4 & 5 DRAINAGE IMPROVEMENTS IN FORT BEND COUNTY, TEXAS FOR



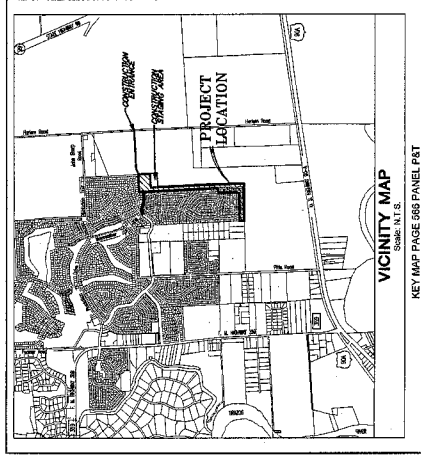
FORT BEND COUNTY AREA MAP

PECAN GROVE MUNICIPAL UTILITY DISTRICT

INDEX OF DRAWINGS

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2	PROJECT OVERALL & PREVENTION PREVENTION DETAILS
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5	PLAN & PROFILE BASELINE B
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7	PLAN & PROFILE BASELINE D
8	PLAN & PROFILE BASELINE E
9	PLAN & PROFILE BASELINE F
10	PLAN & PROFILE BASELINE G
11	PLAN & PROFILE BASELINE H
12	PLAN & PROFILE BASELINE I
13	PLAN & PROFILE BASELINE J
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17	PLAN & PROFILE BASELINE N
18	MISCELLANEOUS DETAILS
19	CITY OF RICHMOND STANDARD CONSTRUCTION DETAILS - STORM SEWER
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21	CITY OF RICHMOND STANDARD CONSTRUCTION DETAILS - WATER
22	CITY OF RICHMOND STANDARD CONSTRUCTION DETAILS - PAVING I
23	CITY OF RICHMOND STANDARD CONSTRUCTION DETAILS - PAVING II
24	TRAFFIC CONTROL PLAN

STA 1+00 - 3+00
 STA 1+00 - 3+50
 STA 1+00 - 4+00
 STA 1+00 - 5+00
 STA 0+00 - 10+00
 STA 0+00 - 17+00
 STA 0+00 - 10+00
 STA 10+00 - 20+00
 STA 20+00 - 30+00
 STA 30+00 - 40+00
 STA 40+00 - 64+50
 STA 0+00 - 64+50
 STA 62+00 - 74+00



VICINITY MAP
Scale: N.T.S.

KEY MAP PAGE 568 PANEL PST

FORT BEND COUNTY ENGINEER
 ENGINEER: *[Signature]*
 RESPONSIVE TELEPHONE: _____
 DATE: 12/2/14
 THESE SIGNATURES ARE VOID IF CONSTRUCTION HAS NOT BEGUN IN ONE (1) YEAR FROM DATE OF APPROVAL
 APPROVED: *[Signature]*
 DATE: 12/2/14

DATE: 11/24/14

CITY OF RICHMOND, TEXAS
 APPROVED BY: *[Signature]*
 Terry Vela, City Manager

[Signature]
 City Engineer

NOTE: Approval Void After One Year From Date Signed. If Construction Has Not Begun.

JONES & CARTER, INC. PROJECT NUMBER 00034-0368-01

NOVEMBER 2014

J.C. JONES & CARTER, INC.
 ENGINEERS-PLANNERS-SURVEYORS
 Texas Board of Professional Engineers Registration No. 7-739
 6411 N. Loop West, Houston, Texas 77047 (832) 246-2000

PECAN GROVE MUNICIPAL UTILITY DISTRICT

DATE: 1-4-14

PECAN GROVE MUNICIPAL UTILITY DISTRICT ENGINEER
 SIGNATURE VALID FOR ONE (1) YEAR

CALL BEFORE YOU DIG!!
 TEXAS (1-800-TRESS)
 1-800-344-8372
 LONE STAR NOTIFICATION CENTER
 1-800-668-8344



1. Chris W. Maloney, a Professional Engineer licensed in the State of Texas, is hereby certifying that these plans were prepared under my supervision and that I am responsible for the design and calculations.

[Signature]
 Chris W. Maloney, P.E.
 Date: 11/24/14

NOTES:

These plans were prepared to meet or exceed the specifications and requirements of City of Richmond and Fort Bend County as currently amended. Approval by Fort Bend County will be deemed void if construction has not begun within one year of approval date.

Construction will be monitored under the supervision of a licensed professional engineer of **JONES & CARTER, INC.**

Contractor shall notify the Fort Bend County Engineering Department at least 48 hours prior to commencement at construction@fortbendcountytx.gov.

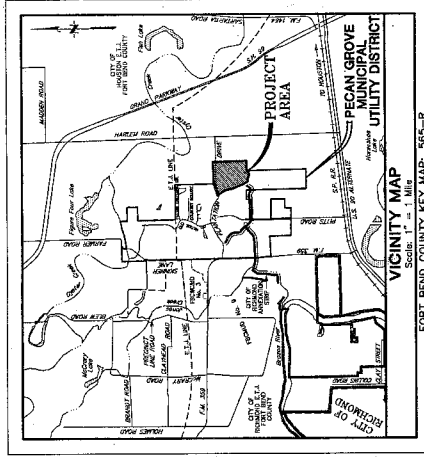
CONFORMED CONSTRUCTION SET

CONSTRUCTION OF PECAN GROVE PLANTATION 4 & 5 DRAINAGE IMPROVEMENTS

FOR PECAN GROVE MUNICIPAL UTILITY DISTRICT FORT BEND COUNTY, TEXAS

INDEX OF DRAWINGS

SHEET No.	TITLE
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PLAN & PROFILE	
5.	PROPOSED BASIN LAYOUTS - NORTH BASIN SHEET 1 OF 2
6.	PROPOSED BASIN LAYOUTS - NORTH BASIN SHEET 2 OF 2
7.	NORTH BASIN CROSS SECTION
8.	COPPERWOOD LANE & BITTERSWEET INLET PLAN & DETAIL INLET PLAN VIEW
9.	BASELINE 'D' - STA 22+00 TO STA 30+00
10.	PLANTATION DRIVE - STA 30+00 TO STA 64+00
11.	BASELINE 'E' - STA 64+00 TO STA 74+00
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DETAILS	
13.	CITY OF RICHMOND STANDARD CONSTRUCTION DETAILS WATER - SHEET 1 OF 2
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15.	CITY OF RICHMOND STANDARD CONSTRUCTION DETAILS SANITARY
16.	CITY OF RICHMOND STANDARD CONSTRUCTION DETAILS STORM SEWER
17.	CITY OF RICHMOND STANDARD CONSTRUCTION DETAILS PAVING - SHEET 1 OF 2
18.	CITY OF RICHMOND STANDARD CONSTRUCTION DETAILS PAVING - SHEET 2 OF 2
19.	PEDESTRIAN FACILITIES CURB RAMPS
20.	TRAFFIC CONTROL PLAN PHASE 1 STEP 1
21.	TRAFFIC CONTROL PLAN PHASE 1 STEP 2
22.	TRAFFIC CONTROL TYPICAL FLAGGING OR MOVING OPERATION
23.	DETOUR PLAN FOR QUARTERPATH DRIVE
24.	STORM WATER POLLUTION PREVENTION PLAN - SHEET 1 OF 2
25.	STORM WATER POLLUTION PREVENTION PLAN - SHEET 2 OF 2
26.	STORM WATER POLLUTION PREVENTION DETAILS



NOTES:
 These plans were prepared to meet or exceed the specifications and requirements of City of Richmond and Fort Bend County as currently amended.
 Approval by Fort Bend County will be deemed void if construction has not begun within one year of approval date.
 Construction shall not begin before the plat of this section is filed in the Fort Bend County Map Records.
 Construction will be monitored under the supervision of a licensed professional engineer of JONES & CARTER, INC.
 Contractor shall notify the Fort Bend County Engineering Department at least 48 hours prior to commencement at construction@fortbendcounty.gov.



I, Stephen C. Retter, a Professional Engineer licensed in the State of Texas do hereby certify that these plans were prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer of JONES & CARTER, INC. in accordance with the specifications and requirements of Fort Bend County, Texas.
 Stephen C. Retter, P.E. 12/21/14 Date

FORT BEND COUNTY ENGINEER
 ENGINEER: *Richard N. Stoller*
 DATE: 2/12/15
 THESE SIGNATURES ARE VOID IF CONSTRUCTION BEGINS BEFORE THE DATE OF APPROVAL.
 APPROVED: *[Signature]*
 DATE: 2/12/15

DIG-LESS NOTIFICATION SYSTEM
 CALL BEFORE YOU DIG!!!
 1-800-344-1377
 1-800-344-1377

DECEMBER 2014
 JC JOB No. 00034-0367-01

CITY OF RICHMOND, TEXAS
 Department of Public Works

Terr Vello City Manager
 Kelly R. Kaubig, P.E. City Engineer
 DATE: 12/21/14
 DATE: 12/21/14

JC JONES & CARTER, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 Texas Board of Professional Engineers Registration No. 1-439
 636 Gulliver Ct., Suite 100 Houston, Texas 77061 P (937) 777-6557

[Signature]
 PECAN GROVE MUNICIPAL UTILITY DISTRICT ENGINEER
 SIGNATURE VALID FOR ONE (1) YEAR
 DATE: 12/21/14

GENERAL NOTES

- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CITY AND STATE AGENCIES PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CITY AND STATE AGENCIES PRIOR TO THE START OF CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CITY AND STATE AGENCIES PRIOR TO THE START OF CONSTRUCTION.

STREET AND PAVING CONSTRUCTION NOTES

- P.1. ALL PAVEMENT SHALL BE CONSTRUCTED WITH THE PLANS AND SPECIFICATIONS AND CITY REQUIREMENTS.
P.2. ALL TEMPORARY AND PERMANENT DRAINAGE SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS MANUAL ON DRAINAGE DESIGN AND CONSTRUCTION.
P.3. ALL DRAINAGE STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS MANUAL ON DRAINAGE DESIGN AND CONSTRUCTION.

WATER DISTRIBUTION NOTES

- W.1. EXCEPT AS OTHERWISE SPECIFIED, WATER MAINS SHALL BE PVC, MINIMUM 12" DIA. UNLESS OTHERWISE SPECIFIED.
W.2. ALL WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS MANUAL ON WATER MAINS.
W.3. ALL WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS MANUAL ON WATER MAINS.

PRIVATE UTILITY LINES SHOWN

Table with columns for DATE, DRAWN BY, CHECKED BY, and REVISIONS. Includes a section for REVISIONS with columns for NO., DATE, and DESCRIPTION.

STORM SEWER NOTES

- S.1. ALL STORM SEWER MAINS SHALL BE 15" DIA. UNLESS OTHERWISE SPECIFIED.
S.2. ALL STORM SEWER MAINS SHALL BE 15" DIA. UNLESS OTHERWISE SPECIFIED.
S.3. ALL STORM SEWER MAINS SHALL BE 15" DIA. UNLESS OTHERWISE SPECIFIED.

SANITARY SEWER CONSTRUCTION NOTES

- SS.1. ALL SANITARY SEWER MAINS SHALL BE 12" DIA. UNLESS OTHERWISE SPECIFIED.
SS.2. ALL SANITARY SEWER MAINS SHALL BE 12" DIA. UNLESS OTHERWISE SPECIFIED.
SS.3. ALL SANITARY SEWER MAINS SHALL BE 12" DIA. UNLESS OTHERWISE SPECIFIED.

LEVEL FILL NOTES

- L.1. ALL LEVEL FILL SHALL BE CONFORMING TO THE REQUIREMENTS OF THE TEXAS MANUAL ON LEVEL FILL.
L.2. ALL LEVEL FILL SHALL BE CONFORMING TO THE REQUIREMENTS OF THE TEXAS MANUAL ON LEVEL FILL.
L.3. ALL LEVEL FILL SHALL BE CONFORMING TO THE REQUIREMENTS OF THE TEXAS MANUAL ON LEVEL FILL.

LAND ACQUISITION NOTES

- LA.1. THE PEACAN GROVE MUNICIPAL UTILITY DISTRICT IS CURRENTLY ACTIVELY ENGAGED IN THE ACQUISITION OF ALL NECESSARY LAND.
LA.2. THE PEACAN GROVE MUNICIPAL UTILITY DISTRICT IS CURRENTLY ACTIVELY ENGAGED IN THE ACQUISITION OF ALL NECESSARY LAND.
LA.3. THE PEACAN GROVE MUNICIPAL UTILITY DISTRICT IS CURRENTLY ACTIVELY ENGAGED IN THE ACQUISITION OF ALL NECESSARY LAND.

CONSTRUCTION NOTES

- C.1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS MANUAL ON CONSTRUCTION.
C.2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS MANUAL ON CONSTRUCTION.
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PEACAN GROVE MUNICIPAL UTILITY DISTRICT

PEACAN GROVE MUNICIPAL UTILITY DISTRICT
DRAINAGE IMPROVEMENTS
CONSTRUCTION NOTES
THE GROVE 4 & 9

DRAINAGE IMPROVEMENTS

DRAINAGE IMPROVEMENTS
CONSTRUCTION NOTES
THE GROVE 4 & 9

J.C. JONES & CARTER, INC.

J.C. JONES & CARTER, INC.
ENGINEERS, PLANNERS & SURVEYORS
1000 West Loop West, Suite 1000, Houston, Texas 77027
PHONE: 713-865-1000
FAX: 713-865-1001

DRAINAGE IMPROVEMENTS

DRAINAGE IMPROVEMENTS
CONSTRUCTION NOTES
THE GROVE 4 & 9

BENCHMARKS
 NGS Monument No. 1902, Base Cap in Top of NW End of
 Pine Alignment of a Concrete Bridge, Under Eastbound
 Lane of I-10, Stationing 1+00.00, Elevation of F.M. 368
 and 1.43 Miles NE of Johnson County Courthouse.
 Elevation = 62.89' (NAD 83)

TEMP. MARKS
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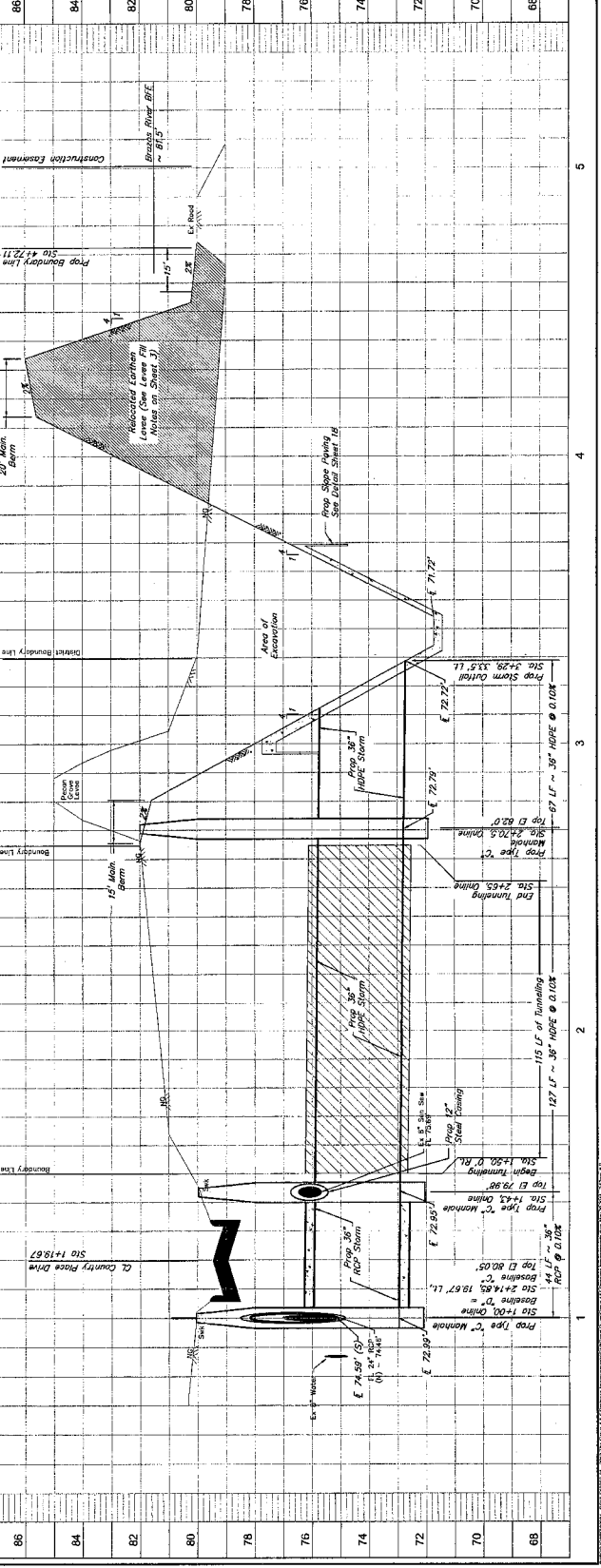
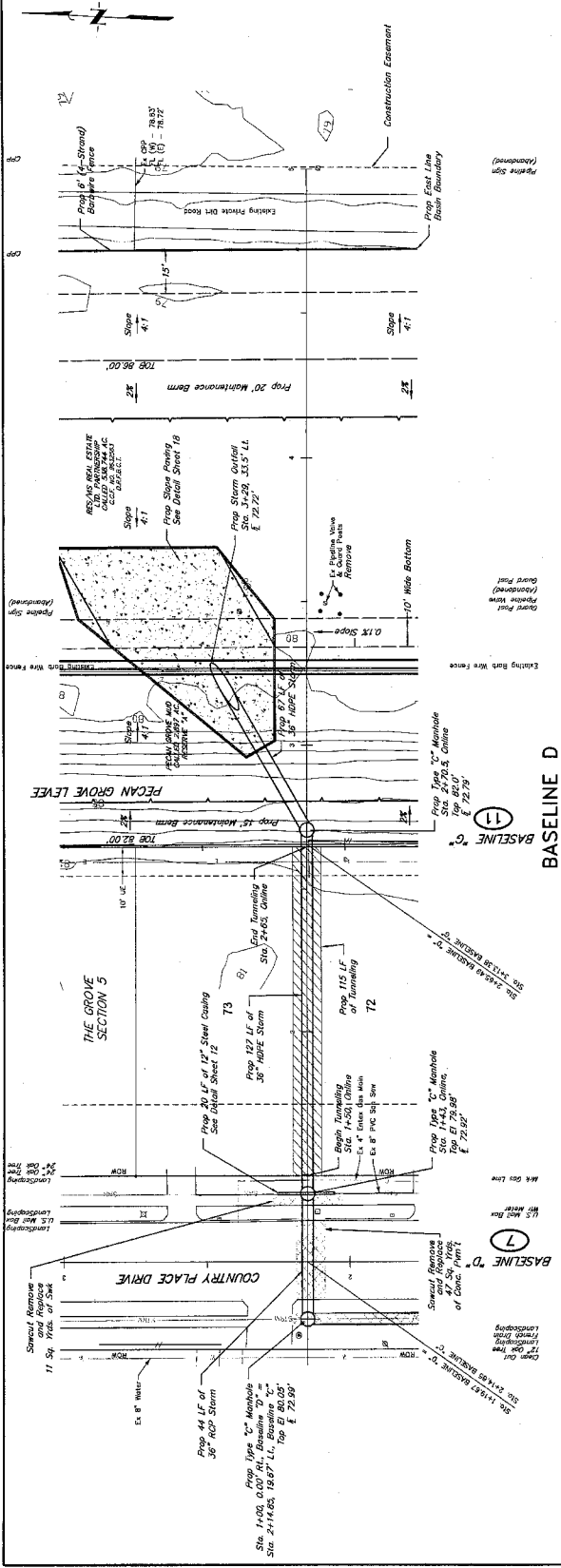
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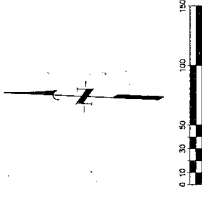
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APPROVED: [Signature] DATE: 12/2/14
 PROJECT: THE GROVE 4 & 5 DRAINAGE IMPROVEMENTS
 PLAN & PROFILE BASELINE D STA 1+00 - 5+00
 J.C. JONES & CARTER, INC. ENGINEERS-PLANNERS-SURVEYORS
 1000 W. KALHOFF BOULEVARD, SUITE 100, FORT WORTH, TEXAS 76104
 DATE: NOVEMBER 2014
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 SUBMITTED: [Date]
 SHEET NO. 7 OF 24

