

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY

CENTRAL AVENUE  
OVER THE WEST FORK, NORTH BRANCH CHICAGO RIVER  
BRIDGE RECONSTRUCTION  
SECTION 09-00085-00-BR  
PROJECT BROS-9003 (298)  
VILLAGE OF DEERFIELD  
LAKE COUNTY, ILLINOIS  
JOB C-91-513-09

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
09-00085-00-BR		LAKE	22	1

CONTRACT NO. 63584

INDEX OF SHEETS

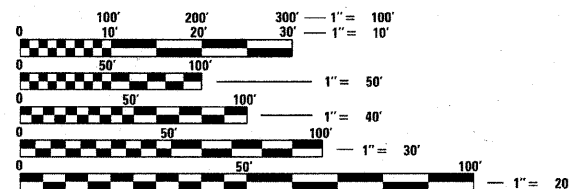
SHEET	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES AND STATE STANDARDS
3	SUMMARY OF QUANTITIES
4	TYPICAL SECTIONS
5	ROADWAY PLAN AND PROFILE
6	TRAFFIC CONTROL AND DETOUR PLAN
7	EROSION CONTROL AND LANDSCAPE PLAN
8	DRAINAGE AND UTILITY PLAN
9-19	BRIDGE STRUCTURE PLANS AND DETAILS
20	BORING LOGS
21-22	CONSTRUCTION DETAILS

PROJECT LOCATED IN  
VILLAGE OF DEERFIELD

PROPOSED IMPROVEMENT: NEW CONSTRUCTION AND RECONSTRUCTION OF HOT-MIX ASPHALT ROADWAY PAVEMENT, BRIDGE AND BRIDGE APPROACH PAVEMENT CONSTRUCTION, STORM SEWER, LANDSCAPING, AND EROSION CONTROL.

TRAFFIC DATA  
ADT (2009) = 309  
POSTED SPEED = 25 MPH

DESIGN DESIGNATION  
FUNCTIONAL CLASSIFICATION = LOCAL  
ADT (2030) ADT = 1,000

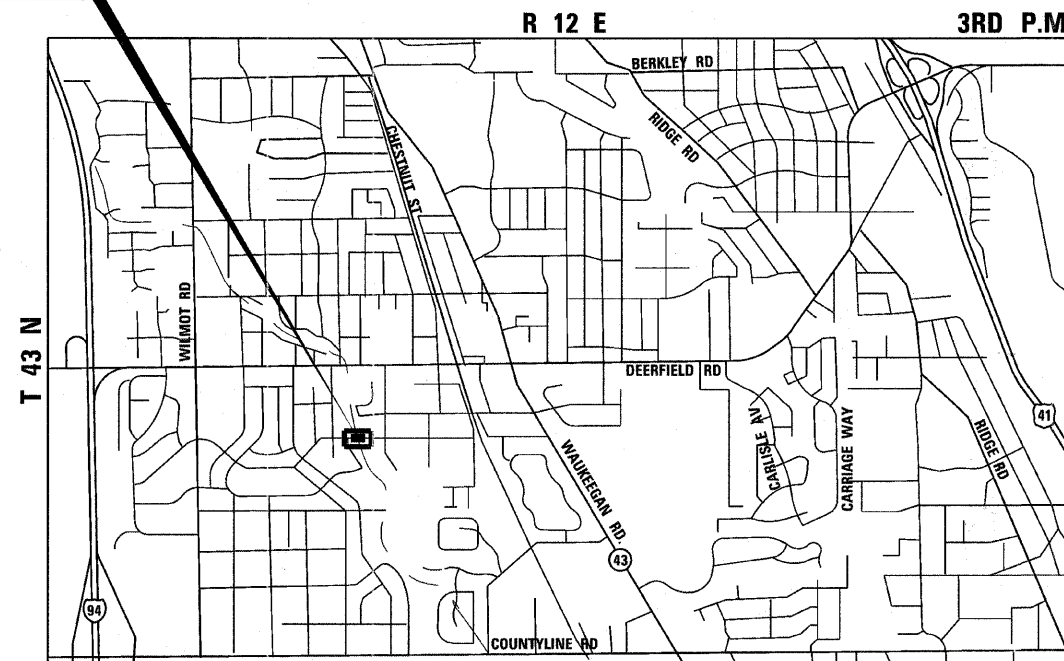


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

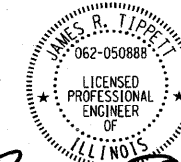
CONTRACT NO. 63584

CENTRAL STREET BRIDGE  
STA. 0+71.11 TO STA. 2+56.11  
STRUCTURE NO. 049-6154  
W. FORK, N. BRANCH OF  
THE CHICAGO RIVER

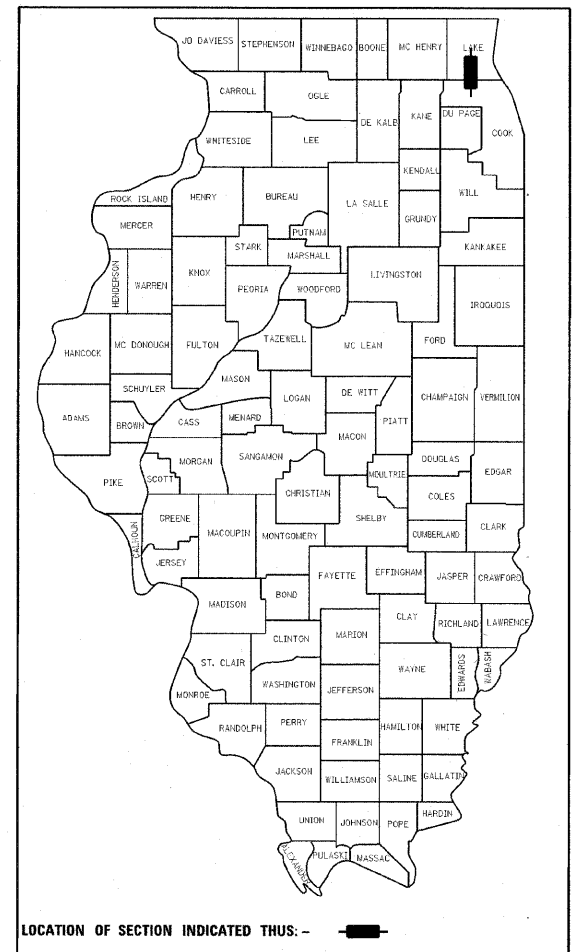


LOCATION MAP  
NOT TO SCALE

TOTAL GROSS LENGTH OF PROJECT	185 FT (0.035 MILES)
TOTAL NET LENGTH OF PROJECT	185 FT (0.035 MILES)



James R. Tippet  
DATE: 3-18-11  
EXPIRES: NOVEMBER 30, 2011



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

Approved MARCH 28 2011  
*Robert Phillip*  
VILLAGE OF DEERFIELD

Passed APRIL 13 2011  
*C. Hebert*  
DISTRICT 1 ENGINEER OF LOCAL ROADS AND STREETS

Releasing for Bid  
Based on Limited  
Review APRIL 13 2011  
*Diane M. O'Keefe*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

PLANS PREPARED BY:  
**URS** 100 S. WACKER DR., SUITE 500 TEL (312)-939-1000  
CHICAGO IL, 60606 FAX (312)-939-4198

PROGRAM AND OFFICE ENGINEER: CHARLES F. RIDDLE, P.E. 847-705-4406 SCHAUMBURG, IL

## GENERAL NOTES

ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE ILLINOIS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2007. (HEREINAFTER REFERRED TO AS THE STANDARD SPECIFICATIONS); THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", ADOPTED JANUARY 1, 2011; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS; THE "DETAILS" ON THE PLANS AND THE "SPECIAL PROVISIONS" INCLUDED IN THE CONTRACT DOCUMENTS. ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 1-800-892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. THE CONTRACTOR SHALL CALL VILLAGE OF DEERFIELD PUBLIC WORKS AT 847-317-7245 FOR VILLAGE OWNED UTILITIES. (48 HOURS NOTIFICATIONS REQUIRED)

WORK HOURS ARE RESTRICTED TO: 7:30 AM TO 7:00 PM MONDAY THROUGH FRIDAY; 9:00 AM TO 5:00 PM SATURDAY; AND NO WORK ON SUNDAY.

ALL UTILITIES, SCHOOL DISTRICTS, LOCAL POLICE, AND FIRE DEPARTMENTS SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.

THE SCALE SHOWN ON THE DRAWINGS APPLIES ONLY TO FULL SIZE PLANS AND NOT TO THE REDUCED SIZE PLANS.

BENCHMARKS FOR THE PROJECT ARE DESCRIBED IN THE PLANS AND ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). ALL BEARINGS AND COORDINATES REFERENCED IN THE PLAN DRAWINGS AND ALL CONTROL COORDINATES ARE BASED ON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83 (2007).

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REESTABLISH THE CENTERLINE ALIGNMENT FOR NEW CONSTRUCTION BASED UPON THE EXISTING ALIGNMENT OF THE BRIDGE BEING REPLACED. EXISTING CENTER OF BRIDGE SHALL BE PROPOSED CENTER OF BRIDGE, AND THE EXISTING CENTER OF ABUTMENTS SHALL BE ON THE CENTERLINE ALIGNMENT.

NO WORK SHALL COMMENCE UNTIL TRAFFIC CONTROL REQUIREMENTS ARE MET.

CONSTRUCTION TRAFFIC SHALL OBEY ALL LOAD POSTING LIMITS ON ALL HAUL ROADS.

WARNING SIGNS (OVERHEAD ELECTRIC) SHALL BE PLACED AT LOCATIONS OF OVERHEAD ELECTRIC LINES CROSSING THE ROADWAY CENTERLINE. SIGNS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR.

THE CONTRACTOR SHALL DEVELOP A PLAN TO ACCOMPLISH THIS WORK AND MINIMIZE DISRUPTION OF ACCESS. THIS PLAN SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

WHEN DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL USE THE FOLLOWING METHOD TO ALLAY DUST AND PREVENT A NUISANCE WITHIN THE LIMITS OF THE CONSTRUCTION SITE. DUST SHALL BE CONTROLLED BY THE UNIFORM APPLICATION OF SPRINKLED WATER AND SHALL BE APPLIED ONLY WHEN DIRECTED BY THE ENGINEER, IN A MANNER MEETING HIS APPROVAL. CALCIUM CHLORIDE SHALL NOT BE USED FOR THIS PURPOSE. ALL EQUIPMENT USED FOR THIS WORK SHALL MEET WITH THE ENGINEER'S APPROVAL. THIS WORK SHALL CONSIST OF THE EXCLUSIVE CONTROL OF DUST RESULTING FROM CONSTRUCTION OPERATIONS AND IS NOT INTENDED FOR USE IN THE COMPACTION OF EARTH EMBANKMENTS, AS SPECIFIED UNDER ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS. NO EXTRA COMPENSATION SHALL BE ALLOWED THE CONTRACTOR FOR THIS WORK.

THE CONTRACTOR SHALL KEEP EXISTING ADJACENT STREETS CLEAN OF DIRT, MUD, AND OTHER DEBRIS AND, WHEN NECESSARY, CLEAN SAID PAVEMENTS ON A DAILY BASIS OR WHEN DIRECTED BY THE ENGINEER. NO EXTRA COMPENSATION SHALL BE ALLOWED THE CONTRACTOR FOR THIS WORK.

THE CONTRACTOR SHALL MAINTAIN THE SITE IN A CLEAN AND ORDERLY MANNER. DEBRIS AND ANY SURPLUS MATERIAL SHALL BE REMOVED AND RESTORATION SHALL PROCEED AS THE WORK PROCEEDS. IF THE ENGINEER SO DIRECTS, THE CONTRACTOR SHALL STOP ALL OTHER WORK AND CONCENTRATE ON CLEAN-UP. DEBRIS AND SURPLUS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED OFF-SITE DISPOSAL AREA.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN EXISTING FIELD CONDITIONS PRIOR TO BIDDING ON THIS PROJECT, SPECIFICALLY AS THEY RELATE TO LUMP SUM PAY ITEMS.

EXISTING UTILITIES ARE SHOWN ON THE PLANS ACCORDING TO INFORMATION OBTAINED FROM THE LOCAL AGENCIES, OWNERS, AND FIELD SURVEYS. THE ACCURACY AND COMPLETENESS OF SAID INFORMATION IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXISTENCE, NATURE AND EXACT LOCATIONS OF ALL UTILITY LINES AND APPURTENANCES WITHIN THE LIMITS OF THE IMPROVEMENTS.

THE CONTRACTOR SHALL USE ALL NECESSARY PRECAUTIONS AND PROTECTIVE 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.

LENGTHS AND SIZES OF EXISTING STORM SEWERS AS SHOWN ON THE PLANS SHALL BE VERIFIED IN THE FIELD PRIOR TO INSTALLATION OF PROPOSED DRAINAGE ITEMS. THE INVERTS OF PROPOSED DRAINAGE ITEMS CONNECTING TO EXISTING SEWERS OR STRUCTURES MAY REQUIRE REVISIONS TO MEET EXISTING FIELD CONDITIONS. ANY ADJUSTMENTS SHALL BE AS DIRECTED BY THE ENGINEER.

TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND PROTECTED UNDER THE PROVISIONS OF ARTICLE 201.05 OF THE STANDARDS SPECIFICATIONS.

THE CONTRACTOR SHALL TAKE EXTRA CARE IN GRADING AND EXCAVATING NEAR TREES WHICH ARE NOT MARKED FOR REMOVAL SO AS NOT TO CAUSE INJURY TO THE ROOT SYSTEM OR TRUNKS. ANY DAMAGED DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE.

ALL EXCESS MATERIAL (BROKEN CONCRETE, CULVERT PIPE, WASTE ROADWAY EXCAVATION, SURPLUS MATERIAL, ETC...) SHALL BE LEGALLY DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH SECTION 202 OF THE STANDARD SPECIFICATIONS.

10-FOOT TRANSITIONS SHALL BE USED TO MATCH PROPOSED ITEMS OF WORK TO EXISTING ITEMS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE ITEM OF WORK SPECIFIED.

THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HOT-MIX ASPHALT LIFTS.

THE CONTRACTOR SHALL MAKE ALL FULL DEPTH SAW CUTS REQUIRED FOR THE REMOVAL OF PAVEMENTS, CONCRETE CURB AND GUTTERS, SIDEWALKS AND DRIVEWAYS AS SPECIFIED, OR AS DIRECTED BY THE ENGINEER. THE COST SHALL BE CONSIDERED INCLUDED IN THE COST FOR REMOVAL OF THE SPECIFIED ITEM IN THE CONTRACT.

THE COST OF MAKING STORM SEWER CONNECTIONS TO EXISTING OR PROPOSED SEWER SHALL BE INCLUDED IN THE COST OF STORM SEWER BEING CONNECTED.

STORM SEWER, WATER MAIN REQUIREMENTS IS TO BE USED AT LOCATIONS WHERE LATERAL SEPARATION BETWEEN THE SEWER AND WATER MAIN IS LESS THAN 10-FEET AND THE WATER MAIN INVERT IS LESS THAN 18-INCHES ABOVE THE STORM SEWER CROWN.

## STATE STANDARDS

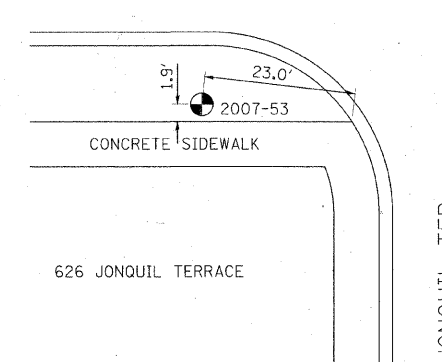
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
424001-05	CURB RAMPS FOR SIDEWALKS
515001-03	NAME PLATE FOR BRIDGES
542106-02	REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERTS, 42" (1050 MM) THRU 60" (1500 MM) DIAMETER AT RIGHT ANGLES WITH ROADWAY
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
602011-02	CATCH BASIN, TYPE C
602401-03	MANHOLE, TYPE A
602406-04	MANHOLE, TYPE A, 6' (1.8 M) DIAMETER
604001-03	FRAME AND LIDS, TYPE 1
604011-04	FRAME AND GRATE, TYPE 3V
606001-04	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND CUTTER
701801-04	LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
701901-01	TRAFFIC CONTROL DEVICES

## DISTRICT 1 STANDARDS

BD-7	DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER
TC-10	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

## BENCHMARK INFORMATION

OSTERMAN AVE.



LOCATION ADDRESS  
626 JONQUIL TERRACE  
DEERFIELD, ILLINOIS

MONUMENT  
2007-53

DEPTH  
18'

ELEVATION  
660.63

DESCRIPTION  
SOUTHWEST CORNER OF JONQUIL TERRACE AND  
OSTERMAN AVENUE (626 JONQUIL TERRACE)  
(NORTHEAST OF PROJECT LOCATION)

DATE	BY	REVISIONS
		1. PLOTTED
		2. AUTO CHECKED
		3. NOTE BOOK
		4. FILE NAME
		5. NO.

DATE	BY	REVISIONS
		1. PLOTTED
		2. AUTO CHECKED
		3. NOTE BOOK
		4. FILE NAME
		5. NO.

**URS**  
100 S. WACKER DR.,  
SUITE 500  
CHICAGO, IL 60606  
TEL (312) 939-1000  
FAX (312) 939-4198

USER NAME = #USER#	DESIGNED -	REVISED -
PLOT SCALE = #SCALE#	DRAWN	REVISED
PLOT DATE = #DATE#	CHECKED -	REVISED
	DATE	REVISED

**VILLAGE OF DEERFIELD  
CENTRAL AVENUE OVER THE WEST FORK,  
NORTH BRANCH OF THE CHICAGO RIVER**

### GENERAL NOTES AND STATE STANDARDS

SCALE: SHEET NO. 2 OF 22 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00085-00-BR	LAKE	22	2
CONTRACT NO. 63584				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

## SUMMARY OF QUANTITIES

PLAN REVISIONS CHECKED DATE NO.	BY DATE
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PROFILE REVISIONS CHECKED DATE NO.	BY DATE
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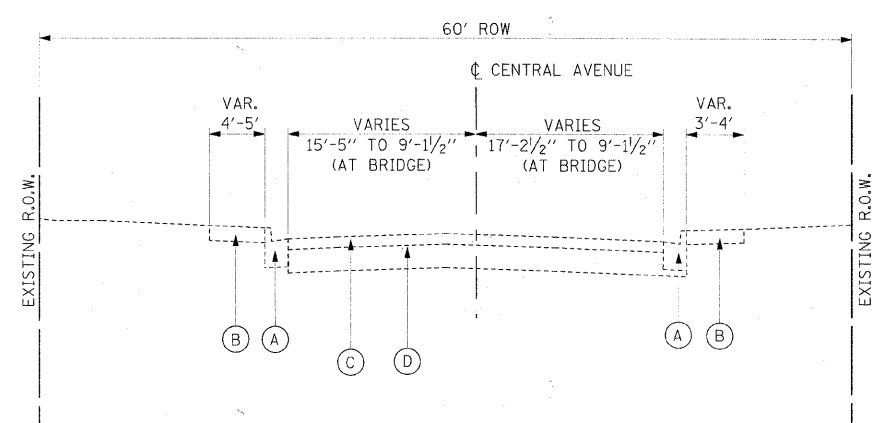
SPECIALTY ITEMS	PAY ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	CONSTRUCTION TYPE CODE 0011
*	20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	32	32
	20200100	EARTH EXCAVATION	CU YD	160	160
	20300100	CHANNEL EXCAVATION	CU YD	210	210
	20800150	TRENCH BACKFILL	CU YD	58	58
	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	111	111
	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	2	2
	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	2	2
	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	2	2
	25100630	EROSION CONTROL BLANKET	SQ YD	60	60
	25200110	SODDING, SALT TOLERANT	SQ YD	111	111
	28000200	EARTH EXCAVATION FOR EROSION CONTROL	CU YD	40	40
	28000400	PERIMETER EROSION BARRIER	FOOT	400	400
	28000510	INLET FILTERS	EACH	4	4
	28100707	STONE DUMPED RIPRAP, CLASS A4	SQ YD	288	288
	28200200	FILTER FABRIC	SQ YD	288	288
	31101300	SUBBASE GRANULAR MATERIAL, TYPE B 5"	SQ YD	246	246
	31101400	SUBBASE GRANULAR MATERIAL, TYPE B 6"	SQ YD	18	18
	40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	58	58
	40701871	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 9 1/2"	SQ YD	200	200
	42001300	PROTECTIVE COAT	SQ YD	138	138
	42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	36	36
	42300100	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 5 INCH	SQ YD	17	17
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	826	826
	44000100	PAVEMENT REMOVAL	SQ YD	387	387
	44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	17	17
	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	300	300
	44000600	SIDEWALK REMOVAL	SQ FT	885	885
	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1
	50200100	STRUCTURE EXCAVATION	CU YD	88	88
	50200300	COFFERDAM EXCAVATION	CU YD	40	40
	50202901	COFFERDAM (LOCATION - 1)	EACH	1	1
	50202902	COFFERDAM (LOCATION - 2)	EACH	1	1
	50300225	CONCRETE STRUCTURES	CU YD	66.4	66
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	97.5	98
	50300260	BRIDGE DECK GROOVING	SQ YD	331	331
	50300300	PROTECTIVE COAT	SQ YD	441	441

