APPENDIX C

DESIGN DOCUMENTS FOR PROPOSED ACTION ALTERNATIVE

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
001	TITLE SHEET
002	ARTICULATING CONCRETE BLOCK MATTING (ABM) TYPICAL SECTION
003	SUMMARY OF QUANTITIES
004	GENERAL NOTES AND LEGEND
005 - 008	PLAN AND PROFILE
101 - 102	TEMPORARY EROSION CONTROL (EC-01) DETAILS
103	BEDDING AND BACKFILL FOR DRAINAGE STRUCTURES (BM-01) DETAIL
104	DELINEATOR, MILEPOST & HAZARD MARKERS STRUCTURAL DETAILS
105 - 106	REINFORCED CONCRETE BOX CULVERT DETAILS
107	EXPANSION JOINT (CM-49) DETAIL
108	CATCH BASIN (CB-04) DETAIL
109	CATCH BASIN GRATE (MC-01) DETAIL
110	ARTICULATING CONCRETE BLOCK MATTING (ABM) DETAIL
111 - 113	HIGHWAY SIGNS AND BARRICADE DETAILS
200 - 210	CROSS SECTIONS

LA One Call 811

REMEMBER TO CALL BEFORE YOU DIG!

CONSTRUCTION PLANS

FOR

POST ROAD CHANNEL IMPROVEMENTS

FOR THE

CITY OF CARENCRO

CITY OF CARENCRO-MAYOR

GLENN L. BRASSEAUX

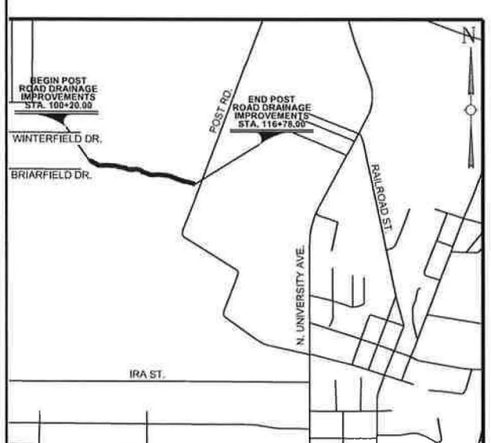
MAYOR PRO TEMPORE

J.L. RICHARD

CARENCRO CITY COUNCIL

ANTOINE BABINEAUX JR. *KIM GUIDRY*

ALFRED SINEGAL *L.J. BOUDREAUX*



VICINITY MAP
SCALE: 1" = 1000'

PLANS PREPARED BY AND RECOMMENDED FOR APPROVAL:

4/6/15

C.H. FENSTERMAKER & ASSOC., LLC. DATE
JUSTIN SHAW, P.E.
PROJECT ENGINEER

STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

FENSTERMAKER
Phone: (337) 231-0200
File: 2071 2721-2100
700 Rodney Blum
Lafayette, LA 70503

JOB NO: 2071040.97C

PARISH: LAFAYETTE PARISH

CHECKED BY: JMS | DATE: APRIL 2015

PROJECT: POST ROAD CHANNEL IMPROVEMENTS

DESIGNED BY: CRM | DRAWN BY: CRM

TITLE SHEET

FOR

City Of Carencro

P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8681 * Fax (337)896-0890

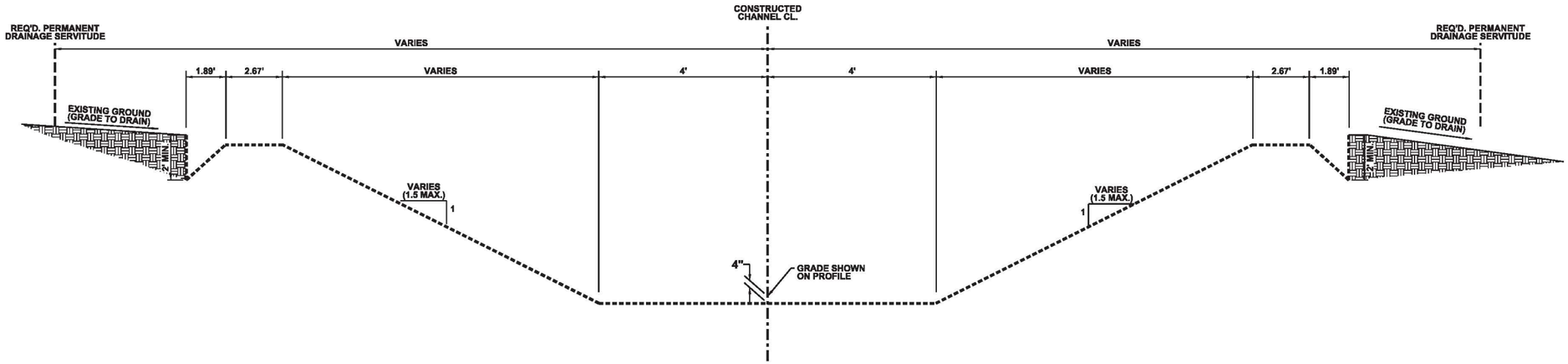
REVISIONS

DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:

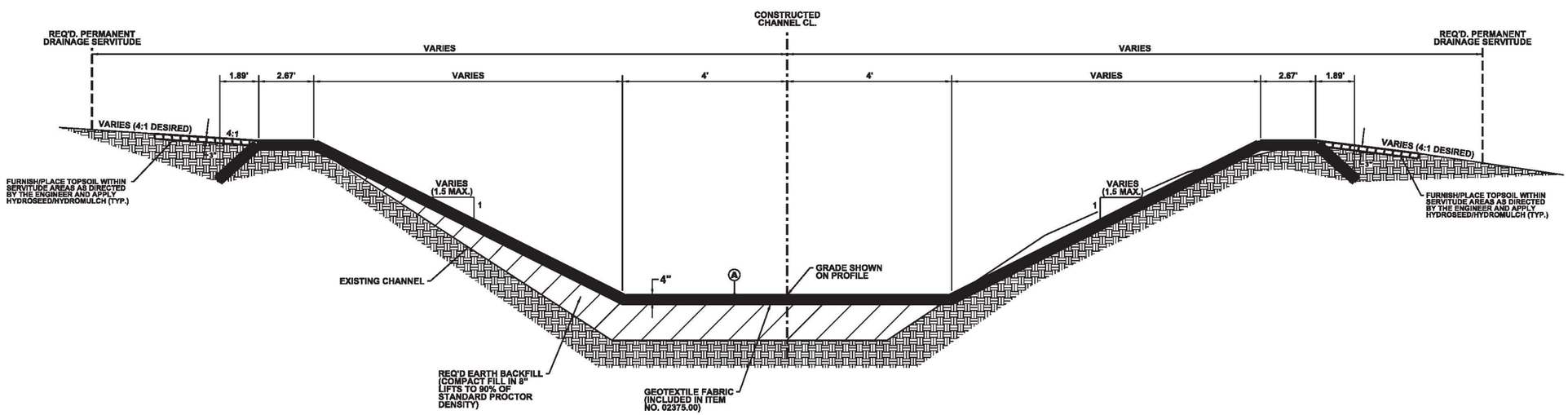
STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 001



ARTICULATING CONCRETE BLOCK MAT TYPICAL GRADING SECTION

STA. 100+30.00 TO STA. 115+76.00
STA. 116+00.00 TO STA. 116+78.00



ARTICULATING CONCRETE BLOCK MAT TYPICAL FINISH SECTION

STA. 100+30.00 TO STA. 115+76.00
STA. 116+00.00 TO STA. 116+78.00

TYPICAL FINISHED SECTION LEGEND

	ITEM NO.	UNIT	DESCRIPTION
A	02375.00	SQ. YD.	ARTICULATING CONCRETE BLOCK MATTING (ABM)

NOTES:
1. REFER TO SHEET 110 FOR ADDITIONAL CONSTRUCTION DETAILS.

FENSTERMAKER
135 Regency Square
Lafayette, La 70508
Phone: (337) 237-2200
Fax: (337) 232-3299

JOB NO: 2071040.97C

PARISH: LAFAYETTE PARISH
DATE: APRIL 2015
CHECKED BY: JMS
DRAWN BY: CRM
DESIGNED BY: CRM

PROJECT: POST ROAD CHANNEL IMPROVEMENTS

ARTICULATING CONCRETE BLOCK MAT TYPICAL SECTION

FOR
City Of Carencro

P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-6481 * Fax (337)896-0890

REVISIONS

DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:
STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

SHEET NO. 002

SUMMARY OF ESTIMATED QUANTITIES

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY
01323.010	CONSTRUCTION PHOTOGRAPHS & VIDEOS	LS	1
01525.002	PROJECT SITE LABORATORY	LS	1
01550.001	TEMPORARY SIGNS AND BARRICADES	LS	1
01590.001	MOBILIZATION	LS	1
02040.001	CONSTRUCTION LAYOUT	LS	1
02220.001	REMOVAL AND DISPOSAL OF STRUCTURES AND OBSTRUCTIONS	LS	1
02220.002	REMOVAL OF PIPE (CROSS DRAIN)	EA	2
02220.003	REMOVAL OF PIPE (STORM DRAIN)	EA	3
02230.001	CLEARING AND GRUBBING	LS	1
02315.001	GENERAL EXCAVATION	CY	2883
02315.002	EMBANKMENT	CY	701
02350.001	GEOTEXTILE FABRIC	SY	7772
02371.005	TEMPORARY SEDIMENT CHECK DAM (HAY)	EA	3
02371.008	TEMPORARY HAY OR STRAW BALES	EA	13
02371.010	TEMPORARY SILT FENCING	LF	3300
02371.011	TEMPORARY STONE CONSTRUCTION ENTRANCE	EA	1
02372.001	RIPRAP	SY	30
02375.000	ARTICULATING CONCRETE BLOCK MATTING (ABM)	SY	7700
02615.001	BEDDING MATERIAL	CY	12
02630.114	SIDE DRAIN PIPE (15" RCP/PP)	LF	152
02635.420	CATCH BASIN (CB-04)	EA	13
02891.001	DELINEATOR ASSEMBLY (GROUND MOUNTED)	EA	4
02920.001	HYDROSEEDING	ACRE	2
02960.002	TEMPORARY EMERGENCY BYPASS PUMP	EA	1
03310.118	REINFORCED CONCRETE BOX CULVERT (8'X8')	LF	24

FENSTERMAKER
135 Regency Square
Lafayette, LA 70508
Phone: (337) 237-1285
Fax: (337) 232-3299

JOB NO: 207/040.97C

PARISH: LAFAYETTE PARISH

PROJECT: POST ROAD CHANNEL IMPROVEMENTS

DESIGNED BY: CRM | DRAWN BY: CRM | CHECKED BY: JMS | DATE: APRIL 2018

SUMMARY OF QUANTITIES

FOR

City Of Carencro

P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-9481 * Fax: (337)896-0890

REVISIONS

DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:

SHEET NO. 003

GENERAL NOTES (UTILITY):

1. THE CONTRACTOR SHALL HAVE SOMEONE AVAILABLE TO RECEIVE CALLS AND DISPATCH PROPER PERSONNEL AND EQUIPMENT ON A TWENTY-FOUR (24) HOUR BASIS FOR EMERGENCIES.

2. UTILITY FACILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND DO NOT INCLUDE SERVICE LOCATIONS. THERE IS NO EXPRESSED OR IMPLIED GUARANTEE AS TO THE ACCURACY OF THE VARIOUS UTILITIES OR OMISSIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION WORK. FINAL PROJECT LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER AFTER THE CONTRACTOR'S VERIFICATION OF ALL UTILITIES.

3. IN NO CASE SHALL THE CONTRACTOR RECEIVE ADDITIONAL COMPENSATION DUE TO THE LOCATION OF EXISTING UTILITIES IN RELATION TO THE FINAL LOCATION OF PROPOSED LINES AND APPURTENANCES.

4. THOROUGH BACKFILL COMPACTION IS REQUIRED THROUGHOUT THE PROJECT AT NO COST TO OWNER. TRENCHES SHALL BE BACKFILLED IN 8" LIFTS OR LAYERS AND LEFT IN A SLIGHTLY CROWNED CONDITION UNTIL FINAL DRESS-UP WORK. CONTRACTOR MUST RESTORE ALL EXCAVATIONS TO AS GOOD OR BETTER CONDITION THAN EXISTING CONDITION. BACKFILLED WORK AREA SURFACES MUST REMAIN IN A NEAT AND TIDY CONDITION (FREE OF DEBRIS AND CLUMPS). BACKFILL SHALL BE COMPACTED TO 90% STANDARD PROCTOR OF THE SUITABLE BACKFILL MATERIAL USED.

5. CONTRACTOR IS TO PROVIDE CONSTRUCTION SIGNS AND BARRICADES AS REQUIRED BY MUTCD. ROADWAY SURFACES MUST BE KEPT IN A SAFE OPERATING CONDITION AT ALL TIMES AND BE CLEANED DAILY.

6. CONTRACTOR IS TO REMOVE AND TO REBUILD FENCES AT LOCATIONS SHOWN ON PLANS OR DIRECTED BY THE ENGINEER. PAYMENT IS TO BE MADE AT CONTRACT PRICE PER LN. FT. FOR "REBUILT FENCE". IF FENCE HAS BEEN REMOVED AND CAN NOT BE REBUILT UNTIL PROJECT IS COMPLETE, AS DIRECTED BY ENGINEER, CONTRACTOR SHALL CONSTRUCT A TEMPORARY FENCE AS PER "TEMPORARY FENCE DETAIL" AND CONTRACT SPECIFICATIONS. PAYMENT IS TO BE MADE AT CONTRACT PRICE PER LN. FT. FOR "FURNISH AND INSTALL TEMPORARY FENCE".

7. CONTRACTOR SHALL MAINTAIN ROADWAY AND DITCH DRAINAGE AT ALL TIMES.

LEGEND - EXISTING TOPOGRAPHY

CONTROL POINT
PAVEMENT EDGE
SHOULDER EDGE
SLOPE TOE
HIGH BANK
PIPE CULVERT
CATCH BASIN TOP (ROUND)
DROP INLET TOP (ROUND)
DRAINAGE MANHOLE TOP
EX. DITCH CENTERLINE
EX. DITCH TOP
EX. DITCH TOE
TREE
FENCE LINE
GATE
PROPERTY CORNER
RIGHT OF WAY MONUMENT
SECTION CORNER
FENCE CORNER
TELEVISION CABLE
TELEVISION PEDESTAL
POWER POLE
OVERHEAD POWER LINE
POWER JUNCTION BOX
POWER VAULT
TRANSFORMER
COMBINATION POLE
POWER DROP
PIPELINE
UNDERGROUND ELECTRIC LINE
PROPERTY LINE

GAS LINE
GAS METER
GAS REGULATOR
GAS VALVE
SEWER LINE
SEWER MANHOLE TOP
SEWER CLEANOUT
LIGHT POLE
LIGHT PEDESTAL
LIGHT POWER VAULT
TRAFFIC SIGN
TELEPHONE POLE
TELEPHONE LINE
TELE CROSS CONNECT BOX
TELEPHONE PEDESTAL
WATER LINE
WATER CLEANOUT
WATER METER
WATER VALVE
WATER VALVE VAULT
FIRE HYDRANT
POST
SIGN POST
MAILBOX
FLAG POLE

GENERAL NOTES:

1. DRAINAGE AND MUCK EXCAVATION SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS. ALL LABOR, EQUIPMENT, AND MATERIAL TO PERFORM DRAINAGE AND MUCK EXCAVATION SHALL BE PAID FOR UNDER ITEM NO. 02315.001.

2. ALL SALVAGEABLE MATERIAL, AS DETERMINED BY THE PROJECT ENGINEER, TO BE LOADED ON TO CITY OF CARENCRO TRUCKS BY THE CONTRACTOR.

3. CONTRACTOR IS TO BE AWARE OF EXISTING DEBRIS IN CHANNEL. THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL OF ANY TRASH & DEBRIS WITHIN CONSTRUCTION LIMITS PRIOR TO AND DURING CONSTRUCTION.

4. ALL EXISTING TREES WITHIN PERMANENT DRAINAGE SERVITUDE SHALL BE REMOVED. (INCLUDED IN ITEM NO. 02230.001)

5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE AND DISPOSE UNSALVAGEABLE MATERIAL ACCORDING TO LOCAL, STATE, AND FEDERAL LAWS, REGULATIONS, AND STANDARDS. (INCLUDED IN LINE ITEM NO. 02316.001)

FENSTERMAKER
Phone: (337) 233-1307
Fax: (337) 235-5096
135 Regency Square
Lafayette, La 70508

JOB NO: 207/040.97C

PARISH: LAFAYETTE PARISH
DATE: APRIL 2015
CHECKED BY: JNB
PROJECT: POST ROAD CHANNEL IMPROVEMENTS
DRAWN BY: CRM
DESIGNED BY: CRM

GENERAL NOTES AND LEGEND

FOR
City Of Carencro

P.O. Drawer 10
216 East St. Peter Street
Carencro, LA 70520
(337)896-6461 * Fax (337)896-0890

REVISIONS

DATE	REVISION DESCRIPTION	BY

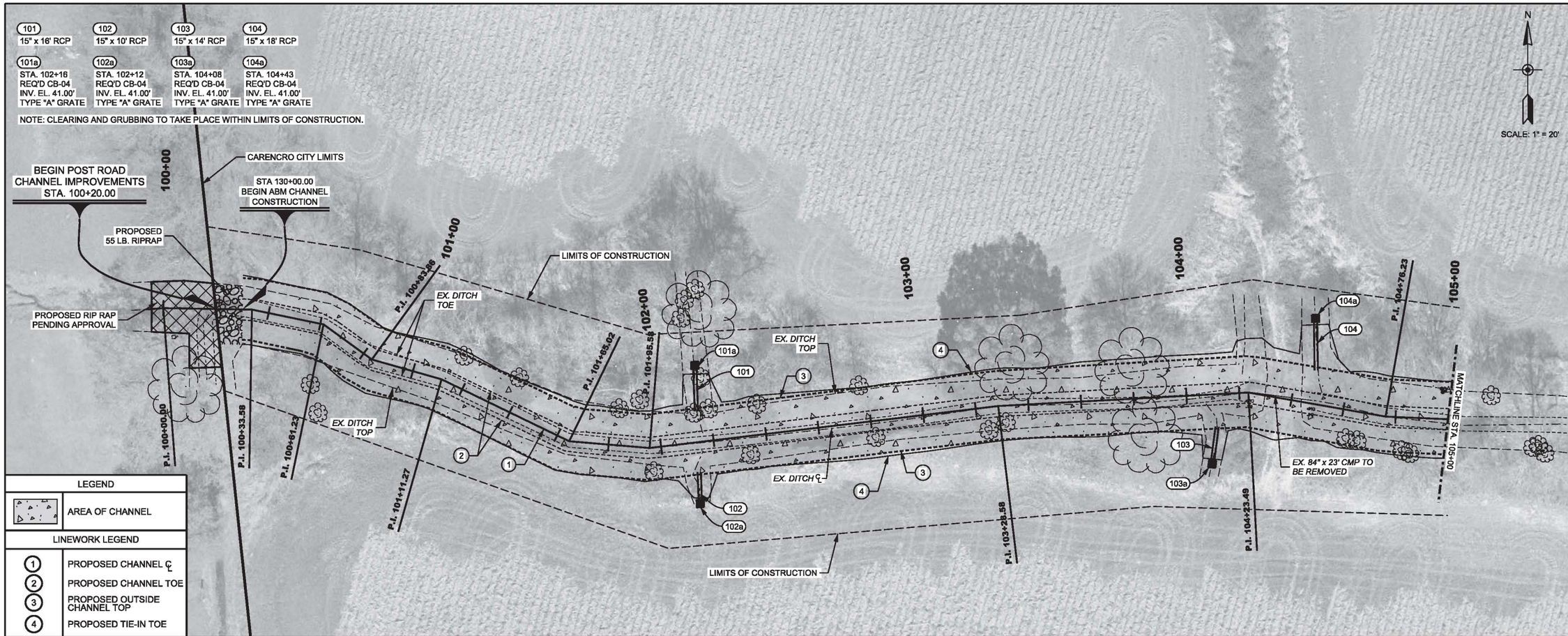
STAMP/SEAL:

STATE OF LOUISIANA
JUSTIN L. BRAS
License No. 37201
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

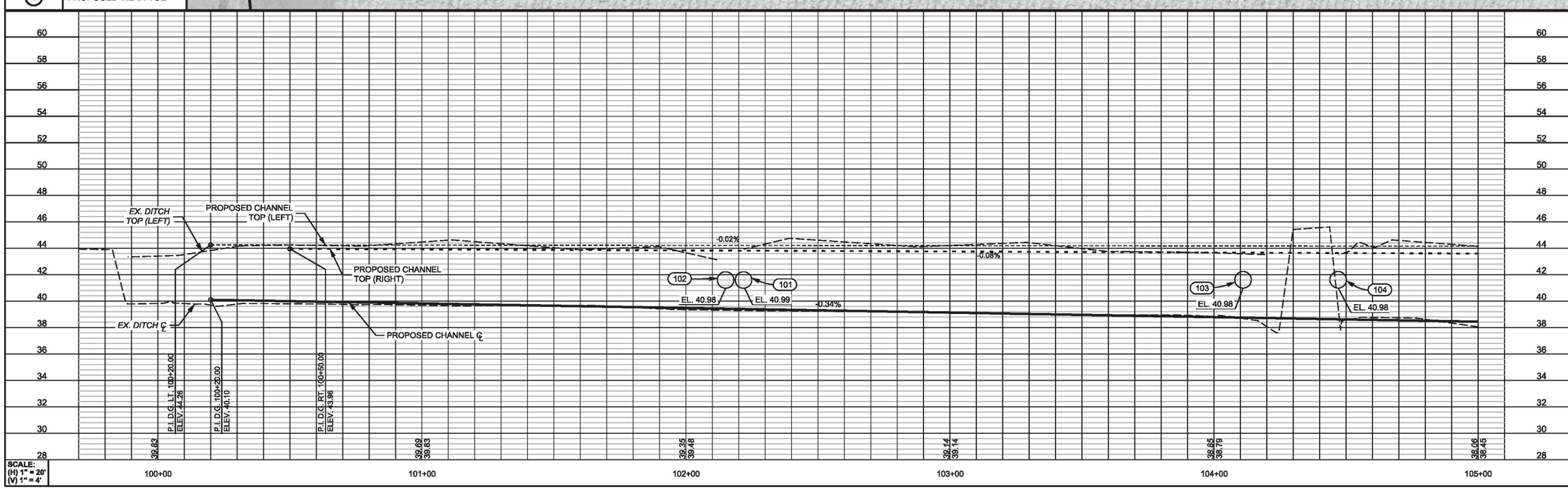
SHEET NO. 004

101	102	103	104
15" x 16' RCP	15" x 10' RCP	15" x 14' RCP	15" x 18' RCP
101a	102a	103a	104a
STA. 102+16 REQ'D CB-04 INV. EL. 41.00' TYPE "A" GRATE	STA. 102+12 REQ'D CB-04 INV. EL. 41.00' TYPE "A" GRATE	STA. 104+08 REQ'D CB-04 INV. EL. 41.00' TYPE "A" GRATE	STA. 104+43 REQ'D CB-04 INV. EL. 41.00' TYPE "A" GRATE

NOTE: CLEARING AND GRUBBING TO TAKE PLACE WITHIN LIMITS OF CONSTRUCTION.



LEGEND	
	AREA OF CHANNEL
LINEWORK LEGEND	
1	PROPOSED CHANNEL ℄
2	PROPOSED CHANNEL TOE
3	PROPOSED OUTSIDE CHANNEL TOP
4	PROPOSED TIE-IN TOE



FENSTERMAKER
135 Regency Square
Lafayette, La 70508
Phone: (337) 237-2200
Fax: (337) 232-3299

JOB NO: 207/040.97C

PARISH: LAFAYETTE PARISH

DATE: APRIL 2015

CHECKED BY: JMS

PROJECT: POST ROAD CHANNEL IMPROVEMENTS

DESIGNED BY: CRM | DRAWN BY: CRM

PLAN AND PROFILE

FOR

City Of Carencro

P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8481 * Fax (337)896-0890

REVISIONS

DATE	REVISION DESCRIPTION	BY

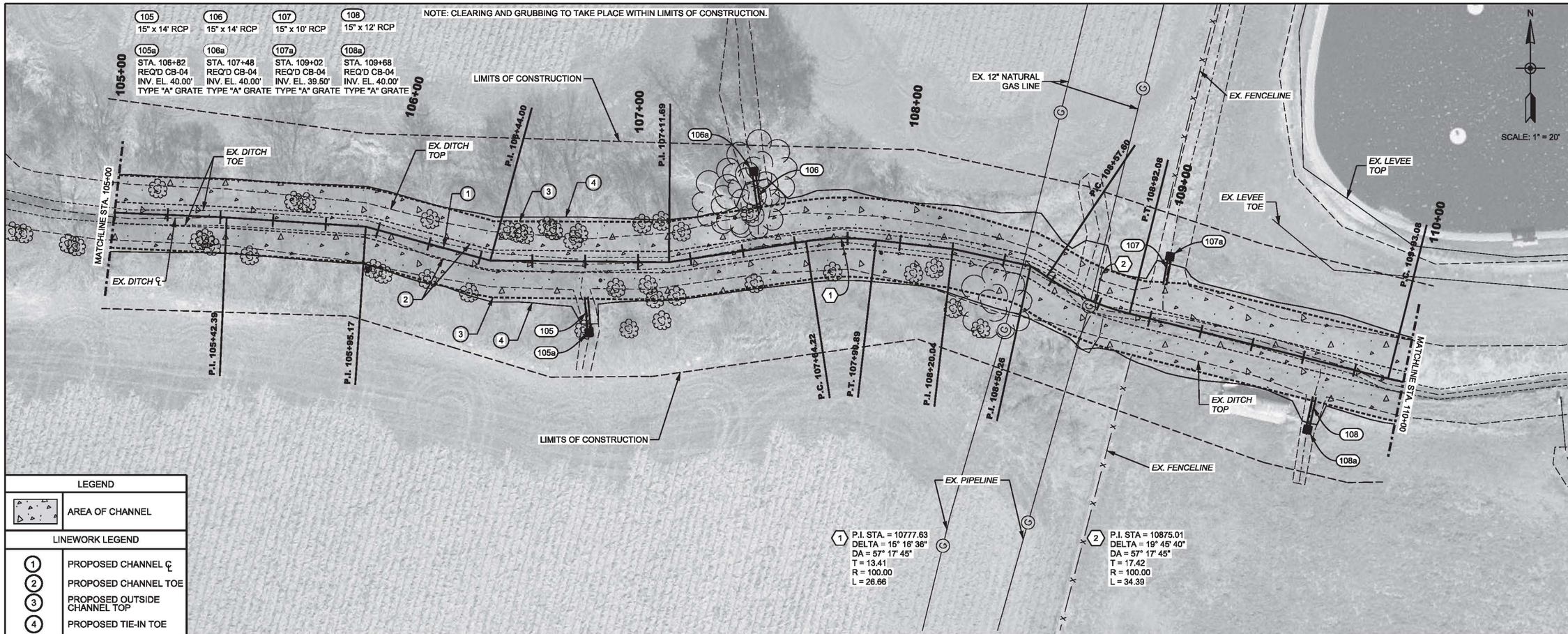
STAMP/SEAL:

STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 005

NOTE: CLEARING AND GRUBBING TO TAKE PLACE WITHIN LIMITS OF CONSTRUCTION.

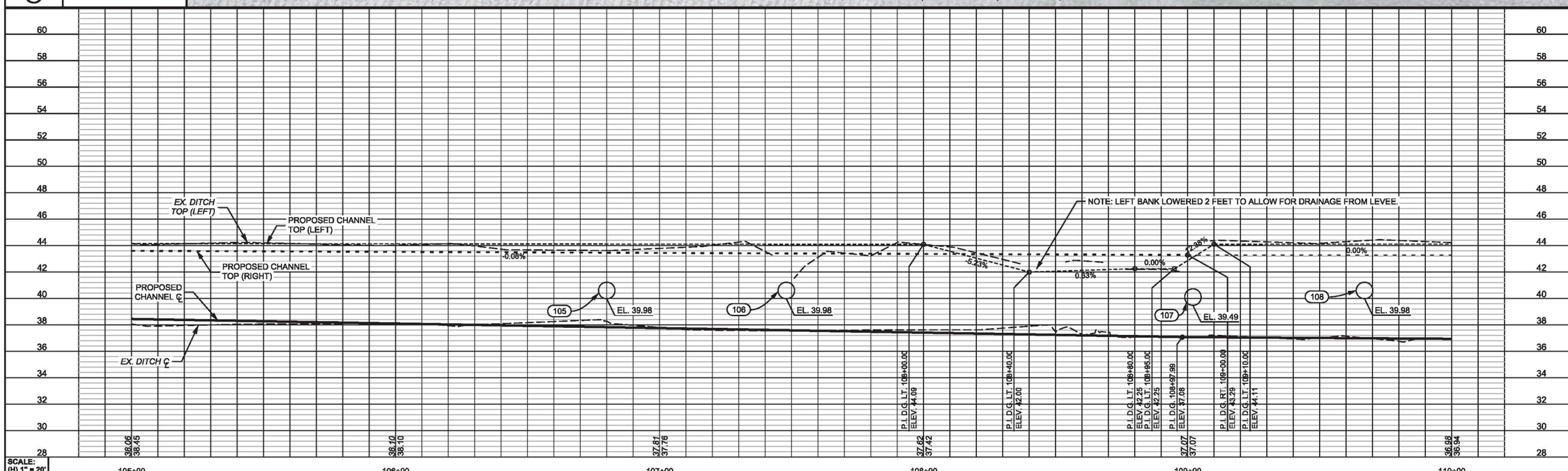
105	106	107	108
15" x 14' RCP	15" x 14' RCP	15" x 10' RCP	15" x 12' RCP
105a	106a	107a	108a
STA. 106+82	STA. 107+48	STA. 109+02	STA. 109+68
REQ'D CB-04	REQ'D CB-04	REQ'D CB-04	REQ'D CB-04
INV. EL. 40.00'	INV. EL. 40.00'	INV. EL. 39.50'	INV. EL. 40.00'
TYPE "A" GRATE	TYPE "A" GRATE	TYPE "A" GRATE	TYPE "A" GRATE



LEGEND	
	AREA OF CHANNEL
LINEWORK LEGEND	
1	PROPOSED CHANNEL ℄
2	PROPOSED CHANNEL TOE
3	PROPOSED OUTSIDE CHANNEL TOP
4	PROPOSED TIE-IN TOE

1 P.I. STA. = 10777.63
DELTA = 15° 16' 36"
DA = 57° 17' 45"
T = 13.41
R = 100.00
L = 26.66

2 P.I. STA = 10875.01
DELTA = 19° 45' 40"
DA = 57° 17' 45"
T = 17.42
R = 100.00
L = 34.39



FENSTERMAKER
Phone: (337) 237-2200
Fax: (337) 232-3299
135 Regency Square
Lafayette, La 70508

JOB NO: 2071040.97C

PARISH: LAFAYETTE PARISH
DATE: APRIL 2015
CHECKED BY: JMS

PROJECT: POST ROAD CHANNEL IMPROVEMENTS
DESIGNED BY: CRM
DRAWN BY: CRM

PLAN AND PROFILE

FOR

City Of Carencro

P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8481 * Fax (337)896-0890

REVISIONS

DATE	REVISION DESCRIPTION	BY

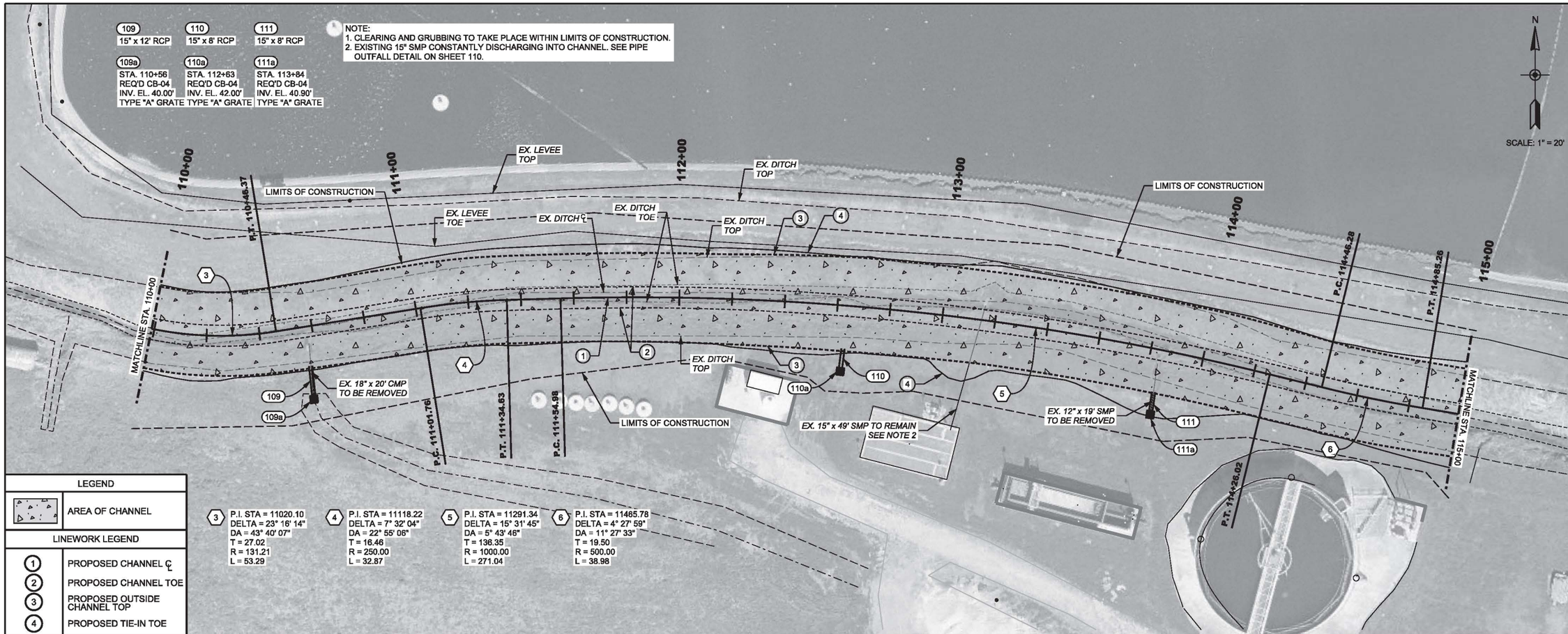
STAMP/SEAL:

STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 006

109	110	111
15" x 12' RCP	15" x 8' RCP	15" x 8' RCP
109a	110a	111a
STA. 110+56	STA. 112+63	STA. 113+84
REQ'D CB-04	REQ'D CB-04	REQ'D CB-04
INV. EL. 40.00'	INV. EL. 42.00'	INV. EL. 40.90'
TYPE "A" GRATE	TYPE "A" GRATE	TYPE "A" GRATE

NOTE:
1. CLEARING AND GRUBBING TO TAKE PLACE WITHIN LIMITS OF CONSTRUCTION.
2. EXISTING 15" SMP CONSTANTLY DISCHARGING INTO CHANNEL. SEE PIPE OUTFALL DETAIL ON SHEET 110.



