

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	84-73	1
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
		CONTRACT NO. 83850		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR

**PROPOSED LOCAL AGENCY IMPROVEMENT
FEDERAL-AID URBAN PROJECT**

FOR INDEX OF SHEETS, SEE SHEET NO. 2

DESIGN DESIGNATION

ELDORADO STREET
LOCAL TYPE TS-3
DESIGN SPEED = 30 MPH
POSTED SPEED = 25 MPH

PINE STREET
LOCAL TYPE TS-2
DESIGN SPEED = 30 MPH
POSTED SPEED = 25 MPH

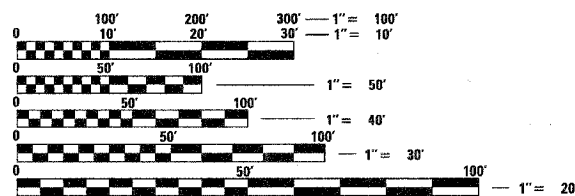
**SECTION 00-00094-03-BR
PROJECT NO.: BHOS 00D1 (556)
PINE STREET OVER UNION PACIFIC RAILROAD
ELDORADO STREET OVER UNION PACIFIC RAILROAD
STRUCTURE REPLACEMENT
VILLAGE OF WINNETKA
COOK COUNTY
C-91-182-00**

TRAFFIC DATA

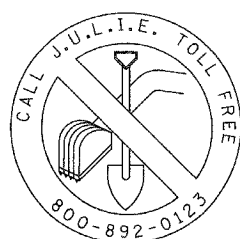
ELDORADO STREET	PINE STREET
EXISTING ADT = 591 (2002)	EXISTING ADT = 2935 (2002)
PROPOSED ADT = 710 (2023)	PROPOSED ADT = 3525 (2023)

SCALES

PLAN	1 : 50
PROFILE HORIZ.	1 : 50
PROFILE VERT.	1 : 5
CROSS SECTIONS	1 : 10 HORIZONTAL, 1 : 5 VERTICAL



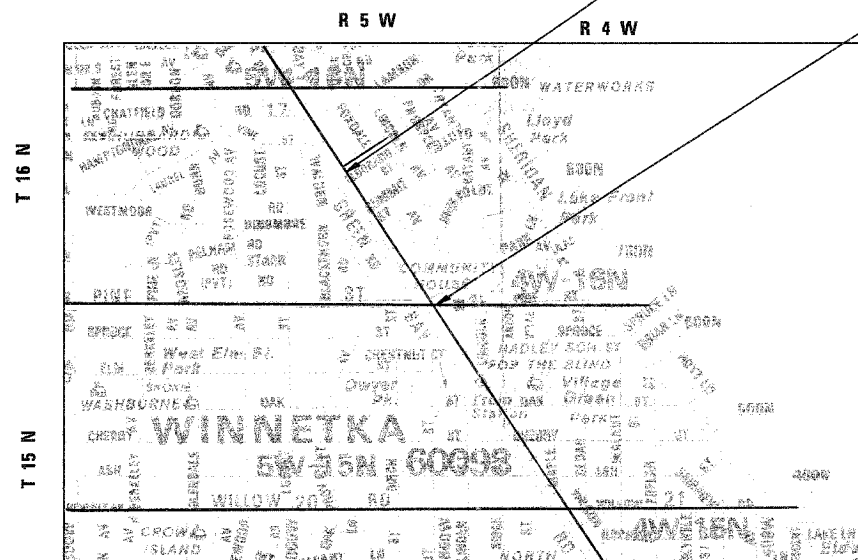
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.



48 - HOURS BEFORE DIGGING

CONTRACT NO. 83850

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



LOCATION MAP
NOT TO SCALE

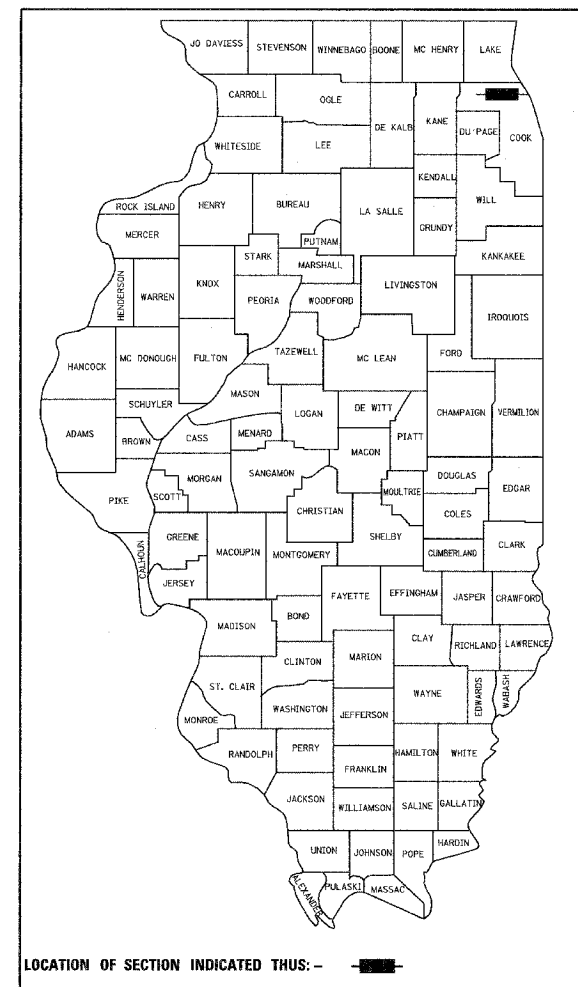
GROSS AND NET LENGTH OF PROJECT
ELDORADO = 240 FT = 0.05 MI
PINE = 300 FT = 0.06 MI

ELDORADO STREET BRIDGE
SN 016-8260
STA. 200+00 - STA. 202+40

PINE STREET BRIDGE
SN 016-8259
STA. 100+00 - STA. 103+00

ELDORADO STREET OVER UNION PACIFIC RAILROAD
STRUCTURE NO. 016-8260
REMOVE EXISTING FOUR SPAN BRIDGE SUPERSTRUCTURE AND REPLACE WITH STEEL BEAM CONTINUOUS SUPERSTRUCTURE AND CONCRETE DECK. REPAIR EXISTING ABUTMENTS AND PIERS.

PINE STREET OVER UNION PACIFIC RAILROAD
STRUCTURE NO. 016-8259
REMOVE EXISTING FOUR SPAN BRIDGE SUPERSTRUCTURE AND REPLACE WITH STEEL BEAM CONTINUOUS SUPERSTRUCTURE AND CONCRETE DECK. REPAIR EXISTING ABUTMENTS AND PIERS.

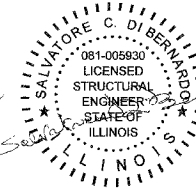


APPROVED *March 8* 2006
Steven M. Sanderson
DIRECTOR OF PUBLIC WORKS / VILLAGE ENGINEER
VILLAGE OF WINNETKA

PASSED *April 11* 2006
Chris Holt
DISTRICT ENGINEER OF LOCAL ROAD & STREETS

SIGNED *April 11* 2006
Diane M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Ciorba Group, Inc.

DESIGN FIRM
REGISTRATION NUMBER
184-001016

CONSULTING ENGINEERS
SUITE 402, 5507 NORTH CUMBERLAND AVE
CHICAGO, ILLINOIS 60656 :: (773) 775-4009

PLANS PREPARED BY: CIORBA GROUP
PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

DATE: 3/8/2006
SEAL EXPIRES: 11/30/2007

DATE: 3/8/2006
SEAL EXPIRES: 11/30/2006

IDOT FEDERAL AID DESIGN ENGINEER: JESSICA MILLER (847) 705-4487
CONSULTANT: CIORBA GROUP, INC. (773) 775-4009

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DO-00094-03-BR	COOK	69	2
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83850				

INDEX OF SHEETS

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2	INDEX OF SHEETS/HIGHWAY STANDARDS
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5	TYPICAL SECTIONS
6	SCHEDULE OF QUANTITIES
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8	ALIGNMENT, TIES, AND BENCHMARKS - ELDORADO STREET
9	REMOVAL ITEMS - PINE STREET
10	REMOVAL ITEMS - ELDORADO STREET
11	EXISTING AND PROPOSED PLAN AND PROFILE - PINE STREET
12	EXISTING AND PROPOSED PLAN AND PROFILE - ELDORADO STREET
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14	DETOUR PLAN - ELDORADO STREET
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16	LANDSCAPING, EROSION CONTROL, AND TREE PROTECTION - ELDORADO STREET
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LIST OF HIGHWAY STANDARDS

000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-02	TEMPORARY EROSION CONTROL SYSTEMS
420401-05	BRIDGE APPROACH PAVEMENT
424001-04	CURB RAMPS FOR SIDEWALK
515001-02	NAME PLATES FOR BRIDGES
604001-02	FRAME AND LIDS, TYPE 1
604051-02	FRAME AND GRATE, TYPE 11
606001-02	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
664001-01	CHAIN LINK FENCE
701701-04	URBAN LANE CLOSURE MULTILANE INTERSECTION
701801-03	LANE CLOSURE, MULTI LANE, 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
702001-06	TRAFFIC CONTROL DEVICES
704001-02	TEMPORARY CONCRETE BARRIER
720001	SIGN PANEL MOUNTING DETAILS
720006	SIGN PANEL ERECTION DETAILS
720011	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
729001	APPLICATION OF TYPE A AND B METAL POSTS (FOR SIGNS AND MARKERS)
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
814001	CONCRETE HANDHOLES
886001	DETECTOR LOOP INSTALLATIONS
886006	TYPICAL LAYOUTS FOR DETECTION LOOPS

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REVISIONS	
NAME	DATE

VILLAGE OF WINNETKA
ELDORADO STREET OVER UNION PACIFIC R.R.
PINE STREET OVER UNION PACIFIC R.R.
INDEX OF SHEETS
LIST OF HIGHWAY STANDARDS

SCALE: N.T.S. DRAWN BY: EAB
DATE: APRIL 2006 CHECKED BY: MRJ

GENERAL NOTES

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		CONTRACT NO. 83850	

1. ALL UNDERGROUND UTILITY LOCATIONS, INCLUDING BUT NOT LIMITED TO, SANITARY AND STORM SEWERS, WATER MAINS, AND THEIR SERVICE LINES, SHOWN ON THE PLANS ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE THE RESPECTIVE UTILITY COMPANIES FIELD LOCATE ALL UTILITIES, ASCERTAIN THEIR STATUS AND ADJUST OR RELOCATE THESE UTILITIES, AS NECESSARY, PRIOR TO STARTING CONSTRUCTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. FIBER OPTICS: CALL BEFORE YOU DIG (800) 336-9193. UPRR UTILITIES CALL ALICE (312) 496-4738. THE CONTRACTOR SHALL NOTIFY J.U.L.I.E. AT (800) 392-0123 AND ALL PUBLIC AND PRIVATE UTILITIES 48 HOURS BEFORE STARTING CONSTRUCTION, INCLUDING, BUT LIMITED TO:

- A. NICOR GAS
1844 FERRY ROAD
1390 WILLOW ROAD
WINNETKA, IL 60093
- B. VILLAGE OF WINNETKA WATER & ELECTRIC
1390 WILLOW ROAD
WINNETKA, IL 60093
ATTN: MR. BRYAN MCINTURFF
- C. SBC
2004 MINER STREET
DES PLAINES, IL 60616
ATTN: MS. LYNN RENAUD
- D. VILLAGE OF WINNETKA - PUBLIC WORKS
1390 WILLOW ROAD
WINNETKA, IL 60093
ATTN: MR. STEVE SAUNDERS
- E. COMCAST CABLE COMMUNICATIONS, INC.
688 INDUSTRIAL DRIVE
ELMHURST, IL 60126
ATTN: MS. MARY STEFAN
- F. NORTH SHORE GAS COMPANY
3001 GRAND AVENUE
WAUKEGAN, IL 60085
MR. ED LAPINSKI
- G. AT&T
1000 COMMERCIAL DRIVE
OAK BROOK, IL 60521

2. PROCUREMENT OF ALL NECESSARY PERMITS, AND PAYMENT THEREOF, SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

3. DURING THE CONSTRUCTION OPERATION WHEN ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF DITCHES, GUTTERS, OR DRAINAGE STRUCTURES SO THE NATURAL FLOW OF WATER IS OBSTRUCTED, THE MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF THE CONSTRUCTION OPERATIONS ALL DRAINAGE STRUCTURES SHALL BE FREE FROM ALL DIRT AND DEBRIS. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN EXISTING FIELD CONDITIONS PRIOR TO BIDDING ON THIS PROJECT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR FAILURE TO VERIFY EXISTING DIMENSIONS OR CONDITIONS.

5. THE CONTRACTOR SHALL LIMIT HIS CONSTRUCTION ACTIVITIES TO THE WORK AREAS DESIGNATED ON THE PLANS. ANY DAMAGE TO AREAS OUTSIDE OF THESE LIMITS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE TO THE SATISFACTION OF THE ENGINEER.

6. THE PROPOSED COMBINATION CONCRETE CURB AND GUTTER SHALL BE DEPRESSED ACROSS ALL DRIVEWAYS, HANDICAPPED RAMPS AND/OR AS DIRECTED BY THE ENGINEER. HANDICAPPED RAMPS SHALL BE PROVIDED AT ALL CROSS WALK LOCATIONS, AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS.

7. THE CONTRACTOR AT HIS OWN EXPENSE SHALL BE REQUIRED TO RELOCATE ALL ROAD SIGNS WHICH INTERFERE WITH HIS CONSTRUCTION OPERATIONS AND TO TEMPORARILY RESET SUCH SIGNS DURING HIS CONSTRUCTION OPERATIONS. ALL WORK INVOLVING SIGNS SHALL BE COVERED BY THE FOLLOWING REQUIREMENTS:

- A. SIGNS SHALL NOT BE REMOVED UNTIL PROGRESS OF WORK NECESSITATES REMOVAL
- B. EVERY SIGN REMOVED MUST BE RE-ERECTED AT A TEMPORARY LOCATION IN A WORKMANLIKE MANNER VISIBLE TO TRAFFIC ON THE ROADWAY. ALL SUCH SIGNS MUST BE MAINTAINED STRAIGHT AND NEAT APPEARING FOR THE DURATION OF THE TEMPORARY SETTING.

C. ALL SIGNS MUST BE RE-ERECTED IN THEIR PERMANENT LOCATIONS AS DESIGNATED BY THE ENGINEER AS THE ROADWAY IS COMPLETED. THIS WORK SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.

D. ALL SIGNS NOT REQUIRED FOR REUSE AFTER CONSTRUCTION IS COMPLETED SHALL REMAIN THE PROPERTY OF THE VILLAGE OF WINNETKA THE CONTRACTOR SHALL BE REQUIRED TO STORE THEM AT THE JOB SITE FOR PICKUP BY THE VILLAGE.

E. ANY SIGN OR SIGN POST DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT HIS OWN EXPENSE. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A LIST OF ALL EXISTING DAMAGED SIGNS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

F. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER AN INVENTORY OF ALL SIGNS MOVED DURING CONSTRUCTION.

8. PROPER DRAINAGE SHALL BE MAINTAINED IN THE IMPROVEMENT AREA DURING CONSTRUCTION. THE COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

9. THE COST OF THE REMOVAL OF ANY EXISTING POLES, POSTS, TREE STUMPS (WITH A DIAMETER LESS THAN 6 INCHES) OR OTHER OBSTRUCTIONS WHICH INTERFERE WITH THE PROPOSED IMPROVEMENTS AND WHICH ARE NOT PAID UNDER SEPARATE PAY ITEMS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

10. THE CONTRACTOR SHALL PLACE WARNING SIGNS PRIOR TO PLACEMENT OF PRIME COAT AND COMMENCEMENT OF PAVING OPERATIONS OR AS DIRECTED BY THE ENGINEER. THIS WORK SHALL NOT BE A SEPARATE PAY ITEM, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

11. WHERE BITUMINOUS OVERLAYS ARE PLACED ON INTERSECTING STREETS, THE CONTRACTOR SHALL COORDINATE CONSTRUCTION TO ALLOW A HOT JOINT BETWEEN THE TWO OVERLAYS; OR HE SHALL SAW CUT TO A MINIMUM DEPTH OF 1-1/2" TO PROVIDE A UNIFORM VERTICAL FACE TO BUTT THE SECOND OVERLAY AGAINST.

12. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION FROM THE ENGINEER BEFORE BEGINNING WORK ON ANY STREET.

13. WHEN PAVING IN THE VICINITY OF SCHOOLS OR PUBLIC BUILDINGS, THE CONTRACTOR SHALL SCHEDULE THE APPLICATION OF PRIME COAT TO BE DONE NOT LESS THAN 30 MINUTES NOR MORE THAN TWO HOURS BEFORE THE PLACEMENT OF THE BITUMINOUS CONCRETE MATERIAL.

14. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL PAVEMENT OPENINGS, OPEN HOLES, EQUIPMENT AND RUBBLE LEFT IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL MAINTAIN HIGH VISIBILITY OF ALL TEMPORARY HAZARDS TO PEDESTRIANS AND MOTORISTS.

15. THE THICKNESS OF THE BITUMINOUS COURSES SHOWN ON STREETS TO BE RESURFACED IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS MAY OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE ON WHICH THE BITUMINOUS COURSE IS PLACED.

16. ALL DRIVEWAYS, CARRIAGE WALKS, AND SERVICE WALKS ADJACENT TO THE NEW CURB AND GUTTER AND MARKED FOR REMOVAL WILL BE RECONSTRUCTED TO PROVIDE GENTLE SLOPES AND PROFILES AS DIRECTED BY THE ENGINEER.

17. ALL PARKWAYS DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE PROPERLY GRADED AND RECEIVE FOUR INCHES OF TOPSOIL AND SODDING, SALT TOLERANT.

18. PLACEMENT OF TOPSOIL SHALL BE COMPLETED WITHIN 10-15 DAYS AFTER THE COMPLETION OF CURB AND GUTTER, PAVING AND/OR DRIVEWAY REPLACEMENT OPERATIONS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SODDING, SALT TOLERANT, SHALL BE PLACED EITHER PRIOR TO JUNE 15 OR AFTER SEPTEMBER 15.

19. THE CONTRACTOR MAY BE REQUIRED TO PUT A GRADE BREAK IN THE SCREED AND ADJUST THE CONTROLS OF HIS PAVING MACHINE TO ALLOW THE REQUIRED THICKNESS OF ASPHALT OVER THE FULL PAVEMENT CROSS SECTION.

20. THE CONTRACTOR SHALL BE REQUIRED TO CLEAN THE SURFACE OF EACH SUCCESSIVE NEW BITUMINOUS COURSE PRIOR TO PLACEMENT OF THE NEXT BITUMINOUS COURSE AS DIRECTED BY THE ENGINEER. THE COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

21. ALL CURB AND GUTTER REMOVAL AND REPLACEMENT SHALL BE COMPLETED PRIOR TO PLACING ANY BITUMINOUS MATERIAL ON THAT STREET.

22. ALL FRAMES AND GRATES DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.

23. STATION AND OFFSETS FOR DRAINAGE STRUCTURES IN THE CURB LINE ARE GIVEN FROM THE CENTERLINE TO THE EDGE OF PAVEMENT. OFFSETS TO STRUCTURES NOT LOCATED ALONG THE EDGE OF PAVEMENT ARE FROM THE SURVEY BASELINE TO CENTER OF STRUCTURE.

24. THE CONTRACTOR SHALL BE REQUIRED TO MOVE ANY DECORATIVE ROCKS, PAVEMENT BRICKS, OR LANDSCAPE ITEMS THAT INTERFERE WITH CONSTRUCTION. UPON COMPLETION OF THE CONSTRUCTION, THE CONTRACTOR SHALL MOVE THESE ITEMS BACK TO THEIR ORIGINAL LOCATION AND TO THEIR ORIGINAL CONDITION. THIS WORK WILL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.

25. THE CONTRACTOR SHALL BE REQUIRED TO PRESERVE AND RESTORE ANY DECORATIVE GROUND COVER IN THE PARKWAY THAT INTERFERES WITH CONSTRUCTION AS INCIDENTAL TO THE CONTRACT.

26. SIDEWALKS SHALL BE THICKENED TO 6 INCHES ACROSS THE DRIVEWAYS AND WILL BE PAID FOR AS P.C.C. SIDEWALK, 6 INCHES.

27. ALL DIMENSIONS ARE FROM THE BASELINE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN. ALL RADII SHOWN ARE FROM THE EDGE OF PAVEMENT (GUTTER FLAG).

28. ONLY PRECAST ADJUSTMENT RINGS WILL BE ALLOWED FOR THE ADJUSTMENTS OF CATCHBASINS, MANHOLES, VALVE VAULTS AND INLETS. NO MORE THAN 2 RINGS FOR A TOTAL ADJUSTMENT OF 11 INCHES WILL BE ALLOWED.

29. BARRICADES: THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SANDBAGS ON EACH TYPE I OR TYPE II BARRICADE USED ONE (1) WEIGHTED SAND BAG ACROSS EACH BOTTOM RAIL.

30. TRAFFIC CONDITIONS, ACCIDENTS AND OTHER UNFORESEEN EMERGENCY CONDITIONS MAY REQUIRE THE ENGINEER TO RESTRICT, MODIFY OR REMOVE LANE CLOSURES OR CHANNELIZATION SHOWN IN THE PLANS. THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS AS DIRECTED BY THE ENGINEER WITHOUT DELAY. THE CONTRACTOR SHALL RESPOND TO ANY REQUEST MADE BY THE ENGINEER FOR CORRECTION WITHIN TWO (2) HOURS FROM THE TIME OF NOTIFICATION.

31. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON CITY PROPERTY WITHOUT WRITTEN PERMISSION FROM THE VILLAGE OF WINNETKA.

32. 10 FOOT TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER ITEMS OF WORK TO EXISTING CURBS & GUTTERS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED

33. SAW CUTTING OF PAVEMENTS, SHOULDERS, ETC., SHALL BE TO FULL DEPTH AND SHALL RESULT IN A CLEAN, STRAIGHT EDGE ON THE PORTION REMAINING. ALL SAW CUTTING SHALL BE CONSIDERED INCLUDED TO THE ITEM REMOVED, INCLUDING PAVEMENT REMOVAL REQUIRED FOR PAVEMENT PATCHES.

34. THE CONTRACTOR SHALL USE ALL NECESSARY PRECAUTIONS AND PROTECTION MEASURES REQUIRED TO MAINTAIN EXISTING UTILITIES, SEWERS, AND APPURTENANCES THAT MUST BE KEPT IN OPERATION. IN PARTICULAR, THE CONTRACTOR WILL TAKE ADEQUATE MEASURES TO PREVENT THE UNDERMINING OF UTILITIES AND SEWERS WHICH ARE STILL IN SERVICE.

35. THE CONTRACTOR SHALL CONTROL DUST RESULTING FROM CONSTRUCTION OPERATIONS BY APPLYING A UNIFORM APPLICATION OF SPRINKLED WATER AS REQUIRED OR DIRECTED BY THE ENGINEER. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

36. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROJECTION OF ALL UNDERGROUND OR SURFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER OR THE OWNER. THIS WORK SHALL BE DONE AT THE CONTRACTOR'S OWN EXPENSE

REVISIONS	
NAME	DATE

CG **Ciorba Group, Inc.**
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VILLAGE OF WINNETKA
ELDORADO STREET OVER UNION PACIFIC R.R.
PINE STREET OVER UNION PACIFIC R.R.
GENERAL NOTES

SCALE: N.T.S. DRAWN BY: EAB
DATE: MARCH 2006 CHECKED BY: MRJ

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	PINE STREET		ELDORADO STREET	
				ROADWAY QUANTITY 1000-2A	BRIDGE QUANTITY X171-2A	ROADWAY QUANTITY 1000-2A	BRIDGE QUANTITY X171-2A
20101000	TEMPORARY FENCE	FOOT	480	240	0	240	0
20101100	TREE TRUNK PROTECTION	EACH	8	4	0	4	0
20200100	EARTH EXCAVATION	CU YD	293	89	0	204	0
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	50	25	0	25	0
20700420	POROUS GRANULAR EMBANKMENT, SUBGRADE	CU YD	50	25	0	25	0
* 21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	500	300	0	200	0
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	7	4	0	3	0
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	7	4	0	3	0
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	7	4	0	3	0
* 25200110	SODDING, SALT TOLERANT	SQ YD	500	300	0	200	0
* 28000510	INLET FILTERS	EACH	7	2	0	5	0
31101200	SUB-BASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	570	465	0	105	0
35102200	AGGREGATE BASE COURSE, TYPE B 10"	SQ YD	130	0	0	130	0
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	45	25	0	20	0
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	290	205	0	85	0
40600300	AGGREGATE (PRIME COAT)	TON	2	1	0	1	0
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	77	0	0	0	77
42001300	PROTECTIVE COAT	SQ YD	1882	300	782	220	580
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	295	0	212	0	83
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	61	25	0	36	0
42300200	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH	SQ YD	30	0	0	30	0
42400200	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	SQ FT	1600	1100	0	500	0
42400300	PORTLAND CEMENT CONCRETE SIDEWALK 6 INCH	SQ FT	200	120	0	80	0
42400800	DETECTABLE WARNINGS	SQ FT	40	28	0	12	0
44000100	PAVEMENT REMOVAL	SQ YD	875	590	0	285	0
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	65	25	0	40	0
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	565	345	0	220	0
44000600	SIDEWALK REMOVAL	SQ FT	1600	1100	0	500	0
44000700	APPROACH SLAB REMOVAL	SQ YD	146	0	84	0	62
50101700	REMOVAL OF EXISTING SUPERSTRUCTURES NO. 1	EACH	1	0	1	0	0
50101800	REMOVAL OF EXISTING SUPERSTRUCTURES NO. 2	EACH	1	0	0	0	1
50102400	CONCRETE REMOVAL	CU YD	27	0	16	0	12
50300225	CONCRETE STRUCTURES	CU YD	29.1	0	10.8	0	18.3
50300255	CONCRETE SUPERSTRUCTURE	CU YD	325.5	0	181.3	0	144.2
50300260	BRIDGE DECK GROOVING	SQ YD	809	0	488	0	321
50300310	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	48	0	20	0	28
50300320	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	20	0	20	0	0
50500505	STUD SHEAR CONNECTORS	EACH	4512	0	2580	0	1932
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	80871	0	44638	0	36233
51100100	SLOPE WALL 4 INCH	SQ YD	275	0	0	0	275
51500100	NAME PLATES	EACH	2	0	1	0	1
58700200	BRIDGE SEAT SEALER	SQ FT	268	0	157	0	111
59000100	EPOXY CRACK SEALING	FOOT	149	0	106	0	43
60250200	CATCH BASINS TO BE ADJUSTED	EACH	1	0	0	1	0
60250400	CATCH BASINS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, OPEN LID	EACH	1	0	0	1	0
60255500	MANHOLES TO BE ADJUSTED	EACH	1	1	0	0	0
60255800	MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID	EACH	3	3	0	0	0

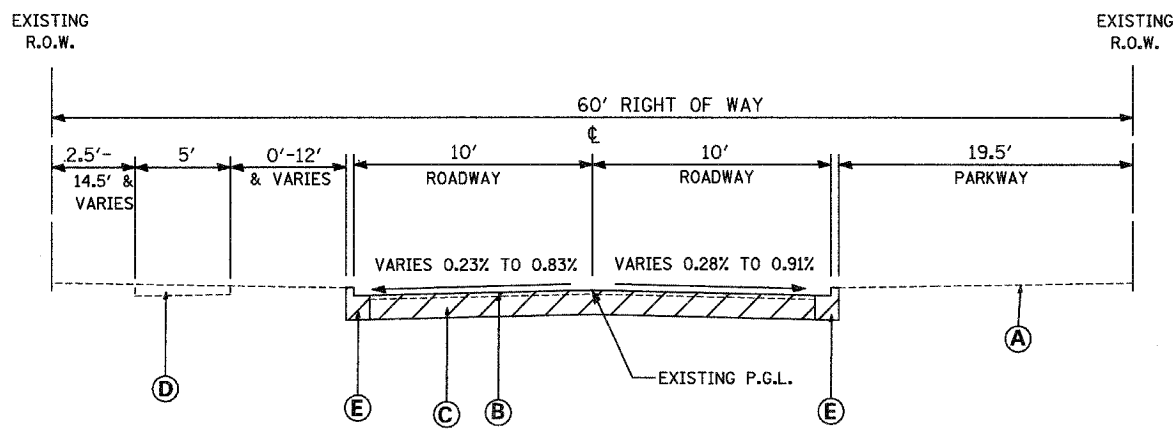
CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	PINE STREET		ELDORADO STREET	
				ROADWAY QUANTITY 1000-2A	BRIDGE QUANTITY X171-2A	ROADWAY QUANTITY 1000-2A	BRIDGE QUANTITY X171-2A
60260100	INLETS TO BE ADJUSTED	EACH	1	0	0	1	0
60260300	INLETS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, OPEN LID	EACH	1	1	0	0	0
60261300	INLETS TO BE ADJUSTED WITH NEW TYPE 11 FRAME AND GRATE	EACH	1	1	0	0	0
60265900	VALVE VAULTS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID	EACH	3	3	0	0	0
60266600	VALVE BOXES TO BE ADJUSTED	EACH	1	1	0	0	0
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	350	230	0	120	0
66400105	CHAIN LINK FENCE, 4'	FOOT	90	30	0	60	0
66400205	CHAIN LINK FENCE, 5'	FOOT	30	30	0	0	0
66410300	CHAIN LINK FENCE REMOVAL	FOOT	120	60	0	60	0
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	6	0	6	0
67100100	MOBILIZATION	L SUM	1	0.5	0	0.5	0
70101700	TRAFFIC CONTROL AND PROTECTION	L SUM	1	0.5	0	0.5	0
* 78005110	EPOXY PAVEMENT MARKING - LINE 4"	FOOT	660	600	0	60	0
* 78005180	EPOXY PAVEMENT MARKING - LINE 24"	FOOT	70	40	0	30	0
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2	1	0	1	0
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	287	0	212	0	75
X0323426	SEDIMENT CONTROL, DRAINAGE STRUCTURE INLET FILTER CLEANING	EACH	7	2	0	5	0
X0323557	BRIDGE JOINT SYSTEM (EXPANSION), 1"	FOOT	99	0	40	0	59
X0323558	BRIDGE JOINT SYSTEM (EXPANSION), 1-5/8"	FOOT	40	0	40	0	0
X0323670	PREFORMED DETECTOR LOOP	FOOT	130	65	0	65	0
X3550300	BITUMINOUS BASE COURSE SUPERPAVE 6"	SQ YD	75	25	0	50	0
X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	15	3	0	12	0
X4066614	BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19.0, N50	TON	10	0	0	10	0
X4073081	BITUMINOUS CONCRETE PAVEMENT (FULL-DEPTH), SUPERPAVE, 10"	SQ YD	360	360	0	0	0
XX002866	CONCRETE BARRIER WALL (SPECIAL)	CU YD	56.7	0	29.7	0	27.0
XX003338	TEST HOLE	EACH	8	4	0	4	0
XX005964	REMOVE AND RESET BRICK SIDEWALK	SQ FT	10	10	0	0	0
Z0002600	BAR SPLICERS	EACH	104	0	60	0	44
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.5	0	0.5	0
Z0047300	PROTECTIVE SHIELD	SQ YD	1159	0	690	0	469
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	0.5	0	0.5	0
Z0076600	TRAINEES	HOUR	500	250	0	250	0
X006668	HANDHOLE TO BE ADJUSTED WITH NEW FRAME AND COVER	EACH	1	0	0	1	0
X5051401	FURNISHING AND ERECTING STRUCTURAL STEEL NO. 1	BRIDGE L SUM	1	0	1	0	0
X5051402	FURNISHING AND ERECTING STRUCTURAL STEEL NO. 2	BRIDGE L SUM	1	0	0	0	1

* SPECIALTY ITEMS
 Δ 1080

REVISIONS	
NAME	DATE

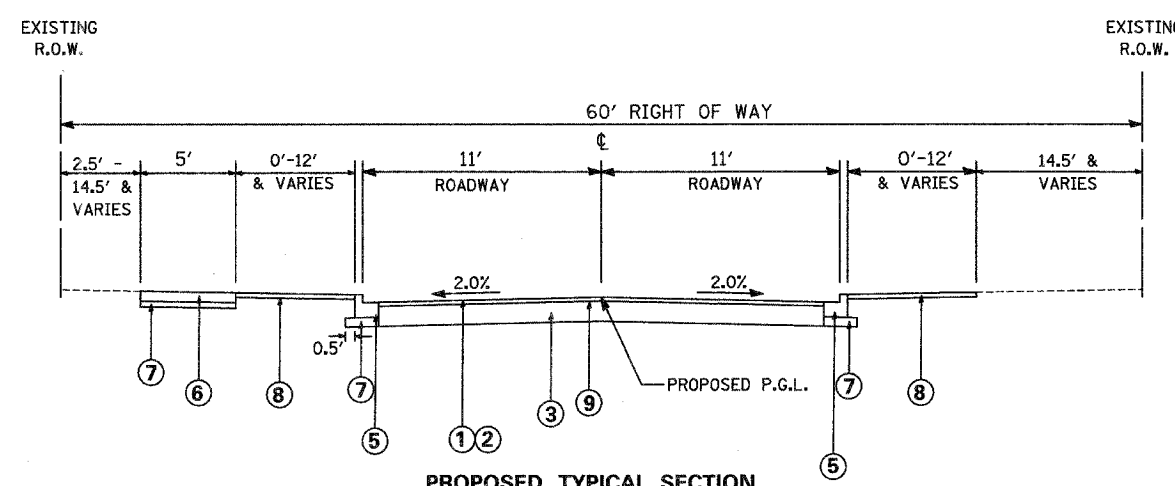
GC Giorba Group, Inc.
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 Tel. 773.775.4009 Fax 773.775.4014 Email: chicago@giorba.com

VILLAGE OF WINNETKA
 ELDORADO STREET OVER UNION PACIFIC R.R.
 PINE STREET OVER UNION PACIFIC R.R.
SUMMARY OF QUANTITIES



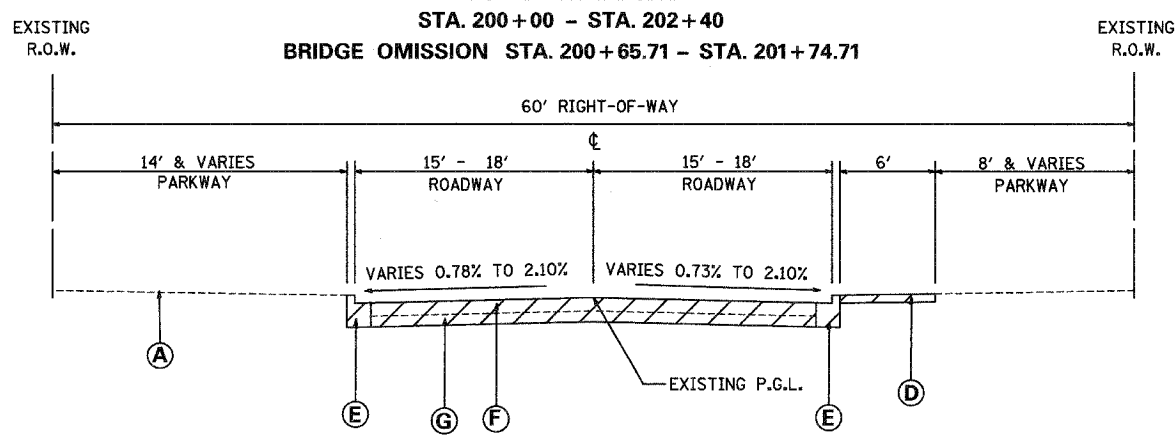
**EXISTING TYPICAL SECTION
ELDORADO STREET**

STA. 200+00 - STA. 202+40
BRIDGE OMISSION STA. 200+65.71 - STA. 201+74.71



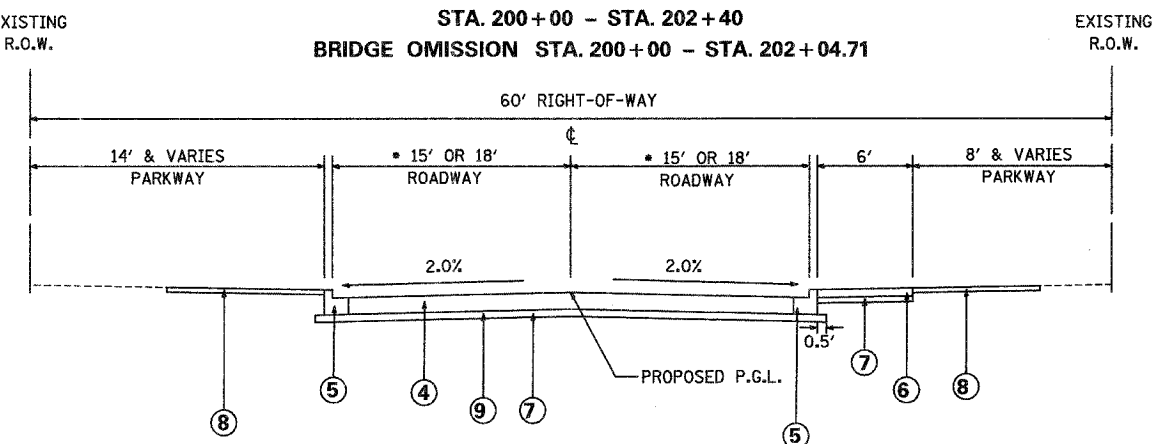
**PROPOSED TYPICAL SECTION
ELDORADO STREET**

STA. 200+00 - STA. 202+40
BRIDGE OMISSION STA. 200+00 - STA. 202+04.71



**EXISTING TYPICAL SECTION
PINE STREET**

STA. 100+00 - STA. 103+00
BRIDGE OMISSION STA. 100+26.09 - STA. 101+86.95



**PROPOSED TYPICAL SECTION
PINE STREET**

STA. 100+00 - STA. 103+00
BRIDGE OMISSION STA. 100+00 - STA. 102+16.40

SEE BRIDGE APPROACH PAVEMENT DETAIL FOR PAVEMENT WEST OF BRIDGE.
PINE STREET (SHEET 42)
ELDORADO STREET (SHEET 64)



EXISTING CONDITIONS

- (A) EXISTING GROUND
- (B) EXISTING BITUMINOUS SURFACE, 4" (TO BE PAID FOR AS PAVEMENT REMOVAL)
- (C) EXISTING AGGREGATE BASE 10" (TO BE PAID FOR AS EARTH EXCAVATION)
- (D) EXISTING P.C.C. SIDEWALK
- (E) EXISTING COMBINATION CONCRETE CURB AND GUTTER
- (F) EXISTING BITUMINOUS SURFACE, 10" (TO BE PAID FOR AS PAVEMENT REMOVAL)
- (G) EXISTING SUBGRADE, 4" (TO BE PAID FOR AS EARTH EXCAVATION)

PROPOSED CONDITIONS

- (1) BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIX "C" N50, 2"
- (2) BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE IL-19, N50 2 1/4"
- (3) AGGREGATE BASE COURSE, TYPE B 10"
- (4) BITUMINOUS CONCRETE PAVEMENT, (FULL-DEPTH), SUPERPAVE, 10" (2" SURFACE, 8" BINDER)
- (5) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
- (6) P.C.C. SIDEWALK 5"
- (7) SUBBASE GRANULAR MATERIAL TYPE B, 4"
- (8) TOPSOIL 4", FERTILIZER NUTRIENTS, SODDING
- (9) BITUMINOUS MATERIALS (PRIME COAT) & AGGREGATE (PRIME COAT)

MIXTURE DESIGN TABLE

ITEM	AC TYPE	VOIDS	RAP%
ELDORADO STREET BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50 (2")	PG 64-22	4% @ 50 GYR.	15
ELDORADO STREET BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19, N50 (2 1/4")	PG 58-22	4% @ 50 GYR.	25
PINE STREET BITUMINOUS CONCRETE PAVEMENT FULL-DEPTH, SUPERPAVE (10") SURFACE COURSE MIX "C", N50 (2") BINDER COURSE, IL-19, N50 (8")	PG 64-22 PG 58-22	4% @ 50 GYR. 4% @ 50 GYR.	15 25
DRIVEWAYS BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX C, N50 (2") BITUMINOUS BASE COURSE, SUPERPAVE, (6" P.E.)	PG 64-22 PG 58-22	4% @ 50 GYR. 2% @ 50 GYR.	15 50

THE UNIT WEIGHT USED TO CALCULATE BITUMINOUS SURFACE MIXTURES IS 112 LBSY PER INCH THICKNESS.

STRUCTURAL DESIGN FACTOR: YEAR 2023 - ELDORADO (PINE)

PV= 689 (3419) SU= 14 (71) MU= 7 (35)

ROAD/STREET CLASSIFICATION: CLASS IV ROAD (CLASS II ROAD)

PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE:

P= 97% (97%) S= 2% (2%) M= 3% (3%)

TRAFFIC FACTOR: ACTUAL TF = 0.087 (0.44) AC TYPE = PG 64-22

MINIMUM TF =

AC GRADE: BINDER = PG 58-22 SURFACE = PG 64-22

SUBGRADE SUPPORT RATING: IBR = 3.0



REVISIONS	
NAME	DATE

VILLAGE OF WINNETKA
ELDORADO STREET OVER UNION PACIFIC R.R.
PINE STREET OVER UNION PACIFIC R.R.
**EXISTING AND PROPOSED
TYPICAL SECTIONS**

PINE STREET

STA.	TO	STA.	EARTH EXCAVATION (CU YD)	*UNDERCUT AND PGE REPLACEMENT (CU YD)	EXCAVATION TO BE USED IN EMBANKMENT (ADJ. FOR SHRINKAGE - 15%) (CU YD)	EMBANKMENT (CU YD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CU YD)
100+00	--	100+20	60	0	51	0	51
101+95	--	102+00	0	0	0	1	-1
102+00	--	102+50	8	0	7	6	1
102+50	--	103+00	21	0	18	0	18
TOTALS			89	25	76	7	69

* UNDERCUT DETERMINED IN FIELD BY ENGINEER

ELDORADO STREET

STA.	TO	STA.	EARTH EXCAVATION (CU YD)	*UNDERCUT AND PGE REPLACEMENT (CU YD)	EXCAVATION TO BE USED IN EMBANKMENT (ADJ. FOR SHRINKAGE - 15%) (CU YD)	EMBANKMENT (CU YD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CU YD)
200+00	--	200+31	138	0	117	0	117
201+75	--	202+00	21	0	18	0	18
202+00	--	202+40	45	0	38	1	37
TOTALS			204	25	173	1	172

* UNDERCUT DETERMINED IN FIELD BY ENGINEER

PAY ITEMS	PINE STREET	ELDORADO STREET	TOTALS
EARTH EXCAVATION (CU YD)	89	204	293
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (CU YD)	25	25	50
POROUS GRANULAR EMBANKMENT, SUBGRADE (CU YD)	25	25	50

REVISIONS	
NAME	DATE

VILLAGE OF WINNETKA
ELDORADO STREET OVER UNION PACIFIC R.R.
PINE STREET OVER UNION PACIFIC R.R.
SCHEDULE OF QUANTITIES

SCALE: 1"=20'
DATE: MARCH 2006

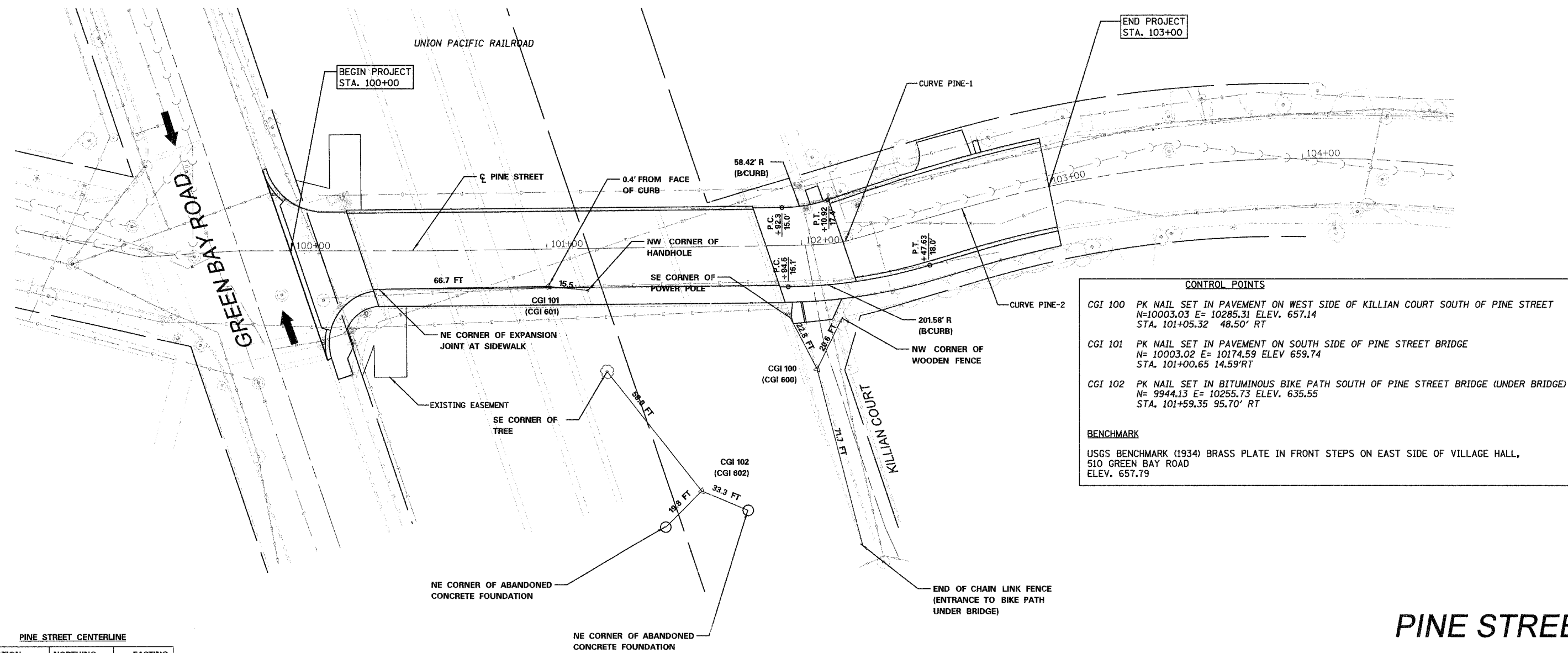
DRAWN BY: EAB
CHECKED BY: MRJ

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DO-00094-03-BR	COOK	69	7
STA. 100+00		TO STA. 103+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83850				

P.I. STA 99+79.54
N= 9981.99
E= 10055.19

CURVE PINE-1
P.I. STA= 102+09.82
Δ= 15°59'55.27"
D= 57°17'44.81"
R= 100.00
T= 14.05
L= 27.92
E= 0.98
S.E. RUN= N/A
P.C. STA= 101+95.77
P.T. STA= 102+23.69

CURVE PINE-2
P.I. STA= 103+32.79
Δ= 17°45'50.89"
D= 12°43'56.62"
R= 450.0
T= 70.32
L= 139.52
E= 5.46
S.E. RUN= N/A
P.C. STA= 102+62.47
P.T. STA= 104+01.99



CONTROL POINTS

CGI 100 PK NAIL SET IN PAVEMENT ON WEST SIDE OF KILLIAN COURT SOUTH OF PINE STREET
N=10003.03 E= 10285.31 ELEV. 657.14
STA. 101+05.32 48.50' RT

CGI 101 PK NAIL SET IN PAVEMENT ON SOUTH SIDE OF PINE STREET BRIDGE
N= 10003.02 E= 10174.59 ELEV 659.74
STA. 101+00.65 14.59' RT

CGI 102 PK NAIL SET IN BITUMINOUS BIKE PATH SOUTH OF PINE STREET BRIDGE (UNDER BRIDGE)
N= 9944.13 E= 10255.73 ELEV. 635.55
STA. 101+59.35 95.70' RT

BENCHMARK

USGS BENCHMARK (1934) BRASS PLATE IN FRONT STEPS ON EAST SIDE OF VILLAGE HALL,
510 GREEN BAY ROAD
ELEV. 657.79

PINE STREET CENTERLINE

STATION	NORTHING	EASTING
100 + 00	9988.00	10074.75
101 + 95.77 (PC)	10045.52	10261.88
102 + 23.69 (PT)	10057.32	10287.08
102 + 62.47 (PC)	10078.49	10319.59
103 + 00	10097.65	10351.84
104 + 01.99 (PT)	10135.47	10446.32

REVISIONS	
NAME	DATE

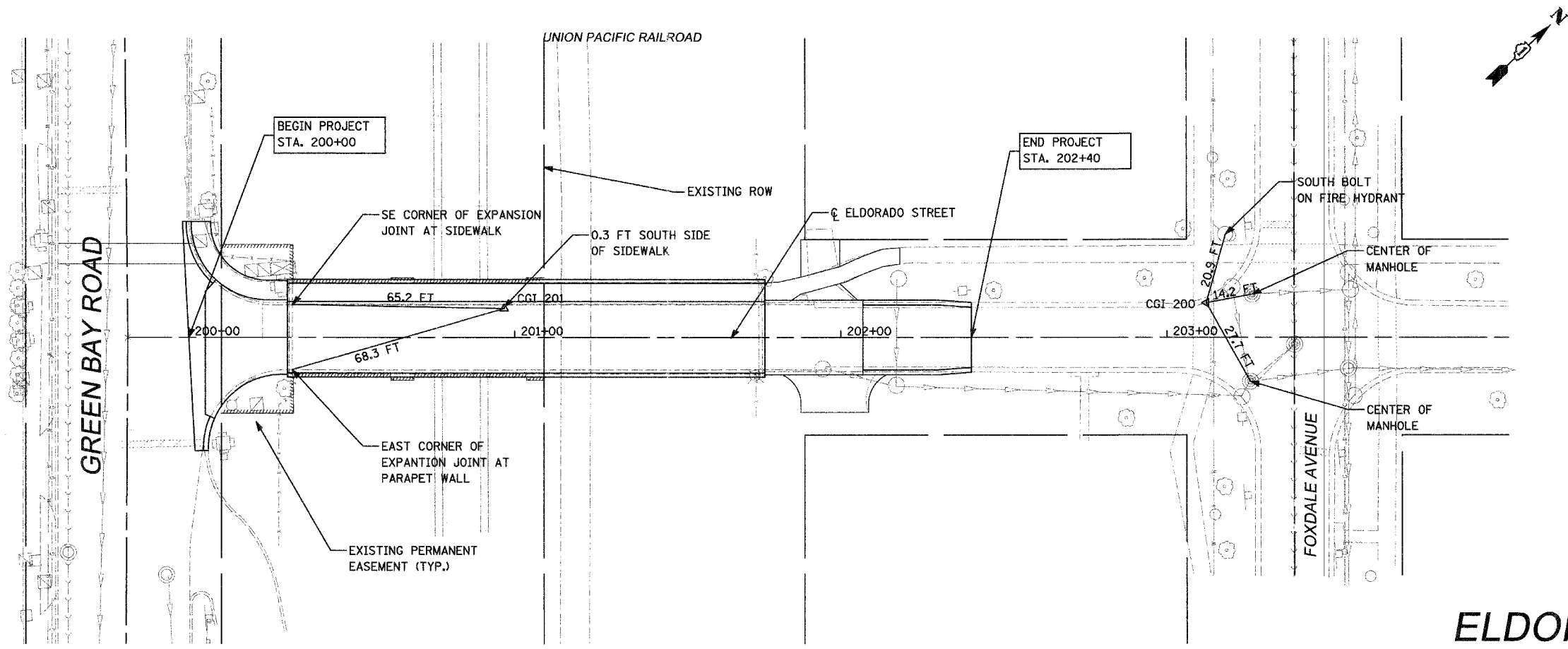
PINE STREET

Clorba Group, Inc.
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VILLAGE OF WINNETKA
PINE STREET OVER UNION PACIFIC R.R.
ALIGNMENT, TIES & BENCHMARKS

SCALE: 1"=20'
DATE: MARCH 2006
DRAWN BY: EAB
CHECKED BY: MRJ

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	8
STA.	200+00	TO STA.	202+40	
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
CONTRACT NO. 83850				



ELDORADO STREET

CONTROL POINTS	
CGI 200	PK NAIL SET IN PAVEMENT NORTHWEST CORNER OF ELDORADO ST. AND FOXDALE AVE. N= 19978.485 E= 20356.5150 ELEV. 663.60 STA. 203+12.04 10.65' LT
CGI 201	PK NAIL SET IN SIDEWALK ON NORTH SIDE OF BRIDGE APPROX. CENTER OF BRIDGE N= 19995.885 E= 20141.931 ELEV. 665.85 STA. 200+96.75 8.91' LT
BENCHMARK	
	USGS BENCHMARK (1934) BRASS PLATE IN FRONT STEPS N EAST SIDE OF VILLAGE HALL. ELEV. 657.79

STATION	NORTHING	EASTING
199+81.30	19997.27	20026.14
200+00.00	19995.61	20044.77
202+40.00	19974.28	20283.82
203+39.21	19965.47	20382.63

REVISIONS	
NAME	DATE

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VILLAGE OF WINNETKA
ELDORADO STREET OVER UNION PACIFIC R.R.

ALIGNMENT, TIES, & BENCHMARKS

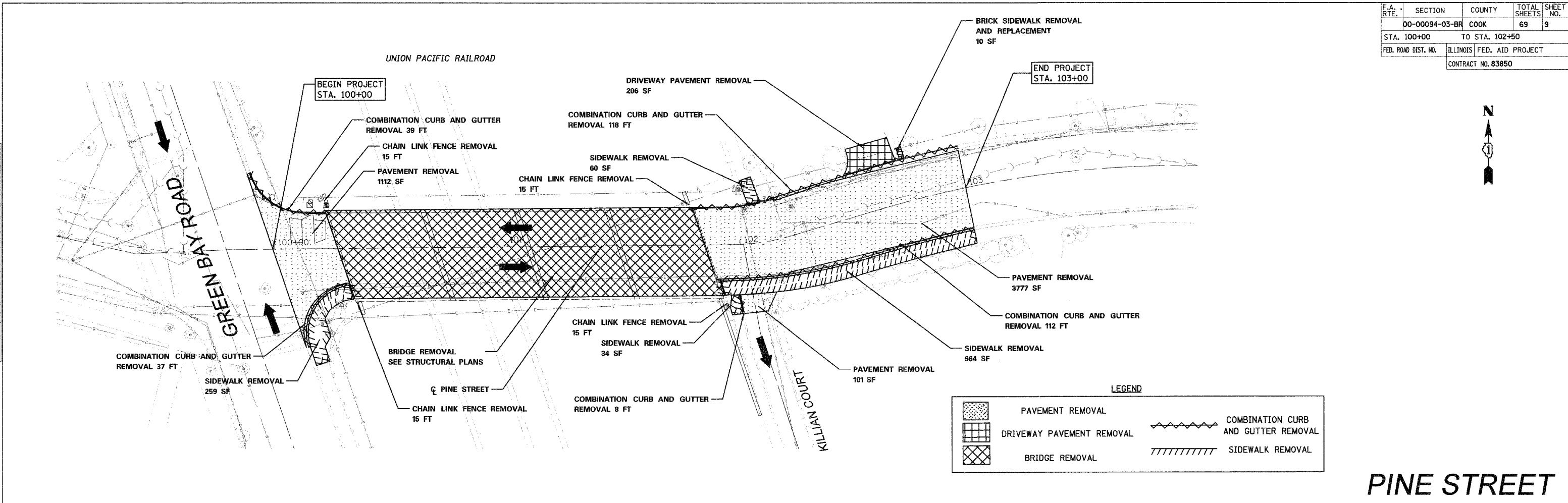
SCALE: 1" = 20'
DATE: MARCH 2006
DRAWN BY: EAB
CHECKED BY: MRJ

DATE PLOTTED: 03/08/06 10:51 AM

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-0094-03-BR	COOK	69	9
STA. 100+00		TO STA. 102+50		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83850				

PLAN	SURVEYED	DATE
NOTE BOOK	ALIGNED	
NO.	CHECKED	
	BY	
	DATE	

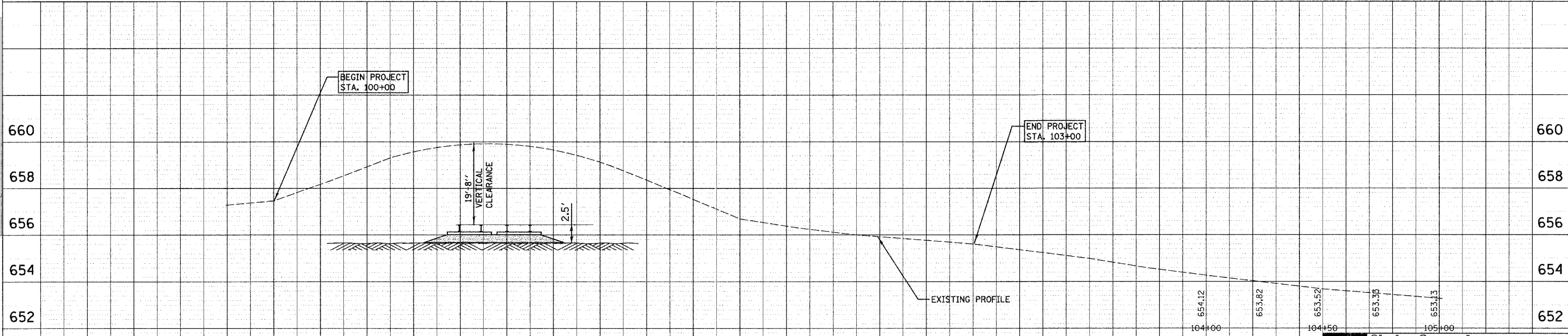
PROFILE	SURVEYED	DATE
NOTE BOOK	GRADES	
NO.	CHECKED	
	BY	
	DATE	



LEGEND

	PAVEMENT REMOVAL		COMBINATION CURB AND GUTTER REMOVAL
	DRIVEWAY PAVEMENT REMOVAL		SIDEWALK REMOVAL
	BRIDGE REMOVAL		

PINE STREET



657.32	656.21	659.17	659.67	659.74	659.39	658.60	657.58	656.54	656.15	655.84	655.64	655.45	655.15	654.84	654.43
100+00	100+50	101+00	101+50	102+00	102+50	103+00	103+50								

REVISIONS	
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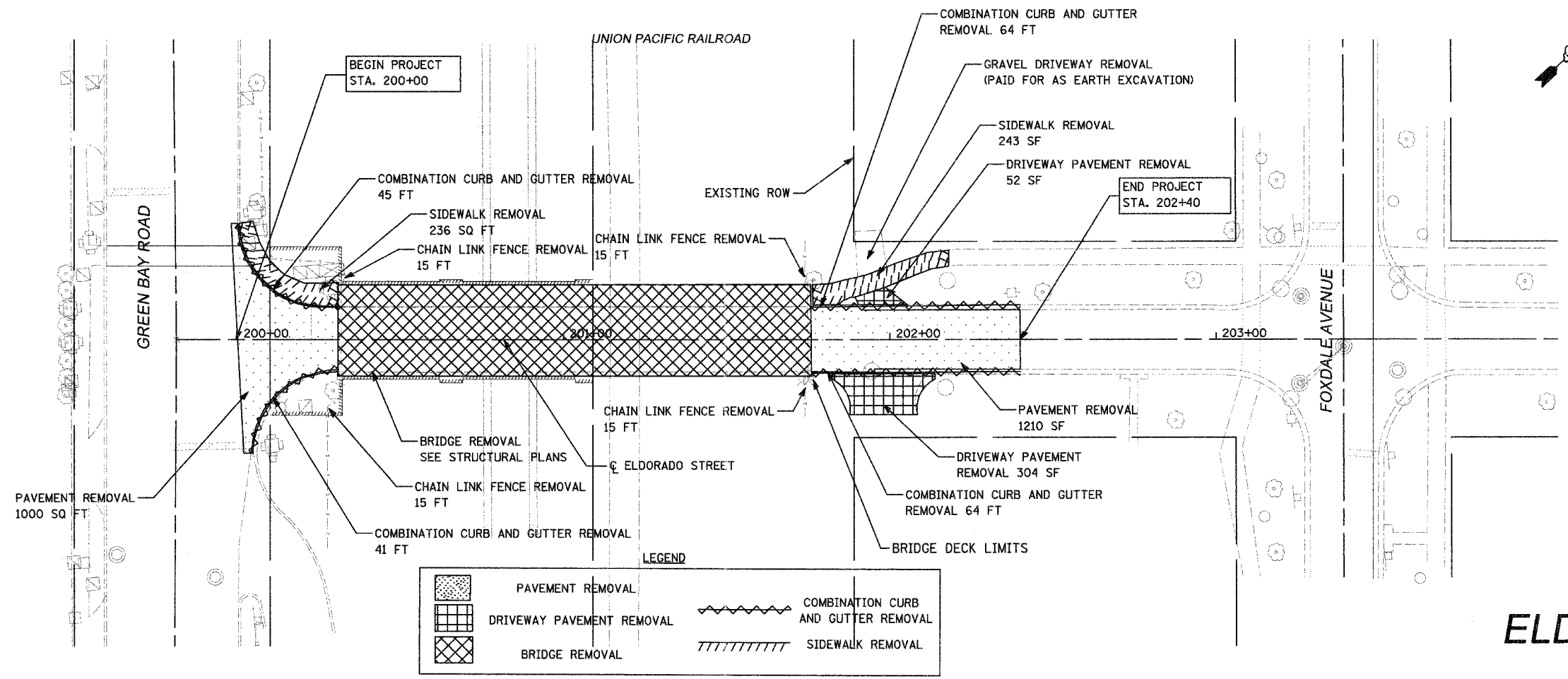
VILLAGE OF WINNETKA
PINE STREET OVER UNION PACIFIC R.R.