SPECIALTY ITEMS	PAY ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	CONSTRUCTION TYPE CODE 0011
	50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	2,000	2,000
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	31,730	31,730
	50800515	BAR SPICERS	EACH	54	54
	51200956	FURNISHING METAL SHELL PILES 12" X 0.179"	FOOT	1,092	1,092
	51202305	DRIVING PILES	FOOT	1,092	1,092
	51203200	TEST PILE METAL SHELLS	EACH	2	2
	51204650	PILE SHOES	EACH	28	28
	51500100	NAME PLATES	EACH	2	2
	54213657	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	1	1
	54215448	CAST-IN-PLACE REINFORCED CONCRETE END SECTIONS 48"	EACH	1	1
	550A0340	STORM SEWERS, CLASS A, TYPE 2 12"	FOOT	46	46
	55100500	STORM SEWER REMOVAL 12"	FOOT	63	63
	55101900	STORM SEWER REMOVAL 48"	FOOT	15	15
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	56	56
	60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	3	3
	60207115	CATCH BASINS, TYPE C, TYPE 3V FRAME AND GRATE	EACH	2	2
	60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1FRAME, CLOSED LID	EACH	1	1
	60223800	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1
	60266600	VALVE BOXES TO BE ADJUSTED	EACH	1	1
	60603800	COMBINATION CONCRETE CURB AND GUTTER,TYPE B-6.12	FOOT	264	264
	60500040	REMOVING MANHOLES	EACH	1	1
	60500050	REMOVING CATCH BASINS	EACH	1	1
	66400205	CHAIN LINK FENCE, 5'	FOOT	33	33
	67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL. MO.	2	2
	67100100	MOBILIZATION	L SUM	1	1
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1
	XX002082	SANITARY SEWER REMOVAL 24"	FOOT	20	20
	XX006119	TRAFFIC CONTROL AND PROTECTION (DETOUR)	L SUM	1	1
*	X0325670	CONCRETE BRIDGE RAIL, SIDEWALK MOUNTED	FOOT	100	100
	X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	75	75
	X5030305	CONCRETE WEARING SURFACE, 5"	SQ. YD.	222	222
	X6026050	SANITARY MANHOLES TO BE ADJUSTED	EACH	2	2
	X6640300	CHAIN LINK FENCE REMOVAL	FOOT	79	79
	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	130	130
	Z0056626	STORM SEWER (WATER MAIN REQUIREMENTS) 48 INCH	FOOT	9	9
	Z0056668	STORM SEWERS, TYPE 2, WATER MAIN QUALITY PIPE, 12"	FOOT	15	15

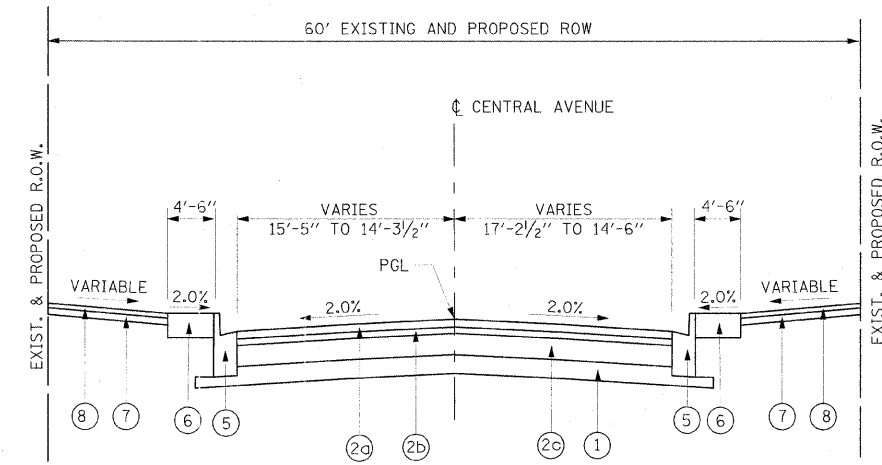
<b>URS</b> 100 S.WACKER DR. SUITE 500 CHICAGO, IL 60606 TEL (312) 939-1000 FAX (312) 939-4198	USER NAME = #USER#	DESIGNED -	REVISED -	<b>VILLAGE OF DEERFIELD                  CENTRAL AVENUE OVER THE WEST FORK,                  NORTH BRANCH OF THE CHICAGO RIVER</b>	<b>SUMMARY OF QUANTITIES</b>	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -			09-00085-00-BR	LAKE	22	3	
	PLOT DATE = #DATE#	DATE -	REVISED -			CONTRACT NO. 63584				
						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

PLAN  
 DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
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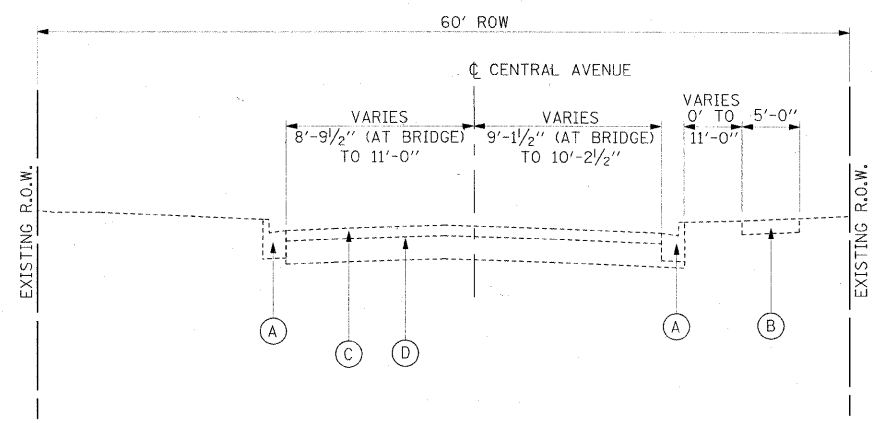
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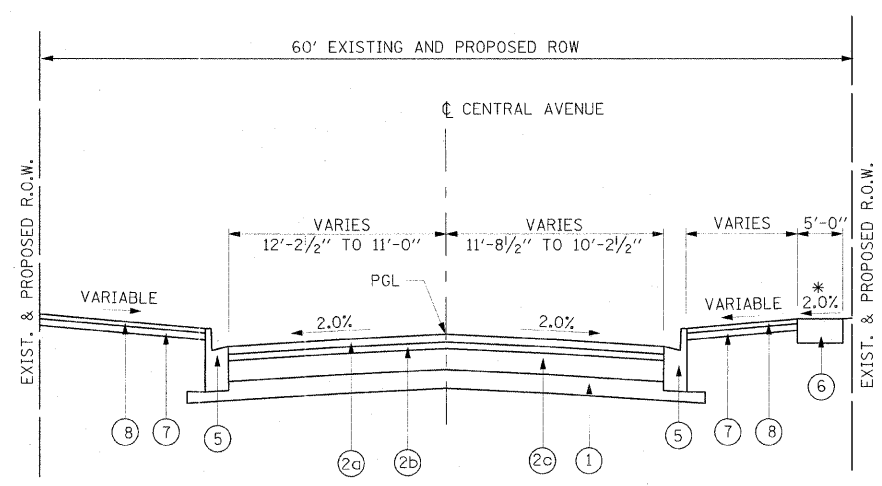
**EXISTING TYPICAL SECTION**  
 STA. 0+71.11 TO STA. 1+45.50  
 CENTRAL AVENUE



**PROPOSED TYPICAL SECTION**  
 STA. 0+71.11 TO STA. 1+06.12  
 CENTRAL AVENUE



**EXISTING TYPICAL SECTION**  
 STA. 1+77.50 TO STA. 2+56.11  
 CENTRAL AVENUE



**PROPOSED TYPICAL SECTION**  
 STA. 2+16.10 TO STA. 2+56.11  
 CENTRAL AVENUE

- LEGEND (EXISTING):**
- (A) COMBINATION CURB AND GUTTER, TYPE B-6,12
  - (B) P.C.C. SIDEWALK
  - (C) ASPHALT PAVEMENT, 3" +/-
  - (D) AGGREGATE BASE COURSE (THICKNESS VARIES)

- LEGEND (PROPOSED):**
- (1) SUB-BASE GRANULAR MATERIAL, TYPE B (5")
  - (2) HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH) 9-1/2"
  - (2a) HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (2")
  - (2b) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 (2-1/4")
  - (2c) HOT MIX ASPHALT BASE COURSE 5-1/4"
  - (5) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
  - (6) PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
  - (7) TOPSOIL, FURNISH AND PLACE 4"
  - (8) SODDING, SALT TOLERANT

NOTE:  
 SEE CROSS SECTIONS FOR THE PROPOSED DRIVEWAY SLOPE.  
 (8% MAXIMUM, 1% MINIMUM)  
 \* 1% MINIMUM

**HOT-MIX ASPHALT MIXTURE REQUIREMENTS**

ITEM	VOIDS
<b>ROADWAY PAVEMENT</b>	
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (IL9.5MM) 2"	4% @ 50 Gyr.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 2-1/4"	4% @ 50 Gyr.
HOT-MIX ASPHALT BASE COURSE (IN 2 LIFTS) (HMA BINDER, IL-19.0) 5-1/4"	4% @ 50 Gyr.
<b>BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)</b>	
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (IL9.5MM) 2"	4% @ 50 Gyr.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 2-1/4"	4% @ 50 Gyr.
HOT-MIX ASPHALT BASE COURSE (IN 3 LIFTS) (HMA BINDER, IL-19.0) VARIES 5-1/4" TO 10-3/4"	4% @ 50 Gyr.

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 LBS/ SQ YD/IN

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70-22", AND FOR NON-POLYMERIZED HMA, THE "AC TYPE" SHALL BE PG 64-22, UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.

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

**URS**  
 100 S.WACKER DR.  
 SUITE 500  
 CHICAGO IL 60606  
 TEL (312) 939-1000  
 FAX (312) 939-4198

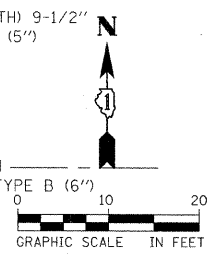
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PLOT SCALE: # SCALE#	DRAWN -	REVISED -
PLOT DATE: # DATE#	CHECKED -	REVISED -
	DATE -	REVISED -

**VILLAGE OF DEERFIELD  
 CENTRAL AVENUE OVER THE WEST FORK,  
 NORTH BRANCH OF THE CHICAGO RIVER**

**TYPICAL SECTIONS**  
 SCALE: NTS SHEET NO. 4 OF 22 SHEETS STA. TO STA.

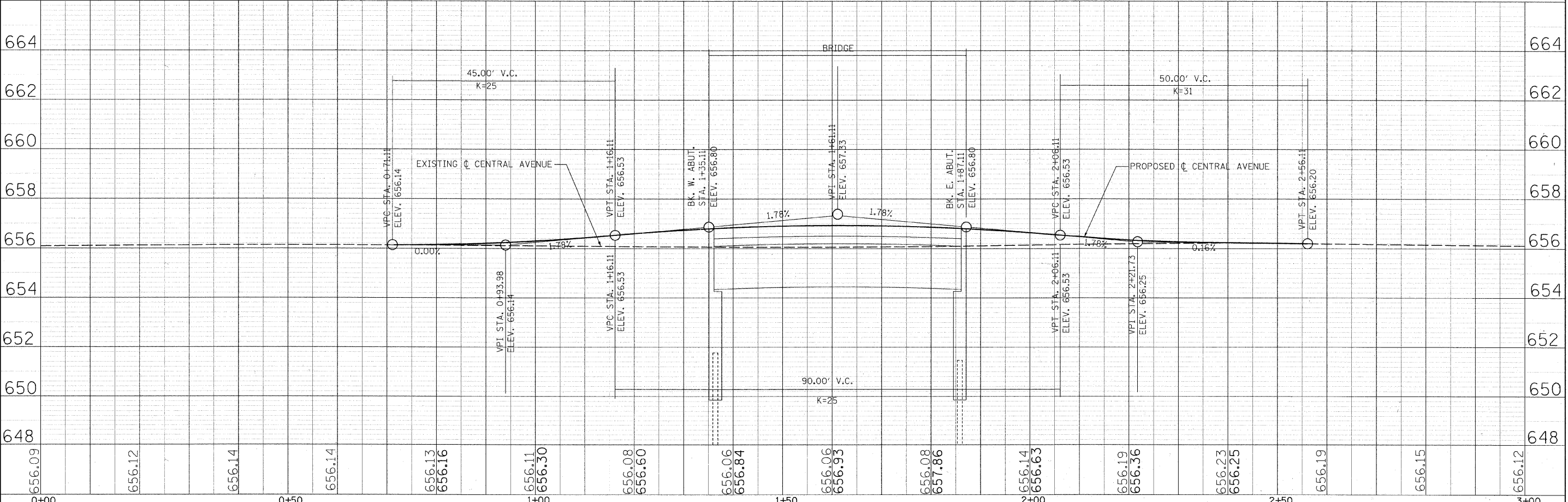
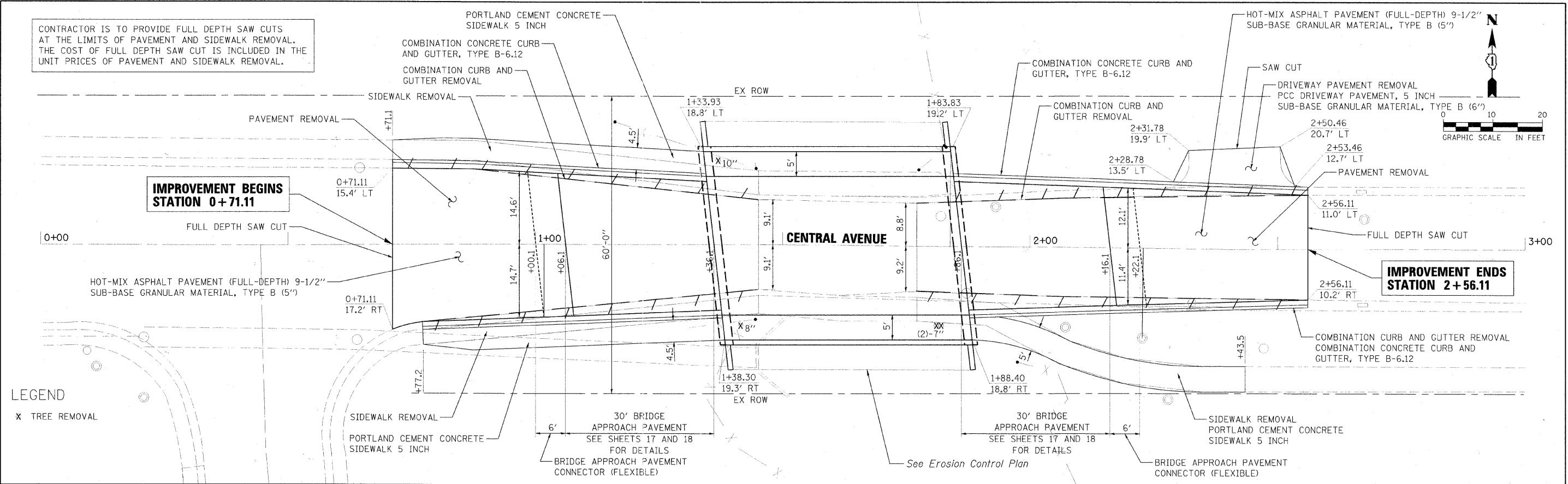
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00085-00-BR	LAKE	22	4
CONTRACT NO. 63584				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

CONTRACTOR IS TO PROVIDE FULL DEPTH SAW CUTS AT THE LIMITS OF PAVEMENT AND SIDEWALK REMOVAL. THE COST OF FULL DEPTH SAW CUT IS INCLUDED IN THE UNIT PRICES OF PAVEMENT AND SIDEWALK REMOVAL.



DATE	
BY	
REVISIONS	
NO.	
DESCRIPTION	
DATE	
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REVISIONS	
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DATE	
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REVISIONS	
NO.	
DESCRIPTION	
DATE	
BY	



656.09	656.12	656.14	656.14	656.13	656.16	656.11	656.30	656.08	656.60	656.06	656.84	656.06	656.93	656.08	657.86	656.14	656.63	656.19	656.36	656.23	656.25	656.19	656.15	656.12
0+00		0+50		1+00		1+50		2+00		2+50		3+00												

**URS**  
100 S. WACKER DR., SUITE 500  
CHICAGO, IL 60606  
TEL 312-939-1000  
FAX 312-939-4198

USER NAME = #USER#	DESIGNED -	REVISED -
PLOT SCALE = #SCALE#	DRAWN -	REVISED -
PLOT DATE = #DATE#	CHECKED -	REVISED -
	DATE -	REVISED -

**VILLAGE OF DEERFIELD  
CENTRAL AVENUE OVER THE WEST FORK,  
NORTH BRANCH OF THE CHICAGO RIVER**

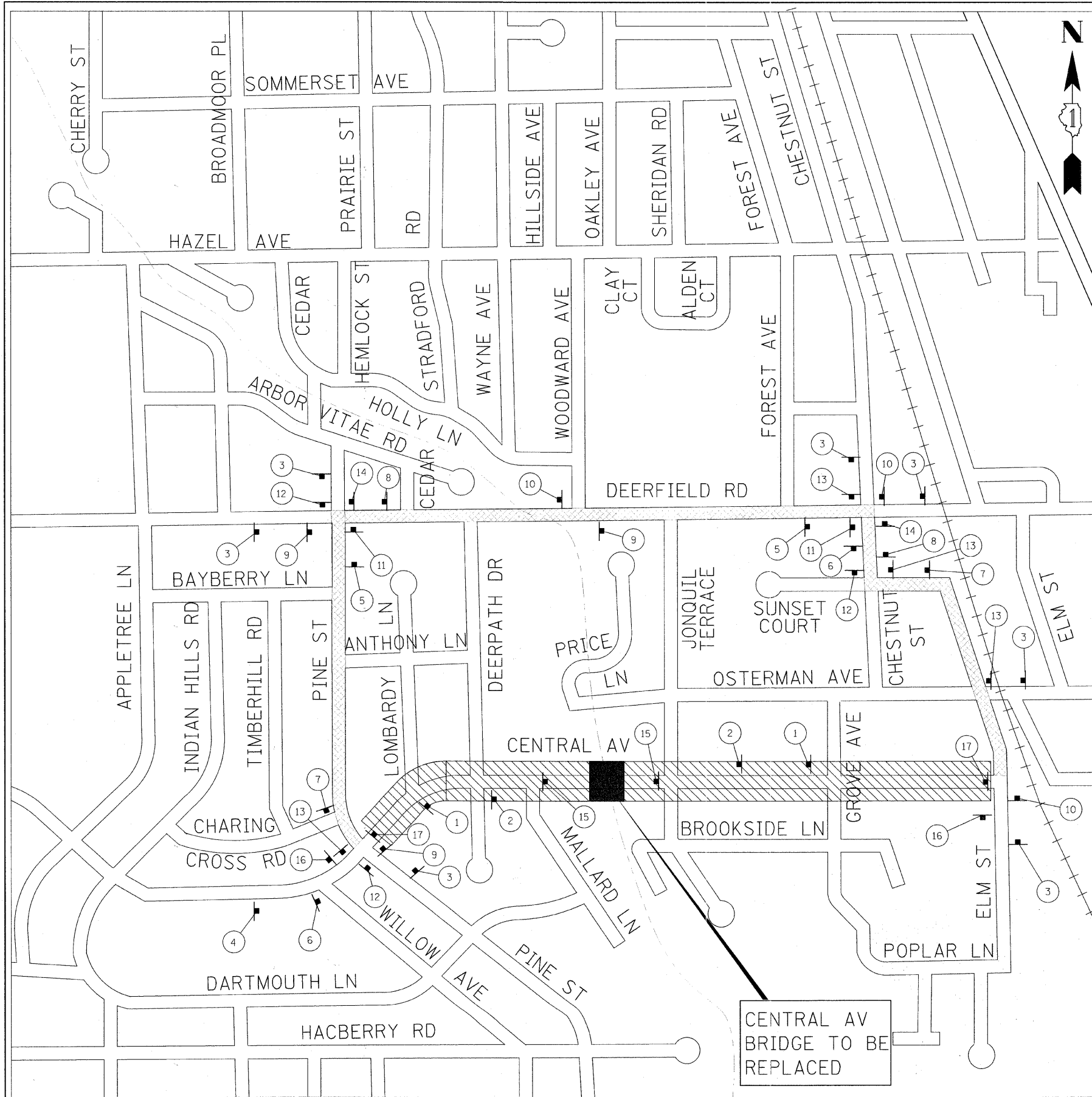
**ROADWAY PLAN AND PROFILE**  
SCALE: 1" = 10'-0"  
SHEET NO. 5 OF 22 SHEETS STA. 0+71.11 TO STA. 2+56.11

