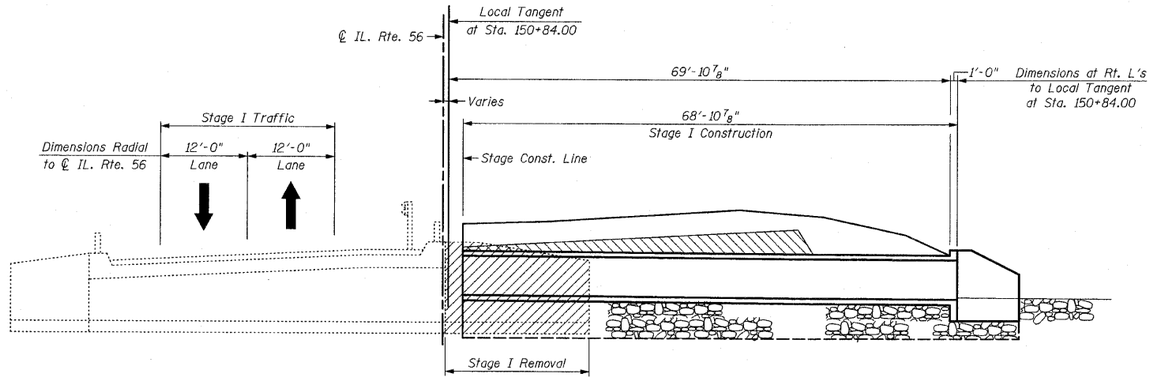
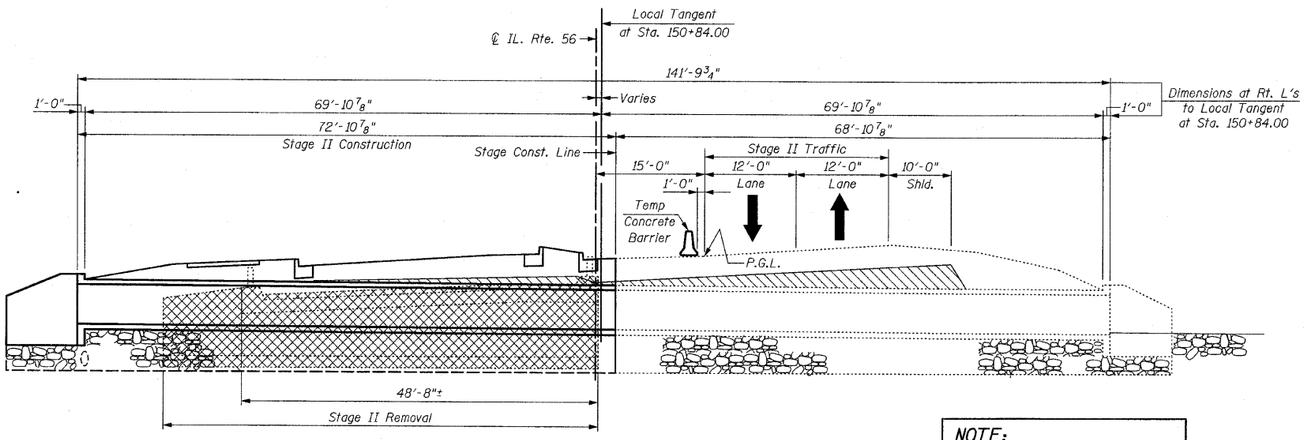
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

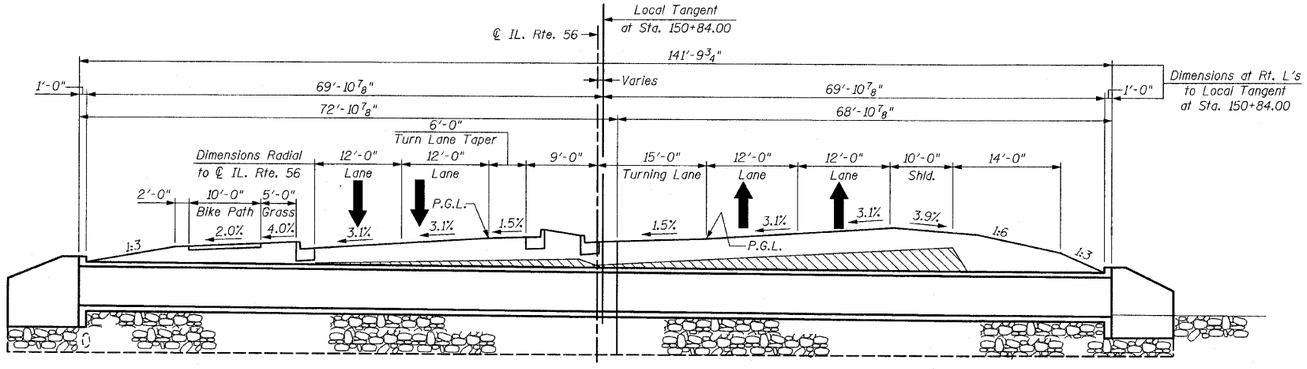


STAGE I CONSTRUCTION
(Looking East)



STAGE II CONSTRUCTION
(Looking East)

NOTE:
See Roadway Plans for quantity of Temporary Concrete Barrier



PROPOSED CROSS SECTION
(Looking East)

LEGEND:

- Existing wingwalls at downstream end to be removed (Stage I Removal)
- Existing Bridge & wingwalls at upstream end to be removed (Stage II Removal)
- Porous Granular Embankment Subgrade between top of culvert and subgrade, see Roadway Plans

STAGE CONSTRUCTION DETAILS
IL. ROUTE 56 OVER
FERRY CREEK
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 150+84.00
STRUCTURE NO. 022-2025

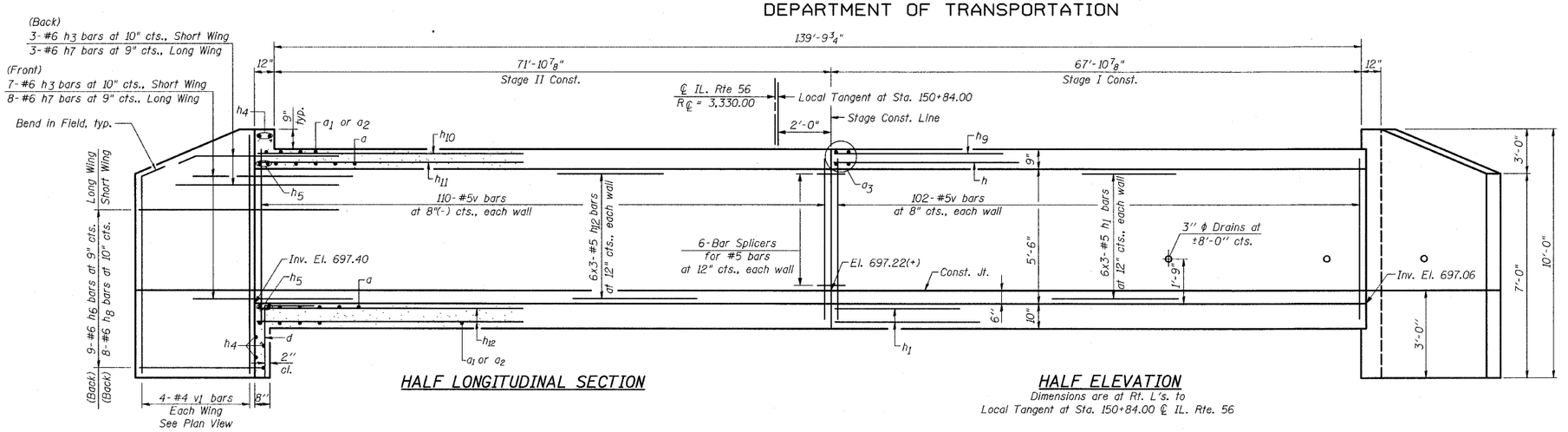
DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S2
S7 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	201
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

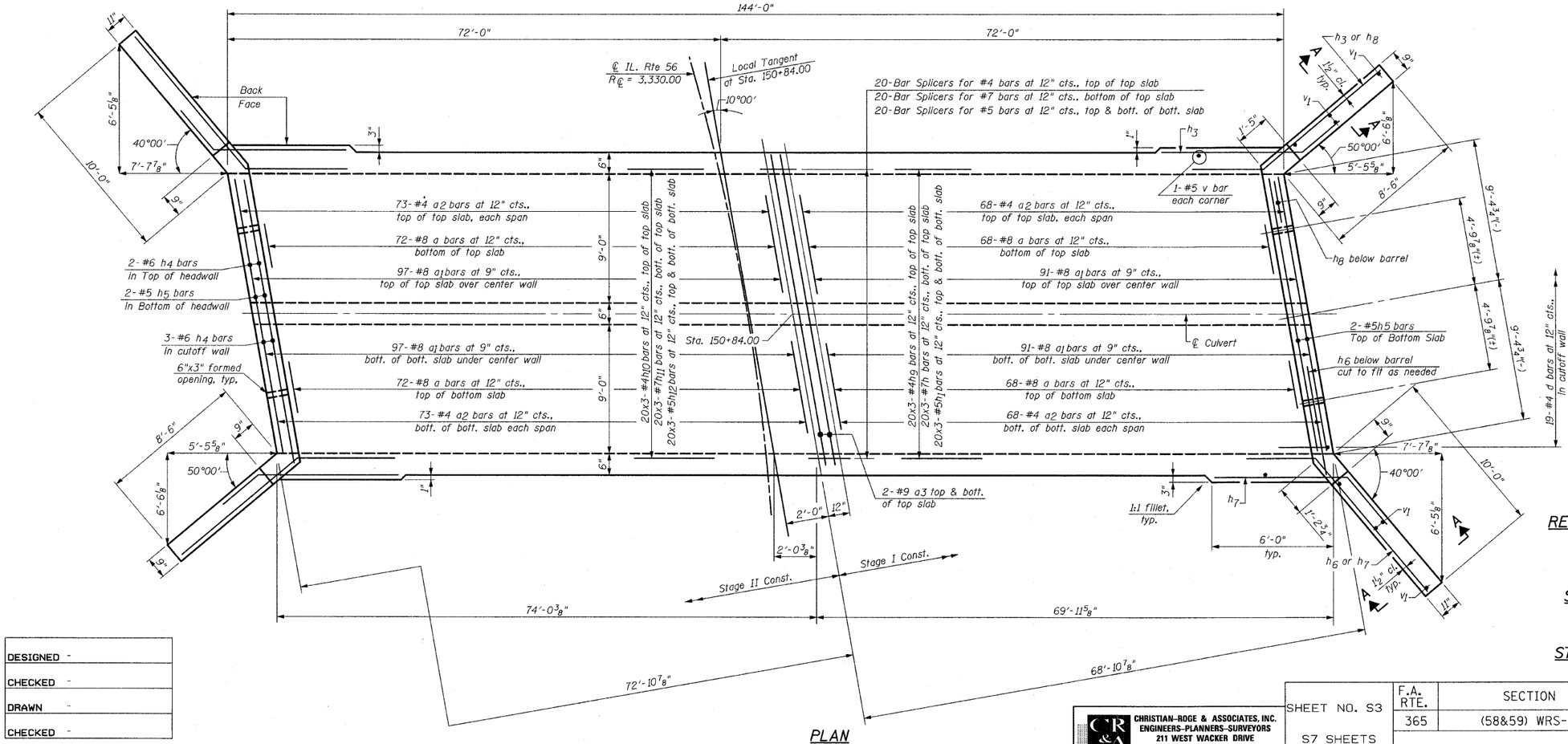
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



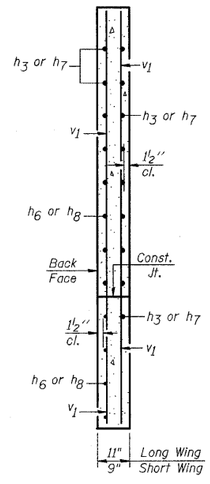
HALF LONGITUDINAL SECTION

HALF ELEVATION

Dimensions are at Rt. L's. to Local Tangent at Sta. 150+84.00 ℄ IL. Rte. 56



PLAN



SECTION A-A

MIN. BAR LAP:

#4 bars = 1'-4"
#5 bars = 1'-8"
#6 bars = 2'-0"
#7 bars = 2'-8"

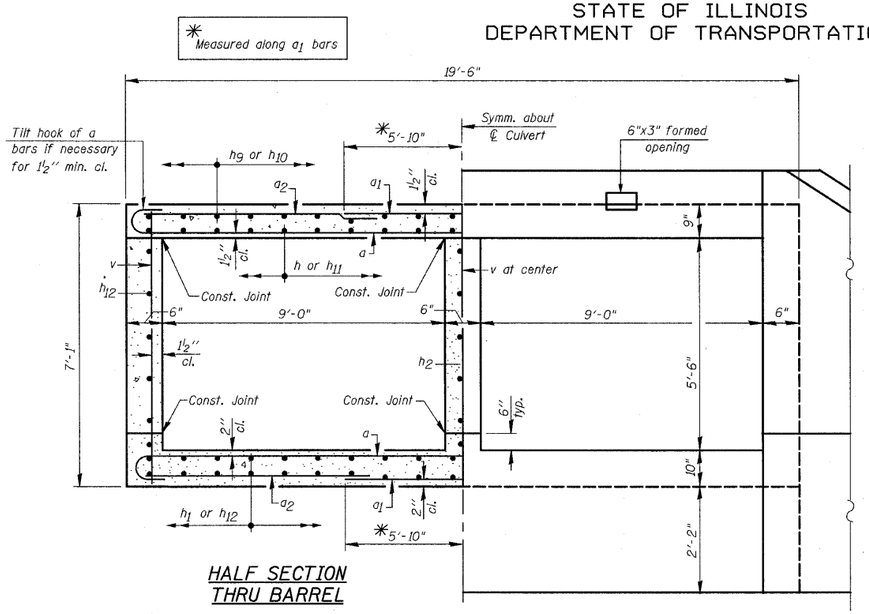
REINFORCEMENT DETAILS-I
IL. ROUTE 56 OVER FERRY CREEK
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 150+84.00
STRUCTURE NO. 022-2025

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

C R & A
CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S3	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S7 SHEETS	365	(58&59) WRS-3	DuPAGE	466	202
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

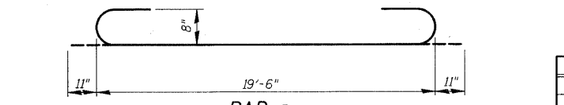
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



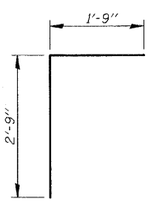
HALF SECTION THRU BARREL

HALF END ELEVATION

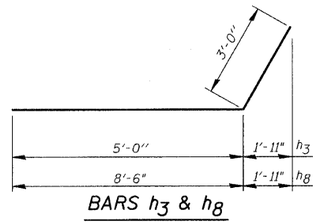
All dimensions are measured Rt. L's to ℄, except as noted



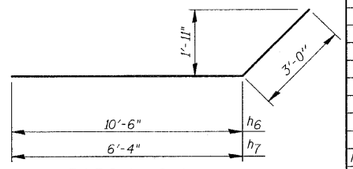
BAR a



BAR d



BARS h_3 & h_8

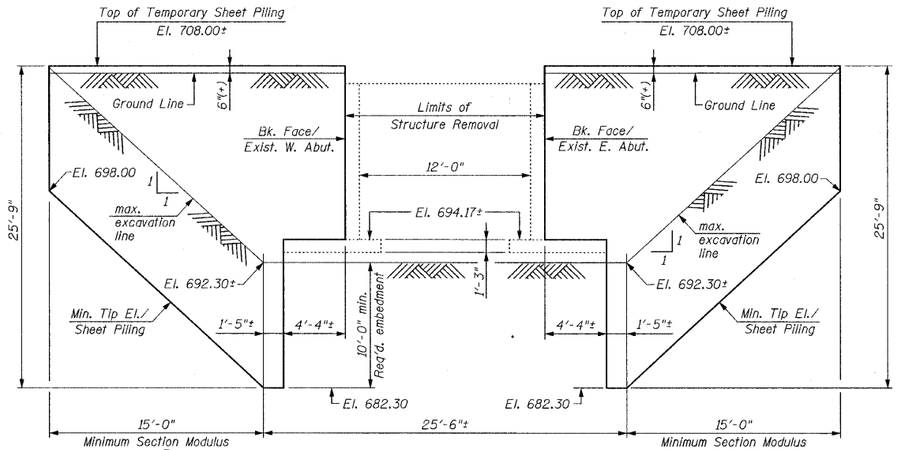


BARS h_6 & h_7

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	280	#8	21'-4"	
a_1	376	#8	11'-8"	
a_2	564	#4	5'-3"	
a_3	4	#9	19'-6"	
d	38	#4	4'-6"	
h	60	#7	25'-0"	
h_1	174	#5	24'-4"	
h_3	20	#6	8'-0"	
h_4	10	#6	19'-7"	
h_5	4	#5	19'-7"	
h_6	18	#6	13'-6"	
h_7	22	#6	9'-4"	
h_8	16	#6	11'-6"	
h_9	60	#4	24'-1"	
h_{10}	60	#4	25'-6"	
h_{11}	60	#7	26'-4"	
h_{12}	174	#5	25'-8"	
v	640	#5	6'-7"	
v_1	16	#4	9'-7"	
Reinforcement Bars		Pound	53,440	
Concrete Box Culverts		Cu Yd	222.1	
Bar Splicers		Each	98	
Removal And Disposal of Unsuitable Material For Structures		Cu Yd	662	
Rockfill		Cu Yd	662	
Stone Riprap, Class A4		Sq Yd	100	
Filter Fabric		Sq Yd	117	
Temporary Sheet Piling		Sq Ft	700	

Notes:
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
Bars indicated thus 20x3-#5 etc., indicates 20 lines of bars with 3 lengths per line.



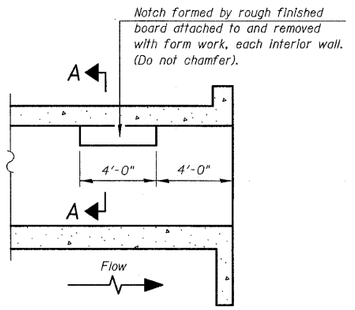
TEMPORARY SHEET PILING

(At South end of existing structure - only)

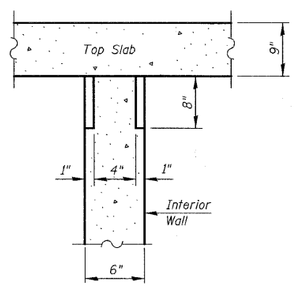
NOTES:

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including details and calculations will be required for review and acceptance by the Engineer.

The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.



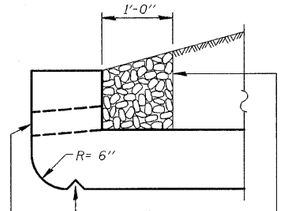
LONGITUDINAL SECTION



SECTION A-A

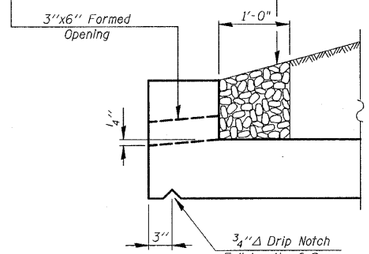
PHOEBE NESTING SITE DETAILS

(Downstream End Only)



AT UPSTREAM END

Coarse aggregate full length of both headwalls. To be placed by Grading Contractor. Cost included with Concrete Box Culverts



AT DOWNSTREAM END DRAIN DETAIL

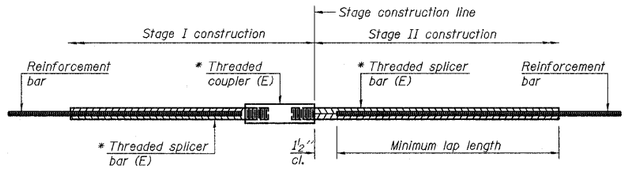
REINFORCEMENT DETAILS-II
IL. ROUTE 56 OVER FERRY CREEK
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 150+84.00
STRUCTURE NO. 022-2025

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S4	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S7 SHEETS	365	(58&59) WRS-3	DuPAGE	466	203
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

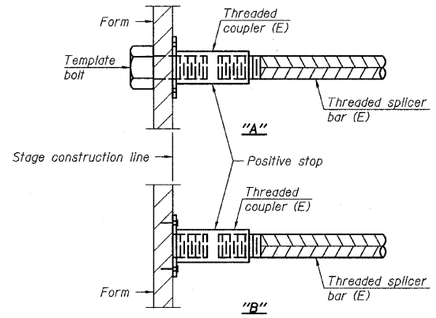
Minimum Lap Lengths				
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

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

Threaded splicer bar length = min. lap length + 1½" + thread length

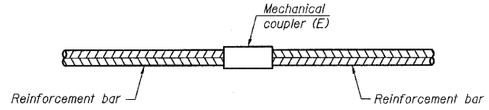
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Top Slab	#4	20	Table 1
	#7	20	Table 2
Bottom Slab	#5	40	Table 1
Walls	#5	18	Table 2
	Total	98	



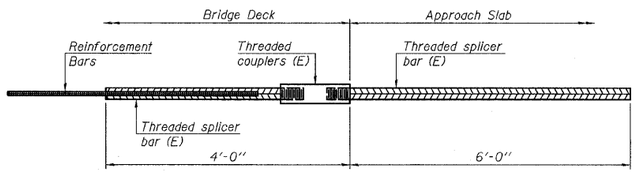
INSTALLATION AND SETTING METHODS

"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.



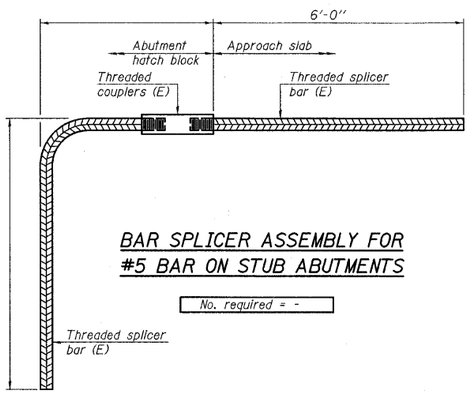
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = -



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
IL. ROUTE 56 OVER
FERRY CREEK
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 150+84.00
STRUCTURE NO. 022-2025

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

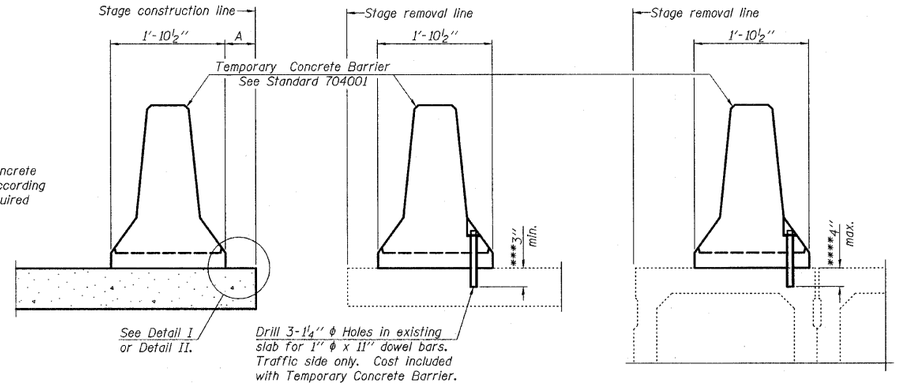
BSD-1 11-1-09

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S5	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S7 SHEETS	365	(58&59) WRS-3	DuPAGE	466	204
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB | EXISTING SLAB | EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1''x7''x10'' steel ℄ to the top layer of couplers with 2-⅝'' ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1''x7''x 10'' steel ℄ to the concrete slab or concrete wearing surface with 2-⅝'' ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

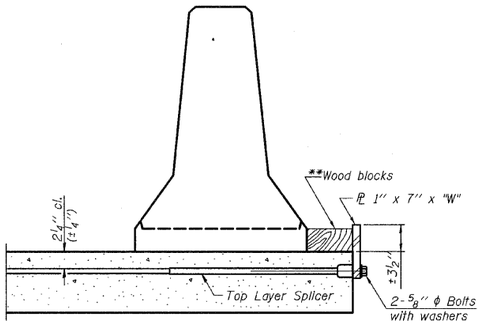
Cost of anchorage is included with Temporary Concrete Barrier.

The 1'' x 7'' x 10'' plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

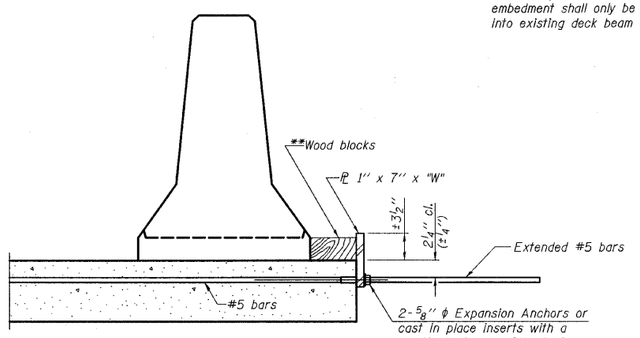
SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



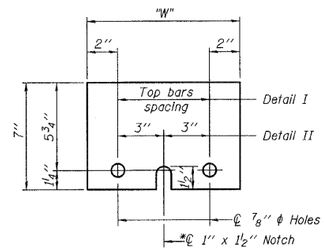
DETAIL I



DETAIL II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4''



STEEL RETAINER ℄ 1'' x 7'' x 10''
* Required only with Detail II

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
IL. ROUTE 56 OVER
FERRY CREEK
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 150+84.00
STRUCTURE NO. 022-2025

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

R-27 11-1-09

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S6	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S7 SHEETS	365	(58&59) WRS-3	DuPAGE	466	205
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOG BC-1

Page 1 of 1

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 950-04-01
Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum:
Elevation: 706.00 ft
North: 1877228.27 ft
East: 1022456.64 ft
Station: 150+75
Offset: 47 L

Elevation (ft)	SOIL AND ROCK DESCRIPTION
705.8	3-inch thick SANDY GRAVEL --SHOUDER AGGREGATE--
	Very stiff to stiff, brown SILTY CLAY to gravelly SILTY CLAY --FILL--
701.3	Loose to very loose, brown, medium SAND, wet
689.5	Medium dense, brown GRAVELLY SAND, wet
685.5	Medium dense, brown, medium SAND, wet
679.5	Hard, gray SILTY CLAY to SILTY CLAY LOAM
673.5	Dense, brown and gray GRAVELLY SAND, wet
661.0	Boring terminated at 45.00 ft

Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
1	13, 15, 13	2.95 B	28
2	4, 4, 3	1.50 P	16
3	2, 2, 2	NP	8
4	2, 2, 2	NP	13
5	0, 1, 0	NP	13
6	0, 0, 2	NP	24
7	1, 6, 10	NP	15
8	10, 11, 7	NP	8
9	11, 9, 11	NP	21
10	7, 7, 8	NP	26
11	--, --, --	NA	
12	10, 10, 16	4.26 B	12
13	10, 5, 10	4.00 P	15
14	5, 9, 20	NA	15
15	9, 20, 23	NP	8

GENERAL NOTES
Begin Drilling 02-19-2003 Complete Drilling 02-19-2003
Drilling Contractor PATRICK Drill Rig CME
Driller K&D Logger N. DAVIS Checked by E. DATZ
Drilling Method 3.25 ID HSA; Boring Backfilled Upon Completion

WATER LEVEL DATA
While Drilling ▽ 8.75 ft
At Completion of Drilling ▼ 37.50 ft
Time After Drilling NA
Depth to Water ▽ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 9500401.GPJ WANGENG.GDT 7/21/09

BORING LOG BC-2

Page 1 of 1

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 950-04-01
Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum:
Elevation: 707.00 ft
North: 1877188.03 ft
East: 1022459.81 ft
Station: 150+71
Offset: 7 L

Elevation (ft)	SOIL AND ROCK DESCRIPTION
706.8	3" SANDY GRAVEL --SHOULDER AGGREGATE--
	Hard, brown SILTY CLAY to gravelly SILTY CLAY --FILL--
702.0	Loose to very loose, brown SAND
691.5	Medium dense,brown SANDY GRAVEL, wet
679.5	Very stiff to hard, gray, SILTY CLAY with gravel
667.0	Boring terminated at 40.00 ft

Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
1	12, 15, 12	5.17 B	26
2	3, 3, 4	>4.5 P	22
3	3, 3, 4	NP	7
4	2, 2, 3	NP	8
5	1, 0, 0	NP	15
6	0, 0, 0	NA	
7	4, 8, 11	NP	18
8	3, 13, 14	NP	11
9	6, 6, 6	NP	11
10	13, 13, 21	NP	10
11	21, 26, 19	NP	10
12	6, 8, 12	2.50 P	12
13	7, 11, 16	4.67 B	16
14	6, 9, 11	--	18

GENERAL NOTES
Begin Drilling 02-18-2003 Complete Drilling 02-18-2003
Drilling Contractor PATRICK Drill Rig CME
Driller K&D Logger N. DAVIS Checked by E. DATZ
Drilling Method 3.25 ID HSA; Boring Backfilled Upon Completion

WATER LEVEL DATA
While Drilling ▽ 9.75 ft
At Completion of Drilling ▼ 37.50 ft
Time After Drilling NA
Depth to Water ▽ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 9500401.GPJ WANGENG.GDT 7/21/09

BORING LOG BC-3

Page 1 of 1

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Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 950-04-01
Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum:
Elevation: 701.00 ft
North: 1877137.03 ft
East: 1022498.09 ft
Station: 151+00
Offset: 50 R

Elevation (ft)	SOIL AND ROCK DESCRIPTION
	36-inch thick, black CLAY LOAM, trace organic material --TOPSOIL--
698.0	Soft to stiff, black SANDY CLAY LOAM, trace organic material
692.3	Medium dense, gray SILTY LOAM, wet
690.8	Medium dense to dense, gray GRAVELLY SAND
678.5	Stiff to very stiff, gray SILTY CLAY
666.0	Boring terminated at 35.00 ft

Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
1	-, -, -	1.75 P	20
2	2, 2, 2	1.50 P	31
3	1, 1, 3	0.49 B	23
4	3, 6, 8	NP	22
5	6, 5, 6	NP	5
6	10, 16, 21	NP	11
7	4, 15, 14	NP	21
8	6, 7, 12	NP	7
9	7, 16, 7	NP	26
10	3, 6, 9	3.03 B	16
11	5, 7, 11	2.79 B	16
12	6, 9, 13	1.89 B	16
13	4, 5, 8	2.87 B	17

GENERAL NOTES
Begin Drilling 01-08-2003 Complete Drilling 01-08-2003
Drilling Contractor PATRICK Drill Rig CME 75 ATV
Driller T&L Logger S. Patel Checked by E. DATZ
Drilling Method 3.25 ID HSA; Boring Backfilled With Bentonite Chips Upon Completion

WATER LEVEL DATA
While Drilling ▽ 8.50 ft
At Completion of Drilling ▼ 5.50 ft
Time After Drilling NA
Depth to Water ▽ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 9500401.GPJ WANGENG.GDT 7/21/09

SOIL BORING LOGS
IL. ROUTE 56 OVER
FERRY CREEK
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 150+84.00
STRUCTURE NO. 022-2025

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S7	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S7 SHEETS	365	(58&59) WRS-3	DuPAGE	466	206
			CONTRACT NO. 62420		
			ILLINOIS FED. AID PROJECT		

BENCH MARK: CRA 18

South bolt on fire hydrant at Sta. 173+03.39, 92.89' Lt., Elev. 703.55

EXISTING STRUCTURE:

Existing Structure No. 022-0054 was first constructed in 1948 under Section 1977-212-WRS-BR-TS. The bridge has three simply supported spans: Spans 1 & 3 are 32'-3" cts. to cts. of bearings, span 2 is 44'-3" cts. to cts. of bearings, for a total of 116'-6" back to back of abutments. The substructure consists of closed abutments and reinforced concrete solid wall piers constructed on spread footings. In 1980 the superstructure was reconstructed with Precast Prestressed Concrete Deck Beams and both the superstructure and substructure were widened to 59'-0" out to out of beams.

The existing structure is to be removed & replaced.

Traffic is to be maintained utilizing Stage Construction.

The existing structure is to be used as Stage 1 Traffic Lanes during Stage 1 Construction.

Salvage: None

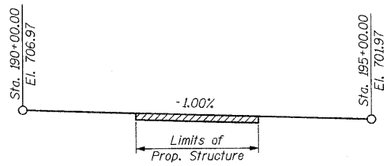
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WATERWAY INFORMATION

Drainage Area = 88.7 Sq. Mi.			Exist. Low Grade El. = 695.98 @ Sta. 195+50			Prop. Low Grade El. = 700.26 @ Sta. 196+50			
Flood	Freq. (Year)	Q (C.F.S.)	Waterway Opening (Sq. Ft.)		NAT. H.W.E.	CreatedHead (Ft.)		Headwater Elev.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
-	10	2,830	702.43	796.40	695.27	0.00	+0.10	695.27	695.37
Design	50	3,970	820.47	967.70	696.60	0.00	+0.12	696.60	696.72
Base	100	4,450	874.14	1,050.90	697.22	0.01	+0.13	697.23	697.35
Overtopping									
Existing	30	3,580							
Proposed	>500	N/A							
Max. Calc.	500	5,650	941.98	1,216.90	698.43	.044	+0.15	698.87	698.58

DESIGN SCOUR ELEVATION TABLE

Location	W. Abut.	Pier	E. Abut.
Design Scour Elevations	697.00	681.00	695.36

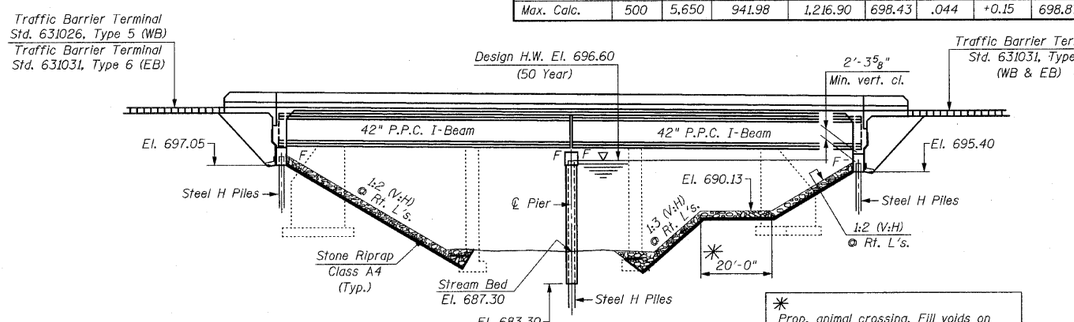


PROFILE GRADE

(Along WB P.G.L. & E.B. P.G.L. of IL. Rte. 56)

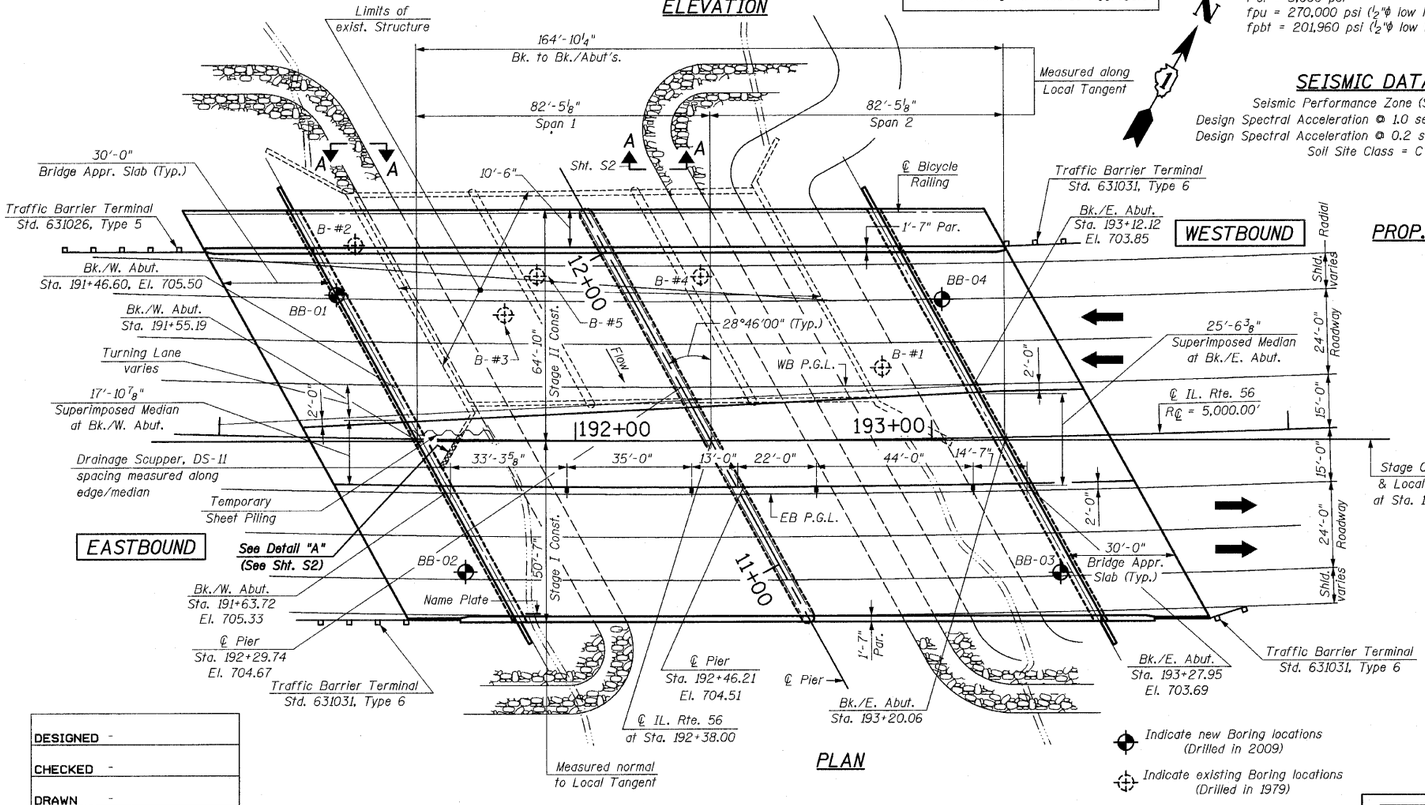
INDEX OF SHEETS

S1 GENERAL PLAN & ELEVATION
S2 GENERAL NOTES & TOTAL BILL OF MATERIAL
S3 STAGE CONSTRUCTION DETAILS
S4-S11 TOP OF SLAB ELEVATIONS
S12 TOP OF EAST APPROACH SLAB ELEVATIONS
S13 TOP OF WEST APPROACH SLAB ELEVATIONS
S14 DECK PLAN-I
S15 DECK PLAN-II
S16 DECK CROSS SECTION & MEDIAN PLAN
S17 SUPERSTRUCTURE DETAILS
S18 BICYCLE RAILING
S19 DRAINAGE SCUPPER, DS-11
S20 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
S21 DIAPHRAGM ELEVATIONS AT ABUTMENTS & PIER-I
S22 DIAPHRAGM ELEVATIONS AT ABUTMENTS & PIER-II
S23 FRAMING PLAN
S24 42" P.P.C. I-BEAM DETAILS-I
S25 42" P.P.C. I-BEAM DETAILS-II
S26 WEST ABUTMENT-I
S27 WEST ABUTMENT-II
S28 EAST ABUTMENT-I
S29 EAST ABUTMENT-II
S30 PIER DETAILS
S31 APPROACH SLAB DETAILS-I
S32 APPROACH SLAB DETAILS-II
S33 APPROACH SLAB DETAILS-III
S34 BAR SPLICER ASSEMBLY DETAILS AND MECHANICAL SPLICER DETAILS
S35 HP PILE DETAILS
S36-S43 SOIL BORING LOGS



* Prop. animal crossing. Fill voids on animal crossing with Coarse Aggregate

ELEVATION



PLAN

Indicate new Boring locations (Drilled in 2009)

Indicate existing Boring locations (Drilled in 1979)

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 & 2009 Interims

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

LOADING HL-93

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

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (½"ϕ low lax strands)
fpbt = 201,960 psi (½"ϕ low lax strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration @ 1.0 sec (SD1) = 0.063g
Design Spectral Acceleration @ 0.2 sec (SDS) = 0.121g
Soil Site Class = C

CURVE DATA

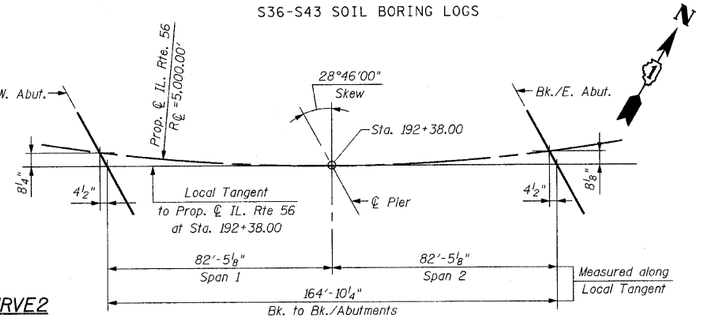
PROP. CURVE #56CURVE2

Δ = 14°15'54" (Lt.)
D = 1°08'45"
T = 625.66'
L = 1,244.85'
E = 38.99'
R = 5,000.00'
S.E. = 2.2%
P.C. = Sta. 190+01.95
P.T. = Sta. 202+46.80
P.I. = Sta. 196+27.61

STATION 192+38
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. ROUTE 365
SECTION (58&59) WRS-3
LOADING HL-93
STRUCTURE NO. 022-2027

NAME PLATE

See Std. 515001

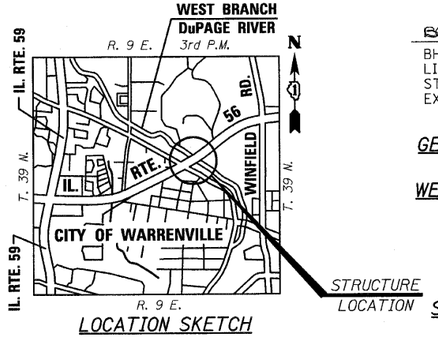


OFFSET SKETCH

STATE OF ILLINOIS
BHADRESH N. SHAH
081-004476
CHICAGO
LICENSED STRUCTURAL ENGINEER

BHadresh N. Shah

BHADRESH N. SHAH 08/11/2010
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS LIC. No. 081-004476
EXPIRES: 11-30-10



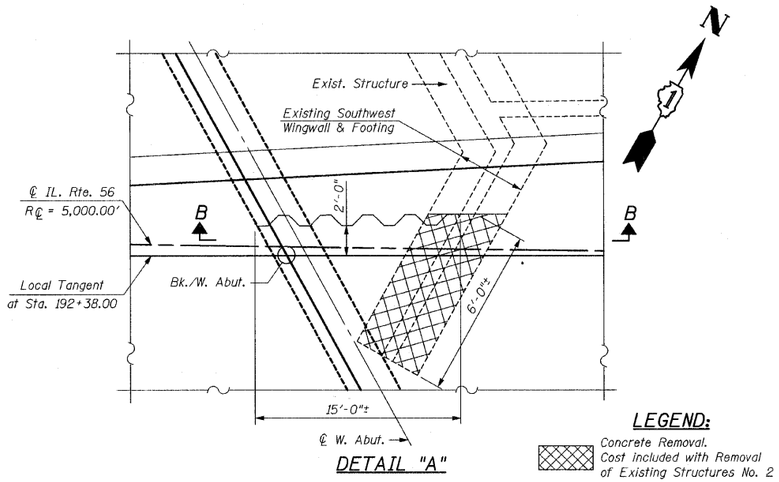
LOCATION SKETCH

GENERAL PLAN & ELEVATION
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

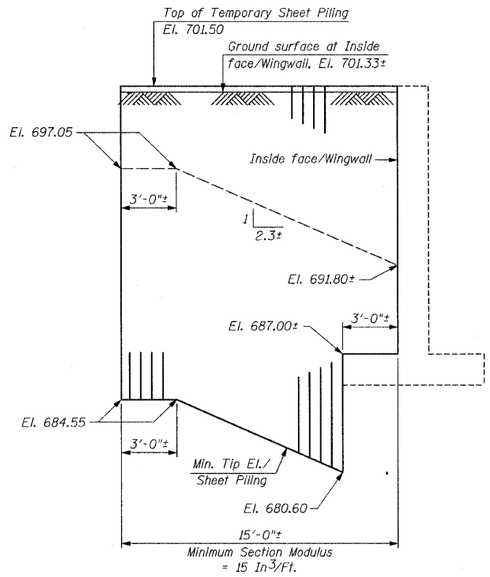
SHEET NO. S1	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	207
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		



DETAIL "A"

LEGEND:

Concrete Removal. Cost included with Removal of Existing Structures No. 2



ELEVATION B-B

NOTES:

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including details and calculations will be required for review and acceptance by the Engineer.

The Contractor shall connect the first sheet to the existing Southwest Wingwall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

Temporary Sheet Piling shall be provided before Stage I Construction and removed during removal of existing structure

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOTAL BILL OF MATERIAL

DESCRIPTION	UNIT	SUPER.	SUB.	TOTAL
Porous Granular Embankment, Special	Cu. Yd.	-	464	464
Stone Riprap, Class A4	Sq. Yd.	-	710	710
Filter Fabric	Sq. Yd.	-	664	664
Removal of Existing Structures No. 2	Each	-	-	1
Structure Excavation	Cu. Yd.	-	942	942
Concrete Structures	Cu. Yd.	-	404.2	404.2
Concrete Superstructure	Cu. Yd.	1,166.2	-	1,166.2
Bridge Deck Grooving	Sq. Yd.	2,080	-	2,080
Concrete Encasement	Cu. Yd.	-	35.5	35.5
Protective Coat	Sq. Yd.	3,089	-	3,089
Furnishing & Erecting Precast Prestressed Concrete I-Beams, 42 in.	Foot	2,916	-	2,916
Reinforcement Bars, Epoxy Coated	Pound	275,360	30,630	305,990
Bar Splicers	Each	924	106	1,030
Bicycle Railing	Foot	225	-	225
Parapet Railing	Foot	225	-	225
Furnishing Steel Piles HP 14x73	Foot	-	1,729	1,729
Furnishing Steel Piles HP 14x102	Foot	-	1,032	1,032
Driving Piles	Foot	-	2,761	2,761
Test Pile Steel HP 14x73	Each	-	2	2
Test Pile Steel HP 14x102	Each	-	1	1
Pile Shoes	Each	-	65	65
Temporary Sheet Piling	Sq. Ft.	-	265	265
Name Plates	Each	1	-	1
Geocomposite Wall Drain	Sq. Yd.	-	245	245
Pipe Underdrains for Structures 4"	Foot	-	567	567
Asbestos Bearing Pad Removal	Each	68	-	68
Drainage Scuppers, DS-11	Each	4	-	4
Underwater Structure Excavation Protection - Location 1	Each	-	1	1

GENERAL NOTES:

Layout of Slope Protection System may be varied in the field to suit ground conditions as directed by the Engineer.

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

For pavement removal & channel excavation between the existing abutment and the new abutment see Roadway Plans.

Slip Forming of the parapets is not allowed.

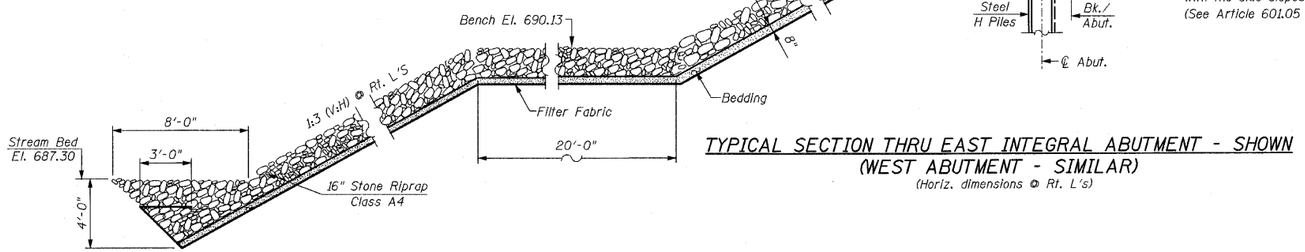
Reinforcement Bars shall conform to the requirements of ASTM A 706, Grade 60. See Special Provisions.

Reinforcement Bars designated (E) shall be epoxy coated.

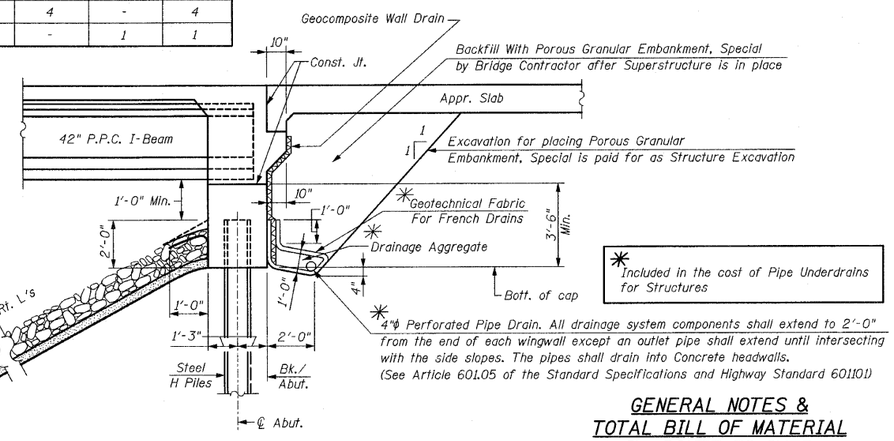
For cleaning out and reshaping channel, see Roadway Plans. Removal of existing debris in channel is included with pay item for "Channel Excavation".

The Contractor shall prepare an In-Stream Work Plan that is in accordance with the requirements of SWPPP, 401 and 404 Permits. All erosion and sediment control, cofferdams, work pads and any work required by the Contractor's operation will be included in the cost of "Underwater Structure Excavation Protection - Location 1".

In lieu of the hammer selection criteria and use of the FHWA Modified Gates formula specified in Section 512 of the Standard Specifications, the Contractor shall conduct a wave equation analysis to establish the driving criteria at all pile foundations which specify a nominal required bearing above 600 kips. The analysis and calculations shall be submitted to the Engineer for approval.



SECTION A-A



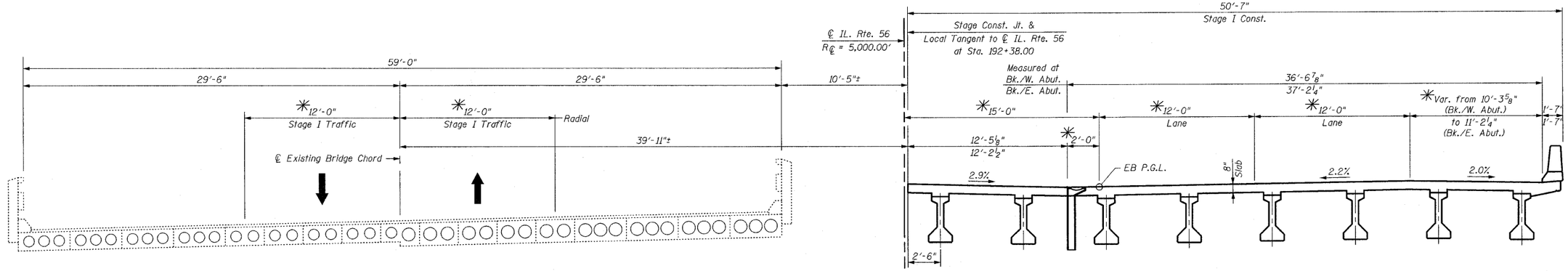
TYPICAL SECTION THRU EAST INTEGRAL ABUTMENT - SHOWN
(WEST ABUTMENT - SIMILAR)
(Horiz. dimensions @ Rt. L's)

GENERAL NOTES & TOTAL BILL OF MATERIAL IL. ROUTE 56 OVER WEST BRANCH DuPAGE RIVER F.A.P. RTE. 365 SECTION (58&59) WRS-3 DuPAGE COUNTY STA. 192+38.00 STRUCTURE NO. 022-2027

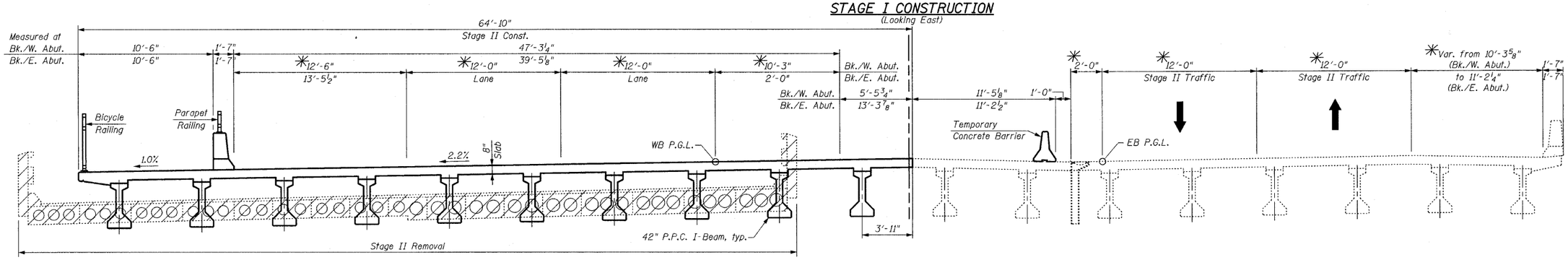
CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S2	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	208
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

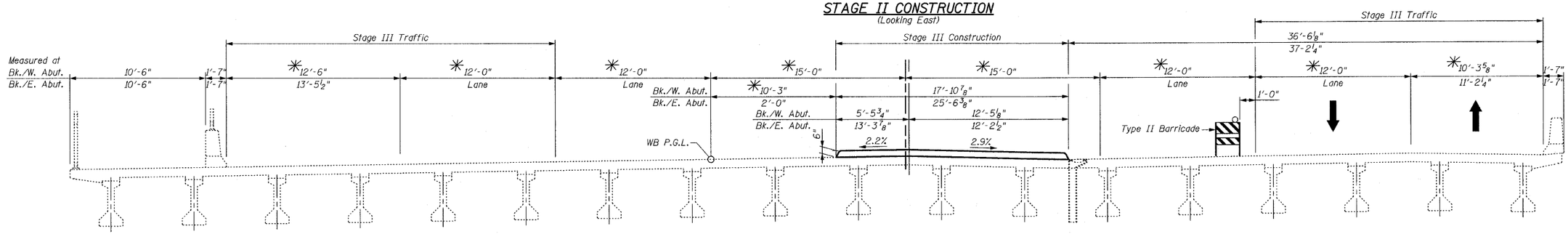
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STAGE I CONSTRUCTION
(Looking East)



STAGE II CONSTRUCTION
(Looking East)



STAGE III CONSTRUCTION

DECK CROSS SECTION
(Looking East)

✳ Measured radially to ℄ IL. Rte 56

NOTE:
See Roadway Plans for quantity of Temporary Concrete Barrier & Type II Barricade

NOTE:
Concrete Median shall be poured after the Superstructure forms at Stage II Construction have been removed

STAGE CONSTRUCTION DETAILS
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

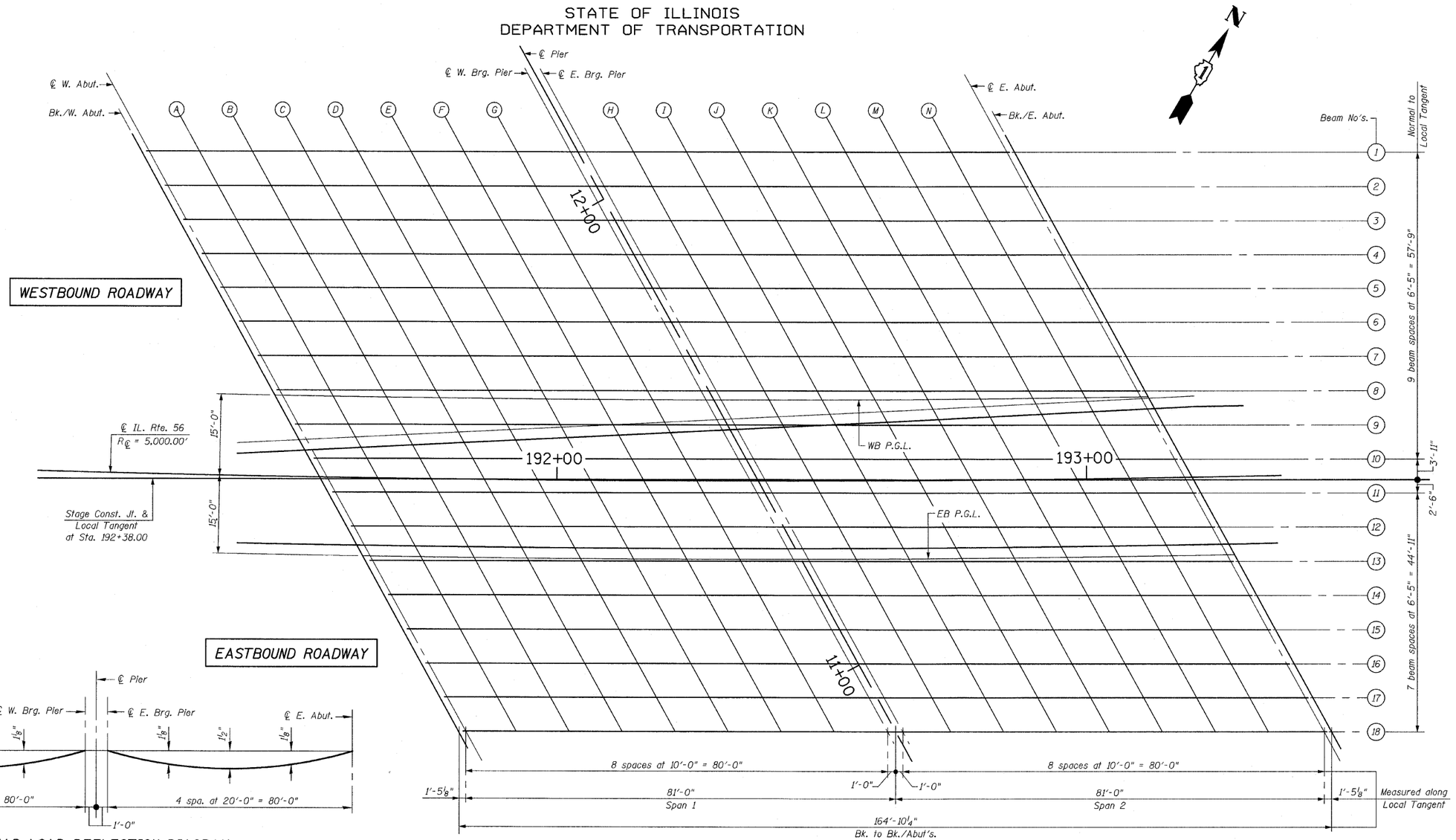
DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

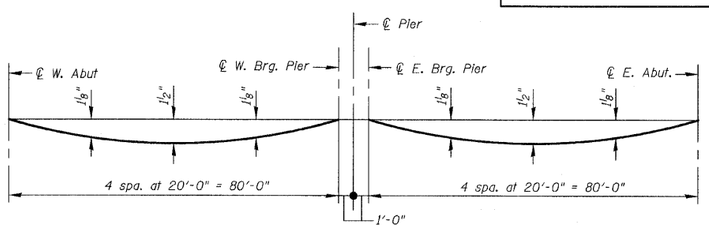
SHEET NO. S3
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	209
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

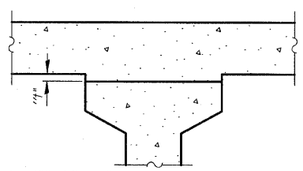


PLAN



DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete, excluding beams)

Note:
The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheets S5 thru S11



To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections shown on Sheets S5 thru S11, minus slab thickness, equals the fillet heights "t" above top flanges of beams

FILLET HEIGHTS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

TOP OF SLAB ELEVATIONS-I
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

C&R A
CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S4
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	210
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WESTBOUND ROADWAY

CL BEAM 1

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+20.29	-60.30	704.86	704.86
CL WEST ABUT.	191+21.73	-60.33	704.85	704.85
A	191+31.85	-60.55	704.74	704.79
B	191+41.97	-60.76	704.64	704.72
C	191+52.09	-60.94	704.54	704.64
D	191+62.22	-61.10	704.43	704.56
E	191+72.34	-61.24	704.33	704.44
F	191+82.46	-61.36	704.23	704.31
G	191+92.59	-61.46	704.13	704.17
CL W BRG PIER	192+02.71	-61.54	704.02	704.02
CL PIER	192+03.72	-61.55	704.01	704.01
CL E BRG PIER	192+04.74	-61.56	704.00	704.00
H	192+14.86	-61.61	703.90	703.94
I	192+24.98	-61.65	703.80	703.88
J	192+35.11	-61.67	703.70	703.80
K	192+45.23	-61.66	703.60	703.72
L	192+55.36	-61.64	703.50	703.60
M	192+65.48	-61.59	703.40	703.48
N	192+75.61	-61.53	703.30	703.34
CL EAST ABUT.	192+85.73	-61.44	703.20	703.20
BACK OF EAST ABUT.	192+87.18	-61.43	703.18	703.18

CL BEAM 2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+24.00	-53.96	704.89	704.89
CL WEST ABUT.	191+25.44	-54.00	704.87	704.87
A	191+35.55	-54.21	704.77	704.81
B	191+45.66	-54.41	704.67	704.75
C	191+55.77	-54.58	704.56	704.67
D	191+65.88	-54.74	704.46	704.59
E	191+75.99	-54.87	704.36	704.46
F	191+86.10	-54.98	704.26	704.34
G	191+96.21	-55.08	704.15	704.20
CL W BRG PIER	192+06.32	-55.15	704.05	704.05
CL PIER	192+07.33	-55.16	704.04	704.04
CL E BRG PIER	192+08.34	-55.16	704.03	704.03
H	192+18.45	-55.21	703.93	703.97
I	192+28.56	-55.24	703.83	703.91
J	192+38.68	-55.25	703.73	703.83
K	192+48.79	-55.24	703.63	703.75
L	192+58.90	-55.21	703.53	703.63
M	192+69.01	-55.15	703.43	703.51
N	192+79.12	-55.08	703.33	703.37
CL EAST ABUT.	192+89.23	-54.99	703.23	703.23
BACK OF EAST ABUT.	192+90.68	-54.98	703.21	703.21

CL BEAM 3

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+27.70	-47.63	704.98	704.98
CL WEST ABUT.	191+29.14	-47.66	704.96	704.96
A	191+39.24	-47.87	704.86	704.90
B	191+49.33	-48.05	704.75	704.83
C	191+59.43	-48.22	704.65	704.75
D	191+69.53	-48.37	704.54	704.67
E	191+79.62	-48.50	704.44	704.54
F	191+89.72	-48.60	704.33	704.41
G	191+99.82	-48.69	704.23	704.27
CL W BRG PIER	192+09.92	-48.76	704.13	704.13
CL PIER	192+10.93	-48.76	704.12	704.12
CL E BRG PIER	192+11.94	-48.77	704.11	704.11
H	192+22.03	-48.81	704.01	704.05
I	192+32.13	-48.83	703.90	703.98
J	192+42.23	-48.83	703.80	703.91
K	192+52.33	-48.81	703.70	703.83
L	192+62.43	-48.77	703.60	703.71
M	192+72.53	-48.72	703.50	703.58
N	192+82.63	-48.64	703.40	703.45
CL EAST ABUT.	192+92.72	-48.54	703.31	703.31
BACK OF EAST ABUT.	192+94.16	-48.52	703.29	703.29

TOP OF SLAB ELEVATIONS-II
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S5	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	211
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WESTBOUND ROADWAY

CL BEAM 4

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+31.40	-41.29	705.08	705.08
CL WEST ABUT.	191+32.84	-41.32	705.06	705.06
A	191+42.92	-41.52	704.96	705.00
B	191+53.00	-41.70	704.85	704.93
C	191+63.08	-41.86	704.75	704.85
D	191+73.17	-42.00	704.64	704.77
E	191+83.25	-42.12	704.54	704.65
F	191+93.34	-42.22	704.44	704.52
G	192+03.42	-42.30	704.34	704.38
CL W BRG PIER	192+13.51	-42.36	704.23	704.23
CL PIER	192+14.51	-42.36	704.22	704.22
CL E BRG PIER	192+15.52	-42.37	704.21	704.21
H	192+25.61	-42.40	704.11	704.15
I	192+35.69	-42.42	704.01	704.09
J	192+45.78	-42.41	703.91	704.01
K	192+55.86	-42.39	703.81	703.93
L	192+65.95	-42.34	703.71	703.81
M	192+76.04	-42.27	703.61	703.69
N	192+86.12	-42.19	703.51	703.55
CL EAST ABUT.	192+96.20	-42.08	703.41	703.41
BACK OF EAST ABUT.	192+97.64	-42.06	703.40	703.40

CL BEAM 5

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+35.08	-34.95	705.18	705.18
CL WEST ABUT.	191+36.52	-34.98	705.17	705.17
A	191+46.59	-35.17	705.06	705.10
B	191+56.66	-35.34	704.96	705.04
C	191+66.73	-35.50	704.85	704.96
D	191+76.80	-35.63	704.75	704.87
E	191+86.87	-35.74	704.65	704.75
F	191+96.94	-35.83	704.54	704.62
G	192+07.01	-35.90	704.44	704.48
CL W BRG PIER	192+17.09	-35.96	704.34	704.34
CL PIER	192+18.09	-35.96	704.33	704.33
CL E BRG PIER	192+19.10	-35.96	704.32	704.32
H	192+29.17	-35.99	704.22	704.26
I	192+39.25	-36.00	704.12	704.20
J	192+49.32	-35.99	704.02	704.12
K	192+59.39	-35.95	703.92	704.04
L	192+69.46	-35.90	703.82	703.92
M	192+79.53	-35.83	703.72	703.80
N	192+89.61	-35.74	703.62	703.66
CL EAST ABUT.	192+99.68	-35.62	703.52	703.52
BACK OF EAST ABUT.	193+01.11	-35.60	703.51	703.51

CL BEAM 6

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+38.76	-28.60	705.28	705.28
CL WEST ABUT.	191+40.19	-28.63	705.27	705.27
A	191+50.25	-28.82	705.16	705.21
B	191+60.31	-28.98	705.06	705.14
C	191+70.36	-29.13	704.96	705.06
D	191+80.42	-29.25	704.85	704.98
E	191+90.48	-29.36	704.75	704.85
F	192+00.54	-29.44	704.65	704.73
G	192+10.60	-29.51	704.55	704.59
CL W BRG PIER	192+20.66	-29.55	704.44	704.44
CL PIER	192+21.66	-29.56	704.43	704.43
CL E BRG PIER	192+22.67	-29.56	704.42	704.42
H	192+32.73	-29.58	704.32	704.36
I	192+42.79	-29.58	704.22	704.30
J	192+52.85	-29.56	704.12	704.23
K	192+62.91	-29.52	704.02	704.15
L	192+72.97	-29.46	703.92	704.03
M	192+83.02	-29.38	703.82	703.90
N	192+93.08	-29.28	703.73	703.77
CL EAST ABUT.	193+03.14	-29.16	703.63	703.63
BACK OF EAST ABUT.	193+04.58	-29.14	703.61	703.61

TOP OF SLAB ELEVATIONS-III
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
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SHEET NO. S6
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	212
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WESTBOUND ROADWAY

CL BEAM 7

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+42.42	-22.26	705.39	705.39
CL WEST ABUT.	191+43.86	-22.28	705.37	705.37
A	191+53.90	-22.46	705.27	705.31
B	191+63.94	-22.62	705.16	705.24
C	191+73.99	-22.76	705.06	705.16
D	191+84.03	-22.88	704.96	705.08
E	191+94.08	-22.97	704.85	704.96
F	192+04.13	-23.05	704.75	704.83
G	192+14.17	-23.11	704.65	704.69
CL W BRG PIER	192+24.22	-23.15	704.55	704.55
CL PIER	192+25.22	-23.15	704.54	704.54
CL E BRG PIER	192+26.23	-23.15	704.53	704.53
H	192+36.27	-23.17	704.43	704.47
I	192+46.32	-23.16	704.33	704.41
J	192+56.37	-23.13	704.23	704.33
K	192+66.41	-23.09	704.13	704.25
L	192+76.46	-23.02	704.03	704.13
M	192+86.50	-22.93	703.93	704.01
N	192+96.55	-22.83	703.83	703.87
CL EAST ABUT.	193+06.60	-22.70	703.74	703.74
BACK OF EAST ABUT.	193+08.03	-22.68	703.72	703.72

CL BEAM 8

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+46.08	-15.91	705.49	705.49
CL WEST ABUT.	191+47.51	-15.93	705.47	705.47
A	191+57.54	-16.10	705.37	705.41
B	191+67.57	-16.26	705.27	705.35
C	191+77.60	-16.39	705.16	705.27
D	191+87.64	-16.50	705.06	705.19
E	191+97.67	-16.59	704.96	705.06
F	192+07.70	-16.66	704.86	704.94
G	192+17.74	-16.71	704.76	704.80
CL W BRG PIER	192+27.77	-16.74	704.65	704.65
CL PIER	192+28.77	-16.74	704.64	704.64
CL E BRG PIER	192+29.78	-16.74	704.63	704.63
H	192+39.81	-16.75	704.53	704.58
I	192+49.84	-16.74	704.43	704.51
J	192+59.88	-16.70	704.33	704.44
K	192+69.91	-16.65	704.24	704.36
L	192+79.94	-16.57	704.14	704.24
M	192+89.98	-16.48	704.04	704.12
N	193+00.01	-16.37	703.94	703.98
CL EAST ABUT.	193+10.04	-16.23	703.84	703.84
BACK OF EAST ABUT.	193+11.47	-16.21	703.83	703.83

WESTBOUND PGL

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+46.60	-15.00	705.50	705.50
CL WEST ABUT.	191+48.05	-15.00	705.49	705.49
A	191+58.17	-15.00	705.39	705.39
B	191+68.29	-15.00	705.29	705.29
C	191+78.39	-15.00	705.19	705.19
D	191+88.48	-15.00	705.09	705.09
E	191+98.56	-15.00	704.98	704.98
F	192+08.63	-15.00	704.88	704.88
G	192+18.69	-15.00	704.78	704.78
CL W BRG PIER	192+28.73	-15.00	704.68	704.68
CL PIER	192+29.74	-15.00	704.67	704.67
CL E BRG PIER	192+30.74	-15.00	704.66	704.66
H	192+40.77	-15.00	704.56	704.56
I	192+50.79	-15.00	704.46	704.46
J	192+60.81	-15.00	704.36	704.36
K	192+70.80	-15.00	704.26	704.26
L	192+80.79	-15.00	704.16	704.16
M	192+90.77	-15.00	704.06	704.06
N	193+00.74	-15.00	703.96	703.96
CL EAST ABUT.	193+10.70	-15.00	703.86	703.86
BACK OF EAST ABUT.	193+12.12	-15.00	703.85	703.85

TOP OF SLAB ELEVATIONS-IV
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
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CHICAGO, ILLINOIS 60606
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SHEET NO. S7
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	213
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WESTBOUND ROADWAY

CL BEAM 9

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+49.73	-9.56	705.59	705.59
CL WEST ABUT.	191+51.16	-9.58	705.58	705.58
A	191+61.17	-9.74	705.47	705.52
B	191+71.19	-9.89	705.37	705.45
C	191+81.21	-10.01	705.27	705.37
D	191+91.23	-10.12	705.17	705.29
E	192+01.25	-10.20	705.06	705.17
F	192+11.27	-10.26	704.96	705.04
G	192+21.29	-10.31	704.86	704.90
CL W BRG PIER	192+31.31	-10.33	704.76	704.76
CL PIER	192+32.32	-10.33	704.75	704.75
CL E BRG PIER	192+33.32	-10.33	704.74	704.74
H	192+43.34	-10.33	704.64	704.68
I	192+53.36	-10.31	704.54	704.62
J	192+63.38	-10.27	704.44	704.54
K	192+73.40	-10.21	704.34	704.47
L	192+83.42	-10.13	704.24	704.35
M	192+93.44	-10.03	704.15	704.22
N	193+03.46	-9.91	704.05	704.09
CL EAST ABUT.	193+13.48	-9.76	703.95	703.95
BACK OF EAST ABUT.	193+14.91	-9.74	703.94	703.94

CL BEAM 10

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+53.36	-3.20	705.70	705.70
CL WEST ABUT.	191+54.79	-3.22	705.68	705.68
A	191+64.80	-3.38	705.58	705.62
B	191+74.80	-3.52	705.48	705.55
C	191+84.81	-3.63	705.37	705.48
D	191+94.82	-3.73	705.27	705.40
E	192+04.82	-3.81	705.17	705.27
F	192+14.83	-3.86	705.07	705.15
G	192+24.84	-3.90	704.97	705.01
CL W BRG PIER	192+34.85	-3.92	704.87	704.87
CL PIER	192+35.85	-3.92	704.86	704.86
CL E BRG PIER	192+36.85	-3.92	704.85	704.85
H	192+46.86	-3.91	704.75	704.79
I	192+56.86	-3.88	704.65	704.73
J	192+66.87	-3.83	704.55	704.65
K	192+76.88	-3.77	704.45	704.57
L	192+86.89	-3.68	704.35	704.45
M	192+96.89	-3.57	704.25	704.33
N	193+06.90	-3.44	704.16	704.20
CL EAST ABUT.	193+16.91	-3.29	704.06	704.06
BACK OF EAST ABUT.	193+18.33	-3.27	704.05	704.05

STAGE CONSTR. JT.

