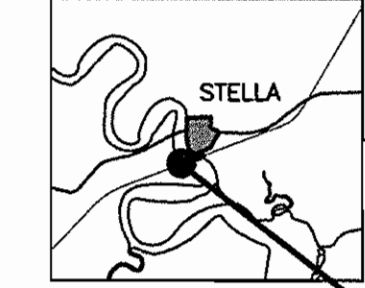
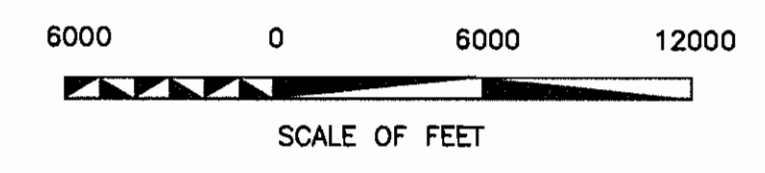
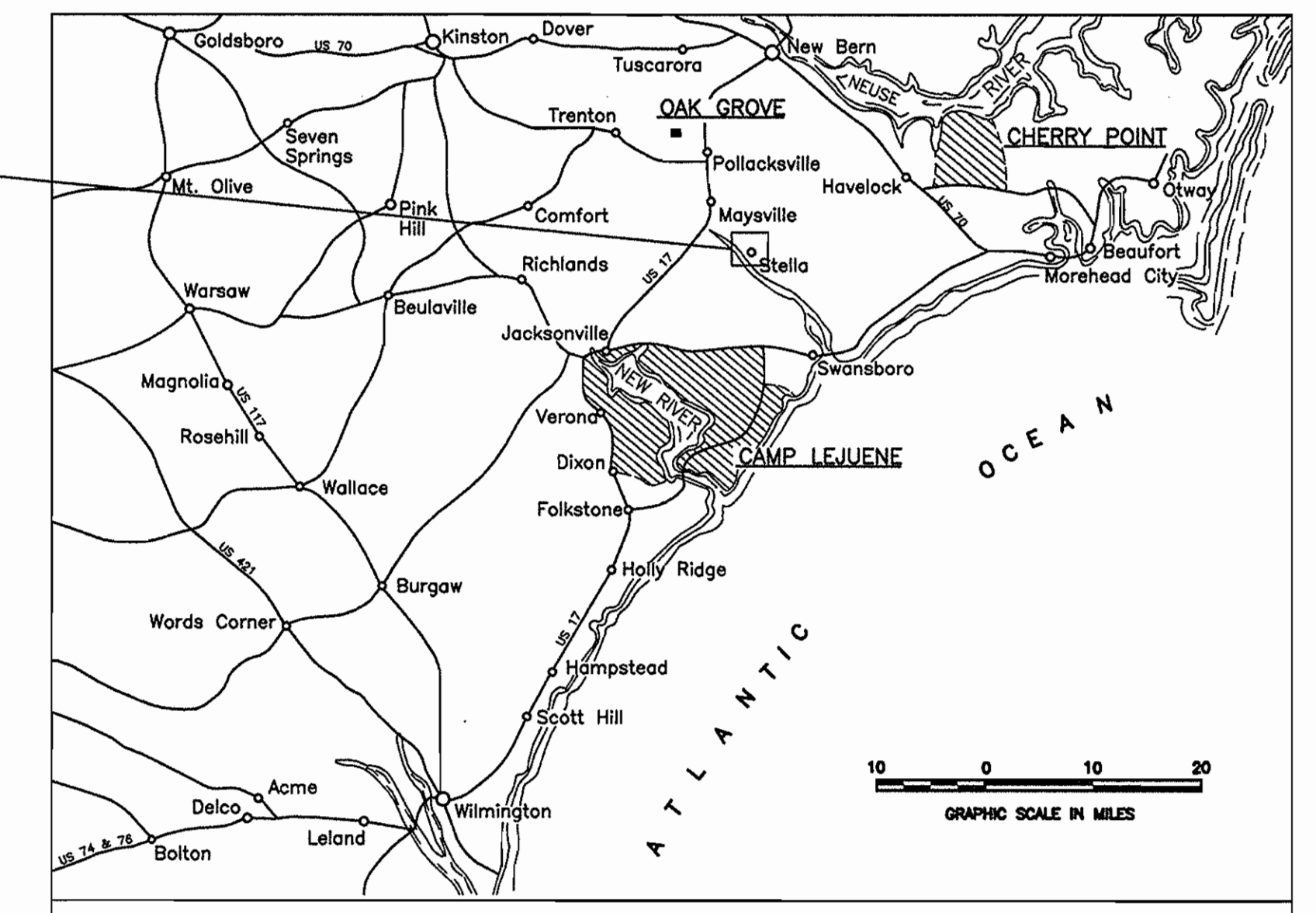


SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED



LOCATION MAP - TOWN OF STELLA, NC



VICINITY MAP - CAMP LEJEUNE, N.C.

BRIDGE SM328

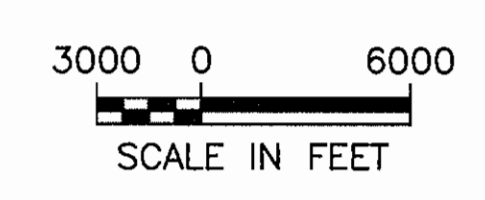
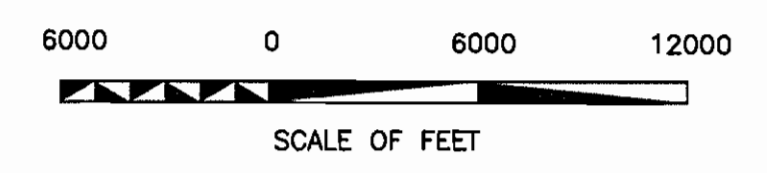
BRIDGE S750

BRIDGES - S787/S788

BRIDGE S882

BRIDGE SSR21

BRIDGE SSR20

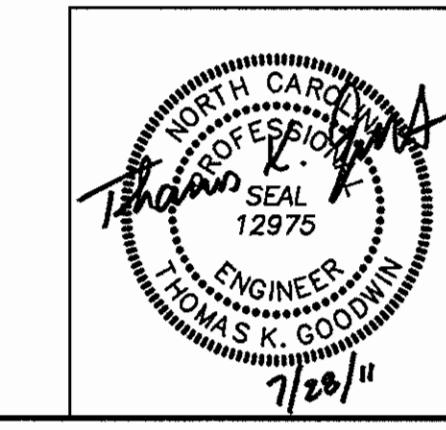


LOCATION MAP - U. S. MARINE CORPS BASE - CAMP LEJEUNE, N.C.

SHEET INDEX

SHEET NO.	NAVFAC NO.	SHEET	SHEET TITLE
01	60008256	G-1	COVER SHEET, VICINITY MAP, LOCATION MAP AND INDEX SHEET
02	60008257	C-1	BRIDGE 750 TYPICAL SECTION AND BRIDGE ELEVATION KEY MAP
03	60008258	C-2	BRIDGE 750 ELEVATION BENT 1 - 14
04	60008259	C-3	BRIDGE 750 ELEVATION BENT 14 - 28
05	60008260	C-4	BRIDGE 750 ELEVATION BENT 28 - 42
06	60008261	C-5	BRIDGE SM328 TYPICAL SECTION
07	60008262	C-6	BRIDGE SM328 BRIDGE ELEVATION
08	60008263	C-7	BRIDGE S787 TYPICAL SECTION
09	60008264	C-8	BRIDGE S787 BRIDGE ELEVATION
10	60008265	C-9	BRIDGE S788 TYPICAL SECTION
11	60008266	C-10	BRIDGE S788 BRIDGE ELEVATION
12	60008267	C-11	BRIDGE SSR20 TYPICAL SECTION
13	60008268	C-12	BRIDGE SSR20 BRIDGE ELEVATION
14	60008269	C-13	BRIDGE SSR21 TYPICAL SECTION
15	60008270	C-14	BRIDGE SSR21 BRIDGE ELEVATION
16	60008271	C-15	BRIDGE S882 TYPICAL SECTION
17	60008272	C-16	BRIDGE S882 ELEVATION BENT 1 - 20
18	60008273	C-17	BRIDGE S882 ELEVATION BENT 21 - 40
19	60008274	C-18	BRIDGE S882 ELEVATION BENT 41 - 60
20	60008275	C-19	BRIDGE S882 ELEVATION BENT 61 - 80
21	60008276	C-20	BRIDGE S882 ELEVATION BENT 81 - 100
22	60008277	C-21	BRIDGE S882 ELEVATION BENT 101 - 120
23	60008278	C-22	BRIDGE S882 ELEVATION BENT 121 - 140
24	60008279	C-23	BRIDGE S882 ELEVATION BENT 141 - 159
25	60008280	C-24	BRIDGE S882 ELEVATION BENT 160 - 179
26	60008281	C-25	BRIDGE S882 ELEVATION BENT 180 - 195
27	60008282	D-1	BRIDGE REPAIR DETAILS
28	60008283	D-2	BRIDGE REPAIR DETAILS

REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC

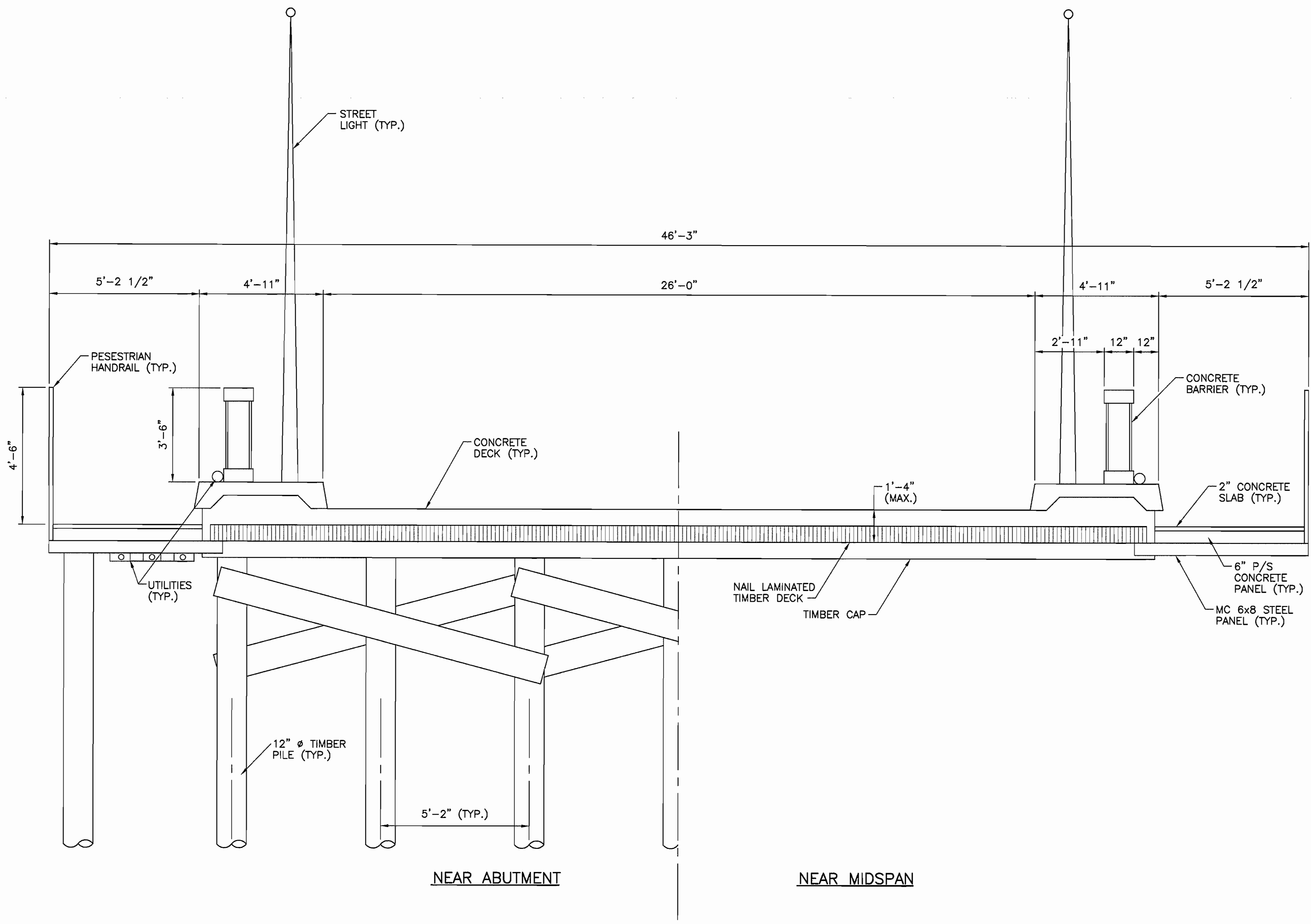


Hobbs Upchurch Associates <small>engineering planning surveying</small> 300 SW Broad Street Southern Pines Office Southern Pines, North Carolina 28387 P: (919) 690-5414 F: (919) 690-7342 License Number: C-0454		G-1	
DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		NAVAL FACILITIES ENGINEERING COMMAND	
DES. TKG DR. FDW CHK. TKG SUBMITTED BY: DESKIN DR.		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC COVER SHEET, VICINITY MAP, LOCATION MAP AND INDEX SHEET	
APPROVED: PWO OR OICC DATE:	DATE:	SIZE: F CODE IDENT NO.: 80091	NAVFAC DRAWING NO.: 60008256 CONSTR CONTR NO.: N 82470-11-0097
BATHYMETRIC TO:		SCALE: AS SHOWN SPEC: 110097	SHEET 1 OF 28

SYMBOL	PREP'D BY	PREP'D BY	DATE	APPROVED

PROJECT AREA DESCRIPTIONS
 BRIDGE NO. 750 (PROP. REC. NO. 200480)
 SETH WILLIAMS BLVD. OVER WALLACE CREEK

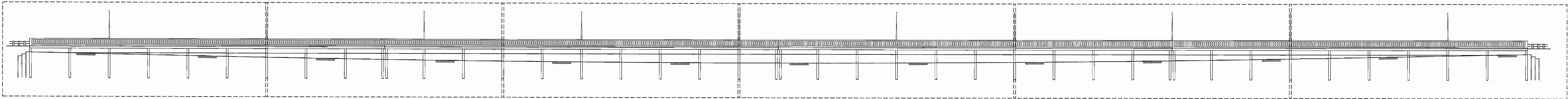
- GENERAL NOTES**
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 - SITE SHALL BE LEFT FREE AND CLEAN OF DEBRIS UPON COMPLETION.
 - INFORMATION ON CONTRACTOR RESPONSIBILITY AND REQUIREMENTS WAS OBTAINED AND COMPILED FROM A REPORT BY PENNONI DATED JULY 30, 2010 THRU AUGUST 2, 2010. CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT FOR ANY SPECIFIC INFORMATION AS TO THE DEFICIENCIES TO BE CORRECTED ON THE BRIDGES.



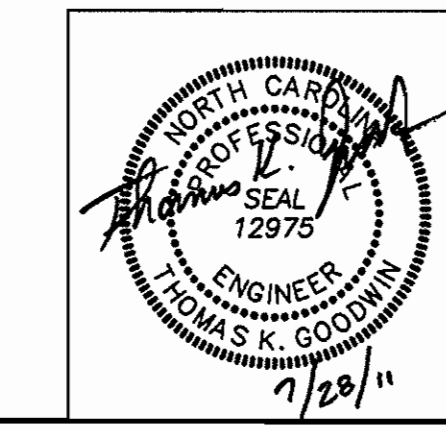
TYPICAL BRIDGE SECTION
 NOT TO SCALE

CONTRACTOR RESPONSIBILITY AND REQUIREMENTS	
DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. THERE IS A GOUGE IN THE NORTHBOUND LANE OF THE NORTH APPROACH, A 1/2" WIDE LONGITUDINAL CRACK ALONG THE CENTERLINE OF THE NORTH APPROACH, RANDOM GOUGES IN THE NORTHBOUND LANE OF THE SOUTH APPROACH UP TO 1/2", AND MINOR MAPCRACKING IN THE SOUTH APPROACH PAVEMENT.	CLEAN AND SEAL PAVEMENT CRACKS AND GOUGES.
2. THERE IS A POTHOLE IN THE NORTHBOUND LANE OF THE NORTH APPROACH, 1'x6"Wx3'DP.	REPAIR POTHOLE PER DETAIL.
3. THE FOLLOWING PILES HAVE GREATER THAN 20% SECTION LOSS: BENT 5 PILE 2, BENT 22 PILE 2, AND BENT 37 PILE 8.	REPAIR THE SECTIONS PER DETAIL.
4. THERE IS SEVERE DECAY OR SPLITTING OF CROSS BRACING.	REPLACE THE CROSS BRACING AND USE NEW HARDWARE FOR THE CONNECTION.
5. PAVEMENT MARKINGS ON THE DECK AND APPROACHES IS FADED.	RESTRIPES THE DECK AND APPROACH WITH THERMOPLASTIC MATERIAL IN ACCORDANCE WITH NCDOT GUIDELINES.
6. THE CABLES ON THE GUARDRAIL END TREATMENTS WE FOUND TO BE LOOSE.	TIGHTEN CABLES ON GUARDRAIL END TREATMENTS.
7. ELIMINATE VEHICLE SNAG POINTS (ERODED SOILS) AT THE NORTHWEST AND SOUTHEAST CORNERS.	REPLACE THE CROSS BRACING AND USE NEW HARDWARE FOR THE CONNECTION.
8. THE HANDRAIL AT THE NORTHEAST CORNER IS OVERGROWN WITH VEGETATION.	REMOVE VEGETATION AND SPRAY WITH HERBICIDE.
9. THE CONDUIT FOR LIGHTING IS SEPARATED AT THE CENTER OF THE BRIDGE.	REPAIR THE SEPARATED CONDUIT.
10. ISOLATED AREAS OF DECAY WITH UP TO 100% LOSS OF SECTION ARE PRESENT ON THE TIMBER BULKHEAD OF END BENT 1.	REPLACE THE DECAYING TIMBERS.
11. PERIODICALLY CLEAN THE BRIDGE JOINTS, GUTTERS, AND DRAINS.	CLEAN AS NEEDED DURING CONTRACT TIMEFRAME.

BENT 1 - 7 SHEET C-2 BENT 7 - 14 SHEET C-2 BENT 14 - 20 SHEET C-3 BENT 20 - 28 SHEET C-3 BENT 28 - 36 SHEET C-4 BENT 36 - 42 SHEET C-4



BRIDGE ELEVATION KEY MAP
 NOT TO SCALE

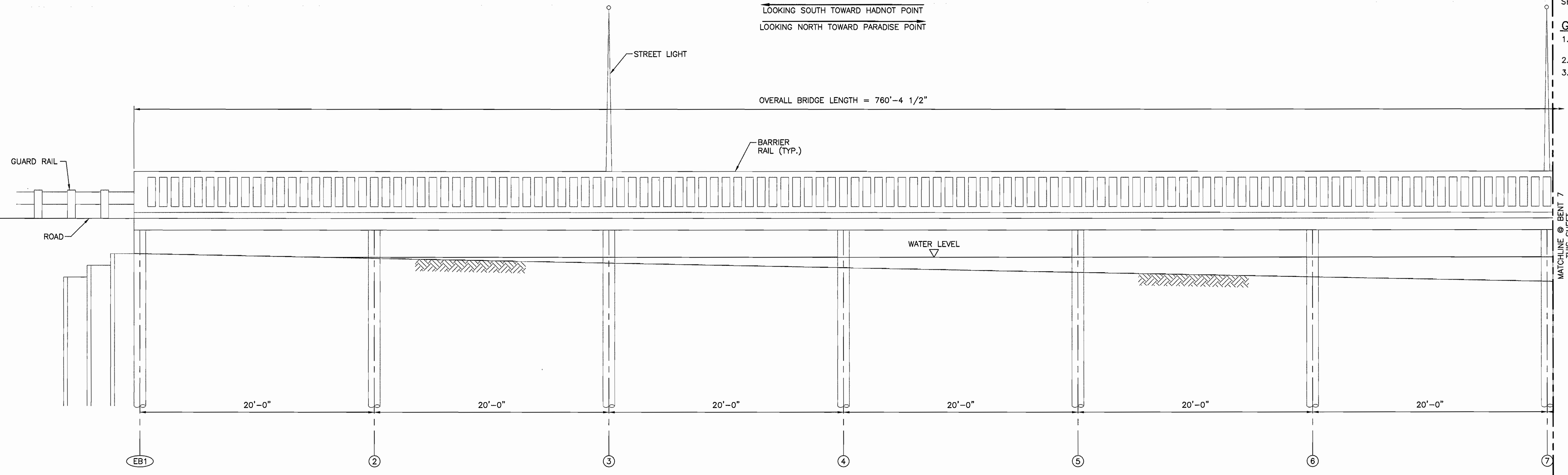


Hobbs Upchurch Associates <small>engineering planning surveying</small> Southern Pines Office 300 SW Broad Street Southern Pines, North Carolina 28387 P: (919) 692-8616 F: (919) 692-7432 www.hobbsupchurch.com License Number: C-0454		C-1	
DEPT OF NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		NAVFAC DRAWING NO. 60008257	
DEB. TKG DR. FDW CHK. TKG SUBMITTED BY: DESIGN DR. APPROVED: PWO OR OKCC DATE		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE 750 TYPICAL SECTION AND BRIDGE ELEVATION KEY MAP	
SATISFACTORY TO DATE		SIZE CODE IDENT NO. F 80091	CONSTR CONTR NO. N 62470-TI-0097
SCALE: AS SHOWN SPEC: 110097		SHEET 2 OF 28	

SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

BRIDGE S750

EAST (UPSTREAM) SIDE
 LOOKING SOUTH TOWARD HADNOT POINT
 LOOKING NORTH TOWARD PARADISE POINT



PROJECT AREA DESCRIPTIONS

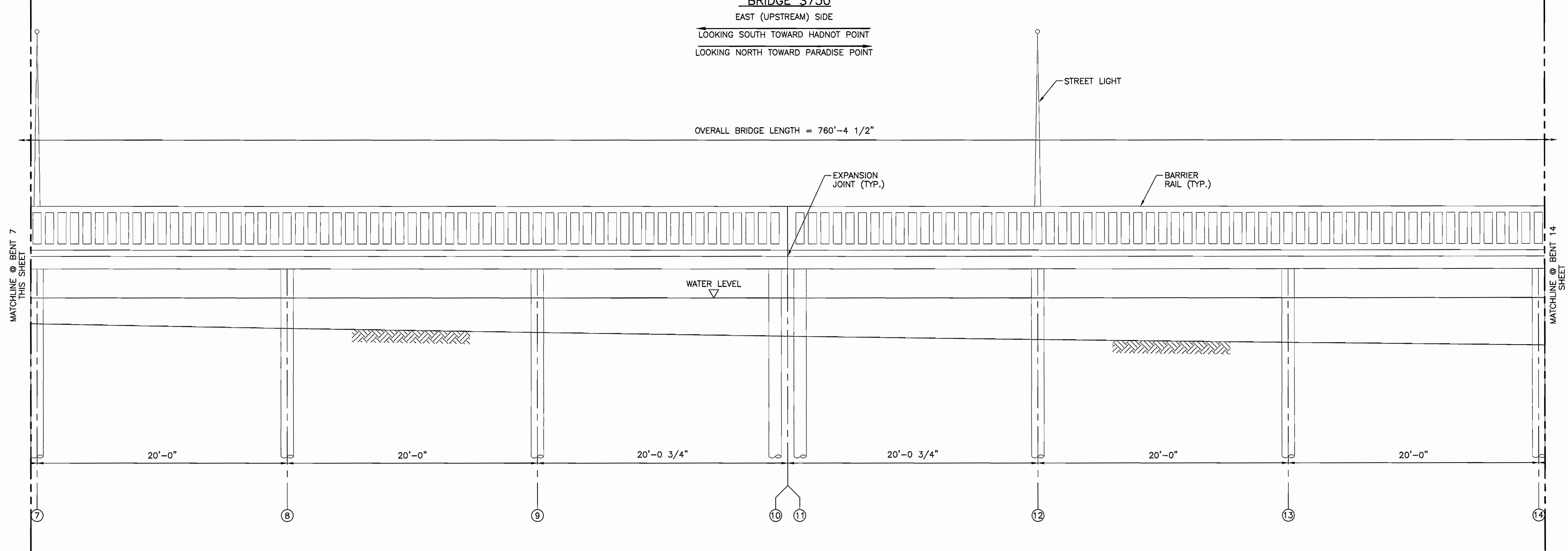
BRIDGE NO. 750 (PROP. REC. NO. 200480)
 SETH WILLIAMS BLVD. OVER WALLACE CREEK

GENERAL NOTES

1. ALL DEBRIS AND CONSTRUCTION MATERIAL MAY BE DISPOSED OF AT THE BASE LANDFILL.
2. SITE SHALL BE LEFT FREE AND CLEAN OF DEBRIS UPON COMPLETION.
3. INFORMATION ON CONTRACTOR RESPONSIBILITY AND REQUIREMENTS WAS OBTAINED AND COMPILED FROM A REPORT BY PENNONI DATED JULY 30, 2010 THRU AUGUST 2, 2010. CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT FOR ANY SPECIFIC INFORMATION AS TO THE DEFICIENCIES TO BE CORRECTED ON THE BRIDGES.

BRIDGE S750

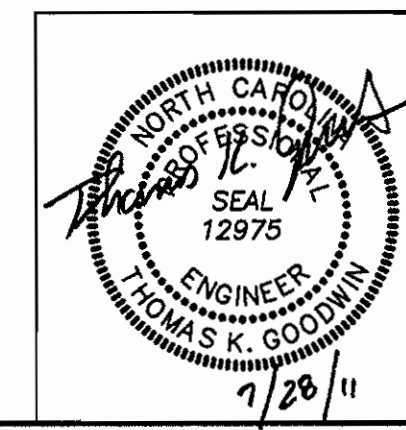
EAST (UPSTREAM) SIDE
 LOOKING SOUTH TOWARD HADNOT POINT
 LOOKING NORTH TOWARD PARADISE POINT



CONTRACTOR RESPONSIBILITY AND REQUIREMENTS

DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. THERE IS A GOUGE IN THE NORTHBOUND LANE OF THE NORTH APPROACH, A 1/2" WIDE LONGITUDINAL CRACK ALONG THE CENTERLINE OF THE NORTH APPROACH, RANDOM GOUGES IN THE NORTHBOUND LANE OF THE SOUTH APPROACH UP TO 1/2", AND MINOR MAPCRACKING IN THE SOUTH APPROACH PAVEMENT.	CLEAN AND SEAL PAVEMENT CRACKS AND GOUGES.
2. THERE IS A POTHOLE IN THE NORTHBOUND LANE OF THE NORTH APPROACH, 1'x6"Wx3"DP.	REPAIR POTHOLES PER DETAIL.
3. THE FOLLOWING PILES HAVE GREATER THAN 20% SECTION LOSS: BENT 5 PILE 2, BENT 22 PILE 2, AND BENT 37 PILE 8.	REPAIR THE SECTIONS PER DETAIL.
4. THERE IS SEVERE DECAY OR SPLITTING OF CROSS BRACING.	REPLACE THE CROSS BRACING AND USE NEW HARDWARE FOR THE CONNECTION.
5. PAVEMENT MARKINGS ON THE DECK AND APPROACHES IS FADED.	RESTRIPE THE DECK AND APPROACH WITH THERMOPLASTIC MATERIAL IN ACCORDANCE WITH NCDOT GUIDELINES.
6. THE CABLES ON THE GUARDRAIL END TREATMENTS WE FOUND TO BE LOOSE.	TIGHTEN CABLES ON GUARDRAIL END TREATMENTS.
7. ELIMINATE VEHICLE SNAG POINTS (ERODED SOILS) AT THE NORTHWEST AND SOUTHEAST CORNERS.	REPLACE THE CROSS BRACING AND USE NEW HARDWARE FOR THE CONNECTION.
8. THE HANDRAIL AT THE NORTHEAST CORNER IS OVERGROWN WITH VEGETATION.	REMOVE VEGETATION AND SPRAY WITH HERBICIDE.
9. THE CONDUIT FOR LIGHTING IS SEPARATED AT THE CENTER OF THE BRIDGE.	REPAIR THE SEPARATED CONDUIT.
10. ISOLATED AREAS OF DECAY WITH UP TO 100% LOSS OF SECTION ARE PRESENT ON THE TIMBER BULKHEAD OF END BENT 1.	REPLACE THE DECAYING TIMBERS.
11. PERIODICALLY CLEAN THE BRIDGE JOINTS, GUTTERS, AND DRAINS.	CLEAN AS NEEDED DURING CONTRACT TIMEFRAME.