BENCH MARK
 NEAR WASHINGTON PK. LIBRA BRASS CAP AT TOP OF NW
 CORNER OF EASTING LINE OF 1/4 SECTION 30A, 81E
 OF RANGE 10E, T. 10N, R. 10E, S. 10E, 10E
 OF RANGE 10E, T. 10N, R. 10E, S. 10E, 10E
 ELEVATION = 82.87' (NAVD 83)



APPROVED: *[Signature]*
 DEVELOPMENT COORDINATOR
 DATE: 2/19/15

PRIVATE UTILITY LINES SHOWN
 FOR INFORMATION ONLY. THE USER SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
 THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES.
 THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES.
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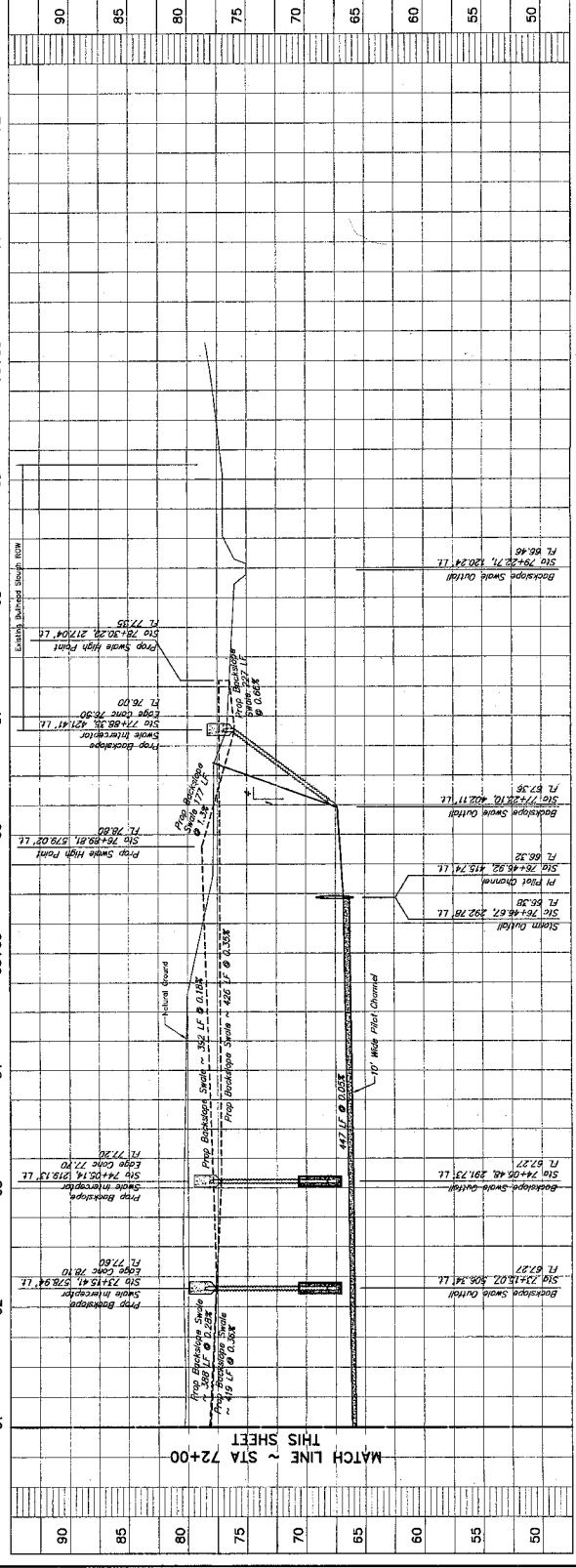
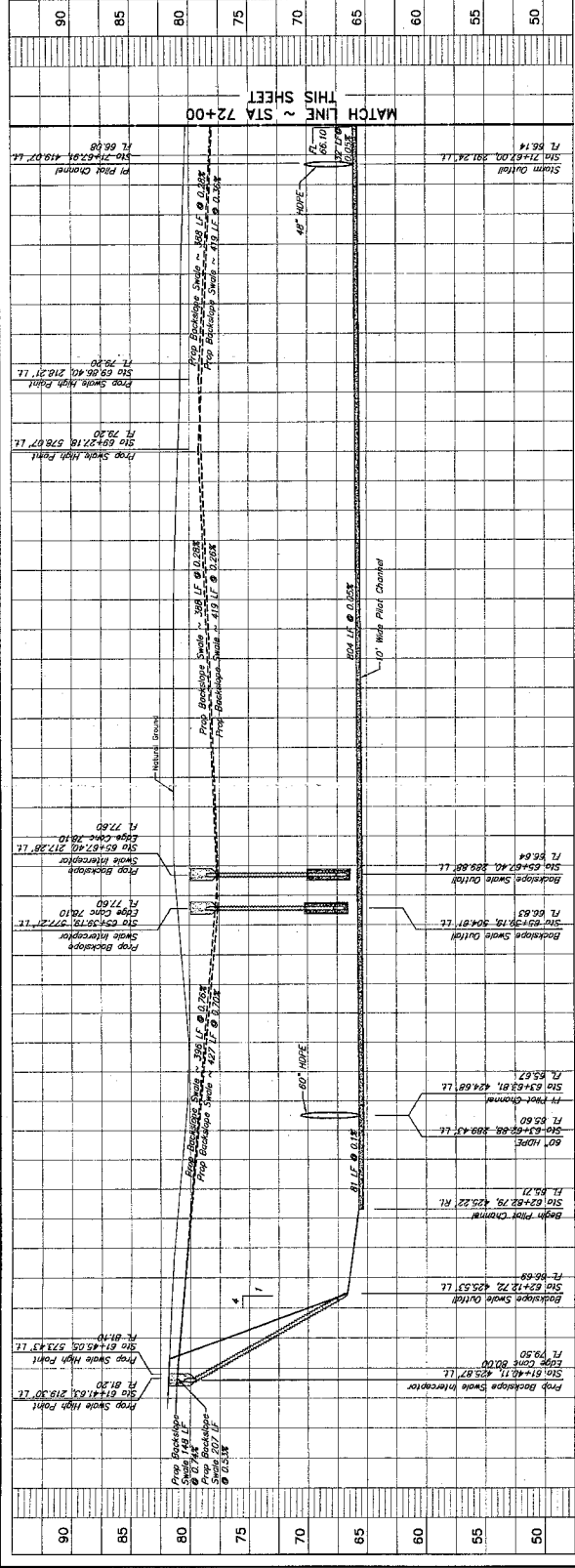
NO.	DATE	REVISIONS	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

PECAN GROVE M.U.D.
 FORT BEND COUNTY, TEXAS
 DRAINAGE IMPROVEMENTS
 NORTH BASIN
 CROSS SECTION

J.C. JONES & SONS, INC.
 ENGINEERS, P.L.L.C.
 1100 WEST 10TH STREET, SUITE 100
 FORT WORTH, TEXAS 76104
 PHONE: (817) 339-1111
 FAX: (817) 339-1112
 WWW: JCS&S.COM



SHEET NO. 7
 OF 26



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REVISIONS

- 1. MBE (Minimum) No. 1000, Base Cap in Top of NMI End of Lane of U.S. Hwy 63A, 0.1 Mile SW of Junction of F.M. 396 and 1.45 Miles NE of Robinson Court House. Elevation = 62.85' (NAVD 88)
- 2. T.B.M. "X" - THE INTERSECTION OF ANMYWATER COURT AND THE INTERSECTION OF F.M. 396 AND 1.45 Miles NE of Robinson Court House. ELEVATION = 62.85' (NAVD 88)
- 3. T.B.M. "Y" - THE INTERSECTION OF ANMYWATER COURT AND THE INTERSECTION OF F.M. 396 AND 1.45 Miles NE of Robinson Court House. ELEVATION = 62.85' (NAVD 88)
- 4. T.B.M. "Z" - THE INTERSECTION OF ANMYWATER COURT AND THE INTERSECTION OF F.M. 396 AND 1.45 Miles NE of Robinson Court House. ELEVATION = 62.85' (NAVD 88)
- 5. T.B.M. "A" - THE INTERSECTION OF ANMYWATER COURT AND THE INTERSECTION OF F.M. 396 AND 1.45 Miles NE of Robinson Court House. ELEVATION = 62.85' (NAVD 88)

NOTE: FOR SMALL USE CUSTOMER CONNECTIONS IN PROJECT AREA, DAMAGES TO EXISTING PUBLIC UTILITY PROPERTY SHALL BE THE RESPONSIBILITY OF THE CUSTOMER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES.

APPROVED: *[Signature]*
DATE: 12/21/14

CONSTRUCTION COORDINATOR

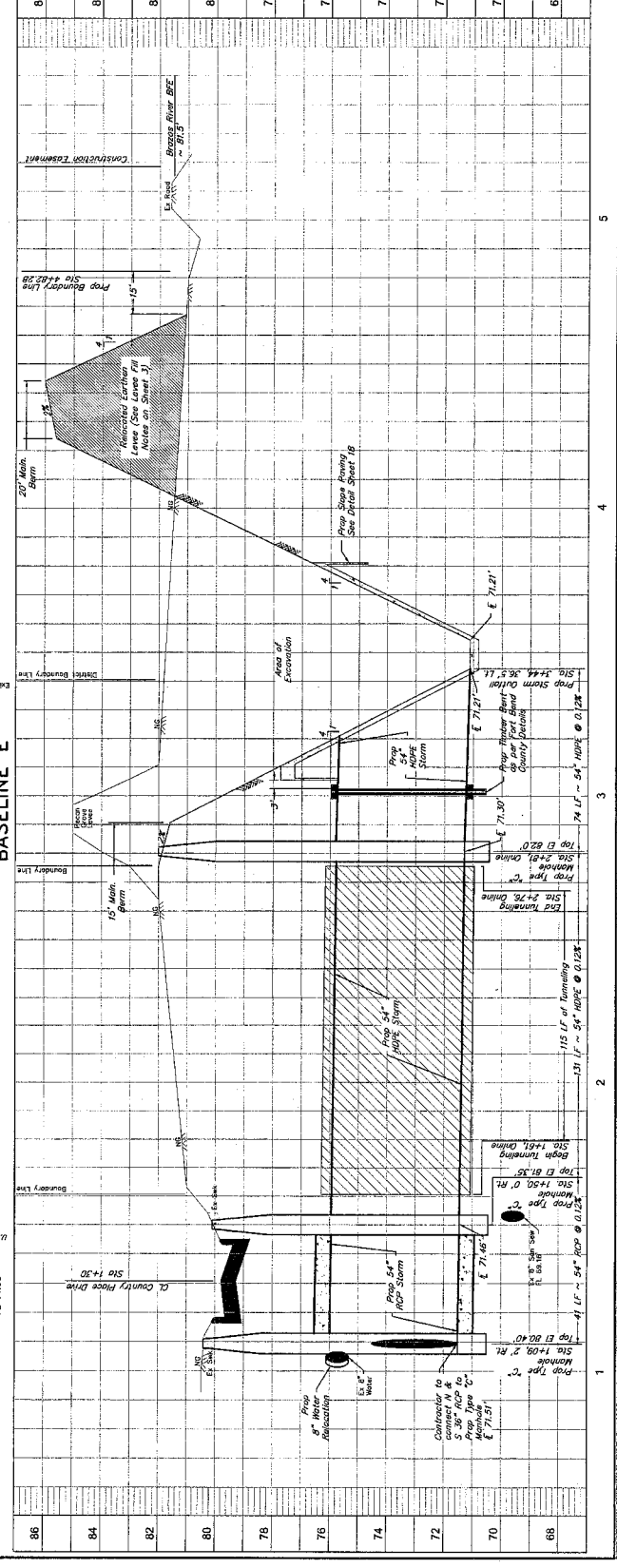
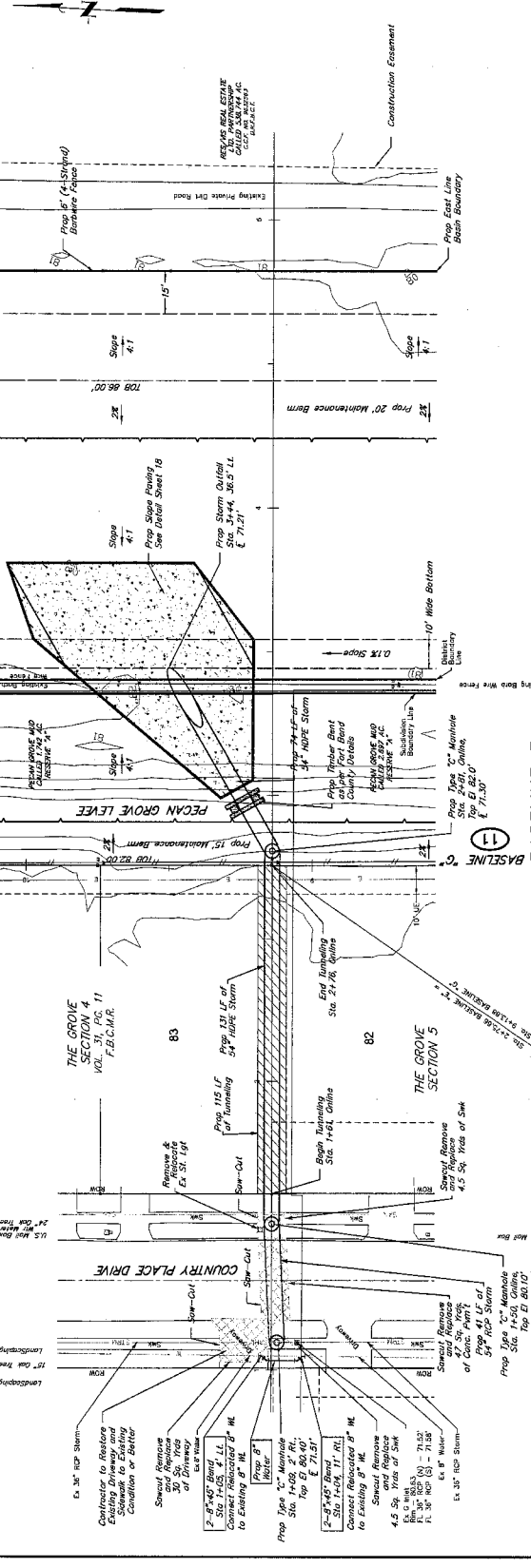
PRIVATE UTILITY LINES SHOWN
BASED ON RECORD DRAWINGS AND FIELD SURVEY DATA.
DATE: 12/21/14

Scale: 1" = 20'

0 5 10 20 40 60

THE GROVE 4 & 5
DRAINAGE IMPROVEMENTS
PLAN & PROFILE
BASELINE E
STA 1+00 - 5+00

J.C. JONES & CARTER
Professional Engineer
No. 12345
State of Texas
1234 Main Street
Houston, TX 77001
Phone: (713) 123-4567
Fax: (713) 123-4568
www.jcjonesandcarter.com



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GENERAL NOTES:
 1. ALL UTILITIES SHOWN IN MAXIMUM OF DENSITY AS SHOWN ON THE PLANS.
 2. ALL UTILITIES SHALL BE PLACED IN MAXIMUM OF DENSITY AS SHOWN ON THE PLANS.
 3. ALL UTILITIES SHALL BE PLACED IN MAXIMUM OF DENSITY AS SHOWN ON THE PLANS.
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 6. ALL UTILITIES SHALL BE PLACED IN MAXIMUM OF DENSITY AS SHOWN ON THE PLANS.

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MANHOLE CONNECTION NOTES:
 1. ALL MANHOLES SHALL BE SHOWN IN MAXIMUM OF DENSITY AS SHOWN ON THE PLANS.
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UTILITY NOTES:
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APPROVED: [Signature]
 DEVELOPMENT ENGINEER

DATE: 2/1/15

LEGEND:
 [Symbol] Proposed to be removed and replaced
 [Symbol] Proposed to be removed and replaced

TABLE 'A'
 ELEVATION = 82.8'
 (MAY 88)

TABLE 'B'
 ELEVATION = 82.3'
 (MAY 88)

TABLE 'C'
 ELEVATION = 79.2'
 (MAY 88)

PRIVATE UTILITY LINES SHOWN
 EXISTING PRIVATE UTILITY LINES
 PROPOSED PRIVATE UTILITY LINES

TABLE 'D'
 DATE: 2/1/15
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: 2/1/15

TABLE 'E'
 DATE: 2/1/15
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: 2/1/15

TABLE 'F'
 DATE: 2/1/15
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: 2/1/15

TABLE 'G'
 DATE: 2/1/15
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: 2/1/15

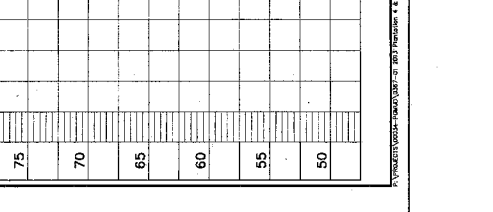
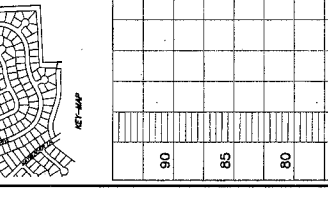
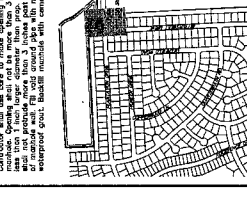
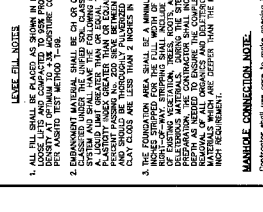
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 CHECKED BY: [Name]
 DATE: 2/1/15

TABLE 'I'
 DATE: 2/1/15
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: 2/1/15

TABLE 'J'
 DATE: 2/1/15
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: 2/1/15

TABLE 'K'
 DATE: 2/1/15
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: 2/1/15

TABLE 'L'
 DATE: 2/1/15
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: 2/1/15



JF JONES & CARTER
 ENGINEERS & ARCHITECTS
 2005 W. W. WALKER BLVD., SUITE 100
 FORT WORTH, TEXAS 76102
 PHONE: 817.335.1111
 FAX: 817.335.1112
 DATE: 2/1/15
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: 2/1/15

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 DATE: 2/1/15

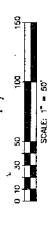
BENCHMARK

NSS Monument No. 180M, Benchmark Cap in Top of NW End of the NE Abutment of a Concrete Bridge Under Eastbound Lane 10, I-30, 1.1 Mile SW of Junction of M. 359 and I-45, 1.45 Miles NE of the Dallas County Courthouse.

- Elevation = 82.08' (MVD 88)
- T.M. 1111 - 1/2" x 1/2" x 1/2" IRON NAIL SET INTO THE INTERSECTION OF HAWKSWATER COURT AND WINDSWORTH DRIVE, 2 N. OF SUBWAY. ELEVATION = 82.38' (MVD 88)
- T.M. 1112 - 1/2" x 1/2" x 1/2" IRON NAIL SET INTO THE INTERSECTION OF WINDSWORTH DRIVE AND COUNTY PARK DRIVE. ELEVATION = 79.87' (MVD 88)
- T.M. 1113 - 1/2" x 1/2" x 1/2" IRON NAIL SET INTO THE INTERSECTION OF WINDSWORTH DRIVE AND BIRCHMOUNT COURT. ELEVATION = 79.57' (MVD 88)
- T.M. 1114 - 1/2" x 1/2" x 1/2" IRON NAIL SET INTO THE INTERSECTION OF WINDSWORTH DRIVE AND BIRCHMOUNT COURT. ELEVATION = 79.57' (MVD 88)

NOTE: CONTRACTOR SHALL USE CAUTION WHEN EXCAVATING IN AREAS WHERE UTILITIES ARE SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES. CONTACT THE UTILITY DISTRICT, EAST TARRANT COUNTY, CITY OF FORT WORTH, PRIVATE CONSULT.

