



**REVIEW BY FORT BEND COUNTY
COMMISSIONERS COURT**

**Fort Bend County
Engineering Department**
301 Jackson Suite 401
Richmond, Texas 77469
281.633.7500
Permits@fortbendcountytexas.gov

☒ Right of Way Permit
☐ Commercial Driveway Permit

Permit No: 2018-23532

Applicant: MCI Metro Access Transmission Services, Corp./Verizon

Job Location Site: 19616 Morton Road, Richmond, TX 77047

Bond No. **Date of Bond:** 5/1/2017 **Amount:** \$50,000.00

The above applicant came to make use of certain Fort Bend County property subject to, "The 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, of the Minutes of the Commissioners Court of Fort Bend County, Texas, to the extent that such order is not inconsistent with Chapter 181, Vernon's Texas Statutes and Codes Annotated.

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, submit notification to Permit Administrator thru MyGovernmentOnline.org portal.
3. This permit expires one (1) year from date of permit if construction has not commenced.

On this 9th day of October, 2018, Upon Motion of Commissioner Meyers, seconded by Commissioner Morales, 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.

Signature

Presented to Commissioners Court and approved.

By: Sean Eglinton

County Engineer

Date Recorded 10-12-2018 Comm. Court No. 14E

N/A

Clerk of Commissioners Court

By:

Drainage District Engineer/Manager

By: Ronda Wilkins

Deputy



**PERMIT APPLICATION REVIEW FORM FOR
CABLE, CONDUIT, AND POLE LINE ACTIVITY
IN FORT BEND COUNTY**

**Fort Bend County
Engineering Department**
301 Jackson Suite 401
Richmond, Texas 77469
281.633.7500
Permits@fortbendcountytexas.gov

- ☒ Right of Way Permit
☐ Commercial Driveway Permit

Permit No: 2018-23532

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:

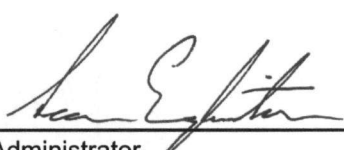
- ☐ County Attorney, approval when applicable.
- ☒ Perpetual bond currently posted. Bond No: [REDACTED] Amount: \$50,000.00
- ☐ Performance bond submitted. Bond No: _____ Amount: _____
- ☐ Cashier's Check Check No: _____ Amount: _____

(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):

Drainage District Approval

Date

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



Permit Administrator

9/27/2018

Date

MCImetro
ACCESS TRANSMISSION SERVICES CORPORATION

OUTSIDE PLANT CONSTRUCTION
FIBER OPTIC CABLE ROUTE

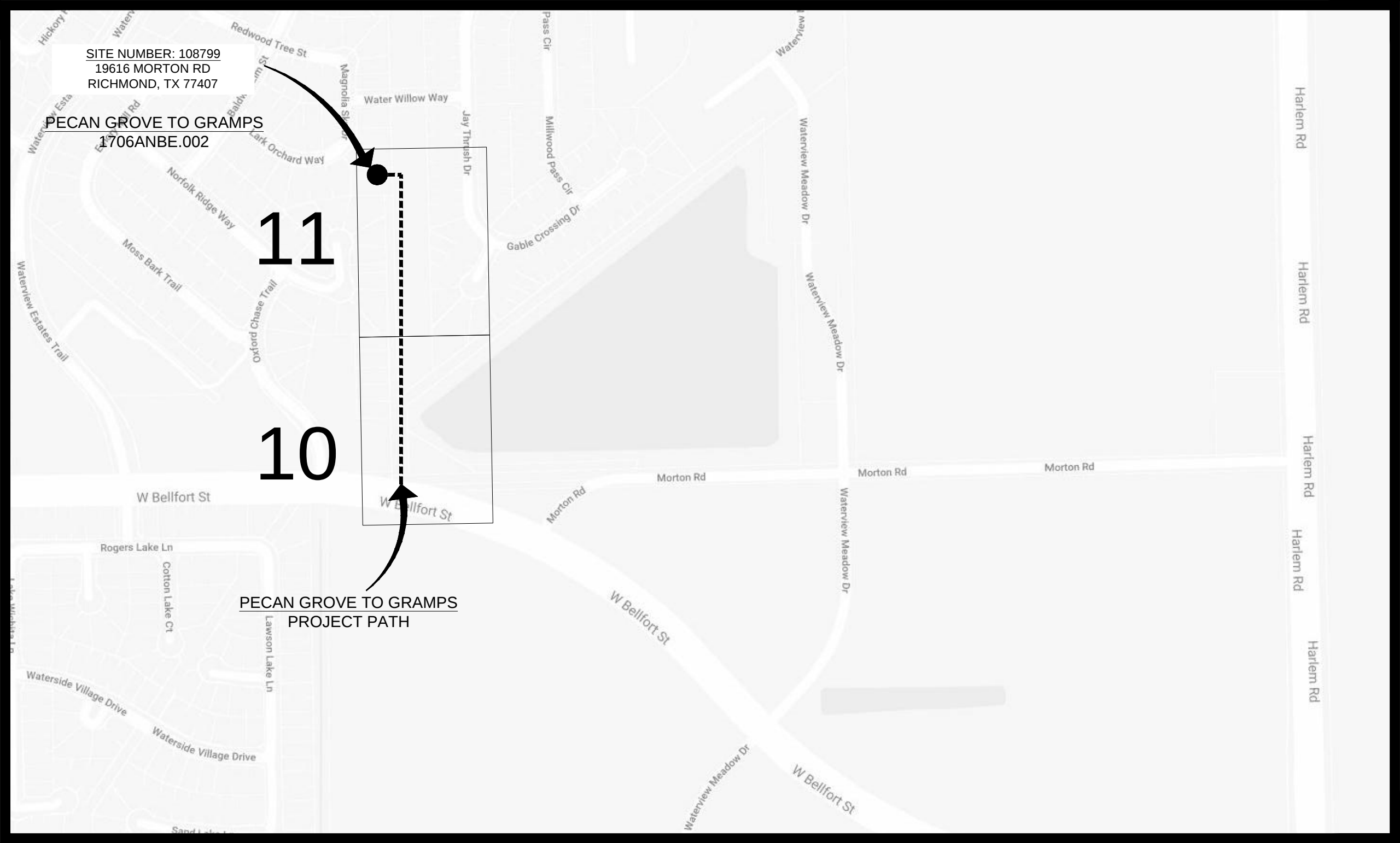
ECC FIBER BUILD: 1706ANBE.002
PECAN GROVE TO GRAMPS
RICHMOND, TX. 77407

SITE CODE: HODATX

PROJECT STATUS: CONSTRUCTION

DATE: 09/05/18

LOCATION MAP
RICHMOND, TX
FORT BEND COUNTY



SITE NUMBER: 108799
19616 MORTON RD
RICHMOND, TX 77407
PECAN GROVE TO GRAMPS
1706ANBE.002

11

10

PECAN GROVE TO GRAMPS
PROJECT PATH

MAP LINE LEGEND

- PROPOSED BURIED CABLE
- PROPOSED AERIAL CABLE

PROJECT: 1706ANBE.002
RICHMOND, TX
PECAN GROVE TO GRAMPS



MCImetro
ACCESS TRANSMISSION SERVICES
CORPORATION
OUTSIDE PLANT CONSTRUCTION
TITLE: FIBER OPTIC ROUTE
PEACANGROVE TO GRAMPS
RICHMOND, TX

DATE: 09/05/18
ENGINEER: L. STALCUP
DRAWN BY: T.P.G. (KIB)

REVISIONS			
No.	DATE	DESCRIPTION	BY
1.	-	-	-

EXCEPT AS MAY BE OTHERWISE PROVIDED BY CONTRACT, THESE DRAWINGS AND SPECIFICATIONS SHALL REMAIN THE PROPERTY OF MCI COMMUNICATIONS SERVICES INC. BOTH BEING ISSUED IN STRICT CONFIDENCE AND SHALL NOT BE REPRODUCED, COPIED, OR USED FOR ANY PURPOSE WITHOUT SPECIFIC WRITTEN PERMISSION.

SCALE
HORIZONTAL: 1"= 50'
VERTICAL: 1"= N/A
MP _____ TO MP _____
SHEET 2 OF 11
FILE: 1706ANBE.005 02 A

CONTACT SHEET

MCI

PROJECT ENGINEER:

PROJECT MANAGER:

PROJECT COORDINATOR:

OUTSIDE PLANT CONSTRUCTION:

CONSTRUCTION CONTRACTOR: ERVIN CABLE CONSTRUCTION 844-322-2524

CONSTRUCTION MANAGER: AURELIO MALLAMANCE 270-349-0337

AGENT:

MANAGER:

COORDINATOR:

MANAGER:

PROGRAM MANAGER:

LIGHTWAVE ENGINEER:

CIVIL ENGINEER:

TERMINAL CONST. REP.:

SPLICING MANAGER:

TSO MANAGER:

ENGINEERING CONTRACTOR

RAILROADS

UNION PACIFIC RAILROAD DANIEL PETERS 402-544-8620

UTILITIES

MCI UTILITY LOCATE 1-800-624-9675

TEXAS ONE CALL SYSTEM (UTILITY LOCATES) 1-800-545-6005

NON MEMBERS:

CITY GOVERNMENT

RICHMOND PUBLIC WORKS DEPARTMENT
600 MORTON STREET , RICHMOND TEXAS
PUBLIC WORKS - 281-342-0559
CITY ENGINEER – KELLY KALUZA

COUNTY GOVERNMENT

STATE GOVERNMENT

FEDERAL GOVERNMENT

N/A

OTHER

N/A

PROJECT: 1706ANBE.002

RICHMOND, TX

PECAN GROVE TO GRAMPS



MCI metro
ACCESS TRANSMISSION SERVICES
CORPORATION

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SCALE

HORIZONTAL: 1"= 50'

VERTICAL: 1"= N/A

MP TO MP

SHEET 3 OF 11

FILE: 1706ANBE.005 03 A

GENERAL NOTES / CLARIFICATION NOTES

GENERAL NOTES

1.

VERIZON BUSINESS COMPRISES THE FOLLOWING OPERATING ENTITIES:

- MCI COMMUNICATIONS SERVICES, INC.
- MCI METRO COMMUNICATIONS SERVICES, INC.
- MCI METRO ACCESS TRANSMISSION SERVICES OF VIRGINIA, INC.
- MCI METRO ACCESS TRANSMISSION SERVICES OF MASSACHUSETTS, INC.
- METROPOLITAN FIBER SYSTEMS OF NEW YORK, INC.
2.

ALL WORK TO BE PERFORMED IN STRICT ACCORDANCE WITH THE APPLICABLE CODES OR REQUIREMENTS OF ANY REGULATING GOVERNMENTAL AGENCY, VERIZON BUSINESS AND THE RIGHT-OF-WAY GRANTOR.
3.

LOCATIONS OF SOME OF THE PHYSICAL FEATURES WERE OBTAINED FROM DATED RAILROAD EVALUATION MAPS OR OTHER DRAWINGS AND MAY NOT BE AS SHOWN OR DEPICTED ON THESE DRAWINGS.
4.

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE RECORDS AND FIELD OBSERVATIONS BUT ARE NOT NECESSARILY EXACT. THEREFORE, UTILITY LOCATIONS WILL BE VERIFIED AT LEAST 100 FEET IN ADVANCE OF TRENCHING OR PLOWING, SO THAT CHANGES IN CABLE PLACEMENT CAN BE MADE IN THE EVENT OF CONFLICT.
5.

