

1995JBCN.DGN 5/22/02 JDY

UTILITY NOTIFICATION:

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UNDERGROUND UTILITY FACILITY SHOWN IN THE PLANS AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

DOMINION EAST OHIO GAS
1000 WEST WILBETH AVENUE
AKRON, OHIO 44314
(330) 798-7104
ATTN: GEORGE TURNER

TIME WARNER CABLE
1655 BRITTAIN ROAD
AKRON, OHIO 44310
(330) 630-7950
ATTN: CHARLIE TONEY

OHIO EDISON
1910 WEST MARKET STREET
AKRON, OHIO 44313
(330) 384-4720
ATTN: DAVE MILLER

GONZOIL
5260 FULTON DRIVE NW
CANTON, OHIO 44718
(330) 497-5888
ATTN: FRANK GONZALEZ

AMERITECH
50 WEST BOWERY STREET
4TH FLOOR
AKRON, OHIO 44308
PHONE:(330)384-8057
ATTN: RICK DALAGRANGE

RESOURCE ENERGY AKA
ATLAS AMERICA, INC.
PO BOX 160 1823 SR 14
(330) 654-4343 ext 215
ATTN: BASIL KAPTAIN

CITY OF BARBERTON
576 WEST PARK AVENUE
BARBERTON, OHIO 44203
PHONE:(330)848-6724
ATTN: JAMES BECKETT

WINDSOR ASSOCIATES
148 EAST MILLER AVENUE
AKRON, OHIO 44301
(330) 253-9118
ATTN: PETER YOUNG

VERIZON
6223 NORWALK ROAD
MEDINA, OHIO 44256
PHONE:(330)722-9588
ATTN: LARRY FURMAN

* SUMMIT COUNTY DEPARTMENT of
ENVIRONMENTAL SERVICES
2525 STATE ROAD
CUYAHOGA FALLS, OHIO 44223
(330) 926-2444
ATTN: ED SHONDEL

MARATHON ASHLAND PIPELINE
245 MILL STREET
LEXINGTON, OHIO 44904
PHONE:(419)884-0800 ext 236
ATTN: GREG NEWMAN

* DENOTES LIMITED-BASIS
MEMBER - MUST BE
CONTACTED DIRECT

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 ORC (OHIO REVISED CODE)

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:
BP-3.I DATED 7-28-00

AND TO SUPPLEMENTAL SPECIFICATIONS:

815	2-22-00		
842	1-6-99	864	7-11-00
843	5-5-98	899	10-21-98
848	6-30-98	910	7-11-00
863	10-12-99	954	9-9-97

DESIGN SPECIFICATIONS:

THE PROPOSED MODIFICATIONS TO THESE STRUCTURES SHALL CONFORM TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 INCLUDING THE 1997, 1998, 1999 AND 2000 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN STRESSES:

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 psi (SUPERSTRUCTURE, PIER COLUMN ENCASEMENT)
CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 psi (SUBSTRUCTURE)
REINFORCING STEEL - ASTM A615, A616, OR A617
GRADE 60 MINIMUM YIELD STRENGTH 60,000 psi

DECK PROTECTION METHOD:

3¼" MICRO SILICA MODIFIED CONCRETE OVERLAY

STRUCTURE REPAIR METHODS:

THE QUANTITIES LISTED ON THE ESTIMATED QUANTITIES SHEET ARE AN ESTIMATED AMOUNT OF REPAIR REQUIRED TO REHABILITATE THE STRUCTURE. THESE QUANTITIES ARE BASED ON VISUAL INSPECTION OF THE EXISTING STRUCTURE AND ARE NOT TO BE CONSIDERED TO REPRESENT THE EXACT AMOUNT OF REPAIR REQUIRED TO REHABILITATE THE BRIDGE. PAYMENT WILL BE BASED ON THE ACTUAL WORK PERFORMED AT THE UNIT PRICE BID FOR THE PERTINENT REPAIR ITEM, AS DIRECTED BY THE ENGINEER.

SUMMARY OF WORK REQUIRED ON BRIDGES:

- REMOVE 3¼"± ASPHALT OVERLAY BY MECHANICAL METHODS AND TOP 1" OF EXISTING DECK BY HYDRODEMOLITION.
- OVERLAY EXISTING DECK WITH UNIFORM THICKNESS 3¼" MSMC.
- QUANTITIES FOR VARIABLE (MATERIAL ONLY) AND FULL DEPTH REPAIRS OF DECK.
- INSTALL PAVEMENT TRANSITIONS USING ASPHALT CONCRETE AT APPROACH SLABS AND ROADWAY.
- REPAIR STEEL BEAMS (HEAT STRAIGHTENING) AND REPLACE DAMAGES CROSSFRAMES.
- EXTEND SCUPPERS TO 8" MINIMUM BELOW BOTTOM FLANGE OF STEEL BEAM.
- REPAIR PIERS USING TROWELABLE MORTAR.
- PAINT EXISTING STEEL WITH SYSTEM OZEU PAINT.
- SEALING CONCRETE SURFACES (EPOXY-URETHANE) AT PIERS, ABUTMENTS, WINGWALLS, AND PARAPETS.
- RESTORE CRUSHED AGGREGATE SLOPE PROTECTION.

ITEM 516 JOINT SEALER, 705.04, AS PER PLAN

AFTER ALL WEARING SURFACES HAVE BEEN REMOVED FROM THE DECK, TOP OF BACKWALLS, AND APPROACH SLABS, ALL EXISTING JOINT SEALER OR ASPHALT, WHICHEVER IS ENCOUNTERED, SHALL BE REMOVED FROM THE EXISTING STEEL END DAM. THE STEEL ARMOR SHALL BE CLEANED IN ACCORDANCE WITH 516.04 OF THE CMS IN ORDER TO ACCEPT THE HOT APPLIED JOINT SEALER IN ACCORDANCE WITH 705.04 OF THE CMS. ALL WORK INCLUDING INCIDENTALS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 516 JOINT SEALER, 705.04, AS PER PLAN.

ITEM 848 WEARING COURSE REMOVED, ASPHALT, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO REMOVE THE ASPHALT FROM THE BRIDGE DECK, APPROACH SLABS, ROADWAY FEATHER AREAS. BUTT JOINTS SHALL BE IN ACCORDANCE WITH STANDARD DRAWING BP-3.I OF THE STANDARD CONSTRUCTION DRAWINGS AND SHALL BE PAID FOR UNDER THIS ITEM. THIS ITEM SHALL ALSO INCLUDE THE REMOVAL OF ANY DECK WATERPROOFING AND ASPHALT IN SCUPPERS OPENINGS. COMPENSATION FOR ALL LABOR AND EQUIPMENT INCLUDING INCIDENTALS, NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 848, WEARING COURSE REMOVED, ASPHALT, AS PER PLAN.

ITEM 843 PATCHING CONCRETE WITH TROWELABLE MORTAR, AS PER PLAN

THIS ITEM SHALL BE USED TO REPAIR DISINTEGRATED CONCRETE SURFACES ON THE PIERS ON STRUCTURE NO. SUM-21-0106 AS DIRECTED BY THE ENGINEER AFTER FIELD EXAMINATION. FINAL EXPOSED SURFACES SHALL HAVE A SMOOTH FINISH AND SHALL MATCH AS NEARLY AS PRACTICABLE THE SURROUNDING CONCRETE. ALL EXISTING REINFORCING STEEL SHALL HAVE AT LEAST 3 (THREE) INCH COVER AFTER PATCHING HAS BEEN COMPLETED.

