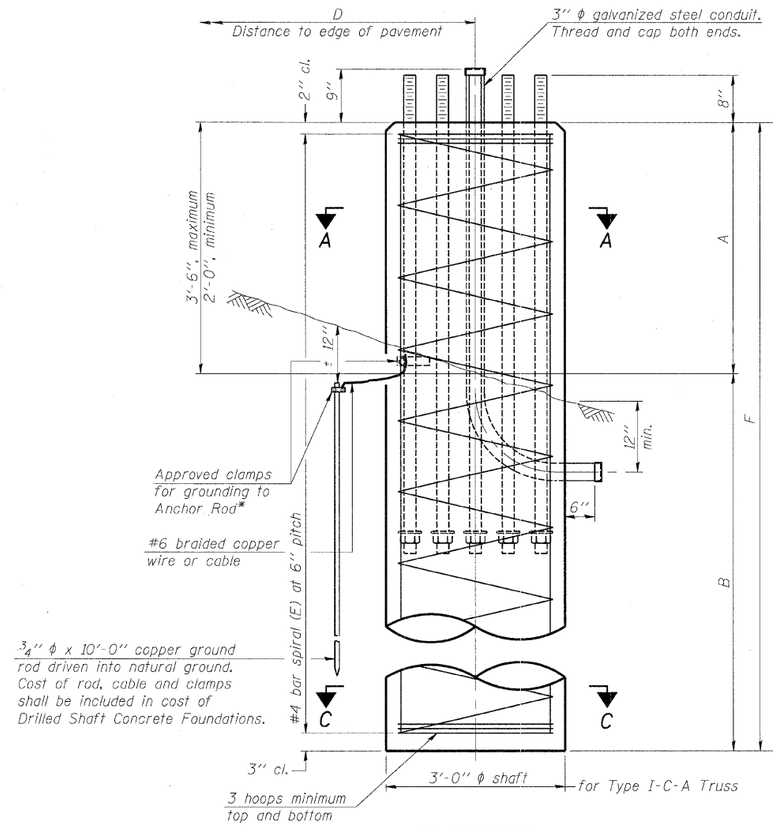
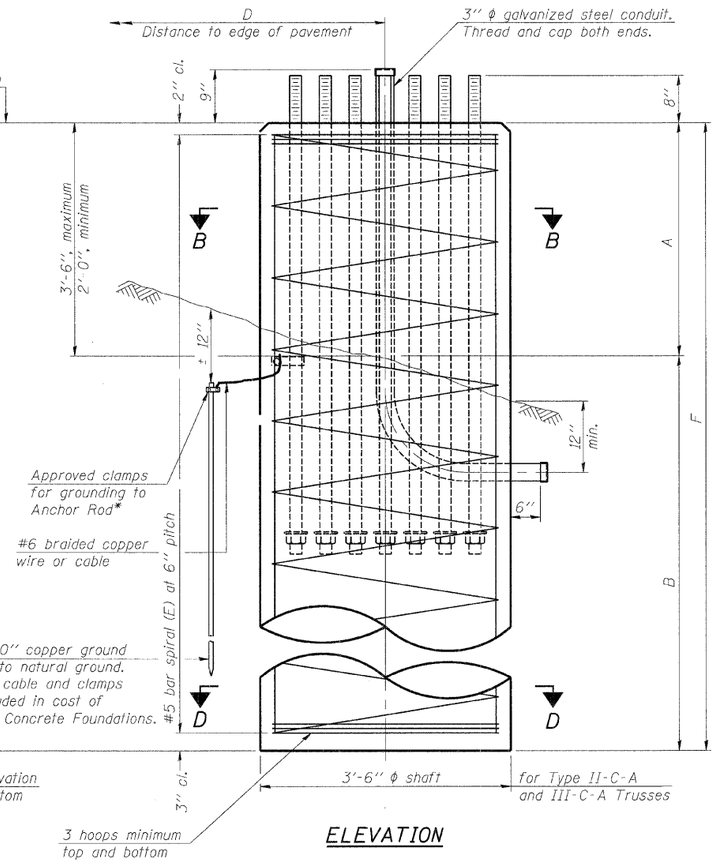
* Grind anchor rod to bright finish at ground clamp location before installing clamp.



ELEVATION



ELEVATION

NOTES:

The foundation dimensions shown in the Foundation Design Table are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown in the Foundation Data Table will be the result of site specific designs.

If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in "Drilled Shaft Concrete Foundation".

FOUNDATION DATA TABLE

Structure Number	Station	Truss Type	Shaft Diameter	Elevation Top	Elevation Bottom	Qu	A	B	F	Class SI Concrete Cubic Yards
1C099I057L335.4	1366+16.50	II-C-A	3'-6"	782.23	762.23		3'-0"	17'-0"	20'-0"	14.3
1C099I057L336.0	1393+40	II-C-A	3'-6"	781.09	762.09		3'-0"	17'-0"	20'-0"	14.3
1C099I057L336.5	1419+80	I-C-A	3'-0"	772.08	753.08		3'-0"	16'-0"	19'-0"	9.9

FOUNDATION DESIGN TABLE

Truss Type	Post Base Sheet	Maximum CantileverLength (ft)	Maximum Total Sign Area (sq ft)	Shaft Diameter (in)	"B" Depth (ft)	Anchor Rods No.	Anchor Rods Diameter (in)	Anchor Rod Circle Diameter (in)
I-C-A	OSC-A-4	25	170	3.0	16.0	8	2	22
II-C-A	OSC-A-5	30	170	3.5	17.0	12	2	30
II-C-A	OSC-A-5	30	340	3.5	21.5	12	2	30
III-C-A	OSC-A-5	35	170	3.5	19.0	12	2	30
III-C-A	OSC-A-5	35	250	3.5	22.5	12	2	30
III-C-A	OSC-A-5	35	400	3.5	26.5	12	2	30
III-C-A	OSC-A-5	40	400	3.5	32.0	12	2	30

NUMBER	REVISION	DATE

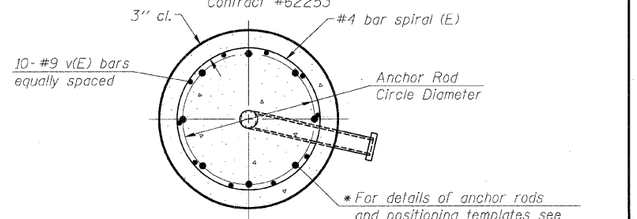
OSC-A-9 6/01/2007

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	101
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

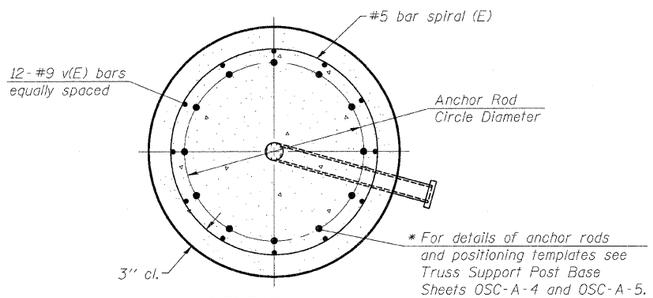
SHEET NO. 10
11 SHEETS

Contract #62253



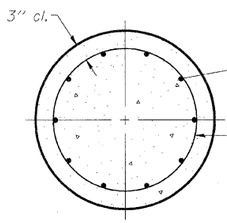
* For details of anchor rods and positioning templates see Truss Support Post Base Sheets OSC-A-4 and OSC-A-5.

SECTION A-A
3'-0" ϕ shaft

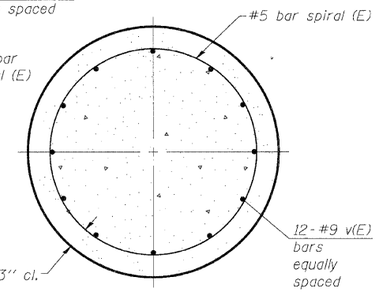


* For details of anchor rods and positioning templates see Truss Support Post Base Sheets OSC-A-4 and OSC-A-5.

SECTION B-B
3'-6" ϕ shaft



SECTION C-C
3'-0" ϕ shaft



SECTION D-D
3'-6" ϕ shaft

CANTILEVER SIGN STRUCTURES
DRILLED SHAFT
ALUMINUM TRUSS & STEEL POST

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57

F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SLD	PROJECT NO:	102230
DRAWN BY:	SLD/AJP	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	TMW		

DRAWING NUMBER
OSC-9

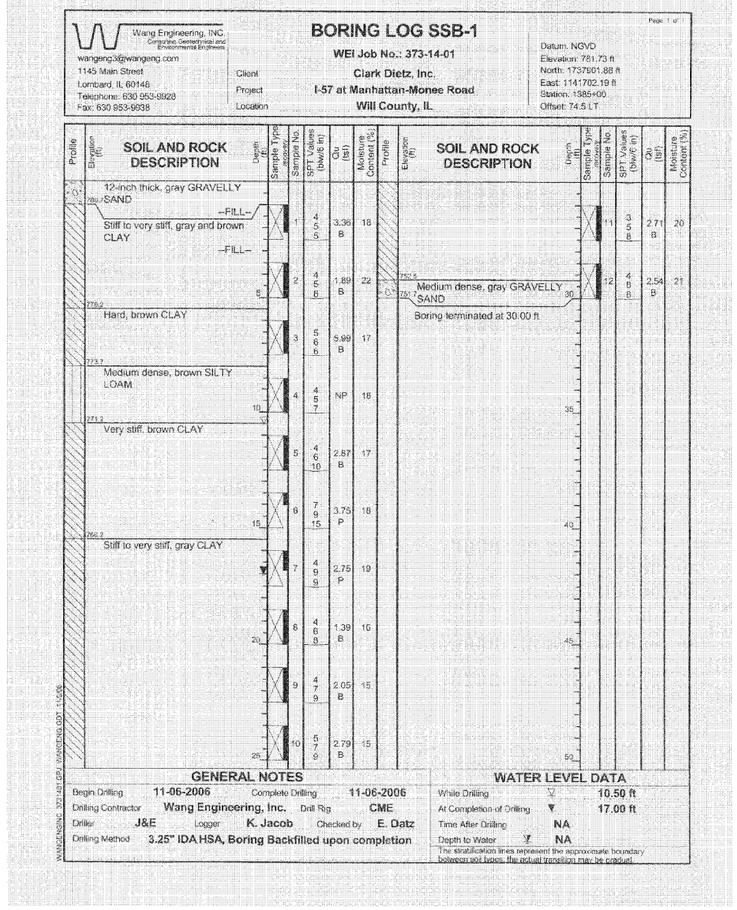
*SEC. 99 (I&2) R 3&9-IHB-1-BR2

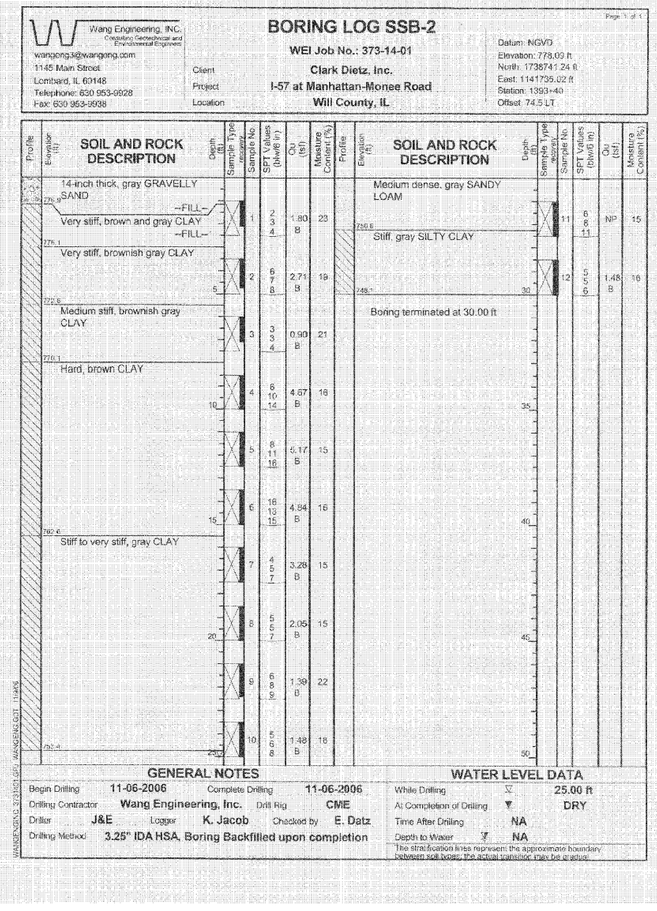
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	102
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

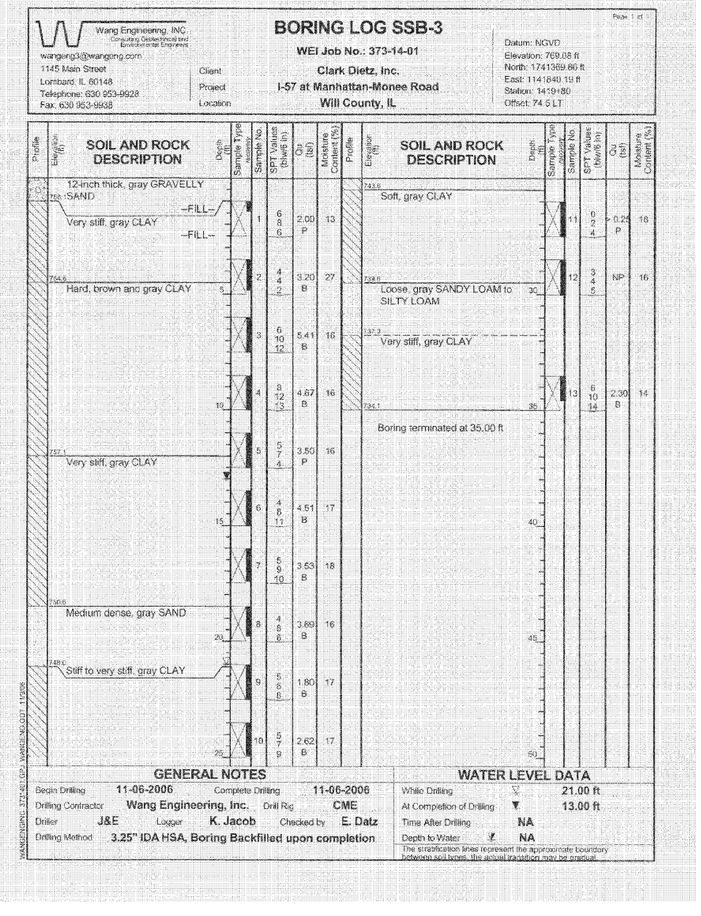
SHEET NO. 11

11 SHEETS

Contract #62253







SOIL BORING LOGS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57

F.A. I-57 SEC. 99(I&2) R 3&9-IHB-1-BR2

WILL COUNTY STA.14037+43.90

STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS

DESIGN FIRM REGISTRATION
No. 184-000450

1817 SOUTH NEIL STREET
SUITE 100
CchampaIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DESIGNED BY:	SLD	PROJECT NO:	102232 *
DRAWN BY:	SLD/AJP	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	TMW		
ACTIVITY	INITIALS		

DRAWING NUMBER

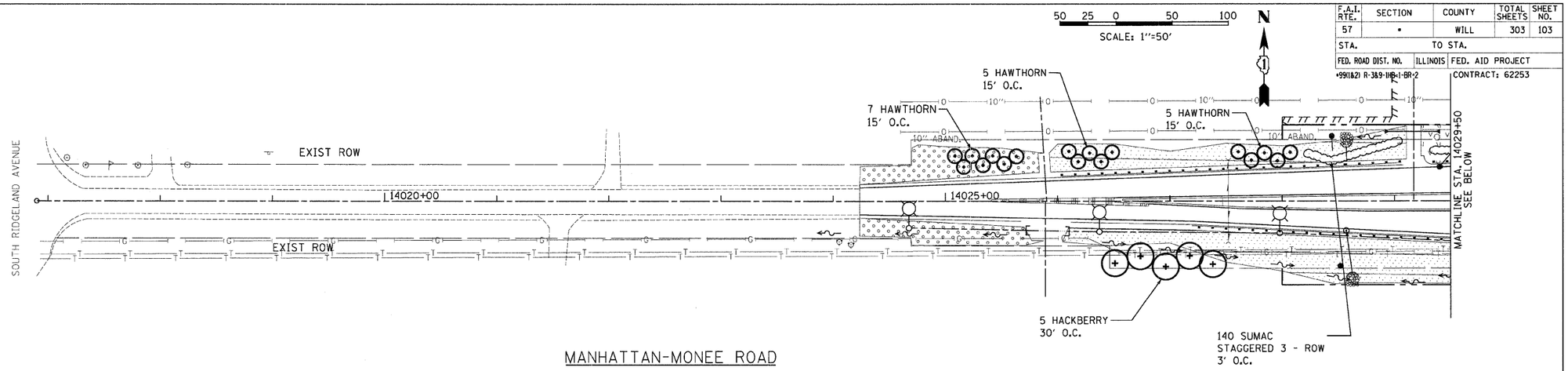
OSC-10

LANDSCAPING LEGEND

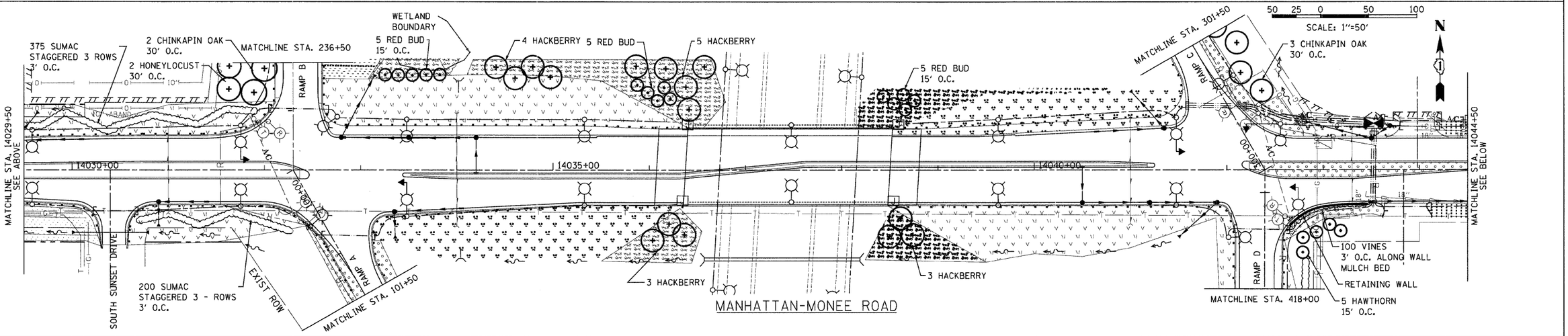
- SEEDING CLASS 2A EROSION CONTROL BLANKET
- SEEDING CLASS 3 EROSION CONTROL BLANKET
- SEEDING CLASS 4 COMPOST FURNISH & PLACE EROSION CONTROL BLANKET
- SODDING SALT TOLERANT
- SELECTIVE CLEARING MULCH PLACEMENT•
- TREE, SHADE (AS LABELED)
- TREE, ORNAMENTAL (AS LABELED)
- SHRUBS (AS LABELED)
- VINES

•AS DIRECTED BY THE ENGINEER

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	WILL	303	103
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
•99(1&2) R-3&9-1H&1-BR-2		CONTRACT: 62253		



MANHATTAN-MONEE ROAD



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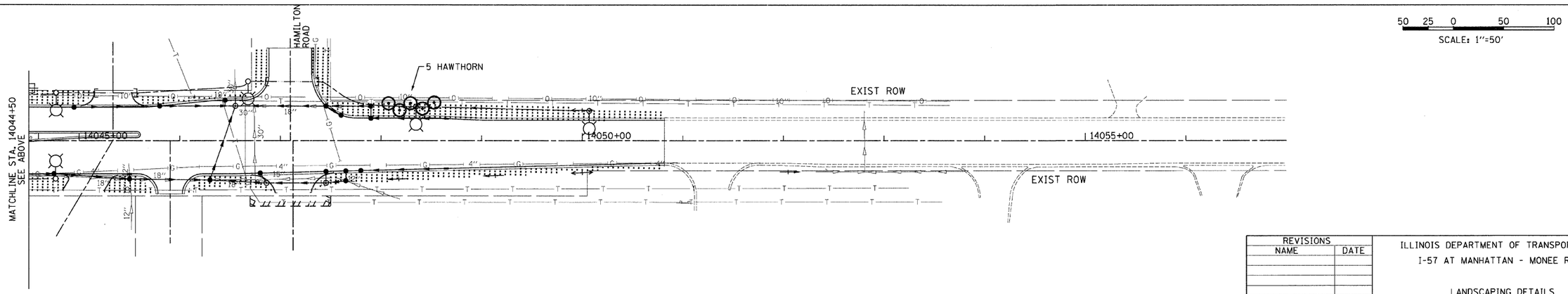

MANHATTAN-MONEE ROAD

REVISIONS NAME	DATE

Clark Dietz ENGINEERS

DESIGN FIRM REGISTRATION No. 184-000450
118 SOUTH CLINTON STREET SUITE 600
CHICAGO, IL 60661
PHONE : 312.648.9900
FAX : 312.648.0204

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-57 AT MANHATTAN - MONEE ROAD

LANDSCAPING DETAILS
MANHATTAN - MONEE ROAD

SCALE: VERT. NA
HORIZ. 1"=50'
DATE 9/19/2008

DRAWN BY ML, GH
CHECKED BY TMW

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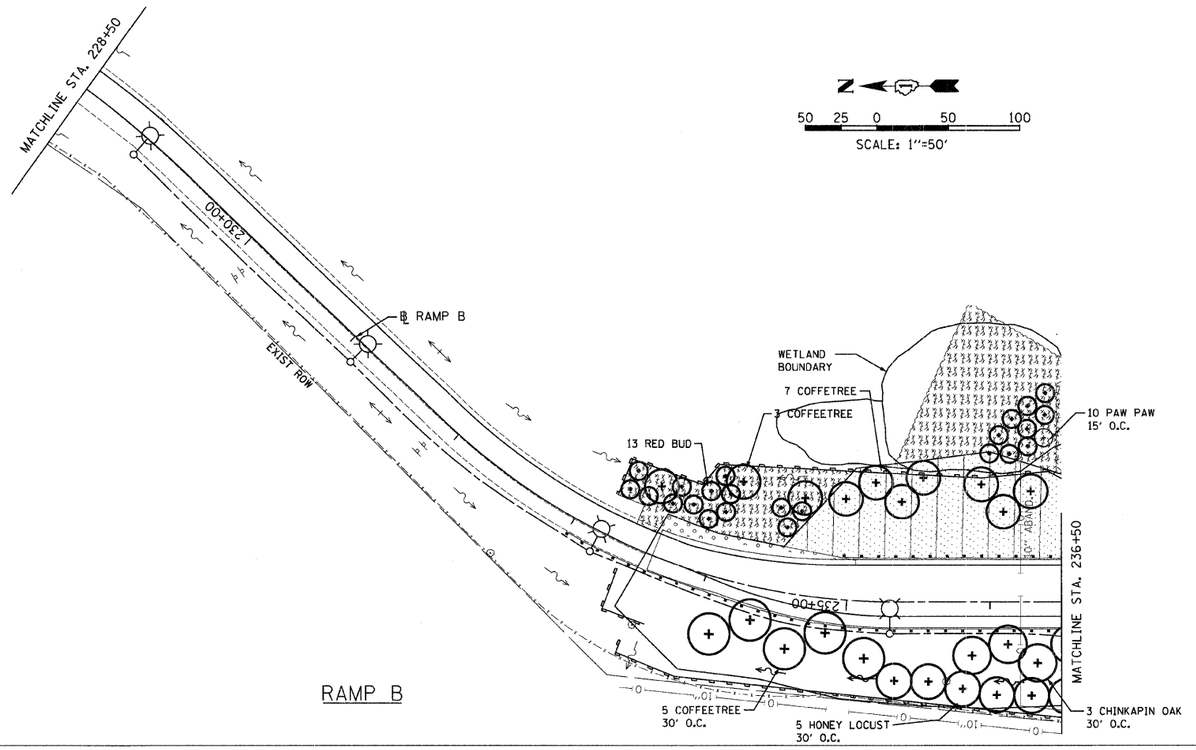
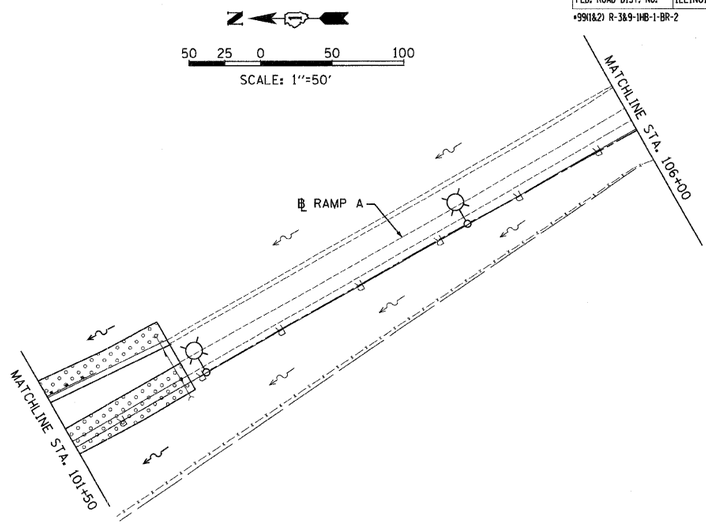
9/17/2008

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	104
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*9911&21 R-3&9-1MB-1-BR-2		CONTRACT: 62253		



RAMP B



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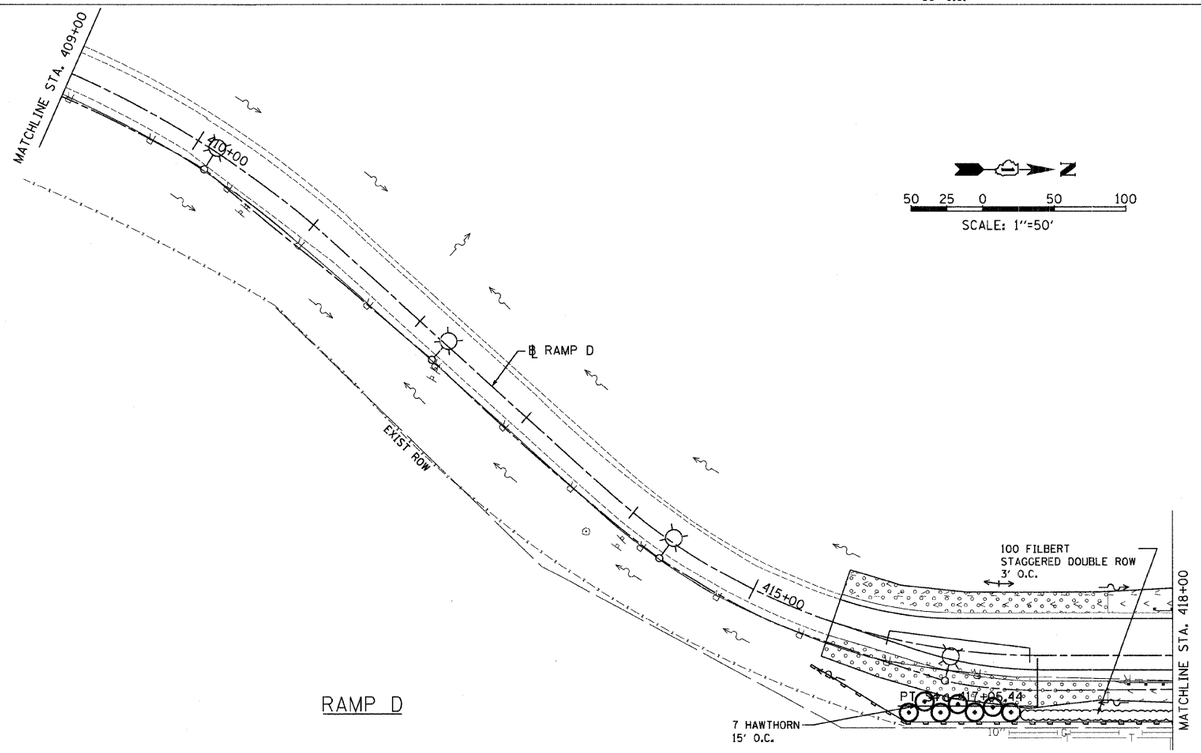

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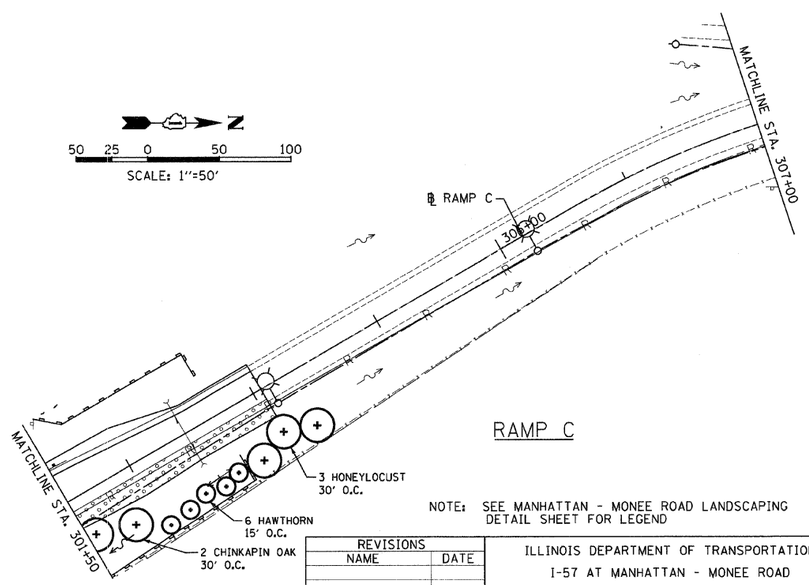

RAMP C

NOTE: SEE MANHATTAN - MONEE ROAD LANDSCAPING DETAIL SHEET FOR LEGEND

REVISIONS	
NAME	DATE

Clark Dietz ENGINEERS

DESIGN FIRM REGISTRATION No. 184-000450
118 SOUTH CLINTON STREET SUITE 600
CHICAGO, IL 60661
PHONE : 312.648.9900
FAX : 312.648.0204

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-57 AT MANHATTAN - MONEE ROAD

LANDSCAPING DETAILS
RAMPS A, B, C, & D

SCALE: VERT. NA
HORIZ. 1"=50'
DATE 9/19/2008

DRAWN BY ML, GH
CHECKED BY TMW

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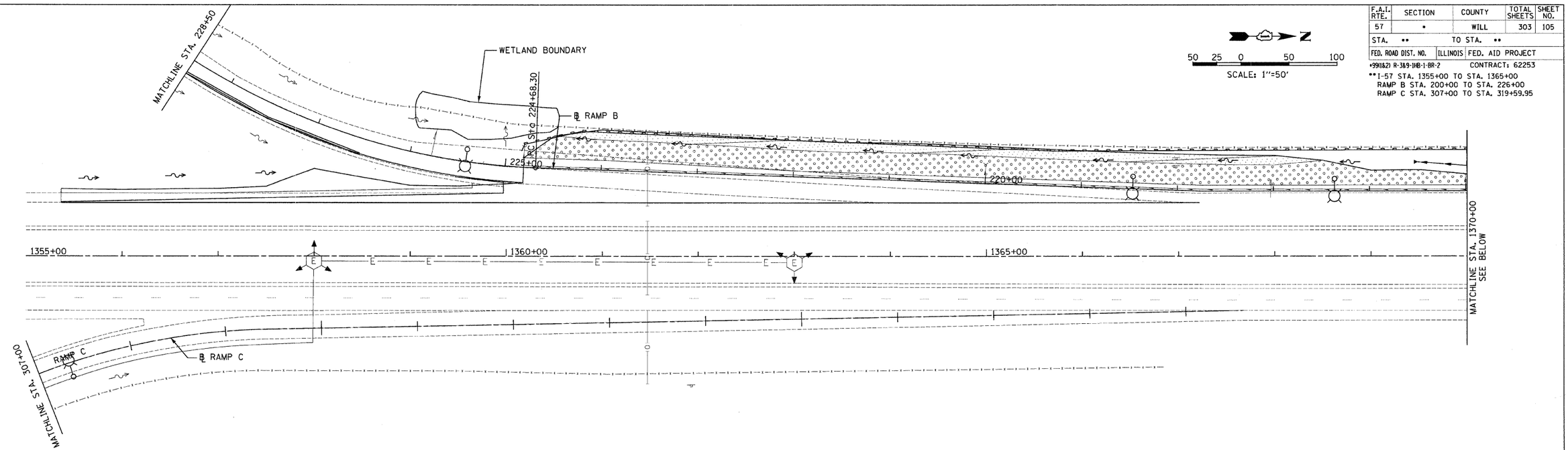
9/1/2008

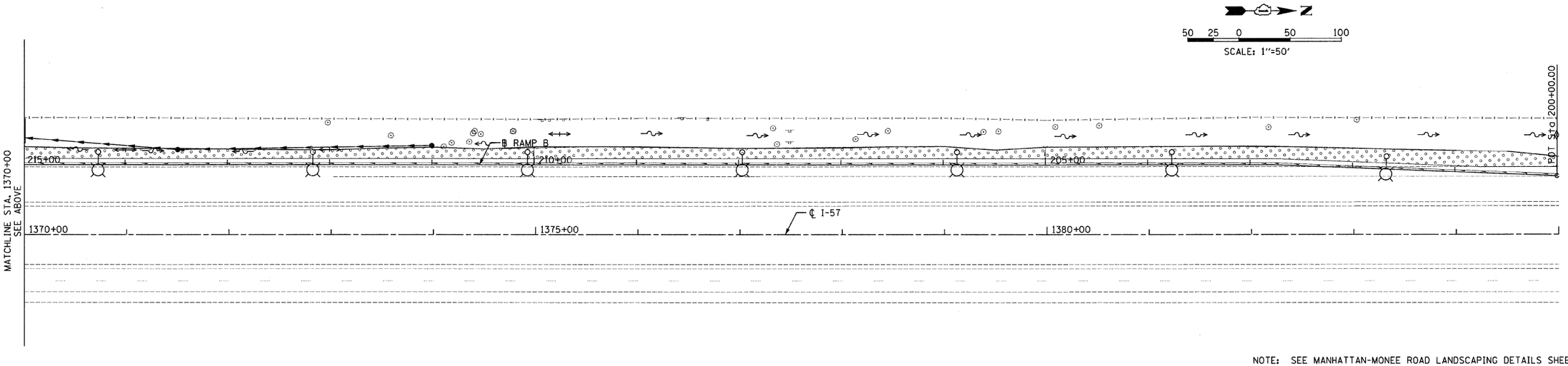
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	WILL	303	105
STA. ••		TO STA. ••		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

•99(1&2) R-3&9-1HB-1-BR-2 CONTRACT: 62253

••I-57 STA. 1355+00 TO STA. 1365+00
RAMP B STA. 200+00 TO STA. 226+00
RAMP C STA. 307+00 TO STA. 319+59.95



I-57



NOTE: SEE MANHATTAN-MONEE ROAD LANDSCAPING DETAILS SHEET FOR LEGEND

I-57

REVISIONS NAME	DATE

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
118 SOUTH CLINTON STREET SUITE 600
CHICAGO, IL 60661
PHONE : 312.648.9900
FAX : 312.648.0204

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-57 AT MANHATTAN - MONEE ROAD

LANDSCAPING DETAILS
I-57 / RAMP B

SCALE: VERT. NA
HORIZ. 1"=50'
DATE 9/19/2008

DRAWN BY ML, GH
CHECKED BY TMW

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9/19/2008

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	99(1&2) R-3&9-INB 1 BR-2	WILL	303	106
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62253

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT 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.

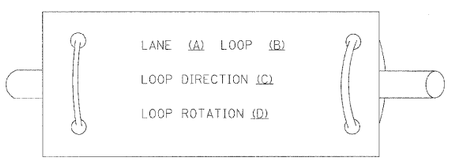
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

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

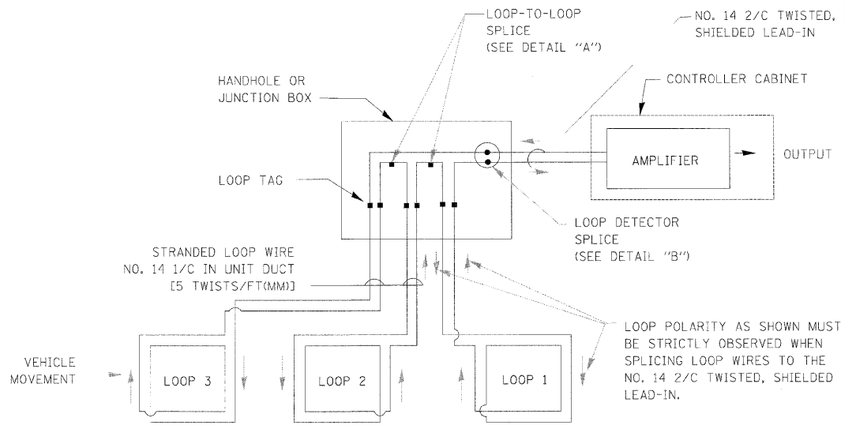


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

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

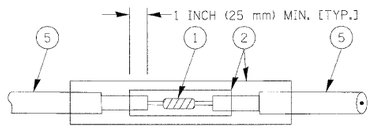
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

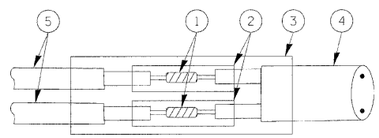


DETECTOR LOOP WIRING SCHEMATIC

- 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

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.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT. NONE
HORIZ.
DATE 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

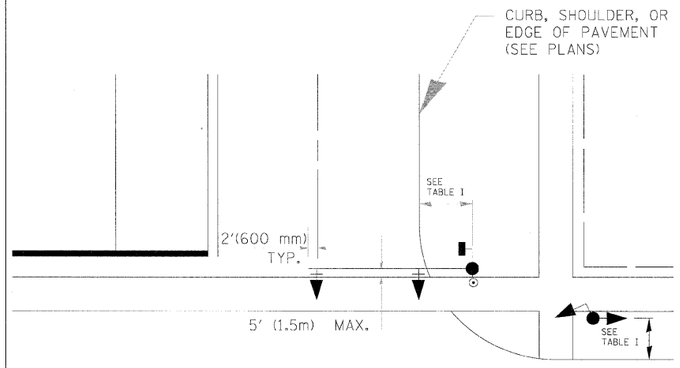
I:\Projects 2002\IL-57 TS\01_std1.dgn
8/1/2008
9:07:55 AM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	99(1&2) R-3&9-IHB-1-BR-2	WILL	303	107
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

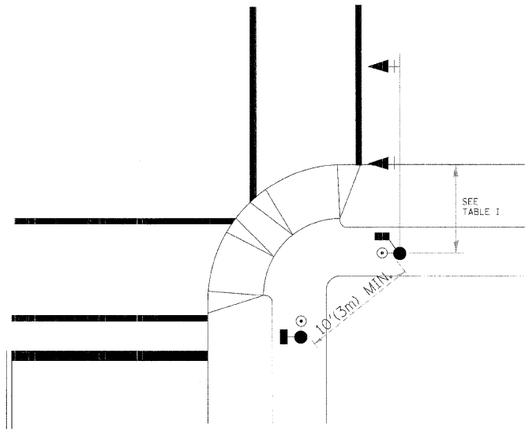
CONTRACT NO. 62253

TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

1. AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.

   AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.

   PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:

   A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.

   B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.

   C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

   D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).

   E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK

2. PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.

3. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.

4. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

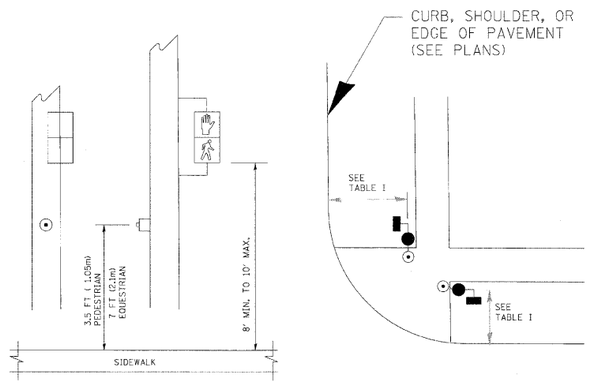


TABLE I

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. HORIZ. NONE
DATE 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 2 OF 4

TS05

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9:08:07 AM

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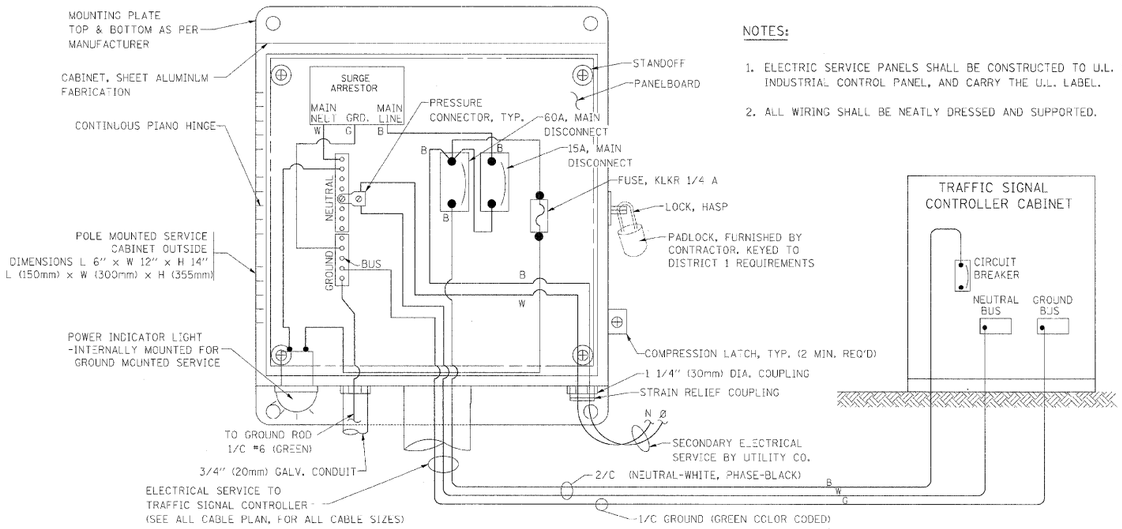
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	99(1&2) R-3&9-1HB-1-BR-2	WILL	303	108
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT=		

CONTRACT NO. 62253



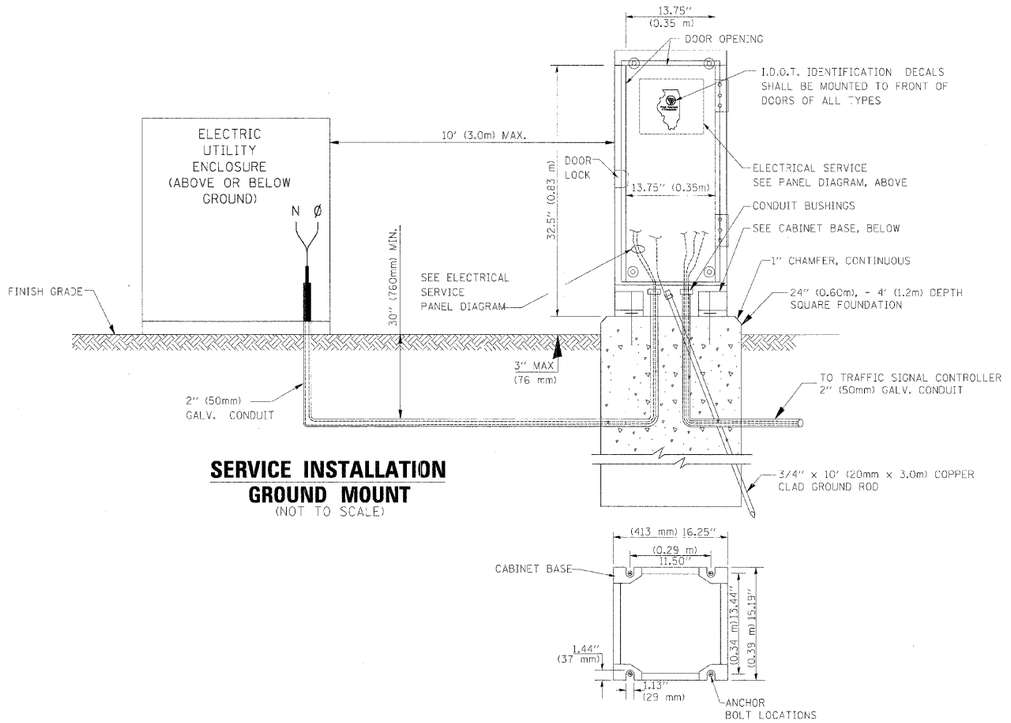
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

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.

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)

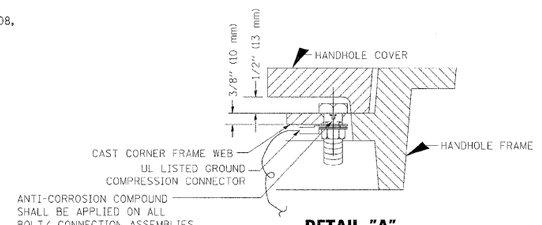


SERVICE INSTALLATION GROUND MOUNT

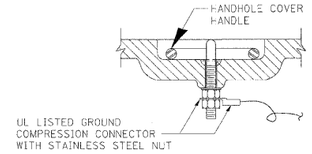
(NOT TO SCALE)

CABINET – BASE BOLT PATTERN

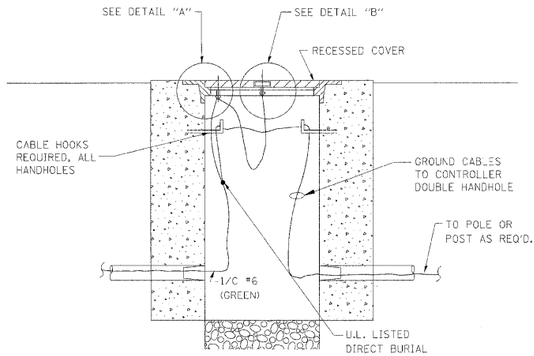
(NOT TO SCALE)



DETAIL "A"

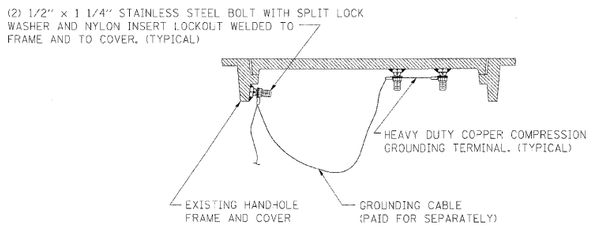


DETAIL "B"



HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



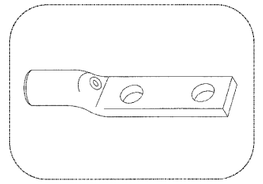
EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)

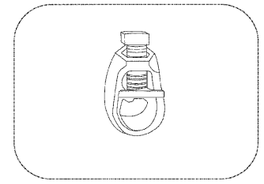
NOTES:

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.



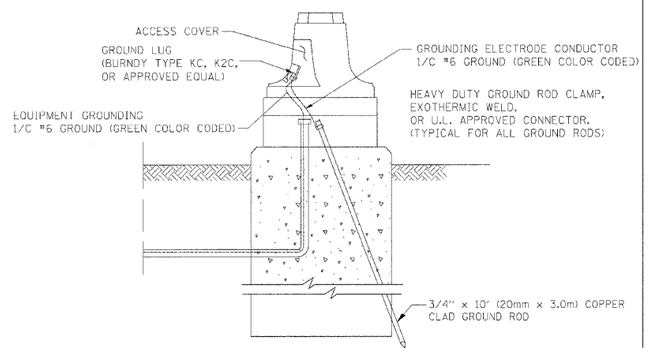
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



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

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.