ALL KNOWN BURIED OBSTRUCTIONS ARE SHOWN ON THE CONSTRUCTION DRAWINGS. ANY AND ALL OTHERS ENCOUNTERED ARE ALSO THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE, PROTECT AND REPAIR IF DAMAGED.
6.

ANY AND ALL IMPROVEMENTS, SUCH AS ASPHALT OR CONCRETE PAVEMENT, CURBS, GUTTERS, WALKS, DRAINAGE DITCHES, EMBANKMENTS, SHRUBS, TREES, GRASS SOD, ETC., IF DAMAGED, SHALL BE RESTORED TO ORIGINAL CONDITION.
7.

EQUIPMENT TYPES SPECIFIED HEREIN (IE: "BACKHOE", SWAMP PLOW" ETC.) ARE SUGGESTIONS ONLY AND ARE NOT INTENDED AS REQUIREMENTS. CONTRACTOR WILL BE NOTIFIED AS TO EXPECTATIONS.
8.

SHORING OF BORE PITS AND TRENCHES IN ACCORDANCE WITH OSHA REGULATIONS IS MANDATORY.
9.

BURIED CABLE MARKERS WILL BE PLACED AT ALL UNDERGROUND UTILITY LOCATIONS AND ALL OTHER LOCATIONS IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS AND THE OUTSIDE PLANT HANDBOOK.
10.

ALL 4" ID CONDUIT WILL BE SCHEDULE 40 (EG.: PVC OR GSP/BSP), OR AS SPECIFIED.
11.

UNDERGROUND CONDUIT WILL BE PLACED AT 48" MINIMUM COVER UNLESS OTHERWISE SPECIFIED ON THE CONSTRUCTION DRAWINGS.

CLARIFICATION NOTES

1.

2.

3.

4.

5.

6.

7.

1.

2.

3.

4.

5.

6.

7.

1. STATION

2. LOCATION

3. CLARIFICATION NO. AND MINIMUM COVER

4. QUANTITY LINEAR FOOTAGE/SQUARE FOOTAGE, SIZE OF MANHOLE/HANDHOLE SIZE OF PULL/SPLICE BOX, DIMENSION OF WALL, HEIGHT/CLASS/TYPE OF POLE

5. TYPICAL DRAWING NO. AND TYPICAL DETAIL DRAWING NUMBER

6. PLANT ACCOUNTING CODE

7. SPECIFIED CONDUIT, HANDHOLE/MANHOLE NO., SPECIFIED PURPOSE AND MATERIAL, BRIDGE NO. AND RAILROAD STATION, MATERIAL, POLE NO.

ADDENDUM NOTES

CLARIFICATION NOTES (CONTINUED)

- 100

110

JACK AND DRY BORE CONDUIT(S)
- 200

210

PLACE CONDUIT
- 212

PLACE HIGH DENSITY POLYETHYLENE (HDPE)
- 213

ROCK ADDER
- 214

SLURRY BACKFILL ADDER
- 215

EXPOSE CONDUIT
- 216

EXPOSE CONDUIT AND RELOCATE
- 217

EXPOSE CONDUIT AND REPLACE/SUBSTITUTE
- 218

EXPOSE AND REMOVE CONDUIT
- 219

EXPOSE AND REMOVE CONDUIT (ABANDONED)
- 220

CONCRETE ENCASE
- 221

REMOVE CONCRETE ENCASEMENT
- 222

REMOVE CONCRETE CAP
- 240

PLACE HANDHOLE
- 244

REMOVE EXISTING HANDHOLE
- 245

RELOCATE HANHOLE
- 246

REPLACE/SUBSTITUTE HANDHOLE
- 247

EXCAVATE SPLICE PIT
- 250

PLACE MANHOLE
- 252

REMOVE EXISTING MANHOLE
- 255

RELOCATE PRECAST MANHOLE
- 256

REPLACE/SUBSTITUTE PRECAST MANHOLE
- 180

CONSTRUCT WALL
- 270

REMOVE AND RESTORE ASPHALT
- 280

REMOVE AND RESTORE CONCRETE
- 281

REMOVE AND RESTORE SIDEWALK
- 282

REMOVE AND RESTORE CURBING
- 300

310

ATTACH CONDUIT TO WALL OR STRUCTURE
- 315

DETACH CONDUIT FROM WALL OR STRUCTURE
- 320

CORE BORE
- 330

ATTACH PULL/SPLICE BOX TO WALL OR STRUCTURE
- 400

410

PULL CABLE
- 411

PULL THROUGH DUCT (INNERDUCT)
- 415

REMOVE CABLE FROM CONDUIT
- 420

REPOSITION ACTIVE CABLE SLACK
- 500

510

DIRECT BURY CABLE
- 515

EXPOSE DIRECT BURIED CABLE
- 516

EXPOSE DIRECT BURIED CABLE AND RELOCATE
- 517

REMOVE AND DISPOSE OF CABLE
- 520

PLACE AERIAL CABLE
- 525

RELOCATE AERIAL CABLE
- 518

DELASH AERIAL CABLE
- 527

RELASH AERIAL CABLE
- 528

REMOVE AERIAL CABLE
- 530

PLACE POLE/PUSH BRACE
- 535

REMOVE POLE/PUSH BRACE
- 600

610

JETTING CONDUIT
- 620

EMBEDMENT PLOW
- 630

DIRECTIONAL BORE
- 700

710

PLACE BURIED CABLE MARKERS AND SIGNS/MWCOM WATER CROSSING SIGNS
- 711

PLACE ISOLATOR/PROTECTION SYSTEM AT EXISTING HANDHOLES/MANHOLES
- 713

HANDHOLES/MANHOLES
- 712

REMOVE BURIED CABLE MARKER POST/HARDWARE
- 714

REMOVE CONCRETE BURIED CABLE MARKER POST

PROJECT: 1706ANBE.002

RICHMOND, TX

PECAN GROVE TO GRAMPS



MCI metro
ACCESS TRANSMISSION SERVICES
CORPORATION

OUTSIDE PLANT CONSTRUCTION

TITLE: FIBER OPTIC ROUTE
PEACANGROVE TO GRAMPS
RICHMOND, TX

DATE: 09/05/18

ENGINEER: L. STALCUP

DRAWN BY: T.P.G. (KIB)

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SCALE

HORIZONTAL: 1"= 50'

VERTICAL: 1"= N/A

MP TO MP

SHEET 4 OF 11

FILE: 1706ANBE.005 04 A

SYMBOLS KEY

DIRECT BURIED CABLE

AERIAL CABLE

SUBMARINE CABLE

FOGWIRE CABLE

DIRECT BURIED HDPE

PVC OR SPLIT PVC CONDUIT

BSP/GSP OR SPLIT BSP/GSP CONDUIT

STEEL CASING

REMOVE AND RESTORE ASPHALT OR CONCRETE
(WIDTH AS INDICATED)

CORE BORE

JACK AND BORE

DIRECTIONAL BORE (& PLACE CONDUIT)

FUTURE CABLE

REMOVE CABLE

TO BE REMOVED OR ABANDONED
(SHOWN FOR HDPE)

AERIAL UTILITY (ELECTRIC)

UNDERGROUND UTILITY (TELEPHONE)

MAIN TRACKS

AUXILLARY TRACKS

CENTERLINE

RIGHT-OF-WAY

EDGE OF ROADWAY (GENERIC)

EDGE OF PAVEMENT

BACK OF CURB

DITCH LINE

TAX, CITY, COUNTY, OR STATE BOUNDARY LINE

PROPERTY LINE

FENCE LINE

GUARDRAIL

TOP OF SLOPE

TOE OF SLOPE

EXISTING

PROPOSED

STEEL MARKER AND SIGN-(A)
ALUMINUM "HUB"-STYLE MARKER-(B)
FLAT MARKER-(C)
TUBULAR MARKER-(D)
TUBULAR MARKER, & ISOLATOR PROTECTOR-(E)

MILE POST MARKER
NOTE:
DASHED = NOT FOUND IN FIELD

PERMIT TRACKING FORM IDENTIFIER

ROCK PROBE (DEPTH AS INDICATED)

UTILITY COVER DEPTH

HANDHOLE, MANHOLE OR PULLBOX

POLE

ANCHOR ONLY

GUY ONLY

OVERHEAD GUY (ARROW IN DIRECTION OF PULL)

ANCHOR AND GUY

SIDEWALK ANCHOR AND GUY

FOREIGN ANCHOR AND GUY

PUSH BRACE (EXISTING POLE)

ACCOUNT CODE CHANGE (BURIED TO AERIAL)

RISER ATTACHMENT LOCATION

BOND AND GROUND

CULVERT (SIZE AS INDICATED)

BRIDGE

WATER METER

GAS VALVE

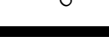
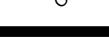
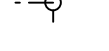
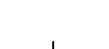
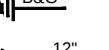
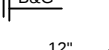
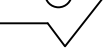
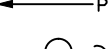
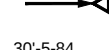
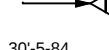
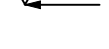
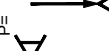
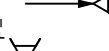
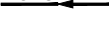
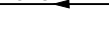
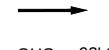
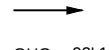
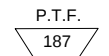
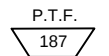
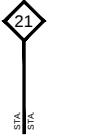
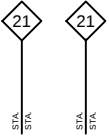
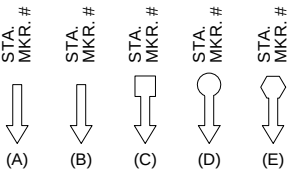
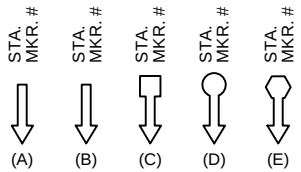
FIRE HYDRANT

RAILROAD SIGNAL CONTROL BOX

CAUTION NOTE

EXISTING

PROPOSED



PROJECT: 1706ANBE.002

RICHMOND, TX

PECAN GROVE TO GRAMPS



McImetro
ACCESS TRANSMISSION SERVICES
CORPORATION

OUTSIDE PLANT CONSTRUCTION

TITLE: FIBER OPTIC ROUTE
PECANGROVE TO GRAMPS
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DATE: 09/05/18

ENGINEER: L. STALCUP

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MP _____ TO MP _____

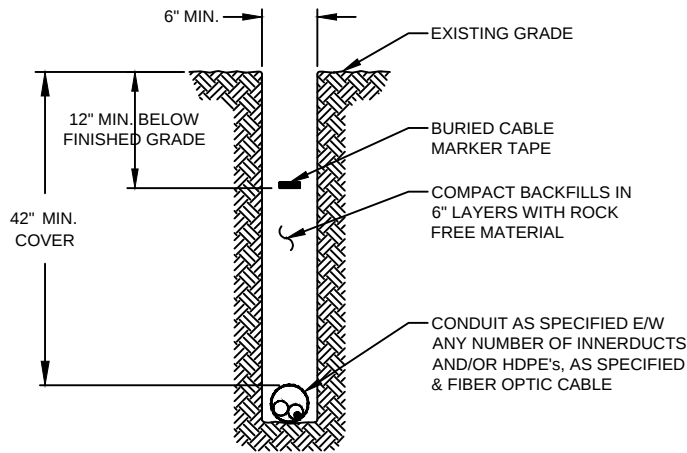
SHEET 6 OF 11

FILE: 1706ANBE.005 06 A

CONSTRUCTION DETAILS

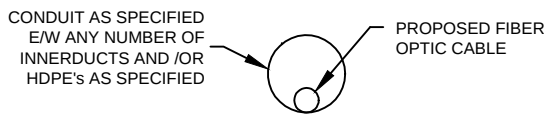
TYPICAL DETAIL "A"

