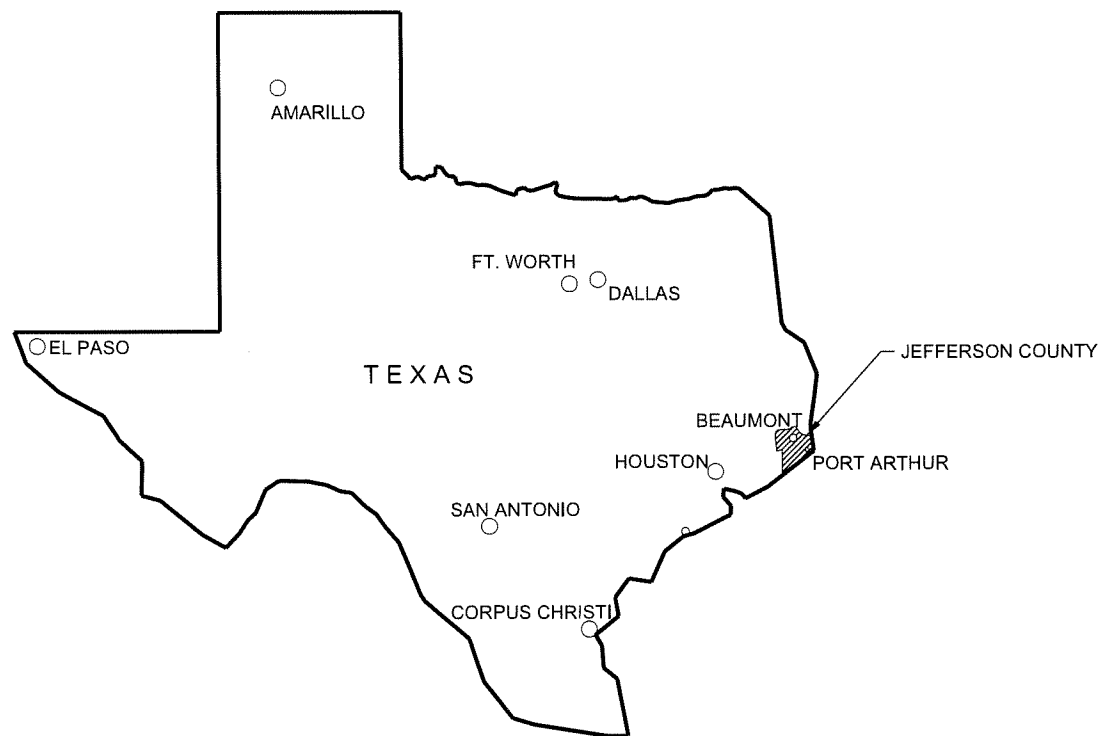
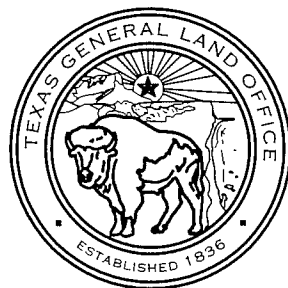


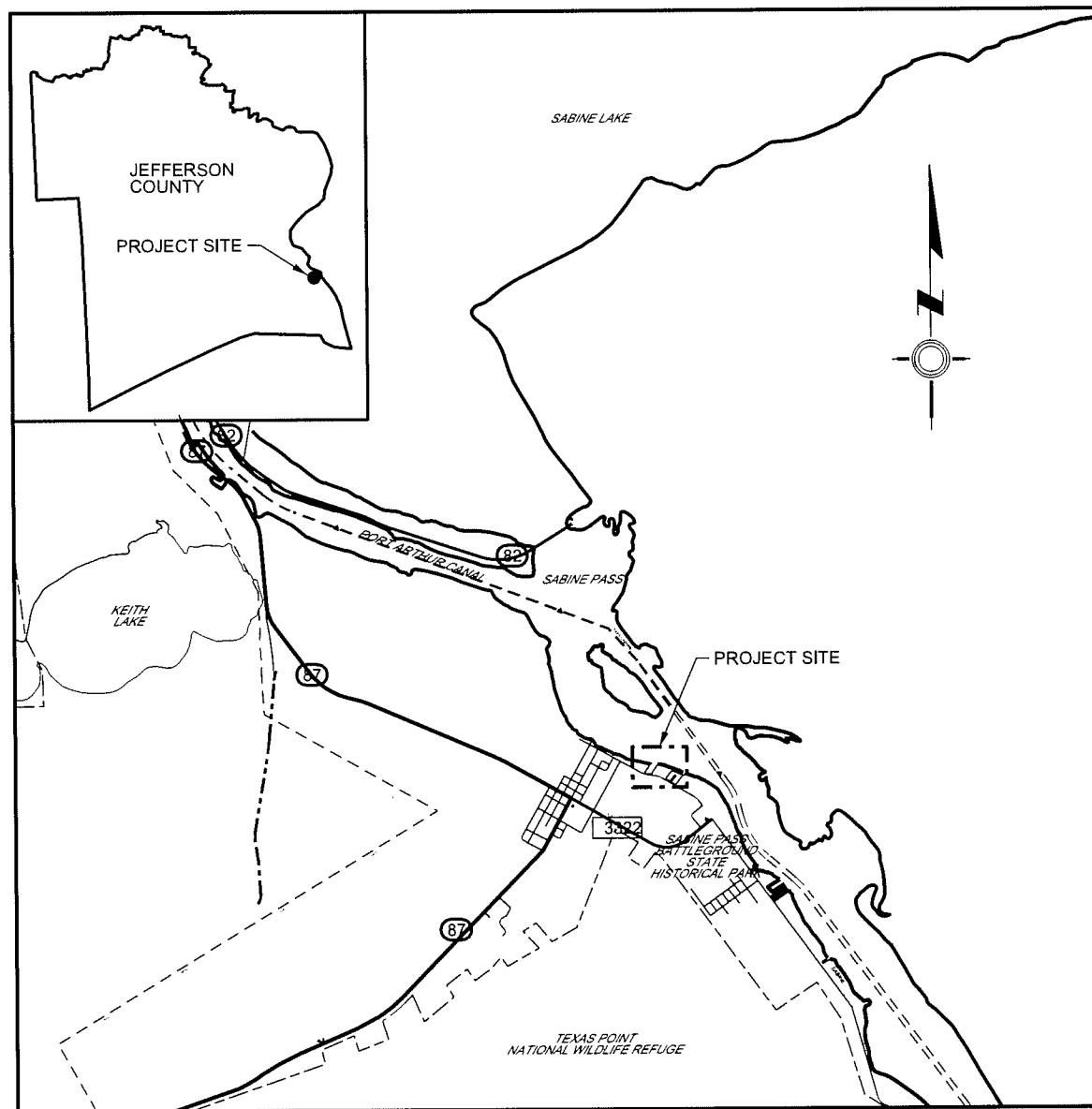
SABINE PASS PORT AUTHORITY

JEFFERSON COUNTY CONTRACT # DRS010219
 TGLO CONTRACT NO. 10-5242-000-5227

POST-IKE ROUND ONE RECOVERY PROJECT PAVING AND DRAINAGE IMPROVEMENT SABINE PASS, TEXAS



01 VICINITY MAP
 SCALE: NTS



02 LOCATION MAP
 SCALE: NTS

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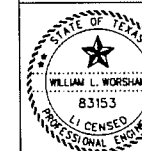
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EC (1) - 93	TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES, FENCED & BALED HAY

LJA Engineering, Inc.

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 Beaumont, Texas 77701 FRN - F-1386



10/23/2012
 W. L. Worsham PE
 WILLIAM L. WORSHAM, P.E. #83153

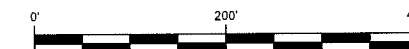
ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
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0	10/14/11	JWB	ISSUED FOR CONSTRUCTION	CKW	WLW



SABINE PASS PORT AUTHORITY

SABINE PASS PORT AUTHORITY
 POST-IKE ROUND ONE RECOVERY PROJECT
 PAVING AND DRAINAGE IMPROVEMENT
 TABLE OF CONTENTS AND LOCATION MAP

DRAWN BY	DATE	SCALE	CHRD	CKW
JWB	16JUL12	AS NOTED	APPVD	WLW
DRAWING NO.	474-1001-C-1000			ISSUE NO.
				1



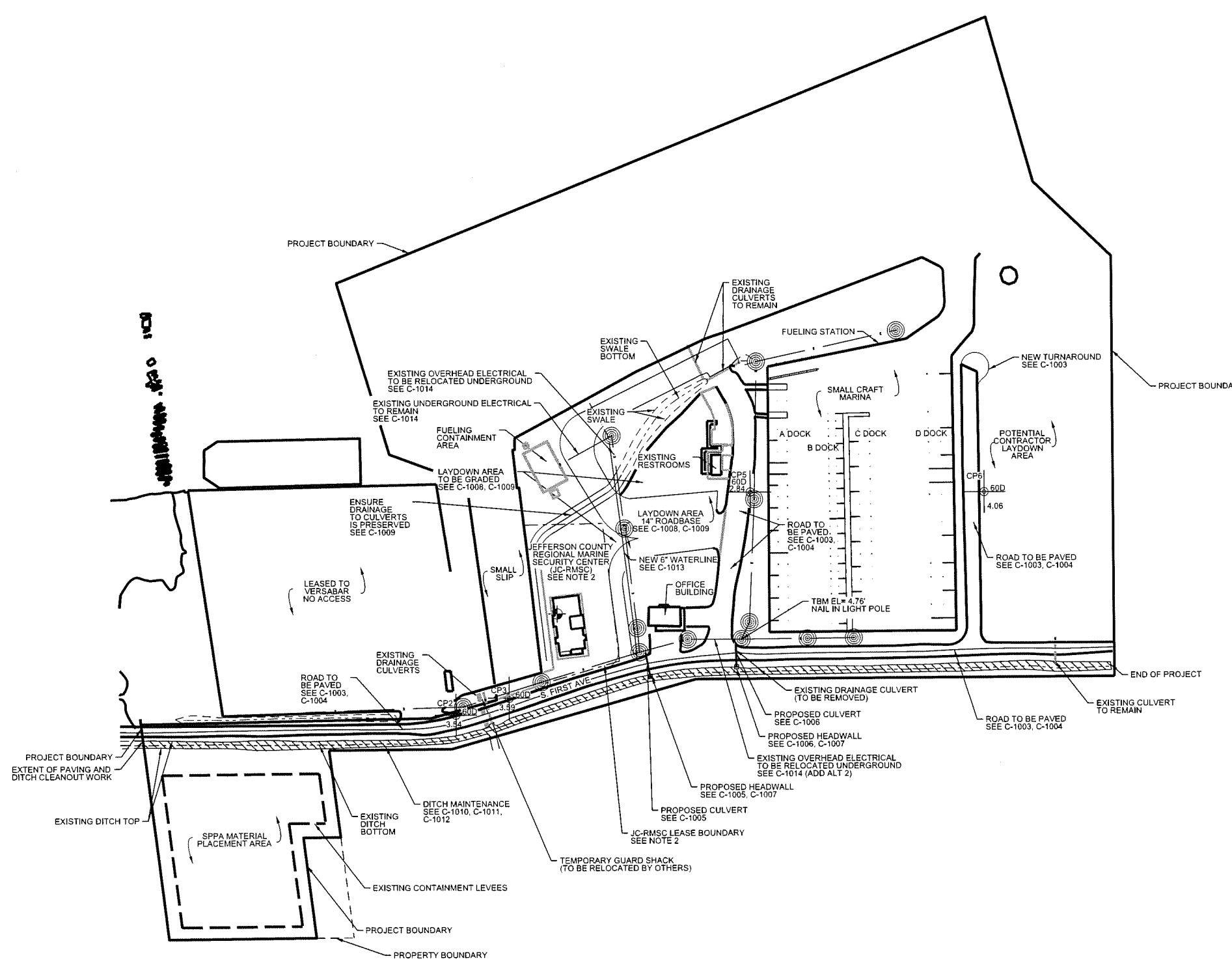
KEY

- CONTROL POINT
- BORING LOCATION
- POWER/LIGHT POLE
- JC-RMSC LEASE BOUNDARY

- NOTES**
1. THE SITE FALLS ENTIRELY WITHIN ZONE V15 (EL. 13) PER FIRM ISSUED FLOOD MAP 485499070F
 2. THE JEFFERSON COUNTY REGIONAL MARINE SECURITY CENTER (JC-RMSC) IS A PROPOSED PROJECT TO BE BUILT BY OTHERS. CONSTRUCTION IS EXPECTED TO BE SIGNIFICANTLY COMPLETED BY THE START OF CONSTRUCTION ON THIS PROJECT. ALL FEATURES AND ELEVATIONS ARE BELIEVED TO BE ACCURATE AS OF THE TIME OF COMMENCEMENT OF CONSTRUCTION. CONFIRM FIELD CONDITIONS WITH ENGINEER. COORDINATE WITH OWNER ON THE RELATIONSHIP OF THIS PROJECT TO PROPOSED, ONGOING AND COMPLETED PROJECTS ON THE SITE.

TIDE LEVELS	
MHHW	1.41'
MHW	1.30'
MSL	0.77'
MLW	0.21'
NAVD88	0.00'
MLLW	-0.20'

CONTROL POINTS			
POINT	EASTING	NORTHING	ELEVATION
CP2	3591507.04	13850738.52	3.54
CP3	3591594.42	13850719.81	3.59
CP5	3592094.40	13850813.60	2.84
CP6	3592420.32	13850627.96	4.06



SITE PLAN
SCALE: 1" = 200'

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10/23/2012

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WILLIAM L. WORSHAM, P.E. #83153

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SABINE PASS PORT AUTHORITY
SABINE PASS PORT AUTHORITY
POST-IKE ROUND ONE RECOVERY PROJECT
PAVING AND DRAINAGE IMPROVEMENT
SITE PLAN

DRAWN BY	JWB	DATE	16JUL12	SCALE	1" = 200'	CHKD	CKW
APPR'D						APPR'D	WLW
DRAWING NO.	474-1001-C-1001					ISSUE NO.	1

GENERAL NOTES

1. THE WORK CONSISTS OF FURNISHING ALL LABOR, EQUIPMENT, AND MATERIALS FOR CONSTRUCTION, AS SHOWN ON THESE DRAWINGS AND SPECIFIED IN THE CONTRACT DOCUMENTS.
2. ALL WORK SHALL CONFORM TO APPLICABLE PROFESSIONAL STANDARDS AND REQUIRED PERMITS FOR WORK DESCRIBED IN THESE DOCUMENTS. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL CODES, ORDINANCES, LAWS, AND REGULATIONS THAT APPLY FOR THAT TRADE.
3. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL MEET WITH THE ENGINEER OR THE ENGINEER'S DESIGNEE (PRE-CONSTRUCTION MEETING) TO VERIFY CONSTRUCTION ACCESS LOCATIONS, DESIGN DETAILS, AND METHODS OF CONSTRUCTION.
4. EXISTING SITE CONDITIONS ARE FROM PREVIOUS CONSTRUCTION DRAWINGS PROVIDED BY ENGINEER AND FIELD OBSERVATIONS MADE ON SITE. CONTRACTOR SHALL VERIFY ACTUAL SITE CONDITIONS AS THEY EXIST PRIOR TO CONSTRUCTION.
5. ANY CONTRADICTIONARY INFORMATION SHALL BE BROUGHT THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
6. ALL SURVEY BENCHMARKS ESTABLISHED BY LJA ENGINEERING, INC.
SURVEY DATA:
HORIZONTAL DATUM: TEXAS SOUTH CENTRAL ZONE, NAD83, US SURVEY FEET
VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM (NAVD88) FEET.
7. CONTRACTOR SHALL RESTORE IMPACTED CONSTRUCTION WORK AREAS, LAYDOWN AREAS AND ACCESS POINTS TO PRE-CONSTRUCTION CONDITIONS PRIOR TO PROJECT COMPLETION, INCLUDING, BUT NOT LIMITED TO: TURF/SEEDING, SHRUBS, TREES, PLANTS, ASPHALT & CONCRETE PAVING, UTILITIES, ETC.
8. THE JOB SITE SHALL BE MAINTAINED IN A SAFE & CLEAN MANNER THAT MINIMIZES ANY ENVIRONMENTAL POLLUTANTS.
9. ALL SUPPLIERS SPECIFIED MATERIAL IS MATERIAL USED IN THE DESIGN. ENGINEER APPROVED EQUALS ARE ACCEPTABLE.