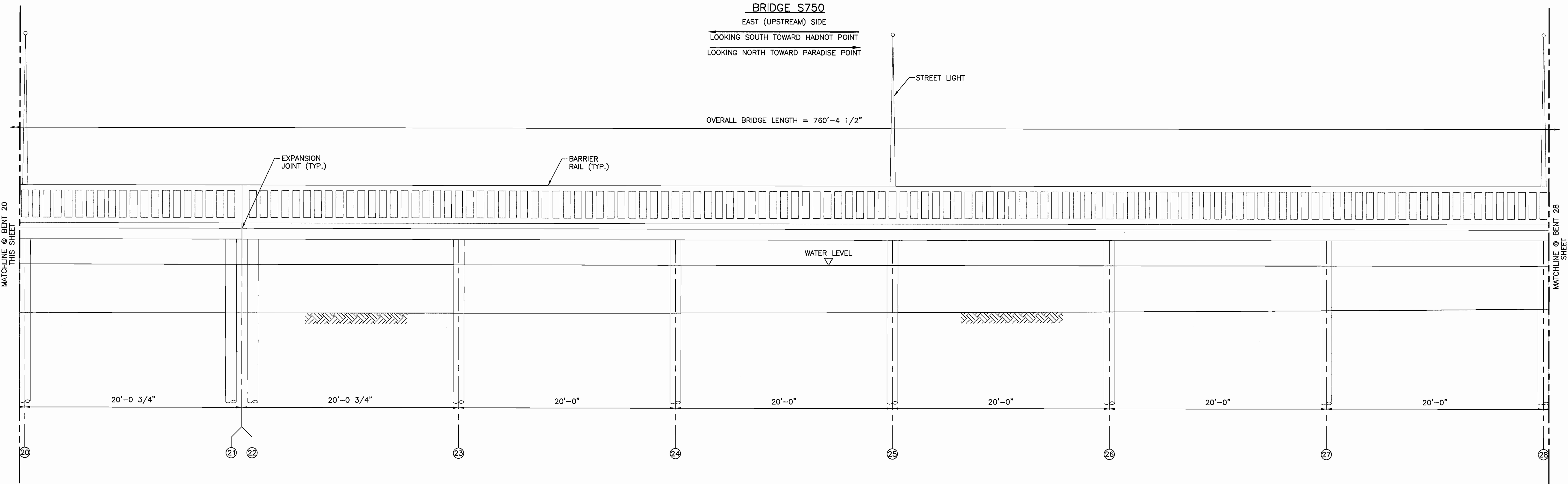
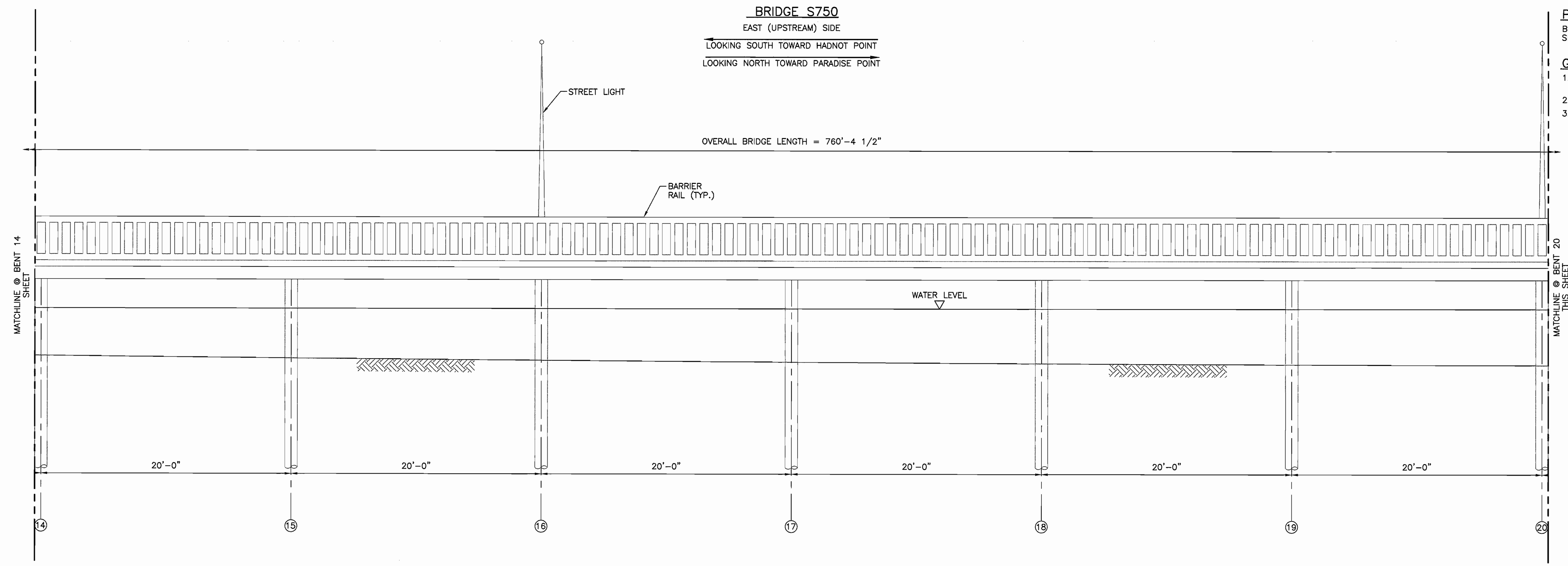
Hobbs Upchurch Associates <small>engineering planning surveying</small> <small>300 SW Broad Street Southern Pines, North Carolina 28387</small> <small>P: (910) 692-8676 F: (910) 692-7362</small> <small>www.hobbsupchurch.com</small>		C-2	
DEPT OF NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE 750 ELEVATION BENT 1 - 14	
DES. TKG	DR. FDW	CHK. TKG	SUBMITTED BY:
DESIGN DR.	APPROVED: PWD OR OICC	DATE	SIZE
SATISFACTORY TO	DATE	CODE IDENT NO.	NAVFAC DRAWING NO.
SCALE: AS SHOWN	SPEC. 110097	F 80091	60008257
		CONSTR CONTR NO. N 82470-II-0097	SHEET 3 OF 28



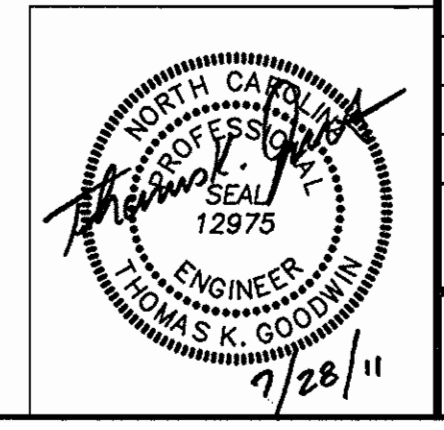
SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

PROJECT AREA DESCRIPTIONS
 BRIDGE NO. 750 (PROP. REC. NO. 200480)
 SETH WILLIAMS BLVD. OVER WALLACE CREEK

- GENERAL NOTES**
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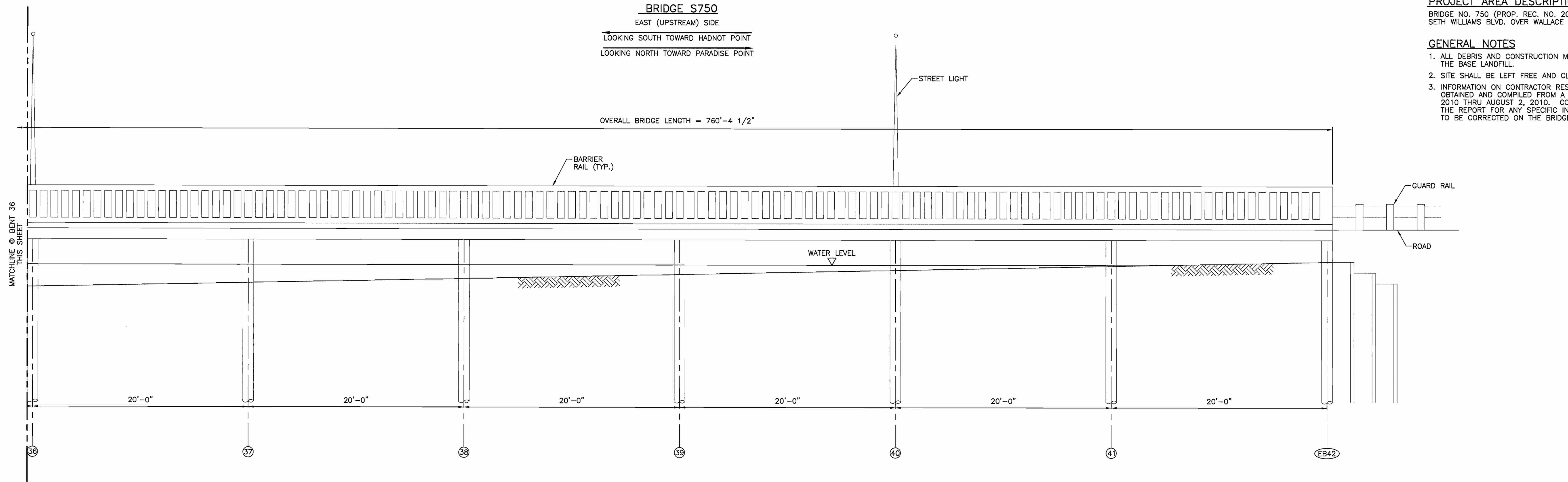
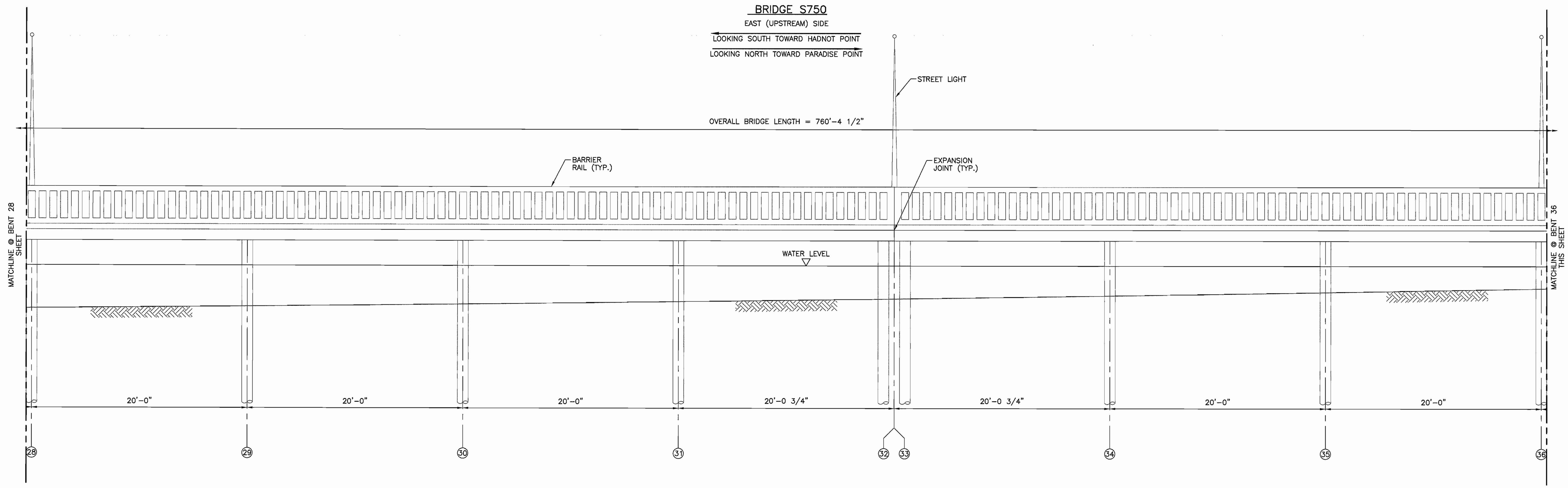


CONTRACTOR RESPONSIBILITY AND REQUIREMENTS	
DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. THERE IS A GOUGE IN THE NORTHBOUND LANE OF THE NORTH APPROACH, A 1/2" WIDE LONGITUDINAL CRACK ALONG THE CENTERLINE OF THE NORTH APPROACH, RANDOM GOUGES IN THE NORTHBOUND LANE OF THE SOUTH APPROACH UP TO 1/2", AND MINOR MAPCRACKING IN THE SOUTH APPROACH PAVEMENT.	CLEAN AND SEAL PAVEMENT CRACKS AND GOUGES.
2. THERE IS A POTHOLE IN THE NORTHBOUND LANE OF THE NORTH APPROACH, 1'x6"wx3"DP.	REPAIR POTHOLES PER DETAIL.
3. THE FOLLOWING PILES HAVE GREATER THAN 20% SECTION LOSS: BENT 5 PILE 2, BENT 22 PILE 2, AND BENT 37 PILE 8.	REPAIR THE SECTIONS PER DETAIL.
4. THERE IS SEVERE DECAY OR SPLITTING OF CROSS BRACING.	REPLACE THE CROSS BRACING AND USE NEW HARDWARE FOR THE CONNECTION.
5. PAVEMENT MARKINGS ON THE DECK AND APPROACHES IS FADED.	RESTRIPE THE DECK AND APPROACH WITH THERMOPLASTIC MATERIAL IN ACCORDANCE WITH NCDOT GUIDELINES.
6. THE CABLES ON THE GUARDRAIL END TREATMENTS WE FOUND TO BE LOOSE.	TIGHTEN CABLES ON GUARDRAIL END TREATMENTS.
7. ELIMINATE VEHICLE SNAG POINTS (ERODED SOILS) AT THE NORTHWEST AND SOUTHEAST CORNERS.	REPLACE THE CROSS BRACING AND USE NEW HARDWARE FOR THE CONNECTION.
8. THE HANDRAIL AT THE NORTHEAST CORNER IS OVERGROWN WITH VEGETATION.	REMOVE VEGETATION AND SPRAY WITH HERBICIDE.
9. THE CONDUIT FOR LIGHTING IS SEPARATED AT THE CENTER OF THE BRIDGE.	REPAIR THE SEPARATED CONDUIT.
10. ISOLATED AREAS OF DECAY WITH UP TO 100% LOSS OF SECTION ARE PRESENT ON THE TIMBER BULKHEAD OF END BENT 1.	REPLACE THE DECAYING TIMBERS.
11. PERIODICALLY CLEAN THE BRIDGE JOINTS, GUTTERS, AND DRAINS.	CLEAN AS NEEDED DURING CONTRACT TIMEFRAME.



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DEPT OF NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE 750 ELEVATION BENT 14 - 28	
DES. TKG	DR. FDW	SIZE	CODE IDENT NO.
CHK. TKG	SUBMITTED BY:	F	80091
DESIGN DIR.	APPROVED: PWO OR OICC	DATE	NAVFAC DRAWING NO. 600082559
SATISFACTORY TO	DATE	CONSTR CONTR NO.	N 82470-II-0057
SCALE: AS SHOWN	SPEC: 110097	SHEET 4 OF 28	

SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

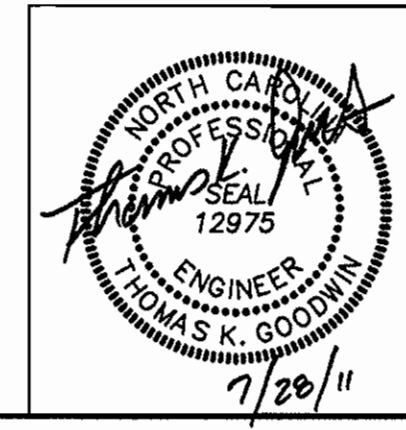


PROJECT AREA DESCRIPTIONS
 BRIDGE NO. 750 (PROP. REC. NO. 200480)
 SETH WILLIAMS BLVD. OVER WALLACE CREEK

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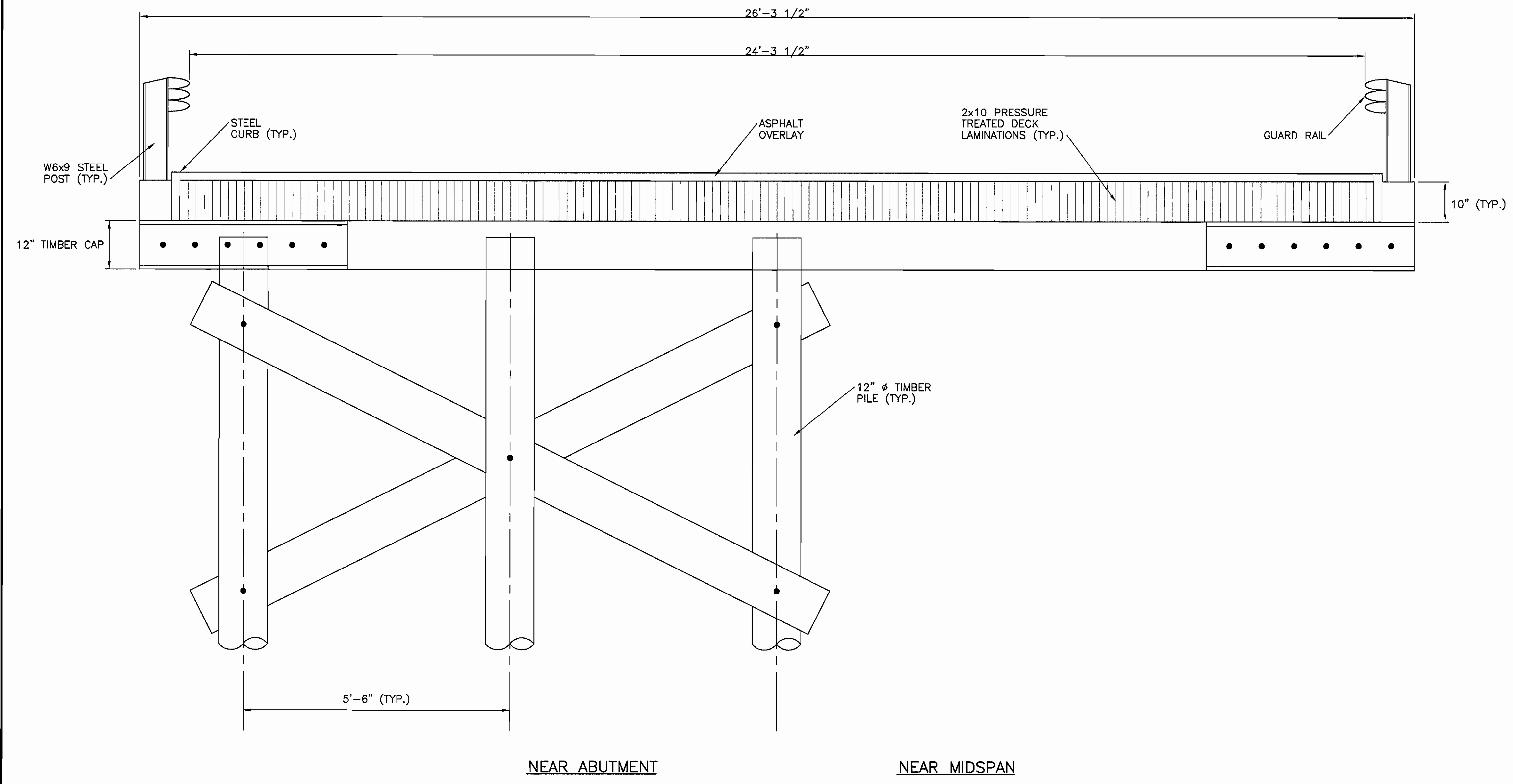


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DEPT OF NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE 750 ELEVATION BENT 28 - 42	
DES. TKG DR. FDW CHK. TKG SUBMITTED BY: DESIGN DIR. APPROVED: PWO OR OICC DATE SATISFACTORY TO DATE	SIZE F 80091 NAVFAC DRAWING NO. 60008260 CONSTR CONTR NO. N 82470-11-0087		
SCALE: AS SHOWN	SPEC: 110097	SHEET 5 OF 28	

SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

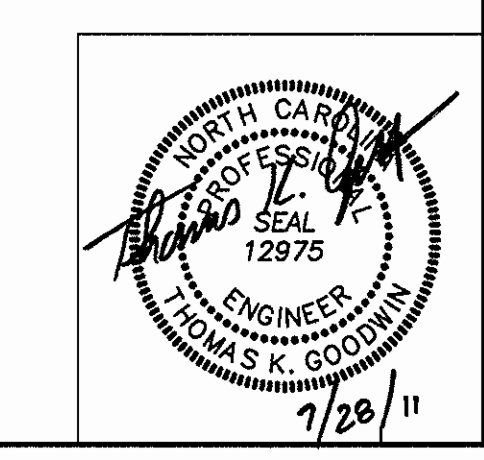
PROJECT AREA DESCRIPTIONS
 BRIDGE NO. SM328 (PROP. REC. NO. 203469)
 FLORENCE ROAD OVER SCALES CREEK

- GENERAL NOTES**
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TYPICAL BRIDGE SECTION
 NOT TO SCALE

CONTRACTOR RESPONSIBILITY AND REQUIREMENTS	
DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. PILE 1 AT BENT 14 HAS EXTERNAL AND INTERNAL DECAY WITH APPROXIMATELY 60% SECTION LOSS.	REPLACE DECAYED PILE.
2. REPAIR DECAYED SECTIONS OF THE FOLLOWING PILES: PILE 4 AT BENT 2, PILE 5 AT BENT 7, PILE 5 AT BENT 9, PILE 1 AT BENT 10, PILE 3 AT BENT 11, PILE 5 AT BENT 15 (2 AREAS), PILE 1 AT BENT 16, PILE 5 AT BENT 17, AND PILE 5 AT BENT 18.	REPAIR DECAYED PILE SECTIONS PER "DECAYED PILE REPAIR DETAIL".
3. CROSS-BRACING MEMBERS HARDWARE IS HEAVILY CORRODED OR MISSING FOR THE CROSS-BRACING TIMBERS.	REPLACE OR ADD HARDWARE FOR ADEQUATE REPAIR OF THE TIMBER CROSS-BRACING.
4. SOME OF THE CROSS-BRACING MEMBERS ARE DISCONNECTED DUE TO 100% SECTION LOSS.	REPLACE CROSS-BRACING MEMBERS AND SECURE WITH NEW HARDWARE.
5. REPAIR THE UNDERMINED AREAS AT THE SOUTH BULKHEAD AT END BENT1 AND AT THE SOUTHEAST WING WALL WITH GROUT BAGS.	CONTRACTOR SHALL CLEAN OUT UNDERMINED AREAS OF UNSUITABLE SOILS AND BACKFILL WITH GROUT BAGS.
6. REPLACE THE TWO FAILED OR SEVERELY DECAYED TIMBER GUARDRAIL POSTS AT THE SOUTHEAST APPROACH AND THE ONE DECAYED TIMBER GUARDRAIL POST AT THE NORTHWEST APPROACH.	REPLACE TIMBER GUARDRAIL POSTS PER NCDOT STANDARD DETAILS.
7. REINSTALL THE INCORRECTLY LAPPED GUARDRAIL SECTION AT THE NORTHEAST BRIDGE CORNER.	REINSTALL GUARDRAIL PER NCDOT STANDARD DETAILS.
8. SEAL THE CRACKS IN THE ASPHALT DECK OVERLAY AT THE SOUTH APPROACH.	CLEAN AND SEAL ALL JOINTS IN ACCORDANCE WITH NCDOT STANDARD DETAILS.
9. CUT AND CAP THE SHARP ENDS OF THE CUT UTILITY CONDUIT LINE ON THE WEST SIDE OF THE BRIDGE.	CUT AND CAP THE CONDUIT, CAP IS TO BE SECURED WITH A WATERPROOF EPOXY SUITABLE FOR THE MATERIALS USED.
10. REALIGN ALL OF THE MISALIGNED GUARDRAIL TIMBER OFFSET BLOCKS AND TIGHTEN ALL OF THE GUARDRAIL ATTACHMENT BOLTS.	REALIGN OFFSET BLOCKS USING NCDOT STANDARD DETAILS AND TIGHTEN ATTACHMENT BOLTS ON THE GUARDRAILS.



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DEPT OF NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
DES: TKG	DR: FDW	REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE SM328 TYPICAL SECTION	
CHK: TKG	DESIGN DIR:		
APPROVED: PWO OR OICC	DATE	SIZE: F	CODE IDENT NO.: 80091
SATISFACTORY TO	DATE	NAVFAC DRAWING NO.: 60008261 CONSTR CONTR NO.: N 62470-11-0087	
SCALE: AS SHOWN		SPEC: 110097	SHEET 6 OF 28

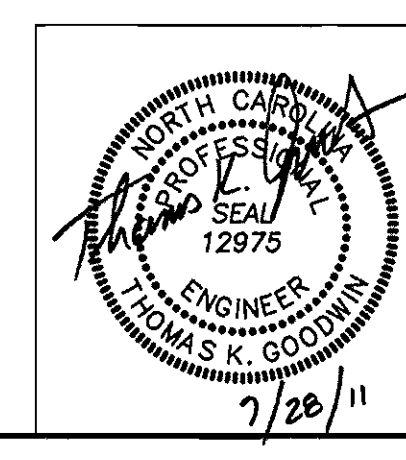
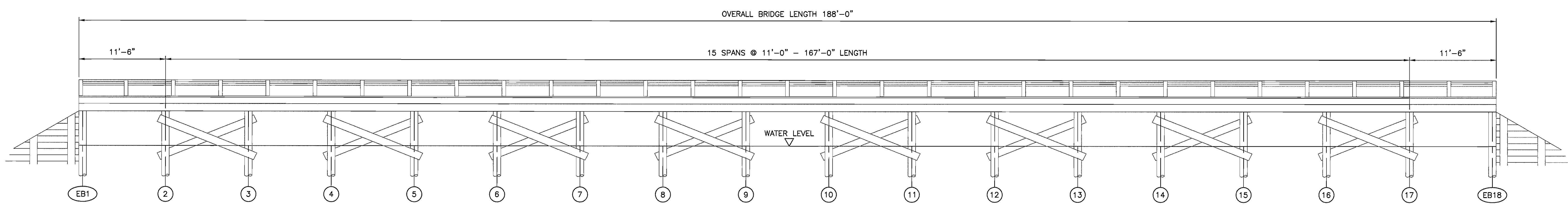
SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

PROJECT AREA DESCRIPTIONS
 BRIDGE NO. SM328 (PROP. REC. NO. 203469)
 FLORENCE ROAD OVER SCALES CREEK

- GENERAL NOTES**
1. ALL DEBRIS AND CONSTRUCTION MATERIAL MAY BE DISPOSED OF AT THE BASE LANDFILL.
 2. SITE SHALL BE LEFT FREE AND CLEAN OF DEBRIS UPON COMPLETION.
 3. INFORMATION ON CONTRACTOR RESPONSIBILITY AND REQUIREMENTS WAS OBTAINED AND COMPILED FROM A REPORT BY PENNONI DATED JULY 30, 2010 THRU AUGUST 2, 2010. CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT FOR ANY SPECIFIC INFORMATION AS TO THE DEFICIENCIES TO BE CORRECTED ON THE BRIDGES.

CONTRACTOR RESPONSIBILITY AND REQUIREMENTS	
DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. PILE 1 AT BENT 14 HAS EXTERNAL AND INTERNAL DECAY WITH APPROXIMATELY 60% SECTION LOSS.	REPLACE DECAYED PILE.
2. REPAIR DECAYED SECTIONS OF THE FOLLOWING PILES: PILE 4 AT BENT 2, PILE 5 AT BENT 7, PILE 5 AT BENT 9, PILE 1 AT BENT 10, PILE 3 AT BENT 11, PILE 5 AT BENT 15 (2 AREAS), PILE 1 AT BENT 16, PILE 5 AT BENT 17, AND PILE 5 AT BENT 18.	REPAIR DECAYED PILE SECTIONS PER "DECAYED PILE REPAIR DETAIL".
3. CROSS-BRACING MEMBERS HARDWARE IS HEAVILY CORRODED OR MISSING FOR THE CROSS-BRACING TIMBERS.	REPLACE OR ADD HARDWARE FOR ADEQUATE REPAIR OF THE TIMER CROSS-BRACING.
4. SOME OF THE CROSS-BRACING MEMBERS ARE DISCONNECTED DUE TO 100% SECTION LOSS.	REPLACE CROSS-BRACING MEMBERS AND SECURE WITH NEW HARDWARE.
5. REPAIR THE UNDERMINED AREAS AT THE SOUTH BULKHEAD AT END BENT1 AND AT THE SOUTHEAST WING WALL WITH GROUT BAGS.	CONTRACTOR SHALL CLEAN OUT UNDERMINED AREAS OF UNSUITABLE SOILS AND BACKFILL WITH GROUT BAGS.
6. REPLACE THE TWO FAILED OR SEVERELY DECAYED TIMBER GUARDRAIL POSTS AT THE SOUTHEAST APPROACH AND THE ONE DECAYED TIMBER GUARDRAIL POST AT THE NORTHWEST APPROACH.	REPLACE TIMBER GUARDRAIL POSTS PER NCDOT STANDARD DETAILS.
7. REINSTALL THE INCORRECTLY LAPPED GUARDRAIL SECTION AT THE NORTHEAST BRIDGE CORNER.	REINSTALL GUARDRAIL PER NCDOT STANDARD DETAILS.
8. SEAL THE CRACKS IN THE ASPHALT DECK OVERLAY AT THE SOUTH APPROACH.	CLEAN AND SEAL ALL JOINTS IN ACCORDANCE WITH NCDOT STANDARD DETAILS
9. CUT AND CAP THE SHARP ENDS OF THE CUT UTILITY CONDUIT LINE ON THE WEST SIDE OF THE BRIDGE.	CUT AND CAP THE CONDUIT, CAP IS TO BE SECURED WITH A WATERPROOF EPOXY SUITABLE FOR THE MATERIALS USED.
10. REALIGN ALL OF THE MISALIGNED GUARDRAIL TIMBER OFFSET BLOCKS AND TIGHTEN ALL OF THE GUARDRAIL ATTACHMENT BOLTS.	REALIGN OFFSET BLOCKS USING NCDOT STANDARD DETAILS AND TIGHTEN ATTACHMENT BOLTS ON THE GUARDRAILS.

BRIDGE SM328
 EAST (UPSTREAM) SIDE
 ← SOUTH TOWARD PARADISE POINT
 ← NORTH TOWARD CAMP JOHNSON →



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DEPT OF NAVY		NAVAL FACILITIES ENGINEERING COMMAND	
MARINE CORPS BASE		CAMP LEJUNE, NORTH CAROLINA	
DES: TKQ	DR: FDW	REPAIR BRIDGES, VARIOUS LOCATIONS	
CHK: TKQ	DESIGN DIR:		
SUBMITTED BY:		MCB, CLNC	
APPROVED: PWO OR OICC		DATE:	BRIDGE SM328
SATISFACTORY TO:		DATE:	BRIDGE ELEVATION
SIZE: F	CODE IDENT NO.: 80091	NAVIFAC DRAWING NO.: 60008262	
SCALE: AS SHOWN	SPEC: 110097	CONSTR CONTR NO.: N 62470-11-0097	SHEET 7 OF 28

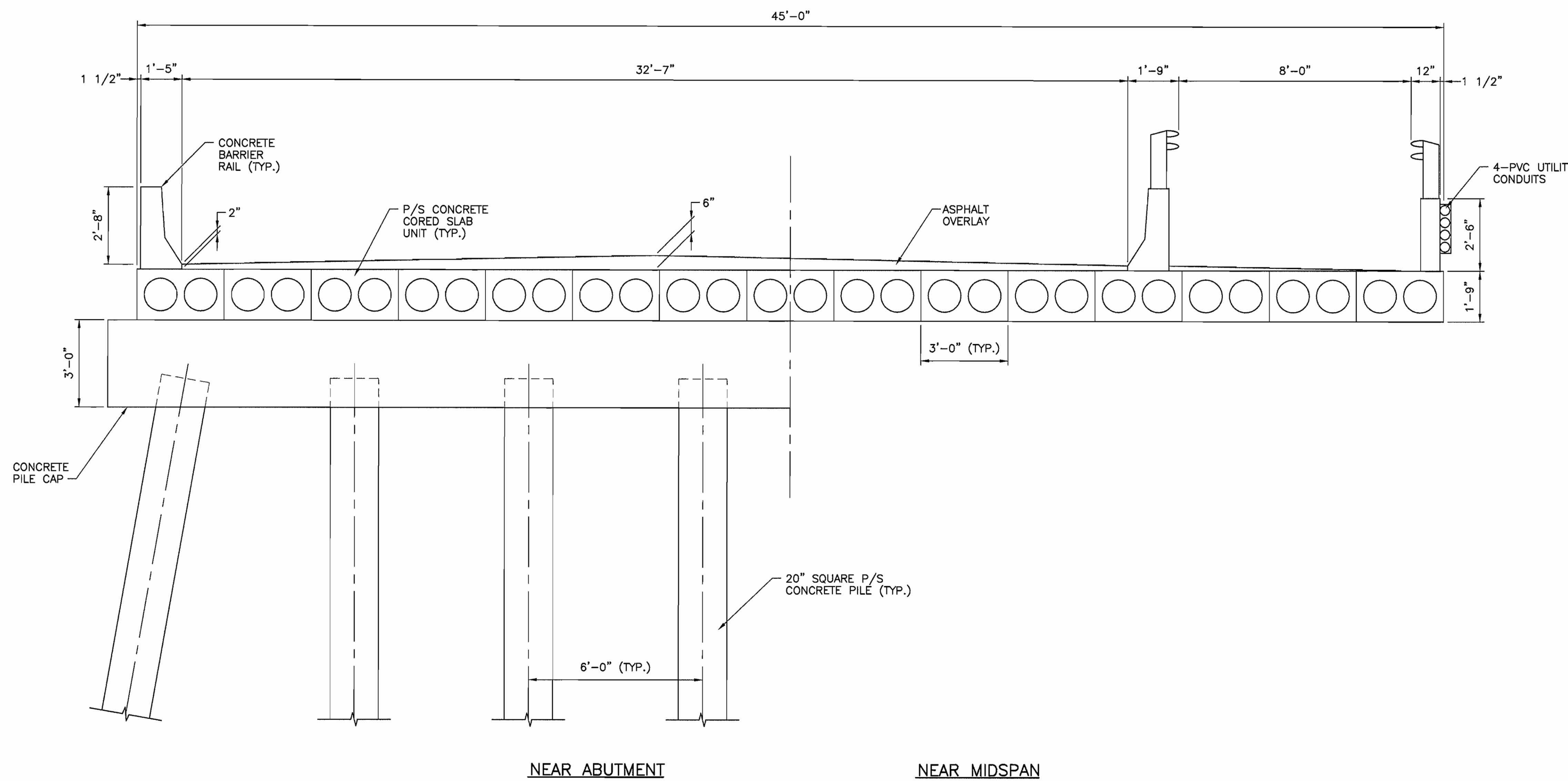
SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

PROJECT AREA DESCRIPTIONS
 BRIDGE NO. 5787 (PROP. REC. NO. 204890)
 HOLCOMB BLVD. OVER WALLACE CREEK

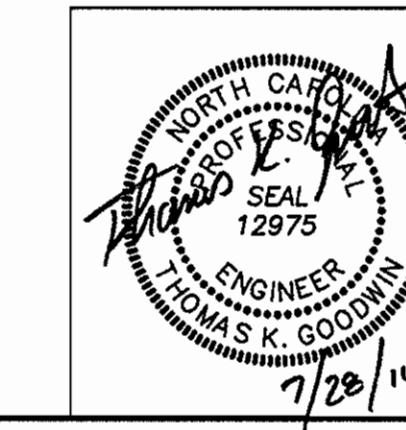
GENERAL NOTES

1. ALL DEBRIS AND CONSTRUCTION MATERIAL MAY BE DISPOSED OF AT THE BASE LANDFILL.
2. SITE SHALL BE LEFT FREE AND CLEAN OF DEBRIS UPON COMPLETION.
3. INFORMATION ON CONTRACTOR RESPONSIBILITY AND REQUIREMENTS WAS OBTAINED AND COMPILED FROM A REPORT BY PENNONI DATED JULY 30, 2010 THRU AUGUST 2, 2010. CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT FOR ANY SPECIFIC INFORMATION AS TO THE DEFICIENCIES TO BE CORRECTED ON THE BRIDGES.