TRENCH & PLACE CONDUIT



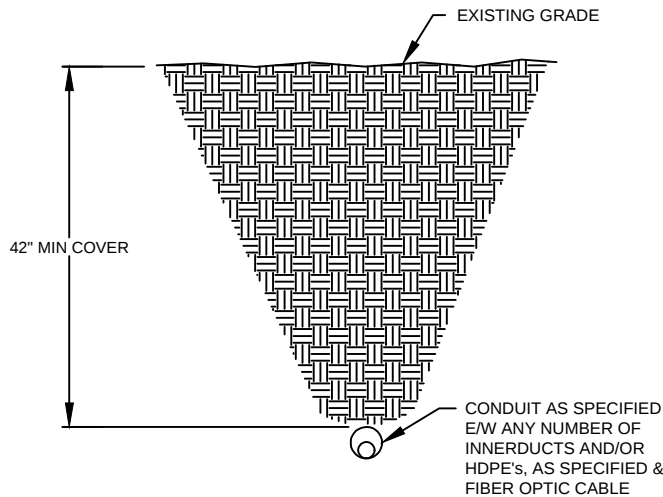
TYPICAL DETAIL "B"

CROSS SECTION OF PROPOSED HDPE



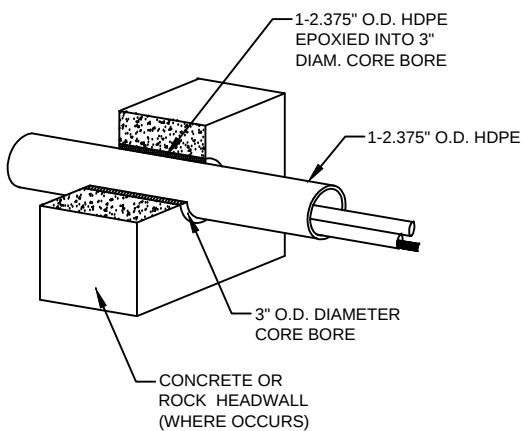
TYPICAL DETAIL "C"

DIRECTIONAL BORE CROSS SECTION FOR CONDUIT



TYPICAL DETAIL "D"

3" CORE BORE



NOTE:

EPOXY GROUT IS USED AT BOTH ENDS OF CORE BORE TO SEAL GAP BETWEEN 2.375" CONDUIT AND PVC SLEEVE.

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RICHMOND, TX

PECAN GROVE TO GRAMPS



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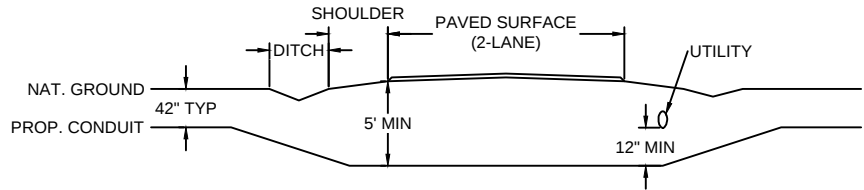
SHEET 7 OF 11

FILE: 1706ANBE.005 07 A

TYPICAL CROSSING PROFILE DETAILS: UNDERGROUND

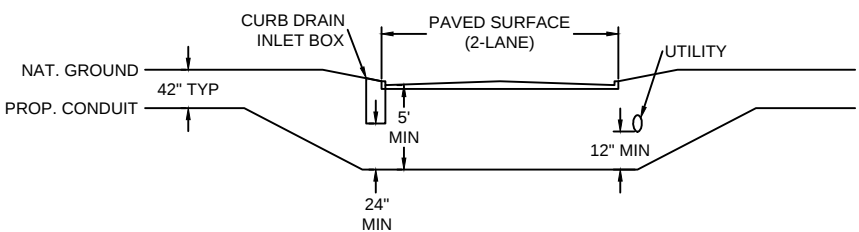
TYPICAL DETAIL "A"

TWO LANE - ASPHALT ROAD - NO CURB



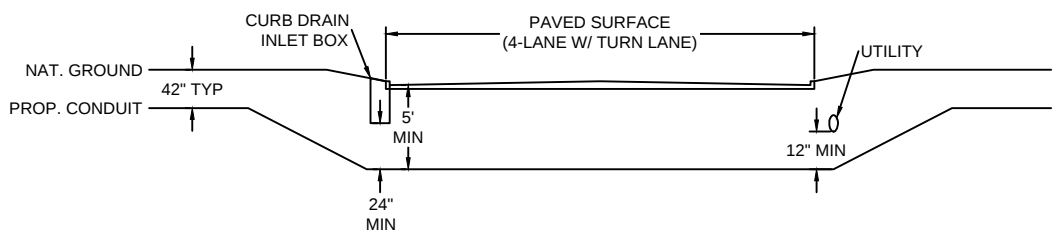
TYPICAL DETAIL "B"

TWO LANE - CURBED ROAD



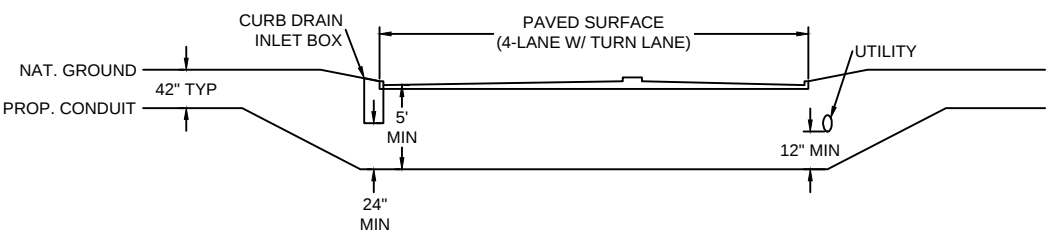
TYPICAL DETAIL "C"

FOUR LANE (W/ TURN LANE) - CURBED ROAD - NO MEDIAN



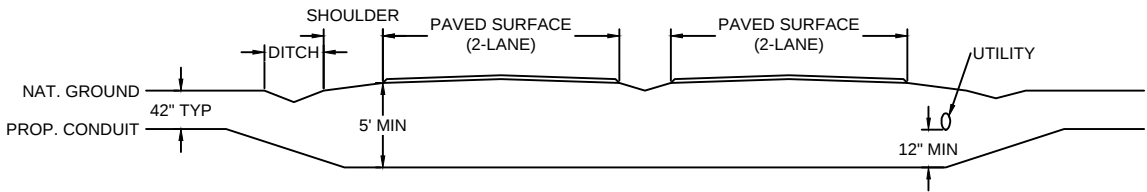
TYPICAL DETAIL "D"

FOUR LANE (W/ TURN LANE) - CURBED ROAD - WITH MEDIAN



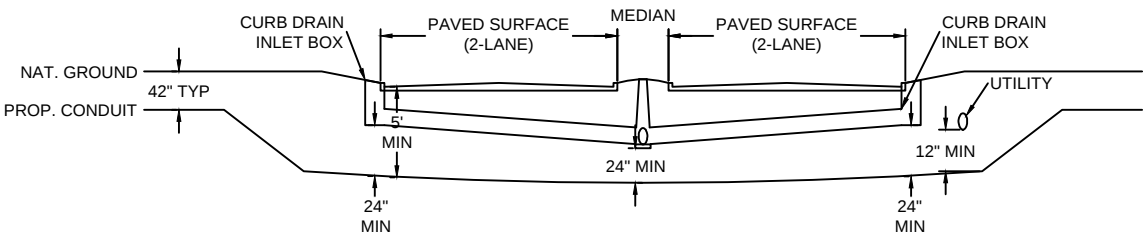
TYPICAL DETAIL "E"

4 LANE - SPLIT ASPHALT ROAD - NO CURB



TYPICAL DETAIL "F"

4 LANE - SPLIT CURBED ROAD



PROJECT: 1706ANBE.002

RICHMOND, TX

PECAN GROVE TO GRAMPS



McImetro
ACCESS TRANSMISSION SERVICES
CORPORATION

OUTSIDE PLANT CONSTRUCTION

TITLE: FIBER OPTIC ROUTE

PEACANGROVE TO GRAMPS

RICHMOND, TX

DATE: 09/05/18

ENGINEER: L. STALCUP

DRAWN BY: T.P.G. (KIB)

REVISIONS

No.	DATE	DESCRIPTION	BY
1.	-	-	-

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SCALE

HORIZONTAL: 1"= 50'

VERTICAL: 1"= N/A

MP _____ TO MP _____

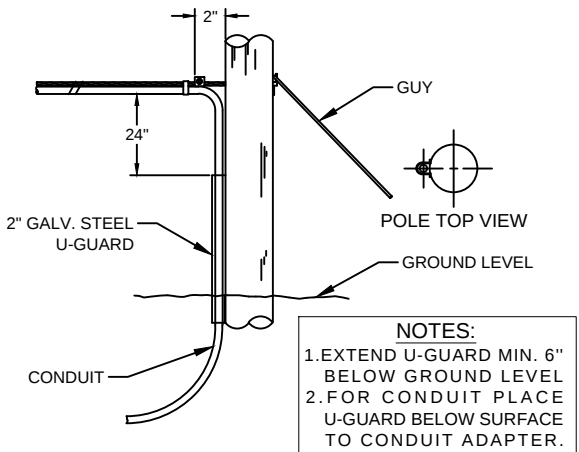
SHEET 7A OF 11

FILE: 1706ANBE.005 07AA

GENERAL AERIAL CONSTRUCTION DETAILS

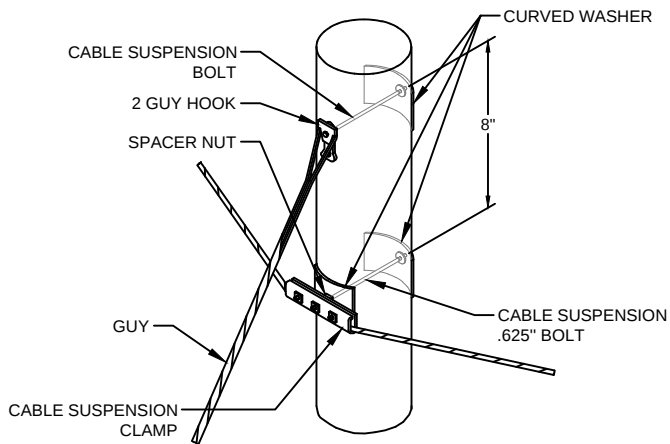
TYPICAL DETAIL "A"

POLE ARRANGEMENT FOR
AERIAL TO BURIED



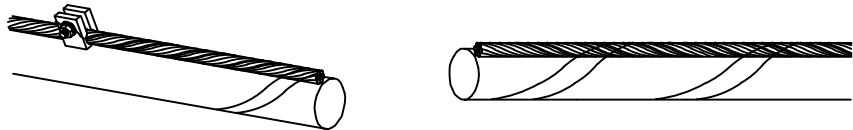
TYPICAL DETAIL "D"

SUSPENSION STRAND - PULL TOWARD
POLE - LESS THAN 5 FEET



TYPICAL DETAIL "G"