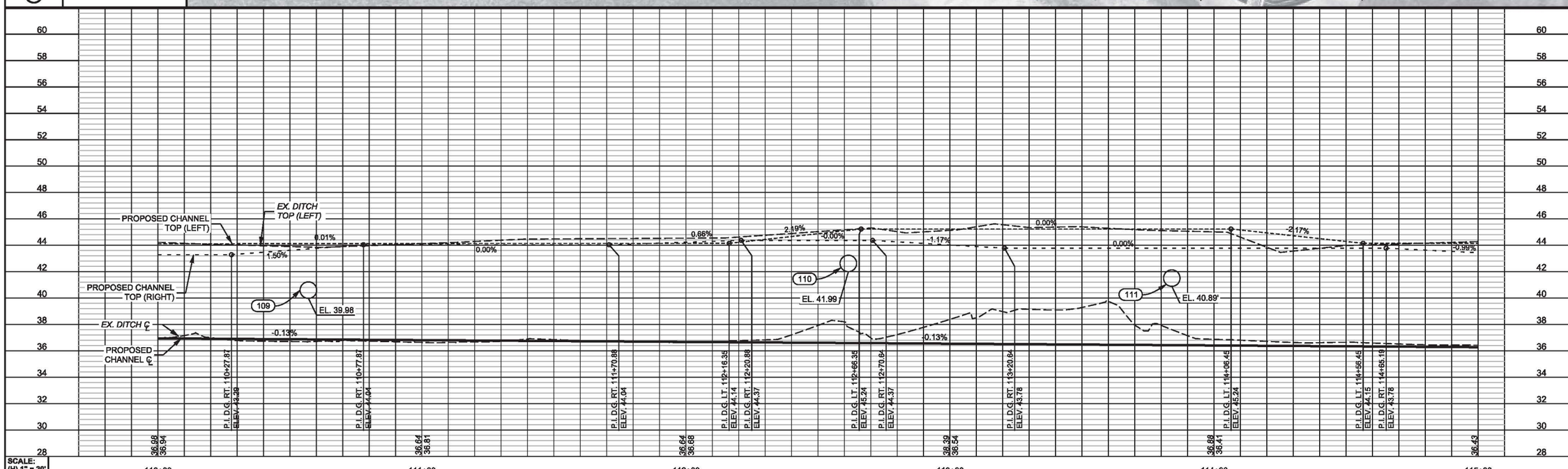
LEGEND	
	AREA OF CHANNEL
LINEWORK LEGEND	
1	PROPOSED CHANNEL ℄
2	PROPOSED CHANNEL TOE
3	PROPOSED OUTSIDE CHANNEL TOP
4	PROPOSED TIE-IN TOE

3 P.I. STA = 11020.10
DELTA = 23° 16' 14"
DA = 43° 40' 07"
T = 27.02
R = 131.21
L = 53.29

4 P.I. STA = 11118.22
DELTA = 7° 32' 04"
DA = 22° 55' 06"
T = 16.46
R = 250.00
L = 32.87

5 P.I. STA = 11291.34
DELTA = 15° 31' 45"
DA = 5° 43' 46"
T = 136.35
R = 1000.00
L = 271.04

6 P.I. STA = 11465.78
DELTA = 4° 27' 59"
DA = 11° 27' 33"
T = 19.50
R = 500.00
L = 38.98



SCALE:
(H) 1" = 20'
(V) 1" = 4'

FENSTERMAKER
135 Regency Square
Lafayette, La 70508
Phone: (337) 237-2200
Fax: (337) 232-3299

JOB NO: 2071040.97C

PARISH: LAFAYETTE PARISH
CHECKED BY: JMS
DATE: APRIL 2015

PROJECT: POST ROAD CHANNEL IMPROVEMENTS
DESIGNED BY: CRM
DRAWN BY: CRM

PLAN AND PROFILE

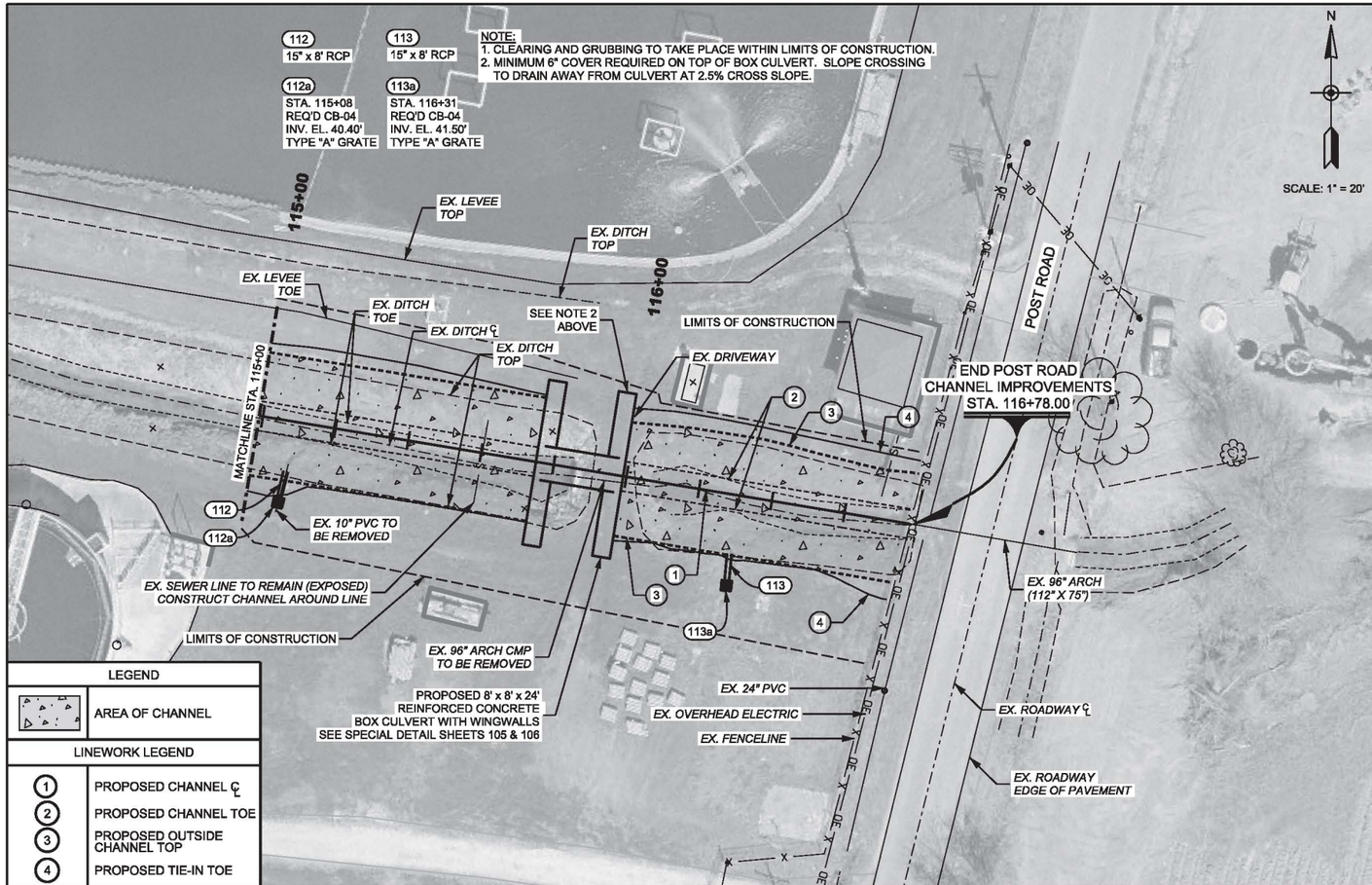
FOR
City Of Carencro
P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-6481 * Fax (337)896-0890

REVISIONS

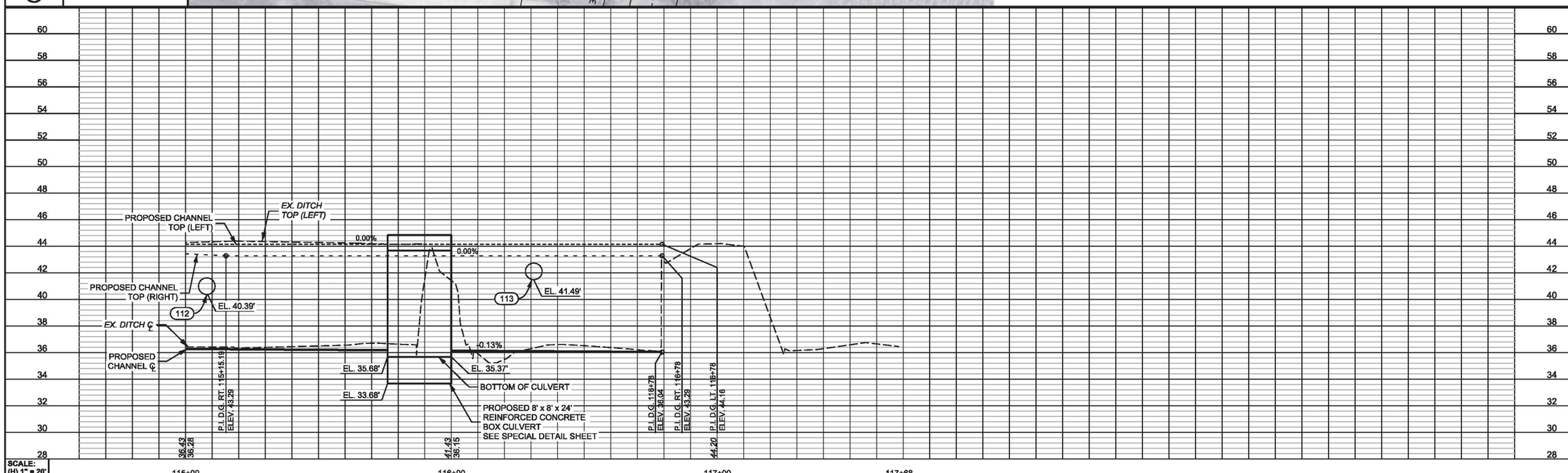
DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:
STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 007



LEGEND	
	AREA OF CHANNEL
LINEWORK LEGEND	
1	PROPOSED CHANNEL ℄
2	PROPOSED CHANNEL TOE
3	PROPOSED OUTSIDE CHANNEL TOP
4	PROPOSED TIE-IN TOE



SCALE:
(H) 1" = 20'
(V) 1" = 4'

FENSTERMAKER
Phone: (337) 237-2200
Fax: (337) 232-3299
135 Regency Square
Lafayette, La 70508

JOB NO: 207/1040.97C

PARISH: LAFAYETTE PARISH
DATE: APRIL 2015
CHECKED BY: JMS
PROJECT: POST ROAD CHANNEL IMPROVEMENTS
DRAWN BY: CRM
DESIGNED BY: CRM

PLAN AND PROFILE

FOR
City Of Carencro

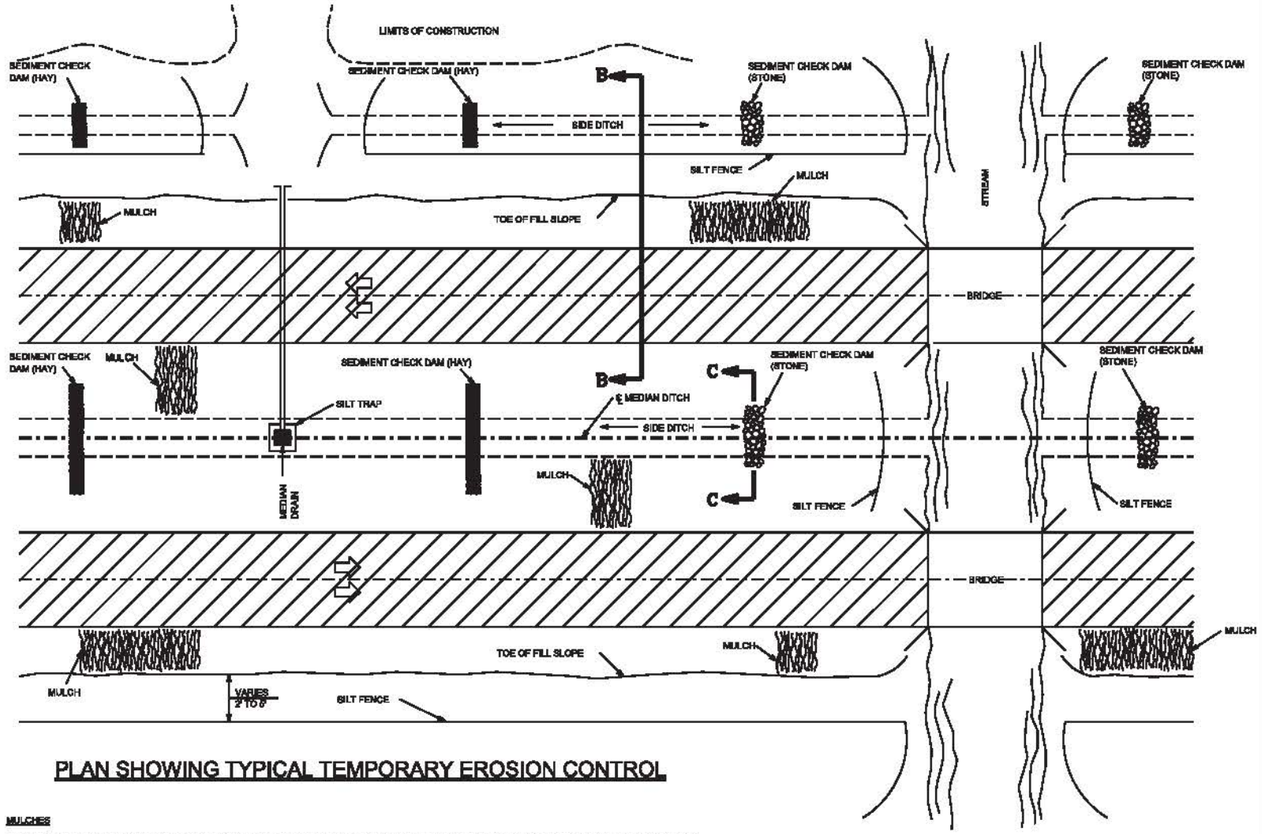
P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8481 * Fax (337)896-0890

REVISIONS

DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:
STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 008

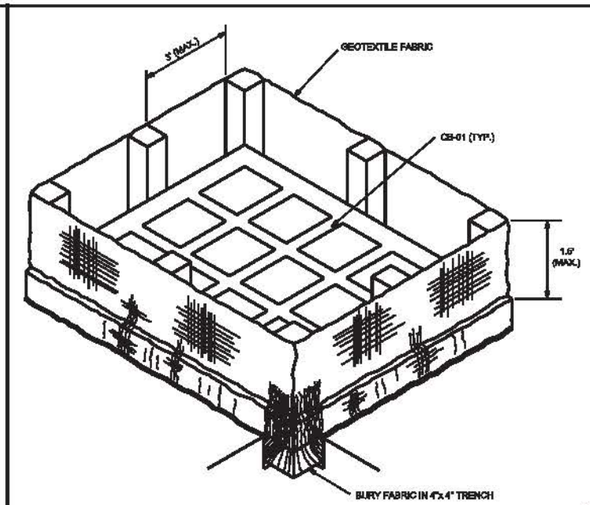


PLAN SHOWING TYPICAL TEMPORARY EROSION CONTROL

MULCHES

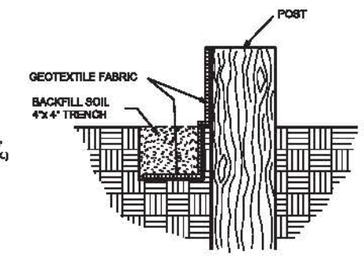
MULCHES ARE THE APPLICATION OF MATS OF MATERIAL PLACED ON THE SOIL SURFACE TO PREVENT EROSION BY PROTECTING THE SOIL SURFACE FROM RAINDROP IMPACT AND TO REDUCE THE VELOCITY OF OVERLAND FLOW. MULCHES CAN BE ORGANIC OR SYNTHETIC. MULCHES SHALL BE IN ACCORDANCE WITH SECTION 02820 OF THE C.H. FENSTERMAKER STANDARD SPECIFICATIONS. A FEW GUIDELINES FOR THE USE OF MULCHES ARE:

1. USE ON CUT AND EMBANKMENT SLOPES WHICH HAVE NOT BEEN COMPLETED TO PLAN GRADE OR WHERE THE WEATHER OR SOIL CONDITIONS WILL NOT PERMIT COMPLETING THEM WITHIN A REASONABLE TIME;
2. USE ON CLEARED, GRUBBED, AND SCALPED AREAS WHERE SOIL EROSION IS LIKELY TO OCCUR;
3. USE WITH TEMPORARY SEEDING.



ISOMETRIC VIEW SHOWING GEOTEXTILE FABRIC

(BACKFILL SOIL NOT SHOWN)

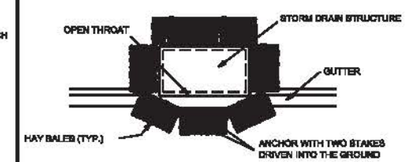


SECTION THRU TRENCH SHOWING GEOTEXTILE FABRIC

NOTES:

THE TEMPORARY DROP INLET SILT TRAP IS TO BE USED FOR SMALL DRAINAGE AREAS (LESS THAN 1 ACRE) WHERE THE STORM DRAIN IS FUNCTIONAL BEFORE THE AREA IS STABILIZED. THE TRAP CAN BE EITHER GEOTEXTILE FABRIC OR HAY BALES.

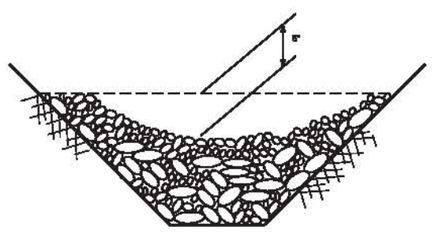
1. THE GEOTEXTILE FABRIC SHALL CONFORM TO SECTION 02280 GEOTEXTILE FABRIC IN CONTRACT DOCUMENTS;
2. WOODEN STAKES SUPPORTING THE FABRIC SHALL BE 2"x 2" OR 2"X 4" WITH A MINIMUM LENGTH OF 3 FEET. THE STAKES SHALL BE SPACED AROUND THE INLET AT A MAXIMUM SPACING OF 3 FEET;
3. THE HEIGHT OF THE FABRIC ABOVE THE INLET SHALL BE LIMITED TO 1.6' AND THE BOTTOM OF THE FABRIC SHALL BE BURIED IN A TRENCH APPROXIMATELY 4" WIDE BY 4" DEEP. THE FABRIC SHALL BE STAPLED TO THE POST WITH STAPLES;
4. THE TRAP SHOULD BE INSPECTED REGULARLY AND AFTER EACH STORM. THE SEDIMENT SHOULD BE REMOVED AND MAKE SURE EACH STAKE IS FIRMLY IN THE GROUND.



PLAN SHOWING HAY BALES

PAY ITEM: 02371.003, TEMPORARY BALED HAY OR STRAW

TEMPORARY INLET SILT TRAP



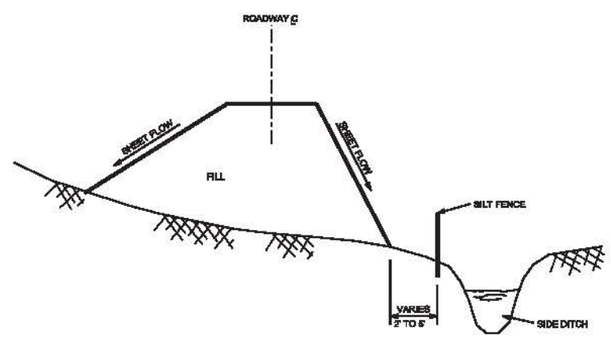
SECTION C-C

TEMPORARY SEDIMENT CHECK DAM (STONE)

NOTES:

A STONE CHECK DAM IS A SMALL TEMPORARY DAM CONSTRUCTED ACROSS A SWALE OR DITCH. THE PURPOSE OF THIS MEASURE IS TO REDUCE THE VELOCITY OF CONCENTRATED STORMWATER FLOWS, THEREBY REDUCING EROSION OF THE SWALE OR DITCH. THE STONE CHECK DAM WILL TRAP SMALL AMOUNTS OF SEDIMENTS GENERATED IN THE DITCH ITSELF, HOWEVER IT SHOULD NOT BE USED AS A SEDIMENT TRAPPING DEVICE. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF STONE CHECK DAMS ARE:

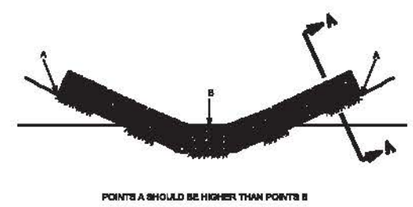
1. USE IN SMALL OPEN CHANNELS WHICH DRAIN 10 ACRES OR LESS;
2. DO NOT USE IN A LIVE STREAM;
3. USE IN A TEMPORARY DITCH OR SWALE WHICH, BECAUSE OF THEIR SHORT LENGTH OF SERVICE, CANNOT RECEIVE A NON-ERODIBLE LINING;
4. USE IN PERMANENT DITCHES OR SWALES WHICH WILL NOT RECEIVE A PERMANENT LINING FOR AN EXTENDED PERIOD OF TIME;
5. USE IN TEMPORARY OR PERMANENT DITCHES OR SWALES WHICH NEED PROTECTION DURING THE ESTABLISHMENT OF GRASS LININGS;
6. FOR STONE SPECIFICATIONS SEE ITEM NO:02371.006 OF THE C.H. FENSTERMAKER STANDARD SPECIFICATIONS.



SECTION B-B

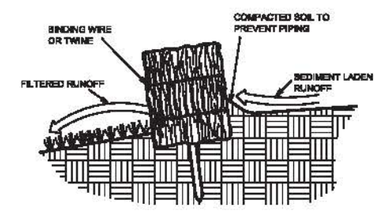
TEMPORARY SILT FENCE APPLICATION

(FOR CONSTRUCTION DETAILS AND SPECIFICATIONS SEE SHEET 2 OF 2)



POINTS A SHOULD BE HIGHER THAN POINTS B

ELEVATION



SECTION A-A

TEMPORARY SEDIMENT CHECK DAM (HAY)

PAY ITEM: 02371.005, TEMPORARY SEDIMENT CHECK DAM (HAY)

NOTES:

A HAY BALE BARRIER IS A TEMPORARY SEDIMENT BARRIER CONSISTING OF A ROW OF ENTRENCHED AND ANCHORED BALES OF STRAW OR HAY. THE HAY BALE BARRIER IS ALSO USED AS A CHECK DAM TO REDUCE THE VELOCITY IN SMALL DITCHES OR SWALES. THE HAY BALES SHALL BE IN ACCORDANCE WITH THE C.H. FENSTERMAKER STANDARD SPECIFICATIONS (SEE ITEM NO. 02371.006). A FEW BASIC DESIGN GUIDELINES FOR THE USE OF A HAY BALE BARRIER ARE:

1. USE WHERE EROSION WOULD OCCUR IN THE FORM OF SHEET AND RILL EROSION;
2. USE IN MINOR SWALES OR DITCHES WHERE THE MAXIMUM DRAINAGE AREA IS 2 ACRES;
3. ONLY USE WHERE THE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS;
4. DO NOT USE IN LIVE STREAMS OR IN SWALES OR DITCHES WHERE THERE IS A POSSIBILITY OF A WASHOUT.

SCALE: NTS

FENSTERMAKER
Phone: (337) 235-4087
Fax: (337) 235-5305
135 Rooster Boulevard
Lafayette, La 70508

JOB NO: 2071040.97C

PARISH: LAFAYETTE PARISH
CHECKED BY: JMB | DATE: APRIL 2015

PROJECT: POST ROAD CHANNEL IMPROVEMENTS
DESIGNED BY: CRM | DRAWN BY: CRM

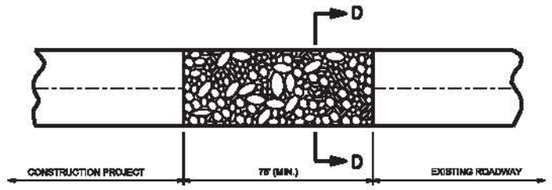
TEMPORARY EROSION CONTROL (EC-01) DETAILS SHEET 1 OF 2

FOR
City Of Carencro
CITY OF CARENCRO
P.O. Drawer 10
216 East St. Peter Street
Carencro, LA 70520
(337)896-6461 * Fax (337)896-0890

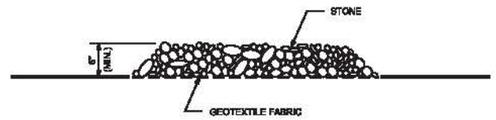
REVISIONS		
DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:
STATE OF LOUISIANA
JUSTIN M. SHAW
LICENSED
PROFESSIONAL ENGINEER
CIVIL ENGINEERING

SHEET NO. 101



PLAN



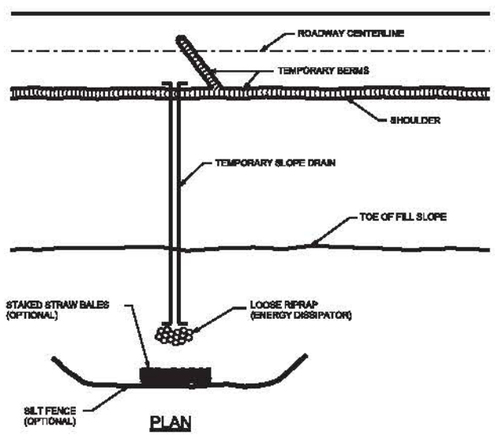
SECTION D-D

TEMPORARY STONE CONSTRUCTION ENTRANCE

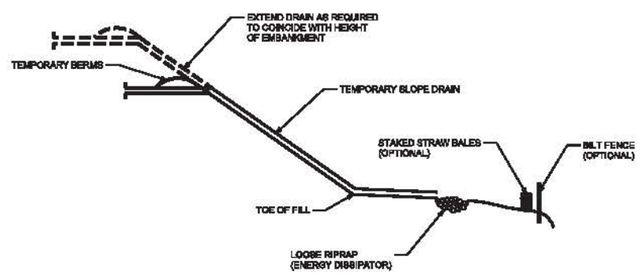
PAY ITEM 02371.011, TEMPORARY STONE CONSTRUCTION ENTRANCE

NOTES:
A STONE STABILIZED PAD LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON THE CONSTRUCTION SITE TO REDUCE THE AMOUNT OF MUD TRANSPORTED ONTO PUBLIC ROADS. IF THE ACTION OF THE VEHICLE TRAVELING OVER THE GRAVEL PAD IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF THE MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLE ENTERS A PUBLIC ROAD. A FEW BASIC GUIDELINES FOR THE USE OF A STONE CONSTRUCTION ENTRANCE AND/OR WASH RACKS ARE:

1. THE STONE LAYER MUST BE AT LEAST 6 INCHES THICK;
2. THE STONE SHALL CONFORM TO SECTION 02371 OF THE C.H. FENSTERMAKER STANDARD SPECIFICATIONS;
3. THE LENGTH OF THE PAD MUST BE AT LEAST 75 FEET AND IT MUST EXTEND THE FULL WIDTH OF VEHICULAR INGRESS AND EGRESS;
4. A GEOTEXTILE FABRIC UNDERLINER IS REQUIRED. THE GEOTEXTILE FABRIC SHALL BE IN ACCORDANCE WITH SECTION 02360 OF THE C.H. FENSTERMAKER STANDARD SPECIFICATIONS;
5. IF A WASH ROCK IS NECESSARY, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF-SITE.



PLAN



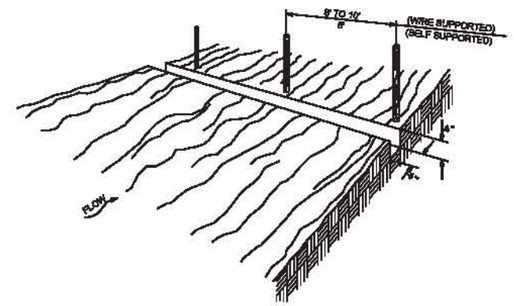
ELEVATION

TEMPORARY SLOPE DRAIN

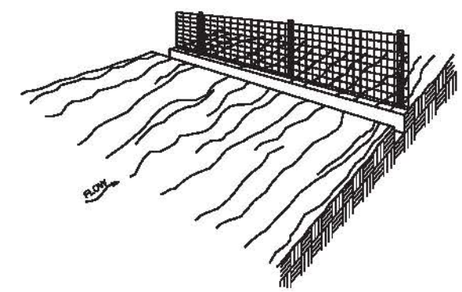
NOTES:
A TEMPORARY SLOPE DRAIN IS A DEVICE USED TO CARRY WATER FROM THE CONSTRUCTION WORK AREA TO A LOWER ELEVATION. SLOPE DRAINS MAY BE PLASTIC SHEETS, METAL OR PLASTIC PIPE, STONE GUTTERS, FIBER MATS, OR CONCRETE OR ASPHALT DITCHES. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF A TEMPORARY SLOPE DRAIN ARE:

1. THE SPACING OF THE SLOPE DRAINS VARIES WITH THE ROAD GRADE.
   FOR GRADES: 0.0% - 2.0% USE 500' SPACING
   2.1% - 5.0% USE 200' SPACING
   GREATER THAN - 5.0% USE 100' SPACING
2. SLOPE DRAIN MATERIAL: SMOOTH PIPE - 8" MINIMUM - 3 MILS THICK MIN.
   CORRUGATED PIPE - 12" MINIMUM
   PLASTIC SHEETING - 4' WIDE MINIMUM
   PLASTIC SHEETING - 3 MILS THICK MIN.
3. PLASTIC SHEETING CAN BE STAKED DOWN OR WEIGHTED WITH ROCKS OR LOGS. THE AREA UNDER THE SHEETING SHOULD BE SHAPED TO PROVIDE AN ADEQUATE CHANNEL.
4. THE OUTLET END SHOULD BE PROTECTED OR HAVE SOME MEANS OF DISSIPATING ENERGY. THE FLOW SHOULD BE DIRECTED THROUGH A SEDIMENT TRAP SUCH AS A SILT FENCE OR HAY BALES.
5. TO ENSURE PROPER OPERATION TEMPORARY SLOPE DRAINS SHOULD BE INSPECTED REGULARLY AND AFTER EACH STORM FOR CLOGGING DISPLACEMENT. EROSION AT THE OUTLET SHOULD BE CHECKED AND THE SILT TRAPS CLEANED IF NECESSARY.

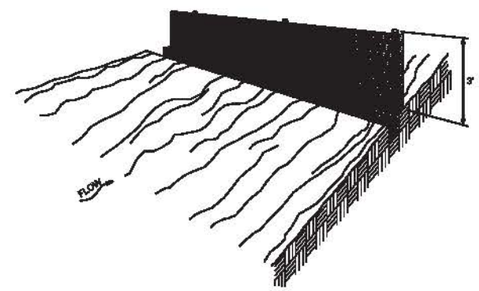
1. SET POSTS AND EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.



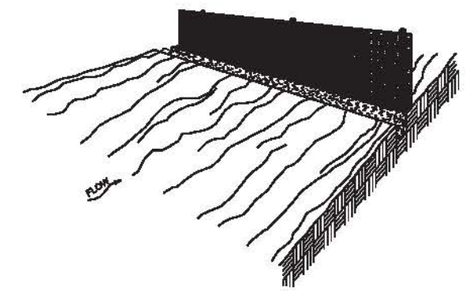
2. STAPLE WIRE FENCING TO THE POSTS.



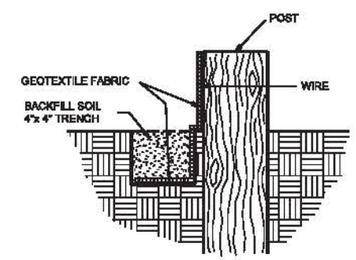
3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND INTO THE TRENCH.



4. BACKFILL AND COMPACT EXCAVATED SOIL.



EXTENSION OF FABRIC INTO THE TRENCH.



CONSTRUCTION OF TEMPORARY SILT FENCING

(WIRE SUPPORTED SILT FENCE IS SHOWN. SELF SUPPORTED SILT FENCE WILL BE CONSTRUCTED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.)

NOTES:
SILT FENCING IS A TEMPORARY SEDIMENT BARRIER CONSISTING OF A FILTER FABRIC SUPPORTED BY POSTS AND STRETCHED ACROSS AN AREA TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT. THE SILT FENCING SHALL BE IN ACCORDANCE WITH SECTION 02371 OF THE C.H. FENSTERMAKER STANDARD SPECIFICATIONS. A FEW BASIC GUIDELINES FOR THE USE OF SILT FENCING ARE:

1. USE WHERE EROSION WOULD OCCUR IN THE FORM OF SHEET AND RILL EROSION;
2. USE WHERE THE MAXIMUM DRAINAGE AREA BEHIND THE SILT FENCE IS 1/4 ACRE PER 100 FEET OF SILT FENCE LENGTH;
3. USE WHERE THE MAXIMUM SLOPE LENGTH BEHIND THE BARRIER IS 100 FEET;
4. USE WHERE THE MAXIMUM GRADIENT BEHIND THE BARRIER IS 2:1;
5. DO NOT USE SILT FENCES IN LIVE STREAMS OR IN DITCHES OR SWALES WHERE FLOWS EXCEED ONE CUBIC FOOT PER SECOND.

SCALE: NTS

FENSTERMAKER
138 Rooney Street
Lafayette, La 70506
Phone: (337) 235-2087
Fax: (337) 235-5305
JOB NO: 207/040.97C

PARISH: LAFAYETTE PARISH
DATE: APRIL 2015
CHECKED BY: JMB

PROJECT: POST ROAD CHANNEL IMPROVEMENTS
DESIGNED BY: CRM
DRAWN BY: CRM

TEMPORARY EROSION CONTROL (EC-01) DETAILS
SHEET 2 OF 2

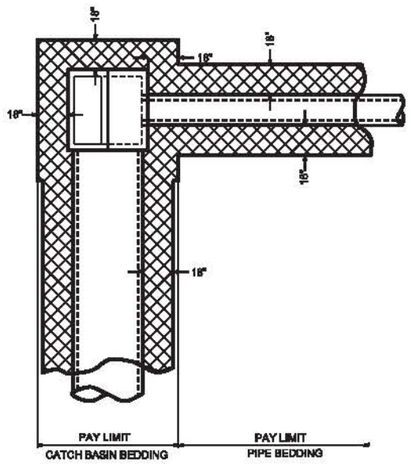
FOR
City Of Carencro
P.O. Drawer 10
216 East St. Peter Street
Carencro, LA 70520
(337)896-0481 * Fax (337)896-0890

REVISIONS		
DATE	REVISION DESCRIPTION	BY

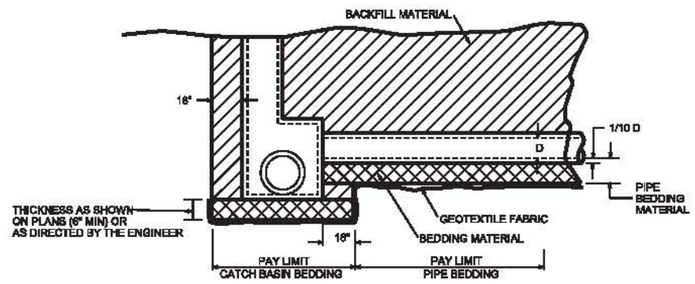
STAMP/SEAL:
STATE OF LOUISIANA
JUSTIN M. BAIN
LICENSED No. 37291
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

SHEET NO. 102

TYPICAL CATCH BASIN AND STORM SEWER PIPE INSTALLATION WITH BEDDING MATERIAL



PLAN OF TYPICAL CATCH BASIN (MANHOLE OR JUNCTION BOX) AND PIPE



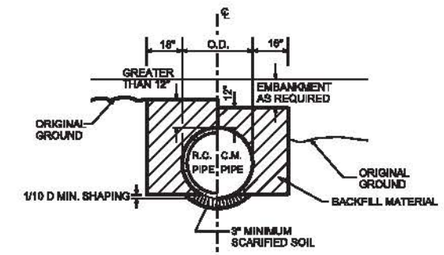
PROFILE OF TYPICAL CATCH BASIN, (MANHOLE OR JUNCTION BOX) AND PIPE

* DEDUCTION FROM BACKFILL QUANTITY		
R.C. PIPE		C.M. PIPE
PIPE DIAMETER	CU.YDS./LIN.FT.	CU.YDS./LIN.FT.
15"	0.0768	0.0455
18"	0.1068	0.0664
24"	0.1818	0.1184
30"	0.2765	0.1818
36"	0.3910	0.2618
42"	0.5254	0.3583
48"	0.6795	0.4664
54"	0.8534	0.5880
60"	1.0471	0.7272
72"	1.4940	1.0472
84"	2.0200	1.4253
96"	2.6252	1.8617
108"	3.3096	2.3562
120"	3.9583	2.9089
132"	4.7809	3.5187
144"	5.7014	4.1888

* DEDUCTION FROM BACKFILL QUANTITY			
R.C. PIPE ARCH		C.M. PIPE ARCH	
EQUIV. DIAM.	CU.YDS./LIN.FT.	EQUIV. DIAM.	CU.YDS./LIN.FT.
18"	0.0679	18"	0.0593
24"	0.1615	24"	0.1037
30"	0.2496	30"	0.1630
36"	0.3488	36"	0.2370
42"	0.4742	42"	0.3222
48"	0.6171	48"	0.4222
54"	0.7654	54"	0.5296
60"	0.9326	60"	0.6518
72"	1.3398	72"	0.9630
84"	1.8302	84"	1.2965
96"	2.6555	96"	1.7037
108"	3.3170	108"	2.1481

* FOR INFORMATIONAL PURPOSES ONLY. THE COST OF THE BACKFILL IS TO BE INCLUDED IN THE COST OF THE HYDRAULIC STRUCTURE.

