


CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR

KINGSVILLE, KLEBERG COUNTY, TEXAS



1
T1 T1

LOCATION MAP
SCALE: 1"=600'



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CITY OF KINGSVILLE

MAYOR.....SAM FUGATE
 MAYOR PRO TEM.....HECTOR HINOJOSA
 CITY COMMISSIONER.....EDNA LOPEZ
 CITY COMMISSIONER.....NORMA NELDA ALVAREZ
 CITY COMMISSIONER.....ANN MARIE TORRES
 CITY MANAGER.....MARK MCLAUGHLIN
 CITY ENGINEER.....RUTILIO "RUDY" MORA, JR., P.E., CFM

CONSULTANT'S SHEET
PROJECT NO. 22107-08





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REVISION NO.	DATE	BY	DESCRIPTION

CITY OF KINGSVILLE
TRANQUITAS BRIDGE REPAIR

TITLE SHEET

DRAWING NO.
T1

SHEET 1 of 22

FILE NAME: I:\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1-DWG\T1-COVER SHEET.dwg LAYOUT NAME: TITLE PLOTTED: Tuesday, April 18, 2023 - 12:02pm USER: izepaco

FILE NAME: I:\Projects\2023\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - Civil\SHEET INDEX.dwg LAYOUT NAME: SHEET INDEX PLOTTED: Tuesday, April 18, 2023 - 12:02pm USER: bapado

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CONSULTANT'S SHEET
PROJECT NO. 22107-08



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CITY OF KINGSVILLE
TRANQUITAS BRIDGE REPAIR

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DRAWING NO.
C1
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REVISION NO. DATE DESCRIPTION BY

FILE NAME: \Projects\2022\City of Kingsville Bridge Repair\1 - Drawings\2 - Chas\1 - GENERAL NOTES.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, April 18, 2023 12:05pm USER: tzepeba

1. GENERAL NOTES

- THE FOLLOWING NOTES ARE GENERAL AND APPLY TO ALL SHEETS OF THESE CONTRACT DOCUMENTS AS IF THEY WERE WRITTEN IN THEIR ENTIRETY ON EACH SHEET.
- EXISTING STRUCTURES, UTILITIES AND PIPING ARE SHOWN FROM AVAILABLE RECORDS AT THE TIME THIS PLAN WAS PREPARED. THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE AND VERIFY THE LOCATION OF ALL EXISTING STRUCTURES, UTILITIES AND PIPING WITHIN THE CONSTRUCTION AREA PRIOR TO THE BEGINNING OF CONSTRUCTION. ANY DAMAGE TO THE EXISTING STRUCTURES, UTILITIES AND PIPING SHALL BE RESTORED AT NO ADDITIONAL COST TO THE OWNER. NOTIFY ENGINEER/OWNER IMMEDIATELY OF ANY CONFLICT.
- ALL DETAILS ARE TYPICAL, INCORPORATED INTO PROJECT AT APPROPRIATE LOCATIONS, WHETHER SPECIFICALLY INDICATED OR NOT.
- PROVIDE TEMPORARY SUPPORT DURING CONSTRUCTION AS REQUIRED, UNTIL STRUCTURAL ELEMENTS ARE PERMANENTLY ATTACHED. DRAWINGS INDICATE STRUCTURES IN FINAL FORM CAPABLE OF SUPPORTING DESIGN LOADS.
- DO NOT SCALE DRAWINGS.
- THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE ENGINEER FREE AND HARMLESS FROM ALL CLAIMS, DEMANDS AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE ENGINEER.
- ALL CONSTRUCTION TO BE COORDINATED WITH CITY OF KINGSVILLE.
- CONTRACTOR SHALL OBTAIN ALL REGULATORY PERMITS AND COST TO BE INCIDENTAL TO BID ITEMS.
- ANY FINES AND/OR PENALTIES FOR FAILURE TO MAINTAIN AND/OR IMPLEMENT EROSION AND SEDIMENT CONTROL SHALL BE THE RESPONSIBILITY OF CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAINING HIS EMPLOYEES AND SUBCONTRACTORS IN THE RECOGNITION AND AVOIDANCE OF UNSAFE CONDITIONS, AND IN THE REGULATIONS AND HAZARDS WHICH APPLY TO THE AREA IN WHICH THE WORK WILL TAKE PLACE.
- ALL SAFETY EXPOSURES OR VIOLATIONS SHALL BE RECTIFIED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PROTECTION OF PERSONS AND PROPERTY, AND FOR PROVIDING SAFE WORKING CONDITIONS THROUGHOUT THE WORK PROGRESS. ALL AREAS ADJACENT TO THE CONSTRUCTION AREA OR AFFECTED BY THE CONSTRUCTION MUST BE PROTECTED FROM DAMAGE, CLEANED, AND RESTORED TO THE ORIGINAL CONDITION AT NO ADDITIONAL EXPENSE TO THE CITY OF KINGSVILLE.
- THE SEQUENCE OF CONSTRUCTION SHALL BE SCHEDULED AND COORDINATED WITH CITY OF KINGSVILLE PUBLIC WORKS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITIONS, AND SHALL PERFORM FIELD MEASUREMENTS PRIOR TO FABRICATION AND/OR PURCHASE OF ANY MATERIAL AND SHALL CONTACT THE ENGINEER SHOULD EXISTING CONDITIONS BE DIFFERENT FROM THE DESIGN DRAWINGS FOR THIS PROJECT. CONFLICTS ARISING DUE TO LACK OF COORDINATION SHALL BE THE RESPONSIBILITY AND AT THE EXPENSE OF THE CONTRACTOR.
- ANY REQUIRED CHANGES TO THE DRAWINGS RESULTING FROM THE ACCEPTANCE OF ALTERNATES AND/OR SUBSTITUTIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS REMOVED WHICH ARE NOT TO BE REINSTALLED OR SALVAGED ON THE PROJECT. DISPOSAL OF MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- PERMITTING ASSOCIATED WITH THE PROJECT INCLUDES BUT ARE NOT LIMITED TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) CONSTRUCTION SITE STORM WATER PERMIT NOTICE OF INTENT (NOI) FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES UNDER THE TPDES CONSTRUCTION GENERAL PERMIT (TXR 150000). THIS PERMIT IS REQUIRED FOR CONSTRUCTION ACTIVITIES INCLUDING CLEARING, GRADING, AND EXCAVATION ACTIVITIES THAT DISTURB BEYOND THE LIMITS OF CONSTRUCTION.
- CONTRACTOR SHALL MARK ALL AS-BUILT CONDITIONS ON A DAILY BASIS ON THE PLAN AND SUBMIT TO THE ENGINEER AT END OF PROJECT. AS-BUILT PLANS SHALL BE AVAILABLE ON-SITE AT ALL TIMES FOR INSPECTION.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE IN ORDER TO BECOME FAMILIAR WITH THE SITE CONDITIONS PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR IS TO RESEARCH THE EXISTING CONDITIONS AND THE PROPOSED WORK TO BECOME FULLY AWARE OF THE INTENT OF THE WORK. THE CONTRACTOR WILL BE REQUIRED TO OBTAIN ALL NECESSARY PERMITS AND PAY ASSOCIATED FEES.
- CONTRACTOR SHALL BACKFILL ALL VOIDS LEFT BY DEMOLITION AND COMPACT THE DISTURBED SOIL IN A MANNER SUITABLE TO FINAL IMPROVEMENTS.
- ALL DEMOLISHED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM THE SITE UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE SAFETY OF THE PEDESTRIANS AND ALL VEHICULAR TRAFFIC FROM CONSTRUCTION RELATED ACTIVITIES DURING THE COURSE OF THIS PROJECT.
- THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNMENTAL ONE-CALL REQUIREMENTS AND OTHER REGULATIONS WITH REGARD TO EXISTING UNDERGROUND UTILITIES, PIPELINES, AND OTHER FACILITIES A MINIMUM OF 48 HOURS IN ADVANCE OF CONSTRUCTION.
- THE QUANTITIES OF THE WORK AND MATERIALS SHOWN ON THE PLANS APPROXIMATELY REPRESENT THE WORK TO BE PERFORMED AND MATERIALS TO BE FURNISHED, AND ARE FOR THE PURPOSE OF COMPARING THE BIDS ON A UNIFORM BASIS. PARTIAL PAYMENTS WILL BE MADE BY THE CITY OF KINGSVILLE TO THE CONTRACTOR BASED ON A LUMP SUM PERCENT COMPLETE OF WORK PERFORMED OR MATERIALS FURNISHED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- UNDERGROUND UTILITY LINES SHOWN ON THE PLANS CONSTITUTE AN ATTEMPT BY THE ENGINEER TO LOCATE THESE LINES FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL FIELD LOCATE ALL UNDERGROUND UTILITY LINES AND MAKE PROVISIONS FOR THEIR PROTECTION. IN THE EVENT OF DAMAGE TO UNDERGROUND UTILITIES, WHETHER SHOWN OR NOT ON THE DRAWINGS, THE CONTRACTOR SHALL MAKE THE NECESSARY REPAIRS TO PLACE THE FACILITIES BACK IN SERVICE. ALL SUCH REPAIRS SHALL CONFORM TO THE REQUIREMENTS OF THE COMPANY OR AGENCY OPERATING THE FACILITY. DAMAGE BY THE CONTRACTOR TO EXISTING UTILITIES SHALL BE REPORTED IMMEDIATELY TO THE OWNER OF THE UTILITY AND THE ENGINEER. THE COST OF DAMAGE AND/OR REPAIR TO SAID UTILITY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO PAYMENT WILL BE MADE FOR DELAYS DUE TO UTILITY CONFLICTS.
- PRIOR TO THE COMMENCEMENT OF ANY WORK AT PROJECT SITE, CONTRACTOR SHALL VERIFY WITH CITY OF KINGSVILLE, THAT PROPOSED CONSTRUCTION METHODS WILL NOT INTERFERE OR IMPEDE DAILY ACTIVITY OF ANY FOR THE CITY OF KINGSVILLE ACTIVITIES LOCATED IN THIS SITE.

2. SITE EXCAVATION AND GRADING

- COMPLETELY REMOVE ALL TREES, SHRUBS, AND STUMPS FROM THE CONSTRUCTION AREA. REMOVE ALL CONCRETE SLABS, CONCRETE WALLS, FOUNDATIONS, ROADWAYS, ETC., ON THE SITE AS REQUIRED TO PROPERLY CONSTRUCT THE PROJECT.
- ALL EXCAVATION IS TO BE UNCLASSIFIED, I.E. THE REMOVAL OF ALL MATERIALS AS ENCOUNTERED, WITH NO ADDITIONAL PAYMENTS FOR ROCK EXCAVATION EXCEPT FOR CHANGES IN WORK FROM THAT SHOWN ON THE CONTRACT DRAWINGS.
- PERFORM EXCAVATION OF EVERY TYPE OF MATERIAL ENCOUNTERED WITHIN THE LIMITS OF THE PROJECT, TO THE LINES, GRADES AND ELEVATIONS INDICATED AND AS SPECIFIED HEREIN. PERFORM EXCAVATION AND FILLING IN A MANNER AND SEQUENCE THAT WILL PROVIDE DRAINAGE AT ALL TIMES.
- KEEP ALL EXCAVATIONS DRY BY DIVERTING SEEPAGE OR SURFACE WATER FROM EXCAVATIONS.
- CONSTRUCT FILLS AT THE LOCATION AND TO THE LINES AND GRADES AS INDICATED. THE COMPLETE FILL SHALL CONFORM TO THE SHAPE OF THE TYPICAL SECTIONS INDICATED OR SHALL MEET THE REQUIREMENTS OF THE PARTICULAR CASE. ALL FILL, EXCEPT FILL UNDER THE BUILDING AREA, SHALL BE SOIL FILL. USE SATISFACTORY ON-SITE SOILS REMOVED FROM THE EXCAVATION TO FORM THE FILL. MATERIAL REQUIRED FOR FILLS IN EXCESS OF THAT PRODUCED BY EXCAVATING WITHIN THE GRADING LIMITS SHALL BE TAKEN FROM APPROVED OFF-SITE AREAS SELECTED BY THE CONTRACTOR. PLACE THE MATERIAL IN SUCCESSIVE HORIZONTAL LAYERS 9" IN LOOSE DEPTH AND COMPACT TO A MINIMUM OF 95% OF STANDARD PROCTOR IN ACCORDANCE WITH ASTM D698 AT MOISTURE CONTENTS -1% TO +3% OF OPTIMUM.
- CONTRACTOR TO VERIFY QUANTITIES SHOWN DURING BID PROCESS TO INSURE THEY ARE SUFFICIENT TO COMPLETE THE PROJECT AS INTENDED AND TO THE LINES AND GRADES SHOWN, AND HE SHALL MAKE ANY ADJUSTMENTS HE DEEMS NECESSARY TO INSURE HE HAS ACCOUNTED FOR SHRINK, SWELL, LOSS, ETC. THE QUANTITIES SHOWN ARE INTENDED AS INFORMATION ONLY TO ASSIST THE CONTRACTOR IN PREPARING HIS LUMP SUM PROPOSAL. CONTRACTOR IS RESPONSIBLE TO COMPLETE THE PROJECT ACCORDING TO THE PLANS AT THE PRICE HE HAS SPECIFIED IN HIS PROPOSAL.