JOINING 045 LASHING WIRE



FORMING WIRE OVER
STUD OF CLAMP

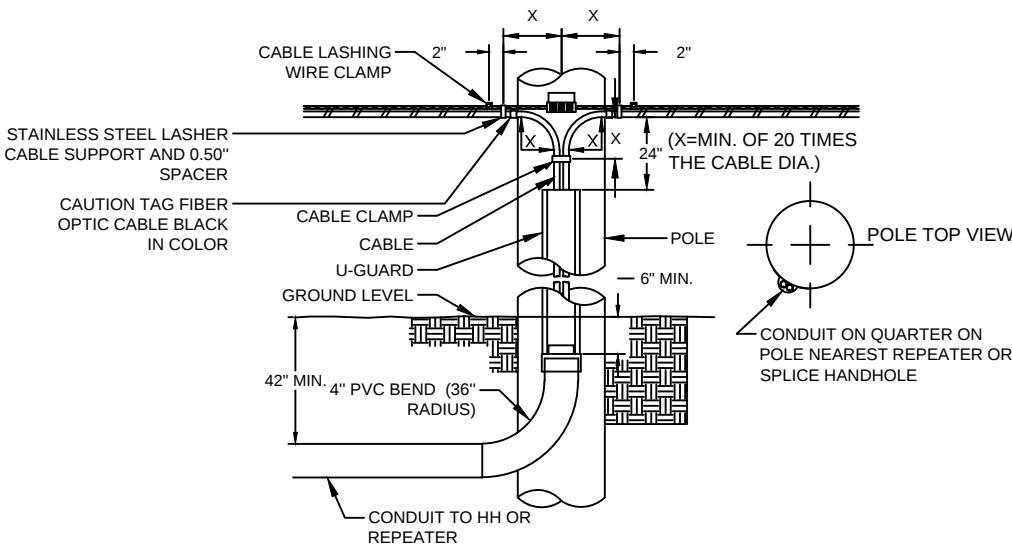
REMOVE ANY SLACK IN THE LASHING WIRE BY MAINTAINING A PULL ON THE WIRE AND TAPPING THE STRAND SHARPLY. THEN FORM THE WIRE OVER THE STUD AND TIGHTEN THE NUT. CUT THE FREE END OF THE LASHING WIRE OFF 0.75" BEYOND THE END OF THE CLAMP.

FORMING LASHING WIRE
AROUND STRAND

FORM THE LASHING WIRE AROUND THE STRAND AND PLACE IT BELOW THE STUD AND BETWEEN THE SECOND WASHER AND STUD SHOULDER.

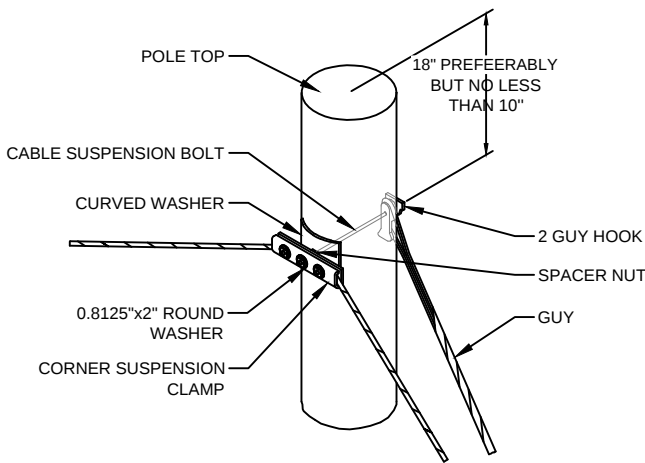
TYPICAL DETAIL "B"

POLE ARRANGEMENT FOR REPEATER
OR HANDHOLE LOCATION



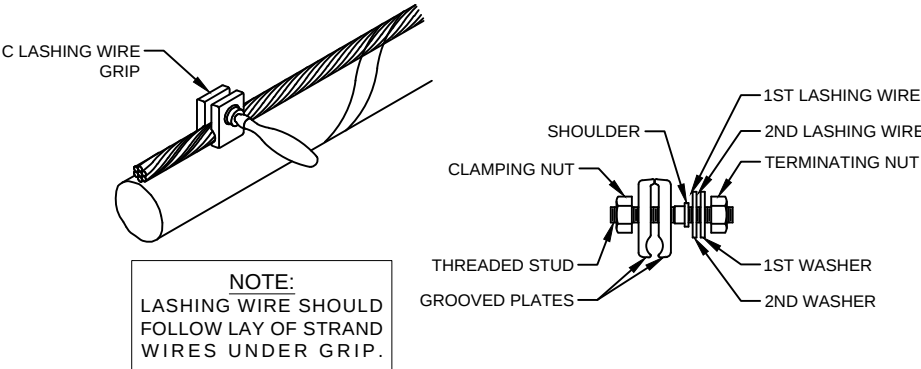
TYPICAL DETAIL "E"

SUSPENSION STRAND - PULL AWAY
FROM POLE - 5 FEET OR MORE



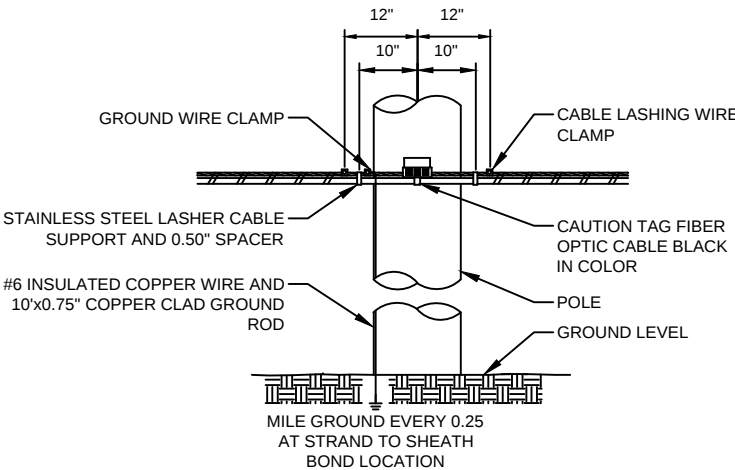
TYPICAL DETAIL "H"

LASHING WIRE GRIP AND CLAMP



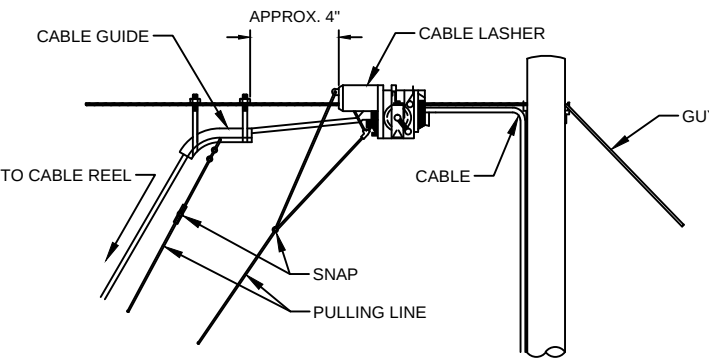
TYPICAL DETAIL "C"

TYPICAL CABLE & HARDWARE
INSTALLATION



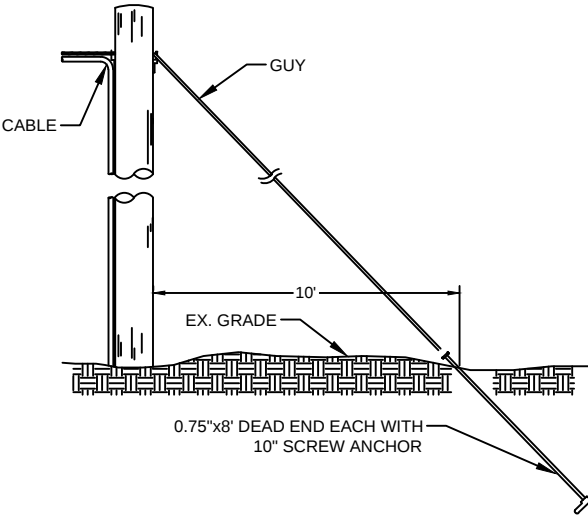
TYPICAL DETAIL "F"

TYPICAL ARRANGEMENT OF
CABLE LASHER AND CABLE GUIDE



TYPICAL DETAIL "I"

ANCHOR & DOWN GUY



PROJECT: 1706ANBE.002

RICHMOND, TX

PECAN GROVE TO GRAMPS



McImetro
ACCESS TRANSMISSION SERVICES
CORPORATION

OUTSIDE PLANT CONSTRUCTION

TITLE: FIBER OPTIC ROUTE
PEACANGROVE TO GRAMPS
RICHMOND, TX

DATE: 09/05/18

ENGINEER: L. STALCUP

DRAWN BY: T.P.G. (KIB)

REVISIONS			
No.	DATE	DESCRIPTION	BY
1.	-	-	-

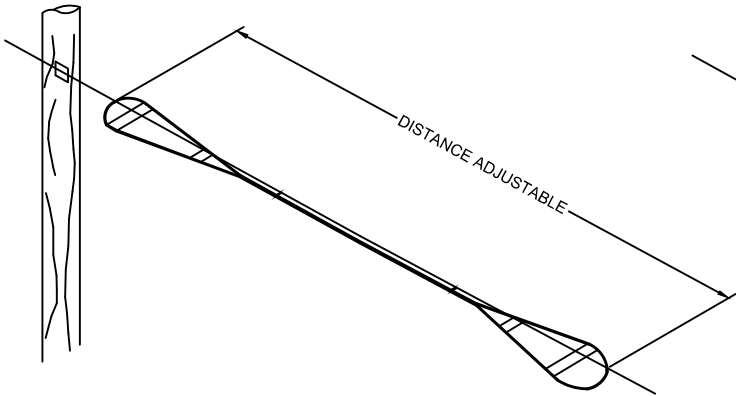
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SCALE	
HORIZONTAL:	1"= 50'
VERTICAL:	1"= N/A
MP	TO MP
SHEET	7B OF 11
FILE: 1706ANBE.005 07BA	

AERIAL IN-LINE SLACK STORAGE DETAILS

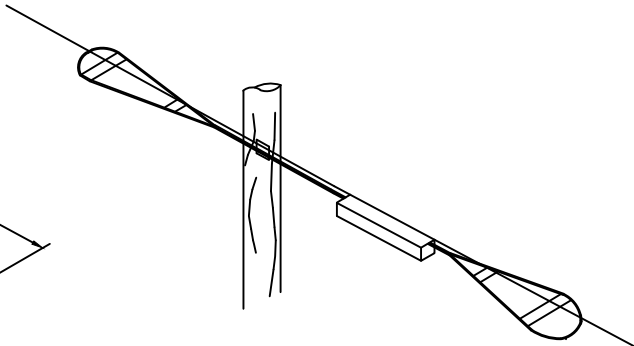
TYPICAL DETAIL "A"

RESERVE CABLE LENGTH
STRAND STORAGE APPLICATION



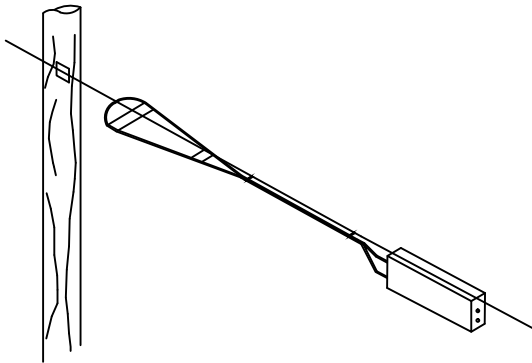
TYPICAL DETAIL "B"

IN-LINE SPLICE APPLICATION



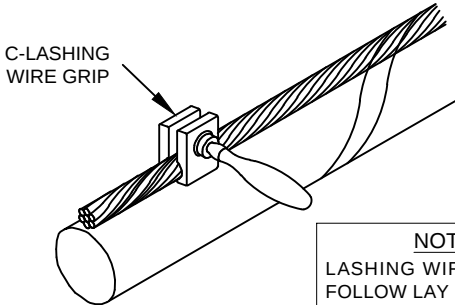
TYPICAL DETAIL "C"

BUTT SPLICE APPLICATION



TYPICAL DETAIL "D"

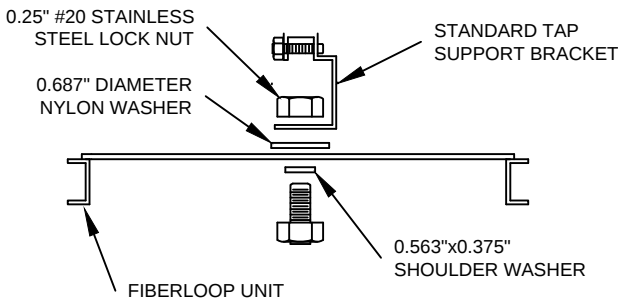
LASHING WIRE GRIP AND CLAMP C-LASHING
WIRE GRIP INSTALLED ON STRAND



NOTE:
LASHING WIRE SHOULD
FOLLOW LAY OF STRAND
WIRES UNDER GRIP.