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
	09-00085-00-BR	LAKE	22
CONTRACT NO. 63584			5
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			



DATE	
BY	
REVISION	
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	
NO. 11	
NO. 12	
NO. 13	
NO. 14	
NO. 15	
NO. 16	
NO. 17	
NO. 18	

DATE	
BY	
REVISION	
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	
NO. 11	
NO. 12	
NO. 13	
NO. 14	
NO. 15	
NO. 16	
NO. 17	
NO. 18	



CENTRAL AV  
BRIDGE TO BE  
REPLACED

SIGN LEGEND

1 ROAD CONSTRUCTION AHEAD W20-1 48 X 48

2 ROAD CLOSED AHEAD W20-1 48 X 48

3 DETOUR AHEAD W20-2 48 X 48

4 DETOUR 500 FT W20-2 48 X 48

5 EAST CENTRAL AV DETOUR M3-4 24 X 12, M4-8 30 X 24, M 5-1R 21 X 15

6 EAST CENTRAL AV DETOUR M3-4 24 X 12, M4-8 30 X 24, M 5-1L 21 X 15

7 WEST CENTRAL AV DETOUR M3-2 24 X 12, M4-8 30 X 24, M 5-1R 21 X 15

8 WEST CENTRAL AV DETOUR M3-2 24 X 12, M4-8 30 X 24, M 5-1L 21 X 15

9 EAST CENTRAL AV DETOUR M3-2 24 X 12, M4-8 30 X 24, M 6-3 21 X 15

10 WEST CENTRAL AV DETOUR M3-2 24 X 12, M4-8 30 X 24, M 6-3 21 X 15

11 EAST CENTRAL AV DETOUR M3-4 24 X 12, M4-9R 30 X 24

12 EAST CENTRAL AV DETOUR M3-4 24 X 12, M4-9L 30 X 24

13 WEST CENTRAL AV DETOUR M3-4 24 X 12, M4-9R 30 X 24

14 WEST CENTRAL AV DETOUR M3-4 24 X 12, M4-9L 30 X 24

15 ROAD CLOSED R11-2 OR BRIDGE OUT R11-2 (MOUNTED ON TYPE III BARRICADE)

16 END DETOUR M4-8a 48 X 36

17 ROAD CLOSED TO THRU TRAFFIC R11-4 60 X 30 (MOUNTED ON TYPE III BARRICADE)

18 NO PEDESTRIAN

LEGEND

- BRIDGE CONSTRUCTION (WORK ZONE)
- ROAD CLOSURE (LOCAL TRAFFIC ONLY)
- DETOUR ROUTE
- TEMPORARY TRAFFIC ADVISORY SIGN
- SIGN LEGEND NUMBER (SEE SIGN LEGEND)

DETOUR NOTES

- 1) THE CONTRACTOR SHALL COMPLETELY COVER ANY EXISTING SIGNS ALONG THE DETOUR ROUTE THAT ARE IN CONFLICT WITH DETOUR.
- 2) THE CONTRACTOR SHALL MAKE ANY ADJUSTMENT TO THE EXISTING TRAFFIC SIGNS, DETOUR SIGNING OR PAVEMENT MARKING ALONG THE DETOUR ROUTE AS NECESSARY OR AS DIRECTED BY ENGINEER.
- 3) ALL SIGNS 1-4 SHALL HAVE TYPE A FLASHING LIGHT

**URS**  
100 S. WACKER DR.  
SUITE 500  
CHICAGO, IL 60606  
TEL (312) 939-1000  
FAX (312) 939-4198

USER NAME: #005918  
DESIGNED: #005918  
DRAWN: #005918  
CHECKED: #005918  
DATE: #005918

REVISIONS:  
REVISED: #005918  
REVISED: #005918  
REVISED: #005918  
REVISED: #005918

VILLAGE OF DEERFIELD  
CENTRAL AVENUE OVER THE WEST FORK,  
NORTH BRANCH OF THE CHICAGO RIVER

TRAFFIC CONTROL AND DETOUR PLAN  
SCALE: NTS SHEET NO. 6 OF 22 SHEETS STA. TO STA.

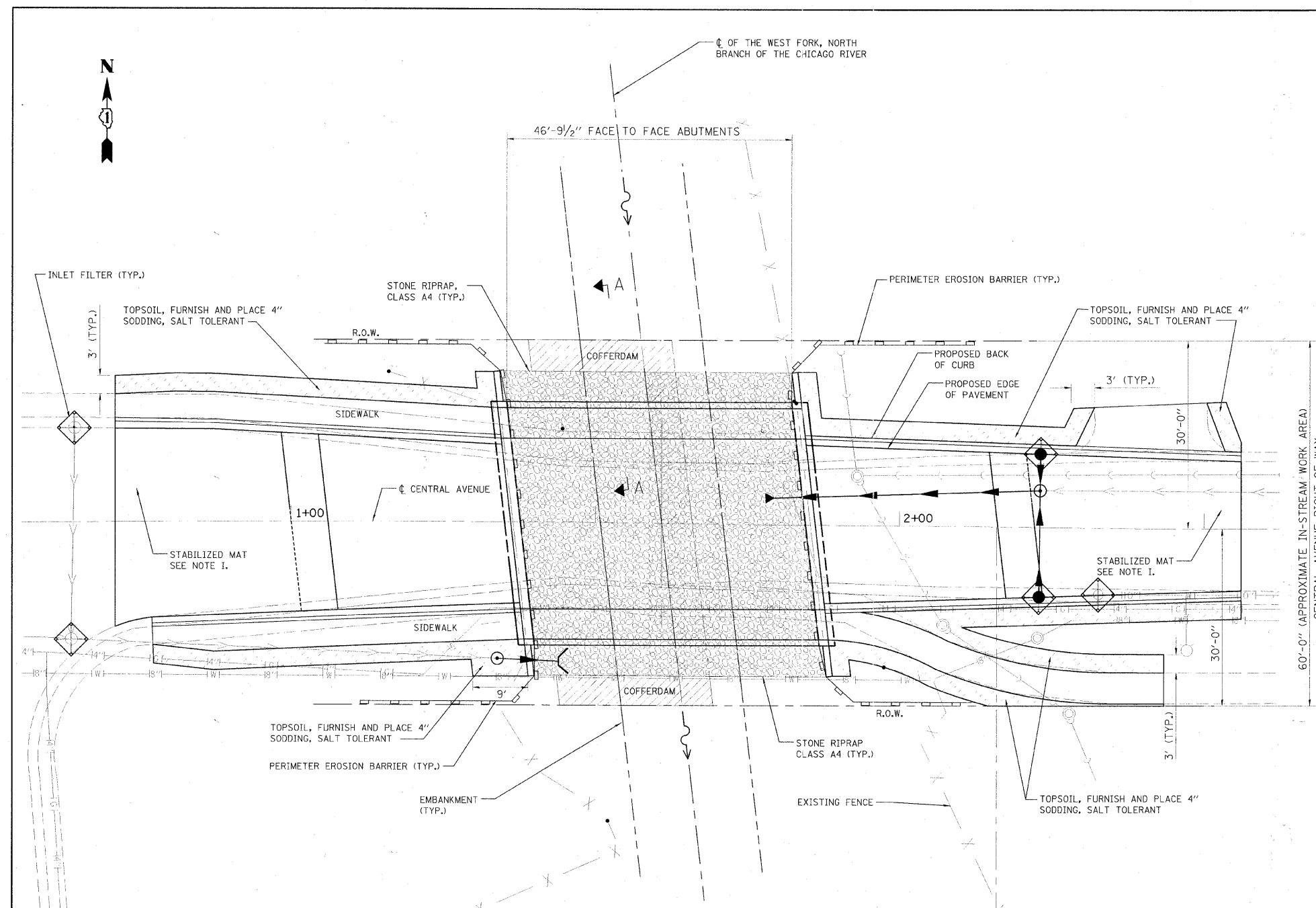
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00085-00-BR	LAKE	22	6
CONTRACT NO. 63584				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

**NOTES**

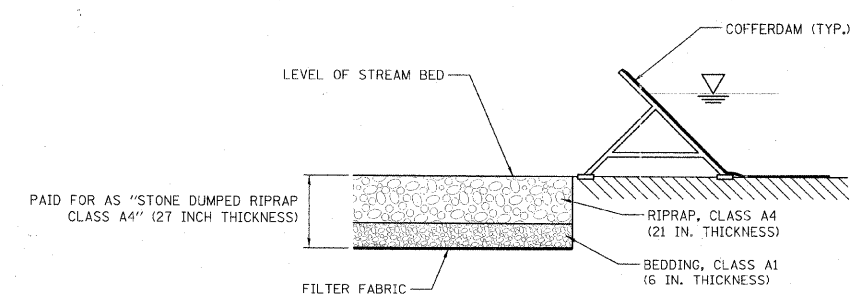
1. EROSION CONTROL BLANKETS SHALL BE USED IN CONJUNCTION WITH COFFERDAMS. EROSION CONTROL BLANKETS ARE BIODEGRADABLE, OPEN WEAVE BLANKETS (OR EQUIVALENT), USED FOR ESTABLISHING AND REINFORCING STREAM EMBANKMENT AND STREAM BOTTOMS.
2. ALL DISTURBED STREAM EMBANKMENT AREAS SHALL BE SEEDED OR SODDED AS SOON AS PRACTICAL AFTER CONSTRUCTION ACTIVITIES IN THAT AREA HAVE CONCLUDED.
3. EROSION CONTROL MEASURES WILL BE INSPECTED BY THE ENGINEER PERIODICALLY AND WITHIN 24 HOURS OF ANY STORM EXCEEDING 1/2 INCH PRECIPITATION. DAMAGED AND INEFFECTIVE EROSION CONTROL MEASURES SHALL BE REPAIRED OR REPLACED AS SOON AS POSSIBLE.
4. ALL EROSION CONTROL MEASURES SHALL BE KEPT OPERATIONAL AND MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD OF LAND DISTURBANCE UNTIL PERMANENT SEDIMENT AND EROSION CONTROL MEASURES ARE OPERATIONAL.
5. APS POLYMERS AND FLOC LOGS SHALL BE USED TO MINIMIZE AND CONTAIN SOIL EROSION.
6. PERIMETER EROSION BARRIER MEETING ASHTO 288 STANDARD WILL BE REQUIRED ALONG PORTIONS OF THE RIVER.
7. COFFERDAM MAY BE PORTADAM OR SIMILAR TYPE, HOWEVER THE COFFERDAMS SHALL NOT BE EARTHEN OR USE ANY PRACTICES THAT WOULD RESULT IN A RELEASE OF SEDIMENT INTO WATERS OF THE U.S. COFFERDAMS SHALL BE CONSTRUCTED OF NON-ERODABLE MATERIALS. ACCEPTABLE PRACTICES INCLUDE PRE-FABRICATED RIGID COFFERDAMS, SHEET PILING, INFLATABLE BLADDERS, AND FABRIC-LINED BASINS.
8. COFFERDAM IS TO BE PLACED IN TWO STAGES, ONE FOR EACH SIDE OF THE RIVER, WHERE HALF OF THE RIVER CAN BE DEWATERED AT A TIME.
9. COFFERDAM AREA SHALL BE TREATED WITH POLYMERS AND THE FLOC REMOVED PRIOR TO THE AREA BEING RETURNED TO THE RIVER.
10. IF NECESSARY THE OUTLETS INTO THE CONSTRUCTION AREAS SHALL BE TEMPORARILY PLUGGED AND THE EFFLUENT PUMPED INTO THE STREAM.

**LAKE COUNTY STORMWATER MANAGEMENT COMMISSION  
SEDIMENTATION AND EROSION CONTROL NOTES**

- A. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES.
- B. SOIL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.
- C. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN 14 CALENDAR DAYS OF THE END OF ACTIVE HYDROLOGIC DISTURBANCE, OR REDISTURBANCE.
- D. AREAS OR ENBANKMENTS HAVING SLOPES GREATER THAN OR EQUAL TO 3H:1V, AND APPROVED BY THE ENFORCEMENT OFFICER, SHALL BE STABILIZED WITH SOD, MAT OR BLANKET IN COMBINATION WITH SEEDING.
- E. EROSION CONTROL BLANKET SHALL BE REQUIRED ON ALL INTERIOR DETENTION BASIN SIDE SLOPES BETWEEN NORMAL WATER LEVEL AND HIGH WATER LEVEL.
- F. ALL STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED, BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.
- G. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
- H. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED, THE CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE AND REPAIR.
- I. A STABILIZED MAT OF AGGREGATE UNDERLAIN WITH FILTER CLOTH (OR OTHER APPROPRIATE MEASURE) SHALL BE LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA. ANY SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA. THE COST SHALL BE INCLUDED WITH STONE DUMPED RIPRAP, CLASS A4.
- J. SOIL STOCKPILES SHALL NOT BE LOCATED IN A FLOOD PRONE AREA OR A DESIGNATED BUFFER PROTECTING WATERS OF THE UNITED STATES OR ISOLATED WATERS OF LAKE COUNTY.
- K. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (e.g. SEDIMENT TRAP, SEDIMENT BASIN, OR OTHER APPROPRIATE MEASURE).
- L. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER OR GOVERNING AGENCY.



**PLAN**



**SECTION A-A**

DATE	BY	REVISIONS

DATE	BY	REVISIONS

**URS**  
100 S. WACKER DR.,  
SUITE 500  
CHICAGO, IL 60606  
TEL (312) 939-1000  
FAX (312) 939-4198

USER NAME = USER#	DESIGNED	REVISIONS
	DRAWN	
	CHECKED	
	DATE	

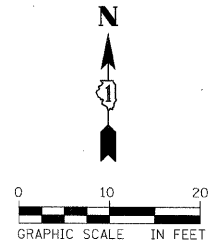
REVISIONS	

**VILLAGE OF DEERFIELD  
CENTRAL AVENUE OVER THE WEST FORK,  
NORTH BRANCH OF THE CHICAGO RIVER**

**EROSION CONTROL AND LANDSCAPE PLAN**  
SCALE: 1"=10'-0" SHEET NO. 7 OF 22 SHEETS STA. 0+71.11 TO STA. 2+56.11

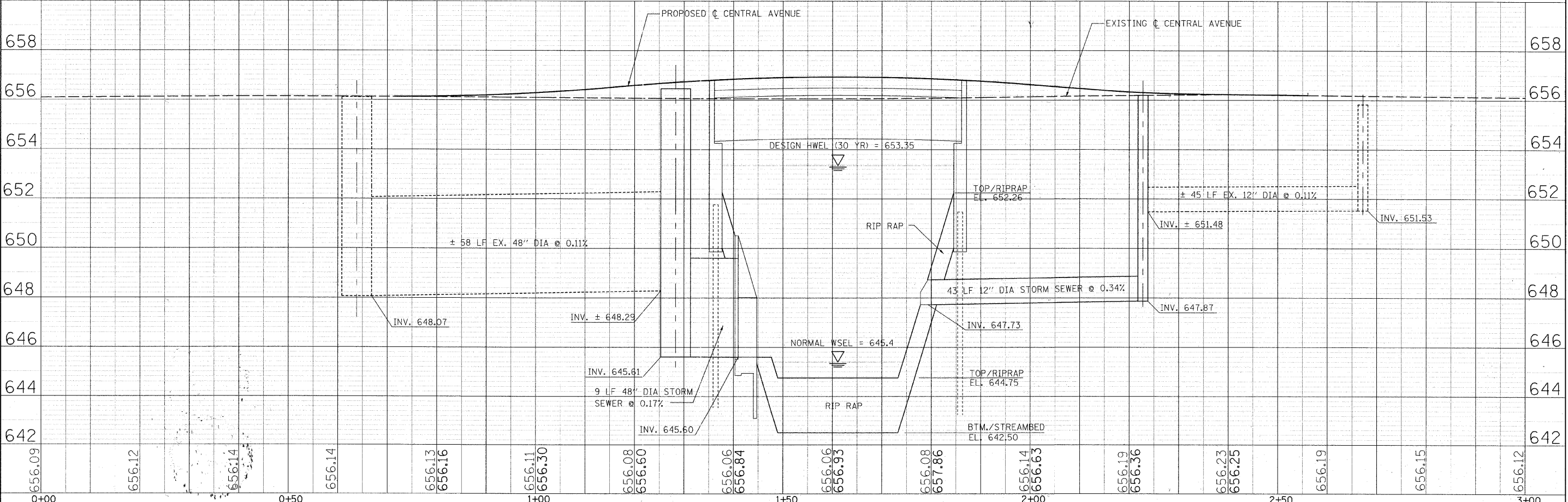
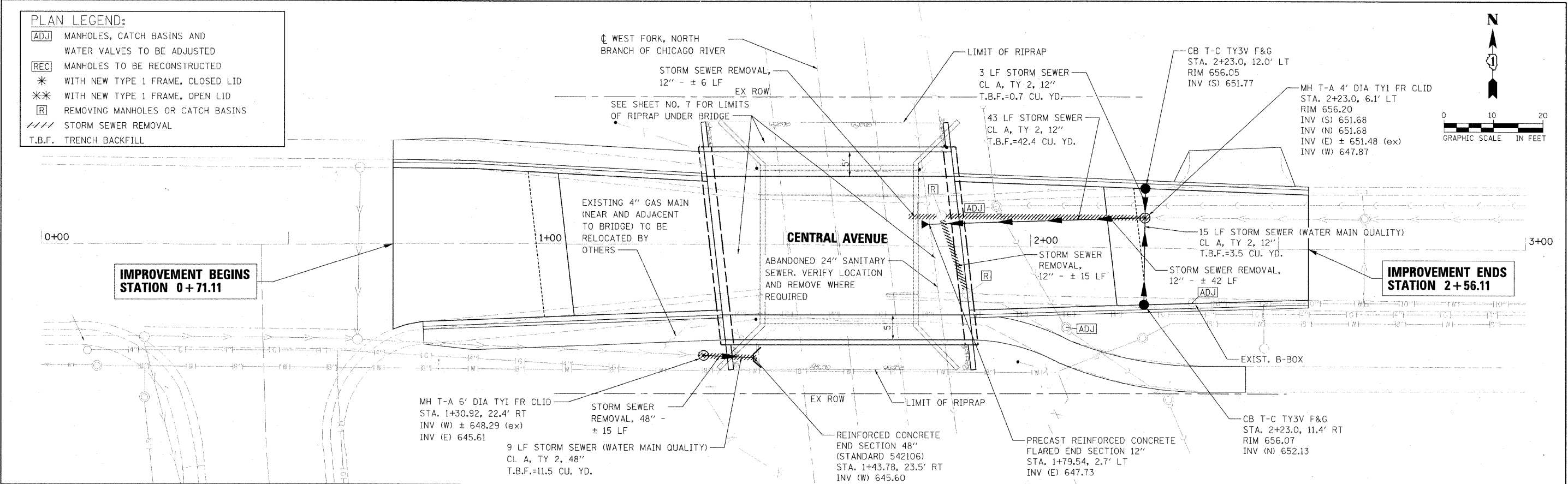
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00085-00-BR	LAKE	22	7
CONTRACT NO. 63584				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