REMOVAL ITEMS

SCALE: 1"=20'
DATE: MARCH 2006

DRAWN BY: EAB
CHECKED BY: MRJ

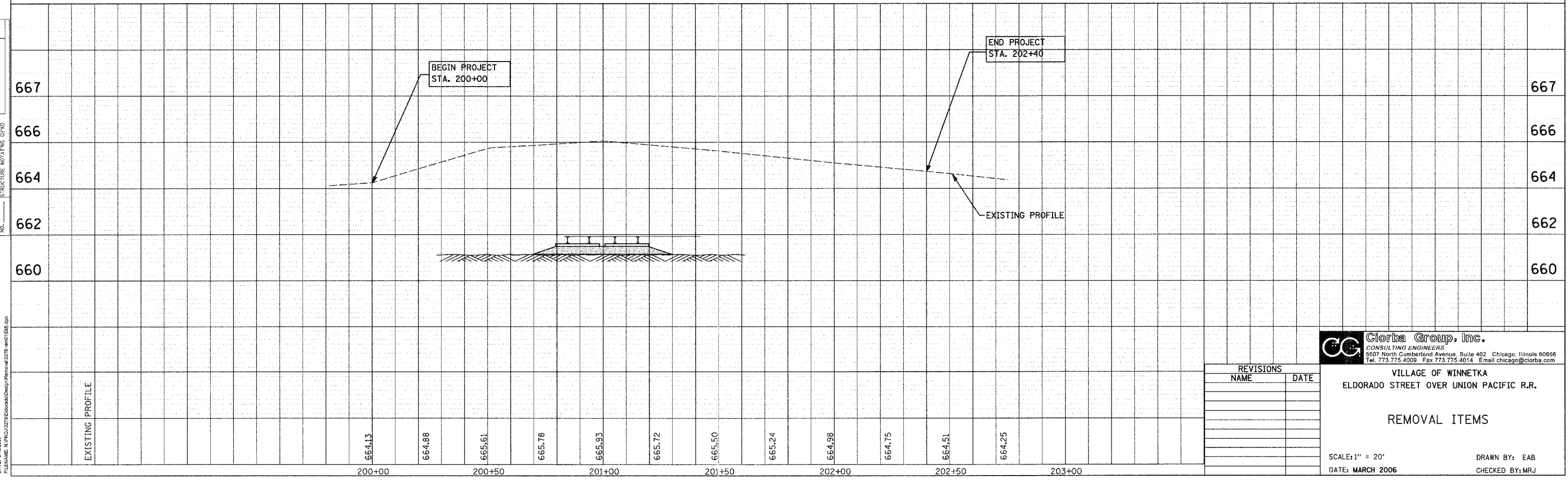
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	10
STA. 200+00		TO STA. 202+40		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 83850				



ELDORADO STREET

PLAN	DATE
BY	
DATE	
BY	
DATE	
BY	
DATE	

PROFILE	DATE
BY	
DATE	
BY	
DATE	
BY	
DATE	



REVISIONS	
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VILLAGE OF WINNETKA
ELDORADO STREET OVER UNION PACIFIC R.R.

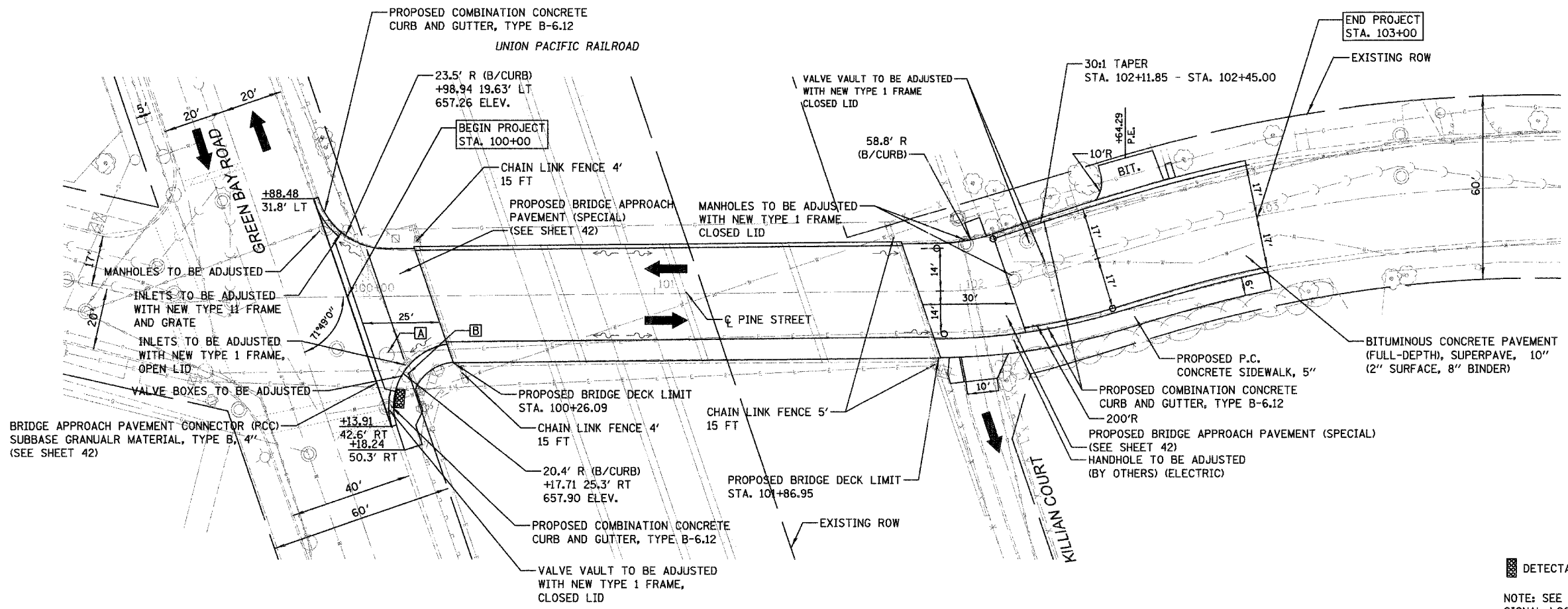
REMOVAL ITEMS

SCALE: 1" = 20'
DATE: MARCH 2006
DRAWN BY: EAB
CHECKED BY: MRJ

DATE: 3/10/2006
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DATE: _____
 BY: _____
 SURVEYED: _____
 ALIGNED: _____
 CHECKED: _____
 PLOTTED: _____
 NO. _____
 NOTE: _____

DATE: _____
 BY: _____
 SURVEYED: _____
 GRADES CHECKED: _____
 E.M. NOTED: _____
 STRUCTURE NOTATIONS: _____
 NO. _____
 NOTE: _____

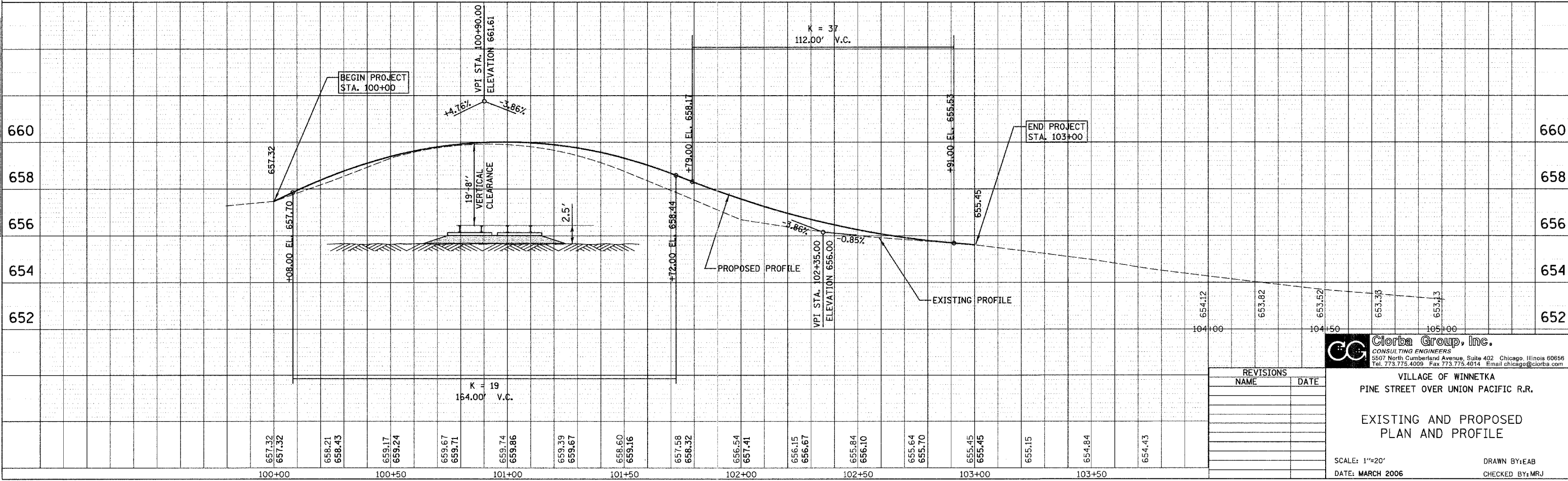


[A] HANDHOLE TO BE ADJUSTED (BY OTHERS)
 [B] GAS VALVE TO BE ADJUSTED (BY OTHERS)

DETECTABLE WARNINGS

NOTE: SEE DETAIL SHEET FOR TRAFFIC SIGNAL LOOP DETECTOR INFORMATION.

PINE STREET



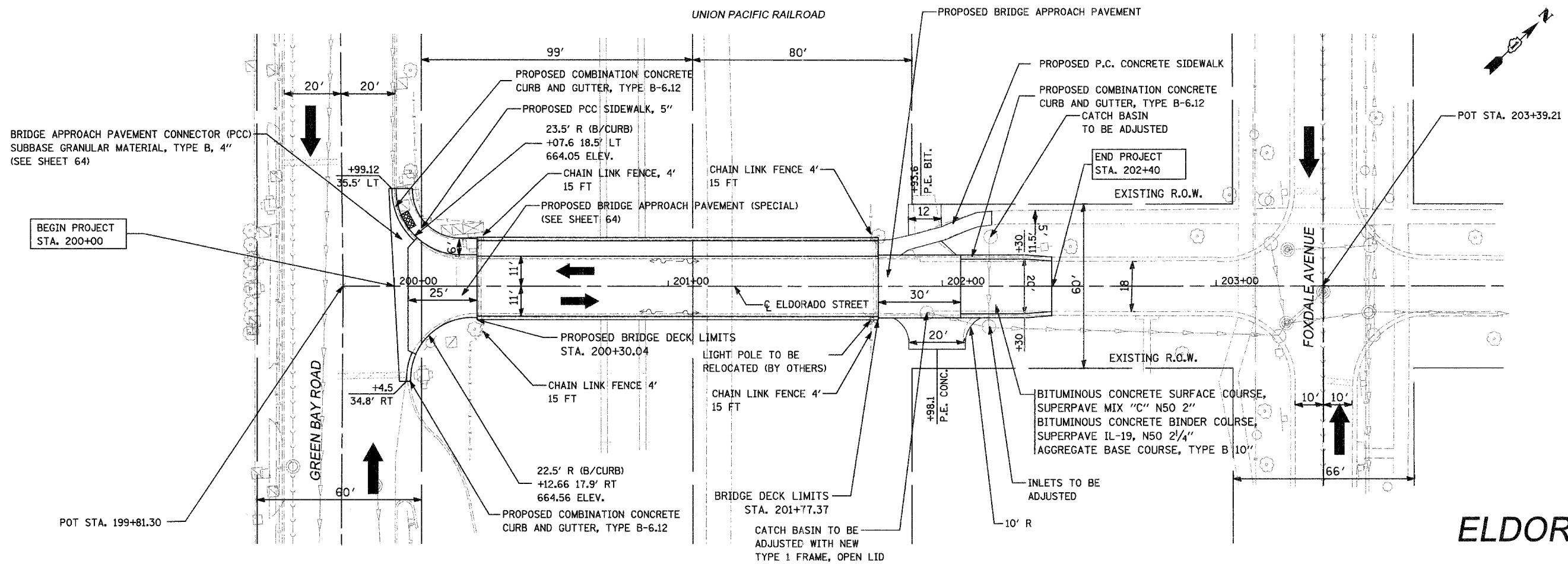
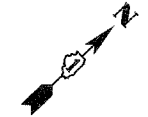
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VILLAGE OF WINNETKA
 PINE STREET OVER UNION PACIFIC R.R.

EXISTING AND PROPOSED
 PLAN AND PROFILE

SCALE: 1"=20'
 DATE: MARCH 2006
 DRAWN BY: EAB
 CHECKED BY: MRJ

REVISIONS	
NAME	DATE



DETECTABLE WARNINGS

NOTE: SEE DETAIL SHEET FOR TRAFFIC SIGNAL LOOP DETECTOR INFORMATION.

ELDORADO STREET

DATE: _____ BY: _____

PLAN

SURVEYED _____

NOTE BOOK _____

ALIGNED _____

RT. OF WAY _____

NO. _____

DATE: _____ BY: _____

PROFILE

SURVEYED _____

NOTE BOOK _____

GRADES _____

STRUCTURE _____

NO. _____

DATE: _____ BY: _____

PROFILE

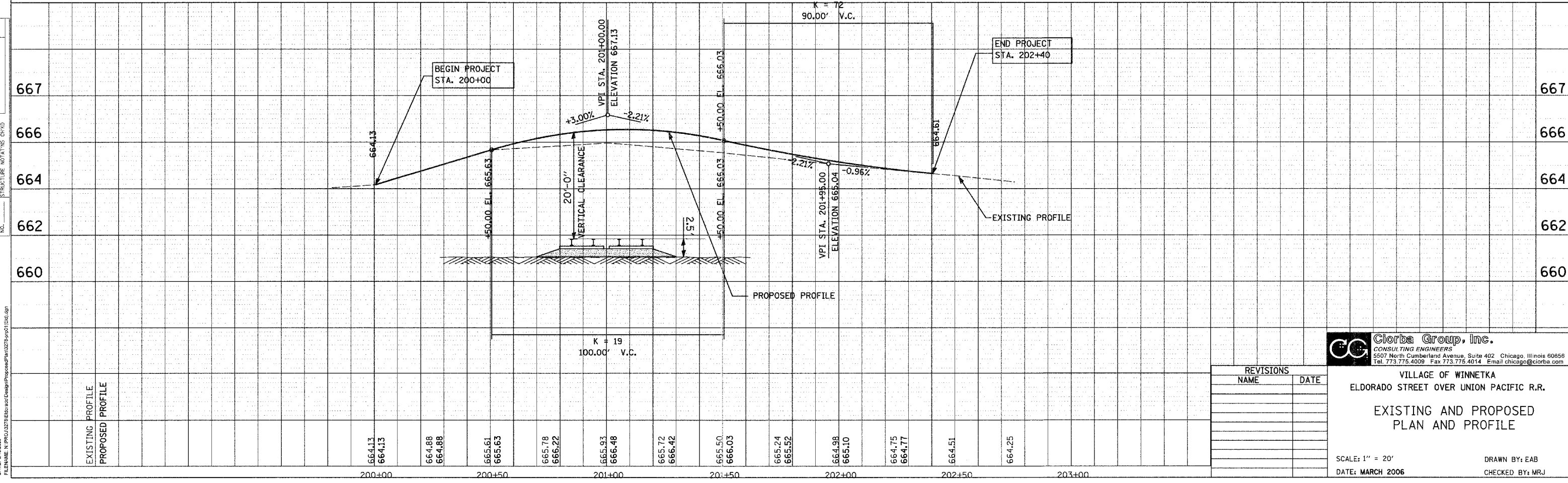
SURVEYED _____

NOTE BOOK _____

GRADES _____

STRUCTURE _____

NO. _____



REVISIONS	
NAME	DATE

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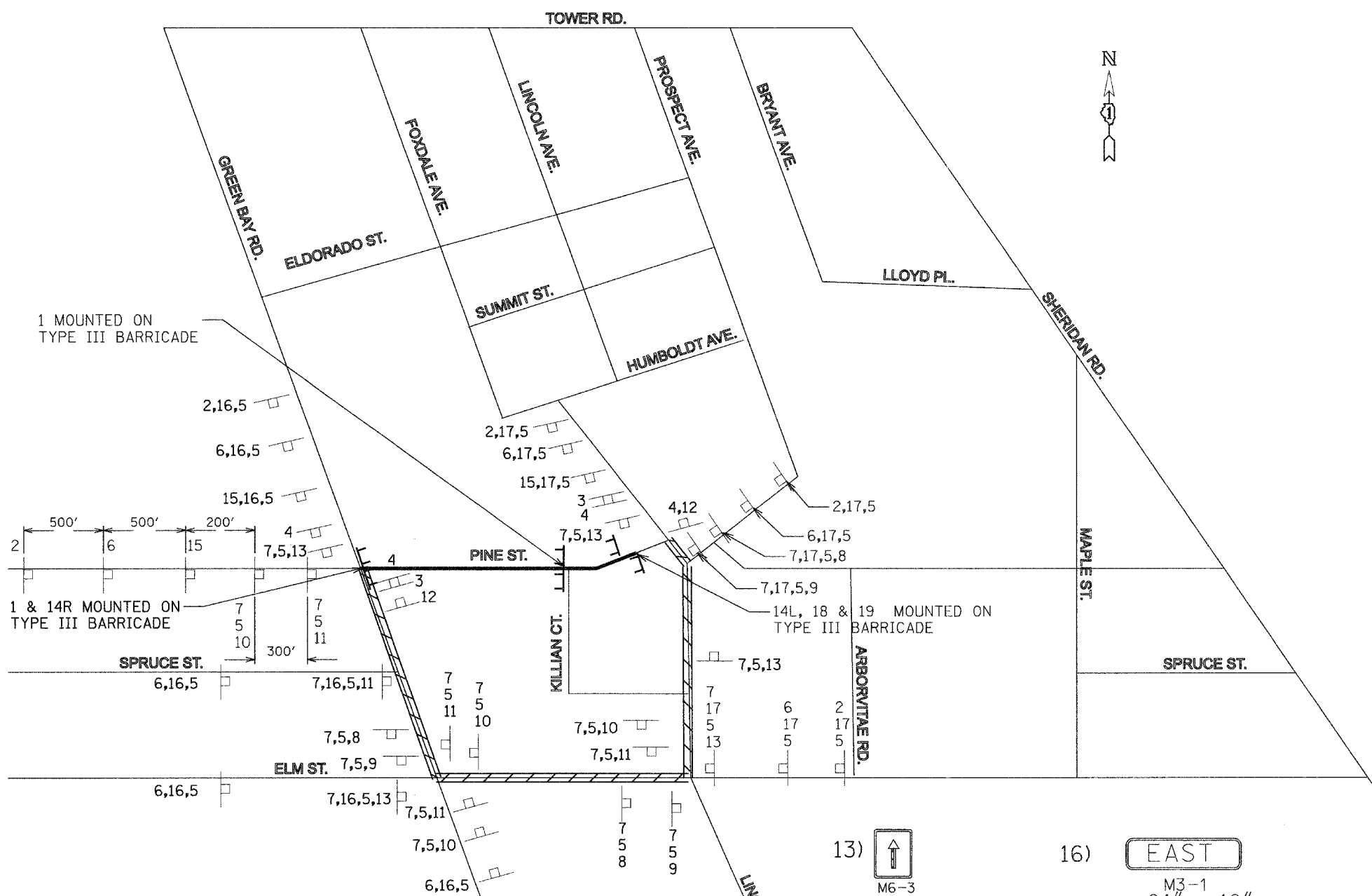
VILLAGE OF WINNETKA
 ELDORADO STREET OVER UNION PACIFIC R.R.
 EXISTING AND PROPOSED
 PLAN AND PROFILE

SCALE: 1" = 20'
 DATE: MARCH 2006
 DRAWN BY: EAB
 CHECKED BY: MRJ

F.A. - RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DO-00094-03-BR	COOK	69	13	
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83850				

DETOUR PLAN GENERAL NOTES

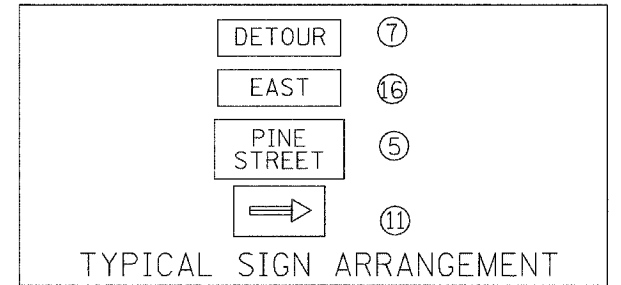
1. TEMPORARY TRAFFIC CONTROL SIGNS MUST BE INSTALLED AT THE DIRECTION AND UNDER THE SUPERVISION OF THE ENGINEER. 48 HOURS NOTICE MUST BE GIVEN TO THE ENGINEER AND VILLAGE.
2. ALL TRAFFIC SIGNS SHALL MEET WITH THE APPROVAL OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL MEET WITH THE APPROVAL OF THE ENGINEER REGARDING LOCATION, TYPE, SIZE, NUMBER AND DURATION.
3. FOR TYPICAL SIGN INSTALLATION, SEE IDOT HIGHWAY STANDARDS.
4. IF FOR ANY REASON WORK MUST BE PERFORMED AT NIGHT, TYPE I OR TYPE II BARRICADES WITH STEADY BURNING LIGHTS ARE TO BE USED.
5. APPROPRIATE IDOT TRAFFIC CONTROL STANDARDS SHALL BE USED TO INSTALL AND REMOVE TRAFFIC CONTROL AND PROTECTION DEVICES.
6. THE CONTRACTOR SHALL INSTALL SHORT-TERM PAVEMENT MARKING AS DIRECTED BY THE ENGINEER.
7. THE COST OF INSTALLING, MAINTAINING AND REMOVING THE DETOUR SHALL BE INCLUDED IN TRAFFIC CONTROL AND PROTECTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT ALL BARRICADES, SIGNS, LIGHTS, AND OTHER DEVICES INSTALLED BY HIM ARE IN PLACE AND OPERATING 24 HOURS EACH DAY INCLUDING SUNDAYS AND HOLIDAYS DURING THE TIME DETOUR IS IN EFFECT.
9. THE CONTRACTOR SHALL MAKE ALL CHANGES IN SIGNING THAT ARE DEEMED NECESSARY BY THE ENGINEER.
10. DURING NON-WORKING HOURS AT THE POINT OF ROAD CLOSURE TO ALL TRAFFIC THE CONTRACTOR SHALL PROVIDE A MEANS TO RESTRAIN THE BARRICADES FROM EASY MOVEMENT BY VANDALS. THE CHOSEN METHOD SHALL BE APPROVED BY THE ENGINEER.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE VISIBILITY OF ALL DETOUR AND CONSTRUCTION SIGNING, INCLUDING BRUSHING BACK VEGETATION IF DEEMED NECESSARY BY THE ENGINEER.
12. THE CONTRACTOR SHALL CONTACT THE VILLAGE OF WINNETKA POLICE DEPARTMENT (708-501-6034) AND FIRE DEPARTMENT (708-501-6029) AT LEAST 72 HOURS PRIOR TO THE IMPLEMENTATION OF THE DETOUR PLAN AND 72 HOURS BEFORE THE ROAD IS TO BE OPENED TO TRAFFIC.
13. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ADJUTING PROPERTY OWNERS AT ALL TIMES DURING CONSTRUCTION OF THE PROJECT.
14. INGRESS AND EGRESS TO DRIVEWAYS SHALL BE MAINTAINED AS DIRECTED BY THE ENGINEER. A QUANTITY OF AGGREGATE SURFACE COURSE, TYPE B HAS BEEN INCLUDED IN THE CONTRACT FOR DRIVEWAY AND SIDE STREET ACCESS. THIS WORK SHALL BE IN ACCORDANCE WITH SECTION 402 OF THE STANDARD SPECIFICATIONS.



- 1) ROAD CLOSED R11-2
- 2) ROAD CLOSED AHEAD W20-3 48" x 48"
- 3) R3-1 24" x 24"
- 4) R3-2 24" x 24"
- 5) PINE STREET W16-8 VAR. x 15"
- 6) DETOUR AHEAD W20-2 48" x 48"
- 7) DETOUR M4-8 24" x 12"
- 8) M5-1L 21" x 15"
- 9) M6-1L 21" x 15"
- 10) M5-1R 21" x 15"
- 11) M6-1R 21" x 15"
- 12) END DETOUR M4-8B 24" x 18"
- 13) M6-3 21" x 15"
- 14R) DETOUR M4-10R 48" x 18"
- 14L) DETOUR M4-10L 48" x 18"
- 15) ROAD CLOSED 500 FT W20-3 48" x 48"
- 16) EAST M3-1 24" x 12"
- 17) WEST M3-1 24" x 12"
- 18) ROAD CLOSED LOCAL TRAFFIC ONLY R11-3A 60" x 30"
- 19) ROAD OPEN TO KILLIAN CT 60" x 30"

DETOUR PLAN LEGEND

- TT TYPE III BARRICADE
- DETOUR SIGN
- /// DETOUR ROUTE
- WORK ZONE



REVISIONS	
NAME	DATE

Giorba Group, Inc.
CONSULTING ENGINEERS
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Tel. 773.775.4009 Fax 773.775.4014 Email: chicago@giorba.com

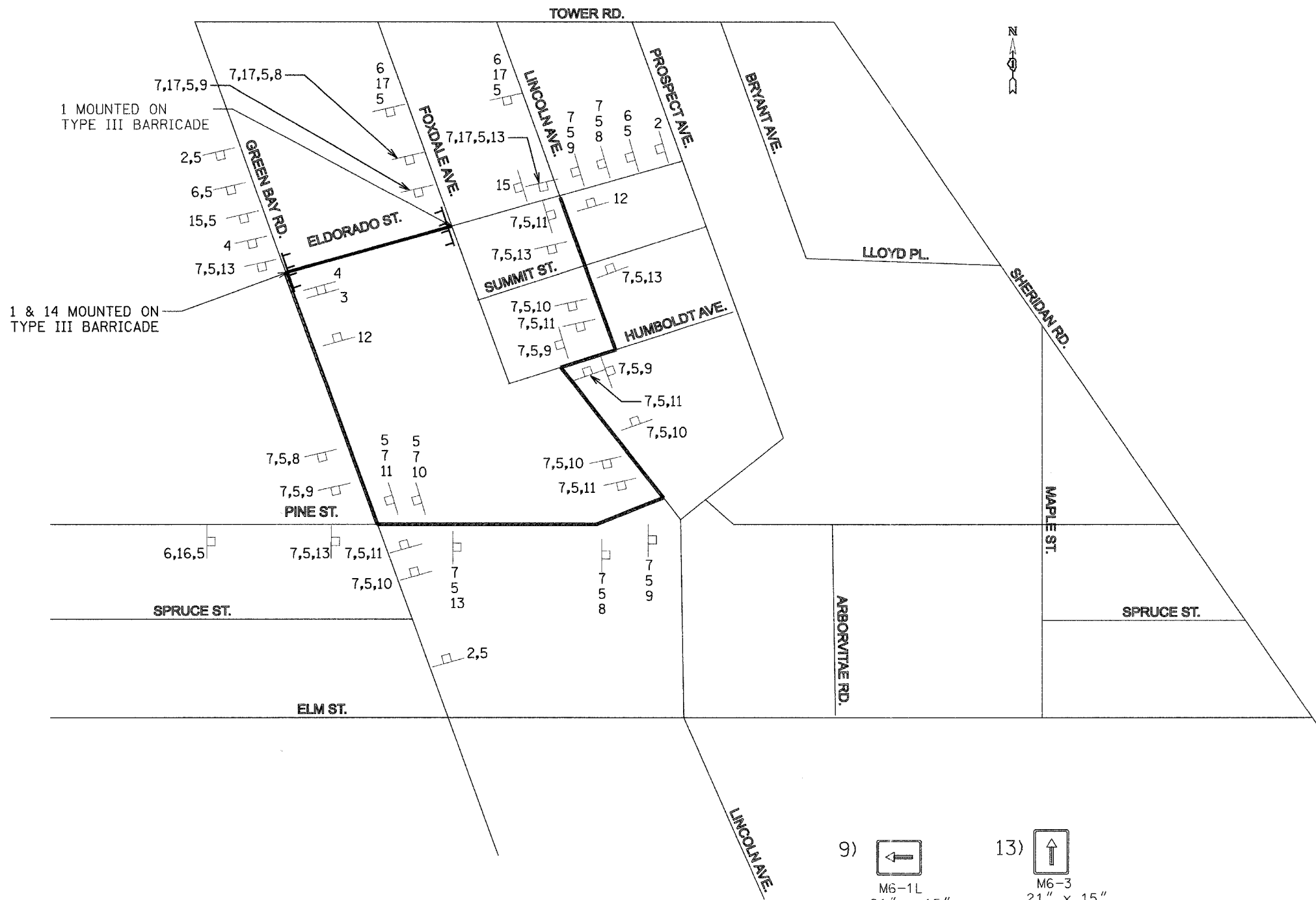
VILLAGE OF WINNETKA
PINE STREET OVER UNION PACIFIC R.R.

DETOUR PLAN
PINE STREET

SCALE: N.T.S. DRAWN BY: EAB
DATE: MARCH 2006 CHECKED BY: MRJ

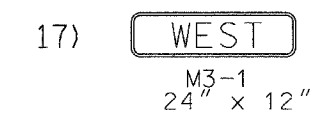
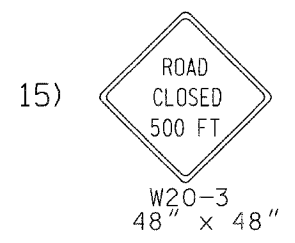
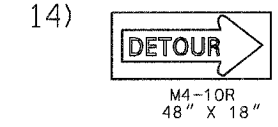
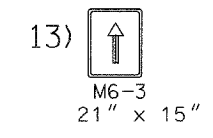
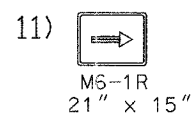
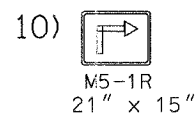
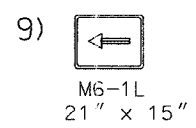
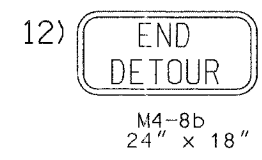
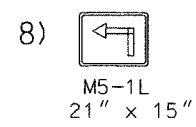
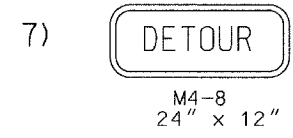
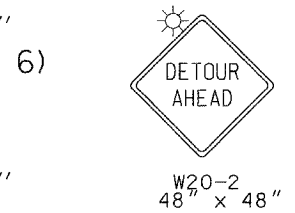
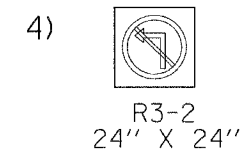
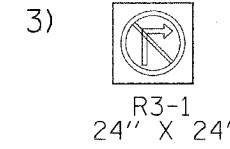
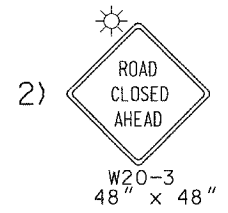
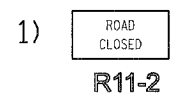
DETOUR PLAN GENERAL NOTES

- TEMPORARY TRAFFIC CONTROL SIGNS MUST BE INSTALLED AT THE DIRECTION AND UNDER THE SUPERVISION OF THE ENGINEER. 48 HOURS NOTICE MUST BE GIVEN TO THE ENGINEER AND VILLAGE.
- ALL TRAFFIC SIGNS SHALL MEET WITH THE APPROVAL OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL MEET WITH THE APPROVAL OF THE ENGINEER REGARDING LOCATION, TYPE, SIZE, NUMBER AND DURATION.
- FOR TYPICAL SIGN INSTALLATION, SEE IDOT HIGHWAY STANDARDS.
- IF FOR ANY REASON WORK MUST BE PERFORMED AT NIGHT, TYPE I OR TYPE II BARRICADES WITH STEADY BURNING LIGHTS ARE TO BE USED.
- APPROPRIATE IDOT TRAFFIC CONTROL STANDARDS SHALL BE USED TO INSTALL AND REMOVE TRAFFIC CONTROL AND PROTECTION DEVICES.
- THE CONTRACTOR SHALL INSTALL SHORT-TERM PAVEMENT MARKING AS DIRECTED BY THE ENGINEER.
- THE COST OF INSTALLING, MAINTAINING AND REMOVING THE DETOUR SHALL BE INCLUDED IN TRAFFIC CONTROL AND PROTECTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT ALL BARRICADES, SIGNS, LIGHTS, AND OTHER DEVICES INSTALLED BY HIM ARE IN PLACE AND OPERATING 24 HOURS EACH DAY INCLUDING SUNDAYS AND HOLIDAYS DURING THE TIME DETOUR IS IN EFFECT.
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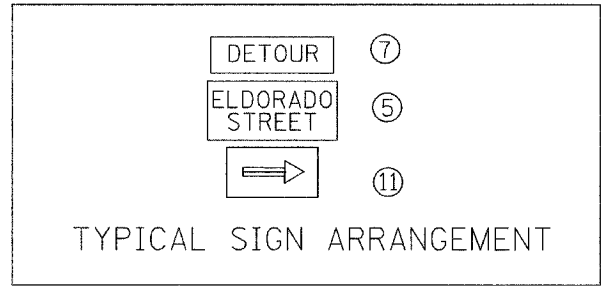
1 MOUNTED ON TYPE III BARRICADE

1 & 14 MOUNTED ON TYPE III BARRICADE



DETOUR PLAN LEGEND

- TT TYPE III BARRICADE
- DETOUR SIGN
- DETOUR ROUTE
- WORK ZONE



REVISIONS	
NAME	DATE

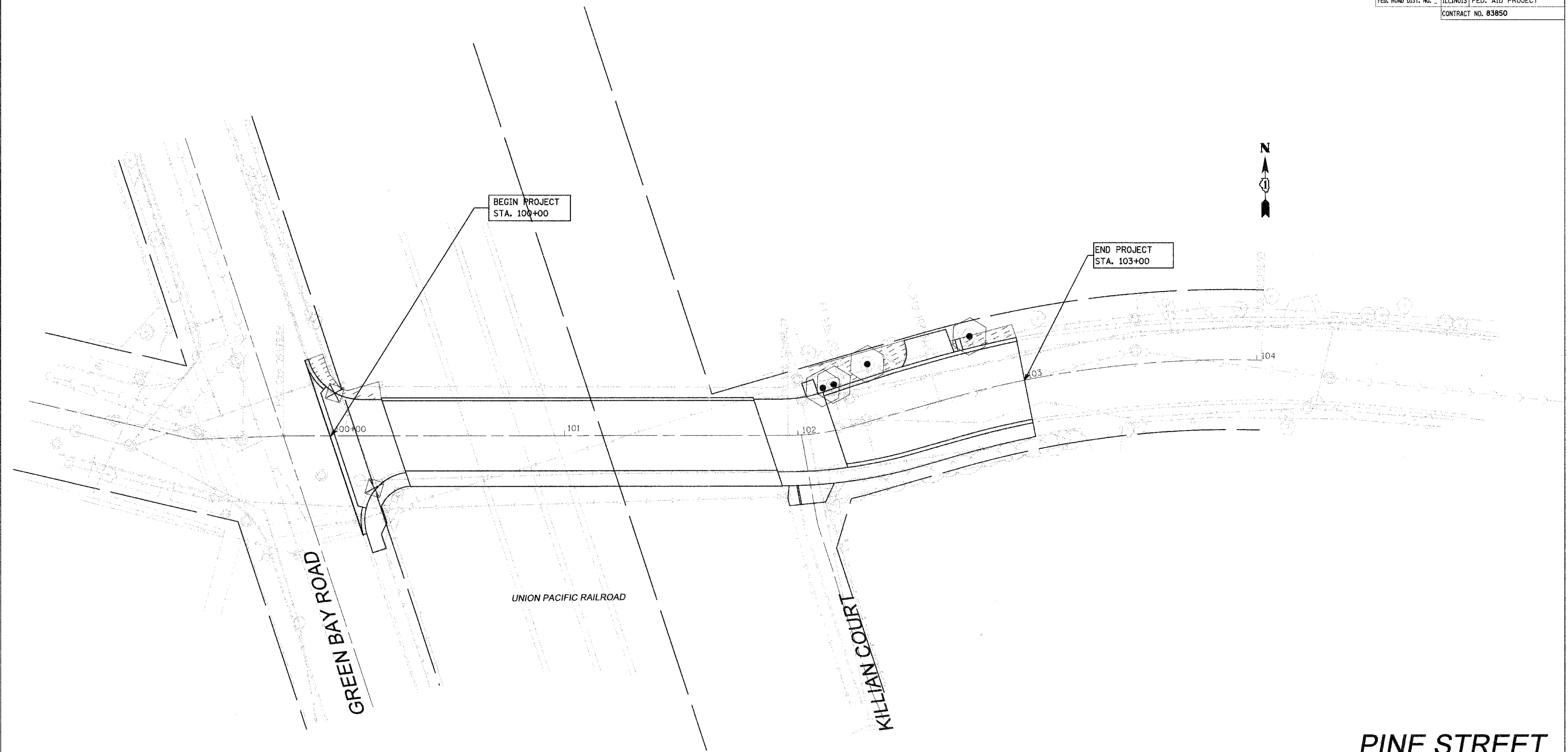
CG Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656
Tel. 773.775.4009 Fax 773.775.4014 Email chicago@ciorba.com

VILLAGE OF WINNETKA
ELDORADO STREET OVER UNION PACIFIC R.R.

DETOUR PLAN
ELDORADO STREET

SCALE: N.T.S. DRAWN BY: EAB
DATE: MARCH 2006 CHECKED BY: MRJ

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	15
STA. 100+00		TO STA. 103+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83850				



PINE STREET

LEGEND

	INLET AND PIPE PROTECTION (INLET FILTERS)
	TEMPORARY FENCE TREE TRUNK PROTECTION
	SODDING, SALT TOLERANT, TOPSOIL FURNISH & PLACE, 4"

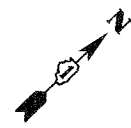
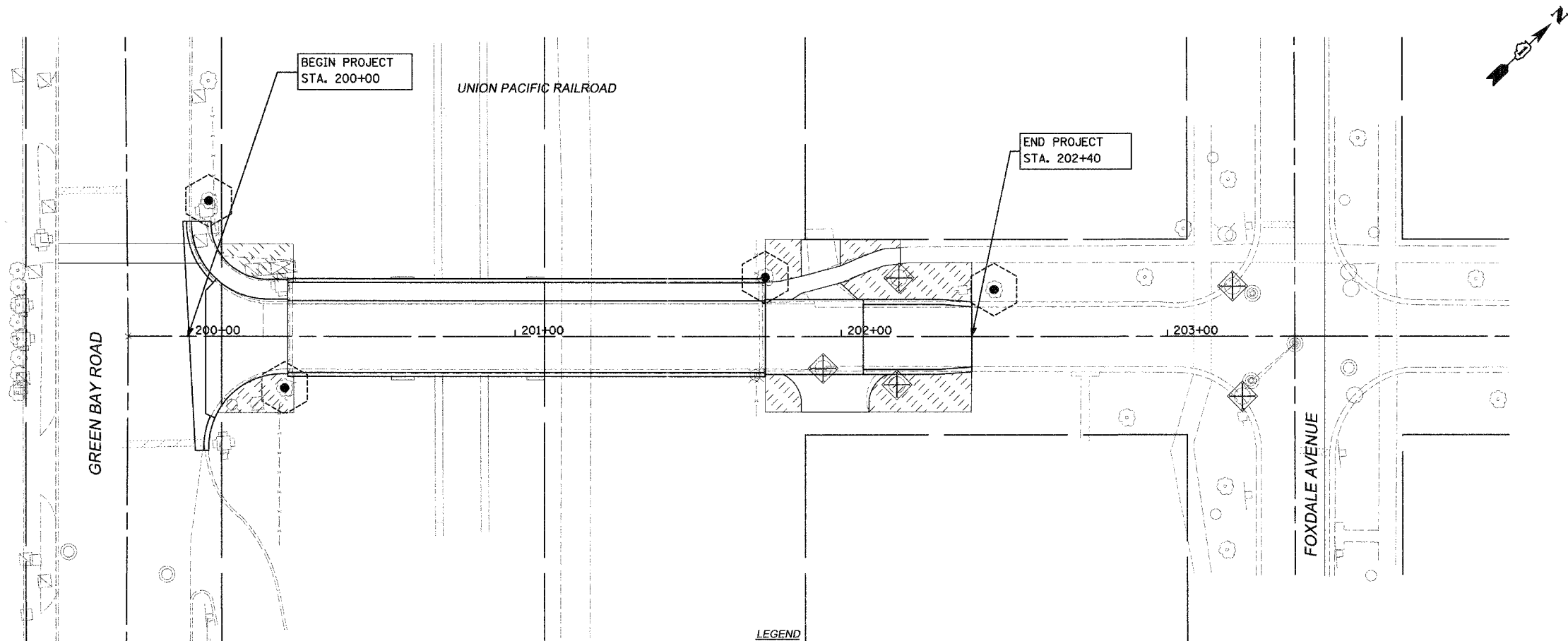
REVISIONS	
NAME	DATE

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CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656
Tel. 773.775.4909 Fax 773.775.4014 Email: chicago@giorba.com

VILLAGE OF WINNETKA
PINE STREET OVER UNION PACIFIC R.R.
LANDSCAPING, EROSION CONTROL
AND TREE PROTECTION

SCALE: 1" = 20'
DATE: MARCH 2006
DRAWN BY: EAB
CHECKED BY: MRJ

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	16
STA.	200+00	TO STA.	202+40	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83850				



LEGEND

	INLET AND PIPE PROTECTION (INLET FILTERS)
	TEMPORARY FENCE TREE TRUNK PROTECTION
	SODDING, SALT TOLERANT, TOPSOIL, FURNISH & PLACE, 4"

ELDORADO STREET

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CONSULTING ENGINEERS
5507 North Cumberland Avenue, Suite 402 Chicago, Illinois 60656
Tel. 773.775.4809 Fax 773.775.4014 Email: chicago@ciorba.com

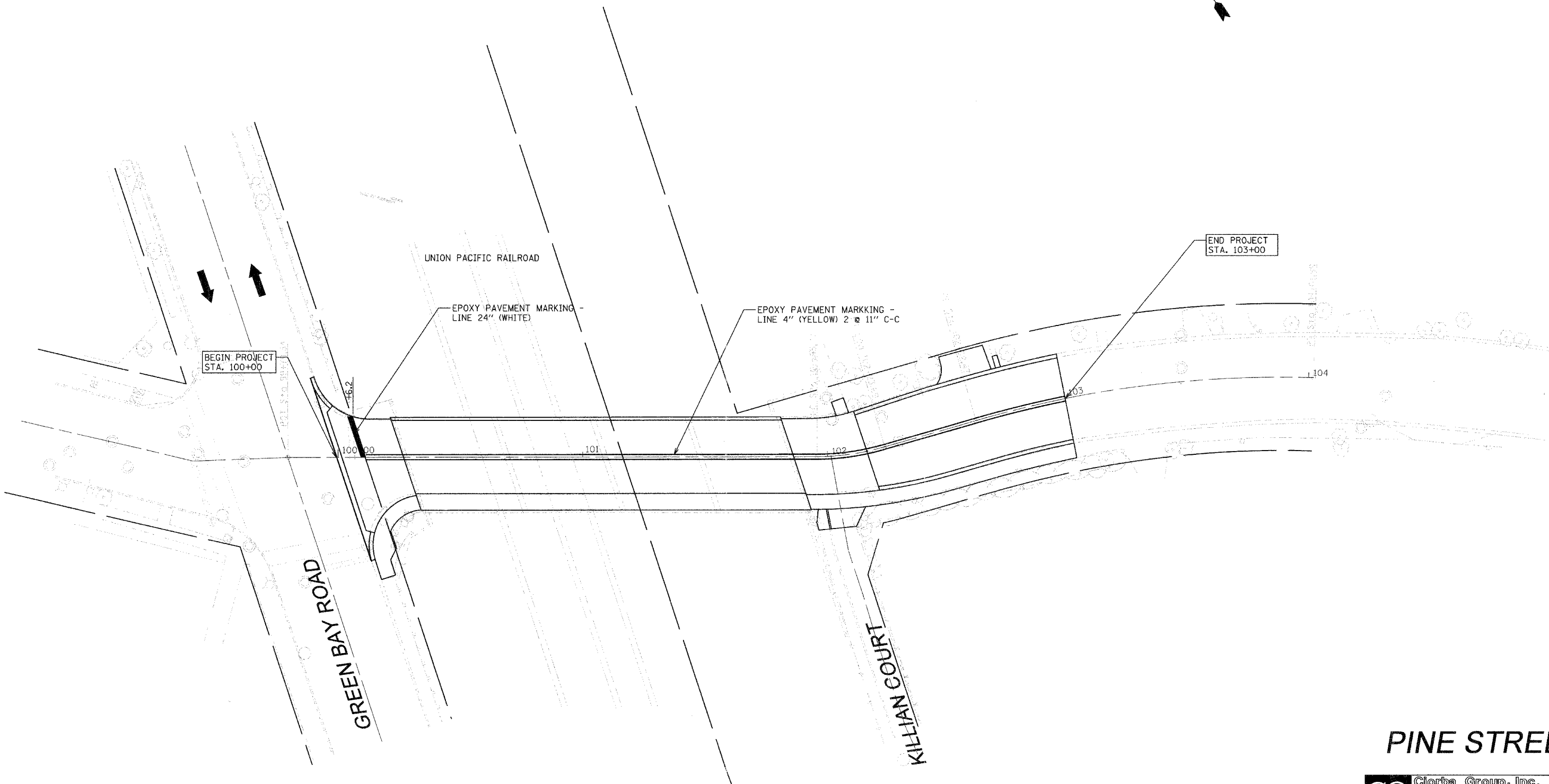
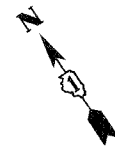
REVISIONS	
NAME	DATE

VILLAGE OF WINNETKA
ELDORADO STREET OVER UNION PACIFIC R.R.

LANDSCAPING, EROSION CONTROL
AND TREE PROTECTION

SCALE: 1" = 20'
DATE: MARCH 2006
DRAWN BY: EAB
CHECKED BY: MRJ

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	17
STA. 100+00		TO STA. 103+00		
FED. ROAD DIST. NO. _		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 83850				



PINE STREET

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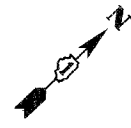
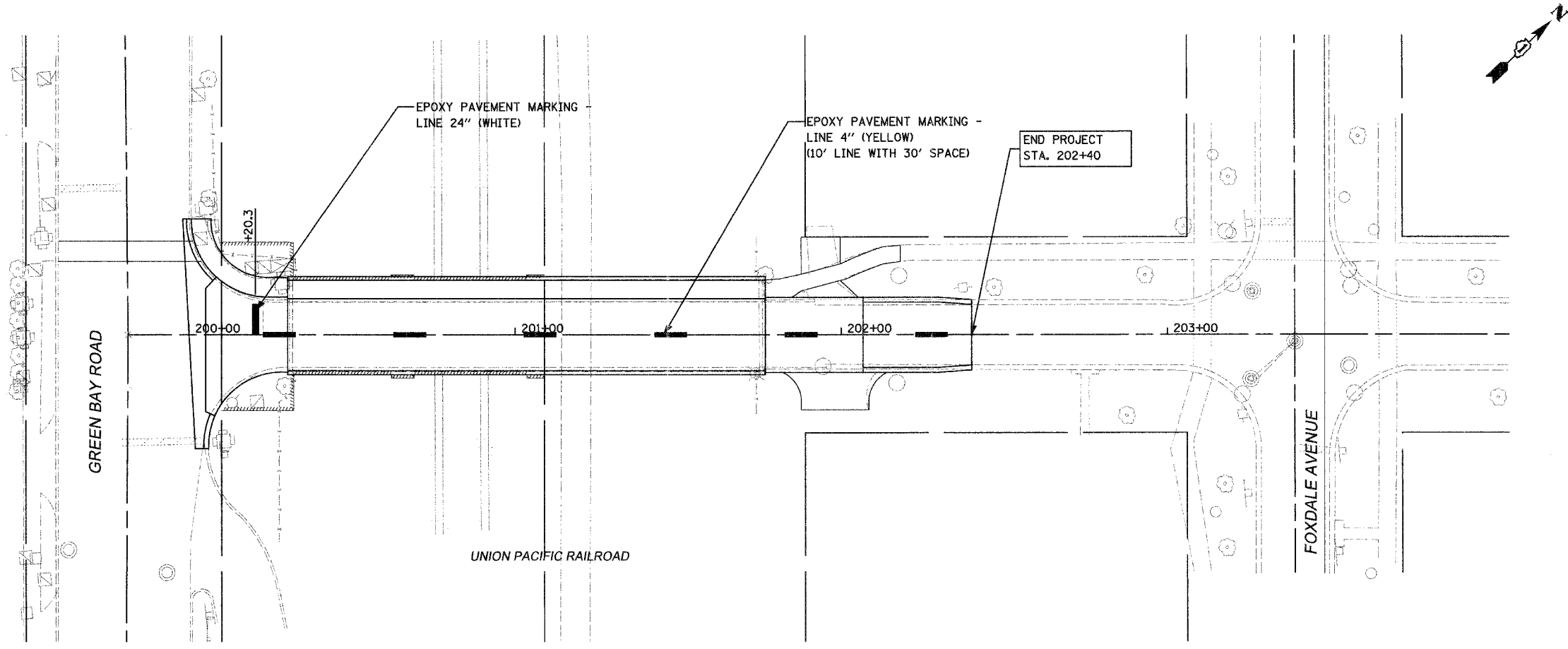
VILLAGE OF WINNETKA
 PINE STREET OVER UNION PACIFIC R.R.
 PROPOSED STRIPING

SCALE: 1"=20'
 DATE: MARCH 2006
 DRAWN BY: EAB
 CHECKED BY: MRJ

REVISIONS	
NAME	DATE

12-11-07/06/06

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	18
STA.	200+00	TO STA.	202+40	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 83850				



ELDORADO STREET

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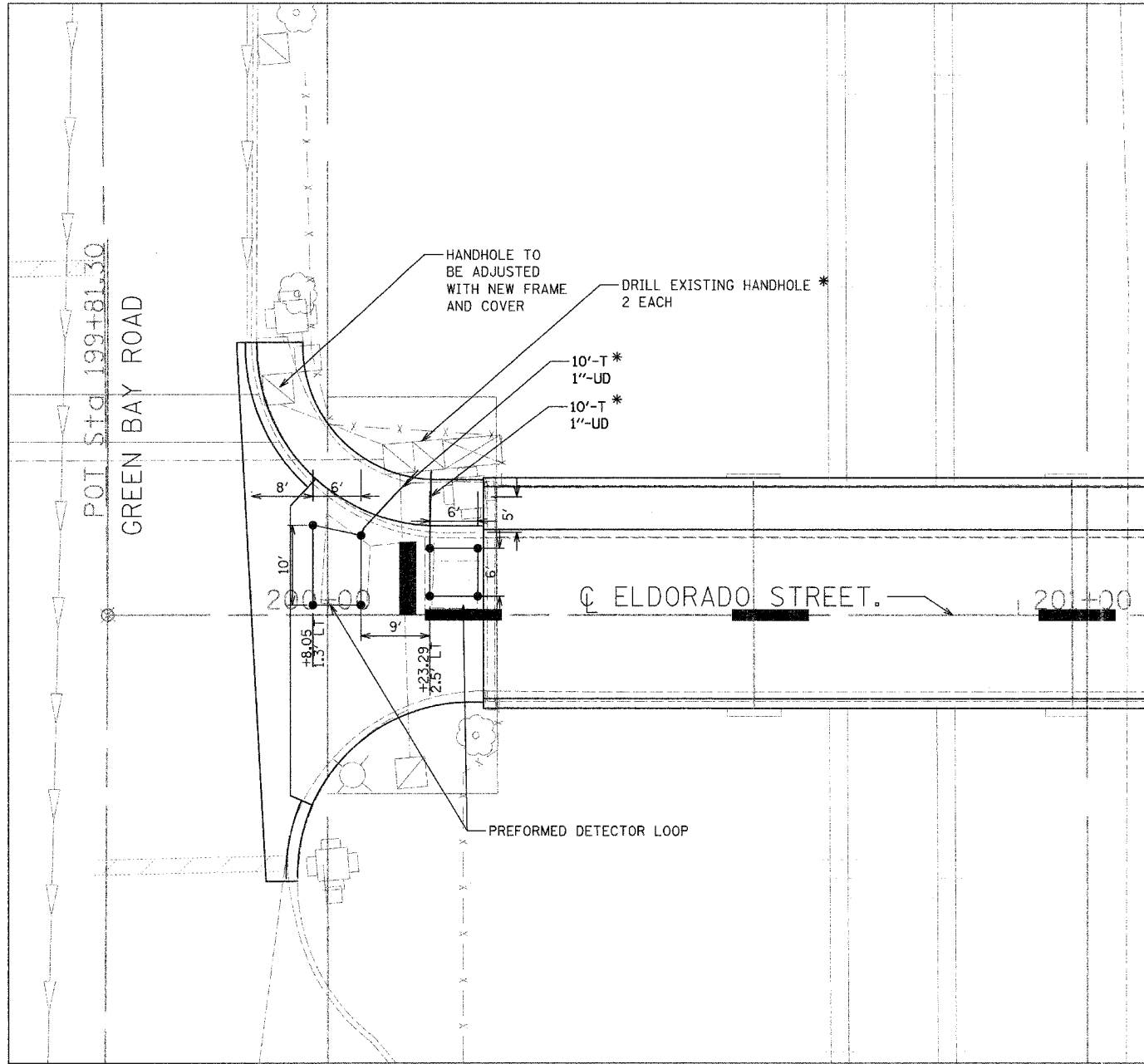
VILLAGE OF WINNETKA
 ELDORADO STREET OVER UNION PACIFIC R.R.

PROPOSED STRIPING

SCALE: 1" = 20'
 DATE: MARCH 2006
 DRAWN BY: EAB
 CHECKED BY: MRJ

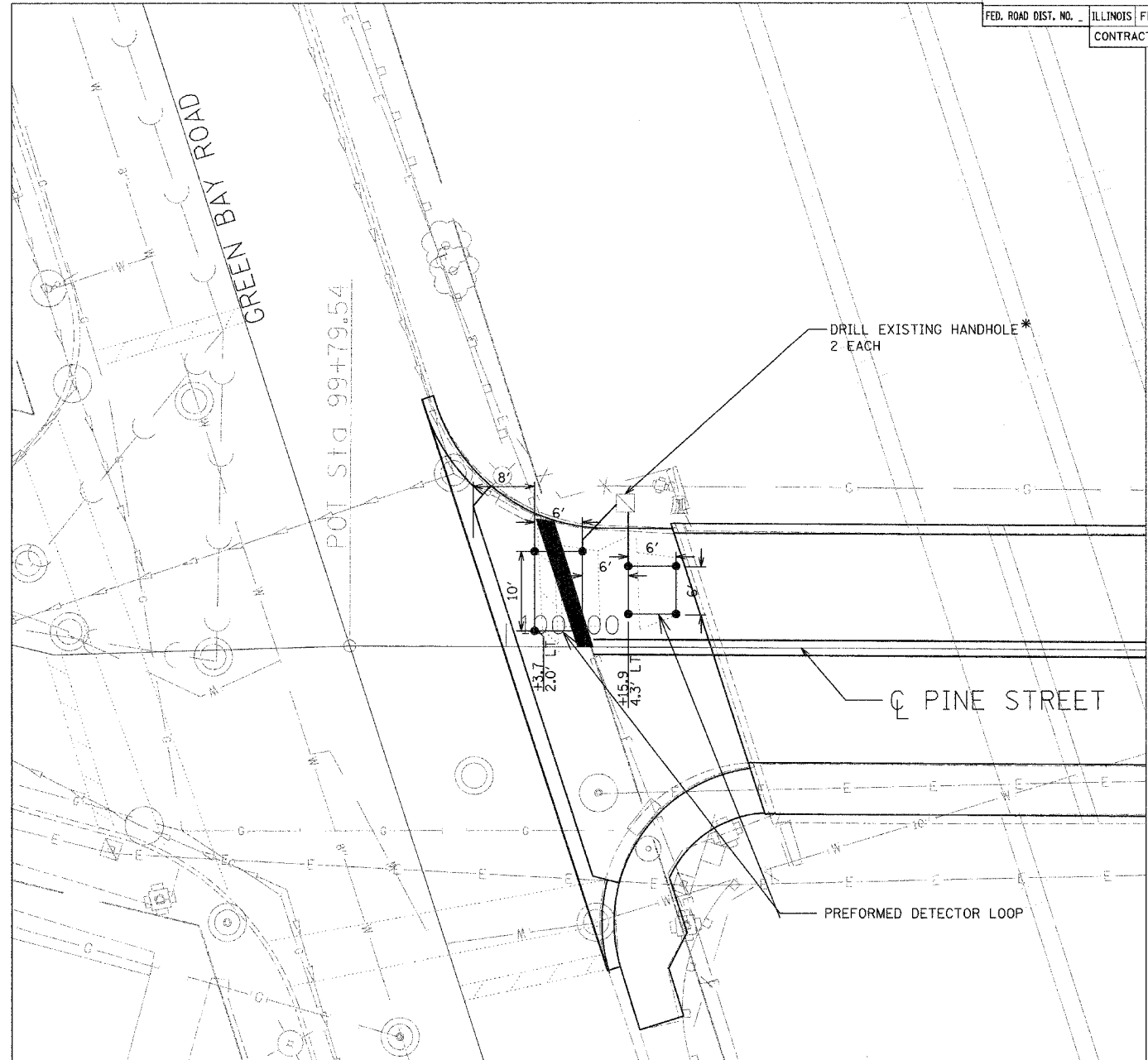
REVISIONS	
NAME	DATE

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 2/28/06 10:28:01 AM



DETECTOR LOOP LAYOUT AT ELDORADO STREET

* INCIDENTAL TO PREFORMED DETECTOR LOOP



DETECTOR LOOP LAYOUT AT PINE STREET

SCHEDULE OF QUANTITIES

UNIT	PAY ITEM	QUANTITY
FOOT	PREFORMED DETECTOR LOOP	65
EACH	HANDHOLE TO BE ADJUSTED WITH NEW FRAME AND COVER	1
EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	1

SCHEDULE OF QUANTITIES

UNIT	PAY ITEM	QUANTITY
FOOT	PREFORMED DETECTOR LOOP	65
EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	1

REVISIONS	
NAME	DATE

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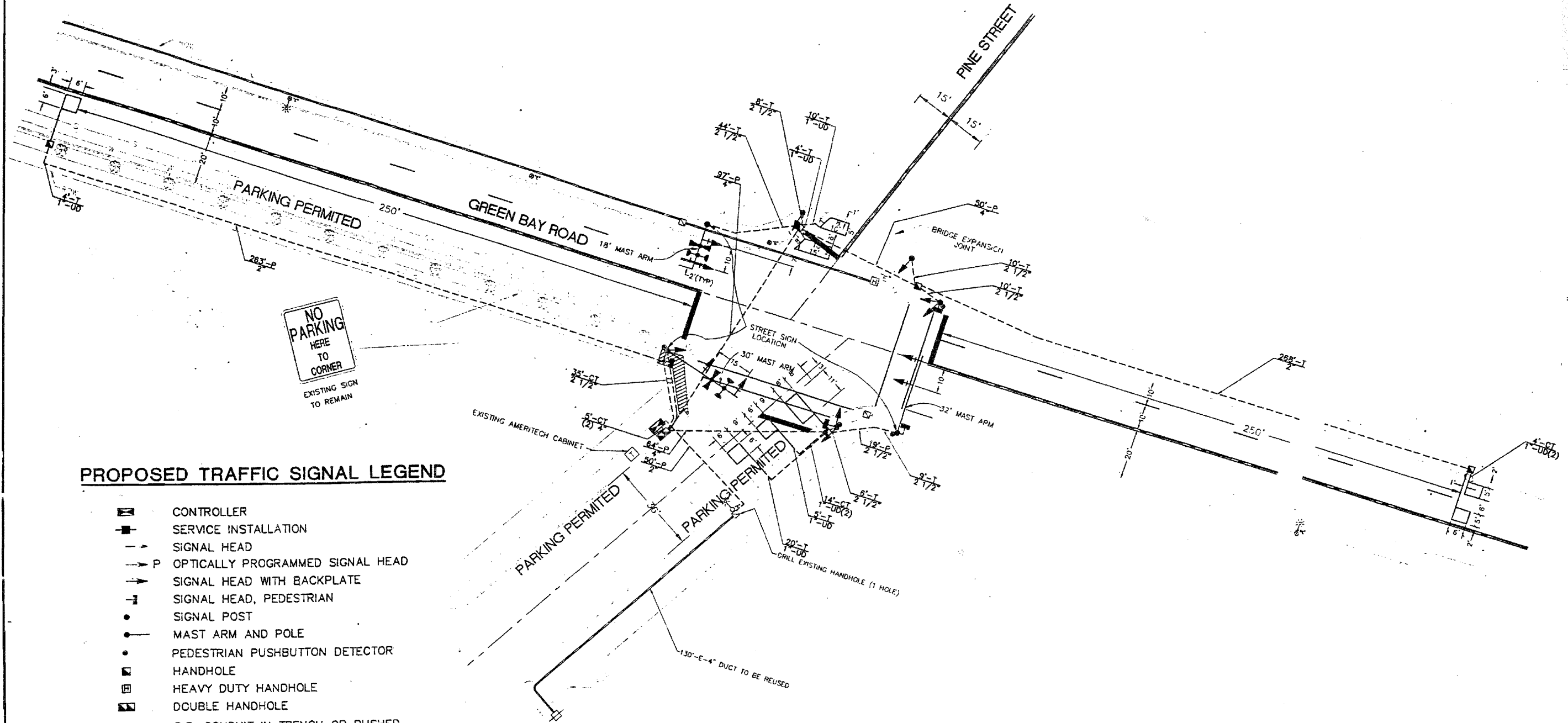
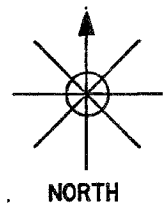
VILLAGE OF WINNETKA
ELDORADO STREET OVER UNION PACIFIC R.R.
PINE STREET OVER UNION PACIFIC R.R.