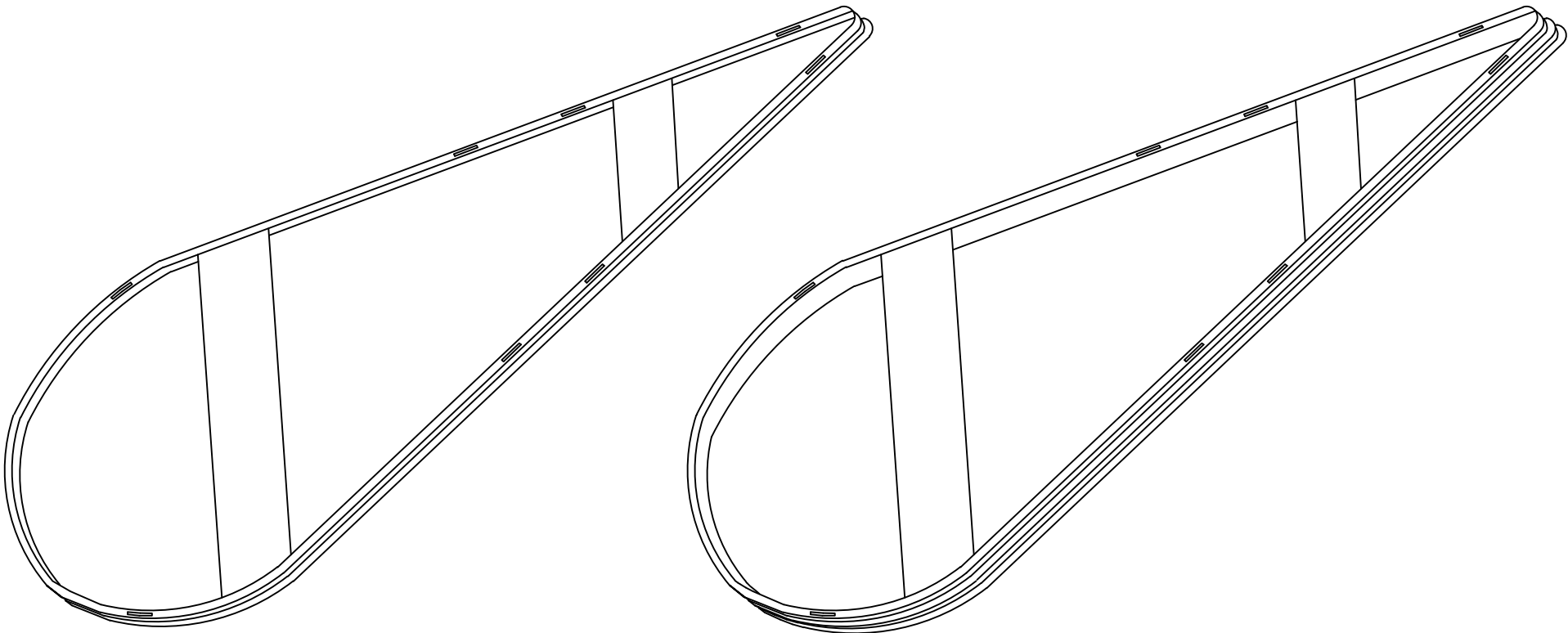
TYPICAL DETAIL "E"

HARDWARE KIT



TYPICAL DETAIL "F"

SINGLE & DOUBLE FIBER LOOPS



PROJECT: 1706ANBE.002

RICHMOND, TX

PECAN GROVE TO GRAMPS



McImetro
ACCESS TRANSMISSION SERVICES
CORPORATION

OUTSIDE PLANT CONSTRUCTION

TITLE: FIBER OPTIC ROUTE

PEACANGROVE TO GRAMPS

RICHMOND, TX

DATE: 09/05/18

ENGINEER: L. STALCUP

DRAWN BY: T.P.G. (KIB)

REVISIONS

No.	DATE	DESCRIPTION	BY
1.	-	-	-

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SCALE

HORIZONTAL: 1"= 50'

VERTICAL: 1"= N/A

MP _____ TO MP _____

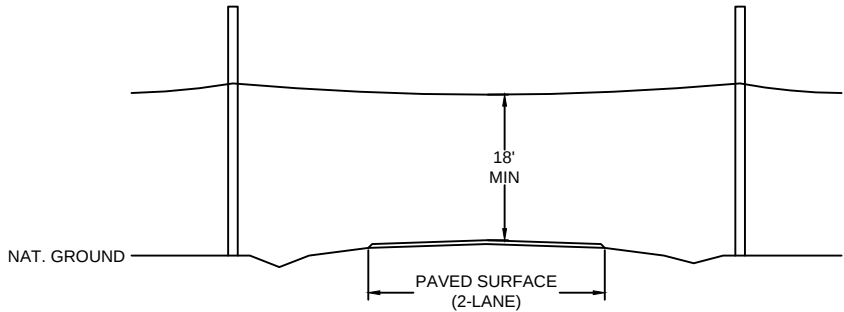
SHEET 7C OF 11

FILE: 1706ANBE.005 07CA

TYPICAL CROSSING PROFILE DETAILS: AERIAL

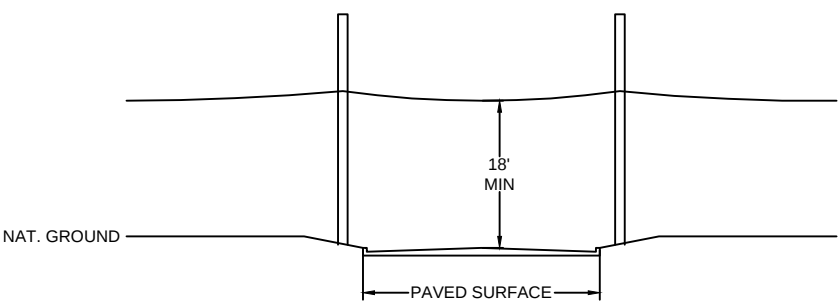
TYPICAL DETAIL "A"

TWO LANE - ASPHALT ROAD - NO CURB



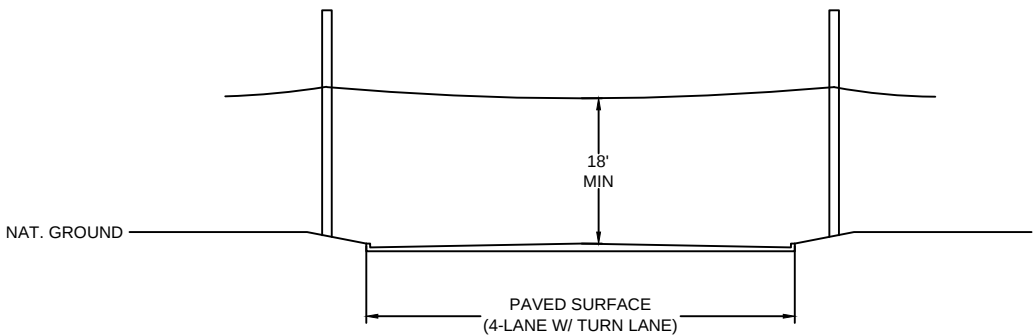
TYPICAL DETAIL "B"

TWO LANE - CURBED ROAD



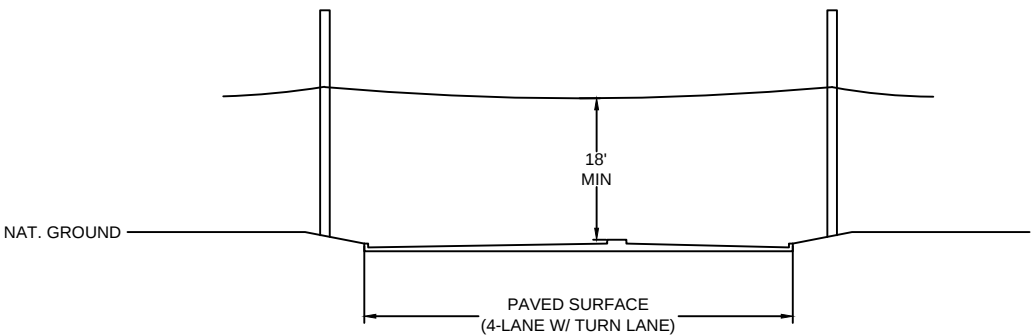
TYPICAL DETAIL "C"

FOUR LANE (W/ TURN LANE) - CURBED ROAD - NO MEDIAN



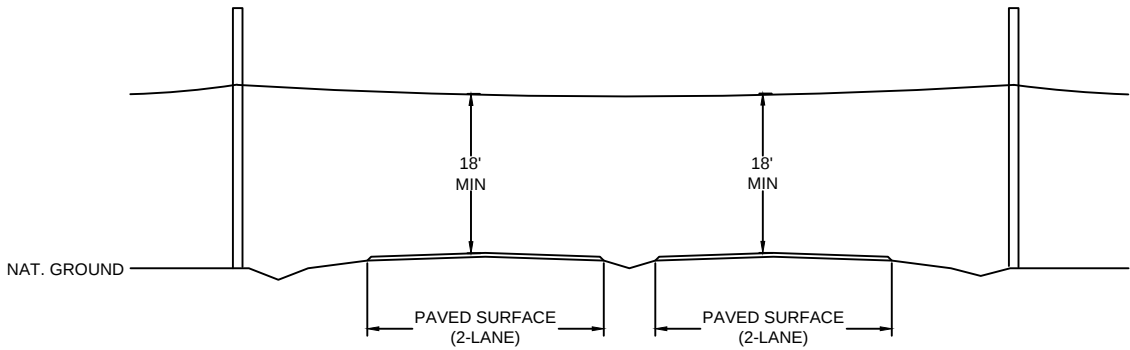
TYPICAL DETAIL "D"