- PLAN LEGEND:**
- [ADJ] MANHOLES, CATCH BASINS AND WATER VALVES TO BE ADJUSTED
  - [REC] MANHOLES TO BE RECONSTRUCTED
  - \* WITH NEW TYPE 1 FRAME, CLOSED LID
  - \*\* WITH NEW TYPE 1 FRAME, OPEN LID
  - [R] REMOVING MANHOLES OR CATCH BASINS
  - //// STORM SEWER REMOVAL
  - T.B.F. TRENCH BACKFILL



PLAN NO. \_\_\_\_\_  
 DATE \_\_\_\_\_  
 BY \_\_\_\_\_  
 CHECKED \_\_\_\_\_  
 DESIGNED \_\_\_\_\_  
 DRAWN \_\_\_\_\_  
 FILE NAME \_\_\_\_\_

PROFILE NO. \_\_\_\_\_  
 DATE \_\_\_\_\_  
 BY \_\_\_\_\_  
 CHECKED \_\_\_\_\_  
 DESIGNED \_\_\_\_\_  
 DRAWN \_\_\_\_\_  
 FILE NAME \_\_\_\_\_



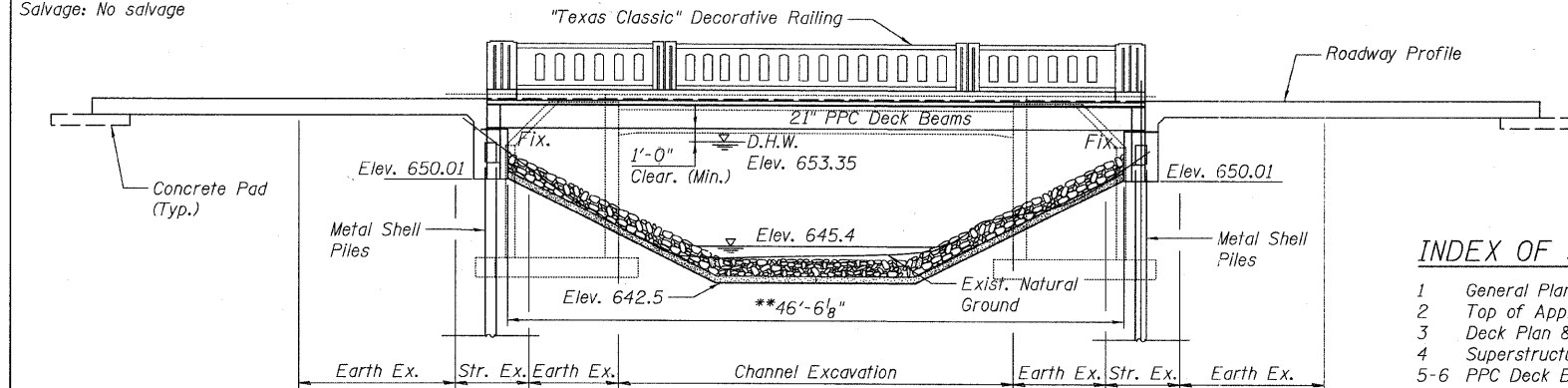
<b>URS</b> 100 S. WACKER DR. SUITE 500 CHICAGO, IL 60606 TEL (312) 939-1000 FAX (312) 939-4198	USER NAME: RUSIGER	DESIGNED: _____	REVISED: _____	<b>VILLAGE OF DEERFIELD CENTRAL AVENUE OVER THE WEST FORK, NORTH BRANCH OF THE CHICAGO RIVER</b>	<b>DRAINAGE AND UTILITY PLAN</b>	SECTION: 09-00085-00-BR	COUNTY: LAKE	TOTAL SHEETS: 22	SHEET NO.: 8
FILE NAME: _____	PLOT SCALE: 1"=40'	CHECKED: _____	REVISED: _____	SCALE: 1"=10'-0"	SHEET NO. 8 OF 22 SHEETS	CONTRACT NO. 63584		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	
	PLOT DATE: 04/15/11	DATE: _____	REVISED: _____	STA. 0+71.11	TO STA. 2+56.11				



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Existing Structure: S/N: 049-6154 was originally built in 1930 by the Village of Deerfield. It consists of a single span 21" deep precast prestressed concrete deck beam superstructure. The superstructure is supported on closed concrete abutments founded on spread footings. The structure length measures 32'-0" from back-to-back of abutments and the roadway width measures 20'-0" from face-to-face of curb. The existing structure will be removed and replaced. The roadway will be closed during construction. Traffic will utilize a detour.

Salvage: No salvage



ELEVATION

(\*\* Dimensions are perpendicular to the face of abutments)

INDEX OF SHEETS

- 1 General Plan & Elevation
- 2 Top of Approach Slab Elevations
- 3 Deck Plan & Section
- 4 Superstructure & Railing Details
- 5-6 PPC Deck Beam Details
- 7 Substructure Plan & Details
- 8 Metal Shell Pile Details
- 9-10 Approach Slab Details
- 11 Bar Splicer Details
- 12 Soil Boring Logs

GENERAL NOTES

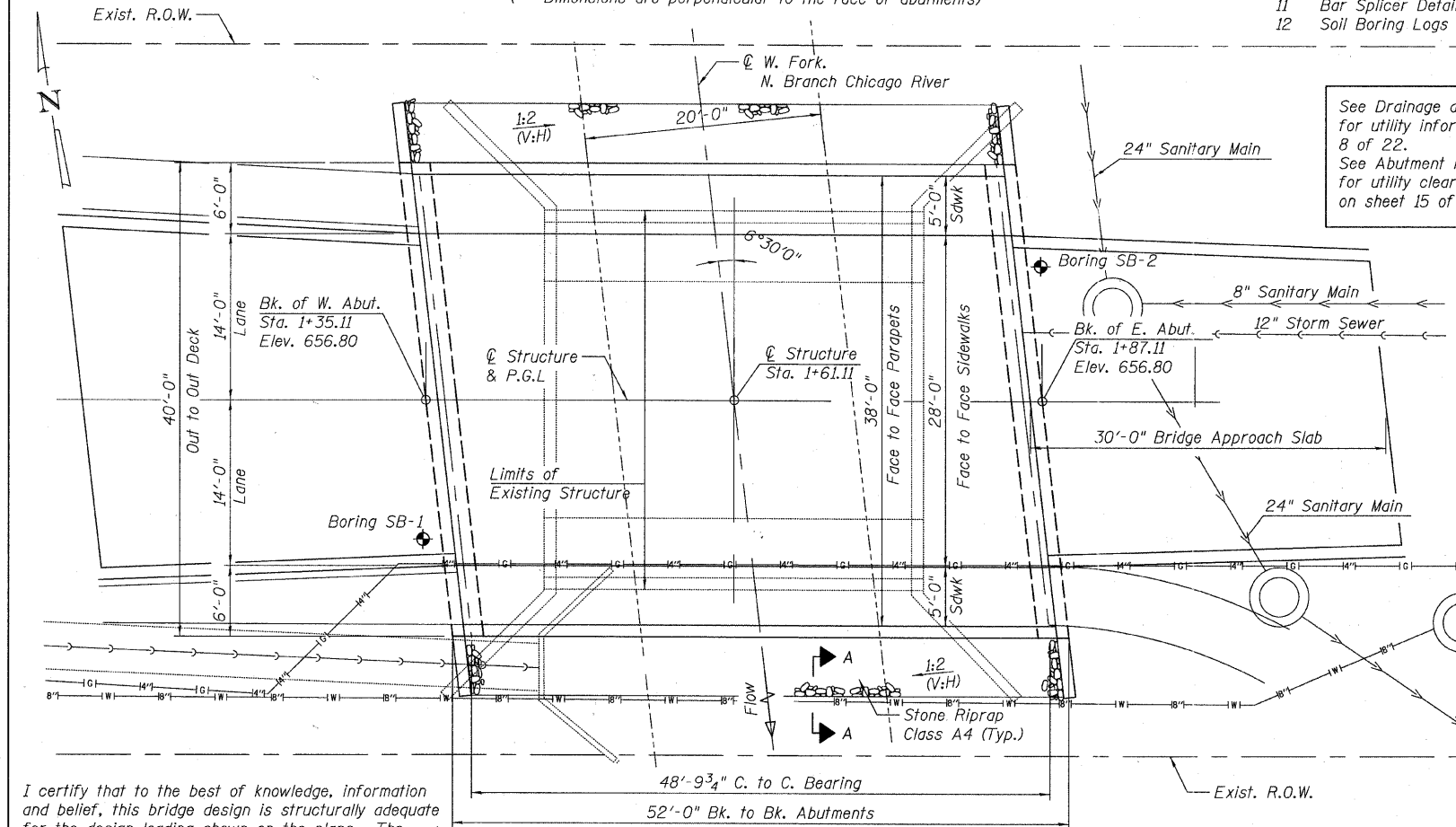
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.  
Reinforcement bars designated (E) shall be epoxy coated.  
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.  
Contractor shall install two Village of Deerfield Emblems provided by the Village at the locations shown. Existing Name Plate shall be cleaned and relocated next to the new Name Plate. Cost included with Name Plates.

RE-BUILT 2011 BY  
VILLAGE OF DEERFIELD  
SEC. 09-00085-00-BR  
STATION 01+61.11  
STR. NO. 049-6161  
LOADING HL-93

NAME PLATE  
See Std. 515001

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
* Removal of Existing Structures	Each	1		1
Bridge Approach Pavement Connector (Flexible)	Sq. Yd.	36		36
Structure Excavation	Cu. Yd.		88	88
Concrete Structures	Cu. Yd.		66.4	66.4
Concrete Superstructure	Cu. Yd.	97.5		97.5
Bridge Deck Grooving	Sq. Yd.	331		331
Protective Coat	Sq. Yd.	441		441
* Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	2,000		2,000
Reinforcement Bars, Epoxy Coated	Pound	24,190	7,540	31,730
Bar Splicers	Each	54		54
Geocomposite Wall Drain	Sq. Yd.		56	56
Furnishing Metal Shell Piles 12"x0.179"	Foot		1,092	1,092
Driving Piles	Foot		1,092	1,092
Test Pile Metal Shells	Each		2	2
Pile Shoes	Each		28	28
Name Plates	Each	2		2
Concrete Headwalls for Pipe Drains	Each		3	3
* Concrete Bridge Rail, Sidewalk Mounted	Foot	100		100
* Porous Granular Embankment, Special	Cu. Yd.		75	75
* Concrete Wearing Surface, 5"	Sq. Yd.	222		222
* Pipe Underdrains for Structures, 4"	Foot		130	130



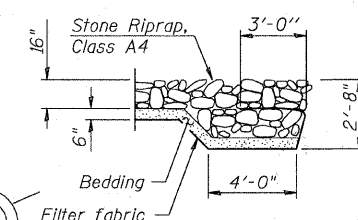
See Drainage and Utility Plan for utility information on sheet 8 of 22.  
See Abutment Plan & Details for utility clearance information on sheet 15 of 22.

DESIGN SPECIFICATIONS

2009 ASHTO LRFD Bridge Design 4th Edition  
2009 IDOT Bridge Manual

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.



SECTION A-A

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 50,000$  psi (M270 Grade 50)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$  psi  
 $f'_ci = 5,000$  psi  
 $f_{pu} = 270,000$  psi ( $1/2$ "  $\phi$  low lax strands)  
 $f_{pb} = 201,960$  psi ( $1/2$ "  $\phi$  low lax strands)

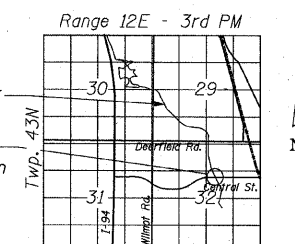
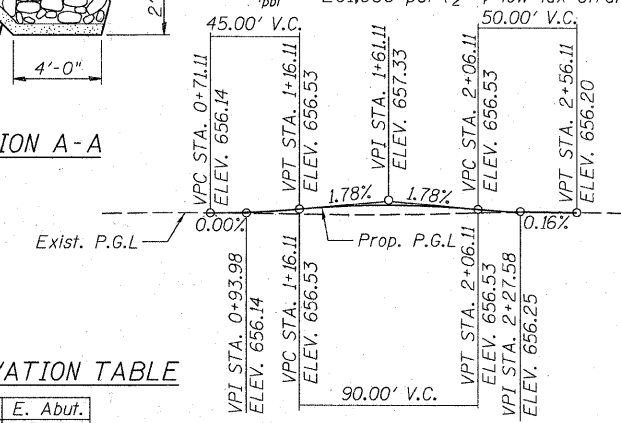
SEISMIC DATA

Seismic Performance Zone (SPZ) = 1  
Bedrock Acceleration Coefficient (A) = 0.040g  
Site Coefficient (S) = 1.0

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	650.01	650.01

PROFILE GRADE



LOCATION SKETCH

I certify that to the best of 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 LRFD Bridge Design Specifications.

PLAN

WATERWAY INFORMATION

Flood		Q		Opening Sq. Ft.		Nat. Head - Ft.		Headwater El.	
Freq. Yr.	C.F.S.	Exist.	Prop.	Exist.	Prop.	H.W.E. Exist.	H.W.E. Prop.	Exist.	Prop.
10	182	196	197	652.96	0.00	0.00	652.96	652.96	652.96
Design	30	256	210	213	653.34	0.01	0.01	653.35	653.35
Base	50	330	233	237	653.32	0.01	0.01	653.93	653.93
Overtopping	100	561	237	241	655.10	0.04	0.05	655.14	655.15
Max. Calc.	500	970	263	271	656.70	0.16	0.17	656.86	656.87

DESIGNED	DYS
CHECKED	JPB
DRAWN	DYS
CHECKED	JPB



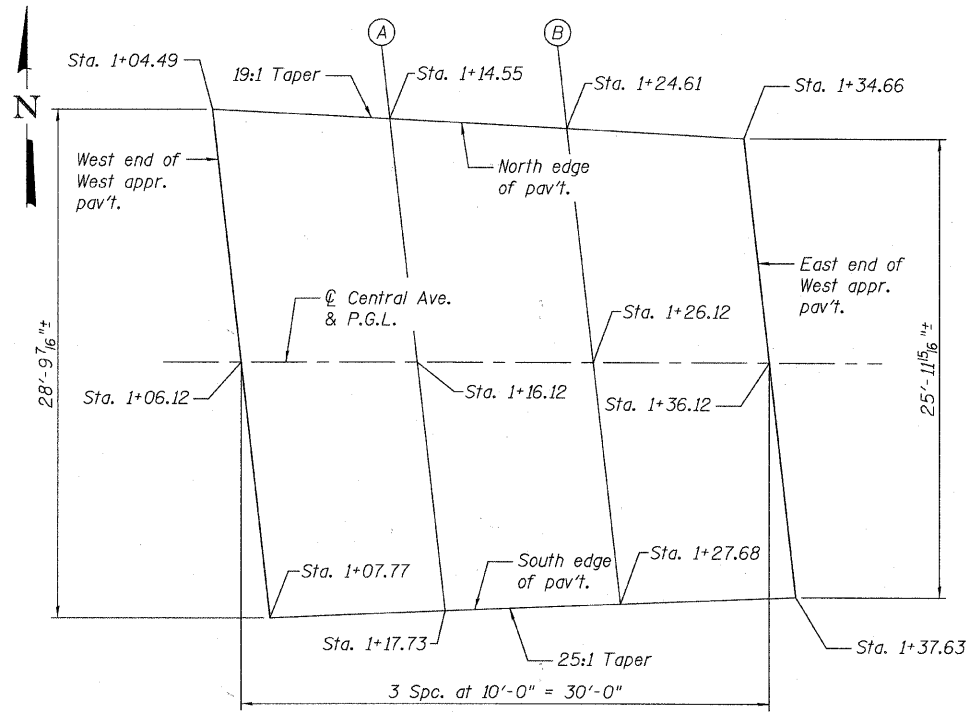
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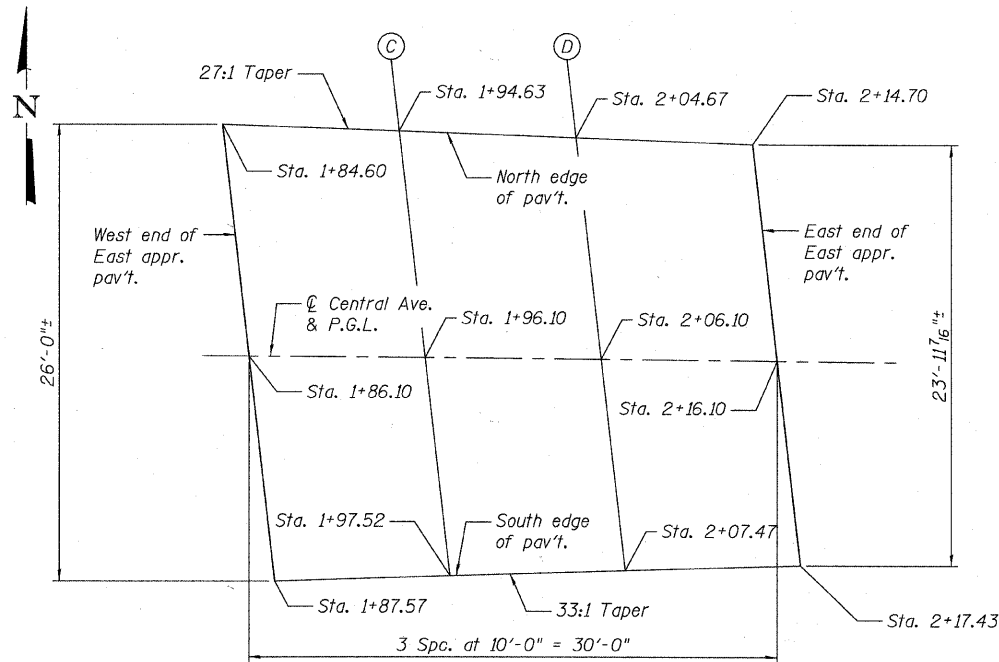
SHEET NO. S-1	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
12 SHEETS		09-00085-00-BR	LAKE	22	9
FED. ROAD DIST. NO. -			ILLINOIS FED. AID PROJECT		

GENERAL PLAN & ELEVATION  
STRUCTURE NO. 049-6161

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



PLAN - WEST APPROACH PAVEMENT



PLAN - EAST APPROACH PAVEMENT

WEST APPROACH SLAB  
NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. end West appr. pav't.	1+04.49	-14.30	656.14
A	1+14.55	-13.77	656.50
B	1+24.61	-13.24	656.47
E. end West appr. pav't.	1+34.66	-12.71	656.60

EAST APPROACH SLAB  
NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. end East appr. pav't.	1+84.60	-13.16	656.62
C	1+94.63	-12.88	656.52
D	2+04.67	-12.58	656.37
E. end East appr. pav't.	2+14.70	-12.29	656.25

WEST APPROACH SLAB  
CENTRAL AVENUE & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
W. end West appr. pav't.	1+06.12	0.00	656.37
A	1+16.12	0.00	656.53
B	1+26.12	0.00	656.69
E. end West appr. pav't.	1+36.12	0.00	656.81

EAST APPROACH SLAB  
CENTRAL AVENUE & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
W. end East appr. pav't.	1+86.10	0.00	656.81
C	1+96.10	0.00	656.69
D	2+06.10	0.00	656.53
E. end East appr. pav't.	2+16.10	0.00	656.41

WEST APPROACH SLAB  
SOUTH EDGE OF PAVEMENT

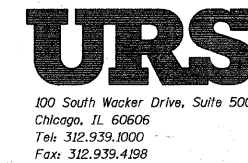
Location	Station	Offset	Theoretical Grade Elevations
W. end West appr. pav't.	1+07.77	14.49	656.18
A	1+17.73	14.09	656.35
B	1+27.68	13.68	656.50
E. end West appr. pav't.	1+37.63	13.28	656.62

EAST APPROACH SLAB  
SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. end East appr. pav't.	1+87.57	12.82	656.60
C	1+97.52	12.41	656.48
D	2+07.47	12.03	656.33
E. end East appr. pav't.	2+17.43	11.64	656.23