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+55.58	0.68	705.73	705.73
CL WEST ABUT.	191+57.01	0.66	705.71	705.71
A	191+67.00	0.50	705.62	705.62
B	191+77.00	0.37	705.52	705.52
C	191+87.00	0.26	705.43	705.43
D	191+97.00	0.17	705.33	705.33
E	192+07.00	0.10	705.23	705.23
F	192+17.00	0.04	705.13	705.13
G	192+27.00	0.01	705.03	705.03
CL W BRG PIER	192+37.00	0.00	704.93	704.93
CL PIER	192+38.00	0.00	704.92	704.92
CL E BRG PIER	192+39.00	0.00	704.91	704.91
H	192+49.00	0.01	704.81	704.81
I	192+59.00	0.04	704.71	704.71
J	192+69.00	0.10	704.61	704.61
K	192+79.00	0.17	704.51	704.51
L	192+89.00	0.26	704.41	704.41
M	192+99.00	0.37	704.30	704.30
N	193+09.00	0.50	704.20	704.20
CL EAST ABUT.	193+18.99	0.66	704.09	704.09
BACK OF EAST ABUT.	193+20.42	0.68	704.08	704.08

TOP OF SLAB ELEVATIONS-V
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
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CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S8
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	214
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EASTBOUND ROADWAY

CL BEAM 11

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+56.99	3.16	705.64	705.64
CL WEST ABUT.	191+58.42	3.13	705.63	705.63
A	191+68.41	2.98	705.53	705.57
B	191+78.41	2.86	705.44	705.52
C	191+88.40	2.75	705.34	705.44
D	191+98.39	2.66	705.24	705.37
E	192+08.39	2.59	705.14	705.25
F	192+18.38	2.54	705.05	705.13
G	192+28.38	2.51	704.95	704.99
CL W BRG PIER	192+38.37	2.50	704.85	704.85
CL PIER	192+39.37	2.50	704.84	704.84
CL E BRG PIER	192+40.37	2.50	704.83	704.83
H	192+50.37	2.52	704.73	704.77
I	192+60.36	2.55	704.63	704.71
J	192+70.36	2.60	704.52	704.63
K	192+80.35	2.68	704.42	704.55
L	192+90.34	2.77	704.32	704.42
M	193+00.34	2.89	704.22	704.30
N	193+10.33	3.02	704.11	704.15
CL EAST ABUT.	193+20.32	3.18	704.01	704.01
BACK OF EAST ABUT.	193+21.75	3.20	703.99	703.99

CL BEAM 12

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+60.61	9.52	705.42	705.42
CL WEST ABUT.	191+62.04	9.49	705.41	705.41
A	191+72.02	9.35	705.31	705.35
B	191+82.00	9.23	705.22	705.29
C	191+91.98	9.13	705.12	705.22
D	192+01.96	9.05	705.02	705.15
E	192+11.94	8.98	704.92	705.03
F	192+21.92	8.94	704.82	704.90
G	192+31.91	8.92	704.73	704.77
CL W BRG PIER	192+41.89	8.92	704.63	704.63
CL PIER	192+42.89	8.92	704.62	704.62
CL E BRG PIER	192+43.88	8.92	704.61	704.61
H	192+53.87	8.94	704.51	704.55
I	192+63.85	8.98	704.40	704.48
J	192+73.83	9.05	704.30	704.41
K	192+83.81	9.13	704.20	704.33
L	192+93.79	9.23	704.10	704.20
M	193+03.77	9.35	703.99	704.07
N	193+13.75	9.49	703.89	703.93
CL EAST ABUT.	193+23.73	9.65	703.79	703.79
BACK OF EAST ABUT.	193+25.16	9.68	703.77	703.77

EASTBOUND PGL

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+63.72	15.00	705.33	705.33
CL WEST ABUT.	191+65.16	15.00	705.32	705.32
A	191+75.20	15.00	705.22	705.22
B	191+85.24	15.00	705.12	705.12
C	191+95.26	15.00	705.02	705.02
D	192+05.27	15.00	704.92	704.92
E	192+15.27	15.00	704.82	704.82
F	192+25.26	15.00	704.72	704.72
G	192+35.24	15.00	704.62	704.62
CL W BRG PIER	192+45.21	15.00	704.52	704.52
CL PIER	192+46.21	15.00	704.51	704.51
CL E BRG PIER	192+47.20	15.00	704.50	704.50
H	192+57.16	15.00	704.40	704.40
I	192+67.10	15.00	704.30	704.30
J	192+77.03	15.00	704.20	704.20
K	192+86.96	15.00	704.10	704.10
L	192+96.87	15.00	704.00	704.00
M	193+06.77	15.00	703.90	703.90
N	193+16.66	15.00	703.80	703.80
CL EAST ABUT.	193+26.54	15.00	703.71	703.71
BACK OF EAST ABUT.	193+27.95	15.00	703.69	703.69

TOP OF SLAB ELEVATIONS-VI
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S9	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	215
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EASTBOUND ROADWAY

CL BEAM 13

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+64.22	15.88	705.35	705.35
CL WEST ABUT.	191+65.64	15.86	705.33	705.33
A	191+75.61	15.72	705.23	705.27
B	191+85.58	15.61	705.13	705.21
C	191+95.55	15.51	705.03	705.13
D	192+05.52	15.44	704.92	705.05
E	192+15.49	15.38	704.82	704.93
F	192+25.46	15.35	704.72	704.80
G	192+35.43	15.33	704.62	704.67
CL W BRG PIER	192+45.40	15.34	704.52	704.52
CL PIER	192+46.39	15.34	704.51	704.51
CL E BRG PIER	192+47.39	15.34	704.50	704.50
H	192+57.36	15.37	704.41	704.45
I	192+67.33	15.42	704.31	704.39
J	192+77.30	15.49	704.21	704.31
K	192+87.27	15.58	704.11	704.24
L	192+97.23	15.69	704.01	704.12
M	193+07.20	15.81	703.92	704.00
N	193+17.17	15.96	703.82	703.86
CL EAST ABUT.	193+27.14	16.13	703.72	703.72
BACK OF EAST ABUT.	193+28.56	16.16	703.71	703.71

CL BEAM 14

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+67.82	22.24	705.45	705.45
CL WEST ABUT.	191+69.24	22.22	705.44	705.44
A	191+79.20	22.10	705.33	705.38
B	191+89.15	21.99	705.23	705.31
C	191+99.11	21.90	705.13	705.24
D	192+09.07	21.83	705.03	705.16
E	192+19.02	21.79	704.93	705.03
F	192+28.98	21.76	704.83	704.91
G	192+38.94	21.75	704.73	704.77
CL W BRG PIER	192+48.89	21.76	704.63	704.63
CL PIER	192+49.89	21.76	704.62	704.62
CL E BRG PIER	192+50.88	21.77	704.61	704.61
H	192+60.84	21.80	704.51	704.55
I	192+70.80	21.86	704.41	704.49
J	192+80.75	21.93	704.32	704.42
K	192+90.71	22.03	704.22	704.34
L	193+00.66	22.14	704.12	704.23
M	193+10.62	22.28	704.02	704.10
N	193+20.57	22.43	703.93	703.97
CL EAST ABUT.	193+30.53	22.61	703.83	703.83
BACK OF EAST ABUT.	193+31.95	22.64	703.82	703.82

CL BEAM 15

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+71.42	28.61	705.56	705.56
CL WEST ABUT.	191+72.83	28.59	705.54	705.54
A	191+82.78	28.47	705.44	705.48
B	191+92.72	28.37	705.34	705.42
C	192+02.66	28.29	705.24	705.34
D	192+12.61	28.23	705.14	705.26
E	192+22.55	28.19	705.04	705.14
F	192+32.49	28.17	704.94	705.01
G	192+42.44	28.17	704.84	704.88
CL W BRG PIER	192+52.38	28.19	704.74	704.74
CL PIER	192+53.38	28.19	704.73	704.73
CL E BRG PIER	192+54.37	28.19	704.72	704.72
H	192+64.31	28.24	704.62	704.66
I	192+74.26	28.30	704.52	704.60
J	192+84.20	28.38	704.42	704.53
K	192+94.14	28.48	704.33	704.45
L	193+04.09	28.61	704.23	704.33
M	193+14.03	28.75	704.13	704.21
N	193+23.97	28.91	704.04	704.08
CL EAST ABUT.	193+33.91	29.09	703.94	703.94
BACK OF EAST ABUT.	193+35.33	29.12	703.93	703.93

TOP OF SLAB ELEVATIONS-VII
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S10
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	216
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EASTBOUND ROADWAY

CL BEAM 16

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+75.00	34.98	705.66	705.66
CL WEST ABUT.	191+76.42	34.97	705.65	705.65
A	191+86.35	34.85	705.54	705.59
B	191+96.28	34.76	705.44	705.52
C	192+06.21	34.69	705.34	705.45
D	192+16.14	34.63	705.24	705.37
E	192+26.07	34.60	705.14	705.25
F	192+36.00	34.58	705.04	705.12
G	192+45.93	34.59	704.94	704.98
CL W BRG PIER	192+55.86	34.62	704.84	704.84
CL PIER	192+56.86	34.62	704.83	704.83
CL E BRG PIER	192+57.85	34.62	704.82	704.82
H	192+67.78	34.67	704.73	704.77
I	192+77.71	34.74	704.63	704.71
J	192+87.64	34.83	704.53	704.63
K	192+97.57	34.94	704.43	704.56
L	193+07.50	35.07	704.34	704.44
M	193+17.43	35.22	704.24	704.32
N	193+27.36	35.39	704.15	704.19
CL EAST ABUT.	193+37.29	35.58	704.05	704.05
BACK OF EAST ABUT.	193+38.70	35.60	704.04	704.04

CL BEAM 17

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+78.57	41.36	705.67	705.67
CL WEST ABUT.	191+79.99	41.34	705.65	705.65
A	191+89.90	41.23	705.55	705.60
B	191+99.82	41.15	705.46	705.54
C	192+09.74	41.08	705.36	705.46
D	192+19.66	41.03	705.26	705.39
E	192+29.58	41.01	705.16	705.27
F	192+39.50	41.00	705.06	705.14
G	192+49.42	41.01	704.96	705.01
CL W BRG PIER	192+59.33	41.05	704.86	704.86
CL PIER	192+60.33	41.05	704.85	704.85
CL E BRG PIER	192+61.32	41.05	704.84	704.84
H	192+71.24	41.11	704.74	704.79
I	192+81.15	41.19	704.64	704.72
J	192+91.07	41.28	704.54	704.65
K	193+00.99	41.40	704.44	704.57
L	193+10.91	41.54	704.34	704.44
M	193+20.82	41.69	704.24	704.32
N	193+30.74	41.87	704.13	704.18
CL EAST ABUT.	193+40.65	42.06	704.03	704.03
BACK OF EAST ABUT.	193+42.07	42.09	704.02	704.02

CL BEAM 18

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BACK OF WEST ABUT.	191+82.14	47.73	705.50	705.50
CL WEST ABUT.	191+83.55	47.72	705.49	705.49
A	191+93.46	47.62	705.39	705.43
B	192+03.36	47.54	705.29	705.37
C	192+13.27	47.48	705.20	705.30
D	192+23.17	47.44	705.10	705.22
E	192+33.08	47.42	705.00	705.10
F	192+42.98	47.42	704.90	704.98
G	192+52.89	47.44	704.80	704.84
CL W BRG PIER	192+62.80	47.48	704.70	704.70
CL PIER	192+63.79	47.48	704.69	704.69
CL E BRG PIER	192+64.78	47.49	704.68	704.68
H	192+74.68	47.55	704.58	704.62
I	192+84.59	47.64	704.48	704.56
J	192+94.49	47.74	704.38	704.48
K	193+04.40	47.86	704.28	704.40
L	193+14.30	48.00	704.18	704.28
M	193+24.21	48.17	704.07	704.15
N	193+34.11	48.35	703.97	704.01
CL EAST ABUT.	193+44.01	48.55	703.87	703.87
BACK OF EAST ABUT.	193+45.42	48.58	703.85	703.85

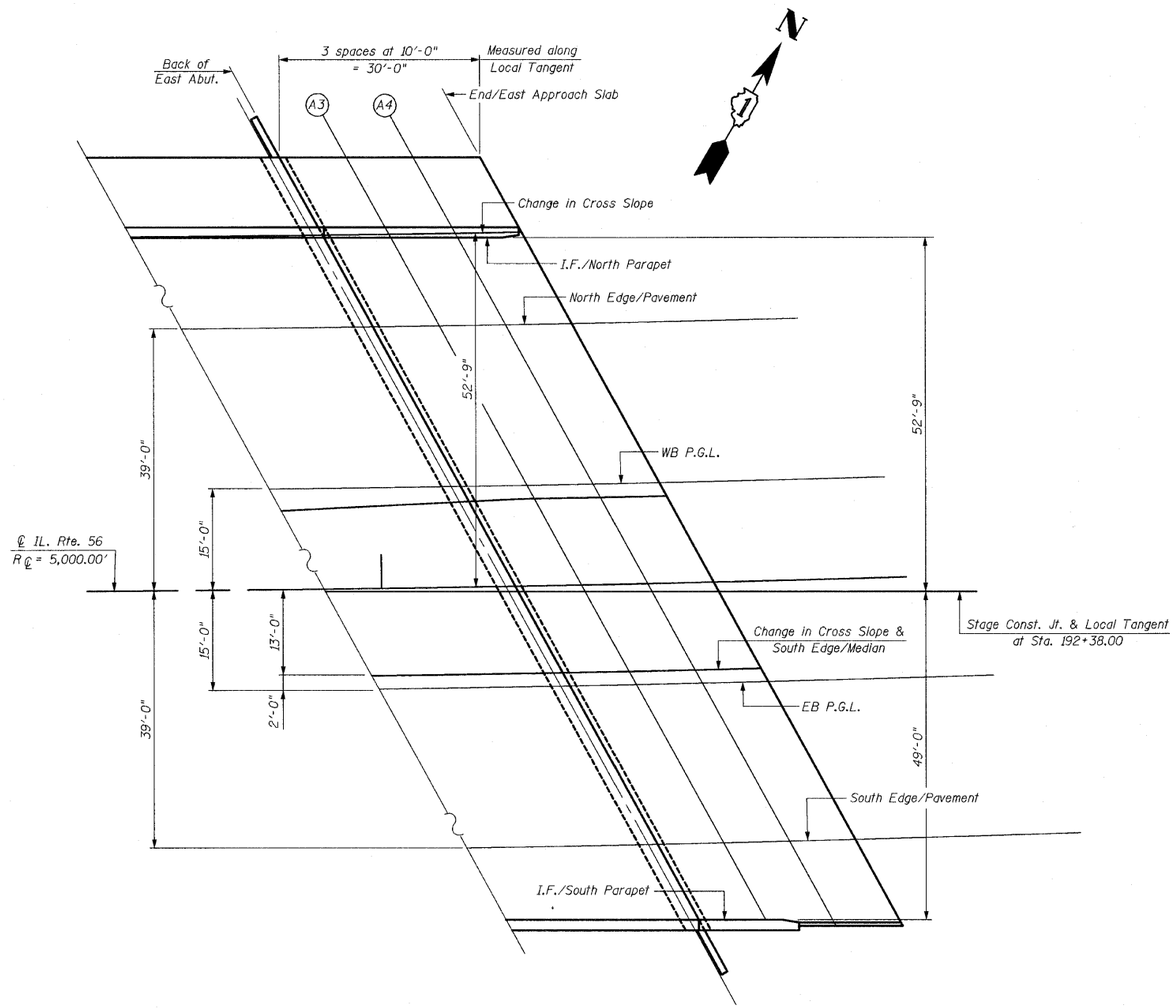
TOP OF SLAB ELEVATIONS-VIII
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S11	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	217
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

EAST APPROACH SLAB

CHANGE IN CROSS SLOPE

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BACK OF EAST ABUT.	192+91.88	-52.75	703.22
A3	193+01.92	-52.75	703.12
A4	193+11.95	-52.75	703.02
END/EAST APPROACH SLAB	193+21.97	-52.75	702.92

CHANGE IN CROSS SLOPE & SOUTH EDGE/MEDIAN

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BACK OF EAST ABUT.	193+26.90	13.00	703.66
A3	193+36.78	13.00	703.56
A4	193+46.64	13.00	703.46
END/EAST APPROACH SLAB	193+56.49	13.00	703.36

I.F./NORTH PARAPET

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BACK OF EAST ABUT.	192+92.04	-52.46	703.23
A3	193+02.14	-52.34	703.13
A4	193+12.25	-52.20	703.03
END/EAST APPROACH SLAB	193+22.35	-52.05	702.93

EB P.G.L.

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BACK OF EAST ABUT.	193+27.95	15.00	703.69
A3	193+37.82	15.00	703.59
A4	193+47.68	15.00	703.49
END/EAST APPROACH SLAB	193+57.53	15.00	703.40

NORTH EDGE/PAVEMENT

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BACK OF EAST ABUT.	192+99.29	-39.00	703.45
A3	193+09.30	-39.00	703.35
A4	193+19.29	-39.00	703.25
END/EAST APPROACH SLAB	193+29.28	-39.00	703.15

SOUTH EDGE/PAVEMENT

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BACK OF EAST ABUT.	193+40.46	39.00	704.09
A3	193+50.27	39.00	704.00
A4	193+60.07	39.00	703.90
END/EAST APPROACH SLAB	193+69.86	39.00	703.80

WB P.G.L.

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BACK OF EAST ABUT.	193+12.12	-15.00	703.85
A3	193+22.06	-15.00	703.75
A4	193+32.00	-15.00	703.65
END/EAST APPROACH SLAB	193+41.92	-15.00	703.55

I.F./SOUTH PARAPET

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BACK OF EAST ABUT.	193+46.25	50.18	703.81
A3	193+56.15	50.41	703.71
A4	193+66.04	50.66	703.60
END/EAST APPROACH SLAB	193+75.94	50.92	703.50

STAGE CONSTRUCTION JOINT

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BACK OF EAST ABUT.	193+20.42	0.68	704.08
A3	193+30.42	0.85	703.98
A4	193+30.42	1.05	703.87
END/EAST APPROACH SLAB	193+50.41	1.26	703.76

TOP OF EAST APPROACH SLAB ELEVATIONS
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

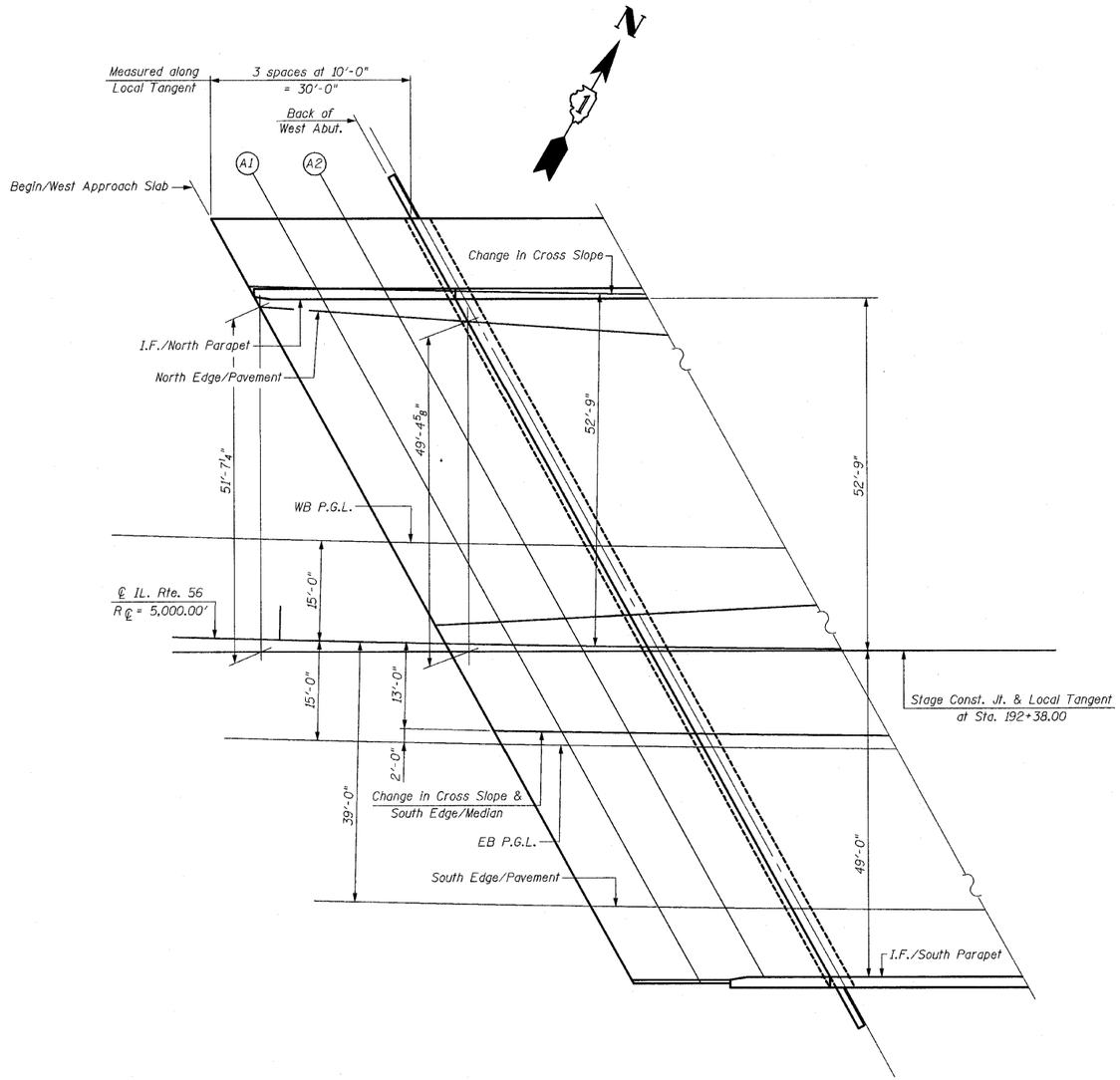
DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S12
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	218
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

WEST APPROACH SLAB

CHANGE IN CROSS SLOPE

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BEGIN/WEST APPROACH SLAB	190+93.95	-52.75	705.20
A1	191+04.21	-52.75	705.10
A2	191+14.47	-52.75	705.00
BACK OF WEST ABUT.	191+24.71	-52.75	704.89

CHANGE IN CROSS SLOPE & SOUTH EDGE/MEDIAN

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BEGIN/WEST APPROACH SLAB	191+32.36	13.00	705.60
A1	191+42.45	13.00	705.50
A2	191+52.53	13.00	705.40
BACK OF WEST ABUT.	191+62.59	13.00	705.30

I.F./NORTH PARAPET

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BEGIN/WEST APPROACH SLAB	190+95.14	-50.73	705.23
A1	191+05.24	-51.01	705.13
A2	191+15.34	-51.26	705.02
BACK OF WEST ABUT.	191+25.44	-51.50	704.91

EB P.G.L.

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BEGIN/WEST APPROACH SLAB	191+33.51	15.00	705.64
A1	191+43.59	15.00	705.53
A2	191+53.67	15.00	705.43
BACK OF WEST ABUT.	191+63.72	15.00	705.33

NORTH EDGE/PAVEMENT

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BEGIN/WEST APPROACH SLAB	190+95.81	-49.60	705.25
A1	191+06.34	-49.15	705.16
A2	191+16.86	-48.67	705.06
BACK OF WEST ABUT.	191+27.39	-48.17	704.97

SOUTH EDGE/PAVEMENT

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BEGIN/WEST APPROACH SLAB	191+47.23	39.00	706.03
A1	191+57.25	39.00	705.93
A2	191+67.26	39.00	705.83
BACK OF WEST ABUT.	191+77.25	39.00	705.73

WB P.G.L.

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BEGIN/WEST APPROACH SLAB	191+16.15	-15.00	705.81
A1	191+26.31	-15.00	705.71
A2	191+36.46	-15.00	705.61
BACK OF WEST ABUT.	191+46.60	-15.00	705.50

I.F./SOUTH PARAPET

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BEGIN/WEST APPROACH SLAB	191+53.31	49.72	705.75
A1	191+63.21	49.56	705.66
A2	191+73.11	49.43	705.56
BACK OF WEST ABUT.	191+83.01	49.31	705.46

STAGE CONSTRUCTION JOINT

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS
BEGIN/WEST APPROACH SLAB	191+25.59	1.26	706.01
A1	191+35.59	1.05	705.92
A2	191+45.58	0.85	705.82
BACK OF WEST ABUT.	191+55.58	0.68	705.73

TOP OF WEST APPROACH SLAB ELEVATIONS
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

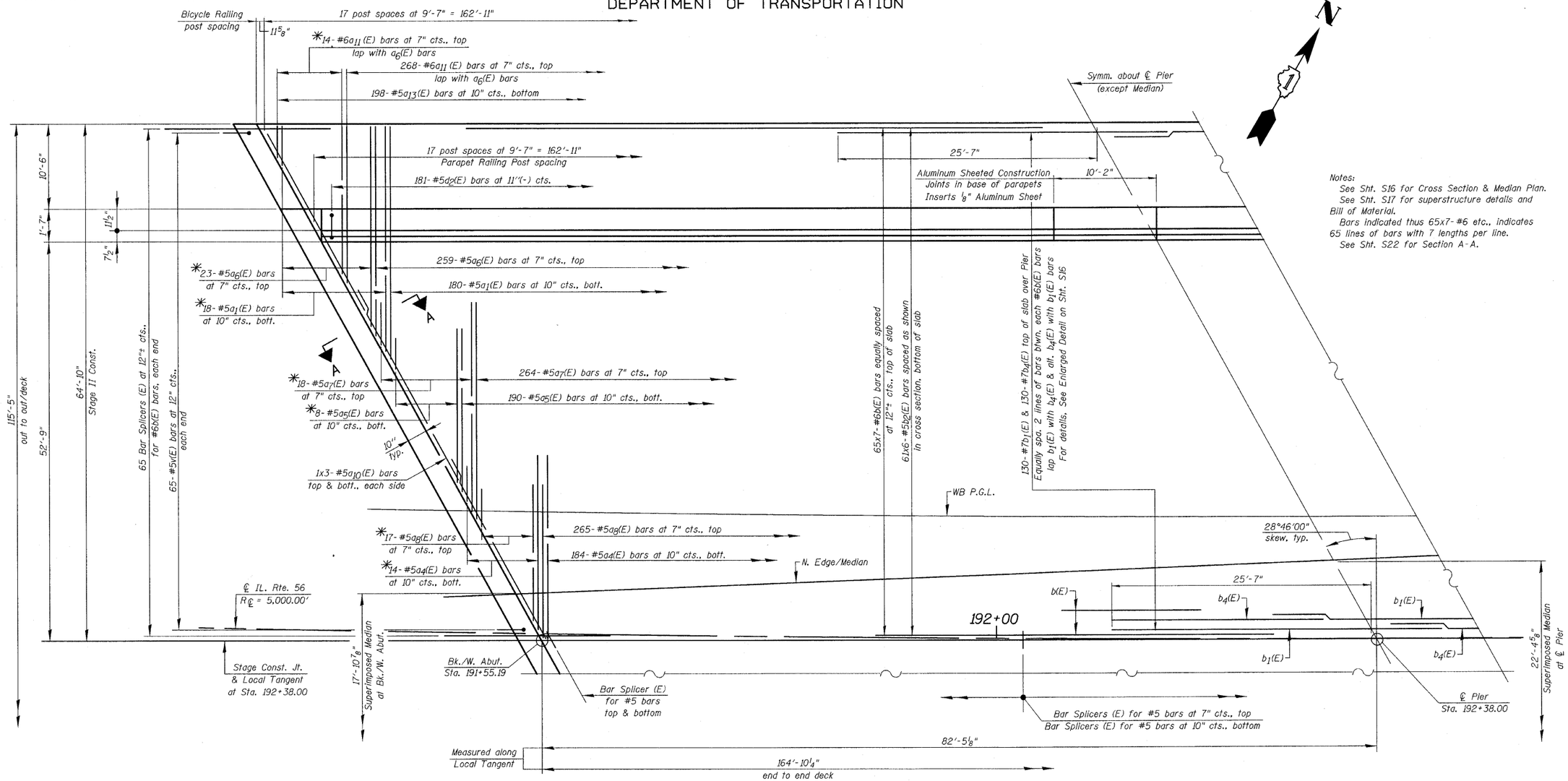
DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S13	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	219
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

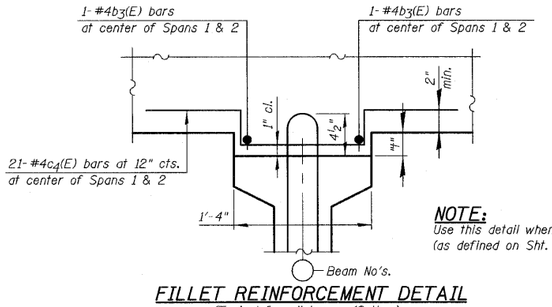
✱ Order a_1(E), a_3(E), a_4(E), a_5(E), a_6(E), a_7(E) and a_8(E) & a_{11}(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



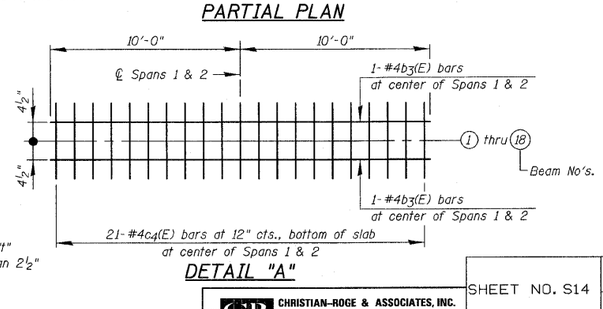
PARTIAL PLAN

Notes:
See Sht. S16 for Cross Section & Median Plan.
See Sht. S17 for superstructure details and Bill of Material.
Bars indicated thus 65x7-#6 etc., indicates 65 lines of bars with 7 lengths per line.
See Sht. S22 for Section A-A.



NOTE: Use this detail when the fillet height "f" (as defined on Sht. S4) is greater than 2½"

FILLET REINFORCEMENT DETAIL
(Typical for all beams-18 thus)
SEE DETAIL "A"



DETAIL "A"

MIN. BAR LAP:
#5 bars = 2'-6"
#6 bars = 3'-0"
#7 bars = 3'-11"

DECK PLAN-I
IL. ROUTE 56 OVER WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

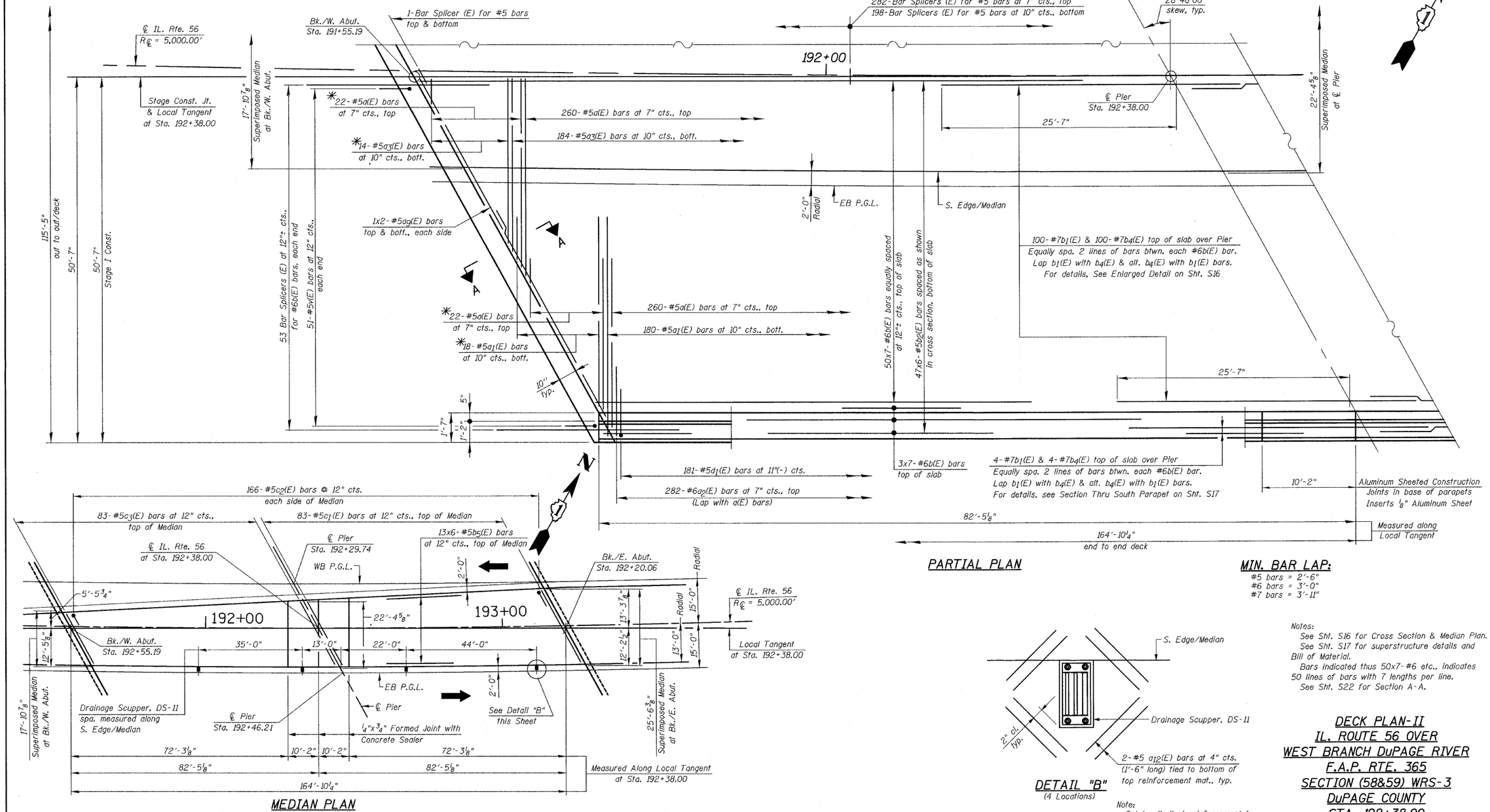
CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S14
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	220
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

✱ Order a(E), a_1(E) & a_3(E) bars full length.
Cut to fit skew and use remainder of bars in opposite end.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PARTIAL PLAN

MEDIAN PLAN

MIN. BAR LAP:

#5 bars = 2'-6"
#6 bars = 3'-0"
#7 bars = 3'-11"

DETAIL "B"
(4 Locations)

Note:
Cut longitudinal reinforcement to clear drainage scuppers.

Notes:
See Sht. S16 for Cross Section & Median Plan.
See Sht. S17 for superstructure details and Bill of Material.
Bars indicated thus 50x7-#6 etc., indicates 50 lines of bars with 7 lengths per line.
See Sht. S22 for Section A-A.

DECK PLAN-II
IL. ROUTE 56 OVER WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

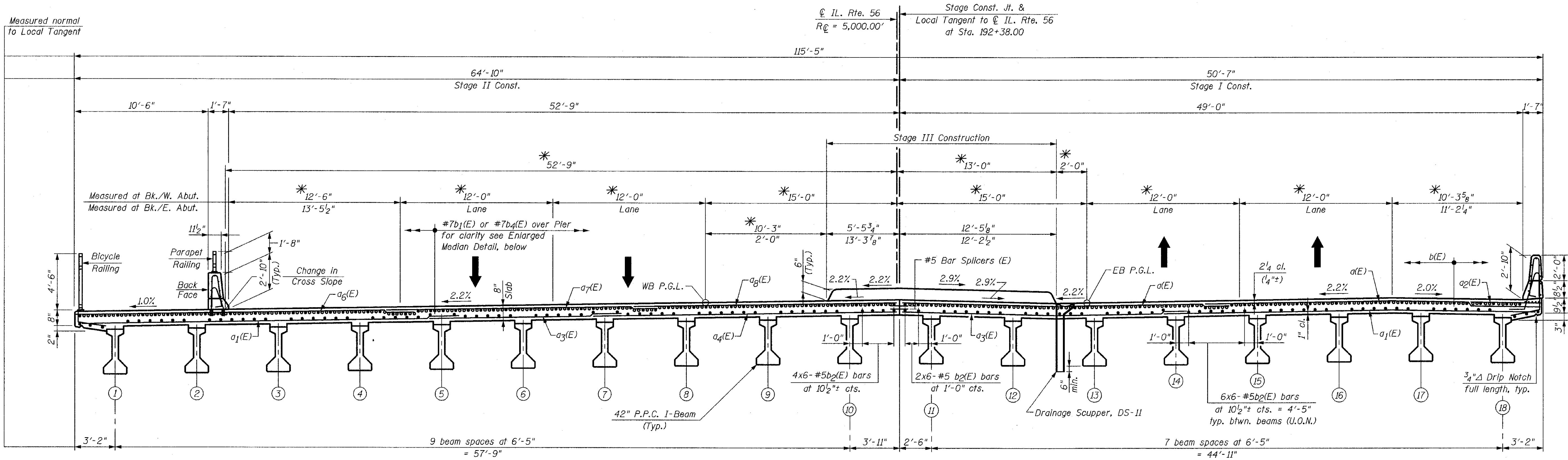
DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S15
S43 SHEETS

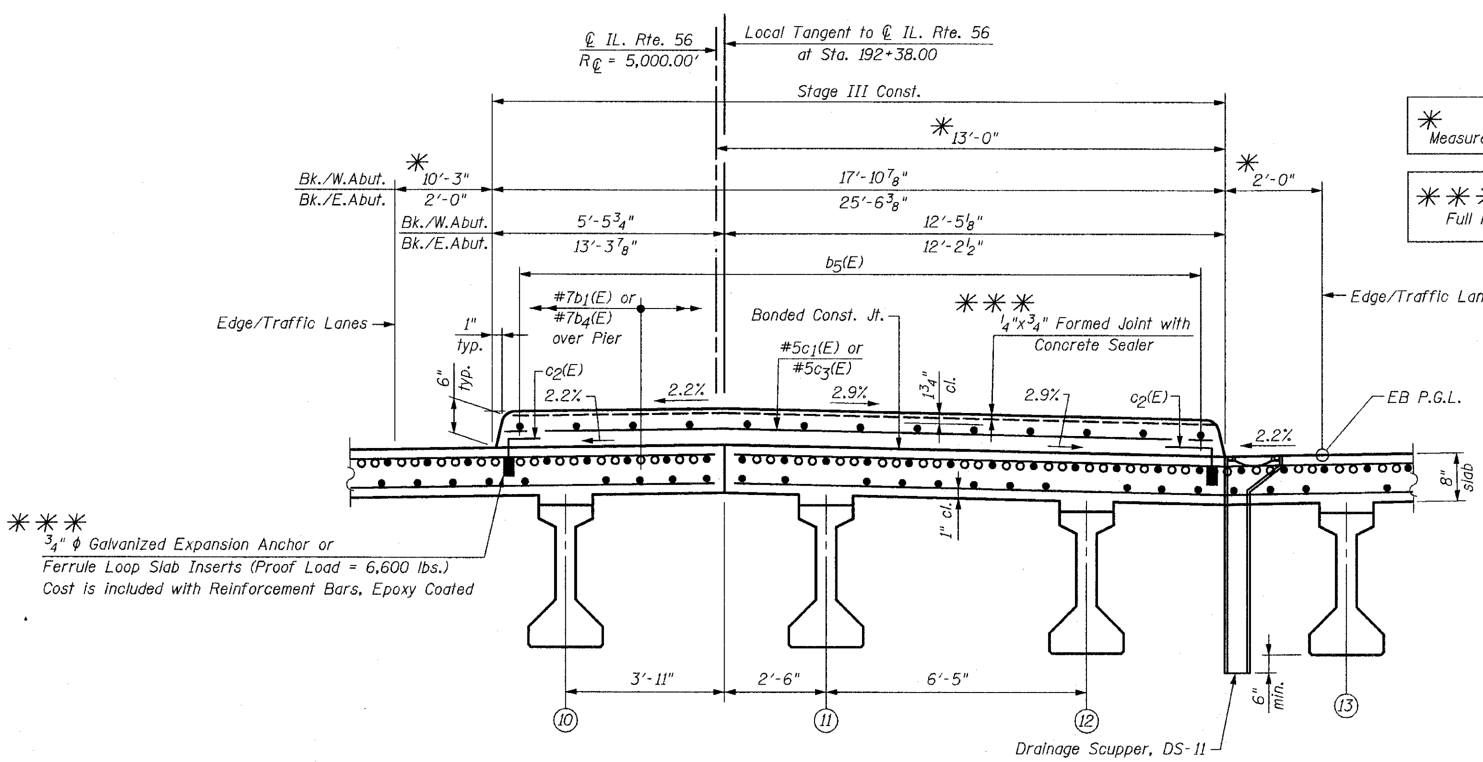
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	221
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DECK CROSS SECTION
(Looking East)

LEGEND:
U.O.N. = Unless Otherwise Noted



ENLARGED DETAIL
(showing Median)

✳ Measured radially to ℄ IL. Rte. 56

✳✳✳ Full length along Joint, Backer Rod not required

DECK CROSS SECTION & MEDIAN PLAN
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

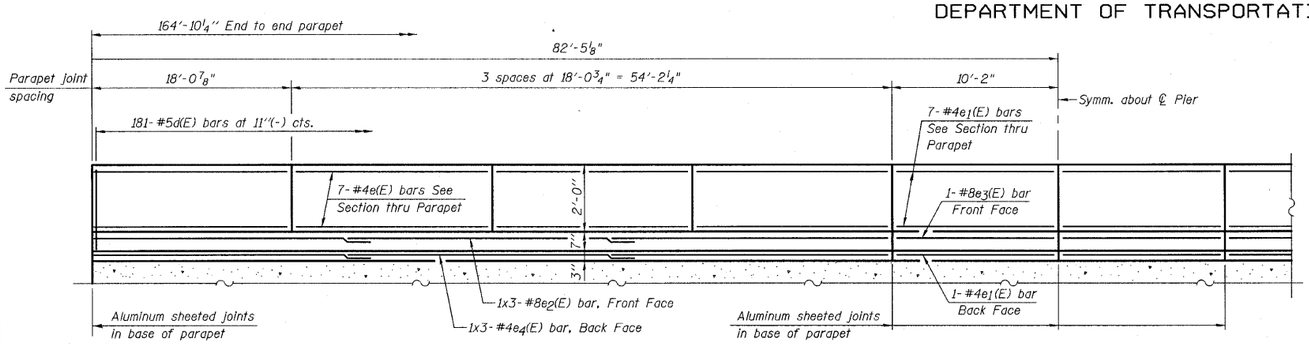
DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

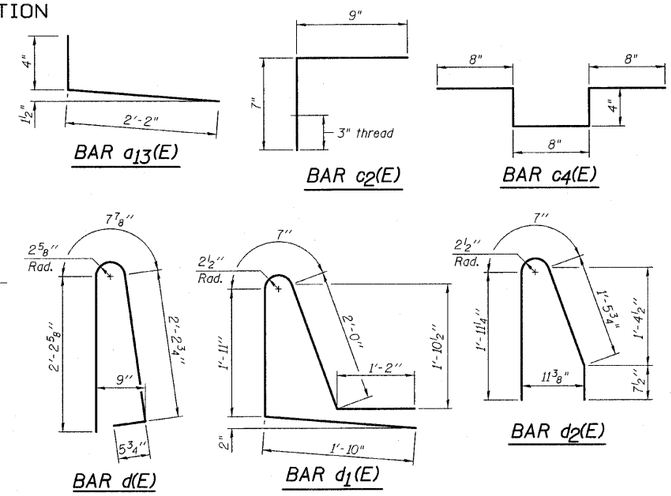
SHEET NO. S16
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	222
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INSIDE ELEVATION OF PARAPET
(2 thus)

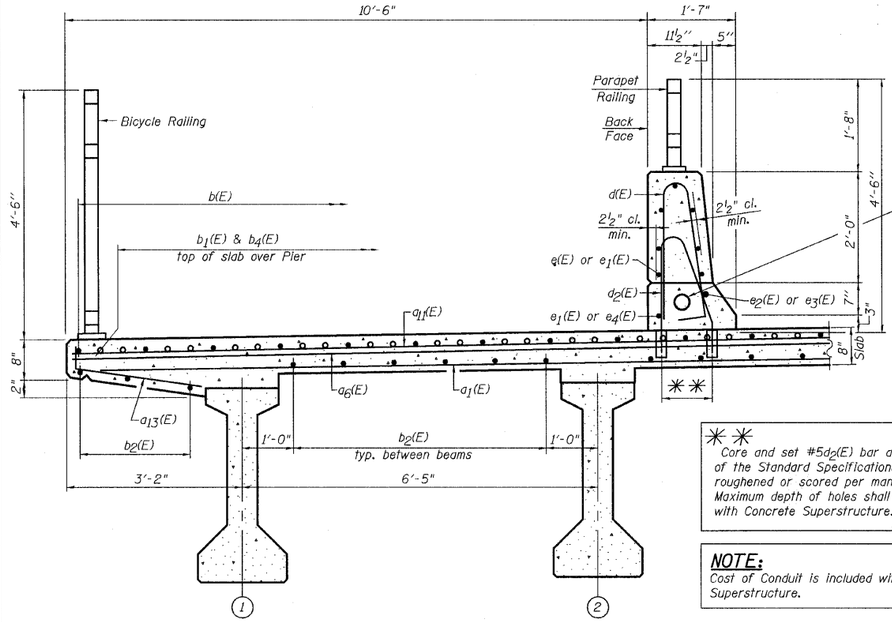


SUPERSTRUCTURE BILL OF MATERIAL

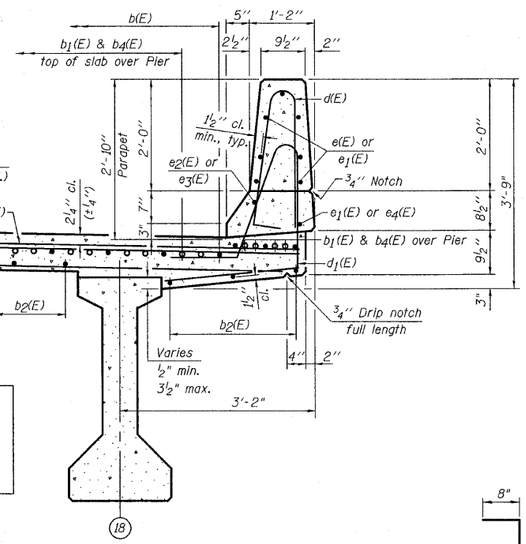
	Bar	No.	Size	Length	Shape
	d(E)	564	#5	26'-5"	—
	a1(E)	396	#5	30'-1"	—
	a2(E)	282	#6	6'-6"	—
	a3(E)	198	#5	22'-10"	—
	a4(E)	198	#5	24'-3"	—
	a5(E)	198	#5	15'-4"	—
	a6(E)	282	#5	26'-9"	—
	a7(E)	282	#5	21'-9"	—
	a8(E)	282	#5	21'-1"	—
	a9(E)	8	#5	29'-11"	—
	a10(E)	12	#5	26'-2"	—
	a11(E)	282	#6	17'-2"	—
	a12(E)	32	#5	1'-6"	—
	a13(E)	198	#5	2'-6"	⌐
	b(E)	826	#6	26'-1"	—
	b1(E)	234	#7	32'-6"	—
	b2(E)	648	#5	29'-6"	—
	b3(E)	72	#4	20'-0"	—
	b4(E)	234	#7	22'-7"	—
	b5(E)	78	#5	29'-8"	—
*	c1(E)	83	#5	29'-1"	—
	c2(E)	332	#5	1'-4"	⌐
*	c3(E)	83	#5	24'-4"	—
	c4(E)	756	#4	2'-10"	⌐¬
	d(E)	362	#5	5'-7"	⌐
	d1(E)	181	#5	7'-6"	⌐
	d2(E)	181	#5	4'-8"	⌐
	e(E)	112	#4	17'-8"	—
	e1(E)	32	#4	9'-10"	—
	e2(E)	12	#8	27'-5"	—
	e3(E)	4	#8	9'-10"	—
	e4(E)	12	#4	25'-4"	—
	m(E)	20	#6	30'-5"	—
	m1(E)	72	#6	10'-8"	—
	m2(E)	34	#6	4'-11"	—
	m3(E)	4	#6	2'-3"	—
	m4(E)	68	#4	6'-5"	—
	m5(E)	18	#8	5'-10"	—
	m6(E)	30	#6	26'-9"	—
	s(E)	250	#5	6'-10"	⊐
	s1(E)	216	#4	11'-0"	⊔
	s2(E)	102	#4	11'-4"	⊔
	v(E)	232	#5	3'-11"	⌐
	Reinforcement Bars, Epoxy Coated		Pound	177,350	
	Concrete Superstructure		Cu. Yd.	740	
	Bar Splicers (E)		Each	742	

Bars indicated thus 50x7-#5 etc. indicates 50 line of bars with 7 lengths per line.

*Cut in field to fit.



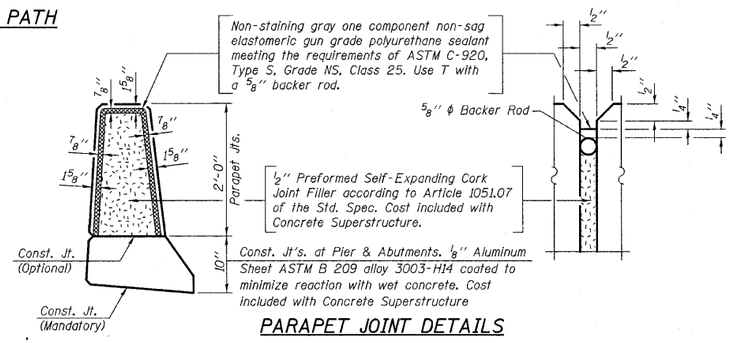
ENLARGED DETAIL AT BIKE PATH
(At North side of bridge)



SECTION THRU SOUTH PARAPET

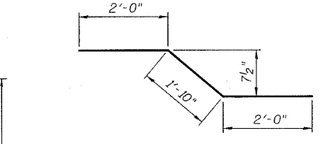
✱✱ Core and set #5d2(E) bar according to Article 509.06 of the Standard Specifications. Cored holes shall be roughened or scored per manufacture's recommendations. Maximum depth of holes shall not exceed 6". Cost included with Concrete Superstructure.

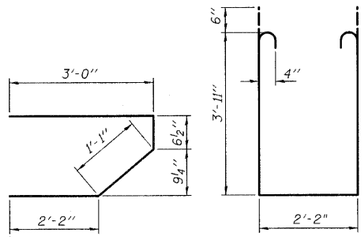
NOTE: Cost of Conduit is included with Concrete Superstructure.

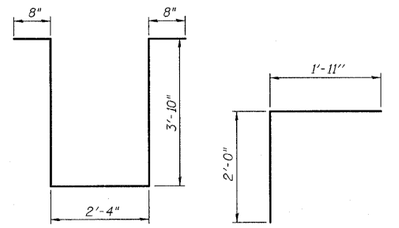


PARAPET JOINT DETAILS

MIN. BAR LAP:
#4 bar = 2'-0"
#8 bar = 5'-2"







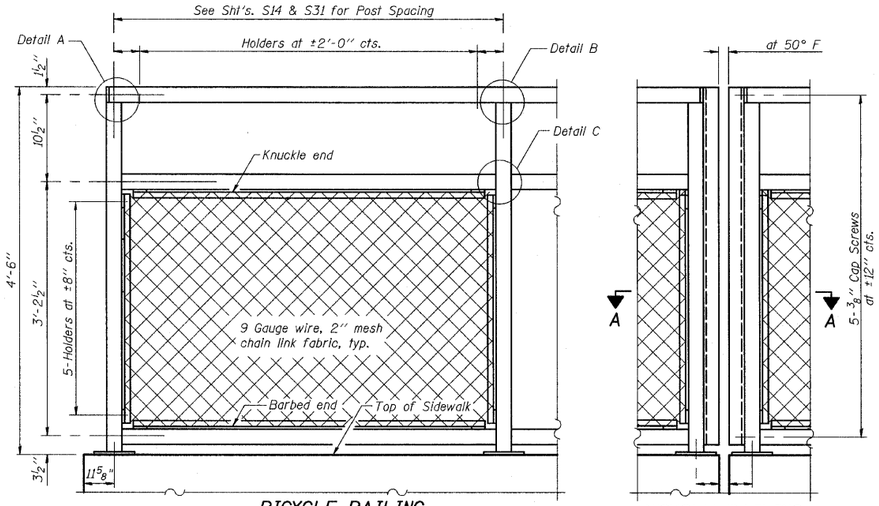
SUPERSTRUCTURE DETAILS
IL. ROUTE 56 OVER WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

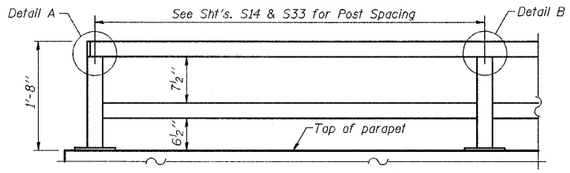
SHEET NO. S17	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	223
			CONTRACT NO. 62420		
		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

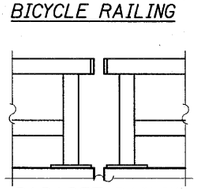


BICYCLE RAILING

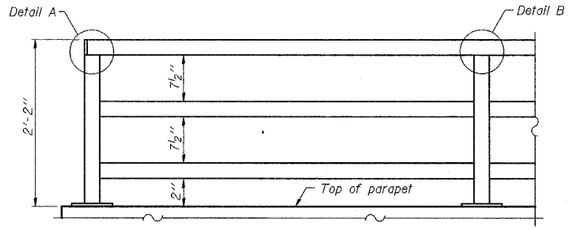
BICYCLE RAILING



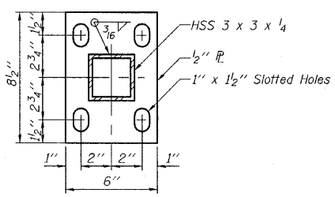
PARAPET RAILING
ELEVATION
(Inside Face of Two Element Rail)



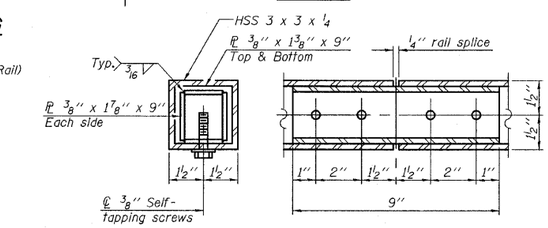
PARAPET RAILING
ELEVATION AT EXPANSION JOINT
(Two Element Rail Shown - Three Element Rail Similar)



PARAPET RAILING
ELEVATION
(Inside Face of Three Element Rail)

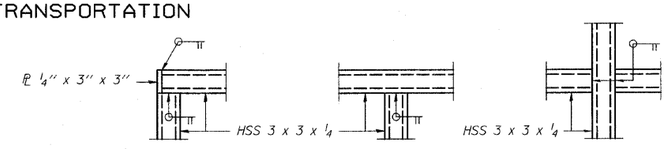


BASE PL



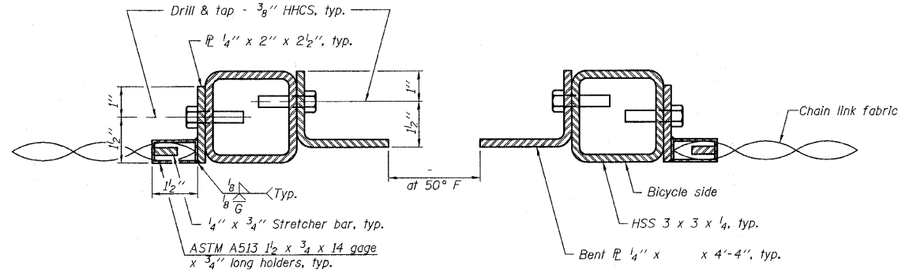
(10'-0" Maximum Post Spacing)

RAIL SPLICE

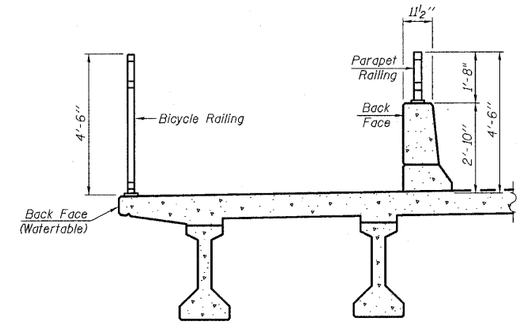


DETAIL A DETAIL B DETAIL C

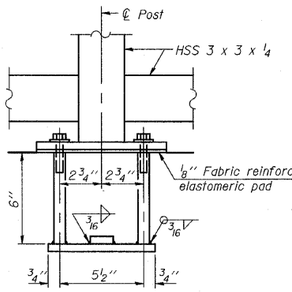
NOTE:
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications

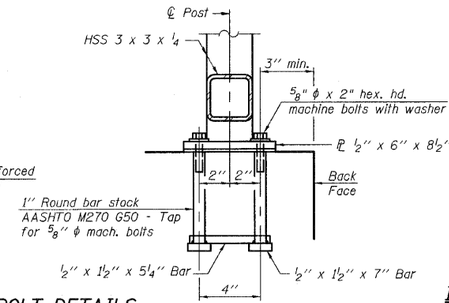


SECTION A-A



SECTION THRU DECK





ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting ⅝" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing	Foot	225
Parapet Railing	Foot	225

BICYCLE RAILING
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

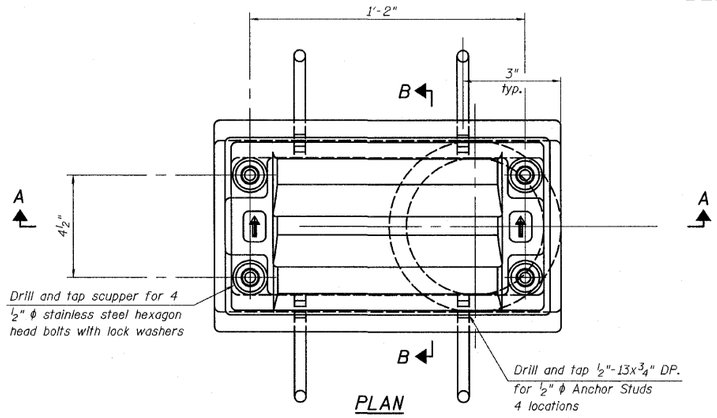
DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

R-29 11-1-09

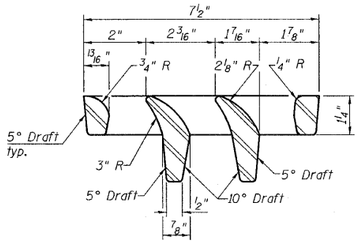
CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S18	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	224
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

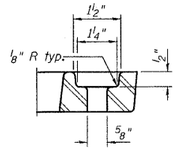
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



VANE GRATE DETAIL



BOLT HOLE DETAIL

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

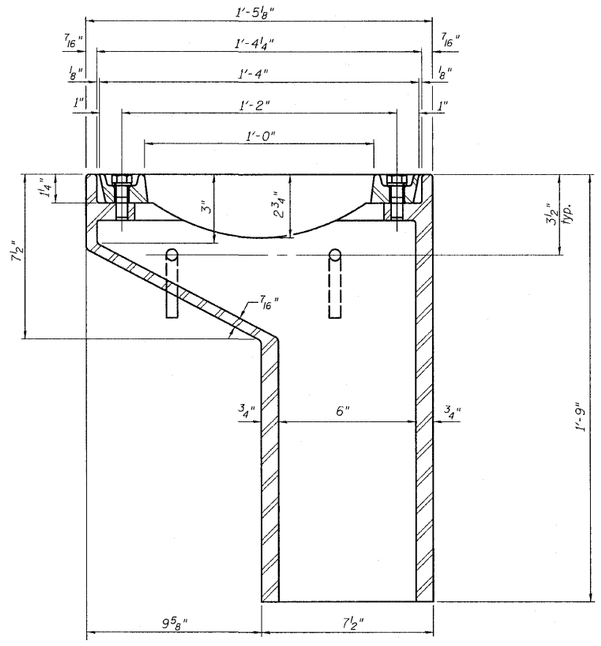
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

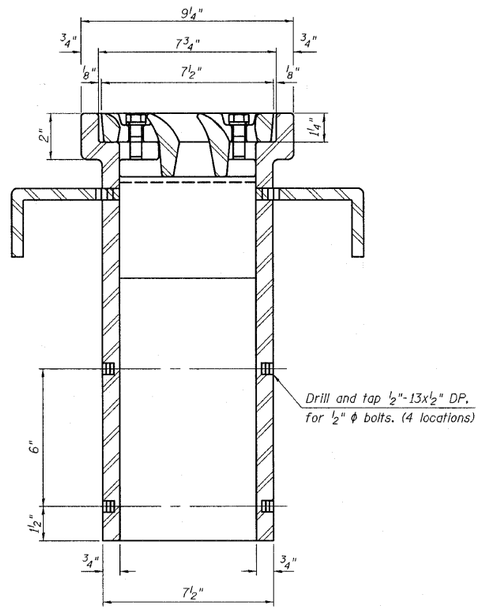
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

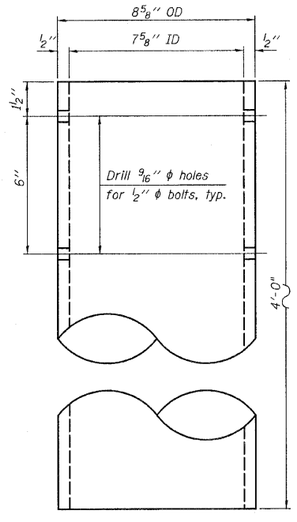
Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



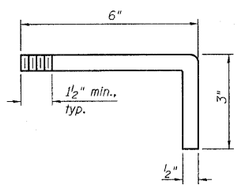
SECTION A-A
See Sheet S16 for scupper location relative to median



SECTION B-B



DOWNSPOUT



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	4

DRAINAGE SCUPPER, DS-11
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

DS-11 11-1-09

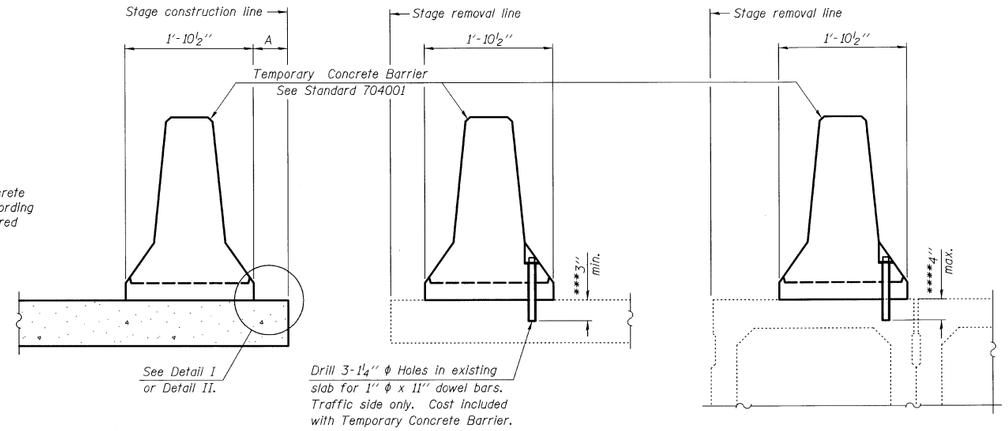
CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S19
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	225
		CONTRACT NO. 62420		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB | EXISTING SLAB | EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

NOTES:

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℄ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

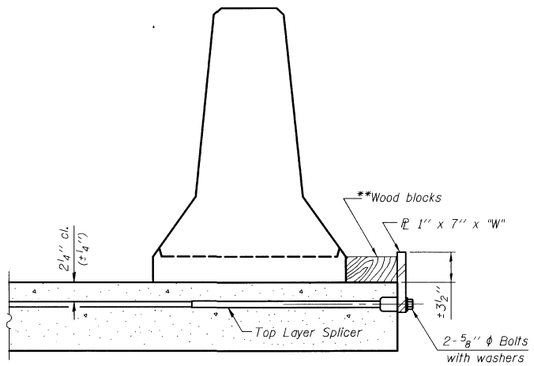
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x 10" steel ℄ to the concrete slab or concrete wearing surface with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.