3. TRAFFIC CONTROL

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A TRAFFIC CONTROL PLAN AND MAINTAIN THE TRAFFIC CONTROL THROUGHOUT THE DURATION OF THE CONTRACT IN ACCORDANCE WITH THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE TxDOT STANDARDS SHEETS. CONTRACTOR SHALL COORDINATE WITH CITY OF KINGSVILLE AND ANY LOCAL EMERGENCY RESPONSE AGENCIES FOR ROAD CLOSURES. SEE SPECIAL NOTE.
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND IN ACCORDANCE WITH THE TRAFFIC CONTROL DEVICE STANDARD DETAILS.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TRAFFIC CONTROL DEVICES DURING THE COURSE OF THE CONSTRUCTION PERIOD AS REQUIRED BY THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) MANUAL.
- EQUIPMENT AND MATERIALS SHALL NOT BE STORED ON PUBLIC RIGHT-OF-WAY AT ANY TIME DURING THE COURSE OF THE CONSTRUCTION PERIOD. ANY MATERIAL AND EQUIPMENT APPROVED BY THE ENGINEER FOR THE TEMPORARY PLACEMENT ALONG THE PUBLIC RIGHT-OF-WAY SHALL BE ADEQUATELY BARRICADED WITH TYPE II BARRICADES FOR EACH DIRECTION OF TRAVEL AND SHALL NOT BE PLACED WITHIN FIVE (5) FEET OF THE STREET PAVEMENT.
- THE CONTRACTOR SHALL MAINTAIN ALL REGULATORY SIGNS DURING THE CONSTRUCTION PERIOD.
- ALL CONSTRUCTION WARNING SIGNS MAY BE MOUNTED ON PORTABLE DEVICES AND/OR GROUND MOUNTED.
- SHOULD ANY TRAFFIC SIGN, SIGN POST OR ITS FOUNDATION BE DAMAGED, CONTRACTOR SHALL REPORT SUCH INFORMATION IMMEDIATELY TO THE ATTENTION OF THE CITY OF KINGSVILLE PUBLIC WORKS.
- ALL SIGNS AND BARRICADES USED FOR LANE CLOSURES AND/OR PROTECTION SHALL BE EQUIPPED WITH FLASHING WARNING LIGHTS IF SUCH SIGNS AND BARRICADES ARE TO BE IN PLACE DURING HOURS OF DARKNESS. ONE LIGHT SHALL BE USED PER SIGN OR BARRICADE.
- ADDITIONAL CHANNELIZING AND OTHER APPROPRIATE TRAFFIC CONTROL DEVICES MAY BE REQUIRED ACCORDING TO THE ENGINEER AND/OR THE DEPARTMENT OF THE CITY OF KINGSVILLE.
- SAFETY BARRICADE FENCING SHALL BE HIGH DENSITY POLYETHYLENE TENSAR-LUX4050 (SB-ORANGE-4HIGH).

4. EPOXY ADHESIVE

- EPOXY SYSTEM (CONCRETE ADHESIVE ANCHORING SYSTEM) SHALL BE "HILTI HIT-RE 500-V3" AS MANUFACTURED BY HILTI CORP., TULSA, OK OR APPROVED EQUAL AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS. ALL HOLES SHALL BE CORE DRILLED IN DRY CONCRETE, 1/8" GREATER THAN ANCHOR DIAMETER, ROUGHEN WHEN DONE, PER MANUFACTURERS RECOMMENDATIONS.

5. CONCRETE REHABILITATION

- REMOVE ALL UNSOUND CONCRETE BY CHIPPING TO SOUND CONCRETE. JACK HAMMERS AND CHIPPING HAMMERS SHALL BE SIZED SO AS NOT TO DAMAGE THE EXISTING SOUND CONCRETE THAT IS TO REMAIN.
- MECHANICALLY CLEAN EXISTING SURFACES THAT DO NOT REQUIRE CHIPPING TO REMOVE PAINT, OIL, MARINE GROWTH, ETC. AND TO PROVIDE A ROUGHENED SURFACE FOR PROPER BONDING OF THE REPAIR OR SEALER.
- MECHANICALLY CLEAN EXISTING REBAR TO REMOVE RUST, OIL, SCALE, ETC.
- REMOVE ALL LOOSE PARTICLES WITH WATER AND/OR COMPRESSED AIR.
- APPLY SIKA ARMI-TEC 100 EPOXEM, OR ENGINEER APPROVED EQUAL, TO CONCRETE SURFACES OF REPAIRS AND REBAR PRIOR TO INSTALLATION OF REPAIR GROUT.
- ALL MECHANICALLY CLEAN MATERIAL AND OTHER PARTICLES SHALL BE CONTAINED AND REMOVED FROM JOBSITE.
- EPOXY SEALER SHALL BE SIKADUR 55 SLV, OR ENGINEER APPROVED EQUAL.
- POLYMER MODIFIED MORTAR SHALL BE SIKA TOP 123 PLUS OR ENGINEER APPROVED EQUAL.
- CONCRETE COATING SHALL BE THOROSEAL WITH ACRYL 80 OR ENGINEER APPROVED EQUAL.
- ALL CONCRETE REPAIR AND COATING PRODUCTS NOTED ABOVE SHALL BE INSTALLED PER RESPECTIVE MANUFACTURERS RECOMMENDATIONS.

SPECIAL NOTE:

NOTE:
CONTRACTOR TO NOTIFY ALL AGENCIES LISTED BELOW AT LEAST 2 WEEKS

CITY OF KINGSVILLE PUBLIC WORKS	(361) 595-8041
KLEBERG COUNTY SHERIFFS DEPARTMENT	(361) 695-8500
CITY OF KINGSVILLE POLICE	(361) 592-4311
CITY OF KINGSVILLE FDI/EMT	(361) 592-6445
KINGSVILLE I.S.D.	(361) 592-3387

CONTRACTOR SHALL NOTIFY PROPERTY OWNERS AFFECTED BY CONSTRUCTION ACTIVITIES AT LEAST 2 WEEKS PRIOR TO CONSTRUCTION.

CONSULTANT'S SHEET
PROJECT NO. 22107-08



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CITY OF KINGSVILLE
TRANQUITAS BRIDGE REPAIR

GENERAL NOTES

DRAWING NO.
C2
SHEET 3 of 22

REVISION NO.	DATE	BY	DESCRIPTION

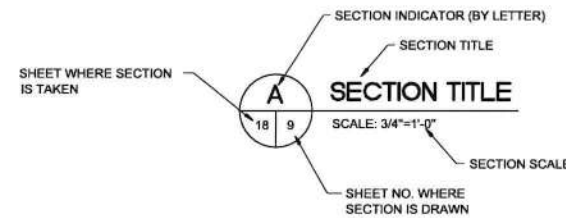
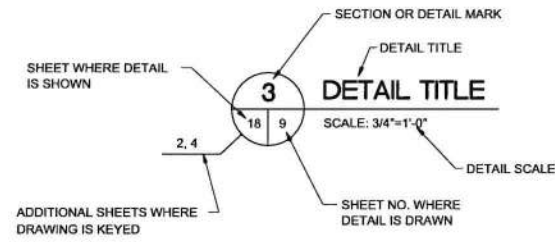
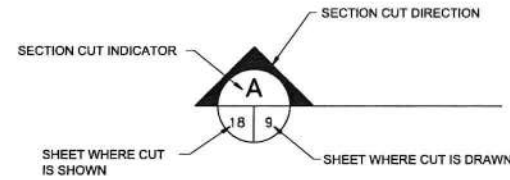
FILE NAME: I:\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - Quantities & Legend.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, April 18, 2023 - 12:03pm USER: jzapado

ESTIMATED QUANTITIES SUMMARY - TOTALS			
	DESCRIPTION	UNIT	QUANTITY
TRANQUITAS BRIDGE REPAIR			
A1	MOBILIZATION / BONDS / INSURANCE	LS	1
A2	SPALLING	CF	85
A3	DELAMINATION	CF	75
A4	REBAR REPAIR	LF	100
A5	EXPANSION JOINT SEALANT	LF	150
A6	ABUTMENT WALL (SHOTCRETE 3")	CF	80

NOTE:
 1. THE ESTIMATED QUANTITIES LISTED ARE FOR INFORMATIONAL PURPOSES AND FOR CONTRACTOR REFERENCE. THE CONTRACTOR IS RESPONSIBLE FOR DELIVERING A FINISHED PROJECT AS DETAILED ON THE PLANS AND SPECIFICATIONS.
 2. CONTRACTOR SHALL ACCOUNT FOR 20% ± OF ALL MATERIALS.



EXISTING LEGEND
 NG - NATURAL GRADE
 T.O.C. - TOP OF CONCRETE



CONSULTANT'S SHEET
 PROJECT NO. 22107-08



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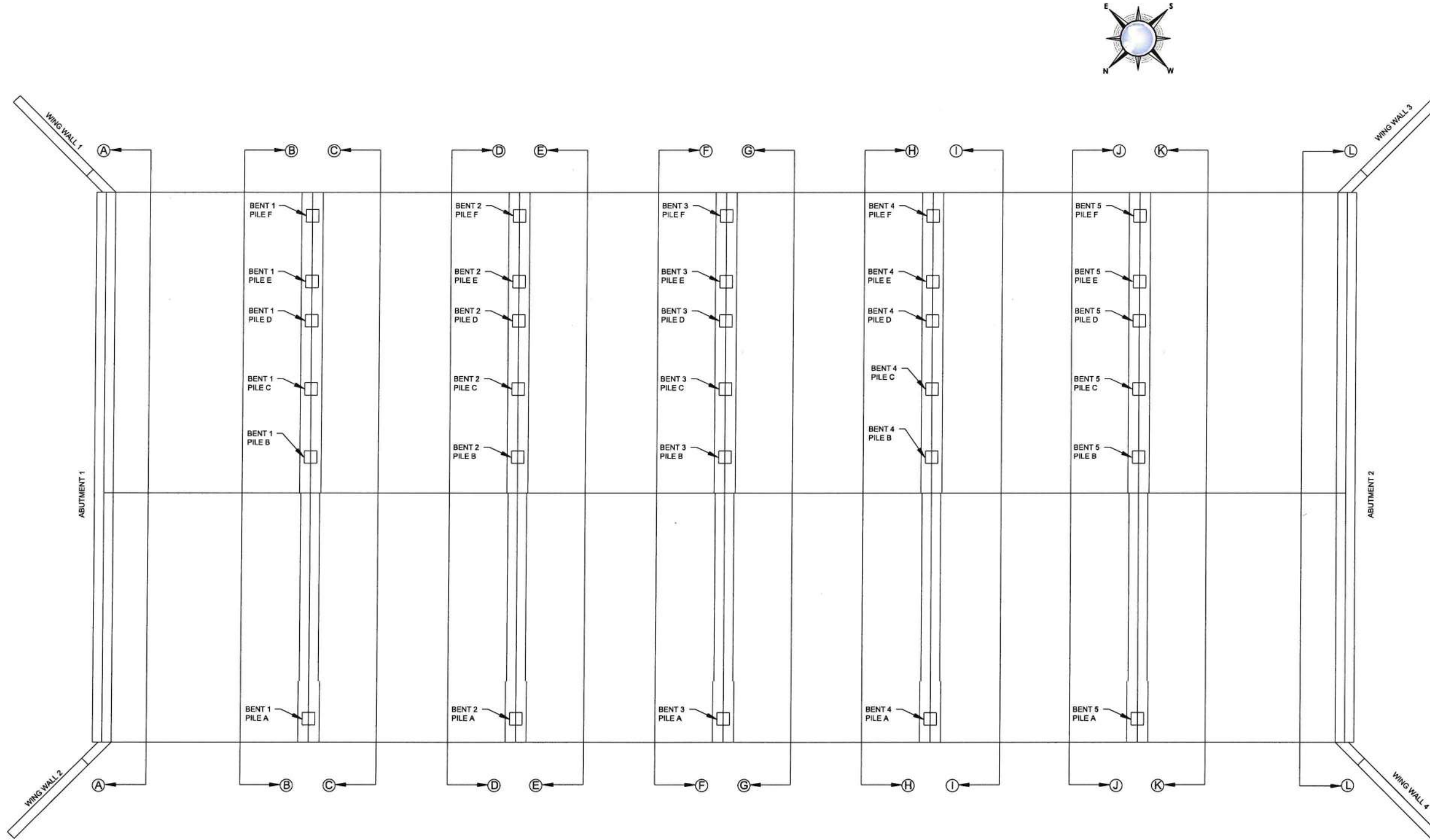