TOP OF APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 049-6161

DESIGNED	DYS
CHECKED	JPB
DRAWN	DYS
CHECKED	JPB

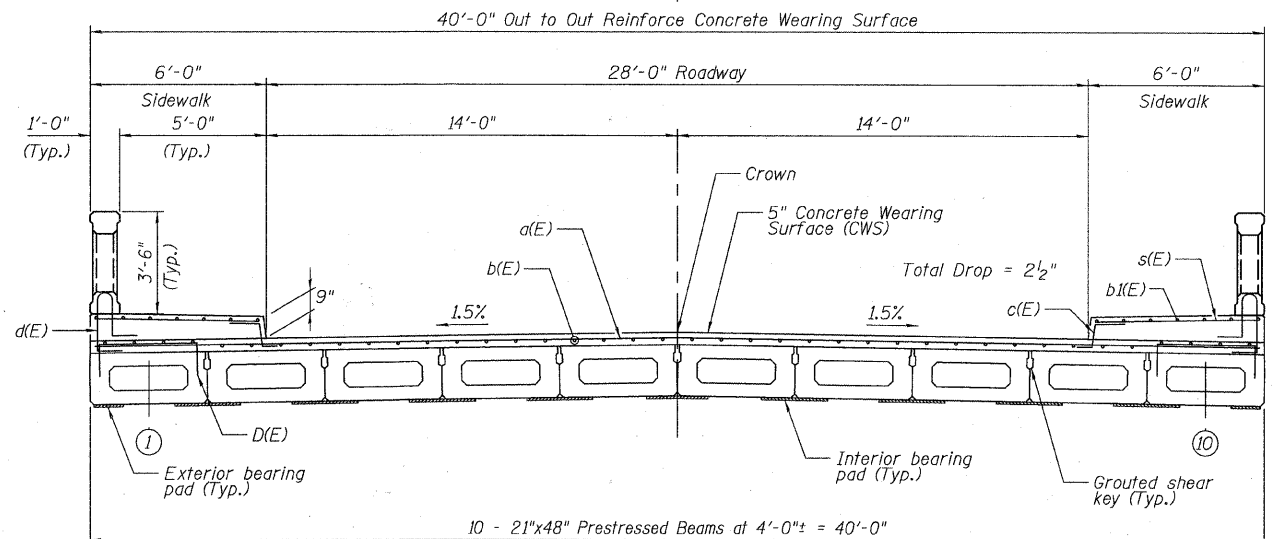
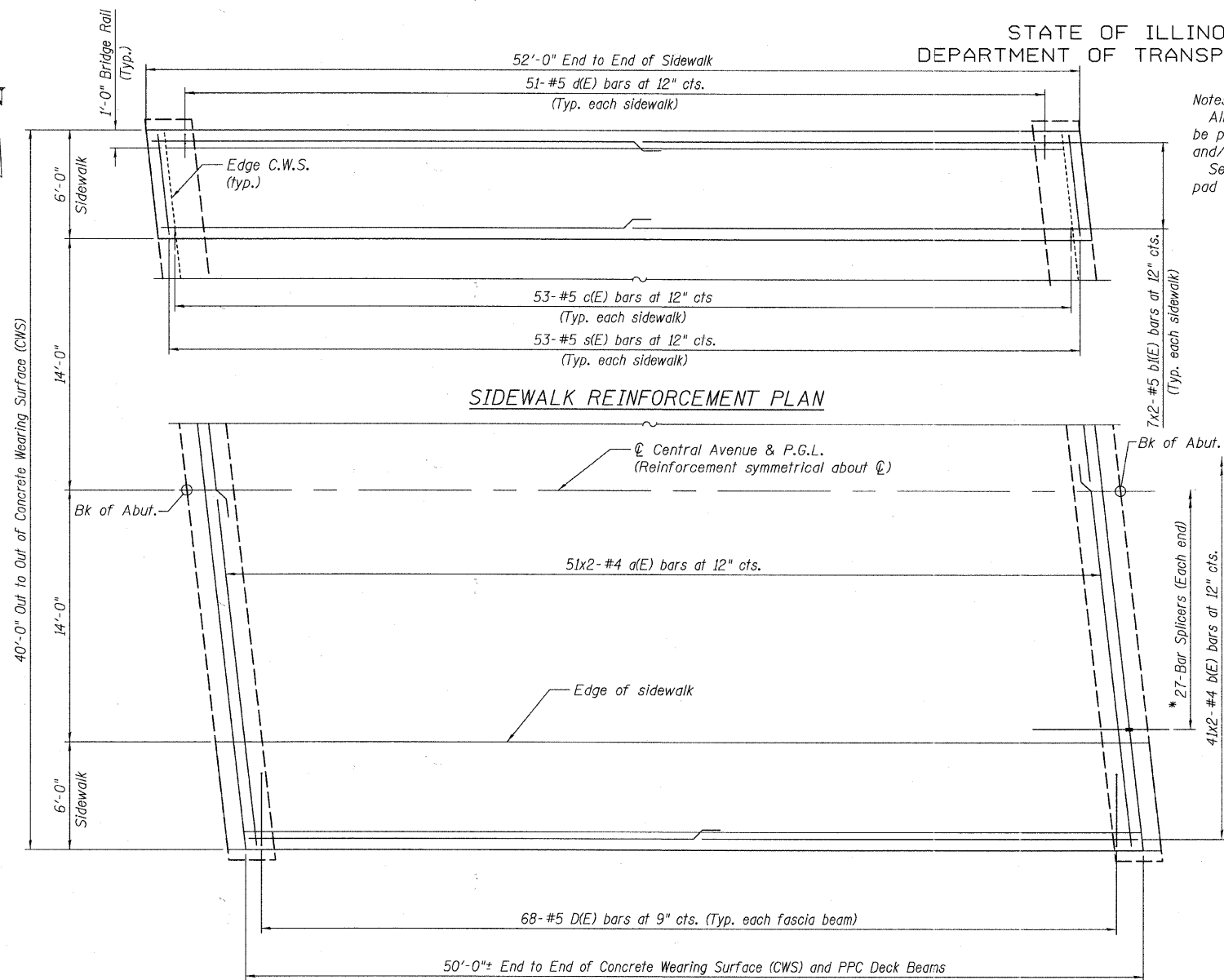


SHEET NO. S-2	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		09-00085-00-BR	LAKE	22	10
12 SHEETS	CONTRACT NO. 63584				
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Central Avenue & P.G.L.

Notes:  
All concrete wearing surfaces shall be placed prior to casting a backwall and/or approach slab.  
See sheet 6 of 12 for fabric bearing pad details.

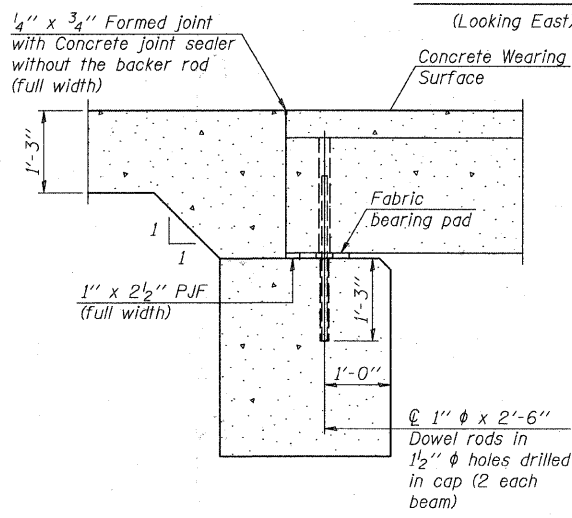


CROSS SECTION  
(Looking East)

BILL OF MATERIAL-CWS

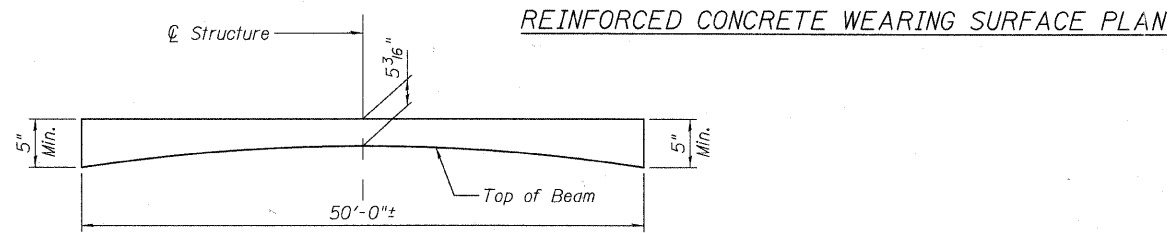
Bar	No.	Size	Length	Shape
a(E)	102	#4	21'-2"	—
b(E)	82	#4	26'-2"	—
Protective Coat			Sq. Yd.	156
Bridge Deck Grooving			Sq. Yd.	156
Reinforcement Bars, Epoxy Coated			Pound	2,880
Bar Splicers			Each	54
Concrete Wearing Surface, 5"			Sq. Yd.	222

\* See Special Provisions



SECTION THRU ABUTMENT

Notes:  
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.  
Quantity of concrete included with Concrete Superstructure.  
See Sheet Nos. 5 & 6 of 12 for beam & bearing pad details.

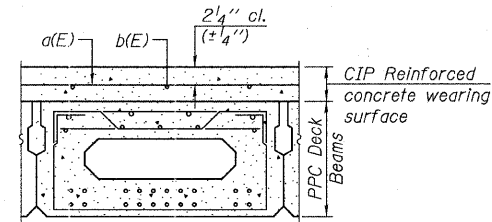


ANTICIPATED CONCRETE WEARING SURFACE PROFILE

(For information only)

MIN. BAR LAP

#4 = 2'-7"  
#5 = 3'-3"



REINFORCED CONCRETE WEARING SURFACE  
CROSS SECTION

DECK PLAN AND SECTION DETAILS  
STRUCTURE NO. 049-6161

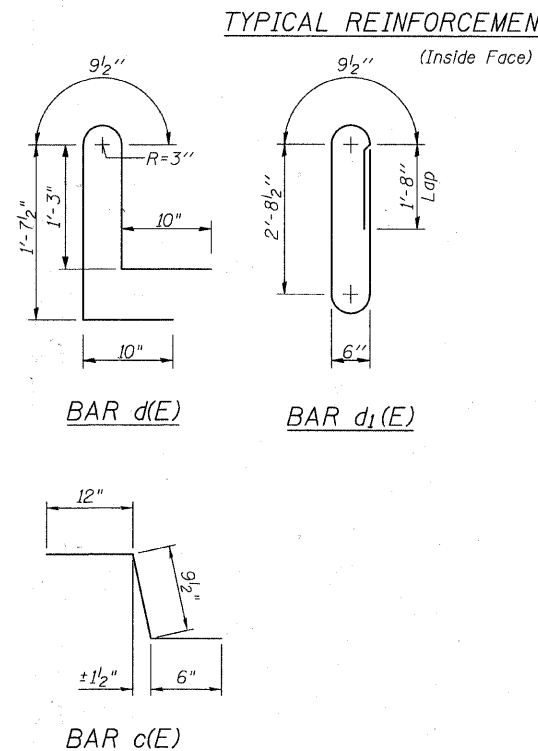
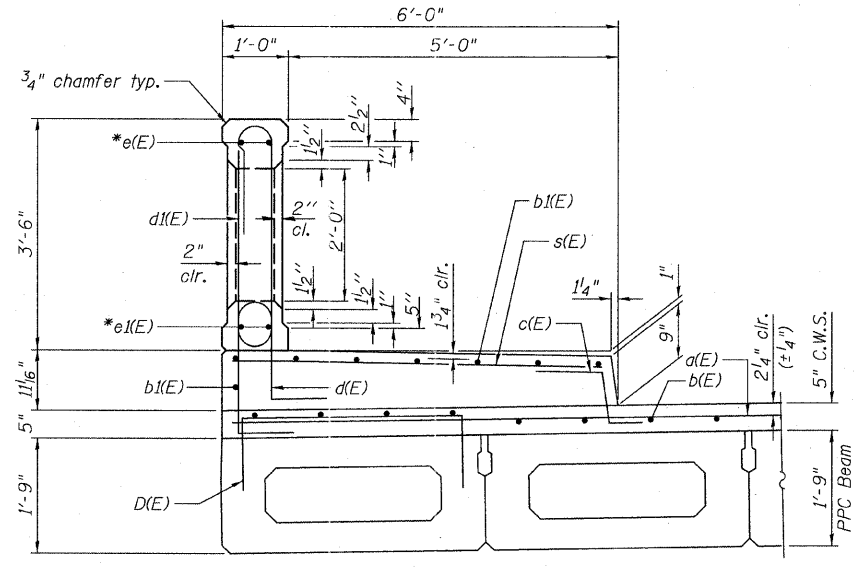
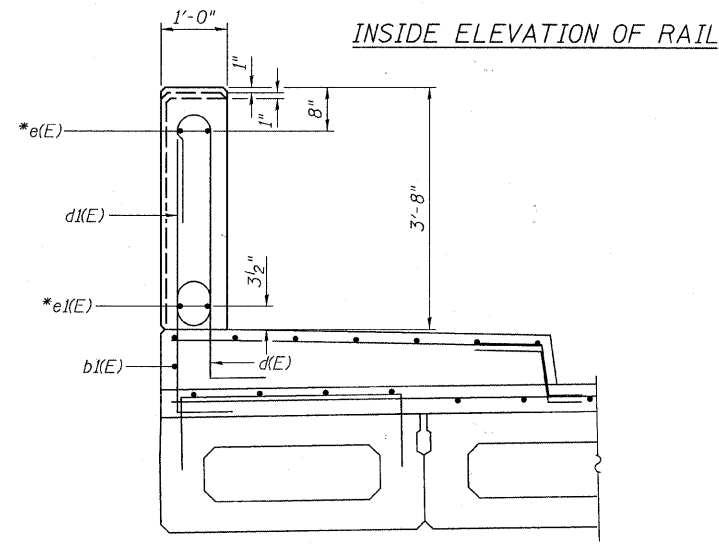
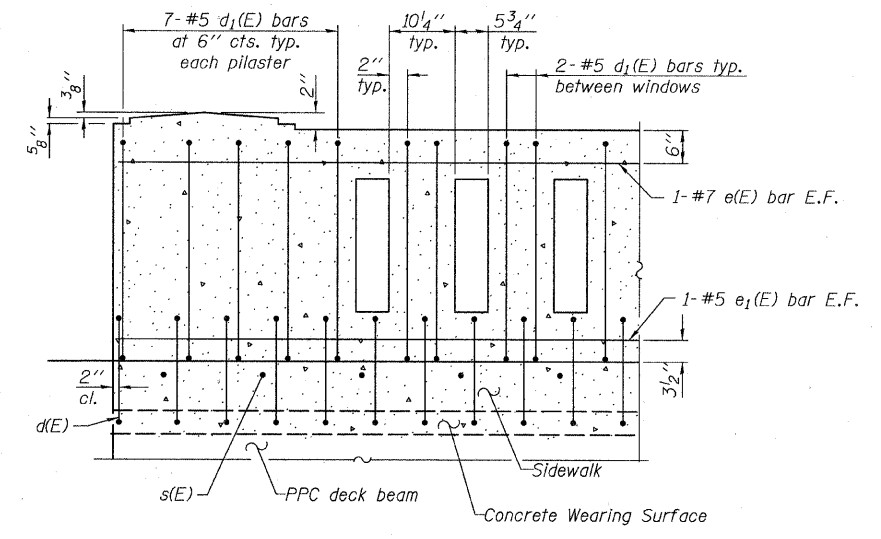
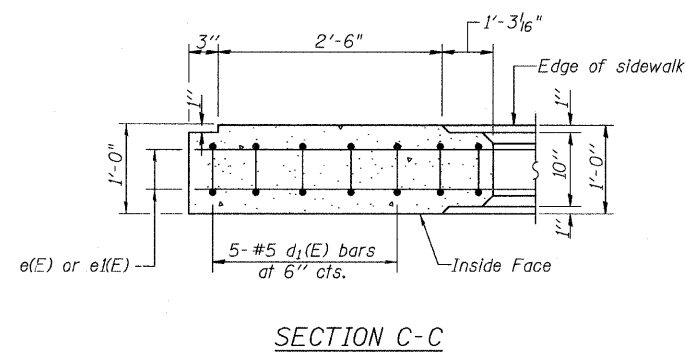
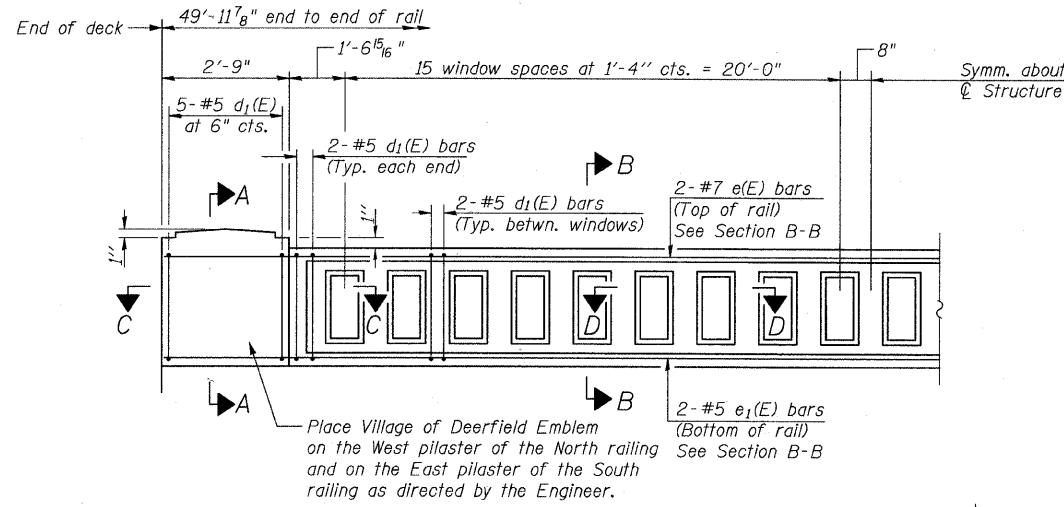
DESIGNED	DYS
CHECKED	JPB
DRAWN	DYS
CHECKED	JPB

Notes:  
See sheets 4 thru 6 of 12 for Superstructure Details.  
Bars indicated thus 20 x 2-#4 etc. indicates 20 lines of bars with 2 lengths per line.  
Spacing of the a(E) bar shall be measured along the centerline of structure.  
See sheet 11 of 12 for Bar Splicer Assembly Details.  
See sheet 4 of 12 for Sidewalk and Railing Details and Bill of Materials.