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE
HORIZ.
DATE 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 3 OF 4

TS05

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8/1/2008
9:08:22 AM

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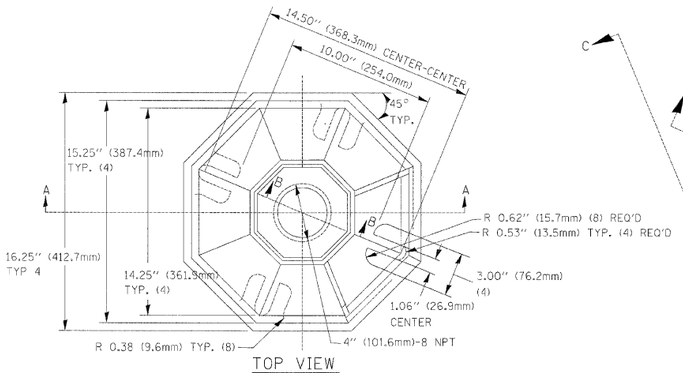
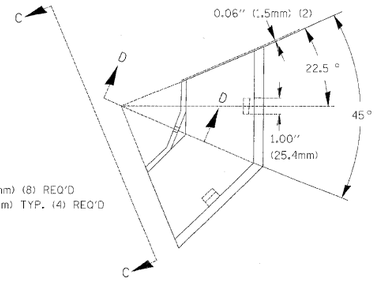
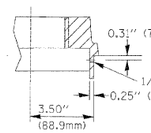
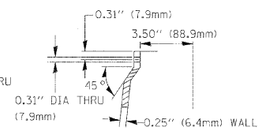


TOP VIEW

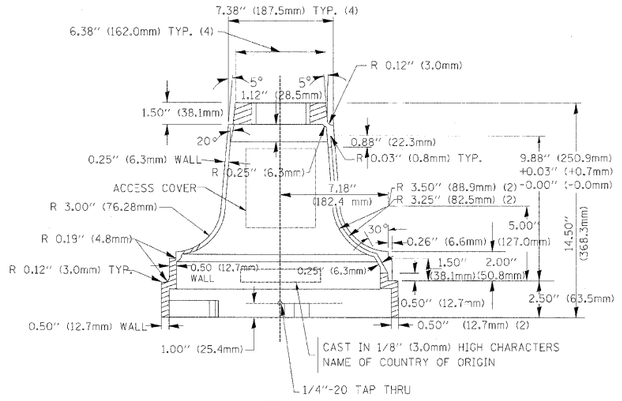




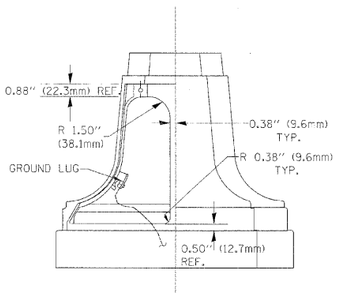
SECTION B-B



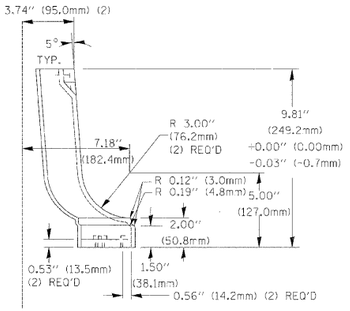
SECTION D-D



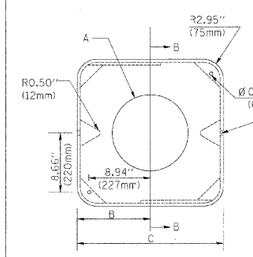
SECTION A-A



VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125"(257mm)	9.5"(241mm)	19"(483mm)	12" (300mm)	24kg
II	Ø 11.125"(283mm)	10.75"(273mm)	21.5"(546mm)	12" (300mm)	26kg

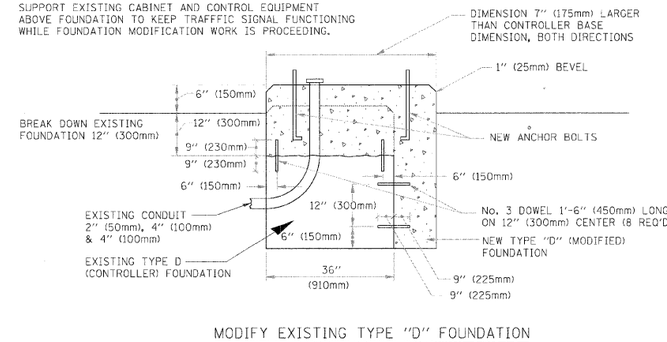
SHROUD DETAIL

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	98(1&2) R-3&3-IHB-1-BR-2	WILL	303	109
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62253

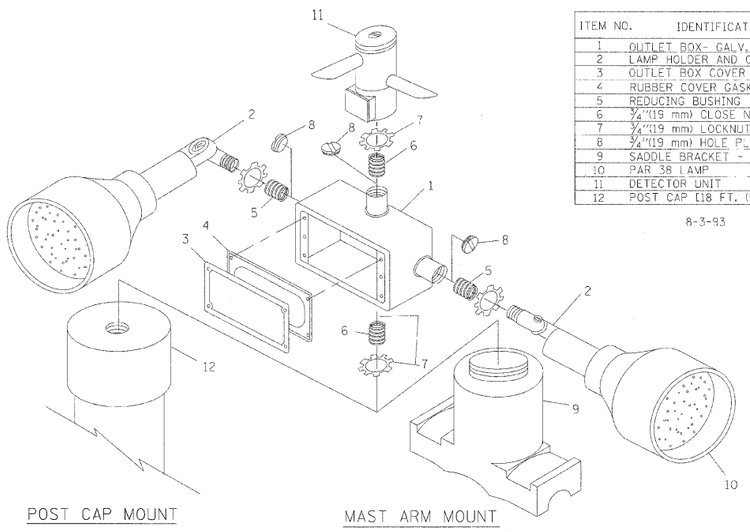
MATERIAL:
- ASTM A48 CLASS 30 GREY IRON
- ASTM A123 HOT DIPPED GALVANIZED

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



MODIFY EXISTING TYPE "D" FOUNDATION

(NOT TO SCALE)



POST CAP MOUNT

MAST ARM MOUNT

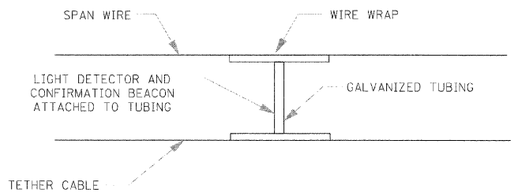
EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

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	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

8-3-93

NOTES:

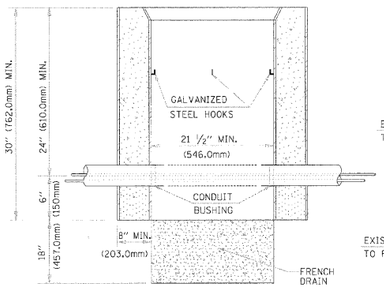
1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. 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.



LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS

(NOT TO SCALE)

NOTES:
1. REMOVAL OF EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHING SHALL BE INCIDENTAL TO THE HANDHOLE.



DETAIL
HANDHOLE TO INTERCEPT EXISTING CONDUIT
N.T.S.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1

STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE
HORIZ.
DATE 1-01-02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 4 OF 4

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8/1/2008
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	99(1&2) R-3&9-1HB-1-BR-2	WILL	303	110
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62253

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGH-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACTOR'S BID PRICE.

1	EACH	CONTROLLER AND TYPE IV CABINET, COMPLETE; EXCEPT FOR ITEMS TO BE RELOCATED
5	EACH	SIGNAL HEAD, 1-FACE, 3 SECTION, SPAN WIRE MOUNTED
2	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION, SPAN WIRE MOUNTED
2	EACH	WOOD POLE
1	EACH	SERVICE INSTALLATION
1	L SUM	SPAN WIRE AND TEATHER WIRE

THE CONTRACTOR SHALL REMOVE THE FOLLOWING ITEMS FROM THE EXISTING TEMPORARY TRAFFIC SIGNAL INSTALLATION AND INSTALL THEM ON THE PROPOSED TEMPORARY TRAFFIC SIGNAL INSTALLATION, THE COST OF WHICH SHALL BE INCLUDED IN THE PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION".

1	EACH	RADIO TRANSMITTER/RECEIVER ALONG WITH ANTENNA
1	EACH	VIDEO CAMERA (ONE IN THE NE QUADRANT ONLY) AND VIDEO CAMERA DETECTION SYSTEM
1	EACH	EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT
1	EACH	EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT

NOTES:

1. AN ADDITIONAL LIGHT DETECTOR FOR THIS INTERSECTION, FOR CONSTRUCTION STAGES IIA, IIIA, AND IIIB SHALL BE PROVIDED WHICH SHALL BE INCLUDED IN THE PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION".
2. ALL THE VIDEO DETECTION ZONES SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE. THIS WORK IS INCIDENTAL TO THE PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION".
3. FROM THE PROPOSED TEMPORARY TRAFFIC SIGNAL INSTALLATION THE CONTRACTOR SHALL REMOVE THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM DETECTOR UNITS, INCLUDING THE CONFIRMATION BEACONS, AND THE PHASING UNIT AND INSTALL THEM ON THE NEW TRAFFIC SIGNAL INSTALLATION AS SHOWN IN THE PLAN AND AS DIRECTED BY THE ENGINEER. NO ADDITIONAL COMPENSATION SHALL BE PAID FOR THIS WORK BUT SHALL BE INCLUDED IN THE PAY ITEM " TEMPORARY TRAFFIC SIGNAL INSTALLATION".

EXISTING EQUIPMENT TO BE REMOVED LEGEND

- EXISTING SIGNAL TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- WOOD POLE TO BE REMOVED
- VIDEO CAMERA TO BE REMOVED
- WIRELESS INTERCONNECT(ANTENNA) TO BE REMOVED

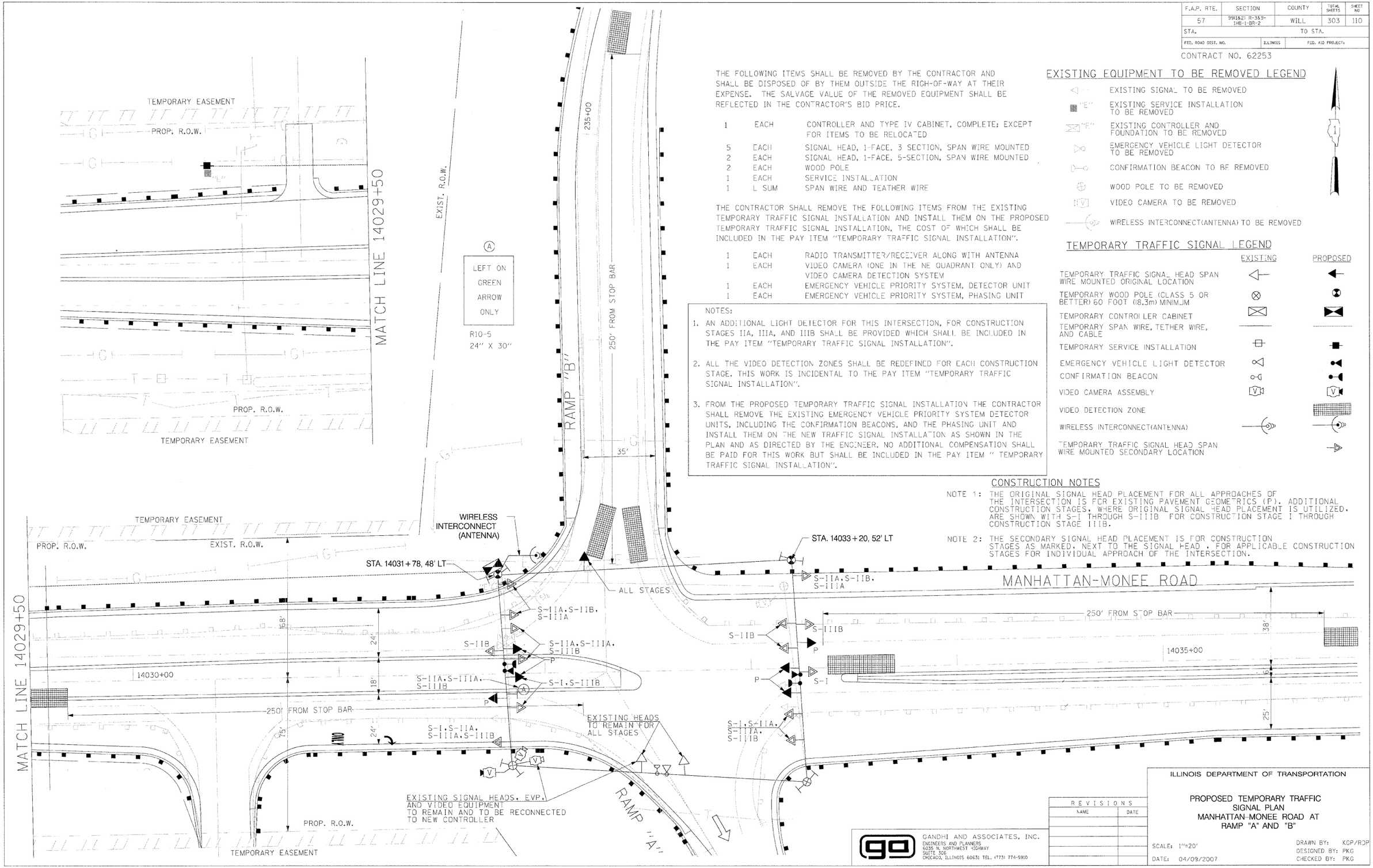
TEMPORARY TRAFFIC SIGNAL LEGEND

	EXISTING	PROPOSED
TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION		
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 60 FOOT (18.3m) MINIMUM		
TEMPORARY CONTROLLER CABINET		
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE		
TEMPORARY SERVICE INSTALLATION		
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIRMATION BEACON		
VIDEO CAMERA ASSEMBLY		
VIDEO DETECTION ZONE		
WIRELESS INTERCONNECT(ANTENNA)		
TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION		

CONSTRUCTION NOTES

NOTE 1: THE ORIGINAL SIGNAL HEAD PLACEMENT FOR ALL APPROACHES OF THE INTERSECTION IS FOR EXISTING PAVEMENT GEOMETRICS (P). ADDITIONAL CONSTRUCTION STAGES, WHERE ORIGINAL SIGNAL HEAD PLACEMENT IS UTILIZED, ARE SHOWN WITH S-I THROUGH S-IIIB FOR CONSTRUCTION STAGE I THROUGH CONSTRUCTION STAGE IIIB.

NOTE 2: THE SECONDARY SIGNAL HEAD PLACEMENT IS FOR CONSTRUCTION STAGES AS MARKED, NEXT TO THE SIGNAL HEAD , FOR APPLICABLE CONSTRUCTION STAGES FOR INDIVIDUAL APPROACH OF THE INTERSECTION.



REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED TEMPORARY TRAFFIC SIGNAL PLAN
MANHATTAN-MONEE ROAD AT RAMP "A" AND "B"

SCALE: 1"=20'
DATE: 04/09/2007
DRAWN BY: KDP/RDP
DESIGNED BY: PKG
CHECKED BY: PKG

I:\projects 2002\11-57 ts\05_RampA&B_Int_TEMP.DGN
8/1/2008
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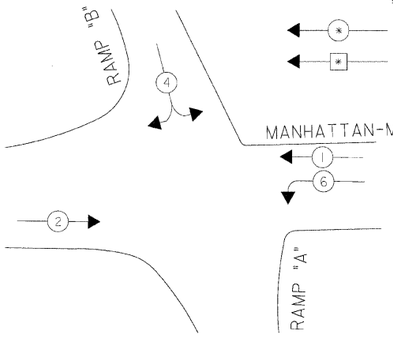
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	95(1&2) R-3&9-1HB-1-BR-2	WILL	303	111
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62253

CONTROLLER SEQUENCE

LEGEND

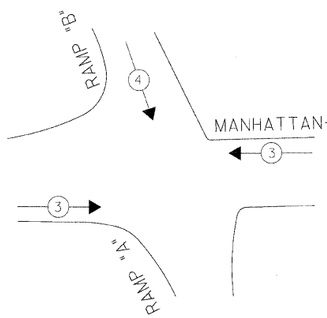
- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE



PHASE DESIGNATION DIAGRAM

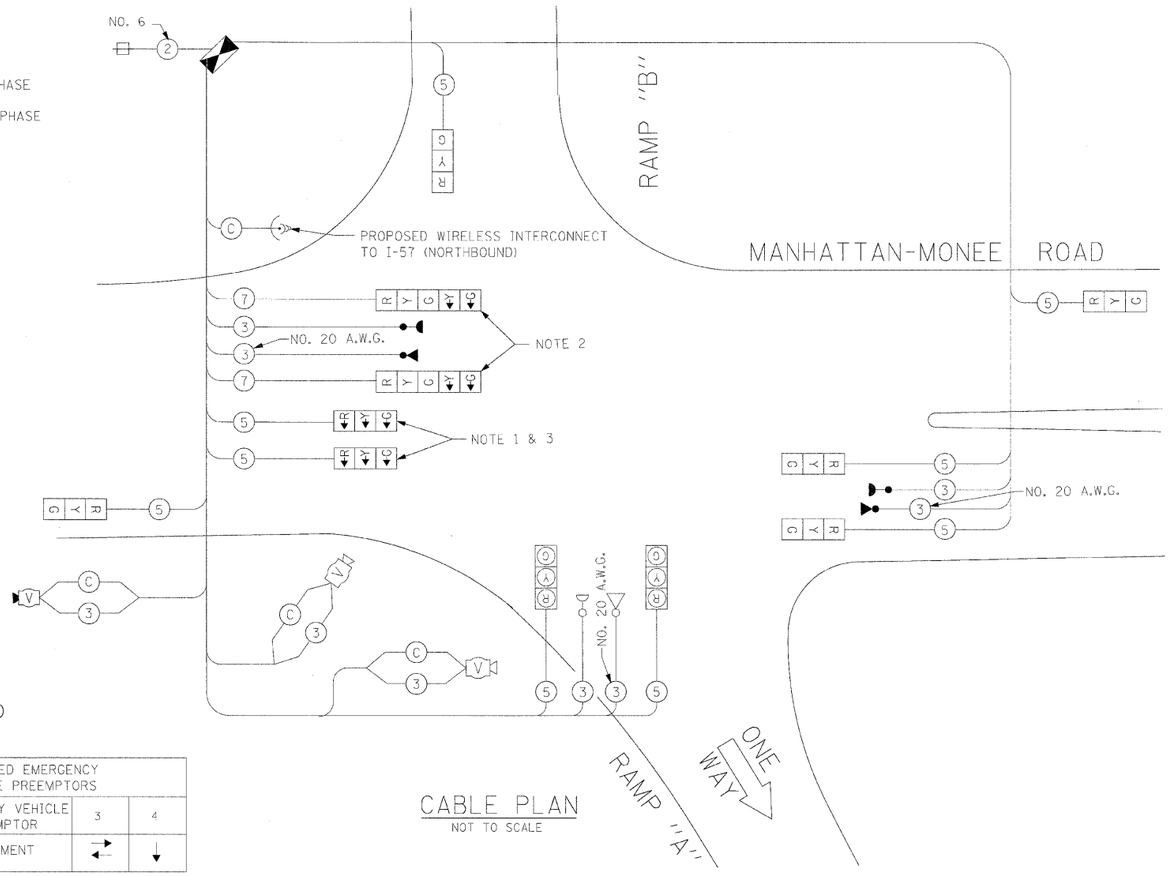
FOR PRE CONSTRUCTION STAGE, STAGE I, STAGE IIB, AND AFTER ALL THE PROPOSED ROADWAY GEOMETRICS ARE BUILT AND OPEN TO TRAFFIC

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	→ ←	↓

FOR PRE CONSTRUCTION STAGE, STAGE I, STAGE IIB, AND AFTER ALL THE PROPOSED ROADWAY GEOMETRICS ARE BUILT AND OPEN TO TRAFFIC



CABLE PLAN
NOT TO SCALE

TEMPORARY CABLE DIAGRAM LEGEND

	PROPOSED	EXISTING
TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300mm)	R	R
TEMPORARY CONTROLLER CABINET		
TEMPORARY SERVICE INSTALLATION		
INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.	2	2
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIRMATION BEACON		
12" (300mm) PEDESTRIAN SIGNAL SECTION		
VIDEO CAMERA ASSEMBLY	V	V
COAXIAL CABLE	C	C
WIRELESS INTERCONNECT		

NOTES:

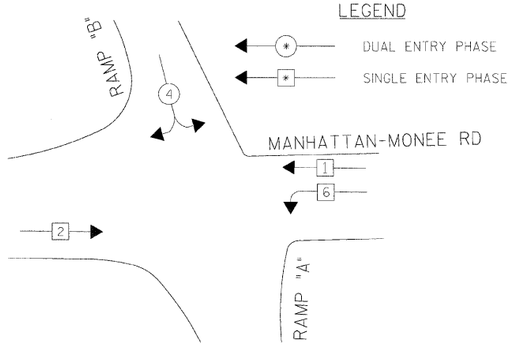
1. ALL THE VIDEO DETECTION ZONES SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE. THIS WORK IS INCIDENTAL TO THE PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION"
2. FROM THE PROPOSED TEMPORARY TRAFFIC SIGNAL INSTALLATION THE CONTRACTOR SHALL REMOVE THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM DETECTOR UNITS, INCLUDING THE CONFIRMATION BEACONS, AND THE PHASING UNIT AND INSTALL THEM ON THE NEW TRAFFIC SIGNAL INSTALLATION AS SHOWN IN THE PLAN AND AS DIRECTED BY THE ENGINEER.

ALL THE SIGNAL HEADS SHALL BE L.E.D. TYPE.

CONTROLLER SEQUENCE

LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE



PHASE DESIGNATION DIAGRAM

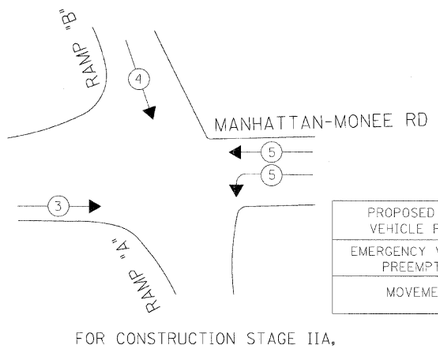
FOR CONSTRUCTION STAGE IIA, STAGE IIIA, AND STAGE IIIB

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED) -	11	135	17	0.50 -	93.5
(YELLOW)	11	135	25	0.25 -	68.75
(GREEN)	11	135	15	0.25 -	41.25
ARROW -	4	135	12	0.10 -	4.8
PED. SIGNAL -		90	25	1.00 -	0.0
CONTROLLER -	1	100	100	1.00 -	100.0
ILLUM. SIGN				0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	308.3

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MR. BRIAN SURDY
PHONE: 708-235-2352
COMPANY: COMED-EDISON

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	→	↓	← ↓

FOR CONSTRUCTION STAGE IIA, STAGE IIIA, AND STAGE IIIB

NOTE 1 THE PROPOSED PROTECTED LEFT TURN SIGNAL HEADS, WITH ENGINEER'S APPROVAL, MAY BE INSTALLED AT THE TIME THE TEMPORARY SIGNAL IS CONSTRUCTED. THESE SIGNAL HEADS WILL NOT BE NEEDED UNTIL TRAFFIC LANES ARE SHIFTED FOR STAGE IIA CONSTRUCTION. THE SIGNAL HEADS SHALL BE BAGGED UNTIL THEY ARE PLACED IN OPERATION.

NOTE 2 THE GREEN AND YELLOW LEFT TURN ARROW INDICATIONS SHALL BE BAGGED AND DISCONNECTED PRIOR TO THE CONNECTION AND UNBAGGING OF THE PROTECTED LEFT TURN SIGNAL INDICATIONS FOR WESTBOUND MANHATTAN-MONEE ROAD FOR STAGE IIA, IIIA, AND IIIB CONSTRUCTION.

NOTE 3 AT THE COMPLETION OF STAGE IIIB CONSTRUCTION, AFTER ALL THE PROPOSED ROADWAY GEOMETRICS ARE IN PLACE PRIOR TO NEW PERMANENT SIGNAL BECOMES OPERATIONAL, THE PROTECTED LEFT TURN SIGNAL HEADS FOR WESTBOUND MANHATTAN-MONEE ROAD SHALL BE REMOVED AND THE LEFT TURN ARROW INDICATION SECTIONS IN THE 5-SECTION SIGNAL HEADS SHALL BE UNBAGGED AND PLACED BACK IN OPERATION.

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED TEMPORARY CABLE PLAN, PHASE DESIGNATION DIAGRAM MANHATTAN-MONEE ROAD AT RAMP "A" AND "B"

SCALE: NONE
DATE: 04/09/2007
DRAWN BY: KGP/RDP
DESIGNED BY: PKG
CHECKED BY: PKG

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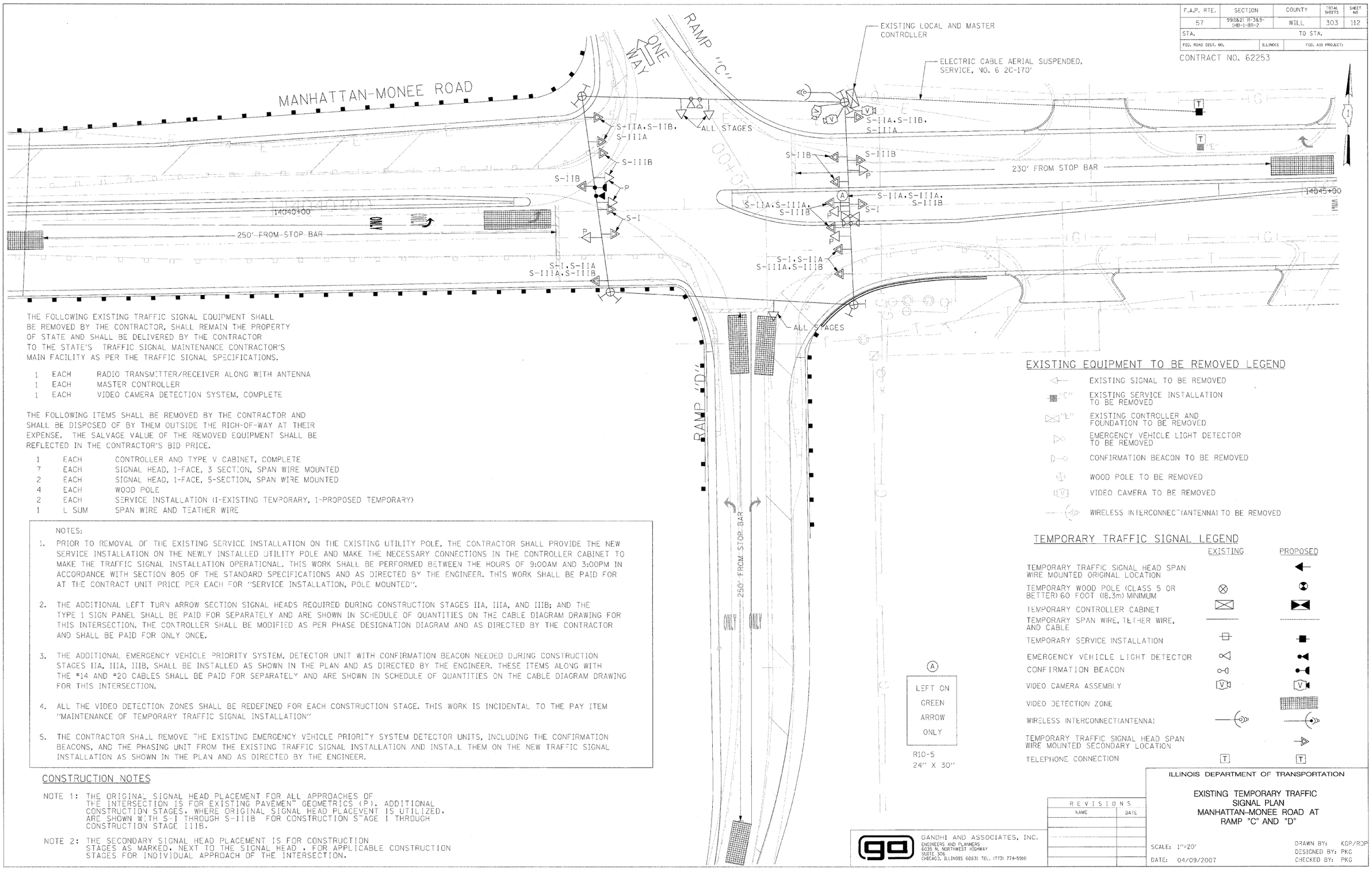
8/1/2008
9:00:29 AM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	99(1&2) R-3&9-1HB-1-BR-2	WILL	303	112
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62253



THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1	EACH	RADIO TRANSMITTER/RECEIVER ALONG WITH ANTENNA
1	EACH	MASTER CONTROLLER
1	EACH	VIDEO CAMERA DETECTION SYSTEM, COMPLETE

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGH-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACTOR'S BID PRICE.

1	EACH	CONTROLLER AND TYPE V CABINET, COMPLETE
7	EACH	SIGNAL HEAD, 1-FACE, 3 SECTION, SPAN WIRE MOUNTED
2	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION, SPAN WIRE MOUNTED
4	EACH	WOOD POLE
2	EACH	SERVICE INSTALLATION (1-EXISTING TEMPORARY, 1-PROPOSED TEMPORARY)
1	L SUM	SPAN WIRE AND TEATHER WIRE

NOTES:

1. PRIOR TO REMOVAL OF THE EXISTING SERVICE INSTALLATION ON THE EXISTING UTILITY POLE, THE CONTRACTOR SHALL PROVIDE THE NEW SERVICE INSTALLATION ON THE NEWLY INSTALLED UTILITY POLE AND MAKE THE NECESSARY CONNECTIONS IN THE CONTROLLER CABINET TO MAKE THE TRAFFIC SIGNAL INSTALLATION OPERATIONAL. THIS WORK SHALL BE PERFORMED BETWEEN THE HOURS OF 9:00AM AND 3:00PM IN ACCORDANCE WITH SECTION 805 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "SERVICE INSTALLATION, POLE MOUNTED".
2. THE ADDITIONAL LEFT TURN ARROW SECTION SIGNAL HEADS REQUIRED DURING CONSTRUCTION STAGES IIA, IIIA, AND IIIB; AND THE TYPE 1 SIGN PANEL SHALL BE PAID FOR SEPARATELY AND ARE SHOWN IN SCHEDULE OF QUANTITIES ON THE CABLE DIAGRAM DRAWING FOR THIS INTERSECTION. THE CONTROLLER SHALL BE MODIFIED AS PER PHASE DESIGNATION DIAGRAM AND AS DIRECTED BY THE CONTRACTOR AND SHALL BE PAID FOR ONLY ONCE.
3. THE ADDITIONAL EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT WITH CONFIRMATION BEACON NEEDED DURING CONSTRUCTION STAGES IIA, IIIA, IIIB, SHALL BE INSTALLED AS SHOWN IN THE PLAN AND AS DIRECTED BY THE ENGINEER. THESE ITEMS ALONG WITH THE #14 AND #20 CABLES SHALL BE PAID FOR SEPARATELY AND ARE SHOWN IN SCHEDULE OF QUANTITIES ON THE CABLE DIAGRAM DRAWING FOR THIS INTERSECTION.
4. ALL THE VIDEO DETECTION ZONES SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE. THIS WORK IS INCIDENTAL TO THE PAY ITEM "MAINTENANCE OF TEMPORARY TRAFFIC SIGNAL INSTALLATION"
5. THE CONTRACTOR SHALL REMOVE THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM DETECTOR UNITS, INCLUDING THE CONFIRMATION BEACONS, AND THE PHASING UNIT FROM THE EXISTING TRAFFIC SIGNAL INSTALLATION AND INSTALL THEM ON THE NEW TRAFFIC SIGNAL INSTALLATION AS SHOWN IN THE PLAN AND AS DIRECTED BY THE ENGINEER.

CONSTRUCTION NOTES

NOTE 1: THE ORIGINAL SIGNAL HEAD PLACEMENT FOR ALL APPROACHES OF THE INTERSECTION IS FOR EXISTING PAVEMENT GEOMETRICS (P). ADDITIONAL CONSTRUCTION STAGES, WHERE ORIGINAL SIGNAL HEAD PLACEVENT IS UTILIZED, ARE SHOWN WITH S-I THROUGH S-IIIB FOR CONSTRUCTION STAGE I THROUGH CONSTRUCTION STAGE IIIB.

NOTE 2: THE SECONDARY SIGNAL HEAD PLACEMENT IS FOR CONSTRUCTION STAGES AS MARKED, NEXT TO THE SIGNAL HEAD , FOR APPLICABLE CONSTRUCTION STAGES FOR INDIVIDUAL APPROACH OF THE INTERSECTION.

(A) LEFT ON GREEN ARROW ONLY

R10-5
24" X 30"

EXISTING EQUIPMENT TO BE REMOVED LEGEND

- EXISTING SIGNAL TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- "C" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- WOOD POLE TO BE REMOVED
- (V) VIDEO CAMERA TO BE REMOVED
- WIRELESS INTERCONNECT(ANTENNA) TO BE REMOVED

TEMPORARY TRAFFIC SIGNAL LEGEND

	EXISTING	PROPOSED
TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION		
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 60 FOOT (18.3m) MINIMUM	⊗	
TEMPORARY CONTROLLER CABINET		
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE		
TEMPORARY SERVICE INSTALLATION		
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIRMATION BEACON		
VIDEO CAMERA ASSEMBLY	(V)	(V)
VIDEO DETECTION ZONE		
WIRELESS INTERCONNECT(ANTENNA)		
TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION		
TELEPHONE CONNECTION	T	T

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EXISTING TEMPORARY TRAFFIC SIGNAL PLAN
MANHATTAN-MONEE ROAD AT RAMP "C" AND "D"

SCALE: 1"=20'
DATE: 04/09/2007

DRAWN BY: KGP/RDP
DESIGNED BY: PKG
CHECKED BY: PKG

I:\projects 2002\11-57 ts\07_RampC&D_Int_TEMP.dgn
8/1/2006
9:00:31 AM

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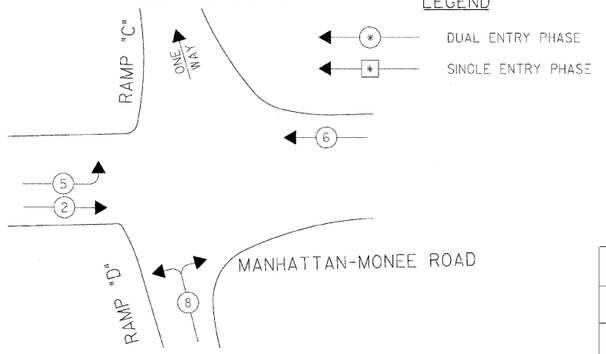
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	95X1&2I R-3&9-1H3-1-BR-2	WILL	303	113
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62253

CONTROLLER SEQUENCE

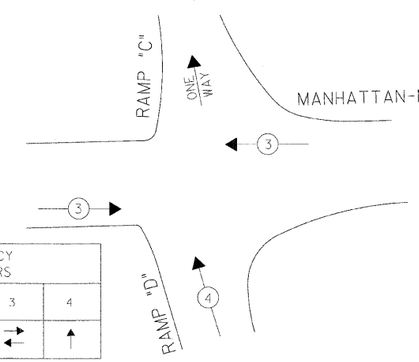
LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE



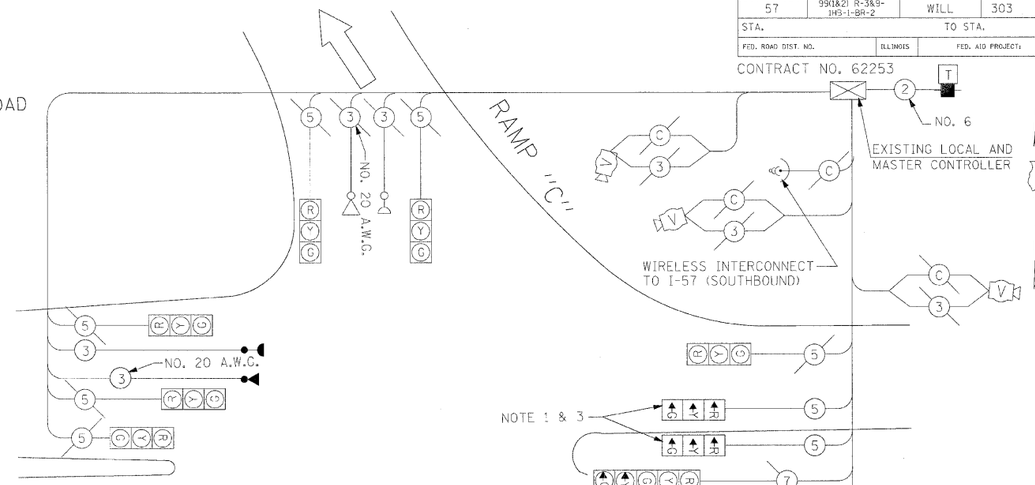
PHASE DESIGNATION DIAGRAM
FOR PRE CONSTRUCTION STAGE, STAGE I, STAGE IIB, AND AFTER ALL THE PROPOSED ROADWAY GEOMETRICS ARE BUILT AND OPEN TO TRAFFIC

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	→ ←	↑

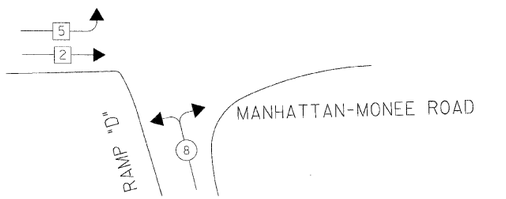
FOR PRE CONSTRUCTION STAGE, STAGE I, STAGE IIB, AND AFTER ALL THE PROPOSED ROADWAY GEOMETRICS ARE BUILT AND OPEN TO TRAFFIC



CONTROLLER SEQUENCE

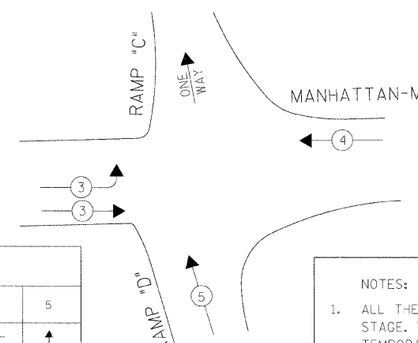
LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE



PHASE DESIGNATION DIAGRAM
FOR CONSTRUCTION STAGE IIA, STAGE IIIA, AND STAGE IIIB

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	→ ←	←	↑

FOR CONSTRUCTION STAGE IIA, STAGE IIIA, AND STAGE IIIB

CABLE PLAN

NOT TO SCALE

NOTES:

1. ALL THE VIDEO DETECTION ZONES SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE. THIS WORK IS INCIDENTAL TO THE PAY ITEM "MAINTENANCE OF TEMPORARY TRAFFIC SIGNAL INSTALLATION"
2. THE CONTRACTOR SHALL REMOVE THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM DETECTOR UNITS, INCLUDING THE CONFIRMATION BEACONS, AND THE PHASING UNIT FROM THE EXISTING TRAFFIC SIGNAL INSTALLATION AND INSTALL THEM ON THE NEW TRAFFIC SIGNAL INSTALLATION AS SHOWN IN THE PLAN AND AS DIRECTED BY THE ENGINEER.

THE PROPOSED ADDITIONAL SIGNAL HEADS SHALL BE INCANDESCENT TYPE TO MATCH THE EXISTING SIGNAL HEADS.

NOTE 1 THE PROPOSED PROTECTED LEFT TURN SIGNAL HEADS, WITH ENGINEER'S APPROVAL, MAY BE INSTALLED AT THE TIME THE TEMPORARY SIGNAL IS CONSTRUCTED. THESE SIGNAL HEADS WILL NOT BE NEEDED UNTIL TRAFFIC LANES ARE SHIFTED FOR STAGE IIA CONSTRUCTION. THE SIGNAL HEADS SHALL BE BAGGED UNTIL THEY ARE PLACED IN OPERATION.

NOTE 2 THE GREEN AND YELLOW LEFT TURN ARROW INDICATIONS SHALL BE BAGGED AND DISCONNECTED PRIOR TO THE CONNECTION AND UNBAGGING OF THE PROTECTED LEFT TURN SIGNAL INDICATIONS FOR EASTBOUND MANHATTAN-MONEE ROAD FOR STAGE IIA, IIIA, AND IIIB CONSTRUCTION.

NOTE 3 AT THE COMPLETION OF STAGE IIIB CONSTRUCTION, AFTER ALL THE PROPOSED ROADWAY GEOMETRICS ARE IN PLACE PRIOR TO NEW PERMANENT SIGNAL BECOMES OPERATIONAL, THE PROTECTED LEFT TURN SIGNAL HEADS FOR EASTBOUND MANHATTAN-MONEE ROAD SHALL BE REMOVED AND THE LEFT TURN ARROW INDICATION SECTIONS IN THE 5-SECTION SIGNAL HEADS SHALL BE UNBAGGED AND PLACED BACK IN OPERATION.

TEMPORARY CABLE DIAGRAM LEGEND

	PROPOSED	EXISTING
TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300mm)	R	R
TEMPORARY CONTROLLER CABINET		
TEMPORARY SERVICE INSTALLATION		
INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.	2	2
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIRMATION BEACON		
12" (300mm) PEDESTRIAN SIGNAL SECTION		
VIDEO CAMERA ASSEMBLY		V
COAXIAL CABLE	C	C
WIRELESS INTERCONNECT		
TELEPHONE CONNECTION	T	T

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
5	SQ FT	SIGN PANEL - TYPE 1
1	EACH	MAINTENANCE OF TEMPORARY TRAFFIC SIGNAL INSTALLATION
215	FOOT	ELECTRIC CABLE AERIAL SUSPENDED, SIGNAL, NO. 14 3C
188	FOOT	ELECTRIC CABLE AERIAL SUSPENDED, SIGNAL, NO. 14 5C
170	FOOT	ELECTRIC CABLE AERIAL SUSPENDED,SERVICE, NO. 6 2 C
2	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION, SPAN WIRE MOUNTED
1	EACH	LIGHT DETECTOR
1	EACH	MODIFY EXISTING CONTROLLER
1	EACH	SERVICE INSTALLATION, POLE MOUNTED
215	FOOT	ELECTRIC CABLE AERIAL SUSPENDED NO. 20 3/C, TWISTED, SHIELDED

I.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO LAMPS	X WATTAGE INCAND.	WATTAGE LED	X %OPERATION	TOTAL WATTAGE
SIGNAL (RED)	11	135	17	0.50	742.5
(YELLOW)	11	135	25	0.25	371.3
(GREEN)	11	135	15	0.25	371.3
ARROW	4	135	12	0.10	54.0
PED. SIGNAL		90	25	1.00	0.0
CONTROLLER	-	100	100	1.00	100.0
ILLUM. SIGN				0.05	
FLASHER				0.50	
ENERGY COSTS TO:			TOTAL =		1639.0

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MR. BRIAN SURDY
PHONE: 708-235-2352
COMPANY: COMED-EDISON

REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

EXISTING TEMPORARY CABLE PLAN, PHASE DESIGNATION DIAGRAM
MANHATTAN-MONEE ROAD
AT RAMP "C" AND "D"

SCALE: NONE
DATE: 04/09/2007
DRAWN BY: KGP/ROP
DESIGNED BY: PKG
CHECKED BY: PKG

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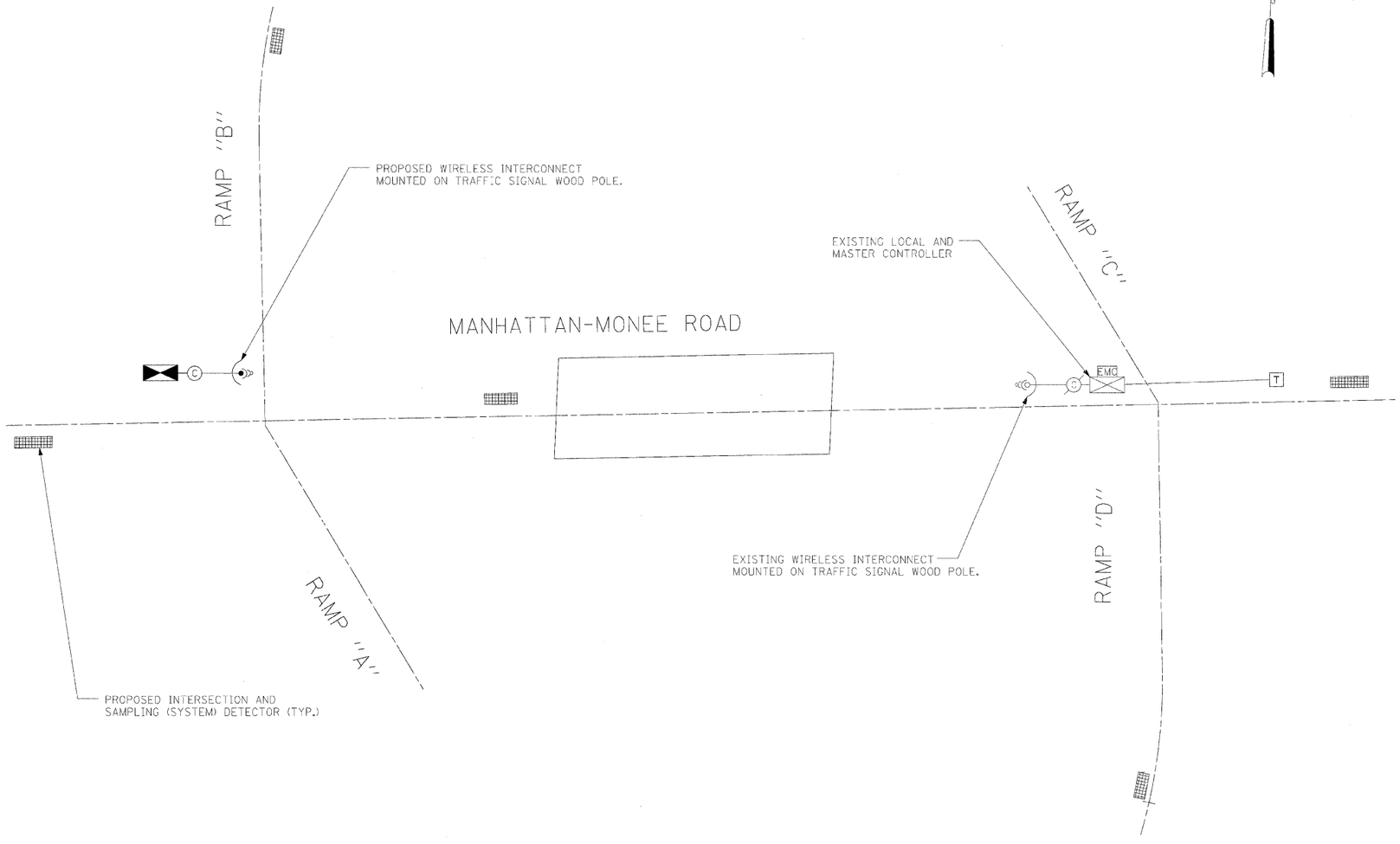
8/1/2008
9:00:36 AM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	99(1&2) R-3&9-1HS-1-BR-2	WILL	303	114
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62253



INTERCONNECT SCHEMATIC LEGEND

- EXISTING INTERSECTION CONTROLLER
- PROPOSED INTERSECTION CONTROLLER
- EMC — EXISTING MASTER CONTROLLER
- MC — PROPOSED MASTER CONTROLLER
- MMC — MASTER MASTER CONTROLLER
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- P — EXISTING INTERSECTION LOOP DETECTORS AND PROPOSED SAMPLING (SYSTEM) DETECTORS
- ES — EXISTING SAMPLING (SYSTEM) DETECTORS
- PS — PROPOSED SAMPLING (SYSTEM) DETECTORS
- ESP — EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS.
- ESPS — EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED SAMPLING (SYSTEM) DETECTORS.
- PD — EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- PD — PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- ESPD — EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS.
- PSPD — PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS.
- (24) — EXISTING FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F & SM12F
- (24) — PROPOSED FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F & SM12F
- (12) — EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F. FIBER OPTIC CABLE
- (12) — PROPOSED INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE
- (6) — EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED
- (6) — PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED
- (2) — EXISTING LOOP DETECTOR CABLE - 2/C TWISTED, SHIELDED
- (2) — PROPOSED LOOP DETECTOR CABLE -2/C TWISTED, SHIELDED
- (1) — EXISTING ELECTRIC CABLE 1/C (AS SPECIFIED)
- (1) — PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED)
- (C) — EXISTING COAXIAL CABLE
- (C) — PROPOSED COAXIAL CABLE
- T — EXISTING TELEPHONE CONNECTION
- T — PROPOSED TELEPHONE CONNECTION
- EXISTING VIDEO DETECTION ZONE
- EXISTING WIRELESS INTERCONNECT(ANTENNA)
- PROPOSED WIRELESS INTERCONNECT(ANTENNA)

SCHEDULE OF TEMPORARY INTERCONNECT QUANTITIES

QUANTITY	UNIT	ITEM
1	EACH	TELEPHONE SERVICE INSTALLATION

REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

EXISTING INTERCONNECT SCHEMATIC
MANHATTAN-MONEE ROAD AT
I-57 INERCHANGE
RAMP A&B TO RAMP C&D

SCALE: NONE
DATE: 04/09/2007

DRAWN BY: KGP/RDP
DESIGNED BY: PKG
CHECKED BY: PKG

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8/1/2008
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	99(T&2) R-3&9-1HS-1-BR-2	WILL	303	115
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT=		

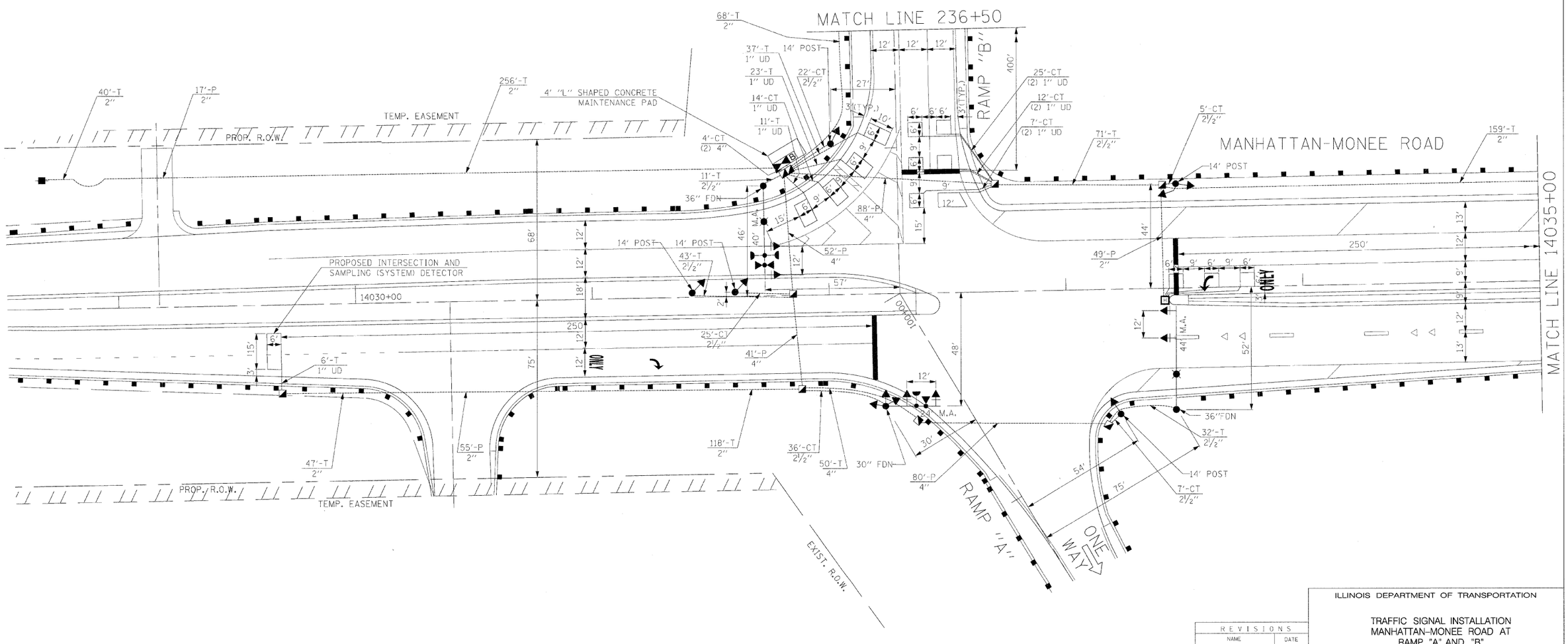
CONTRACT NO. 62253

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR		

DETECTOR LOOP	
CAST IRON JUNCTION BOX	"E"
EMERGENCY VEHICLE SYSTEM DETECTOR	
CONFIRMATION BEACON	
SIGNAL HEAD, OPTICALLY PROGRAMMED	"P"
CONDUIT SPLICE	
WOOD POLE	"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE	
RAILROAD CONTROL CABINET	"E"
TELEPHONE CONNECTION	T
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"	"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"	"E"
MICROWAVE VEHICLE SENSOR	
UPS BATTERY BACK-UP	B

THE CONTRACTOR SHALL REMOVE THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM DETECTOR UNITS, INCLUDING THE CONFIRMATION BEACONS, AND THE PHASING UNIT FROM THE EXISTING TRAFFIC SIGNAL INSTALLATION. STORE IT IN A SAFE MANNER, AND INSTALL THEM ON THE NEW TRAFFIC SIGNAL INSTALLATION AS SHOWN IN THE PLAN AND AS DIRECTED BY THE ENGINEER.



REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5810

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION
MANHATTAN-MONEE ROAD AT
RAMP "A" AND "B"
(SHEET 1 OF 2)

SCALE: 1"=20'
DATE: 04/09/2007

DRAWN BY: KGP/RDP
DESIGNED BY: PKG
CHECKED BY: PKG

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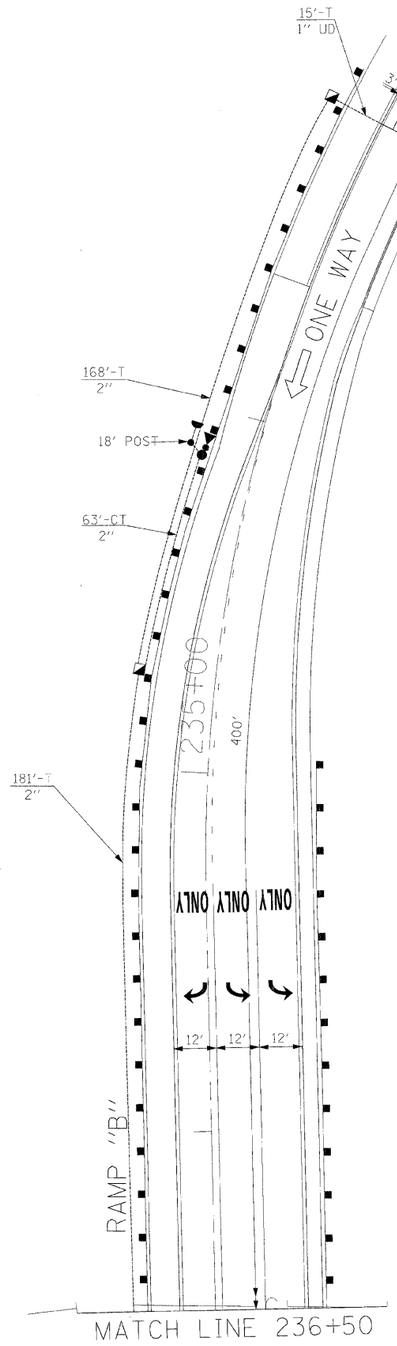
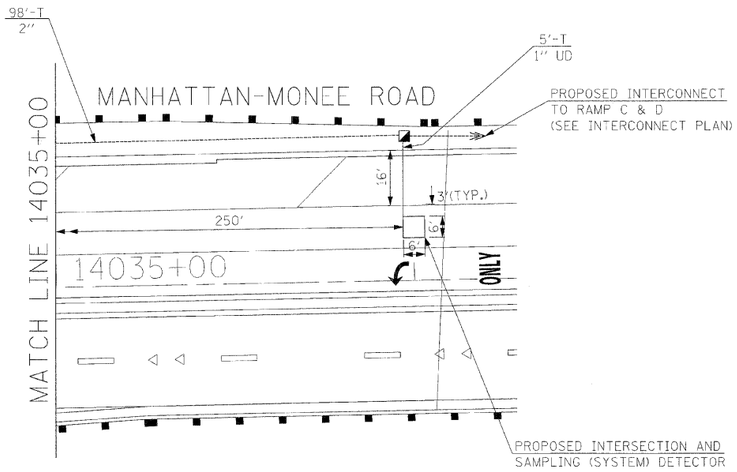
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	93(I&2) R-3&9-1HB-1-BR-2	WILL	303	116
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62253

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX	J	J "E"
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD, OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET	R R	R R "E"
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN, FIBER OPTIC 'NO LEFT TURN'		"E"
ILLUMINATED SIGN, FIBER OPTIC 'NO RIGHT TURN'		
MICROWAVE VEHICLE SENSOR		





REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION
MANHATTAN-MONEE ROAD AT
RAMP "A" AND "B"
(SHEET 2 OF 2)

SCALE: 1"=20'
DATE: 04/09/2007

DRAWN BY: KGP/RDP
DESIGNED BY: PKG
CHECKED BY: PKG

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SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
15	SQ FT	SIGN PANEL - TYPE 2
1198	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
252	FOOT	CONDUIT IN TRENCH, 2½" DIA., GALVANIZED STEEL
58	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
121	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
261	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
10	EACH	HANDHOLE
1	EACH	HEAVY- DUTY HANDHOLE
1	EACH	DOUBLE HANDHOLE
1487	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET
1	EACH	TRANSCEIVER-FIBER OPTIC
* 654	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
2644	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
278	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
1756	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
332	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
5	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 40 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 44 FT.
24	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
10	FOOT	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
30	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
5	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
4	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 3-FACE, 2-3 SECTION, 1-5 SECTION BRACKET MOUNTED
6	EACH	TRAFFIC SIGNAL BACKPLATE
7	EACH	INDUCTIVE LOOP DETECTOR
* 1	EACH	LIGHT DETECTOR
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
* 2	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT
* 1	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
619	FOOT	PREFORMED DETECTOR LOOP
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING
1	EACH	SERVICE INSTALLATION, POLE MOUNTED
1	EACH	UNINTERRUPTIBLE POWER SUPPLY
1383	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
* 654	FOOT	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED

* 100% COST TO VILLAGE OF MONEE

LEGEND

DUAL ENTRY PHASE

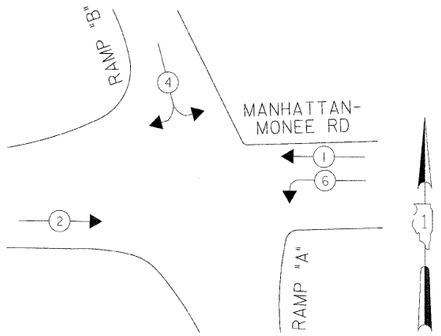
SINGLE ENTRY PHASE

O.L. OVERLAP

PEDESTRIAN PHASE

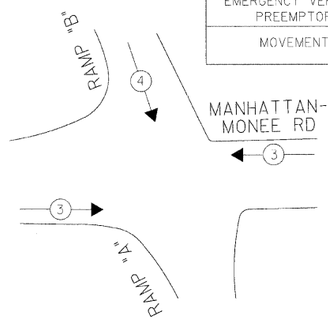
* NUMBER REFERS TO ASSOCIATED PHASE

CONTROLLER SEQUENCE

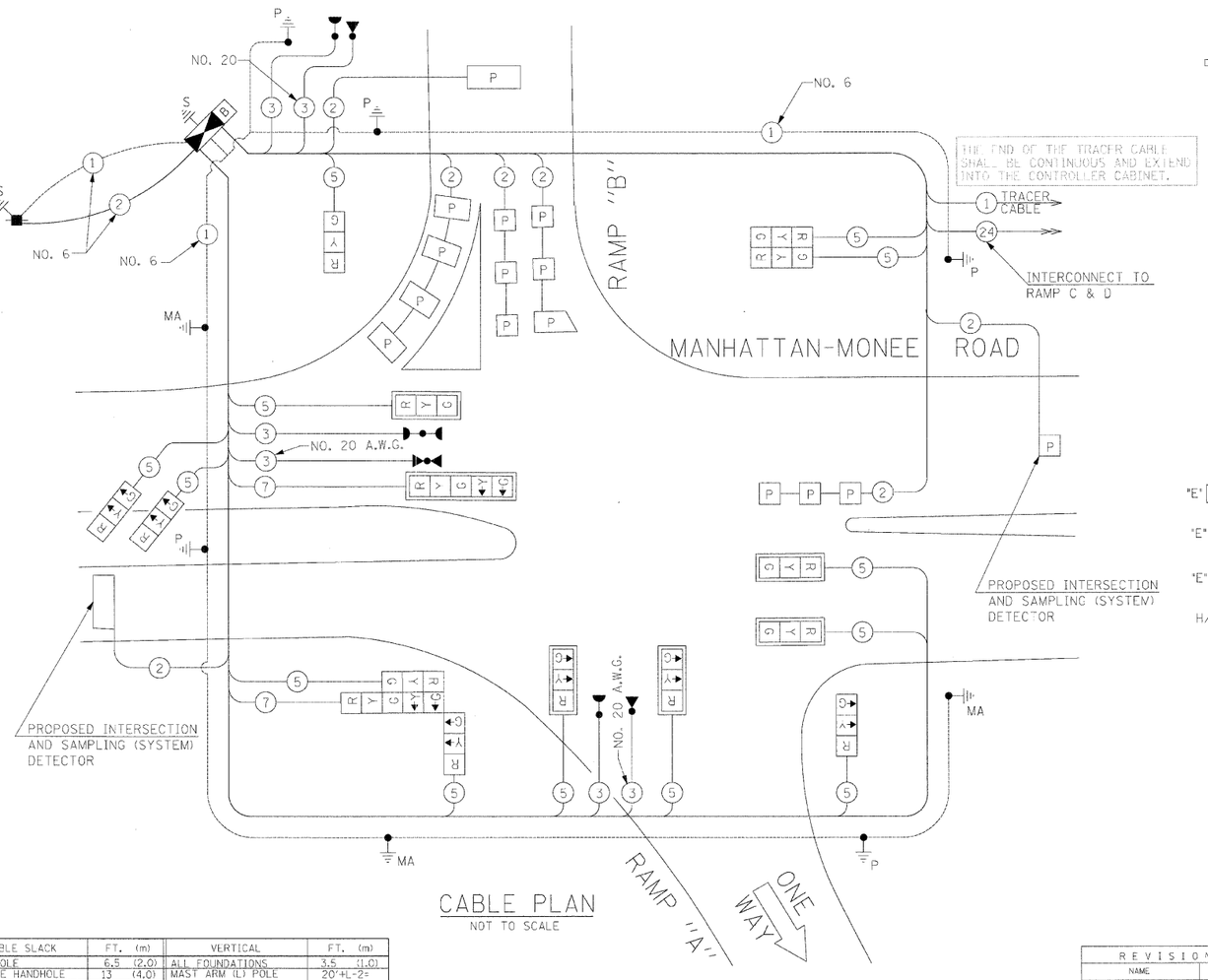


EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	→	↓



PHASE DESIGNATION DIAGRAM



CABLE PLAN

NOT TO SCALE

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	X WATTAGE INCAND.	WATTAGE LED	X %OPERATION	
SIGNAL (RED)	15	135	17	0.50	127.5
(YELLOW)	15	135	25	0.25	93.75
(GREEN)	15	135	15	0.25	56.25
ARROW	4	135	12	0.10	4.8
PED. SIGNAL	0	90	25	1.00	0
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN				0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	382.3

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MR. BRIAN SURDY
PHONE: 708-235-2352
COMPANY: COMED-EDISON

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A-POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D-CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
E-MARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	99(1&2) R-3&9-JNB-1-BR-2	WILL	303	117
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62253

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" (200mm) TRAFFIC SIGNAL SECTION
R	R	12" (300mm) TRAFFIC SIGNAL SECTION
W	W	12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
P	P	PREFORMED DETECTOR LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON DETECTOR
2	2	DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO.14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
1	1	GROUND CABLE IN CONDUIT NO.6 SOLID COPPER (GREEN)
24	24	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MMI2F & SMI2F
R Y G "P"	R Y G "P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE NSTALLATION
		LOCAL AND MASTER CONTROLLER
		MICROWAVE VEHICLE SENSOR
B	B	UNINTERUPTABLE POWER SUPPLY

REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

CABLE PLAN
MANHATTAN-MONEE ROAD
AT RAMP "A" AND "B"

SCALE: NONE
DATE: 04/09/2007

DRAWN BY: KGP/RDP
DESIGNED BY: PKG
CHECKED BY: PKG

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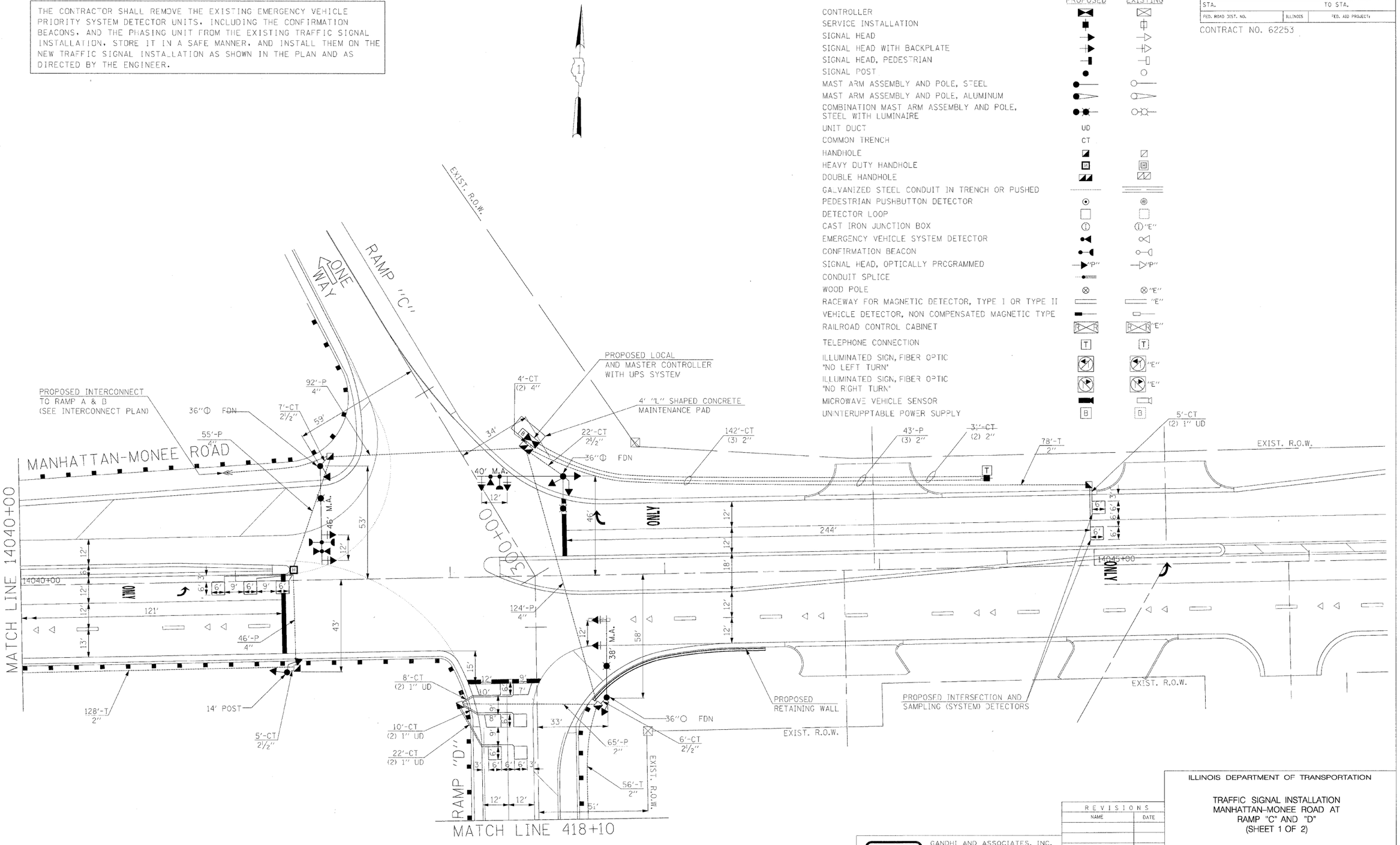
THE CONTRACTOR SHALL REMOVE THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM DETECTOR UNITS, INCLUDING THE CONFIRMATION BEACONS, AND THE PHASING UNIT FROM THE EXISTING TRAFFIC SIGNAL INSTALLATION, STORE IT IN A SAFE MANNER, AND INSTALL THEM ON THE NEW TRAFFIC SIGNAL INSTALLATION AS SHOWN IN THE PLAN AND AS DIRECTED BY THE ENGINEER.



TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	⊠	⊠
SERVICE INSTALLATION	■	⊟
SIGNAL HEAD	→	→
SIGNAL HEAD WITH BACKPLATE	→	→
SIGNAL HEAD, PEDESTRIAN	▮→	▯→
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●—	○—
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●—	○—
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE	●●—	○○—
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE	◪	◪
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE	◪◪	◪◪
GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED	----------	==========
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	◎
DETECTOR LOOP	□	□
CAST IRON JUNCTION BOX	Ⓘ	Ⓘ "E"
EMERGENCY VEHICLE SYSTEM DETECTOR	◀●	◁●
CONFIRMATION BEACON	●◀	○◁
SIGNAL HEAD, OPTICALLY PROGRAMMED	→"P"	→"P"
CONDUIT SPLICE	●●●	
WOOD POLE	⊗	⊗ "E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	═	═ "E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE	▬—	▭—
RAILROAD CONTROL CABINET	R R	R R "E"
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"
MICROWAVE VEHICLE SENSOR	▬	▭
UNINTERUPPTABLE POWER SUPPLY	B	B

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	93(1&2) R-3&9-1HB-1-BR-2	WILL	303	118
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62253

REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION
MANHATTAN-MONEE ROAD AT
RAMP "C" AND "D"
(SHEET 1 OF 2)

SCALE: 1"=20'
DATE: 04/09/2007

DRAWN BY: KGP/RDP
DESIGNED BY: PKG
CHECKED BY: PKG

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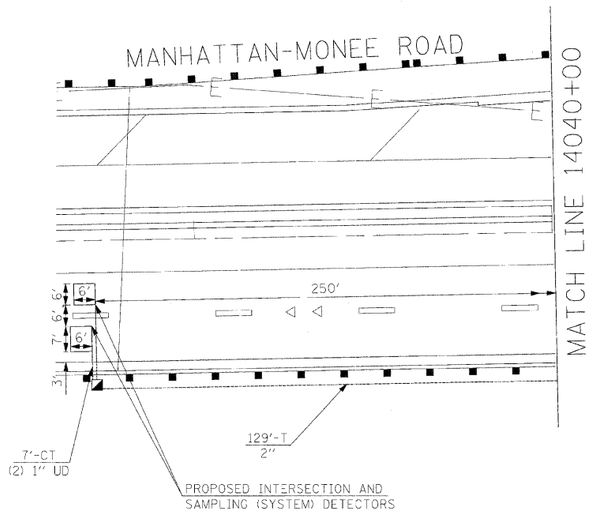
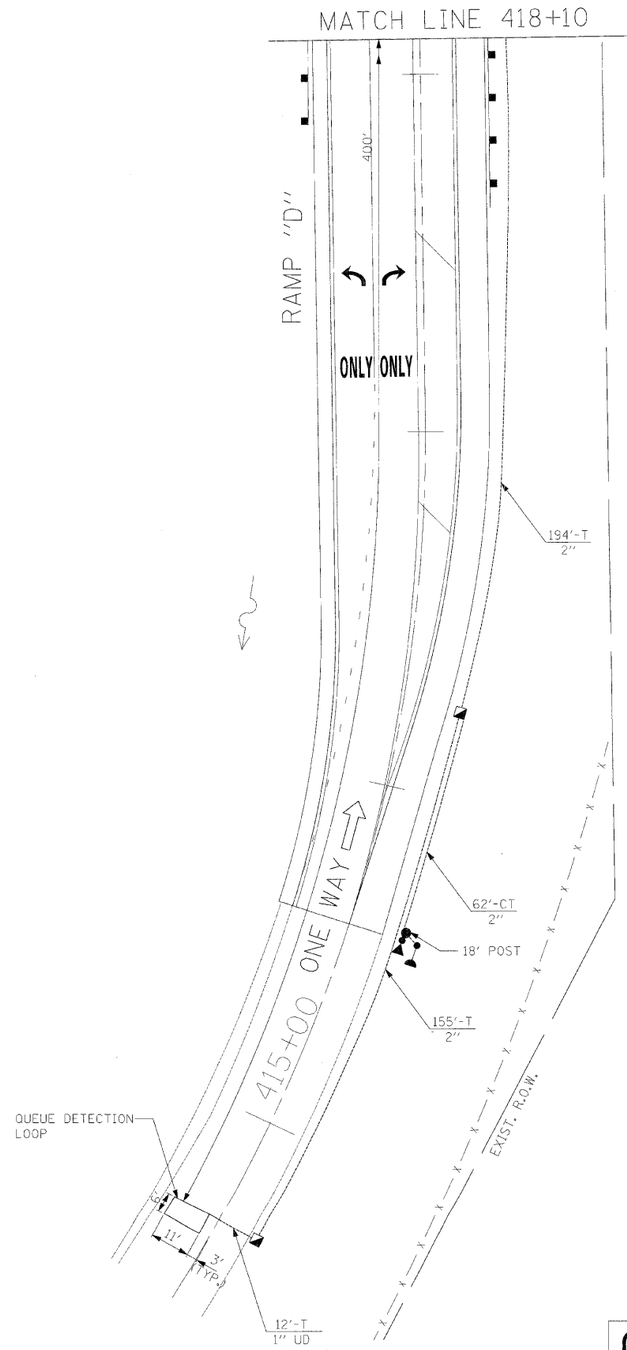
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	99I&2I R-3&9-1H3-1-BR-2	WILL	303	119
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62253





TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	■	☒
SERVICE INSTALLATION	■	☐
SIGNAL HEAD	→	→
SIGNAL HEAD WITH BACKPLATE	→	→
SIGNAL HEAD, PEDESTRIAN	■	☐
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●—	○—
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●—	○—
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE	●—	○—
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE	◪	◪
HEAVY DUTY HANDHOLE	◪ H	◪ H
DOUBLE HANDHOLE	◪◪	◪◪
GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED	----------	==========
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	⊙
DETECTOR LOOP	□	□
CAST IRON JUNCTION BOX	Ⓘ	Ⓘ "E"
EMERGENCY VEHICLE SYSTEM DETECTOR	●◀	○◁
CONFIRMATION BEACON	●◀	○◁
SIGNAL HEAD, OPTICALLY PROGRAMMED	→ "P"	→ "P"
CONDUIT SPLICE	—●—	
WOOD POLE	⊗	⊗ "E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE	▬	▭
RAILROAD CONTROL CABINET	R R	R R "E"
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"
MICROWAVE VEHICLE SENSOR	▬◀	▭◁

REVISIONS	
NAME	DATE

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SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION
MANHATTAN-MONEE ROAD AT
RAMP "C" AND "D"
(SHEET 2 OF 2)

SCALE: 1"=20'
DATE: 04/09/2007

DRAWN BY: KGP/RDP
DESIGNED BY: PKG
CHECKED BY: PKG

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	99(1&2) R-3&9-1HB-1-BR-2	WILL	303	120
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

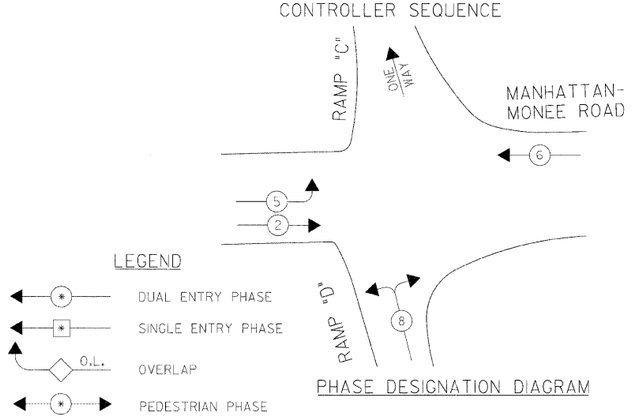
CONTRACT NO. 62253

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
15	SQ FT	SIGN PANEL - TYPE 2
1290	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
40	FOOT	CONDUIT IN TRENCH, 2½" DIA., GALVANIZED STEEL
8	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
194	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
317	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
8	EACH	HANDHOLE
1	EACH	HEAVY- DUTY HANDHOLE
1	EACH	DOUBLE HANDHOLE
956	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE V CABINET
1	EACH	TRANSCEIVER-FIBER OPTIC
* 781	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
1752	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
282	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
2776	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
235	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 38 FT
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 40 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 46 FT.
8	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
45	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
5	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 5 SECTION, MAST-ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 3-FACE, 2-3 SECTION, 1-5 SECTION BRACKET MOUNTED
6	EACH	TRAFFIC SIGNAL BACKPLATE
8	EACH	INDUCTIVE LOOP DETECTOR
* 1	EACH	LIGHT DETECTOR
* 2	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT
* 1	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
517	FOOT	PREFORMED DETECTOR LOOP
1	EACH	SERVICE INSTALLATION, POLE MOUNTED
1	EACH	UNINTERRUPTABLE POWER SUPPLY
1149	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
* 781	FOOT	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED

* 100% COST TO VILLAGE OF MONEE

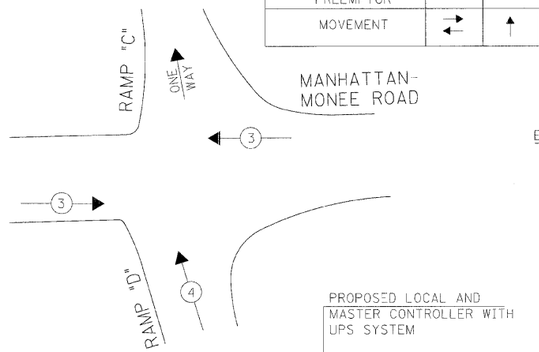
CONTROLLER SEQUENCE

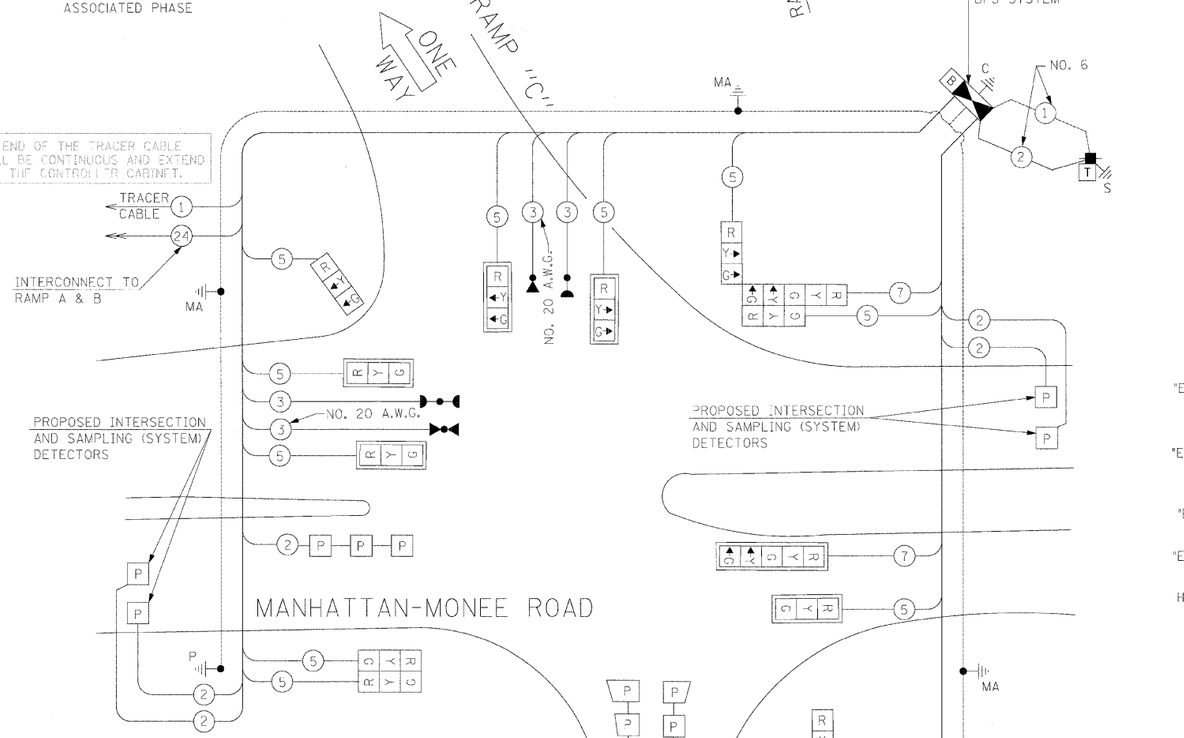


PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	→ ←	↑





CABLE PLAN

NOT TO SCALE

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" (200mm) TRAFFIC SIGNAL SECTION
R	R	12" (300mm) TRAFFIC SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
P	P	PREFORMED DETECTOR LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON DETECTOR
(2)	(2)	DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
(1)	(1)	GROUND CABLE IN CONDUIT NO.6 SOLID COPPER (GREEN)
(24)	(24)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MMI2F & SMI2F
"E" R Y G "P"	R Y G "P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
		LOCAL AND MASTER CONTROLLER
		MICROWAVE VEHICLE SENSOR
B	B	UNINTERUPTABLE POWER SUPPLY

I.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO LAMPS	X WATTAGE INCAND.	WATTAGE LED	X %OPERATION	TOTAL WATTAGE
SIGNAL (RED)	13	135	17	0.50	110.5
(YELLOW)	13	135	25	0.25	81.25
(GREEN)	13	135	15	0.25	48.75
ARROW	4	135	12	0.10	4.8
PED. SIGNAL	0	90	25	1.00	3.0
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN				0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	345.3

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MR. BRIAN SURDY
PHONE: 708-235-2352
COMPANY: COMED-EDISON

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A-POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D-CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'-H -2= (6m-H -0.6m)=
E-M.ARM POLE		SIGNAL POST	2 (1.0)		
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

CABLE PLAN
MANHATTAN-MONEE ROAD
AT RAMP "C" AND "D"

SCALE: NONE
DATE: 04/09/2007

DRAWN BY: KGP/RDP
DESIGNED BY: PKG
CHECKED BY: PKG

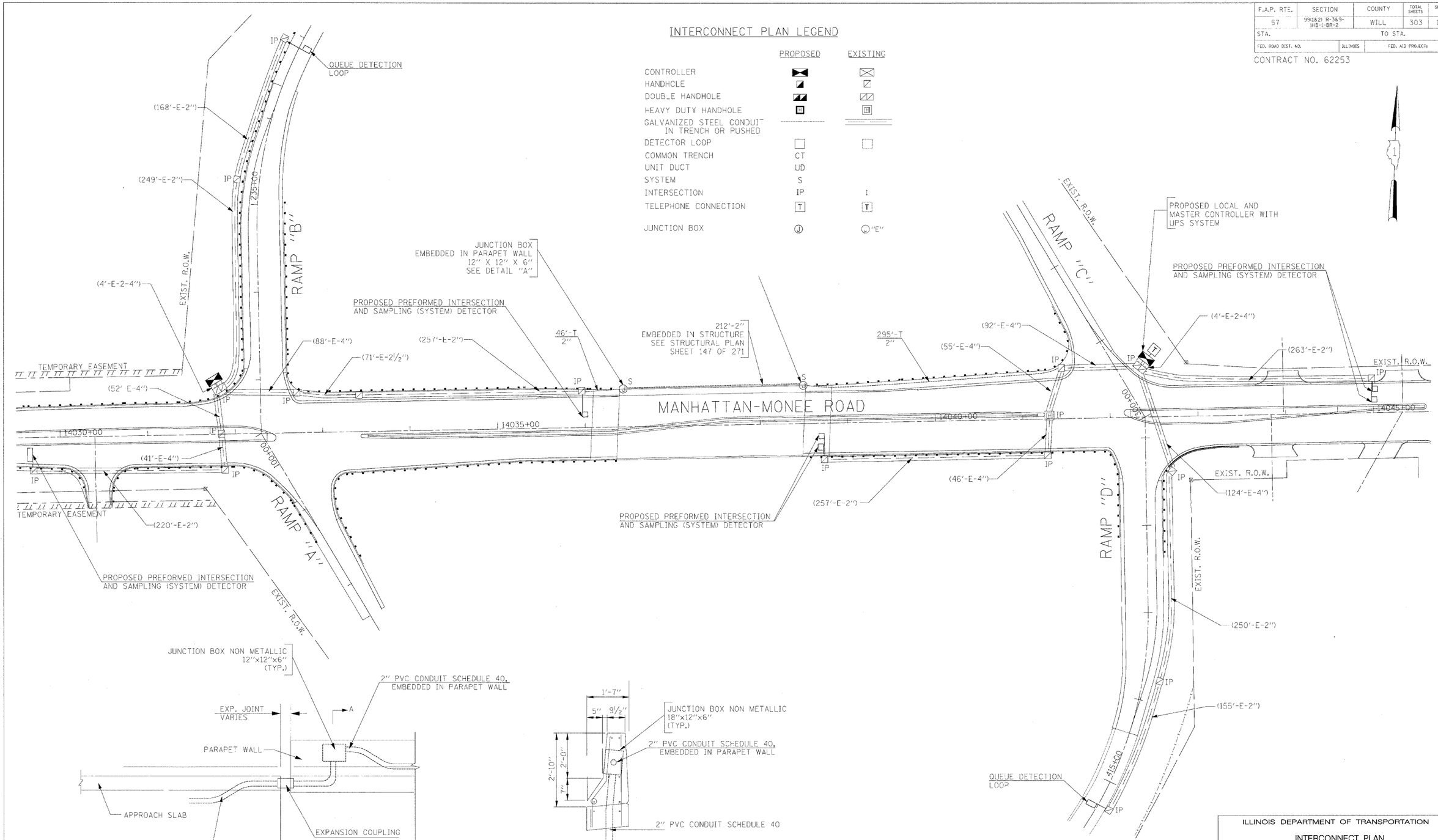
t:\projects 2002\ll-57 ts\15_RampC&D_CD.dgn
8/1/2008
9:00:55 AM

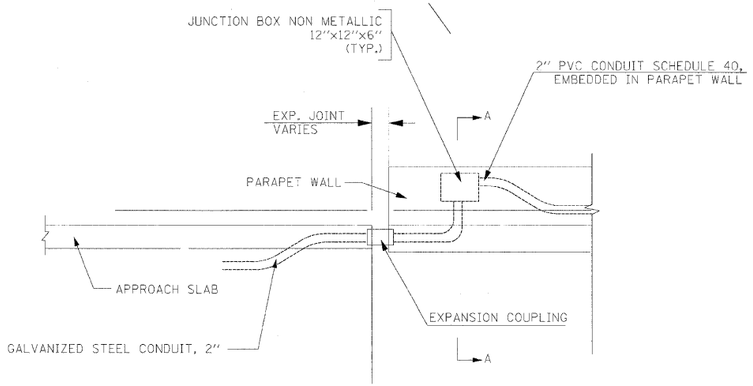
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
57	99(1&2) R-3&9-1HB-1-BR-2	WILL	303	121
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62253

INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER	▬	⊠
HANDHOLE	◪	◸
DOUBLE HANDHOLE	◪◪	◸◸
HEAVY DUTY HANDHOLE	⊡	⊡
GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED	———	═══
DETECTOR LOOP	□	□
COMMON TRENCH	CT	
UNIT DUCT	UD	
SYSTEM	S	
INTERSECTION	IP	I
TELEPHONE CONNECTION	T	T
JUNCTION BOX	J	○ "E"





DETAIL "A"

SECTION A-A

REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN
MANHATTAN-MONEE ROAD AT
I-57 INERCHANGE
RAMP A&B TO RAMP C&D

SCALE: 1"=50'
DATE: 04/09/2007

DRAWN BY: KGP/RDP
DESIGNED BY: PKG
CHECKED BY: PKG

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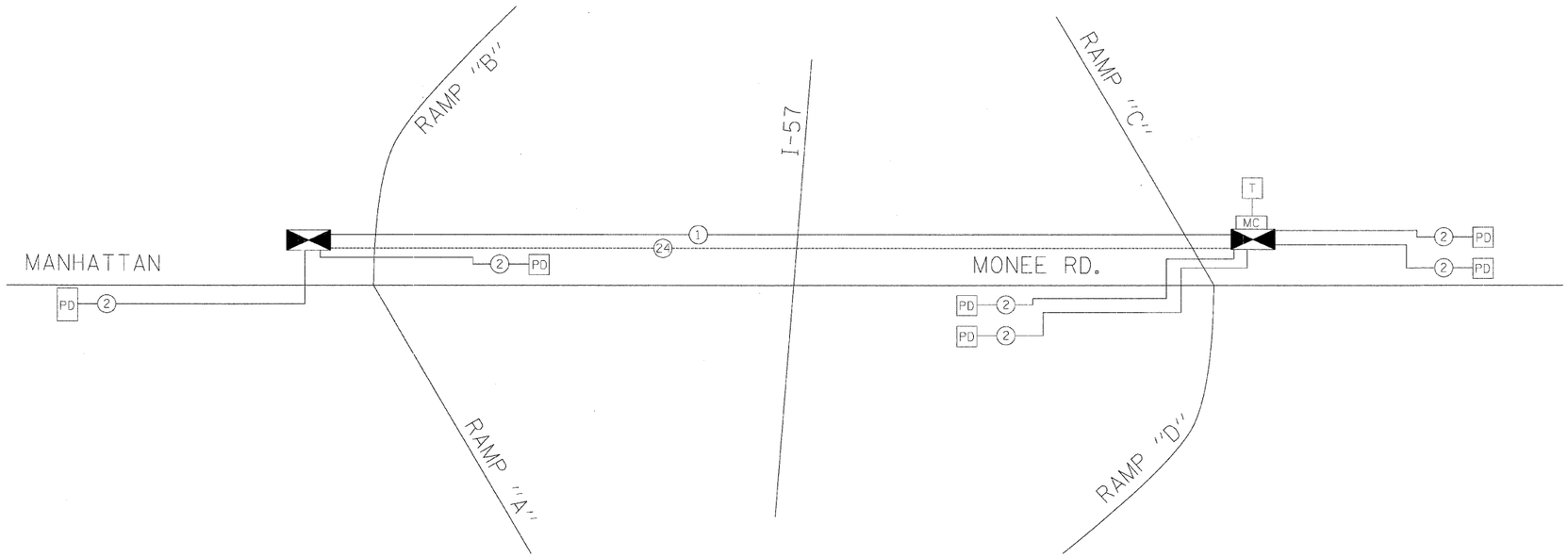
8/1/2008
9:00:58 AM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99(1&2) R-3&9-IHS-1-BR-2	WILL	303	122
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62253



INTERCONNECT SCHEMATIC LEGEND

- EXISTING INTERSECTION CONTROLLER
- PROPOSED INTERSECTION CONTROLLER
- EMC — EXISTING MASTER CONTROLLER
- MC — PROPOSED MASTER CONTROLLER
- MMC — MASTER MASTER CONTROLLER
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- P — EXISTING INTERSECTION LOOP DETECTORS AND PROPOSED SAMPLING (SYSTEM) DETECTORS
- ES — EXISTING SAMPLING (SYSTEM) DETECTORS
- PS — PROPOSED SAMPLING (SYSTEM) DETECTORS
- ESP — EXISTING SAMPLING (SYSTEM) DETECTORS. PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS.
- ESPS — EXISTING SAMPLING (SYSTEM) DETECTORS. PROPOSED SAMPLING (SYSTEM) DETECTORS.
- PD — EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- PD — PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- ESPD — EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS.
- PSPD — PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS.
- (24) — EXISTING FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F & SM12F
- (24) — PROPOSED FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F & SM12F
- (12) — EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F. FIBER OPTIC CABLE
- (12) — PROPOSED INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE
- (6) — EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED
- (6) — PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED
- (2) — EXISTING LOOP DETECTOR CABLE - 2/C TWISTED, SHIELDED
- (2) — PROPOSED LOOP DETECTOR CABLE -2/C TWISTED, SHIELDED
- (1) — EXISTING ELECTRIC CABLE 1/C (AS SPECIFIED)
- (1) — PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED)
- T — EXISTING TELEPHONE CONNECTION
- T — PROPOSED TELEPHONE CONNECTION

INTERCONNECT SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
341	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
212	FOOT	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC
2	EACH	JUNCTION BOX EMBEDDED IN STRUCTURE, 12" X 12" X 6"
341	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	MASTER CONTROLLER
1143	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C
1	EACH	OPTIMIZE TRAFFIC SIGNAL SYSTEM
1169	FOOT	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F

REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC AND SCHEDULE OF QUANTITIES
MANHATTAN-MONEE ROAD AT I-57 INTERCHANGE
RAMP A&B TO RAMP C&D

SCALE: NONE
DATE: 04/09/2007

DRAWN BY: KGP/RDP
DESIGNED BY: PKG
CHECKED BY: PKG

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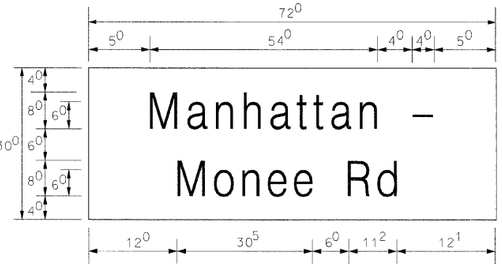
8/1/2008
9:01:00 AM



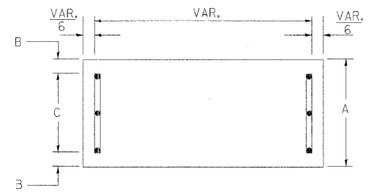
PANEL SIGN DESIGN TYPE 2

15.00 Sq. Ft. each

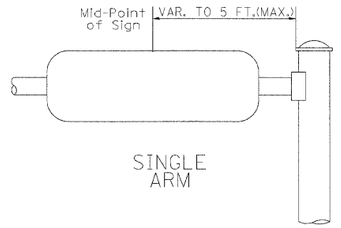
2 Required

Design Series D

SUPPORTING CHANNELS

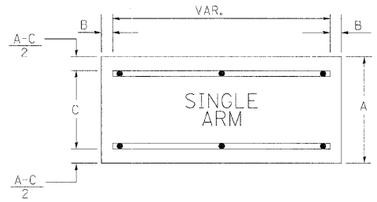


A	B	C
18"	2"	12"



SINGLE ARM

SUPPORTING CHANNELS



A	B	C
18"	2"	12"
30"	2"	22"

NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

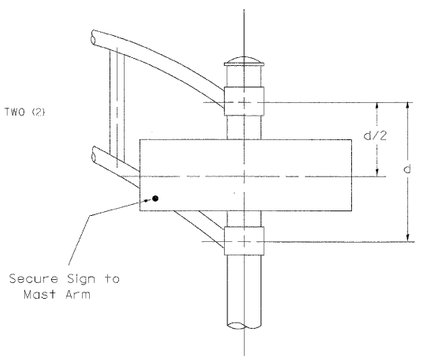
GENERAL NOTES

1. WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 834001, 834006 AND 834011, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 6'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
2. ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
3. THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 6'-0".
4. ALL BORDERS SHALL BE ¾" WIDE AND CORNER RADIUS SHALL BE 2-1/4 ".
5. SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:
   - * A.K.T. CORPORATION, SCHAUMBURG, IL
   - * TUCKER COMPANY, INC., WAUWATOSA, WI
   - * AMERICAN FABRICATION CO., CHICAGO HEIGHTS, IL
   - * WESTERN TRAFFIC CONTROL INC., CICERO, IL

PARTS LISTING:

SIGN CHANNEL	PART #HPNO53 (MED. CHANNEL)
SIGN SCREWS	¼" x 14 x 1" H.W.H. #3 SELF TAPPING WITH NEOPRENE WASHER
BRACKETS	PART #HPNO34 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.