FOUR LANE (W/ TURN LANE) - CURBED ROAD - WITH MEDIAN



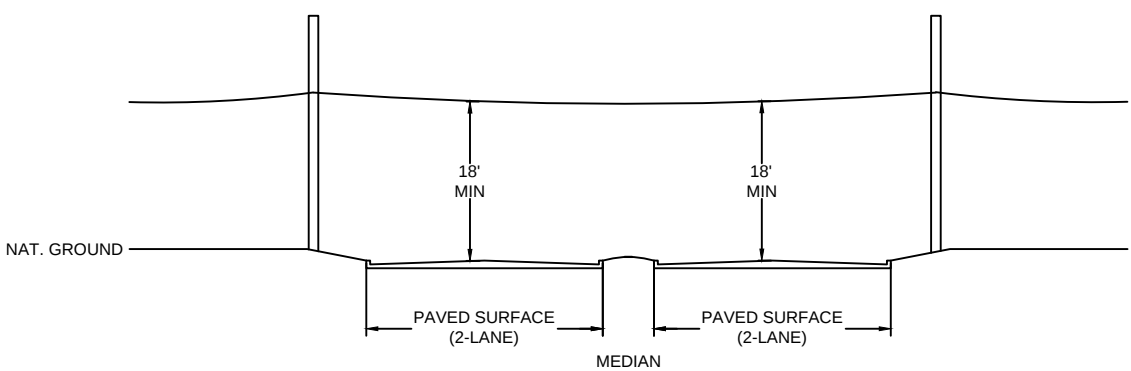
TYPICAL DETAIL "E"

4 LANE - SPLIT ASPHALT ROAD - NO CURB



TYPICAL DETAIL "F"

4 LANE - SPLIT CURBED ROAD



PROJECT: 1706ANBE.002

RICHMOND, TX
PECAN GROVE TO GRAMPS



MCI metro
ACCESS TRANSMISSION SERVICES
CORPORATION
OUTSIDE PLANT CONSTRUCTION
TITLE: FIBER OPTIC ROUTE
PECAN GROVE TO GRAMPS
RICHMOND, TX

DATE: 09/05/18

ENGINEER: L. STALCUP

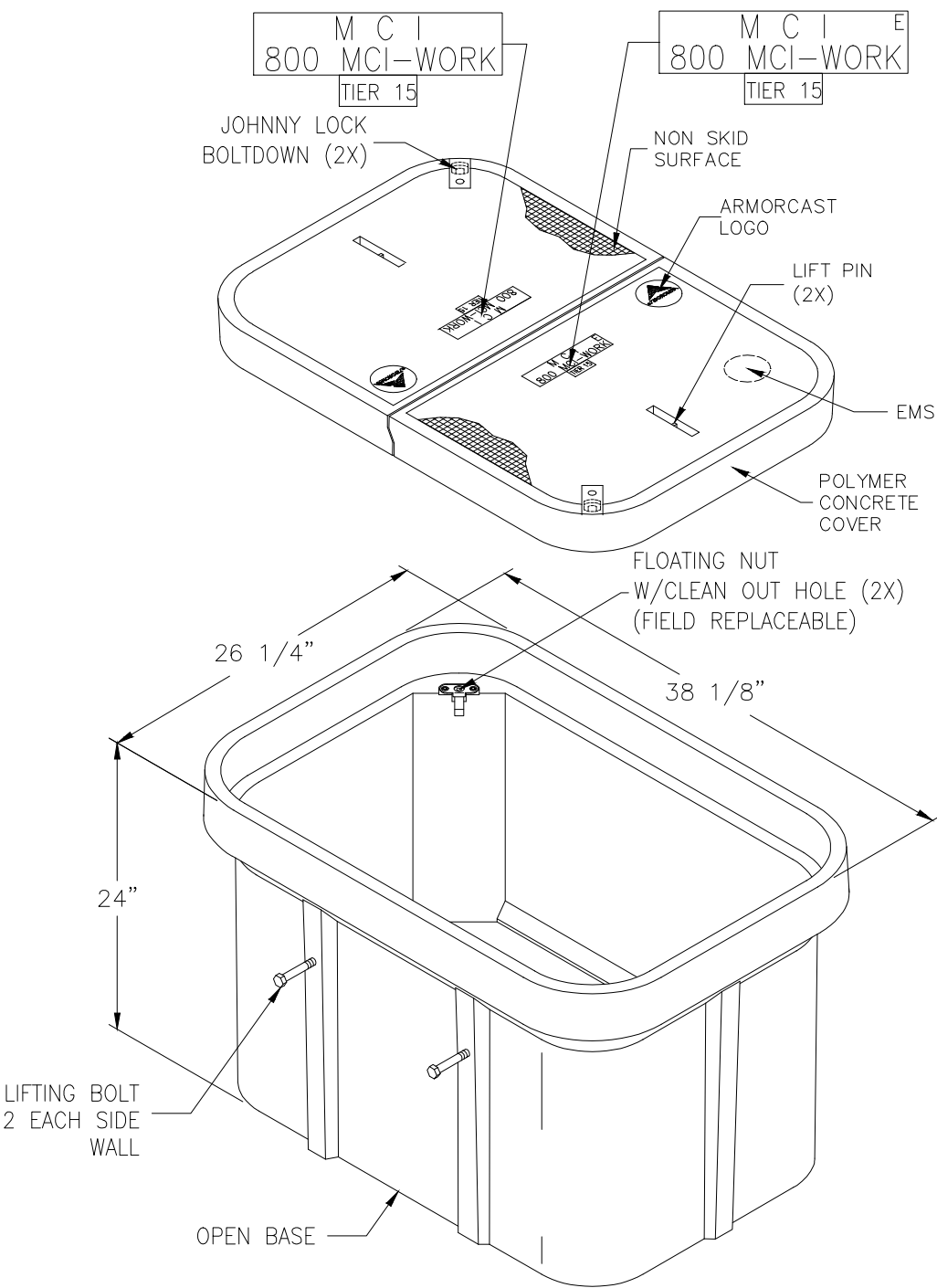
DRAWN BY: T.P.G. (KIB)

REVISIONS			
No.	DATE	DESCRIPTION	BY
1.	-	-	-

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SCALE
HORIZONTAL: 1"= 50'
VERTICAL: 1"= N/A
MP _____ TO MP _____
SHEET 7D OF 11
FILE: 1706ANBE.005 07DA

24" x 36" x 24" POLYMER CONCRETE BOX ASSEMBLY



NOTE:
BOX AND COVER ASSEMBLY MEET
ANSI/SCTE 77 TIER 15 LOADING

FILE # A6-1974TAPMC14	 ARMORCAST® PRODUCTS COMPANY 13230 Satcoy Street, North Hollywood, CA 91605 (818) 982-3600	PART DESCRIPTION 24" X 36" X 24" POLYMER CONCRETE BOX ASSEMBLY			
		CUSTOMER VERIZON			
		DRAWN OA	DATE 10/17	SCALE NONE	MAX. LOAD TIER 15
		APPROV. WS	DATE 10/17	MATERIAL POLYMER CONCRETE	DRAWING NUMBER A6001974TAPMC14
		THE INFORMATION IN THIS DRAWING IS CONFIDENTIAL. THE DRAWING IS NOT TO BE REPRODUCED OR ITS CONTENTS DIVULGED IN ANY WAY WHATSOEVER EXCEPT WITH THE PRIOR WRITTEN APPROVAL OF ARMORCAST PRODUCTS COMPANY. IT IS THE PROPERTY OF AND MUST BE RETURNED TO ARMORCAST PRODUCTS COMPANY, 13230 SATICOY STREET, NORTH HOLLYWOOD, CALIFORNIA 91605.			

PROJECT: 1706ANBE.002

RICHMOND, TX
PECAN GROVE TO GRAMPS



MCI metro
ACCESS TRANSMISSION SERVICES
CORPORATION
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RICHMOND, TX

DATE: 09/05/18

ENGINEER: L. STALCUP

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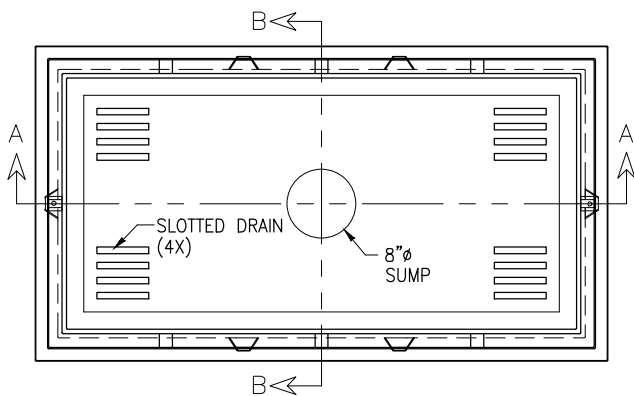
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SCALE	
HORIZONTAL:	1"= 50'
VERTICAL:	1"= N/A
MP	TO MP
SHEET	8 OF 11
FILE: 1706ANBE.005 08 A	

30" x 60" x 30" 30K STANDARD HANDHOLE DETAILS

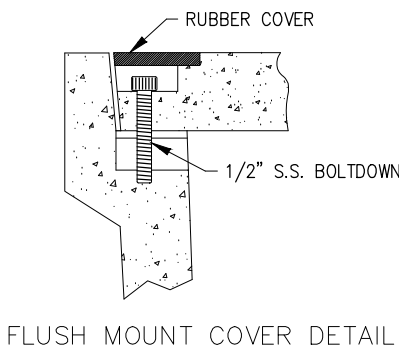
DETAIL "A"

