PLANS FOR

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HIGH LEVEL PLAN

ORLEANS AVENUE OUTFALL CANAL
PHASE I-B
ORLEANS PARISH, LOUISIANA
ROBERT E. LEE BOULEVARD BRIDGE

MARCH 8, 2000

US Army Corps
of Engineers
New Orleans District

H-4-44776

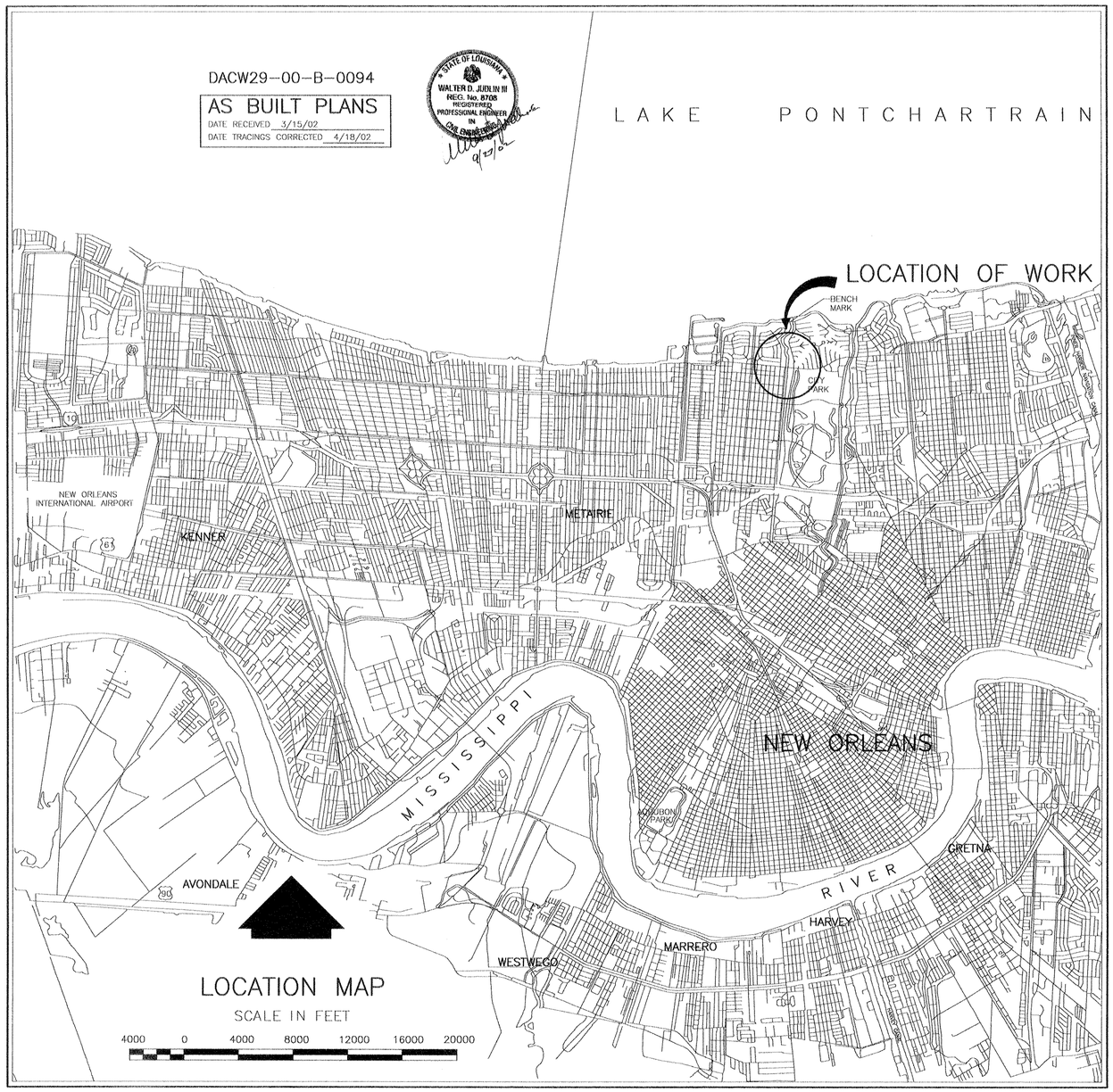
DACW29-00-B-0094

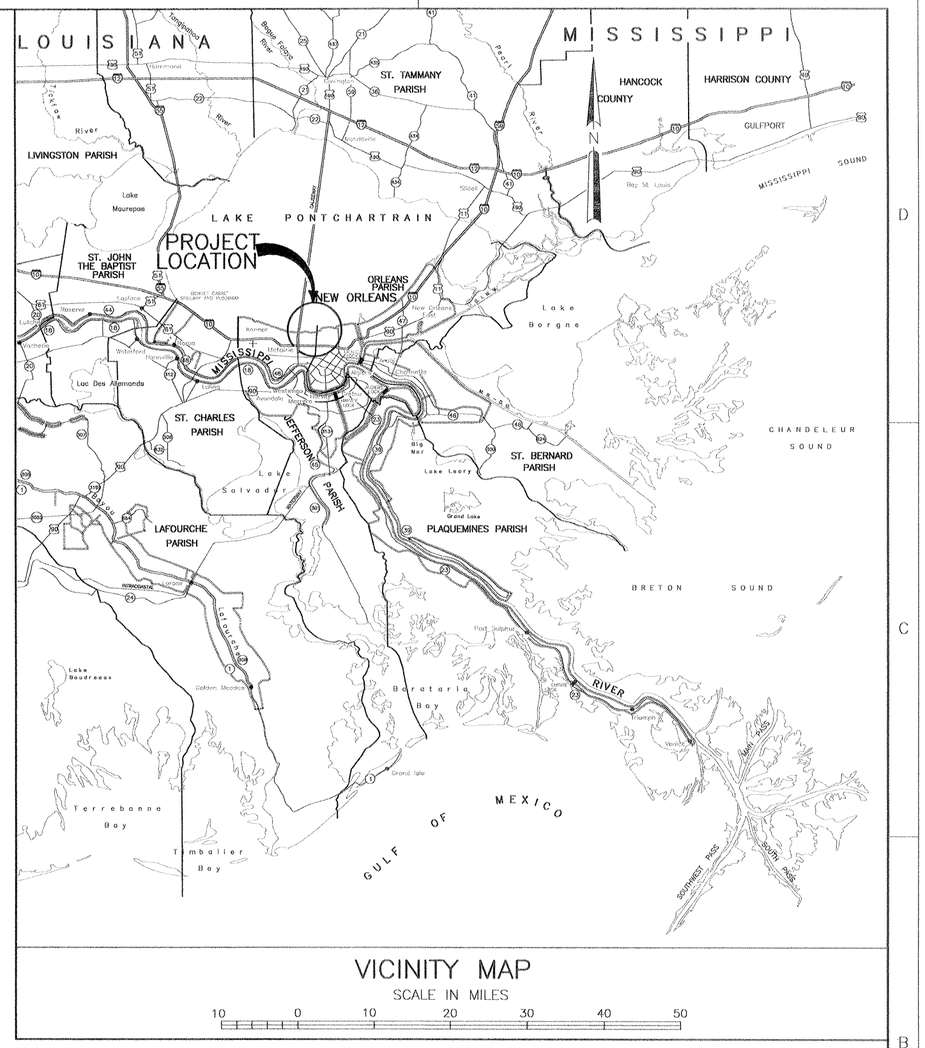
AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

STATE OF LOUISIANA
WALTER D. JUDLIN III
REG. No. 8708
REGISTERED PROFESSIONAL ENGINEER IN
CIVIL ENGINEERING
4/17/02





TABULATION OF BENCH MARKS

DESIGNATION	DESCRIPTION	ELEVATION
CHRYSLER RM 1983 EPOCH	C.G.S. REFERENCE MARK DISK AT NEW ORLEANS, ABOUT 0.45 MILE EAST ALONG LAKESHORE DRIVE FROM JUNCTION OF CANAL BOULEVARD, 125 YARDS NORTHWEST OF THE NORTHWEST CORNER OF LAKESHORE DRIVE BRIDGE OVER ORLEANS CANAL, SET IN THE TOP OF THE CONCRETE SEA WALL ALONG SHORE OF LAKE PONCHARTRAIN, 33 FEET NORTHEAST OF THE NORTH ONE OF A GROUP OF PALM TREES, 66 FEET WEST OF CHRYSLER STATION DESCRIBED, 270 FEET NORTH OF THE CENTER LINE OF LAKESHORE DRIVE AND ABOUT 2 FEET ABOVE THE LEVEL OF THE LAKESHORE DRIVE.	7.11 N.G.V.D.

THIS PROJECT WAS DESIGNED BY THE FIRM OF HARTMAN ENGINEERING, INC. FOR THE NEW ORLEANS DISTRICT OF U.S. ARMY CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF USACE EMPLOYEES APPEARING ON THESE PROJECT DOCUMENTS ARE WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER 1110-1-8152.

INDEX TO DRAWINGS

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HIGH LEVEE PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE IB
ORLEANS PARISH, LOUISIANA
ROBERT E. LEE BOULEVARD BRIDGE
INDEX, LOCATION, AND VICINITY MAP

DESIGNED BY: W.D.J.	APPROVED BY:	CADD FILE: SHT1.DWG	
DRAWN BY: L.A.C.		PLOT DATE: MAR.8,2000	PLOT SCALE: 400
CHECKED BY: W.D.J.	CHIEF, STRUCTURES BRANCH		
DATE: MARCH 8, 2000			
SUBMITTED BY: HARTMAN ENGINEERING	APPROVED BY:	SOLICITATION NO. DACW29-00-B-0094	
DESIGN ENGINEER	CHIEF, ENGINEERING DIVISION		
APPROVED BY: HARTMAN ENGINEERING	APPROVED BY:	FILE NO. H-4-44776	
DESIGN ENGINEER	COLONEL, C. E. DISTRICT ENGINEER	DWG. 1 OF 59	

Safety is a Part of Your Contract

ABBREVIATIONS

ABT	ABOUT
ADJ	ADJACENT
ACP	ASPHALTIC CONCRETE PAVEMENT
B/L	BASE LINE
BM	BENCH MARK
CIP	CAST IN PLACE
CB	CATCH BASIN
C/L	CENTER LINE
CL	CLEARANCE
CONC	CONCRETE
CJ	CONSTRUCTION JOINT
C.R.S	CORROSION RESISTANT STEEL
CY	CUBIC YARD
DIA OR Ø	DIAMETER
D/W	DRIVEWAY
DI	DROP INLET
D.I.	DUCTILE IRON
DPW	DEPARTMENT OF PUBLIC WORKS
DWG	DRAWING
E.F.	EACH FACE
E.B.	EASTBOUND
E B/L	EAST BASELINE
EL OR ELEV	ELEVATION
E.S.	EQUAL SPACES
EXIST	EXISTING
EXP	EXPANSION
F.S.	FAR SIDE
FND	FOUND
FT	FOOT
HDG	HOT DIP GALVANIZED
H.P.	HIGH PRESSURE
HWY	HIGHWAY
H OR HORIZ	HORIZONTAL
ID	INTERNAL DIAMETER
INV	INVERT
IR	IRON ROD
JT	JOINT
KIP	1000 LBS.
LT	LEFT
LF	LINEAR FEET
LG	LONG
LDOTD	LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
MH	MANHOLE
MAX	MAXIMUM
MSL	MEAN SEA LEVEL
MIN	MINIMUM
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NIC	NOT IN CONTRACT
N.S.	NEAR SIDE
N.T.S.	NOT TO SCALE
OC	ON CENTER
OLB	ORLEANS LEVEE BOARD
OD	OUTSIDE DIAMETER
PL	PLATE
PI	POINT OF INTERSECTION
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY
PVC	POLYVINYL CHLORIDE PIPE
PGL	PROFILE GRADE LINE
R	RADIUS
REINF	REINFORCING
REQ'D.	REQUIRED
RET	RETAINING
R/W	RIGHT-OF-WAY
RT	RIGHT
RD	ROAD
SECT	SECTION
S&WB	SEWERAGE AND WATER BOARD
SH.	SHEET(S)
SP.	SPACE(S)
STA	BASELINE STATION
STD	STANDARD
STR	STRAIGHT
ST	STREET
SYMM.	SYMETRICAL
TEL	TELEPHONE
TBM	TEMPORARY BENCH MARK
T&B	TOP & BOTTOM
TC	TOP OF CURB OR TOP OF CASTING
TYP	TYPICAL
UG	UNDERGROUND
USACE	U.S. ARMY CORPS OF ENGINEERS
V OR VERT	VERTICAL
W/L	WALL LINE
W.S.	WATERSTOP
WS	WATER SURFACE
W B/L	WEST BASELINE
W.B.	WESTBOUND
W/	WITH

LEGEND

TREE	WATER VALVE
BUSH	FIRE HYDRANT
B-54 CORING AND NUMBER	GAS MANHOLE
BANK OR SLOPE LINES	GAS METER
FENCE	GAS VALVE
8"G GAS LINE AND SIZE	TRAFFIC LIGHT
8"S SEWER LINE AND SIZE	POWER POLE OR TELEPHONE POLE
18"D DRAIN LINE AND SIZE	LIGHT POLE
12"W WATER LINE AND SIZE	STRUCTURE (HOUSE, GARAGE)
TELE TELEPHONE LINE	GRADE
UG TELE UNDERGROUND TELEPHONE LINE	ELECTRIC MANHOLE
SEWER MANHOLE	FLOW DIRECTION
DRAIN CLEANOUT	SIGN
SEWER CLEANOUT	GUARD POST
UG ELEC UNDERGROUND ELECTRIC LINE	REMOVAL
ELECTRIC LINE (OVERHEAD)	ELECTRICAL JUNCTION BOX
CATCH BASIN	TRAFFIC ELECTRICAL JUNCTION BOX
DROP INLET	TRAFFIC ELECTRICAL MANHOLE
TELEPHONE MANHOLE	CABLE TV JUNCTION BOX
TELEPHONE JUNCTION BOX	STEEL SHEET PILING
WM WATER METER	REQ'D. BANK OR SLOPE LINES
WATER MANHOLE	X.XX REQ'D. GRADE (BOLD)
DRAIN MANHOLE	REQ'D. GRASS AREA
	REQ'D. CONCRETE PAVEMENT
	REQ'D. ASPHALT PAVEMENT

SECTION AND DETAIL CROSS REFERENCES

SYMBOL WHERE SECTION IS TAKEN

SUBTITLE FOR SECTION DRAWING

SYMBOL FOR LOCATING CONDITION FOR WHICH THERE IS A DETAIL

SUBTITLE FOR DETAIL DRAWING

VALUE INCENTIVE CLAUSES ENGINEERING — YOUR KEY TO HIGHER PROFITS

STATE OF LOUISIANA
WALTER D. JUDLIN III
REG. No. 8706
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
4/29/02

DACW29-00-B-0094

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ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE LEGEND AND ABREVATIONS

DESIGNED BY: W.D.L.	DATE: MAR.8,2000	PLOT SCALE: 1	PLOT DATE: MARCH 8, 2000
DRAWN BY: C.R.H.	CADD FILE: SHT2.DGN		FILE NO. H-4-44776
CHECKED BY: P.J.H.	SOLICITATION NO. DACW29-00-B-0094		DWG. 2 OF 59
SUBMITTED BY: HARTMAN ENGINEERING, DESIGN ENGINEER			

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GENERAL NOTES

A. GENERAL DESIGN NOTES

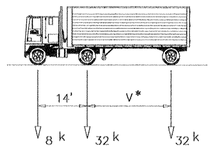
1. BRIDGE DESIGN SPECIFICATIONS:
   a. THE 1992 STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) FIFTEENTH EDITION AS AMENDED BY THE CURRENT AASHTO INTERIM SPECIFICATIONS FOR BRIDGES.

   b. THE 1987 BRIDGE DESIGN MANUAL PREPARED BY THE BRIDGE DESIGN SECTION OF THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT 3RD EDITION AS AMENDED BY THE CURRENT BRIDGE DESIGN MEMORANDA.

2. CONSTRUCTION SPECIFICATION: U.S. ARMY CORPS OF ENGINEERS GUIDE SPECIFICATIONS AND THE PROJECT TECHNICAL SPECIFICATIONS.

3. DESIGN SPEED: ROBERT E. LEE BOULEVARD BRIDGE = 20 M.P.H.

4. DESIGN LOADS:
   a. DEAD LOADS – ESTIMATED WEIGHT OF COMPLETED STRUCTURE INCLUDING AN ALLOWANCE OF 12 PSF FOR FUTURE WEARING SURFACE.
   b. LIVE LOADS – HS20–44 LOADING AS SHOWN ON THIS SHEET.
   c. ALL OTHER LOADS SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATIONS.



LADOTD HS–20–44 TRUCK
* V = VARIABLE 14–30FT

5. DESIGN CANAL WATER ELEVATION HIGH LEVEL PLAN:
   a. STILL WATER LEVEL – EL. 11.90 N.G.V.D. (100% OF DESIGN FORCES USED.)

6. STATIONS: ALL STATIONS REFER TO THE PROJECT BASELINE STATIONS UNLESS OTHERWISE NOTED.

7. ELEVATIONS: ALL ELEVATIONS ARE IN FEET AND REFER TO NATIONAL GEODETIC VERTICAL DATUM (N.G.V.D.). ELEVATION BENCH MARK IS BM "CHRYSLER RM", EL. 7.11 (1983 EPOCH), C.G.S. REFERENCE MARK DISK AT NEW ORLEANS, ABOUT 0.45 MILE EAST ALONG LAKESHORE DRIVE FROM JUNCTION OF CANAL BOULEVARD, 125 YARDS NORTHWEST OF THE NORTHWEST CORNER OF LAKESHORE DRIVE BRIDGE OVER ORLEANS CANAL SET IN THE TOP OF THE CONCRETE SEA WALL ALONG SHORE OF LAKE PONTCHARTRAIN, 33 FEET NORTHEAST OF THE NORTH ONE OF A GROUP OF PALM TREES, 66 FEET WEST OF CHRYSLER STATION DESCRIBED, 270 FEET NORTH OF THE CENTER LINE OF LAKESHORE DRIVE AND ABOUT 2 FEET ABOVE THE LEVEL OF THE LAKESHORE DRIVE.

8. DESIGN CRITERIA: ALL STRUCTURAL MEMBERS ARE DESIGNED BY LOAD FACTOR METHOD UNLESS OTHERWISE NOTED.

9. DIMENSIONS: DIMENSIONS AND/OR ELEVATIONS MARKED THUS (±) ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS IN FIELD. DIMENSIONS AND/OR ELEVATIONS MARKED THUS (N.T.S.) ARE NOT SHOWN TO SCALE. DRAWINGS ARE GENERALLY TO SCALE, BUT SHOULD NOT BE SCALED. N.T.S. IS SHOWN ONLY WHERE DRAWING IS OBVIOUSLY OUT OF SCALE.

B. GEOTECHNICAL NOTES

1. SOILS INVESTIGATION: A SOILS INVESTIGATION WAS PERFORMED FOR THIS PROJECT. BORING LOGS ARE INCLUDED IN THESE CONTRACT DRAWINGS.

2. PILES: ALL PILE REQUIREMENTS INCLUDING SIZE AND TYPE ARE LOCATED WITHIN THE DRAWINGS AND SPECIFICATIONS.

C. STRUCTURAL STEEL NOTES

1. ANCHOR BOLTS SHALL BE ASTM A–307 RODS.

2. STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE NOTED. FABRICATION SHALL MEET THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS.

D. STRUCTURAL CONCRETE

1. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4" EXCEPT ALL CORNERS OF BENTS WHICH SHALL BE CHAMFERED 1–1/2" UNLESS OTHERWISE NOTED. NO DEDUCTIONS ARE TO BE MADE IN CONCRETE QUANTITIES FOR CHAMFERS 1–1/2" OR LESS.

2. FINISH DESCRIPTIONS SHOWN HEREIN ARE DESCRIBED IN THE PROJECT SPECIFICATIONS.

E. REINFORCEMENT

1. ALL REINFORCING STEEL BARS SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM 615, ASTM 616, ASTM 617.

2. DIMENSIONS RELATING TO REINFORCING STEEL FABRICATION ARE OUT TO OUT OF BAR UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO REINFORCING STEEL SPACING ARE CENTER TO CENTER OF BAR. THE MINIMUM COVERING FROM THE SURFACE OF THE CONCRETE TO THE FACE OF ANY DEFORMED REINFORCING BAR SHALL NOT BE LESS THAN THE FOLLOWING:

TOP OF SLAB	= 2"
BOTTOM OF BRIDGE DECK	= 3"
HEADWALLS	= 3"

3. ALL OTHER REINFORCING STEEL COVER SHALL BE 3" UNLESS OTHERWISE NOTED IN THE PLANS.

4. MECHANICAL SPLICES FOR REINFORCING BARS SHALL BE APPROVED BY THE CONTRACTING OFFICER. THE EMBEDMENT AND LAP SPLICE LENGTH TABLE ON THIS SHEET SHALL BE USED IN DETERMINING LAP SPLICES AND EMBEDMENT LENGTHS WHERE LENGTHS ARE NOT OTHERWISE INDICATED. SPLICE LENGTHS SHALL BE BASED ON THE SMALLER BAR BEING LAPPED. THE CONTRACTOR WILL BE ALLOWED TO MAKE SPLICES IN ADDITION TO THOSE INDICATED IN THE DRAWINGS, WHERE ESSENTIAL TO CONSTRUCTIBILITY, SUBJECT TO APPROVAL BY THE CONTRACTING OFFICER. SPLICES OTHER THAN THOSE SHOWN ON THE DRAWINGS AND OTHER THAN ANY ADDITIONAL SPLICES REQUIRED BY THE CONTRACTING OFFICER, WILL BE AT THE CONTRACTOR'S EXPENSE.

REINFORCEMENT EMBEDMENT AND SPLICE TABLE

BAR SIZE	MINIMUM EMBEDMENT LENGTH, INCHES		MINIMUM LAP LENGTH INCHES	
	TOP	OTHER	TOP	OTHER
3	19	14	25	19
4	25	19	33	25
5	32	24	42	32
6	37	28	49	37
7	54	41	71	54
8	62	47	81	62
9	69	53	90	69
10	77	59	101	77
11	86	66	112	86

5. EMBEDMENT AND SPLICE NOTES:
   a. THE TABLE IS BASED ON THE FOLLOWING CONDITIONS:
      i) CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN THE BAR DIAMETER.
      ii) CLEAR COVER NOT LESS THAN THE BAR DIAMETER.
      iii) STIRRUPS OR TIES THROUGHOUT THE BAR DEVELOPMENT LENGTH NOT LESS THAN ACI CODE MINIMUM.

      OR

      iv) CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN TWO BAR DIAMETERS.
      V) CLEAR COVER NOT LESS THAN BAR DIAMETER.

   b. TOP BARS ARE HORIZONTAL BARS AND BARS INCLINED LESS THAN 45 DEGREES WITH RESPECT TO A HORIZONTAL PLANE, WHICH ARE PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

BRIDGE CONSTRUCTION SEQUENCE

PHASE I

1. ALL PILES ARE TO BE CAST AND READY FOR DELIVERY TO THE JOB SITE.
2. CLOSE ROBERT E. LEE BOULEVARD TO THROUGH TRAFFIC AND IMPLEMENT TRAFFIC CONTROL DEVICES PLAN.
3. DEMOLISH BRIDGE APPROACH SLABS TO ALLOW FOR RELOCATION OF GAS LINE.
4. DEMOLISH EXISTING "I"–WALL, SIDEWALK ON SOUTH SIDE OF BRIDGE, SOUTHWEST AND SOUTHEAST CORNERS OF THE EXISTING BRIDGE TO FACILITATE TELEPHONE LINE RELOCATIONS.
5. INSTALL TEMPORARY PILE SUPPORTS AND COORDINATE RELOCATION OF TELEPHONE LINE TO TEMPORARY SUPPORTS.
6. COORDINATE RELOCATION OF GAS LINE TO TEMPORARY SUPPORTS. CLOSE VALVES TO WATERLINE ATTACHED TO THE EXISTING BRIDGE.

PHASE II

7. DEMOLISH EXISTING BRIDGE SUBSTRUCTURE AND SUPERSTRUCTURE.

PHASE III

8. CONSTRUCT NEW BRIDGE SUBSTRUCTURE.
9. CONSTRUCT NEW BRIDGE SUPERSTRUCTURE. CONSTRUCTION OF THE SUPERSTRUCTURE SHOULD START WITH EITHER THE EAST OR WEST END BENTS. THE SLAB SPANS SHALL BE PLACED IN EITHER THE ORDER "1,3,2" OR "3,1,2".
10. COORDINATE PERMANENT RELOCATION OF GAS LINE AND TELEPHONE LINE. INSTALL NEW WATERLINE.
11. INSTALL NEW "I"–WALL SHEET PILING AT THE CORNERS OF THE NEW BRIDGE.
12. CAP EXISTING UNCAPPED SHEET PILING AND REMOVE TEMPORARY UTILITY SUPPORTS.
13. PERFORM GRADING AT NEW FLOODWALLS.

PHASE IV

14. DEMOLISH REMAINING APPROACH SLABS AND RECONSTRUCT REQUIRED APPROACH SLABS, CURBS AND GUTTERS, ROADWAY, SIDEWALKS, RAMPS, ANY OTHER INCIDENTAL CONSTRUCTION ITEMS AND FINAL GRADING.
15. REMOVE TEMPORARY CONSTRUCTION SIGNING AND TRAFFIC CONTROL DEVICES.

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C•A•D

STATE OF LOUISIANA
WALTER D. JUDLIN III
REG. No. 6708
REGISTERED PROFESSIONAL ENGINEER IN LOUISIANA
8/27/02

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ROBERT E. LEE BOULEVARD BRIDGE GENERAL NOTES

DESIGNED BY: W.D.L. DRAWN BY: L.A.C. CHECKED BY: P.J.H.	DATE: MAR.8,2000	PLOT SCALE: 1	PLOT DATE: MARCH 8, 2000
	CADD FILE: SHT3.DGN		FILE NO. H–4–44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29–00–B–0094		DWG. 3 OF 59

File: D:\SHT3.DWG Last edited: AUG. 27, 02 @ 09:10 a.m. Scale: 1:1 R.J.C.

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103+00 104+00 105+00 106+00 107+00 108+00 109+00

STA. 104+44.36 BFM B/L, 214.36' LT.
=STA. 93+00, OFFSET W B/L, 67.00' LT.

STA. 104+44.30 BFM B/L, 188.87' LT.
=STA. 92+74.51, OFFSET W B/L, 67.00' LT.

STA. 104+74.19 BFM B/L, 148.85' LT.
=STA. 92+34.57, OFFSET W B/L, 37.00' LT.

SAFETY FENCE (TYP.)

STA. 104+74.00 BFM B/L, 73.39' LT.
=STA. 91+59.11, OFFSET W B/L, 37.00' LT.

STA. 104+66 BFM B/L, 73.48 LT.

STA. 104+41.19 BFM B/L, 73.52' LT.
=STA. 91+59.16 OFFSET W B/L, 69.81' LT.

LIMITS OF CONSTRUCTION

N05°50'55"E

OFFSET W B/L

FLOW

ORLEANS AVENUE OUTFALL CANAL

CONTRACTOR'S STAGING AREA

STA. 109+57.45 BFM B/L, 200.57' LT.
= STA. 93+00 E B/L, 230.00' RT.

STA. 108+38.55 BFM B/L, 80.46' LT.
STA. 91+76.34 E B/L, 115.00' LT.

STA. 109+53.59 BFM B/L, 79.99' LT.
STA. 91+79.55 E B/L, 230.00' LT.

C/L CONSTRUCTION SITE ACCESS GATE
STA. 108+35.36 BFM B/L,
12.06' LT.

ROBERT E. LEE BOULEVARD
(WESTBOUND LANES)
(ASPHALT)

BFM BASELINE S84°17'54"E

S84°17'54"E S85°58'58"E S85°58'57"E

ROBERT E. LEE BOULEVARD
(EASTBOUND LANES)
(ASPHALT)

C/L CONSTRUCTION SITE ACCESS GATE
STA. 104+66.00 BFM B/L,
17.51' RT.

STA. 104+40.84 BFM B/L, 61.57' RT.
=STA. 90+24.07 W B/L, 97.81' LT.

STA. 104+66 BFM B/L, 43.71' RT.

STA. 104+85.65 BFM B/L, 61.73' RT.
=STA. 90+24.00 W B/L, 53.00' LT.

STA. 104+85.63 BFM B/L, 70.75' RT.
=STA. 90+15.00 W B/L, 53.00' LT.

STA. 90+15 W B/L, 43.24' LT.

ORLEANS AVENUE

U.S. ARMY CORPS. OF ENGINEERS W B/L N05°50'55"E

U.S. ARMY CORPS. OF ENGINEERS E B/L N05°50'55"E

STA. 108+33.40 BFM B/L, 80.80' RT.=
STA. 90+15 E B/L, 115.00' RT.

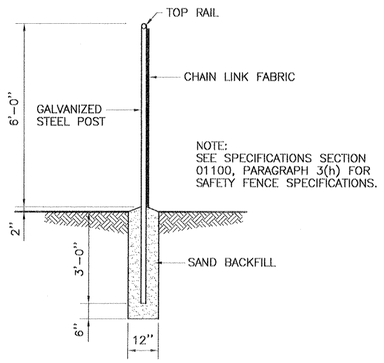
PLAN

SCALE: 1" = 20'

20' 0 20' 40' 60' 80'

REFERENCE DRAWINGS

1. FOR GENERAL NOTES, SEE DWG. NO. 3.
2. FOR PLAN/PROFILE, SEE DWG NO. 5.
3. FOR DISPOSITION OF UTILITIES, SEE DWG NO'S. 11, 12 & 13.
4. FOR UTILITY RELOCATION/MODIFICATION TABLE, SEE DWG NO. 13.



NOTE:
SEE SPECIFICATIONS SECTION 01100, PARAGRAPH 3(h) FOR SAFETY FENCE SPECIFICATIONS.

SAFETY FENCE DETAIL

SCALE: 1/2" = 1'-0"

LEGEND

- BASELINE
- LIMITS OF CONSTRUCTION
- CONTRACTOR'S STAGING AREA
- REQ'D. SAFETY FENCE

NOTES:

1. AREAS USED FOR CONSTRUCTION STAGING SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS, FERTILIZED AND SEEDED AFTER UTILIZATION IS COMPLETED.

SCALE: 1/2" = 1'- 0"

12" 0 2' 4' 6' 8'

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ROBERT E. LEE BOULEVARD BRIDGE LIMITS OF CONSTRUCTION

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SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 4 OF 59

Safety is a Part of Your Contract

SEE DWG. NO. 4 FOR CONTINUATION OF SAFETY FENCING

REQ'D. SAFETY FENCE

STA. 104+74.00 BFM B/L, 73.39' LT.

PT = STA. 104+81.51 BFM B/L, 38' LT.

STA. 104+66 BFM B/L, 73.48' LT.

LIMIT OF SIDEWALK PC = STA. 104+46.95 BFM B/L, 43.99' LT.

LIMIT OF WORK STA. 104+92 BFM B/L

ROBERT E. LEE BOULEVARD (ASPHALT) (WEST BOUND LANES)

91+00

BFM B/L S84°17'54"E

EXIST. PROFILE GRADE

LIMITS OF CROSS SLOPE TRANSITIONS

ROBERT E. LEE BOULEVARD (EAST BOUND LANES) (ASPHALT)

CONSTRUCTION SITE ACCESS GATE STA. 104+66.00 BFM B/L, 17.51' RT.

SLOPE BREAK LINES

LIMIT OF WORK STA. 104+76 BFM B/L

1' CHAINWALL

STA. 104+66 BFM B/L, 43.71' RT.

LOCATE SAFETY FENCE TO MAINTAIN PEDESTRIAN ACCESS TO R. E. LEE BLVD.

STA. 90+15 W B/L, 43.24' LT.

15'± ALLEY

90+00

STA. 105+10.81 BFM B/L = STA. 90+85.81 W B/L

OFFSET W B/L

BRICK BLDG.

STA. 105+38.82 BFM B/L

BFM B/L S84°17'54"E

15.82'

S85°58'57"E BFM B/L

S85°58'58"E

61.09'

IRON ROD (SET) STA. 105+23.00 BFM B/L

STA. 90+86.16 W B/L = END OF B/L

W B/L T-WALL

LIMIT OF WORK 61' RT. OF BFM B/L

ORLEANS AVENUE RETAINING WALL

U.S. ARMY CORPS. OF ENGINEERS WEST B/L N05°50'55"E

OFFSET WEST B/L

99.13' R. Δ = 10°32'51"

87.13' R. Δ = 23°13'08"

103+00 104+00 105+00 106+00 107+00 108+00 109+00

ORLEANS AVENUE OUTFALL CANAL

LIMIT OF UNCAPPED SHEET PILING STA. 91+42.12 W B/L, 13.69' RT. TO BE CAPPED UNDER THIS CONTRACT, SEE DWG. 14.

LIMIT OF UNCAPPED SHEET PILING STA. 91+52.78 E B/L, 10.58' LT. TO BE CAPPED UNDER THIS CONTRACT, SEE DWG. 14.

PC = STA. 105+20.88 BFM B/L, 31.20' LT.

1'-1" HEADWALL

WEST BOUND (W.B.) PROFILE GRADE LINE

EAST BOUND (E.B.) PROFILE GRADE LINE

P.I. STA. 105+10.81 BFM B/L = STA. 90+85.81 W B/L

S85°58'58"E S84°17'54"E S85°58'57"E

4' 12' 4' 12' 4' 12' 6'

17'-9"R

20'-0" APPROACH SLAB

7'-3"

REQ'D I-WALL

EXISTING T-WALL

1'-1" HEADWALL

140'-0" BRIDGE

20'-0" APPROACH SLAB

60'-0" SHOULDER TAPER

LIMIT OF UNCAPPED SHEET PILING (C/L) STA. 90+23.20 E B/L 10.12' LT.

LIMIT OF NECKDOWN I-WALL STA. 90+17.70 E B/L 11.00' LT (FLOODSIDE FACE)

LIMIT OF EXISTING "T"-WALL STA. 90+26.91 E B/L 4.00' RT.

FLOW

182'-0"

U.S. ARMY CORPS. OF ENGINEERS EAST B/L N05°50'55"E

EXISTING I-WALL

P.I. STA. 107+20.92 BFM B/L = STA. 90+92.17 E B/L

LIMIT OF WORK STA. 107+62 BFM B/L

EXIST. PROFILE GRADE

ROBERT E. LEE BOULEVARD (WEST BOUND LANES) (ASPHALT)

91+00

S85°58'57"E

ROBERT E. LEE BOULEVARD (EAST BOUND LANES) (ASPHALT)

EXIST. PROFILE GRADE

LIMITS OF CROSS SLOPE TRANSITIONS

SEE DWG. NO. 4 FOR CONTINUATION OF SAFETY FENCING

REQ'D. SAFETY FENCE

STA. 109+53.59 BFM B/L, 79.99' LT.

STA. 108+38.55 BFM B/L, 80.46' LT.

CONSTRUCTION SITE ACCESS GATE STA. 108+35.36 BFM B/L, 12.06' LT.

STA. 90+15 E B/L, 115.00' RT.

90+00 REFERENCE DRAWINGS:

FOR GENERAL NOTES, SEE DWG. NO. 3.
FOR UTILITIES, SEE DWG. NO. 11.
FOR FLOODWALL PLAN, SEE DWG. NO. 14.
FOR REQUIRED ROADWAY ELEVATIONS, SEE DWG. NO. 39.
FOR TYPICAL ROADWAY SECTIONS, SEE DWG. NO. 44.
FOR ROADWAY AND SIDEWALK DETAILS, SEE DWG. NO. 45.

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

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

PLAN
SCALE: 1" = 20'
20' 0 20' 40' 60' 80'

VALUE INCENTIVE CLAUSES YOUR KEY TO HIGHER PROFITS ENGINEERING

STATE OF LOUISIANA WALTER D. JUDLIN III REG. No. 8708 REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING 9/27/02

C•A•D

VERTICAL CONTROL

ALL ELEVATIONS ARE IN FEET AND REFER TO NATIONAL GEODETIC VERTICAL DATUM (N.G.V.D.). ELEVATION BENCH IS BM "CHRYSLER RM", EL. 7.11 (1983 EPOCH), LOCATED IN TOP OF CONCRETE SEAWALL IN NORTHWEST CORNER OF LAKESHORE DRIVE BRIDGE OVER ORLEANS AVENUE CANAL.

PROFILE GRADE LINE (PGL) WITHIN LIMITS OF BRIDGE IS LOCATED ONE (1) FOOT FROM THE FACE OF NEW JERSEY BARRIER AND TWO (2) FEET FROM THE BASELINE AND CENTERLINE OF PROJECT.

HYDRAULIC DATA

	WATER SURFACE ELEVATION	FLOW RATE	FREQUENCY
NORMAL WATER LEVEL	1.0 N.G.V.D.	0 CFS	---
DESIGN FLOOD	11.90 N.G.V.D.	3250 CFS	300 YR.

PROFILE
SCALE: 1" = 20'
20' 0 20' 40' 60' 80'

140' V.C. PVI STA. 106+12 BFM B/L EL. 10.36

20' APPROACH SLAB — PROPOSED BRIDGE LENGTH = 140' — 20' APPROACH SLAB

+6.25% −6.00%

60'-0" TRANSITION TO EXISTING

BEGIN BRIDGE STA. 105+42.00 BFM B/L

END BRIDGE STA. 106+82.00 BFM B/L

30' V.C. EAST BOUND

PROFILE GRADE LINE (E.B. & W.B.)

PVC STA. 105+42 BFM B/L EL. 5.98

PVT STA. 106+82 BFM B/L EL. 6.16

PVT E.B. STA.105+37 BFM B/L EL. 5.67

PVT W.B. STA. 105+36.5 BFM B/L EL. 5.64

30' V.C. PVI E.B. STA. 105+22 BFM B/L EL. 4.73

BOTTOM OF 26" CONCRETE DECK

EL. 4.96

PVC E.B. STA. 105+07 BFM B/L EL. 4.04

+4.68% +4.30%

40' V.C. PVI W.B. STA. 105+16.5 BFM B/L EL. 4.38

12" THK. APPROACH SLAB

PVC W.B. STA. 104+96.5 BFM B/L EL. 3.52

EXISTING W.B. GUTTERLINE PROFILE

12" THK. APPROACH SLAB

EXISTING W.B. GUTTERLINE PROFILE

40' V.C. WEST BOUND

45'-10" 45'-4" 45'-10"

EXISTING E.B. GUTTERLINE PROFILE

EXISTING E.B. GUTTERLINE PROFILE

℄ BENT STA. 105+43.50 BFM B/L

℄ BENT STA. 105+89.33 BFM B/L

℄ BENT STA. 106+44.87 BFM B/L

℄ BENT STA. 106+80.50 BFM B/L

1 2 3 4

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
BRIDGE PLAN – PROFILE

DESIGNED BY: W.D.L. DRAWN BY: L.A.C. CHECKED BY: P.J.H.	DATE: MAR.8,2000	PLOT SCALE: 20	PLOT DATE: MARCH 8, 2000
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	CADD FILE: SHT5.DGN		FILE NO. H-4-44776
	SOLICITATION NO. DACW29-00-B-0094		DWG. 5 OF 59

Safety is a Part of Your Contract

TRAFFIC CONTROL NOTES

1. THE DESIGN AND APPLICATION OF ALL SIGNALS, PAVEMENT MARKINGS, CHANNELIZING DEVICES, AND WARNING SIGNS SHALL CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", 1988 EDITION AS REVISED.

2. CHANNELIZING AND DELINEATION DEVICES SHALL BE USED TO MARK ALL CONSTRUCTION AREAS. THESE SHALL BE TYPE III BARRICADES, AND/OR BARRELS, ALL FULLY REFLECTORIZED WITH FLASHING LIGHTS.

3. ANY EXISTING TRAFFIC CONTROL DEVICE THAT IS NOT REQUIRED SHALL IMMEDIATELY BE REMOVED, COVERED AND/OR RELOCATED.

4. SIGNS, BARRELS, BARRICADES, STRIPING, BARRIERS AND ALL OTHER TRAFFIC CONTROL DEVICES SHOWN ON THESE DRAWINGS ARE REQUIRED FOR CONSTRUCTION OF THE PROJECT AND SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR.

5. ALL CONSTRUCTION MATERIAL AND EQUIPMENT SHALL BE STORED OUTSIDE OF THE ROADWAY SURFACE, CREATING NO SIGHT DISTANCE PROBLEMS, AND FULLY DELINEATED AS IN NOTE 2.

6. YELLOW, HIGH VISIBILITY PENNANT BARRIER FLAGGING (NYLON ROPE WITH PLASTIC PENNANTS) SHALL BE STRUNG BETWEEN TYPE II BARRICADES AND BARRELS/DRUMS. YELLOW PENNANT FLAGGING SHALL BE USED ONLY WHERE PEDESTRIAN ACTIVITY IS TO BE PROHIBITED. THIS MATERIAL SHALL NOT BE USED OR PLACED NEAR VEHICULAR TRAFFIC LANES OR USED TO WARN OR DIRECT VEHICULAR TRAFFIC.

7. THIS TRAFFIC CONTROL DEVICE PLAN INDICATES GENERAL TRAFFIC CONTROL DEVICES TO BE USED ON THIS PROJECT. IT IS ANTICIPATED THAT CONDITIONS WILL VARY DEPENDING ON THE PHASE UNDER CONSTRUCTION AND THAT THE ARRANGEMENT OF THOSE DEVICES WILL BE REVIEWED ON A DAY TO DAY BASIS.

8. THE CONTRACTOR SHALL MAINTAIN ACCESS TO FIRE STATION.

9. ALL EXCAVATION SHALL BE COVERED, BACKFILLED, OR PROTECTED AND FULLY DELINEATED (SEE NOTE 2) AT NIGHT AND WHEN WORK IS NOT IN PROGRESS. EXCAVATION PITS, ETC. SHALL BE FULLY FENCED OR BARRICADED (SEE NOTE 2) TO PREVENT ACCESS BY PEDESTRIANS.

10. ALL TRAFFIC SIGNS SHALL BE STAKED OUT BY THE CONTRACTOR IN ACCORDANCE WITH THE TRAFFIC CONTROL PLAN AND APPROVED BY THE CONTRACTING OFFICER PRIOR TO INSTALLATION.

11. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES BY CERTIFIED MAIL AT LEAST 14 WORKING DAYS PRIOR TO CLOSING ROBERT E. LEE BLVD. BRIDGE: COPIES OF THESE NOTIFICATIONS ARE TO BE PROVIDED TO CONTRACTING OFFICER AT THAT TIME.

- NEW ORLEANS DEPT. OF STREETS, TRAFFIC ADMINISTRATION DIVISION: 565-6840 (ELMER DARWIN)
- ORLEANS PARISH SCHOOL BOARD: 286-2700
- NEW ORLEANS POLICE DEPARTMENT: 821-2222
- NEW ORLEANS FIRE DEPARTMENT: 565-7800
- ENTERGY: 593-3460 (NORMAN SILES)
- U.S. ARMY CORPS OF ENGINEERS: 862-1200 (ADMINISTRATIVE CONTRACTING OFFICER)
- ORLEANS LEVEE DISTRICT: 243-4045 (STEPHEN G. SPENCER)

12. DETOUR ROUTES MUST BE ADVERTISED IN THE TIMES-PICAYUNE AS A "PUBLIC NOTICE" AT LEAST ONE (1) WEEK PRIOR TO BRIDGE CLOSURE. THE ADVERTISEMENT MUST BE A MINIMUM OF TWO COLUMNS BY TWO INCHES.

M4-9L(1) *

M4-9L(4) *

M4-9R(1) *

M4-8A *

M4-9S *

M4-9R(2) *

M4-9L(2) *

M4-9L(3) *

M4-9R(3) *

* "R.E. LEE" PORTION OF SIGN MAY BE ON SEPARATE PLATE, MOUNTED ABOVE M4-9 SIGN

MINIMUM SIGN SIZES

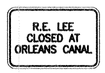
M SERIES – 30"x 30"
* W SERIES – 36"x 36"
R3-1 – 24"x 24"
R3-2 – 24"x 24"
R11-2 – 48"x 30"
R11-4 – 60"x 60"
S-1 – 36"x 24"
S-2 – 48"x 24"
* AUXILIARY STREET NAME – 30"x 8"

W20-3(1)

W20-3(2)

W20-2(1)

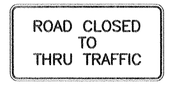
W20-2(2)



S-1


R3-2


R3-1



R11-4

R11-2

S-2

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG NO. 3.

FOR PLAN/PROFILE, SEE DWG. NO. 5.

FOR TRAFFIC CONTROL DEVICES PLAN AND NOTES, SEE DWG. NO. 7.

FOR HIGHWAY SIGN AND BARRICADES DETAILS, SEE DWG. NOS. 57, 58 AND 59.

TRAFFIC CONTROL SIGNS

SCALE: 1/2 " = 1'- 0"

SCALE: 1/2 " = 1'- 0"

12" 0 2' 4' 6' 8'

STATE OF LOUISIANA
WALTER D. JUDLIN III
REG. No. 8708
REGISTERED PROFESSIONAL ENGINEER
IN
9/27/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

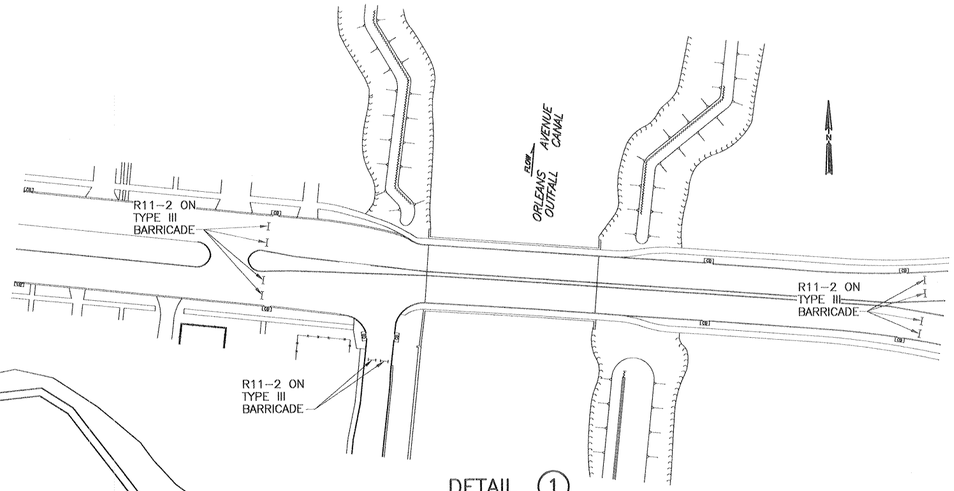
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE TRAFFIC CONTROL NOTES

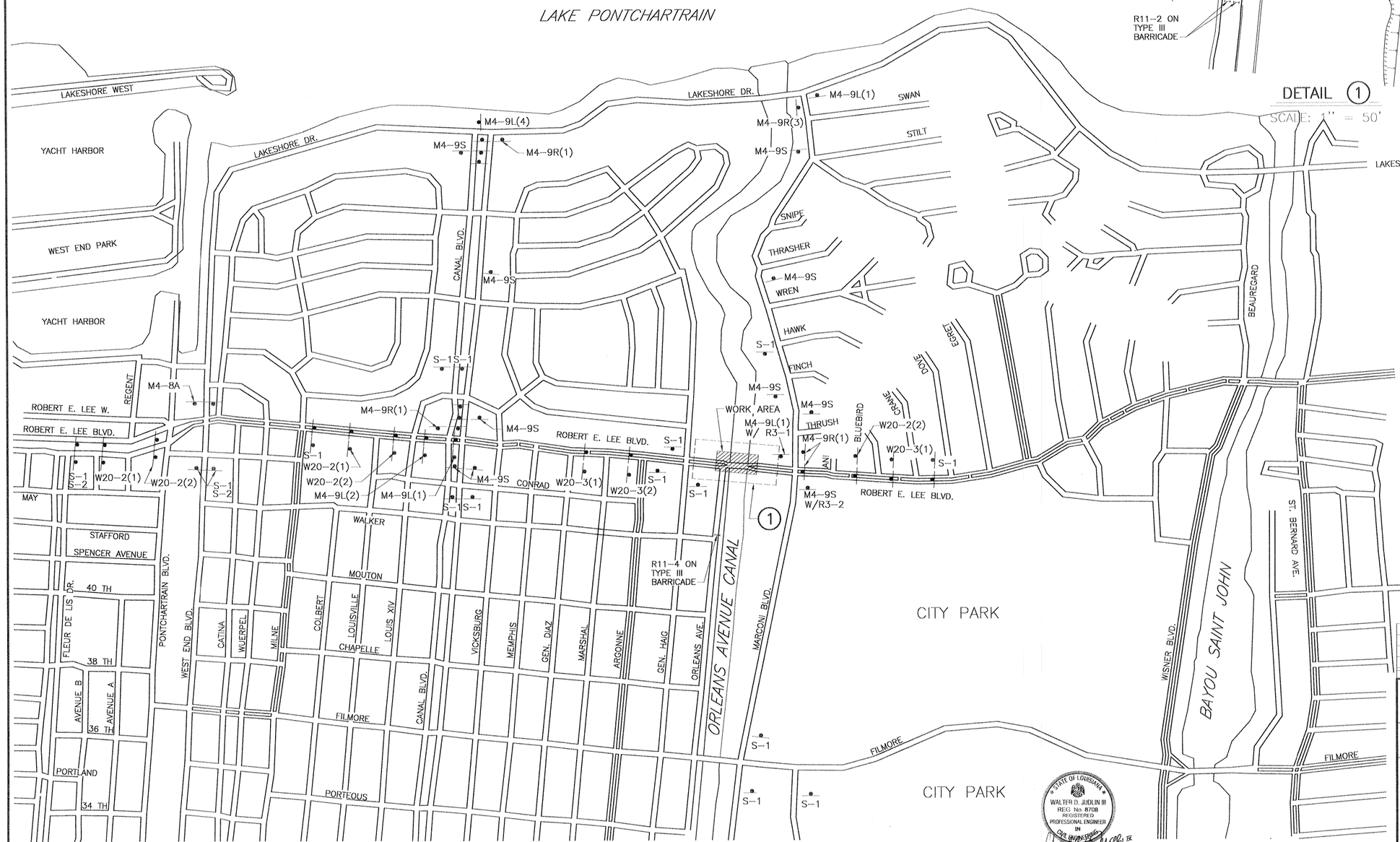
DESIGNED BY: R.R.C.
DRAWN BY: L.A.C.
CHECKED BY: W.D.L.
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER
DATE: MAR.8,2000
PLOT SCALE: 1
CADD FILE: SHT6.DGN
SOLICITATION NO. DACW29-00-B-0094
PLOT DATE: MARCH 8, 2000
FILE NO. H-4-44776
DWG. 6 OF 59

VALUE ENGINEERING — INCENTIVE CLAUSES — YOUR KEY TO HIGHER PROFITS

Safety is a Part of Your Contract



DETAIL (1)
SCALE: 1" = 50'



C•A•D

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3.

FOR PLAN/PROFILE, SEE DWG. NO. 5.

FOR TRAFFIC CONTROL SIGNS AND NOTES, SEE DWG. NO. 6.

FOR HIGHWAY SIGN AND BARRICADE DETAILS, SEE DWG. NOS. 57, 58 AND 59.

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

STATE OF LOUISIANA
WALTER D. JUDLIN III
REG. No. 8708
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
9/4/02

SCALE: 1" = 50'
50' 0 50' 100' 150' 200'

SCALE: 1" = 400'
400' 0 400' 800' 1200' 1600'

VALUE ENGINEERING — INCENTIVE CLAUSES — YOUR KEY TO HIGHER PROFITS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
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HARTMAN ENGINEERING, INC.
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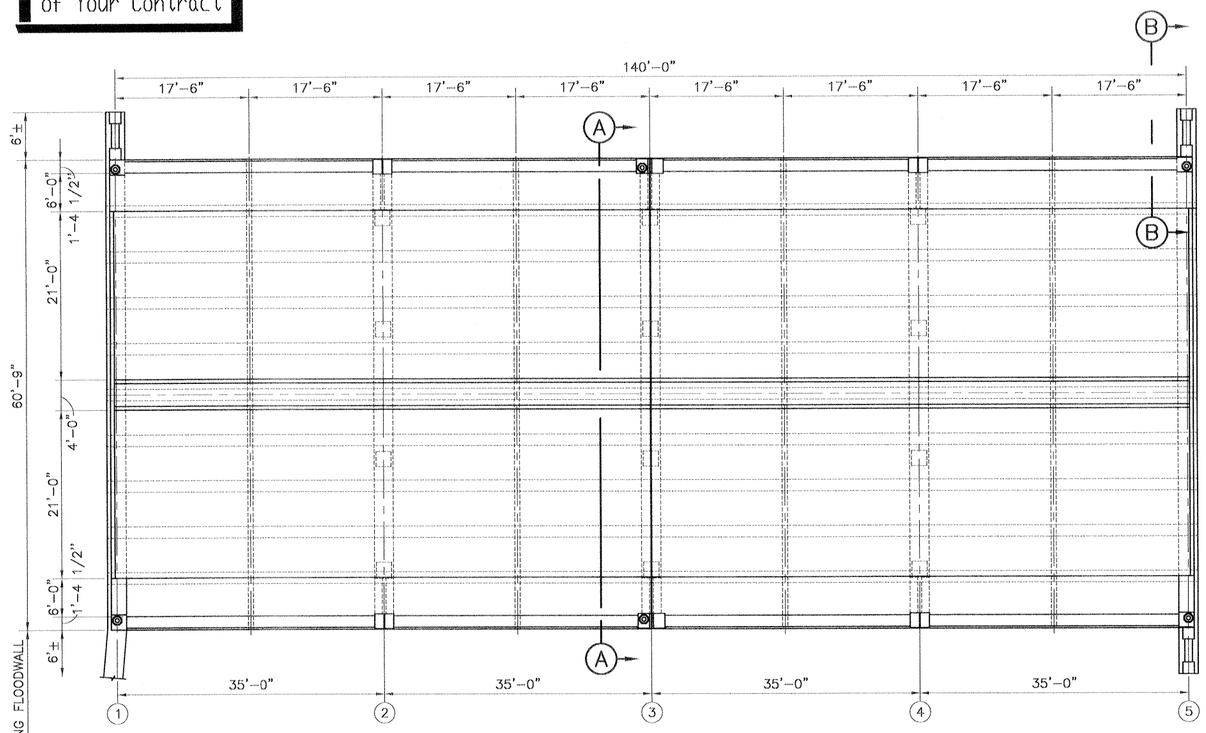
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE TRAFFIC CONTROL DEVICES PLAN AND NOTES

DESIGNED BY: R.R.C.	DATE: MAR.8,2000	PLOT SCALE: 400	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.	CADD FILE: SHT7.DGN		FILE NO. H-4-44776
CHECKED BY: W.D.L.			
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 7 OF 59

Safety is a Part of Your Contract

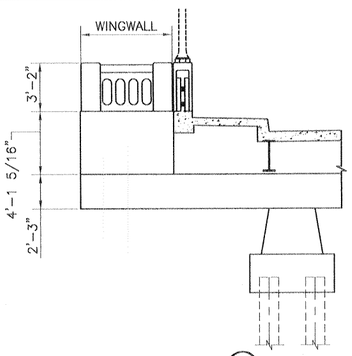


PLAN

SCALE: 1/8"=1'-0"

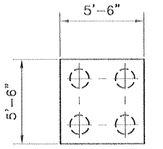
ELEVATION

SCALE: 1/8"=1'-0"



SECTION (B)

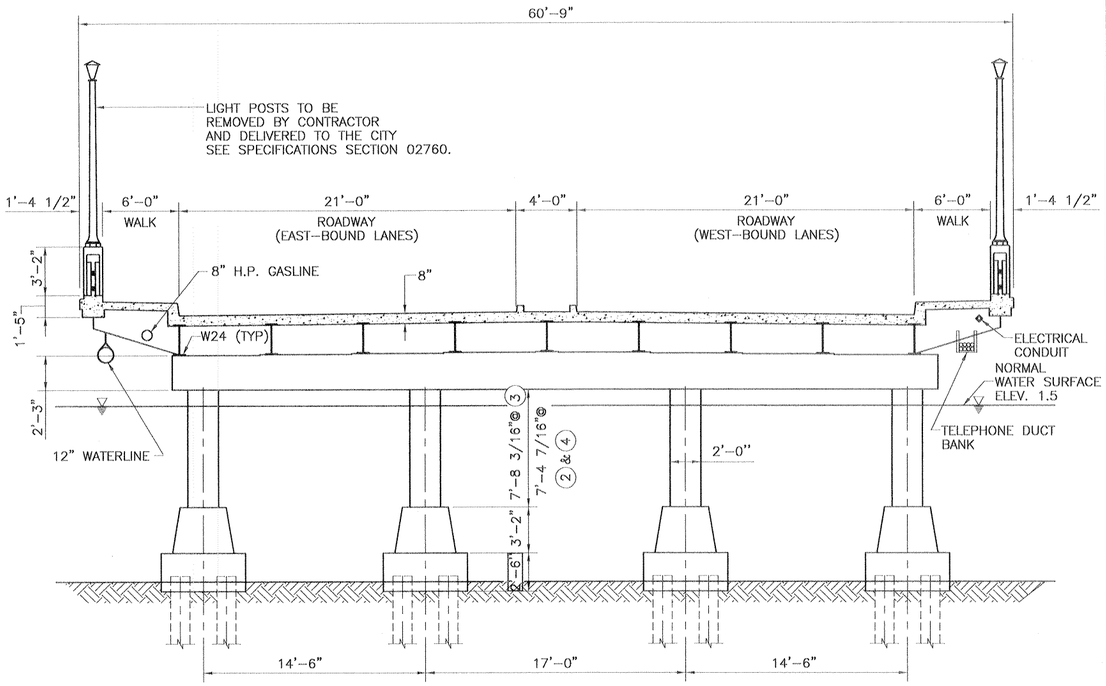
SCALE: 1/4"=1'-0"



NOTE:
BENTS 2–3–4 (64 FT. ROUND UNTREATED TIMBER PILES.)
BENTS 1–5 (35 FT. ROUND UNTREATED TIMBER PILES.)

PLAN OF EXISTING FOOTING

SCALE: 1/4"=1'-0"



SECTION (A)

SCALE: 1/4"=1'-0"

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3.

FOR DEMOLITION PLAN, SEE DWG. NO. 9.

FOR UTILITY PLAN, SEE DWG. NO. 11.

FOR EXISTING I-WALL, SEE DWG. NO. 20.

DEMOLITION NOTE

DEMOLITION OF EXISTING BRIDGE INCLUDES REMOVAL OF BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE. THIS INCLUDES REMOVAL OF ALL EXISTING FOOTINGS. THE PILING BENEATH FOOTINGS THAT ARE NOT IN CONFLICT WITH NEW BRIDGE CAN REMAIN.