DUAL ARM

SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM

Shall be used. See Note #5.

Upper Case To Lower Case

Spacing Chart 8-6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER: a c d e g o q		b h i k l m n p r u		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
A W X	1^{2}	1^{4}	1^{4}	1^{5}	1^{2}	1^{4}	0^{6}	1^{0}	1^{1}	1^{4}	0^{6}	1^{0}	1^{1}	1^{2}	1^{2}	1^{4}
B	1^{4}	1^{5}	2^{0}	2^{1}	1^{4}	1^{5}	1^{1}	1^{2}	1^{4}	1^{5}	1^{2}	1^{4}	1^{2}	1^{4}	1^{6}	1^{7}
C E G	1^{4}	1^{5}	2^{0}	2^{1}	1^{2}	1^{4}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}
D O Q R	1^{4}	1^{5}	2^{0}	2^{1}	1^{4}	1^{5}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}
F	0^{5}	0^{6}	1^{4}	1^{5}	0^{6}	1^{0}	0^{5}	0^{6}	0^{6}	1^{0}	0^{6}	1^{0}	0^{6}	1^{0}	1^{1}	1^{2}
H I M N	2^{0}	2^{1}	2^{2}	2^{4}	2^{0}	2^{1}	1^{4}	1^{5}	1^{6}	1^{7}	1^{6}	1^{7}	2^{0}	2^{1}	2^{0}	2^{1}
J U	2^{0}	2^{1}	2^{0}	2^{1}	1^{6}	1^{7}	1^{4}	1^{5}	1^{6}	1^{7}	1^{6}	1^{7}	1^{6}	1^{7}	2^{0}	2^{1}
K L	1^{1}	1^{2}	1^{6}	1^{7}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}
P	1^{2}	1^{4}	1^{4}	1^{5}	1^{2}	1^{4}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}	1^{2}	1^{4}
S	1^{2}	1^{4}	1^{6}	1^{7}	1^{2}	1^{4}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}
T	1^{1}	1^{2}	1^{6}	1^{7}	0^{6}	1^{0}	0^{6}	1^{0}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}
V	0^{6}	1^{0}	1^{4}	1^{5}	1^{1}	1^{2}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}
Y	0^{5}	0^{6}	1^{4}	1^{5}	0^{6}	1^{0}	0^{5}	0^{6}	0^{5}	0^{7}	0^{5}	0^{6}	0^{6}	1^{0}	1^{1}	1^{2}
Z	1^{6}	1^{7}	2^{2}	2^{4}	1^{6}	1^{7}	1^{2}	1^{4}	1^{6}	1^{7}	1^{6}	1^{7}	1^{6}	1^{7}	2^{0}	2^{1}

Lower Case To Lower Case

Spacing Chart 6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER: a c d e g o q		b h i k l m n p r u		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
a d h g i j l m n q u	1^{6}	1^{7}	2^{2}	2^{4}	1^{6}	1^{7}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}	1^{6}	1^{7}	1^{6}	1^{7}
b f k o p s	1^{2}	1^{4}	1^{6}	1^{7}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}	1^{2}	1^{4}
c e	1^{2}	1^{4}	1^{6}	1^{7}	1^{2}	1^{4}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}
r	0^{6}	1^{0}	1^{2}	1^{4}	0^{6}	1^{0}	0^{3}	0^{3}	0^{5}	0^{6}	0^{5}	0^{6}	0^{6}	1^{0}	0^{6}	1^{0}
t z	1^{2}	1^{4}	1^{6}	1^{7}	1^{2}	1^{4}	0^{6}	1^{0}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}	1^{2}	1^{4}
v y	1^{1}	1^{2}	1^{4}	1^{5}	1^{1}	1^{2}	0^{5}	0^{6}	0^{6}	1^{0}	0^{6}	1^{0}	1^{1}	1^{2}	1^{1}	1^{2}
w	1^{1}	1^{2}	1^{4}	1^{5}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}
x	1^{2}	1^{4}	1^{6}	1^{7}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}

Number To Number

Spacing Chart 8 Inch Series "C & D"

FIRST NUMBER	SECOND NUMBER: 0		1		2		3		4		5		6		7		8		9	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
0 9	1^{6}	1^{7}	1^{6}	1^{7}	1^{4}	1^{5}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}	1^{6}	1^{7}	1^{2}	1^{4}	1^{6}	1^{7}	1^{6}	1^{7}
1	2^{0}	2^{1}	2^{0}	2^{1}	2^{0}	2^{1}	1^{6}	1^{7}	1^{4}	1^{5}	2^{0}	2^{1}	2^{0}	2^{1}	1^{4}	1^{5}	2^{0}	2^{1}	2^{0}	2^{1}
2 3 4	1^{4}	1^{5}	1^{4}	1^{5}	1^{4}	1^{5}	1^{2}	1^{4}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}	1^{1}	1^{2}	1^{6}	1^{7}	1^{4}	1^{5}
5	1^{4}	1^{5}	1^{4}	1^{5}	1^{4}	1^{5}	1^{1}	1^{2}	1^{1}	1^{2}	1^{4}	1^{5}	1^{4}	1^{5}	1^{1}	1^{2}	1^{4}	1^{5}	1^{4}	1^{5}
6	1^{6}	1^{7}	1^{4}	1^{5}	1^{4}	1^{5}	1^{2}	1^{5}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}	1^{1}	1^{2}	1^{4}	1^{5}	1^{4}	1^{5}
7	1^{2}	1^{4}	1^{2}	1^{4}	1^{4}	1^{5}	1^{2}	1^{5}	0^{5}	0^{6}	1^{2}	1^{4}	1^{4}	1^{5}	1^{1}	1^{2}	1^{4}	1^{5}	1^{2}	1^{4}
8	1^{6}	1^{7}	1^{6}	1^{7}	1^{4}	1^{5}	1^{2}	1^{5}	1^{2}	1^{4}	1^{4}	1^{5}	1^{6}	1^{7}	1^{2}	1^{4}	1^{6}	1^{7}	1^{4}	1^{5}

EXAMPLE, $2^{(3)}$ — DENOTES $\frac{3}{8}$"

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99X1&2I R-3&9-1H3-1-BR-2	WILL	303	123
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62253

UPPER AND LOWER CASE LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS SERIES C	D	8 INCH UPPER CASE LETTERS SERIES C	D	LETTERS	6 INCH LOWER CASE LETTERS SERIES C	D
A	3^{6}	5^{0}	5^{0}	6^{5}	a	3^{5}	4^{2}
B	3^{2}	4^{0}	4^{3}	5^{3}	b	3^{5}	4^{2}
C	3^{2}	4^{0}	4^{3}	5^{3}	c	3^{5}	4^{1}
D	3^{2}	4^{0}	4^{3}	5^{3}	d	3^{5}	4^{2}
E	3^{0}	3^{5}	4^{0}	4^{7}	e	3^{5}	4^{2}
F	3^{0}	3^{5}	4^{0}	4^{7}	f	2^{3}	2^{6}
G	3^{2}	4^{0}	4^{3}	5^{3}	g	3^{5}	4^{2}
H	3^{2}	4^{0}	4^{3}	5^{3}	h	3^{5}	4^{2}
I	0^{7}	0^{7}	1^{1}	1^{2}	i	1^{1}	1^{1}
J	3^{0}	3^{6}	4^{0}	5^{0}	j	2^{0}	2^{2}
K	3^{2}	4^{1}	4^{3}	5^{4}	k	3^{5}	4^{2}
L	3^{0}	3^{5}	4^{0}	4^{7}	l	1^{1}	1^{1}
M	3^{7}	4^{5}	5^{1}	6^{1}	m	6^{0}	7^{0}
N	3^{2}	4^{0}	4^{3}	5^{3}	n	3^{5}	4^{2}
O	3^{4}	4^{2}	4^{5}	5^{5}	o	3^{6}	4^{3}
P	3^{2}	4^{0}	4^{3}	5^{3}	p	3^{5}	4^{2}
Q	3^{4}	4^{2}	4^{5}	5^{5}	q	3^{5}	4^{2}
R	3^{2}	4^{0}	4^{3}	5^{3}	r	2^{6}	3^{2}
S	3^{2}	4^{0}	4^{3}	5^{3}	s	3^{6}	4^{2}
T	3^{0}	3^{5}	4^{0}	4^{7}	t	2^{7}	3^{2}
U	3^{2}	4^{0}	4^{3}	5^{3}	u	3^{5}	4^{2}
V	3^{5}	4^{4}	4^{7}	6^{0}	v	4^{2}	4^{7}
W	4^{4}	5^{2}	6^{0}	7^{0}	w	5^{5}	6^{4}
X	3^{4}	4^{0}	4^{5}	5^{3}	x	4^{4}	5^{1}
Y	3^{6}	5^{0}	5^{0}	6^{6}	y	4^{6}	5^{3}
Z	3^{2}	4^{0}	4^{3}	5^{3}	z	3^{6}	4^{3}

NUMBER	6 INCH SERIES C	D	8 INCH SERIES C	D
1	1^{2}	1^{4}	1^{5}	2^{0}
2	3^{2}	4^{0}	4^{3}	5^{3}
3	3^{2}	4^{0}	4^{3}	5^{3}
4	3^{5}	4^{3}	4^{7}	5^{7}
5	3^{2}	4^{0}	4^{3}	5^{3}
6	3^{2}	4^{0}	4^{3}	5^{3}
7	3^{2}	4^{0}	4^{3}	5^{3}
8	3^{2}	4^{0}	4^{3}	5^{3}
9	3^{2}	4^{0}	4^{3}	5^{3}
0	3^{4}	4^{2}	4^{5}	5^{5}

REVISIONS NAME	DATE
D.A.Z./D.A.G.	11/90
	6/98
CADD	10/00

Illinois Department of Transportation
DISTRICT 1

MAST ARM MOUNTED STREET NAME SIGNS

SCALE: NONE

DATE: $$DATE$$

DRAWN BY: RDB
DESIGNED BY: JHE
CHECKED BY: DAD

I:\projects 2002\11-57 ts\18_Signs.dgn
8/1/2008
9:01:02 AM

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99(1&2) R-3&9-1(B-1-BR-2	WILL	303	124
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LEGEND

- PROPOSED LIGHTING UNIT WITH BREAKAWAY DEVICE (TRANSFORMER BASE) 47.5' M.H., 15' M.A., 310W HPS, TYPE MC-III, 240V LUMINAIRE
- PROPOSED LIGHTING UNIT, BRIDGE MOUNTED 47.5' M.H., 15' M.A., 310W HPS, TYPE MC-III, 240V LUMINAIRE
- PROPOSED COMBINATION LIGHTING UNIT 45' M.H., 15' M.A., 310W HPS, TYPE MC-III, 240V LUMINAIRE
- (R) EXISTING LIGHTING UNIT TO BE REMOVED 40' M.H., 6' M.A., 400W, 240V HPS LUMINAIRE
- (E) EXISTING HIGH MAST TOWER TO REMAIN 100' M.H., (3) 1000W HPS, TYPE MC-II, 240V LUMINAIRES
- (T) LIGHT POLE, WOOD, 60FT, CLASS IV, TEMPORARY LIGHTING UNIT 50' M.H., 15' M.A., 400W, TYPE MC-III, 240V HPS LUMINAIRE
- RIGID GALVANIZED STEEL CONDUIT (RGC) PUSHED (P), OR TRENCHED (T) SIZE AS INDICATED
- PVC CONDUIT, EMBEDDED IN STRUCTURE, SIZE AS NOTED
- UNIT DUCT, AS SPECIFIED IN PLANS
- -E- EXISTING UNDERGROUND WIRING TO REMAIN UNLESS OTHERWISE NOTED
- -R- EXISTING UNIT DUCT TO BE ABANDONED OR REMOVED
- -A/C- AERIAL CABLE WITH MESSENGER WIRE, AS SPECIFIED IN PLANS
- PROPOSED LIGHTING CONTROLLER
- EXISTING LIGHTING CONTROLLER TO BE USED AS TEMPORARY
- ELECTRIC UTILITY POLE
- ELECTRIC GROUND ROD
- J JUNCTION BOX, SIZE AND TYPE AS SPECIFIED

CALL-OUT SAMPLES

DEFINITION	EXAMPLE
CKT. NO. LOCATION OFFSET FROM CENTER LINE OR FROM BASE LINE	MA1 STA. 14035+30, 50' RT
A C POLE NUMBER CIRCUIT NUMBER LIGHTING CONTROL CABINET	
CONDUIT SIZE TYPE, LENGTH, PUSHED (P) OR TRENCHED (T)	3" DIA. RGC, 50 FT., T
CIRCUITS CONDUCTORS RACEWAY	CKTS. MA&MB 3 1/C #2, 1/C #4 GND. 1½" DIA. UNIT DUCT
CONTROLLER DESIGNATION LOCATION DESCRIPTION	PROPOSED LIGHTING CONTROLLER "M" STA 14043+50, 45' LT 240/480 VAC, 1ø, 3 WIRE

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	DESCRIPTION
59	EACH	GROUND ROD, ⅝" DIA. X 10 FT.
1	EACH	ELECTRIC SERVICE INSTALLATION
1	L SUM	ELECTRIC UTILITY SERVICE CONNECTION
56	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
1,133	FOOT	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL
448	FOOT	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC
4	EACH	JUNCTION BOX EMBEDDED IN STRUCTURE 18" X 12" X 6"
110	FOOT	ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE USE) 3-1/C 350MCM
240	FOOT	AERIAL CABLE, 3-1/C NO. 4 WITH MESSENGER WIRE
11,744	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
65	EACH	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 310 WATT
4	EACH	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 WATT
60	EACH	LIGHT POLE, ALUMINUM, 47.5 FT. M.H., 15 FT. MAST ARM
4	EACH	LIGHT POLE, WOOD, 60 FOOT, CLASS 4, WITH 15FT MAST ARM
580	FOOT	LIGHT POLE FOUNDATION, 24" DIAMETER
58	EACH	BREAKAWAY DEVICE, TRANSFORMER BASE, 15 INCH BOLT CIRCLE
4	EACH	REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE
4	EACH	LIGHTING FOUNDATION REMOVAL
1	EACH	REMOVAL OF ELECTRIC SERVICE INSTALLATION
14	CAL MO	MAINTENANCE OF LIGHTING SYSTEM
65	EACH	LUMINAIRE SAFETY CABLE ASSEMBLY
470	FOOT	ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE-RHW) 3-1/C NO. 2 AND 1/C NO. 4 GROUND
16,247	FOOT	UNIT DUCT, WITH 3-1/C NO. 2 AND 1/C NO. 4 GROUND, 600V (EPR-TYPE RHW), 1½" DIA., POLYETHYLENE
1	EACH	LIGHTING CONTROLLER, DUPLEX CONSOLE TYPE
4	EACH	REMOVE TEMPORARY LIGHTING UNITS AND SALVAGE
1	EACH	REMOVE EXISTING LIGHTING CONTROLLER AND SALVAGE
1	EACH	REMOVE AND RELOCATE EXISTING LIGHTING CONTROLLER

ABBREVIATIONS

SYMBOL	DESCRIPTION
AC	ALTERNATING CURRENT
A/C	AERIAL CABLE
AFG	ABOVE FINISHED GRADE
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CM	CENTIMETER
CNC	COILABLE NONMETALLIC CONDUIT
CT	CURRENT TRANSFORMER
CP	CONTROL PANEL
DA	DAVIT ARM
DC	DIRECT CURRENT
DIA	DIAMETER
DP	DISTRIBUTION PANEL
E	EXISTING UNIT TO REMAIN
ECA	ELECTRIC CABLE ASSEMBLY
EM	EXISTING UNIT TO BE MODIFIED (e.g. NEW LUMINAIRE, BALLAST OR MAST ARM)
ER	EXISTING RELOCATED UNIT
ET	EXISTING TEMPORARY UNIT TO REMAIN
ETR	EXISTING TEMPORARY RELOCATED UNIT
FT	FEET OR FOOT
FND BW	FOUNDATION BARRIER WALL
FND BW OS	FOUNDATION BARRIER WALL OFFSET
FND CON	FOUNDATION CONCRETE
FND CON OS	FOUNDATION CONCRETE OFFSET
FND MET	FOUNDATION METAL
FND PW	FOUNDATION PARAPET WALL
FU	FUSE
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
JB	JUNCTION BOX
KVA	KILOVOLT-AMPERE
KW	KILOWATTS
LT	LEFT
M	METER
MA	MAST ARM
MM	MILLIMETER
MH	MOUNTING HEIGHT
NO. #	NUMBER
P	PROPOSED
PB	PUSH BUTTON
PNL	PANEL
PVCC RGC	PVC COATED RIGID GALVANIZED CONDUIT
PT	POTENTIAL TRANSFORMER
R	EXISTING UNIT TO BE REMOVED (OWNER SALVAGED U.N.O.)
RR	EXISTING UNIT TO BE REMOVED AND REINSTALLED
RECP	RECEPTACLE
RGC	RIGID GALVANIZED CONDUIT
RT	RIGHT
SEL SW	SELECTOR SWITCH
SPARE	SPARE
SPACE	SPACE
SS	STAINLESS STEEL
STA	STATION
T	TEMPORARY LIGHTING UNIT
TB	TRANSFORMER BASE
TMP	TEMPORARY
TR	TEMPORARY UNIT TO BE REMOVED. SALVAGE EQUIPMENT AS SPECIFIED
TRR	TEMPORARY UNIT TO BE REMOVED AND RELOCATED
TUR	TEMPORARY UNIT ON UTILITY POLE TO BE REMOVED
UD	UNIT DUCT
U.N.O.	UNLESS NOTED OTHERWISE
WP	WOOD POLE
XFMR	TRANSFORMER

GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL OF THE INFORMATION SHOWN ON THE CONTRACT DRAWINGS, WHICH WOULD AFFECT THE WORK UNDER THIS CONTRACT.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS PROJECT, SPECIFICALLY AS THEY RELATE TO LUMP SUM ITEMS AND UNIT PRICE ITEMS.
3. ALL NEW CONDUIT, UNIT DUCTS, DIRECT BURIAL CABLE, AND APPURTENANCES ARE INDICATED DIAGRAMMATICALLY ON THE DRAWINGS. THE ACTUAL LOCATIONS IN THE FIELD SHALL MEET WITH APPROVAL OF THE ENGINEER.
4. THE ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ASSOCIATED SUPPLEMENTAL CONDITIONS.
5. THE SCALE SHOWN ON PLAN DRAWINGS APPLIES ONLY TO THE FULL SIZE PLANS AND NOT TO REDUCED SIZE PLANS.
6. THE CONTRACTOR SHALL FURNISH AND INSTALL LUMINAIRE LAMPS IN ACCORDANCE WITH THE SUPPLIER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE SPECIFICATIONS. THE COST OF THIS WORK AND MATERIAL SHALL BE INCLUDED IN THE APPLICABLE LUMINAIRE PAY ITEM. SEPARATE PAYMENT WILL NOT BE MADE.
7. THE CONTRACTOR SHALL FURNISH AND INSTALL POLE WIRING AT EACH POLE. THIS SHALL BE CONSIDERED AS A PART OF THE LIGHT POLE PAY ITEMS. NO EXTRA COMPENSATION WILL BE ALLOWED FOR THIS ITEM.
8. ALL LUMINAIRES SHALL BE ORIENTED WITH THE OPTICS PERPENDICULAR TO THE ROADWAY UNLESS OTHERWISE INDICATED OR DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE APPLICABLE LUMINAIRE PAY ITEMS. SEPARATE PAYMENT WILL NOT BE MADE.
9. FOR THE EXISTING LIGHT POLE AND FOUNDATIONS THAT ARE TO BE REMOVED, THE ASSOCIATED UNDERGROUND CONDUITS AND CABLE SHALL BE SEPARATED FROM RESPECTIVE FOUNDATIONS AT 2.5 FEET BELOW GRADE AND SHALL BE ABANDONED.
10. ALL LIGHTING EQUIPMENT REMOVED AS PART OF THIS CONTRACT SHALL REMAIN THE PROPERTY OF THE IDOT AND SHALL BE DELIVERED TO THE STATE MAINTENANCE FACILITY.
11. CONDUITS AND UNIT DUCTS SHALL BE INSTALLED AT A MINIMUM 30" DEPTH BELOW GRADE AND POSITIONED IN THE FIELD TO AVOID CONFLICT WITH ROADWAY UNDERRAINS AND OTHER EXISTING AND PROPOSED UTILITIES. THE CONTRACTOR SHALL INCREASE DEPTH OF UNIT DUCT AND CONDUIT AS REQUIRED AT NO ADDITIONAL COST TO THE STATE. THE CONTRACTOR SHALL COORDINATE RACEWAY DEPTH WITH THE ELECTRICAL DETAILS AND THE ENGINEER.
12. WHERE MULTIPLE CONDUITS ADJACENT TO EACH OTHER ARE INSTALLED IN A COMMON TRENCH, TRENCH AND BACKFILL WILL NOT BE PAID FOR EACH CONDUIT, BUT WILL BE PAID FOR THE LENGTH OF THE COMMON TRENCH ONLY.
13. WHERE THE CONTRACTOR'S EXCAVATION MEETS AN OBSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR DIRECTION IN WRITING PRIOR TO EXCAVATION. THE CONTRACTOR SHALL RESTORE ANY DAMAGE TO EXISTING SYSTEMS OR UTILITIES AND REMOVE EXISTING OBSTRUCTIONS AND FOUNDATIONS TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE PAY ITEM.
14. WHEREVER THE TEMPORARY AERIAL CABLE IS REQUIRED TO CROSS AN EXISTING AND/OR PROPOSED ROADWAY, THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF TWENTY (20) FEET OF VERTICAL CLEARANCE OVER THE ROADWAY AT ALL TIMES.
15. THE CONTRACTOR SHALL MARK AND STAKE EACH LIGHT POLE LOCATION AND UNIT DUCT PATH AND SHALL OBTAIN APPROVAL OF THE ENGINEER, COORDINATED WITH THE BUREAU OF ELECTRICAL OPERATIONS, BEFORE FOUNDATION AND CABLE CONSTRUCTION IS BEGUN. THIS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROPER CONSTRUCTION, INCLUDING HEIGHT, BUT FAILURE TO GAIN THE APPROVAL LEAVES FOUNDATION AND CABLE WORK SUBJECT TO RELOCATION AT THE CONTRACTOR'S EXPENSE.

REVISIONS NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57

LEGENDS, GENERAL NOTES, AND SCHEDULE OF QUANTITIES

SCALE: NONE

DATE 10/09/2006

DRAWN BY: KGP
DESIGNED BY: PKG/KGP
CHECKED BY: PKG

J:\PROJECTS\Projects 2002\IL-57 @ Manhattan\E01_LEGEND_QTY_NOTES.dgn
2/20/2008
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99(1&2) R-3&9-1HB-1-BR-2	WILL	303	125
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

MATCH LINE STA. 234+00 (SHEET 4 OF 5)

CKTS: MO & MP
3 1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT
(TYP.)

EXIST. R.O.W.

RAMP "B"

MO1
STA. 235+35,
25' RT

3" DIA.
RGC, 62FT., P

MG5
STA. 14029+55,
38' LT

MH4
STA. 14031+73,
COMBINATION POLE

MANHATTAN-MONEE ROAD

14025+00

14030+00

14035+00

MG4
STA. 14032+74,
52' LT

MH3
STA. 14033+46,
50' LT

CKTS: MG & MH
3 1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT
(TYP.)

JUNCTION BOX
18"X12"X6", EMBEDDED IN
PARAPET WALL, (TYP.)
SEE DETAIL SHEET 133

MG3
STA. 14035+30,
50' LT

MATCH LINE STA. 1352+00 (SHEET 4 OF 5)

CKTS: MM & MN
3 1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT
(TYP.)

MM2
STA. 1349+90,
71' LT

MK2
STA. 1349+90,
71' RT

MH2
STA. 14037+53.67,
BRIDGE MOUNTED

MATCH LINE STA. 14039+00 (SHEET 2 OF 5)

MJ7
STA. 14024+65,
27' RT

MI7
STA. 14026+35,
31' RT

MJ6
STA. 14027+95,
32' RT

3" DIA.
RGC, 36FT., P

MI6
STA. 14029+55,
39' RT

3" DIA.
RGC, 46FT., P

CKTS: MI & MJ
3 1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT
(TYP.)

MJ5
STA. 14031+73,
41' RT

MI5
STA. 100+62,
18' RT

3" DIA.
RGC, 55FT., P

EXIST. R.O.W.

MM5
STA. 102+55,
14.5' RT

CKTS: MM & MN
3 1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT
(TYP.)

RAMP "A"

MN4
STA. 104+65,
14.5' RT

MJ4
STA. 14033+46,
COMBINATION POLE

MI4
STA. 14035+30,
41' RT

3 1/C#2, 1/C#4 GND IN
2" DIA. PVC CONDUIT,
EMBEDDED IN STRUCTURE (TYP.)

MJ3
STA. 14037+49.45,
BRIDGE MOUNTED

ML2
STA. 1347+60,
71' RT

MN2
STA. 1347+60,
71' LT

℄ I-57

CKTS: MK & ML
3 1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT
(TYP.)

MM3
STA. 1345+30,
71' LT

MK3
STA. 1345+30,
71' RT

MATCH LINE STA. 1345+00 (SHEET 3 OF 5)

MATCH LINE STA. 105+00 (SHEET 3 OF 5)

REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57

PROPOSED LIGHTING PLAN
SHEET 1 OF 5

SCALE: 1"=50'

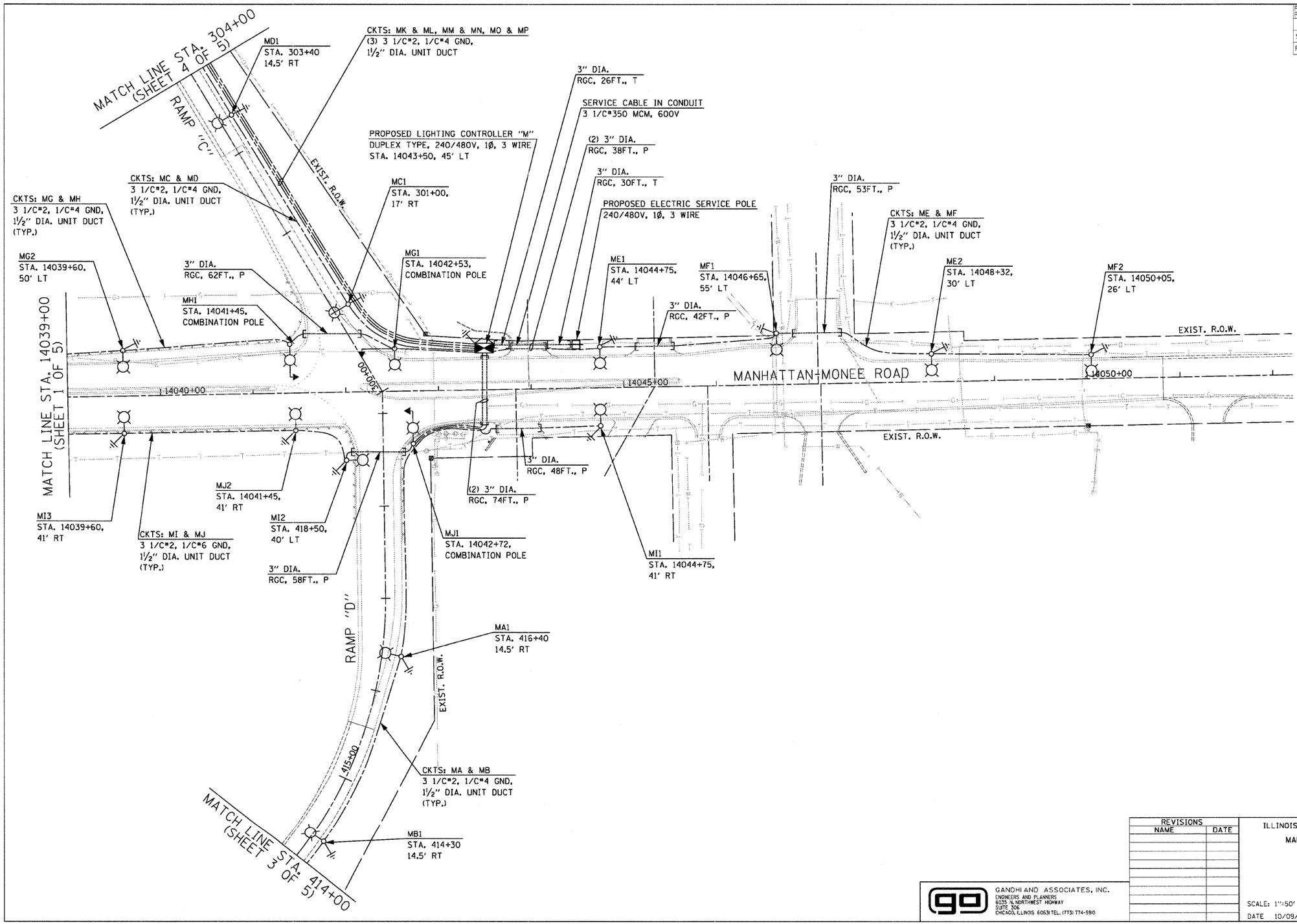
DATE 10/09/2006

DRAWN BY: KGP
DESIGNED BY: PKG/KGP
CHECKED BY: PKG

SFILES
SDATES
STIMES

\E02_PRO_LIGHTING.dgn 2/20/2008 4:00:22 PM

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99(1&2) R-3&9-1HB-1-BR-2	WILL	303	126
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION
MANHATTAN-MONEE ROAD AT I-57
PROPOSED LIGHTING PLAN
SHEET 2 OF 5

SCALE: 1"=50'
DATE 10/09/2006

DRAWN BY: KGP
DESIGNED BY: PKG/KGP
CHECKED BY: PKG

$FILES
$DATES
$TIMES

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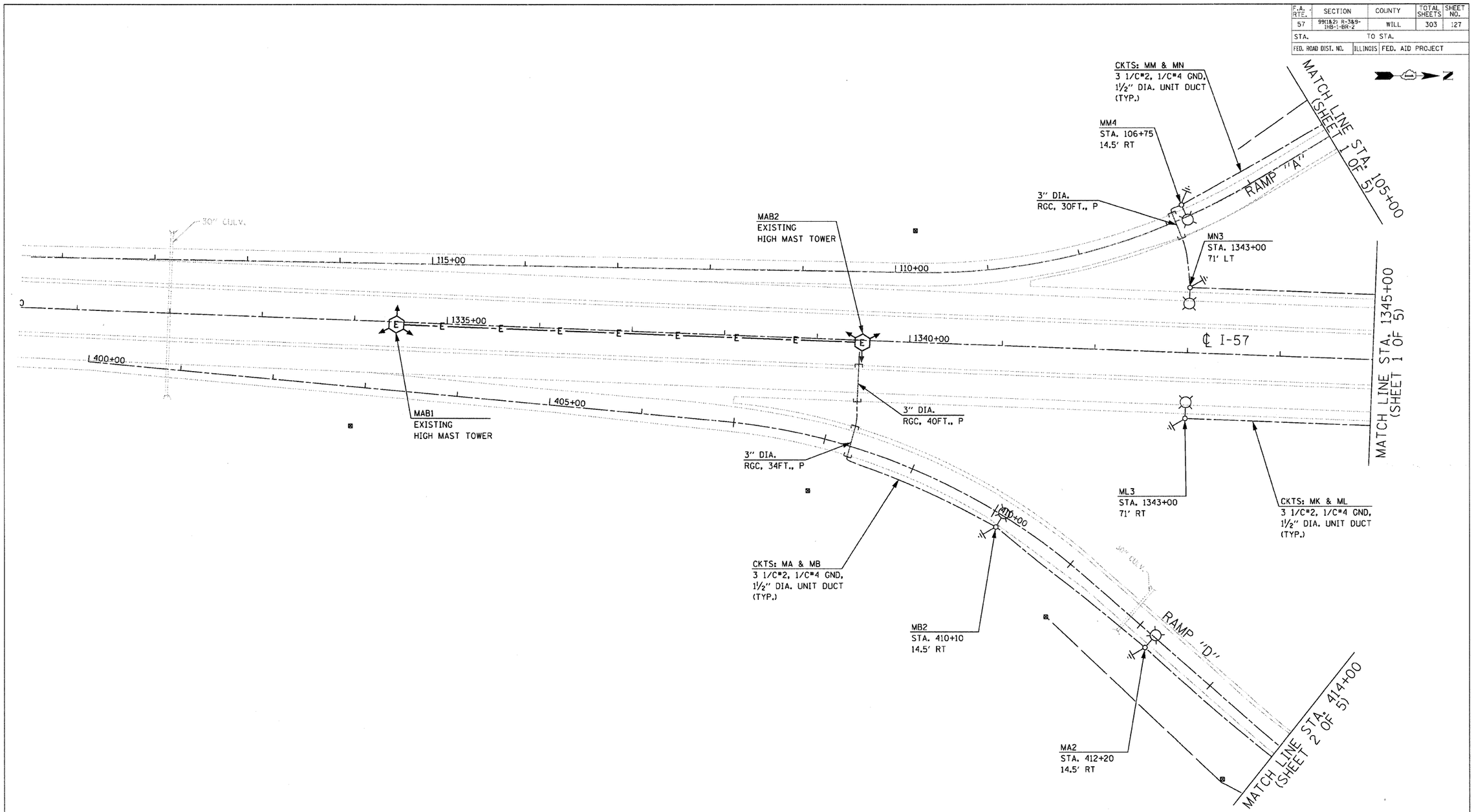
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99(1&2) R-3&9-1HB-1-BR-2	WILL	303	:27
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL.: (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57

PROPOSED LIGHTING PLAN
SHEET 3 OF 5

SCALE: 1"=50'

DATE 10/09/2006

DRAWN BY: KGP
DESIGNED BY: PKG/KGP
CHECKED BY: PKG

$FILE$
$DATE$
$TIME$

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99I(&2) R-389-1HB-1-BR-2	WILL	303	128
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

MATCH LINE STA. 234+00 (SHEET 1 OF 5)

MP1
STA. 233+25,
14.5' RT

M02
STA. 231+15,
14.5' RT

MP2
STA. 228+90,
14.5' RT

RAMP "B"

1230+00

CKTS: MM & MN
3 1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT
(TYP.)

CKTS: MO & MP
3 1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT
(TYP.)

M03
STA. 226+80,
14.5' RT

MP3
STA. 224+70,
14.5' RT

3" DIA.
RGC, 32FT., P

MN1
STA. 1352+20
71' LT

MM1
STA. 1354+50
71' LT

(2) 3" DIA.
RGC, 40FT., P

MCD1
EXISTING
HIGH MAST TOWER

1225+00

1220+00

MATCH LINE STA. 1352+00 (SHEETS 1 OF 5)

1355+00

℄ I-57

1360+00

1365+00

MATCH LINE STA. 1366+00 (SHEET 5 OF 5)

CKTS: MK & ML
3 1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT
(TYP.)

(2) 3" DIA.
RGC, 40FT., P

MK1
STA. 1354+50
71' RT

ML1
STA. 1352+20
71' RT

3" DIA.
RGC, 61FT., P

MCD2
EXISTING
HIGH MAST TOWER

PAVED DITCH

RAMP "B"

305+00

MD2
STA. 308+20,
14.5' RT

CKTS: MC & MD
3 1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT
(TYP.)

(3) 3" DIA.
RGC, 30FT., P

MC2
STA. 305+80,
14.5' RT

MATCH LINE STA. 304+00 (SHEET 2 OF 5)

CKTS: MK & ML, MM & MN, MO & MP
(3) 3 1/C#2, 1/C#4 GND,
1½" DIA. UNIT DUCT

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57

PROPOSED LIGHTING PLAN
SHEET 4 OF 5

SCALE: 1"=50'

DATE 10/09/2006

DRAWN BY: KGP
DESIGNED BY: PKG/KGP
CHECKED BY: PKG

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5900

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SDATES
STIMES

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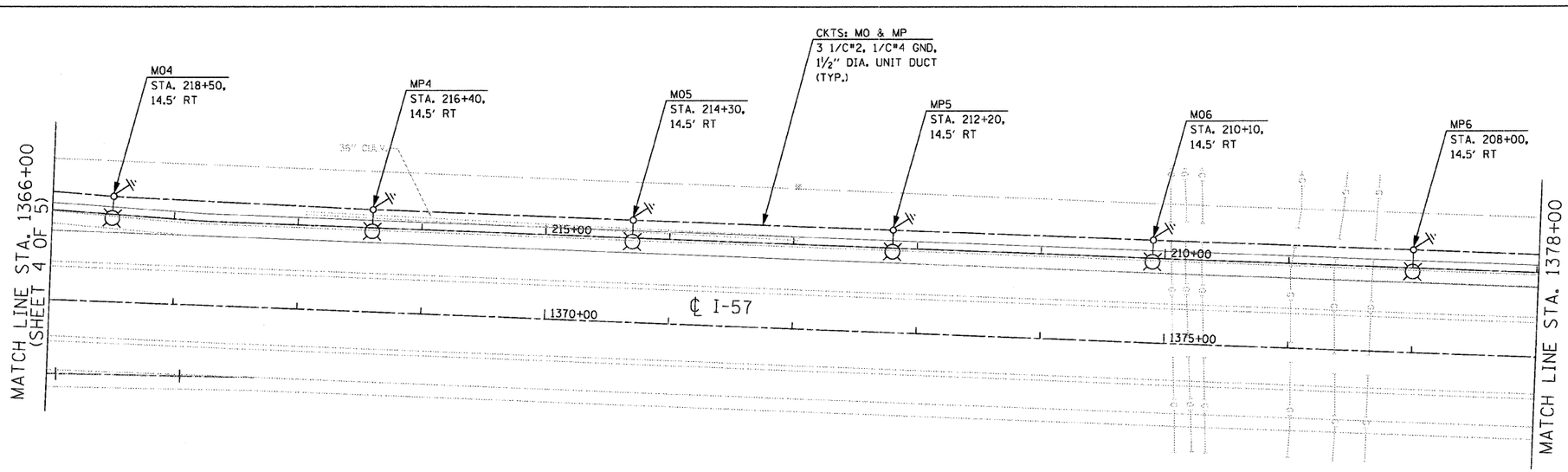
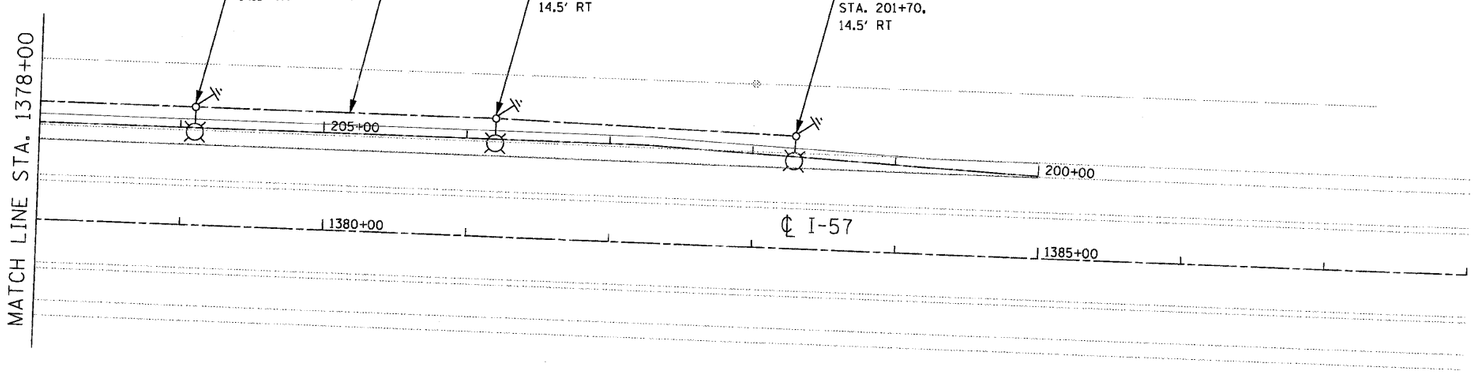
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99(1&2) R-3&9-1HB-1-BR-2	WILL	303	129
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5900

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57

PROPOSED ROADWAY LIGHTING
SHEET 5 OF 5

SCALE: 1"=50'
DATE 10/09/2006

DRAWN BY: KGP
DESIGNED BY: PKG/KGP
CHECKED BY: PKG

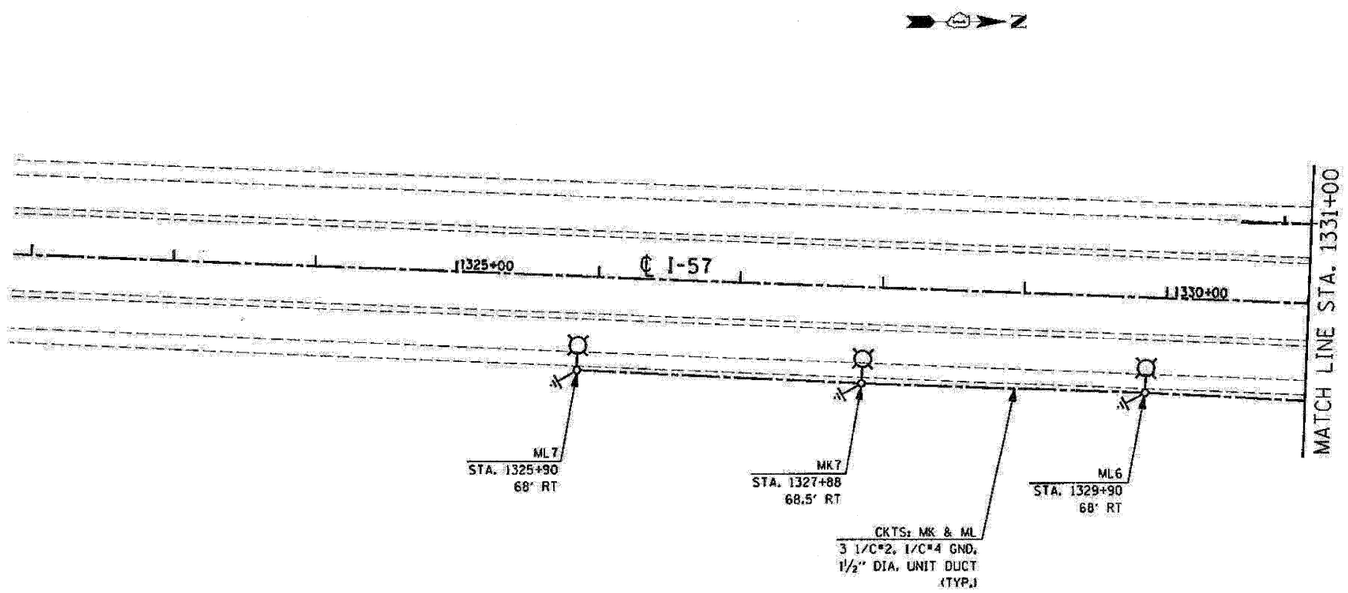
$FILES
$DATE$
$TIME$

\E06_PRO_LIGHTING.dgn 2/20/2008 4:05:03 PM

CONTRACT NO. 62253

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	130
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

+99(182) R-369-1HB-1-BR-2



NOTES:

1. THE PLAN SHEETS 130, 131, 132, and 133 SHOW ADDITIONAL LIGHTING UNITS TO BE INSTALLED IN PLACE OF THE EXISTING LIGHT TOWERS THAT WILL BE REMOVED BY THE IDOT MAINTENANCE CONTRACTOR UNDER SEPARATE CONTRACT. THESE PLAN SHEETS REVISE THE UNIT DUCT ROUTING SHOWN ON THE OTHER PLAN SHEETS IN THIS CONTRACT, AND SHALL TAKE PRECEDENCE. THE CONTRACTOR SHALL NOT MAKE ANY NEW PERMANENT CONNECTIONS TO THE EXISTING LIGHT TOWERS, UNLESS OTHERWISE NOTED BY THE ENGINEER.

2. THE CONTRACTOR SHALL VERIFY THE FINAL ASSIGNMENTS OF THE LIGHT POLE CIRCUIT DESIGNATION DECALS WITH THE ENGINEER FOR COORDINATION WITH THE BUREAU OF ELECTRICAL OPERATIONS, PRIOR TO THE ACTUAL PLACEMENT.

3. THE CONTRACTOR IS RESPONSIBLE FOR UPDATING THE RECORD DRAWINGS INCLUDING THE SINGLE LINE DIAGRAMS, TO INCLUDE THE FIELD AND THE PLAN SHEET CHANGES, IN ACCORDANCE WITH THE PROVISIONS OF THE ARTICLE 801.16 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

4. THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF THE EXISTING TOWERS WITH THE IDOT MAINTENANCE CONTRACTOR. THE CONTRACTOR SHALL FACILITATE THE IDOT MAINTENANCE CONTRACTOR'S REMOVAL OF THE TOWERS.

5. IF THE EXISTING TOWERS CANNOT BE REMOVED IMMEDIATELY AFTER THE PROPOSED LIGHTING UNITS BECOME OPERATIONAL AND BEFORE THE REMOVAL OF THE TEMPORARY LIGHTING, THE CONTRACTOR UNDER THIS CONTRACT WILL BE RESPONSIBLE FOR A TEMPORARY CONNECTION OF THE EXISTING TOWERS TO THE PROPOSED CIRCUITS AT LIGHT POLES MN4, NB2, AND MD2 UTILIZING THE EXISTING UNIT DUCT. THE WORK AND MATERIAL REQUIRED TO MAKE THESE TEMPORARY CONNECTIONS IS INCLUDED IN THE PAY ITEM FOR "MAINTENANCE OF LIGHTING SYSTEM" AND NO EXTRA COMPENSATION WILL BE MADE FOR THIS WORK.

6. THE SETBACK FOR THE LIGHTING UNITS SHALL BE AS SHOWN ON THE PLANS. NO LIGHTING UNIT SHALL BE SET BACK CLOSER THAN 14 FT. FROM THE EDGE OF TRAVELED PAVEMENT.