TYPICAL PIPE INSTALLATION WITHOUT BEDDING MATERIAL



SECTION THRU TRENCH

HALF-SECTION SHOWING TOP OF PIPE GREATER THAN 12" BELOW ORIGINAL GROUND (TRENCH INSTALLATION)

HALF-SECTION SHOWING TOP OF PIPE ABOVE ORIGINAL GROUND (EMBANKMENT INSTALLATION)

GENERAL NOTES:

1. STANDARD PIPE INSTALLATION AS DESCRIBED IN "DETAILED SPECIFICATIONS FOR CULVERTS AND STORM DRAINS" OF THE CONTRACT SPECIFICATIONS. STANDARD BEDDING MATERIAL INSTALLATION AS DESCRIBED IN "DETAILED SPECIFICATIONS FOR BEDDING MATERIAL" OF THE CONTRACT SPECIFICATIONS.

2. THE DETAILS ON THIS SHEET DEPICT PAY LIMITS FOR BEDDING MATERIALS (ITEM NO. 02615.001). THE BEDDING MATERIAL PAY QUANTITIES ARE TO BE BASED ON THE THEORETICAL NET SECTION WITH NO PIPE DEDUCTIONS. FULL PIPE DEDUCTIONS (SEE TABLES ON THIS SHEET). BACKFILL QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. THE COST OF THE BACKFILL IS TO BE INCLUDED IN THE COST OF THE HYDRAULIC STRUCTURE.

3. REINFORCED CONCRETE PIPE, REINFORCED CONCRETE BOX, AND CORRUGATED METAL PIPE ARE SHOWN AS TYPICAL STRUCTURES, DETAILS FOR REINFORCED CONCRETE PIPE ARCH, CORRUGATED METAL PIPE ARCH, AND CORRUGATED STRUCTURAL PLATE STRUCTURES ARE SIMILAR.

4. GEOTEXTILE FABRIC (ITEM NO. 02350.001) SHALL BE REQUIRED WHEN BEDDING MATERIAL IS REQUIRED AND SHALL BE PLACED IN ACCORDANCE WITH DETAILS PRIOR TO PLACING BEDDING MATERIAL. ADJACENT STRIPS OF FILTER CLOTH SHALL LAP EACH OTHER FOR AT LEAST 3 FEET.

5. BEDDING SHOWN ON THIS STANDARD PLAN CONFORMS TO CLASS "B" AS DEFINED BY THE 1983 AASHTO SPECIFICATIONS.

6. BACKFILL MATERIAL SHALL BE PLACED IN LAYERS NOT EXCEEDING 6" THICK. EACH LAYER SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.

SCALE: NTS

FENSTERMAKER
JOB NO: 207/1040.97C

PARISH: LAFAYETTE PARISH
CHECKED BY: JNS | DATE: APRIL 2015

PROJECT: POST ROAD CHANNEL IMPROVEMENTS
DESIGNED BY: CRM | DRAWN BY: CRM

BEDDING AND BACKFILL FOR DRAINAGE STRUCTURES (BM-01) DETAIL

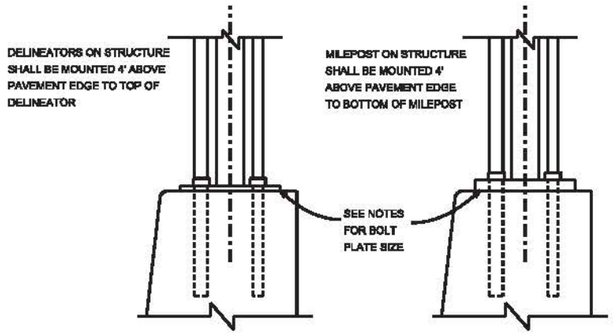
FOR
City Of Carencro
P.O. Drawer 10
216 East St. Peter Street
Carencro, LA 70520
(337)896-6461 * Fax (337)896-0890

REVISIONS

DATE	REVISION DESCRIPTION	BY

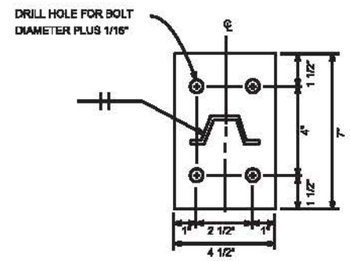
STAMP/SEAL:
STATE OF LOUISIANA
JUSTIN M. SHAW
LICENSED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 103



DELINEATOR

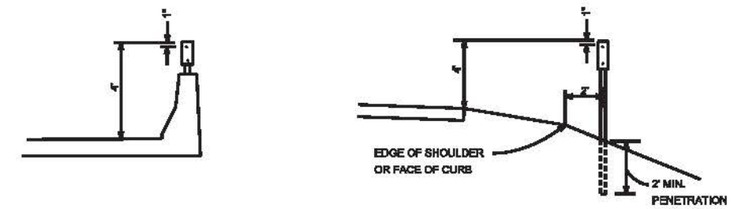
MILEPOST



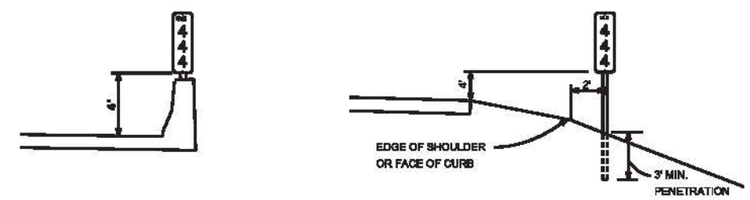
BASE PLATE

NOTES:
1. FOR DELINEATOR INSTALLATIONS USE 1/4" THICKNESS BASE PLATE AND 1/4" x 3" BOLTS.
2. FOR MILEPOST INSTALLATIONS USE 3/16" THICKNESS BASE PLATE AND 1/2" x 5" BOLTS. USE 5/8" x 5" BOLT IN HIGHWAY DISTRICTS 02, 03 & 07 FOR 4' x 1' MILEPOST.
3. BOLTS SHALL BE WEJ-IT CONCRETE ANCHORS OR MOLLY PARABOLT CONCRETE ANCHORS OR EQUAL APPROVED BY THE DEPARTMENT BRIDGE DESIGN ENGINEER.
4. STEEL BASE PLATE AND CHANNEL POST SHALL BE GALVANIZED AFTER FABRICATION.
5. FOR PIPE HANDRAILS THE BASE PLATE MAY BE OFFSET FROM CENTER OF HANDRAIL.

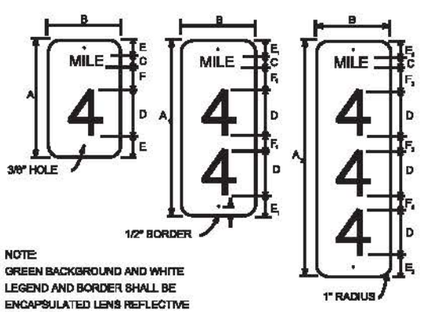
DETAILS OF DELINEATOR OR MILEPOST INSTALLATION ON STRUCTURE



DELINEATOR INSTALLATION



MILEPOST INSTALLATION

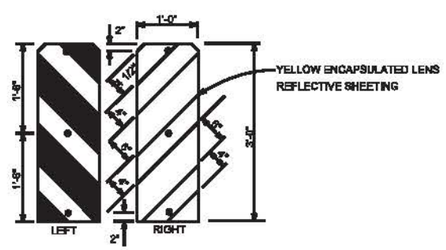


NOTE:
GREEN BACKGROUND AND WHITE LEGEND AND BORDER SHALL BE ENCAPSULATED LENS REFLECTIVE SHEETING

MILEPOST FACE DIMENSIONS

CODE / LOCATION	A	A_1	A_2	B	C	D	E	E_1	E_2	F	F_1	F_2
CONVENTIONAL ROADS	18"	27"	36"	10"	4"	6"C	2.5"	2.5"	2.5"	3"	3"	3"
EXPRESSWAYS & FREEWAYS	24"	36"	48"	12"	4"	10"C	3.5"	3"	2.5"	3"	3"	3"

STRIPES SHALL SLOPE DOWNWARD AT AN ANGLE OF 45° TOWARD THE SIDE OF THE OBSTRUCTION ON WHICH TRAFFIC IS TO PASS.

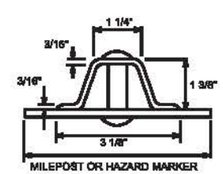


DETAIL OF HAZARD MARKER

MOUNTING HEIGHT TO BOTTOM OF MARKER SHALL BE 30" ABOVE GROUND LINE.
POST PENETRATION IN GROUND SHALL BE SAME AS REQUIRED FOR MILEPOST

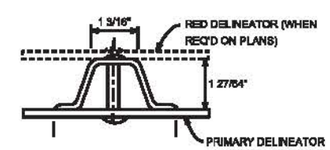
NOTE:
FASTENERS FOR DELINEATORS, MILEPOST, AND HAZARD MARKERS SHALL BE CHERRO-MATE RIVETS AS APPROVED BY THE DEPARTMENT
PANELS 36" OR GREATER SHALL HAVE 3 RIVETS EACH

RED, WHITE OR AMBER DELINEATORS SHALL BE 4" x 8" RECTANGLES. FACE MATERIAL SHALL BE ENCAPSULATED LENS REFLECTIVE SHEETING ON 0.080" ALUMINUM PANELS.



SECTION OF POST FOR HAZARD MARKER & MILEPOST

3/8" DIAMETER HOLES TO BE DRILLED IN CHANNEL ON 1" CENTERS FROM TOP OF POST. POST SHALL BE STEEL, 2.50 LBS./FT. + 3 1/2%, GALV. AFTER DRILLING.



SECTION OF DEL. POST

3/8" DIAMETER HOLES TO BE DRILLED IN CHANNEL ON 1" CENTERS FROM TOP OF POST. POST SHALL BE STEEL, 2.00 LBS./FT. (TOL.-3 1/2 %), GALVANIZED AFTER DRILLING.

FOR ALTERNATE DELINEATOR POST, SEE D.O.T.D. APPROVED MATERIALS LIST.

SCALE: NTS

RS-31

FENSTERMAKER
138 Rooney Street
Lafayette, La 70506
Phone: (337) 235-4987
Fax: (337) 235-5020

JOB NO: 207/1040.97C

PARISH: LAFAYETTE PARISH
CHECKED BY: JMB | DATE: APRIL 2015

PROJECT: POST ROAD CHANNEL IMPROVEMENTS
DESIGNED BY: CRM | DRAWN BY: CRM

DELINEATOR, MILEPOST & HAZARD MARKERS STRUCTURAL DETAILS

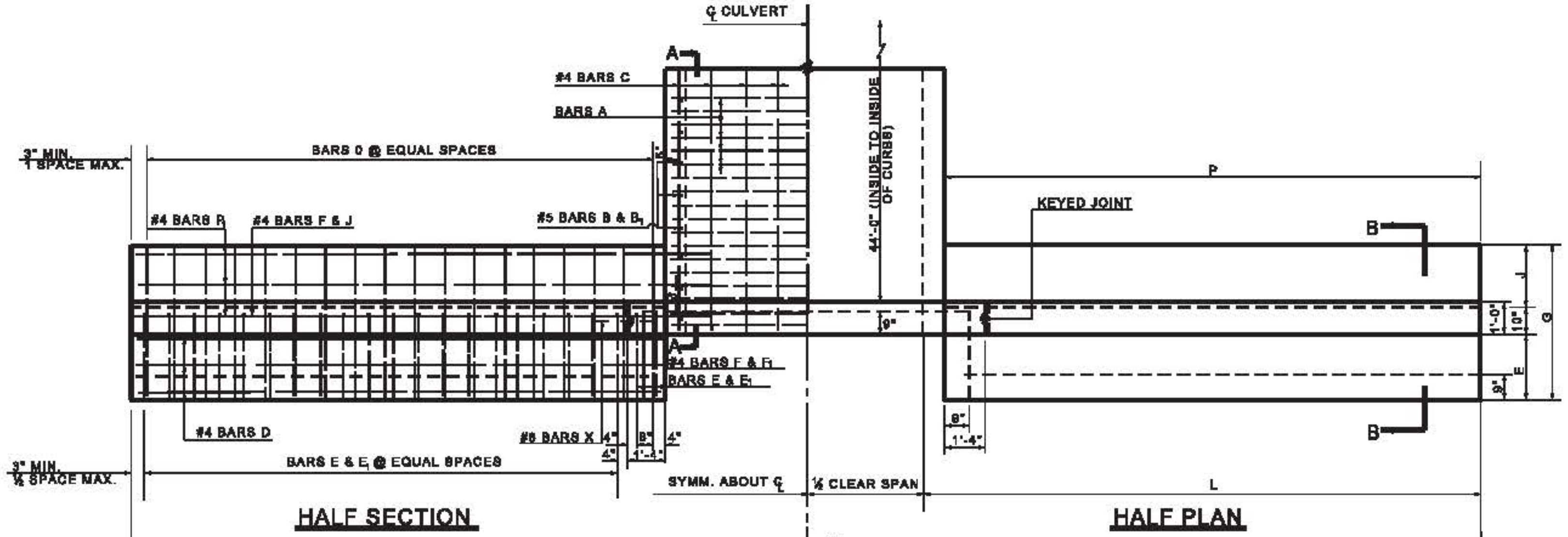
FOR
City Of Carencro
P.O. Drawer 10
216 East St. Peter Street
Carencro, LA 70520
(337)896-0461 * Fax (337)896-0890

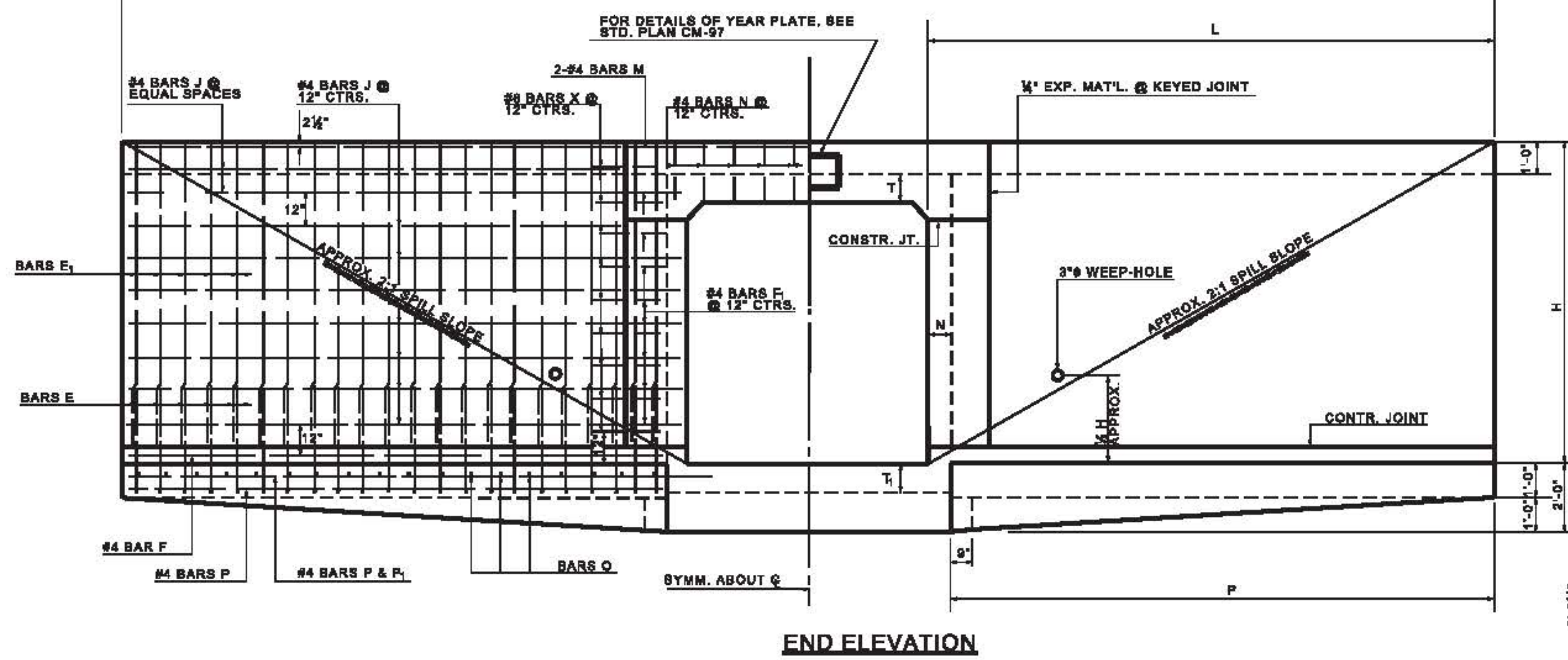
REVISIONS

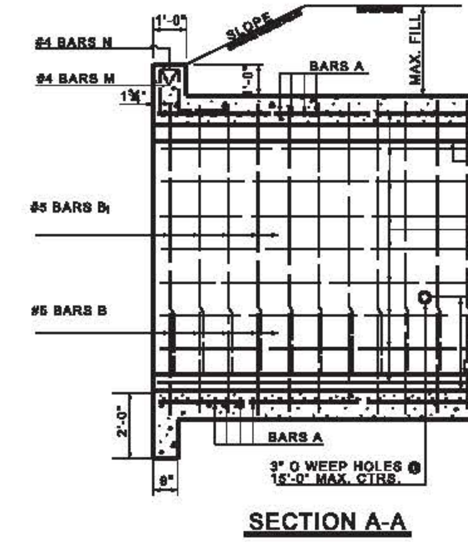
DATE	NO.	REVISION DESCRIPTION	BY

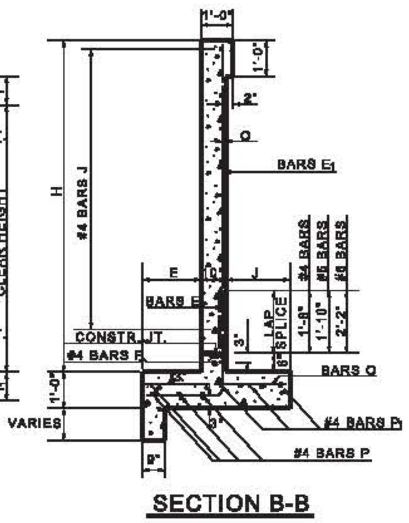
STAMP/SEAL:
STATE OF LOUISIANA
JUSTIN M. SHAW
LICENSED NO. 37201
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

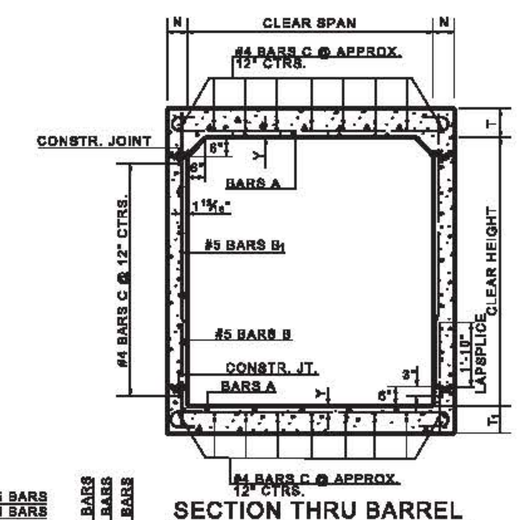
SHEET NO. 104

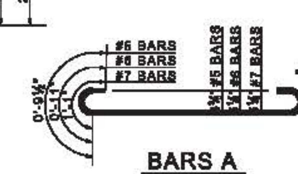


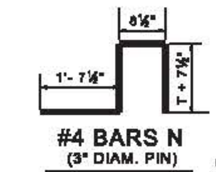


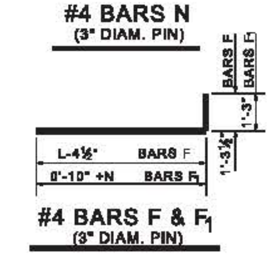


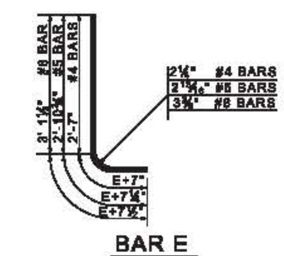












DIMENSIONS

CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	AREA (SQ. FT.)	MAX. FILL SLAB (FT.)	MAX. FILL WALL (FT.)	BARREL N (IN.)	BARREL T (IN.)	BARREL T_1 (IN.)	BARREL O (IN.)	BARREL Y (IN.)	WINGS & CURBS E (FT.-IN.)	J (FT.-IN.)	G (FT.-IN.)	H (FT.-IN.)	L (FT.-IN.)	P (FT.-IN.)	M (FT.-IN.)
8	7	56	13	6	7	10	10	1 3/4	1 7/8	1-11	1-8	4-5	8-10	16-8	16-1	41-4
8	8	64	12	5	8	10	10	1 13/16	1 7/8	2-0	2-0	4-10	9-10	16-7	17-11	45-2

BILL OF REINFORCING STEEL FOR 44'-0" CULVERT

BARREL REINFORCEMENT

CLEAR SPAN	CLEAR HEIGHT	BARS A SIZE	BARS A NO.	BARS A LENGTH (FT.-IN.)	BARS A SPAC. (IN.)	#6 BARS B & B_1 NO.	LENGTH B (FT.-IN.)	LENGTH B_1 (FT.-IN.)	SPAC. (IN.)	#4 BARS C NO.	#4 BARS C LENGTH ① (FT.-IN.)
8	7	#6	220	10-2 1/2	5	92	3-0	7-2	12	32	47-2
8	8	#6	228	10-4 1/2	5	96	3-0	8-2	11 1/2	34	47-2

① INCLUDES 1 - 1'-8" LAP SPLICE

WINGS AND CURBS REINFORCEMENT

CLEAR SPAN	CLEAR HEIGHT	BARS E & E_1 SIZE E	SIZE E_1	NO.	LENGTH E (FT.-IN.)	LENGTH E_1 (FT.-IN.)	SPAC. (IN.)	#4 BARS F NO.	F LENGTH (FT.-IN.)	#4 BARS F_1 NO.	F_1 LENGTH (FT.-IN.)	#4 BARS J NO.	J LENGTH (FT.-IN.)	#4 BARS M NO.	M LENGTH (FT.-IN.)	#4 BARS N NO.	N LENGTH (FT.-IN.)
8	7	#4	#4	80	5-1	8-2	10	4	17-7	28	2-8	36	14-5	4	11-3	20	5-3
8	8	#5	#4	88	5-6	9-2	10	4	19-6	32	2-9	40	19-3	4	11-6	20	5-3

CLEAR SPAN	CLEAR HEIGHT	#4 BARS O NO.	O SIZE	O LENGTH (FT.-IN.)	O SPAC. (IN.)	#4 BARS P NO.	P LENGTH (FT.-IN.)	#4 BARS P_1 NO.	P_1 LENGTH (FT.-IN.)	#8 BARS X Ⓐ NO.	X LENGTH (FT.-IN.)
8	7	64	#4	4-0	12	16	15-8	12	17-5	32	2-0
8	8	72	#4	4-5	12	16	17-7	12	19-3	36	2-0

Ⓐ #8 BARS X TO BE ¾"ø SMOOTH AND GREASED FOR 1'-0" OF LENGTH.

QUANTITIES

OPENING CLEAR SPAN (FT.)	OPENING CLEAR HEIGHT (FT.)	PER LIN. FT. OF BARREL STEEL (LBS.)	PER LIN. FT. OF BARREL CONC. (CU. YDS.)	44'-0" CULVERT STEEL (LBS.)	44'-0" CULVERT CONC. (CU. YDS.)
8	7	116.18	0.8776	7184	71.25
8	8	121.82	0.9805	7870	82.66

NOTES:

1. CONSTRUCTION SPECIFICATIONS: LATEST APPROVED DOTD STANDARD SPECIFICATIONS;
2. DESIGN SPECIFICATIONS: A.A.S.H.O. 1961 AS AMENDED BY INT. SPEC. 1964; LIVE LOAD HS 20-44, OR MILITARY LOADING, WHICHEVER IS GREATER.
3. ALL CONCRETE TO BE CLASS "A";
4. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER, UNLESS OTHERWISE NOTED; REINFORCEMENT SHALL BE BILLET-STEEL A.S.T.M. A615 OR RAIL-STEEL A.S.T.M. A616 OR AXLE-STEEL A.S.T.M. A617;
5. FOR DETAIL OF JOINTS, SEE STD. PLAN C.M.-48;
6. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO BAR CENTERS;
7. A 1'-6" SQUARE OF PLASTIC FILTER CLOTH (SEE APPROVED MATERIALS LIST) SHALL BE PLACED IN CONTACT WITH CONCRETE BEHIND EACH WEEP HOLE IN ADDITION TO APPROX. 2 CU. FT. OF CONCRETE SAND.

CONCRETE SAND GRADATION

SIEVE	2011 % AVERAGE PASSING	CONCRETE MATERIAL SPEC	ASTM C33 FINE AGGREGATE SPEC
3/8"	100	100	100
#4	97	95-100	95-100
#8	85	80-100	80-100
#10			50-85
#16	65	50-85	50-85
#30	40	25-60	25-60
#40	26		50-85
#50	12	30-Oct	30-May
#100	2.1	10-Feb	0-10
#200	1	0-2	
FM	2.99		
SHALE	0.1		

STANDARD PLAN
REINF. CONCRETE BOX CULVERTS
STRAIGHT WINGS 90° CROSSING
2:1 SPILL SLOPE
7' THRU 10' CLEAR SPANS & CLEAR HEIGHTS

NOT TO SCALE

FENSTERMAKER
JOB NO: 2071040.97C

PROJECT: POST ROAD CHANNEL IMPROVEMENTS
PARISH: LAFAYETTE PARISH
DESIGNED BY: CRM | DRAWN BY: CRM | CHECKED BY: JMS | DATE: APRIL 2016

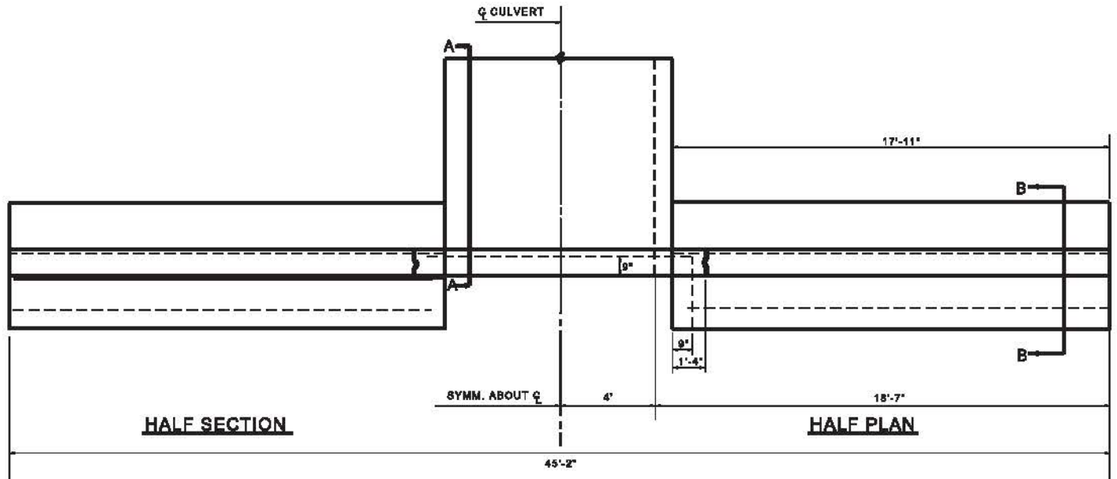
REINFORCED CONCRETE BOX CULVERT DETAILS (1 OF 2)

FOR
City Of Carencro
P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520

REVISIONS		
DATE	REVISION DESCRIPTION	BY

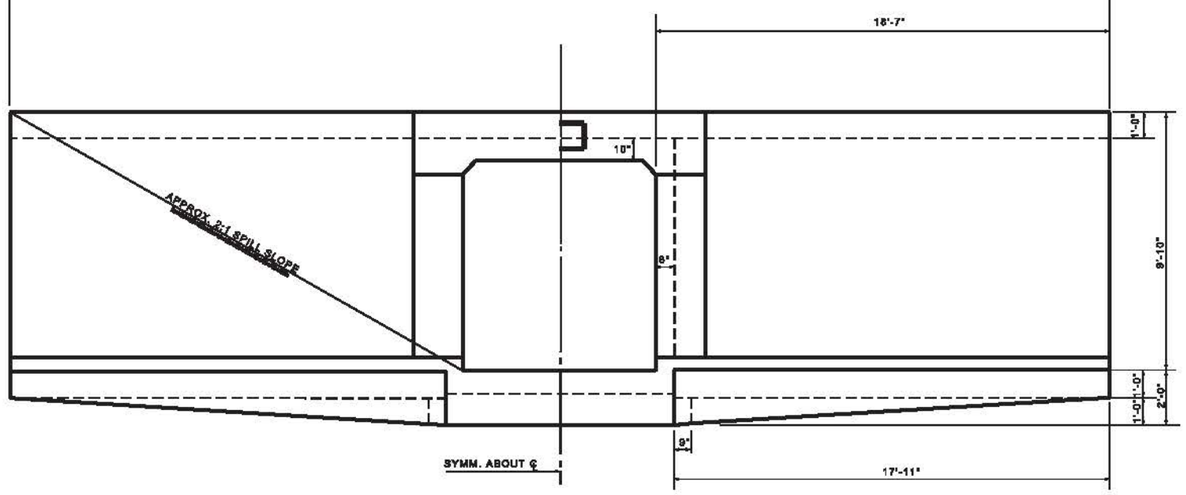
STAMP/SEAL:
STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING

SHEET NO. 105

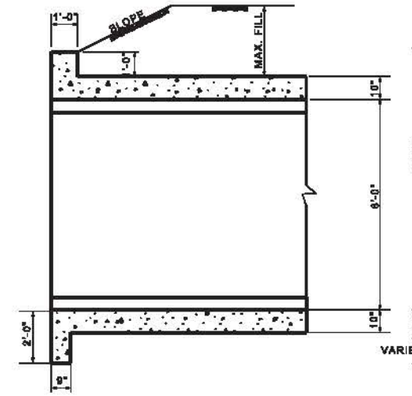


HALF SECTION

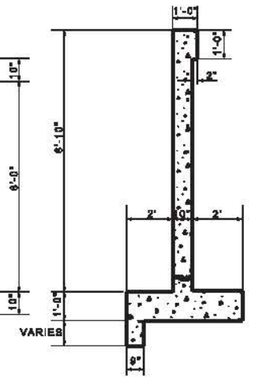
HALF PLAN



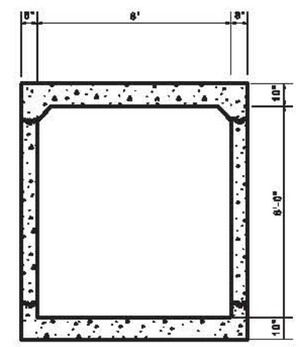
END ELEVATION



SECTION A-A



SECTION B-B



SECTION THRU BARREL

STANDARD PLAN
REINF. CONCRETE BOX CULVERTS
STRAIGHT WINGS 90° CROSSING
2:1 SPILL SLOPE
7' THRU 10' CLEAR SPANS & CLEAR HEIGHTS

NOT TO SCALE

FENSTERMAKER

JOB NO: 2071040.97C

PARISH: LAFAYETTE PARISH

DATE: APRIL 2015

CHECKED BY: JNB

PROJECT: POST ROAD CHANNEL IMPROVEMENTS

DESIGNED BY: CRM

DRAWN BY: CRM

REINFORCED CONCRETE BOX CULVERT DETAILS (2 OF 2)

FOR

City Of Carencro

P.O. Drawer 10
216 East St. Peter Street
Carencro, LA 70520

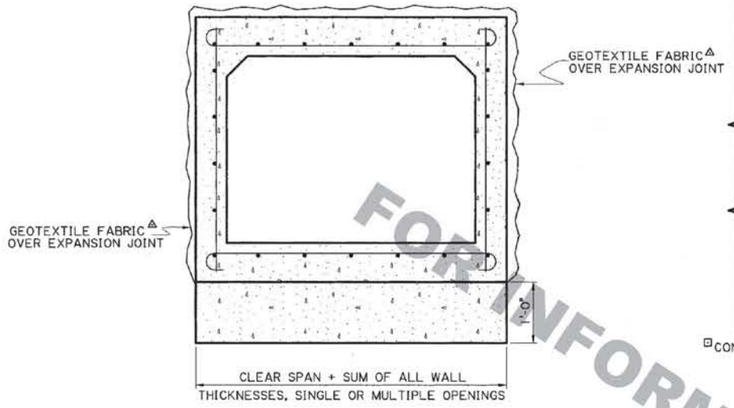
REVISIONS

DATE	REVISION DESCRIPTION	BY

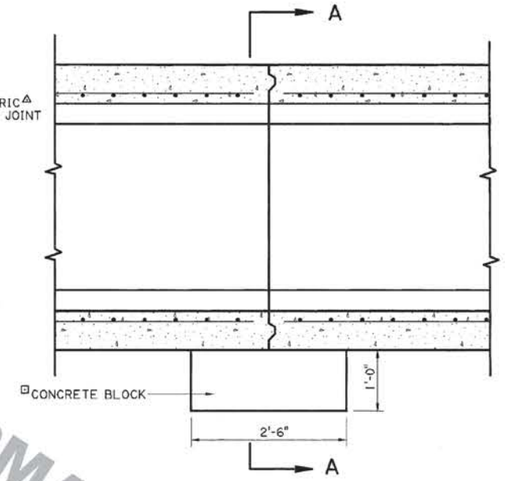
STAMP/SEAL:

STATE OF LOUISIANA
JUSTIN N. SHAW
LICENSE NO. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 106



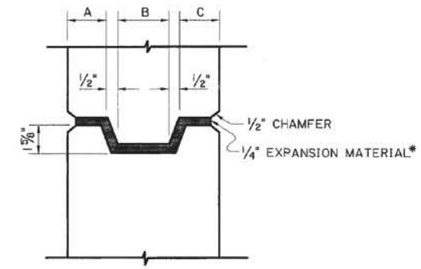
SECTION A-A



LONGITUDINAL BARREL SECTION

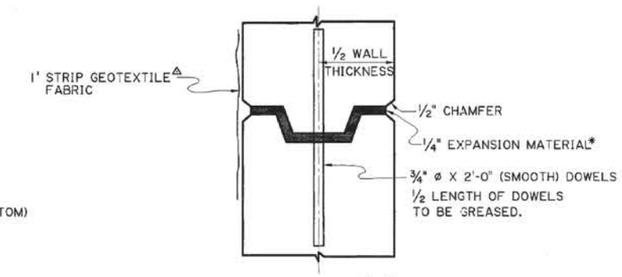
KEYED EXPANSION JOINTS (SEE DETAIL "A") TO BE SPACED SO THAT BARREL SHALL NOT BE CONTINUOUS FOR MORE THAN 200'. NO REINFORCING STEEL SHALL EXTEND THROUGH JOINT.

⊡CONCRETE BLOCK TO BE PAID FOR AS CLASS "A" CONCRETE. CONCRETE BLOCK IS NOT REQUIRED IF A WORKING TABLE (DRY BOTTOM) IS CAST AS A BASE FOR PLACEMENT IN THE FIELD.