CONSTRUCTION NOTES

1. ALL WASTE MATERIAL FROM CONSTRUCTION ACTIVITIES SHALL BECOME PROPERTY OF CONTRACTOR. CONTRACTOR SHALL REMOVE AND TRANSPORT WASTE MATERIALS OFF OWNER'S PROPERTY AND SHALL BE DISPOSED OF IN A LEGAL MANNER.
2. ALL EXCAVATION SHALL BE CONDUCTED IN ACCORDANCE WITH OSHA REQUIREMENTS FOR SHORING AND TRENCH SUPPORT.

CONSTRUCTION NOTES (CONT.)

3. NO DAMAGE WILL BE ALLOWED TO PUBLIC OR PRIVATE PROPERTY. ANY DAMAGES TO PUBLIC OR PRIVATE PROPERTY RESULTING FROM THE CONTRACTORS OPERATIONS WILL BE REPAIRED AT THE CONTRACTORS EXPENSE, OR AS DIRECTED BY ENGINEER.
4. ALL UNKNOWN UNDERGROUND OBJECTS, PIPING, STRUCTURES, ELECTRICAL, ENVIRONMENTAL CONDITIONS, ETC SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY.
5. ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED WITHIN THE LIMITS OF THE LINES AND GRADES SHOWN ON THESE DRAWINGS, AND WITHIN THE PROJECT BOUNDARIES DESCRIBED IN THE CONTRACT DOCUMENTS.
6. ALL TRAFFIC RIGHT-OF-WAY WILL BE MAINTAINED BY CONTRACTOR FOLLOWING ALL TEXAS MUTCD REQUIREMENTS. CONTRACTOR SHALL PROVIDE ACCESS RAMPS OVER ANY PIPES, HOSES, OR TEMPORARY PLACEMENT OF EQUIPMENT ACROSS ROADWAY, PARKING AND OTHER AREAS WHERE TRAFFIC MAY BE EXPECTED.
7. ALL STRUCTURAL WOOD PRODUCTS SHALL BE A MINIMUM #2 YSP. ALL EXTERIOR OR GROUND EXPOSED WOOD PRODUCTS SHALL BE ACQ TREATED MAT'L'S.
8. ALL RAMP DECKING SHALL BE FITTED TIGHT WITHOUT GAPS BETWEEN BOARDS.
9. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL TEMPORARY FORMS USED FOR CAST-IN-PLACE CONCRETE PRIOR TO PROJECT COMPLETION.

CONCRETE NOTES

1. CONCRETE DESIGN AND INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF ACI-318 (2011) AND THE IBC CODE (2009).
2. CONTRACTOR SHALL SUBMIT TO LJA ENGINEERING FOR APPROVAL THE CONCRETE MIX DESIGN PRIOR TO INSTALLATION.
3. THE CONTRACTOR SHALL GIVE THE OWNER'S REPRESENTATIVE A MINIMUM OF 48 HOURS NOTICE FOR PRE-POUR REINFORCING STEEL INSPECTION. NO CONCRETE SHALL BE PLACED WITHOUT A PRE-POUR INSPECTION UNLESS PRIOR WRITTEN APPROVAL IS OBTAINED.
4. ALL CONCRETE SHALL BE CLASS C WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI MIX @ 28 DAYS UNLESS NOTED OTHERWISE. DO NOT INCLUDE ANY FLY ASH, ADMIXTURE, ETC. WITHOUT THE ENGINEERS PRIOR APPROVAL.

CONCRETE NOTES (CONT.)

5. AN INDEPENDENT TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST-IN-PLACE CONCRETE:
 - A. ASTM C 143 'STANDARD TEST FOR SLUMP OF PORTLAND CEMENT CONCRETE'. ALL CONCRETE SHALL CONTAIN A MAXIMUM SLUMP OF 4" UNLESS THE CONTRACTOR USES A SUPERPLASTICIZING ADMIXTURE.
 - B. ASTM C 39 'STANDARD TEST FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS'. A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS, FOR EVERY 50 CUBIC YARDS OR A FRACTION THEREOF, PLACED PER DAY. REQUIRED CYLINDER(S) QUANTITIES AND TEST AGE AS FOLLOWS:
 - (1) AT 7 DAYS
 - (2) AT 14 DAYS
 - (3) AT 28 DAYS
6. ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE DIRECTION OF THE ENGINEER, IF REQUIRED. IF 28 DAY STRENGTH IS ACHIEVED, THE ADDITIONAL CYLINDER(S) MAY BE DISCARDED.
7. CONCRETE FINISHES ON ALL EXPOSED EDGES OF CONCRETE FOUNDATIONS AND STRUCTURES SHALL HAVE A 3/4" CHAMFER, UNLESS NOTED OTHERWISE.
8. COLD JOINTS SHALL NOT BE PERMITTED UNLESS APPROVED BY LJA ENGINEERING.
9. ALL REINFORCEMENT SHALL BE GRADE 60 KSI CONFORMING TO ASTM A615. REINFORCEMENT SHALL BE SUPPORTED, SECURED AND OR TIED WITH APPROVED DEVICES OR IN AN APPROVED MANNER.
10. FIELD FLAME CUTTING, FLAME BENDING AND OR WELDING OF REINFORCEMENT IS NOT PERMITTED.
11. ALL COLD BENDING, SPLICES, EMBEDMENTS AND LAPS OF REINFORCEMENT SHALL BE PER THE LATEST EDITION OF THE ACI-318.
12. ALL CONCRETE INSTALLATION, CURING, FINISHING, REPAIRS, ETC SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI-318.
13. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS PRIOR TO COMMENCING CONSTRUCTION.
14. ALL REBAR SPLICES SHALL BE STAGGERED AND OVERLAPPED IN ACCORDANCE WITH ACI STANDARDS.

ELECTRICAL NOTES

1. ALL WORK SHALL CONFORM TO LOCAL POWER COMPANY (ENTERGY) STANDARDS AND PROCEDURES. CONTRACTOR SHALL CONFIRM MOST RECENT AND APPLICABLE SPECIFICATIONS.
2. ALL WORK SHALL CONFORM WITH POWER COMPANY STANDARDS, NEC AND AUTHORITIES WITH JURISDICTION.

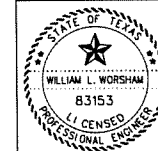
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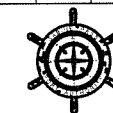
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Fax 409.813.1916
FRN - F-1386



10/23/2012
W.L. Worsham, P.E.
WILLIAM L. WORSHAM, P.E. #83153

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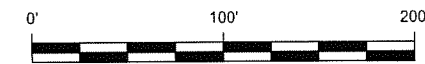


**SABINE PASS
PORT AUTHORITY**

SABINE PASS PORT AUTHORITY
POST-IKE ROUND ONE RECOVERY PROJECT -
PAVING AND DRAINAGE IMPROVEMENT
CONSTRUCTION NOTES

DRAWN BY JWB	DATE 16JUL12	SCALE NTS	CHKD APPD	CKW WLW
DRAWING NO. 474-1001-C-1002	ISSUE NO. 1			

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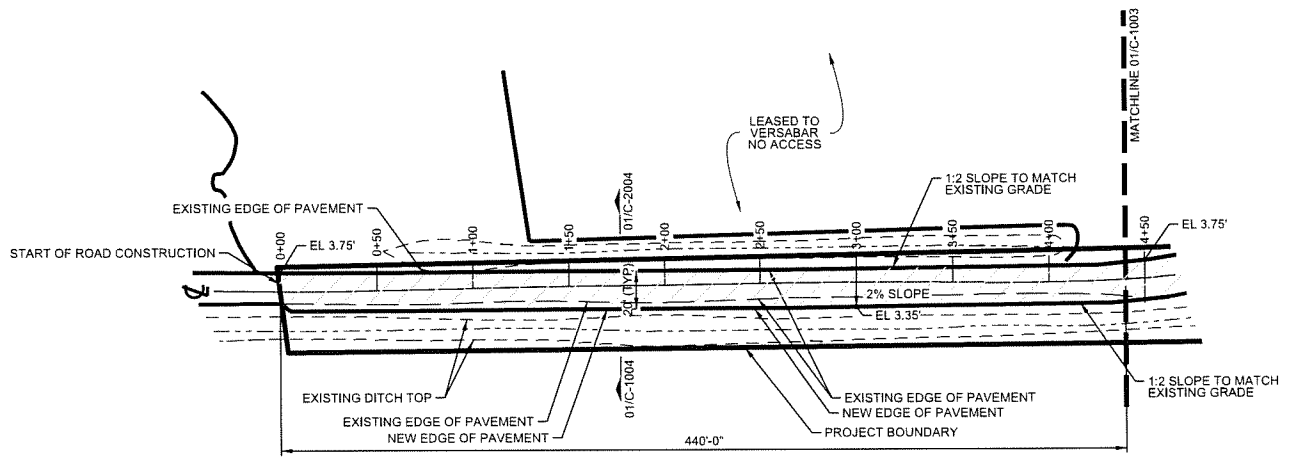
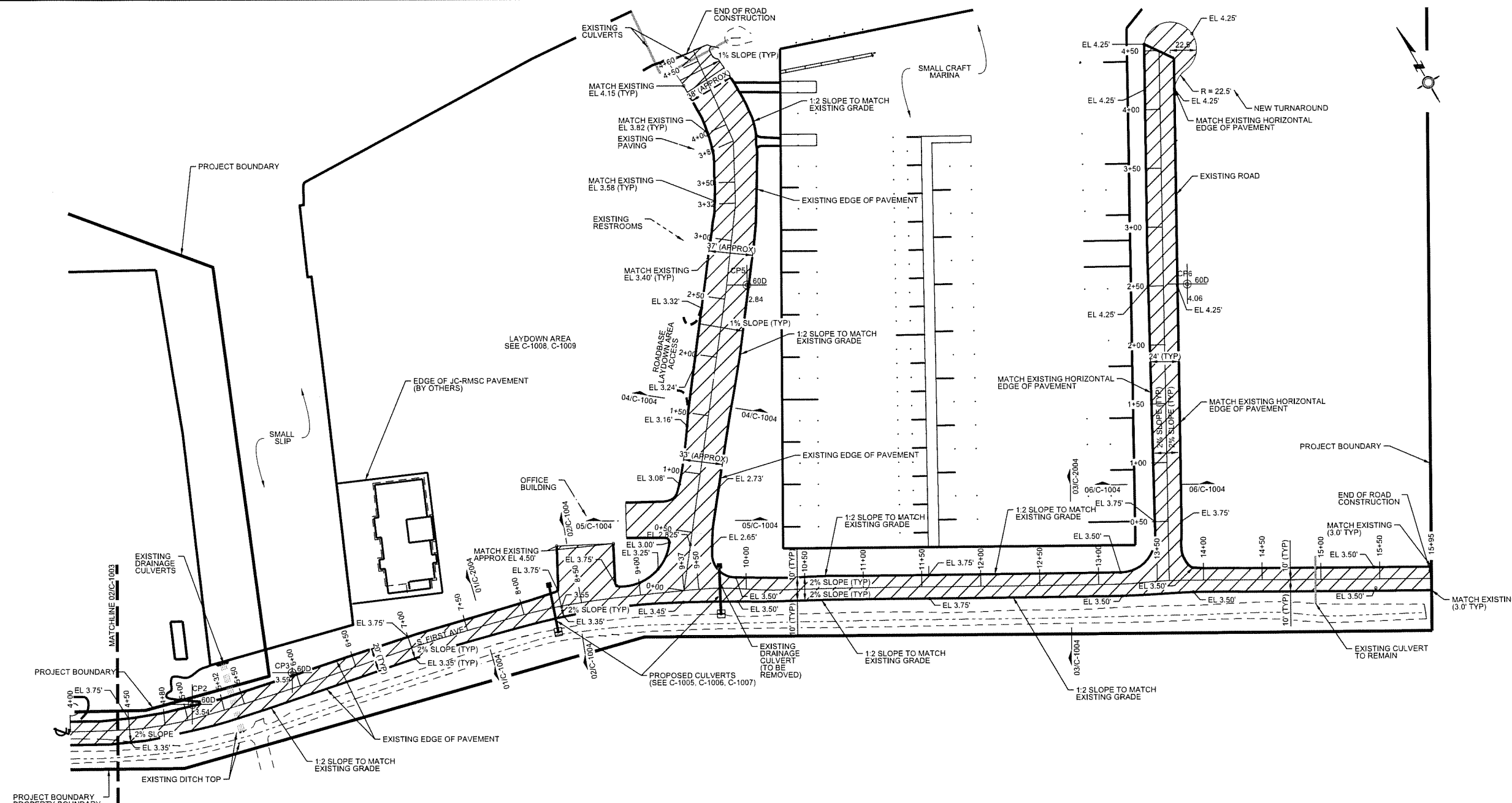


- NOTES**
- SUPPLEMENTAL TOPOGRAPHIC DATA (NATURAL GROUND, DITCH AND EDGE OF PAVEMENT) COLLECTED DECEMBER 2009 (LEAP PRJ#:268-1007). SPOT ELEVATIONS ARE TOP OF PAVEMENT FOR NEW PAVING.
 - HORIZONTAL DATUM IS NAD83 - STATEPLANE TEXAS SOUTH CENTRAL FIPS 4202 (US SURVEY FEET) VERTICAL DATUM IS NAVD88 (FEET)
 - EXCESS MATERIAL FROM PAVEMENT DEMOLITION SHALL BE REMOVED FROM THE PROJECT AREA AND BE DISPOSED OF IN A LEGAL MANNER.
 - EXCESS CLEAN MATERIAL FROM ROAD GRADING SUITABLE TO OWNER AND IN COMPLIANCE WITH REGULATORY PROVISIONS MAY BE PLACED IN SPPA MATERIAL PLACEMENT AREA IDENTIFIED ON C-1001

- KEY**
- EDGE OF EXISTING PAVEMENT (AS NOTED)
 - NEW ROAD ELEVATIONS
 - ⊕ CONTROL POINT
 - ▨ EXTENT OF NEW PAVED ROADS

CONTROL POINTS

POINT	EASTING	NORTHING	ELEVATION
CP2	3591507.04	13850738.52	3.54
CP3	3591594.42	13850719.81	3.59
CP5	3592094.40	13850813.60	2.84
CP6	3592420.32	13850527.96	4.06