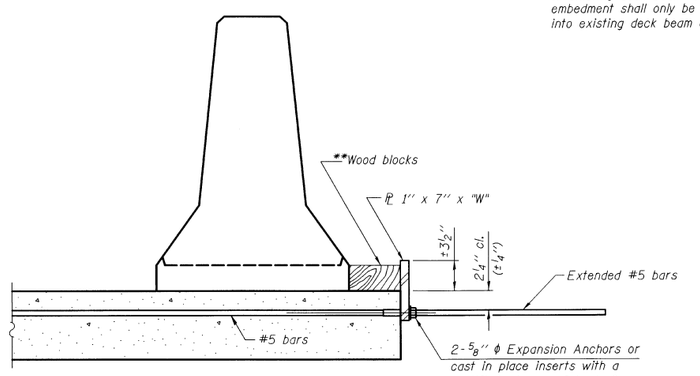
The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



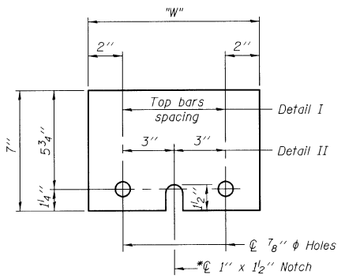
DETAIL I



DETAIL II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"



STEEL RETAINER ℄ 1" x 7" x 10"

* Required only with Detail II

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION IL. ROUTE 56 OVER WEST BRANCH DuPAGE RIVER F.A.P. RTE. 365 SECTION (58&59) WRS-3 DuPAGE COUNTY STA. 192+38.00 STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

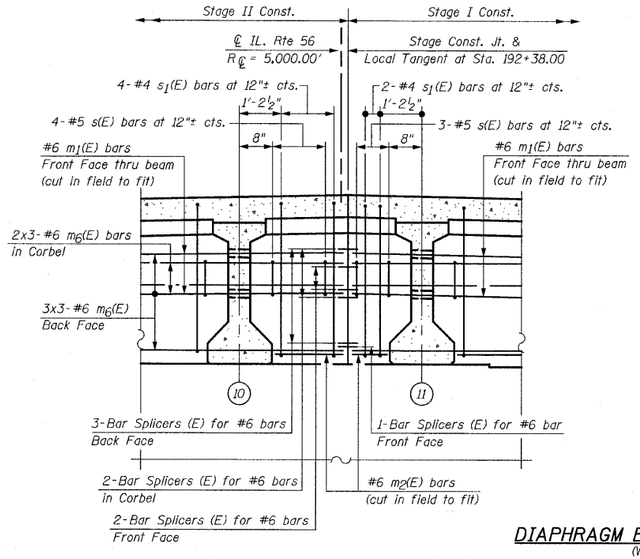
R-27 11-1-09

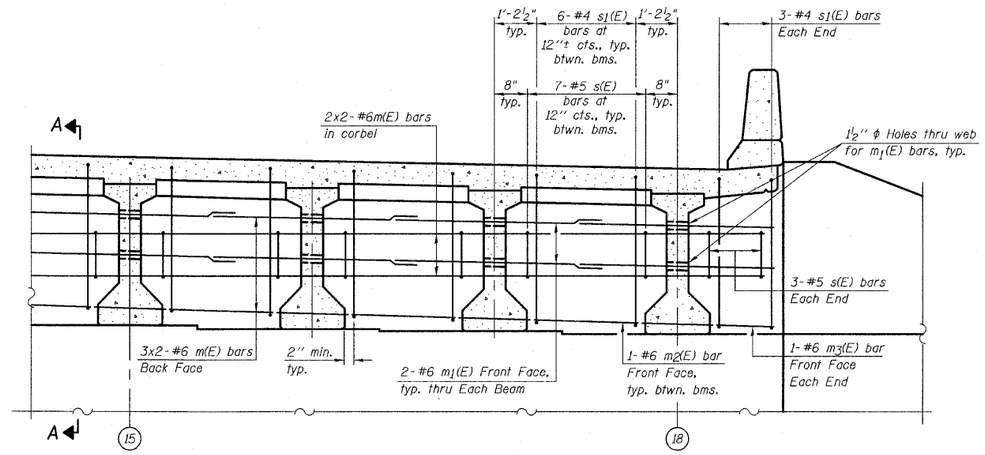
CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S20
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	226
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

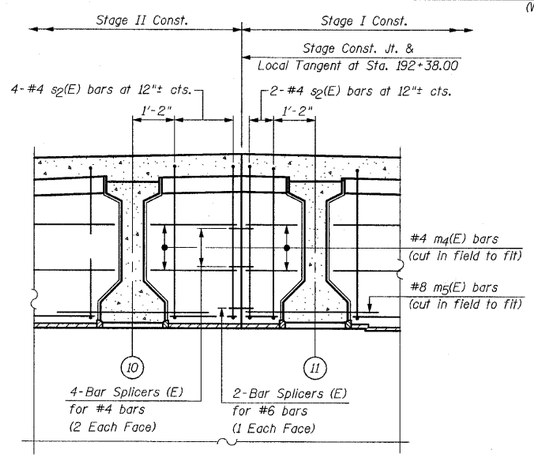
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

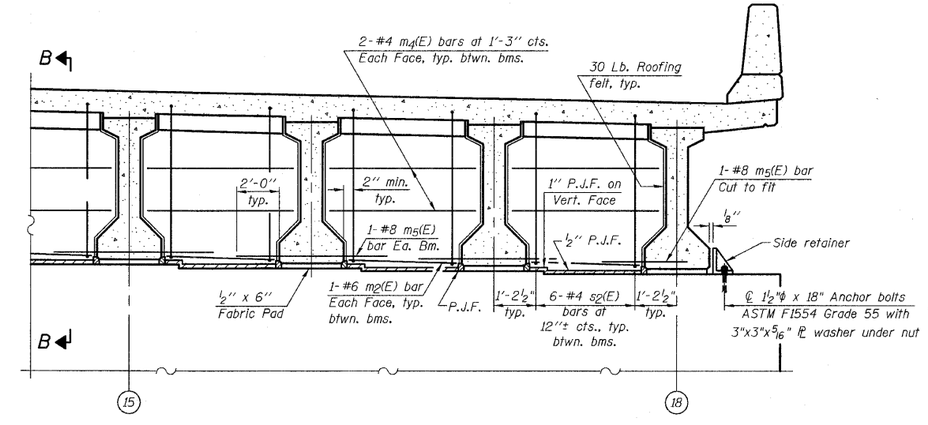




DIAPHRAGM ELEVATION AT EAST ABUTMENT

(West Abutment opposite hand)

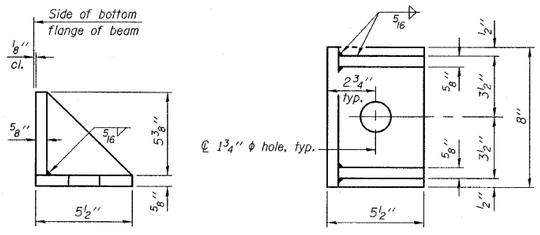




DIAPHRAGM AT PIER

(Fixed)
(Looking East)

Notes:
Reinforcement bars in diaphragm are billed with superstructure on Sht. S17.
Concrete in diaphragm is included with Concrete Superstructure on Sht. S17.
For details of bars s(E), s_1(E) and s_2(E) see Sht. S17.
The s(E), s_1(E) and s_2(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
See Sht. S22 for Sections A-A and B-B.
Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
The side retainer shall be galvanized after shop fabrication according to AASHTO M 111.
Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi).
The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts for side retainers may be either cast in place or installed in holes drilled after the supporting member is in place and prior to pouring the deck.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.



SIDE RETAINER

(2 required each side of pier)
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

MIN. BAR LAP

#6 bar = 3'-4"

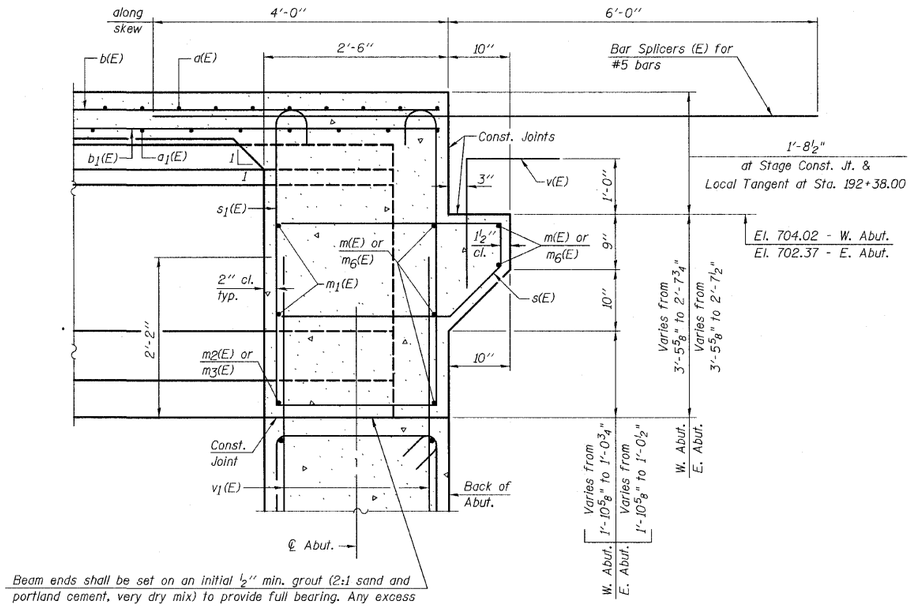
DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

DIAPHRAGM ELEVATIONS AT ABUTMENTS & PIER-I IL. ROUTE 56 OVER WEST BRANCH DuPAGE RIVER F.A.P. RTE. 365 SECTION (58&59) WRS-3 DuPAGE COUNTY STA. 192+38.00 STRUCTURE NO. 022-2027

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S21	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	227
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

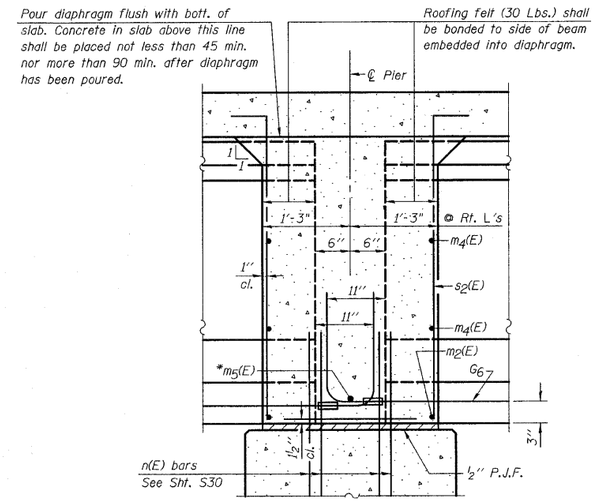
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Beam ends shall be set on an initial ½" min. grout (2:1 sand and portland cement, very dry mix) to provide full bearing. Any excess grout squeezed out from under the beam shall be removed. Cost included with Concrete Structures.

SECTION A-A

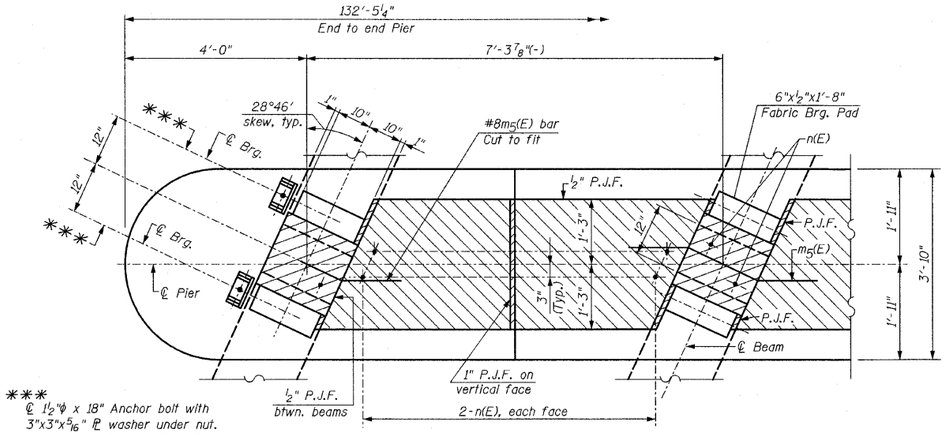
Dimensions at right angles to abutment, except as shown.



* *Tightly fasten the #8 bars together with No. 9 wire ties.*

SECTION B-B

Dimensions along ℄ of beam, except as shown.



*** ℄ ½"φ x 18" Anchor bolt with 3"x3"x$\frac{5}{16}$" ℄ washer under nut. Holes in cap to be drilled after beams are in place.

PLAN AT PIER

(Showing bearing pad and P.J.F. details)

Note:
See Sht. S21 for location of Sections A-A and B-B.

DIAPHRAGM ELEVATIONS AT ABUTMENTS & PIER-II IL. ROUTE 56 OVER WEST BRANCH DuPAGE RIVER F.A.P. RTE. 365 SECTION (58&59) WRS-3 DuPAGE COUNTY STA. 192+38.00 STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
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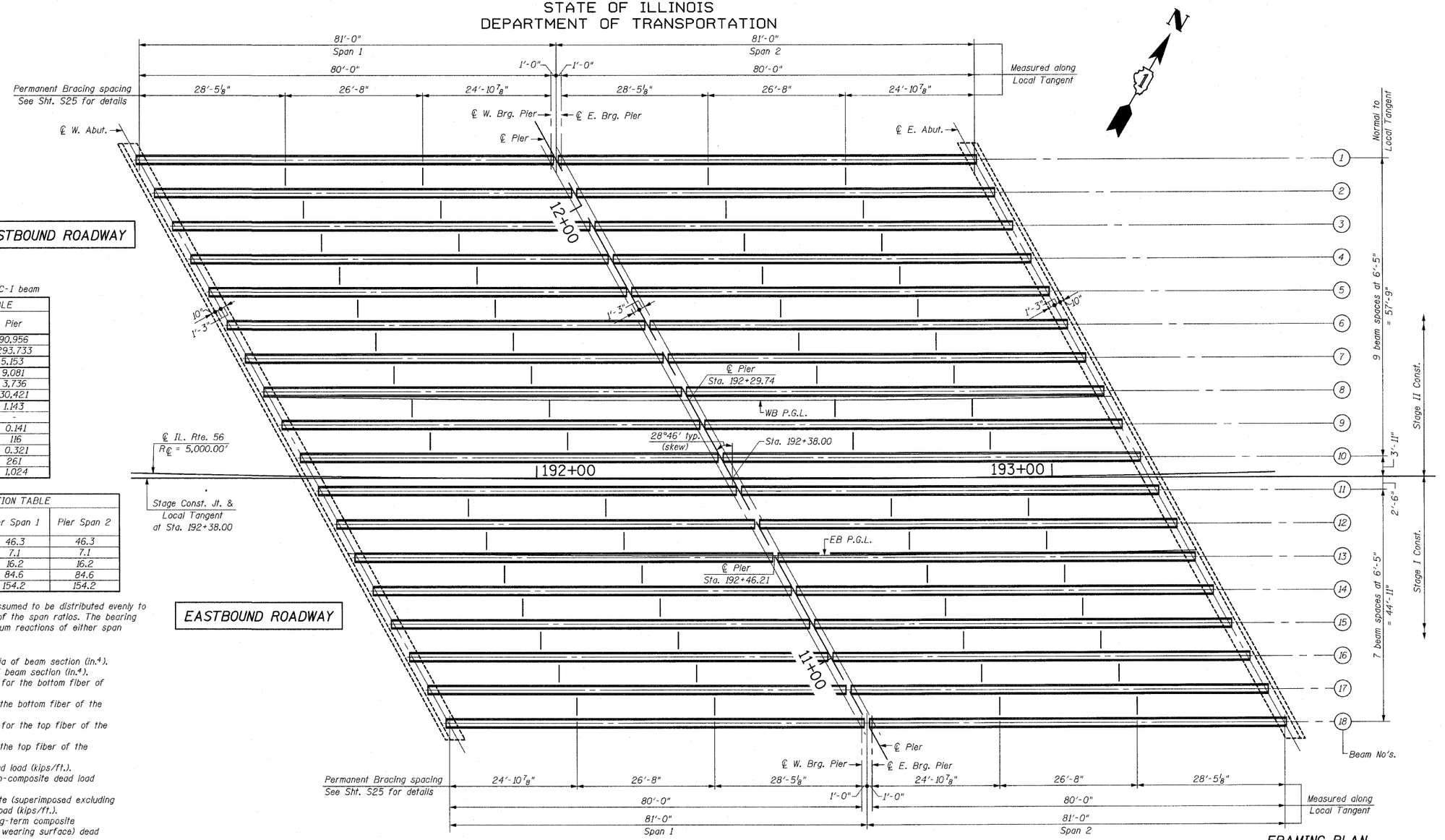
SHEET NO. S22
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	228
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN

Moment table: Symmetrical 2 span PPC-I beam

INTERIOR BEAM MOMENT TABLE			
		0.4 Sp. 1 0.6 Sp 2	Pier
I	(in^4)	90,956	90,956
I'	(in^4)	293,733	293,733
S_b	(in^3)	5,153	5,153
S_b'	(in^3)	9,081	9,081
S_t	(in^3)	3,736	3,736
S_t'	(in^3)	30,421	30,421
$DC1$	($k/'$)	1.143	1.143
M_{DC1}	($'k$)	914	-
$DC2$	($k/'$)	0.141	0.141
M_{DC2}	($'k$)	65	116
DW	($k/'$)	0.321	0.321
M_{DW}	($'k$)	149	261
M_{L+IM}	($'k$)	999	1,024

INTERIOR BEAM REACTION TABLE				
		Abut's.	Pier Span 1	Pier Span 2
	R_{DC1} (k)	46.3	46.3	46.3
*	R_{DC2} (k)	4.3	7.1	7.1
*	R_{DW} (k)	9.7	16.2	16.2
*	R_{L+IM} (k)	73.5	84.6	84.6
	R_{Total} (k)	133.8	154.2	154.2

*The total R_{DC2}, R_{DW} and R_{L+IM} are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier is based on the maximum reactions of either span

I: Non-composite moment of inertia of beam section ($in.^4$).
I': Composite moment of inertia of beam section ($in.^4$).
S_b: Non-composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_b': Composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_t: Non-composite section modulus for the top fiber of the prestressed beam ($in.^3$).
S_t': Composite section modulus for the top fiber of the prestressed beam ($in.^3$).
$DC1$: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
$DC2$: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft).
M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

FRAMING PLAN
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
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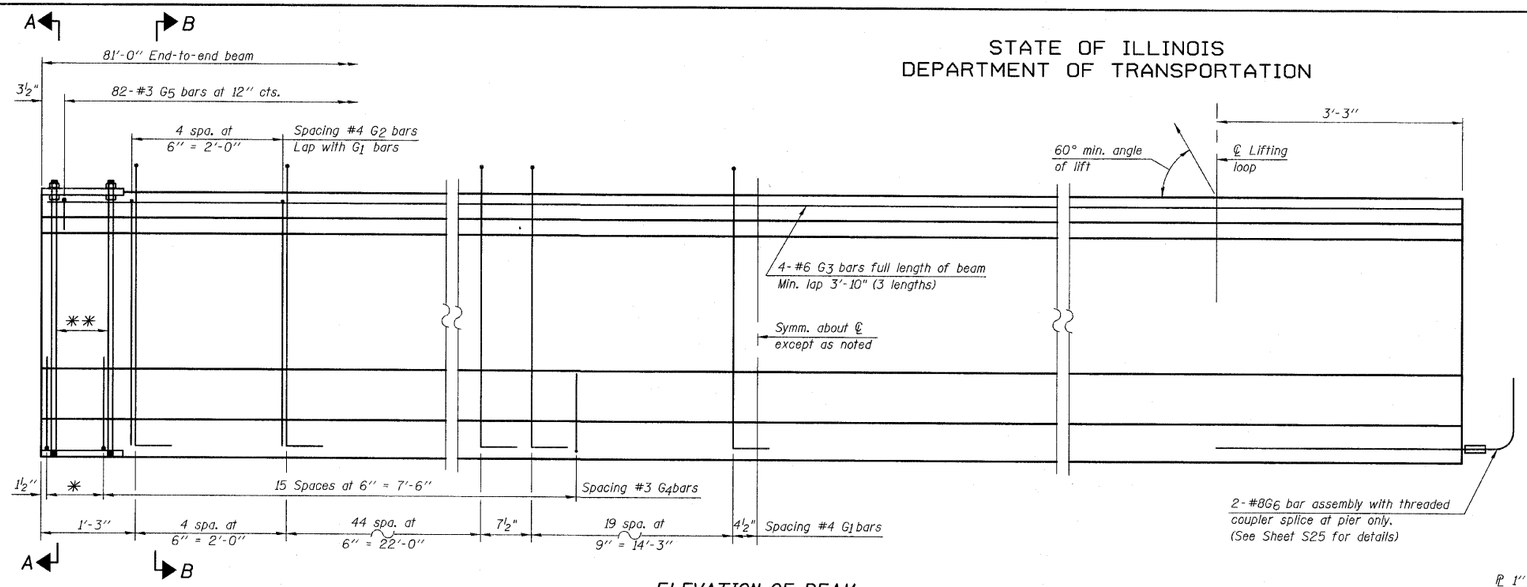
SHEET NO. S23	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	229
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

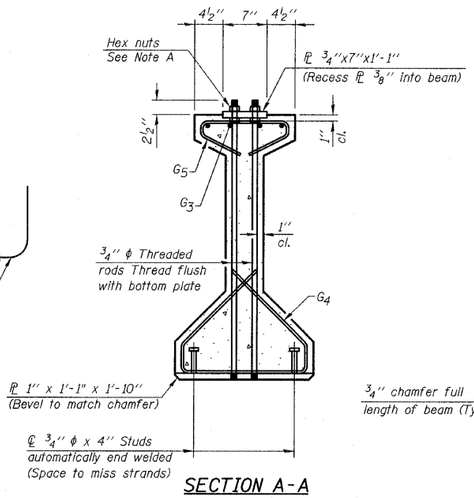


ELEVATION OF BEAM
(Showing reinforcement & dimensions)

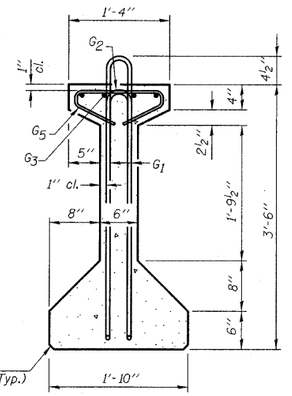
*3 spaces at 3" = 9".

**4-¾"ϕ threaded dowel rods at 3" cts., each face.

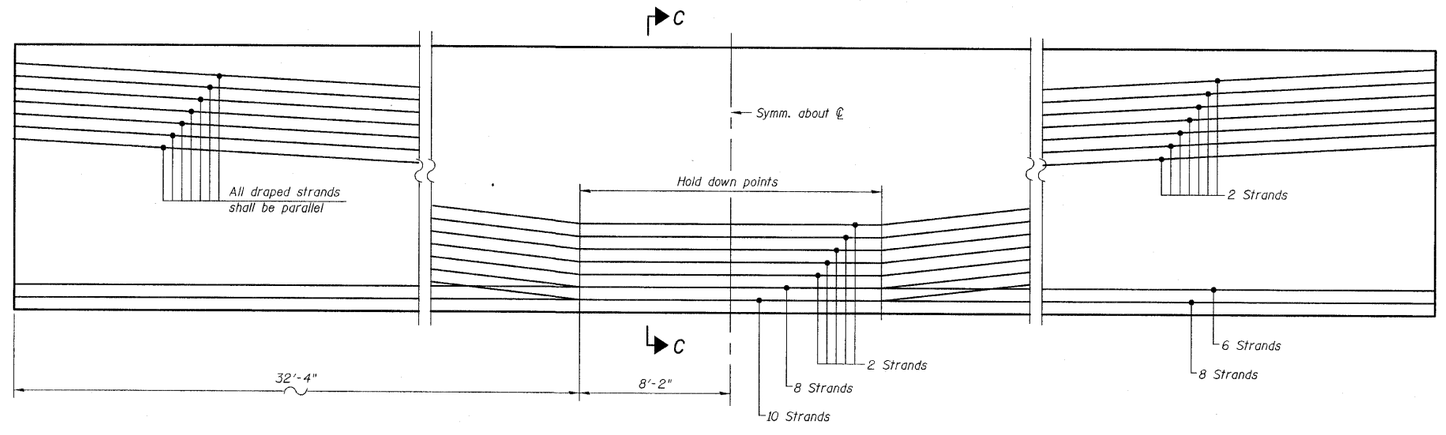
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



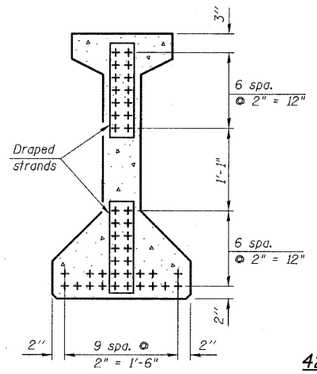
SECTION A-A



SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C

***BAR LIST
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G1	138	#4	8'-5"	
G2	10	#4	6'-8"	
G3	12	#6	29'-7"	
G4	38	#3	4'-11"	
G5	82	#3	2'-6"	
G6	2	#8	6'-6"	

***For information only

Notes:
See Sheet S25 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.

42" P.P.C. I-BEAM DETAILS-I
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

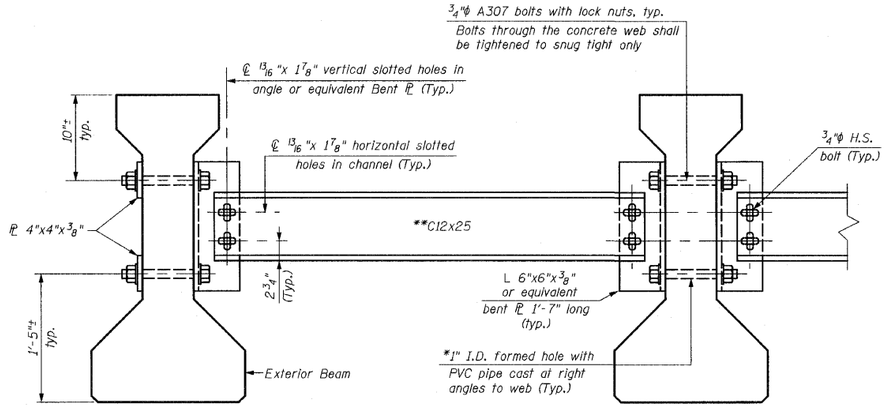
DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

PI-4-42 11-1-09

C R & A
CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S24	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	230
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PERMANENT BRACING DETAIL FOR 42" P.P.C. I-BEAMS

Notes:

All material for bracing shall be hot dip galvanized according to AASHTO M111, unless otherwise noted.

Two hardened washers are required for each set of oversized holes.

Bracing shall be installed as beams are erected and tightened as soon as possible during construction.

All holes shall be 15/16"ϕ unless otherwise noted.

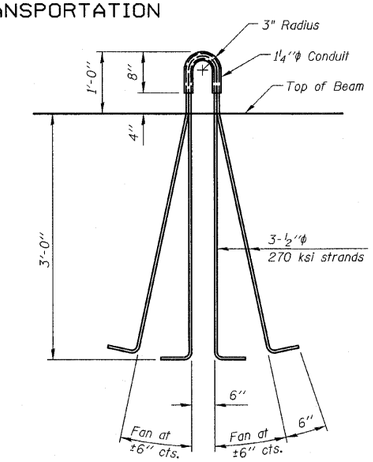
5/16"x3"x3" plate washers are required over all slotted holes.

All bolts shall be galvanized according to AASHTO M232.

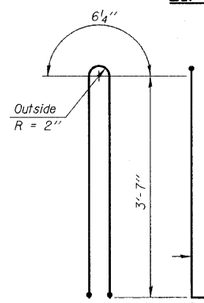
Permanent bracing shall not be paid for separately but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete I-Beams.

*Fabricator shall locate to miss strands within permissible tolerances.

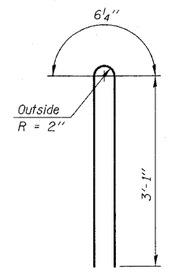
**Alternate C12x30 channels are permitted to facilitate material acquisition.



LIFTING LOOP DETAIL



BAR G1



BAR G2

NOTES:

Inserts for 3/4" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

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.

Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).

A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling.

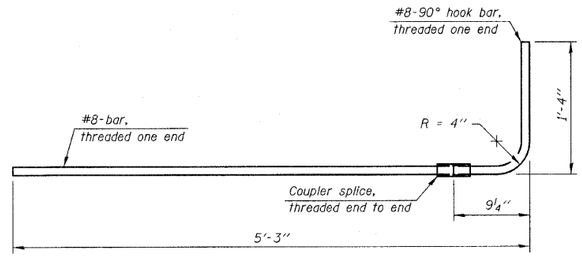
Tilt G_6 bars when necessary to maintain 1 1/2" clearance.

The top and bottom plates shall be AASHTO M270 Grade 50.

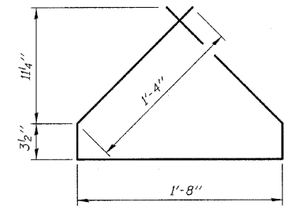
The bottom plates and studs shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized.

Threaded rods shall be ASTM F 1554 Grade 55.

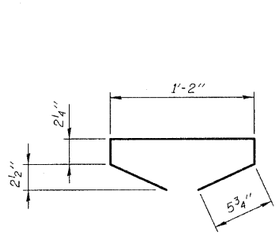
The G_6 bar assembly shall have the threaded ends oversized to ensure no reduction in cross sectional area after threading. The coupler splice shall be capable of developing 125 percent of the yield strength of the reinforcement bar.



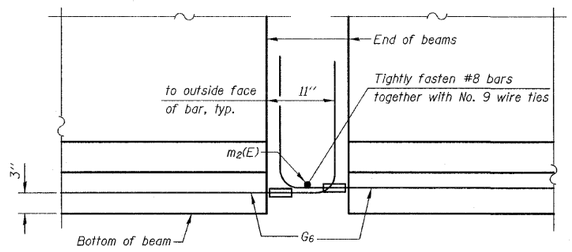
G6 BAR ASSEMBLY



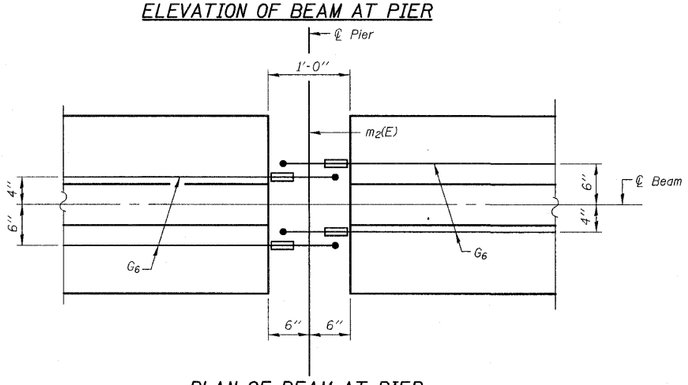
BAR G4



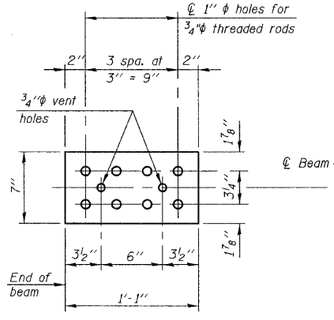
BAR G5



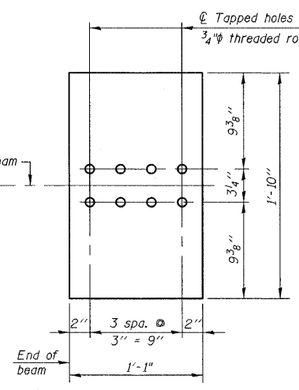
ELEVATION OF BEAM AT PIER



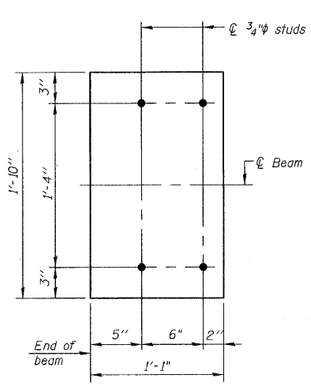
PLAN OF BEAM AT PIER



TOP PLATE



BOTTOM PLATE
(Showing threaded rods)



BOTTOM PLATE
(Showing studs)

See bearing details for pintle hole locations when required.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42"	Ft.	2,916

42" P.P.C. I-BEAM DETAILS-II
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

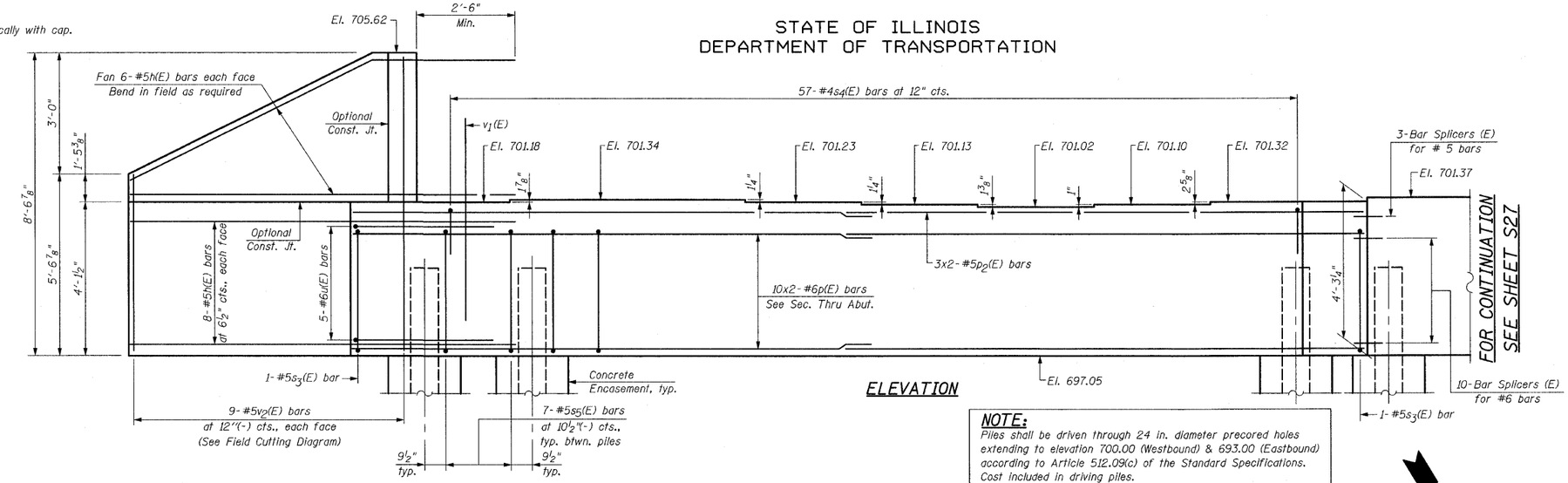
CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S25
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	231
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

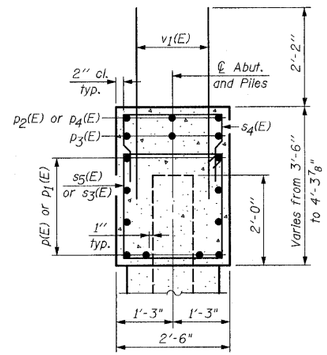
NOTE:
Pour steps monolithically with cap.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

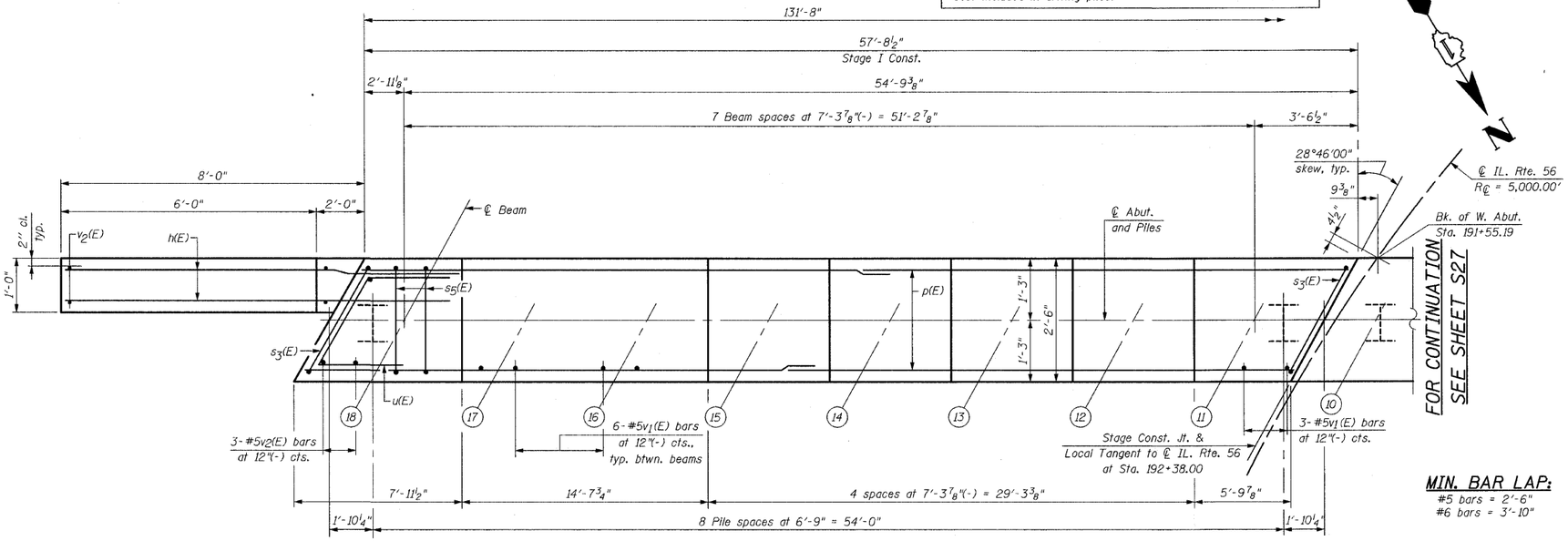


ELEVATION

NOTE:
Piles shall be driven through 24 in. diameter precored holes extending to elevation 700.00 (Westbound) & 693.00 (Eastbound) according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

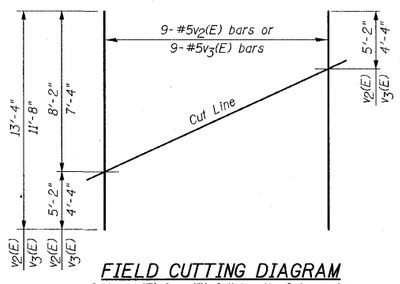


SEC. THRU ABUT.



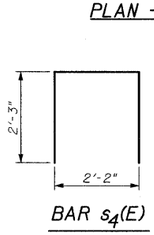
PLAN - WEST ABUTMENT

MIN. BAR LAP:
#5 bars = 2'-6"
#6 bars = 3'-10"

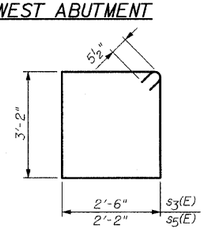


FIELD CUTTING DIAGRAM

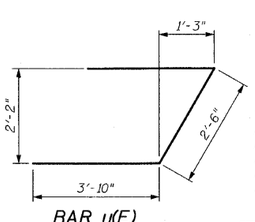
Order $v_2(E)$ & $v_3(E)$ full length. Cut as shown and use remainder of bars in opposite face



BAR $s_4(E)$



BARS $s_3(E)$ & $s_5(E)$



BAR $u(E)$

NOTE:
Work this Sheet with Sheet S27

PILE DATA

Type: Steel HP 14x73 with Pile Shoes
Nominal Required Bearing: 578 kips
Factored Resistance Available: 289 kips
Est. Length: 45 Feet
No. Production Piles: 19
No. Test Piles: 1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	54	#5	10'-6"	—
p(E)	30	#6	31'-8"	—
p1(E)	20	#6	26'-7"	—
p2(E)	6	#5	29'-11"	—
p3(E)	6	#5	20'-2"	—
p4(E)	3	#5	8'-6"	—
s3(E)	4	#5	12'-3"	⊐
s4(E)	94	#4	6'-8"	⊓
s5(E)	130	#5	11'-7"	⊐
u(E)	9	#6	10'-2"	⊐
v1(E)	241	#5	5'-2"	—
v2(E)	9	#5	13'-4"	—
v3(E)	9	#5	11'-8"	—
Structure Excavation		Cu. Yd.	438	
Concrete Structures		Cu. Yd.	52.8	
Concrete Encasement		Cu. Yd.	10.9	
Reinforcement Bars, Epoxy Coated		Pound	6,870	
Bar Splicers		Each	13	
Furnishing Steel Piles HP 14x73		Foot	855	
Driving Piles		Foot	855	
Test Pile Steel HP 14x73		Each	1	
Pile Shoes		Each	20	

For details of Bar Splicers, see Sheet S34.
For details of piles and Concrete Encasement, see Sheet S35.
Bars indicated thus 10x3-#6 etc., indicates 10 lines of bars with 3 lengths per line.

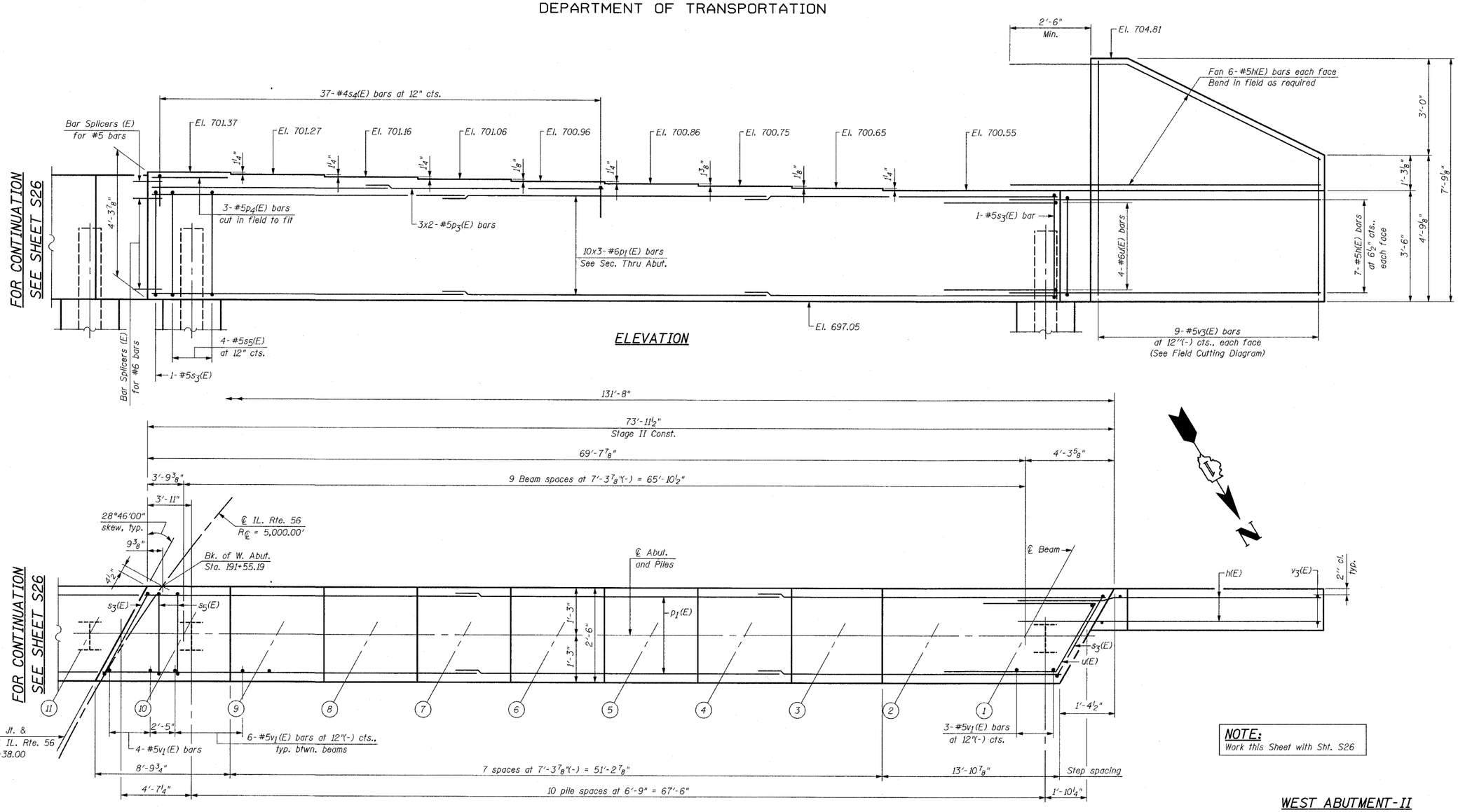
WEST ABUTMENT-I
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S26	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	232
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN - WEST ABUTMENT

FOR CONTINUATION SEE SHEET S26

NOTE:
Work this Sheet with Sht. S26

NOTE:
See Sht. S26 for Sec. Thru Abut., Field Cutting Diagram, Bill of Material and Pile Data

WEST ABUTMENT-II
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
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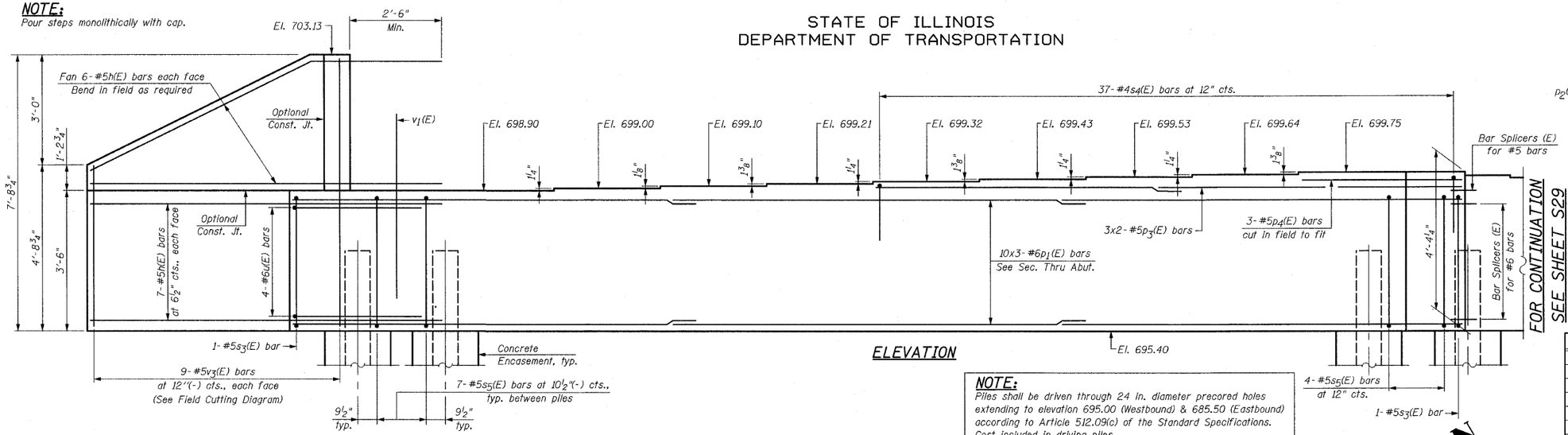
SHEET NO. S27	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	233
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

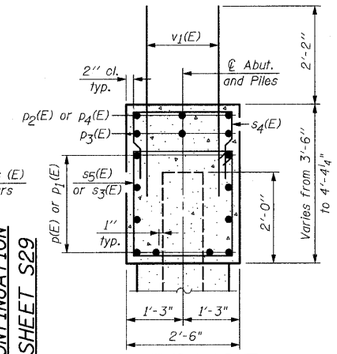
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOTE:
Pour steps monolithically with cap.



ELEVATION

NOTE:
Piles shall be driven through 24 in. diameter precored holes extending to elevation 695.00 (Westbound) & 685.50 (Eastbound) according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

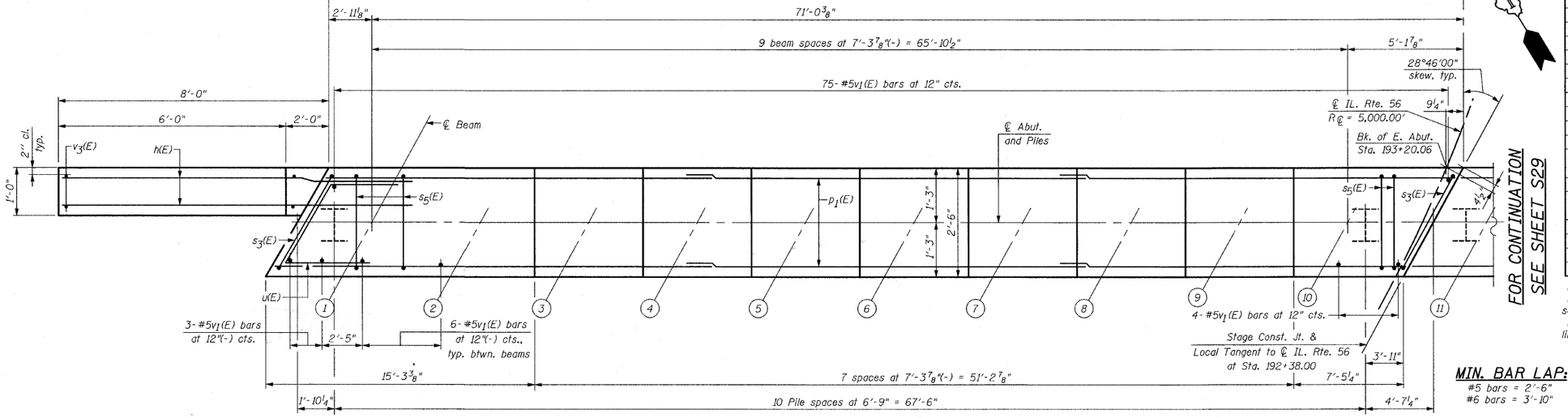


SEC. THRU ABUT.

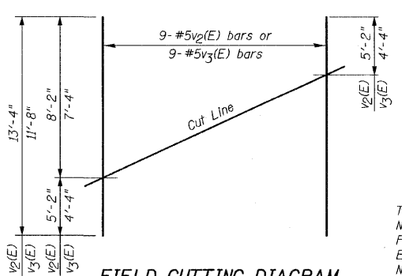
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	54	#5	10'-6"	——
p(E)	20	#6	31'-8"	——
p1(E)	30	#6	26'-7"	——
p2(E)	6	#5	29'-11"	——
p3(E)	6	#5	20'-2"	——
p4(E)	3	#5	8'-6"	——
s3(E)	4	#5	12'-3"	⌐
s4(E)	94	#4	6'-8"	⊓
s5(E)	130	#5	11'-7"	⌐
u(E)	9	#6	10'-2"	⊐
v1(E)	241	#5	5'-2"	——
v2(E)	9	#5	13'-4"	——
v3(E)	9	#5	11'-8"	——
Structure Excavation		Cu. Yd.	438	
Concrete Structures		Cu. Yd.	52.9	
Concrete Encasement		Cu. Yd.	10.9	
Reinforcement Bars, Epoxy Coated		Pound	6,870	
Bar Splicers		Each	13	
Furnishing Steel Piles HP 14x73		Foot	874	
Driving Piles		Foot	874	
Test Pile Steel HP 14x73		Each	1	
Pile Shoes		Each	20	

For details of Bar Splicers, see Sheet S34.
For details of piles and Concrete Encasement, see Sheet S35.
Bars indicated thus 10x3-#6 etc., indicates 10 lines of bars with 3 lengths per line.

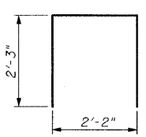


PLAN - EAST ABUTMENT

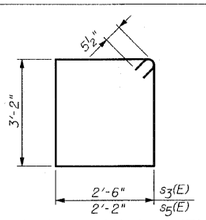


FIELD CUTTING DIAGRAM
Order $v_2(E)$ & $v_3(E)$ full length. Cut as shown and use remainder of bars in opposite face

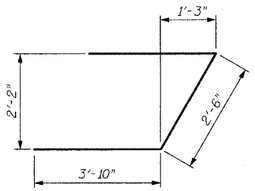
PILE DATA
Type: Steel HP 14x73 with Pile Shoes
Nominal Required Bearing: 578 kips
Factored Resistance Available: 289 kips
Est. Length: 46 Feet
No. Production Piles: 19
No. Test Piles: 1



BAR $s_4(E)$



BARS $s_3(E)$ & $s_5(E)$



BAR u(E)

MIN. BAR LAP:
#5 bars = 2'-6"
#6 bars = 3'-10"

NOTE:
Work this Sheet with Sheet S29

EAST ABUTMENT-I
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
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211 WEST WACKER DRIVE
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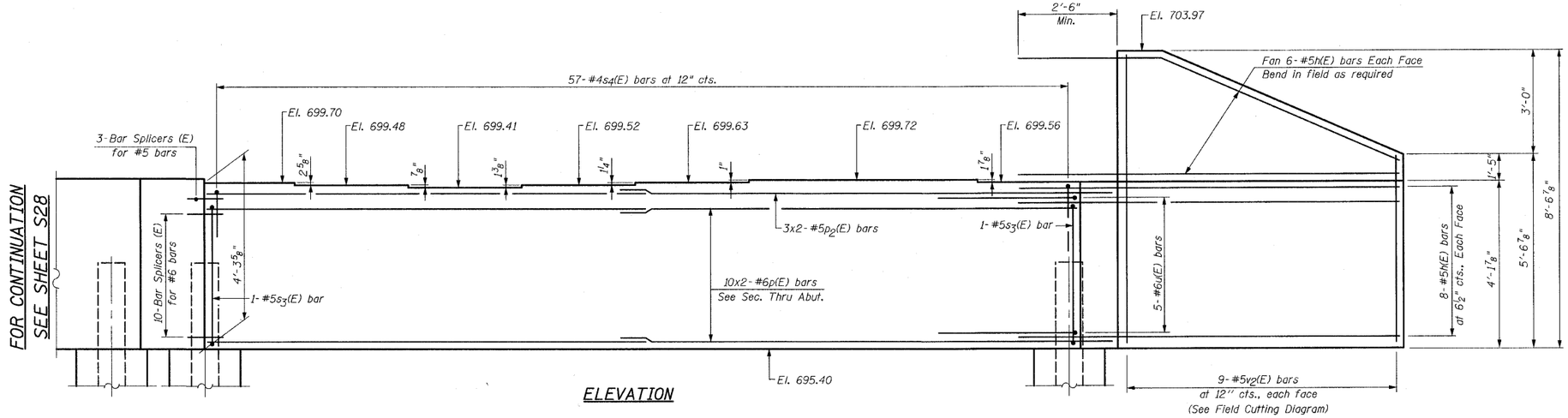
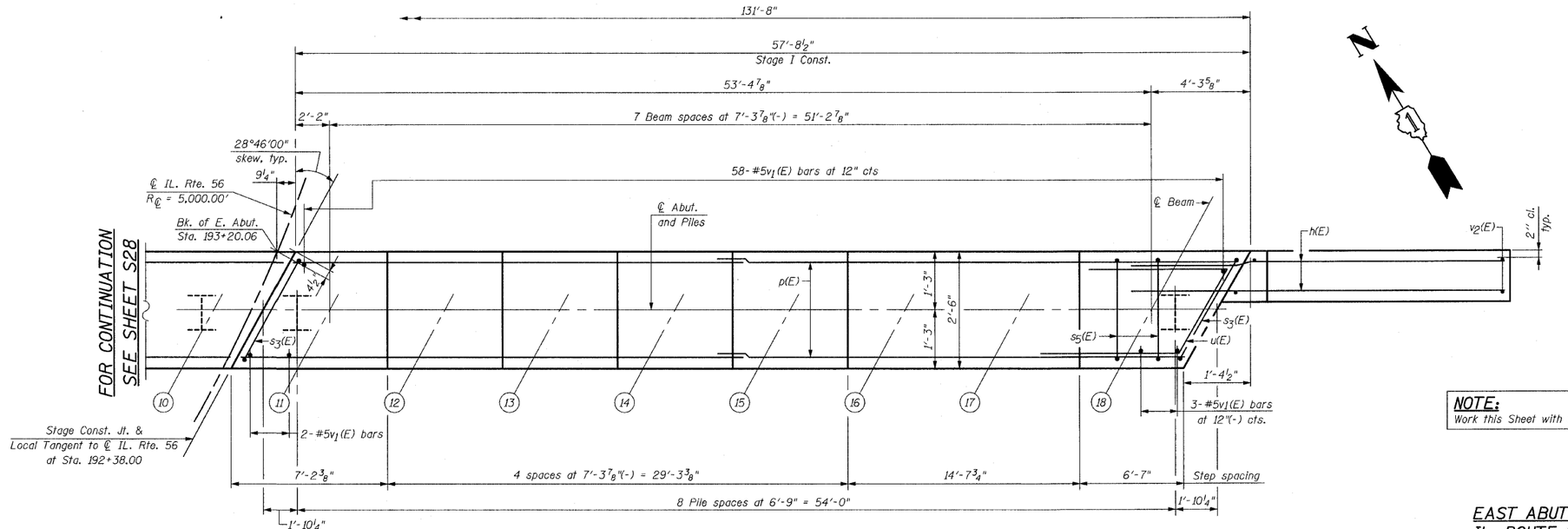
SHEET NO. S28	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	234
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION



PLAN - EAST ABUTMENT

NOTE:
Work this Sheet with Sht. S28

NOTE:
See Sht. S28 for Sec. Thru Abut., Field Cutting Diagram, Bill of Material and Pile Data.