REVISION NO. DATE BY DESCRIPTION

CITY OF KINGSVILLE
 TRANQUITAS BRIDGE REPAIR
 QUANTITIES AND LEGEND

DRAWING NO.
C3
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FILE NAME: \Projects\2022\City of Kingsville\Tranquitas Bridge Repair\1 - Drawings\2 - C4\CS-C16-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-3 PLOTTED: Tuesday, April 18, 2023 - 12:03pm USER: lzapeda

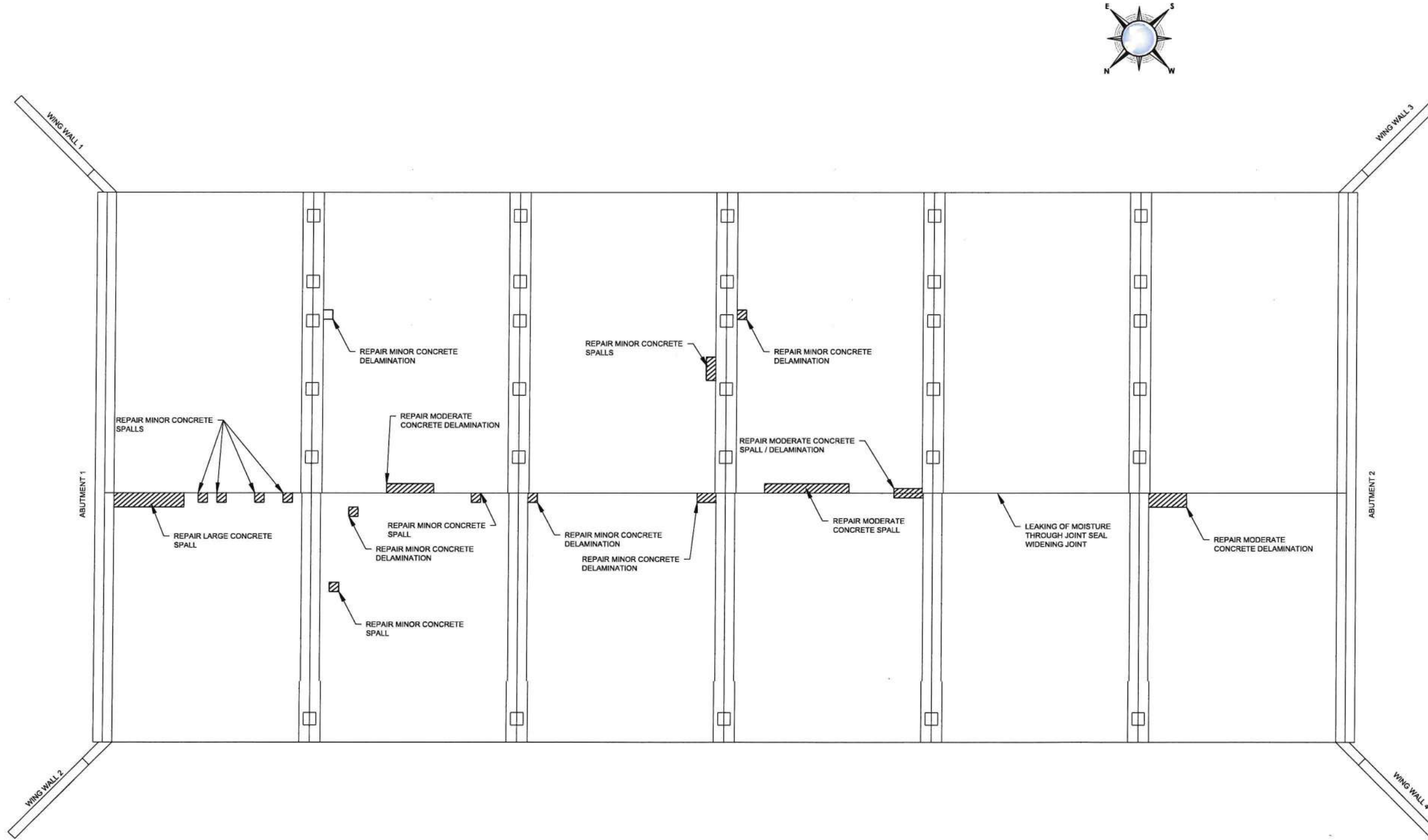


1 BRIDGE PLAN
C4 NTS

*ALL RECOMMENDED REPAIRS ARE BASED ON VISUAL INSPECTIONS

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<p>INTERNATIONAL CONSULTING ENGINEERS 261 SARATOGA BLVD. CORPUS CHRISTI, TX 78417 PHONE: 361.826.8808 FAX: 361.826.8806 T.E.P.E. REG. REGISTRATION #F-10837</p>	
<p>CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR</p>	
<p>BRIDGE PLAN</p>	
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FILE NAME: I:\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - Civi\CS-C16-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-3 (2) PLOTTED: Tuesday, April 18, 2023 - 12:03pm USER: lzepedo

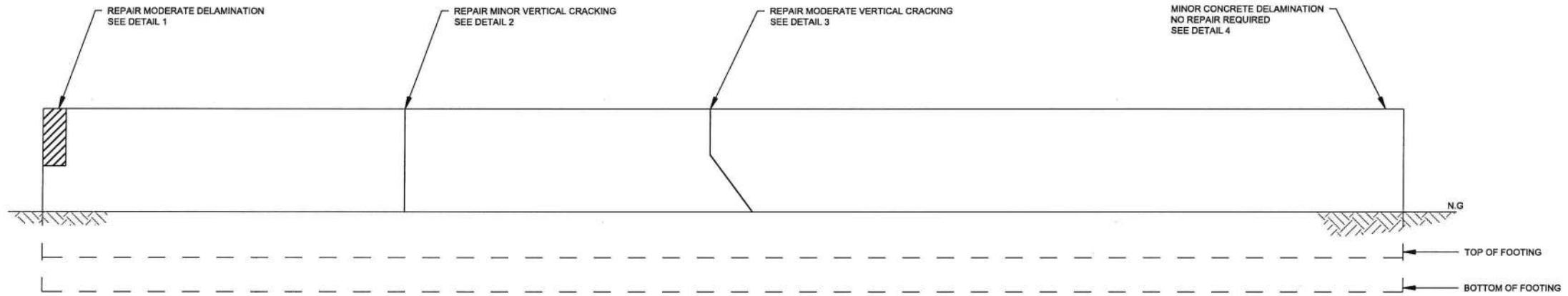
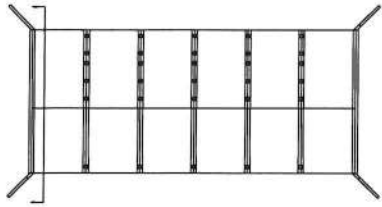


1 BRIDGE DECK - UNDERSIDE
C5 NTS

*ALL RECOMMENDED REPAIRS ARE BASED ON VISUAL INSPECTIONS

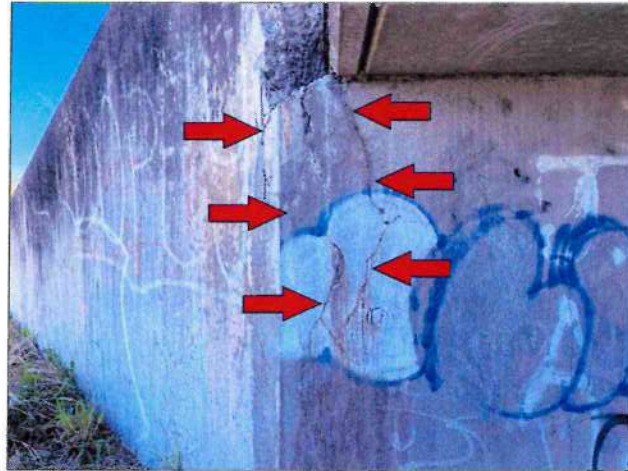
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	CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR
	BRIDGE DECK - UNDERSIDE
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FILE NAME: I:\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - Civil\C3-C16-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-4 PLOTTED: Tuesday, April 18, 2023 - 12:03pm USER: lzapacho

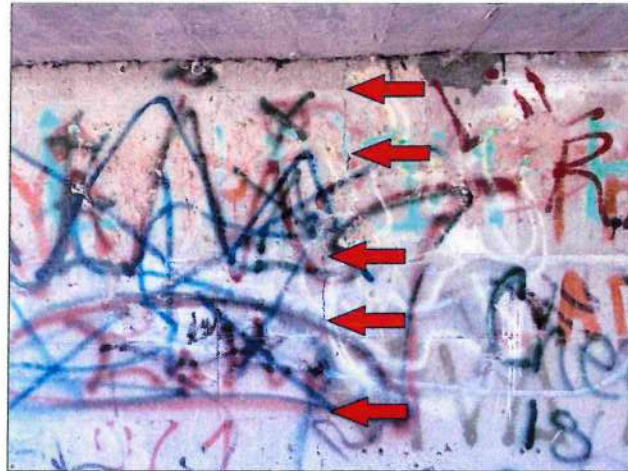


1 ABUTMENT 1 (A-A)
C6 NTS

NOTE: CONCRETE WINGWALLS NOT SHOWN FOR CLARITY



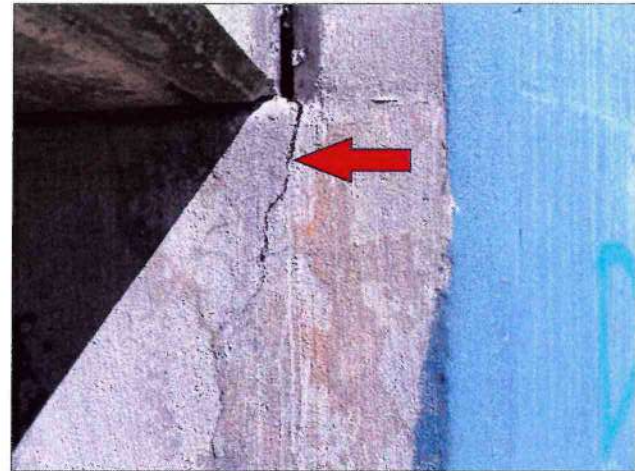
1 DETAIL 1
C6 NTS



2 DETAIL 2
C6 NTS



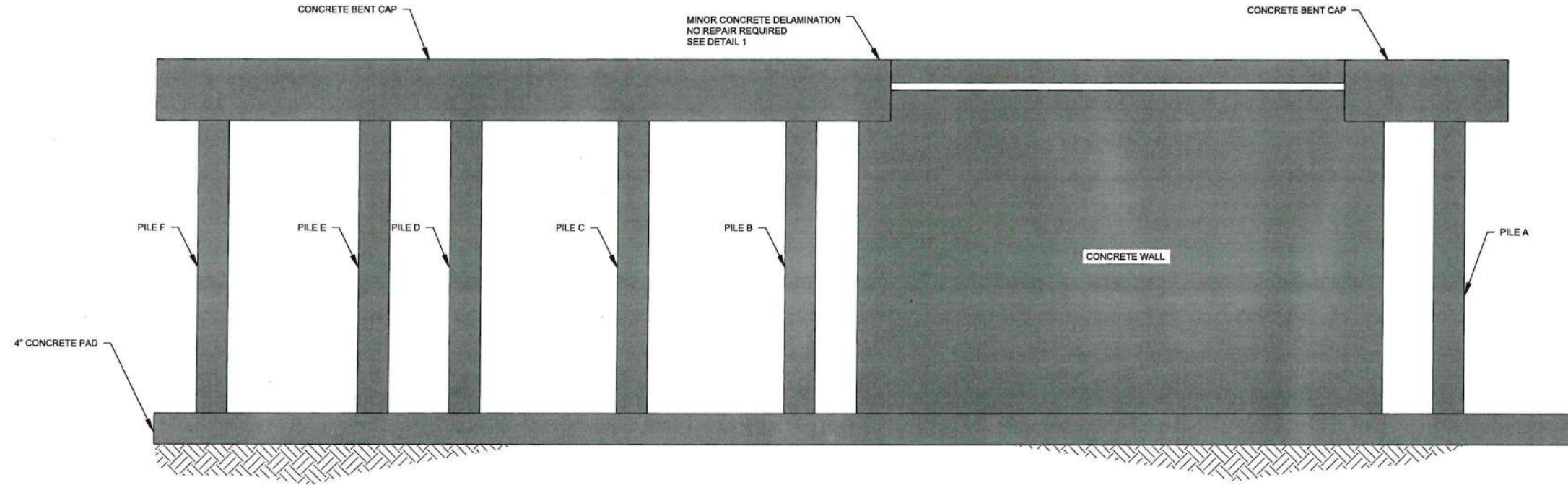
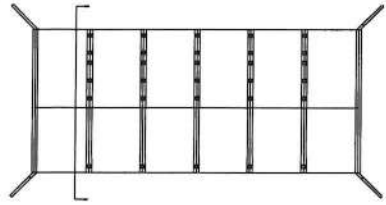
3 DETAIL 3
C6 NTS