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W/23/2012

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SABINE PASS PORT AUTHORITY

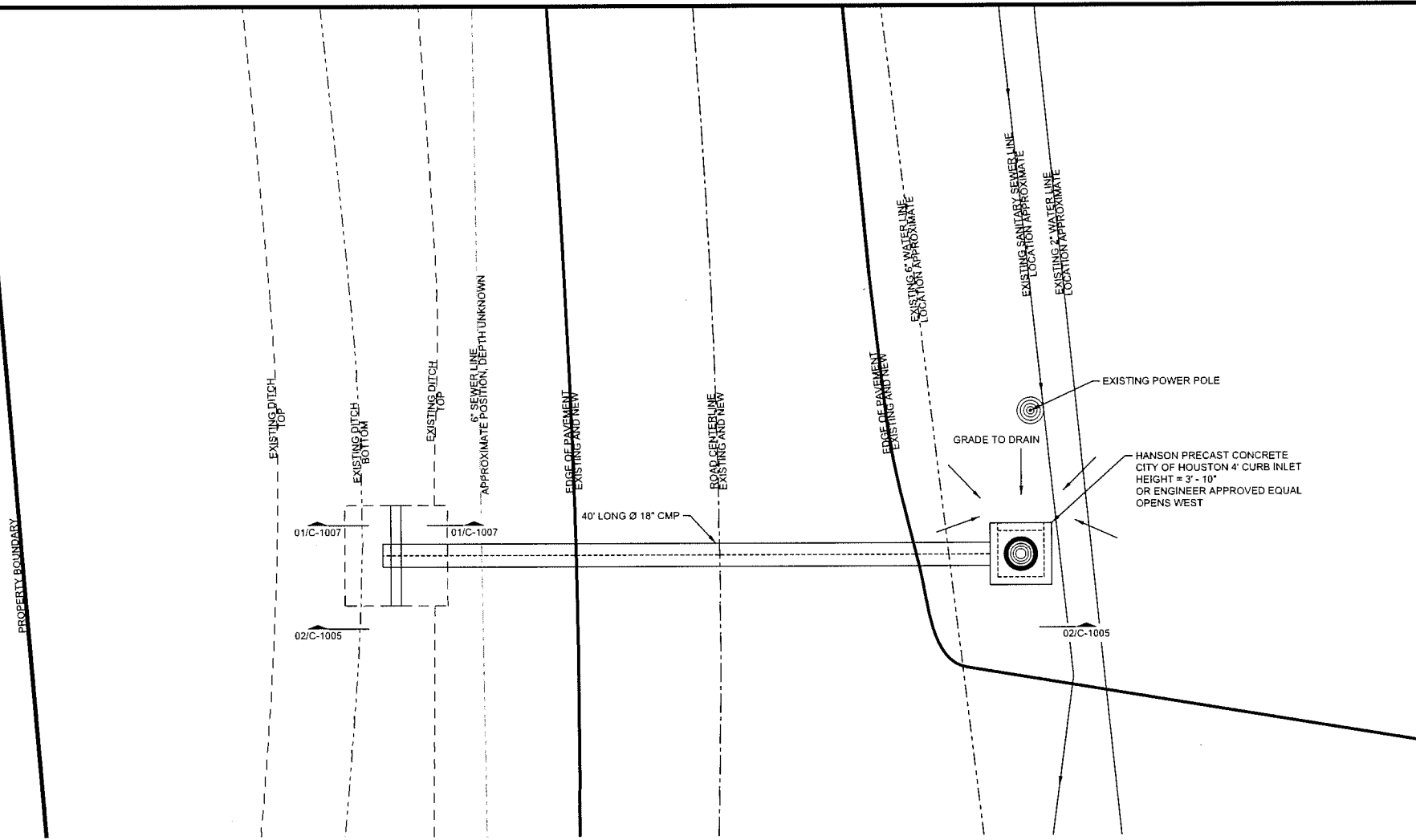
SABINE PASS PORT AUTHORITY
POST-IKE ROUND ONE RECOVERY PROJECT
PAVING AND DRAINAGE IMPROVEMENT
PAVING PLAN

DRAWN BY	JWB	DATE	16JUL12	SCALE	1" = 100'	CHKD	CKW
APPVD						APPVD	WLW
DRAWING NO.	474-1001-C-1003					ISSUE NO.	1

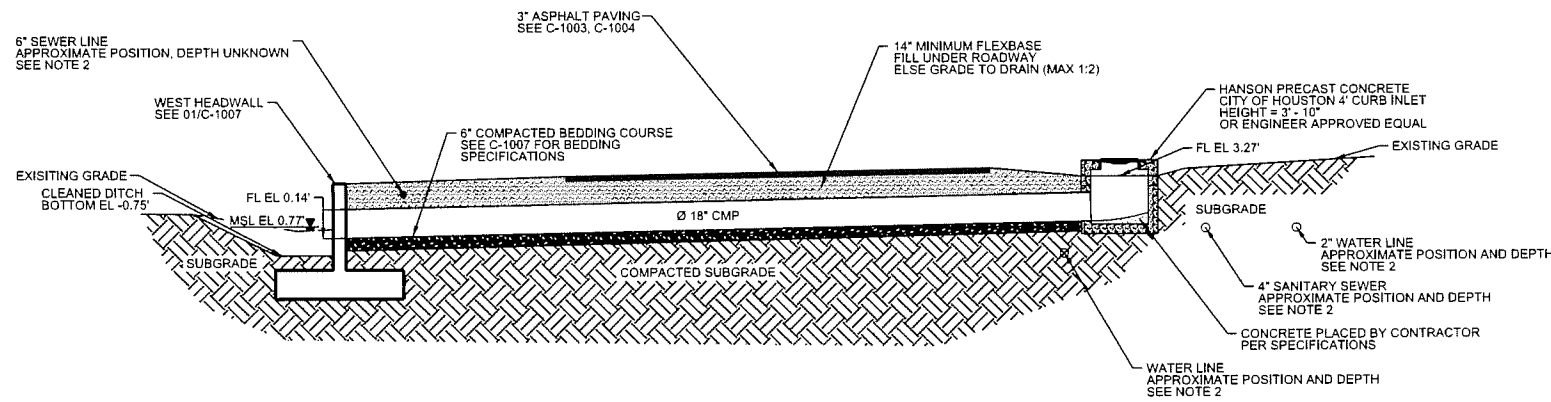


NOTES

1. ORIENT CULVERT PERPENDICULAR TO ROAD WITH THE INLET OPENING FACING WEST
2. COORDINATE RELOCATION OF WATER/WASTEWATER LINES TO AVOID CONFLICT WITH PROJECT ELEMENTS.



01 WEST CULVERT PLAN VIEW
SCALE: 1" = 10'



02 WEST CULVERT SECTION
SCALE: 1" = 10'

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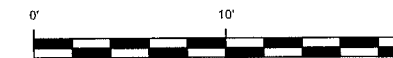
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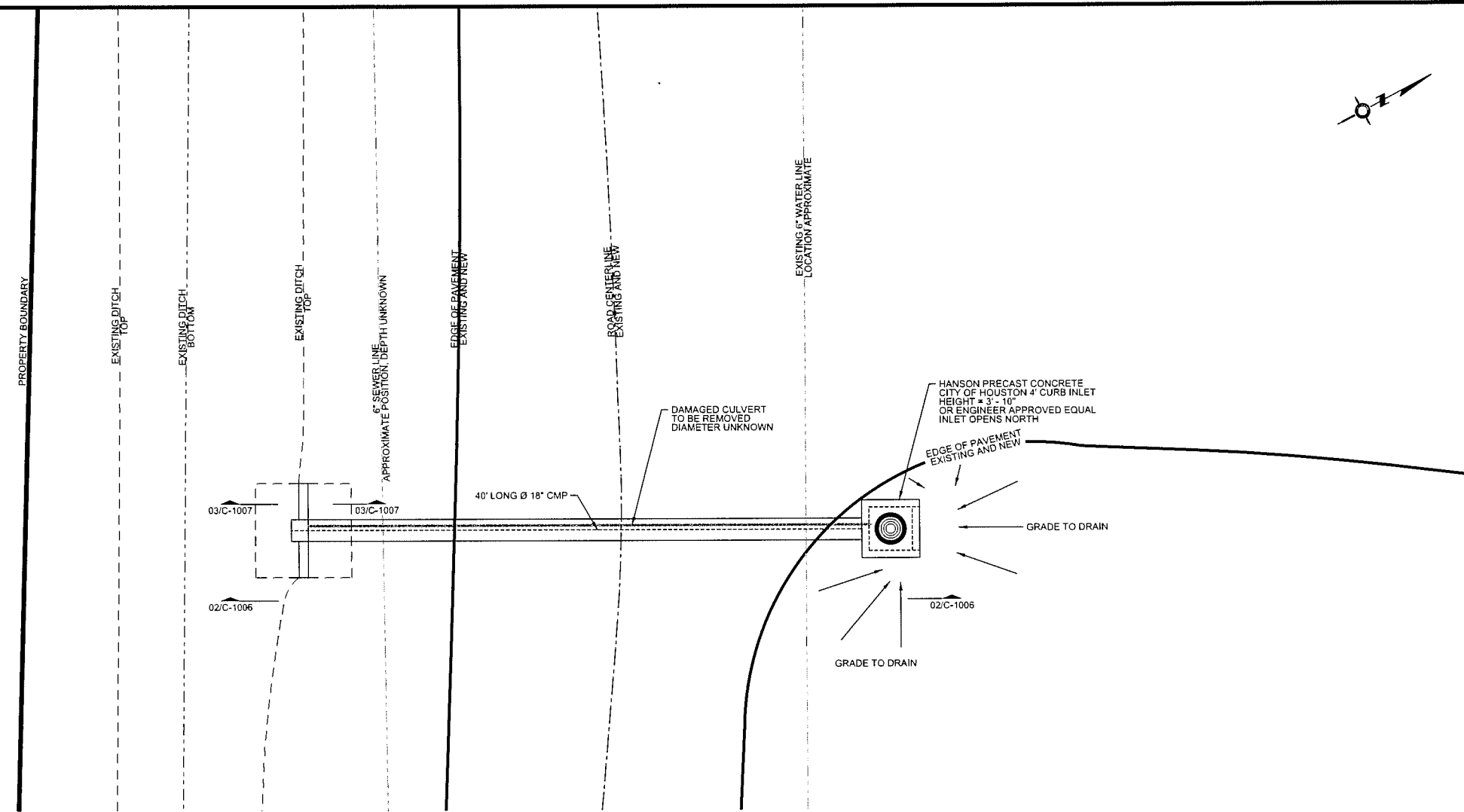
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POST-IKE ROUND ONE RECOVERY PROJECT
PAVING AND DRAINAGE IMPROVEMENT
WEST CULVERT PLAN AND SECTION

DRAWN BY	JWB	DATE	16JUL12	SCALE	1" = 10'	CHKD	CKW	
APPR'D						APPR'D	WLW	
DRAWING NO.	474-1001-C-1005						ISSUE NO.	1

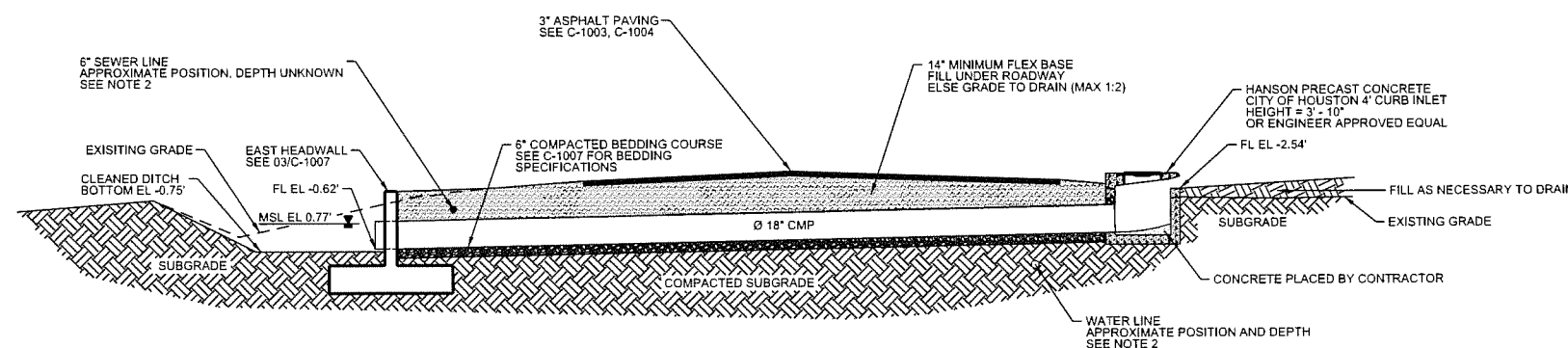


NOTES

- ORIENT CULVERT PERPENDICULAR TO ROAD WITH THE INLET OPENING FACING NORTH
- COORDINATE RELOCATION OF WATER/WASTEWATER LINES TO AVOID CONFLICT WITH PROJECT ELEMENTS.

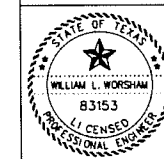


01 EAST CULVERT PLAN VIEW
SCALE: 1" = 10'



02 EAST CULVERT SECTION
SCALE: 1" = 10'

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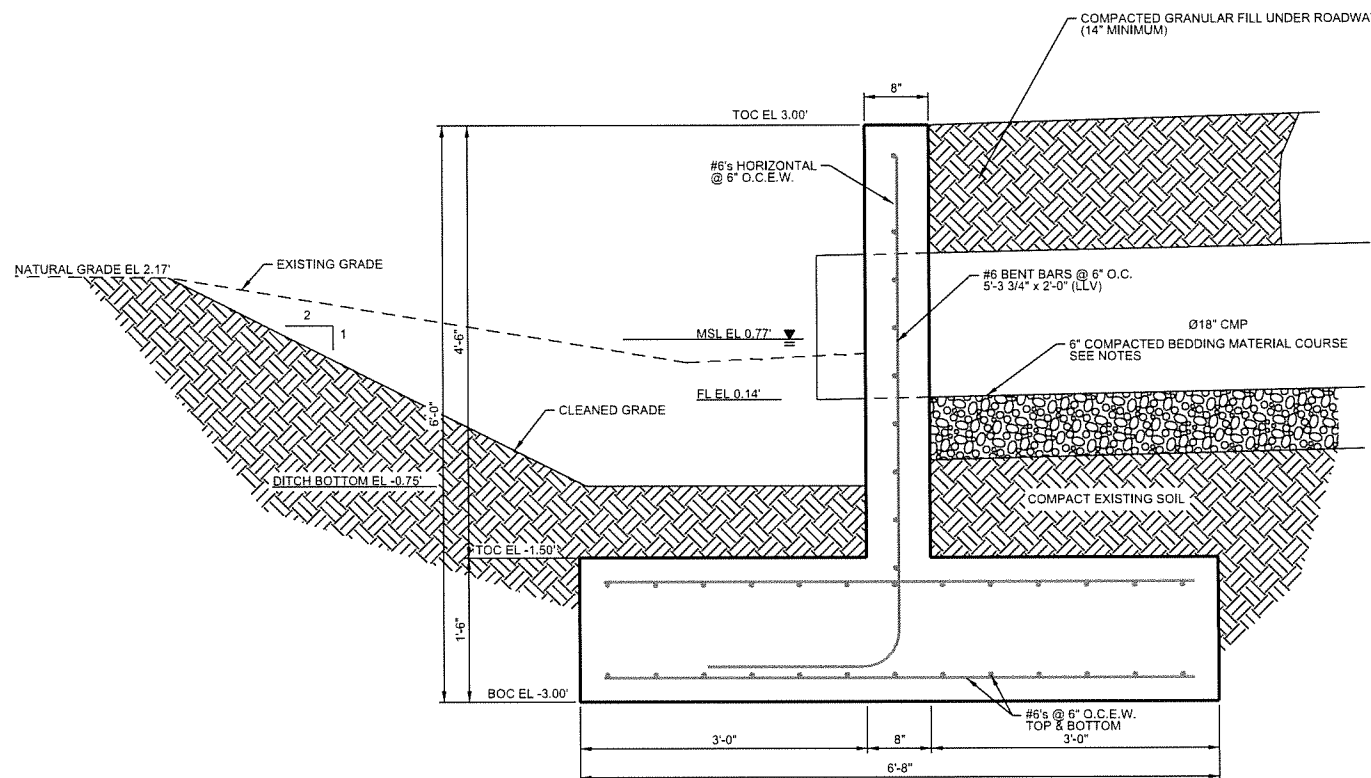
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POST-IKE ROUND ONE RECOVERY PROJECT
PAVING AND DRAINAGE IMPROVEMENT
EAST CULVERT PLAN AND SECTION

DRAWN BY	JWB	DATE	16JUL12	SCALE	1" = 10'	CHKD	CKW
APPROVED						APP'D	WLW
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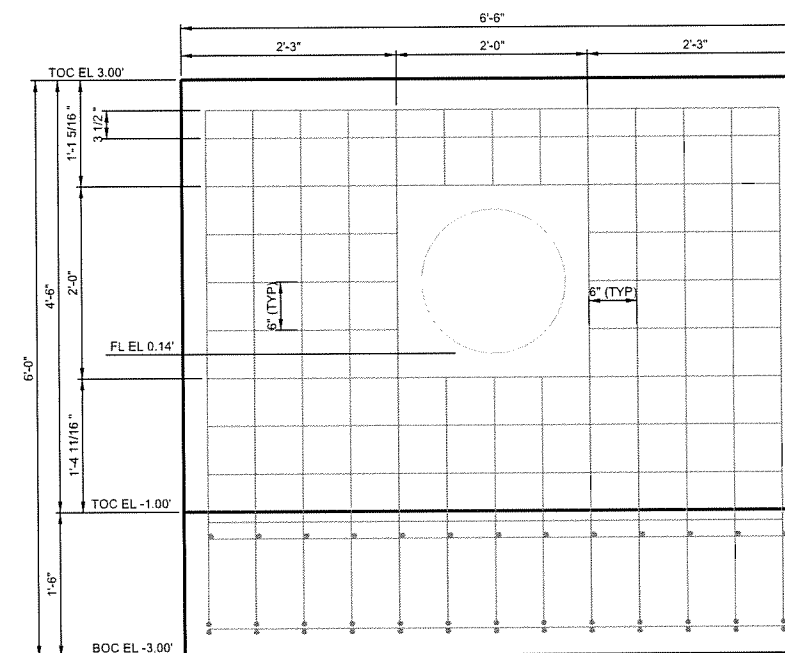


