

08-03-12 LETTING ITEM 024

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A.U. RTE. 3597	SECTION 0710 B	COUNTY COOK	TOTAL SHEETS 30	SHEET NO. 1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 60F95	

D-91-292-09

IMPROVEMENTS ARE LOCATED IN THE VILLAGES OF MARKHAM, HAZEL CREST & HARVEY

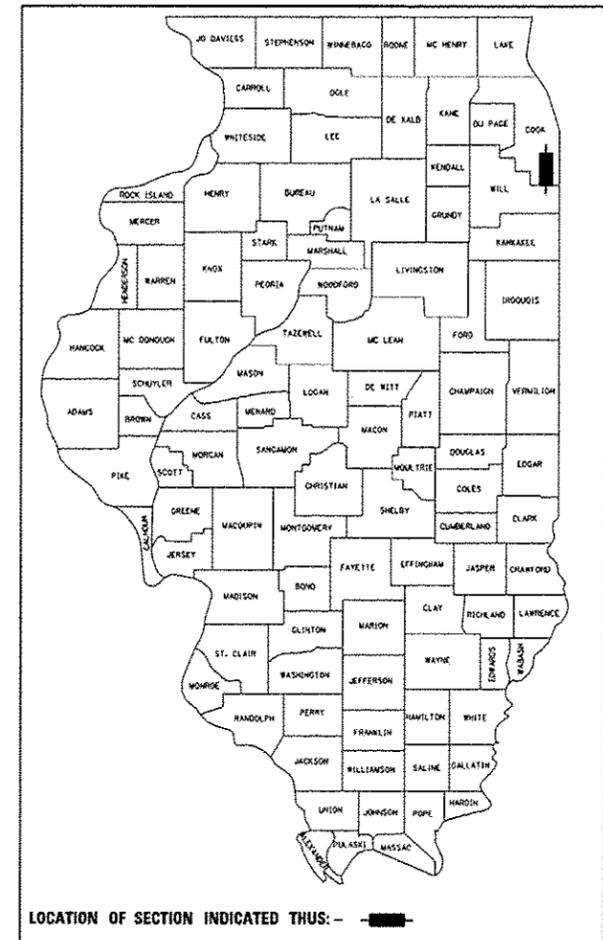
FOR INDEX OF SHEETS, SEE SHEET NO. 2

DESIGN DESIGNATION
MINOR ARTERIAL (URBAN)

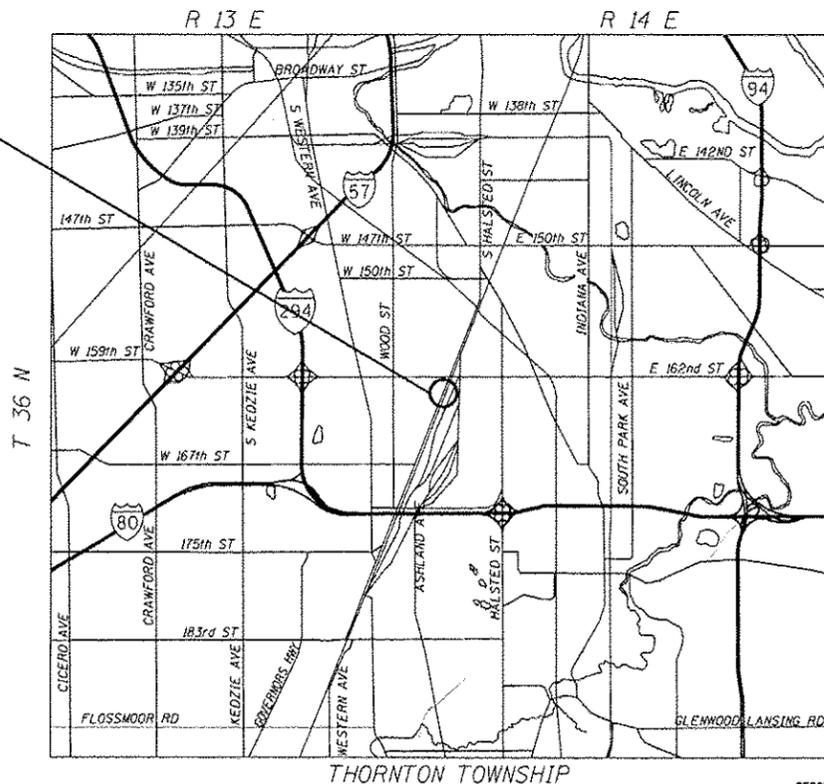
ADT 4900 (2010)
POSTED SPEED LIMIT 40 MPH

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

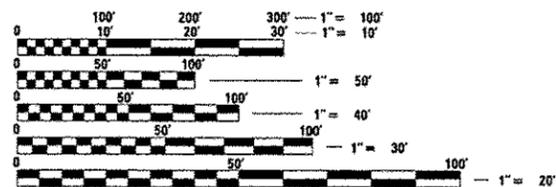
F.A.U. 3597 (PARK AVENUE)
OVER CALUMET UNION DRAINAGE DITCH
SECTION: 0710 B
PPC DECK BEAM REPLACEMENT PROJECT
COOK COUNTY
C-91-292-09



PARK AVENUE OVER
CALUMET UNION DRAINAGE DITCH
0.5 MI. SOUTH OF US ROUTE 6
EXISTING SN 016-0771



LOCATION SKETCH
NET AND GROSS LENGTH OF PROJECT = 340' = 0.064 MI



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT MANAGER: ISSAM RAYYAN (847) 705-4178
PROJECT ENGINEER: ROBERT BORO (847) 705-4237

CONTRACT NO. 60F95

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED MAY 18, 2012

Diane M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

JUNE 29, 2012
John D. Baranzelli, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

JUNE 29, 2012
William R. Frezza
acting DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

LOCO INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH 630 577-9100

WILLIAM H. FREZZA, P.E.
062-047827
REGISTERED
PROFESSIONAL
ENGINEER
ILLINOIS

William H. Frezza

Exp 11.30.13

SHEET NO.	TITLE
1	TITLE SHEET
2	GENERAL NOTES, STATE STANDARDS AND INDEX OF SHEETS
3-4	SUMMARY OF QUANTITIES
5	TYPICAL SECTIONS
6	DETOUR PLAN
7	PLAN AND PROFILE
8	PAVEMENT MARKING PLAN
9	EROSION CONTROL PLAN
10-23	STRUCTURAL PLANS
24	FRAMES AND LIDS ADJUSTMENT WITH MILLING (BD-08)
25	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT (BD-22)
26	BUTT JOINT AND HMA TAPER DETAILS (BD-32)
27	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS (TC-10)
28	RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-LOW RESISTANT) (TC-11)
29	DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC-13)
30	ARTERIAL ROAD INFORMATION SIGN (TC-22)
	HIGHWAY STANDARDS

STATE STANDARDS

SHEET NO.	TITLE
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT REBARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-06	TEMPORARY EROSION CONTROL SYSTEMS
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
442201-03	CLASS C AND CLASS D PATCHES
515001-03	NAME PLATE FOR BRIDGE
604001-03	FRAME AND LIDS TYPE 1
604091-02	FRAME AND TRATE TYPE 24
606001-04	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-10	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701301-04	LANE CLOSURE 2L, 2W SHORT TIME OPERATIONS
701427	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≤ 40 MPH
701606-06	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH MOUNTABLE MEDIUM
701901-02	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720006-03	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
729001-01	APPLICATION OF TYPES A & B METAL POSTS (FOR SIGN & MARKERS)
780001-03	TYPICAL PAVEMENT MARKINGS

GENERAL NOTES

DIMENSIONS ARE IN ENGLISH UNITS UNLESS OTHERWISE NOTED.

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES (48 HOUR NOTIFICATION IS REQUIRED).

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.

ANY REFERENCE TO STANDARDS IN THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE DEPARTMENT LISTED IN THE PLANS WITH THE LATEST NUMBERS.

THE RESIDENT ENGINEER SHALL CONTACT MS. PATRICE HARRIS, AREA TRAFFIC ENGINEER, AT (708) 597-9800 AT A MINIMUM OF 2 WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKING.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS PRIOR TO THE PLACEMENT OF ANY TEMPORARY TRAFFIC CONTROL DEVICES.

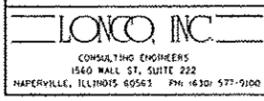
BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE DIRECTED BY THE ENGINEER.

WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC, THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHING SHALL NOT EXCEED 1/2". WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL FO 3" MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).

BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HMA TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.

THE CONTRACTOR SHALL EXERCISE THE UTMOST CARE TO PREVENT ANY DEBRIS FROM THE BRIDGE REMOVAL WORK FROM DROPPING INTO JACKSON CREEK. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST FOR REMOVAL OF EXISTING STRUCTURES PAY ITEM.

THE RESTRICTED START DATE FOR THIS PROJECT IS MAY 1, 2013. THE CONTRACTOR WILL NOT BE ALLOWED TO PROCEED WITH ANY WORK ON THIS PROJECT THAT REQUIRES A PERMANENT OR OVER-NIGHT LANE(S) OR SHOULDER(S) CLOSURE PRIOR TO MAY 1, 2013. TEMPORARY DAY-TIME LANE/SHOULDER CLOSURES MAY BE ALLOWED BETWEEN THE HOURS OF 9:00 AM TO 3:00 PM WITH THE WRITTEN PERMISSION/APPROVAL OF THE ENGINEER AND THE BUREAU OF TRAFFIC OPERATIONS. THE COST TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE INCLUDED IN THE COST OF THE PROJECT AND THIS RESTRICTION SHALL NOT BE CONSIDERED A BASIS FOR A TIME EXTENSION.



DESIGNED - ST	REVISED -
DRAWN - ST	REVISED -
CHECKED - MJV, SLV	REVISED -
DATE - 03/29/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, STATE STANDARDS AND INDEX OF SHEETS
PARK AVENUE OVER CALUMET UNION DRAINAGE DITCH

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. 98+20 TO STA. 101+60

F.A.P. RTE. 3597	SECTION 0710 B	COUNTY COOK	TOTAL SHEETS 30	SHEET NO. 2
D-91-292-09			CONTRACT NO. 60F95	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES			URBAN	100% STATE		SUMMARY OF QUANTITIES			URBAN	100% STATE	
CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY 0004	BRIDGE 0014	CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY 0004	BRIDGE 0014
20200100	EARTH EXCAVATION	CU YD	190	190		44201341	CLASS C PATCHES, TYPE II, 9 INCH	SO YD	32	32	
21101815	COMPOST FURNISH AND PLACE, 4"	SO YD	637	637		44201345	CLASS C PATCHES, TYPE III, 9 INCH	SO YD	40	40	
25000310	SEEDING, CLASS 4	ACRE	0.2	0.2		44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	516	516	
25100630	EROSION CONTROL BLANKET	SO YD	637	637		50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1		1
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	20	20		50300225	CONCRETE STRUCTURES	CU YD	28.5		28.5
28000305	TEMPORARY DITCH CHECKS	FOOT	108	108		50300255	CONCRETE SUPERSTRUCTURE	CU YD	155.1		155.1
28000400	PERIMETER EROSION BARRIER	FOOT	630	630		50300260	BRIDGE DECK GROOVING	SO YD	565		565
28000510	INLET FILTERS	EACH	2	2		50300300	PROTECTIVE COAT	SO YD	680		680
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	1	1		50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SO FT	2355		2355
40600300	AGGREGATE (PRIME COAT)	TON	4	4		50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	44900		44900
40600400	MIXTURE FOR CRACK, JOINTS AND FLANGEWAYS	TON	2	2		50901750	PARAPET RAILING	FOOT	22		22
40600625	LEVELING BINDER (MACHINE METHOD) N50	TON	64	64		51500100	NAME PLATES	EACH	1		1
40600985	PORTLAND CEMENT CONCRETE SURFACE REMOVAL-BUTT JOINT	SO YD	42	42		52000110	PREFORMED JOINT STRIP SEAL	FOOT	47		47
40601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	11	11		59000200	EPOXY CRACK INJECTION	FOOT	147		147
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	79	79		60300105	FRAMES AND GRATES TO BE ADJUSTED	EACH	2	2	
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SO YD	289	289		60300305	FRAMES AND LIDS TO BE ADJUSTED	EACH	1	1	
44000100	PAVEMENT REMOVAL	SO YD	94	94		60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	597	597	
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	597	597		63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	54	54	
44002207	HOT-MIX ASPHALT REMOVAL OVER PATCHES, 1 3/4"	SO YD	106	106	*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2	2	
44201337	CLASS C PATCHES, TYPE I, 9 INCH	SO YD	24	24	*	63100167	TRAFFIC BARRIER TERMINAL, TYPE I (SPECIAL) TANGENT	EACH	4	4	

* SPECIALTY ITEMS

LONCO, INC.
CONSULTING ENGINEERS
1560 HALL ST, SUITE 222
HAVERVILLE, ILLINOIS 60562 PH 630-577-9100

DESIGNED - ST
DRAWN - ST
CHECKED - MJY, SLV
DATE - 03/29/2012

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
PARK AVENUE OVER CALUMET UNION DRAINAGE DITCH

SCALE: NONE SHEET NO. 1 OF 2 SHEETS STA. 98+20 TO STA. 101+60

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3597	0710 B	COOK	30	3
D-91-292-09		CONTRACT NO. 60F95		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES			URBAN	100% STATE		SUMMARY OF QUANTITIES			URBAN	100% STATE	
CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY 0004	BRIDGE 0014	CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY 0004	BRIDGE 0014
63200310	GUARDRAIL REMOVAL	FOOT	408	408		Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	9	9		Z0030850	TEMPORARY INFORMATION SIGNING	SO FT	200	200	
67100100	MOBILIZATION	L SUM	1	1		Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	10	10	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DAY	90	90							
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	12	12							
* 78000200	THERMOPLASTIC PAVEMENT MARKING-LINE 4"	FOOT	3836	3836							
* 78000650	THERMOPLASTIC PAVEMENT MARKING-LINE 24"	FOOT	12	12							
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	753		753						
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	50	50							
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	8		8						
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	58	50	8						
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	10	10							
X0323078	REMOVE AND RE-ERECT EXISTING BRIDGE RAIL	FOOT	89		89						
X4400100	PORTLAND CEMENT CONCRETE SURFACE REMOVAL (VARIABLE DEPTH)	SO YD	485	485							
X5030305	CONCRETE WEARING SURFACE, 5"	SO YD	262		262						
X6310218	TRAFFIC BARRIER TERMINAL, TYPE 6 (SPECIAL)	EACH	2	2							
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1							
Z0004552	APPROACH SLAB REMOVAL	SO YD	488		488						
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SO FT	39		39						

* SPECIALTY ITEMS

LONGO INC.
CONSULTING ENGINEERS
1540 WALL ST, SUITE 202
NAPERVILLE, ILLINOIS 60563 Ph: 630/577-9000

DESIGNED - ST
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CHECKED - MJY, SLV
DATE - 03/29/2012

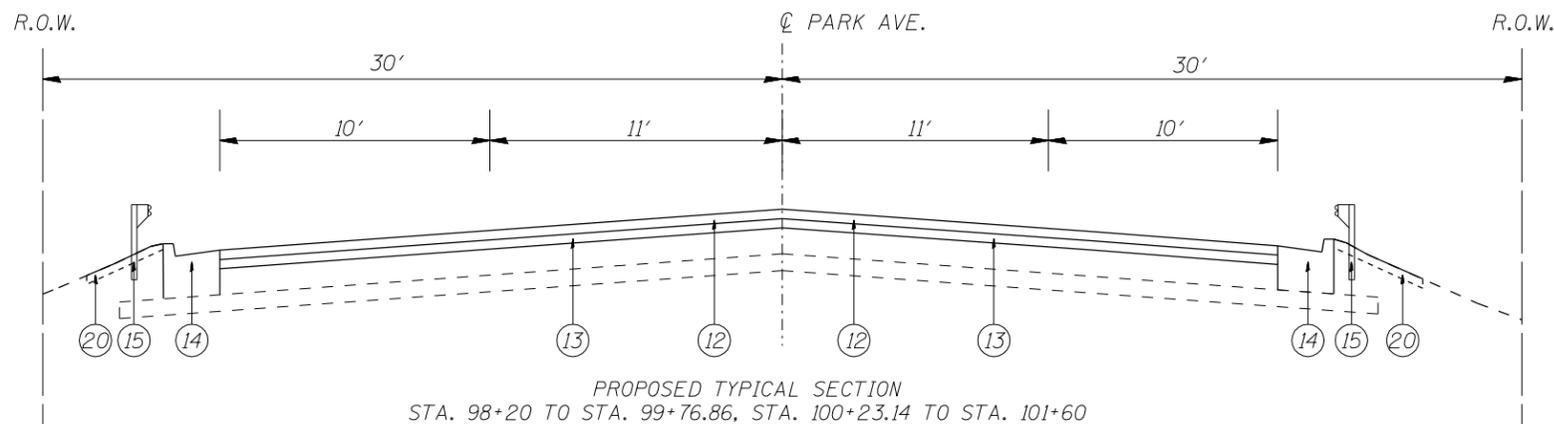
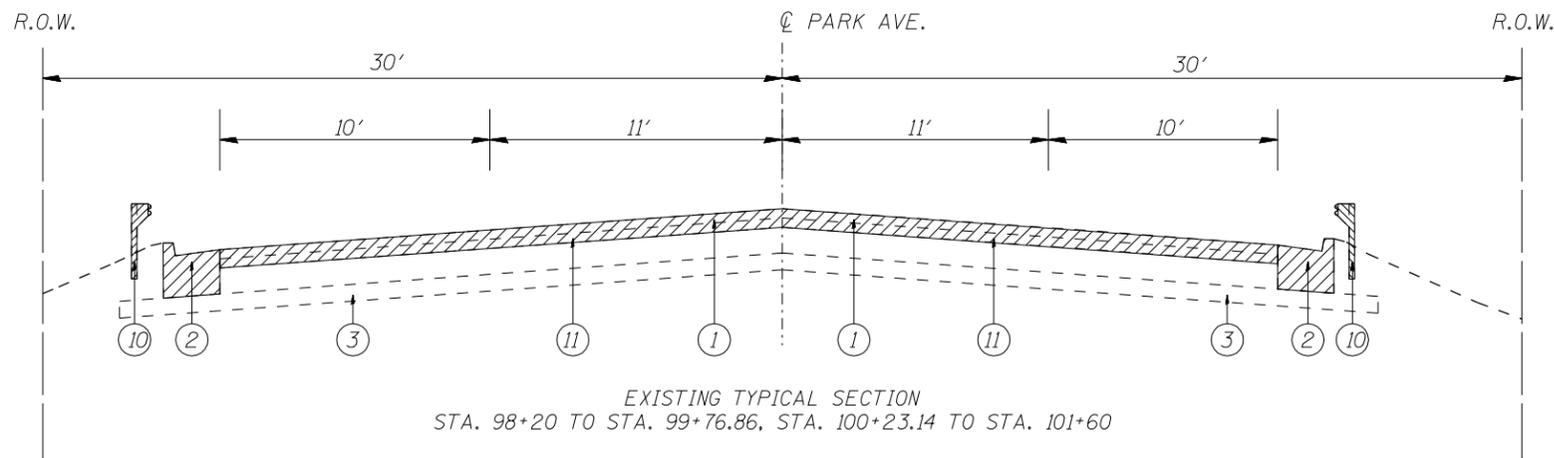
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
PARK AVENUE OVER CALUMET UNION DRAINAGE DITCH

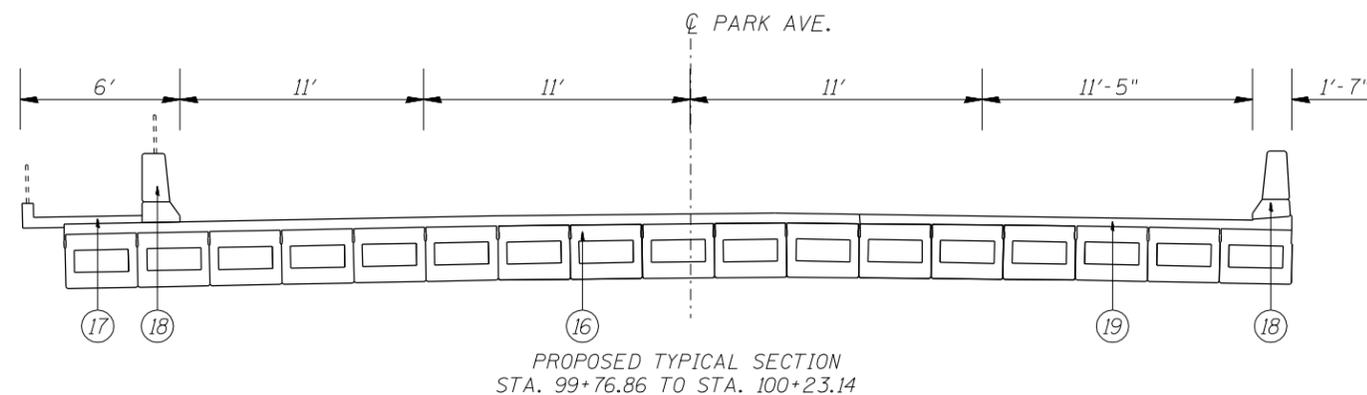
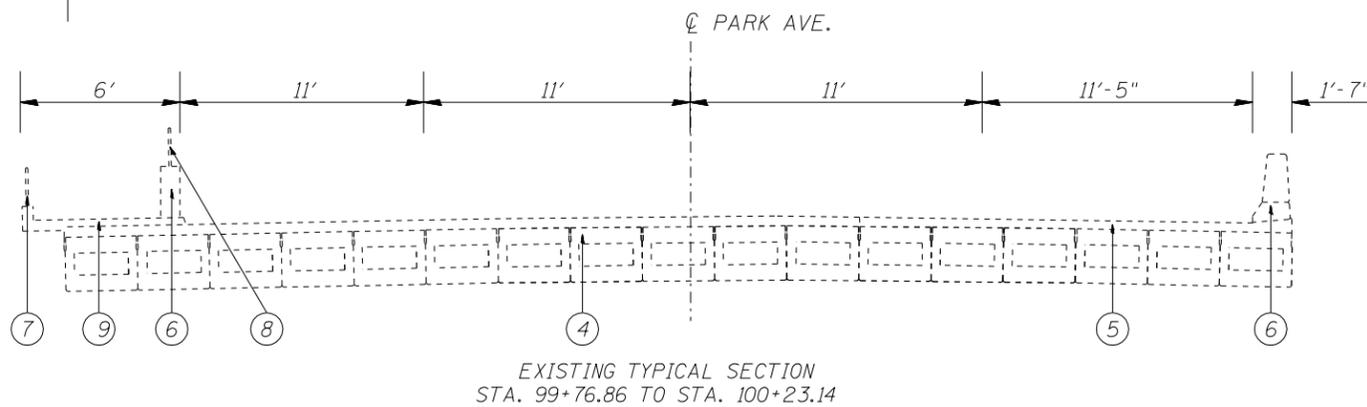
SCALE: NONE SHEET NO. 2 OF 2 SHEETS STA. 98+20 TO STA. 101+60

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3597	0710 B	COOK	30	4
D-91-292-09		CONTRACT NO. 60F95		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



LEGEND

- ① EXISTING PCC PAVEMENT, 10"
- ② EXISTING CONCRETE CURB AND GUTTER, B6-12 TO BE REMOVED
- ③ EXISTING SUBGRADE GRANULAR MATERIAL, TYPE A, 6"
- ④ EXISTING PPC DECK BEAMS
- ⑤ EXISTING CONCRETE WEARING SURFACE, 5"
- ⑥ EXISTING PARAPET WALLS
- ⑦ EXISTING BICYCLE RAILING
- ⑧ EXISTING PARAPET RAILING
- ⑨ EXISTING PCC SIDEWALK
- ⑩ EXISTING GUARDRAIL
- ⑪ PROPOSED PCC SURFACE REMOVAL, VARIABLE DEPTH
- ⑫ PROPOSED HMA SURFACE CSE., MIX "D", N50, 1 3/4"
- ⑬ PROPOSED LEVING BINDER (MACHINE METHOD), N50, 1 1/2"
- ⑭ PROPOSED COMBINATION CONCRETE CURB AND GUTTER B-6.12
- ⑮ PROPOSED GUARDRAIL
- ⑯ PROPOSED PPC DECK BEAMS
- ⑰ PROPOSED PCC SIDEWALK (PAID AS CONCRETE SUPERSTRUCTURE)
- ⑱ PROPOSED PARAPET WALL (PAID AS CONCRETE SUPERSTRUCTURE)
- ⑲ PROPOSED CONCRETE WEARING SURFACE, 5"
- ⑳ PROPOSED COMPOST FURNISH AND PLACE 4", WITH SEEDING, CLASS 4