4 DETAIL 4
C6 NTS

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DATE	BY
<p>CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR</p>	
<p>ABUTMENT 1 A-A</p>	
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FILE NAME: I:\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - Civil\03-C16-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-5 PLOTTED: Tuesday, April 18, 2023 - 12:03pm USER: lzapeda



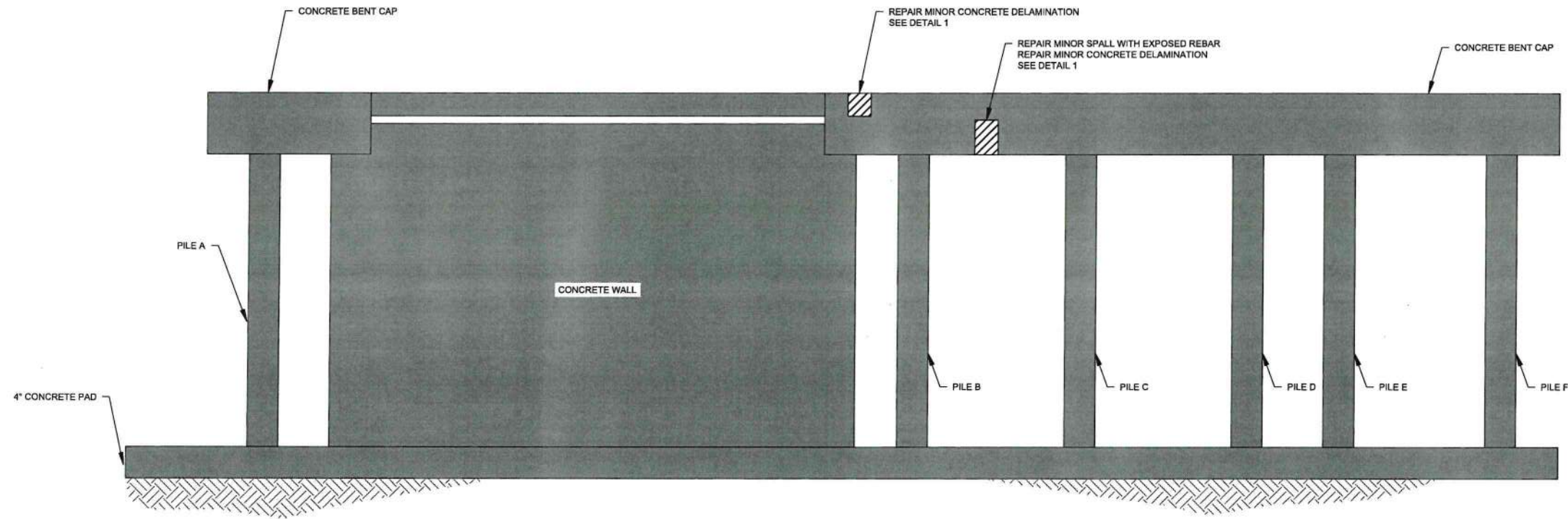
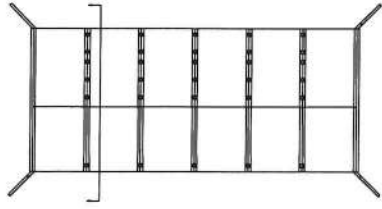
1 BENT 1 (B)-(B)
C7 NTS



1 DETAIL 1
C7 NTS

REVISION NO.		DATE	BY	DESCRIPTION
C7				CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR
SHEET 8 of 22		DRAWING NO.		
		BENT 1 B-B		
CONSULTANT'S SHEET PROJECT NO. 22107-08				
		INTERNATIONAL CONSULTING ENGINEERS 261 SARATOGA BLVD. CORPUS CHRISTI, TX 78417 PHONE: 361.826.8803 FAX: 361.826.8808 I.C.E. FIRM REGISTRATION #F-10837		
CITY OF KINGSVILLE				

FILE NAME: \\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - City\CS-C16-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-6 PLOTTED: Tuesday, April 18, 2023 - 12:03pm USER: lzapeda



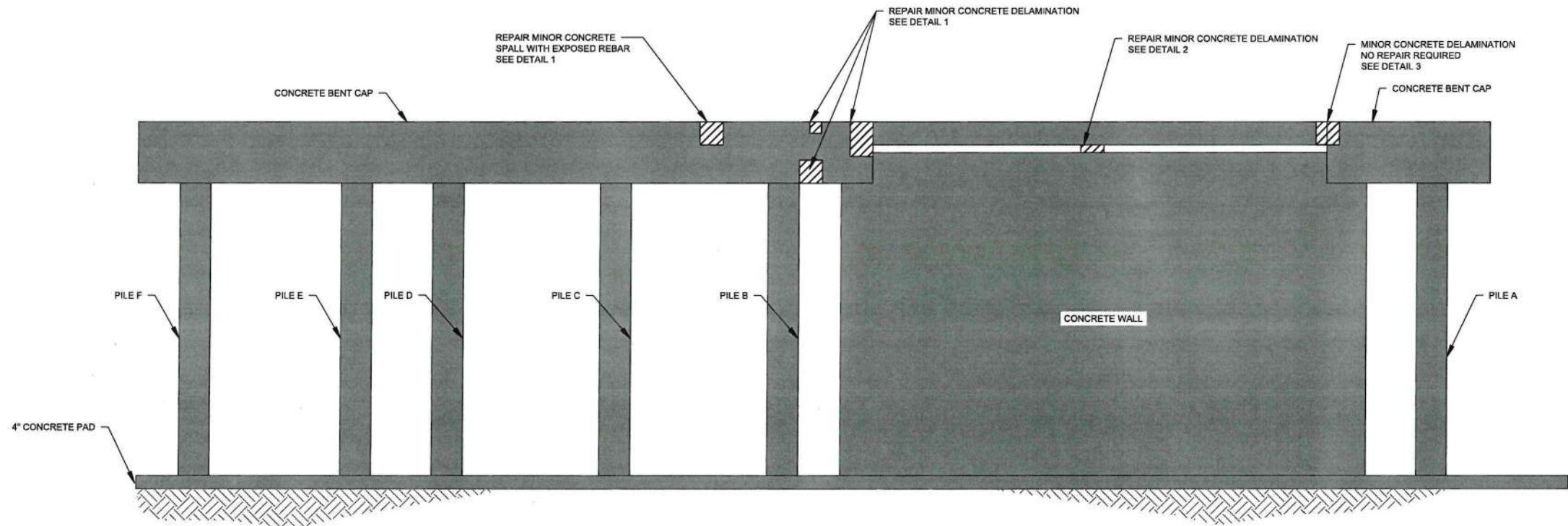
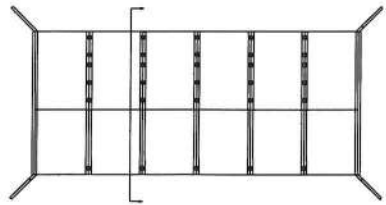
1 BENT 1 C-C
C8 NTS



1 DETAIL 1
C8 NTS

REVISION NO.		DATE	BY	DESCRIPTION
C8				DRAWING NO.
SHEET 9 of 22		CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR		
ICE		CITY OF KINGSVILLE		
INTERNATIONAL CONSULTING ENGINEERS PHONE: 361.526.5805 FAX: 361.526.5808		BENT 1 C-C		
T.B.P.E. FROM REGISTRATION # - 10637		CITY OF TEXAS JESUS JAVIER JIMENEZ 100716		
CONSULTANT'S SHEET PROJECT NO. 22107-08				

FILE NAME: I:\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - Civil\C3-C16-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-7 PLOTTED: Tuesday, April 18, 2023 - 12:03pm USER: bapado



1 BENT 2 D-D
C9 NTS



1 DETAIL 1
C9 NTS



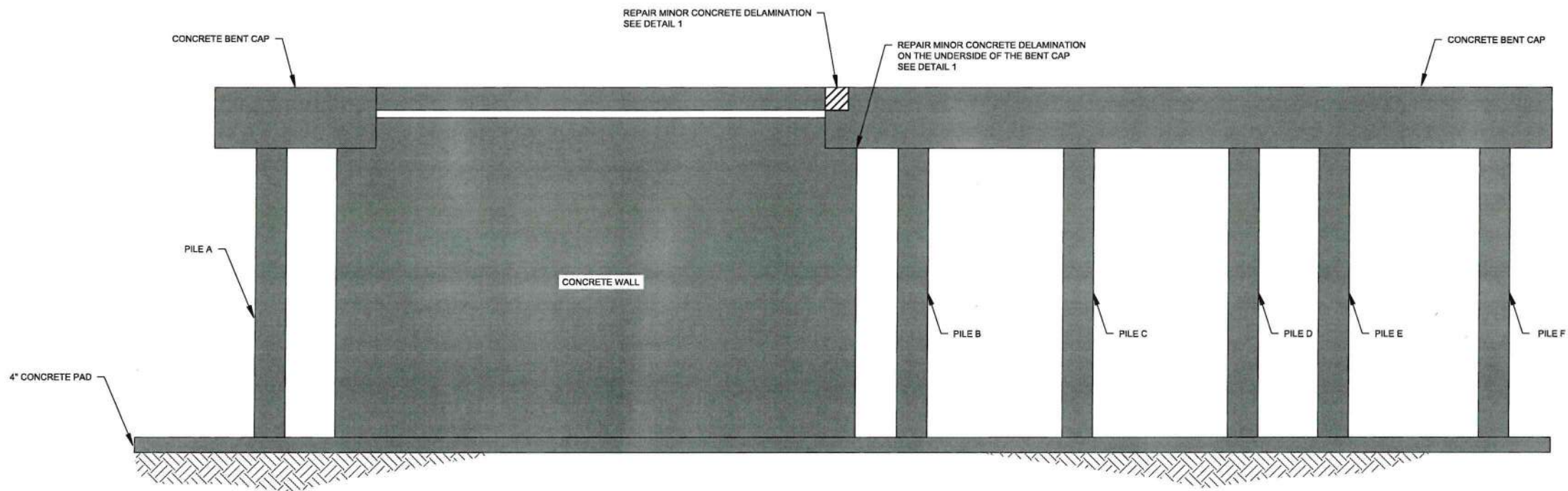
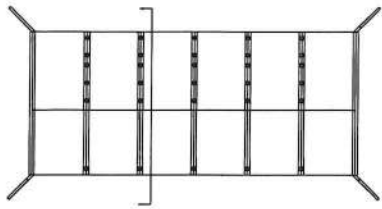
2 DETAIL 2
C9 NTS



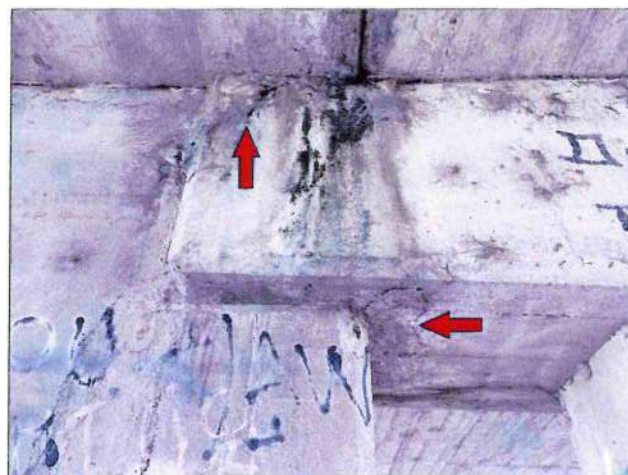
3 DETAIL 3
C9 NTS

CONSULTANT'S SHEET PROJECT NO. 22107-08			
INTERNATIONAL CONSULTING ENGINEERS 261 SARATOGA BLVD. CORPUS CHRISTI, TX 78417 PHONE: 361.826.8805 FAX: 361.826.8808 I.B.P.E. FROM REGISTRATION #- 10637		CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR BENT 2 D-D	
REVISION NO.	DATE	BY	DESCRIPTION
C9			DRAWING NO.
			10 of 22

FILE NAME: I:\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - C:\C3-C16-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-8 PLOTTED: Tuesday, April 18, 2023 - 12:03pm USER: lzapado