BEDDING MATERIAL NOTES

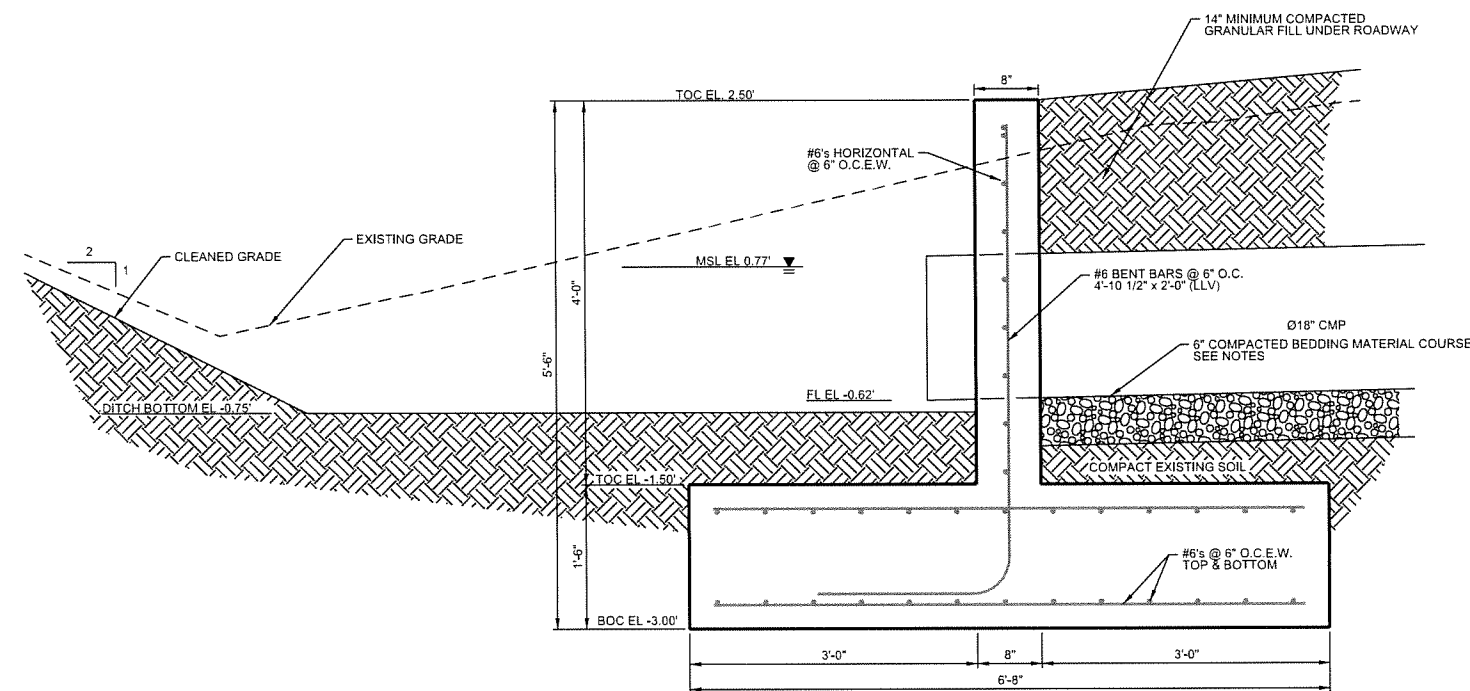
- PIPE BEDDING SHALL BE GRANULAR MATERIAL SUCH AS AGGREGATES NORMALLY USED IN THE CONSTRUCTION ON HIGHWAY BASE AND SUBBASE. THESE AGGREGATES INCLUDE CRUSHED STONE, NATURAL OR CRUSHED GRAVEL, NATURAL OR MANUFACTURED SANDS, CRUSHED SLAG OR A HOMOGENEOUS MIXTURE OF THESE MATERIALS. PIPE BEDDING SHALL BE COMPACTED TO 90% OF MAXIMUM DRY DENSITY AS DEFINED IN ASTM INTERNATIONAL D1557 (MODIFIED PROCTOR). RECOMMENDED GRADATION IS AS FOLLOWS:
- | SCREEN SIZE% | PASSING (BY WEIGHT) |
|--------------|---------------------|
| 1 INCH | 100 |
| 1/2 INCH | 60-90 |
| 3/8 INCH | 20-40 |
| NO. 4 | 10-20 |
| NO. 200 | LESS THAN 5% |



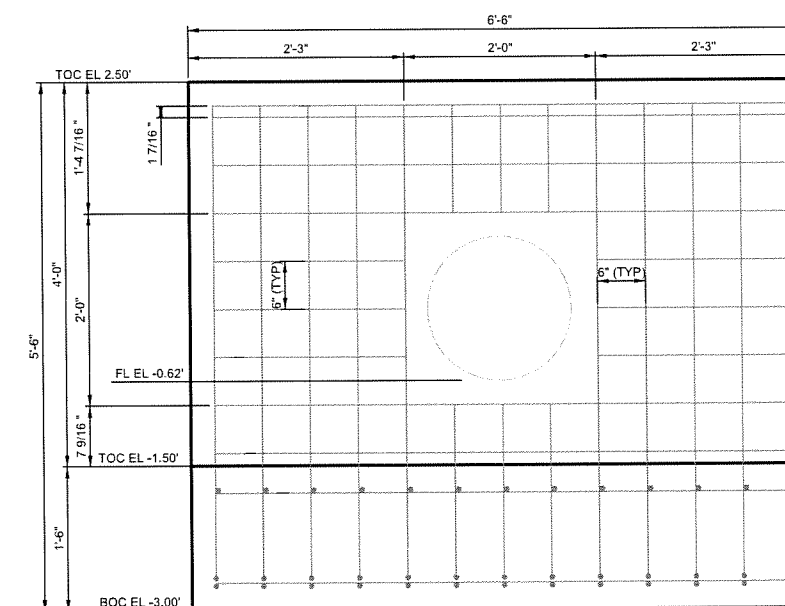
01 WEST HEADWALL SECTION
SCALE: 1/2" = 1'-0"



02 WEST HEADWALL DETAIL
SCALE: 1/2" = 1'-0"



03 EAST HEADWALL SECTION
SCALE: 1/2" = 1'-0"



04 EAST HEADWALL DETAIL
SCALE: 1/2" = 1'-0"

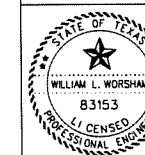
RELEVANT TERMS

BOC	BOTTOM OF CONCRETE
TOC	TOP OF CONCRETE
FL	FLOWLINE
OC	ON CENTER
OCEW	ON CENTER EACH WAY

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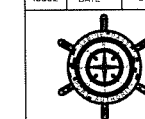
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0	10/14/11	JWB	ISSUED FOR CONSTRUCTION	CKW	WLW



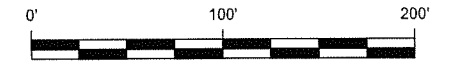
SABINE PASS PORT AUTHORITY

SABINE PASS PORT AUTHORITY
TDRA POST-IKE ROUND ONE RECOVERY PROJECT
PAVING AND DRAINAGE IMPROVEMENT
HEADWALL SECTION AND DETAILS

DRAWN BY	JWB	DATE	16JUL12	SCALE	1/2" = 1'	CHKD	CKW	
APPRD		APPRD	WLW	ISSUE NO.	1			
DRAWING NO.	474-1001-C-1007							

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NOTES

- TOPOGRAPHIC SURVEY DATA OF THE LAYDOWN AREA AND RELEVANT DRAINAGE FEATURES COLLECTED 5/20/10 AND 5/27/10 BY LEAP (LEAP PRJ#:474-1001)

SUPPLEMENTAL TOPOGRAPHIC DATA (NATURAL GROUND, DITCH AND EDGE OF PAVEMENT) COLLECTED DECEMBER 2009 (LEAP PRJ#:268-1007)

SPOT ELEVATIONS REPRESENT DESIGN GRADE FOR JC-RMSC PROJECT (ANTICIPATED COMPLETE AT THE TIME OF THIS PROJECT). VERIFY FIELD CONDITIONS WITH ENGINEER.
- HORIZONTAL DATUM IS NAD83 - STATEPLANE TEXAS SOUTH CENTRAL FIPS 4202 (US SURVEY FEET)
VERTICAL DATUM IS NAVD88 (FEET)

KEY

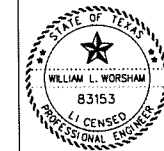
- MAJOR CONTOUR
- MINOR CONTOUR
- GRADE ARROW
- SPOT ELEVATION
- CONTROL POINT
- EXISTING POWER POLE

CONTROL POINTS

POINT	EASTING	NORTHING	ELEVATION
CP2	3591507.04	13850738.52	3.54
CP3	3591594.42	13850719.81	3.59
CP5	3592094.40	13850813.60	2.84
CP6	3592420.32	13850627.96	4.06

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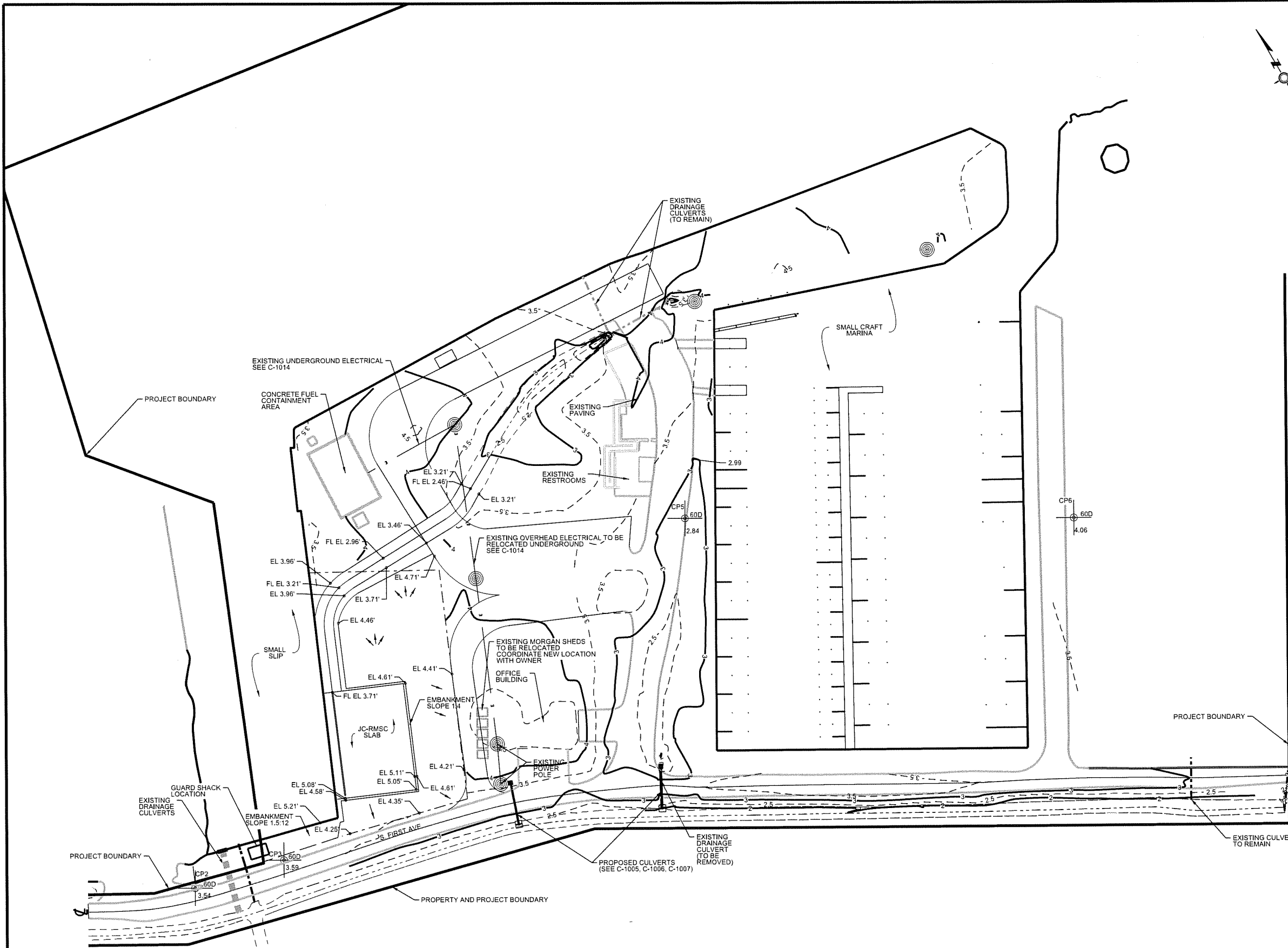
10/23/2012
W L Worsham, PE
WILLIAM L. WORSHAM, P.E. #83153

ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
2	10/23/12	JWB	UPDATED PLANS FOR CONSTRUCTION	CKW	WLW
1	7/15/12	JWB	UPDATED PLANS FOR CONSTRUCTION	CKW	WLW
0	10/14/11	JWB	ISSUED FOR CONSTRUCTION	CKW	WLW

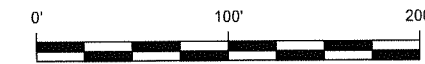


SABINE PASS PORT AUTHORITY
POST-IKE ROUND ONE RECOVERY PROJECT
PAVING AND DRAINAGE IMPROVEMENT
EXISTING TOPOGRAPHY

DRAWN BY	DATE	SCALE	CHKD	CKW
JWB	16JUL12	1" = 100'	APPVD	WLW
DRAWING NO.	474-1001-C-1008			ISSUE NO.
				1



01 EXISTING GRADE
SCALE: 1" = 100'



NOTES

- TOPOGRAPHIC SURVEY DATA OF THE LAYDOWN AREA AND RELEVANT DRAINAGE FEATURES COLLECTED 5/20/10 AND 5/27/10 BY LEAP (LEAP PRJ#:474-1001)

SUPPLEMENTAL TOPOGRAPHIC DATA (NATURAL GROUND, DITCH AND EDGE OF PAVEMENT) COLLECTED DECEMBER 2009 (LEAP PRJ#:268-1007)

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- HORIZONTAL DATUM IS NAD83 - STATEPLANE TEXAS SOUTH CENTRAL FIPS 4202 (US SURVEY FEET)
VERTICAL DATUM IS NAVD88 (FEET)
- EXCESS CLEAN MATERIAL FROM CONSTRUCTION SUITABLE TO OWNER AND IN COMPLIANCE WITH REGULATORY PROVISIONS MAY BE PLACED IN SPPA MATERIAL PLACEMENT AREA IDENTIFIED ON C-1001

KEY

- SPOT ELEVATION
- DRAINAGE ARROW
- CONTROL POINT
- EXISTING POWER POLE
- 14' ROAD BASE

CONTROL POINTS

POINT	EASTING	NORTHING	ELEVATION
CP2	3591507.04	13850738.52	3.54
CP3	3591594.42	13850719.81	3.59
CP5	3592094.40	13850813.60	2.84
CP6	3592420.32	13850627.96	4.06