A CONCRETE BONDING AGENT SHALL BE APPLIED TO AREAS WHERE PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR IS PLACED ON OLD CONCRETE. THE CONCRETE BONDING AGENT SHALL BE APPLIED TO THE EXISTING PREPARED SURFACE AREAS. THE BONDING AGENT SHALL BE APPLIED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND SHALL MEET THE REQUIREMENTS OF ASTM C-881. THE BONDING AGENT SHALL BE SUPPLIED BY ONE OF THE FOLLOWING OR EQUALLY APPROVED BY ODOT:

NITOBOND 881-12 FOSROC INC. 150 CARLEY COURT GEORGETOWN, KY 40324	SIKADUR 32, HI-MOD LPL SIKA CORP. ADMIXTURE DIVISION 1682 MARION WILLIAMSPORT RD. E. MARION, OH. 43302	CONCRESE LIQUID LPL MASTER BUILDERS, INC. 23700 CHAGRIN BLVD. CLEVELAND, OHIO 44122-5554
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ALL WORK SHALL BE DONE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION FOR: ITEM 843 PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR AND SHALL BE PAID FOR AT THE UNIT COST INCLUDING ALL ABOVE MENTIONED WORK AND INCIDENTALS FOR ITEM 843 PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN.

ITEM 815 FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU

ALL PAINT SHALL BE FEDERAL COLOR NO, 15526-BLUE.

BRIDGE GENERAL NOTES

BRIDGE NO. SUM-21-0106

SUM-21-00.26

1 / 7

193
199

DESIGNED
JEL
CHECKED
CET

DRAWN
REVISED

REVIEWED
TJP
DATE
5-01-02

STRUCTURE FILE NUMBER
7701179

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

1995IBEQ.DGN 5/22/02 JDY

CALCULATIONS:

407 TACK COAT

40' x 24' x 2 ÷ 9 = 213.33 SQ.YD x .075 gal/s.y. = 16.0 GAL
EXTRA AREAS @ 1.0 GAL
TOTAL = 17 GAL

407 TACK COAT FOR INTERMEDIATE COURSE

40' x 24' x 2 ÷ 9 = 213.33 SQ.YD x .04 gal/s.y. = 8.53 GAL
EXTRA AREAS @ .47 GAL
TOTAL = 9 GAL

448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22

40' x 24' x 2 ÷ 9 = 213.33 SQ.YD x 1.25" ÷ 36 = 7.4 CU YD
EXTRA AREAS @ 0.6 CU YD
TOTAL = 8.0 CU YD

448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22

40' x 24' x 2 ÷ 9 = 213.33 SQ.YD. x 1.375"(AVE.) ÷ 36 = 8.1 CU YD
EXTRA AREAS @ 0.9 CU YD
TOTAL = 9.0 CU YD

516 JOINT SEALER, 705.04, AS PER PLAN

28' x 2 = 56.00 LIN FT
TOTAL = 56 LIN FT

848 WEARING COURSE REMOVED, ASPHALT, AS PER PLAN

BRIDGE: 204.5' x 28' ÷ 9 = 636.22 SQ YD

APP. SLAB: 15' x 24' x 2 ÷ 9 = 80.00 SQ YD

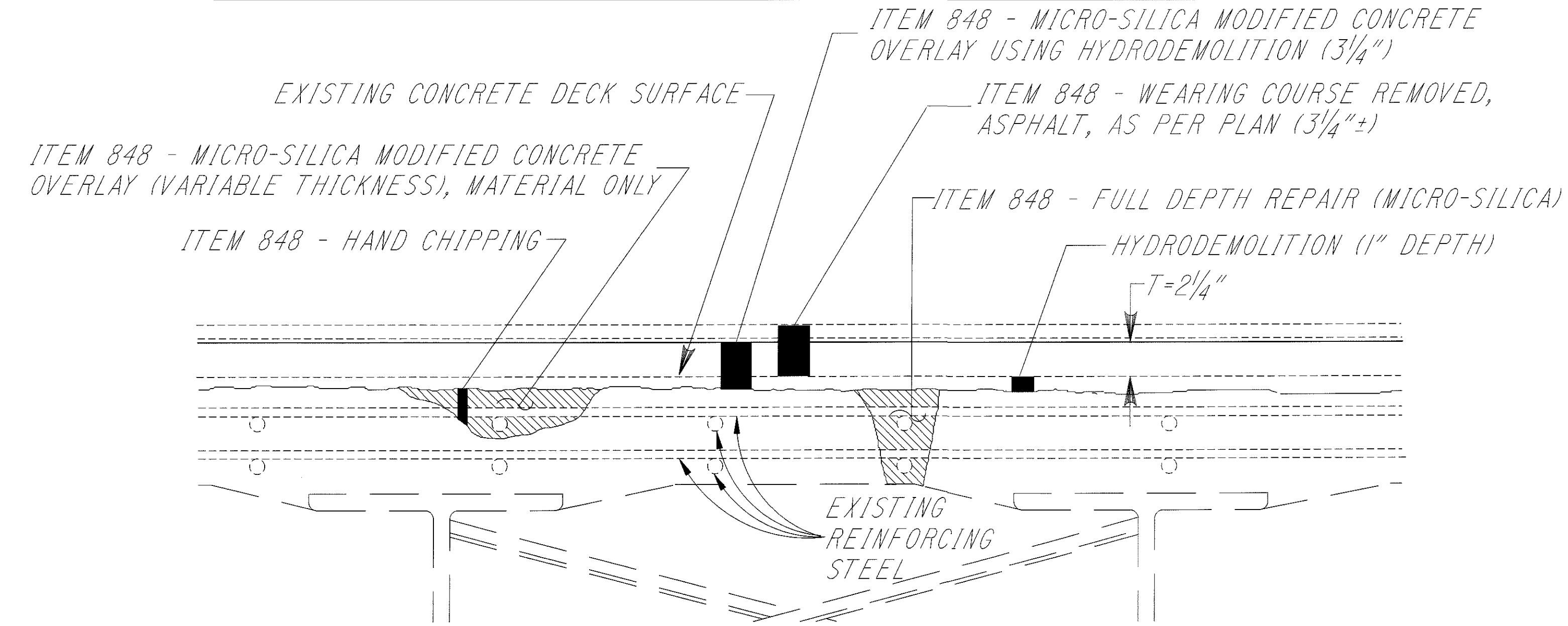
ROADWAY: 25' x 24' x 2 ÷ 9 = 133.33 SQ YD