HOT-MIX ASPHALT MIXTURE REQUIREMENTS		
MIXTURE TYPE	DESIGN AIR VOIDS	THICKNESS
ROADWAY RESURFACING		
HMA SURFACE COURSE, MIX "D", N70 (IL-9.5 mm)	4% @ 50 GYR	1 3/4"
LEVELING BINDER (MACHINE METHOD), N70	4% @ 50 GYR	1 1/2"
PAVEMENT PATCHING		
CLASS D PATCH (HMA BINDER IL-19 mm)	4% @ 50 GYR	9"
HMA REPLACEMENT OVER PATCHES (HMA BINDER IL-19 mm)	4% @ 50 GYR	1 3/4"

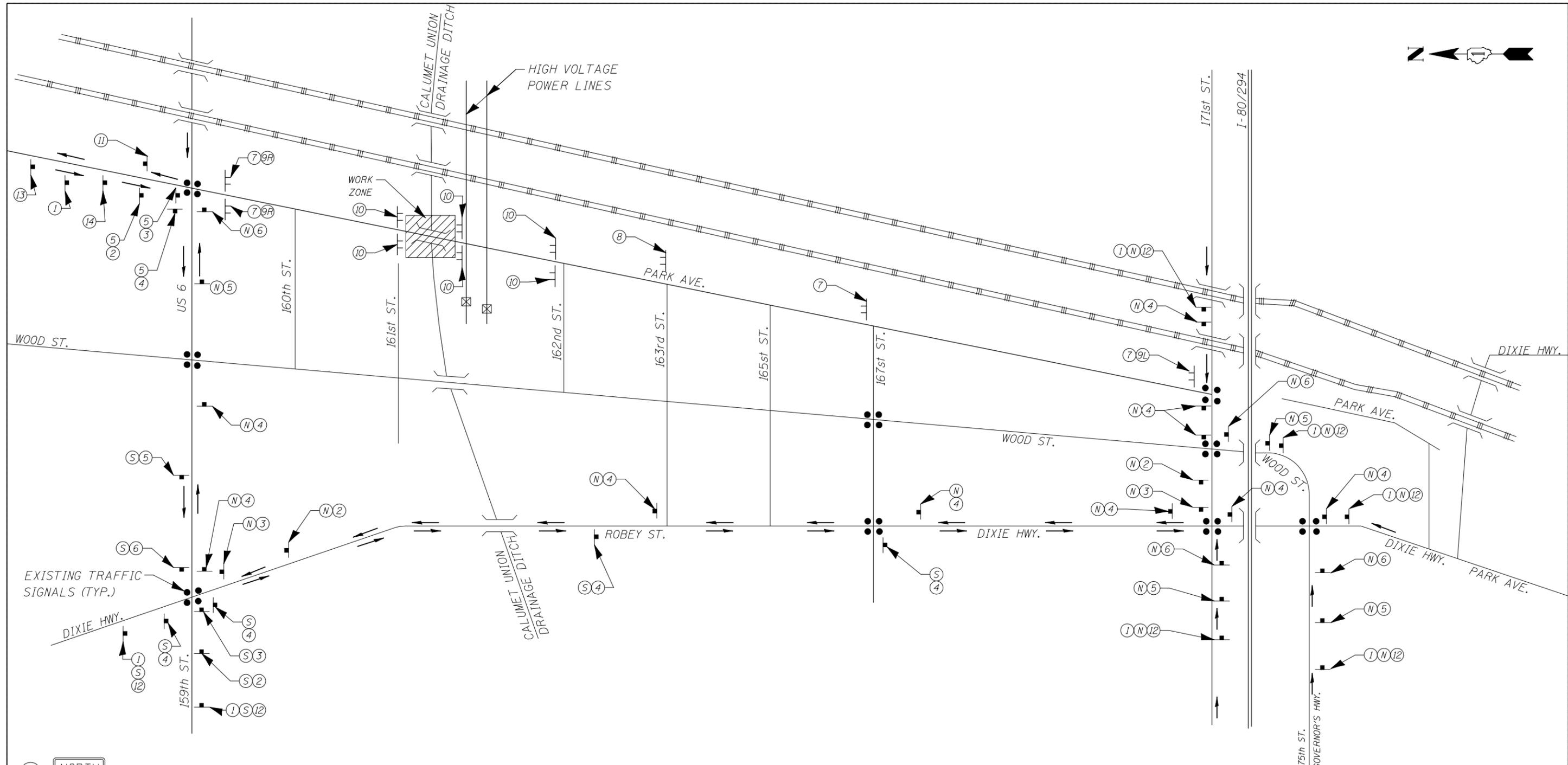
NOTES:

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE COURSE MIXTURES IS 112 LBS/SQ-YD/IN.

THE CONTRACTOR SHALL PATCH FIRST BEFORE MILLING

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76 -22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.

FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.



(N) NORTH M3-1 2412	(1) DETOUR AHEAD W20-2-48	(2) PARK AVE DETOUR [Right Arrow]	(3) PARK AVE DETOUR [Right Arrow]	(4) PARK AVE DETOUR [Up Arrow]	(5) PARK AVE DETOUR [Left Arrow]	(6) PARK AVE DETOUR [Left Arrow]	(7) ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY R11-3a 6030	(8) ROAD CLOSED TO THRU TRAFFIC R11-4 6030	(9L) DETOUR M4-10L 4818	(10) ROAD CLOSED R11-2 2418
(S) SOUTH M3-1 2412	(11) END DETOUR M4-8a 4830	(12) PARK AVE 2412	(13) ROAD CLOSED AHEAD W20-2-48	(14) ROAD CLOSED 500 FT W20-2-48	DETOUR [Right Arrow] M4-9	DETOUR [Right Arrow] M4-9	DETOUR [Up Arrow] M4-9	DETOUR [Left Arrow] M4-9	DETOUR [Left Arrow] M4-9	(9R) DETOUR M4-10R 4818

SIGN
 TYPE III BARRICADES (2 OR MORE) W/ STEADY BURN LIGHTS
 (SIGNS 7, 8, 9, & 10 TO BE MOUNTED ABOVE TYPE III BARRICADE.)

LOVCO, INC.
CONSULTING ENGINEERS
1560 WALL ST., SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

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CHECKED - MJY, SLV	REVISED -
DATE - 03/29/2012	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETOUR PLAN
PARK AVENUE OVER CALUMET UNION DRAINAGE DITCH**

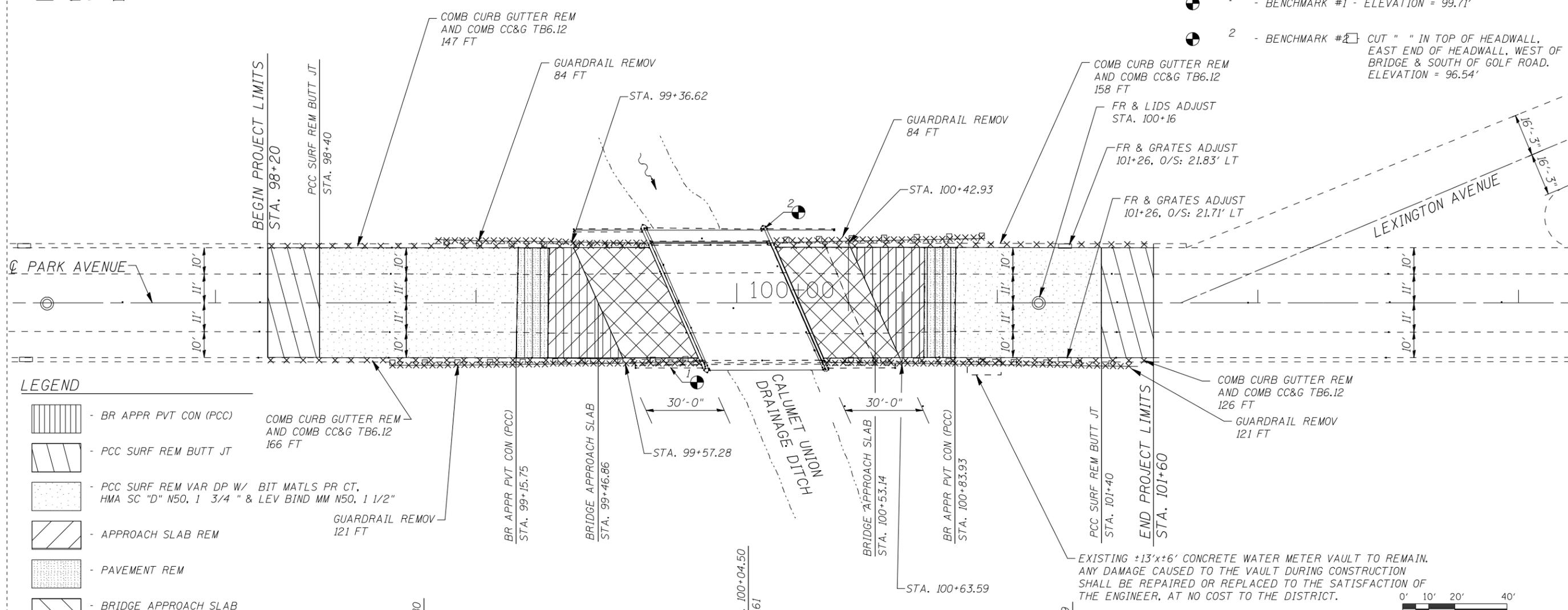
SCALE: 1" = 30' SHEET NO. 1 OF 1 SHEETS STA. 98+20 TO STA. 101+60

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3597	0710 B	COOK	30	6
D-91-292-09		CONTRACT NO. 60F95		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	CHECKED		
	AT		
	WORK		
	NO.		
	FILE		
	NAME		

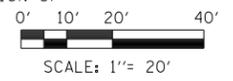
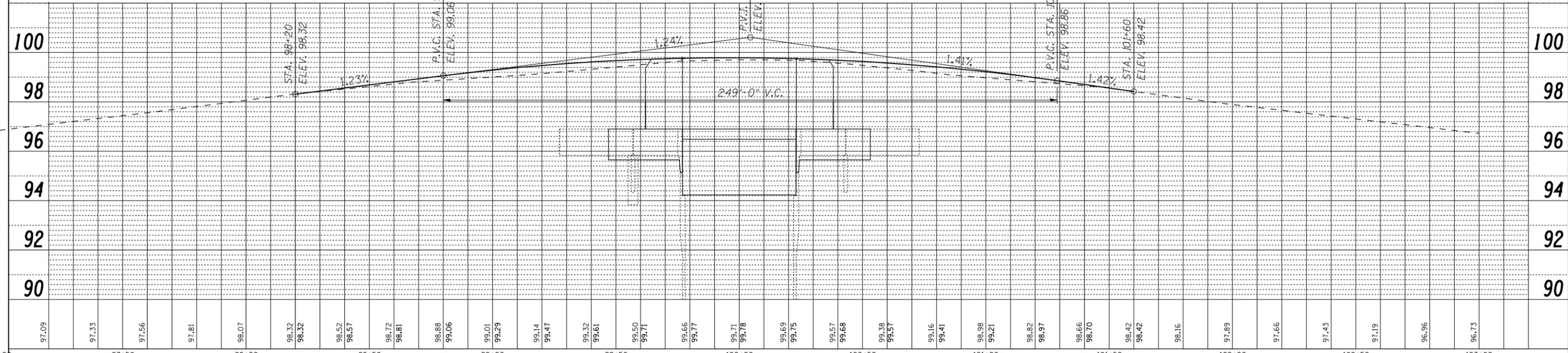
PROFILE	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	CHECKED		
	AT		
	WORK		
	NO.		
	FILE		
	NAME		

NOTE:
 1 - BENCHMARK #1 - ELEVATION = 99.71'
 2 - BENCHMARK #2 - CUT " " IN TOP OF HEADWALL, EAST END OF HEADWALL, WEST END OF BRIDGE & SOUTH OF GOLF ROAD. ELEVATION = 96.54'



LEGEND

- BR APPR PVT CON (PCC) COMB CURB GUTTER REM AND COMB CC&G TB6.12 166 FT
- PCC SURF REM BUTT JT
- PCC SURF REM VAR DP W/ BIT MATLS PR CT, HMA SC "D" N50, 1 3/4" & LEV BIND MM N50, 1 1/2"
- GUARDRAIL REMOV 121 FT
- APPROACH SLAB REM
- PAVEMENT REM
- BRIDGE APPROACH SLAB (PAID AS CONCRETE SUPERSTRUCTURE)



96.85

97+00	97+50	98+00	98+50	99+00	99+50	100+00	100+50	101+00	101+50	102+00	102+50	103+00																																
97.09	97.33	97.56	97.81	98.07	98.32	98.57	98.81	98.88	99.06	99.01	99.29	99.14	99.47	99.32	99.61	99.50	99.71	99.66	99.77	99.71	99.78	99.69	99.75	99.57	99.68	99.38	99.57	99.16	99.41	98.98	99.21	98.82	98.97	98.66	98.70	98.42	98.42	98.16	97.89	97.66	97.43	97.19	96.96	96.73

LONCO, INC.
 CONSULTING ENGINEERS
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CHECKED -	REVISED -
DATE - 03/29/2012	REVISED -

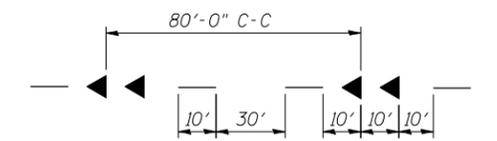
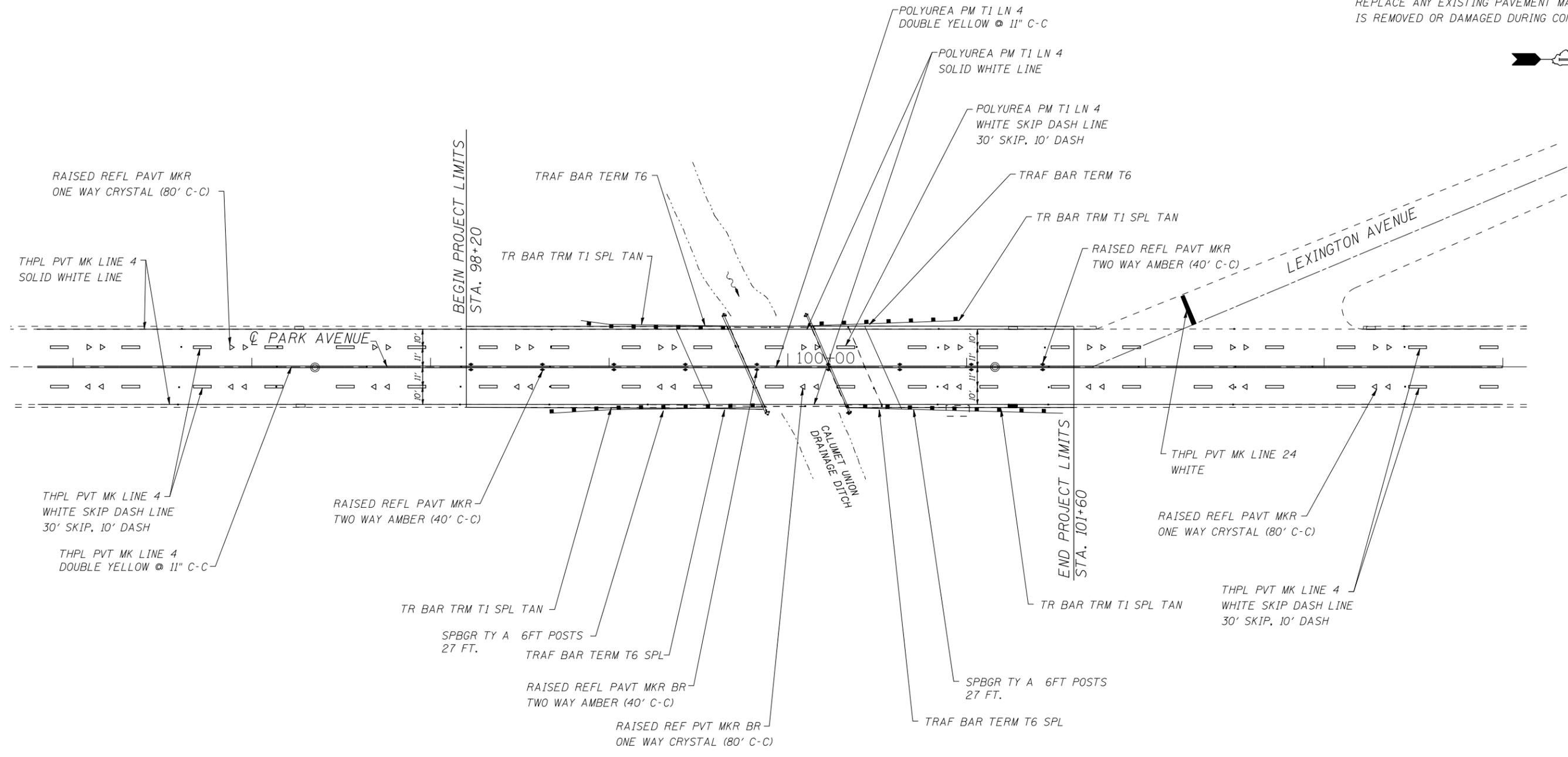
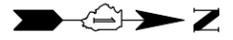
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
PARK AVENUE OVER CALUMET UNION DRAINAGE DITCH

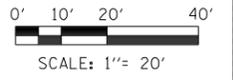
SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. 98+20 TO STA. 101+60

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3597	0710 B	COOK	30	7
D-91-292-09		CONTRACT NO. 60F95		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

NOTE:
 REPLACE ANY EXISTING PAVEMENT MARKING THAT IS REMOVED OR DAMAGED DURING CONSTRUCTION.



LANE PAVEMENT MARKER DETAIL
 SEE STATE STANDARD NO. 780001
 SEE DISTRICT STANDARD NO. TC-11



LONCO, INC.
 CONSULTING ENGINEERS
 1560 WALL ST., SUITE 222
 NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

DESIGNED - ST	REVISED -
DRAWN - ST	REVISED -
CHECKED - MJY, SLV	REVISED -
DATE - 03/29/2012	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
 PARK AVENUE OVER CALUMET UNION DRAINAGE DITCH**

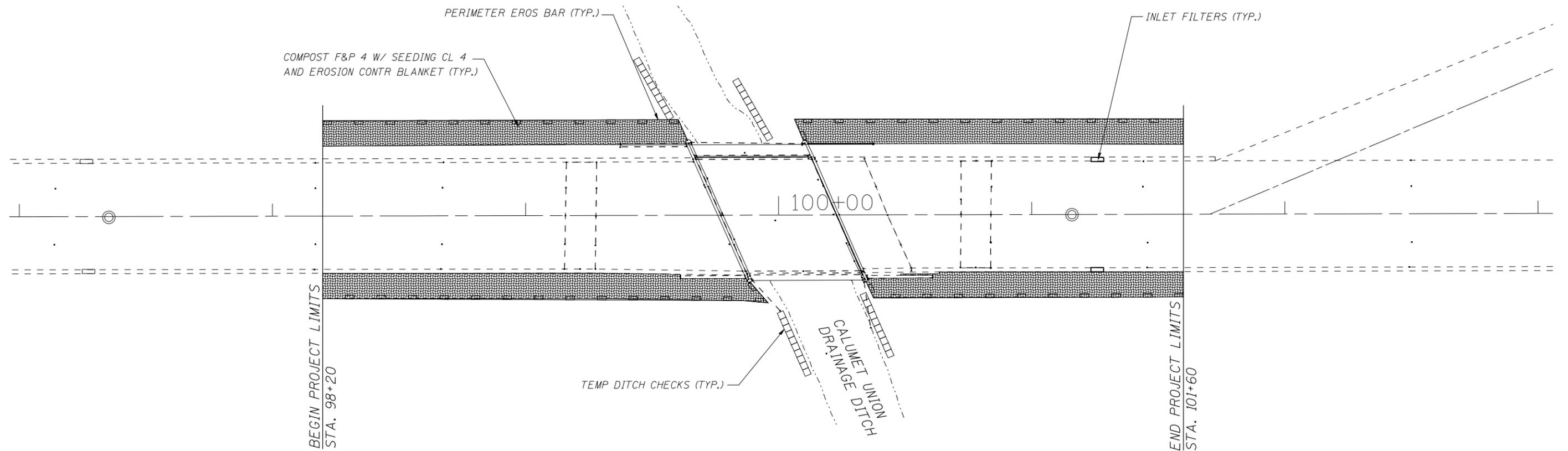
SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. 98+20 TO STA. 101+60

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3597	0710 B	COOK	30	8
D-91-292-09		CONTRACT NO. 60F95		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

TEMPORARY EROSION CONTROL NOTES



1. ALL CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER POLICY.
2. THE CONTRACTOR SHALL INSTALL PERIMETER EROSION BARRIER PRIOR TO STRIPPING OF VEGETATION.
3. THE CONTRACTOR SHALL SURROUND ANY NECESSARY EARTH STOCKPILES WITH PERIMETER EROSION BARRIER.
4. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AT ALL TIMES. EROSION CONTROL DEVICES SHALL BE INSPECTED EVERY SEVEN CALENDAR DAYS OR WITHIN 24 HOURS AFTER A 13 MM (0.5 INCH) RAINFALL OR SNOWFALL.
5. THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS AS SOON AS PRACTICAL AFTER CONSTRUCTION ACTIVITIES IN THAT AREA HAVE BEEN CONCLUDED. AREAS THAT HAVE STEEP SLOPES OR WILL NOT RECEIVE PERMANENT LANDSCAPING SHALL BE TEMPORARILY SEEDED. ALL FLATTER AREAS OR AREAS WHERE NO FURTHER WORK IS TO OCCUR FOR ONE MONTH OR MORE SHALL BE SEEDED AND EXCELSIOR BLANKET WITHIN SEVEN (7) CALENDAR DAYS.

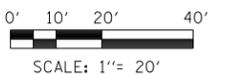


TEMPORARY EROSION CONTROL SEQUENCE OF CONSTRUCTION

1. ESTABLISH TEMPORARY EROSION CONTROL AND ERECT PERIMETER EROSION CONTROL BARRIER AS SHOWN ON THE THE PLANS PROIR TO EARTHWORK.
2. IMPLEMENT SEDIMENT AND EROSION CONTROL DEVICES FOR STOCKPILE AREAS AS REQUIRED.
3. INSTALL PERMANENT LANDSCAPING IN CONJUNCTION WITH CONSTRUCTION STAGING.
4. CLEAN DRAINAGE FACILITIES AND REMOVE TEMPORARY EROSION DEVICES WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED.

LEGEND

- COMPOST FURNISH AND PLACE, 4" W/ SEEDING, CL 4 AND EROSION CONTROL BLANKET
- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECKS



LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

DESIGNED - ST	REVISED -
DRAWN - ST	REVISED -
CHECKED - MJY, SLV	REVISED -
DATE - 03/29/2012	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL PLAN
PARK AVENUE OVER CALUMET UNION DRAINAGE DITCH**

SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. 98+20 TO STA. 101+60

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3597	0710 B	COOK	30	9
D-91-292-09		CONTRACT NO. 60F95		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

Benchmark : Benchmark #1 - cut "□" in top of southeast wingwall, approx. 21' south of bridge. Assumed Elevation = 99.71'

Existing Structure: S.N. 016-0771 built in 1958 as a single span 27"x36" PPC Deck Beam bridge with 2" bituminous wearing surface on closed abutments on spread footings. The structure measures 48'-3 3/8" back to back abutments and 53'-0" out to out. Bridge was rehabilitated in 1999 with a new 5" concrete wearing surface, installation of parapets and handrails. Traffic is to be detoured with full bridge closure. New bridge width measures 52'-0".