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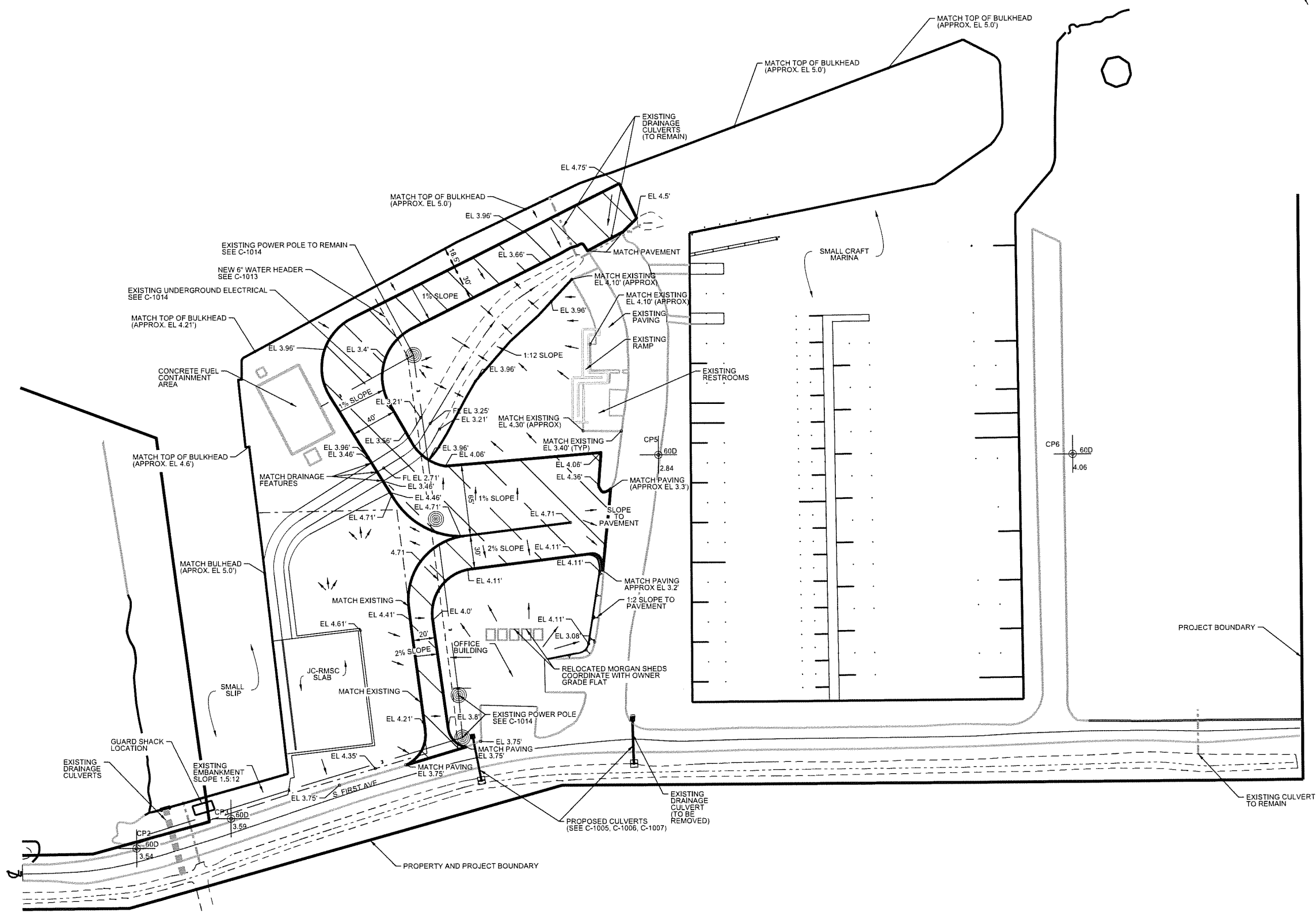
10/23/2012

 W. L. Worsham, P.E.
 WILLIAM L. WORSHAM, P.E. #83153

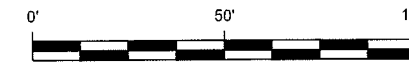
ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
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0	10/14/11	JWB	ISSUED FOR CONSTRUCTION	CKW	WLW

SABINE PASS PORT AUTHORITY
 SABINE PASS PORT AUTHORITY
 POST-IKE ROUND ONE RECOVERY PROJECT
 PAVING AND DRAINAGE IMPROVEMENT
 GRADING PLAN

DRAWN BY	JWB	DATE	16JUL12	SCALE	1" = 100'	CHKD	CKW	
APPR'D						APP'D	WLW	
DRAWING NO.	474-1001-C-1009						ISSUE NO.	1



01 PROPOSED GRADE
 SCALE: 1" = 100'



NOTES

- WHERE THE CUT CANNOT BE CONTAINED WITHIN THE ORIGINAL DITCH BOUNDARIES, HOLD THE EDGE OF THE DITCH CLOSEST TO THE ROAD AND EXTEND THE CUT TO DAYLIGHT ON THE FAR SIDE OF THE DITCH
- VERTICAL DATUM IS NAVD88 (FEET)
- CLEAN MATERIAL FROM DITCH CLEANUP SUITABLE TO OWNER AND IN COMPLIANCE WITH REGULATORY PROVISIONS MAY BE PLACED IN SPPA MATERIAL PLACEMENT AREA IDENTIFIED ON C-1001

KEY

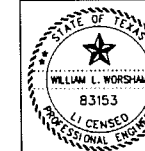
- - - EXISTING TOP OF DITCH
- EXISTING DITCH CENTERLINE
- - - 6" SEWER LINE (POSITION APPROXIMATE)
- ⊕ CONTROL POINT

CONTROL POINTS

POINT	EASTING	NORTHING	ELEVATION
CP2	3591507.04	13850738.52	3.54

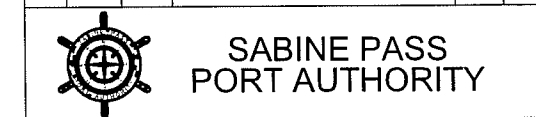
LJA Engineering, Inc.

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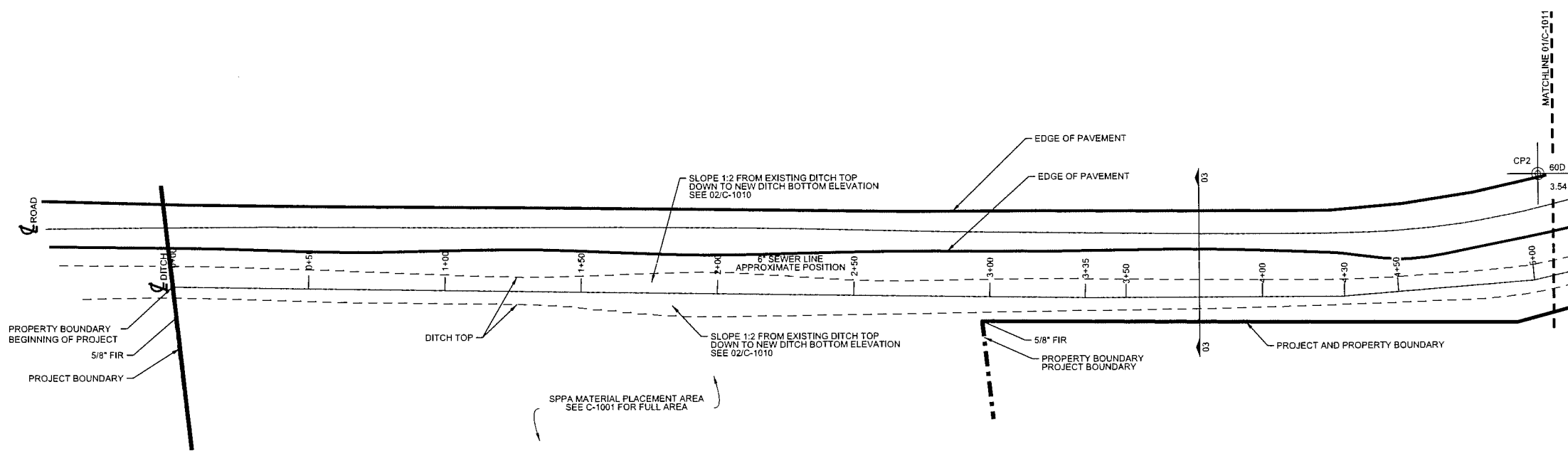
10/23/2012
W. L. Worsham
 WILLIAM L. WORSHAM, P.E. #83153

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0	10/14/11	JWB	ISSUED FOR CONSTRUCTION	CKW	WLW

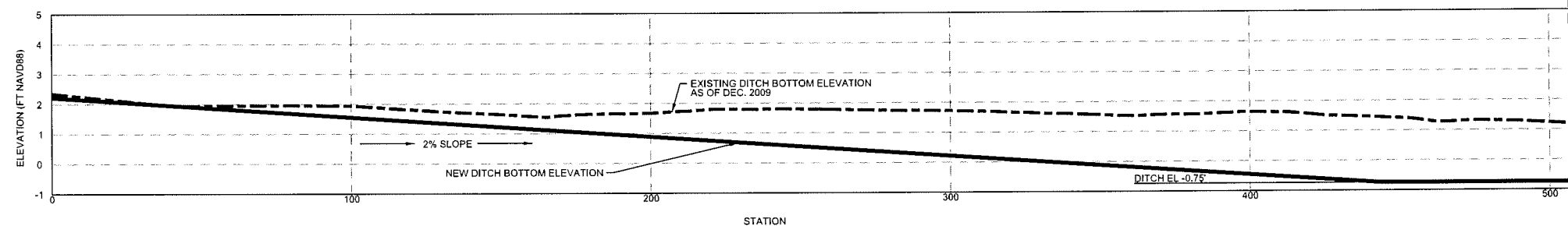


SABINE PASS PORT AUTHORITY
 POST-IKE ROUND ONE RECOVERY PROJECT
 PAVING AND DRAINAGE IMPROVEMENT
 DITCH CLEANOUT STA 0+00 TO STA 5+00

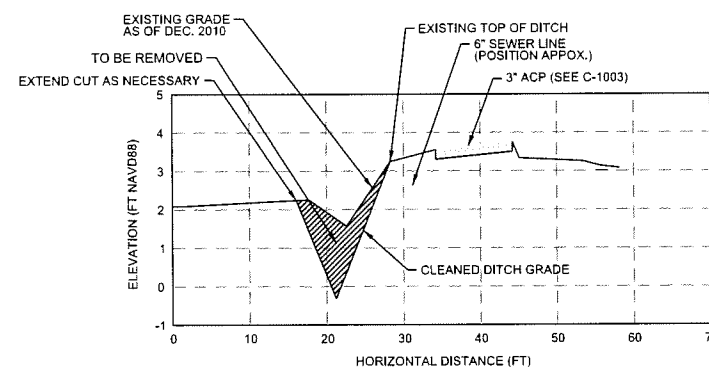
DRAWN BY	DATE	SCALE	CHKD	CKW
JWB	16JUL12	AS NOTED	APPD	WLW
DRAWING NO.	474-1001-C-1010	ISSUE NO.	1	



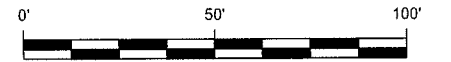
01 DITCH PLAN VIEW STA 0+00 TO STA 5+00
 SCALE: 1" = 50'



02 DITCH ELEVATION STA 0+00 TO STA 5+00
 SCALE: H: 1" = 50', V: 1" = 5'



03 TYPICAL DITCH SECTION STA 0+00 TO STA 5+00
 SCALE: H: 1" = 25', V: 1" = 5'



NOTES

- WHERE THE CUT CANNOT BE CONTAINED WITHIN THE ORIGINAL DITCH BOUNDARIES, HOLD THE EDGE OF THE DITCH CLOSEST TO THE ROAD AND EXTEND THE CUT TO DAYLIGHT ON THE FAR SIDE OF THE DITCH
- VERTICAL DATUM IS NAVD88 (FEET)
- CLEAN MATERIAL FROM DITCH CLEANOUT SUITABLE TO OWNER AND IN COMPLIANCE WITH REGULATORY PROVISIONS MAY BE PLACED IN SPPA MATERIAL PLACEMENT AREA IDENTIFIED ON C-1001

KEY

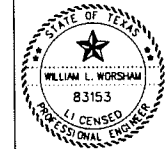
- - - EXISTING TOP OF DITCH
- EXISTING DITCH CENTERLINE
- - - 6" SEWER LINE (POSITION APPROXIMATE)
- ⊕ CONTROL POINT

CONTROL POINTS

POINT	EASTING	NORTHING	ELEVATION
CP2	3591507.04	13850738.52	3.54
CP3	3591594.42	13850719.81	3.59

LJA Engineering, Inc.

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10/23/2012
W. L. Worsham, P.E.
 WILLIAM L. WORSHAM, P.E. #83153

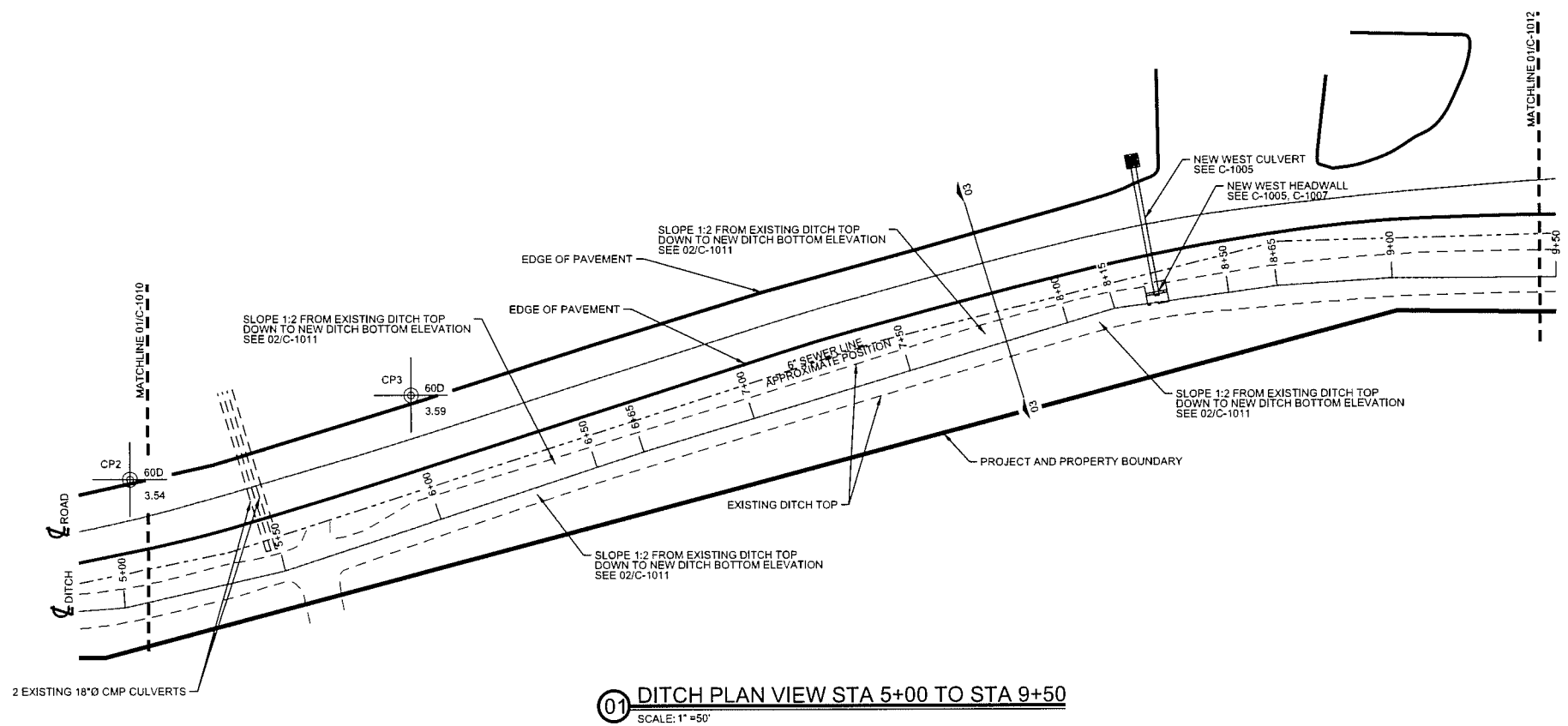
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0	10/14/11	JWB	ISSUED FOR CONSTRUCTION	CKW	WLW