CONTRACTOR RESPONSIBILITY AND REQUIREMENTS		
DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:	
1. CORRECT THE IMPROPER GUARDRAIL LAP AT THE NORTHEAST CORNER.	REINSTALL GUARDRAIL PER NCDOT STANDARD DETAILS.	
2. TIGHTEN (TENSION) THE LOOSE CABLES AT THE SOUTHWEST GUARDRAIL END TREATMENTS.	TIGHTEN THE CABLES TO ADEQUATE TENSION IN ACCORDANCE WITH NCDOT SPECIFICATIONS.	
3. ATTACH THE GUARDRAIL TO THE TIMBER BREAKAWAY POSTS AS NEEDED.	ATTACH THE GUARDRAIL PER NCDOT STANDARD DETAILS.	
4. SEAL THE LONGITUDINAL AND TRANSVERSE CRACKS IN THE ASPHALT DECK OVERLAY AND SIDEWALK.	CLEAN AND SEAL ALL JOINTS IN ACCORDANCE WITH NCDOT STANDARD DETAILS AND BASE GUIDELINES.	
5. REMOVE THE VEGETATION AT THE ENDS OF THE BENT CAPS AS NEEDED.	REMOVE VEGETATION AS STATED.	
6. PERIODICALLY CLEAN THE BRIDGE GUTTERS AND DRAINS.	CLEAN AS NEEDED DURING CONTRACT TIMEFRAME.	
7. THE TYPE 3 OBJECT MARKER LOCATED AT THE NORTHEAST CORNER OF THE BRIDGE THAT NEEDS TO BE RELOCATED TO THE END OF THE BRIDGE RAIL AND OBJECT MARKERS NEED TO BE INSTALLED AT THE REMAINING CORNERS OF THE BRIDGE.	RELOCATE AND ADD THE MARKERS USING THE "TYPE 3 REFLECTIVE OBJECT MARKER DETAIL" AND IN ACCORDANCE WITH NCDOT SPECIFICATIONS.	
8. THE GUARDRAIL END TREATMENT AT THE SOUTHEAST CORNER HAS MINOR IMPACT DAMAGE AND IS ALSO UNATTACHED FROM THE POST.	REPAIR THE DAMAGED GUARDRAILS TO NCDOT SPECIFICATIONS AND REATTACH TO POST	



TYPICAL BRIDGE SECTION
 NOT TO SCALE



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<small>DEPT OF NAVY</small> NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE <small>CAMP LEJEUNE, NORTH CAROLINA</small>		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE 5787 TYPICAL SECTION	
<small>DES. TKG</small> <small>DR. FDW</small> <small>CHK. TKG</small> <small>SUBMITTED BY:</small> <small>DESIGN DIR.</small>	<small>APPROVED: PWO OR OICC</small>	<small>DATE</small>	<small>SIZE</small> F
<small>SATISFACTORY TO</small>	<small>DATE</small>	<small>CODE IDENT NO.</small> 80091	<small>NAVFAC DRAWING NO.</small> 60008263
<small>SCALE: AS SHOWN</small>	<small>SPEC.</small>	<small>CONSTR CONTR NO.</small> N 62470-II-0097	<small>NAVAC DRAWING NO.</small> 60008263
<small>SCALE: AS SHOWN</small>		<small>SPEC.</small> 110097	<small>SHEET</small> 8 <small>OF</small> 28

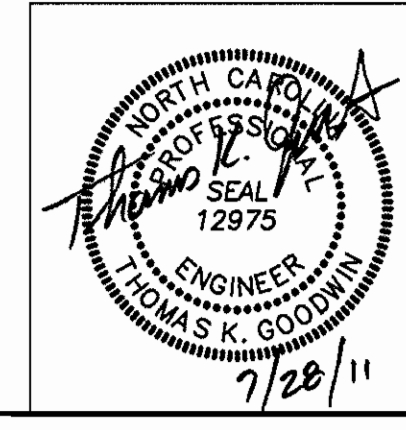
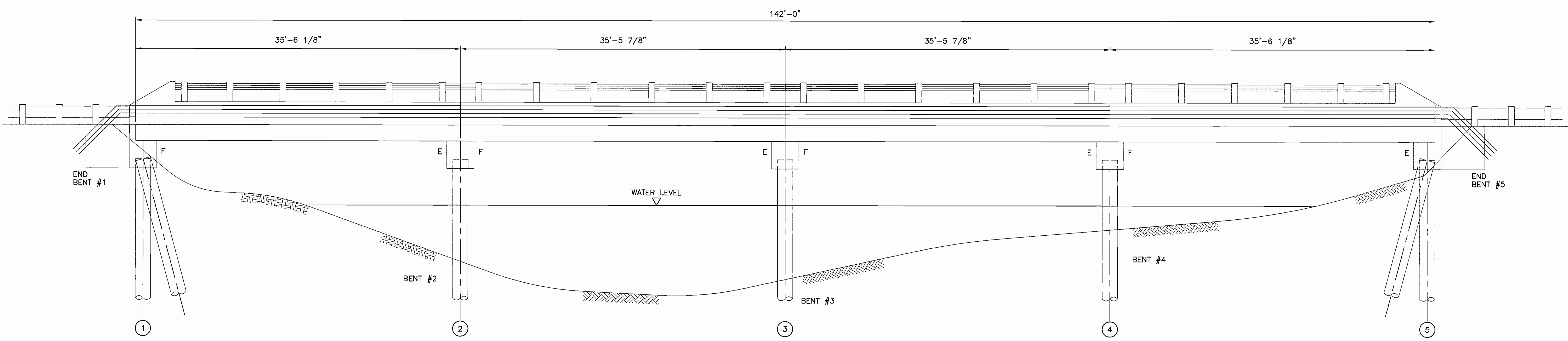
SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

PROJECT AREA DESCRIPTIONS
 BRIDGE NO. S787 (PROP. REC. NO. 204890)
 HOLCOMB BLVD. OVER WALLACE CREEK

- GENERAL NOTES**
1. ALL DEBRIS AND CONSTRUCTION MATERIAL MAY BE DISPOSED OF AT THE BASE LANDFILL.
 2. SITE SHALL BE LEFT FREE AND CLEAN OF DEBRIS UPON COMPLETION.
 3. INFORMATION ON CONTRACTOR RESPONSIBILITY AND REQUIREMENTS WAS OBTAINED AND COMPILED FROM A REPORT BY PENNONI DATED JULY 30, 2010 THRU AUGUST 2, 2010. CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT FOR ANY SPECIFIC INFORMATION AS TO THE DEFICIENCIES TO BE CORRECTED ON THE BRIDGES.

BRIDGE S787
 EAST (UPSTREAM) SIDE
 SOUTH TOWARD HADNOT POINT
 NORTH TOWARD MAIN GATE

CONTRACTOR RESPONSIBILITY AND REQUIREMENTS	
DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. CORRECT THE IMPROPER GUARDRAIL LAP AT THE NORTHEAST CORNER.	REINSTALL GUARDRAIL PER NCDOT STANDARD DETAILS.
2. TIGHTEN (TENSION) THE LOOSE CABLES AT THE SOUTHWEST GUARDRAIL END TREATMENTS.	TIGHTEN THE CABLES TO ADEQUATE TENSION IN ACCORDANCE WITH NCDOT SPECIFICATIONS.
3. ATTACH THE GUARDRAIL TO THE TIMBER BREAKAWAY POSTS AS NEEDED.	ATTACH THE GUARDRAIL PER NCDOT STANDARD DETAILS.
4. SEAL THE LONGITUDINAL AND TRANSVERSE CRACKS IN THE ASPHALT DECK OVERLAY AND SIDEWALK.	CLEAN AND SEAL ALL JOINTS IN ACCORDANCE WITH NCDOT STANDARD DETAILS AND BASE GUIDELINES.
5. REMOVE THE VEGETATION AT THE ENDS OF THE BENT CAPS AS NEEDED.	REMOVE VEGETATION AS STATED.
6. PERIODICALLY CLEAN THE BRIDGE GUTTERS AND DRAINS.	CLEAN AS NEEDED DURING CONTRACT TIMEFRAME.
7. THE TYPE 3 OBJECT MARKER LOCATED AT THE NORTHEAST CORNER OF THE BRIDGE THAT NEEDS TO BE RELOCATED TO THE END OF THE BRIDGE RAIL AND OBJECT MARKERS NEED TO BE INSTALLED AT THE REMAINING CORNERS OF THE BRIDGE.	RELOCATE AND ADD THE MARKERS USING THE "TYPE 3 REFLECTIVE OBJECT MARKER DETAIL" AND IN ACCORDANCE WITH NCDOT SPECIFICATIONS.
8. THE GUARDRAIL END TREATMENT AT THE SOUTHEAST CORNER HAS MINOR IMPACT DAMAGE AND IS ALSO UNATTACHED FROM THE POST.	REPAIR THE DAMAGED GUARDRAILS TO NCDOT SPECIFICATIONS AND REATTACH TO POST.

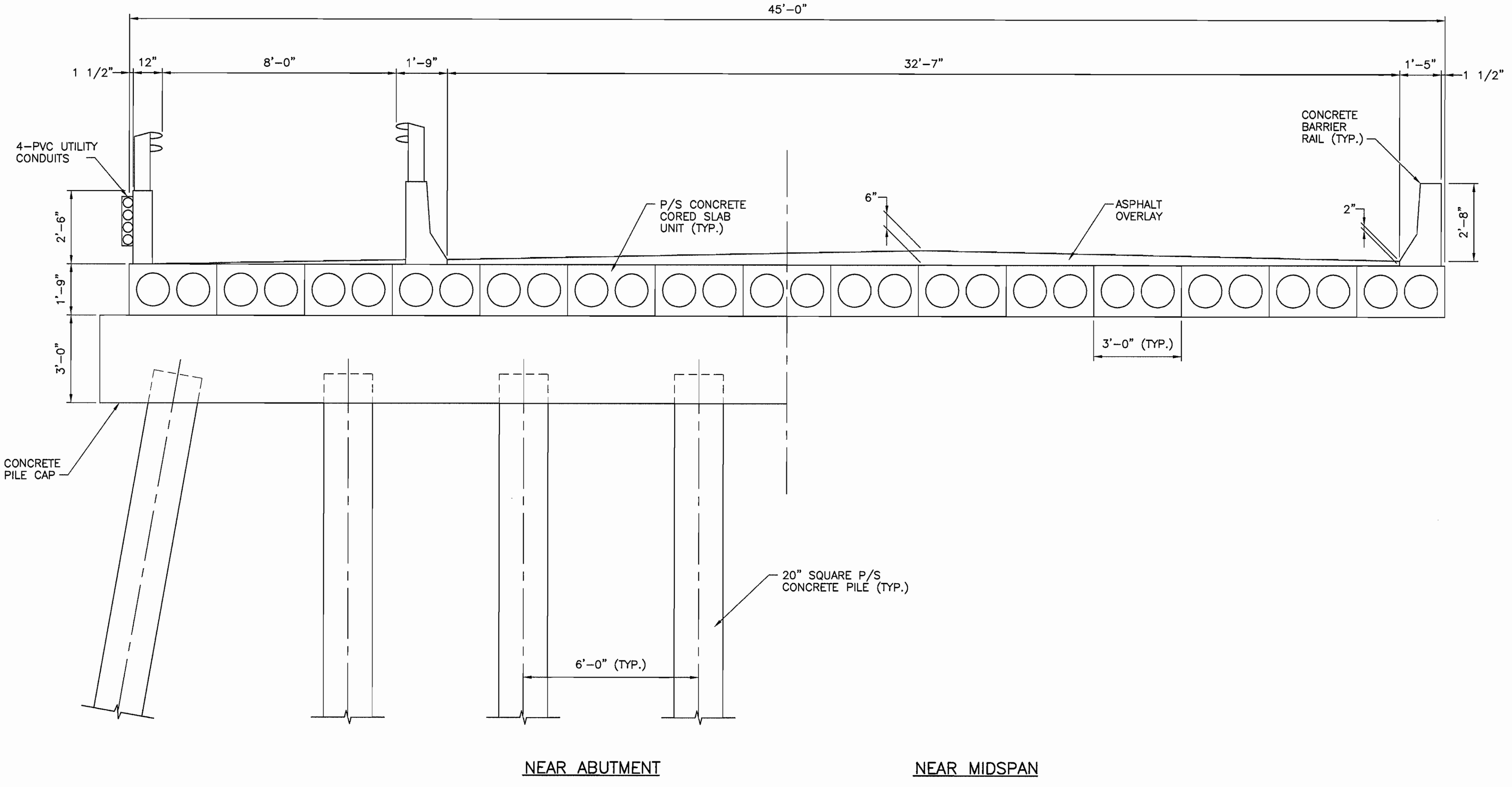


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<small>DEPT OF NAVY</small> NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE <small>CAMP LEJEUNE, NORTH CAROLINA</small>		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE S787 BRIDGE ELEVATION	
<small>DESIGN DIR.</small> <small>APPROVED: PWO OR OICC</small>	<small>DATE</small>	<small>SIZE</small> F	<small>CODE IDENT NO.</small> 80091
<small>SUBMITTED BY:</small> <small>CHK:</small> <small>DR:</small> <small>DES:</small>	<small>DATE</small>	<small>NAVFAC DRAWING NO.</small> 60008264	<small>CONSTR CONTR NO.</small> N 82470-11-0097
<small>SATISFACTORY TO</small>	<small>DATE</small>	<small>SCALE</small> AS SHOWN	<small>SHEET</small> 9 <small>OF</small> 28

SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

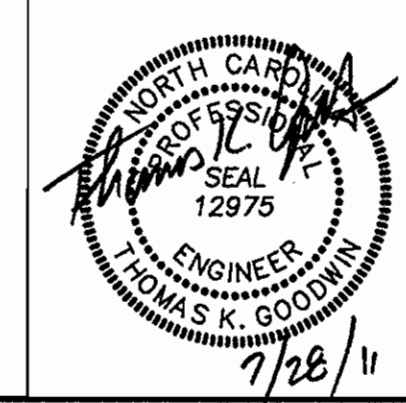
PROJECT AREA DESCRIPTIONS
 BRIDGE NO. 5788 (PROP. REC. NO. 204891)
 HOLCOMB BLVD. OVER WALLACE CREEK

- GENERAL NOTES**
1. ALL DEBRIS AND CONSTRUCTION MATERIAL MAY BE DISPOSED OF AT THE BASE LANDFILL.
 2. SITE SHALL BE LEFT FREE AND CLEAN OF DEBRIS UPON COMPLETION.
 3. INFORMATION ON CONTRACTOR RESPONSIBILITY AND REQUIREMENTS WAS OBTAINED AND COMPILED FROM A REPORT BY PENNONI DATED JULY 30, 2010 THRU AUGUST 2, 2010. CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT FOR ANY SPECIFIC INFORMATION AS TO THE DEFICIENCIES TO BE CORRECTED ON THE BRIDGES.



TYPICAL BRIDGE SECTION
 NOT TO SCALE

CONTRACTOR RESPONSIBILITY AND REQUIREMENTS	
DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. REMOVE THE THREADED STEEL ROD PROTRUDING FROM THE UNDERSIDE OF BENT 2.	CONTRACTOR SHALL DETERMINE THE NECESSITY OF THE STEEL ROD AND TAKE APPROPRIATE ACTION TO REMOVE THE ROD IF NOT NEEDED. IF REQUIRED THE CONTRACTOR SHALL REMOVE AS MUCH OF THE ROD AS POSSIBLE.
2. SEAL THE LONGITUDINAL AND TRANSVERSE CRACKS IN THE ASPHALT DECK OVERLAY AND SIDEWALK.	CLEAN AND SEAL ALL JOINTS IN ACCORDANCE WITH NCDOT STANDARD DETAILS AND BASE GUIDELINES.
3. ATTACH THE GUARDRAILS TO THE TIMBER POSTS WHERE THEY ARE CURRENTLY DISCONNECTED.	ATTACH WITH APPROPRIATE HARDWARE AND IN ACCORDANCE WITH NCDOT STANDARD DETAILS AND BASE GUIDELINES.
4. TIGHTEN (TENSION) THE LOOSE CABLES AT THE GUARDRAIL END TREATMENTS.	TIGHTEN LOOSE CABLES.
5. REPAIR THE AREA OF EROSION ALONG THE NORTHWEST APPROACH ROADWAY SHOULDER.	REPAIR AREA OF EROSION. SEED, MULCH AND TACK AREA AND ENSURE ADEQUATE WATERING TO ESTABLISH SATISFACTORY STAND OF GRASS.
6. PERIODICALLY CLEAN THE BRIDGE GUTTERS AND DRAINS.	CLEAN AS NEEDED DURING CONTRACT TIMEFRAME.
7. RELOCATE THE OBJECT MARKERS ON THE WEST SIDE OF THE BRIDGE TO THE ENDS OF THE BRIDGE RAILS AND INSTALL NEW OBJECT MARKERS ON THE EAST SIDE OF THE BRIDGE.	RELOCATE AND ADD MARKERS ENSURING PROPER INSTALLATION IN ACCORDANCE WITH ANY NCDOT STANDARDS AND BASE GUIDELINES.



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DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE 5788 TYPICAL SECTION	
DES. TKG	DR. FDW	SIZE F	CODE IDENT NO. 80091
CHK. TKG	DESIGN DR.	APPROVED PWO OR OICC	DATE
SUBMITTED BY:	APPROVED PWO OR OICC	DATE	DATE
SATISFACTORY TO	DATE	SCALE AS SHOWN	SPEC. 110097
		NAVFAC DRAWING NO. 60008265 CONSTR CONTR NO. N 62470-II-0097 SHEET 10 OF 28	

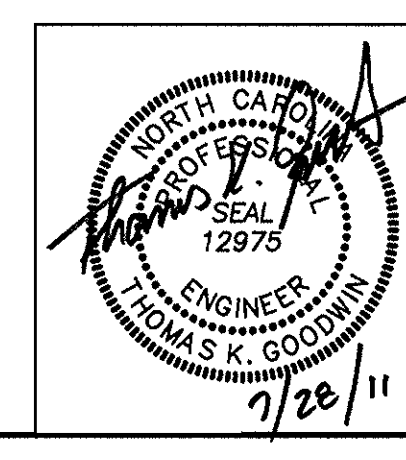
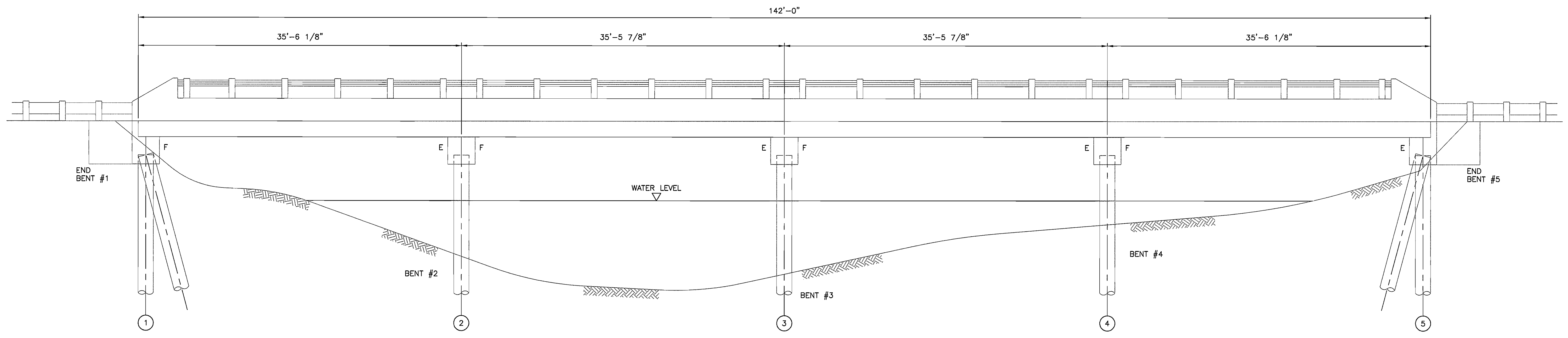
SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

PROJECT AREA DESCRIPTIONS
 BRIDGE NO. S788 (PROP. REC. NO. 204891)
 HOLCOMB BLVD. OVER WALLACE CREEK

- GENERAL NOTES**
1. ALL DEBRIS AND CONSTRUCTION MATERIAL MAY BE DISPOSED OF AT THE BASE LANDFILL.
 2. SITE SHALL BE LEFT FREE AND CLEAN OF DEBRIS UPON COMPLETION.
 3. INFORMATION ON CONTRACTOR RESPONSIBILITY AND REQUIREMENTS WAS OBTAINED AND COMPILED FROM A REPORT BY PENNONI DATED JULY 30, 2010 THRU AUGUST 2, 2010. CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT FOR ANY SPECIFIC INFORMATION AS TO THE DEFICIENCIES TO BE CORRECTED ON THE BRIDGES.

CONTRACTOR RESPONSIBILITY AND REQUIREMENTS	
DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. REMOVE THE THREADED STEEL ROD PROTRUDING FROM THE UNDERSIDE OF BENT 2.	CONTRACTOR SHALL DETERMINE THE NECESSITY OF THE STEEL ROD AND TAKE APPROPRIATE ACTION TO REMOVE THE ROD IF NOT NEEDED. IF REQUIRED THE CONTRACTOR SHALL REMOVE AS MUCH OF THE ROD AS POSSIBLE.
2. SEAL THE LONGITUDINAL AND TRANSVERSE CRACKS IN THE ASPHALT DECK OVERLAY AND SIDEWALK.	CLEAN AND SEAL ALL JOINTS IN ACCORDANCE WITH NCDOT STANDARD DETAILS AND BASE GUIDELINES.
3. ATTACH THE GUARDRAILS TO THE TIMBER POSTS WHERE THEY ARE CURRENTLY DISCONNECTED.	ATTACH WITH APPROPRIATE HARDWARE AND IN ACCORDANCE WITH NCDOT STANDARD DETAILS AND BASE GUIDELINES.
4. TIGHTEN (TENSION) THE LOOSE CABLES AT THE GUARDRAIL END TREATMENTS.	TIGHTEN LOOSE CABLES.
5. REPAIR THE AREA OF EROSION ALONG THE NORTHWEST APPROACH ROADWAY SHOULDER.	REPAIR AREA OF EROSION. SEED, MULCH AND TACK AREA AND ENSURE ADEQUATE WATERING TO ESTABLISH SATISFACTORY STAND OF GRASS.
6. PERIODICALLY CLEAN THE BRIDGE GUTTERS AND DRAINS.	CLEAN AS NEEDED DURING CONTRACT TIMEFRAME.
7. RELOCATE THE OBJECT MARKERS ON THE WEST SIDE OF THE BRIDGE TO THE ENDS OF THE BRIDGE RAILS AND INSTALL NEW OBJECT MARKERS ON THE EAST SIDE OF THE BRIDGE.	RELOCATE AND ADD MARKERS ENSURING PROPER INSTALLATION IN ACCORDANCE WITH ANY NCDOT STANDARDS AND BASE GUIDELINES.

BRIDGE S788
 EAST (UPSTREAM) SIDE
 ← SOUTH TOWARD HADNOT POINT
 ← NORTH TOWARD MAIN GATE →



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DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		NAVAL FACILITIES ENGINEERING COMMAND	
DES: TKG DR: PDW CHK: TKG SUBMITTED BY: DESIGN DIR:	REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE S788 BRIDGE ELEVATION		
APPROVED: PWO OR OICC DATE:	SIZE: F CODE IDENT NO.: 80091	NAVFAC DRAWING NO.: 60008266	CONSTR CONTR NO.: N 62470-11-0097
SATISFACTORY TO:	DATE:	SCALE: AS SHOWN SPEC: 110097	SHEET 11 OF 28

SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

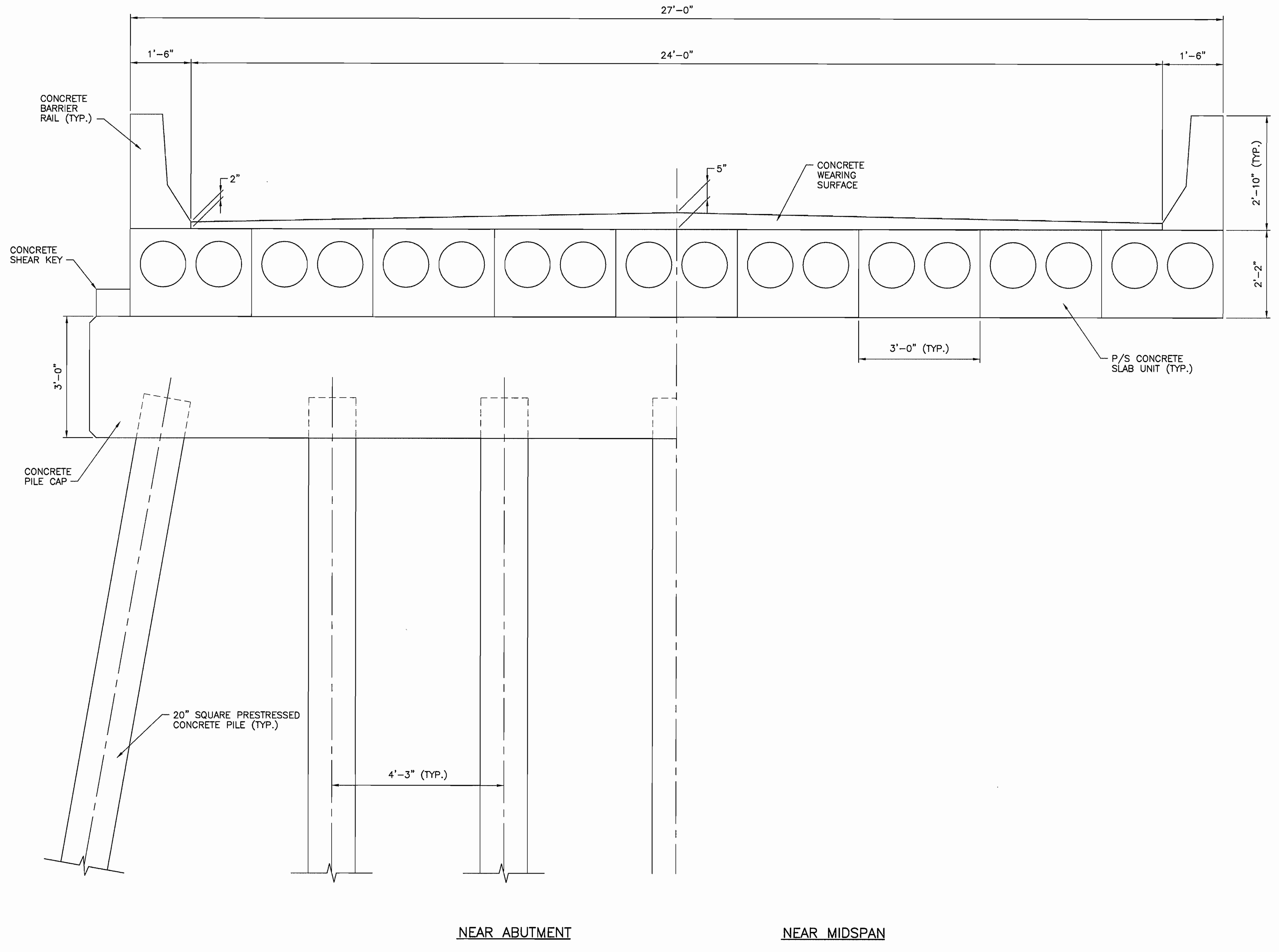
PROJECT AREA DESCRIPTIONS

BRIDGE NO. SSR20 (PROP. REC. NO. 210930)
DIRT ACCESS ROAD OVER JUNIPER SWAMP

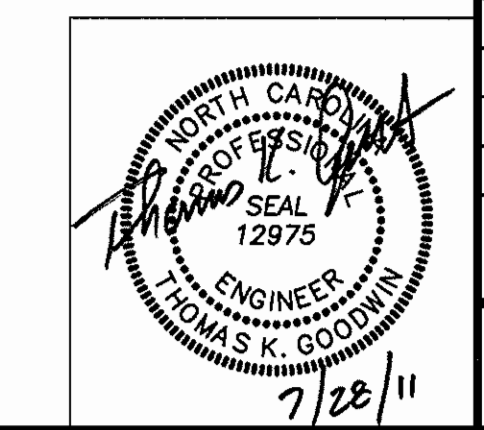
GENERAL NOTES

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CONTRACTOR RESPONSIBILITY AND REQUIREMENTS	
DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. REMOVE THE GROUT BUILD-UP ON THE SEAT OF BENT 3 AT THE NORTH END.	REMOVE THE BUILD-UP.
2. GRADUALLY STIFFEN THE GUARDRAIL TRANSITIONS.	STIFFEN GUARDRAIL TRANSITIONS TO MEET BASE REQUIREMENTS.
3. TIGHTEN THE BOLT AT THE SOUTHWEST GUARDRAIL TRANSITION.	TIGHTEN THE BOLT.
4. PATCH THE POT HOLE AND THE SETTLED AREA IN THE SOUTH APPROACH ROADWAY.	REGRADE AREA OF STONE APPROACH REPAIRING ANY DEPRESSED AREAS.
5. REMOVE THE VEGETATION FROM BENT 4 AND ALONG THE WEST FACIA OF SPAN 2.	CLEAR VEGETATION AS STATED.