APPROVED: *[Signature]*
 DATE: 11/2/14
 EIGHTH EDITION COORDINATOR



PRIVATE UTILITY LINES SHOWN
 AT ALL TIMES CONTRACTOR SHALL EXCAVATE AND EXPOSE ALL UTILITIES SHOWN ON THIS PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES. CONTACT THE UTILITY DISTRICT, EAST TARRANT COUNTY, CITY OF FORT WORTH, PRIVATE CONSULT.

DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 DATE: _____
 DATE: _____

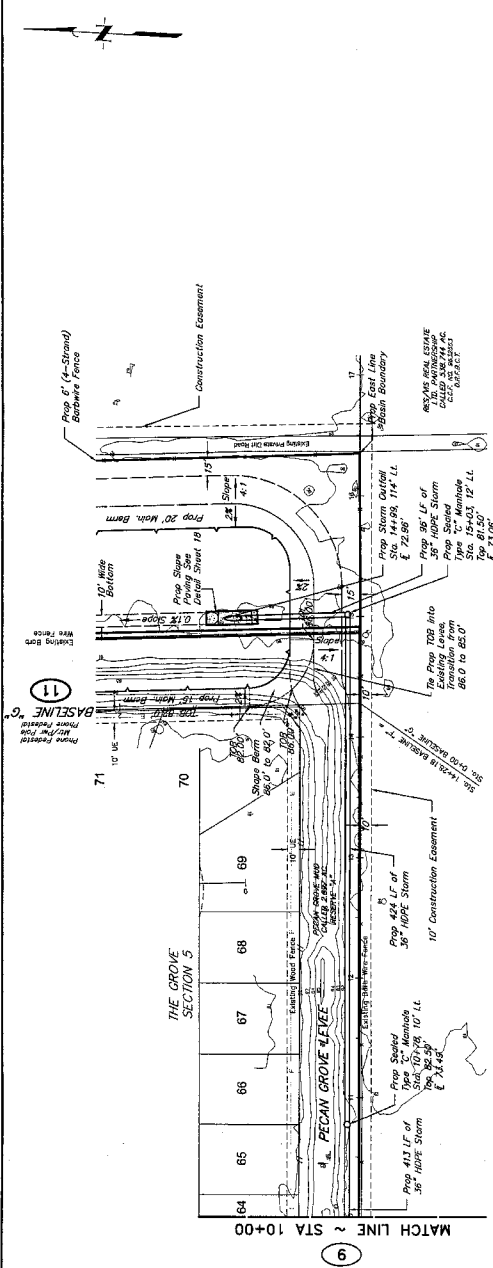
NO.	DATE	REVISIONS	BY

PECAN GROVE MUNICIPAL UTILITY DISTRICT
 EAST TARRANT COUNTY, TEXAS

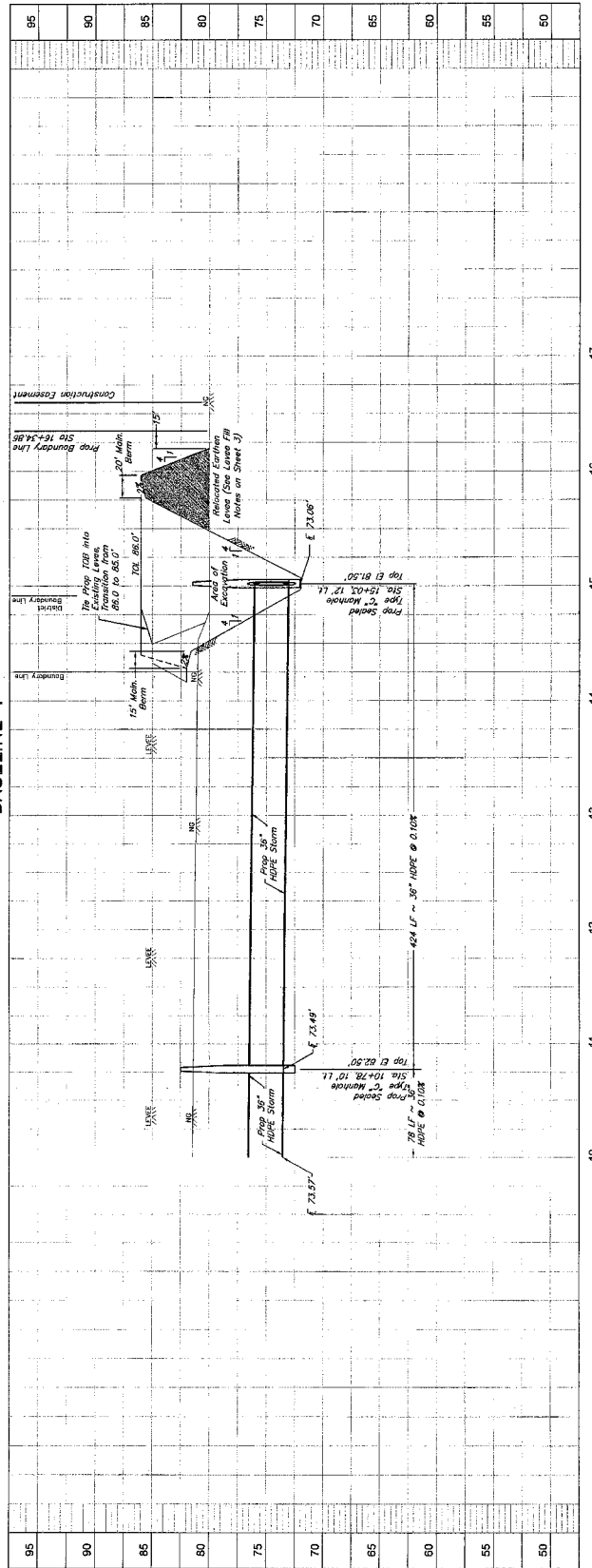
THE GROVE 4 & 5
 DRAINAGE IMPROVEMENTS
PLAN & PROFILE
 BASELINE F
 STA 10+00 - 17+00

J.C. JONES & CARTER, INC.
 ENGINEERS-PLANNERS-SURVEYORS
 615 Ross Street, Fort Worth, Texas 76102, (817) 332-5533

SCALE: _____
 DATE: _____
 JOB NO.: _____
 SUBMITTED: _____
 DRAWN BY: _____
 CHECKED BY: _____
 DATE: _____
 DATE: _____



BASELINE F



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BENCHMARK

NSS Monument No. US64, Black Cap in Top of NW End of the NE Corner of a Certain Bridge Under Easement and 145 Feet NE of Richmond Court Hook.
Elevation = 82.88' (MVD 88)

T.B.M. 12

NO. 202 1/4 NW 1/4 OF THE INTERSECTION OF WANGFATHER COURT AND WINDSOR DRIVE, 7 1/4 OF EDWARDS.
Elevation = 82.32' (MVD 88)

T.B.M. 32

7' 0" OF 3" CONC. IN E.N.E. OF THE INTERSECTION OF WINDSOR DRIVE AND COUNTRY PLACE DRIVE.
Elevation = 73.57' (MVD 88)

T.B.M. 33

CENTERLINE INTERSECTION OF RUTHERFORD DRIVE AND RUTHERFORD COURT.
Elevation = 72.24' (MVD 88)

NOTE

CONTRACTOR SHALL USE CAUTION WHEN BROWDER IN THE FIELD TO VERIFY THE LOCATION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS FROM THE LOCAL DISTRICT, FORT BEND COUNTY, CITY OF RICHMOND OR PRIVATE UTILITIES.

APPROVED: *[Signature]*
DEVELOPMENT COORDINATOR
DATE: 12/2/14



SCALE: 1" = 50'

PRIVATE UTILITY LINES SHOWN
AS LOCATED ON THE DATE SHOWN IN THE TITLE BLOCK.

DATE: 12/2/14
DRAWN BY: [Name]
CHECKED BY: [Name]
DATE: 12/2/14
DESIGNED BY: [Name]
DATE: 12/2/14

PROJECT NO. 14555-0308-01
SHEET NO. 11 OF 11

THE GROVE 4 & 5
DRAINAGE IMPROVEMENTS
PLAN & PROFILE
BASELINE G
STA 0+00 - 10+00

PECAN GROVE MUNICIPAL UTILITY DISTRICT
FORT BEND COUNTY, TEXAS

J.C. JONES & CARTER, INC.
Professional Engineer Registration No. 24579
1000 West Loop West, Suite 700, Fort Worth, Texas 76107 (817) 252-2222

DATE: 12/2/14
DRAWN BY: [Name]
CHECKED BY: [Name]
DATE: 12/2/14
DESIGNED BY: [Name]
DATE: 12/2/14

PROJECT NO. 14555-0308-01
SHEET NO. 11 OF 11

THE GROVE 4 & 5
DRAINAGE IMPROVEMENTS
PLAN & PROFILE
BASELINE G
STA 0+00 - 10+00

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DATE: 12/2/14
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CHECKED BY: [Name]
DATE: 12/2/14
DESIGNED BY: [Name]
DATE: 12/2/14

PROJECT NO. 14555-0308-01
SHEET NO. 11 OF 11

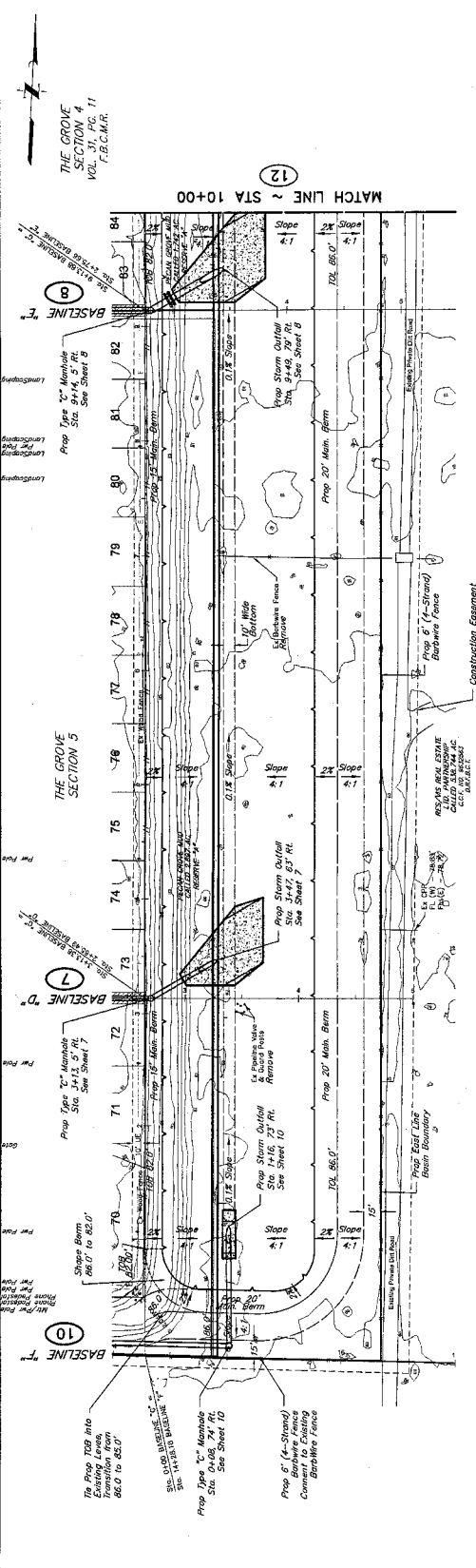
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DATE: 12/2/14
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CHECKED BY: [Name]
DATE: 12/2/14
DESIGNED BY: [Name]
DATE: 12/2/14

PROJECT NO. 14555-0308-01
SHEET NO. 11 OF 11



MATCH LINE ~ STA 10+00

THE GROVE SECTION 4
VOL. 31, PG. 11
7.2 C.M.R.

THE GROVE SECTION 5

BASELINE G

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THE GROVE SECTION 4
VOL. 31, PG. 11
7.2 C.M.R.

THE GROVE SECTION 5

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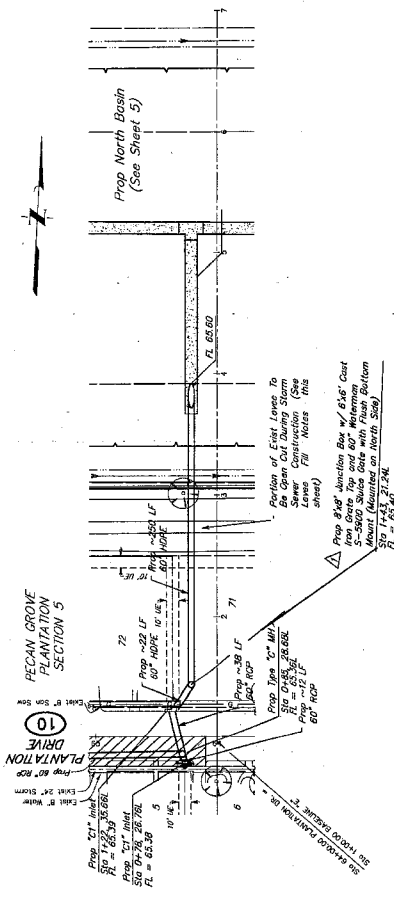
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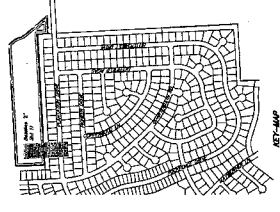
- LEAVE-BILL NOTES**
1. ALL BILL SHALL BE PLACED AS SHOWN IN MAXIMUM OF DENSITY AS OBTAIN TO THE MAXIMUM DENSITY AS PER AASHTO TEST METHOD T-99.
 2. CLASSIFIED UNDER THE UNIFIED SOIL CLASSIFICATION SYSTEM (USCS) AND THE AASHTO SYSTEM (AASHTO).
 3. THE FOUNDATION AREA SHALL BE A MINIMUM OF 6 INCHES DEEPER FOR THE SHALL WITH 0.01% INCREASE OF DRAINAGE COEFFICIENT. THE SOIL SHALL BE PREPARED BY THE CONTRACTOR SHALL INCREASE THE REMOVAL OF ALL ORGANICS AND SUBSTITUTIONS WITH REQUIREMENT.

MANHOLE CONNECTION NOTE:
 Manhole openings shall be 30 inches diameter. The manhole shall be constructed of concrete or masonry. The manhole shall be constructed of concrete or masonry. The manhole shall be constructed of concrete or masonry. The manhole shall be constructed of concrete or masonry.

B-B MARK
 Storm Manhole
 8'-0" DIA



UTILITY NOTE:
 Contractor shall use extreme care when working around
 solitary and water lines.



BRUSH MARK
 BRUSH MARK NO. 1000, BRUSH CAP IN TOP OF NW CORNER OF EACH SECTION OF CONCRETE DRIVE. THE BRUSH MARK SHALL BE PLACED AT THE INTERSECTION OF SECTION 5 AND SECTION 6. THE BRUSH MARK SHALL BE PLACED AT THE INTERSECTION OF SECTION 5 AND SECTION 6. THE BRUSH MARK SHALL BE PLACED AT THE INTERSECTION OF SECTION 5 AND SECTION 6.

TABLE 1
 ELEVATION = 65.39

TABLE 2
 ELEVATION = 65.40

TABLE 3
 ELEVATION = 65.41

TABLE 4
 ELEVATION = 65.42

TABLE 5
 ELEVATION = 65.43

TABLE 6
 ELEVATION = 65.44

TABLE 7
 ELEVATION = 65.45

TABLE 8
 ELEVATION = 65.46

TABLE 9
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TABLE 10
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TABLE 11
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TABLE 12
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TABLE 13
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TABLE 14
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TABLE 15
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TABLE 16
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TABLE 17
 ELEVATION = 65.55

TABLE 18
 ELEVATION = 65.56

TABLE 19
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TABLE 20
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TABLE 21
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TABLE 22
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TABLE 41
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TABLE 42
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TABLE 43
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TABLE 60
 ELEVATION = 65.98

TABLE 61
 ELEVATION = 65.99

TABLE 62
 ELEVATION = 66.00

APPROVED: *[Signature]*
 DEVELOPMENT COORDINATOR

DATE: 2/1/15

LEGEND
 Limits of pavement to be removed and replaced

PRIVATE UTILITY LINES SHOWN
 AS SHOWN ON THIS PLAN, THE LOCATION OF ALL PRIVATE UTILITY LINES IS NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL PRIVATE UTILITY LINES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES PRIOR TO CONSTRUCTION.

NOTES:
 1. ALL PRIVATE UTILITY LINES SHALL BE SHOWN ON THIS PLAN.
 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL PRIVATE UTILITY LINES PRIOR TO CONSTRUCTION.
 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES PRIOR TO CONSTRUCTION.