EXTRA AREAS @ 15.45 SQ YD

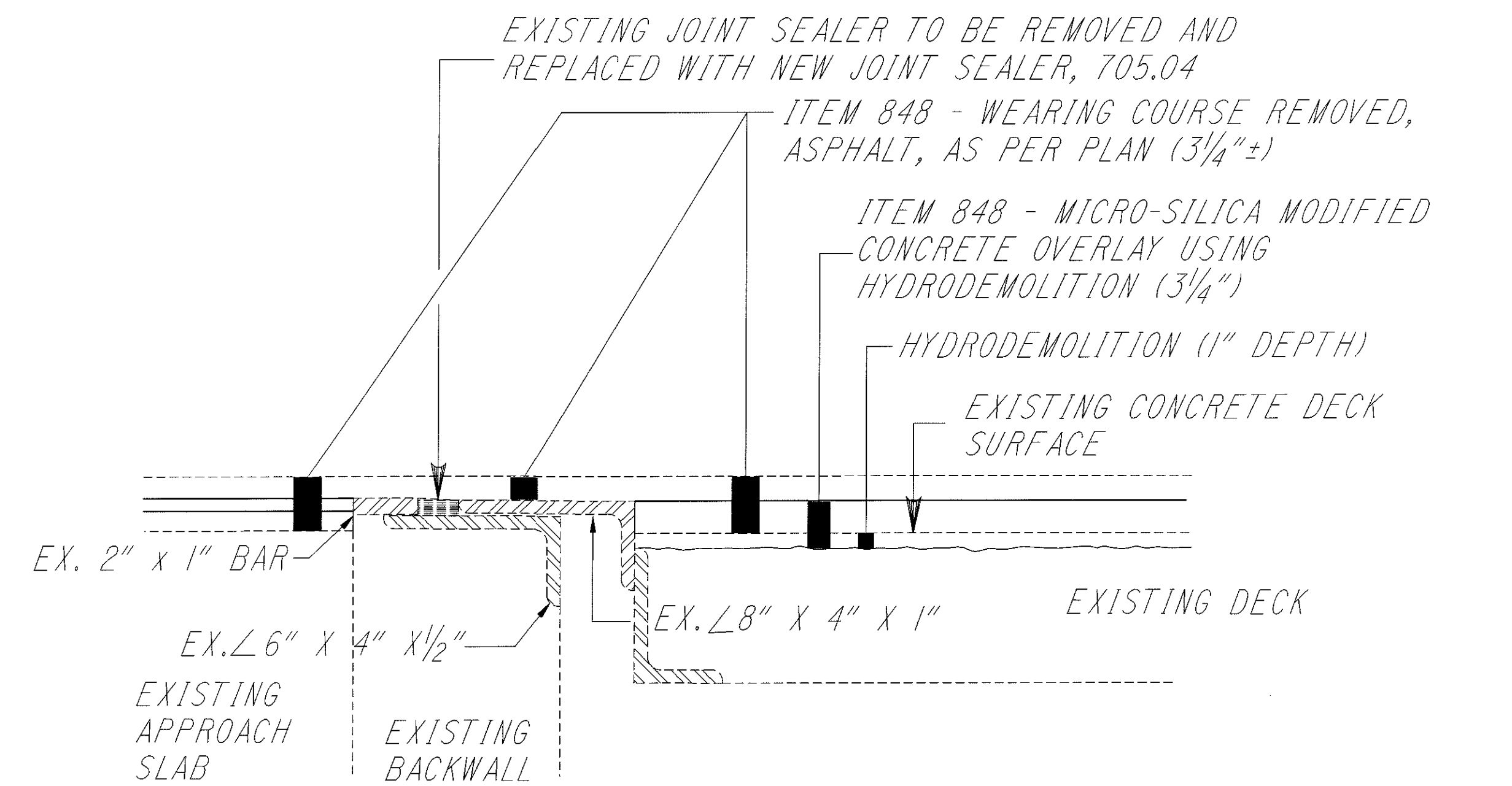
TOTAL = 865 SQ YD

ESTIMATED QUANTITIES										SEE SHEET
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION				ABUT.	PIERS	
				STRUCTURE: SUM-21-0106 (SFN: 7701179)						
407	10000	17	GAL	TACK COAT						17
407	14000	9	GAL	TACK COAT FOR INTERMEDIATE COURSE						9
448	46050	9	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22						9
448	47020	8	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22						8
SPECIAL	51319000	LUMP		HEAT STRAIGHTENING OF DAMAGED STRUCTURAL STEEL						4/7
516	31001	56	LIN FT	JOINT SEALER, 705.04, AS PER PLAN					56	1/7
518	12901	16	EACH	SCUPPER LENGTHENING, AS PER PLAN					16	6/7
601	20001	275	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN					275	5/7
815	00050	10200	SQ FT	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU					10200	
815	00056	10200	SQ FT	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU					10200	
815	00060	10200	SQ FT	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU					10200	
815	00066	10200	SQ FT	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU					10200	
843	50001	100	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN					100	1/7
848	10000	637	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION						637
848	20000	637	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION						637
848	30000	29	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY						29
848	50000	20	SQ YD	HAND CHIPPING						20
848	50100	LUMP		TEST SLAB						
848	50200	1	CU YD	FULL-DEPTH REPAIR					1	
848	50301	865	SQ YD	WEARING COURSE REMOVED, ASPHALT, AS PER PLAN					637	228 1/7
863	90000	183	POUND	STRUCTURAL STEEL, MISC.: REPLACEMENT OF DAMAGED CROSS FRAMES, AS PER PLAN					183	4/7
864	10100	772	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)				90	243	439

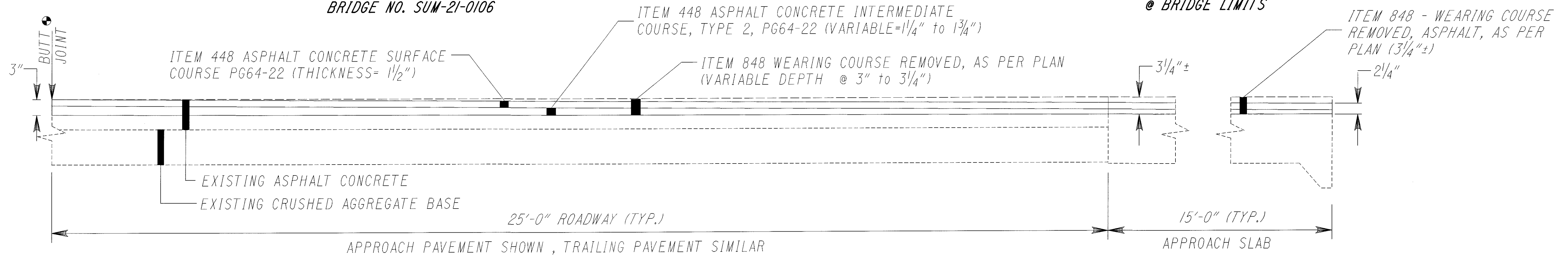
GENERAL INFORMATION : BRIDGE DECK OVERLAY									
STRUCTURE NO.	OVERPASS	BRIDGE LIMITS	BRIDGE WIDTH	DECK AREA	THICKNESS OF OVERLAY	VOLUME OF OVERLAY	BRIDGE DECK OVERLAY MATERIAL TREATMENT	EXISTING ASPHALT CONCRETE	EXISTING CONCRETE DECK
		L.F.	L.F.	SQ.YD.	INCH	CU.YD.		INCH	DEPTH
SUM-21-0106	JOHNSON RD S.R. 21	204.5	28.0	637.0	3 1/4	57.5	MSC (MICRO SILICA MODIFIED CONCRETE)	3 1/4±	7"



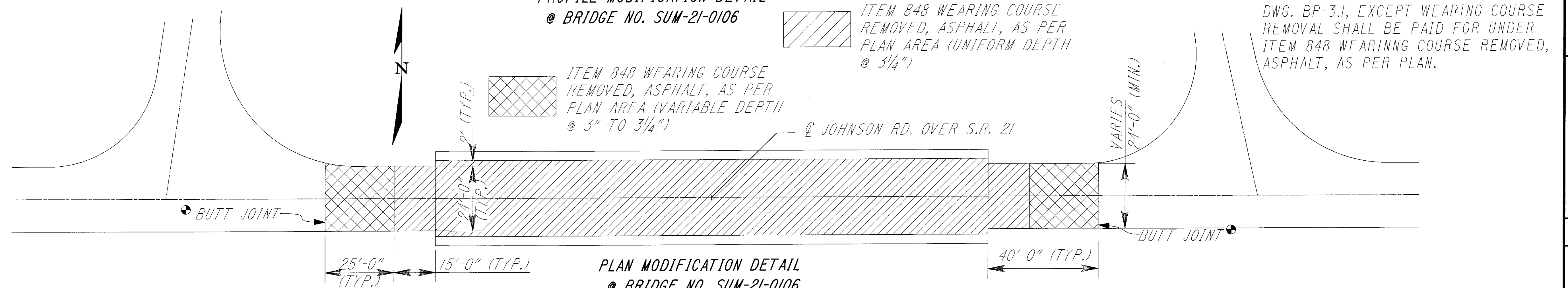
TYPICAL OVERLAY DETAIL
BRIDGE NO. SUM-21-0106