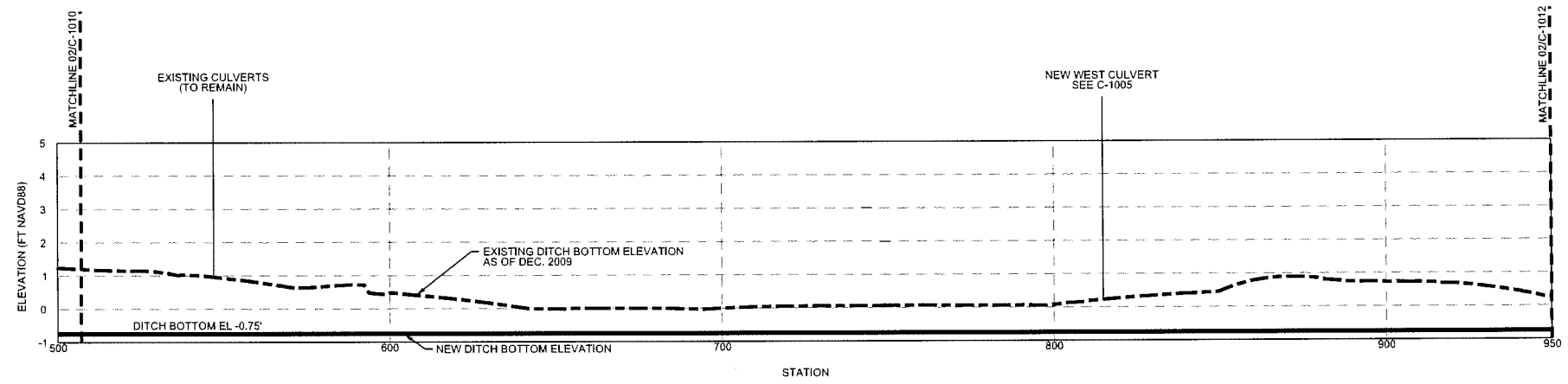
SABINE PASS PORT AUTHORITY
 POST-IKE ROUND ONE RECOVERY PROJECT
 PAVING AND DRAINAGE IMPROVEMENT
 DITCH CLEANOUT STA 5+00 TO STA 9+50

DRAWN BY	DATE	SCALE	CHKD	CKW
JWB	16JUL12	AS NOTED	APPVD	WLW

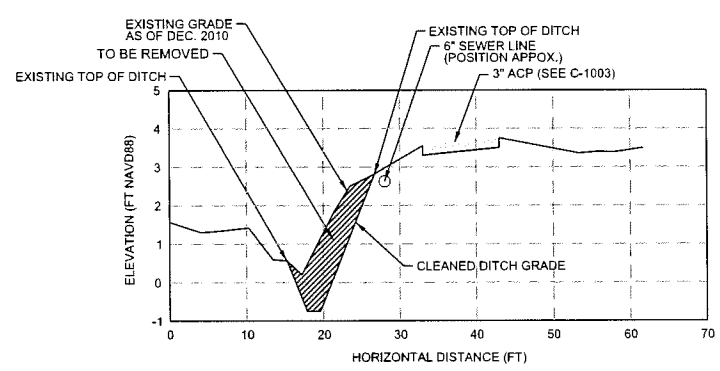
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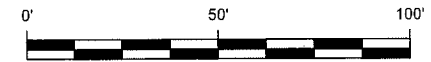
01 DITCH PLAN VIEW STA 5+00 TO STA 9+50
 SCALE: 1" = 50'



02 DITCH ELEVATION STA 5+00 TO STA 9+50
 SCALE: H: 1" = 50', V: 1" = 5'



03 TYPICAL DITCH SECTION STA 5+00 TO STA 9+50
 SCALE: H: 1" = 25', V: 1" = 5'

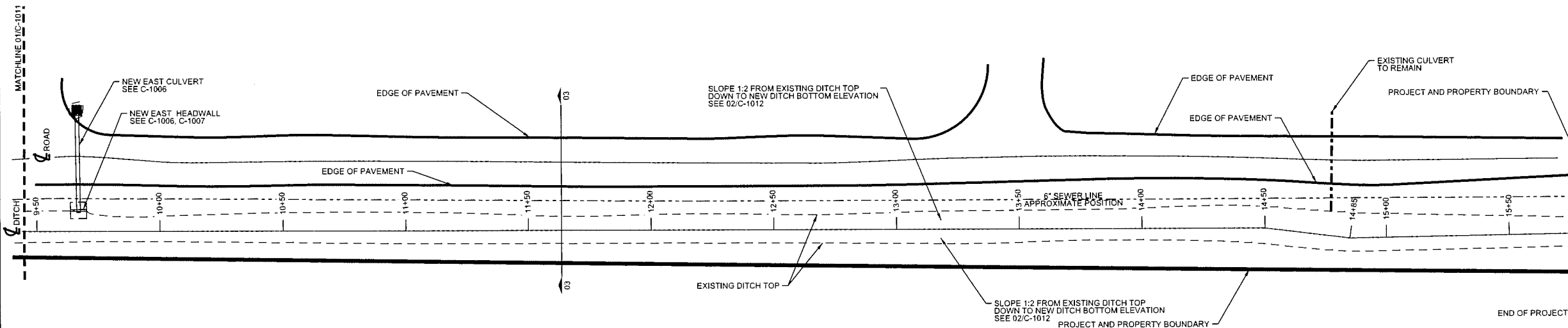


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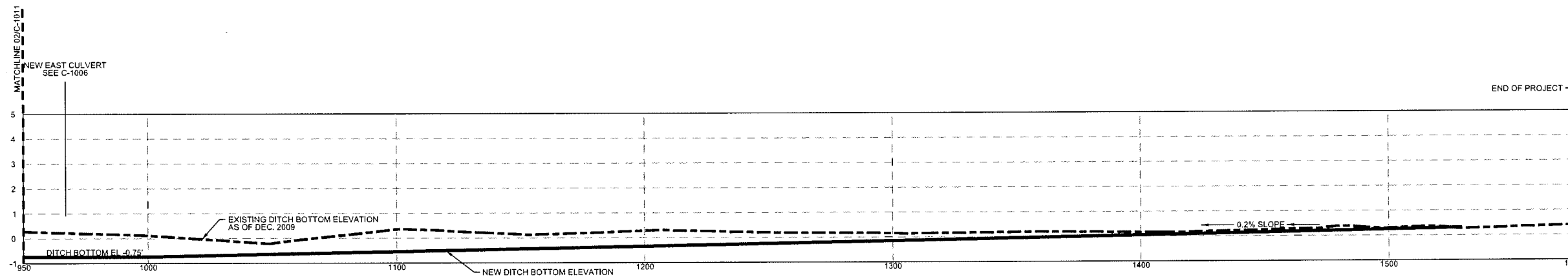
- WHERE THE CUT CANNOT BE CONTAINED WITHIN THE ORIGINAL DITCH BOUNDARIES, HOLD THE EDGE OF THE DITCH CLOSEST TO THE ROAD AND EXTEND THE CUT TO DAYLIGHT ON THE FAR SIDE OF THE DITCH
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KEY

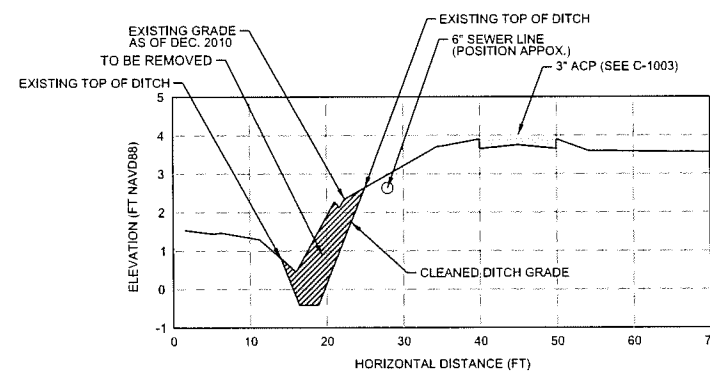
- - - - EXISTING TOP OF DITCH
- — — EXISTING DITCH CENTERLINE
- - - - 6" SEWER LINE (POSITION APPROXIMATE)



01 DITCH PLAN VIEW STA 9+50 TO STA 15+77
SCALE: 1" = 50'



02 DITCH ELEVATION STA 9+50 TO STA 15+77
SCALE: H: 1" = 50', V: 1" = 5'



03 TYPICAL DITCH SECTION STA 9+50 TO STA 15+77
SCALE: H: 1" = 25', V: 1" = 5'

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10/23/2012

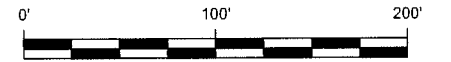
William L. Worsham, P.E.
WILLIAM L. WORSHAM, P.E. #83153

ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
2	10/23/12	JWB	UPDATED PLANS FOR CONSTRUCTION	CKW	WLW
1	7/15/12	JWB	UPDATED PLANS FOR CONSTRUCTION	CKW	WLW
0	10/14/11	JWB	ISSUED FOR CONSTRUCTION	CKW	WLW

SABINE PASS PORT AUTHORITY

SABINE PASS PORT AUTHORITY
POST-IKE ROUND ONE RECOVERY PROJECT
PAVING AND DRAINAGE IMPROVEMENT
DITCH CLEANOUT STA 9+50 TO 15+77

DRAWN BY	JWB	DATE	16JUL12	SCALE	AS NOTED	CHKD	CKW	
APPR'D						APP'D	WLW	
DRAWING NO.	474-1001-C-1012						ISSUE NO.	1



NOTES

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- CONTRACTOR SHALL NOTIFY "TEXAS ONE CALL" AT (800) 245-4545 AND "LONESTAR ONE CALL" AT (800) 669-8344 AT LEAST 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION.



KEY

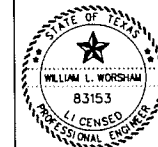
- CONTROL POINT
- EXISTING POWER POLE
- VALVE

CONTROL POINTS

POINT	EASTING	NORTHING	ELEVATION
CP2	3591507.04	13850738.52	3.54
CP3	3591594.42	13850719.81	3.59
CP5	3592094.40	13850813.60	2.84

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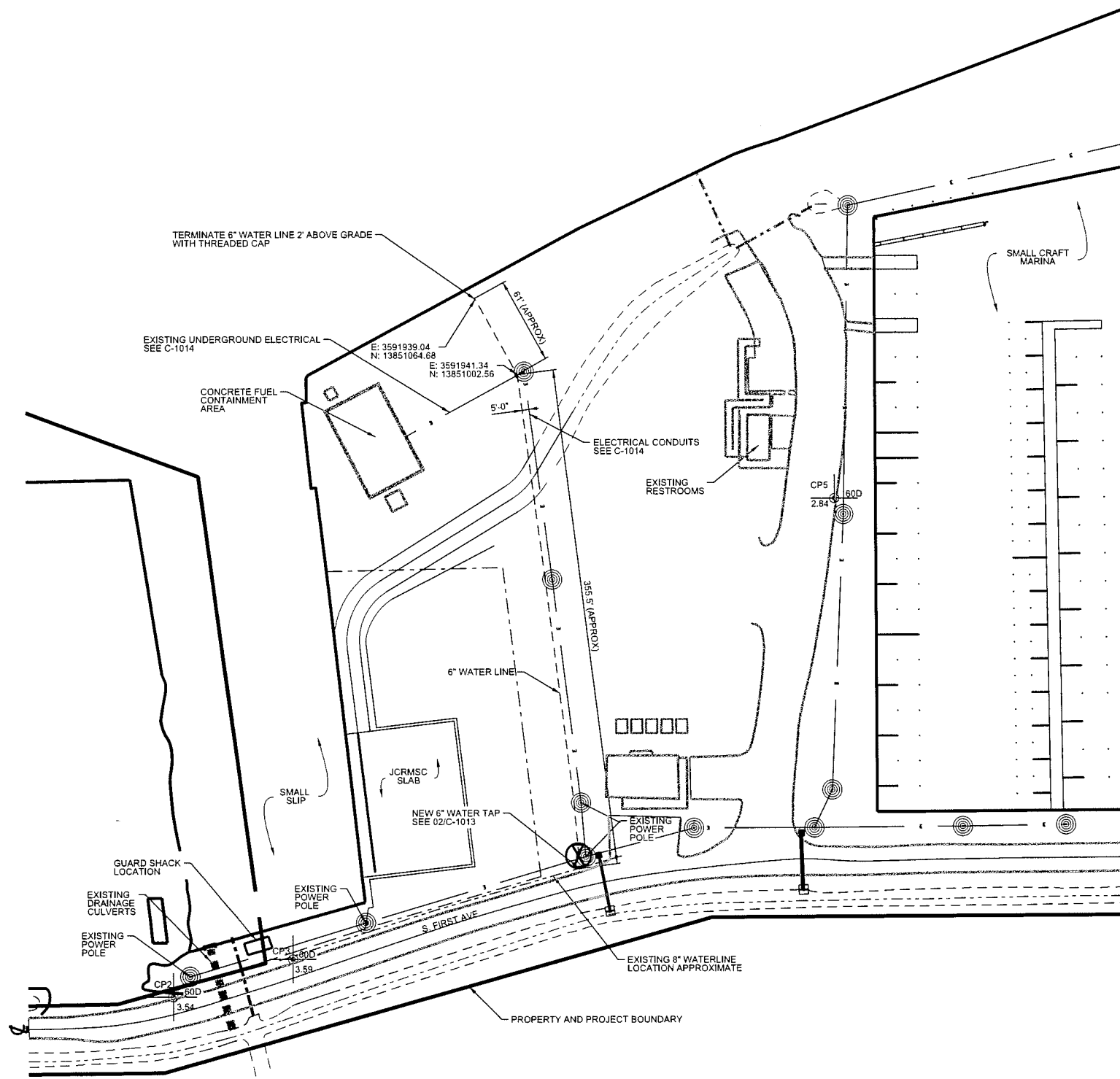
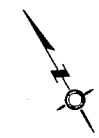


SABINE PASS PORT AUTHORITY

SABINE PASS PORT AUTHORITY
 POST-IKE ROUND ONE RECOVERY PROJECT
 PAVING AND DRAINAGE IMPROVEMENT
 WATER UTILITY

DRAWN BY	DATE	SCALE	CHKD	CKW
JWB	16JUL12	1" = 100'	APPVD	WLW

DRAWING NO. 474-1001-C-1013 ISSUE NO. 1



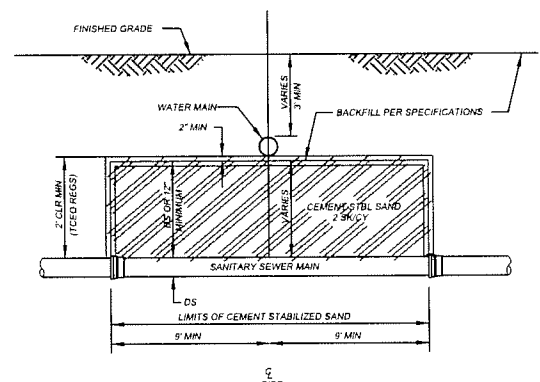
01 WATER LINE ALIGNMENT

SCALE: 1" = 100'

02 CONNECTION TO EXISTING WATER

SCALE: NTS

GENERAL NOTE:
 ALL WORK NECESSARY FOR INSTALLATION OF FLOW METER IS CONSIDERED SUBSIDIARY TO WATER LINE



PROTECTION REQUIREMENTS AT WATER LINE - SANITARY SEWER CROSSINGS

PRIMARY CONDITION	PROPOSED WATER EXISTING SANITARY		PROPOSED WATER EXISTING WATER		PROPOSED SANITARY EXISTING WATER	
	WATER OVER SANITARY	WATER UNDER SANITARY	WATER OVER SANITARY	WATER UNDER SANITARY	WATER OVER SANITARY	WATER UNDER SANITARY
IF THE CLEARANCE IS	LESS THAN 2'	Greater than or equal to 2' but less than 5'	LESS THAN 2'	Greater than or equal to 2' but less than 5'	LESS THAN 2'	Greater than or equal to 2' but less than 5'
*PROTECTION REQUIREMENT	1,2,3	2	6	4	1,3,5	2

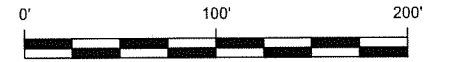
PROTECTION REQUIREMENTS FOR SANITARY SEWER CROSSINGS

(UNLESS VARIANCE IS GRANTED BY TCEQ)
 (ALL CLEARANCES SHALL BE MEASURED FROM OUTSIDE WALL TO OUTSIDE WALL)

- PLACE ONE FULL SECTION OF APPROVED RESTRAINED JOINT WATER LINE CENTERED AT SANITARY SEWER. NOT APPLICABLE FOR EXISTING WATER.
- IF NO EVIDENCE OF SANITARY SEWER LEAKAGE, PLACE ONE FULL SECTION OF WATER LINE CENTERED OVER SANITARY SEWER; IF THERE IS EVIDENCE OF LEAKAGE, USE NOTE 4 BELOW.
- ONE FOOT MINIMUM CLEARANCE
- AUGER 9" MINIMUM EACH SIDE OF SANITARY SEWER. PLACE ONE FULL SECTION OF WATER LINE, CENTERED UNDER SANITARY SEWER. FILL AUGERED HOLE WITH BENTONITE/CLAY MIXTURE. IF SEWER LINE IS LEAKING, SEWER LINE SHALL BE REPLACED WITH 150 PSI LINED DUCTILE IRON OR PVC PIPE WITH APPROPRIATE ADAPTERS ON ALL PORTIONS OF THE SANITARY SEWER WITHIN 9' OF WATER LINE. PROVIDE RESTRAINED JOINTS FOR BOTH WATER AND SANITARY SEWER LINES AT EACH END OF PIPE SECTION. WATER LINE MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN TECHNICAL SPECIFICATIONS. SEWER LINE SHALL PASS INFILTRATION, EXFILTRATION LOW PRESSURE AIR TEST OR LEAKAGE TEST AS SPECIFIED IN TCEQ CHAPTER 317.2 DESIGN CRITERIA FOR SEWERAGE SYSTEMS.
- PLACE MINIMUM ONE FULL SECTION OF SANITARY SEWER, 150 PSI LINED DUCTILE IRON OR PVC PIPE CENTERED AT THE WATER LINE AND PROVIDE RESTRAINED JOINTS FOR BOTH WATER AND SANITARY SEWER LINES AT EACH END OF PROPOSED PIPE SECTION. USE CEMENT-STABILIZED SAND BACKFILL FOR ALL PORTIONS OF THE SANITARY SEWER WITHIN 9' OF THE WATER LINE, AS MEASURED PERPENDICULARLY FROM ANY POINT ON THE WATER LINE TO THE SANITARY SEWER (MIN 2.5 SACK CEMENT/CL. YD. SAND). THE CEMENT-STABILIZED SAND BEDDING WILL START AT A POINT 6" BELOW THE BOTTOM OF SANITARY SEWER TO 6" ABOVE THE TOP OF SANITARY SEWER AND ONE-QUARTER OF THE PIPE DIAMETER OR 6", WHICHEVER IS GREATER, ON THE SIDE OF THE SANITARY SEWER.
- NOT ALLOWED.