REVISIONS

NO.	DATE	DESCRIPTION
1	2/1/15	Added Junction Box Callout

DATE: 2/1/15
DATE: 2/1/15
DATE: 2/1/15

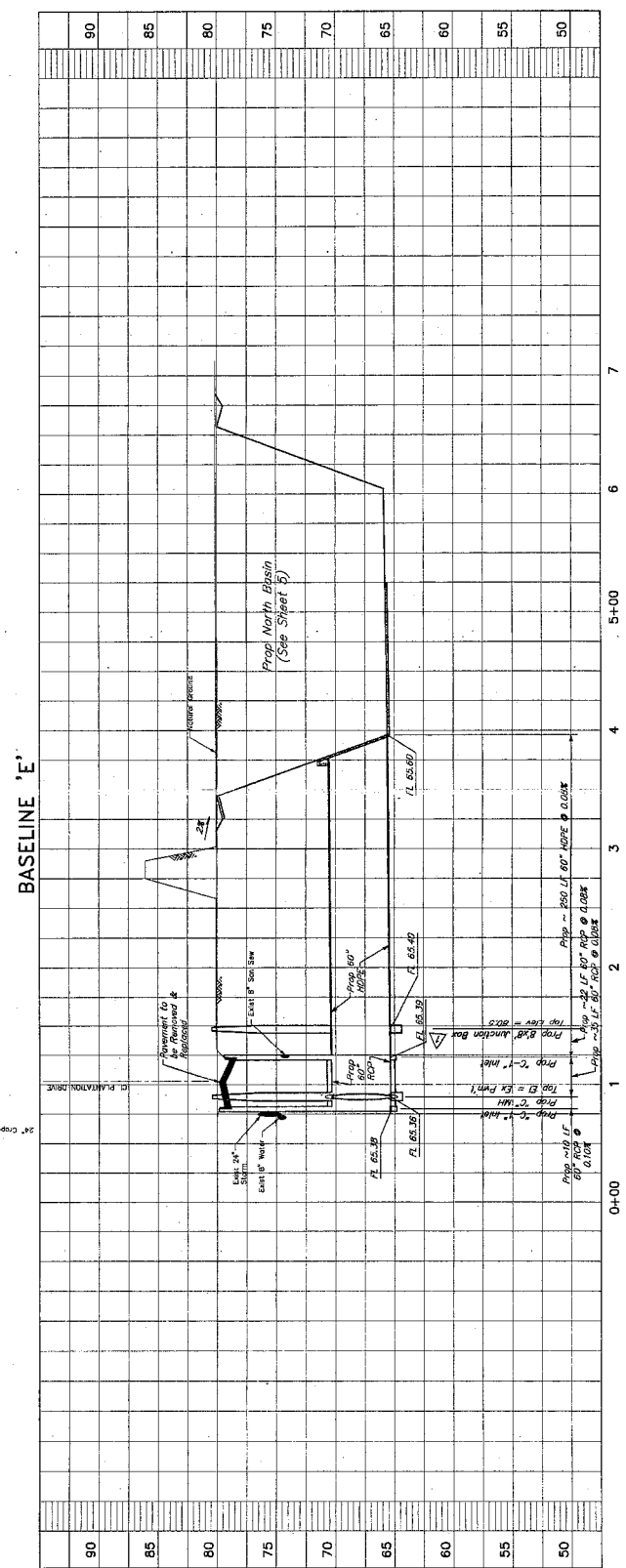
PECAN GROVE M.U.D.
 FORT BEND COUNTY, TEXAS

PECAN GROVE PLANTATION 4 & 5
DRAINAGE IMPROVEMENTS
BASELINE 'E'
STA 0+00 TO STA 7+00

J.C. JONES & ASSOCIATES
 12000 Katy Road, Suite 100, Houston, Texas 77058 (713) 462-1200
 DATE: 12/22/14
 DRAWN BY: JLC
 JOB NO.: 14000000000000
 SHEET NO.: 11
 SUBMITTED: 2/1/15
 P.E. NO.:

REGISTERED PROFESSIONAL ENGINEER
 STATE OF TEXAS
 NUMBER: 12000
 EXPIRES: 12/31/15

11
 OF 25



BENCHMARK

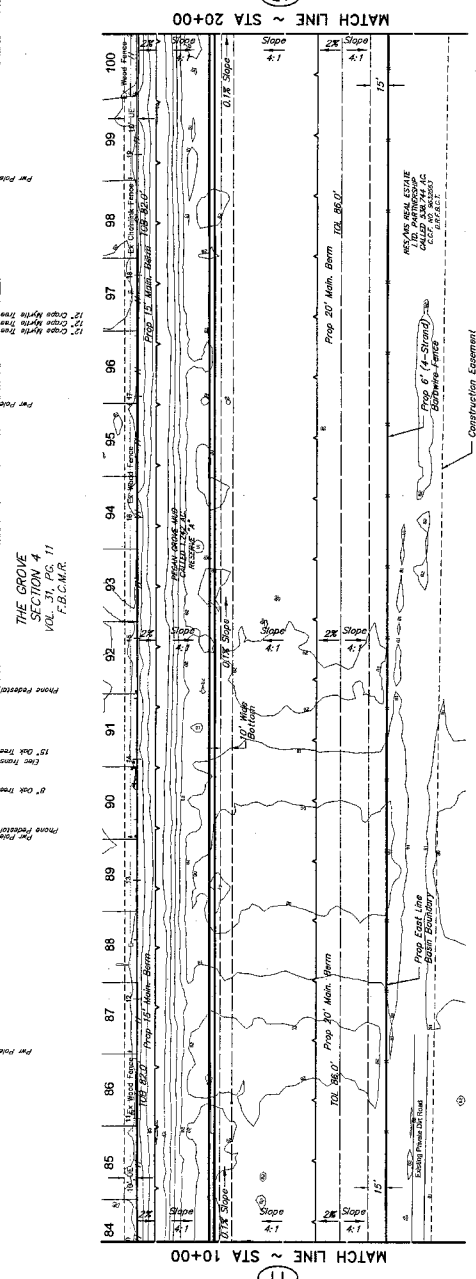
NWS Monument No. USRA, Brass Cap in Top of NW End of
 the NE Quarter of a Section 4, Under Enrollment
 and 1.45 Miles NE of Richmond, Cass Parish,
 Elevation = 82.66' (MVD 98)

T.B.M. 11C
 WOODS CROSSING OF THE INTERSECTION OF HAWKSWATER
 DRIVE AND COUNTRY PLACE DRIVE,
 ELEVATION = 93.36' (MVD 98)

T.B.M. 32
 WOODS CROSSING OF THE INTERSECTION OF WOODING
 DRIVE AND COUNTRY PLACE DRIVE,
 ELEVATION = 79.27' (MVD 98)

T.B.M. 22
 CENTERLINE INTERSECTION OF HITTENBERRY
 DRIVE AND HITTENBERRY COURT,
 ELEVATION = 79.24' (MVD 98)

NOTE:
 CONTRACTOR SHALL USE CAUTION WHEN EXCAVATING IN
 AREAS WHERE THERE IS A POSSIBILITY OF UNDERGROUND
 UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO
 CONTACT THE CITY OF RICHMOND, MISSISSIPPI, TO
 OBTAIN A COPY OF THE CITY RECORDS TO DETERMINE
 PRIVATE OWNERS.



APPROVED: *[Signature]*
 DATE: 12/2/14
 SCALE: 1" = 30'

DATE: 12/2/14

SCALE: 1" = 30'

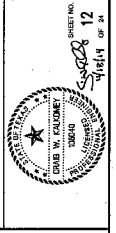
PRIVATE UTILITY LINES SHOWN
 ALL UTILITIES SHOWN ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.

NO.	DATE	REVISIONS	BY
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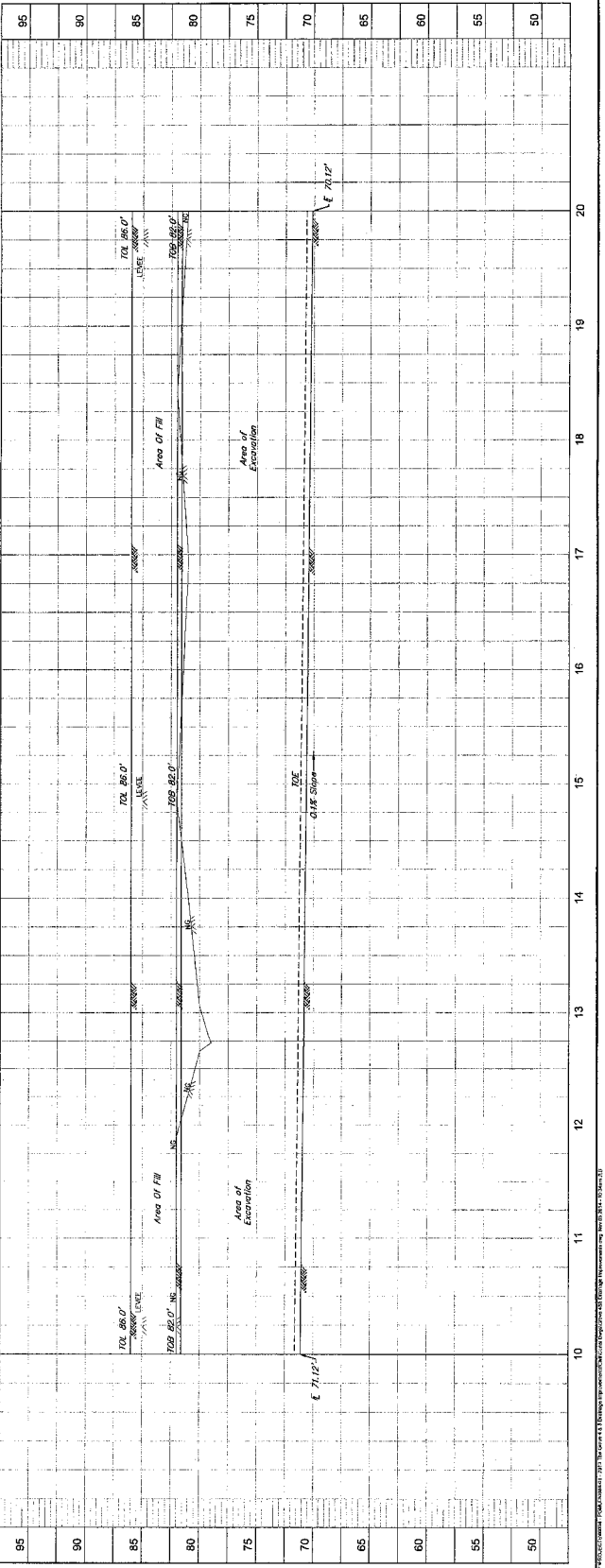
THE GROVE 4 & 5
 DRAINAGE IMPROVEMENTS
PLAN & PROFILE
BASELINE G
 STA 10+00 - 20+00

J.C. JONES & CARTER, INC.
 ENGINEERS-PLANNERS-SURVEYORS
 1475 Highway 100, Hammond, Louisiana 70401
 PHONE: (504) 885-7700 FAX: (504) 885-7701

SCALE: 1" = 30'
 DATE: NOVEMBER 2014
 JOB NO.: 140314-030-01
 SHEET NO.: 12
 SHEET TOTAL: 12



BASELINE G



PROJECT NUMBER: 140314-030-01
 SHEET NO.: 12
 SHEET TOTAL: 12

BENCHMARK
 REIS Monument No. 1584, Brass Cap in Top of NW End of the NE Quarter of a Corner Being Under Easement of 1.45 Acres NE of Richmond Court Lots 1 and 1.45 Miles NE of Richmond Court Iowa.
 Elevation = 82.85 (NAVD 88)

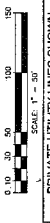
T.B.M. 22
 100' GRADE MARK OF THE INTERSECTION OF HAWKSWATER COURT AND WINDSWIFT DRIVE, 7 1/2' N. OF SUDAWAK
 ELEVATION = 82.32 (NAVD 88)

T.B.M. 23
 7' CUT IN CONC. 1/4 MI. OF THE INTERSECTION OF WOODWARD DRIVE AND COUNTRY PLACE DRIVE
 ELEVATION = 79.27 (NAVD 88)

T.B.M. 24
 CENTERLINE/BACKSIGHTLINE INTERSECTION OF HITTENSWERT DRIVE AND HITTENSWERT COURT.
 ELEVATION = 79.24 (NAVD 88)

NOTE
 CONTRACTOR SHALL USE CAUTION WHEN LOCATING THE UTILITIES SHOWN ON THIS PLAN. THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND DEPTH OF UTILITIES IS NOT TRANSFERRED TO THE ENGINEER BY THE PRESENCE OF THIS PLAN. THE CITY OF RICHMOND, IOWA, PROVIDES CONVEYANCE.

APPROVED: *[Signature]*
 DEVELOPMENT COORDINATOR
 DATE: 12/2/14



PRIVATE UTILITY LINES SHOWN
 ARE NOT TO BE CONSIDERED AS GUARANTEED UNLESS INDICATED OTHERWISE BY THIS PLAN.

DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 DATE: _____

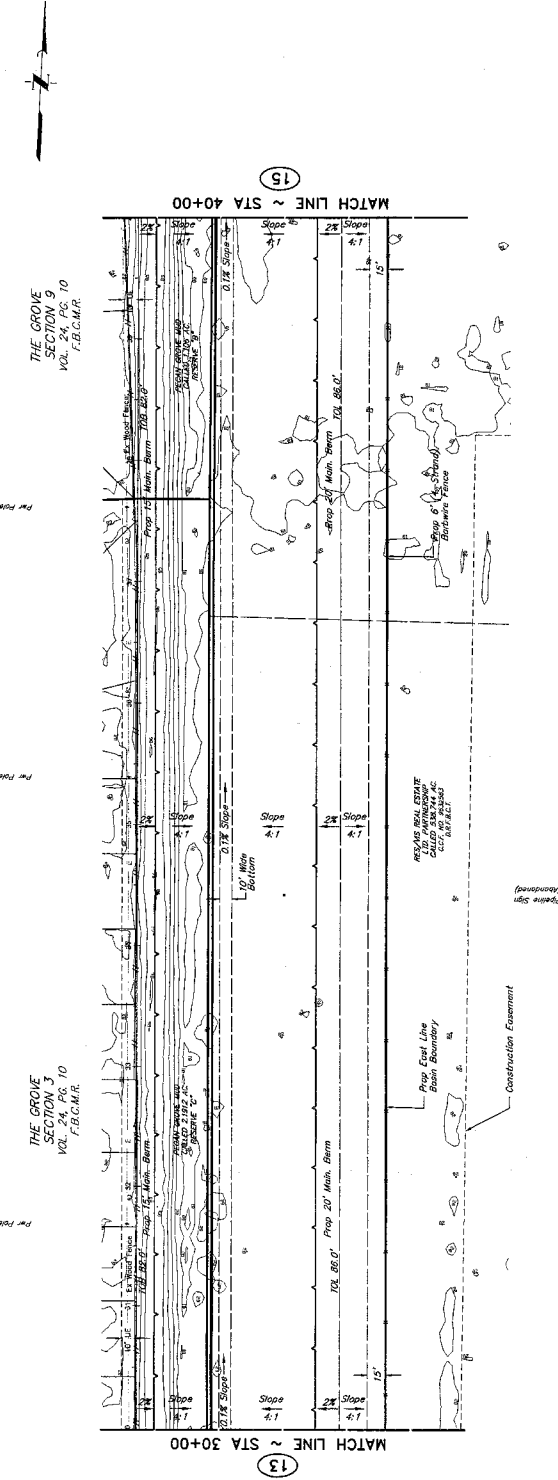
NO.	DATE	REVISIONS	APP.

PECAN GROVE MUNICIPAL UTILITY DISTRICT
 PEAN GROVE COUNTY, IOWA

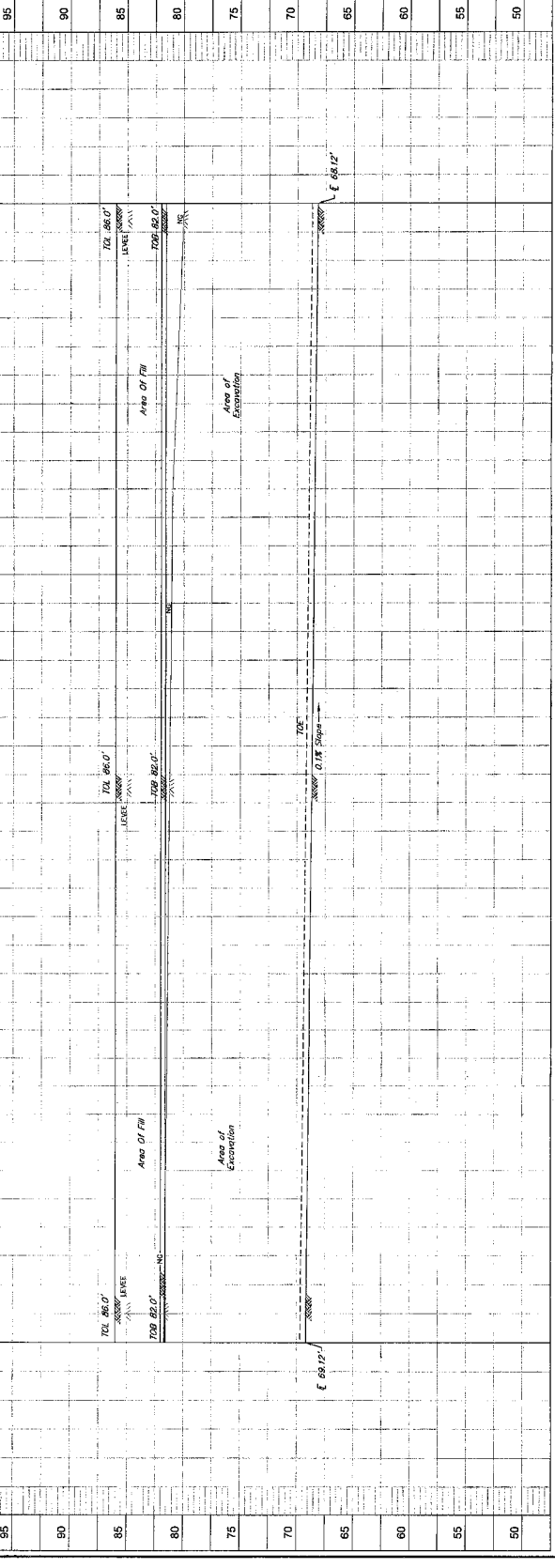
THE GROVE 4 & 5
 DRAINAGE IMPROVEMENTS
PLAN & PROFILE
BASELINE G
 STA 30+00 - 40+00

J.C. JONES & CARTER, INC.
 ENGINEERS-PLANNERS-SURVEYORS
 1475 Oakdale Road, Newton, Iowa 52567
 PHONE: 319-251-2222 FAX: 319-251-2222

SCALE: _____
 DATE: _____
 JOB NO.: _____
 SUBMITTED: _____



BASELINE G



95
90
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30 31 32 33 34 35 36 37 38 39 40

THE GROVE SECTION 9
 VOL. 14, P. 10
 F.B.C.M.R.

13 MATCH LINE ~ STA 30+00

15 MATCH LINE ~ STA 40+00

1	APPROVED	DATE
2	DESIGNED BY: RRS	DATE
3	DRAWN BY: EDS	DATE
4	CHECKED BY: NKK	DATE
5	DATE: OCTOBER 24, 1955	
6	JOB NO.	
7	DWG. NO.	
8	SHEET	

CITY OF RICHMOND
APPENDIX

LEWIS HARTZ, DIRECTOR OF PUBLIC WORKS

DAVID EMMETT, SUPERVISOR

W. W. WATSON, SUPERVISOR

DAVID FINE, SUPERVISOR

APPROVED: *[Signature]*
 DATE: 2/1/55

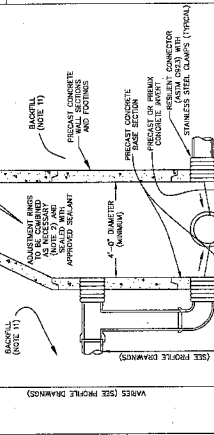
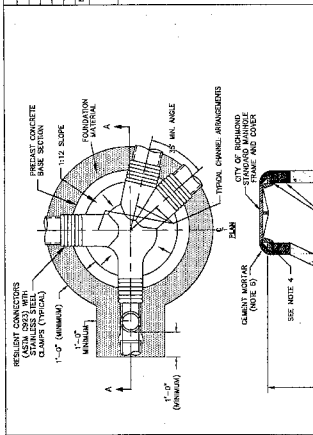
J.C. JONES & CARTER, INC.
 REGISTERED PLUMBERS - SANITARIANS
 1000 W. 10th Street, Richmond, Va. 23224

CITY OF RICHMOND
SANITARY

SCALE: _____

REVISIONS: _____

1	APPROVED	DATE
2	DESIGNED BY: RRS	DATE
3	DRAWN BY: EDS	DATE
4	CHECKED BY: NKK	DATE
5	DATE: OCTOBER 24, 1955	
6	JOB NO.	
7	DWG. NO.	
8	SHEET	

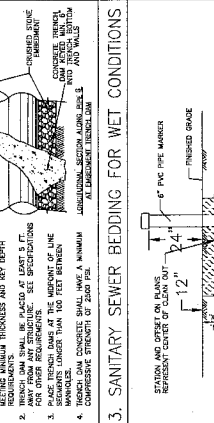
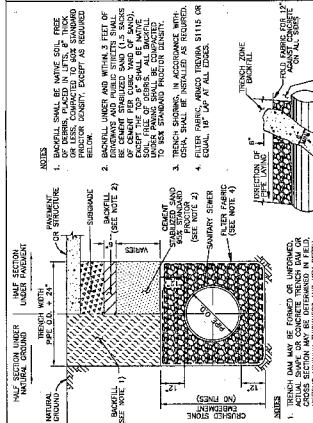


SECTION A

FOUNDATION MATERIAL

WAGES (SEE PROFILE DRAWINGS)

4\"/>

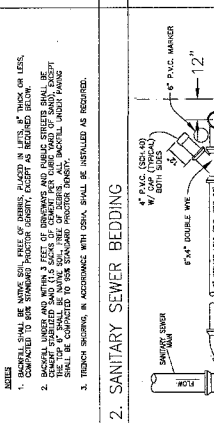
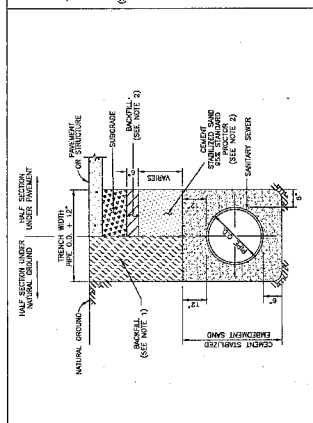