TYPICAL BRIDGE SECTION
NOT TO SCALE



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DEPT OF NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE SSR20 TYPICAL SECTION	
DES. TKG	DR. FDW	SIZE	CODE IDENT NO.
CHK. TKG	SUBMITTED BY:	F	80091
DESIGN DR.	APPROVED: PWO OR OKC	DATE	NAVFAC DRAWING NO.
SATISFACTORY TO	DATE		60008267
SCALE: AS SHOWN	SPEC. 110097	CONSTR CONTR NO.	N 62476-II-0067
			SHEET 12 OF 28

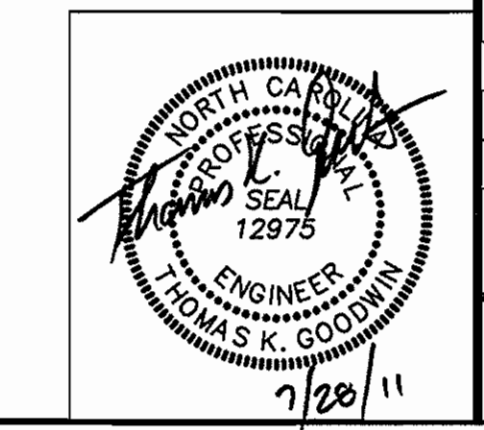
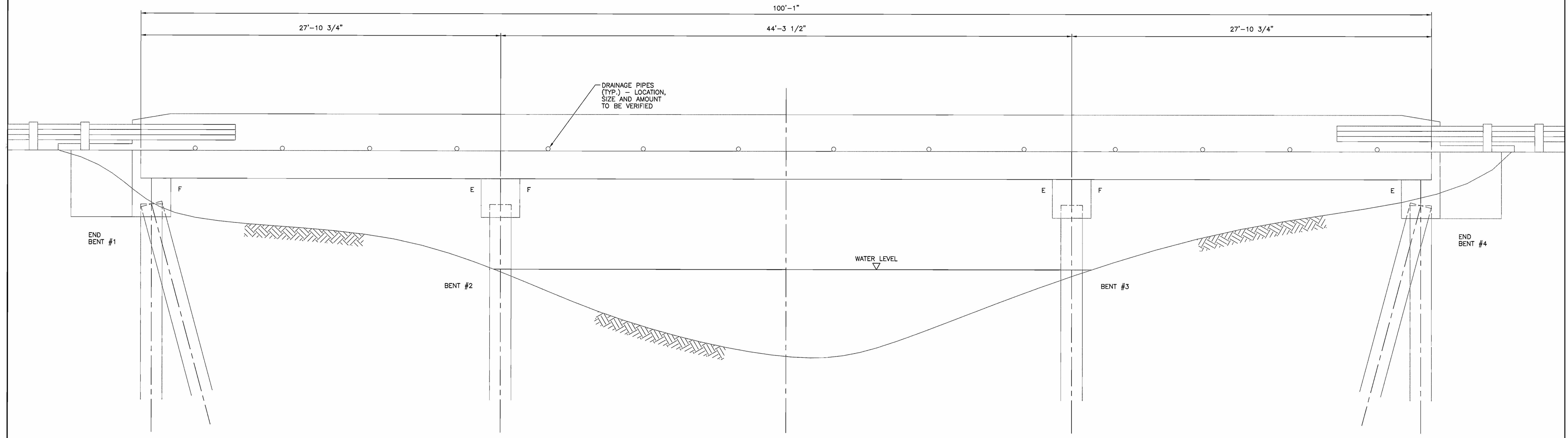
SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

PROJECT AREA DESCRIPTIONS
 BRIDGE NO. SSR20 (PROP. REC. NO. 210930)
 DIRT ACCESS ROAD OVER JUNIPER SWAMP

- GENERAL NOTES**
1. ALL DEBRIS AND CONSTRUCTION MATERIAL MAY BE DISPOSED OF AT THE BASE LANDFILL.
 2. SITE SHALL BE LEFT FREE AND CLEAN OF DEBRIS UPON COMPLETION.
 3. INFORMATION ON CONTRACTOR RESPONSIBILITY AND REQUIREMENTS WAS OBTAINED AND COMPILED FROM A REPORT BY PENNONI DATED JULY 30, 2010 THRU AUGUST 2, 2010. CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT FOR ANY SPECIFIC INFORMATION AS TO THE DEFICIENCIES TO BE CORRECTED ON THE BRIDGES.

BRIDGE SSR20
 EAST (UPSTREAM) SIDE
 SOUTH TOWARD HOLLY RIDGE
 NORTH TOWARD SKY MANOR AIRPORT

CONTRACTOR RESPONSIBILITY AND REQUIREMENTS	
DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. REMOVE THE GROUT BUILD-UP ON THE SEAT OF BENT 3 AT THE NORTH END	REMOVE THE BUILD-UP.
2. GRADUALLY STIFFEN THE GUARDRAIL TRANSITIONS.	STIFFEN GUARDRAIL TRANSITIONS TO MEET BASE REQUIREMENTS.
3. TIGHTEN THE BOLT AT THE SOUTHWEST GUARDRAIL TRANSITION.	TIGHTEN THE BOLT.
4. PATCH THE POTHOLE AND THE SETTLED AREA IN THE SOUTH APPROACH ROADWAY.	REGRADE AREA OF STONE APPROACH REPAIRING ANY DEPRESSED AREAS.
5. REMOVE THE VEGETATION FROM BENT 4 AND ALONG THE WEST FACIA OF SPAN 2.	CLEAR VEGETATION AS STATED.

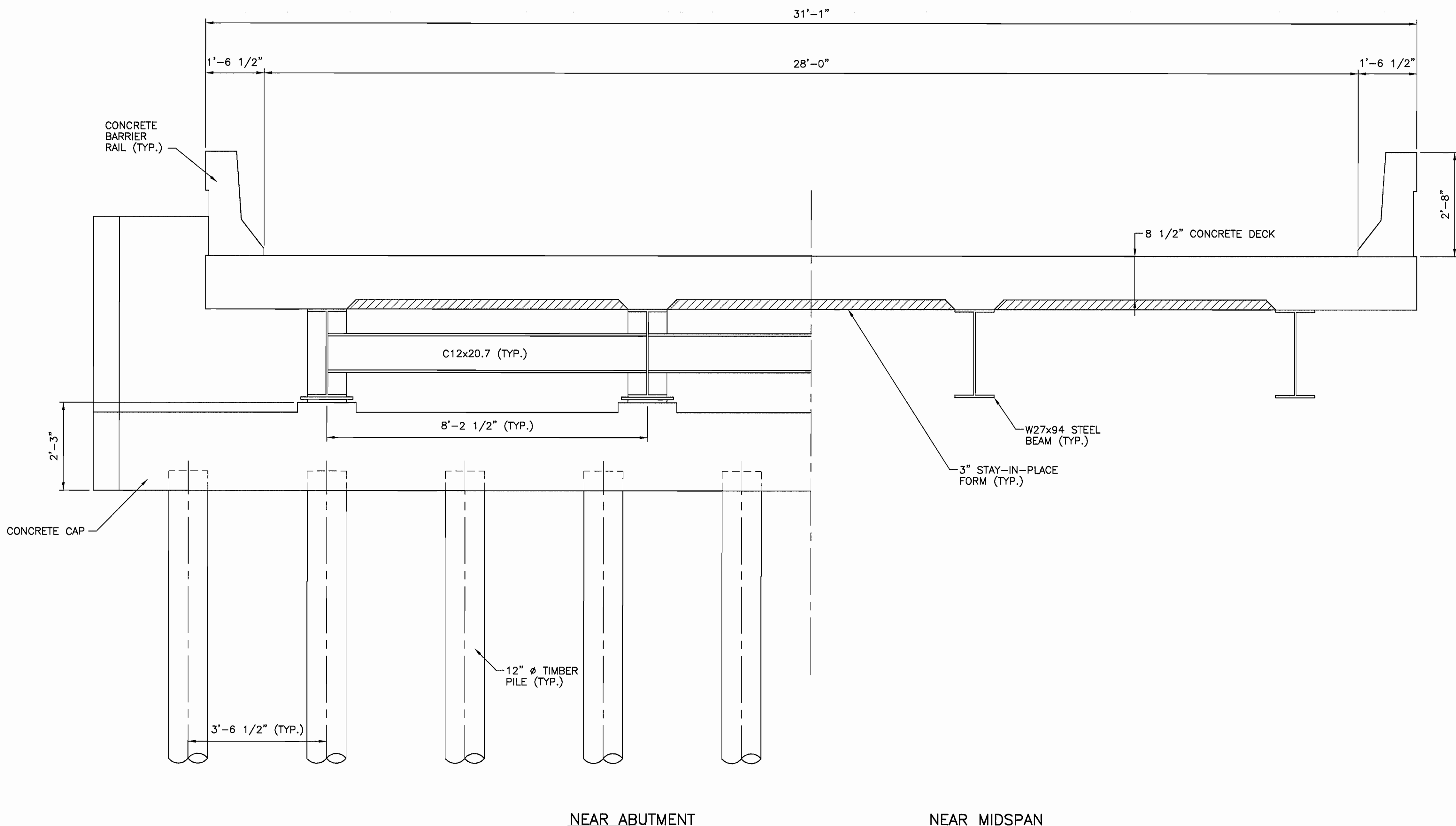


Hobbs Upchurch Associates <small>engineering planning surveying</small> 300 SW Broad Street Southern Pines Office Southern Pines, North Carolina 28387 P: (919) 692-8616 F: (919) 692-7242 www.hobbsupchurch.com License Number: C-0454		C-12	
DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		NAVAL FACILITIES ENGINEERING COMMAND	
REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE SSR20 BRIDGE ELEVATION		NAIFAC DRAWING NO. 60008268	
DESIGNED BY: TKG CHECKED BY: TKG SUBMITTED BY: DESIGN DIR:	APPROVED: PWO OR OICC DATE:	SIZE: F CODE IDENT NO.: 80091	NAIFAC CONTR NO.: N 82470-II-0097
SATISFACTORY TO:		SCALE: AS SHOWN SPEC: 110097	SHEET 13 OF 28

SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

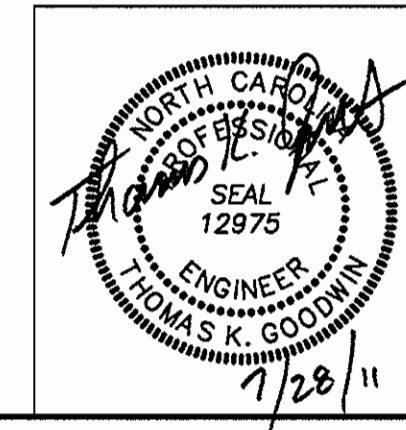
PROJECT AREA DESCRIPTIONS
 BRIDGE NO. SSR21 (PROP. REC. NO. 210931)
 CC ROAD OVER SHELTER SWAMP CREEK

- GENERAL NOTES**
1. ALL DEBRIS AND CONSTRUCTION MATERIAL MAY BE DISPOSED OF AT THE BASE LANDFILL.
 2. SITE SHALL BE LEFT FREE AND CLEAN OF DEBRIS UPON COMPLETION.
 3. INFORMATION ON CONTRACTOR RESPONSIBILITY AND REQUIREMENTS WAS OBTAINED AND COMPILED FROM A REPORT BY PENNONI DATED JULY 30, 2010 THRU AUGUST 2, 2010. CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT FOR ANY SPECIFIC INFORMATION AS TO THE DEFICIENCIES TO BE CORRECTED ON THE BRIDGES.



TYPICAL BRIDGE SECTION
 NOT TO SCALE

CONTRACTOR RESPONSIBILITY AND REQUIREMENTS	
DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. ADD POSTS TO GRADUALLY STIFFEN THE GUARDRAIL TRANSITIONS.	ADD POSTS IN ACCORDANCE WITH NCDOT STANDARD DETAILS.
2. THE ATTACHMENT BOLTS FOR THE BEAM DIAPHRAGMS TYPICALLY HAVE MINOR TO MODERATE SURFACE CORROSION DUE TO PAINT FAILURE.	THE BOLTS ARE TO BE CLEANED TO BARE METAL, PRIMED AND PAINTED WITH WATERPROOF MATERIALS.
3. ATTACH THE GUARDRAILS TO THE TIMBER POSTS AT EACH END TREATMENT.	REATTACH THE GUARDRAILS TO THE POST WITH THE PROPER HARDWARE IN ACCORDANCE WITH NCDOT STANDARD DETAILS.
4. FILL THE POTHoles IN THE APPROACH ROADWAY.	REGRADE AREA OF STONE APPROACH REPAIRING ANY DEPRESSED AREAS.
5. TIGHTEN THE LOOSE CABLES AT THE GUARDRAIL END TREATMENTS.	TIGHTEN THE CABLES AT THE GUARDRAIL END TREATMENTS TO THE PROPER TENSION.



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		DEPT OF NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA	
DES. TKG	DR. FDW	REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE SSR21 TYPICAL SECTION	
CHK. TKG	SUBMITTED BY:		
DESKN DIR.	APPROVED- PWO OR OICC	DATE	SIZE
			F
SATISFACTORY TO		DATE	CODE IDENT NO.
			80091
		SCALE	AS SHOWN
		SPEC.	110097
		SHEET	14 OF 28

SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

PROJECT AREA DESCRIPTIONS

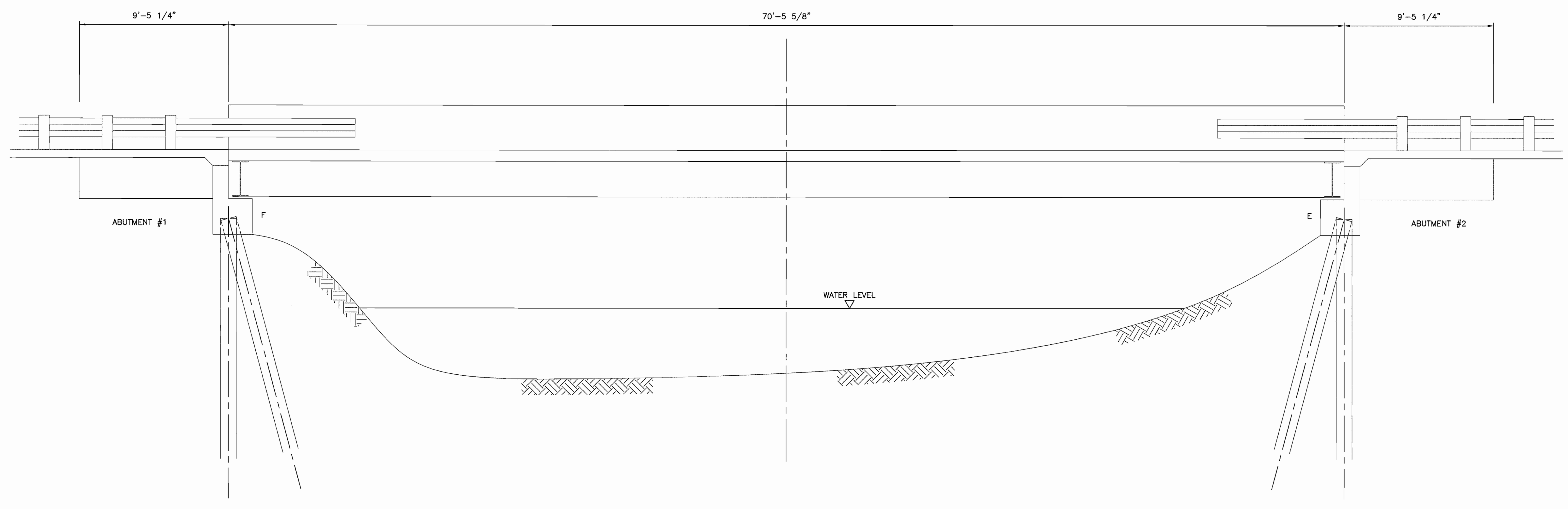
BRIDGE NO. SSR21 (PROP. REC. NO. 210931)
CC ROAD OVER SHELTER SWAMP CREEK

GENERAL NOTES

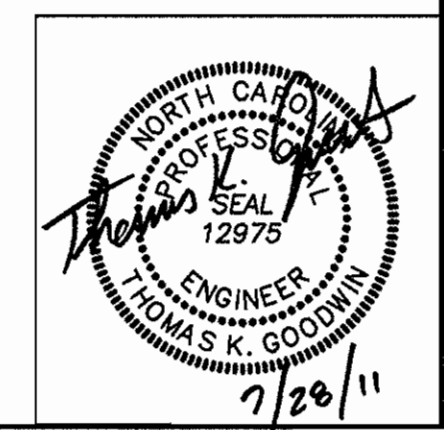
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3. INFORMATION ON CONTRACTOR RESPONSIBILITY AND REQUIREMENTS WAS OBTAINED AND COMPILED FROM A REPORT BY PENNONI DATED JULY 30, 2010 THRU AUGUST 2, 2010. CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT FOR ANY SPECIFIC INFORMATION AS TO THE DEFICIENCIES TO BE CORRECTED ON THE BRIDGES.

CONTRACTOR RESPONSIBILITY AND REQUIREMENTS	
DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. ADD POSTS TO GRADUALLY STIFFEN THE GUARDRAIL TRANSITIONS.	ADD POSTS IN ACCORDANCE WITH NCDOT STANDARD DETAILS.
2. THE ATTACHMENT BOLTS FOR THE BEAM DIAPHRAGMS TYPICALLY HAVE MINOR TO MODERATE SURFACE CORROSION DUE TO PAINT FAILURE.	THE BOLTS ARE TO BE CLEANED TO BARE METAL, PRIMED AND PAINTED WITH WATERPROOF MATERIALS.
3. ATTACH THE GUARDRAILS TO THE TIMBER POSTS AT EACH END TREATMENT.	REATTACH THE GUARDRAILS TO THE POST WITH THE PROPER HARDWARE IN ACCORDANCE WITH NCDOT STANDARD DETAILS.
4. FILL THE POTHOLES IN THE APPROACH ROADWAY.	REGRADE AREA OF STONE APPROACH REPAIRING ANY DEPRESSED AREAS.
5. TIGHTEN THE LOOSE CABLES AT THE GUARDRAIL END TREATMENTS.	TIGHTEN THE CABLES AT THE GUARDRAIL END TREATMENTS TO THE PROPER TENSION.

BRIDGE SSR21
NORTH (UPSTREAM) SIDE
← WEST TOWARD NC HWY 50
→ EAST TOWARD DIXON



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DEPT OF NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		
DES. TKG DR. FDW CHK. TKG SUBMITTED BY: DESIGN DR. APPROVED: PWO OR OICC DATE SATISFACTORY TO DATE		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE SSR21 BRIDGE ELEVATION
SIZE: F CODE IDENT NO.: 80091 NAVFAC DRAWING NO.: 60008270 CONSTR CONTR NO.: N 62470-II-0097		
SCALE: AS SHOWN SPEC.: 110097		SHEET 15 OF 28

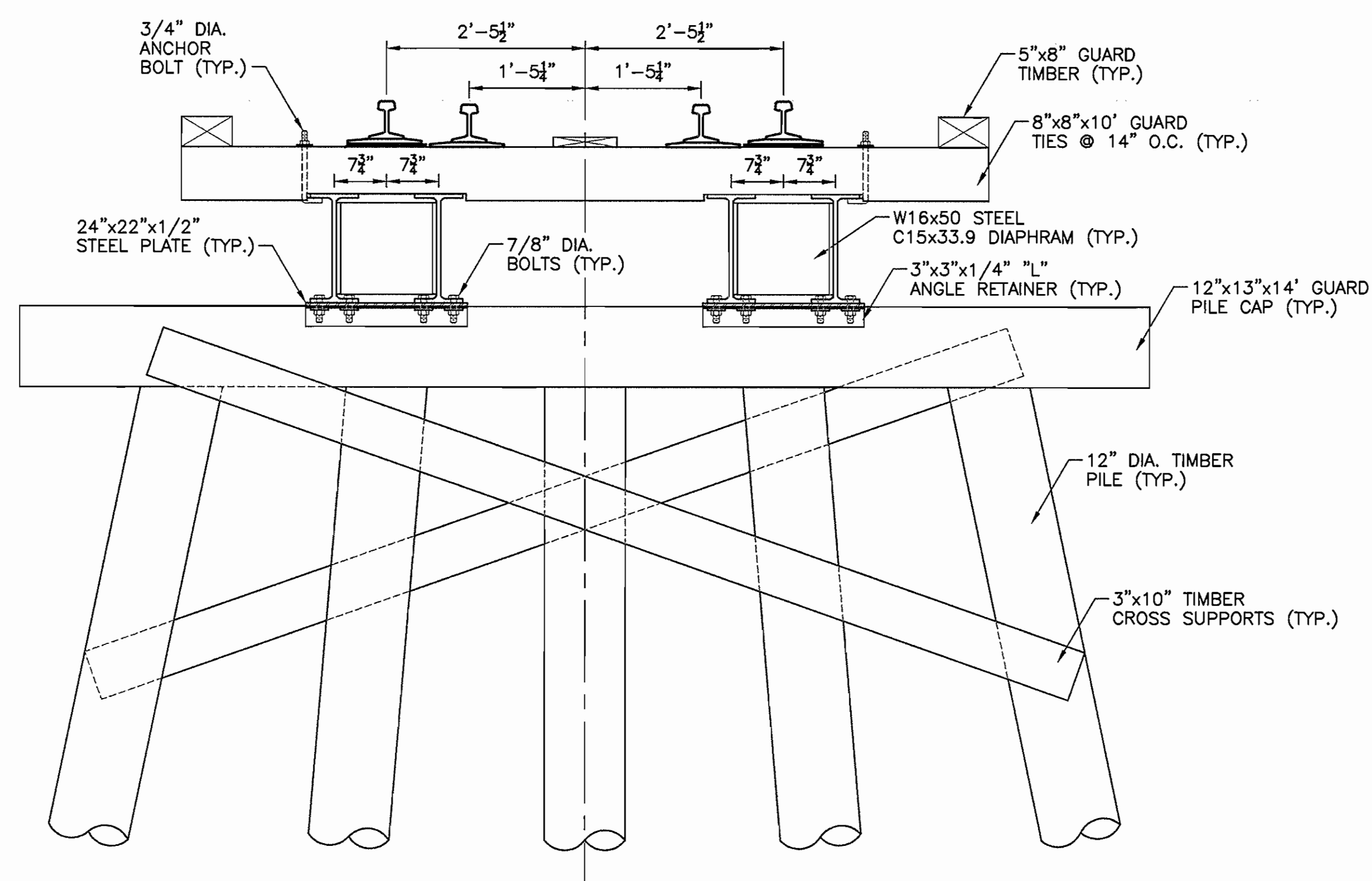


SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

PROJECT AREA DESCRIPTIONS
 BRIDGE NO. S882
 RAILROAD BRIDGE OVER WHITE OAK RIVER

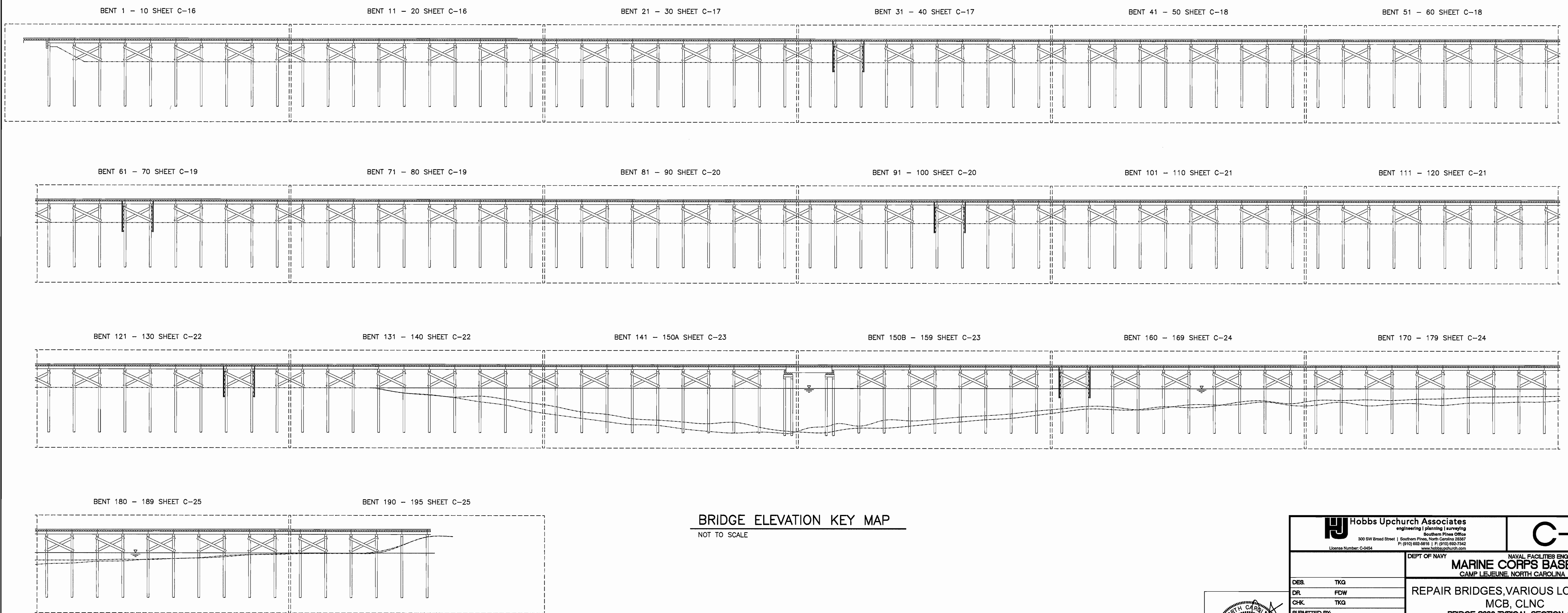
GENERAL NOTES

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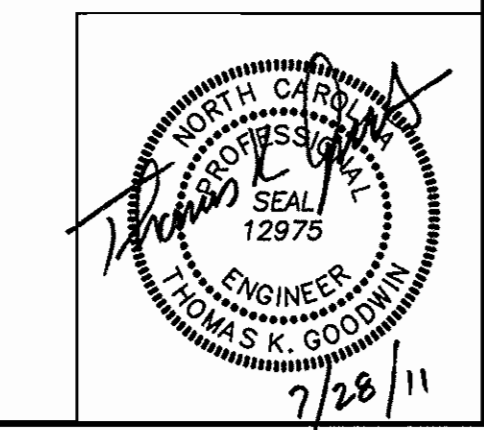


TYPICAL BRIDGE SECTION
 NOT TO SCALE

CONTRACTOR RESPONSIBILITY AND REQUIREMENTS	
DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. REPAIR BENT 5 PILE CAP	REPAIR PILE CAP AS NEEDED.
2. REPAIR PILE D, BENT 154	REPAIR PILE PER "DECAYED PILE REPAIR DETAIL".
3. CLEAN AND INSTALL FULL HEIGHT PILE WRAPS ON ALL TIMBER PILES IDENTIFIED WITH MODERATE CHECKS, SPLINTERING, MARINE BORER ACTIVITY, FRACTURED AND/OR HEAVILY DECAYED TIMBER PILES WITH 10% OR MORE SECTION LOSS TO PREVENT FURTHER DETERIORATION AND LOSS OF SECTION.	REPAIR PILE PER "DECAYED PILE REPAIR DETAIL" TO FULL HEIGHT OF IDENTIFIED PILES AT 44 LOCATIONS IDENTIFIED IN THE REPORT.
4. REPLACE MISSING, FRACTURED, AND/OR HEAVILY DECAYED TIMBER CROSSBRACING MEMBERS, TIMBER CURBS, AND TIMBER RAIL TIES, INCLUDING REPLACEMENT OF THE MISSING, CORRODED OR BROKEN HARDWARE.	REPLACE MISSING, FRACTURED, AND/OR HEAVILY DECAYED TIMBER CROSSBRACING, CURBS, RAIL TIES, AND ANY MISSING OR CORRODED HARDWARE.
5. REPLACE THE LOWER PANELS WITH HEAVY CORROSION AND SECTION LOSS AT THE FIREBREAKS BETWEEN BENTS 1 AND 134.	REPLACE THE LOWER PANELS IN ACCORDANCE WITH THE DETAILS.
6. REPLACE THE MISSING AND BROKEN RAIL BEARING PLATES, AND RAIL SPIKES AS NEEDED.	IDENTIFY AND REPLACE THE MISSING AND BROKEN RAIL BEARING PLATES AND RAIL SPIKES AS NEEDED.