PROPOSED DETECTOR LOOP DETAILS

SCALE: 1"=10'
DATE: APRIL 2006

DRAWN BY: EAB
CHECKED BY: MRJ

NOTE:
CONTROLLER SHALL BE EAGLE EPAC 300



PROPOSED TRAFFIC SIGNAL LEGEND

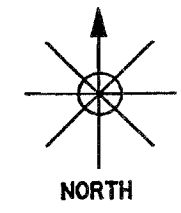
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- SERVICE INSTALLATION
- SIGNAL HEAD
- OPTICALLY PROGRAMMED SIGNAL HEAD
- SIGNAL HEAD WITH BACKPLATE
- SIGNAL HEAD, PEDESTRIAN
- SIGNAL POST
- MAST ARM AND POLE
- PEDESTRIAN PUSHBUTTON DETECTOR
- HANDHOLE
- HEAVY DUTY HANDHOLE
- DOUBLE HANDHOLE
- G.S. CONDUIT IN TRENCH OR PUSHED
- UNIT DUCT IN TRENCH
- DETECTOR LOOP
- SIDEWALK REMOVAL AND REPLACEMENT
- TELEPHONE (AMERITECH) CABINET
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON

FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
SIGNAL LAYOUT PLAN
 GREEN BAY ROAD AND PINE STREET
 WINNETKA, ILLINOIS

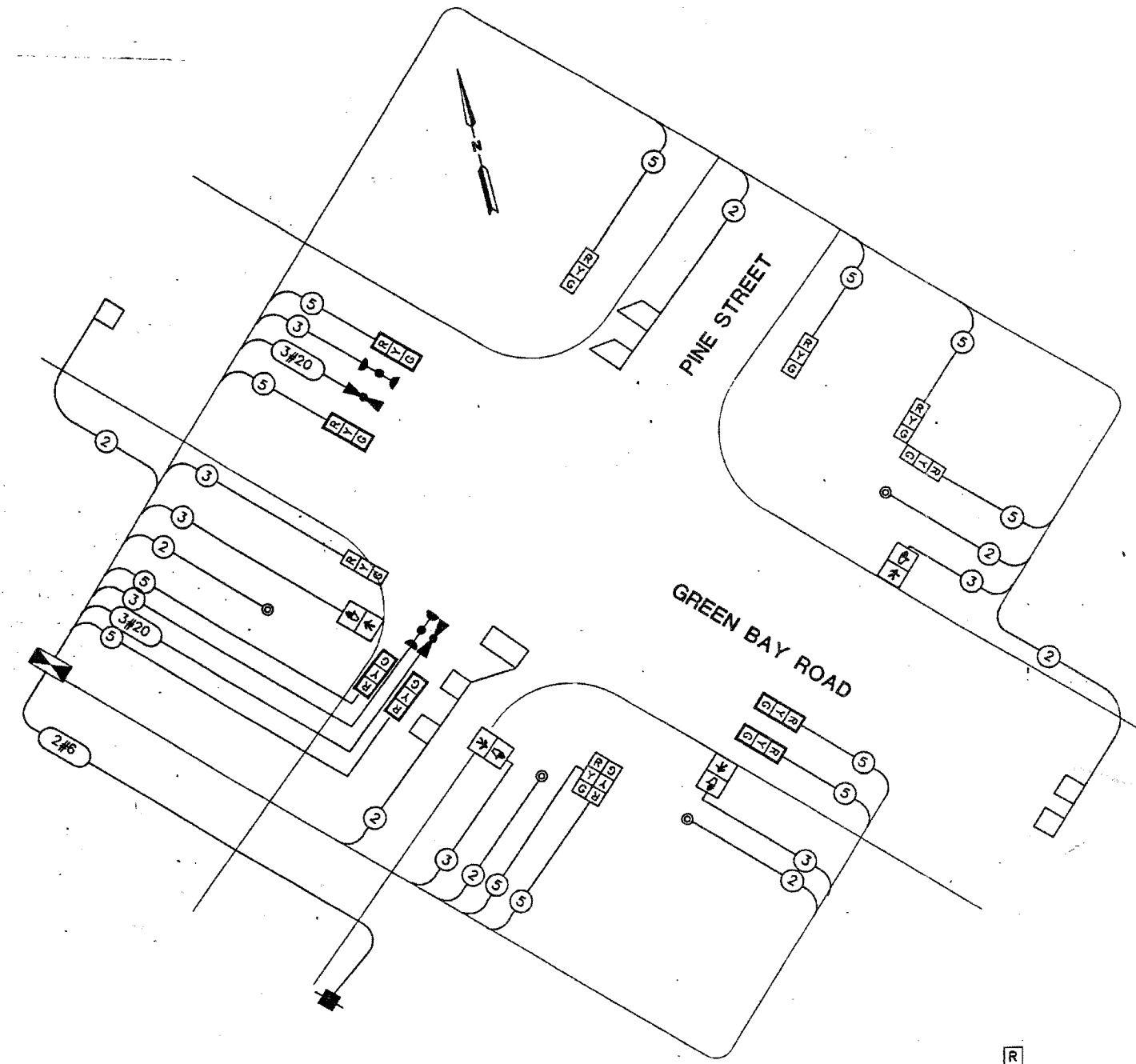
SCALE: VERT. _____
 HORIZ. _____
 DATE: _____

DRAWN BY: _____
 DESIGNED BY: _____
 CHECKED BY: _____



CONTROLLER SEQUENCE

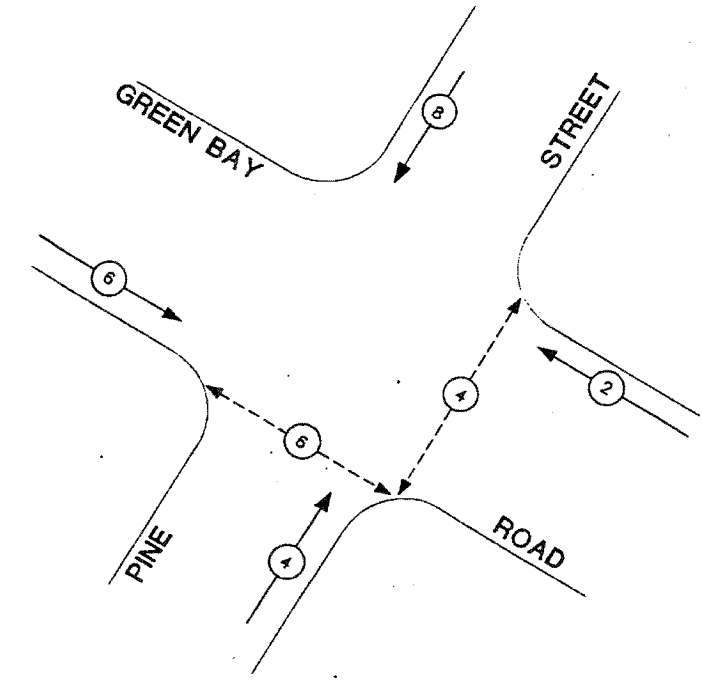
REFERRING TO STANDARD 2393 THE VEHICULAR AND PEDESTRIAN PHASES USED ARE DESIGNATED BELOW.



CABLE PLAN

SCHEDULE OF QUANTITIES

- CABLE PLAN LEGEND**
- [R] 12" TRAFFIC SIGNAL SECTION
 - [Cabinet Symbol] CONTROLLER CABINET
 - [Square Symbol] SERVICE INSTALLATION
 - [Square Symbol] VEHICLE DETECTOR, INDUCTION LOOP
 - [Circle Symbol] PEDESTRIAN PUSHBUTTON
 - [Square Symbol] PEDESTRIAN SIGNAL SECTION
 - [R/Y/G] [R/Y/G] SIGNAL FACES WITH OR WITHOUT BACKPLATE
 - (5) DENOTES NUMBER OF CONDUCTORS (NEW). ALL LOOP DETECTOR CABLE TO BE SHIELDED. ALL CABLE # 14 EXCEPT AS INDICATED.



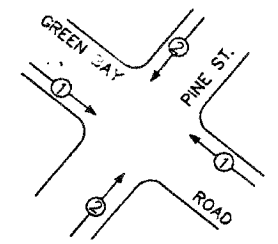
PROPOSED PHASE DESIGNATION DIAGRAM

DUAL ENTRY - ALL LEGS



- LEGEND**
- [Circle with arrows] DUAL ENTRY PHASE
 - [Circle with arrow] PEDESTRIAN PHASE
 - *
- NUMBERS REFER TO ASSOCIATED PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE NOTES



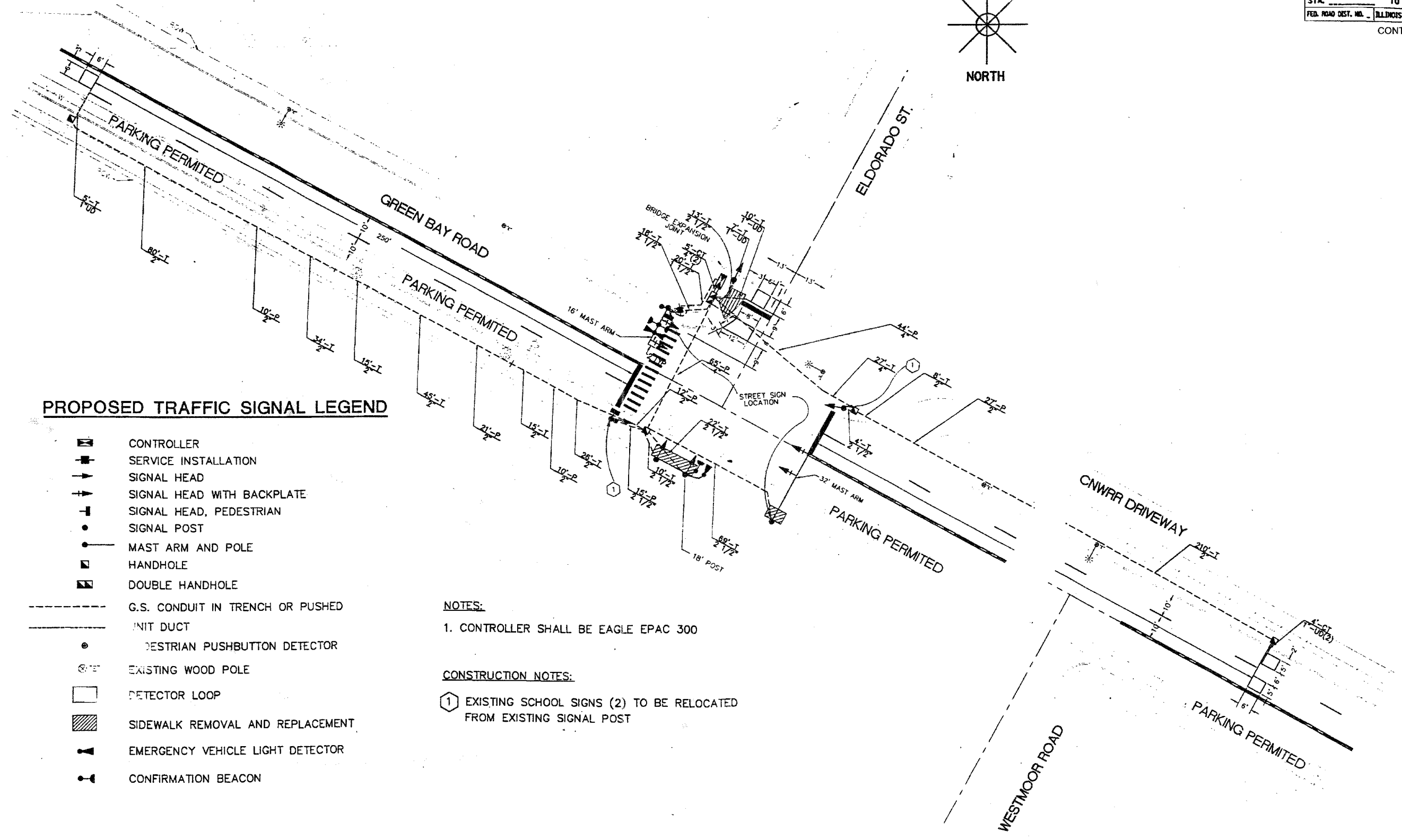
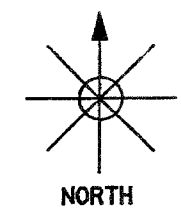
PROPOSED PRIORITY LANES		
PRIORITY LANE INTERVAL	1	2
MOVEMENT	—	

ILLINOIS DEPARTMENT OF TRANSPORTATION
CABLE PLAN AND PHASE DESIGNATION DIAGRAM
GREEN BAY ROAD AND PINE STREET WINNETKA ILLINOIS

DATE: _____ VERT. SCALE: _____
 DATE: _____ HORIZ. SCALE: _____

DRAWN BY: _____
 DESIGNED BY: _____
 CHECKED BY: _____

FOR INFORMATION ONLY



PROPOSED TRAFFIC SIGNAL LEGEND

- CONTROLLER
- SERVICE INSTALLATION
- SIGNAL HEAD
- SIGNAL HEAD WITH BACKPLATE
- SIGNAL HEAD, PEDESTRIAN
- SIGNAL POST
- MAST ARM AND POLE
- HANDHOLE
- DOUBLE HANDHOLE
- G.S. CONDUIT IN TRENCH OR PUSHED UNIT DUCT
- PEDESTRIAN PUSHBUTTON DETECTOR
- EXISTING WOOD POLE
- DETECTOR LOOP
- SIDEWALK REMOVAL AND REPLACEMENT
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON

NOTES:
 1. CONTROLLER SHALL BE EAGLE EPAC 300

CONSTRUCTION NOTES:
 (1) EXISTING SCHOOL SIGNS (2) TO BE RELOCATED FROM EXISTING SIGNAL POST

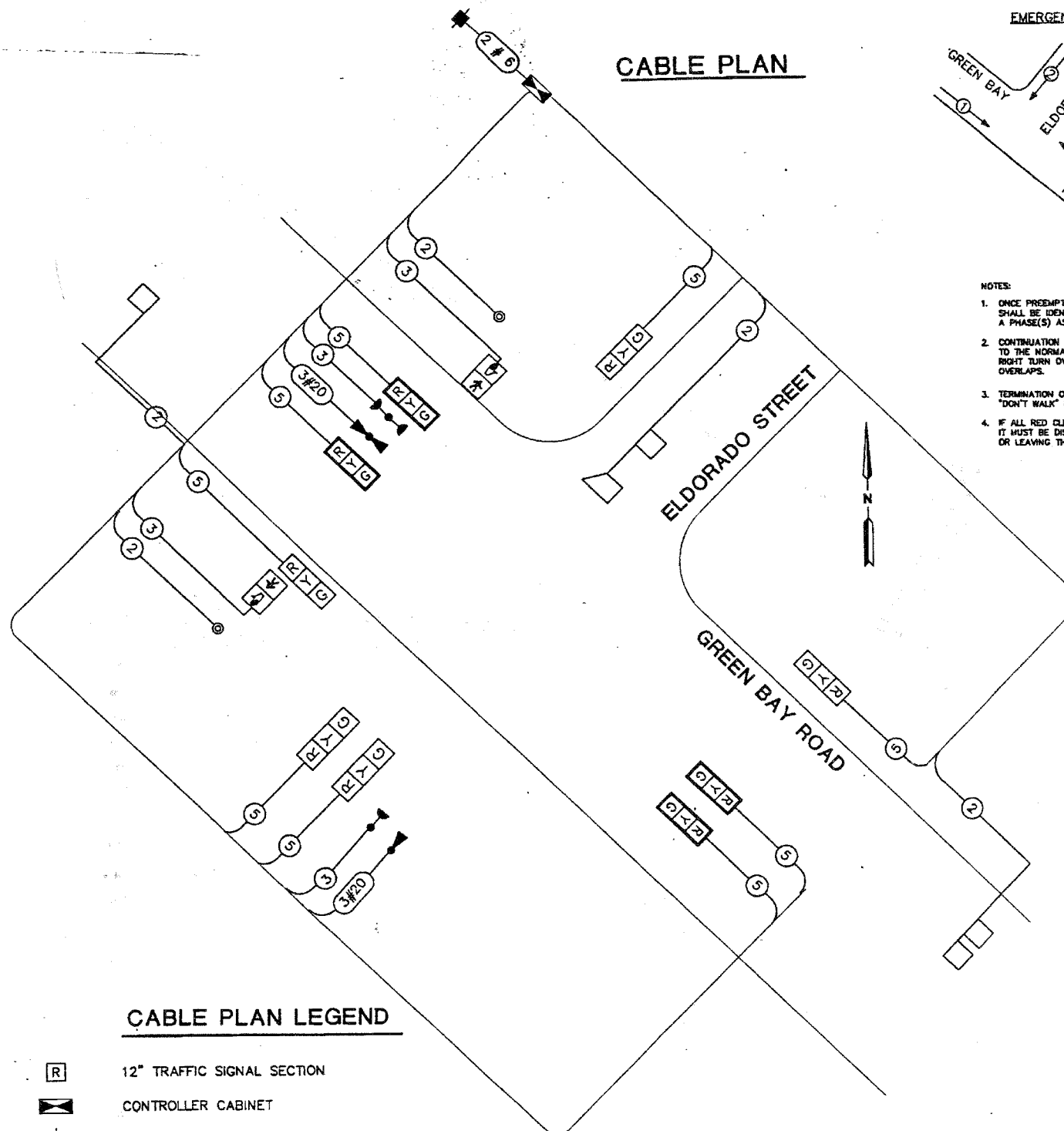
FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SIGNAL LAYOUT PLAN
 GREEN BAY ROAD AND ELDORADO STREET
 WINNETKA, ILLINOIS

SCALE: VERT. _____
 HORIZ. _____
 DATE: _____

DRAWN BY: _____
 DESIGNED BY: _____
 CHECKED BY: _____

CABLE PLAN

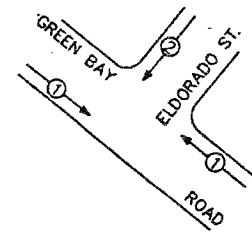


CABLE PLAN LEGEND

- R 12" TRAFFIC SIGNAL SECTION
- CONTROLLER CABINET
- SERVICE INSTALLATION
- VEHICLE DETECTOR, INDUCTION LOOP
- PEDESTRIAN PUSHBUTTON
- PEDESTRIAN SIGNAL SECTION
- 5 DENOTES NUMBER OF CONDUCTORS (NEW). ALL LOOP DETECTOR CABLE TO BE SHIELDED. ALL CABLE #14 EXCEPT AS INDICATED.
- R
Y
G

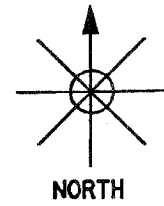
R
Y
G
 SIGNAL FACES WITH OR WITHOUT BACKPLATE

EMERGENCY VEHICLE PREEMPTION SEQUENCE NOTES



PROPOSED PRIORITY LANES		
PRIORITY LANE INTERVAL	1	2
MOVEMENT	←	↓

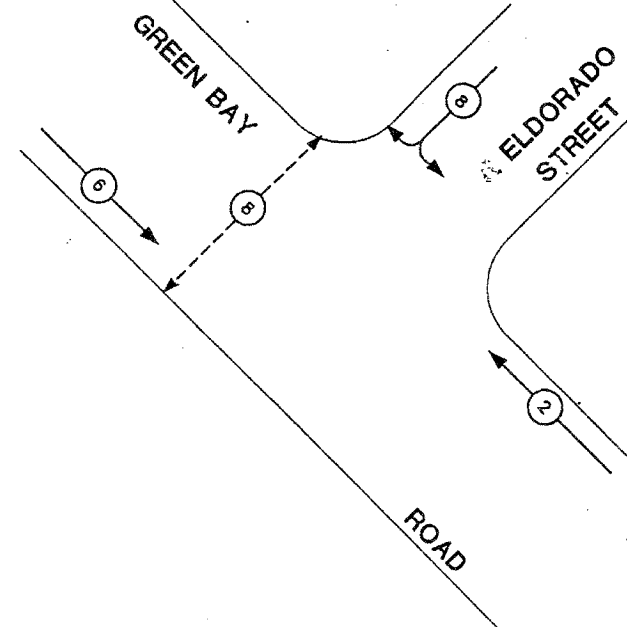
- NOTES:
- ONCE PREEMPTION HAS BEEN CALLED, TERMINATION OF A DUAL ENTRY PHASE(S) SHALL BE IDENTICAL TO THE NORMAL SEQUENCE OF OPERATION'S TERMINATION OF A PHASE(S) AS DESCRIBED IN STANDARD 2393.
 - CONTINUATION OR TERMINATION OF ALL RIGHT TURN OVERLAPS SHALL BE IDENTICAL TO THE NORMAL SEQUENCE OF OPERATION'S CONTINUATION OR TERMINATION OF RIGHT TURN OVERLAPS AS DESCRIBED IN THE CLEARANCE NOTES FOR RIGHT TURN OVERLAPS.
 - TERMINATION OF ALL PEDESTRIAN PHASES SHALL INCLUDE A FULL FLASHING "DON'T WALK" INTERVAL.
 - IF ALL RED CLEARANCE IS USED IN THE NORMAL SEQUENCE OF OPERATION, IT MUST BE DISPLAYED AFTER THE YELLOW CLEARANCE INTERVAL WHEN ENTERING OR LEAVING THE PREEMPTION SEQUENCE.



NORTH

CONTROLLER SEQUENCE

REFERRING TO STANDARD 2393 THE VEHICULAR AND PEDESTRIAN PHASES USED ARE DESIGNATED BELOW.



PROPOSED PHASE DESIGNATION DIAGRAM

DUAL ENTRY - ALL LEGS

- LEGEND
- DUAL ENTRY PHASE
 - PEDESTRIAN PHASE
 - * NUMBERS REFER TO ASSOCIATED PHASE

SCHEDULE OF QUANTITIES

FOR INFORMATION ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
CABLE PLAN AND PHASE DESIGNATION DIAGRAM
 GREEN BAY ROAD AND ELDORADO STREET
 WINNETKA ILLINOIS

SCALE: VERT. _____
 HORIZ. _____
 DATE: _____

DRAWN BY: _____
 DESIGNED BY: _____
 CHECKED BY: DAD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
00-00094-03-BR	COOK	69	20	
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS FED. AID PROJECT			
Sheet SA-1 of SA-23	CONTRACT 83850			

Bench Mark:
Brass plate in front steps on east side of Village Hall, 510 Green Bay Road.
Elev. 657.79

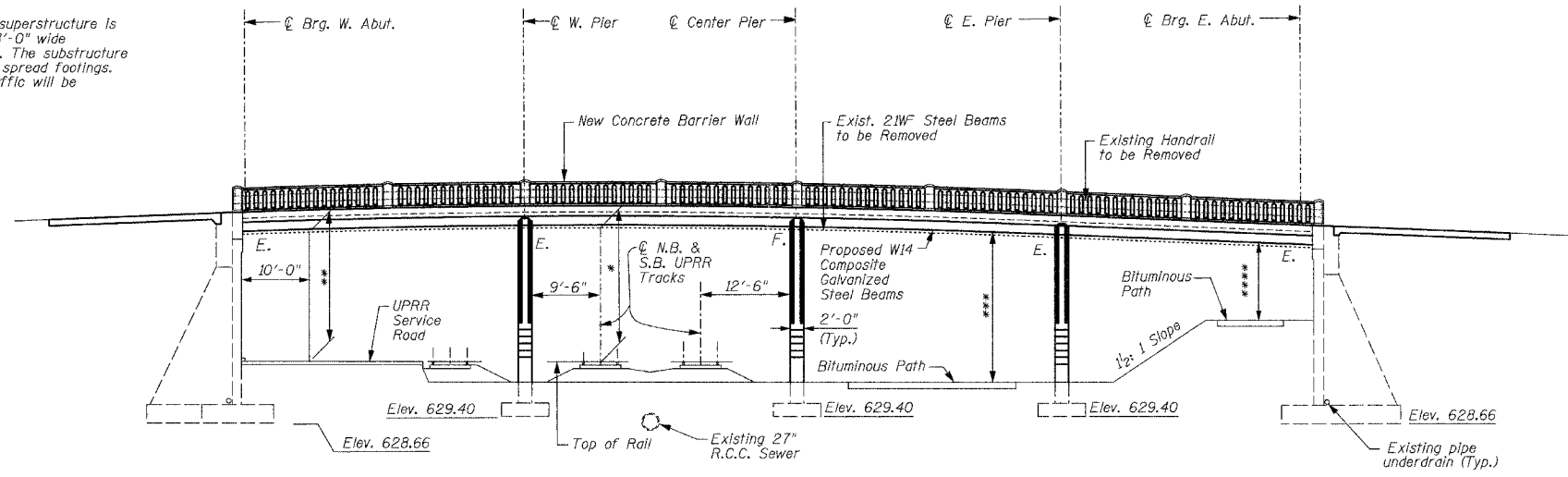
Existing Structure: SN 016-8259. Built in 1940. The superstructure is R.C. Deck 155'-7" long Bk. to Bk. of Abutments by 38'-0" wide supported on four-span rolled beams. Skew 18°10'00". The substructure is R.C. Multi-column piers & counterfort abutments on spread footings. The superstructure will be removed and replaced. Traffic will be detoured during construction.

No salvage.

Note:
No deck drains will be permitted in the spans over tracks or within 10' feet of cross arms of a railroad pole line. Storm water collected on the bridge will be deposited into Village storm drains East and West of the bridge as shown in Sheet No. 11.

TABLE 1 - TRACK ELEVATION:

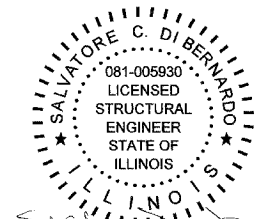
Point No.	Elevation	Location
1	637.20	SPUR - N
2	637.12	SPUR - S
3	637.75	N.B. - N
4	637.57	N.B. - S
5	637.62	S.B. - N
6	637.48	S.B. - S



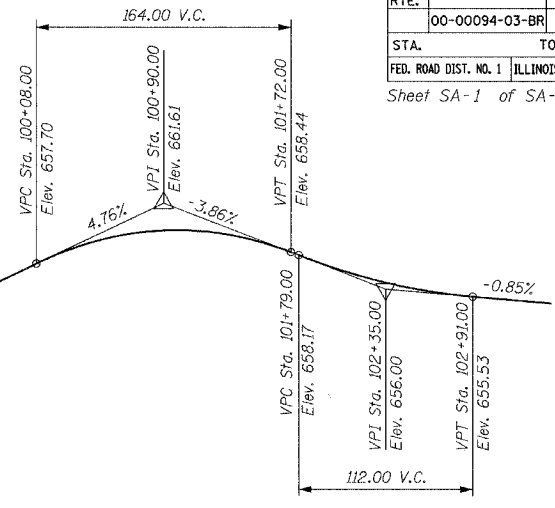
ELEVATION

- * Existing Min. Vert. Cl. 19'-2"
- Proposed Min. Vert. Cl. 19'-8"
- ** Existing Min. Vert. Cl. 18'-7"
- Proposed Min. Vert. Cl. 19'-1"
- *** Proposed Min. Vert. Cl. 21'-0"
- **** Proposed Min. Vert. Cl. 8'-5"

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 requirements of the current "AASHTO Standard Specifications for Highway Bridges".



DATE: 7/20/2006
SEAL EXPIRES: 11/30/2006



PROPOSED P.G.L. PINE STREET

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

LOADING HS20-44

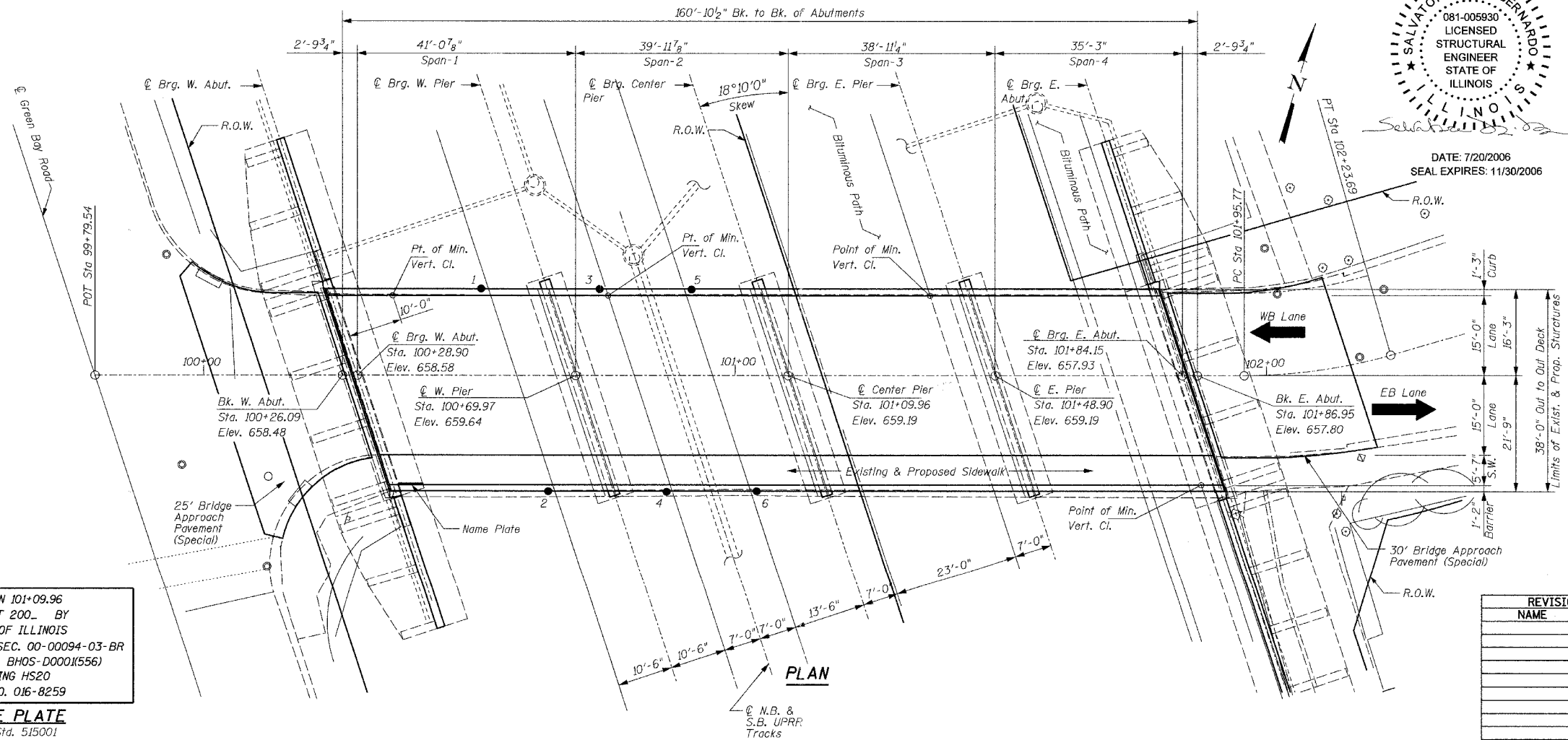
Allow 50 p.s.f. for future wearing surface.

DESIGN STRESSES

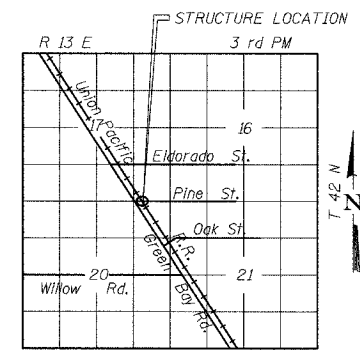
- $f_s = 18,000$ p.s.i. (Existing)
- $f_c = 1,050$ p.s.i. (Existing)
- $f_c = 3,500$ p.s.i. (Proposed)
- $f_y = 60,000$ p.s.i. (Proposed Reinforcing Steel)
- $f_y = 50,000$ p.s.i. (Proposed Structural Steel-M270 Grade 50)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04 g
Site Coefficient (S) = 1.0



PLAN



LOCATION SKETCH

STATION 101+09.96
BUILT 200 BY
STATE OF ILLINOIS
F.A.U RT. SEC. 00-00094-03-BR
F.A.U PROJ. NO. BHOS-D0001(556)
LOADING HS20
STR. NO. 016-8259
NAME PLATE
See Std. 515001

REVISIONS	
NAME	DATE

Clorba Group, Inc.
CONSULTING ENGINEERS
3001 NORTH CUMBERLAND AVENUE - CHICAGO, ILLINOIS 60656 - (773) 775-4000

VILLAGE OF WINNETKA, ILLINOIS
GENERAL PLAN & ELEVATION
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

SCALE: NONE
DATE: JUNE 2006
FILE: 3278

DRAWN BY: RCD
DESIGN BY: BWS
CHECKED BY: SCD

DATE: 7/20/2006
FILENAME: N:\PROJ\9278\Pine\Design\Structural_Pine_9278\CAD\Final_plan_rev\9278-Pine-gp01.dgn

GENERAL NOTES

- Fasteners shall be high strength bolts (AASHTO M 164, Type 3 in unpainted areas and mechanically galvanized AASHTO M 164, Type 1 or Type 2 in painted areas). Bolts 3/4" ϕ , open holes 5/8" ϕ , unless otherwise noted.
- Calculated weight of Structural Steel = Grade 50=128,168 Lbs.
Grade 36=34,494 Lbs.
- Field welding of construction accessories will not be permitted to beams or girders.
- Anchor bolts shall be set before bolting diaphragms over supports.
- The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.
- The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2.
- Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-322 Grade 60.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two 1/8" adjusting shims shall be provided for each bearing and placed as detailed.
- Bridge Seat Sealer shall be applied to the seat area of both abutments.
- All construction joints shall be bonded.
- The roadway signs that hang from each fascia beam below the bridge shall be removed and salvaged prior to removal of the superstructure and reinstalled once the new beams are set.
- All new structural steel shall be galvanized. The fascia and underside of the exterior beams and their associated splice plates shall be painted with the acrylic system. The color of the final finish coat shall be Reddish Brown, Munsell No. 2.5 YR 3/4. See Special Provision for "Hot Dip Galvanizing for Structural Steel".
- The existing structural steel coating contains lead. The contractors shall take appropriate precautions to deal with the presence of lead on this project.
- The existing restricted clearances at the structure must not be reduced while the tracks are in service.

INDEX OF SHEETS

- SA-1 General Plan & Elevation
- SA-2 General Notes & Quantities
- SA-3 Cantilever Forming Brackets
- SA-4 Top of Slab Elevations I
- SA-5 Top of Slab Elevations II
- SA-6 Top of Slab Elevations III
- SA-7 Deck Reinforcement Plan & Cross Section
- SA-8 Deck Details
- SA-9 Concrete Barrier Details
- SA-10 Framing Plan & Beam Elevation
- SA-11 Diaphragm & Splice Details
- SA-12 Bearing Details I
- SA-13 Bearing Details II
- SA-14 Bridge Joint System - Expansion
- SA-15 Bridge Joint System - Expansion (Alternate)
- SA-16 Anchor Bolt Details for Bearings
- SA-17 Limits of Removal
- SA-18 West Abutment Removals & Repairs
- SA-19 East Abutment Removals & Repairs
- SA-20 Abutment Reconstruction Details
- SA-21 Pier Repairs
- SA-22 Bar Splicer Assembly Details
- SA-23 Bridge Approach Pavement (Special)

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	21
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
Sheet SA-2 of SA-23		CONTRACT 83950		

TOTAL BILL OF MATERIAL

NUMBER	ITEM	UNIT	SUPER.	SUB.	TOTAL
* 1	Protective Coat	Sq. Yd.	782		782
* 2	Bridge Approach Pavement, Special	Sq. Yd.	212		212
* 3	Approach Slab Removal	Sq. Yd.	84		84
* 4	Removal of Existing Superstructures No. 1	Each	1		1
5	Concrete Removal	Cu. Yd.		15.7	15.7
6	Concrete Structures	Cu. Yd.		10.8	10.8
7	Concrete Superstructures	Cu. Yd.	181.3		181.3
8	Bridge Deck Grooving	Sq. Yd.	488		488
9	Elastomeric Bearing Assembly, Type I	Each	20		20
10	Elastomeric Bearing Assembly, Type II	Each	20		20
* 11	Structural Repair of Concrete (Depth Equal to or Less than 5")	Sq. Ft.		212	212
12	Stud Shear Connectors	Each	3,300		3,300
13	Reinforcement Bars, Epoxy Coated	Lb.	44,638	1,847	46,485
14	Name Plates	Each	1		1
15	Bridge Seat Sealer	Sq. Ft.		157	157
16	Epoxy Crack Sealing	Foot		106	106
* 17	Bridge Joint System (Expansion), 1"	Foot	40		40
* 18	Bridge Joint System (Expansion), 1 5/8"	Foot	40		40
* 19	Furnishing and Erecting Structural Steel, Bridge No.1	L. Sum	1		1
* 20	Concrete Barrier Wall (Special)	Cu. Yd.	29.7		29.7
21	Bar Splicers	Each		60	60
* 22	Protective Shield	Sq. Yd.		690	690

*-Special Provisions

DATE: 7/20/2006
FILENAME: N:\PROJ\3278\Drawings\Structural_Pine_3278\CAD\Final_plan_rev\3278-Pine-graft01.dgn

REVISIONS	
NAME	DATE

Clorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE - CHICAGO, ILLINOIS 60630 - (773) 775-6000

VILLAGE OF WINNETKA, ILLINOIS
GENERAL NOTES & QUANTITIES
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

SCALE: NONE
DATE: JUNE 2006
FILE: 3278

DRAWN BY: RCD
DESIGN BY: BWS
CHECKED BY: SCD

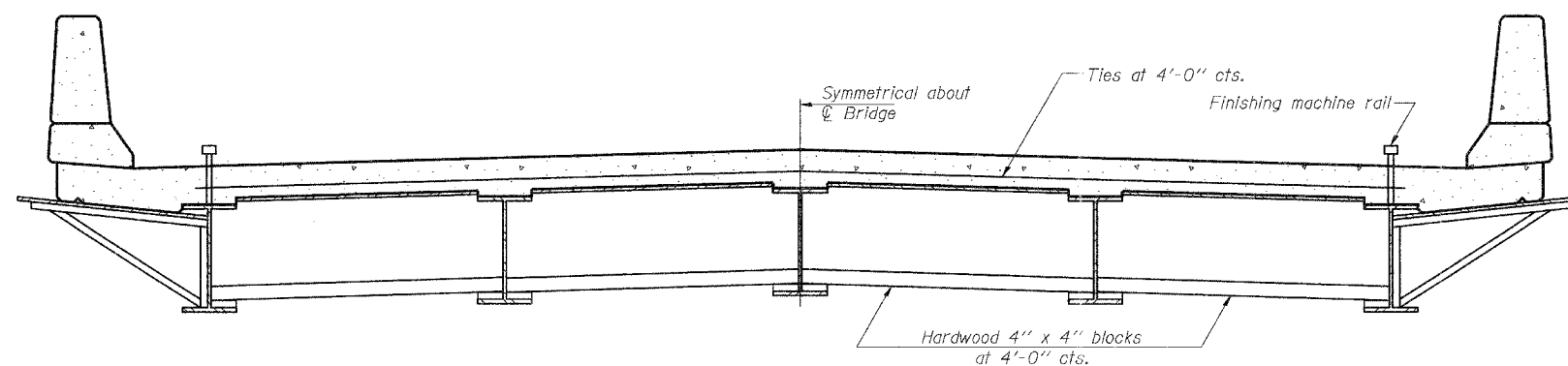
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	22
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
Sheet SA-3 of SA-23		CONTRACT	83850	

When cantilever forming brackets are used, the work shall be done according to Article 503.06, except as modified below and in the details shown on this sheet.

The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



**FORM BRACES FOR
STANDARD CONSTRUCTION**

**CANTILEVER FORMING BRACKETS
FOR SUPERSTRUCTURES WITH
W27 BEAMS AND SMALLER**

DATE: 3/02/2006
FILENAME: N:\PROJ\3278\Drawn\Design\Structural_Pine_3278\CAD\Final_Plan\3278-Pine-cnf01.dgn

SB-1 10-22-04

Clorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (773) 775-4069

REVISIONS	
NAME	DATE

VILLAGE OF WINNETKA, ILLINOIS
CANTILEVER FORMING BRACKETS
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

SCALE: NONE
DATE: MARCH 2006
FILE: 3278

DRAWN BY: RCD
DESIGN BY:
CHECKED BY: SCD

Beam No. 8

Location	Station	Offset	Theoretical Grade Elevation	Theoretical Grade Elevations Adjusted For Dead Load Deflections
BK. W. ABUT.	100+30.21	-12.54	658.43	658.43
⊕ BRG. W. ABUT.	100+33.01	-12.54	658.53	658.53
A	100+43.01	-12.54	658.85	658.89
B	100+53.01	-12.54	659.12	659.17
C	100+63.01	-12.54	659.33	659.36
D	100+73.01	-12.54	659.49	659.49
⊕ W. PIER	100+74.08	-12.54	659.51	659.51
E	100+84.08	-12.54	659.61	659.61
F	100+94.08	-12.54	659.66	659.67
G	101+04.08	-12.54	659.66	659.66
⊕ CTR. PIER	101+14.07	-12.54	659.60	659.60
H	101+24.07	-12.54	659.49	659.50
I	101+34.07	-12.54	659.33	659.35
J	101+44.07	-12.54	659.12	659.13
⊕ E. PIER	101+53.01	-12.54	658.88	658.88
K	101+63.01	-12.54	658.57	658.59
L	101+73.01	-12.54	658.20	658.23
M	101+83.01	-12.54	657.79	657.80
⊕ BRG. E. ABUT.	101+88.26	-12.54	657.55	657.55
BK. E. ABUT.	101+91.07	-12.54	657.41	657.41

South Gutter Line

Location	Station	Offset	Theoretical Grade Elevation	Theoretical Grade Elevations Adjusted For Dead Load Deflections
BK. W. ABUT.	100+31.01	-15.00	658.42	658.42
⊕ BRG. W. ABUT.	100+33.82	-15.00	658.52	658.52
A	100+43.82	-15.00	658.84	658.88
B	100+53.82	-15.00	659.10	659.15
C	100+63.82	-15.00	659.31	659.34
D	100+73.82	-15.00	659.46	659.47
⊕ W. PIER	100+74.89	-15.00	659.48	659.48
E	100+84.89	-15.00	659.58	659.58
F	100+94.89	-15.00	659.62	659.64
G	101+04.89	-15.00	659.61	659.62
⊕ CTR. PIER	101+14.88	-15.00	659.55	659.55
H	101+24.88	-15.00	659.44	659.45
I	101+34.88	-15.00	659.28	659.30
J	101+44.88	-15.00	659.06	659.07
⊕ E. PIER	101+53.82	-15.00	658.82	658.82
K	101+63.82	-15.00	658.50	658.52
L	101+73.82	-15.00	658.13	658.16
M	101+83.82	-15.00	657.71	657.73
⊕ BRG. E. ABUT.	101+89.07	-15.00	657.47	657.47
BK. E. ABUT.	101+91.88	-15.00	657.33	657.33

Beam No. 9

Location	Station	Offset	Theoretical Grade Elevation	Theoretical Grade Elevations Adjusted For Dead Load Deflections
BK. W. ABUT.	100+31.49	-16.46	658.42	658.42
⊕ BRG. W. ABUT.	100+34.30	-16.46	658.51	658.51
A	100+44.30	-16.46	658.83	658.87
B	100+54.30	-16.46	659.09	659.14
C	100+64.30	-16.46	659.29	659.33
D	100+74.30	-16.46	659.45	659.45
⊕ W. PIER	100+75.37	-16.46	659.46	659.46
E	100+85.37	-16.46	659.56	659.56
F	100+95.37	-16.46	659.60	659.61
G	101+05.37	-16.46	659.59	659.60
⊕ CTR. PIER	101+15.36	-16.46	659.53	659.53
H	101+25.36	-16.46	659.41	659.42
I	101+35.36	-16.46	659.25	659.26
J	101+45.36	-16.46	659.03	659.03
⊕ E. PIER	101+54.30	-16.46	658.78	658.78
K	101+64.30	-16.46	658.46	658.48
L	101+74.30	-16.46	658.09	658.12
M	101+84.30	-16.46	657.67	657.68
⊕ BRG. E. ABUT.	101+89.55	-16.46	657.42	657.42
BK. E. ABUT.	101+92.35	-16.46	657.29	657.29

Beam No. 10

Location	Station	Offset	Theoretical Grade Elevation	Theoretical Grade Elevations Adjusted For Dead Load Deflections
BK. W. ABUT.	100+32.78	-20.38	658.46	658.46
⊕ BRG. W. ABUT.	100+35.58	-20.38	658.56	658.56
A	100+45.58	-20.38	658.86	658.91
B	100+55.58	-20.38	659.12	659.17
C	100+65.58	-20.38	659.32	659.35
D	100+75.58	-20.38	659.46	659.47
⊕ W. PIER	100+76.66	-20.38	659.48	659.48
E	100+86.66	-20.38	659.56	659.57
F	100+96.66	-20.38	659.60	659.62
G	101+06.66	-20.38	659.58	659.59
⊕ CTR. PIER	101+16.64	-20.38	659.52	659.52
H	101+26.64	-20.38	659.39	659.41
I	101+36.64	-20.38	659.22	659.24
J	101+46.64	-20.38	658.99	659.00
⊕ E. PIER	101+55.58	-20.38	658.75	658.75
K	101+65.58	-20.38	658.42	658.44
L	101+75.58	-20.38	658.04	658.07
M	101+85.58	-20.38	657.61	657.62
⊕ BRG. E. ABUT.	101+90.83	-20.38	657.36	657.36
BK. E. ABUT.	101+93.64	-20.38	657.22	657.22

DATE: 7/20/2006
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REVISIONS	
NAME	DATE

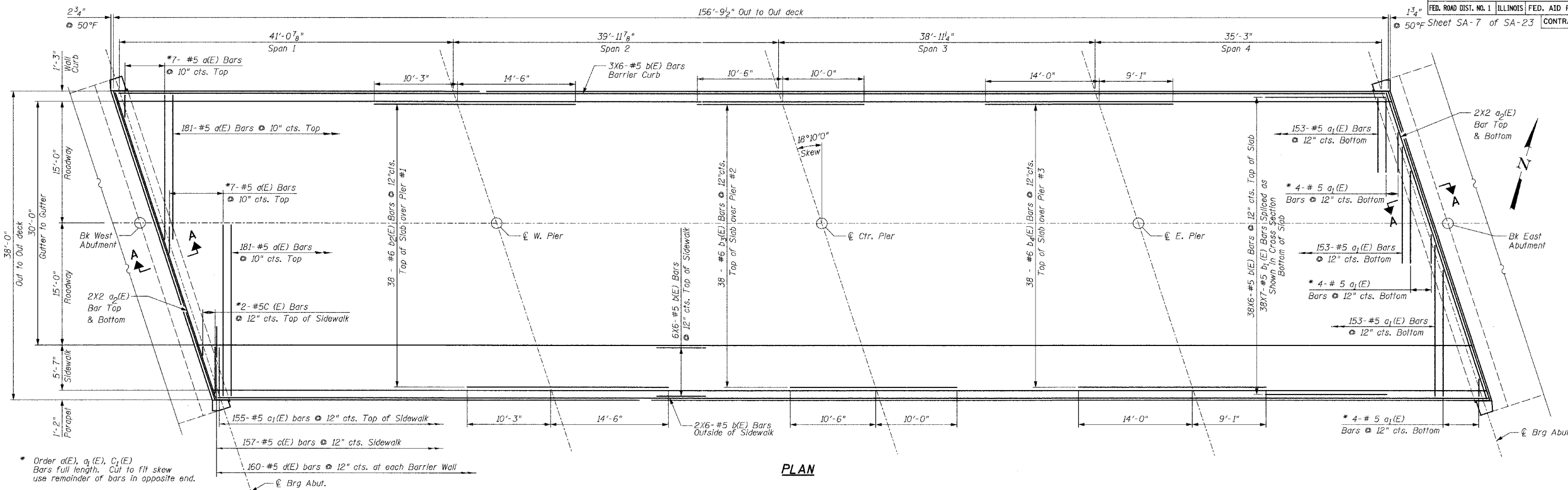
CC Ciorba Group, Inc.
 CONSULTING ENGINEERS
 3001 NORTH CUMBERLAND AVENUE • CHICAGO, ILLINOIS 60658 • (773) 775-4000

VILLAGE OF WINNETKA, ILLINOIS
 TOP OF SLAB ELEVATIONS III
 PINE STREET OVER THE UNION PACIFIC R.R.
 R.R. MILE POST 16.89 KENOSHA SUBDIVISION
 COOK COUNTY STA. 101+09.96
 STRUCTURE NO. 016-8259

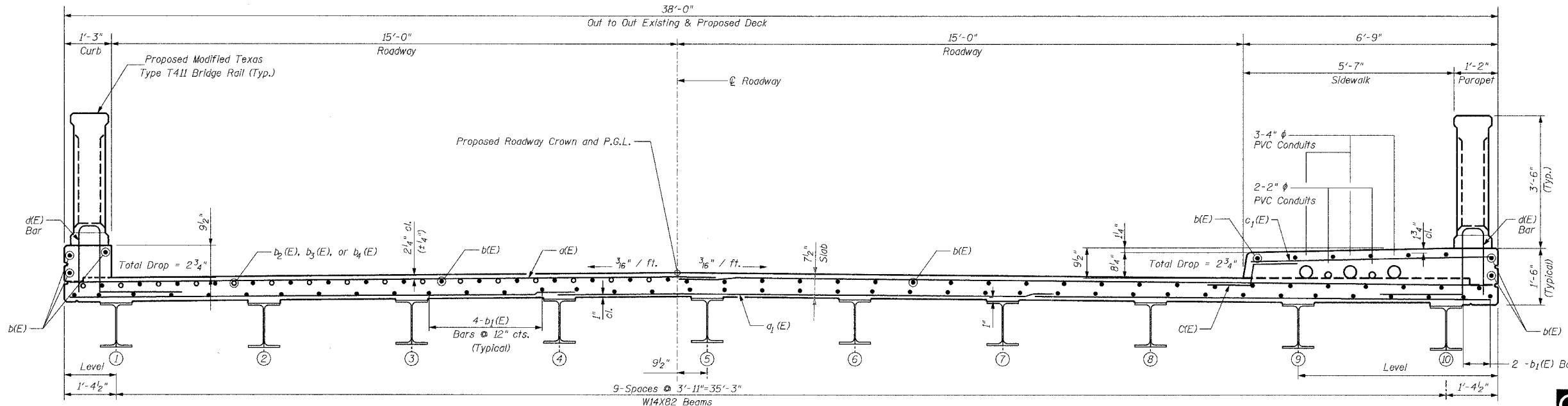
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 DATE: JUNE 2006
 FILE: 3278

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 DESIGN BY: BWS
 CHECKED BY: SCD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
00-00094-03-BR		COOK	69	26
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
Sheet SA-7 of SA-23		CONTRACT 83850		



PLAN



PROPOSED CROSS SECTION
(Looking East)

Notes:
 See sheet SA-8 for superstructure details & Bill of Materials.
 Reinforcement bars designated (E) shall be epoxy coated.
 Bars indicated thus 20X3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
 See sheet SA-9 for parapet reinforcement.
 See sheet SA-8 for Section A-A.

Bar Size	Min. Lap
#4	1'-1"
#5	1'-4"
#6	1'-7"

REVISIONS	
NAME	DATE

Clorba Group, Inc.
 CONSULTING ENGINEERS
 5607 NORTH CUMBERLAND AVENUE - CHICAGO, ILLINOIS 60630 - (773) 775-6009

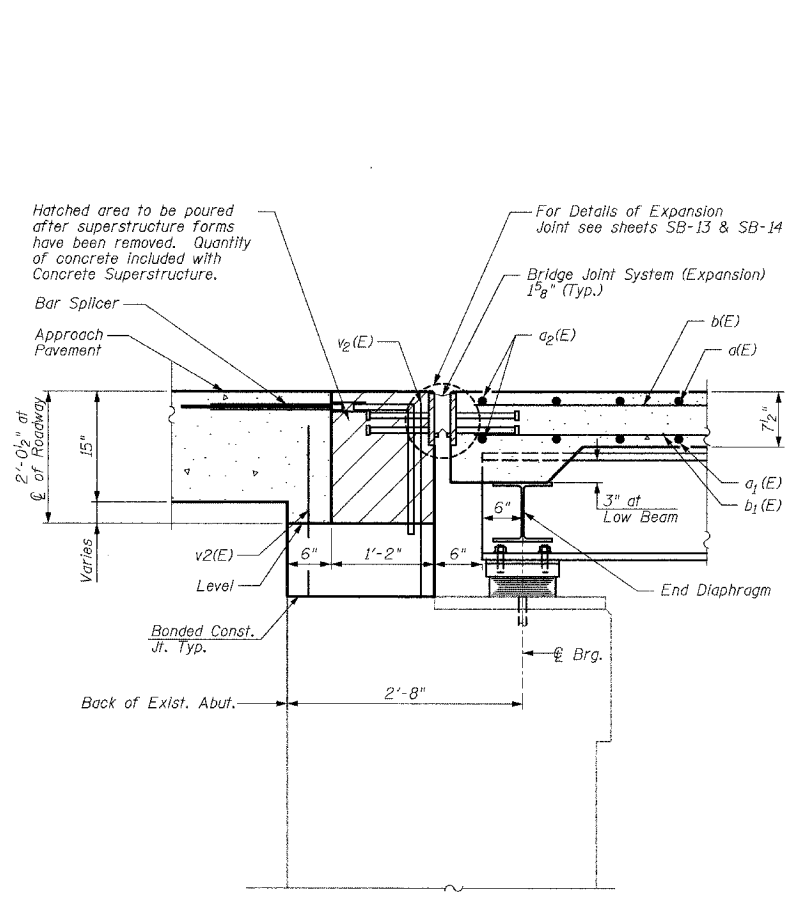
VILLAGE OF WINNETKA, ILLINOIS
 DECK REINFORCEMENT PLAN AND CROSS SECTION
 PINE STREET OVER THE UNION PACIFIC R.R.
 R.R. MILE POST 16.89 KENOSHA SUBDIVISION
 COOK COUNTY STA. 101+09.96
 STRUCTURE NO. 016-8259

SCALE: NONE
 DATE: JUNE 2006
 FILE: 3278

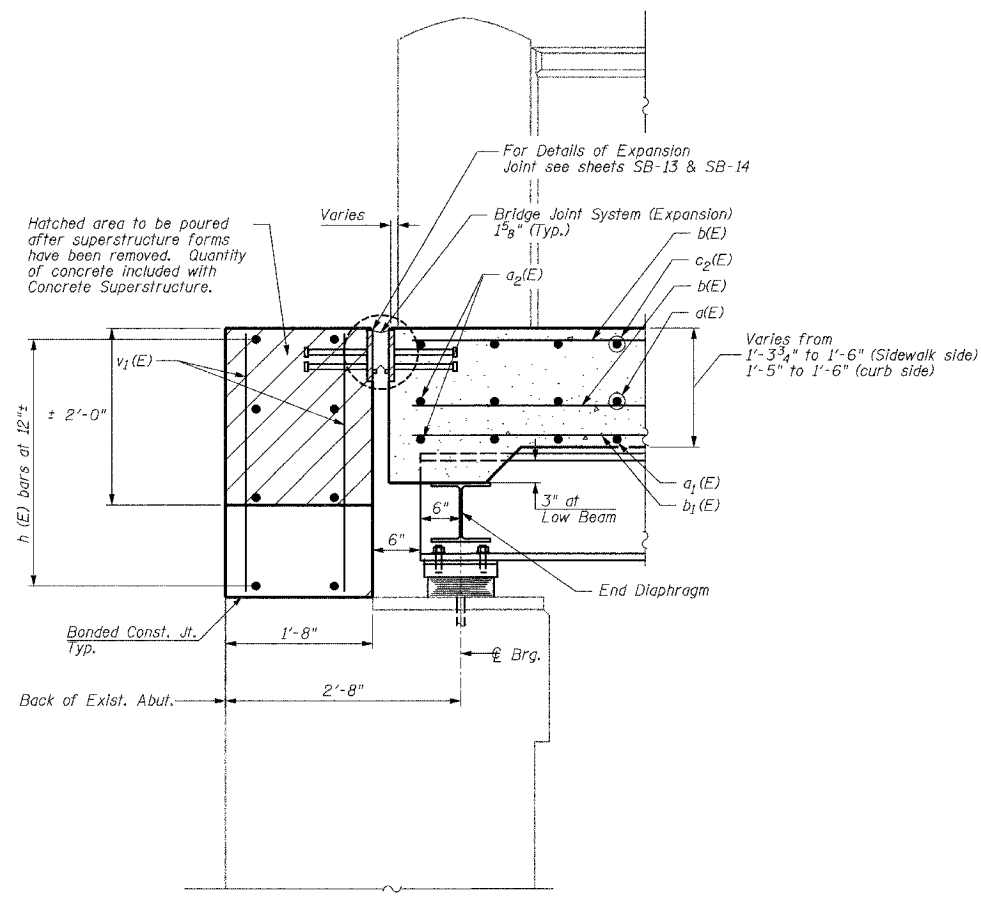
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DATE: 7/20/2006
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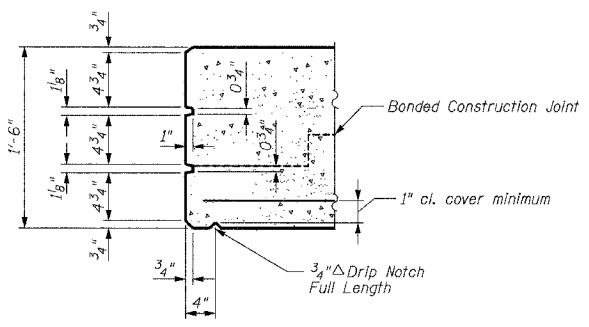
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	27
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
Sheet SA-8 of SA-23			CONTRACT	83850



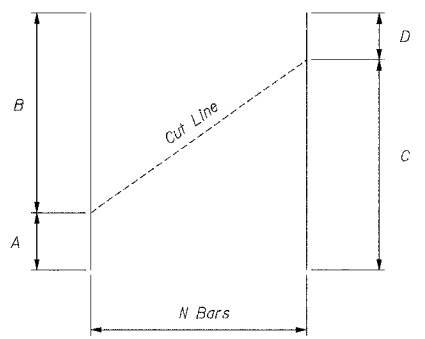
SECTION A-A
(All Dimensions are Perpendicular to Abutment)



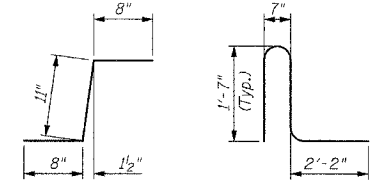
SECTION B-B
(All Dimensions are Perpendicular to Abutment)



TYPICAL COPING DETAIL



Bar	A	B	C	D	N
a(E)	1'-2"	18'-4"	18'-4"	1'-2"	14
a1(E)	3'-1"	10'-5"	10'-5"	3'-1"	12
c1(E)	2'-7"	3'-10"	3'-10"	2'-7"	2



BAR c(E) **BAR d(E)**

Bar	No.	Size	Length	Shape
a(E)	376	#5	19'-6"	—
a1(E)	471	#5	13'-6"	—
a2(E)	8	#5	20'-6"	—
b(E)	294	#5	27'-3"	—
b1(E)	266	#5	23'-6"	—
b2(E)	38	#6	24'-9"	—
b3(E)	38	#6	20'-6"	—
b4(E)	38	#6	23'-1"	—
c(E)	157	#5	2'-5"	┌
c1(E)	157	#5	6'-5"	—
d(E)	320	#5	5'-11"	└
Reinforcement Bars, Epoxy Coated			Pound	36,647
Concrete Superstructures Cu. Yd.				181.3

Notes:
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1x2-#5 etc. indicated 1 line of bars with 2 lengths per line.
Work this sheet with sheets SA-18 thru SA-20.