7. THE CONTRACTOR SHALL INSTALL ADDITIONAL PVC RACEWAY IN THE FOUNDATIONS FOR LIGHT POLES MN4, MM4, NB2, MD2 AND MD2. THE WORK AND MATERIAL REQUIRED TO INSTALL AN ADDITIONAL RACEWAY IS INCLUDED IN THE PAY ITEM FOR "LIGHT POLE FOUNDATION, 24" DIAMETER", AND NO EXTRA COMPENSATION WILL BE MADE. ANY ADDITIONAL PVC RACEWAY INSTALLED FOR FUTURE USE SHALL BE CAPPED.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57
PROPOSED LIGHTING PLAN
(MAINLINE I-57)

SCALE: 1"=50'
DATE: 1/30/2008

DRAWN BY:
DESIGNED BY:
CHECKED BY:

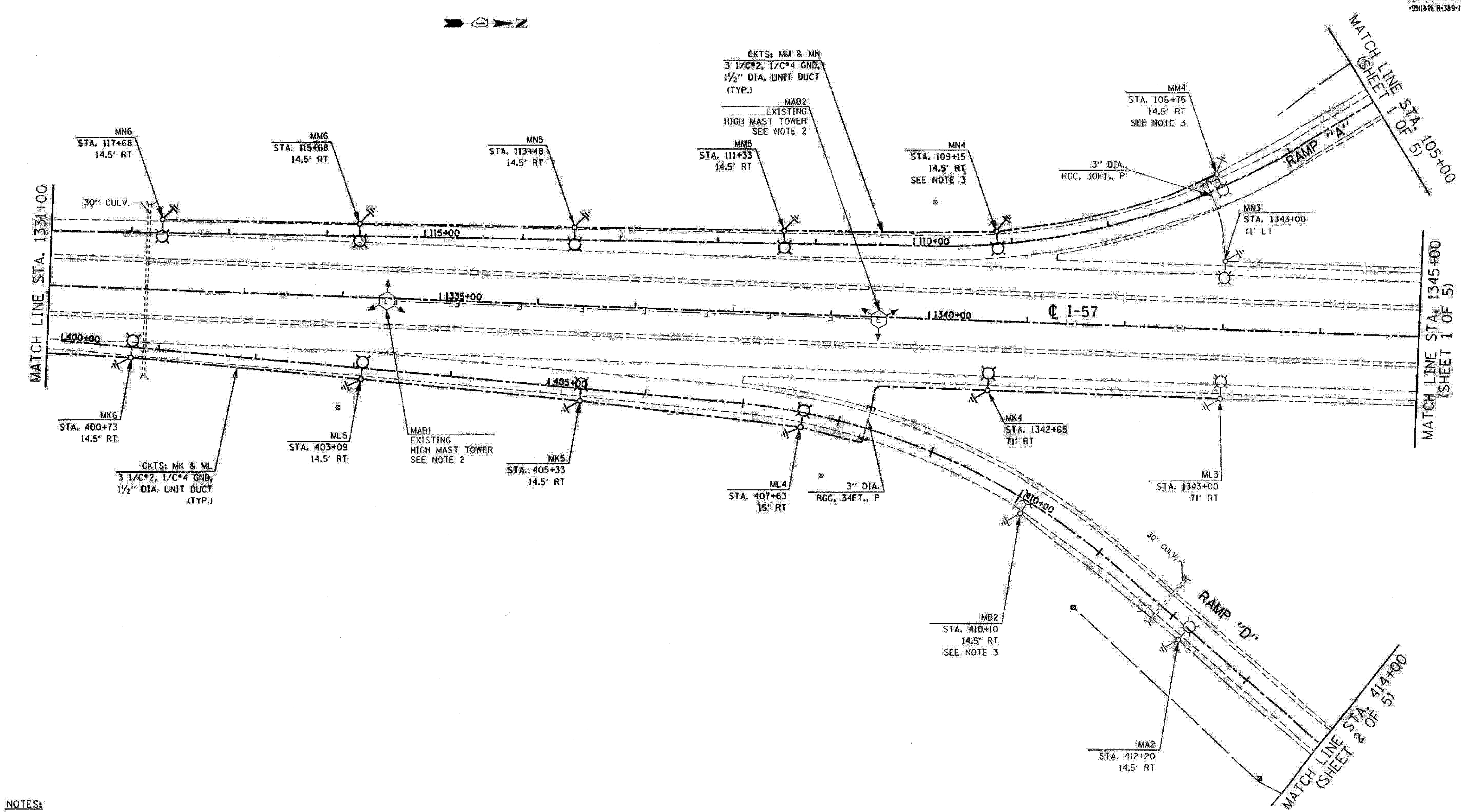
PLOT DATE = 1/30/2008
FILE NAME = c:\projects\electrical\2007\57man-monee.dgn
PLOT SCALE = 100.0524 '/ IN.
USER NAME = bauerdl

\2007\57\man-monee.dgn 1/30/2008 2:03:54 PM User=bauerdl

CONTRACT NO. 62253

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	131
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*99(82) R-389-IHB-I-BR-2



NOTES:

1. SEE PLAN NOTES ON SHEET 130.

2. THE EXISTING HIGH MAST TOWERS WILL BE REMOVED BY THE IDOT MAINTENANCE CONTRACTOR UNDER SEPARATE CONTRACT. THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF THE EXISTING TOWERS WITH THE IDOT MAINTENANCE CONTRACTOR. THE CONTRACTOR SHALL FACILITATE THE IDOT MAINTENANCE CONTRACTOR'S REMOVAL OF THE TOWERS. SEE NOTE 5 ON SHEET 130 FOR ADDITIONAL INFORMATION.

3. THE CONTRACTOR SHALL INSTALL ADDITIONAL PVC RACEWAY IN THE FOUNDATIONS FOR LIGHT POLES MN4, MM4, MB2, MO2 AND MD2. THE WORK AND MATERIAL REQUIRED TO INSTALL AN ADDITIONAL RACEWAY WILL BE INCIDENTAL TO THE PAY ITEM "LIGHT POLE FOUNDATION, 24" DIAMETER", AND NO EXTRA COMPENSATION WILL BE MADE. ANY ADDITIONAL PVC RACEWAY INSTALLED FOR FUTURE USE SHALL BE CAPPED.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57
PROPOSED LIGHTING PLAN
(MAINLINE I-57)

SCALE: 1"=50'
DATE: 1/30/2008

DRAWN BY:
DESIGNED BY:
CHECKED BY:

PLOT DATE = 1/30/2008
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PLOT SCALE = 105.8824 ' / IN.
USER NAME = bauerdl

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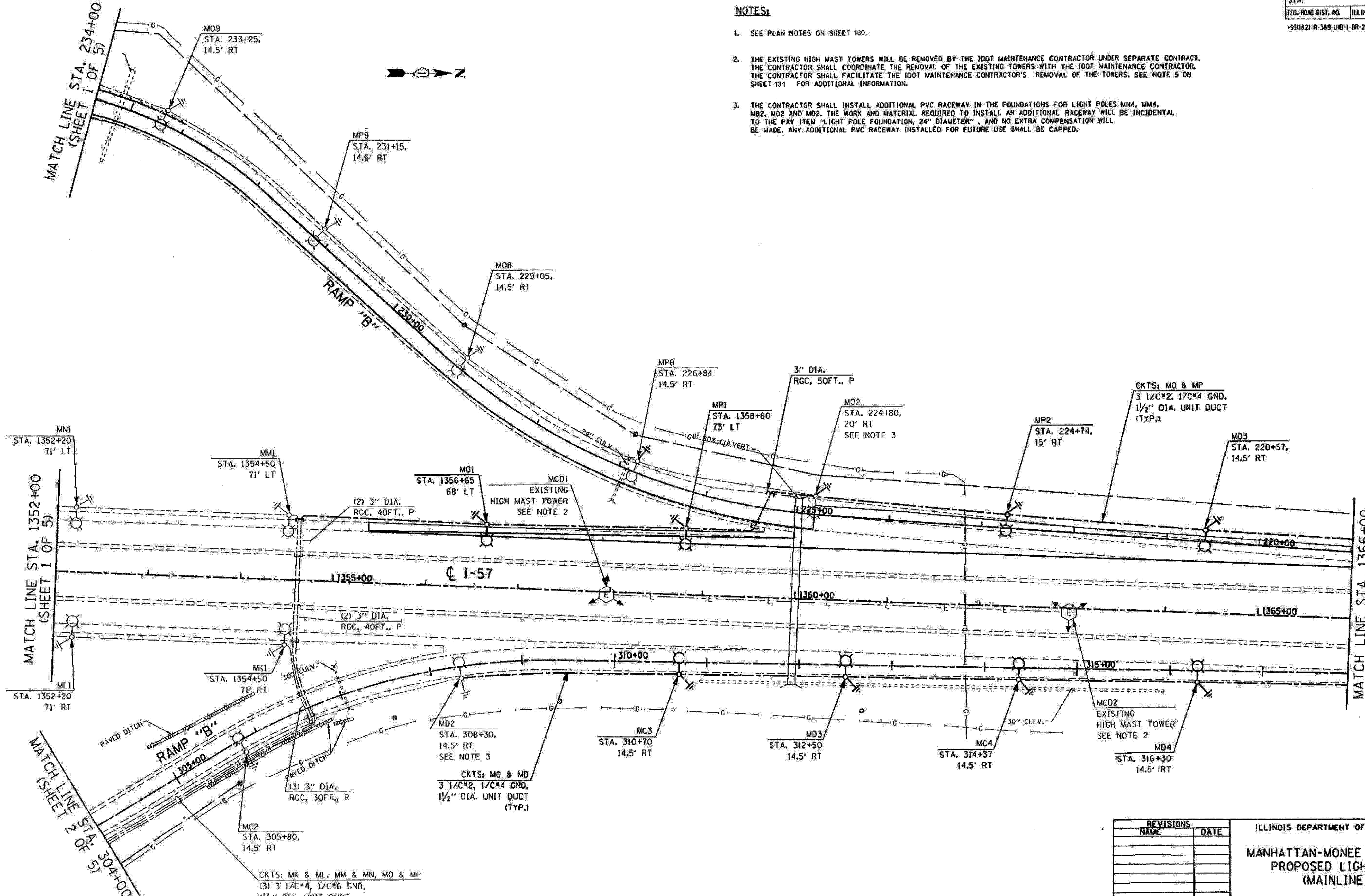
CONTRACT NO. 62253

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	132
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*93(1&2) R-389-(HB-1-BR-2

NOTES:

1. SEE PLAN NOTES ON SHEET 130.
2. THE EXISTING HIGH MAST TOWERS WILL BE REMOVED BY THE IDOT MAINTENANCE CONTRACTOR UNDER SEPARATE CONTRACT. THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF THE EXISTING TOWERS WITH THE IDOT MAINTENANCE CONTRACTOR. THE CONTRACTOR SHALL FACILITATE THE IDOT MAINTENANCE CONTRACTOR'S REMOVAL OF THE TOWERS. SEE NOTE 5 ON SHEET 131 FOR ADDITIONAL INFORMATION.
3. THE CONTRACTOR SHALL INSTALL ADDITIONAL PVC RACEWAY IN THE FOUNDATIONS FOR LIGHT POLES MN4, MM4, MB2, MO2 AND MD2. THE WORK AND MATERIAL REQUIRED TO INSTALL AN ADDITIONAL RACEWAY WILL BE INCIDENTAL TO THE PAY ITEM "LIGHT POLE FOUNDATION, 24" DIAMETER" , AND NO EXTRA COMPENSATION WILL BE MADE. ANY ADDITIONAL PVC RACEWAY INSTALLED FOR FUTURE USE SHALL BE CAPPED.



REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57
PROPOSED LIGHTING PLAN
(MAINLINE I-57)

SCALE: 1"=50'
DATE: 1/30/2008

DRAWN BY:
DESIGNED BY:
CHECKED BY:

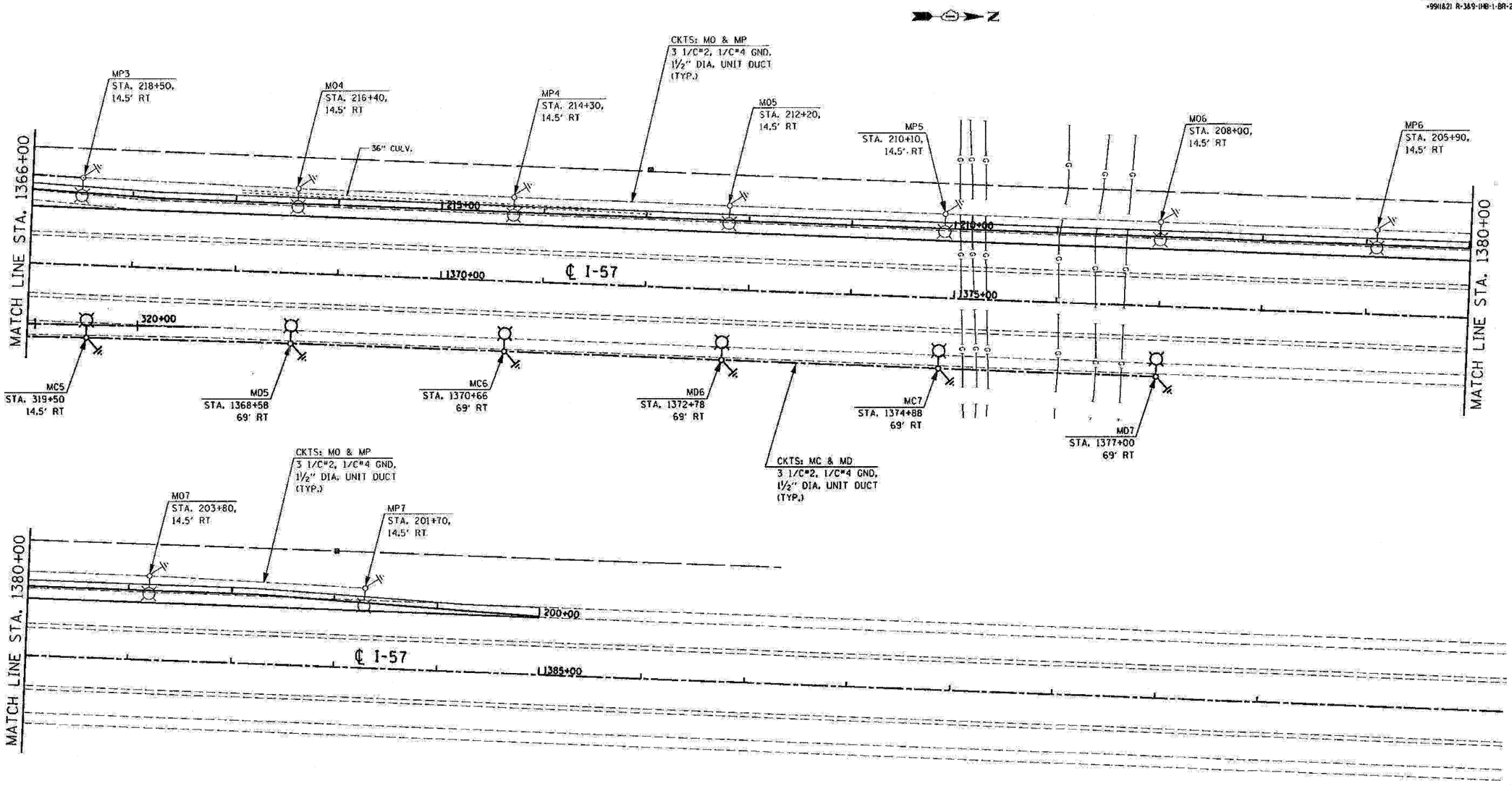
PLOT DATE : 1/30/2008
FILE NAME : c:\projects\electrical\2007\i57\man-monee.dgn
PLOT SCALE : 100.0000 ' / IN.
USER NAME : bauerdl

...\2007\i57@man-monee.dgn 1/30/2008 2:06:14 PM User=bauerdl

CONTRACT NO. 62253

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	133
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*9911&21 R-389-1HB-1-BR-2



NOTES:

1. SEE PLAN NOTES ON SHEET 130.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57
PROPOSED LIGHTING PLAN
(MAINLINE I-57)

SCALE: 1"=50'
DATE: 1/30/2008

DRAWN BY:
DESIGNED BY:
CHECKED BY:

PLOT DATE = 1/30/2008
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PLOT SCALE = 1185.3824 ' / IN.
USER NAME = bauerdl

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99(1&2) R-3&9-1HB-1-BR-2	WILL	303	134
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

N

LOAD TABLE
PROPOSED IDOT LIGHTING CONTROLLER "M"
DUPLEX TYPE, 1Ø, 3 WIRE, 240/480V

CIRCUIT	BLACK PHASE		CIRCUIT	RED PHASE	
	AMPS	WATTS		AMPS	WATTS
A	17.8	3120.0	B	17.8	3120.0
D	17.8	3120.0	C	17.8	3120.0
F	3.4	816.0	E	3.4	816.0
G	8.5	2040.0	H	6.8	1632.0
J	11.9	2856.0	I	11.9	2856.0
K	5.1	1224.0	L	5.1	1224.0
N	6.8	1632.0	M	8.5	2040.0
P	11.9	2448.0	O	13.6	3264.0
TOTAL	83.2	19968.0	TOTAL	84.9	20376.0

℄ MANHATTAN-MONEE ROAD

℄ I-57

CKTS: MI & MJ
3 1/C#2, 1/C#4 GND,
(TYP.)

CKTS: MG & MH
3 1/C#2, 1/C#4 GND,
(TYP.)

CKTS: MM & MN
3 1/C#2, 1/C#4 GND,
(TYP.)

CKTS: MK & ML
3 1/C#2, 1/C#4 GND,
(TYP.)

CKTS: MA & MB
3 1/C#2, 1/C#4 GND,
(TYP.)

CKTS: MC & MD
3 1/C#2, 1/C#4 GND,
(TYP.)

CKTS: MO & MP
3 1/C#2, 1/C#4 GND,
(TYP.)

CKTS: ME & MF
3 1/C#2, 1/C#4 GND,
(TYP.)

SERVICE CABLE
3 1/C#350MCM

ELECTRIC SERVICE POLE,
240/480V, 1Ø, 3 WIRE

SEE DETAIL "A"

RAMP "D"

RAMP "B"

RAMP "C"

RAMP "D"

MATCH LINE "A"

MATCH LINE "A"

MAB1 MAB2 MB2 MA2 MB1 MA1

MJ7 MI7 MJ6 MI6 MG5 MJ5 MH4 MI5 MG4 MJ4 MH3 MI4 MG3 MJ3 MH2 MI3 MG2 MJ2 MH1 MI2 MG1 MI1 MJ1 ME1 MF1 ME2 MF2

MM5 MM4 MN4 MM3 MN3 MN2 MM2 MN1 MM1 MK3 ML3 MK2 ML2 MK1 ML1

MO1 MP1 MO2 MP2 MO3 MP3 MO4 MP4 MO5 MP5 MO6 MP6 MO7 MP7 MO8

MCD1 MCD2 MD2 MC2 MD1 MC1

LUMINAIRE MN3
(BLACK PHASE)

LUMINAIRE MM3
(RED PHASE)

2 1/C #10

TWO POLE FUSE HOLDER WITH 10 AMP FUSE (TYP.)

GROUND LUG IN POLE HAND HOLE (TYP.)

+Ø RED WIRE

-Ø BLACK WIRE

N WHITE WIRE

G

ELECTRICAL CABLE IN DUCT

REINFORCING BAR IN FOUNDATION

NO. 2/0 BARE COPPER GROUND EXOTHERMIC WELD ON ENDS.

5/8" DIA. X 10' GROUND ROD

DETAIL "A"
LUMINAIRE WIRING CONNECTION (TYP.)

LEGEND:

PROPOSED LIGHTING UNIT,
47.5FT M.H., 15FT M.A., 310W (1.7AMP.) HPS TYPE MC-III LUMINAIRE, 240V, (RED PHASE)

PROPOSED LIGHTING UNIT,
47.5FT M.H., 15FT M.A., 310W (1.7 AMP.) HPS TYPE MC-III LUMINAIRE, 240V, (BLACK PHASE)

PROPOSED LIGHTING CONTROLLER,
DUPLEX TYPE, 1-PHASE, 3 WIRE, 240/480V

EXISTING HIGH MAST TOWER,
100FT M.H. WITH 3-1000W (4.8 AMP./EACH) HPS TYPE MC-II LUMINAIRE AT 120°, 240V
(OPEN - RED PHASE, SOLID - BLACK PHASE)

GROUND ROD

REVISIONS NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57

SINGLE LINE DIAGRAM
PROPOSED LIGHTING CONTROLLER "M"

SCALE: NONE
DATE 10/09/2006

DRAWN BY: KGP
DESIGNED BY: PKG/KGP
CHECKED BY: PKG

$FILE$
$DATE$
$TIME$

\E07_PRO_WIRING_DIAGRAM.dgn 2/20/2008 4:07:14 PM

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99(1&2) R-3&9-IHB-1-BR-2	WILL	303	135
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EXISTING UNIT DUCT TO
EXISTING HIGH MAST TOWER "MCD1"

CKTS: MC & MD
EXISTING 1¼" UNIT DUCT
3 1/C#4, 1/C#8 GND
SEE NOTE 4

RELOCATED PEDESTAL MOUNTED
EXISTING LIGHTING CONTROL CABINET "M" TO BE
USED AS TEMPORARY LIGHTING CONTROLLER "M"
SEE NOTE 2, 3 AND DETAIL SHEET 132

AERIAL SERVICE CABLE,
3 1/C #2, 600V WITH MESSENGER WIRE

ELECTRIC SERVICE POLE,
240/480V, 1Ø, 3 WIRE

MA1
TEMPORARY LIGHTING UNIT,
STA. 14042+30, 55' LT
SEE DETAIL SHEET 132

MB2
TEMPORARY LIGHTING UNIT,
STA. 14031+85, 50' LT

CKTS: MA & MB
3 1/C#4 W/MW, AERIAL CABLE

MANHATTAN-MONEE ROAD

CKTS: MA & MB
3 1/C#4 W/MW, AERIAL CABLE

MA2
TEMPORARY LIGHTING UNIT,
STA. 14032+28, 52' RT
SEE NOTE 1

MB1
TEMPORARY LIGHTING UNIT,
STA. 14042+65, 65' RT
SEE NOTE 1

CKTS: MA & MB
EXISTING 1¼" UNIT DUCT
3 1/C#4, 1/C#8 GND
SEE NOTE 4

CKTS: MA & MB
EXISTING 1¼" UNIT DUCT
3 1/C#4, 1/C#8 GND
SEE NOTE 4

EXISTING UNIT DUCT FROM
EXISTING HIGH MAST TOWER "MAB2"

EXISTING UNIT DUCT TO
EXISTING HIGH MAST TOWER "MAB2"

NOTES

1. ADEQUATE LENGTH OF THE EXISTING UNIT DUCT SHALL BE EXPOSED AND ATTACHED TO THE TEMPORARY LIGHTING UNIT AT MINIMUM 10FT ABOVE GROUND. AERIAL CABLE SHALL BE SPLICED TO THE EXISTING UNIT DUCT ATTACHED TO THE TEMPORARY LIGHTING UNIT AND SHALL BE CONNECTED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE INCIDENTAL TO THE PAY ITEM "MAINTENANCE OF LIGHTING SYSTEM" AND NO EXTRA COMPENSATION WILL BE MADE.

2. PEDESTAL MOUNTED EXISTING LIGHTING CONTROLLER LOCATED AT STA. 14043+00, 25FT LT. SHALL BE RELOCATED ON TEMPORARY LIGHTING UNIT AND SHALL BE USED AS A TEMPORARY LIGHTING CONTROLLER "M" AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. THE RECONNECTION OF THE ELECTRIC SERVICE FOR THE RELOCATED LIGHTING CONTROLLER, AERIAL SERVICE CABLE, AND ANY CHARGES TO THE UTILITY COMPANY, NECESSARY FOR THE INSTALLATION AND CONNECTION OF THE SERVICE TO THE RELOCATED LIGHTING CONTROLLER IN ORDER TO MAKE IT FULLY OPERATIONAL SHALL BE INCIDENTAL TO THE PAY ITEM "REMOVE AND RELOCATE EXISTING LIGHTING CONTROLLER"

3. THE RELOCATED LIGHTING CONTROLLER "M" SHALL BE REMOVED AFTER PROPOSED LIGHTING IS FULLY OPERATIONAL AND DELIVERED TO THE STATE MAINTENANCE FACILITY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID UNDER THE PAY ITEM "REMOVE EXISTING LIGHTING CONTROLLER AND SALVAGE".

4. THIS EXISTING UNIT DUCT SHALL NOT BE ABANDONED OR REMOVED UNTIL THE NEW UNIT DUCT IS IN PLACE AND ALL THE CONNECTIONS ARE MADE TO MAKE THE LIGHTING UNITS COMPLETELY OPERATIONAL. THE CONTRACTOR MAY REMOVE THE CONDUCTORS FROM THE UNIT DUCTS, WITH SALVAGE VALUE OF THE CONDUCTORS REFLECTED IN THE BID PRICES OF THE REMOVAL ITEMS.

REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57

TEMPORARY LIGHTING PLAN

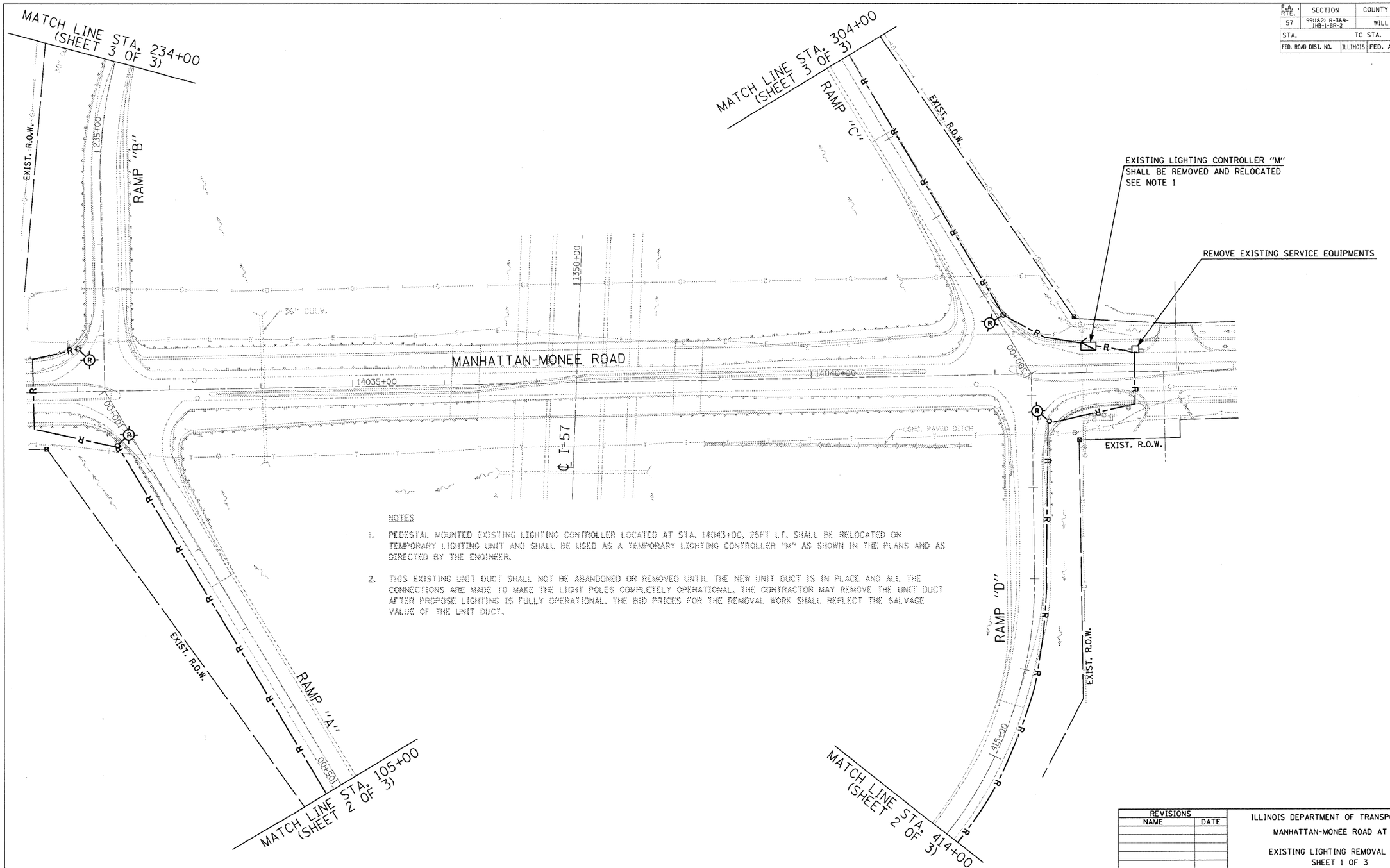
SCALE: 1"=50'
DATE 10/09/2006

DRAWN BY: KGP
DESIGNED BY: PKG/KGP
CHECKED BY: PKG

$FILES
$DATES
$TIMES

\E08_TEMP_LIGHTING.dgn 2/20/2008 4:27:03 PM

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99(1&2) R-3&9-IHB-1-BR-2	WILL	303	136
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES

1. PEDESTAL MOUNTED EXISTING LIGHTING CONTROLLER LOCATED AT STA. 14043+00, 25FT LT. SHALL BE RELOCATED ON TEMPORARY LIGHTING UNIT AND SHALL BE USED AS A TEMPORARY LIGHTING CONTROLLER "M" AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

2. THIS EXISTING UNIT DUCT SHALL NOT BE ABANDONED OR REMOVED UNTIL THE NEW UNIT DUCT IS IN PLACE AND ALL THE CONNECTIONS ARE MADE TO MAKE THE LIGHT POLES COMPLETELY OPERATIONAL. THE CONTRACTOR MAY REMOVE THE UNIT DUCT AFTER PROPOSE LIGHTING IS FULLY OPERATIONAL. THE BID PRICES FOR THE REMOVAL WORK SHALL REFLECT THE SALVAGE VALUE OF THE UNIT DUCT.

REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5900

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57

EXISTING LIGHTING REMOVAL PLAN
SHEET 1 OF 3

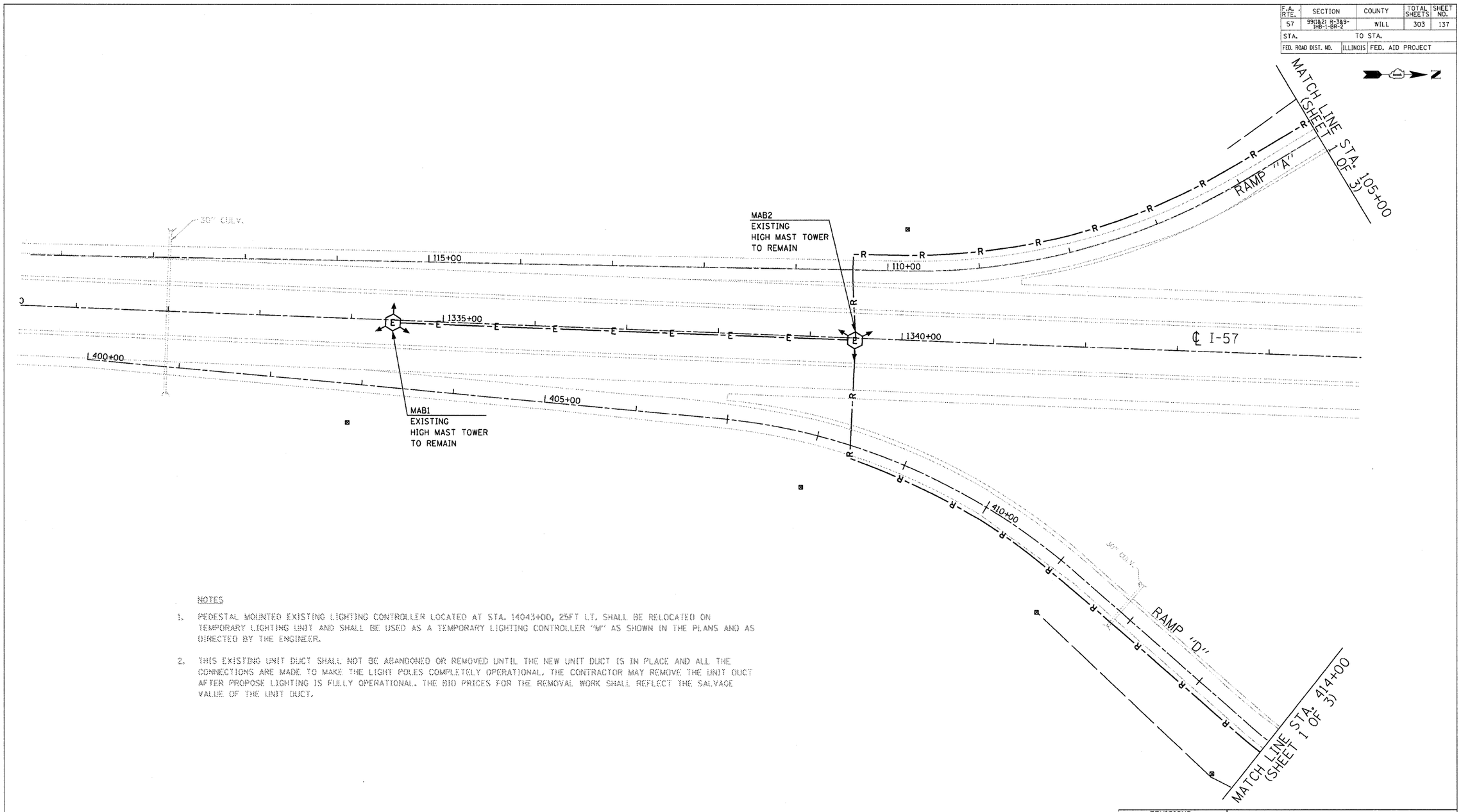
SCALE: 1"=50'

DATE 10/09/2006

DRAWN BY: KGP
DESIGNED BY: PKG/KGP
CHECKED BY: PKG

SFILES
SDATE
STIMES

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99(1&2) R-3&9-1HB-1-BR-2	WILL	303	137
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES

1. PEDESTAL MOUNTED EXISTING LIGHTING CONTROLLER LOCATED AT STA. 1404+00, 25FT LT. SHALL BE RELOCATED ON TEMPORARY LIGHTING UNIT AND SHALL BE USED AS A TEMPORARY LIGHTING CONTROLLER "M" AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

2. THIS EXISTING UNIT DUCT SHALL NOT BE ABANDONED OR REMOVED UNTIL THE NEW UNIT DUCT IS IN PLACE AND ALL THE CONNECTIONS ARE MADE TO MAKE THE LIGHT POLES COMPLETELY OPERATIONAL. THE CONTRACTOR MAY REMOVE THE UNIT DUCT AFTER PROPOSE LIGHTING IS FULLY OPERATIONAL. THE BID PRICES FOR THE REMOVAL WORK SHALL REFLECT THE SALVAGE VALUE OF THE UNIT DUCT.

REVISIONS NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5900

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57

EXISTING LIGHTING REMOVAL PLAN
SHEET 2 OF 3

SCALE: 1"=50'

DATE 10/09/2006

DRAWN BY: KGP
DESIGNED BY: PKG/KGP
CHECKED BY: PKG

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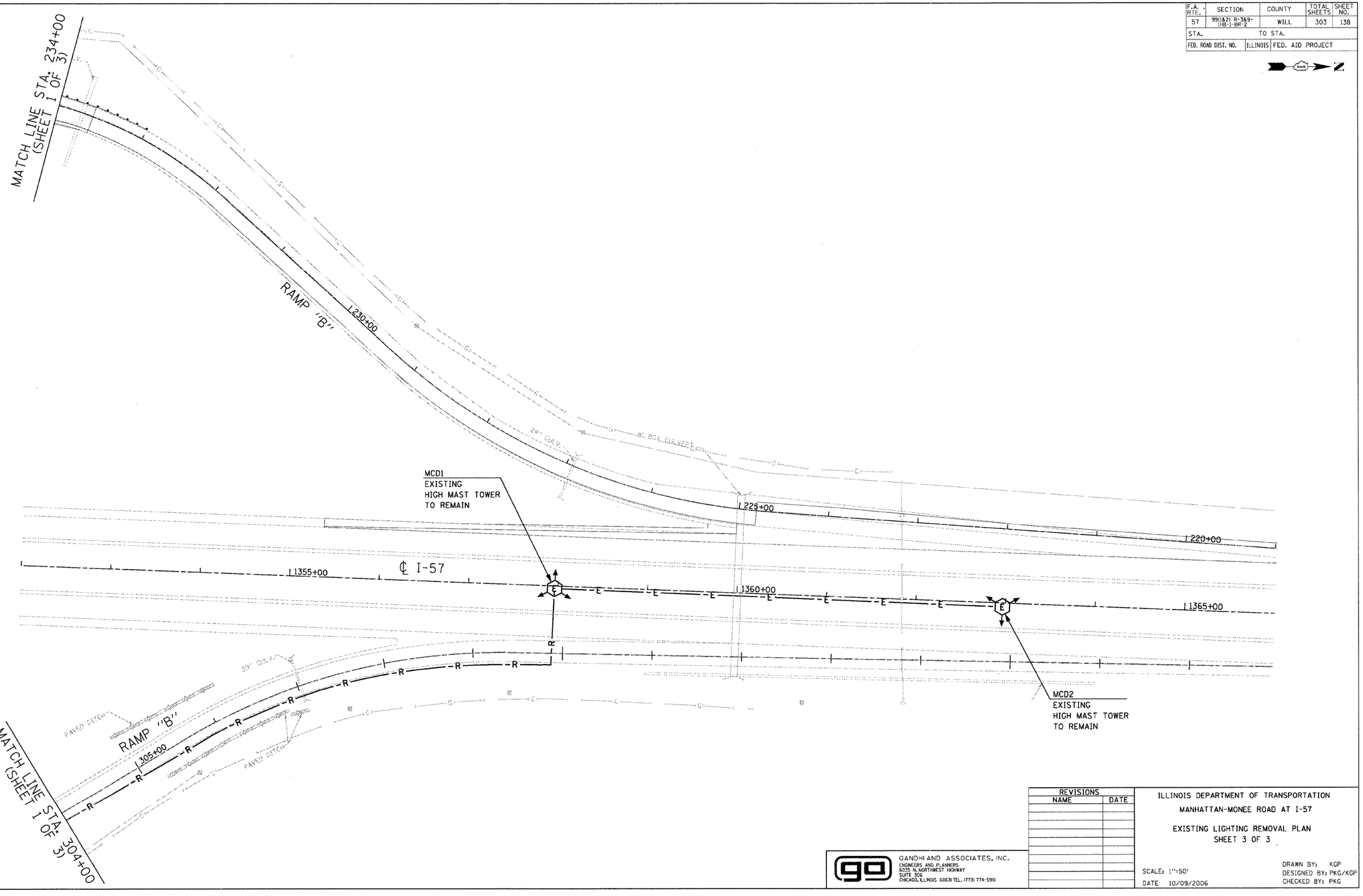
$DATE$
$TIME$

\E10_REM_LIGHTING.dgn 2/20/2008 4:29:51 PM

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99(1&2) R-3&9-1(8-1-BR-2	WILL	303	138
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57

EXISTING LIGHTING REMOVAL PLAN
SHEET 3 OF 3

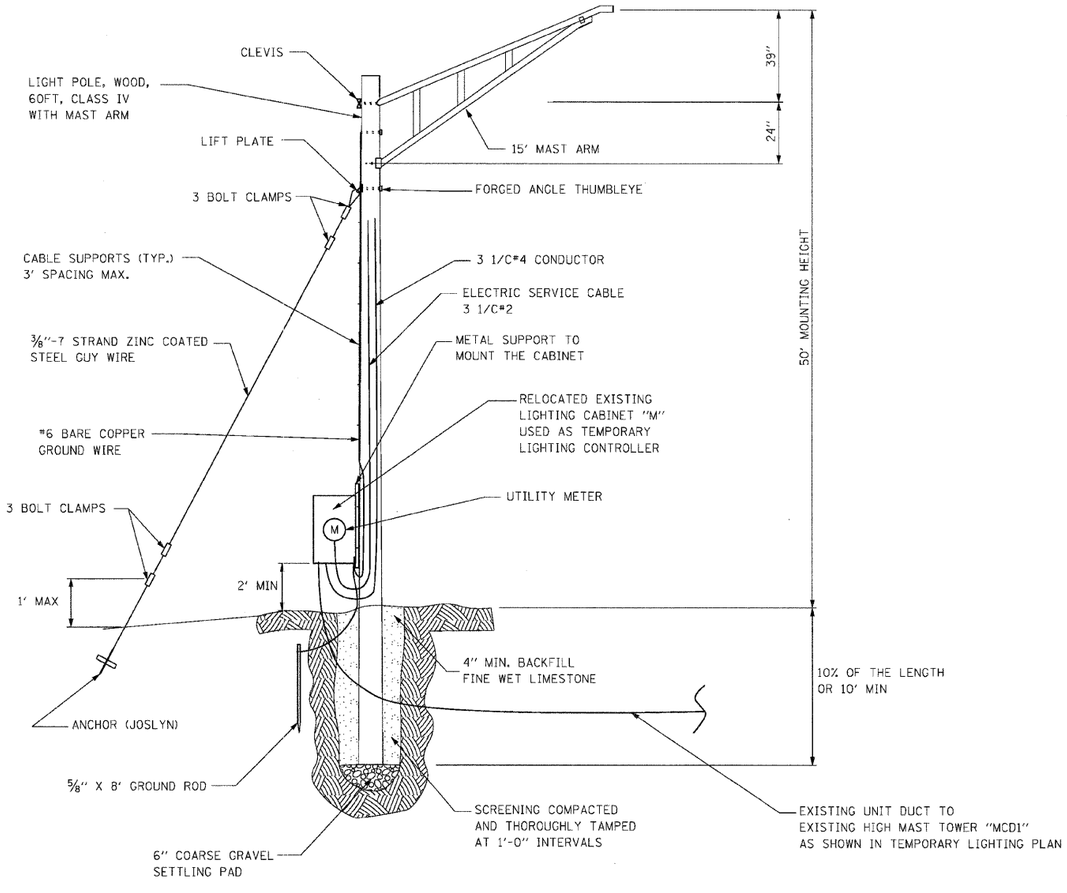
SCALE: 1"=50'
DATE 10/09/2006

DRAWN BY: KGP
DESIGNED BY: PKG/KGP
CHECKED BY: PKG

$FILES
$DATES
$TIMES

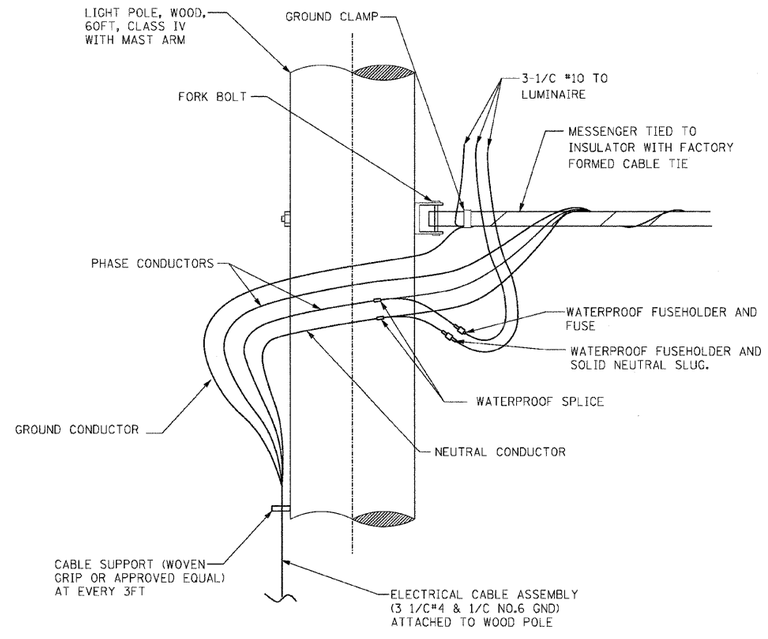
\E11_REM_LIGHTING.dgn 2/20/2008 4:31:09 PM

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99(1&2) R-3&9-IHB-1-BR-2	WILL	303	139
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TEMPORARY LIGHT POLE DETAIL (STA. 14042+30, 55' LT)
NORTHEAST CORNER OF EAST INTERSECTION

NOT TO SCALE



AERIAL CABLE CONNECTION DETAIL

NOT TO SCALE

REVISIONS	
NAME	DATE

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

ILLINOIS DEPARTMENT OF TRANSPORTATION
MANHATTAN-MONEE ROAD AT I-57

TEMPORARY LIGHTING DETAILS

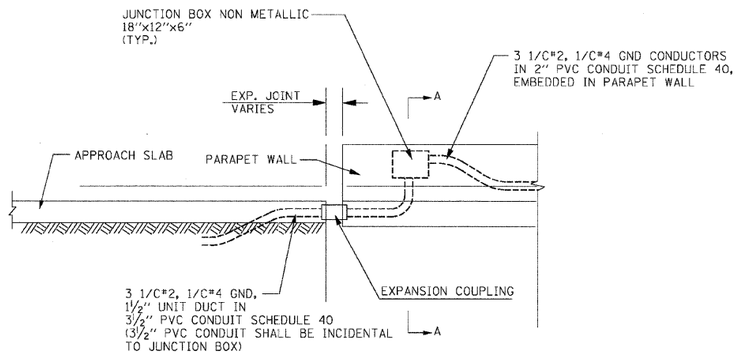
SCALE: NONE
DATE 10/09/2006

DRAWN BY: KGP
DESIGNED BY: PKG/KGP
CHECKED BY: PKG

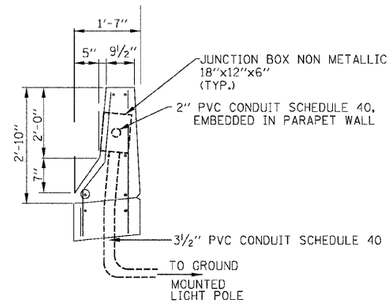
$FILES
$DATES
$TIMES

\E12 TEMP LIGHT DETAIL.dgn 2/20/2008 4:33:01 PM

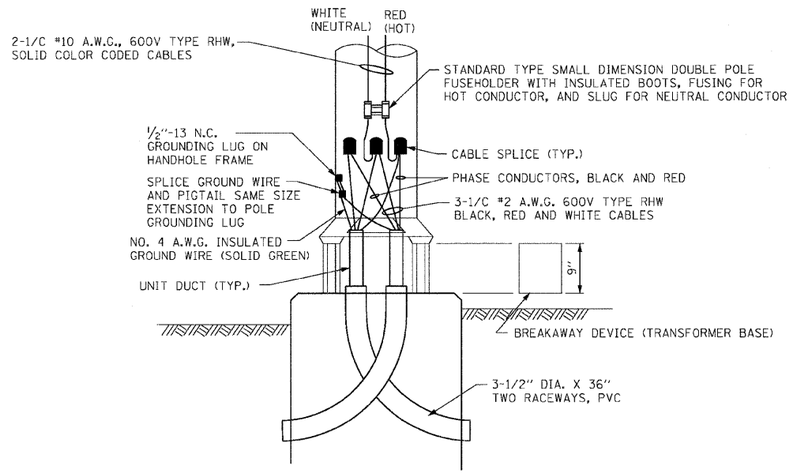
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	99(1&2) R-3&9-IHB-1-BR-2	WILL	303	140
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



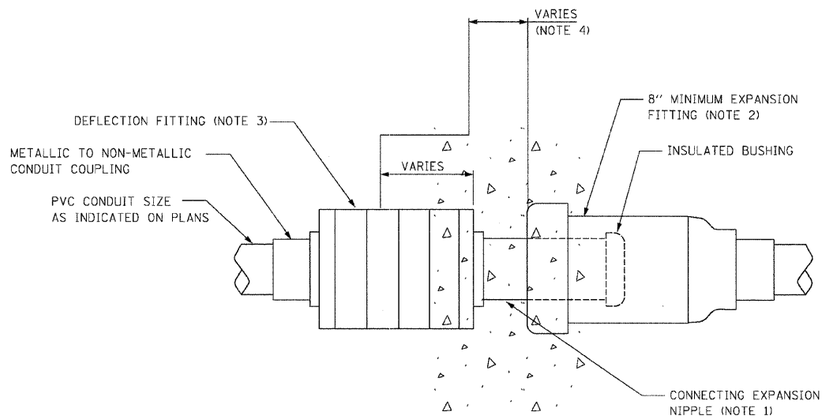
EXPANSION JOINT CONDUIT TRANSITION



SECTION A-A



BREAKAWAY DEVICE DETAIL



CONDUIT EXPANSION/DEFLECTING COUPLING

NOTES:

1. PROVIDE REQUIRED LENGTH OF CONNECTING EXPIATION NIPPLE. REFER TO STRUCTURAL DRAWINGS FOR THE EXPANSION JOINT CHARACTERISTICS.
2. THE BARREL OF THE FITTING SHALL BE FULLY EMBEDDED IN THE CONCRETE OF ONE SIDE OF THE EXPANSION JOINT.
3. A CAVITY OPENING, IF REQUIRED, SHALL BE 3" LARGER DIA. AND A MAX. DEPTH OF HALF OF THE DEFLECTION FITTING SHALL BE CENTERED IN THE OPENING AND EMBEDDED IN THE CONCRETE ONLY UP TO THE DEFLECTION FITTING CENTER.
4. REFER TO STRUCTURAL DRAWINGS FOR EACH EXPANSION JOINT WIDTH.