Salvage: None

LOADING HL-93

Allow 50 psf for future wearing surface

DESIGN SPECIFICATIONS

2007 AASHTO LRFD 4th Edition

DESIGN STRESSES

FIELD UNITS

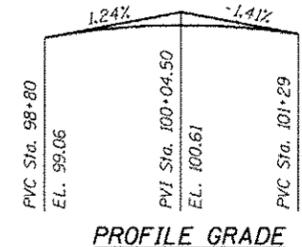
f'c = 3,500 psi
f'c = 5000 psi (Concrete Wearing Surface)
fy = 60000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

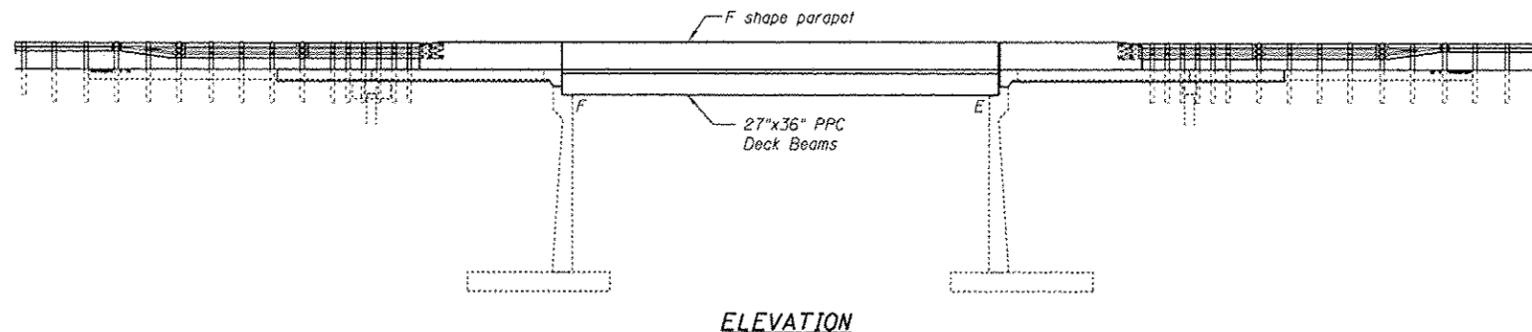
f'c = 6000 psi
f'ci = 5000 psi
f's = 270,000 psi (1/2" ϕ low lax. strands)
f'si = 201,900 psi (1/2" ϕ low lax. strands)

SEISMIC DATA

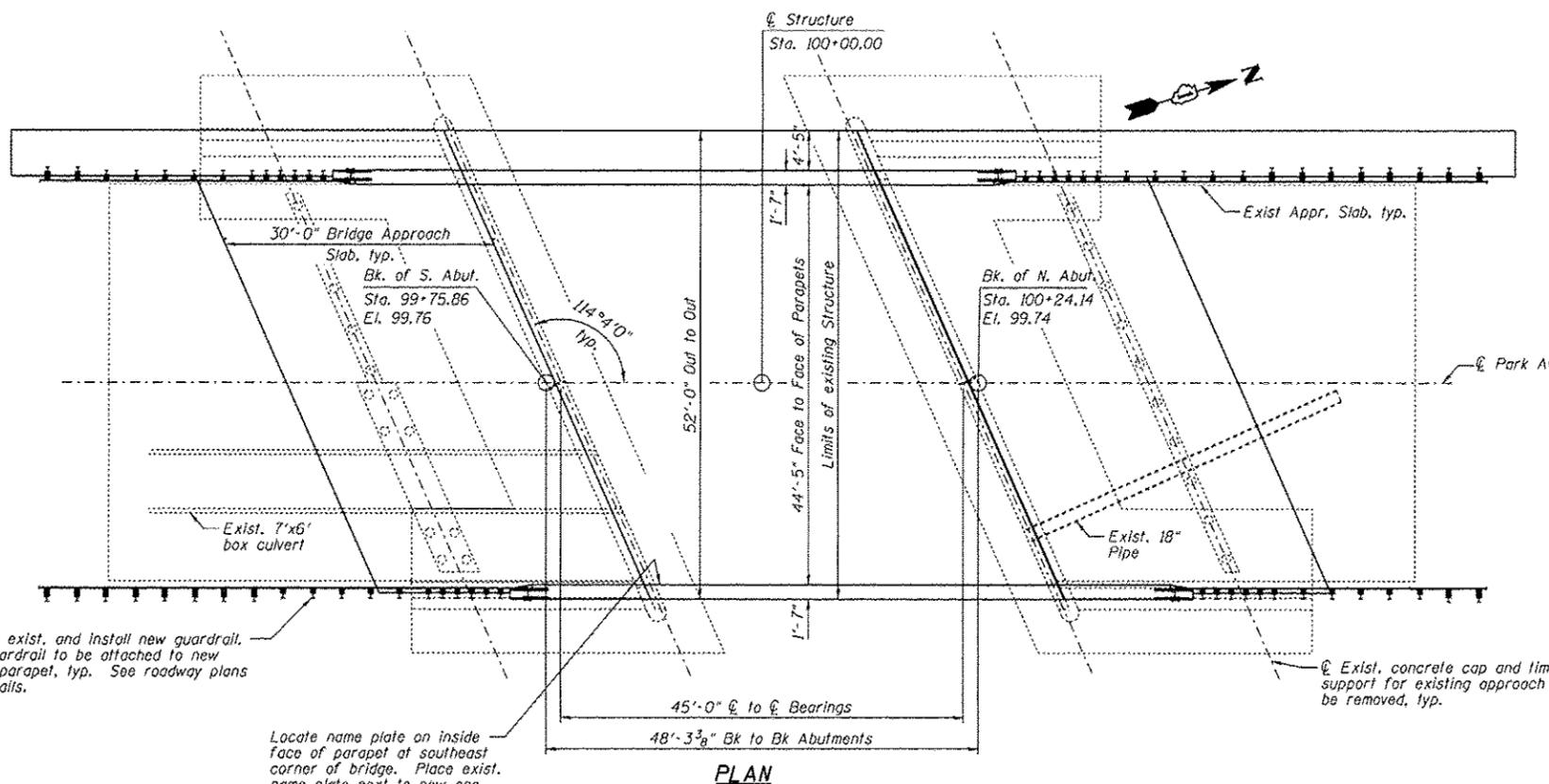
Seismic Performance Category (SPC) = A
Bedrock acceleration coefficient (A) = .04
Site Coefficient (S) = 1.2



PROFILE GRADE



ELEVATION



PLAN

STATION 100+00.00
REBUILT 20_ BY
STATE OF ILLINOIS
F.A.U. ROUTE 3597 SEC 0710 B
LOADING HL-93
STRUCTURE NO. 016-0771

NAME PLATE

See Std. 515001

NOTE:
Existing Name Plate shall be cleaned and relocated next to new Name Plate.
Cost included with Name Plates.

APPROVED
For Structural Adequacy Only

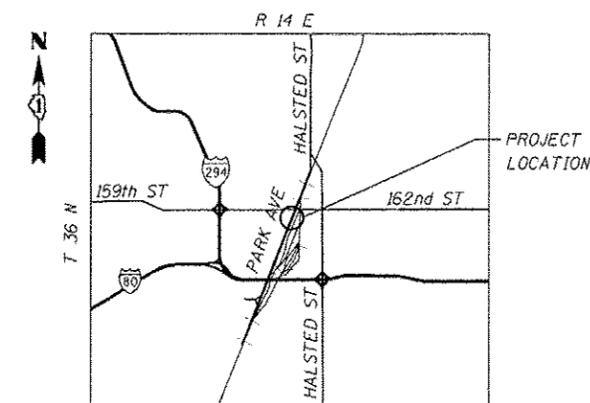
William H. Epp
Engineer of Bridges & Structures



William H. Epp

WILLIAM H. EPP, S.E.
IL. LIC. NO. 081-005150
EXP. 11.30.12
DATE 5.16.12

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with the requirements of the current AASHTO LRFD Bridge Design Specifications.



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
PARK AVENUE OVER CALUMET

UNION DRAINAGE DITCH
F.A.U RT. 3597
SECTION 0710 B
COOK COUNTY
STA. 100+00.00
STRUCTURE NO. 016-0771

LOCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 517-9100

DESIGNED - SLV	REVISED -
CHECKED - MJM	REVISED -
DRAWN - SLV	REVISED -
CHECKED - MJM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 016-0771

SHEET NO. 51 OF 514 SHEETS

F.A.U. R.T.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3597	0710 B	COOK	30	10
0-91-292-09			CONTRACT NO. 60F95	
[ILLINOIS] FED. AID PROJECT				

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

Reinforcement Bars designated (E) shall be epoxy coated.

No in-stream work will be allowed in this project

Slip forming of the parapets is not allowed.

Repair of the substructure shall be completed prior to placement of the new deck beams.

If the Contractor's procedures for existing beam removal or placement of new beams involves placement of heavy equipment on the existing or new deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Removal of Existing Superstructures.

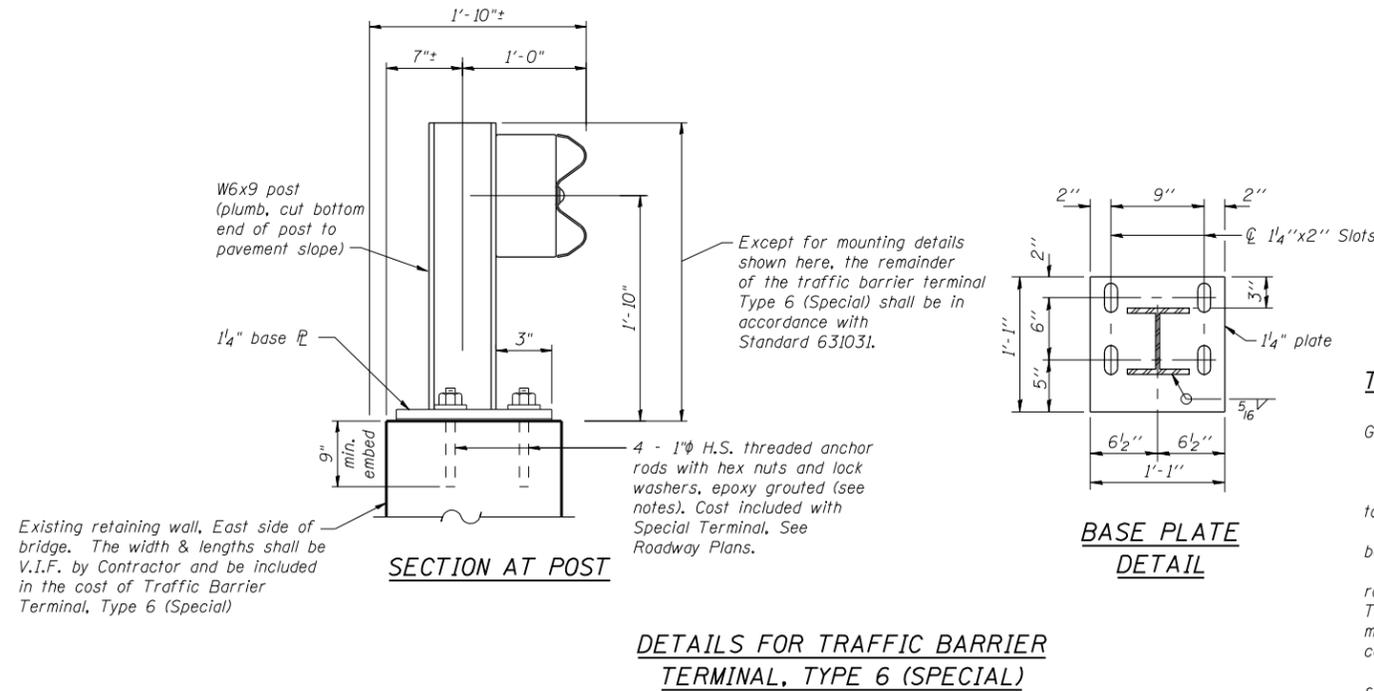
The cost of removing existing concrete wearing surface, parapet, expansion joint strip seal, bearing pads, and sidewalk are included in the cost of Removal of Existing Superstructures.

INDEX OF SHEETS

- S1. General Plan and Elevation
- S2. General Data and Bill of Material
- S3. Top of North Approach Slab Elevations
- S4. Top of South Approach Slab Elevations
- S5. Superstructure
- S6. Superstructure Details
- S7. Parapet Details
- S8. Bicycle Railing
- S9. Bridge Approach Slab Details 1 of 2
- S10. Bridge Approach Slab Details 2 of 2
- S11. 27"x36" PPC Deck Beams
- S12. 27"x36" PPC Deck Beam Details
- S13. North Abutment Details
- S14. South Abutment Details

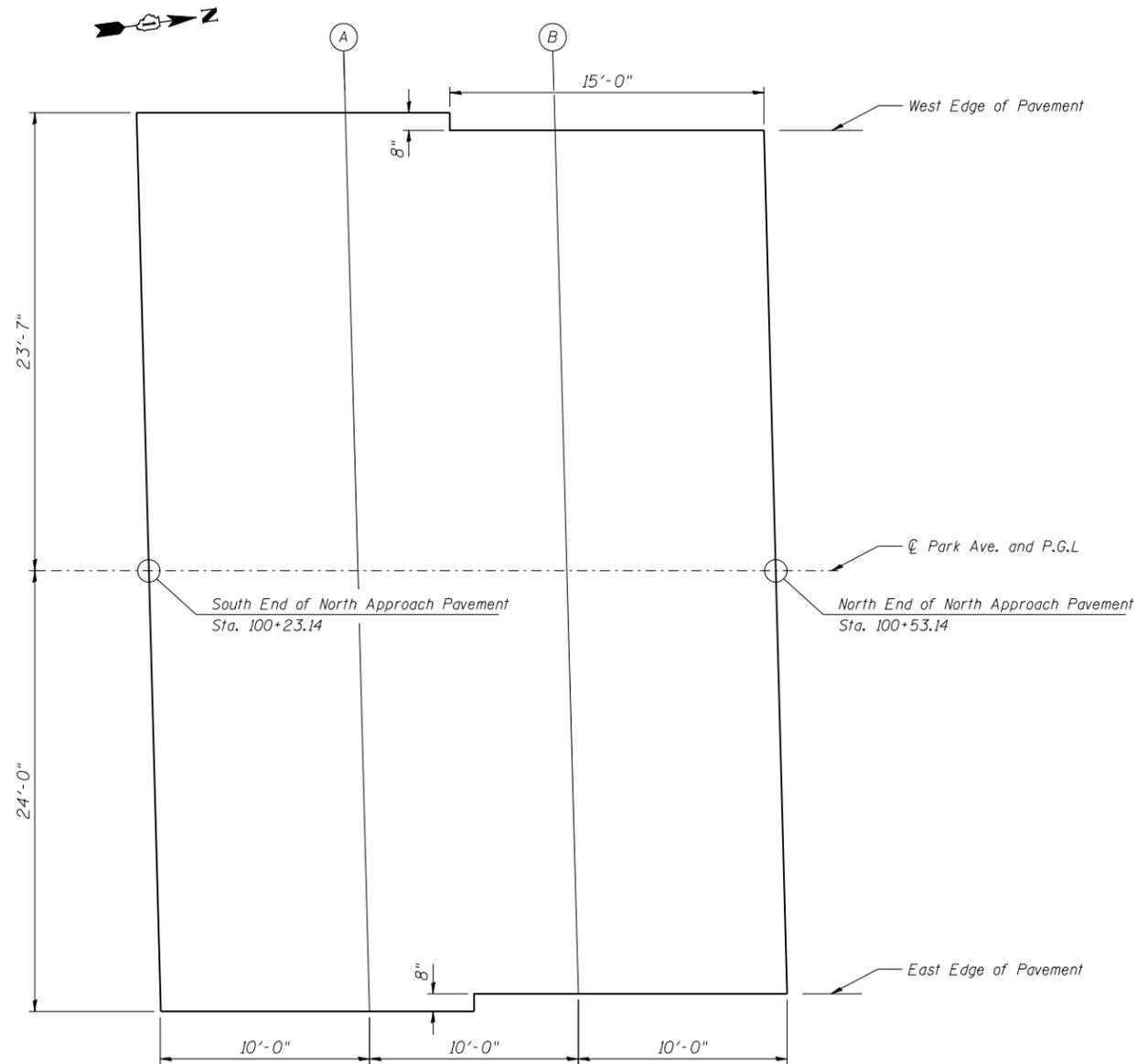
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	APPR. SLAB	TOTAL
Removal of Existing Superstructures	Each	1			1
Concrete Structures	Cu. Yd.			28.5	28.5
Concrete Superstructure	Cu. Yd.	16.6	0.5	138	155.1
Bridge Deck Grooving	Sq. Yd.	262		303	565
Protective Coat	Sq. Yd.	335		345	680
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. ft.	2355			2355
Reinforcement Bars, Epoxy Coated	Pound	6390	220	38290	44900
Parapet Railing	Foot			22	22
Name Plates	Each	1			1
Preformed Joint Strip Seal	Foot	47			47
Epoxy Crack Injection	Foot		147		147
Remove and Re-Erect Existing Bridge Rail	Foot	89			89
Concrete Wearing Surface, 5"	Sq. Yd.	262			262
Approach Slab Removal	Sq. Yd.			488	488
Structural Repair of Concrete (Depth Equal to or Less Than 5 inches)	Sq. Ft.		39		39



TERMINAL NOTES:

Steel shapes and plates shall conform to the requirements of AASHTO M 270. Grade 36 except posts shall conform to AASHTO M 270, Grade 50. Threaded rods, nuts and washers shall conform to AASHTO M 164. All nuts and lock washers shall be galvanized according to AASHTO M 232. All posts and anchor rods shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Provide one 1/8 inch and two 1/16 inch steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes. The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with premeasured amounts of the adhesive chemical. Nuts for 1 inch threaded anchor rods connecting the base plate to the concrete shall be tightened to a snug fit and given an additional 1/8 turn.



PLAN

West Edge of Pavement

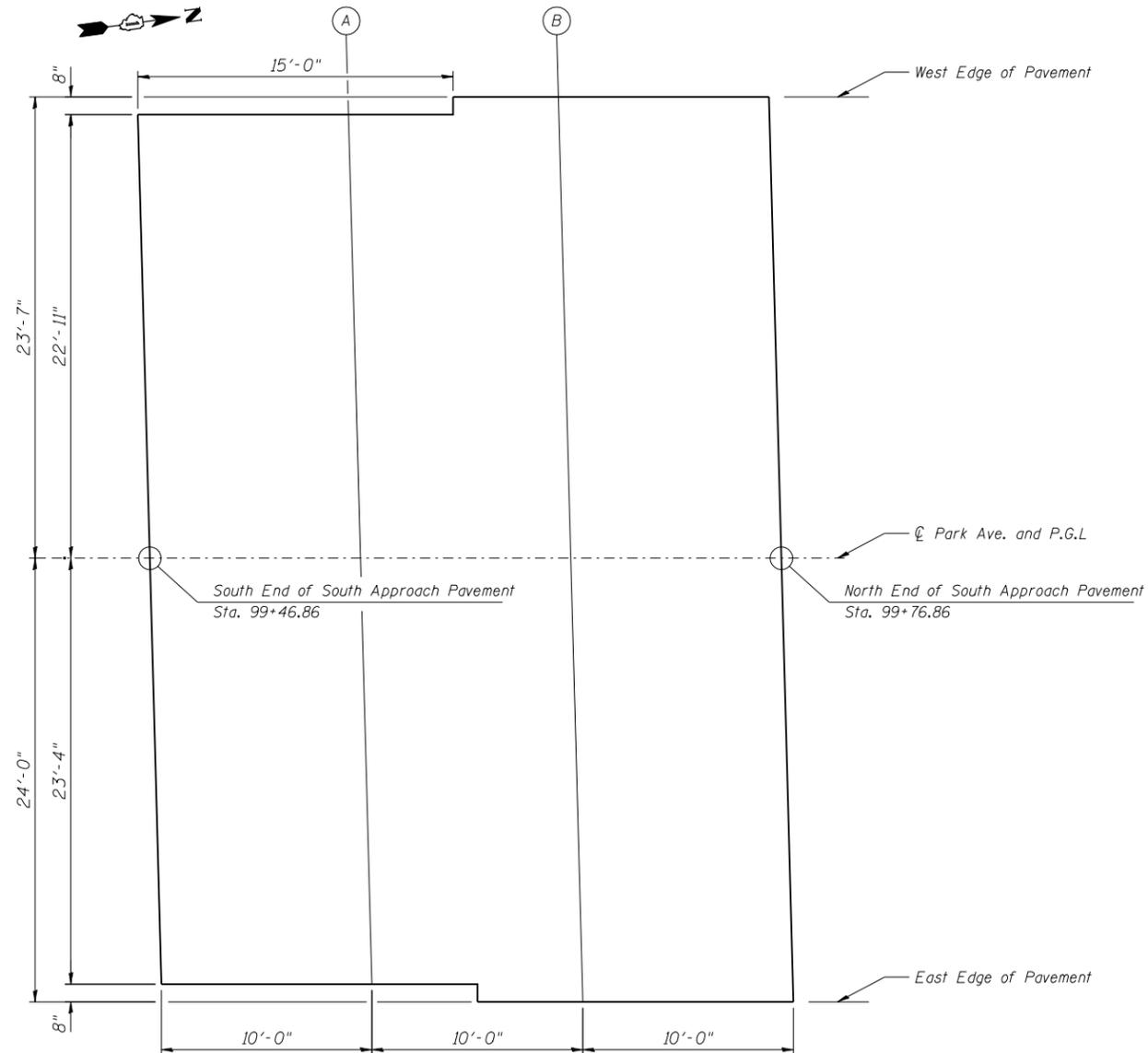
Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr Pvmt	100+12.61	-23.583'	99.40
A	100+22.61	-23.583'	99.38
B	100+32.90	-22.917'	99.35
N. End N. Appr Pvmt	100+42.90	-22.917'	99.31

Centerline of Park Ave. and P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr Pvmt	100+23.14	0.000'	99.74
A	100+33.14	0.000'	99.71
B	100+43.14	0.000'	99.67
N. End N. Appr Pvmt	100+53.14	0.000'	99.61

East Edge of Pavement

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr Pvmt	100+33.86	24.000'	99.33
A	100+43.86	24.000'	99.29
B	100+53.56	23.333'	99.24
N. End N. Appr Pvmt	100+63.56	23.333'	99.18



PLAN

West Edge of Pavement

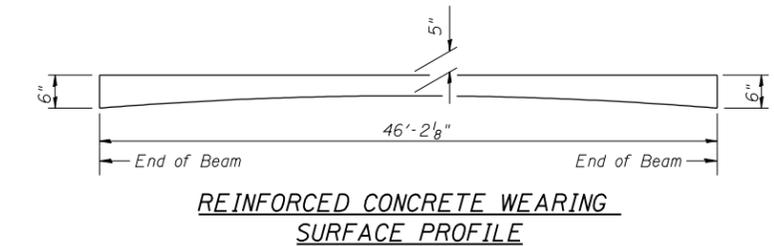
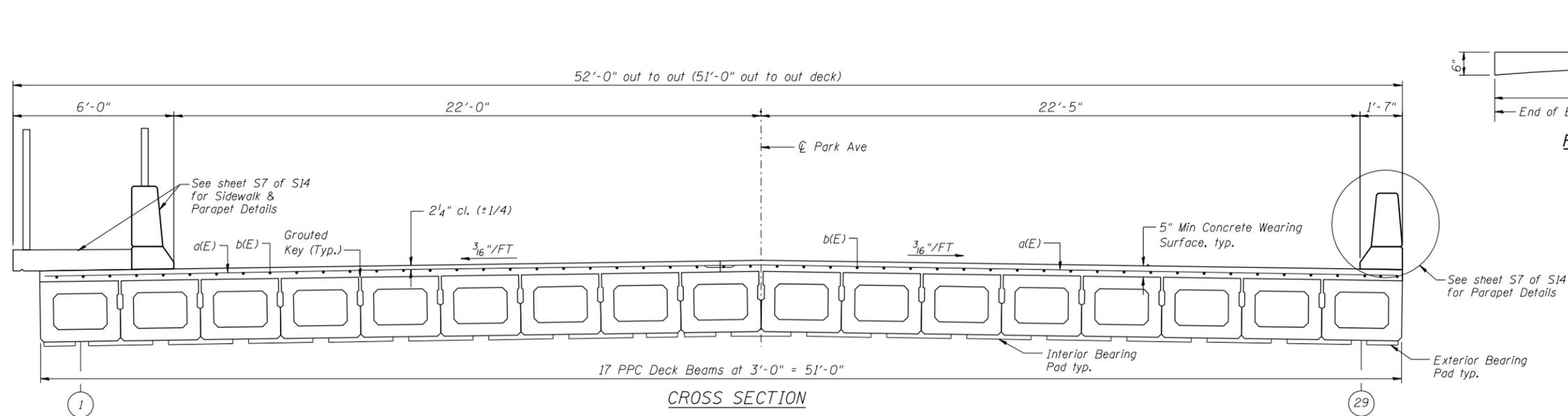
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr Pvmt	99+36.62	-22.917'	99.23
A	99+46.62	-22.917'	99.29
B	99+56.33	-23.583'	99.33
N. End S. Appr Pvmt	99+66.33	-23.583'	99.37