CC **Clorba Group, Inc.**
CONSULTING ENGINEERS
3001 NORTH CUMBERLAND AVENUE • CHICAGO, ILLINOIS 60630 • (773) 775-6000

VILLAGE OF WINNETKA, ILLINOIS
DECK DETAILS
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

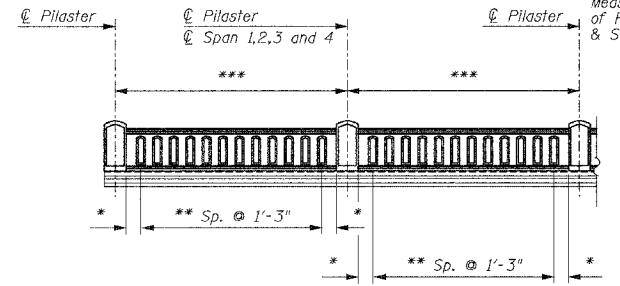
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DATE: JUNE 2006 DESIGN BY: BWS
FILE: 3278 CHECKED BY: SCD

REVISIONS	
NAME	DATE

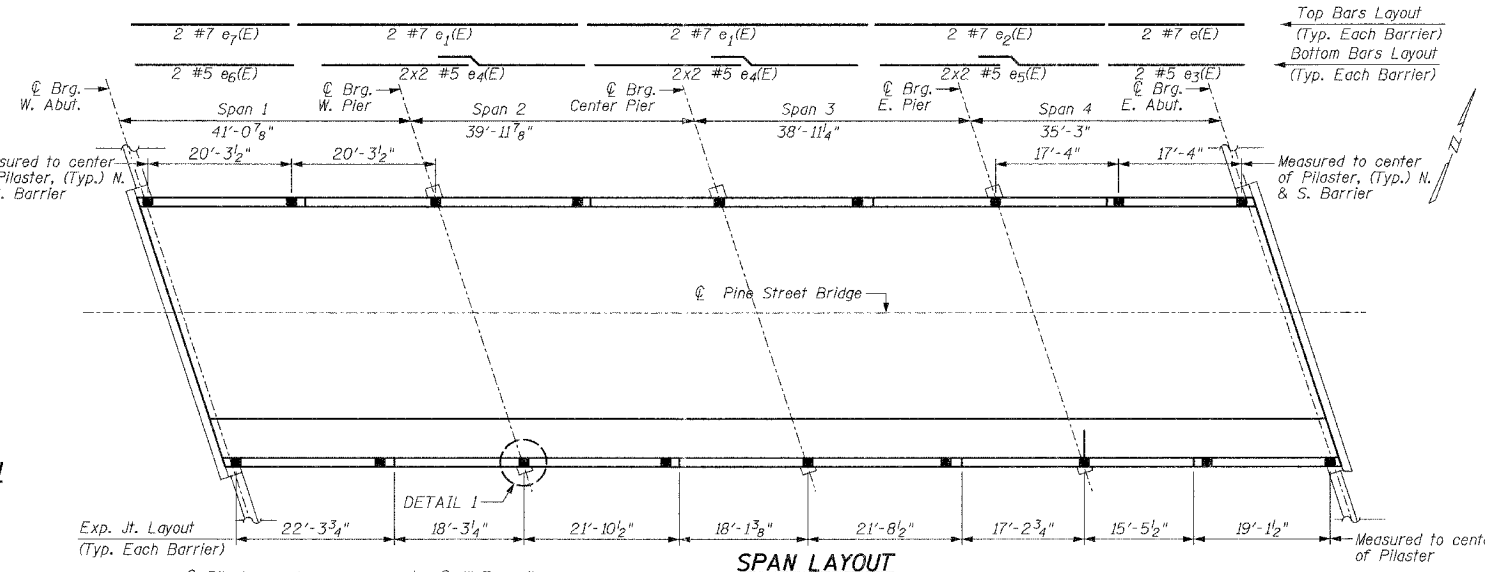
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
00-00094-03-BR	COOK	ILLINOIS	69	28
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS FED. AID PROJECT			
Sheet SA-9 of SA-23			CONTRACT 83850	

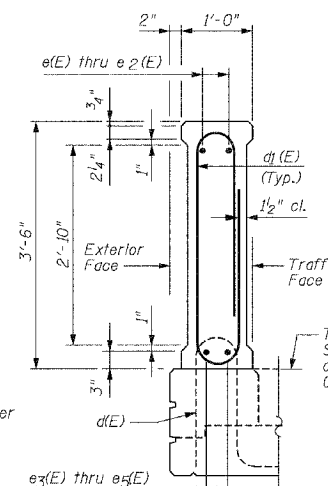
	*	**	***
Span 1	1'-3 1/4"	13	20'-3 1/2"
Span 2	1'-1 1/2"	13	19'-11 5/8"
Span 3	1'-5 3/4"	12	19'-5 3/8"
Span 4	1'-0 1/2"	11	17'-4"



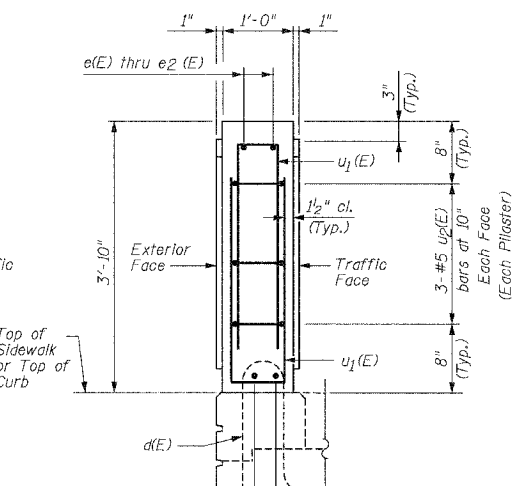
EXTERIOR FACE OF BRIDGE RAIL ELEVATION
NORTH BRIDGE RAIL SHOWN SOUTH BRIDGE RAIL SIMILAR



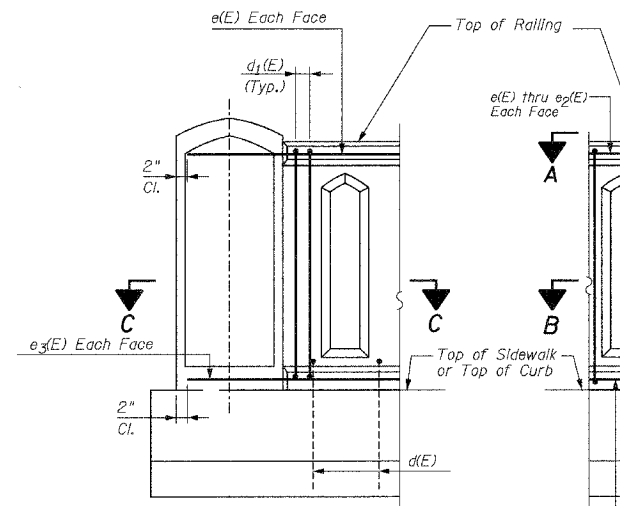
SPAN LAYOUT



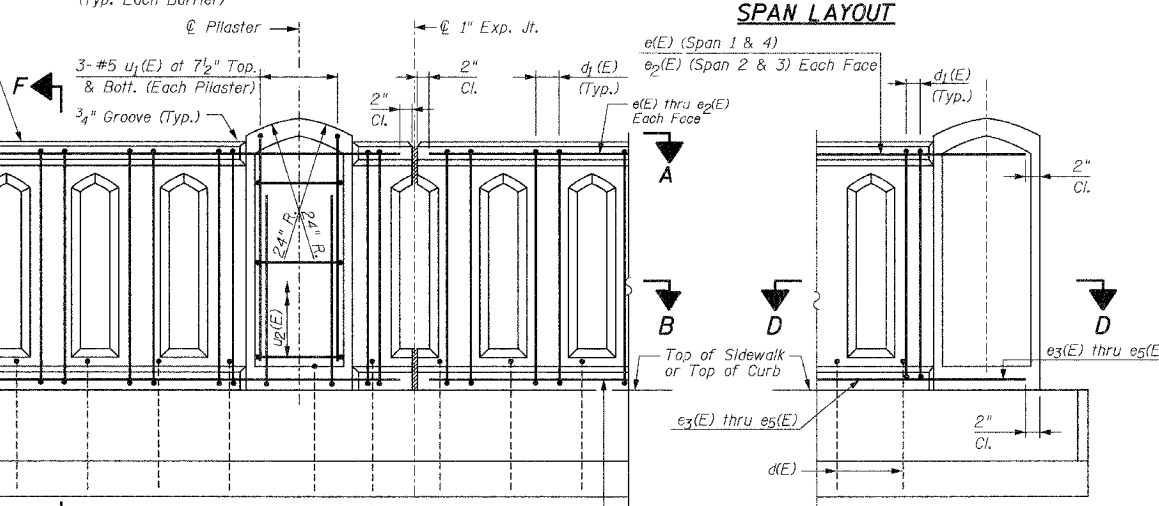
SECTION F-F (TYP. POSTS)



SECTION E-E (TYP. PILASTER)

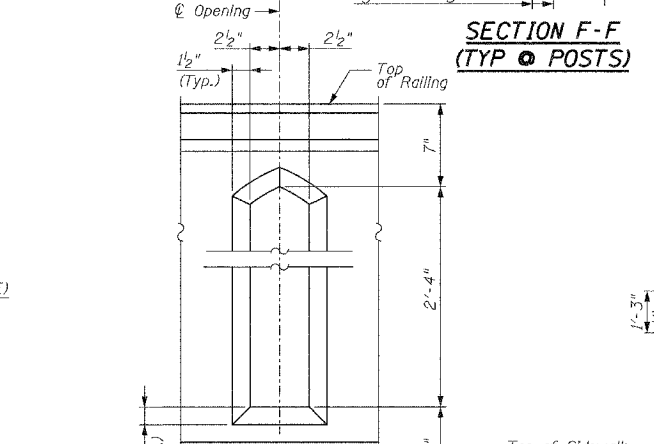


WEST END PILASTER ELEVATION
(Typ. of Span 1)

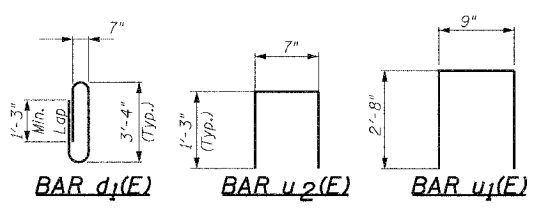


PARTIAL ELEVATION AT CENTER PILASTER
For Expansion Joint Location see span layout
Extend sidewalk and curb to edge of deck

EAST END PILASTER ELEVATION
(Typ. of Span 4)
Note: Traffic Face Elevations



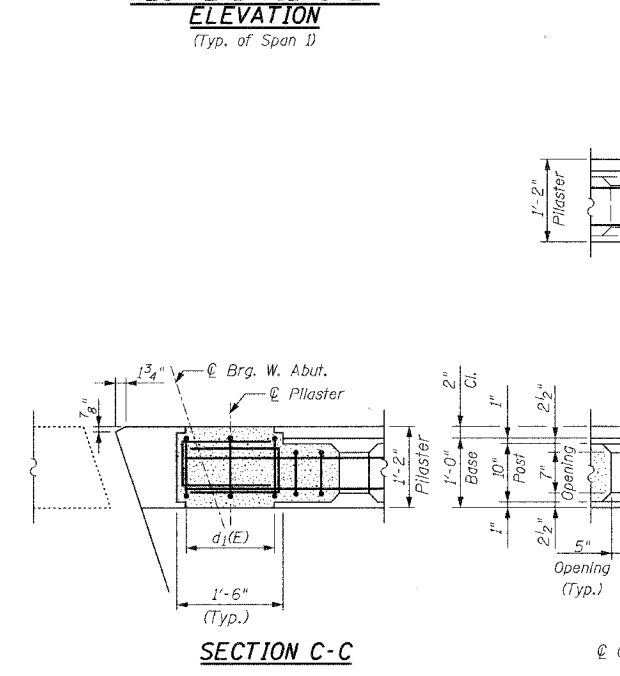
OPENING DETAIL



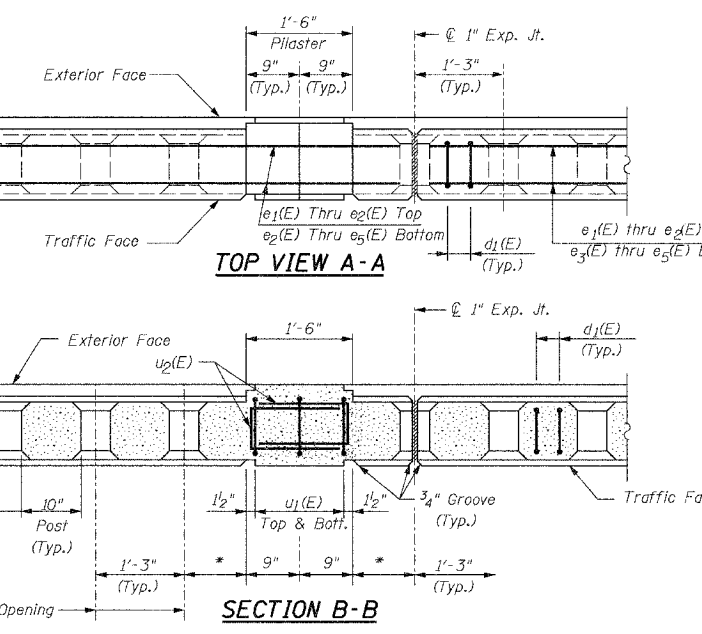
BAR d1(E) BAR u2(E) BAR u1(E)

Bar	No.	Size	Length	Shape	
d1(E)	424	#5	9'-1"		
e(E)	4	#7	19'-2"	—	
e1(E)	8	#7	39'-6"	—	
e2(E)	4	#7	32'-5"	—	
e3(E)	4	#5	19'-2"	—	
e4(E)	16	#5	20'-6"	—	
e5(E)	8	#5	16'-11"	—	
e6(E)	4	#5	22'-8"	—	
e7(E)	4	#7	22'-8"	—	
u1(E)	216	#5	6'-1"	—	
u2(E)	216	#5	3'-1"	—	
Reinforcement Bars, Epoxy Coated				Pound	8,012
Concrete Barrier (Special)				Cu. Yd.	29.7

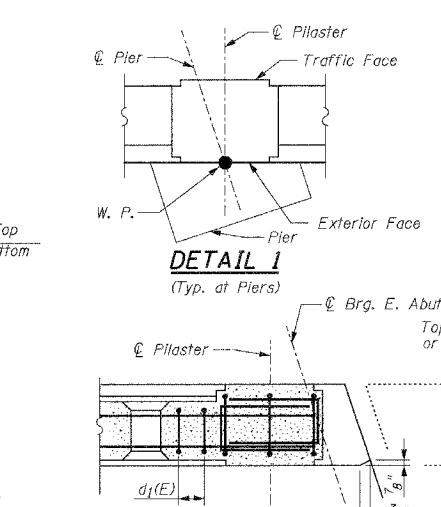
Reinforcement bars designated (E) shall be epoxy coated. Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line. Reinforcement bars shall not pass thru the expansion joints. Concrete Texture and Finishes to Match Existing Pilasters See Concrete Barrier (Special) Special Provisions.



SECTION C-C

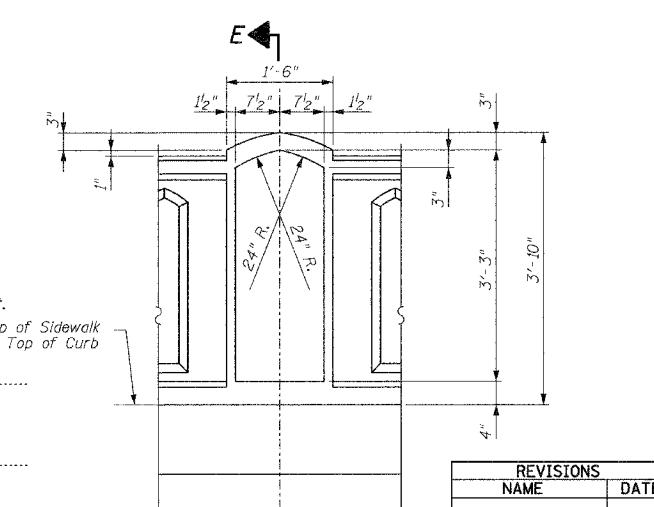


SECTION B-B



DETAIL 1 (Typ. at Piers)

SECTION D-D



DETAIL FACE OF PILASTER

REVISIONS	NAME	DATE

Clorba Group, Inc.
CONSULTING ENGINEERS
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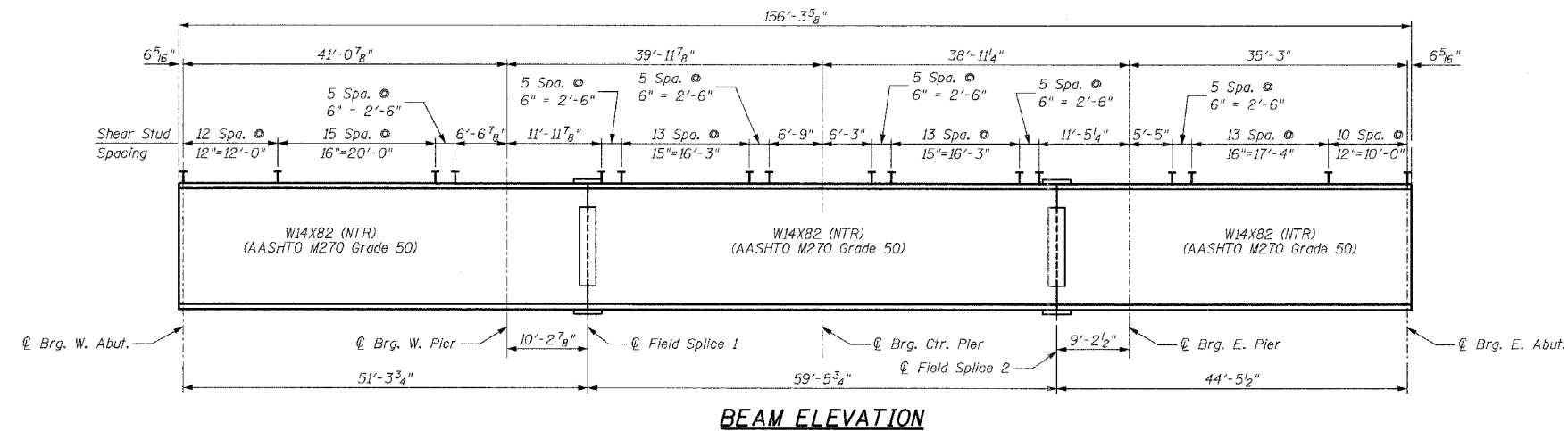
VILLAGE OF WINNETKA, ILLINOIS
CONCRETE BARRIER DETAILS
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

SCALE: NONE
DATE: MARCH 2006
FILE: 3278

DRAWN BY: RCD
DESIGN BY: BWS
CHECKED BY: SCD

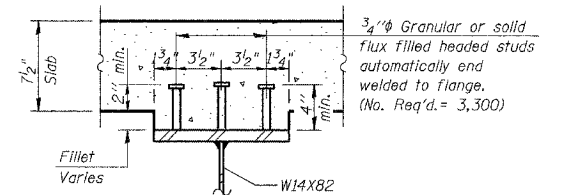
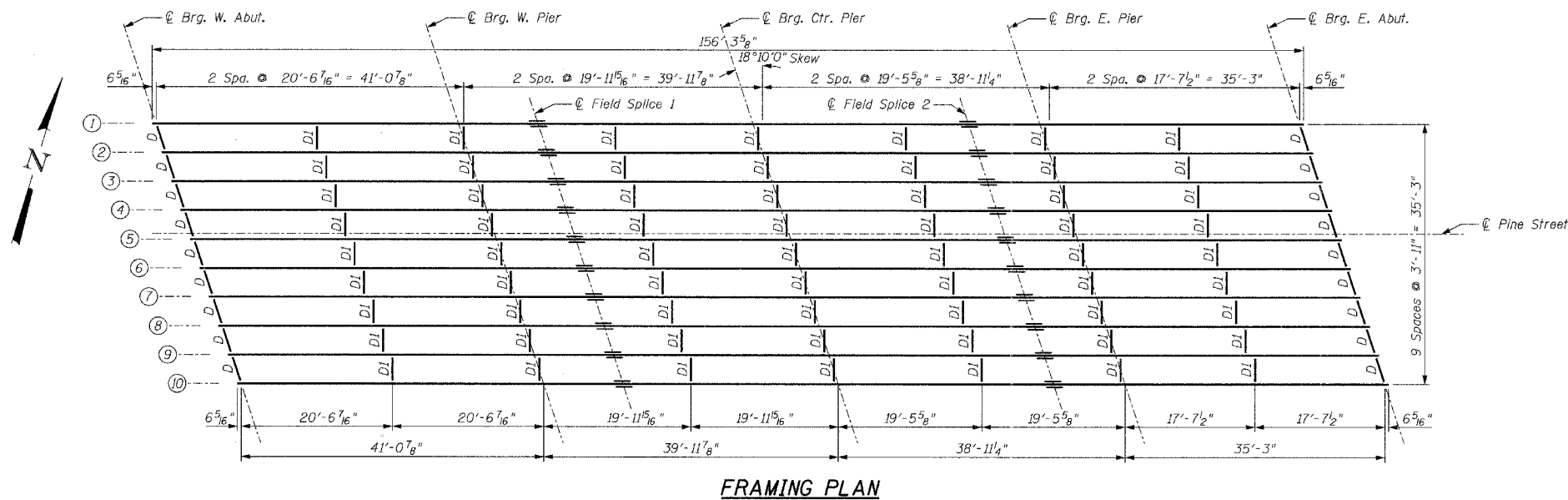
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	29
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
Sheet SA-10 of SA-23		CONTRACT 83850		



TOP OF BEAM ELEVATIONS

	© BRG. W. ABUT.	© W. PIER	© SPLICE 1	© CTR. PIER	© SPLICE 2	© E. PIER	© BRG. E. ABUT.
Beam 1	657.48	658.64	657.71	658.93	657.88	658.40	657.23
Beam 2	657.59	658.73	657.78	658.98	658.08	658.43	657.23
Beam 3	657.70	658.81	657.86	659.04	658.28	658.45	657.24
Beam 4	657.81	658.89	657.93	659.09	658.48	658.48	657.24
Beam 5	657.89	658.95	657.98	659.12	658.66	658.49	657.22
Beam 6	657.88	658.91	657.93	659.05	658.73	658.39	657.10
Beam 7	657.86	658.86	657.88	658.98	658.81	658.29	656.98
Beam 8	657.84	658.82	657.83	658.91	658.89	658.20	656.86
Beam 9	657.83	658.77	657.78	658.84	658.96	658.10	656.74
Beam 10	657.87	658.79	657.79	658.83	659.10	658.06	656.67



SHEAR CONNECTOR DETAIL

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Furnishing and Erecting Structural Steel	L. Sum	1.0
Stud Shear Connectors	Each	3,300

NOTES:
Contractor to verify existing dimensions in the field and make necessary approved adjustments prior to ordering materials.
All splice plate material shall meet notch toughness requirements.

Clorba Group, Inc.
CONSULTING ENGINEERS
597 NORTH CUMBERLAND AVENUE - CHICAGO, ILLINOIS 60658 - (773) 725-6000

VILLAGE OF WINNETKA, ILLINOIS
FRAMING PLAN AND BEAM ELEVATION
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

SCALE: NONE
DATE: JUNE 2006
FILE: 3278
DRAWN BY: RCD
DESIGN BY: BWS
CHECKED BY: SCD

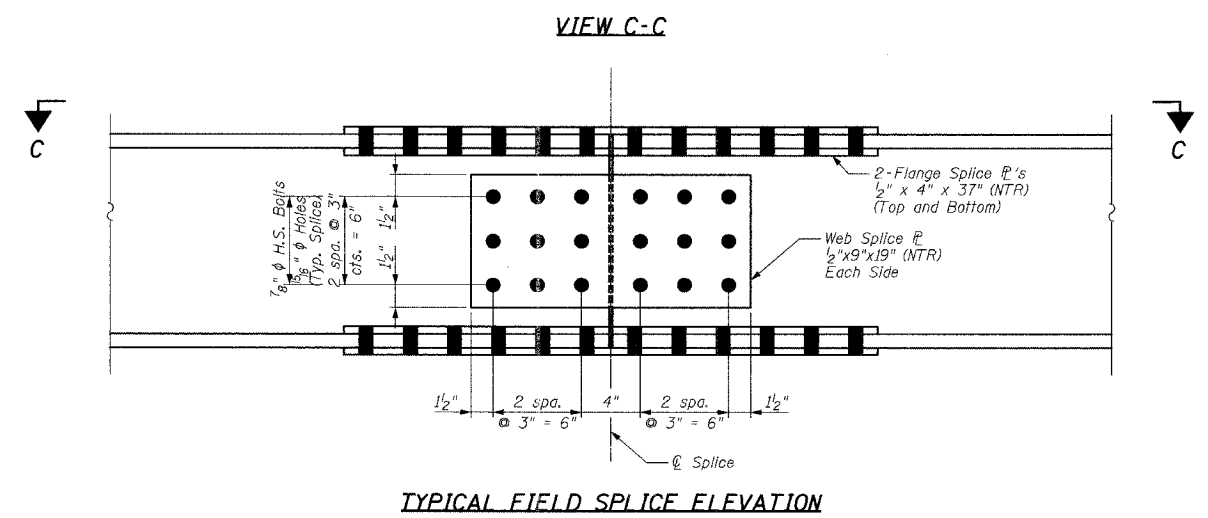
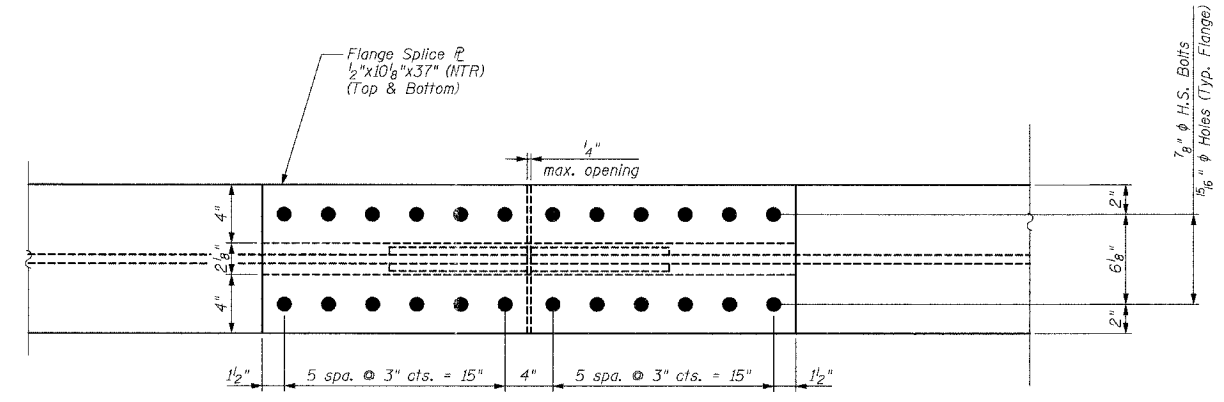
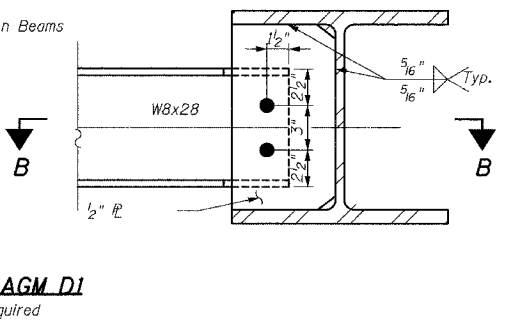
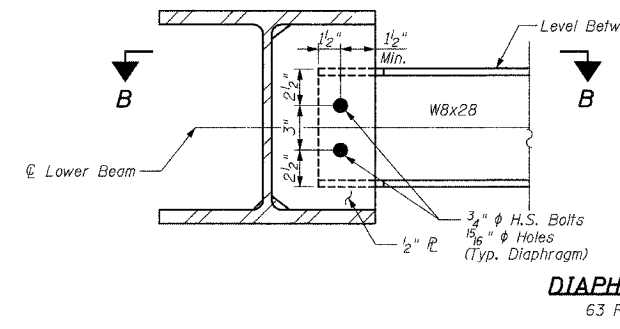
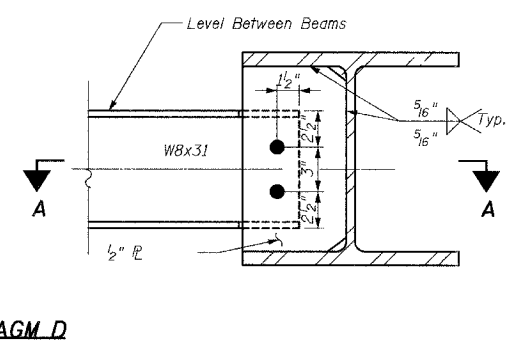
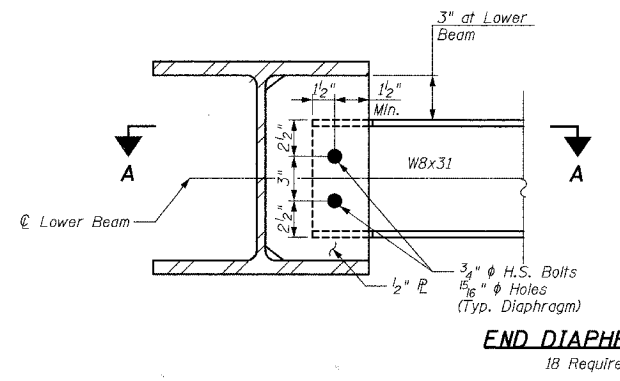
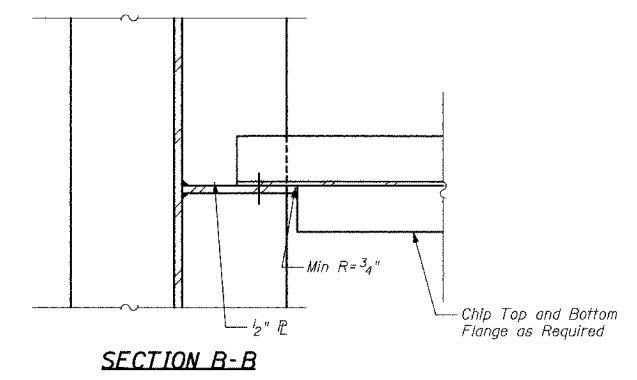
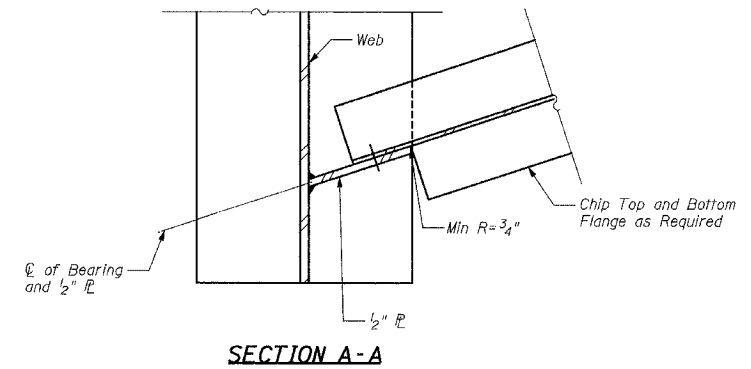
REVISIONS	
NAME	DATE

	Interior Girder Moment Table						
	0.4 Span #1	Pier #1	0.5 Span #2	Pier #2	0.5 Span #3	Pier #3	0.6 Span #4
I_s (in ⁴)	881	881	881	881	881	881	881
I_c (in ⁴)	3,569	-	3,569	-	3,569	-	3,569
$I_c(3n)$ (in ⁴)	2,353	-	2,353	-	2,353	-	2,353
S_s (in ³)	123	123	123	123	123	123	123
$Sc(3n)$ (in ³)	235	-	235	-	235	-	234
Z (in ²)	199	-	199	-	199	-	201
Z (in ²)	-	139	-	139	-	139	-
D.L. (k/ft)	0.5	0.5	0.5	0.5	0.5	0.5	0.5
M D.L. (k)	62.2	82.5	26.1	53.3	29.1	66.7	43.4
s D.L. (k/ft)	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Ms D.L. (k)	99.7	90.4	55.7	66.4	57.3	73.4	70.7
M L.L. (k)	171.9	81.4	138.2	74.7	133.2	71.7	133.1
M (Imp) (k)	51.6	24.4	41.5	22.4	40.0	21.5	39.9
5/3 (M L.L. + M I) (k)	372.5	176.3	299.5	161.8	288.7	155.3	288.3
Ma (k)	694.6	454.0	495.7	365.9	487.6	384.0	523.1
Mu (k)	892.5	579.2	892.5	579.2	892.5	579.2	892.5
f_s DL non-comp (ksi)	6.1	8.1	2.5	5.2	2.8	6.5	4.2
f_s DL (comp) (ksi)	5.9	8.8	3.3	6.5	3.4	7.2	4.2
f_s 5/3 (M L.L. + M I) (ksi)	19.1	17.2	15.4	15.3	14.8	15.2	14.8
f_s (Overload)	31.1	34.1	21.2	27.0	21.1	28.9	23.2
f_s (Total)	40.4	44.3	27.6	35.2	27.4	37.5	30.2
VR (k)	28.1	-	28.1	-	27.7	-	27.5

Interior Girder Reaction Table					
	W Abut	Pier 1	Pier 2	Pier 3	E Abut
R DL (kip)	19.2	51.8	43.2	46.8	16.1
R LL (kip)	23.0	32.2	31.0	30.9	21.5
Imp (kips)	5.7	5.5	5.5	5.6	5.4
R (Total)	48.0	89.6	79.7	83.4	43.0

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
 $I_c(n)$ and $Sc(n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
 $I_c(3n)$ and $Sc(3n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads (see AASHTO 10.38).
VR is the maximum Live Load + Impact shear range in span.
 Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.
 M_a (Applied Moment) = $1.3M_{DL} + M_{sL} + 5/3(M_{LL} + M_I)$.
 M_u is the Full Plastic Moment Capacity for Compact, Braced section.
 f_s (Overload) is the sum of the stresses due to $M_{DL} + M_{sL} + 5/3(M_{LL} + M_I)$.
 f_s (Total) (Non-compact section) is the sum of the stresses due to $1.3M_{DL} + M_{sL} + 5/3(M_{LL} + M_I)$.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	30
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
Sheet SA-11 of SA-23		CONTRACT 83850		



NOTES

1. For splice and diaphragm locations see sheet SA-10.
2. All splice plates shall be AASHTO M270 Grade 36.
3. (NTR) denotes plates to which notch toughness requirements are applicable.
4. Use 7/8" ϕ M 164 H.S. bolts and 5/16" holes on all beam splices.
5. Use 3/4" ϕ M164 H.S. bolts and 5/16" holes on all diaphragm connections.

REVISIONS	
NAME	DATE

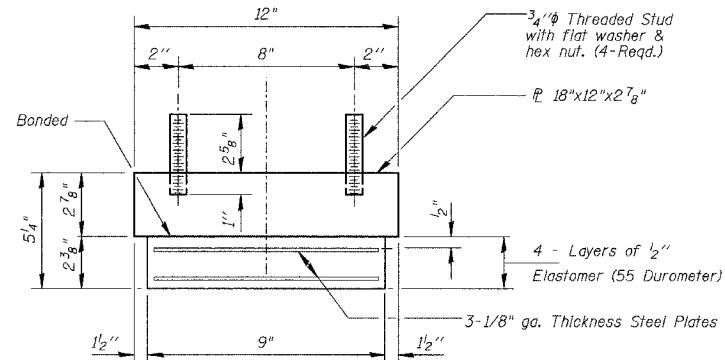
Clorba Group, Inc.
CONSULTING ENGINEERS
5007 NORTH CUMBERLAND AVENUE - CHICAGO, ILLINOIS 60630 - (773) 775-4000

VILLAGE OF WINNETKA, ILLINOIS
DIAPHRAGM & SPLICE DETAILS
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

SCALE: NONE
DATE: JUNE 2006
FILE: 3278

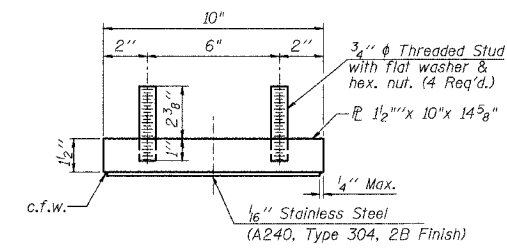
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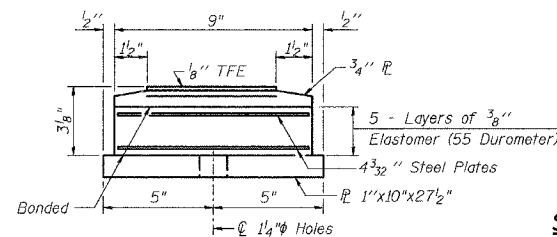
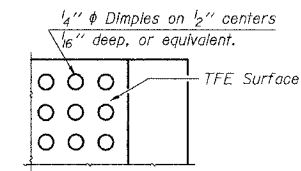
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



TOP BEARING ASSEMBLY

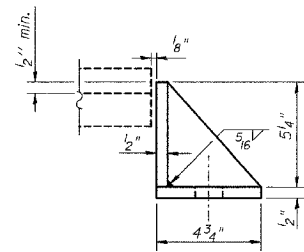
PLAN-TFE SURFACE



BOTTOM BEARING ASSEMBLY

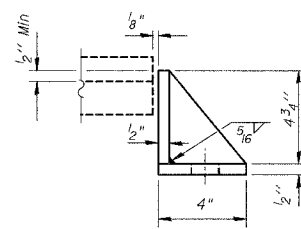
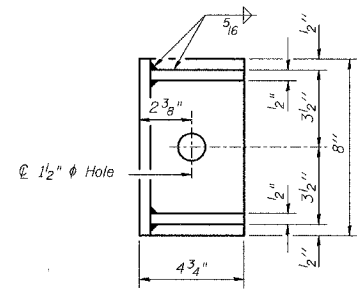
SECTION THRU TFE

Notes:
The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces. Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



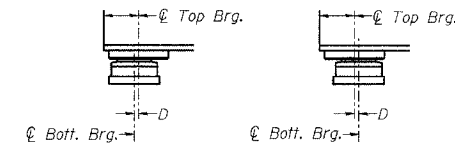
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



SIDE RETAINER

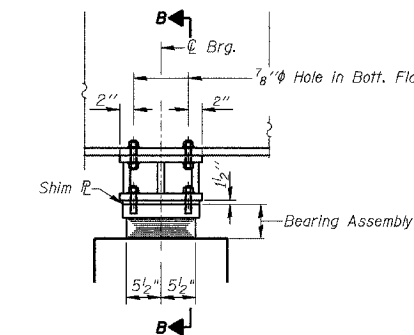
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



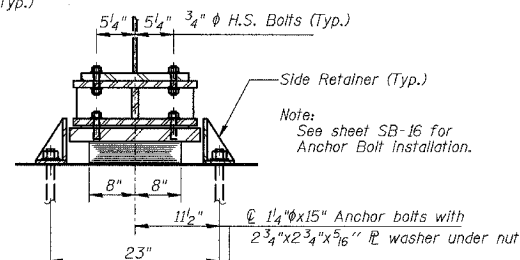
BELOW 50°F. (Move bott. brg. away from fixed brg.)
ABOVE 50°F. (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

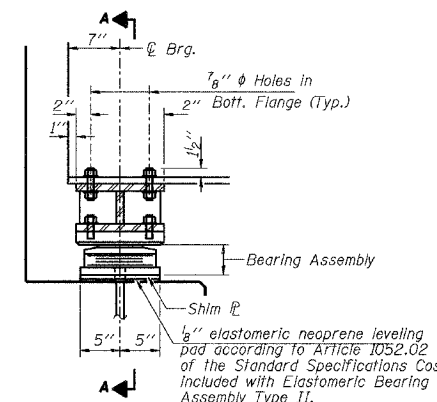


ELEVATION AT EAST PIER & WEST PIER

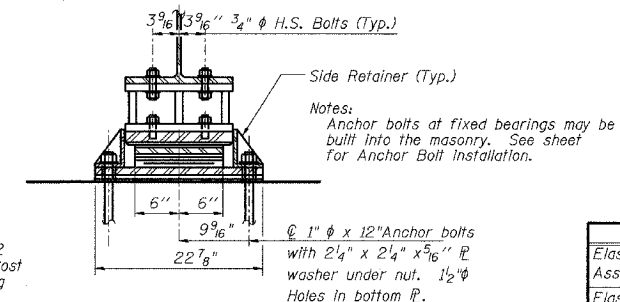


SECTION B-B

TYPE I ELASTOMERIC EXP. BRG.



ELEVATION AT ABUT.



SECTION A-A

TYPE II ELASTOMERIC EXP. BRG.

BILL OF MATERIAL

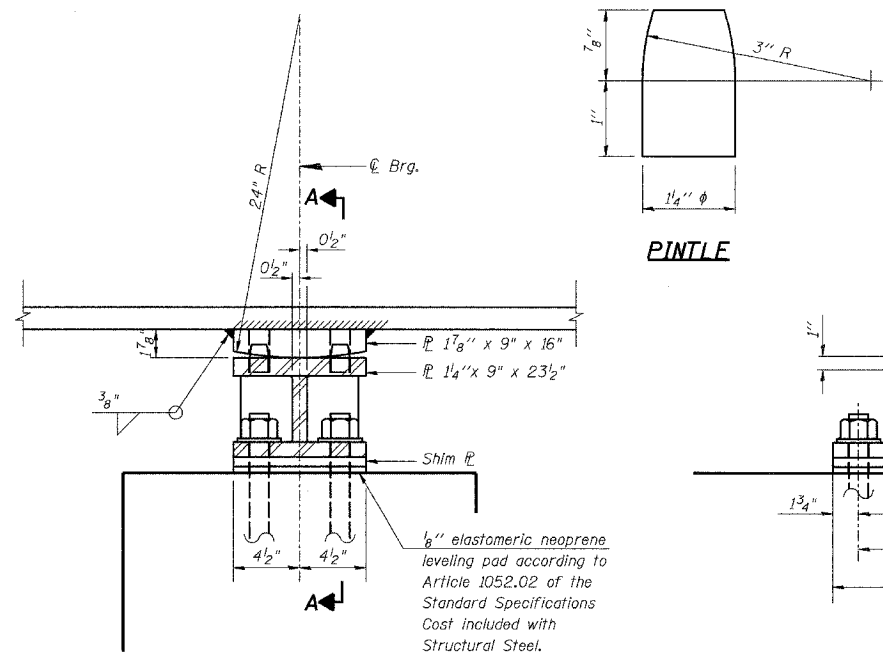
Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	20
Elastomeric Bearing Assembly Type II	Each	20

Clorba Group, Inc.
CONSULTING ENGINEERS
500 NORTH CUMBERLAND AVENUE - CHICAGO, ILLINOIS 60606 - (773) 778-0700

VILLAGE OF WINNETKA, ILLINOIS
BEARING DETAILS I
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

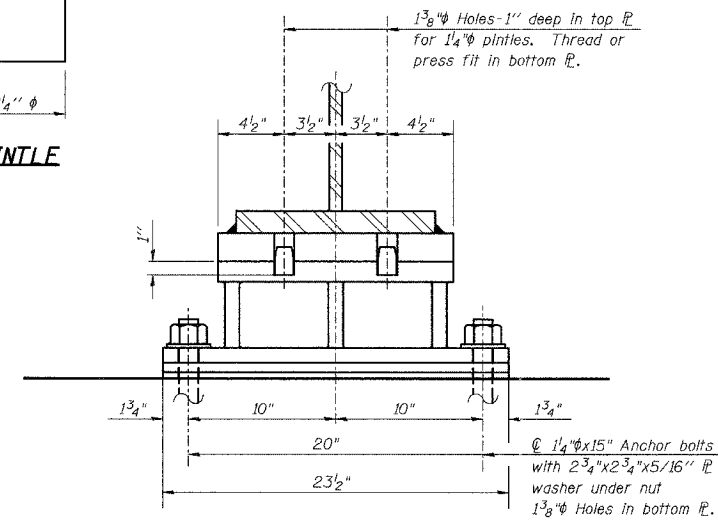
REVISIONS	
NAME	DATE

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CHECKED BY: SCD

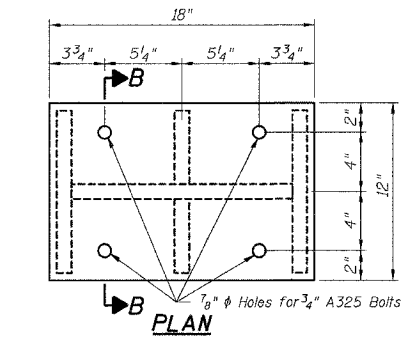


ELEVATION

FIXED BEARING AT CENTER PIER



SECTION A-A



ELEVATION

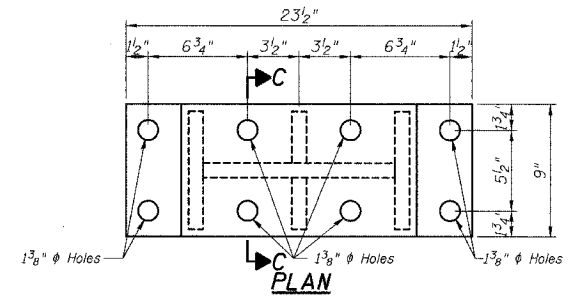
SECTION B-B

EXPANSION STEEL EXTENSION AT EAST PIER & WEST PIER

Extension Dimensions

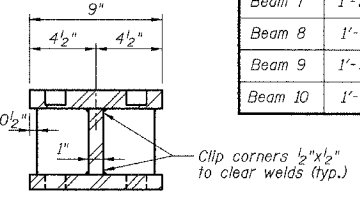
Weight included w/ structural steel

	West Pier	East Pier
Location	A (ft)	A (ft)
Beam 1	1'-11 3/8"	1'-7 1/8"
Beam 2	1'-10 7/8"	1'-5 3/8"
Beam 3	1'-11 1/4"	1'-6 3/8"
Beam 4	1'-11 5/8"	1'-7"
Beam 5	2'-1 1/8"	1'-7 5/8"
Beam 6	2'-0"	1'-7 1/8"
Beam 7	2'-0 1/4"	1'-6 5/8"
Beam 8	2'-2 3/8"	1'-7 7/8"
Beam 9	2'-1 1/8"	1'-7 3/8"
Beam 10	2'-0 3/4"	1'-7 1/2"



ELEVATION

FIXED STEEL EXTENSION AT CENTER PIER

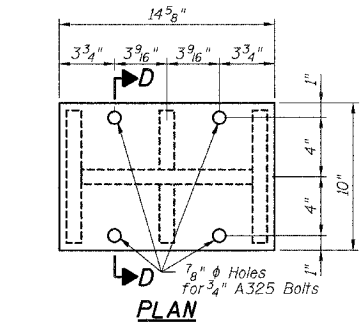


SECTION C-C

Extension Dimensions

Weight included w/ structural steel

Location	H (ft)
Beam 1	1'-2 5/8"
Beam 2	1'-1 3/4"
Beam 3	1'-2 3/8"
Beam 4	1'-3 1/8"
Beam 5	1'-3 3/8"
Beam 6	1'-2 5/8"
Beam 7	1'-2 3/4"
Beam 8	1'-4 1/4"
Beam 9	1'-3 3/8"
Beam 10	1'-3 1/4"



ELEVATION

SECTION D-D

EXPANSION STEEL EXTENSION AT ABUTMENTS

Extension Dimensions

Weight included w/ structural steel

	West Abut.	East Abut.
Location	B (ft)	B (ft)
Beam 1	11 3/8"	1'-4 1/8"
Beam 2	10 1/4"	1'-3 1/4"
Beam 3	10 1/4"	1'-3 3/8"
Beam 4	10 5/8"	1'-4 1/2"
Beam 5	11 5/8"	1'-4 1/4"
Beam 6	10 3/8"	1'-2 3/4"
Beam 7	10 1/4"	1'-2 1/4"
Beam 8	10"	1'-2"
Beam 9	10 3/4"	1'-4 1/8"
Beam 10	11 1/4"	1'-3 3/8"

DATE: 7/20/2006 FILENAME: N:\PROJ\3278\Drawings\Structural_Pine_3278\CAD\Final_plan_rev3278-Pine-bcd102.dgn

I-2-E1 2-26-93

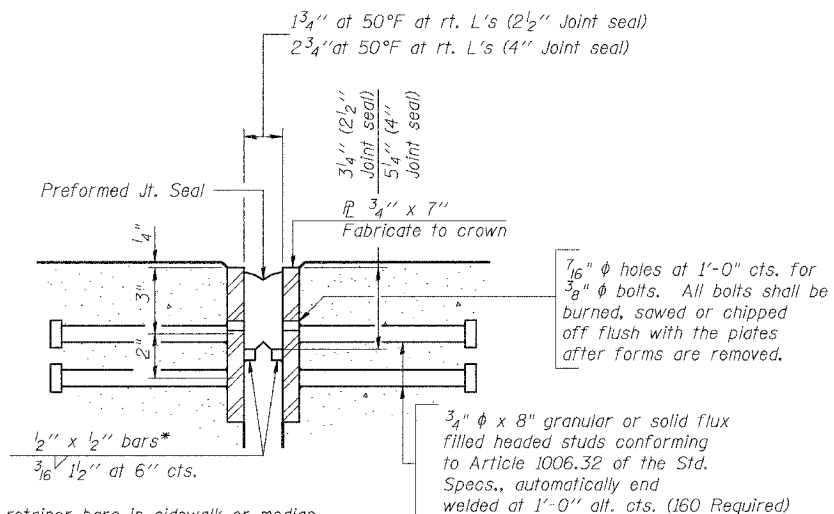
CC **Clorba Group, Inc.**
CONSULTING ENGINEERS
5001 NORTH CUMBERLAND AVENUE - CHICAGO, ILLINOIS 60630 - (773) 775-4000

VILLAGE OF WINNETKA, ILLINOIS
BEARING DETAILS II
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

REVISIONS	
NAME	DATE

SCALE: NONE
DATE: JUNE 2006
FILE: 3278

DRAWN BY: RCD
DESIGN BY: BWS
CHECKED BY: SCD



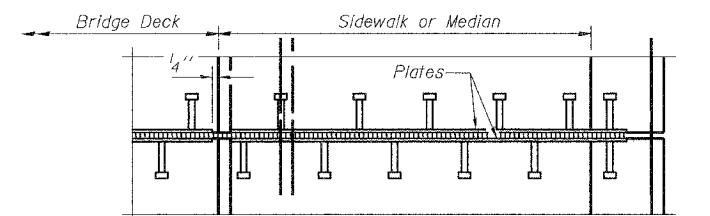
*Cut retainer bars in sidewalk or median 6" short of the sidewalk or median face.

SECTION THRU EXPANSION JOINT
(2 1/2" and 4" joint seals)

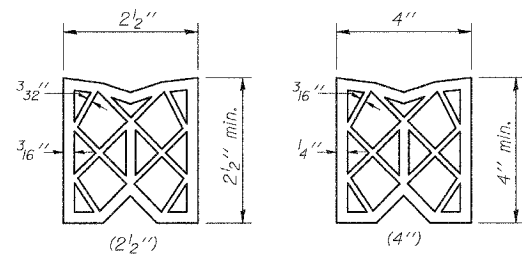
Bridge Joint System (Expansion)		
Design Movement	Required Preformed Joint Seal Size	Required Strip Seal Rated movement
1"	2 1/2"	1"
1 5/8"	4"	2"

GENERAL NOTES

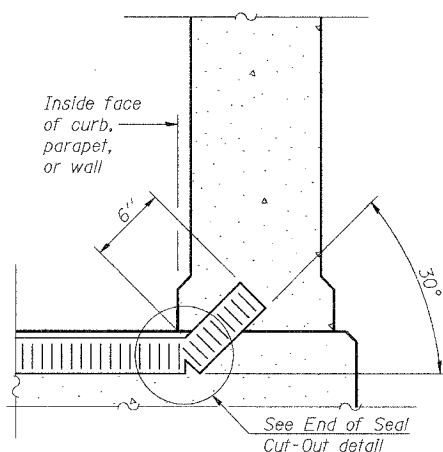
Furnish steel plates in segments of 20 feet maximum length. Maximum space between installed segments shall be 3/16". Seal space with silicone sealant suitable for structural steel.



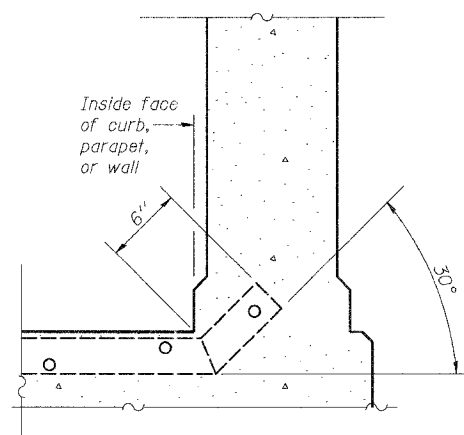
PLAN AT SIDEWALK OR MEDIAN



PREFORMED JOINT SEAL

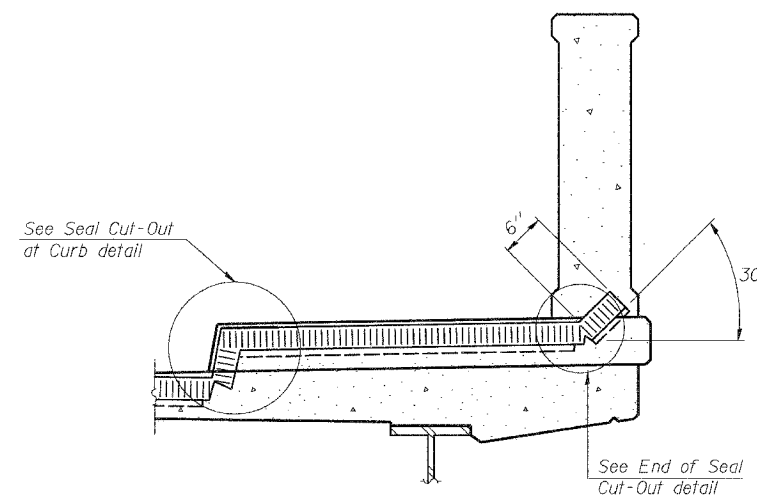


AT CURB, PARAPET, OR WALL
(Showing seal)



AT CURB, PARAPET, OR WALL
(Showing plate)

TYPICAL END TREATMENTS



AT SIDEWALK OR MEDIAN*
(Showing plate and seal)

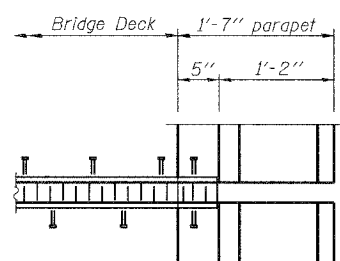
* Shorter plates with a single row of studs at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

BILL OF MATERIAL

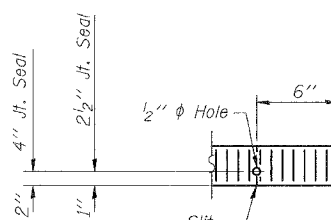
Item	Unit	Total
Bridge Joint System 2 1/2" (Expansion)	Foot	40
Bridge Joint System 4" (Expansion)	Foot	40

(Sheet 1 of 2)

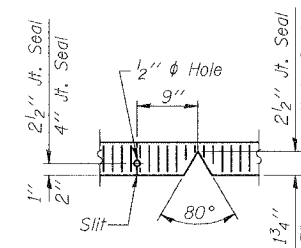
BRIDGE JOINT SYSTEM - EXPANSION
(PREFORMED JOINT SEAL)



PLAN AT PARAPET



END OF SEAL CUT-OUT



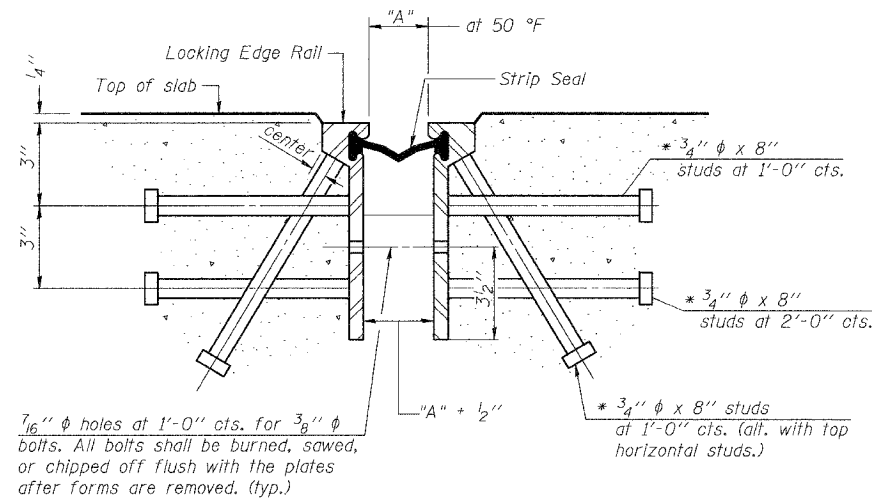
SEAL CUT-OUT AT CURB

REVISIONS	
NAME	DATE

Clorba Group, Inc.
CONSULTING ENGINEERS
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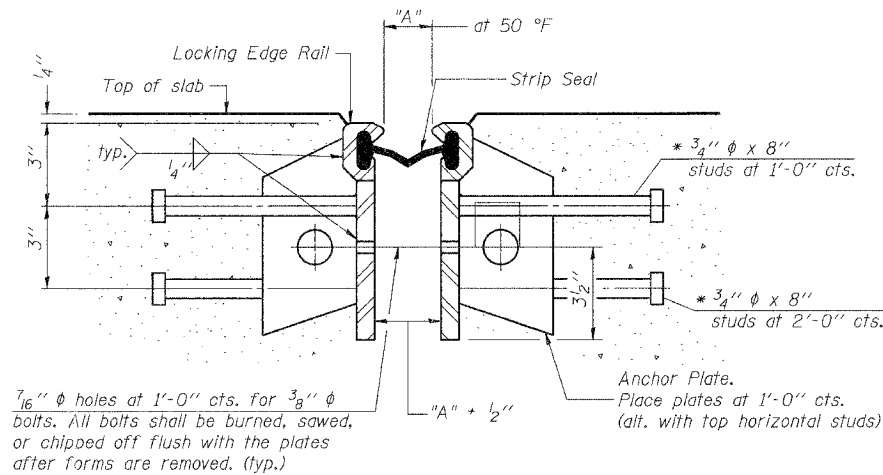
VILLAGE OF WINNETKA, ILLINOIS
BRIDGE JOINT SYSTEM-EXPANSION
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

SCALE: NONE DRAWN BY: RCD
DATE: MARCH 2006 DESIGN BY:
FILE: 3278 CHECKED BY: SCD



SECTION THRU ROLLED RAIL EXP. JOINT
(240 Studs Required)

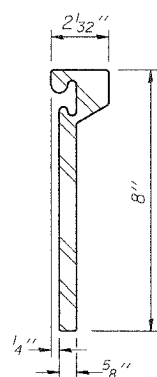
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



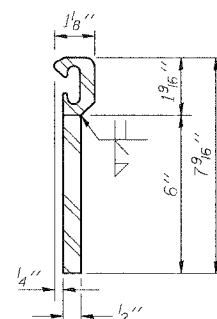
SECTION THRU WELDED RAIL EXP. JOINT
(240 Studs Required)
(160 Anchor Plates Required)

GENERAL NOTES

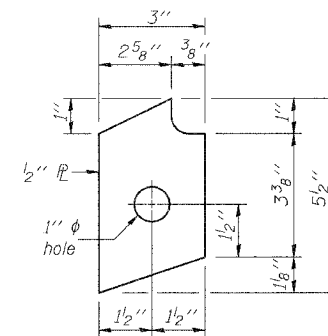
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
The manufacturer's recommended installation methods shall be followed.
The joint opening and deck dimensions detailed on the superstructure are based on a preformed joint seal. If the contractor elects to use the alternate strip seal joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.



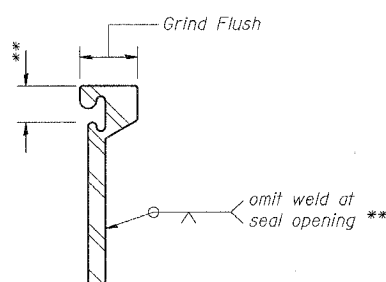
ROLLED (EXTRUDED) RAIL



WELDED RAIL

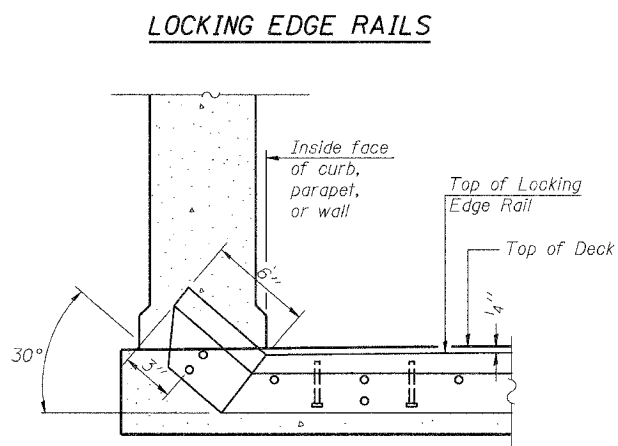


ANCHOR PLATE
(for welded rail)

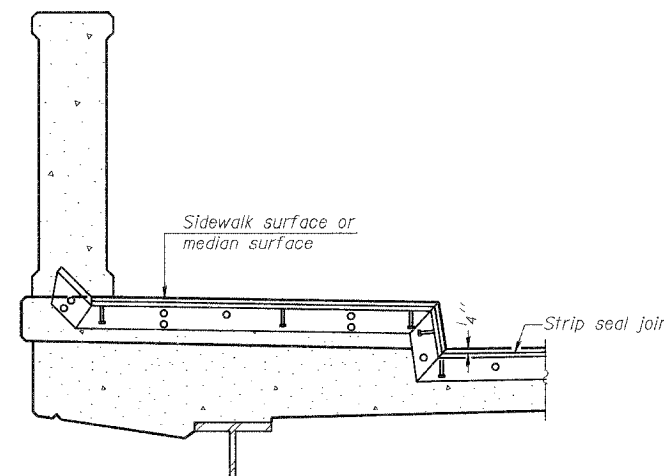


LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.