LOCKING DEVICE
CROSS SECTION



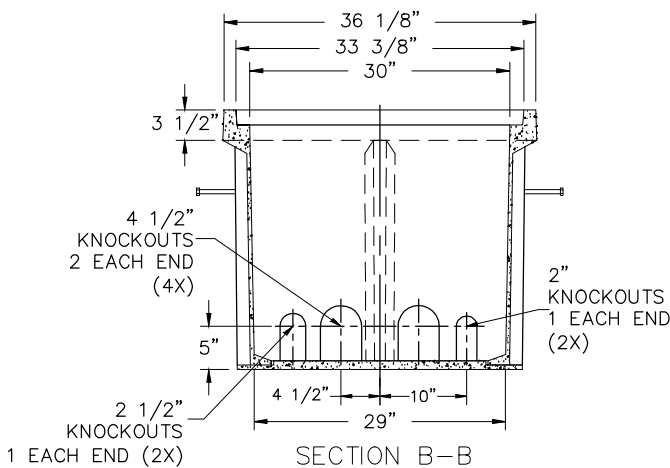
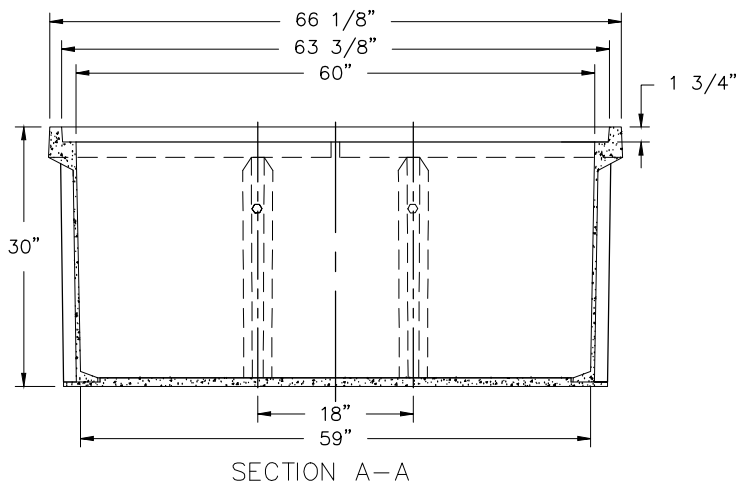
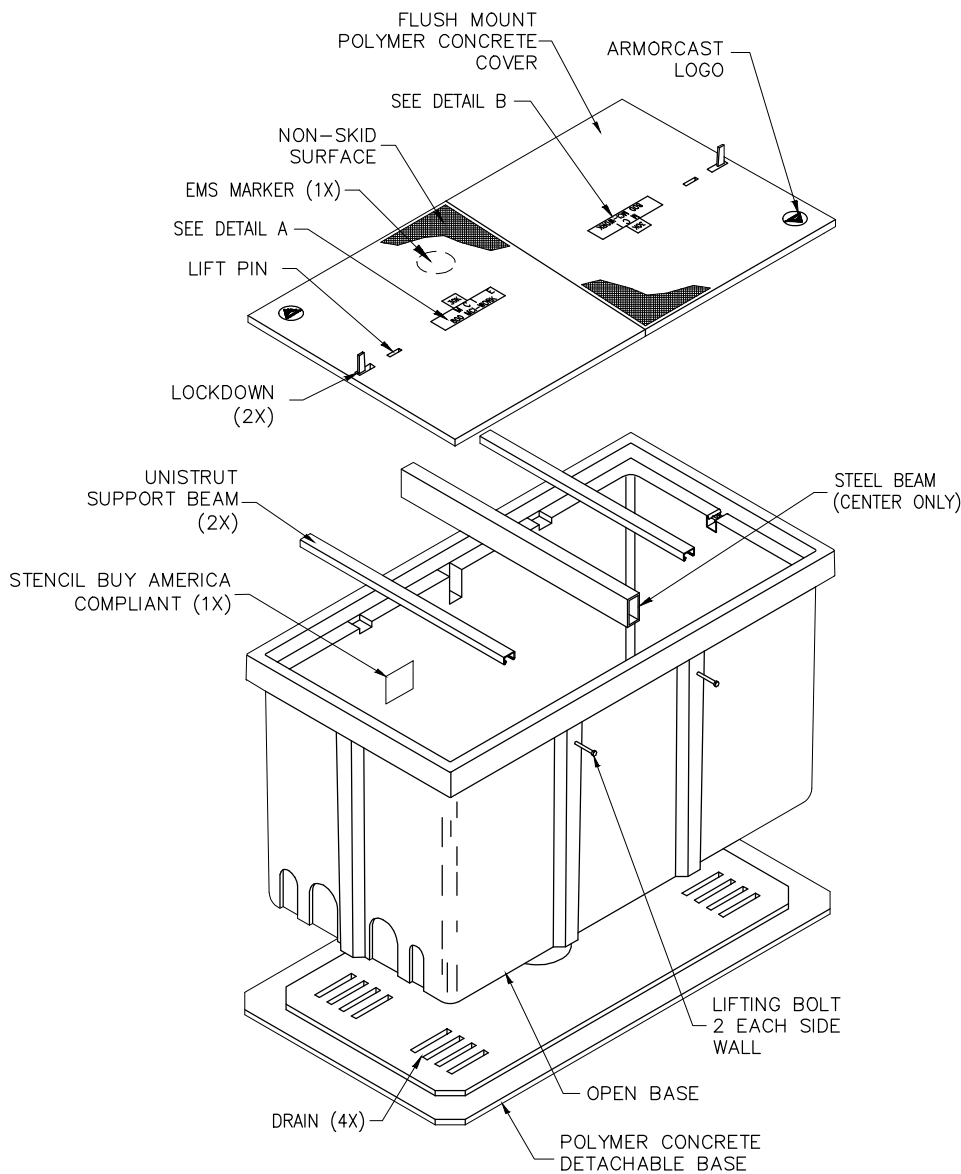
DETAIL "B"

FLUSH MOUNT
COVER DETAIL



DETAIL "C"

EXPLODED ISOMETRIC DETAIL



30K
M C I E
800 MCI-WORK
DETAIL A

30K
M C I
800 MCI-WORK
DETAIL B

- SEALED PLASTIC BAG PLACED INSIDE VAULT TO CONTAIN
- | ITEM | QTY | |
|------|-----|--|
| 1 | (1) | JOHNNY LOCK KEY |
| 2 | (2) | S.S. JOHNNY BOLTS W/FLAT WASHER. |
| 3 | | SHRINK WRAP COVERS TO FRAME FOR PACKAGING. |

30K STANDARD HANDHOLE
30"x60"x30" POLYMER CONCRETE FLUSH MOUNT ASSEMBLY
MEETS SCTE/ANSI 77-TIER 22 LOADING CRITERIA
ADDITIONAL REQUIREMENTS:
DESIGNED LOAD: 30,000 LBS
MINIMUM FAILURE LOAD: 45,000 LBS

PROJECT: 1706ANBE.002

RICHMOND, TX

PECAN GROVE TO GRAMPS



MCI metro
ACCESS TRANSMISSION SERVICES
CORPORATION
OUTSIDE PLANT CONSTRUCTION
TITLE: FIBER OPTIC ROUTE
PECAN GROVE TO GRAMPS
RICHMOND, TX

DATE: 09/05/18

ENGINEER: L. STALCUP

DRAWN BY: T.P.G. (KIB)

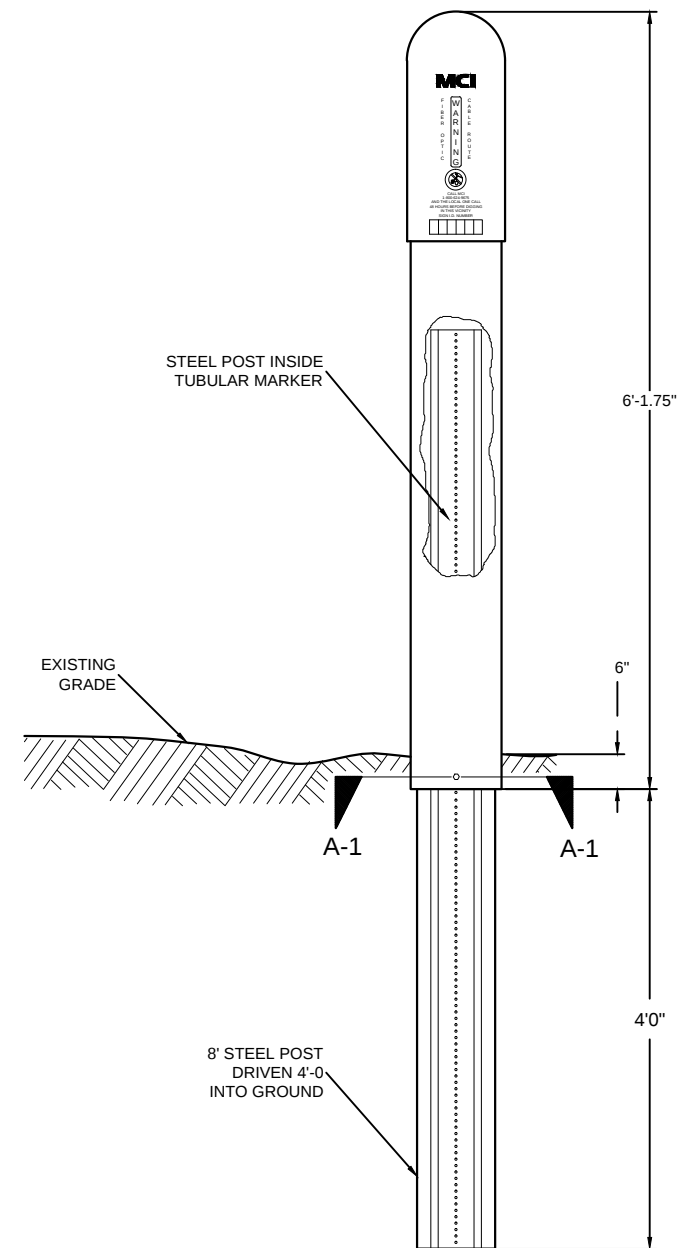
REVISIONS			
No.	DATE	DESCRIPTION	BY
1.	-	-	-

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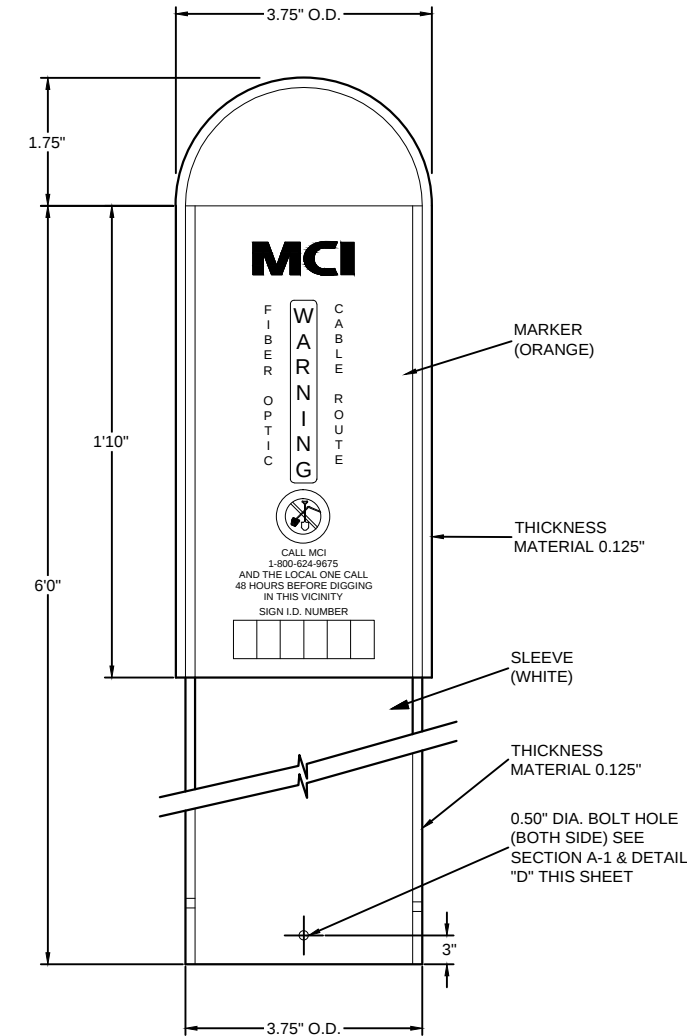
SCALE
HORIZONTAL: 1"= 50'
VERTICAL: 1"= N/A
MP _____ TO MP _____
SHEET 8A OF 11
FILE: 1706ANBE.005 08AA