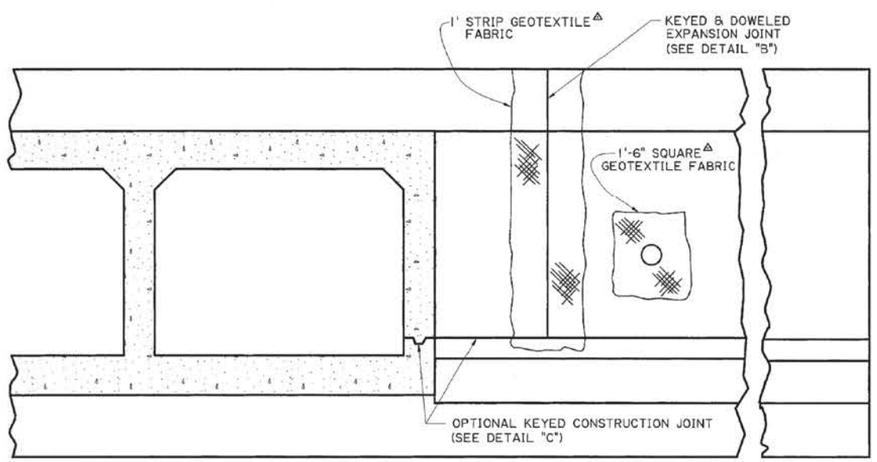


DETAIL "A"
KEYED EXPANSION JOINT

*IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR PREFORMED JOINT FILLERS (PREFORMED RESILIENT BITUMINOUS TYPES)

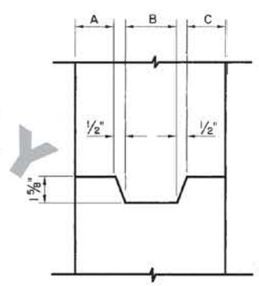


DETAIL "B"
KEYED & DOWELED
EXPANSION JOINT
(FOR BOX CULVERT WING WALLS)



SECTION SHOWING REAR SIDE OF WING WALL

WALL OR SLAB	A	B	C
6"	1 1/2"	2"	1 1/2"
6 1/2"	1 5/8"	2 1/4"	1 5/8"
7"	1 3/4"	2 1/2"	1 3/4"
7 1/2"	2"	2 1/2"	2"
8"	2 1/8"	2 3/4"	2 1/8"
8 1/2"	2 3/8"	2 3/4"	2 3/8"
9"	2 1/2"	3"	2 1/2"
9 1/2"	2 3/4"	3"	2 3/4"
10"	2 7/8"	3 1/4"	2 7/8"
10 1/2"	3"	3 1/2"	3"
11"	3 1/8"	3 3/4"	3 1/8"
11 1/2"	3 1/4"	4"	3 1/4"
12"	3 1/2"	4"	3 1/2"



DETAIL "C"
KEYED CONSTRUCTION JOINT

△ IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR GEOTEXTILE FABRIC

THESE DETAILS CAN BE FOUND ON THE LA DOTD WEBSITE.

FOR INFORMATIONAL PURPOSES ONLY

FENSTERMAKER
JOB NO: 207/1040.97C

PARISH: LAFAYETTE PARISH
DATE: APRIL 2015
CHECKED BY: JMB
PROJECT: POST ROAD CHANNEL IMPROVEMENTS
DESIGNED BY: CRM
DRAWN BY: CRM

EXPANSION JOINT (CM-49) DETAIL

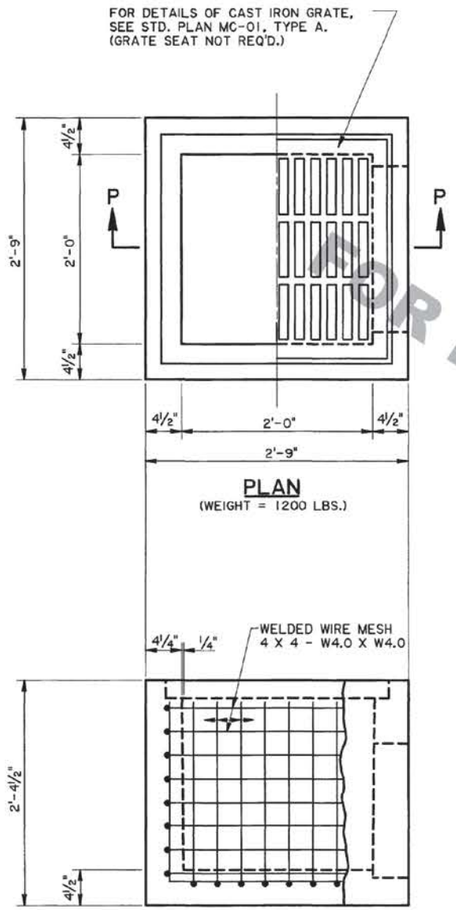
FOR
City Of Carencro
P.O. Drawer 10
216 East St. Peter Street
Carencro, LA 70520

REVISIONS

DATE	REVISION DESCRIPTION	BY

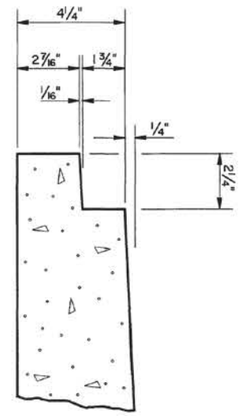
STAMP/SEAL:
STATE OF LOUISIANA
JUSTIN M. BRAU
LICENSED NO. 37201
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

SHEET NO. 107



PLAN
(WEIGHT = 1200 LBS.)

ELEVATION



DETAIL A
ALL DIMENSIONS TYPICAL

GENERAL NOTES:

ALL CONCRETE TO BE CLASS "P".

SETTING TOLERANCE TO BE +0 & -1".

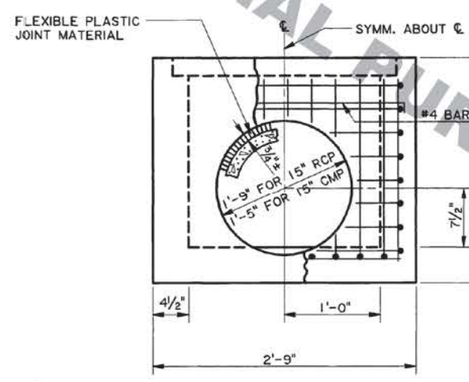
WELDED WIRE MESH TO BE OVERLAPPED A MINIMUM 3" FOR SPLICE.

OPENING TO MATCH TYPE OF PIPE SPECIFIED ON PLAN/PROFILE OR SUMMARY OF DRAINAGE STRUCTURES.

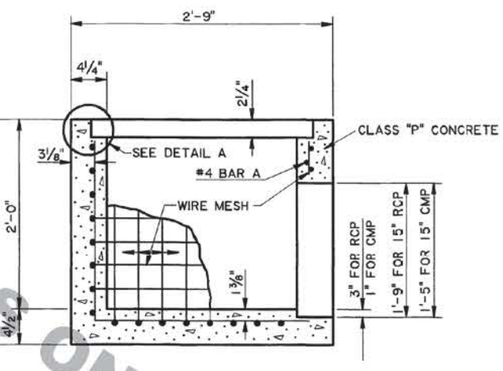
THE MANUFACTURER SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ALL PICK-UP AND HANDLING DEVICES.

AFTER PLACEMENT OF PIPE, THE OPENING AROUND PIPE SHALL BE FILLED WITH FLEXIBLE PLASTIC JOINT MATERIAL.

DIMENSIONS RELATING TO REINFORCED STEEL ARE TO BAR CENTERS.



END ELEVATION



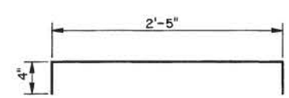
SECTION P-P

NOTE: 4½" UNIFORM WALLS MAY BE USED AT SUPPLIER'S OPTION.

NOT TO BE USED WHERE SUBJECT TO VEHICULAR TRAFFIC.

NOTE: STANDARD PLAN MC-01 (DETAILS OF GRATES, FRAMES, SEATS, LIDS, ETC.) MAY BE OBTAINED FROM:

HYDRAULICS SECTION
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
P.O. BOX 94245
CAPITOL STATION
BATON ROUGE, LA 70804



#4 BAR A

THESE DETAILS CAN BE FOUND ON THE LA DOTD WEBSITE.

FOR INFORMATIONAL PURPOSES ONLY

FENSTERMAKER
138 Rooney Street
Lafayette, La 70506
Phone: (337) 233-1307
Fax: (337) 235-5096

JOB NO: 207/1040.97C

PARISH: LAFAYETTE PARISH
DATE: APRIL 2015
CHECKED BY: JNB

PROJECT: POST ROAD CHANNEL IMPROVEMENTS
DESIGNED BY: CRM
DRAWN BY: CRM

CATCH BASIN (CB-04) DETAIL

FOR
City Of Carencro

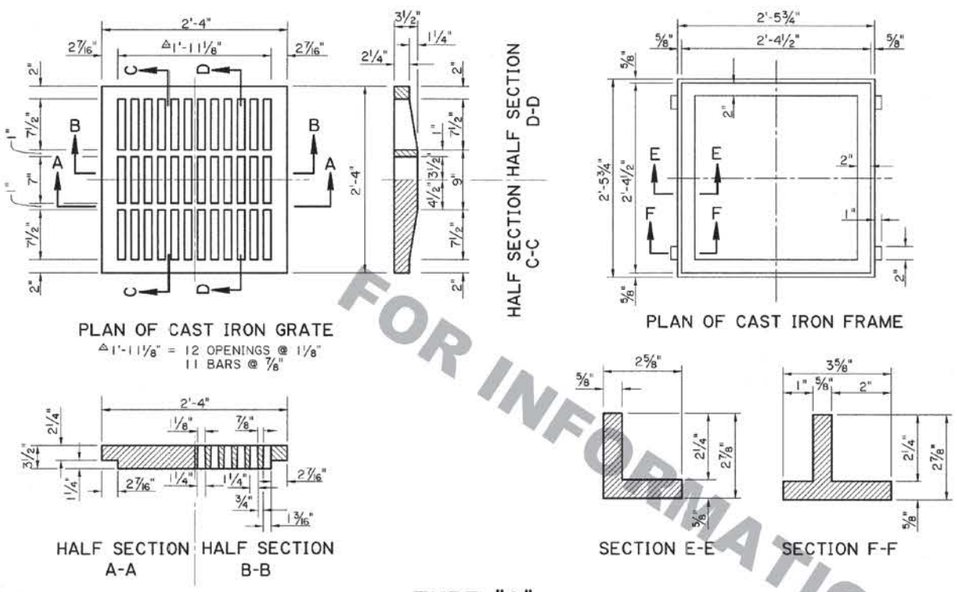
P.O. Drawer 19
210 East St. Peter Street
Carencro, LA 70520
(337)896-6461 * Fax (337)896-0890

REVISIONS		
DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:

STATE OF LOUISIANA
JUSTIN L. BRAU
License No. 37201
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

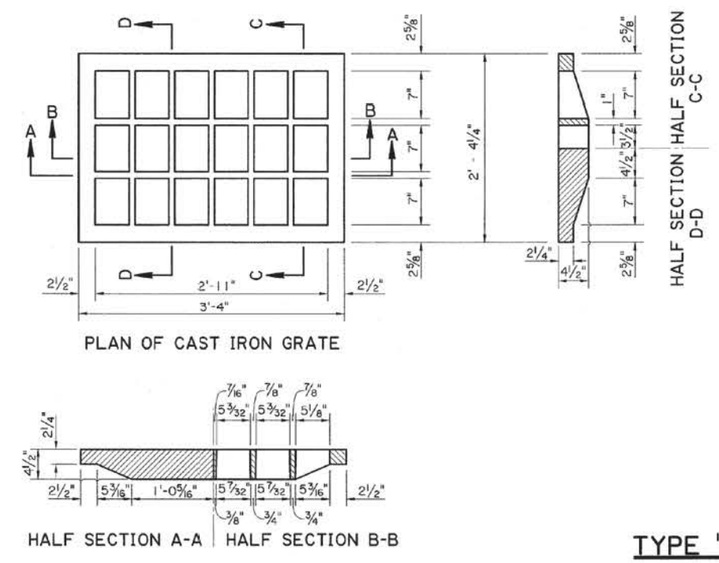
SHEET NO. 108



TYPE "A"

CAST IRON GRATE & FRAME

NOTES: 1. WEIGHT OF CAST IRON GRATE = 334 LBS
2. WEIGHT OF CAST IRON FRAME = 90 LBS



TYPE "B"

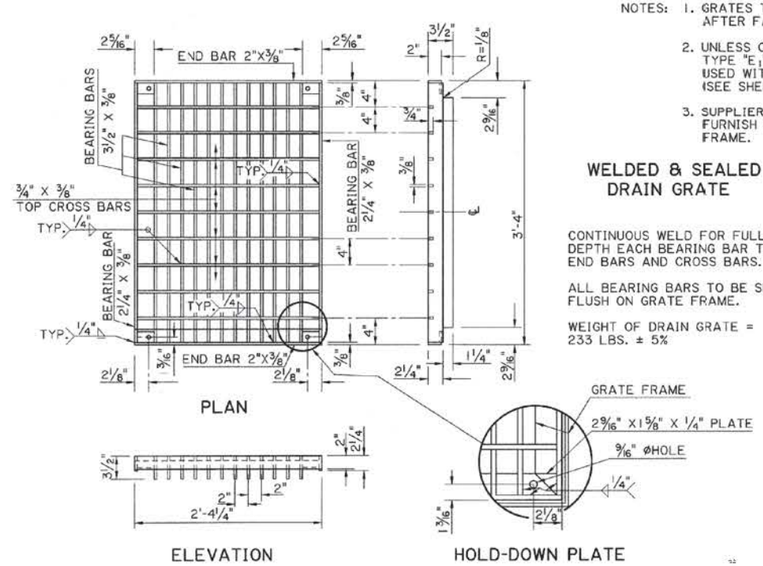
CAST IRON GRATE

NOTES: 1. WEIGHT OF CAST IRON GRATE = 350 LBS
2. UNLESS OTHERWISE STATED, TYPE "E" FRAME WILL BE USED WITH THIS GRATE.

TYPE "C"

STEEL DRAIN GRATE

NOTES: 1. GRATES TO BE GALVANIZED AFTER FABRICATION.
2. UNLESS OTHERWISE STATED, TYPE "E_1" FRAME IS TO BE USED WITH THESE GRATES. (SEE SHEET 2)
3. SUPPLIER OF GRATE ALSO IS TO FURNISH PRE-FITTED GRATE FRAME.



WELDED & SEALED DRAIN GRATE

CONTINUOUS WELD FOR FULL DEPTH EACH BEARING BAR TO END BARS AND CROSS BARS.

ALL BEARING BARS TO BE SET FLUSH ON GRATE FRAME.

WEIGHT OF DRAIN GRATE = 233 LBS. ± 5%

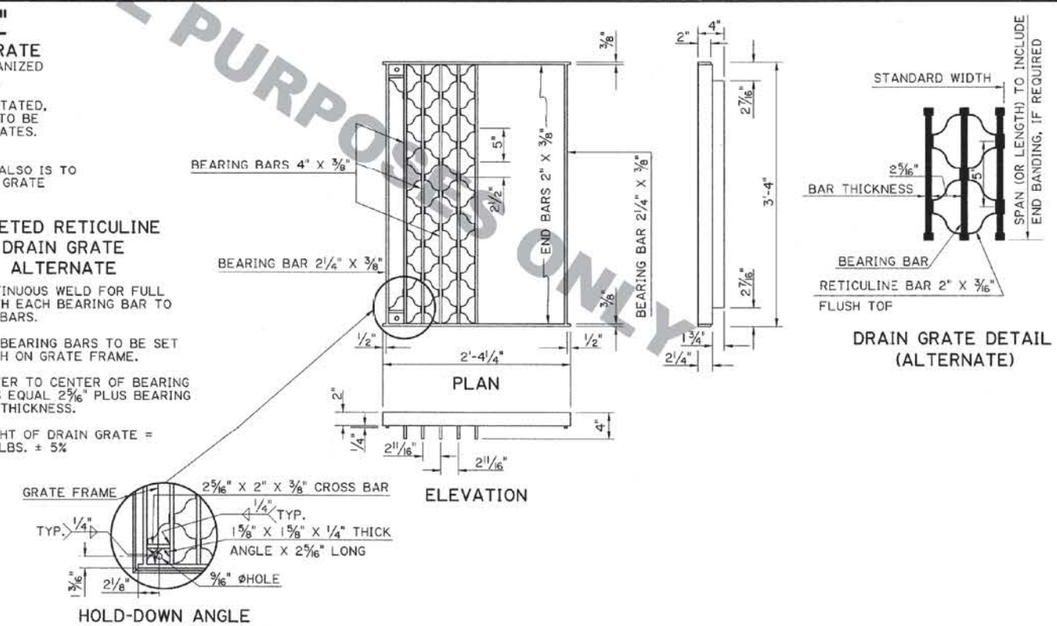
RIVETED RETICULINE DRAIN GRATE ALTERNATE

CONTINUOUS WELD FOR FULL DEPTH EACH BEARING BAR TO END BARS.

ALL BEARING BARS TO BE SET FLUSH ON GRATE FRAME.

CENTER TO CENTER OF BEARING BARS EQUAL 2 5/16" PLUS BEARING BAR THICKNESS.

WEIGHT OF DRAIN GRATE = 266 LBS. ± 5%



DRAIN GRATE DETAIL (ALTERNATE)

THESE DETAILS CAN BE FOUND ON THE LA DOTD WEBSITE.

FOR INFORMATIONAL PURPOSES ONLY

FENSTERMAKER
Phone: (337) 233-1007
Fax: (337) 235-3405
138 Rooney Street
Lafayette, LA 70506
JOB NO: 207/040.97C

PARISH: LAFAYETTE PARISH
DATE: APRIL 2015
CHECKED BY: JNB
PROJECT: POST ROAD CHANNEL IMPROVEMENTS
DESIGNED BY: CRM
DRAWN BY: CRM

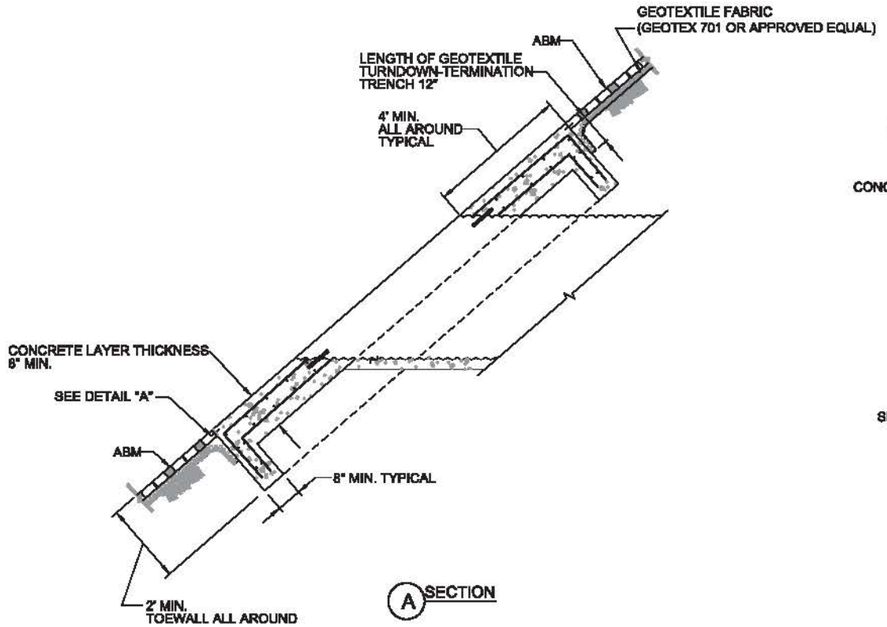
CATCH BASIN GRATE (MC-01) DETAIL

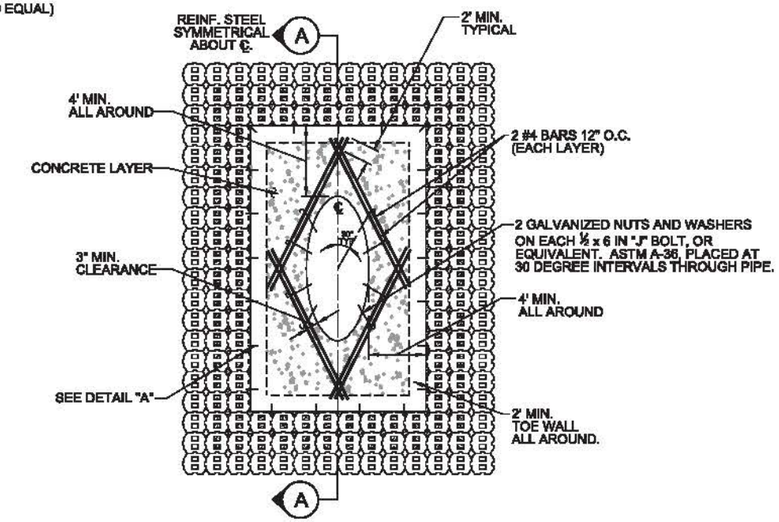
FOR
City Of Carencro
P.O. Drawer 19
216 East St. Peter Street
Carencro, LA 70520
(337) 896-6461 • Fax (337) 896-0890

REVISIONS		
DATE	REVISION DESCRIPTION	BY

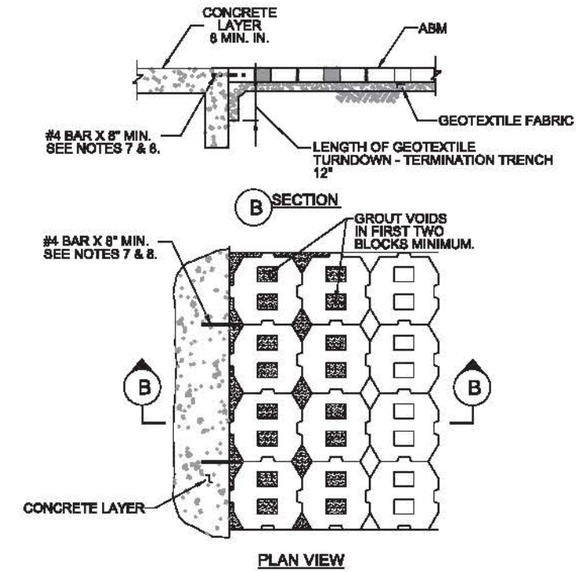
STAMP/SEAL:
STATE OF LOUISIANA
JUSTIN L. BRAS
License No. 37701
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

SHEET NO. 109



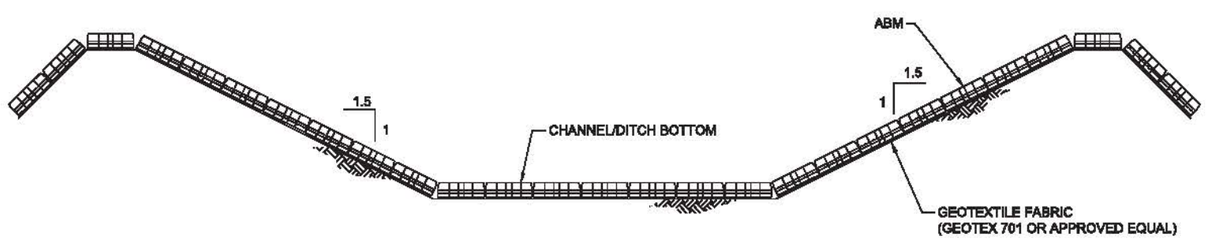


PIPE OUTFALL DETAIL
(FOR OUTFALLS 15 INCH DIA.)
SCALE: NTS



PLAN VIEW

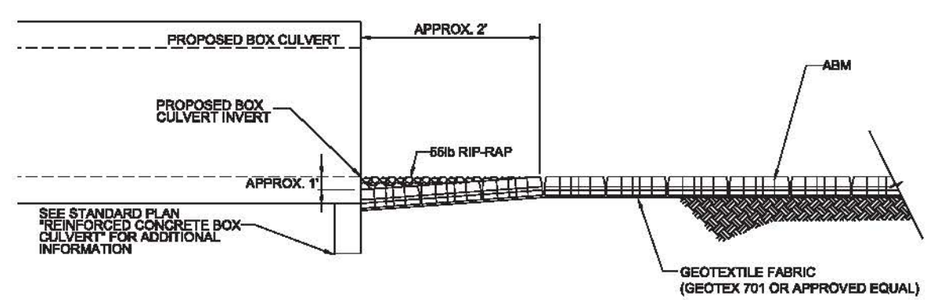
DETAIL A-CHANNEL LINING - ABM JUNCTURE
SCALE: NTS



TRAPEZOID CHANNEL/DITCH
CONSTRUCTION DETAIL
SCALE: NTS

GENERAL NOTES:

1. EXACT LAYOUT OF ABM TO BE DETERMINED BY CONTRACTOR IN THE FIELD.
2. ABM SHALL BE TEXICON ARTICULATING BLOCK OR APPROVED EQUAL.
3. SEE STANDARD PLAN STONE OR RECYCLED CONCRETE RIP RAP FOR SECURING GEOTEXTILE FABRIC.
4. SECURING PINS WILL BE PROVIDED AT NO DIRECT PAY.
5. IN LIEU OF LAPPING, CONTRACTOR MAY SEW SEAMS USING AN APPROVED METHOD. SEAM STRENGTH SHALL PROVIDE NO LESS THAN 90 PERCENT OF THE REQUIRED TENSILE STRENGTH OF THE GEOTEXTILE FABRIC IN ANY PRINCIPAL DIRECTION.
6. #4 REBAR DOWELS TO BE 8" MINIMUM TOTAL LENGTH FROM WITHIN CHANNEL LINING TO DEPTH OF ABM CAVITY CENTERED BETWEEN EVERY SECOND BLOCK.
7. ABM MUST BE TERMINATED ON ALL FOUR SIDES, TOP, BOTTOM, AND BOTH UPSTREAM AND DOWNSTREAM EDGES BY TRENCHING OR TYING TO ADJACENT CHANNEL LINING.
8. COST TO CONSTRUCT PIPE OUTFALL SHALL BE INCLUDED IN ITEM NO. 02376.000.



CONSTRUCTION DETAIL AT BOX
CULVERT DETAIL UPSTREAM & DOWNSTREAM ENDS
SCALE: NTS

SCALE: NTS

FENSTERMAKER
138 Rooney Street
Lafayette, LA 70506
Phone: (337) 235-5401
Fax: (337) 235-5404
JOB NO: 207/1040.97C

PARISH: LAFAYETTE PARISH
DATE: APRIL 2015
CHECKED BY: JMB
DRAWN BY: CRM
DESIGNED BY: CRM

PROJECT: POST ROAD CHANNEL IMPROVEMENTS

ARTICULATING CONCRETE BLOCK MATTING (ABM) DETAIL

FOR
City Of Carencro
P.O. Drawer 10
216 East St. Peter Street
Carencro, LA 70520
(337)896-0461 * Fax (337)896-0890

REVISIONS

DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:
STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 110

ADVANCE ROAD (STREET) WORK SIGN (W20-1)

THE ROAD (STREET) WORK SIGN IS TO BE LOCATED IN ADVANCE OF THE INITIAL ACTIVITY OR DETOUR A DRIVER MAY ENCOUNTER, AND IS INTENDED FOR USE AS A GENERAL WARNING OF OBSTRUCTIONS OR RESTRICTIONS. IT CARRIES THE LEGEND ROAD (STREET) CONSTRUCTION ( ) FT. OR ROAD (STREET) CONSTRUCTION ( ) MILE. IT MAY BE USED IN REPETITION WITH APPROPRIATE LEGENDS, OR IN CONJUNCTION WITH OTHER CONSTRUCTION SIGNS.

THE LEGEND ROAD (STREET) WORK AHEAD IS INTENDED MAINLY FOR USE ON APPROACHES OF ROADS (STREETS) THAT INTERSECT THE ROUTE UNDER CONSTRUCTION IN BETWEEN THE 500 FT. ADVANCE WARNING SIGNS AND THE END CONSTRUCTION SIGN. IT IS ALSO TO BE EMPLOYED AS THE FIRST ADVANCE SIGN IN URBAN SETTINGS WITH SHORT 250' SPACING.

ROAD
WORK
1500 FT.

W20-1
48" x 48"

DETOUR SIGNS

THE DETOUR ARROW SIGN (M4-10) IS USED ONLY AT THE POINT WHERE A DETOUR ROADWAY OR ROUTE HAS BEEN ESTABLISHED DUE TO THE CLOSURE OF A STREET OR HIGHWAY TO THROUGH TRAFFIC. IT SHOULD USUALLY BE MOUNTED JUST BELOW THE ROAD CLOSED SIGN OR THE LOCAL TRAFFIC ONLY SIGN, NORMALLY ON TOP OF A TYPE III BARRICADE.

THE DETOUR MARKER (M4-8) MOUNTED ON A ROUTE MARKER ASSEMBLY IS TO BE USED TO MARK A TEMPORARY DETOUR ROUTE THAT BRANCHES FROM A REGULAR NUMBERED ROUTE; BYPASSES A SECTION OF A ROUTE THAT IS CLOSED BY CONSTRUCTION, OR OTHER REASONS; AND REJOINS THE REGULAR ROUTE BEYOND THAT SECTION. THE ROUTE MARKER ASSEMBLY SHALL INCLUDE AN ARROW INDICATING THE DIRECTION OF THE DETOUR.

THE DETOUR SIGN (M4-9) IS TO BE USED FOR UNNUMBERED ROUTES, OR IN EMERGENCY SITUATIONS; FOR PERIODS OF SHORT DURATION, OR WHERE IT IS NOT NECESSARY TO SHOW ROUTE MARKERS TO GUIDE TRAFFIC ALONG TO ITS DESIRED ROUTE. A STREET NAME SIGN MAY BE PLACED ABOVE OR INCORPORATED IN THE DETOUR SIGN TO INDICATE THE NAME OF THE ROADWAY FOR WHICH THE DETOUR WAS ESTABLISHED.

DETOUR

M4-8
12" x 24"

DETOUR

M4-9 R
M4-9 L
30" x 24"

DETOUR

M-4-10R
M-4-10L
48" x 18"
Background- Orange
Legend- Black
Arrow- Orange
Legend- 6" Series D

DO NOT PASS SIGN (R4-1)

THE DO NOT PASS SIGN MAY BE USED ON A TWO OR THREE LANE ROAD, AT THE BEGINNING OF, AND AT INTERVALS OF 1500' WITHIN A WORK ZONE THROUGH WHICH RESTRICTED SIGHT DISTANCE OR OTHER CONDITIONS MAKES OVERTAKING AND PASSING HAZARDOUS. WHERE STANDARD PAVEMENT MARKINGS ARE PRESENT, THE SIGN NEED NOT BE USED. HOWEVER, THE SIGN MAY BE USED IN ADDITION TO THE PAVEMENT MARKINGS TO EMPHASIZE THE RESTRICTION ON PASSING.

BECAUSE A DRIVER ABOUT TO PASS OFTEN HAS ONLY A RESTRICTED VIEW TO THE RIGHT, CONSIDERATION SHOULD BE GIVEN TO PLACING A SIGN ON THE LEFT-HAND SIDE OF THE ROADWAY.

THE NO PASSING ZONE SIGN (W14-3) PLACED ON THE LEFT-HAND SIDE OF TWO-WAY ROADWAYS. SHOULD BE CONSIDERED AS A SUPPLEMENT TO THE ENFORCEABLE NO PASSING ZONE CONTROL, WHICH IS THE REGULATORY MARKING AND/OR THE REGULATORY DO NOT PASS SIGN.

PASS WITH CARE SIGN (R4-2)

THE PASS WITH CARE SIGN SHOULD BE USED AT THE END OF A NO-PASSING ZONE WHERE A DO NOT PASS SIGN HAS BEEN ERECTED AT THE BEGINNING OF THE ZONE. IT SHALL BE OF THE SAME SIZE AND ERECTED IN THE SAME MANNER AS THE DO NOT PASS SIGN.

DO
NOT
PASS

R4-1
24" x 30"
Background- White
Legend & Border- Black
Legend- 6" Series D

PASS
WITH
CARE

R4-2
24" x 30"
Background- White
Legend & Border- Black
Legend - 6" Series D

ADVANCE DETOUR SIGN (W20-2)

THE DETOUR SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT AT WHICH TRAFFIC IS DIVERTED OVER A TEMPORARY ROADWAY OR ROUTE. IT CARRIES THE LEGEND DETOUR ( ) FT OR DETOUR ( ) MILE. IT MAY BE USED IN REPETITION WITH APPROPRIATE LEGENDS OR IN CONJUNCTION WITH OTHER CONSTRUCTION SIGNS.

DETOUR
1000FT

W20-2
48" x 48"

ROAD CLOSED SIGN (R11-2)

THE ROAD (STREET) CLOSED SIGN SHALL BE USED WHERE THE ROAD IS CLOSED TO ALL TRAFFIC EXCEPT CONTRACTORS' EQUIPMENT AND OFFICIALLY AUTHORIZED VEHICLES. IT SHOULD BE ERECTED AT OR NEAR THE CENTER OF THE ROADWAY ABOVE A TYPE III BARRICADE. THE WORDS BRIDGE OUT MAY BE SUBSTITUTED FOR ROAD CLOSED WHERE APPLICABLE. IT SHALL HAVE A STANDARD AND MINIMUM SIZE OF 48 INCHES BY 30 INCHES.

THE ROAD CLOSED SIGN SHALL NOT BE USED WHERE TRAFFIC IS MAINTAINED OR WHERE THE ACTUAL CLOSURE IS SOME DISTANCE BEYOND THE SIGN AND LOCAL TRAFFIC IS PERMITTED ACCESS TO NEARER POINTS.

ROAD
CLOSED

R11-2
48" x 30"
Background- White
Legend & Border- Black
Legend- 8" Series D

LOCAL TRAFFIC ONLY SIGN (R11-3)

THE LOCAL TRAFFIC ONLY SIGN SHALL BE USED WHERE THROUGH TRAFFIC MUST DETOUR TO AVOID A CLOSING OF THE HIGHWAY AT A CONSTRUCTION OR MAINTENANCE JOB SOME DISTANCE BEYOND BUT WHERE THE HIGHWAY IS OPEN FOR TRAFFIC UP TO THE POINT OF CLOSURE. IT CARRIES THE LEGEND ROAD CLOSED ( ) MILES AHEAD - LOCAL TRAFFIC ONLY. IT SHOULD BE ERECTED AT BOTH SIDES OF THE ROADWAY OVER A TYPE III BARRICADE. NORMALLY IT WILL BE ACCOMPANIED BY A DETOUR ARROW SIGN INDICATING THE PROPER ROUTE FOR THROUGH TRAFFIC. THE WORDS BRIDGE OUT MAY BE SUBSTITUTED FOR ROAD CLOSED WHERE APPLICABLE. WHERE THE SIGN FACES THROUGH TRAFFIC IT SHALL BE PRECEDED BY AN ADVANCE ROAD CLOSED SIGN WITH THE SECONDARY LEGEND AHEAD AND IF APPLICABLE AN ADVANCE DETOUR SIGN. THE DISTANCE FROM THE SIGN TO THE ROAD CLOSURE SHALL BE APPROXIMATED TO THE NEAREST ONE TENTH OF A MILE.

ROAD CLOSED
10.0 MILES AHEAD
LOCAL TRAFFIC ONLY

R11-3
60" x 30"
Background- White
Legend & Border- Black
Legend- Line 1- 6" Series C
Line 2- 5" Series C
Line 3- 4" Series C

ONE WAY SIGNS

THE ONE WAY SIGN SHALL BE USED TO INDICATE STREETS OR ROADWAYS UPON WHICH VEHICULAR TRAFFIC IS ALLOWED TO TRAVEL IN ONE DIRECTION ONLY. THE VERTICAL DESIGN HAD ADVANTAGE WHERE LATERAL SPACE IS LIMITED. BOTH DESIGNS MAY USE EITHER RIGHT OR LEFT ARROWS.