EAST ABUTMENT-II
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

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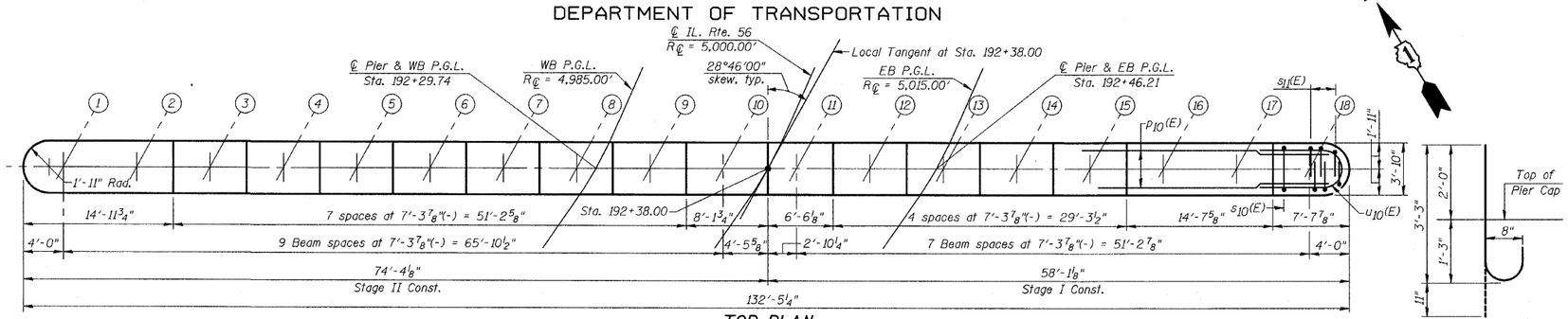
SHEET NO. S29
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	235
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

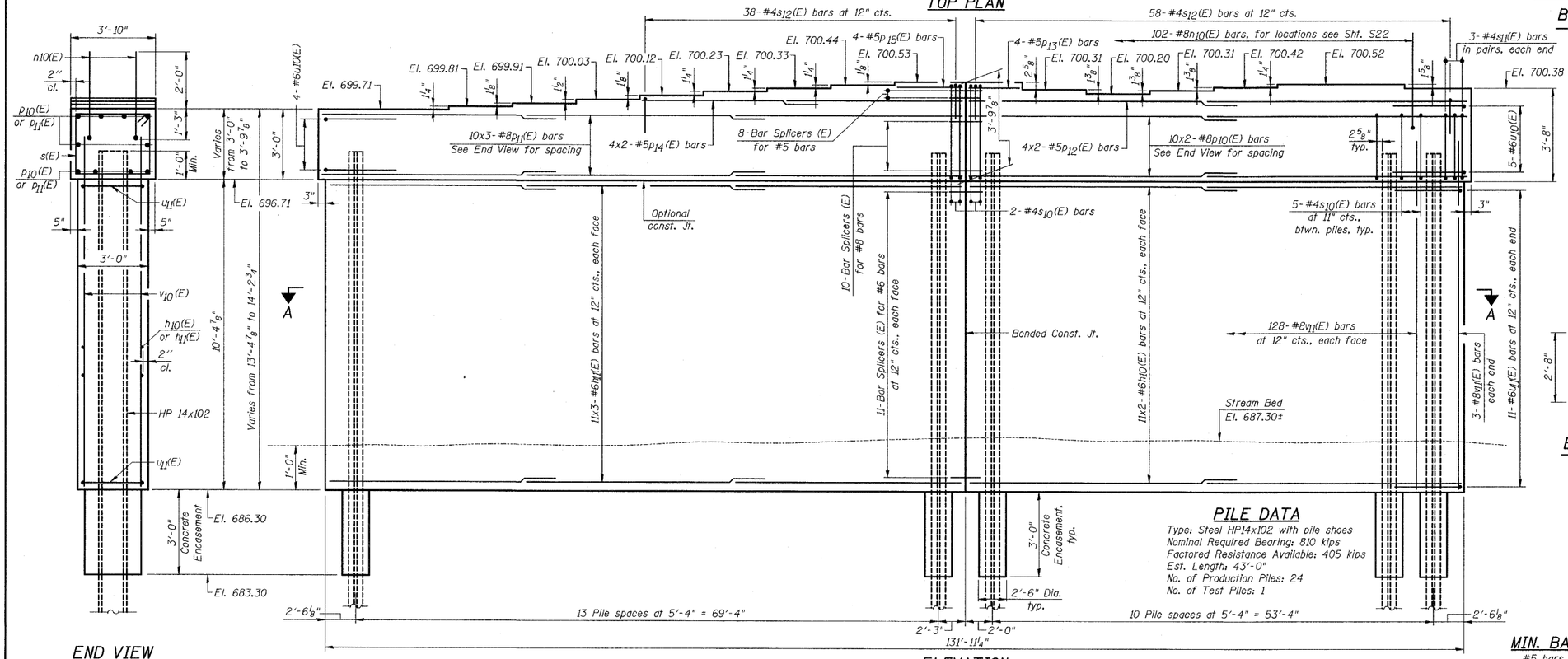
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see Sheet S35

NOTE:
If a portion of the Pier Wall or Concrete Encasement is under water, Reinforcement may be placed under water into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an Elevation of 1'-0" above the water line at the time of Construction.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



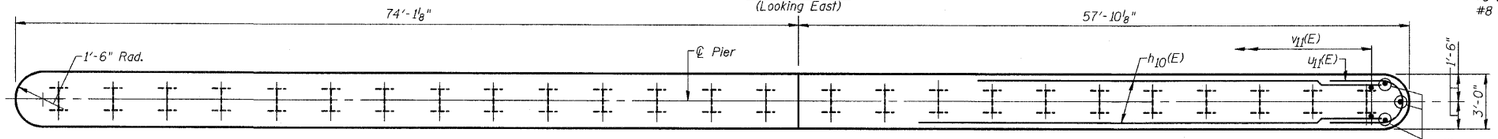
TOP PLAN



BAR $n_{10}(E)$

END VIEW

ELEVATION
(Looking East)



SECTION A-A

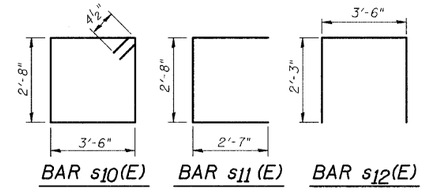
PILE DATA

Type: Steel HP14x102 with pile shoes
Nominal Required Bearing: 810 kips
Factored Resistance Available: 405 kips
Est. Length: 43'-0"
No. of Production Piles: 24
No. of Test Piles: 1

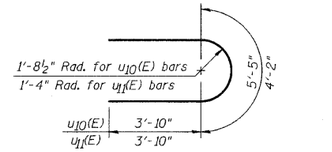
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h10(E)	44	#6	30'-0"	—
h11(E)	66	#6	26'-9"	—
n10(E)	102	#8	4'-2"	L
p10(E)	20	#8	31'-5"	—
p11(E)	30	#8	28'-7"	—
p12(E)	8	#5	29'-4"	—
p13(E)	4	#5	6'-2"	—
p14(E)	8	#5	19'-10"	—
p15(E)	4	#5	7'-9"	—
s10(E)	119	#4	13'-1"	□
s11(E)	12	#4	7'-10"	C
s12(E)	96	#4	8'-0"	⊓
u10(E)	9	#6	13'-1"	⊃
u11(E)	22	#6	11'-10"	⊃
v11(E)	134	#8	12'-7"	—
Structure Excavation		Cu. Yd.	66	
Concrete Structures		Cu. Yd.	217.6	
Reinforcement Bars, Epoxy Coated		Pound	16,890	
Furnishing Steel Piles HP 14x102		Foot	1,032	
Test Pile Steel HP 14x102		Each	1	
Driving Piles		Foot	1,032	
Underwater Structure Excavation Protection-Location 1		Each	1	
Concrete Encasement		Cu. Yd.	13.7	
Bar Splicers		Each	40	
Pile Shoes		Each	25	

Bars indicated thus 11x2-#6 etc., indicates 11 lines of bars with 2 lengths per line



BAR $s_{10}(E)$ BAR $s_{11}(E)$ BAR $s_{12}(E)$



BARS $u_{10}(E)$ & $u_{11}(E)$

MIN. BAR LAP:
#5 bars = 2'-6"
#6 bars = 3'-10"
#8 bars = 6'-9"

PIER DETAILS
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

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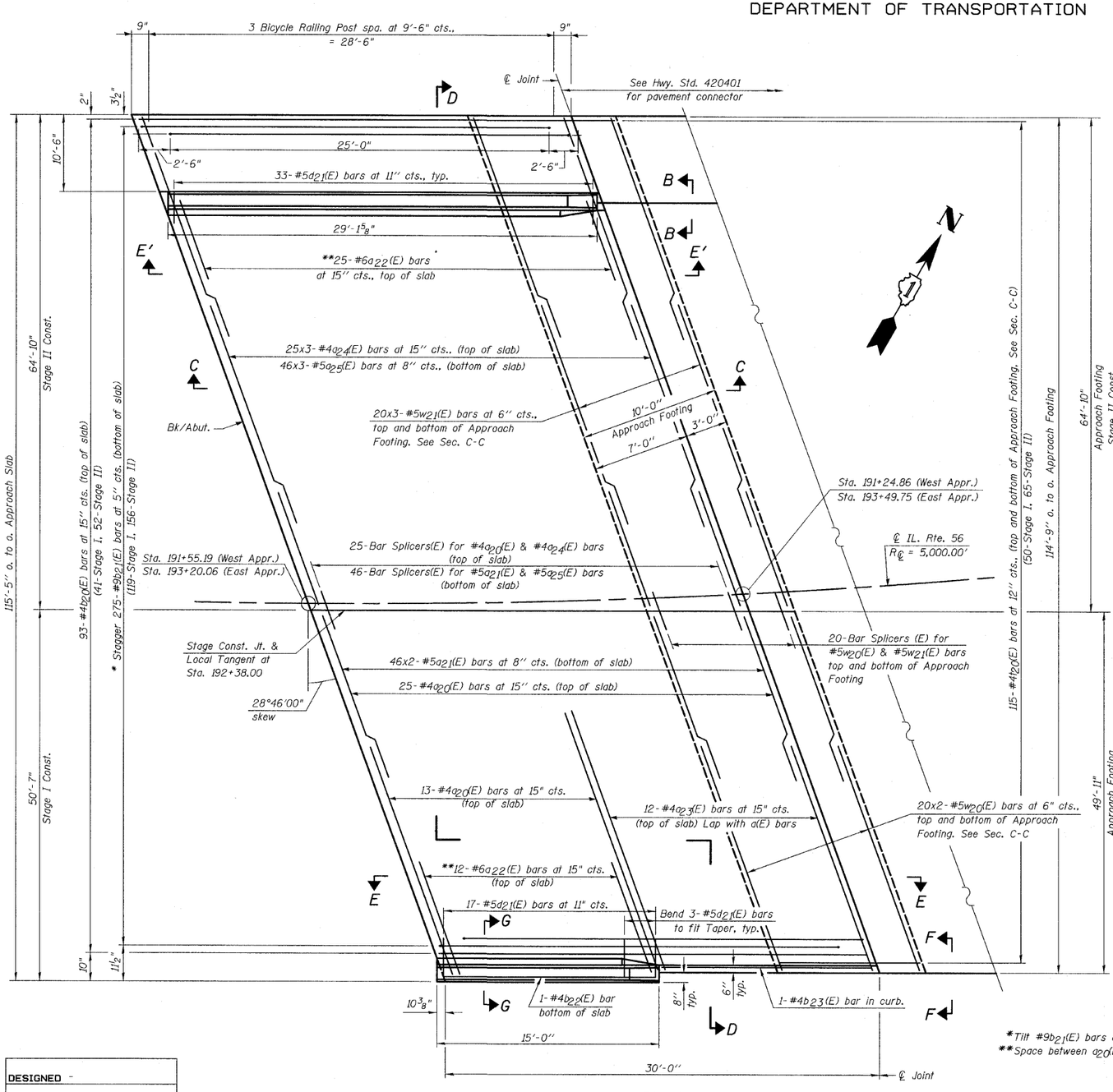
SHEET NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S30	365	(58&59) WRS-3	DuPAGE	466	236
S43 SHEETS			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

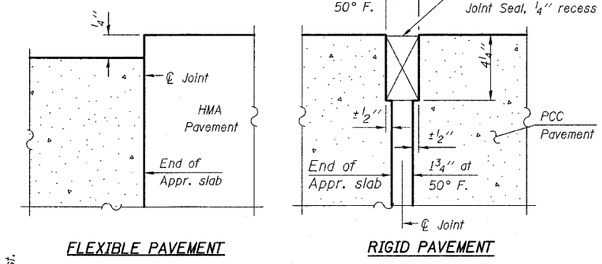
Notes:
See Sht. S33 for Sections C-C, D-D & G-G and Views E-E & E'-E'.
a_{20}(E) thru a_{25}(E) bar spacings measured along Local Tangent.



PLAN
(East Approach Slab shown)
(West Approach Slab opp. hand)

*Tilt #9b21(E) bars as required to maintain clearance.
**Space between a20(E) or a24(E) bars, typ. each parapet.

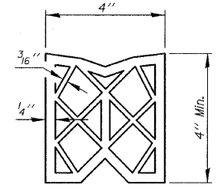
*** Cost included with Concrete Superstructure.



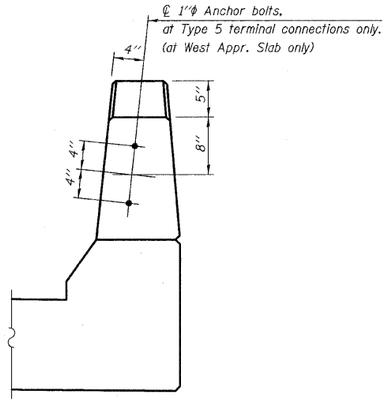
FLEXIBLE PAVEMENT

RIGID PAVEMENT

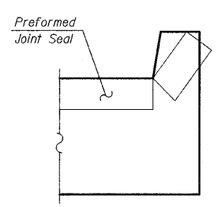
DETAIL A



PREFORMED JOINT SEAL



VIEW B-B



VIEW F-F
Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.

MIN. BAR LAP:
#4 bar = 1'-10"
#5 bar = 2'-6"

(Sheet 1 of 3)

APPROACH SLAB DETAILS-I
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

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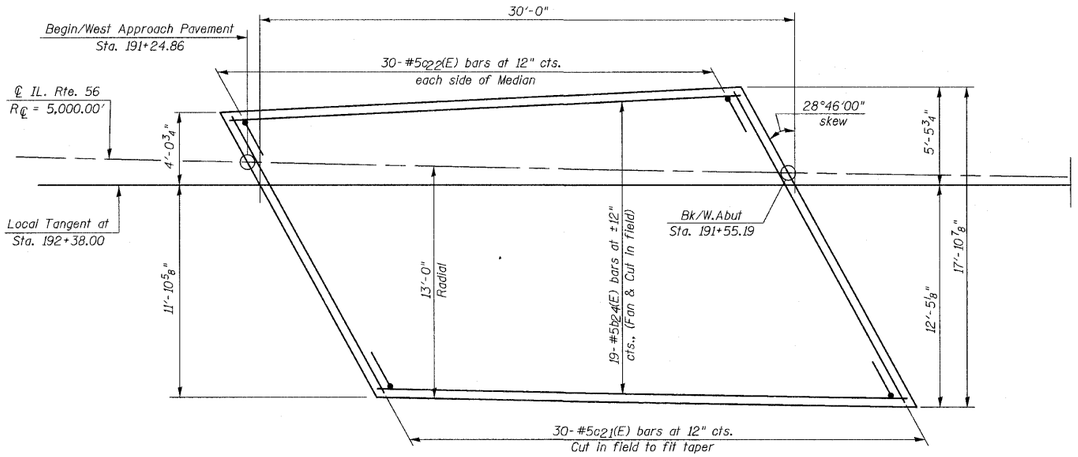
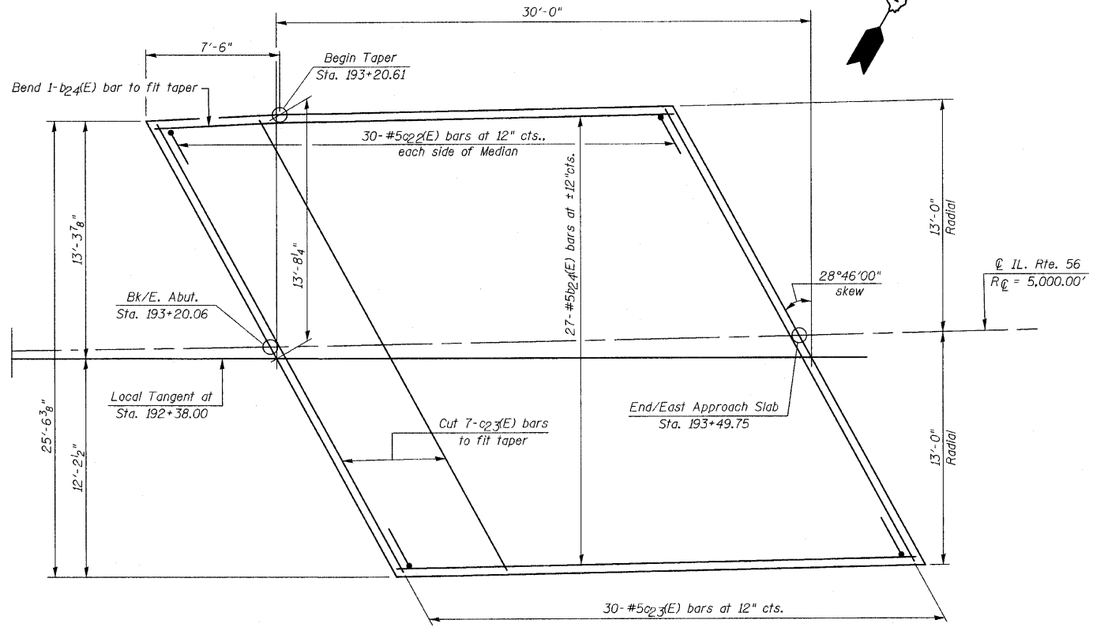
SHEET NO. S31
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	237
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

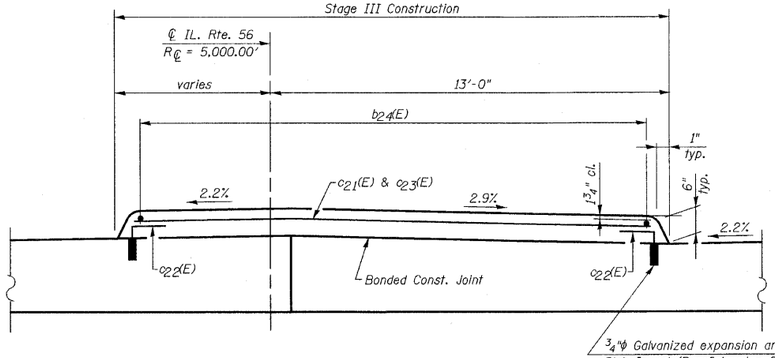
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



MEDIAN PLAN
(At West End)



MEDIAN PLAN
(At East End)



MEDIAN CROSS SECTION
(Looking East)

NOTE:
See Sht. S33 for Bill of Material

APPROACH SLAB DETAILS-II
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

(Sheet 2 of 3)

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

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CHICAGO, ILLINOIS 60606
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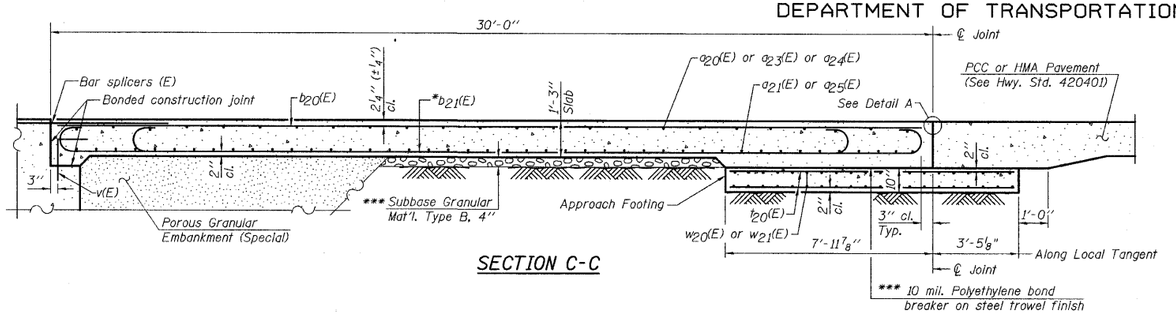
SHEET NO. S32	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	230
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

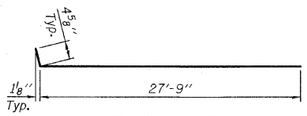
Notes:
See Sht. S31 for Detail A and View B-B.
See Sht. S32 for median plan.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see Sht. S17.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see Sht. S34.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see Sht. S2.
For additional parapet details, see Sht. S31.



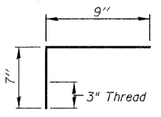
SECTION C-C

* Tilt #9b21(E) bars as required to maintain clearance.

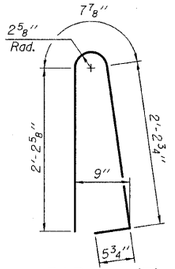
*** Cost included with Concrete Superstructure.



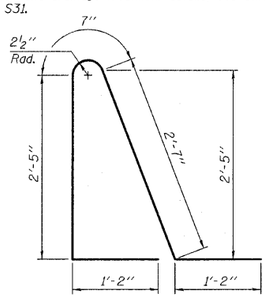
BAR a23(E)



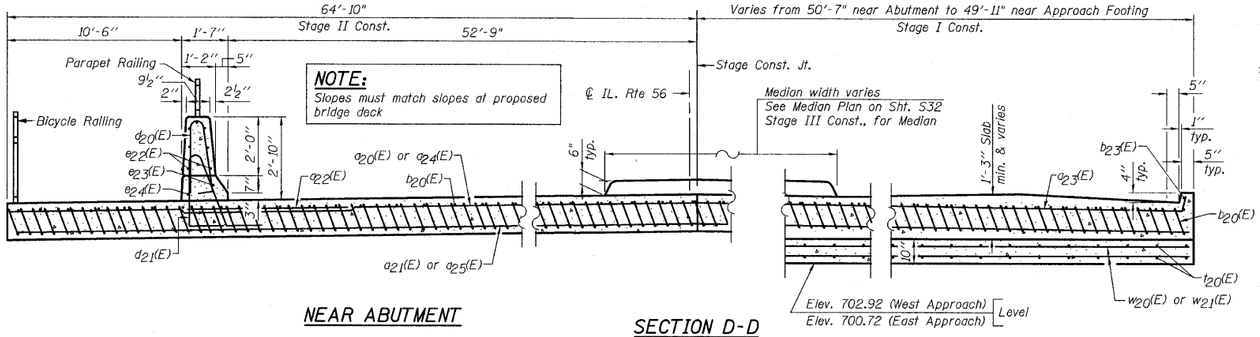
BAR c22(E)



BAR d20(E)



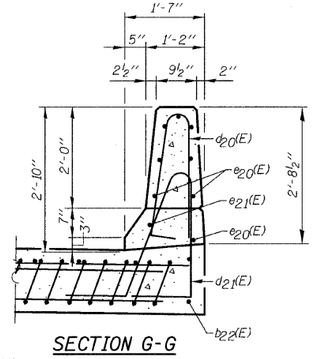
BAR d21(E)



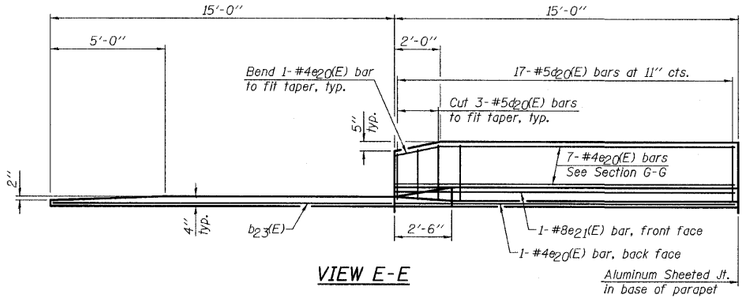
NEAR ABUTMENT

SECTION D-D
(See Plan for dimensions not shown)

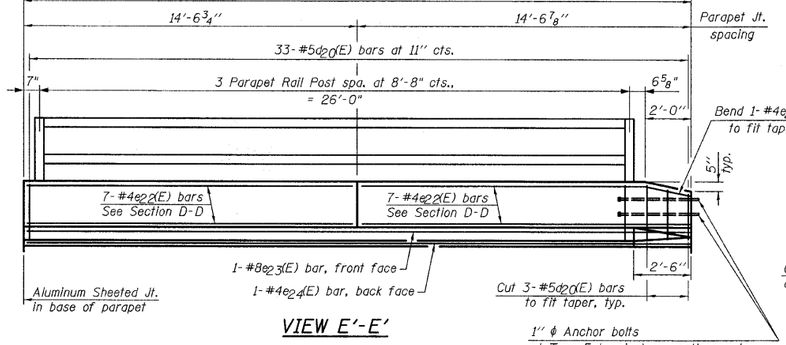
AT APPROACH FOOTING



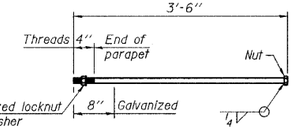
SECTION G-G



VIEW E-E



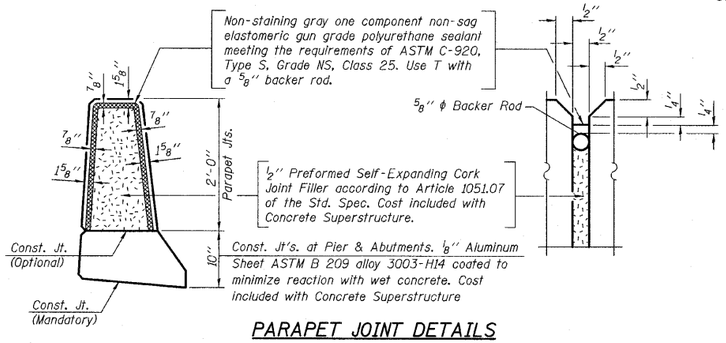
VIEW E'-E'



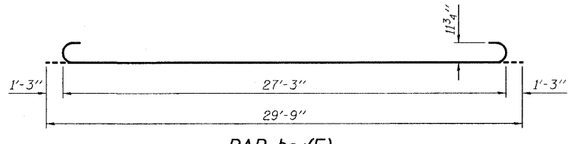
1"ϕ ANCHOR BOLT
(Cost included with Concrete Superstructure)

TWO APPROACHES & MEDIANS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a20(E)	76	#4	29'-8"	
a21(E)	184	#5	30'-3"	
a22(E)	74	#6	6'-6"	
a23(E)	24	#4	28'-2"	
a24(E)	150	#4	25'-9"	
a25(E)	276	#5	23'-8"	
b20(E)	186	#4	29'-8"	
b21(E)	550	#9	29'-9"	
b22(E)	2	#4	14'-8"	
b23(E)	2	#4	14'-4"	
b24(E)	46	#5	29'-8"	
c21(E)	60	#5	20'-1"	
c22(E)	120	#5	1'-4"	
c23(E)	30	#5	29'-3"	
d20(E)	100	#5	5'-7"	
d21(E)	100	#5	7'-11"	
e20(E)	16	#4	14'-8"	
e21(E)	2	#8	14'-8"	
e22(E)	28	#4	14'-2"	
e23(E)	2	#8	28'-9"	
e24(E)	2	#4	28'-9"	
t20(E)	460	#4	11'-1"	
w20(E)	160	#5	29'-7"	
w21(E)	240	#5	26'-3"	
Concrete Structures		Cu. Yd.	80.9	
Concrete Superstructure		Cu. Yd.	426.2	
Reinforcement Bars, Epoxy Coated		Pound	98,010	
Bar Splicers		Each	222	



PARAPET JOINT DETAILS



BAR b21(E)

(Sheet 3 of 3)

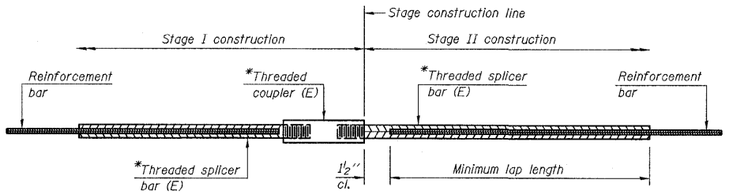
APPROACH SLAB DETAILS-III
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S33	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	239
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

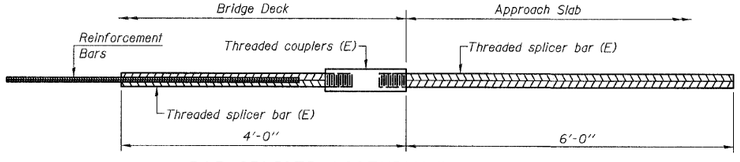
Minimum Lap Lengths				
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

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

Threaded splicer bar length = min. lap length + 1½" + thread length

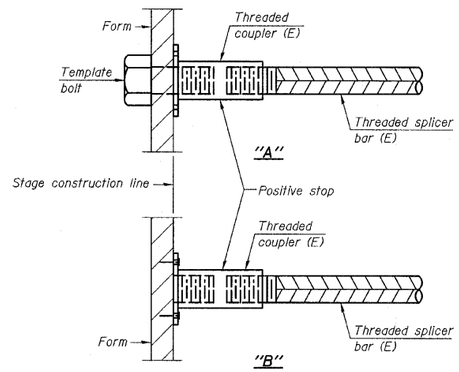
*Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Top of Deck Slab	#5	284	Table 4
Bottom of Deck Slab	#5	200	Table 4
Diaphragms at West Abut.	#6	8	Table 4
Diaphragms at East Abut.	#6	8	Table 4
Diaphragms at Pier	#4	4	Table 4
	#6	2	Table 4
West Abutment	#6	10	Table 4
	#5	3	Table 3
East Abutment	#6	10	Table 4
	#5	3	Table 3
Pier Cap	#8	10	Table 4
	#5	8	Table 3
Pier Solid Wall Encasement	#6	22	Table 3
West Approach Slab	#4	25	Table 4
	#5	46	Table 3
West Approach Slab Footing	#5	40	Table 3
East Approach Slab	#4	25	Table 4
	#5	46	Table 3
East Approach Slab Footing	#5	40	Table 3
	Total	794	



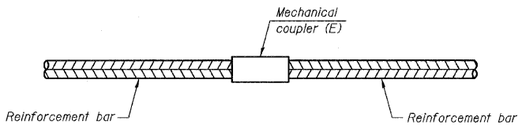
BAR SPLICER ASSEMBLY FOR #6 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 236



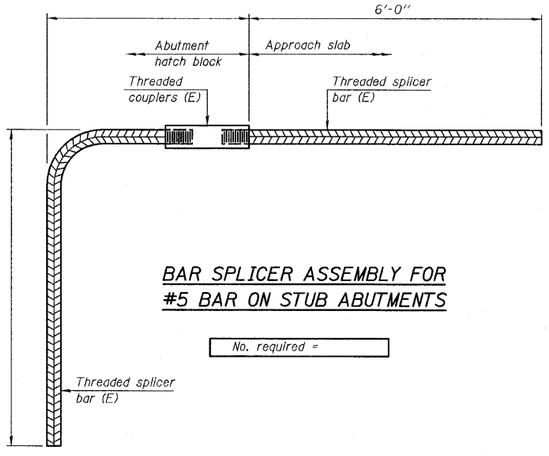
INSTALLATION AND SETTING METHODS

"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 #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
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

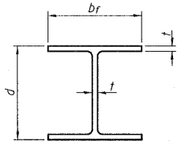
DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

BSD-1 11-1-09

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

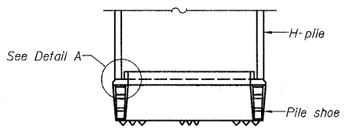
SHEET NO. S34	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	240
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

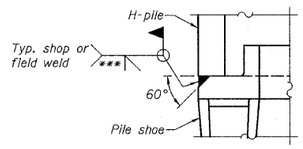


STEEL PILE TABLE

Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

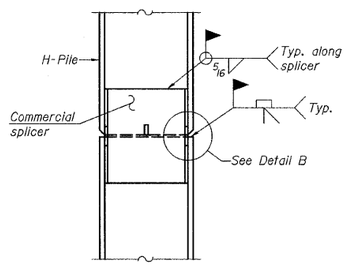


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



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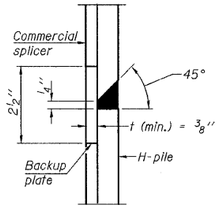
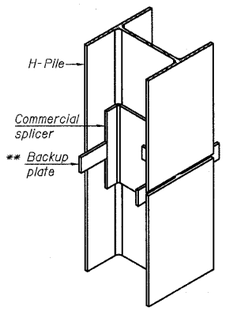
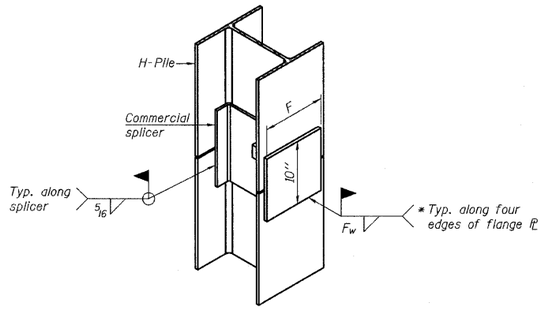


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



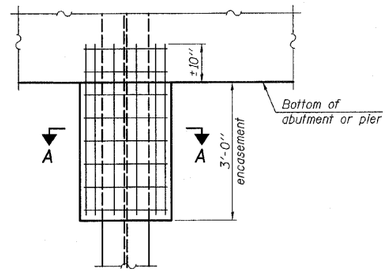
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

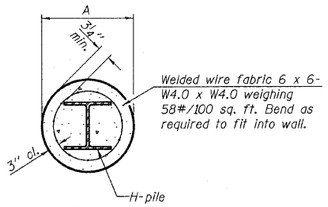
* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



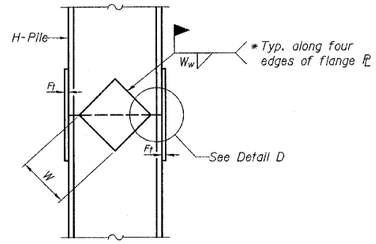
ELEVATION



Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

PILE ENCASEMENT



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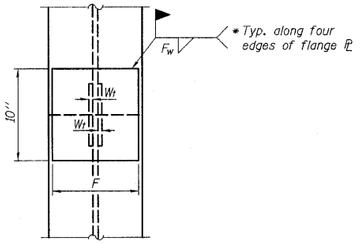
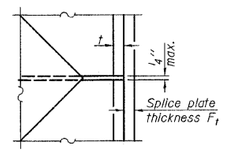


END VIEW



DETAIL D

Designation	F	Ft	Fw	W	Wf	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

HP PILE DETAILS
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

F-HP 11-1-09

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S35
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	241
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Illinois Department of Transportation

Bridge Foundation Boring Log

P-91-243-77 Sh. 1 of 2 Sheets

PROJECT _____ BRIDGE Butterfield Road over West branch of DuPage River Date 01-23-79

ROUTE FAU 3545 Bored By D. GROW

SEC. 1977-212-BR STA. East Abutment Checked By _____

COUNTY Du Page

Boring No. #1
Station 471 + 46
Offset 20' Rt. ℄ (S)

Surface Water El. _____
Groundwater El. at Completion Wash
After _____ Hours

Elevation	N	Qu t/s.f.	w (%)	Description
697.8				**Ground Surface** 0
				MEDIUM, BROWN SANDY LOAM & GRAVEL
	5			
	10			
	13			
-5				
691.8	5			
	9			
	4			
				LOOSE, BROWN & BLACK SANDY LOAM & GRAVEL -- somewhat organic. Very little recovery.
	1			
	2			
687.8	4			
-10				
	5			
	7			MEDIUM, BROWN SANDY LOAM & GRAVEL
685.8	5		14	
				LOOSE, BROWN SANDY LOAM and GRAVEL
	2			
	2			
683.2	4		11	
-15				VERY DENSE, GRAY GRAVEL Free water in Sampler.
	50			
	50			
680.8	32			
		Begin Wash		
	23			VERY DENSE, BROWN SAND and GRAVEL
	24			
	34			
-20				
677.3	10			
	12	S/B		VERY STIFF, GRAY SANDY CLAY (TILL)
	14	3.49	12	

Elevation	N	Qu t/s.f.	w (%)	Description
				VERY STIFF, GRAY SANDY CLAY (TILL) Continued 674.8
	12			
	22			VERY DENSE, BROWN SAND - Medium-Grained
	27			
-25				
	7			
	28			
	31			
669.8	6			
	14	S/B		HARD, GRAY SANDY CLAY (TILL)
	20	5.26	10	
-30				
	15	S(15%)		
	20			
	92	4.74	9	
	12	S/B		
	47			
	32	6.01	13	
-35				
	7			
	12			
	20	6.01	13	
659.8				
	46			
	100			VERY DENSE, BROWN SANDY LOAM & GRAVEL
	100/3"Pen			
-40				
	15			
	30			
	55			
654.8				
	31			
	36			VERY DENSE, DECAYED LIMESTONE
	37			
-45				

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. hammer falling 30".

Qu-Unconfined Compressive Strength - t/sf

w - Water Content - percentage of oven dry weight-%.

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value
P - Penetrometer

FORM NO. B. D. 127 REV. 9-86 Sh. 2 of 2 Sheets

BRIDGE FOUNDATION BORING LOG

FAU 3545
Section 1977-212-BR
Boring #1 Continued
P-91-243-88

Elevation	N	Qu t/s.f.	w (%)	Description
-45	50			VERY DENSE, WHITE DECAYED LIMESTONE -- Continued
	100			
651.3	0"	Pen.		
				BEDROCK
-50				
-55				
-60				
-65				
-70				
-75				
-80				
-85				
-90				
-95				

SOIL BORING LOGS-#1
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S36	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S43 SHEETS	365	(58&59) WRS-3	DuPAGE	466	242
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh. 1 of 2 Sh.

P-91-243-77
PROJECT ____ BRIDGE Butterfield Road over Date 01-29-79
ROUTE FAU 3545 west branch of Du Page River Bored By D. GROW
SEC. 1977-212-BR STA. West abutment Checked By ____
COUNTY Du Page
Boring No. 2
Station 469+90
Offset 15' Lt. ℄ (N)
Surface Water El. ____
Groundwater El. at Completion Wash
After ____ Hours ____

Elevation	N	Qu t/s.f.	w (%)	Description
701.2	0			Ground Surface
				MEDIUM, BROWN SANDY LOAM and GRAVEL
698.7	3	S(20%)		
	3 4	2.91	18	VERY STIFF, BROWN SILTY CLAY with Pebbles
696.2 -5	3	S(15%)		
	3 4	1.48	26	STIFF, BROWN, MOTTLED SILTY CLAY (TOPSOIL) with some plant roots
693.7	4	P		STIFF, GRAY CLAY LOAM
692.7	4 9	1.25	15	MEDIUM, BROWN SAND & GRAVEL
-10	4 6 6			Free water in sampler
689.2	0 5 10			MEDIUM, GRAY SANDY LOAM and GRAVEL
-15	2 4 7			
683.2	8 9	S/B		
	8	3.10	10	VERY STIFF, GRAY SANDY CLAY (TILL)
-20	5 10 30	S(15%) 3.30	10	VERY STIFF, GRAY SILTY CLAY (TILL)
656.7				
-45				

Elevation	N	Qu t/s.f.	w (%)	Description
	5	S/B		VERY STIFF, GRAY SANDY CLAY (TILL
	10 11	3.88	11	
676.7				
-25	7	S(15%)		HARD, GRAY SANDY CLAY (TILL)
	13 16	5.15	10	
	6	S/B		
	13 21	4.65	12	
-30	8	S/B		
	12 25	5.24	13	
669.2				
	4	S/B		VERY STIFF, GRAY SANDY CLAY (TILL
	12 17	2.91	15	
666.7				
-35	7	S/B		HARD, GRAY SILTY CLAY (TILL)
	18 24	5.82	14	
	7	S/B		
	10 14	4.46	16	
-40	4	S/B		
	12 20	4.46	16	
659.2				
	6	B		VERY STIFF, GRAY SILTY CLAY (TILL)
	11 16	3.49	19	

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. hammer falling 30".

Qu-Unconfined Compressive Strength - t/sf

w - Water Content - percentage of oven dry weight-%.

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value
P - Penetrometer

FORM NO. B. D. 127 REV. 9-80

Sh. 2 of 2 Sh.

BRIDGE FOUNDATION BORING LOG

FAU 3545
Section 1977-212-BR
P-91-243-77 Du Page Co.
Boring #2 Continued

Elevation	N	Qu t/s.f.	w (%)	Description
-45	7			MEDIUM, GRAY SAND
	9 20			
653.7				
	11			
	20 100	3" Pen		VERY DENSE, BROWN DECAYED LIMESTONE
650.7 -50	100			
	0" Pen.			End of Boring
				Sampler Refused
-55				
-60				
-65				
-70				

Elevation: -75, -80, -85, -90, -95

SOIL BORING LOGS-#II
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S37
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	243
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Illinois Department of Transportation

Bridge Foundation Boring Log

P-91-243-77 Sh. 1 of 2 Sh.

PROJECT _____ BRIDGE Butterfield Road over Date 02-28-79

ROUTE FAU 3545 (IL 56) West Branch Du Page River Bored By D. GROW

SEC. 1977-212-BR STA. _____ Checked By _____

COUNTY Du Page

Boring No. 3
Station 470 + 41
Offset 4' Rt. ℄ (S)

Surface Water El. 693.12
Groundwater El. at Completion _____
After _____ Hours _____

Elevation	N	Qu t/s.f.	w (%)	
Ground Surface 700.2	0			
Suspended Augers through Bridge Deck				
	-5			
Top of Ice 691.2				
	-10			
Water 687.2				
Bottom Sediments MEDIUM to STIFF SAND & CLAYS	-15			
683.7				
STIFF, GRAY SILTY CLAY (TILL)	4			
	5	B		
	7	1.32	12	
680.2	-20			
	2	B		
MEDIUM, GRAY SANDY CLAY LOAM (TILL)	3			
	5	.78	12	
678.2				

Elevation	N	Qu t/s.f.	w (%)	
VERY STIFF, GRAY SANDY CLAY (TILL)	9	B		
	7			
	12	3.10	12	
675.1	-25	Begin Wash		
DENSE, GRAY SAND	11			
	15			
673.2	19			
HARD, GRAY SILTY CLAY (TILL)	7	B		
	15			
	26	5.62	14	
670.7	-30			
DENSE, GRAY SAND	8	S(15%)		
669.2	16			
	26	3.09	18	
VERY STIFF, GRAY SILTY LOAM (TILL) with Sand Seams	7	B		
667.2				
HARD, GRAY SILTY CLAY (TILL)	15			
	25	4.65	11	
665.7	-35			
VERY STIFF, GRAY SILTY CLAY (TILL)	13	B		
	9			
	12	2.91	16	
	6			
661.7	7	B		
	19	4.07	16	
HARD, GRAY SILTY CLAY (TILL)	-40			
	6	B		
	13			
	24	4.07	16	
657.2	30			
	57			
VERY DENSE, BROWN SAND & SILT LENSES	112	10" Pen		
655.7	-45			

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. hammer falling 30".

Qu-Unconfined Compressive Strength - t/sf

w - Water Content - percentage of oven dry weight-%.

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value
P - Penetrometer

FORM NO. D. 157 REV. 9-80 Sh. 2 of 2 Sh

BRIDGE FOUNDATION BORING LOG

FAU 3545 (IL 56)
Section 1977-212-BR
Du Page County
P-91-243-77

Elevation	N	Qu t/s.f.	w (%)	
VERY DENSE, BROWN DECAYED LIMESTONE	-45			
	40			
	57			
	90			
652.7				
Auger Refusal - Limestone				
	-50			
	-55			
	-60			
	-65			
	-70			

Elevation	N	Qu t/s.f.
	-75	
	-80	
	-85	
	-90	
	-95	

SOIL BORING LOGS-#III
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S38
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	244
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Illinois Department of Transportation

Bridge Foundation Boring Log

P-91-243-77 Sh. 1 of 1 Sh.

PROJECT _____ BRIDGE IL Route 56 over Date 04-26-79

ROUTE FAU 3545 West Branch of Du Page River Bored By D. GROW

SEC. 1977-212 BR STA. _____ Checked By _____

COUNTY DU PAGE

Boring No. 4
Station 470+95
Offset 5' Lt. ℄ (N)

Surface Water El. 693.6
Groundwater El. at Completion _____
After _____ Hours _____

Elevation	N	Qu t/s.f.	w (%)		Elevation	N	Qu t/s.f.	w (%)
Ground Surface 699.1	0							
Suspended Augers through Bridge Deck				VERY STIFF, GRAY SANDY CLAY (TILL)- Continued		5	B	
						11 15	3.49	10
					674.1 -25	7	B	
				HARD, GRAY CLAY (TILL)	672.1	11 17	4.66	12
-5				VERY STIFF, PINKISH SILTY CLAY (TILL) with 4" Sand seam		11	S(20%)	
691.6					669.6	11 21	3.10	17
WATER				VERY STIFF, BROWN SILTY LOAM	-30 668.1	11	S(20%)	
-10				HARD, GRAY CLAY (TILL)		14 20	3.10	19
686.6						7 9	S(20%)	
	0				664.1 -35	12	4.27	12
RIVER SEDIMENTS MUCK (highly organic - with Layers of Sand)	0 0		87	VERY STIFF, GRAY CLAY (TILL)		5 11	B	
-15 683.6					662.1	15	3.88	15
STIFF, GRAY SANDY CLAY (TILL)	1 7 6	E 1.5		HARD, GRAY CLAY (TILL)		6 11	S/B	
	6 8 9	S/B 1.79	11		659.1 -40	18 20	5.05	15
679.1 -20				DECAYED LIMESTONE with CLAY SEAM (1.16 TSF)		11 30		19
	5	18%	(S)		656.6			
VERY STIFF, GRAY SANDY CLAY (TILL) - with some sand seams	18 16	3.80	10	VERY DENSE, YELLOW DECAYED LIMESTONE - No Clay	655.1	30 31 39		
				End of Boring	-45			

N-Standard Penetration Test- Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. hammer falling 30".

Qu-Unconfined Compressive Strength - t/sf

w - Water Content - percentage of oven dry weight-%.

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value
P - Penetrometer

Illinois Department of Transportation

Bridge Foundation Boring Log

P-91-243-77 Sh. 1 of 1 Sh.

PROJECT _____ BRIDGE IL Route 56 over Date 04-27-79

ROUTE FAU 3545 West Branch of Du Page River Bored By D. GROW

SEC. 1977-212 BR STA. _____ Checked By _____

COUNTY DU PAGE

Boring No. 5
Station 470+50
Offset 6' Lt. ℄ (N)

Surface Water El. 693.6
Groundwater El. at Completion _____
After _____ Hours _____

Elevation	N	Qu t/s.f.	w (%)		Elevation	N	Qu t/s.f.	w (%)
Ground Surface 699.9	0							
Suspended Augers through Bridge Deck				VERY STIFF, GRAY SANDY CLAY (TILL) -- Continued		18	S/B	
					675.9	14 17	3.88	11
				HARD, GRAY CLAY (TILL)	-25	6	B	
						11 18	4.85	13
-5					671.9	8		
				MEDIUM, BROWN SAND	670.4	10 9		
-10				DENSE, BROWN SILTY LOAM	-30	12	S(15%)	
687.4					668.4	24 19	1.90	16
	1	P		End of Boring				
VERY SOFT, BLACK MUCK and Dirty Sands	0 0	.2	38		-35			
-15 683.9								
STIFF, GRAY SANDY CLAY (TILL)	4 6 7	S/B 1.79	11		-40			
679.9 -20								
	6 7	B						
VERY STIFF, GRAY SANDY CLAY (TILL)	10	2.14	11					
					-45			

N-Standard Penetration Test- Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. hammer falling 30".

Qu-Unconfined Compressive Strength - t/sf

w - Water Content - percentage of oven dry weight-%.

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value
P - Penetrometer

SOIL BORING LOGS-#IV
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S39
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	245
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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Lombard, IL 60148
Telephone: 630 953-9928
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BORING LOG BB-01

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 702.00 ft
North: 1878948.57 ft
East: 1026101.00 ft
Station: 191+33
Offset: 40 L

Depth (ft)	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	702.0	8-inch thick ASPHALT over 8-inch thick CONCRETE					
	700.7	--PAVEMENT--					
		3-inch thick CRUSHED STONE --BASE COURSE--					
		Stiff to very stiff, brown and gray CLAY to CLAY LOAM w/some gravel					
5		--FILL--		1	7 8 5	NP	10
				2	3 4 5	2.50 P	22
				3	4 4 4	1.50 P	25
		--AUGER SAMPLE--		4	5 3 3	NR	16
10	691.5						
		Medium dense to very dense, brown CRUSHED STONE					
		--FILL--		5	5 11 12	NP	11
		A rock fragment in the tip of spoon		6	7 27 26	NR	
15		--HARD DRILLING--					
	686.5	Medium stiff to very stiff, gray CLAY LOAM w/some gravel		7	5 5 5	1.64 B	12
				8	8 4 4	0.98 B	10
20							
				9	4 5 6	1.23 B	13
				10	5 8 6	1.31 B	12
25							
		A rock fragment in the tip of spoon		11	9 9 10	NR	
		A rock fragment in the tip of spoon		12	5 7 12	NR	
30							
				13	8 10 13	1.00 P	16
35							
				14	5 8 10	2.38 B	16
40							
				15	6 10 45	3.94 B	22
45							
	656.5	DOLOMITE --WEATHERED BEDROCK-- --AUGER REFUSAL @ 47.25'		16	21 35 50/3"	NP	9
	654.8	Poor, brown to gray DOLOMITE --BEDROCK-- --RUN #1: 47.25 - 52.25 FEET -- --REC=100%--		17			
50							

GENERAL NOTES

Begin Drilling: 07-23-2009 Complete Drilling: 07-24-2009
Drilling Contractor: WTS Drill Rig: Mobile B-57
Driller: J&K Logger: B. Wilson Checked by: S. Sugiarto
Drilling Method: 4.25 ID HSA; Boring Backfilled Upon Completion

WATER LEVEL DATA

While Drilling: ▽ 13.50 ft
At Completion of Drilling: ▼ WASHED
Time After Drilling: 24 hours
Depth to Water: ▽ 10.50 ft

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 9500402.GPJ WANGENG.GDT 6/9/09

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1145 N. Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG BB-01

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 702.00 ft
North: 1878948.57 ft
East: 1026101.00 ft
Station: 191+33
Offset: 40 L

Depth (ft)	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--RQD=37%--					
	649.8	Fair, brown to gay DOLOMITE --BEDROCK-- --RUN #2: 52.25 - 57.25 FEET-- --REC=92%-- --RQD=53%--					
55				18			
	644.8	Boring terminated at 57.25 ft					
60							
65							
70							
75							

GENERAL NOTES

Begin Drilling: 07-23-2009 Complete Drilling: 07-24-2009
Drilling Contractor: WTS Drill Rig: Mobile B-57
Driller: J&K Logger: B. Wilson Checked by: S. Sugiarto
Drilling Method: 4.25 ID HSA; Boring Backfilled Upon Completion

WATER LEVEL DATA

While Drilling: ▽ 13.50 ft
At Completion of Drilling: ▼ WASHED
Time After Drilling: 24 hours
Depth to Water: ▽ 10.50 ft

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 9500402.GPJ WANGENG.GDT 9/9/09

SOIL BORING LOGS-I
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S40	365	(58&59) WRS-3	DuPAGE	466	246
S43 SHEETS			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
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1145 N. Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG BB-02

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 696.00 ft
North: 1878898.98 ft
East: 1026169.64 ft
Station: 191+69
Offset: 37 R

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
695.8	2-inch thick, black SILTY CLAY LOAM --TOPSOIL--						
	Stiff, brown CLAY LOAM w/little gravel			1	4 4 3	1.00 P	11
693.0	Medium dense to dense, brown GRAVELLY SAND	5		2	3 10 16	NP	9
				3	5 20 22	NP	10
688.0	Stiff to very stiff, gray CLAY LOAM w/some gravel	10		4	7 4 5	2.00 P	10
				5	3 3 4	2.05 B	13
680.5	Medium dense, gray LOAM w/some gravel	15		6	4 4 6	1.89 B	12
		20		7	5 7 10	NP	10
				8	23 20 12	NP	8
				9	3 5 6	NP	12
673.0	Very stiff, gray CLAY LOAM w/some gravel	25		10	5 8 9	2.05 B	14
664.0	Very dense, gray SILT w/some gravel	30		11	3 5 11	2.87 B	15
				12	3 5 8	2.30 B	14
659.0	Loose, coarse, gray SAND	35		13	20 39 33	NP	18
656.5	Very dense, gray, weathered DOLOMITE --WEATHERED BEDROCK-- --AUGER REFUSAL @ 42 FEET--	40		14	3 6 50/5"	NP	7
654.0	Good, gray DOLOMITE --BEDROCK-- --RUN #1: 42 - 47 FEET-- --REC=98%-- --RQD=88%--	45		15			
649.0	Good, gray DOLOMITE --BEDROCK-- --RUN #3: 47 - 52 FEET-- --REC=85%-- --RQD=85%--	50		16			

GENERAL NOTES

Begin Drilling: 07-17-2009 Complete Drilling: 08-06-2009
Drilling Contractor: WTS Drill Rig: Mobile B-57
Driller: J&K Logger: B. Wilson Checked by: S. Sugiarto
Drilling Method: 4.25 ID HSA; Boring Backfilled Upon Completion

WATER LEVEL DATA

While Drilling: ▽ 5.00 ft
At Completion of Drilling: ▼ WASHED
Time After Drilling: NA
Depth to Water: ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 9500402.GPJ WANGENG.GDT 9/9/09

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Consulting Geotechnical and Environmental Engineers
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1145 N. Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG BB-02

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 696.00 ft
North: 1878898.98 ft
East: 1026169.64 ft
Station: 191+69
Offset: 37 R

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
644.0	Boring terminated at 52.00 ft	55					
		60					
		65					
		70					
		75					

GENERAL NOTES

Begin Drilling: 07-17-2009 Complete Drilling: 08-06-2009
Drilling Contractor: WTS Drill Rig: Mobile B-57
Driller: J&K Logger: B. Wilson Checked by: S. Sugiarto
Drilling Method: 4.25 ID HSA; Boring Backfilled Upon Completion

WATER LEVEL DATA

While Drilling: ▽ 5.00 ft
At Completion of Drilling: ▼ WASHED
Time After Drilling: NA
Depth to Water: ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 9500402.GPJ WANGENG.GDT 9/9/09

SOIL BORING LOGS-II
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S41
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	247
		CONTRACT NO. 62420		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
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1145 N. Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG BB-03

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 691.00 ft
North: 1878983.47 ft
East: 1026315.60 ft
Station: 193+36
Offset: 38 R

Elevation (ft)	Depth (ft)	SOIL AND ROCK DESCRIPTION	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
690.0	0	Brown GRAVELLY SAND --FILL--					
		Soft, black CLAY to SILTY CLAY --BURIED TOPSOIL--		1	1 1 2	0.25 P	58
	5			2	1 1 1	< 0.25 P	63
685.5		Medium dense, brown GRAVELLY SAND		3	4 5 9	NP	11
	10			4	8 11 14	NP	15
				5	12 20 9	NP	16
678.0		Very stiff, gray CLAY LOAM w/some gravel		6	4 6 8	2.00 P	14
	15			7	4 7 15	2.87 B	13
673.0		Medium dense, gray, fine SAND		8	6 10 9	NP	23
	20			9	4 7 10	NP	20
670.5		Medium dense, gray SILT		10	8 8 8	NP	19
	25						

Elevation (ft)	Depth (ft)	SOIL AND ROCK DESCRIPTION	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	RQD
		--ROCK PIECES AT THE TIP OF SPOON--		11	6 6 8	NA		
663.0		Very stiff, gray CLAY LOAM w/some gravel						
	30			12	6 8 23	2.00 P	16	
657.5		Very dense, gray, weathered DOLOMITE --WEATHERED BEDROCK--		13	50/5"	NP	12	
	35	--AUGER REFUSAL @ 40 FEET--						
651.0	40	Fair, gray DOLOMITE --BEDROCK-- --RUN #1: 40 - 45 FEET-- --REC=100%-- --RQD=63%						1
646.0	45	Fair to good, gray DOLOMITE --BEDROCK-- --RUN #2: 45 - 50 FEET-- --REC=97%-- --RQD=75%--						2
641.0	50	Boring terminated at 50.00 ft						

GENERAL NOTES

Begin Drilling: 07-17-2009 Complete Drilling: 08-07-2009
Drilling Contractor: WTS Drill Rig: Mobile B-57
Driller: J&K Logger: B. Wilson Checked by: S. Sugiarto
Drilling Method: 4.25 ID HSA; Boring Backfilled Upon Completion

WATER LEVEL DATA

While Drilling: ▽ 6.00 ft
At Completion of Drilling: ▼ WASHED
Time After Drilling: NA
Depth to Water: ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 9500402.GPJ WANGENG.GDT 9/9/09

SOIL BORING LOGS-III
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S42
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	248
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
1145 N. Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG BB-04

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 698.00 ft
North: 1879032.66 ft
East: 1026246.96 ft
Station: 193+03
Offset: 39 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		20-inch thick ASPHALT --PAVEMENT--						
	696.3							
		Medium dense, brown CRUSHED STONE --BASE COURSE--			1	5 9 12	NP	
	695.0							
		Very stiff, brown CLAY LOAM --FILL--	5		2	4 4 4	2.00 P	14
	692.5							
		Medium dense, brown CRUSHED STONE --FILL--			3	5 6 10	NP	8
	690.0							
		Loose, brown LOAM w/some gravel	10		4	3 4 4	NP	12
	687.5							
		Medium dense to dense, brown, medium to coarse SAND w/some gravel			5	5 5 6	NP	9
			15		6	6 6 10	NP	12
					7	20 22 15	NP	13
		--ROCK PIECES IN THE TIP OF SPLIT SPOON--	20		8	4 4 7	--	
	677.5							
		Very stiff, gray CLAY LOAM w/some gravel			9	4 7 10	3.53 B	13
			25		10	5 10 13	2.25 P	14
	672.5							
		Medium dense to dense, gray SILT to SILTY LOAM w/trace to some gravel			11	11 15 18	NP	16
			30		12	10 15 13	NP	16
			35		13	14 26 14	NP	17
	661.0							
		Stiff, gray CLAY LOAM w/trace gravel			14	2 4 6	1.97 B	16
	655.0							
		Medium dense, gray, weathered DOLOMITE --WEATHERED BEDROCK-- --AUGER REFUSAL @ 4645 FEET--	40		15	2 3 18	NP	11
	652.0							
		Fair, gray DOLOMITE --BEDROCK-- --RUN #1: 46 - 51 FEET-- --REC=100%-- --RQD=72%--	50		16			

GENERAL NOTES

Begin Drilling: 07-21-2009 Complete Drilling: 07-21-2009
Drilling Contractor: WTS Drill Rig: Mobile B-57
Driller: J&K Logger: B. Wilson Checked by: S. Sugiarto
Drilling Method: 4.25 ID HSA; Boring Backfilled Upon Completion

WATER LEVEL DATA

While Drilling: ▽ 11.50 ft
At Completion of Drilling: ▼ WASHED
Time After Drilling: NA
Depth to Water: ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 950402.GPJ WANGENG.GDT 9/9/09

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
1145 N. Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG BB-04

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 698.00 ft
North: 1879032.66 ft
East: 1026246.96 ft
Station: 193+03
Offset: 39 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	647.0							
		Excellent, gray DOLOMITE --BEDROCK-- --RUN #2: 51 - 56 FEET-- --REC=100%-- --RQD=92%--	55		17			
	642.0							
		Boring terminated at 56.00 ft	60					
			65					
			70					
			75					

GENERAL NOTES

Begin Drilling: 07-21-2009 Complete Drilling: 07-21-2009
Drilling Contractor: WTS Drill Rig: Mobile B-57
Driller: J&K Logger: B. Wilson Checked by: S. Sugiarto
Drilling Method: 4.25 ID HSA; Boring Backfilled Upon Completion

WATER LEVEL DATA

While Drilling: ▽ 11.50 ft
At Completion of Drilling: ▼ WASHED
Time After Drilling: NA
Depth to Water: ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 950402.GPJ WANGENG.GDT 9/9/09

SOIL BORING LOGS-IV
IL. ROUTE 56 OVER
WEST BRANCH DuPAGE RIVER
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 192+38.00
STRUCTURE NO. 022-2027

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S43
S43 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	249
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

EXISTING STRUCTURE:

The existing Bridge No. 022-0151, built in 1985 under Section 58VB-R (84), is a single span, simply supported, 14" thick reinforced concrete slab bridge, that is 30'-8" long back to back of abutments and 87'-2" wide out to out of parapets. The Substructure consists of closed abutments and wingwalls at 45° angles. A 1" open joint separates the northern half of the existing bridge from the southern half.

PROPOSED SCOPE OF WORK

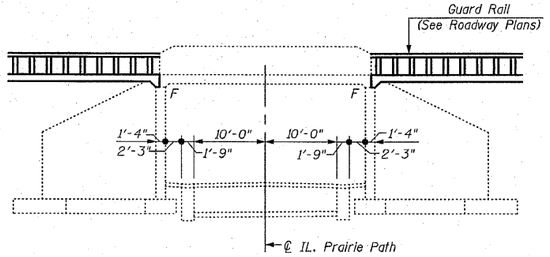
Minor structure repairs are needed for the existing superstructure & substructure.

The entire Longitudinal Joint is to be removed.

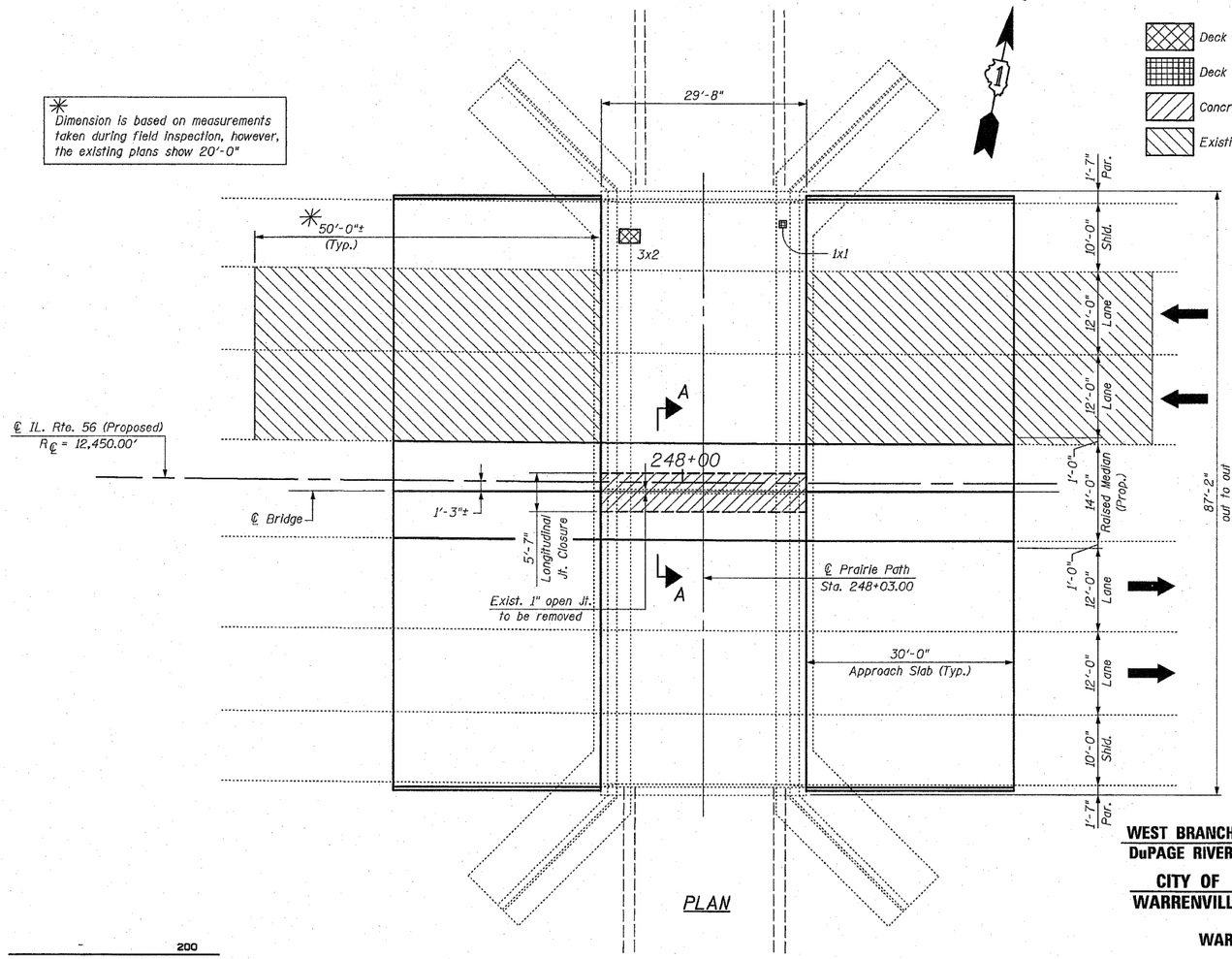
A 14'-0" raised median will be constructed in the center of the bridge.

Scarify bridge deck $\frac{1}{4}$ Inch and replace with Bridge Deck Thin Polymer Overlay, $\frac{1}{4}$ Inch.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION
(Looking North)



PLAN

✳ Dimension is based on measurements taken during field inspection, however, the existing plans show 20'-0"

LEGEND:

- Deck Slab Repair (Full Depth, Type I)
- Deck Slab Repair (Full Depth, Type II)
- Concrete Removal
- Existing Approach Slab Removal

GENERAL NOTES:

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

Existing Reinforcement Bars extending into the removal areas shall be cleaned, straightened and incorporated into the new construction. Any Reinforcement Bars that are damaged during concrete removal shall be replaced with an approved Bar Splicer or Anchorage System.

Reinforcement Bars shall conform to the requirements of A.S.T.M. A-706, Gr. 60. See Special Provisions.

Reinforcement Bars designated (E) shall be Epoxy Coated.

INDEX OF SHEETS

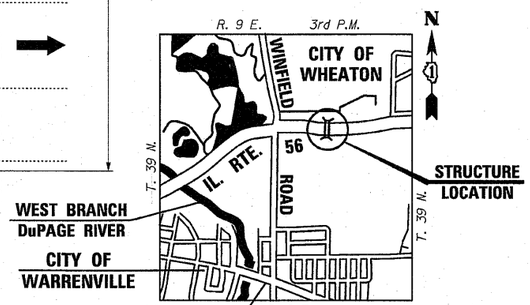
S1 GENERAL PLAN & ELEVATION
S2 DECK CROSS SECTION
S3 BRIDGE APPROACH SLAB DETAILS-I
S4 BRIDGE APPROACH SLAB DETAILS-II
S5 ABUTMENT REPAIRS
S6 BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Reinforcement Bars, Epoxy Coated	Pound	71,370
Concrete Superstructure	Cu. Yd.	286.7
Concrete Structures	Cu. Yd.	53.0
Concrete Removal	Cu. Yd.	8.6
Concrete Bridge Deck Scarification, $\frac{1}{4}$ Inch	Sq. Yd.	231
Bridge Deck Thin Polymer Overlay, $\frac{1}{4}$ Inch	Sq. Yd.	231
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	1
Structural Repair of Concrete (Depth Greater than 5 Inches)	Sq. Ft.	1
Structural Repair of Concrete (Depth Equal to or less than 5 Inches)	Sq. Ft.	11.0
Approach Slab Removal	Sq. Yd.	267
Bar Splicers	Each	282

DESIGN STRESSES
FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)



LOCATION SKETCH

STATE OF ILLINOIS
BHADRESH N. SHAH
081-004476
LICENSED STRUCTURAL ENGINEER
CHICAGO

Bhadresh N. Shah 04/23/2010

BHADRESH N. SHAH
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS LIC. No. 081-004476
EXPIRES: 11-30-10

GENERAL PLAN & ELEVATION
IL. ROUTE 56 OVER
ILLINOIS PRAIRIE PATH
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 248+03.00
STRUCTURE NO. 022-0151

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

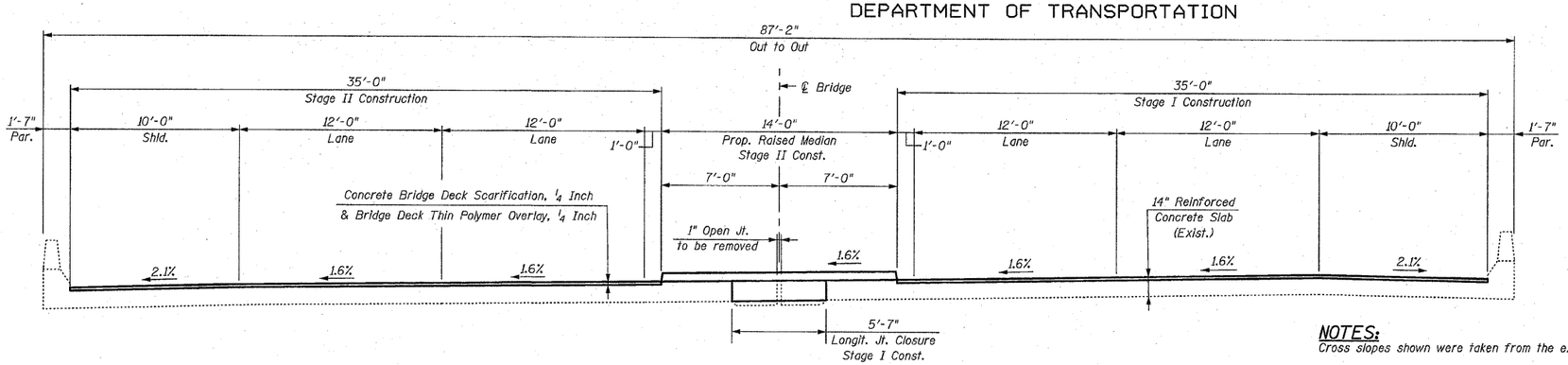
ENGINEER OF BRIDGES AND STRUCTURES

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

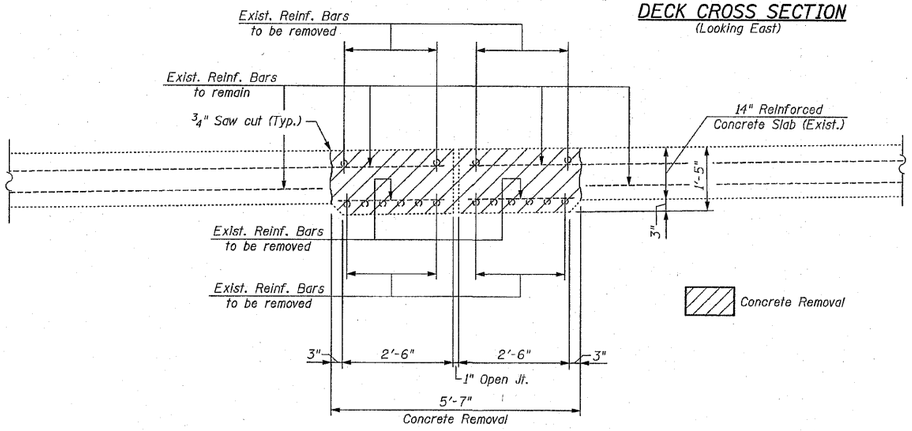
SHEET NO. S1
S6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	250
		CONTRACT NO. 62420		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

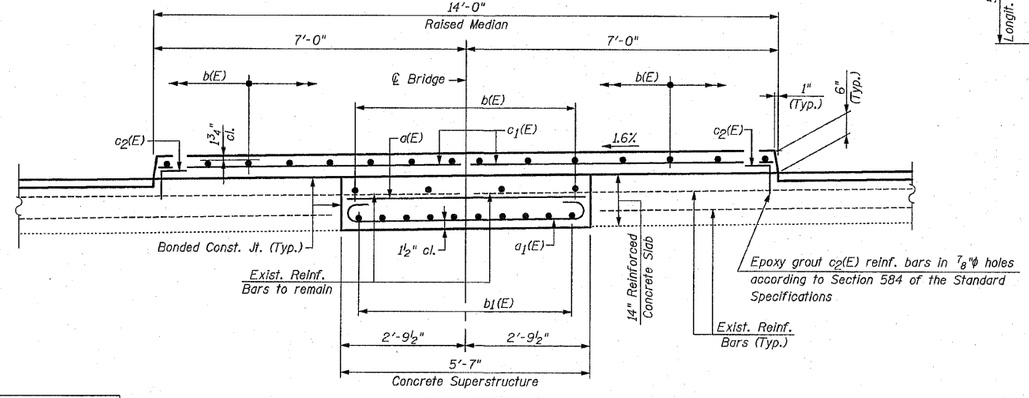


DECK CROSS SECTION
(Looking East)



Concrete Removal

EXISTING
SECTION A-A



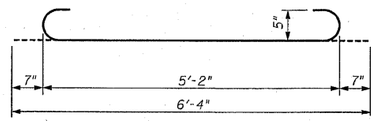
PROPOSED
SECTION A-A

BILL OF MATERIAL

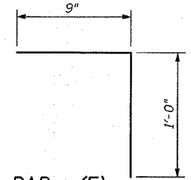
Bar	No.	Size	Length	Shape
a(E)	20	#5	5'-2"	—
a1(E)	40	#5	6'-4"	⊂⊃
b(E)	19	#5	29'-4"	—
b1(E)	10	#10	29'-4"	—
c1(E)	30	#5	13'-6"	—
c2(E)	60	#5	1'-9"	⌐
Concrete Superstructure			Cu. Yd.	15.0
Reinforcement Bars, Epoxy Coated			Pound	2,750
Concrete Bridge Deck Scarification, 1/4 Inch			Sq. Yd.	231
Bridge Deck Thin Polymer Overlay, 1/4 Inch			Sq. Yd.	231
Concrete Removal			Cu. Yd.	8.6

NOTES:
Cross slopes shown were taken from the existing plans.