TYPICAL OVERLAY DETAIL
@ BRIDGE LIMITS

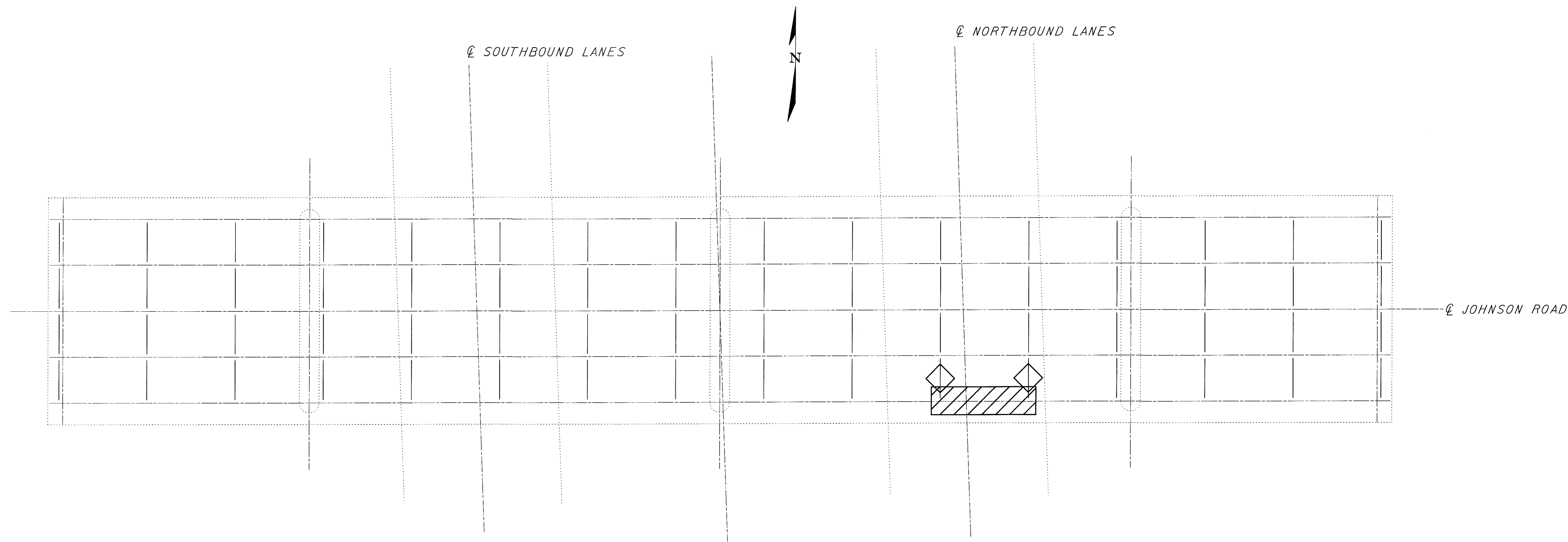


PROFILE MODIFICATION DETAIL
@ BRIDGE NO. SUM-21-0106



PLAN MODIFICATION DETAIL
@ BRIDGE NO. SUM-21-0106

1995\SDR.DGN 5/22/02 JUY



STEEL FRAMING PLAN

ITEM SPECIAL - HEAT STRAIGHTENING OF DAMAGED STRUCTURAL STEEL

THE DAMAGED BEAM WILL BE HEAT STRAIGHTENED AS PER PROPOSAL NOTE FOR HEAT STRAIGHTENING OF DAMAGED STRUCTURAL STEEL.


ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM WILL BE INCLUDED FOR PAYMENT UNDER ITEM SPECIAL - HEAT STRAIGHTENING OF STRUCTURAL STEEL.

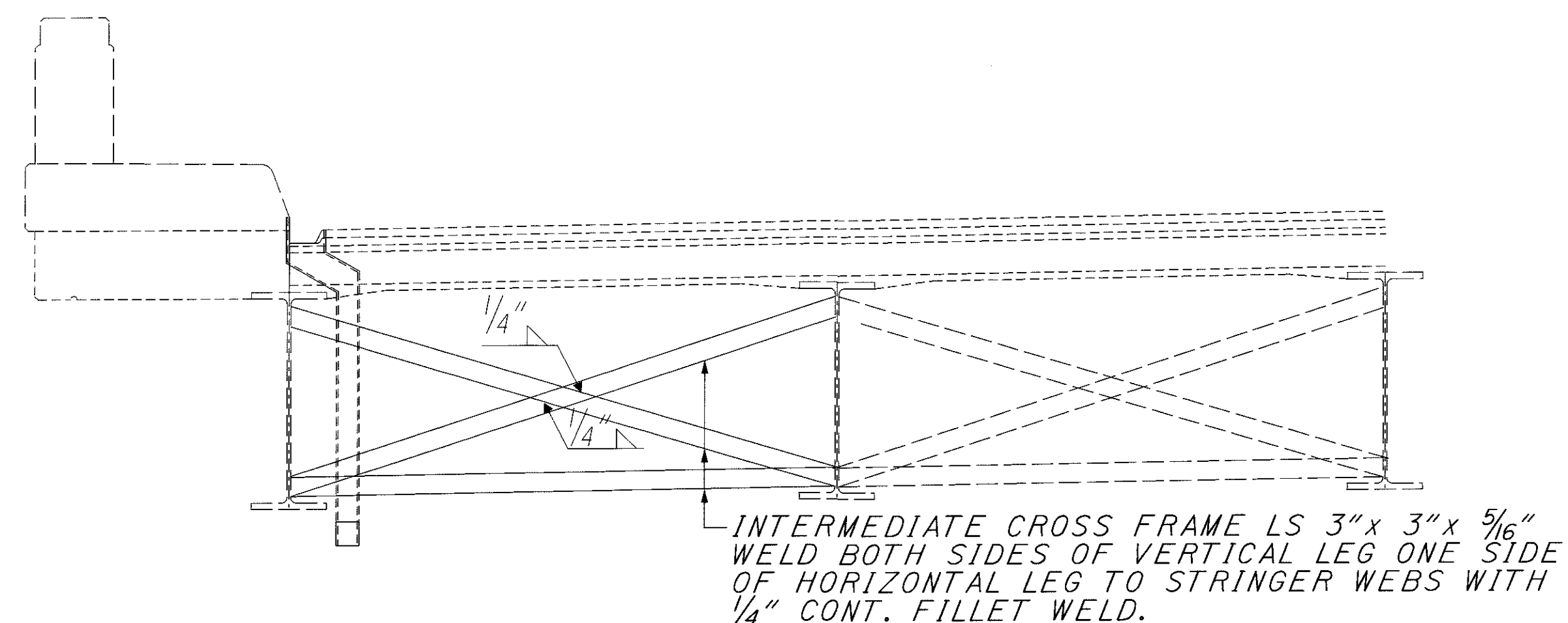
ITEM 863 - STRUCTURAL STEEL, MISC.: REPLACEMENT OF DAMAGED CROSS FRAMES, AS PER PLAN