TUBULAR MARKER DETAILS

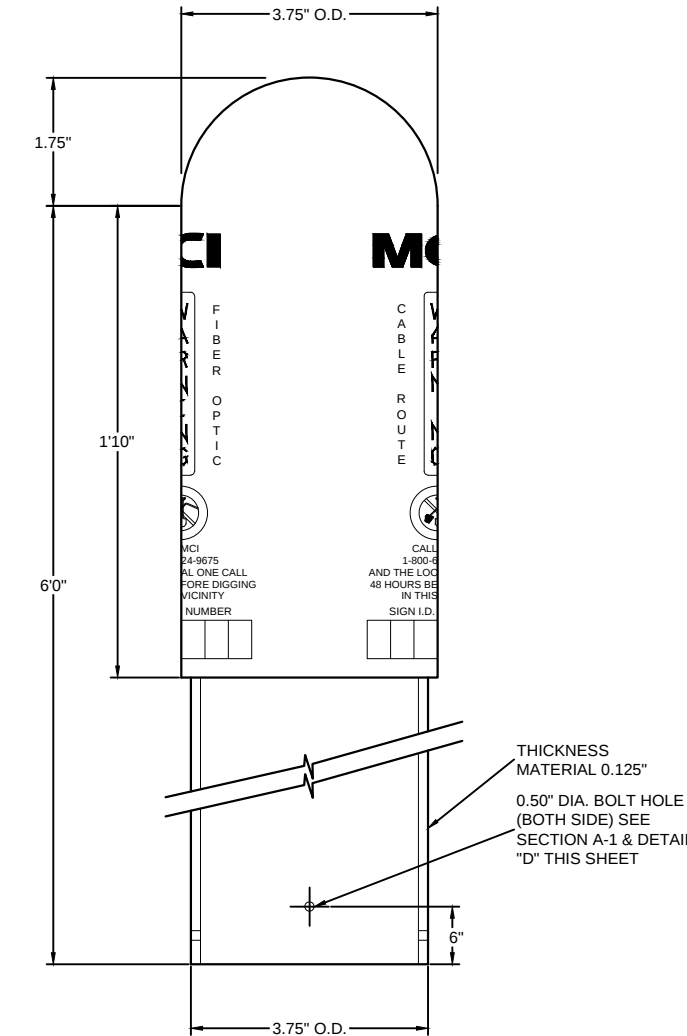
DETAIL "A"
INSTALLATION VIEW



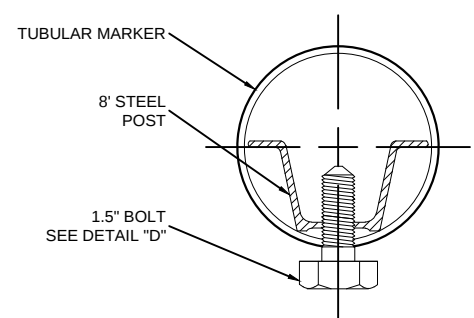
DETAIL "B"
FRONT VIEW



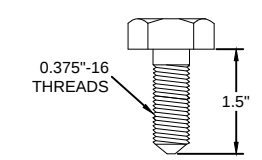
DETAIL "C"
SIDE VIEW



SECTION A-1
TUBULAR MARKER



DETAIL "D"
1.5" BOLT



PROJECT: 1706ANBE.002
RICHMOND, TX
PECAN GROVE TO GRAMPS



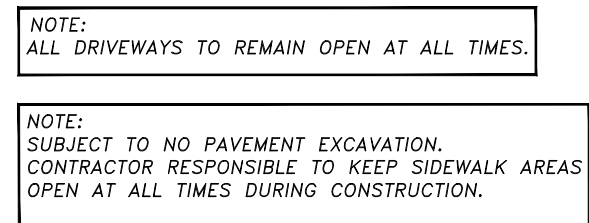
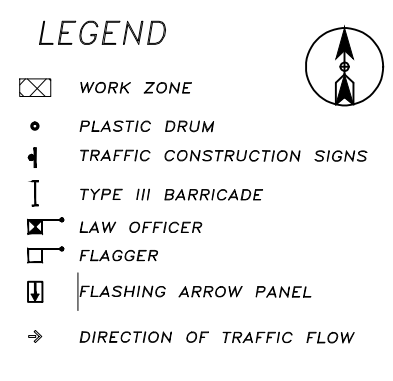
MCI metro
ACCESS TRANSMISSION SERVICES
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OUTSIDE PLANT CONSTRUCTION
TITLE: FIBER OPTIC ROUTE
PEACANGROVE TO GRAMPS
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DATE: 09/05/18
ENGINEER: L. STALCUP
DRAWN BY: T.P.G. (KIB)

REVISIONS			
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SCALE
HORIZONTAL: 1"= 50'
VERTICAL: 1"= N/A
MP _____ TO MP _____
SHEET 9 OF 11
FILE: 1706ANBE.005 09 A



PROJECT: 1706ANBE.002			
RICHMOND, TX			
PECAN GROVE TO GRAMPS			
 THE PERMIT GETTERS			
MCImetro ACCESS TRANSMISSION SERVICES CORPORATION		OUTSIDE PLANT CONSTRUCTION	
		TITLE: FIBER OPTIC ROUTE PEACANGROVE TO GRAMPS RICHMOND, TX	
DATE: 09/05/18			
ENGINEER: L. STALCUP			
DRAWN BY: T.P.G. (KIB)			
REVISIONS			
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SCALE			
HORIZONTAL: 1"= 50'			
VERTICAL: 1"= N/A			
MP _____ TO MP _____			
SHEET 9A OF 11			
FILE: 1706ANBE.005 09AA			

RICHMOND, TX
FORT BEND COUNTY

CAUTION !!!!
CONTRACTOR TO LOCATE &
VERIFY ALL EXISTING UTILITIES
PRIOR TO CONSTRUCTION

CAUTION!!!
EXIST. BURIED FIBER, TELEPHONE, CATV, GAS, ELECTRIC, WATER,
SANITARY SEWER & STORM SEWER FACILITIES IN CONSTRUCTION AREA
AND HAVE NOT BEEN FIELD LOCATED, CONTRACTOR TO VERIFY EXACT
LOCATION AND DEPTH PRIOR TO ANY DIGGING AND/OR BORING.

NORTH



PROJECT: 1706ANBE.002

RICHMOND, TX
PECAN GROVE TO GRAMPS

CLARIFICATION NO.	QUANTITY
PLACE (24"X36"X24") HH	1
PLACE (17"X30"X36") HH	-
PROP. 1-2" HDPE	508'
PULL 1-144F (A) CABLE	713'
PULL 1-144F (DE) CABLE	-
PLACE 6M STRAND	-
LASH 1-144F CABLE	-
DOWN GUY & ANCHOR	-
RISER: 2" U GUARD	-
PLACE MARKER	1



McMetro
ACCESS TRANSMISSION SERVICES
CORPORATION
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SCALE

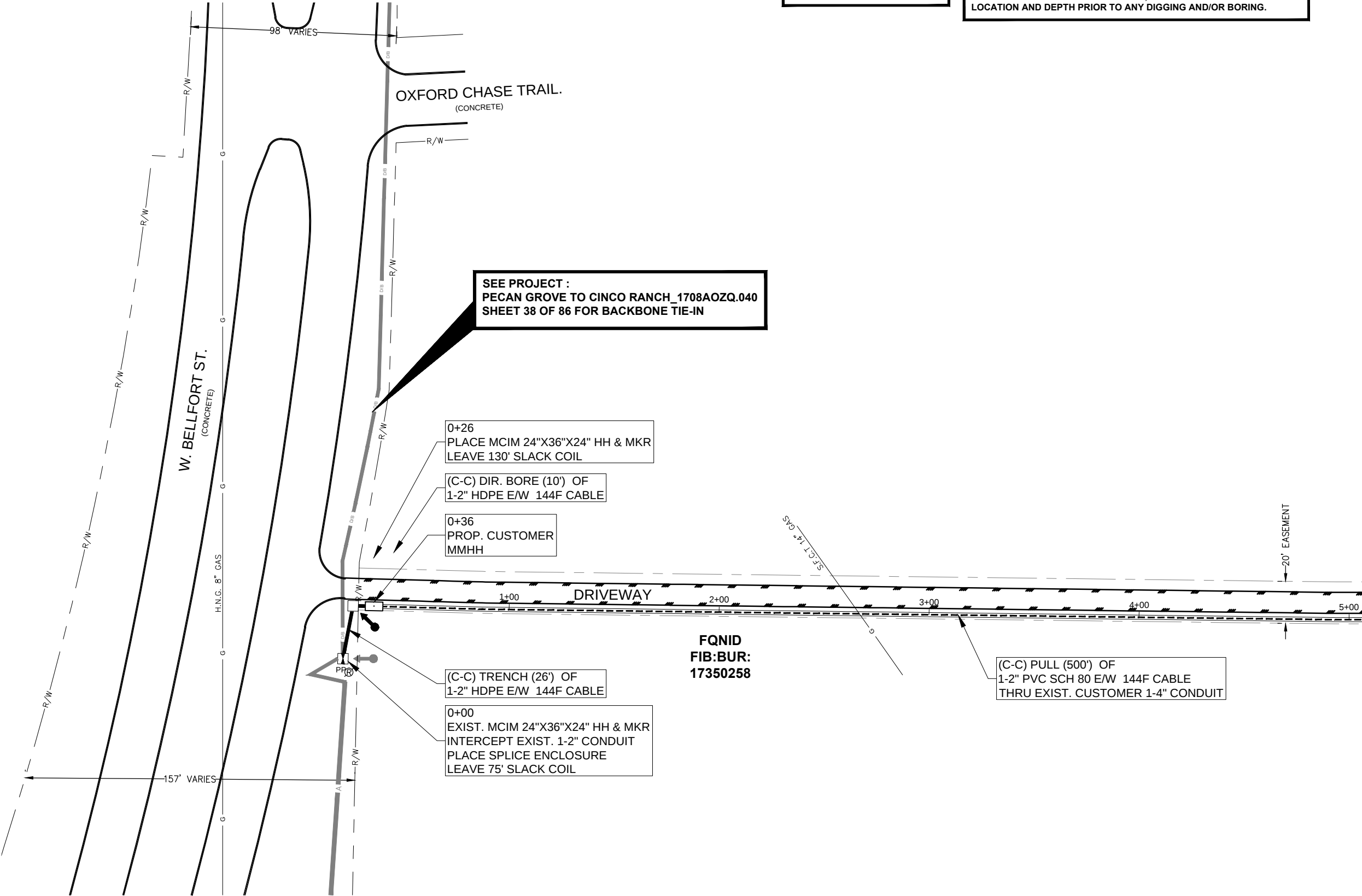
HORIZONTAL: 1"= 50'

VERTICAL: 1"= N/A

MP _____ TO MP _____

SHEET 10 OF 11

FILE: 1706ANBE.005 010



UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE RECORDS AND
FIELD OBSERVATIONS BUT ARE NOT NECESSARILY EXACT. IT IS THE CONTRACTORS
RESPONSIBILITY TO FIELD LOCATE ALL UNDERGROUND OBSTRUCTIONS AND
UTILITIES PRIOR TO CONSTRUCTION. COMPLETE REPAIR OF ANY AND ALL
DAMAGES INCURRED SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

RIGHT OF WAY LINES WERE ESTABLISHED BY RESEARCH OF PUBLIC INFORMATION.
NO BOUNDARY SURVEY OR PROPERTY LINE SURVEY WAS ESTABLISHED. RIGHT OF
WAY BOUNDARY MUST BE FIELD VERIFIED BY A REGISTERED PROFESSIONAL LAND
SURVEYOR TO ACCURATELY VERIFY RIGHT OF WAY AND PROPERTY LINES PRIOR
TO CONSTRUCTION.

NOTE:
THE CONTRACTOR SHALL FIELD VERIFY AND LOCATE
ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION."



Know what's below.
Call before you dig.



CALL BEFORE YOU DIG
1-800-545-6005

48 HOURS NOTICE REQUIRED