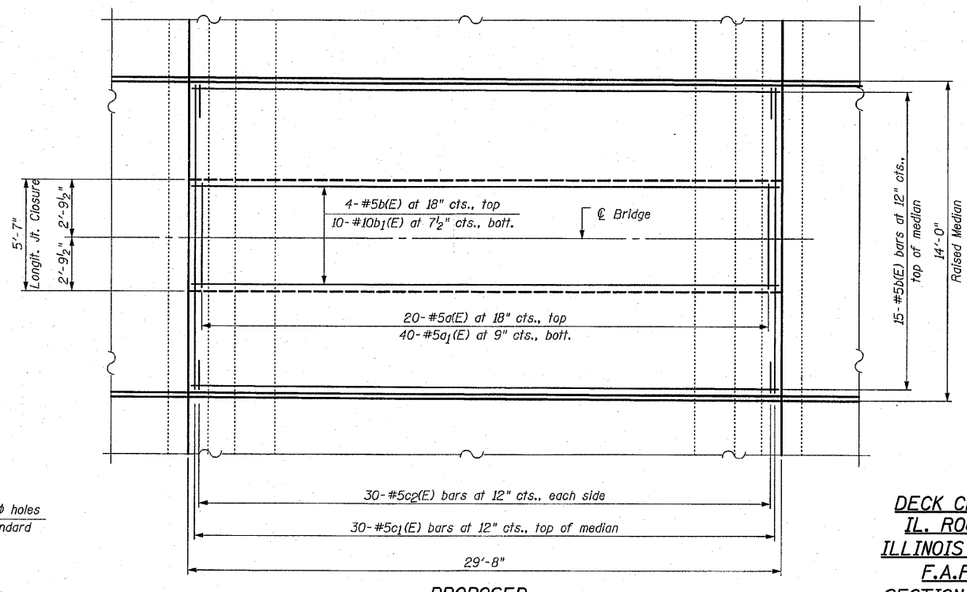
The proposed overlay cross slopes shall match existing cross slopes.



BAR a1(E)



BAR c2(E)



PROPOSED

MEDIAN PLAN &
LONGITUDINAL JOINT CLOSURE

DECK CROSS SECTION
IL. ROUTE 56 OVER
ILLINOIS PRAIRIE PATH
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 248+03.00
STRUCTURE NO. 022-0151

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

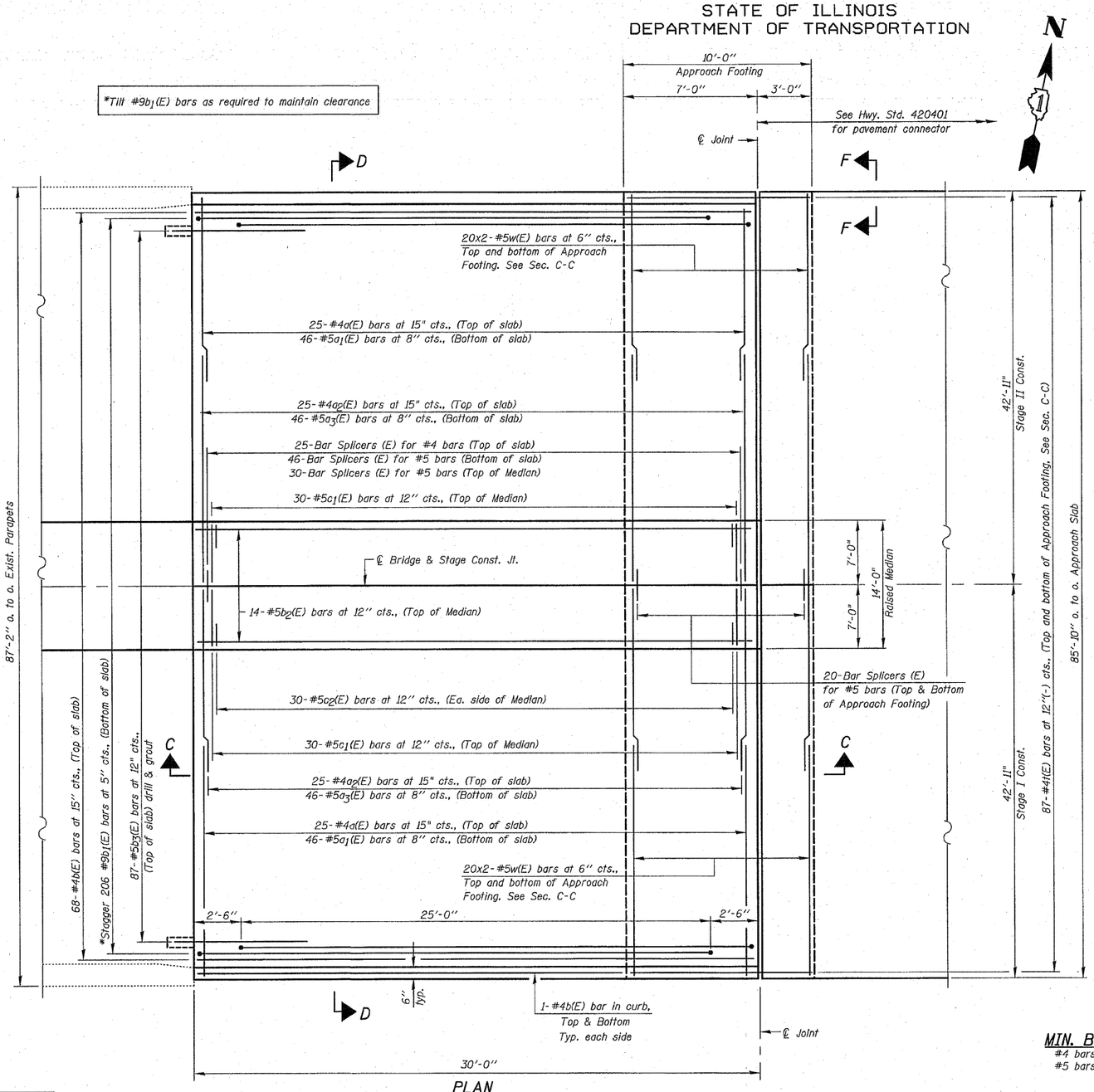
ENGINEER OF BRIDGES AND STRUCTURES

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S2
S6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	251
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

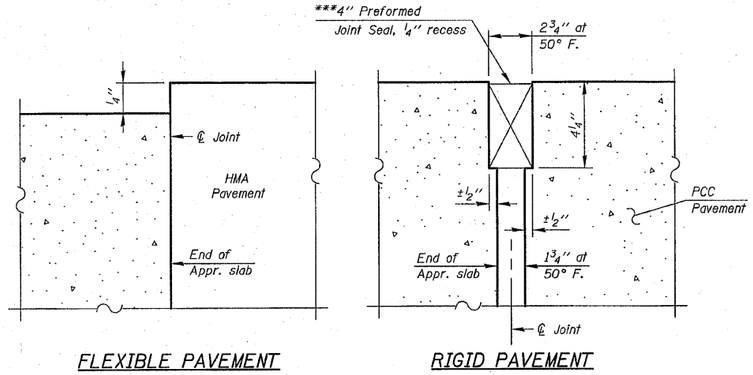


PLAN
Showing East Approach Slab
West Approach Slab similar

NOTES:
See Sheet S4 for Sections C-C & D-D.

a(E) thru a_3(E) and w(E) bar spacings measured perpendicular to ℄ Bridge.

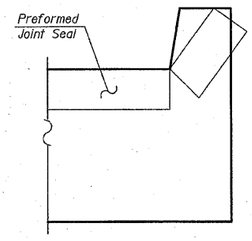
***Cost included with Concrete Superstructure



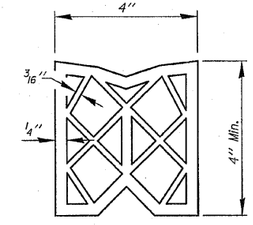
FLEXIBLE PAVEMENT

RIGID PAVEMENT

DETAIL A



VIEW F-F
Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



PREFORMED JOINT SEAL

MIN. BAR LAP:
#4 bars = 1'-11"
#5 bars = 2'-2"

BRIDGE APPROACH SLAB DETAILS-I
IL. ROUTE 56 OVER
ILLINOIS PRAIRIE PATH
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 248+03.00
STRUCTURE NO. 022-0151

(Sheet 1 of 2)
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 022-0151

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

200

EXAMINED
ENGINEER OF BRIDGE DESIGN

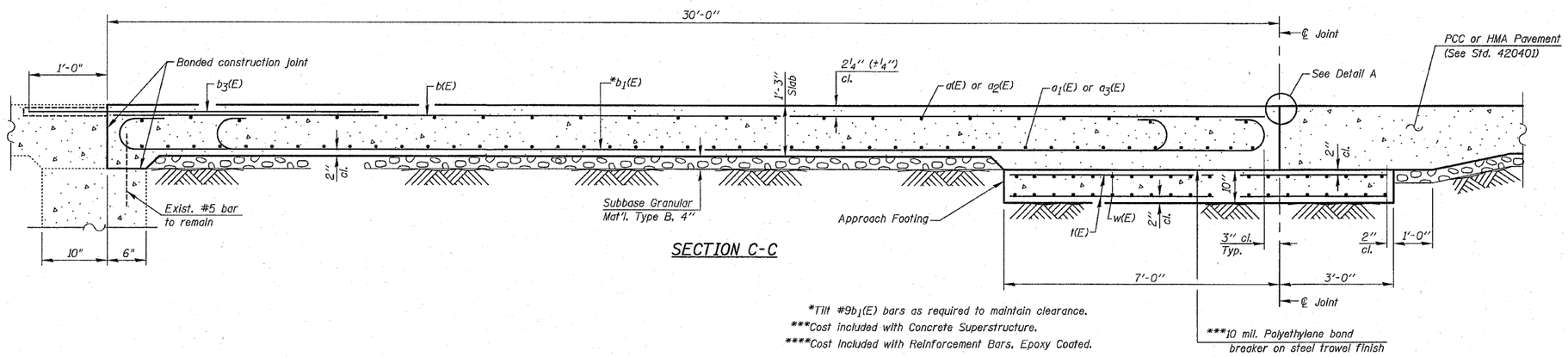
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S3	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S6 SHEETS	365	(58&59) WRS-3	DuPAGE	466	252
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See Sheet S3 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.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see Sheet S6.
Cost of excavation for approach footing included with Concrete Structures.



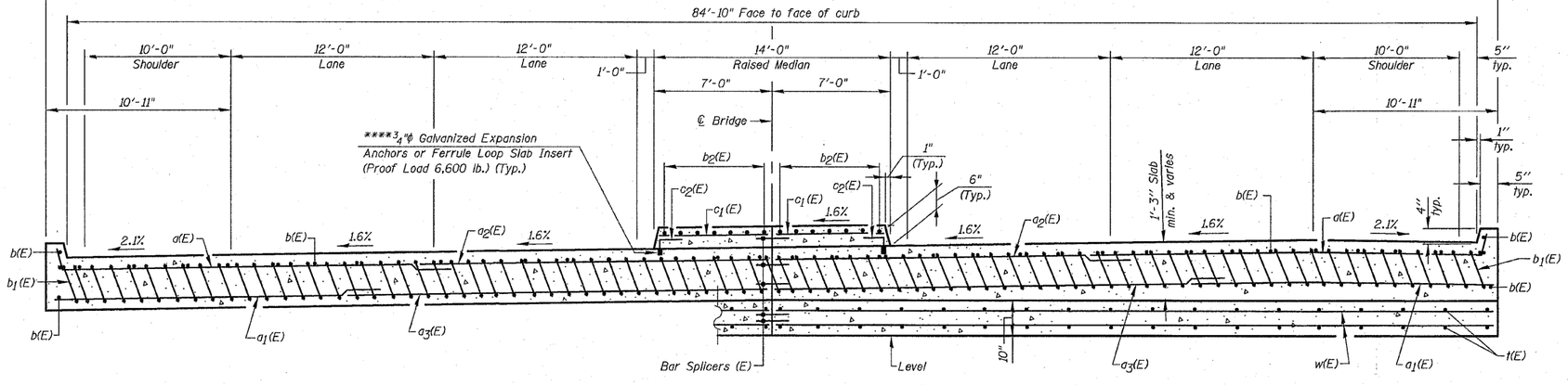
SECTION C-C

*Tilt #9 $b_1(E)$ bars as required to maintain clearance.
***Cost included with Concrete Superstructure.
****Cost included with Reinforcement Bars, Epoxy Coated.

***10 mil. Polyethylene bond breaker on steel trowel finish

TWO APPROACHES
BILL OF MATERIAL

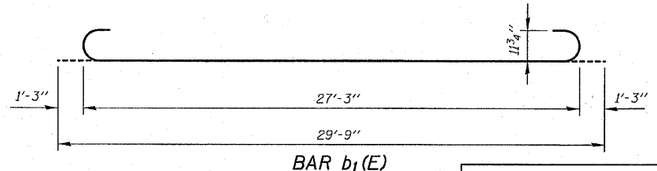
Bar	No.	Size	Length	Shape
d(E)	100	#4	25'-9"	
a1(E)	184	#5	20'-9"	
a2(E)	100	#4	18'-10"	
a3(E)	184	#5	24'-1"	
b(E)	144	#4	29'-8"	
b1(E)	412	#9	29'-9"	
b2(E)	28	#5	29'-8"	
b3(E)	174	#5	7'-0"	
c1(E)	120	#4	6'-8"	
c2(E)	120	#4	1'-4"	
t(E)	348	#4	9'-8"	
w(E)	320	#5	22'-5"	
Concrete Superstructure			Cu. Yd.	271.7
Concrete Structures			Cu. Yd.	53.0
Reinforcement Bars, Epoxy Coated			Pound	68,620
Bar Splicers			Each	282



NEAR ABUTMENT

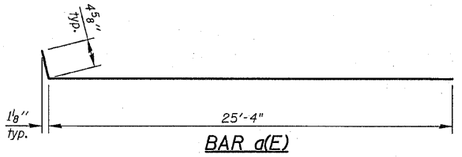
AT APPROACH FOOTING

SECTION D-D
(See Plan for dimensions not shown)



BAR $b_1(E)$

BAR $c_2(E)$



BAR d(E)

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

(Sheet 2 of 2)
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 022-0151

BRIDGE APPROACH SLAB DETAILS-II
IL. ROUTE 56 OVER
ILLINOIS PRAIRIE PATH
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 248+03.00
STRUCTURE NO. 022-0151

CHRISTIAN-ROGE & ASSOCIATES, INC.
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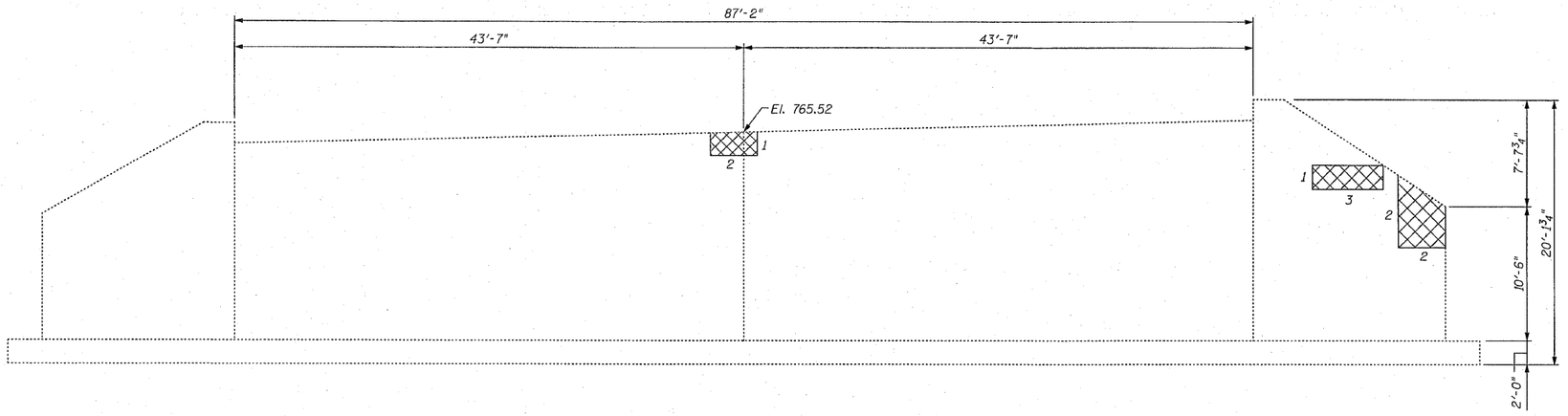
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S4	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S6 SHEETS	365	(58&59) WRS-3	DuPAGE	466	253
			CONTRACT NO. 62420		
		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

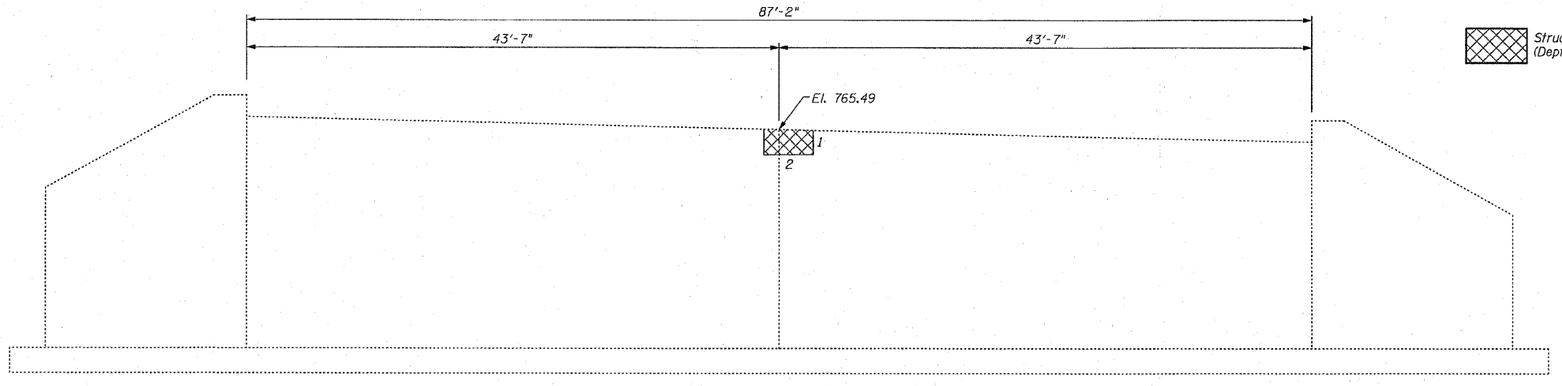


EAST ABUTMENT & WINGWALLS

ELEVATION
(Looking East)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal to or Less Than 5 In.)	Sq. Ft.	11



LEGEND:
Structural Repair of Concrete (Depth Equal to or Less Than 5 In.)

WEST ABUTMENT & WINGWALLS

ELEVATION
(Looking West)

ABUTMENT REPAIRS
IL. ROUTE 56 OVER
ILLINOIS PRAIRIE PATH
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 248+03.00
STRUCTURE NO. 022-0151

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

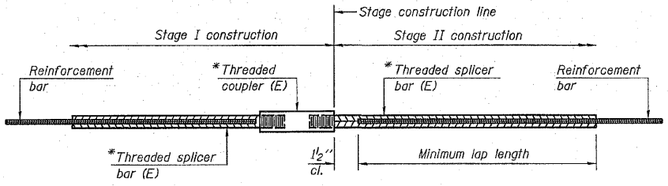
ENGINEER OF BRIDGES AND STRUCTURES

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S5
S6 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	254
		CONTRACT NO. 62420		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

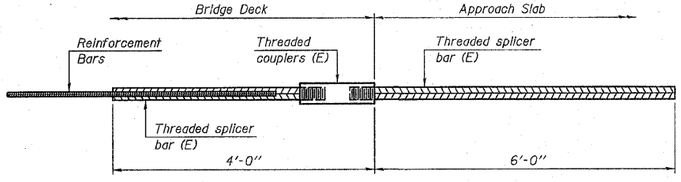
Minimum Lap Lengths				
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

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

Threaded splicer bar length = min. lap length + 1½" + thread length

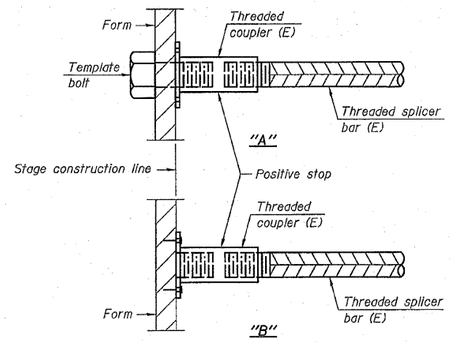
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Two Approaches	#4	50	2'-4"
Two Approaches	#5	92	2'-7"
Two Approach Medians	#5	60	2'-11"
Two Approach Footings	#5	80	2'-7"
	Total	282	



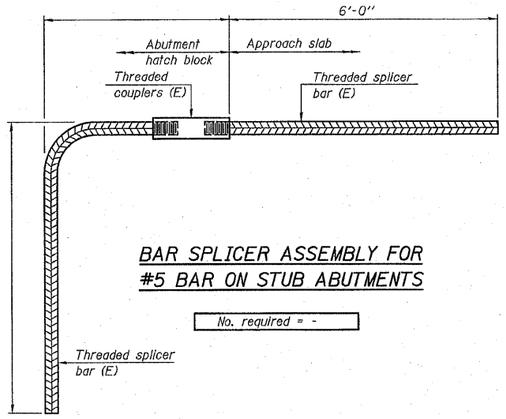
BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = -



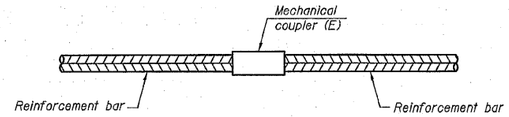
INSTALLATION AND SETTING METHODS

"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.



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = -



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies 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.

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

BSD-1 11-1-09

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
IL. ROUTE 56 OVER
ILLINOIS PRAIRIE PATH
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 248+03.00
STRUCTURE NO. 022-0151

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S6	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S6 SHEETS	365	(58&59) WRS-3	DuPAGE	466	255
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

BENCH MARK #423

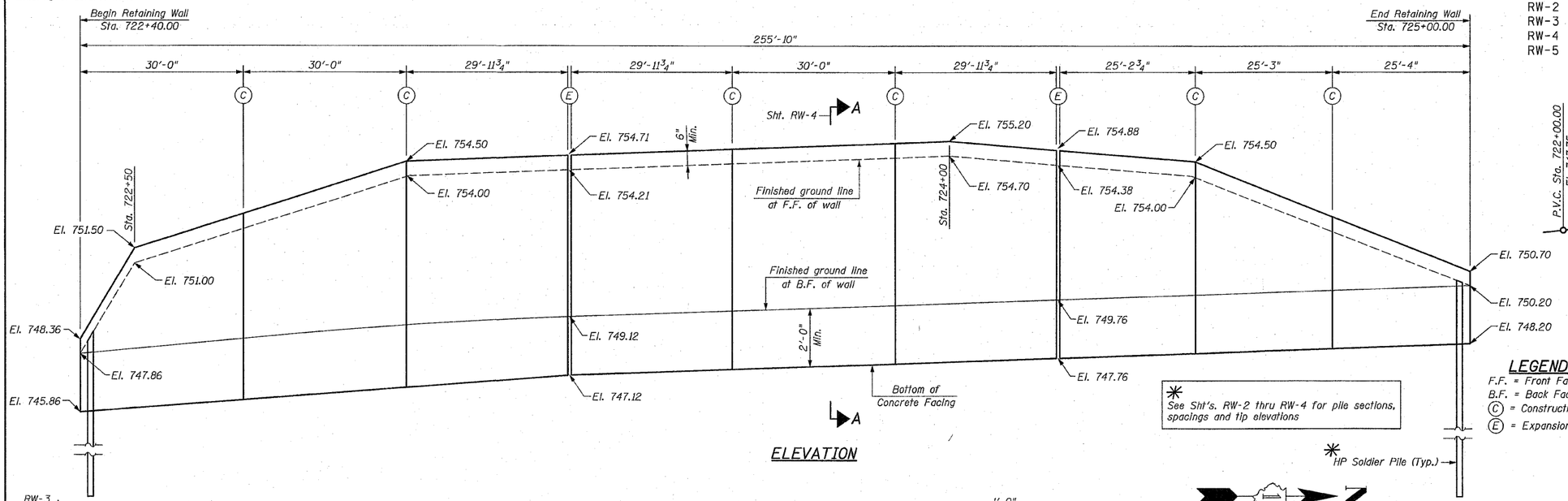
"[]" cut in Traffic Signal Foundation at Sta. 228+78.05, 19.63' Rt., Elev. 745.78

Existing structure: none

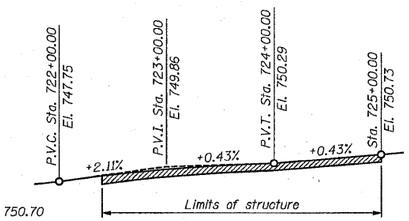
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

RW-1 GENERAL PLAN & ELEVATION
RW-2 PLAN & ELEVATION-I
RW-3 PLAN & ELEVATION-II
RW-4 SECTIONS & RETAINING WALL DETAILS
RW-5 SOIL BORING LOG



ELEVATION

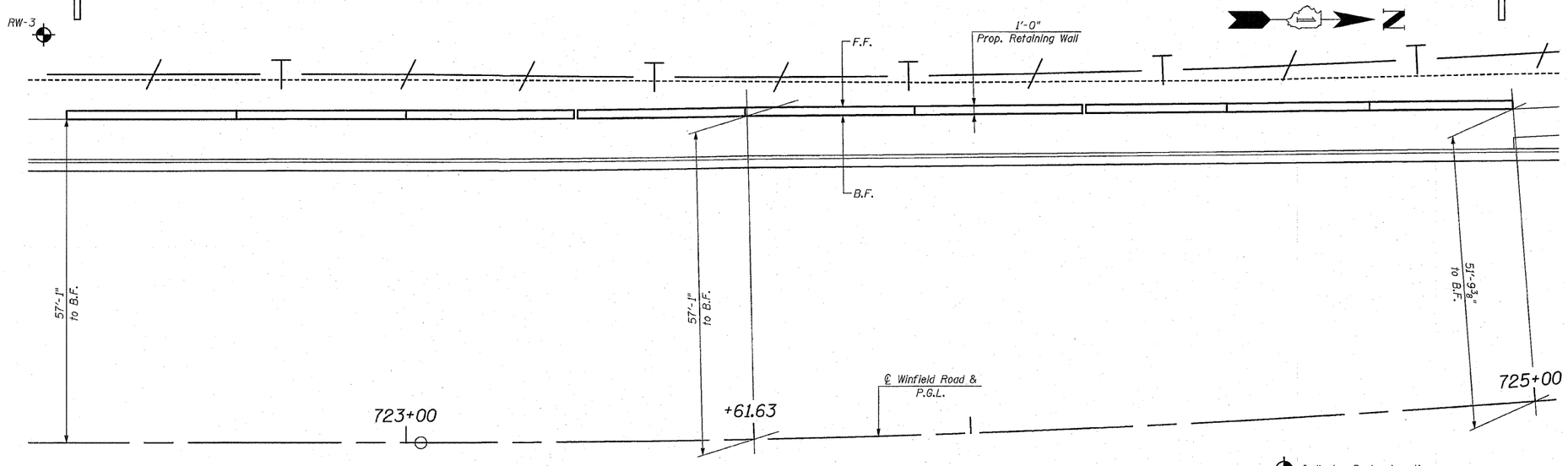


PROFILE GRADE

(along ℄ Winfield Road & P.G.L.)

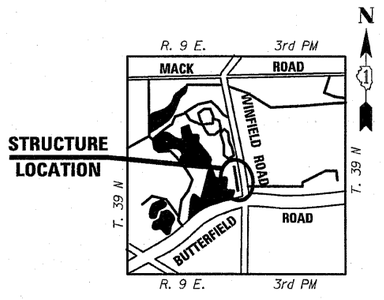
LEGEND:

F.F. = Front Face
B.F. = Back Face
(C) = Construction Joint
(E) = Expansion Joint



PLAN

Bhadresh N. Shah 09/23/2010
BHADRESH N. SHAH
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS LIC. No. 081-004476
EXPIRES: 11-30-10



LOCATION SKETCH

GENERAL PLAN & ELEVATION
IL. ROUTE 56
SOLDIER PILE RETAINING WALL
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 722+40.00 TO STA. 725+00.00
AT WINFIELD ROAD

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

\- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

DESIGN SPECIFICATIONS

AASHTO Standard Specifications for Highway Bridges 17th Edition-2002

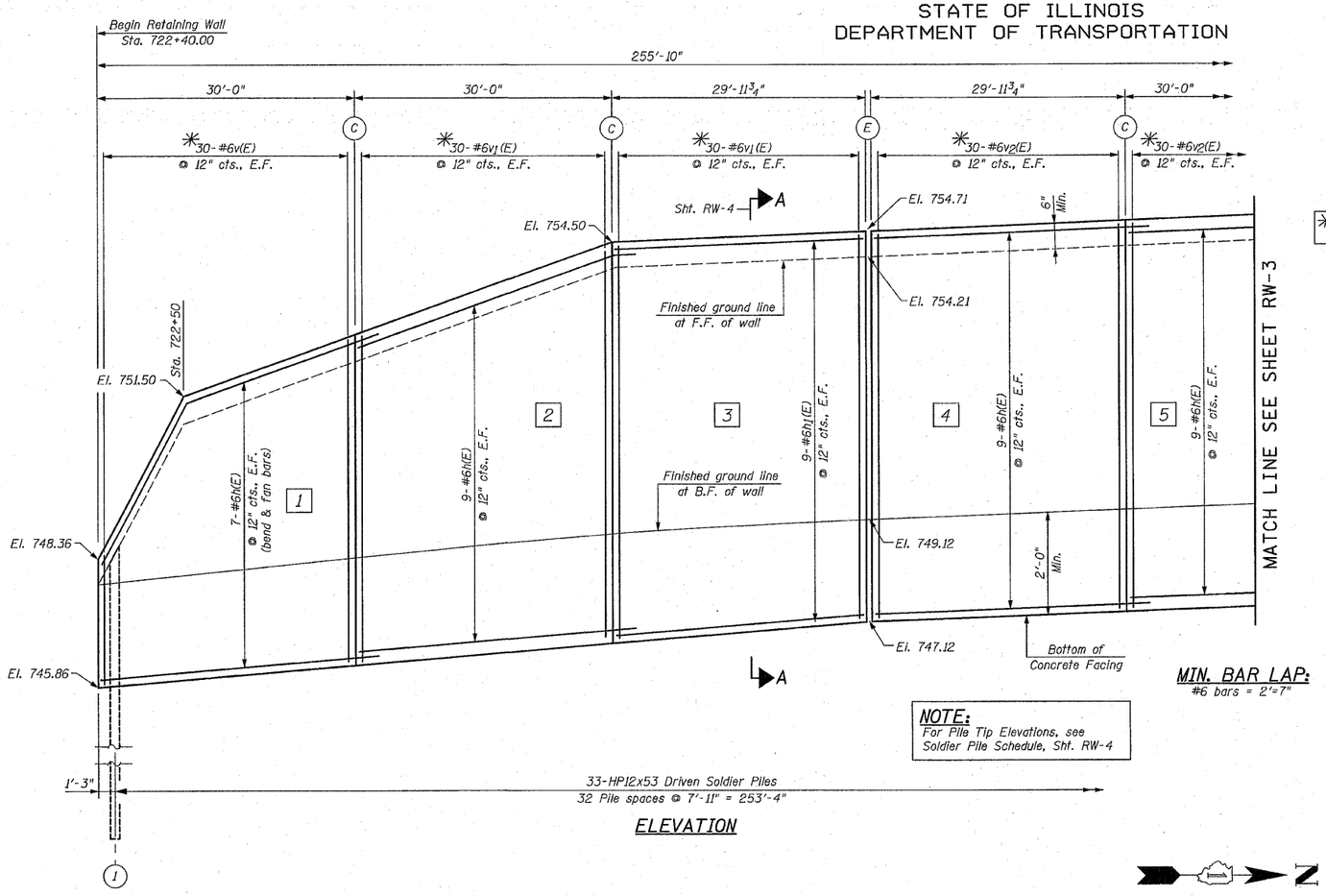
DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (Soldier Piles)

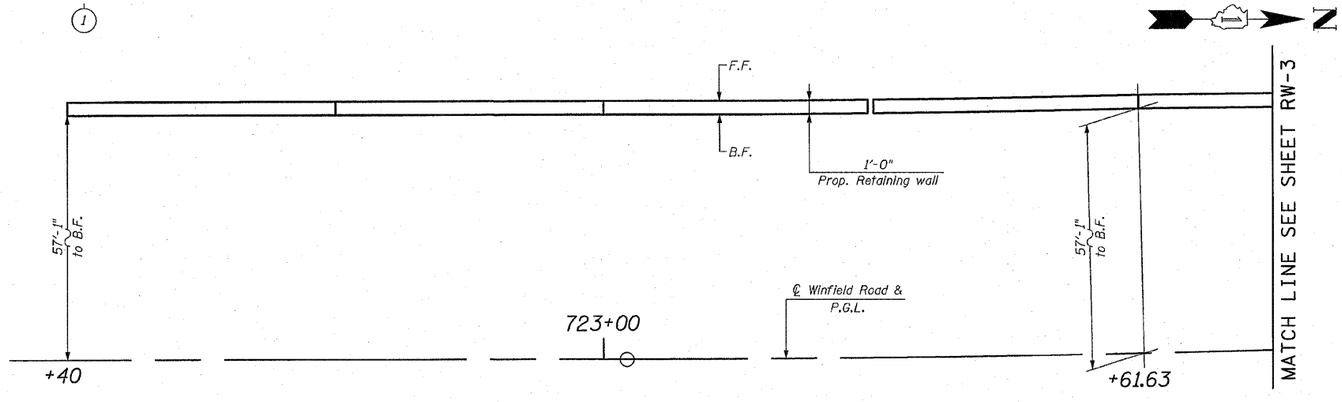
CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
RW-1	365	(58&59) WRS-3	DuPAGE	466	256
RW-5 SHEETS			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION



PLAN

NOTE:
For Pile Tip Elevations, see Soldier Pile Schedule, Sht. RW-4

MIN. BAR LAP:
#6 bars = 2'-7"

✳ Cut in field to fit

LEGEND:
- E.F. = Each Face
- F.F. = Front Face
- B.F. = Back Face
- (C) = Construction Joint
- (E) = Expansion Joint
- [1] = Panel Numbers
- (1) = Pile Numbers

GENERAL NOTES:

1. 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 the scope of work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
2. The Contractor is responsible for the design and performance of the lagging using no less than a 3 in. nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.
3. Pipe Underdrain Outlet Pipes shall drain into concrete headwalls. See Article 601.05 of the Standard Specifications and see Highway Standard 601101.
4. Reinforcement Bars shall conform to the requirements of ASTM A 706, Gr. 60. See Special Provisions.
5. All Exposed Concrete edges shall be chamfered 3/4" unless otherwise noted.
6. Reinforcement Bars designated (E) shall be Epoxy Coated.

TOTAL BILL OF MATERIAL

DESCRIPTION	UNIT	QUANTITY
Concrete Structures	Cu. Yd.	62.8
Pipe Underdrains for Structures 4"	Foot	266
Stud Shear Connectors	Each	836
Furnishing Soldier Piles (HP Section)	Foot	760
Driving Soldier Piles	Foot	760
Reinforcement Bars, Epoxy Coated	Pound	11,800
Structure Excavation	Cu. Yd.	250
Untreated Timber Lagging	Sq. Ft.	1,200
Geocomposite Wall Drain	Sq. Yd.	90

PLAN & ELEVATION-I
IL. ROUTE 56
SOLDIER PILE RETAINING WALL
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 722+40.00 TO STA. 725+00.00
AT WINFIELD ROAD

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

\- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

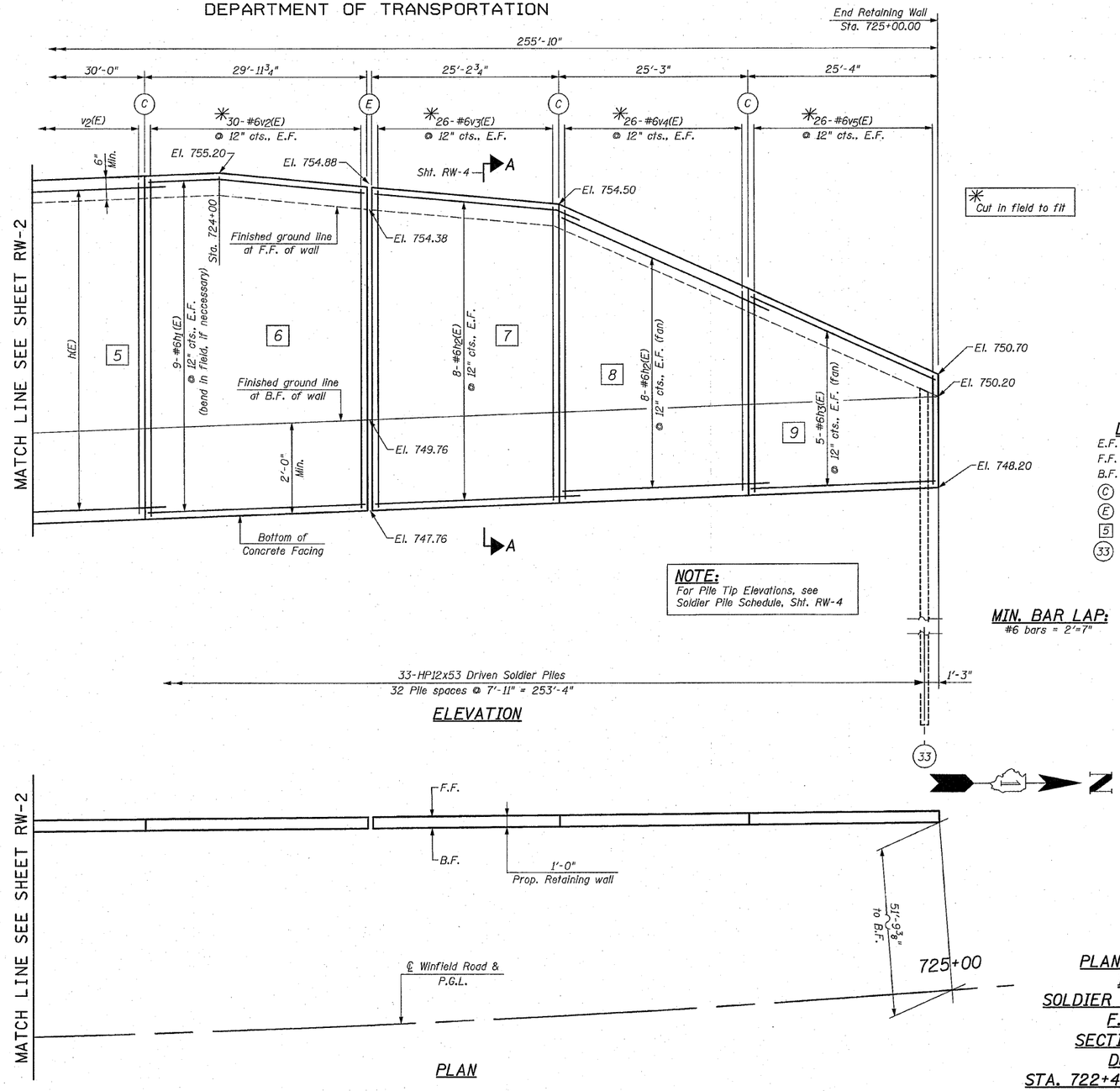
ENGINEER OF BRIDGES AND STRUCTURES

CHRISTIAN-RODE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. RW-2
RW-5 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	257
		CONTRACT NO. 62420		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



NOTE:
For Pile Tip Elevations, see Soldier Pile Schedule, Sht. RW-4

LEGEND:
E.F. = Each Face
F.F. = Front Face
B.F. = Back Face
(C) = Construction Joint
(E) = Expansion Joint
[5] = Panel Numbers
(33) = Pile Numbers

MIN. BAR LAP:
#6 bars = 2'-7"

ELEVATION

PLAN

PLAN & ELEVATION-II
IL. ROUTE 56
SOLDIER PILE RETAINING WALL
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 722+40.00 TO STA. 725+00.00
AT WINFIELD ROAD

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

\- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

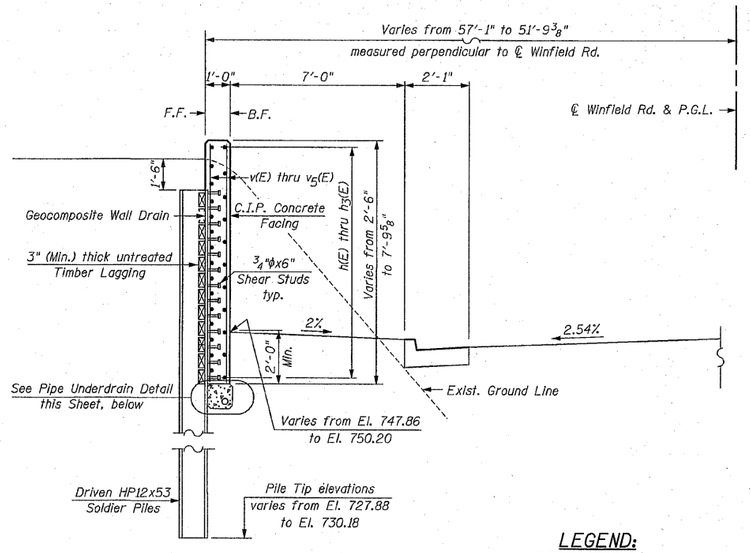
ENGINEER OF BRIDGES AND STRUCTURES

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. RW-3
RW-5 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	258
		CONTRACT NO. 62420		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DRIVEN SOLDIER PILE
(from Sta. 722+40.00 to Sta. 725+00.00)

SECTION A-A

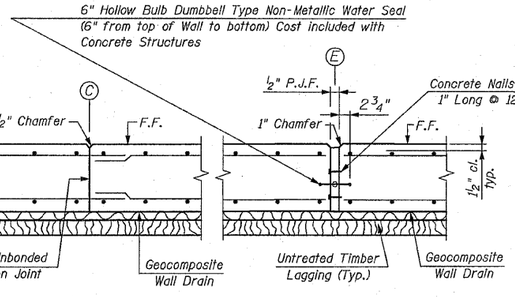
LEGEND:
F.F. = Front Face
B.F. = Back Face
C.I.P. = Casi-In-Place
Ⓒ = Construction Joint
Ⓔ = Expansion Joint

SOLDIER PILE RETAINING WALL
SOLDIER PILE SCHEDULE

PILE NO.	PILE SIZE	TOP/PILE ELEV.	TIP/PILE ELEV.	APPROX. PILE LENGTH (FT.)	NO. STUD PER PILE	STUD SPACING
1	HP12x53	747.25	727.88	19.37	2 x 5 = 10	4 SPA. @ 4.75 IN = 1'- 7"
2	HP12x53	749.74	728.02	21.72	2 x 11 = 22	10 SPA. @ 4.75 IN = 3'- 11"
3	HP12x53	750.43	728.15	22.27	2 x 13 = 26	12 SPA. @ 4.63 IN = 4'- 7"
4	HP12x53	750.90	728.28	22.62	2 x 13 = 26	12 SPA. @ 4.75 IN = 4'- 9"
5	HP12x53	751.38	728.40	22.97	2 x 14 = 28	13 SPA. @ 4.75 IN = 5'- 1"
6	HP12x53	751.85	728.51	23.34	2 x 14 = 28	13 SPA. @ 5.25 IN = 5'- 8"
7	HP12x53	752.33	728.62	23.70	2 x 14 = 28	13 SPA. @ 5.25 IN = 5'- 8"
8	HP12x53	752.80	728.73	24.07	2 x 14 = 28	13 SPA. @ 5.75 IN = 6'- 2"
9	HP12x53	753.03	728.83	24.20	2 x 14 = 28	13 SPA. @ 5.75 IN = 6'- 2"
10	HP12x53	753.09	728.92	24.17	2 x 14 = 28	13 SPA. @ 5.75 IN = 6'- 2"
11	HP12x53	753.14	729.01	24.13	2 x 14 = 28	13 SPA. @ 5.75 IN = 6'- 2"
12	HP12x53	753.20	729.10	24.10	2 x 14 = 28	13 SPA. @ 5.75 IN = 6'- 2"
13	HP12x53	753.25	729.18	24.07	2 x 14 = 28	13 SPA. @ 5.75 IN = 6'- 2"
14	HP12x53	753.31	729.25	24.06	2 x 14 = 28	13 SPA. @ 5.75 IN = 6'- 2"
15	HP12x53	753.36	729.32	24.04	2 x 14 = 28	13 SPA. @ 5.75 IN = 6'- 2"
16	HP12x53	753.42	729.38	24.04	2 x 14 = 28	13 SPA. @ 5.75 IN = 6'- 2"
17	HP12x53	753.48	729.45	24.02	2 x 14 = 28	13 SPA. @ 5.75 IN = 6'- 2"
18	HP12x53	753.53	729.52	24.01	2 x 14 = 28	13 SPA. @ 5.75 IN = 6'- 2"
19	HP12x53	753.59	729.56	24.03	2 x 14 = 28	13 SPA. @ 5.75 IN = 6'- 2"
20	HP12x53	753.64	729.62	24.03	2 x 14 = 28	13 SPA. @ 5.75 IN = 6'- 2"
21	HP12x53	753.70	729.65	24.05	2 x 14 = 28	13 SPA. @ 5.75 IN = 6'- 2"
22	HP12x53	753.57	729.70	23.87	2 x 14 = 28	13 SPA. @ 5.50 IN = 5'- 11"
23	HP12x53	753.46	729.73	23.72	2 x 14 = 28	13 SPA. @ 5.25 IN = 5'- 8"
24	HP12x53	753.35	729.78	23.56	2 x 14 = 28	13 SPA. @ 5.25 IN = 5'- 8"
25	HP12x53	753.23	729.82	23.42	2 x 14 = 28	13 SPA. @ 5.25 IN = 5'- 8"
26	HP12x53	753.12	729.87	23.26	2 x 14 = 28	13 SPA. @ 5.00 IN = 5'- 5"
27	HP12x53	753.01	729.91	23.11	2 x 14 = 28	13 SPA. @ 4.75 IN = 5'- 1"
28	HP12x53	752.60	729.96	22.64	2 x 13 = 26	12 SPA. @ 4.75 IN = 4'- 9"
29	HP12x53	751.96	730.00	21.96	2 x 12 = 24	11 SPA. @ 4.63 IN = 4'- 2"
30	HP12x53	751.32	730.05	21.27	2 x 10 = 20	9 SPA. @ 4.75 IN = 3'- 6"
31	HP12x53	750.68	730.09	20.59	2 x 8 = 16	7 SPA. @ 4.75 IN = 2'- 9"
32	HP12x53	750.04	730.14	19.89	2 x 6 = 12	5 SPA. @ 4.75 IN = 1'- 11"
33	HP12x53	749.40	730.18	19.21	2 x 5 = 10	4 SPA. @ 4.63 IN = 1'- 6"
			TOTAL	760	836	

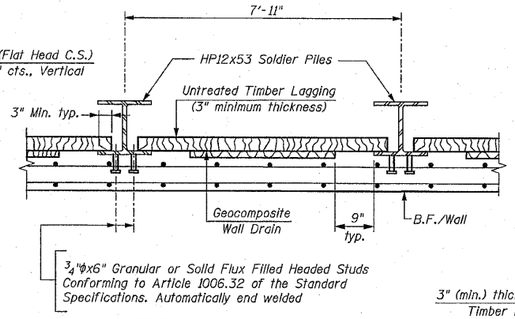
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	68	#6	32'-4"	
h1(E)	36	#6	29'-9"	
h2(E)	32	#6	27'-7"	
h3(E)	10	#6	25'-1"	
v(E)	60	#6	6'-1"	
v1(E)	120	#6	7'-5"	
v2(E)	180	#6	7'-3"	
v3(E)	52	#6	6'-9"	
v4(E)	52	#6	6'-3"	
v5(E)	52	#6	4'-2"	
Reinforcement Bars, Epoxy Coated			Pound	11,800



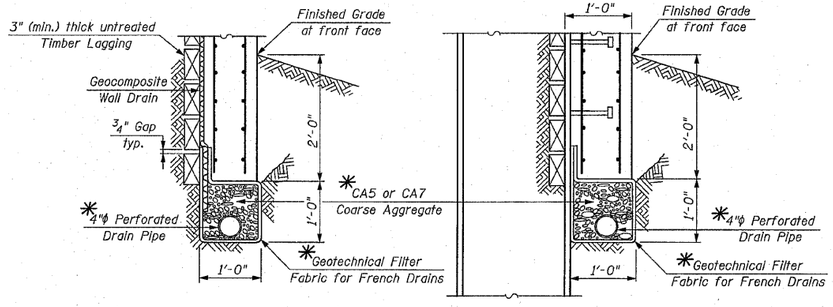
CONSTRUCTION JOINT EXPANSION JOINT

END OF PANEL DETAILS



TYPICAL SECTION THRU SOLDIER PILE WALL

✱ Included in the cost of Pipe Underdrains for Structures 4"



BETWEEN SOLDIER PILES AT SOLDIER PILES

PIPE UNDERDRAIN DETAIL

SECTIONS & RETAINING WALL DETAILS
IL. ROUTE 56
SOLDIER PILE RETAINING WALL
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 722+40.00 TO STA. 725+00.00
AT WINFIELD ROAD

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. RW-4
RW-5 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	259
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG RW-3

WEI Job No.: 950-04-02

Client: **Christian-Roge and Associates, Inc.**
Project: **IL Rte. 56 (FAP 365) Butterfield Road**
Location: **Sec. 33, 34 & 26; T39N ; R9E**

Datum: NGVD
Elevation: 749.00 ft
North: 1880932.27 ft
East: 1029161.58 ft
Station: 722+36
Offset: 72 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	746.2	10-inch thick, brown CLAY with organic material --TOPSOIL--						
		Medium dense to dense, brown, fine to coarse SAND, some gravel and rock fragments			1	5 5 6	NP	7
			5		2	4 5 6	NP	6
					3	7 6 9	NP	5
			10		4	7 20 22	NP	4
	738.5	Dense, brown SILTY LOAM, some gravel and rock fragments			5	7 12 19	NP	10
	736.0	Medium dense, brown SANDY LOAM, some gravel and rock fragments			6	9 15 14	NP	7
	733.5	Very dense, brown, GRAVELLY SAND with rock fragments	15		7	25 52 50/1	NP	
			20		8	24 42 50/3	NP	4
					9	34 50/5	NP	5
			25		10	18 28 36	NP	3
	719.0	Boring terminated at 30.00 ft	30		11	56 32 28	NP	4
					12	28 24 28	NP	4
			35					
			40					
			45					
			50					

WANGENGINC 950402.GPJ WANGENG.GDT 1/14/10

GENERAL NOTES

Begin Drilling: **12-18-2009** Complete Drilling: **12-18-2009**
Drilling Contractor: **Groff** Drill Rig: **CME**
Driller: **K&J** Logger: **B. Wilson** Checked by: **C.Marin**
Drilling Method: **3.25 ID HSA; Boring Backfilled Upon Completion**

WATER LEVEL DATA

While Drilling: ▽ **DRY**
At Completion of Drilling: ▽ **DRY**
Time After Drilling: **NA**
Depth to Water: ▽ **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

\- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

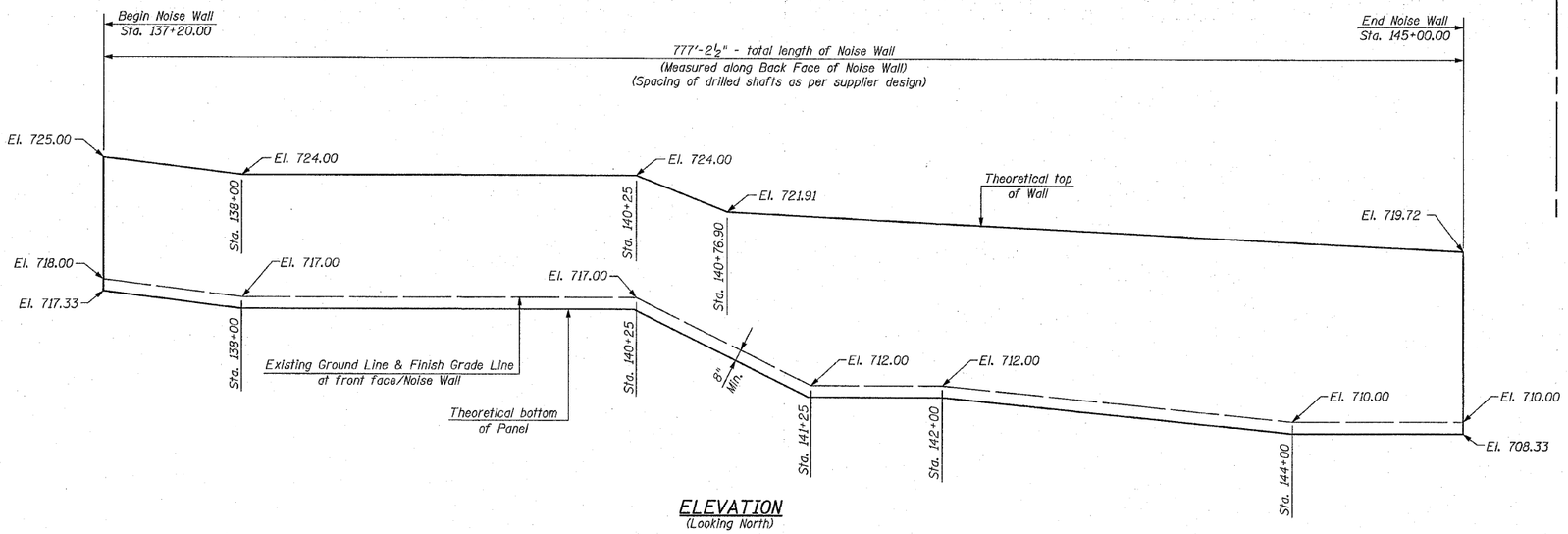
SOIL BORING LOG
IL. ROUTE 56
SOLDIER PILE RETAINING WALL
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 722+40.00 TO STA. 725+00.00
AT WINFIELD ROAD

SHEET NO. RW-5	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
RW-5 SHEETS	365	(58&59) WRS-3	DuPAGE	466	260
			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

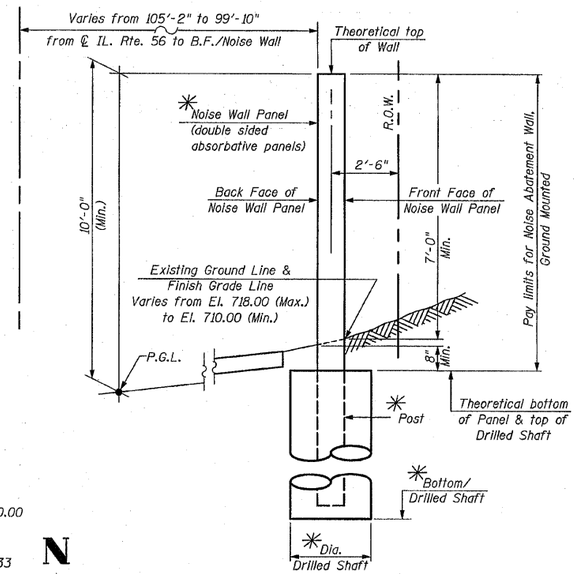
BENCH MARK: CRA 18
South bolt on fire hydrant at Sta. 173+03.39, 92.89' Lt., Elev. 703.55

The Noise Wall will be installed during Stage II Construction.
Existing Structure: none
Salvage: none

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

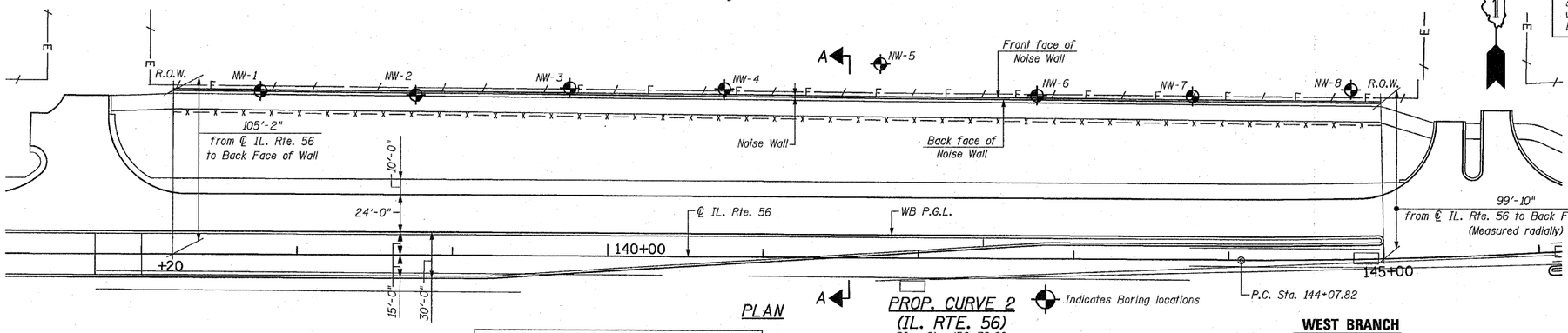


ELEVATION
(Looking North)

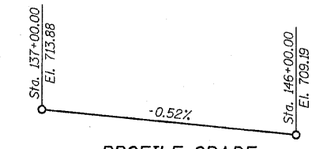


SECTION A-A

✳ Type, size & spacing of posts, Noise Wall Panels, drilled shaft size & embedment length, reinforcement details and wall limits including top & bottom of wall to be determined by the Noise Wall supplier during construction



PLAN



PROFILE GRADE
(along W.B. IL. Rte. 56 Prop. edge of Median)

NOTE:
The Foundation, Posts & Noise Wall Panels shall be designed to accommodate the ultimate or maximum Noise Wall height and earth retainment condition.

NOTES:
The foundation is to be designed by the Contractor. The foundation is not to be placed within 1'-0" of any pipes, culverts or utilities.
The Contractor shall verify any obstruction to pipes, culverts and utilities prior to construction of foundation.

PROP. CURVE 2
(IL. RTE. 56)

PI = Sta. 152+72.86
Δ = 29°-07'-26" (Lt.)
D = 1°-43'-14"
R = 3,330.00'
T = 865.04'
L = 1,692.66'
E = 110.52'
e = 3.14%
T.P. = 72.61'
S.E. RUN = 114'
P.C. Sta. = 144+07.82
P.T. Sta. = 161+00.48

Indicates Boring locations

BILL OF MATERIAL

Item	Unit	Total
Noise Abatement Wall, Ground Mounted	Sq. Ft.	6,814

HIGHWAY CLASSIFICATION

F.A.P. Rte. 365 (IL. Rte. 56)
Functional Class: Other Principal Arterial
ADT: 14,200 (2005); 25,00 (2030)
ADTT: 690 (2005); 1,070 (2030)
DHV: 3,060 (2030)
Design Speed: 50 m.p.h.
Posted Speed: 45 m.p.h.
Two-Way Traffic
Directional Distribution: 50%/50%

DESIGN SPECIFICATIONS

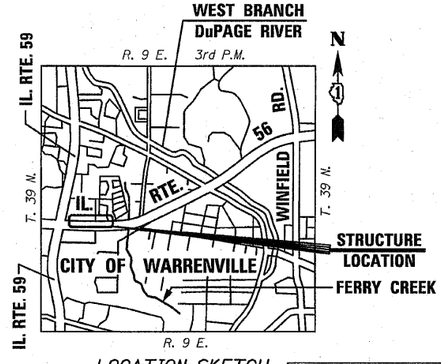
AASHTO 2002 Standard Specifications for Highway Bridges.
AASHTO 1989 Guide Specifications for Structural Design of Sound Barriers and 1992 & 2002 Interims.