AT CURB, PARAPET, OR WALL



AT SIDEWALK OR MEDIAN*

* Shorter plates with a single row of studs at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

TYPICAL END TREATMENTS

(Sheet 2 of 2)
BRIDGE JOINT SYSTEM - EXPANSION
(ALTERNATE-STRIP SEAL)

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VILLAGE OF WINNETKA, ILLINOIS
BRIDGE JOINT SYSTEM-EXPANSION (ALTERNATE)
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

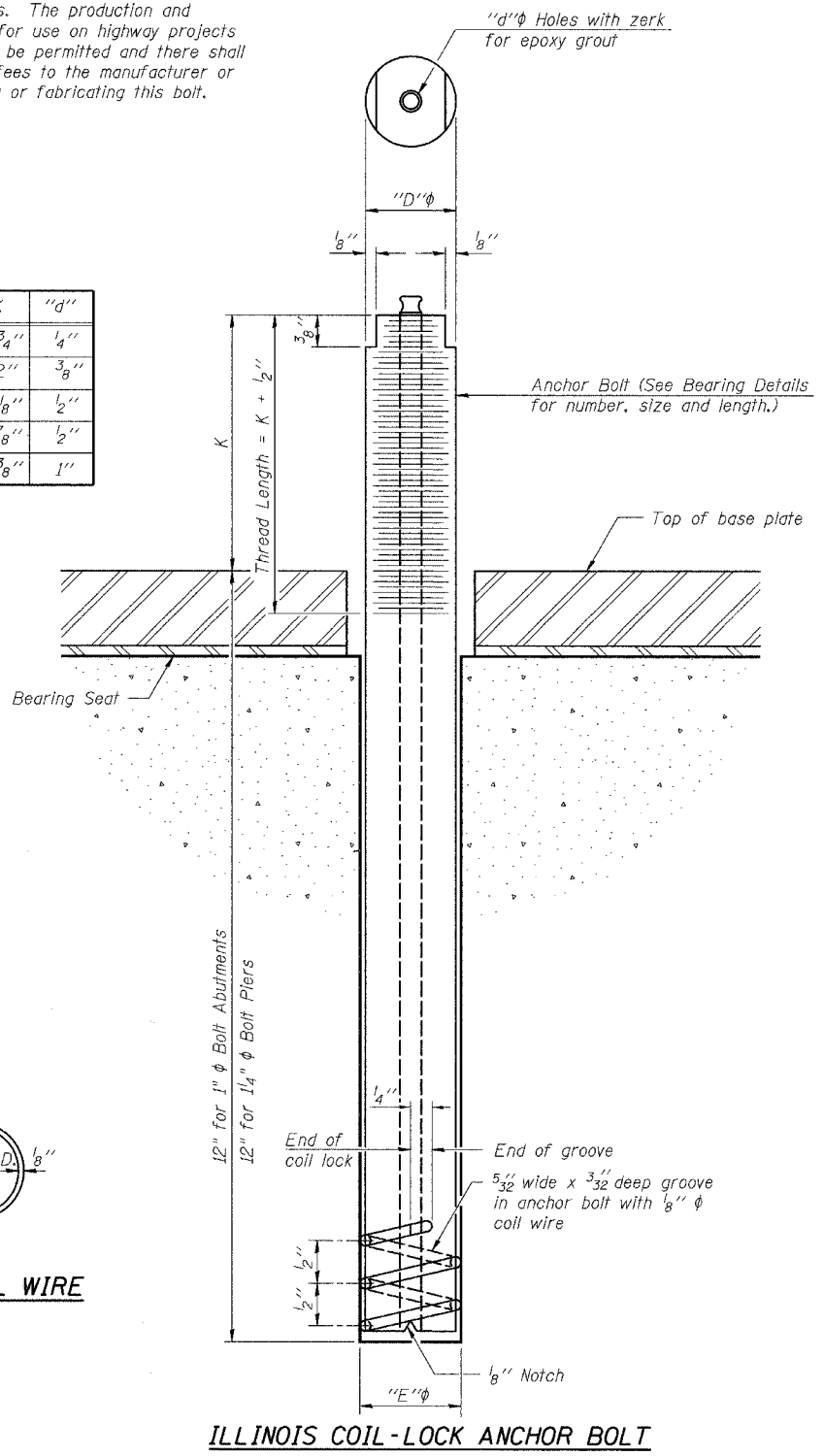
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DATE: MARCH 2006 DESIGN BY: BWS
FILE: 3278 CHECKED BY: SCD

REVISIONS	
NAME	DATE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	35
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
Sheet SA-16 of SA-23		CONTRACT	83850	

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
 The coil wire shall be made of any suitable soft steel wire.
 The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
 The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, 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 type anchor rods shall be a two part system composed of:
 1. A threaded rod stud with nut and washer of the type specified.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
Abutments	A 307
Piers	A 307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
 Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
 The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

ANCHOR BOLT DETAILS FOR BEARINGS

REVISIONS	
NAME	DATE

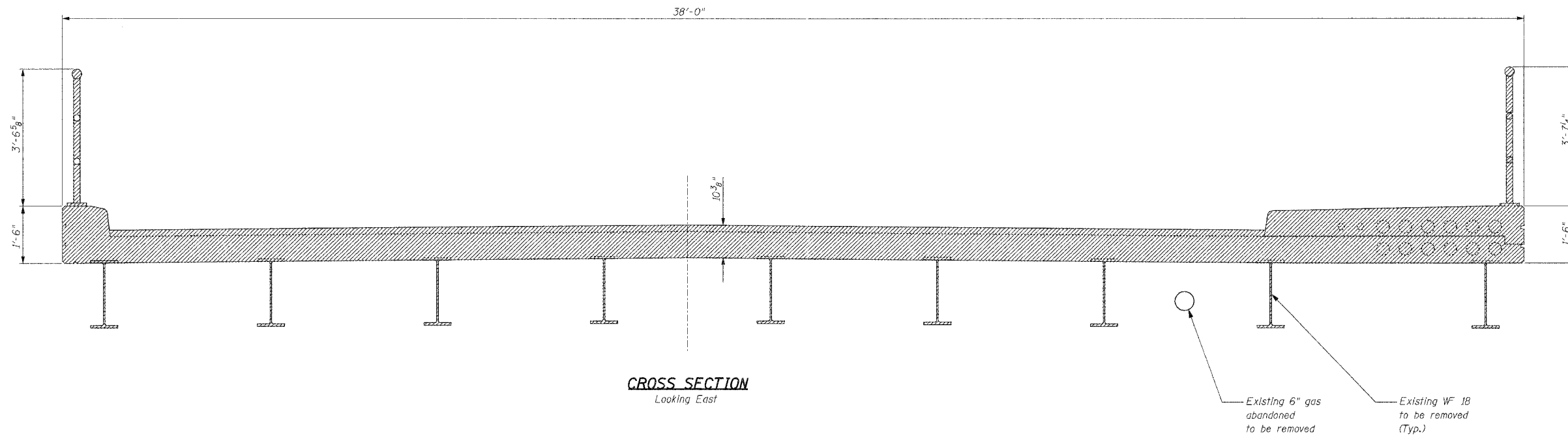
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 CONSULTING ENGINEERS
 3007 NORTH CUMBERLAND AVENUE - CHICAGO, ILLINOIS 60638 - (773) 775-4000

VILLAGE OF WINNETKA, ILLINOIS
 ANCHOR BOLT DETAILS FOR BEARINGS
 PINE STREET OVER THE UNION PACIFIC R.R.
 R.R. MILE POST 16.89 KENOSHA SUBDIVISION
 COOK COUNTY STA. 101+09.96
 STRUCTURE NO. 016-8259

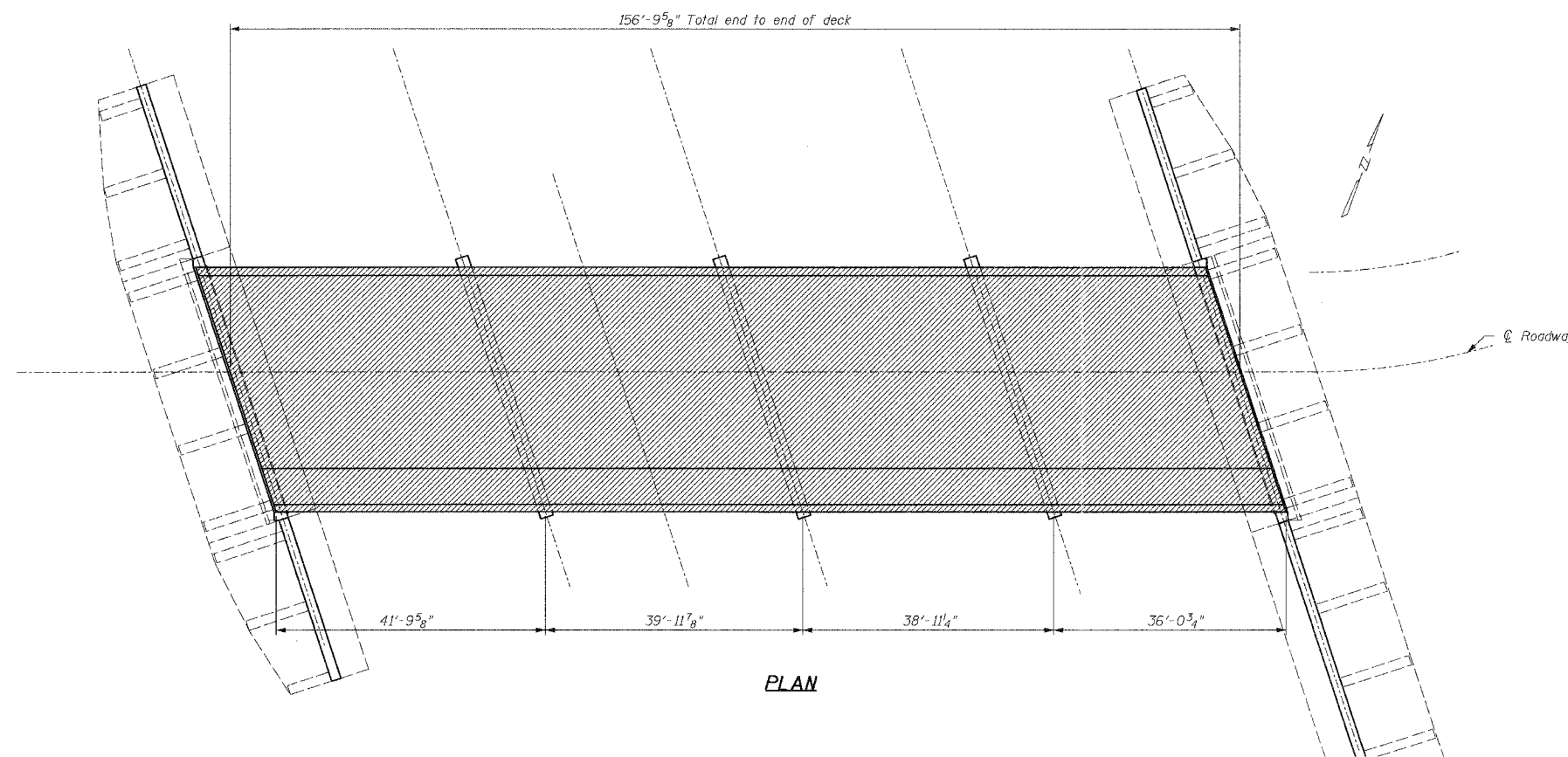
SCALE: NONE
 DATE: JUNE 2006
 FILE: 3278

DRAWN BY: RCD
 DESIGN BY: BWS
 CHECKED BY: SCD

DATE: 7/20/2006 FILENAME: N:\PROJ\9278\1\Design\Structural_Pine_9278\CAD\Final_plan_rev\9278-Pine-abb01.dgn



CROSS SECTION
Looking East



PLAN

LEGEND:
 To Be Removed

BILL OF MATERIAL

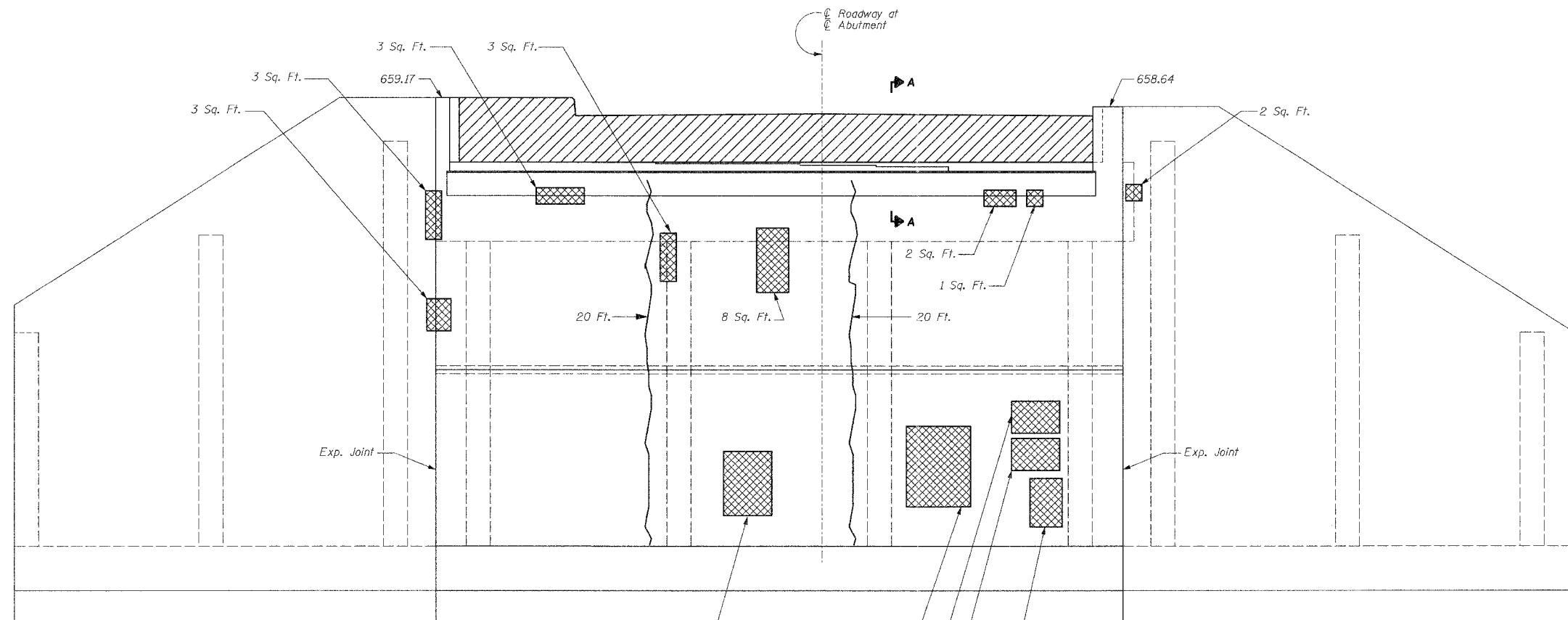
Item	Unit	Quantity
Removal of Existing Structures	L. Sum	1

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VILLAGE OF WINNETKA, ILLINOIS
 LIMITS OF REMOVAL
 PINE STREET OVER THE UNION PACIFIC R.R.
 R.R. MILE POST 16.89 KENOSHA SUBDIVISION
 COOK COUNTY STA. 101+09.96
 STRUCTURE NO. 016-8259

SCALE: NONE DRAWN BY: RCD
 DATE: MARCH 2006 DESIGN BY: BWS
 FILE: 3278 CHECKED BY: SCD

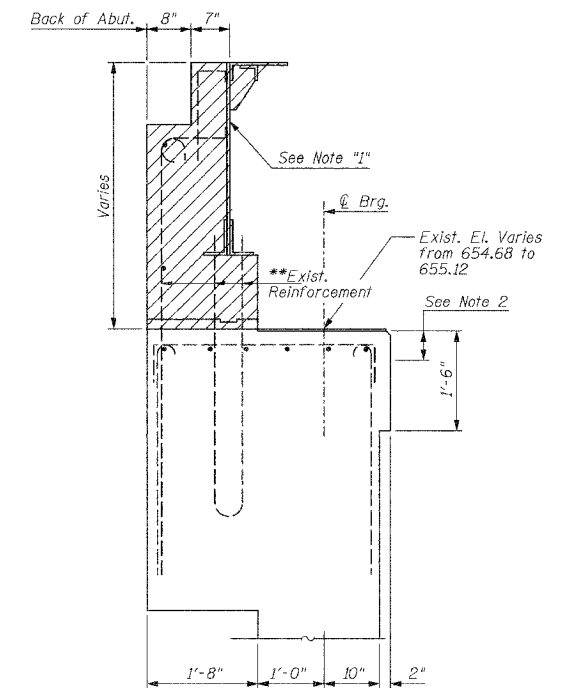
REVISIONS	
NAME	DATE



SOUTHWEST WINGWALL

WEST ABUTMENT ELEVATION

NORTHWEST WINGWALL



SECTION A-A
(EXISTING CONDITION)

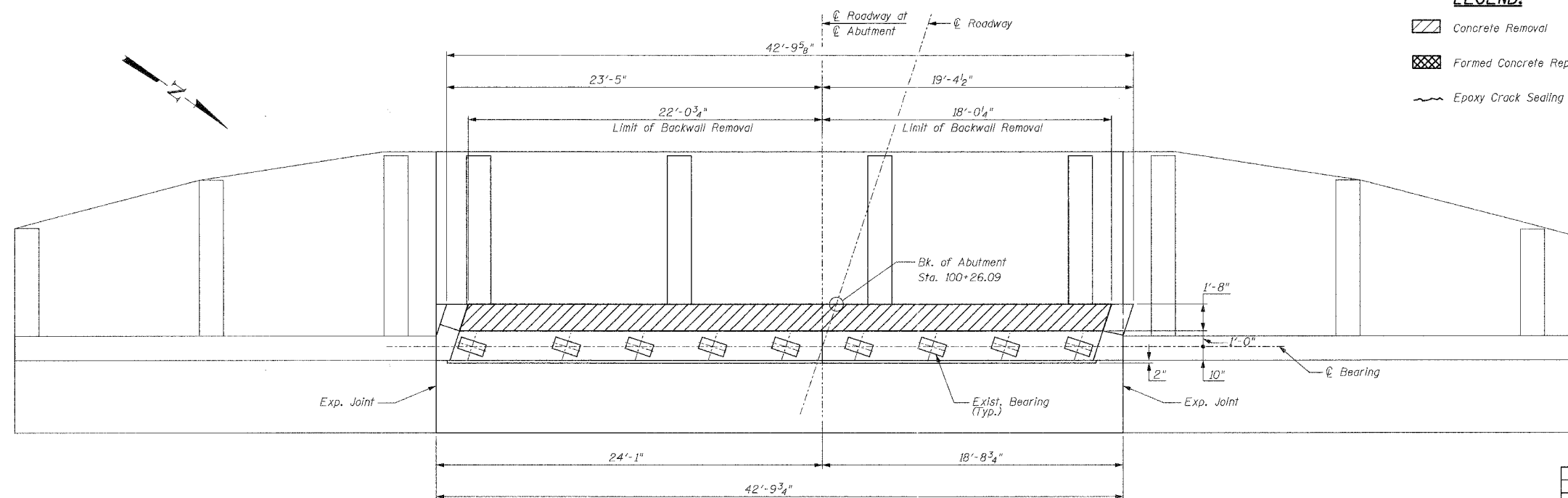
LEGEND:

- Concrete Removal
- Formed Concrete Repair
- Epoxy Crack Sealing

BILL OF MATERIAL

Item	Unit	Quantity
Epoxy Crack Sealing	Lin. Ft.	40
Formed Concrete Repair	Sq. Ft.	75
Concrete Removal	Cubic Yards	7.9

- NOTES:**
1. Removal of existing steel plates and bars in abutment backwall incidental to "Concrete Removal"
 2. Remove existing bearing seat and concrete to completely uncover top bars. Remove backwall to same elevation.
 3. Existing reinforcement extending into new construction shall be cleaned, straightened and incorporated into new construction. Cost shall be included with Concrete Removal.
 4. Repair of the existing abutment shall include but not be limited to the areas shown. The actual areas to be repaired will be determined by the Engineer at the time of construction.



WEST ABUTMENT PLAN

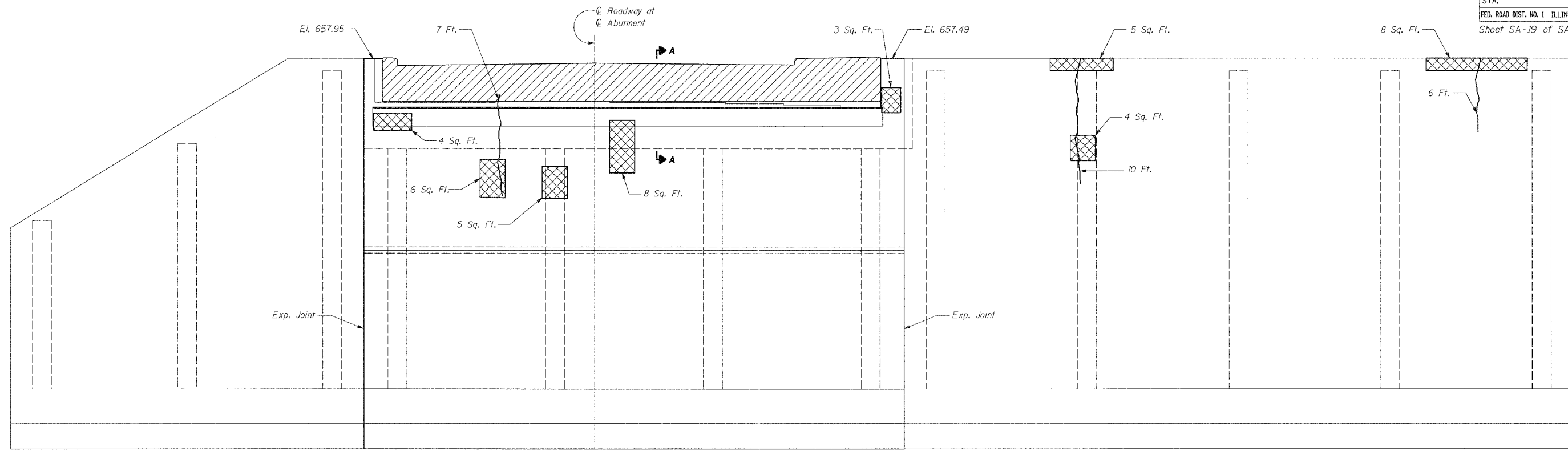
REVISIONS	
NAME	DATE

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VILLAGE OF WINNETKA, ILLINOIS
WEST ABUTMENT REMOVAL AND REPAIRS
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

SCALE: NONE
DATE: MARCH 2006
FILE: 3278

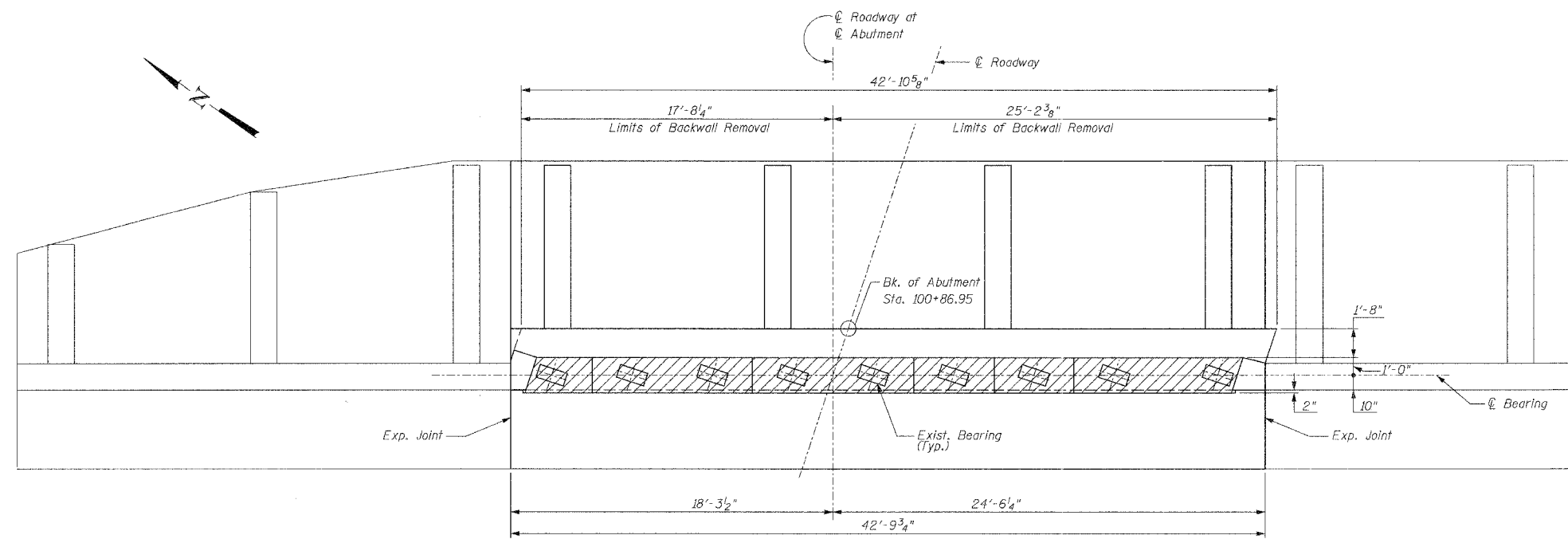
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DESIGN BY: BWS
CHECKED BY: SCD



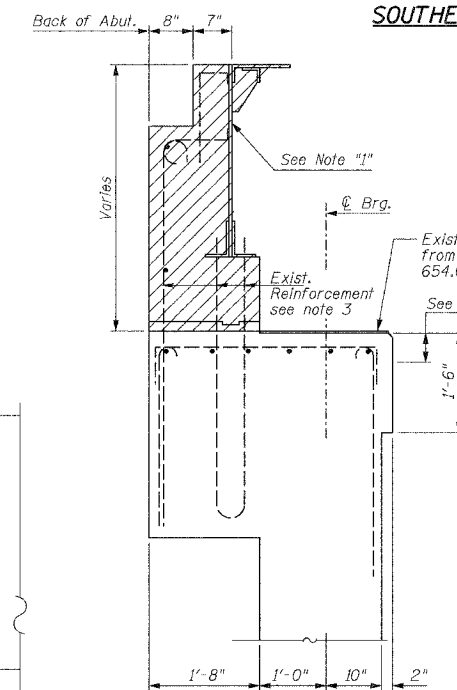
NORTHEAST WINGWALL

EAST ABUTMENT ELEVATION

SOUTHEAST WINGWALL



EAST ABUTMENT PLAN



SECTION A-A (EXISTING CONDITION)

LEGEND:

- Concrete Removal
- Formed Concrete Repair
- Epoxy Crack Sealing

BILL OF MATERIAL

Item	Unit	Quantity
Epoxy Crack Sealing	Lin. Ft.	23
Formed Concrete Repair	Sq. Ft.	42
Concrete Removal	Cubic Yards	7.8

NOTES:

1. Removal of existing steel plates and bars in abutment backwall incidental to "Concrete Removal"
2. Remove existing bearing seat and concrete to completely uncover top bars.
3. Existing reinforcement extending into new construction shall be cleaned, straightened and incorporated into new construction. Cost shall be included with Concrete Removal.

REVISIONS	
NAME	DATE

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VILLAGE OF WINNETKA, ILLINOIS
EAST ABUTMENT REMOVAL AND REPAIRS
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

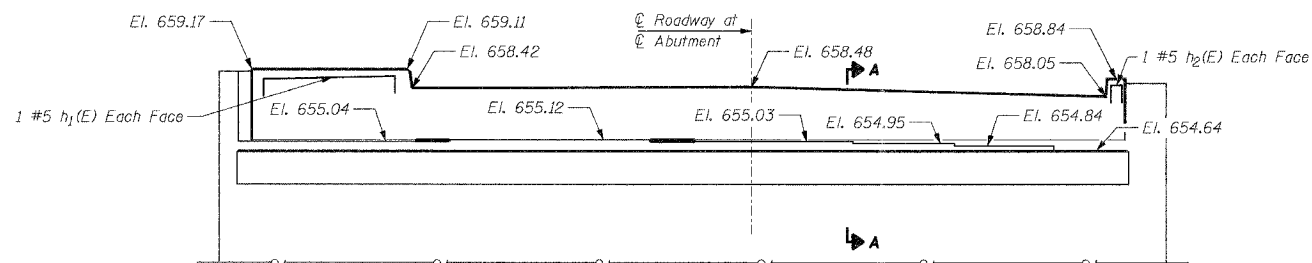
SCALE: NONE
DATE: MARCH 2006
FILE: 3278

DRAWN BY: RCD
DESIGN BY: BWS
CHECKED BY: SCD

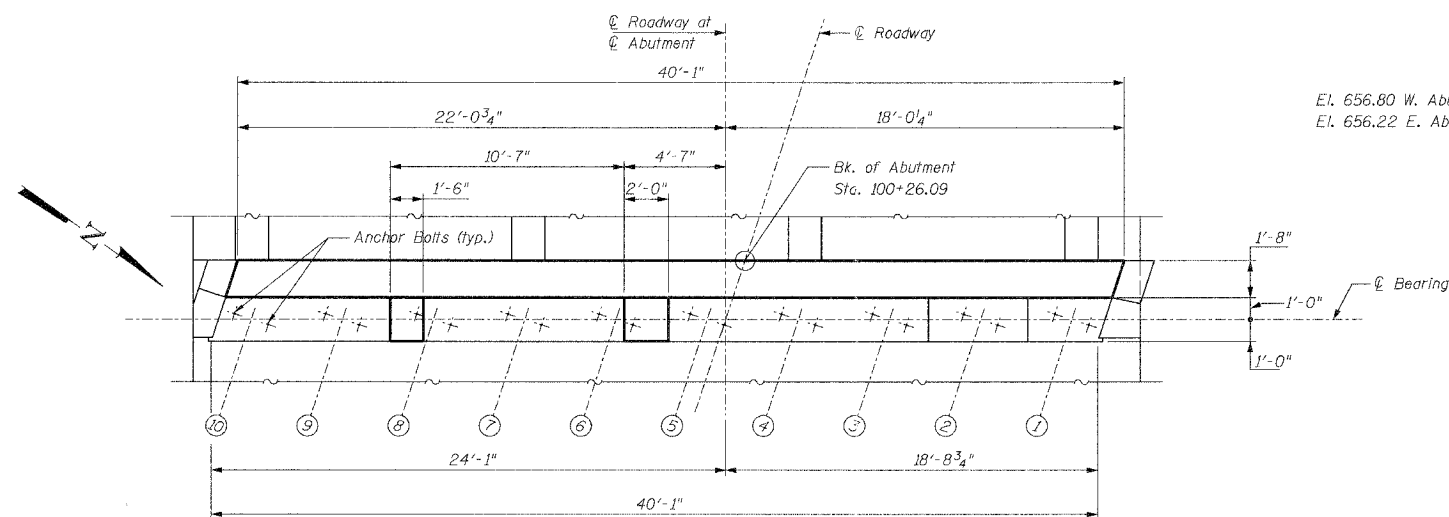
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	39
STA.	TO STA.			
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
Sheet SA-20 of SA-23			CONTRACT	83850

*** Existing Reinforcement extending into removed areas shall be blast cleaned, straightened and incorporated into new construction. Cost incidental to "Concrete Removal". Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost incidental to "Concrete Removal".

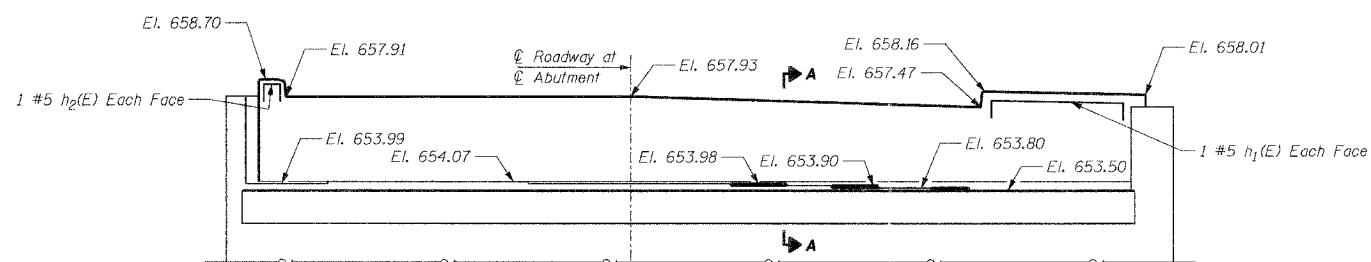
*** Bonded Construction Joint in accordance with Article 503.09(a)(2) of the Standard Specifications.



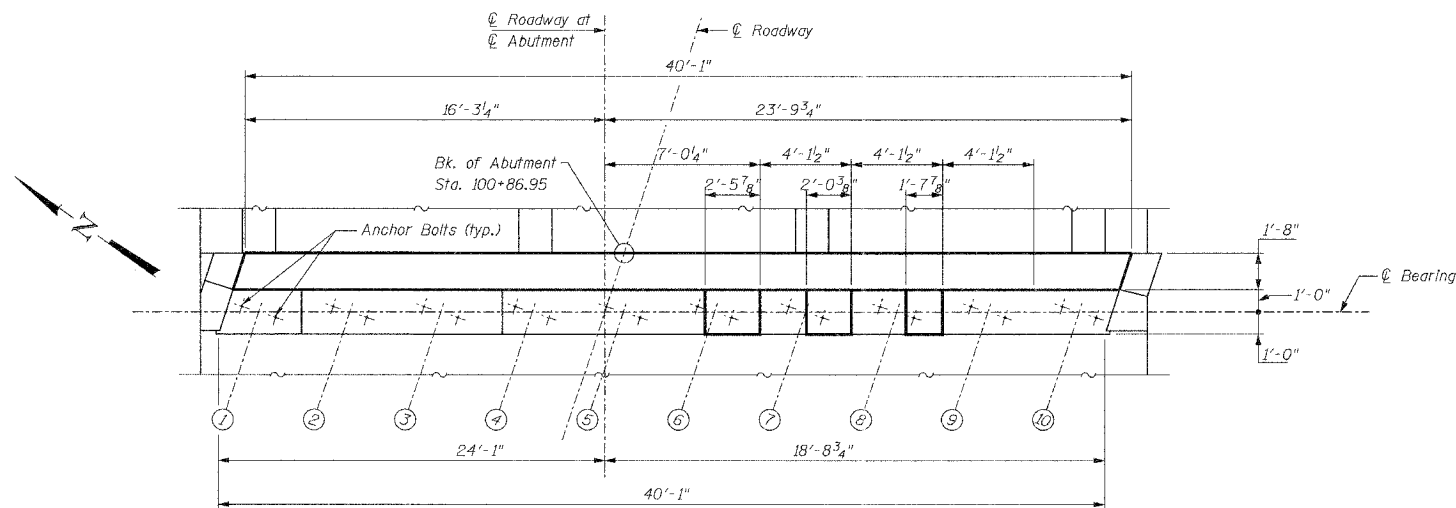
WEST ABUTMENT ELEVATION



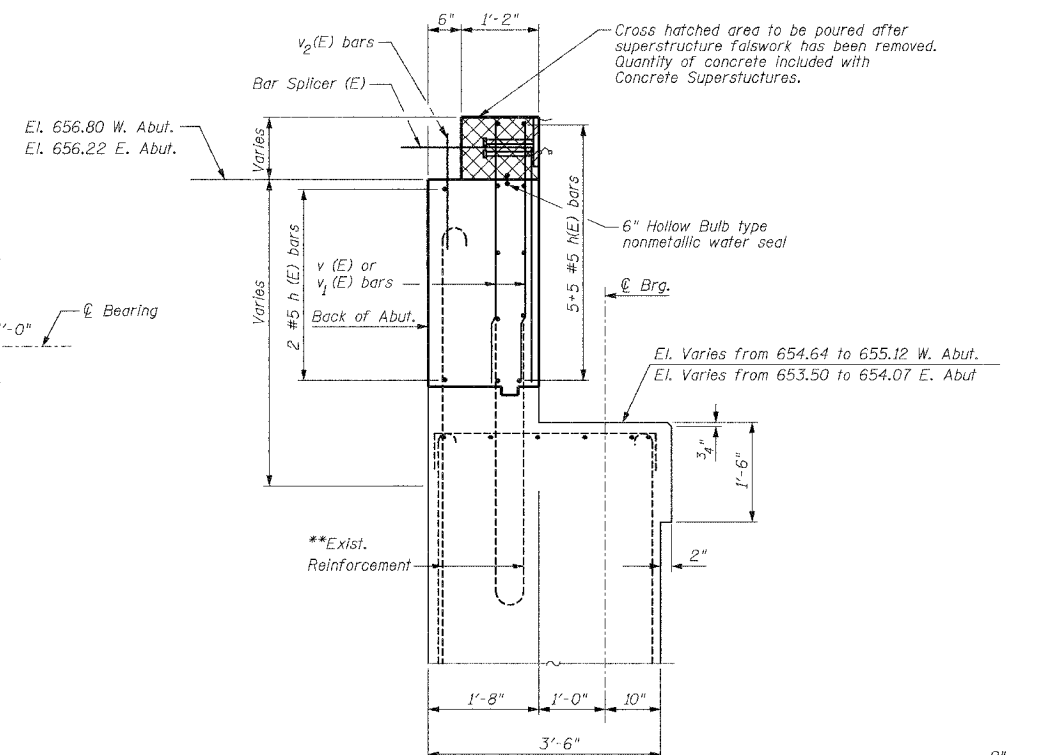
WEST ABUTMENT PLAN



EAST ABUTMENT ELEVATION



EAST ABUTMENT PLAN



**SECTION A-A
(PROPOSED IMPROVEMENT)**

BAR h1(E) BAR h2(E)

BILL OF MATERIAL

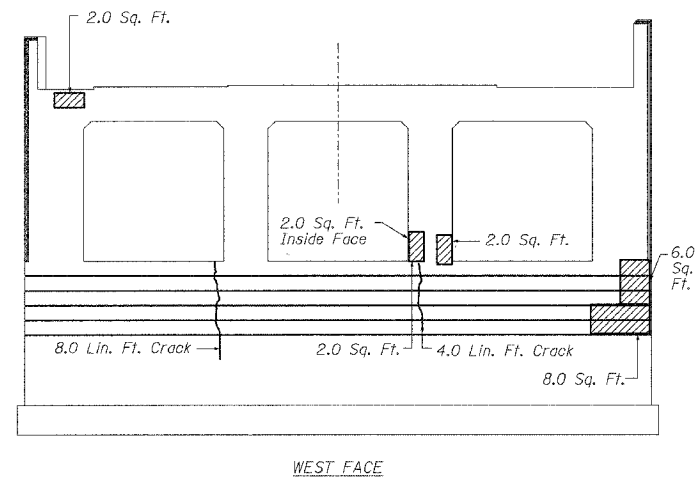
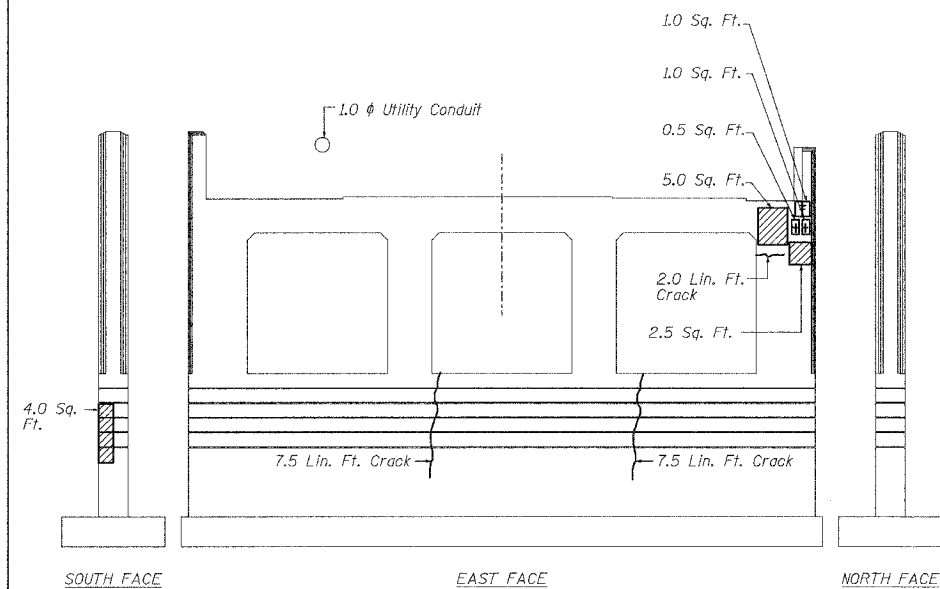
Bar	No.	Size	Length	Shape	
h1(E)	48	#5	20'-7"	—	
h2(E)	4	#5	6'-9"	—	
h2(E)	4	#5	2'-3"	—	
W. Abut.	v1(E)	80	#5	3'-2"	
E. Abut.	v1(E)	80	#5	3'-8"	
	v2(E)	80	#5	2'-6"	
Reinforcement Bars (Epoxy Coated)				Lbs.	1,847
Concrete Structures				Cu. Yd.	10.8
Bridge Seal Sealer				Sq. Ft.	157

REVISIONS	
NAME	DATE

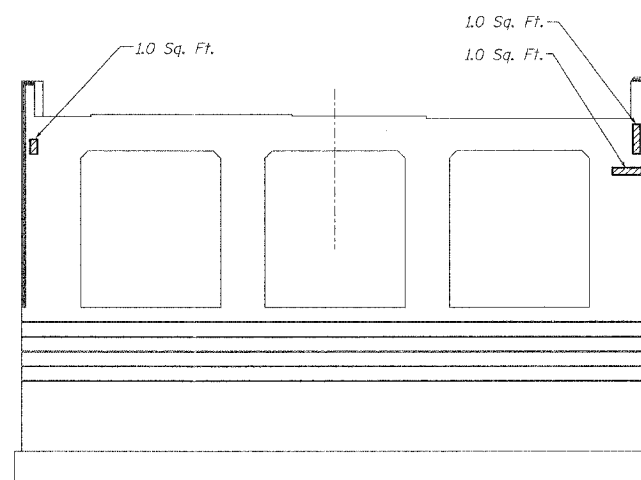
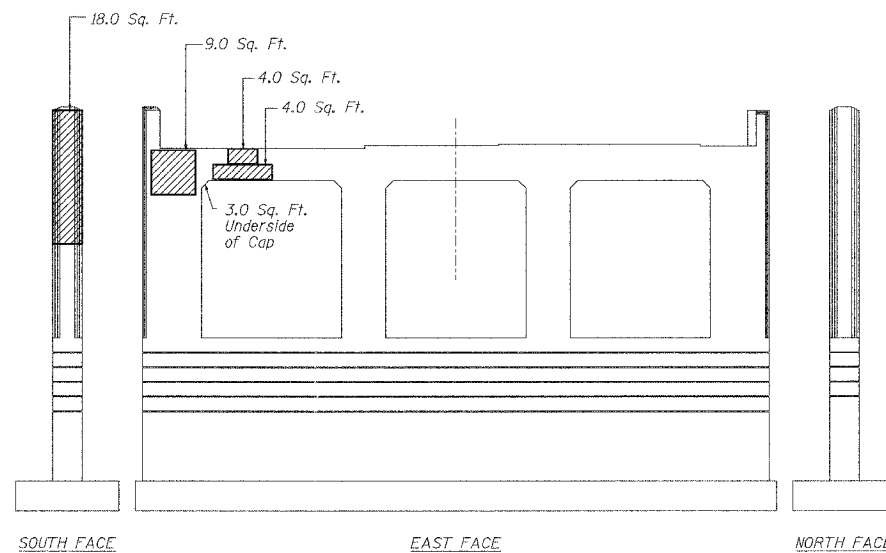
Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (773) 775-4009

VILLAGE OF WINNETKA, ILLINOIS
ABUTMENT RECONSTRUCTION DETAILS
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

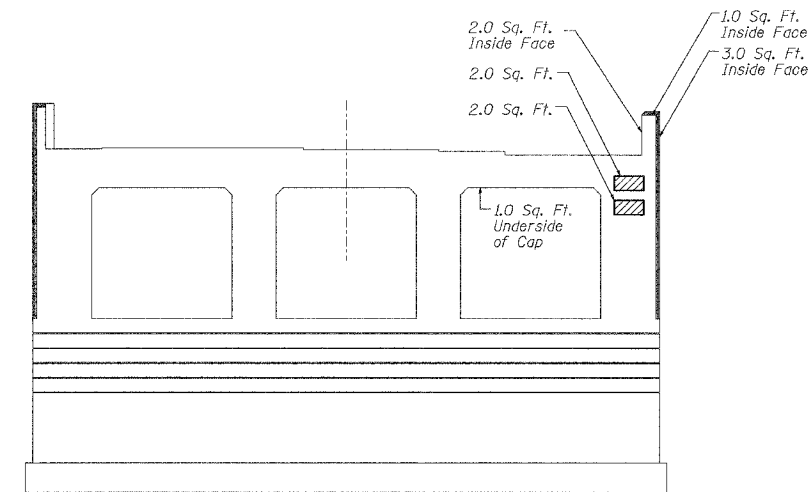
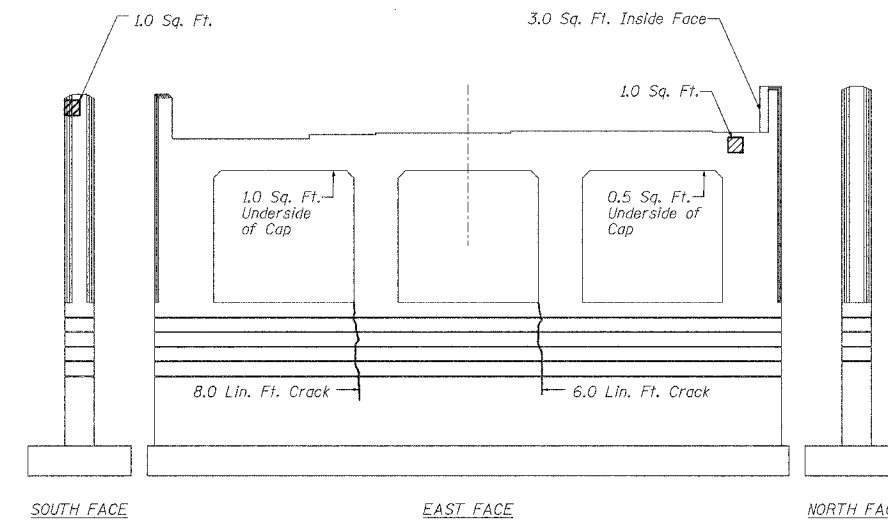
SCALE: NONE DRAWN BY: RCD
DATE: MARCH 2006 DESIGN BY: BWS
FILE: 3278 CHECKED BY: SCD



WEST PIER



CENTER PIER



EAST PIER

Note:

Repair of the existing piers shall include but not be limited to the areas shown. The actual areas to be repaired will be determined by the engineer at the time of construction.

LEGEND

- Formed Concrete Repair (Depth < 5")
- Epoxy Crack Sealing

BILL OF MATERIALS

Formed Concrete Repair < 5" Sq. Ft.	94.5
Epoxy Crack Sealing Ft.	43

REVISIONS	
NAME	DATE

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (773) 775-4009

VILLAGE OF WINNETKA, ILLINOIS
PIER REPAIRS
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

SCALE: NONE
DATE: MARCH 2006
FILE: 3278

DRAWN BY: RCD
DESIGN BY: BWS
CHECKED BY: SCD

DATE: 9/9/2006
FILENAME: n:\proj\3278\pine\design\structural_pine_3278\cad\final_plan\3278_pine_pier01.dgn

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- ② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times f_{s_{allow}} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

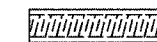
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

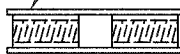
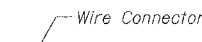
The diameter of this part is the same as the diameter of the bar spliced.

The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



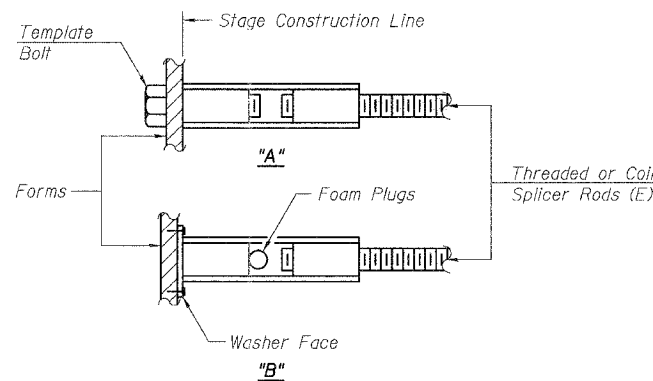
** ONE PIECE



WELDED SECTIONS

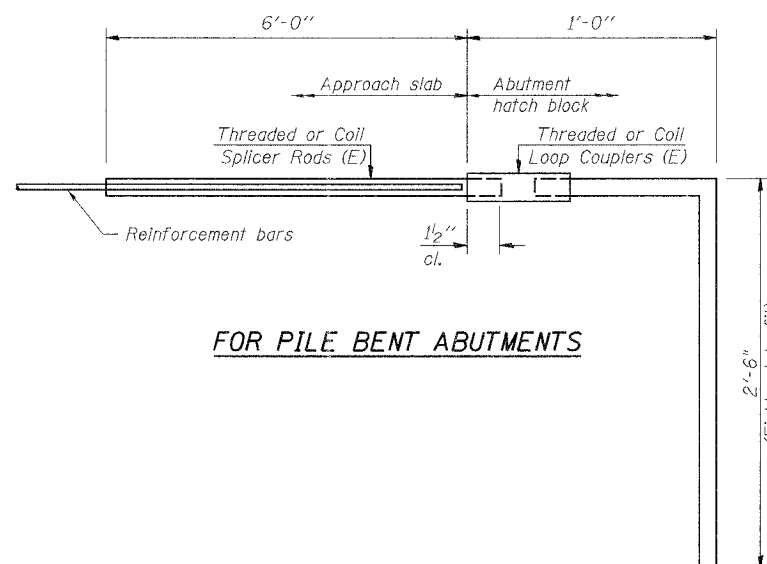
BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 60

DATE: 3-9-2006 FILENAME: n:\proj\3278\pine\design\structural_pine\3278\cad\final_plan\3278-Pine-bsad01.dgn

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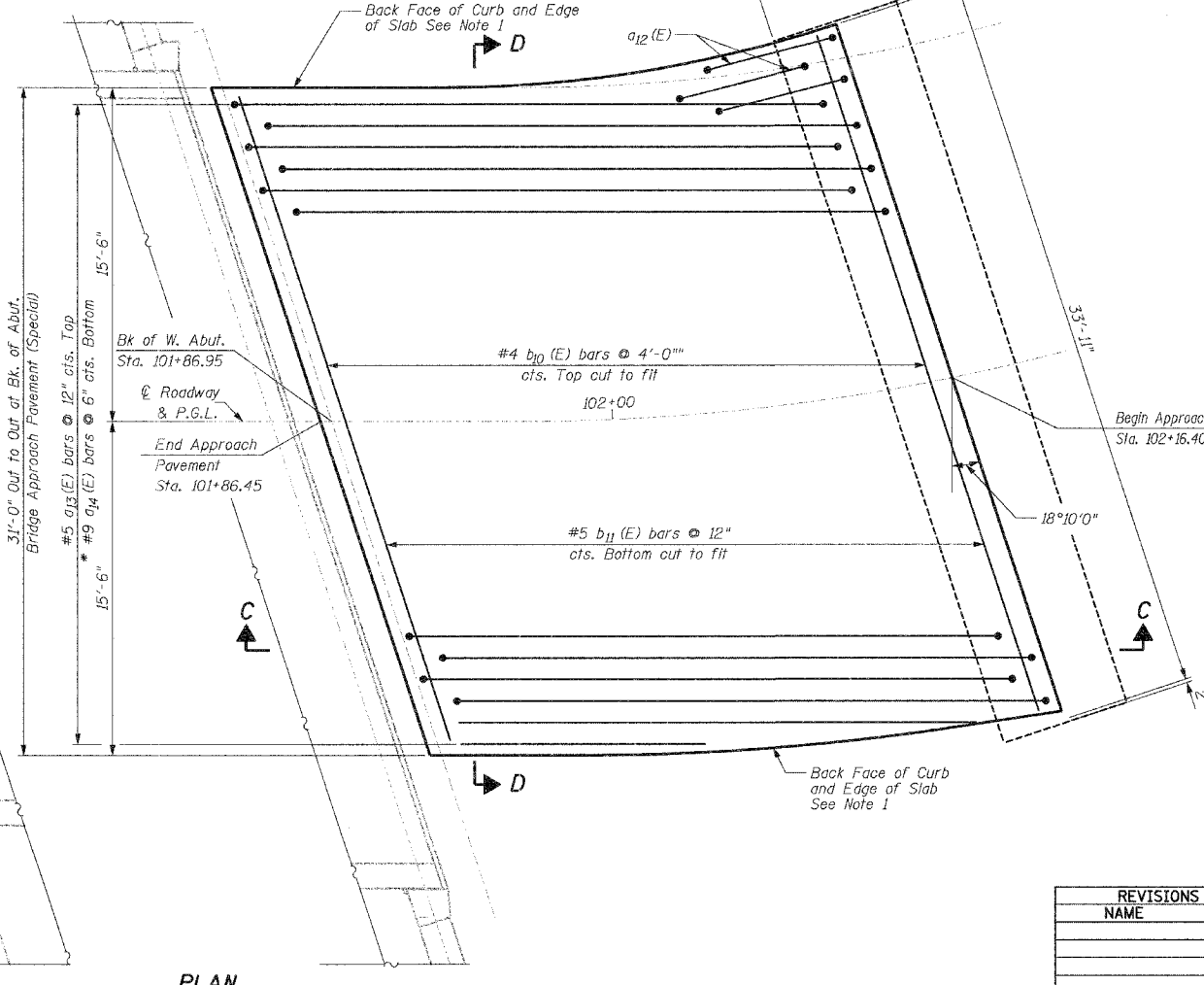
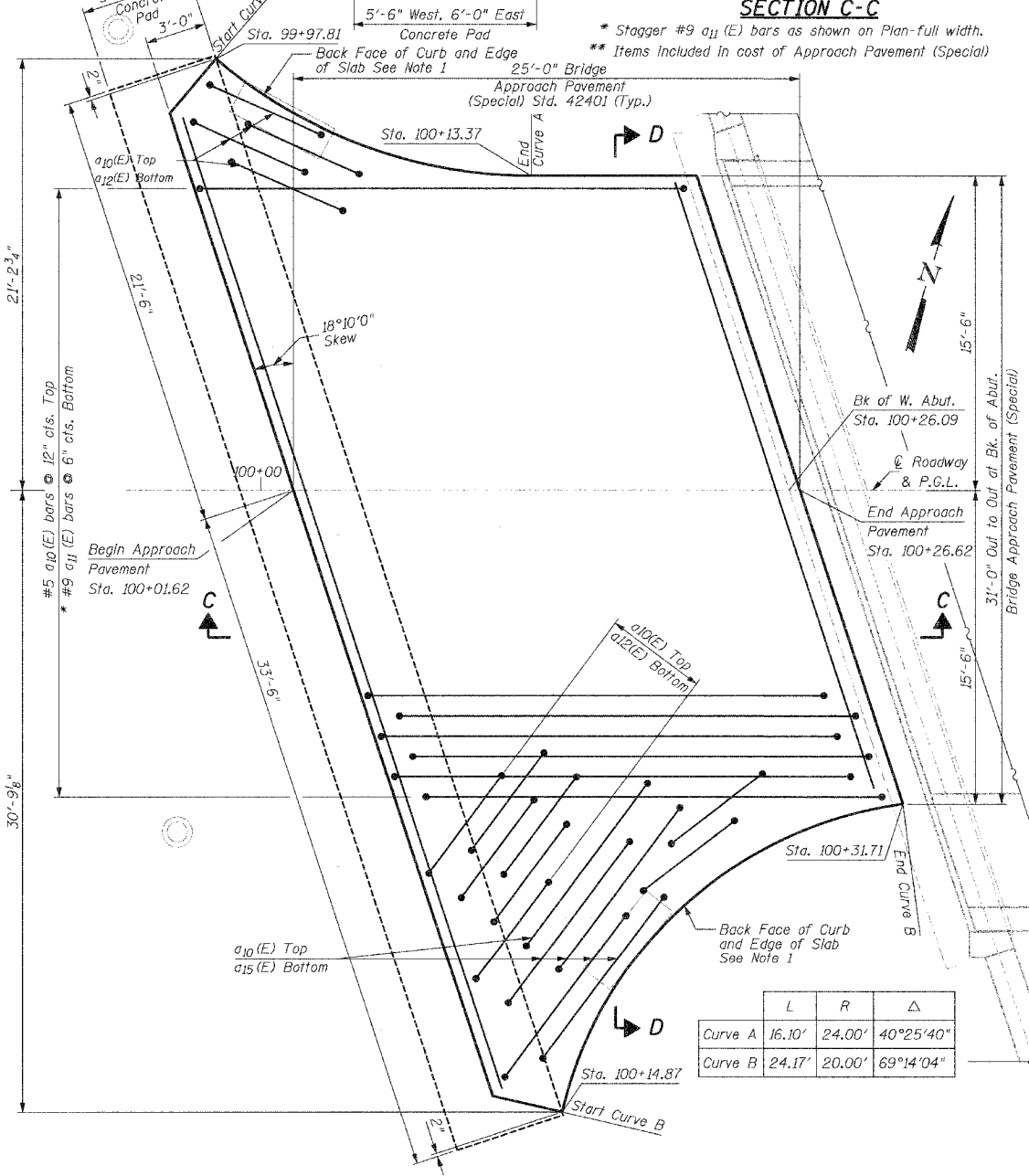
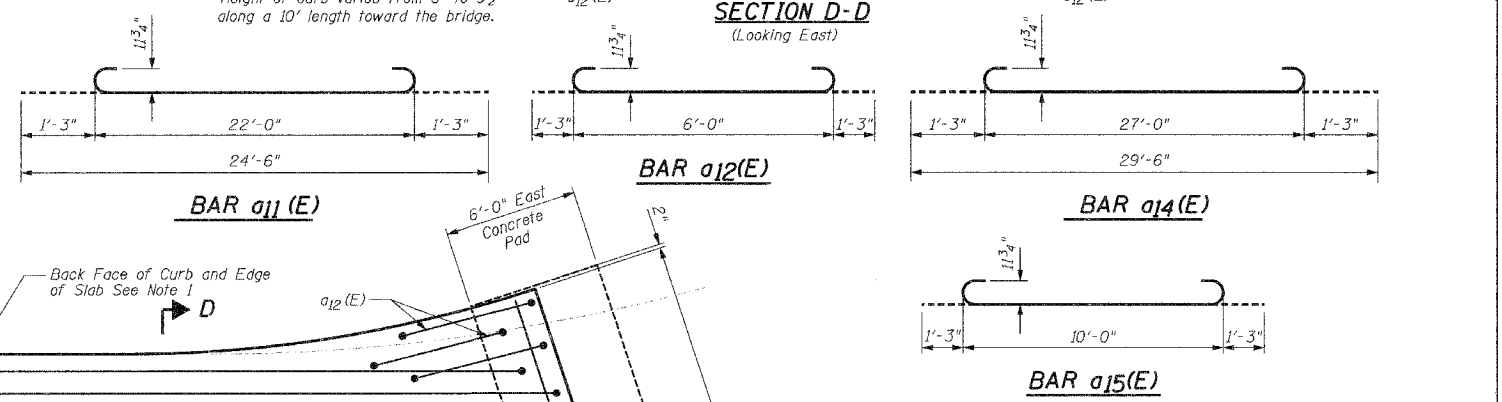
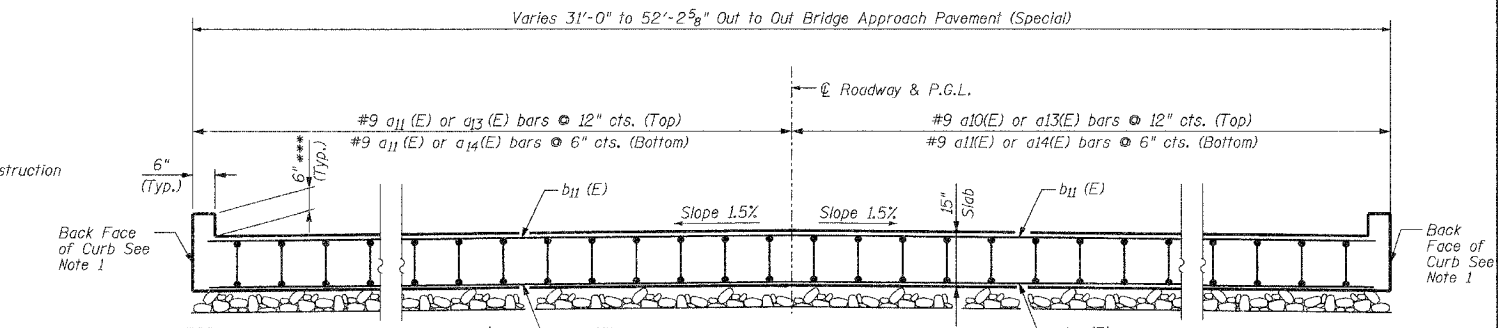
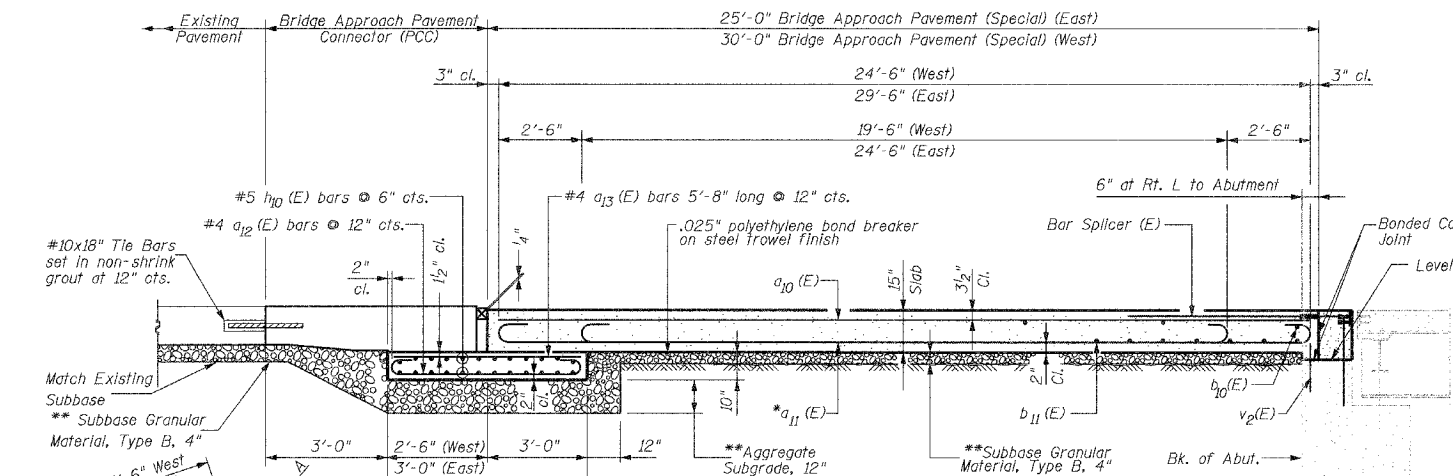
REVISIONS	
NAME	DATE

Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (773) 775-4009

VILLAGE OF WINNETKA, ILLINOIS
 BAR SPLICER ASSEMBLY DETAILS
 PINE STREET OVER THE UNION PACIFIC R.R.
 R.R. MILE POST 16.89 KENOSHA SUBDIVISION
 COOK COUNTY STA. 101+09.96
 STRUCTURE NO. 016-8259

SCALE: NONE DRAWN BY: RCD
 DATE: MARCH 2006 DESIGN BY: SCD
 FILE: 3278 CHECKED BY: SCD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
00-00094-03-BR	COOK	69	42	
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
Sheet SA-23 of SA-23			CONTRACT 83850	



**TWO APPROACH PAVEMENTS
BILL OF MATERIAL**

Item	Unit	Quantity
Bridge Approach Pavement (Special)	Sq. Yd.	207

DESIGN STRESSES

$f'_c = 3,500$ p.s.i.
 $f_y = 60,000$ p.s.i.
 $n = 8.5$

NOTES:

- For Back of Curb Horizontal Alignment see Sheet 7.
- See Bridge Approach Pavement Std. 420401 for additional details.
- All reinforcement bars shall be Epoxy Coated.