SHEET NO. S-3 12 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		09-0085-00-BR	LAKE	22	11
CONTRACT NO. 63584					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

**URS**  
100 South Wacker Drive, Suite 500  
Chicago, IL 60606  
Tel: 312.939.1000  
Fax: 312.939.4198

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**SUPERSTRUCTURE BILL OF MATERIAL**

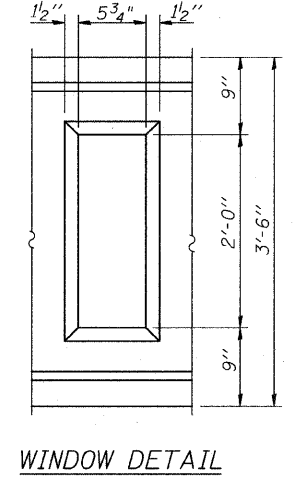
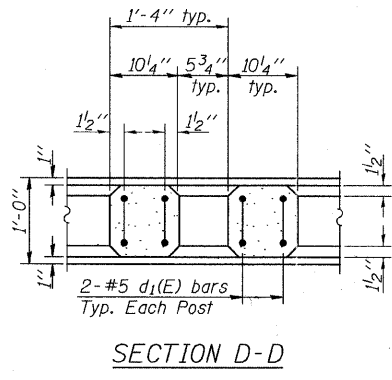
Bar	No.	Size	Length	Shape
b1(E)	28	#5	27'-8"	—
c(E)	106	#5	2'-4"	└
d(E)	106	#5	5'-4"	└
s(E)	106	#5	5'-8"	—
** Protective Coat		Sq. Yds.	110	
Concrete Superstructure		Cu. Yds.	19.5	
* Reinforcement Bars, Epoxy Coated		Pound	2,280	
Concrete Bridge Railing, Sidewalk Mounted		Foot	100	

**RAILING BAR LIST  
ONE RAILING ONLY**  
(For Information Only)

Bar	No.	Size	Length	Shape
d1(E)	76	#5	8'-8"	—
e(E)	4	#7	26'-10"	—
e1(E)	4	#5	26'-1"	—

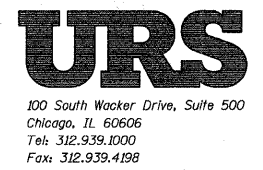
**Notes:**  
All concrete for railing wall shall be Class BS according to Article 1020.04 of the Standard Specifications. Surface of railing shall receive a rubbed finish according to Article 503.15(b) of the Standard Specifications.  
All parts of the railing including concrete and reinforcing will be paid for at the contract unit price per foot for Concrete Bridge Railing, Sidewalk Mounted. Holes and recesses must be formed or cored. Drilling is not permitted.  
All construction joints shall be bonded unless otherwise noted.  
Work this sheet with Sheet No. 3 of 12

DESIGNED	DYS
CHECKED	JPB
DRAWN	DYS
CHECKED	JPB



**MIN. BAR LAP**  
#5 bars = 2'-6"  
#7 bars = 3'-11"

**SUPERSTRUCTURE & RAILING DETAILS  
STRUCTURE NO. 049-6161**



SHEET NO. S-4 12 SHEETS	F.A.U. RTE.	SECTION 09-00085-00-BR	COUNTY LAKE	TOTAL SHEETS 22	SHEET NO. 12
	CONTRACT NO. 63584			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

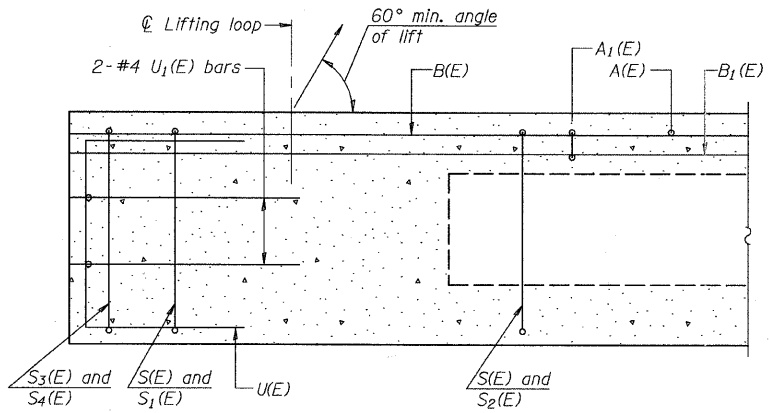
BAR LIST  
ONE BEAM ONLY

(For information only)

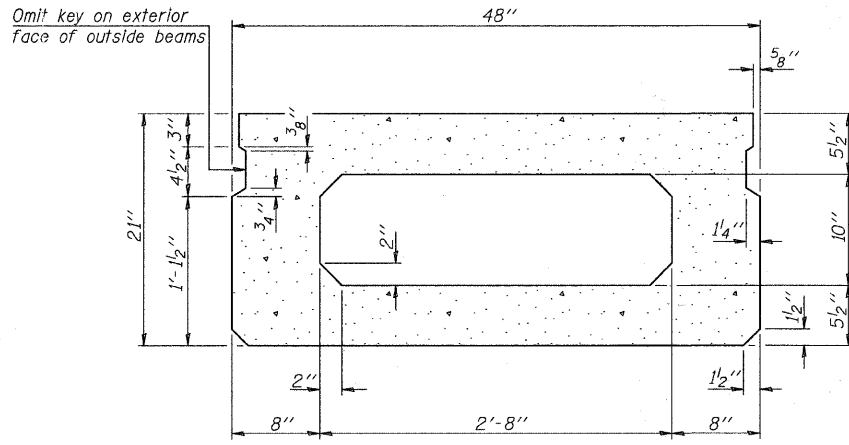
Bar	No.	Size	Length	Shape
A(E)	16	#4	3'-7"	—
A <sub>1</sub> (E)	30	#4	3'-10"	~
B(E)	10	#5	26'-2"	—
B <sub>1</sub> (E)	8	#4	25'-11"	—
D(E)	68	#5	6'-3"	⌈
S(E)	76	#4	7'-5"	⌈
S <sub>1</sub> (E)	8	#4	5'-11"	⌈
S <sub>2</sub> (E)	68	#4	6'-2"	⌈
S <sub>3</sub> (E)	12	#4	4'-9"	⌈
S <sub>4</sub> (E)	12	#4	4'-0"	⌈
U(E)	12	#5	4'-0"	⌈
U <sub>1</sub> (E)	4	#4	6'-6"	⌈

Note: See sheet 6 of 12 for additional details and Bill of Material.

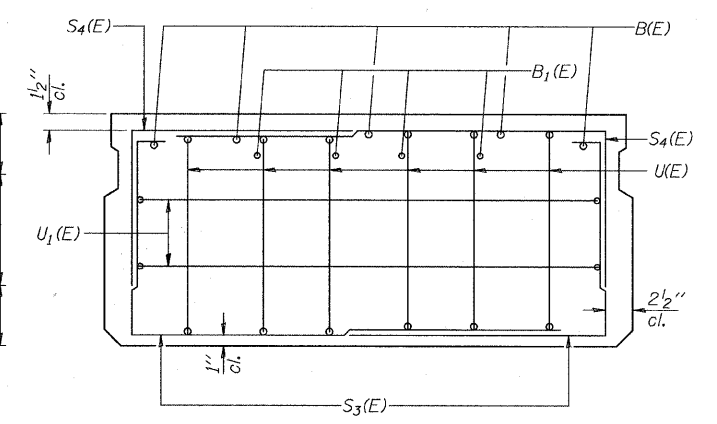
\* Beams 1 & 10 only



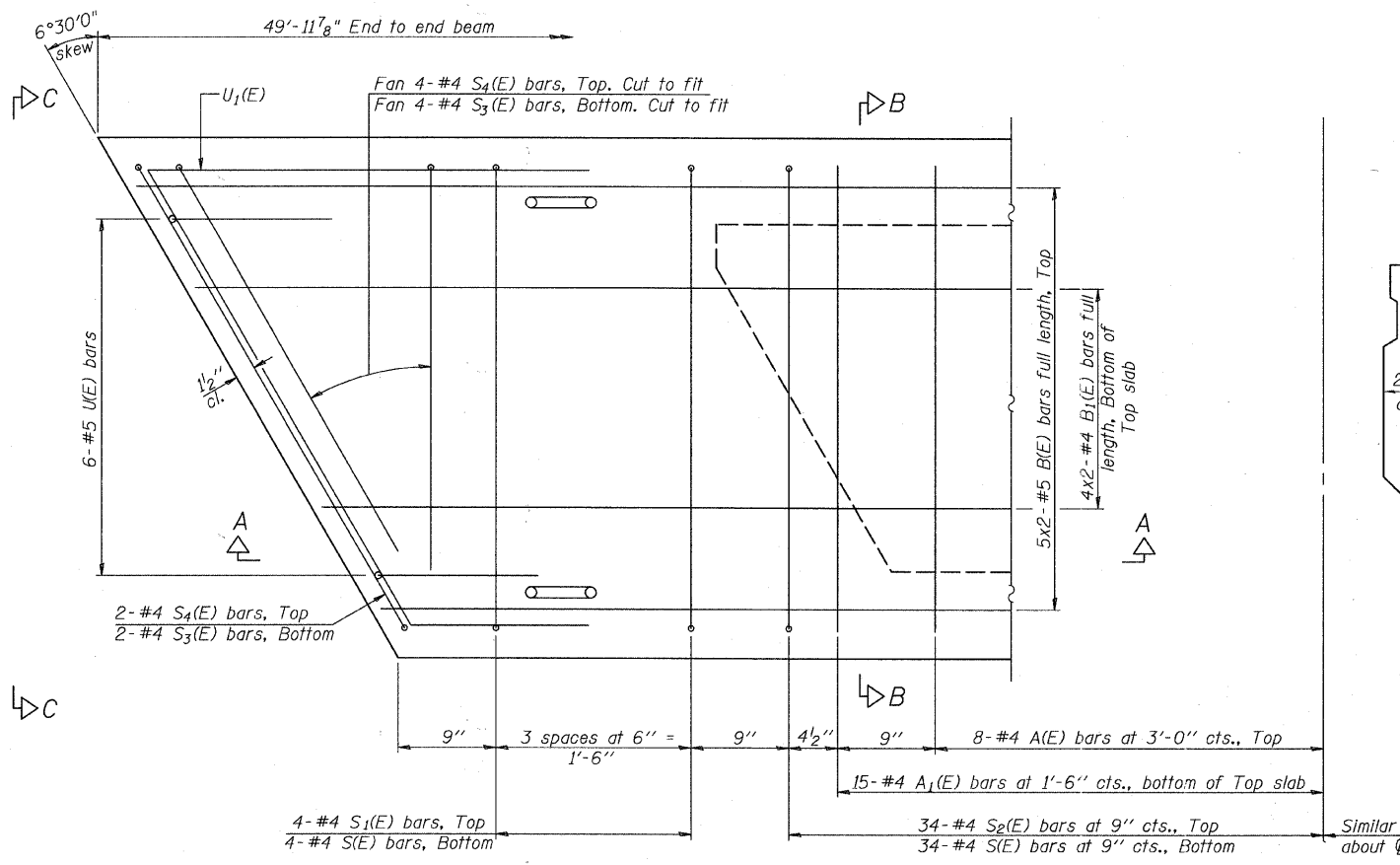
SECTION A-A



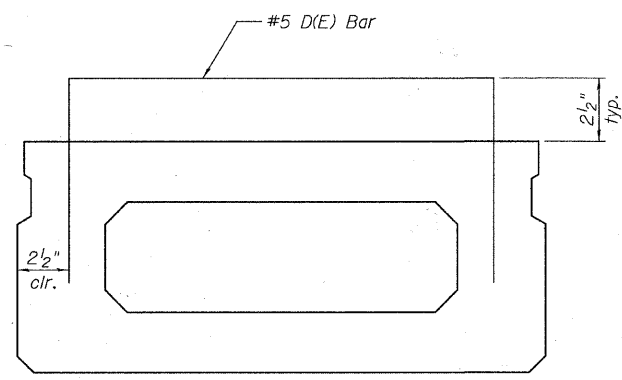
SECTION B-B  
(Showing dimensions)



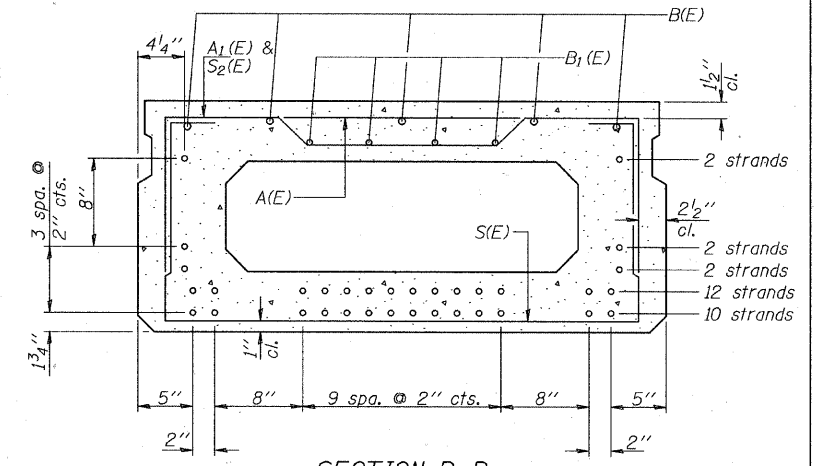
VIEW C-C



PLAN VIEW



DECK BEAMS 1 & 10  
(Showing additional reinforcement)



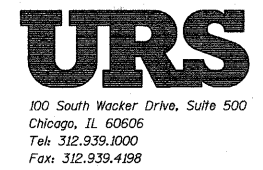
SECTION B-B  
(Showing reinforcement and permissible strand locations)

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

MINIMUM BAR LAP  
#4 bar = 2'-0"  
#5 bar = 2'-6"

Note: Spacing of S(E) and S<sub>2</sub>(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

DESIGNED	DYS
CHECKED	JPB
DRAWN	DYS
CHECKED	JPB

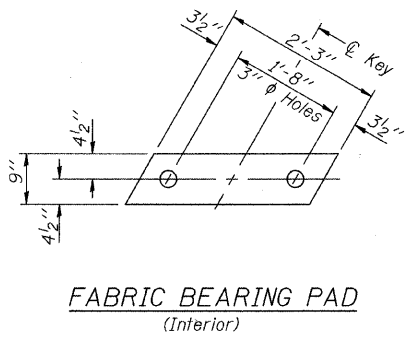


SUPERSTRUCTURE  
21"X48" PPC DECK BEAM  
STRUCTURE NO. 049-6161

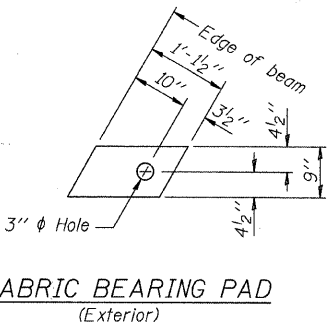
SHEET NO. S-5	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		09-00085-00-BR	LAKE	22	13
12 SHEETS	CONTRACT NO. 63584				
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



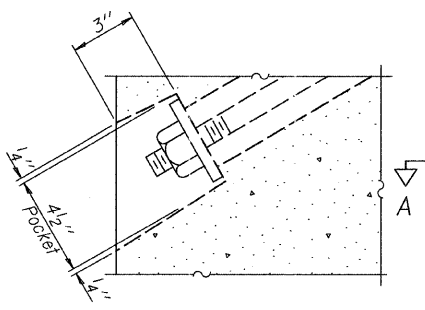
FABRIC BEARING PAD  
(Interior)



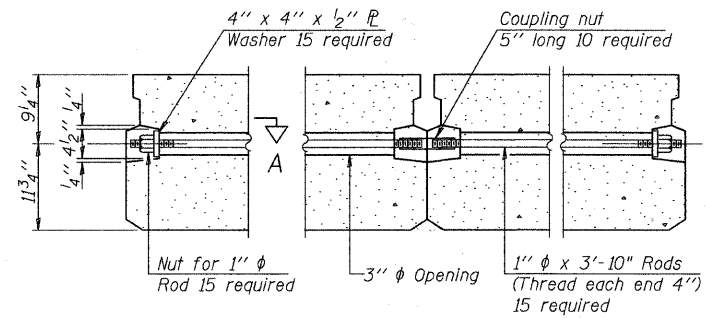
FABRIC BEARING PAD  
(Exterior)

Notes:  
All bearing pads shall be 1" thick.

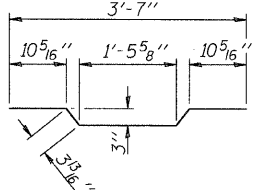
FIXED



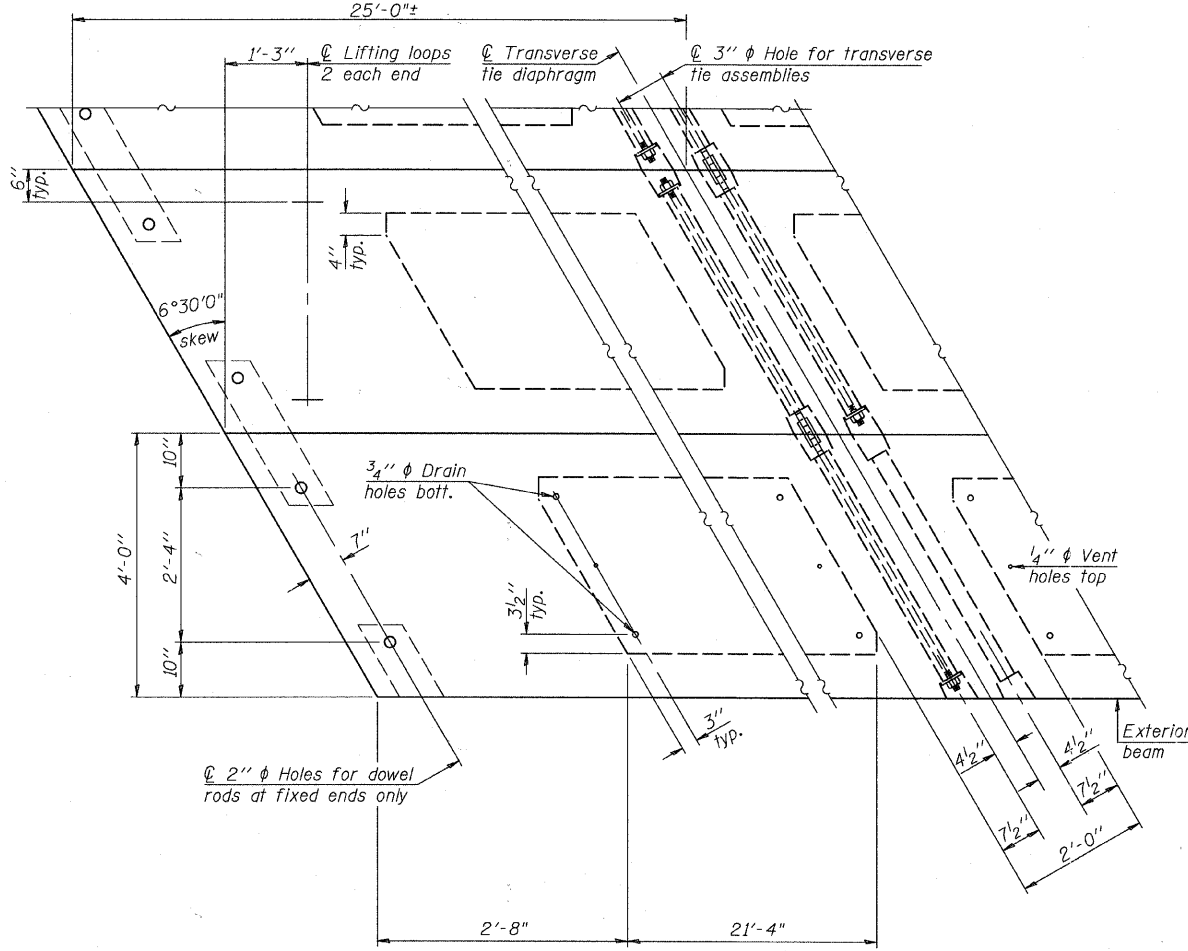
SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



BAR A1(E)



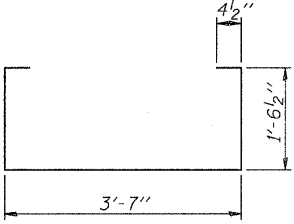
PLAN VIEW

NOTES

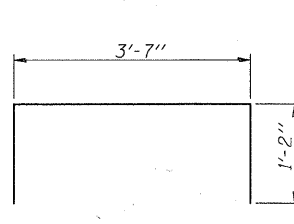
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" phi rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.  
Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).  
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.  
A minimum 2 1/2" phi lifting pin shall be used to engage the lifting loops during handling.  
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.05 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.  
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.  
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

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

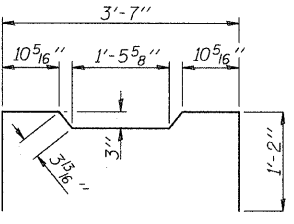
DESIGNED	DYS
CHECKED	JPB
DRAWN	DYS
CHECKED	JPB



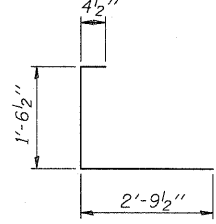
BAR S(E)



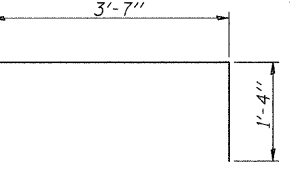
BAR S1(E)



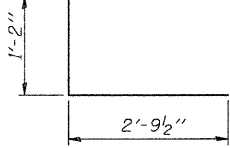
BAR S2(E)



BAR S3(E)



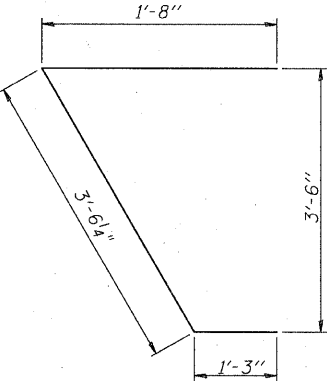
BAR D(E)



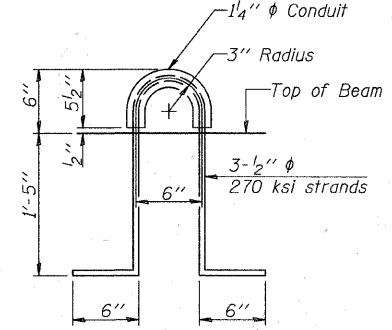
BAR S4(E)



BAR U(E)



BAR U1(E)

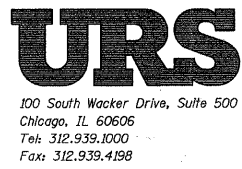


LIFTING LOOP DETAIL

BILL OF MATERIAL

* Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	2,000
* See Special Provisions		