ONE WAY

R6-1 L
R6-1 R
36" x 12"
Background- Black
Legend- Black
Arrow- White
Legend- 4" Series D

ONE
WAY

R6-2 L
R6-2 R
18" x 24"
Background- White
Legend & Border- Black
Legend- 5" Series D

ADVANCE ROAD (STREET) CLOSED SIGN (W20-3)

THE ROAD (STREET) CLOSED SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT AT WHICH A ROADWAY IS CLOSED TO ALL TRAFFIC OR TO ALL BUT LOCAL TRAFFIC. IT CARRIES THE LEGEND ROAD (STREET) CLOSED ( ) FT. OR ROAD (STREET) CLOSED ( ) MILE. IT MAY BE USED IN REPETITION WITH APPROPRIATE LEGENDS OR IN CONJUNCTION WITH OTHER CONSTRUCTION SIGNS.

ROAD
CLOSED
1000FT

W20-3
48" x 48"

ROAD MACHINERY AHEAD SIGN (W21-3)

THE ROAD MACHINERY SIGN SHALL BE USED IN AREAS WHERE HEAVY ROAD EQUIPMENT SUCH AS A GRADER IS OPERATING IN OR CLOSELY ADJACENT TO THE ROADWAY.

FRESH OIL SIGN (W21-2)

THE FRESH OIL OR FRESH TAR SIGN SHALL BE USED TO WARN MOTORISTS THAT RESURFACING OPERATIONS HAVE RENDERED THE SURFACE OF THE PAVEMENT TEMPORARILY HAZARDOUS AND THAT OBJECTIONABLE SPLASHING ON VEHICLES MAY OCCUR.

ROAD
MACHINERY
AHEAD

W21-3
36" x 36"
Legend 5" Series D

FRESH
OIL

W21-2
30" x 30"
Legend 8" Series D

SPEED LIMIT SIGN

PREEXISTING SPEED LIMITS SHALL AT NO TIME BE INCREASED DURING CONSTRUCTION AND SHALL REMAIN IN EFFECT, EXCEPT WHEN REDUCED AS HEREBY INDICATED.

A REDUCED SPEED LIMIT OF 45 MPH SHALL BE USED WHERE SHOWN ON PLANS AND MAY BE USED AT LOCATIONS WITHIN THE PROJECT LIMITS WHERE CONSTRUCTION ACTIVITIES HAVE ALTERED THE ROADWAY BELOW ORIGINAL CONDITIONS, OR WHERE WORK IS IN PROGRESS AND/OR EQUIPMENT IS IN THE IMMEDIATE VICINITY OF THE TRAVELWAY. THE SPEED LIMIT CAN BE REDUCED TO 20 MPH IF WORKERS ARE IN CLOSE PROXIMITY TO TRAFFIC. PREEXISTING SIGNS EXCEEDING THE CONSTRUCTION SPEED LIMIT SHALL BE REMOVED OR COVERED.

REDUCED SPEED LIMITS SHOULD BEGIN APPROXIMATELY 750 FT. (275 FT. IN URBAN AREAS) IN ADVANCE OF THE POINT OF ACTUAL NEED, AND BE REMOVED OR COVERED WHEN NOT REQUIRED. REDUCED SPEED LIMITS SHALL ALSO BE POSTED AT OR JUST BEYOND ANY IMPORTANT ACCESS POINT.

THE REDUCED SPEED ZONE SHALL BE TERMINATED BY ERECTING A SPEED LIMIT SIGN SHOWING THE ORIGINAL SPEED LIMIT. WORK ZONES SEPARATED BY LESS THAN 1/2 MILE SHALL BE CONSIDERED AS A SINGLE ZONE AND BE CONTINUOUSLY POSTED.

THE "SPEED ZONE AHEAD" SIGN SHALL BE ERECTED IN ADVANCE OF EACH REDUCED SPEED ZONE SIGNS WITHIN A CONSTRUCTION AREA.

SPEED
ZONE
AHEAD

R2-5C
24" x 30" Standard
48" x 60" on Interstate and Freeways
Background- White
Legend & Border- Black
Legend- Line 1, 2, & 3
6" Series C

SPEED
LIMIT
45

R2-1
24" x 30" Standard
48" x 60" on Interstate and Freeways
Background- White
Legend & Border- Black
Legend- Line 1 & 2
4" Series E
Line 3 - 10" Series E

LENGTH OF ROAD WORK SIGN (G20-1)

THE LENGTH OF CONSTRUCTION GUIDE SIGN SHALL BE ERECTED AT THE BEGINNING OF ANY MAJOR ROAD CONSTRUCTION OR MAINTENANCE JOB OF MORE THAN 2 MILES IN LENGTH. WHERE TRAFFIC IS MAINTAINED THROUGH THE JOB IT CARRIES THE LEGEND ROAD WORK NEXT ( ) MILES. ORDINARILY IT SHOULD BE MOUNTED ON TOP OF A TYPE III BARRICADE. THE PROJECT LENGTH SHALL BE APPROXIMATED ONLY TO THE NEAREST ONE TENTH OF A MILE.

END ROAD WORK SIGN (G20-2)

THE END ROAD WORK SIGN SHALL BE ERECTED APPROXIMATELY 500 FEET BEYOND THE END OF A MAJOR CONSTRUCTION OR MAINTENANCE JOB TO INDICATE THE LIMITS OF ANY RESTRICTIONS OR SPECIAL PRECAUTIONS THAT HAVE BEEN IMPOSED.

ROAD
WORK
NEXT 5.0 MILES

G20-1
60" x 36"

END
ROAD WORK

G20-2
60" x 24"

Legend- 6" Series C

ADVANCE ONE LANE ROAD SIGN (W20-4)

THE ONE LANE ROAD SIGN IS USED ONLY IN ADVANCE OF A POINT WHERE TRAFFIC IN BOTH DIRECTIONS MUST USE A SINGLE LANE. IT CARRIES THE LEGEND ONE LANE ROAD ( ) FT OR ONE LANE ROAD ( ) MILE. IT MAY BE USED IN REPETITION WITH APPROPRIATE LEGENDS OR IN CONJUNCTION WITH OTHER CONSTRUCTION SIGNS.

IF THE AFFECTED ONE LANE ROADWAY IS NOT VISIBLE FROM ONE END TO THE OTHER, OR IF TRAFFIC IS SUCH THAT SIMULTANEOUS ARRIVALS AT BOTH ENDS OCCUR FREQUENTLY, FLAGGING PROCEDURES OR SIGNAL CONTROL SHALL BE USED TO CONTROL ALTERNATE TRAFFIC FLOWS. IN GENERAL, TWO-WAY TRAFFIC WILL ALWAYS BE RESTORED AT NIGHT. ONLY IN SPECIAL LOW VOLUME AND/OR SHORT LENGTH SITUATIONS WILL A ONE LANE ROAD BE LEFT AT NIGHT UNATTENDED.

ONE LANE
ROAD
1000FT

W20-4
48" x 48"

ROAD WORK AHEAD SIGN (W21-4)

THE ROAD WORK SIGN IS INTENDED FOR USE IN ADVANCE OF MAINTENANCE OR MINOR RECONSTRUCTION OPERATIONS IN THE ROADWAY.

ROAD
WORK
1 MILE

W21-4
36" x 36"
Legend 5" Series D

TWO WAY TRAFFIC SIGN (W6-3)

THE TWO WAY TRAFFIC SIGN IS INTENDED FOR USE WHERE A ROADWAY DESIGNED OR NORMALLY USED FOR ONE WAY TRAFFIC IS TEMPORARILY BEING USED FOR TRAFFIC IN BOTH DIRECTIONS OR WHERE UNDER ANY CIRCUMSTANCE IT MAY BE NECESSARY TO REMIND DRIVERS THAT THEY ARE TRAVELING ON A TWO-WAY ROADWAY. THE SIGN SHOULD BE PLACED AT INTERVALS OF ABOUT ONE-HALF MILE BUT NOT EXCEEDING ONE MILE. SPECIAL CARE MUST BE TAKEN TO PLACE IT AT OR JUST BEYOND ANY IMPORTANT ACCESS POINTS.

W6-3
48" x 48"

ADVISORY SPEED PLATES (W13-1)

IN CONJUNCTION WITH ANY WARNING SIGN AN ADVISORY SPEED PLATE MAY BE USED TO INDICATE A MAXIMUM RECOMMENDED SPEED THROUGH A HAZARDOUS AREA. EXCEPT IN EMERGENCIES AN ADVISORY SPEED PLATE SHALL NOT BE ERECTED UNTIL THE RECOMMENDED SPEED HAS BEEN DETERMINED BY THE TRAFFIC ENGINEER. ADVISORY SPEEDS GREATER THAN THE POSTED SPEED LIMIT SHALL NOT BE USED.

45
M.P.H.

W13-1
18" x 18"
Line 1- 8" Series E
Line 2- 3" Series E

ADVANCE LANE CLOSED SIGN (W20-5)

THE LANE CLOSED SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE ONE LANE OF A MULTIPLE-LANE ROAD WAY IS CLOSED. IT CARRIES THE LEGEND RIGHT (LEFT) LANE CLOSED ( ) FT OR RIGHT (LEFT) LANE CLOSED ( ) MILE. IT MAY BE USED IN REPETITION WITH APPROPRIATE LEGENDS OR IN CONJUNCTION WITH OTHER CONSTRUCTION SIGNS.

RIGHT LANE
CLOSED
1000FT

W20-5
48" x 48"

SHOULDER WORK AHEAD SIGN (W21-5)

THE SHOULDER WORK SIGN IS INTENDED FOR USE IN ADVANCE OF MAINTENANCE OR MINOR RECONSTRUCTION OPERATIONS INVOLVING THE SHOULDER, WHERE THE TRAVELWAY REMAINS UNOBSTRUCTED.

SURVEY CREW SIGN (W21-6)

THE SURVEY CREW SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE A SURVEYING PARTY IS WORKING IN OR CLOSELY ADJACENT TO THE ROADWAY.

SHOULDER
WORK

W21-5
30" x 30"
Legend
5" Series C

SURVEY
CREW

W21-6
30" x 30"
Legend
5" Series D

SIDE ROAD WORK AHEAD SIGN

THE SIDE ROAD WORK AHEAD SIGN IS INTENDED FOR USE IN ADVANCE OF AN INTERSECTION WHERE THE ROAD CONSTRUCTION PROJECT ON THE SIDE ROADWAY APPROACH TERMINATES AT THE CROSSING. NO CONSTRUCTION ACTIVITY SHALL BE ON THE THROUGH ROADWAY.

SIDE ROAD
WORK
AHEAD

36" x 36"
Legend 5" Series C

SOFT SHOULDERS SIGN

THE SOFT SHOULDERS AND OR THE LOW SHOULDERS SIGNS SHALL BE USED WHEN IN THE OPINION OF THE PROJECT ENGINEER THE SHOULDER OF THE HIGHWAY UNDER CONSTRUCTION BECOMES HAZARDOUS TO TRAFFIC.

SOFT
SHOULDER

W8-4
30" x 30"

LOW
SHOULDER

W8-9
30" x 30"

Legend 5" Series C

ADVANCE FLAGGER SIGN (W20-7)

THE FLAGGER SIGN IS USED IN ADVANCE OF ANY POINT AT WHICH A FLAGGER HAS BEEN STATIONED TO CONTROL TRAFFIC THROUGH A CONSTRUCTION OR MAINTENANCE PROJECT. WHEN NEEDED, AN APPROPRIATE DISTANCE MESSAGE MAY BE DISPLAYED ON A SUPPLEMENTAL PLATE BELOW THE SYMBOL SIGN. IT MAY BE USED IN REPETITION WITH APPROPRIATE REVISIONS IN THE SUPPLEMENTAL DISTANCE PLATE OR IN CONJUNCTION WITH OTHER CONSTRUCTION SIGNS.

THE WORD MESSAGE SIGN W20-7 WITH APPROPRIATE DISTANCES MAY BE USED AS AN ALTERNATE TO THE W20-7A FLAGGER SYMBOL SIGN.

THE SIGN SHALL BE PROMPTLY REMOVED, COVERED, OR TURNED TO FACE AWAY FROM THE ROADWAY WHEN THE FLAGGER IS NOT AT THE STATION.

FLAGMAN
AHEAD
500
FEET

W20-7
36" x 36"
Supplemental Plate
24" x 18"

500
FEET

W20-7a
36" x 36"
Supplemental Plate
24" x 18"

NOTE:
ALL SIGNS ON THIS SHEET SHALL HAVE ORANGE BACKGROUNDS WITH BLACK LEGENDS AND BORDERS EXCEPT WHERE OTHERWISE SPECIFIED.

SCALE: NTS

FENSTERMAKER

JOB NO: 2071040.97C

PARISH: LAFAYETTE PARISH

PROJECT: POST ROAD CHANNEL IMPROVEMENTS

DESIGNED BY: CRM | DRAWN BY: CRM | CHECKED BY: JMS | DATE: APRIL 2016

HIGHWAY SIGNS AND BARRICADE DETAILS (SHEET 1 OF 3)

FOR

City Of Carencro

P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520

REVISIONS

BY	REVISION DESCRIPTION	DATE

STAMP/SEAL:

STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37291
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 111

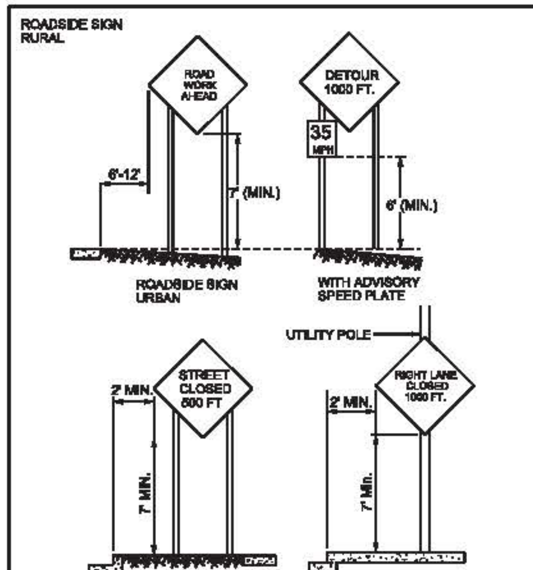
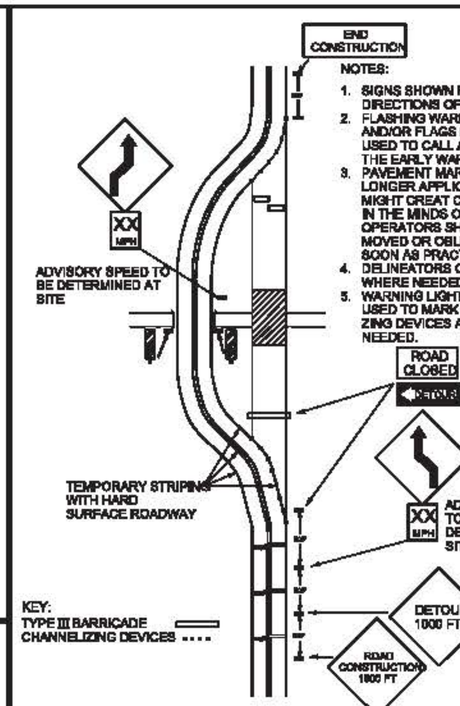


FIGURE 2-1

HEIGHTS AND LATERAL LOCATION OF SIGN TYPICAL INSTALLATIONS.



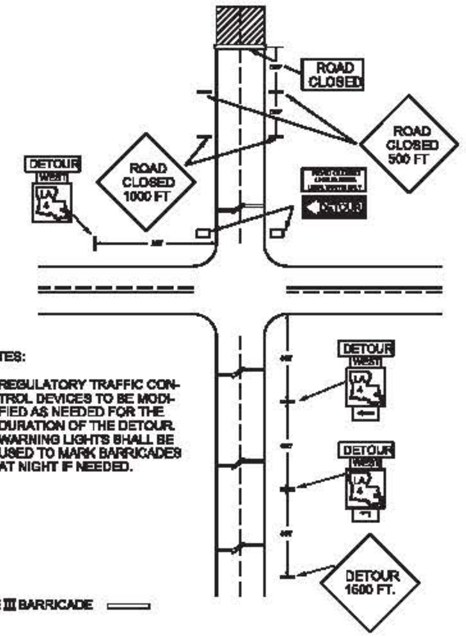
NOTES:

1. SIGNS SHOWN FOR ONE DIRECTIONS OF TRAVEL ONLY.
2. FLASHING WARNING LIGHTS AND/OR FLAGS SHALL BE USED TO CALL ATTENTION TO THE EARLY WARNING SIGNS.
3. PAVEMENT MARKING NO LONGER APPLICABLE WHICH MIGHT CREAT CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICAL.
4. DELINEATORS ON BYPASS WHERE NEEDED.
5. WARNING LIGHTS SHALL BE USED TO MARK CHANNELIZING DEVICES AT NIGHT AS NEEDED.

KEY:
TYPE III BARRICADE
CHANNELIZING DEVICES

FIGURE 2-2

TYPICAL APPLICATION- 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



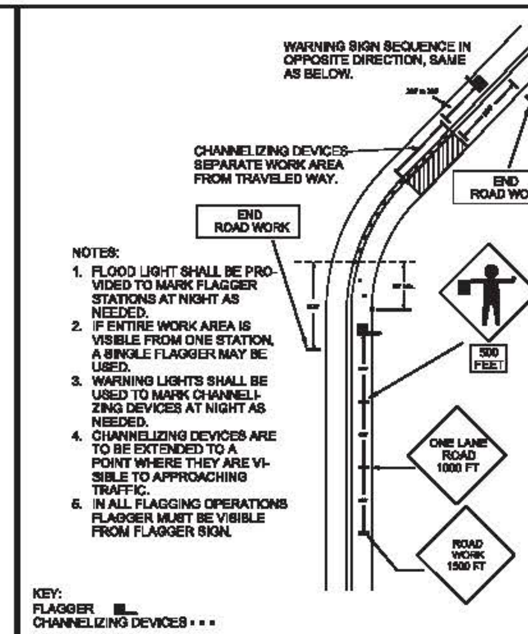
NOTES:

1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. WARNING LIGHTS SHALL BE USED TO MARK BARRICADES AT NIGHT IF NEEDED.

KEY:
TYPE III BARRICADE

FIGURE 2-3

TYPICAL APPLICATION- ROADWAY CLOSED BEYOND DETOUR POINT.



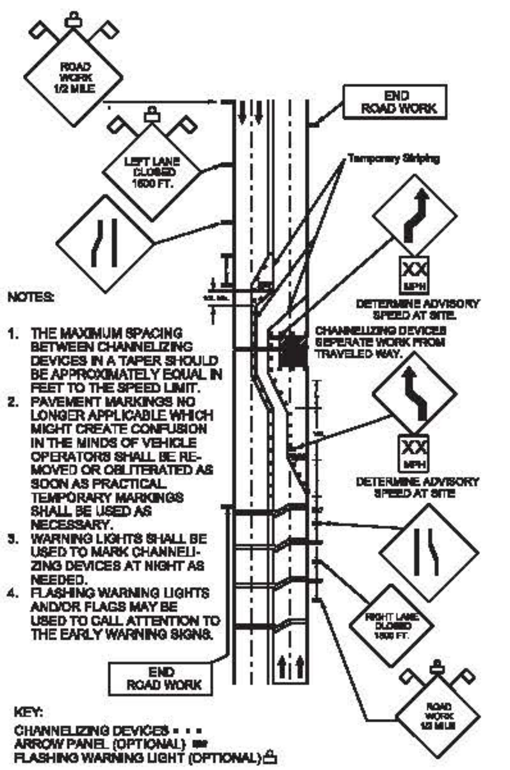
NOTES:

1. FLOOD LIGHT SHALL BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.
2. IF ENTIRE WORK AREA IS VISIBLE FROM ONE STATION, A SINGLE FLAGGER MAY BE USED.
3. WARNING LIGHTS SHALL BE USED TO MARK CHANNELIZING DEVICES AT NIGHT AS NEEDED.
4. CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
5. IN ALL FLAGGING OPERATIONS FLAGGER MUST BE VISIBLE FROM FLAGGER SIGN.

KEY:
FLAGGER
CHANNELIZING DEVICES

FIGURE 2-4

TYPICAL APPLICATION- 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



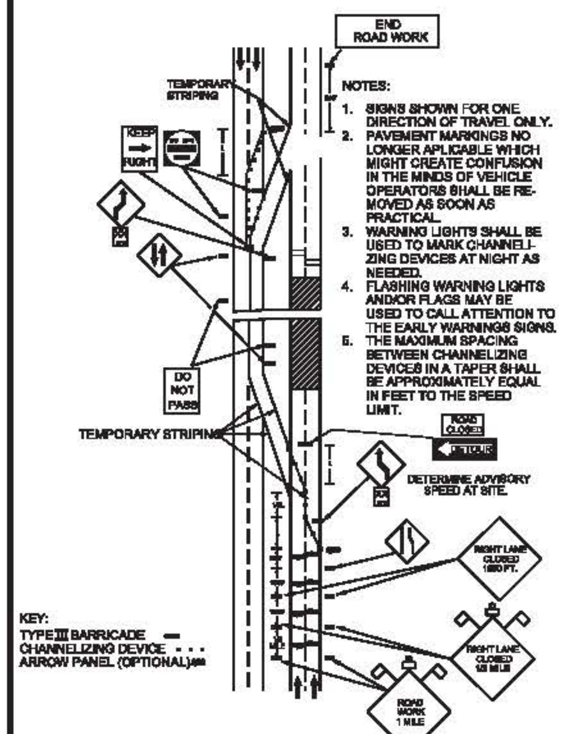
NOTES:

1. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT.
2. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICAL. TEMPORARY MARKINGS SHALL BE USED AS NECESSARY.
3. WARNING LIGHTS SHALL BE USED TO MARK CHANNELIZING DEVICES AT NIGHT AS NEEDED.
4. FLASHING WARNING LIGHTS AND/OR FLAGS MAY BE USED TO CALL ATTENTION TO THE EARLY WARNING SIGNS.

KEY:
CHANNELIZING DEVICES
ARROW PANEL (OPTIONAL)
FLASHING WARNING LIGHT (OPTIONAL)

FIGURE 2-5

TYPICAL APPLICATION- 4-LANE UNDIVIDED ROADWAY WHERE HALF THE ROADWAY IS CLOSED



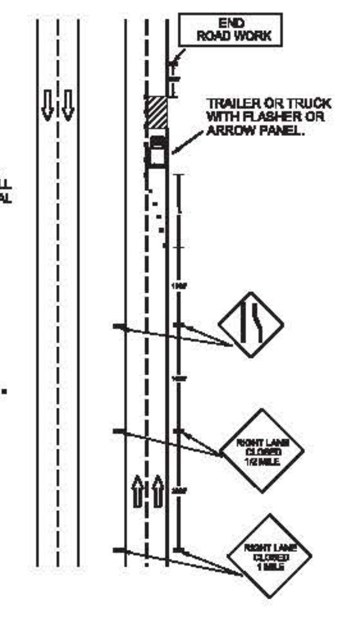
NOTES:

1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. PAVEMENT MARKINGS NO LONGER APLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED AS SOON AS PRACTICAL.
3. WARNING LIGHTS SHALL BE USED TO MARK CHANNELIZING DEVICES AT NIGHT AS NEEDED.
4. FLASHING WARNING LIGHTS AND/OR FLAGS MAY BE USED TO CALL ATTENTION TO THE EARLY WARNINGS SIGNS.
5. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHALL BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT.

KEY:
TYPE III BARRICADE
CHANNELIZING DEVICE
ARROW PANEL (OPTIONAL)

FIGURE 2-6

TYPICAL APPLICATION- 4-LANE DIVIDED HIGHWAY WHERE ONE ROADWAY IS CLOSED.



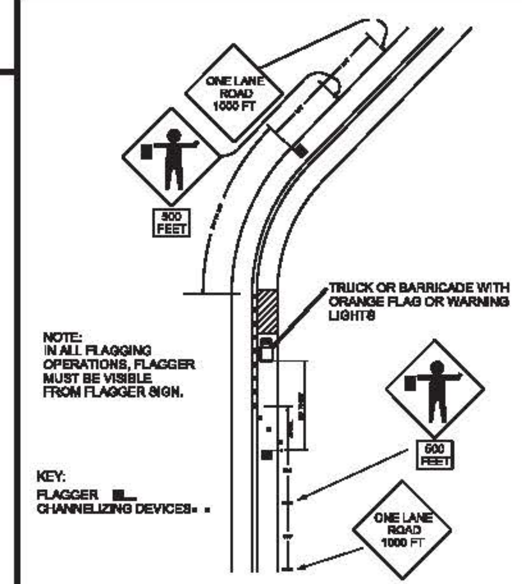
NOTES:

1. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHALL BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT.

KEY:
CHANNELIZING DEVICES

FIGURE 2-7

TYPICAL APPLICATION- SHORT DURATION DAYTIME MAINTENANCE OPERATIONS ON A 4-LANE DIVIDED HIGHWAY WHERE HALF OF THE ROADWAY IS CLOSED.



NOTE:
IN ALL FLAGGING OPERATIONS, FLAGGER MUST BE VISIBLE FROM FLAGGER SIGN.

KEY:
FLAGGER
CHANNELIZING DEVICES

FIGURE 2-8

TYPICAL APPLICATION- DAYTIME MAINTENANCE OPERATIONS OF SHORT DURATION ON A 2-LANE ROADWAY AND FLAGGING IS PROVIDED.

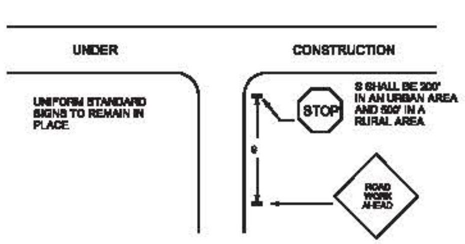


FIGURE 2-9

TYPICAL SIGNING ON A SIDE ROAD APPROACH TO A CONSTRUCTION PROJECT.

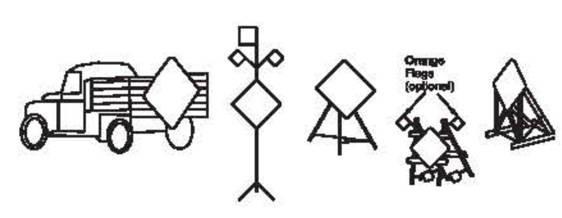
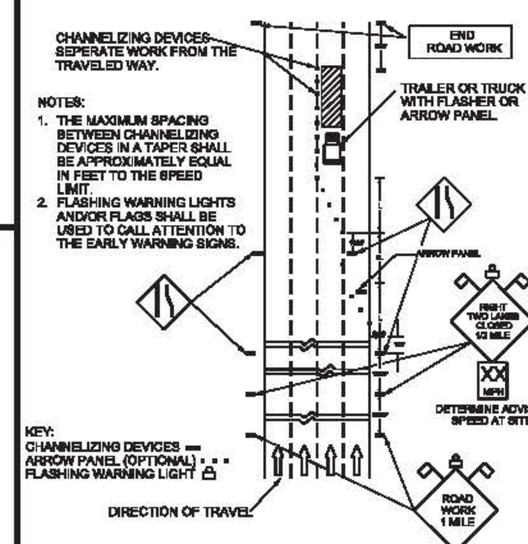


FIGURE 2-10

TYPICAL PORTABLE AND TEMPORARY MOUNTINGS.



NOTES:

1. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHALL BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT.
2. FLASHING WARNING LIGHTS AND/OR FLAGS SHALL BE USED TO CALL ATTENTION TO THE EARLY WARNING SIGNS.

KEY:
CHANNELIZING DEVICES
ARROW PANEL (OPTIONAL)
FLASHING WARNING LIGHT

FIGURE 2-11

TYPICAL APPLICATION- CLOSING MULTIPLE LANES OF A MULTILANE HIGHWAY.

NOTES:

GENERAL

1. ALL SIGNS AND PAVEMENT MARKINGS HEREIN SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
2. NO TRAFFIC CONTROLS SHALL BE ERECTED UNTIL THE CONSTRUCTION WORK IS ABOUT TO BEGIN AND WITH THE AUTHORIZATION OF THE PROJECT ENGINEER.
3. RESPONSIBILITY IS HEREBY PLACED UPON THE CONTRACTOR FOR THE ERECTION AND MAINTENANCE OF ALL MARKINGS, SIGNS AND BARRICADES CALLED FOR IN THESE PLANS OR REQUIRED BY THE PROJECT ENGINEER FOR THE PROTECTION OF THE TRAVELING PUBLIC OR CONSTRUCTION PERSONNEL. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE OR REFURBISHING, IF NECESSARY, OF ALL PERMANENT SIGNS AND PAVEMENT MARKINGS THAT SHOULD BE LEFT IN PLACE AS ESSENTIAL TO THE SAFE MOVEMENT AND GUIDANCE OF TRAFFIC WITHIN THE LIMITS OF THE PROJECT.
4. ALL RETROREFLECTIVE DEVICES SUCH AS SIGNS, DRUMS, BARRICADES, VERTICAL PANELS, DELINEATORS OF ANY TYPE, ETC., SHALL BE CLEANED OR WASHED PERIODICALLY, TO MAINTAIN THEIR EFFECTIVENESS, AS REQUIRED BY CONDITIONS OR THE PROJECT ENGINEER.
5. WHERE A CONSTRUCTION PROJECT INVOLVES A NUMBER OF ROAD SEGMENTS REMOTE FROM EACH OTHER, ONLY THOSE SEGMENTS WHERE ACTUAL WORK IS IN PROGRESS SHALL BE SIGNED. UPON COMPLETION OF ANY SEGMENT, CONSTRUCTION SIGNING SHALL BE REMOVED AND REPLACED WITH PERMANENT SIGNING.
6. WHEN DIFFERENT PROJECTS ARE NEXT TO EACH OTHER, OR SEPARATED BY LESS THAN ONE MILE, THEY SHALL BE CONSIDERED AS ONE PROJECT FOR CONSTRUCTION SIGNING PURPOSES, AND ALL ADVANCE SIGNING AT THE JUNCTURE SHALL BE ELIMINATED, EXCEPT FOR ANY SIGNING THAT THE PROJECT ENGINEER MIGHT REQUIRE DUE TO THE SITE CONDITIONS.
7. SIGNS SHOWN IN ALL ILLUSTRATIONS ARE TYPICAL AND MAY VARY WITH EACH SPECIFIC CONDITION. OTHER SIGNS FROM SHEET ONE (1) MORE APPROPRIATE FOR THE SPECIFIC CONDITION MAY BE SUBSTITUTED IN ANY OF THE ABOVE ILLUSTRATIONS UPON APPROVAL BY THE PROJECT ENGINEER. HOWEVER, THE REQUIRED NUMBER OF SUCH SIGNS SHALL IN GENERAL BE CONSTANT.
8. TAPER LENGTH (L) FORMULA
   L = S x W FOR SPEED LIMIT > 45 MPH
   L = WS /60 FOR SPEED LIMIT < 40 MPH
   WHERE:
   L = MINIMUM LENGTH OF TAPER
   S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED
   W = WIDTH OF OFFSET
9. SPACING AND CHANNELIZING DEVICES SUCH AS CONES, PANELS, DRUMS, AND TYPE I OR II BARRICADES SHALL NOT EXCEED A DISTANCE IN FEET EQUAL TO THE SPEED LIMIT WHEN USED FOR TAPER CHANNELIZATION AND A DISTANCE IN FEET OF TWICE THE SPEED LIMIT WHEN USED FOR TANGENT CHANNELIZATION.

PAVEMENT MARKINGS

ALL PAVEMENT MARKINGS AT EITHER END OF OR WITHIN THE LIMITS OF THE PROJECT THAT ARE IN CONFLICT WITH THE PROJECT SIGNING OR THE REQUIRED TRAFFIC MOVEMENTS SHALL BE REMOVED FROM THE PAVEMENT BY ABRASION. IF, IN THE OPINION OF THE PROJECT ENGINEER, SPECIAL PAVEMENT MARKINGS ARE NEEDED AS A TRAFFIC CONTROL, AS IN CHANNELIZATION OR WIDTH TRANSITIONS, THEY SHALL BE REFLECTORIZED, REMOVABLE, TEMPORARY LANE MARKING TAPE AND SHOULD BE ACCOMPANIED BY PROPER SIGNS. TYPICAL ILLUSTRATIONS ARE SHOWN IN THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES."

SIGN MATERIALS

THE BACKING MATERIAL USED IN THE FABRICATION AND ERECTION OF CONSTRUCTION SIGNS SHALL BE IN ACCORDANCE WITH SUBSECTION 1015.04 (B) OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES AS REVISED BY PROJECT SPECIFICATIONS. SIGNS SHALL NORMALLY BE MOUNTED ON TWO POSTS, EXCEPT SPEED LIMIT SIGNS, CHEVRONS AND OTHER SIMILAR SIGNS, WHICH SHALL BE MOUNTED ON ONE POST. A MINIMUM OF TWO BOLTS PER POST SHALL BE USED.

REFLECTORIZATION OF SIGNS AND BARRICADES SHALL BE BY MEANS OF MATERIALS THAT CONFORM TO THE REQUIREMENTS OF SUBSECTION 1015.05 (E) OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIADGES AS REVISED BY PROJECT SPECIFICATIONS. IF SUPPORT POSTS SHOULD BE SPLICED, THE SPLICE SHOULD BE NO HIGHER THAN 15" ABOVE THE GROUND.

ALL MATERIALS AND THEIR APPLICATION SHALL MEET CONSTRUCTION SPECIFICATIONS.

REMOVAL OF SIGNS

AT NO TIME SHALL SIGNS WARNING AGAINST A PARTICULAR HAZARD OR OPERATION BE LEFT IN PLACE WHEN THE OPERATION IS NOT IN PROGRESS OR WHEN THE HAZARD HAS BEEN REMOVED. ON PART - TIME OPERATIONS, SUCH SIGNS AS "TRUCK CROSSING", "MEN WORKING", ETC. SHALL BE REMOVED OR SET ASIDE OUT OF VIEW OF TRAFFIC WHEN THE OPERATION IS NOT IN PROGRESS. WHEN CONSTRUCTION OPERATIONS CHANGE, SIGNING MUST CHANGE ACCORDINGLY, ALL CONFLICTING SIGNS FROM PREVIOUS OPERATIONS MUST BE REMOVED OR COVERED AS NEW SIGNS ARE ERECTED.

COVERING OF SIGNS

SIGNS SHALL BE COVERED WITH A STRONG, LIGHTWEIGHT, COMPLETELY OPAQUE MATERIAL, SHAPED OR FORMED SO AS TO COVER ALL OF THE LEGEND ON THE FACE OF THE SIGN. THE COVERING SHALL BE SECURELY FASTENED SO AS TO PREVENT ITS ACCIDENTAL REMOVAL BY WIND OR OTHER CAUSES. THE COVERING MATERIAL SHALL BE NON-REFLECTIVE AND OF A NATURAL SHADE, OR BLACK. BURLAP CLOTH, OR PAPER ARE NOT ACCEPTABLE MATERIALS. SIGNS THAT MIGHT OBSCURE OTHER CONSTRUCTION SIGNS SHALL BE REMOVED, NOT COVERED.

LIGHTING

LIGHTING SHALL SUPPLEMENT ALL BARRICADES THAT CLOSE ONE OR MORE LANES OR THAT EXTEND ACROSS A HIGHWAY. AT LEAST TWO HIGH INTENSITY LIGHTS WILL BE USED BUT, WHERE THE TRAVELWAY ENDS IMMEDIATELY AFTER A BARRICADE, A MINIMUM OF FOUR LIGHTS SHALL BE USED. LIGHTING SHALL BE BY APPROVED ELECTRICAL INSTALLATIONS. WHERE BATTERY OPERATED EQUIPMENT IS USED, IT SHALL CONFORM TO SPECIFICATIONS FOR HIGH OR LOW INTENSITY, FLASHING OR STEADY BURNING LIGHTS AS SET FORTH IN SUBSECTION 1015.12 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.