C•A•D

STATE OF LOUISIANA
WALTER D. JUDLIN III
REG No. 8708
REGISTERED PROFESSIONAL ENGINEER IN
CIVIL ENGINEERING
9/23/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
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ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

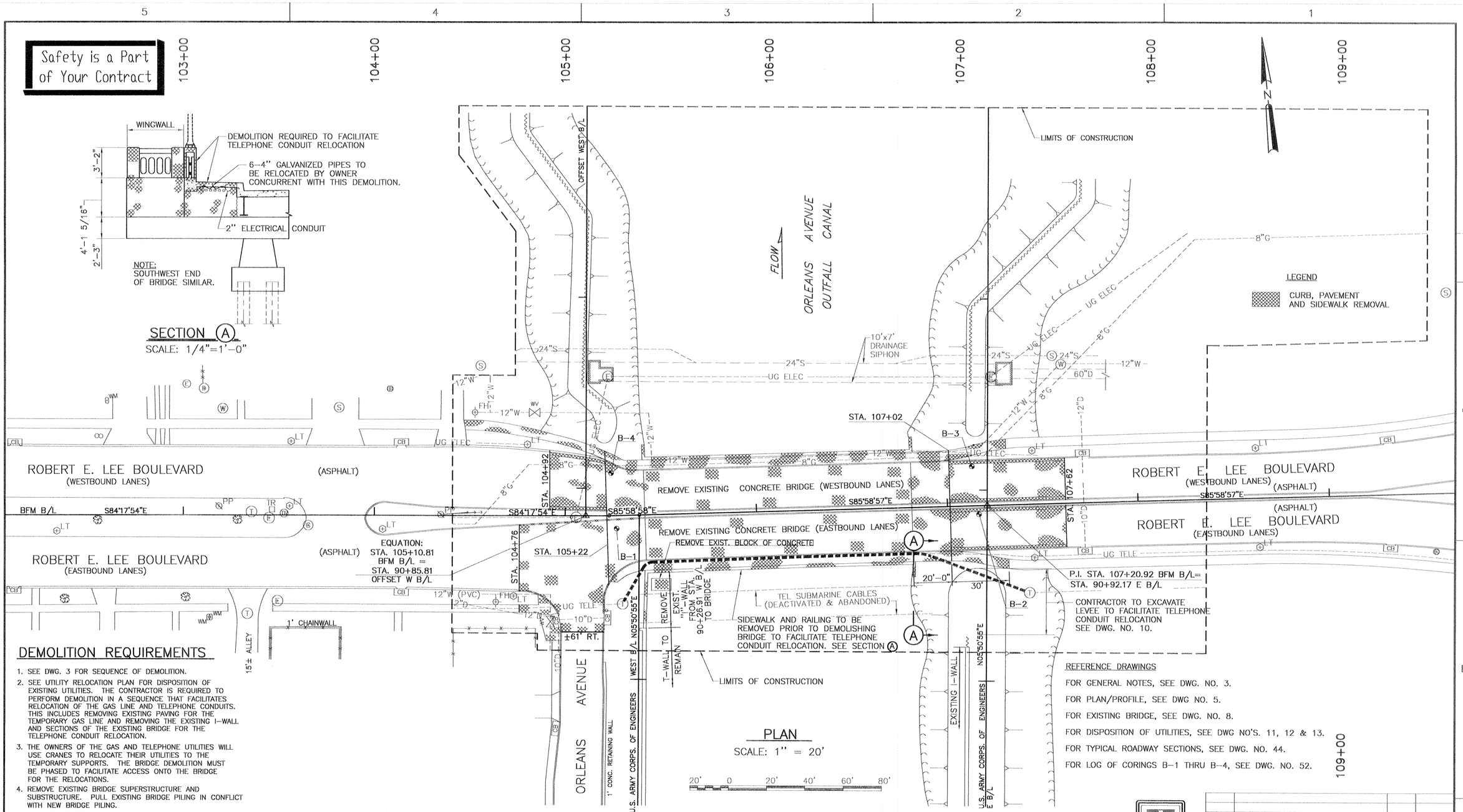
ROBERT E. LEE BOULEVARD BRIDGE EXISTING BRIDGE

DESIGNED BY: W.D.L.	DATE: MAR.8,2000	PLOT SCALE: 96	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.			
CHECKED BY: P.J.H.	CADD FILE: SHT8.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 8 OF 59

VALUE ENGINEERING — YOUR KEY TO HIGHER PROFITS

Safety is a Part of Your Contract

SECTION (A)
SCALE: 1/4"=1'–0"



PLAN
SCALE: 1" = 20'
20' 0 20' 40' 60' 80'

DEMOLITION REQUIREMENTS

1. SEE DWG. 3 FOR SEQUENCE OF DEMOLITION.
2. SEE UTILITY RELOCATION PLAN FOR DISPOSITION OF EXISTING UTILITIES. THE CONTRACTOR IS REQUIRED TO PERFORM DEMOLITION IN A SEQUENCE THAT FACILITATES RELOCATION OF THE GAS LINE AND TELEPHONE CONDUITS. THIS INCLUDES REMOVING EXISTING PAVING FOR THE TEMPORARY GAS LINE AND REMOVING THE EXISTING I–WALL AND SECTIONS OF THE EXISTING BRIDGE FOR THE TELEPHONE CONDUIT RELOCATION.
3. THE OWNERS OF THE GAS AND TELEPHONE UTILITIES WILL USE CRANES TO RELOCATE THEIR UTILITIES TO THE TEMPORARY SUPPORTS. THE BRIDGE DEMOLITION MUST BE PHASED TO FACILITATE ACCESS ONTO THE BRIDGE FOR THE RELOCATIONS.
4. REMOVE EXISTING BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE. PULL EXISTING BRIDGE PILING IN CONFLICT WITH NEW BRIDGE PILING.
5. SAWCUT AND REMOVE EXISTING ROADWAY AND SIDEWALKS WITHIN THE LIMITS SHOWN ON THIS SHEET.
6. REMOVE EXISTING PAVEMENT WITHIN LIMITS SHOWN.
7. BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE, BRIDGE PILING, ROADWAY, CONCRETE WALL, ABANDONED UTILITIES AND SHEET PILING DEMOLISHED AS A PART OF THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
8. AN ABANDONED METAL PIPE LOCATED BENEATH THE NORTHWEST CORNER OF THE BRIDGE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR TO THE EXTENT IT DOES NOT INTERFERE WITH EXCAVATION FOR THE NEW ABUTMENT AND FINAL GRADING FOR THE RIPRAP.
9. A LARGE BLOCK OF CONCRETE LOCATED AT THE SOUTHWEST CORNER OF THE BRIDGE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL CUT, REMOVE AND DISPOSE OF ABANDONED CABLES LOCATED SOUTH OF THE BRIDGE, AS NECESSARY TO CONSTRUCT THE NEW BRIDGE AND FLOODWALLS.

VALUE ENGINEERING: INNOVATIVE CLAUSES YOUR KEY TO HIGHER PROFITS

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3.
FOR PLAN/PROFILE, SEE DWG NO. 5.
FOR EXISTING BRIDGE, SEE DWG. NO. 8.
FOR DISPOSITION OF UTILITIES, SEE DWG NO'S. 11, 12 & 13.
FOR TYPICAL ROADWAY SECTIONS, SEE DWG. NO. 44.
FOR LOG OF CORINGS B–1 THRU B–4, SEE DWG. NO. 52.

STATE OF LOUISIANA
WALTER D. JUDLIN III
REG. No. 8708
REGISTERED PROFESSIONAL ENGINEER IN
CIVIL ENGINEERING
9/17/02

DACW29–00–B–0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

C•A•D

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

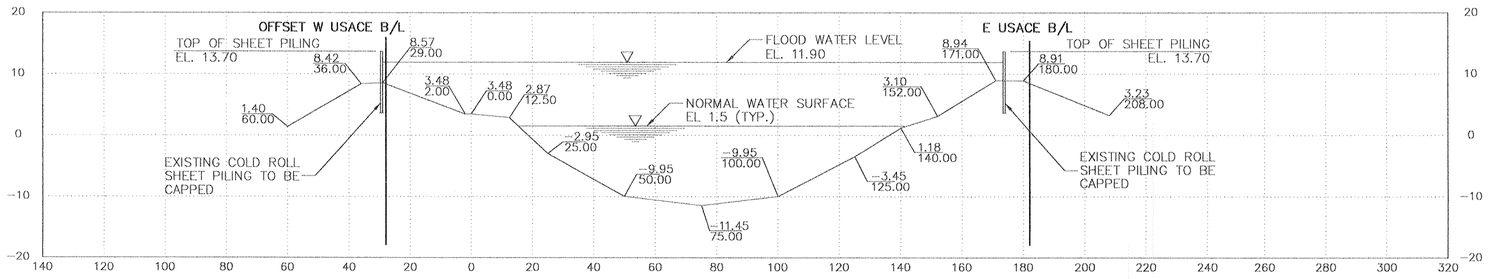
HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

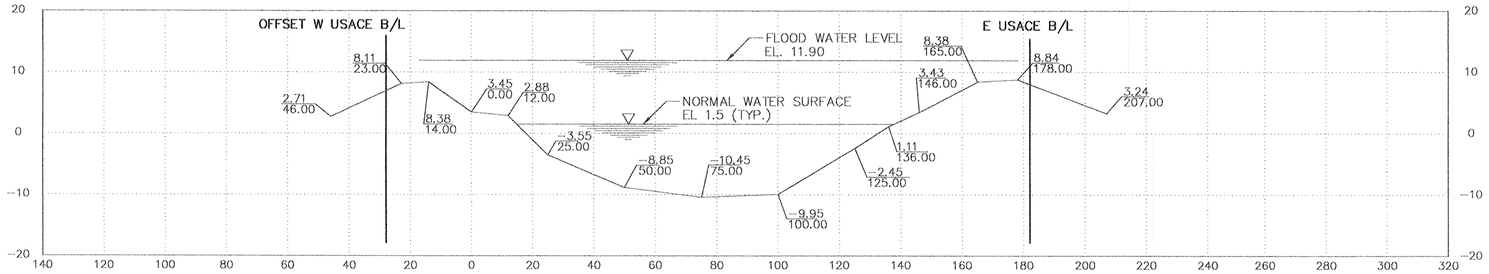
ROBERT E. LEE BOULEVARD BRIDGE DEMOLITION PLAN

DESIGNED BY: W.D.L.	DATE: MAR.8,2000	PLOT SCALE: 20	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.			
CHECKED BY: P.J.H.	CADD FILE: SHT9.DGN		FILE NO. H–4–44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29–00–B–0094		DWG. 9 OF 59

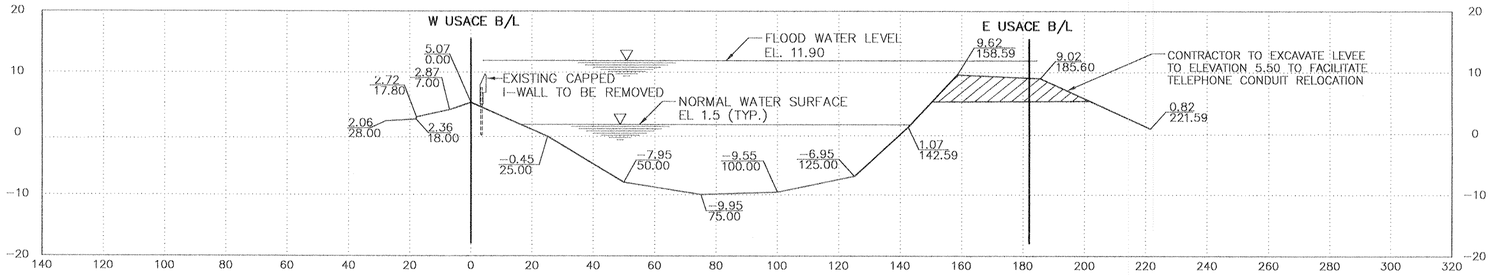
Safety is a Part of Your Contract



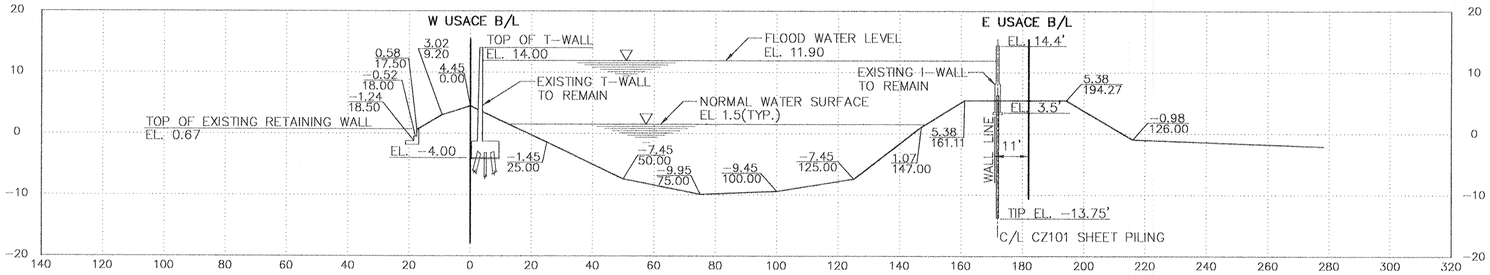
STA. 91+90



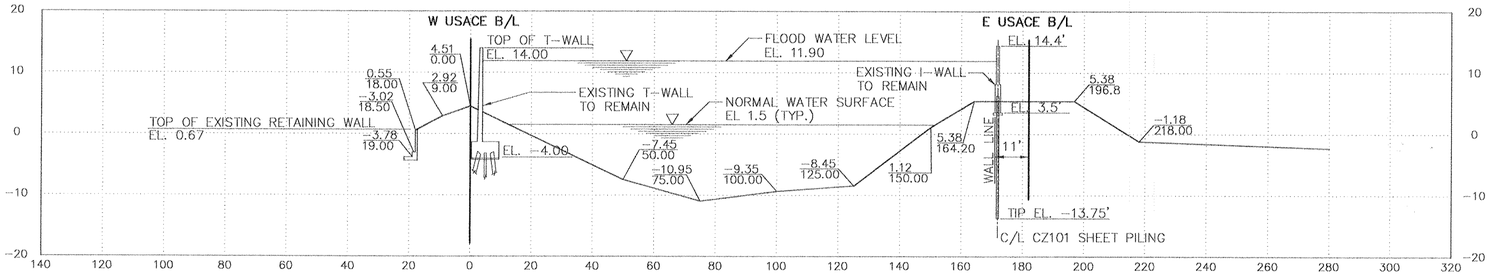
STA. 91+40



STA. 90+43



STA. 89+93



STA. 89+43

SCALE: 1" = 20' (H)
1" = 10' (V)

NOTE:

ALL STATIONS REFER TO USACE W B/L AND E B/L.

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3
FOR FLOODWALL PLAN, SEE DWG. NO. 14

STATE OF LOUISIANA
WALTER D. JUDLIN III
REG. No. 8708
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
9/27/02

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SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
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HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
EXISTING ORLEANS AVE. CANAL - SECTIONS

DESIGNED BY: W.D.L.	DATE: MAR.8,2000	PLOT SCALE: 20	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.			
CHECKED BY: P.J.H.	CADD FILE: SHT10.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 10 OF 59

VALUE ENGINEERING: INCENTIVES CLAUSES, FUTURE SAVINGS, HIGHER PROFITS

Safety is a Part of Your Contract

105+00 106+00 107+00

FLOW

ORLEANS AVENUE OUTFALL CANAL

24"S 10'x7' DRAINAGE SIPHON

WATER VALVE TO BE CLOSED DURING BRIDGE DEMOLITION

BEGIN NEW 12" DUCTILE IRON WATER LINE AT NEAREST EXISTING PIPE JOINT

12"W 8"G UG ELEC ELEC

NEW 12 " D.I. WATER LINE TO TIE-IN TO EXISTING 12 " C.I. WATER LINE AT NEAREST JOINT

(RELOCATED) POSITION

(REPLACED)

60" DRAINAGE PIPE

S84°17'54"E S85°58'58"E BFM B/L S85°58'57"E

1 #6 BLACK (PHASE), 1 #6 WHITE (NEUTRAL), 1 #6 GREEN EQUIPMENT GROUNDING CONDUCTOR. 1 1/2" CONDUIT REQ'D WITHIN BRIDGE STRUCTURE AND 1 1/2" CONDUIT REQ'D BETWEEN BRIDGE AND EM-3.

INSTALL SECTION OF MATCHING SIZE CONDUIT AS REQ'D AND REPULL 3 NEW #6 CONDUCTORS TO PREVIOUS LIGHT POLE

(ABANDONED)

EXISTING FLOODWALL (TO BE REMOVED)

TEL SUBMARINE CABLES (DEACTIVATED & ABANDONED BELOW CANAL BOTTOM)

EXISTING T-WALL (TO REMAIN)

SUPPORT FOR TEMPORARY ALIGNMENT OF TELEPHONE CONDUITS BY CONTRACTOR (TYP.)

C/L TEMP. BENT STA. 105+70, BFM B/L 50' RT.

C/L TEMP. BENT STA. 106+00, BFM B/L, 50' RT.

C/L TEMP. BENT STA. 106+30, BFM B/L, 50' RT.

C/L TEMP. BENT STA. 106+60, BFM B/L 50' RT.

NOTES:

1. EXISTING AND PROPOSED BRIDGE NOT SHOWN FOR CLARITY.

NOTE:
EXISTING UTILITY LOCATIONS BASED ON FIELD SURVEY AND INFORMATION FROM UTILITY AGENCIES. CONTRACTOR SHALL ARRANGE FOR OWNER TO MARK UTILITY LOCATIONS IN FIELD PRIOR TO CONSTRUCTION.

REFERENCE DRAWINGS

1. FOR GENERAL NOTES, SEE DWG. NO. 3.
2. FOR BRIDGE PLAN -- PROFILE, SEE DWG. NO. 5.
3. FOR DETAILS OF UTILITY ATTACHMENTS TO NEW BRIDGE AND UTILITY COVER PLATES, SEE DWG. NO. 12.
4. FOR REQUIRED UTILITY RELOCATION/MODIFICATION CHART AND DESCRIPTION OF UTILITIES, SEE DWG. NO. 13.
5. FOR DETAILS OF TEMPORARY PILE SUPPORTS, SEE DWG. NO. 13.

PLAN

SCALE: 1'' = 10'

UTILITIES RELOCATION NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS AND PERFORM ALL OPERATIONS IN CONNECTION WITH THE RELOCATION OF THE 12" ø WATER LINE IN ACCORDANCE WITH THESE DRAWINGS AND APPLICABLE SPECIFICATIONS.
2. PRIOR TO DEMOLISHING THE BRIDGE, THE TELEPHONE CONDUITS SHALL BE TEMPORARILY RELOCATED BY OTHERS ON TEMPORARY PILE SUPPORTS FURNISHED AND INSTALLED BY CONTRACTOR. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL WOOD BLOCKING AND MISCELLANEOUS HARDWARE REQUIRED TO ANCHOR THE TELEPHONE CONDUITS TO THE TEMPORARY PILE SUPPORTS. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNERS TO PERFORM DEMOLITION OF THE EXISTING ROADWAY, BRIDGE AND I-WALL TO FACILITATE TEMPORARY UTILITY RELOCATION.
3. THE TELEPHONE CONDUITS SHALL BE RELOCATED TO THEIR PERMANENT LOCATION BY OTHERS. THE CONTRACTOR SHALL FURNISH THE REQUIRED BRACKETS AND ANCHOR BOLTS.
4. TEMPORARY PILE SUPPORTS SHALL BE REMOVED BY CONTRACTOR UPON COMPLETION OF PERMANENT RELOCATION OF TELEPHONE CONDUIT BY OTHERS.

45° FITTING (TYP.) ±3'-0"(TYP)* NEW 12 " D.I. WATER LINE BRIDGE OUTLINE TOP OF BRIDGE DECK BRIDGE MOUNTED STREET LIGHTS (6 REQ'D.) BRIDGE LIGHTING CONDUITS AND CONDUCTORS ± 20'-0" (TYP.) CONCRETE UTILITY SADDLE (TYP.)

STA. 105+42.00 BEGIN BRIDGE — STA. 105+89.33 C/L BENT ② — 106+00 — STA. 106+34.67 C/L BENT ③ — STA. 106+82.00 END BRIDGE — 107+00

* LOCATE CONCRETE UTILITY SADDLES TO AVOID CONFLICT WITH UTILITY COVER PLATE SUPPORT BRACKETS

NOTE:
NOMINAL LAYING LENGTH OF WATER LINE PIPE IS APPROXIMATELY 20 '. ALL PIPE JOINTS TO BE RESTRAINED JOINTS.

PROFILE

SCALE: 1 '' = 10 ' (H & V)

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		
⚠	ADDED PERMANENT TELEPHONE CONDUITS	05/25/00	W.D.L.
⚠	RELOCATED PERMANENT 8" GAS LINE	05/25/00	W.D.L.

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HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE UTILITY PLAN

DESIGNED BY: M.R.K.
DRAWN BY: C.R.N.
CHECKED BY: W.D.L.
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER

DATE: MAR.8,2000
PLOT SCALE: 10
CADD FILE: SHT11.DGN
PLOT DATE: MARCH 8, 2000
FILE NO. H-4-44776
SOLICITATION NO. DACW29-00-B-0094
DWG. 11 OF 59

DACW29-00-B-0094

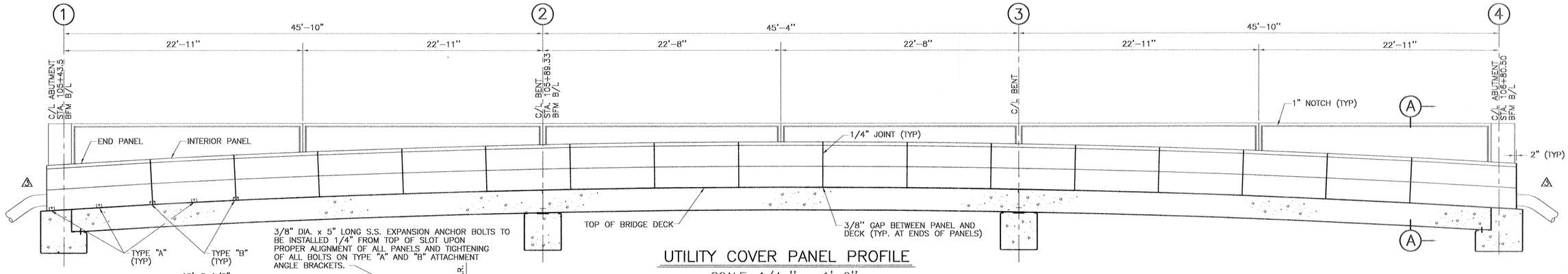
AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

STATE OF LOUISIANA WALTER D. JUDLIN III REG. No. 8708 REGISTERED PROFESSIONAL ENGINEER BY: DIR. CONSTRUCTION 9/27/02

C•A•D

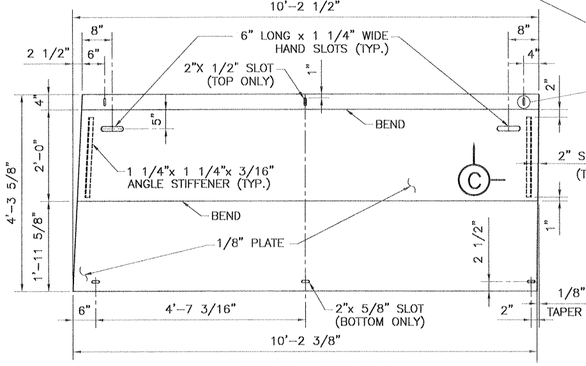
VALUE INGENUITY SLASHES YOUR KEY TO HIGHER PROFITS ENGINEERING

Safety is a Part of Your Contract



UTILITY COVER PANEL PROFILE

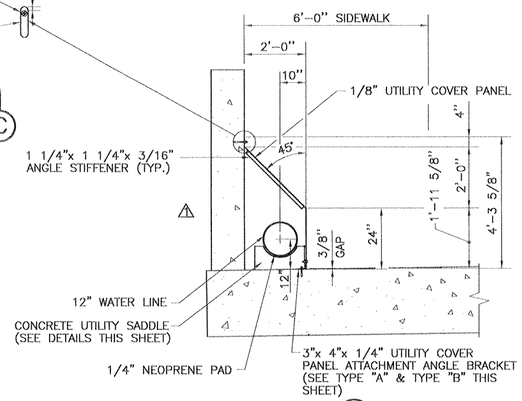
SCALE: 1/4 '' = 1'-0''



ONE AS SHOWN
ONE OPPOSITE HAND

UTILITY COVER END PANEL

SCALE: 3/4 '' = 1'-0''

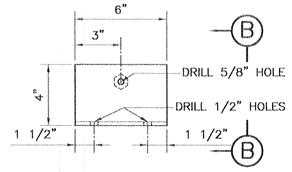


SECTION (A)

SCALE: 1/2'' = 1'-0''

NOTE:

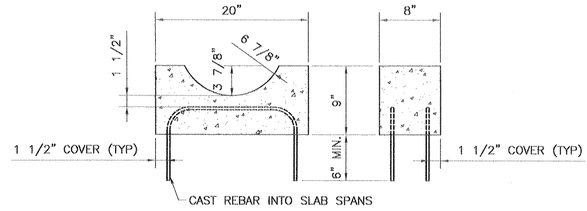
1. ROUND ALL EDGES TO 1/8" DIA. INCLUDING HAND SLOTS.
2. PANELS AND METAL BRACKETS AND BOLTS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION.



19 REQUIRED

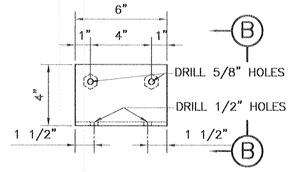
TYPE "A" ATTACHMENT ANGLE BRACKET

SCALE: 3 '' = 1'-0''



CONCRETE UTILITY SADDLE

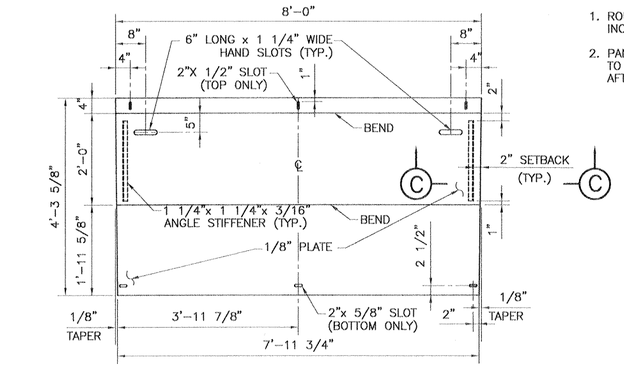
SCALE: 1 1/2 '' = 1'-0''



16 REQUIRED @ JOINTS

TYPE "B" ATTACHMENT ANGLE BRACKET

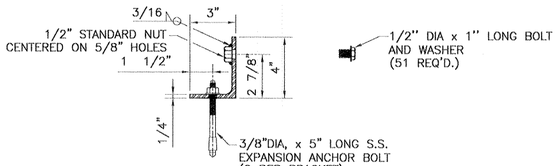
SCALE: 3 '' = 1'-0''



15 REQUIRED

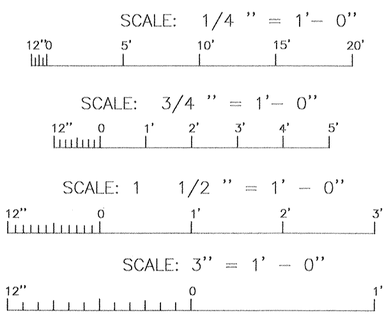
UTILITY COVER INTERIOR PANEL

SCALE: 3/4 '' = 1'-0''

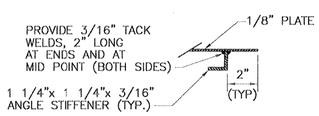


SECTION (B)

SCALE: 3'' = 1'-0''



PROVIDE 3/16" TACK WELDS, 2" LONG AT ENDS AND AT MID POINT (BOTH SIDES)



SECTION (C)

SCALE: 3'' = 1'-0''

VALUE ENGINEERING — INCENTIVE CLAUSES — YOUR KEY TO HIGHER PROFITS

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3
FOR PLAN/PROFILE, SEE DWG. NO. 5
FOR ABUTMENT DETAILS, SEE DWG. NO. 35 AND NO. 36
FOR TYPICAL BRIDGE FLOODWALL DETAIL SEE DWG. NO. 38 AND 43
FOR SLAB SPAN DETAILS, SEE DWG. NO. 40, 41 AND 42

C•A•D

STATE OF LOUISIANA
WALTER D. JUDLIN III
REG. No. 8708
REGISTERED PROFESSIONAL ENGINEER
IN
4/27/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED
⚠	DELETE GAS LINE AT BOTH ENDS OF BRIDGE	08/14/00	W.D.J.
⚠	DELETE STEEL UTILITY BRACKET DETAIL IN ITS ENTIRETY	08/14/00	W.D.J.
⚠	DELETE STEEL UTILITY BRACKET & 8" GAS LINE	08/14/00	W.D.J.

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
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HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

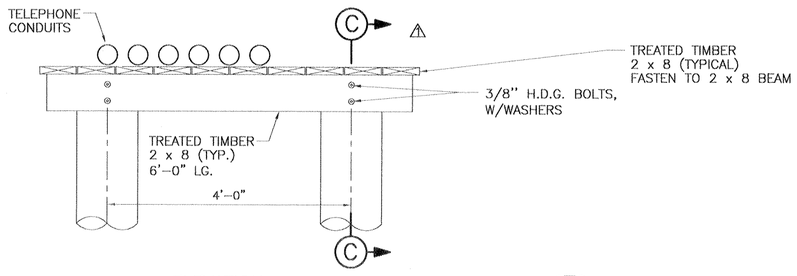
ROBERT E. LEE BOULEVARD BRIDGE UTILITY RELOCATIONS

DESIGNED BY: P.J.H.	DATE: MAR.8,2000	PLOT SCALE: 48	PLOT DATE: MARCH 8, 2000
DRAWN BY: C.R.N.	CADD FILE: SHT12.DGN		FILE NO. H-4-44776
CHECKED BY: W.D.L.			
SUBMITTED BY: HARTMAN ENGINEERING, DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 12 OF 59

Safety is a Part of Your Contract

REQUIRED UTILITY RELOCATION/MODIFICATION

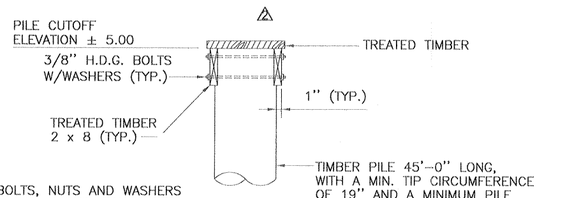
ITEM NO.	DESCRIPTION	LOCATION/B/L STATION	OWNER	DISPOSITION
A–1	GUY ANCHORS	STA. 104+56.40 BFM B/L, 1.70 LT.	ENTERGY	TO REMAIN, DO NOT DISTURB.
CB–1 CB–2	CATCH BASINS	STA. 104+97.58 BFM B/L, 54.53 RT. STA. 105+20.50 BFM B/L, 53.60 RT.	NEW ORLEANS DPW	CONTRACTOR TO ADJUST HEIGHT OF CATCH BASINS TO MATCH NEW CURB GRADES.
CB–3 CB–4	CATCH BASINS	STA. 107+71.60 BFM B/L, 24.32 RT. STA. 107+71.40 BFM B/L, 25.81 LT.	NEW ORLEANS DPW	TO REMAIN, DO NOT DISTURB.
D–1	DRAIN LINES – 10" DIA AND 12" DIA.	ALONG ROBERT E. LEE E.B. SIDEWALK SIDE AND CROSSING ORLEANS AVE.	NEW ORLEANS DPW	TO REMAIN, DO NOT DISTURB.
D–2	10'x7' DRAINAGE SIPHON AND 60" DRAINAGE PIPE	ALONG ROBERT E. LEE 72'± LT. OF BFM B/L (NORTH OF R.E. LEE BRIDGE)	S&WB	TO REMAIN, DO NOT DISTURB.
D–3	DRAIN LINES – 10" DIA. AND 12" DIA.	CROSSING ROBERT E. LEE AT STA. 107+71 BFM B/L	NEW ORLEANS DPW	TO REMAIN, DO NOT DISTURB.
E–1	UG ELECTRICAL – STREET LIGHT UG BURIED	ALONG ROBERT E. LEE E.B LANES – WEST OF BRIDGE, SIDEWALK SIDE	NEW ORLEANS UTILITIES DEPT.	TO REMAIN, DO NOT DISTURB.
E–2	UG ELECTRICAL – 3–WIRE LINE PRIMARY IN CONDUIT	ROBERT E. LEE E.B LANES – WEST OF BRIDGE	ENTERGY	TO REMAIN, DO NOT DISTURB.
E–3	UG ELECTRICAL – 3–WIRE LINE PRIMARY IN CONDUIT	ALONG ROBERT E. LEE 71'± LT. OF BFM B/L (N. OF R.E. LEE BRIDGE)–CROSSES R.E. LEE AT STA. 105+06± BFM B/L	ENTERGY	TO REMAIN, DO NOT DISTURB.
E–4	UG ELECTRICAL – STREET LIGHT UG BURIED	ROBERT E. LEE W.B LANES – WEST OF BRIDGE, SIDEWALK SIDE	NEW ORLEANS UTILITIES DEPT.	TO REMAIN, DO NOT DISTURB.
E–5	ELECTRICAL – STREET LIGHTS IN CONDUIT	ATTACHED TO UNDERSIDE OF EXISTING BRIDGE	NEW ORLEANS UTILITIES DEPT.	OWNER TO DE–ENERGIZE AND CONTRACTOR TO DEMOLISH WITH BRIDGE
E–6	ELECTRICAL – STREET LIGHTS IN CONDUIT	ATTACHED TO UNDERSIDE OF EXISTING BRIDGE	NEW ORLEANS UTILITIES DEPT.	OWNER TO DE–ENERGIZE AND CONTRACTOR TO DEMOLISH WITH BRIDGE
E–7	UG ELECTRICAL – STREET LIGHT UG BURIED	ROBERT E. LEE E.B. LANES. EAST OF BRIDGE, SIDEWALK SIDE	NEW ORLEANS DPW/ ENTERGY	CONTRACTOR TO REMOVE AND REPLACE PORTION OF CONDUIT AS NEEDED FOR LIGHT POLE RELOCATION AND INSTALL NEW CONDUCTORS TO PREVIOUS LIGHT POLE.
E–8	UG ELECTRICAL – STREET LIGHT UG BURIED	ROBERT E. LEE W.B. LANES. EAST OF BRIDGE, SIDEWALK SIDE	NEW ORLEANS UTILITIES DEPT.	OWNER TO DE–ENERGIZE AND ABANDON
E–9	UG ELECTRICAL – STREET LIGHT UG BURIED	ROBERT E. LEE W.B. LANES. EAST OF BRIDGE, SIDEWALK SIDE	NEW ORLEANS UTILITIES DEPT.	CONTRACTOR TO REMOVE AND REPLACE PORTION OF CONDUIT AS NEEDED FOR LIGHT POLE RELOCATION AND INSTALL NEW CONDUCTORS TO PREVIOUS LIGHT POLE.
E–10	ELECTRICAL LINE FOR STREET LIGHTS 1 1/2" CONDUIT	ALONG SOUTH SIDE OF ROBERT E. LEE BRIDGE	NEW ORLEANS UTILITIES DEPT.	CONDUIT AND CONDUCTORS TO BE FURNISHED, INSTALLED, AND CONNECTED BY CONTRACTOR
E–11	ELECTRICAL LINE FOR STREET LIGHTS 1 1/2" CONDUIT	ALONG NORTH SIDE OF ROBERT E. LEE BRIDGE AND ROBERT E. LEE BLVD.	NEW ORLEANS UTILITIES DEPT.	CONDUIT AND CONDUCTORS TO BE FURNISHED, INSTALLED, AND CONNECTED BY CONTRACTOR
E–12	ELECTRICAL LINE FOR STREET LIGHTS 1 1/2" CONDUIT	EAST ABUTMENT	NEW ORLEANS UTILITIES DEPT.	CONDUIT AND CONDUCTORS TO BE FURNISHED, INSTALLED, AND CONNECTED BY CONTRACTOR
E–13	UG ELECTRICAL FOR STREET LIGHT 2" CONDUIT	NORTHEAST CORNER OF ROBERT E. LEE BRIDGE TO EM–3	NEW ORLEANS UTILITIES DEPT.	CONDUIT AND CONDUCTORS TO BE FURNISHED, INSTALLED, AND CONNECTED BY CONTRACTOR
EM–1 EM–2 EM–3	ELECTRICAL MANHOLES	STA. 105+05.72 BFM B/L, 0.89 RT. STA. 105+22.41 BFM B/L, 72.89 LT. STA. 107+24.03 BFM B/L, 67.09 LT.	ENTERGY ENTERGY ENTERGY	TO REMAIN, DO NOT DISTURB. TO REMAIN, DO NOT DISTURB. TO REMAIN, CONTRACTOR TO ROUTE NEW E–13 INTO MANHOLE. SPLICE INTO 120 V STREET LIGHT CIRCUIT USING WATERPROOF SPLICES AS SPECIFIED.
FH–1 FH–2	FIRE HYDRANTS	STA. 104+63.55 BFM B/L, 45.33 RT. STA. 104+52.76 BFM B/L 53.98 LT.	S&WB	TO REMAIN, DO NOT DISTURB.
G–1	8" H.P. GAS LINE	ATTACHED TO NORTH SIDE OF EXISTING BRIDGE	ENTERGY GAS OPERATIONS	⚠3 CONTRACTOR TO DEMOLISH ABANDONED LINE WITH BRIDGE DEMOLITION.
⚠3				
G–1	8" H.P. GAS LINE	ATTACHED TO PROTECTED SIDE FACE OF NORTH BRIDGE WALL	ENTERGY GAS OPERATIONS	TO REMAIN. GAS LINE LOCATED APPROXIMATED 3 FEET BELOW EXISTING GRADE. UPON NOTIFICATION BY CONTRACTOR, OWNER SHALL TEMPORARILY REMOVE THE SECTION OF GAS LINE IN CONFLICT WITH NEW SHEET PILING. OWNER WILL RE–INSTALL LINE AFTER CONTRACTOR INSTALLS STEEL CASING. ⚠3
LT–1 LT–2	LIGHT POLES	STA. 104+72.55 BFM B/L, 42.30 RT. STA. 104+80.27 BFM B/L, 37.22 LT.	NEW ORLEANS UTILITIES DEPT.	TO REMAIN, DO NOT DISTURB.
LT–3 LT–4	LIGHT POLES	STA. 107+42.83 BFM B/L, 25.56 RT. STA. 107+40.41 BFM B/L, 27.48 LT.	NEW ORLEANS UTILITIES DEPT.	TO BE RELOCATED BY CONTRACTOR TO STA.107+45.00, 28'RT. AND STA.107+45.00, 28'LT. RESPECTIVELY
LT–5 LT–6 LT–7 LT–8 LT–9 LT–10	STREET LIGHTS WITH POLES MOUNTED TO NEW BRIDGE	STA. 105+43.00 BFM B/L, 38.50 RT. STA. 105+43.00 BFM B/L, 38.50 LT. STA. 106+12.00 BFM B/L, 38.50 RT. STA. 106+12.00 BFM B/L, 38.50 LT. STA. 106+81.00 BFM B/L, 38.50 RT. STA. 106+81.00 BFM B/L, 38.50 LT.	NEW ORLEANS UTILITIES DEPT.	LIGHT POLES AND FIXTURES TO BE FURNISHED AND INSTALLED BY CONTRACTOR
LT–11 LT–12 LT–13 LT–14 LT–15 LT–16	LIGHT POLES MOUNTED ON EXISTING BRIDGE	STA. 105+42.29 BFM B/L, 29.52 RT. STA. 105+40.83 BFM B/L, 29.38 LT. STA. 106+09.91 BFM B/L, 29.52 RT. STA. 106+09.94 BFM B/L, 29.66 LT. STA. 106+80.69 BFM B/L, 29.25 RT. STA. 106+80.91 BFM B/L, 29.83 LT.	NEW ORLEANS UTILITIES DEPT.	OWNER TO DE–ENERGIZE AND CONTRACTOR TO REMOVE AND DELIVER TO THE CITY OF NEW ORLEANS. CONTRACTOR MUST REMOVE LT–11, LT–13 AND LT–15 PRIOR TO RELOCATION OF G–1.
S–1	12" SEWER LINE	78'± LT. OF BFM B/L ALONG ROBERT E. LEE (NORTH OF R.E. LEE BRIDGE)	S&WB	TO REMAIN, DO NOT DISTURB.
SG–1 SG–2	STREET SIGNS	STA. 105+04.72 BFM B/L, 0.89 LT. STA. 105+21.76 BFM B/L, 49.64 RT.	NEW ORLEANS DPW	REMOVE AND STORE DURING CONSTRUCTION, REINSTALL DURING FINAL SIGNING AND STRIPING
SM–1	SEWER MANHOLE	STA. 107+56.94 BFM B/L, 77.36 LT.	S&WB	TO REMAIN, DO NOT DISTURB.
T–1	TELEPHONE CONDUITS (SIX 4" CONDUITS)	ALONG ROBERT E. LEE E.B. LANES SIDEWALK SIDE AND ATTACHED TO SOUTH SIDE OF EXISTING BRIDGE	BELLSOUTH	TO BE RELOCATED BY OWNER AFTER CONTRACTOR INSTALLS TEMPORARY SUPPORTS AND DEMOLISHES EXISTING SOUTHWEST FLOODWALL AND A SECTION OF THE BRIDGE.
T–1	TELEPHONE CONDUITS (SIX 4" CONDUITS)	ATTACHED TO TEMPORARY PILE SUPPORTS SOUTH OF ROBERT E. LEE BRIDGE	BELLSOUTH	TEMPORARY RELOCATION BY OWNER WITHIN 28 CALENDAR DAYS OF COMPLETION OF TEMPORARY SUPPORTS AND REQUIRED DEMOLITION BY CONTRACTOR.
T–1	TELEPHONE CONDUITS (SIX 4" CONDUITS)	ATTACHED TO FLOOD SIDE FACE OF SOUTH BRIDGE WALL	BELLSOUTH	TO BE INSTALLED BY OWNER WITHIN 28 CALENDAR DAYS AFTER WRITTEN NOTICE FROM CONTRACTOR
T–2 T–3	ABANDONED SUBMARINE CABLES	41±' AND 56'± RT. OF BFM B/L (SOUTH OF R.E. LEE BRIDGE)	BELLSOUTH	ABANDONED, DO NOT DISTURB.
TM–1 TM–2	ABANDONED TELEPHONE MANHOLES	STA. 103+30.33 BFM B/L, 46.50 RT. STA. 107+41.90 BFM B/L, 46.31 RT.	BELLSOUTH	TO BE DEMOLISHED AND RE–CONSTRUCTED BY OWNER
W–1	12" WATER MAIN	ATTACHED TO NORTH SIDE OF EXISTING BRIDGE	S&WB	VALVES ON THE EAST AND WEST CANAL BANKS TO BE SHUT OFF BY S&WB DURING CONSTRUCTION. LINE TO BE REMOVED IN CONJUNCTION WITH BRIDGE DEMOLITION. WORK TO BE PERFORMED BY CONTRACTOR.
W–2	12" PVC WATER MAIN	ALONG ROBERT E. LEE E/B LANES, SIDEWALK SIDE	S&WB	TO REMAIN, DO NOT DISTURB.
W–3	6" WATER LINE	ALONG ORLEANS AVENUE AT STA. 104+93± BFM B/L	S&WB	TO REMAIN, DO NOT DISTURB.
W–4	12" WATER LINE	SUPPORTED ON SIDEWALK OF NEW BRIDGE	S&WB	CONTRACTOR TO FURNISH AND INSTALL NEW LINE
WM–1	WATER MANHOLE	STA. 107+61.17 BFM B/L, 73.11 LT.	S&WB	UPON NOTIFICATION BY CONTRACTOR, THE S&WB SHALL SHUT OFF VALVES DURING WATER LINE RELOCATION. MANHOLE TO REMAIN.



ELEVATION

TEMPORARY PILE SUPPORT DETAILS

SCALE: 1" = 1'–0"



NOTES:

1. ALL BOLTS, NUTS AND WASHERS TO BE HOT DIPPED GALVANIZED.
2. CONTRACTOR TO COORDINATE TEMPORARY AND PERMANENT RELOCATION WITH THE OWNER. (ENTERGY)

SECTION C

SCALE: 1" = 1'–0"

REFERENCE DRAWINGS

1. FOR GENERAL NOTES, SEE DWG. NO. 3.
2. FOR UTILITY PLAN, SEE DWG. NO. 11.
3. FOR UTILITY COVER PANEL, SEE DWG NO. 12.
4. FOR PERMANENT TELEPHONE SUPPORT BRACKETS, SEE DWG. NO. 30.

SCALE: 1" = 1'– 0"

12" 0 1' 2' 3' 4' 5'

STATE OF LOUISIANA
WALTER R. JUDLIN III
REG. No. 8708
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
9/27/02

DACW29–00–B–0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

VALUE ENGINEERING CLASSES — YOUR KEY TO HIGHER PROFITS

C•A•D

SYMBOL	DESCRIPTION	DATE	APPROVED
⚠3	CHANGES TO ITEMS G–1 IN TABLE	08/14/00	W.D.J.
⚠2	DELETE GAS LINE FROM SECTION VIEW	08/14/00	W.D.J.
⚠1	DELETE GAS LINE FROM ELEVATION VIEW	08/14/00	W.D.J.

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE BOARD NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC. CONSULTING ENGINEERS KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE UTILITY RELOCATIONS

DESIGNED BY: M.K.R.	DATE: MAR.8,2000	PLOT SCALE: 12	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.			
CHECKED BY: W.D.J.	CADD FILE: SHT13.DGN		FILE NO. H–4–44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29–00–B–0094		DWG. 13 OF 59

Safety is a Part of Your Contract

92+00

91+00

90+00

105+00

106+00

107+00

N

PANEL 1

PANEL 2

PANEL 3

PANEL 4

PANEL 8

PANEL 9

PANEL 10

PANEL 11

PANEL 14

PANEL 15

PANEL 16

SEE DWG. NO. 16 FOR PANELS 5, 6 AND 7

SEE DWG. NO. 17 FOR PANELS 12 AND 13

U.S. ARMY CORPS OF ENGINEERS OFFSET W B/L N05°50'55"E

E B/L N05°50'55"E

U.S. ARMY CORPS. OF ENGINEERS E B/L N05°50'55"E

U.S. ARMY CORPS. OF ENGINEERS W B/L N05°50'55"E

C/L EXISTING UNCAPPED SHEET PILING

CAP EXISTING SHEET PILING STA. 10+25.34 W/L TO STA. 11+96.78 W/L

LIMIT OF EXIST. SHEET PILING STA. 91+42.12 OFFSET W B/L = 13.69' RT. = STA. 10+25.34 W/L

℄ ABUTMENT (1) STA. 105+43.50

℄ BENT (2) STA. 105+89.33

℄ BENT (3) STA. 106+34.67

℄ ABUTMENT (4) STA. 106+80.50

1 14|15

2 14|15

3 14|15

4 14|15

LIMITS OF GRADING

W/L

FLOW TO LAKE PONTCHARTRAIN

BRIDGE HEADWALL

3'-0"

SILT FENCING

SILT FENCING— EXTEND TO TOE OF LEVEE ±30'RT. OF E B/L

LIMIT OF EXIST. SHEET PILE WALL STA. 91+52.78 E B/L 10.58' LT. = STA. 10+40.28 W/L

CAP EXISTING SHEET PILING STA. 10+40.28 W/L TO STA. 11+74.56 W/L

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3.

FOR PLAN AND PROFILE, SEE DWG. NO. 4.

FOR LIMITS AND ALIGNMENT OF UNCAPPED SHEET PILING, SEE DWG. NOS. 17 AND 18.

EQUATION: STA. 105+10.81 BFM B/L= STA. 90+85.81 OFFSET W B/L

BFM B/L S84°17'54"E

S85°58'58"E

S85°58'57"E

P.I. STA. 105+23.00 BFM B/L

P.I. STA. 105+38.82 BFM B/L

N 4°01'03"E

N04°01'03"E

STA. 105+68 BFM B/L LIMITS OF RIPRAP

STA. 106+56 BFM B/L LIMITS OF RIPRAP

77'-0" ROBERT E. LEE BOULEVARD BRIDGE

BASELINE INTERSECTION STA. 107+20.92 BFM B/L= STA. 90+92.17 E B/L

SILT FENCING SEE DWG. NO. 20 FOR DETAIL.

LIMIT OF EXISTING "T"-WALL STA. 90+26.91 W B/L 4.00' RT. = STA. 10+00.00 W/L

EXISTING "T"-WALL

ORLEANS AVENUE OUTFALL CANAL

CAP SHEET PILING

STA. 90+23.20 E B/L 10.125' LT.

STA. 90+17.70 E B/L 11.18' LT. = STA. 10+00.00 W/L

FLOODWALL KEY PLAN

SCALE: 1" = 10'

10' 0 10' 20' 30' 40'

DACW29-00-B-0094

AS BUILT PLANS

DATE RECEIVED 3/15/02

DATE TRACINGS CORRECTED 4/18/02

STATE OF LOUISIANA Walter D. Judlin, III No. 8408 REGISTERED PROFESSIONAL ENGINEER 4/27/02

VALUE INCENTIVE CLAUSES ENGINEERING YOUR KEY TO HIGHER PROFITS

C•A•D

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

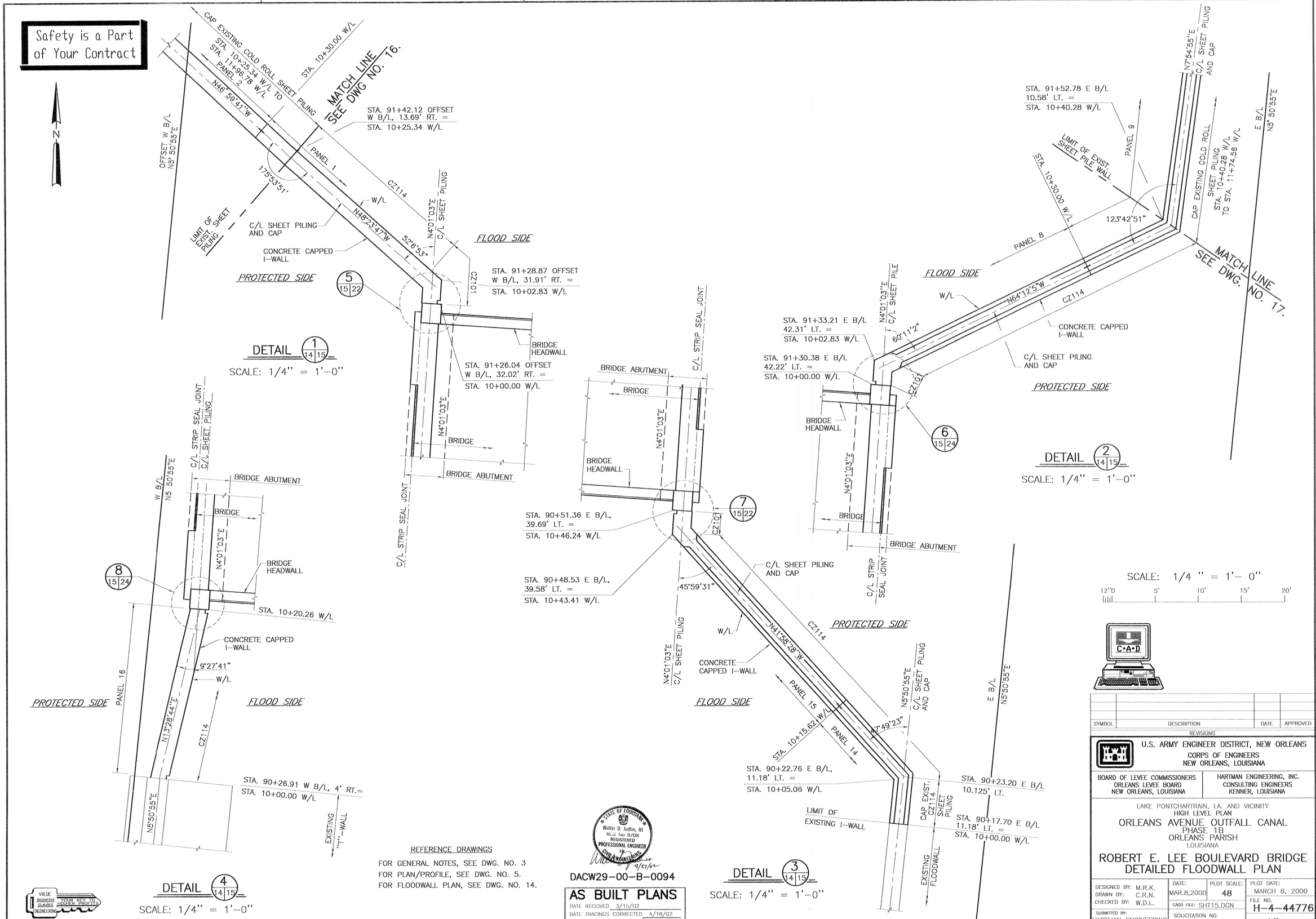
HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE FLOODWALL PLAN

DESIGNED BY: M.K.R.	DATE: MAR.8,2000	PLOT SCALE: 10	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.	CADD FILE: SHT14.DGN		FILE NO. H-4-44776
CHECKED BY: W.D.L.			
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 14 OF 59

Safety is a Part of Your Contract



SCALE: 1/4 " = 1'- 0"

12"0 5' 10' 15' 20'

C•A•D

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
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HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE DETAILED FLOODWALL PLAN

DESIGNED BY: M.R.K.	DATE: MAR.8,2000	PLOT SCALE: 48	PLOT DATE: MARCH 8, 2000
DRAWN BY: C.R.N.	CADD FILE: SHT15.DGN		FILE NO. H-4-44776
CHECKED BY: W.D.L.			
SUBMITTED BY: HARTMAN ENGINEERING, DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 15 OF 59

VALUE INCENTIVE CLASSES — YOUR KEY TO HIGHER PROFITS — ENGINEERING

REFERENCE DRAWINGS

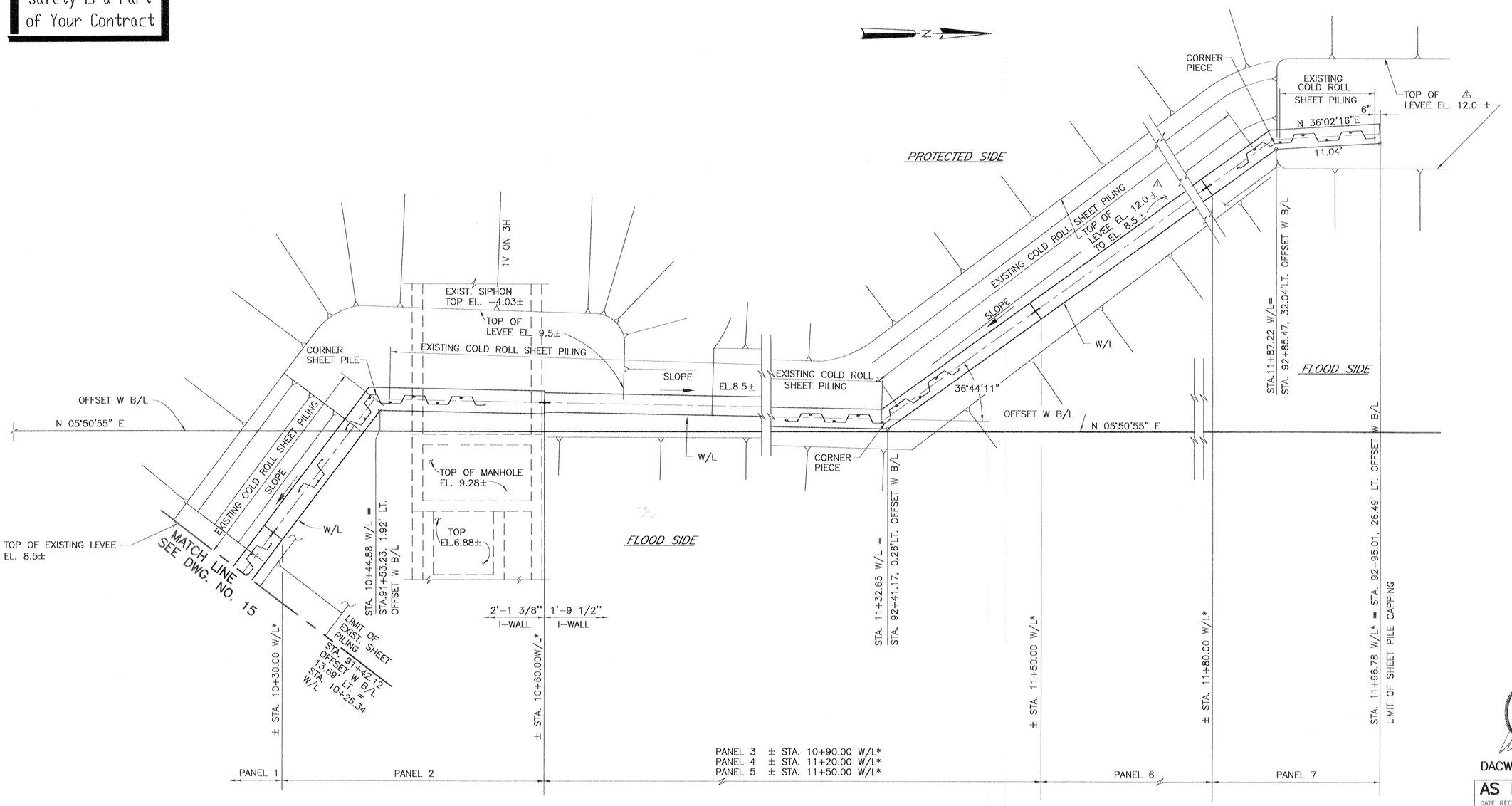
FOR GENERAL NOTES, SEE DWG. NO. 3
FOR PLAN/PROFILE, SEE DWG. NO. 5.
FOR FLOODWALL PLAN, SEE DWG. NO. 14.

STATE OF LOUISIANA
Walter D. Judlin, III
R.G. No. 8708
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
9/21/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

Safety is a Part of Your Contract



*PANELS TO END AT SHEET PILE INTERLOCK NEAREST TO THE WALL LINE STATION CALLED OUT ON THE DRAWING.

PLAN

SCALE: 1/4 " = 1'- 0"

12'0 5' 10' 15' 20'

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3.

FOR PLAN/PROFILE, SEE DWG. NO. 5.

FOR FLOODWALL PLAN, SEE DWG. NO. 14.

FOR WALL REINFORCEMENT, SEE DWG. NO. 27.

FOR FLOODWALL PROFILES, SEE DWG. NOS. 18 AND 19.

FOR OFFSET BASELINE, SEE DWG. NOS. 5 AND 14.

STATE OF LOUISIANA
Walter D. Judin, III
No. 26 8/08
REGISTERED PROFESSIONAL ENGINEER
4/2/02

DACW29-00-B-0094

AS BUILT PLANS

DATE RECEIVED 3/15/02

DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED
⚠	CHANGED CONCRETE CAP & EXIST. SHEET PILE	04/03/01	W.D.J.