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5910

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHATTAN-MONEE ROAD AT I-57

MISCELLANEOUS LIGHTING DETAILS

SCALE: NONE

DATE 10/09/2006

DRAWN BY: KGP
DESIGNED BY: PKG/KGP
CHECKED BY: PKG

$FILE$
$DATE$
$TIME$

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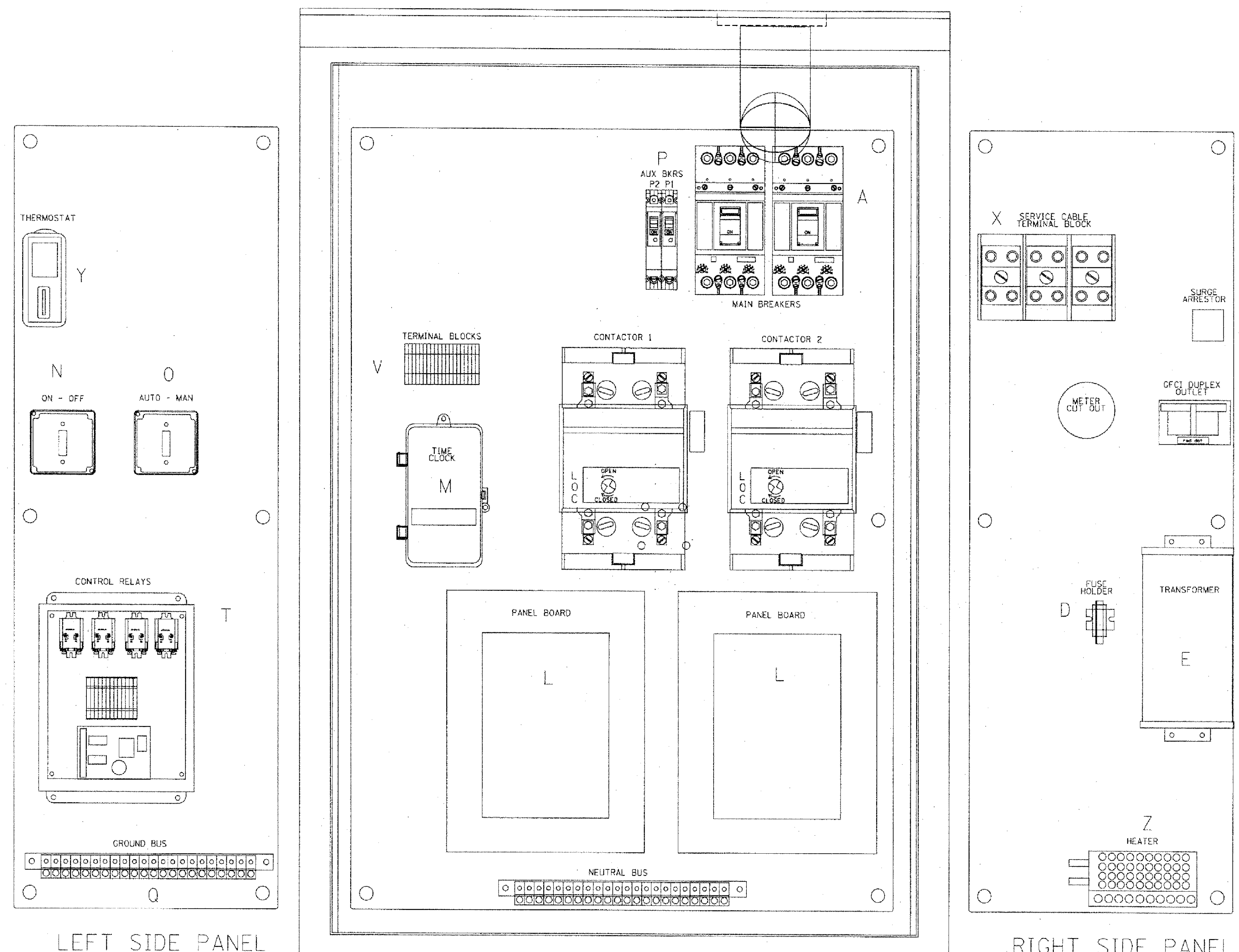
CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			303	141
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



BILL OF MATERIALS

ITEM *	QTY	DESCRIPITON
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, 250AMP 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

*

E-200

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER DUPLEX TYPE SHT 1 OF 4

SCALE: VERT. HORIZ.
DATE:2/15/2006

DRAWN BY CADD
CHECKED BY

E-200 (BE-200)

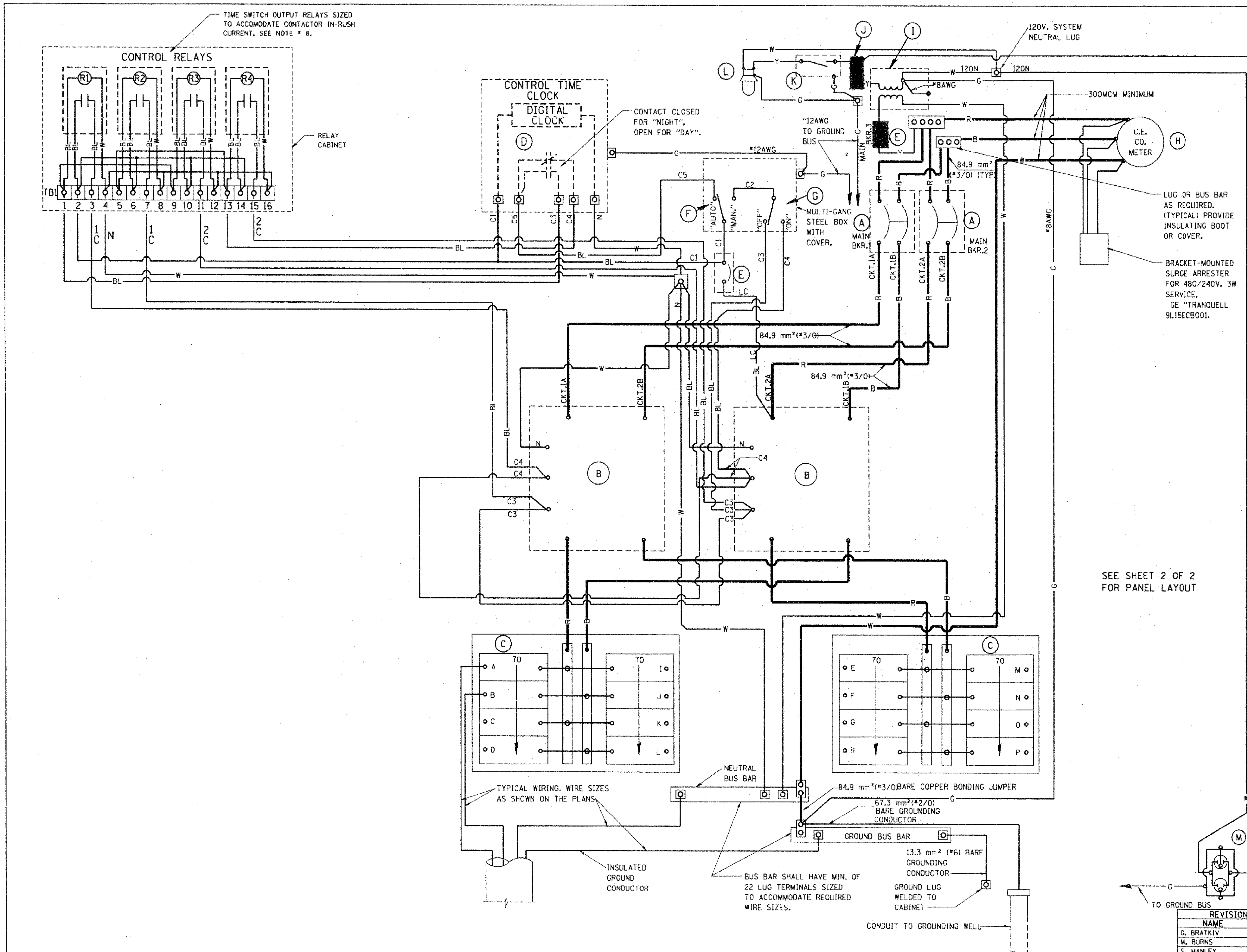
REVISION DATE:12/18/02

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			303	142

CONTRACT NO.

STA. TO STA.

FED. ROAD DIST. NO. 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.

E-200

REVISIONS	
NAME	DATE
G. BRATKIV	06-30-86
M. BURNS	07-25-91
S. MANLEY	10-11-93

ILLINOIS DEPARTMENT OF TRANSPORTATION

CONTROL CABINET, DUPLEX TYPE WIRING DETAIL SHEET 2 OF 4

SCALE: VERT. HORIZ.
DATE: 2/15/2006
DRAWN BY
CHECKED BY

E-200 (BE-200)

REVISION DATE: 12/18/02

PLOT DATE = 2/15/2006
FILE NAME = ...\be200.dgn
PLOT SCALE = 4.9999 / IN.
USER NAME = ...

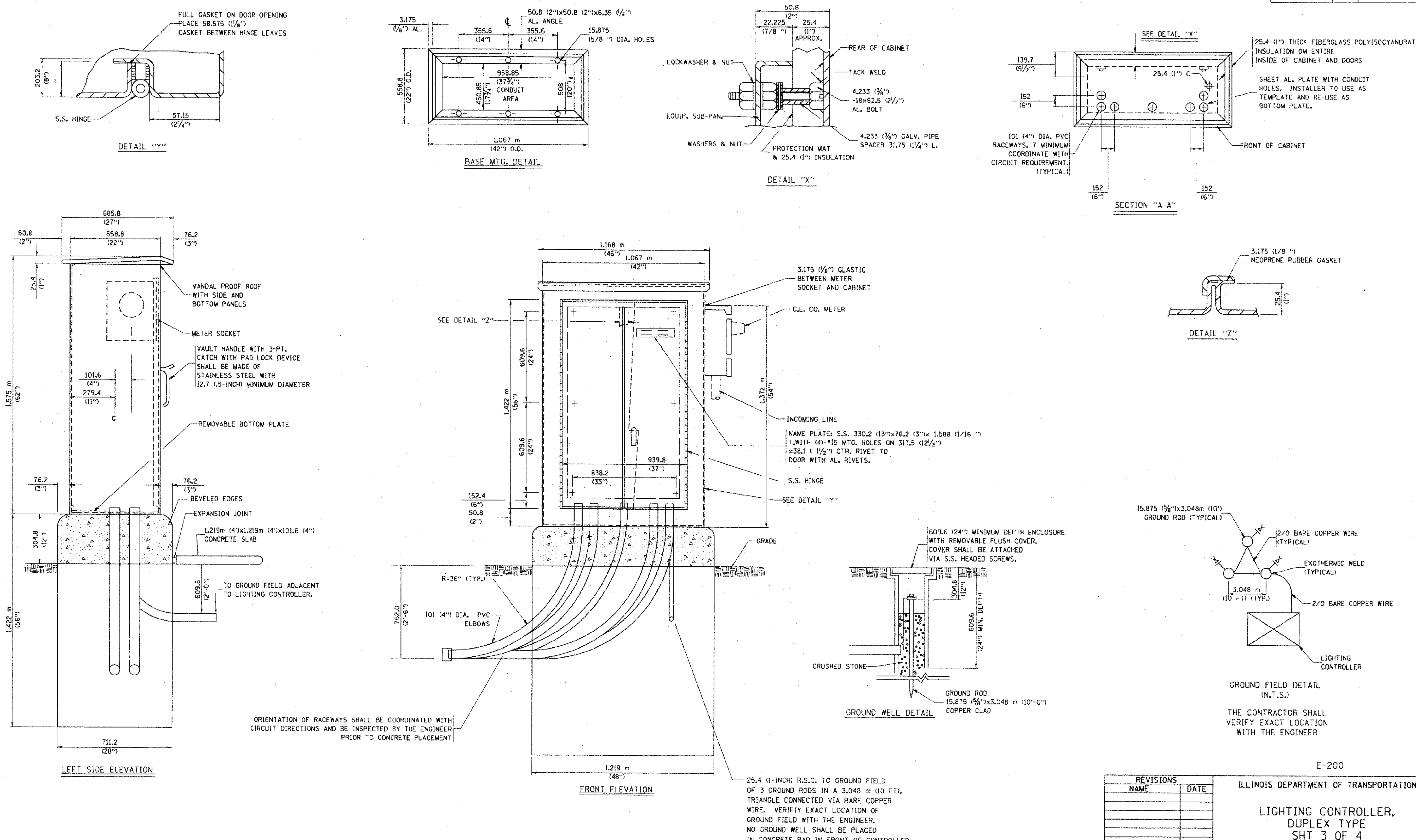
CREATED 8/5/92

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			303	143

CONTRACT NO.

STA. TO STA.

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



E-200

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

LIGHTING CONTROLLER, DUPLEX TYPE SHT 3 OF 4

SCALE: VERT. HORIZ.
DATE: 4/26/2006
DRAWN BY C.A.D.
CHECKED BY

E-200 (BE-200)

REVISION DATE: 04/26/06

PLOT DATE = 4/26/2006
FILE NAME = e:\pw_work\dist\std\be200.dgn
PLOT SCALE = 50.0000 ' / IN.
USER NAME = goglinrobt

NOTES

1. CABINET SHALL BE FABRICATED FROM 3.175 (0.125-INCH) 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 19.05 (0.75-INCH) 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 3.175 (0.125-INCH) 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

PLOT DATE : 2/15/2006
FILE NAME : w:\distatd\be200.dgn
PLOT SCALE : 49.9999 / IN.
USER NAME : gm

E-200

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

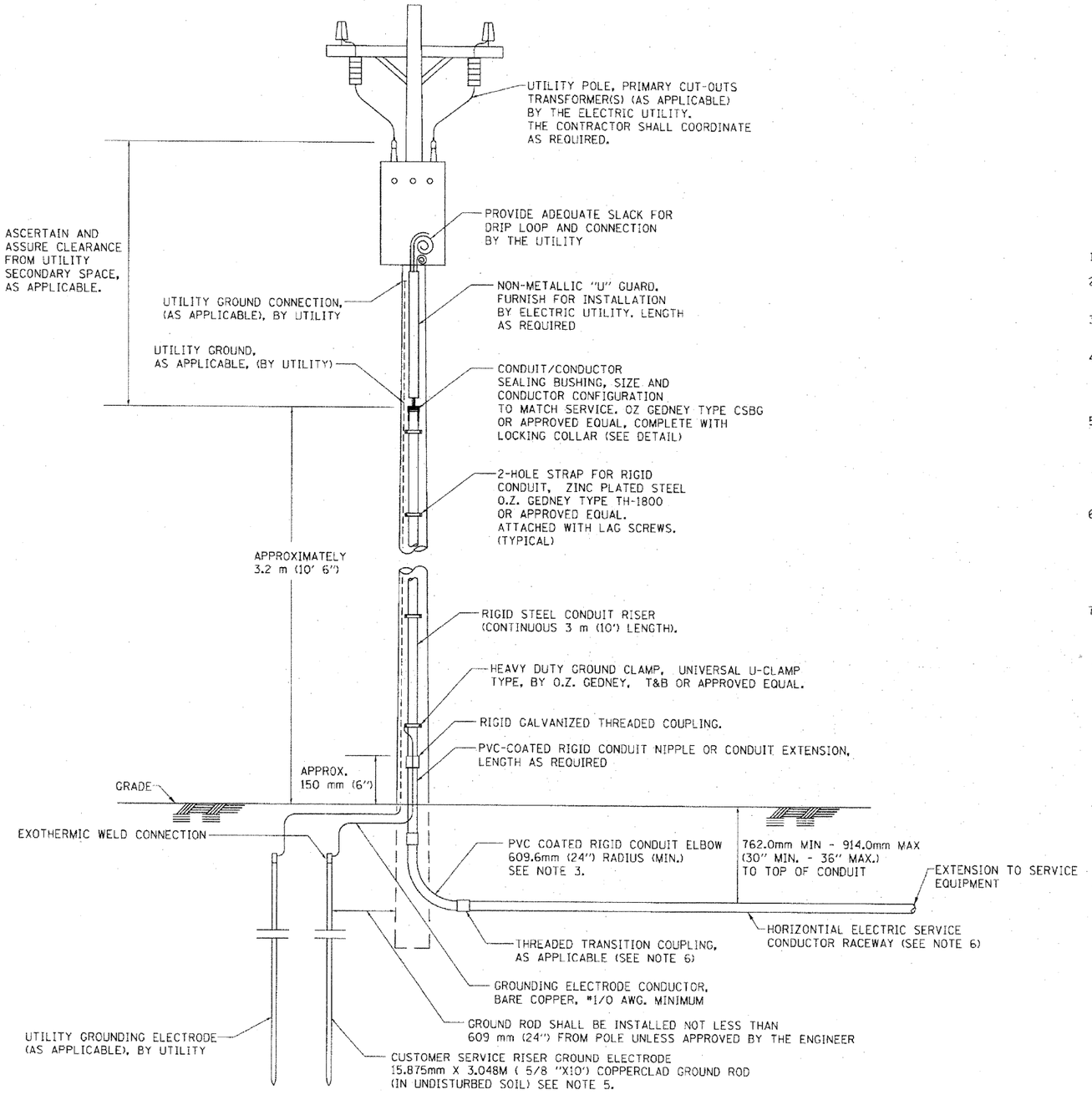
LIGHTING CONTROLLER
DUPLEX TYPE
SHT 4 OF 4

SCALE: VERT. HORIZ.
DATE: 2/15/2006

DRAWN BY CADD
CHECKED BY

CONTRACT NO.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			303	145
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

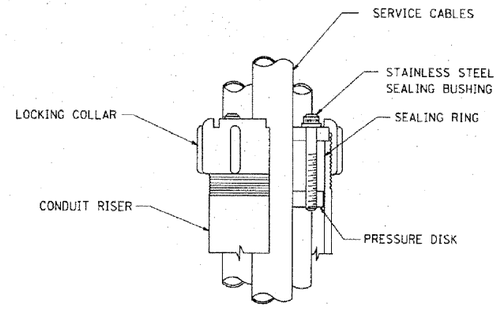


APPLICATION

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

BE-220

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ELECTRIC SERVICE INSTALLATION
AERIAL, REMOTE DISCONNECT
BE - 220

SCALE: NONE
DATE: 4/25/2006
DRAWN BY
CHECKED BY MEA

REVISION DATE: 03/03/06

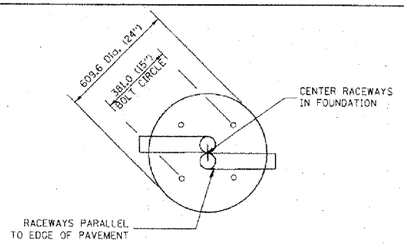
PLOT DATE = 4/25/2006
FILE NAME = c:\projects\standards\be220.dgn
PLOT SCALE = 50.0000 '/ IN.
USER NAME = gregl

CONTRACT NO.

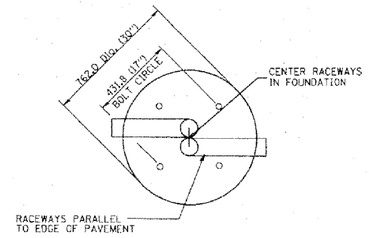
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			303	146
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

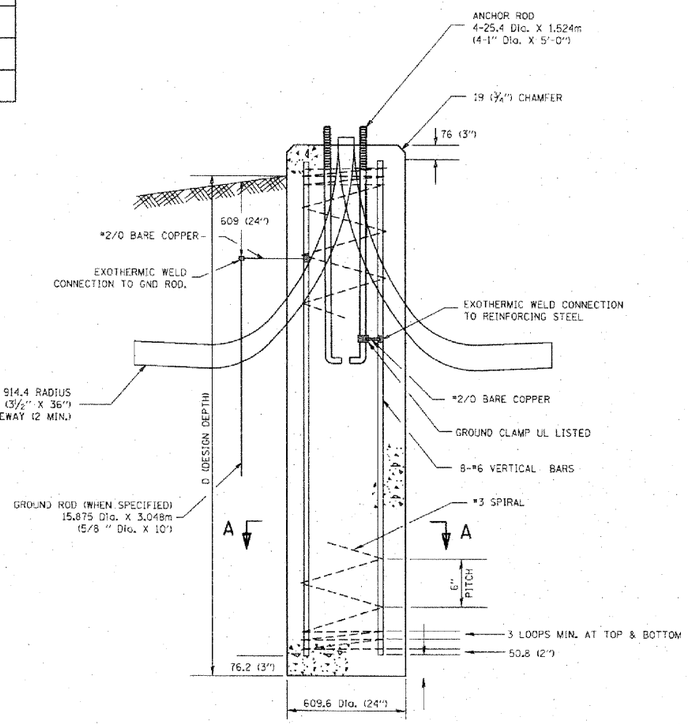


TOP VIEW

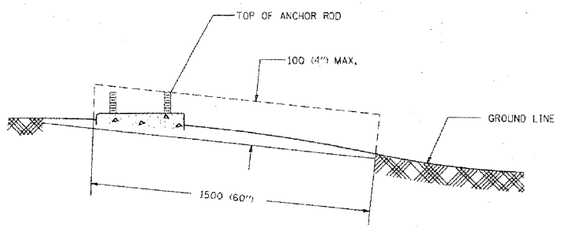


TOP VIEW

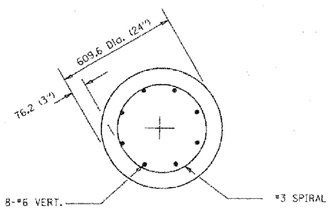
ANCHOR ROD DETAIL



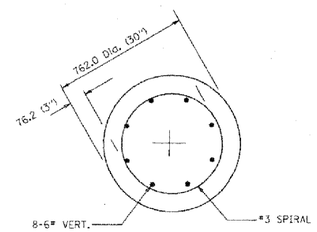
FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SECTION A-A

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) 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 1.5M (60 IN.) 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 20MM (3/4-IN.).
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 150 MM (6 INCHES) WITH A MINIMUM OF 75 MM (3 INCHES) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
11. ANCHOR RODS SHALL PROJECT 69.9MM (2¾") 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 152.4MM (6") PITCH OR MAY SUBSTITUTE #3 TIES AT 304.8MM (12") 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 25.4MM (1") ABOVE THE TOP OF THE FOUNDATION.

E-301

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

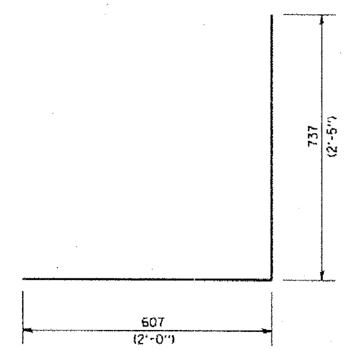
LIGHT POLE FOUNDATION
12.192M (40') TO 14.478M (47½') M.H.
381 (15") BOLT CIRCLE

SCALE: NONE
DATE: 2/15/2006
DRAWN BY
CHECKED BY

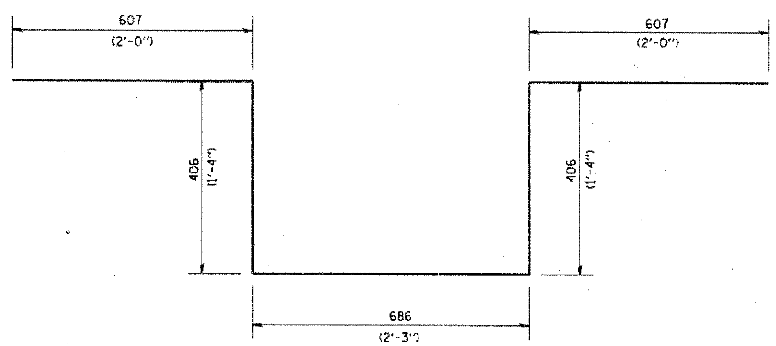
BE301
REVISION DATE: 04/22/02

PLOT DATE = 2/15/2006
FILE NAME = e:\data\ud\be301.dgn
PLOT SCALE = 4.0000 '/ IN.
USER NAME = gagliano01

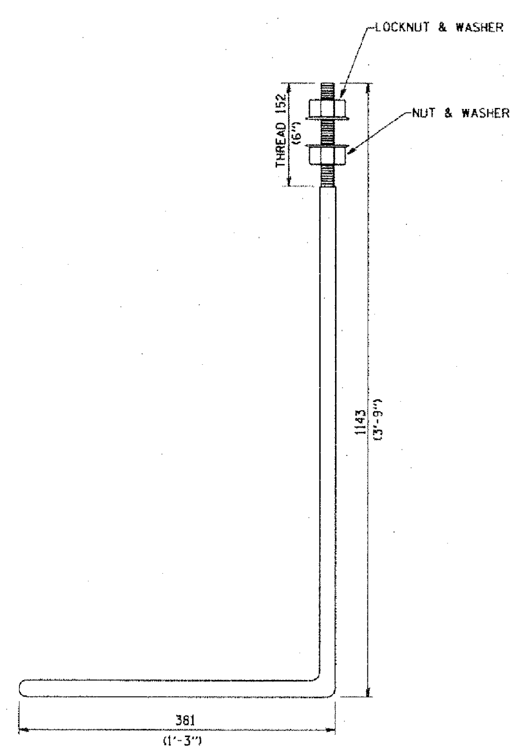
CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			303	147
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



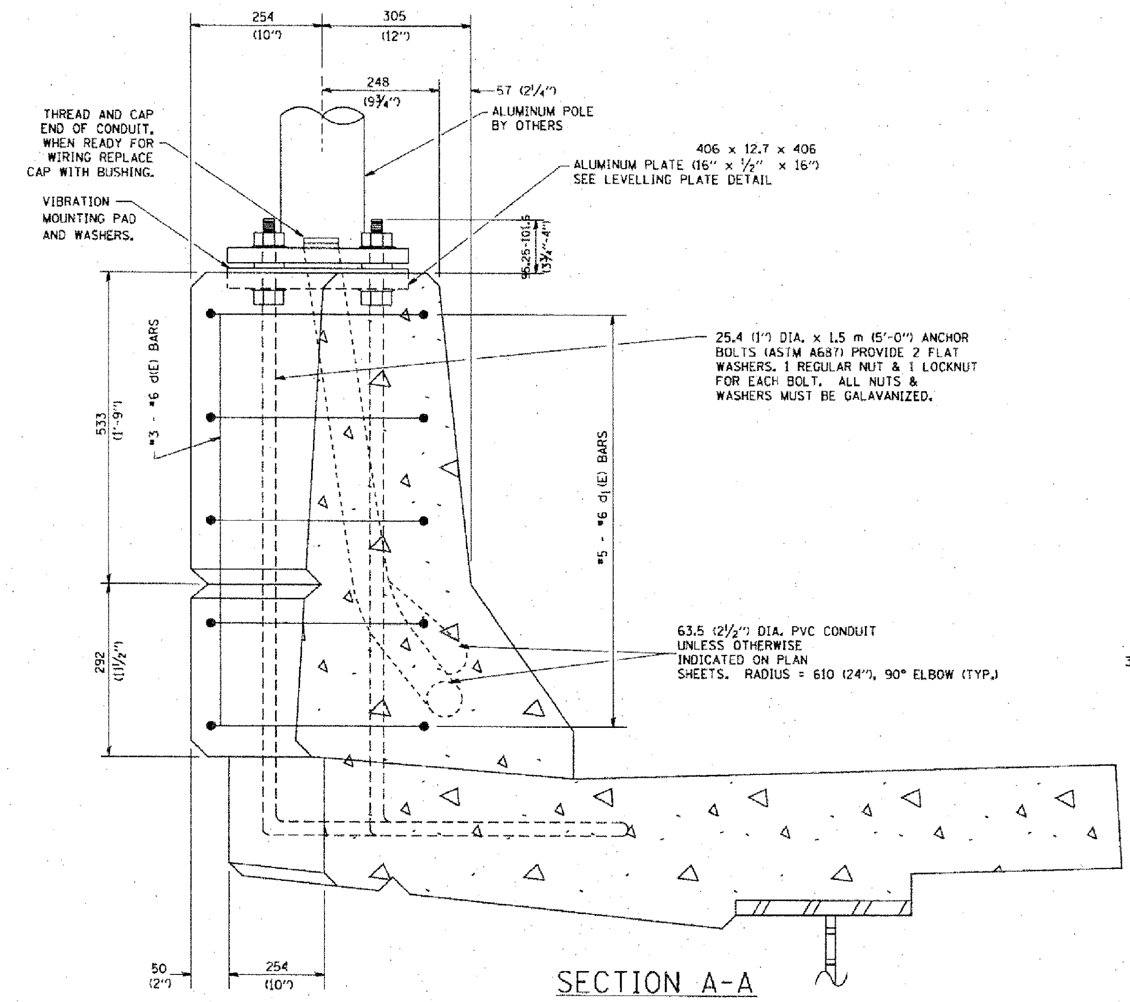
BAR d (E)



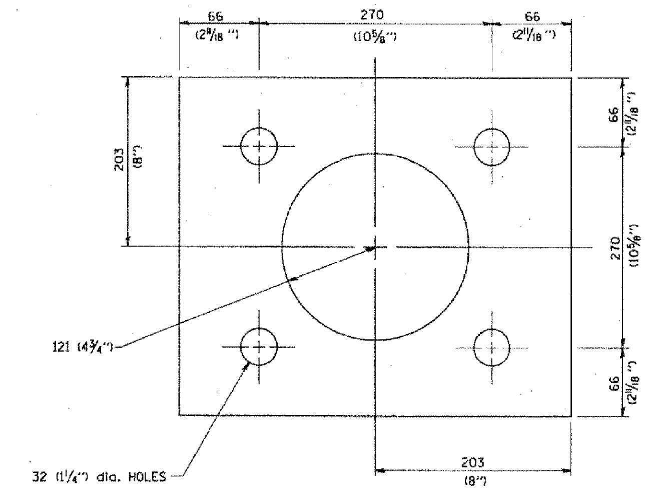
BAR d_1 (E)



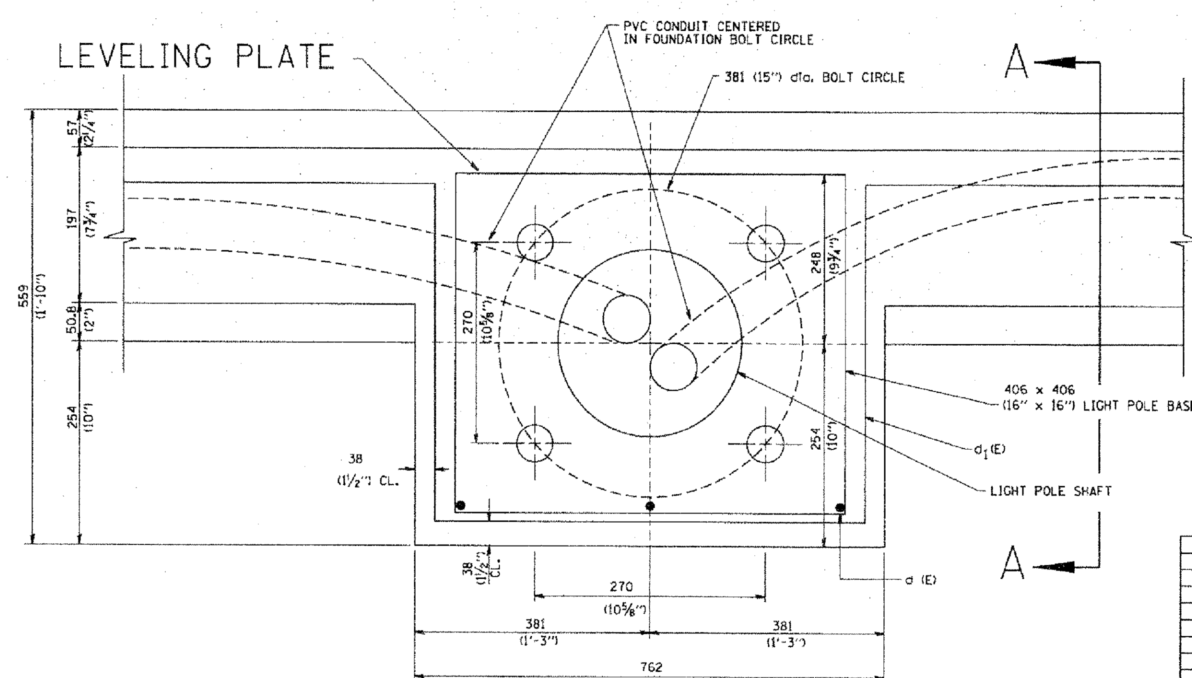
25.4 (1") dia. ANCHOR BOLT



SECTION A-A



LEVELING PLATE DETAIL



PLAN

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
2. LEVEL LIGHT POLE PLATES, USING THE FLANGE NUTS, PRIOR TO POURING THE PARAPET WALL. THE TOP OF THE PLATE SHALL BE AT THE SAME ELEVATION AS THE FINISHED CONCRETE PARAPET.
3. THE COST OF ANCHOR BOLTS, CONDUIT, LEVELLING PLATE AND FOUNDATION IS INCLUDED IN THE COST OF THE BRIDGE STRUCTURE.

BE-330

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

LIGHT POLE MOUNTED
ON CONCRETE PARAPET WALL
381 mm (15") BOLT CIRCLE

SCALE: NONE
DATE: 2/15/2006
DRAWN BY
CHECKED BY

BE-330

REVISION DATE: 04/22/02

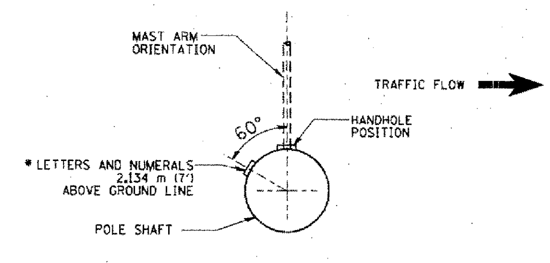
PLOT DATE : 2/15/2006

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			303	148

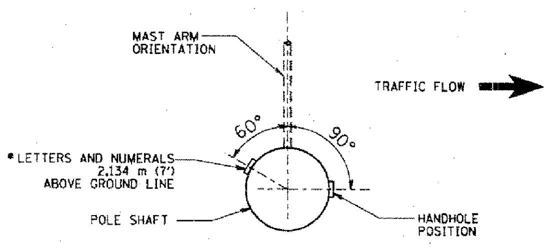
CONTRACT NO.

STA. TO STA.

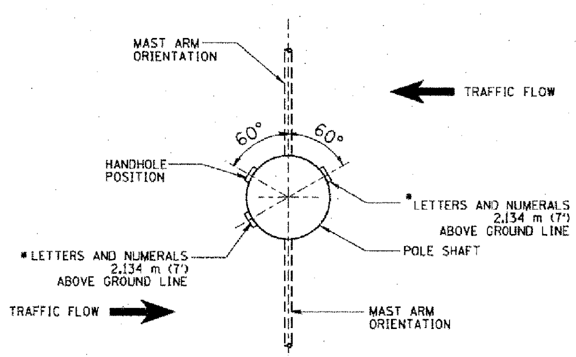
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT



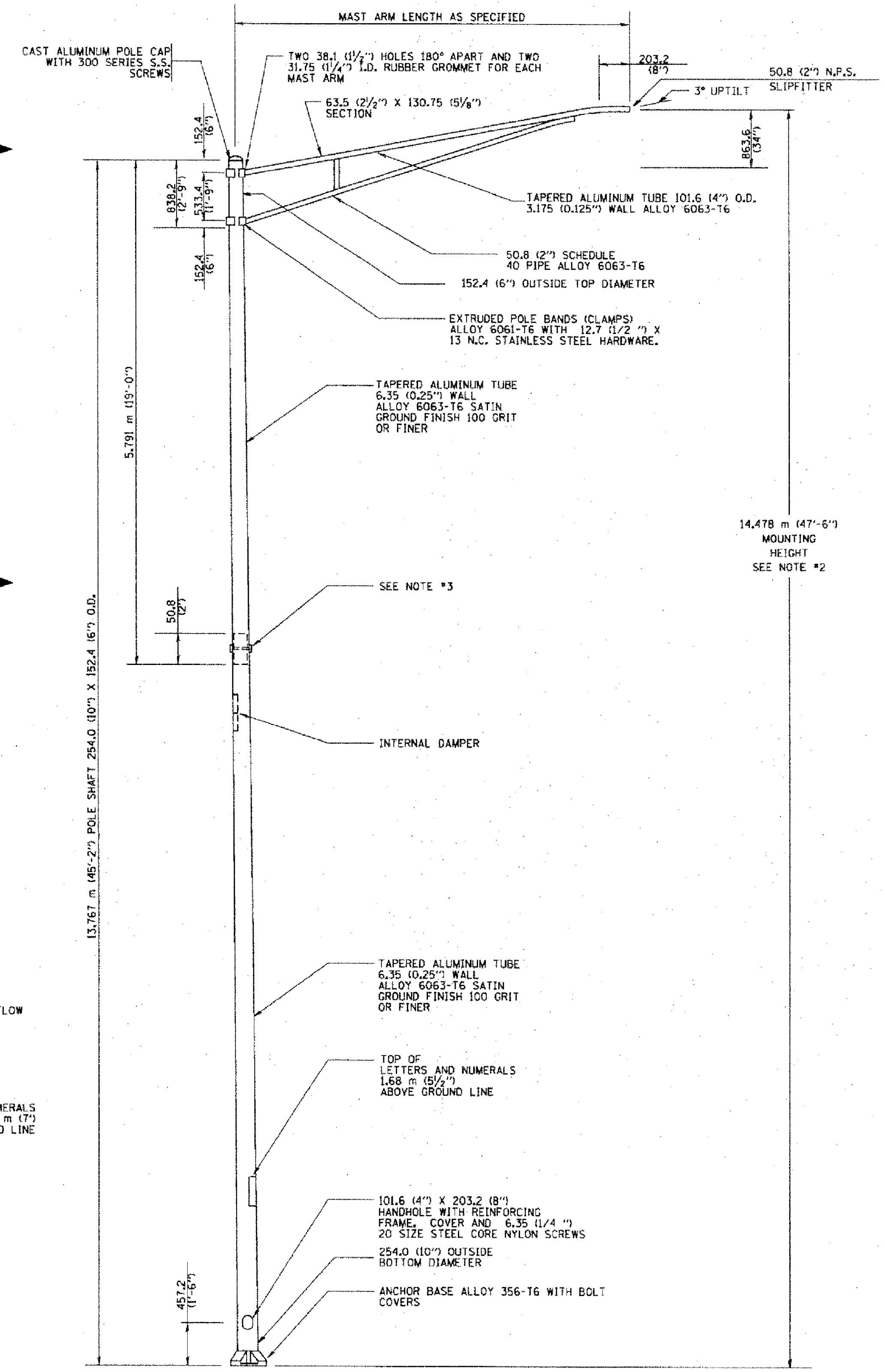
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL

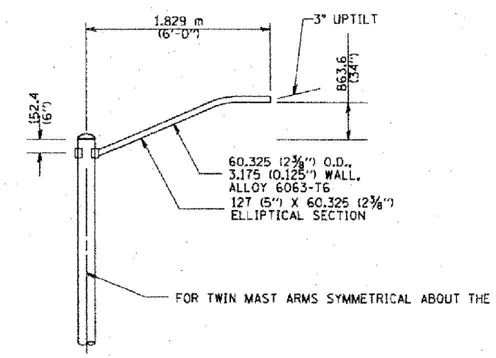


POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES



POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES



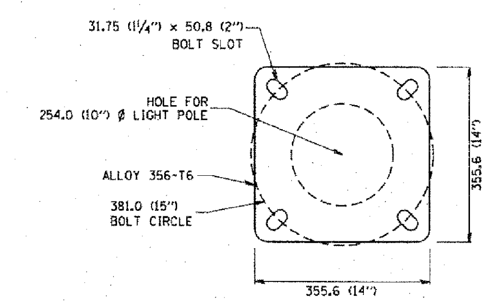


1.8 m (6') SINGLE MEMBER MAST ARM

(N.T.S.)

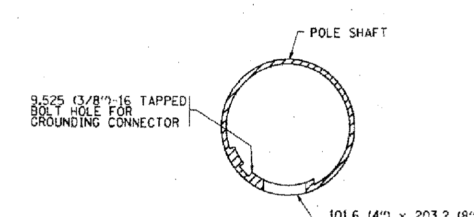
NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) 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.



LIGHT POLE BASE PLATE DETAIL

381.0 (15 INCH) BOLT CIRCLE



HANDHOLE DETAIL

(N.T.S.)

BE-400

REVISIONS	
NAME	DATE
R. TOMSONS	9-6-00
R. TOMSONS	8-12-03

ILLINOIS DEPARTMENT OF TRANSPORTATION

ALUMINUM LIGHT POLE
14.478 m (47'-6")
MOUNTING HEIGHT

SCALE: NONE

DATE:2/15/2006

DRAWN BY

CHECKED BY

BE-400

REVISION DATE:09/02/03

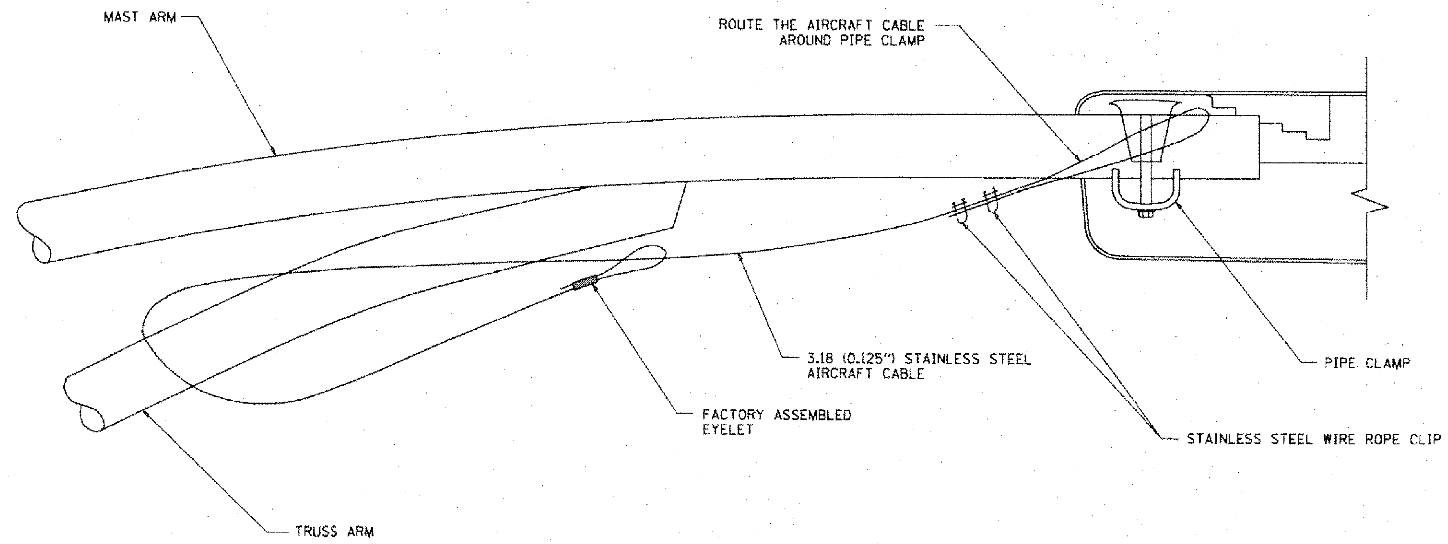
PLOT DATE = 2/15/2006
FILE NAME =
PLOT SCALE = 50.000 ' / IN.
USER NAME =

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			303	149

CONTRACT NO.

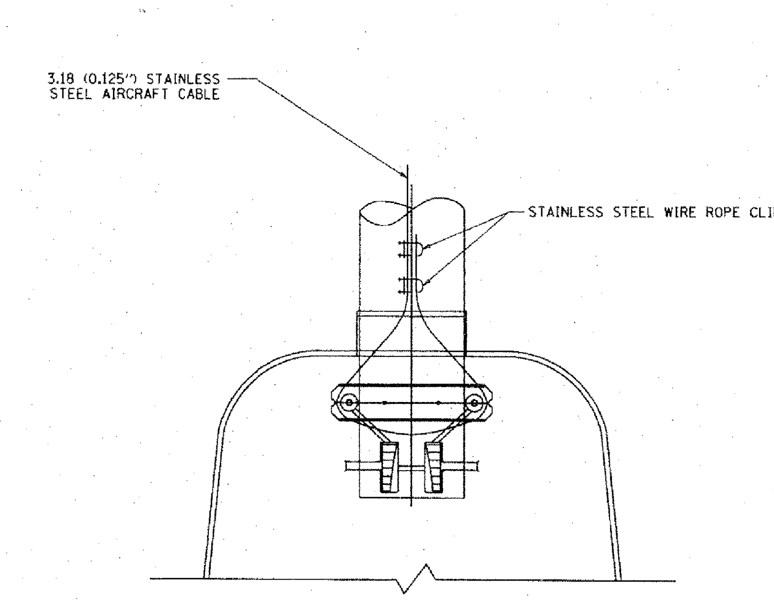
STA. TO STA.