1 BENT 2 (E-E)
C10 NTS

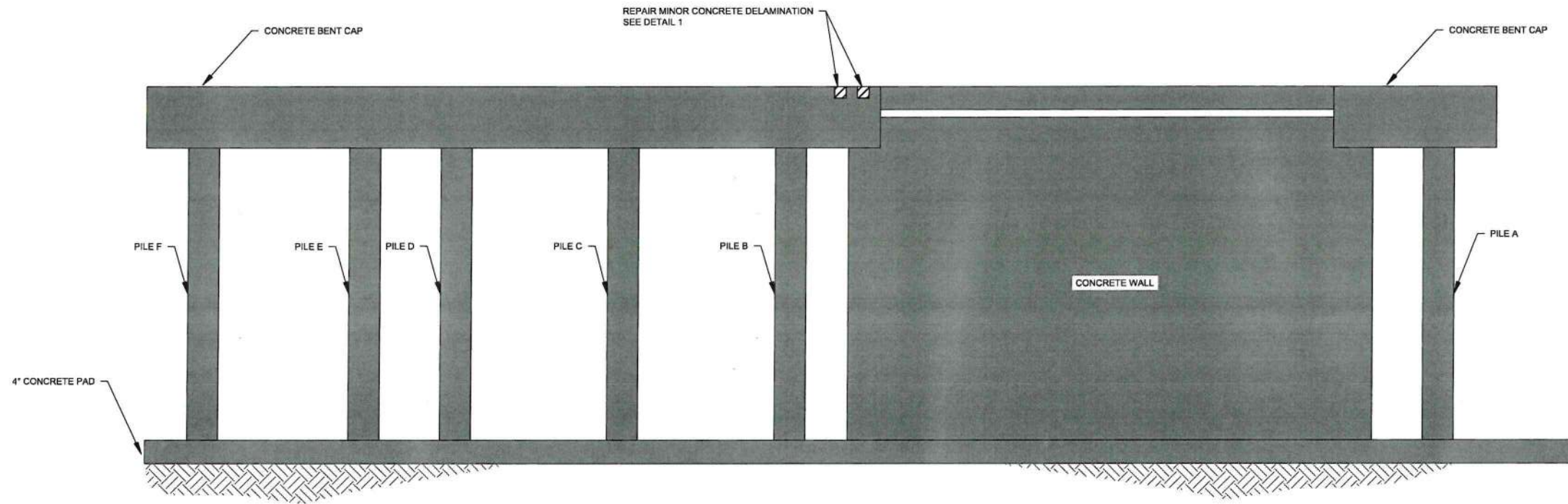
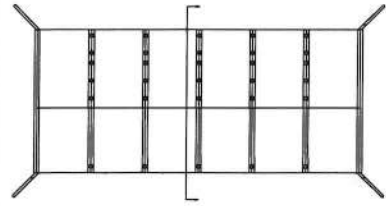


1 DETAIL 1
C10 NTS

REVISION NO.	DATE	BY	DESCRIPTION

CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR		CONSULTANT'S SHEET PROJECT NO. 22107-08
BENT 2 E-E		 ICE INTERNATIONAL CONSULTING ENGINEERS 261 SARATOGA BLVD. CORPUS CHRISTI, TX 78417 PHONE: 361.526.5805 FAX: 361.526.5808 I.B.P.E. FROM REGISTRATION #F-10837
DRAWING NO. C10		
SHEET 11 of 22		

FILE NAME: I:\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1- Drawings\2 - Civi\C3-C16-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-9 PLOTTED: Tuesday, April 18, 2023 - 12:03pm USER: hrapeda



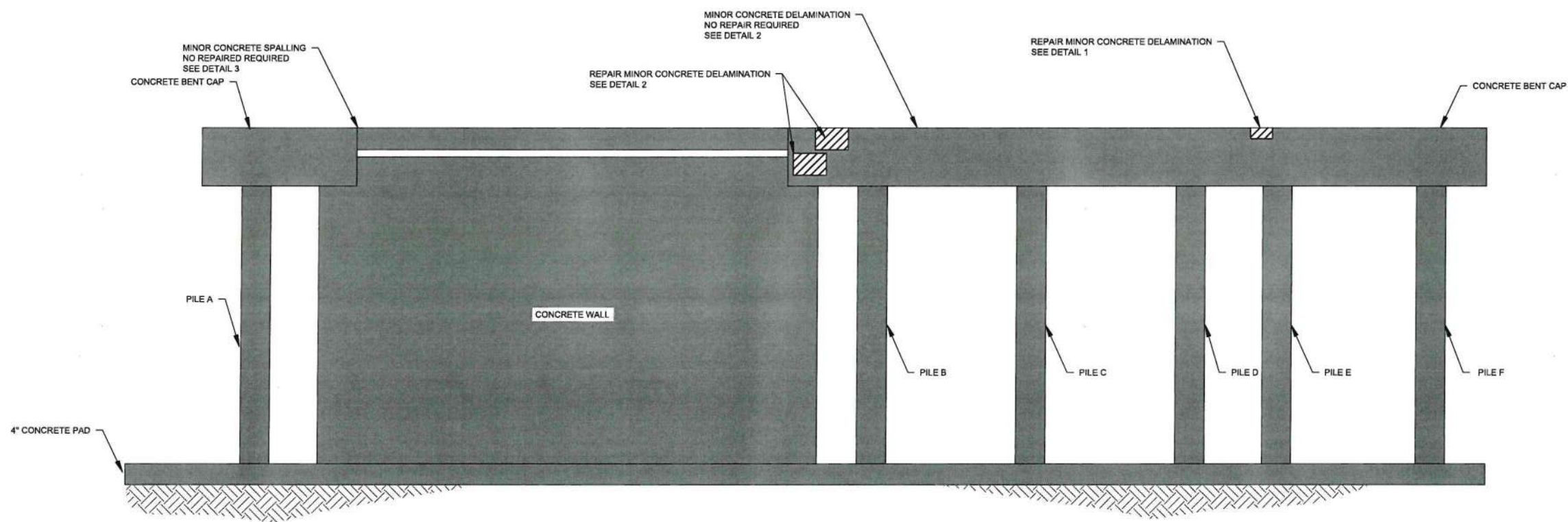
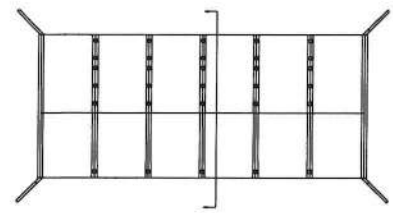
1 BENT 3 (F-F)
C11 NTS



1 DETAIL 1
C11 NTS

REVISION NO.		DATE	BY	DESCRIPTION
C11				CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR
SHEET 12 of 22		DRAWING NO.		BENT 3 F-F
CONSULTANT'S SHEET PROJECT NO. 22107-08				
		REVISION NO.	DATE	BY

FILE NAME: I:\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - Civil\C3-C16-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-10 PLOTTED: Tuesday, April 18, 2023 - 12:05pm USER: lzejgado



1 BENT 3 G-G
C12 NTS



1 DETAIL 1
C12 NTS



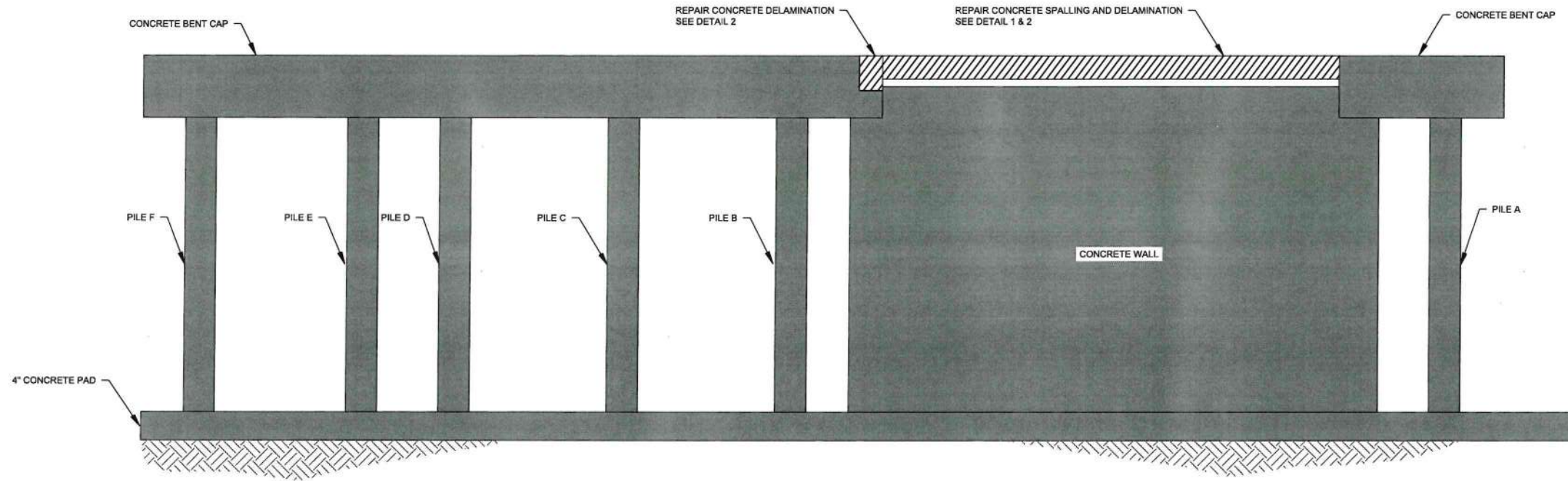
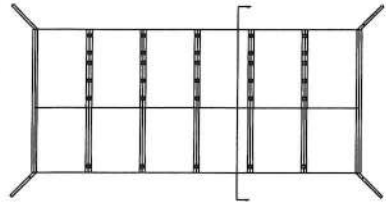
2 DETAIL 2
C12 NTS



3 DETAIL 3
C12 NTS

CONSULTANT'S SHEET PROJECT NO. 22107-08			
REVISION NO.	DATE	BY	DESCRIPTION
			CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR
			BENT 3 G-G
DRAWING NO. C12		SHEET 13 of 22	

FILE NAME: I:\Projects\2023\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - Civil\C3-C16-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-11 PLOTTED: Tuesday, April 18, 2023 - 12:04pm USER: lzepado



1 BENT 4 (H)-(H)
C13 NTS



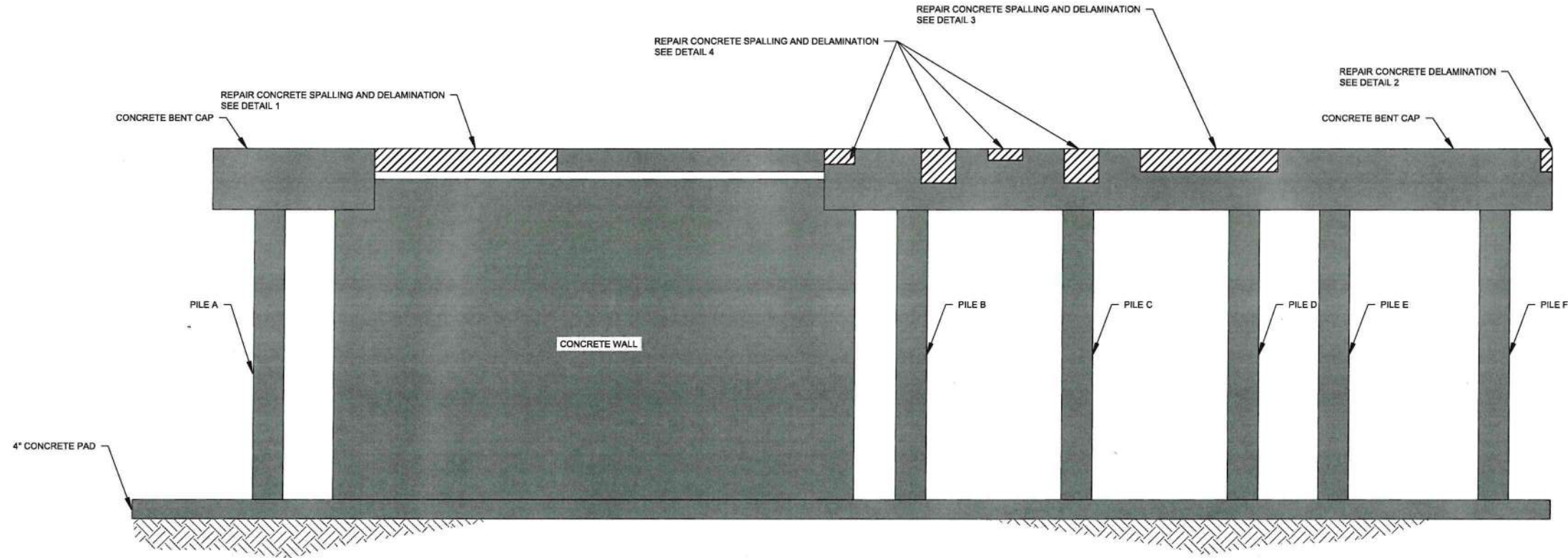
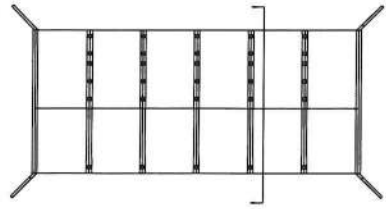
1 DETAIL 1
C13 NTS