Centerline of Park Ave. and P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr Pvmt	99+46.86	0.000'	99.65
A	99+56.86	0.000'	99.70
B	99+66.86	0.000'	99.74
N. End S. Appr Pvmt	99+76.86	0.000'	99.76

East Edge of Pavement

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr Pvmt	99+57.28	23.333'	99.34
A	99+67.28	23.333'	99.37
B	99+77.58	24.000'	99.39
N. End S. Appr Pvmt	99+87.58	24.000'	99.40



BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	94	#4	29'-11"	—	
a1(E)	94	#5	6'-0"	—	
b(E)	108	#4	23'-11"	—	
b1(E)	10	#5	24'-2"	—	
c(E)	47	#5	4'-6"	┘	
d(E)	51	#5	5'-7"	┘	
d1(E)	102	#4	5'-11"	┘	
d2(E)	51	#5	6'-1"	┘	
e(E)	42	#4	15'-0"	—	
e1(E)	2	#8	45'-9"	—	
e2(E)	2	#4	23'-10"	—	
Concrete Wearing Surface, 5"				Sq. Yd.	262
Concrete Superstructure				Cu. Yd.	16.6
Reinforcement Bars, Epoxy Coated				Pound	6390

NOTES

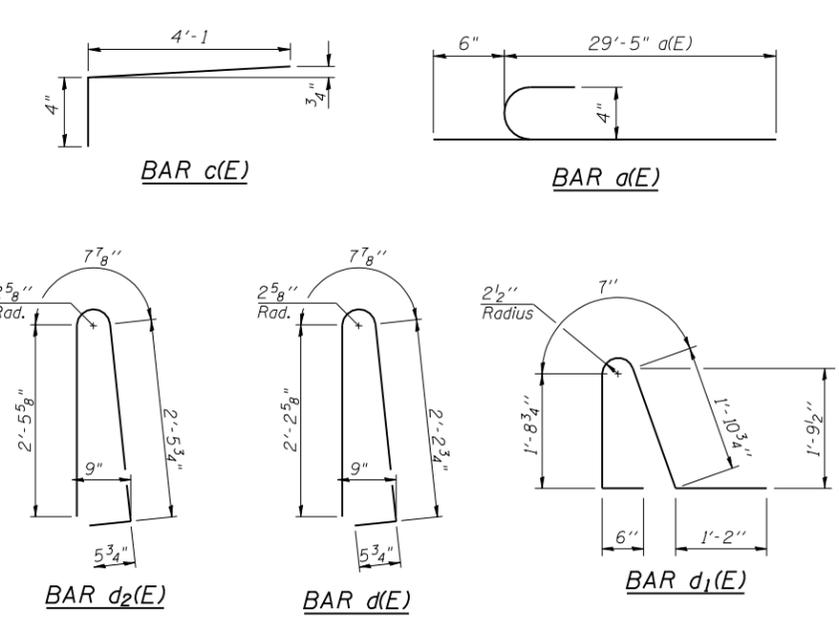
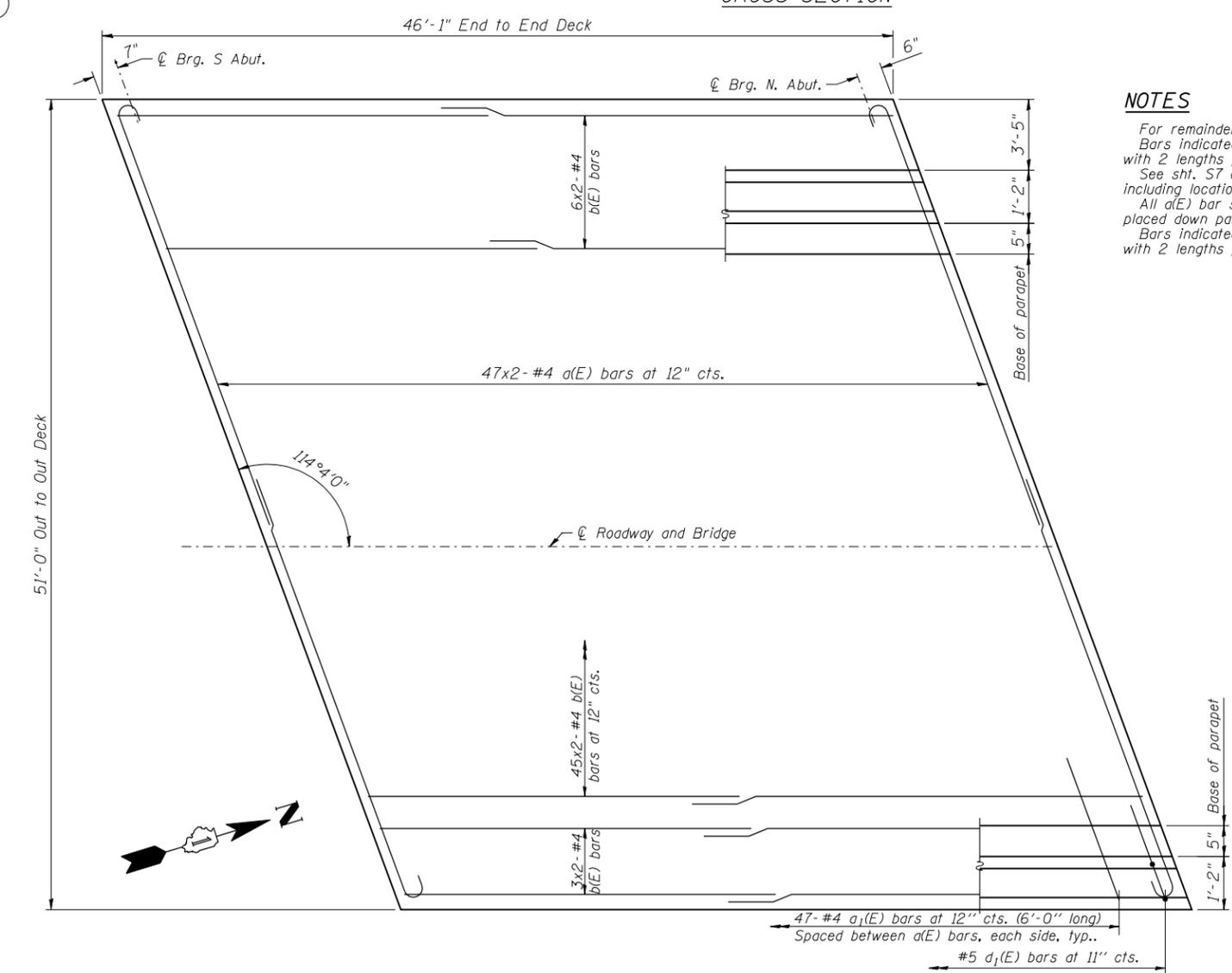
For remainder of Superstructure Details see sht. S6 of S14.

Bars indicated thus 45x2-#4, etc. indicates 45 lines of bars with 2 lengths per line.

See sht. S7 of S14 for sidewalk plan and parapet details, including locations of d(E) thru d2(E) bars.

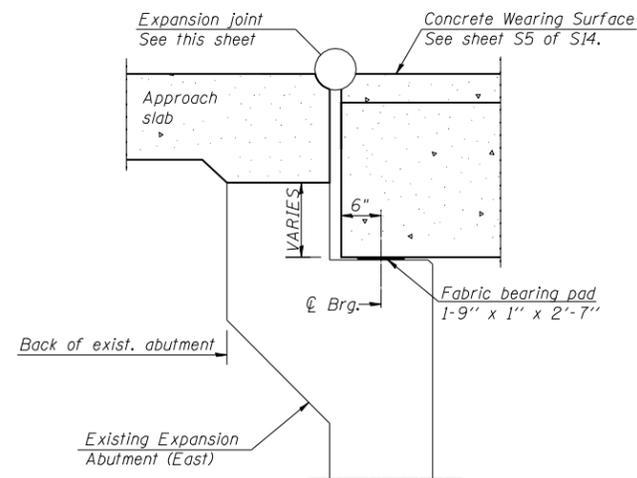
All a(E) bar spacings measured parallel to CL roadway, but placed down parallel to skew.

Bars indicated thus 47x2-#4 etc. indicates 47 lines of bars with 2 lengths per line.



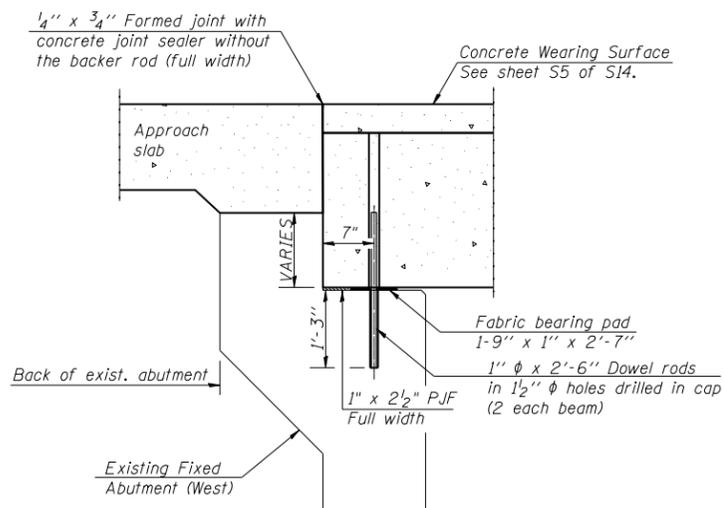
MIN. BAR LAP

#4 bars = 2'-1"



SECTION THRU EXPANSION ABUTMENT

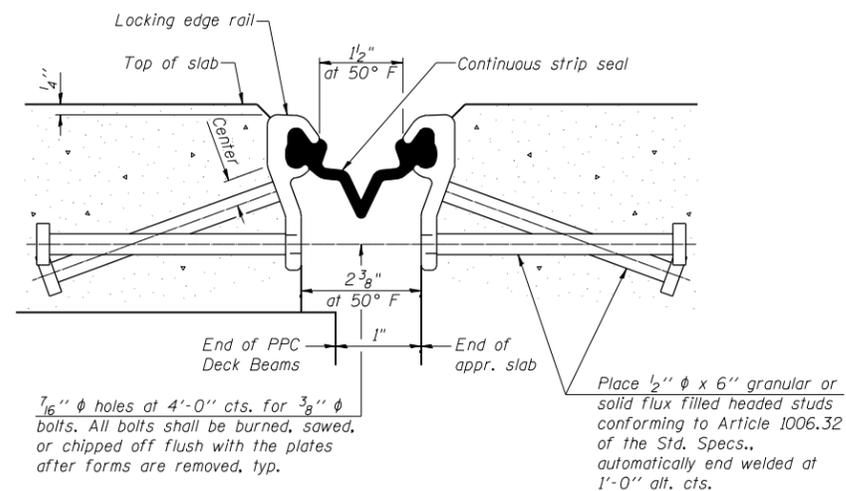
Notes:
All horizontal dimensions are at right angles to beam ends.
Hatched area to be poured after concrete wearing surface is in place.
See sheet S12 of S14 for bearing pad details.



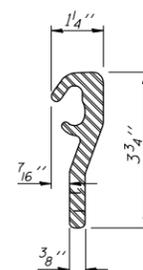
SECTION THRU FIXED ABUTMENT

Notes:
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.
All horizontal dimensions are at right angles to beam ends.
See sheet S12 of S14 for bearing pad details.

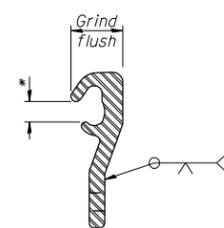
*Omit weld at seal opening.



SECTION THRU STRIP SEAL JOINT FOR OVERLAY OVER DECK BEAMS

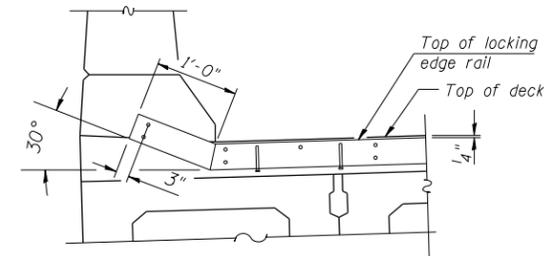


LOCKING EDGE RAIL

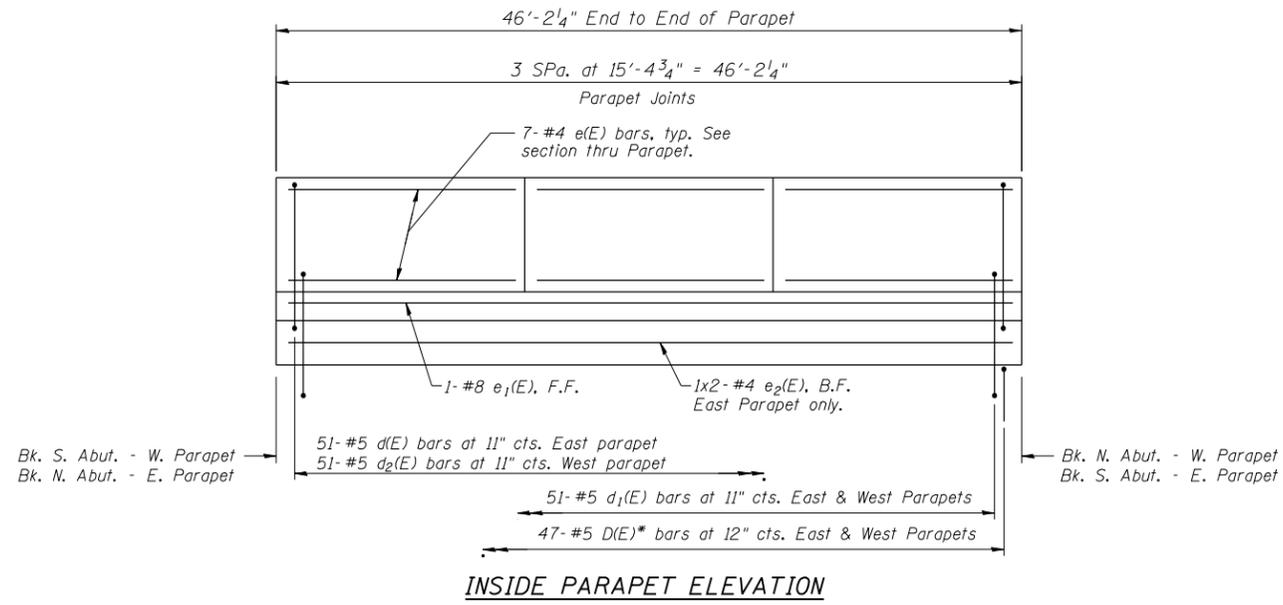


LOCKING EDGE RAIL SPLICE

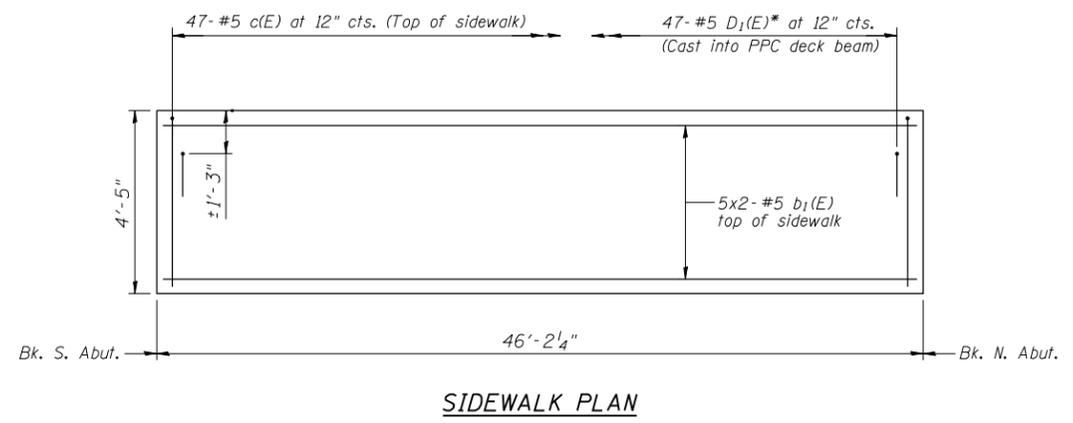
Notes:
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.
The inside of the Locking Edge Rail groove shall be free of weld residue.
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
The manufacturer's recommended installation methods shall be followed.



STRIP SEAL DETAILS AT PARAPET



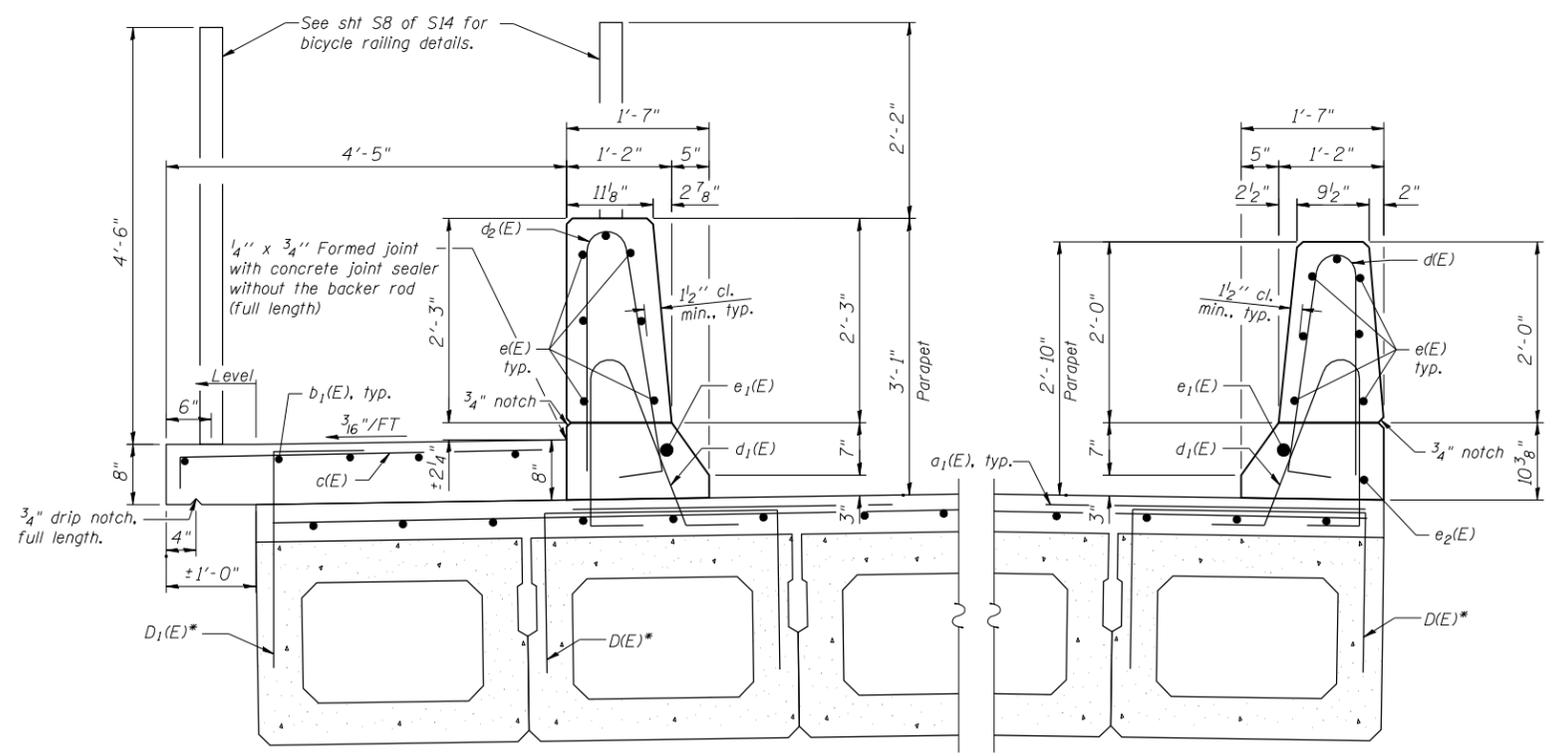
INSIDE PARAPET ELEVATION



SIDEWALK PLAN

MIN. BAR LAP

Min bar lap: #4 = 2'-1"
 Min bar lap: #5 = 2'-7"



WEST PARAPET

EAST PARAPET

NOTE:
 The West parapet front face has the same slope as the East parapet front face.

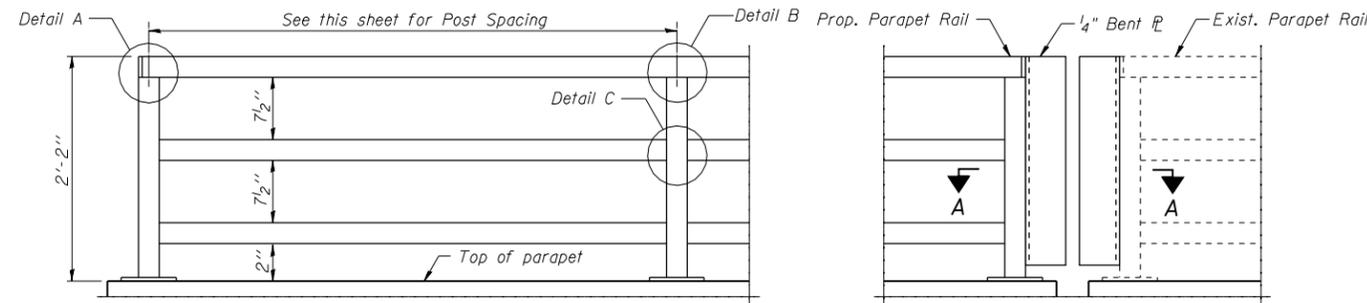
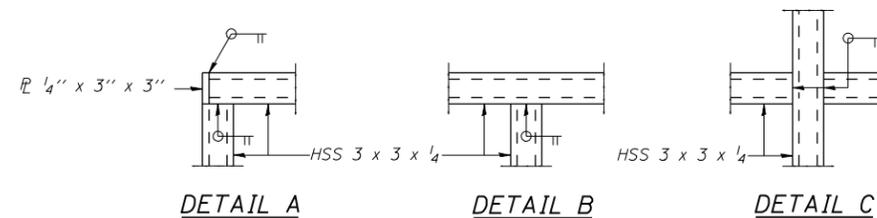
*See sht. S11 of S14 for D(E) and D₁(E) bar details cast into PPC Deck Beams.

NOTES

See Concrete wearing Surface Plan on sht. S5 of S14 for deck reinforcement and Bill of Material.
 Bars indicated thus 1x2-#5, etc, indicates 1 line of bars with 2 lengths per line.
 See sht. S10 of S14 for parapet joint details.

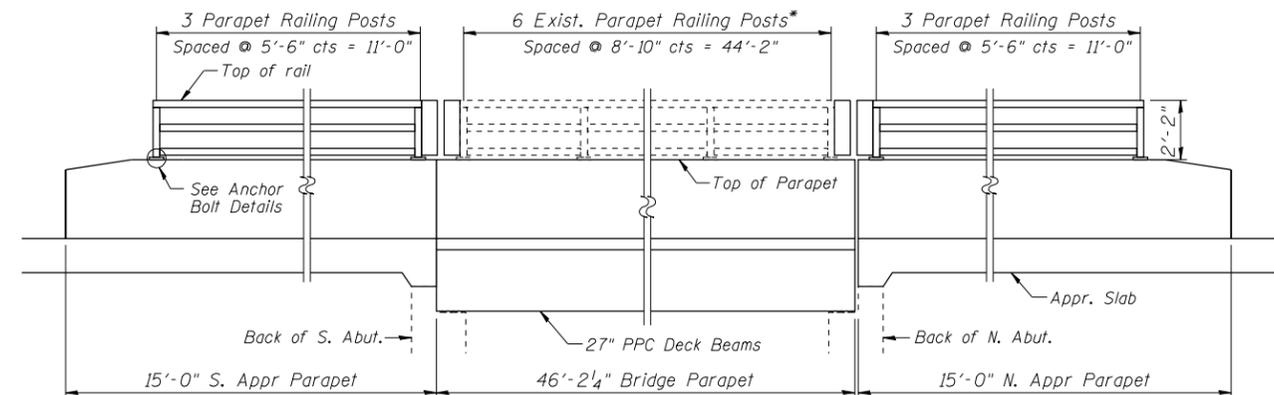
NOTES

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
 See sheet S7 of S14 for section thru sidewalk.
 All new hardware and $\frac{1}{8}$ " fabric reinforced elastomeric pad shall be included for each post that is being removed and re-erected. See Base P and Anchor Bolt for details. Cost shall be included in Removing and Re-Erecting Existing Railing.