03 TYPICAL WATER AND SANITARY SEWER MAIN CROSSING DETAIL

SCALE: NTS



- NOTES**
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KEY

- CONTROL POINT
- EXISTING POWER POLE
- VALVE

CONTROL POINTS

POINT	EASTING	NORTHING	ELEVATION
CP2	3591507.04	13850738.52	3.54
CP3	3591594.42	13850719.81	3.59
CP5	3592094.40	13850813.60	2.84

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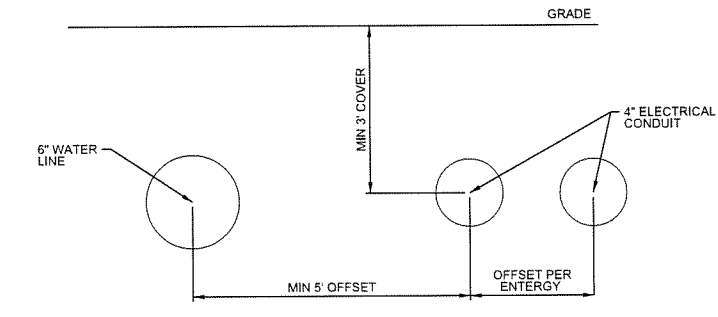
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1	7/15/12	JWB	UPDATED PLANS FOR CONSTRUCTION	CKW	WLW
A	10/14/11	JWB	ISSUED FOR CONSTRUCTION	CKW	WLW



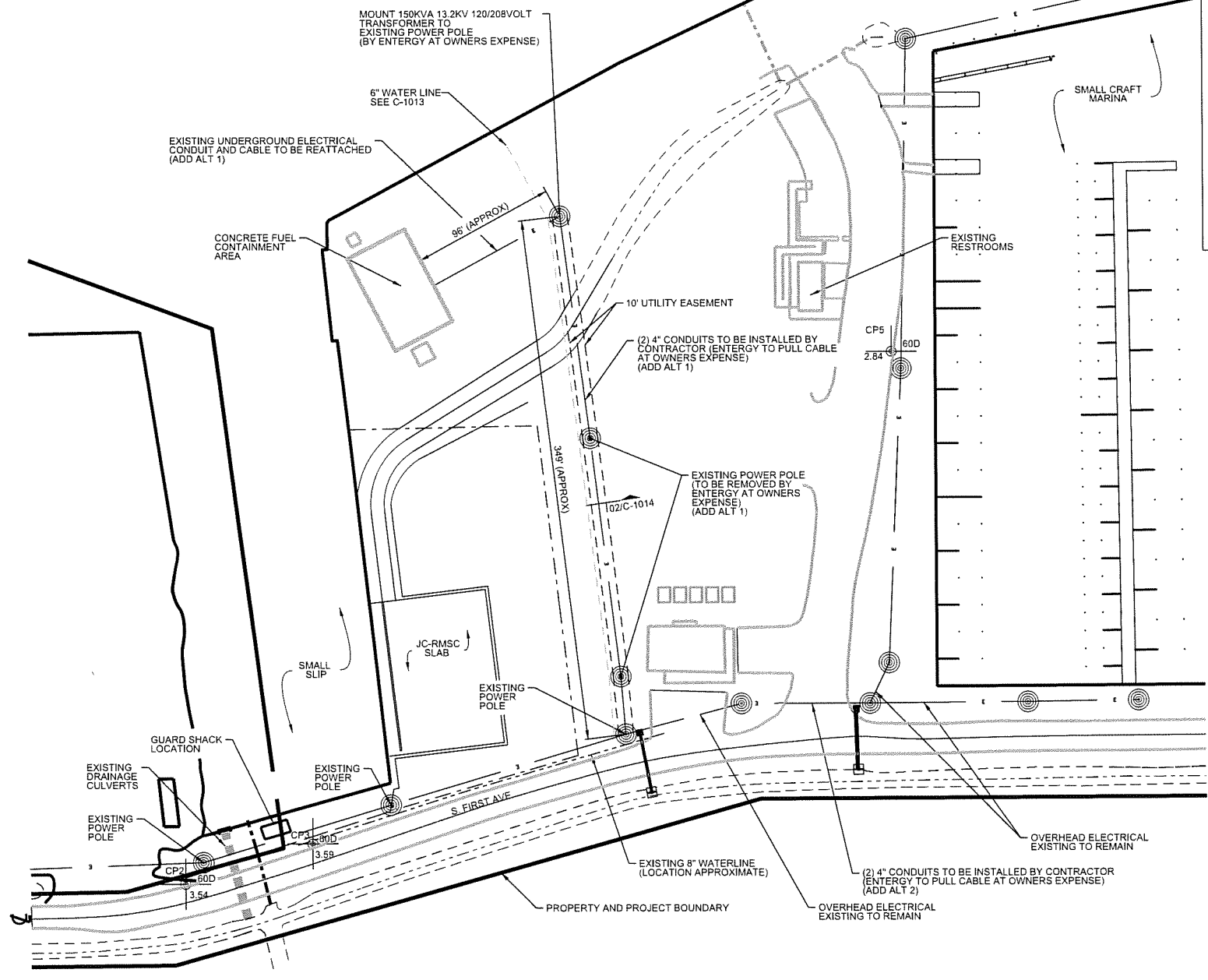
SABINE PASS PORT AUTHORITY
 POST-IKE ROUND ONE RECOVERY PROJECT
 PAVING AND DRAINAGE IMPROVEMENT
 ELECTRICAL CONDUIT

DRAWN BY	DATE	SCALE	CHKD	CKW
JWB	16JUL12	1" = 100'	APPVD	WLW

DRAWING NO. 474-1001-C-1014
 ISSUE NO. 1



02 WATER AND CONDUIT SECTION
 SCALE: NTS



01 ELECTRICAL CONDUIT ALIGNMENT
 SCALE: 1" = 100'

SITE DESCRIPTION

Notes:

- (1) The Site Description is accomplished using various sheets, each revealing separate details. This Index Sheet's purpose is to point the user to the appropriate location where the information required by the TPDES CGP can be found.
- (2) The project limits shown on the Title Sheet shall also be the limits of coverage of the SW3P.

NATURE OF ACTIVITY: REPLACEMENT OF ROAD, INSTALLATION OF CULVERTS, GRADING TO IMPROVE DRAINAGE, CLEANOUT OF DRAINAGE DITCH

INTENDED SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES: _____

DEMOLITION OF EXISTING ROAD, INSTALLATION OF CULVERTS AND HEADWALLS, INSTALLATION OF NEW SUBGRADE, FLEX BASE, AND ASPHALT, CLEANOUT OF DRAINAGE DITCH, PLACEMENT OF ROAD BASE FOR LAYDOWN AREA, GRADING OF SITE FOR DRAINAGE

TOTAL AREA OF SITE: 12.25 AREA TO BE DISTURBED: 4.36 ACRES

PRE-CONSTRUCTION RUNOFF CO-EFFICIENT: 0.90

POST-CONSTRUCTION RUNOFF CO-EFFICIENT: 0.90

EXISTING SOIL DESCRIPTION: SOIL TYPE IS SABINE-BAINES COMPLEX. SABINE SOILS ARE LOAMEY AND BAINES ARE CLAY, CLAY LOAM. SURFACE IS HARD PACKED FROM USE AND MIXED WITH ROADBASE

GENERAL LOCATION MAP: SEE TITLE SHEET

RECEIVING WATERS: SEGMENT NUMBER 2411
SEGMENT NAME SABINE PASS

LOCATION OF WETLAND OR SPECIAL AQUATIC SITES: NONE

DRAINAGE PATTERNS: DRAINS TO SWALES AND DRAINAGE DITCHES FEEDING CULVERTS TO SABINE PASS

TYPICAL AREAS OF SOIL DISTURBANCE: 6' (AVERAGE) FROM EDGE OF DITCH, EDGE OF PAVEMENT, EDGE OF GRADING OPERATIONS

TYPICAL AREAS WHICH WILL NOT BE DISTURBED: BEYOND 6' (AVERAGE) FROM CONSTRUCTION ACTIVITIES

LOCATION OF OFF-SITE SURFACE RECEIVING WATERS: NONE

LOCATIONS WHERE STABILIZATION PRACTICES WILL OCCUR: DOWNHILL SLOPE OF EXISTING SWALE, UPHILL OF DITCH CLEANOUT, DOWNHILL ADJACENT ROADWORK

LOCATIONS OF OFF-SITE STORAGE OF MATERIALS AND EQUIPMENT, WASTE, BORROW: OR DEDICATED MATERIAL PROCESSING PLANTS: N/A

LOCATIONS WHERE STORM WATER DISCHARGES TO SURFACE WATERS: CULVERTS

LOCATION OF POLLUTION CONTROL MEASURES: SEE SW3P LAYOUT 474-1001-C-1014

CONTROLS

SOIL STABILIZATION PRACTICES

INTERIM:

- TEMPORARY SEEDING
- MULCHING (Hay or Straw)
- BUFFER ZONES
- PRESERVATION OF NATURAL RESOURCES
- FLEXIBLE CHANNEL LINER
- OTHER

PERMANENT:

- SEEDING
- BLOCK SOD
- OTHER
- RETENTION BLANKET
- CHANNEL LINER

STRUCTURAL PRACTICES (T/P)-

- SILT FENCE
- HAY BALES
- ROCK BERMS
- PIPE SLOPE DRAINS
- CHANNEL LINERS
- STORM SEWERS
- STORM INLET SEDIMENT TRAP
- STONE OUTLET STRUCTURES
- DIVERSION, INTERCEPTOR, or PERIMETER SWALES
- DIVERSION, INTERCEPTOR, or PERIMETER DIKES
- PAVED FLUMES
- ROCK BEDDING AT CONSTRUCTION EXIT
- TIMBER MATTING AT CONSTRUCTION EXIT
- SEDIMENT TRAPS
- SEDIMENT BASINS
- CURB and GUTTER
- VELOCITY CONTROL DEVICES

* T means Temporary - P means Permanent

PERMANENT POST CONSTRUCTION TSS CONTROLS

- RETENTION / IRRIGATION
- EXTENDED DETENTION BASINS
- VEGETATIVE FILTER STRIPS / VEGETATIVE SWALES
- CONSTRUCTED WETLANDS
- WET BASINS

OTHER CONTROLS

- WATERING FOR DUST CONTROLS
- SEDIMENT REMOVAL FROM ROADWAY (SWEEPING)
- LOADED TRUCKS WILL BE COVERED WITH TARP

The above indicated practices are proposed to control pollutants in storm water discharges. These practices are based on information contained in TxDOT Storm Water Management Guidelines. The Schedule of implementation of these practices will be based on the intended Sequence of Major Soil Disturbing Activities. Stabilization measures shall be initiated no later than 14 days after construction activity of that portion of the site has temporarily or permanently ceased.

Describe construction and waste materials expected to be stored on site and proposed controls to reduce pollutants from these materials (include storage practices spill prevention and response. ALL WASTE MATERIALS WILL BE DISPOSED OF IN ACCORDANCE WITH ALL STATE LAWS AND REGULATIONS. NO CONSTRUCTION WASTE MATERIAL WILL BE BURIED ON SITE.

Describe pollutant sources from areas other than construction and measures implemented at those sites to minimize pollutant discharges. N/A

Describe measures necessary to protect listed endangered or threatened species, or critical habitat. N/A

INFORMATION

MAINTENANCE:

All erosion and sediment control and other protective measures identified in the SW3P must be maintained in effective operating conditions. If site inspections required by this permit identify BMP's that are not operating effectively, maintenance shall be performed before the next anticipated storm event, or as necessary to maintain the continued effectiveness of storm water controls. If maintenance prior to the next anticipated storm event is unpracticable, maintenance must be scheduled and accomplished as soon as practical.

INSPECTION:

Qualified personnel shall inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site.

Inspection Cycle Option:

- 1. At least every 14 calendar days or within 24 hrs after 0.5 inches or more of rainfall.
- 2. At least every 7 calendar days.
- 3. At least monthly (Engineer & DEQC approved revision to SW3P required).

a). Disturbed areas that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Sediment and erosion control measures identified on the SW3P shall be observed to ensure that they are operating correctly. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking. Sediments must be removed from sediment control structures no later than the time that the design capacity has been reduced by 50%.

b). Based on the result of the inspection, the SW3P shall be revised to include (show on Site Map) additional or modified BMP's designed to correct the observed deficiency. Revisions to the SW3P must be completed within seven (7) calendar days following the inspection.

c). A report summarizing the scope, date, name and qualifications of inspector, and major observations relating to the implementation of the SW3P shall be produced and retained as part of the SW3P for 3 years from date of final stabilization.

d). The following records must be maintained and either attached to or referenced in the SW3P, and made readily available upon request to the parties in Part III.D.1 of the CGP: 1). The dates when major grading activities occur; 2). The dates when construction activities temporarily or permanently cease on a portion of the site and; 3). The dates when stabilization measures are initiated.

INSPECTOR PAPERWORK CHECKLIST:

- Contact Form (1)
- Notice of Intent (1)(2)
- SW3P Certification Statement (signed by AE) (2)
- Delegation of Signature Authority (all Inspectors signing reports) (2)(3)
- TPDES General Permit (2)(3)
- Environmental Document (2)
- Inspection and Maintenance Report (2)(3)
- Notice of Termination (2)
- SW3P Plan (2)(3)
- Inspector Qualification Form (2)(3)
- Project Diary (2)(3)

- (1) The information should be displayed on the Project Bulletin Board.
- (2) The information should be a part of the permanent SW3P file maintained at the Area Office.
- (3) The information should be maintained at the Field Office.

STORM WATER POLLUTION PREVENTION PLAN is consistent with requirements specified in applicable sediment and erosion site plans or site permits, or storm water management site plans or site permits approved by State, Tribal or local officials (i.e. MS4 Permits).