2 DETAIL 2
C13 NTS

CONSULTANT'S SHEET PROJECT NO. 22107-08	
REVISION NO.	DESCRIPTION
DATE	BY
REVISION NO.	DESCRIPTION
DATE	BY
CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR	
BENT 4 H-H	
DRAWING NO. C13	
SHEET 14 of 22	

FILE NAME: I:\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - Civil\C3-C16-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-12 PLOTTED: Tuesday, April 18, 2023 - 12:04pm USER: lzapado



1 BENT 4 (1-1)
C14 NTS



1 DETAIL 1
C14 NTS



2 DETAIL 2
C14 NTS



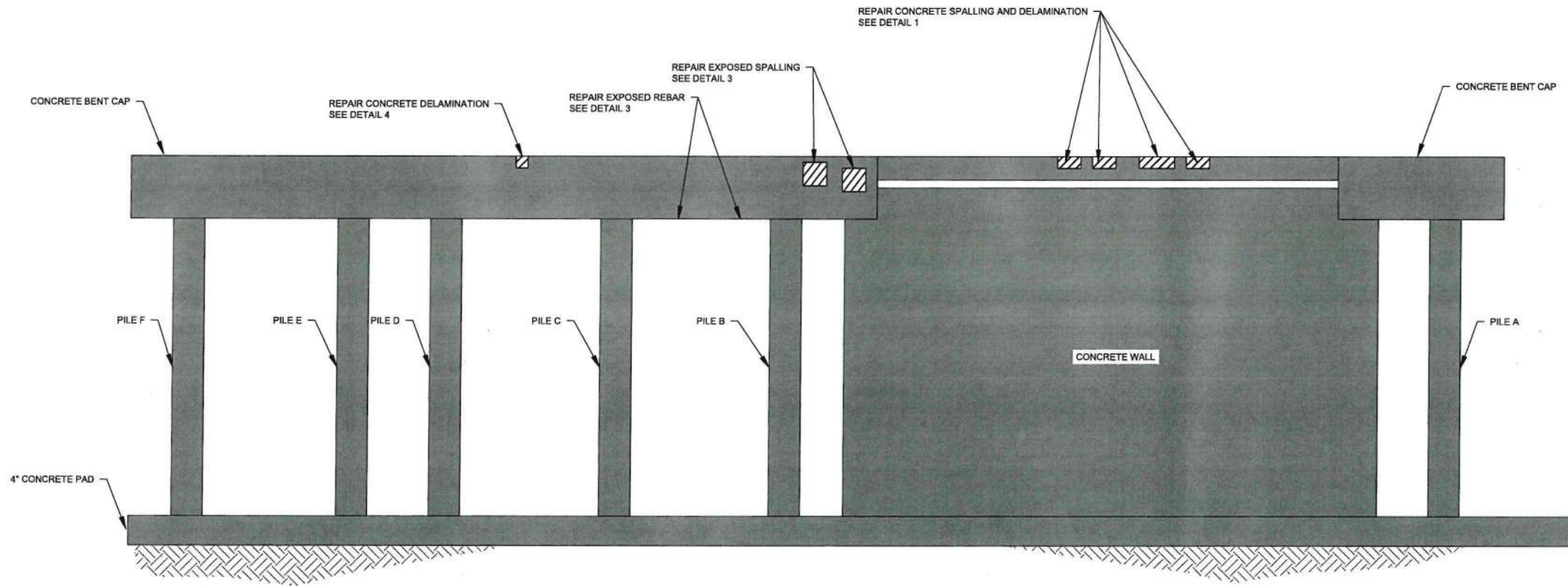
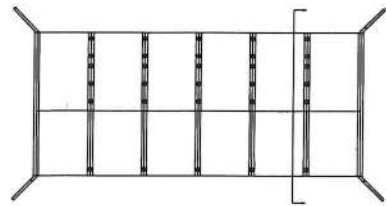
3 DETAIL 3
C14 NTS



4 DETAIL 4
C14 NTS

CONSULTANT'S SHEET PROJECT NO. 22107-08	
REVISION NO.	DESCRIPTION
DATE	BY
CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR	
BENT 4-I-I	
REVISION NO.	DESCRIPTION
DATE	BY
DRAWING NO. C14	
SHEET 15 of 22	

FILE NAME: I:\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - Civil\C3-C16-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-13 PLOTTED: Tuesday, April 18, 2023 - 12:04pm USER: lzepeda



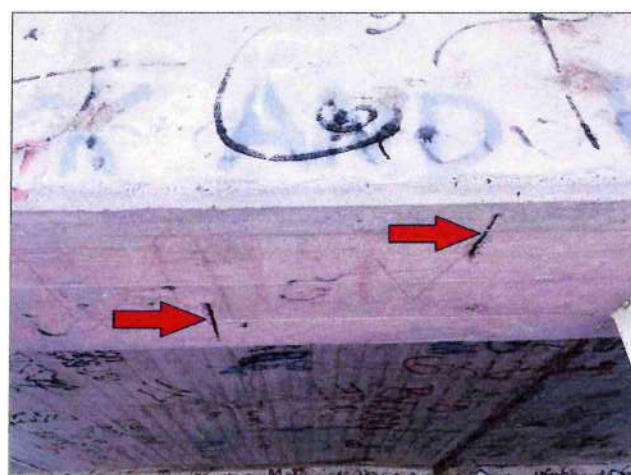
1 BENT 5 J-J
C15 NTS



1 DETAIL 1
C15 NTS



2 DETAIL 2
C15 NTS



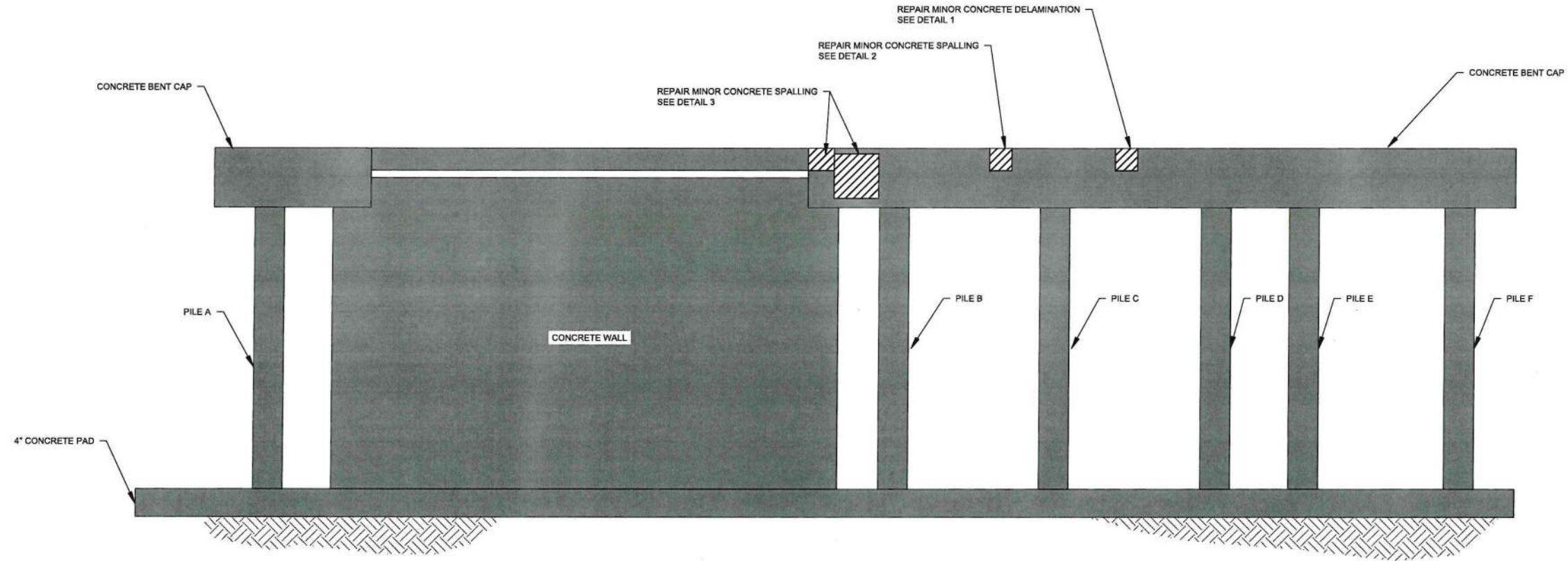
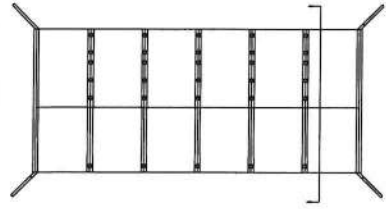
3 DETAIL 3
C15 NTS



4 DETAIL 4
C15 NTS

CONSULTANT'S SHEET PROJECT NO. 22107-08	
<p>INTERNATIONAL CONSULTING ENGINEERS 261 SARATOGA BLVD. CORPUS CHRISTI, TX 78417 PHONE: 361.826.5805 FAX: 361.826.5808 I.B.P.E. FROM REGISTRATION #F-10837</p>	
REVISION NO.	DESCRIPTION
DATE	BY
REVISION NO.	DESCRIPTION
DATE	BY
CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR	
BENT 5 J-J	
REVISION NO.	DESCRIPTION
DATE	BY
DRAWING NO. C15	
SHEET 16 of 22	

FILE NAME: \\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - Civil\C3-C16-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-14 PLOTTED: Tuesday, April 18, 2023 - 12:04pm USER: lzspado



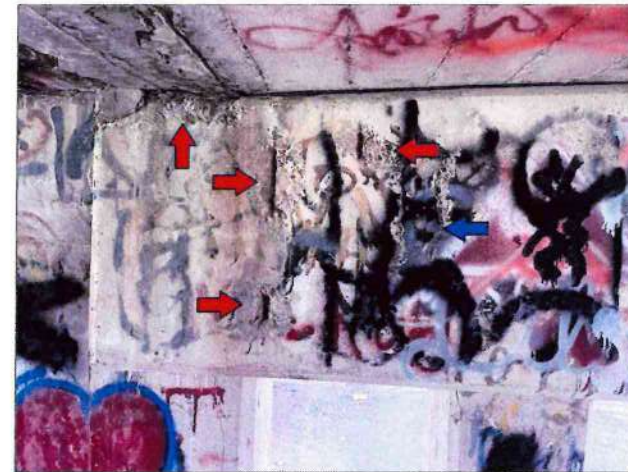
1 BENT 5 (K-K)
C16 NTS



1 DETAIL 1
C16 NTS



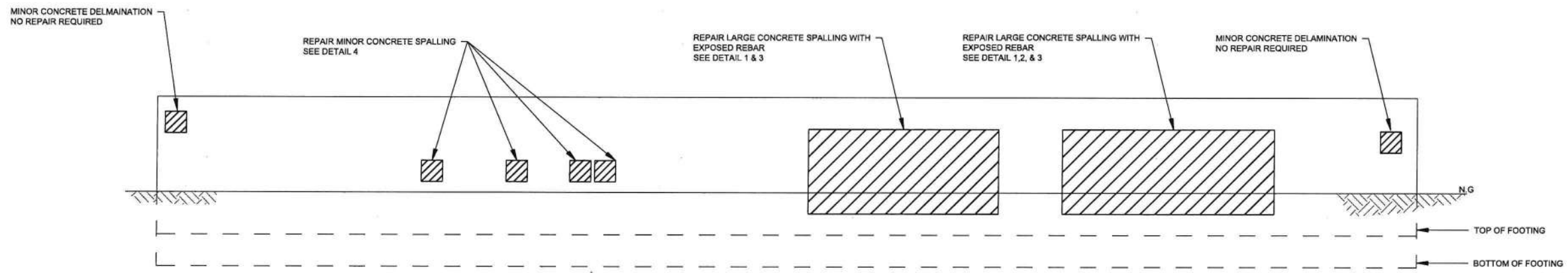
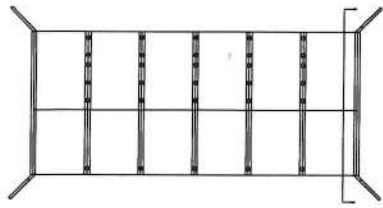
2 DETAIL 2
C16 NTS