PARAPET RAILING ELEVATION
(Inside Face of Three Element Rail)

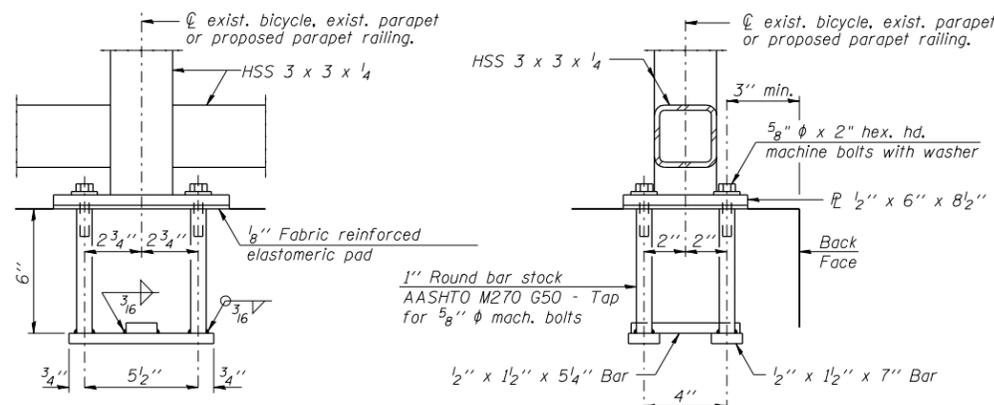
PARAPET RAILING ELEVATION AT EXPANSION JOINT



PARAPET RAILING ELEVATION

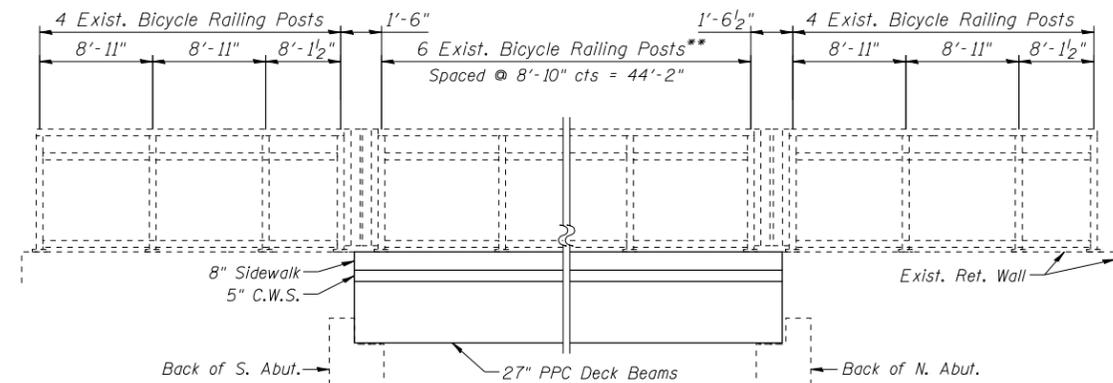
(Looking West)

*Exist. Parapet Railing to be removed, and re-erected. Cost shall be included in Removing and Re-Erecting Existing Railing.



ANCHOR BOLT DETAILS

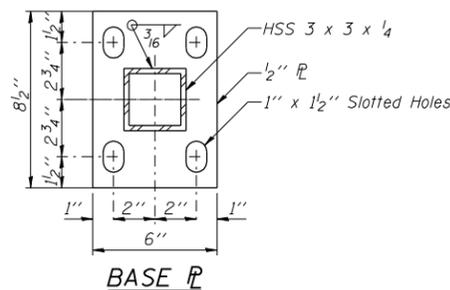
In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting $\frac{5}{8}$ " ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



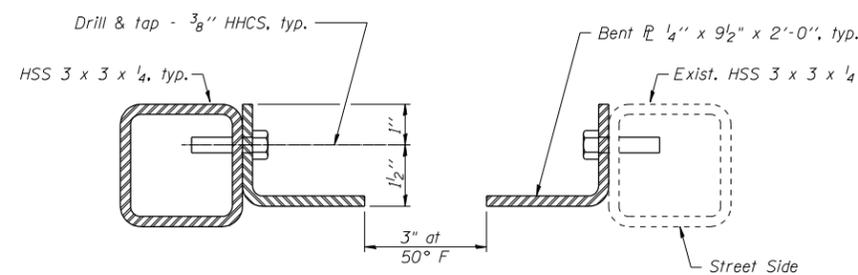
BICYCLE RAILING ELEVATION

(Looking West)

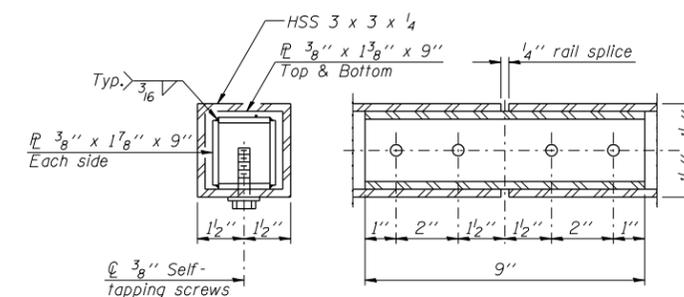
**Exist. Bicycle Railing to be removed, and re-erected. Cost shall be included in Removing and Re-Erecting Existing Railing. The exist. railing on the exist. ret. wall shall stay in place during construction.



BASE P



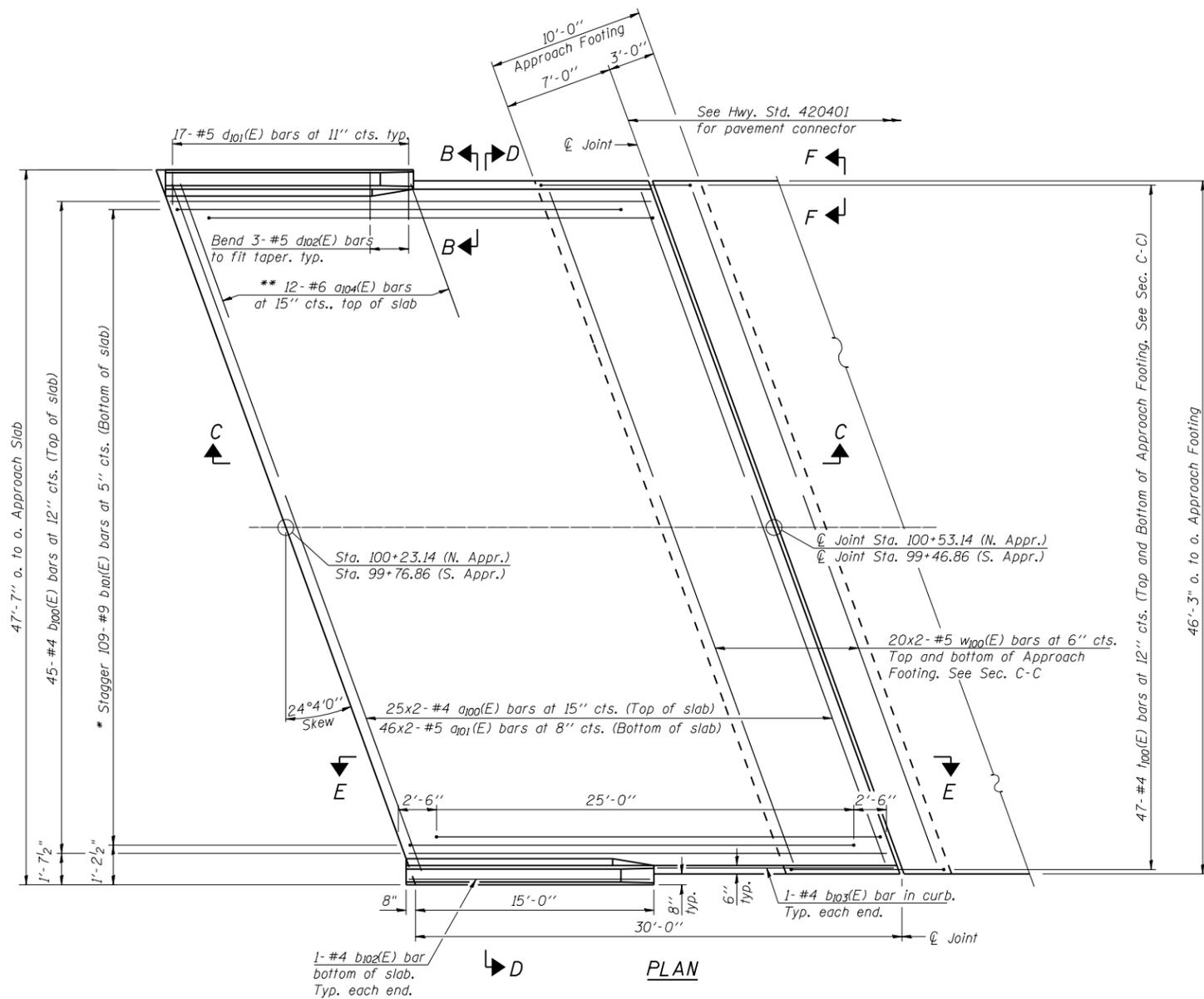
SECTION A-A



RAIL SPLICE

BILL OF MATERIAL

Item	Unit	Quantity
Parapet Railing	Foot	22
Remove and Re-Erect Existing Bridge Rail	Foot	89

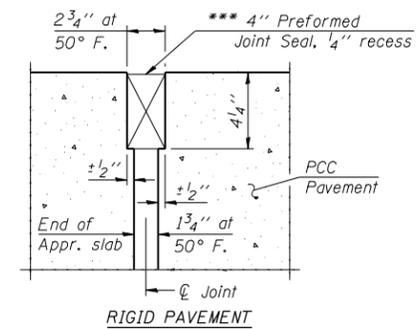


* Tilt #9 b101(E) bars as required to maintain clearance.
 ** Space between a100(E) bars, typ. each parapet.
 North Approach Slab Shown.
 South Approach Slab is similar and opposite hand.

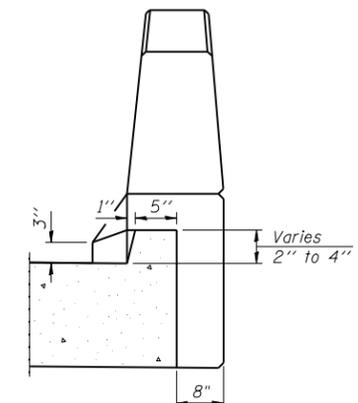
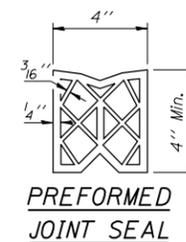
*** Concrete cap is 4'-0" wide and 2'-0" thick under the south approach slab on the east side (Northbound traffic lane). There is also two rows of piles at this location since the piles are spaced further apart to be clear from the exist. box culvert that runs underneath. Caution shall be taken during this work to not damage the existing box culvert. Any damage caused during construction shall be repaired by the Contractor, at no additional cost to the District, to the satisfaction of the Engineer.

Notes:
 See sheet S10 of S14 for Sections C-C & D-D, and View E-E.
 All a(E) and w(E) bar spacings measured parallel to \perp Rdwy.
 Removal of existing concrete cap, timber piles and any excavation needed to complete the work to remove the concrete pile cap shall not be paid for separately but shall be included in the cost of Approach Slab Removal.

*** Cost included with Concrete Superstructure.



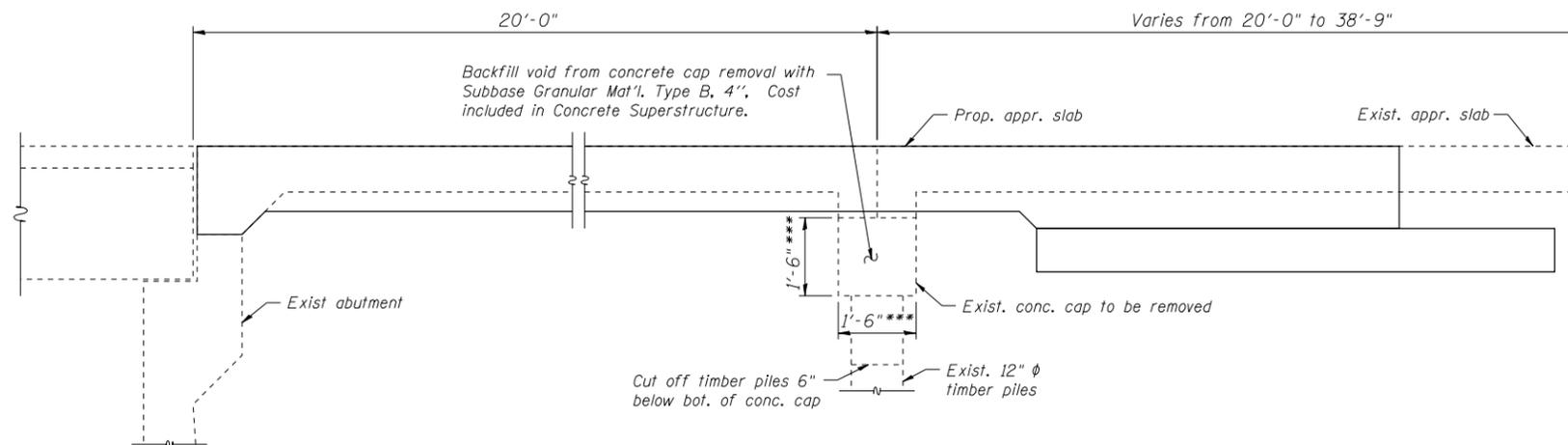
DETAIL A



VIEW B-B

MIN. BAR LAP

#4 bars = 2'-1"
 #5 bars = 2'-7"



SECTION F-F

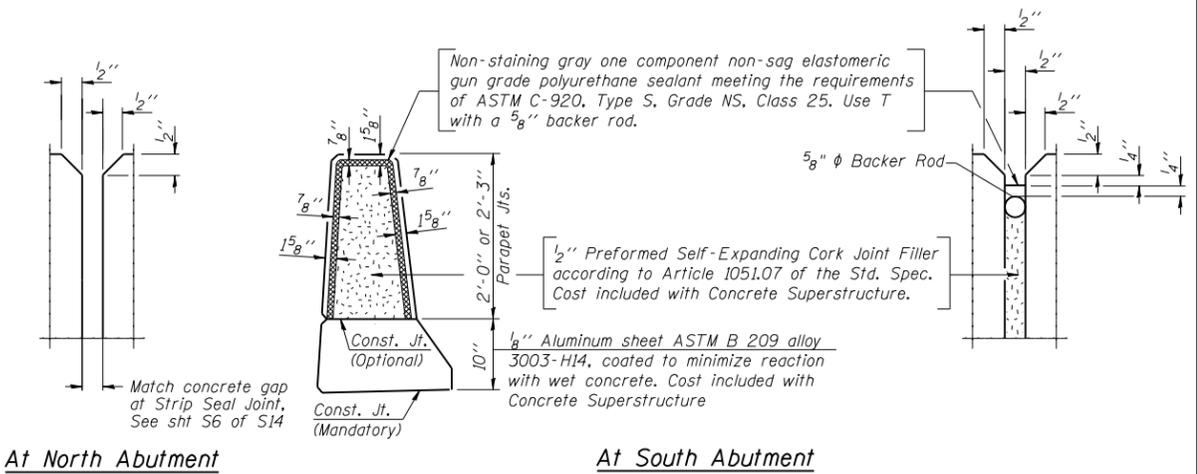
(North Approach Slab Shown.
 South Approach Slab similar and opposite hand.)

DESIGNED	- SLV	REVISED	-
CHECKED	- MJM	REVISED	-
DRAWN	- SLV	REVISED	-
CHECKED	- MJM	REVISED	-

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3597	0710 B	COOK	30	18
D-91-292-09			CONTRACT NO. 60F95	
ILLINOIS FED. AID PROJECT				

Notes:
 See sheet S9 of S14 for Detail A, View B-B and Section F-F.
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
 Approach footing concrete shall be paid for as Concrete Structures.
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 For v(E) bar details, see sheet S13 & S14 of S14.
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
 Cost of excavation for approach footing included with Concrete Structures.

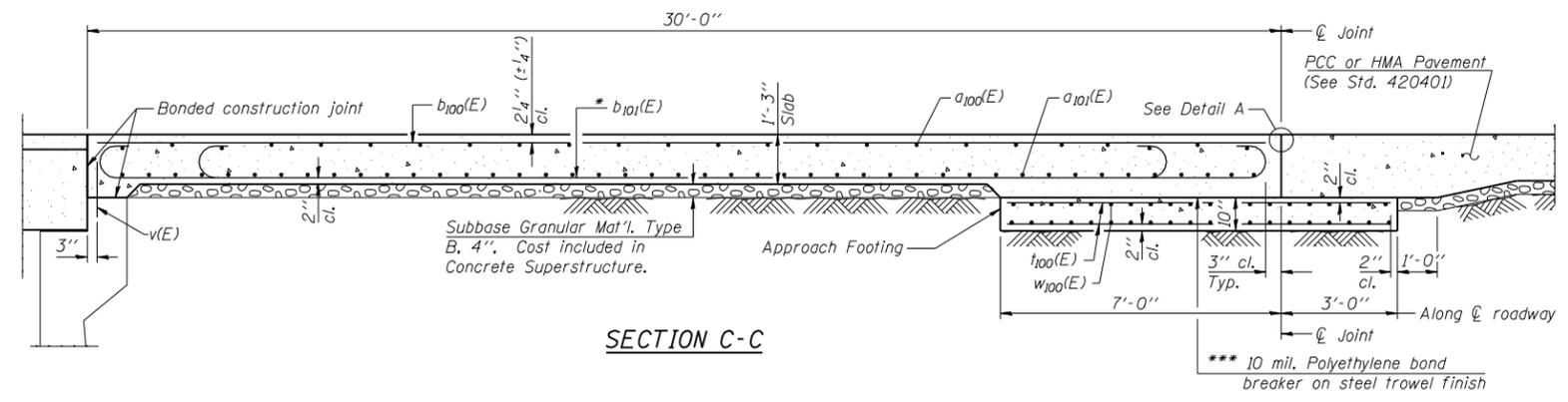
- * Tilt #9 b₁₀₁(E) bars as required to maintain clearance.
- ** Parapet varies in height on west side only.
- *** Cost included with Concrete Superstructure.



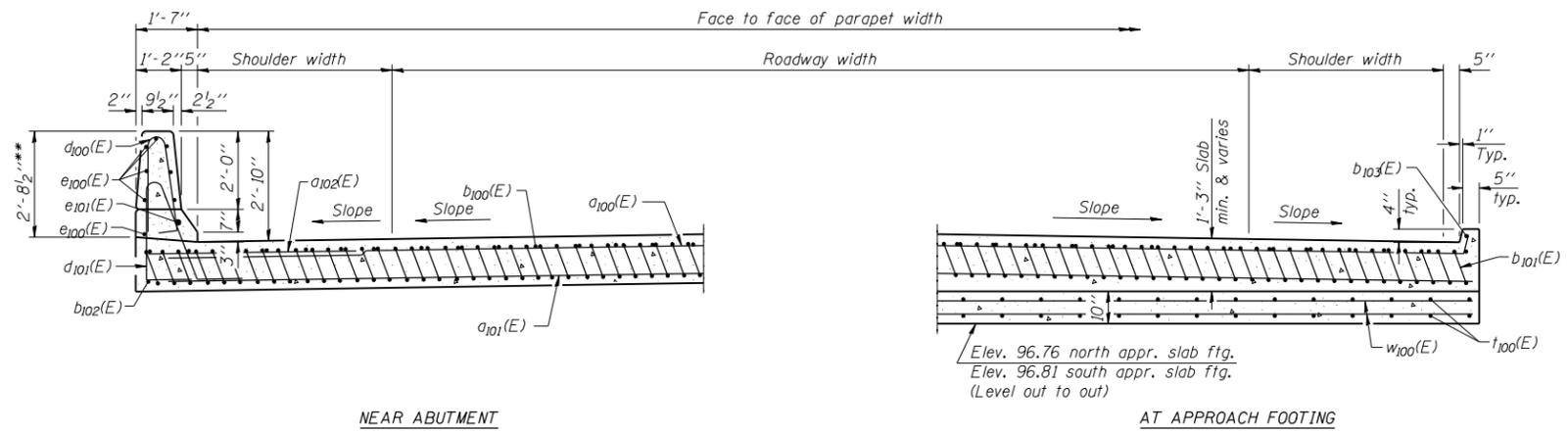
PARAPET JOINT DETAILS

**TWO APPROACHES
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	
a ₁₀₀ (E)	100	#4	26'-8"	—	
a ₁₀₁ (E)	184	#5	26'-6"	—	
a ₁₀₂ (E)	48	#6	6'-6"	—	
b ₁₀₀ (E)	90	#4	29'-8"	—	
b ₁₀₁ (E)	218	#9	29'-9"	—	
b ₁₀₂ (E)	4	#4	14'-8"	—	
b ₁₀₃ (E)	4	#4	14'-6"	—	
d ₁₀₀ (E)	68	#5	5'-7"	—	
d ₁₀₁ (E)	68	#5	7'-11"	—	
e ₁₀₀ (E)	32	#4	14'-8"	—	
e ₁₀₁ (E)	4	#8	14'-8"	—	
t ₁₀₀ (E)	188	#4	9'-6"	—	
w ₁₀₀ (E)	160	#5	26'-6"	—	
Concrete Superstructure				Cu. Yd.	138.0
Concrete Structures				Cu. Yd.	28.5
Reinforcement Bars, Epoxy Coated				Pound	38290



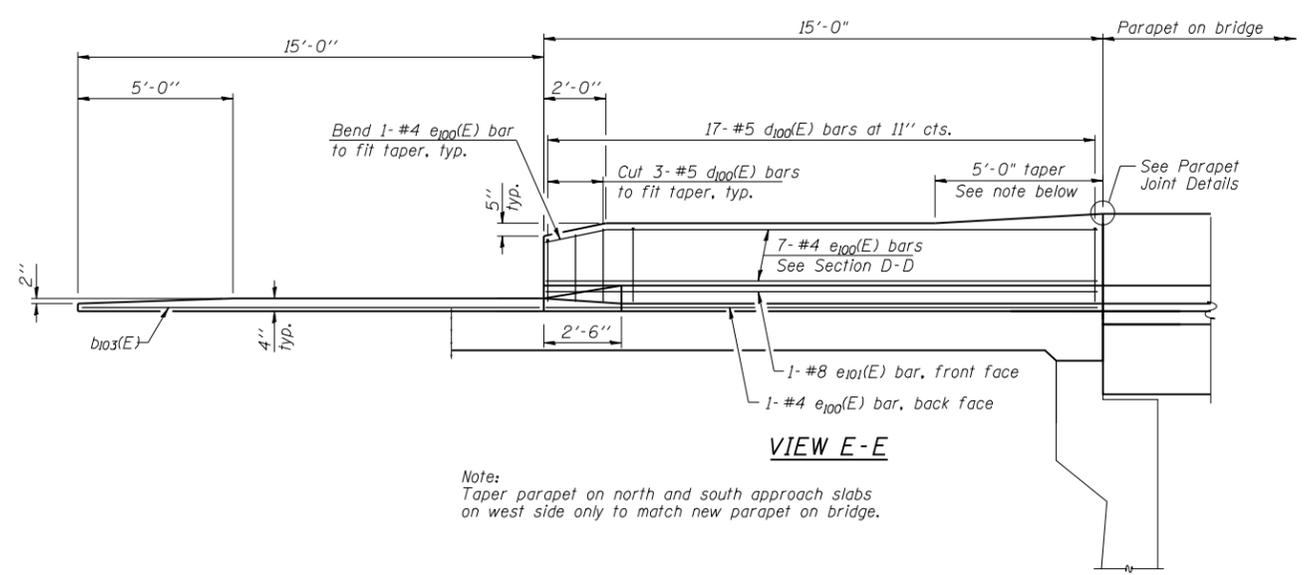
SECTION C-C



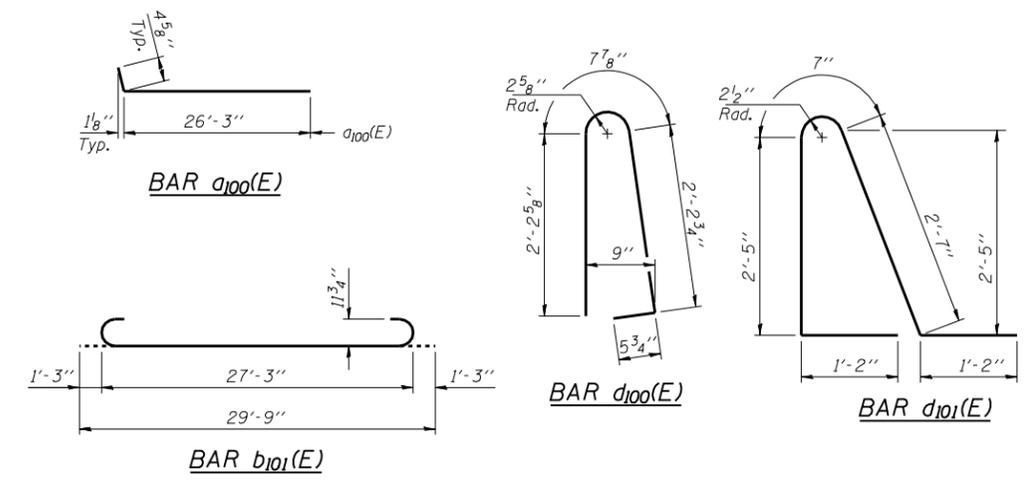
NEAR ABUTMENT

SECTION D-D

(See Plan for dimensions not shown)



Note:
Taper parapet on north and south approach slabs on west side only to match new parapet on bridge.