LOADING

Wind Load on Noise Wall = 25psf

DESIGN STRESSES
FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
IL. ROUTE 56
CONCRETE NOISE ABATEMENT WALL
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 137+20 TO STA. 145+00
STRUCTURE NO. 022-W041

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. RW-1
RW-5 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	261
		CONTRACT NO. 62420		
145+13.00	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG NW-1

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 719.00 ft
North: 1877255.88 ft
East: 1021171.29 ft
Station: 137+76
Offset: 105 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		12-inch thick, black CLAY LOAM --TOPSOIL--						
	718.0	Hard, brown, SILTY CLAY			1	5 14 13	> 4.50 P	12
			5		2	8 10 14	> 4.50 P	13
					3	5 7 10	> 4.50 P	15
			10		4	4 6 7	4.92 S	18
	707.8	Very stiff to hard, brown SILTY CLAY TO LOAM to SILTY CLAY			5	5 6 7	2.50 P	11
			15		6	5 13 10	> 4.50 P	10
					7	8 11 22	NP	8
	700.3	Hard, gray SILTY CLAY						
	699.0	Boring terminated at 20.00 ft	20		8	17 13 13	> 4.50 P	8
			25					

GENERAL NOTES

Begin Drilling: 01-09-2003 Complete Drilling: 01-09-2003
Drilling Contractor: PATRICK Drill Rig: CME 75 ATV
Driller: T&L Logger: S. Janowski Checked by: E. Datz
Drilling Method: 3.25 ID HSA; Boring Backfilled With Bentonite Chips Upon Completion

WATER LEVEL DATA

While Drilling: ▽ DRY
At Completion of Drilling: ▼ DRY
Time After Drilling: NA
Depth to Water: ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
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1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG NW-2

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 717.00 ft
North: 1877251.12 ft
East: 1021271.24 ft
Station: 138+76
Offset: 103 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		24-inch thick, black CLAY LOAM, trace organic material --TOPSOIL--						
	715.0	Very stiff to hard, brown SILTY CLAY			1	8 11 14	2.50 P	35
			5		2	4 8 8	3.20 S	14
					3	8 7 10	> 4.50 P	16
	707.8	Medium dense, brown SILT	10		4	5 8 8	6.97 S	18
	706.5	Very stiff, brown SILTY CLAY LOAM, with gravel			5	3 6 7	3.00 P	14
	704.0	Very stiff, gray SILTY CLAY, with gravel	15		6	5 11 15	3.50 P	11
	702.3	Medium dense, brown SANDY GRAVEL						
	701.5	Hard, gray SILTY CLAY, with gravel			7	4 7 11	6.48 B	11
	697.0	Boring terminated at 20.00 ft	20		8	6 11 13	> 4.50 P	9
			25					

GENERAL NOTES

Begin Drilling: 01-09-2003 Complete Drilling: 01-09-2003
Drilling Contractor: PATRICK Drill Rig: CME 75 ATV
Driller: T&L Logger: S. Janowski Checked by: E. Datz
Drilling Method: 3.25 ID HSA; Boring Backfilled With Bentonite Chips Upon Completion

WATER LEVEL DATA

While Drilling: ▽ 14.75 ft
At Completion of Drilling: ▼ 13.50 ft
Time After Drilling: NA
Depth to Water: ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 950402.GPJ WANGENG.GDT 7/31/09

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED
ENGINEER OF BRIDGE DESIGN

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. RW-2
RW-5 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	262
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

SOIL BORING LOGS-I
IL. ROUTE 56
CONCRETE NOISE ABATEMENT WALL
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 137+20 TO STA. 145+00
STRUCTURE NO. 022-W041

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG NW-3

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 719.00 ft
North: 1877253.37 ft
East: 1021371.19 ft
Station: 139+75
Offset: 108 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	717.5	18-inch thick, black CLAY LOAM, trace organic material --TOPSOIL--						
		Stiff to very stiff, brown SILTY CLAY			1	5 5 6	1.00 P	
			5		2	3 4 4	3.69 B	16
					3	4 6 7	2.87 B	23
			10		4	3 8 11	3.69 B	15
					5	5 11 15	NR	
			15		6	8 9 10	NR	
	702.0	Medium dense, gray SILT			7	3 6 11	3.28 B	15
	701.3	Loose, gray SILTY LOAM	20		8	4 3 5	NP	11
	698.5	Very stiff, gray SILTY CLAY			9	3 3 11	2.13 S	19
	696.5	Boring terminated at 22.50 ft	25					

GENERAL NOTES

Begin Drilling: 01-09-2003 Complete Drilling: 01-09-2003
Drilling Contractor: PATRICK Drill Rig: CME 75 ATV
Driller: T&L Logger: S. Janowski Checked by: E. Datz
Drilling Method: 3.25 ID HSA; Boring Backfilled With Bentonite Chips Upon Completion

WATER LEVEL DATA

While Drilling: ▽ DRY
At Completion of Drilling: ▼ 17.00 ft
Time After Drilling: NA
Depth to Water: ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG.GDT 7/31/09 WANGENG 9500402.GPJ

BORING LOG NW-4

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 713.00 ft
North: 1877250.62 ft
East: 1021471.15 ft
Station: 140+75
Offset: 108 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	712.0	12-inch thick, black CLAY LOAM, trace organic material --TOPSOIL--						
		Very stiff to hard, brown SILTY CLAY			1	3 4 5	3.00 P	24
			5		2	3 5 4	3.69 B	20
					3	3 5 7	5.66 B	15
			10		4	3 6 12	3.75 P	13
	702.5	Stiff, brown SILTY CLAY LOAM			5	2 4 10	1.15 B	11
	699.3	Loose, gray SILT			6	3 2 4	NP	20
	698.3	Stiff, gray SILTY CLAY LOAM	15					
	697.5	Loose, brown, medium SAND			7	3 4 6	1.97 B	11
	696.8	Stiff, gray SILTY CLAY LOAM			8	6 8 7	NP	12
	695.0	Loose to medium dense, gray, coarse GRAVELLY SAND	20		9	4 5 3	NP	13
	688.8	Very stiff, gray SILTY CLAY			10	3 4 6	2.05 B	10
	688.0		25					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		LOAM						
		Boring terminated at 25.00 ft	30					
			35					
			40					
			45					
			50					

GENERAL NOTES

Begin Drilling: 01-09-2003 Complete Drilling: 01-09-2003
Drilling Contractor: PATRICK Drill Rig: CME 75 ATV
Driller: T&L Logger: S. Janowski Checked by: E. Datz
Drilling Method: 3.25 ID HSA; Boring Backfilled With Bentonite Chips Upon Completion

WATER LEVEL DATA

While Drilling: ▽ 16.00 ft
At Completion of Drilling: ▼ 18.50 ft
Time After Drilling: NA
Depth to Water: ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENG.GDT 7/31/09 WANGENG 9500402.GPJ

SOIL BORING LOGS-II
IL. ROUTE 56
CONCRETE NOISE ABATEMENT WALL
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 137+20 TO STA. 145+00
STRUCTURE NO. 022-W041

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED
ENGINEER OF BRIDGE DESIGN

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
RW-3	365	(58&59) WRS-3	DuPAGE	466	263
RW-5 SHEETS			CONTRACT NO. 62420		
		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG NW-5

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 711.00 ft
North: 1877264.87 ft
East: 1021571.14 ft
Station: 141+75
Offset: 125 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		21-inch thick, black CLAY LOAM, trace organic material --TOPSOIL--						
	709.3	Hard, brown and gray SILTY CLAY			1	5 6 6	3.50 P	27
			5		2	4 6 8	4.84 B	15
					3	3 10 8	4.51 B	16
			10		4	5 5 8	4.84 B	18
	699.8	Medium dense, brown, medium SAND			5	4 5 6	NP	11
	698.0	Medium stiff to very stiff, gray, SILTY CLAY LOAM with gravel			6	4 4 4	0.98 B	12
	695.5	Stiff to very stiff, gray, SILTY CLAY LOAM with gravel	15		7	3 5 7	2.30 B	11
			20		8	3 5 7	1.64 B	19
	690.5	Medium dense, gray, coarse SAND, wet			9	6 6 6	NP	23
	687.0	Very stiff, gray, gravelly SILTY CLAY LOAM	25		10	3 4 6	3.00 P	7
		Boring terminated at 25.00 ft	30					
			35					
			40					
			45					
			50					

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	01-09-2003	Complete Drilling	01-09-2003	While Drilling	▽ 20.50 ft
Drilling Contractor	PATRICK	Drill Rig	CME 75 ATV	At Completion of Drilling	▼ 18.00 ft
Driller	T&L	Logger	S. Janowski	Time After Drilling	NA
Drilling Method	3.25 ID HSA; Boring Backfilled With Bentonite Chips Upon Completion	Checked by	E. Datz	Depth to Water	▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 9500402.GPJ WANGENG.GDT 7/31/09

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG NW-6

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 711.00 ft
North: 1877242.12 ft
East: 1021671.10 ft
Station: 142+76
Offset: 105 L

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	710.0	12-inch thick, black CLAY LOAM, trace organic material --TOPSOIL--						
	708.8	Very stiff, dark brown CLAY LOAM			1	4 3 4	2.50 P	24
		Loose, brown SILTY LOAM, moist	5		2	2 2 2	NP	27
	705.5	Loose, brown, medium SAND			3	2 2 2	NP	31
	704.3	Very stiff, brown SILTY CLAY	10		4	2 3 6	2.38 B	17
	700.5	Very stiff to hard, gray SILTY CLAY			5	3 5 8	2.05 B	18
			15		6	3 4 7	4.02 B	18
					7	2 4 5	2.95 B	19
			20		8	3 5 8	2.21 B	18
	691.0	Boring terminated at 20.00 ft	25					

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	01-09-2003	Complete Drilling	01-09-2003	While Drilling	▽ 5.50 ft
Drilling Contractor	PATRICK	Drill Rig	CME 75 ATV	At Completion of Drilling	▼ DRY
Driller	T&L	Logger	S. Janowski	Time After Drilling	NA
Drilling Method	3.25 ID HSA; Boring Backfilled With Bentonite Chips Upon Completion	Checked by	E. Datz	Depth to Water	▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 9500402.GPJ WANGENG.GDT 7/31/09

SOIL BORING LOGS-III
IL. ROUTE 56
CONCRETE NOISE ABATEMENT WALL
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 137+20 TO STA. 145+00
STRUCTURE NO. 022-W041

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED
ENGINEER OF BRIDGE DESIGN

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
RW-4	365	(58&59) WRS-3	DuPAGE	466	264
RW-5 SHEETS			CONTRACT NO. 62420		
		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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Consulting Geotechnical and Environmental Engineers
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1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG NW-7

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 710.00 ft
North: 1877239.37 ft
East: 1021771.06 ft
Station: 143+76
Offset: 105 L

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
709.0	15-inch thick, black CLAY LOAM, trace organic material --TOPSOIL--						
	Hard, brown SILTY CLAY LOAM			1	7 5 5	4.00 P	25
707.0	Very stiff, black CLAY LOAM	5		2	3 3 4	2.00 P	21
703.3	Loose, brown SANDY GRAVEL			3	3 4 5	NP	13
702.0	Stiff, brown SILTY CLAY	10		4	2 2 3	1.25 P	18
699.5	Very stiff, brown to gray SILTY CLAY			5	2 4 6	3.03 B	16
697.0	Stiff, gray SILTY CLAY	15		6	1 4 6	1.80 S	19
694.5	Very stiff, gray SILTY CLAY, with a lens of medium to fine SAND			7	2 4 8	2.05 B	19
690.0	Boring terminated at 20.00 ft	20		8	4 6 6	3.77 B	17
		25					

GENERAL NOTES

Begin Drilling: 01-10-2003 Complete Drilling: 01-10-2003
Drilling Contractor: PATRICK Drill Rig: CME 75 ATV
Driller: T&L Logger: S. Patel Checked by: E. Datz
Drilling Method: 3.25 ID HSA; Boring Backfilled With Bentonite Chips Upon Completion

WATER LEVEL DATA

While Drilling: ▽ 10.50 ft
At Completion of Drilling: ▼ 17.50 ft
Time After Drilling: NA
Depth to Water: ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

Wang Engineering, Inc.
Consulting Geotechnical and Environmental Engineers
wangeng@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
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BORING LOG NW-8

WEI Job No.: 950-04-02

Client: Christian-Roge and Associates, Inc.
Project: IL Rte. 56 (FAP 365) Butterfield Road
Location: DuPage County, Illinois

Datum: NGVD
Elevation: 711.00 ft
North: 1877241.60 ft
East: 1021871.05 ft
Station: 144+78
Offset: 109 L

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
709.8	15-inch thick, black CLAY LOAM, trace organic material --TOPSOIL--						
	Medium dense, brown SANDY LOAM			1	5 6 9	NP	12
708.0	Very stiff to hard, brown SILTY CLAY	5		2	3 4 9	3.85 S	18
				3	4 8 13	6.15 B	20
		10		4	3 5 8	3.03 B	20
700.5	Loose, brown, SANDY GRAVEL			5	7 6 3	1.23 B	15
699.3	Stiff, brown CLAY SILTY						
698.0	Medium dense, brown to gray SANDY GRAVEL to GRAVELLY SAND	15		6	4 6 11	NP	16
694.5	Hard, gray SILTY CLAY			7	5 13 11	4.00 P	10
692.1	Medium dense, fine to coarse SAND	20		8	4 7 7	NP	15
690.5	Very stiff, gray SILTY CLAY			9	4 6 6	2.13 B	12
688.5	Boring terminated at 22.50 ft	25					

GENERAL NOTES

Begin Drilling: 01-10-2003 Complete Drilling: 01-10-2003
Drilling Contractor: PATRICK Drill Rig: CME 75 ATV
Driller: T&L Logger: S. Patel Checked by: E. Datz
Drilling Method: 3.25 ID HSA; Boring Backfilled With Bentonite Chips Upon Completion

WATER LEVEL DATA

While Drilling: ▽ 11.00 ft
At Completion of Drilling: ▼ 18.25 ft
Time After Drilling: NA
Depth to Water: ▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

WANGENGINC 9500403.GPJ WANGENG.GDT 7/31/09
WANGENGINC 9500402.GPJ WANGENG.GDT 7/31/09

SOIL BORING LOGS-IV
IL. ROUTE 56
CONCRETE NOISE ABATEMENT WALL
F.A.P. RTE. 365
SECTION (58&59) WRS-3
DuPAGE COUNTY
STA. 137+20 TO STA. 145+00
STRUCTURE NO. 022-W041

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. RW-5
RW-5 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	265
		CONTRACT NO. 62420		
	ILLINOIS	FED. AID PROJECT		

ROADWAY LIGHTING SHEET INDEX

LT-01		GENERAL NOTES, LEGEND, AND SHEET INDEX
LT-02		ROADWAY LIGHTING SCHEDULE OF QUANTITIES
LT-03		DEMOLITION AND TEMPORARY LIGHTING PLAN - IL 56 AT IL 59
LT-04		DEMOLITION AND TEMPORARY LIGHTING PLAN - IL 56 AT IL 59
LT-05		PROPOSED ROADWAY LIGHTING PLAN - IL 56 AT IL 59
LT-06		PROPOSED ROADWAY LIGHTING PLAN - IL 56 AT IL 59
LT-07		ROADWAY LIGHTING SINGLE LINE DIAGRAM

IDOT DISTRICT 1 DETAILS

LT-08	BE-200	LIGHTING CONTROLLER, DUPLEX TYPE
LT-09	BE-200	CONTROL CABINET, DUPLEX TYPE WIRING DETAIL
LT-10	BE-200	LIGHTING CONTROLLER, DUPLEX TYPE
LT-11	BE-200	LIGHTING CONTROLLER, DUPLEX TYPE
LT-12	BE-220	ELECTRIC SERVICE INSTALLATION, AERIAL, REMOTE DISCONNECT
LT-13	BE-301	LIGHT POLE FOUNDATION, 40' TO 47'-6" M.H., 15" BOLT CIRCLE
LT-14	BE-410	DAVIT LIGHT POLE, 47'-6" MOUNTING HEIGHT
LT-15	BE-701	LUMINAIRE SAFETY CABLE ASSEMBLY
LT-16	BE-702	MISC. DETAILS, SHEET A - CABLE SPLICE, POLE WIRING, TRENCH DETAIL
LT-17	BE-800	TEMPORARY LIGHTING
LT-18	BE-801	TEMPORARY AERIAL CABLE INSTALLATION

ABBREVIATIONS

A	AMPS
DIA	DIAMETER
C	CONDUIT
GND	GROUND
FT	FEET
HPS	HIGH PRESSURE SODIUM
IDOT	ILLINOIS DEPARTMENT OF TRANSPORTATION
LT	LEFT
MC	MEDIUM CUTOFF
P	PUSHED
PC	PHOTOCELL CONTROL
PH	PHASE
PVC	POLYVINYL CHLORIDE
RGS	RIGID GALVANIZED STEEL
RT	RIGHT
STA	STATION
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
W	WATTS

GENERAL NOTES - ROADWAY LIGHTING

1. SPLICING OF CONDUCTORS SHALL BE IN POLE BASES OR WEATHER TIGHT JUNCTION BOXES ONLY. SPLICES BELOW GRADE WILL NOT BE PERMITTED.
2. LIGHTING CIRCUITS SHALL BE WIRED IN ACCORDANCE WITH THE PLANS. DEVIATIONS WILL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER.
3. THE CONTRACTOR SHALL REQUEST A FORMAL MAINTENANCE TRANSFER BEFORE ANY WORK BEGINS AT THE INTERSECTION OF IL 56 AND IL 59. THE CONTRACTOR SHALL CONTACT THE ILLINOIS DEPARTMENT OF TRANSPORTATION AT (847) 221-3079.
4. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO RESTORE ANY SPECIALIZED LANDSCAPING (DECORATIVE ROCKS, PLANTS, ETC.).
5. ALL WORK SHALL CONFORM TO THE LATEST IDOT AND IDOT DISTRICT 1 STANDARDS, SPECIAL PROVISIONS, SUPPLEMENTAL SPECIFICATIONS, THE NATIONAL ELECTRICAL CODE, AND THE NATIONAL ELECTRICAL SAFETY CODE.
6. ALL ELECTRICAL EQUIPMENT SHALL BE UL LISTED AND LABELED.
7. ALL CONDUITS SHALL BE SEALED.
8. ALL CIRCUIT WIRES SHALL BE LABELED WITH CIRCUIT IDENTIFICATION.
9. ALL LAMPS SHALL BE FURNISHED AS PART OF THE CONTRACT.
10. CIRCUITS SHALL BE TESTED PER SPECIFICATION.
11. THE LOCATIONS OF ALL PROPOSED EQUIPMENT ARE ILLUSTRATED DIAGRAMMITICALLY. THE ACTUAL LOCATION IN THE FIELD SHALL MEET THE APPROVAL OF THE ENGINEER.
12. ALL MEASUREMENTS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY MEASUREMENTS IN THE FIELD.
13. THE EXISTING LIGHTING SYSTEM VOLTAGE AT IL 56 AND IL 59 IS 240/480V, 1-PHASE, 3-WIRE. LUMINAIRE VOLTAGES ARE 240V.
14. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTING INSTALLATIONS AND DATA PRIOR TO BIDDING.
15. TEMPORARY LIGHTING SHALL REMAIN IN SERVICE UNTIL THE PERMANENT LIGHTING SYSTEM IS IN OPERATION.
16. THE CONTRACTOR MUST MAINTAIN SAFE EQUIPMENT AND WORKING CLEARANCES FROM THE EXISTING COMED OVERHEAD ELECTRIC LINES. THE CONTRACTOR SHALL PLAN HIS WORK CONSIDERING COMED'S LINES TO BE IN SERVICE AND ENERGIZED THROUGHOUT THE CONSTRUCTION PERIOD.
17. THE CONTRACTOR SHALL REMOVE CABLES FROM ALL EXISTING UNIT DUCTS. EXISTING UNIT DUCTS SHALL BE ABANDONED IN PLACE.
18. THE COST OF SPLICING TEMPORARY CONDUCTORS TO EXISTING CONDUCTORS IN EXISTING POLES SHALL BE INCIDENTAL TO THE PAY ITEM FOR AERIAL CABLE.
19. GROUNDING CONDUCTORS SHALL BE CONTINUOUS.
20. ALL NEW UNIT DUCTS AND UNDERGROUND CONDUITS SHALL BE PLACED A MINIMUM OF 30" BENEATH THE GROUND SURFACE (FINAL GRADE).

ROADWAY LIGHTING LEGEND

DESCRIPTION	PROPOSED	EXISTING	REMOVAL	TEMPORARY
LIGHT UNIT SINGLE 15 FT DAVIT ARM 400W HPS, MCIII, 240V 47.5 FT MOUNTING HEIGHT, U.N.O.				
E - EXISTING UNIT TO REMAIN R - EXISTING UNIT TO BE REMOVED T - TEMPORARY UNIT				
LIGHT UNIT COMBINATION TRAFFIC SIGNAL, SINGLE 15 FT MAST ARM, 400W HPS, MCIII, 240V, 47.5 FT MOUNTING HEIGHT				
LIGHT UNIT COMBINATION TRAFFIC SIGNAL, DOUBLE 15 FT MAST ARMS, 400W HPS, MCIII, 240V, 45 FT MOUNTING HEIGHT				
LIGHTING CONTROLLER				
UNIT DUCT				
UNIT DUCT TO BE ABANDONED CONDUCTORS TO BE REMOVED			— A —	
RIGID GALVANIZED STEEL CONDUIT, PUSHED CONTAINING PULLED-IN UNIT DUCT				
AERIAL CABLE				— — AC — —
UTILITY SERVICE CONNECTION				
GROUND ROD, 5/8" X 10'				
ELECTRIC UTILITY POLE				

LT-01

FILE NAME = LT-01.dgn
PLOT DATE = 8/13/2010

SPAAN Tech, Inc.
311 S. Wacker Drive, Suite 2400
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web: www.SpaanTech.com

DESIGNED - I. A. B.	REVISED -	
DRAWN - M. K. J.	REVISED -	
CHECKED - A. D. O.	REVISED -	
DATE - AUGUST 2010	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, LEGEND, AND SHEET INDEX
ILLINOIS ROUTE 56

SCALE: NONE | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	266
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

ROADWAY LIGHTING SCHEDULE OF QUANTITIES

	ITEM	UNIT	TOTAL QUANTITY
	ELECTRIC SERVICE INSTALLATION	EACH	1
	ELECTRIC UTILITY SERVICE CONNECTION	LUMP SUM	1
	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	42
	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	906
	UNIT DUCT, 600V, 3-1C NO. 4, 1/C NO. 6 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	4800
	ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE USE) 3-1/C 300 MCM	FOOT	66
	AERIAL CABLE, 3-1/C NO. 4 WITH MESSENGER WIRE	FOOT	6260
	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	3900
	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT	EACH	52
	LIGHTING CONTROLLER, DUPLEX CONSOLE TYPE	EACH	1
	LIGHT POLE, ALUMINUM, 47.5 M.H., 15 FT. DAVIT ARM	EACH	20
	LIGHT POLE, WOOD, 60 FOOT, CLASS 4, WITH 15FT MAST ARM	EACH	16
	LIGHT POLE, WOOD, 60 FOOT, CLASS 4, WITH TWO 15FT MAST ARMS	EACH	3
	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	190
	BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE	EACH	20
	REMOVAL OF TEMPORARY LIGHTING UNIT	EACH	19
	REMOVAL OF POLE FOUNDATION, CONCRETE	EACH	12
	REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE	EACH	12
*	REMOVAL OF LIGHTING CONTROLLER	EACH	1
	REMOVAL OF LIGHTING CONTROLLER FOUNDATION	EACH	1
	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	17000
	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	16
	LUMINAIRE SAFETY CABLE ASSEMBLY	EACH	28
	GROUND ROD, 5/8" DIA X 10 FT.	EACH	39

*: THE EXISTING LIGHTING CONTROLLER SHALL REMAIN THE PROPERTY OF THE DEPARTMENT AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE DEPARTMENT'S ELECTRICAL MAINTENANCE CONTRACTOR'S MAIN FACILITY.

FILE NAME = LT-02.dgn
PLOT DATE = 8/12/2010

SPAAN Tech, Inc.
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DESIGNED - I. A. B.	REVISED -	
DRAWN - M. K. J.	REVISED -	
CHECKED - A. D. O.	REVISED -	
DATE - AUGUST 2010	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY LIGHTING SCHEDULE OF QUANTITIES
ILLINOIS ROUTE 56

SCALE: NONE | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	267
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TEMPORARY LIGHTING NOTES:

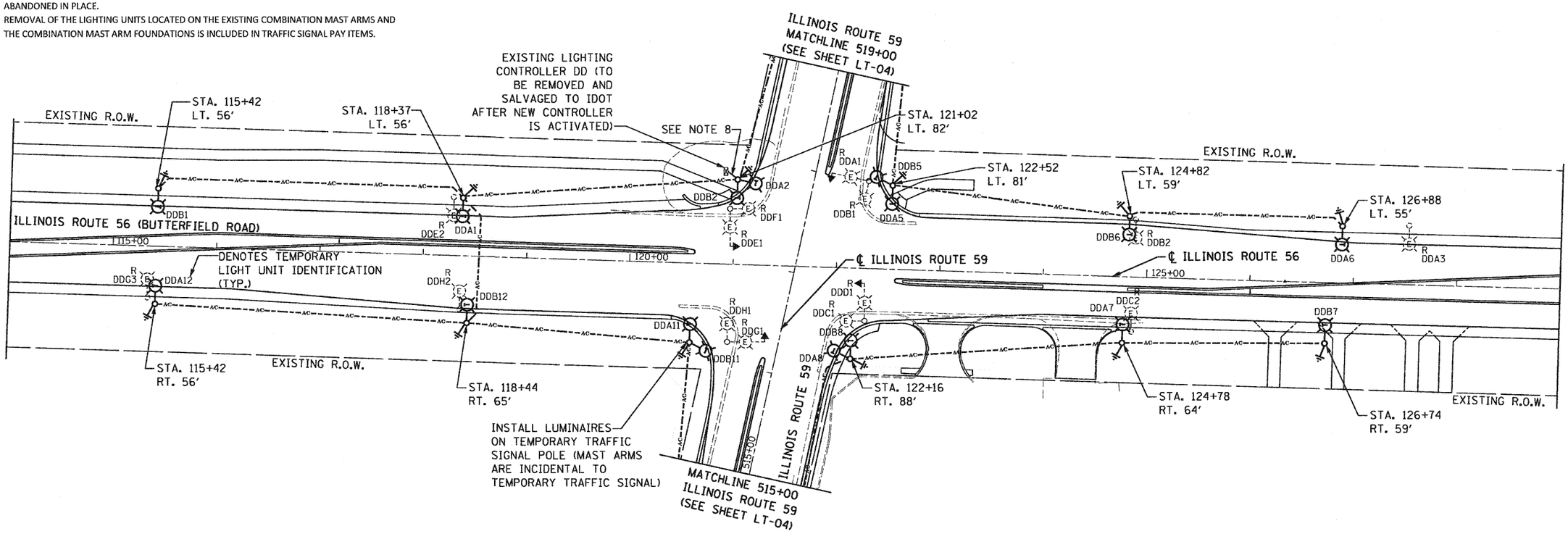
1. ALL AERIAL CABLES ARE (3) 1/C #4 ALUMINUM WITH MESSENGER WIRE.
2. CONTRACTOR SHALL COORDINATE AND STAGE TEMPORARY, DEMOLITION AND PROPOSED LIGHTING INSTALLATION AND ENERGIZATION SO THAT NO SECTIONS OF ROADWAY THAT ARE CURRENTLY ILLUMINATED WILL BE WITHOUT LIGHT FOR ANY NIGHTTIME PERIOD.
3. MAINTAIN CLEARANCE FROM GROUND PER NEC SECTION 225.18 FOR ALL AERIAL CABLES. MAINTAIN CLEARANCE FROM COMED OVERHEAD ELECTRIC LINES AS REQUIRED BY COMED.
4. ALL TEMPORARY LIGHT UNITS SHALL HAVE 60' CLASS 4 WOOD POLES AND 15' MAST ARMS WITH A LUMINAIRE MOUNTING HEIGHT OF 47'-6". LUMINAIRES SHALL BE 400W, 240V, MCIII.
5. WORK ON THIS SHEET SHALL BE COORDINATED WITH THE MAINTENANCE OF TRAFFIC PLANS.
6. TEMPORARY LIGHTING CIRCUITS TO BE CONNECTED TO EXISTING CONTROLLER.
7. INSTALL (1) 2" PVC CONDUIT IN TRENCH WITH 1-3/C#4 AND 1-1/C#6 GROUND FOR TEMPORARY CONNECTIONS BETWEEN EXISTING LIGHTING CONTROLLER AND AERIAL CABLES. REFER TO "WOOD POLE TO LIGHTING CONTROLLER WIRING CONNECTION" DETAIL ON SHEET LT-18.
8. ELECTRICAL SERVICE TO EXISTING CONTROLLER TO REMAIN ENERGIZED UNTIL PROPOSED LIGHTING SYSTEM IS IN SERVICE. REMOVE EXISTING ELECTRICAL SERVICE AFTER PROPSED LIGHTING SYSTEM IS IN SERVICE.
9. REMOVE CONDUCTORS FROM ALL EXISTING UNIT DUCTS. EMPTY UNIT DUCTS ARE TO BE ABANDONED IN PLACE.
10. REMOVAL OF THE LIGHTING UNITS LOCATED ON THE EXISTING COMBINATION MAST ARMS AND THE COMBINATION MAST ARM FOUNDATIONS IS INCLUDED IN TRAFFIC SIGNAL PAY ITEMS.

DEMOLITION LEGEND

R EXISTING TO BE REMOVED AND SALVAGED TO IDOT

T WOOD POLE WITH LUMINAIRE FOR TEMPORARY LIGHTING

N



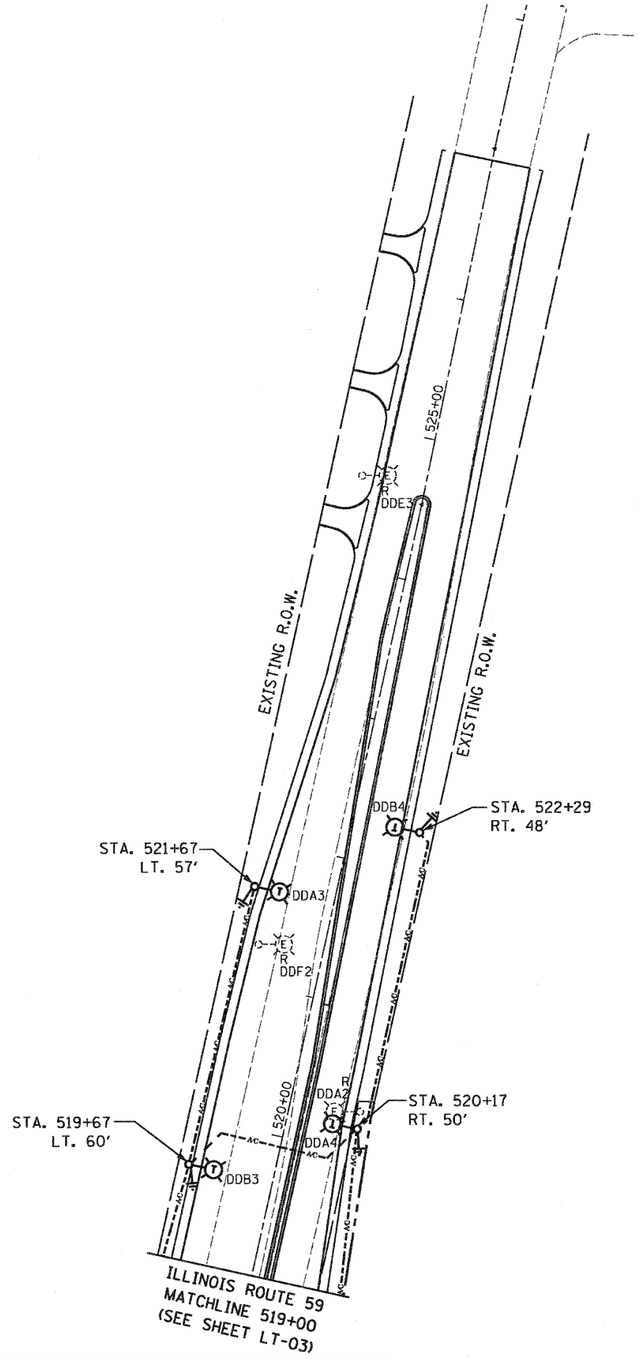
GRAPHIC SCALE

METERS 20 0 20 40 60 80 100

FEET 50 0 50 100 150 200 250

LT-03

FILE NAME = LT-03.dgn PLOT DATE = 8/13/2010	SPAAN Tech, Inc. 311 S. Wacker Drive, Suite 2400 Chicago, Illinois 60606 phone: 312.277.8800 fax: 312.277.8808 web: www.SpaanTech.com	DESIGNED - I. A. B. DRAWN - M. K. J. CHECKED - A. D. O. DATE - AUGUST 2010	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DEMOLITION AND TEMPORARY LIGHTING PLAN ILLINOIS ROUTE 56 AT ILLINOIS ROUTE 59 SCALE: 1" = 50' SHEET NO. 1 OF 2 SHEETS STA. 114+00 TO STA. 129+00	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
						365	(58&59) WRS-3	DuPAGE	466	268
								CONTRACT NO. 62420		
						FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



N

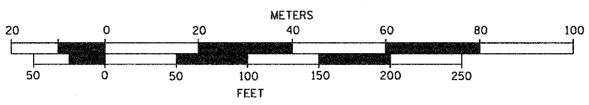
DEMOLITION LEGEND

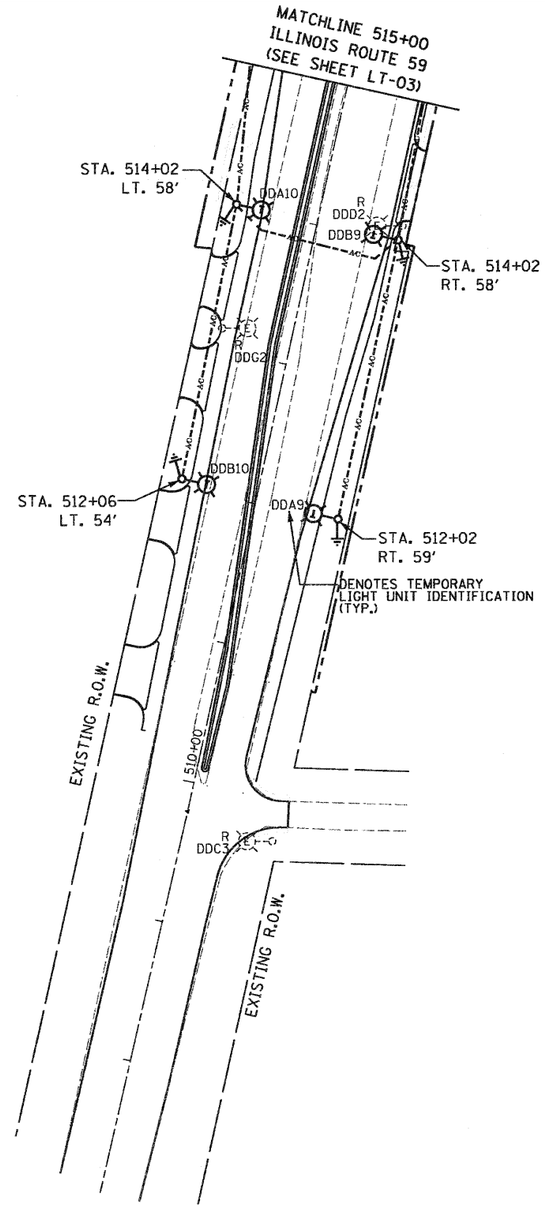
R	EXISTING TO BE REMOVED AND SALVAGED TO IDOT
T	WOOD POLE WITH LUMINAIRE FOR TEMPORARY LIGHTING

TEMPORARY LIGHTING NOTES:

1. ALL AERIAL CABLES ARE (3) 1/C #4 ALUMINUM WITH MESSENGER WIRE.
2. CONTRACTOR SHALL COORDINATE AND STAGE TEMPORARY, DEMOLITION AND PROPOSED LIGHTING INSTALLATION AND ENERGIZATION SO THAT NO SECTIONS OF ROADWAY THAT ARE CURRENTLY ILLUMINATED WILL BE WITHOUT LIGHT FOR ANY NIGHTTIME PERIOD.
3. MAINTAIN CLEARANCE FROM GROUND PER NEC SECTION 225.18 FOR ALL AERIAL CABLES. MAINTAIN CLEARANCE FROM COMED OVERHEAD ELECTRIC LINES AS REQUIRED BY COMED.
4. ALL TEMPORARY LIGHT UNITS SHALL HAVE 60' CLASS 4 WOOD POLES AND 15' MAST ARMS WITH A LUMINAIRE MOUNTING HEIGHT OF 47'-6". LUMINAIRES SHALL BE 400W, 240V, MCIII.
5. WORK ON THIS SHEET SHALL BE COORDINATED WITH THE MAINTENANCE OF TRAFFIC PLANS.
6. TEMPORARY LIGHTING CIRCUITS TO BE CONNECTED TO EXISTING CONTROLLER.
7. REMOVE CONDUCTORS FROM ALL EXISTING UNIT DUCTS. EMPTY UNIT DUCTS ARE TO BE ABANDONED IN PLACE.

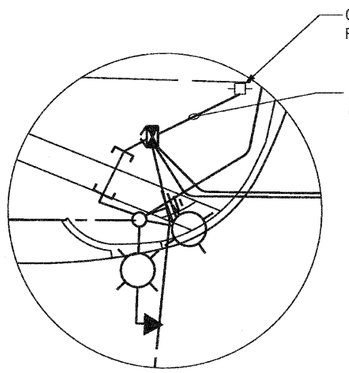
GRAPHIC SCALE





LT-04

FILE NAME = LT-84.dgn PLOT DATE = 8/13/2010	SPAAN Tech, Inc. 311 S. Wacker Drive, Suite 2400 Chicago, Illinois 60606 phone: 312.277.8800 fax: 312.277.8808 web: www.SpaanTech.com	DESIGNED - I. A. B. DRAWN - M. K. J. CHECKED - A. D. O. DATE - AUGUST 2010	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DEMOLITION AND TEMPORARY LIGHTING PLAN ILLINOIS ROUTE 56 AT ILLINOIS ROUTE 59 SCALE: 1" = 50' SHEET NO. 2 OF 2 SHEETS STA. TO STA.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
						365	(58&59) WRS-3	DuPAGE	466	269
								CONTRACT NO. 62420		
						FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



N

ILLINOIS ROUTE 59
MATCHLINE 519+00
(SEE SHEET LT-06)

PROPOSED LIGHTING CONTROLLER "DD" STA. 120+80
(240/480V, SINGLE PHASE, 3 WIRE)
SET BACK 35 FT
(FROM BACK OF CURB)

SEE TRAFFIC SIGNAL PLANS FOR EXACT LOCATIONS OF COMBINATION POLES (TYP.). COMBINATION POLES AND LIGHTING MAST ARMS ARE PART OF TRAFFIC SIGNAL PAY ITEMS.

EXISTING R.O.W.

DDA2
STA. 118+34
SET BACK 15 FT

DDB2
STA. 116+04
SET BACK 15 FT

17' P
4" RGSC

DDA1

DDB1

SEE ENLARGED DETAIL

DDL1

17' P
4" RGSC

DDK1

DDL2
STA. 124+91
SET BACK 13 FT

DDK2
STA. 127+21
SET BACK 15 FT

ILLINOIS ROUTE 56 (BUTTERFIELD ROAD)

MATCHLINE 114+00 (SEE BELOW)

115+00

120+00

140' P
(2) 4" RGSC

134' P
4" RGSC

125+00

℄ ILLINOIS ROUTE 56

MATCHLINE 129+00 (SEE BELOW)

156' P
4" RGSC

DDE1

DDF1

DDG1

DDH1

3-1/C #4, 1/C #6 GND
1 1/4" UNIT DUCT (TYP.)

DDC1
STA. 116+04
SET BACK 15 FT
(FROM EDGE OF TRAVELED PAVEMENT, U.N.O.)

DDD1
STA. 118+34
SET BACK 13 FT

DUAL 15' LUMINAIRE ARMS WITH 400W HPS MCIII 240V LUMINAIRES AT 45' MOUNTING HEIGHT (TYP. FOR COMBINATION POLES)

ILLINOIS ROUTE 59

515+00

MATCHLINE 515+00
ILLINOIS ROUTE 59
(SEE SHEET LT-06)

40' P
4" RGSC

74' P
4" RGSC

LIGHT POLE
47.5' MOUNTING HEIGHT
15' DAVIT ARM
400W HPS MCII 240V LUMINAIRE
WITH TRANSFORMER BASE (TYP.)

DDI1
STA. 124+91
SET BACK 15 FT

DDJ1
STA. 124+91
SET BACK 15 FT

26' P
4" RGSC

23' P
4" RGSC

EXISTING R.O.W.

EXISTING R.O.W.

110+00

DDD2
STA. 113+74
SET BACK 15 FT

MATCHLINE 114+00 (SEE ABOVE)

EXISTING R.O.W.

EXISTING R.O.W.

DDL3
STA. 129+51
SET BACK 15 FT

130+00

MATCHLINE 129+00 (SEE ABOVE)

EXISTING R.O.W.

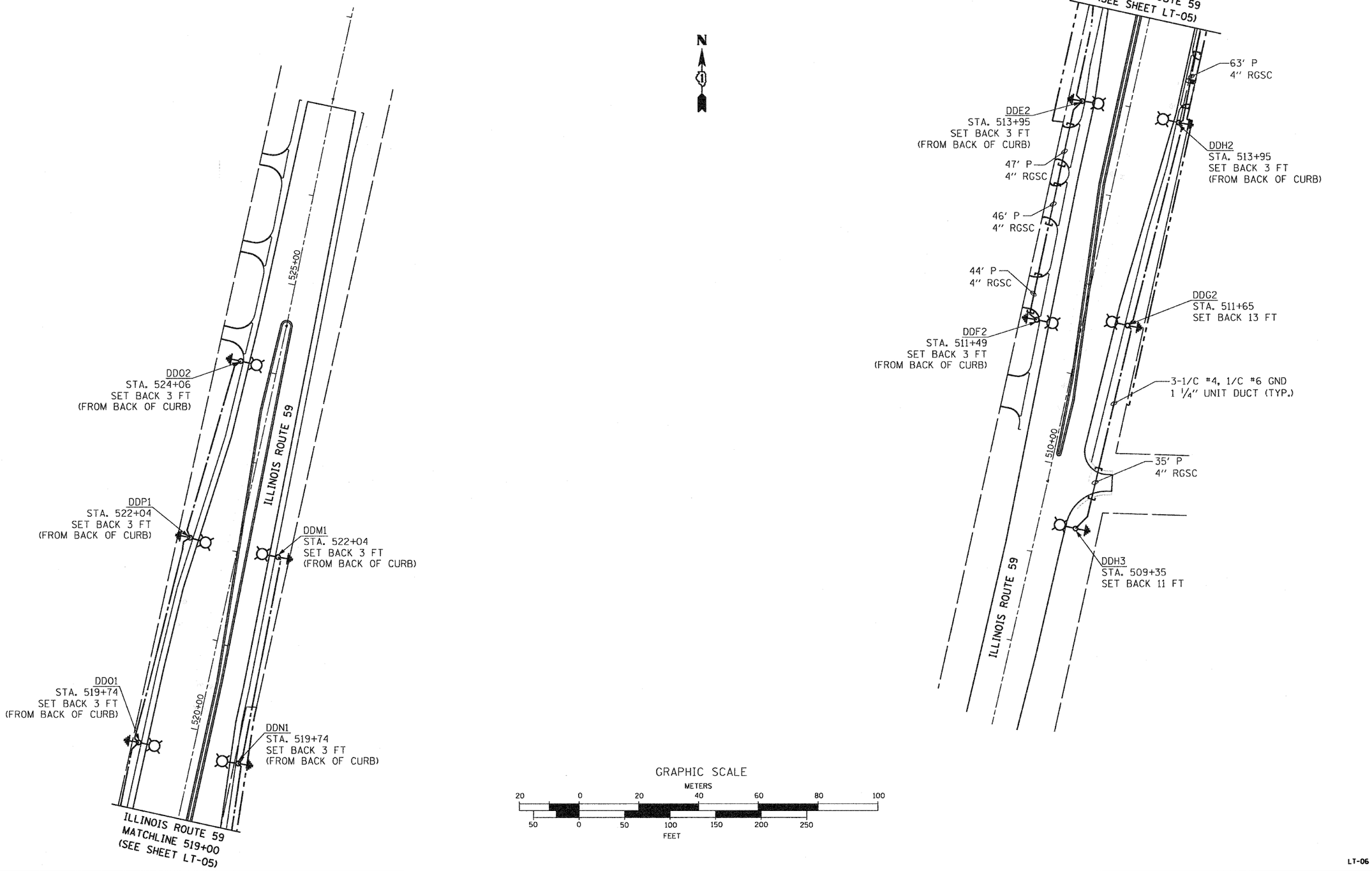
GRAPHIC SCALE

METERS: 20 0 20 40 60 80 100

FEET: 50 0 50 100 150 200 250

LT-05

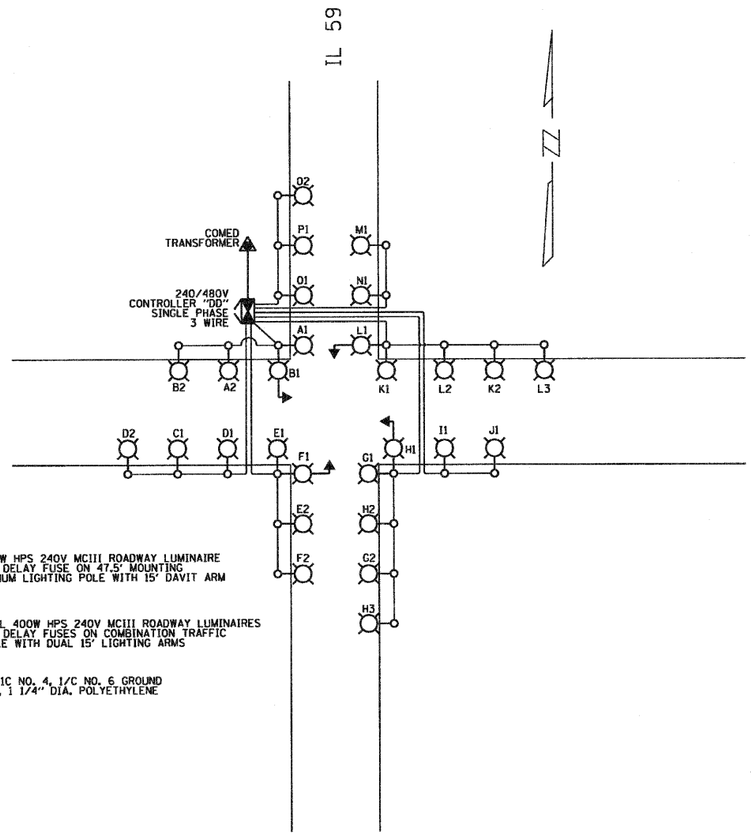
FILE NAME = LT-05.dgn PLOT DATE = 8/13/2010	SPAAN Tech, Inc. 311 S. Wacker Drive, Suite 2400 Chicago, Illinois 60606 phone: 312.277.5800 fax: 312.277.5808 web: www.SpaanTech.com	DESIGNED - I. A. B. DRAWN - M. K. J. CHECKED - A. D. O. DATE - AUGUST 2010	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED ROADWAY LIGHTING PLAN ILLINOIS ROUTE 56 AT ILLINOIS ROUTE 59 SCALE: 1" = 50' | SHEET NO. 1 OF 2 SHEETS | STA. 110+00 TO STA. 130+73	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
						365	(58&59) WRS-3	DuPAGE	466	270
								CONTRACT NO. 62420		
						FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



LT-06

FILE NAME = LT-06.dgn PLOT DATE = 8/13/2010	SPAAN Tech, Inc. 311 S. Wacker Drive, Suite 2400 Chicago, Illinois 60606 phone: 312.277.8800 fax: 312.277.8808 web: www.SpaanTech.com	DESIGNED - I. A. B. DRAWN - M. K. J. CHECKED - A. D. O. DATE - AUGUST 2010	REVISED - REVISED - REVISED - REVISED -	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**	**PROPOSED ROADWAY LIGHTING PLAN** **ILLINOIS ROUTE 56 AT ILLINOIS ROUTE 59**	SCALE: 1" = 50'	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	271
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



LEGEND

PROPOSED 400W HPS 240V MCIII ROADWAY LUMINAIRE WITH 6A TIME DELAY FUSE ON 47.5' MOUNTING HEIGHT ALUMINUM LIGHTING POLE WITH 15' DAVIT ARM

PROPOSED DUAL 400W HPS 240V MCIII ROADWAY LUMINAIRES WITH 6A TIME DELAY FUSES ON COMBINATION TRAFFIC MAST ARM POLE WITH DUAL 15' LIGHTING ARMS

UNIT DUCT, 3-1C NO. 4, 1/C NO. 6 GROUND XLP-TYPE USE, 1 1/4" DIA. POLYETHYLENE

ROADWAY LIGHTING
PROPOSED SINGLE LINE DIAGRAM

NO SCALE

PANEL SCHEDULE AND
LOAD TABULATION
LIGHTING CONTROLLER DD
240/480 VAC, 1-PHASE, 3-WIRE
MAIN BREAKERS: 175A

CIRCUIT	BREAKER TRIP AMPS	AMPS RED	AMPS BLACK
A	70	3.98	–
B	70	–	3.98
C	70	1.99	–
D	70	–	3.98
E	70	3.98	–
F	70	-	3.98
G	70	3.98	-
H	70	-	5.96
I	70	1.99	-
J	70	-	1.99
K	70	3.98	-
L	70	-	5.96
M	70	1.99	-
N	70	-	1.99
O	70	3.98	-
P	70	–	1.99
	TOTAL	27.85	

LT-07

FILE NAME = LT-07.dgn
PLOT DATE = 8/13/2010

SPAAN Tech, Inc.
311 S. Wacker Drive, Suite 2400
Chicago, Illinois 60606
phone: 312.277.8800
fax: 312.277.8808
web: www.SpaanTech.com

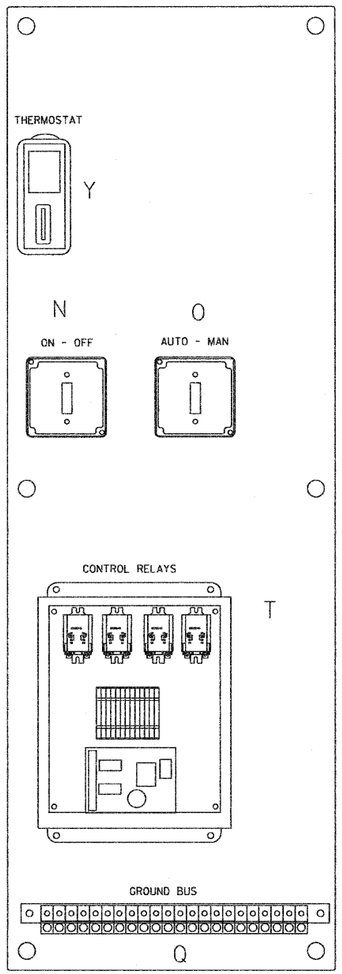
DESIGNED - I. A. B.		REVISED -
DRAWN - M. K. J.		REVISED -
CHECKED - A. D. O.		REVISED -
DATE - AUGUST 2010		REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

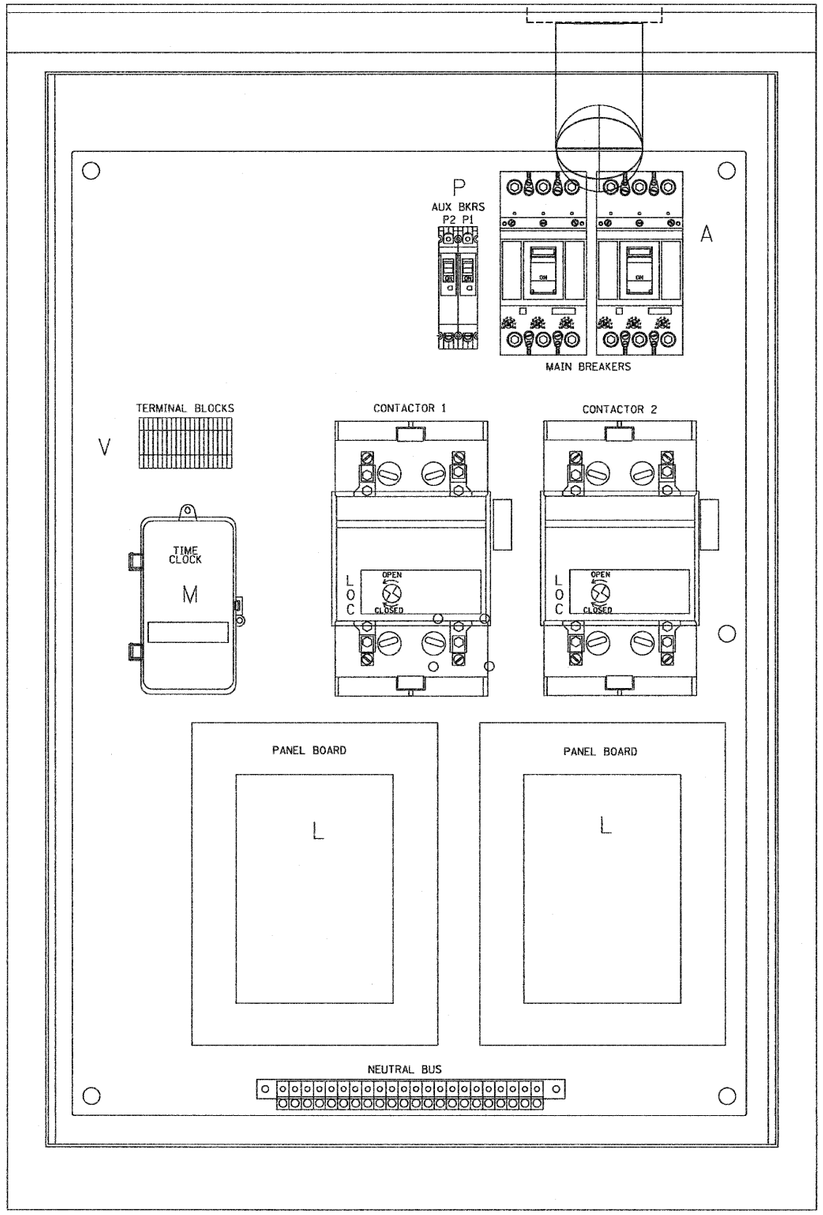
ROADWAY LIGHTING SINGLE LINE DIAGRAM
ILLINOIS ROUTE 56 AT ILLINOIS ROUTE 59

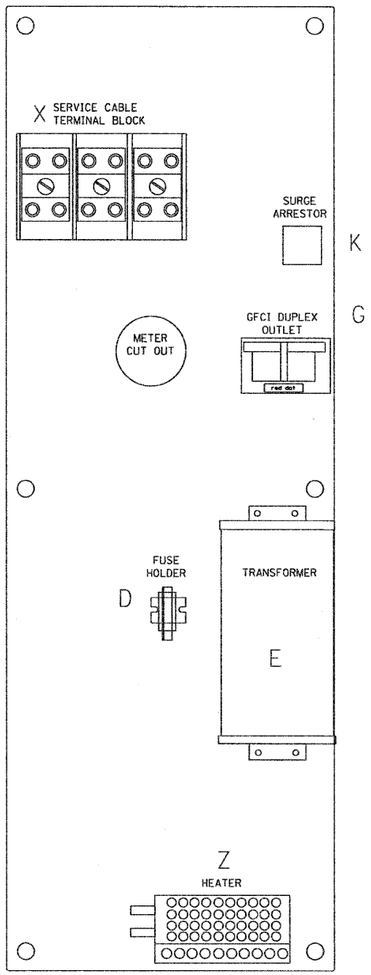
SCALE: NONE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	272
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



LEFT SIDE PANEL





RIGHT SIDE PANEL

BILL OF MATERIALS

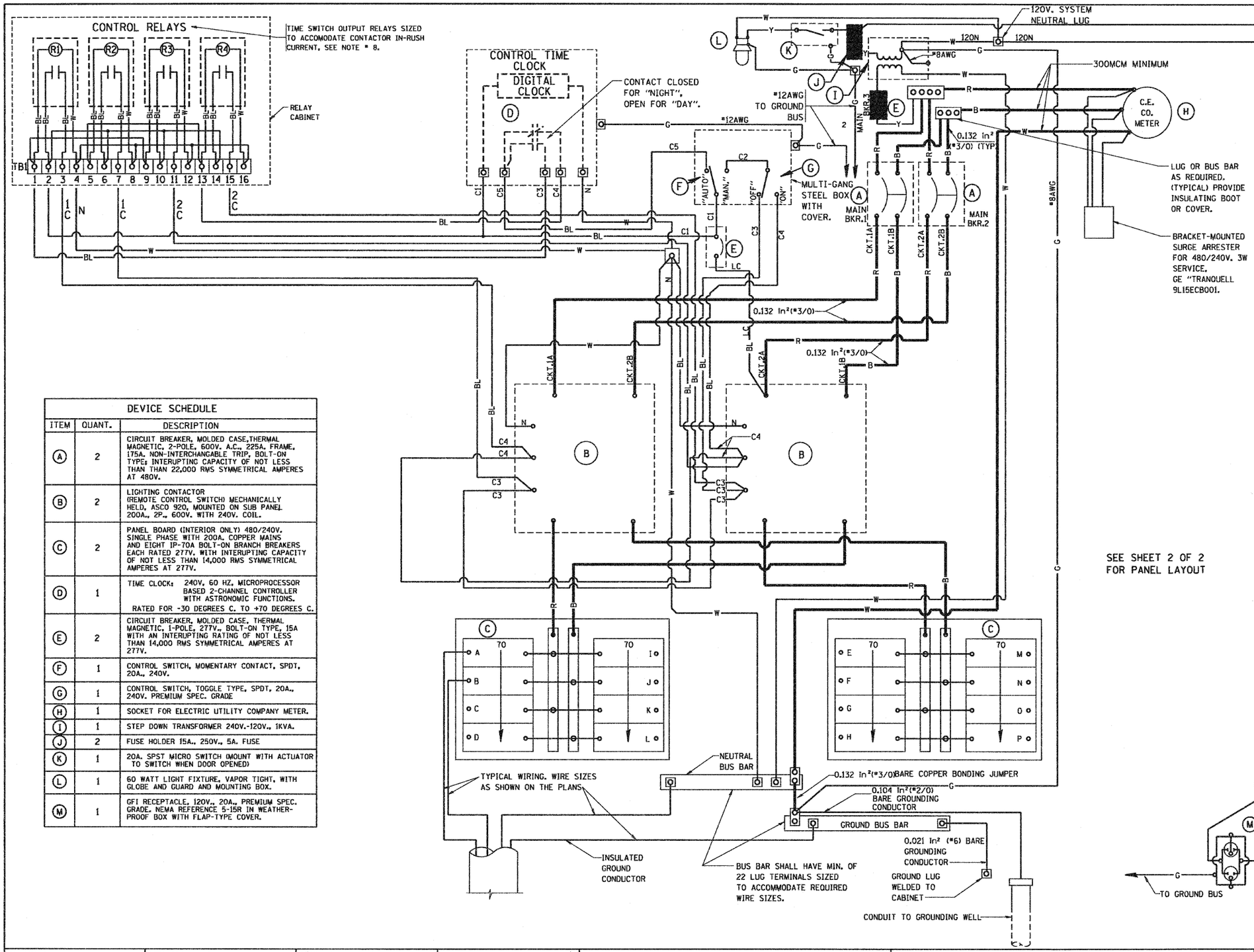
ITEM *	QTY	DESCRIPTION
A	2	FXD62B175 BREAKERS 2 POLE 175 AMP WITH AUX CONTACT
C1,C2	2	MECHANICAL CONTRACTOR 8903PBV10X11V39 2 POLE 200 AMP 240V COIL WITH AUX CONTACTS
D	1	SECTIONAL FUSE HOLDER
E	1	1.5 KVA 277V-240/120 TRASFORMER
G	1	15 AMP GFCI
H	2	DOOR SWITCH
I	1	LIGHT FIXTURE
J	1	METER FITTING 1 PHASE 3 WIRE 200 AMP
K	1	SURGE ARRESTER
L	2	PANEL BOARD 480/240V 1 PHASE, 250 AMP COPPER BUS
M	1	2 CHANNEL DIGITAL TIME CLOCK
N	1	MOMENTARY SWITCH ON - OF
O	1	DPDT 20 AMP AUTO-MANUAL
P1	1	BREAKER 1P 15A
P2	1	BREAKER 1P 15A
Q	2	COPPER GROUND AND NEUTRAL BUS 1 X 16 X 1/4
T	1	CONTROL RELAY ASSEMBLY 240V COILS WITH DPDT 25 AMP RELAYS (R1,R2,R3,R4). MOMENTARY CONTACT ADAPTER. QTY 12 TERMINAL BLOCKS
V	20	TERMINAL BLOCKS
X	1	620 AMP SPLICE BLOCK
Y	1	CHROMALOX WR 80, 40-80 DEG THERMOSTAT
Z	1	HEATREX 276-10 375 WATT HEATER

*

LT-08

E-200

FILE NAME = W:\diststd\22x34\be200.dgn	USER NAME = gaglionobt	DESIGNED -	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**LIGHTING CONTROLLER, DUPLEX TYPE**		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - CADD	REVISED -				365	(58&59) WRS-3	DuPAGE	466	273
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -					E-200 (BE-200)	CONTRACT NO. 62420		
	PLOT DATE = 1/4/2008	DATE - 12-18-02	REVISED -		SCALE: NONE	SHEET NO. 1 OF 4 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



DEVICE SCHEDULE		
ITEM	QUANT.	DESCRIPTION
(A)	2	CIRCUIT BREAKER, MOLDED CASE,THERMAL MAGNETIC, 2-POLE, 600V. A.C., 225A. FRAME, 175A. NON-INTERCHANGABLE TRIP, BOLT-ON TYPE; INTERUPTING CAPACITY OF NOT LESS THAN THAN 22,000 RMS SYMMETRICAL AMPERES AT 480V.
(B)	2	LIGHTING CONTACTOR (REMOTE CONTROL SWITCH) MECHANICALLY HELD, ASCO 920, MOUNTED ON SUB PANEL 200A., 2P., 600V. WITH 240V. COIL.
(C)	2	PANEL BOARD (INTERIOR ONLY) 480/240V. SINGLE PHASE WITH 200A. COPPER MAINS AND EIGHT IP-70A BOLT-ON BRANCH BREAKERS EACH RATED 277V. WITH INTERUPTING CAPACITY OF NOT LESS THAN 14,000 RMS SYMMETRICAL AMPERES AT 277V.
(D)	1	TIME CLOCK: 240V, 60 HZ, MICROPROCESSOR BASED 2-CHANNEL CONTROLLER WITH ASTRONOMIC FUNCTIONS. RATED FOR -30 DEGREES C. TO +70 DEGREES C.
(E)	2	CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 1-POLE, 277V., BOLT-ON TYPE, 15A WITH AN INTERUPTING RATING OF NOT LESS THAN 14,000 RMS SYMMETRICAL AMPERES AT 277V.
(F)	1	CONTROL SWITCH, MOMENTARY CONTACT, SPDT, 20A., 240V.
(G)	1	CONTROL SWITCH, TOGGLE TYPE, SPDT, 20A., 240V. PREMIUM SPEC. GRADE
(H)	1	SOCKET FOR ELECTRIC UTILITY COMPANY METER.
(I)	1	STEP DOWN TRANSFORMER 240V.-120V., 1KVA.
(J)	2	FUSE HOLDER 15A., 250V., 5A. FUSE
(K)	1	20A. SPST MICRO SWITCH (MOUNT WITH ACTUATOR TO SWITCH WHEN DOOR OPENED)
(L)	1	60 WATT LIGHT FIXTURE, VAPOR TIGHT, WITH GLOBE AND GUARD AND MOUNTING BOX.
(M)	1	GFI RECEPTACLE, 120V., 20A., PREMIUM SPEC. GRADE, NEMA REFERENCE 5-15R IN WEATHER-PROOF BOX WITH FLAP-TYPE COVER.

NOTES:

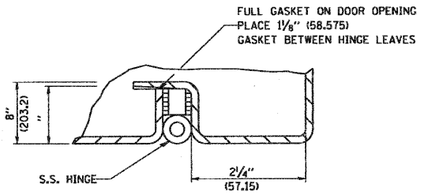
1. ALL CONTROL CABINET ITEMS SHALL HAVE SUITABLE IDENTIFICATION. OPEN CIRCUIT BREAKERS, CONTACTORS AND OTHER OPEN DEVICES SHALL HAVE PERMANENT SELF STICKING TAGS. DEVICES IN ENCLOSURES SHALL HAVE ENGRAVED 2-COLOR LAMINATED PLASTIC NAMEPLATES ATTACHED TO ENCLOSURES WITH SCREWS. NAMEPLATES SHALL BE ENGRAVED TO CORRESPOND TO DESIGNATIONS ON THE DRAWINGS. INTERNAL CABINET WIRING SHALL BE IDENTIFIED AS INDICATED OR AS DIRECTED BY THE ENGINEER BY MEANS OF SELF-STICKING TAGS APPLIED AT EACH CONNECTED END. IDENTIFICATION SHALL BE MADE BY THE CABINET MANUFACTURER.
2. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED.
   R = RED BL = BLUE W = WHITE
   B = BLACK Y = YELLOW G = GREEN
3. PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
4. ALL 120 VOLT SYSTEM AND ALL CONTROL WIRING SHALL BE *12AWG STRANDED UNLESS OTHERWISE INDICATED.
5. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
6. THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL"
7. SEE CABINET AND FOUNDATION DETAIL SHEET FOR SCHEMATIC DIAGRAM AND DEVICE LAYOUT.
8. CONTROL RELAYS CAN BE ELIMINATED IF THE CONTROL TIME CLOCK OUTPUT CONTACTS ARE RATED FOR CONTACTOR INRUSH CURRENT.

LT-09

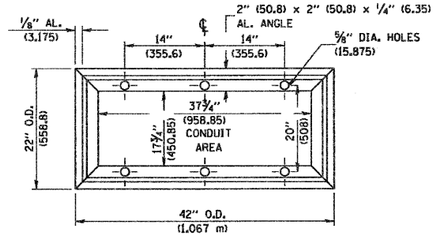
E-200

FILE NAME = W:\diststd\22x34\be200.dgn	USER NAME = gaglsnobt	DESIGNED - G. BRATKIV	REVISED - M. BURNS 07-25-91	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONTROL CABINET, DUPLEX TYPE WIRING DETAIL
		DRAWN -	REVISED - S. MANLEY 10-11-93		
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -		SCALE: NONE SHEET NO. 2 OF 4 SHEETS STA. TO STA.
	PLOT DATE = 1/4/2008	DATE - 06-30-86	REVISED -		

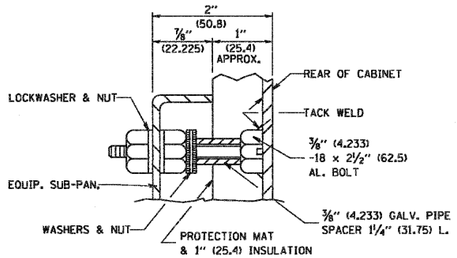
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(588,59) WRS-3	DuPAGE	466	274
E-200 (BE-200)		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



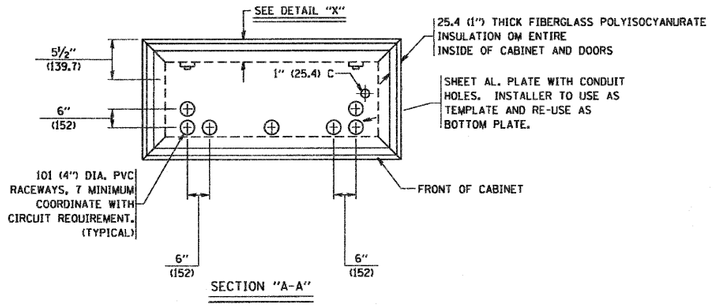
DETAIL "Y"



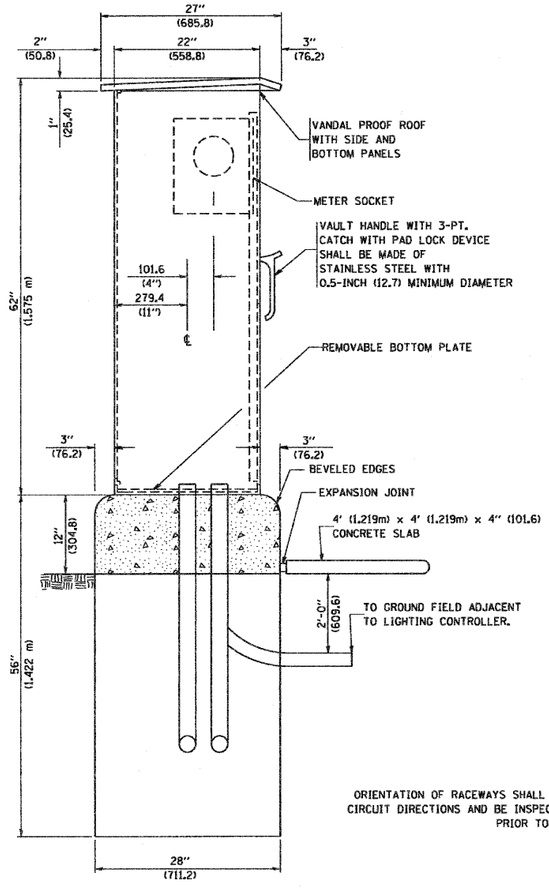
BASE MTG. DETAIL



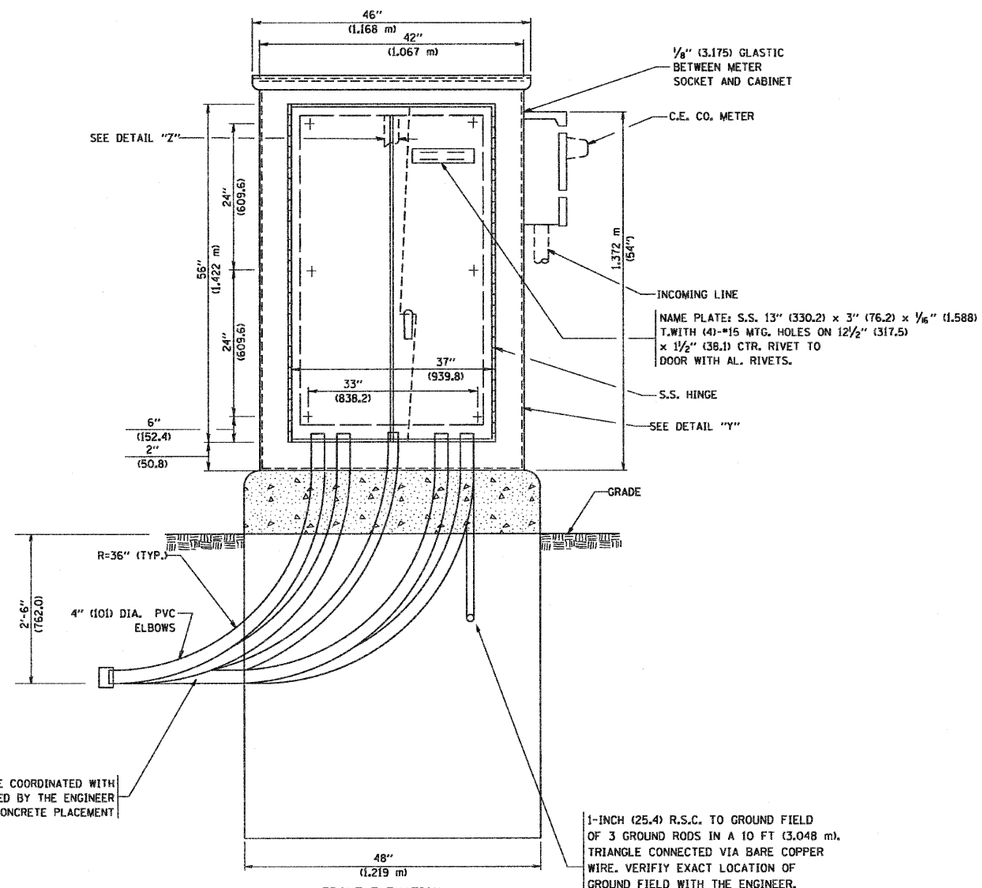
DETAIL "X"



SECTION "A-A"

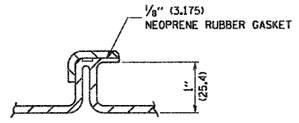


LEFT SIDE ELEVATION

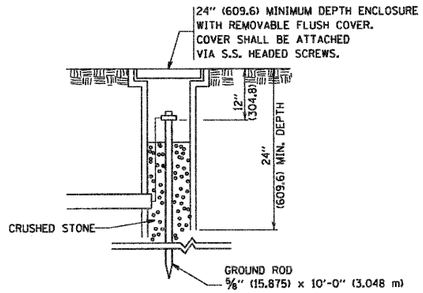


FRONT ELEVATION

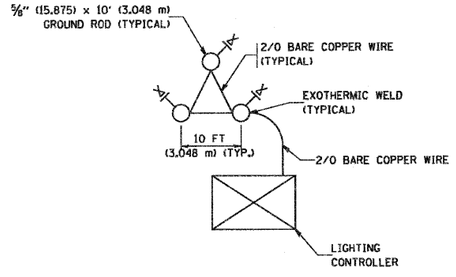
1-INCH (25.4) R.S.C. TO GROUND FIELD
OF 3 GROUND RODS IN A 10 FT (3.048 m).
TRIANGLE CONNECTED VIA BARE COPPER
WIRE. VERIFIY EXACT LOCATION OF
GROUND FIELD WITH THE ENGINEER.
NO GROUND WELL SHALL BE PLACED
IN CONCRETE PAD IN FRONT OF CONTROLLER.