3 DETAIL 3
C16 NTS

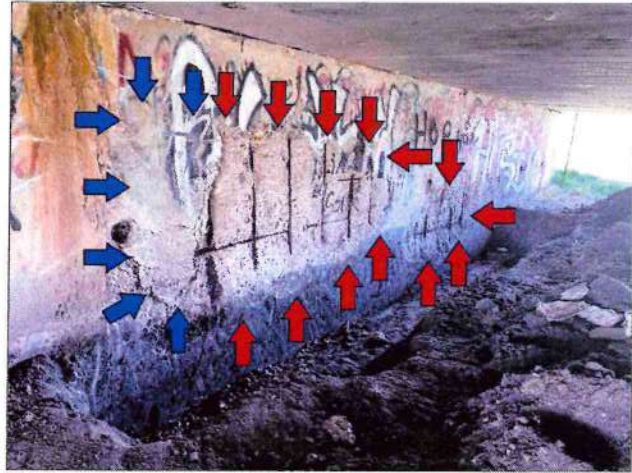
CONSULTANT'S SHEET PROJECT NO. 22107-08			
		INTERNATIONAL CONSULTING ENGINEERS 261 SARATOGA BLVD. CORPUS CHRISTI, TX 78417 PHONE: 361.826.8805 FAX: 361.826.8808 T.S.P.E. FROM REGISTRATION #F-10837	
REVISION NO.	DATE	BY	DESCRIPTION
			CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR
			BENT 5 K-K
DRAWING NO.		C16	
SHEET 17 of 22			

FILE NAME: I:\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - Civil\C17-C18-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-15 PLOTTED: Tuesday, April 18, 2023 - 12:04pm USER: itrepado



1 ABUTMENT 2 (L-L)
C17 NTS

NOTE: CONCRETE WINGWALLS NOT SHOWN FOR CLARITY



1 DETAIL 1
C17 NTS



2 DETAIL 2
C17 NTS



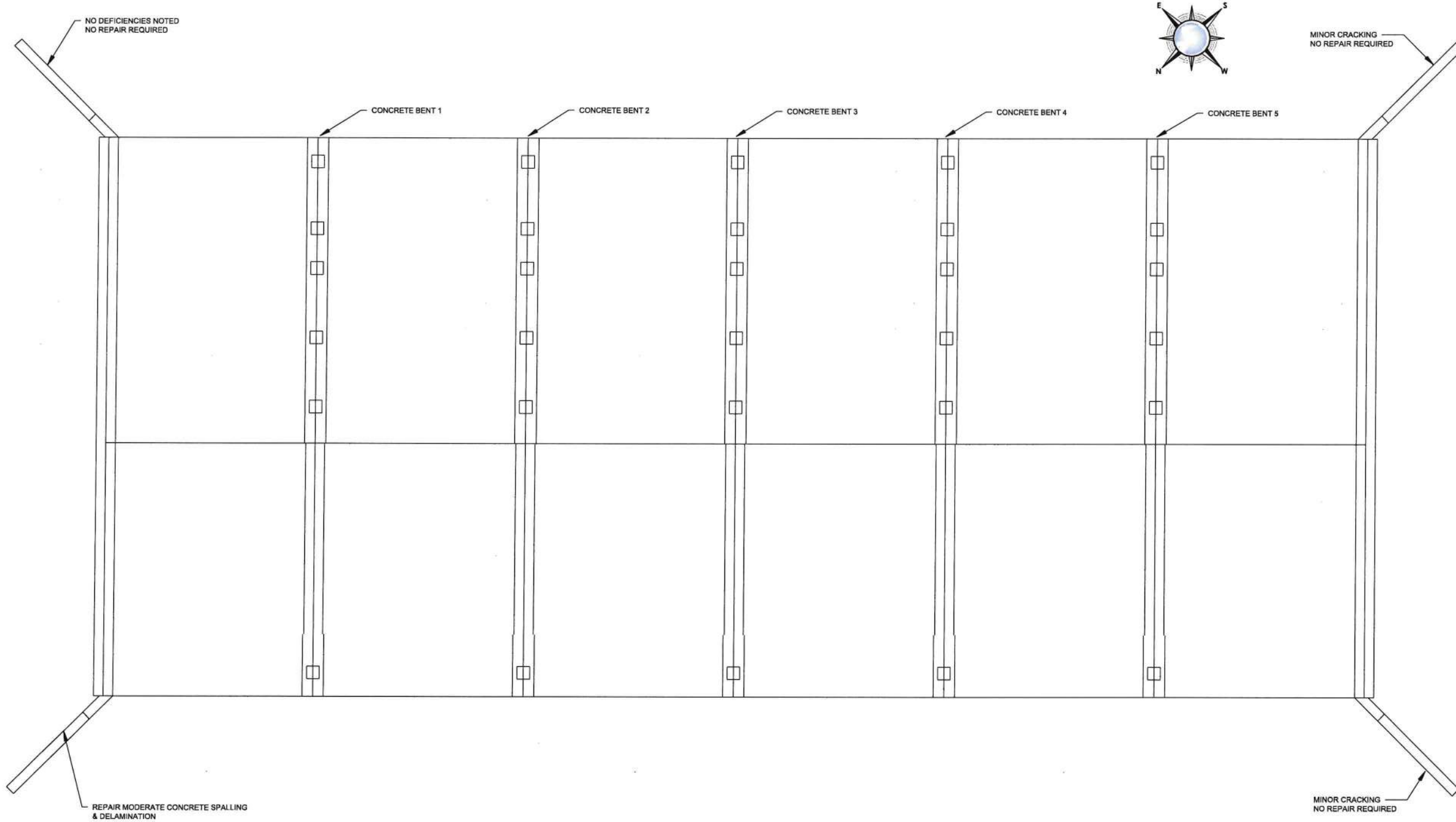
3 DETAIL 3
C17 NTS



4 DETAIL 4
C17 NTS

CONSULTANT'S SHEET PROJECT NO. 22107-08	
INTERNATIONAL CONSULTING ENGINEERS 261 SARATOGA BLVD. CORPUS CHRISTI, TX 78417 PHONE: 361.826.5805 FAX: 361.826.8906 T.S.P.E. FIRM REGISTRATION #F-10837	
DESCRIPTION	CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR
BY	
DATE	
REVISION NO.	
DESCRIPTION	ABUTMENT 2 L-L
BY	
DATE	
REVISION NO.	
DRAWING NO.	C17
SHEET	18 of 22

FILE NAME: I:\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1- Drawings\2 - Civil\C3-C16-TRANQUITAS BRIDGE.dwg LAYOUT NAME: C-16 PLOTTED: Tuesday, April 18, 2023 - 12:04pm USER: izapado

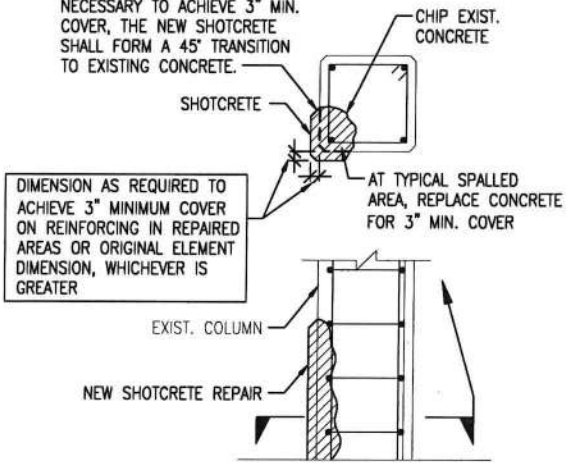


1 BRIDGE PLAN WING WALLS
C18 NTS

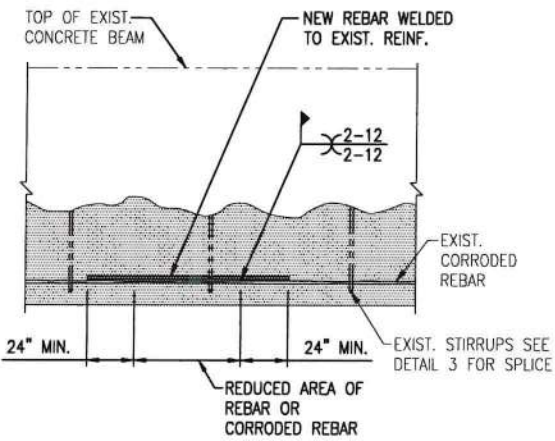
CONSULTANT'S SHEET PROJECT NO. 22107-08	
<p>INTERNATIONAL CONSULTING ENGINEERS 241 SARATOGA BLVD. CORPUS CHRISTI, TX 78417 PHONE: 361.826.8808 FAX: 361.826.8808 T.S.P.E. FIRM REGISTRATION #F-10837</p>	
REVISION NO.	DESCRIPTION
	CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR
	BRIDGE PLAN WING WALLS
REVISION NO.	DATE
BY	
	DRAWING NO.
	C18
	SHEET 19 of 22

FILE NAME: I:\Projects\2022\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - Concrete Repair Details.dwg LAYOUT NAME: SECTIONS PLOTTED: Tuesday, April 18, 2023 - 12:04pm USER: Irepado

NOTE:
AT ALL AREAS WHERE AN ADDITIONAL SHOTCRETE OR CAST-IN PLACE CONC. IS NECESSARY TO ACHIEVE 3" MIN. COVER, THE NEW SHOTCRETE SHALL FORM A 45° TRANSITION TO EXISTING CONCRETE.

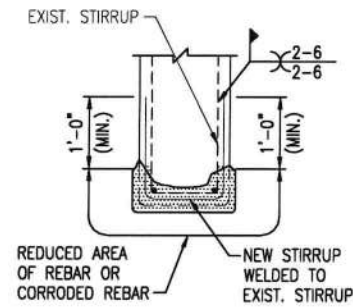


1 SPALL REPAIR DETAIL
C19 SCALE: 3/4"=1'-0"



NOTE:
REINFORCING SIZES AND LOCATIONS ARE TAKEN FROM DESIGN DWG'S. ACTUAL SIZES AND LOCATIONS MAY VARY (TYP.)

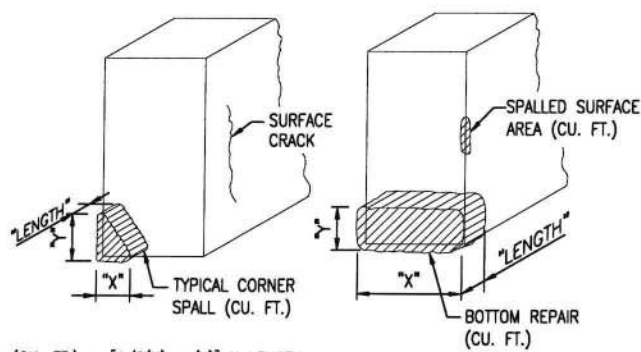
2 TYPICAL REBAR SPLICE DETAIL
C19 SCALE: 1"=1'-0"



3 TYP. STIRRUP SPLICE DETAIL
C19 NOT TO SCALE

NOTES:

- REBAR SPLICE SHALL BE NECESSARY WHEN EXISTING EXPOSED REBAR HAS LOST 25% OF ITS ORIGINAL CROSS-SECTIONAL AREA (NOT DIAMETER) AFTER SANDBLASTING.
- REMOVAL OF SOUND CONCRETE MAY BE REQUIRED TO ACHIEVE MIN. SPLICE LENGTH. CONSULT WITH ENGINEER BEFORE REMOVING ANY SOUND CONCRETE.
- ALL EXPOSED REBARS SHALL BE COMPLETELY MECHANICALLY CLEANED PRIOR TO PLACING SHOTCRETE OR CAST-IN-PLACE CONCRETE.
- APPLY SIKA ARMTEC 1C CEMENTITIOUS BONDER TO CONCRETE SURFACES OF REPAIRS AND REBAR PRIOR TO PLACEMENT OF SHOTCRETE OR CAST-IN PLACE CONCRETE.