SECTION A

FINISHED GRADE

STANDARD BACKFILL

6\"/>

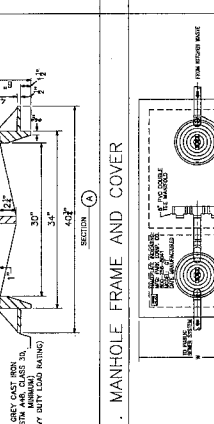
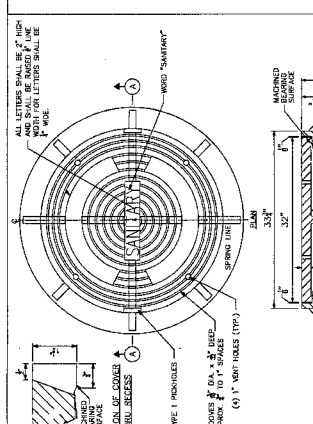


SECTION A

FINISHED GRADE

STANDARD BACKFILL

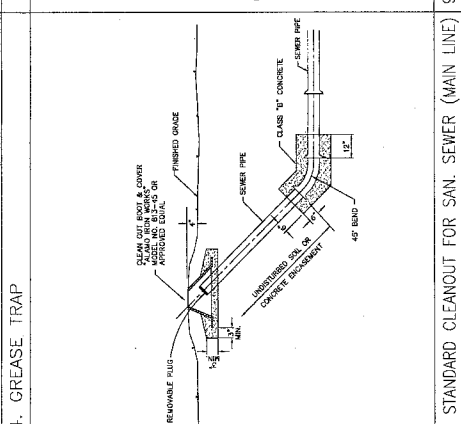
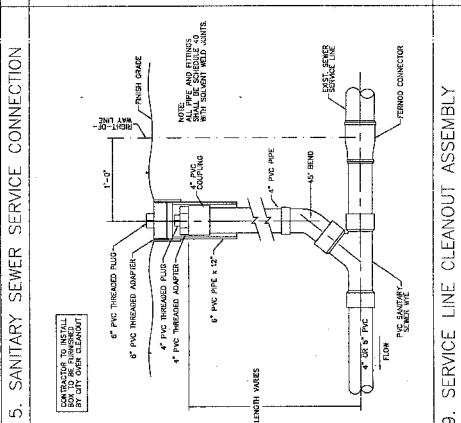
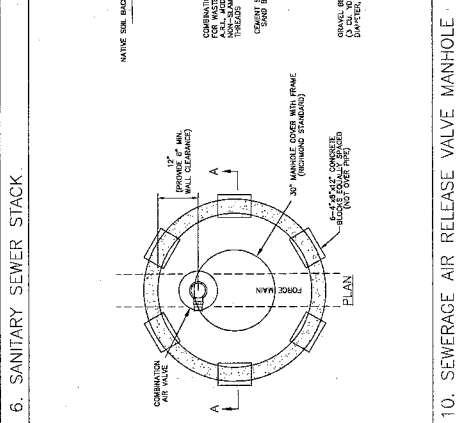
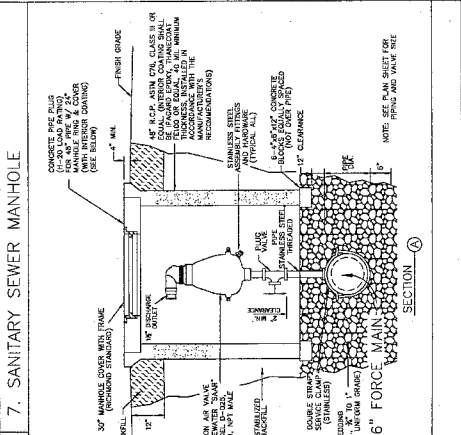
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SECTION A

GREASE TRAP

1\"/>



SECTION A

STANDARD CLEANOUT FOR SAN. SEWER (MAIN LINE)

6\"/>

BENCHMARK
 NRS Monument No. 1804, Brass Cap in Top of NW End of
 the NE-Arrow of a Corner Along User Boundary
 and 1.45 Miles NE of Richmond Court House.
 Elevation = 82.86 (NAVD 88)

TBM 3C
 TOL 81.00' 1/4" OF THE INTERSECTION OF HAWKFAIR
 COURT AND WOODBURY DRIVE, 2 1/4' OF SIDEWALK
 ELEVATION = 82.07 (NAVD 88)

TBM 3E
 7/8" C.P. IN CONC. 1/4" IN THE INTERSECTION OF WOODWARD
 DRIVE AND COUNTY PLACE DRIVE
 ELEVATION = 73.87 (NAVD 88)

TBM 3C
 CENTERLINE INTERSECTION OF WINTERBLET
 DRIVE AND BIRTSMEIER COURT.
 ELEVATION = 72.24 (NAVD 88)

NOTE
 CONTRACTOR SHALL USE CAUTION WHEN EXCAVATING IN
 AREAS WHERE THERE ARE UNDEVELOPED UTILITIES.
 UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO
 IDENTIFY. CONTACT THE UTILITY DISTRICT (FOR BIRMINGHAM COUNTY, CITY OF PEACOCK, OR
 PRIVATE OWNERS).

APPROVED: *[Signature]*
 DEVELOPMENT ENGINEER

DATE: 12/2/14

SCALE: 1" = 50'

PRIVATE UTILITY LINES SHOWN
 ALL UTILITIES SHOWN ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY.
 CONTRACTOR SHALL VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

NO.	DATE	REVISIONS

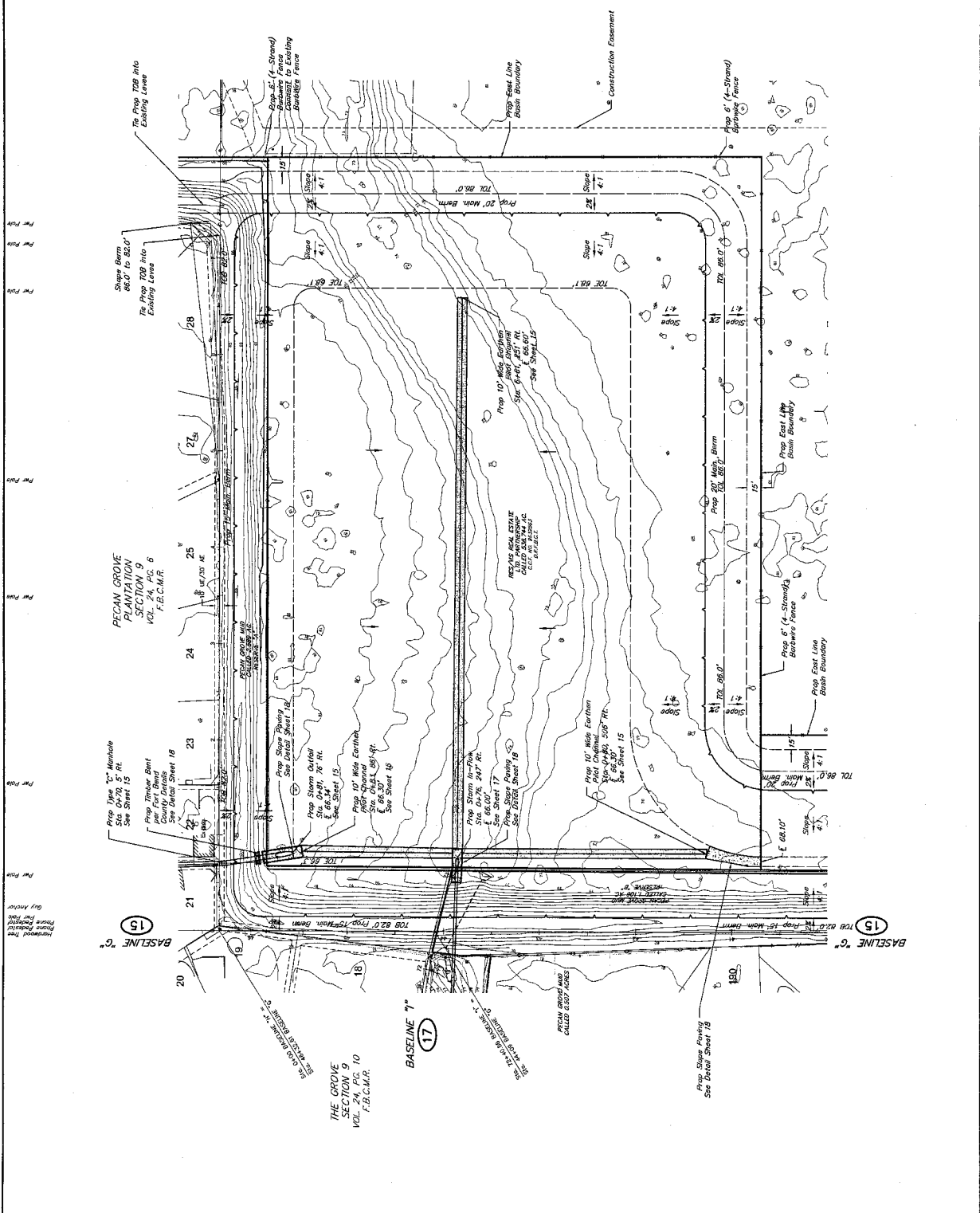
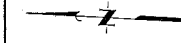
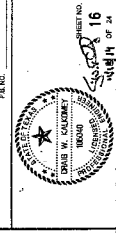
PEACOCK MUNICIPAL UTILITY DISTRICT
 EAST BIRMINGHAM, TEXAS

THE GROVE 4 & 5
 DRAINAGE IMPROVEMENTS

PLAN
 BASELINE H
 STA 0+00 - 8+50

J. JONES & CARTER, INC.
 ENGINEERS-PLANNERS-SURVEYORS
 1615 Highway 40, Houston, Texas 77057 (813) 952-0523

SCALE: AS SHOWN
 DATE: NOVEMBER 2014
 DRAWN BY: RJD
 CHECKED BY: JJC
 SUBMITTED: 11/10/14



THE GROVE
 SECTION 9
 VOL. 24, PG. 10
 F.B.C.M.R.

THE GROVE
 SECTION 9
 VOL. 24, PG. 10
 F.B.C.M.R.

THE GROVE
 SECTION 9
 VOL. 24, PG. 10
 F.B.C.M.R.

SCALE

APPROVED BY: NIS
DRAWN BY: DSH
CHECKED BY: RSK
DATE: OCTOBER 24, 2005
JOB NO.:
DATE: OCTOBER 24, 2005
JOB NO.:
DATE: OCTOBER 24, 2005
JOB NO.:
DATE: OCTOBER 24, 2005

STORM SEWER

J.C. JONES & CARTER, INC.
ENGINEERS-PLANNERS-SURVEYORS
1000 COMMONWEALTH BLVD., SUITE 200
RICHMOND, VIRGINIA 23220-1000
(804) 781-1000

APPROVED: [Signature]
DEVELOPMENT COORDINATOR

DATE: 2/14/15

1. MANHOLE AND INLET FRAME AND COVER

2. STORM SEWER BEDDING

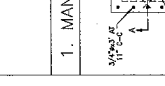
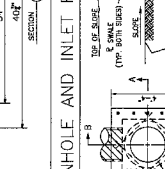
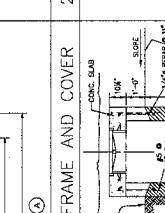
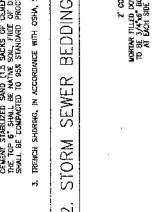
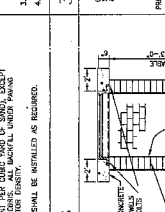
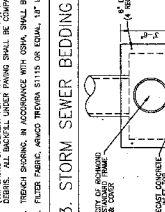
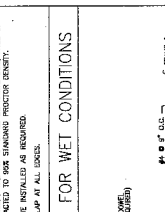
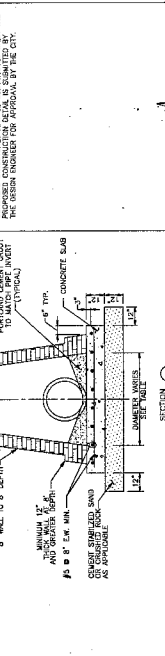
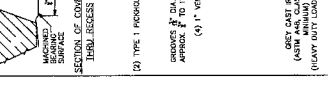
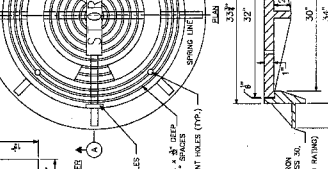
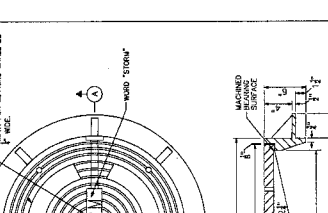
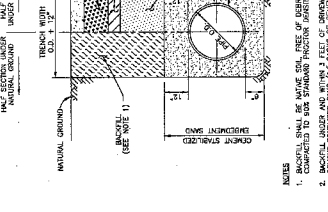
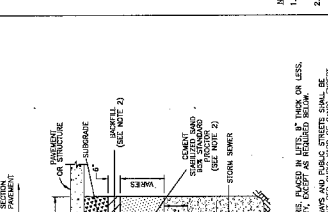
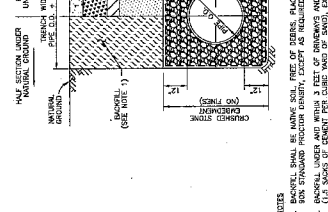
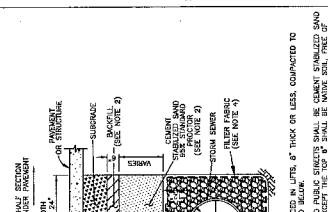
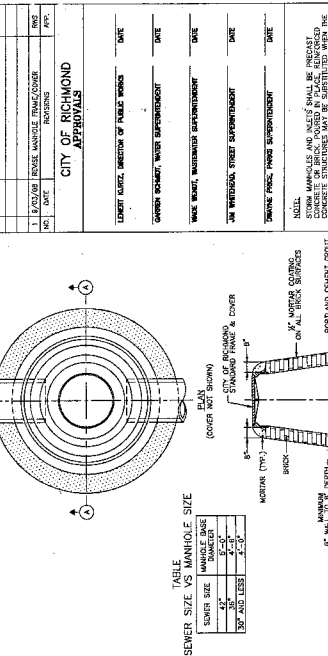


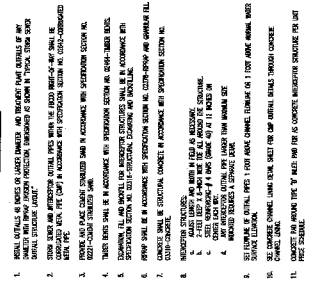
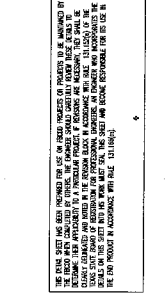
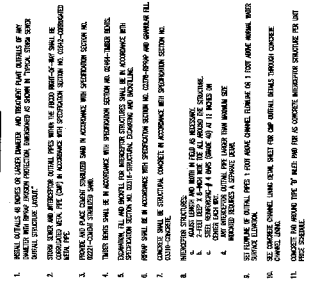
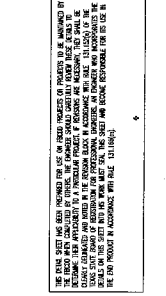
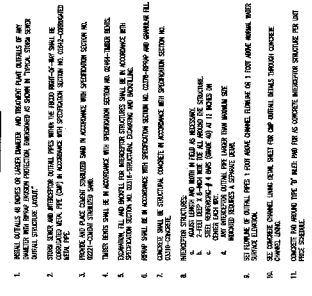
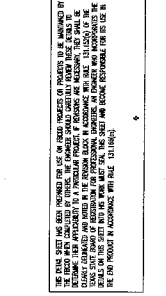
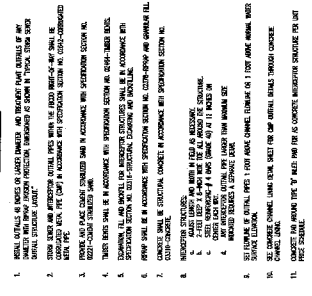
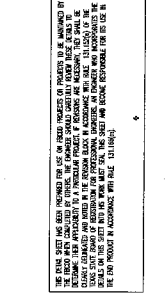
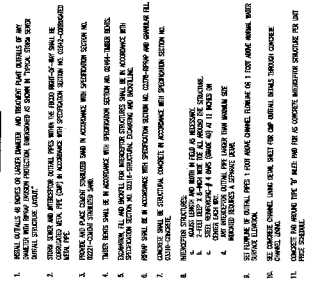
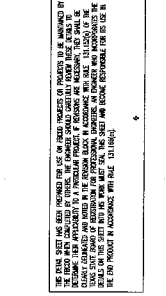
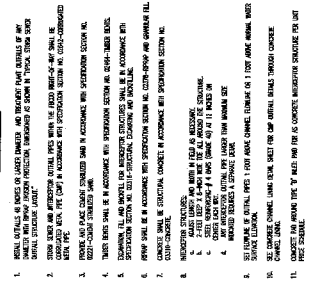
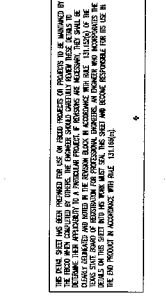
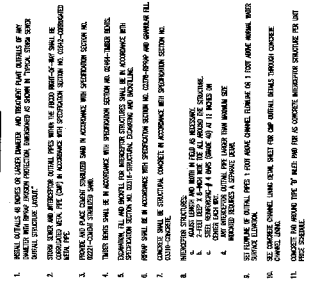
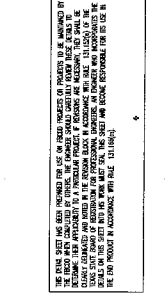
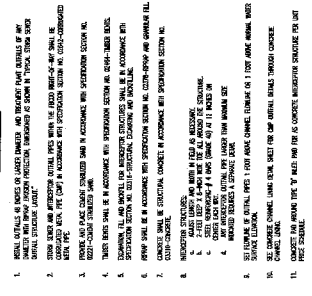
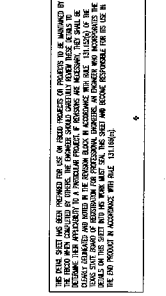
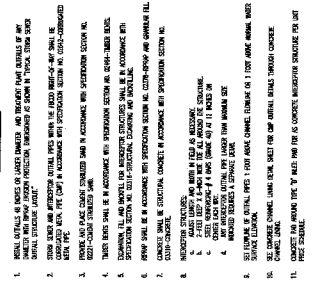
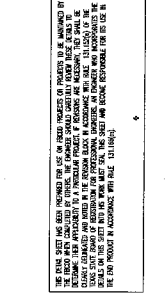
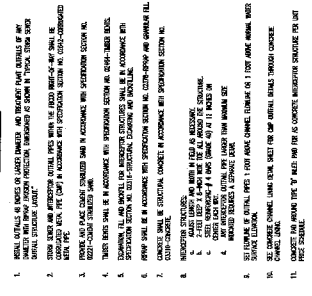
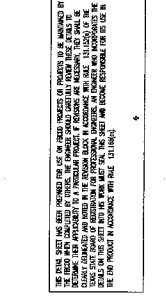
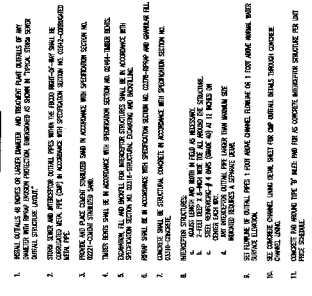
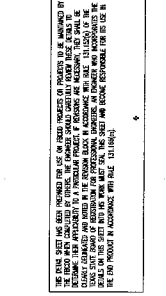
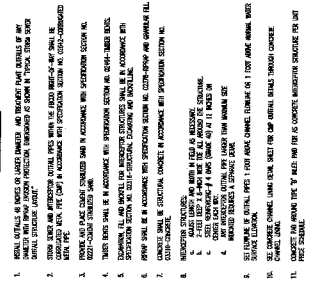
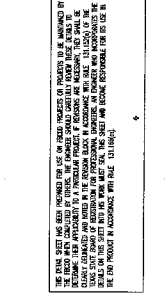
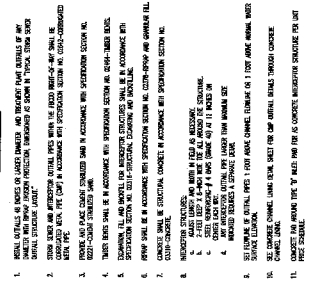
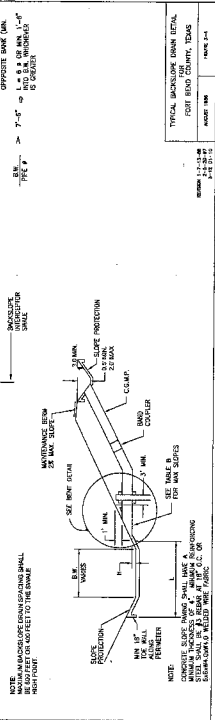
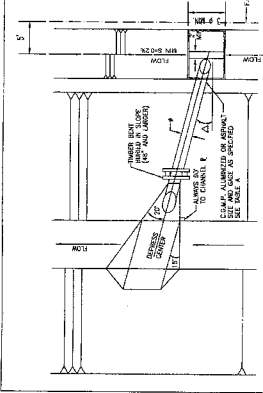
TABLE 1
SEWER SIZE VS MANHOLE SIZE