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
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NEW ORLEANS, LOUISIANA

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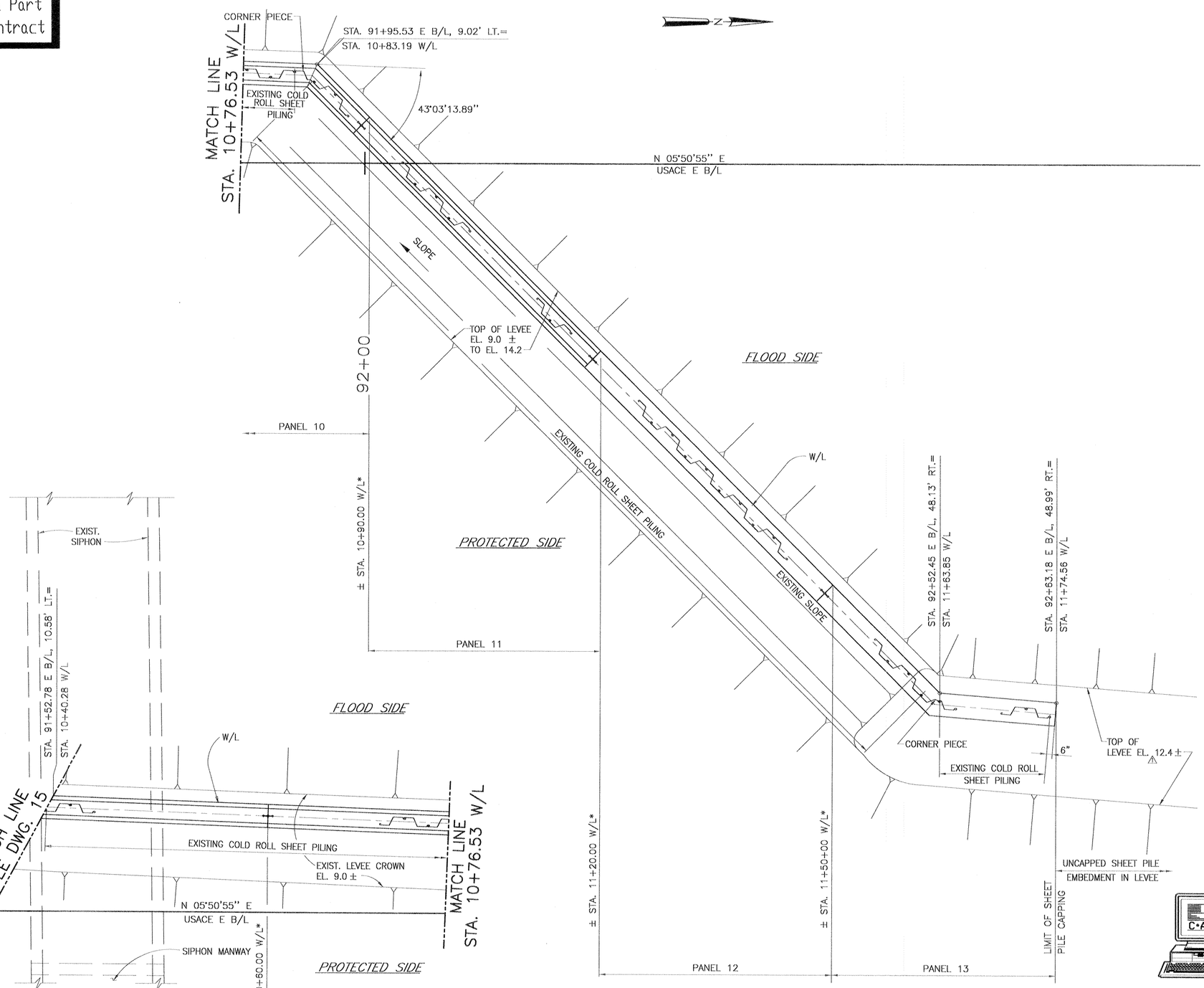
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE DETAILED FLOODWALL PLAN

DESIGNED BY: M.K.R. DRAWN BY: L.A.C. CHECKED BY: W.D.L.	DATE: MAR.8,2000	PLOT SCALE: 48	PLOT DATE: MARCH 8, 2000
	CADD FILE: SHT16.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094	DWG. 16 OF 59	

VALUE INCENTIVE CLAUSES — YOUR KEY TO HIGHER PROFITS — ENGINEERING

Safety is a Part of Your Contract



PLAN

SCALE: 1/4 " = 1'- 0"

12'0 5' 10' 15' 20'

*PANELS TO END AT SHEET PILE INTERLOCK NEAREST TO THE WALL LINE STATION CALLED OUT ON DRAWING.

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3.

FOR PLAN/PROFILE, SEE DWG. NO. 5.

FOR FLOODWALL PLAN, SEE DWG. NO. 14.

FOR WALL REINFORCEMENT, SEE DWG. NO. 27.

FOR FLOODWALL PROFILES, SEE DWG. NOS. 18 AND 19.

SYMBOL	DESCRIPTION	DATE	APPROVED
4	CHANGED CONCRETE CAP & EXIST. SHEET PILE	03/13/01	W.D.J.

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
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PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE DETAILED FLOODWALL PLAN

STATE OF LOUISIANA
Walter D. Judlin, III
No. 34018
REGISTERED PROFESSIONAL ENGINEER
4/9/02

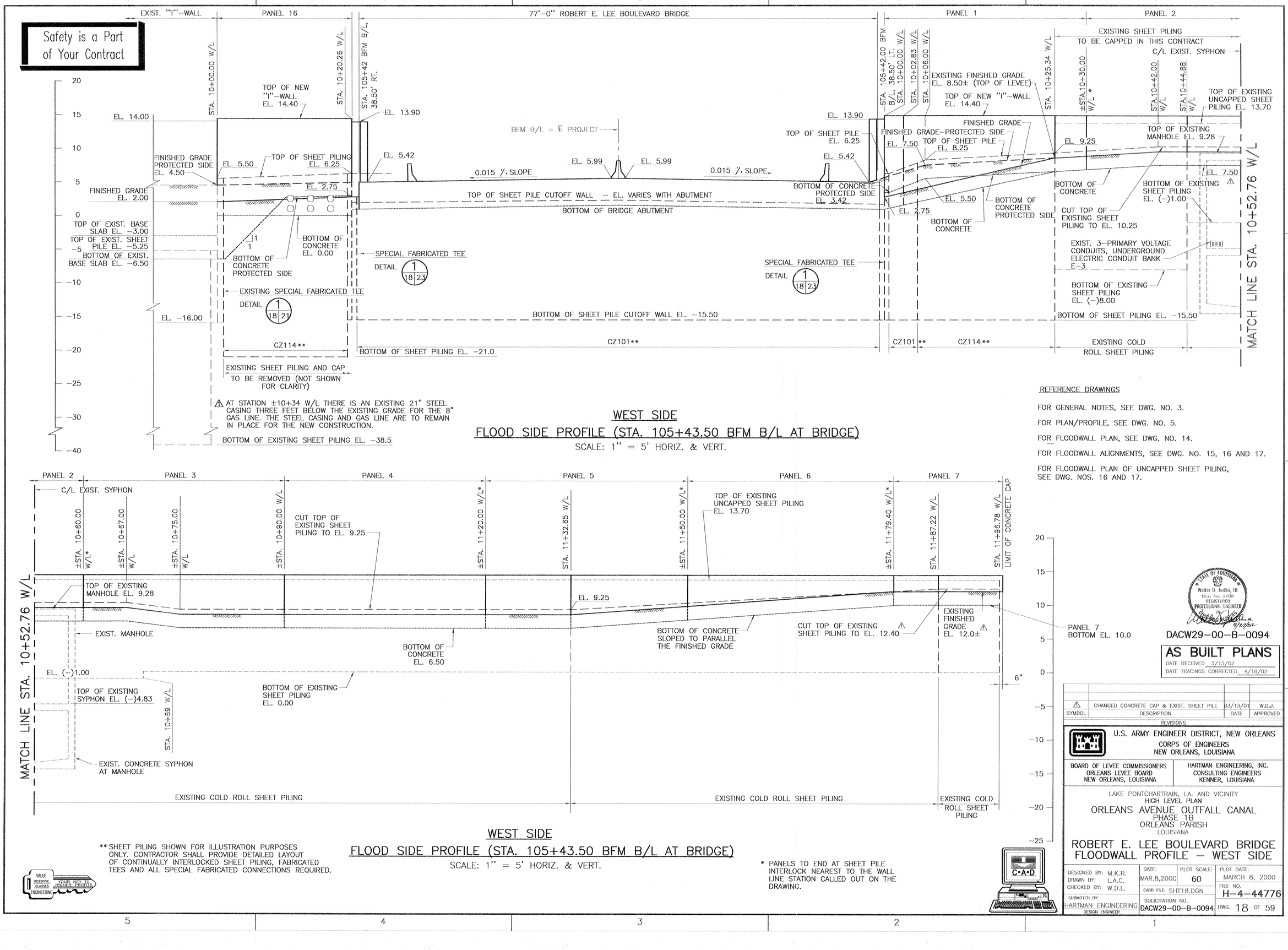
DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

DESIGNED BY: M.K.R.	DATE: MAR.8,2000	PLOT SCALE: 48	PLOT DATE: MARCH 8, 2000
DRAWN BY: C.R.N.			
CHECKED BY: W.D.L.	CADD FILE: SHT17.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0029		DWG. 17 OF 59

VALUE ENGINEERING — YOUR KEY TO HIGHER PROFITS

Safety is a Part of Your Contract



WEST SIDE
FLOOD SIDE PROFILE (STA. 105+43.50 BFM B/L AT BRIDGE)
SCALE: 1" = 5' HORIZ. & VERT.

WEST SIDE
FLOOD SIDE PROFILE (STA. 105+43.50 BFM B/L AT BRIDGE)
SCALE: 1" = 5' HORIZ. & VERT.

** SHEET PILING SHOWN FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR SHALL PROVIDE DETAILED LAYOUT OF CONTINUALLY INTERLOCKED SHEET PILING, FABRICATED TEES AND ALL SPECIAL FABRICATED CONNECTIONS REQUIRED.

* PANELS TO END AT SHEET PILE INTERLOCK NEAREST TO THE WALL LINE STATION CALLED OUT ON THE DRAWING.

VALUE ENGINEERING — INCENTIVE CLAUSES — YOUR KEY TO HIGHER PROFITS

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3.

FOR PLAN/PROFILE, SEE DWG. NO. 5.

FOR FLOODWALL PLAN, SEE DWG. NO. 14.

FOR FLOODWALL ALIGNMENTS, SEE DWG. NO. 15, 16 AND 17.

FOR FLOODWALL PLAN OF UNCAPPED SHEET PILING, SEE DWG. NOS. 16 AND 17.

STATE OF LOUISIANA
Walter D. Judin, III
No. 24 744
REGISTERED PROFESSIONAL ENGINEER
9/12/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED
⚠	CHANGED CONCRETE CAP & EXIST. SHEET PILE	03/13/01	W.D.J.

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
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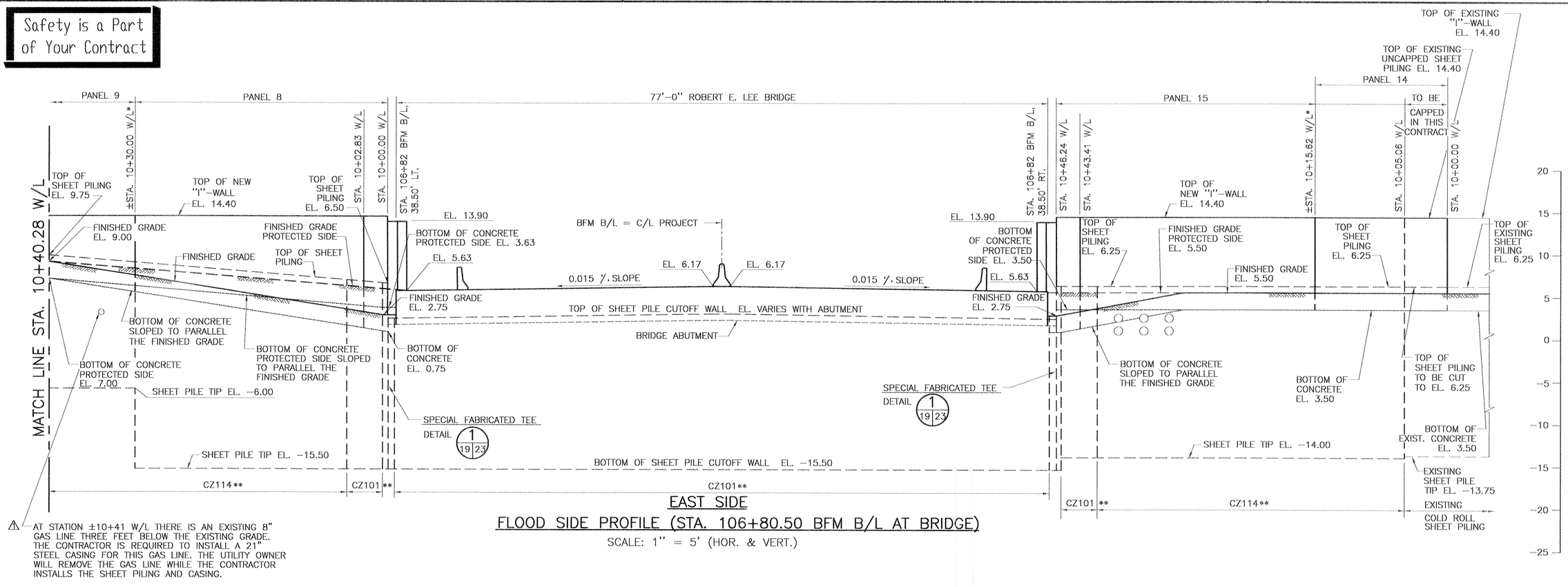
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE FLOODWALL PROFILE — WEST SIDE

DESIGNED BY: M.K.R.	DATE: MAR.8,2000	PLOT SCALE: 60	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.	CADD FILE: SHT18.DGN		FILE NO. H-4-44776
CHECKED BY: W.D.L.			
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 18 OF 59

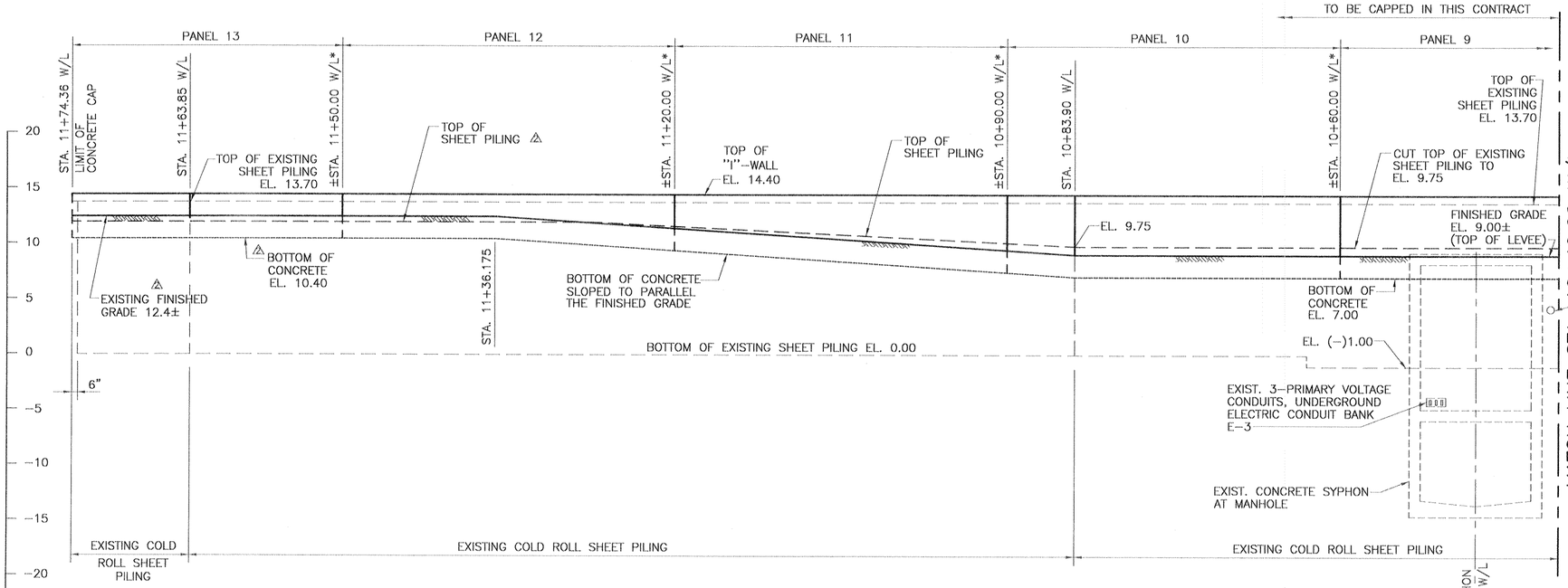
Safety is a Part of Your Contract



EAST SIDE
FLOOD SIDE PROFILE (STA. 106+80.50 BFM B/L AT BRIDGE)

SCALE: 1" = 5' (HOR. & VERT.)

⚠ AT STATION ±10+41 W/L THERE IS AN EXISTING 8" GAS LINE THREE FEET BELOW THE EXISTING GRADE. THE CONTRACTOR IS REQUIRED TO INSTALL A 21" STEEL CASING FOR THIS GAS LINE. THE UTILITY OWNER WILL REMOVE THE GAS LINE WHILE THE CONTRACTOR INSTALLS THE SHEET PILING AND CASING.



** SHEET PILING SHOWN FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR SHALL PROVIDE DETAILED LAYOUT OF CONTINUALLY INTERLOCKED SHEET PILING, FABRICATED TEES AND ALL SPECIAL FABRICATED CONNECTIONS REQUIRED.

EAST SIDE
FLOOD SIDE PROFILE (STA. 106+80.50 BFM B/L AT BRIDGE)

SCALE: 1" = 5' (HOR. & VERT.)

* PANELS TO END AT SHEET PILE INTERLOCK NEAREST TO THE WALL LINE STATION CALLED OUT ON THE DRAWING.

VALUE INCENTIVE CLAUSES — VEIN WAY TO HIGHER PROFITS — ENGINEERING

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3.

FOR PLAN/PROFILE, SEE DWG. NO. 5.

FOR FLOODWALL PLAN, SEE DWG. NO. 14.

FOR FLOODWALL ALIGNMENTS, SEE DWG. NO. 15, 16 AND 17.

FOR FLOODWALL PLAN OF UNCAPPED SHEET PILING, SEE DWG. NOS. 16 AND 17.

C•A•D

SYMBOL	DESCRIPTION	DATE	APPROVED
⚠	CHANGED CONCRETE CAP & EXIST. SHEET PILE	03/15/01	W.D.J.
⚠	NOTE FOR INSTALLATION OF 21" STEEL CASING	08/14/00	W.D.J.

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
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LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE FLOODWALL PROFILE – EAST SIDE

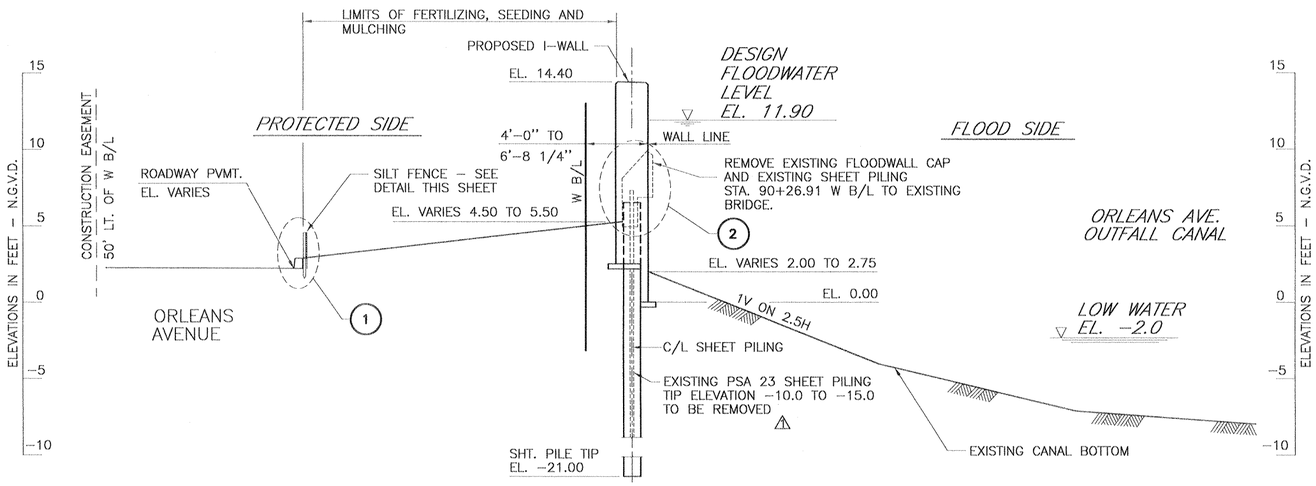
Walter D. Judlin, III
REG. NO. 8708
REGISTERED PROFESSIONAL ENGINEER
STATE OF LOUISIANA
9/27/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

DESIGNED BY: M.K.R.	DATE: MAR.8,2000	PLOT SCALE: 60	PLOT DATE: MARCH 8, 2000
DRAWN BY: C.R.N.	CADD FILE: SHT19.DGN		FILE NO. H-4-44776
CHECKED BY: W.D.L.	SOLICITATION NO. DACW29-00-B-0094		DWG. 19 OF 59
SUBMITTED BY: HARTMAN ENGINEERING, DESIGN ENGINEER			

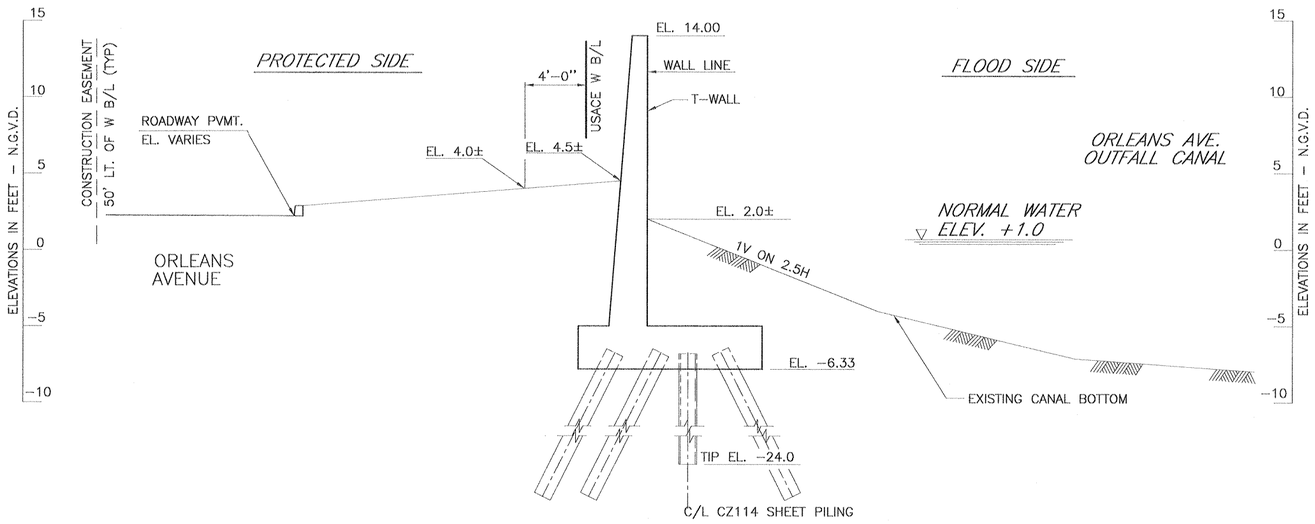
Safety is a Part of Your Contract



STATION 90+26.91 W B/L TO STATION 90+46.80 W B/L
STATION 10+00.00 W/L TO STATION 10+20.26 W/L

I-WALL SECTION

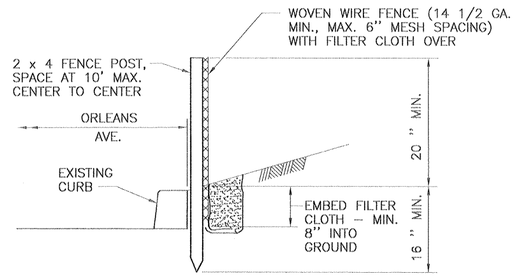
SCALE: 1/4 " = 1 ' - 0 "



STATION 64+51.53 W B/L TO STATION 90+26.91 W B/L

EXISTING T-WALL SECTION

SCALE: 1/4 " = 1 ' - 0 "

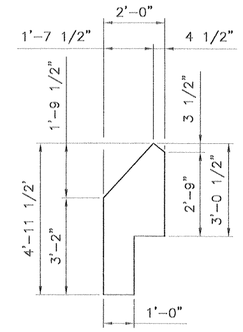


SILT FENCE

DETAIL (1)

N.T.S.

FILTER CLOTH REQUIREMENTS		
PROPERTY	TEST METHOD	REQUIREMENTS
AOS, U. S. SIEVE, MIN.	ASTM D 4751	20
GRAB TENSILE, LB, MIN.	ASTM D 4632	90
PERMITTIVITY, SEC.$^{-1}$, MIN.	ASTM D 4491	0.01
WEATHEROMETER, %, MIN.	DOTD TR 611	70



EXISTING FLOODWALL CAP

DETAIL (2)

SCALE: 1/2 " = 1 ' - 0 "

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3.
FOR FLOODWALL PLAN, SEE DWG. NO. 14.
FOR FLOODWALL PROFILE - WEST SIDE, SEE DWG. NO. 18.

SCALE: 1/4 " = 1 ' - 0 "

12"0 5' 10' 15' 20'

VALUE ENGINEERING INCENTIVE CLAUSES YOUR KEY TO HIGHER PROFITS

STATE OF LOUISIANA
Walter D Judlin, III
Reg. No. 31708
REGISTERED PROFESSIONAL ENGINEER IN
Civil Engineering

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

C•A•D

SYMBOL	DESCRIPTION	DATE	APPROVED
1	SUBSTITUTE "TIP ELEVATION" FOR "TOP ELEVATION"	08/14/00	W.D.L.

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

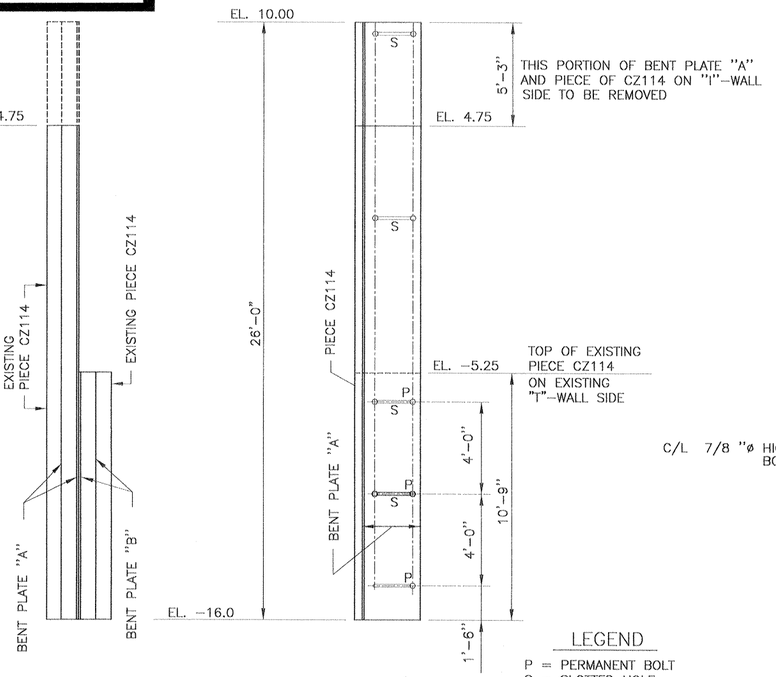
HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
TYPICAL WALL SECTIONS
SOUTHWEST OF BRIDGE

DESIGNED BY: M.K.R. DRAWN BY: C.R.N. CHECKED BY: W.D.L.	DATE: MAR.8,2000	PLOT SCALE: 48	PLOT DATE: MARCH 8, 2000
	CADD FILE: SHT20.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094	DWG. 20 OF 59	

Safety is a Part of Your Contract



LEGEND

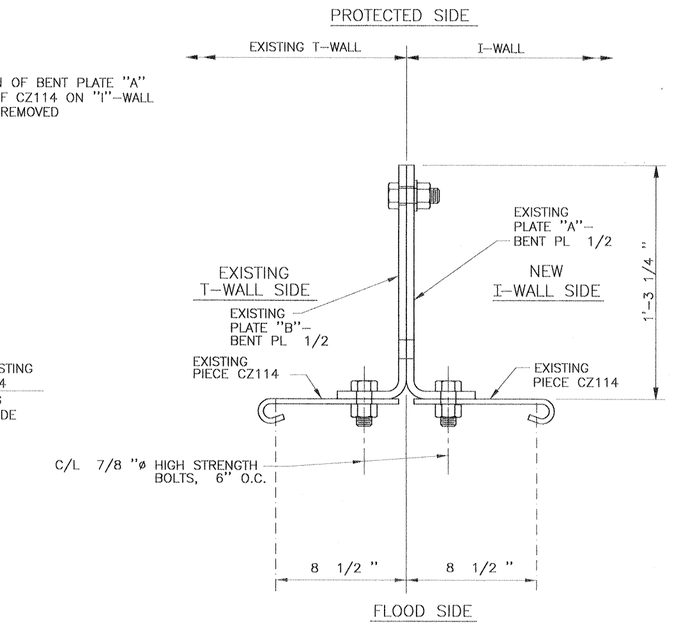
P = PERMANENT BOLT
S = SLOTTED HOLE (PLATE "A" ONLY)

PROTECTED SIDE ELEVATION

NEW I-WALL SIDE ELEVATION

ELEVATION OF SPECIAL CZ114 TEE SHOWING BENT PLATES BOLT SPACING

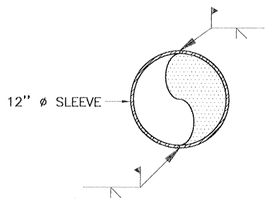
SCALE: 3/4"=1'-0" (HORZ.)
3/8"=1'-0" (VERT.)



DETAIL (1 / 25 / 21)

EXISTING SPECIAL CZ114 TEE

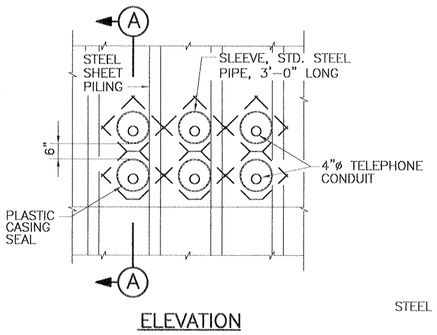
SCALE: 3" = 1' - 0"



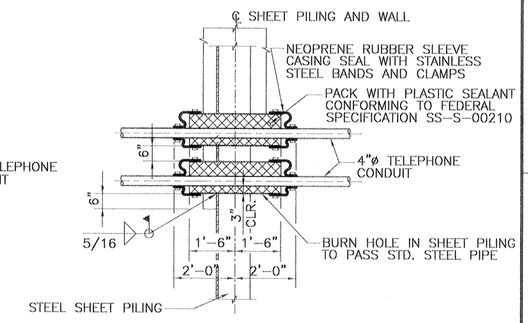
NOTE:
THE TELEPHONE CONDUITS MUST PASS THROUGH THE SHEET PILING WITHOUT CUTTING THE CONDUITS. THE CONTRACTOR WILL DRIVE SHEET PILING AND INSTALL SPLIT SLEEVES. AFTER INSTALLATION OF NEW SPLIT SLEEVES BY CONTRACTOR, BELLSOUTH WILL MOVE CONDUITS INTO SLEEVES TO ALLOW CONTRACTOR TO COMPLETE THE INSTALLATION OF SPLIT SLEEVES AND SHEET PILING.

PIPE TABULATION AND SLEEVE TABLE

UTILITY MARK	APPROX. W/L STA.	PANEL NUMBER	MINIMUM SLEEVE SIZE		
			NOMINAL SIZE	INSIDE DIAMETER	OUTSIDE DIAMETER
T-1	10+16.00	16	12"ø	12.000"ø	12.750"ø
T-1	10+37.00	15	12"ø	12.000"ø	12.750"ø
G-1	10+40.00	9	22"ø	21.250"ø	22.000"ø



ELEVATION

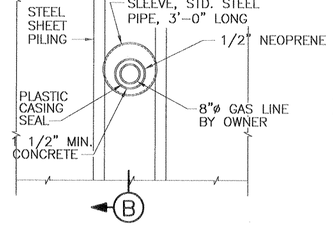


SECTION "A" THRU STEEL SHEET PILING

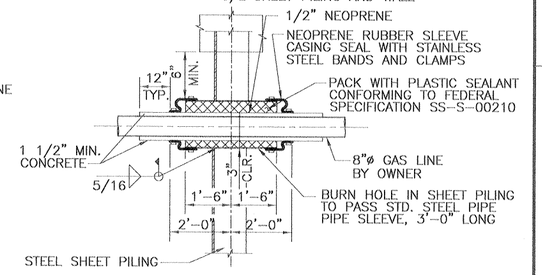
SHEET PILE TELEPHONE CONDUIT PENETRATION DETAIL

PANEL 16 SHOWN, PANEL 15 SIMILAR

SCALE: 1/2" = 1'-0"



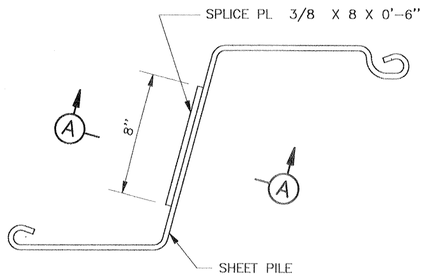
ELEVATION



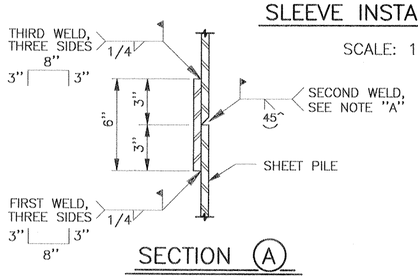
SECTION "B" THRU STEEL SHEET PILING

SHEET PILE GAS LINE PENETRATION DETAIL

SCALE: 1/2" = 1'-0"



PLAN



SECTION (A)

SLEEVE INSTALLATION IN HALVES

SCALE: 1 1/2" = 1' - 0"

SHEET PILE SPLICE DETAIL

SCALE: 3" = 1' - 0"

NOTE "A"
GROOVE WELD SHALL EXTEND THE FULL LENGTH OF THE SHEET PILE WEB AND FLANGES EXCLUDING THE INTERLOCKS.

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3.

FOR UTILITY RELOCATIONS, SEE DWG. NOS. 11, 12, AND 13.

FOR FLOODWALL PLAN, SEE DWG. NO. 14.

FOR FLOODWALL ALIGNMENTS, SEE DWG. NO. 15, 16 AND 17.

FOR FLOODWALL PROFILES, SEE DWG. NOS. 18 AND 19.

SCALE: 3/8" = 1'- 0"

12" 0 2' 4' 6' 8' 10'

SCALE: 3/4" = 1'- 0"

12" 0 1' 2' 3' 4' 5'

SCALE: 1 1/2 " = 1'- 0"

12" 0 1' 2' 3' 4' 5'

SCALE: 3 " = 1'- 0"

12" 0 1' 2'

VALUE INCENTIVE CLAUSES — YOUR KEY TO HIGHER PROFITS — ENGINEERING

STATE OF LOUISIANA — Walter D. Judice, III — Reg. No. 8708 — REGISTERED PROFESSIONAL ENGINEER — 4/12/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED
1	ADDED GAS PIPE THRU STEEL SHEET PILING	05/30/00	W.D.L.

REVISIONS

C-A-D

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

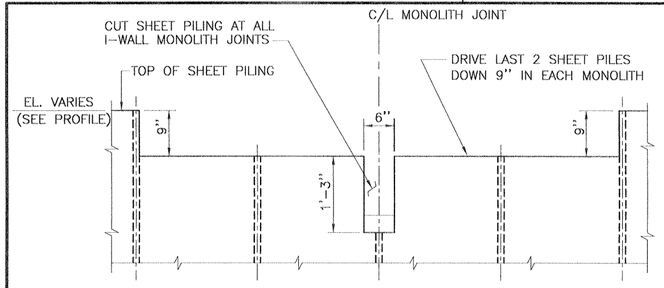
BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE SHEET PILE DETAILS

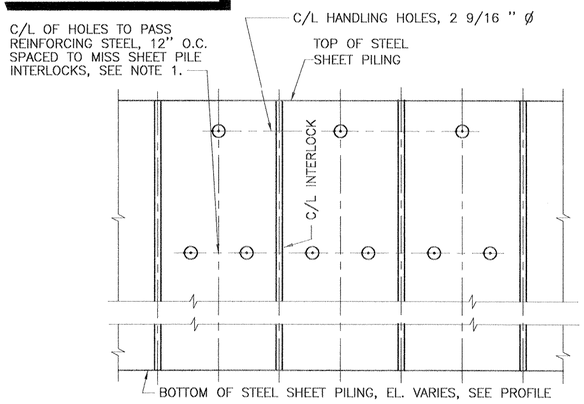
DESIGNED BY: M.K.R.	DATE: MAR.8,2000	PLOT SCALE: 3	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.			
CHECKED BY: W.D.L.	CADD FILE: SHT21.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 21 OF 59



SHEET PILING DETAILS I–WALL MONOLITH JOINTS

SCALE: 1" = 1'– 0"

Safety is a Part of Your Contract



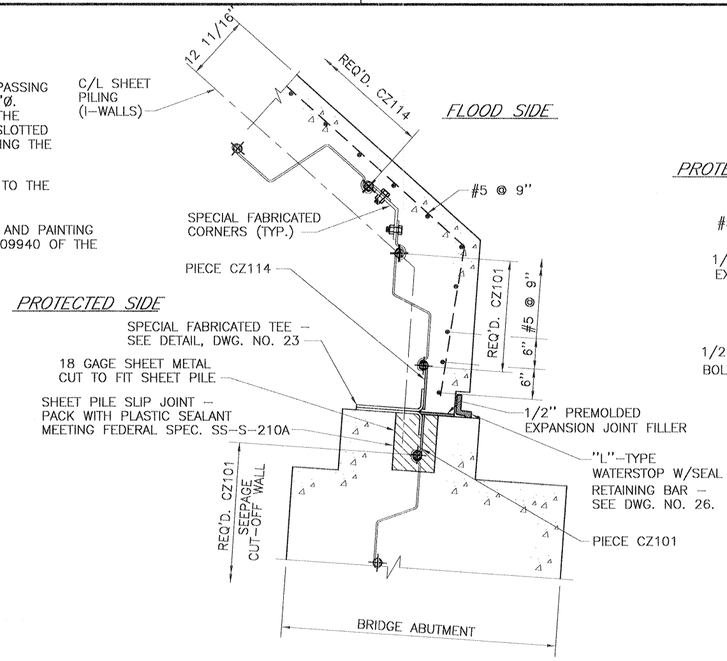
ELEVATION

DETAILS OF HOLES IN SHEET PILING

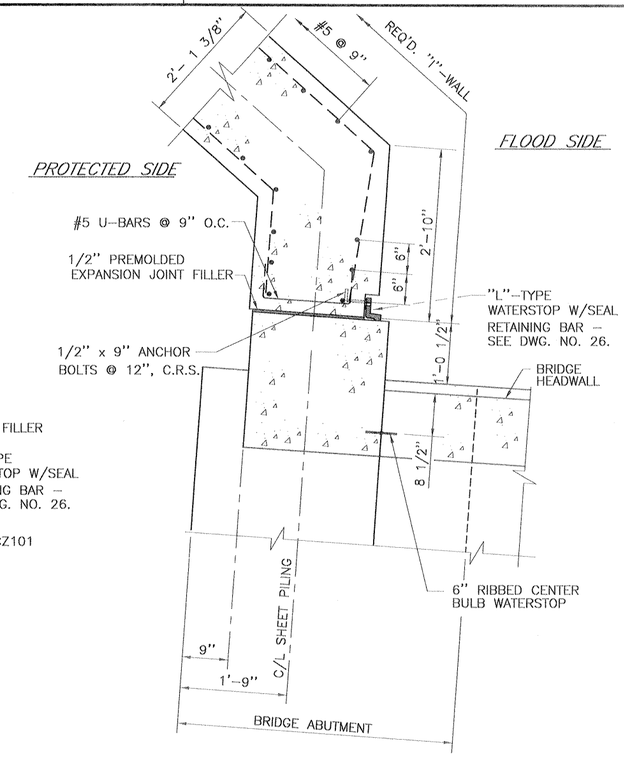
SCALE: 1" = 1'– 0"

SHEET PILE NOTES:

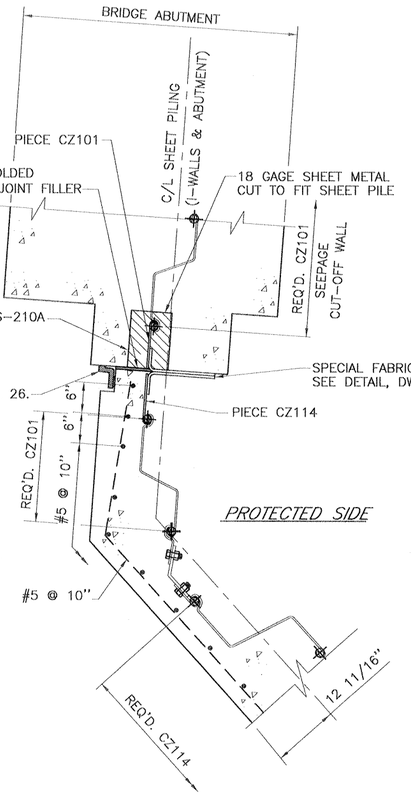
1. HOLES CUT IN STEEL SHEET PILING FOR PASSING REINFORCING BARS SHALL NOT EXCEED 2"Ø. WHERE HOLES FALL WITHIN THE WEB OF THE STEEL SHEET PILE, THE HOLE SHALL BE SLOTTED 4" HORIZONTALLY TO ACCOMMODATE PASSING THE REINFORCING BARS.
2. ANY SUBSTITUTIONS SHALL BE SUBMITTED TO THE CONTRACTING OFFICER FOR APPROVAL.
3. STEEL SHEET PILE SURFACE PREPARATION AND PAINTING SHALL BE IN ACCORDANCE WITH SECTION 09940 OF THE SPECIFICATIONS.



SECTION THROUGH SHEET PILE



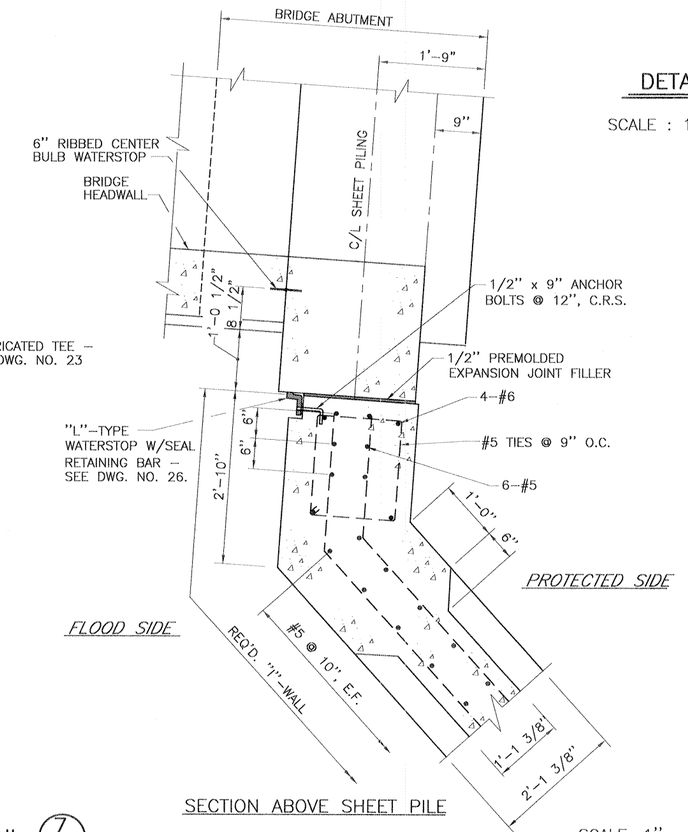
SECTION ABOVE SHEET PILE



SECTION THROUGH SHEET PILE

DETAIL 7 (15/22)

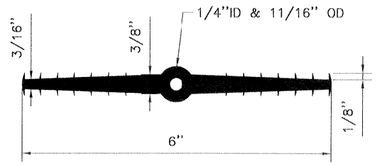
SCALE : 1" = 1' – 0 "



SECTION ABOVE SHEET PILE

DETAIL 5 (15/22)

SCALE : 1" = 1' – 0 "



RIBBED CENTER BULB WATERSTOP

N.T.S.

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3
FOR PLAN AND PROFILE, SEE DWG. NO. 5.
FOR TYPICAL WALL SECTIONS, SEE DWG. NO. 27.

SCALE: 1" = 1'– 0"

12" 0 1' 2' 3' 4' 5'

STATE OF LOUISIANA
Walter D Judlin, III
No. 19708
REGISTERED PROFESSIONAL ENGINEER
4/21/02

DACW29–00–B–0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

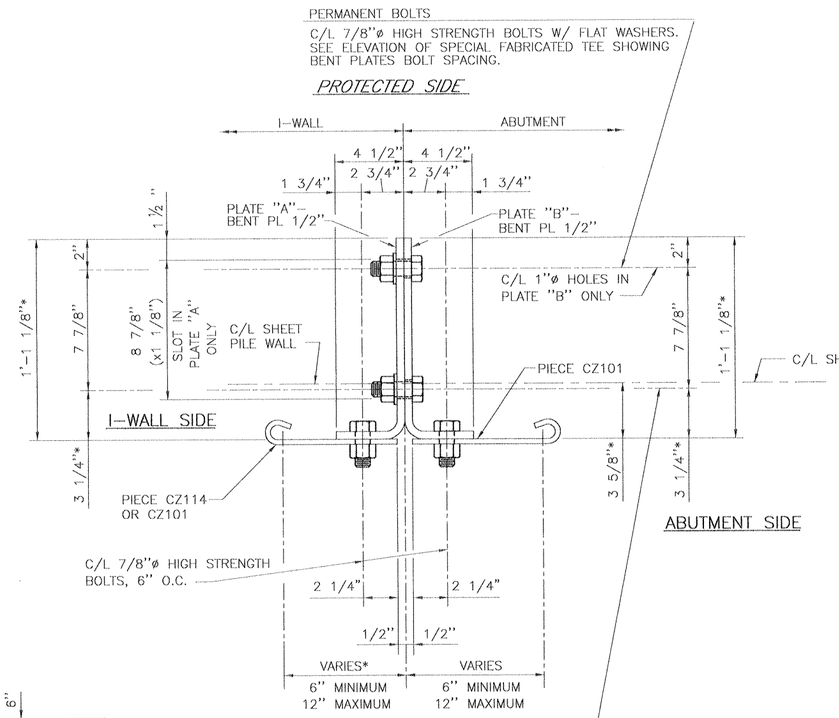
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE SHEET PILE DETAILS & JOINT DETAILS

DESIGNED BY: M.K.R.	DATE: MAR.8,2000	PLOT SCALE: 12	PLOT DATE: MARCH 8, 2000
DRAWN BY: C.R.N.			
CHECKED BY: W.D.L.	CADD FILE: SHT22.DGN		FILE NO. H–4–44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29–00–B–0094		DWG. 22 OF 59

VALUE INCENTIVE CLAUSES ENGINEERING — YOUR KEY TO HIGHER PROFITS

Safety is a Part of Your Contract

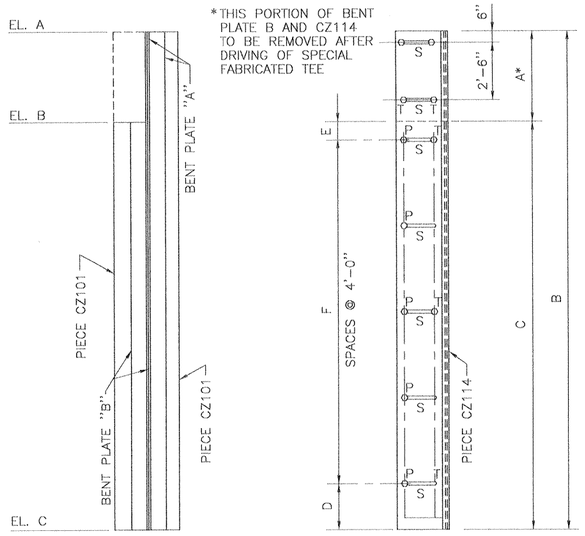


DETAIL 1 (25|23)

SPECIAL FABRICATED TEE

(SOUTHEAST CORNER SHOWN, OTHERS SIMILAR)

SCALE: 3" = 1'-0"



PROTECTED SIDE ELEVATION

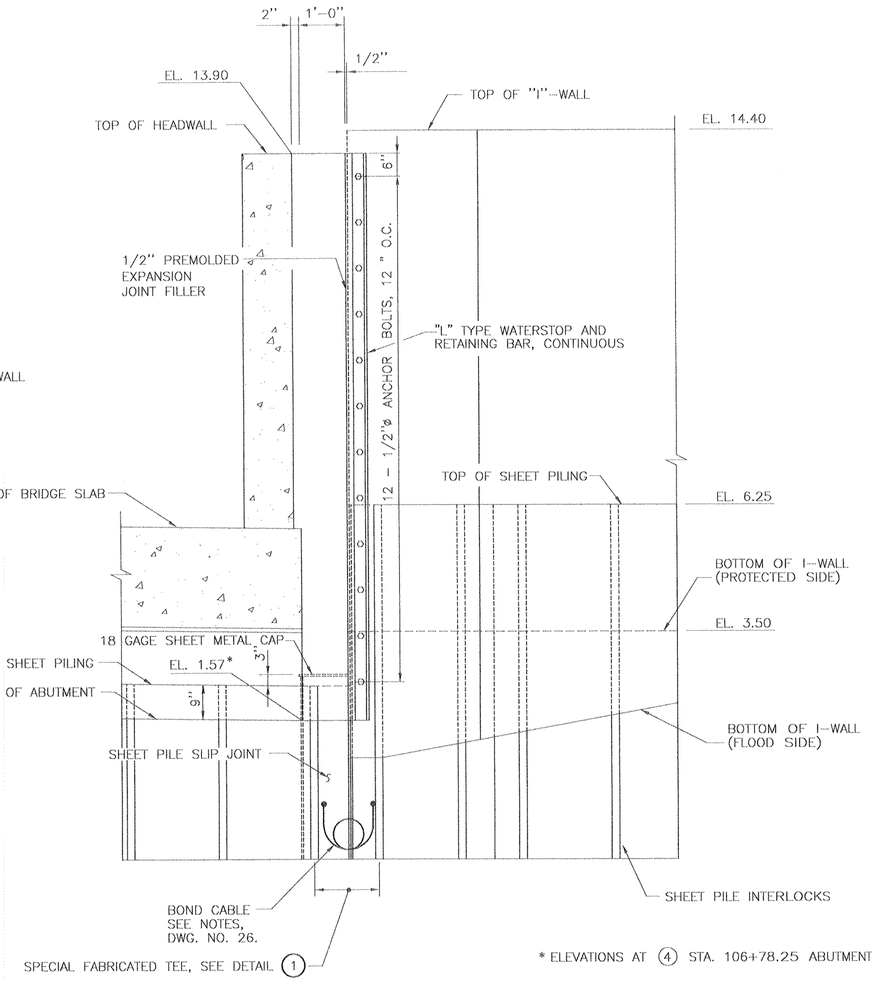
I-WALL SIDE ELEVATION

ELEVATION OF SPECIAL FABRICATED TEE SHOWING BENT PLATES BOLT SPACING

(SOUTHEAST CORNER SHOWN, OTHERS SIMILAR)

SCALE: HORIZ. 3/4" = 1' - 0"
VERT. 3/8" = 1' - 0"

LOCATION	ELEV. A	ELEV. B	ELEV. C	DIM. A	DIM. B	DIM. C	DIM. D	DIM. E	F
SOUTHWEST	6.25	2.14	-15.5	4'-1 3/8"	21'-9"	17'-7 5/8"	9"	10 5/8"	4
NORTHWEST	6.25	2.14	-15.5	4'-1 3/8"	21'-9"	17'-7 5/8"	9"	10 5/8"	4
SOUTHEAST	6.25	2.32	-15.5	3'-11 1/8"	21'-9"	17'-9 7/8"	1'-0"	9 7/8"	4
NORTHEAST	6.50	2.32	-15.5	4'-2 1/8"	22'-0"	17'-9 7/8"	1'-0"	9 7/8"	4



FLOOD SIDE ELEVATION

"I"- WALL TO ABUTMENT

(SOUTHEAST CORNER SHOWN, OTHERS SIMILAR)

SCALE: 3/4" = 1'- 0"

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3.
FOR FLOODWALL PLAN, SEE DWG. NO. 14.
FOR FLOODWALL PROFILES, SEE DWG. NOS. 18 AND 19.