THE REPAIR SHALL CONSIST OF REMOVING THE DAMAGED CROSS FRAMES (AS SHOWN ON THIS SHEET) ON STRUCTURE SUM-21-0106. ALL CROSS FRAMES REMOVED WILL BECOME THE PROPERTY OF THE CONTRACTOR. THIS ITEM WILL ALSO INCLUDE SUPPLYING NEW CROSS FRAMES AND WELDING THEM BACK TO THE ORIGINAL POSITIONS OF THE CROSS FRAMES THAT WERE REMOVED. AFTER REMOVAL, ALL WELDS WILL BE GROUND SMOOTH, IN PREPARATION OF WELDING THE NEW CROSS FRAMES IN PLACE. CROSS FRAME ANGLES SHALL BE 3" x 3" x $\frac{5}{16}$ ". THE NEW CROSS FRAME ANGLES WILL BE WELDED TO THE GIRDERS OR BEAMS ON BOTH SIDES OF THE VERTICAL LEG AND ON THE TOP SIDE OF THE HORIZONTAL LEG. THE ANGLE WILL BE WELDED USING A $\frac{1}{4}$ " CONTINUOUS FILLET WELD. STEEL MEMBERS TO BE FABRICATED UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. AISC CERTIFICATION IS NOT REQUIRED. THE CONTRACTOR WILL TAKE THE NECESSARY MEASUREMENTS. THE ENGINEER WILL HAVE THE AUTHORITY AND THE RESPONSIBILITY FOR ENSURING THAT THE STEEL IS ACCEPTABLE. AFTER FABRICATION THE PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH ITEM 513 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND SUBMITTED TO THE ENGINEER FOR HIS REVIEW AND APPROVAL.

ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM EXCEPT FOR PAINT WILL BE INCLUDED FOR PAYMENT UNDER ITEM 863 -STRUCTURAL STEEL MISC.: REPLACEMENT OF DAMAGED CROSS FRAMES, AS PER PLAN.

 APPROXIMATE AREA OF DAMAGE TO THE BEAM

 DAMAGED CROSS FRAMES



TRANSVERSE HALF SECTION

* REINFORCING NOT SHOWN FOR CLARITY

ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN

AFTER ALL MAJOR REHABILITATION WORK HAS BEEN COMPLETED, EXISTING CRUSHED AGGREGATE SLOPE PROTECTION SURFACES SHALL BE RESTORED TO A UNIFORMED PLANE SURFACE USING EXCAVATION AND EMBANKMENT CONSTRUCTION. THIS WORK SHALL INCLUDE THE EXCAVATION OF UNSUITABLE MATERIAL, FILL OF ANY DEPRESSIONS AND/OR REGRADING IN THE SLOPE AREAS, AND THE COMPACTION OF THE FILLED AND/OR REGRADED AREAS WITHIN THE WORK LIMITS FOR THIS ITEM AS DETAILED ON THIS SHEET.

EXCAVATION AND EMBANKMENT SHALL BE IN ACCORDANCE WITH 203.02 TO 203.13 OF THE CMS TO CREATE A PLANE FOR THE EMBANKMENT CONSTRUCTION AND COMPACTION FOR THE CRUSHED AGGREGATE SLOPE PROTECTION. CRUSHED AGGREGATE SLOPE PROTECTION SHALL BE IN ACCORDANCE WITH 601.05 OF THE CMS.

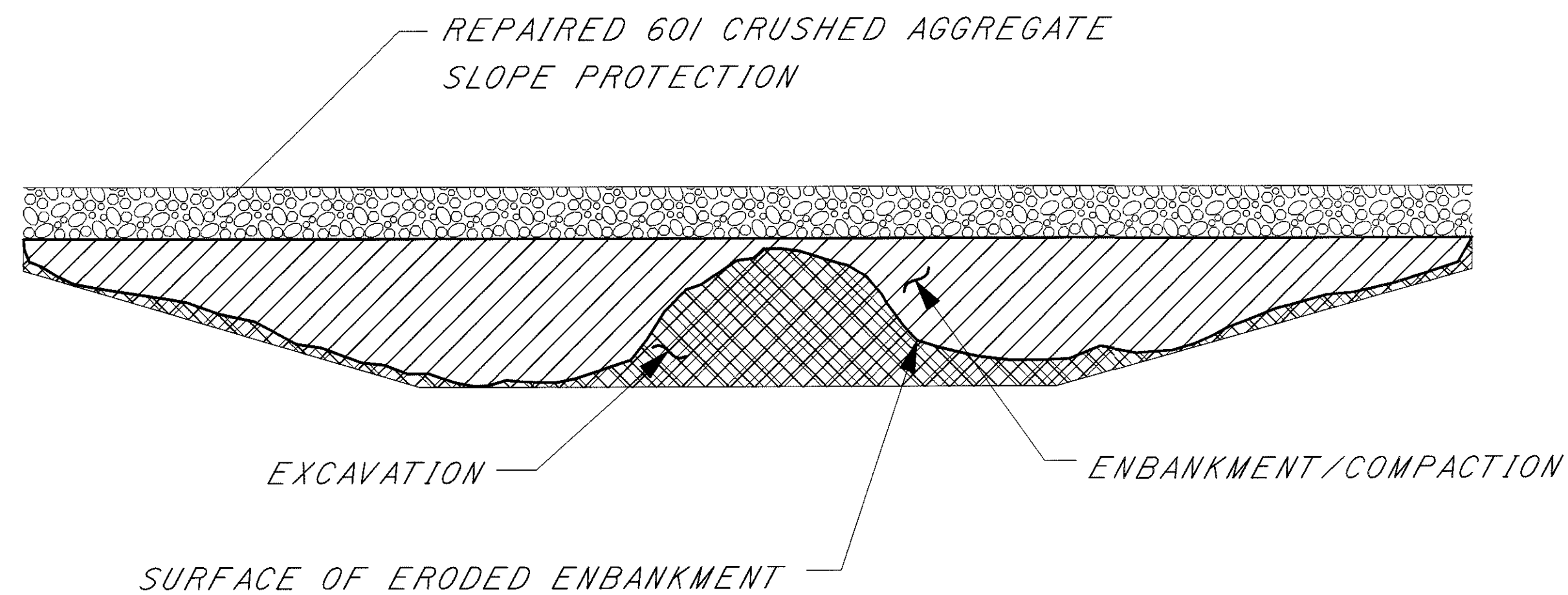
THE QUANTITY CALCULATED TO BE RESTORED IS BASED THE FOLLOWING PERCENTAGE OF TOTAL AREA:

90 % BR.NO. SUM-21-0106 EAST (OF SR 21)
75 % BR.NO. POR-21-0106 WEST (OF SR 21)

PAYMENT SHALL BE THE ACTUAL AREA RESTORED AFTER CONSTRUCTION IS COMPLETED AS APPROVED BY THE ENGINEER.