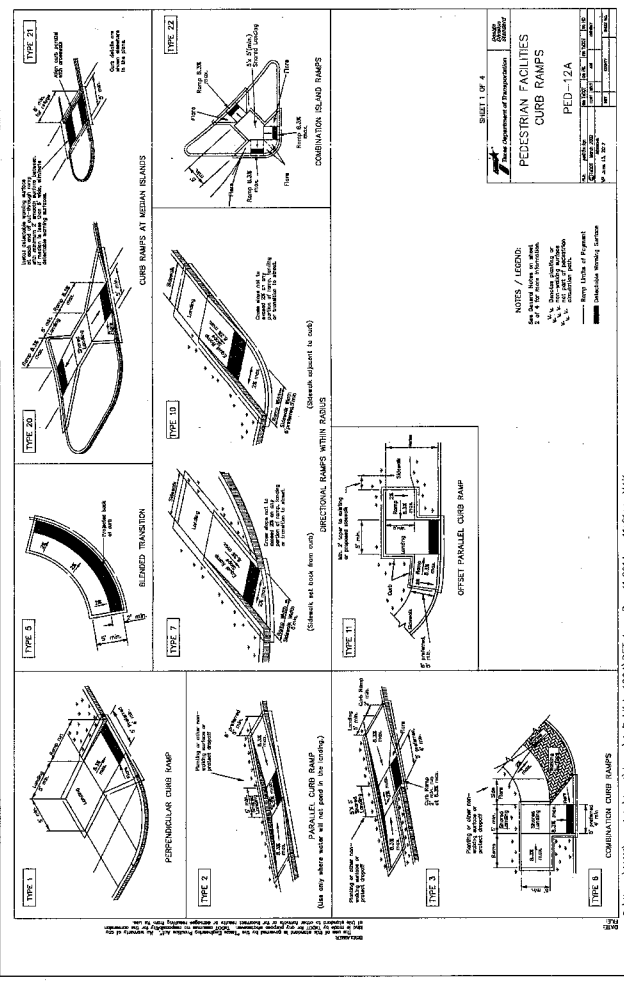
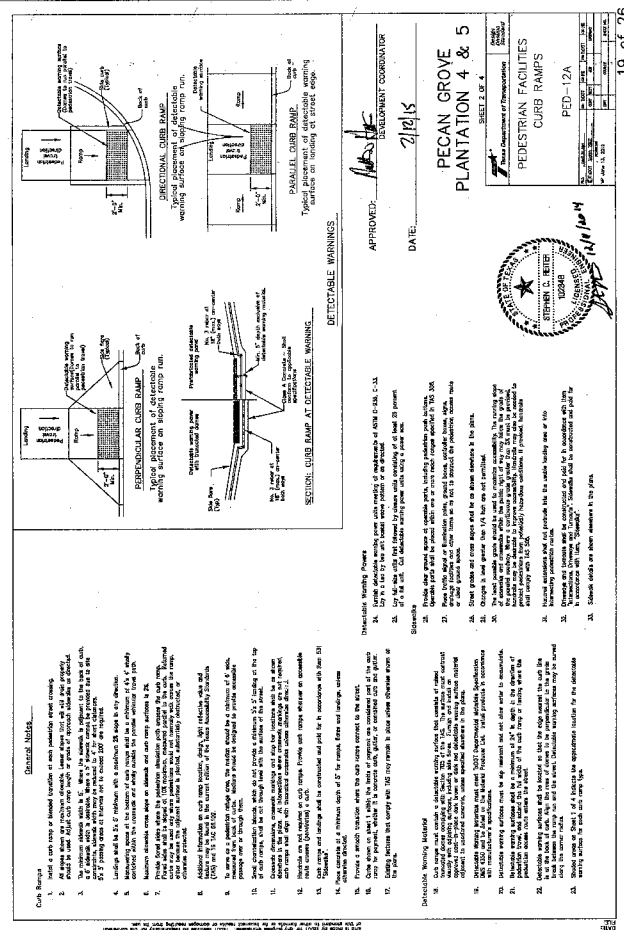
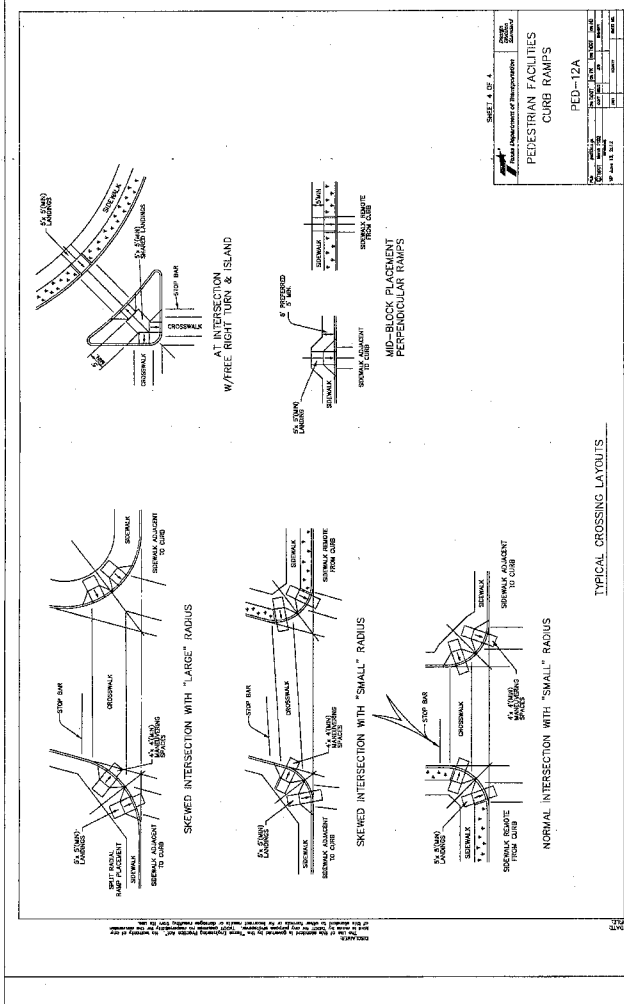
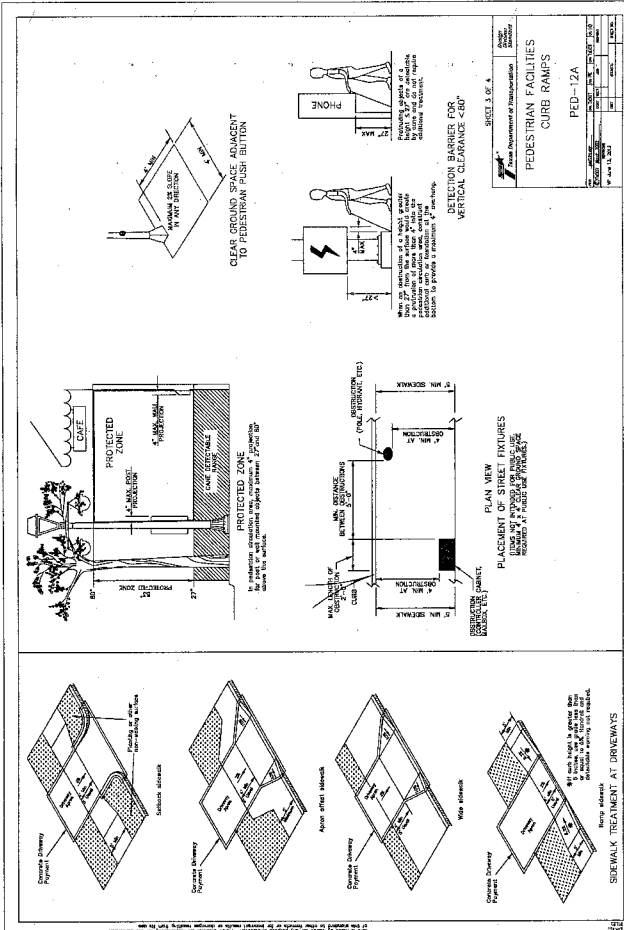
SEWER SIZE	MANHOLE SIZE
12"	18"
15"	24"
18"	30"
21"	36"
24"	42"
27"	48"
30"	54"
36"	60"
42"	66"
48"	72"
54"	78"
60"	84"
66"	90"
72"	96"
78"	102"
84"	108"
90"	114"
96"	120"
102"	126"
108"	132"
114"	138"
120"	144"
126"	150"
132"	156"
138"	162"
144"	168"
150"	174"
156"	180"
162"	186"
168"	192"
174"	198"
180"	204"
186"	210"
192"	216"
198"	222"
204"	228"
210"	234"
216"	240"
222"	246"
228"	252"
234"	258"
240"	264"
246"	270"
252"	276"
258"	282"
264"	288"
270"	294"
276"	300"
282"	306"
288"	312"
294"	318"
300"	324"
306"	330"
312"	336"
318"	342"
324"	348"
330"	354"
336"	360"
342"	366"
348"	372"
354"	378"
360"	384"
366"	390"
372"	396"
378"	402"
384"	408"
390"	414"
396"	420"
402"	426"
408"	432"
414"	438"
420"	444"
426"	450"
432"	456"
438"	462"
444"	468"
450"	474"
456"	480"
462"	486"
468"	492"
474"	498"
480"	504"
486"	510"
492"	516"
498"	522"
504"	528"
510"	534"
516"	540"
522"	546"
528"	552"
534"	558"
540"	564"
546"	570"
552"	576"
558"	582"
564"	588"
570"	594"
576"	600"
582"	606"
588"	612"
594"	618"
600"	624"
606"	630"
612"	636"
618"	642"
624"	648"
630"	654"
636"	660"
642"	666"
648"	672"
654"	678"
660"	684"
666"	690"
672"	696"
678"	702"
684"	708"
690"	714"
696"	720"
702"	726"
708"	732"
714"	738"
720"	744"
726"	750"
732"	756"
738"	762"
744"	768"
750"	774"
756"	780"
762"	786"
768"	792"
774"	798"
780"	804"
786"	810"
792"	816"
798"	822"
804"	828"
810"	834"
816"	840"
822"	846"
828"	852"
834"	858"
840"	864"
846"	870"
852"	876"
858"	882"
864"	888"
870"	894"
876"	900"
882"	906"
888"	912"
894"	918"
900"	924"
906"	930"
912"	936"
918"	942"
924"	948"
930"	954"
936"	960"
942"	966"
948"	972"
954"	978"
960"	984"
966"	990"
972"	996"
978"	1002"
984"	1008"
990"	1014"
996"	1020"
1002"	1026"
1008"	1032"
1014"	1038"
1020"	1044"
1026"	1050"
1032"	1056"
1038"	1062"
1044"	1068"
1050"	1074"
1056"	1080"
1062"	1086"
1068"	1092"
1074"	1098"
1080"	1104"
1086"	1110"
1092"	1116"
1098"	1122"
1104"	1128"
1110"	1134"
1116"	1140"
1122"	1146"
1128"	1152"
1134"	1158"
1140"	1164"
1146"	1170"
1152"	1176"
1158"	1182"
1164"	1188"
1170"	1194"
1176"	1200"
1182"	1206"
1188"	1212"
1194"	1218"
1200"	1224"
1206"	1230"
1212"	1236"
1218"	1242"
1224"	1248"
1230"	1254"
1236"	1260"
1242"	1266"
1248"	1272"
1254"	1278"
1260"	1284"
1266"	1290"
1272"	1296"
1278"	1302"
1284"	1308"
1290"	1314"
1296"	1320"
1302"	1326"
1308"	1332"
1314"	1338"
1320"	1344"
1326"	1350"
1332"	1356"
1338"	1362"
1344"	1368"
1350"	1374"
1356"	1380"
1362"	1386"
1368"	1392"
1374"	1398"
1380"	1404"
1386"	1410"
1392"	1416"
1398"	1422"
1404"	1428"
1410"	1434"
1416"	1440"
1422"	1446"
1428"	1452"
1434"	1458"
1440"	1464"
1446"	1470"
1452"	1476"
1458"	1482"
1464"	1488"
1470"	1494"
1476"	1500"
1482"	1506"
1488"	1512"
1494"	1518"
1500"	1524"
1506"	1530"
1512"	1536"
1518"	1542"
1524"	1548"
1530"	1554"
1536"	1560"
1542"	1566"
1548"	1572"
1554"	1578"
1560"	1584"
1566"	1590"
1572"	1596"
1578"	1602"
1584"	1608"
1590"	1614"
1596"	1620"
1602"	1626"
1608"	1632"
1614"	1638"
1620"	1644"
1626"	1650"
1632"	1656"
1638"	1662"
1644"	1668"
1650"	1674"
1656"	1680"
1662"	1686"
1668"	1692"
1674"	1698"
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1848"	1872"
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1860"	1884"
1866"	1890"
1872"	1896"
1878"	1902"
1884"	1908"
1890"	1914"
1896"	1920"
1902"	1926"
1908"	1932"
1914"	1938"
1920"	1944"
1926"	1950"
1932"	1956"
1938"	1962"
1944"	1968"
1950"	1974"
1956"	1980"
1962"	1986"
1968"	1992"
1974"	1998"
1980"	2004"
1986"	2010"
1992"	2016"
1998"	2022"
2004"	2028"
2010"	2034"
2016"	2040"
2022"	2046"
2028"	2052"
2034"	2058"
2040"	2064"
2046"	2070"
2052"	2076"
2058"	2082"
2064"	2088"
2070"	2094"
2076"	2100"
2082"	2106"
2088"	2112"
2094"	2118"
2100"	2124"
2106"	2130"
2112"	2136"
2118"	2142"
2124"	2148"
2130"	2154"
2136"	2160"
2142"	2166"
2148"	2172"
2154"	2178"
2160"	2184"
2166"	2190"
2172"	2196"
2178"	2202"
2184"	2208"
2190"	2214"
2196"	2220"
2202"	2226"
2208"	2232"
2214"	2238"
2220"	2244"
2226"	2250"
2232"	2256"
2238"	2262"
2244"	2268"
2250"	2274"
2256"	2280"
2262"	2286"
2268"	2292"
2274"	2298"
2280"	2304"
2286"	2310"
2292"	2316"
2298"	2322"
2304"	2328"
2310"	2334"
2316"	2340"
2322"	2346"
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2370"	2394"
2376"	2400"
2382"	2406"
2388"	2412"
2394"	2418"
2400"	2424"
2406"	2430"
2412"	2436"
2418"	2442"
2424"	2448"
2430"	2454"
2436"	2460"
2442"	2466"
2448"	2472"
2454"	2478"

- ### GENERAL NOTES
1. THESE DETAILS ARE BASED UPON THE ASSUMPTIONS AND CONDITIONS LISTED IN THESE SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AUTHORITIES.
 2. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ENGINEER. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL UTILITIES AND STRUCTURES THROUGHOUT THE CONSTRUCTION PERIOD.
 3. ALL DIMENSIONS SHALL BE IN UNITS OF FEET AND INCHES. DIMENSIONS SHALL BE SHOWN TO THE CENTERLINE UNLESS OTHERWISE NOTED.
 4. ALL MATERIALS SHALL BE OF THE HIGHEST QUALITY AVAILABLE AND SHALL BE SUBJECT TO TESTING AND APPROVAL BY THE ENGINEER.
 5. ALL STRUCTURES SHALL BE CONSTRUCTED TO RESIST ALL LOADS AND STRESSES TO WHICH THEY MAY BE SUBJECT DURING THE LIFE OF THE PROJECT.
 6. ALL STRUCTURES SHALL BE CONSTRUCTED TO RESIST ALL CORROSION AND WEAR TO WHICH THEY MAY BE SUBJECT DURING THE LIFE OF THE PROJECT.
 7. ALL STRUCTURES SHALL BE CONSTRUCTED TO RESIST ALL SETTLEMENT AND SLIDING TO WHICH THEY MAY BE SUBJECT DURING THE LIFE OF THE PROJECT.
 8. ALL STRUCTURES SHALL BE CONSTRUCTED TO RESIST ALL COLLISION AND IMPACT TO WHICH THEY MAY BE SUBJECT DURING THE LIFE OF THE PROJECT.
 9. ALL STRUCTURES SHALL BE CONSTRUCTED TO RESIST ALL OVERLOADS AND STRESS TO WHICH THEY MAY BE SUBJECT DURING THE LIFE OF THE PROJECT.
 10. ALL STRUCTURES SHALL BE CONSTRUCTED TO RESIST ALL VIBRATIONS AND SHOCK TO WHICH THEY MAY BE SUBJECT DURING THE LIFE OF THE PROJECT.
 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AUTHORITIES.