LOCO, INC.
 CONSULTING ENGINEERS
 1560 WALL ST, SUITE 222
 NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

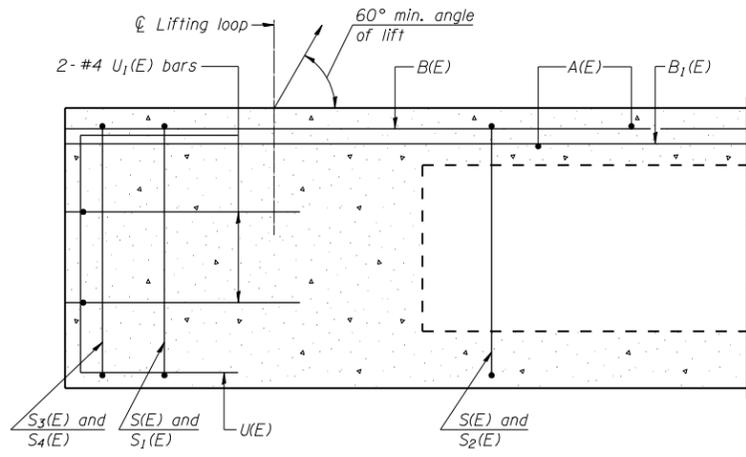
DESIGNED - SLV	REVISED -
CHECKED - MJM	REVISED -
DRAWN - SLV	REVISED -
CHECKED - MJM	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

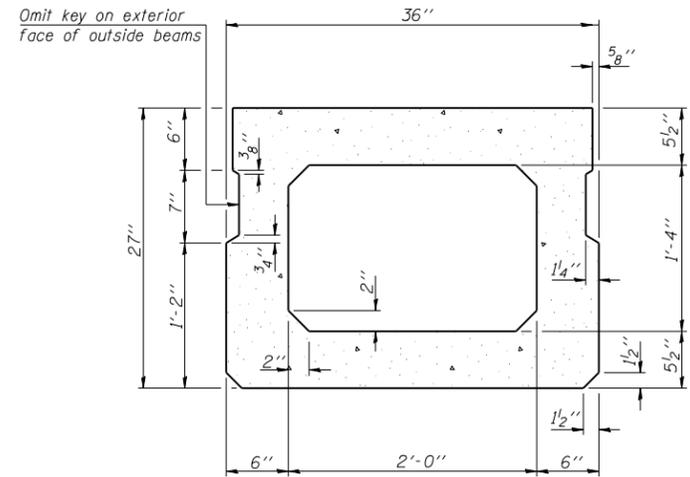
**BRIDGE APPROACH SLAB DETAILS (2 of 2)
STRUCTURE NO. 016-0771**

SHEET NO. S10 OF S14 SHEETS

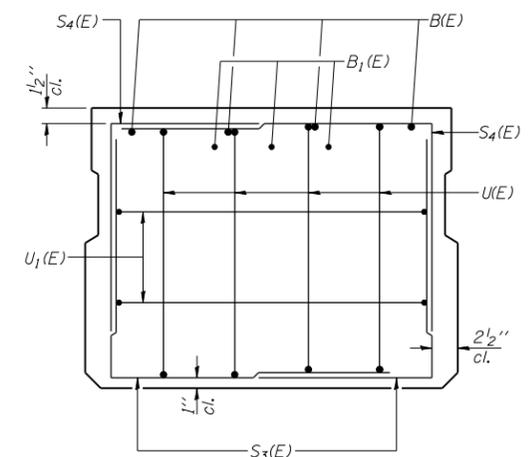
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3597	0710 B	COOK	30	19
D-91-292-09		CONTRACT NO. 60F95		
ILLINOIS FED. AID PROJECT				



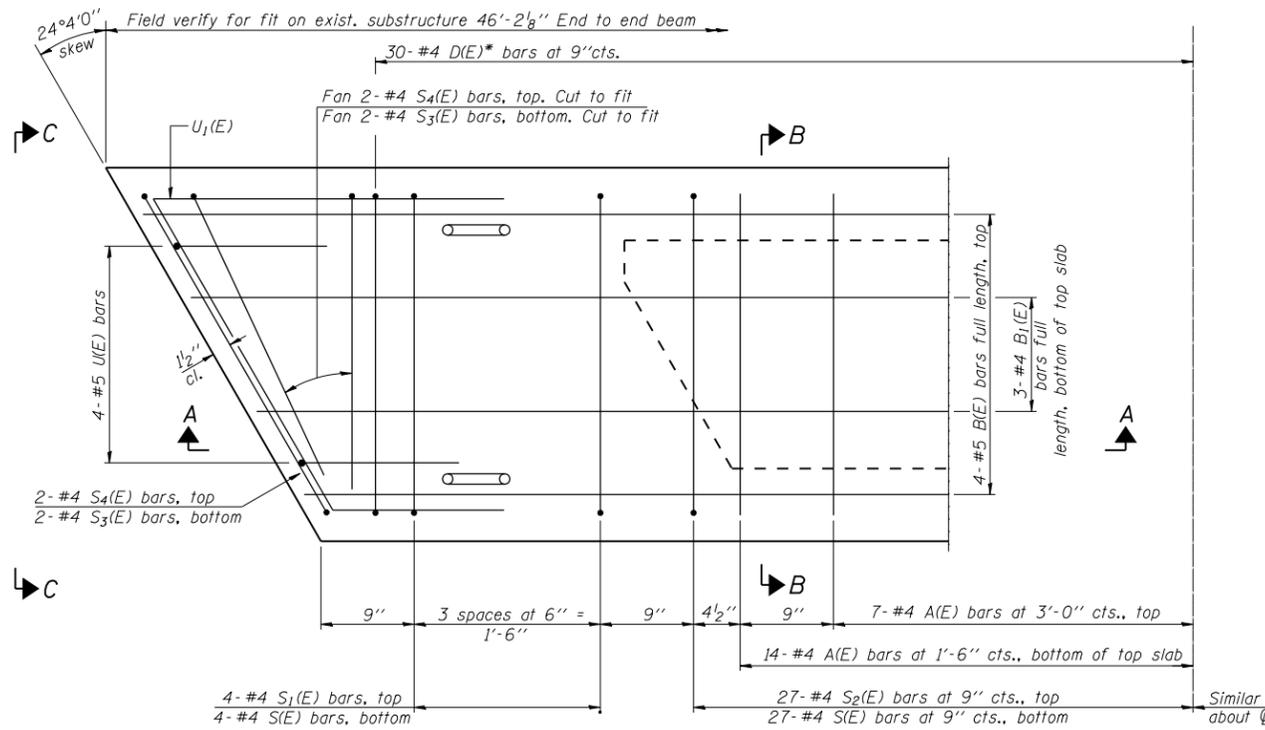
SECTION A-A



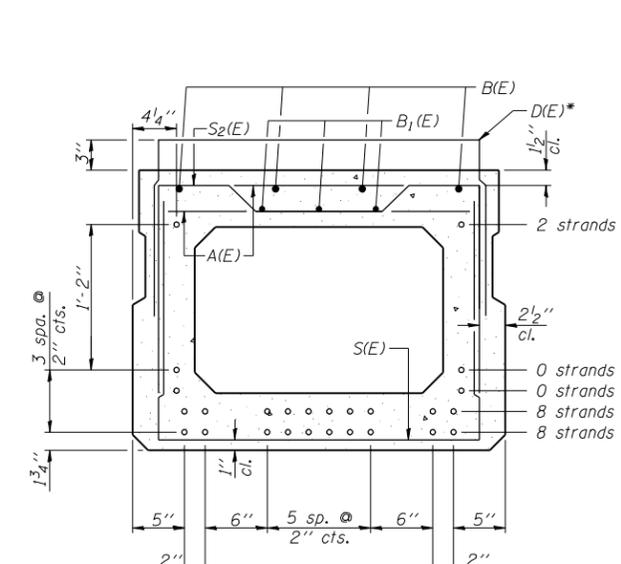
SECTION B-B
(Showing dimensions)



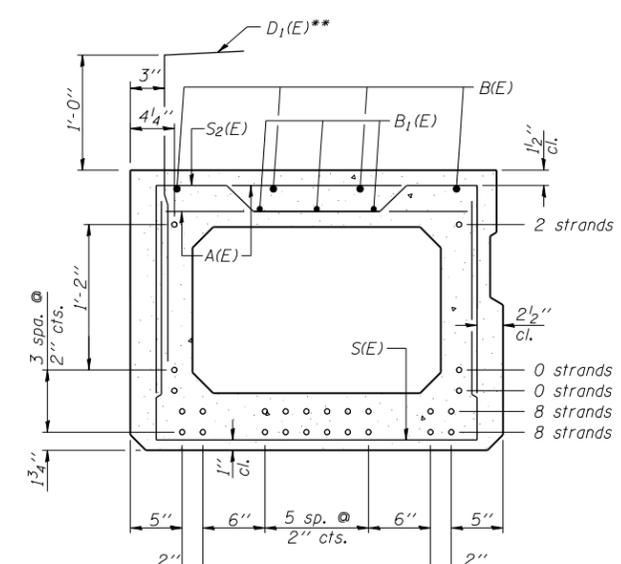
VIEW C-C



PLAN VIEW



SECTION A-A
(Showing reinforcement and permissible strand locations)



SECTION A-A
(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

* Bar D(E) for beams 2 and 17 only. See sht. S7 of S14 for Section Thru East & West Parapets.
** Bar D1(E) for west exterior beam only. See sht. S7 of S14 for Section Thru East Parapet.

MINIMUM BAR LAP

#4 bar = 2'-0"
#5 bar = 2'-6"

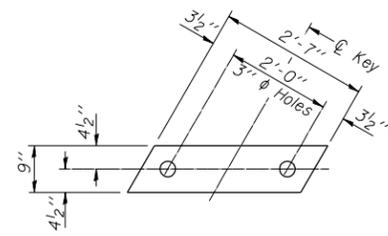
Note: Spacing of D(E), D1(E), S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

BAR LIST
ONE BEAM ONLY

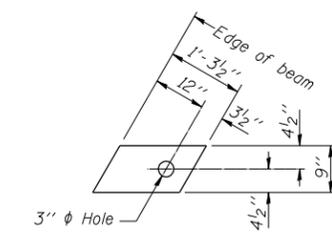
(For information only)

Bar	No.	Size	Length	Shape
A(E)	42	#4	2'-7"	—
B(E)	4	#5	45'-9"	—
B1(E)	3	#4	45'-9"	—
*D(E)	30	#4	5'-10"	┌
**D1(E)	47	#4	3'-6"	┌
S(E)	62	#4	6'-5"	┌
S1(E)	8	#4	5'-11"	┌
S2(E)	54	#4	6'-2"	┌
S3(E)	8	#4	4'-4"	┌
S4(E)	8	#4	4'-1"	┌
U(E)	8	#5	4'-6"	┌
U1(E)	4	#4	6'-4"	┌

Note: See sheet S12 of S14 for additional details and Bill of Material.



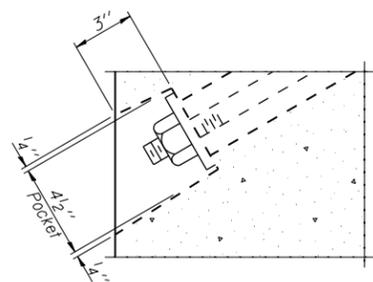
FABRIC BEARING PAD
(Interior)



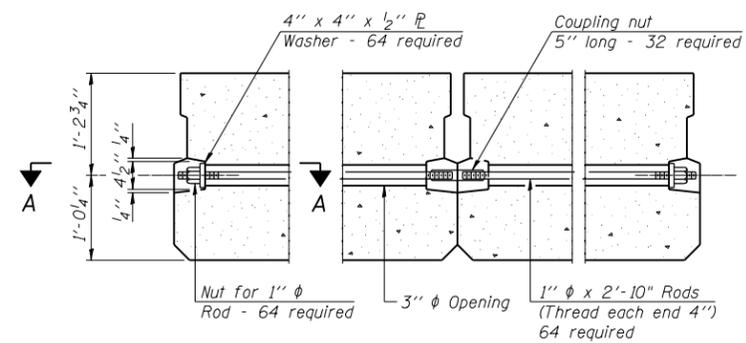
FABRIC BEARING PAD
(Exterior)

FIXED

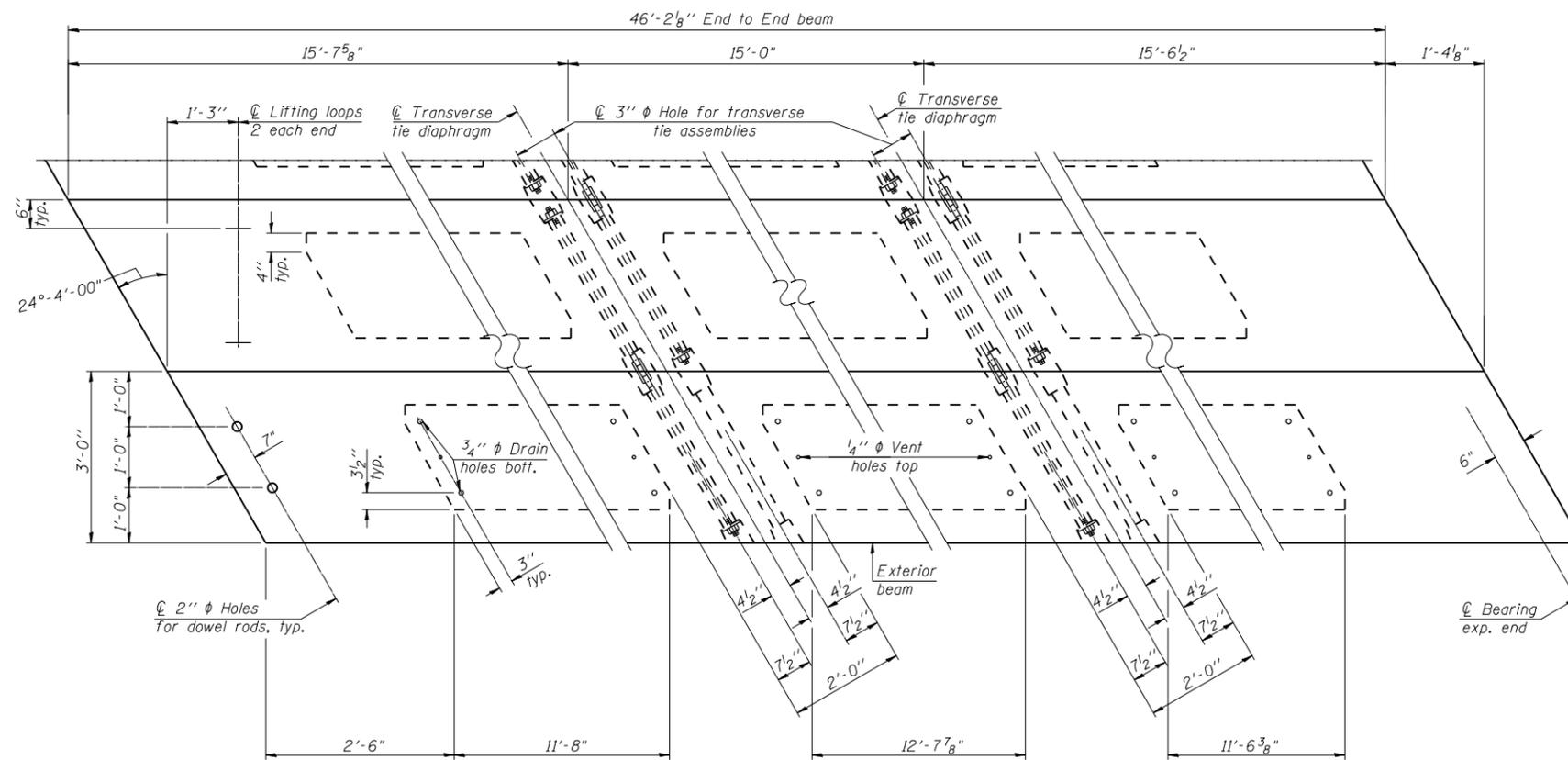
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



SECTION A-A



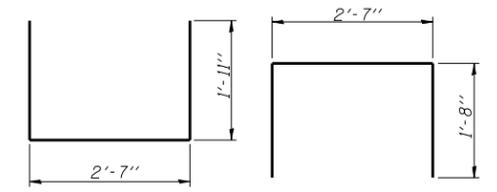
TYPICAL TRANSVERSE TIE ASSEMBLY



Note: Connect beams in pairs with the transverse tie configuration shown.

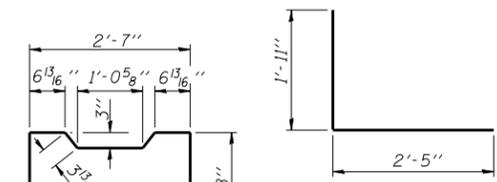
NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" phi rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
A minimum 2 1/2" phi lifting pin shall be used to engage the lifting loops during handling.
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.



BAR S₁(E)

BAR S₂(E)

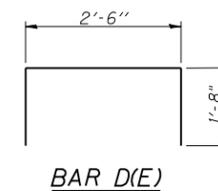


BAR S₃(E)

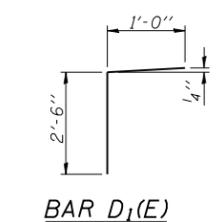
BAR S₄(E)



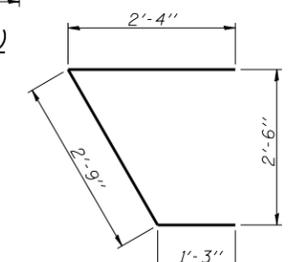
BAR U₁(E)



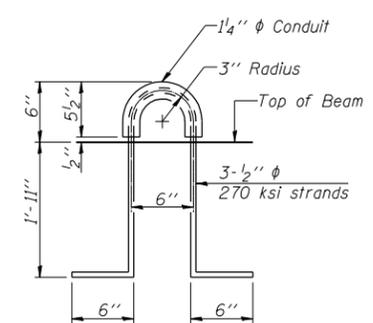
BAR D₁(E)



BAR D₂(E)



BAR U₁(E)



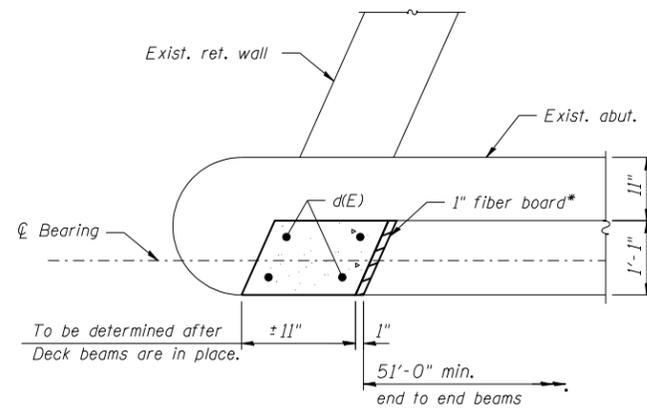
LIFTING LOOP DETAIL

BILL OF MATERIAL

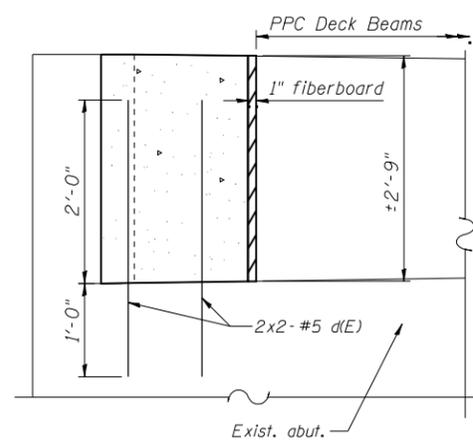
Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	2355
-------------------------------------------------	---------	------

DESIGNED - SLV	REVISED -
CHECKED - MJM	REVISED -
DRAWN - SLV	REVISED -
CHECKED - MJM	REVISED -

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3597	0710 B	COOK	30	21
D-91-292-09		CONTRACT NO. 60F95		
ILLINOIS FED. AID PROJECT				



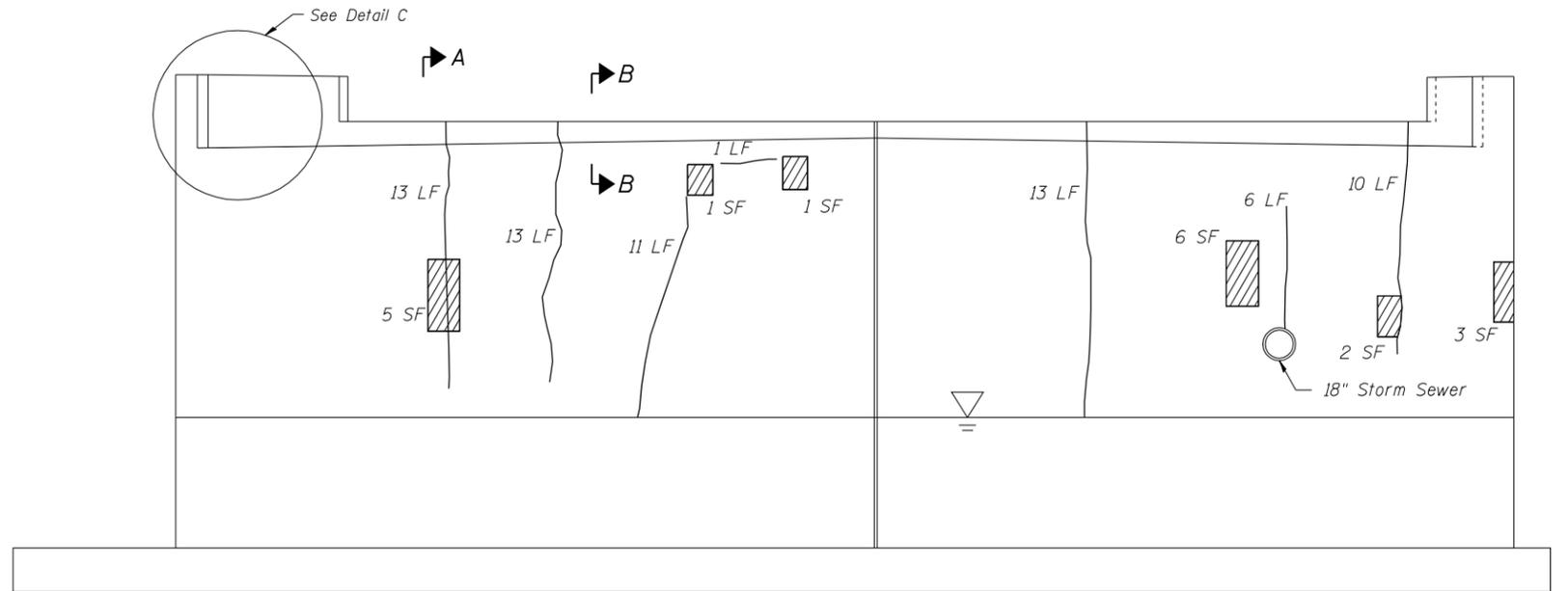
Plan
(West side shown,
east side similar)