BRIDGE ELEVATION KEY MAP
 NOT TO SCALE



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DEPT OF NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
DES. TKG	DR. FDW	REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE 8882 TYPICAL SECTION AND BRIDGE ELEVATION KEY MAP	
CHK. TKG	DESIGN DR.		
APPROVED: PWO OR OICC	DATE	SIZE: F	CODE IDENT NO.: 80091
SATISFACTORY TO	DATE	NAVFAC DRAWING NO.: 60008271	CONSTR CONTR NO.: N 62470-II-0097
SCALE: AS SHOWN	SPEC: 110097	SHEET 16 OF 28	

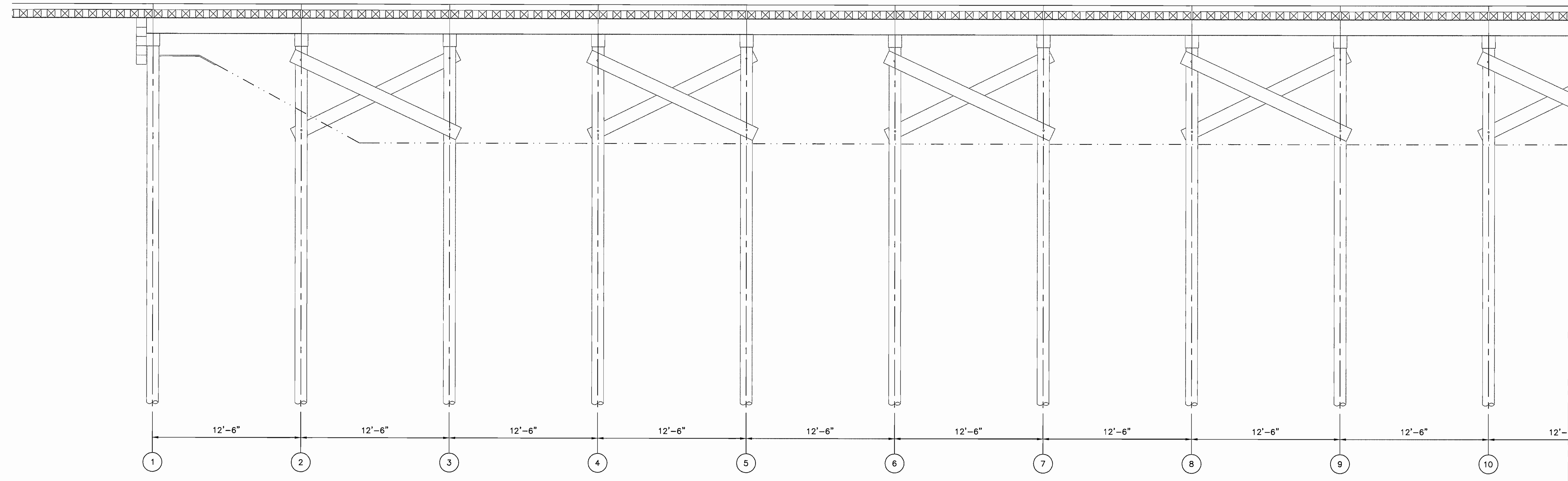
SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

BRIDGE S882

PROJECT AREA DESCRIPTIONS
 BRIDGE NO. S882
 RAILROAD BRIDGE OVER WHITE OAK RIVER

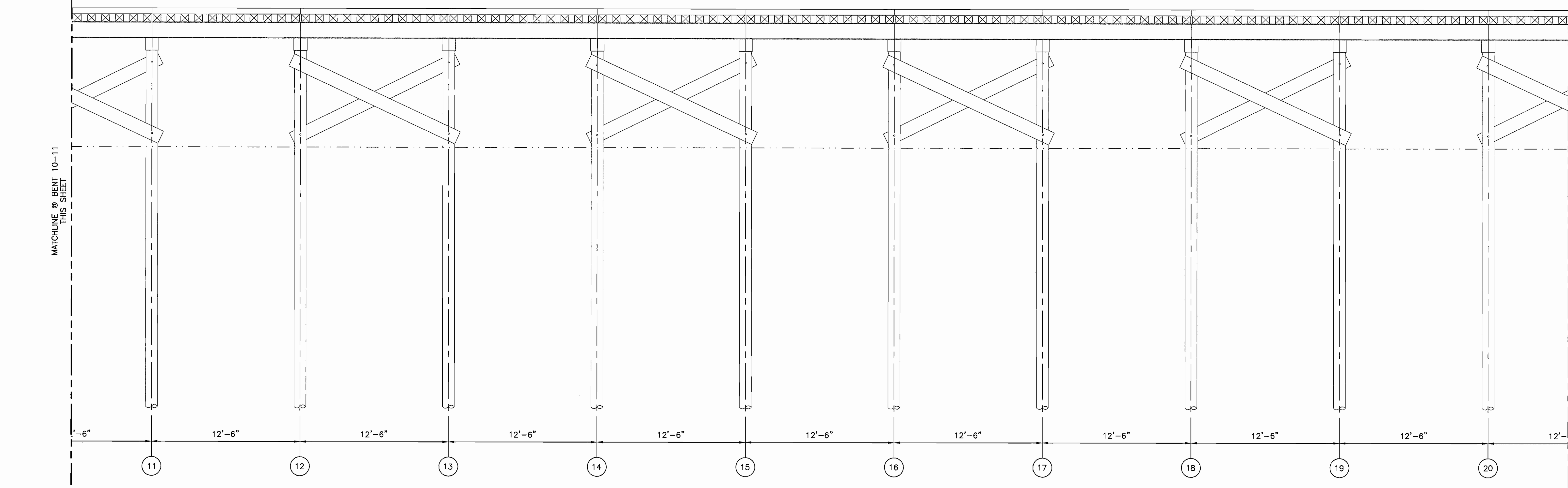
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MATCHLINE @ BENT 10-11 THIS SHEET

BRIDGE S882

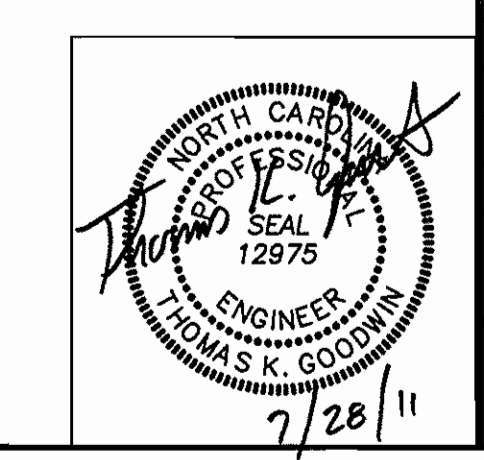


MATCHLINE @ BENT 10-11 THIS SHEET

MATCHLINE @ BENT 20-21 THIS SHEET

CONTRACTOR RESPONSIBILITY AND REQUIREMENTS

DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. REPAIR BENT 5 PILE CAP	REPAIR PILE CAP AS NEEDED.
2. REPAIR PILE D, BENT 154	REPAIR PILE PER "DECAYED PILE REPAIR DETAIL".
3. CLEAN AND INSTALL FULL HEIGHT PILE WRAPS ON ALL TIMBER PILES IDENTIFIED WITH MODERATE CHECKS, SPLINTERING, MARINE BORER ACTIVITY, FRACTURED AND/OR HEAVILY DECAYED TIMBER PILES WITH 10% OR MORE SECTION LOSS TO PREVENT FURTHER DETERIORATION AND LOSS OF SECTION.	REPAIR PILE PER "DECAYED PILE REPAIR DETAIL" TO FULL HEIGHT OF IDENTIFIED PILES AT 44 LOCATIONS IDENTIFIED IN THE REPORT.
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6. REPLACE THE MISSING AND BROKEN RAIL BEARING PLATES, AND RAIL SPIKES AS NEEDED.	IDENTIFY AND REPLACE THE MISSING AND BROKEN RAIL BEARING PLATES AND RAIL SPIKES AS NEEDED.



Hobbs Upchurch Associates <small>engineering planning surveying</small> <small>300 5th Broad Street Southern Pines Office</small> <small>Southern Pines, North Carolina 28387</small> <small>P: (910) 693-5816 F: (910) 693-7343</small> <small>www.hobbsupchurch.com</small>		C-16
DEPT OF NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE <small>CAMP LEJEUNE, NORTH CAROLINA</small>		
DES. TKG DR. FDW CHK. TKG SUBMITTED BY: DESIGN DIR. APPROVED: PWO OR OICC DATE: _____ SATISFACTORY TO DATE: _____		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE S882 ELEVATION BENT 1 - 20
SCALE: AS SHOWN SPEC: 110097		NAVFAC DRAWING NO. 60008272 CONSTR CONTR NO. N 82470-11-0087
SHEET 17 OF 28		

SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

PROJECT AREA DESCRIPTIONS

BRIDGE NO. S882
RAILROAD BRIDGE OVER WHITE OAK RIVER

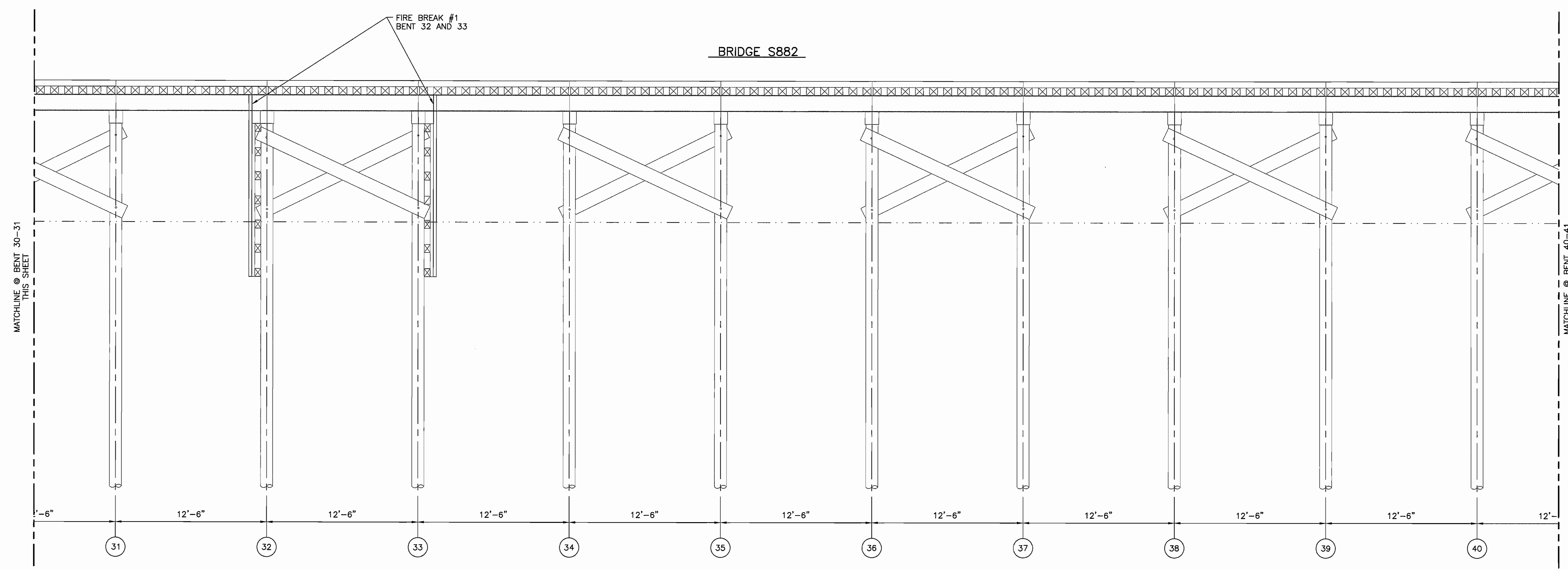
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BRIDGE S882



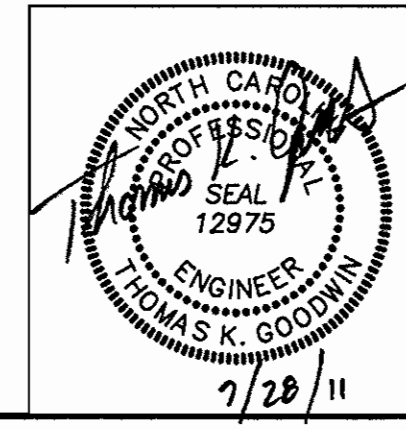
BRIDGE S882



CONTRACTOR RESPONSIBILITY AND REQUIREMENTS

DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. REPAIR BENT 5 PILE CAP	REPAIR PILE CAP AS NEEDED.
2. REPAIR PILE D, BENT 154	REPAIR PILE PER "DECAYED PILE REPAIR DETAIL".
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<small>DEPT OF NAVY</small> NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE <small>CAMP LEJEUNE, NORTH CAROLINA</small>		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE S882 ELEVATION BENT 21 - 40	
DES. TKG	DR. FDW	CHK. TKG	SUBMITTED BY:
DESIGN DR.	APPROVED: PWO OR OICC	DATE	SIZE: F
BATSFACTORY TO	DATE	CODE IDENT NO. 80091	NAVFAC DRAWING NO. 60008273
SCALE: AS SHOWN	SPEC. 110097	CONSTR CONTR NO. N 82470-11-0087	SHEET 18 OF 28



SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

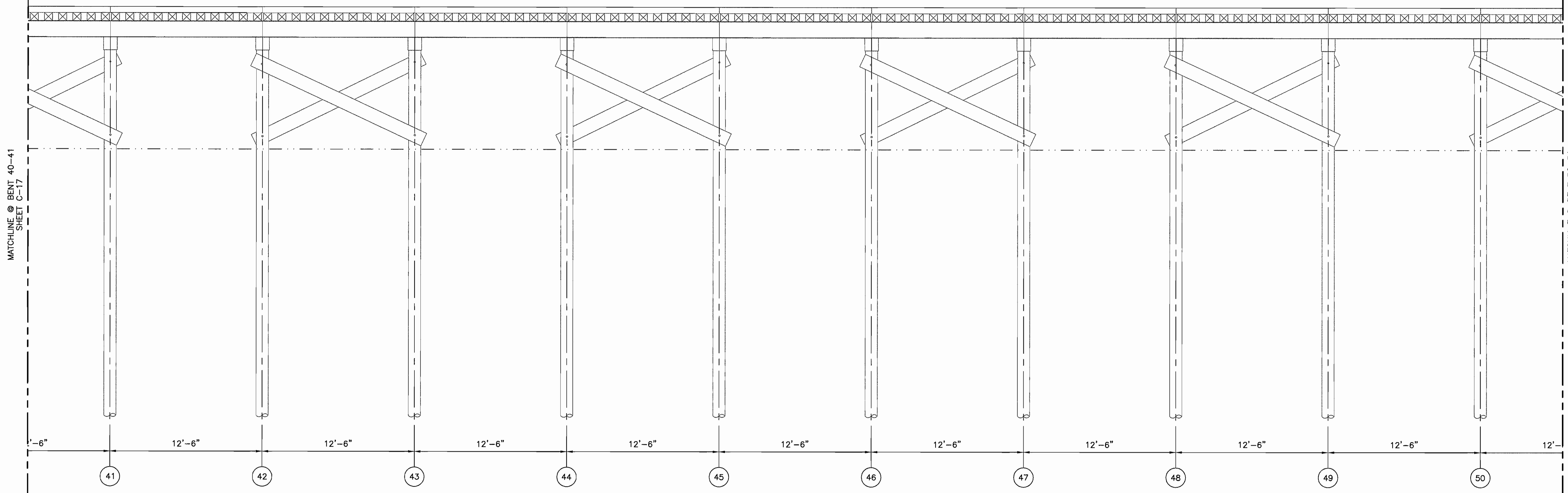
PROJECT AREA DESCRIPTIONS

BRIDGE NO. S882
RAILROAD BRIDGE OVER WHITE OAK RIVER

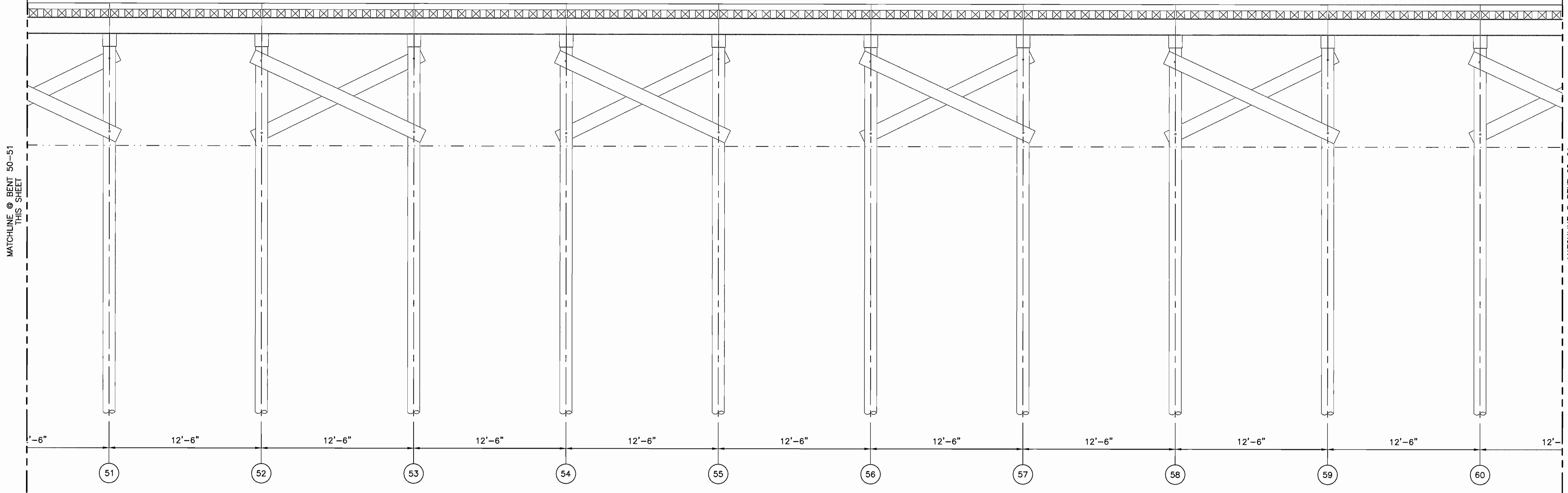
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BRIDGE S882



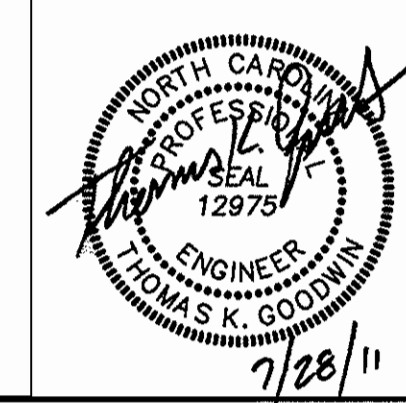
BRIDGE S882



CONTRACTOR RESPONSIBILITY AND REQUIREMENTS

DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
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<p>Hobbs Upchurch Associates engineering planning surveying 300 SW Broad Street Southern Pines, North Carolina 28387 P: (910) 692-8616 F: (910) 692-7342 www.hobbsupchurch.com</p>		C-18	
<p>DEPT OF NAVY MARINE CORPS BASE CAMP LEJUNE, NORTH CAROLINA</p>		<p>NAVAL FACILITIES ENGINEERING COMMAND NAVFAC DRAWING NO. 60008274</p>	
DES. TKG	DR. FDW	SIZE	CODE IDENT NO.
CHK. TKG		F	80091
SUBMITTED BY:		APPROVED: PWO OR OJCC	DATE
DESIGN DR.		CONSTR CONTR NO. N 62470-II-0097	
SATISFACTORY TO		DATE	
SCALE: AS SHOWN	SPEC: 110097	SHEET 19 OF 28	



SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

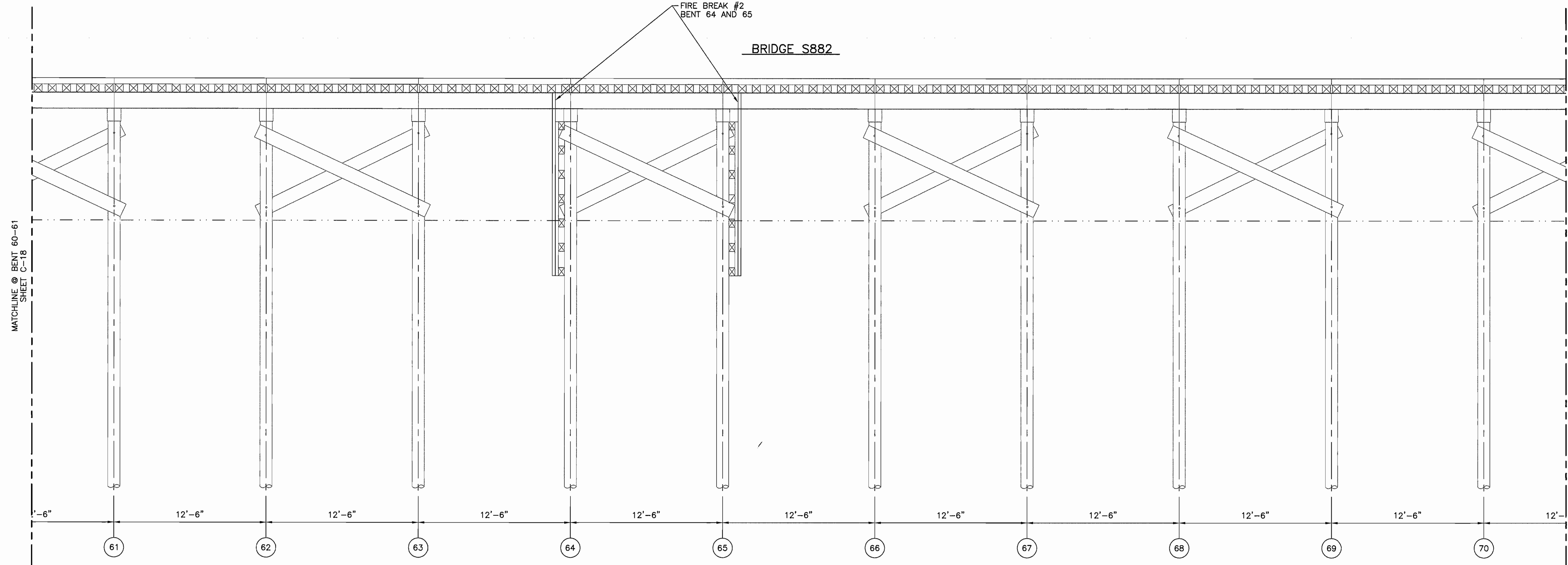
PROJECT AREA DESCRIPTIONS

BRIDGE NO. S882
RAILROAD BRIDGE OVER WHITE OAK RIVER

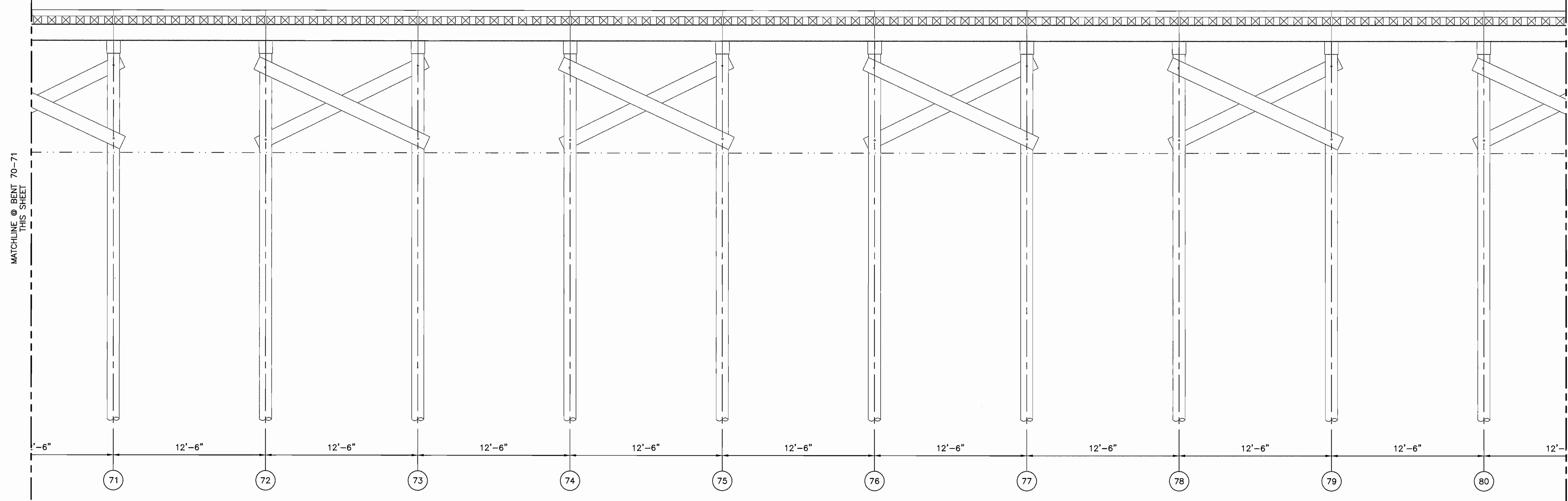
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BRIDGE S882

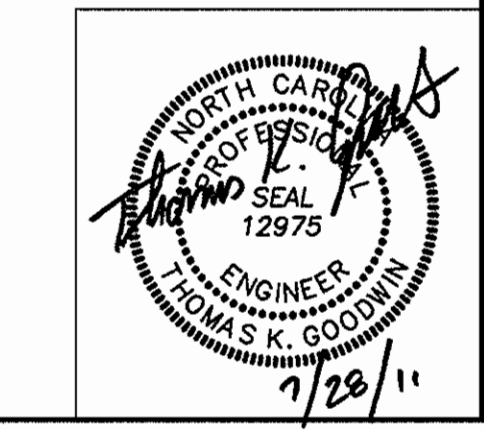


BRIDGE S882



CONTRACTOR RESPONSIBILITY AND REQUIREMENTS

DESCRIPTION OF RESPONSIBILITY AND REQUIREMENTS:	ACTION TO BE TAKEN:
1. REPAIR BENT 5 PILE CAP	REPAIR PILE CAP AS NEEDED.
2. REPAIR PILE D, BENT 154	REPAIR PILE PER "DECAYED PILE REPAIR DETAIL".
3. CLEAN AND INSTALL FULL HEIGHT PILE WRAPS ON ALL TIMBER PILES IDENTIFIED WITH MODERATE CHECKS, SPLINTERING, MARINE BORER ACTIVITY, FRACTURED AND/OR HEAVILY DECAYED TIMBER PILES WITH 10% OR MORE SECTION LOSS TO PREVENT FURTHER DETERIORATION AND LOSS OF SECTION.	REPAIR PILE PER "DECAYED PILE REPAIR DETAIL" TO FULL HEIGHT OF IDENTIFIED PILES AT 44 LOCATIONS IDENTIFIED IN THE REPORT.
4. REPLACE MISSING, FRACTURED, AND/OR HEAVILY DECAYED TIMBER CROSSBRACING MEMBERS, TIMBER CURBS, AND TIMBER RAIL TIES, INCLUDING REPLACEMENT OF THE MISSING, CORRODED OR BROKEN HARDWARE.	REPLACE MISSING, FRACTURED, AND/OR HEAVILY DECAYED TIMBER CROSSBRACING, CURBS, RAIL TIES, AND ANY MISSING OR CORRODED HARDWARE.
5. REPLACE THE LOWER PANELS WITH HEAVY CORROSION AND SECTION LOSS AT THE FIREBREAKS BETWEEN BENTS 1 AND 134.	REPLACE THE LOWER PANELS IN ACCORDANCE WITH THE DETAILS.
6. REPLACE THE MISSING AND BROKEN RAIL BEARING PLATES, AND RAIL SPIKES AS NEEDED.	IDENTIFY AND REPLACE THE MISSING AND BROKEN RAIL BEARING PLATES AND RAIL SPIKES AS NEEDED.