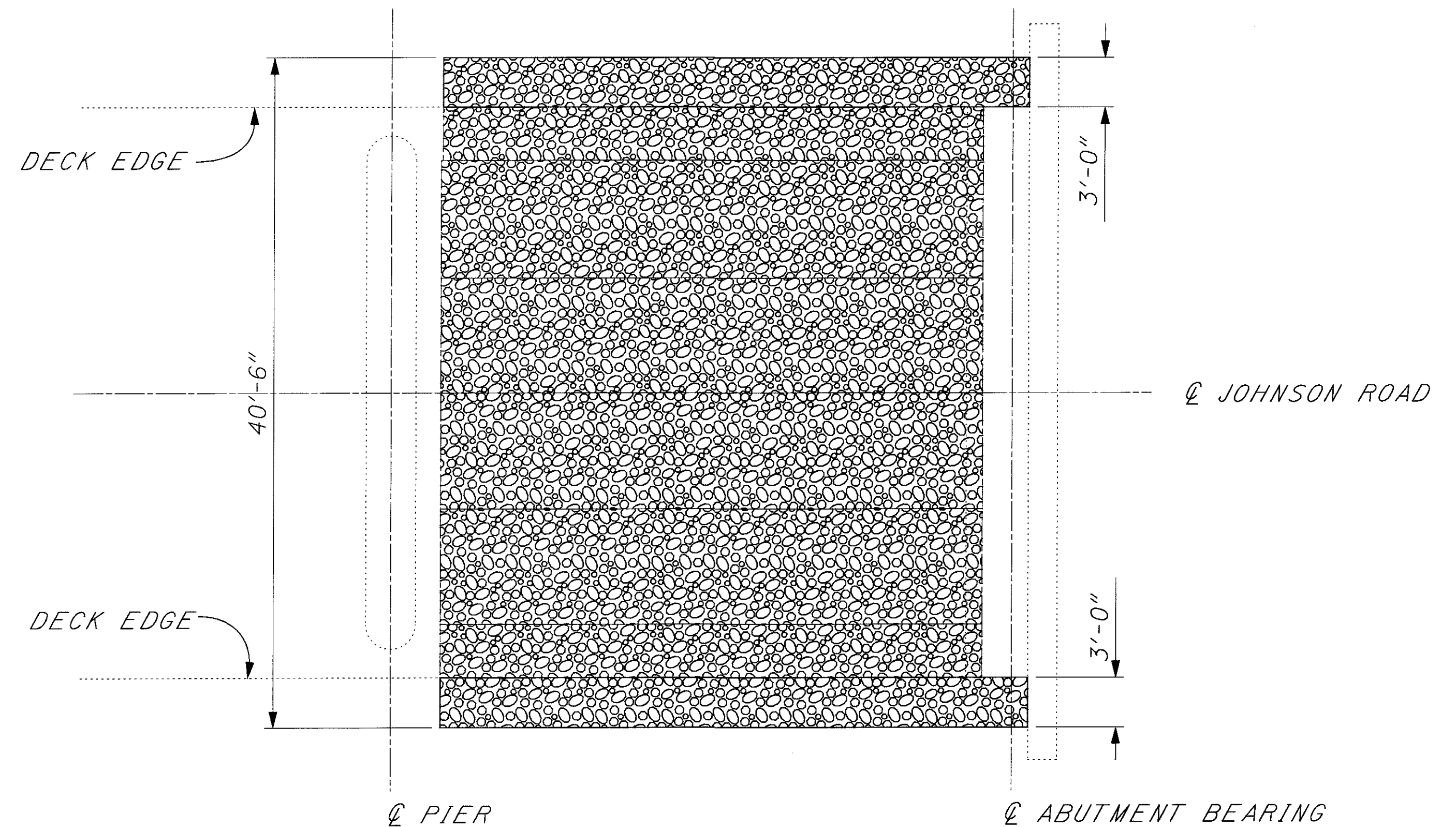
ALL COSTS SHALL BE THE ACTUAL COST OF THE WORK PERFORMED INCLUDING EXCAVATION, EMBANKMENT, CRUSHED AGGREGATE SLOPE PROTECTION, OTHER MATERIALS, LABOR AND INCIDENTALS FOR THE UNIT BID PRICE FOR ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN.