REVISIONS	NAME	DATE

Clorba Group, Inc.
CONSULTING ENGINEERS
887 WOOD CHURCHLAND AVENUE • CHICAGO, ILLINOIS 60656 • (773) 778-4000

VILLAGE OF WINNETKA, ILLINOIS
BRIDGE APPROACH PAVEMENT (SPECIAL)
PINE STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 16.89 KENOSHA SUBDIVISION
COOK COUNTY STA. 101+09.96
STRUCTURE NO. 016-8259

SCALE: NONE
DATE: MARCH 2006
FILE: 3278

DRAWN BY: RCD
DESIGN BY:
CHECKED BY: SCD

DATE: 4/22/2006
FILENAME: N:\PROJ\3278\Pine\Design\Structural_Pine_3278\CAD\Final_plan_3278-Pine-bapp01.dgn

	L	R	Δ
Curve A	16.10'	24.00'	40°25'40"
Curve B	24.17'	20.00'	69°14'04"

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
00-00094-03-BR	COOK	69	43	
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
Sheet SB-1 of SB-22		CONTRACT 83850		

Bench Mark:
Brass plate in front steps on east side of
Village Hall, 510 Green Bay Road. Elev. 657.79

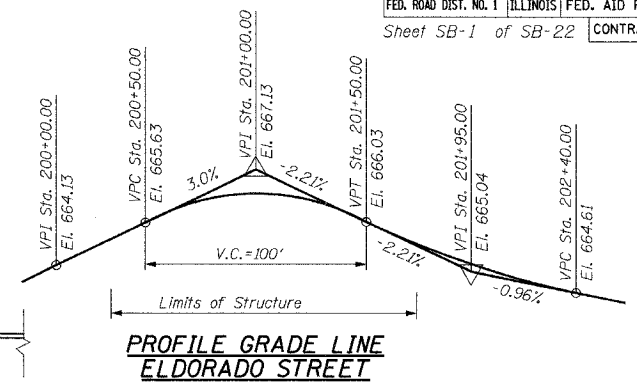
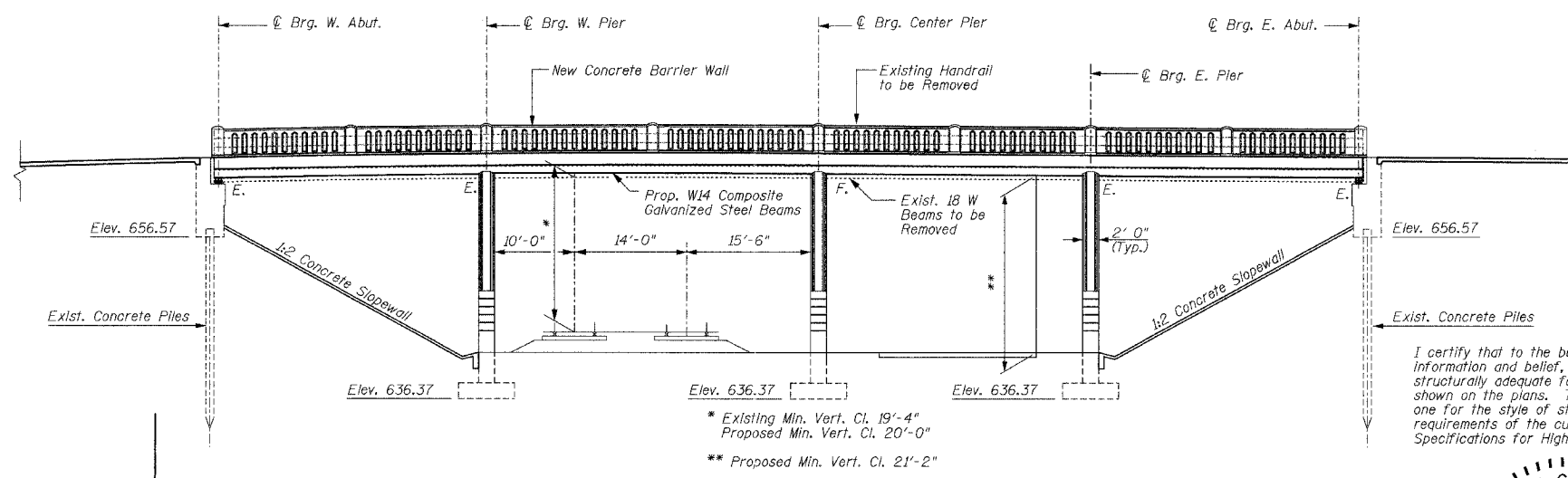
Existing Structure: SN 016-8260. Built in 1940. The superstructure is R.C. Deck 147'-10" long bk. to bk. of Abutments by 28'-0" wide supported on four-span rolled beams. No skew. The substructure is R.C. Multi-column piers on spread footings and pile supported R.C. abutments. The superstructure will be removed and replaced. Traffic will be detoured during construction.

No salvage.

Note:
No deck drains will be permitted in the spans over tracks or within 10' feet of cross arms of a railroad pole line. Storm water collected on the bridge will be deposited into Village storm drains East and West of the bridge as shown in Sheet No. 12.

TABLE 1 - TRACK ELEVATION:

Point No.	Elevation	Location
1	643.95	N.B. - N
2	644.03	N.B. - S
3	644.11	S.B. - N
4	644.03	S.B. - S



DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications for Highway Bridges

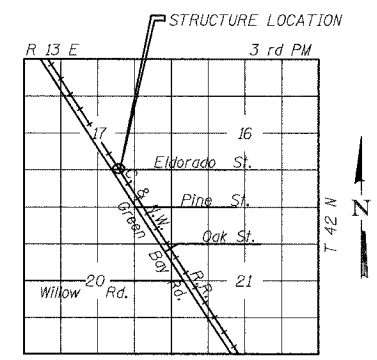
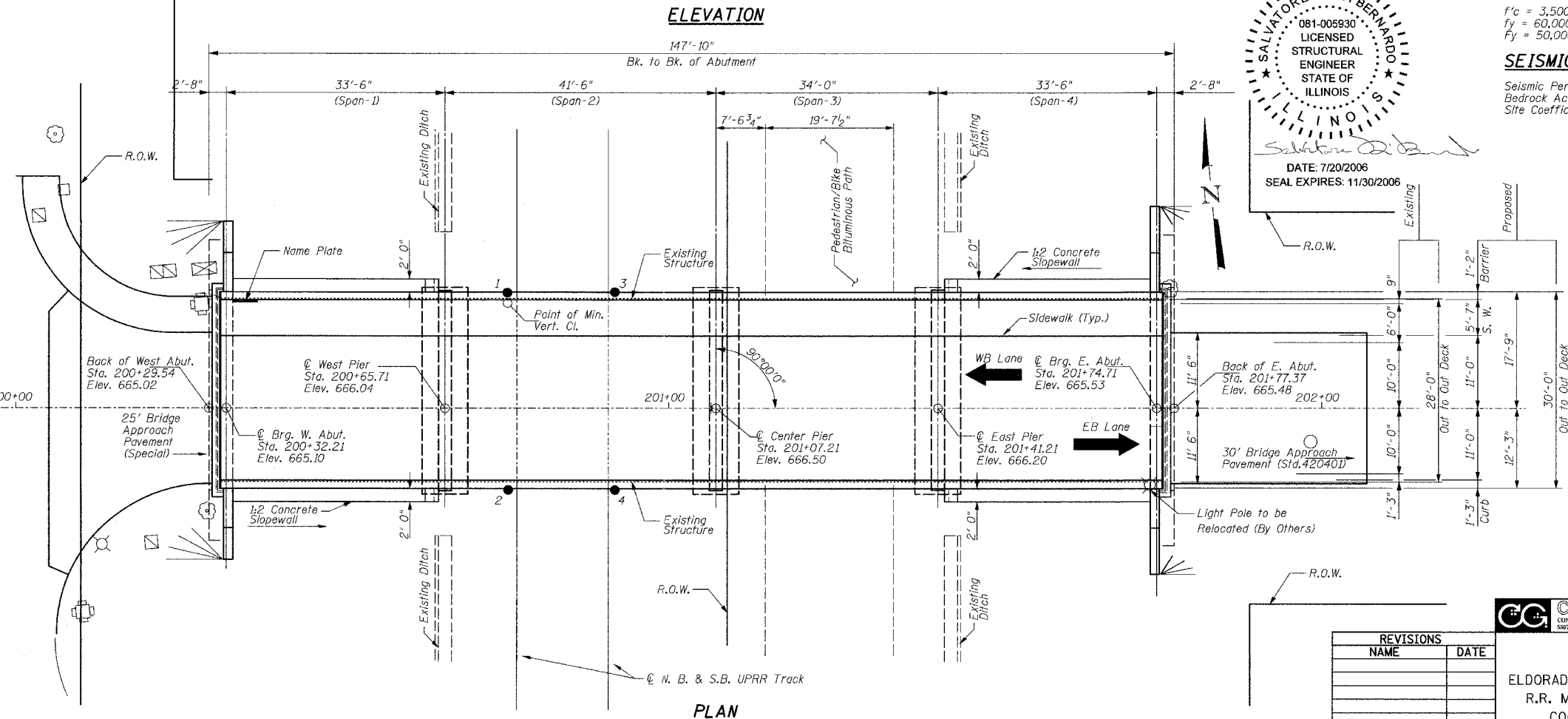
LOADING HS20-44
Allow 50 p.s.f. for future wearing surface.

DESIGN STRESSES
 $f_s = 18,000$ p.s.i. (Existing)
 $f_c = 1,050$ p.s.i. (Existing)
 $f'_c = 3,500$ p.s.i. (Proposed)
 $f_y = 60,000$ p.s.i. (Proposed Reinforcing Steel)
 $F_y = 50,000$ p.s.i. (Proposed Structural Steel-M270 Grade 50)

SEISMIC DATA
 Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.035 g
 Site Coefficient (S) = 1.0

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 requirements of the current "AASHTO Standard Specifications for Highway Bridges".

SALVATORE C. DI BERNARDO
 081-005930
 LICENSED STRUCTURAL ENGINEER
 STATE OF ILLINOIS
 DATE: 7/20/2006
 SEAL EXPIRES: 11/30/2006



STATION 201+07.21
 BUILT 200_ BY
 STATE OF ILLINOIS
 F.A.U RT. SEC. 00-00094-03-BR
 F.A.U PROJ. NO. BHOS-D000K1556)
 LOADING HS20
 STR. NO. 016-8260
NAME PLATE
 See Std. 515001

REVISIONS	
NAME	DATE

Clorba Group, Inc.
 CONSULTING ENGINEERS
 5407 NORTH CUMBERLAND AVENUE - CHICAGO, ILLINOIS 60656 - (773) 775-8000

VILLAGE OF WINNETKA, ILLINOIS
 GENERAL PLAN & ELEVATION
 ELDORADO STREET OVER THE UNION PACIFIC R.R.
 R.R. MILE POST 17.26 KENOSHA SUBDIVISION
 COOK COUNTY STA. 201+07.21
 STRUCTURE NO. 016-8260

SCALE: NONE
 DATE: JUNE 2006
 FILE: 3278

DRAWN BY: RCD
 DESIGN BY: BWS
 CHECKED BY: SCB

DATE: 7/20/2006 FILENAME: N:\PROJ\3278\Eldorado\Design\Structural\Eldorado_3278\CAD\Final_revised\3278-eldo-gp.e01.dgn

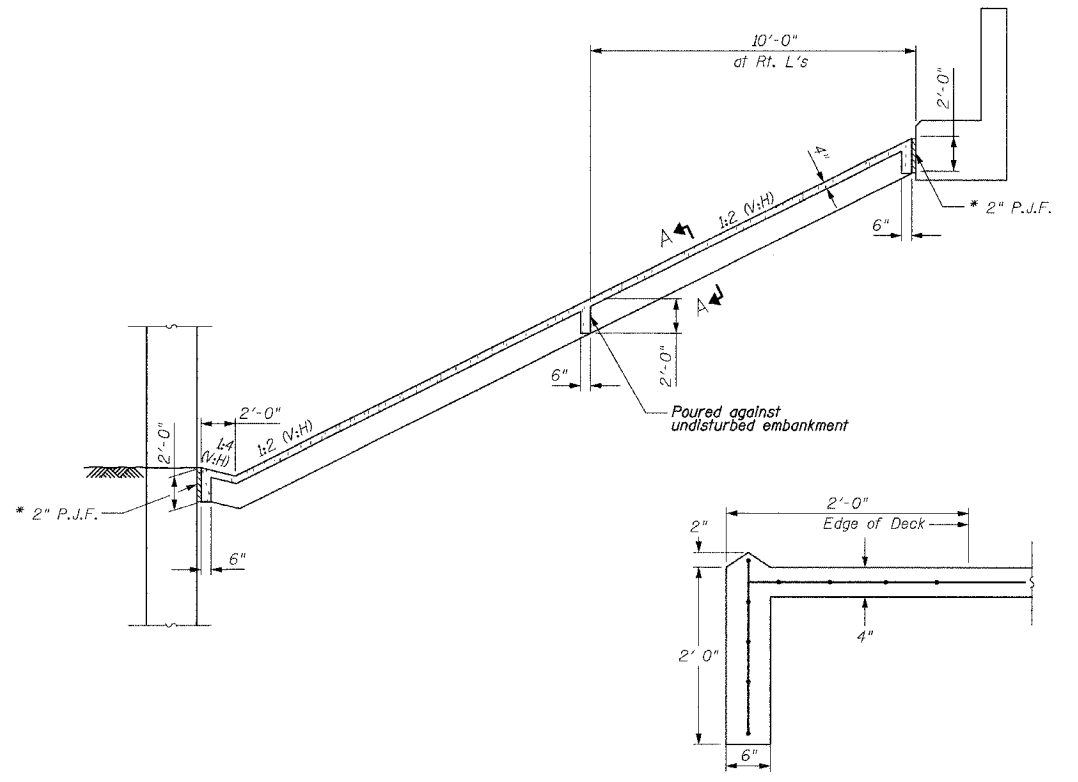
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	44
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS		FED. AID PROJECT
Sheet SB-2 of SB-22		CONTRACT 83850		

GENERAL NOTES

- Fasteners shall be high strength bolts (AASHTO M 164, Type 3 in unpainted areas and mechanically galvanized AASHTO M 164, Type 1 or Type 2 in painted areas). Bolts 3/4" ϕ , open holes 5/8" ϕ , unless otherwise noted.
- Calculated weight of Structural Steel = Grade 50=90,405 Lbs.
Grade 36=23,024 Lbs.
- Field welding of construction accessories will not be permitted to beams or girders.
- Anchor bolts shall be set before bolting diaphragms over supports.
- The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.
- The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2.
- Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-322 Grade 60.
- Slope wall shall be reinforced with welded wire fabric, 6" x 6" -W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two 1/8" adjusting shims shall be provided for each bearing and placed as detailed.
- Bridge Seat Sealer shall be applied to the seat area of both abutments.
- All construction joints shall be bonded.
- The roadway signs that hang from each fascia beam below the bridge shall be removed and salvaged prior to removal of the superstructure and reinstalled once the new beams are set.
- All new structural steel shall be galvanized. The fascia and underside of the exterior beams and their associated splice plates shall be painted with the acrylic system. The color of the final finish coat shall be Reddish Brown, Munsell No. 2.5 YR 3/4. See Special Provision for "Hot Dip Galvanizing for Structural Steel".
- The existing structure steel coating contains lead. The contractor shall take appropriate precautions to deal with the presence of lead on this project.
- The existing restricted clearance at the structure must not be reduced while the tracks are in service.

INDEX OF SHEETS

- SB-1 General Plan & Elevation
- SB-2 General Notes & Quantities
- SB-3 Cantilever Forming Brackets
- SB-4 Top of Slab Elevations I
- SB-5 Top of Slab Elevations II
- SB-6 Deck Reinforcement Plan & Cross Section
- SB-7 Deck Details
- SB-8 Concrete Barrier Details
- SB-9 Framing Plan & Beam Elevation
- SB-10 Diaphragm & Splice Details
- SB-11 Bearing Details I
- SB-12 Bearing Details II
- SB-13 Bridge Joint System - Expansion
- SB-14 Bridge Joint System - Expansion (Alternate)
- SB-15 Anchor Bolt Details for Bearings
- SB-16 Limits of Removal
- SB-17 West Abutment Removals & Repairs
- SB-18 East Abutment Removals & Repairs
- SB-19 Abutment Reconstruction Details
- SB-20 Pier Repairs
- SB-21 Bar Splicer Assembly Details
- SB-22 Bridge Approach Pavement (Special)



SECTION A-A

SLOPEWALL DETAIL

* Preformed Joint Filler (P.J.F.) incidental to Pay Item Slope Wall, 4"

TOTAL BILL OF MATERIAL

NUMBER	ITEM	UNIT	SUPER.	SUB	TOTAL
1	Bridge Approach Pavement	Sq. Yd.	77		77
2	Protective Coat	Sq. Yd.	580		580
3	Bridge Approach Pavement, Special	Sq. Yd.	83		83
4	Approach Slab Removal	Sq. Yd.	62		62
5	Removal of Existing Superstructures No. 2	Each	1		1
6	Concrete Removal	Cu. Yd.		11.7	11.7
7	Concrete Structures	Cu. Yd.		18.3	18.3
8	Concrete Superstructures	Cu. Yd.	144.2		144.2
9	Bridge Deck Grooving	Sq. Yd.	321		321
10	Elastomeric Bearing Assembly, Type I	Each	28		28
11	Structural Repair of Concrete (Depth Equal to or Less than 5")	Sq. Ft.		75	75
12	Stud Shear Connectors	Each	1,932		1,932
13	Reinforcement Bars, Epoxy Coated	Lb.	34,972	1,261	36,233
14	Slope Wall, 4 Inch	Sq. Yd.		275	275
15	Name Plates	Each	1		1
16	Bridge Seat Sealer	Sq. Ft.		111	111
17	Epoxy Crack Sealing	Foot		43	43
18	Bridge Joint System (Expansion), 1"	Foot		59	59
19	Furnishing and Erecting Structural Steel, Bridge No.2	L. Sum	1		1
20	Concrete Barrier Wall (Special)	Cu. Yd.	27.0		27.0
21	Bar Splicers	Each		44	44
22	Protective Shield	Sq. Yd.		469	469

*- Special Provision

REVISIONS	
NAME	DATE

Clorba Group, Inc.
CONSULTING ENGINEERS
 5007 NORTH CLAREMONT AVENUE • CHICAGO, ILLINOIS 60646 • (773) 778-4000

VILLAGE OF WINNETKA, ILLINOIS
 GENERAL NOTES AND QUANTITIES
 ELDORADO STREET OVER THE UNION PACIFIC R.R.
 R.R. MILE POST 17.26 KENOSHA SUBDIVISION
 COOK COUNTY STA. 201+07.21
 STRUCTURE NO. 016-8260

SCALE: NONE
 DATE: JUNE 2006
 FILE: 3278

DRAWN BY: RCD
 DESIGN BY: BWS
 CHECKED BY: SCD

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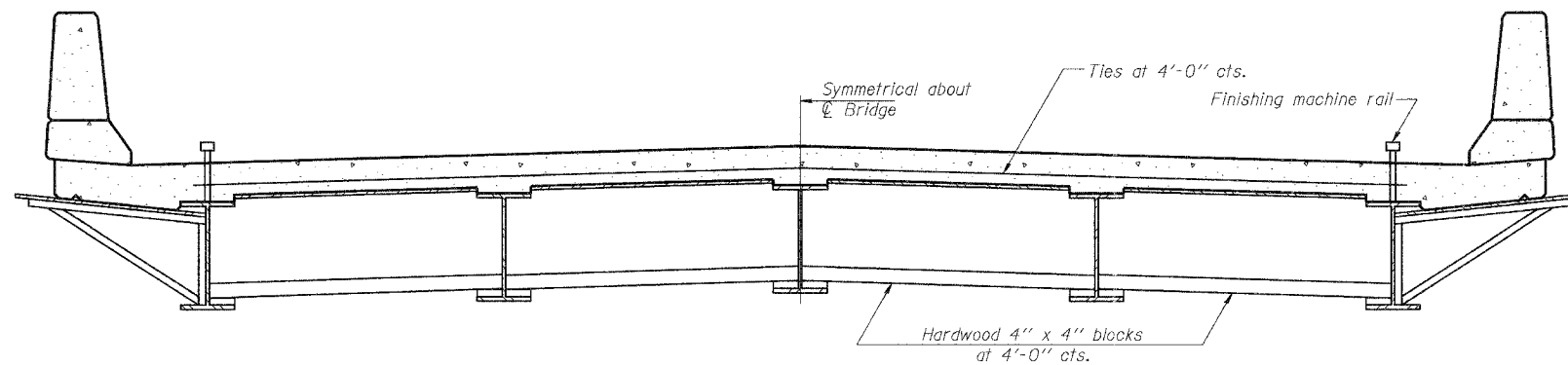
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STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
Sheet SB-3 of SB-22			CONTRACT	83850

When cantilever forming brackets are used, the work shall be done according to Article 503.06, except as modified below and in the details shown on this sheet.

The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



**FORM BRACES FOR
STANDARD CONSTRUCTION**

**CANTILEVER FORMING BRACKETS
FOR SUPERSTRUCTURES WITH
W27 BEAMS AND SMALLER**

CG Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (773) 775-4009

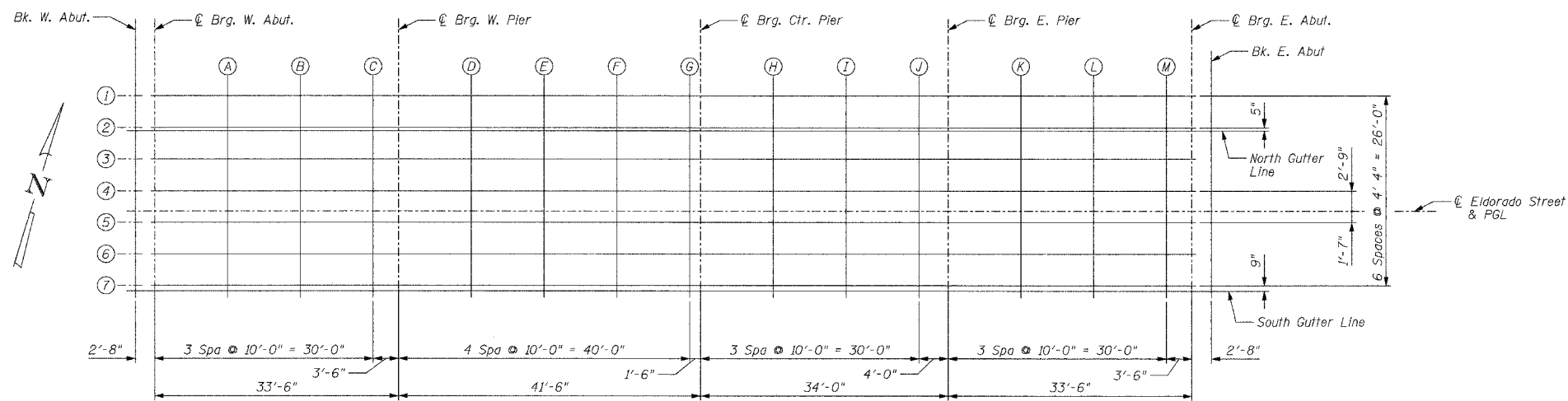
REVISIONS	
NAME	DATE

VILLAGE OF WINNETKA, ILLINOIS
CANTILEVER FORMING BRACKETS
ELDORADO STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 17.26 KENOSHA SUBDIVISION
COOK COUNTY STA. 201+07.21
STRUCTURE NO. 016-8260

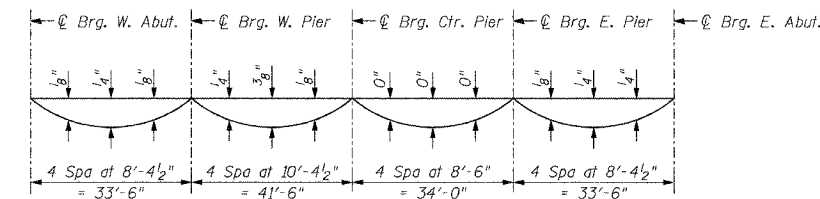
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DATE: MARCH 2006 DESIGN BY: BWS
FILE: 3278 CHECKED BY: SCD

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SB-1 10-22-04



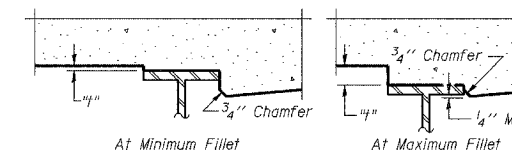
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of cast-in-place concrete only)

Note: The above deflections are not to be used in the field if the engineers is working from the grade elevations adjusted for dead load deflections as shown.



At Minimum Fillet At Maximum Fillet

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted For Dead Load Deflections" shown on sheets SB-4 and SB-5, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

Beam No. 1

Location	Station	Offset	Theoretical Grade Elevation	Theoretical Grade Elevations Adjusted For Dead Load Deflections
BK. W. ABUT.	200+29.54	15.75	664.84	664.84
¢ BRG. W. ABUT.	200+32.21	15.75	664.92	664.92
A	200+42.21	15.75	665.22	665.23
B	200+52.21	15.75	665.52	665.53
C	200+62.21	15.75	665.78	665.78
¢ W. PIER	200+65.71	15.75	665.86	665.86
D	200+75.71	15.75	666.05	666.07
E	200+85.71	15.75	666.19	666.22
F	200+95.71	15.75	666.28	666.30
H	201+05.71	15.75	666.32	666.32
¢ CTR. PIER	201+07.21	15.75	666.32	666.32
H	201+17.21	15.75	666.29	666.29
I	201+27.21	15.75	666.22	666.22
J	201+37.21	15.75	666.09	666.09
¢ E. PIER	201+41.21	15.75	666.02	666.02
K	201+51.21	15.75	665.83	665.84
L	201+61.21	15.75	665.61	665.64
M	201+71.21	15.75	665.42	665.43
¢ BRG. E. ABUT.	201+74.71	15.75	665.35	665.35
BK. E. ABUT.	201+77.37	15.75	665.30	665.30

Beam No. 2

Location	Station	Offset	Theoretical Grade Elevation	Theoretical Grade Elevations Adjusted For Dead Load Deflections
BK. W. ABUT.	200+29.54	11.42	664.84	664.84
¢ BRG. W. ABUT.	200+32.21	11.42	664.92	664.92
A	200+42.21	11.42	665.22	665.23
B	200+52.21	11.42	665.52	665.53
C	200+62.21	11.42	665.78	665.78
¢ W. PIER	200+65.71	11.42	665.86	665.86
D	200+75.71	11.42	666.05	666.07
E	200+85.71	11.42	666.19	666.22
F	200+95.71	11.42	666.28	666.30
G	201+05.71	11.42	666.32	666.32
¢ CTR. PIER	201+07.21	11.42	666.32	666.32
H	201+17.21	11.42	666.29	666.29
I	201+27.21	11.42	666.22	666.22
J	201+37.21	11.42	666.09	666.09
¢ E. PIER	201+41.21	11.42	666.02	666.02
K	201+51.21	11.42	665.83	665.84
L	201+61.21	11.42	665.61	665.64
M	201+71.21	11.42	665.42	665.43
¢ BRG. E. ABUT.	201+74.71	11.42	665.35	665.35
BK. E. ABUT.	201+77.37	11.42	665.30	665.30

North Gutter Line

Location	Station	Offset	Theoretical Grade Elevation	Theoretical Grade Elevations Adjusted For Dead Load Deflections
BK. W. ABUT.	200+29.54	11.00	664.84	664.84
¢ BRG. W. ABUT.	200+32.21	11.00	664.92	664.92
A	200+42.21	11.00	665.22	665.24
B	200+52.21	11.00	665.52	665.54
C	200+62.21	11.00	665.79	665.79
¢ W. PIER	200+65.71	11.00	665.87	665.87
D	200+75.71	11.00	666.06	666.07
E	200+85.71	11.00	666.20	666.23
F	200+95.71	11.00	666.29	666.31
G	201+05.71	11.00	666.32	666.32
¢ CTR. PIER	201+07.21	11.00	666.32	666.32
H	201+17.21	11.00	666.30	666.30
I	201+27.21	11.00	666.22	666.23
J	201+37.21	11.00	666.10	666.10
¢ E. PIER	201+41.21	11.00	666.03	666.03
K	201+51.21	11.00	665.83	665.85
L	201+61.21	11.00	665.62	665.64
M	201+71.21	11.00	665.42	665.43
¢ BRG. E. ABUT.	201+74.71	11.00	665.36	665.36
BK. E. ABUT.	201+77.37	11.00	665.31	665.31

Beam No. 3

Location	Station	Offset	Theoretical Grade Elevation	Theoretical Grade Elevations Adjusted For Dead Load Deflections
BK. W. ABUT.	200+29.54	7.08	664.91	664.91
¢ BRG. W. ABUT.	200+32.21	7.08	664.99	664.99
A	200+42.21	7.08	665.29	665.30
B	200+52.21	7.08	665.58	665.60
C	200+62.21	7.08	665.85	665.85
¢ W. PIER	200+65.71	7.08	665.93	665.93
D	200+75.71	7.08	666.12	666.14
E	200+85.71	7.08	666.26	666.29
F	200+95.71	7.08	666.35	666.37
G	201+05.71	7.08	666.38	666.39
¢ CTR. PIER	201+07.21	7.08	666.38	666.38
H	201+17.21	7.08	666.36	666.36
I	201+27.21	7.08	666.29	666.29
J	201+37.21	7.08	666.16	666.16
¢ E. PIER	201+41.21	7.08	666.09	666.09
K	201+51.21	7.08	665.89	665.91
L	201+61.21	7.08	665.68	665.71
M	201+71.21	7.08	665.48	665.49
¢ BRG. E. ABUT.	201+74.71	7.08	665.42	665.42
BK. E. ABUT.	201+77.37	7.08	665.37	665.37

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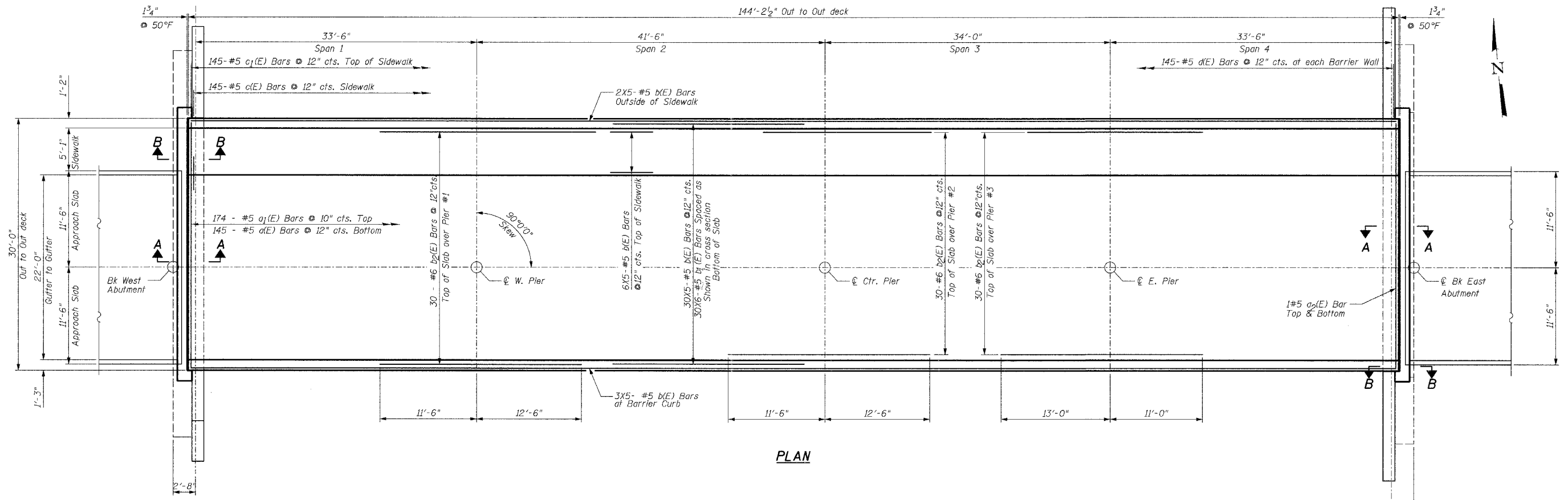


VILLAGE OF WINNETKA, ILLINOIS
 TOP OF SLAB ELEVATIONS I
 ELDORADO STREET OVER THE UNION PACIFIC R.R.
 R.R. MILE POST 17.26 KENOSHA SUBDIVISION
 COOK COUNTY STA. 201+07.21
 STRUCTURE NO. 016-8260

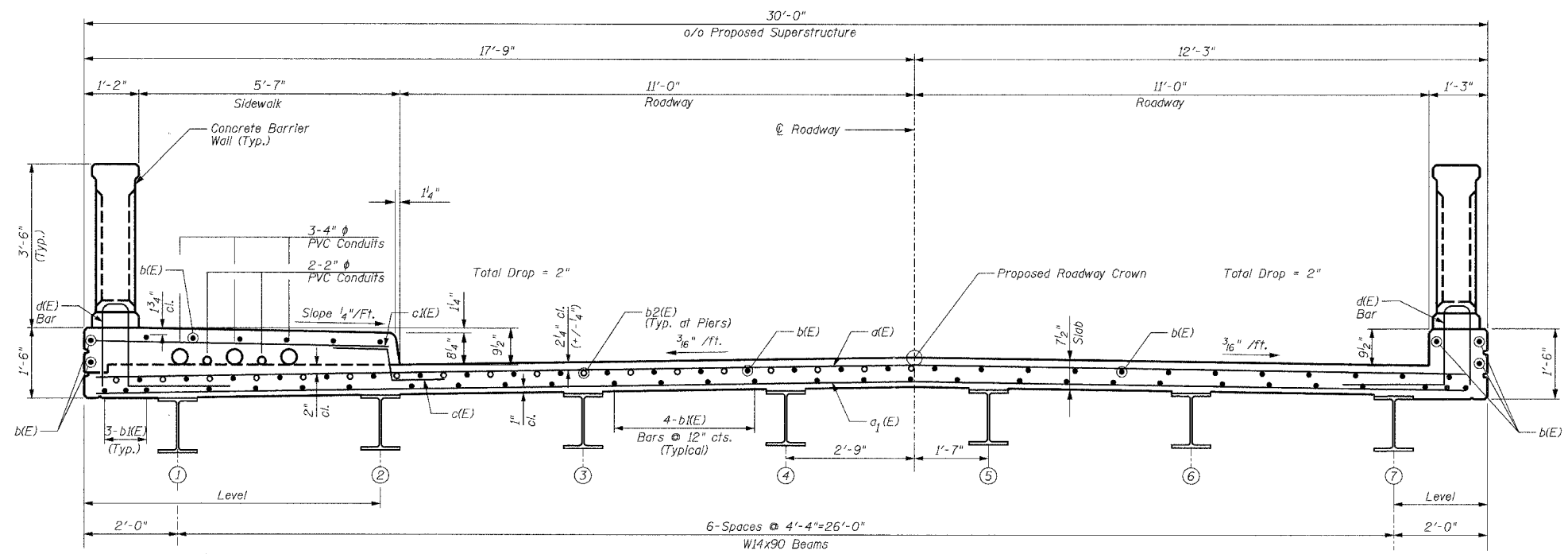
REVISIONS	
NAME	DATE

SCALE: NONE
 DATE: JUNE 2006
 FILE: 3278
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 DESIGN BY: BWS
 CHECKED BY: SCD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
00-00094-03-BR		COOK	69	48
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
Sheet SB-6 of SB-22		CONTRACT 83850		



PLAN



TYPICAL CROSS SECTION (Looking East)

Notes:
 See Sheet SB-7 for superstructure details & Bill of Materials.
 Reinforcement bars designated (E) shall be epoxy coated.
 Bars indicated thus 20x3-#5 etc. Indicates 20 lines of bars with 3 lengths per line.
 See sheet SB-8 for concrete barrier wall details and section B-B.
 See sheet SB-7 for Section A-A and B-B.

Bar Size	Min. Lap
#4	1'-1"
#5	1'-4"
#6	1'-7"

REVISIONS	
NAME	DATE

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 CONSULTING ENGINEERS
 500 NORTH CUMBERLAND AVENUE - CHICAGO, ILLINOIS 60658 - (773) 775-4900

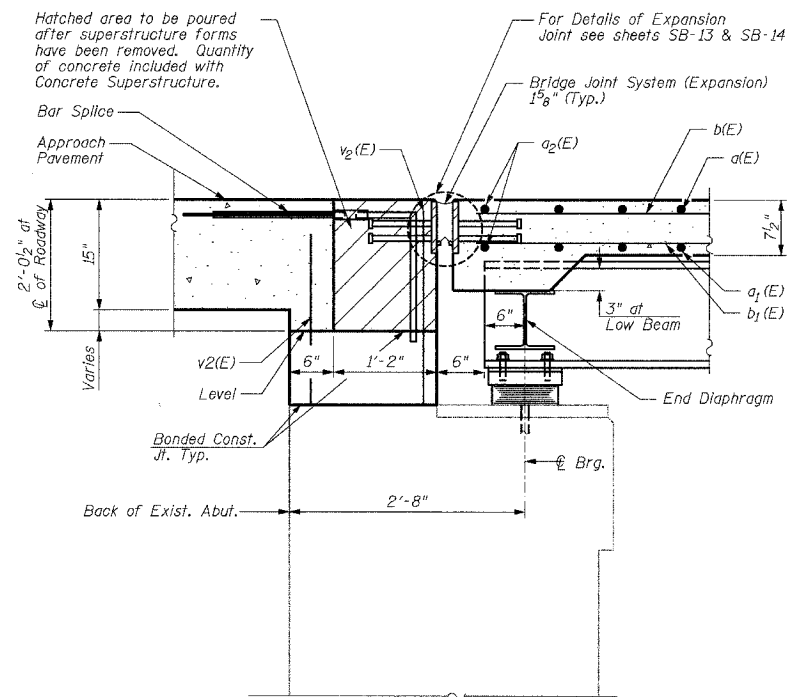
VILLAGE OF WINNETKA, ILLINOIS
 DECK REINFORCEMENT PLAN AND CROSS SECTION
 ELDORADO STREET OVER THE UNION PACIFIC R.R.
 R.R. MILE POST 17.26 KENOSHA SUBDIVISION
 COOK COUNTY STA. 201+07.21
 STRUCTURE NO. 016-8260

SCALE: NONE
 DATE: JUNE 2006
 FILE: 3278

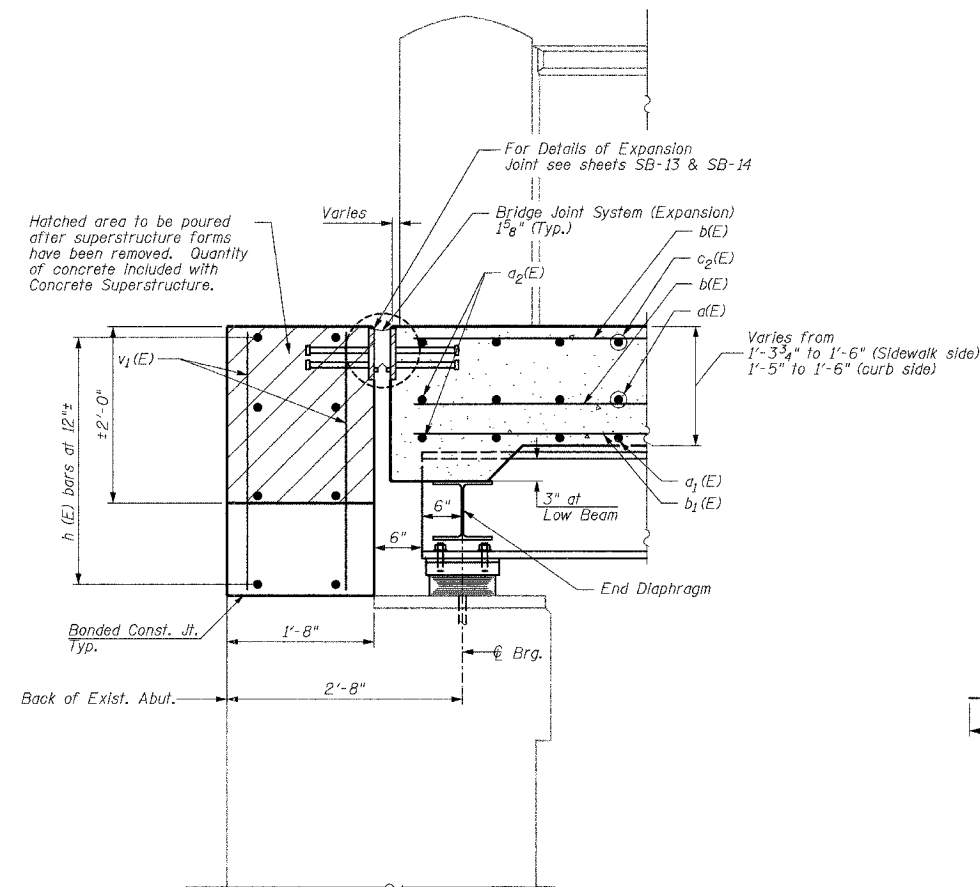
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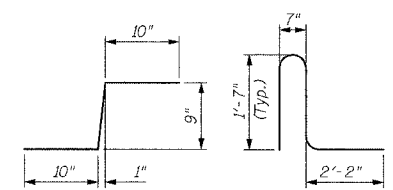
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STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
Sheet SB-7 of SB-22		CONTRACT 83850		



SECTION A-A

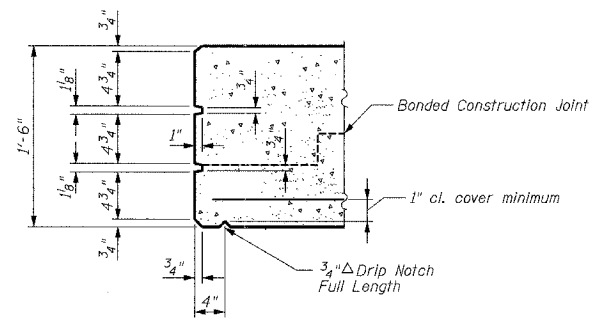


SECTION B-B



BAR c(E) BAR d(E)

Bar	No.	Size	Length	Shape
a(E)	145	#5	29'-8"	—
a1(E)	174	#5	29'-8"	—
a2(E)	4	#5	29'-8"	—
b(E)	205	#5	30'-2"	—
b1(E)	180	#5	25'-5"	—
b2(E)	90	#6	24'-0"	—
c(E)	145	#5	2'-5"	┌
c1(E)	145	#5	6'-5"	—
d(E)	290	#5	5'-11"	└
Reinforcement Bars, Epoxy Coated			Pound	27,588
Concrete Superstructure			Cu. Yd.	144.2



TYPICAL COPING DETAIL

Notes:
 Reinforcement bars designated (E) shall be epoxy coated.
 For Backwall Reinforcement Bars see Sheet SB-19.
 For bar splicer detail see Sheet SB-21.
 Bars indicated thus 1x2-#5 etc. indicated 1 line of bars with 2 lengths per line.
 Work this sheet with Sheets SB-17 thru SB-19.

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VILLAGE OF WINNETKA, ILLINOIS
 DECK DETAILS
 ELDORADO STREET OVER THE UNION PACIFIC R.R.
 R.R. MILE POST 17.26 KENOSHA SUBDIVISION
 COOK COUNTY STA. 201+07.21
 STRUCTURE NO. 016-8260

SCALE: NONE
 DATE: JUNE 2006
 FILE: 3278

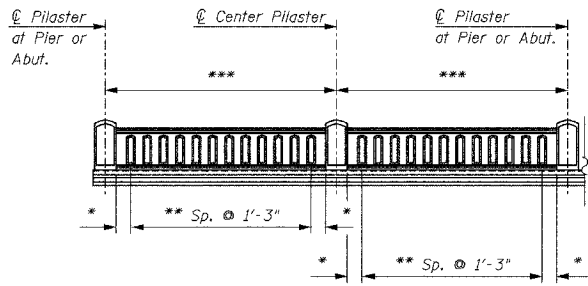
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 DESIGN BY: BWS
 CHECKED BY: SCD

REVISIONS	
NAME	DATE

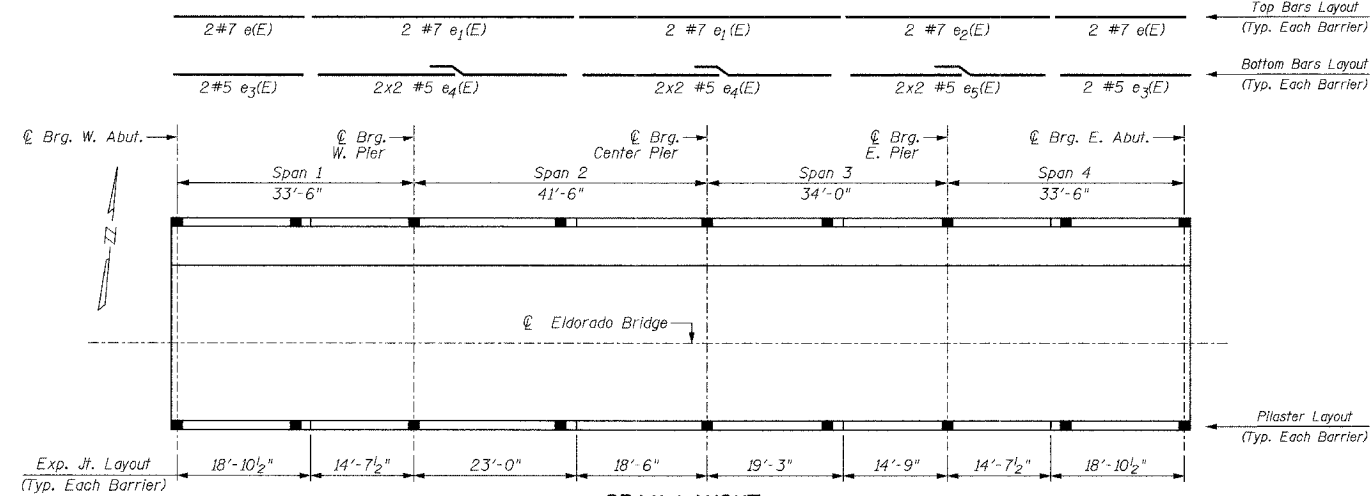
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
00-00094-03-BR	COOK	69	50	
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
Sheet SB-8 of SB-22	CONTRACT		83850	

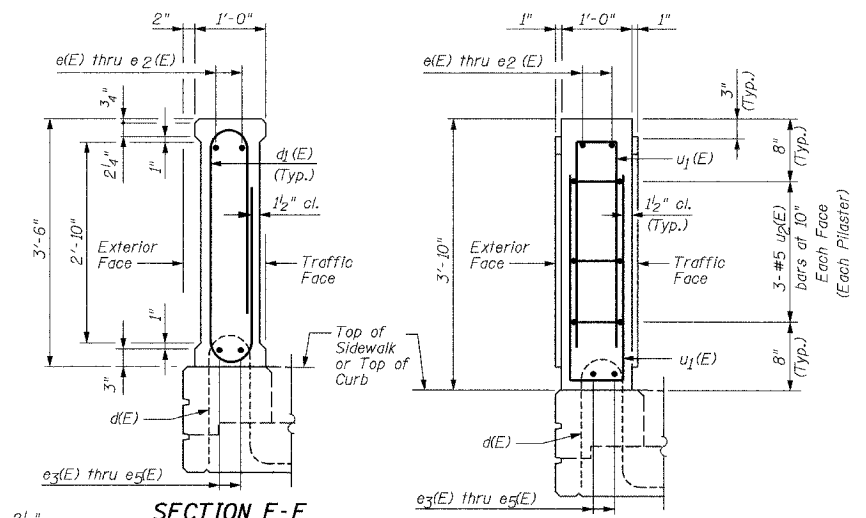
	*	**	***
Span 1 & 4	1'-4 1/2"	10	16'-9"
Span 2	1'-6"	13	20'-9"
Span 3	1'-6"	10	17'-0"



CONCRETE BARRIER WALL
(TYPICAL SPAN LAYOUT)

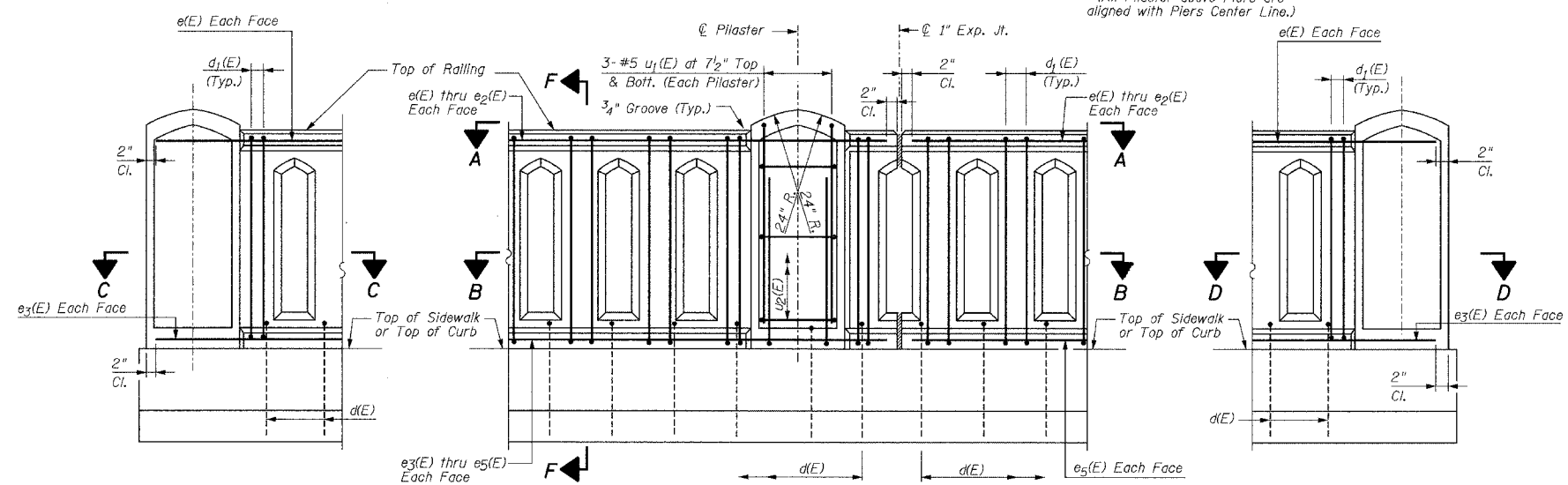


SPAN LAYOUT
(All Pilaster above Piers are aligned with Piers Center Line.)



SECTION F-F (TYP. POSTS)

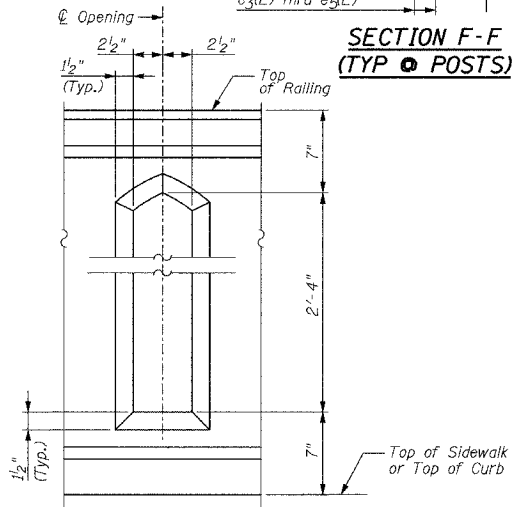
SECTION E-E (TYP. PILASTER)



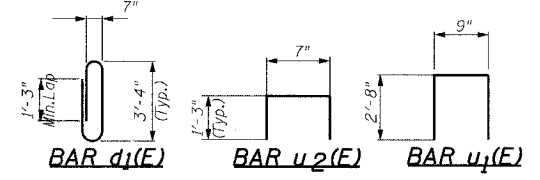
WEST END PILASTER ELEVATION
(Typ. of Span 1)

PARTIAL ELEVATION AT CENTER PILASTER
For Expansion Joint Location see span layout

EAST END PILASTER ELEVATION
(Typ. of Span 4)
Note: Traffic Face Elevations

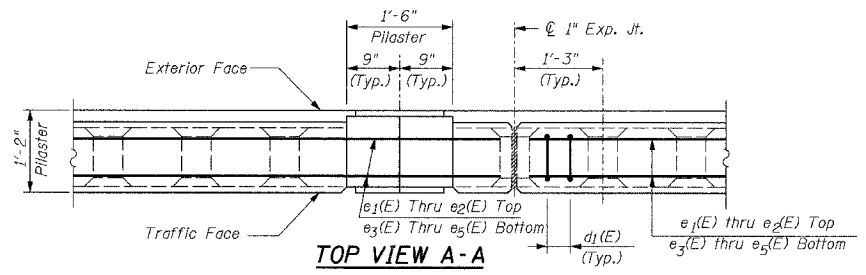


OPENING DETAIL

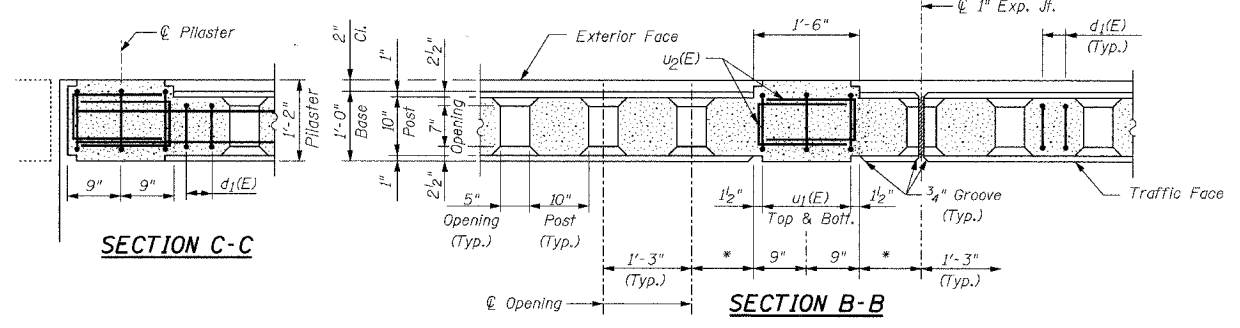


Bar	No.	Size	Length	Shape
d ₁ (E)	376	#5	9'-1"	
e(E)	8	#7	18'-6"	
e ₁ (E)	8	#7	37'-3"	
e ₂ (E)	4	#7	29'-0"	
e ₃ (E)	8	#5	18'-6"	
e ₄ (E)	16	#5	19'-4"	
e ₅ (E)	8	#5	15'-8"	
u ₁ (E)	216	#5	6'-1"	
u ₂ (E)	216	#5	3'-1"	
Reinforcement Bars, Epoxy Coated		Pound	7,384	
Concrete Barrier Wall (Special)		Cu. Yd.	27.0	

Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.
Reinforcement bars shall not pass thru the expansion joints.
See Concrete Barrier Wall (Special) Special Provisions.

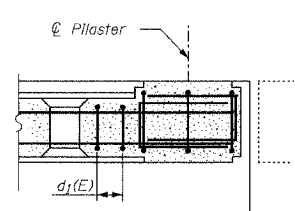


TOP VIEW A-A

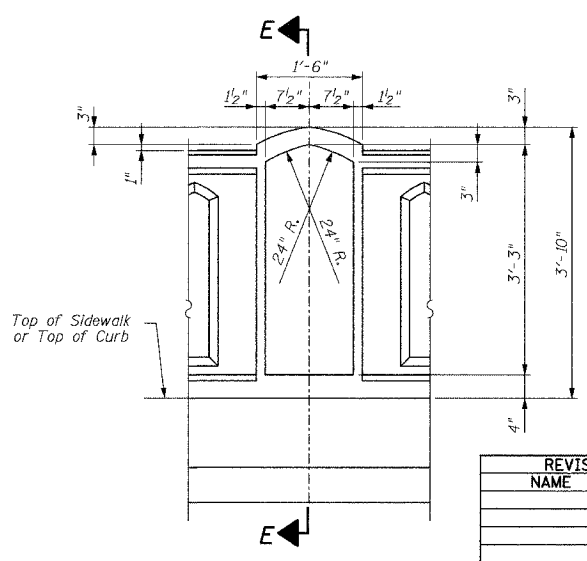


SECTION C-C

SECTION B-B



SECTION D-D



FACE OF PILASTER DETAIL

REVISIONS	
NAME	DATE

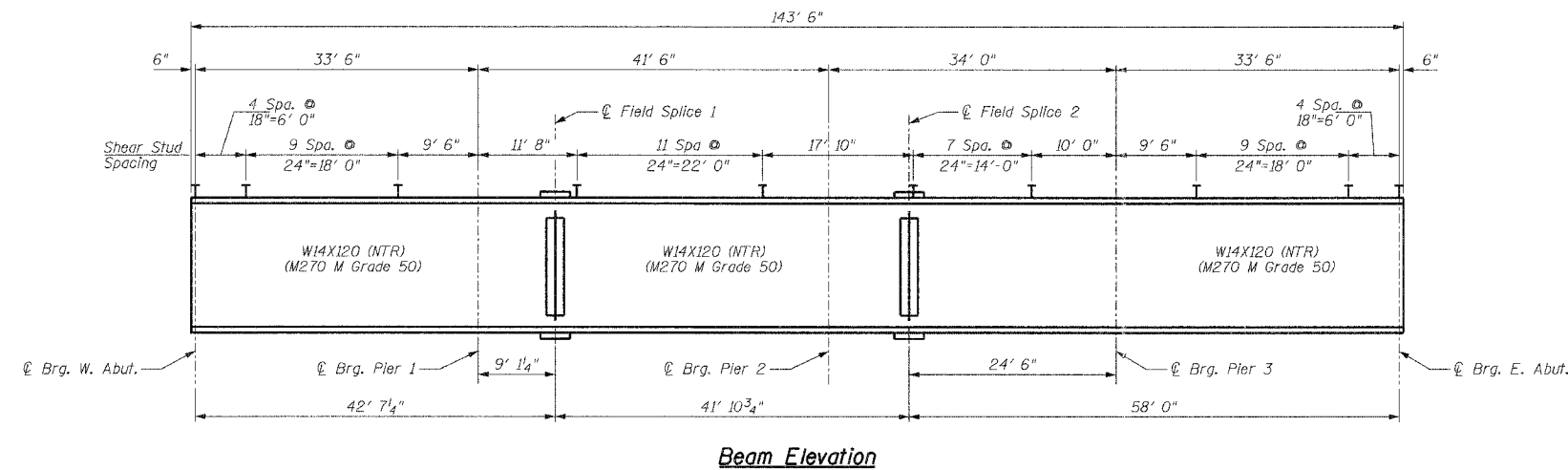
Clorba Group, Inc.
CONSULTING ENGINEERS
5007 NORTH CUMBERLAND AVENUE - CHICAGO, ILLINOIS 60656 - (773) 775-4000

VILLAGE OF WINNETKA, ILLINOIS
CONCRETE BARRIER DETAILS
ELDORADO STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 17.26 KENOSHA SUBDIVISION
COOK COUNTY STA. 201+07.21
STRUCTURE NO. 016-8260

SCALE: NONE
DATE: JUNE 2006
FILE: 3278

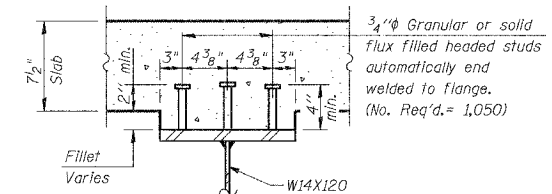
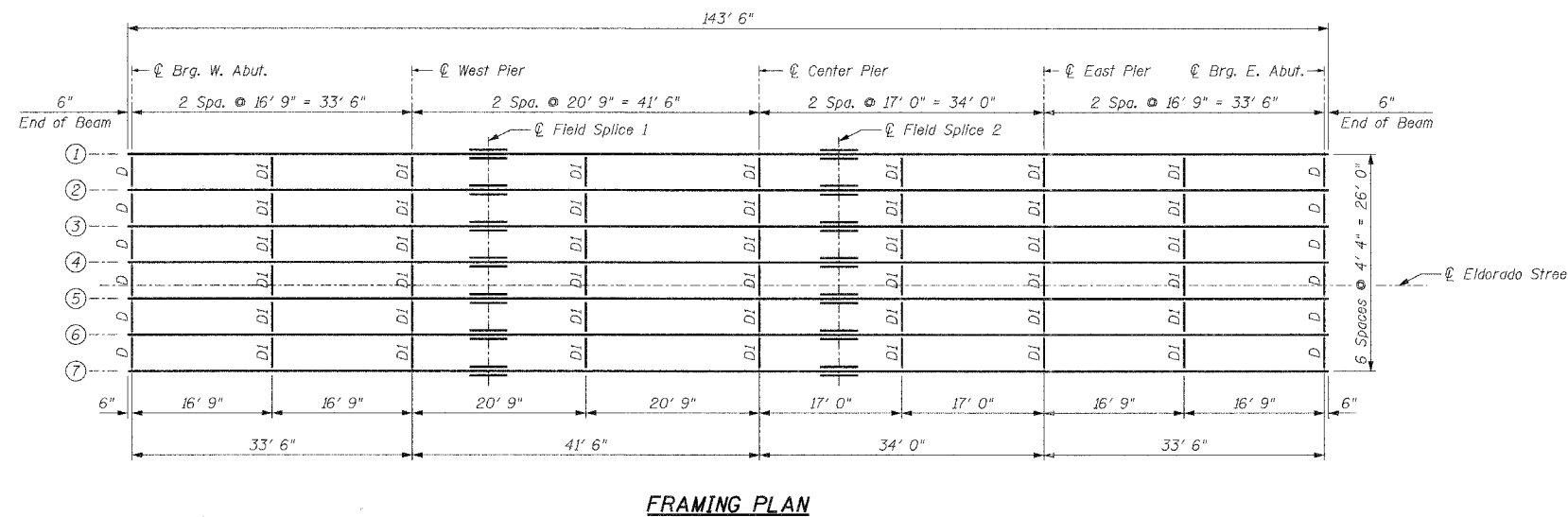
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DESIGN BY: BWS
CHECKED BY: SCB

DATE: 7/20/2006
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TOP OF BEAM ELEVATIONS

	℄ Brg. W. Abut.	℄ W. Pier	℄ Splice 1	℄ Ctr. Pier	℄ Splice 2	℄ E. Pier	℄ Brg. E. Abut.
Beam 1	664.230	665.171	666.04	658.928	666.30	658.396	657.225
Beam 2	664.230	658.728	666.04	658.985	666.30	658.426	657.231
Beam 3	664.298	658.810	666.10	659.040	666.36	658.455	657.237
Beam 4	664.366	658.892	666.17	659.095	666.43	658.483	657.241
Beam 5	664.384	658.948	666.24	659.124	666.50	658.486	657.220
Beam 6	664.316	658.906	666.31	659.054	666.57	658.390	657.100
Beam 7	664.249	658.862	666.37	658.984	666.63	658.293	656.980



SHEAR CONNECTOR DETAIL

TOTAL BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	L. Sum	1.0
Shear Stud Connectors	Each	1,050

NOTES:
Contractor to verify existing dimensions in the field and make necessary approved adjustments prior to ordering materials.
All splice plate material shall meet notch toughness requirements.