Elevation

DETAIL C

*Fiberboard to be included in the cost of Concrete Superstructure

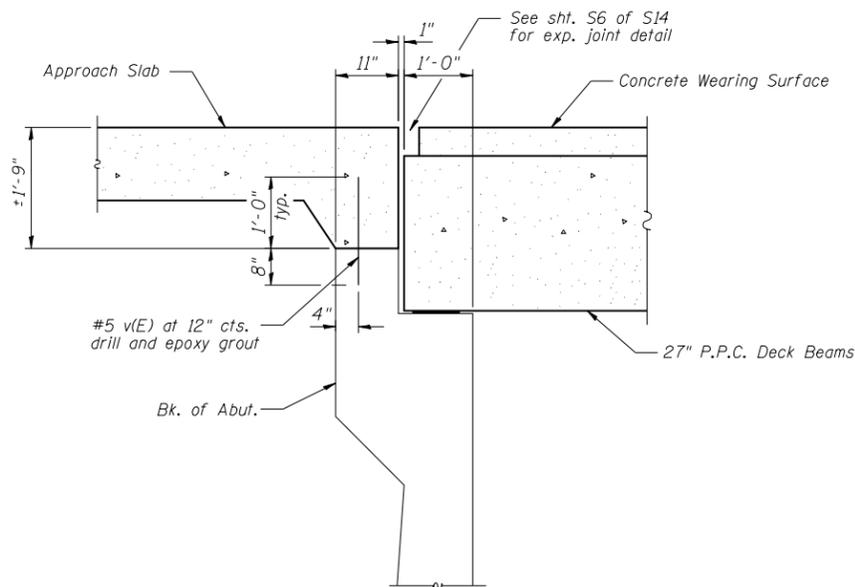


ELEVATION - REMOVAL AND REPAIR
(Looking North)

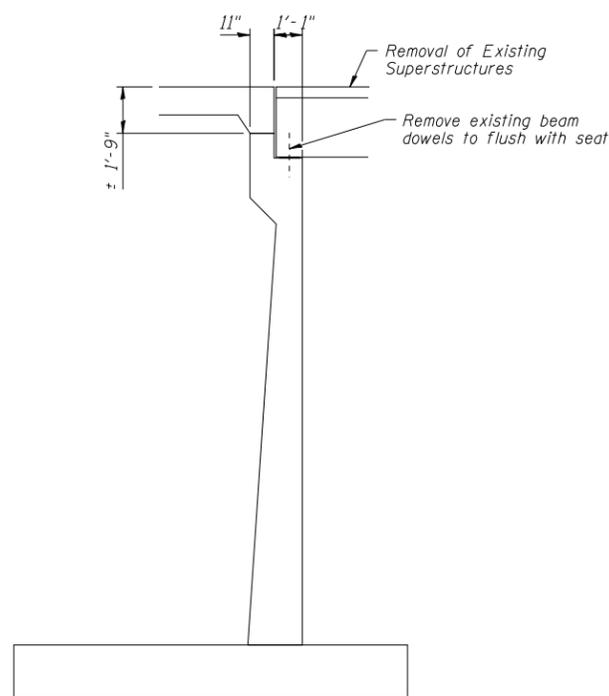
— Epoxy Crack Injection
▨ Formed Concrete Repair Depth < 5"

NOTES

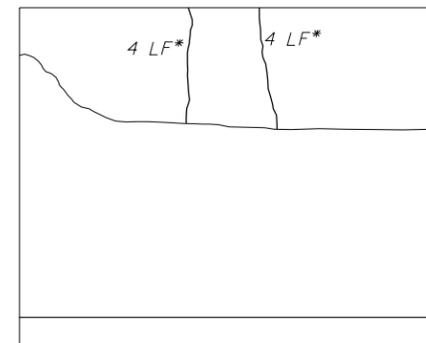
Existing reinforcement bars which have lost 25% or more of their original diameter shall be supplemented by new epoxy coated bars of the same diameter. New bars shall be drilled and epoxy grouted in place adjacent to the original bars, as directed by the Engineer.
Drilling and epoxy grouting of reinforcement bars shall be in accordance with Article 584 of the Standard Specifications.



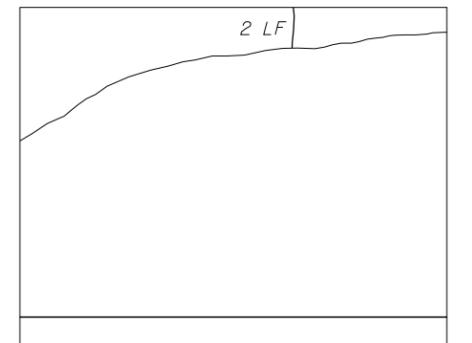
SECTION B-B



SECTION A-A



NORTHWEST WINGWALL



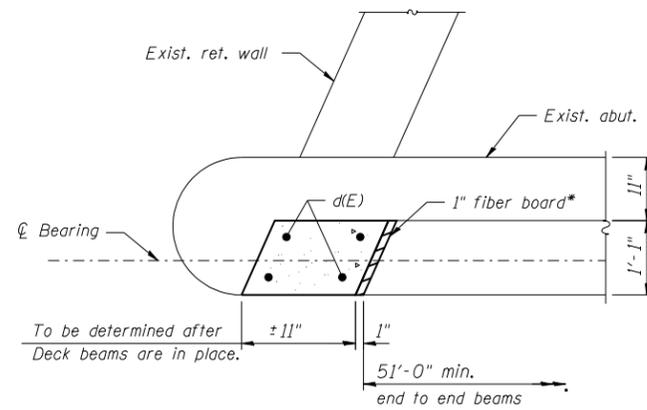
NORTHEAST WINGWALL

WINGWALL DETAILS

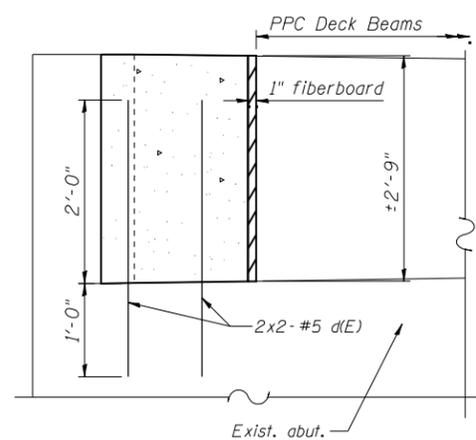
*Length includes 1' along top of wingwall to be epoxy injected

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	8	#5	3'-0"	—
v(E)	48	#5	1'-8"	—
Concrete Superstructure			Cu. Yd.	0.25
Epoxy Crack Injection			Foot	77
Structural Repair of Concrete (Depth less than equal to 5")			Sq. Ft.	18
Reinforcement Bars, Epoxy Coated			Pound	110



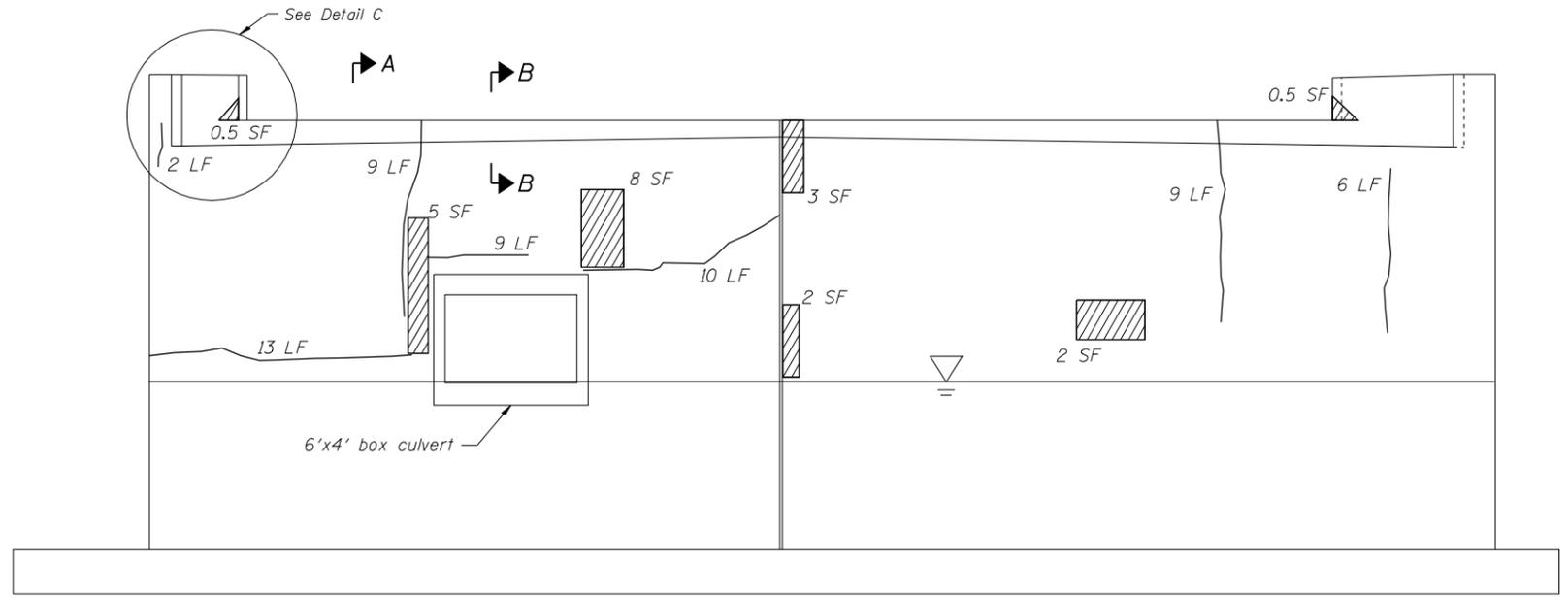
Plan
(East side shown,
west side similar)



Elevation

DETAIL C

*Fiberboard to be included in the cost of Concrete Superstructure

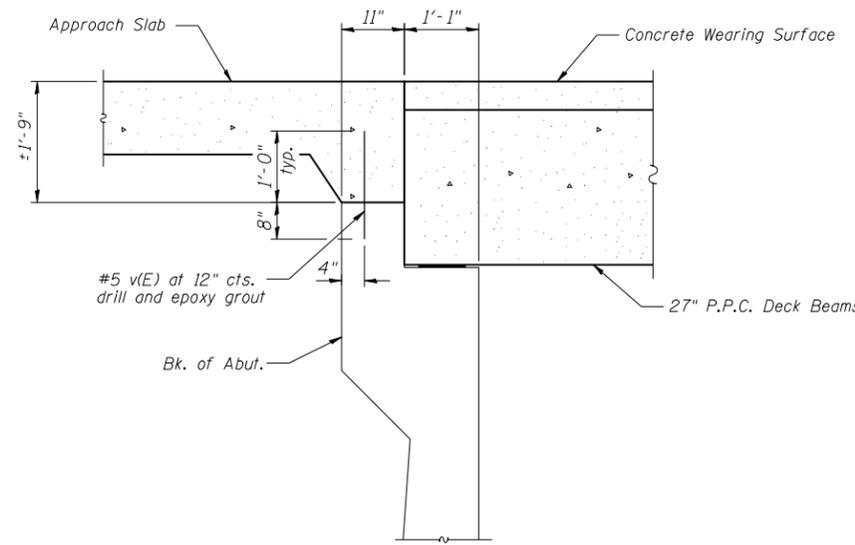


ELEVATION - REMOVAL AND REPAIR
(Looking South)

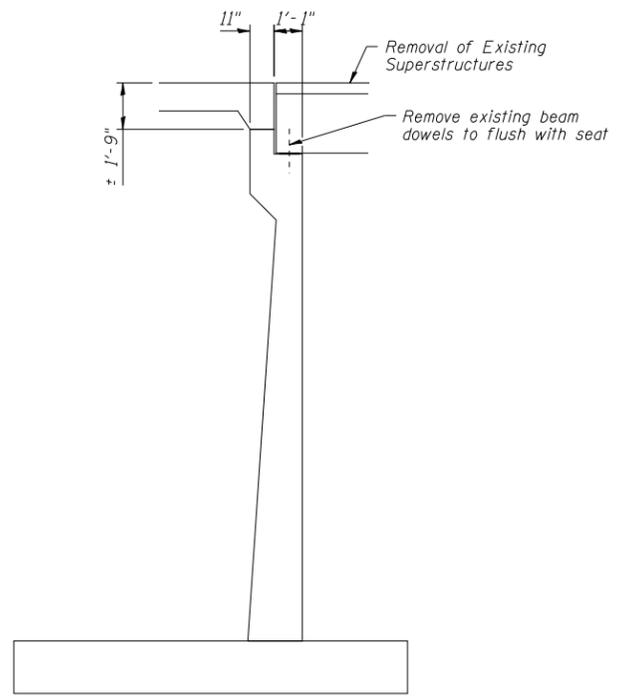
— Epoxy Crack Injection
 Formed Concrete Repair Depth < 5"

NOTES

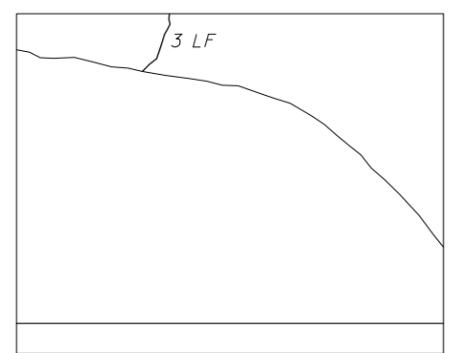
Existing reinforcement bars which have lost 25% or more of their original diameter shall be supplemented by new epoxy coated bars of the same diameter. New bars shall be drilled and epoxy grouted in place adjacent to the original bars, as directed by the Engineer.
 Drilling and epoxy grouting of reinforcement bars shall be in accordance with Article 584 of the Standard Specifications.



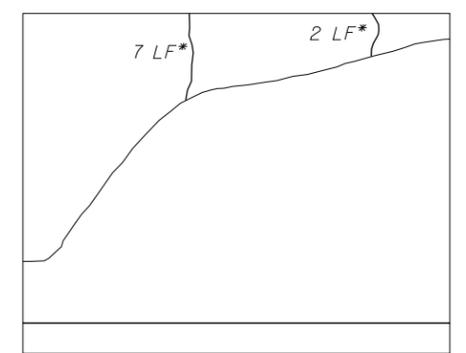
SECTION B-B



SECTION A-A



SOUTHEAST WINGWALL

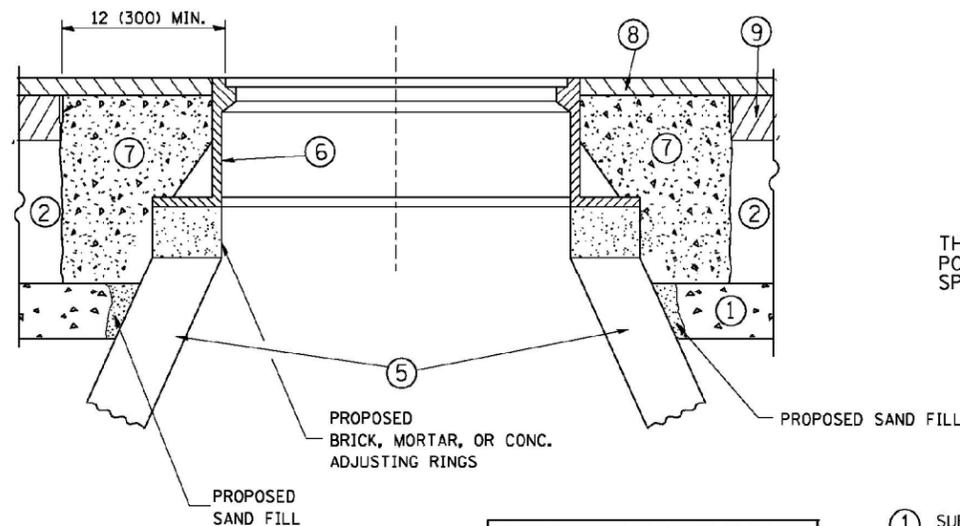
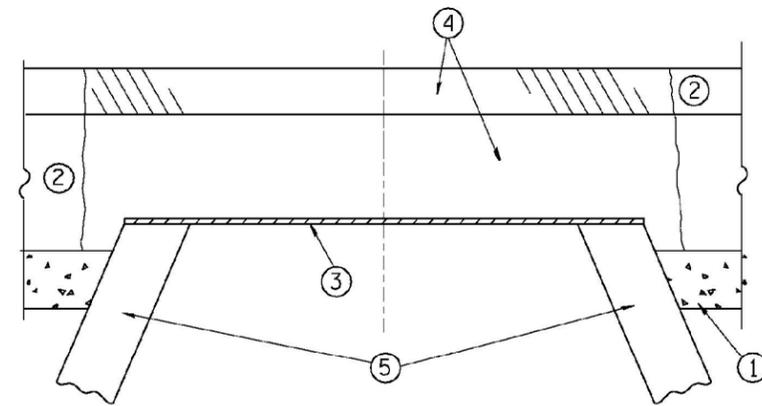


SOUTHWEST WINGWALL

WINGWALL DETAILS
 *Length includes 1' along top of wingwall to be epoxy injected

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	8	#5	3'-0"	—
v(E)	48	#5	1'-8"	—
Concrete Superstructure			Cu. Yd.	0.25
Epoxy Crack Injection			Foot	70
Structural Repair of Concrete (Depth less than equal to 5")			Sq. Ft.	21
Reinforcement Bars, Epoxy Coated			Pound	110



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS SI CONCRETE, OR HMA SURFACE COURSE OR HMA BINDER COURSE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

LEGEND

- ① SUB-BASE GRANULAR MATERIAL
- ② EXISTING PAVEMENT
- ③ 36 (900) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS SI CONCRETE, HMA SURFACE COURSE OR HMA BINDER COURSE
- ⑧ PROPOSED HMA SURFACE COURSE
- ⑨ PROPOSED HMA BINDER COURSE

REVISED	- R. SHAH 03-10-95
REVISED	- A. ABBAS 03-21-97
REVISED	- R. WIEDEMAN 05-14-04
REVISED	- R. BORO 01-01-07

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

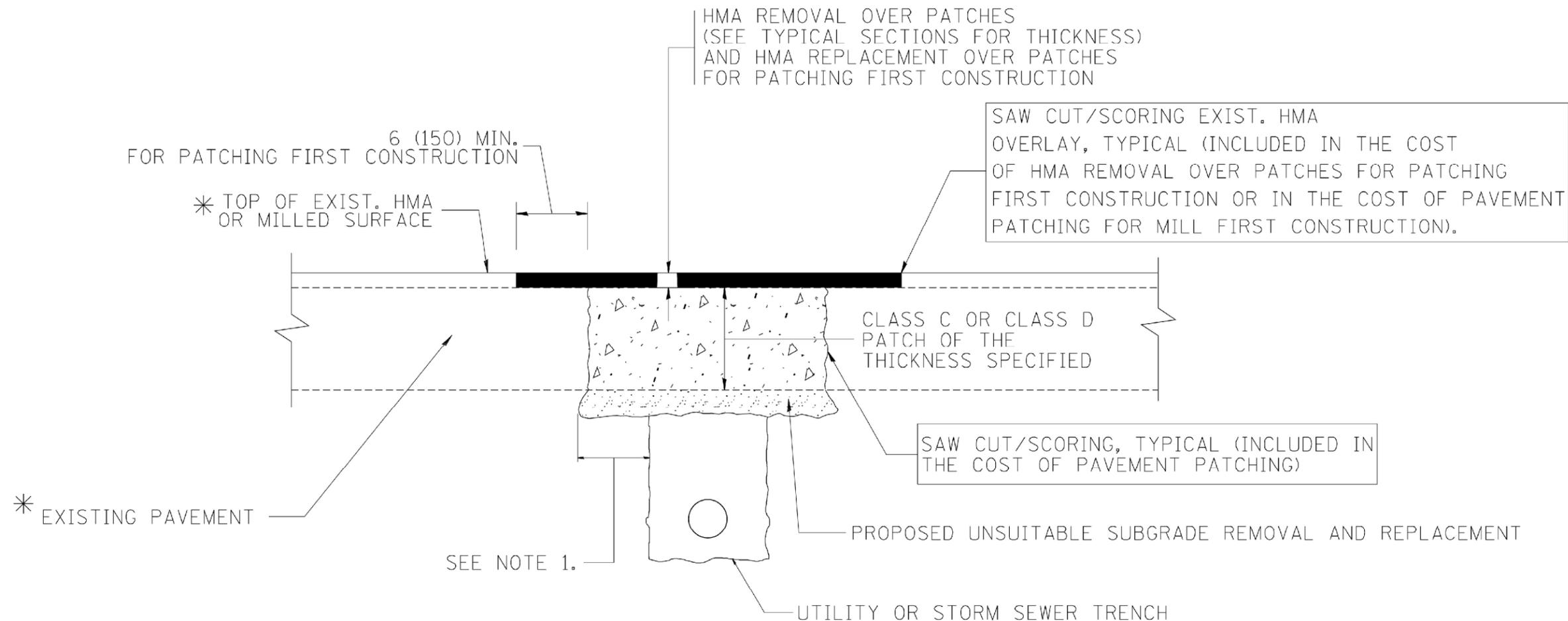
BASIS OF PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL"

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

FRAMES AND LIDS ADJUSTMENT WITH MILLING

DESIGNED	- SLV	REVISED	-
DRAWN	- SLV	REVISED	-
CHECKED	- MJY, ST	REVISED	-
DATE	- 03/29/2012	REVISED	-

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3597	0710 B	COOK	30	24
D-91-292-09		CONTRACT NO. 60F95		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

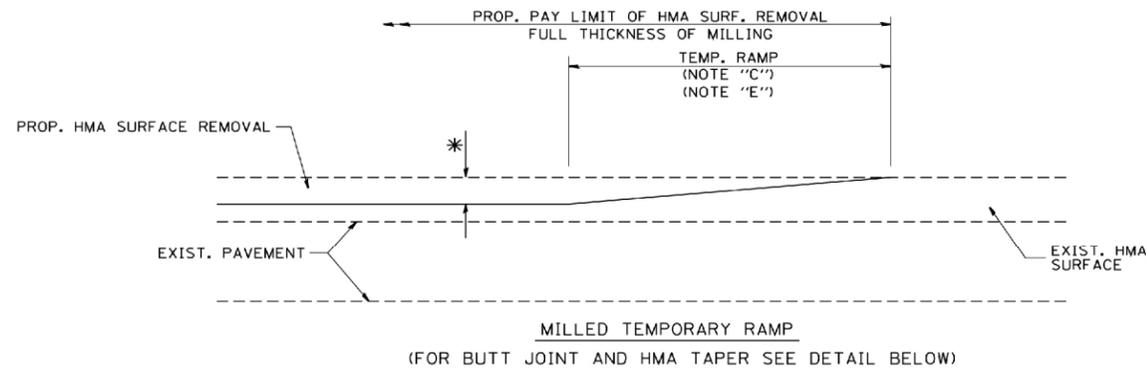
SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

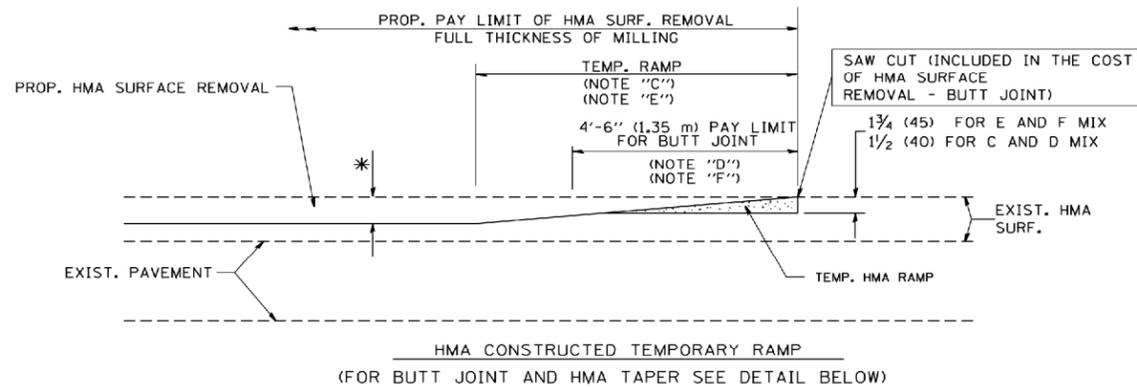
REVISED	-	A. ABBAS	04-27-98
REVISED	-	R. BORO	01-01-07
REVISED	-	R. BORO	09-04-07
REVISED	-	K. ENG	10-27-08