SCALE: 3/8" = 1'- 0"
12" 0 2' 4' 6' 8' 10'

SCALE: 3/4" = 1'- 0"
12" 0 1' 2' 3' 4' 5'

SCALE: 3" = 1' - 0"
12" 0 1'

STATE OF LOUISIANA
Walter D. Judin, III
REG. No. 25708
REGISTERED PROFESSIONAL ENGINEER
9/20/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

C-A-D

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
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KENNER, LOUISIANA

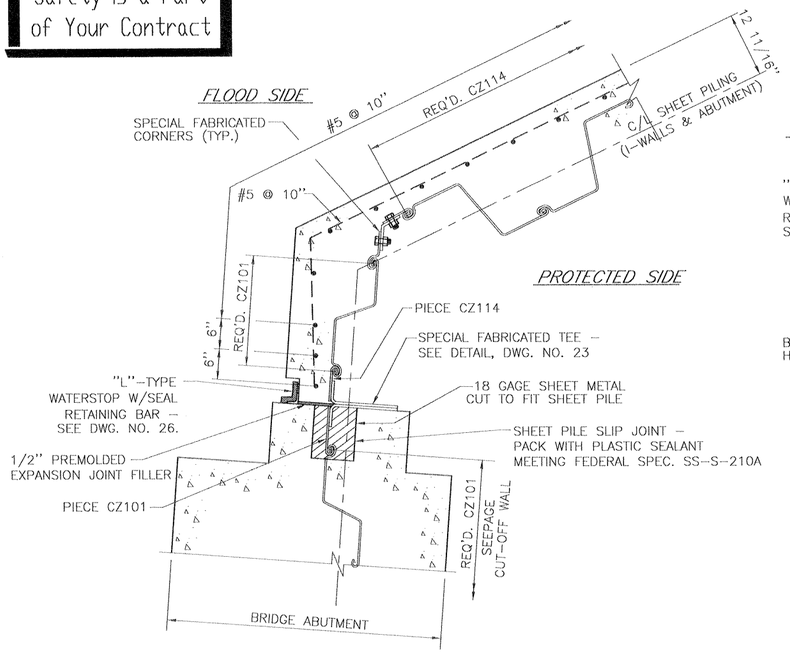
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE SHEET PILE DETAILS AND JOINT DETAILS

DESIGNED BY: M.K.R.	DATE: MAR.8,2000	PLOT SCALE: 16	PLOT DATE: MARCH 8, 2000
DRAWN BY: C.R.N.			
CHECKED BY: W.D.L.	CADD FILE: SHT23.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING, DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 23 OF 59

VALUE INCENTIVE CLAUSES ENGINEERING — YOUR KEY TO HIGHER PROFITS

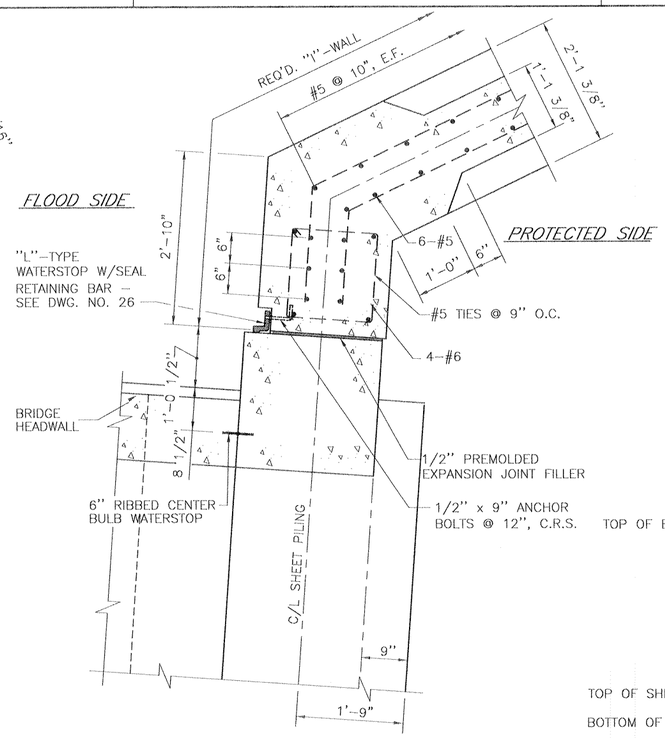
Safety is a Part of Your Contract



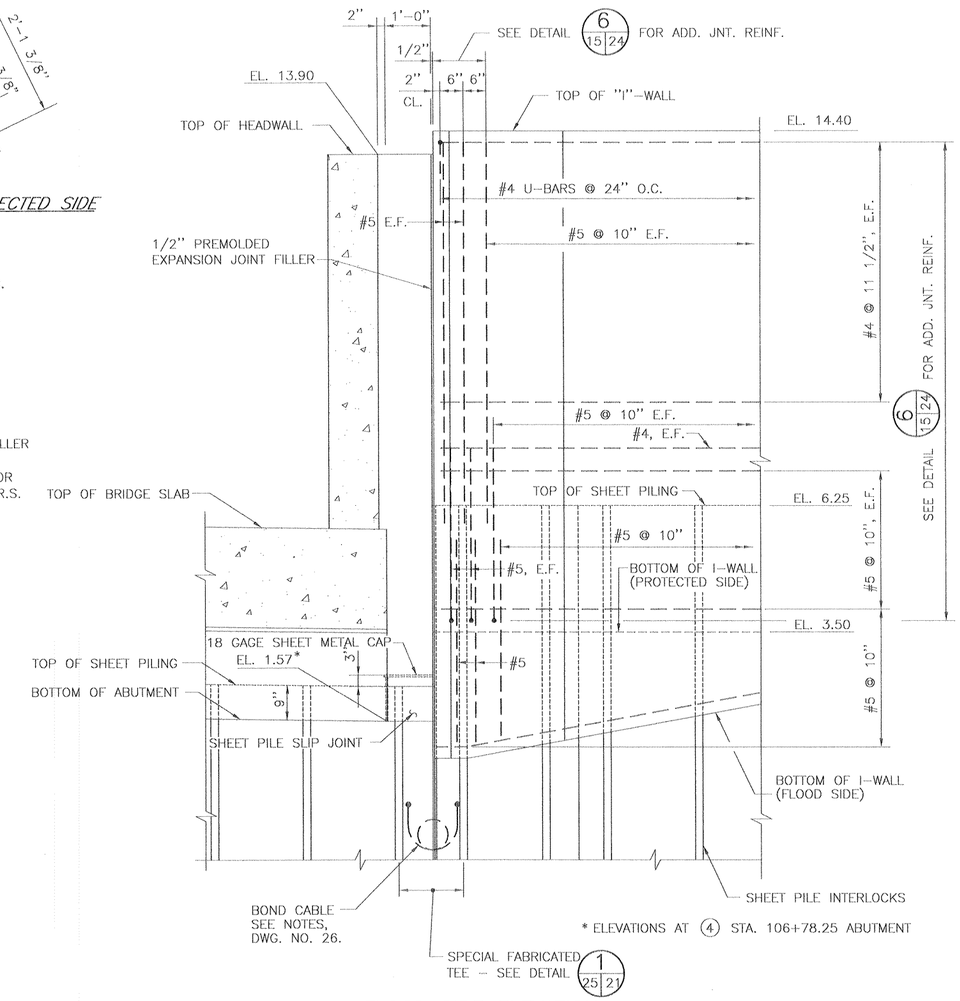
SECTION THROUGH SHEET PILE

DETAIL 6/15/24

SCALE : 1" = 1' - 0 "



SECTION ABOVE SHEET PILE



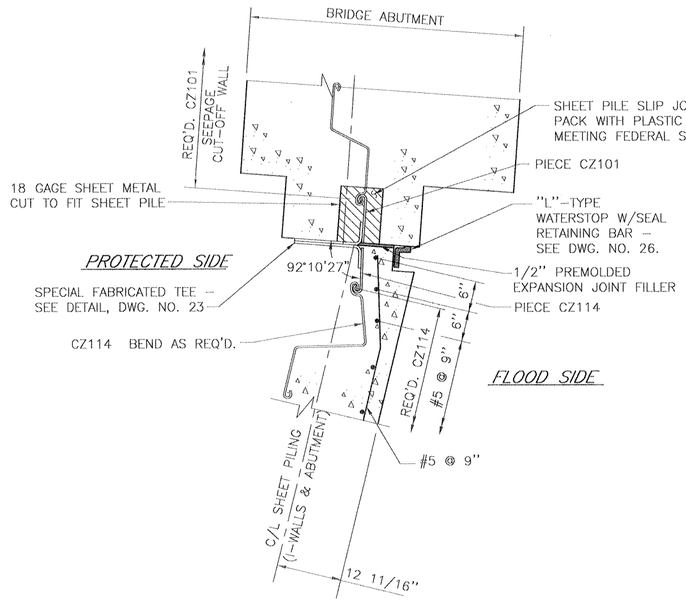
FLOOD SIDE ELEVATION

REINFORCEMENT

"I" - WALL TO ABUTMENT

(SOUTHEAST CORNER SHOWN, OTHERS SIMILAR)

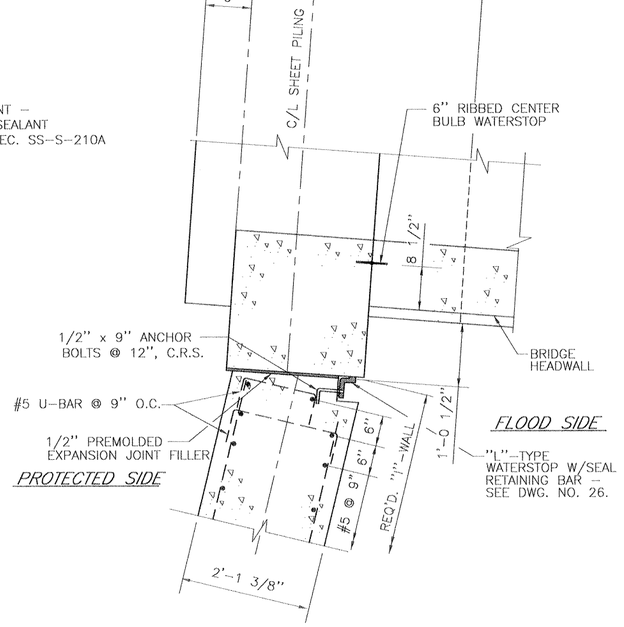
SCALE: 3/4" = 1'- 0 "



SECTION THROUGH SHEET PILE

DETAIL 8/15/24

SCALE : 1" = 1' - 0 "



SECTION ABOVE SHEET PILE

SCALE: 1" = 1'- 0"

12" 0 1' 2' 3' 4' 5'

VALUE INCENTIVE CLAUSE ENGINEERING — YOUR MVE TO HIGHER PROFITS

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DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

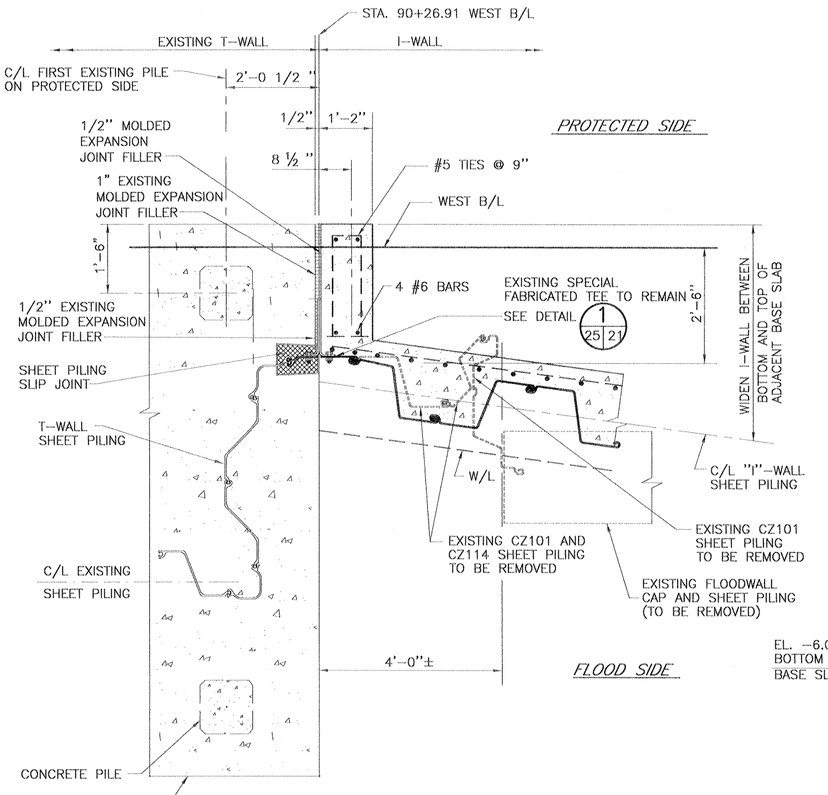
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE JOINT DETAILS

DESIGNED BY: M.K.R. DRAWN BY: C.R.N. CHECKED BY: W.D.L.	DATE: MAR.8,2000	PLOT SCALE: 12	PLOT DATE: MARCH 8, 2000
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	CADD FILE: SHT24.DGN		FILE NO. H-4-44776
	SOLICITATION NO. DACW29-00-B-0094		DWG. 24 OF 59

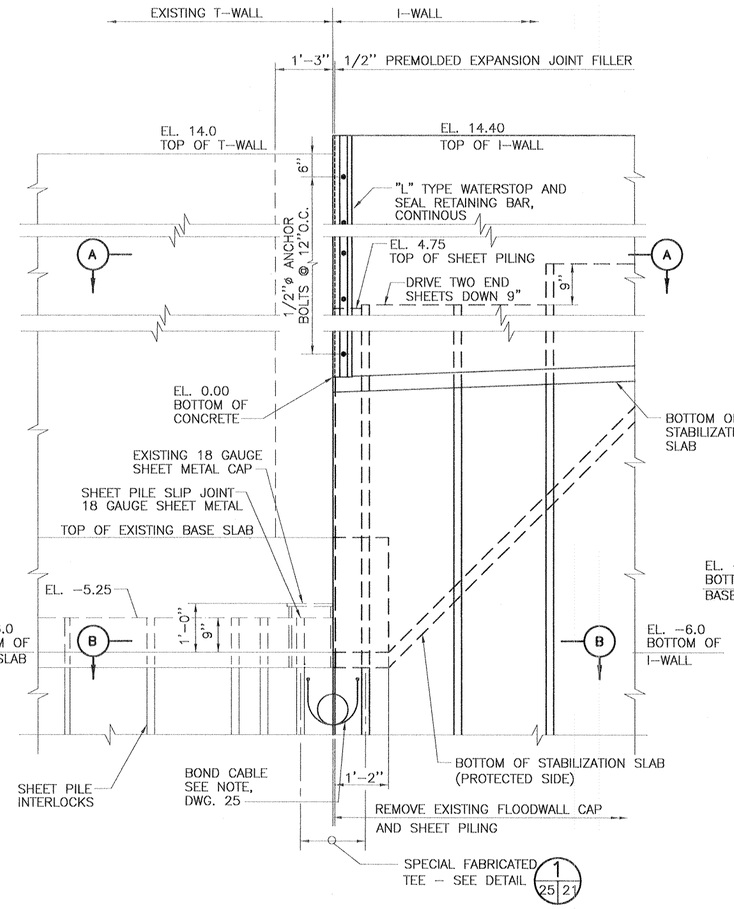
File: D:\SHT24.DWG Last edited: AUG. 23, 02 @ 10:55 a.m. Scale: 1:12 RJ.C.

Safety is a Part of Your Contract



SECTION (B)

SCALE: 3/4" = 1'–0"

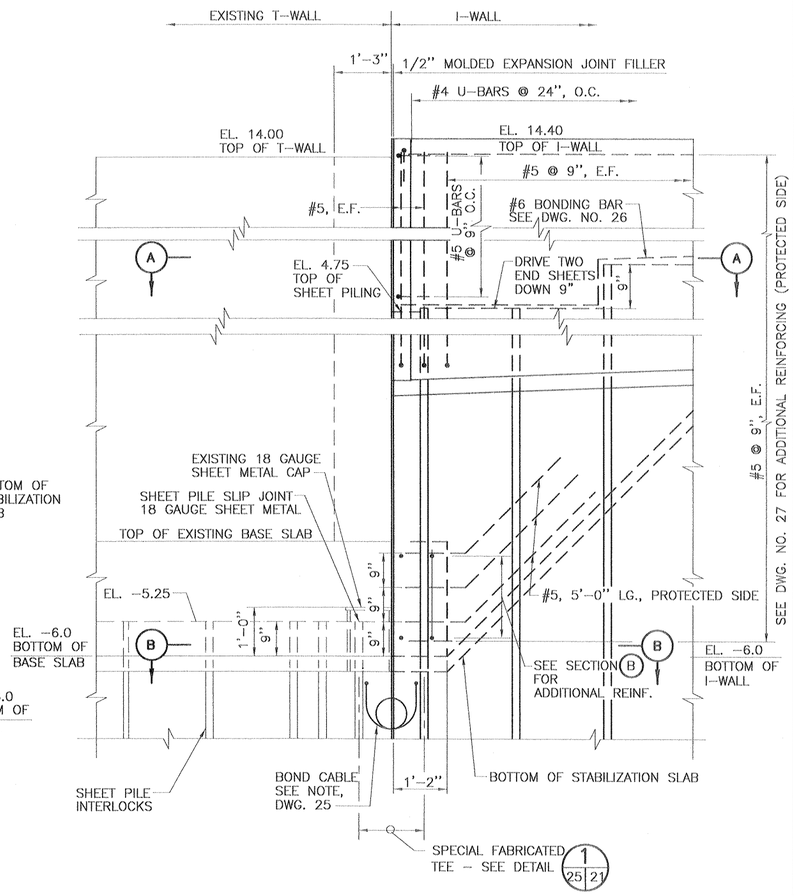


FLOOD SIDE ELEVATION

T–WALL TO I–WALL

(STA. 90+26.91 W B/L)

SCALE: 3/4" = 1'–0"



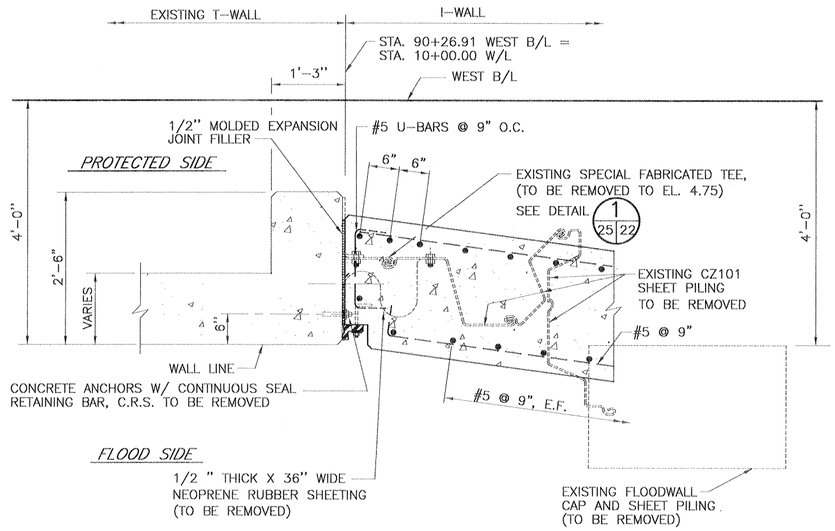
FLOOD SIDE ELEVATION

REINFORCEMENT

T–WALL TO I–WALL

(STA. 90+26.91 W B/L)

SCALE: 3/4" = 1'–0"



SECTION (A)

SCALE: 1" = 1'–0"

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3
FOR PLAN/PROFILE, SEE DWG. NO. 5
FLOODWALL PLAN, SEE DWG. NO. 14
FOR FLOODWALL ALIGNMENTS, SEE DWG. NO. 15, 16 AND 17.
FOR FLOODWALL PROFILES, SEE DWG. NO'S. 18 AND 19
FOR I–WALL REINFORCEMENT DETAILS, SEE DWG. NO. 27

SCALE: 3/4" = 1'– 0"

12" 0 1' 2' 3' 4' 5'

SCALE: 1" = 1'– 0"

12" 0 1' 2' 3' 4' 5'

DACW29–00–B–0094

AS BUILT PLANS

DATE RECEIVED 3/15/02

DATE TRACINGS CORRECTED 4/18/02

Walter D. Judin, III
Reg. No. 05708
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
9/23/02

C•A•D

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
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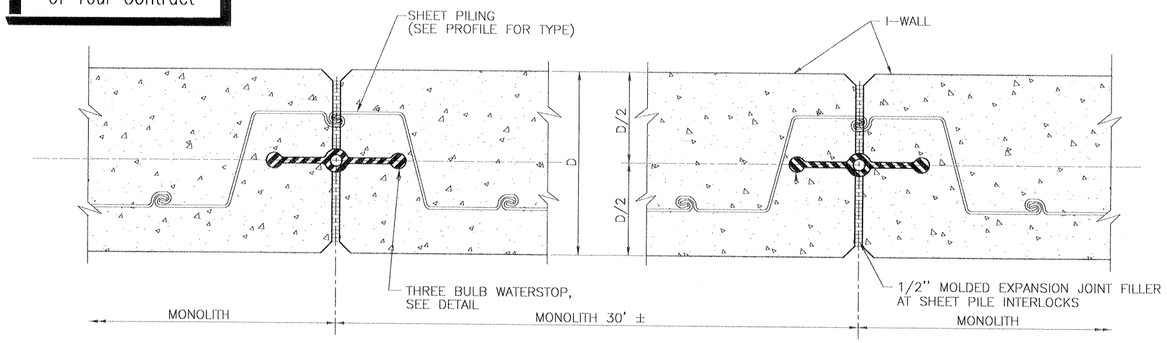
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE JOINT DETAILS

DESIGNED BY: M.K.R.	DATE: MAR.8,2000	PLOT SCALE: 1	PLOT DATE: MARCH 8, 2000
DRAWN BY: C.R.N.	CADD FILE: SHT25.DGN		FILE NO. H–4–44776
CHECKED BY: W.D.L.			
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29–00–B–0094		DWG. 25 OF 59

VALUE INCENTIVE CLAUSES — YOUR KEY TO HIGHER PROFITS — ENGINEERING

Safety is a Part of Your Contract



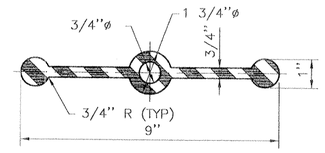
TYPICAL I-WALL AT SHEET PILE INTERLOCKS

SCALE: 3 " = 1'- 0 "

NOTE:
EACH I-WALL MONOLITH SHALL END AT THE CENTER OF THE NEAREST SHEET PILE INTERLOCK.

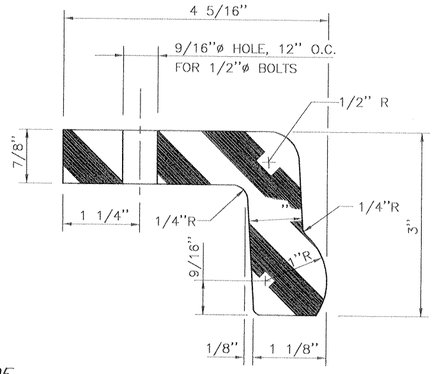
BONDING NOTES

1. #6 REINFORCING BAR TO BE WELDED TO THE TOP OF EACH STEEL SHEET PILE. #6 REINFORCING BAR SHALL NOT EXTEND ACROSS THE MONOLITH JOINT. INSTALL BOND CABLE AT ALL EXPANSION JOINTS. BOND CABLE SHALL HAVE AN 7" DIAMETER LOOP TO ALLOW FOR STRESSES. BOND CABLES SHALL BE WELDED AS SPECIFIED TO ADJACENT STEEL PILES 3" BELOW THE BOTTOM OF CONCRETE CAP. WELDED CONNECTIONS SHALL BE COATED WITH SPLICING EPOXY TO OBTAIN MOISTURE PROOF JOINT. SEE SPECIFICATIONS.
2. #6 REINFORCING BARS SHALL BE WELDED TO THE LAST THREE SHEET PILINGS AT EACH END OF THE MONOLITH AS SHOWN FOR CONTINUITY.
3. SPLICING OF THE #6 REINFORCING BAR WILL NOT BE ALLOWED.



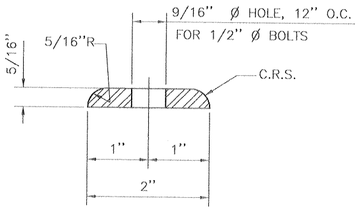
THREE BULB WATERSTOP DETAIL

N.T.S.



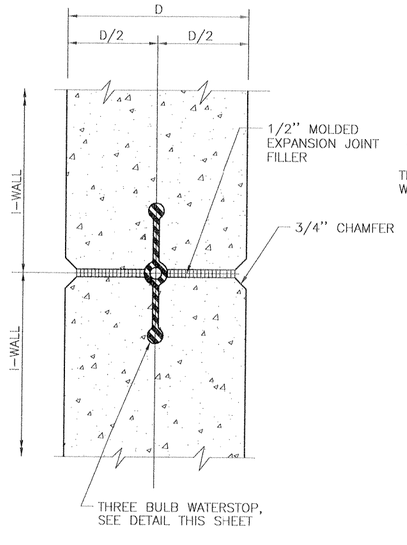
"L" TYPE WATERSTOP

SCALE: 12" = 1'- 0 "



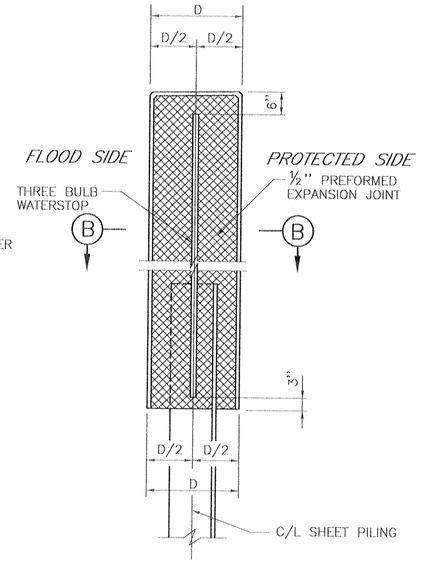
SEAL RETAINING BAR

SCALE: 12" = 1'- 0 "



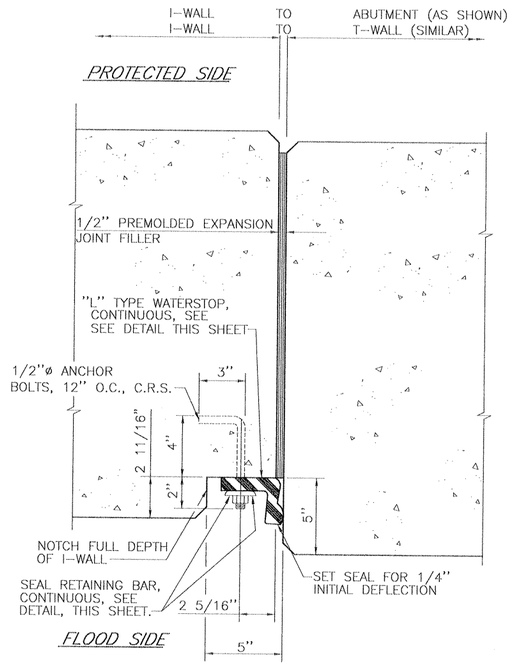
SECTION (B)

SCALE: 3" = 1'- 0 "



TYPICAL I-WALL JOINT (TYPE I WALL)

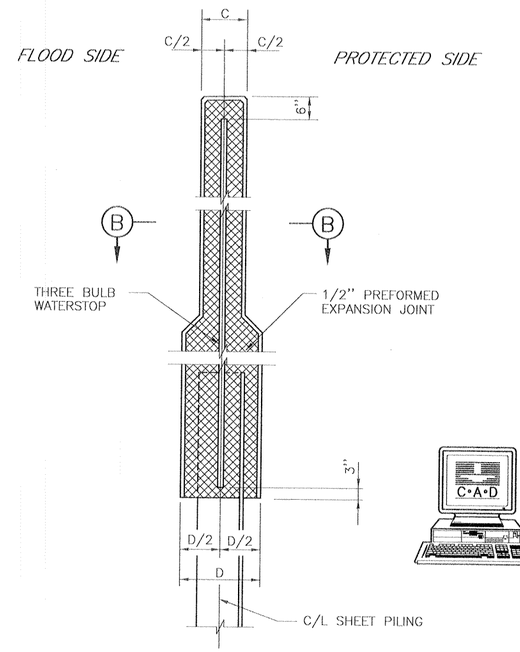
SCALE: 3/4 " = 1'- 0 "



PLAN

I-WALL TO ABUTMENT (I-WALL TO T-WALL SIMILAR)

SCALE: 3" = 1'- 0"



TYPICAL I-WALL JOINT (TYPE II WALL)

SCALE: 3/4" = 1'-0"

SCALE: 3/4 " = 1'- 0"

12" 0 1' 2' 3' 4' 5'

SCALE: 1" = 1'- 0"

12" 0 1' 2' 3' 4' 5'

SCALE: 3" = 1' - 0"

12" 0 1'

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3
FOR FLOODWALL PLAN, SEE DWG. NO. 14
FOR FLOODWALL ALIGNMENTS, SEE DWG. NO. 15, 16 AND 17.
FOR FLOODWALL PROFILES, SEE DWG. NO.'S 18 AND 19

VALUE ENGINEERING CLAUSES — YOUR KEY TO HIGHER PROFITS

STATE OF LOUISIANA
Walter D. Justin, III
26611 "OF 01/09
REGISTERED
PROFESSIONAL ENGINEER
CIVIL ENGINEERING
9/27/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
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ORLEANS LEVEE BOARD
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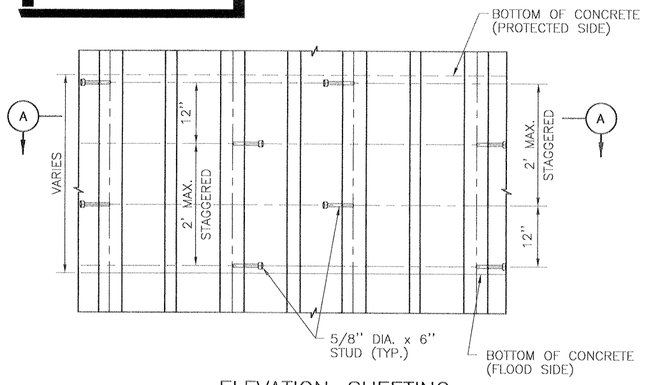
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
TYPICAL WALL JOINTS

DESIGNED BY: M.K.R.	DATE: OCT. 1999	PLOT SCALE: 1	PLOT DATE: OCTOBER, 1999
DRAWN BY: L.A.C.			
CHECKED BY: W.D.I.	CADD FILE: SHT26.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-		DWG. 26 OF 59

File: D:\Sht26.DWG Last edited: AUG. 23, 02 @ 10:57 a.m. Scale: 1:1 R.J.C.

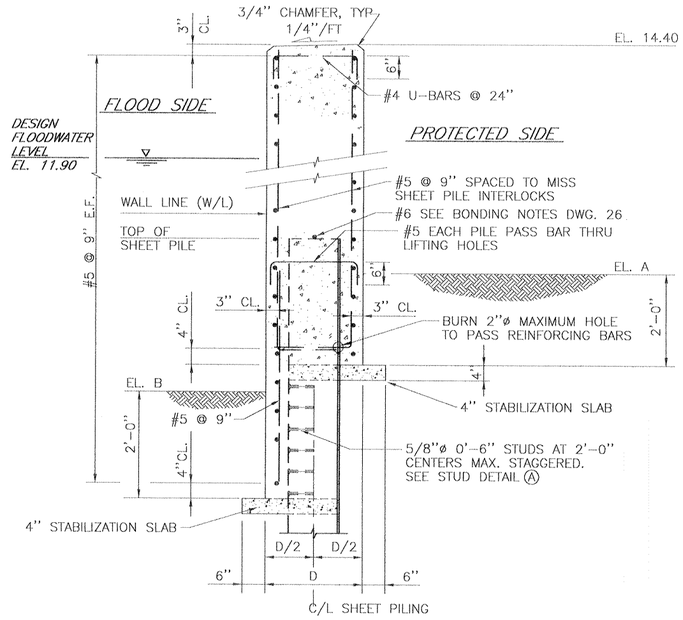
Safety is a Part of Your Contract



ELEVATION–SHEETING

DETAIL (A)

SCALE: 1" = 1'–0"

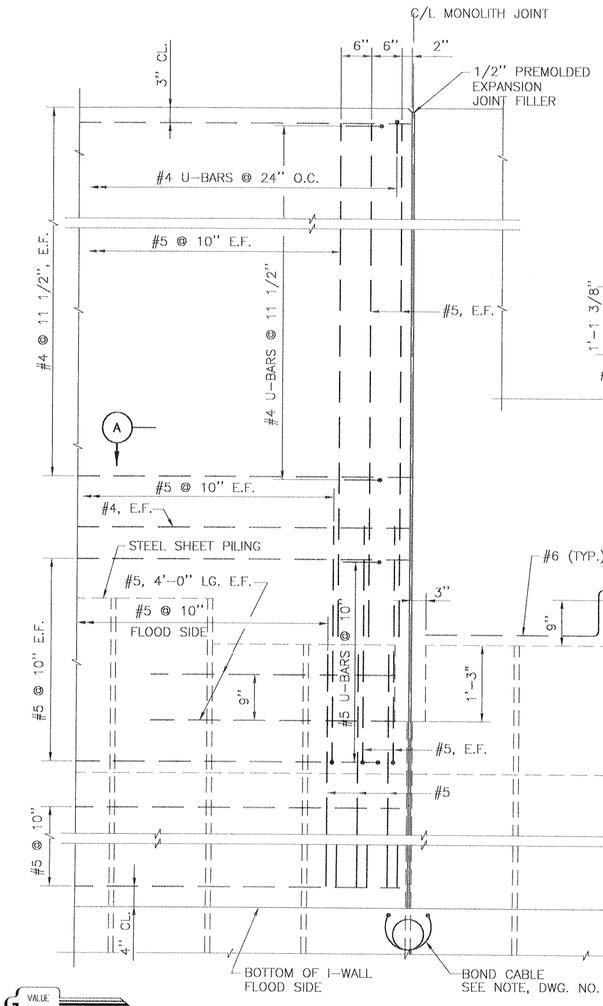


TYPICAL TYPE I CAP

SCALE: 3/4" = 1'–0"

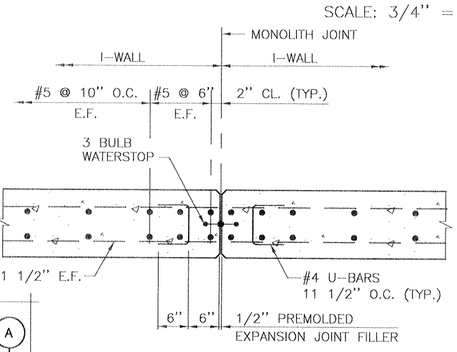
PANEL NO.	WALL LENGTH	WALL TYPE	ELEV. A	ELEV. B	C	D	X	S.P.TIPELEV.
1	30'–0"	I	5.4± TO 8.8±	2.8± TO 8.8±		2'–1 3/8"		–15.50 TO –8.00
2	30'–0"	I	8.8± TO 9.5±	8.8± TO 9.5±		2'–1 3/8"		–8.00 TO –1.00
3	30'–0"	I	9.5± TO 8.5±	9.5± TO 8.5±		1'–9 1/2"		–1.00 TO 0.00
4	30'–0"	I	8.5±	8.5±		1'–9 1/2"		0.00
5	30'–0"	I	8.5± TO 9.8±	8.5± TO 9.8±		1'–9 1/2"		0.00
6	30'–0"	I	9.8± TO 12.0±	9.8± TO 12.0±		1'–9 1/2"		0.00
7	16'–0 1/8"	I	⚠ 12.0±	⚠12.0±		1'–9 1/2"		0.00
8	30'–0"	II	5.6± TO 8.2±	2.8± TO 7.5±	1'–1 3/8"	2'–1 3/8"	5'–4 3/4"	–15.50
9	30'–0"	II	8.2± TO 9.0±	7.5± TO 9.0±	1'–1 3/8"	2'–1 3/8"	3'–4 3/4"	–6.00 TO –1.00
10	30'–0"	II	9.0± TO 9.5±	9.0± TO 9.5±	1'–1 3/8"	2'–1 3/8"	3'–4 3/4"	–1.00 TO 0.00
11	30'–0"	II	9.5± TO 11.4±	9.5± TO 11.4±	1'–1 3/8"	2'–1 3/8"	3'–4 3/4" TO 1'–10 3/4"	0.00
12	30'–0"	I	11.4± TO ⚠ 12.4±	11.4± TO ⚠12.4±		2'–1 3/8"		0.00
13	23'–6"	I	12.4± TO ⚠ 14.2±	12.4± TO ⚠ 14.2±		2'–1 3/8"		0.00
14	15'–7 1/4"	II	5.5±	5.5±	1'–1 3/8"	2'–1 3/8"	6'–10 3/4"	–13.75 TO –14.00
15	30'–0"	II	5.5±	2.8± TO 5.5±	1'–1 3/8"	2'–1 3/8"	6'–10 3/4"	–14.00
16	20'–3 1/8"	I	4.5± TO 5.4±	2.0± TO 2.8±		2'–1 3/8"		–21.00

NOTE: STUDS NOT REQ'D ON FLOOD SIDE CONCRETE FOR PANELS 2–7 AND 10–14. SEE FLOODWALL PROFILES FOR SLOPING OF BOTTOM OF CONCRETE AT SLOPING GROUND.



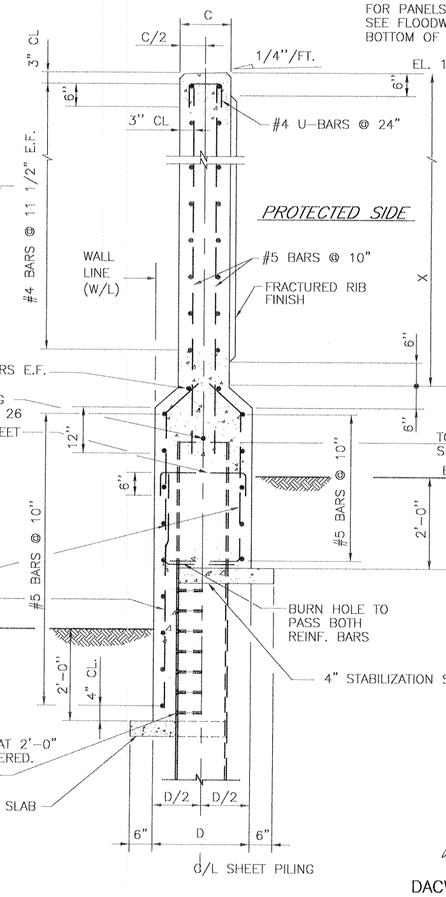
DETAIL OF I–WALL MONOLITH JOINTS

SCALE: 1" = 1'–0"



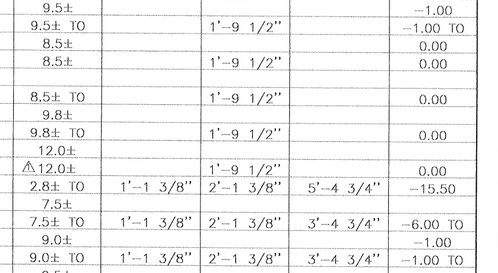
SECTION (A)

SCALE: 1" = 1' – 0"



TYPICAL TYPE II CAP

SCALE: 3/4" = 1'–0"



SECTION (A)

SCALE: 1" = 1'–0"

SCALE: 1/2" = 1'– 0"

12" 0 2' 4' 6' 8'

SCALE: 3/4" = 1'– 0"

12" 0 1' 2' 3' 4' 5'

SCALE: 1" = 1'– 0"

12" 0 1' 2' 3' 4' 5'

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3
FOR FLOODWALL PLAN, SEE DWG. NO. 14
FOR FLOODWALL ALIGNMENTS, SEE DWG. NO. 15, 16 AND 17.
FOR FLOODWALL PROFILES, SEE DWG. NOS. NOS. 18 AND 19

VALUE INCENTIVE CLAUSES ENGINEERING — YOUR KEY TO HIGHER PROFITS

C•A•D

SYMBOL	DESCRIPTION	DATE	APPROVED
⚠	CHANGED CONCRETE CAP& EXIST. SHEET PILE	03/15/01	W.D.J.

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

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ORLEANS LEVEE BOARD
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HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE I–WALL REINFORCING & DETAILS

STATE OF LOUISIANA — Walter D. Judice, III — 16.6.6 No. 8/08 — REGISTERED PROFESSIONAL ENGINEER — 4/22/02

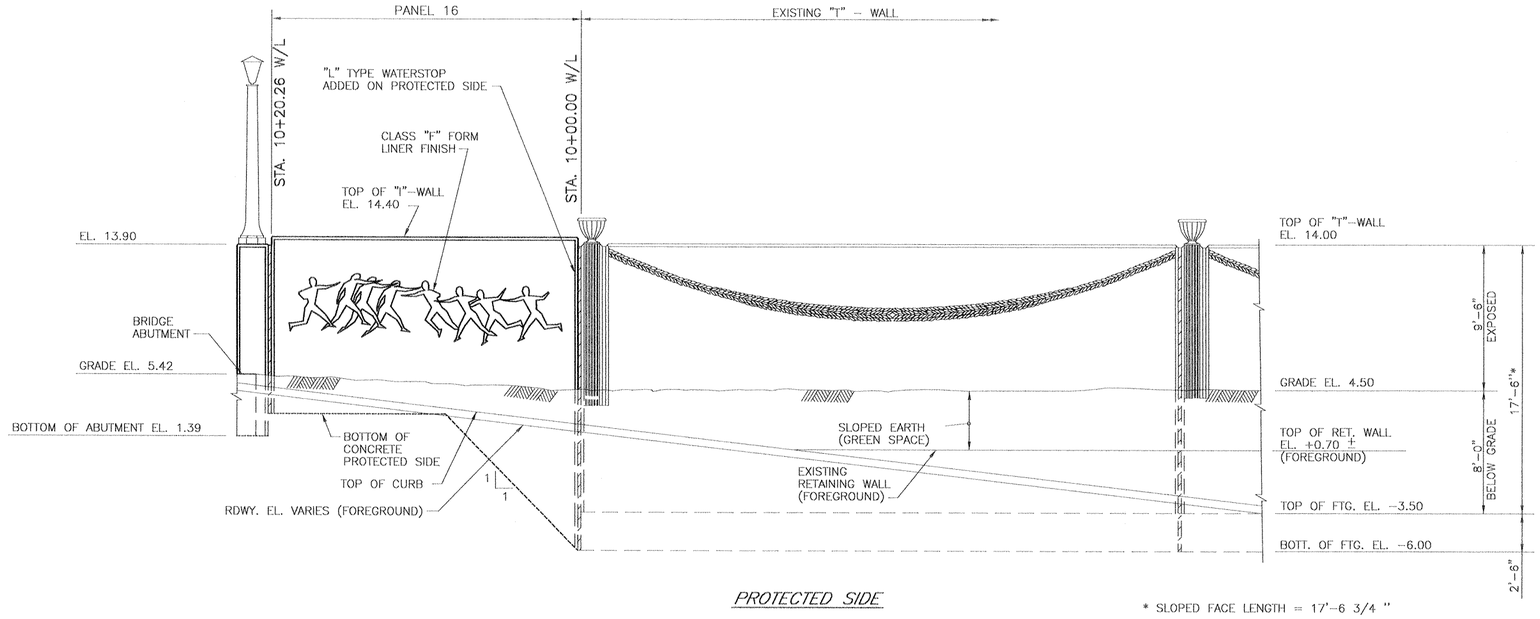
DACW29–00–B–0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

DESIGNED BY: M.K.R.	DATE: MAR.8,2000	PLOT SCALE: 1	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.	CADD FILE: SHT27.DGN		FILE NO. H–4–44776
CHECKED BY: W.D.L.	SOLICITATION NO. DACW29–00–B–0094		DWG. 27 OF 59
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER			

Plot: D:\SHT27.DWG Last edited: AUG. 23, 02 @ 10:48 a.m. Scale: 1:1 R.J.C.

Safety is a Part of Your Contract



PROTECTED SIDE

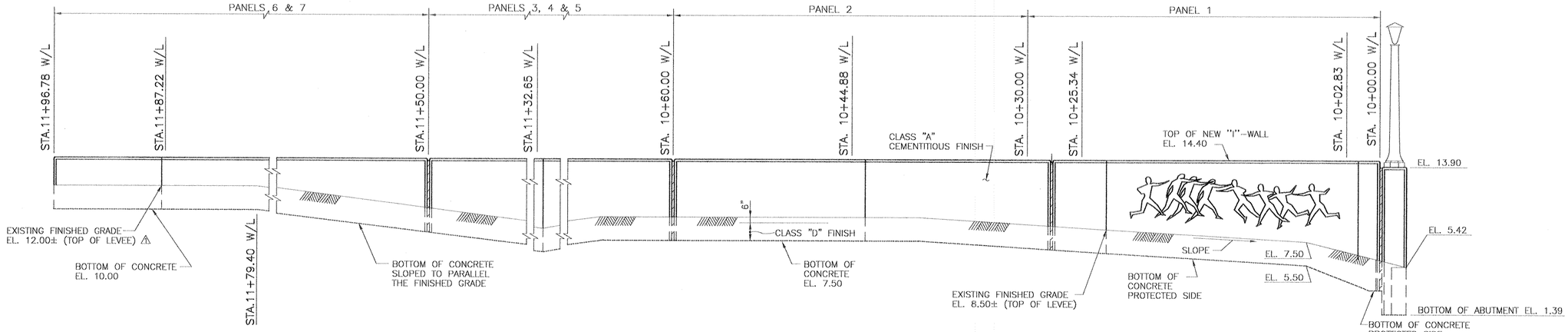
SOUTHWEST "I" WALL TREATMENT

SCALE: 1/4" = 1'–0"

* SLOPED FACE LENGTH = 17'–6 3/4 "

NOTES

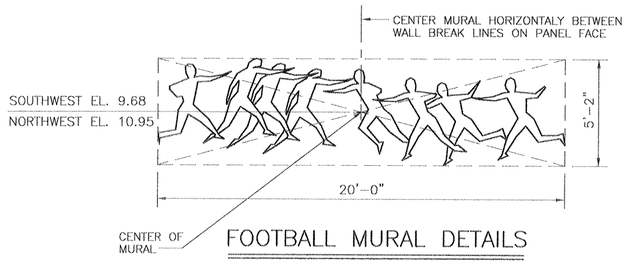
1. THE FOOTBALL MURALS ARE TO BE FURNISHED BY THE GOVERNMENT AS PRECAST FIBERGLASS NEGATIVE MOLDS AND INCORPORATED INTO THE PROJECT BY THE CONTRACTOR. SEE THE SPECIFICATIONS FOR IDENTIFICATION OF GOVERNMENT FURNISHED PROPERTY.
2. CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING THE LOCATION OF ALL JOINTS IN ALL FORMS USED FOR CONSTRUCTION FOR PRIOR APPROVAL.



PROTECTED SIDE

NORTHWEST "I" WALL TREATMENT

SCALE: 1/4" = 1'–0"



FOOTBALL MURAL DETAILS

N.T.S.

NOTE: IMAGE SHOWN MAY NOT REFLECT ACTUAL IMAGE.

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3.

FOR FLOODWALL PLAN, SEE DWG. NO. 14.

FOR FLOODWALL ALIGNMENTS, SEE DWG. NO. 15, 16 AND 17.

FOR FLOODWALL PROFILES, SEE DWG. NOS. 18 AND 19.

FOR FLOODWALL REINFORCING AND DETAILS, SEE DWG. NO. 27.

SCALE: 1/4 " = 1'– 0"

12"b 5' 10' 15' 20'

DACW29–00–B–0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

STATE OF LOUISIANA
Walter O. Judice, III
Reg. No. 8708
REGISTERED PROFESSIONAL ENGINEER
9/2/02

VALUE INCENTIVE CLAUSES ENGINEERING — YOUR KEY TO HIGHER PROFITS

SYMBOL	DESCRIPTION	DATE	APPROVED
⚠	CHANGED CONCRETE CAP& EXIST. SHEET PILE	03/15/01	W.D.J.

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
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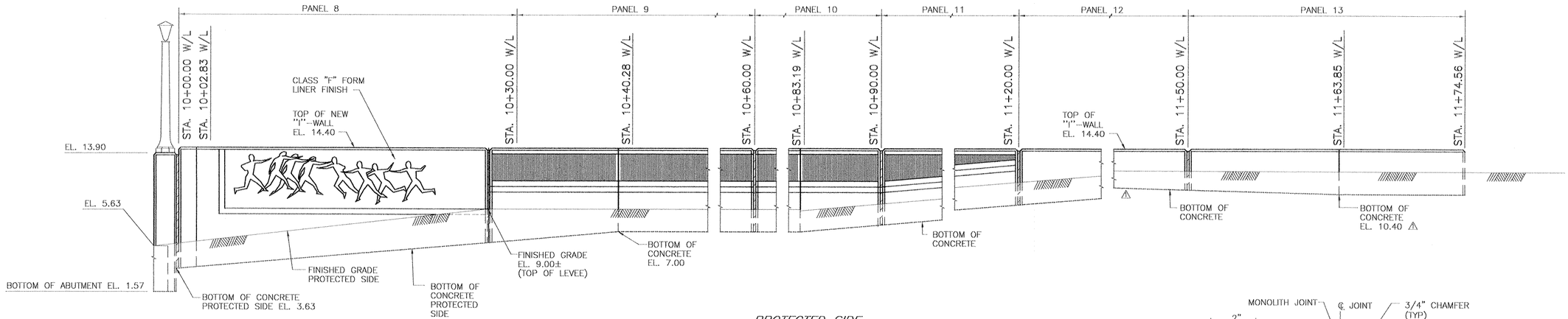
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE I–WALL TREATMENT – WEST SIDE

DESIGNED BY: M.K.R.	DATE: MAR.8,2000	PLOT SCALE: 4	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.			
CHECKED BY: W.D.L.	CADD FILE: SHT2B.DGN		FILE NO. H–4–44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29–00–B–0094		DWG. 28 OF 59

File: D:\SHT2B.DWG Last edited: AUG. 26, 02 @ 1:29 p.m. Scale: 1:4 R.J.C.

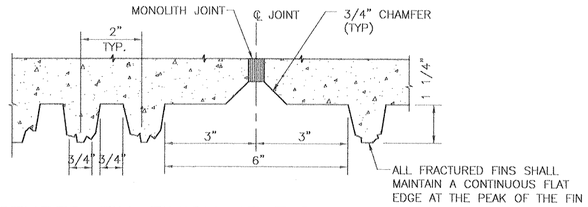
Safety is a Part of Your Contract



PROTECTED SIDE

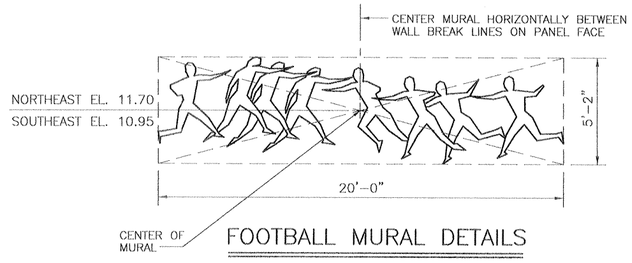
NORTHEAST "I" WALL TREATMENT

SCALE: 1/4" = 1'-0"



FRACTURED FIN FINISH AT TYPICAL MONOLITH JOINT

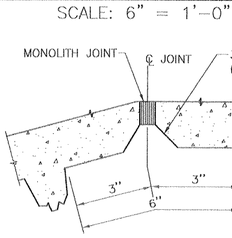
SCALE: 6" = 1'-0"



FOOTBALL MURAL DETAILS

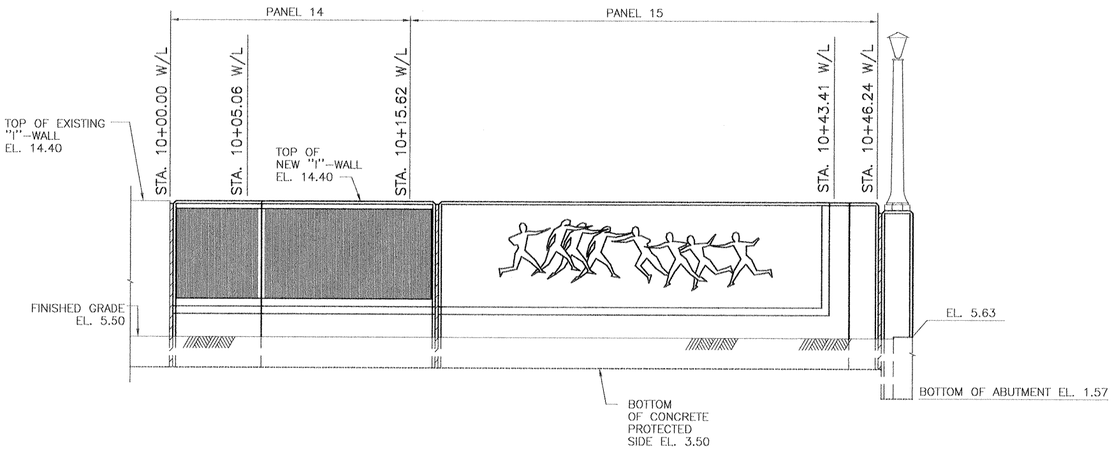
N.T.S.

NOTE: IMAGE SHOWN MAY NOT REFLECT ACTUAL IMAGE.



FRACTURED FIN FINISH AT P.I. OR JOINT

SCALE: 6" = 1'-0"



PROTECTED SIDE

SOUTHEAST "I" WALL TREATMENT

SCALE: 1/4" = 1'-0"

NOTES

1. THE FOOTBALL MURALS ARE TO BE FURNISHED BY THE GOVERNMENT AS PRECAST FIBERGLASS NEGATIVE MOLDS AND INCORPORATED INTO THE PROJECT BY THE CONTRACTOR. SEE THE SPECIFICATIONS FOR IDENTIFICATION OF GOVERNMENT FURNISHED PROPERTY.
2. CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING THE LOCATION OF ALL JOINTS IN ALL FORMS USED FOR CONSTRUCTION FOR PRIOR APPROVAL.
3. NO HORIZONTAL SPLICING OF FRACTURED FIN FORM LINER SHALL BE ALLOWED.

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3
FOR FLOODWALL PLAN, SEE DWG. NO. 14
FOR FLOODWALL ALIGNMENTS, SEE DWG. NO. 15, 16 AND 17.
FOR FLOODWALL PROFILES, SEE DWG. NO'S. 18 AND 19
FOR FLOODWALL REINFORCING AND DETAILS, SEE DWG. NO. 27

SCALE: 6" = 1' - 0"

6" 0 6"

SCALE: 1/4 " = 1'- 0"

12"0 5' 10' 15' 20'

STATE OF LOUISIANA
Walter D. Judice, III
No. 24 No. 31705
REGISTERED
PROFESSIONAL ENGINEER
CIVIL ENGINEERING
9/27/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED
⚠	CHANGED CONCRETE CAP & EXIST. SHEET PILE	03/15/01	W.D.J.

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

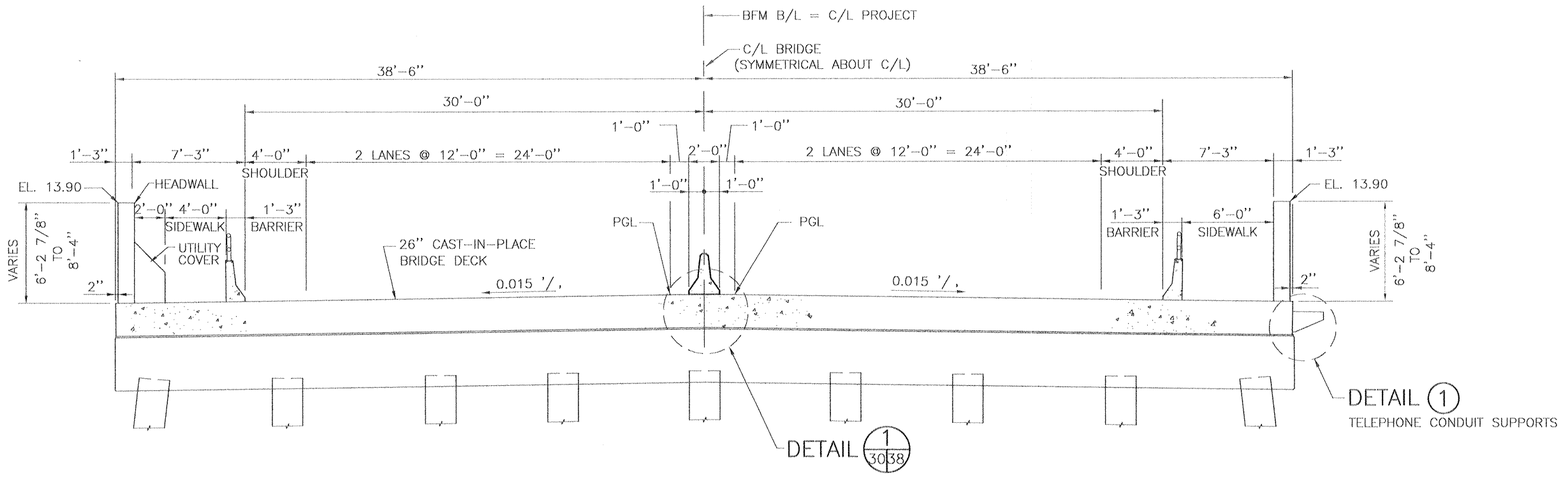
ROBERT E. LEE BOULEVARD BRIDGE I-WALL TREATMENT - EAST SIDE

DESIGNED BY: M.K.R.	DATE:	PLOT SCALE:	PLOT DATE:
DRAWN BY: L.A.C.	MAR.8,2000	4	MARCH 8, 2000
CHECKED BY: W.D.L.	CADD FILE: SHT29.DWG		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 29 OF 59

VALUE INCENTIVE CLAUSES — VALUE WAY TO ENGINEER INNOVATE

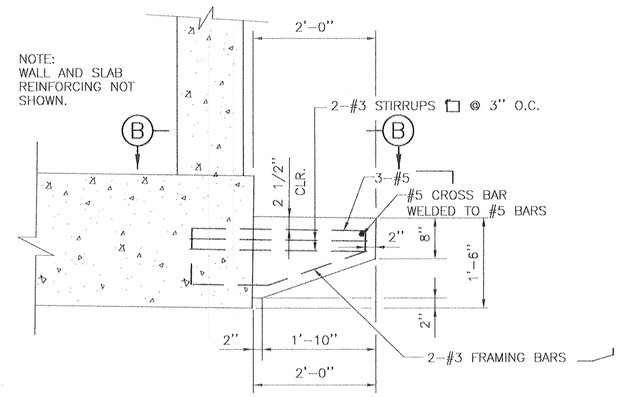
Plot: D:\SHT29.DWG Last edited: AUG. 28, 02 @ 1:40 p.m. Scale: 1:4 R.J.C.

Safety is a Part of Your Contract



SECTION (A)

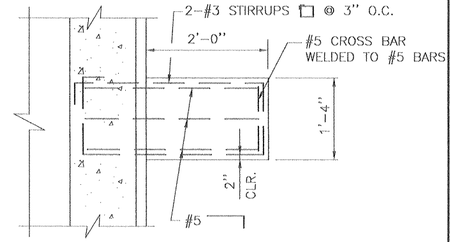
SCALE: 1" = 1'-0"



DETAIL (1)

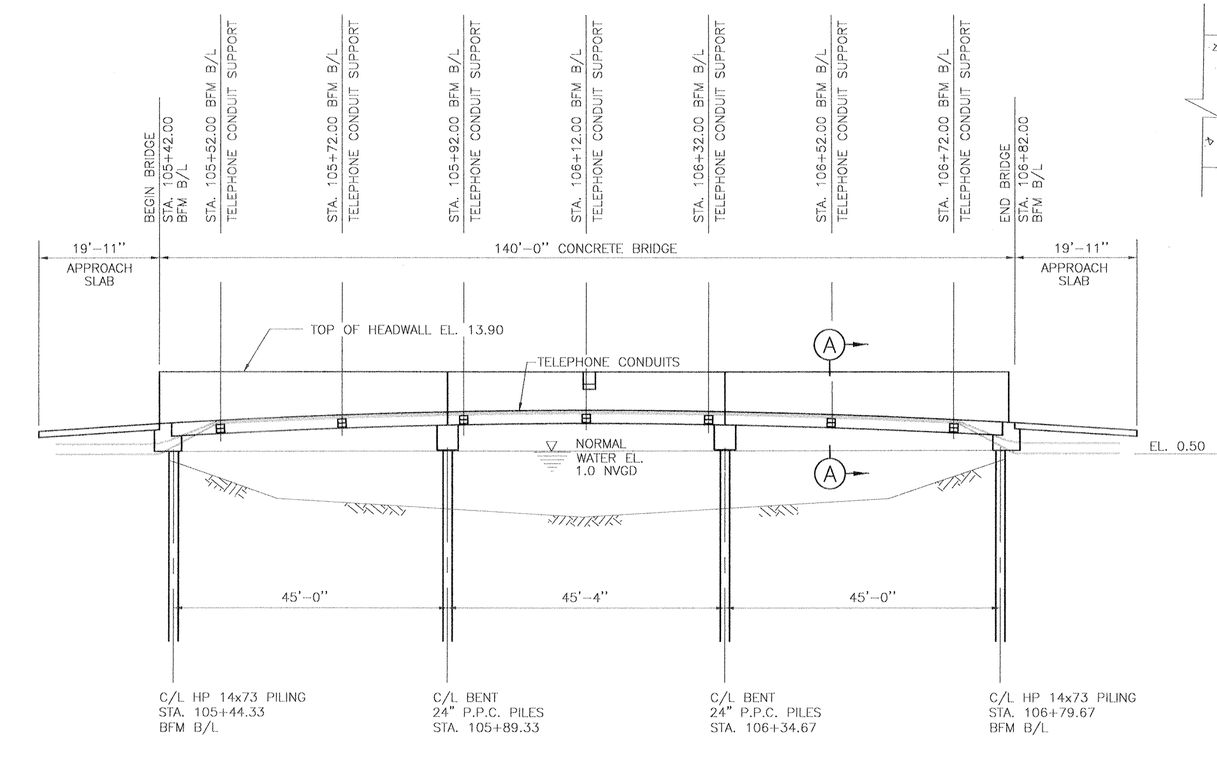
SCALE: 1" = 1'-0"

NOTE:
WALL REINFORCING
NOT SHOWN.



SECTION (B)

SCALE: 1" = 1'-0"



BRIDGE ELEVATION

SCALE: 1" = 10'

REFERENCE DRAWINGS

1. FOR GENERAL NOTES, SEE DWG. NO. 3.
2. FOR PLAN/PROFILE, SEE DWG. NO. 5.
3. FOR UTILITY PLAN AND DETAILS, SEE DWG. NO. 11, 12 AND 13.
4. FOR FLOODWALL PLAN, SEE DWG. NO. 14.

SCALE: 1" = 10'

10' 0 10' 20' 40' 60'

SCALE: 1/4" = 1'-0"

12"0 5' 10' 15' 20'

SCALE: 1" = 1'-0"

12" 0 1' 2' 3' 4' 5'

VALUE INCENTIVE CLAUSES ENGINEERING — YOUR KEY TO HIGHER PROFITS

File: D:\SHT30.DWG Last edited: AUG. 25, 02 @ 2:23 p.m. Scale: 1:10 R.J.G.