1. HIGH INTENSITY FLASHING LIGHTS SHALL BE USED TO MARK THE FIRST ADVANCE WARNING SIGN.
2. LOW INTENSITY FLASHING LIGHTS SHALL BE USED TO MARK ALL OTHER HAZARDS OFF THE TRAVEL WAY.
3. STEADY BURNING LIGHTS SHALL BE USED ON ALL TRAFFIC CONTROL DEVICES USED FOR CHANNELIZATION.

SCALE: NTS

FENSTERMAKER
JOB NO: 2071040.97C

PARISH: LAFAYETTE PARISH

PROJECT: POST ROAD CHANNEL IMPROVEMENTS

DESIGNED BY: CRM | DRAWN BY: CRM | CHECKED BY: JMS | DATE: APRIL 2015

HIGHWAY SIGNS AND BARRICADE DETAILS (SHEET 2 OF 3)

FOR
City Of Carencro
P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-6481 * Fax (337)896-0890

REVISIONS

DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:

STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

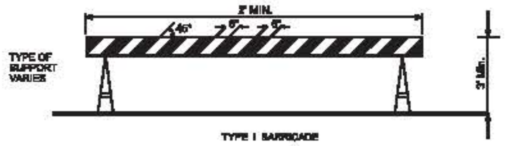


TABLE 3 - 1

BARRICADE CHARACTERISTICS

TYPE *	I	II	III
MINIMUM WIDTH OF RAIL	8 IN.	8 IN.	8 IN.
MAXIMUM WIDTH OF RAIL	12 IN.	12 IN.	12 IN.
MINIMUM LENGTH OF RAIL	2 FT.	2 FT.	4 FT.
WIDTH OF STRIPES **	6 IN.	6 IN.	6 IN.
MINIMUM HEIGHT	3 FT.	3 FT.	5 FT.
NUMBER OF REFLECTORIZED RAILS FACING ONE DIRECTION OF TRAFFIC	1	2	3

* FOR WOODEN BARRICADES NOMINAL LUMBER DIMENSIONS WILL BE SATISFACTORY

** FOR RAILS LESS THAN 3 FEET LONG, 4 INCH WIDE STRIPES SHALL BE USED

NOTE: FOR DIMENSIONS NOT SHOWN, SEE TABLE 3 - 1

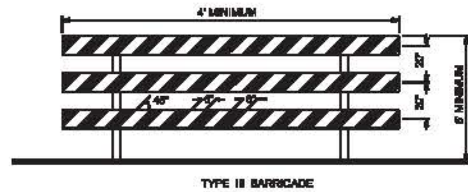


FIGURE 3 - 1

STANDARD BARRICADES

BARRICADE DESIGN

A BARRICADE IS A PORTABLE OR FIXED DEVICE HAVING FROM ONE TO THREE RAILS WITH APPROPRIATE MARKINGS USED TO CONTROL TRAFFIC BY CLOSING, RESTRICTING OR DELINEATING ALL OR A PORTION OF THE RIGHT-OF-WAY.

BARRICADES SHALL BE ONE OF THREE TYPES: TYPE I, TYPE II, OR TYPE III, AS SHOWN IN FIGURE 3-1 AND TABLE 3-1.

STRIPES ON BARRICADE RAILS SHALL BE ALTERNATE ORANGE AND WHITE REFLECTORIZED STRIPES (SLOPING DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION TRAFFIC IS TO PASS). THE STRIPES SHALL BE 6 INCHES WIDE EXCEPT WHERE RAIL LENGTHS ARE LESS THAN 36 INCHES, THEN 4 INCH WIDE STRIPES MAY BE USED. THE MINIMUM RAIL LENGTH IS 24 INCHES. THE ENTIRE AREA OF ORANGE AND WHITE SHALL BE REFLECTORIZED USING ENCAPSULATED LENS REFLECTIVE SHEETING WHICH WILL DISPLAY THE SAME APPROXIMATE SIZE, SHAPE AND COLOR DAY AND NIGHT, CONFORMING TO SUBSECTION 1015.05(E) OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES. THE PREDOMINANT COLOR FOR OTHER BARRICADE COMPONENTS SHALL BE WHITE, EXCEPT THAT UNPAINTED GALVANIZED METAL OR ALUMINUM COMPONENTS MAY BE USED. BARRICADE USED ON EXPRESSWAYS, FREEWAYS, AND OTHER HIGH-SPEED ROADWAYS SHALL HAVE A MINIMUM OF 270 SQUARE INCHES OF REFLECTIVE AREA FACING TRAFFIC.

WHERE A BARRICADE EXTENDS ENTIRELY ACROSS A ROADWAY, THE STRIPES SHOULD SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH TRAFFIC MUST TURN IN DETOURING. WHERE BOTH RIGHT AND LEFT TURNS ARE PROVIDED FOR, THE CHEVRON STRIPING MAY SLOPE DOWN-WARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE.

BARRICADE RAILS SHOULD BE SUPPORTED IN A MANNER THAT WILL ALLOW THEM TO BE SEEN BY THE MOTORIST AND PROVIDE A STABLE SUPPORT NOT EASILY BLOWN OVER BY THE WIND OR TRAFFIC. FOR TYPE I BARRICADES, THE SUPPORT MAY INCLUDE OTHER UNSTRIPED HORIZONTAL PANELS NECESSARY TO PROVIDE STABILITY. THE NAME OF THE AGENCY, CONTRACTOR, OR SUPPORT SHALL NOT BE SHOWN ON THE FACE PARTS OF ANY BARRICADE. IDENTIFICATION MARKINGS MAY BE SHOWN ONLY ON THE BACK SIDE OF BARRICADE RAILS.

BARRICADES ARE LOCATED ADJACENT TO TRAFFIC AND THEREFORE SUBJECT TO IMPACT BY ERRANT VEHICLES. BECAUSE OF THEIR VULNERABLE POSITION AND THE POSSIBLE HAZARD THEY COULD CREATE, THEY SHOULD BE CONSTRUCTED OF LIGHTWEIGHT MATERIALS AND HAVE NO RIGID STAY BRACING FOR A-FRAME DESIGNS.

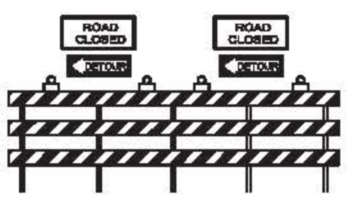


FIGURE 3 - 2

BARRICADE CLOSING A ROAD

APPLICATION OF BARRICADES- WHERE A ROAD IS CLOSED TO TRAFFIC, TYPE III BARRICADES SHALL BE ERECTED AT THE POINTS OF CLOSURE, AND SHALL EXTEND ACROSS THE ROADWAY TO A MINIMUM OF 2-FT. FROM EACH EDGE. TO FURTHER DISCOURAGE PUBLIC MOTORISTS GAINING ACCESS THROUGH THE CONSTRUCTION SITE BY REMOVING THE BARRICADES, THE TYPE III BARRICADES SHALL BE ANCHORED TO THE EXISTING ROADWAY IF NECESSARY.

FIGURE 3-2 SHOWS A TYPICAL CLOSURE OF A TWO LANE ROADWAY. FOUR HIGH INTENSITY FLASHING WARNING LIGHTS SHALL BE PLACED ON THE BARRICADE AS SHOWN ABOVE. IF ONLY ONE LANE OF THE TRAVELWAY IS CLOSED BY A BARRICADE, TWO LIGHTS SHALL BE USED.

BARRICADE APPLICATION

TYPE I OR TYPE II BARRICADES ARE INTENDED FOR USE IN SITUATIONS WHERE TRAFFIC IS MAINTAINED THROUGH THE AREA BEING CONSTRUCTED AND/OR RECONSTRUCTED. THEY MAY BE USED SINGLY OR IN GROUPS TO MARK A SPECIFIC HAZARD OR THEY MAY BE USED IN A SERIES FOR CHANNELIZING TRAFFIC. TYPE I BARRICADES WOULD NORMALLY BE USED ON CONVENTIONAL ROADS OR URBAN STREETS AND ARTERIALS. TYPE II BARRICADES HAVE MORE REFLECTIVE AREA, AND ARE INTENDED FOR USE ON EXPRESSWAYS AND FREEWAYS OR OTHER HIGH SPEED ROADWAYS.

ON HIGH SPEED EXPRESSWAYS OR IN OTHER SITUATIONS WHERE BARRICADES MAY BE SUSCEPTIBLE TO OVERTURNING IN THE WIND, SANDBAGS SHOULD BE USED FOR BALLASTING. SANDBAGS MAY BE PLACED ON LOWER PARTS OF THE FRAME OR STAYS TO PROVIDE THE REQUIRED BALLAST BUT SHALL NOT BE PLACED ON TOP OF ANY STRIPED RAIL. BARRICADES SHALL NOT BE BALLASTED BY SOLID OBJECTS SUCH AS ROCKS OR CHUNKS OF CONCRETE.

WHERE MAINTENANCE ACTIVITIES ARE BEING PERFORMED, THE ROADWAY CONDITION SELDOM REQUIRES A COMPLETE CLOSING OF THE FACILITY. WHERE SUCH A CONDITION DOES OCCUR, IT IS ALMOST ALWAYS AN EMERGENCY SITUATION, AS WOULD RESULT FROM A BROKEN WATERMAIN OR A WASHED-OUT CULVERT. THIS TYPE OF REPAIR WORK IS GENERALLY INITIATED ON AN EMERGENCY BASIS AND THE STREET OR ROAD CLOSURE CAN BE ACCOMPLISHED WITH TYPE I BARRICADES.

ON CONSTRUCTION PROJECTS, WHERE A ROAD SECTION IS CLOSED TO TRAFFIC, TYPE III BARRICADES SHALL BE ERECTED AT THE POINTS OF CLOSURE. THEY MAY EXTEND COMPLETELY ACROSS A ROADWAY AND ITS SHOULDERS OR FROM CURB TO CURB. WHERE PROVISIONS MUST BE MADE FOR ACCESS OF EQUIPMENT AND AUTHORIZED VEHICLES, THE TYPE III BARRICADES SHALL BE PROVIDED WITH GATES OR MOVEABLE SECTIONS THAT CAN BE CLOSED WHEN WORK IS NOT IN PROGRESS, OR WITH INDIRECT OPENINGS THAT WILL DISCOURAGE PUBLIC ENTRY. WHERE ACCESS IS PROVIDED THROUGH THE TYPE III BARRICADES, RESPONSIBILITY SHALL BE ASSIGNED TO A PERSON TO ASSURE PROPER CLOSURE AT THE END OF EACH WORKING DAY.

WHEN A ROAD OR STREET IS LEGALLY CLOSED, BUT ACCESS MUST STILL BE ALLOWED FOR LOCAL TRAFFIC, THE TYPE III BARRICADE CANNOT BE EXTENDED COMPLETELY ACROSS A ROADWAY. A SIGN WITH THE APPROPRIATE LEGEND CONCERNING PERMISSIBLE USE BY LOCAL TRAFFIC SHALL BE MOUNTED ABOVE THE BARRICADE.

WING BARRICADES ARE A SPECIAL APPLICATION OF TYPE III BARRICADE, ERECTED ON THE ROADWAY SHOULDER (ON ONE OR BOTH SIDES OF THE PAVEMENT) TO GIVE THE ILLUSION OF A NARROWED OR RESTRICTED ROADWAY.

TYPE III BARRICADES MAY BE USED AS A MOUNTING FOR REGULATORY SIGNS, GUIDE SIGNS OR LIGHTING DEVICES. THE ROAD CLOSED SIGNS, DETOUR ARROW SIGNS, AND THE LARGE ARROW WARNING SIGNS, FOR EXAMPLE, CAN EFFECTIVELY BE MOUNTED ABOVE THE BARRICADE THAT CLOSES THE ROADWAY.

CONSTRUCTION AND MAINTENANCE ZONES OFTEN ENCROACH ON SIDEWALKS OR CROSSWALKS NECESSITATING PROVISIONS FOR ALTERNATE ROUTING. WHERE IT IS NOT POSSIBLE TO CLOSE A PATH AND DIVERT THE PEDESTRIANS TO OTHER WALKWAYS, BARRICADES MAY BE USED TO DEFINE THE PATH. WARNING LIGHTS SHALL BE USED ON SIDEWALK BARRICADES IN ACCORDANCE WITH THE FOLLOWING PARAGRAPH; HOWEVER WHERE HIGH LEVELS OF ILLUMINATION EXIST FOR SIDEWALK AREAS, EXTRA LIGHTING MAY NOT BE NEEDED.

FOR NIGHTTIME USE OF ANY TYPE OF BARRICADE, ADD FLASHING WARNING LIGHTS WHEN BARRICADES ARE USED SINGLY, AND STEADY BURN LIGHTS WHEN BARRICADES ARE USED IN A SERIES FOR CHANNELIZATION.

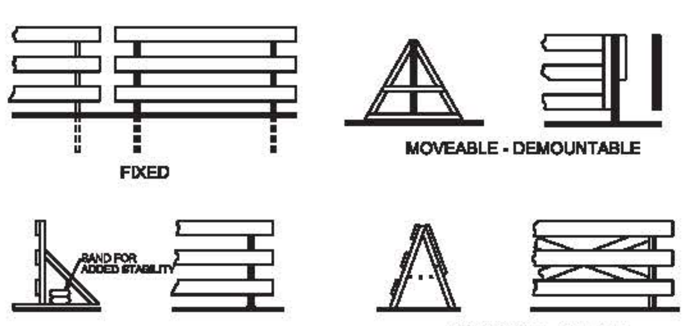


FIGURE 3 - 3

TYPE III BARRICADE CONSTRUCTION - TYPICAL EXAMPLES

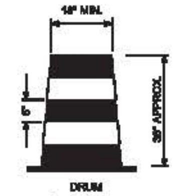


FIGURE 3 - 4

DRUM DESIGN

DRUMS USED FOR TRAFFIC WARNING OR CHANNELIZATION SHALL BE MADE OF PLASTIC AND SHALL BE AS PER THE APPROVED MATERIAL LIST. DRUMS SHALL BE APPROXIMATELY 36" IN HEIGHT AND A MINIMUM OF 18" IN DIAMETER. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL, CIRCUMFERENTIAL, ALTERNATING ORANGE AND WHITE REFLECTORIZED STRIPES, 6 INCHES WIDE, USING A MATERIAL THAT HAS A SMOOTH, SEALED OUTER SURFACE WHICH WILL DISPLAY THE SAME APPROXIMATE SIZE, SHAPE AND COLOR DAY AND NIGHT, CONFORMING TO SUBSECTION 1015.05(E) OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES THERE SHALL BE AT LEAST TWO ORANGE AND TWO WHITE STRIPES ON EACH DRUM WITH THE TOP STRIPE BEING ORANGE. IF THERE ARE NONREFLECTORIZED SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES. THEY SHALL BE NO MORE THAN TWO INCHES WIDE. DRUMS SHALL HAVE CLOSED TOPS WHICH WILL NOT ALLOW COLLECTION OF CONSTRUCTION OR OTHER DEBRIS.

DRUM APPLICATION

DRUMS ARE MOST COMMONLY USED TO CHANNELIZE OR DELINEATE TRAFFIC FLOW BUT MAY ALSO BE USED SINGLY OR IN GROUPS TO MARK SPECIFIC HAZARDS. DRUMS ARE HIGHLY VISIBLE AND HAVE GOOD TARGET VALUE, GIVE THE APPEARANCE OF BEING FORMIDABLE OBSTACLES AND, THEREFORE, COMMAND THE RESPECT OF DRIVERS. THEY ARE PORTABLE ENOUGH TO BE SHIFTED FROM PLACE TO PLACE WITHIN A CONSTRUCTION PROJECT IN ORDER TO ACCOMMODATE CHANGING CONDITIONS, BUT ARE GENERALLY USED IN SITUATIONS WHERE THEY WILL REMAIN IN PLACE FOR A PROLONGED PERIOD OF TIME. WHEN DRUMS ARE PLACED IN THE ROADWAY, APPROPRIATE ADVANCE WARNING SIGNS SHALL BE USED

DRUMS SHALL NOT BE WEIGHTED WITH SAND, WATER, OR ANY OTHER MATERIAL TO THE EXTENT THAT WOULD MAKE THEM HAZARDOUS TO MOTORISTS, PEDESTRIANS, OR WORKERS; A TYPICAL BALLAST WOULD BE A 25 POUND BAG OF SAND PLACED ON THE BASE OF THE DRUM. WHEN THEY ARE USED IN REGIONS SUSCEPTIBLE TO FREEZING, THEY SHOULD HAVE DRAIN HOLES IN THE BOTTOM SO WATER WILL NOT ACCUMULATE AND FREEZE CAUSING A HAZARD IF STRUCK BY A MOTORIST. BALLAST SHALL NOT BE PLACED ON TOP OF THE DRUM. DRUMS SHALL NOT BE BALLASTED WITH SOLID OBJECTS SUCH AS ROCKS OR PIECES OF CONCRETE.

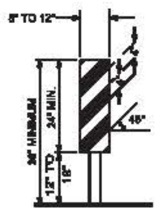


FIGURE 3 - 5

VERTICAL PANEL

VERTICAL PANEL DESIGN

VERTICAL PANELS SHALL BE 8 TO 12 INCHES IN WIDTH AND AT LEAST 24 INCHES IN HEIGHT. THEY SHALL HAVE ORANGE AND WHITE STRIPES REFLECTORIZED IN THE SAME MATERIAL AS DRUMS. PANEL STRIPE WIDTHS SHALL BE 6 INCHES EXCEPT WHERE PANEL HEIGHTS ARE LESS THAN 36 INCHES, THEN 4 INCH STRIPES MAY BE USED. IF USED FOR TWO-WAY TRAFFIC, BACK-TO-BACK PANELS SHALL BE USED.

STRIPES FOR VERTICAL PANELS SHALL SLOPE DOWNWARD AT AN ANGLE OF 45° IN THE DIRECTION TRAFFIC IS TO PASS. VERTICAL PANELS USED ON EXPRESSWAYS, FREEWAYS, AND OTHER HIGH SPEED ROADWAYS SHALL HAVE A MINIMUM REFLECTIVE AREA OF 270 SQUARE INCHES FACING TRAFFIC.

VERTICAL PANEL APPLICATION

VERTICAL PANELS MAY BE USED TO CHANNELIZE TRAFFIC, DIVIDE OPPOSING LANES OF TRAFFIC, DIVIDE TRAFFIC LANES WHEN TWO LANES ARE KEPT OPEN IN THE SAME DIRECTION AND IN PLACE OF BARRICADES WHERE SPACE IS LIMITED.

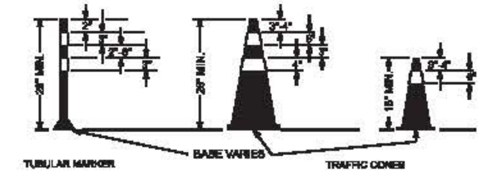


FIGURE 3 - 6

TUBULAR MARKER DESIGN

TUBULAR MARKERS SHALL BE PREDOMINANTLY ORANGE, NOT LESS THAN 18 INCHES HIGH AND NOT LESS THAN 2 INCHES WIDE WHEN VIEWED FROM ANY DIRECTION, AND SHALL BE MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING IMPACTING VEHICLES. TUBULAR MARKERS SHALL BE A MINIMUM OF 28 INCHES HIGH WHEN THEY ARE USED ON FREEWAYS AND OTHER HIGH-SPEED ROADWAYS AND ON ALL FACILITIES DURING HOURS OF DARKNESS, OR WHENEVER MORE CONSPIC-UOUS GUIDANCE IS NEEDED.

FOR NIGHTTIME USE, TUBULAR MARKERS SHALL BE REFLECTORIZED. REFLEC-TORIZATION OF TUBULAR MARKERS SHALL BE PROVIDED BY TWO, 3 INCH WIDE WHITE BANDS PLACED A MAXIMUM OF 6 INCHES BETWEEN THE BANDS. REFLECTORIZED MATERIAL SHALL CONFORM TO SUBSECTION 1015.15(E) FOR DRUMS OF THE LOUISIANA STANDARD SPECIFICATION FOR ROADS AND BRIDGES.

TUBULAR MARKER ASSOCIATION

TUBULAR MARKERS HAVE LESS VISIBLE AREA THAN OTHER DEVICES AND SHALL GENERALLY BE USED IN SITUATIONS WHERE SPACE RESTRICTIONS DO NOT ALLOW THE USE OF MORE VISIBLE DEVICES. THEY MAY BE USED TO DIVIDE OPPOSING TRAFFIC LANES, DIVIDE TRAFFIC LANES WHEN ONE OR MORE LANES ARE KEPT OPEN IN THE SAME DIRECTION, AND TO DELINEATE EDGE OF PAVEMENT DROPOFF WHERE SPACE LIMITATIONS DO NOT ALLOW THE USE OF LARGER DEVICES.

STEPS SHOULD BE TAKEN TO ENSURE THAT TUBULAR MARKERS WILL NOT BE BLOWN OVER OR DISPLACED BY WIND OR MOVING TRAFFIC. EFFECTIVE STEPS INCLUDE AFFIXING THEM TO THE PAVEMENT WITH ANCHOR BOLTS OR ADHESIVE, USING WEIGHTED BASES OR WEIGHTED RINGS THAT CAN BE DROPPED OVER THE MARKER. BALLAST, HOWEVER, SHOULD NOT PRESENT A HAZARD IF THE MARKERS ARE INADVERTENTLY STRUCK. IF A NON-CYLINDRICAL DEVICE IS USED, AND IT COULD BE DISPLAYED WITH A WIDTH LESS THAN THE MINIMUM FACING TRAFFIC, IT SHALL BE ATTACHED TO THE PAVEMENT.

CONE DESIGN

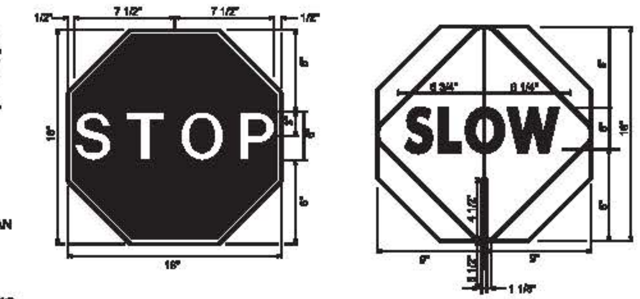
CONES SHALL BE PREDOMINANTLY ORANGE, NOT LESS THAN 18 INCHES HIGH,AND SHALL BE MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING IMPACTING VEHICLES. CONES SHALL BE A MINIMUM OF 28 INCHES HIGH WHEN THEY ARE USED ON FREEWAYS AND OTHER HIGH-SPEED ROADWAYS AND ON ALL FACILITIES DURING HOURS OF DARKNESS, OR WHENEVER MORE CONSPICUOUS GUIDANCE IS NEEDED.

FOR DAYTIME USE ONLY, AN 18 INCH HIGH CONE MAY BE REFLECTORIZED BY PLACING A 6 INCH WIDE WHITE BAND 3 TO 4 INCHES DOWN FROM THE TOP OF THE CONE. FOR NIGHTTIME USE, CONES SHALL BE REFLECTORIZED OR EQUIPPED WITH LIGHTING DEVICES FOR MAXIMUM VISIBILITY. REFLECTORIZATION OF 28 INCH CONES SHALL BE PROVIDED BY A WHITE BAND 6 INCHES WIDE PLACED 3 TO 4 INCHES FROM THE TOP OF THE 6 INCH BAND. REFLECTORIZED MATERIAL SHALL HAVE A SMOOTH, SEALED OUTER SURFACE WHICH WILL DISPLAY THE SAME APPROXIMATE COLOR DAY AND NIGHT, AND SHALL MEET THE REQUIREMENTS OF SUBSECTION 1015.05(E) OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.

CONE APPLICATION

TRAFFIC CONES ARE USED TO CHANNELIZE TRAFFIC, DIVIDE OPPOSING TRAFFIC LANES, DIVIDE TRAFFIC LANES WHEN TWO OR MORE LANES ARE KEPT OPEN IN THE SAME DIRECTION, AND SHALL BASICALLY BE USED FOR EMERGENCY SITUATIONS, OR SHORT TERM OPERATIONS THAT REQUIRE RAPID DEPLOYMENT AND REMOVAL OF CHANNELIZING DEVICES.

STEPS SHOULD BE TAKEN TO ENSURE THAT CONES WILL NOT BE BLOWN OVER OR DISPLACED BY WIND OR MOVING TRAFFIC. CONES CAN BE DOUBLED UP TO THE INCREASE THEIR WEIGHT, SOME CONES ARE CON-STRUCTED WITH BASES THAT CAN BE FILLED WITH BALLAST, OR CAN BE WEIGHTED BY DROPPING RINGS OVER THE CONE BALLAST, HOWEVER, SHOULD NOT PRESENT A HAZARD IF THE CONES ARE INADVERTENTLY STRUCK.



BACKGROUND - RED
BORDERS - WHITE
LEGEND - 6" SERIES C
TO BE MADE OF 0.08 ALUMINUM
OR 0.04 TEMPERED ALUMINUM

BACKGROUND - ORANGE (REFLECTORIZED)
AREA OUTSIDE DIAMOND - BLACK OR LIGHT BLUE
LEGEND - 6" SERIES B
TO BE MADE OF 0.08 ALUMINUM
OR 0.04 TEMPERED ALUMINUM

FIGURE 3 - 7

DETAILS OF HAND SIGN

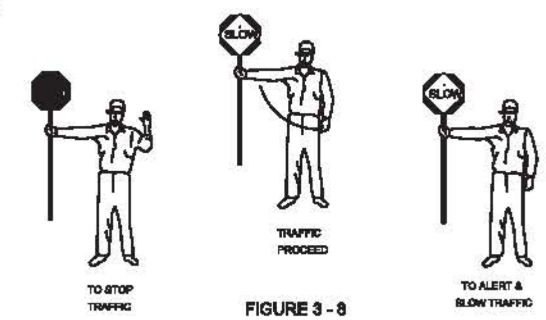


FIGURE 3 - 8

USE OF HAND SIGN

USE OF HAND SIGNALING DEVICES BY FLAGGER

A FLAGGER EQUIPPED WITH A SIGN PADDLE SHALL BE STATIONED WHERE CONSTRUCTION OPERATIONS REQUIRE TWO-WAY TRAFFIC TO USE A SINGLE LANE, WHERE MOVING EQUIPMENT ENTERS OR CROSSES THE TRAVELWAY AND WELL IN ADVANCE OF BLASTING OR ANY OTHER HAZARDOUS OPERATION REQUIRING THE ABSOLUTE CONTROL OF TRAFFIC. FLAGGER STATIONS SHALL BE LOCATED IN A HIGHLY VISIBLE LOCATION IN ADVANCE OF THE WORK ZONE. THE DISTANCE BEFORE THE WORK ZONE SHOULD ALLOW MOTORISTS TO SAFELY DECELERATE AND IS THUS RELATED TO THE APPROACH SPEEDS AND PHYSICAL CONDITIONS OF THE SITE, 200 TO 300 FEET IS DESIRABLE IN MOST SITUATIONS. IN URBAN AREAS, WHERE SPEEDS ARE LOW AND STREETS ARE CLOSELY SPACED, THE ADVANCE DISTANCE SHOULD BE DECREASED. THE HAND SIGN (FIG. 3-7) GIVES DRIVERS MORE POSITIVE GUIDANCE THAN FLAGS, AND SHALL BE IN THE PRIMARY HAND SIGNALING DEVICE. THE SIGN PADDLE SHALL BE PROVIDED WITH A RIGID HANDLE AND A SECURE MOUNTING AS SHOWN.

THE FOLLOWING STANDARD PROCEDURES SHALL BE FOLLOWED BY FLAGGERS:
(A) STAND ADJACENT TO THE TRAVELWAY, NEVER IN THE TRAVELWAY.
(B) STAND ALONE. NEVER PERMIT A GROUP OF WORKERS TO CONGREGATE AROUND OR OBSCURE THE FLAGGER;
(C) BE CAUTIOUS IN EXPLAINING THE REASON FOR THE DELAY AND IN ISSUING INSTRUCTIONS TO MOTORIST;
(D) REASONABLE EFFORTS SHOULD BE MADE TO ALLOW DRIVERS THE RIGHT OF WAY AND TO PREVENT EXCESSIVE DELAYS;
(E) FLAGGERS SHALL WEAR AN ORANGE VEST, AN ORANGE CAP SHALL BE OPTIONAL;
(F) FOR NIGHT OPERATIONS ALL SIGNS AND CLOTHING SHALL BE REFLECTORIZED, FLAGGING STATIONS SHOULD BE ILLUMINATED, AND FLAGGERS SHOULD BE EQUIPPED WITH A BRIGHT RED LIGHT;
(G) USE THE FOLLOWING MOTIONS TO DIRECT TRAFFIC (FIGURE 3-8)
1. TO STOP TRAFFIC. FACE TRAFFIC WITH STOP SIGN PADDLE IN A STATIONARY POSITION, WITH ARM EXTENDED HORIZONTALLY FROM THE BODY. RAISE THE FREE ARM WITH THE PALM FACING TRAFFIC;
2. TRAFFIC PROCEED, WITH ARM EXTENDED HORIZONTALLY FROM THE BODY. USE THE FREE ARM TO MOTION TRAFFIC AHEAD;
TO ALERT OR SLOW TRAFFIC. FACE TRAFFIC WITH SLOW SIGN PADDLE
3. IN A STATIONARY POSITION, WITH ARM EXTENDED HORIZONTALLY FROM THE BODY. MOVE THE FREE ARM UP AND DOWN.

SCALE: NTS

FENSTERMAKER

JOB NO: 2071040.97C

PROJECT: POST ROAD CHANNEL IMPROVEMENTS

PARISH: LAFAYETTE PARISH

DESIGNED BY: CRM | DRAWN BY: CRM | CHECKED BY: JMS | DATE: APRIL 2015

HIGHWAY SIGNS AND BARRICADE DETAILS (SHEET 3 OF 3)

FOR

City Of Carencro

CITY OF CARENCRO

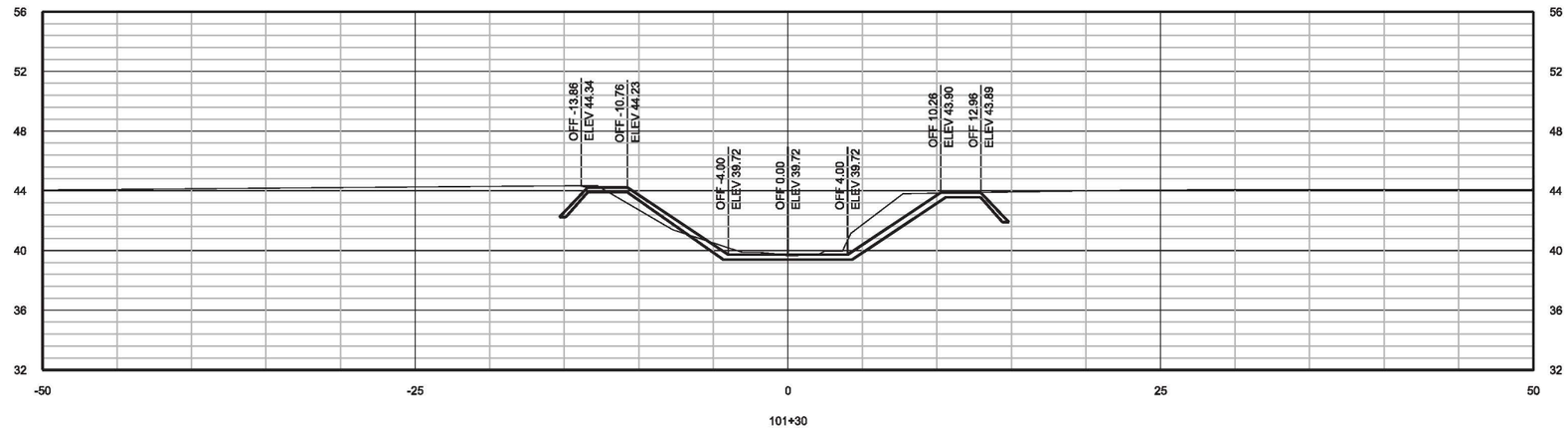
P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-6481 * Fax (337)896-0890

REVISIONS

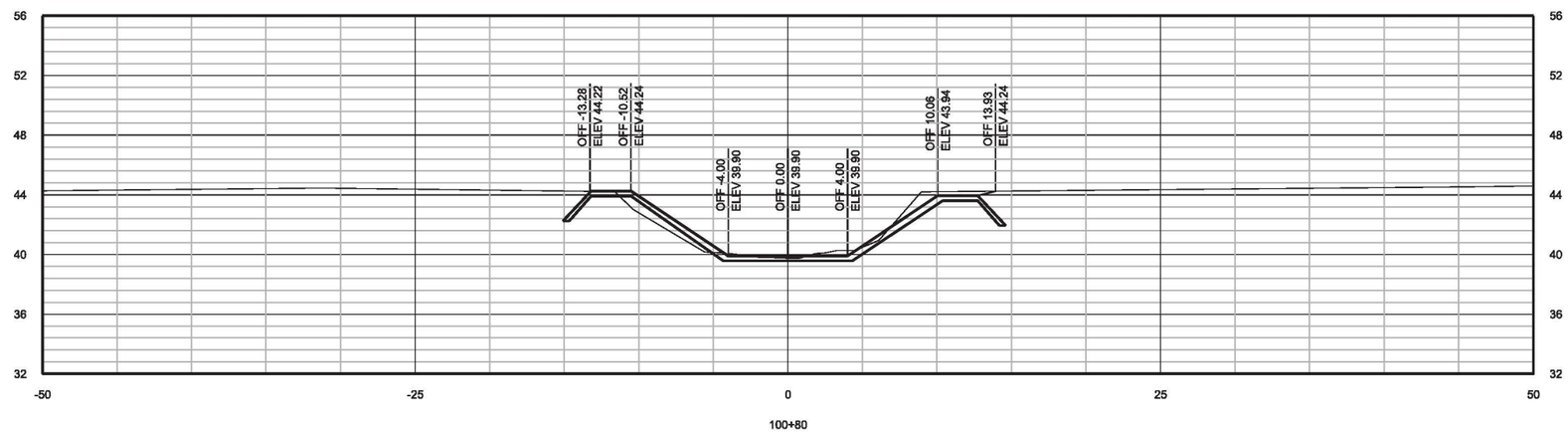
DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:

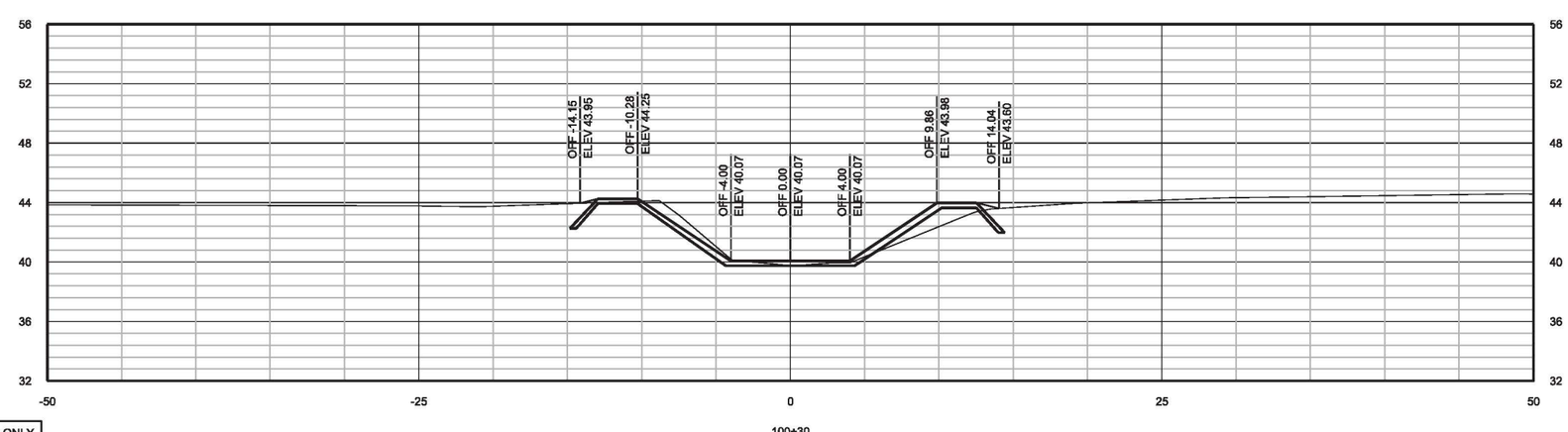
SHEET NO. 113



FILL: 5.01 CY
CUT: 35.39 CY



FILL: 6.93 CY
CUT: 25.39 CY



FILL: 0.00 CY
CUT: 0.00 CY

CROSS SECTIONS ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY BE ADJUSTED AS NECESSARY TO MATCH FIELD CONDITIONS AS DIRECTED BY PROJECT ENGINEER