SUPERSTRUCTURE  
21"x48" PPC DECK BEAM DETAILS  
STRUCTURE NO. 049-6161

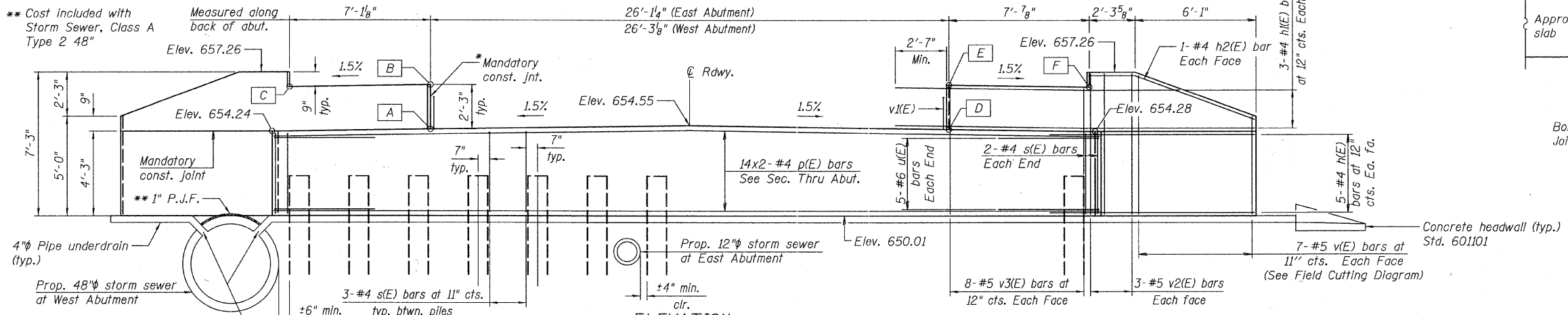


SHEET NO. S-6	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		09-00085-00-BR	LAKE	22	14
12 SHEETS	CONTRACT NO. 63584				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Location	Elevations					
	A	B	C	D	E	F
West Abutment	654.36	656.61	656.52	654.33	656.58	656.47
East Abutment	654.37	656.62	656.52	654.34	656.59	656.47

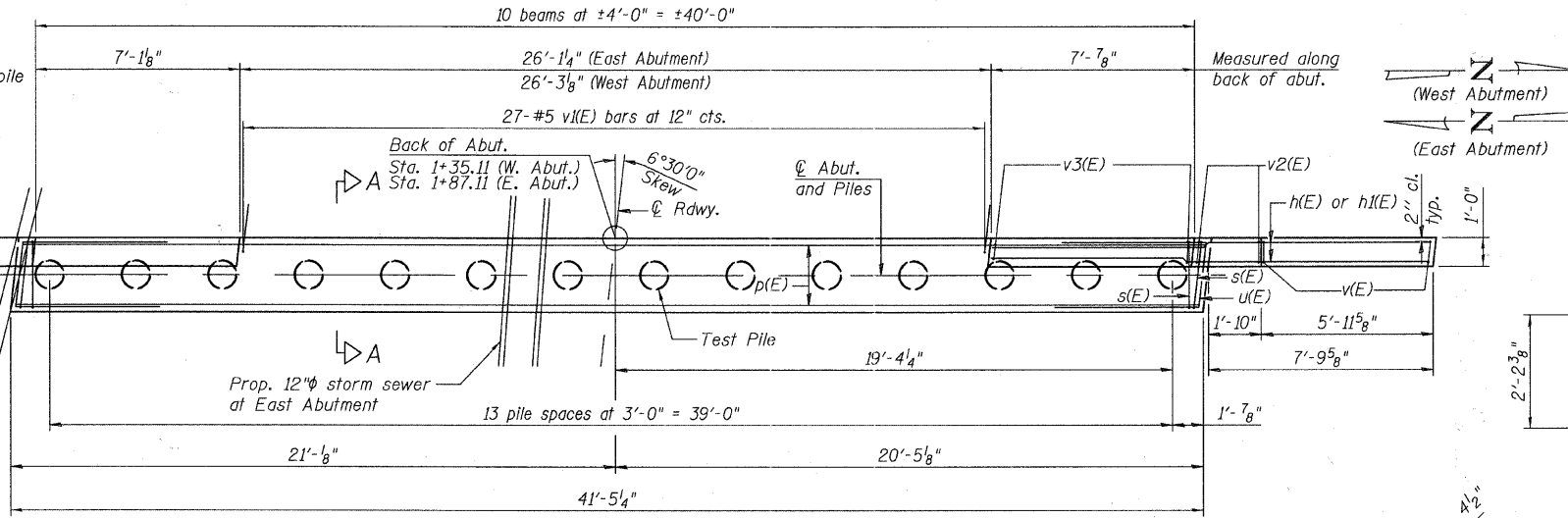
\* Cast top of wingwall flush with exterior beam face after beams have been erected.  
\*\* Cost included with Storm Sewer, Class A Type 2 48"



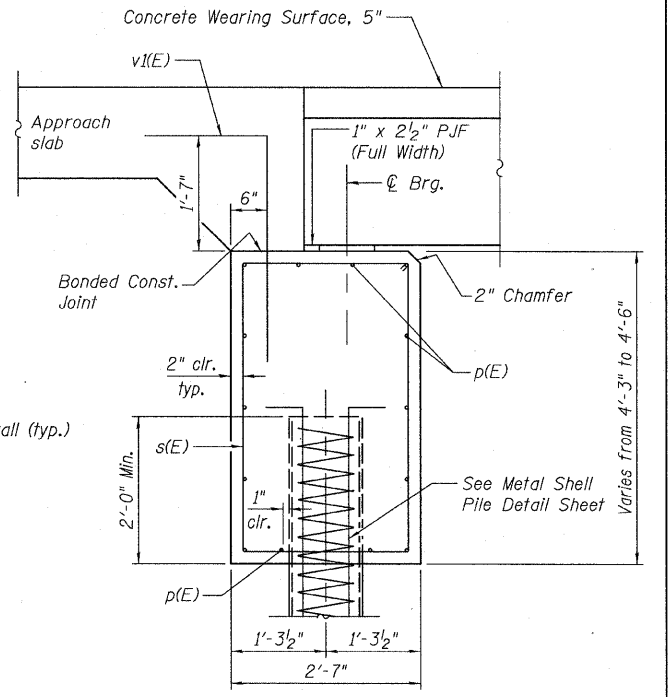
PILE DATA

Type: Metal Shell 12"φ w/0.179" walls with pile shoes  
Nominal Required Bearing: 163.4 k/pile  
Factored Resistance Available: 81.6 k/pile  
Est. Length: 42 ft  
No. Production Piles: 26  
No. Test Piles: 2

ELEVATION  
(Facing Abutment)



PLAN



SECTION A-A  
(Dimensions are at Rt. L's)

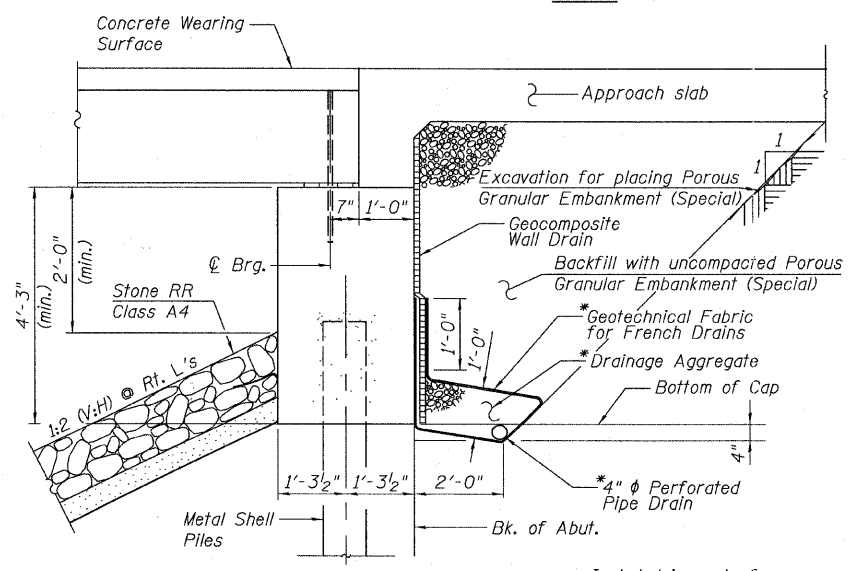
MINIMUM LAP  
#4 bar = 2'-7"

BILL OF MATERIAL - 2 ABUTS.

Bar	No.	Size	Length	Shape
h(E)	40	#4	10'-3"	—
h2(E)	8	#4	8'-7"	—
p(E)	56	#4	21'-11"	—
s(E)	86	#4	12'-9"	□
u(E)	20	#6	12'-4"	—
v(E)	28	#5	11'-7"	—
v2(E)	48	#5	6'-11"	—
v3(E)	64	#5	6'-2"	—
Structure Excavation			Cu. Yd.	88
Concrete Structures			Cu. Yd.	47.7
Reinforcement Bars, Epoxy Coated			Pound	3,900
Geocomposite Wall Drain			Sq. Yd.	56
Furnishing Metal Shell Piles 12"x0.179"			Foot	1,092
Driving Piles			Foot	1,092
Test Pile Metal Shell			Each	2
Pile Shoes			Each	28
Concrete Headwall for Pipe Drains			Each	3
Porous Granular Embankment, Special			Cu. Yd.	75
Pipe Underdrain for Structure, 4"			Feet	130

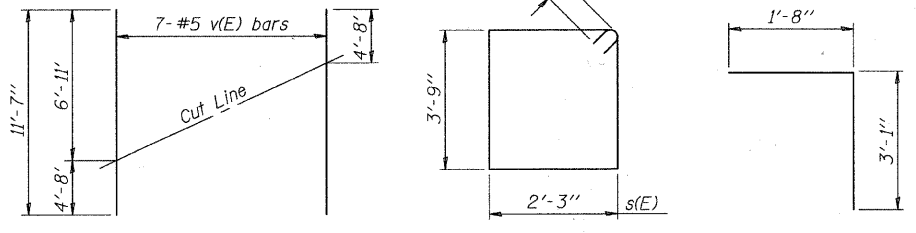
\*See Special Provisions

ABUTMENT PLAN & DETAILS  
STRUCTURE NO. 049-6161

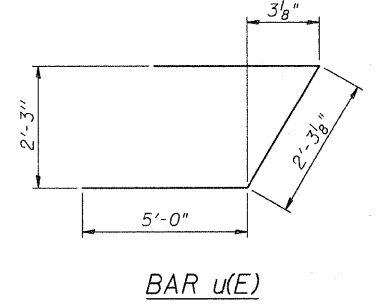


ABUTMENT DRAINAGE  
(Horiz. dim. @ Rt. L's)

\* Included in cost of Pipe Underdrains for Structures, 4"



FIELD CUTTING DIAGRAM  
Order v(E) full length. Cut as shown and use remainder of bars in opposite face.



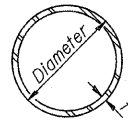
BAR u(E)



SHEET NO. S-7 12 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		09-00085-00-BR	LAKE	22	15
			CONTRACT NO. 63584		
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

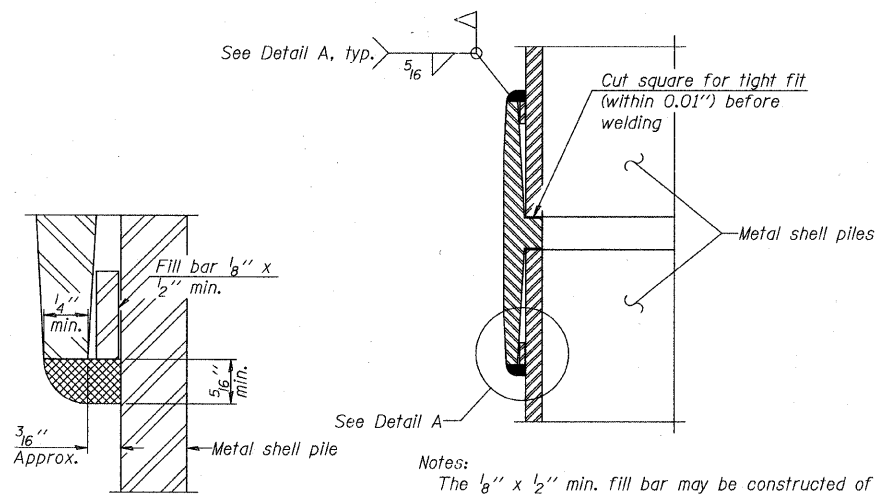
DESIGNED DYS
CHECKED JPB
DRAWN DYS
CHECKED JPB

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



METAL SHELL PILE TABLE

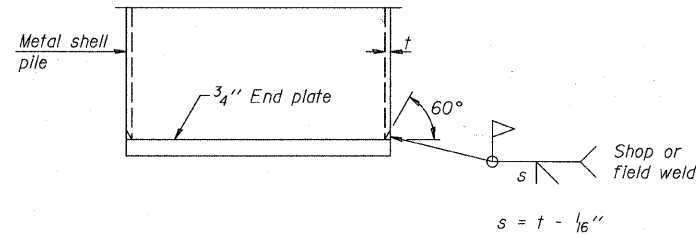
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. <sup>3</sup> /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



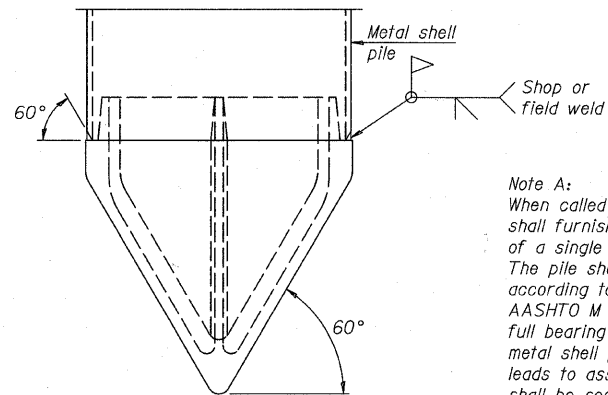
DETAIL A

Notes:  
The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.  
Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



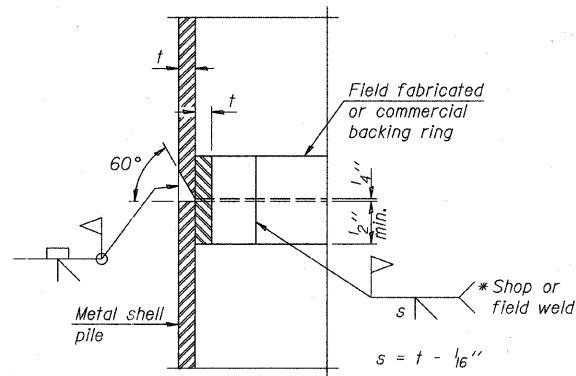
END PLATE ATTACHMENT



METAL SHELL PILE SHOE ATTACHMENT

(See Note A)

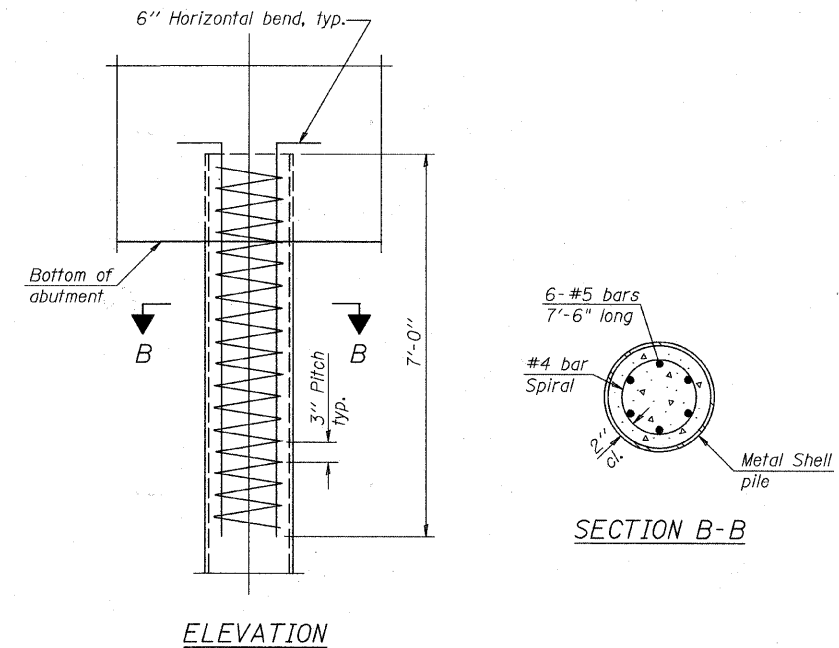
Note A:  
When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.



COMPLETE PENETRATION WELD SPLICE

\* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.

Note:  
The metal shell piles shall be according to ASTM A 252 Grade 3.



ELEVATION

METAL SHELL REINFORCEMENT AT ABUTMENTS

METAL SHELL PILE DETAILS  
STRUCTURE NO. 049-6161

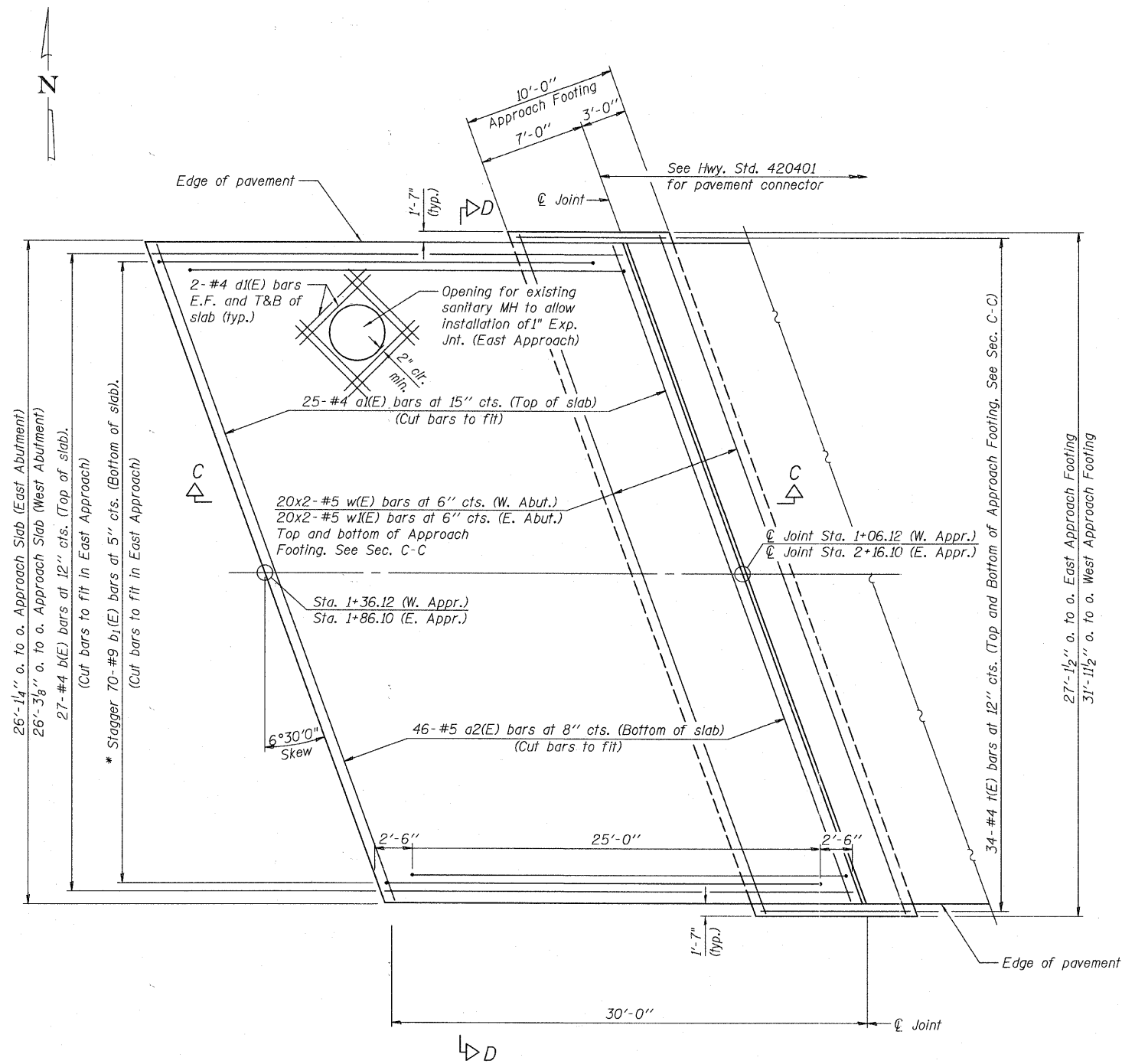
DESIGNED	DYS
CHECKED	JPB
DRAWN	DYS
CHECKED	JPB

**URS**  
100 South Wacker Drive, Suite 500  
Chicago, IL 60606  
Tel: 312.939.1000  
Fax: 312.939.4198

SHEET NO. S-8	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		09-00085-00-BR	LAKE	22	16
12 SHEETS	CONTRACT NO. 63584				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

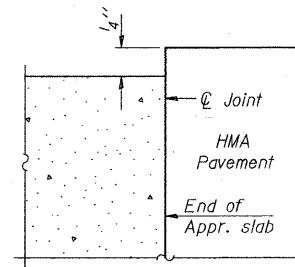
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Notes:  
See sheet 10 of 12 for Sections C-C & D-D.  
a(E) and a<sub>1</sub>(E) bar spacings measured along  $\text{\textcircled{C}}$  Rdwy.  
Bars indicated thus 20x2-#5 etc. indicates  
20 lines of bars with 2 lengths per line.