275 SQ. YD. HAVE CARRIED TO THE ESTIMTD QUANTITIES FOR: ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN.

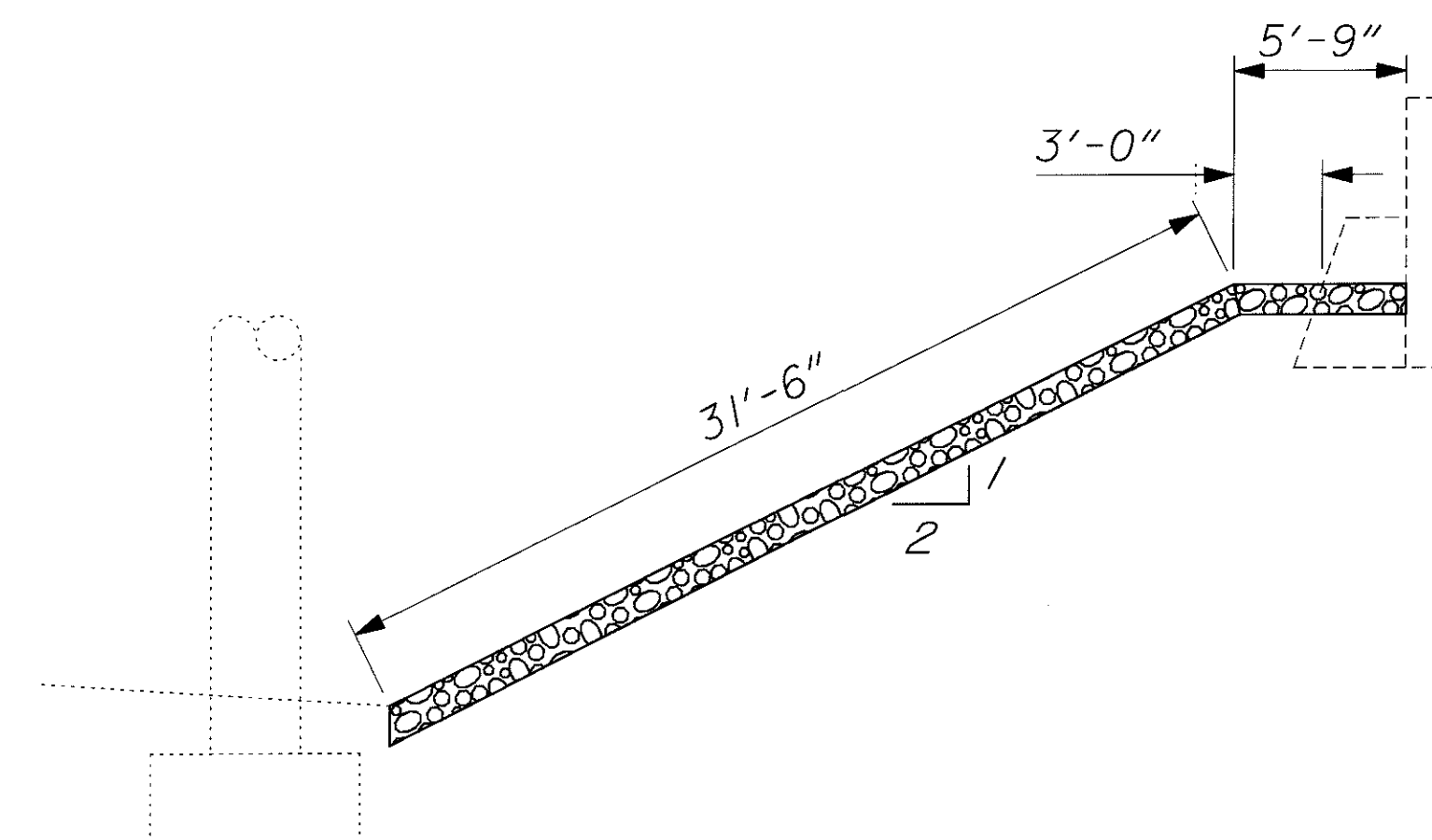


EROSION REPAIR SECTION

EASTSIDE SLOPE

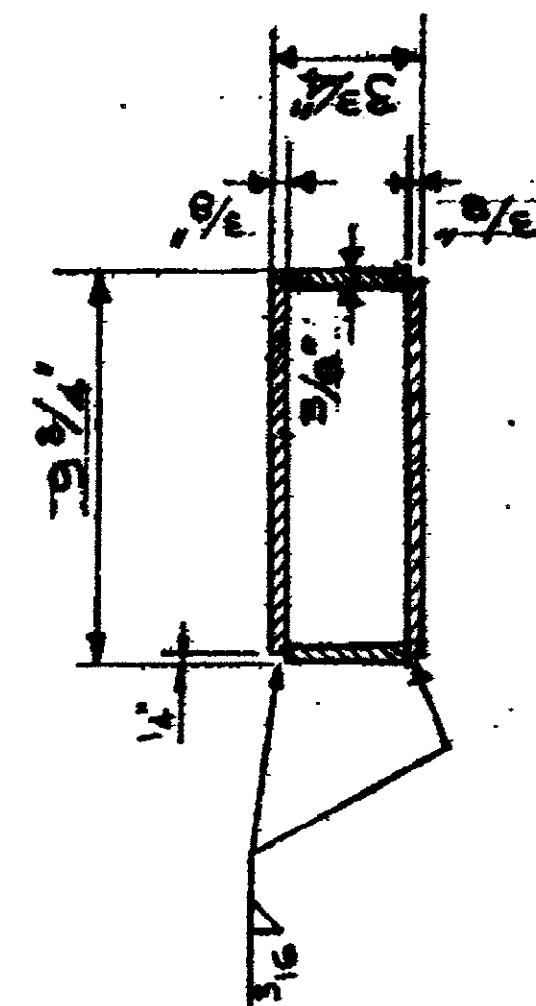


EROSION REPAIR PLAN



EROSION REPAIR SECTION

EASTSIDE (OF S.R. 21) SLOPE SHOWN,
WESTSIDE SIMILAR

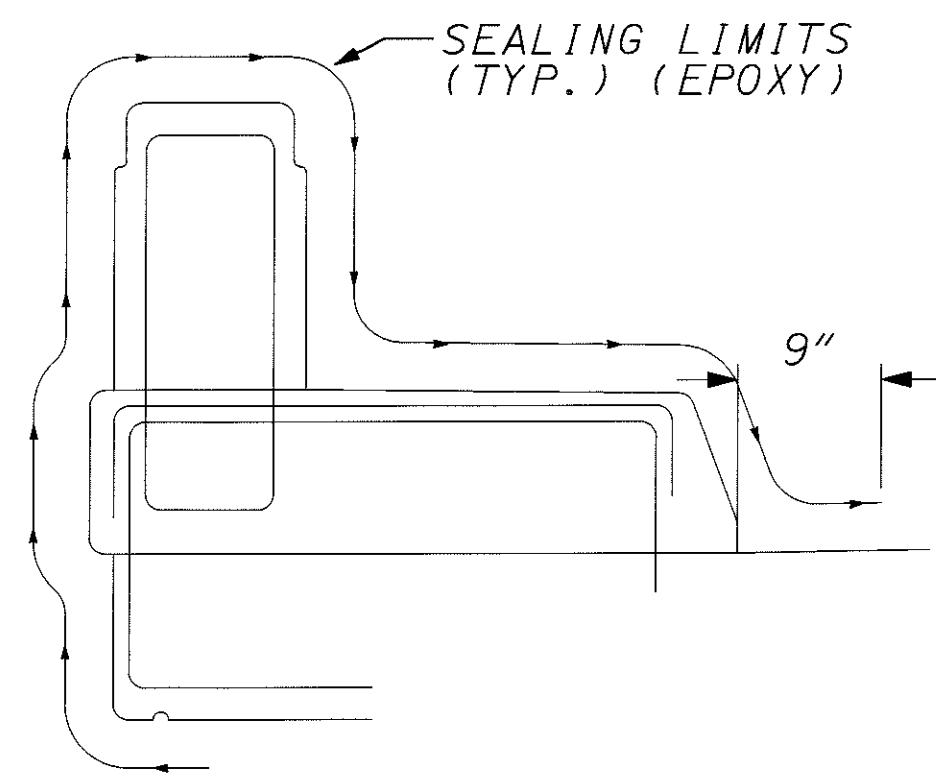


BRACKET TO BE REMOVED & REPLACED

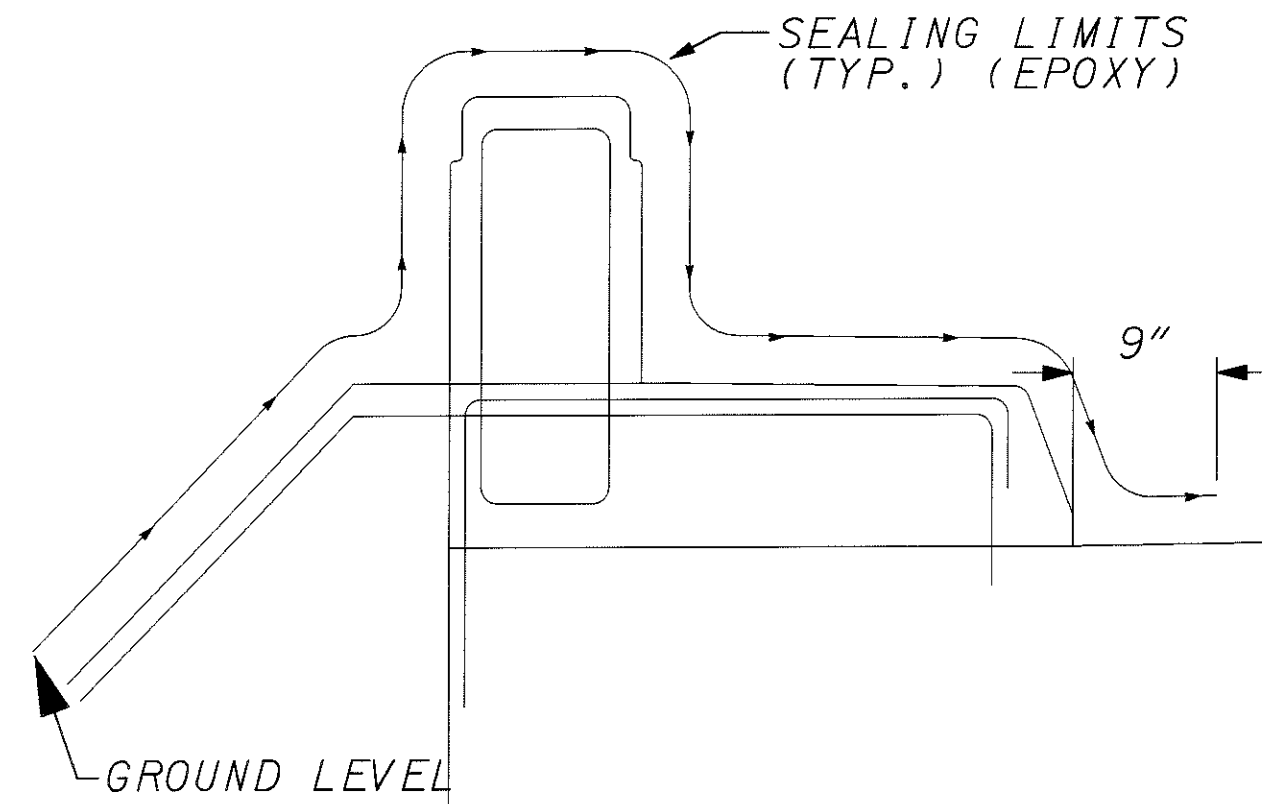
NOTES:

1. THE PIPE EXTENSIONS SHALL BE WELDED IN PLACE AFTER THE EXISTING SURFACES HAVE BEEN ABRASIVE BLASTED TO A SA-1.
2. ADDITIONAL LENGTH OF SCUPPER PIPE TO BE REPLACED IS TO BE DETERMINED BY THE PROJECT ENGINEER/SUPERVISOR.
3. ALL NEW SCUPPER EXTENSIONS MUST BE COMPLETE AND IN PLACE BEFORE COMMENCING WITH PAINT OPERATIONS.
4. IF ADDITIONAL INFORMATION IS REQUIRED, ORIGINAL CONSTRUCTION PLANS (SUM-21-0.23) ARE AVAILABLE UPON REQUEST.
5. IF THE SCUPPER NEEDS TO BE CUT ABOVE THE BRACKET, THE BRACKET SHALL BE SEPARATED FIRST AND WELDED TO SCUPPER AFTER IT IS LENGTHENED.