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VILLAGE OF WINNETKA, ILLINOIS
FRAMING PLAN AND BEAM ELEVATIONS
ELDORADO STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 17.26 KENOSHA SUBDIVISION
COOK COUNTY STA. 201+07.21
STRUCTURE NO. 016-8260

SCALE: NONE
DATE: MARCH 2006
FILE: 3278

DRAWN BY: RCD
DESIGN BY: BWS
CHECKED BY: SCD

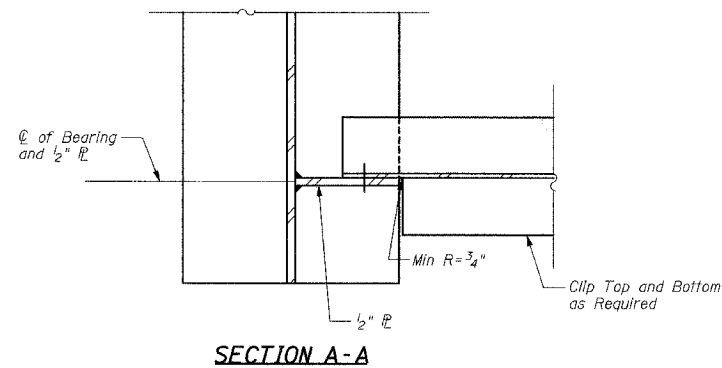
REVISIONS	
NAME	DATE

	0.4 Span #1	Pier #1	0.5 Span #2	Pier #2	0.5 Span #3	Pier #3	0.6 Span #4
I_s (in ⁴)	1380	1380	1380	1380	1380	1380	1380
I_c (in ⁴)	4886	-	4886	-	4886	-	4886
$I_c(3n)$ (in ⁴)	3177	-	3177	-	3177	-	3177
S_s (in ³)	190	190	190	190	190	190	190
$S_c(n)$ (in ³)	338	-	338	-	338	-	338
$S_c(3n)$ (in ³)	289	-	289	-	289	-	289
Z (in ³)		212		212		212	
D.L. (k/ft)	0.56	0.56	0.56	0.56	0.56	0.56	0.56
M D.L. (k)	41.94	-83.69	45.98	-65.47	16.56	-63.26	50.11
S D.L. (k/ft)	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Ms D.L. (k)	43.17	-60.41	52.38	-50.12	24.1	-46.18	48.86
M L.L. (k)	114.55	7.75	137.46	11.04	95.97	10.42	113.89
M (Imp) (k)	34.36	2.32	41.24	3.31	28.79	3.12	34.17
5/3 (M L.L. + M I) (k)	246.2	16.8	297.8	23.9	207.9	22.6	246.8
Ma (k)	433.3	-165.47	515.81	-119.11	323.7	-112.87	450.1
Mu (k)	1254.73	883.33	1254.73	883.33	1254.73	883.33	1254.73
f_s DL non-comp (ksi)	-3.4	6.9	-3.8	5.4	-1.4	5.2	-4.1
f_s DL (comp) (ksi)	-0.7	5	-0.9	4.1	-0.4	3.8	-0.8
f_s 5/3 (M L.L. + M I) (ksi)	2.5	14	2.6	13.1	2.9	12.1	1.8
f_s (Overload)	-3.27	19.9	-3.65	17.4	2.26	16.22	-3.85
f_s (Total)	-4.2	25.9	-4.7	22.6	-1.8	21.1	-5
VR (k)	14.34	27.24	15.51	25.71	14.16	25.93	14.19

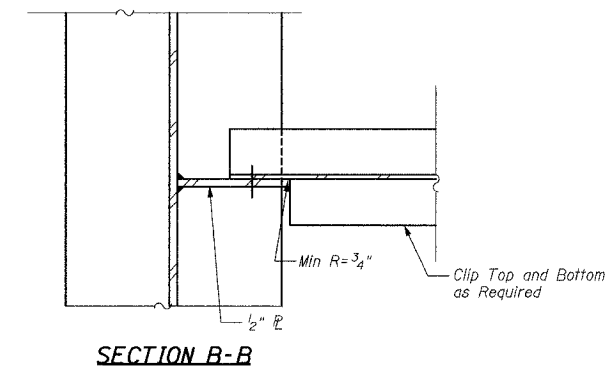
	W Abut	Pier 1	Pier 2	Pier 3	E Abut
R DL (kips)	16.68	55.40	48.95	48.13	17.95
R LL (kips)	46.35	66.42	66.48	64.48	46.27
Imp (kips)	13.90	21.85	19.94	19.34	13.88
R (Total)	76.93	143.67	135.37	131.94	78.11

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
 $I_c(n)$ and $S_c(n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
 $I_c(3n)$ and $S_c(3n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads (see AASHTO 10.38).
VR is the maximum Live Load + Impact shear range in span.
 Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.
 M_a (Applied Moment) = $1.3[M_R + M_S] + 5_3(M_L + M_I)$.
 M_u is the Full Plastic Moment Capacity for Compact, Braced section.
 f_s (Overload) is the sum of the stresses due to $M_R + M_S + 5_3(M_L + M_I)$.
 f_s (Total) (Non-compact section) is the sum of the stresses due to $1.3[M_R + M_S] + 5_3(M_L + M_I)$.

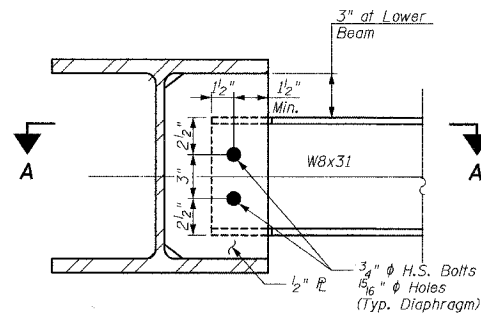
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00-00094-03-BR		COOK	69	52
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
Sheet SB-10 of SB-22		CONTRACT	83850	



SECTION A-A

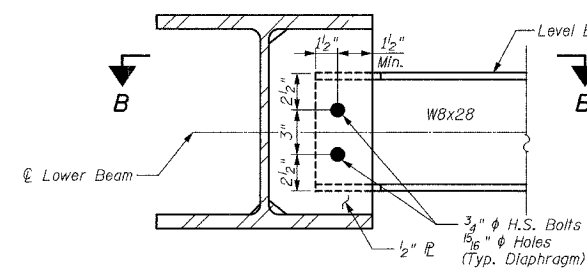
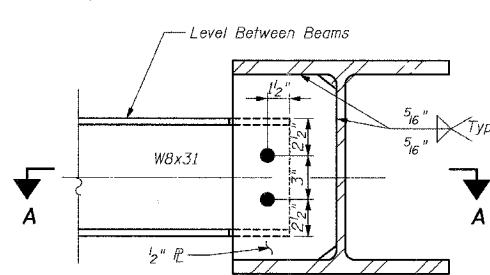


SECTION B-B



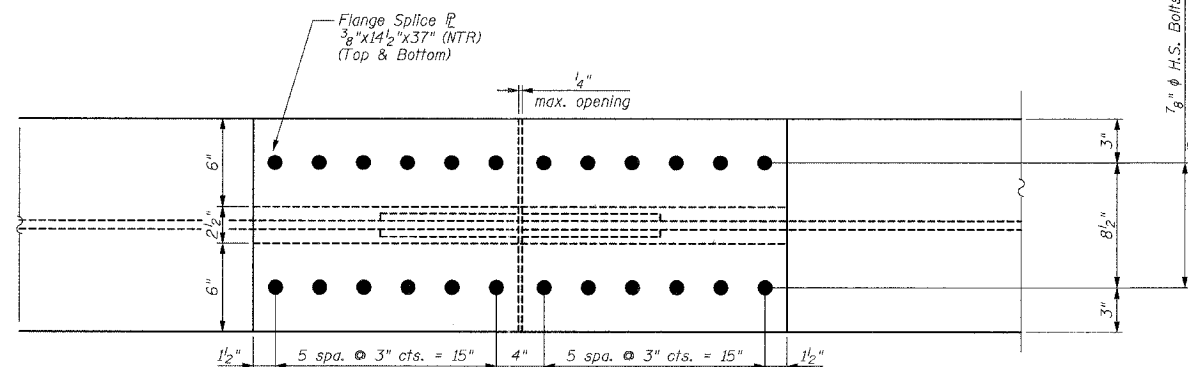
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12 Required

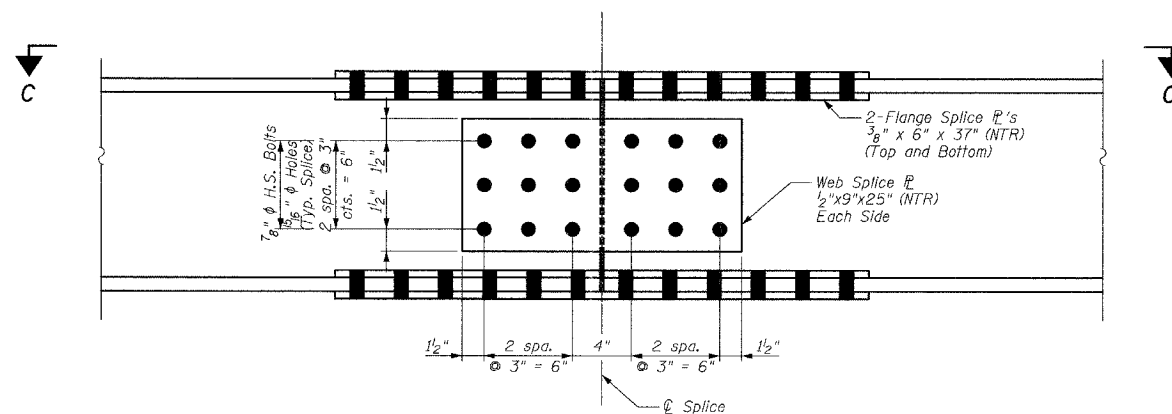


DIAPHRAGM D1

42 Required



VIEW C-C



TYPICAL SPLICE ELEVATION

FIELD SPLICE DETAILS

NOTES

1. For splice and diaphragm locations see sheet SB-9.
2. All splice plates shall be AASHTO M270 Grade 36.
3. (NTR) denotes plates to which notch toughness requirements are applicable.
4. Use 7/8" ϕ M 164 H.S. bolts and 5/16" holes on all beam splices.
5. Use 3/4" ϕ M164 H.S. bolts and 5/16" holes on all diaphragm connections.

CC Clorba Group, Inc.
CONSULTING ENGINEERS
5807 NORTH CUMBERLAND AVENUE - CHICAGO, ILLINOIS 60666 - (773) 775-6909

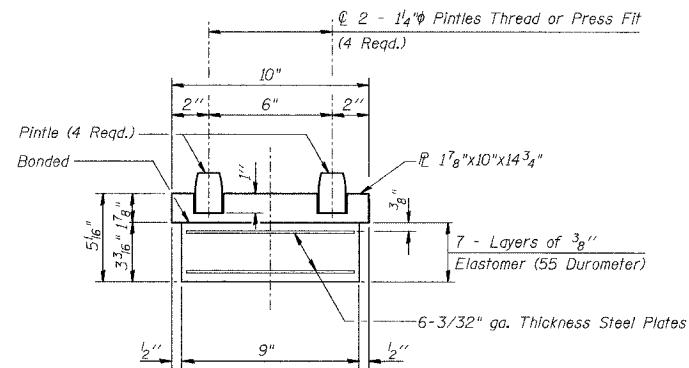
REVISIONS	
NAME	DATE

VILLAGE OF WINNETKA, ILLINOIS
DIAPHRAGM & SPLICE DETAILS
ELDORADO STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 17.26 KENOSHA SUBDIVISION
COOK COUNTY STA. 201+07.21
STRUCTURE NO. 016-8260

SCALE: NONE
DATE: JUNE 2006
FILE: 3278

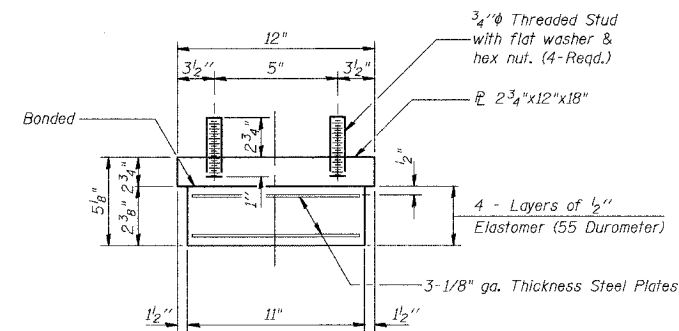
DRAWN BY: RCD
DESIGN BY: BWS
CHECKED BY: SCD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	53
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
Sheet SB-11 of SB-22		CONTRACT 83850		



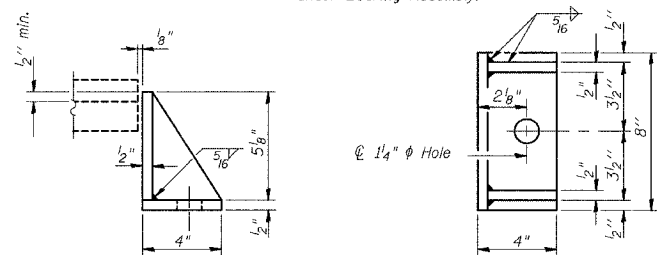
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



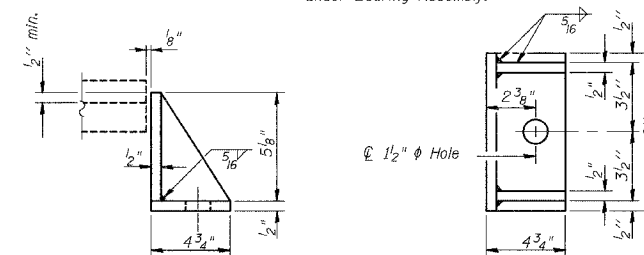
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



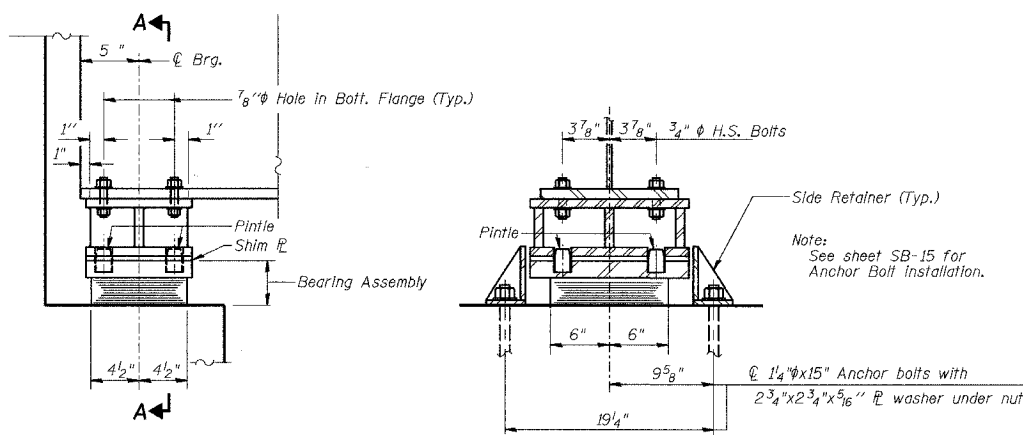
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

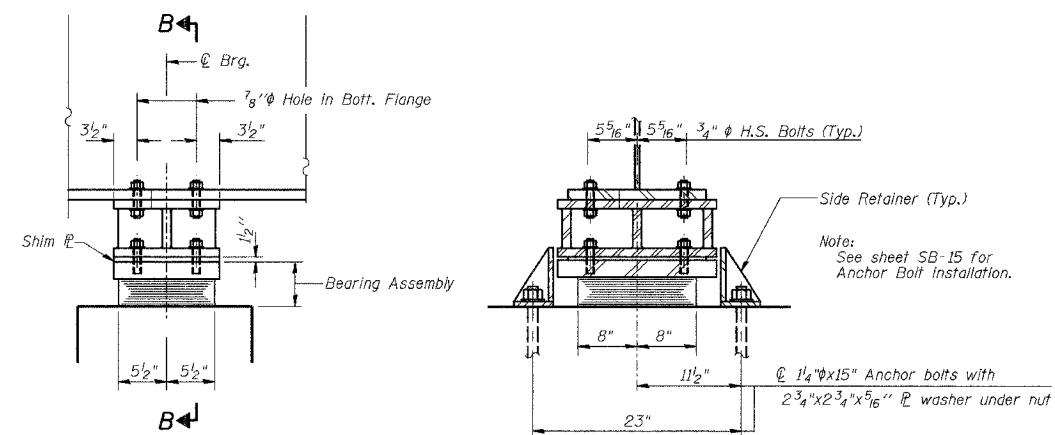


ELEVATION AT ABUTMENTS

SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

(See sheet SB-12 for extension details)



ELEVATION AT EAST PIER & WEST PIER

SECTION B-B

TYPE I ELASTOMERIC EXP. BRG.

(See sheet SB-12 for extension details)

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	28

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REVISIONS	
NAME	DATE

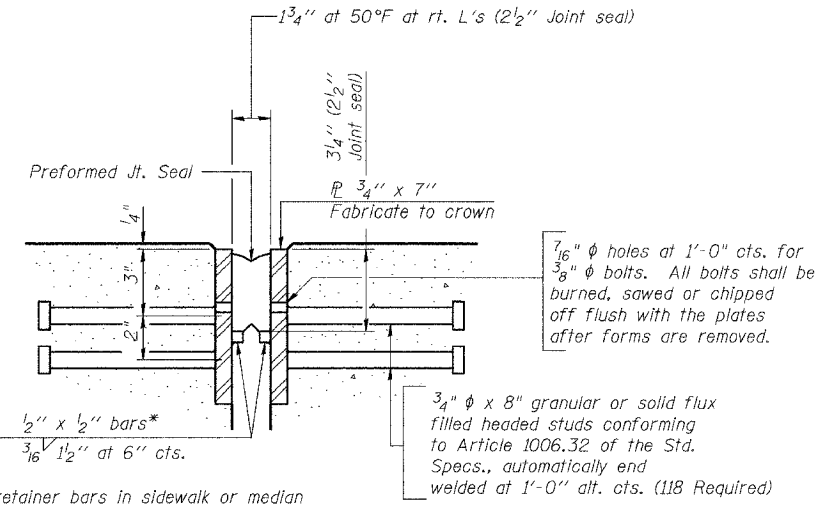
VILLAGE OF WINNETKA, ILLINOIS
BEARING DETAILS I
ELDORADO STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 17.26 KENOSHA SUBDIVISION
COOK COUNTY STA. 201+07.21
STRUCTURE NO. 016-8260

SCALE: NONE
DATE: JUNE 2006
FILE: 3278

DRAWN BY: RCD
DESIGN BY: BWS
CHECKED BY: SCD

DATE: 7/20/2006
FILENAME: \\A:\PROJECTS\ELDORADO\Design\Structural_Eldorado_8278\CAD\Final_revised\8278-eldo-brd01.dgn

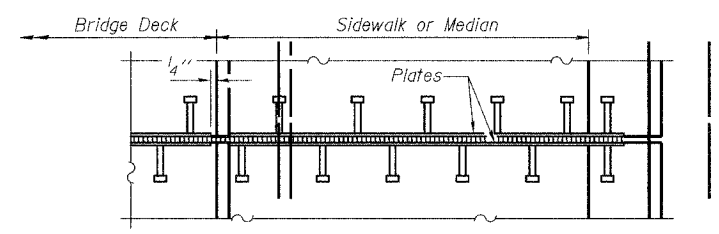
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	55
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
Sheet SB-13 of SB-22		CONTRACT 83850		



Design Movement	Required Preformed Joint Seal Size	Required Strip Seal Rated movement
1"	2 1/2"	1"

GENERAL NOTES

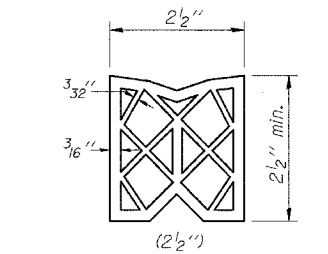
Furnish steel plates in segments of 20 feet maximum length. Maximum space between installed segments shall be 3/16". Seal space with silicone sealant suitable for structural steel.



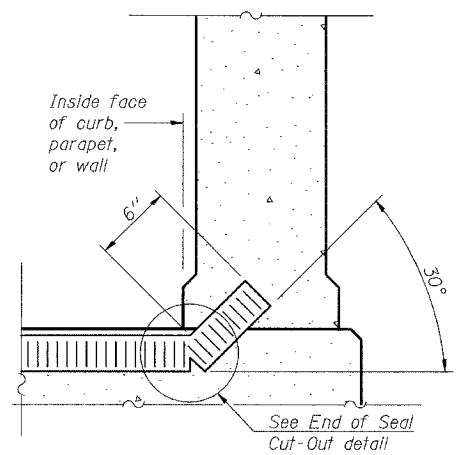
PLAN AT SIDEWALK OR MEDIAN

SECTION THRU EXPANSION JOINT

(2 1/2 inch joint seals)

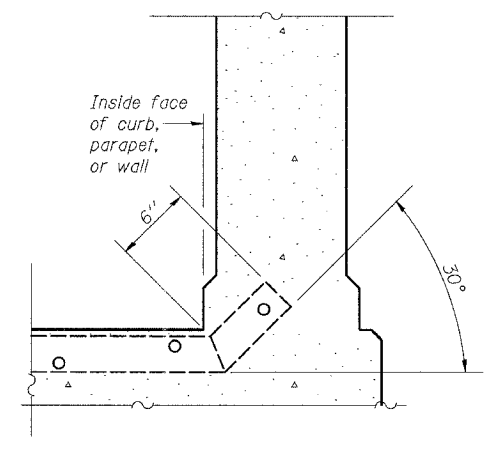


PREFORMED JOINT SEAL



AT CURB, PARAPET, OR WALL

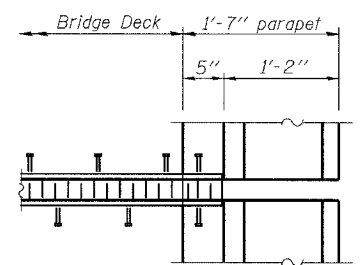
(Showing seal)



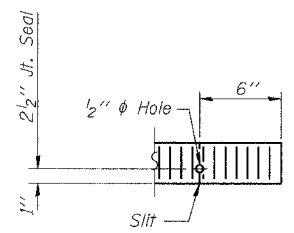
AT CURB, PARAPET, OR WALL

(Showing plate)

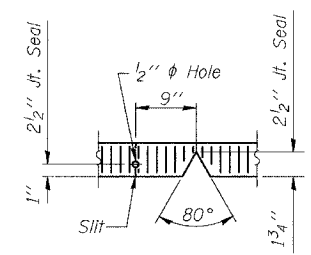
TYPICAL END TREATMENTS



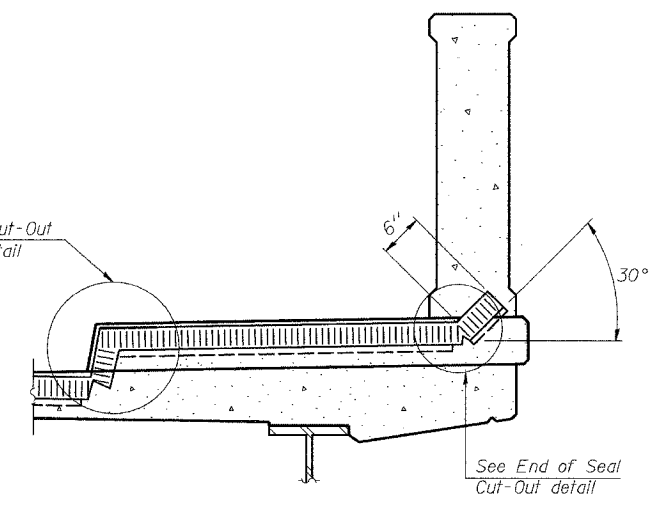
PLAN AT PARAPET



END OF SEAL CUT-OUT



SEAL CUT-OUT AT CURB



AT SIDEWALK OR MEDIAN*

(Showing plate and seal)

* Shorter plates with a single row of studs at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

BILL OF MATERIAL

Item	Unit	Total
Bridge Joint System (Expansion)	Foot	59.0'

(Sheet 1 of 2)

BRIDGE JOINT SYSTEM - EXPANSION (PREFORMED JOINT SEAL)



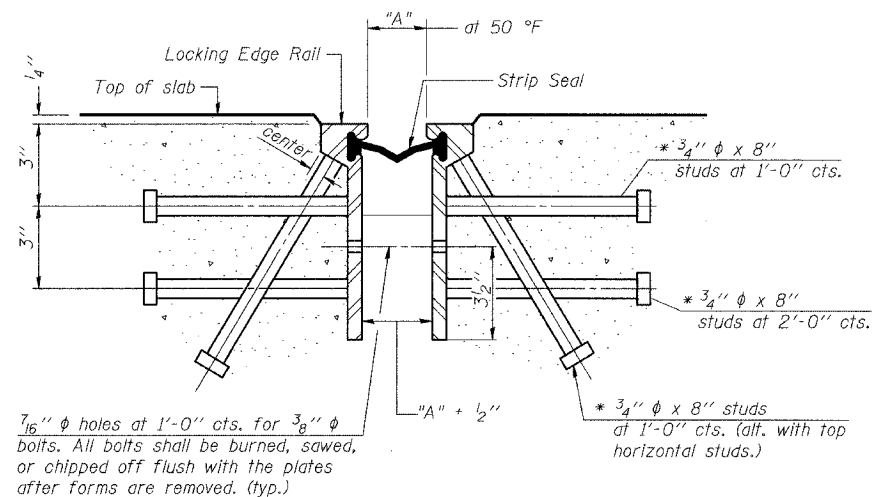
VILLAGE OF WINNETKA, ILLINOIS
 BRIDGE JOINT SYSTEM-EXPANSION
 ELDORADO STREET OVER THE UNION PACIFIC R.R.
 R.R. MILE POST 17.26 KENOSHA SUBDIVISION
 COOK COUNTY STA. 201+07.21
 STRUCTURE NO. 016-8260

REVISIONS	
NAME	DATE

SCALE: NONE
 DATE: JUNE 2006
 FILE: 3278
 DRAWN BY: RCD
 DESIGN BY: BWS
 CHECKED BY: SCD

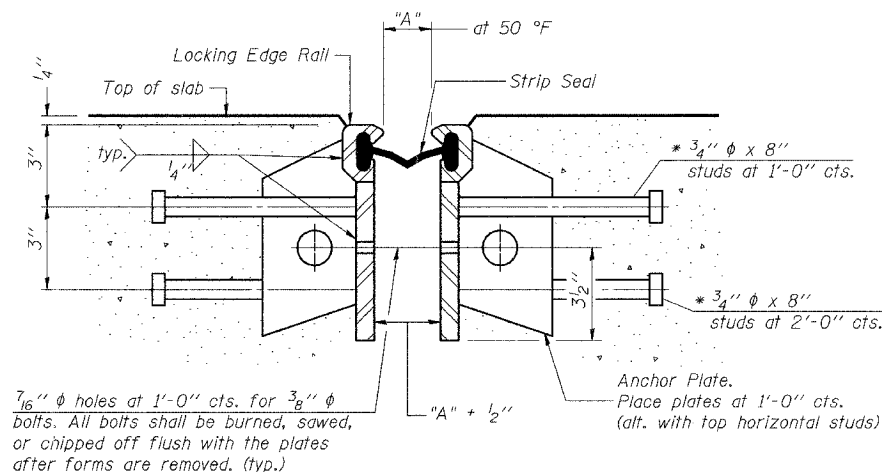
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	56
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
Sheet SB-14 of SB-22		CONTRACT 83850		



SECTION THRU ROLLED RAIL EXP. JOINT
(178 Studs Required)

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



SECTION THRU WELDED RAIL EXP. JOINT
(118 Anchor Plates Required)

GENERAL NOTES

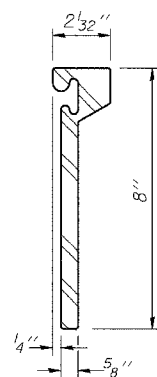
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

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.

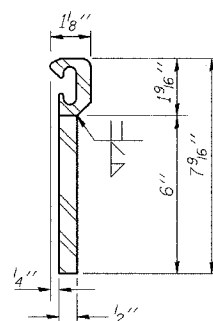
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

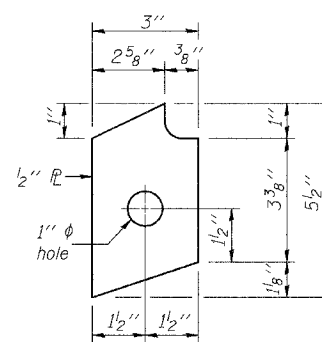
The joint opening and deck dimensions detailed on the superstructure are based on a preformed joint seal. If the contractor elects to use the alternate strip seal joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.



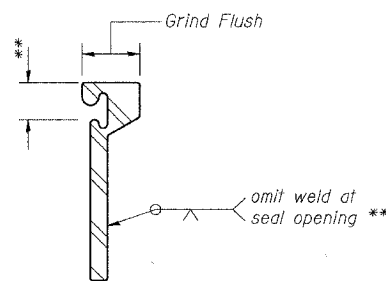
ROLLED (EXTRUDED) RAIL



WELDED RAIL



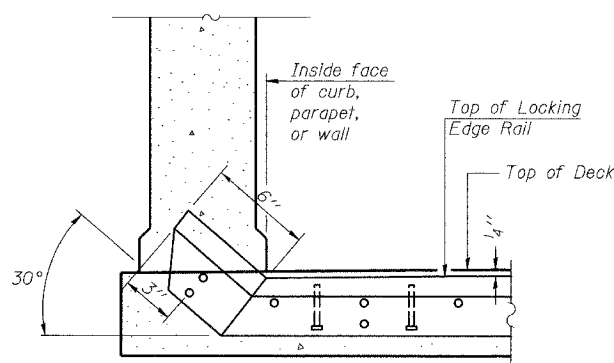
ANCHOR PLATE
(for welded rail)



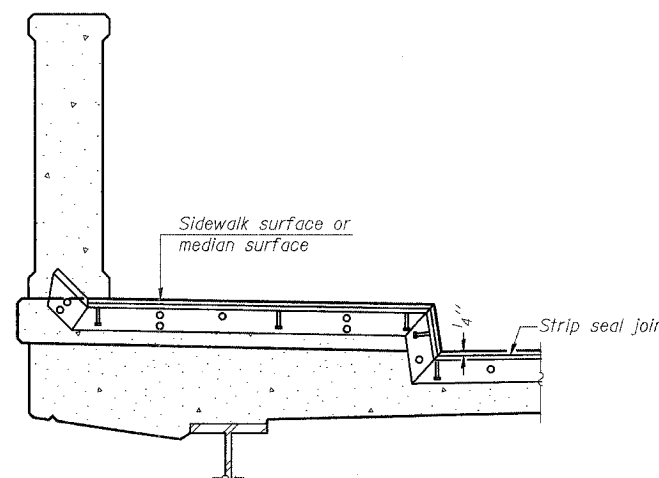
LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

LOCKING EDGE RAILS



AT CURB, PARAPET, OR WALL



AT SIDEWALK OR MEDIAN*

TYPICAL END TREATMENTS

* Shorter plates with a single row of studs at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

REVISIONS	
NAME	DATE

(Sheet 2 of 2)

BRIDGE JOINT SYSTEM - EXPANSION
(ALTERNATE - STRIP SEAL)

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VILLAGE OF WINNETKA, ILLINOIS
BRIDGE JOINT SYSTEM-EXPANSION (ALTERNATE)
ELDORADO STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 17.26 KENOSHA SUBDIVISION
COOK COUNTY STA. 201+07.21
STRUCTURE NO. 016-8260

SCALE: NONE
DATE: JUNE 2006
FILE: 3278

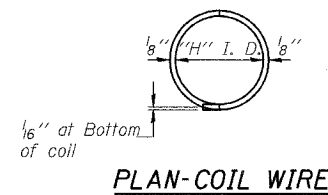
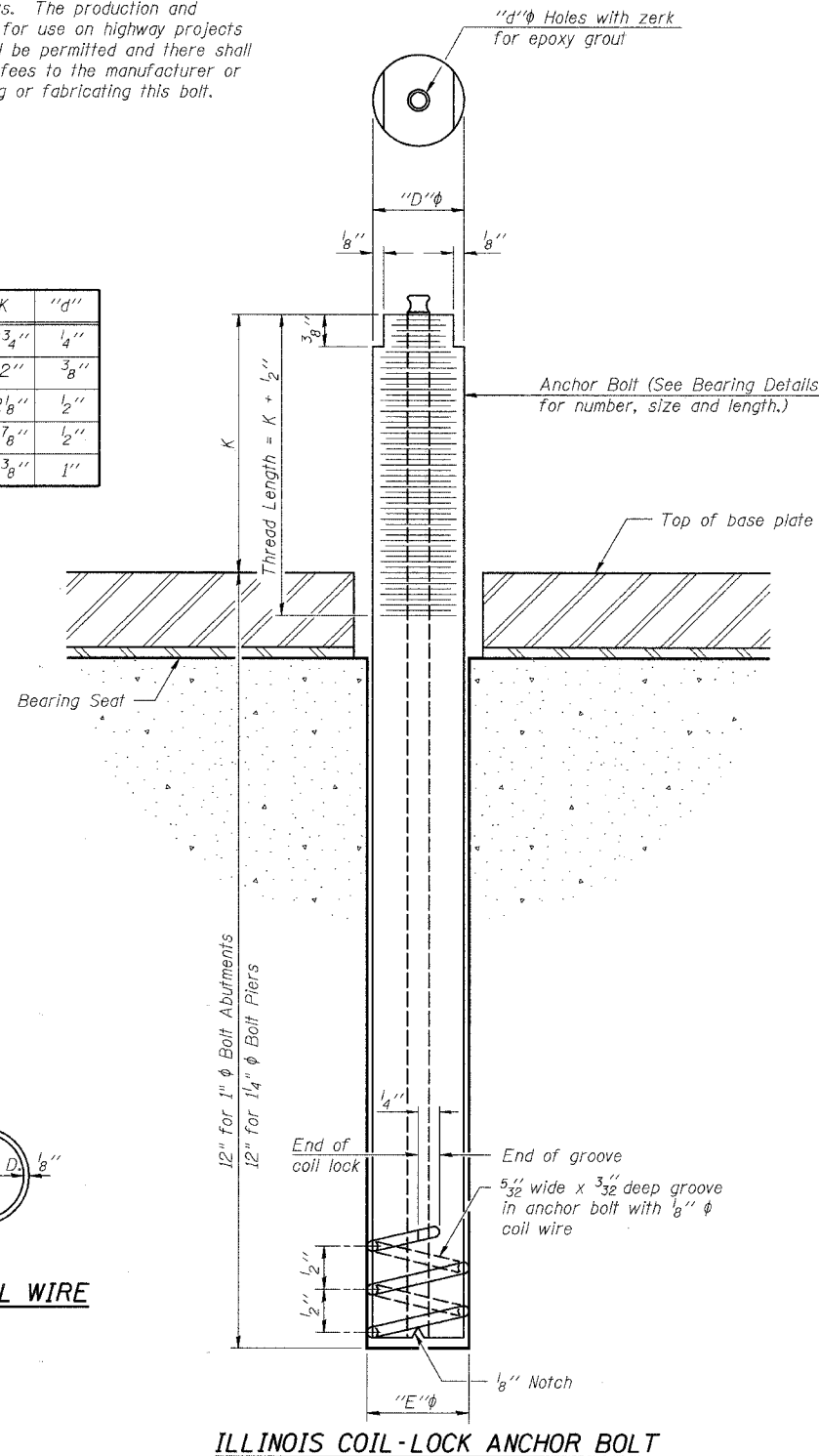
DRAWN BY: RCD
DESIGN BY: BWS
CHECKED BY: SCD

DATE: 7/20/2006
FILENAME: N:\PROJ\9278\Eldorado\Structural\Eldorado_9278\CAD\Final_revised\9278-eldo-hjse02.dgn

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	57
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS		FED. AID PROJECT
Sheet SB-15 of SB-22		CONTRACT		83850

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 3/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
 The coil wire shall be made of any suitable soft steel wire.
 The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
 The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, 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 type anchor rods shall be a two part system composed of:
 1. A threaded rod stud with nut and washer of the type specified.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
Abutments	A 307
Piers	A 307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
 Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
 The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

ANCHOR BOLT DETAILS FOR BEARINGS



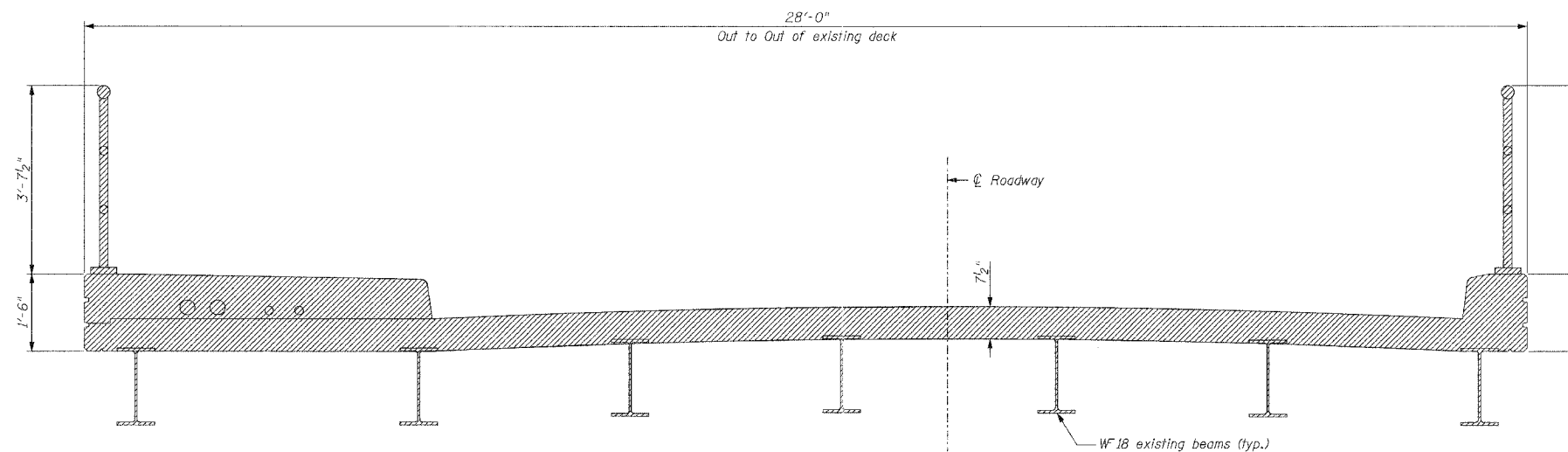
REVISIONS	
NAME	DATE

VILLAGE OF WINNETKA, ILLINOIS
 ANCHOR BOLT DETAILS FOR BEARINGS
 ELDORADO STREET OVER THE UNION PACIFIC R.R.
 R.R. MILE POST 17.26 KENOSHA SUBDIVISION
 COOK COUNTY STA. 201+07.21
 STRUCTURE NO. 016-8260

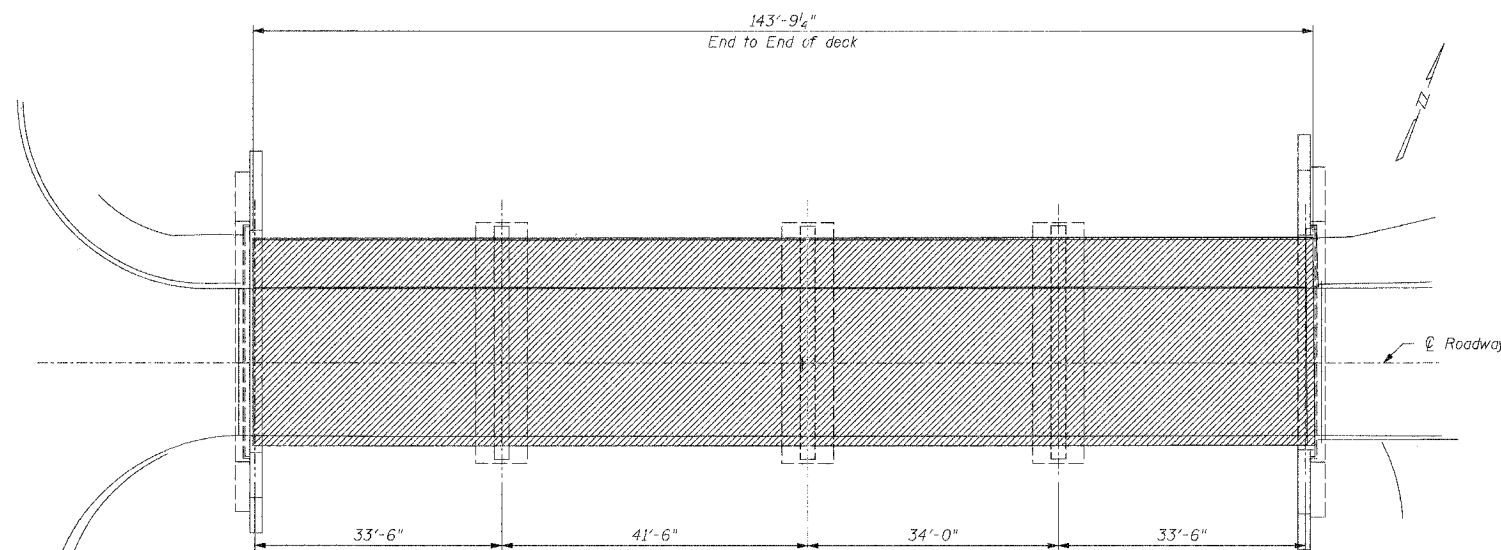
SCALE: NONE
 DATE: JUNE 2006
 FILE: 3278

DRAWN BY: RCD
 DESIGN BY: BWS
 CHECKED BY: SCD

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	58
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
Sheet SB-16 of SB-22			CONTRACT 83850	



CROSS SECTION



PLAN

BILL OF MATERIAL

Item	Unit	Quantity
Removal of Existing Structures	L. Sum	1

LEGEND:

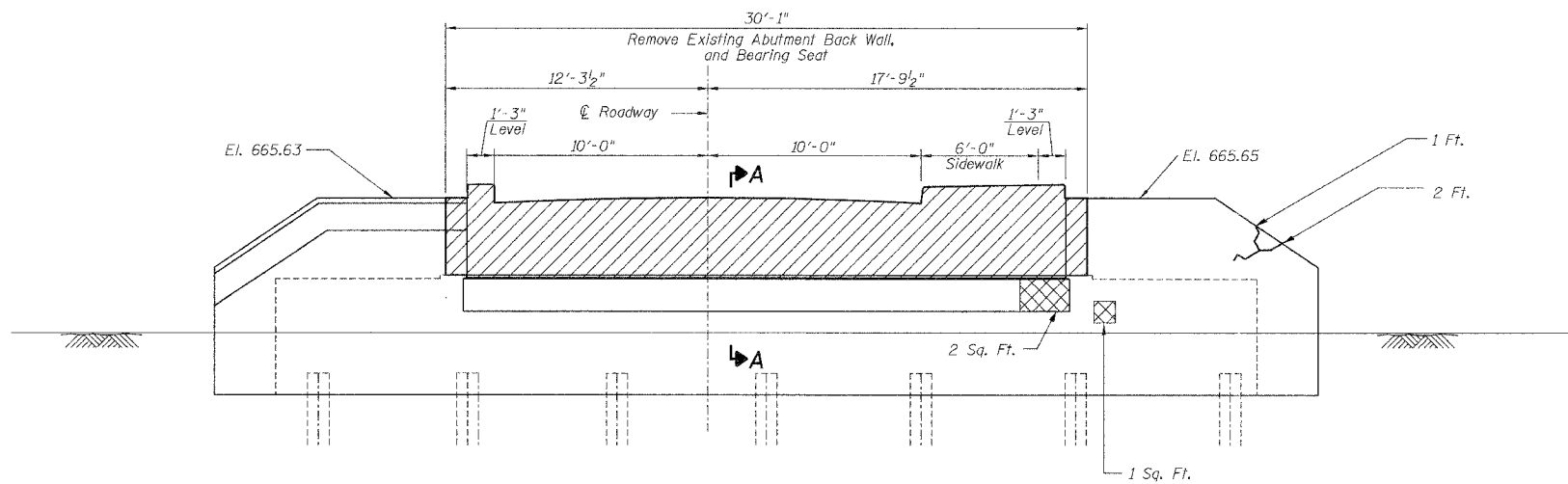
To Be Removed

REVISIONS	
NAME	DATE

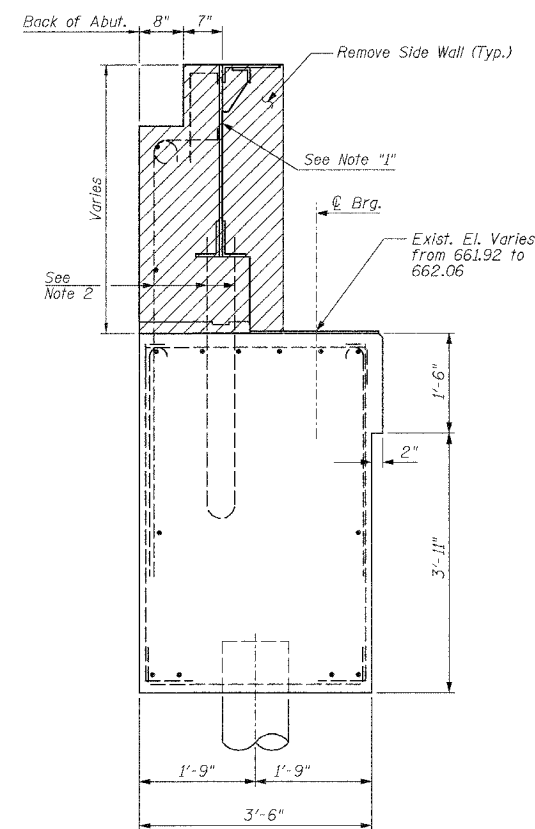
Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (773) 775-4009

VILLAGE OF WINNETKA, ILLINOIS
LIMITS OF REMOVAL
ELDORADO STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 17.26 KENOSHA SUBDIVISION
COOK COUNTY STA. 201+07.21
STRUCTURE NO. 016-8260

SCALE: NONE DRAWN BY: RCD
DATE: MARCH 2006 DESIGN BY: BWS
FILE: 3278 CHECKED BY: SCD



ELEVATION
(Looking west)



SECTION A-A
(EXISTING CONDITION)

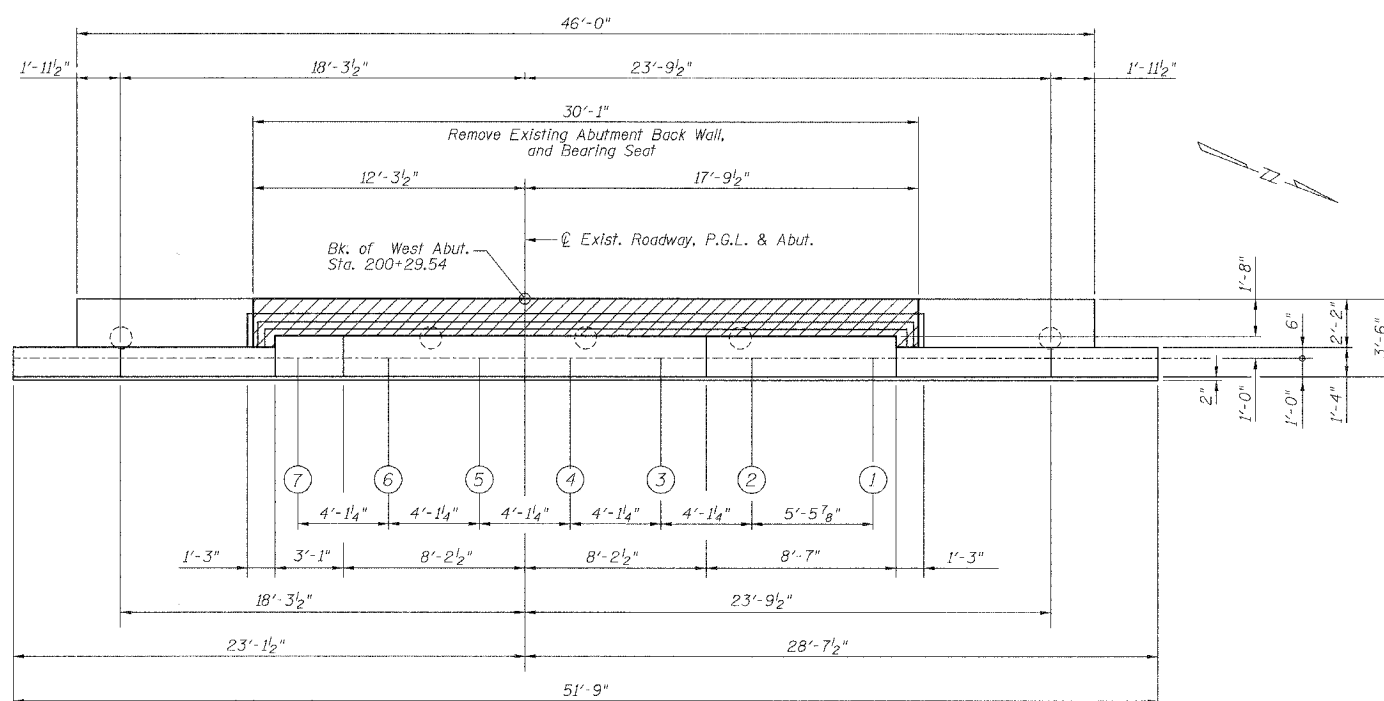
LEGEND:

	Concrete Removal
	Formed Concrete Repair
	Epoxy Crack Sealing

BILL OF MATERIAL

Item	Unit	Quantity
Formed Concrete Repairs	Sq. Ft.	4.0
Epoxy Crack Sealing	Ft.	3.0
Concrete Removal	Cu. Ft.	5.8

- NOTES:**
1. Removal of existing steel plates and bars in abutment backwall incidental to "Concrete Removal"
 2. Existing reinforcement extending into new construction shall be cleaned, straightened and incorporated into new construction. Cost shall be included with Concrete Removal.
 3. Repair of the existing abutment shall include but not be limited to the areas shown. The actual areas to be repaired will be determined by the Engineer at the time of construction.
 4. Remove backwall to match exist. bearing seat elevations.



TOP PLAN

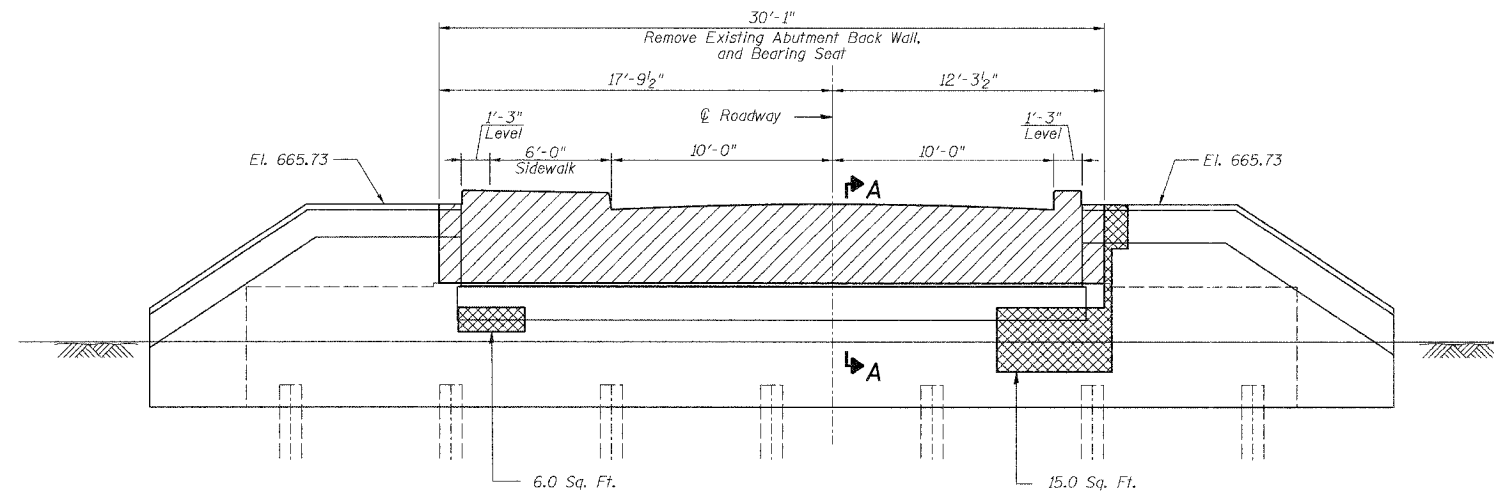
REVISIONS	
NAME	DATE

Ciorba Group, Inc.
CONSULTING ENGINEERS
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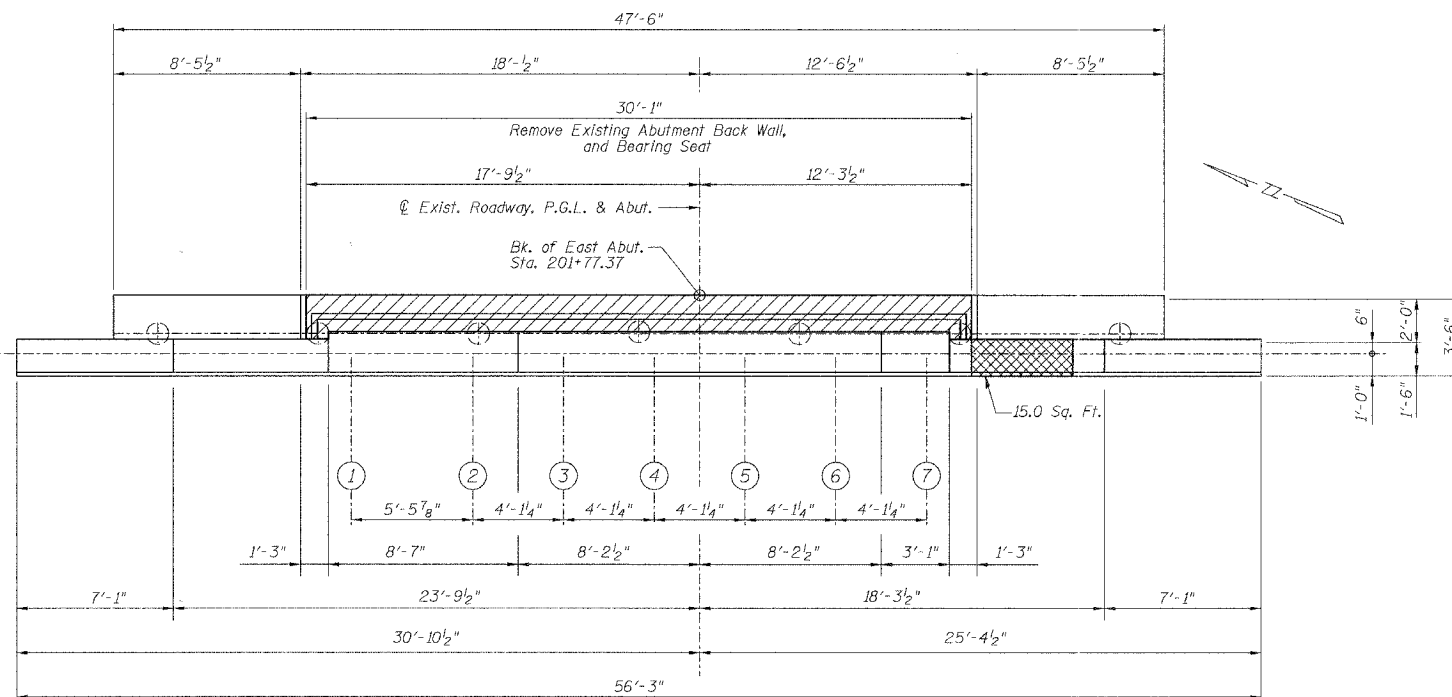
VILLAGE OF WINNETKA, ILLINOIS
WEST ABUTMENT REMOVAL AND REPAIRS
ELDORADO STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 17.26 KENOSHA SUBDIVISION
COOK COUNTY STA. 201+07.21
STRUCTURE NO. 016-8260

SCALE: NONE
DATE: MARCH 2006
FILE: 3278

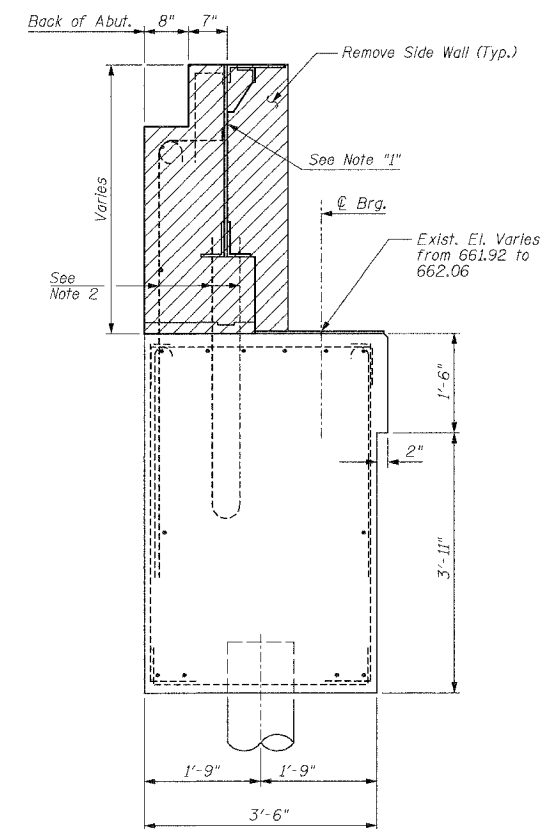
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DESIGN BY: BWS
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ELEVATION
(Looking east)



TOP PLAN



SECTION A-A
(Existing Condition)

LEGEND:

- Concrete Removal
- Formed Concrete Repair
- Epoxy Crack Sealing

BILL OF MATERIAL

Item	Unit	Quantity
Formed Concrete Repairs	Sq. Ft.	36.0
Concrete Removal	Cu. Yd.	5.9

- NOTES:**
- Removal of existing steel plates and bars in abutment backwall incidental to "Concrete Removal"
 - Existing reinforcement extending into new construction shall be cleaned, straightened and incorporated into new construction. Cost shall be included with Concrete Removal.
 - Repair of the existing abutment shall include but not be limited to the areas shown. The actual areas to be repaired will be determined by the Engineer at the time of construction.
 - Remove backwall to match existing bearing seat elevations.