DETAIL "Z"



GROUND WELL DETAIL



GROUND FIELD DETAIL
(N.T.S.)

THE CONTRACTOR SHALL
VERIFY EXACT LOCATION
WITH THE ENGINEER

LT-10
E-200

FILE NAME = W:\diststd\22x34\be200.dgn	USER NAME = gaglenobt	DESIGNED -	REVISED -
		DRAWN - CADD	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE - 12-18-02	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, DUPLEX TYPE

SCALE: NONE | SHEET NO. 3 OF 4 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	4.66	2.75
	E-200 (BE-200)	CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

NOTES

1. CABINET SHALL BE FABRICATED FROM 0.125-INCH (3.175) SHEET ALUMINUM #3003H14, FORMED AND ARC WELDED ASSEMBLY.
2. ALL SCREWS AND HARDWARE SHALL BE PLATED, GALVANIZED, OR MADE OF BRASS, ALUMINUM OR STAINLESS STEEL.
3. NAME PLATE SHALL HAVE ENGRAVED 0.75-INCH (19.05) HIGH LETTERS FILLED IN BLACK: "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.
4. ONE INCH THICK POLYISOCYANURATE INSULATION SHALL BE INSTALL AND PERMANENTLY CEMENTED ON ALL SIDES OF THE CABINET AND DOORS.
5. CABINET SHALL BE PRIMED AND PAINTED AS SPECIFIED.
6. ELECTRIC UTILITY METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET AS SHOWN ON THE PANEL LAYOUT DIAGRAM.
7. THE COMPLETED CONTROLLER SHALL BE U.L. LISTED AS AN INDUSTRIAL CONTROL PANEL UNDER UL508.
8. METAL MOUNTING PANEL SHALL BE #10 GAUGE GALVANIZED SHEET STEEL FLANGED BACK 0.75-INCHES I.D. ON 4 SIDES.
9. CIRCUIT BREAKERS AND CONTACTORS AND OTHER COMPONENTS SHALL BE MOUNTED ON 0.125-INCH (3.175) THICK GLASTIC INSULATION BACK PANEL.
10. ALL DEVICES SHALL BE FRONT REMOVABLE.
11. TIME CLOCK CHANNEL 1 N.O. CONTACT IS CLOSED NIGHT AND OPEN DAY.
12. SET "ON TIME" TO 30 MINUTES AFTER ASTRONOMICAL SUNSET.
13. BUS BAR SHALL HAVE 22 LUG TERMINALS SIZED TO ACCOMMODATE REQUIRED WIRE SIZES.
    NEUTRAL BUS SHALL BE PAINTED WHITE.
    GROUND BUS SHALL BE PAINTED GREEN.
14. ALL LUGS SHALL BE OF COPPER SCREWS AND CONNECTORS, SPRING HELD.
15. ALL WIRING TERMINATIONS SHALL BE RATED NOT LESS THAN 75 DEGREE CENTIGRADE.
16. ALL CONTROL WIRING SHALL BE 600V MACHINE TOOL WIRE TYPE MTW.
17. ALL POWER WIRING SHALL BE 600V TYPE RHH/RHW.
18. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:

    R - RED Y - YELLOW
    B - BLACK W - WHITE
    BL- BLUE G - GREEN
19. ALL DIMENSIONS ARE IN MILIMETERS (INCHES) UNLESS OTHERWISE INDICATED.
20. SCHEMATIC SHOWN WITH BREAKER OPEN, CONTACTOR OPEN, CABINET DOOR CLOSED, CLOCK NOT ACTIVE.
21. A LAMINATED COPY OF THE CIRCUIT SCHEMATIC AND SCADA I/O DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE CONTROLLER.

LT-11

E-200

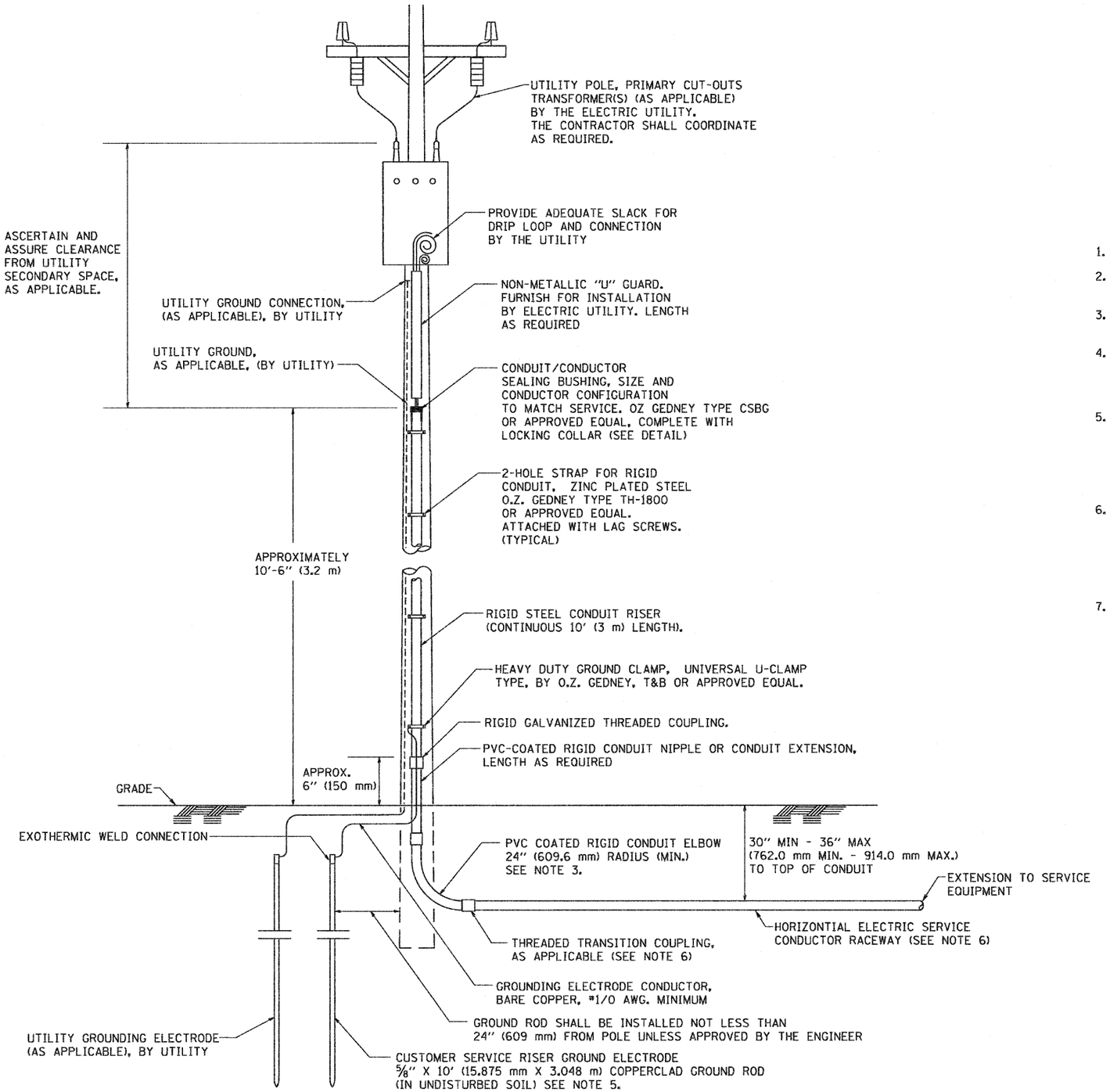
FILE NAME = W:\diststd\22x34\be200.dgn	USER NAME = gaglenobt	DESIGNED -	REVISED -
		DRAWN - CADD	REVISED -
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE - 12-18-02	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, DUPLEX TYPE

SCALE: NONE | SHEET NO. 4 OF 4 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(588S9) WRS-3	DuPAGE	466	276
	E-200 (BE-200)		CONTRACT NO. 62420	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

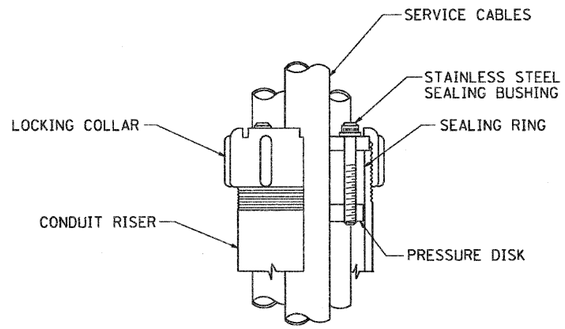


APPLICATION

THIS DETAIL APPLIES FOR LOW VOLTAGE ELECTRIC SERVICE (660 V OR LESS) FROM AN OVERHEAD UTILITY SUPPLY TO SEPERATLY-MOUNTED SERVICE EQUIPMENT.

NOTES

1. SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
2. UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
3. CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
4. PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
5. THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
6. THE HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALIC TO NON METALIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
7. PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.



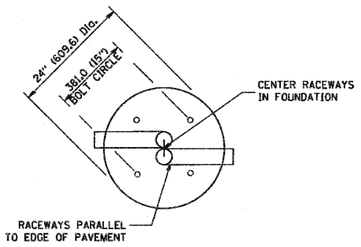
SEALING BUSHING DETAIL

LT-12

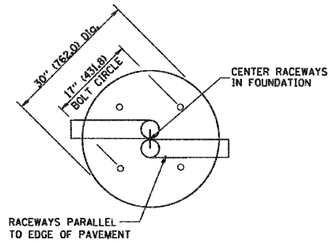
FILE NAME = W:\diststd\22x34\be220.dgn	USER NAME = gaglionobt	DESIGNED -	REVISED - 03-03-06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ELECTRIC SERVICE INSTALLATION AERIAL, REMOTE DISCONNECT			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
		DRAWN -	REVISED -					365	(58&59) WRS-3	DuPAGE	466 / 277
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - MEA	REVISED -						BE-220	CONTRACT NO. 62420	
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	

LIGHT POLE FOUNDATION DEPTH TABLE
40 FT. (12.192 m) TO 47.5 FT. (14.478 m) MOUNTING HEIGHT

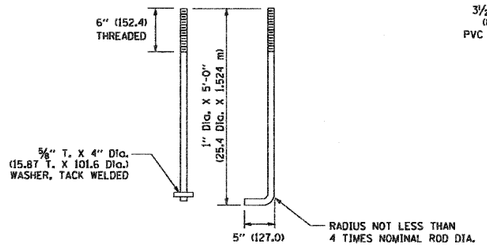
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-6" (2.09 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND ø = 34°	9'-0" (2.74 m)	10'-0" (3.05 m)
MEDIUM SAND ø = 37.5°	8'-3" (2.52 m)	9'-0" (2.74 m)
DENSE SAND ø = 40°	7'-9" (2.36 m)	9'-0" (2.74 m)



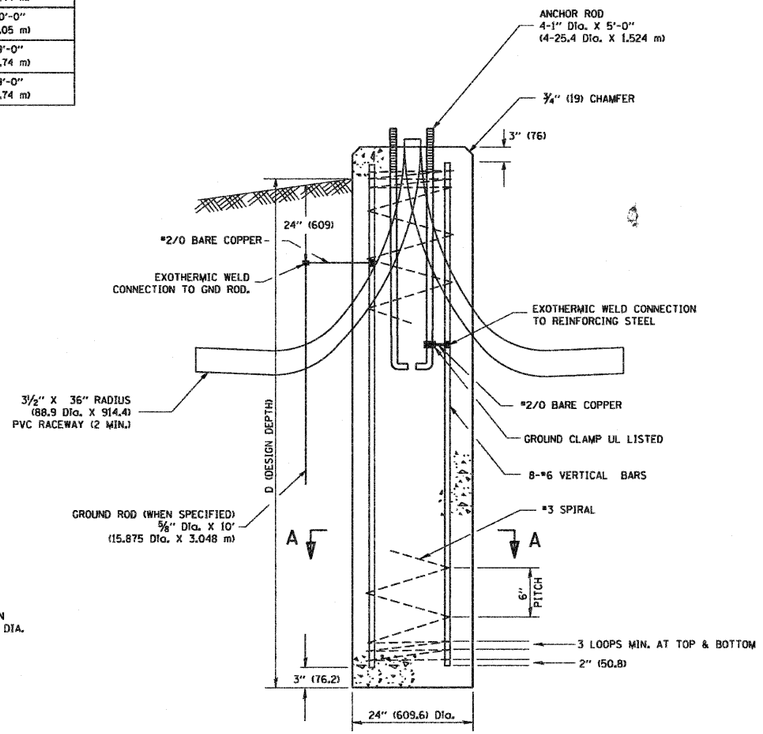
TOP VIEW



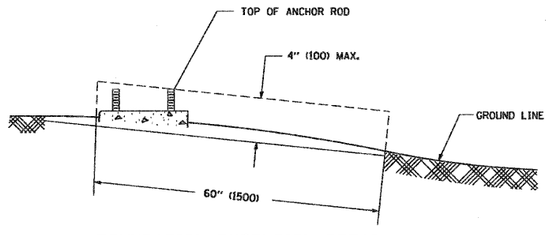
TOP VIEW



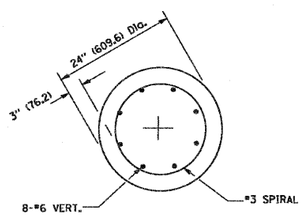
ANCHOR ROD DETAIL



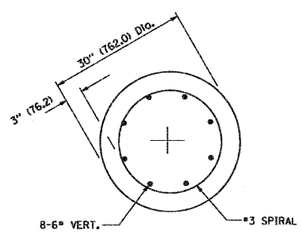
FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SECTION A-A

NOTES

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IN PLACED.
3. THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
4. THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
5. THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN. (20 mm).
6. THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
7. THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
8. THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
9. ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UM(6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
10. THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
11. ANCHOR RODS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
12. THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
13. THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
14. THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.

LT-13

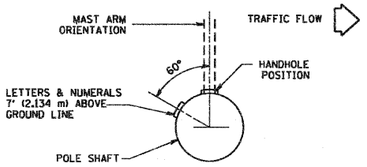
FILE NAME = W:\diststd\22x34\be301.dgn	USER NAME = gaglionobt	DESIGNED -	REVISED - 04-22-02
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

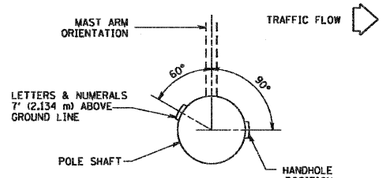
LIGHT POLE FOUNDATION
40' (12.192 m) TO 47 1/2' (14.478 m) M.H. 15" (381 mm) BOLT CIRCLE

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

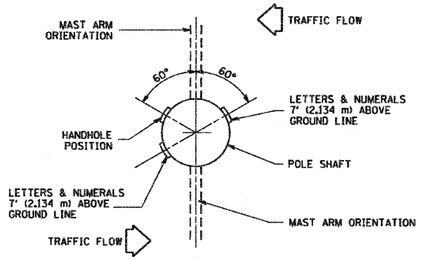
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	278
	BE-301	CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



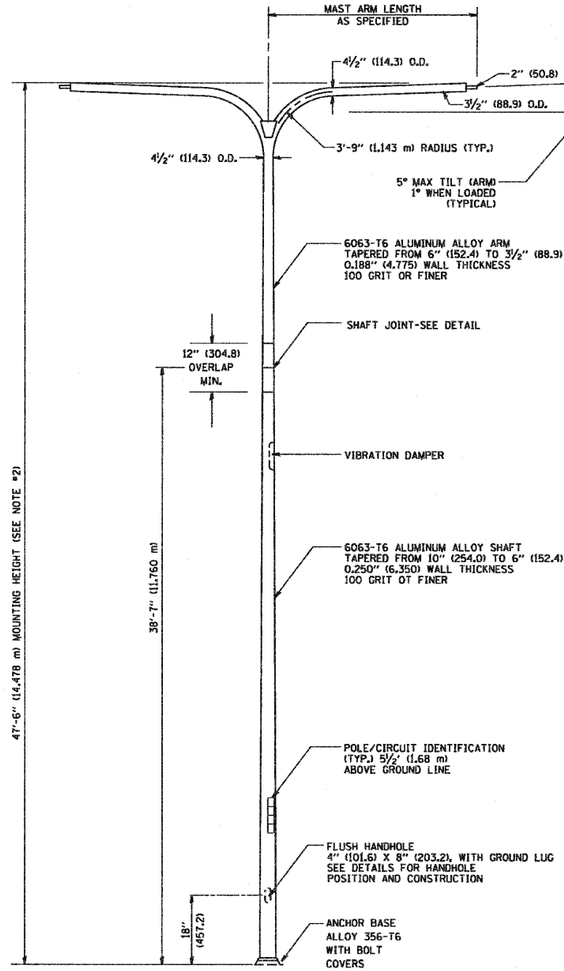
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL



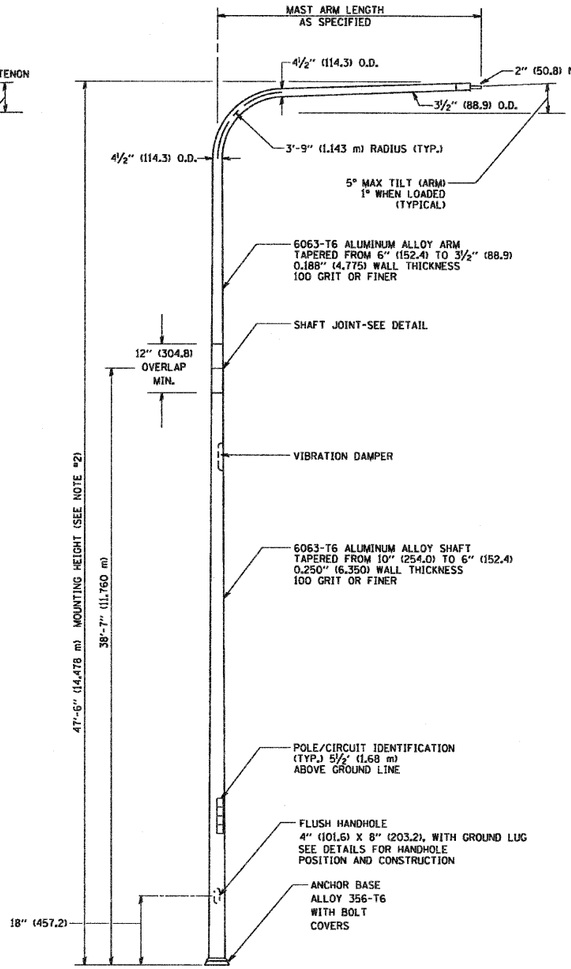
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES



POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES



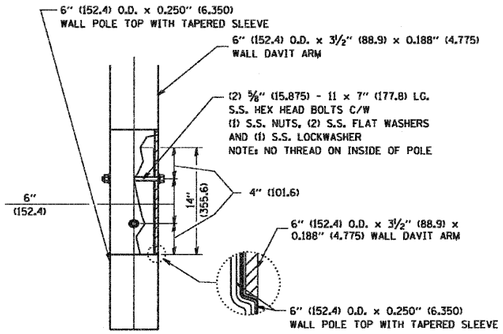
TWIN ARM POLE



SINGLE ARM POLE

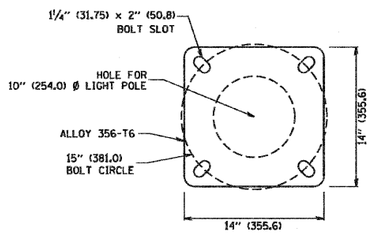
NOTES:

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
3. TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
4. THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
5. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR. BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.
6. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
7. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
8. LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.



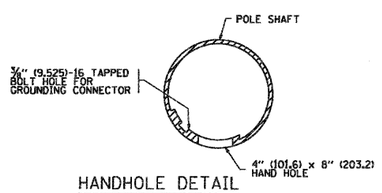
DAVIT ARM CONNECTION

[14" (355.6) OVERLAP SHOWN]



LIGHT POLE BASE PLATE DETAIL

(FOR POLE MOUNTED ON 15 INCH (381.0) BOLT CIRCLE FOUNDATION)

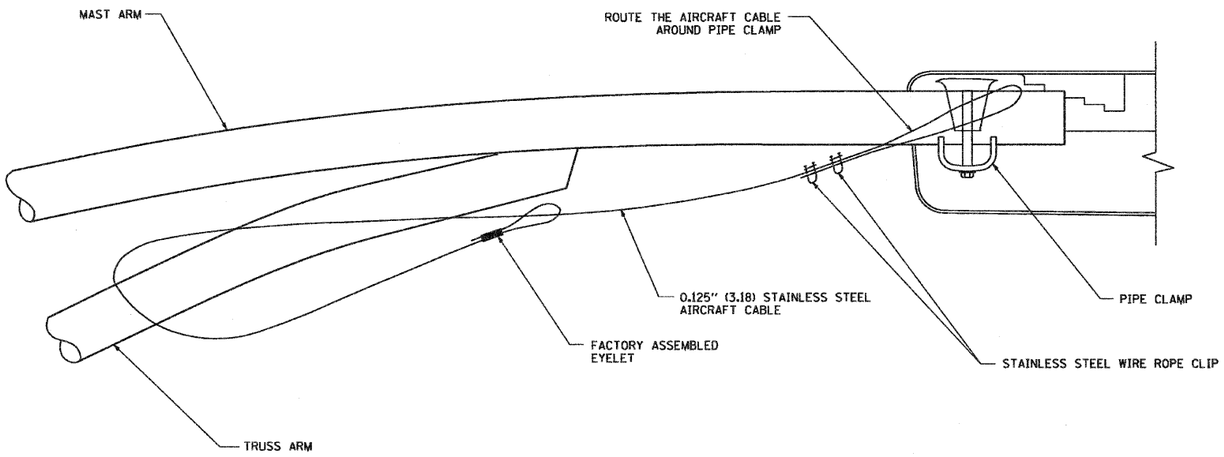


HANDHOLE DETAIL

(N.T.S.)

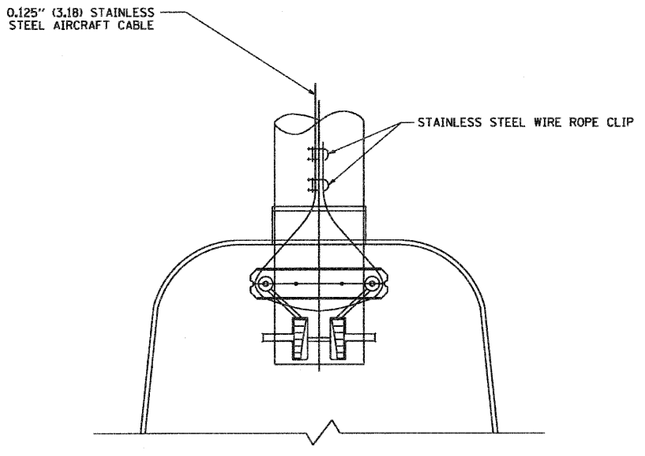
LT-14

FILE NAME = W:\diststd\22x34\be410.dgn	USER NAME = gaglienobt	DESIGNED -	REVISED - D. DREW 04-02-92	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DAVIT LIGHT POLE 47'-6" (14.478 m) MOUNTING HEIGHT				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - LEY	REVISED - D. DREW 05-07-92						365	(58&59) WRS-3	DuPAGE	466	279
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - R. TOWSONS 09-06-00							BE-410		CONTRACT NO. 62420	
	PLOT DATE = 1/4/2008	DATE -	REVISED - R. TOWSONS 09-02-03		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



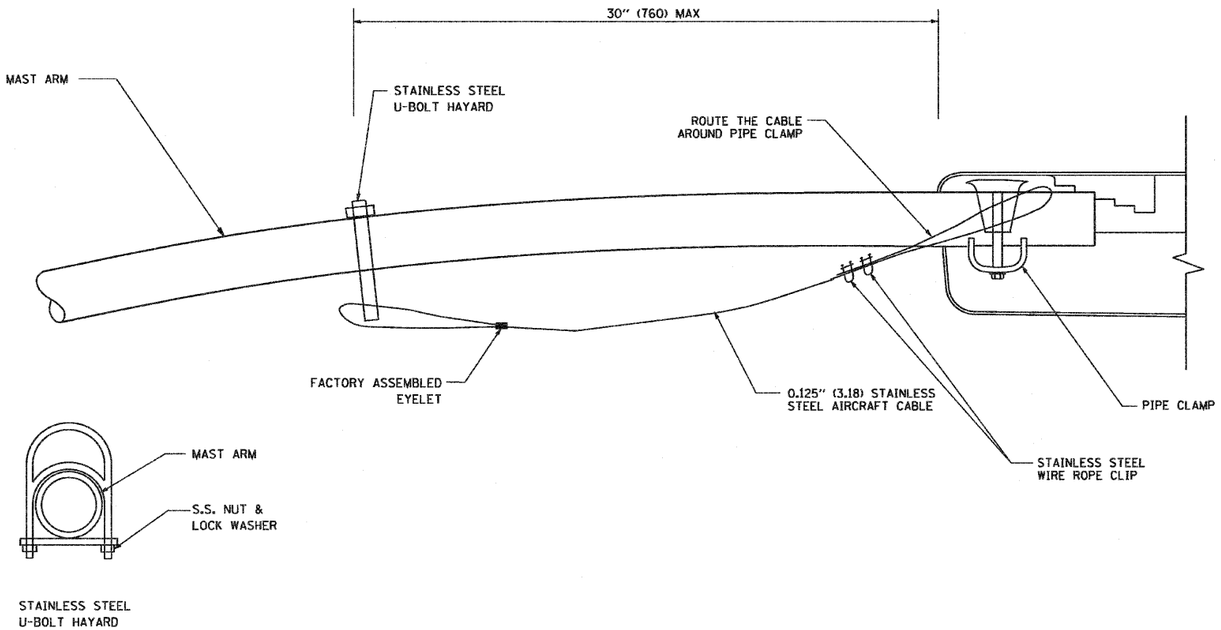
SIDE VIEW (TRUSS ARM)

N.T.S.



BOTTOM VIEW

N.T.S.



SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)

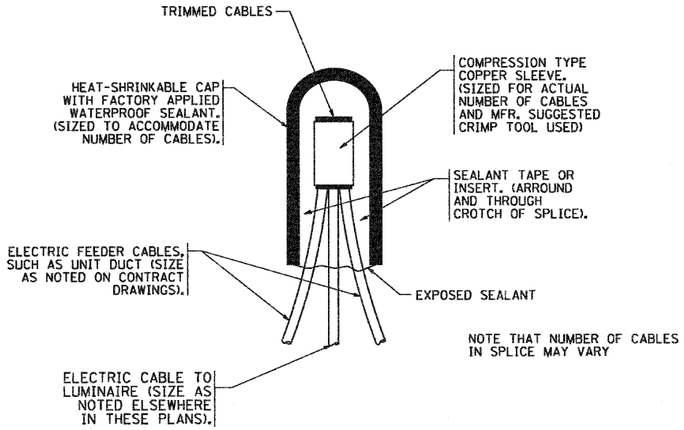
N.T.S.

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

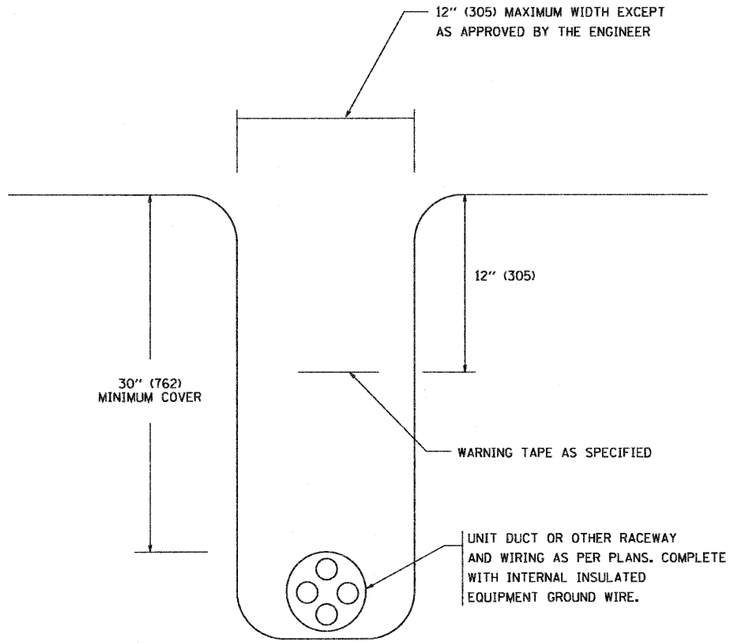
LT-15

FILE NAME = W:\diststd\22x34\be701.dgn	USER NAME = gaghanabt	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LUMINAIRE SAFETY CABLE ASSEMBLY			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					365	(58&59) WRS-3	DuPAGE	466	280
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -						BE-701	CONTRACT NO. 62420		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



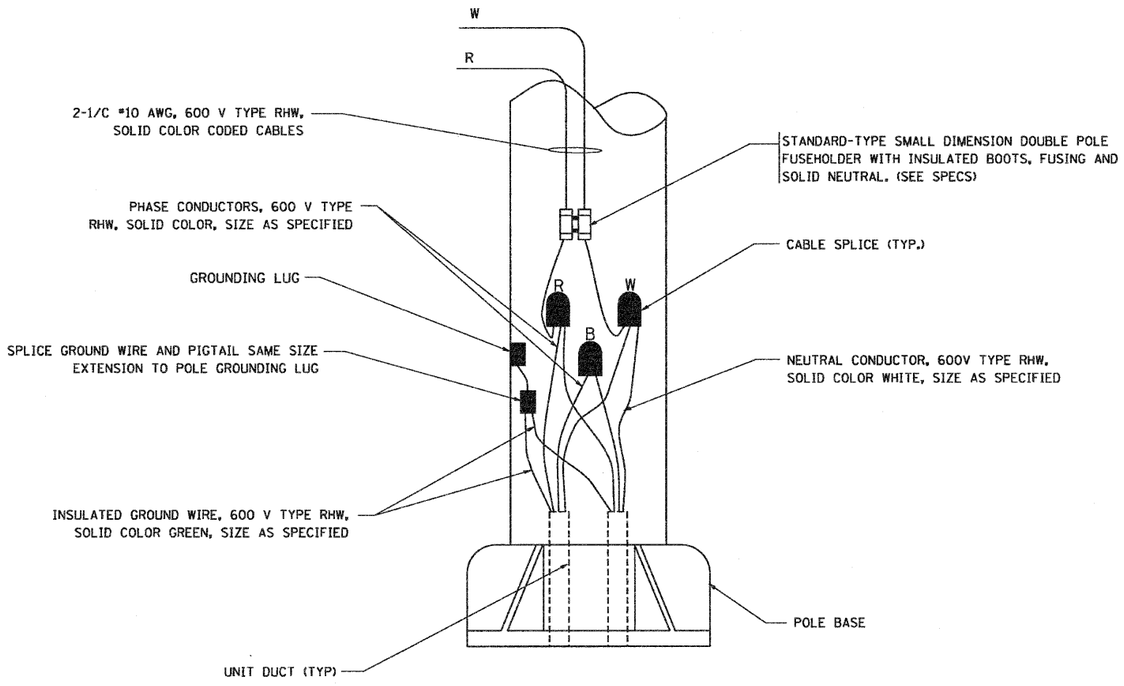
TYPICAL SPLICE DETAIL

N.T.S.



TYPICAL WIRING IN TRENCH DETAIL

N.T.S.

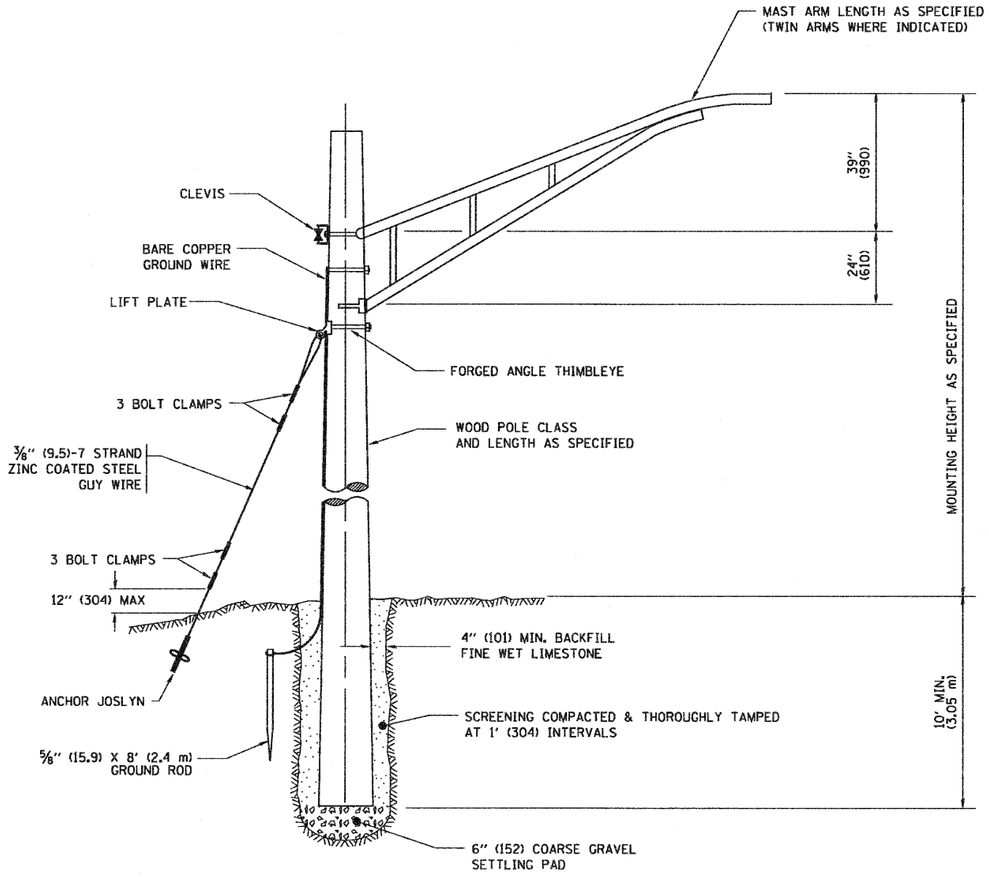


POLE WIRING DETAIL

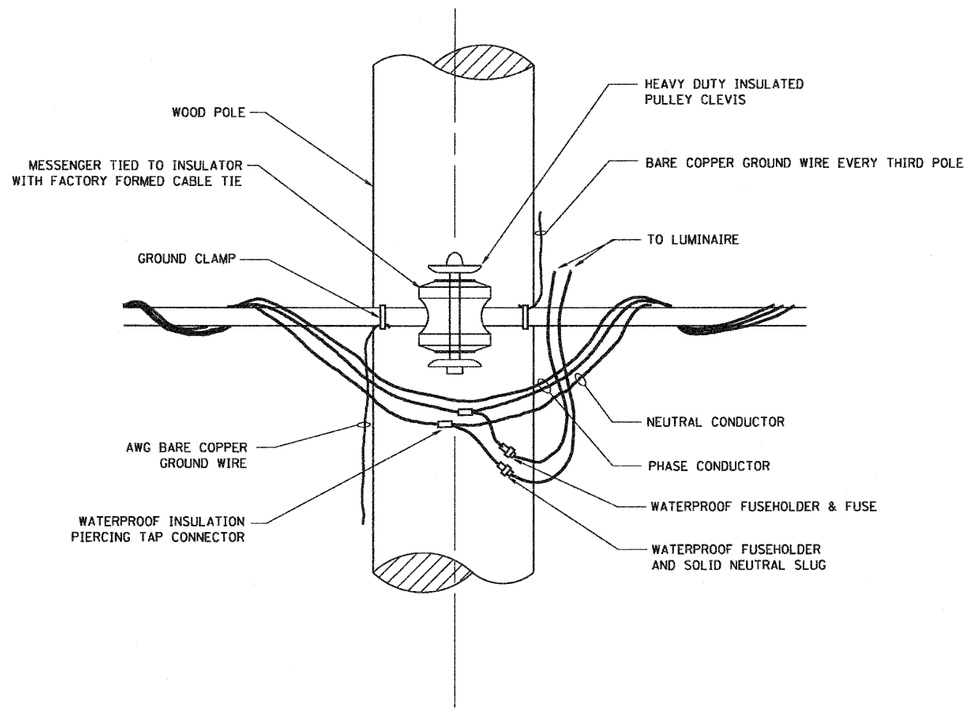
N.T.S.

LT-16

FILE NAME = W:\diststd\22x34\be702.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MISC. ELECTRICAL DETAILS SHEET A			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					365	(588,59) WRS-3	DuPAGE	466	281
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -						BE-702		CONTRACT NO. 62420	
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.		FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	



TEMPORARY LIGHT POLE DETAIL



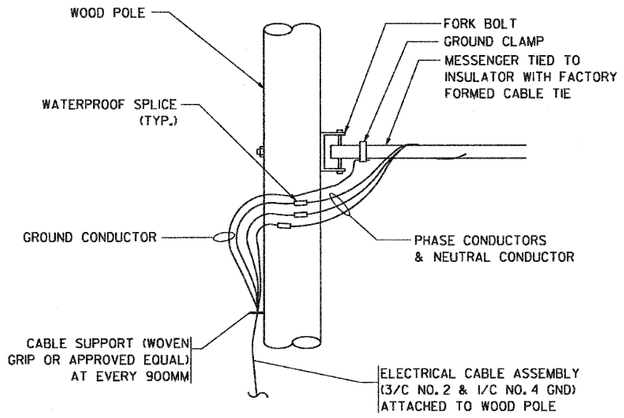
TEMPORARY LIGHT POLE ATTACHMENT DETAIL

NOTES:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED

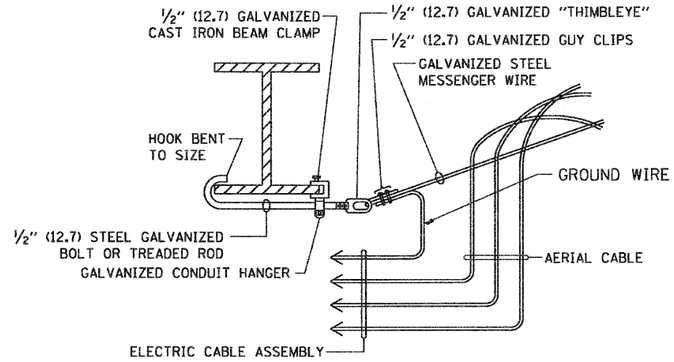
LT-17

FILE NAME = W:\diststd\22x34\be800.dgn	USER NAME = geglianobt	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY LIGHT POLE DETAILS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					365	(58&59) WRS-3	DuPAGE	466	282
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -					BE-800		CONTRACT NO. 62420		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



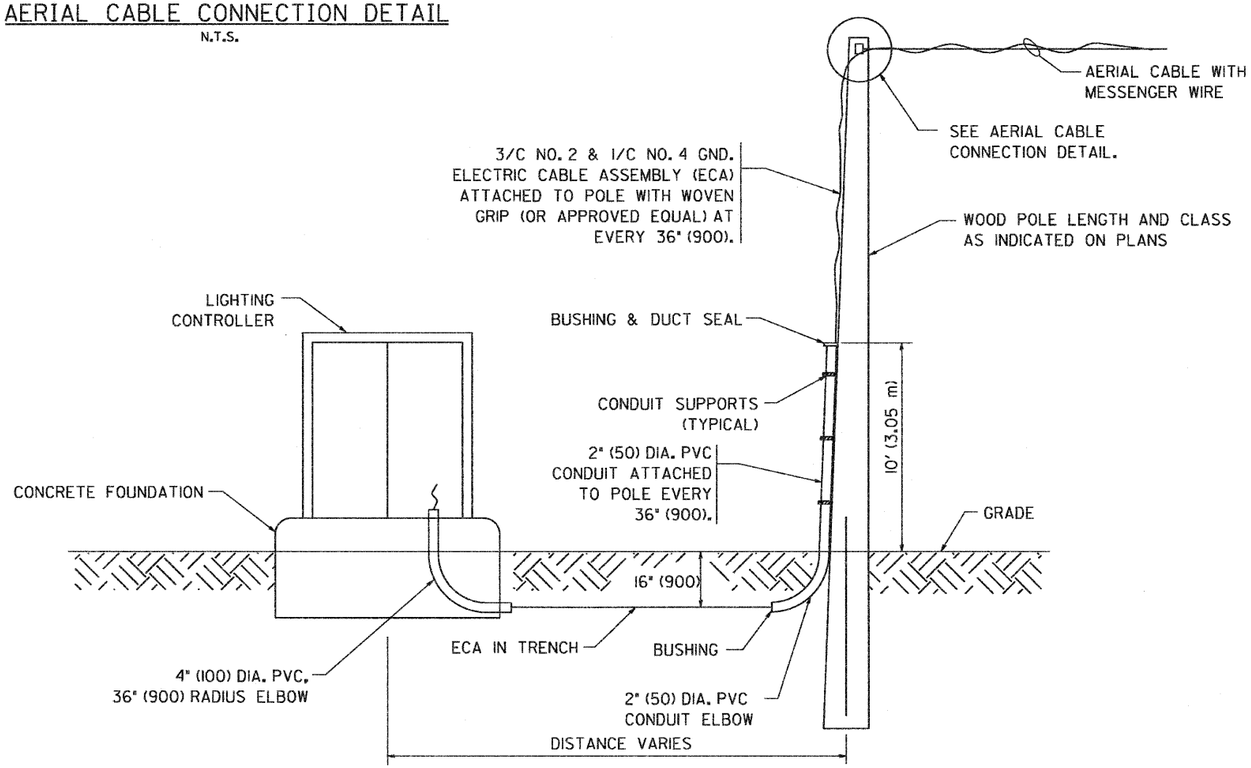
AERIAL CABLE CONNECTION DETAIL

N.T.S.



AERIAL CABLE ATTACHED TO STRUCTURE

NOT TO SCALE



WOOD POLE TO LIGHTING CONTROLLER WIRING CONNECTION DETAIL

N.T.S.

NOTES:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
2. SEE PROPOSED LIGHTING PLAN FOR CONDUIT, CABLE AND ROUTING.
3. THE CONTRACTOR SHALL PROVIDE INTERMEDIATE SUPPORTS TO MAINTAIN MINIMUM CLEARANCES. REFER TO AERIAL AERIAL CABLE ATTACHED TO STRUCTURE DETAIL.
4. COST OF SPLICES AND MOUNTING HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE FOR AERIAL CABLE.

LT-18

FILE NAME = W:\diststd\22x34\bs801.dgn	USER NAME = gaglenobt	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY AERIAL CABLE INSTALLATION	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			365	(58&59) WRS-3	DuPAGE	466	283
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -				BE-801	CONTRACT NO. 62420		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL SCHEDULE OF QUANTITIES

ITEM	UNIT	IL RTE 56 AT IL RTE 59	IL RTE 56 AT BATAVIA ROAD	IL RTE 56 AT WINFIELD ROAD	IL RTE 59 INTERCONNECT	IL RTE 56 INTERCONNECT	TOTAL
SIGN PANEL - TYPE 1	SQ FT	55	55	56.5			166.5
SIGN PANEL - TYPE 2	SQ FT	30	30	30			90
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	1063	580	1208	357	3111	6319
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	134	213	85			432
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	18	44	46			108
CONDUIT IN TRENCH, 3 1/2" DIA., GALVANIZED STEEL	FOOT		29	10			39
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	106	77	72			255
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	274	53	256		144	727
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	560	991	573			2124
CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT					224	224
HANDHOLE	EACH	4	6	3		1	14
HEAVY-DUTY HANDHOLE	EACH	6	2	6		5	19
DOUBLE HANDHOLE	EACH	2	4	3			9
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1255	922	1391	357	3111	7036
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH				1		1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH			1			1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1					1
FULL-ACTUATED CONTROLLER AND TYPE V CABINET	EACH		1				1
MASTER CONTROLLER	EACH					1	1
TRANSCEIVER - FIBER OPTIC	EACH	1	1	1			3
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	859	2713	2548			6120
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2037	6222	2908			11167
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	3241	6128	3215			12584
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2035		2030			4065
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	4772	2962	4551			12285
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	42	28	32			102
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH		2				2
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH		4				4
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH			1			1
STEEL MAST ARM ASSEMBLY AND POLE, 16 FT.	EACH	3		2			5
STEEL MAST ARM ASSEMBLY AND POLE, 18 FT.	EACH		1	1			2
STEEL MAST ARM ASSEMBLY AND POLE, 22 FT.	EACH		1				1
STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	1					1
STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH		1				1
STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.	EACH		2				2
STEEL MAST ARM ASSEMBLY AND POLE, 56 FT.	EACH		1				1
STEEL MAST ARM ASSEMBLY AND POLE, 58 FT.	EACH			2			2
STEEL MAST ARM ASSEMBLY AND POLE, 66 FT.	EACH			1			1
STEEL MAST ARM ASSEMBLY AND POLE, 74 FT.	EACH			1			1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT. (SPECIAL)	EACH	1					1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 54 FT. (SPECIAL)	EACH	2					2
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 55 FT. (SPECIAL)	EACH	1					1
CONCRETE FOUNDATION, TYPE A	FOOT		24	4			28
CONCRETE FOUNDATION, TYPE C	FOOT	4	4	4			12
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	40	33.5	30			103.5
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	58	26				84
CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER	FOOT		21	92			113
DRILL EXISTING HANDHOLE	EACH				1		1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	12	14	11			37
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH		6				6
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	8		7			15
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH		2				2
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH			1			1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2	6				8
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1	2	4			7
PEDESTRIAN SIGNAL HEAD, LED, 3-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH		2				2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	20	14	18			52
INDUCTIVE LOOP DETECTOR	EACH	14	10	15			39
LIGHT DETECTOR	EACH	4*	4*	2**			10
LIGHT DETECTOR AMPLIFIER	EACH	1*	1*	1**			3
PEDESTRIAN PUSH-BUTTON	EACH	4	24	13			41
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1	1	1			3
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH			2**			2
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH			1**			1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT				3500		3500
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	1	1			3
REMOVE EXISTING HANDHOLE	EACH	12	13	12			37
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9	8	9			26
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT				2284	4455	6739
PREFORMED DETECTOR LOOP	FOOT	866	875	978			2719
OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH					1	1
TEMPORARY TRAFFIC SIGNAL TIMINGS	EACH	1	1	1			3
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL I	EACH				1		1
SERVICE INSTALLATION, POLE MOUNT	EACH	1	1	1			3
UNINTERRUPTIBLE POWER SUPPLY	EACH	1	1	1			3
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT				2296	4478	6774
ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1C	FOOT	903	1460	986			3349
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	1144	1662	1116			3922

* DENOTES 100% OF COST TO CITY OF WARRENVILLE
** DENOTES 100% OF COST TO WARRENVILLE FIRE PROTECTION DISTRICT

TS-1

FILE NAME = TS-01.dgn
PLOT DATE = 8/13/2010

SPAAN Tech, Inc.
311 S. Wacker Drive, Suite 2400 phone: 312.277.8900
Chicago, Il 60606 fax: 312.277.8928
web: www.SpaanTech.com

DESIGNED	R.A.S.	REVISED	-
DRAWN	R.A.S.	REVISED	-
CHECKED	A.D.O.	REVISED	-
DATE	AUGUST 2010	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL SCHEDULE OF QUANTITIES
IL ROUTE 56 (BUTTERFIELD ROAD)
WEST OF IL ROUTE 59 TO EAST OF WINFIELD ROAD

SCALE: NONE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	284

CONTRACT NO. 62420

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

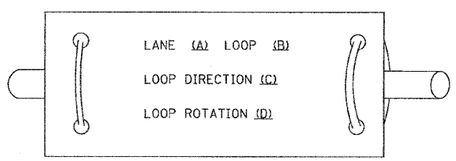
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

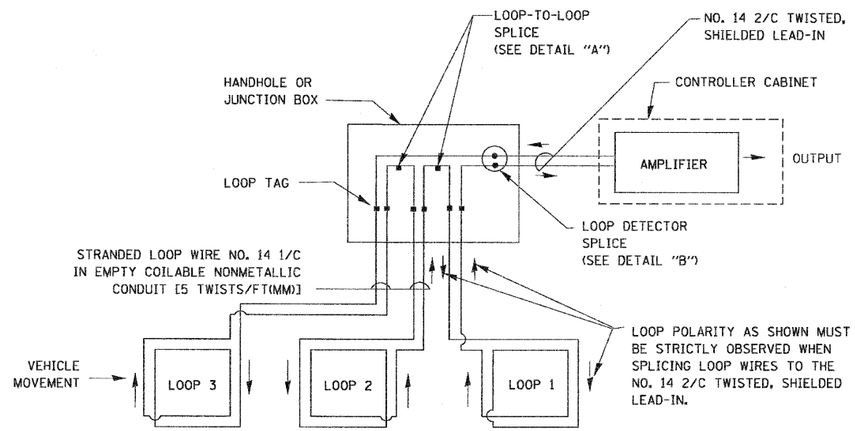


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

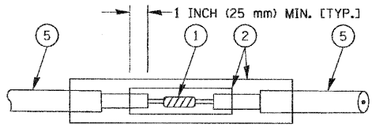
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

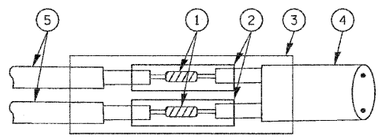


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

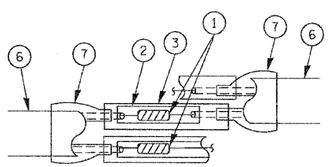


DETAIL "A"
LOOP-TO-LOOP SPLICE



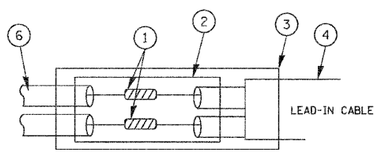
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE

PRE-FORMED LOOP



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

(1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.

(2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.

(3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

(6) PRE-FORMED LOOP

(7) XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

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		DRAWN - BCK	REVISED -
	PLOT SCALE = 20.0000 ' / IN.	CHECKED - DAD	REVISED -
	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

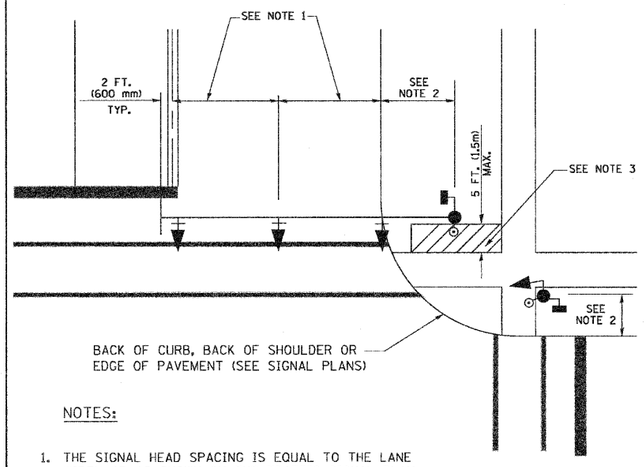
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. 1 OF 6 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	285
		CONTRACT NO. 62420		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

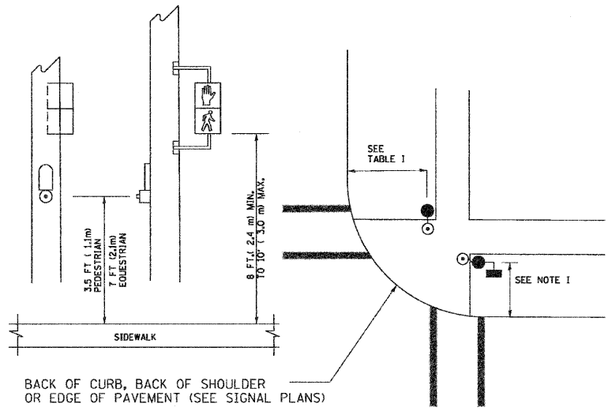
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

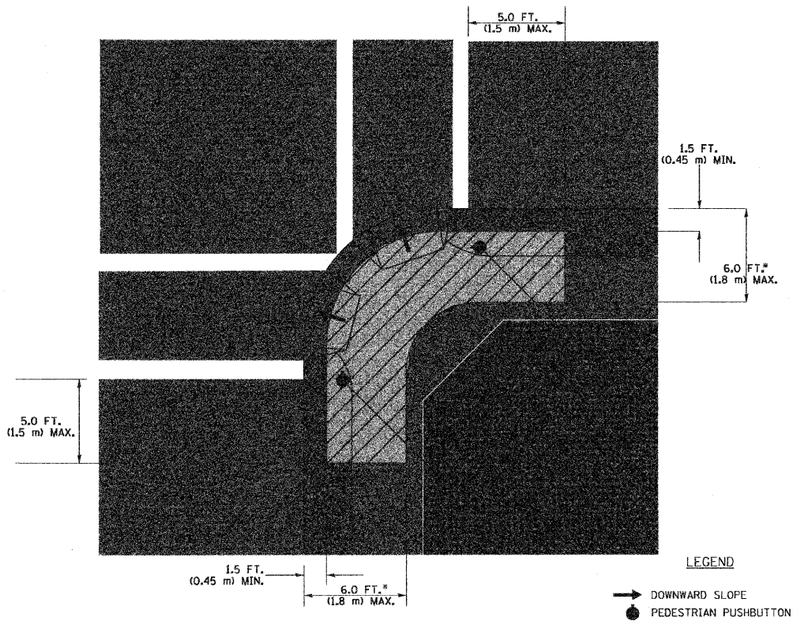
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

RECOMMENDED PUSHBUTTON LOCATIONS



* WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

** WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

TRAFFIC SIGNAL EQUIPMENT OFFSET

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

TS-3

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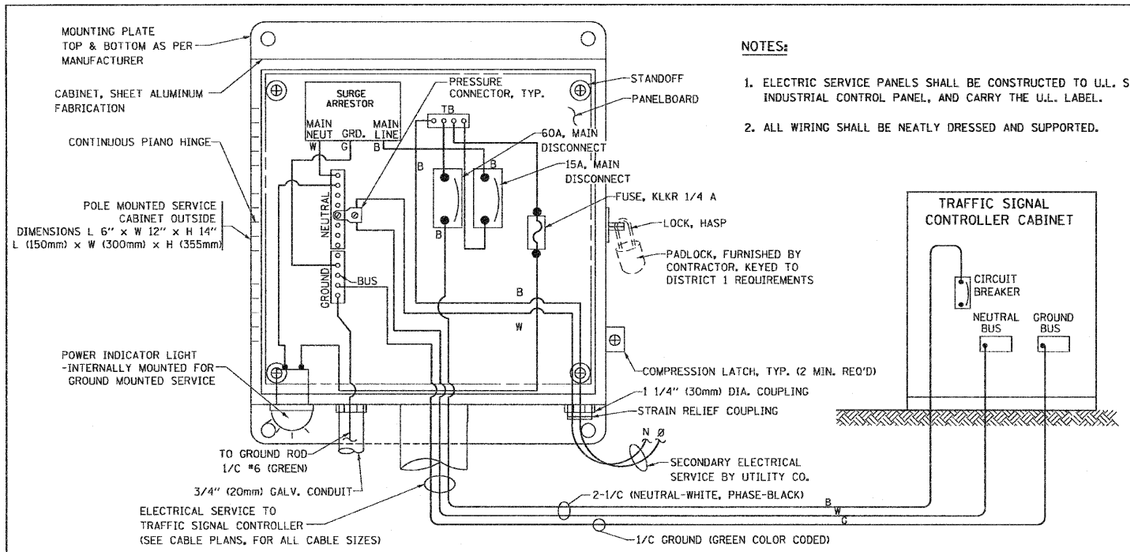
		DRAWN - BCK	REVISED -
	PLOT SCALE = 20.0000 ' / IN.	CHECKED - DAD	REVISED -
	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. 2 OF 6 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	286
		CONTRACT NO. 62420		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



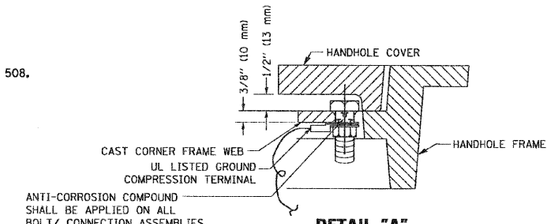
NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

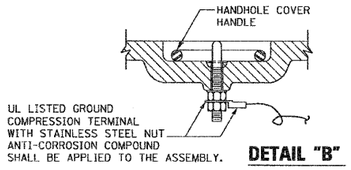
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)



DETAIL "A"

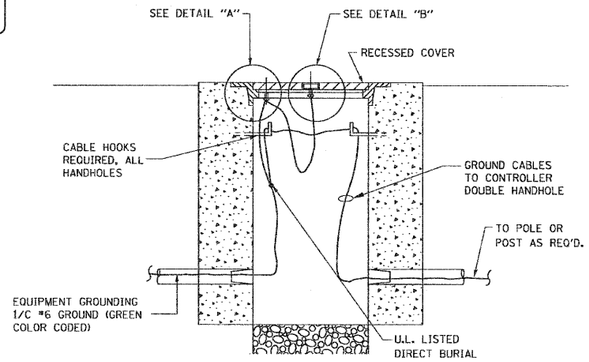


DETAIL "B"

NOTES:

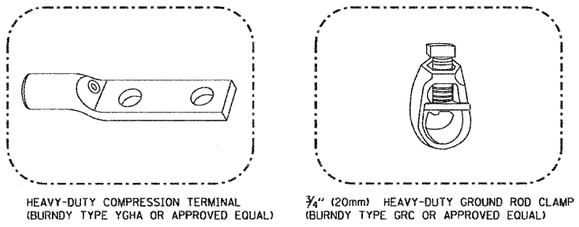
GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)

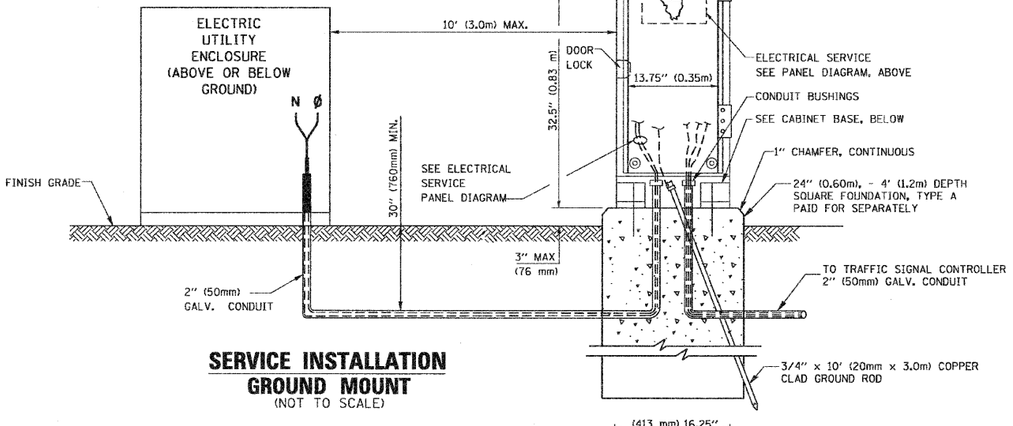


HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)

3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

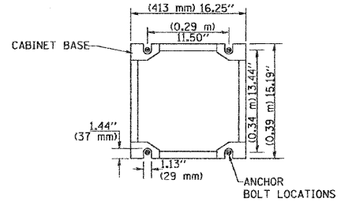
NOTES:

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES
  6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES
  13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
  5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



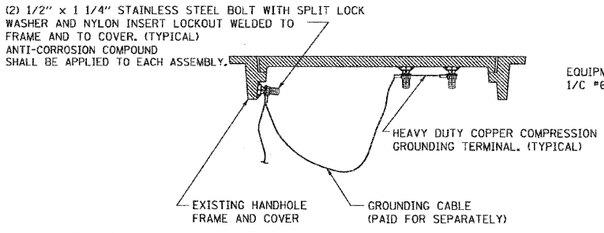
SERVICE INSTALLATION GROUND MOUNT

(NOT TO SCALE)



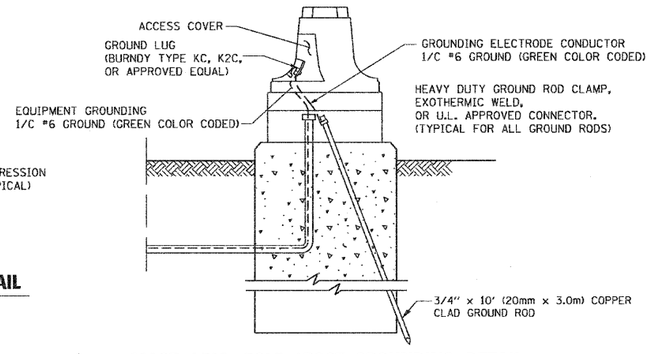
CABINET – BASE BOLT PATTERN

(NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

TS-4

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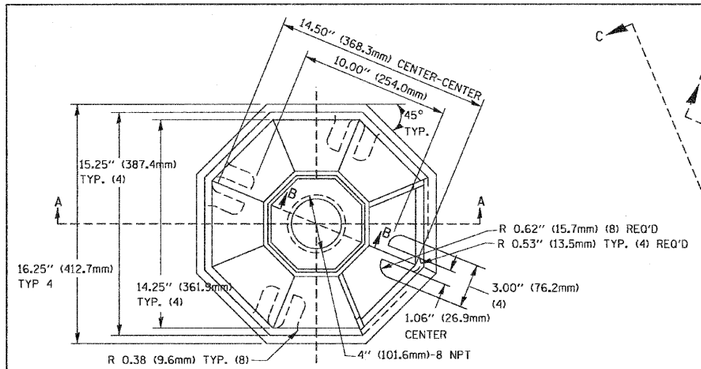
	PLOT SCALE = 20.0000 ' / IN.	CHECKED - DAD	REVISED -
	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

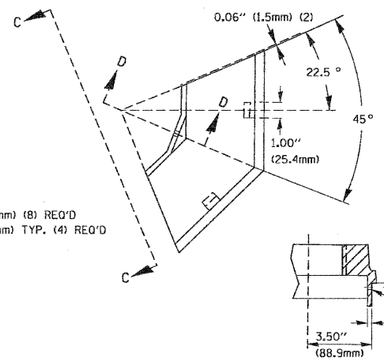
DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

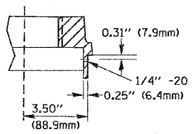
SCALE: | SHEET NO. 3 OF 6 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	287
		CONTRACT NO. 62420		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

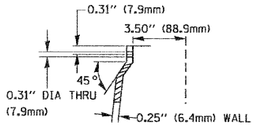


TOP VIEW

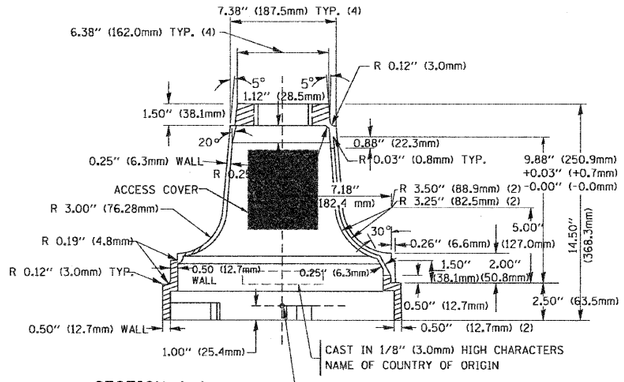




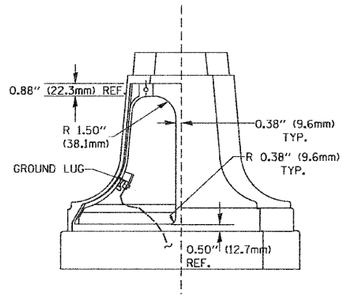
SECTION B-B



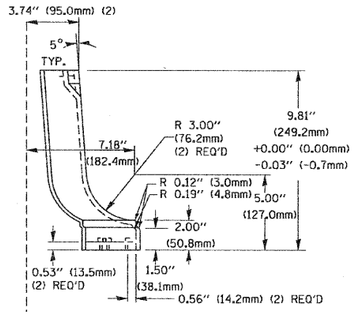
SECTION D-D



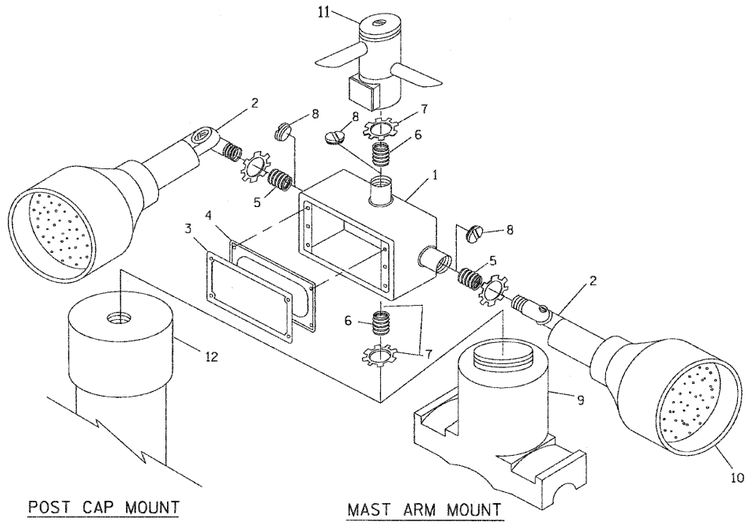
SECTION A-A



VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



POST CAP MOUNT

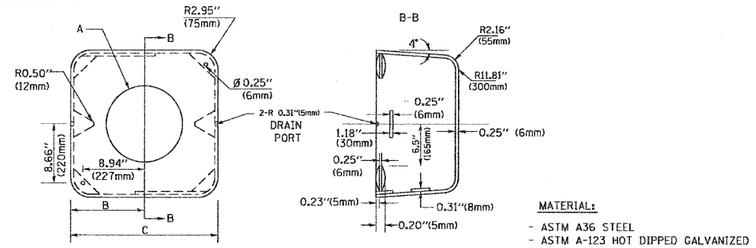
MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A ¾"(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



MATERIAL:
- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

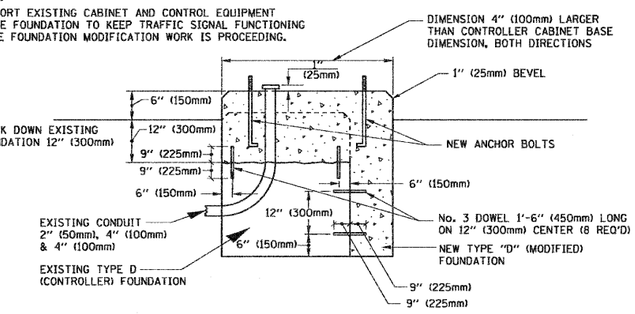
A	B	C	HEIGHT	WEIGHT
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

SHROUD

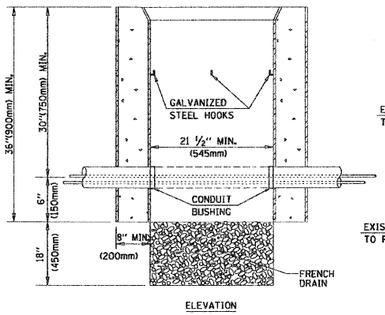
NOTES:

1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

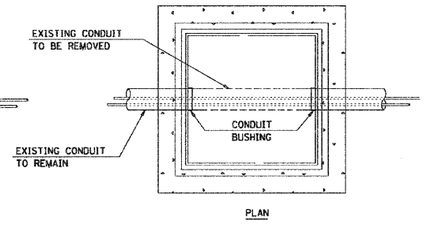
NOTE:
SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION



ELEVATION



PLAN

NOTES:

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

T5-5

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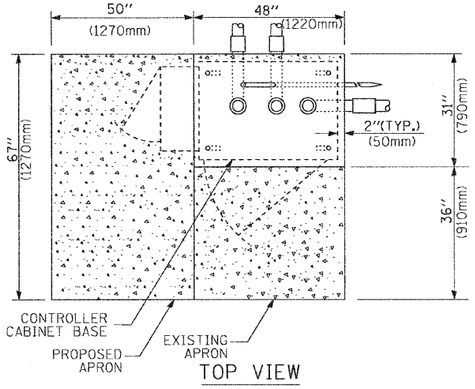
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

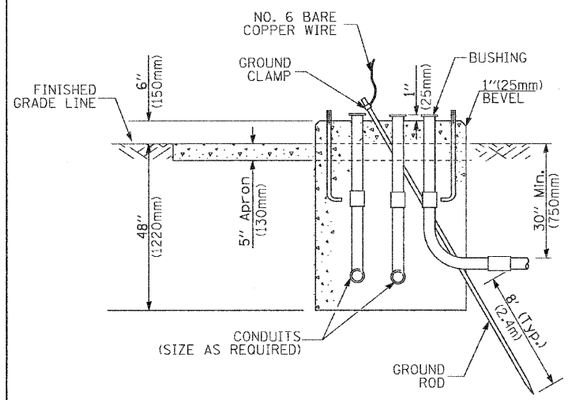
DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. 4 OF 6 SHEETS | STA. | TO STA.