VOL (CU. FT.) = [1/2(X x Y)] x LENGTH

VOL (CU. FT.) = (X x Y) x LENGTH

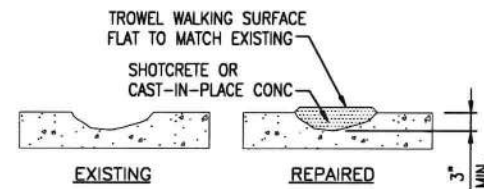
EQUIVALENT SQUARE FEET: = $\frac{VOL(CU.FT.)}{.33}$ FOR PAYMENT

4 REPAIR QUANTITY MEASUREMENT
C19 NOT TO SCALE

NOTE:

REPAIR QUANTITIES WILL BE BASED ON THE FOLLOWING:

- CITY OF KINGSVILLE REPRESENTATIVES OR THE CONTRACT ENGINEER WILL MEASURE THE SPALLED AND CRACKED AREA QUANTITIES AFTER COMPLETION OF CHIPPING AND CLEANING PROCESS, BUT PRIOR TO NEW REPAIRS. ALL REPAIR QUANTITIES WILL BE MEASURED IN LINEAR FEET FOR CRACKS AND IN CU.FT. FOR SPALLED BASED ON THE FOLLOWING DEPTH CRITERIA:
 - A) CRACK-1" DEEP
 - B) SPALL-3" DEEP
- PAYMENT FOR THE QUANTITIES OVER AND ABOVE THE TABULATED REPAIR QUANTITIES MUST BE APPROVED BY OWNERS REPRESENTATIVE PER ADDITIVE/DEDUCTIVE BID ITEM 1.



5 TYPICAL SPALL REPAIR DETAIL
C19 SCALE: 3/4"=1'-0"

NOTE:

- FOR CONCRETE REPAIR NOTES SEE DWG. C-1



CITY OF KINGSVILLE
TRANQUITAS BRIDGE REPAIR
CONCRETE REPAIR DETAILS

DESCRIPTION

BY

DATE

REVISION NO.

DESCRIPTION

BY

DATE

REVISION NO.

DRAWING NO.

C19

SHEET 20 of 22

FILE NAME: I:\Projects\2023\City of Kingsville\Kingsville Tranquitas Bridge Repair\1 - Drawings\2 - CIV\2.18 - CONCRETE FAILURE REPRESENTATIONS.dwg LAYOUT NAME: Layout1 PLOTTED: Tuesday, April 18, 2023 - 12:05pm USER: lzapado



1
C20 NTS
TYPICAL CONCRETE SPALL WITH EXPOSED REBAR



2
C20 NTS
TYPICAL CONCRETE SPALL WITH EXPOSED REBAR



3
C20 NTS
TYPICAL CONCRETE SPALL WITH EXPOSED REBAR



4
C20 NTS
TYPICAL CRACK AND SPALLING OF CONCRETE



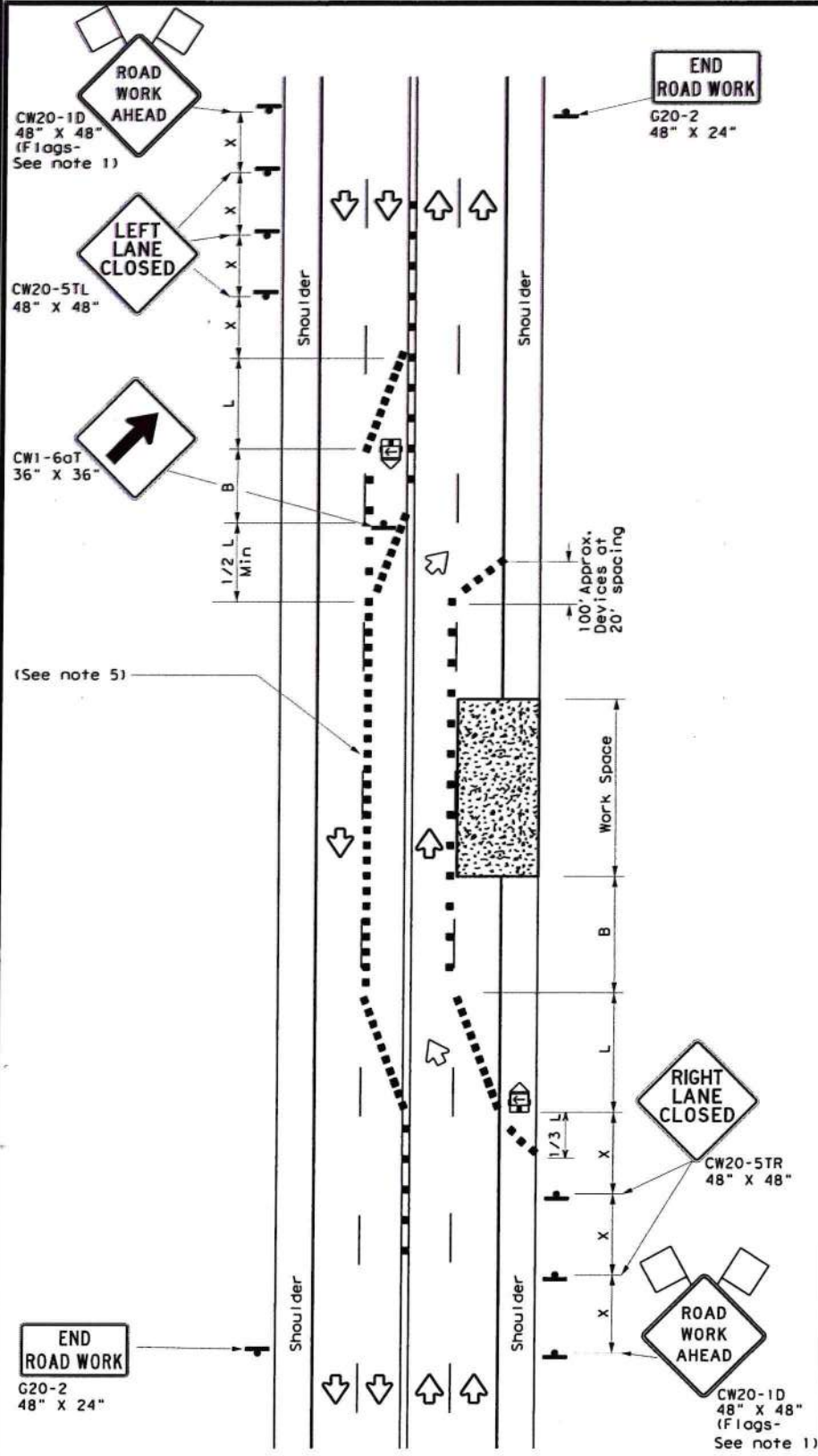
5
C20 NTS
TYPICAL CRACK AND SPALLING OF CONCRETE



6
C20 NTS
TYPICAL CRACK AND SPALLING OF CONCRETE

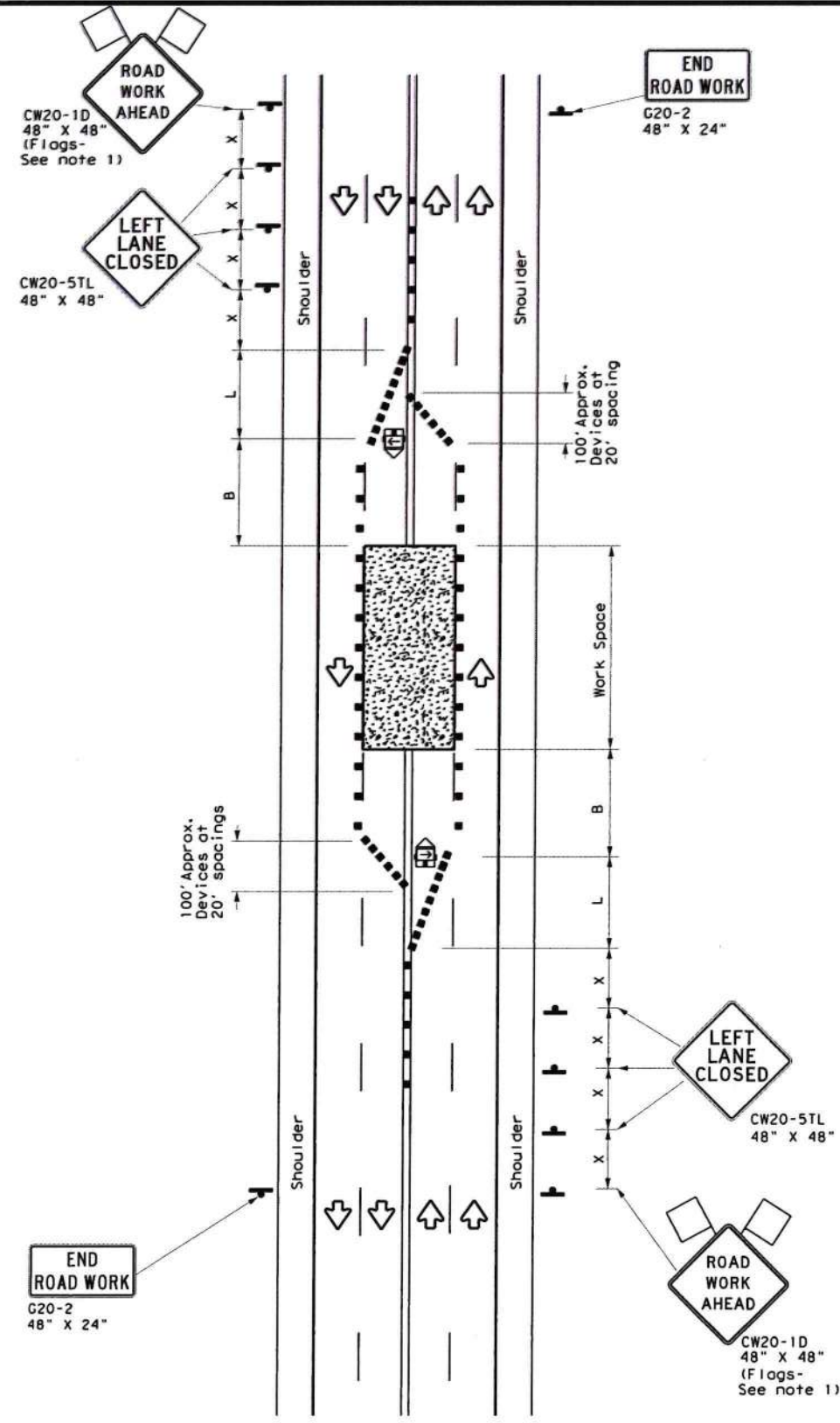
REVISION NO.		DATE	BY	DESCRIPTION
C20				CITY OF KINGSVILLE TRANQUITAS BRIDGE REPAIR CONCRETE FAILURE REPRESENTATIONS
DRAWING NO.		C20		
SHEET		21 of 22		
CONSULTANT'S SHEET		PROJECT NO. 22107-08		
<p>INTERNATIONAL CONSULTING ENGINEERS 281 SARATOGA BLVD. CORPUS CHRISTI, TX 78417 PHONE: 361.826.8865 FAX: 361.826.8866 I.B.P.E. FIRM REGISTRATION #F-10837</p>				

FILE NAME: I:\Projects\2022\City of Kingsville\Tranquitas Bridge Repair\Drawings\2 - Civi\C19-Traffic Control PLAN.dwg LAYOUT NAME: Layout11 PLOTTED: Tuesday, April 18, 2023 - 12:05pm USER: lrezedo



TCP (SC-2a)

**ONE LANE CLOSED EACH DIRECTION
CONTROL WITH CHANNELIZING DEVICES**



TCP (SC-2b)

**CENTER LANES CLOSED
CONTROL WITH CHANNELIZING DEVICES**

LEGEND

	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "x" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L = WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only
 ** Taper lengths have been rounded off.
 L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

TYPICAL USAGE

MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

- Flags attached to signs where shown are REQUIRED.
- All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
- The CW20-1D "ROAD WORK AHEAD" sign may be repeated if the visibility of the work zone is less than 1500 feet.
- If the seal coat operation crosses intersections, traffic in these areas must be controlled. Care must be taken to prevent vehicles from crossing the asphalt before the aggregate is placed. This may require positioning other member of the traffic control crew at the intersection.
- Temporary rumble strips are not required on seal coat operations.

TCP (SC-2a)

- Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speeds are 35 mph or slower, and for tangent sections, at 1/2(S) where S is the posted speed in mph. This tighter device spacing is intended for the areas of conflicting markings, not the entire work zone.

Texas Department of Transportation
 Traffic Operations Division Standard

**TRAFFIC CONTROL PLAN
 LANE CLOSURES ON MULTILANE
 CONVENTIONAL ROADS**

TCP (SC-2) -21

FILE: tcpsc-2-21.dgn D:\ J:\ C:\
 © TxDOT April 2021 CONT SECT JOB HIGHWAY
 REVISIONS
 DIST COUNTY SHEET NO.



IOE
 INTERNATIONAL CONSULTING ENGINEERS
 261 SARATOGA BLVD.
 CORPUS CHRISTI, TX 78417
 PHONE: 361.428.5805
 FAX: 361.428.5806
 I.B.P.E. FIRM REGISTRATION #F-10837



CITY OF KINGSVILLE
 TRANQUITAS BRIDGE REPAIR
 TRAFFIC CONTROL PLAN