STATE OF LOUISIANA
Walter D. Judice, III
No. 22708
REGISTERED PROFESSIONAL ENGINEER
9/27/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

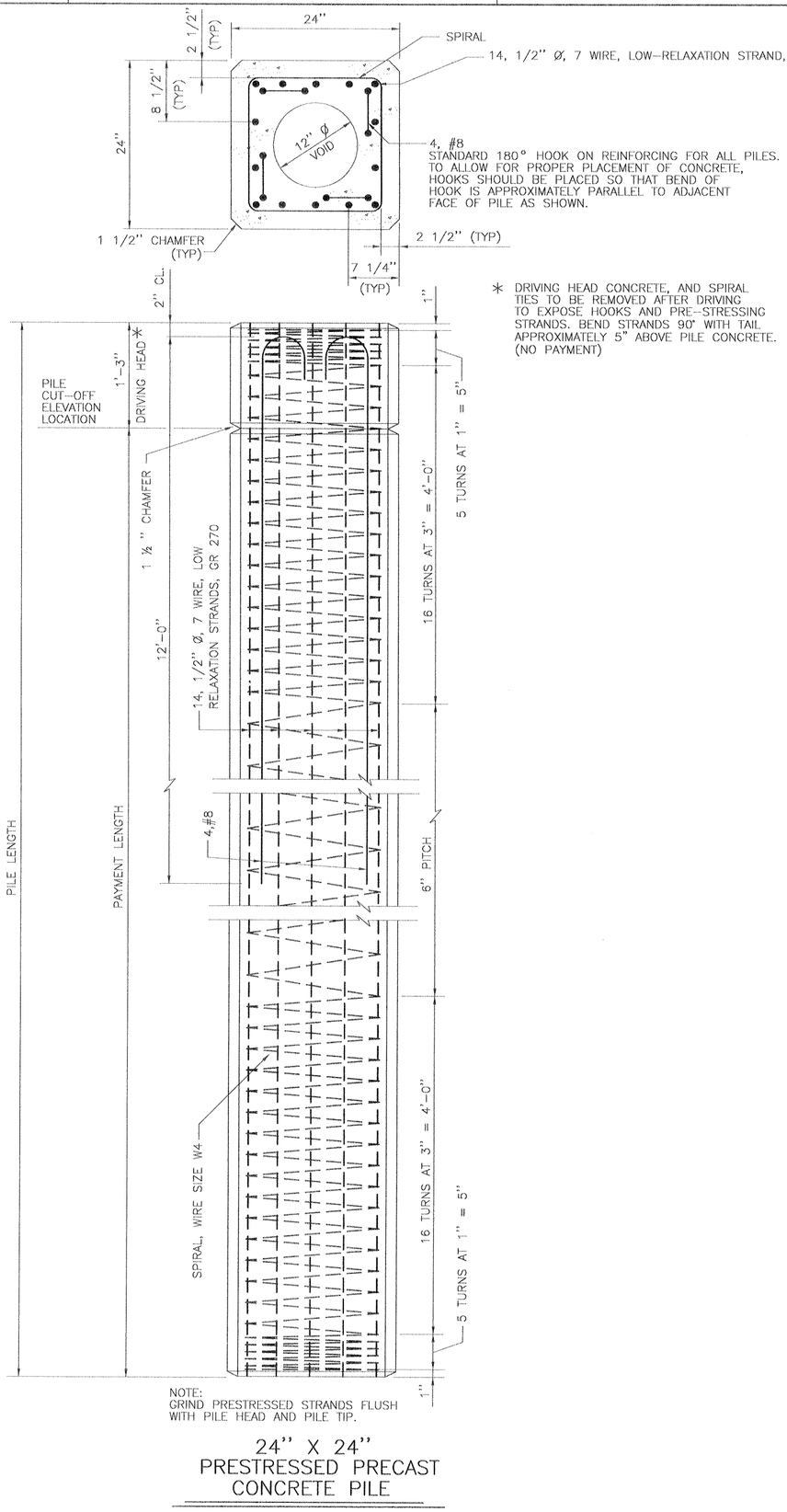
HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
BRIDGE PLAN AND ELEVATION

DESIGNED BY: N.P.	DATE: MAR.8,2000	PLOT SCALE: 10	PLOT DATE: MARCH 8, 2000
DRAWN BY: C.R.N.	CADD FILE: SHT30.DGN		FILE NO. H-4-44776
CHECKED BY: W.D.L.	SOLICITATION NO. DACW29-00-B-0094		DWG. 30 OF 59
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER			

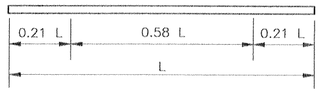
Safety is a Part of Your Contract



* DRIVING HEAD CONCRETE, AND SPIRAL TIES TO BE REMOVED AFTER DRIVING TO EXPOSE HOOKS AND PRE-STRESSING STRANDS. BEND STRANDS 90° WITH TAIL APPROXIMATELY 5" ABOVE PILE CONCRETE. (NO PAYMENT)

NOTE:
GRIND PRESTRESSED STRANDS FLUSH WITH PILE HEAD AND PILE TIP.

24" X 24" PRESTRESSED PRECAST CONCRETE PILE



2 POINT PICKUP (≤ 117') 24" X 24" PILE

NOTE: PICKUP POINTS TO BE PLAINLY MARKED ON PILES

PILE SCHEDULE

BFM B/L STATIONS	PILE SIZE	NUMBER OF PILES	PILE LENGTH *	PILE BATTER
105+89.33 (BENT (2))	24"x 24"	7	88.5'	VERTICAL
		2	88.5'	12V on 1H
106+34.67 (BENT (3))	24"x 24"	7	88.5'	VERTICAL
		2	88.5'	12V on 1H

* PILE LENGTH INCLUDES 1'-3" DRIVING HEAD

NOTES:

1. PILES SHALL BE DRIVEN TO ACHIEVE REQUIRED EMBEDMENT IN PILE CAPS AND TO THE TOLERANCES SPECIFIED IN SECTION 02365 OF THE SPECIFICATIONS.
2. PILE LENGTH BASED ON MINIMUM REQUIRED TIP ELEVATION OF -84.0 NGVD..

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3
FOR PLAN/PROFILE, SEE DWG. NO. 5
FOR BENT DETAILS, SEE DWG. NO. 37

C•A•D

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

STATE OF LOUISIANA
Walter D. Judice, III
No. 19405
REGISTERED PROFESSIONAL ENGINEER
9/27/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
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HARTMAN ENGINEERING, INC.
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KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE PRESTRESSED CONCRETE PILES

DESIGNED BY: N.P.	DATE: MAR.8,2000	PLOT SCALE: 8	PLOT DATE: MARCH 8, 2000
DRAWN BY: C.R.N.			
CHECKED BY: W.D.L.	CADD FILE: SHT31.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 31 OF 59

VALUE INCENTIVE CLAUSES ENGINEERING YOUR KEY TO HIGHER PROFITS

File: D:\SHT31.DWG Last edited: Aug. 28, 02 @ 2:40 p.m. Scale: 1:8 R.v.G.

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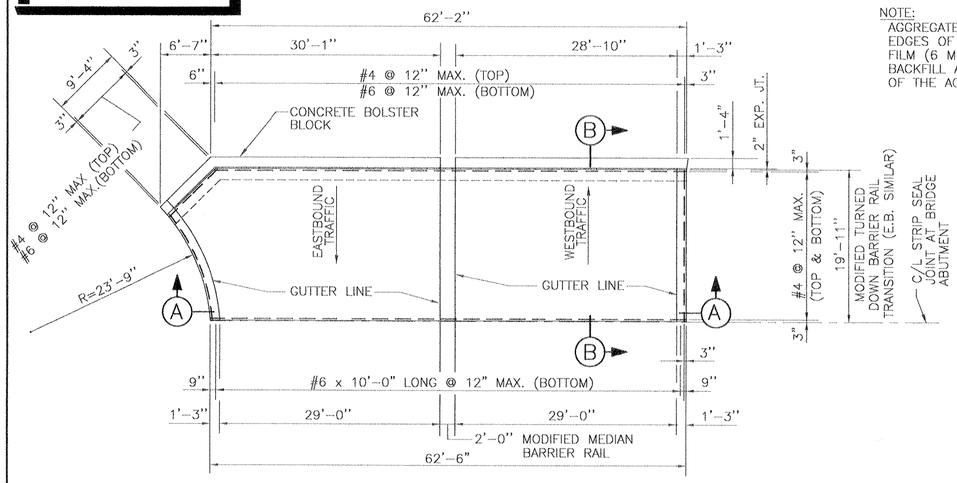
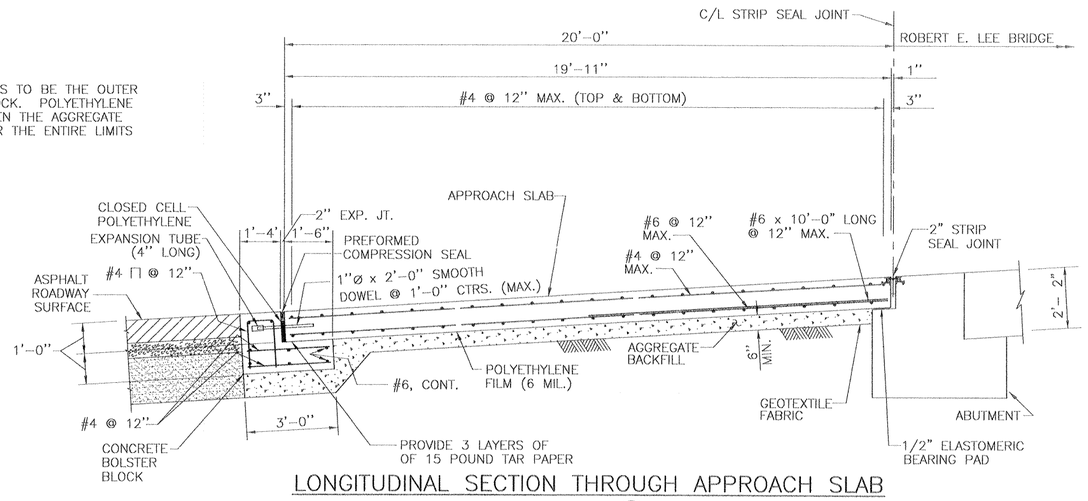


APPROACH SLAB PLAN

SCALE: 1/8" = 1'-0"

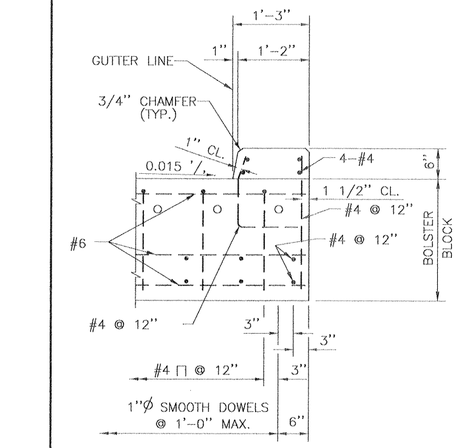
NOTE:
AGGREGATE BACKFILL AND GEOTEXTILE FABRIC LIMITS TO BE THE OUTER EDGES OF THE APPROACH SLAB AND BOLSTER BLOCK. POLYETHYLENE FILM (6 MIL. THICKNESS) TO BE INSTALLED BETWEEN THE AGGREGATE BACKFILL AND THE CONCRETE APPROACH SLAB FOR THE ENTIRE LIMITS OF THE AGGREGATE BACKFILL.



LONGITUDINAL SECTION THROUGH APPROACH SLAB

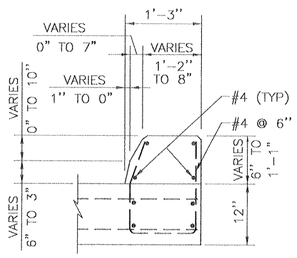
SECTION (B)

SCALE: 1/2" = 1'- 0"



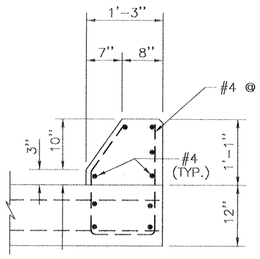
SECTION (C)

SCALE: 1" = 1'- 0"



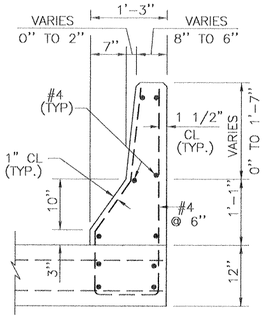
SECTION (D)

SCALE: 1" = 1'- 0"



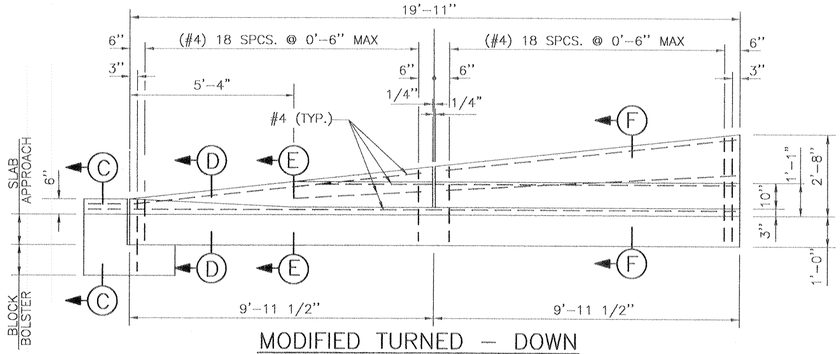
SECTION (E)

SCALE: 1" = 1'- 0"



SECTION (F)

SCALE: 1" = 1'- 0"



MODIFIED TURNED – DOWN BARRIER RAIL TRANSITION – WESTBOUND LANES ONLY

SCALE: 1/2" = 1'- 0"
(NOTE: EASTBOUND TRANSITION SIMILAR)

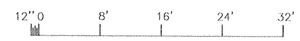
REFERENCE DRAWINGS:
FOR GENERAL NOTES, SEE DWG. NO. 3

FOR PLAN/PROFILE, SEE DWG. NO. 5

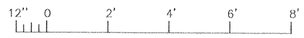
FOR YEAR PLATE DETAILS, SEE DWG. NO. 53

FOR STRIP SEAL JOINT DETAILS, SEE DWG. NOS. 54 AND 55.

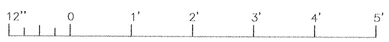
SCALE: 1/8" = 1'- 0"

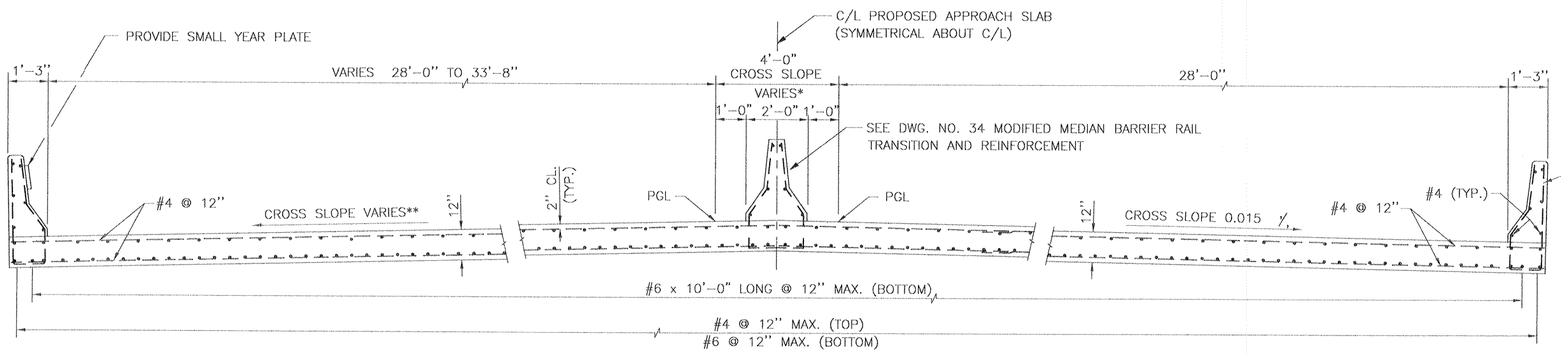


SCALE: 1/2" = 1'- 0"



SCALE: 1" = 1'- 0"





SECTION (A)

SCALE: 1/2" = 1'- 0"

**FOR LIMITS OF CROSS SLOPE TRANSITION, SEE DWG. NO. 5

* SEE DWG. NO. 42 FOR CROWN DETAIL

VALUE INCENTIVE CLAUSES ENGINEERING — YOUR KEY TO HIGHER PROFITS

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

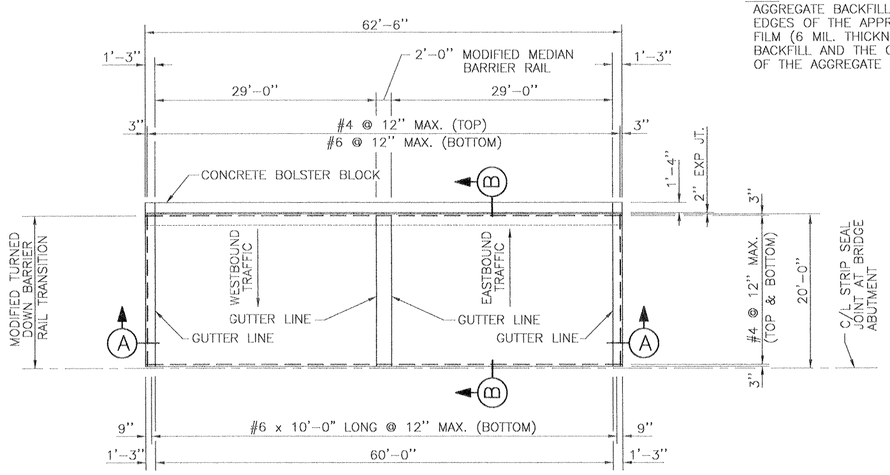
ROBERT E. LEE BOULEVARD BRIDGE WEST APPROACH SLAB

DESIGNED BY: W.D.L.	DATE: MAR.8,2000	PLOT SCALE: 24	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.	CADD FILE: SHT32.DGN		FILE NO. H-4-44776
CHECKED BY: P.J.H.			
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 32 OF 59

File: D:\SHT32.DWG Last edited: AUG. 28, 02 @ 2:41 p.m. Scale: 1:34 R.J.C.

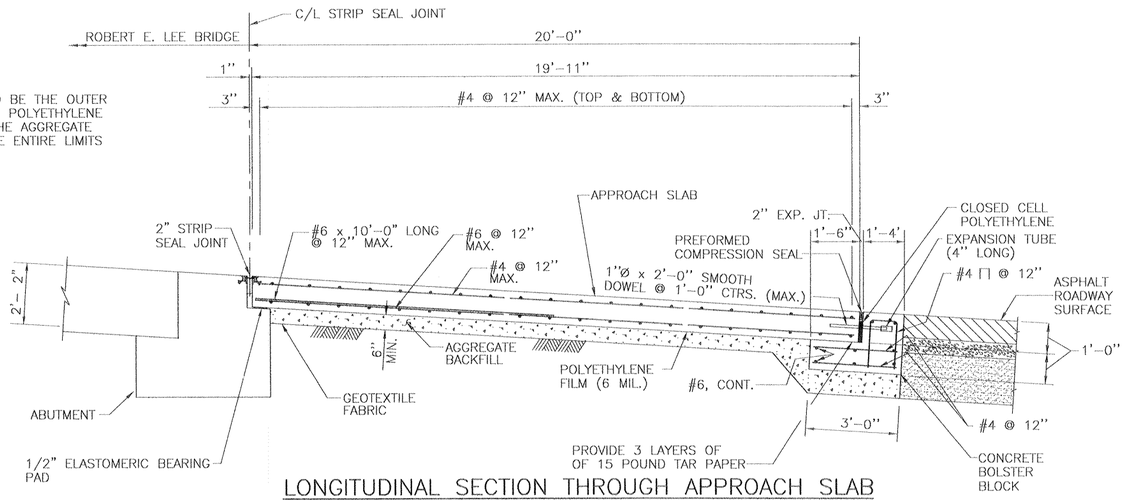
Safety is a Part of Your Contract

NOTE:
AGGREGATE BACKFILL AND GEOTEXTILE FABRIC LIMITS TO BE THE OUTER EDGES OF THE APPROACH SLAB AND BOLSTER BLOCK. POLYETHYLENE FILM (6 MIL. THICKNESS) TO BE INSTALLED BETWEEN THE AGGREGATE BACKFILL AND THE CONCRETE APPROACH SLAB FOR THE ENTIRE LIMITS OF THE AGGREGATE BACKFILL.



APPROACH SLAB PLAN

SCALE: 1/8" = 1'-0"

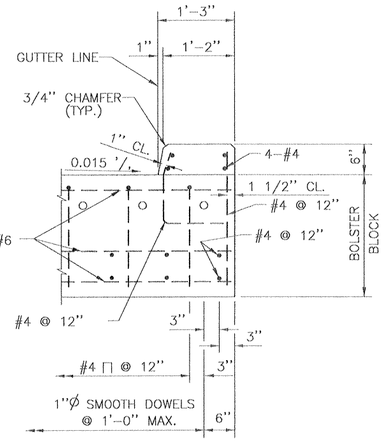


LONGITUDINAL SECTION THROUGH APPROACH SLAB

SECTION (B)

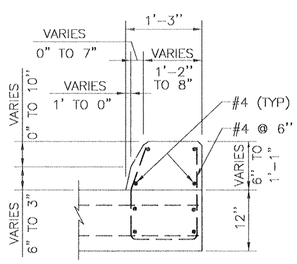
SCALE: 1/2" = 1'-0"

NOTE: CENTER BARRIER NOT SHOWN FOR CLARITY



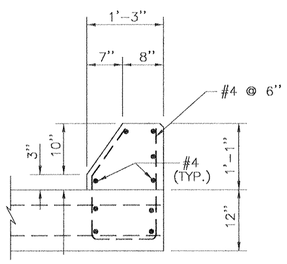
SECTION (C)

SCALE: 1" = 1'-0"



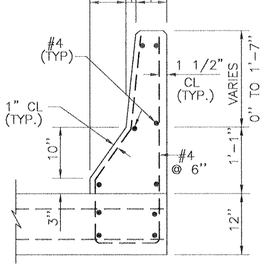
SECTION (D)

SCALE: 1" = 1'-0"



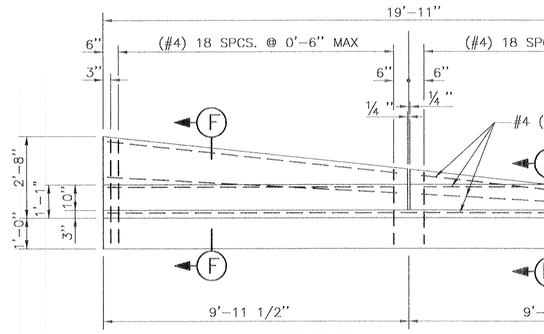
SECTION (E)

SCALE: 1" = 1'-0"



SECTION (F)

SCALE: 1" = 1'-0"



MODIFIED TURNED – DOWN BARRIER RAIL TRANSITION

SCALE: 1/2" = 1'-0"

REFERENCE DRAWINGS:
FOR GENERAL NOTES, SEE DWG. NO. 3

FOR PLAN/PROFILE, SEE DWG. NO. 5

FOR YEAR PLATE DETAILS, SEE DWG. NO. 53

FOR STRIP SEAL JOINT DETAILS, SEE DWG. NOS. 54 AND 55.

SCALE: 1/8" = 1'-0"

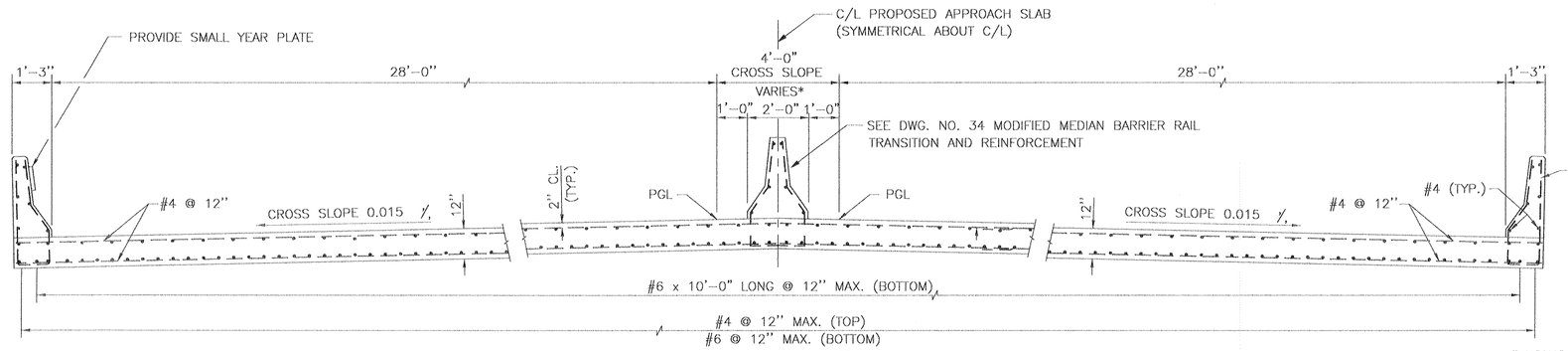
12" 0 8' 16' 24' 32'

SCALE: 1/2" = 1'-0"

12" 0 2' 4' 6' 8'

SCALE: 1" = 1'-0"

12" 0 1' 2' 3' 4' 5'



SECTION (A)

SCALE: 1/2" = 1'-0"

* SEE DWG. NO. 38 FOR CROWN DETAIL

VALUE ENGINEERING – YOUR KEY TO HIGHER PROFITS

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

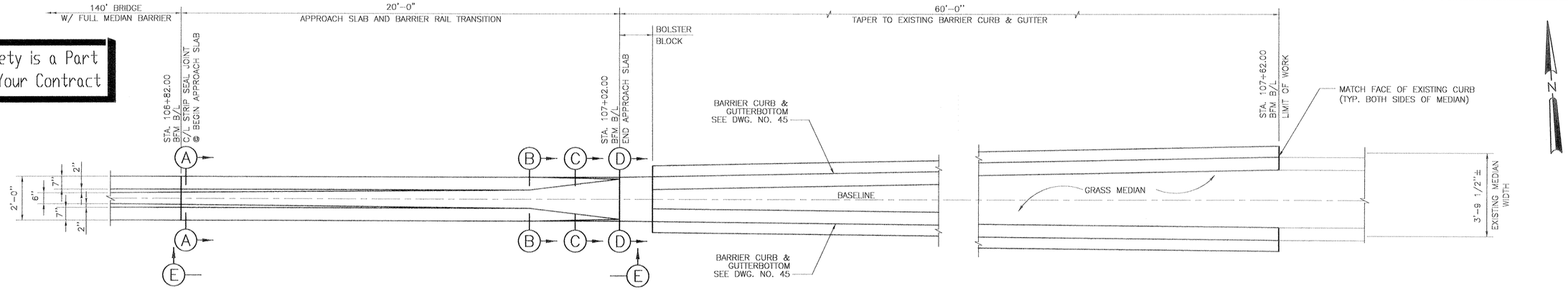
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
EAST APPROACH SLAB

DESIGNED BY: W.D.L.	DATE: MAR.8,2000	PLOT SCALE: 24	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.	CADD FILE: SHT33.DGN		FILE NO. H-4-44776
CHECKED BY: P.J.H.	SOLICITATION NO. DACW29-00-B-0094		DWG. 33 OF 59
SUBMITTED BY: HARTMAN ENGINEERING, DESIGN ENGINEER			

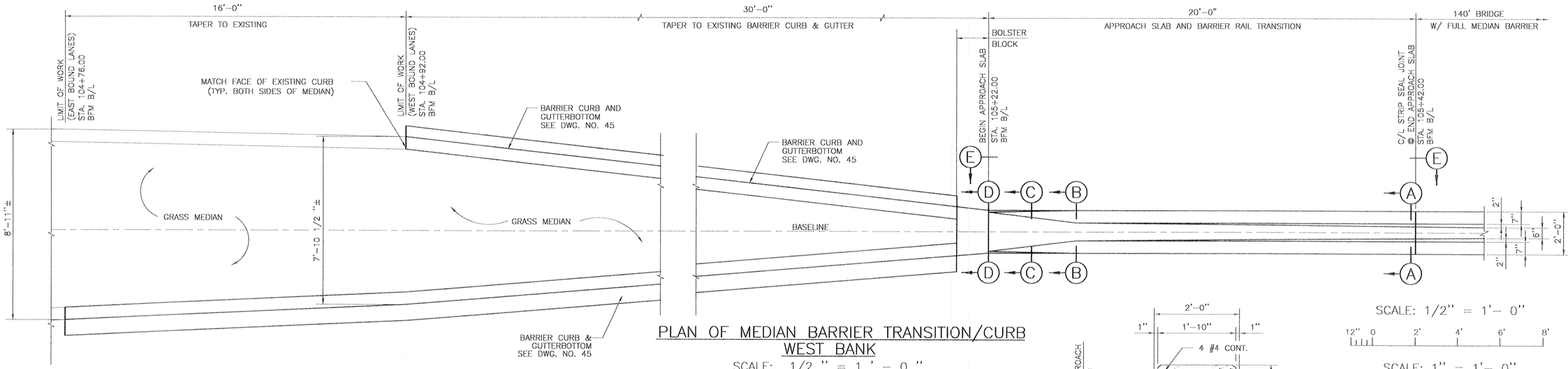
File: D:\SHT33.DWG Last edited: AUG. 29, 02 @ 2:47 p.m. Scale: 1:24 R.J.C.

Safety is a Part of Your Contract



PLAN OF MEDIAN BARRIER TRANSITION/CURB
EAST BANK

SCALE: 1/2 " = 1 ' - 0 "

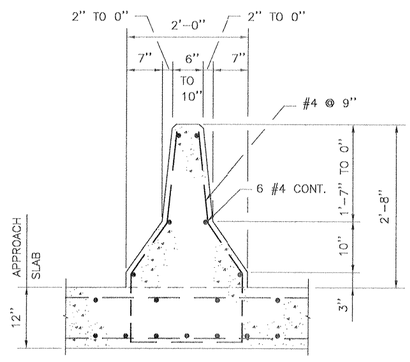


PLAN OF MEDIAN BARRIER TRANSITION/CURB
WEST BANK

SCALE: 1/2 " = 1 ' - 0 "

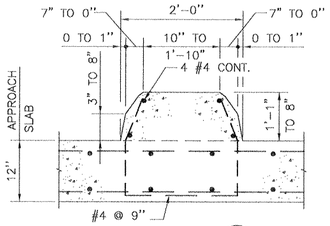
REFERENCE DRAWINGS

1. FOR GENERAL NOTES, SEE DWG. NO. 3.
2. FOR PLAN/PROFILE, SEE DWG. NO. 5.
3. FOR TYPICAL ROADWAY SECTIONS, SEE DWG. NO. 44.
4. FOR TYPICAL ROADWAY AND SIDEWALK DETAILS, SEE DWG. NO. 45.



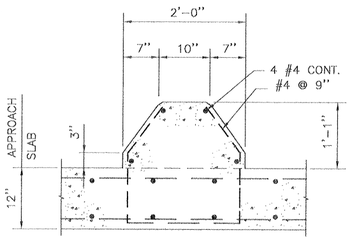
SECTION (A)

SCALE: 1 " = 1 ' - 0 "



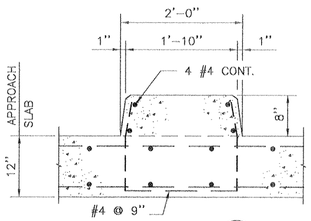
SECTION (C)

SCALE: 1 " = 1 ' - 0 "



SECTION (B)

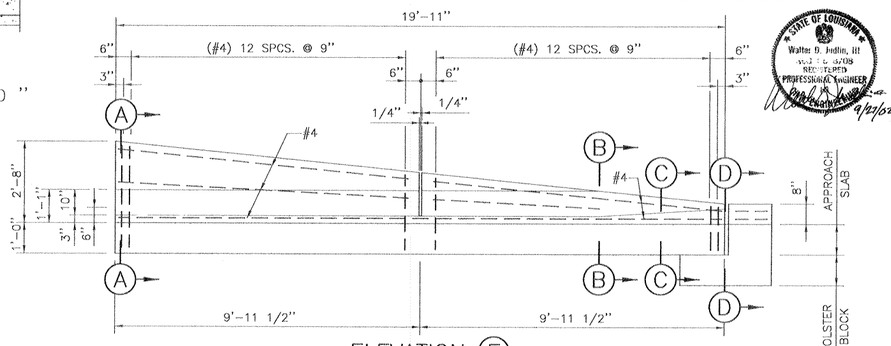
SCALE: 1 " = 1 ' - 0 "



SECTION (D)

SCALE: 1 " = 1 ' - 0 "

NOTE: BOLSTER BLOCK NOT SHOWN FOR CLARITY.



ELEVATION (E)

SCALE: 1/2 " = 1 ' - 0 "

SCALE: 1/2" = 1'- 0"

12" 0 2' 4' 6' 8'

SCALE: 1" = 1'- 0"

12" 0 1' 2' 3' 4' 5'

C•A•D

DACW29-00-B-0094

AS BUILT PLANS

DATE RECEIVED 3/15/02

DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

STATE OF LOUISIANA
Walter B. Judice, III
No. 23 4 JUDICE
REGISTERED
PROFESSIONAL ENGINEER
4/22/02

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

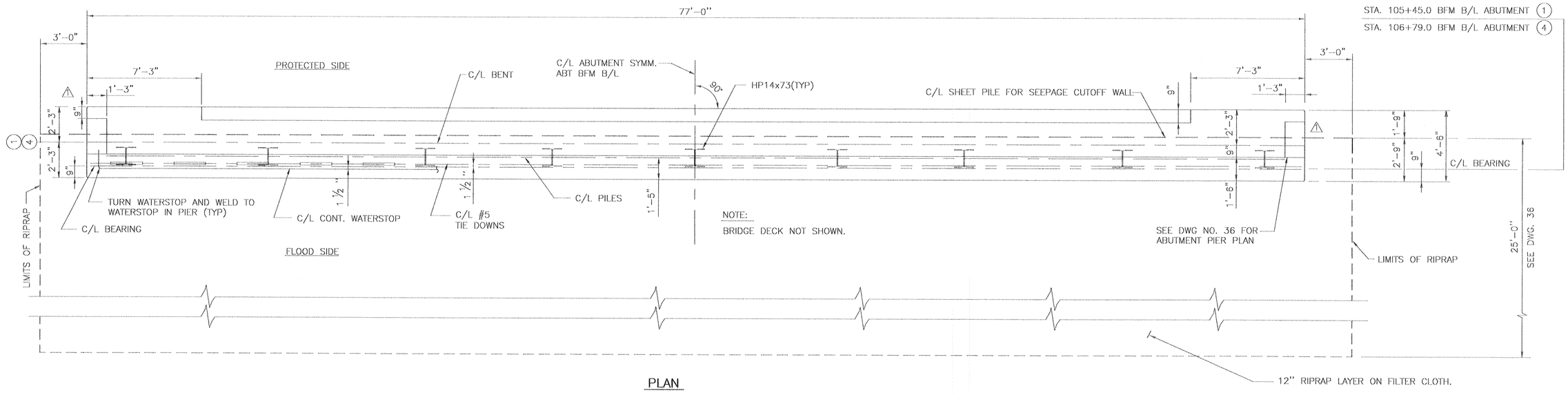
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
APPROACH SLAB DETAILS

DESIGNED BY: W.D.L.	DATE: MAR.8,2000	PLOT SCALE: 24	PLOT DATE: MARCH 8, 2000
DRAWN BY: C.R.N.	CADD FILE: SHT34.DGN		FILE NO. H-4-44776
CHECKED BY: P.J.H.	SOLICITATION NO. DACW29-00-B-0094		DWG. 34 OF 59
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER			

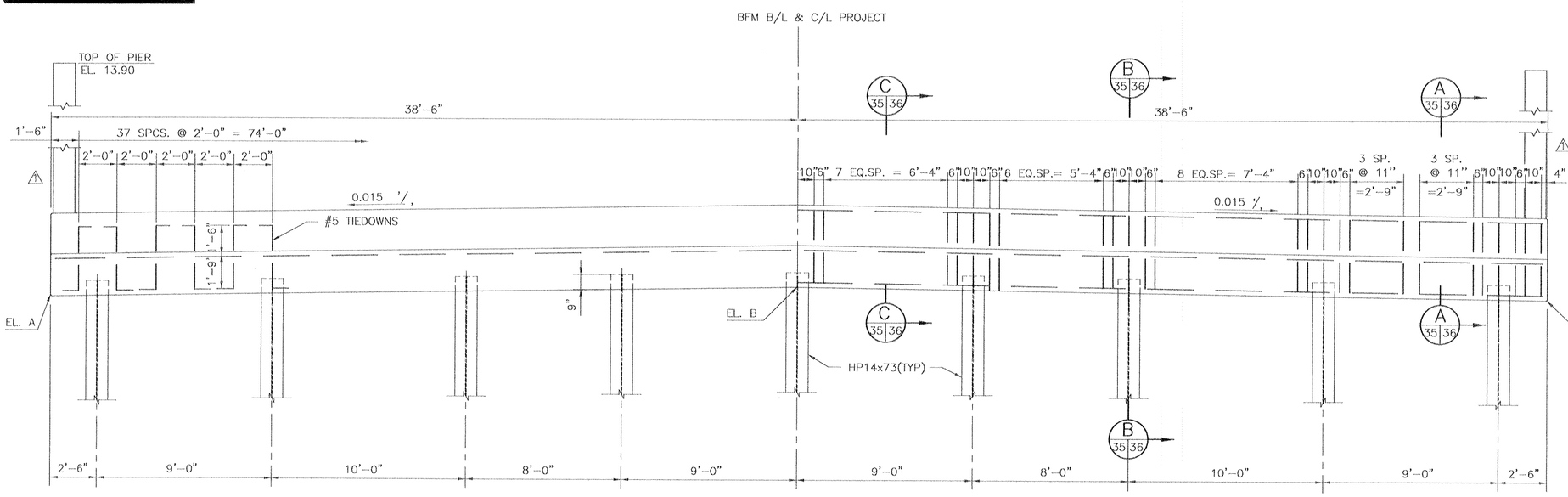
VALUE INCENTIVE SLAMICE ENGINEERING — YOUR KEY TO HIGHER PROFITS

File: D:\SHT34.DWG Last edited: AUG. 24, 02 @ 3:02 p.m. Scale: 1:24 R.J.C.



PLAN

Safety is a Part of Your Contract



ELEVATION

ABUTMENT	C/L BRG. BFM B/L STATION	EL. A	EL. B
WEST (1)	105+45	1.39	1.97
EAST (4)	106+79	1.57	2.15

NOTES:
BRIDGE DECK AND SHEET PILE NOT SHOWN IN ELEVATION.

BRIDGE LIGHTING CONDUIT REQUIRED IN EAST ABUTMENT AND LIGHT POST ANCHOR BOLTS REQUIRED IN ALL PIERS NOT SHOWN FOR CLARITY.

STATE OF LOUISIANA — REG. No. 19708 — REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING — 9/27/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SCALE: 3/8 " = 1'- 0"
12" 0 2' 4' 6' 8' 10'

REFERENCE DRAWINGS
FOR GENERAL NOTES, SEE DWG. NO. 3
FOR BENT LOCATIONS, SEE DWG. NO. 5
FOR BRIDGE PLAN AND ELEVATION, SEE DWG. NO. 30
FOR CATHODIC PROTECTION REQUIREMENTS, SEE DWG. NOS. 24, 25 AND 26.

PILE LENGTH = 87.0 FT.
REQ'D. SHEET PILE TIP MIN. ELEV. = -15.5"

SYMBOL	DESCRIPTION	DATE	APPROVED
1	CHANGED ABUTMENT PIER ENDS	09/19/02	W.D.J.

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

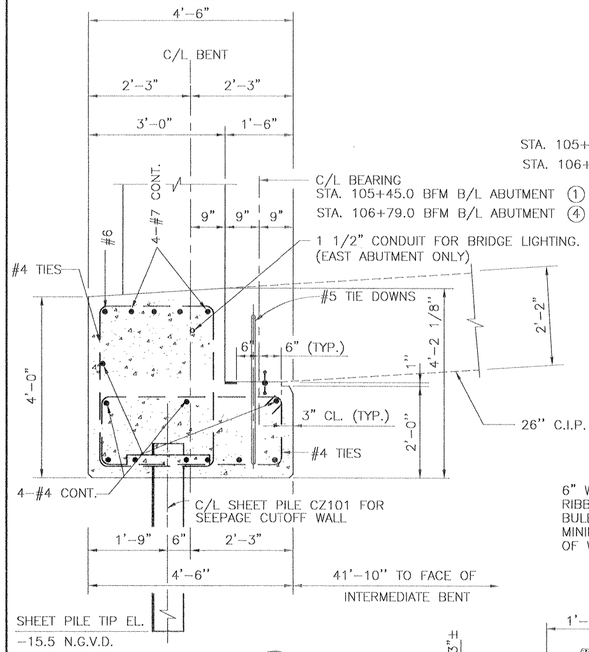
HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE ABUTMENT PLAN & ELEVATION

DESIGNED BY: N.P.	DATE: MAR.8,2000	PLOT SCALE: 32	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.	CADD FILE: SHT35.DGN		FILE NO. H-4-44776
CHECKED BY: P.J.H.			
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 35 OF 59

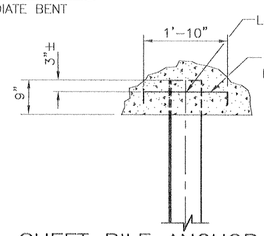
VALUE ENGINEERING — INCENTIVE CLAUSES — YOURS KEY TO HIGHER PROFITS



SECTION (A) 35|36

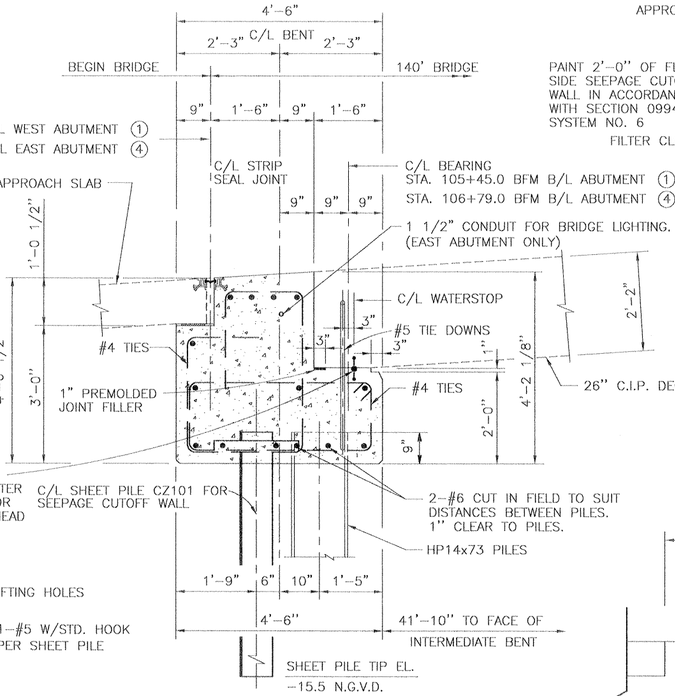
SCALE: 3/4" = 1'- 0"

Safety is a Part of Your Contract



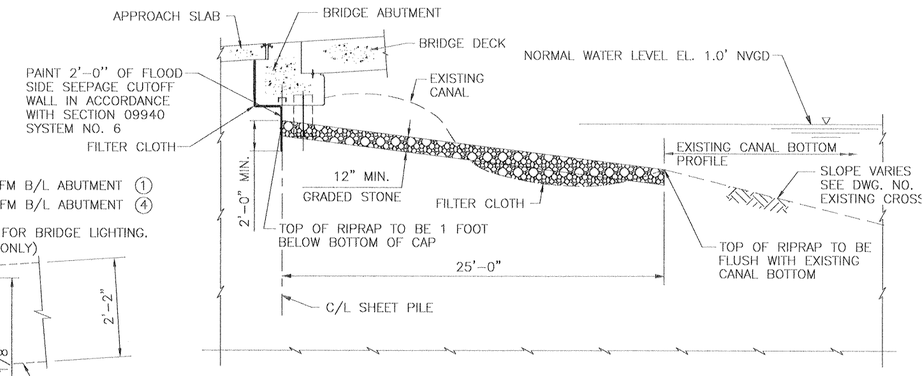
SHEET PILE ANCHOR DETAIL

SCALE: 3/4" = 1'- 0"



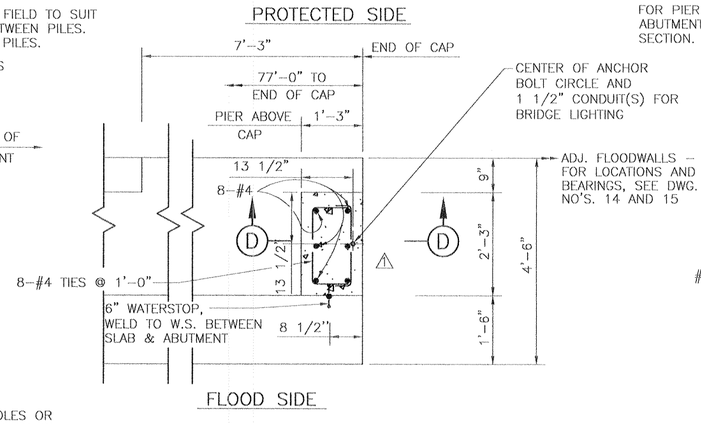
SECTION (B) 35|36

SCALE: 3/4" = 1'- 0"



TYPICAL RIPRAP

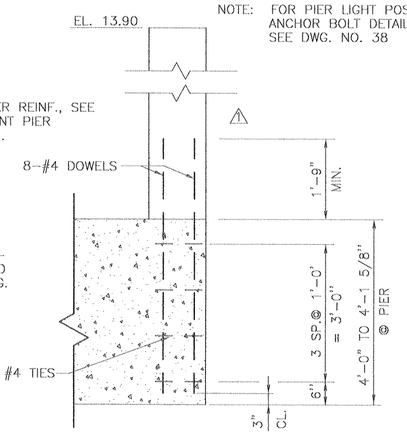
SCALE: 1/4 " = 1'- 0"



FLOOD SIDE

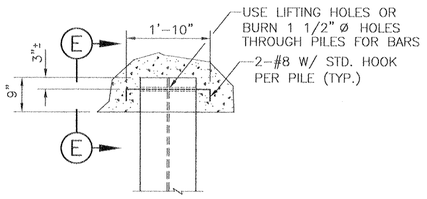
TYP. ABUTMENT PIER SECTION

SCALE: 3/4 " = 1'- 0"



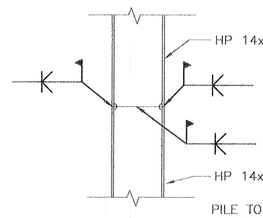
SECTION (D)

SCALE: 3/4 " = 1'- 0"



HP14X73 PILE ANCHOR DETAIL

SCALE: 3/4" = 1'- 0"



NOTE:
UPPER 10 FEET OF HP 14x73 TO RECEIVE COAL TAR EPOXY COATING. THE PAINTED AREA SHALL START 9" FROM THE BUTT OF THE PILE AND EXTEND TO AT LEAST 10'-9" BELOW THE BUTT OF THE PILE.

PILE TO BE SPLICED PRIOR TO DRIVING.

HP14X73 PILE SPLICE DETAIL

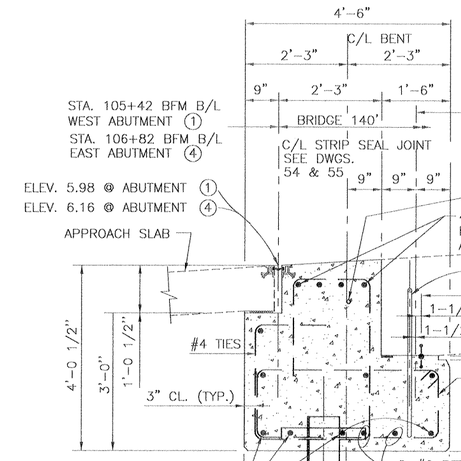
SCALE: 3/4" = 1'- 0"

REFERENCE DRAWINGS:

FOR GENERAL NOTES, SEE DWG. NO. 3.

FOR BRIDGE PLAN AND ELEVATION, SEE DWG. NO. 30.

FOR LIMITS OF RIPRAP, SEE DWG. NOS. 14 AND 35.



SECTION (C) 35|36

SCALE: 3/4" = 1'- 0"

NOTE:
FOR SPACING OF SETS OF STIRRUPS, SEE ELEVATION, DWG. 35.

VALUE ENGINEERING — YOUR KEY TO HIGHER PROFITS

STATE OF LOUISIANA
Walter D. Justin, III
No. 15708
REGISTERED PROFESSIONAL ENGINEER
4/22/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SCALE: 1/4 " = 1'- 0"
12"0 5' 10' 15' 20'

SCALE: 3/4 " = 1'- 0"
12" 0 1' 2' 3' 4' 5'

C*A*D

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		
1	CHANGED ABUTMENT PIER SECTIONS	09/19/02	W.D.J.

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

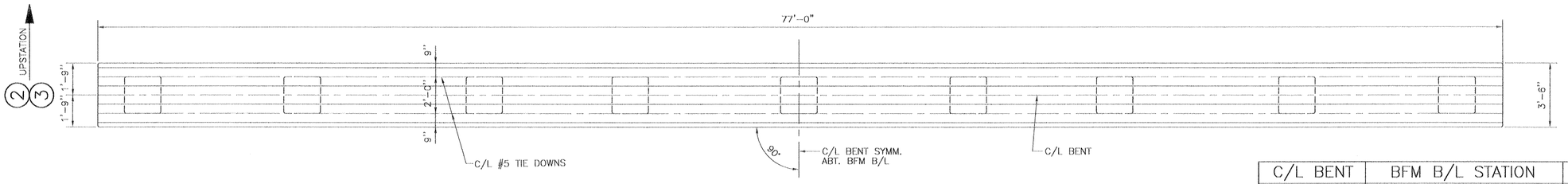
HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE ABUTMENT DETAILS

DESIGNED BY: N.P.	DATE: MAR.8,2000	PLOT SCALE: 16	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.			
CHECKED BY: P.J.H.	CADD FILE: SHT36.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING, DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 36 OF 59

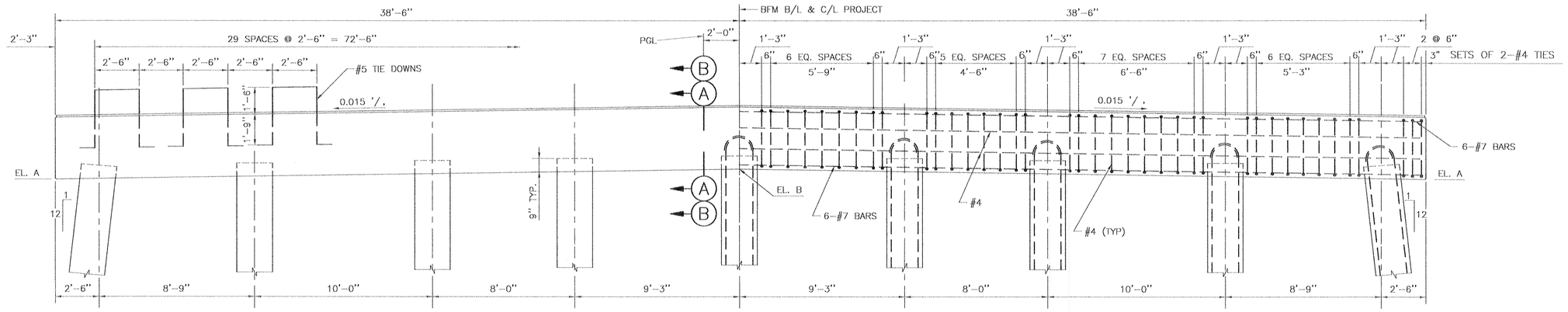
Safety is a Part of Your Contract



PLAN

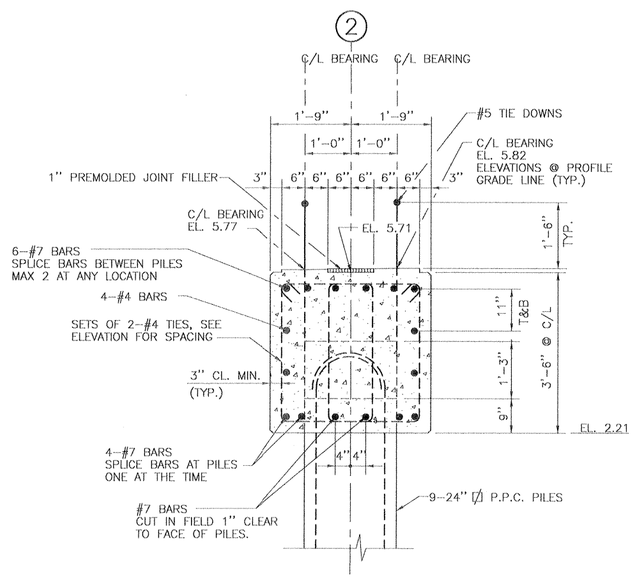
SCALE: 3/8" = 1'- 0"

C/L BENT	BFM B/L STATION	EL. A	EL. B
②	105+89.33	1.66	2.24
③	106+34.67	1.72	2.30



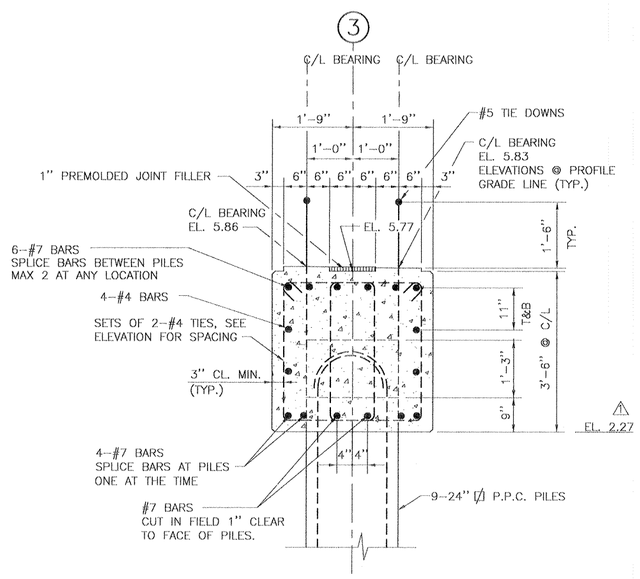
SECTION

SCALE: 3/8" = 1'- 0"



SECTION (A) BENT (2)

SCALE: 3/4" = 1'- 0"



SECTION (B) BENT (3)

SCALE: 3/4" = 1'- 0"

REFERENCE DRAWINGS:

FOR GENERAL NOTES, SEE DWG. NO. 3.

FOR BRIDGE PLAN AND ELEVATION, SEE DWG. NO. 30.

FOR PILE LENGTHS, SEE DWG. NO. 31.

C•A•D

SCALE: 3/8" = 1'- 0"

12" 0 2' 4' 6' 8' 10'

SCALE: 3/4" = 1'- 0"

12" 0 1' 2' 3' 4' 5'

DACW29-00-B-0094

AS BUILT PLANS

DATE RECEIVED 3/15/02

DATE TRACINGS CORRECTED 4/18/02

STATE OF LOUISIANA — Walter D. Pilkington, Jr. — Reg. No. 18708 — REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING — 9/27/02

VALUE ENGINEERING CLAUSES — YOUR KEY TO HIGHER PROFITS

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		
⚠	CHANGED EL. @ SECTION B, BENT 3	09/19/02	W.D.J.

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

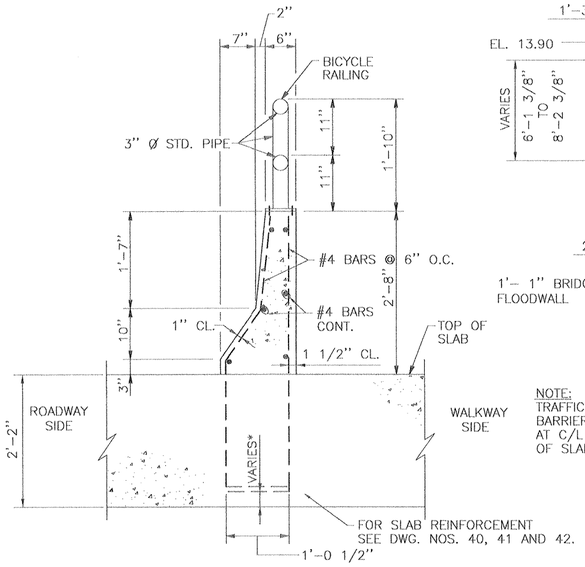
HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
BENTS ② & ③

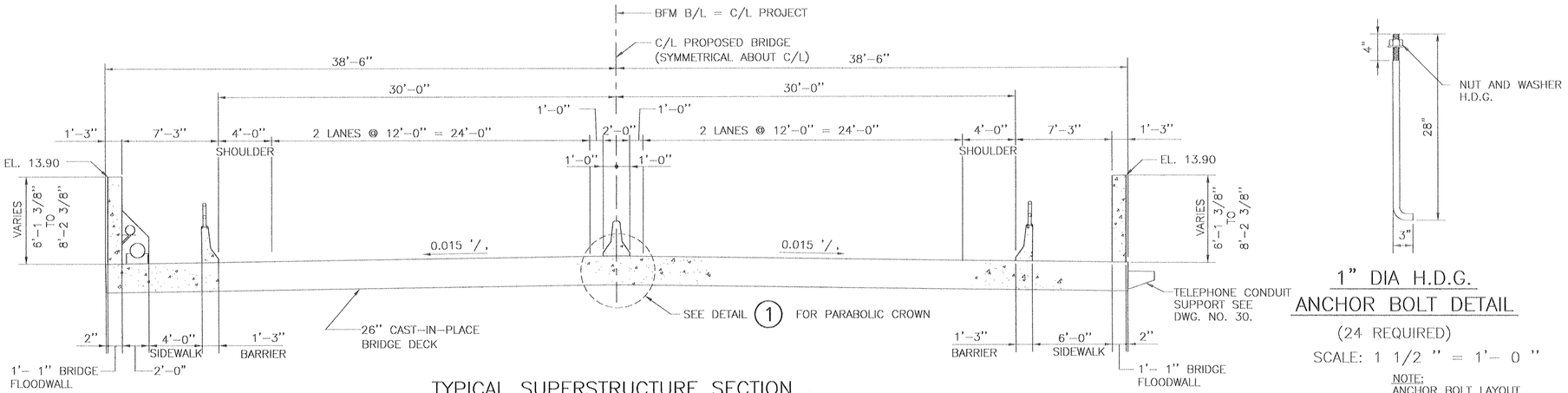
DESIGNED BY: N.P.	DATE: MAR.8,2000	PLOT SCALE: 32	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.	CADD FILE: SHT37.DGN		FILE NO. H-4-44776
CHECKED BY: P.J.H.	SOLICITATION NO. DACW29-00-B-0094		DWG. 37 OF 59
SUBMITTED BY: HARTMAN ENGINEERING, DESIGN ENGINEER			

Safety is a Part of Your Contract



TRAFFIC BARRIER DETAIL

SCALE: 1" = 1'- 0"



TYPICAL SUPERSTRUCTURE SECTION

SCALE: 1/4 " = 1'- 0"

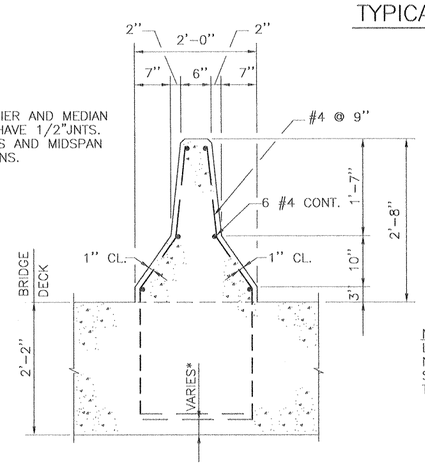
1" DIA H.D.G. ANCHOR BOLT DETAIL

(24 REQUIRED)

SCALE: 1 1/2 " = 1'- 0 "

NOTE:
ANCHOR BOLT LAYOUT AND PROJECTION PER LIGHT POST MANUFACTURER

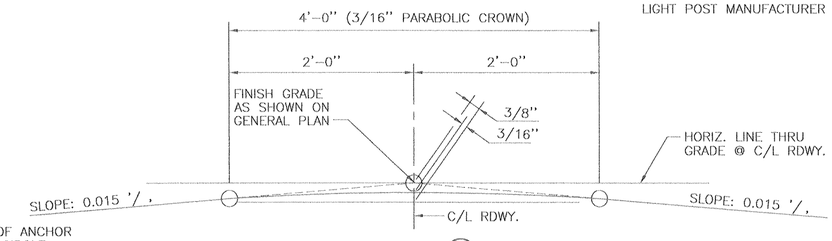
NOTE:
TRAFFIC BARRIER AND MEDIAN BARRIER TO HAVE 1/2"JNTS. AT C/L BENTS AND MIDSPAN OF SLAB SPANS.