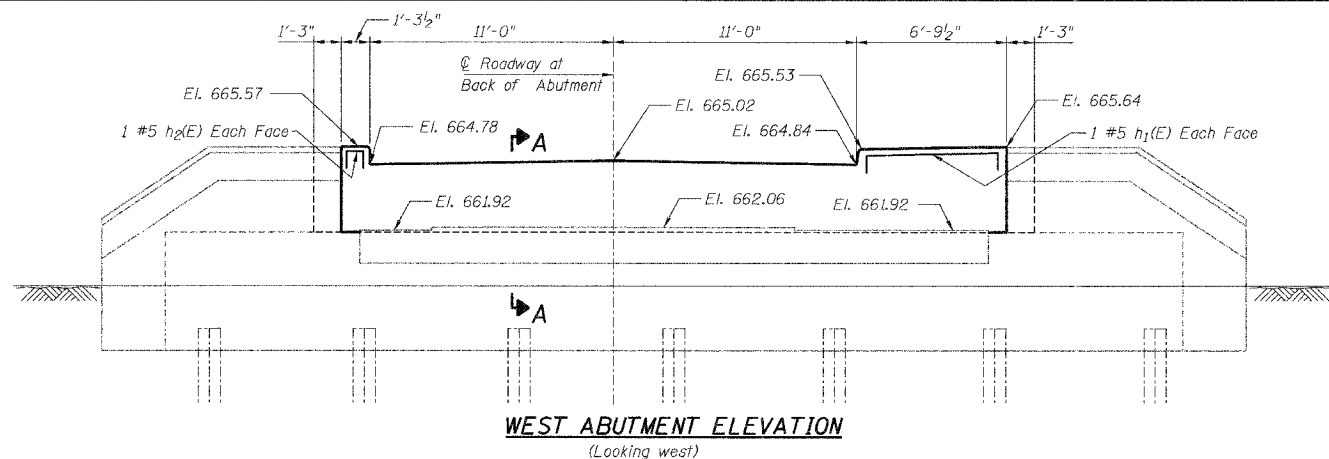
REVISIONS	
NAME	DATE

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE • CHICAGO, ILLINOIS 60656 • (773) 775-4009

VILLAGE OF WINNETKA, ILLINOIS
EAST ABUTMENT REMOVAL AND REPAIRS
ELDORADO STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 17.26 KENOSHA SUBDIVISION
COOK COUNTY STA. 201+07.21
STRUCTURE NO. 016-8260

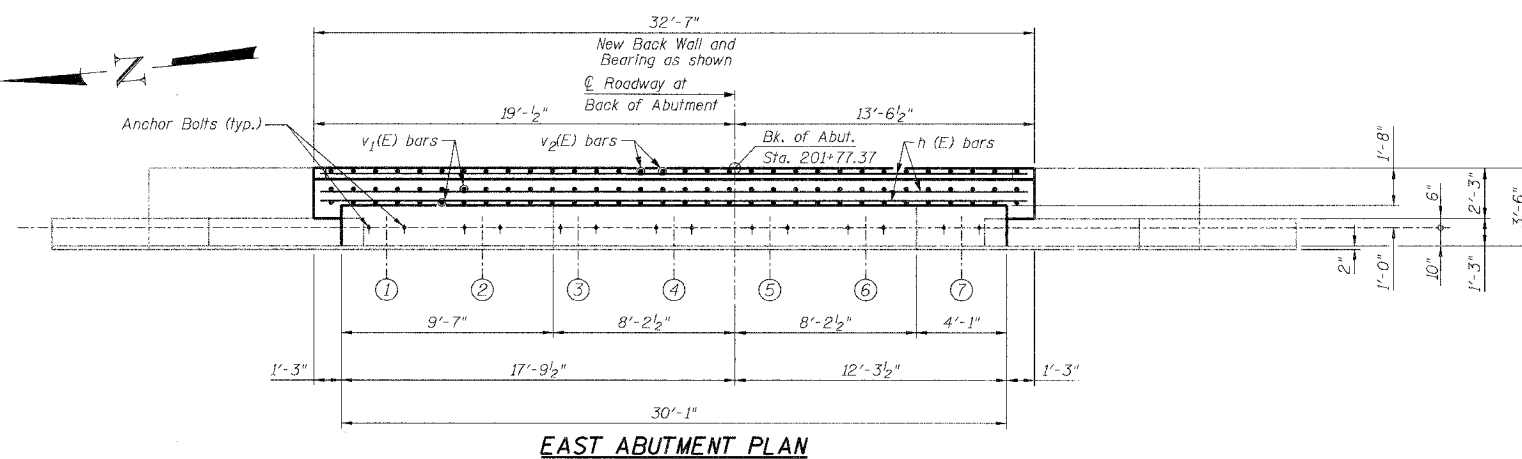
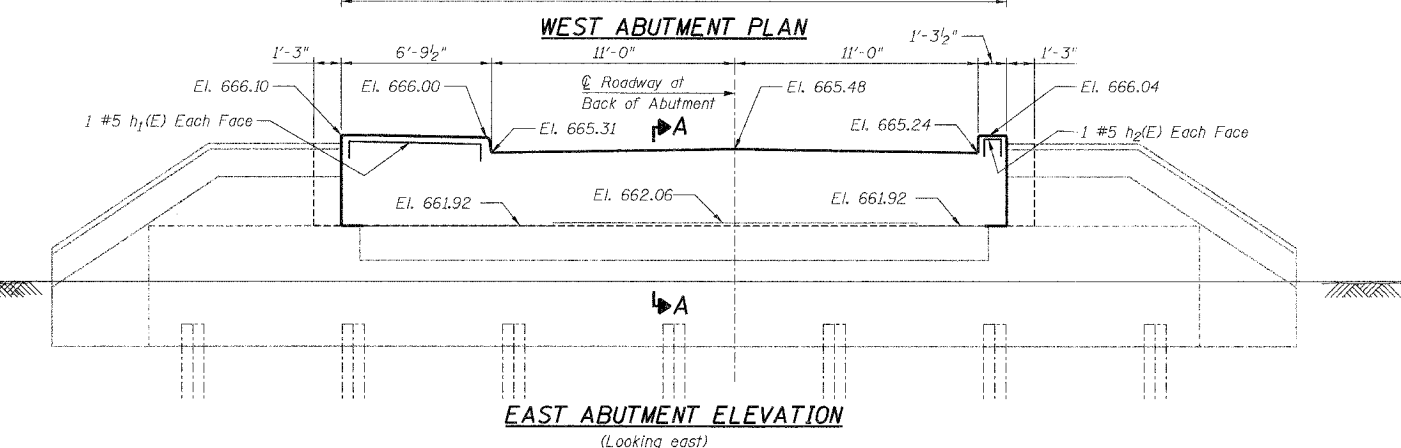
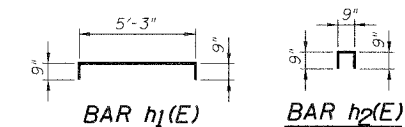
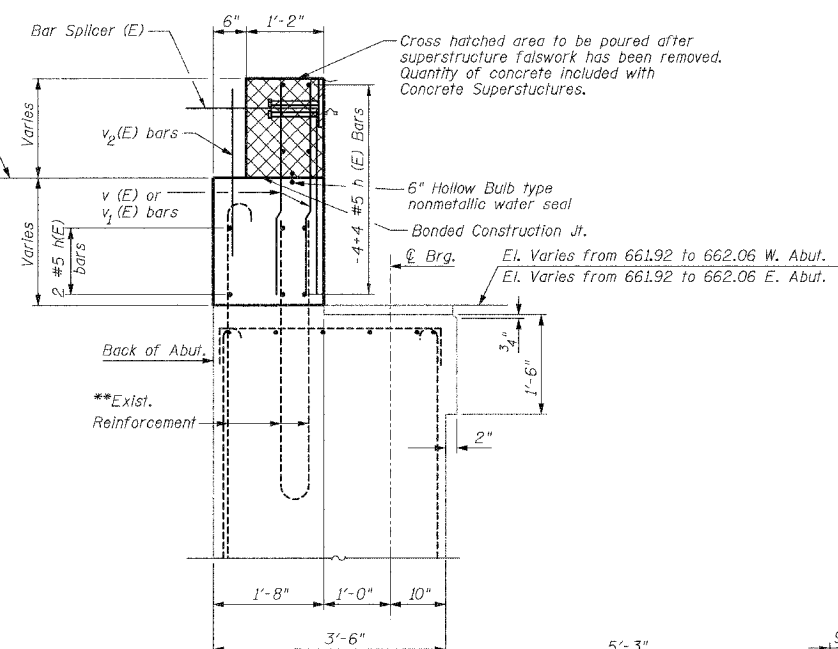
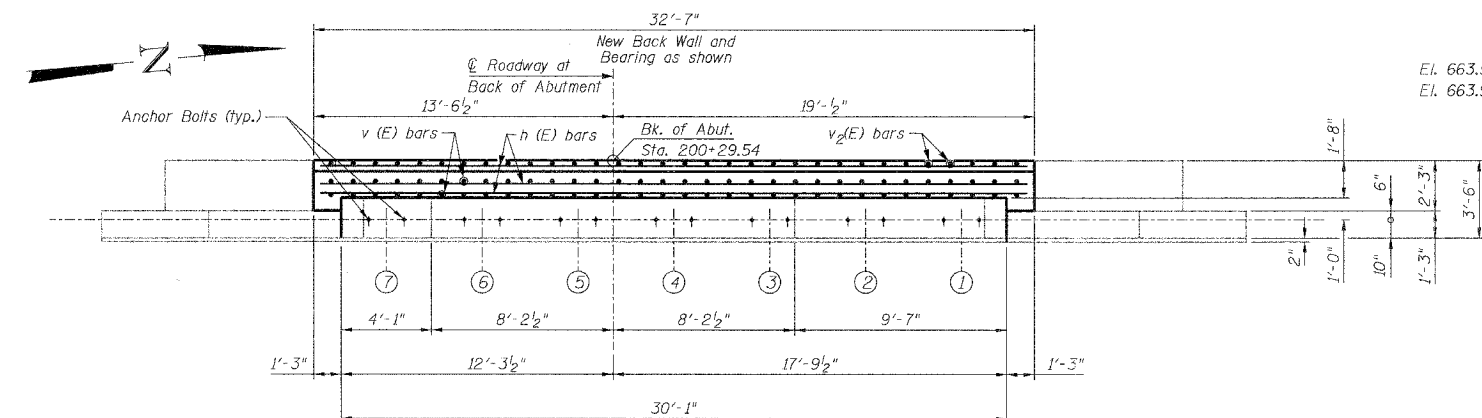
SCALE: NONE
DATE: MARCH 2006
FILE: 3278

DRAWN BY: RCD
DESIGN BY: BWS
CHECKED BY: SCD



** Existing Reinforcement extending into removed areas shall be blast cleaned, straightened and incorporated into new construction. Cost incidental to "Concrete Removal". Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost incidental to "Concrete Removal".

*** Bonded Construction Joint in accordance with Article 503.09(a)(2) of the Standard Specifications.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#5	32'-3"	—
h ₁ (E)	4	#5	6'-9"	┌
h ₂ (E)	4	#5	2'-3"	└
v(E)	64	#5	2'-8"	—
v ₁ (E)	64	#5	3'-1"	—
v ₂ (E)	64	#5	2'-6"	—
Reinforcement Bars (Epoxy Coated)		Lbs.		1,260
Concrete Structures		Cu. Yd.		18.3

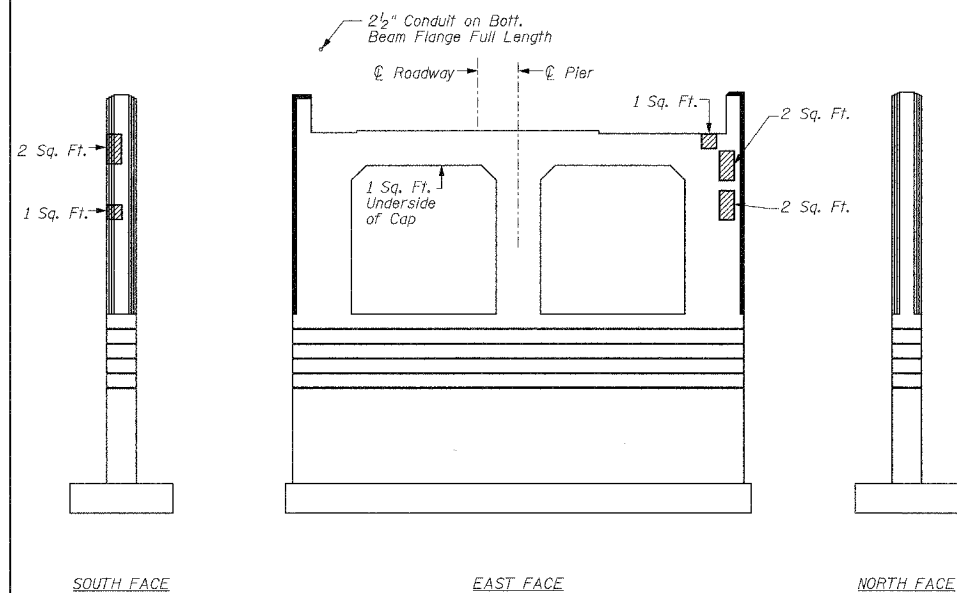
REVISIONS	
NAME	DATE

Clorba Group, Inc.
CONSULTING ENGINEERS
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VILLAGE OF WINNETKA, ILLINOIS
ABUTMENT RECONSTRUCTION DETAILS
ELDORADO STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 17.26 KENOSHA SUBDIVISION
COOK COUNTY STA. 201+07.21
STRUCTURE NO. 016-8260

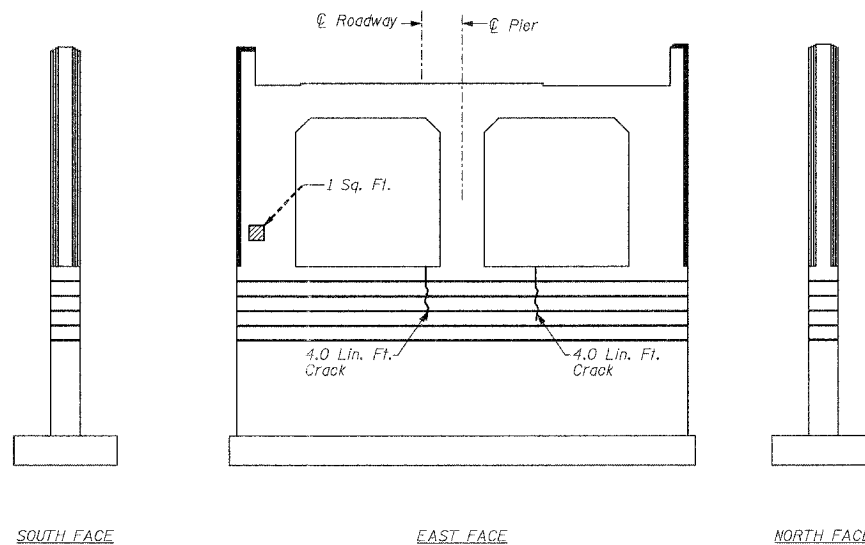
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FILE: 3278

DRAWN BY: RCD
DESIGN BY: BWS
CHECKED BY: SCD



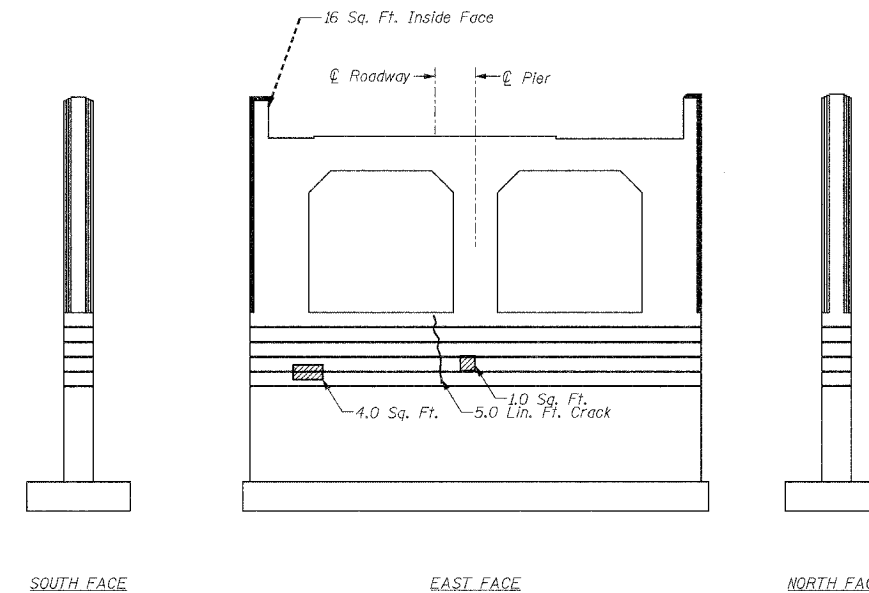
SOUTH FACE
EAST FACE
NORTH FACE

WEST FACE
WEST PIER



SOUTH FACE
EAST FACE
NORTH FACE

WEST FACE
CENTER PIER



SOUTH FACE
EAST FACE
NORTH FACE

WEST FACE
EAST PIER

Notes:
Repair of the existing piers shall include but not be limited to the areas shown. The actual areas to be repaired will be determined by the engineer at the time of construction.

LEGEND
 Formed Concrete Repair (Depth < 5")
 Epoxy Crack Sealing

BILL OF MATERIALS

Formed Concrete Repair < 5"	Sq. Ft.	35
Epoxy Crack Sealing	Fl.	40

REVISIONS	
NAME	DATE

Clorba Group, Inc.
CONSULTING ENGINEERS
3507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (773) 775-4009

VILLAGE OF WINNETKA, ILLINOIS
PIER REPAIRS
ELDORADO STREET OVER THE UNION PACIFIC R.R.
R.R. MILE POST 17.26 KENOSHA SUBDIVISION
COOK COUNTY STA. 201+07.21
STRUCTURE NO. 016-8260

SCALE: NONE
DATE: MARCH 2006
FILE: 3278

DRAWN BY: RCD
DESIGN BY: BWS
CHECKED BY: SCD

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- Minimum *Pull-out Strength (Tension in kips) = $1.25 \times f_{s_{allow}} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

The diameter of this part is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



**** ONE PIECE**

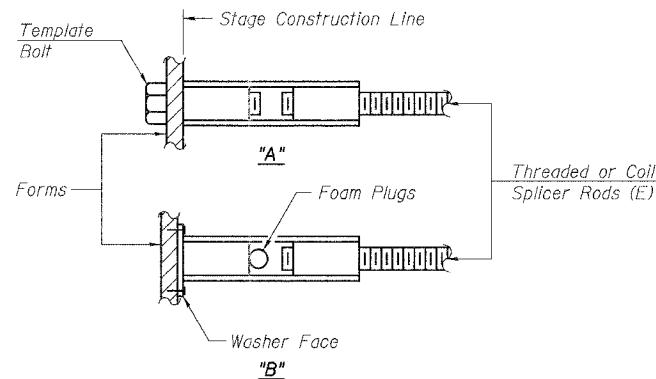
Wire Connector



WELDED SECTIONS

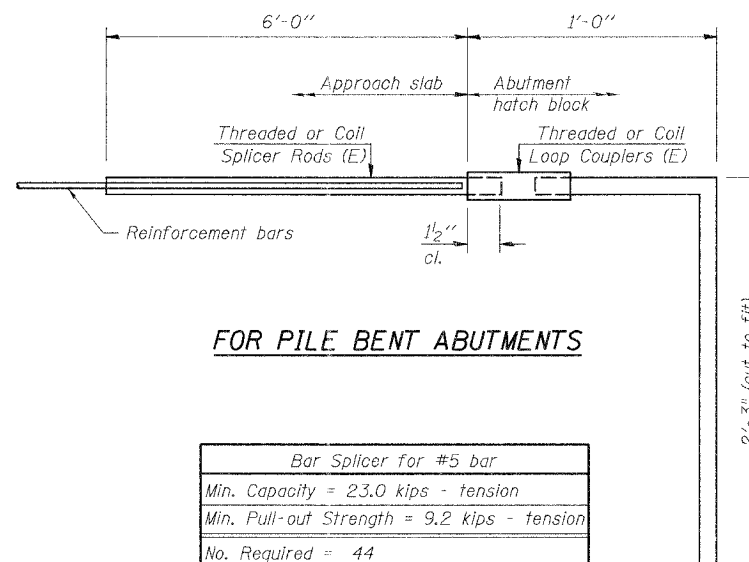
BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 44

DATE: 3/9/2006 FILENAME: n:\proj\3278\eldorado\design\structural_eldorado_3278_cad\final_plan\3278-eldo-bsadh01.dgn

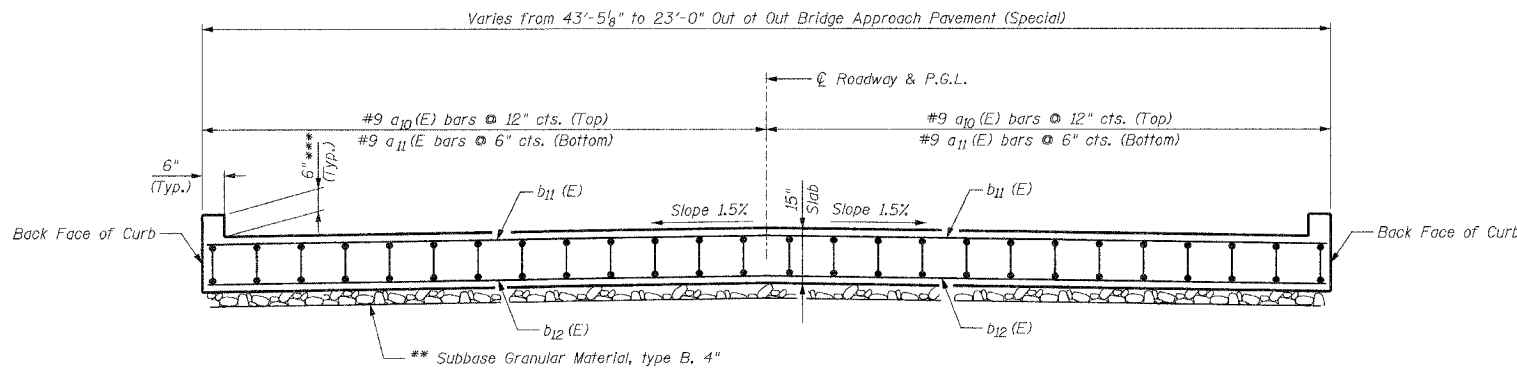
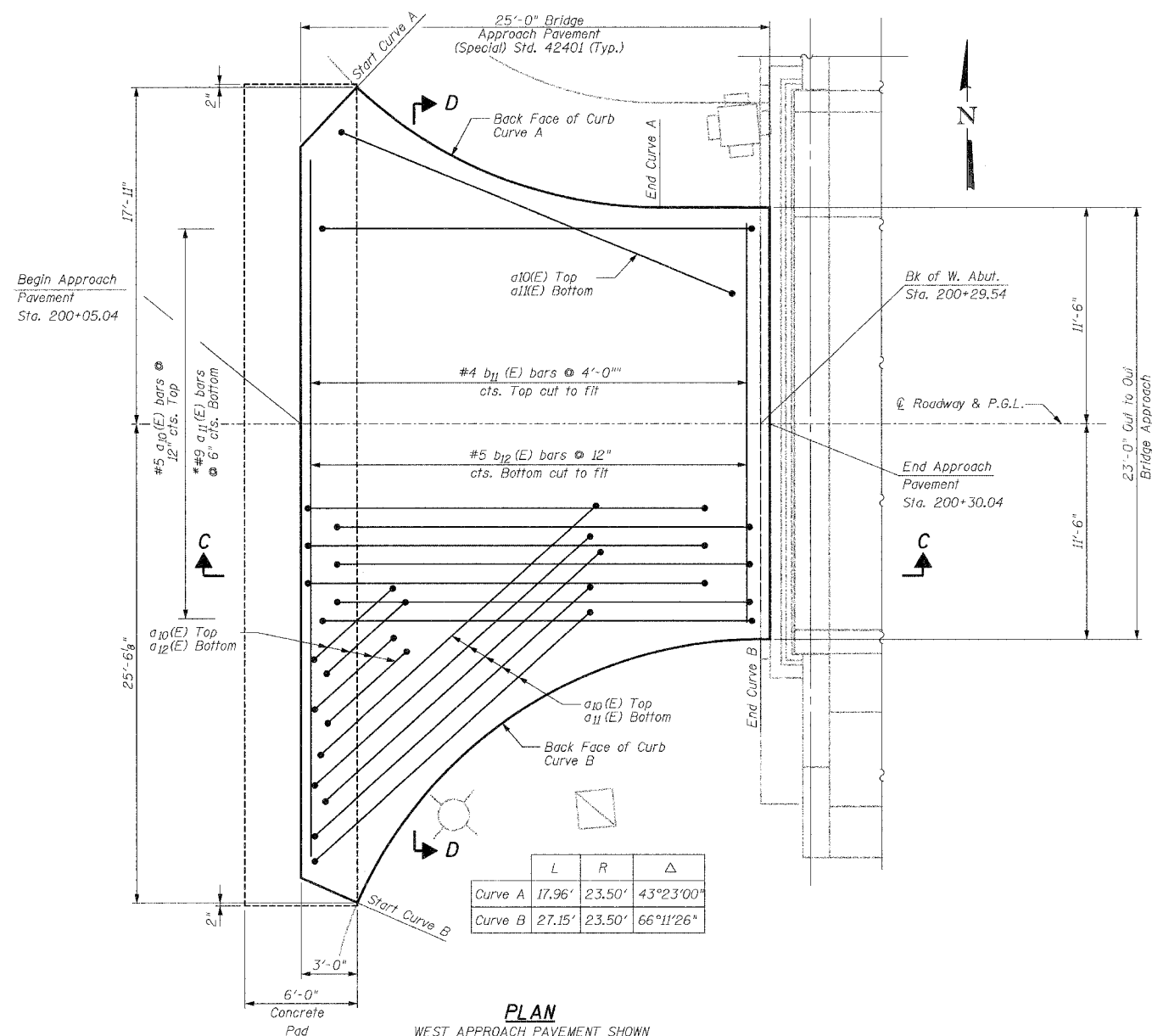
BSD-1 10-31-02

REVISIONS	
NAME	DATE

Clorba Group, Inc.
 CONSULTING ENGINEERS
 5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (773) 775-4009

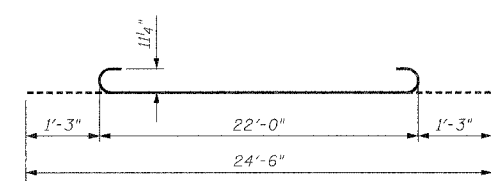
VILLAGE OF WINNETKA, ILLINOIS
 BAR SPLICER ASSEMBLY DETAILS
 ELDORADO STREET OVER THE UNION PACIFIC R.R.
 R.R. MILE POST 17.26 KENOSHA SUBDIVISION
 COOK COUNTY STA. 201+07.21
 STRUCTURE NO. 016-8260

SCALE: NONE DRAWN BY: RCD
 DATE: MARCH 2006 DESIGN BY: BWS
 FILE: 3278 CHECKED BY: SCD

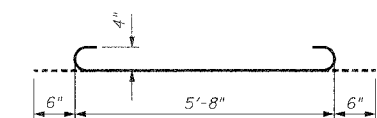


SECTION D-D
(Looking East)

*** Height of curb varies from 6" to 9½" along a 10' length toward the bridge.



BAR a11(E)



BAR a12(E)

TWO APPROACH PAVEMENTS

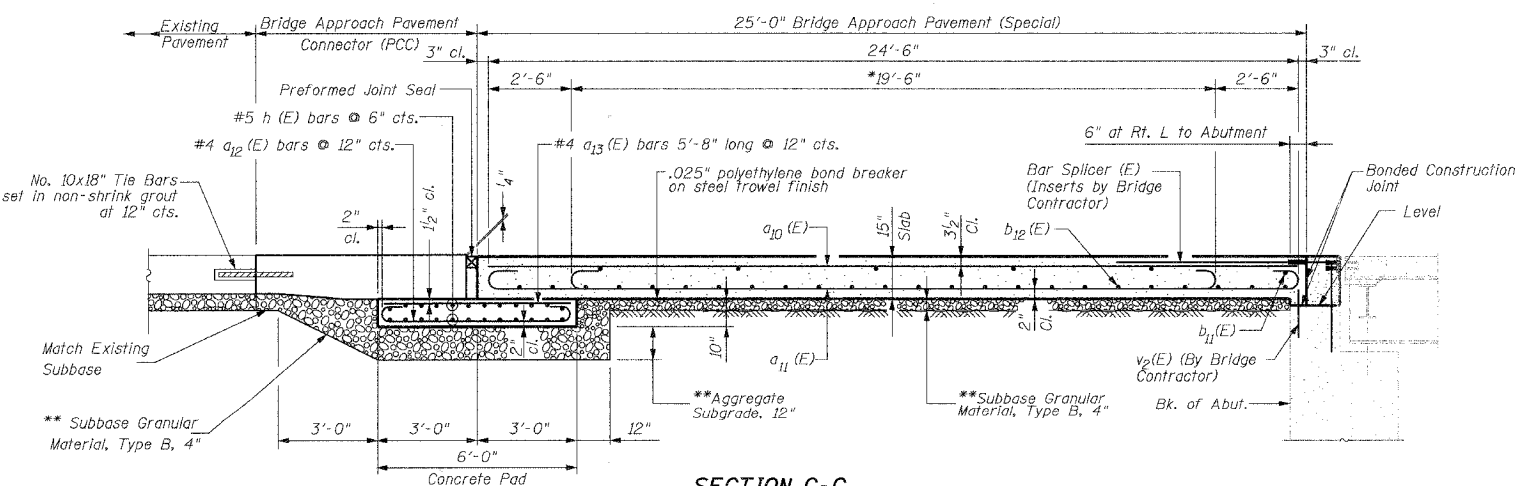
BILL OF MATERIAL

Item	Unit	Quantity
Bridge Approach Pavement (Special)	Sq. Yd.	83

DESIGN STRESSES

$f'_c = 3,500$ p.s.i.
 $f_y = 60,000$ p.s.i.
 $n = 8.5$

See Bridge Approach Pavement Std. 420401 for additional details.
 All reinforcement bars shall be Epoxy Coated.



SECTION C-C

*Stagger #9 a10(E) bars as shown on Plan-Full width.
 **Items included in cost of Approach Pavement (Special)

REVISIONS	
NAME	DATE

Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (773) 775-4009

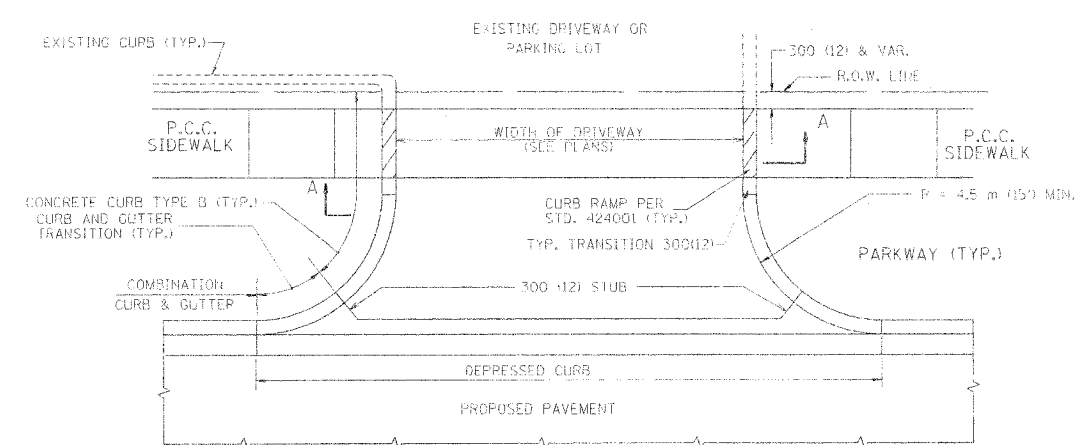
VILLAGE OF WINNETKA, ILLINOIS
 BRIDGE APPROACH PAVEMENT (SPECIAL)
 ELDORADO STREET OVER THE UNION PACIFIC R.R.
 R.R. MILE POST 17.26 KENOSHA SUBDIVISION
 COOK COUNTY STA. 201+07.21
 STRUCTURE NO. 016-8260

SCALE: NONE
 DATE: MARCH 2006
 FILE: 3278

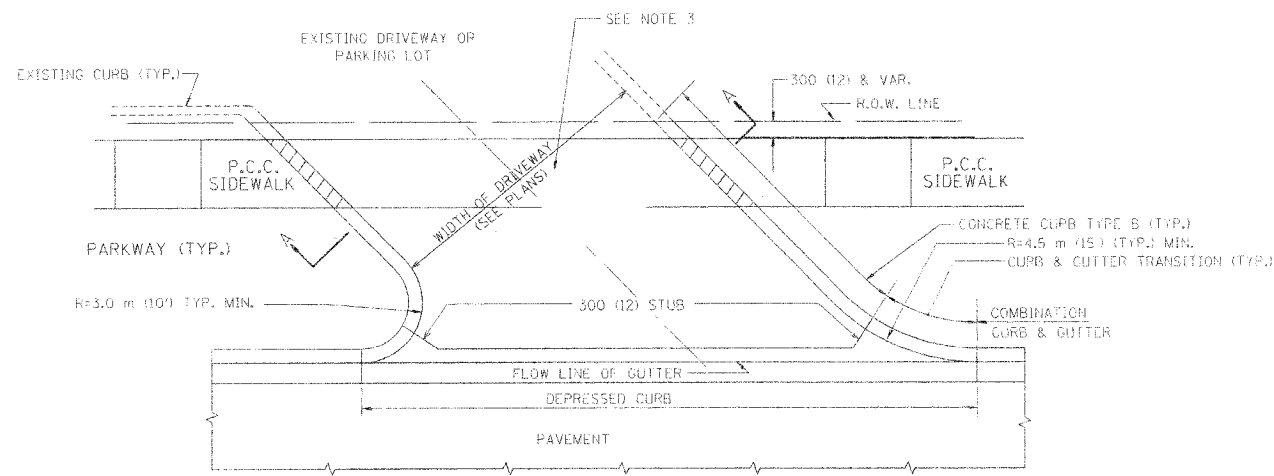
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 DESIGN BY: BWS
 CHECKED BY: SCD

DATE: 3/10/2006
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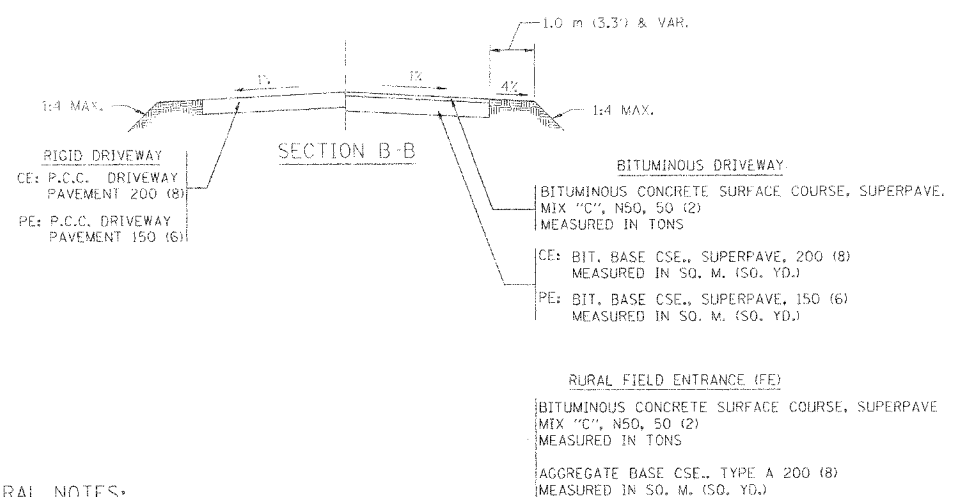
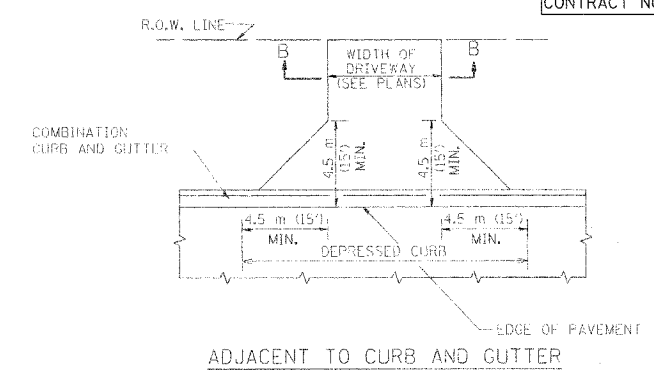
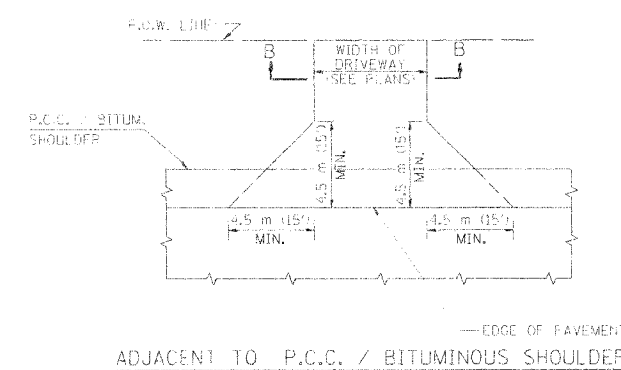
SECTION	COURT	TOTAL SHEETS	SHEET NO.
00-00094-03-DR	COOK	69	65
TO STA.		REF. AND PROJECT	
CONTRACT NO. 83850			



WITH CONCRETE CURB, TYPE B



WITH CONCRETE CURB, TYPE B



GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

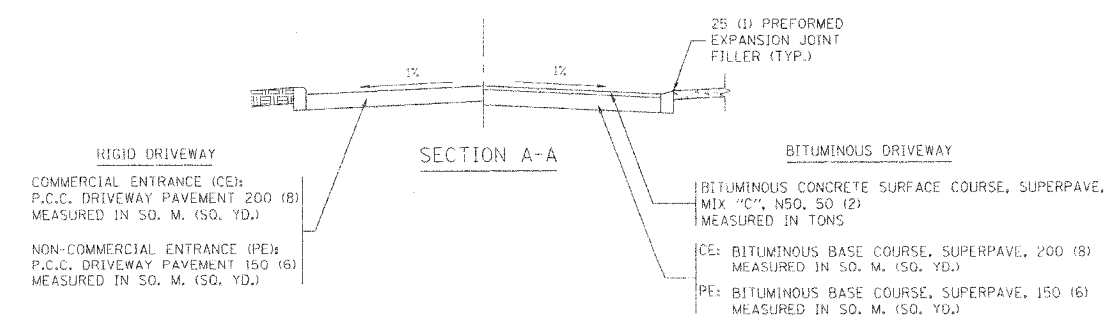
COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 1.2 METERS (4 FEET) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

25 (1) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.



ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED

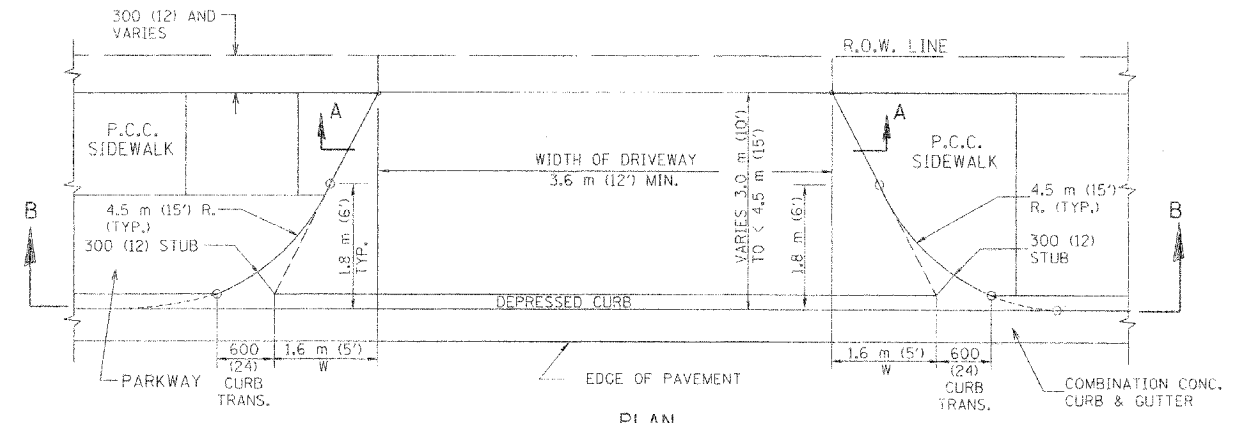
ILLINOIS DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS
DISTANCE BETWEEN R.O.W. AND FACE OF CURB / EDGE OF SHOULDER >= 4.5 m (15')

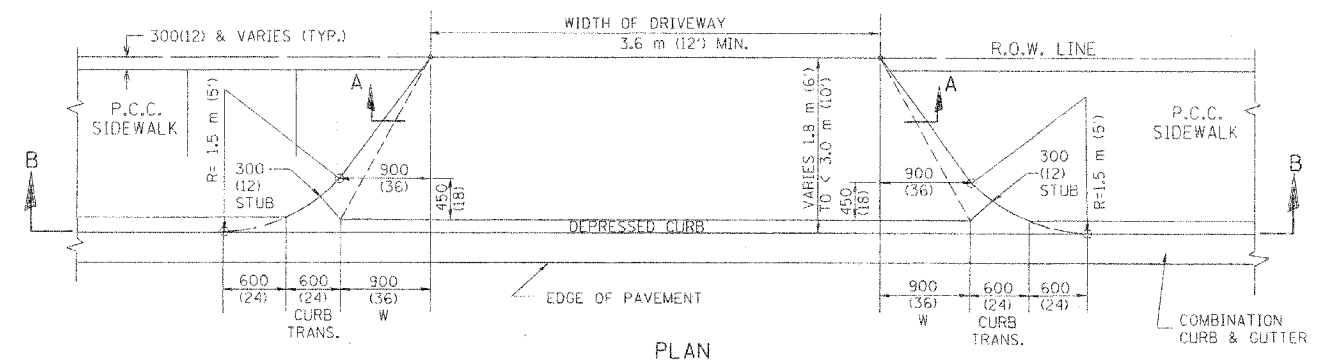
REVISIONS	
NAME	DATE
P. LOFLEUR	04-15-03
R. SHAH	11-04-95
J. POLLASTRINI	08-12-96
J. POLLASTRINI	12-14-96
A. ABBAS	03-21-97
T. HOLTZ	04-08-97
M. GOMEZ	04-06-01

SCALE: NONE
DATE PLOTTED: 04/17/2003
DRAWN BY: SC
CHECKED BY: JFP

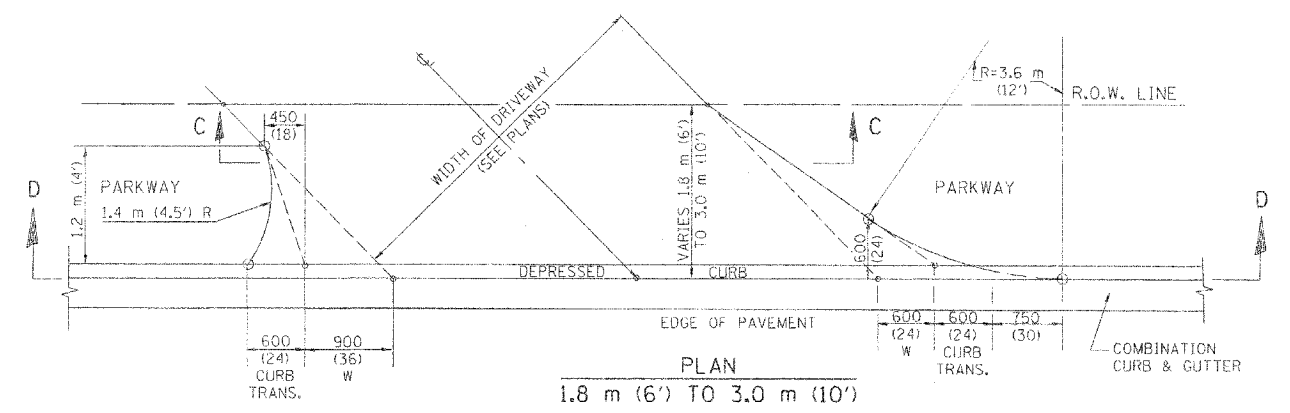
CONTRACT NO. 83850



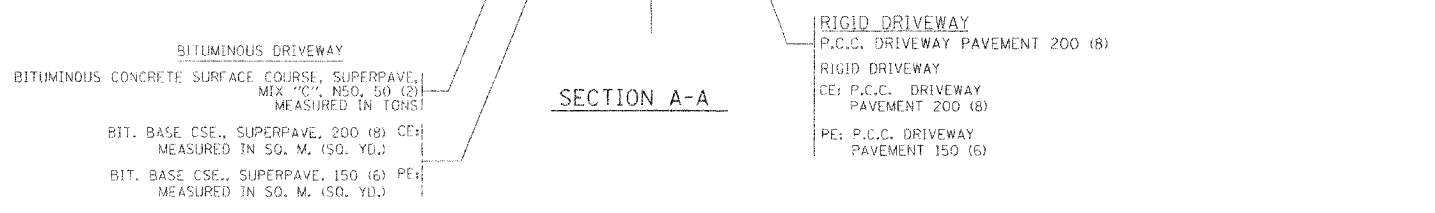
PLAN
3.0 m (10') TO < 4.5 m (15')



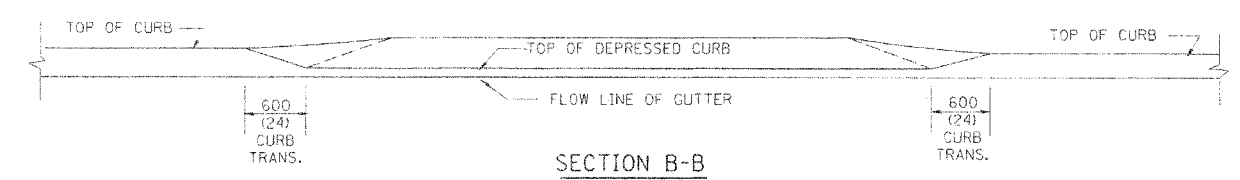
PLAN
1.8 m (6') < 3.0 m (10')



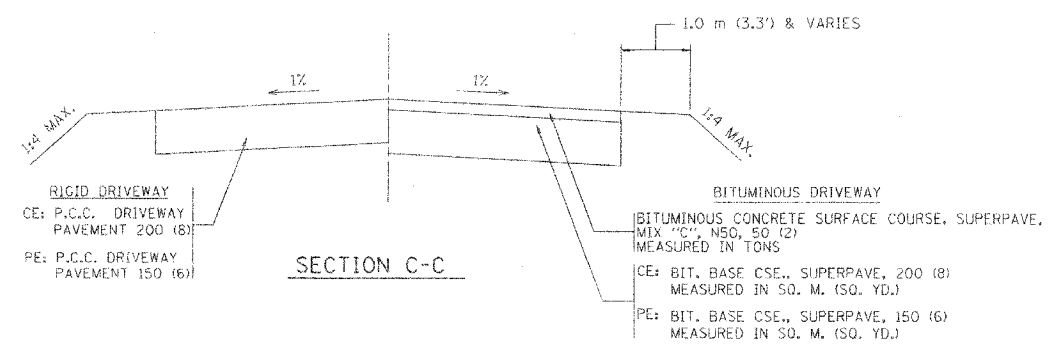
PLAN
1.8 m (6') TO 3.0 m (10')



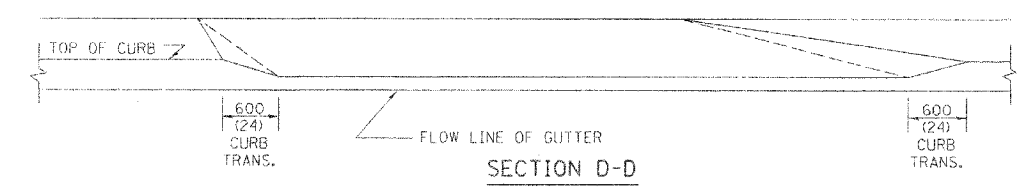
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

GENERAL NOTES

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 2.4 M (8'), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

25 (1) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

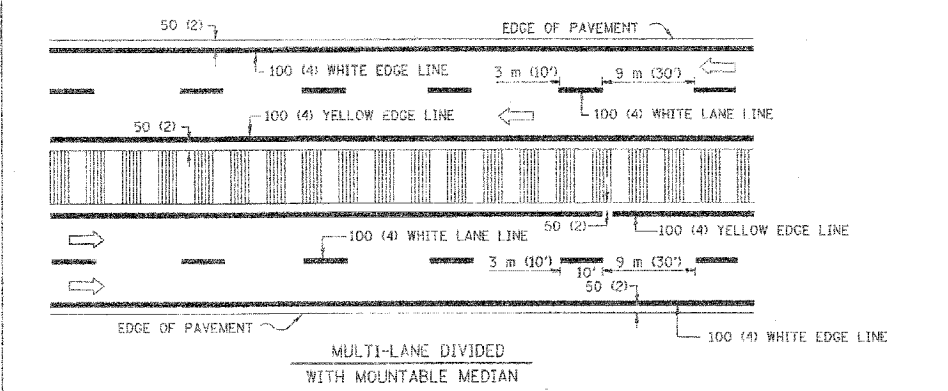
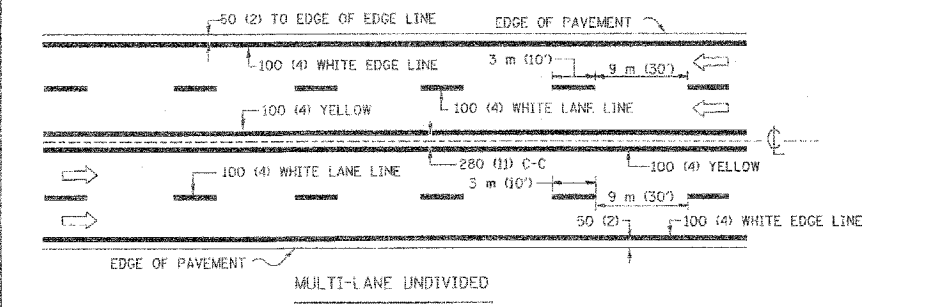
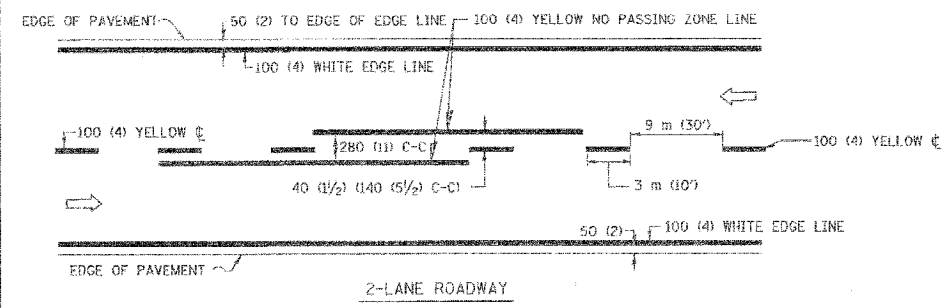
"W" VARIES FROM 900 (36) TO 1.5 M (5 FT.) PROPORTIONAL TO THE LENGTH (L), FROM 1.8 M (6 FT.) TO 3 M (10 FT.).

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
DRIVEWAY DETAILS
DISTANCE BETWEEN ROW AND FACE OF CURB < 4.5 m (15')

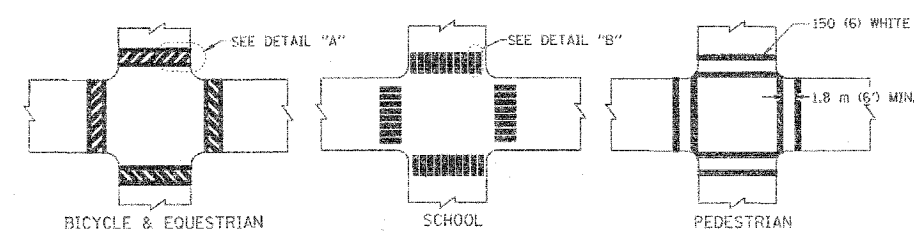
REVISIONS	
NAME	DATE
P. LAFLEUR	04/15/03
M. GOMEZ	04/06/01
R. SHAH	11/06/95
J. POLLASTRINI	08/12/96
J. POLLASTRINI	12/14/96
A. ABBAS	03/21/97
T. HOLTZ	04/08/97

SCALE: NONE
DATE PLOTTED: 04/17/2003
DRAWN BY: SC
CHECKED BY: JFP

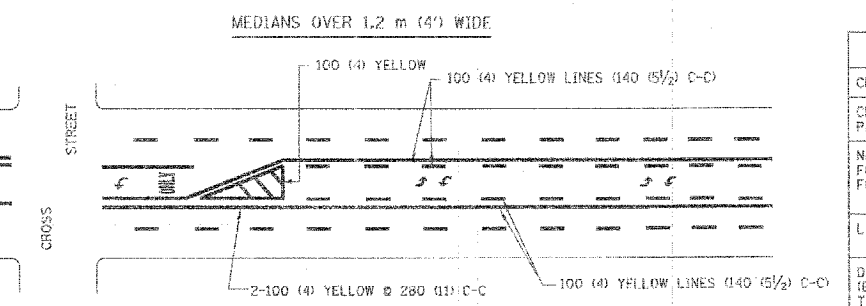
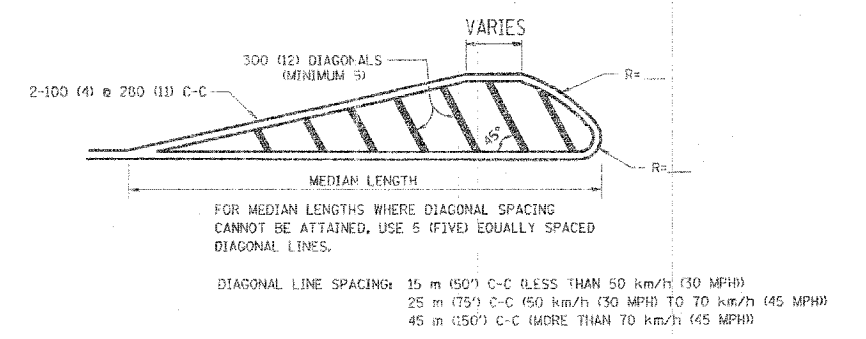
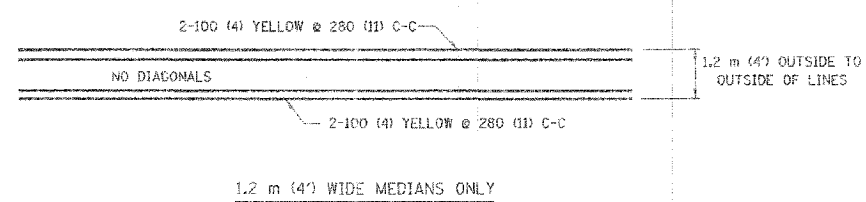


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

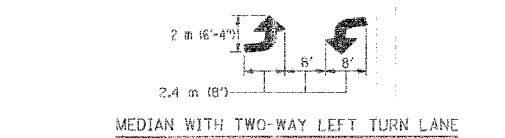
TYPICAL LANE AND EDGE LINE MARKING



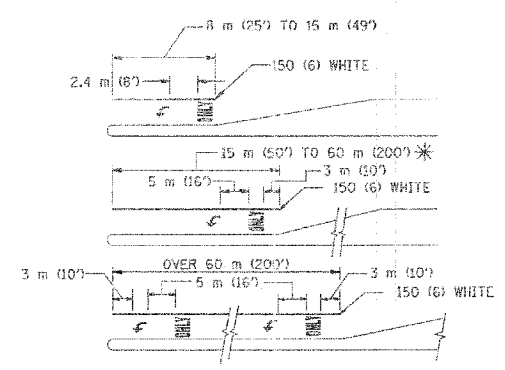
TYPICAL CROSSWALK MARKING



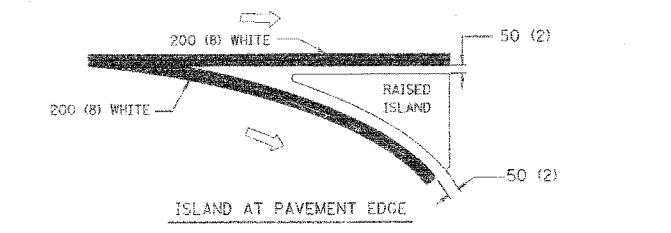
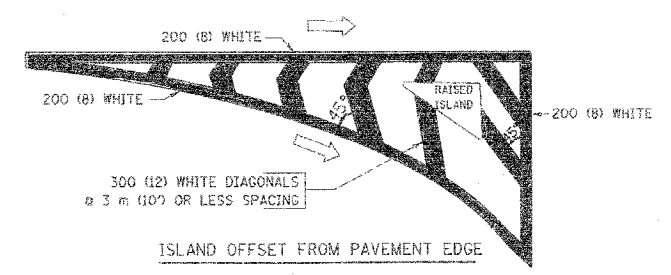
TYPICAL PAINTED MEDIAN MARKING



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	100 (4)	SKIP-DASH	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 100 (4)	SOLID	YELLOW	280 (11) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	100 (4) 2 @ 100 (4)	SOLID SOLID	YELLOW YELLOW	140 (5 1/2) C-C FROM SKIP-DASH CENTERLINE 280 (11) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	100 (4) 125 (5) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	3 m (10') LINE WITH 9 m (30') SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	600 (2') LINE WITH 1.8 m (6') SPACE
EDGE LINES	100 (4)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW. EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	150 (6) LINE; FULL SIZE LETTERS & SYMBOLS (2.4 m (8'))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 100 (4) EACH DIRECTION 2.4 m (8') LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	3 m (10') LINE WITH 9 m (30') SPACE FOR SKIP-DASH 140 (5 1/2) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 150 (6) 300 (12) @ 45° 300 (12) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 1.8 m (6') APART 600 (2') APART 600 (2') APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	600 (24)	SOLID	WHITE	PLACE 1.2 m (4') IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 100 (4) WITH 300 (12) DIAGONALS @ 45° NO DIAGONALS USED FOR 1.2 m (4') WIDE MEDIANS	SOLID	YELLOW TWO WAY TRAFFIC WHITE ONE WAY TRAFFIC	280 (11) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	200 (8) WITH 300 (12) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 4.5 m (15') C-C (LESS THAN 50 km/h (30 MPH)) 6 m (20') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 9 m (30') C-C (OVER 70 km/h (45 MPH))
RAILROAD CROSSING	600 (24) TRANSVERSE LINES; "RR" IS 1.8 m (6') LETTERS; 400 (16) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF "X"=0.33m² (3.6 SQ. FT.) EACH "X"=5.0 m² (54.0 SQ. FT.)
SHOULDER DIAGONALS	300 (12) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	15 m (50') C-C (LESS THAN 50 km/h (30 MPH)) 25 m (75') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 45 m (150') C-C (OVER 70 km/h (45 MPH))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 1997 AND STATE STANDARD 780001.

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE

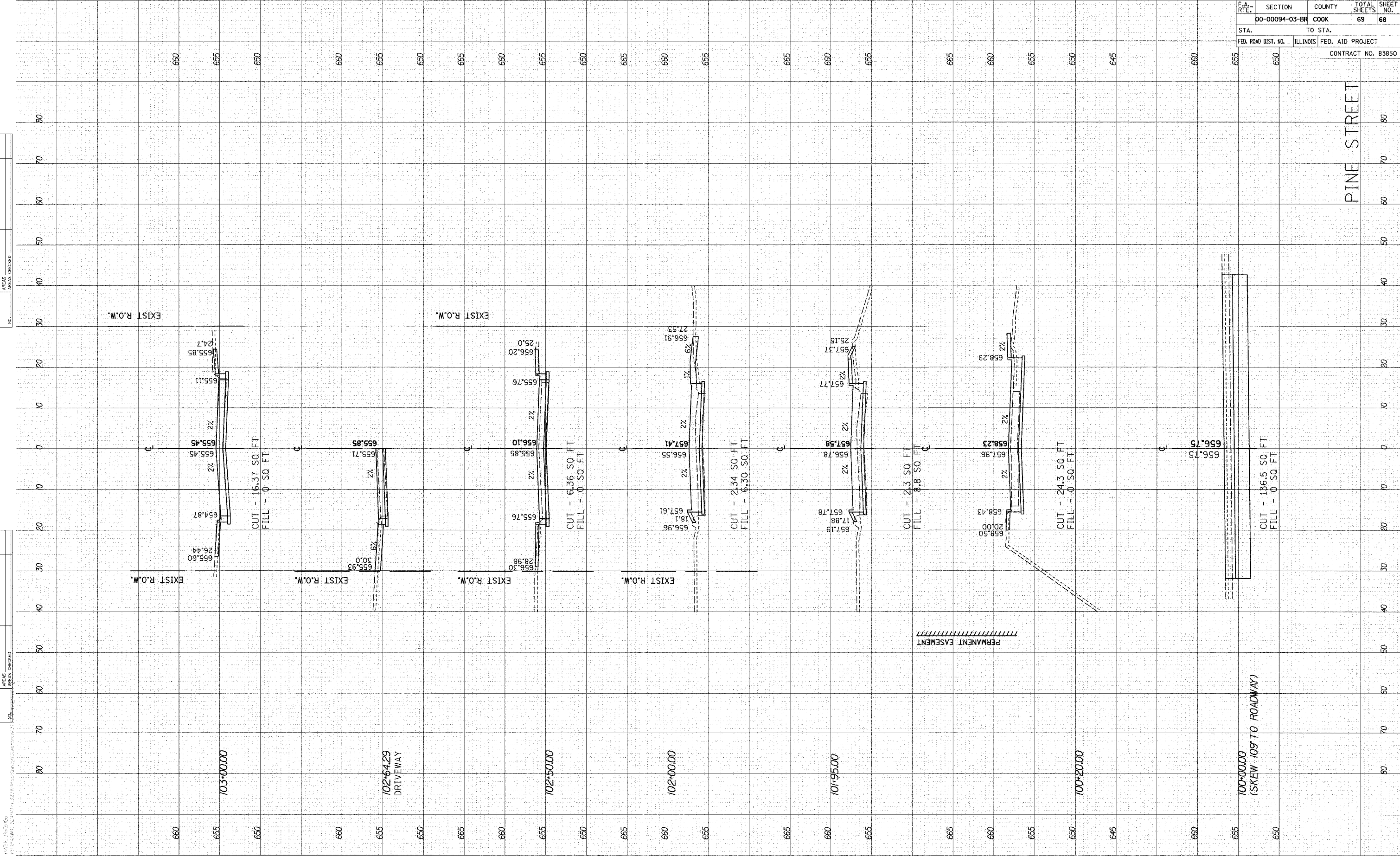
TYPICAL PAVEMENT MARKINGS

REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

SCALE: NONE DRAWN BY CADD
DATE 10/11/01 CHECKED BY

FINAL SURVEY NO.	SURVEY PLOTTED	BY	DATE
NOTE BOOK NO.	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEY PLOTTED	BY	DATE
NOTE BOOK NO.	TEMPLATE		
	AREAS CHECKED		



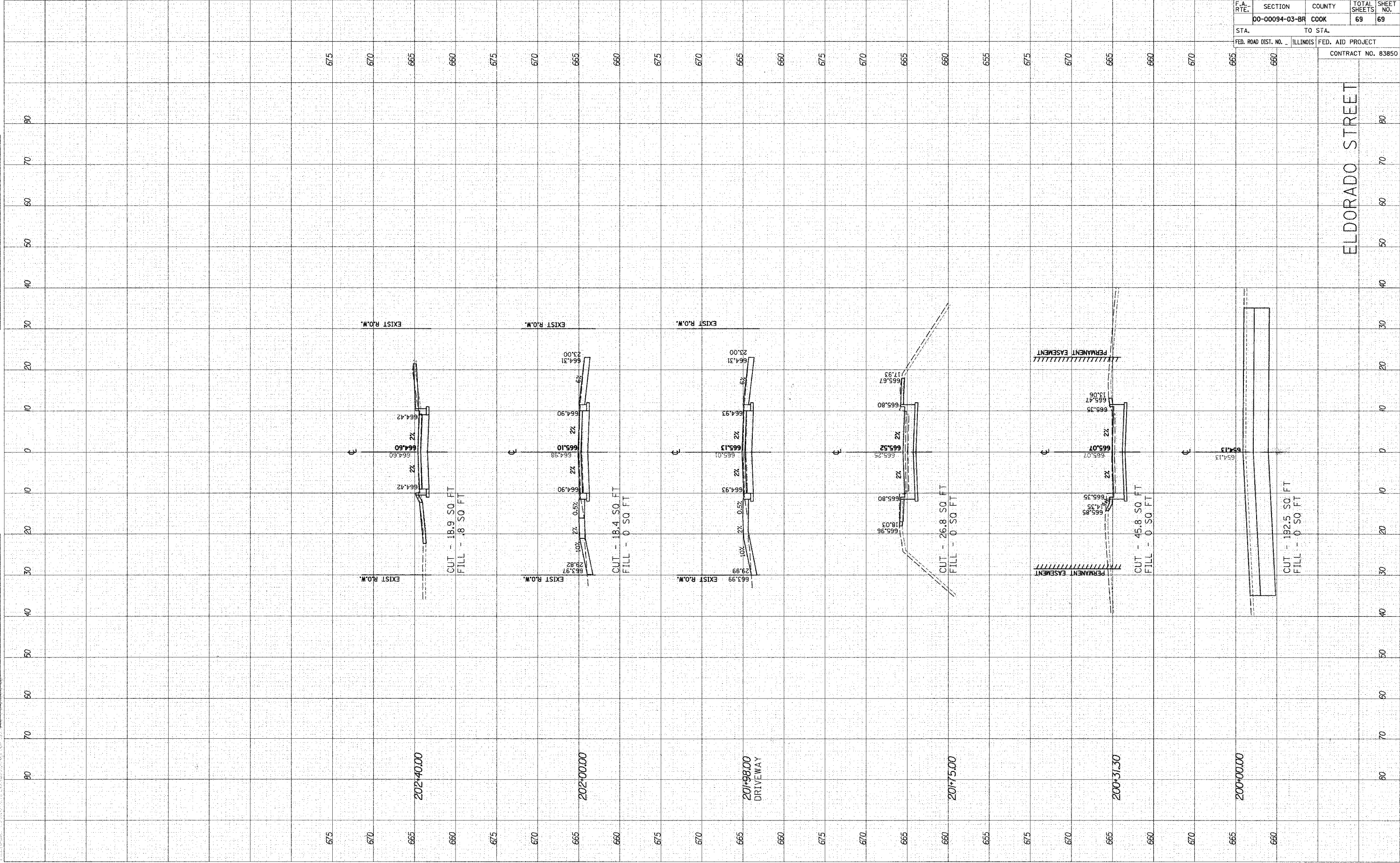
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	68
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
		CONTRACT NO. 83850		

PINE STREET

DATE: 10/15/09
 DRAWN BY: J. J. [unreadable]

FINAL SURVEY NOTE BOOK NO. SURVEYED PLOTTED TEMPLATE AREAS CHECKED BY DATE

ORIGINAL SURVEY NOTE BOOK NO. SURVEYED PLOTTED TEMPLATE AREAS CHECKED BY DATE



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	00-00094-03-BR	COOK	69	69
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
		CONTRACT NO.	83850	

ELDORADO STREET