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



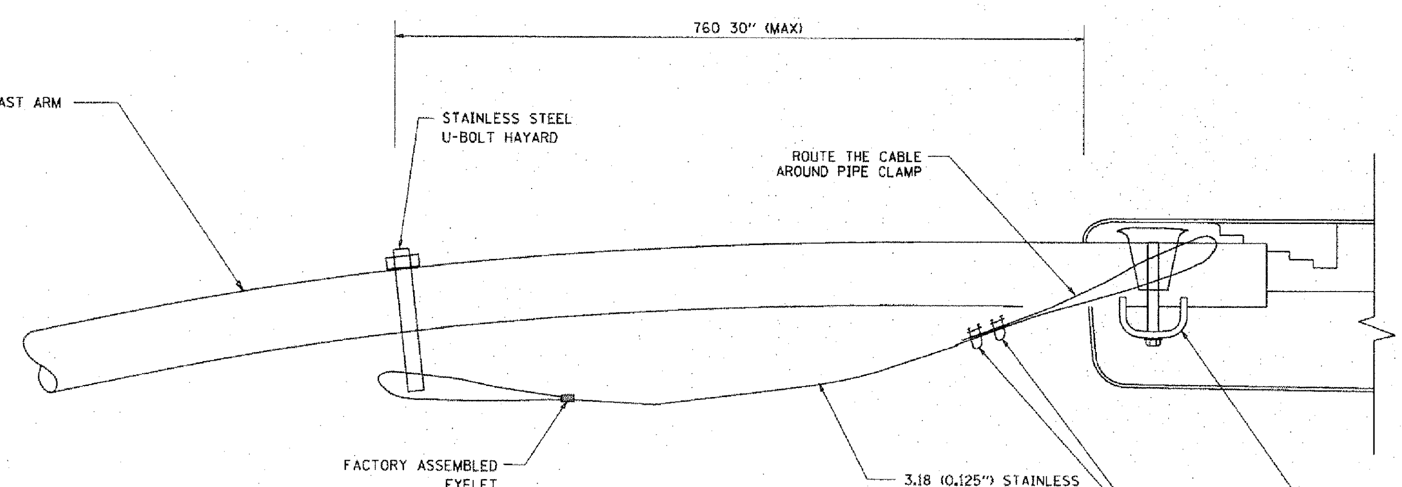
SIDE VIEW (TRUSS ARM)

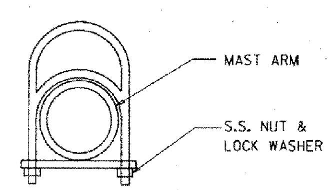
N.T.S.



BOTTOM VIEW

N.T.S.





STAINLESS STEEL U-BOLT HAYARD

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 3.18 (0.125") STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL
4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

LUMINAIRE SAFETY CABLE ASSEMBLY

SCALE: VERT. HORIZ.

DATE: 2/15/2006

DRAWN BY

CHECKED BY

BE-701

REVISION DATE:

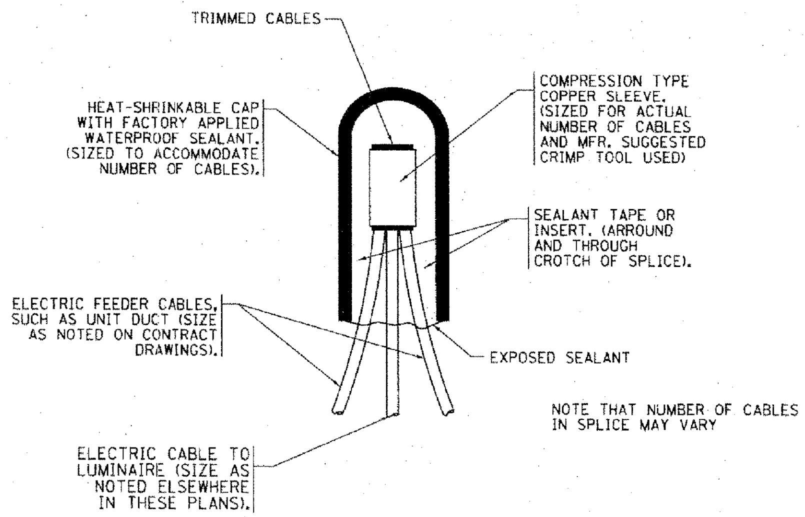
PLOT DATE = 2/15/2006

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			303	150

CONTRACT NO.

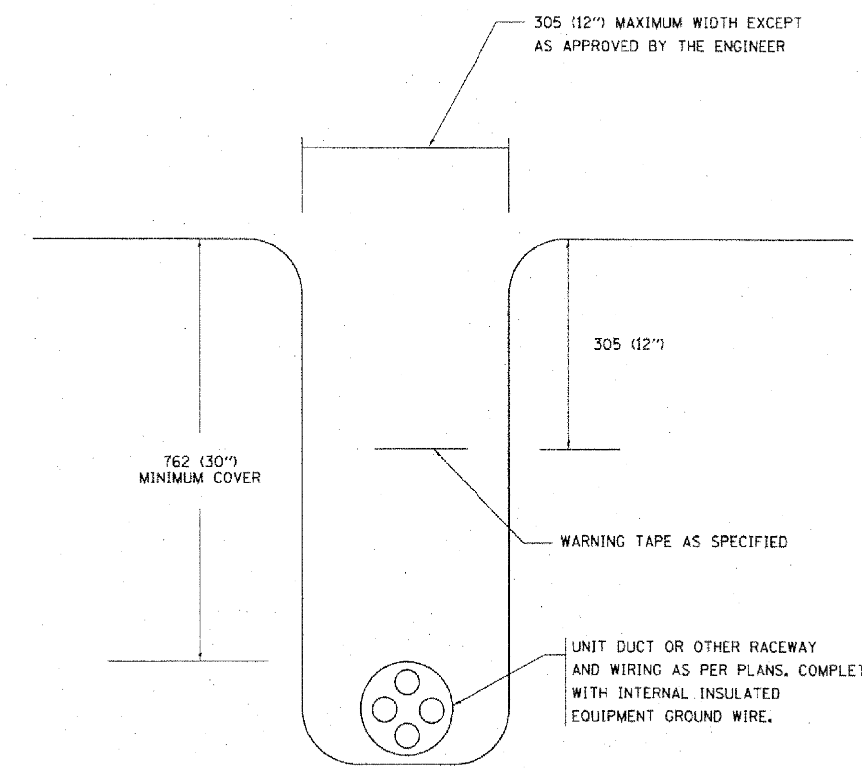
STA. TO STA.

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



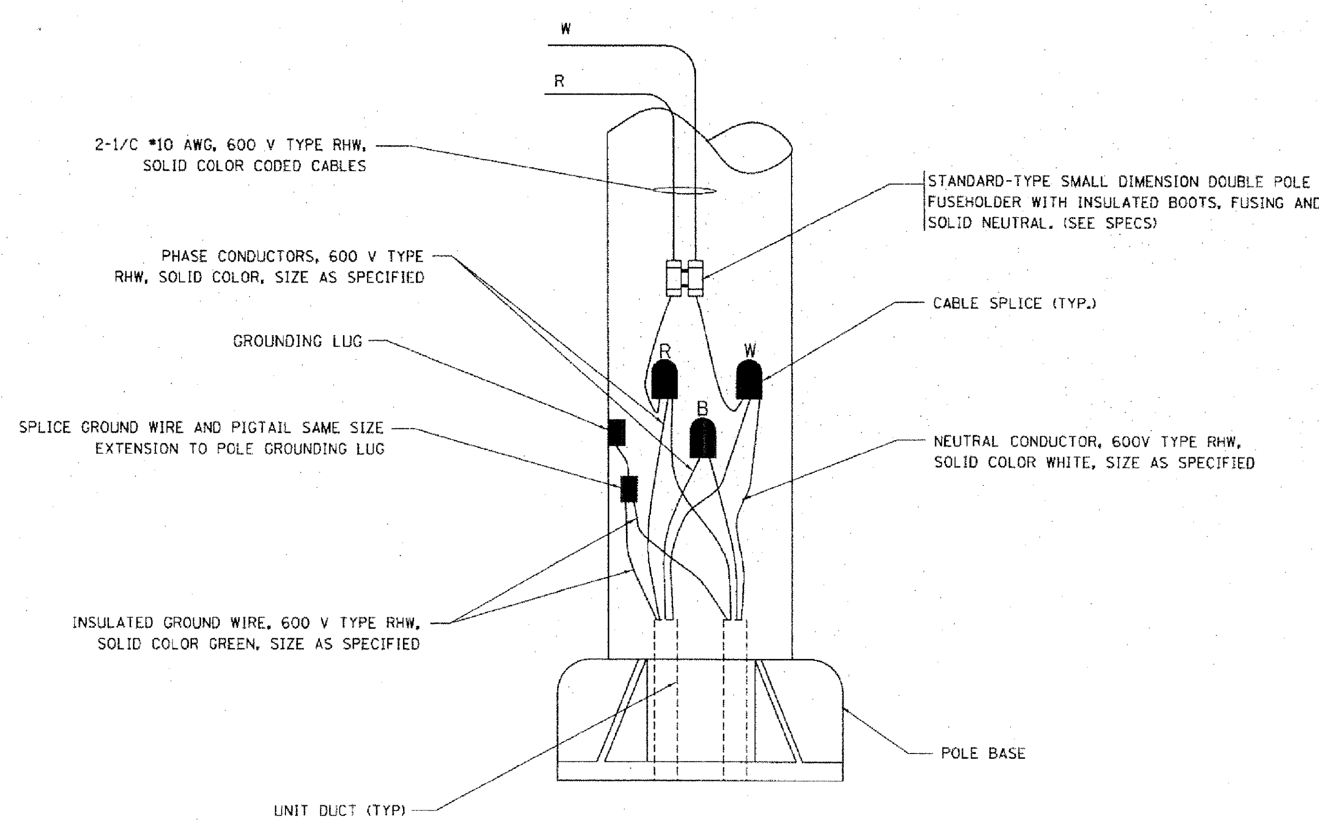
TYPICAL SPLICE DETAIL

N.T.S.



TYPICAL WIRING IN TRENCH DETAIL

N.T.S.



POLE WIRING DETAIL

N.T.S.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MISC. ELECTRICAL DETAILS
SHEET A

SCALE: VERT.
HORIZ.
DATE: 4/25/2006

DRAWN BY
CHECKED BY
BE-702
REVISION DATE:

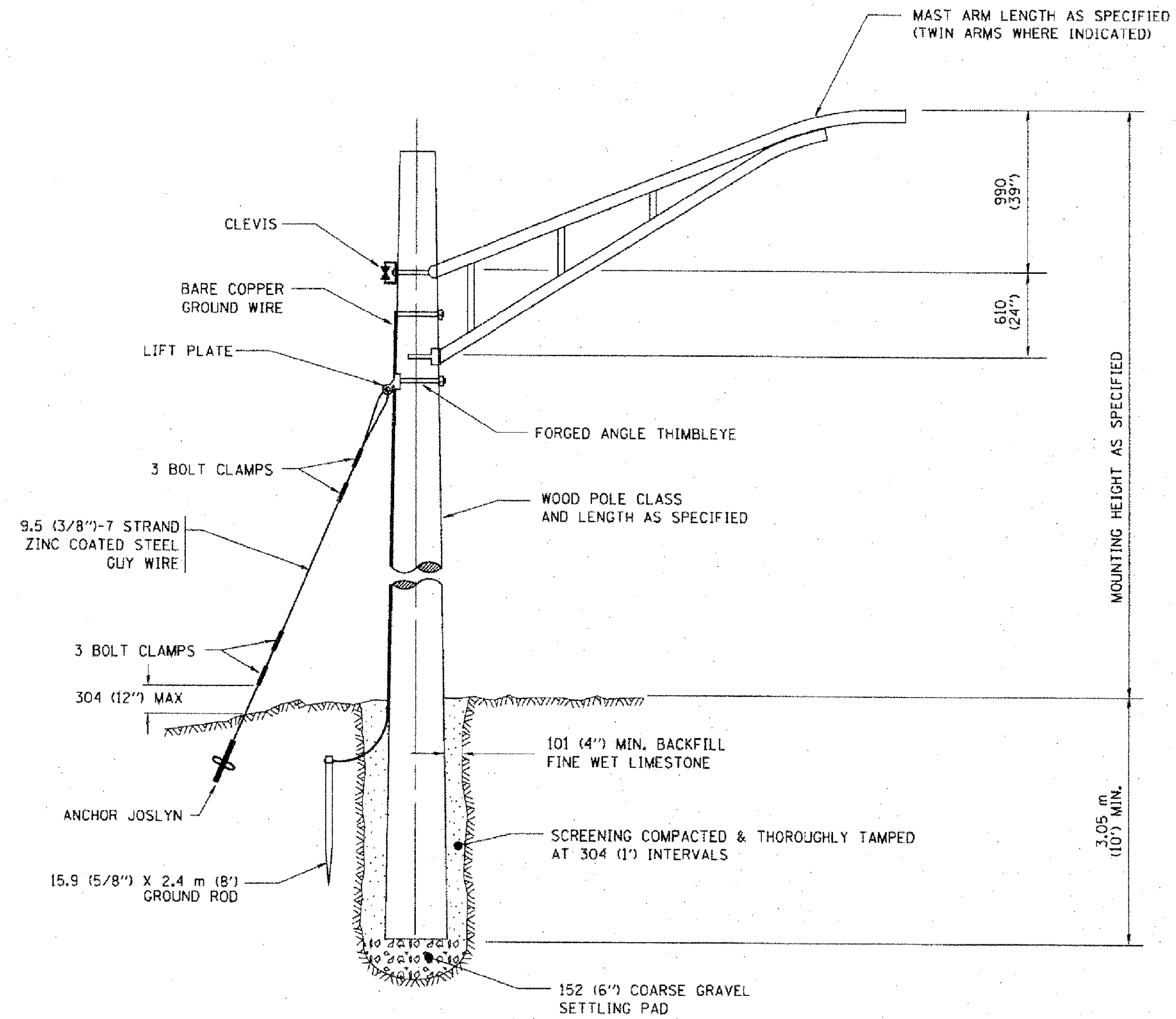
PLOT DATE = 4/26/2006
FILE NAME = c:\projects\diststd\be702.dgn
PLOT SCALE = 50.000 ' / IN.
USER NAME = gagliardt

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			303	151

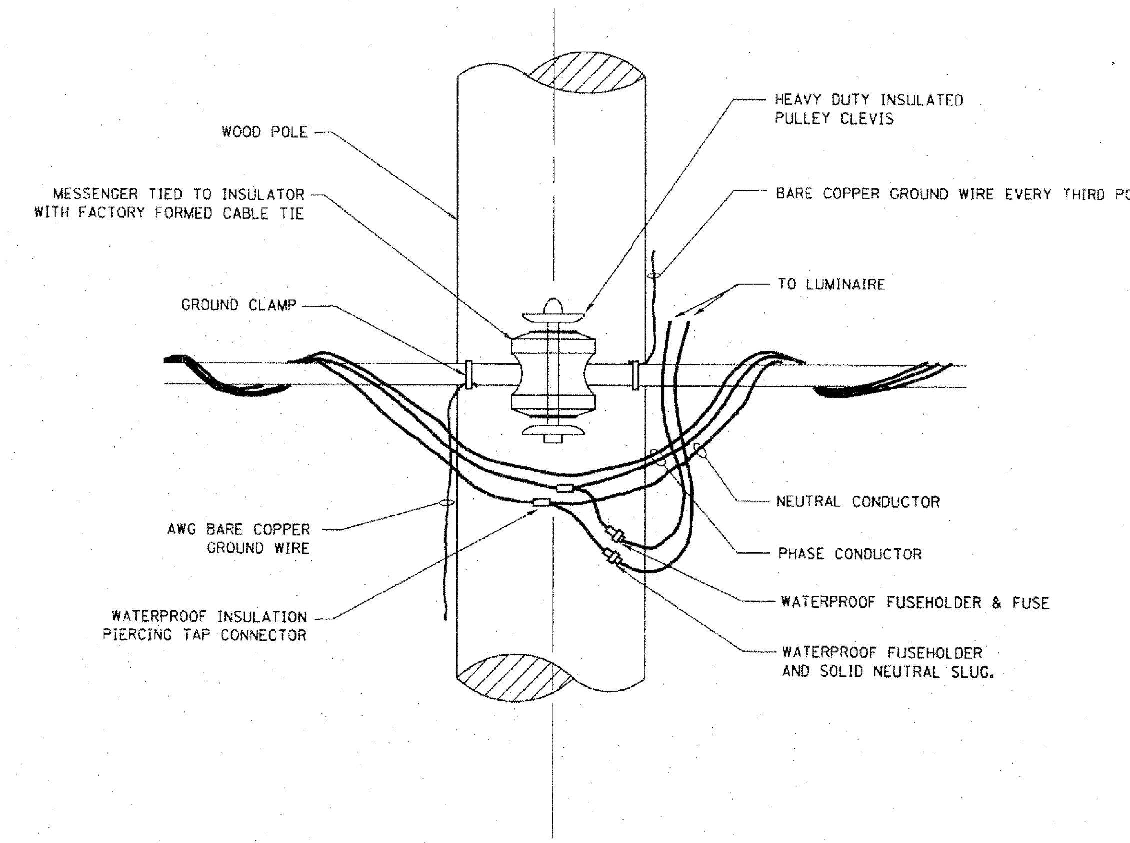
CONTRACT NO.

STA. TO STA.

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



TEMPORARY LIGHT POLE DETAIL



TEMPORARY LIGHT POLE ATTACHMENT DETAIL

NOTES:

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

PLOT DATE = 2/15/2006
FILE NAME = w:\diststd\be800.dgn
PLOT SCALE = 50.000 ' / IN.
USER NAME = goglionobt

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY LIGHT POLE DETAILS

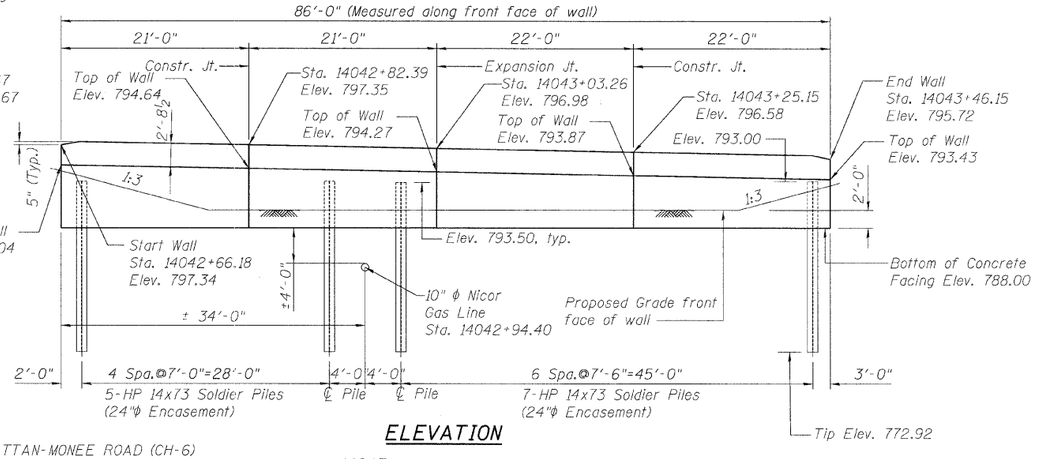
SCALE: VERT. HORIZ.
DATE: 2/15/2006

DRAWN BY
CHECKED BY
BE-800
REVISION DATE:

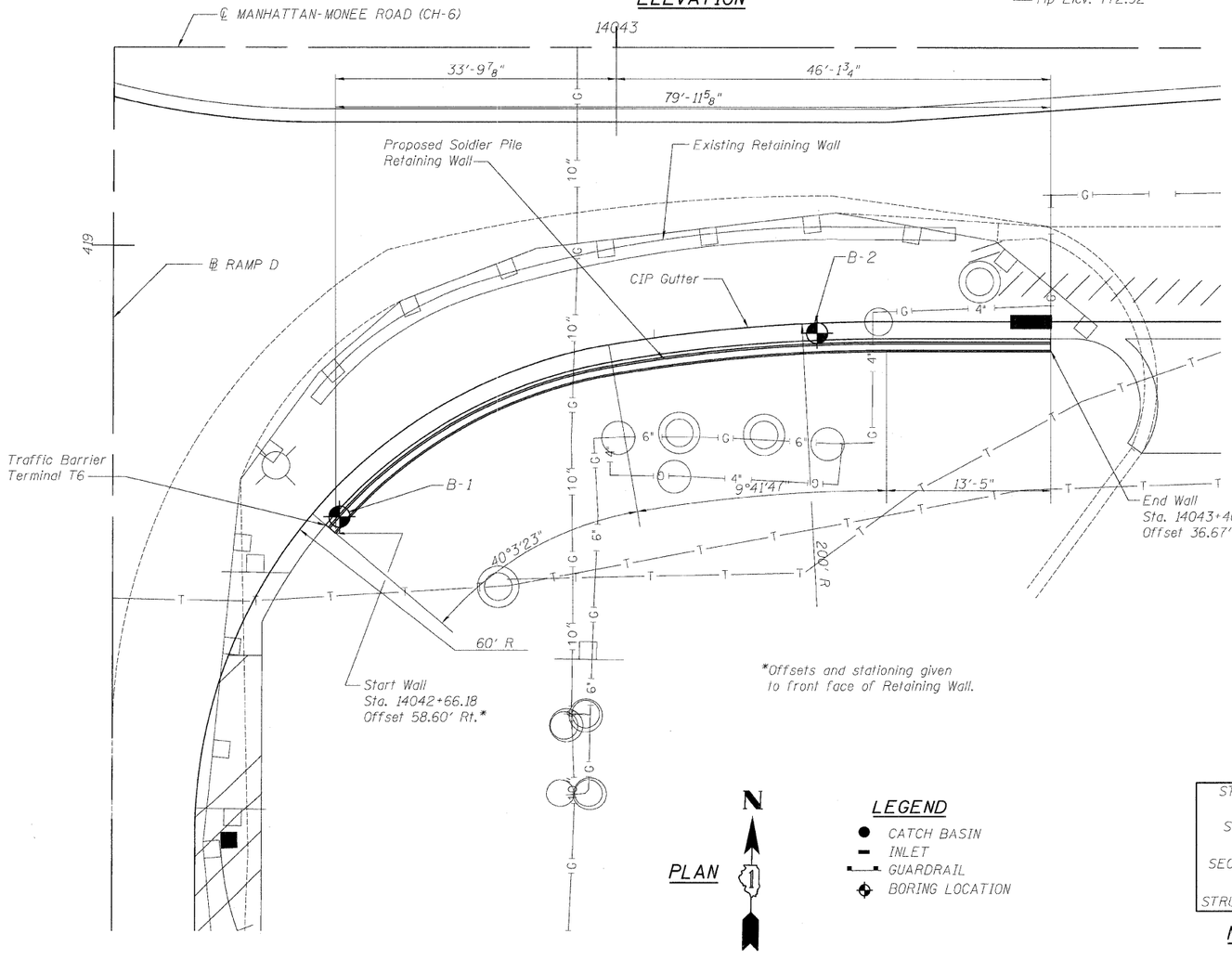
Benchmark: Box cut in concrete base of light pole in Northeast quad of East Ramps of I-57 and Monee Road. Elev. 796.46.

Existing Structure:
The existing retaining wall was built in 1967 from Sta. 14042+62.62 to Sta. 14043+40.67 of Manhattan-Monee Road (CH-6). The wall is a cantilevered type with key and varies in height over a length of 83'-5". The stem of the retaining wall is to be partially removed

Salvage:
None



ELEVATION



PLAN

N

LEGEND

- CATCH BASIN
- INLET
- GUARDRAIL
- BORING LOCATION

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	152
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT=		

SHEET NO. 1
4 SHEETS

Contract #62253

GENERAL NOTES

Contractor shall coordinate with utility for protection of gas pipeline. The retaining wall shall be constructed in such a way that the existing pipeline, valves and appurtenances are not disturbed and remain accessible during construction. Hand excavation may be required in close promixity to pipeline facilities and oversight by a Nicor inspector may be necessary.

All retaining wall stations and offsets are off the Manhattan-Monee Rd (CH-6) centerline.

Reinforcement Bars shall conform to the requirements of ASTM A 706 Gr. 60 (IL Modified).

See Special Provisions for installation of Soldier Pile Retaining Wall.

Shear Studs shall be granular or solid flux filled headed studs automatically end welded to the front flange in field.

The geocomposite wall drain shall be constructed according to Section 591 of the Standard Specifications. The contractor shall ensure that the bottom, side and the top edges are protected for soil entering or sealing the drain while placing the pervious fabric side of the drain toward the soil. Geocomposite wall drain shall be installed in stages as the excavation proceeds downward. Splicing should be minimized, following proper splice practices to insure no long term soil contamination.

All construction joints shall be bonded.

Proposed grade front face of wall shall match existing grade.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stud Shear Connectors	Each	144
Structure Excavation	Cu. Yd.	35
Concrete Retaining Wall Removal	Foot	83
Concrete Structures	Cu. Yd.	32.8
Reinforcement Bars, Epoxy Coated	Pound	4,580
Furnishing Soldier Piles, HP 14x73	Foot	247
Drilling and Setting Soldier Piles (in Soil)	Cu. Yd.	24.2
Geocomposite Wall Drain	Sq. Yd.	48
Protective Coat	Sq. Yd.	156
Pipe Underdrains for Structures, 4"	Foot	86
Untreated Timber Lagging	Sq. Ft.	511
Name Plates	Each	1
Porous Granular Embankment	Cu. Yd.	96

INDEX OF DRAWINGS

DESIGN LOADINGS

Equivalent Lateral Fluid Pressure: 40 pcf

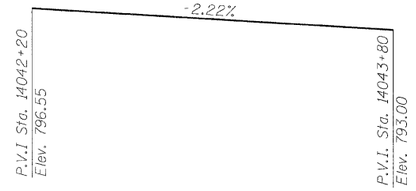
DESIGN SPECIFICATIONS

2002 AASHTO

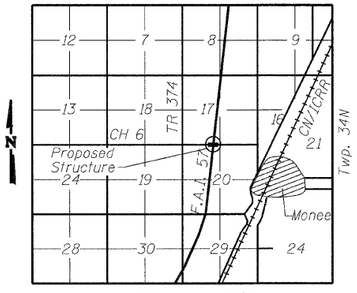
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (reinf.)
fy = 50,000 psi (M270, Grade 50 Soldier Piles)



PROFILE GRADE MANHATTAN-MONEE ROAD



LOCATION SKETCH

STATION 14043+06.16
BUILT 200_ BY
STATE OF ILLINOIS
FAI RTE 57
SECTION 99(1&2) R 3&9-1HB-1-BR2
STRUCTURE NO. 099-W022

NAME PLATE

See Std. 515001

STATE OF ILLINOIS
SEAN M. MARZANO
081-006321
CHAMPAIGN, ILLINOIS
LICENSED STRUCTURAL ENGINEER

STRUCTURAL ENGINEER
CLARK DIETZ, INC.

DATE: 5/1/2008

LICENSE EXPIRES 11-30-2009

GENERAL PLAN

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
RETAINING WALL AT RAMP D
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-W022

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER

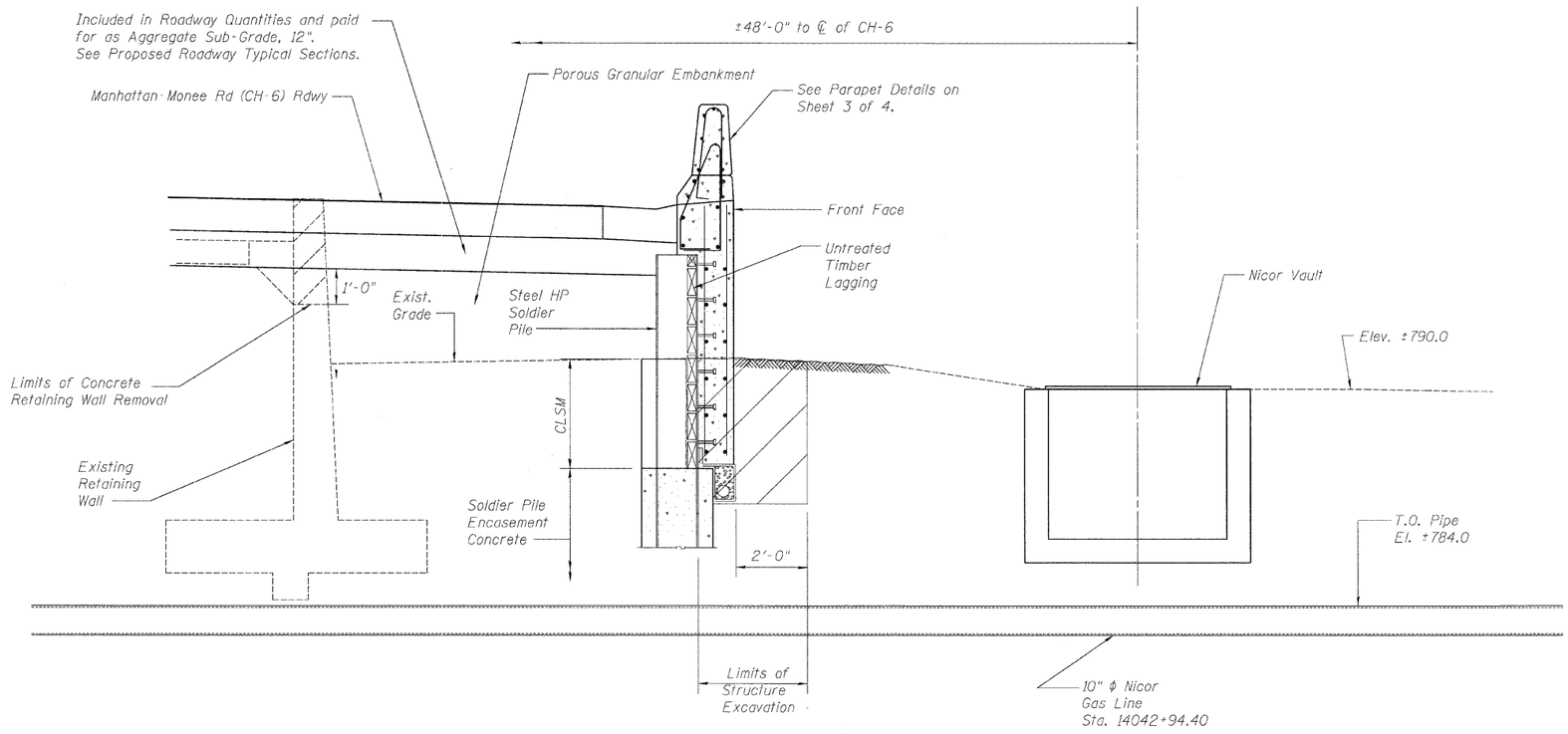
R-1

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	153
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

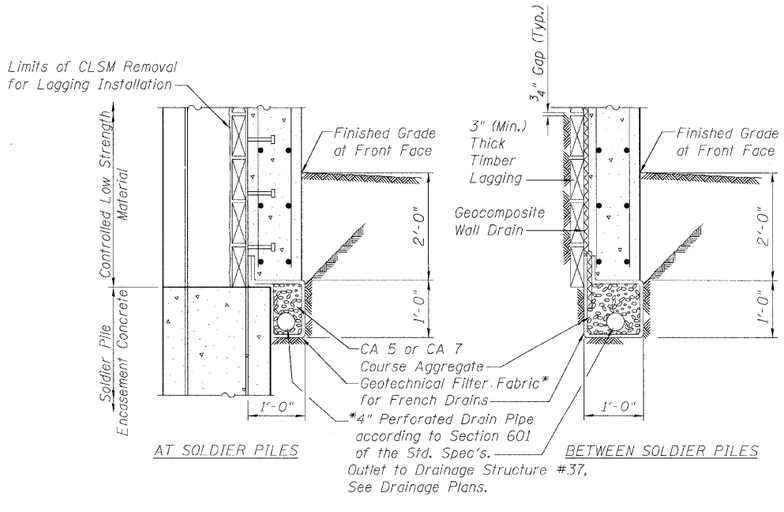
SHEET NO. 2
4 SHEETS

Contract #62253



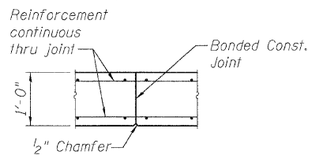
TYPICAL SECTION

Note:
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.

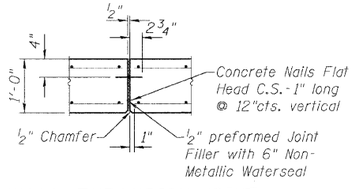


*Included in the cost of "Pipe Underdrains for Structures".

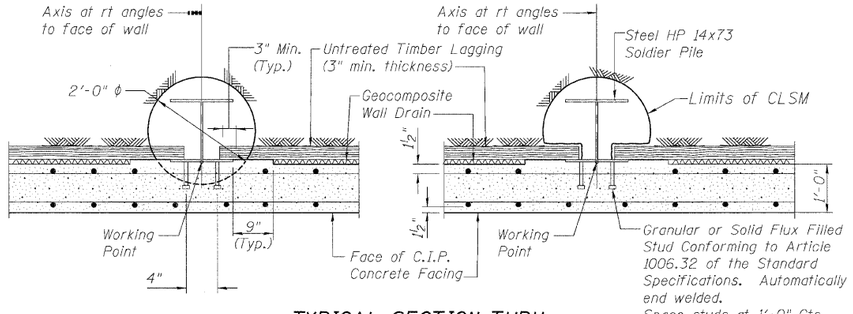
FRENCH DRAIN DETAILS



WALL CONSTRUCTION JOINT



WALL EXPANSION JOINT



TYPICAL SECTION THRU SOLDIER PILE

SOLDIER PILE STATION AND OFFSETS

Pile	Station	Offset to Working Point	
A	14042+66.74	56.45	Rt
B	14042+71.75	51.57	Rt
C	14042+77.31	47.33	Rt
D	14042+83.36	43.81	Rt
E	14042+89.64	41.10	Rt
F	14042+98.33	38.70	Rt
G	14043+05.74	37.53	Rt
H	14043+13.18	36.64	Rt
I	14043+20.66	36.04	Rt
J	14043+28.15	35.72	Rt
K	14043+35.65	35.67	Rt
L	14043+43.15	35.67	Rt

Notes:
Station and offsets are off Manhattan-Monee (CH-6) Centerline.
Hatched area indicates "Structure Excavation."
Soldier pile lettering is from west to east.
If additional length is required, that length shall be added to the bottom of the pile and shall be paid for at the unit price bid for Furnishing Soldier Piles, with the cost of splicing being included in the unit price and the method of splicing approved by the Engineer.

TYPICAL SECTION AND DETAILS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
RETAINING WALL AT RAMP D
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-W022

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CchampaIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

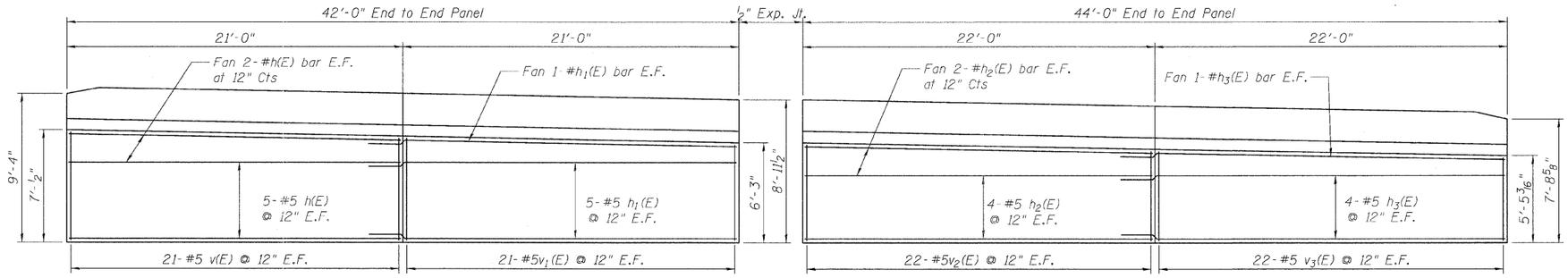
DRAWING NUMBER
R-2

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	154
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
4 SHEETS

Contract #62253



ELEVATION OF PANEL 1

(Looking from front of wall)

ELEVATION OF PANEL 2

(Looking from front of wall)

MIN. BAR LAP

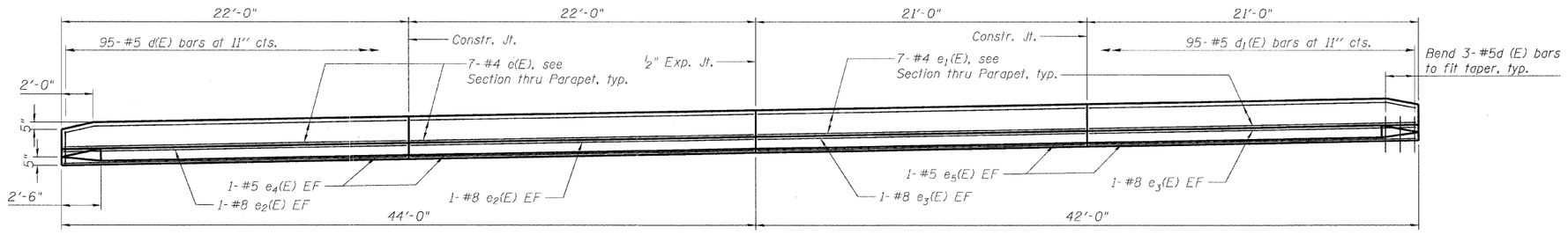
#5	2'-5"
#8	3'-8"

Note: E.F. indicates each face.

SUPERSTRUCTURE BILL OF MATERIAL

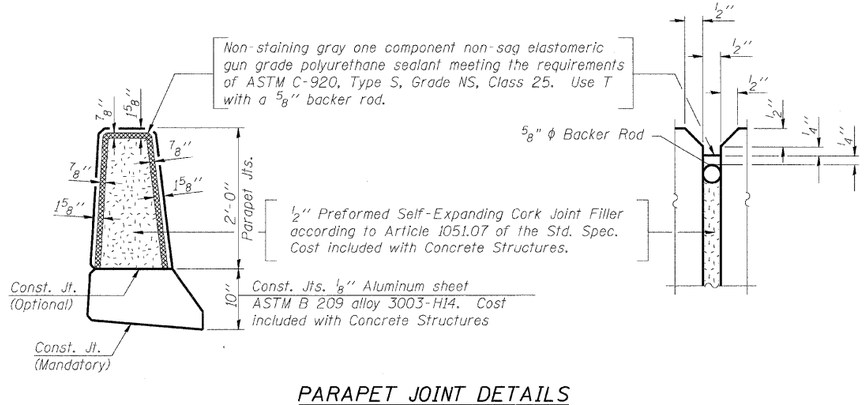
Bar	No.	Size	Length	Shape
d(E)	95	#5	5'-7"	
d_1(E)	95	#5	8'-3"	
e(E)	14	#4	21'-9"	
e_1(E)	14	#4	20'-9"	
e_2(E)	4	#8	21'-9"	
e_3(E)	4	#8	20'-9"	
e_4(E)	4	#5	21'-9"	
e_5(E)	4	#5	20'-9"	
h(E)	14	#5	20'-9"	
h_1(E)	12	#5	23-5"	
h_2(E)	12	#5	21'-9"	
h_3(E)	10	#5	24'-5"	
v(E)	42	#5	6'-8"	
v_1(E)	42	#5	6'-2"	
v_2(E)	44	#5	5'-8"	
v_3(E)	44	#5	5'-4"	
Reinforcement Bars, Epoxy Coated		Pound	4,580	

The horizontal bars shall be bent to account for non-linear wall alignment. Cost shall be included in "Reinforcement Bars, Epoxy Coated."

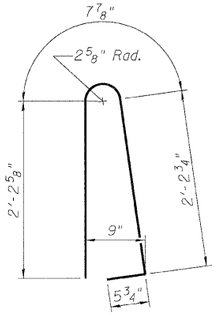


ELEVATION OF PARAPET

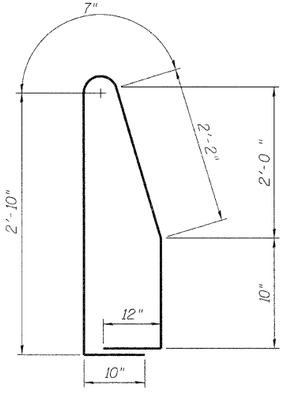
(inside face of parapet - mirror image of wall elevation above)



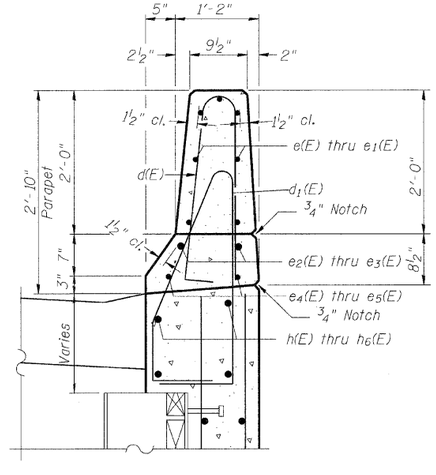
PARAPET JOINT DETAILS



BAR d(E)



BAR d_1(E)



SECTION THRU PARAPET

WALL ELEVATION AND REINFORCEMENT

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
RETAINING WALL AT RAMP D
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-W022

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER
R-3

*SEC. 99 (I&2) R 3&9-IHB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	154a
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
4 SHEETS

Contract #62253

Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG RW-01

WEI Job No.: 373-14-01

Client: Clark-Dietz, Inc.
Project: Manhattan-Monee Road Bridge over I-57
Location: Will County, IL

Datum: NGVD
Elevation: 785.47 ft
North: 1734245.55 ft
East: 1142163.33 ft
Station:
Offset:

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type (recovery)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	784.2	16-inch thick, black CLAY LOAM thick						
		Stiff to very stiff, brown and black CLAY with trace organics --POSSIBLE FILL--			1	3 4 5	2.83 B	20
			5		2	3 2 5	1.50 P	34
	780.0	Hard, brown and gray CLAY, trace non-decomposed roots			3	4 6 7	6.89 B	17
			10		4	4 6 10	6.89 B	17
	775.0	Hard, brownish gray SILTY CLAY			5	5 9 13	6.15 B	14
			15		6	4 7 10	7.30 B	16
					7	5 6 8	6.15 B	16
	767.5	Hard, gray CLAY						
			20		8	3 4 6	4.10 B	17
	763.2				9	4 7 10	4.76 B	17
	761.7	Medium dense, brown SAND						
		Very stiff, gray CLAY	25		10	3 4 7	3.36 B	17
	757.2	Medium dense, gray, fine SANDY LOAM			11	4 7 7	3.12 B	20
	755.5		30		12	4 6 9	NP	16
		Boring terminated at 30.00 ft	35					
			40					
			45					
			50					

GENERAL NOTES

Begin Drilling: 10-05-2006 Complete Drilling: 10-05-2006
Drilling Contractor: Groff Testing Drill Rig: CME 550 ATV
Driller: T&A Logger: C.D. Checked by: E.D.
Drilling Method: 3.25" IDA HSA, Boring Backfilled upon completion

WATER LEVEL DATA

While Drilling: 22.50 ft
At Completion of Drilling: 24.00 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.

WANGENGINC 373401.GPJ WANGENG.GDT 10/1/108

Wang Engineering, INC.
Consulting Geotechnical and Environmental Engineers
wangeng3@wangeng.com
1145 Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG RW-02

WEI Job No.: 373-14-01

Client: Clark-Dietz, Inc.
Project: Manhattan-Monee Road Bridge over I-57
Location: Will County, IL

Datum: NGVD
Elevation: 785.47 ft
North: 1734275.01 ft
East: 1142218.24 ft
Station:
Offset:

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type (recovery)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	785.1	14-inch thick, black CLAY LOAM --TOPSOIL--						
		Very loose to loose, gray, medium GRAVEL, no fines --FILL--			1	3 3 3	NP	4
			5		2	3 2 1	NP	4
	780.0				3	2 1 1	NP	5
	777.5	Hard, brown and gray CLAY						
			10		4	3 4 7	4.35 B	20
	775.0	Loose, brown, medium SANDY LOAM			5	2 2 3	NP	21
	772.5	Medium stiff to stiff, gray SILTY CLAY to CLAY	15		6	2 3 3	0.82 B	22
	770.0	Very stiff, gray CLAY			7	3 4 4	1.64 B	16
			20		8	3 3 6	3.12 B	17
					9	4 6 8	2.46 B	16
			25		10	4 6 6	3.69 B	15
	755.5	Boring terminated at 30.00 ft	30		11	4 4 7	2.21 B	17
			35		12	3 5 6	3.20 B	19
			40					
			45					
			50					

GENERAL NOTES

Begin Drilling: 10-05-2006 Complete Drilling: 10-05-2006
Drilling Contractor: Groff Testing Drill Rig: CME 550 ATV
Driller: T&A Logger: C.D. Checked by: E.D.
Drilling Method: 3.25" IDA HSA, Boring Backfilled upon completion

WATER LEVEL DATA

While Drilling: 0.00 ft
At Completion of Drilling: 5.00 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.

WANGENGINC 373401.GPJ WANGENG.GDT 10/1/108

SOIL BORINGS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
RETAINING WALL AT RAMP D
F.A. I-57 SEC. 99(I&2) R 3&9-IHB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-W022

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	122230
DRAWN BY:	MEW	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER
R-4

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	155
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT=		

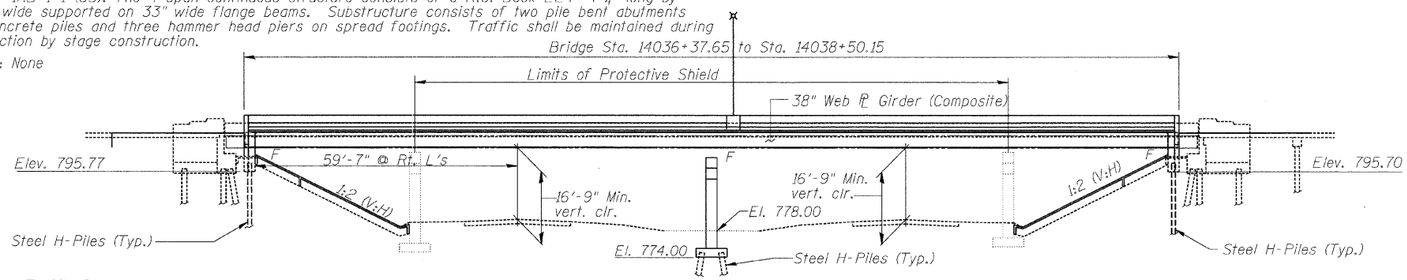
SHEET NO. 1
28 SHEETS

Contract #62253

Bench Mark: "□" Cut in Bridge Wall Southwest corner of bridge, Monee Road of I-57, Elev. 804.20.

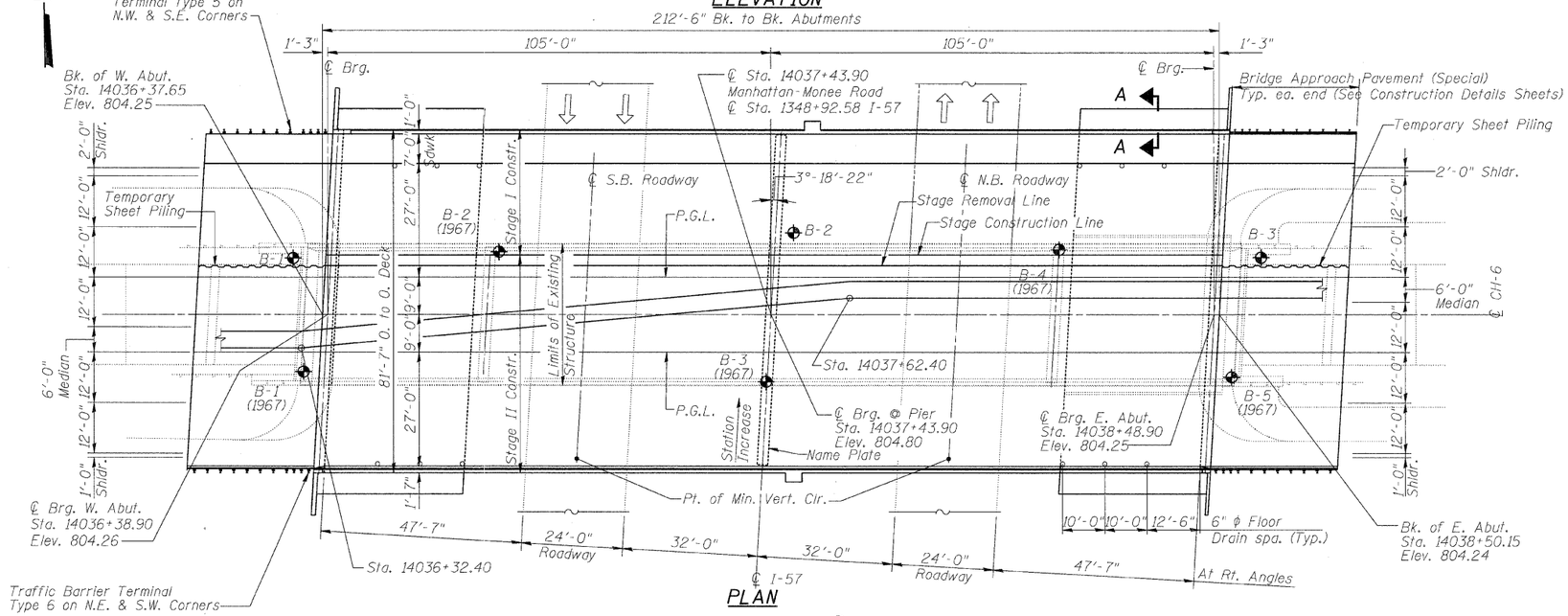
Existing Structure: S.N. 099-0159 was built in 1967 as F.A.I. Rte. 57 (I-57) Manhattan-Monee Road, Sec. 99-1HB-1-I (85). The 4 span continuous structure consists of a R.C. Deck 224'-4 3/4" long by 34'-0" wide supported on 33" wide flange beams. Substructure consists of two pile bent abutments with concrete piles and three hammer head piers on spread footings. Traffic shall be maintained during construction by stage construction.