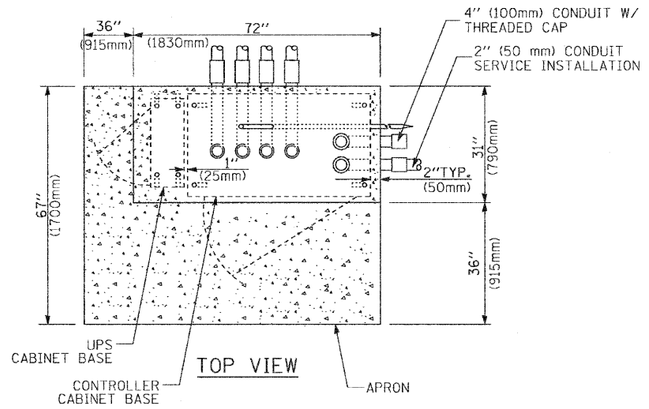
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	288
		CONTRACT NO. 62420		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



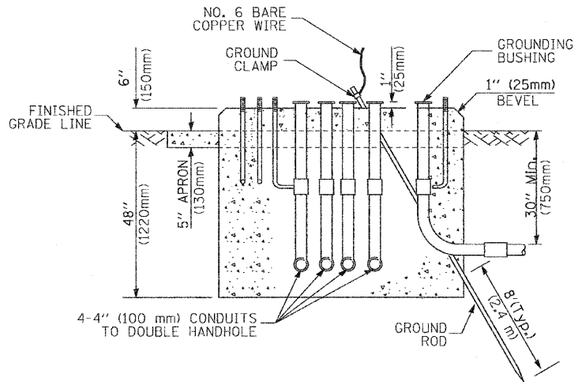
TOP VIEW



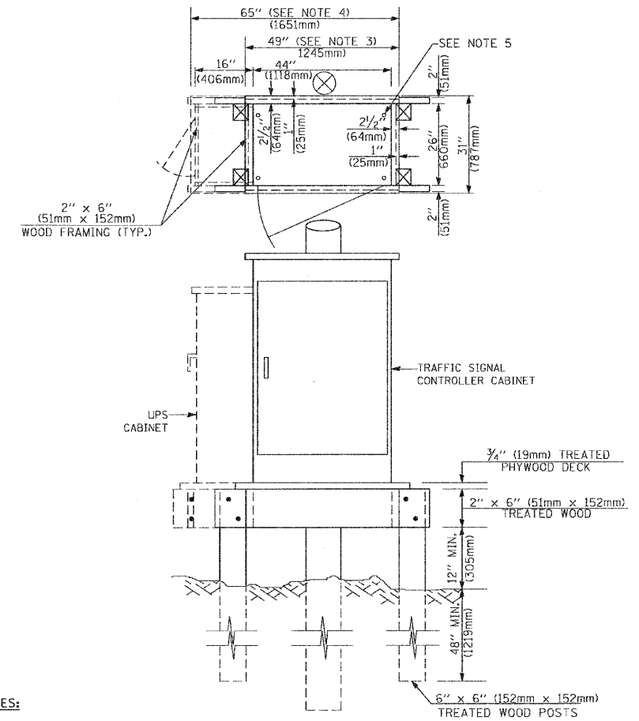
TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



TOP VIEW



TYPE C
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



NOTES:

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
4. For mast arm assemblies with dual arms refer to state standard 878001.

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE:	SHEET NO. 5 OF 6 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	289
		CONTRACT NO. 62420		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET	R		
RAILROAD CONTROL CABINET			
COMMUNICATIONS CABINET	R CC	ECC	CC
MASTER CONTROLLER		EMC	MC
MASTER MASTER CONTROLLER		EMMC	MMC
UNINTERRUPTIBLE POWER SUPPLY	R UPS	EUPS	UPS
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	R	P	P
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT	R T	P T	P T
STEEL MAST ARM ASSEMBLY AND POLE	R		
ALUMINUM MAST ARM ASSEMBLY AND POLE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA	R PTZ	PTZ	PTZ
SIGNAL POST	R		
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM	R		
GUY WIRE	R		
SIGNAL HEAD	R		
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)			2
SIGNAL HEAD WITH BACKPLATE	R		
SIGNAL HEAD OPTICALLY PROGRAMMED	R "P"	"P"	"P"
FLASHER INSTALLATION (S DENOTES SOLAR POWER)	R "F"	"F"	"F"
PEDESTRIAN SIGNAL HEAD	R		
PEDESTRIAN PUSHBUTTON DETECTOR	R		
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR	R APS	APS	APS
ILLUMINATED SIGN "NO LEFT TURN"	R		
ILLUMINATED SIGN "NO RIGHT TURN"	R		
DETECTOR LOOP, TYPE I			
PREFORMED DETECTOR LOOP		P	P
MICROWAVE VEHICLE SENSOR	R M	M	M
VIDEO DETECTION CAMERA	R V	V	V
VIDEO DETECTION ZONE			
PAN, TILT, ZOOM CAMERA	R PTZ	PTZ	PTZ
WIRELESS DETECTOR SENSOR	R W	W	W
WIRELESS ACCESS POINT	R		

ITEM	REMOVAL	EXISTING	PROPOSED
EMERGENCY VEHICLE LIGHT DETECTOR	R		
CONFIRMATION BEACON	R		
HANDHOLE	R		
HEAVY DUTY HANDHOLE	R H	H	H
DOUBLE HANDHOLE	R		
JUNCTION BOX	R		
GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)			
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE	R		
COMMON TRENCH			CT
COILABLE NONMETALLIC CONDUIT (EMPTY)			CNC
SYSTEM ITEM		S	S
INTERSECTION ITEM		I	IP
REMOVE ITEM	R		
RELOCATE ITEM	RL		
ABANDON ITEM	A		
12" (300mm) TRAFFIC SIGNAL SECTION		R	R
12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE		R Y G	
SIGNAL FACE		R Y G Y G	R Y G Y G
SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD		R Y G Y G "P"	R Y G Y G "P"
12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL		DW W	
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED		DW W	
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID			
PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER		C D	C D
RADIO INTERCONNECT	R		
RADIO REPEATER	R ERR	ERR	RR
DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED		5	5
GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)		1	1

ITEM	REMOVAL	EXISTING	PROPOSED
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE		J	J
COAXIAL CABLE		C	C
VENDOR CABLE FOR CAMERA		V	V
COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED		6	6
FIBER OPTIC CABLE NO. 62.5/125, MM12F		12F	
FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F		24F	24F
FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE		C	C
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED	RCF		
STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED	RMF		
SIGNAL POST AND FOUNDATION TO BE REMOVED	RMF		
INTERSECTION & SAMPLING (SYSTEM) DETECTOR		IS	IS
SAMPLING (SYSTEM) DETECTOR		S	S
EXISTING INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		P	
EXISTING PREFORMED INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PP	
PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PIS	PIS
PREFORMED SAMPLING (SYSTEM) DETECTOR		PS	PS

RAILROAD SYMBOLS

	EXISTING	PROPOSED
RAILROAD CONTROL CABINET		
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

TS-7

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	PLOT SCALE = 20.0000 ' / IN.	CHECKED - DAD	REVISED -
	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 6 OF 6 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(5859) WRS-3	DuPAGE	468	290
		CONTRACT NO. 62420		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

RED LIGHT RUNNING SYSTEM NOTES:

1. THE EXISTING RED LIGHT RUNNING SYSTEM OWNED BY THE CITY OF WARRENVILLE WILL BE DEACTIVATED AND REMOVED DURING CONSTRUCTION.
2. THE CONTRACTOR SHALL NOTIFY MR. RON MENSER AT (630) 393-5745 NOT LESS THAN 72 HOURS IN ADVANCE OF CONSTRUCTION TO ALLOW THE CITY OF WARRENVILLE TO REMOVE THE EXISTING RED LIGHT RUNNING EQUIPMENT. ALL COSTS ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF THE RED LIGHT RUNNING EQUIPMENT ARE THE RESPONSIBILITY OF THE CITY OF WARRENVILLE.

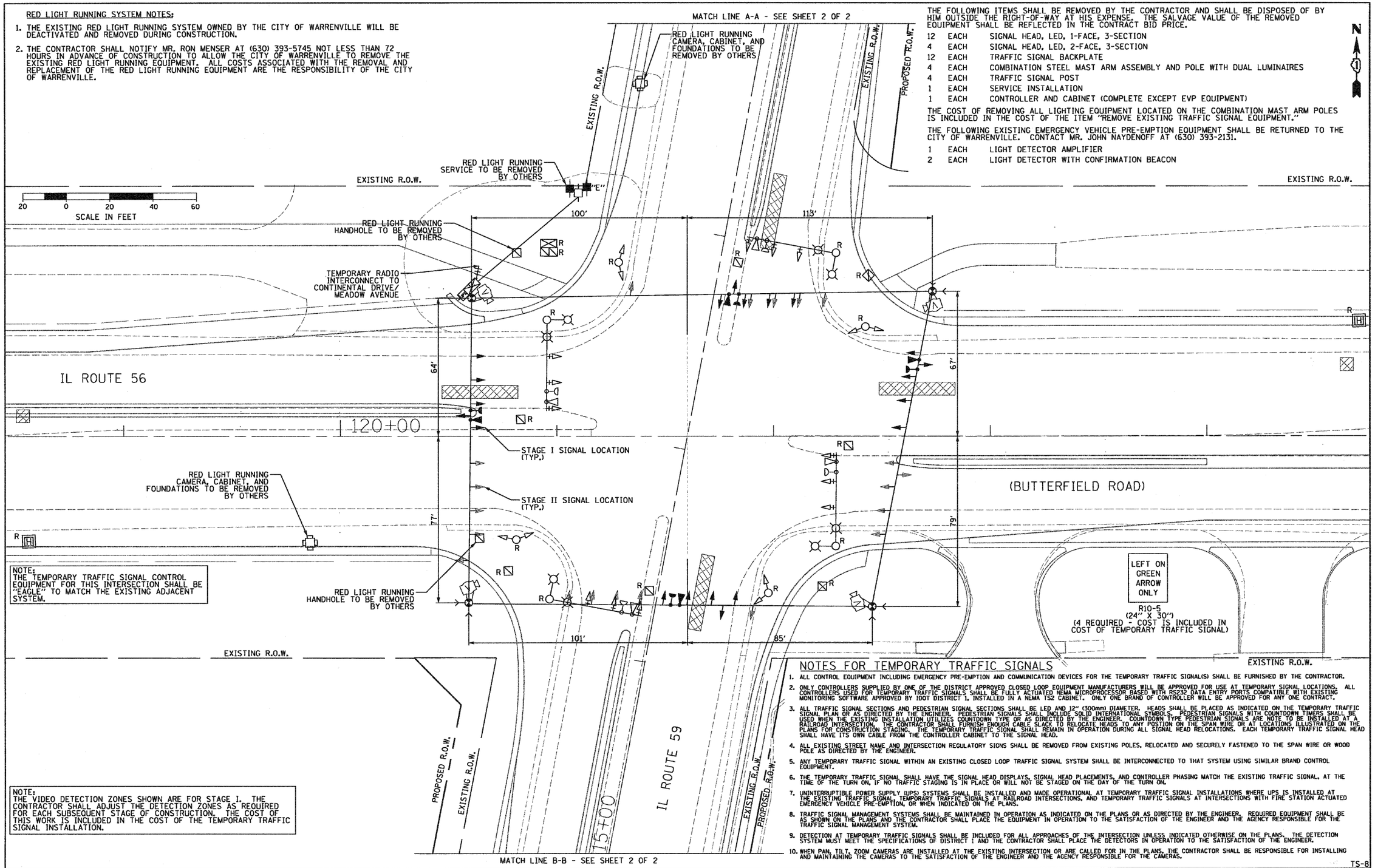
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY HIM OUTSIDE THE RIGHT-OF-WAY AT HIS EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

12	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION
4	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION
12	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	COMBINATION STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL LUMINAIRES
4	EACH	TRAFFIC SIGNAL POST
1	EACH	SERVICE INSTALLATION
1	EACH	CONTROLLER AND CABINET (COMPLETE EXCEPT EVP EQUIPMENT)

THE COST OF REMOVING ALL LIGHTING EQUIPMENT LOCATED ON THE COMBINATION MAST ARM POLES IS INCLUDED IN THE COST OF THE ITEM "REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT."

THE FOLLOWING EXISTING EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT SHALL BE RETURNED TO THE CITY OF WARRENVILLE. CONTACT MR. JOHN NAYDENOFF AT (630) 393-2131.

1	EACH	LIGHT DETECTOR AMPLIFIER
2	EACH	LIGHT DETECTOR WITH CONFIRMATION BEACON



NOTE:
THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

NOTE:
THE VIDEO DETECTION ZONES SHOWN ARE FOR STAGE I. THE CONTRACTOR SHALL ADJUST THE DETECTION ZONES AS REQUIRED FOR EACH SUBSEQUENT STAGE OF CONSTRUCTION. THE COST OF THIS WORK IS INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE APPROVED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOTE TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY TRAFFIC SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS, AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS IN OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.

TS-8

FILE NAME = TS-86.dgn
PLOT DATE = 8/12/2010

SPAAN Tech, Inc.
311 S. Wacker Drive, Suite 2400 phone: 312.277.8500 fax: 312.277.8508 web: www.SpaanTech.com
Chicago, Il 60606

DESIGNED	R.A.S.	REVISED	-
DRAWN	R.A.S.	REVISED	-
CHECKED	A.D.O.	REVISED	-
DATE	AUGUST 2010	REVISED	-

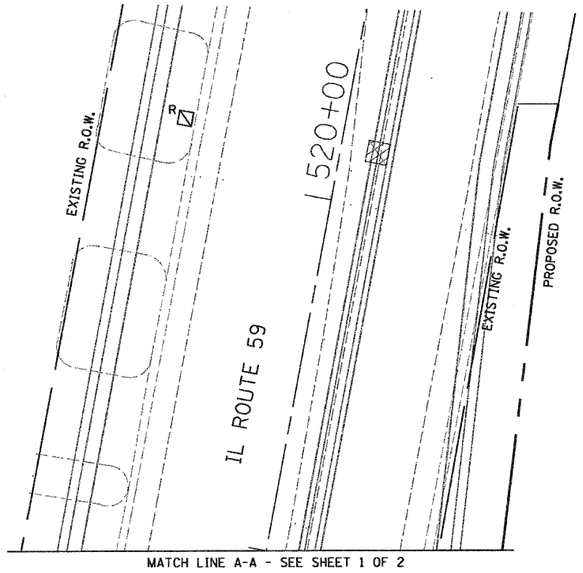
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGES I & II) AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
IL ROUTE 56 (BUTTERFIELD ROAD) AND IL ROUTE 59 - SHEET 1 OF 2

SCALE: 1" = 20' | SHEET NO. OF SHEETS | STA. 118+45 TO STA. 124+75

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	29
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

20 0 20 40 60
SCALE IN FEET

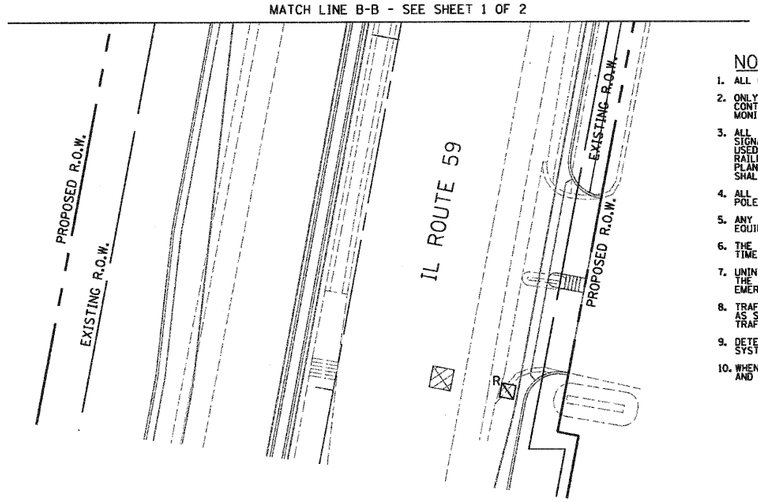


MATCH LINE A-A - SEE SHEET 1 OF 2

N

NOTE:
THE VIDEO DETECTION ZONES SHOWN ARE FOR STAGE I. THE CONTRACTOR SHALL ADJUST THE DETECTION ZONES AS REQUIRED FOR EACH SUBSEQUENT STAGE OF CONSTRUCTION. THE COST OF THIS WORK IS INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

MATCH LINE B-B - SEE SHEET 1 OF 2



NOTES FOR TEMPORARY TRAFFIC SIGNALS

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NOTE:
THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FILE NAME = TS-07.dgn
PLOT DATE = 8/12/2010

SPAAN Tech, Inc.
311 S. Wacker Drive, Suite 2400 phone: 312.277.8800 fax: 312.277.8808 web: www.SpaanTech.com
Chicago, Il 60606

DESIGNED -	R.A.S.	REVISED -	
DRAWN -	R.A.S.	REVISED -	
CHECKED -	A.D.O.	REVISED -	
DATE -	AUGUST 2010	REVISED -	

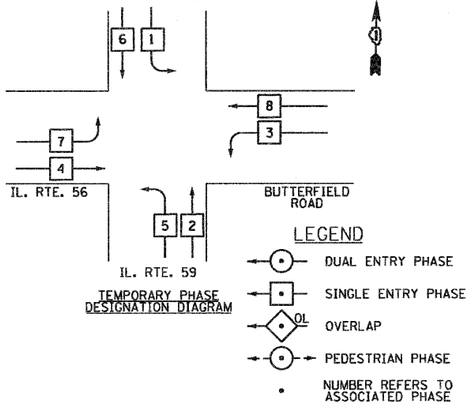
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGES I & II) AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
IL ROUTE 56 (BUTTERFIELD ROAD) AND IL ROUTE 59 - SHEET 2 OF 2

SCALE: 1" = 20' | SHEET NO. OF SHEETS | STA. TO STA.

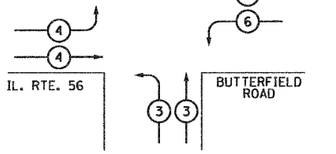
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	292
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTROLLER SEQUENCE

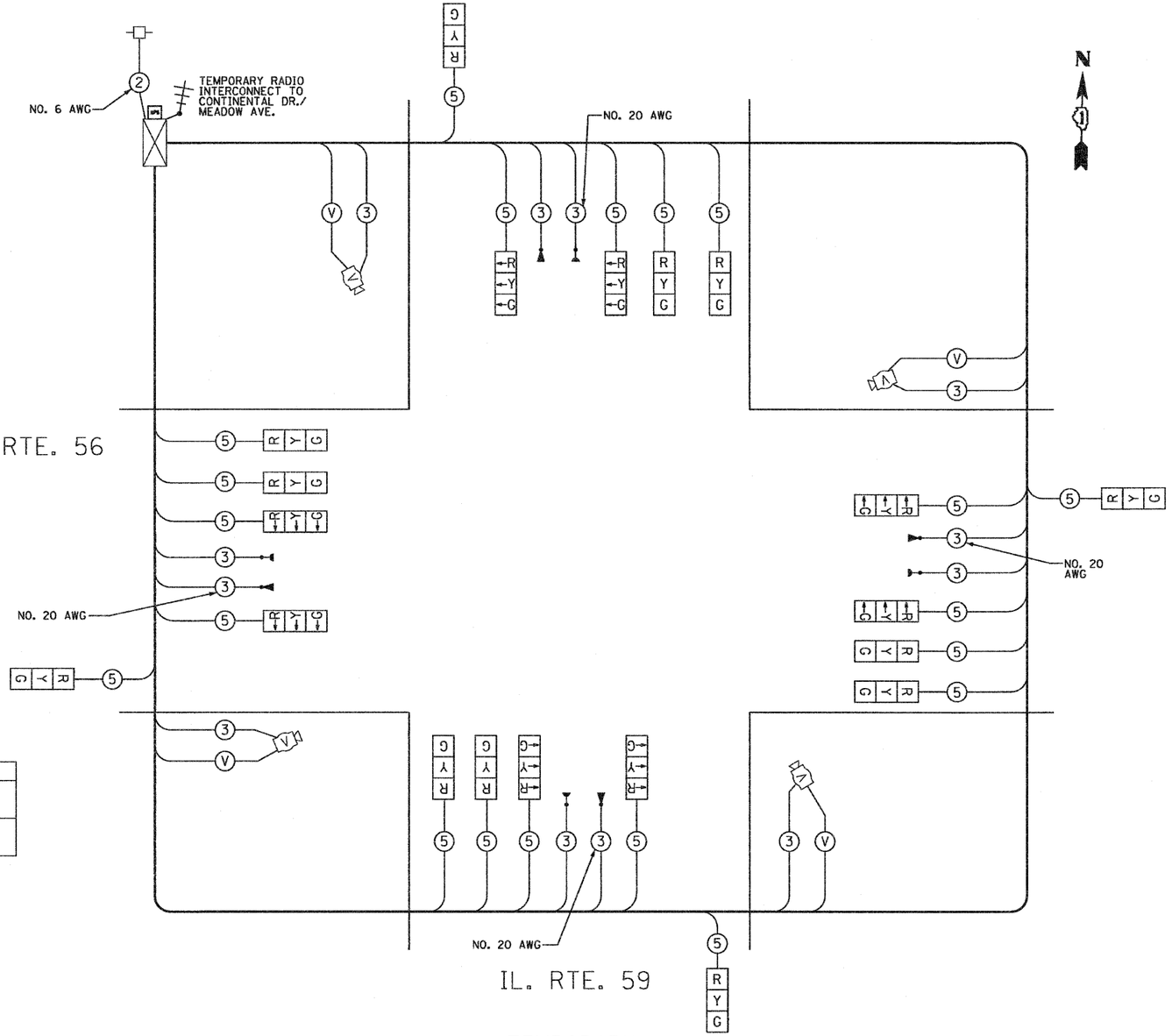


TEMPORARY PHASE DESIGNATION DIAGRAM

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				



TEMPORARY CABLE PLAN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATION	
SIGNAL (RED)	20	135	17	0.50	170
(YELLOW)	20	135	25	0.25	125
(GREEN)	20	135	15	0.25	75
ARROW	-	135	12	0.10	-
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	100	100		100
ILLUM. SIGN	-	252		0.05	-
VIDEO SYSTEM	1	150		1.00	150
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	620.0

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS / DISTRICT 1
201 WEST CENTER COURT / SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY: CONTACT: MS. MIKKI WILLIAMS
PHONE: (630) 691-4721
COMPANY: COMED

NOTE:
THE TEMPORARY TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE "EAGLE" BRAND TO MATCH THE EXISTING SYSTEM.

TS-10

FILE NAME = TS-08.dgn
PLOT DATE = 8/9/2010

SPAAN Tech, Inc.
311 S. Wacker Drive, Suite 2400 phone: 312.277.8800 fax: 312.277.8808 web: www.SpaanTech.com
Chicago, Il 60606

DESIGNED - R.A.S.		REVISED -
DRAWN - R.A.S.		REVISED -
CHECKED - A.D.O.		REVISED -
DATE - AUGUST 2010		REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM (STAGES I & II)
IL ROUTE 56 (BUTTERFIELD ROAD) AND IL ROUTE 59

SCALE: NONE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	293
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SIGN (A)

LEFT ON GREEN ARROW ONLY

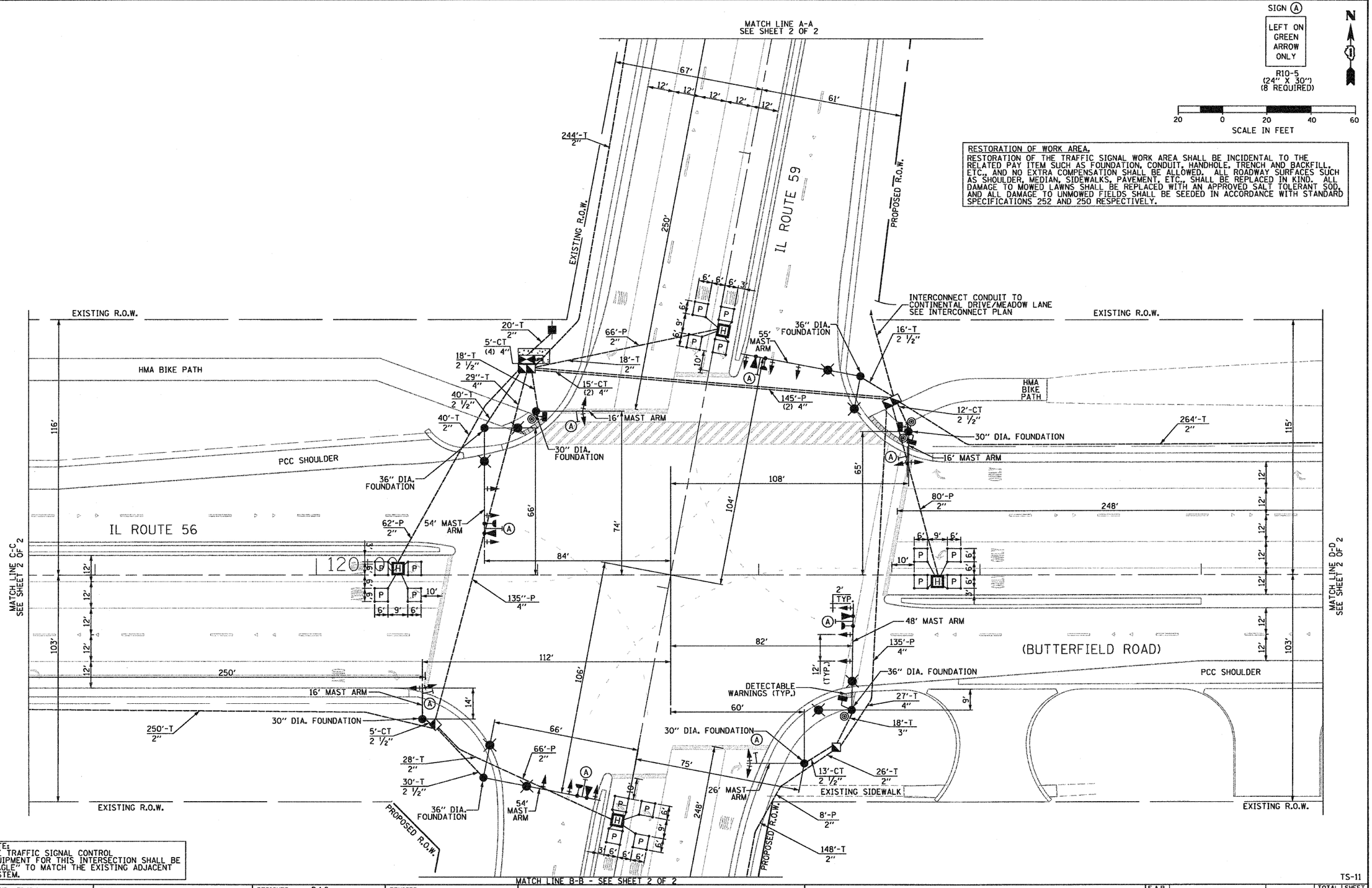
R10-5
(24" X 30")
(8 REQUIRED)

N

20 0 20 40 60
SCALE IN FEET

MATCH LINE A-A
SEE SHEET 2 OF 2

RESTORATION OF WORK AREA.
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC., SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SALT TOLERANT SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



NOTE:
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

TS-11

FILE NAME = TS-12.dgn
PLOT DATE = 8/13/2010

SPAAN Tech, inc.
311 S. Wacker Drive, Suite 2400 Chicago, Il 60606
phone: 312.277.8300 fax: 312.277.8308 web: www.SpaanTech.com

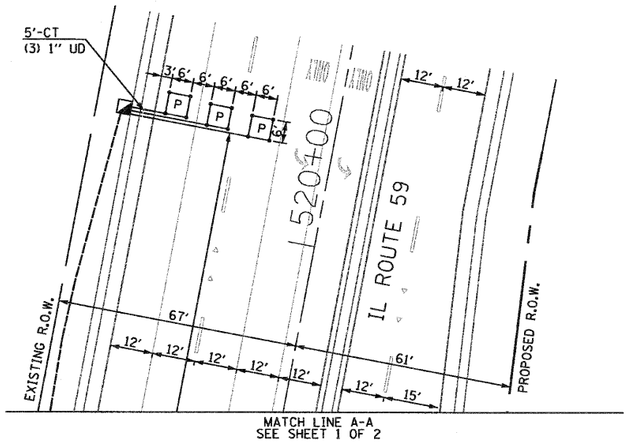
DESIGNED - R.A.S.	REVISED -	
DRAWN - R.A.S.	REVISED -	
CHECKED - A.D.O.	REVISED -	
DATE - AUGUST 2010	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

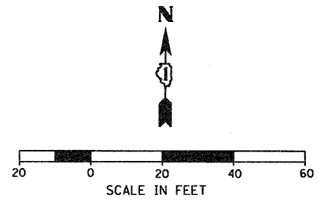
TRAFFIC SIGNAL INSTALLATION PLAN
IL ROUTE 56 (BUTTERFIELD ROAD) AND IL ROUTE 59 - SHEET 1 OF 2

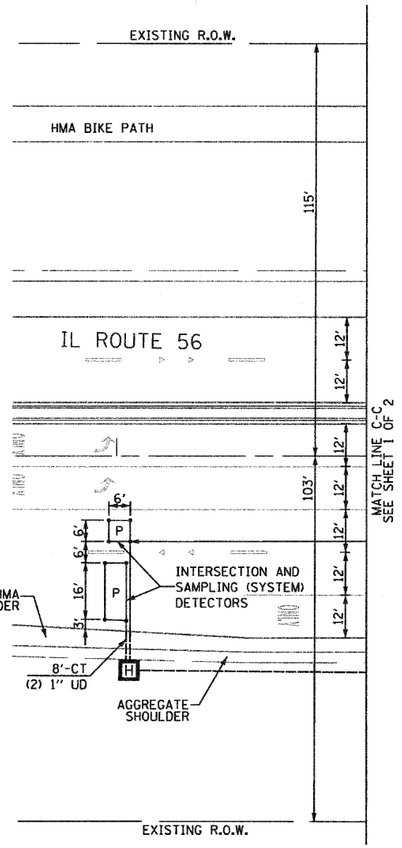
SCALE: 1" = 20' | SHEET NO. OF SHEETS | STA. 118+70 | TO STA. 124+55

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	294
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

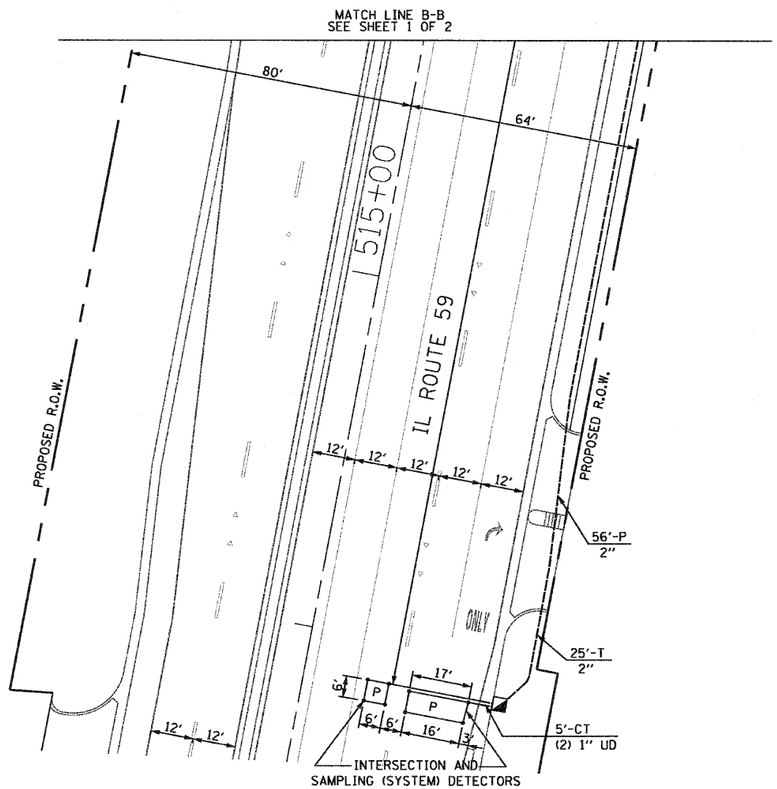


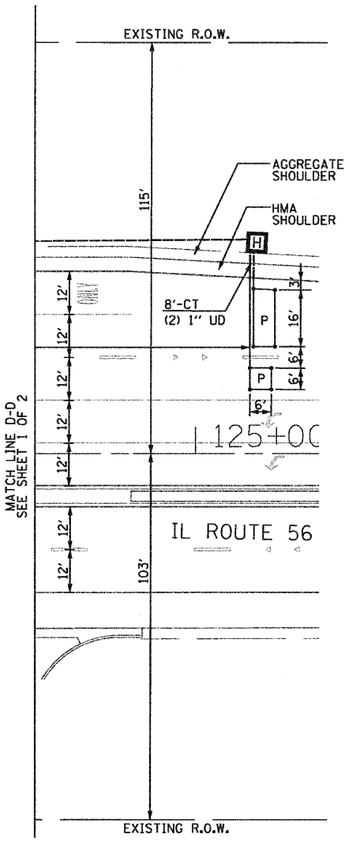
MATCH LINE A-A
SEE SHEET 1 OF 2





MATCH LINE B-B
SEE SHEET 1 OF 2





RESTORATION OF WORK AREA,
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC., SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SALT TOLERANT SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

TS-12

FILE NAME = TS-13.dgn
PLOT DATE = 8/12/2010

SPAAN Tech, Inc.
311 S. Wacker Drive, Suite 2400 phone: 312.277.8800
Chicago, Il 60606 fax: 312.277.8808
web: www.SpaanTech.com

DESIGNED - R.A.S.	REVISED -		
DRAWN - R.A.S.	REVISED -		
CHECKED - A.D.O.	REVISED -		
DATE - AUGUST 2010	REVISED -		

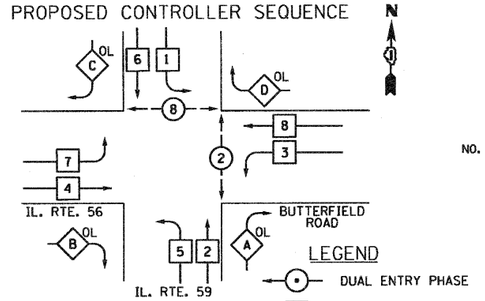
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN
IL ROUTE 56 (BUTTERFIELD ROAD) AND IL ROUTE 59 - SHEET 2 OF 2

SCALE: 1" = 20' | SHEET NO. OF SHEETS | STA. 117+70 | TO STA. 125+35

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	295
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

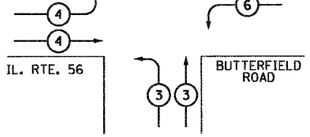
PROPOSED CONTROLLER SEQUENCE



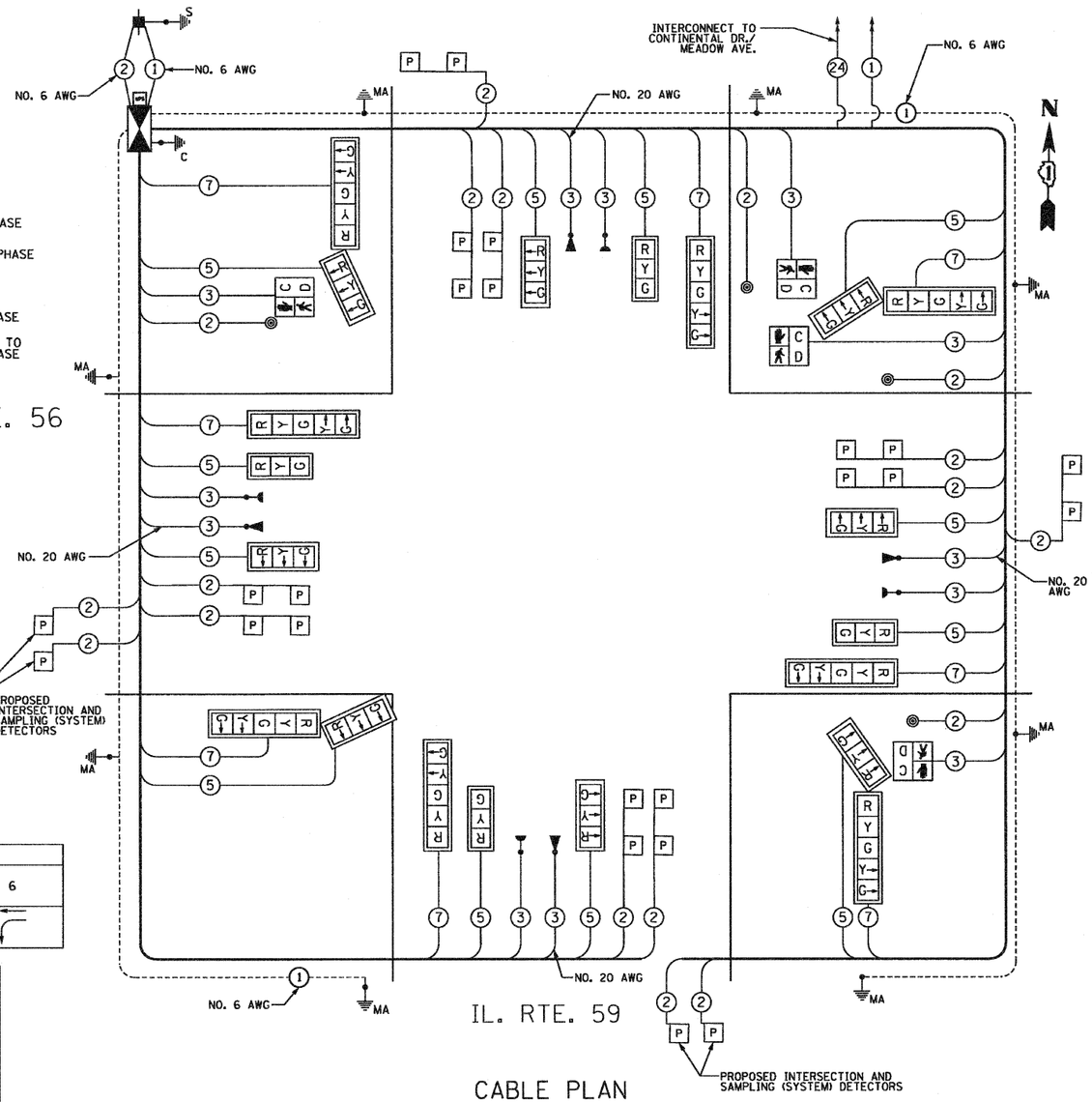
PHASE DESIGNATION DIAGRAM

OVERLAP LETTER	=	PERMISSIVE PHASE	+	PROTECTED PHASE
A	=	2	+	3
B	=	4	+	5
C	=	6	+	7
D	=	8	+	1

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				



IL. RTE. 56

IL. RTE. 59

CABLE PLAN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATION	
SIGNAL (RED)	20	135	17	0.50	170
(YELLOW)	20	135	25	0.25	125
(GREEN)	20	135	15	0.25	75
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	589.2

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS / DISTRICT 1
201 WEST CENTER COURT / SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY: CONTACT: MS. MIKKI WILLIAMS
PHONE: (630) 691-4721
COMPANY: COMED

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
SIGN PANEL - TYPE 1	SQ FT	55
SIGN PANEL - TYPE 2	SQ FT	30
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	1063
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	134
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	18
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	106
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	274
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	560
HANDHOLE	EACH	4
HEAVY-DUTY HANDHOLE	EACH	6
DOUBLE HANDHOLE	EACH	2
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1255
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	859
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2037
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	3241
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2035
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	4772
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	42
STEEL MAST ARM ASSEMBLY AND POLE, 16 FT.	EACH	3
STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 54 FT. (SPECIAL)	EACH	2
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 55 FT. (SPECIAL)	EACH	1
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	40
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	58
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	12
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	8
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	20
INDUCTIVE LOOP DETECTOR	EACH	14
LIGHT DETECTOR	EACH	4*
LIGHT DETECTOR AMPLIFIER	EACH	1*
PEDESTRIAN PUSH-BUTTON	EACH	4
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	12
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
PREFORMED DETECTOR LOOP	FOOT	866
TEMPORARY TRAFFIC SIGNAL TIMINGS	EACH	1
SERVICE INSTALLATION, POLE MOUNT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1C	FOOT	903
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	1144

* DENOTES 100% OF COST TO CITY OF WARRENVILLE

NOTE:
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS INTERSECTION SHALL BE "EAGLE" BRAND TO MATCH THE EXISTING SYSTEM.

TS-13

FILE NAME = TS-14.dgn
PLOT DATE = 8/12/2010

SPAAN Tech, Inc.
311 S. Wacker Drive, Suite 2400 Chicago, Il 60606 phone: 312.277.8300 fax: 312.277.1808 web: www.SpaanTech.com

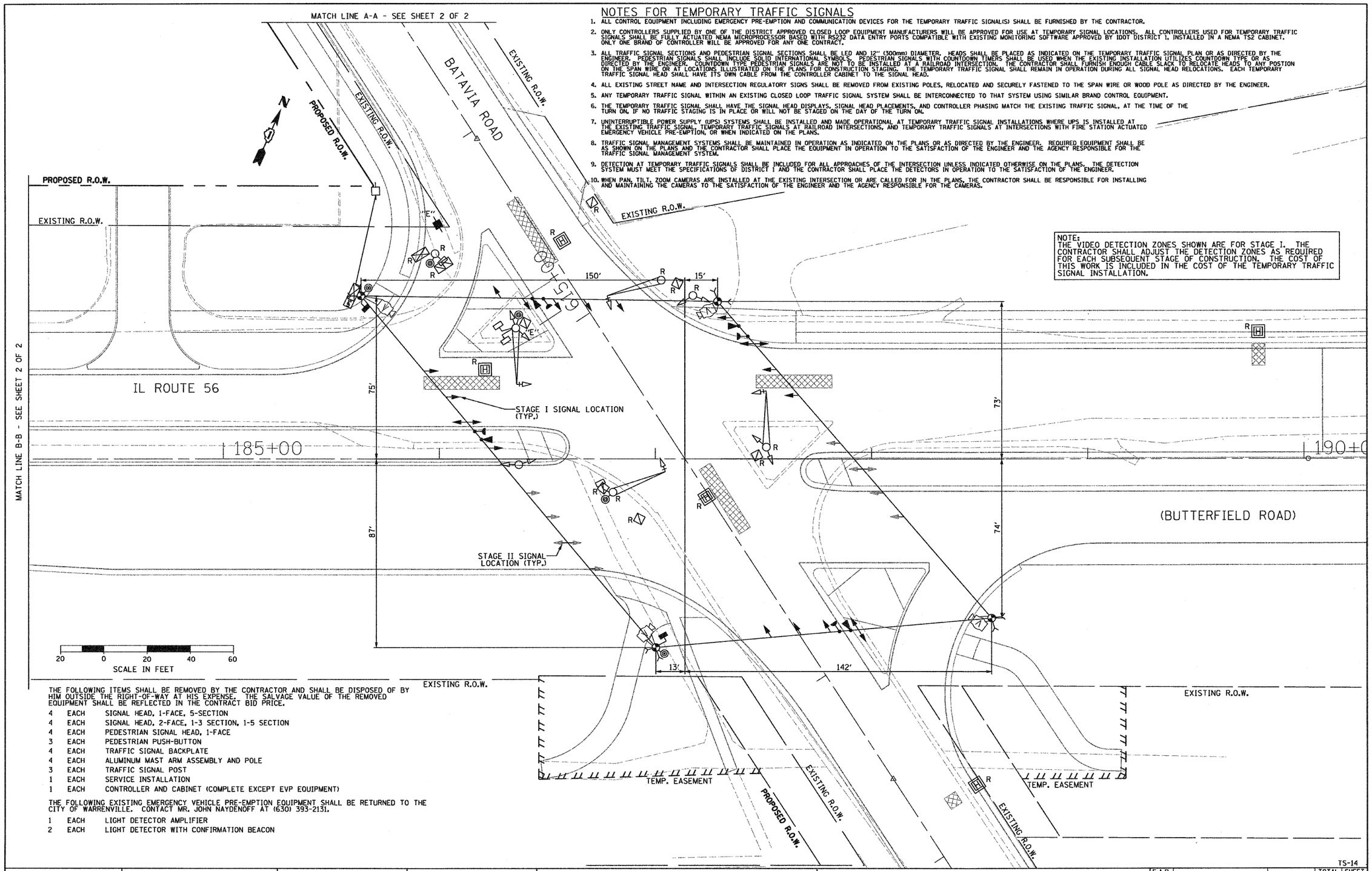
DESIGNED - R.A.S.	REVISED -	
DRAWN - D.L.	REVISED -	
CHECKED - A.D.O.	REVISED -	
DATE - AUGUST 2010	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, AND PHASE DESIGNATION DIAGRAM
IL ROUTE 56 (BUTTERFIELD ROAD) AND IL ROUTE 59

SCALE: NONE | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	296
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE APPROVED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSTION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY TRAFFIC SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS, AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS IN OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.

NOTE:
THE VIDEO DETECTION ZONES SHOWN ARE FOR STAGE I. THE CONTRACTOR SHALL ADJUST THE DETECTION ZONES AS REQUIRED FOR EACH SUBSEQUENT STAGE OF CONSTRUCTION. THE COST OF THIS WORK IS INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY HIM OUTSIDE THE RIGHT-OF-WAY AT HIS EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION
4	EACH	SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION
4	EACH	PEDESTRIAN SIGNAL HEAD, 1-FACE
3	EACH	PEDESTRIAN PUSH-BUTTON
4	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	ALUMINUM MAST ARM ASSEMBLY AND POLE
3	EACH	TRAFFIC SIGNAL POST
1	EACH	SERVICE INSTALLATION
1	EACH	CONTROLLER AND CABINET (COMPLETE EXCEPT EVP EQUIPMENT)

THE FOLLOWING EXISTING EMERGENCY VEHICLE PRE-EMPTION EQUIPMENT SHALL BE RETURNED TO THE CITY OF WARRENVILLE. CONTACT MR. JOHN NAYDENOFF AT (630) 393-2131.

1	EACH	LIGHT DETECTOR AMPLIFIER
2	EACH	LIGHT DETECTOR WITH CONFIRMATION BEACON

TS-14

FILE NAME = TS-15.dgn
PLOT DATE = 8/12/2010

SPAAN Tech, Inc.
311 S. Wacker Drive, Suite 2400 phone: 312.277.8300 fax: 312.277.8305
Chicago, IL 60606 web: www.SpaanTech.com

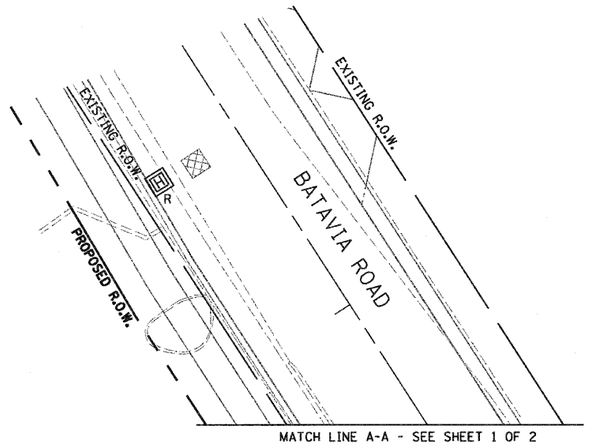
DESIGNED	R.A.S.	REVISED	-
DRAWN	R.A.S.	REVISED	-
CHECKED	A.D.O.	REVISED	-
DATE	AUGUST 2010	REVISED	-

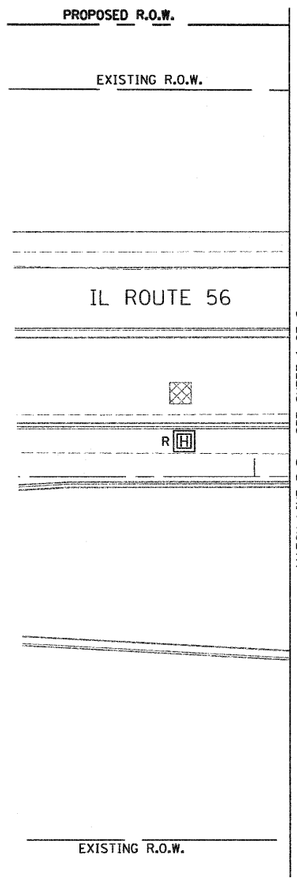
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

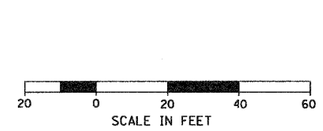
TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGES I & II) AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
IL ROUTE 56 (BUTTERFIELD ROAD) AND BATAVIA ROAD - SHEET 1 OF 2

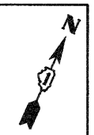
SCALE: 1" = 20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	297
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		









NOTE:
THE VIDEO DETECTION ZONES SHOWN ARE FOR STAGE I. THE CONTRACTOR SHALL ADJUST THE DETECTION ZONES AS REQUIRED FOR EACH SUBSEQUENT STAGE OF CONSTRUCTION. THE COST OF THIS WORK IS INCLUDED IN THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

NOTES FOR TEMPORARY TRAFFIC SIGNALS

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TS-15

FILE NAME = TS-16.dgn
PLOT DATE = 8/12/2010

SPAAN Tech, Inc.
311 S. Wacker Drive, Suite 2400 phone: 312.377.8800 fax: 312.377.8808
Chicago, Il 60606 web: www.SpaanTech.com

DESIGNED	R.A.S	REVISED	-
DRAWN	R.A.S	REVISED	-
CHECKED	A.D.O.	REVISED	-
DATE	AUGUST 2010	REVISED	-

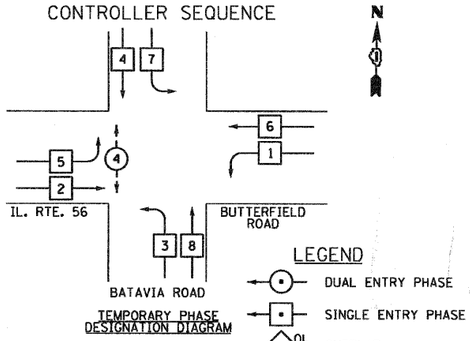
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION (STAGES I & II) AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
IL ROUTE 56 (BUTTERFIELD ROAD) AND BATAVIA ROAD - SHEET 2 OF 2

SCALE: 1" = 20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	298
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

LEGEND

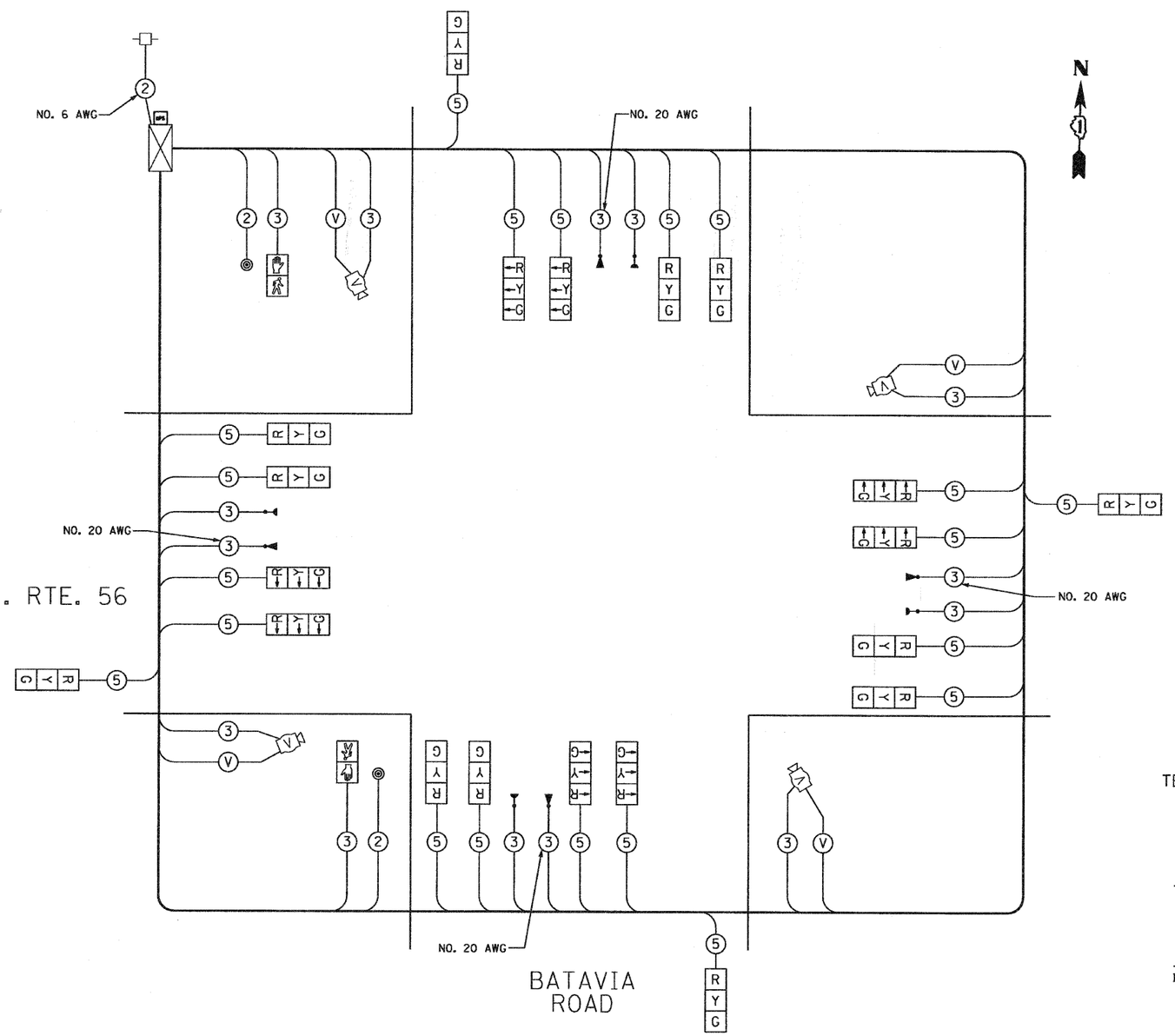
- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OL — OVERLAP
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE

NOTES:

PHASES 1, 3, AND 8 SHALL BE DEACTIVATED DURING STAGE I OF BATAVIA ROAD CONSTRUCTION.

PHASES 4, 5, AND 7 SHALL BE DEACTIVATED DURING STAGE II OF BATAVIA ROAD CONSTRUCTION.

THE SIGNAL SECTIONS CORRESPONDING TO ANY DEACTIVATED PHASE SHALL BE BAGGED AND DEACTIVATED WHILE THE PHASE IS DEACTIVATED.



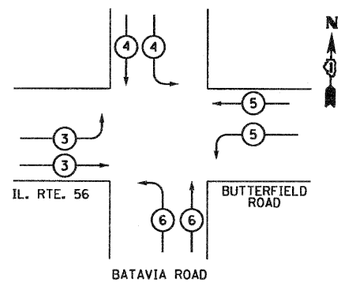
TEMPORARY CABLE PLAN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND.	WATTAGE LED	x % OPERATION	
SIGNAL (RED)	20	135	17	0.50	170
(YELLOW)	20	135	25	0.25	125
(GREEN)	20	135	15	0.25	75
ARROW	-	135	12	0.10	-
PED. SIGNAL	2	90	25	1.00	50
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	-	252		0.05	-
VIDEO SYSTEM	1	150			150
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	670.0

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS / DISTRICT 1
201 WEST CENTER COURT / SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY: CONTACT: MS. MIKKI WILLIAMS
PHONE: (630) 691-4721
COMPANY: COMED

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				

TS-16

FILE NAME = TS-17.dgn
PLOT DATE = 8/12/2010

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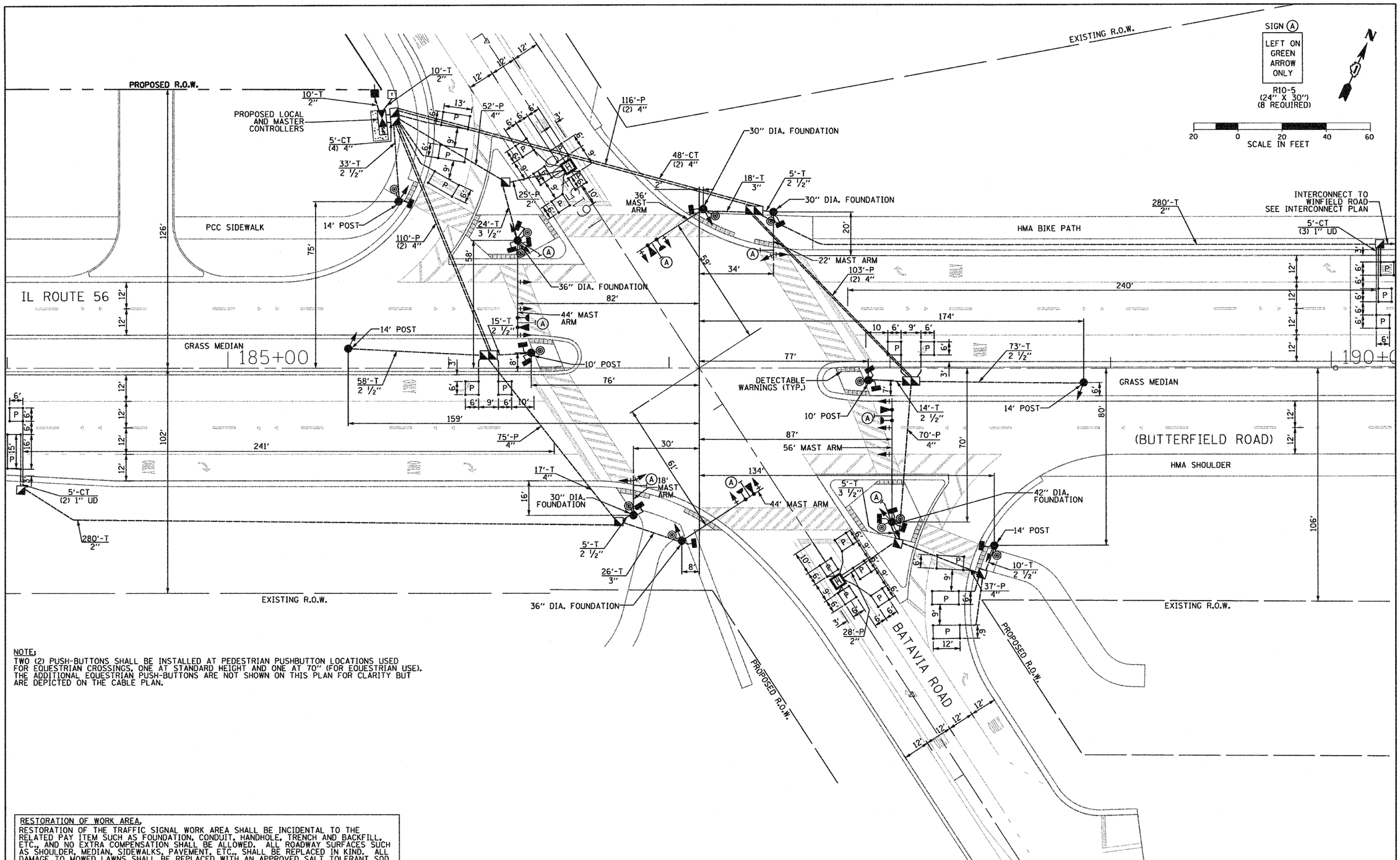
DESIGNED	R.A.S.	REVISED -
DRAWN	R.A.S.	REVISED -
CHECKED	A.D.O.	REVISED -
DATE	AUGUST 2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM (STAGES I & II)
IL ROUTE 56 (BUTTERFIELD ROAD) AND BATAVIA ROAD

SCALE: NONE | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	299
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTE:
TWO (2) PUSH-BUTTONS SHALL BE INSTALLED AT PEDESTRIAN PUSHBUTTON LOCATIONS USED FOR EQUESTRIAN CROSSINGS, ONE AT STANDARD HEIGHT AND ONE AT 70" (FOR EQUESTRIAN USE). THE ADDITIONAL EQUESTRIAN PUSH-BUTTONS ARE NOT SHOWN ON THIS PLAN FOR CLARITY BUT ARE DEPICTED ON THE CABLE PLAN.

RESTORATION OF WORK AREA.
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC., SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SALT TOLERANT SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

TS-17

FILE NAME = TS-20.dgn
PLOT DATE = 8/13/2010

SPAAN Tech, Inc.
311 S. Wacker Drive, Suite 2400 phone: 312.277.4800
Chicago, IL 60606 fax: 312.277.8808
web: www.SpaanTech.com

DESIGNED - R.A.S.	REVISED -		
DRAWN - R.A.S.	REVISED -		
CHECKED - A.D.O.	REVISED -		
DATE - AUGUST 2010	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN
IL ROUTE 56 (BUTTERFIELD ROAD) AND BATAVIA ROAD

SCALE: 1" = 20' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE	466	300
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		