Hobbs Upchurch Associates <small>engineering planning surveying</small> <small>Southern Pines Office</small> <small>300 SW Broad Street Southern Pines, North Carolina 28387</small> <small>P: (910) 690-0516 F: (910) 690-7382</small> <small>www.hobbsupchurch.com</small> <small>License Number: C-0454</small>		C-19	
<small>DEPT OF NAVY</small> MARINE CORPS BASE <small>CAMP LEJEUNE, NORTH CAROLINA</small>		<small>NAVAL FACILITIES ENGINEERING COMMAND</small> REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE S882 ELEVATION BENT 61 - 80	
DES. TKG	CHK. TKG	DATE	SIZE
APPROVED: PWO OR OICC	DATE	CODE IDENT NO.	NAVFAC DRAWING NO.
SATISFACTORY TO		DATE	F 80091
SCALE: AS SHOWN	SPEC. 110097	CONSTR CONTR NO. N 02470-II-0097	60008275
		SHEET 20 OF 28	

SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

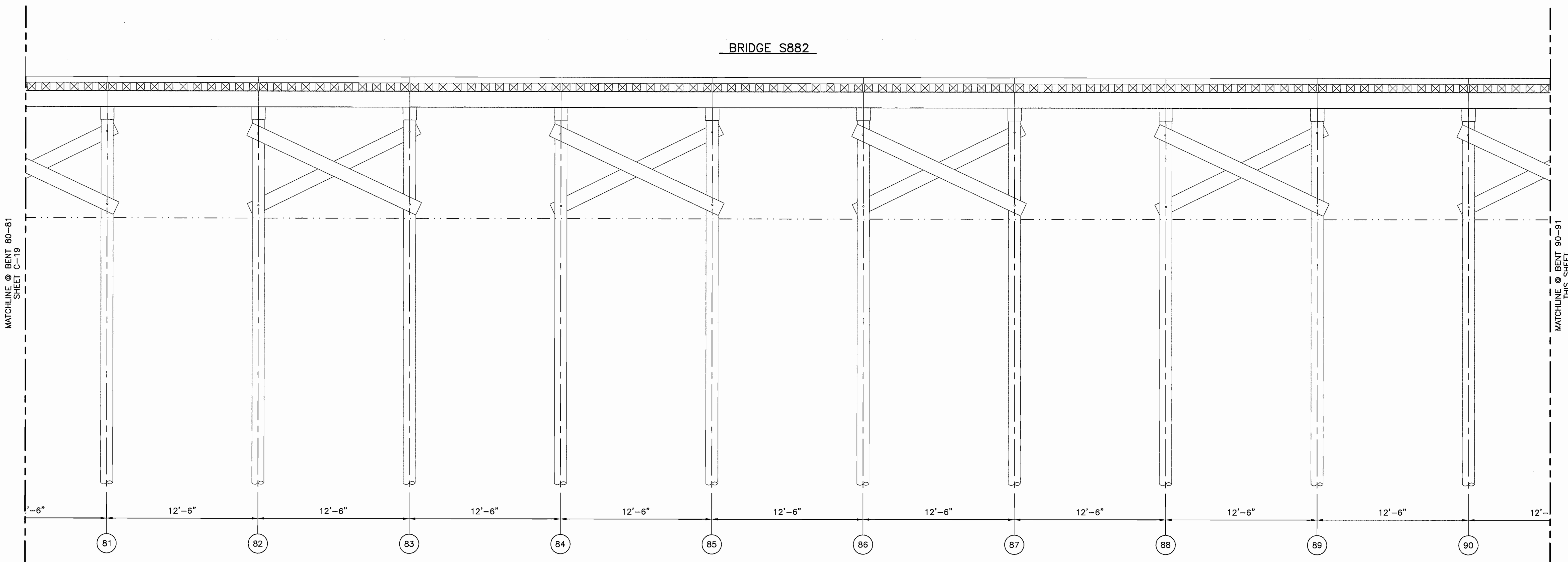
PROJECT AREA DESCRIPTIONS

BRIDGE NO. S882
RAILROAD BRIDGE OVER WHITE OAK RIVER

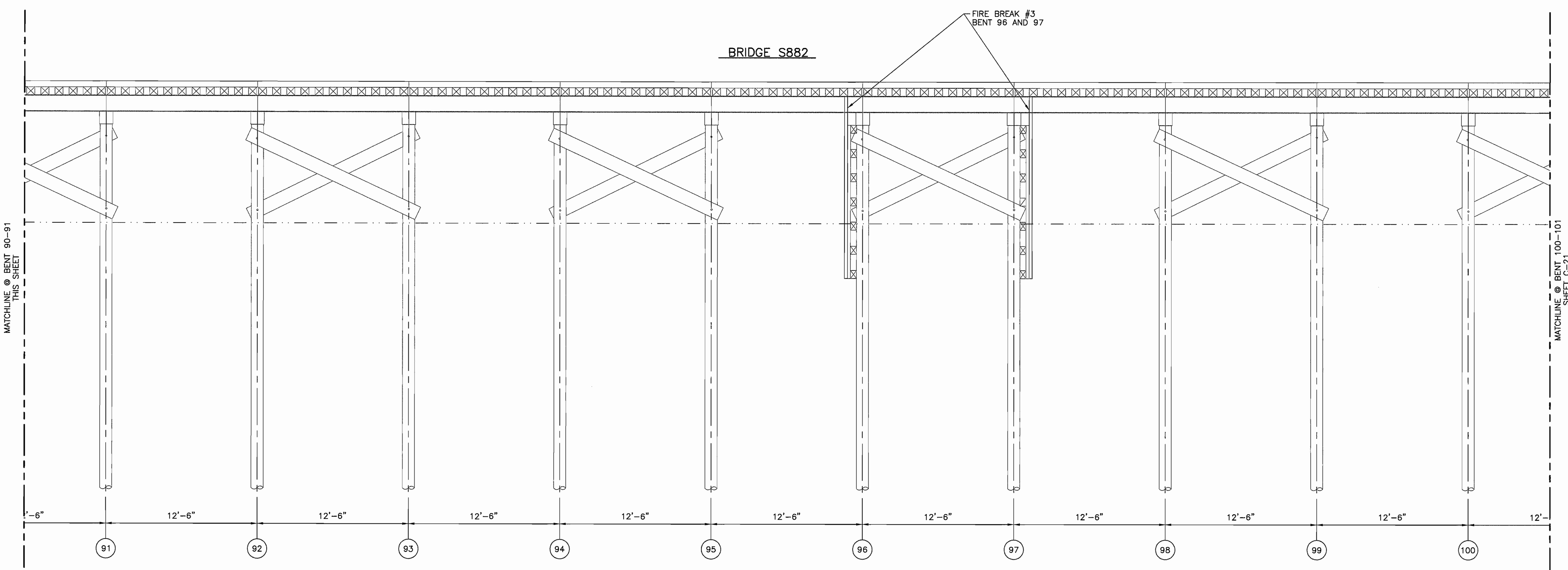
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BRIDGE S882

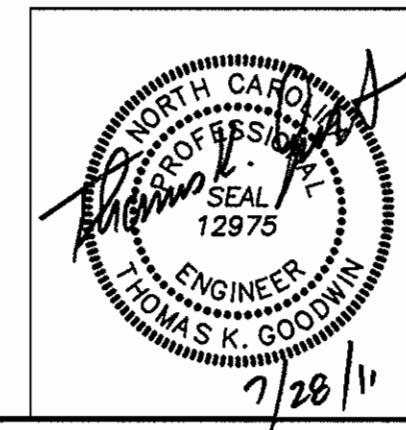


BRIDGE S882



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<small>DEPT OF NAVY</small> NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE <small>CAMP LEJEUNE, NORTH CAROLINA</small>		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE S882 ELEVATION BENT 81 - 100	
<small>DES. TKG</small> <small>DR. FDW</small> <small>CHK. TKG</small> <small>SUBMITTED BY:</small> <small>DESKN DR.</small> <small>APPROVED: PWO OR OICC</small>	<small>DATE</small> <small>DATE</small>	<small>SIZE</small> F	<small>CODE IDENT NO.</small> 80091 <small>NAVFAC DRAWING NO.</small> 60008276 <small>CONSTR CONTR NO.</small> <small>N 62470-II-0097</small>
<small>SATISFACTORY TO</small> <small>DATE</small>	<small>SCALE: AS SHOWN</small>	<small>SPEC.</small> 110097	<small>SHEET</small> 21 OF 28

SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

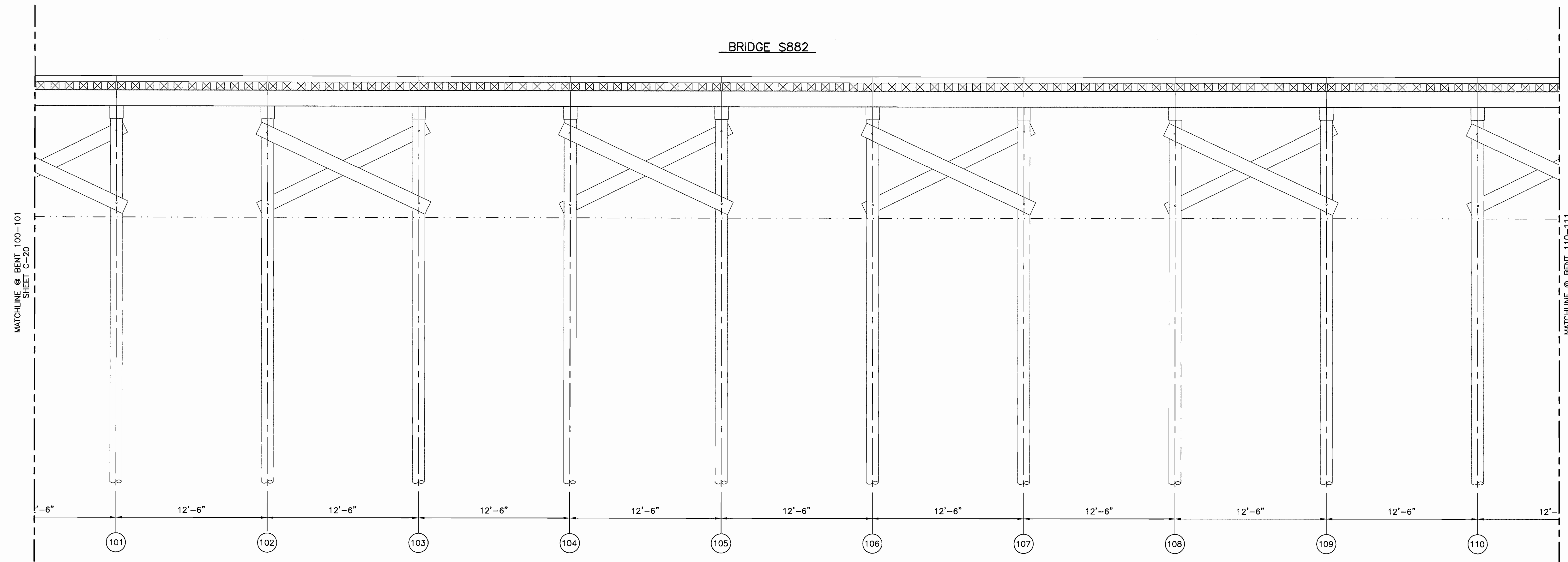
PROJECT AREA DESCRIPTIONS

BRIDGE NO. S882
RAILROAD BRIDGE OVER WHITE OAK RIVER

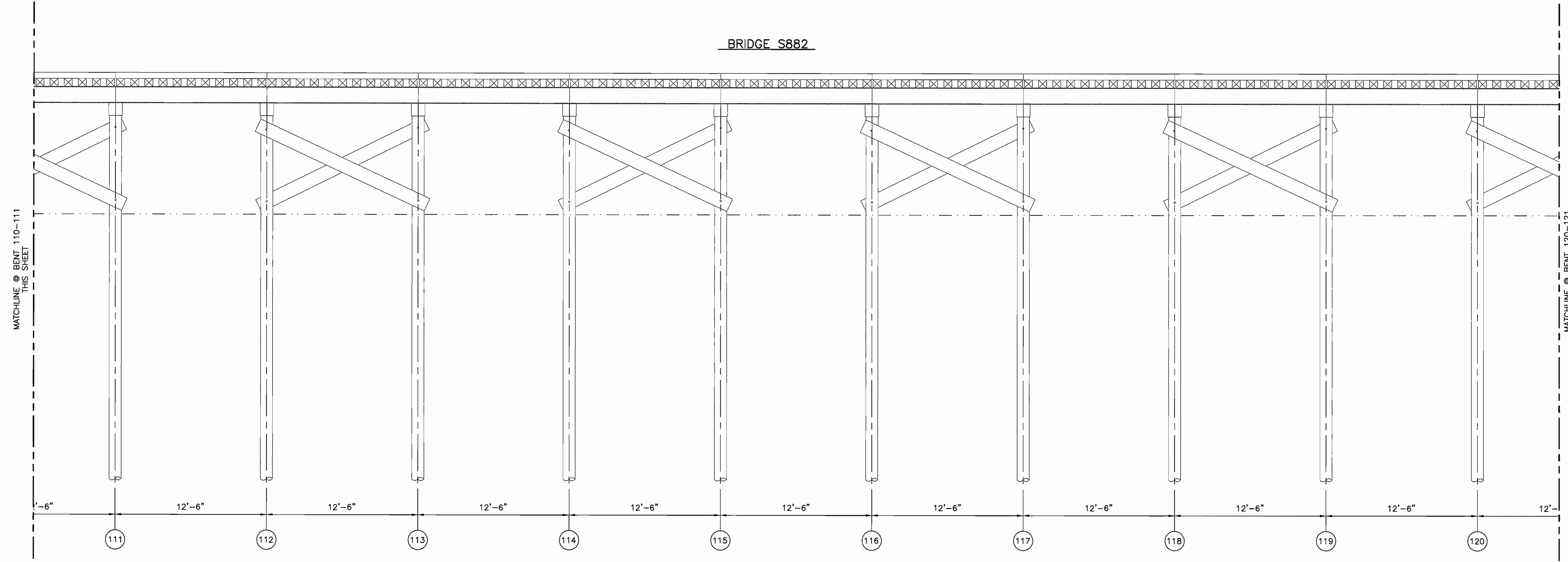
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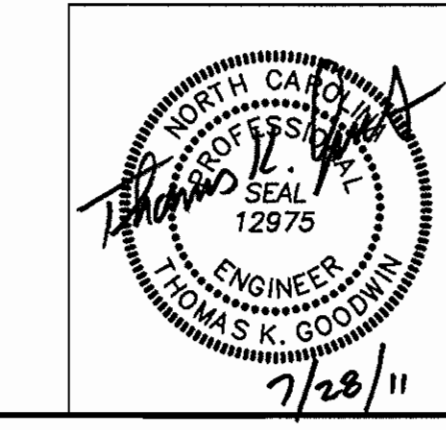


BRIDGE S882



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<small>DEPT OF NAVY</small> MARINE CORPS BASE <small>CAMP LEJEUNE, NORTH CAROLINA</small>		<small>NAVAL FACILITIES ENGINEERING COMMAND</small>	
<small>DES. TKG</small> <small>DR. FDW</small> <small>CHK. TKG</small> <small>SUBMITTED BY:</small> <small>DESIGN DR.</small> <small>APPROVED: PWO OR OICC</small> <small>DATE</small> <small>SATISFACTORY TO</small> <small>DATE</small>		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE S882 ELEVATION BENT 101 - 120	
<small>SIZE</small> <small>CODE IDENT NO.</small> F 80091		<small>NAVFAC DRAWING NO.</small> 60008277	
<small>SCALE: AS SHOWN</small> <small>SPEC.</small> 110097		<small>CONSTR CONTH NO.</small> N 82470-11-0087 <small>SHEET</small> 22 OF 28	

SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

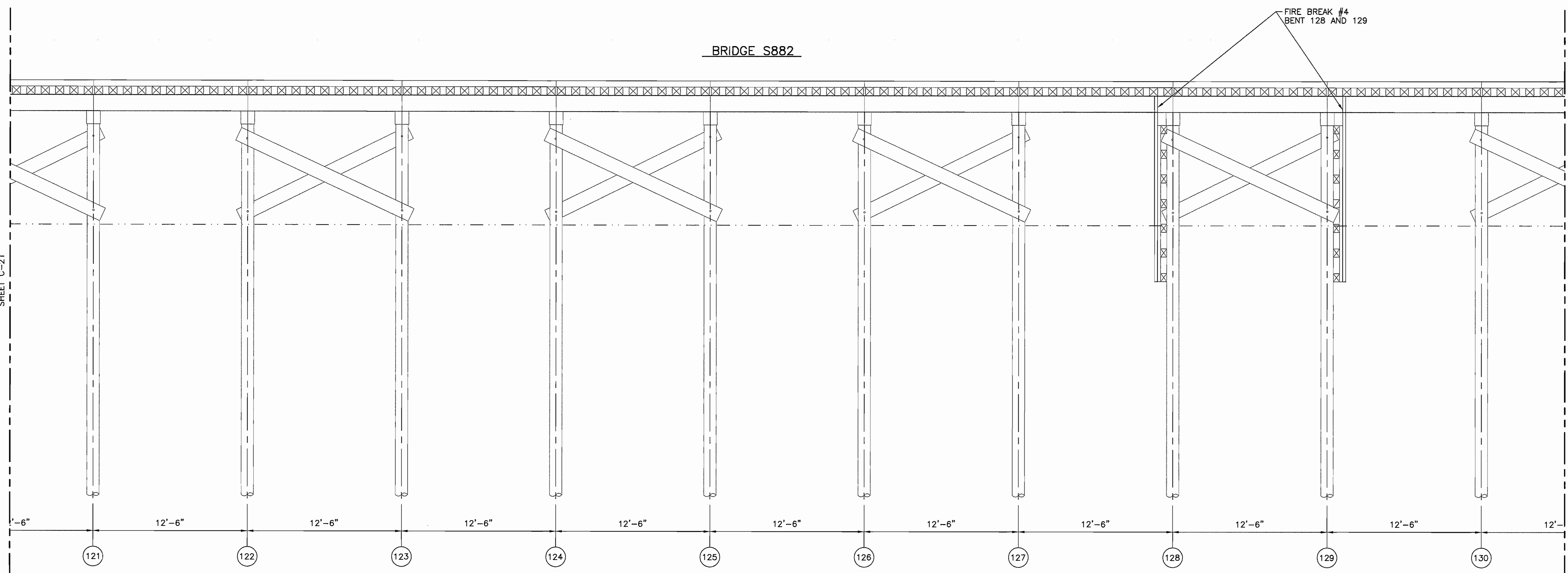
PROJECT AREA DESCRIPTIONS

BRIDGE NO. S882
RAILROAD BRIDGE OVER WHITE OAK RIVER

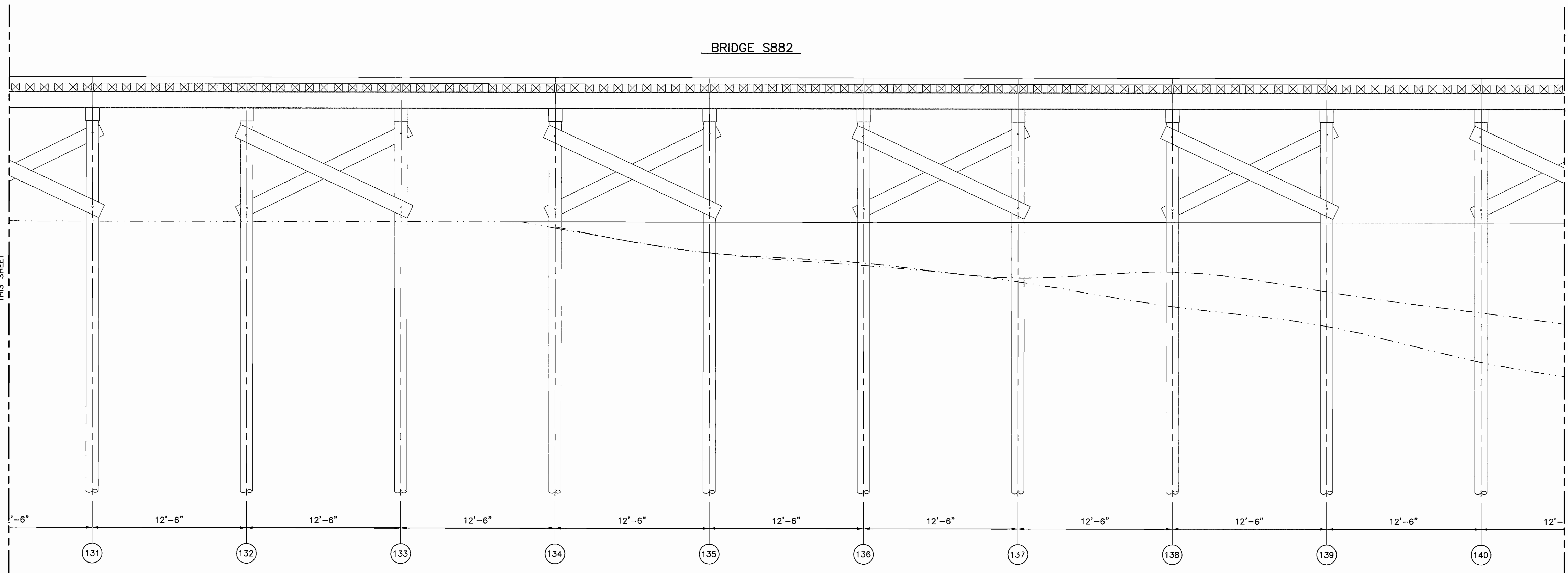
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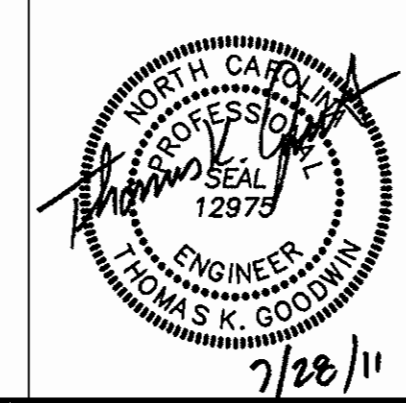


BRIDGE S882



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DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA		REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE S882 ELEVATION BENT 121 - 140	
DES. TKG DR. FDW CHK. TKG SUBMITTED BY: DESIGN DR.	APPROVED: PWO OR OJCC DATE	SIZE F 80091	NAVFAC DRAWING NO. 60008278 CONSTR CONTR NO. N 62470-II-0067
SATISFACTORY TO		DATE	SCALE: AS SHOWN SPEC: 110097 SHEET 23 OF 28

SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

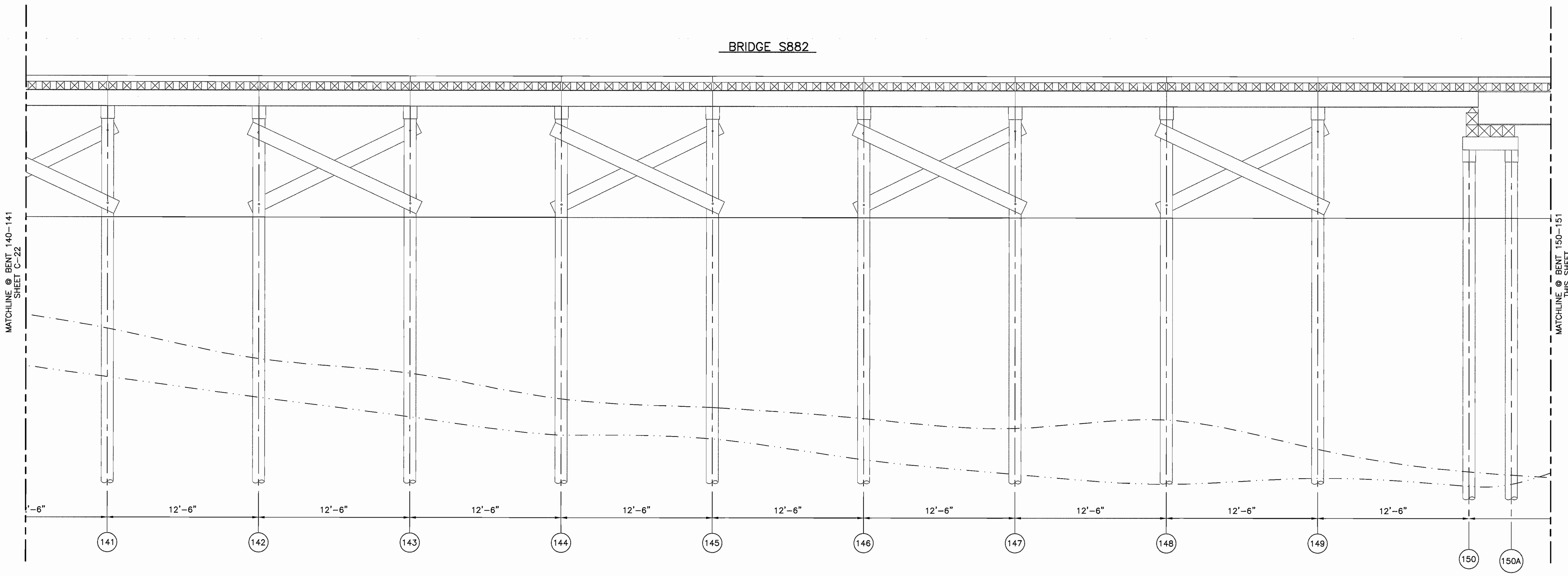
PROJECT AREA DESCRIPTIONS

BRIDGE NO. S882
RAILROAD BRIDGE OVER WHITE OAK RIVER

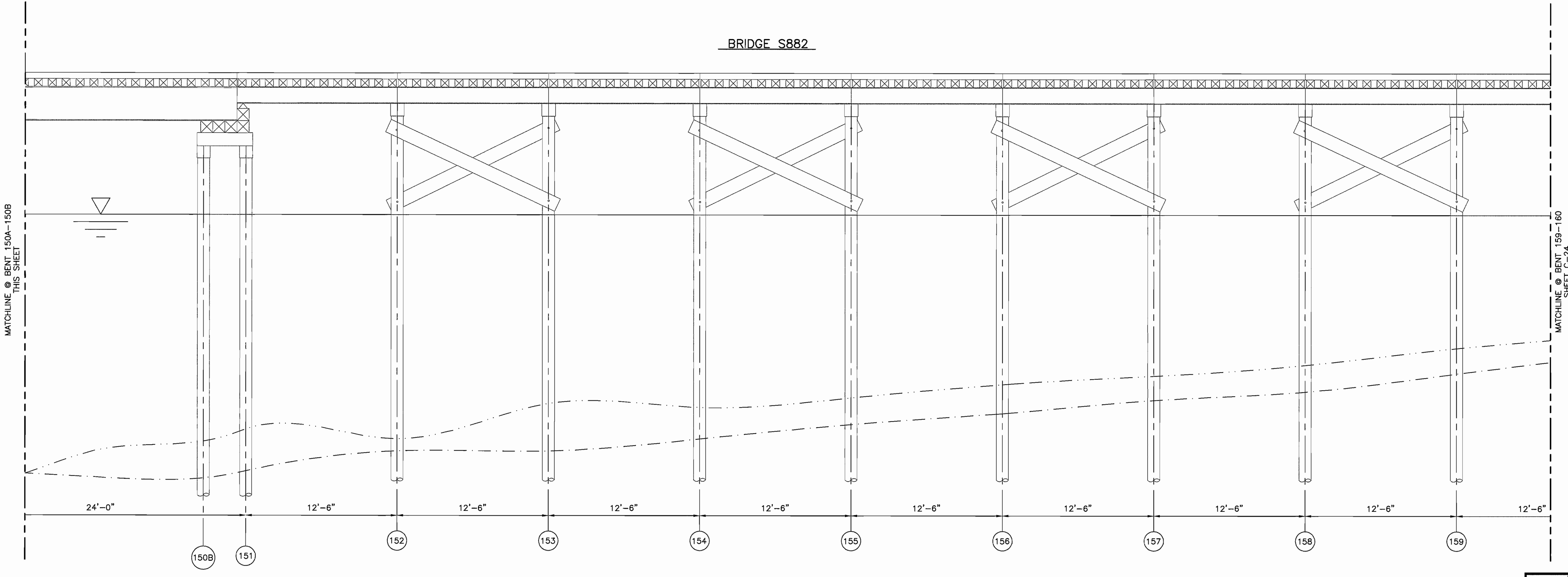
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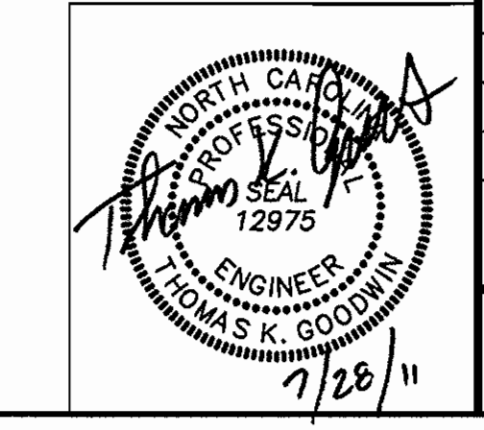
BRIDGE S882



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<p>DEPT OF NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA</p>		<p>NAVAL FACILITIES ENGINEERING COMMAND REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE S882 ELEVATION BENT 141 - 159</p>	
DES: TKG	DR: FDW	CHK: TKG	SUBMITTED BY:
DESIGN DIR:	APPROVED: PWO OR OICC	DATE:	SIZE: F
SATISFACTORY TO:	DATE:	CODE IDENT NO.: 80091	NAVFAC DRAWING NO.: 60008279
SCALE: AS SHOWN	SPEC: 110097	CONSTR CONTR NO.: N 82470-11-0097	SHEET 24 OF 28



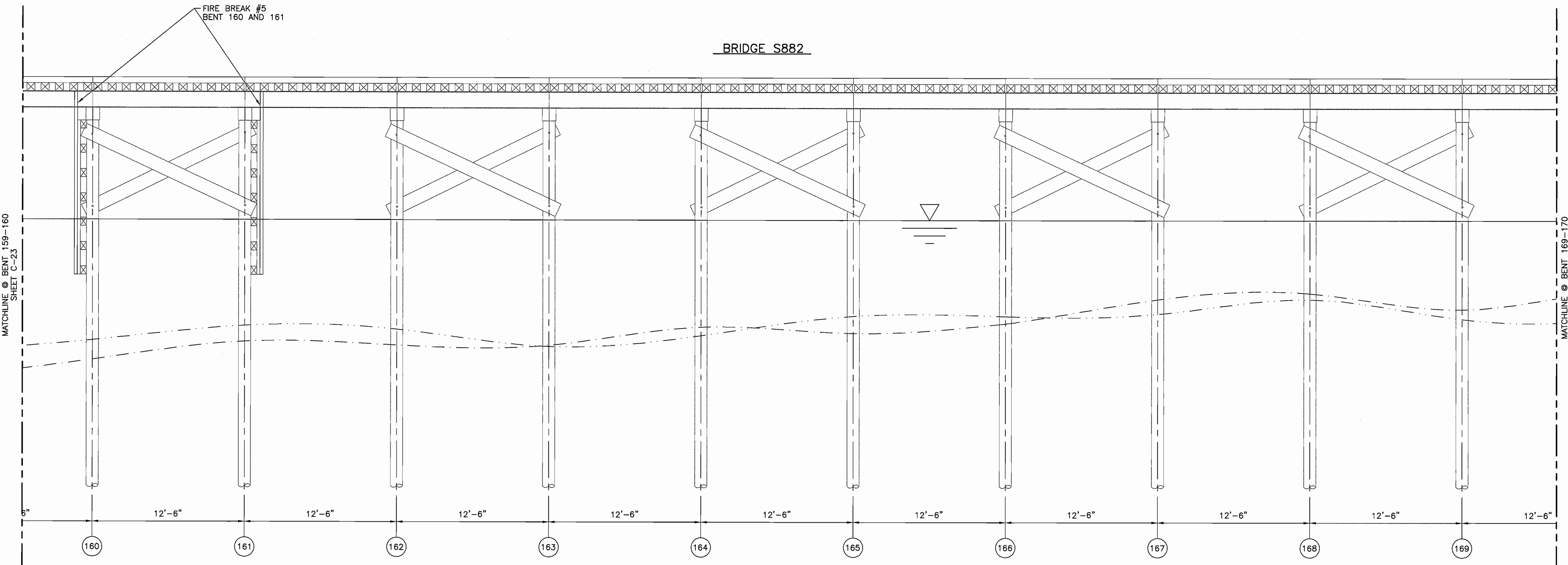
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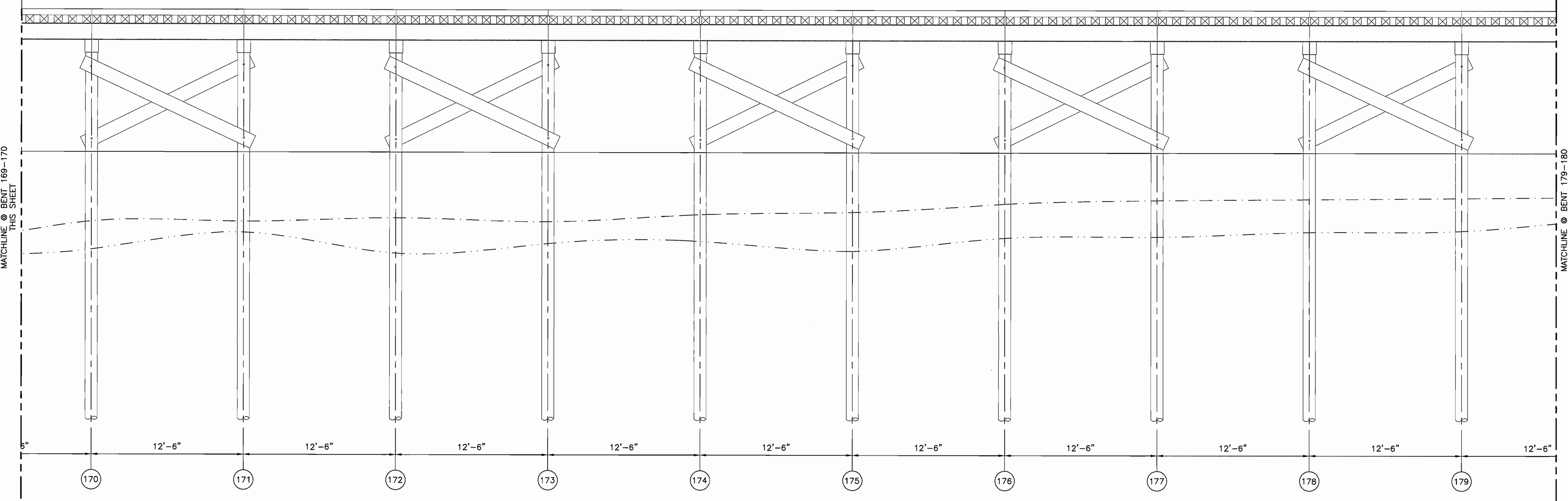
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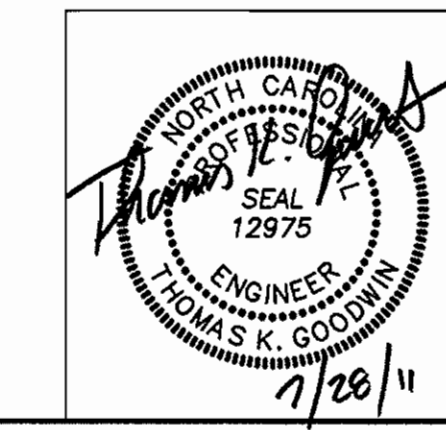