PLAN

\* Tilt #9 b<sub>1</sub>(E) bars as required to maintain clearance.



FLEXIBLE PAVEMENT

DETAIL A

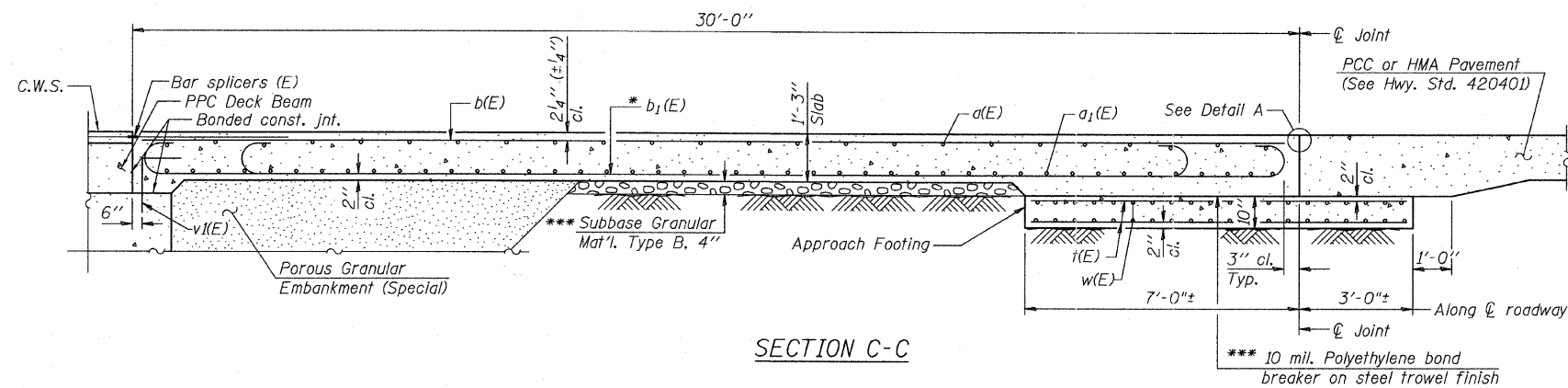
DESIGNED	DYS
CHECKED	JPB
DRAWN	DYS
CHECKED	JPB

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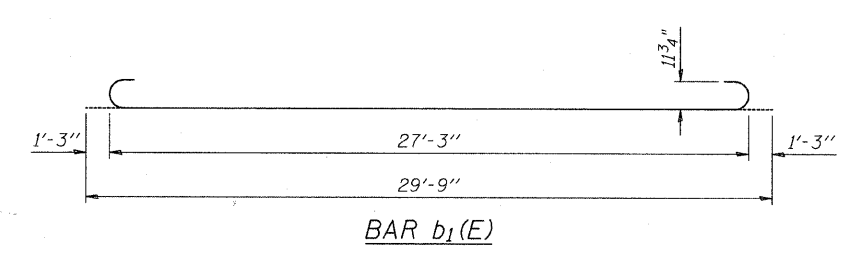
APPROACH SLAB DETAIL -1  
STRUCTURE NO. 049-6161

SHEET NO.S-9 12 SHEETS	F.A.U. RTE.	SECTION 09-00085-00-BR	COUNTY LAKE	TOTAL SHEETS 22	SHEET NO. 17
	CONTRACT NO. 63584				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
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Notes:  
See sheet 9 of 12 for Detail A.  
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
Approach footing concrete shall be paid for as Concrete Structures.  
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
For v(E) bar details, see sheet 7 of 12.  
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
For bar splicer details, see sheet 11 of 12.  
Cost of excavation for approach footing included with Concrete Structures.  
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 7 of 12.

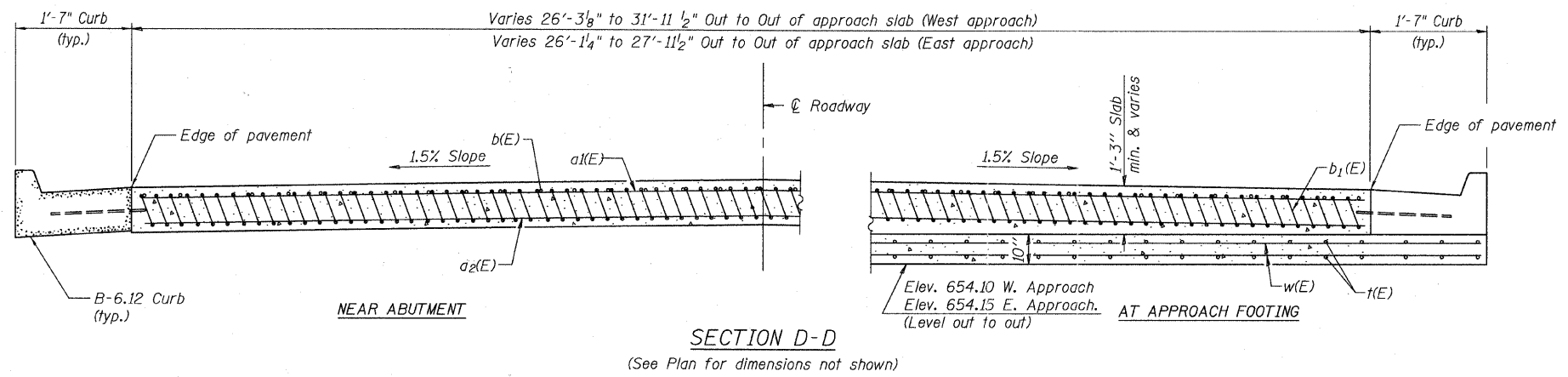


\* Tilt #9 b<sub>1</sub>(E) bars as required to maintain clearance.  
\*\*\* Cost included with Concrete Superstructure.

TWO APPROACHES  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	54	#4	29'-0"	—
a2(E)	92	#5	29'-0"	—
b(E)	50	#4	28'-7"	—
b <sub>1</sub> (E)	140	#9	29'-9"	U
d(E)	12	#4	6'-0"	—
f(E)	136	#4	9'-8"	—
w(E)	80	#5	17'-9"	—
w1(E)	80	#5	15'-4"	—
Item	Unit	Quantity		
Protective Coat	Sq. Yd.	175		
Concrete Superstructure	Cu. Yd.	78.0		
Concrete Structures	Cu. Yd.	18.7		
Bridge Deck Grooving	Sq. Yd.	175		
Reinforcement Bars, Epoxy Coated	Pound	22,670		

\*See Special Provisions



DESIGNED	DYS
CHECKED	JPB
DRAWN	DYS
CHECKED	JPB

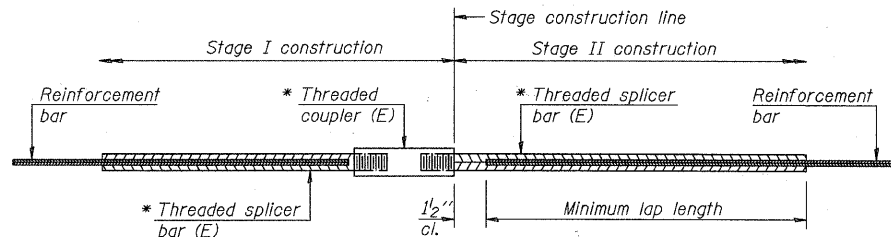
**URS**  
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Chicago, IL 60606  
Tel: 312.939.1000  
Fax: 312.939.4198

APPROACH SLAB DETAIL-2  
STRUCTURE NO. 049-6161

SHEET NO. S-10 12 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		09-00085-00-BR	LAKE	22	18
	CONTRACT NO. 63584				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

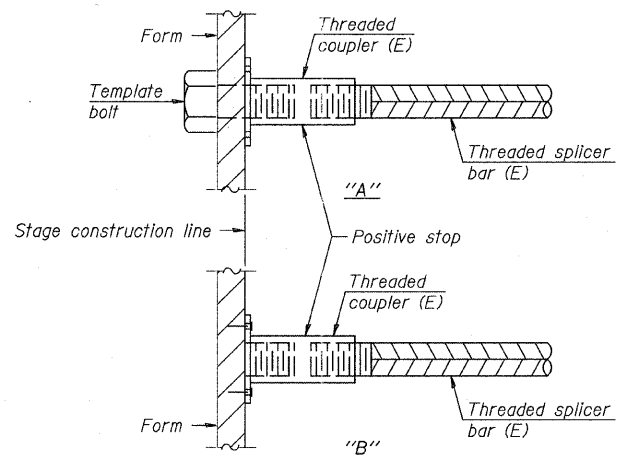
Bar size to be spliced	Minimum Lap Lengths				
	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1/2" + thread length

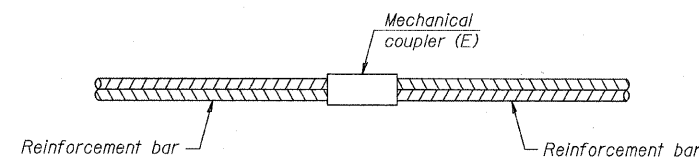
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



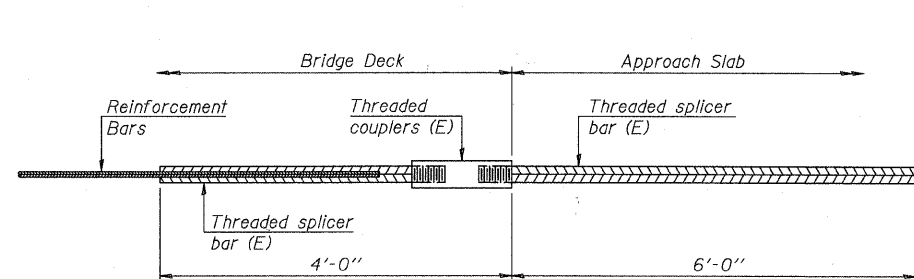
INSTALLATION AND SETTING METHODS

"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.



STANDARD MECHANICAL SPLICER

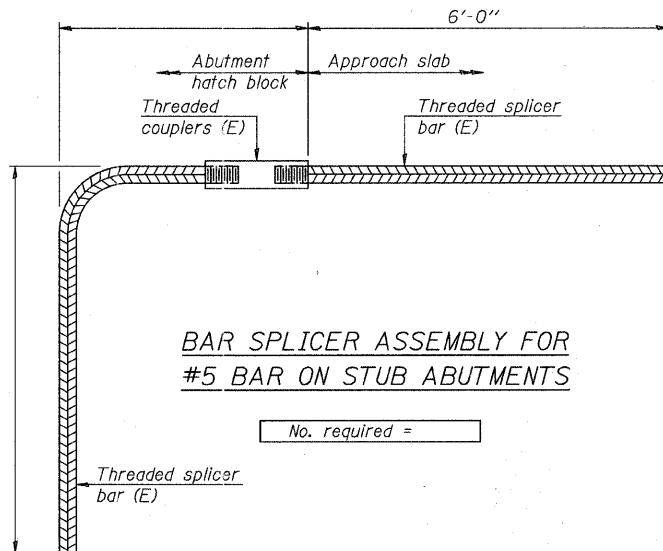
Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #4 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

DESIGNED	DYS
CHECKED	JPB
DRAWN	DYS
CHECKED	JPB

No. required = 54



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

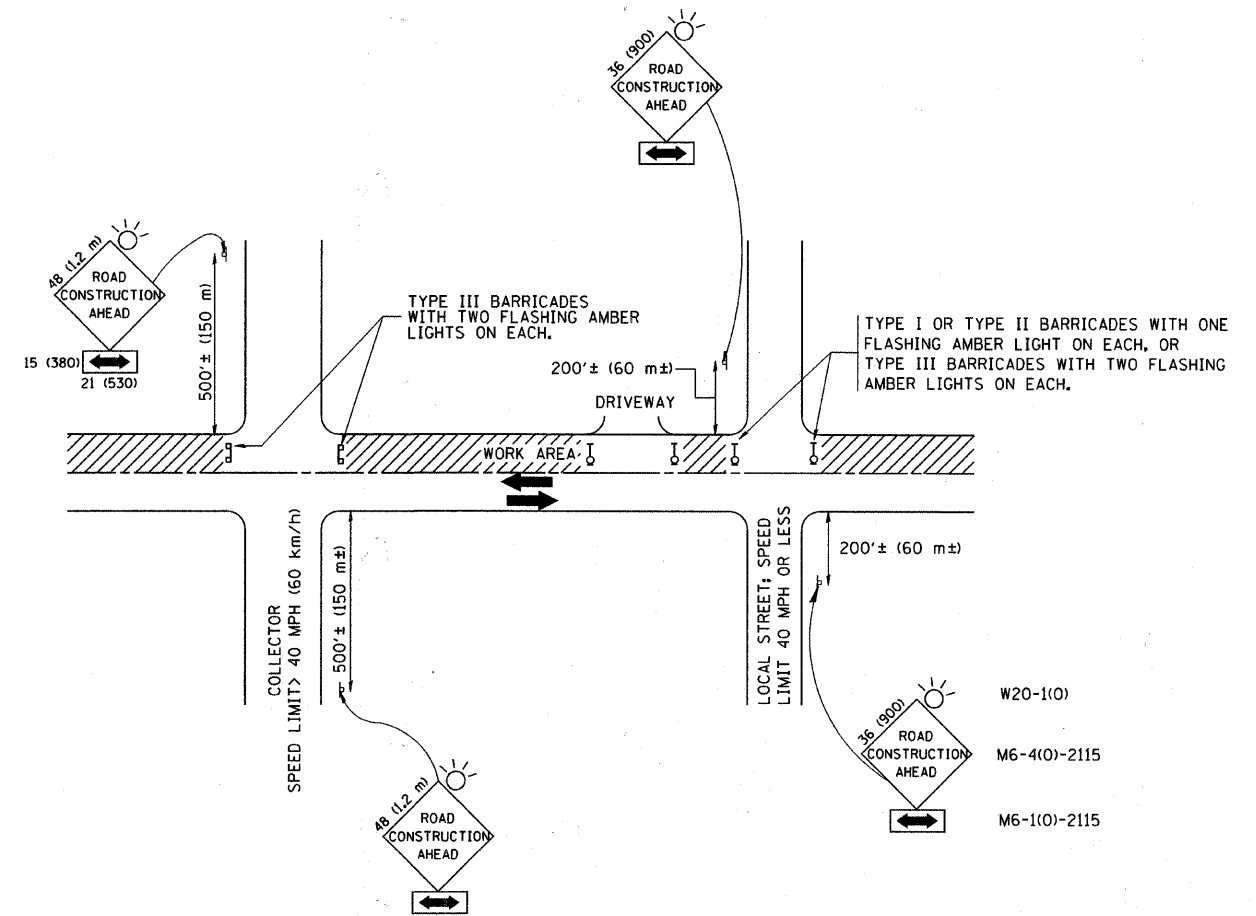
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
All reinforcement shall be lapped and tied to the splicer bars.  
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
See special provision for Mechanical Splicers.  
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
STRUCTURE NO. 049-6161

**URS**  
100 South Wacker Drive, Suite 500  
Chicago, IL 60606  
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Fax: 312.939.4198

SHEET NO.S-11 12 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		09-00085-00-BR	LAKE	22	19
CONTRACT NO. 63584					
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					





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

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
    - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
  - SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
    - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
  - WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

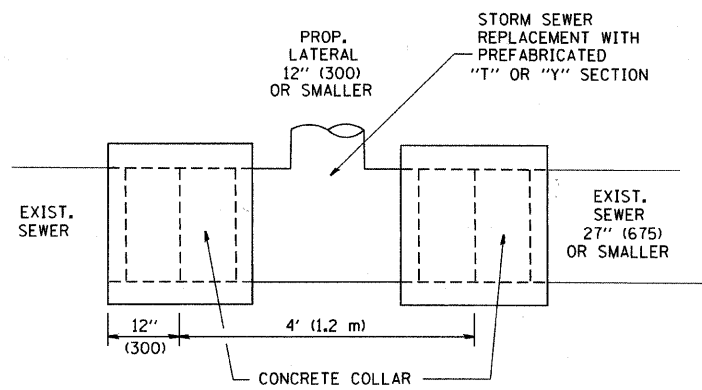
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	PLOT SCALE = 50.000 / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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

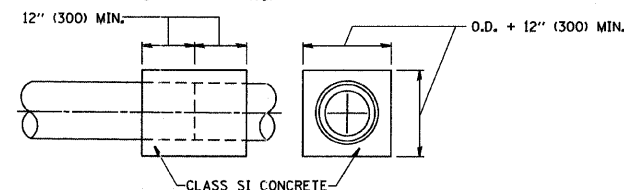
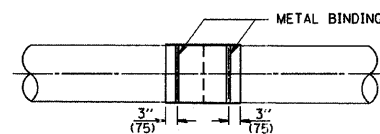
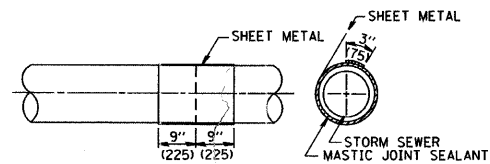
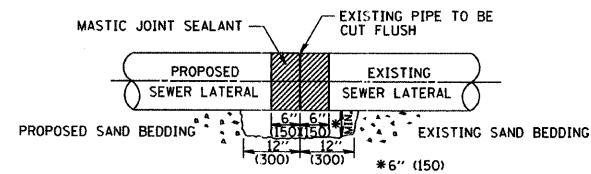
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00085-00-BR	LAKE	21	22
TC-10			CONTRACT NO.	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



**DETAIL "A"**

LATERAL CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER

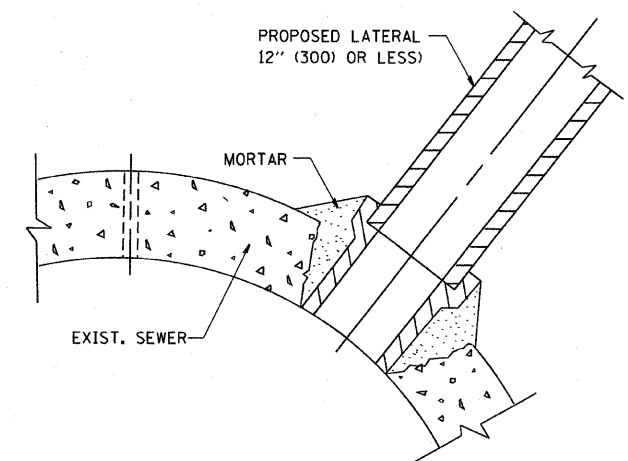


**DETAIL "B"**

CLASS SI CONCRETE COLLAR

**CONSTRUCTION SEQUENCE**

- CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
- APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
- BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12" x 6" (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
- CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" (75) LONG.
- WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
- LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
- PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
- WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OZZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
- PLACE CLASS SI CONCRETE AROUND THE JOINT.



**DETAIL "C"**

PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER

**NOTES**

**MATERIAL**

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

**CONSTRUCTION METHODS**

- THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
  - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".
  - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

**GENERAL**

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

**BASIS OF PAYMENT**

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS, THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

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

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		DRAWN -	REVISED - R. SHAH 09-09-94		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	09-00085-00-BR	LAKE	22	22	
		PLOT SCALE = 50,000 / IN.	REVISED - R. SHAH 10-25-94						BD500-01 (BD-7)				
		PLOT DATE = 1/4/2008	REVISED - R. SHAH 06-12-96						FED. ROAD DIST. NO. 1	ILLINOIS FED. AID PROJECT			