FENSTERMAKER
135 Regency Square
Lafayette, La 70508
Phone: (337) 237-2200
Fax: (337) 232-3299

JOB NO: 207/040.97C

PARISH
LAFAYETTE PARISH

PROJECT
POST ROAD CHANNEL IMPROVEMENTS

DESIGNED BY: CRM | DRAWN BY: CRM | CHECKED BY: JMS | DATE: APRIL 2015

CROSS SECTIONS

FOR
City Of Carencro

P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8481 * Fax (337)896-0890

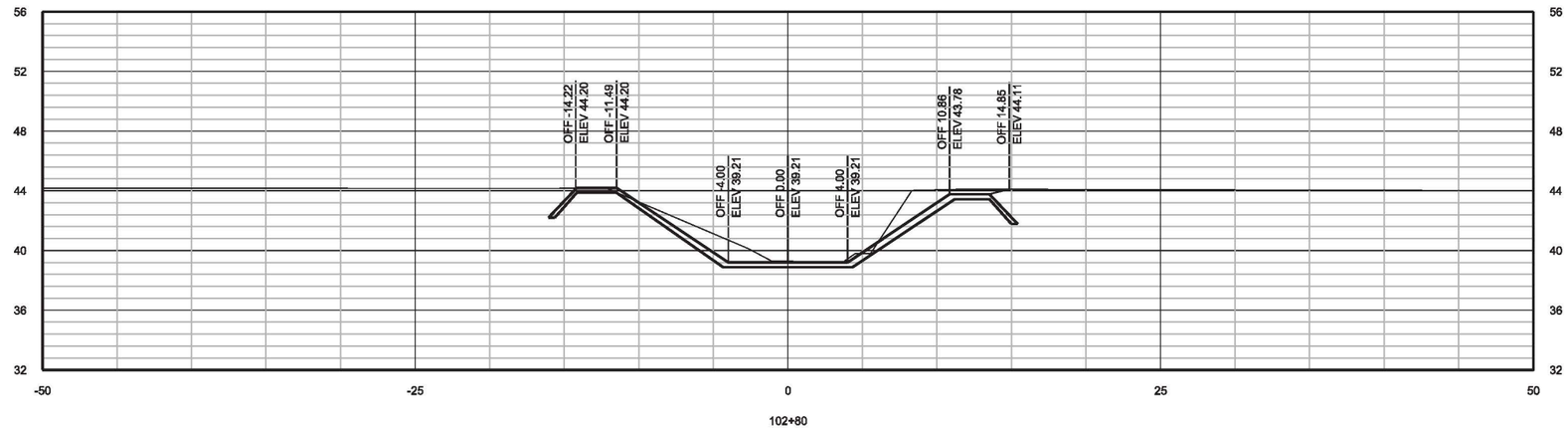
REVISIONS

DATE	REVISION DESCRIPTION	BY

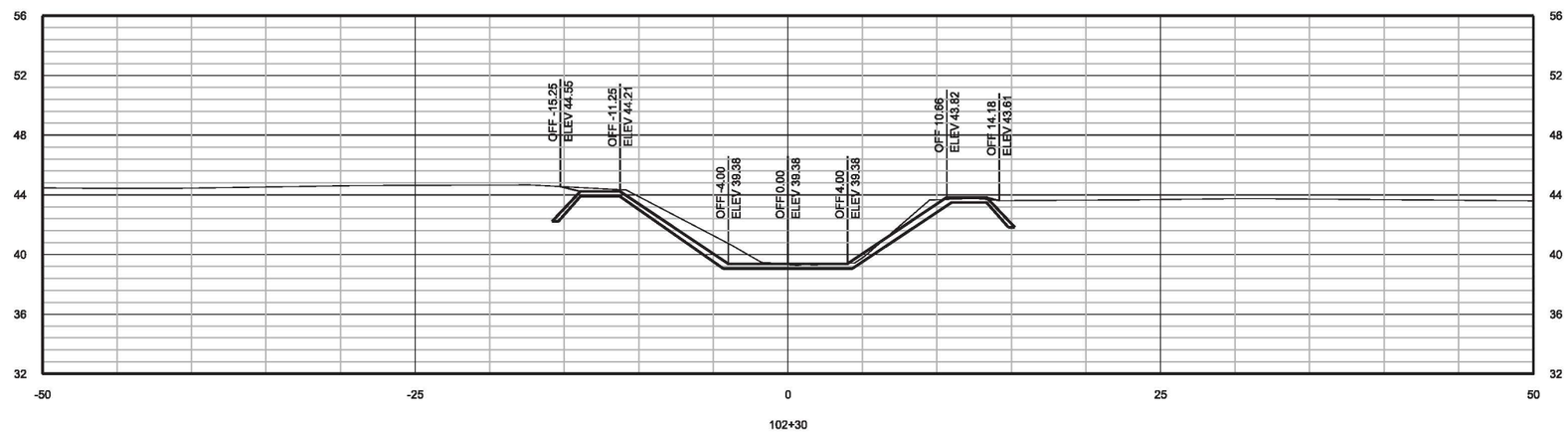
STAMP/SEAL:

STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

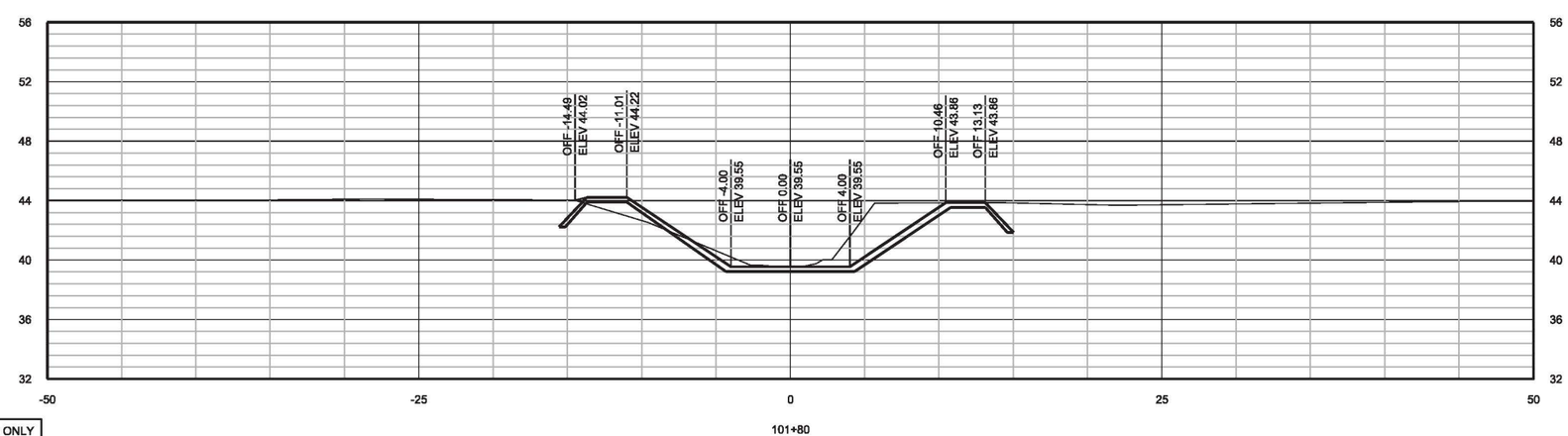
SHEET NO. 200



FILL: 0.00 CY
CUT: 51.00 CY



FILL: 2.38 CY
CUT: 49.94 CY



FILL: 4.55 CY
CUT: 47.32 CY

CROSS SECTIONS ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY BE ADJUSTED AS NECESSARY TO MATCH FIELD CONDITIONS AS DIRECTED BY PROJECT ENGINEER

FENSTERMAKER
135 Regency Square
Lafayette, La 70503
Phone: (337) 237-2200
Fax: (337) 232-3299

JOB NO: 2071040.97C

PARISH: LAFAYETTE PARISH

PROJECT: POST ROAD CHANNEL IMPROVEMENTS

DESIGNED BY: CRM | DRAWN BY: CRM | CHECKED BY: JMS | DATE: APRIL 2015

CROSS SECTIONS

FOR
City Of Carencro

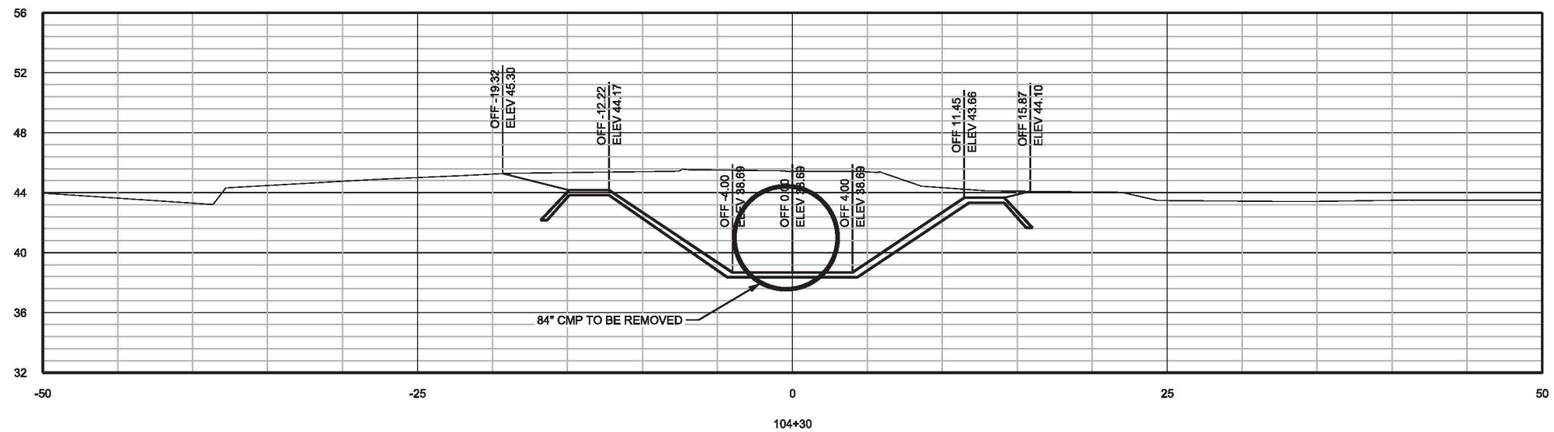
P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8481 * Fax (337)896-0890

REVISIONS

DATE	REVISION DESCRIPTION	BY

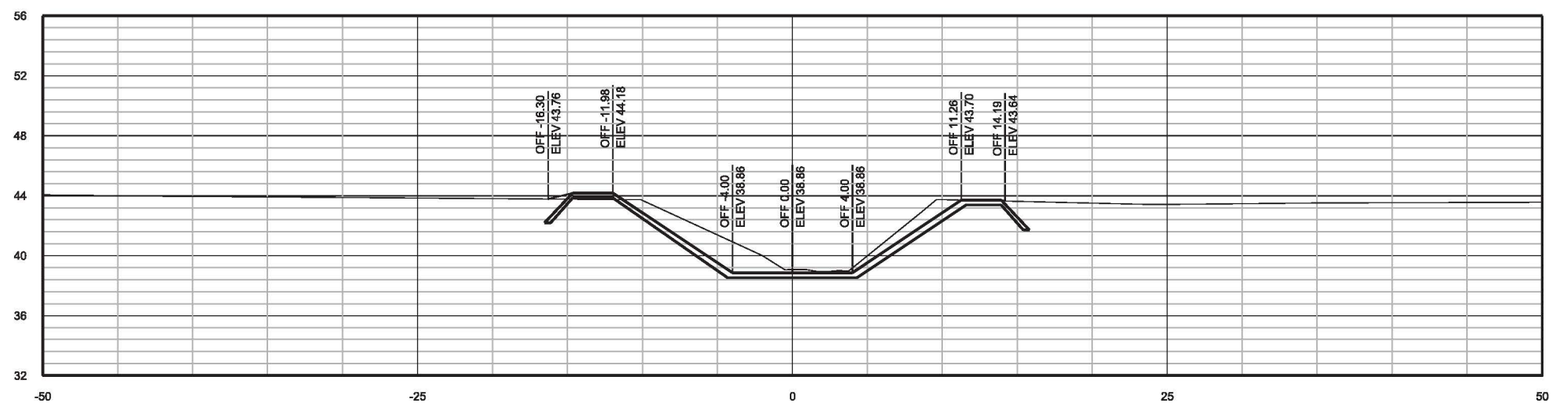
STAMP/SEAL:
STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 201



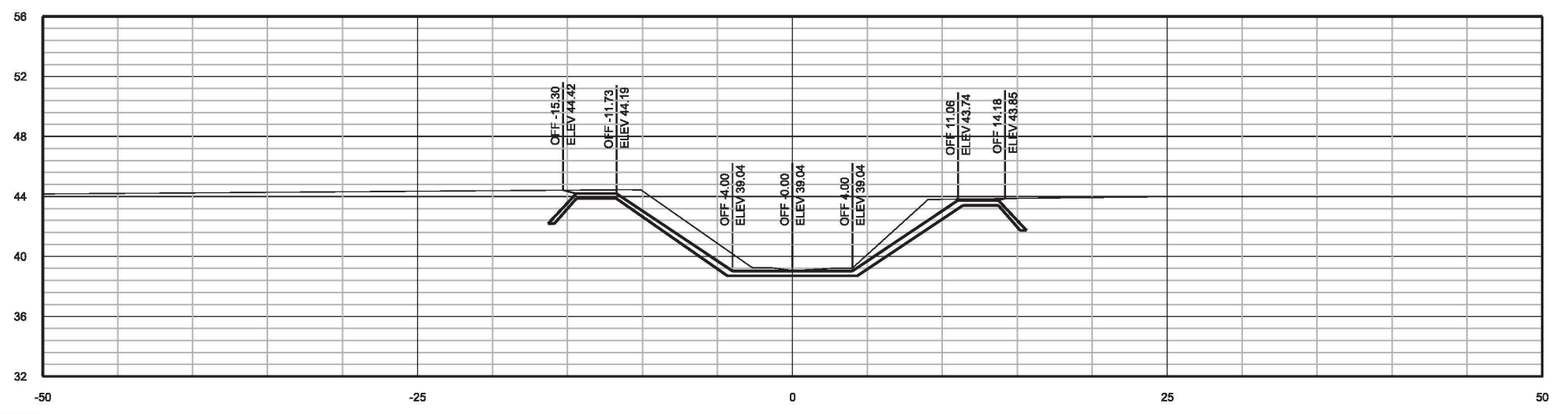
104+30

FILL: 0.27 CY
CUT: 163.81 CY



103+80

FILL: 0.27 CY
CUT: 63.33 CY



103+30

FILL: 0.00 CY
CUT: 59.62 CY

CROSS SECTIONS ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY BE ADJUSTED AS NECESSARY TO MATCH FIELD CONDITIONS AS DIRECTED BY PROJECT ENGINEER

FENSTERMAKER
135 Regency Square
Lafayette, La 70503
Phone: (337) 237-2200
Fax: (337) 232-3299

JOB NO: 207/040.97C

PARISH
LAFAYETTE PARISH

DATE: APRIL 2015

CHECKED BY: JMS

PROJECT
POST ROAD CHANNEL IMPROVEMENTS

DESIGNED BY: CRM

DRAWN BY: CRM

CROSS SECTIONS

FOR
City Of Carencro

P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8481 * Fax (337)896-0890

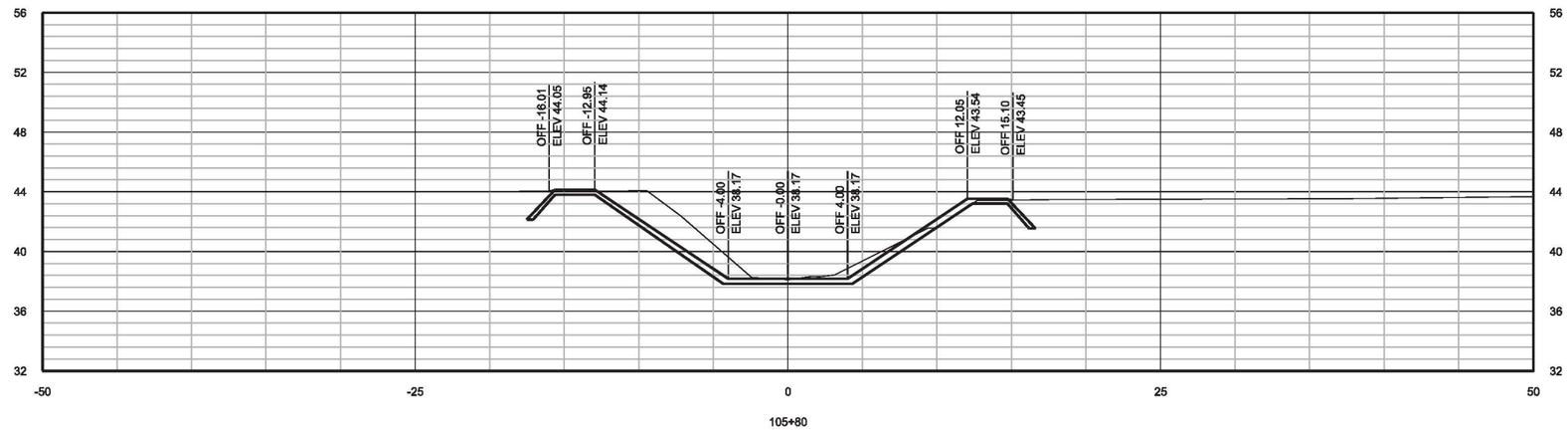
REVISIONS

DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:

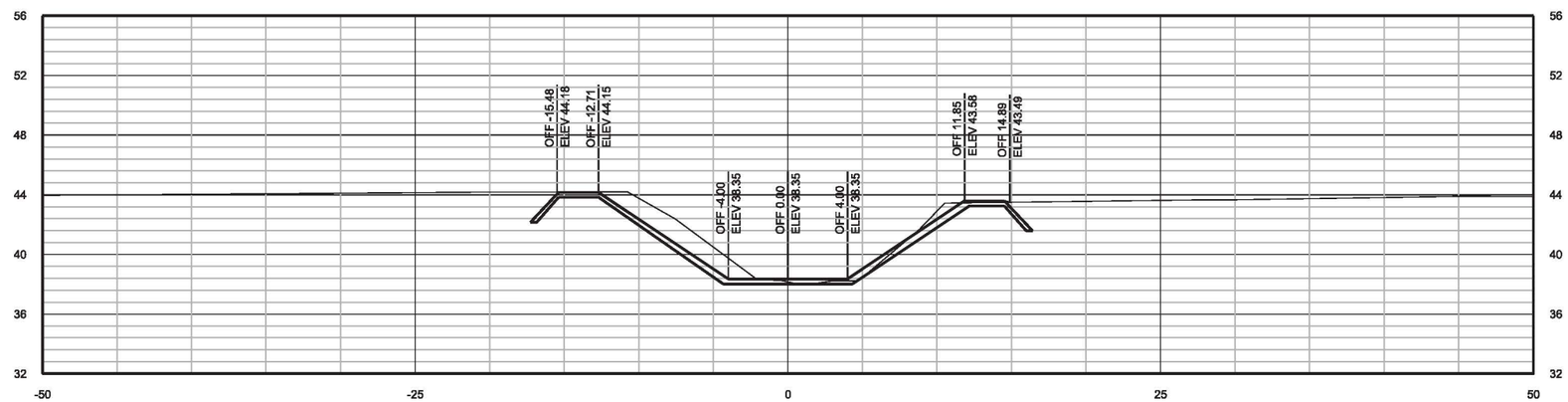
STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 202



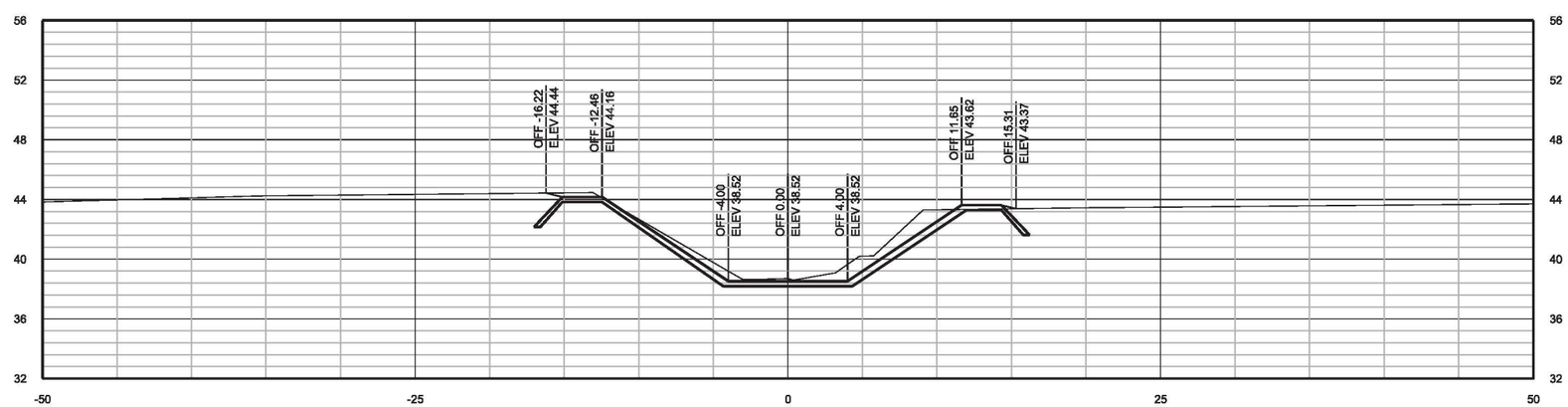
105+80

FILL: 0.03 CY
CUT: 57.54 CY



105+30

FILL: 0.03 CY
CUT: 53.57 CY



104+80

FILL: 0.00 CY
CUT: 159.17 CY

CROSS SECTIONS ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY BE ADJUSTED AS NECESSARY TO MATCH FIELD CONDITIONS AS DIRECTED BY PROJECT ENGINEER

FENSTERMAKER
135 Regency Square
Lafayette, La 70508
Phone: (337) 237-2200
Fax: (337) 232-3299

JOB NO: 2071040.97C

PARISH: LAFAYETTE PARISH

PROJECT: POST ROAD CHANNEL IMPROVEMENTS

DESIGNED BY: CRM | DRAWN BY: CRM | CHECKED BY: JMS | DATE: APRIL 2015

CROSS SECTIONS

FOR

City Of Carencro

P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8481 * Fax (337)896-0890

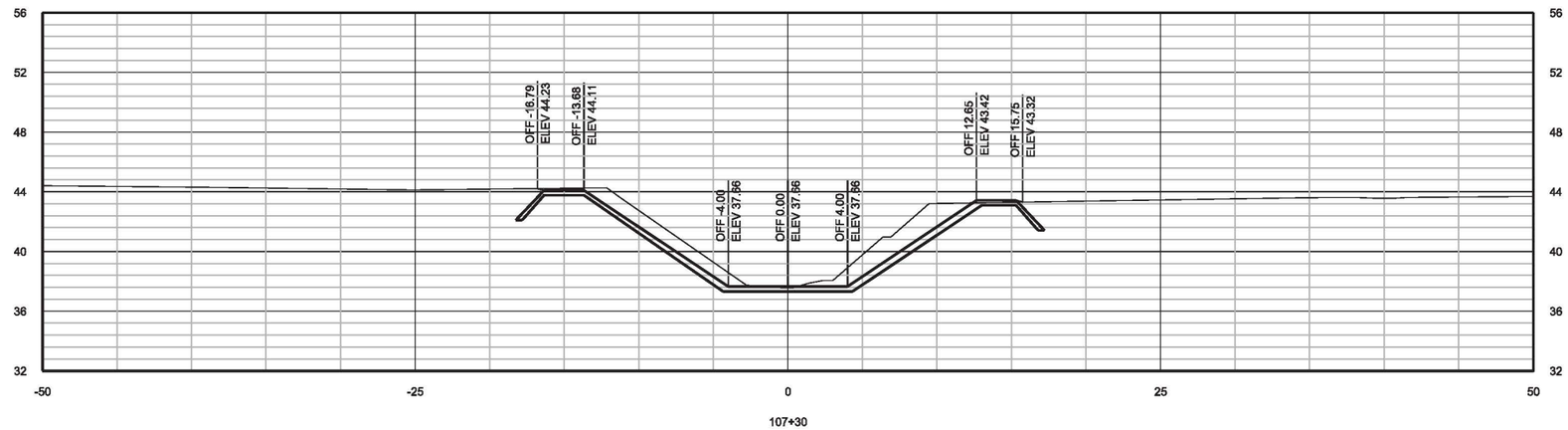
REVISIONS

DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:

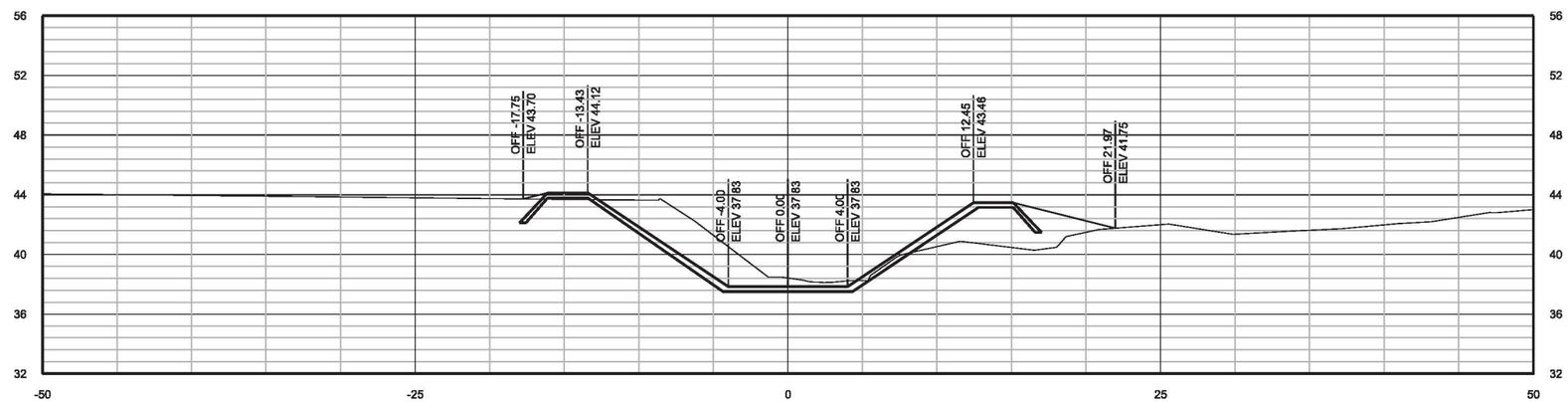
STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 203



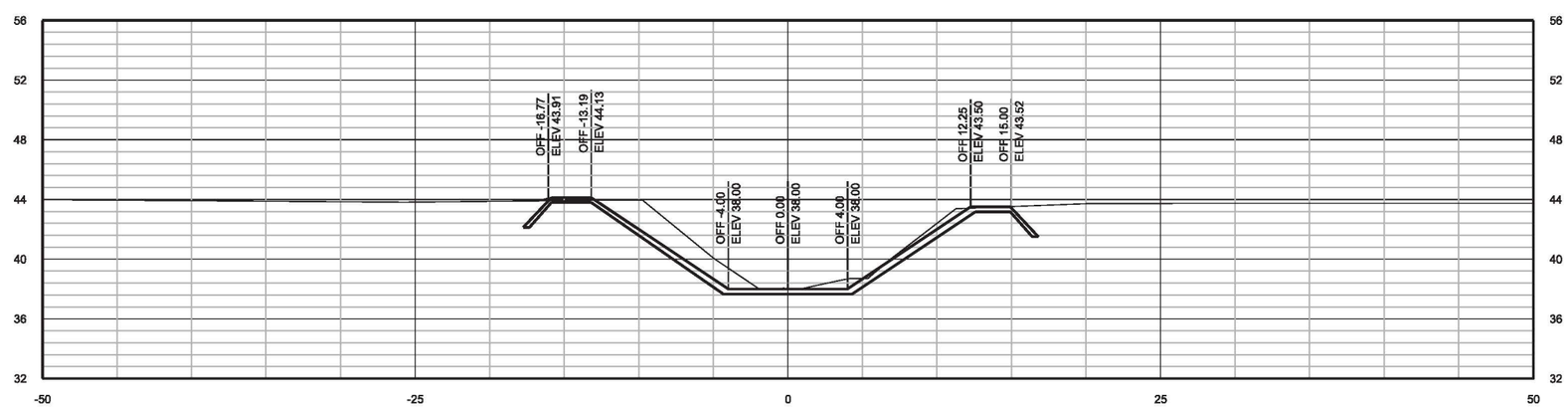
107+30

FILL: 15.91 CY
CUT: 71.22 CY



106+80

FILL: 15.91 CY
CUT: 64.76 CY



106+30

FILL: 0.00 CY
CUT: 62.72 CY

CROSS SECTIONS ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY BE ADJUSTED AS NECESSARY TO MATCH FIELD CONDITIONS AS DIRECTED BY PROJECT ENGINEER

FENSTERMAKER
135 Regency Square
Lafayette, La 70503
Phone: (337) 237-2200
Fax: (337) 232-3299

JOB NO: 2071040.97C

PARISH
LAFAYETTE PARISH

DATE: APRIL 2015

CHECKED BY: JMS

PROJECT
POST ROAD CHANNEL IMPROVEMENTS

DESIGNED BY: CRM

DRAWN BY: CRM

CROSS SECTIONS

FOR
City Of Carencro

P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8481 * Fax (337)896-0890

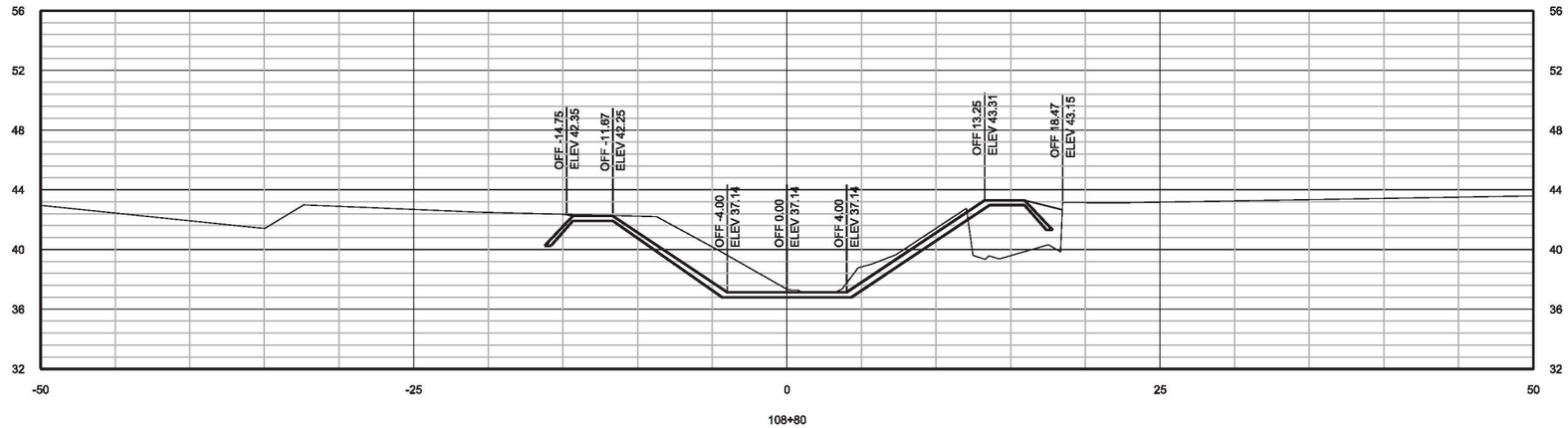
REVISIONS

DATE	REVISION DESCRIPTION	BY

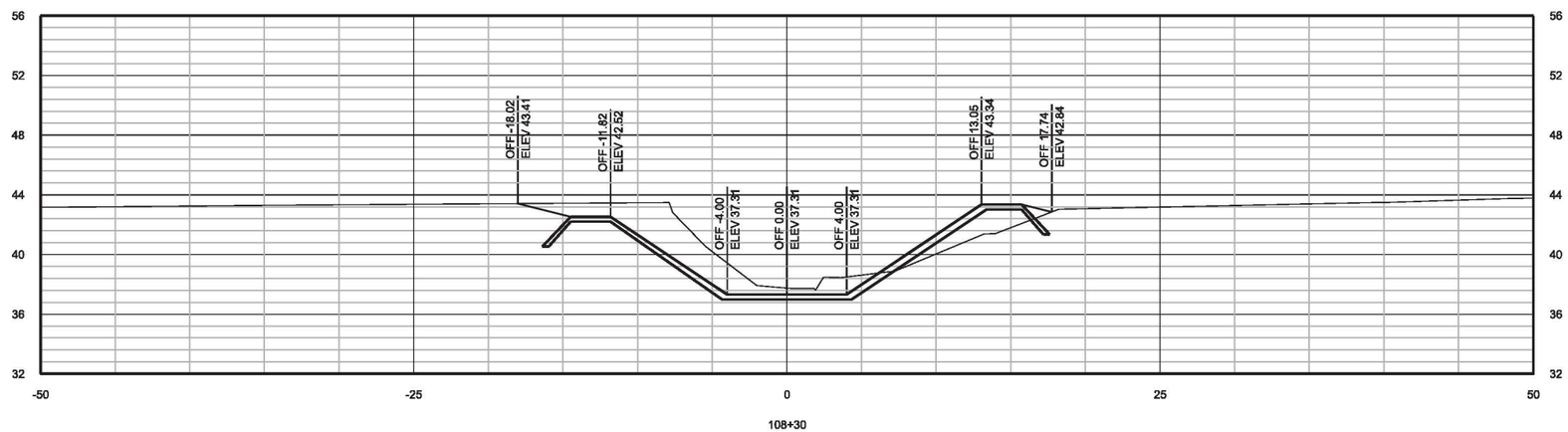
STAMP/SEAL:

STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

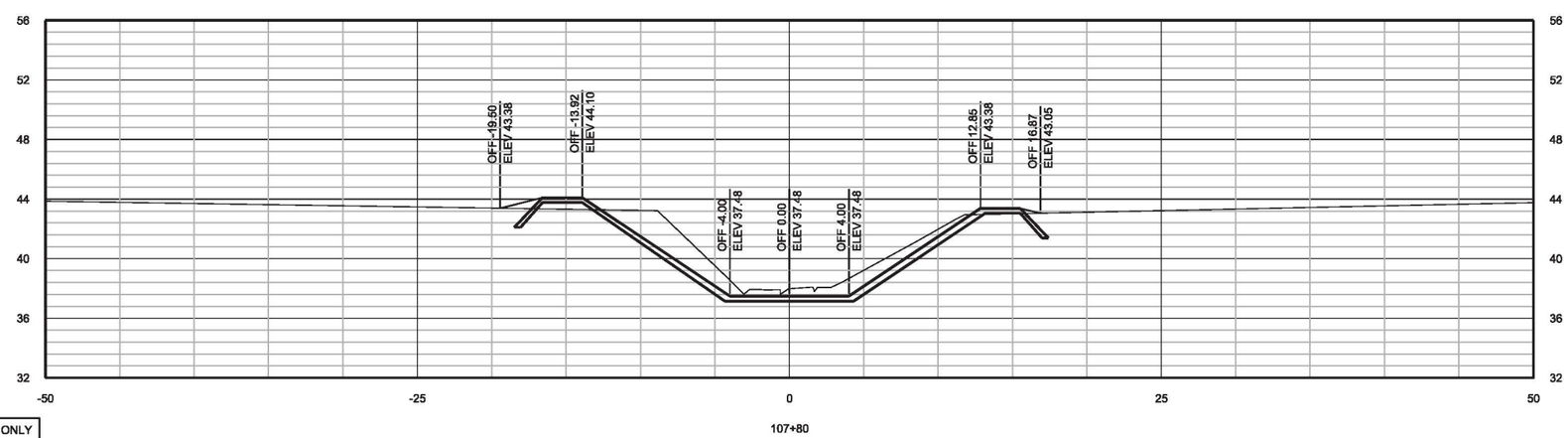
SHEET NO. 204



FILL: 23.05 CY
CUT: 76.12 CY



FILL: 9.29 CY
CUT: 77.72 CY



FILL: 1.47 CY
CUT: 74.21 CY

CROSS SECTIONS ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY BE ADJUSTED AS NECESSARY TO MATCH FIELD CONDITIONS AS DIRECTED BY PROJECT ENGINEER