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

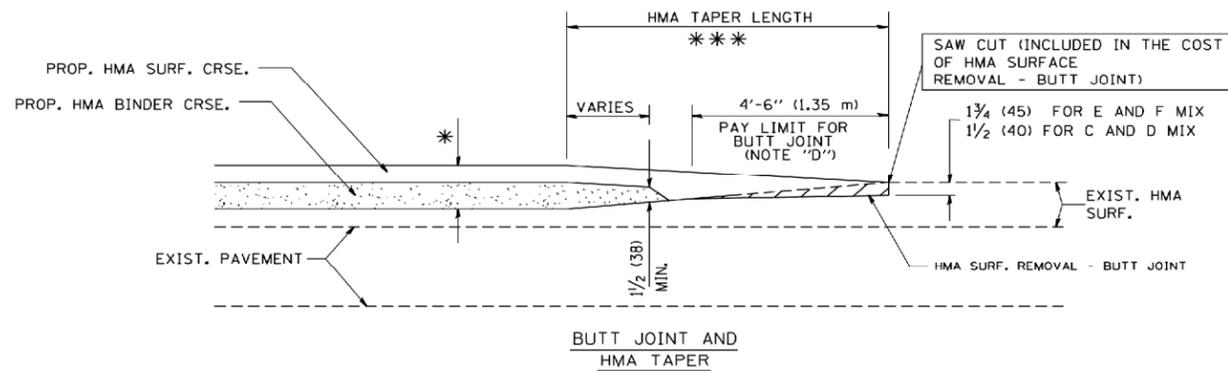
PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT



OPTION 1

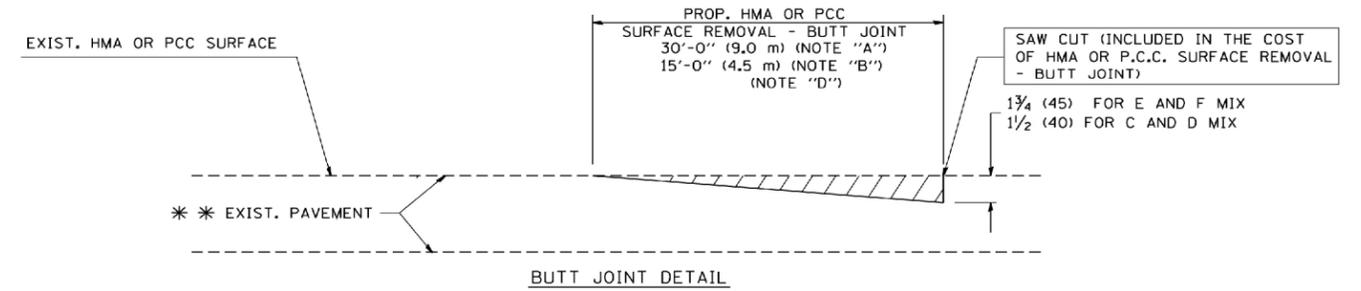


OPTION 2
TYPICAL TEMPORARY RAMP

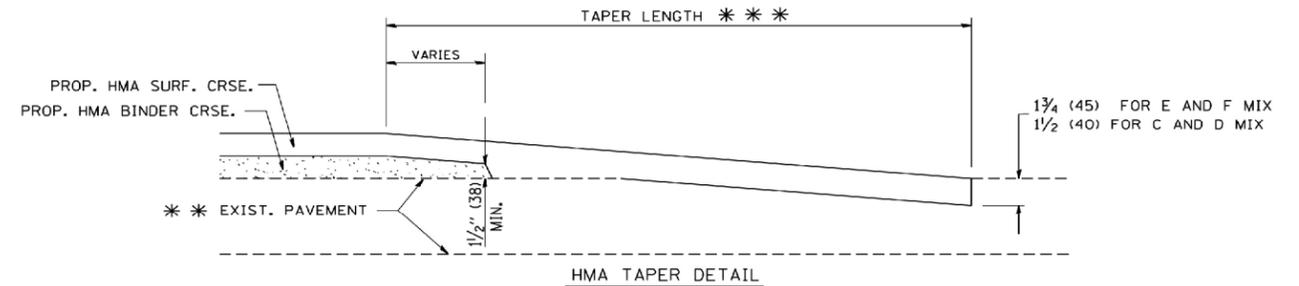


TYPICAL BUTT JOINT AND HMA TAPER
FOR MILLING AND RESURFACING

REVISED	-	R. SHAH	10-25-94
REVISED	-	A. ABBAS	03-21-97
REVISED	-	M. GOMEZ	04-06-01
REVISED	-	R. BORO	01-01-07



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER
FOR RESURFACING ONLY

*** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

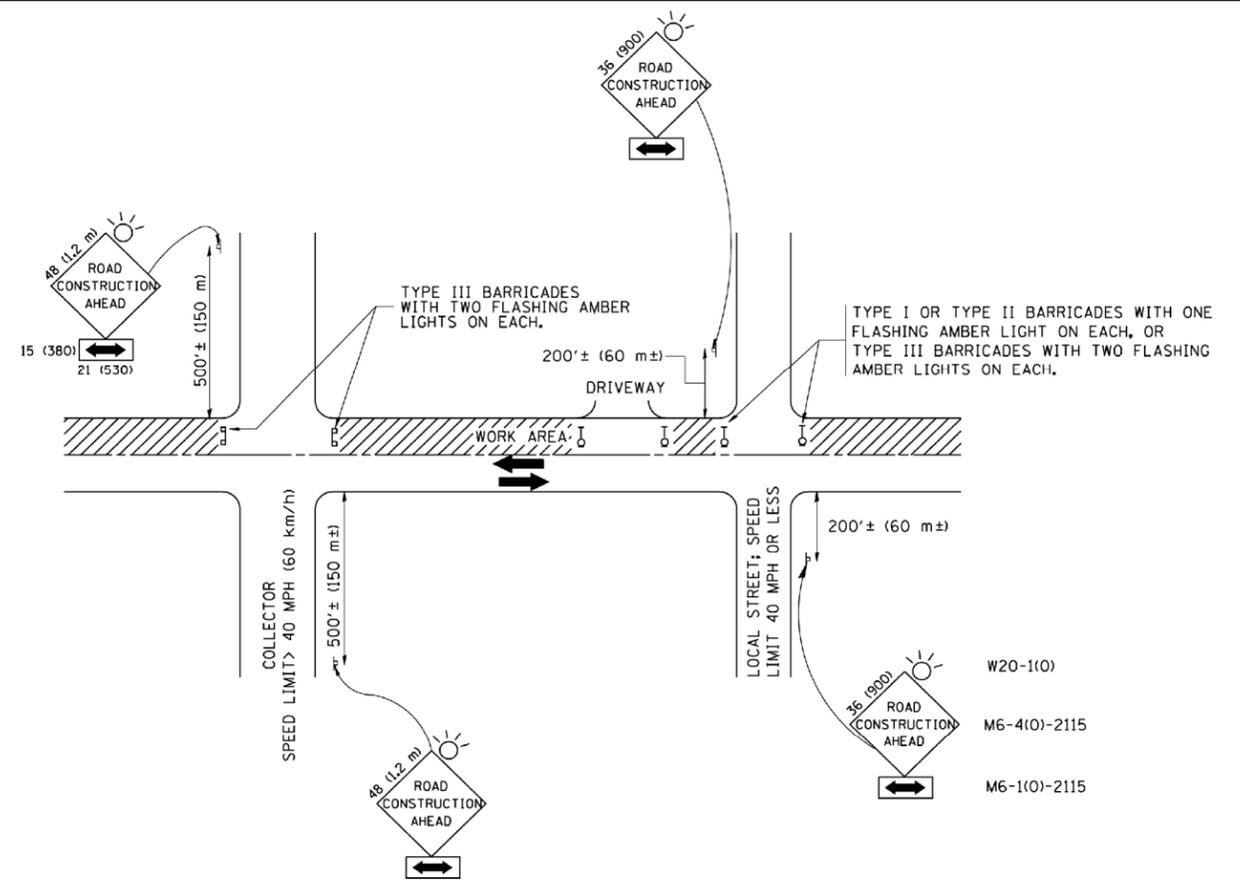
- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B: MINOR SIDE ROADS.
- C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
- E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
- F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
- G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

BUTT JOINT AND HMA TAPER DETAILS



NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.

b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.

b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.

3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

REVISED	- J. OBERLE	10-18-95
REVISED	- A. HOUSEH	03-06-96
REVISED	- A. HOUSEH	10-15-96
REVISED	- T. RAMMACHER	01-06-00

All dimensions are in millimeters (inches) unless otherwise shown.

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST., SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

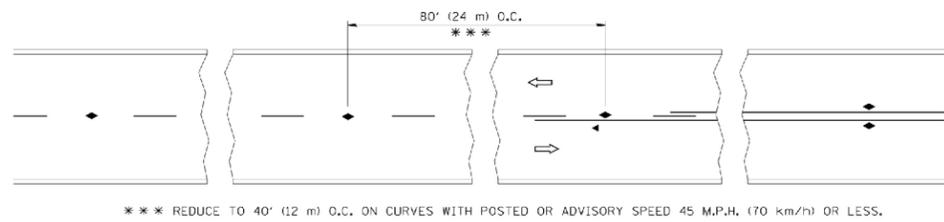
DESIGNED	- SLV	REVISED	-
DRAWN	- SLV	REVISED	-
CHECKED	- MJY, ST	REVISED	-
DATE	- 03/29/2012	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

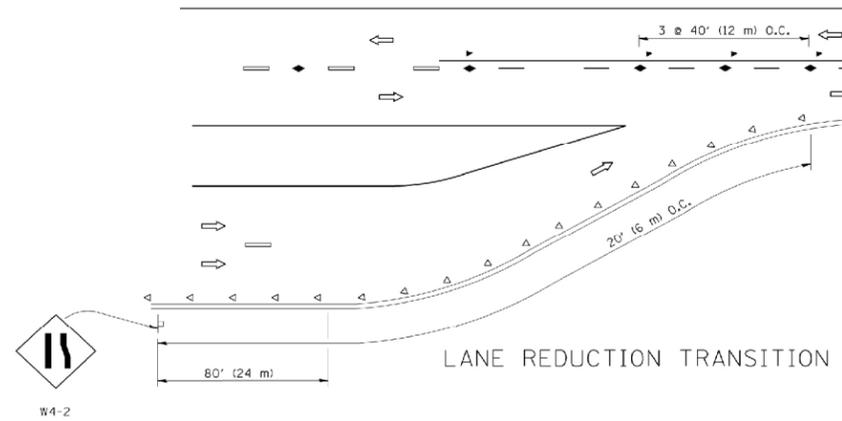
**DISTRICT ONE DETAIL SHEETS
PARK AVENUE OVER CALUMET UNION DRAINAGE DITCH**

SCALE: SHEET NO. 4 OF 7 SHEETS STA. 98+20 TO STA. 101+60

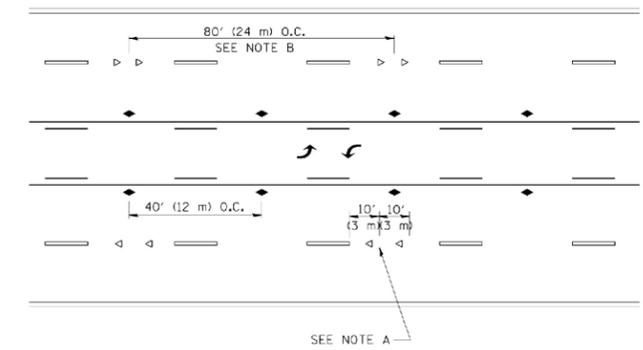
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3597	0710 B	COOK	30	27
D-91-292-09		CONTRACT NO. 60F95		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



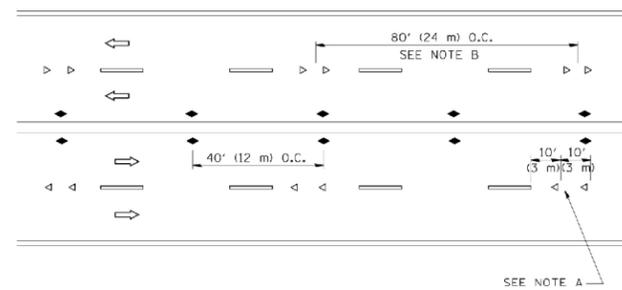
TWO-LANE/TWO-WAY



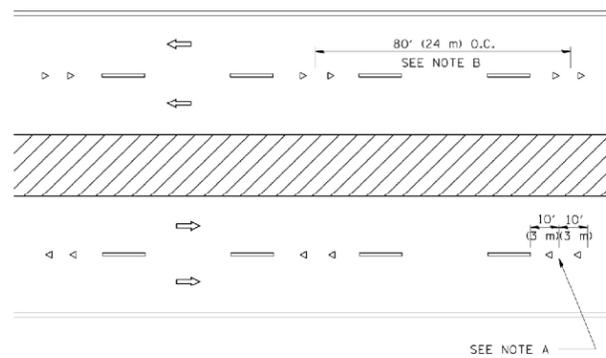
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

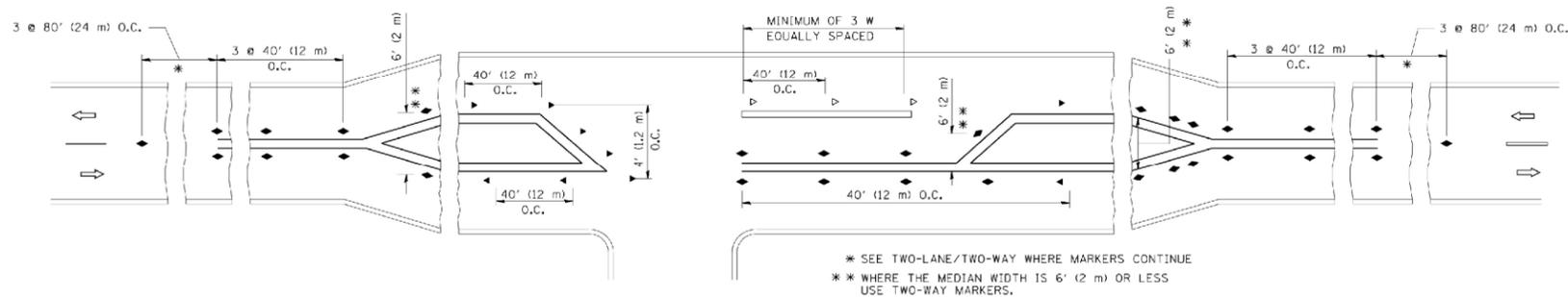
SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- < ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

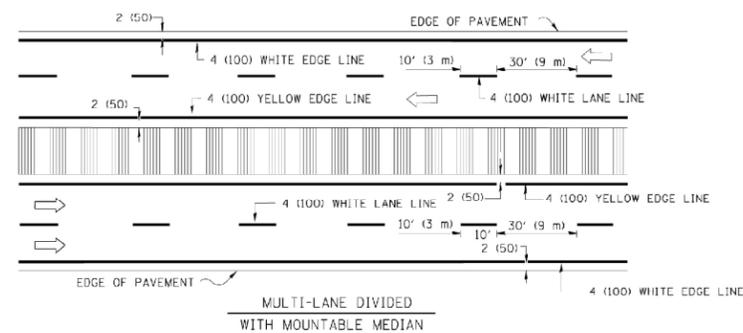
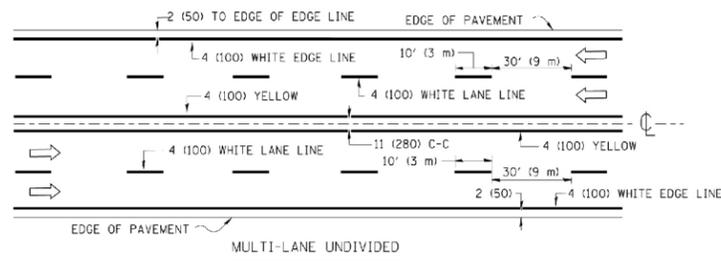
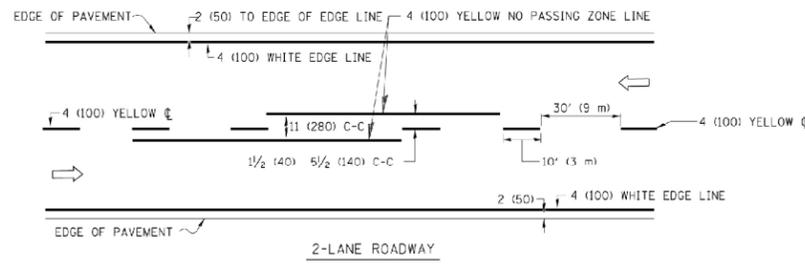
REVISED	- T. RAMMACHER	09-19-94
REVISED	- T. RAMMACHER	03-12-99
REVISED	- T. RAMMACHER	01-06-00
REVISED	- C. JUCIUS	09-09-09



LEFT TURN

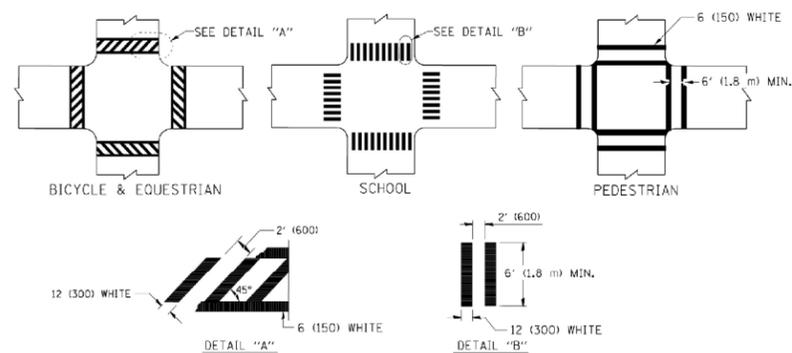
All dimensions are in inches (millimeters) unless otherwise shown.

TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

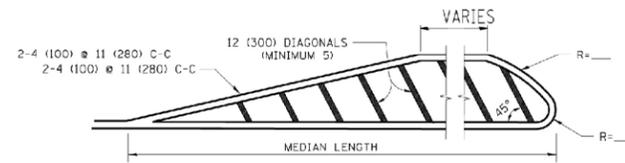
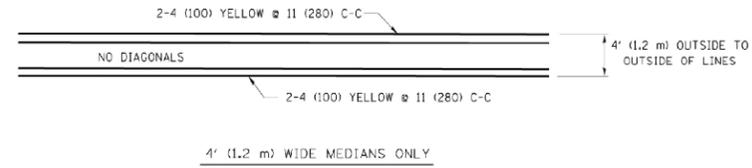


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

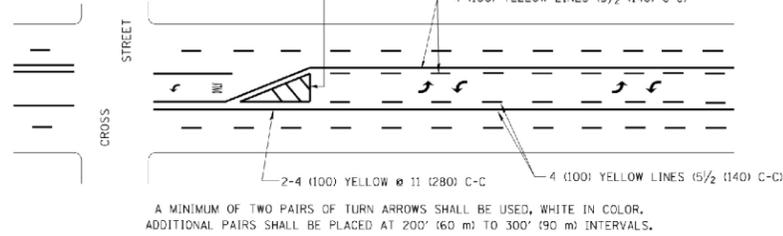


TYPICAL CROSSWALK MARKING

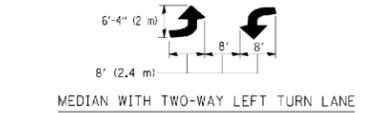


FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.
 DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)
 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

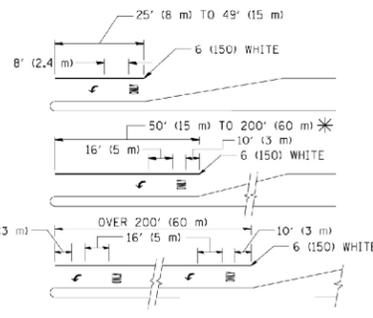


TYPICAL PAINTED MEDIAN MARKING



MEDIAN WITH TWO-WAY LEFT TURN LANE

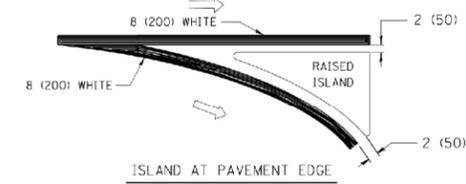
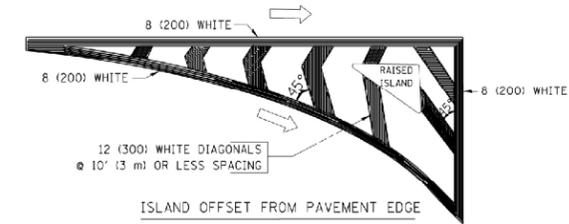
TYPICAL PAINTED MEDIAN MARKING



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
 AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)
 * TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

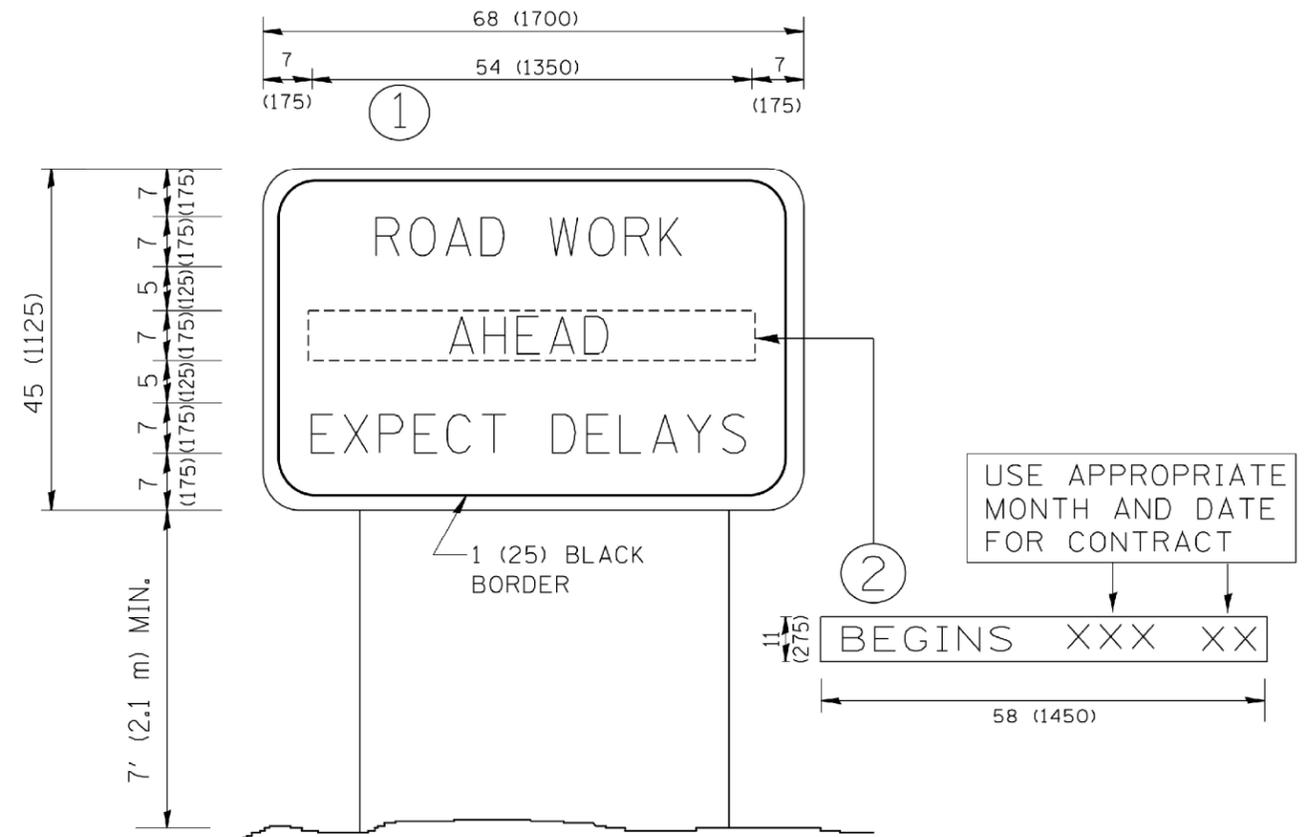
TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION	SKIP-DASH AND DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LEFT
	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" 15 6" (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in Inches (millimeters) unless otherwise shown.

REVISED	-T. RAMMACHER 10-27-94
REVISED	-C. JUCIUS 09-09-09
REVISED	-
REVISED	-

DISTRICT ONE TYPICAL PAVEMENT MARKINGS



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

REVISED	-	R. MIRS 09-15-97
REVISED	-	R. MIRS 12-11-97
REVISED	-	T. RAMMACHER 02-02-99
REVISED	-	C. JUCLUIS 01-31-07

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

ARTERIAL ROAD INFORMATION SIGN