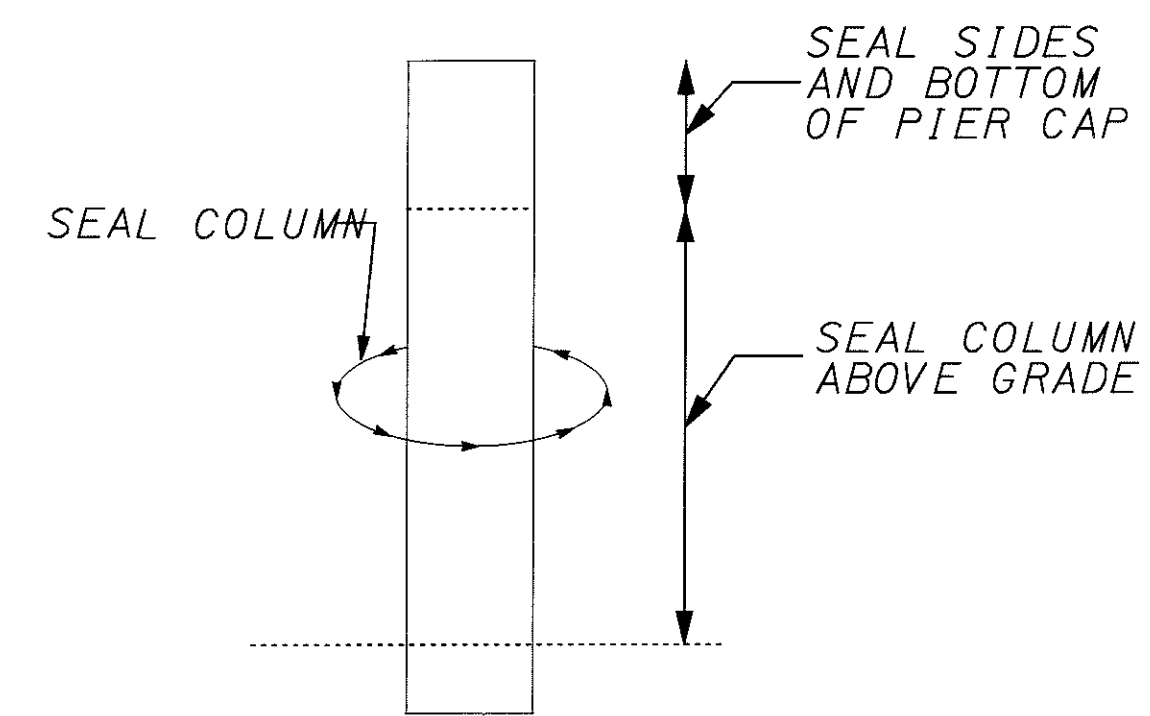
5/8	
STRUCTURE NO.	SCUPPER LENGTHENING, AS PER PLAN
	EACH
SUM-21-0106	16
TOTAL	16



PARAPET DETAIL



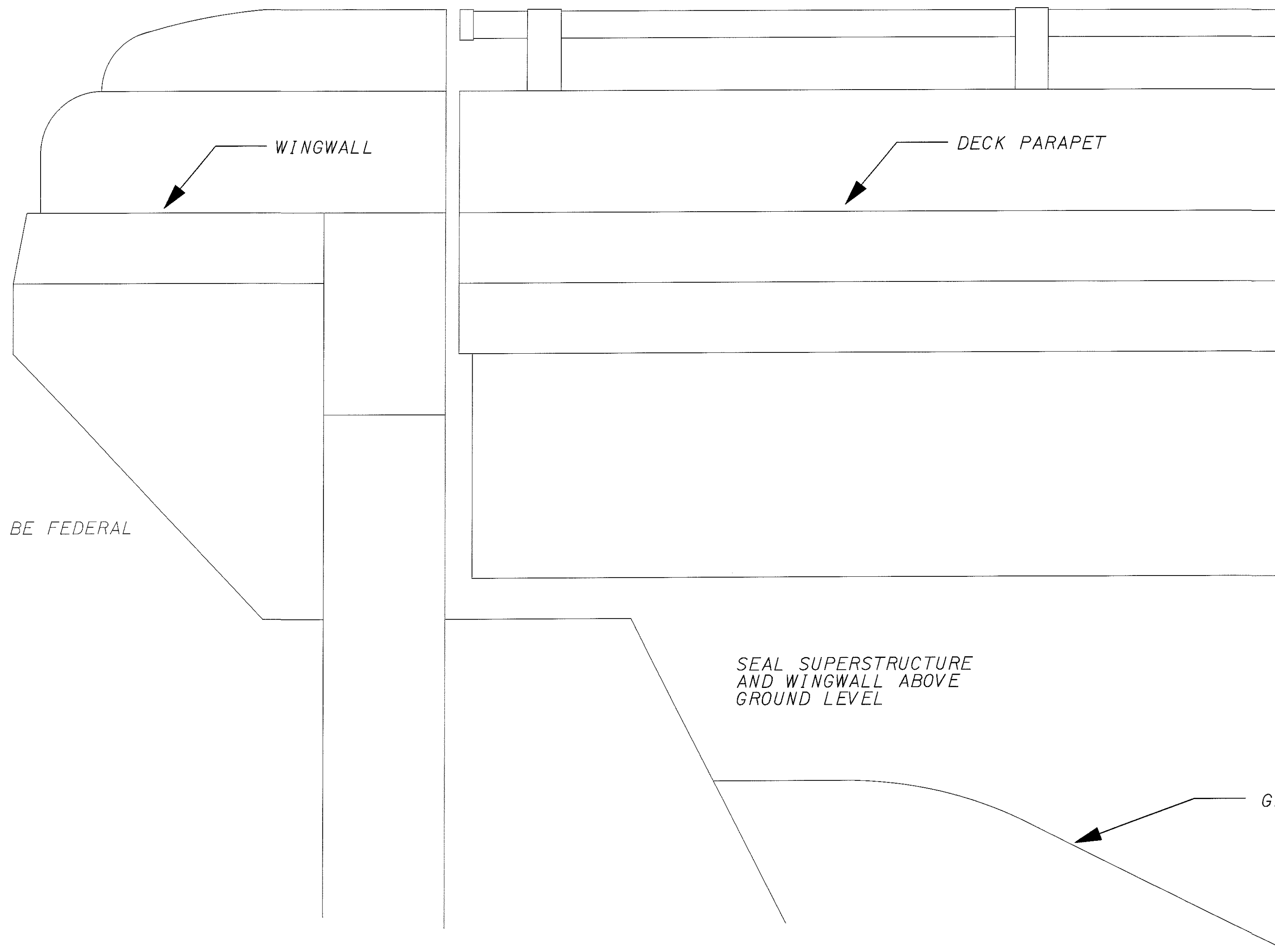
WINGWALL DETAIL



PIER DETAIL
(SUBSTRUCTURE)

NOTE:

1. THE EPOXY URETHANE SEALER SHALL BE FEDERAL COLOR NO. 17778 - LIGHT NEUTRAL



WINGWALL ELEVATION