TABLE A

PIPE SIZE (IN)	MINIMUM COVER (IN)	MINIMUM WALL THICKNESS (IN)	MINIMUM SPACING (IN)
12	18	1.5	12
15	24	1.75	15
18	30	2.0	18
21	36	2.25	21
24	42	2.5	24
27	48	2.75	27
30	54	3.0	30
36	66	3.5	36
42	78	4.0	42
48	90	4.5	48
54	102	5.0	54
60	114	5.5	60
66	126	6.0	66
72	138	6.5	72
78	150	7.0	78
84	162	7.5	84
90	174	8.0	90
96	186	8.5	96
102	198	9.0	102
108	210	9.5	108
114	222	10.0	114
120	234	10.5	120





NO.	DATE	BY	REVISIONS
1.	12/27/03	ASB	ASB RELEASE VALUE MANHOLE
2.	12/27/03	ASB	ASB RELEASE VALUE MANHOLE
3.	12/27/03	ASB	ASB RELEASE VALUE MANHOLE

CITY OF RICHMOND APPROVALS

DATE: 10/24/03

SCALE: 1" = 1'-0"

DESIGNED BY: [Signature]

CHECKED BY: [Signature]

APPROVED BY: [Signature]



JC JONES & CARTER, INC.
 ENGINEERS - LANDSCAPE ARCHITECTS - SURVEYORS
 4445 Rounding Road, Richmond, VA 23234
 (804) 281-2525

CITY OF RICHMOND
 STANDARD CONSTRUCTION DETAILS
 SANITARY

SCALE: 1" = 1'-0"

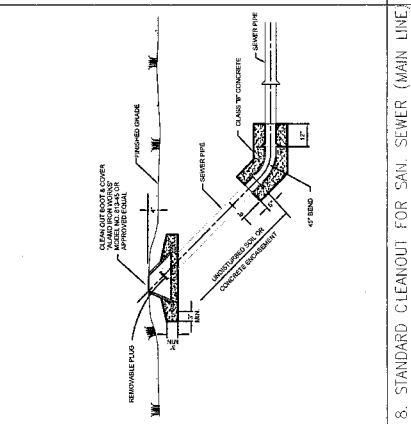
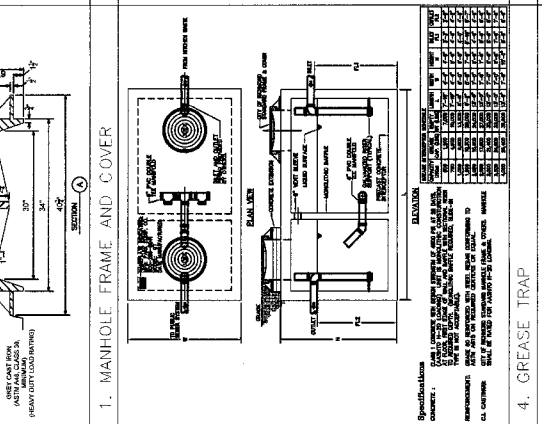
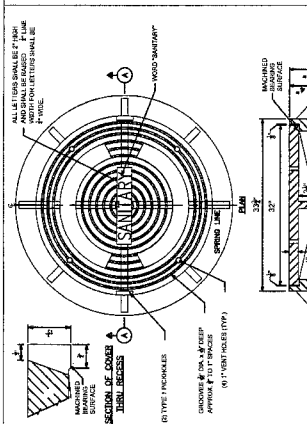
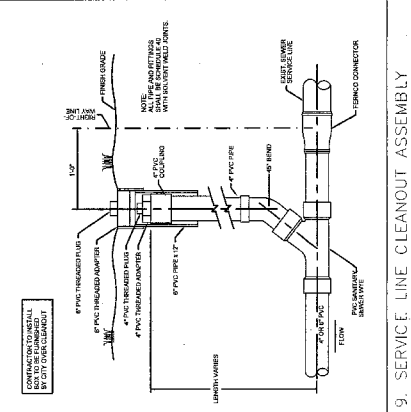
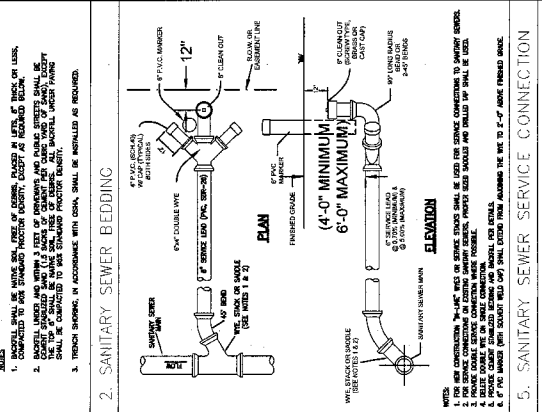
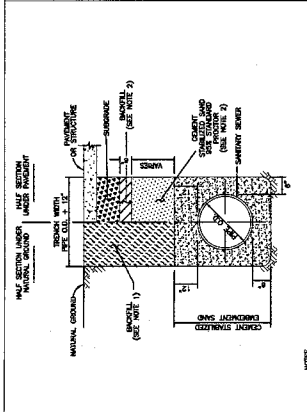
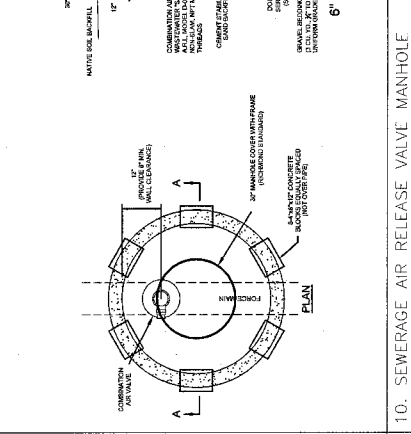
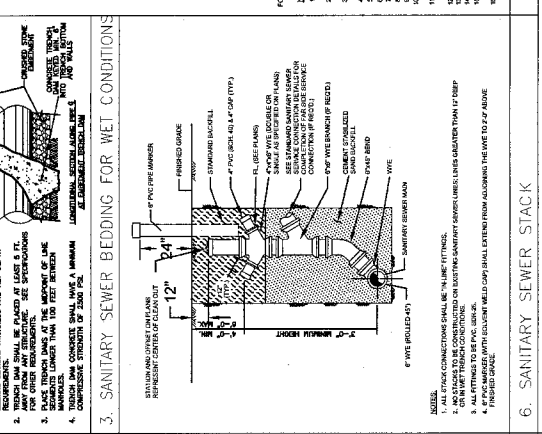
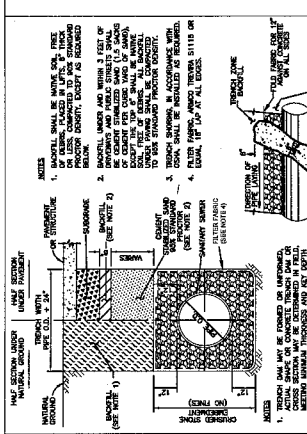
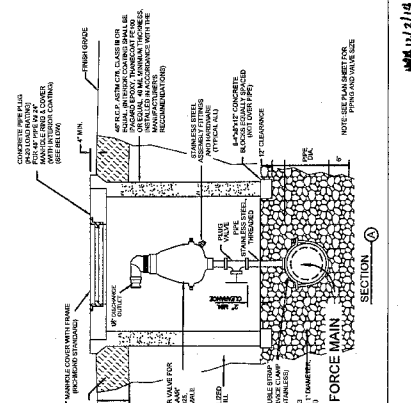
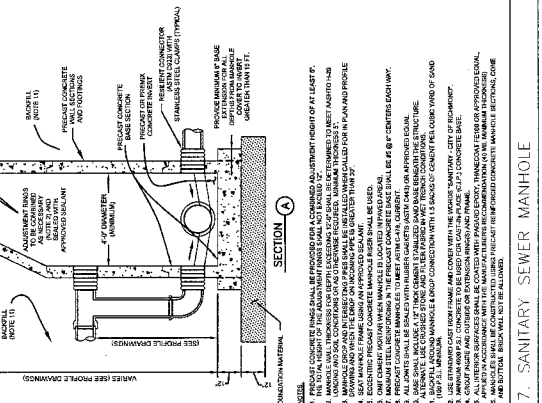
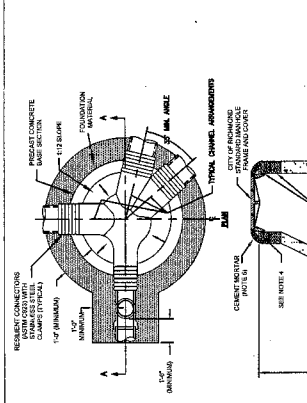
DESIGNED BY: [Signature]

CHECKED BY: [Signature]

DATE: OCTOBER 24, 2003

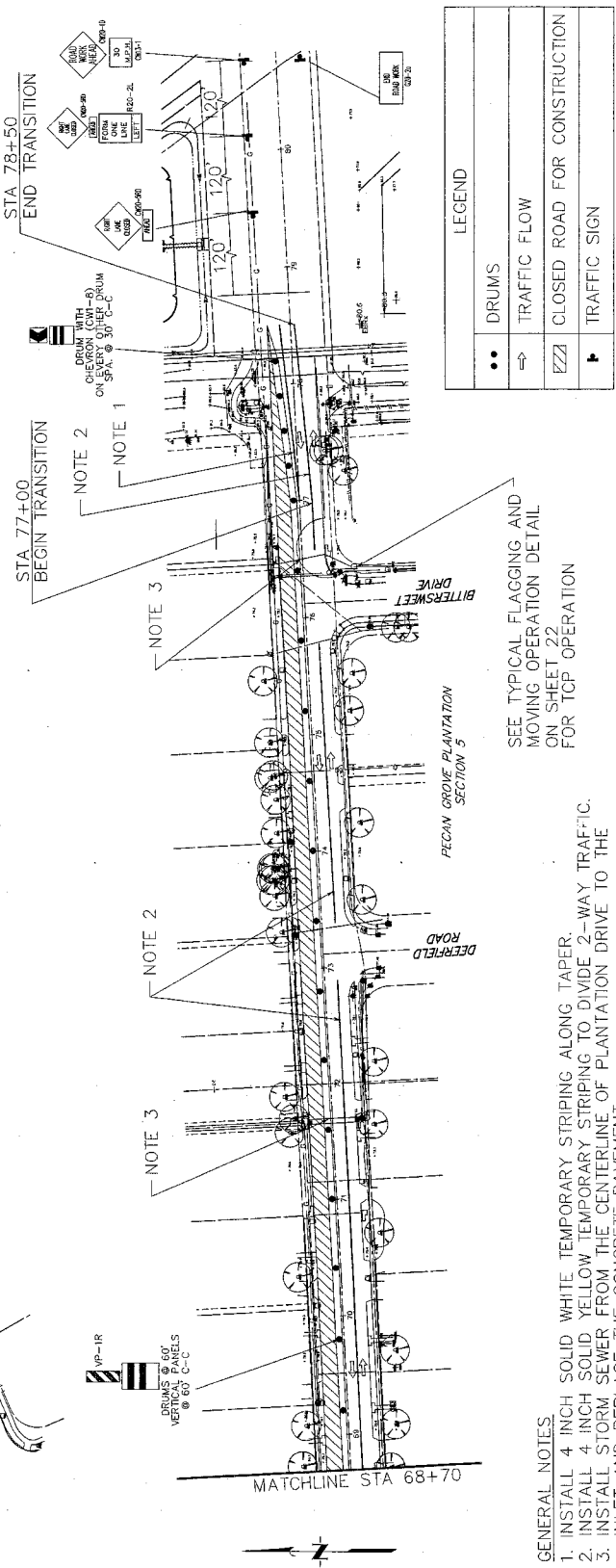
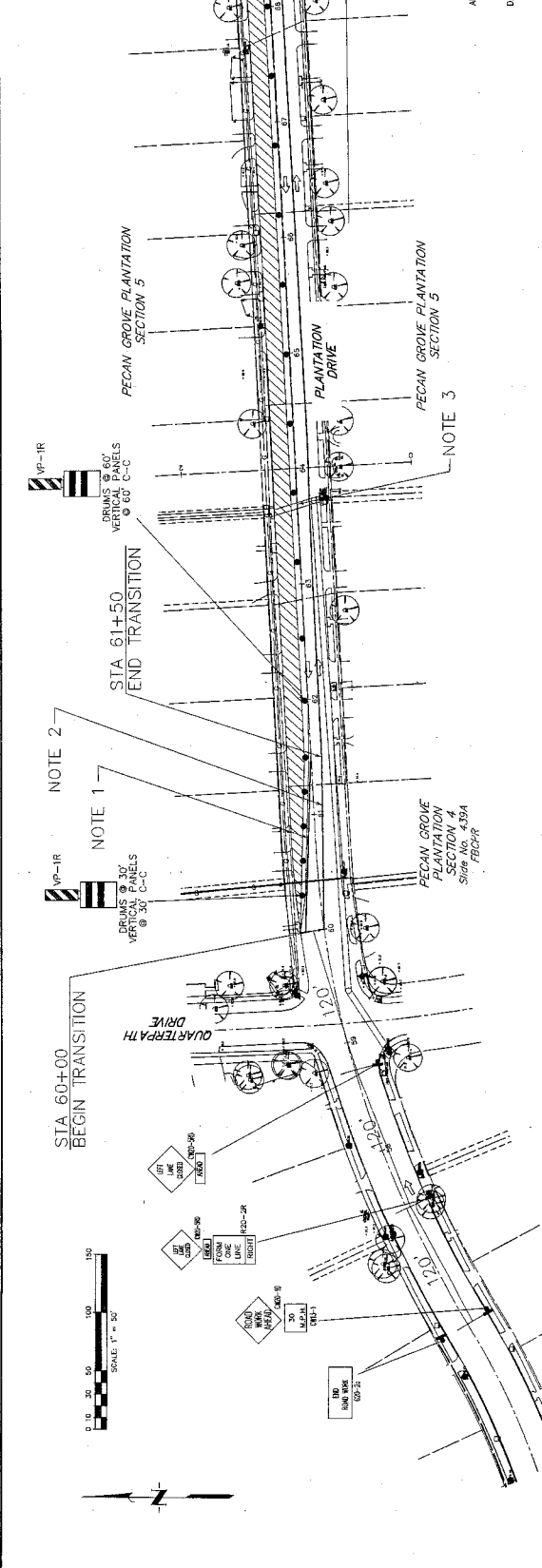
DRAWN BY: [Signature]

Sheet: **20** of 24



1. MANHOLE FRAME AND COVER
 2. SANITARY SEWER BEDDING FOR WET CONDITIONS
 3. SANITARY SEWER MANHOLE
 4. GREASE TRAP
 5. SANITARY SEWER SERVICE CONNECTION
 6. SANITARY SEWER STACK
 7. SANITARY SEWER MANHOLE
 8. STANDARD CLEANOUT FOR SAN. SEWER (MAIN LINE)
 9. SERVICE LINE CLEANOUT ASSEMBLY
 10. SEWERAGE AIR RELEASE VALVE MANHOLE

SPECIAL MARK
 SEE DRAWING NO. URBAN BRANCH CAP IN TOP OF ANY
 DRAINAGE MANHOLE FOR LOCATION OF ALL CONCRETE
 DRAINAGE MANHOLES. ALL CONCRETE SHALL BE
 REINFORCED WITH #4 BARS AND 1/4" WELLS. SEE
 REINFORCEMENT PLAN. (DRAW 90)



GENERAL NOTES
 1. INSTALL 4 INCH SOLID WHITE TEMPORARY STRIPING ALONG TAPER.
 2. INSTALL 4 INCH SOLID YELLOW TEMPORARY STRIPING TO DIVIDE 2-WAY TRAFFIC.
 3. INSTALL STORM SEWER FROM THE CENTERLINE OF PLANTATION DRIVE TO THE
 INLET AND REPLACE THE CONCRETE PAVEMENT.

SEE TYPICAL FLAGGING AND
 MOVING OPERATION DETAIL
 ON SHEET 22
 FOR TOP OPERATION

LEGEND

••	DRUMS
→	TRAFFIC FLOW
ZZZ	CLOSED ROAD FOR CONSTRUCTION
+	TRAFFIC SIGN

PRIVATE UTILITY LINES SHOWN
 AS SHOWN IN THIS PLAN ARE THE PROPERTY OF THE
 DEVELOPER AND ARE NOT TO BE USED FOR ANY OTHER
 PURPOSES WITHOUT THE WRITTEN CONSENT OF THE
 DEVELOPER. THE DEVELOPER IS NOT RESPONSIBLE FOR
 THE ACCURACY OF THE INFORMATION PROVIDED.
 THE CONTRACTOR SHALL VERIFY THE LOCATION AND
 DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
 ANY CHANGES TO THE UTILITIES SHALL BE
 APPROVED BY THE DEVELOPER.

TRAFFIC CONTROL PLAN
PHASE 1 STEP 2

PECAN GROVE PLANTATION 4 & 5
 DRAINAGE IMPROVEMENTS

J. C. JONES & CARTER
 ENGINEERS - PLANNERS - ARCHITECTS
 12111 E. 12th Street, Suite 100, Fort Worth, TX 76134
 PHONE: 817-441-1111 FAX: 817-441-1112

DATE: OCTOBER 2014
 DRAW BY: J.C.J.
 CHECK BY: J.C.J.
 SUBMITTED: 10/14/14

SCALE: 1" = 40'
 SHEET NO. 21
 OF 25

APPROVED: [Signature]
 DEVELOPMENT COORDINATOR
 DATE: 2/11/15

NO.	DATE	REVISION	BY

CITY OF RICHMOND
APPROVALS

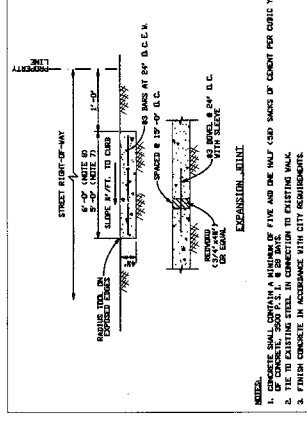
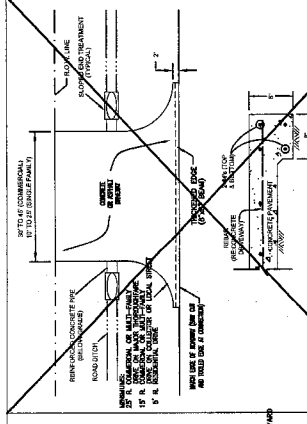
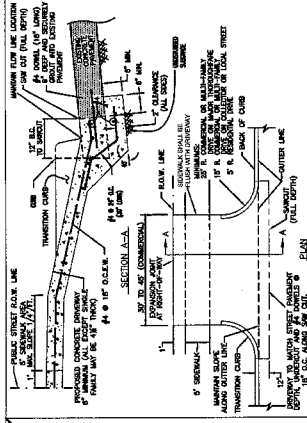
FOR THE DIRECTOR OF PUBLIC WORKS

FOR THE CITY ENGINEER

FOR THE CITY COMMISSIONER OF PUBLIC WORKS

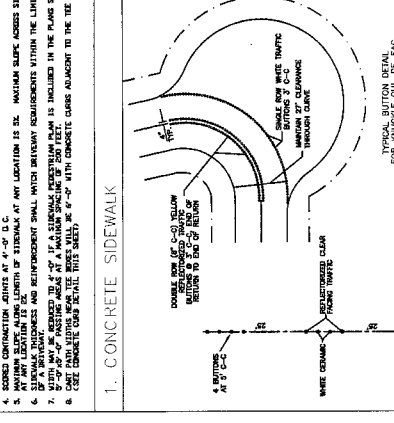
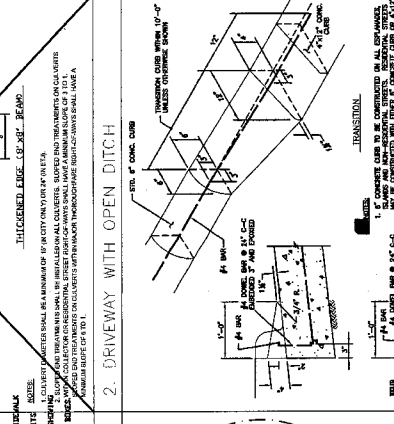
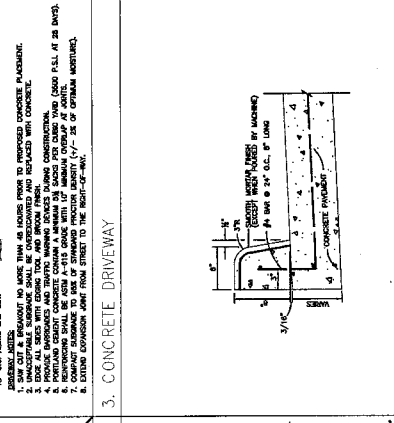
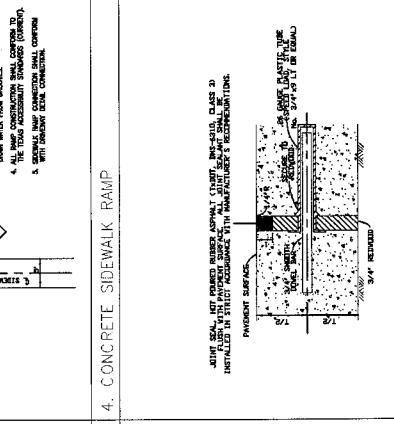
FOR THE CITY COMMISSIONER OF PUBLIC UTILITIES

FOR THE CITY COMMISSIONER OF PUBLIC SAFETY



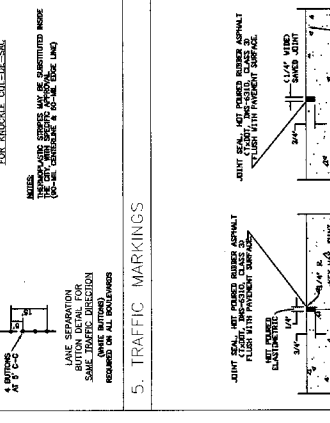
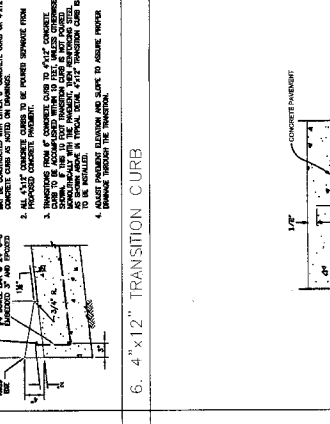
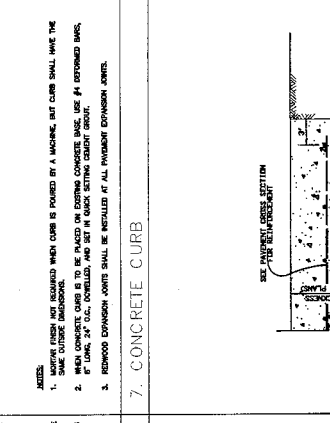
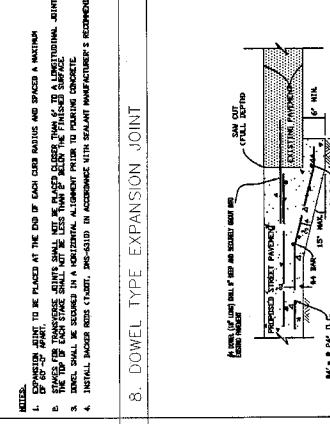
NOTES:

- CONCRETE SHALL BE 4000 PSI STRENGTH OF FIVE AND THE FULL CURED STRENGTH OF SEVEN.
- FINISH CONCRETE IN ACCORDANCE WITH CITY REQUIREMENTS.
- MINIMUM CURB HEIGHT SHALL BE 4 INCHES AT ALL LOCATIONS.
- MINIMUM CURB LENGTH SHALL BE 10 FEET.
- MINIMUM CURB WIDTH SHALL BE 4 INCHES.
- MINIMUM CURB SPACING SHALL BE 10 FEET.
- MINIMUM CURB SPACING SHALL BE 10 FEET.
- MINIMUM CURB SPACING SHALL BE 10 FEET.