MEDIAN BARRIER DETAIL

SCALE: 1 " = 1 ' - 0 "

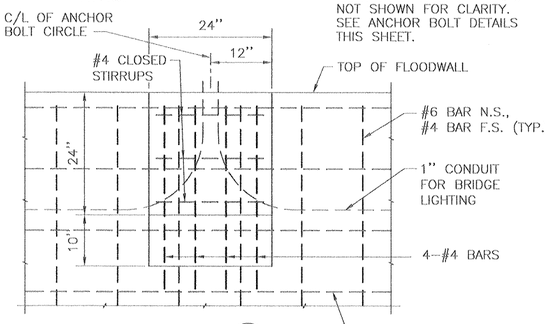
*NOTE:
BRIDGE FLOODWALL AND BARRIER REINFORCING STEEL TO BE PLACED ON TOP OF PRIMARY SLAB REINFORCEMENT SEE DWG. NOS. 40, 41 AND 42 FOR VARYING DIMENSION DETAILS.



DETAIL (1)

TWO WAY TANGENT CROWN PARABOLIC CROWN DETAIL

N.T.S.

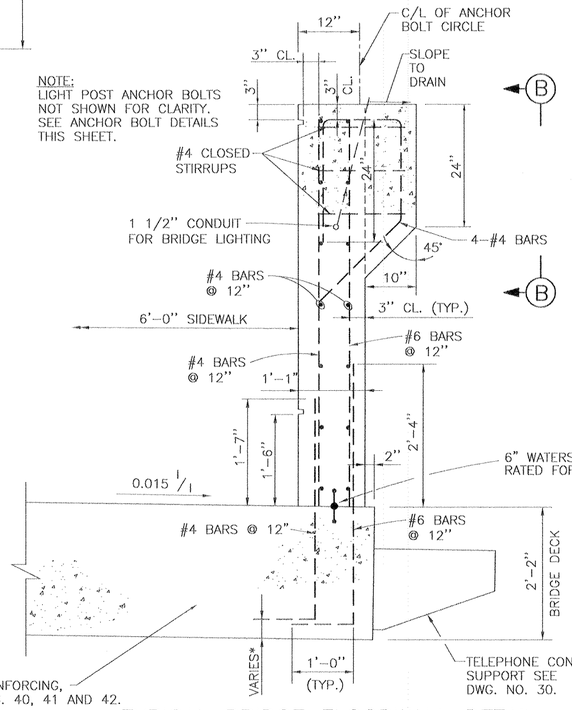


SECTION (B)

SCALE: 1 " = 1'- 0 "

NOTE:
LIGHT POST ANCHOR BOLTS NOT SHOWN FOR CLARITY. SEE ANCHOR BOLT DETAILS THIS SHEET.

NOTE:
LIGHT POST ANCHOR BOLTS NOT SHOWN FOR CLARITY. SEE ANCHOR BOLT DETAILS THIS SHEET.

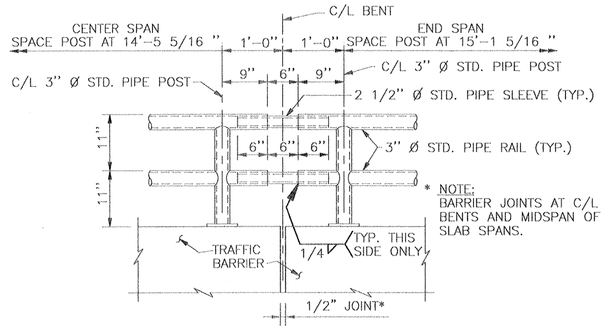


TYPICAL BRIDGE FLOODWALL DETAIL INCLUDING LIGHT POST CORBEL

SCALE: 1 " = 1'- 0 "

REFERENCE DRAWINGS

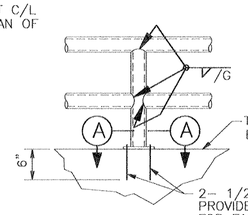
1. FOR GENERAL NOTES, SEE DWG. NO. 3.
2. FOR BRIDGE PLAN AND ELEVATION, SEE DWG. NO. 30.
3. FOR BRIDGE SLAB DETAILS, SEE DWG. NOS. 40, 41 AND 42.



BICYCLE RAILING JOINT

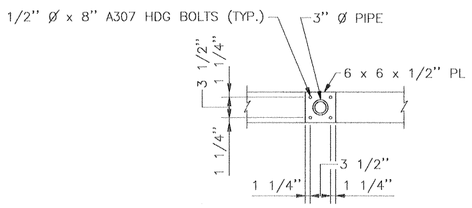
SCALE: 1" = 1'- 0"

NOTE:
BARRIER JOINTS AT C/L BENTS AND MIDSPAN OF SLAB SPANS.



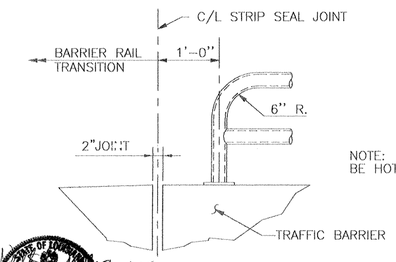
BICYCLE RAILING POST

SCALE: 1" = 1'- 0"



SECTION (A)

SCALE: 1" = 1'- 0"



NOTE: BICYCLE RAILING TO BE HOT-DIP GALVANIZED

END OF RAILING

SCALE: 1" = 1'- 0"

SCALE: 1/4 " = 1'- 0"

12"0 5' 10' 15' 20'

SCALE: 1" = 1'- 0"

12" 0 1' 2' 3' 4' 5'

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

VALUE INCENTIVE CLAUSES — YOUR KEY TO HIGHER PROFITS — ENGINEERING

Walter D. Joffrion, III R.L.S. No. 5708 REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING 9/17/02

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE TYPICAL SUPERSTRUCTURE SECTION

DESIGNED BY: W.D.L.	DATE: MAR.8,2000	PLOT SCALE: 48	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.			
CHECKED BY: P.J.H.	CADD FILE: SHT38.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 38 OF 59

Plot: D:\SHT38.DWG Last edited: AUG. 26, 02 @ 4:35 p.m. Scale: 1:48 R.J.C.

Safety is a Part of Your Contract

EASTBOUND LANES – FINAL

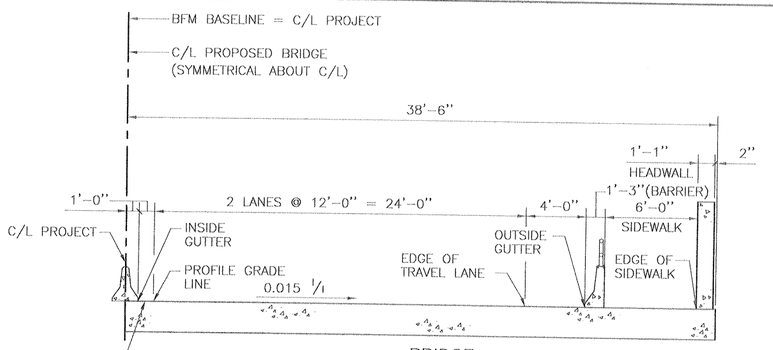
BFM B/L STATION	C/L PROJECT	INSIDE GUTTER	PROFILE GRADE LINE	EDGE TRAVEL LANE	OUTSIDE GUTTER	EDGE OF SIDEWALK
104+76	N.A.	2.62*	2.62*	1.37*	0.82*	*
104+85	N.A.	3.12	3.12	2.00	--	--
104+92	N.A.	3.41	3.41	2.39	--	--
105+09	N.A.	4.13	4.13	3.33	N.A.	--
105+22	4.83	4.82	4.80	4.18	--	--
105+32	5.39	5.38	5.36	4.86	4.72	4.59
105+42	6.00	5.99	5.98	5.62	5.56	5.45
105+52	6.58	6.57	6.56	6.20	6.14	6.03
105+62	7.08	7.07	7.06	6.70	6.64	6.53
105+72	7.48	7.47	7.46	7.10	7.04	6.93
105+82	7.80	7.79	7.78	7.42	7.36	7.25
105+92	8.03	8.02	8.01	7.65	7.59	7.48
106+02	8.18	8.17	8.16	7.80	7.74	7.63
106+12	8.23	8.22	8.21	7.85	7.79	7.68
106+22	8.20	8.19	8.18	7.82	7.76	7.65
106+32	8.08	8.07	8.06	7.70	7.64	7.53
106+42	7.88	7.87	7.86	7.50	7.44	7.33
106+52	7.58	7.57	7.56	7.20	7.14	7.03
106+62	7.20	7.19	7.18	6.82	6.76	6.65
106+72	7.63	6.72	6.71	6.35	6.29	6.18
106+82	6.18	6.17	6.16	5.80	5.74	5.63
106+92	5.59	5.58	5.56	5.20	5.14	5.03
107+02	4.99	4.98	4.96	4.60	4.54	4.43
107+12	N.A.	4.41	4.41	--	3.61	N.A.
107+25	N.A.	3.70	3.70	--	2.72	N.A.
107+32	N.A.	3.31	3.31	--	2.39	N.A.
107+50	N.A.	2.32	2.32	--	1.50	N.A.
107+62	N.A.	*	*	*	*	N.A.

WESTBOUND LANES – FINAL

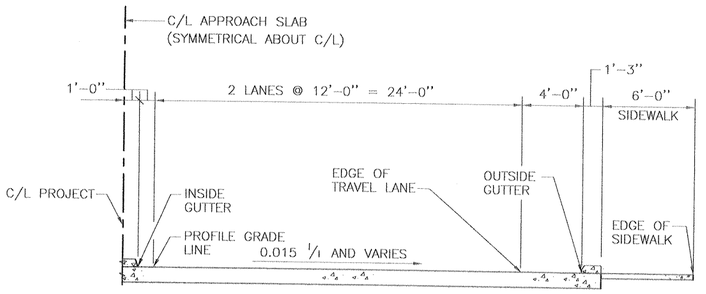
BFM B/L STATION	C/L PROJECT	INSIDE GUTTER	PROFILE GRADE LINE	EDGE TRAVEL LANE	OUTSIDE GUTTER	EDGE OF SIDEWALK
104+76	N.A.	*	*	*	*	N.A.
104+85	N.A.	*	*	*	*	N.A.
104+92	N.A.	*	*	*	*	N.A.
105+09	N.A.	4.10	4.10	--	3.64	N.A.
105+22	4.83	4.80	4.78	4.44	4.38	4.27
105+32	5.39	5.38	5.36	5.00	4.94	4.83
105+42	6.00	5.99	5.98	5.62	5.56	5.45
105+52	6.58	6.57	6.56	6.20	6.14	6.03
105+62	7.08	7.07	7.06	6.70	6.64	6.53
105+72	7.48	7.47	7.46	7.10	7.04	6.93
105+82	7.80	7.79	7.78	7.42	7.36	7.25
105+92	8.03	8.02	8.01	7.65	7.59	7.48
106+02	8.18	8.17	8.16	7.80	7.74	7.63
106+12	8.23	8.22	8.21	7.85	7.79	7.68
106+22	8.20	8.19	8.18	7.82	7.76	7.65
106+32	8.08	8.07	8.06	7.70	7.64	7.53
106+42	7.88	7.87	7.86	7.50	7.44	7.33
106+52	7.58	7.57	7.56	7.20	7.14	7.03
106+62	7.20	7.19	7.18	6.82	6.76	6.65
106+72	7.63	6.72	6.71	6.35	6.29	6.18
106+82	6.18	6.17	6.16	5.80	5.74	5.63
106+92	5.59	5.58	5.56	5.20	5.14	5.03
107+02	4.99	4.98	4.96	4.60	4.54	4.43
107+12	N.A.	4.43	4.43	--	3.52	N.A.
107+25	N.A.	3.74	3.74	--	2.75	N.A.
107+32	N.A.	3.36	3.36	--	2.45	N.A.
107+50	N.A.	2.41	2.41	--	1.63	N.A.
107+62	N.A.	*	*	*	*	N.A.

* – EXISTING GRADE

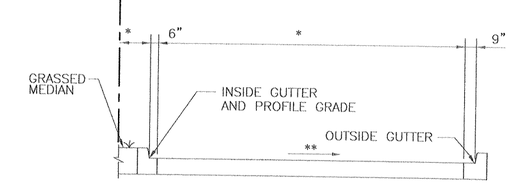
N.A. – NOT APPLICABLE



BRIDGE
(LOOKING UPSTATION)



APPROACH SLAB
(STATION 107+02 SHOWN)



* VARIES

** FOR LIMITS OF CROSS SLOPE TRANSITIONS, SEE DWG. NO. 5

TYPICAL ROADWAY

FINAL ELEVATIONS – KEY PLANS

SCALE: 1/4" = 1'-0"

12" 0 5' 10' 15' 20' 25'

C•A•D

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3
FOR PLAN/PROFILE, SEE DWG. NO. 5
FOR PAVEMENT COMPONENTS AND THICKNESSES, SEE DWG. NO. 44

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

STATE OF LOUISIANA
Walter D. Fadlin, III
Reg. No. 6/08
REGISTERED PROFESSIONAL ENGINEER
CIVIL ENGINEER
4/22/02

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
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KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

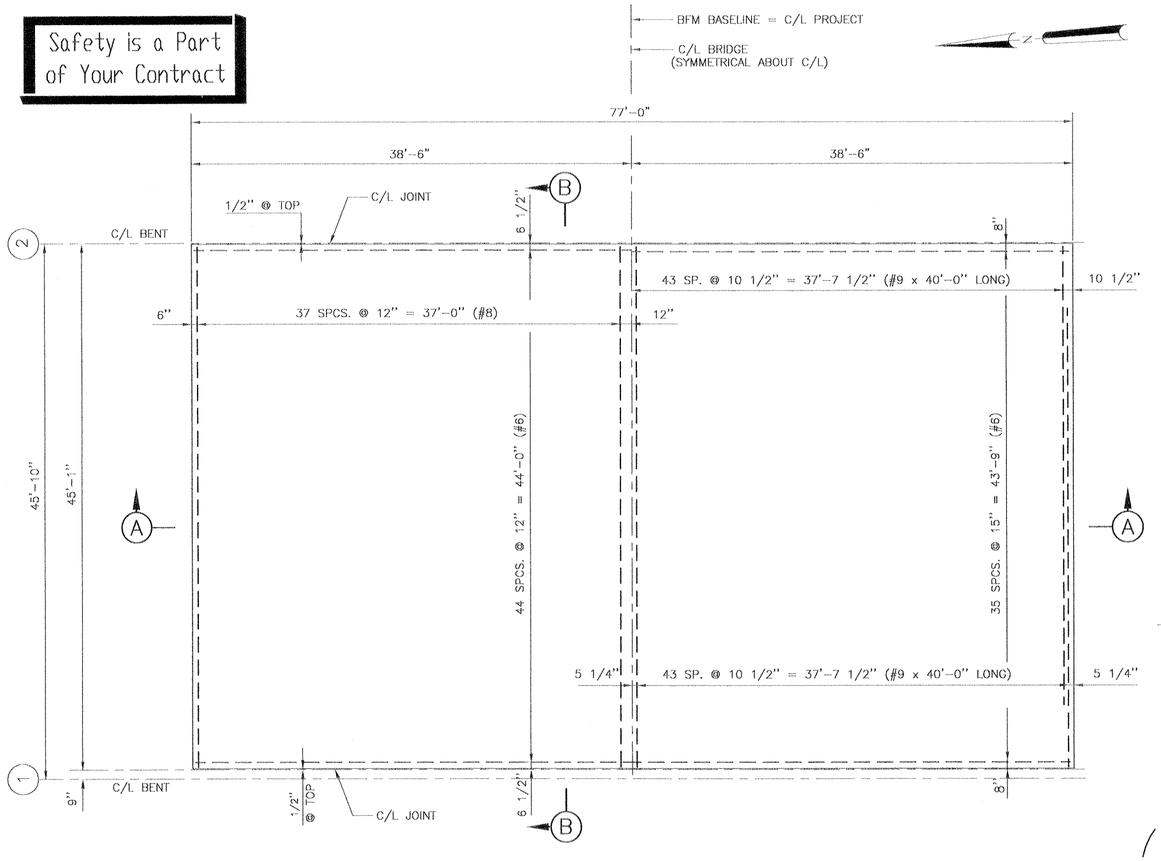
ROBERT E. LEE BOULEVARD BRIDGE ROADWAY ELEVATIONS

DESIGNED BY: W.D.L.	DATE: MAR.8,2000	PLOT SCALE: 1	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.			
CHECKED BY: P.J.H.	CADD FILE: SHT39.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 39 OF 59

VALUE ENGINEERING – YOUR KEY TO CLASSIC PROJECTS – ENGINEERING

File: D:\SHT39.DWG Last edited: AUG. 25, 02 @ 4:45 p.m. Scale: 1:1 R.L.C.

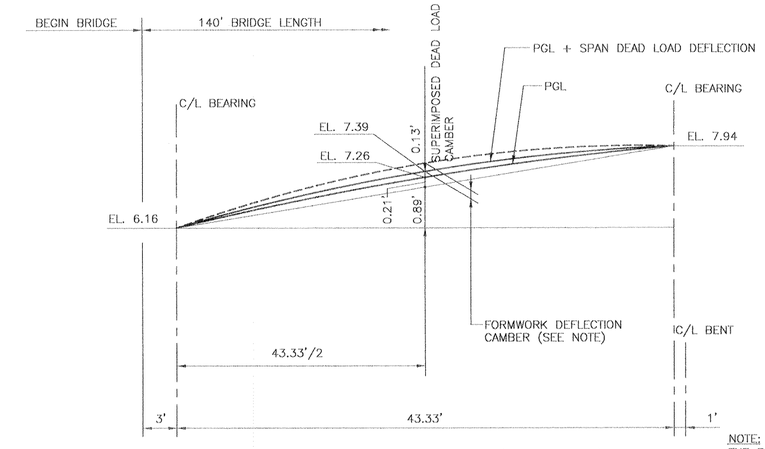
Safety is a Part of Your Contract



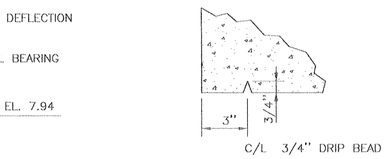
HALF PLAN
SHOWNG SPACING OF TOP REINF. STEEL

HALF PLAN
SHOWNG SPACING OF BOT. REINF. STEEL

PLAN
SCALE: 3/16 " = 1'- 0"

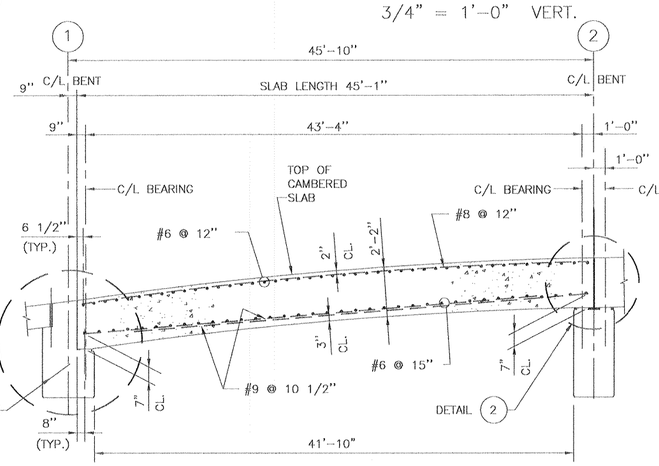


BRIDGE DECK CAMBER (SPAN 1)
SCALE: 3/16" = 1'-0" HORZ.
3/4" = 1'-0" VERT.

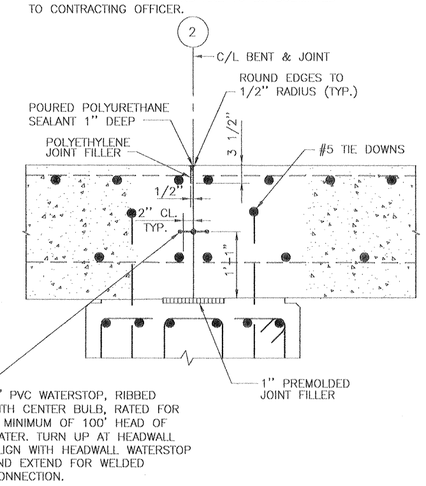


DETAIL (3)
SCALE: 3" = 1'- 0"

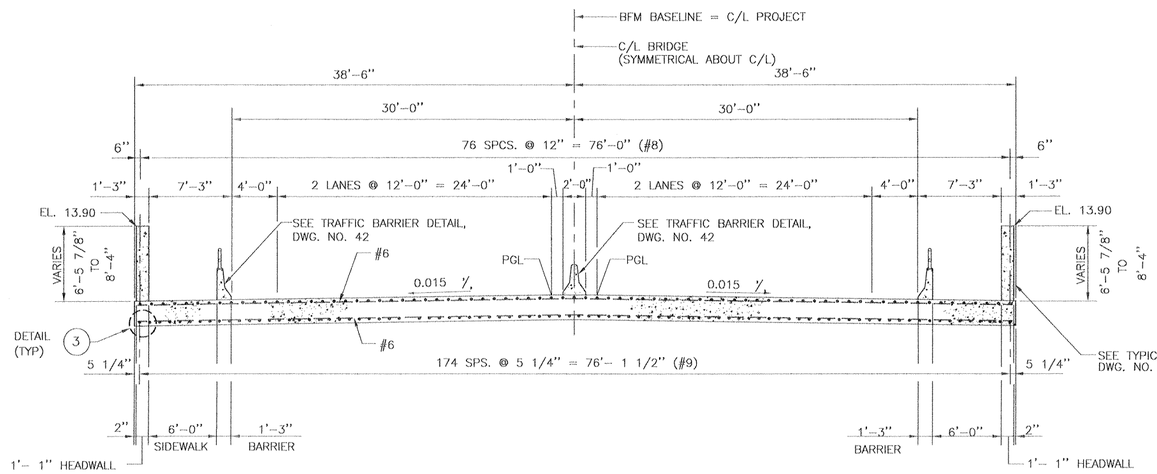
NOTE:
THE PGL + SPAN DEAD LOAD DEFLECTION CHAMBER SHOWN DOES NOT INCLUDE THE DEFLECTION DUE TO THE WEIGHT OF THE FORMWORK. THE CONTRACTOR SHALL PROVIDE ADDITIONAL CAMBER TO ACCOUNT FOR SUCH DEFLECTIONS. CALCULATIONS ARE TO BE SUBMITTED TO CONTRACTING OFFICER.



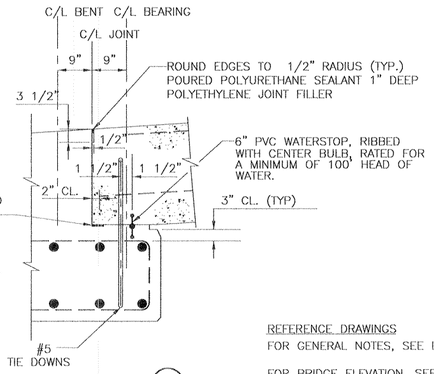
SECTION (B)
HOR. SCALE: 3/16 " = 1'- 0"
VERT. SCALE: 3/8 " = 1'- 0"



DETAIL (2)
SCALE: 1" = 1'- 0"



SECTION (A)
SCALE: 3/16 " = 1'- 0"



DETAIL (1)
SCALE: 3/4" = 1'- 0"

REFERENCE DRAWINGS
FOR GENERAL NOTES, SEE DWG. NO. 3.
FOR BRIDGE ELEVATION, SEE DWG. NO. 30.
FOR BENTS, SEE DWG. NO. 37.
FOR BRIDGE FLOODWALL SECTION, SEE DWG. NO. 38.
FOR BAR SUPPORT DETAILS, SEE DWG. NO. 56.

STATE OF LOUISIANA
Walter D. Judlin, III
Reg. No. 8/08
REGISTERED PROFESSIONAL ENGINEER
4/22/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

VALUE INGENITUY CLASSES ENGINEERING — CLICK HERE TO HIGHER PROFITS

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

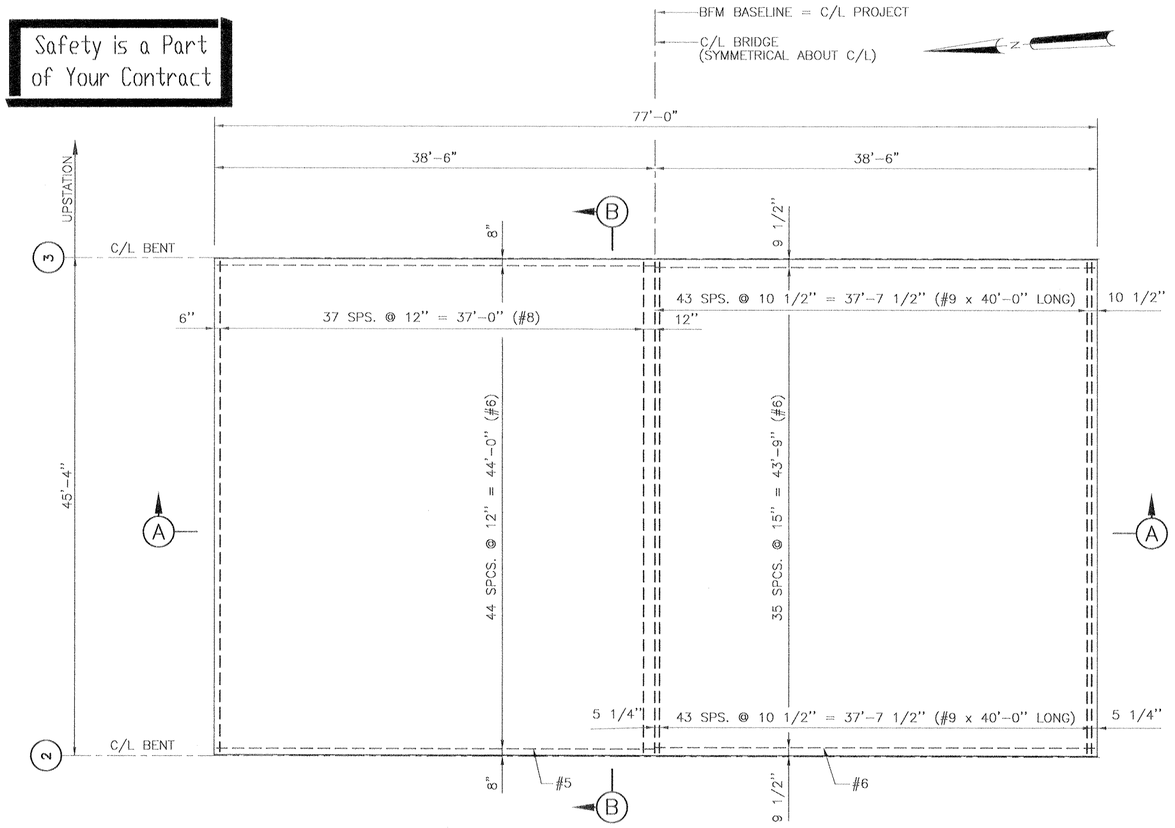
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE SLAB SPAN 1

DESIGNED BY: N.P. DRAWN BY: L.A.C. CHECKED BY: P.J.H.	DATE: MAR.8,2000	PLOT SCALE: 64	PLOT DATE: MARCH 8, 2000
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	CADD FILE: SHT40.DGN		FILE NO. H-4-44776
	SOLICITATION NO. DACW29-00-B-0094		DWG. 40 OF 59

File: D:\SHT40.DWG Last edited: AUG. 28, 02 @ 4:46 p.m. Scale: 1:64 R.J.C.

Safety is a Part of Your Contract

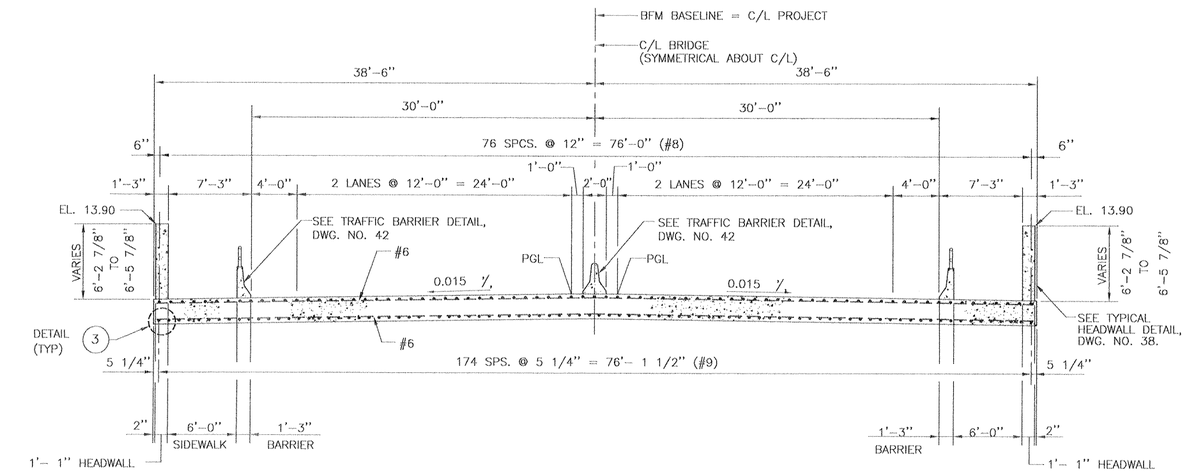


HALF PLAN
SHOWNG SPACING OF TOP REINF. STEEL

HALF PLAN
SHOWNG SPACING OF BOT. REINF. STEEL

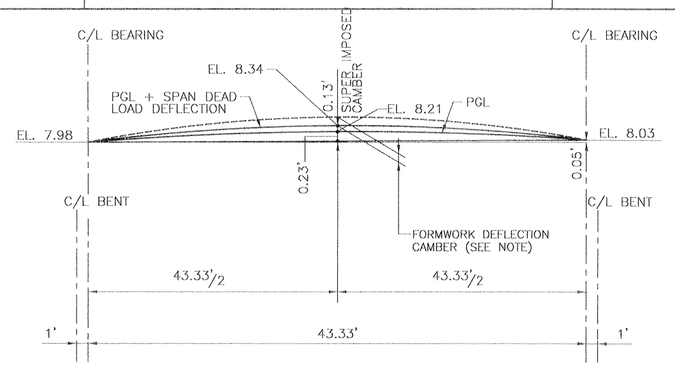
PLAN

SCALE: 3/16 " = 1'- 0"



SECTION (A)

SCALE: 3/16 " = 1'- 0"



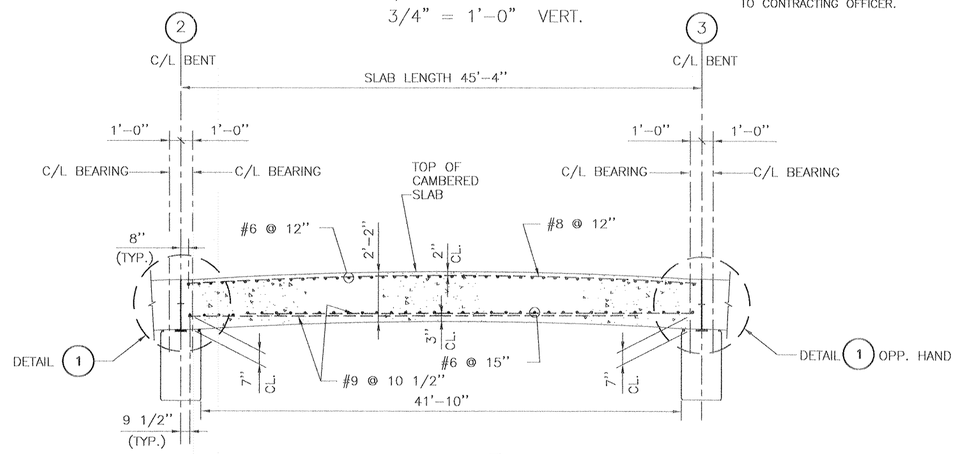
DETAIL (3)

SCALE: 3" = 1'- 0"

NOTE:
THE PGL + SPAN DEAD LOAD DEFLECTION CHAMBER SHOWN DOES NOT INCLUDE THE DEFLECTION DUE TO THE WEIGHT OF THE FORMWORK. THE CONTRACTOR SHALL PROVIDE ADDITIONAL CAMBER TO ACCOUNT FOR SUCH DEFLECTIONS. CALCULATIONS ARE TO BE SUBMITTED TO CONTRACTING OFFICER.

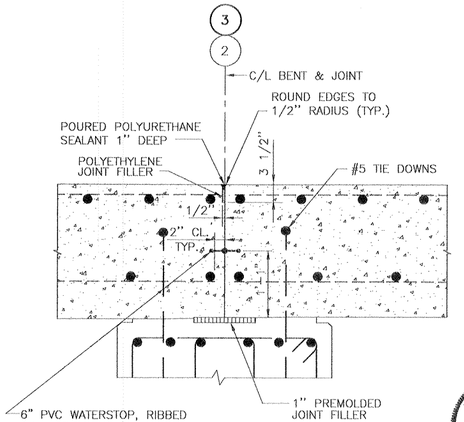
BRIDGE DECK CAMBER (SPAN 2)

SCALE: 3/16" = 1'-0" HORZ.
3/4" = 1'-0" VERT.



SECTION (B)

HOR. SCALE: 3/16 " = 1'- 0"
VERT. SCALE: 3/8 " = 1'- 0"



DETAIL (1)

SCALE: 1" = 1'- 0"

@ BENT LINE (3) OPP. HAND

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

REFERENCE DRAWINGS
FOR GENERAL NOTES, SEE DWG. NO. 3.
FOR BRIDGE ELEVATION, SEE DWG. NO. 30.
FOR BENTS, SEE DWG. NO. 37.
FOR BRIDGE FLOODWALL SECTION, SEE DWG. NO. 38.
FOR BAR SUPPORT DETAILS, SEE DWG. NO. 56.

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

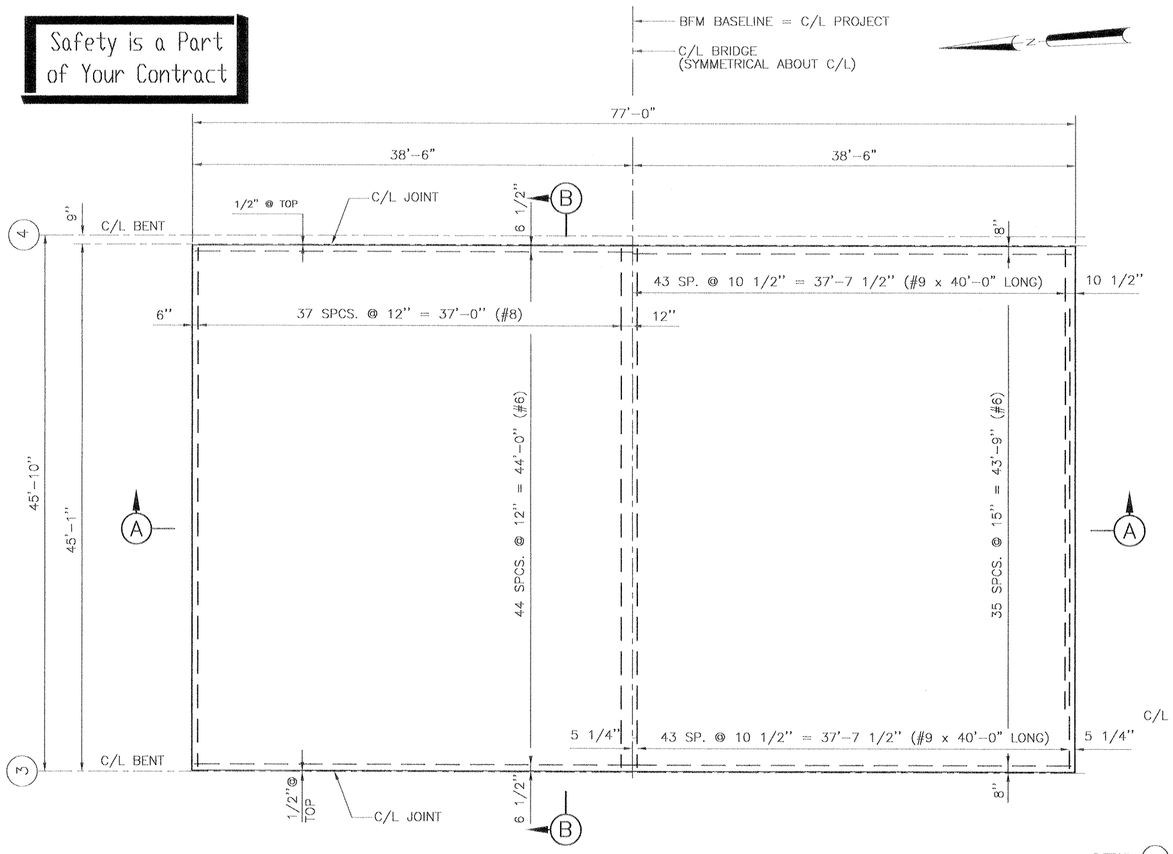
ROBERT E. LEE BOULEVARD BRIDGE SLAB SPAN 2

DESIGNED BY: N.P.	DATE: MAR.8,2000	PLOT SCALE: 64	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.			
CHECKED BY: P.J.H.	CADD FILE: SHT41.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING, DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 41 OF 59

VALUE ENGINEERING — YOUR KEY TO HIGHER PROFITS

File: D:\SHT41.DWG Last edited: AUG. 28, 02 @ 4:47 p.m. Scale: 1:64 R.J.C.

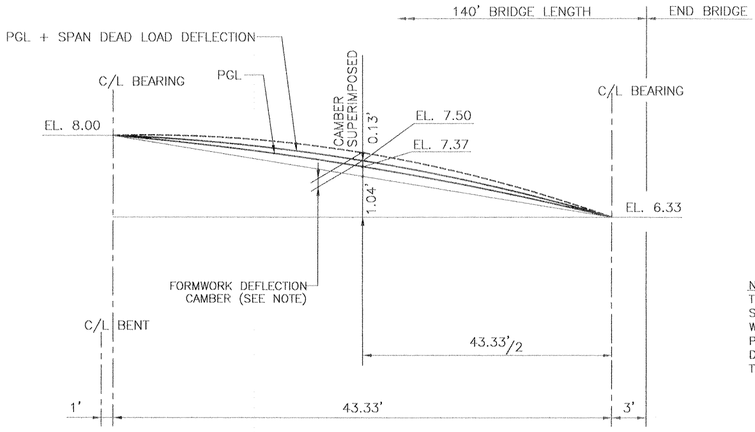
Safety is a Part of Your Contract



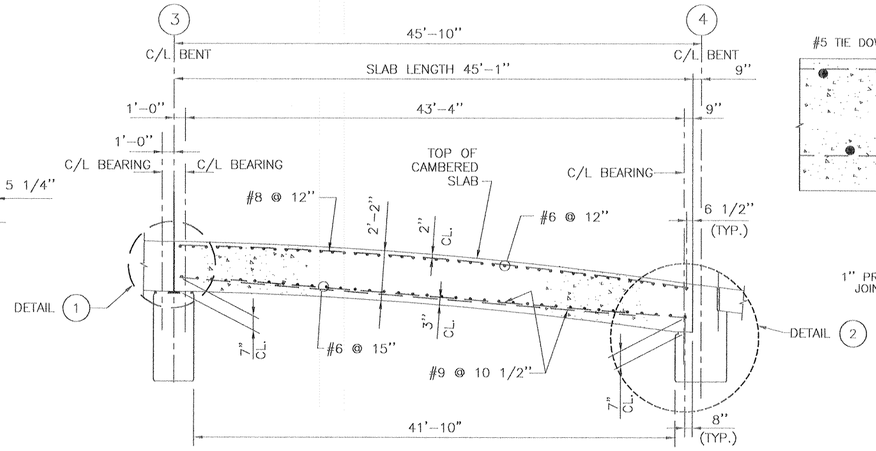
HALF PLAN
SHOWNG SPACING OF TOP REINF. STEEL

HALF PLAN
SHOWNG SPACING OF BOT. REINF. STEEL

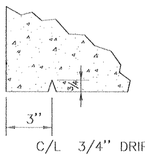
PLAN
SCALE: 3/16 '' = 1'- 0''



BRIDGE DECK CAMBER (SPAN 3)
SCALE: 3/16" = 1'-0" HORZ.
3/4" = 1'-0" VERT.

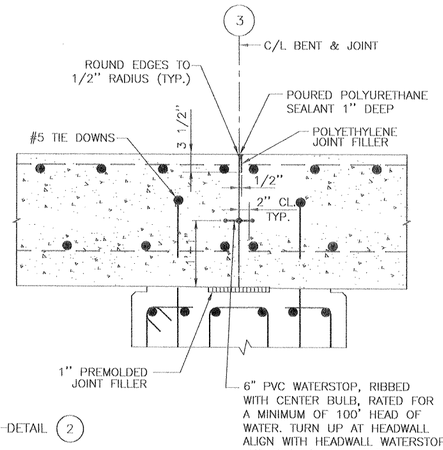


SECTION (B)
HOR. SCALE: 3/16 '' = 1'- 0''
VERT. SCALE: 3/8 '' = 1'- 0''

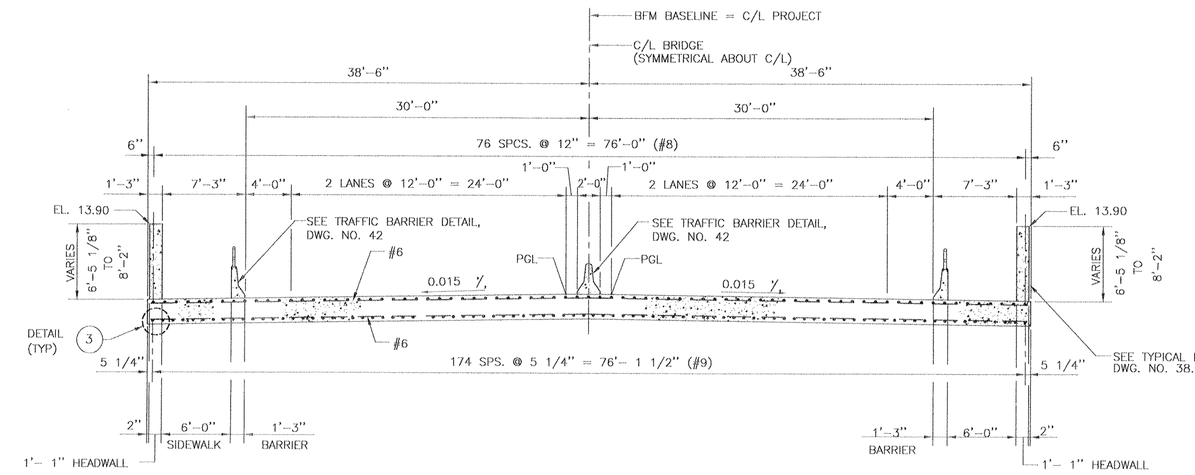


DETAIL (3)
SCALE: 3" = 1'- 0"

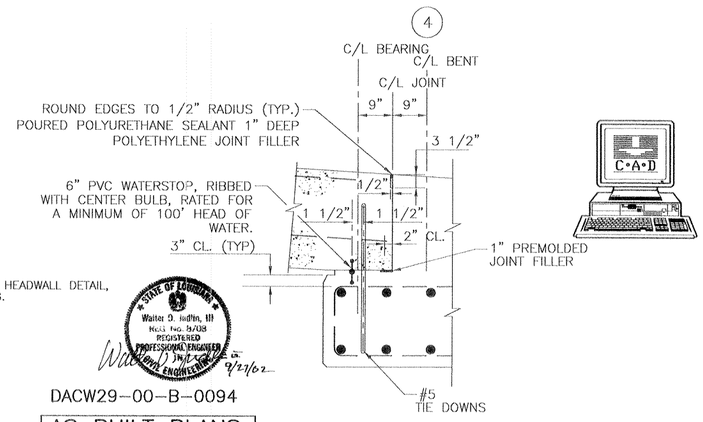
NOTE:
THE PGL + SPAN DEAD LOAD DEFLECTION CHAMBER SHOWN DOES NOT INCLUDE THE DEFLECTION DUE TO THE WEIGHT OF THE FORMWORK. THE CONTRACTOR SHALL PROVIDE ADDITIONAL CAMBER TO ACCOUNT FOR SUCH DEFLECTIONS. CALCULATIONS ARE TO BE SUBMITTED TO CONTRACTING OFFICER.



DETAIL (1)
SCALE: 1'' = 1'- 0''



SECTION (A)
SCALE: 3/16 '' = 1'- 0''



DETAIL (2)
SCALE: 3/4'' = 1'- 0''

REFERENCE DRAWINGS
FOR GENERAL NOTES, SEE DWG. NO. 3.
FOR BRIDGE ELEVATION, SEE DWG. NO. 30.
FOR BENTS, SEE DWG. NO. 37.
FOR BRIDGE FLOODWALL SECTION, SEE DWG. NO. 38.
FOR BAR SUPPORT DETAILS, SEE DWG. NO. 56.

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

STATE OF LOUISIANA
Walter O. Maffin, III
Regis. No. 9708
REGISTERED PROFESSIONAL ENGINEER
CIVIL ENGINEERING
9/27/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

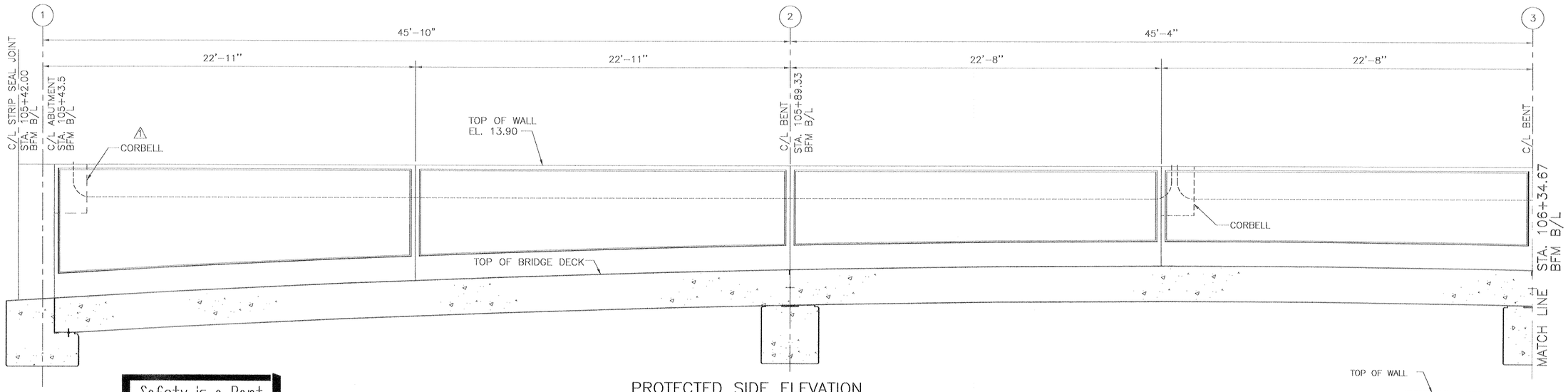
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE SLAB SPAN 3

DESIGNED BY: N.P. DRAWN BY: L.A.C. CHECKED BY: P.J.H.	DATE: MAR.8,2000	PLOT SCALE: 64	PLOT DATE: MARCH 8, 2000
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	CADD FILE: SHT42.DGN		FILE NO. H-4-44776
	SOLICITATION NO. DACW29-00-B-0094		DWG. 42 OF 59

VALUE ENGINEERING CLAUSES APPLY — YOUR KEY TO HIGHER PROFITS

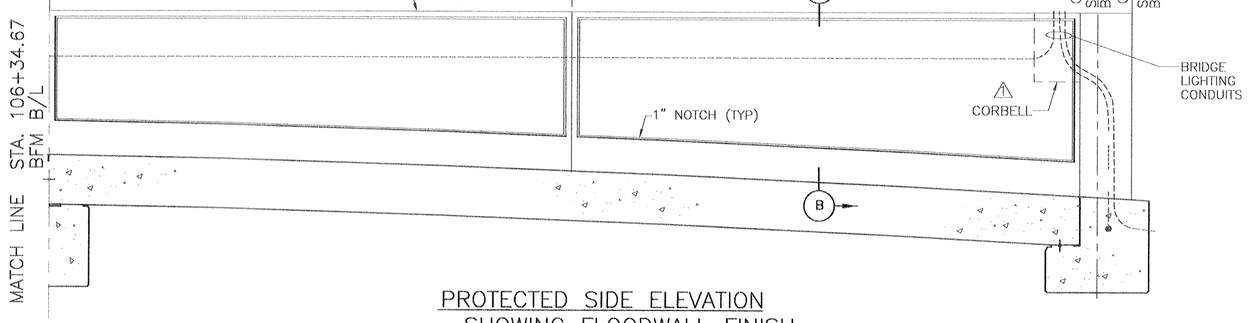
File: D:\SHT42.DWG Last edited: AUG. 26, 02 @ 4:48 p.m. Scale: 1:64 R.u.C.



PROTECTED SIDE ELEVATION
SHOWING FLOODWALL FINISH

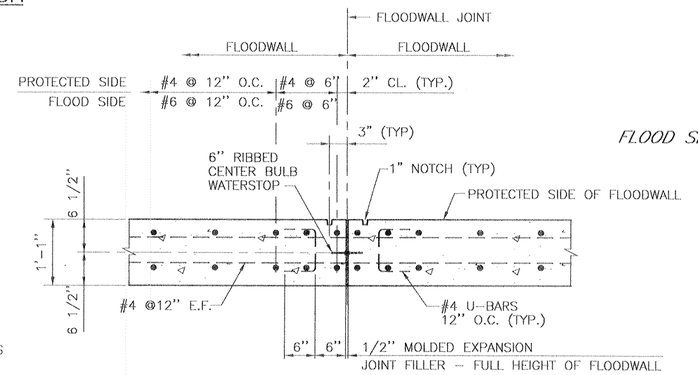
SCALE: 3/8 " = 1' – 0 "

Safety is a Part of Your Contract



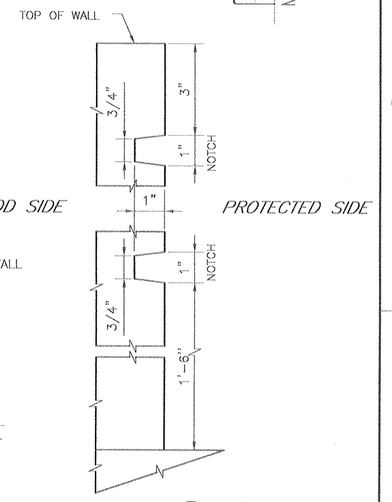
PROTECTED SIDE ELEVATION
SHOWING FLOODWALL FINISH

SCALE: 3/8 " = 1' – 0 "



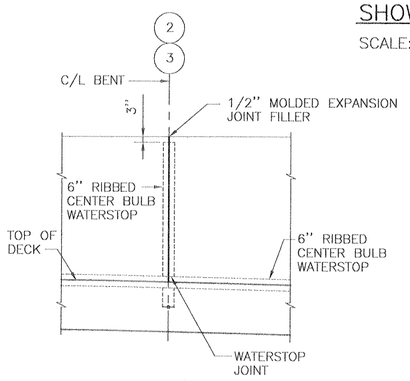
SECTION (A)

SCALE: 1 " = 1' – 0 "



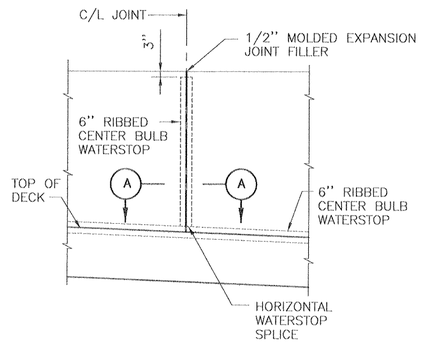
SECTION (B)

SCALE: 1/2" = 1' – 0 "



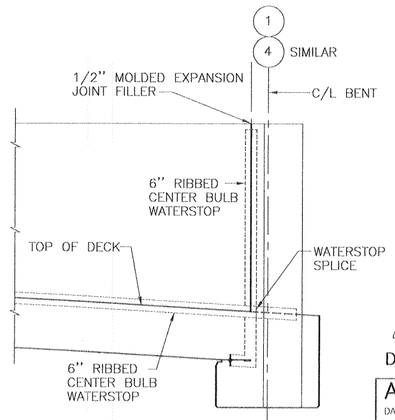
FLOOD SIDE ELEVATION
FLOODWALL JOINT AT BENTS

SCALE: 3/8 " = 1' – 0 "



FLOOD SIDE ELEVATION
FLOODWALL JOINT AT MIDSPAN

SCALE: 3/8 " = 1' – 0 "



FLOOD SIDE ELEVATION
DECK/FLOODWALL SEAL AT ABUTMENTS

SCALE: 3/8 " = 1' – 0 "

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3
FOR PLAN/PROFILE, SEE DWG. NO. 5
FOR BRIDGE LIGHTING CONDUITS, SEE DWG. NO. 11
FOR ABUTMENT DETAILS, SEE DWG. NO. 35 AND NO. 36
FOR TYPICAL BRIDGE FLOODWALL AND CORBEL DETAIL SEE DWG. NO. 38
FOR SLAB SPAN DETAILS, SEE DWG. NO. 40, 41 AND 42

C•A•D

STATE OF LOUISIANA
Walter P. Joslin, III
No. 21108
REGISTERED
PROFESSIONAL ENGINEER
9/27/02

DACW29–00–B–0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED
⚠	CHANGED TO SHOW CORBELL	09/19/02	W.D.J.

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

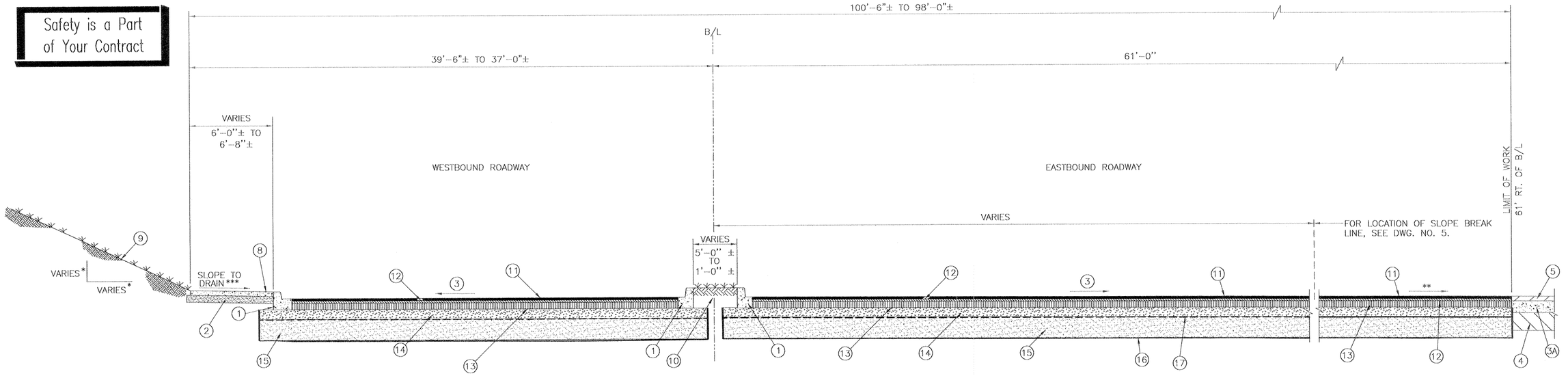
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
BRIDGE FLOODWALL DETAILS

DESIGNED BY: W.D.J.	DATE: MAR.8,2000	PLOT SCALE: 32	PLOT DATE: MARCH 8, 2000
DRAWN BY: C.R.N.			
CHECKED BY: P.J.H.	CADD FILE: SHT43.DGN		FILE NO. H–4–44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29–00–B–0094		DWG. 43 OF 59

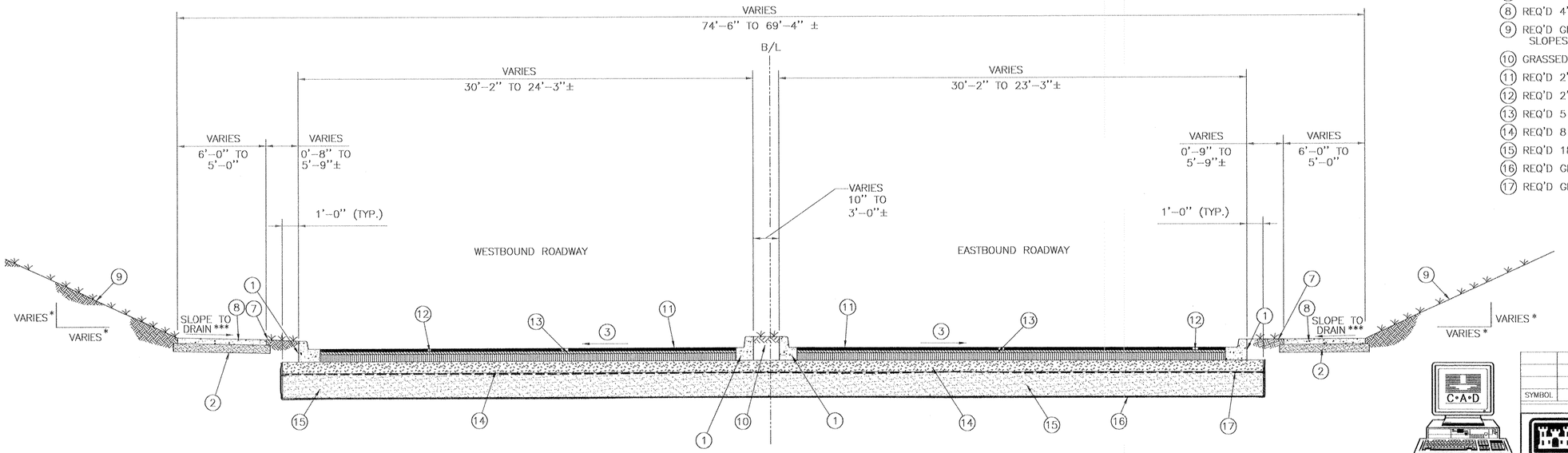
VALUE INCENTIVE CLAUSES ENGINEERING — YOUR KEY TO HIGHER PROFITS

Safety is a Part of Your Contract



ROBERT E. LEE BOULEVARD
STA. 104+99± TO 105+20±

TYPICAL ROADWAY SECTION
SCALE: 1" = 3'- 0"



ROBERT E. LEE BOULEVARD
STA. 107+02 TO STA. 107+62

TYPICAL ROADWAY SECTION
SCALE: 1" = 3'- 0"

(1) REQ'D INTEGRAL BARRIER CURB AND GUTTER
(2) REQ'D 6" COMPACTED SAND
(3) SLOPE VARIES
(3A) EXISTING CONCRETE ROADWAY (THICKNESS VARIES)
(4) EXISTING PAVEMENT BASE (THICKNESS VARIES)
(5) EXISTING PAVEMENT SURFACE COURSE (THICKNESS VARIES)
(7) REQ'D GRADING TO TOP OF CURB
(8) REQ'D 4" SIDEWALK (SLOPE TO DRAIN)
(9) REQ'D GRADING TO MEET LEVEE SLOPES
(10) GRASSED MEDIAN
(11) REQ'D 2" TYPE 8F WEARING COURSE
(12) REQ'D 2" TYPE 8 BINDER COURSE
(13) REQ'D 5 1/2" TYPE 5A BASE COURSE
(14) REQ'D 8 1/2" CRUSHED STONE BASE
(15) REQ'D 18" SAND SUBBASE
(16) REQ'D GEOTEXTILE FABRIC
(17) REQ'D GEOTEXTILE FABRIC AND GEOGRID FABRIC

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3
FOR PLAN/PROFILE, SEE DWG. NO. 5
FOR DEMOLITION PLAN, SEE DWG. NO. 9
FOR ROADWAY ELEVATIONS, SEE DWG. NO. 39.
FOR TYPICAL ROADWAY AND SIDEWALK DETAILS SEE DWG. NO. 45.
FOR ROADWAY CROSS-SECTIONS, SEE DWG. NO. 47, 48 AND 49.