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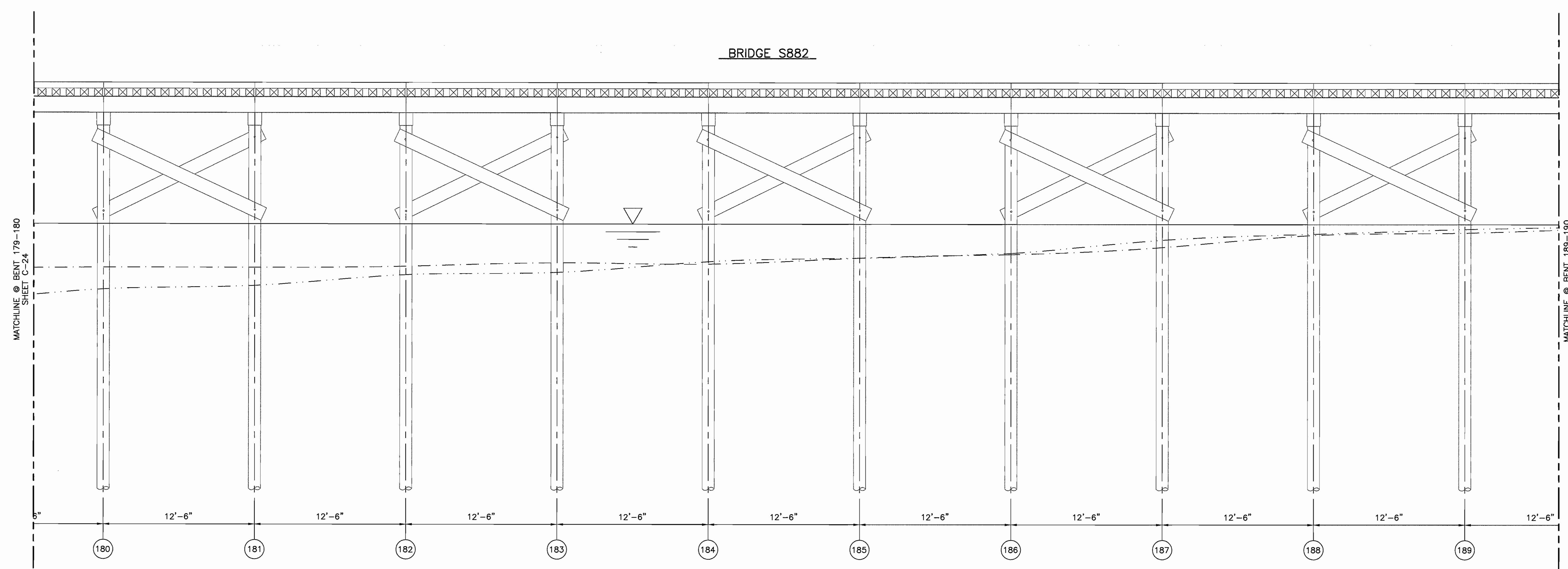
Hobbs Upchurch Associates <small>engineering planning surveying</small> <small>300 SW Broad Street Southern Pines, North Carolina 28387</small> <small>Phone: (919) 692-8810 Fax: (919) 692-7542</small> <small>www.hobbsupchurch.com</small>		C-24	
<small>DEPT OF NAVY</small> MARINE CORPS BASE <small>CAMP LEJEUNE, NORTH CAROLINA</small>		<small>NAVAL FACILITIES ENGINEERING COMMAND</small> REPAIR BRIDGES, VARIOUS LOCATIONS <small>MCB, CLNC</small> BRIDGE S882 ELEVATION BENT 160-179	
<small>DESIGN DR.</small> <small>APPROVED: PWO OR CKOC</small>	<small>DATE</small>	<small>SIZE</small> F	<small>CODE IDENT NO.</small> 80091 <small>NAVFAC DRAWING NO.</small> 60008280 <small>CONSTR CONTR NO.</small> N 62470-B-0097
<small>SATISFACTORY TO</small>	<small>DATE</small>	<small>SCALE</small> AS SHOWN	<small>SPEC.</small> 110097 <small>SHEET</small> 25 OF 28

SYM.	PREP'D BY	PREP'D BY	DATE	APPROVED

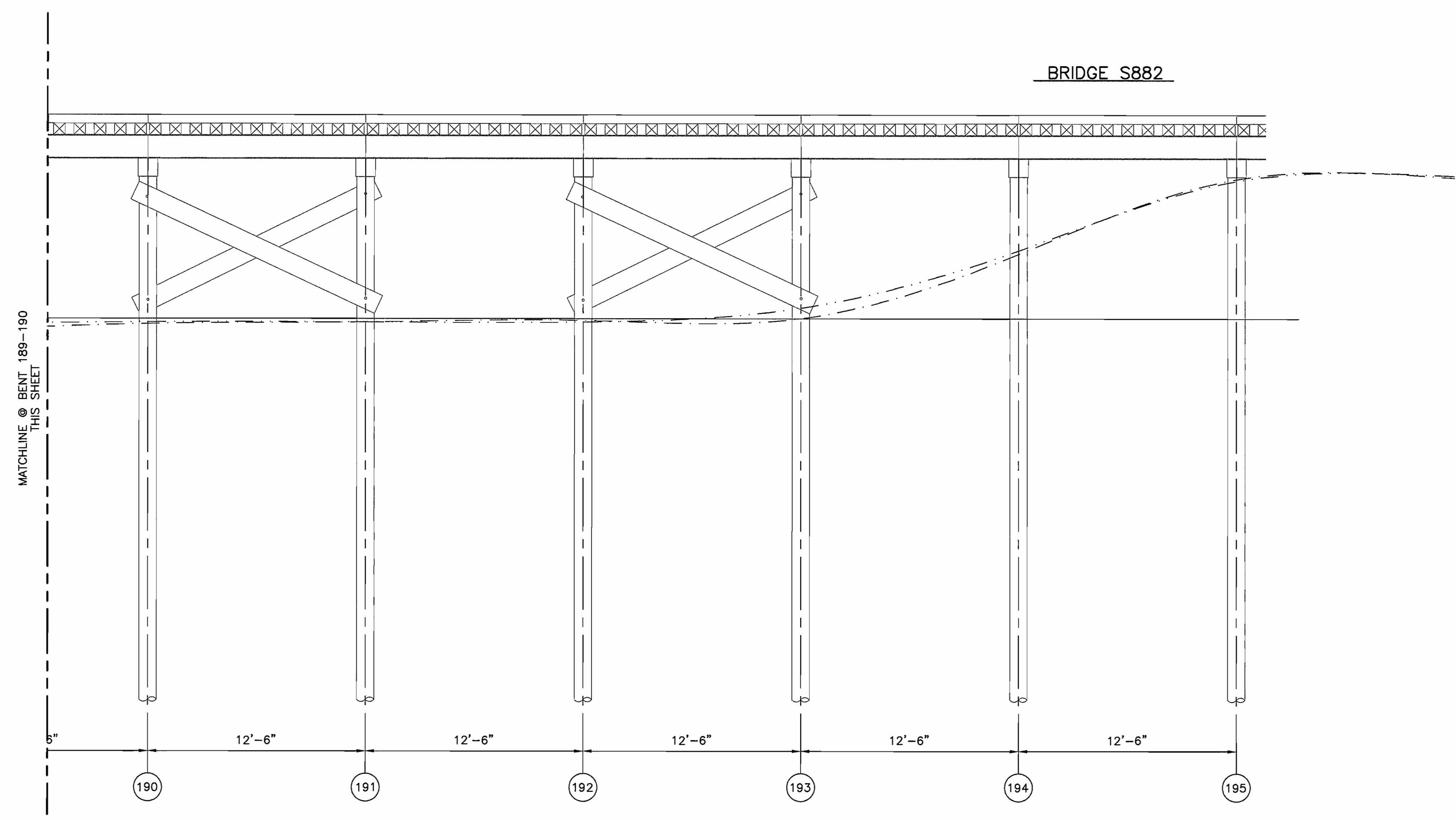
PROJECT AREA DESCRIPTIONS
 BRIDGE NO. S882
 RAILROAD BRIDGE OVER WHITE OAK RIVER

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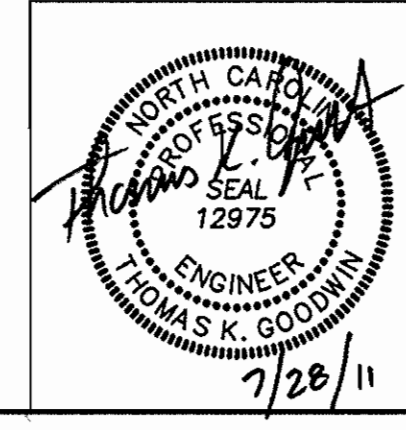
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2. REPAIR PILE D, BENT 154	REPAIR PILE PER "DECAYED PILE REPAIR DETAIL".
3. CLEAN AND INSTALL FULL HEIGHT PILE WRAPS ON ALL TIMBER PILES IDENTIFIED WITH MODERATE CHECKS, SPLINTERING, MARINE BORER ACTIVITY, FRACTURED AND/OR HEAVILY DECAYED TIMBER PILES WITH 10% OR MORE SECTION LOSS TO PREVENT FURTHER DETERIORATION AND LOSS OF SECTION.	REPAIR PILE PER "DECAYED PILE REPAIR DETAIL" TO FULL HEIGHT OF IDENTIFIED PILES AT 44 LOCATIONS IDENTIFIED IN THE REPORT.
4. REPLACE MISSING, FRACTURED, AND/OR HEAVILY DECAYED TIMBER CROSSBRACING MEMBERS, TIMBER CURBS, AND TIMBER RAIL TIES, INCLUDING REPLACEMENT OF THE MISSING, CORRODED OR BROKEN HARDWARE.	REPLACE MISSING, FRACTURED, AND/OR HEAVILY DECAYED TIMBER CROSSBRACING, CURBS, RAIL TIES, AND ANY MISSING OR CORRODED HARDWARE.
5. REPLACE THE LOWER PANELS WITH HEAVY CORROSION AND SECTION LOSS AT THE FIREBREAKS BETWEEN BENTS 1 AND 134.	REPLACE THE LOWER PANELS IN ACCORDANCE WITH THE DETAILS.
6. REPLACE THE MISSING AND BROKEN RAIL BEARING PLATES, AND RAIL SPIKES AS NEEDED.	IDENTIFY AND REPLACE THE MISSING AND BROKEN RAIL BEARING PLATES AND RAIL SPIKES AS NEEDED.

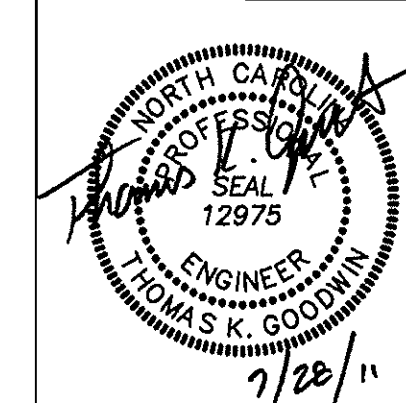
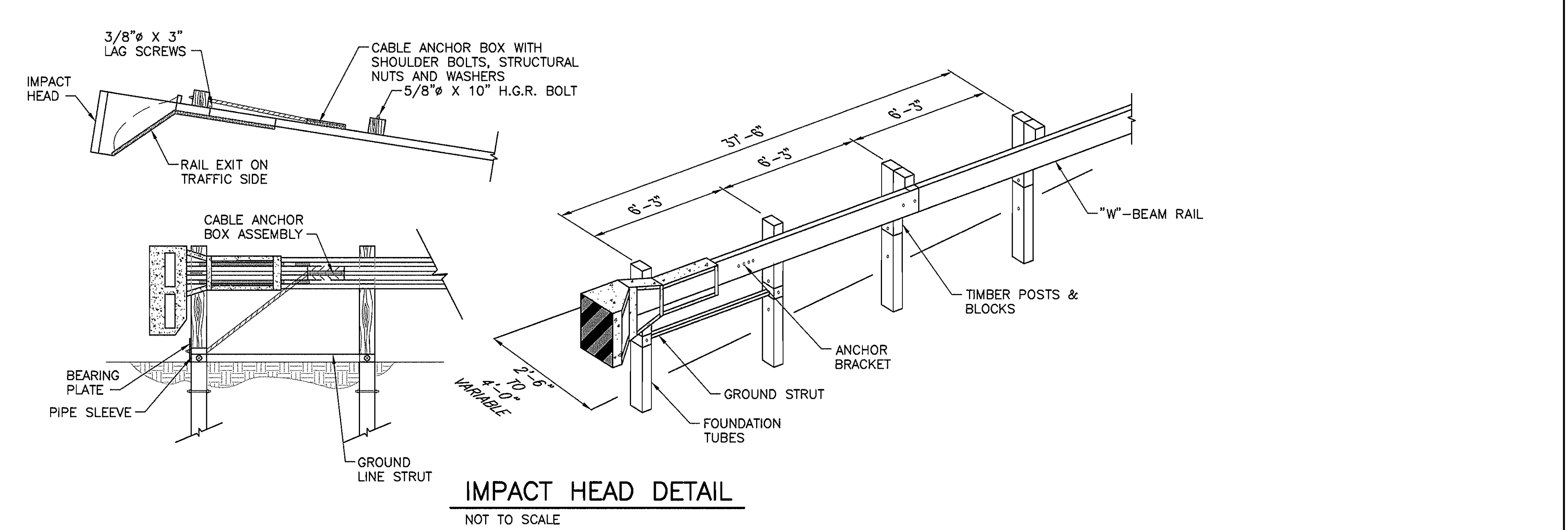
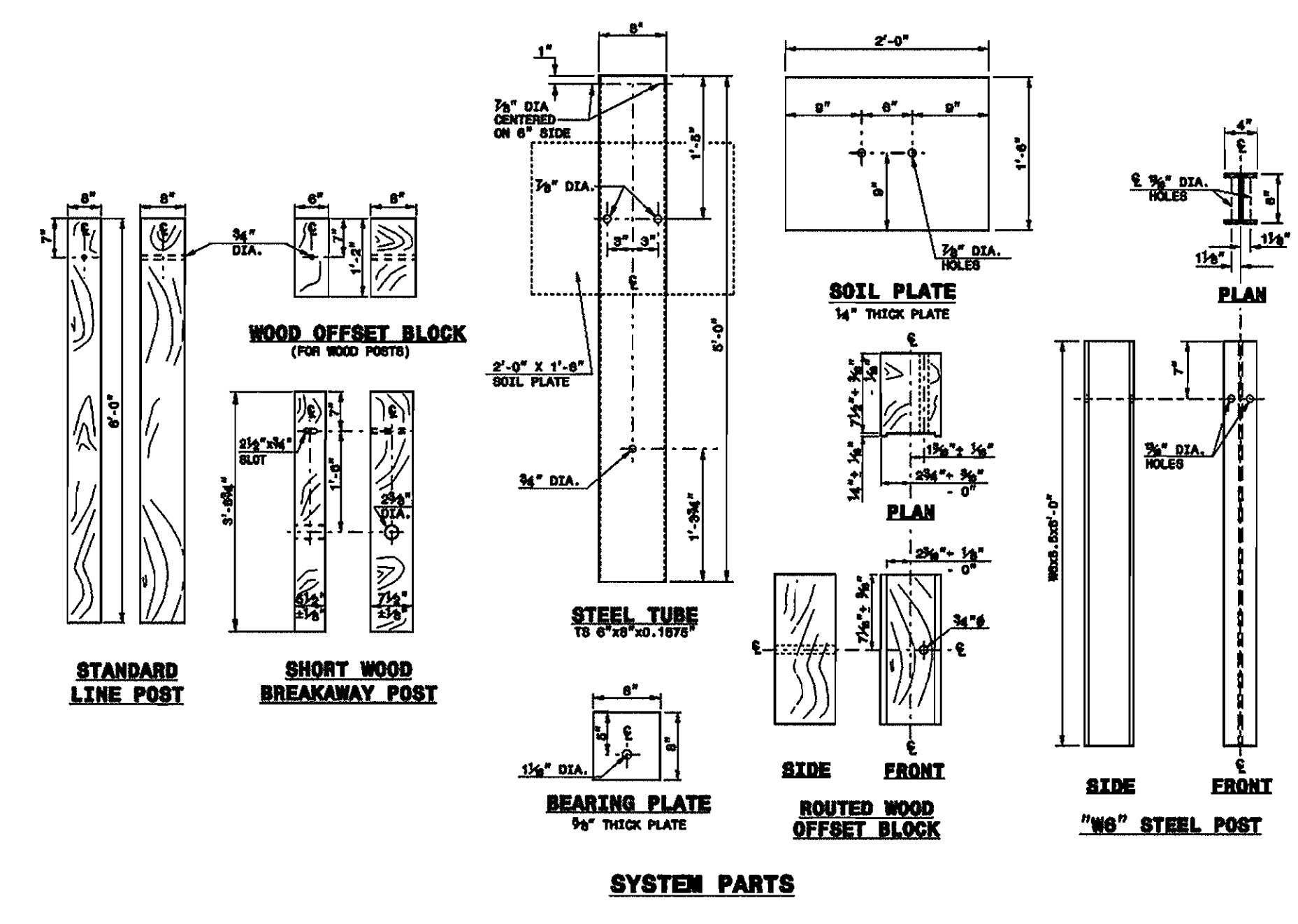
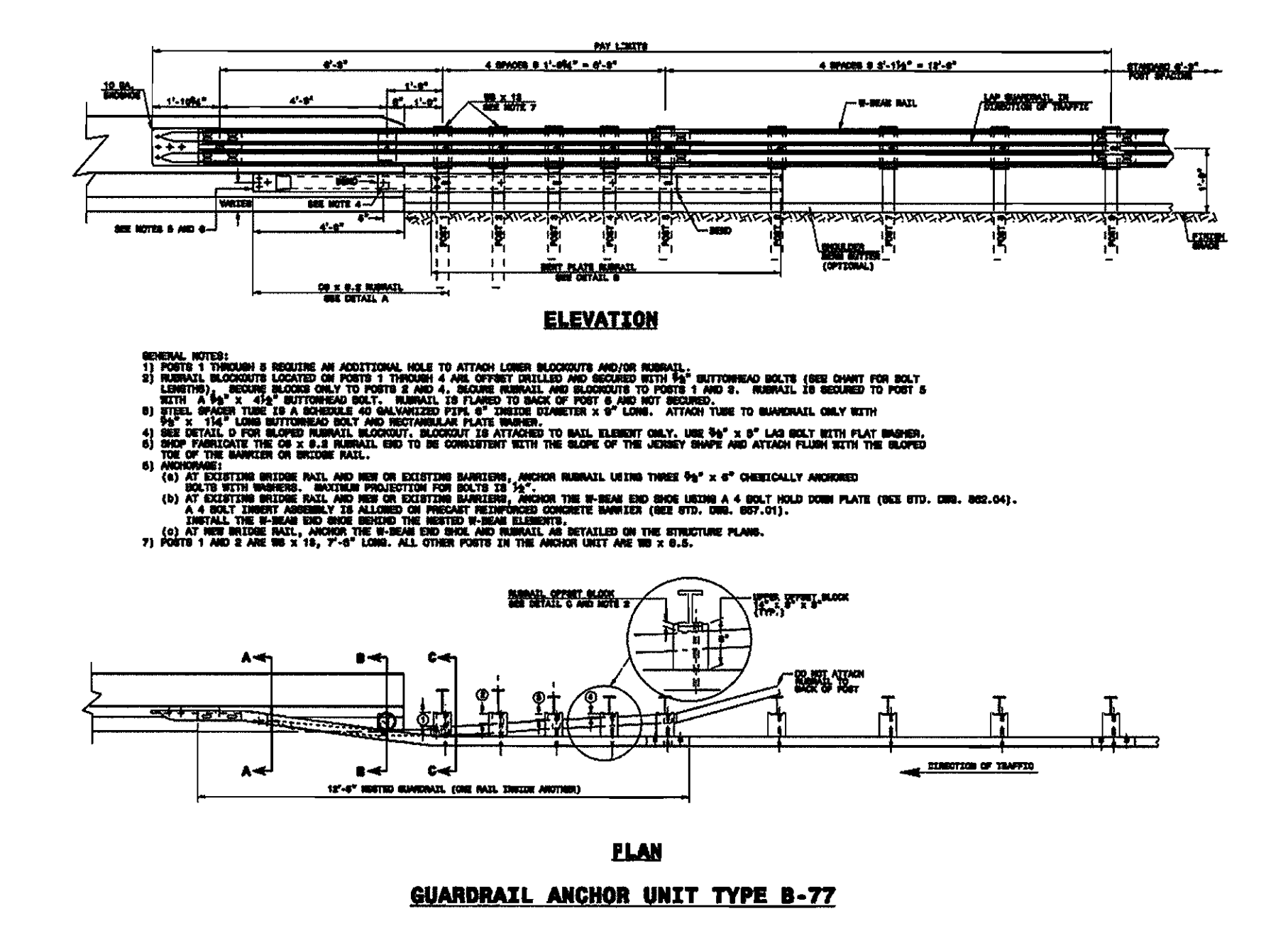
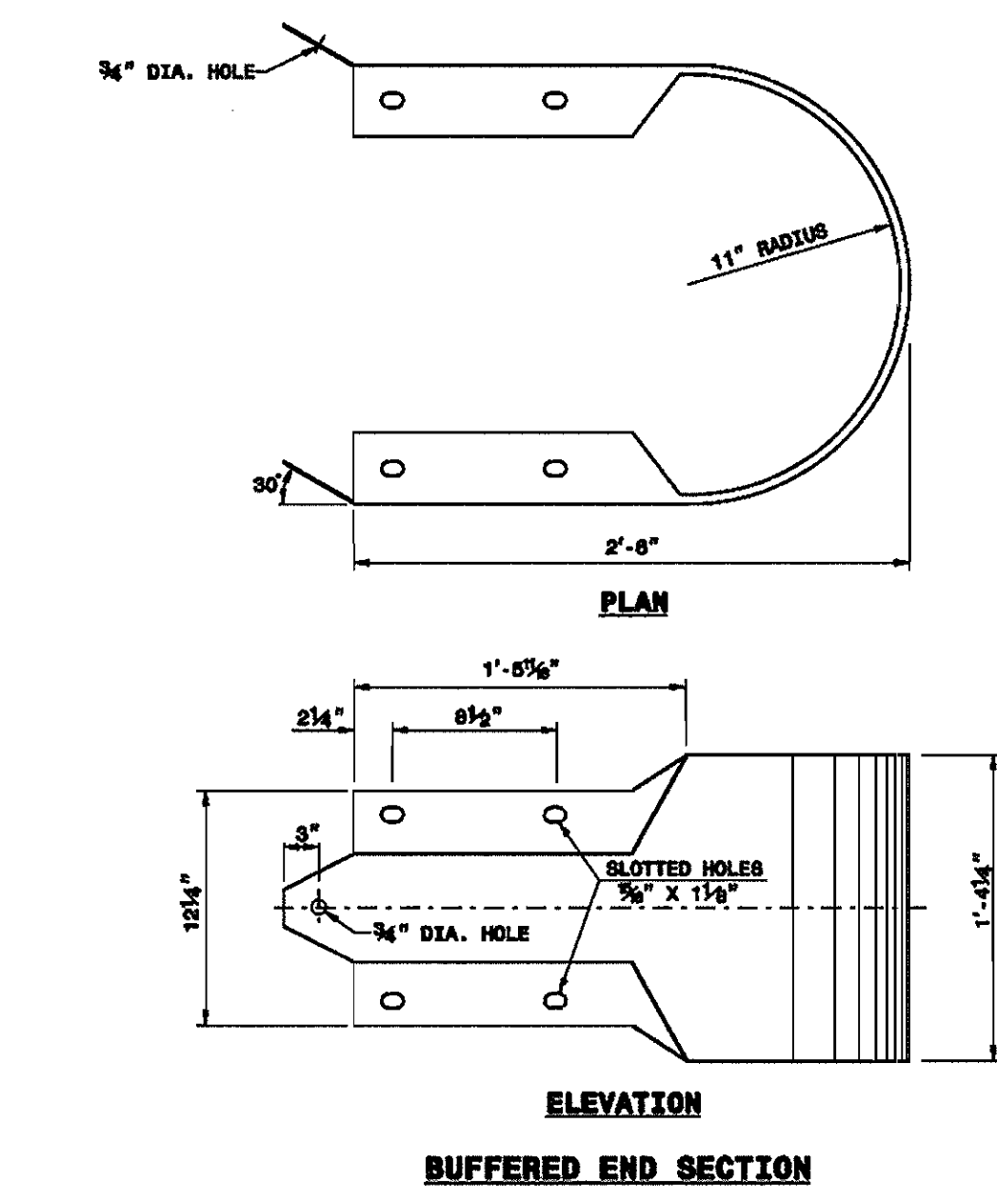
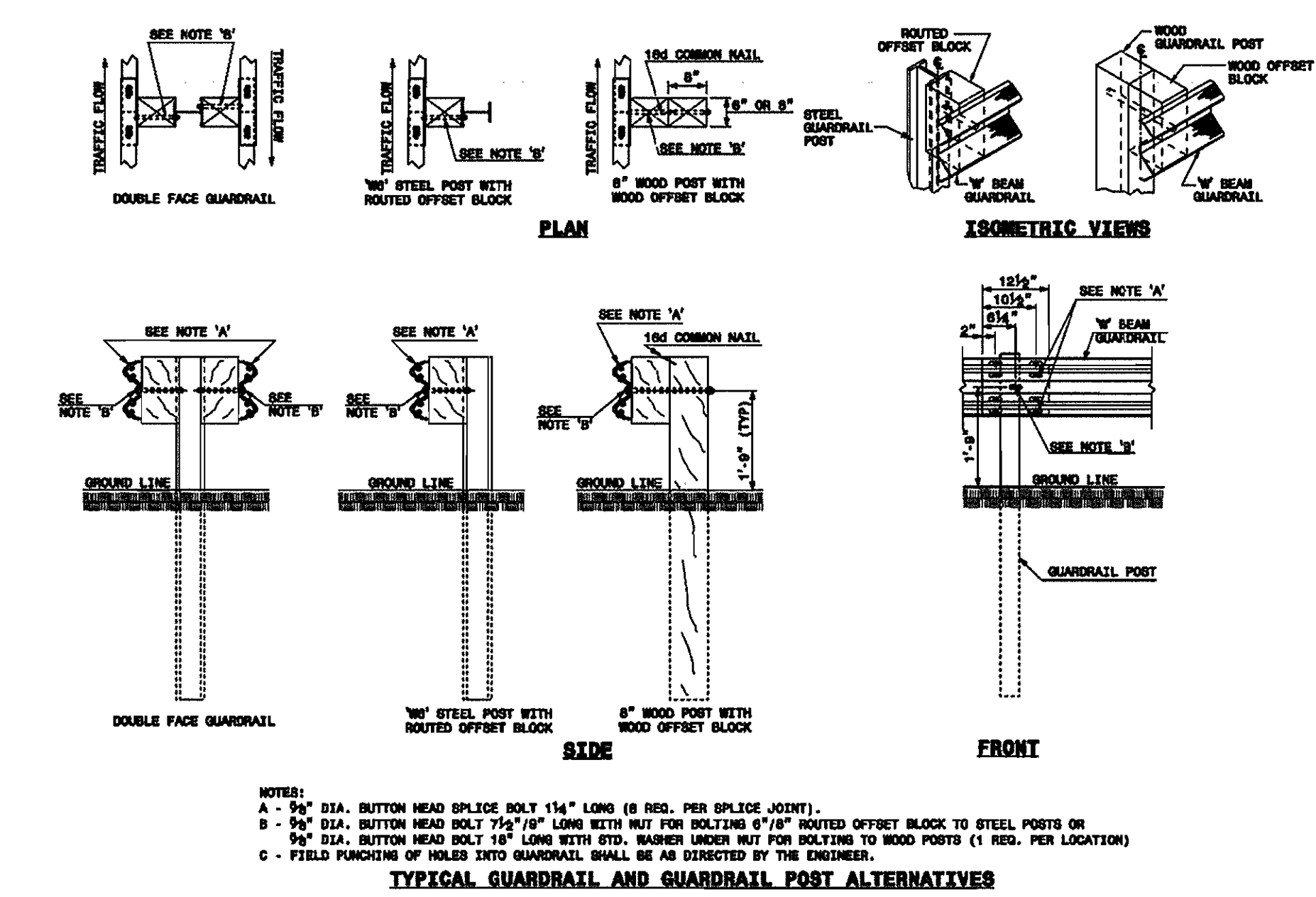
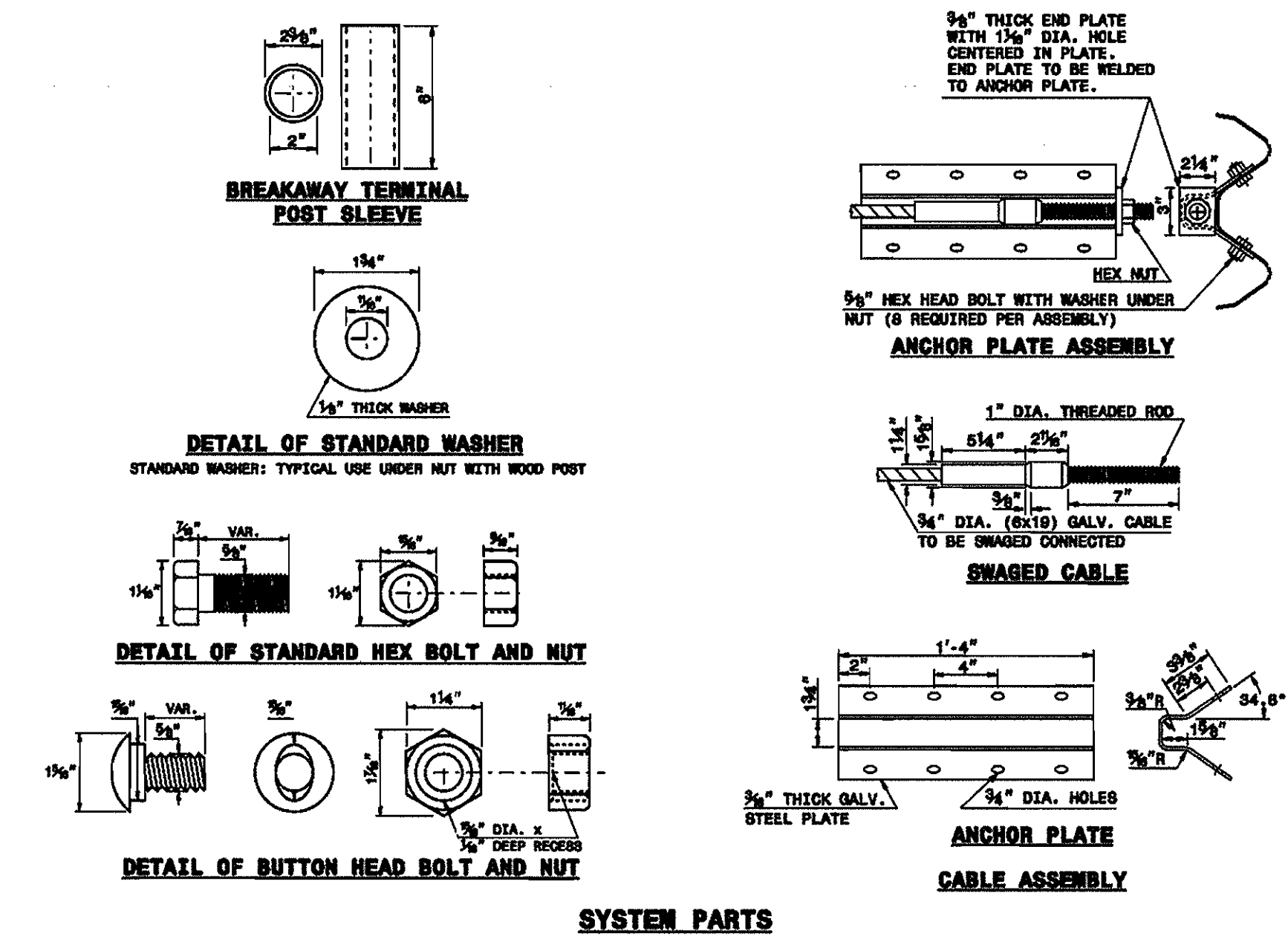
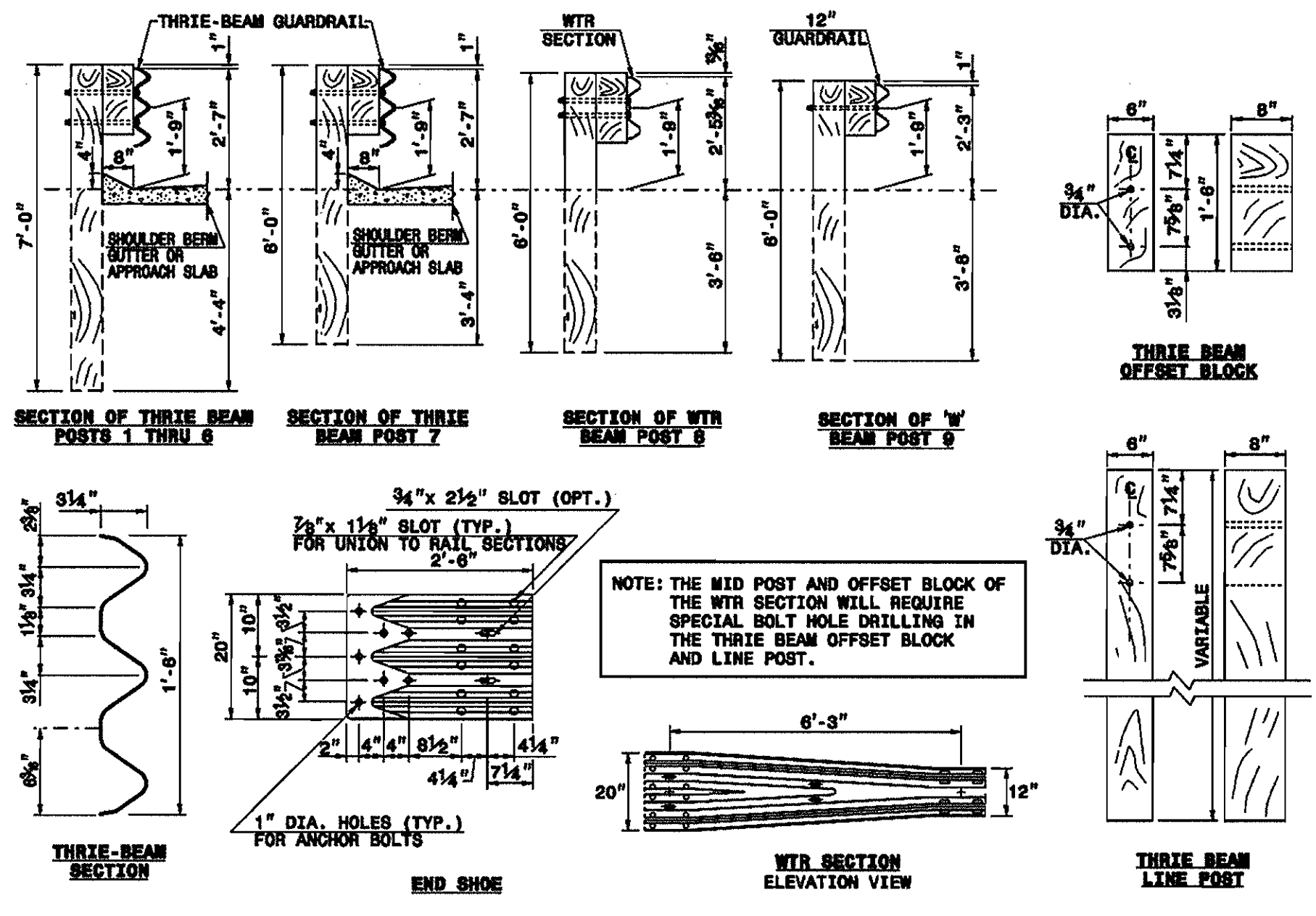
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C-25