NOTES:

- EXPANSION JOINTS TO BE PLACED AT THE END OF EACH CURB BAY AND SPACED A MINIMUM OF 10 FEET.
- THE TOP OF EACH CURB SHALL BE FINISHED TO A HORIZONTAL JOINT.
- EXPANSION JOINTS SHALL BE PLACED AT THE END OF EACH CURB BAY AND SPACED A MINIMUM OF 10 FEET.
- EXPANSION JOINTS SHALL BE PLACED AT THE END OF EACH CURB BAY AND SPACED A MINIMUM OF 10 FEET.



CITY OF RICHMOND
STANDARD CONSTRUCTION DETAILS

PAVING 1

SCALE

HORIZONTAL 1" = 10'

VERTICAL 1" = 10'

ISSUED BY: PWS

DESIGNED BY: PWS

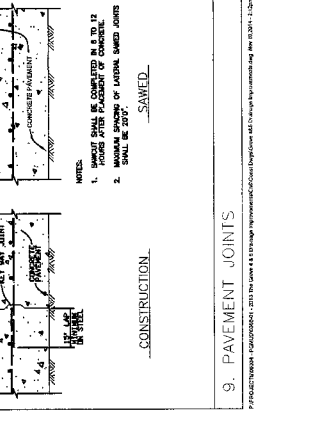
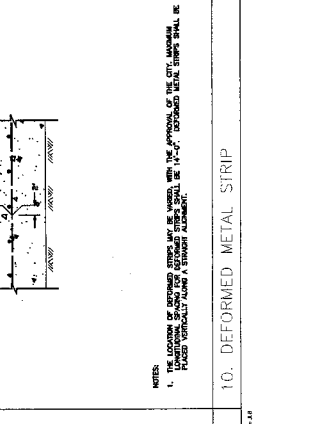
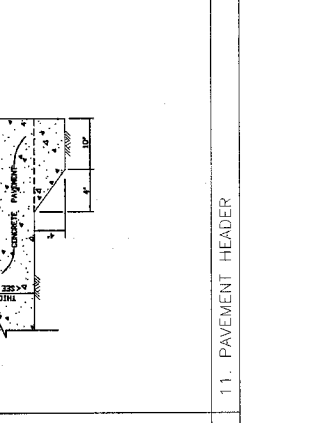
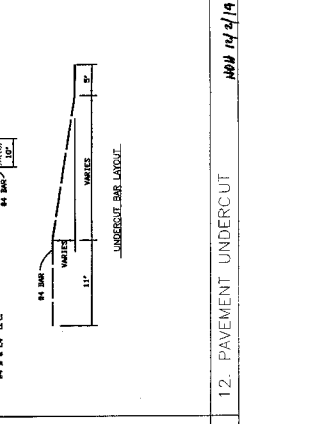
CHECKED BY: PWS

DATE: OCTOBER 24, 2000

JOB NO.:

DWG. NO.:

Sheet: 22 of 24



BENCH MARK
 USE MOMENT IN UPRIGHT BRASS CAP IN TOP OF ANY
 END OF PLACEMENT LINE OF AN ANCHOR BOLT
 BEING SET IN CONCRETE. THE BENCH MARK SHALL BE
 SET AT THE POINT OF THE END OF THE PLACEMENT
 ELEVATION = 62.87
 (NAD 83)

APPROVED: *[Signature]*
 DEVELOPMENT COORDINATOR
 DATE: 2/21/15

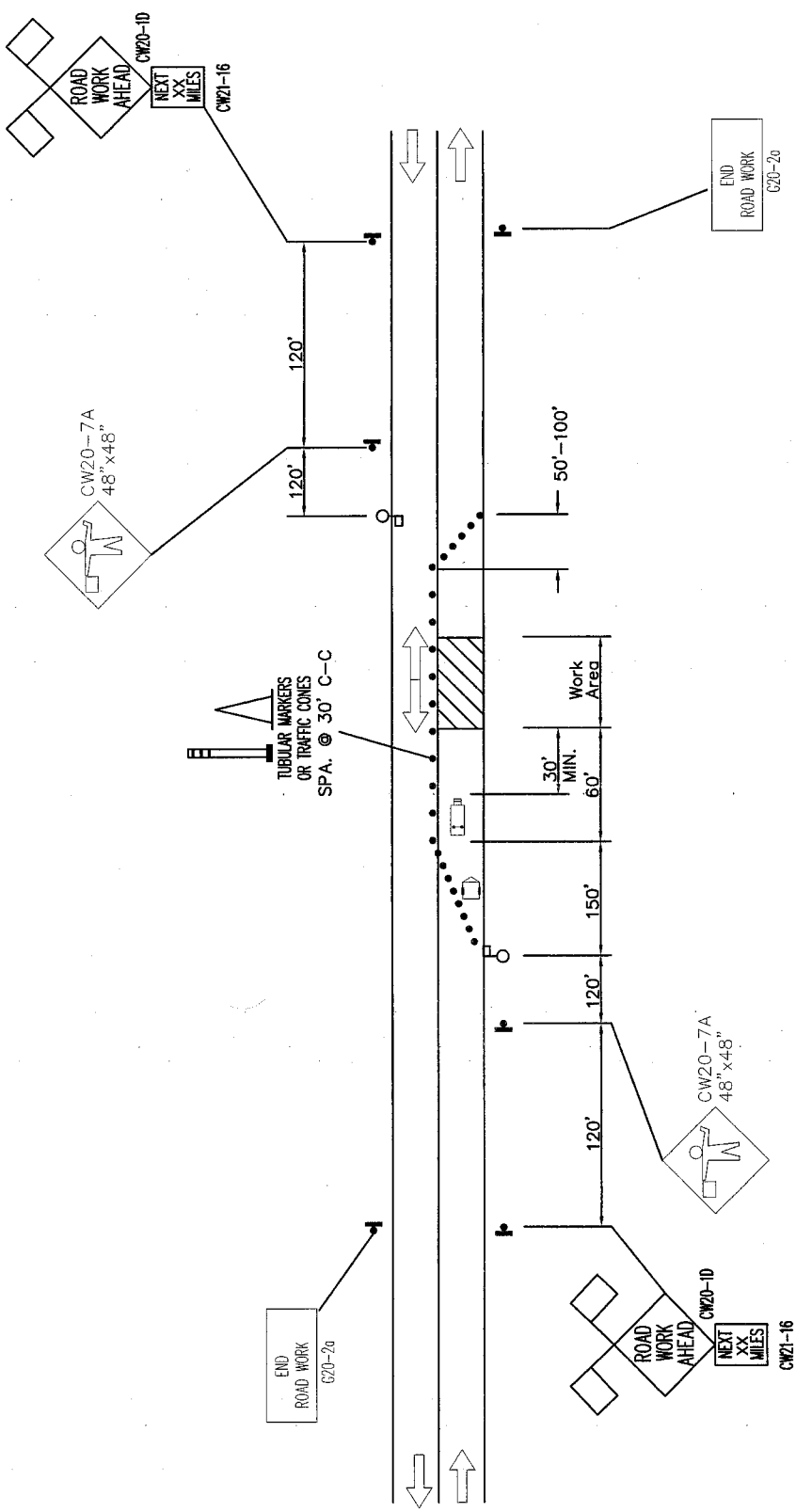
PRIVATE UTILITY LINES SHOWN
 FOR INFORMATION ONLY. THE USER SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
 THE USER SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.
 APPROXIMATE LOCATION OF PRIVATE UTILITY LINES

PECAN GROVE PLANTATION 4 & 5
 FORT BEND COUNTY, TEXAS

PECAN GROVE PLANTATION 4 & 5
 DRAINAGE IMPROVEMENTS
 TRAFFIC CONTROL PLAN
 TYPICAL FLAGGING OR
 MOVING OPERATION

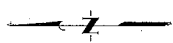
JC JONES & PARTNER
 ENGINEERS ARCHITECTS
 1400 WEST 11TH STREET, SUITE 100
 FORT WORTH, TEXAS 76102
 PHONE: (817) 339-1100
 FAX: (817) 339-1101
 WWW: www.jc-jones.com

DATE: 2/21/15
 DRAWN BY: []
 CHECKED BY: []
 SUBMITTED: []
 E.D. NO. []
 SHEET NO. 22
 OF 25



- LEGEND**
- ▨ CONSTRUCTION AREA
 - ➡ OPEN TO TRAFFIC
 - 🚚 HEAVY WORK VEHICLE
 - ⚠ FLASHING ARROW BOARD (OPTIONAL)
 - 🚧 SIGN POST
 - TUBULAR MARKERS, CONES OR DRUMS
 - 👷 FLAGGER

DAYTIME ONLY
 TYPICAL FLAGGING / MOVING OPERATION
 FOR CONSTRUCTION ALONG BITTERSWEET DRIVE (TWO LOCATIONS) AND
 DAYTIME ONLY CONSTRUCTION ALONG PLANTATION DRIVE,
 DURING PHASE 1 STEP 2 CONSTRUCTION
 WHEN CONNECTION TO THE NEW STORM SEWER AND
 INLET RECONSTRUCTION AREAS



APPROVED: *[Signature]*
 DEVELOPMENT COORDINATOR
 DATE: 12/1/14

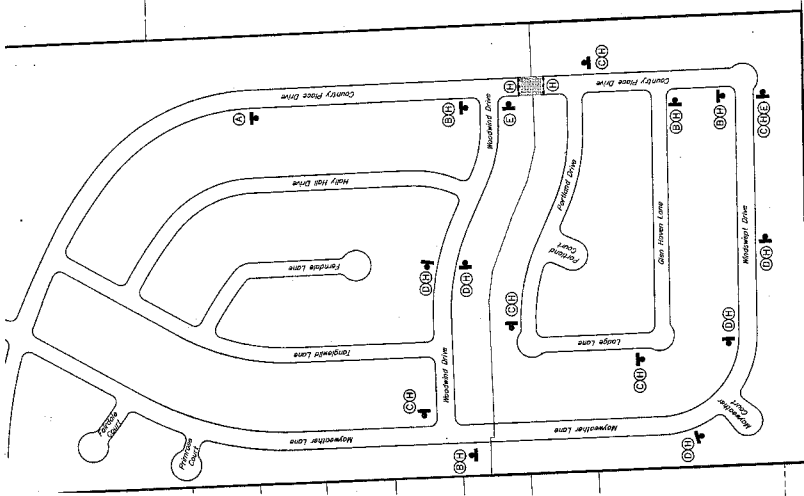
PRIVATE UTILITY LINES SHOWN
 ALL INFORMATION IS BASED ON RECORD DRAWINGS AND FIELD SURVEY.
 DATE: 12/1/14
 DRAWN BY: C.A.S./J.B.
 CHECKED BY: C.A.S./J.B.
 DATE: 12/1/14
 PROJECT NO.: 2014-0304-008-01
 SHEET NO.: 24

NO.	DATE	REVISIONS

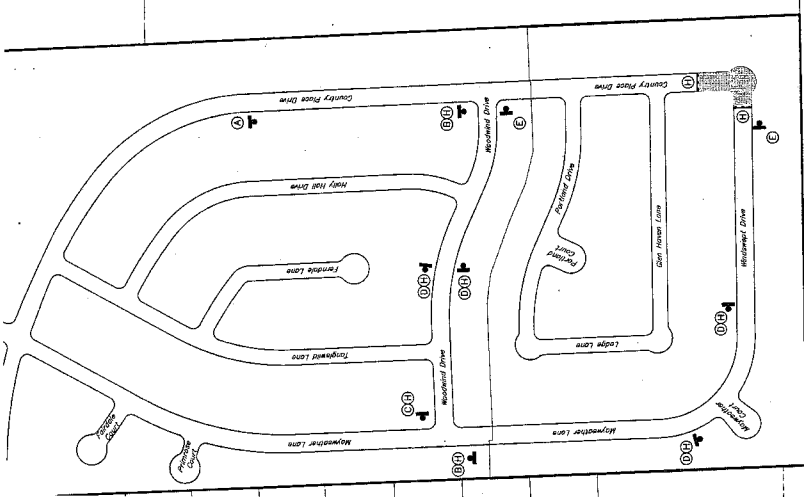
PECAN GROVE MUNICIPAL UTILITY DISTRICT
 FORT BEND COUNTY, TEXAS

THE GROVE 4 & 5
 DRAINAGE IMPROVEMENTS
TRAFFIC CONTROL PLAN

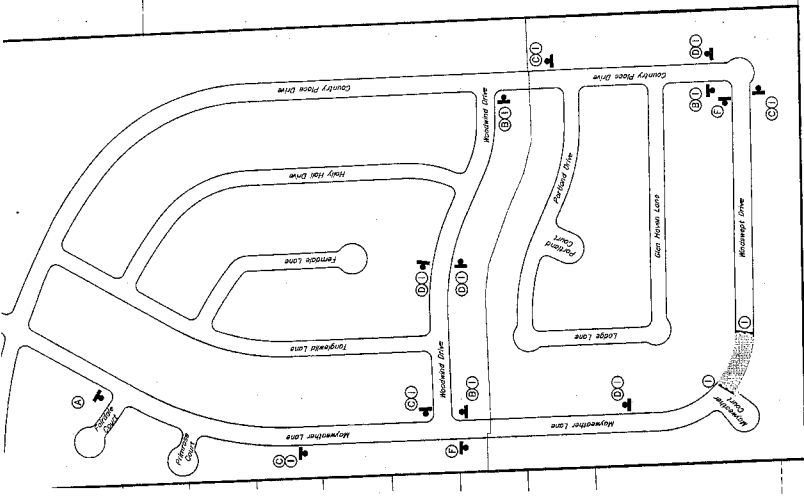
J.C. JONES & CARTER, INC.
 ENGINEERS & PLANNERS
 14141 Highway 60, Suite 100, Houston, Texas 77040
 PHONE: 281-291-1100
 FAX: 281-291-1101



Traffic Control for Closure of
 Country Place Drive



Traffic Control for Closure of
 Mayweather Drive & Country Place Drive



Traffic Control for Closure of
 Mayweather Drive

TRAFFIC CONTROL LEGEND
 Road Closed
 Detour
 Construction Barrier
 Detour with Direction Arrow
 Construction Driveway Signage



TRAFFIC CONTROL CONSTRUCTION SEQUENCE

(A) ROAD CLOSED	(B) DETOUR	(C) DETOUR	(D) ROAD CLOSED
(E) END DETOUR	(F) ROAD CLOSED TO TRAFFIC	(G) ROAD CLOSED	(H) ROADWORK DONE
(I) ROAD CLOSED	(J) ROADWORK DONE	(K) ROADWORK DONE	(L) ROADWORK DONE

BENCH MARK
 1. 1/4" DIA. IRON PIPE CAP AT TOP OF NW CORNER OF ADJACENT LOT. COMPLETE BENCH MARK AT THE INTERSECTION OF THE SW CORNER OF LOT 130 AND 14.8 MILES NE OF FORT BEND COUNTY JAIL.
 ELEVATION = 82.87 (NAVD 88)

TABLE "A"
 CONTAINS INTERSECTION OF QUARTERPATH DRIVE AND COPPERWOOD DRIVE.
 ELEVATION = 80.33 (NAVD 88)

TABLE "B"
 CONTAINS THE INTERSECTION OF QUARTERPATH DRIVE AND PIONEER DRIVE.
 ELEVATION = 78.24 (NAVD 88)

TABLE "C"
 CONTAINS THE INTERSECTION OF BITTERSWEET DRIVE AND QUARTERPATH DRIVE.
 ELEVATION = 78.24 (NAVD 88)

LEGEND:

- [Symbol] INLET PROTECTION
- [Symbol] BARRIERS FOR STAGE
- [Symbol] STABILIZED
- [Symbol] CONSTRUCTION ACCESS
- [Symbol] CONCRETE TRUCK WASHOUT AREA
- [Symbol] X FILTER FABRIC FENCE

APPROVED: *[Signature]*
 REGISTRATION NO. 21415
 DATE: 7/1/15

PRIVATE UTILITY LINES SHOWN
 ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE LOCATION OF THESE LINES IS NOT GUARANTEED BY THE ENGINEER. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF THESE LINES. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF THESE LINES.

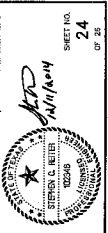
VERIFICATION OF PRIVATE UTILITY LINES
 DATE: _____

PECAN GROVE M.U.D.,
 FORT BEND COUNTY, TEXAS

PECAN GROVE PLANTATION 4 & 5
 DRAINAGE IMPROVEMENTS
 STORM WATER POLLUTION PREVENTION PLAN
 SHEET 1 OF 2

J.C. JONES & CARTER, INC.
 400 W. 10TH ST., SUITE 100, FORT WORTH, TEXAS 76102
 PHONE: (817) 335-1111 FAX: (817) 335-1112
 WWW: www.jcjc.com

DATE: _____ DRAWN BY: JCM
 CHECKED BY: JCM
 SUBMITTED: _____



SHEET NO. 24
 OF 25