* SLOPE SHALL MATCH EXISTING TO LEVEE CROWN (SEE ROADWAY CROSS-SECTIONS)

** SLOPE TO MEET EXISTING GRADE @ LIMIT OF WORK

*** 1/4" PER FT. MINIMUM

STATE OF LOUISIANA
Walter D. Judice, III
REG. NO. 31705
REGISTERED PROFESSIONAL ENGINEER
9/27/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SCALE: 1" = 3'- 0"
12" 0 3' 6' 9' 12'

C•A•D

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

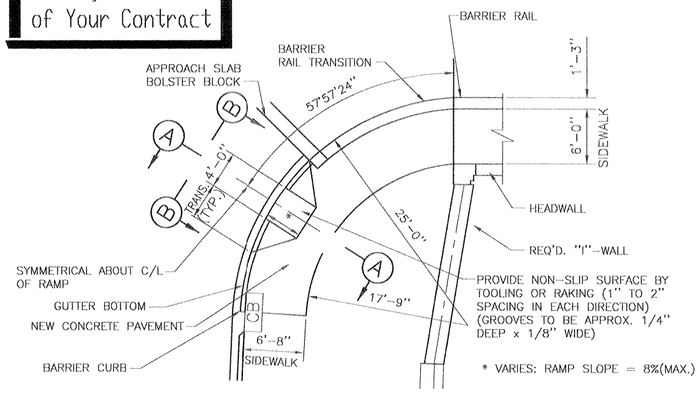
ROBERT E. LEE BOULEVARD BRIDGE TYPICAL ROADWAY SECTIONS

DESIGNED BY: M.K.R.	DATE: MAR.8,2000	PLOT SCALE: 36	PLOT DATE: MARCH 8, 2000
DRAWN BY: C.R.N.	CADD FILE: SHT44.DGN		FILE NO. H-4-44776
CHECKED BY: W.D.L.	SOLICITATION NO. DACW29-00-B-0094		DWG. 44 OF 59
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER			

VALUE INCENTIVE CLAUSES ENGINEERING — YOUR KEY TO HIGHER PROFITS

File: D:\SHT44.DWG Last edited: AUG. 26, 02 @ 5:10 p.m. Scale: 1:38 R.J.C.

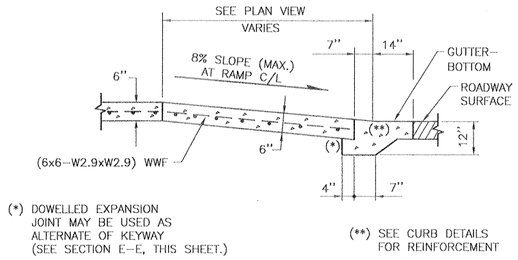
Safety is a Part of Your Contract



NOTE: WEST CONCRETE HANDICAPPED RAMP SIMILAR.

EAST CONCRETE HANDICAPPED RAMP TYPE "A"

N.T.S.



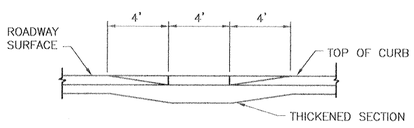
(*) DOWELLED EXPANSION JOINT MAY BE USED AS ALTERNATE OF KEYWAY (SEE SECTION E-E, THIS SHEET.)

(**) SEE CURB DETAILS FOR REINFORCEMENT

SECTION (A)

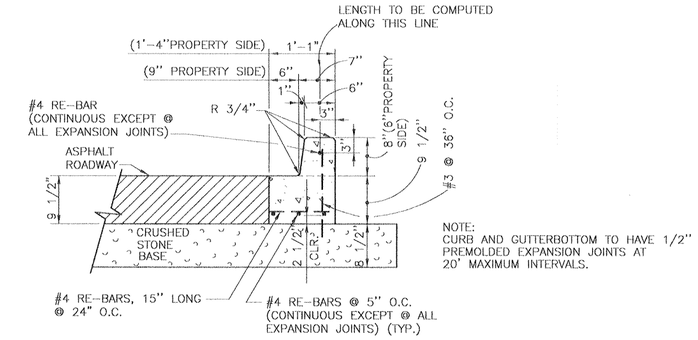
(TYPE "A" RAMP)

N.T.S.



SECTION (B)

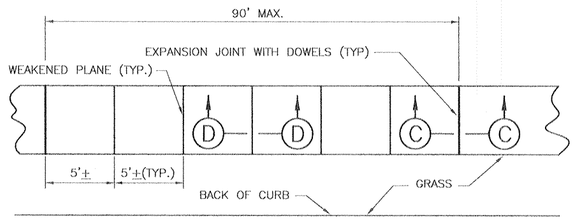
N.T.S.



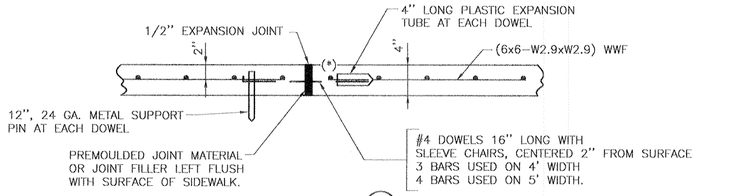
NOTE:
CURB AND GUTTERBOTTOM TO HAVE 1/2" PREMOLDED EXPANSION JOINTS AT 20' MAXIMUM INTERVALS.

BARRIER CURB & GUTTERBOTTOM

SCALE: 1" = 1'-0"

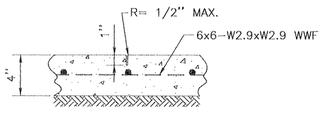


PLAN

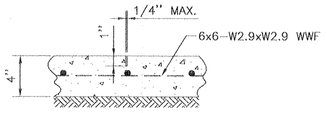


SECTION (C)

(*) THIS HALF OF DOWEL SHALL BE GREASED UNLESS PLASTIC OR EPOXY COATED DOWEL IS USED.



HAND-TOOLED CONTROL JOINT

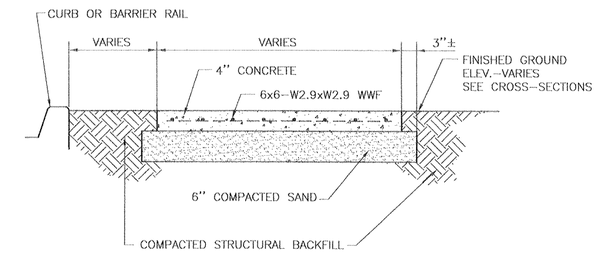


SAWED CONTROL JOINT

SECTION (D)

PORTLAND CEMENT CONCRETE SIDEWALK PAVEMENT

N.T.S.

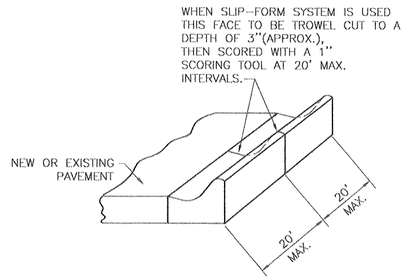


TYPICAL SIDEWALK SECTION

N.T.S.

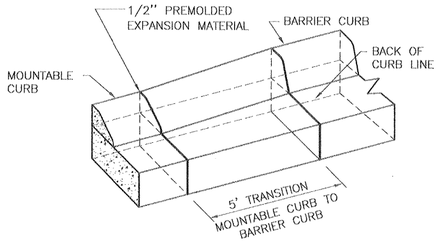
NOTES:

1. REQUIRED WALKS TO BE CONSTRUCTED TO GRADES AS SHOWN ON "ROADWAY ELEVATIONS" SHEET.



DETAIL SHOWING JOINTS IN CONCRETE CURB AND GUTTER

N.T.S.



MOUNTABLE-BARRIER CURB TRANSITION

N.T.S.

HANDICAP RAMP NOTES:

A. LOCATION

1. STREET INTERSECTIONS AS SHOWN ON DRAWINGS.

B. CONSTRUCTION

1. THE SLOPE OF THE RAMP SHALL NOT EXCEED 8%.
2. THE SLOPE OF THE SIDEWALK AND SIDEWALK TRANSITION SHALL NOT EXCEED 8%.
3. THE WIDTH OF THE RAMP SHALL NOT BE LESS THAN 4' BUT MAY EXCEED THIS WHERE NECESSARY.

VALUE ENGINEERING — VALUE INCENTIVE CLAUSES — YOUR KEY TO HIGHER PROFITS

REFERENCE DRAWINGS

1. FOR GENERAL NOTES, SEE DWG. NO. 3.
2. FOR PLAN/PROFILE, SEE DWG. NO. 5.
3. FOR TYPICAL ROADWAY SECTIONS, SEE DWG. NO. 44.

STATE OF LOUISIANA — Walter D. Judkin, III — R.G. No. 24708 — REGISTERED PROFESSIONAL ENGINEER — 5TH ENGINEERS — 4/12/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
TYP. ROADWAY AND SIDEWALK DETAILS

DESIGNED BY: M.K.R. DRAWN BY: L.A.C. CHECKED BY: W.D.L.	DATE: MAR.8,2000	PLOT SCALE: 1	PLOT DATE: MARCH 8, 2000
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	CADD FILE: SHT45.DGN		FILE NO. H-4-44776
	SOLICITATION NO. DACW29-00-B-0094		DWG. 45 OF 59

File: D:\SHT45.DWG Last edited: Aug. 28, 02 @ 5:12 p.m. Scale: 1:1 R.u.c.

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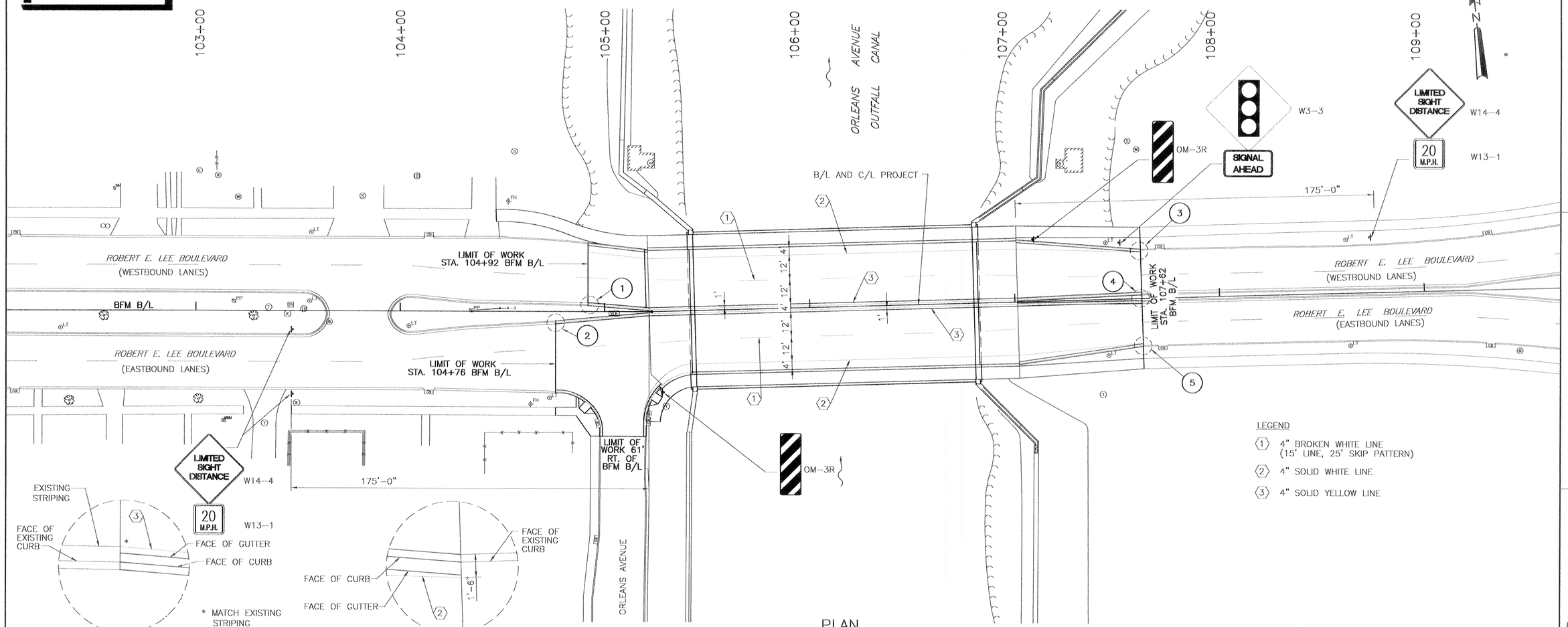


LEGEND

(1) 4" BROKEN WHITE LINE (15' LINE, 25' SKIP PATTERN)

(2) 4" SOLID WHITE LINE

(3) 4" SOLID YELLOW LINE

PLAN

SCALE: 1" = 20'

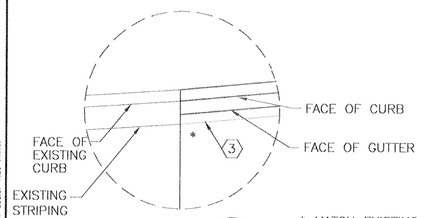
20' 0 20' 40' 60' 80'

DETAIL (1)

SCALE: 3/8" = 1'-0"

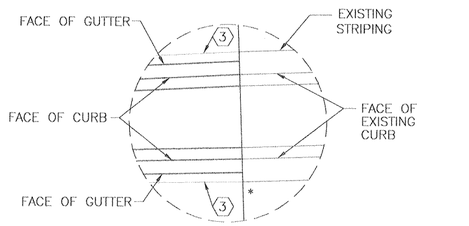
DETAIL (3)

SCALE: 3/8" = 1'-0"



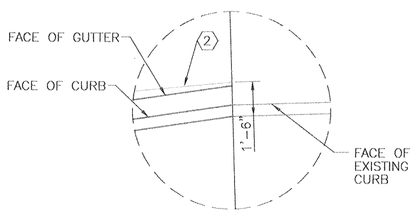
DETAIL (2)

SCALE: 3/8" = 1'-0"



DETAIL (4)

SCALE: 3/8" = 1'-0"



DETAIL (5)

SCALE: 3/8" = 1'-0"

NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE INSTALLED AS PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

2. ALL PAVEMENT MARKINGS SHALL BE PREFORMED PLASTIC OR HOT APPLIED THERMO PLASTIC.

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. 3.

FOR PLAN/PROFILE, SEE DWG. 5.

SCALE: 3/8" = 1'- 0"

12" 0 2' 4' 6' 8' 10'

DACW29-00-B-0094

AS BUILT PLANS

DATE RECEIVED 3/15/02

DATE TRACINGS CORRECTED 4/18/02

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
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LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

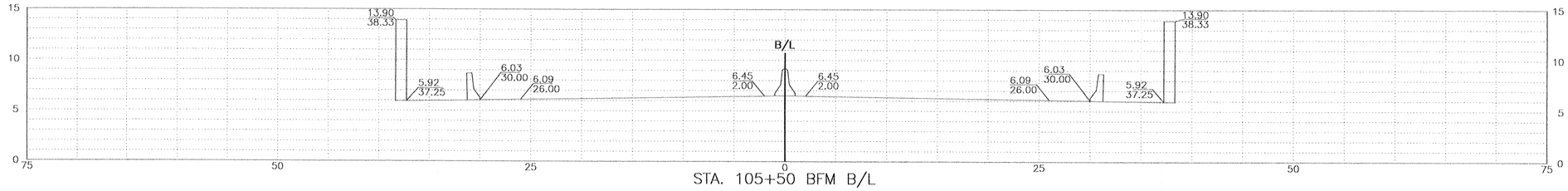
ROBERT E. LEE BOULEVARD BRIDGE PERMANENT PAVEMENT MARKINGS

DESIGNED BY: M.K.R.	DATE: MAR.8,2000	PLOT SCALE: 20	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.			
CHECKED BY: W.D.L.	CADD FILE: SHT46.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING	SOLICITATION NO. DACW29-00-B-0094		DWG. 46 OF 59
DESIGN ENGINEER			

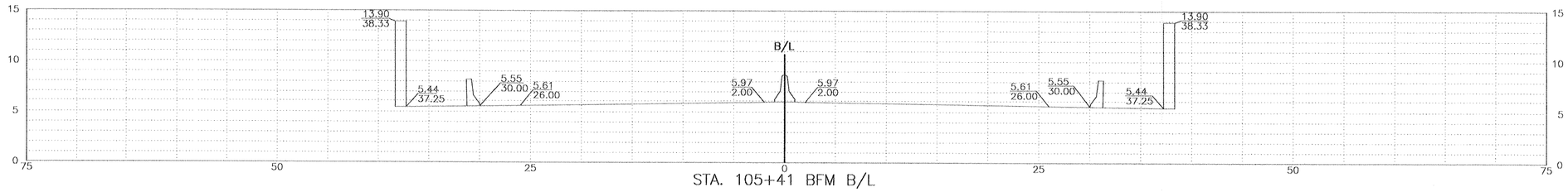
VALUE ENGINEERING CLASSES — YOUR KEY TO HIGHER PROFITS

Plot: D:\SHT46.DWG Last edited: AUG. 26, 02 @ 8:17 p.m. Scale: 1:20 R.J.C.

Safety is a Part of Your Contract



STA. 105+50 BFM B/L



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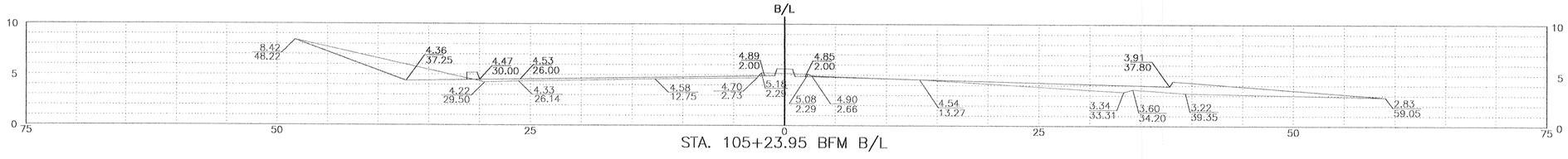
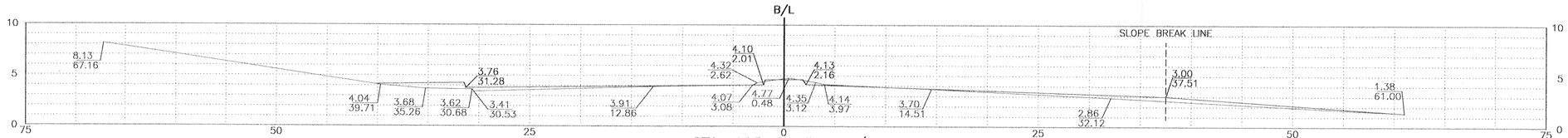
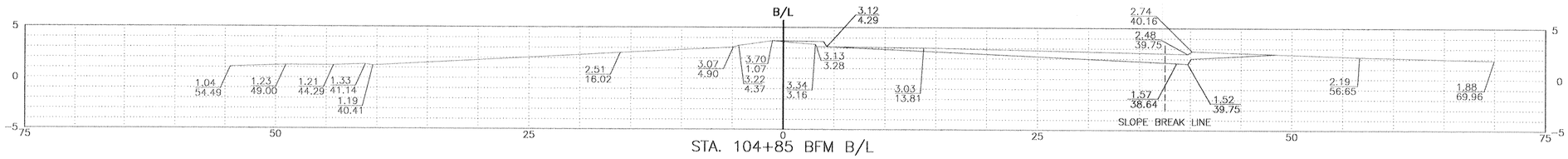


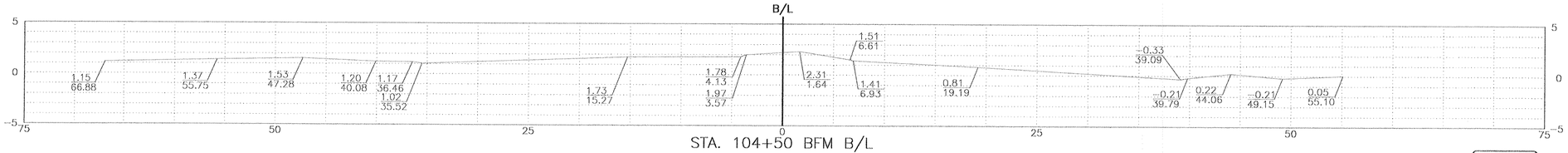
STA. 105+23.95 BFM B/L



STA. 105+09 BFM B/L



STA. 104+85 BFM B/L



STA. 104+50 BFM B/L

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3
FOR PLAN/PROFILE, SEE DWG. NO. 5
FOR ROADWAY ELEVATIONS, SEE DWG. NO. 39
FOR TYPICAL ROADWAY SECTIONS, SEE DWG. NO. 44

SCALE: 1" = 5' (H)
1" = 5' (V)

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE ROADWAY CROSS SECTIONS

VALUE INCENTIVE CLAUSES ENGINEERING — YOUR KEY TO HIGHER PROFITS

STATE OF LOUISIANA
Walter D. Hadlin, III
18643 REGISTERED
PROFESSIONAL ENGINEER
HARTMAN ENGINEERING
4/22/02

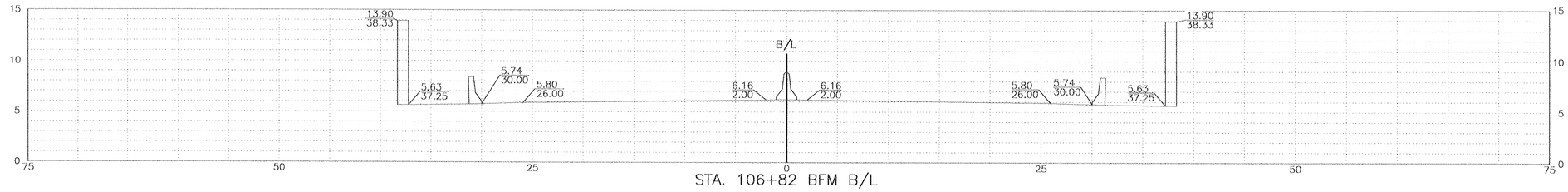
DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

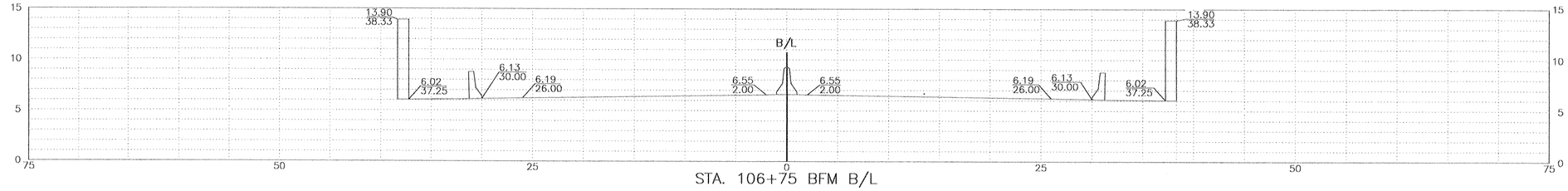
C•A•D

DESIGNED BY: M.K.R.	DATE: MAR.8,2000	PLOT SCALE: 5	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.			
CHECKED BY: W.D.L.	CADD FILE: SHT47.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 47 OF 59

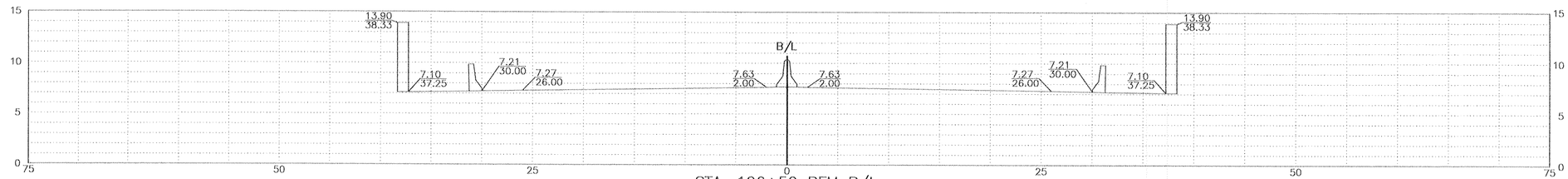
File: D:\SHT47.DWG Last edited: AUG. 28, 02 @ 5:19 p.m. Scale: 1=5 R.J.C.



STA. 106+82 BFM B/L

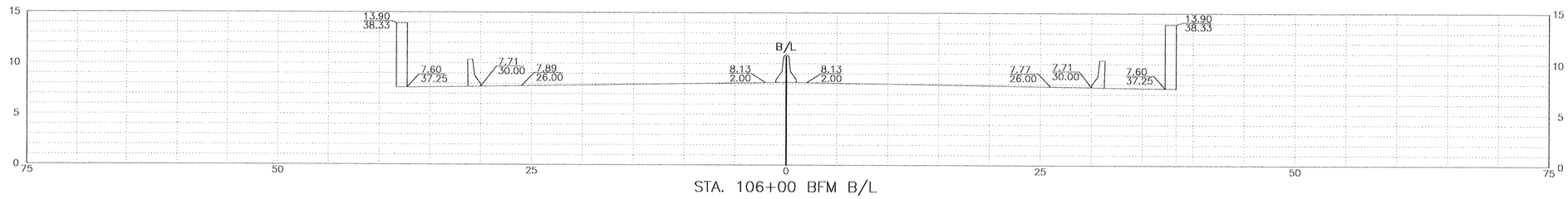


STA. 106+75 BFM B/L

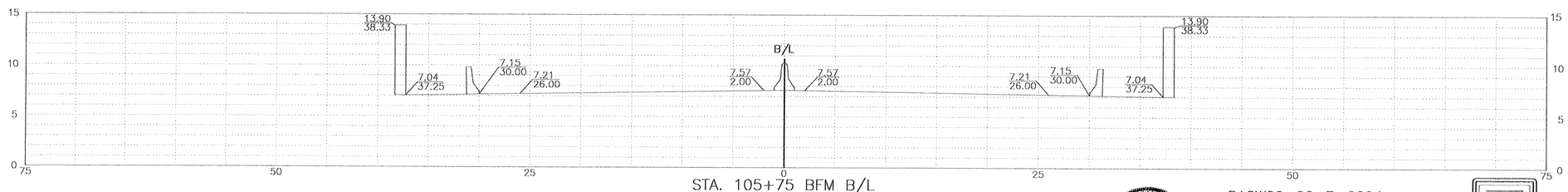


STA. 106+50 BFM B/L

STA. 106+25 BFM B/L



STA. 106+00 BFM B/L



STA. 105+75 BFM B/L

Safety is a Part of Your Contract

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3.
FOR PLAN/PROFILE, SEE DWG. NO. 5.
FOR ROADWAY ELEVATIONS, SEE DWG. NO. 39.
FOR TYPICAL ROADWAY SECTIONS, SEE DWG. NO. 44.

SCALE: 1" = 5' (H)
1" = 5' (V)

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
ROADWAY CROSS SECTIONS

DESIGNED BY: M.K.R.
DRAWN BY: L.A.C.
CHECKED BY: W.D.L.
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER

DATE: MAR.8,2000
PLOT SCALE: 5
PLOT DATE: MARCH 8, 2000
CADD FILE: SHT48.DGN
FILE NO. H-4-44776
SOLICITATION NO. DACW29-00-B-0094
DWG. 48 OF 59

STATE OF LOUISIANA
Walter D. Judin, III
No. 31708
REGISTERED PROFESSIONAL ENGINEER
9/27/02

DACW29-00-B-0094

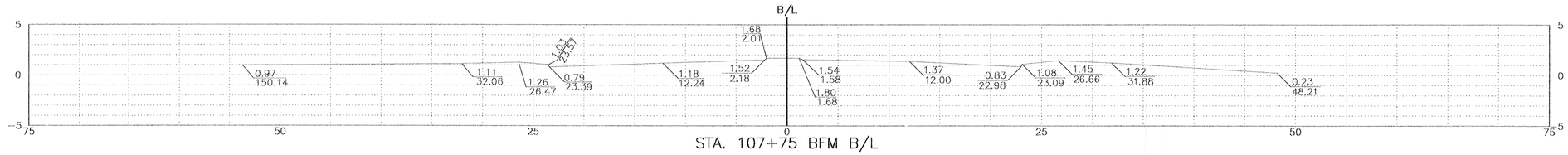
AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

C-A-D

VALUE INCENTIVE CLAUSES — YOUR KEY TO HIGHER PROFITS — ENGINEERING

File: D:\SHT48.DWG Last edited: AUG. 26, 02 @ 8:21 a.m. Scale: 1:5 R.A.C.

Safety is a Part of Your Contract



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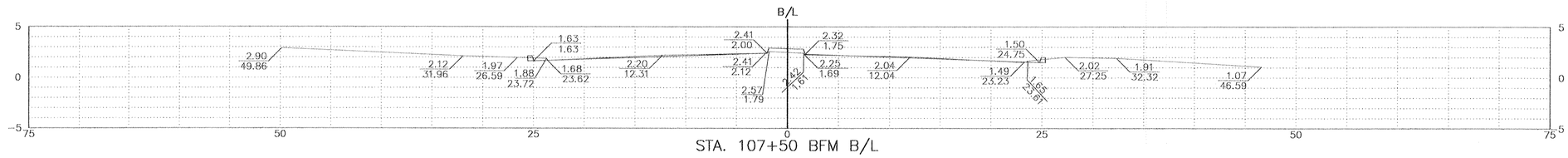
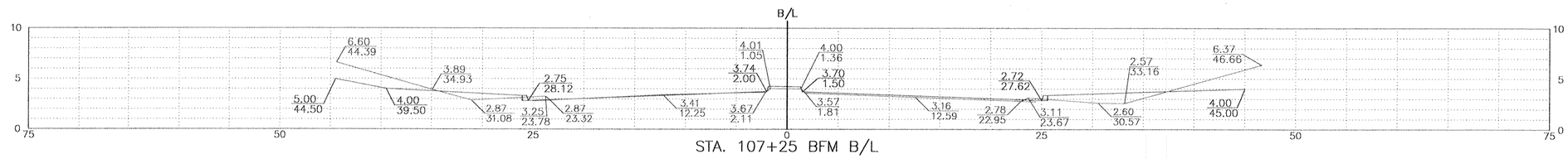
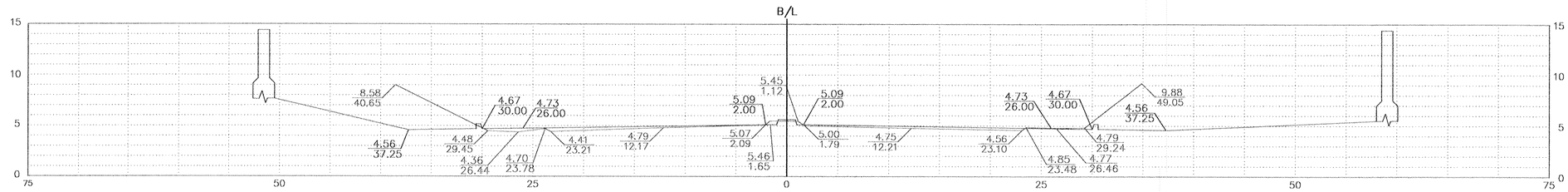


STA. 107+50 BFM B/L



STA. 107+25 BFM B/L



STA. 107+00 BFM B/L

REFERENCE DRAWINGS

FOR GENERAL NOTES, SEE DWG. NO. 3.
FOR PLAN/PROFILE, SEE DWG. NO. 5.
FOR ROADWAY ELEVATIONS, SEE DWG. NO. 39.
FOR TYPICAL ROADWAY SECTIONS, SEE DWG. NO. 44.

SCALE: 1" = 5' (H)
1" = 5' (V)

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE ROADWAY CROSS SECTIONS

DESIGNED BY: M.K.R.
DRAWN BY: L.A.C.
CHECKED BY: W.D.L.
SUBMITTED BY: HARTMAN ENGINEERING
DESIGN ENGINEER

DATE: MAR.8,2000
PLOT SCALE: 5
CADD FILE: SHT49.DGN
SOLICITATION NO. DACW29-00-B-0094

PLOT DATE: MARCH 8, 2000
FILE NO. H-4-44776
DWG. 49 OF 59

VALUE INCENTIVE CLAUSES — YOUR KEY TO IMPROVED ENGINEERING

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

STATE OF LOUISIANA — Walter D. Dalfin, III — REGISTERED PROFESSIONAL ENGINEER — CIVIL ENGINEERING
9/27/02

C•A•D

Plot: D:\SHT49.DWG Last edited: AUG. 28, 02 @ 6:59 p.m. Scale: 1:5 R.A.C.

Safety is a Part of Your Contract

SUMMARY OF BORINGS

BORING NO. 35
USACE E B/L STA. 87+34, 4.5' RT.
GROUND ELEVATION +9.16 NGVD*

SAMPLE NO.	SAMPLE DEPTH—FEET FROM	SAMPLE DEPTH—FEET TO	STRATUM FEET FROM	STRATUM FEET TO	VISUAL CLASSIFICATION	STANDARD PENETRATION TEST	
1	0.0	0.5	0.0		STIFF TAN & GRAY CLAY W/GRASS ROOTS		
2	1.7	2.5		3.0	STIFF TAN & GRAY CLAY W/CLAYEY SILT POCKETS		
3	4.7	5.5	3.0		STIFF GRAY CLAY W/CLAYEY SILT POCKETS & SILTY SAND LAYERS		
4	7.7	8.5			STIFF GRAY CLAY W/CLAYEY SILT POCKETS		
5	10.7	11.5		12.0	STIFF GRAY CLAY W/CLAYEY SILT POCKETS		
6	13.7	14.5	12.0	15.0	SOFT DARK GRAY CLAY W/HUMUS POCKETS & ORGANIC MATTER		
7	18.2	19.0	15.0	19.0	SOFT DARK GRAY SILTY CLAY W/CLAYEY SILT POCKETS		
8	23.2	24.0	19.0	24.0	SOFT BROWN & GRAY ORGANIC CLAY W/HUMUS LAYERS & FEW ROOTS		
9	28.2	29.0	24.0	29.0	VERY LOOSE GRAY CLAYEY SILT		
10	33.2	34.0	29.0		SOFT TO MEDIUM STIFF GRAY CLAY W/FEW CLAYEY SILTY LENSES & SHELLS		
11	38.2	39.0		41.0	SOFT TO MEDIUM STIFF GRAY CLAY W/FEW SILTY SAND POCKETS		
12	43.2	44.0	41.0	44.0	VERY LOOSE TO LOOSE GRAY CLAYEY SAND W/CLAY POCKETS & SHELL FRAGMENTS		
13	45.0	46.5	44.0		MEDIUM DENSE GRAY FINE SAND W/SHELL FRAGMENTS	5	18
14	48.5	50.0		50.0	MEDIUM DENSE GRAY FINE SAND W/SHELL FRAGMENTS	5	13

BORING NO. 36
USACE W B/L STA. 87+26, 25' LT.
GROUND ELEVATION −5.20 NGVD

SAMPLE NO.	SAMPLE DEPTH—FEET FROM	SAMPLE DEPTH—FEET TO	STRATUM FEET FROM	STRATUM FEET TO	VISUAL CLASSIFICATION	STANDARD PENETRATION TEST	
			0.0	3.00	ASPHALT, CONCRETE, FILL(SAND & SHELLS) & MISCELLANEOUS FILL		
1	5.0	6.0	3.0	7.0	EXTREMELY SOFT BLACK & BROWN HUMUS W/WOOD & ROOTS		
	8.0	9.0	7.0	9.0	WOOD W/HUMUS & CLAY		
2	11.0	12.0	9.0	13.0	LOOSE GRAY CLAYEY SILT W/ORGANIC MATTER		
3	14.0	15.0	13.0		VERY SOFT TO SOFT GRAY CLAY W/SILT LENSES		
4	19.0	20.0			VERY SOFT TO SOFT GRAY CLAY W/SILT LENSES		
5	24.0	25.0		25.5	VERY SOFT TO SOFT GRAY CLAY W/SILT LENSES		
6	28.0	29.0	25.5	29.0	LOOSE GRAY CLAYEY SAND W/SHELL FRAGMENTS		
7	29.0	30.5	29.0		MEDIUM DENSE GRAY SAND W/SHELL FRAGMENTS	3	23
8	31.5	33.0		34.0	MEDIUM DENSE GRAY SAND W/SHELL FRAGMENTS	4	18
9	34.0	35.5	34.0		LOOSE GRAY SAND W/SHELL FRAGMENTS	3	7
10	38.5	40.0		42.0	LOOSE GRAY SAND W/SHELL FRAGMENTS	1	5
11	43.5	45.0	42.0		MEDIUM STIFF GRAY CLAY W/SAND POCKETS & SHELL FRAGMENTS	2	4
12	49.0	50.0		50.0	MEDIUM STIFF GRAY CLAY W/SAND POCKETS & SHELL FRAGMENTS		

* BORING 35 WAS TAKEN IN A LEVEE THAT WAS DEGRADED. THE TOP THREE TO FIVE FEET OF SOIL WAS REMOVED. THE APPROXIMATE GROUND SURFACE ELEVATIONS AT THE LOCATIONS OF THESE BORINGS ARE NOW THREE TO FIVE FEET LOWER.

NOTES

1. NUMBER IN FIRST STANDARD PENETRATION TEST COLUMN INDICATES NUMBER OF BLOWS OF 140−LB. HAMMER DROPPED 30 IN. REQUIRED TO SEAT 2−IN. O.D. SPLITSPOON SAMPLER 6 IN. NUMBER IN SECOND COLUMN INDICATES NUMBER OF BLOWS OF 140−LB HAMMER DROPPED 30 IN. REQUIRED TO DRIVE 2 IN. O.D. SPLITSPOON SAMPLER 1 FT. AFTER SEATING 6 IN.
2. BORING 35 WAS TAKEN AUGUST 31, 1985. BORING 36 WAS TAKEN SEPTEMBER 18, 1985.
3. BORINGS TAKEN BY EUSTIS ENGINEERING.

SUMMARY OF LABORATORY TEST RESULTS

BORING 35

SAMPLE NO.	DEPTH IN FEET	CLASSIFICATION	WATER CONTENT PERCENT	DENSITY PCF DRY	DENSITY PCF WET	UNCONFINED COMPRESSIVE STRENGTH PSF
2	1.7	STIFF TAN & GRAY CLAY W/CLAYEY SILT LAYERS & POCKETS	26.2	91.9	115.9	2290*
4	7.7	STIFF GRAY CLAY W/CLAYEY SILT LAYERS & LENSES	22.6	95.7	117.3	2440*
5	10.7	STIFF GRAY CLAY W/CLAYEY SILT LAYERS & LENSES	30.1	89.1	115.9	2560*
7	18.2	SOFT DARK GRAY SILTY CLAY W/ORGANIC MATTER	70.0	52.8	89.8	640
9	28.2	VERY LOOSE GRAY CLAYEY SILT W/SILTY CLAY LAYERS	47.0	71.8	105.5	385
11	38.2	MEDIUM STIFF GRAY CLAY	70.9	57.3	98.0	1105

BORING 36

SAMPLE NO.	DEPTH IN FEET	CLASSIFICATION	WATER CONTENT PERCENT	DENSITY PCF DRY	DENSITY PCF WET	UNCONFINED COMPRESSIVE STRENGTH PSF
1	5.0	EXTREMELY SOFT BLACK & BROWN HUMUS W/ORGANIC CLAY & ROOTS	212.0	23.5	73.2	215
3	14.0	VERY SOFT GRAY CLAY W/SILT POCKETS & SHELL FRAGMENTS	64.3	60.7	99.7	435
5	24.0	SOFT GRAY CLAY	75.7	54.3	95.4	700
6	28.0	LOOSE GRAY CLAYEY SAND W/SHELL FRAGMENTS	28.2	93.2	119.5	345*
12	49.0	MEDIUM STIFF GRAY CLAY W/SHELL FRAGMENTS & SAND POCKETS	58.8	63.3	100.5	1010

*UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST− ONE SPECIMEN; CONFINED AT THE APPROXIMATE OVERBURDEN PRESSURE

VALUE INCENTIVE ENGINEERING — YOUR KEY TO HIGHER PROFITS

LEGEND

CLAY SILT SAND HUMUS

PREDOMINANT TYPE SHOWN IN HEAVY.
MODIFYING TYPE SHOWN LIGHT.

REFERENCE DRAWINGS

1. FOR GENERAL NOTES, SEE DWG. NO. 3.
2. FOR USACE B/L INFORMATION, SEE DWG. NO. 5.

SCALE: 1" = 5'
5' 0 5' 10' 15' 20'

C•A•D

DACW29−00−B−0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

STATE OF LOUISIANA — Walter D. Judlin, III — REG. No. 8/08 — REGISTERED PROFESSIONAL ENGINEER — 9/27/02

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
BORING LOGS

DESIGNED BY: EUSTIS	DATE: MAR.8,2000	PLOT SCALE: 60	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.			
CHECKED BY: W.D.L.	CADD FILE: SHT50.DGN		FILE NO. H−4−44776
SUBMITTED BY: HARTMAN ENGINEERING, DESIGN ENGINEER	SOLICITATION NO. DACW29−00−B−0094		DWG. 50 OF 59

File: D:\SHT50.DWG Last edited: Aug. 27, 02 @ 08:14, c.m. Scale: 1:60 R.A.C.

Safety is a Part of Your Contract

SUMMARY OF BORINGS

BORING NO. 37
USACE E B/L STA. 93+97, 1.5' LT.
GROUND ELEVATION +9.04 NGVD*

SAMPLE NO.	SAMPLE DEPTH—FEET FROM	SAMPLE DEPTH—FEET TO	DEPTH STRATUM FEET FROM	DEPTH STRATUM FEET TO	VISUAL CLASSIFICATION	STANDARD PENETRATION TEST	
1	1.0	1.5	0.0		MEDIUM COMPACT TO COMPACT BROWN CLAYEY SILT W/CLAY POCKETS (FILL)		
2	1.5	3.0			MEDIUM COMPACT TO COMPACT BROWN CLAYEY SILT	8	25
3	4.0	5.5		6.0	MEDIUM COMPACT TO COMPACT BROWN CLAYEY SILT W/SHELLS, BRICK, GLASS, ETC.	10	14
4	8.3	9.0	6.0		MEDIUM STIFF TO STIFF BROWN SILTY CLAY W/BRICKS & SILT POCKETS (FILL)		
5	11.3	12.0		12.0	MEDIUM STIFF TO STIFF BROWN SILTY CLAY W/SAND & SILT POCKETS		
6	14.3	15.0	12.0		LOOSE DARK GRAY CLAYEY SILT W/ROOTS & ORGANIC MATTER		
7	17.0	18.0		18.0	LOOSE DARK GRAY CLAYEY SILT W/CLAY LAYERS, ROOTS & WOOD		
			18.0	19.5	WOOD		
8	23.5	24.5	19.5	24.5	SOFT BROWN SILTY CLAY W/ROOTS & SILTY CLAY LAYERS & ORGANIC MATTER		
9	28.5	29.5	24.5	30.0	SOFT GRAY SILTY CLAY W/ROOTS & ORGANIC MATTER		
10	33.5	34.5	30.0		SOFT GRAY CLAY W/SILT LENSES		
11	38.5	39.5		41.0	SOFT GRAY CLAY		
12	42.5	43.5	41.0	43.5	LOOSE GRAY CLAYEY SAND W/CLAY POCKETS & SHELLS		
13	44.0	45.5	43.5		MEDIUM DENSE GRAY FINE SAND	4	12
14	46.5	48.0			MEDIUM DENSE GRAY FINE SAND	5	18
15	48.5	50.0		50.0	MEDIUM DENSE GRAY FINE SAND W/CLAY LAYERS	9	22

BORING NO. 38
USACE W B/L STA. 93+67
GROUND ELEVATION +8.89 NGVD*

SAMPLE NO.	SAMPLE DEPTH—FEET FROM	SAMPLE DEPTH—FEET TO	DEPTH STRATUM FEET FROM	DEPTH STRATUM FEET TO	VISUAL CLASSIFICATION	STANDARD PENETRATION TEST	
1	2.0	2.5	0.0	4.5	STIFF GRAY & TAN SILTY CLAY W/SILT POCKETS		
2	5.0	5.5	4.5	7.5	STIFF BROWN CLAY W/ORGANIC MATTER		
3	8.0	8.5	7.5		SOFT GRAY CLAY W/ORGANIC MATTER		
4	11.0	11.5			SOFT GRAY CLAY W/ORGANIC MATTER		
5	14.0	14.5		15.0	SOFT GRAY CLAY W/ORGANIC MATTER		
6	19.0	19.5	15.0		SOFT BROWN ORGANIC CLAY W/ORGANIC MATTER & WOOD		
7	24.0	24.5		26.5	SOFT BROWN ORGANIC CLAY W/ORGANIC MATTER & WOOD		
8	29.0	29.5	26.5		SOFT GRAY CLAY W/ORGANIC MATTER		
9	34.0	34.5			SOFT GRAY CLAY W/SILT LENSES		
10	39.0	39.5		40.5	SOFT GRAY CLAY W/SILT LENSES		
11	42.0	42.5	40.5	43.5	SOFT GRAY SANDY CLAY W/SHELL FRAGMENTS		
12	43.5	45.0	43.5		MEDIUM DENSE GRAY SAND W/SHELL FRAGMENTS	5	13
13	46.0	47.5			MEDIUM DENSE GRAY SAND W/SHELL FRAGMENTS	4	11
14	48.5	50.0		53.5	MEDIUM DENSE GRAY SAND W/SHELL FRAGMENTS	5	15
15	53.5	55.0	53.5	56.5	LOOSE GRAY SAND W/SHELL FRAGMENTS	3	8
16	58.5	60.0	56.5	61.0	SOFT GRAY SANDY CLAY W/SHELL FRAGMENTS	2	5
17	64.0	64.5	61.0		MEDIUM STIFF GRAY CLAY W/SAND POCKETS & SHELL FRAGMENTS		
18	68.5	69.5		73.0	MEDIUM STIFF GRAY CLAY W/ROOTS & ORGANIC CLAY LAYERS		
19	73.5	74.5	73.0	75.0	MEDIUM STIFF LIGHT GRAY SILTY CLAY		
20	78.5	79.5	75.0	81.0	STIFF GREENISH—GRAY CLAY		
21	83.5	84.5	81.0	86.0	STIFF GREENISH GRAY SANDY CLAY W/CLAYEY SAND POCKETS		
22	89.5	90.0	86.0		MEDIUM DENSE GRAY & TAN CLAYEY SAND W/CLAY LAYERS		
23	94.0	94.5		95.0	MEDIUM DENSE GRAY & TAN CLAYEY SAND W/CLAY LAYERS		
24	98.5	99.5	95.0	100.0	MEDIUM STIFF GRAY CLAY W/SAND LENSES & LAYERS		

* BORING 37 AND 38 WERE TAKEN IN A LEVEE THAT WAS DEGRADED. THE TOP THREE TO FIVE FEET OF SOIL WAS REMOVED. THE APPROXIMATE GROUND SURFACE ELEVATIONS AT THE LOCATIONS OF THESE BORINGS ARE NOW THREE TO FIVE FEET LOWER.

NOTES

1. NUMBER IN FIRST STANDARD PENETRATION TEST COLUMN INDICATES NUMBER OF BLOWS OF 140—LB. HAMMER DROPPED 30 IN. REQUIRED TO SEAT 2—IN. O.D. SPLITSPOON SAMPLER 6 IN. NUMBER IN SECOND COLUMN INDICATES NUMBER OF BLOWS OF 140—LB HAMMER DROPPED 30 IN. REQUIRED TO DRIVE 2 IN. O.D. SPLITSPOON SAMPLER 1 FT. AFTER SEATING 6 IN.
2. BORING 37 WAS TAKEN AUGUST 1, 1985
   BORING 38 WAS TAKEN SEPTEMBER 5—6, 1985
3. BORINGS TAKEN BY EUSTIS ENGINEERING

SUMMARY OF LABORATORY TEST RESULTS

BORING 37

SAMPLE NO.	DEPTH IN FEET	CLASSIFICATION	WATER CONTENT PERCENT	DENSITY PCF DRY	DENSITY PCF WET	UNCONFINED COMPRESSIVE STRENGTH PSF
2	1.5	COMPACT BROWN CLAYEY SILT W/SILTY CLAY & ROOTS (FILL)	9.1	----	----	----
4	8.3	MEDIUM STIFF BROWN SILTY CLAY W/SANDY SILT (FILL)	26.5	----	----	----
6	14.3	LOOSE DARK GRAY CLAYEY SILT W/ORGANIC MATTER	38.4	78.4	108.5	630
8	23.5	SOFT BROWN SILTY CLAY W/MUCH ORGANIC MATTER	98.2	41.9	82.9	795
10	33.5	SOFT GRAY CLAY W/SILT & SAND POCKETS & DECAYED SHELL FRAGMENTS	56.1	66.2	103.3	575

BORING 38

SAMPLE NO.	DEPTH IN FEET	CLASSIFICATION	WATER CONTENT PERCENT	DENSITY PCF DRY	DENSITY PCF WET	UNCONFINED COMPRESSIVE STRENGTH PSF
2	5.0	STIFF BROWN CLAY W/CLAYEY SAND POCKETS	34.6	78.8	106.0	2165
4	11.0	SOFT GRAY CLAY W/ORGANIC MATTER LENSES & SILTY SAND POCKETS	55.6	65.4	101.8	660
6	19.0	SOFT BROWN ORGANIC CLAY W/HUMUS & ROOTS	198.1	23.8	70.9	745
8	29.0	SOFT GRAY CLAY W/CLAYEY SILT POCKETS & DECAYED SHELLS	59.4	63.9	101.9	570
10	39.0	SOFT GRAY CLAY W/CLAYEY SILT LENSES	70.8	57.2	97.7	890
17	64.0	MEDIUM STIFF GRAY CLAY W/DECAYED SHELLS	54.0	67.3	103.7	1175
19	73.5	MEDIUM STIFF LIGHT GRAY SILTY CLAY W/TRACE OF SAND	23.3	99.0	122.1	1835
20	78.5	STIFF GREENISH—GRAY CLAY	39.9	79.7	111.5	2825
21	83.5	STIFF LIGHT GRAY SANDY CLAY	24.9	97.2	121.4	2515

VALUE ENGINEERING — INCENTIVE CLAUSES — YOUR KEY TO HIGHER PROFITS

REFERENCE DRAWINGS

1. FOR GENERAL NOTES, SEE DWG. NO. 3.
2. FOR USACE B/L INFORMATION, SEE DWG. NO. 5.

SCALE: 1" = 5'

5' 0 5' 10' 15' 20'

LEGEND

CLAY SILT SAND HUMUS

PREDOMINANT TYPE SHOWN IN HEAVY.
MODIFYING TYPE SHOWN LIGHT.

C•A•D

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

STATE OF LOUISIANA — Walter D. Judkin, III — REG. No. 31408 — REGISTERED PROFESSIONAL ENGINEER — 9/27/02

DACW29—00—B—0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
BORING LOGS

DESIGNED BY: EUSTIS	DATE: MAR.8,2000	PLOT SCALE: 60	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.	CADD FILE: SHT51.DGN		FILE NO. H-4-44776
CHECKED BY: W.D.I.			
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29—00—B—0094		DWG. 51 OF 59

File: D:\SHT51.DWG Last edited: AUG. 27, 02 @ 08:17 a.m. Scale: 1:60 R.A.C.

Safety is a Part of Your Contract

SUMMARY OF PAVEMENT CORES

CORING NO. B-1

SCALE IN INCHES	SYMBOL	VISUAL CLASSIFICATION	USC
0		4.36" ASPHALT	
10		11.4" CONCRETE	
20		BROWN & GRAY SILTY SAND W/ TRACE OF SHELL	SM
30		MEDIUM STIFF DARK GRAY CLAY W/ SILT LENSES	CH
40			
50			

CORING NO. B-2

SCALE IN INCHES	SYMBOL	VISUAL CLASSIFICATION	USC
0		19.97" ASPHALT	
10			
20		BROWN & TAN SILTY SAND W/ TRACE OF SHELL	SM
30			
40		SOFT DARK GRAY CLAY W/ DECAYED ROOTS & SILTY CLAY LAYERS	CH
50			

CORING NO. B-3

SCALE IN INCHES	SYMBOL	VISUAL CLASSIFICATION	USC
0		4.80" ASPHALT	
10		11.66" CONCRETE	
20		BROWN & GRAY SILTY SAND W/ TRACE OF SHELL	SM
30			
40		BROWN & TAN SILTY SAND W/ TRACE OF SHELL	SM
50		SOFT DARK GRAY CLAY W/ SAND POCKETS & ORGANIC MATTER	CH
60		SOFT DARK GRAY ORGANIC CLAY W/ SAND POCKETS & SHELL FRAGMENTS	OH

CORING NO. B-4

SCALE IN INCHES	SYMBOL	VISUAL CLASSIFICATION	USC
0		4.25" ASPHALT	
10		10.24" CONCRETE	
20		BROWN & TAN SILTY SAND W/ SHELL FRAGMENTS	SM
30			
40		SOFT DARK GRAY CLAY W/ SAND POCKETS & LENSES, SHELL FRAGMENTS & TRACE OF ORGANIC MATTER	CH
50			

NOTES

1. CORES TAKEN AUGUST 6 AND AUGUST 7, 1996.
2. SEE DRAWING NO. 9, DEMOLITION PLAN FOR CORE LOCATIONS.
3. CORES TAKEN BY EUSTIS ENGINEERING.

SCALE: 1" = 5"

5" 0 5" 10" 15" 20"

LEGEND

SAND ASPHALT CLAY HUMUS SILT CONCRETE

PREDOMINANT TYPE SHOWN IN HEAVY.
MODIFYING TYPE SHOWN LIGHT.

VALUE INCENTIVE CLAUSES IN ENGINEERING — YOUR KEY TO HIGHER PROFITS

STATE OF LOUISIANA — Walter D. Judice, III — No. 6705 — REGISTERED PROFESSIONAL ENGINEER — CIVIL ENGINEERING — 9/27/01

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

C•A•D

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

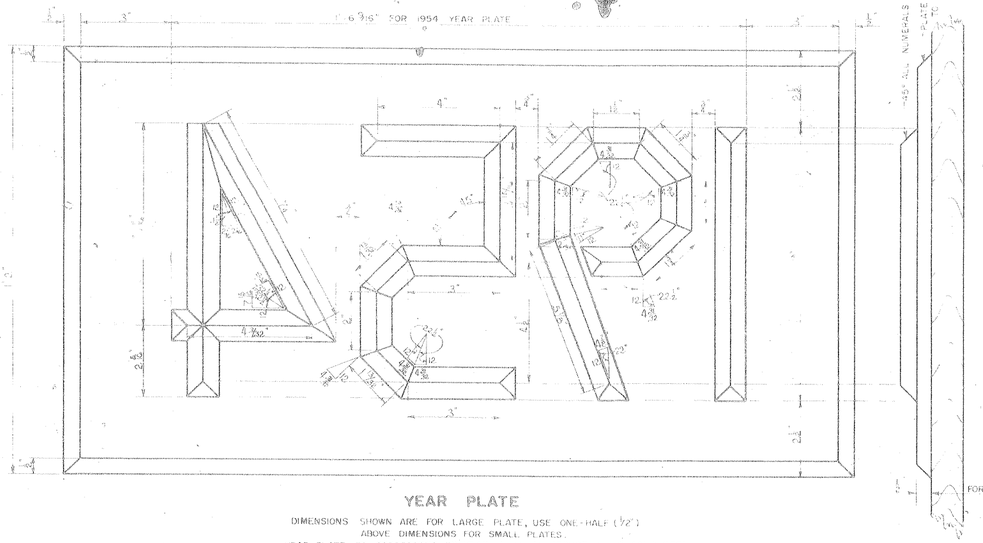
HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE CORING LOGS

DESIGNED BY: EUSTIS	DATE: MAR.8,2000	PLOT SCALE: 60	PLOT DATE: MARCH 8, 2000
DRAWN BY: L.A.C.	CADD FILE: SHT52.DGN		FILE NO. H-4-44776
CHECKED BY: W.D.L.			
SUBMITTED BY: HARTMAN ENGINEERING, DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 52 OF 59

STATE PROJECT	PARISH	SHEET NO.

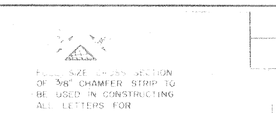


YEAR PLATE

DIMENSIONS SHOWN ARE FOR LARGE PLATE, USE ONE-HALF (1/2") ABOVE DIMENSIONS FOR SMALL PLATES.
YEAR PLATE TO CORRESPOND TO YEAR IN WHICH STRUCTURE IS COMPLETED.

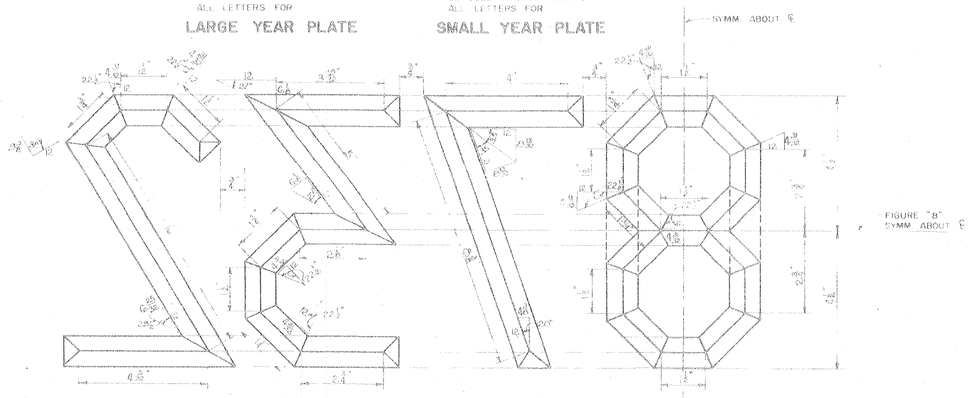
FULL SIZE CROSS SECTION OF 3/4" CHAMFER STRIP TO BE USED IN CONSTRUCTING ALL LETTERS FOR

LARGE YEAR PLATE

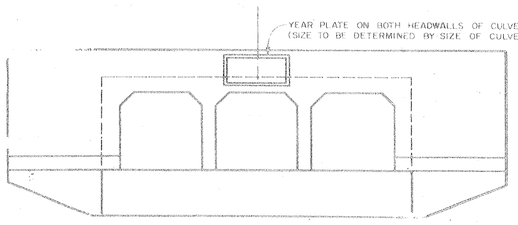


FULL SIZE CROSS SECTION OF 3/8" CHAMFER STRIP TO BE USED IN CONSTRUCTING ALL LETTERS FOR

SMALL YEAR PLATE



NOTE:
FIGURE "6" TO BE "9" INVERTED.
FIGURE "0" TO BE MADE AS DASHED LINES INDICATE ON DETAIL OF FIGURE "8".
FIGURE DETAILS ARE HALF SCALE FOR LARGE YEAR PLATE.
FIGURE DETAILS ARE FULL SCALE FOR SMALL YEAR PLATE.
DIMENSIONS SHOWN ARE FOR LARGE YEAR PLATE.
USE 1/2 DIMENSIONS SHOWN FOR SMALL YEAR PLATE.