FENSTERMAKER
135 Regency Square
Lafayette, La 70503
Phone: (337) 237-2200
Fax: (337) 232-3299

JOB NO: 2071040.97C

PARISH: LAFAYETTE PARISH

DATE: APRIL 2015

CHECKED BY: JMS

PROJECT: POST ROAD CHANNEL IMPROVEMENTS

DRAWN BY: CRM

DESIGNED BY: CRM

CROSS SECTIONS

FOR
City Of Carencro

P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8481 * Fax (337)896-0890

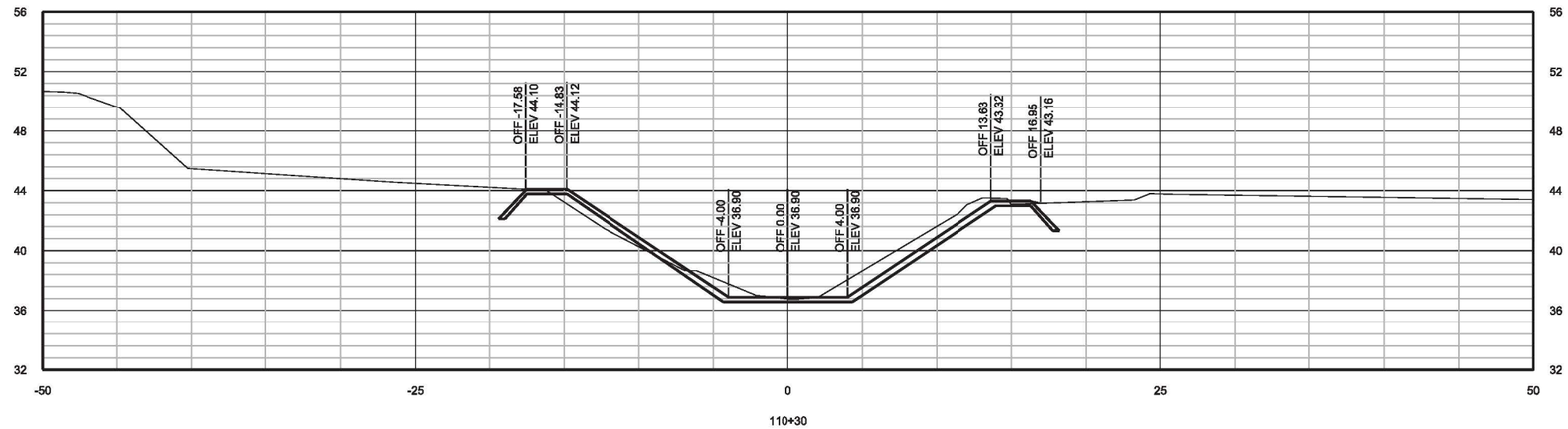
REVISIONS

DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:

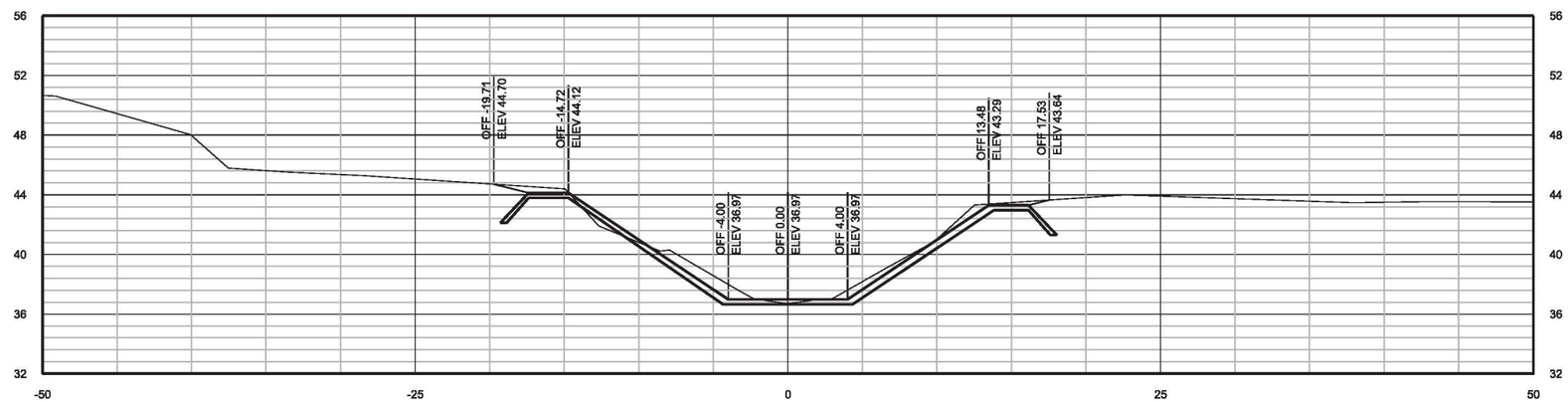
STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
LICENSED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 205



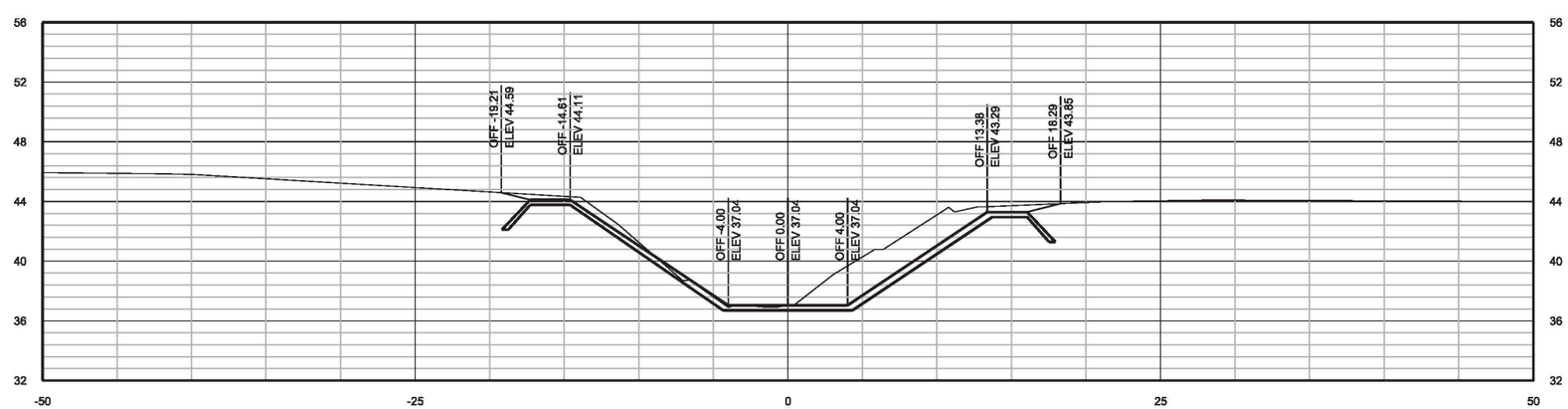
110+30

FILL: 3.39 CY
CUT: 51.81 CY



109+80

FILL: 0.65 CY
CUT: 71.22 CY



109+30

FILL: 15.23 CY
CUT: 78.60 CY

CROSS SECTIONS ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY BE ADJUSTED AS NECESSARY TO MATCH FIELD CONDITIONS AS DIRECTED BY PROJECT ENGINEER

FENSTERMAKER
135 Regency Square
Lafayette, La 70508
Phone: (337) 237-2200
Fax: (337) 232-3299

JOB NO: 2071040.97C

PARISH: LAFAYETTE PARISH

PROJECT: POST ROAD CHANNEL IMPROVEMENTS

DESIGNED BY: CRM | DRAWN BY: CRM | CHECKED BY: JMS | DATE: APRIL 2015

CROSS SECTIONS

FOR

City Of Carencro

P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8481 * Fax (337)896-0890

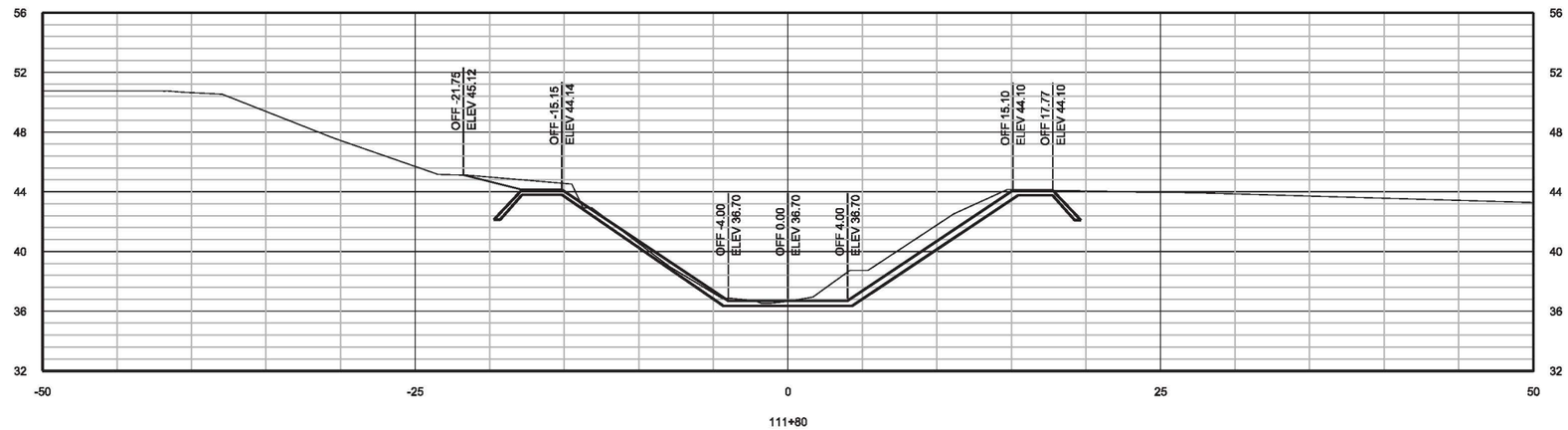
REVISIONS

DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:

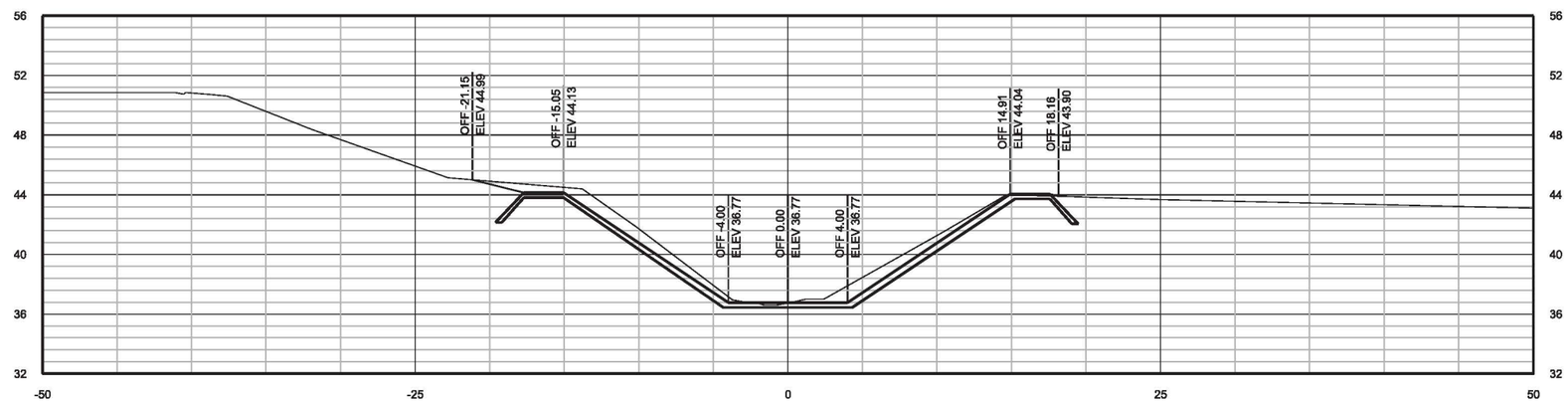
STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 206



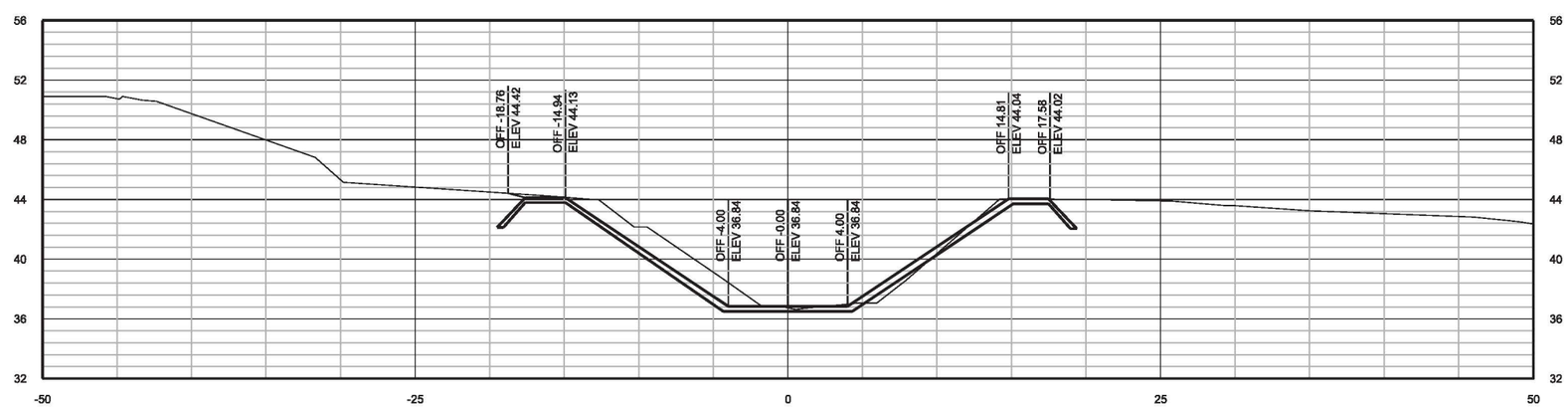
111+80

FILL: 0.00 CY
CUT: 73.89 CY



111+30

FILL: 1.22 CY
CUT: 69.39 CY



110+80

FILL: 3.96 CY
CUT: 56.81 CY

CROSS SECTIONS ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY BE ADJUSTED AS NECESSARY TO MATCH FIELD CONDITIONS AS DIRECTED BY PROJECT ENGINEER

FENSTERMAKER
135 Regency Square
Lafayette, La 70503
Phone: (337) 237-2200
Fax: (337) 232-3299

JOB NO: 207/040.97C

PROJECT
POST ROAD CHANNEL IMPROVEMENTS

PARISH
LAFAYETTE PARISH

DESIGNED BY: CRM | DRAWN BY: CRM | CHECKED BY: JMS | DATE: APRIL 2015

CROSS SECTIONS

FOR
City Of Carencro

P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8481 * Fax (337)896-0890

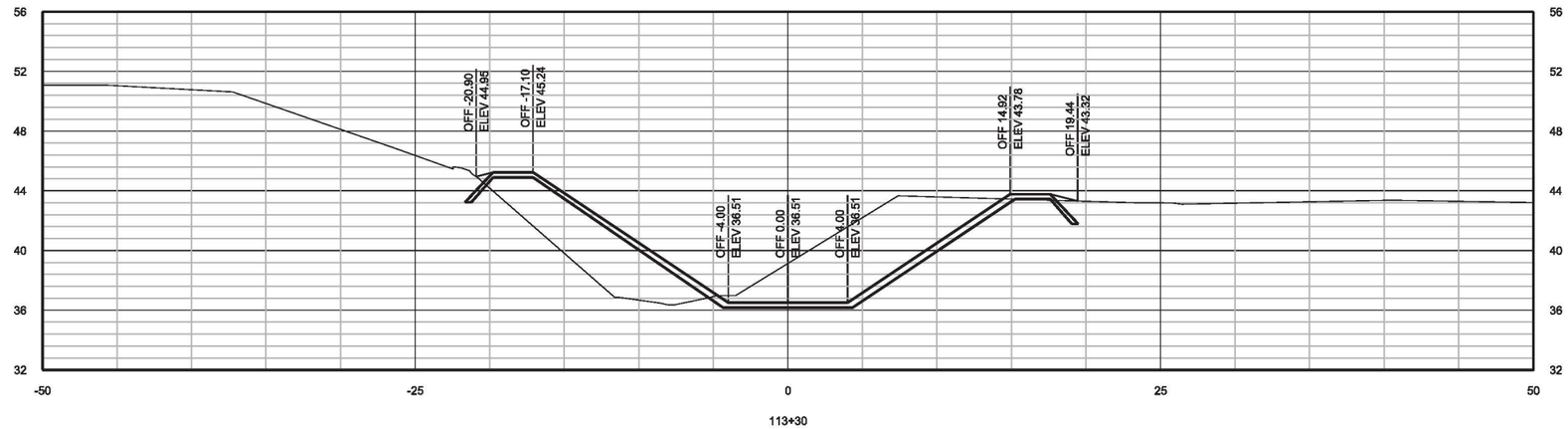
REVISIONS

DATE	REVISION DESCRIPTION	BY

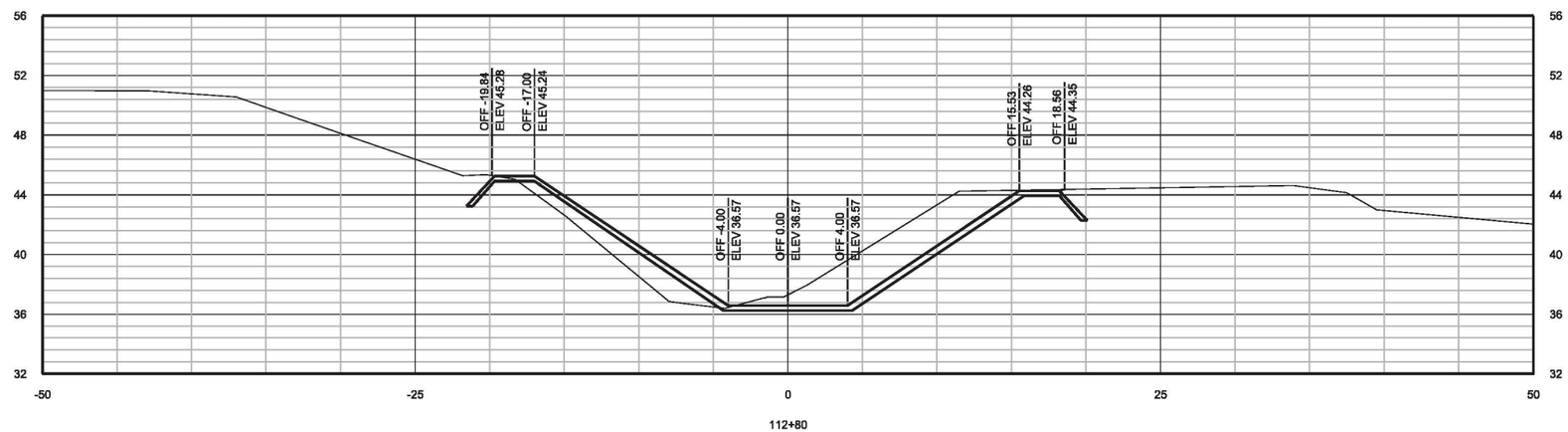
STAMP/SEAL:

STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

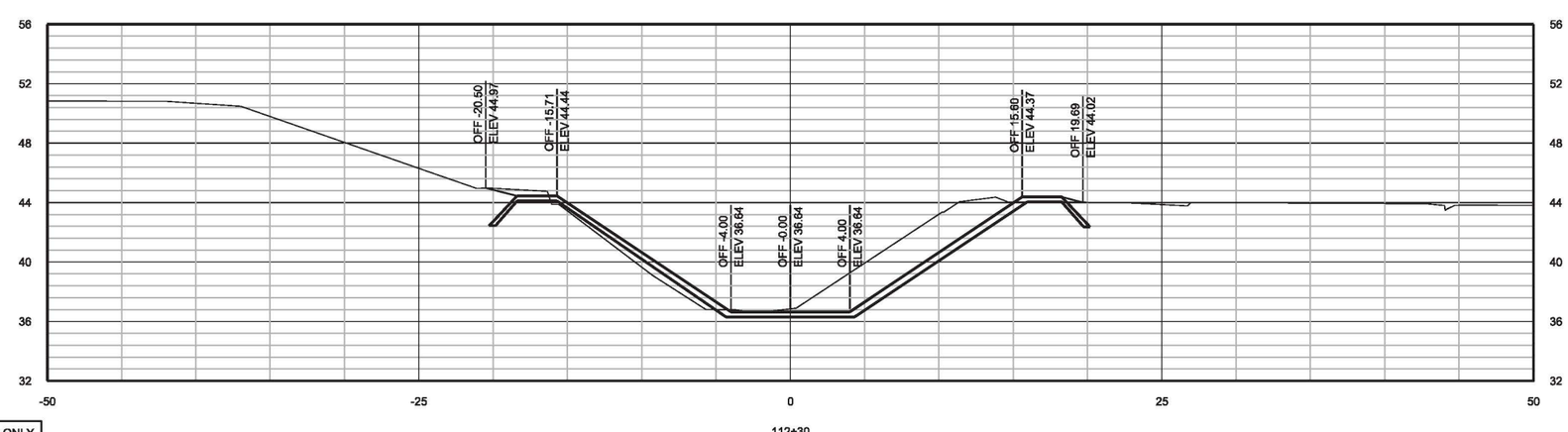
SHEET NO. 207



FILL: 52.60 CY
CUT: 110.84 CY



FILL: 18.15 CY
CUT: 90.49 CY



FILL: 4.10 CY
CUT: 79.08 CY

CROSS SECTIONS ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY BE ADJUSTED AS NECESSARY TO MATCH FIELD CONDITIONS AS DIRECTED BY PROJECT ENGINEER

FENSTERMAKER
135 Regency Square
Lafayette, La 70508
Phone: (337) 237-2200
Fax: (337) 232-3299

JOB NO: 207/040.97C

PROJECT
POST ROAD CHANNEL IMPROVEMENTS

PARISH
LAFAYETTE PARISH

DESIGNED BY: CRM | DRAWN BY: CRM | CHECKED BY: JMS | DATE: APRIL 2015

CROSS SECTIONS

FOR
City Of Carencro

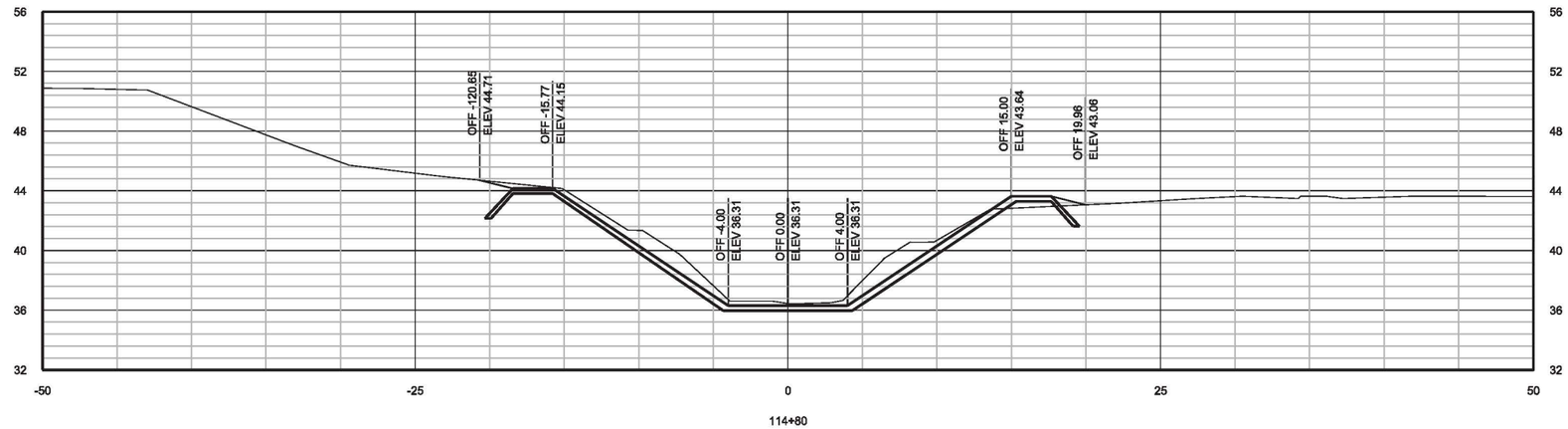
P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8481 * Fax (337)896-0890

REVISIONS

DATE	REVISION DESCRIPTION	BY

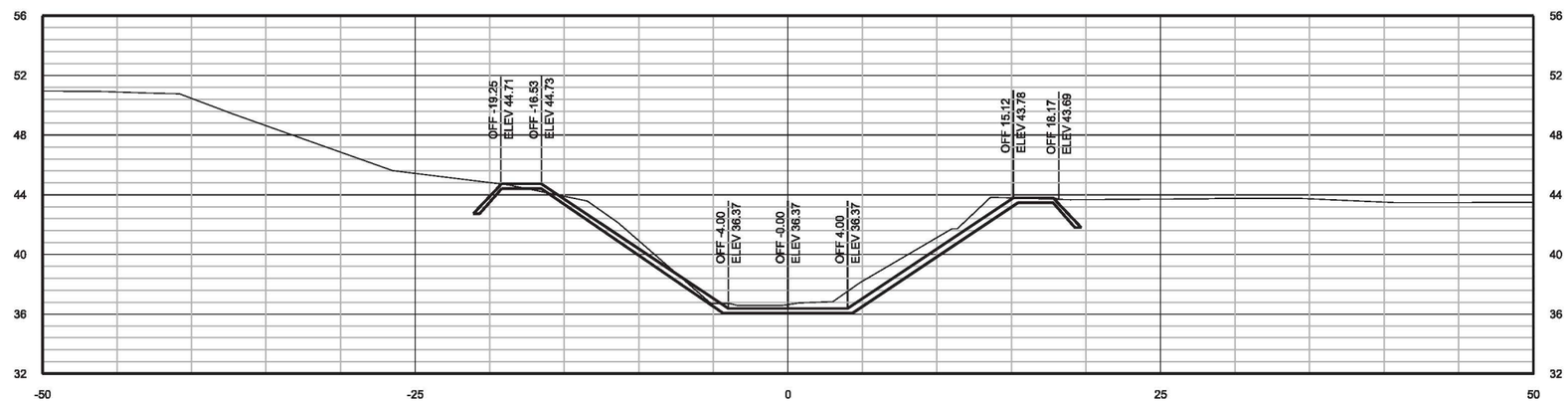
STAMP/SEAL:
STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 208



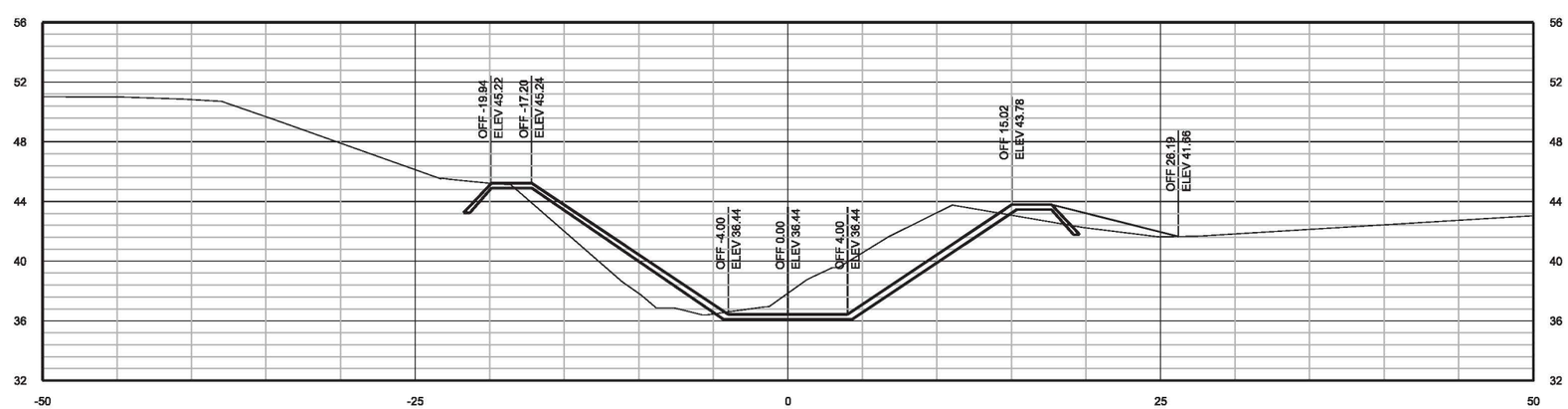
114+80

FILL: 1.20 CY
CUT: 69.49 CY



114+30

FILL: 20.22 CY
CUT: 81.73 CY



113+80

FILL: 58.65 CY
CUT: 111.50 CY

CROSS SECTIONS ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY BE ADJUSTED AS NECESSARY TO MATCH FIELD CONDITIONS AS DIRECTED BY PROJECT ENGINEER

FENSTERMAKER
135 Regency Square
Lafayette, La 70508
Phone: (337) 237-2200
Fax: (337) 232-3299

JOB NO: 207/040.97C

PROJECT
POST ROAD CHANNEL IMPROVEMENTS

PARISH
LAFAYETTE PARISH

DESIGNED BY: CRM | DRAWN BY: CRM | CHECKED BY: JMS | DATE: APRIL 2015

CROSS SECTIONS

FOR
City Of Carencro

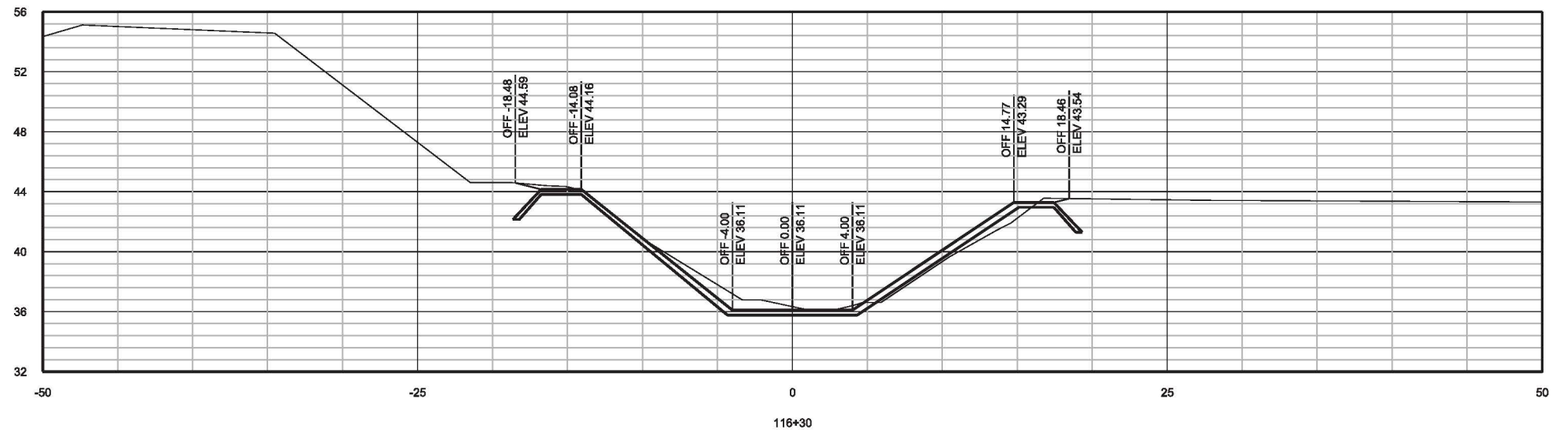
P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8481 * Fax (337)896-0890

REVISIONS

DATE	REVISION DESCRIPTION	BY

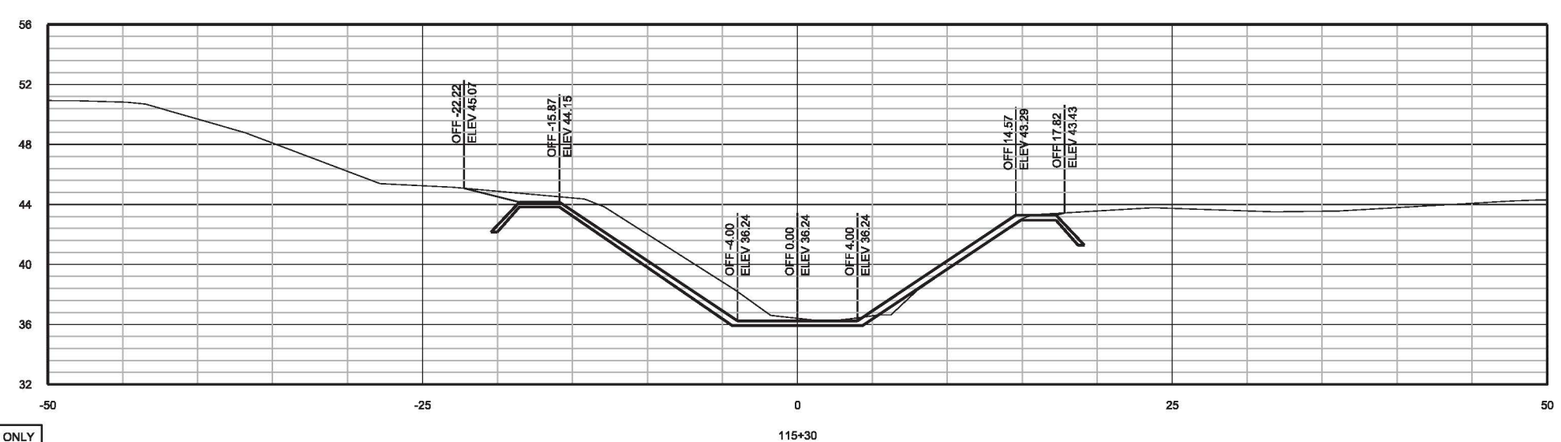
STAMP/SEAL:
STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 209



FILL: 29.36 CY
CUT: 46.36 CY

FILL: 247.11 CY
CUT: 171.00 CY



FILL: 2.00 CY
CUT: 76.21 CY

CROSS SECTIONS ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY BE ADJUSTED AS NECESSARY TO MATCH FIELD CONDITIONS AS DIRECTED BY PROJECT ENGINEER

FENSTERMAKER
135 Regency Square
Lafayette, La 70508
Phone: (337) 237-2200
Fax: (337) 232-3299

JOB NO: 2071040.97C

PARISH: LAFAYETTE PARISH

PROJECT: POST ROAD CHANNEL IMPROVEMENTS

DESIGNED BY: CRM | DRAWN BY: CRM | CHECKED BY: JMS | DATE: APRIL 2015

CROSS SECTIONS

FOR

City Of Carencro

P.O. Drawer 10
210 East St. Peter Street
Carencro, LA 70520
(337)896-8481 * Fax (337)896-0890

REVISIONS

DATE	REVISION DESCRIPTION	BY

STAMP/SEAL:

STATE OF LOUISIANA
JUSTIN M. SHAW
License No. 37201
LICENSED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

SHEET NO. 210