Any reportable quantity of Hazardous Material release must be reported to the National Response Center at 1-800-424-8802. In addition the Beaumont District "Hazardous Material Spill Information Form" must be completed and mailed to the EPA Regional Office in Dallas, Tx.

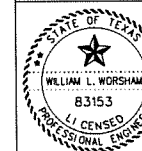
A copy of the Construction General Permit is part of the SW3P.

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LJA Engineering, Inc.

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Beaumont, Texas 77701 FRN - F-1386



10/23/2012
W. L. Worsham, P.E.
WILLIAM L. WORSHAM, P.E. #83153

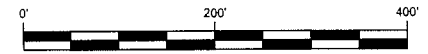
ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
2	10/23/12	JWB	UPDATED PLANS FOR CONSTRUCTION	CKW	WLW
1	7/15/12	JWB	UPDATED PLANS FOR CONSTRUCTION	CKW	WLW
0	10/14/11	JWB	ISSUED FOR CONSTRUCTION	CKW	WLW



SABINE PASS PORT AUTHORITY

SABINE PASS PORT AUTHORITY
POST-IKE ROUND ONE RECOVERY PROJECT
PAVING AND DRAINAGE IMPROVEMENT
SW3P INDEX

DRAWN BY	JWB	DATE	16JUL12	SCALE	NTS	CHKD	CKW
DRAWING NO.	474-1001-C-1015	APP'D	WLW	ISSUE NO.	1		



- KEY
- CONTROL POINT
 - TEMPORARY SEDIMENT CONTROL FENCE (SEE TXDOT DETAIL EC(1)-93)
 - JC-RMSC LEASE BOUNDARY

- NOTES
1. THE LOCATION AND TYPE OF EROSION CONTROL MEASURES SUBJECT TO MODIFICATION THROUGH CONSULTATION WITH ENGINEER AND EXACT CONSTRUCTION METHODOLOGY TO BE EMPLOYED.
 2. TOPOGRAPHIC SURVEY DATA OF THE LAYDOWN AREA AND RELEVANT DRAINAGE FEATURES COLLECTED 5/20/10 AND 5/27/10 BY LEAP (LEAP PRJ#474-1031)
 3. SUPPLEMENTAL TOPOGRAPHIC DATA (NATURAL GROUND, DITCH AND PAVEMENT) COLLECTED DECEMBER 2009 (LEAP PRJ#268-1007) ADDITIONAL DATA (ASPHALT AND ROCK) COLLECTED OCTOBER 2007 BY LEAP

TIDE LEVELS	
MHHW	1.41'
MHW	1.30'
MSL	0.77'
MLW	0.21'
NAVD88	0.00'
MLLW	-0.20'

CONTROL POINTS			
POINT	EASTING	NORTHING	ELEVATION
CP2	3591507.04	13850738.52	3.54
CP3	3591594.42	13850719.81	3.59
CP5	3592094.40	13850813.60	2.84
CP6	3592420.32	13850827.96	4.06
CP7	3592432.26	13850919.55	4.03

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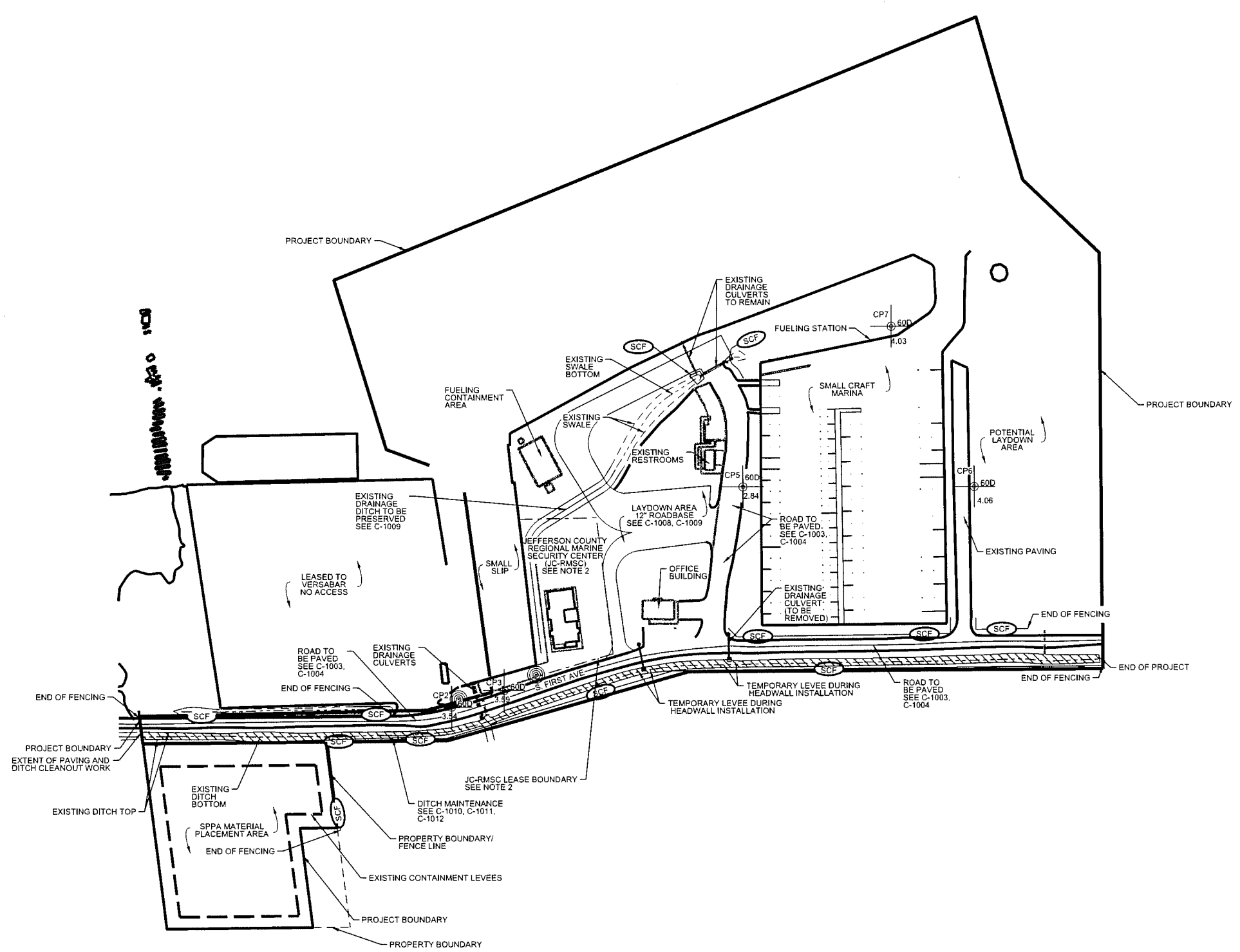
10/23/2012

 WILLIAM L. WORSHAM, P.E. #83153

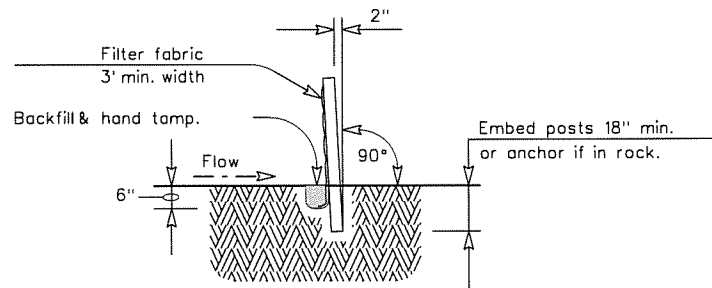
ISSUE	DATE	BY	DESCRIPTION	CHKD	APPD
2	10/23/12	JWB	UPDATED PLANS FOR CONSTRUCTION	CKW	WLW
1	7/15/12	JWB	UPDATED PLANS FOR CONSTRUCTION	CKW	WLW
0	10/14/11	JWB	ISSUED FOR CONSTRUCTION	CKW	WLW

SABINE PASS PORT AUTHORITY
 SABINE PASS PORT AUTHORITY
 POST-IKE ROUND ONE RECOVERY PROJECT
 PAVING AND DRAINAGE IMPROVEMENT
 SW3P LAYOUT

DRAWN BY	JWB	DATE	16JUL12	SCALE	1" = 200'	CHKD	CKW	
APPR'D						APP'D	WLW	
DRAWING NO.	474-1001-C-1016						ISSUE NO.	1



SW3P PLAN
 SCALE: 1" = 200'



SECTION A-A

SEDIMENT CONTROL FENCE USAGE GUIDELINES

A sediment control fence may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A 2 year storm frequency may be used to calculate the flow rate to be filtered.

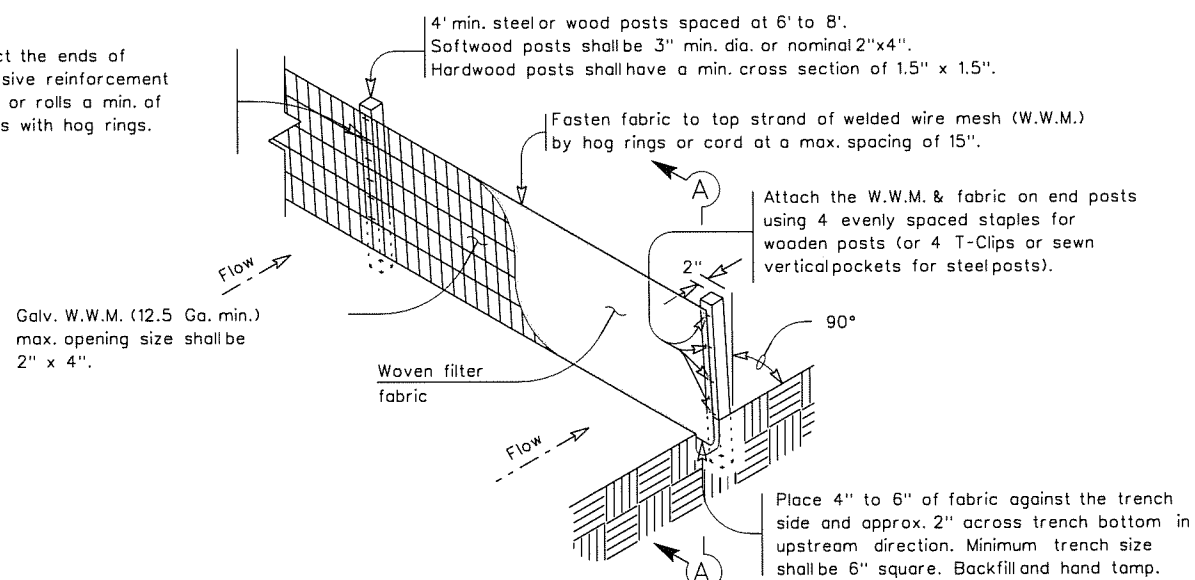
Sediment control fence should be sized to filter a max. flow through rate of 100 GPM/FT. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

PLAN SHEET LEGEND

Sediment Control Fence — SCF —

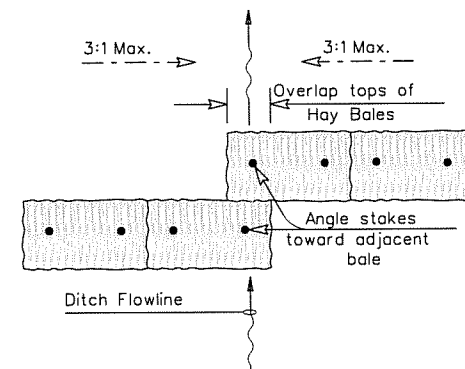
GENERAL NOTES

1. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

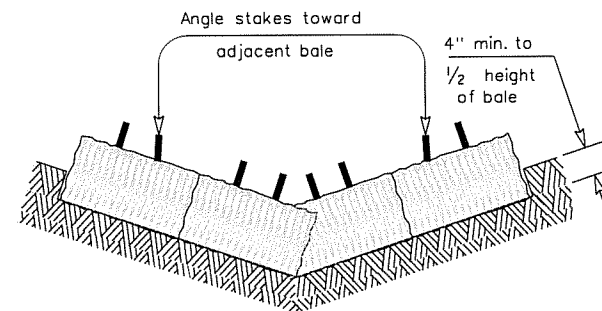


TEMPORARY SEDIMENT CONTROL FENCE

SCF



PLAN VIEW



PROFILE VIEW

PLANS SHEET LEGEND

Baled Hay — BH —

BALED HAY USAGE GUIDELINES

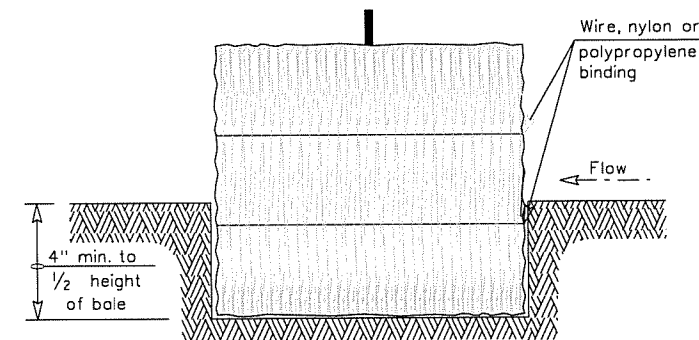
A Baled Hay installation may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A two year storm frequency may be used to calculate the flow rate to be filtered. The installation should be sized to filter a maximum flow thru rate of 5 GPM/FT² of cross sectional area. Baled hay may be used at the following locations:

1. Where the runoff approaching the baled hay flows over disturbed soil for less than 100'. If the slope of the disturbed soil exceeds 10%, the length of slope upstream the baled hay should be less than 50'.
2. Where the installation will be required for less than 3 months.
3. Where the contributing drainage area is less than 1/2 acre.

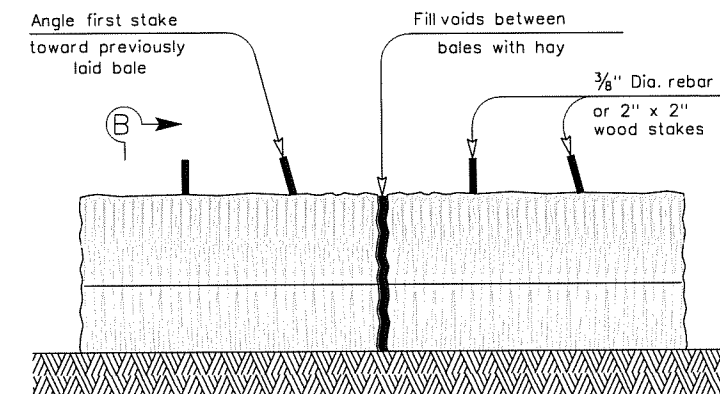
For Baled Hay installations in small ditches, the additional following considerations apply:

1. The ditch sideslopes should be graded as flat as possible to maximize the drainage flowrate thru the hay.
2. The ditch should be graded large enough to contain the overtopping drainage when sediment has filled to the top of the baled hay.

Bales should be replaced usually every 2 months or more often during wet weather when loss of structural integrity is accelerated.



SECTION B-B



BALED HAY FOR EROSION CONTROL

BH

GENERAL NOTES

1. Hay bales shall be a minimum of 30" in length and weigh a minimum of 50 Lbs.
2. Hay bales shall be bound by either wire or nylon or polypropylene string. The bales shall be composed entirely of vegetative matter.
3. Hay bales shall be embedded in the soil a minimum of 4" and where possible 1/2 the height of the bale.
4. Hay bales shall be placed in a row with ends tightly abutting the adjacent bales. The bales shall be placed with bindings parallel to the ground.
5. Hay bales shall be securely anchored in place with 3/8" Dia. rebar or 2" x 2" wood stakes, driven through the bales. The first stake shall be angled towards the previously laid bale to force the bales together.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

Texas Department of Transportation
Design Division (Roadway)

TEMPORARY EROSION,
SEDIMENT AND WATER
POLLUTION CONTROL MEASURES
FENCED & BALED HAY

EC(1)-93

FILE: EC193.DGN	DN: HEJ	CK: HEJ	DW: BGD	CK:
© TxDOT	JUNE 1993	DISTRICT	FEDERAL AID PROJECT	SHEET
REVISIONS		LE JOB NO. 180-1001		C1.XX
		COUNTY	CONTROL SECT	JOB HIGHWAY

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	1	3	4	15	16	17	18	19	20	21	22	23	24	25	26	27
	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75