CULVERT
ELEVATION

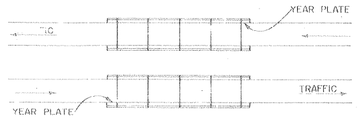
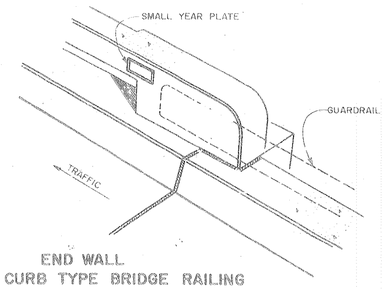
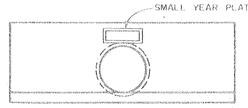


PLATE LOCATIONS FOR TWIN BRIDGE SITES

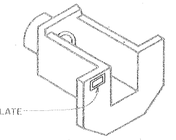
NOTE:
YEAR PLATE REQUIRED AT BOTH ENDS OF TWO-WAY TRAFFIC BRIDGE ON ONCOMING SIDE.



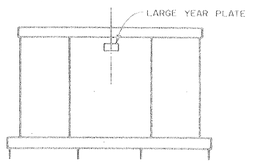
END WALL
BRUSH CURB TYPE BRIDGE RAILING



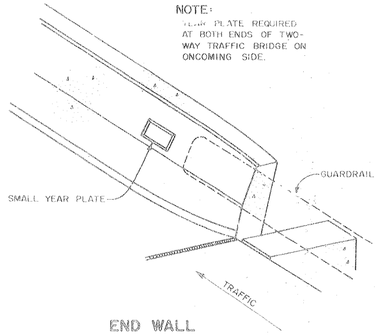
PIPE CULVERT HEADWALL
YEAR PLATE REQUIRED ON BOTH HEADWALLS OF CULVERT



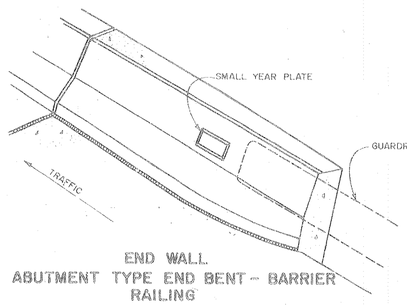
PIPE HEADWALL
OPEN END



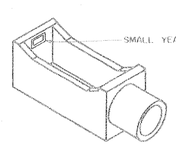
PIER
ELEVATION



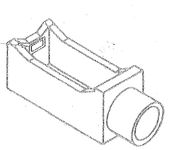
END WALL
BARRIER TYPE BRIDGE RAILING



END WALL
ABUTMENT TYPE END BENT - BARRIER RAILING



PIPE HEADWALL
OPEN BOX TYPE
END WALL WITHOUT WEIR



PIPE HEADWALL
OPEN BOX TYPE
END WALL WITH WEIR

SKETCHES SHOWING LOCATION OF YEAR PLATE ON VARIOUS CONCRETE STRUCTURES

DATE	DESCRIPTION	BY
2-21-74	UPDATED	D.S.H.
5-25-66	RETRACED	V.M.
2-25-55	REDETAILED & RETRACED	W.D.
1-96	DELINEATOR OMITTED	
3-94	DELINEATOR ADDED	C.E.A.
10-90	NEW SPECS. & REORG.	S.C.M.
10-40	RETRACED	M.I.H.

REVISIONS

STANDARD PLAN
YEAR PLATES
FOR CONCRETE STRUCTURES
(TO BE USED WITH STD. PLAN C.M. 95 WHEN ALPHABET IS REQ'D.)

DATED JULY 1953

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION & DEVELOPMENT
OFFICE OF HIGHWAYS

DESIGNED	DETAILED R.K.W.	TRACED C. Dinday
CHECKED	CHECKED I.R.P.	CHECKED

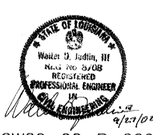
BRIDGE & STRUCTURAL DESIGN SECTION

APPROVED _____ DATE 12/11/89
CHIEF ENGINEER

C.M.97

Safety is a Part of Your Contract

VALUE INCENTIVE CLAUSES ENGINEERING — YOUR KEY TO HIGHER PROFITS



4/27/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE BOARD NEW ORLEANS, LOUISIANA	HARTMAN ENGINEERING, INC. CONSULTING ENGINEERS KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

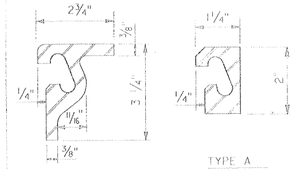
ROBERT E. LEE BOULEVARD BRIDGE YEAR PLATES

DESIGNED BY:	DATE:	PLOT SCALE:	PLOT DATE:
DRAWN BY:	MAR.8,2000	1	MARCH 8, 2000
CHECKED BY:	CADD FILE: SHT53.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 53 OF 59

File: D:\SHTS-53-59.DWG Last edited: AUG. 27, 02 @ 08:20 a.m. Scale: 1:1 R.J.C.

	STATE PROJECT	PARISH	SHEET NO.

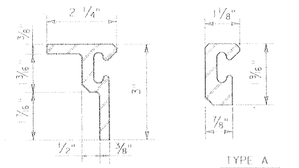
WATSON-BOWMAN /ACME
ROLLED STEEL SHAPE *



TYPE M

TYPE A
(CURB USE ONLY)

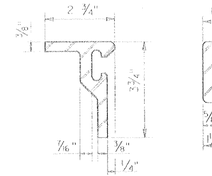
ONFLEX
STEEL EXTRUSIONS



TYPE KL

TYPE A
(CURB USE ONLY)

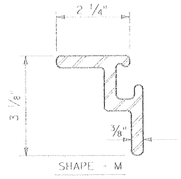
D.S.BROWN
ROLLED STEEL SHAPE *



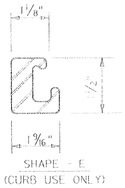
TYPE SSCM

TYPE SSA
(CURB USE ONLY)

ESCO
STEEL EXTRUSIONS

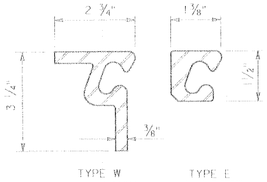


SHAPE - M



SHAPE - E
(CURB USE ONLY)

E-POXY INC.
STEEL EXTRUSIONS



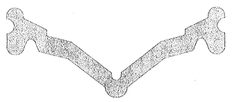
TYPE W

TYPE E
(CURB USE ONLY)

NEOPRENE EXTRUSIONS

TYPE SE 400

NEOPRENE EXTRUSIONS



TYPE 40 SS

NEOPRENE EXTRUSIONS

"L" SEAL

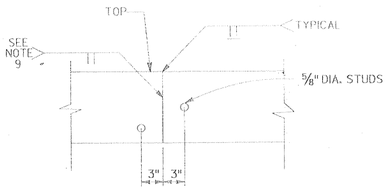
NEOPRENE EXTRUSIONS

TYPE ES 400

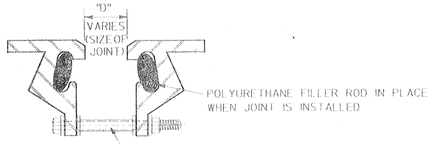
NEOPRENE EXTRUSIONS

TYPE S 400

* REFERRED TO AS EXTRUSIONS IN THE NOTES.

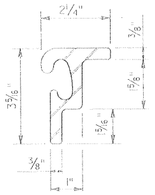


TYPICAL SPLICE



SECTION

LENCO
STEEL EXTRUSIONS

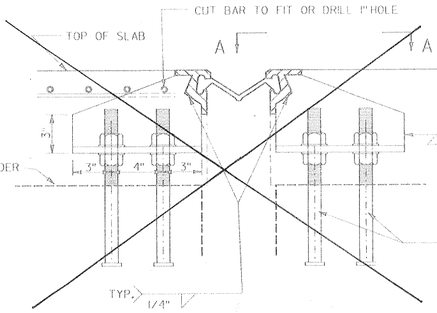


TYPE X

TYPE W
(CURB USE ONLY)

NEOPRENE EXTRUSIONS

TYPE L400

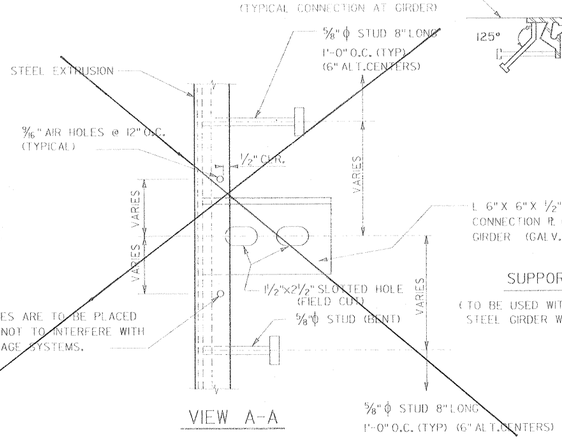


* NOMINAL - DEPTH OF ANGLE MUST BE ADJUSTED TO FIT EACH PROJECT AND JOINT TYPE.

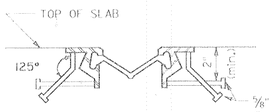
L 6" X 6" X ½" X 10" LONG CONNECTION R @ EACH GIRDER.

1" ø BOLT x 12" LONG (BY OTHERS)

SECTION
(TYPICAL CONNECTION AT GIRDER)



VIEW A-A



SECTION

SUPPORT DETAIL
(TO BE USED WITH A CONCRETE GIRDER OR STEEL GIRDER WITH A WELDED STUD)

INSTALLATION :

CONDITION 1: DECKS ON EACH SIDE OF JOINT POURED AT DIFFERENT TIME INTERVALS
- A-PLACE JOINT IN PLACE AS A UNIT (SPACER STILL IN PLACE).
- B-ADJUST TO PROPER VERTICAL POSITION.
- C-POUR DECK THAT IS TO BE POURED FIRST.
- D-PRIOR TO POURING THE ADJACENT DECK, REMOVE SPACER.
- E-JUST PRIOR TO POURING THE ADJACENT DECK, SET JOINT TO PROPER OPENING RELATIVE TO THE CURRENT TEMPERATURE.

CONDITION 2: DECK ON EACH SIDE OF JOINT POURED SIMULTANEOUSLY.
- A-PLACE JOINT IN PLACE AS A UNIT (SPACER STILL IN PLACE).
- B-ADJUST TO PROPER VERTICAL POSITION.
- C-PRIOR TO POURING DECKS, REMOVE SPACER.
- D-JUST PRIOR TO POURING DECKS, SET JOINT TO PROPER OPENING RELATIVE TO THE CURRENT TEMPERATURE.

NOTE: FIELD BENDING OF STUDS IS TOTALLY PROHIBITED.

NOTES:
1. THE FOLLOWING MATERIALS ARE ~~TO BE PAID FOR IN THE BID PRICE PER LINEAR FOOT OF "STRIP SEAL",~~ **INCLUDED IN STRIP SEAL JOINTS.**
   - A. NEOPRENE EXTRUSION
   - B. STEEL EXTRUSIONS
   - C. 5/8" DIAMETER STUDS
   - D. ALL STEEL PLATES REQUIRED FOR BARRIER SECTION
   - E. CAP SCREWS AND NUTS, TEMPORARY STEEL SPACER BLOCKS AND POLYURETHANE FILLER ROD
   - ~~F. L 6"X 6"X ½" CONNECTION PLATES~~
   - G. HEAVY DUTY ANCHOR STRAPE & REBAR
2. STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36 OR A-588
3. THE MANUFACTURER'S RECOMMENDED CONSTRUCTION METHODS SHALL BE FOLLOWED.
4. ~~A FACTORY REPRESENTATIVE IS TO BE PRESENT DURING THE INSTALLATION OF THE JOINTS.~~
5. SHOP DETAILS OF JOINTS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION.
6. STEEL EXTRUSIONS SHALL BE SHIPPED IN PAIRS.
7. POLYURETHANE FILLER ROD WILL BE PLACED IN THE STEEL EXTRUSION'S CAVITY PRIOR TO SHIPMENT. THIS ROD WILL BE REMOVED ONLY WHEN THE NEOPRENE EXTRUSION IS TO BE INSTALLED IN PLACE.
8. ~~ALL WELDS SHALL CONFORM TO AWS D1.5 BE BRIDGE STRUCTURAL WELDING CODE AND D1.4-92 REINFORCING STEEL WELDING CODE.~~
9. WELDED SPLICES OF STEEL EXTRUSIONS SHALL BE SHOP SPLICES AND EACH PORTION OF THE EXTRUSION SHALL BE NOT LESS THAN 15 FEET IN LENGTH EXCEPT THAT ONE SECTION, NOT LESS THAN 4 FEET IN LENGTH WILL BE ALLOWED IN THE SHOULDER AREA IF REQUIRED TO MATCH THE ROADWAY CROSS SECTION. ALL SPLICES SHALL BE MADE SO AS TO OCCUR OUTSIDE THE WHEEL PATHS. (SEE DETAIL ON SHEET 2 OF 2.) IF A SECTION LESS THAN 15 FEET IS USED, THE CONNECTION STUDS WILL BE SPACED AT 9 INCH ALTERNATE CENTERS. ALL SPLICE LOCATIONS WILL BE SHOWN ON THE SHOP DRAWINGS. DRAWINGS WILL NOT BE APPROVED UNLESS THE LOCATIONS ARE DESIGNATED ON THE DRAWINGS. THE LOCATIONS MAY BE DESIGNATED WITH A +/- 6 INCH TOLERANCE. WELDED SPLICES ARE ALSO REQUIRED WHERE TWO DIFFERENT STEEL SHAPES ARE JOINED AT THE CURB AREA AND WHERE THE CURB UNITS ARE TURNED UP.

   WELDED SPLICES WILL BE BUTT SPLICES AND CARE SHALL BE TAKEN NOT TO ALLOW WELD METAL TO INVADE THE GLAND CAVITY. WELD MATERIAL IN THE CAVITY WILL BE CAUSE FOR REJECTION. CONNECTION STUDS WILL BE LOCATED 3 INCHES EITHER SIDE OF WELDED SPLICES.
10. NEOPRENE EXTRUSIONS ~~SHALL BE~~ **SHALL** BE MANUFACTURED AS A CONTINUOUS PIECE WITH ONLY ONE (1) SHOP SPLICE PER JOINT ALLOWED WHEN LENGTH EXCEEDS 50 FEET. THE NEOPRENE STRIP SEAL SHALL BE AN EXTRUDED NEOPRENE MATERIAL CONFORMING TO ASTM DESIGNATION: D2628 MODIFIED TO OMIT RECOVERY TEST AND TO REVISE THE REQUIRED DUROMETER - TYPE A HARDNESS TO 55 -5/+10 AS DETERMINED BY ASTM D2240.
11. SEAL SHALL BE BONDED TO STEEL WITH A PRE-MIXED LUBRICATING ADHESIVE SOLUTION WHICH SHALL BE USED TO FACILITATE THE SEAL INSTALLATION. THIS LUBRICANT ADHESIVE SHALL BE SELECTED FROM THE LA. DOTD QUALIFIED PRODUCTS LIST, AS MAINTAINED BY THE DEPARTMENT'S MATERIALS SECTION. THE LUBRICANT SHOULD FLOW FREELY AND EVENLY COAT THE SEAL AND JOINT FACE. THE LUBRICANT SHOULD COMPLETELY COAT THE SEAL AND STEEL EXTRUSION CAVITY WHICH REMAIN IN CONTACT.
12. ALL METAL SURFACES NOT EMBEDDED IN CONCRETE SHALL BE SHOP PAINTED WITH TWO COATS OF ~~INORGANIC ZINC~~ PRIMER (NO TOP COAT). CARE SHALL BE TAKEN THAT A PAINT BUILD-UP DOES NOT OCCUR IN THE BOTTOM OF THE STEEL EXTRUSION CAVITY .
13. JOINTS UP TO FIFTY FOUR (54') FEET IN LENGTH SHALL BE DELIVERED TO THE JOB SITE IN ONE PIECE. JOINTS OVER FIFTY FOUR (54') FEET IN LENGTH MAY HAVE PROVISIONS FOR A FIELD SPLICE IN THE STEEL EXTRUSIONS PROVIDING THE SPLICE IS PERFORMED IN SHOP LIKE CONDITIONS ~~IN THE PRESENCE OF A STATE INSPECTOR~~ AND MEET THE REQUIREMENTS OF NOTE 8 ABOVE. ALL OTHER WELDED SPLICES OF STEEL EXTRUSIONS SHALL BE SHOP SPLICES.
14. ~~ALL LABOR, MATERIALS, EQUIPMENT, MANUFACTURER SUPERVISION AND INCIDENTALS PERTAINING TO THE INSTALLATION OF THE JOINT SHALL BE PAID FOR UNDER ITEM 805 (10).~~

    ** PAY LENGTH FOR JOINT IS MEASURED GUTTER TO GUTTER ALONG CENTERLINE OF JOINT.
15. ALL STUDS SHALL BE BENT PRIOR TO WELDING TO THE JOINT

STRIP SEAL JOINT DETAILS (4")

DATE	DESCRIPTION	BY
5/22/95	ADDED ITEM 805(10)B BENTING ANGLE ON STUDS.	
9/13/94	ADDED NOTE TO TYP. CONN. GIRDER & STUD (CLR.)	TWA
5/5/94	PAYMENT ITEM CHANGED ON NOTE " 14	NPK
3/1/94	SPACER & CONN. STUD AT WELDED SPLICES	NPK
8/09/93	ANCHOR BOLTS LOCATION AT END DAM	NPK
5/20/93	SLOTTED HOLES SHALL BE FIELD CUT	NPK

REVISIONS

DATED MAY, 1993

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DESIGNED: KNAPP | DETAILED: A.N.NWAFOR | DIR: stdplans
CHECKED: D. MILLER | CHECKED: KNAPP | FILE: stripsea.dgn

STATE OF LOUISIANA
Walter D. Judlin, III
REG No. 8408
REGISTERED PROFESSIONAL ENGINEER
9/27/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

Safety is a Part of Your Contract

VALUE INCENTIVE CLAUSES — YOUR KEY TO HIGHER PROFITS — ENGINEERING

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
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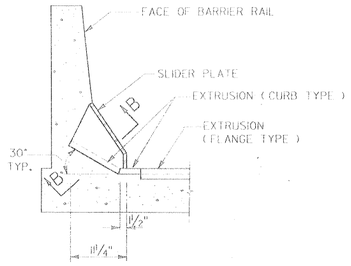
HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

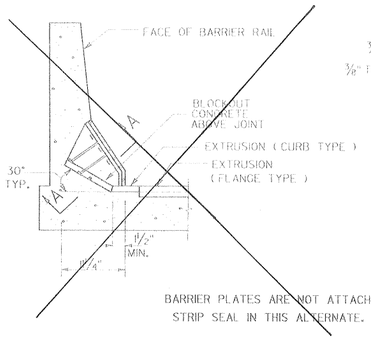
ROBERT E. LEE BOULEVARD BRIDGE STRIP SEAL JOINT DETAILS

DESIGNED BY:	DATE: MAR.8,2000	PLOT SCALE: 1	PLOT DATE: MARCH 8, 2000
DRAWN BY:	CADD FILE: SHT54.DGN		FILE NO. H-4-44776
CHECKED BY:			
SUBMITTED BY: HARTMAN ENGINEERING, DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 54 OF 59



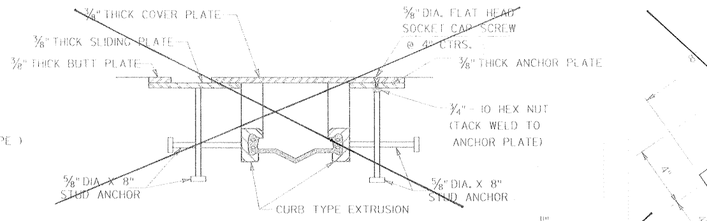
BARRIER SECTION

LOW SIDE ONLY

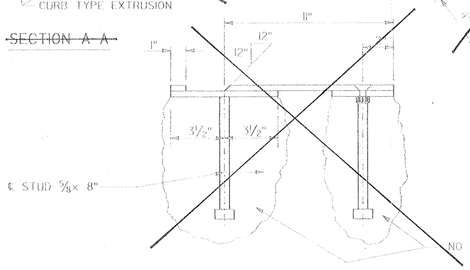


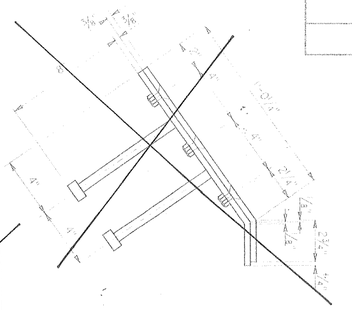
BARRIER PLATES ARE NOT ATTACHED TO STRIP SEAL IN THIS ALTERNATE.

~~ALTERNATE DETAIL FOR PLACEMENT OF COVER PLATE~~



~~SECTION A-A~~



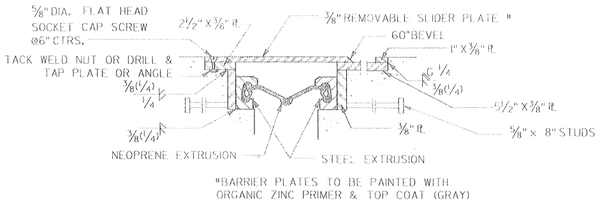


~~SIDE VIEW~~

	STATE PROJECT	PARISH	SHEET NO.

BENT NO.	TOTAL JT. MOVEMENT	LIN. FT. **	"D"

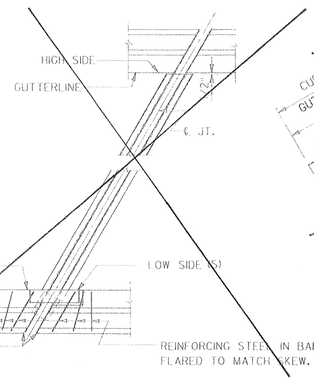
⊘ THE "D" DIMENSION IS GIVEN FOR THE AVERAGE TEMPERATURE (68°) AND AT 100° THE MINIMUM OPENING IS TO BE 1"



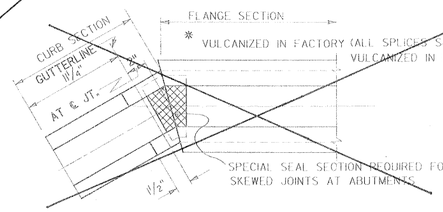
*BARRIER PLATES TO BE PAINTED WITH ORGANIC ZINC PRIMER & TOP COAT (GRAY)

SECTION B-B

(CURB SECTION)

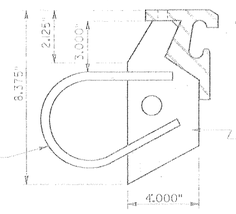


~~PART PLAN VIEW OF STRIP SEAL JOINT AT INTERIOR JOINT~~



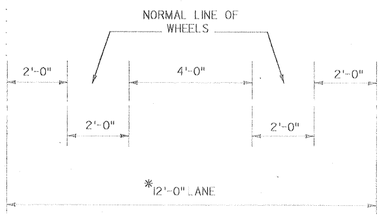
~~PART PLAN VIEW OF STRIP SEAL AT END BENTS WITH WING WALLS~~

LOW SIDE ONLY



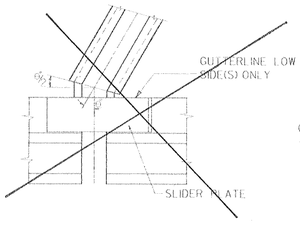
OPTIONAL HEAVY DUTY ANCHOR SYSTEM

SPLICE LOCATIONS SHALL BE LOCATED SO AS NOT TO FALL IN THE "NORMAL LINE OF WHEELS." EXCEPT FOR CURB SECTIONS, ALL EXTRUSIONS SHALL BE A MINIMUM OF 15 FT. BETWEEN SPLICES EXCEPT WHEN NOTED OTHERWISE ON THE SPAN SHEET.



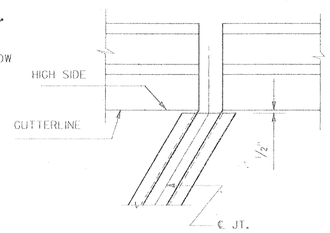
*DIMENSIONS SHOWN ARE NORMAL TO ROADWAY. WHEN JOINT IS PLACED ON SKEW THE DIMENSIONS SHOWN WILL VARY TO MEET THE SKEW DIMENSIONS ALONG THE ℄ OF THE JOINT.

SPLICE LOCATIONS



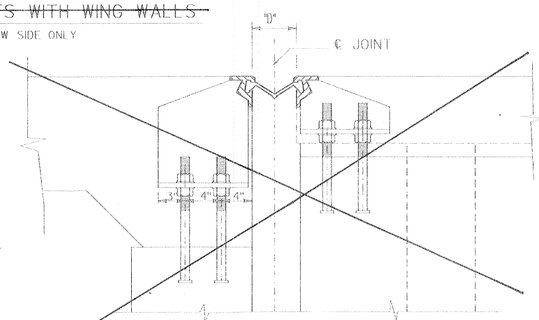
~~GUTTER DETAIL FOR END BENTS WITH WINGWALLS~~

LOW SIDE ONLY

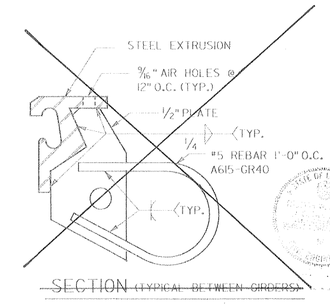


GUTTER DETAIL FOR END JOINTS

HIGH SIDE ONLY



~~PART SECTION SHOWING ANCHORAGE SYSTEM AND END DAM CONNECTION (TYPICAL SECTION AT CONNECTION BENT)~~



~~SECTION (TYPICAL BETWEEN GIRDERS)~~

STRIP SEAL JOINT DETAILS (4")

DATE	DESCRIPTION	BY
5/22/95	ADDED ITEM 805(11) & BENDING ANGLE ON STUDS.	TWA
9/13/94	ADDED NOTE TO TYP. CONN. GIRDER & STUD(CLR.)	NPK
5/5/94	PAYMENT ITEM CHANGED ON NOTE # 14	NPK
3/1/94	SPACER & CONN. STUD AT WELDED SPLICES	NPK
11/09/93	ANCHOR BOLTS LOCATION AT END DAM	NPK
5/20/93	SLOTTED HOLES SHALL BE FIELD CUT	NPK

REVISIONS

DATED MAY, 1993

STATE OF LOUISIANA

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DESIGNED KNAPP | DETAILED A.N.NWAFOR | DGN stdplans

CHECKED D. MILLER | CHECKED KNAPP | FILE stripsea.dgn

Safety is a Part of Your Contract

STATE OF LOUISIANA
Walter D. Judice, III
Reg. No. 31708
REGISTERED
PROFESSIONAL ENGINEER
CIVIL ENGINEERING
4/22/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

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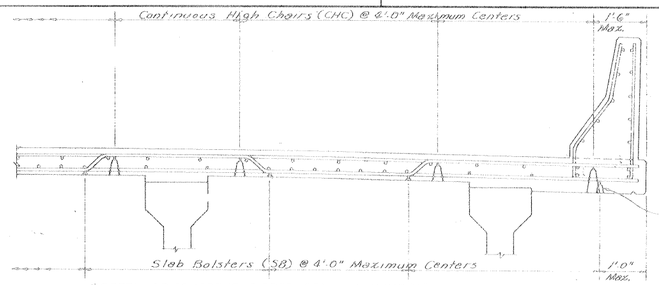
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

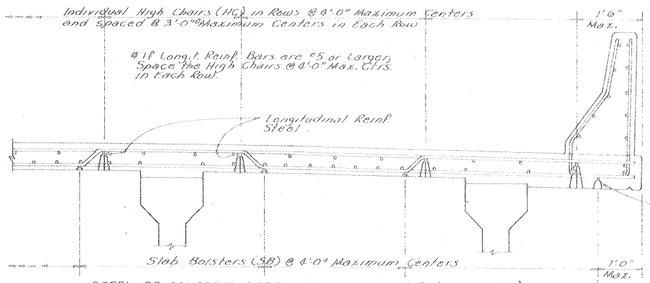
ROBERT E. LEE BOULEVARD BRIDGE
STRIP SEAL JOINT DETAILS

DESIGNED BY:	DATE: MAR.8,2000	PLOT SCALE: 1	PLOT DATE: MARCH 8, 2000
DRAWN BY:			
CHECKED BY:	CADD FILE: SHT55.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 55 OF 59

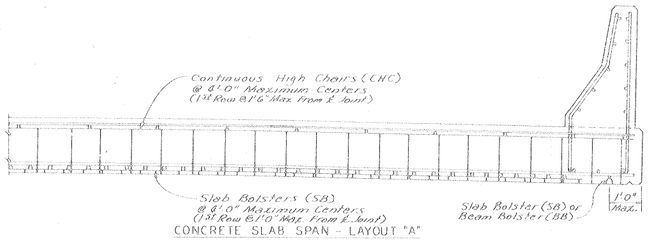
F.A.P.	STATE PROJECT	PARISH	SHEET NO.



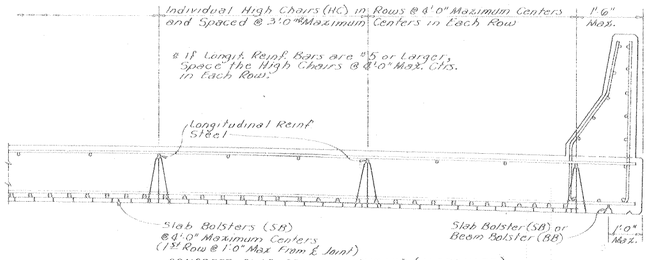
STEEL OR CONCRETE GIRDER SPAN - LAYOUT "A"



STEEL OR CONCRETE GIRDER SPAN - LAYOUT "B" (ALTERNATE)



CONCRETE SLAB SPAN - LAYOUT "A"



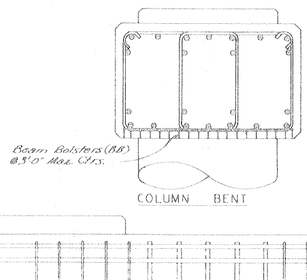
CONCRETE SLAB SPAN - LAYOUT "B" (ALTERNATE)

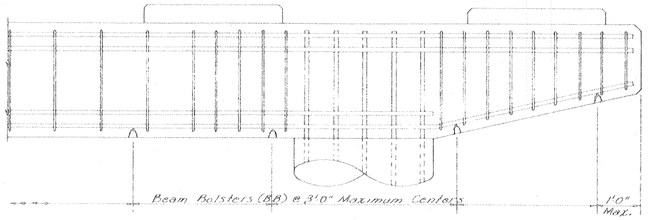
TYPE OF SUPPORT	BAR SUPPORT ILLUSTRATION	MINIMUM WIRE SIZES Δ HEIGHT	TOP	LEGS		REMARKS
Slab Bolster (SB)	5"	All	No 4 Cor. rugated	No 6		Vert. Corrugations Spaced 1" on Centers
Beam Bolsters (BB)		Up to 2"	No 7	No 7		
		Over 2"	No 6	No 4		
#Individual High Chair (HC)		2" to 5"	--	No 4		
		5" to 9"	--	No 2		
		over 9"	--	No 0		
*Continuous High Chair (CHC)		2" to 5"	No 2	No 6		
		5" to 9"	No 2	No 2		
		Over 9"	No 2	No 0		

Legs at 20 degrees or less with vertical. When height exceeds 12", reinforce legs with welded cross wires or encircling wires.

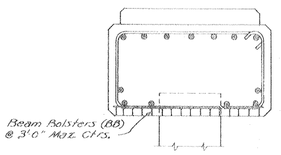
* Legs at 20 degrees or less with vertical. All legs 3/4" on center maximum, with leg within 4" of end of chair, and spread between legs not less than 50% of nominal height.

Δ American Steel & Wire Gauges.

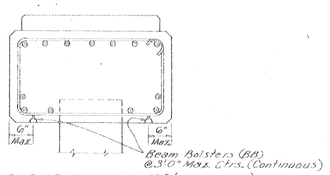




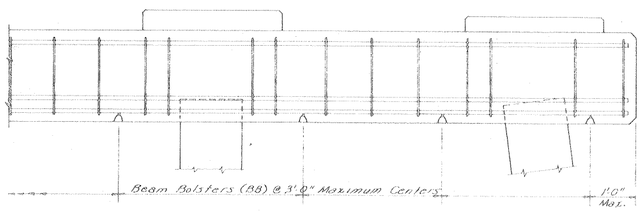
COLUMN BENT



PILE BENT - LAYOUT "A"



PILE BENT - LAYOUT "B" (ALTERNATE)



PILE BENT - LAYOUT "A"

GENERAL NOTES:

Steel Wire Bar Supports Shall be in Accordance with the latest Approved Louisiana Std. Specs. for Roads and Bridges, 1982, as Amended by Special Provisions and/or Supplemental Specifications.
Reinforcing Steel Bars Shall be Tied in Accordance with the latest Approved Louisiana Std. Specs. for Roads and Bridges, 1982, as amended by Special Provisions and/or Supplemental Specifications.
A #5 Bar with Individual High Chairs @ 4'-0" Max. Ctrs. or A #4 Bar with Individual High Chairs @ 3'-0" Max. Ctrs. may be Substituted, on a One for One BASIS, for the Continuous High Chairs.
Height of Bar Supports to be that Required to Support the Reinf. Bars in Positions Shown on Plans.
Bar Supports are not intended, and Shall not be used, to Support Runways for Concrete Buggies or Similar Loads.

When bar supports are placed in Continuous lines, they shall be so placed that the ends of the supporting wires shall be lapped to lock the last legs on adjoining pieces, but no bar shall be placed more than 2" beyond the last leg at the end of a run of any continuous supports.

Where bar supports are used on earth or aggregate subgrades, suitable plates shall be provided to prevent displacement of the support feet. All bar supports bearing on the forms shall have radius bearing legs in the form of a hook (upturned legs) or spherical foot at the lower end of the legs.

STEEL WIRE BAR SUPPORTS

STANDARD PLAN
BAR SUPPORTS
FOR
REINFORCING STEEL

DATED March 27, 1973

REVISIONS		
DESCRIPTION	DATE	BY
6.8.83 Std. Specs. Date & Min. Wire Sizes		JPP
9.1997 Gen. Notes		RS
1.1998 Note regarding upturned legs		RS

S.W.B.S. 1001

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION & DEVELOPMENT
OFFICE OF HIGHWAYS

DESIGNED | DETAILED: D. Spears | TRACED
CHECKED | CHECKED: W. G. Wilson | CHECKED

BRIDGE & STRUCTURAL DESIGN SECTION

APPROVED: [illegible] CHIEF ENGINEER. DATE: [illegible]

STATE OF LOUISIANA
Walter D. Pesin, III
No. 19108
REGISTERED
PROFESSIONAL ENGINEER
9/27/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

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NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
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HARTMAN ENGINEERING, INC.
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PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
BAR SUPPORTS FOR REINFORCING STEEL

DESIGNED BY:	DATE: MAR. 8, 2000	PLOT SCALE: 1	PLOT DATE: MARCH 8, 2000
DRAWN BY:			
CHECKED BY:	CADD FILE: SHT56.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING, DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 56 OF 59

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

The Road (Street) Construction 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) CONSTRUCTION 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 employed as the first advance sign in urban settings with short 250' spacing.

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 higway to through traffic. It should usually be mounted just below the Road Closed sign or the Local Teffic 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.

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

M4 - 8
12" x 24"

M4 - 10 R
M4 - 10 L
48" x 18"

Background - Black
Legend - Black
Arrow - Orange
Legend - 6" Series D

DO NOT PASS SIGN (R4-1)

The Do No 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.

R4-1
24" x 30"

Background - White
Legend & Border - Black
Legend - 6" Series D

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.

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 vechicles. 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 in. by 30 in.

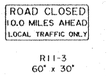
The Road Closed sign shall not be used where traffic is maintained or where the actual closure is some distance beyond the sign and local traffic is permitted access to nearer points.

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 tenth of a mile.



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 vechicular traffic is allowed to travel in one direction only. The vertical design has advantage where lateral space is limited. Both designs may use either right or left arrows.

R6-1 L
R6-1 R
36" x 12"

Background - Black
Legend - Black
Arrow - White
Legend - 4" Series D

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.

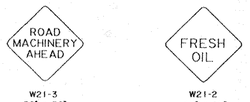
W20-3
48" x 48"

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 operation have rendered the surface of the pavement temporarily hazardous and that objectionable splashing on vehicles may occur.



W21-3
36" x 36"

Legend 5" Series D

W21-2
30" x 30"

Legend 6" 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 troveiway. 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 ½mile 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.

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

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

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 trafic 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.

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.

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.

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 roadway 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.

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 trovelway 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.

W21-5
30" x 30"

Legend 5" Series C

W21-6
30" x 30"

Legend 5" Series D

SIDE ROAD CONSTRUCTION AHEAD SIGN

The Side Road Construction 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.

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.

W8-4
30" x 30"

W8-9
30" x 30"

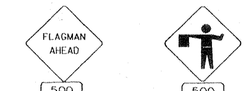
Legend 5" Series C

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.



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

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

LENGTH OF CONSTRUCTION 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 CONSTRUCTION NEXT ( ) MILES. Ordinarily it should be mounted on top of a Type III barricade. The project length shall be approximated only to the nearest tenth of a mile.

END CONSTRUCTION SIGN (G20-2)

The End Construction 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.

G20-1
60" x 36"

G20-2
60" x 24"

Legend - 6" Series C

NOTE:
All signs on this sheet shall have orange backgrounds with black legends and borders, except where otherwise specified.

	STATE PROJECT	PARISH	SHEET NO.

STANDARD PLAN NO. HS-01 | 1 OF 3

STANDARD PLAN
HIGHWAY SIGN AND BARRICADE DETAILS
FOR CONSTRUCTION PROJECTS

DATED

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DESIGNED A. Caceres	DETAILED D. Beaty	TRACED
CHECKED D. Beaty	CHECKED A. Caceres	CHECKED
APPROVED	DATE 9-17-99	

CHIEF ENGINEER

DATE	DESCRIPTION	BY
	Redraft and update to 1993 standards	D2
	REVISIONS	APPROVED

STATE OF LOUISIANA
WALTER D. HELLIN, III
REG. NO. 24788
REGISTERED
PROFESSIONAL ENGINEER
9/27/02

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

Safety is a Part of Your Contract

VALUE INCENTIVE CLAUSES YOUR KEY TO HIGHER PROFITS ENGINEERING

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE BOARD NEW ORLEANS, LOUISIANA	HARTMAN ENGINEERING, INC. CONSULTING ENGINEERS KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
HWY. SIGN AND BARRICADE DETAILS FOR CONSTRUCTION

DESIGNED BY:	DATE: MAR.8,2000	PLOT SCALE: 1	PLOT DATE: MARCH 8, 2000
DRAWN BY:			
CHECKED BY:	CADD FILE: SHT57.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 57 OF 59

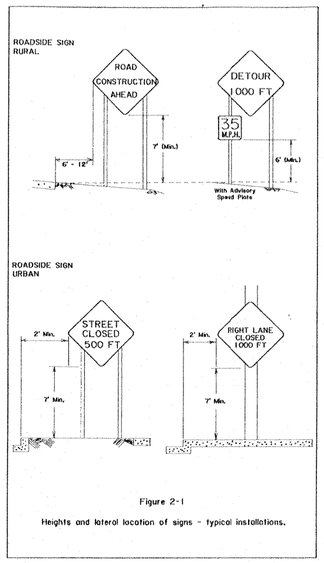


Figure 2-1

Heights and lateral location of signs - typical installations.

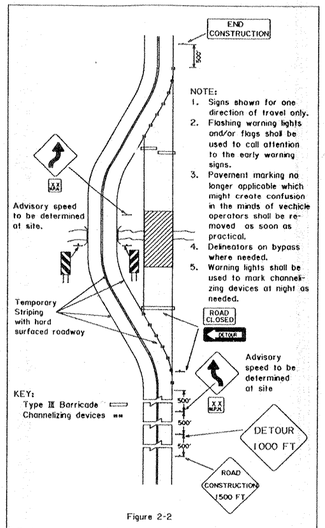


Figure 2-2

Typical application - 2-lane highway where the entire roadway is closed and a bypass detour is provided.

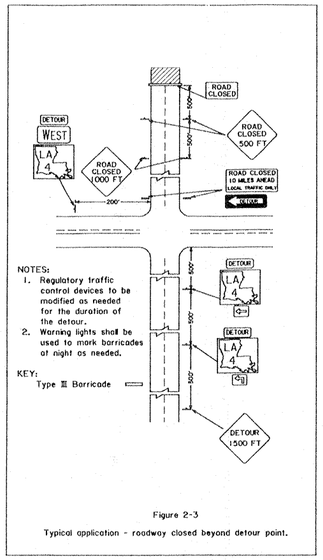


Figure 2-3

Typical application - roadway closed beyond detour point.

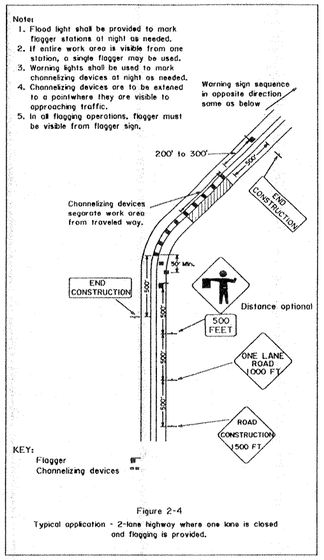


Figure 2-4

Typical application - 2-lane highway where one lane is closed and flagging is provided.

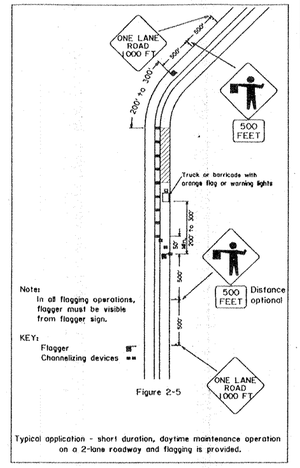


Figure 2-5

Typical application - short duration, daytime maintenance operation on a 2-lane roadway and flagging is provided.

	STATE PROJECT	PARISH	SHEET NO.

NOTES:

GENERAL

1. All signs and pavement markings herein shall be in accordance with the current edition of the "Louisiana Manual on Uniform Traffic Control Devices."
2. No traffic controls shall be erected until 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 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 = $\frac{WS^2}{60}$ for speed limit < 40 MPH
   where:
   L = minimum length of taper
   S = numerical value of posted speed limit prior to work or 85th precentile speed
   W = Width of offset
9. Spacing of 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 marking tape and should be accompanied by proper signs. Typical illustrations are shown in the "Louisiana 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 Standard Specifications 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 Standard Specifications 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 Department 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 where the hazard has been removed. On part-time operations, signs such 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 neutral shade, or black. Burlap cloth, cardboard, 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 traveiway 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 1018.12 of the Standard Specifications.

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.

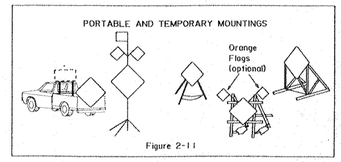


Figure 2-11

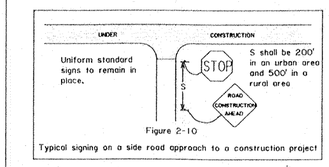


Figure 2-10

Typical signing on a side road approach to a construction project

STANDARD PLAN NO.	HS-01	2 OF 3

STANDARD PLAN

HIGHWAY SIGN AND BARRICADE DETAILS

FOR CONSTRUCTION PROJECTS

DATED . . .

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DESIGNED	A Caceres	DETAILED	D Healy	TRACED	W.J.M.jr.
CHECKED	D Healy	CHECKED	A Caceres	CHECKED	
APPROVED				DATE	9-15-00

CHIEF ENGINEER

DATE	DESCRIPTION	BY	APPROVED
4/18/02	Redraft and update to 1993 standards DB		

REVISIONS

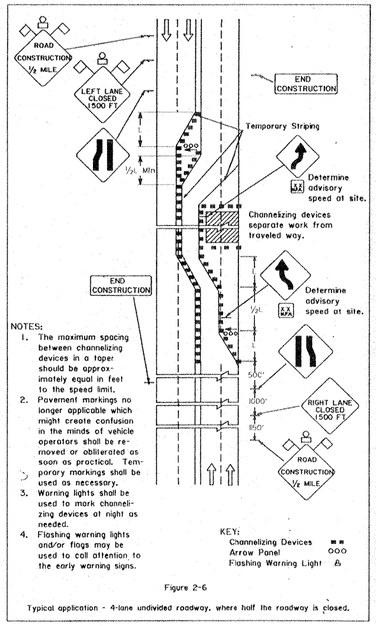


Figure 2-6

Typical application - 4-lane undivided roadway, where half the roadway is closed.

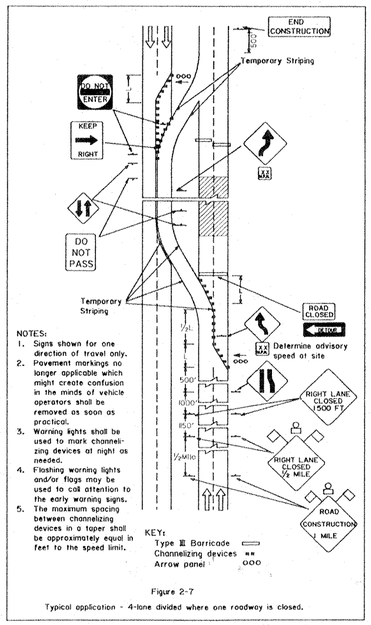


Figure 2-7

Typical application - 4-lane divided where one roadway is closed.

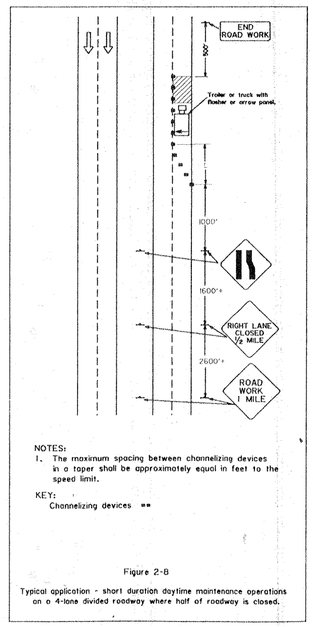


Figure 2-8

Typical application - short duration daytime maintenance operations on a 4-lane divided roadway where half of roadway is closed.

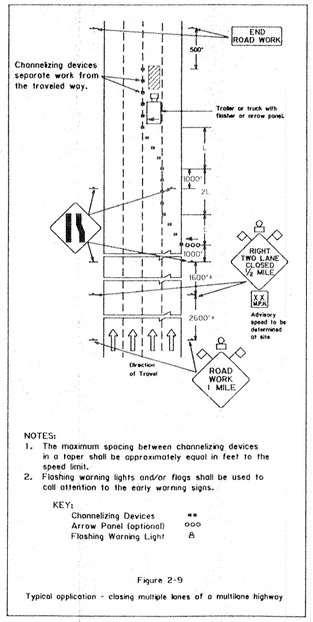
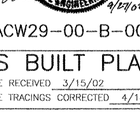


Figure 2-9

Typical application - closing multiple lanes of a multilane highway



DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

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VALUE INCENTIVE CLAUSES ENGINEERING YOUR KEY TO FEDERAL FUNDING

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE BOARD NEW ORLEANS, LOUISIANA	HARTMAN ENGINEERING, INC. CONSULTING ENGINEERS KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
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LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
HWY. SIGN AND BARRICADE DETAILS FOR CONSTRUCTION

DESIGNED BY:	DATE: MAR.8,2000	PLOT SCALE: 1	PLOT DATE: MARCH 8, 2000
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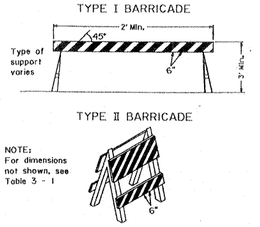
CHECKED BY:	CADD FILE: SHT58.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 58 OF 59



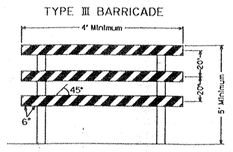


Figure 3 - 1
Standard Barricades

Table 3 - ;
Barricade Charactersistics

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

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 Standard Specifications. The predominant color for other barricade components shall be white, except that unpainted galvanized metal or aluminum components may be used. Barricades 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 downward 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.

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 movable 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.

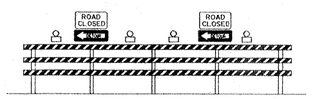


Figure 3 - 2
Barricade closing a road

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.

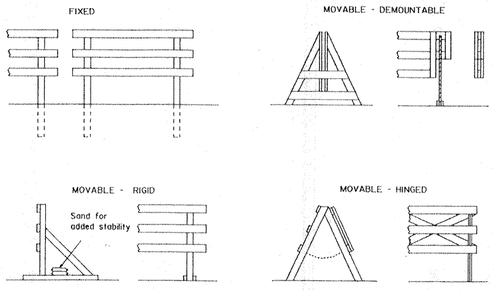


Figure 3 - 3
Type III barricade construction - Typical examples

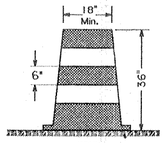


Figure 3 - 4

Drum Design

Drums used for traffic warning or channelization shall be made of plastic and shall be as per the qualified product list. Drums shall be approximately 36 inches in height and a minimum of 18 inches 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 Standard Specifications. 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, giving 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 accomodate 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 should 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.

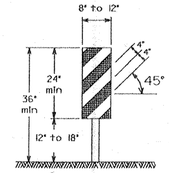


Figure 3 - 5

Vertical Panel 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 with 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 trafic

Vertical Panel Application

Vertical panels may be used to channelize traffic, divide opposing lanes of traffic, divide traffic lanes when two or more lanes are kept open in the same direction and in place of barricades where space is limited.

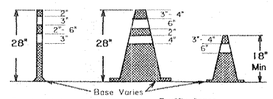


Figure 3 - 6

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 conspicuous guidance is needed.

For nighttime use, tubular markers shall be reflectorized. Reflectorization of tubular markers shall be provided by two, 3 inch wide white bands placed a maximum of 2 inches from the top of the marker, with a maximum of 6 inches between the bands. Reflectorized material shall conform to Subsection 1015.05(e) for Drums of the Standard Specifications

Tubular Marker Application

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

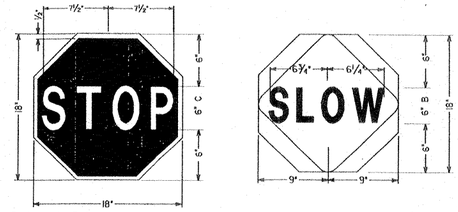
Cones shall be predominantly orange, not less than 18 inches high, and shall be made of a material that can be struck without damaging impacting vehicles. Cones shall be a minimum of 28 inches high when they are used on freeways and other high-speed roadways and on all facilities during hours of darkness, 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 form the top of the cone. For nighttime use, cones shall be reflectorized or equiped 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 cone, and an additional 4 inch wide white band 2 inches below 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 Standard Specifications

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.

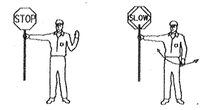
Steps should be taken to ensure that cones will not be blown over or displaced by wind or moving traffic. Cones can be doubled up to increase their weight, some cones are constructed with bases that can be filled with ballast, or can be weighted by droping rings over the cone. Ballast, however, should not present a hazard if the cones are inadvertantly 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



To STOP Traffic | Traffic Proceed | To Alert & SLOW Traffic

Figure 3 - 9
Use of Hand Sign

Use of hand signalling devices by flagger

A flagger equiped 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 deccelerate and is thus related to the approach speeds and physical conditions of the site. 200 to 300 feet is desireable 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 the primary hand signaling device. The sign paddle shall be provided with a rigid handle and a secure mounting as shown.

The following standard procedure 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 courteous in explaining the reason for the delay and in issuing instructions to motorists;
(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 equiped with a bright red light;
(G) Use the following motions to direct traffic (figure 3-9):
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. Face traffic with SLOW sign paddle in a stationary position, with arm extended horizontally from the body. Use the free arm to motion traffic ahead;
3. To Alert or SLOW Traffic. Face traffic with SLOW sign paddle in a stationary position, with arm extended horizontally from the body. Move the free arm up and down.;

	STATE PROJECT	PARISH	SHEET NO.

STANDARD PLAN NO. HS-01 | SHEET 3 OF 3

STANDARD PLAN
HIGHWAY SIGN AND BARRICADE DETAILS
FOR CONSTRUCTION PROJECTS

DATED:

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DESIGNED A. Caceres	DETAILED D. Healy	TRACED	
CHECKED D. Healy	CHECKED A. Caceres	CHECKED	
APPROVED	DATE 9/18/98		

CHIEF ENGINEER

DATE	DESCRIPTION	BY	APPROVED
	Recraft and update to 1993 standards	DB	

REVISIONS

VALUE INCENTIVE CLAUSES — YELLOW KEY TO HIGHER PROFITS — ENGINEERING

Safety is a Part of Your Contract

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Walter D. Judice, III
No. 15708
REGISTERED PROFESSIONAL ENGINEER
Civil ENGINEERING
9/21/98

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

C•A•D

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CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

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KENNER, LOUISIANA

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HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

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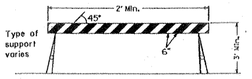
	STATE PROJECT	PARISH	SHEET NO.

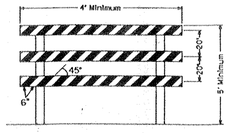
TYPE I BARRICADE



TYPE II BARRICADE

NOTE:
For dimensions not shown, see Table 3 - 1

TYPE III BARRICADE



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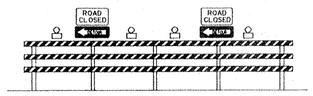

Figure 3 - 2
Barricade closing a road

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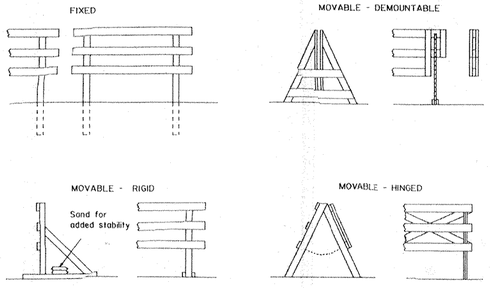

Figure 3 - 3
Type III barricade construction - Typical examples

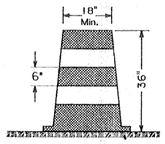

Figure 3 - 4

Drum Design

Drums used for traffic warning or channelization shall be made of plastic and shall be as per the qualified product list. Drums shall be approximately 36 inches in height and a minimum of 18 inches 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 Standard Specifications. 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.

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Drums should 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.

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 form the top of the cone. For nighttime use, cones shall be reflectorized or equiped 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 cone, and an additional 4 inch wide white band 2 inches below 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 Standard Specifications

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 increase their weight. some cones are constructed with bases that can be filled with ballast, or can be weighted by droping rings over the cone. Ballast, however, should not present a hazard if the cones are inadvertantly struck.

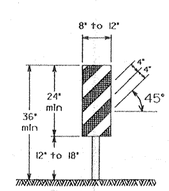


Figure 3 - 5

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 with 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 or more lanes are kept open in the same direction and in place of barricades where space is limited.

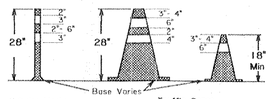


Figure 3 - 6

Tubular Marker Design

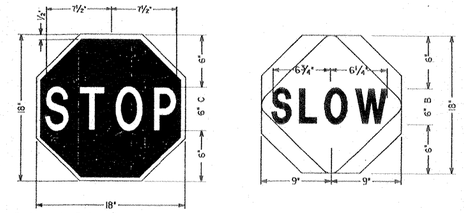
Tubular markers shall be predominantly orange, not less than 18 inches high and not less than 2 inches wide when viewed from any direction, and shall be made of a material that can be struck without damaging impacting vehicles. Tubular markers shall be a minimum of 28 inches high when they are used on freeways and other high-speed roadways and on all facilities during hours of darkness, or whenever more conspicuous guidance is needed.

For nighttime use, tubular markers shall be reflectorized. Reflectorization of tubular markers shall be provided by two, 3 inch wide white bands placed a maximum of 2 inches from the top of the marker, with a maximum of 6 inches between the bands. Reflectorized material shall conform to Subsection 1015.05(e) for Drums of the Standard Specifications

Tubular Marker Application

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.

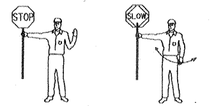
Steps should be taken to ensure that tubular markers will not be blown over or displaced by wind or moving traffic. Effective steps include affixing them to the pavement with anchor bolts or adhesive, using weighted bases or weighted rings that can be dropped over the marker. Ballast, however, should not present a hazard if the markers are inadvertantly 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.



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



To STOP Traffic | Traffic Proceed | To Alert & SLOW Traffic

Figure 3 - 9
Use of Hand Sign

Use of hand signalling devices by flagger

A flagger equiped 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 desireable 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 the primary hand signaling device. The sign paddle shall be provided with a rigid handle and a secure mounting as shown.

The following standard procedure 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 courteous in explaining the reason for the delay and in issuing instructions to motorists;
(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 equiped with a bright red light;
(G) Use the following motions to direct traffic (figure 3-9):
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. Face traffic with SLOW sign paddle in a stationary position, with arm extended horizontally from the body. Use the free arm to motion traffic ahead;
3. To Alert or SLOW Traffic. Face traffic with SLOW sign paddle in a stationary position, with arm extended horizontally from the body. Move the free arm up and down.;

	Redraft and update to 1993 standards DB		
DATE	DESCRIPTION	BY	APPROVED

REVISIONS

STANDARD PLAN NO.	HS-01	SHEET 3 OF 3

STANDARD PLAN
HIGHWAY SIGN AND BARRICADE DETAILS
FOR CONSTRUCTION PROJECTS
DATED:

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DESIGNED A. Caceres	DETAILED D. Eesly	TRACED
CHECKED D. Eesly	CHECKED A. Caceres	CHECKED
APPROVED	DATE 9/19/95	

CHIEF ENGINEER

STATE OF LOUISIANA
Walter O. Judin, III
No. 13 760 /2/20
REGISTERED
PROFESSIONAL ENGINEER
9/22/95

DACW29-00-B-0094

AS BUILT PLANS
DATE RECEIVED 3/15/02
DATE TRACINGS CORRECTED 4/18/02

Safety is a Part of Your Contract

VALUE INCENTIVES CLOSES HIGHER PROFITS YOUR KEY TO ENGINEERING

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE BOARD
NEW ORLEANS, LOUISIANA

HARTMAN ENGINEERING, INC.
CONSULTING ENGINEERS
KENNER, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
ORLEANS AVENUE OUTFALL CANAL
PHASE 1B
ORLEANS PARISH
LOUISIANA

ROBERT E. LEE BOULEVARD BRIDGE
HWY. SIGN AND BARRICADE DETAILS FOR CONSTRUCTION

DESIGNED BY:	DATE: MAR.8,2000	PLOT SCALE: 1	PLOT DATE: MARCH 8, 2000
DRAWN BY:			
CHECKED BY:	CADD FILE: SHT59.DGN		FILE NO. H-4-44776
SUBMITTED BY: HARTMAN ENGINEERING DESIGN ENGINEER	SOLICITATION NO. DACW29-00-B-0094		DWG. 59 OF 59