DEPT OF NAVY		NAVAL FACILITIES ENGINEERING COMMAND	
MARINE CORPS BASE		CAMP LEJEUNE, NORTH CAROLINA	
REPAIR BRIDGES, VARIOUS LOCATIONS			
MCB, CLNC			
BRIDGE S882			
ELEVATION BENT 180-195			
DESIGNER	TKG	SIZE	CODE IDENT NO.
APPROVED: PWO OR OKCC	DATE	F	80091
SATISFACTORY TO		DATE	NAVFAC DRAWING NO.
SCALE: AS SHOWN		SPEC:	110097
SHEET		26 OF 28	

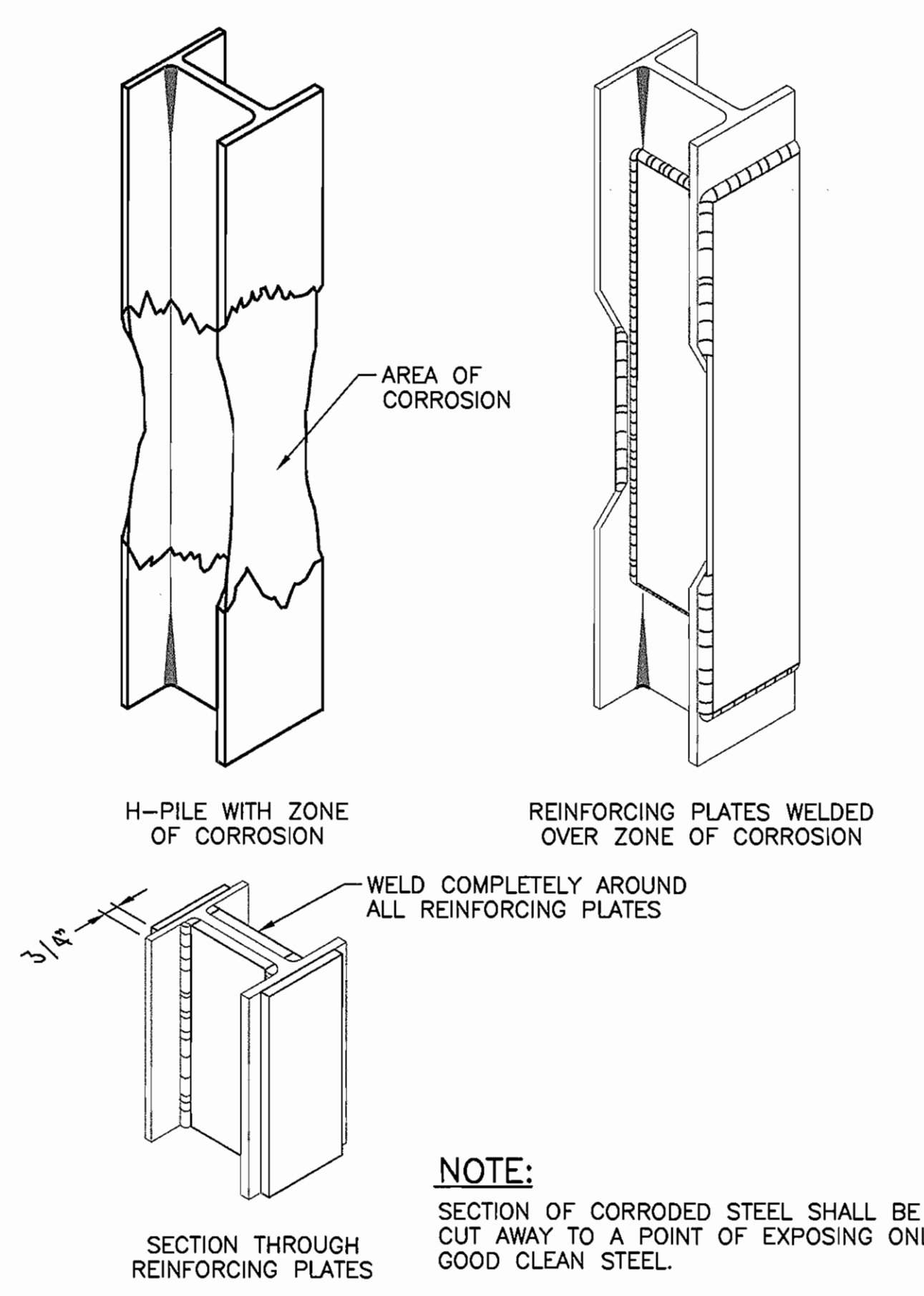


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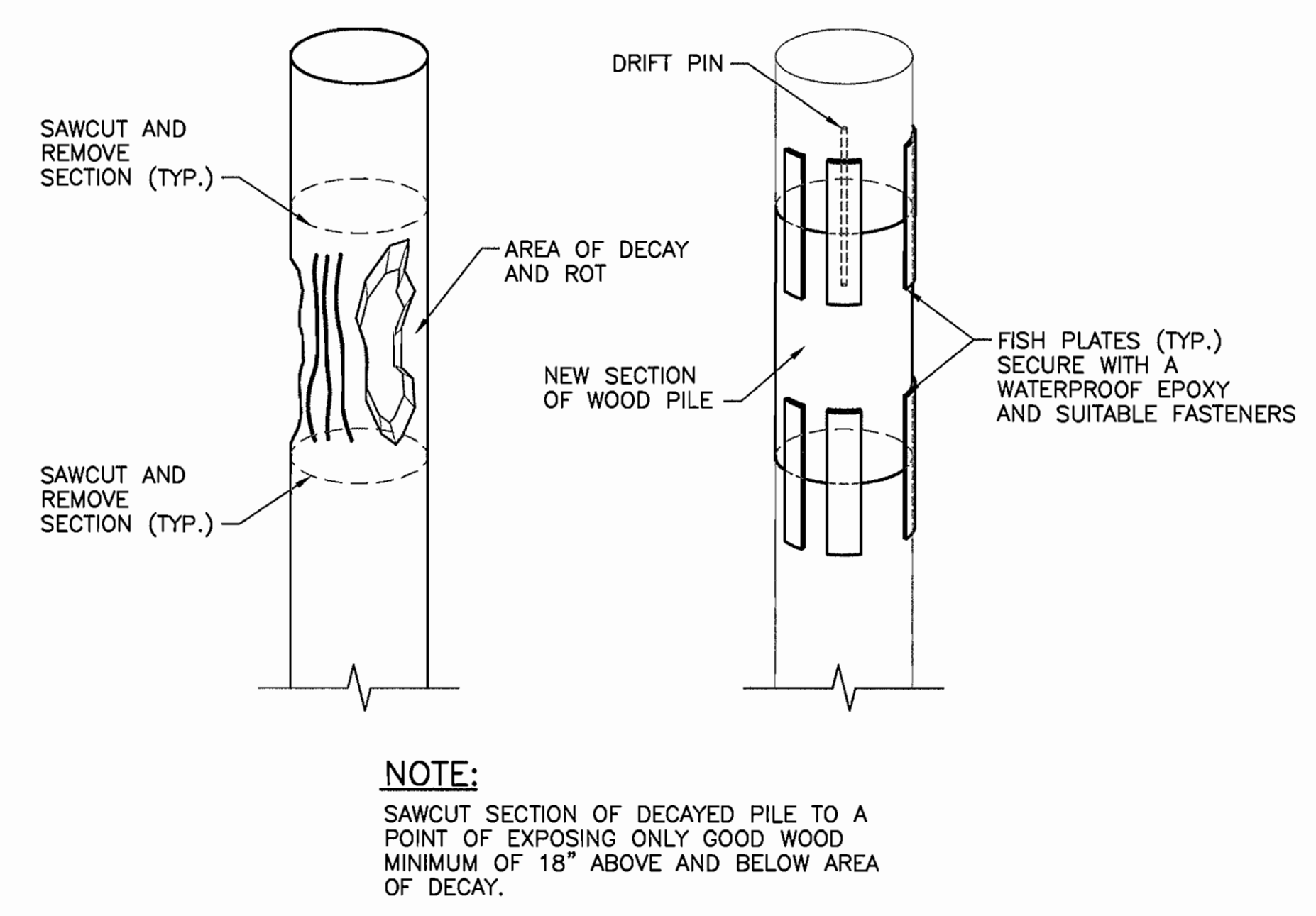


Hobbs Upchurch Associates engineering planning surveying 300 SW Broad Street Southern Pines, North Carolina 28387 P: (910) 682-9616 F: (910) 682-7342 License Number: C-0454		D-1 NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA	
DEPT OF NAVY REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE REPAIR DETAILS		NAVFAC DRAWING NO. 60008282	
DESG. TKG DR. FDW CHK. TKG SUBMITTED BY: DESG. DIR. APPROVED: PWO OR OICC SATISFACTORY TO	DATE DATE DATE DATE	SIZE F CODE IDENT NO. 80091	NAVFAC DRAWING NO. 60008282 CONSTR CONTR NO. N 62470-11-0097
SCALE AS SHOWN		SPEC. 110097	SHEET 27 OF 28

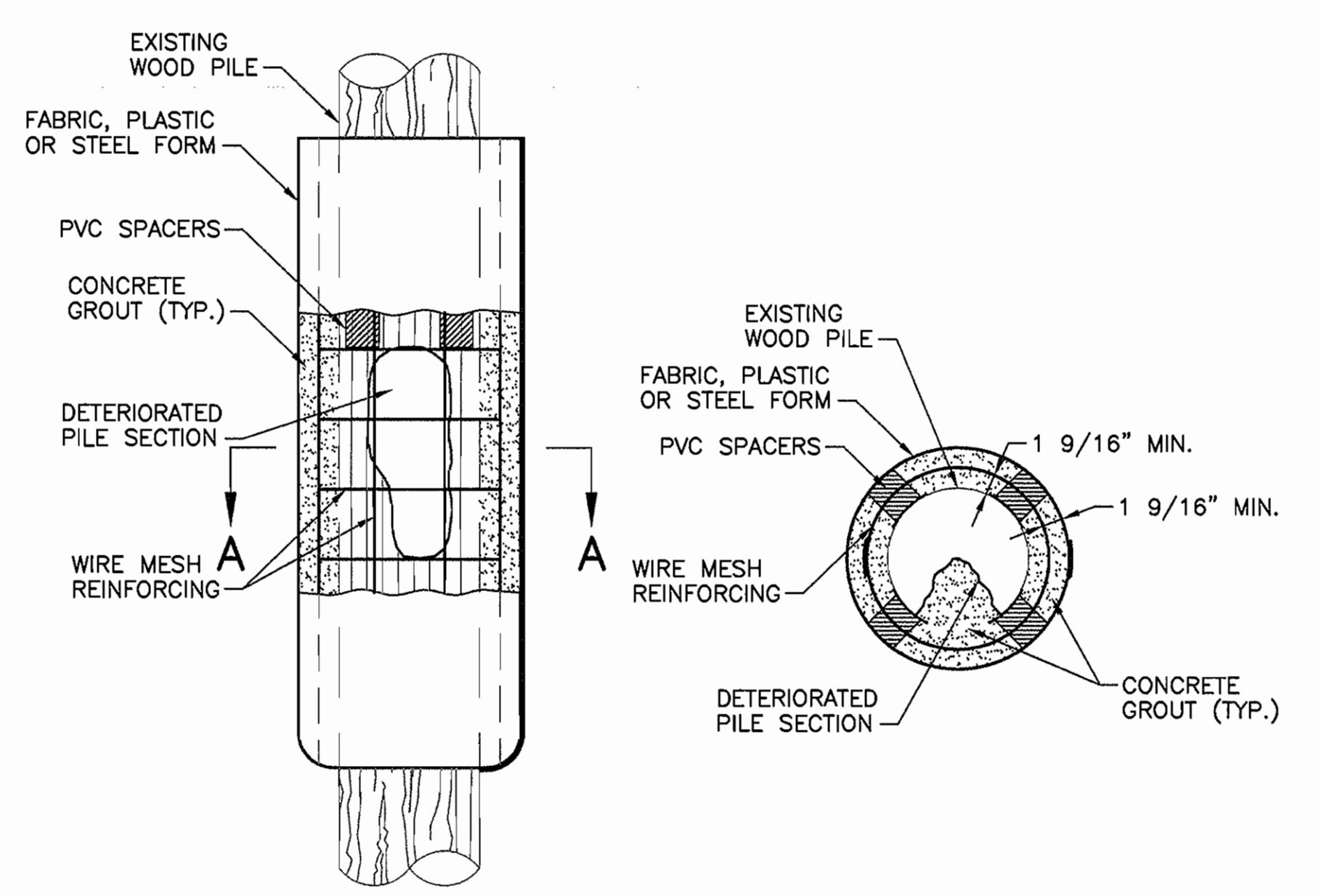
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CORRODED STEEL REPAIR DETAIL
NOT TO SCALE

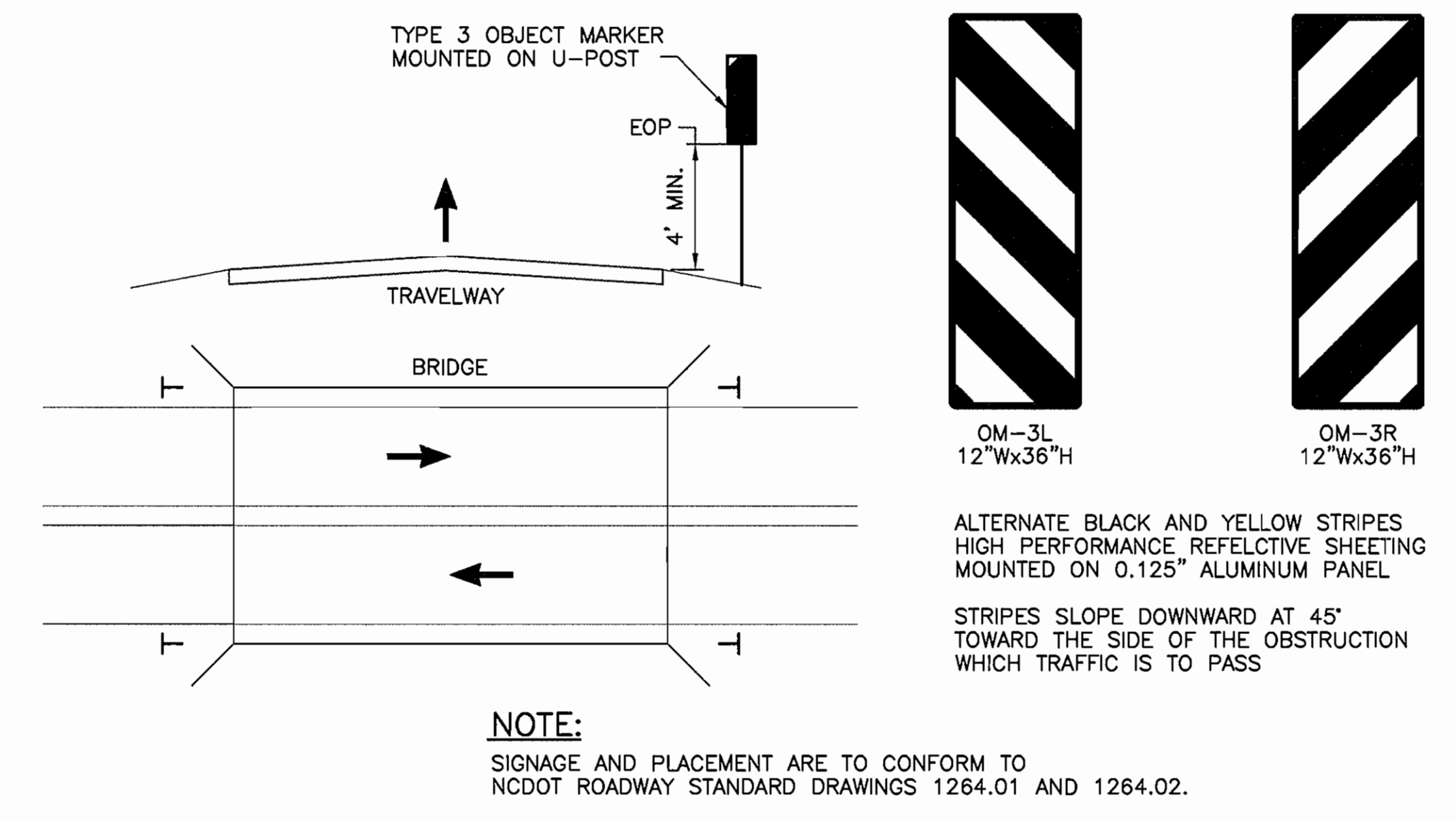


DECAYED PILE SECTION REPLACEMENT DETAIL
NOT TO SCALE

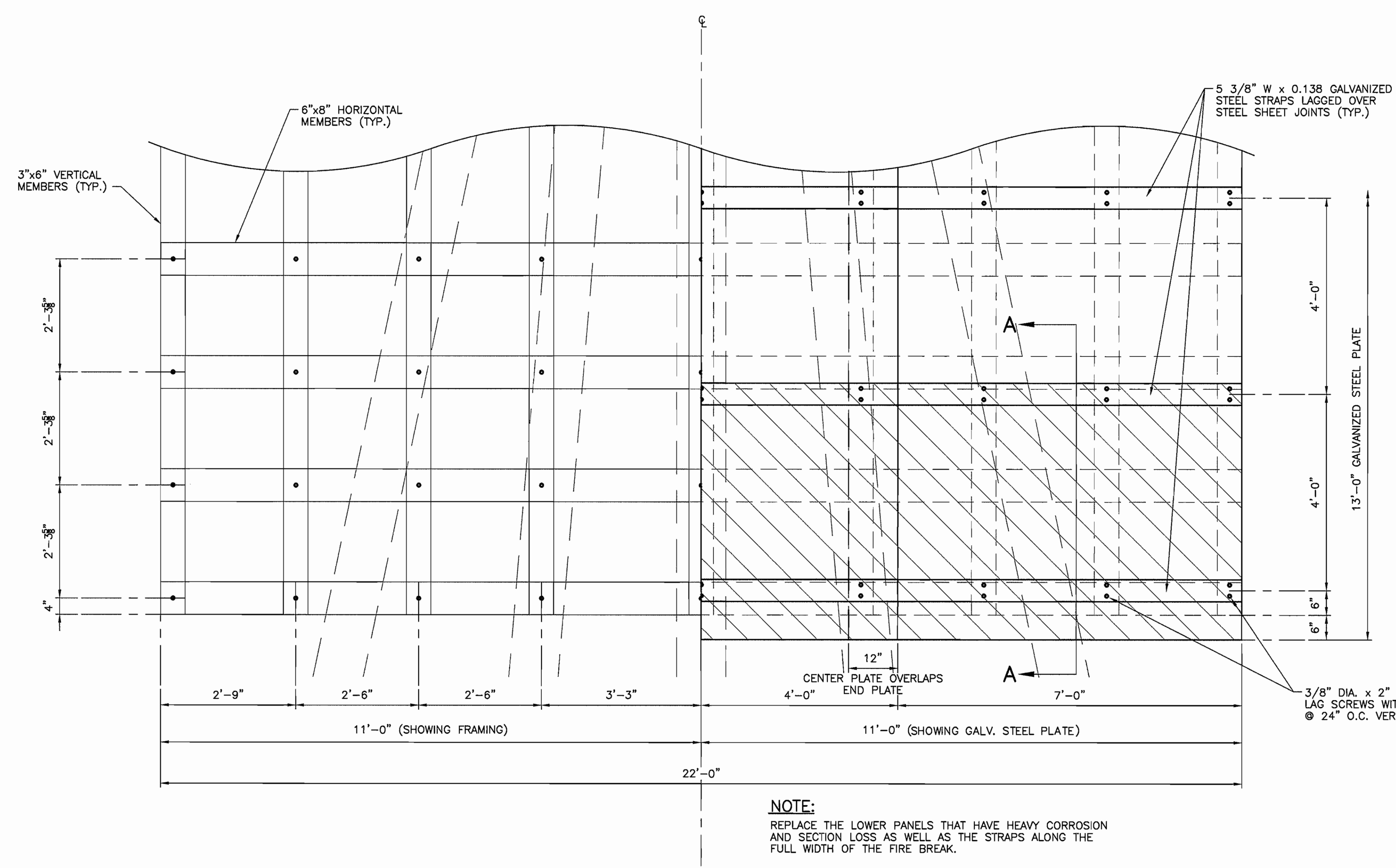


- NOTES:**
- CLEAN THE TIMBER PILE THOROUGHLY FROM 18" ABOVE TO 18" BELOW THE DAMAGED AREA.
 - PLACE THE REINFORCING MESH AROUND THE PILE USING SPACERS TO MAINTAIN MINIMUM CLEARANCES.
 - PLACE THE FORM AROUND THE PILE AND SEAL THE VERTICAL SEAM AND BOTTOM TO PREVENT CONCRETE GROUT LOSS PER THE MANUFACTURER'S DIRECTION.
 - FILL THE SPACE BETWEEN THE PILE AND FORM WITH CONCRETE GROUT USING A TUBE EXTENDED TO THE LOWEST POINT OF THE FORM.

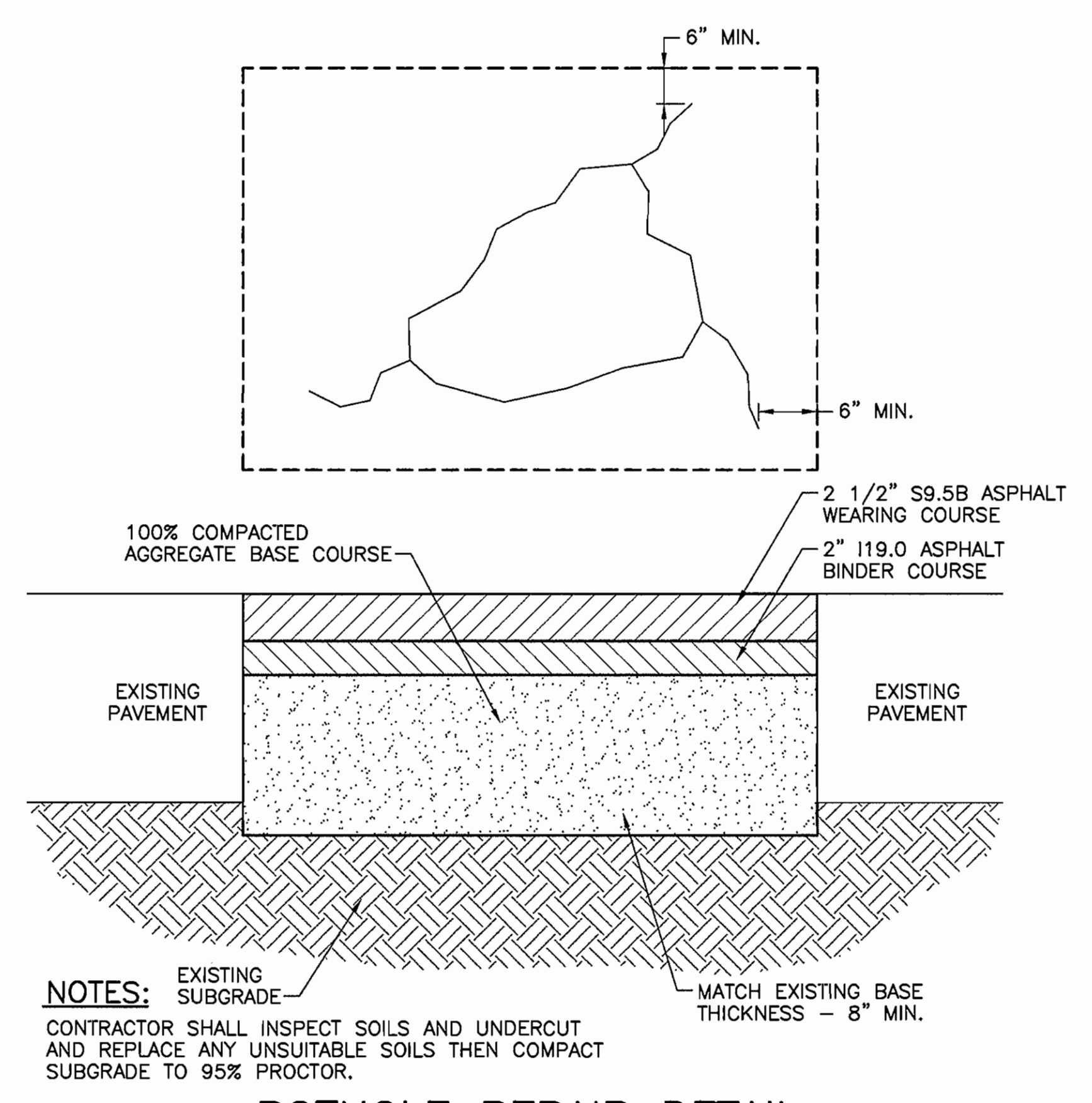
DECAYED PILE REPAIR DETAIL
NOT TO SCALE



TYPE 3 REFLECTIVE OBJECT MARKER DETAIL
NOT TO SCALE



FIRE BREAK DETAIL
NOT TO SCALE



POTHOLE REPAIR DETAIL
NOT TO SCALE

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<p>DEPT OF NAVY</p> <p>MARINE CORPS BASE CAMP LEJUNE, NORTH CAROLINA</p>		<p>NAVAL FACILITIES ENGINEERING COMMAND</p>	
DES: TKG	DR: FDW	<p>REPAIR BRIDGES, VARIOUS LOCATIONS MCB, CLNC BRIDGE REPAIR DETAILS</p>	
CHK: TKG	SUBMITTED BY:	<p>NAVFAC DRAWING NO. 60008283</p>	
DESIGN DR:	APPROVED: PWO OR OICC	DATE:	<p>CONSTR CONTR NO. N 62470-11-0097</p>
SATISFACTORY TO:	DATE:	SCALE: AS SHOWN	SPEC: 110097
<p>7/28/11</p>		<p>SHEET 28 OF 28</p>	