Salvage: None

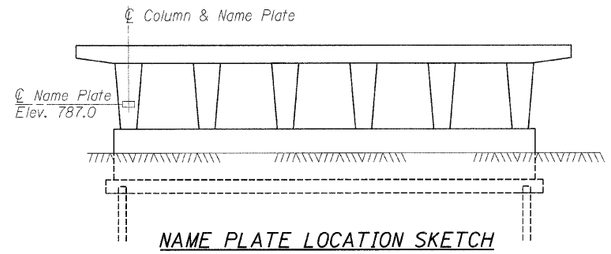


ELEVATION

212'-6" Bk. to Bk. Abutments



PLAN

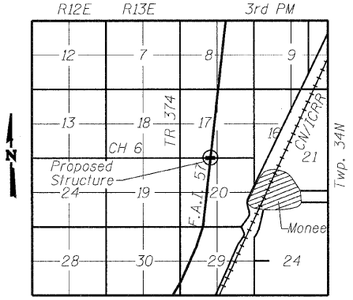


NAME PLATE LOCATION SKETCH

STATION 140.37+43.90
BUILT BY
STATE OF ILLINOIS
MANHATTAN-MONEE ROAD (CH-6)
SEC. 99(1&2) R 3&9-1HB-1-BR2
LOADING HS20
STR. NO. 099-4647

NAME PLATE

See Std. 515001



LOCATION SKETCH

LOADING HS20-44

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

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

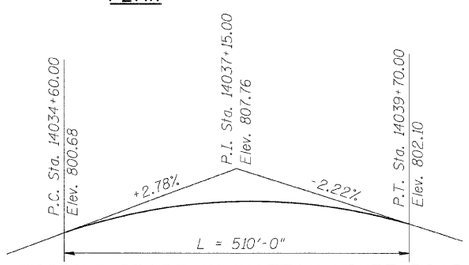
DESIGN STRESSES

FIELD UNITS

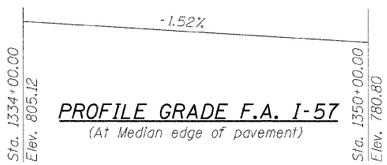
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (M270, Grade 50)
f_y = 36,000 psi (M270, Grade 36)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4%g
Site Coefficient (S) = 1.0



PROFILE GRADE MANHATTAN-MONEE ROAD



PROFILE GRADE F.A. I-57

(At Median edge of pavement)

STATE OF ILLINOIS
SEAN W. MARIANO
081-006321
CHAMPAIGN, ILLINOIS
LICENSED STRUCTURAL ENGINEER

Sean Mariano

STRUCTURAL ENGINEER
CLARK DIETZ, INC.

DATE: 2/29/2008

LICENSE EXPIRES 11-30-2008

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

GENERAL PLAN

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57

F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS

DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	02/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER

S-1

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	156
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
28 SHEETS

Contract #62253

GENERAL NOTES

1. Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts $^{7}/_{8}$ in. ϕ, holes $^{15}/_{16}$ in. ϕ, unless otherwise noted.

2. Calculated weight of Structural Steel = 397,720 lbs. M270 Gr. 50
40,200 lbs. M270 Gr. 36

3. No field welding is permitted except as specified in the contract documents.

4. Reinforcement bars designated (E) shall be epoxy coated.

5. Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

6. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions

7. Slope wall shall be reinforced with welded wire fabric, 6"x6"-W4.0xW4.0, weighing 58 lbs. per 100 sq. ft.

8. The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

9. The inorganic zinc rich primer/Acrylic/Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for exterior and bottom flange of the fascia beams shall be blue, Munsell No. 10B 3/6. See Special Provision for "Cleaning and Painting New Metal Structures."

10. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $^{1}/_{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $^{1}/_{8}$" adjusting shims, of the dimensions of the bottom bearing plates, shall be provided for each bearing in addition to all other plates or shims.

11. The Contractor shall drive 3 test piles in permanent locations: one at the West Abutment, one at the East Abutment, and the Pier as directed by the Engineer before ordering the remainder of piles. The test piles shall be driven to 110 percent of the nominal required bearing indicated in the pile data information.

12. All Construction joints shall be bonded.

13. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

14. Cable guardrail in median is to remain in place during construction. Should the contractor desire to remove the cable guardrail for access during construction, it shall be removed and replaced in kind as approved by the engineer. Cost included in Structure Excavation

15. Slipforming of the parapets is not allowed.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.		308	308
Slopewall 4 Inch	Sq. Yd.		797	797
Removal of Existing Structures	Each	1		1
Structure Excavation	Cu. Yd.		209	209
Floor Drains	Each	12		12
Concrete Structures	Cu. Yd.		153.0	153.0
Concrete Superstructure	Cu. Yd.	609.6		609.6
Protective Coat	Sq. Yd.	2,130		2,130
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	6,864		6,864
Reinforcement Bars, Epoxy Coated	Pound	127,630	38,130	165,760
Furnishing Steel Piles HP10x42	Foot		4,823	4,823
Driving Piles	Foot		4,823	4,823
Test Pile Steel HP10x42	Each		3	3
Name Plates	Each	1		1
Geocomposite Wall Drain	Sq. Yd.		157	157
Pipe Underdrains for Structures 4"	Foot		206	206
Temporary Sheet Piling	Sq. Ft.		211	211
Bar Splicers	Each	1,985	64	2,049
Protective Shield	Sq. Yd.	510		510
Bridge Deck Grooving	Sq. Yd.	1,559		1,559
Aluminum Railing, Type L	Foot	202.8		202.8
Concrete Encasement	Cu. Yd.		8.0	8.0
Anchor Bolts, 1"	Each		44	44
Anchor Bolts, 1½"	Each		22	22

INDEX OF DRAWINGS

GENERAL NOTES & BILL OF MATERIAL

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CchampaIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		
ACTIVITY	INITIALS		

DRAWING NUMBER

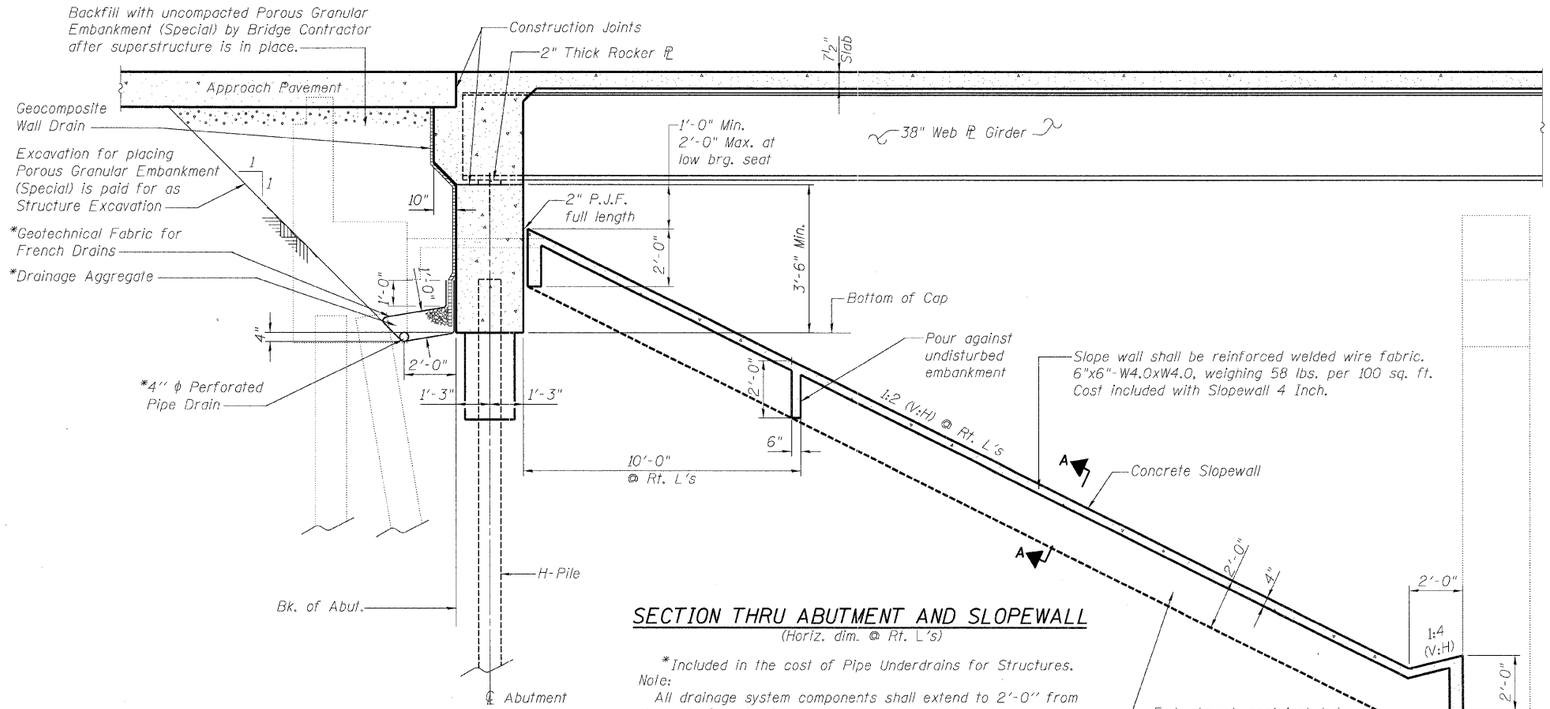
S-2

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	157
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
28 SHEETS

Contract #62253



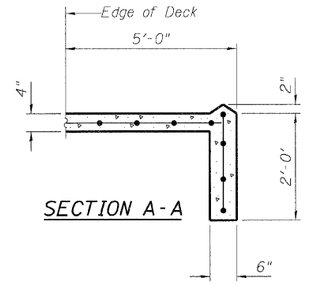
SECTION THRU ABUTMENT AND SLOPEWALL

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

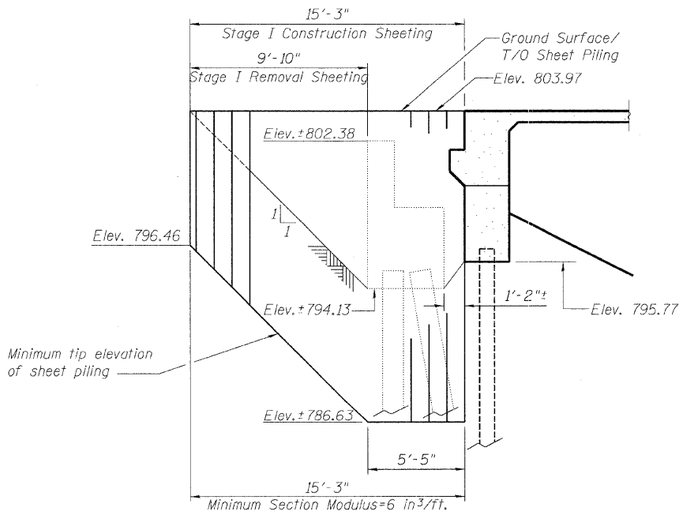
*Included in the cost of Pipe Underdrains for Structures.

Note:

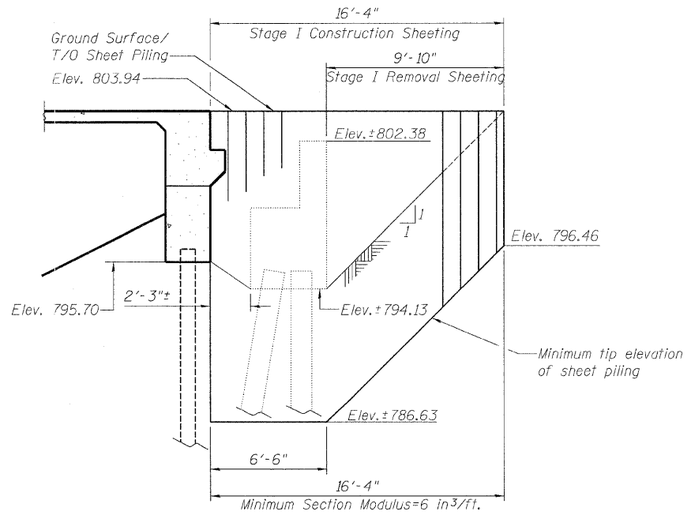
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



SECTION A-A



WEST ABUTMENT



EAST ABUTMENT

TEMPORARY SHEET PILING AND ABUTMENT REMOVAL DETAILS

NOTES:

1. If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
2. Sheeting for Stage II is within the limits of Stage I Sheeting. Set top of Stage I Sheeting at proposed elevation for Stage II Sheeting.

TEMPORARY SHEET PILING

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY	SMM	PROJECT NO:	122230
DRAWN BY	MEW/SLD	DATE:	06/2008
CHECKED BY	SLD		
APPROVED BY	SMM		

DRAWING NUMBER

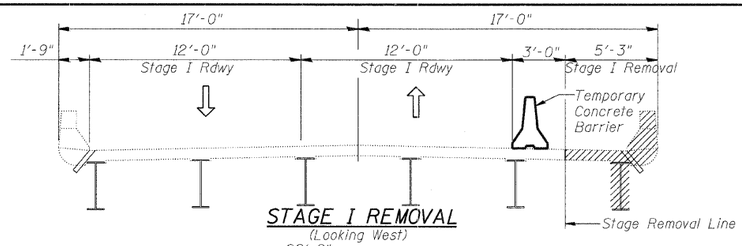
S-3

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

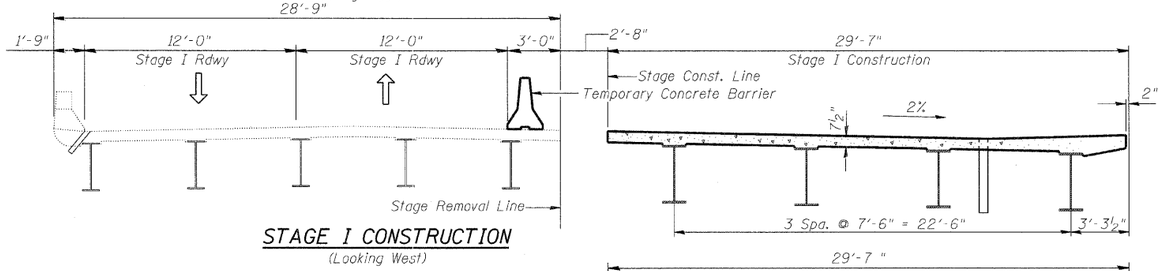
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO. *
FAI 57	*	WILL	303	158
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 4
28 SHEETS

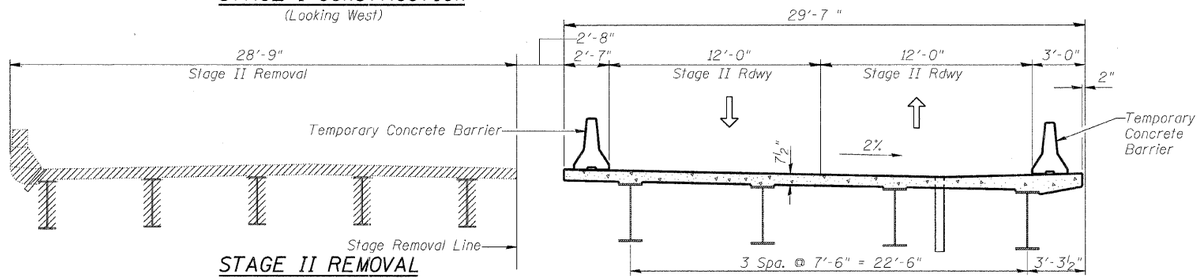
Contract #62253



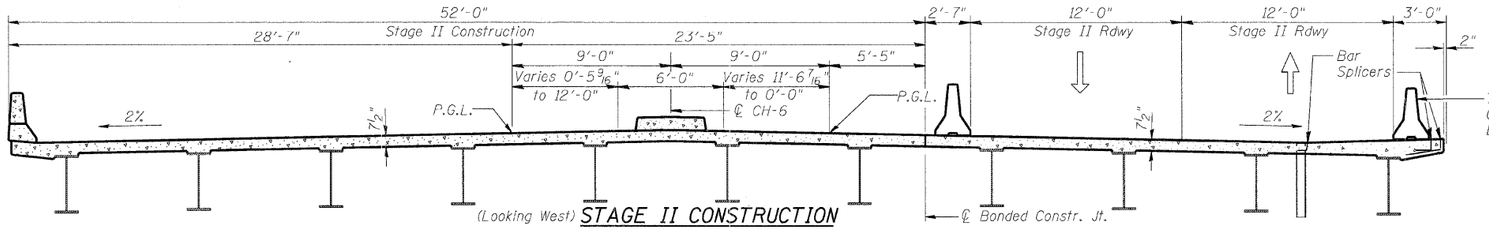
STAGE I REMOVAL
(Looking West)



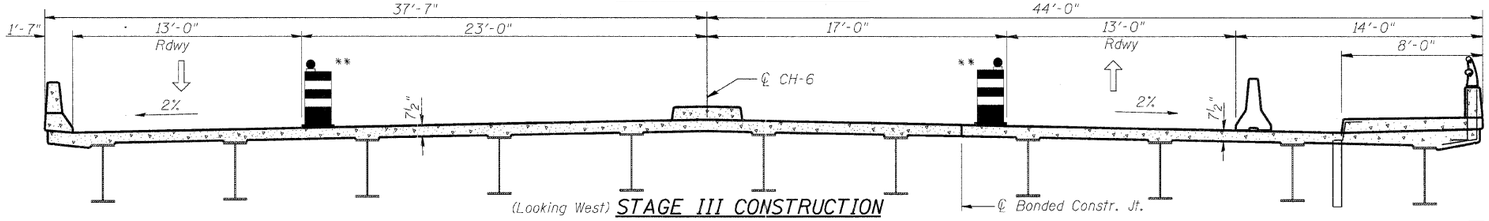
STAGE I CONSTRUCTION
(Looking West)



STAGE II REMOVAL
(Looking West)

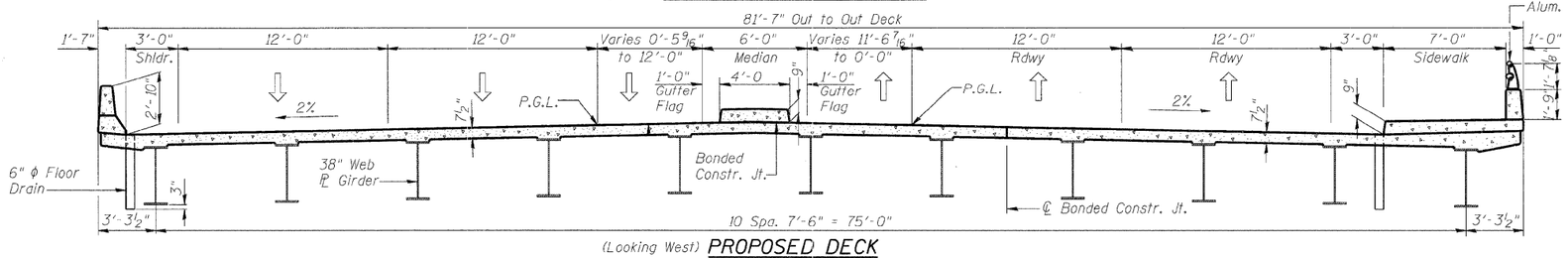


(Looking West) STAGE II CONSTRUCTION



(Looking West) STAGE III CONSTRUCTION

** Required for roadway construction. See Roadway Plans.



(Looking West) PROPOSED DECK

NOTES:

1. Hatched areas indicate removal of existing structures.
2. Existing East and West Piers to be removed 1' below the ground surface and center pier to be completely removed.
3. Existing abutment piles to be cut off 1' below the bottom of pile cap.
4. The existing abutments and piers shall be removed in stages along the same line as for removal of the existing superstructure.
5. See Dwg. S-23 for Temporary Concrete Barrier details.
6. For quantities of Temporary Concrete Barrier see Roadway Plans.

STAGE CONSTRUCTION AND DETAILS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		
ACTIVITY	INITIALS		

DRAWING NUMBER

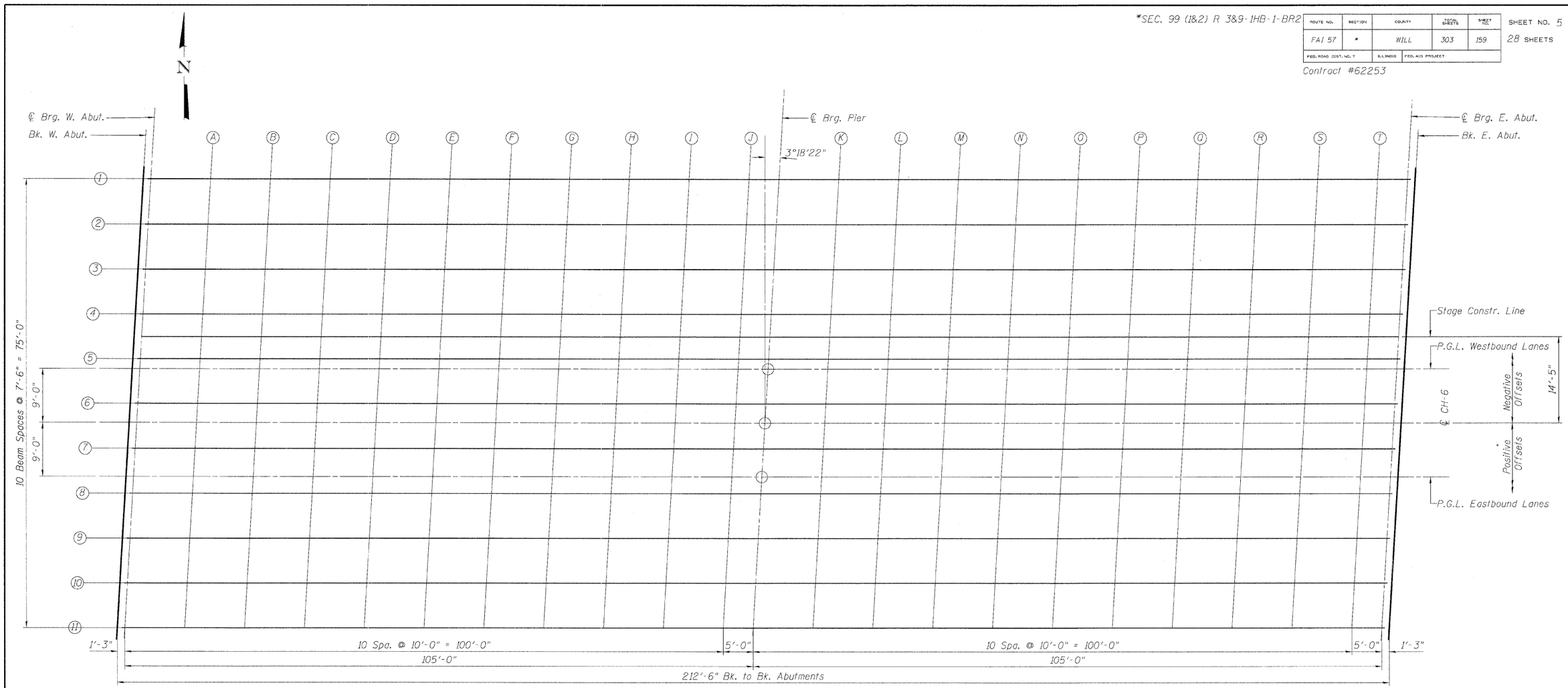
S-4

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	159
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5
28 SHEETS

Contract #62253



PLAN

TOP OF DECK PLAN

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57
WILL COUNTY
SEC. 99(1&2) R 3&9-1HB-1-BR2
STA.14037+43.90
STRUCTURE NUMBER 099-4647

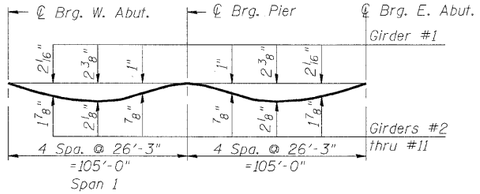
Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER

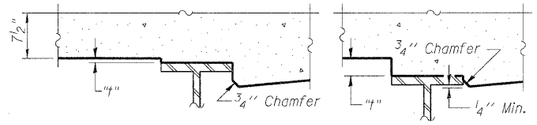
S-5



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

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 below.



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

FILLET HEIGHTS

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+40.002	-40.708	803.457	803.457
℄ Brg. W. Abut.	14036+41.254	-40.708	803.469	803.469
A	14036+51.254	-40.708	803.564	803.643
B	14036+61.254	-40.708	803.650	803.794
C	14036+71.254	-40.708	803.725	803.914
D	14036+81.254	-40.708	803.791	803.999
E	14036+91.254	-40.708	803.847	804.048
F	14037+01.254	-40.708	803.893	804.065
G	14037+11.254	-40.708	803.930	804.055
H	14037+21.254	-40.708	803.956	804.032
I	14037+31.254	-40.708	803.973	804.006
J	14037+41.254	-40.708	803.980	803.988
℄ Brg. Pier	14037+46.254	-40.708	803.980	803.980
K	14037+56.254	-40.708	803.972	803.988
L	14037+66.254	-40.708	803.955	804.006
M	14037+76.254	-40.708	803.928	804.028
N	14037+86.254	-40.708	803.891	804.041
O	14037+96.254	-40.708	803.844	804.033
P	14038+06.254	-40.708	803.787	803.995
Q	14038+16.254	-40.708	803.721	803.921
R	14038+26.254	-40.708	803.644	803.812
S	14038+36.254	-40.708	803.558	803.670
T	14038+46.254	-40.708	803.462	803.502
℄ Brg. E. Abut.	14038+51.254	-40.708	803.411	803.411
Bk. E. Abut.	14038+52.506	-40.708	803.398	803.398

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+39.568	-33.208	803.602	803.602
℄ Brg. W. Abut.	14036+40.820	-33.208	803.615	803.615
A	14036+50.820	-33.208	803.710	803.781
B	14036+60.820	-33.208	803.796	803.926
C	14036+70.820	-33.208	803.872	804.042
D	14036+80.820	-33.208	803.938	804.126
E	14036+90.820	-33.208	803.995	804.176
F	14037+00.820	-33.208	804.042	804.196
G	14037+10.820	-33.208	804.078	804.191
H	14037+20.820	-33.208	804.105	804.173
I	14037+30.820	-33.208	804.123	804.152
J	14037+40.820	-33.208	804.130	804.137
℄ Brg. Pier	14037+45.820	-33.208	804.130	804.130
K	14037+55.820	-33.208	804.123	804.137
L	14037+65.820	-33.208	804.106	804.152
M	14037+75.820	-33.208	804.079	804.170
N	14037+85.820	-33.208	804.042	804.178
O	14037+95.820	-33.208	803.996	804.166
P	14038+05.820	-33.208	803.940	804.126
Q	14038+15.820	-33.208	803.874	804.054
R	14038+25.820	-33.208	803.798	803.949
S	14038+35.820	-33.208	803.712	803.813
T	14038+45.820	-33.208	803.617	803.652
℄ Brg. E. Abut.	14038+50.820	-33.208	803.565	803.565
Bk. E. Abut.	14038+52.073	-33.208	803.552	803.552

GIRDER 3

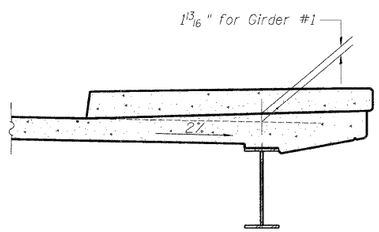
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+39.135	-25.708	803.748	803.748
℄ Brg. W. Abut.	14036+40.387	-25.708	803.760	803.760
A	14036+50.387	-25.708	803.856	803.927
B	14036+60.387	-25.708	803.943	804.072
C	14036+70.387	-25.708	804.019	804.189
D	14036+80.387	-25.708	804.086	804.273
E	14036+90.387	-25.708	804.143	804.324
F	14037+00.387	-25.708	804.190	804.344
G	14037+10.387	-25.708	804.227	804.340
H	14037+20.387	-25.708	804.254	804.322
I	14037+30.387	-25.708	804.272	804.302
J	14037+40.387	-25.708	804.280	804.287
℄ Brg. Pier	14037+45.387	-25.708	804.280	804.280
K	14037+55.387	-25.708	804.273	804.287
L	14037+65.387	-25.708	804.257	804.303
M	14037+75.387	-25.708	804.230	804.321
N	14037+85.387	-25.708	804.194	804.330
O	14037+95.387	-25.708	804.148	804.318
P	14038+05.387	-25.708	804.092	804.279
Q	14038+15.387	-25.708	804.027	804.207
R	14038+25.387	-25.708	803.951	804.102
S	14038+35.387	-25.708	803.866	803.967
T	14038+45.387	-25.708	803.771	803.806
℄ Brg. E. Abut.	14038+50.387	-25.708	803.720	803.720
Bk. E. Abut.	14038+51.639	-25.708	803.707	803.707

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+38.702	-18.208	803.893	803.893
℄ Brg. W. Abut.	14036+39.954	-18.208	803.906	803.906
A	14036+49.954	-18.208	804.002	804.073
B	14036+59.954	-18.208	804.089	804.219
C	14036+69.954	-18.208	804.166	804.336
D	14036+79.954	-18.208	804.233	804.420
E	14036+89.954	-18.208	804.290	804.471
F	14036+99.954	-18.208	804.338	804.492
G	14037+09.954	-18.208	804.376	804.489
H	14037+19.954	-18.208	804.403	804.471
I	14037+29.954	-18.208	804.422	804.451
J	14037+39.954	-18.208	804.430	804.437
℄ Brg. Pier	14037+44.954	-18.208	804.430	804.430
K	1403?+54.954	-18.208	804.424	804.438
L	14037+64.954	-18.208	804.408	804.454
M	14037+74.954	-18.208	804.382	804.472
N	14037+84.954	-18.208	804.346	804.481
O	14037+94.954	-18.208	804.300	804.470
P	14038+04.954	-18.208	804.245	804.432
Q	14038+14.954	-18.208	804.180	804.360
R	14038+24.954	-18.208	804.105	804.256
S	14038+34.954	-18.208	804.020	804.121
T	14038+44.954	-18.208	803.925	803.961
℄ Brg. E. Abut.	14038+49.954	-18.208	803.875	803.875
Bk. E. Abut.	14038+51.206	-18.208	803.861	803.861

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+38.483	-14.417	803.967	803.967
℄ Brg. W. Abut.	14036+39.735	-14.417	803.980	803.980
A	14036+49.735	-14.417	804.076	804.147
B	14036+59.735	-14.417	804.163	804.293
C	14036+69.735	-14.417	804.240	804.410
D	14036+79.735	-14.417	804.308	804.495
E	14036+89.735	-14.417	804.365	804.546
F	14036+99.735	-14.417	804.413	804.567
G	14037+09.735	-14.417	804.451	804.564
H	14037+19.735	-14.417	804.479	804.547
I	14037+29.735	-14.417	804.497	804.527
J	14037+39.735	-14.417	804.506	804.513
℄ Brg. Pier	14037+44.735	-14.417	804.506	804.506
K	14037+54.735	-14.417	804.500	804.514
L	14037+64.735	-14.417	804.484	804.530
M	14037+74.735	-14.417	804.458	804.549
N	14037+84.735	-14.417	804.423	804.558
O	14037+94.735	-14.417	804.377	804.547
P	14038+04.735	-14.417	804.322	804.509
Q	14038+14.735	-14.417	804.257	804.438
R	14038+24.735	-14.417	804.182	804.333
S	14038+34.735	-14.417	804.098	804.198
T	14038+44.735	-14.417	804.003	804.039
℄ Brg. E. Abut.	14038+49.735	-14.417	803.953	803.953
Bk. E. Abut.	14038+50.987	-14.417	803.940	803.940



SECTION THRU SIDEWALK

TOP OF DECK ELEVATIONS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	122230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER
S-6

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	161
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
28 SHEETS

Contract #62253

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+38.269	-10.708	804.039	804.039
℄ Brg. W. Abut.	14036+39.521	-10.708	804.052	804.052
A	14036+49.521	-10.708	804.149	804.219
B	14036+59.521	-10.708	804.236	804.365
C	14036+69.521	-10.708	804.313	804.483
D	14036+79.521	-10.708	804.380	804.568
E	14036+89.521	-10.708	804.438	804.619
F	14036+99.521	-10.708	804.486	804.640
G	14037+09.521	-10.708	804.524	804.637
H	14037+19.521	-10.708	804.552	804.620
I	14037+29.521	-10.708	804.571	804.601
J	14037+39.521	-10.708	804.580	804.587
℄ Brg. Pier	14037+44.521	-10.708	804.580	804.580
K	14037+54.521	-10.708	804.574	804.588
L	14037+64.521	-10.708	804.559	804.605
M	14037+74.521	-10.708	804.533	804.624
N	14037+84.521	-10.708	804.498	804.633
O	14037+94.521	-10.708	804.453	804.623
P	14038+04.521	-10.708	804.398	804.584
Q	14038+14.521	-10.708	804.333	804.513
R	14038+24.521	-10.708	804.258	804.409
S	14038+34.521	-10.708	804.174	804.274
T	14038+44.521	-10.708	804.080	804.115
℄ Brg. E. Abut.	14038+49.521	-10.708	804.029	804.029
Bk. E. Abut.	14038+50.773	-10.708	804.016	804.016

P.G.L. WESTBOUND LANES

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+38.170	-9.000	804.072	804.072
℄ Brg. W. Abut.	14036+39.422	-9.000	804.085	804.085
A	14036+49.422	-9.000	804.182	804.252
B	14036+59.422	-9.000	804.269	804.399
C	14036+69.422	-9.000	804.346	804.516
D	14036+79.422	-9.000	804.414	804.601
E	14036+89.422	-9.000	804.472	804.653
F	14036+99.422	-9.000	804.520	804.674
G	14037+09.422	-9.000	804.558	804.671
H	14037+19.422	-9.000	804.586	804.654
I	14037+29.422	-9.000	804.605	804.635
J	14037+39.422	-9.000	804.614	804.621
℄ Brg. Pier	14037+44.422	-9.000	804.615	804.615
K	14037+54.422	-9.000	804.609	804.623
L	14037+64.422	-9.000	804.593	804.639
M	14037+74.422	-9.000	804.567	804.658
N	14037+84.422	-9.000	804.532	804.668
O	14037+94.422	-9.000	804.487	804.657
P	14038+04.422	-9.000	804.432	804.619
Q	14038+14.422	-9.000	804.368	804.548
R	14038+24.422	-9.000	804.293	804.444
S	14038+34.422	-9.000	804.209	804.309
T	14038+44.422	-9.000	804.115	804.150
℄ Brg. E. Abut.	14038+49.422	-9.000	804.064	804.064
Bk. E. Abut.	14038+50.674	-9.000	804.051	804.051

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+37.835	-3.208	804.184	804.184
℄ Brg. W. Abut.	14036+39.087	-3.208	804.197	804.197
A	14036+49.087	-3.208	804.295	804.365
B	14036+59.087	-3.208	804.382	804.512
C	14036+69.087	-3.208	804.460	804.630
D	14036+79.087	-3.208	804.528	804.715
E	14036+89.087	-3.208	804.586	804.767
F	14036+99.087	-3.208	804.634	804.788
G	14037+09.087	-3.208	804.673	804.786
H	14037+19.087	-3.208	804.701	804.769
I	14037+29.087	-3.208	804.720	804.750
J	14037+39.087	-3.208	804.729	804.736
℄ Brg. Pier	14037+44.087	-3.208	804.730	804.730
K	14037+54.087	-3.208	804.725	804.739
L	14037+64.087	-3.208	804.709	804.756
M	14037+74.087	-3.208	804.684	804.775
N	14037+84.087	-3.208	804.649	804.785
O	14037+94.087	-3.208	804.605	804.775
P	14038+04.087	-3.208	804.550	804.737
Q	14038+14.087	-3.208	804.486	804.666
R	14038+24.087	-3.208	804.412	804.563
S	14038+34.087	-3.208	804.328	804.428
T	14038+44.087	-3.208	804.234	804.269
℄ Brg. E. Abut.	14038+49.087	-3.208	804.184	804.184
Bk. E. Abut.	14038+50.340	-3.208	804.170	804.170

CENTERLINE-CH-6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+37.650	0.000	804.247	804.247
℄ Brg. W. Abut.	14036+38.902	0.000	804.259	804.259
A	14036+48.902	0.000	804.357	804.428
B	14036+58.902	0.000	804.445	804.574
C	14036+68.902	0.000	804.523	804.693
D	14036+78.902	0.000	804.591	804.778
E	14036+88.902	0.000	804.649	804.830
F	14036+98.902	0.000	804.697	804.852
G	14037+08.902	0.000	804.736	804.849
H	14037+18.902	0.000	804.765	804.833
I	14037+28.902	0.000	804.784	804.814
J	14037+38.902	0.000	804.794	804.801
℄ Brg. Pier	14037+43.902	0.000	804.795	804.795
K	14037+53.902	0.000	804.789	804.803
L	14037+63.902	0.000	804.774	804.820
M	14037+73.902	0.000	804.749	804.840
N	14037+83.902	0.000	804.714	804.850
O	14037+93.902	0.000	804.670	804.840
P	14038+03.902	0.000	804.615	804.802
Q	14038+13.902	0.000	804.551	804.732
R	14038+23.902	0.000	804.477	804.628
S	14038+33.902	0.000	804.394	804.494
T	14038+43.902	0.000	804.300	804.335
℄ Brg. E. Abut.	14038+48.902	0.000	804.250	804.250
Bk. E. Abut.	14038+50.154	0.000	804.237	804.237

GIRDER 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+37.402	4.292	804.158	804.158
℄ Brg. W. Abut.	14036+38.654	4.292	804.171	804.171
A	14036+48.654	4.292	804.269	804.339
B	14036+58.654	4.292	804.357	804.487
C	14036+68.654	4.292	804.435	804.605
D	14036+78.654	4.292	804.503	804.690
E	14036+88.654	4.292	804.562	804.743
F	14036+98.654	4.292	804.611	804.765
G	14037+08.654	4.292	804.650	804.763
H	14037+18.654	4.292	804.679	804.747
I	14037+28.654	4.292	804.698	804.728
J	14037+38.654	4.292	804.708	804.715
℄ Brg. Pier	14037+43.654	4.292	804.709	804.709
K	14037+53.654	4.292	804.704	804.718
L	14037+63.654	4.292	804.689	804.735
M	14037+73.654	4.292	804.664	804.755
N	14037+83.654	4.292	804.629	804.765
O	14037+93.654	4.292	804.585	804.755
P	14038+03.654	4.292	804.531	804.718
Q	14038+13.654	4.292	804.467	804.648
R	14038+23.654	4.292	804.393	804.544
S	14038+33.654	4.292	804.310	804.410
T	14038+43.654	4.292	804.217	804.252
℄ Brg. E. Abut.	14038+48.654	4.292	804.166	804.166
Bk. E. Abut.	14038+49.906	4.292	804.153	804.153

TOP OF DECK ELEVATIONS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS

DESIGN FIRM REGISTRATION
No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DESIGNED BY:	SMM	PROJECT NO:	102232
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		
ACTIVITY	INITIALS		

DRAWING NUMBER

S-7

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	162
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 8
28 SHEETS

Contract #62253

P.G.L. EASTBOUND LANES

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+37.130	9.000	804.061	804.061
℄ Brg. W. Abut.	14036+38.382	9.000	804.074	804.074
A	14036+48.382	9.000	804.172	804.243
B	14036+58.382	9.000	804.260	804.390
C	14036+68.382	9.000	804.339	804.509
D	14036+78.382	9.000	804.407	804.595
E	14036+88.382	9.000	804.466	804.647
F	14036+98.382	9.000	804.515	804.669
G	14037+08.382	9.000	804.554	804.668
H	14037+18.382	9.000	804.584	804.652
I	14037+28.382	9.000	804.603	804.633
J	14037+38.382	9.000	804.613	804.620
℄ Brg. Pier	14037+43.382	9.000	804.615	804.615
K	14037+53.382	9.000	804.610	804.624
L	14037+63.382	9.000	804.595	804.641
M	14037+73.382	9.000	804.571	804.661
N	14037+83.382	9.000	804.536	804.672
O	14037+93.382	9.000	804.492	804.662
P	14038+03.382	9.000	804.438	804.625
Q	14038+13.382	9.000	804.375	804.555
R	14038+23.382	9.000	804.301	804.452
S	14038+33.382	9.000	804.218	804.319
T	14038+43.382	9.000	804.125	804.160
℄ Brg. E. Abut.	14038+48.382	9.000	804.075	804.075
Bk. E. Abut.	14038+49.634	9.000	804.062	804.062

GIRDER 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+36.969	11.792	804.004	804.004
℄ Brg. W. Abut.	14036+38.221	11.792	804.017	804.017
A	14036+48.221	11.792	804.115	804.185
B	14036+58.221	11.792	804.203	804.333
C	14036+68.221	11.792	804.282	804.452
D	14036+78.221	11.792	804.351	804.538
E	14036+88.221	11.792	804.409	804.590
F	14036+98.221	11.792	804.459	804.613
G	14037+08.221	11.792	804.498	804.611
H	14037+18.221	11.792	804.528	804.596
I	14037+28.221	11.792	804.547	804.577
J	14037+38.221	11.792	804.557	804.564
℄ Brg. Pier	14037+43.221	11.792	804.559	804.559
K	14037+53.221	11.792	804.554	804.568
L	14037+63.221	11.792	804.540	804.586
M	14037+73.221	11.792	804.515	804.606
N	14037+83.221	11.792	804.481	804.617
O	14037+93.221	11.792	804.437	804.607
P	14038+03.221	11.792	804.384	804.570
Q	14038+13.221	11.792	804.320	804.501
R	14038+23.221	11.792	804.247	804.398
S	14038+33.221	11.792	804.164	804.264
T	14038+43.221	11.792	804.071	804.106
℄ Brg. E. Abut.	14038+48.221	11.792	804.021	804.021
Bk. E. Abut.	14038+49.473	11.792	804.008	804.008

GIRDER 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+36.536	19.292	803.849	803.849
℄ Brg. W. Abut.	14036+37.788	19.292	803.862	803.862
A	14036+47.788	19.292	803.961	804.031
B	14036+57.788	19.292	804.050	804.179
C	14036+67.788	19.292	804.129	804.299
D	14036+77.788	19.292	804.198	804.385
E	14036+87.788	19.292	804.257	804.438
F	14036+97.788	19.292	804.307	804.461
G	14037+07.788	19.292	804.347	804.460
H	14037+17.788	19.292	804.377	804.444
I	14037+27.788	19.292	804.397	804.426
J	14037+37.788	19.292	804.407	804.414
℄ Brg. Pier	14037+42.788	19.292	804.409	804.409
K	14037+52.788	19.292	804.404	804.418
L	14037+62.788	19.292	804.390	804.437
M	14037+72.788	19.292	804.366	804.457
N	14037+82.788	19.292	804.333	804.468
O	14037+92.788	19.292	804.289	804.459
P	14038+02.788	19.292	804.236	804.423
Q	14038+12.788	19.292	804.173	804.354
R	14038+22.788	19.292	804.100	804.251
S	14038+32.788	19.292	804.018	804.118
T	14038+42.788	19.292	803.925	803.960
℄ Brg. E. Abut.	14038+47.788	19.292	803.875	803.875
Bk. E. Abut.	14038+49.040	19.292	803.862	803.862

GIRDER 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+36.102	26.792	803.695	803.695
℄ Brg. W. Abut.	14036+37.354	26.792	803.708	803.708
A	14036+47.354	26.792	803.807	803.877
B	14036+57.354	26.792	803.896	804.026
C	14036+67.354	26.792	803.975	804.145
D	14036+77.354	26.792	804.045	804.232
E	14036+87.354	26.792	804.105	804.286
F	14036+97.354	26.792	804.155	804.309
G	14037+07.354	26.792	804.195	804.308
H	14037+17.354	26.792	804.225	804.293
I	14037+27.354	26.792	804.246	804.276
J	14037+37.354	26.792	804.257	804.264
℄ Brg. Pier	14037+42.354	26.792	804.259	804.259
K	14037+52.354	26.792	804.255	804.269
L	14037+62.354	26.792	804.241	804.288
M	14037+72.354	26.792	804.218	804.308
N	14037+82.354	26.792	804.184	804.320
O	14037+92.354	26.792	804.141	804.312
P	14038+02.354	26.792	804.089	804.275
Q	14038+12.354	26.792	804.026	804.206
R	14038+22.354	26.792	803.954	804.104
S	14038+32.354	26.792	803.871	803.972
T	14038+42.354	26.792	803.779	803.815
℄ Brg. E. Abut.	14038+47.354	26.792	803.730	803.730
Bk. E. Abut.	14038+48.607	26.792	803.717	803.717

GIRDER 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	14036+35.669	34.292	803.540	803.540
℄ Brg. W. Abut.	14036+36.921	34.292	803.553	803.553
A	14036+46.921	34.292	803.653	803.723
B	14036+56.921	34.292	803.742	803.872
C	14036+66.921	34.292	803.822	803.992
D	14036+76.921	34.292	803.892	804.079
E	14036+86.921	34.292	803.952	804.133
F	14036+96.921	34.292	804.003	804.157
G	14037+06.921	34.292	804.043	804.157
H	14037+16.921	34.292	804.074	804.142
I	14037+26.921	34.292	804.095	804.125
J	14037+36.921	34.292	804.107	804.114
℄ Brg. Pier	14037+41.921	34.292	804.109	804.109
K	14037+51.921	34.292	804.105	804.119
L	14037+61.921	34.292	804.092	804.138
M	14037+71.921	34.292	804.069	804.160
N	14037+81.921	34.292	804.036	804.172
O	14037+91.921	34.292	803.994	804.164
P	14038+01.921	34.292	803.941	804.128
Q	14038+11.921	34.292	803.879	804.059
R	14038+21.921	34.292	803.807	803.958
S	14038+31.921	34.292	803.725	803.826
T	14038+41.921	34.292	803.634	803.669
℄ Brg. E. Abut.	14038+46.921	34.292	803.584	803.584
Bk. E. Abut.	14038+48.173	34.292	803.571	803.571

TOP OF DECK ELEVATIONS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS

DESIGN FIRM REGISTRATION
No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER

S-8

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	182A
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT=	

SHEET NO. 8A
28 SHEETS

Contract #62253

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14036+09.730	-36.000	803.199
A	14036+19.730	-36.000	803.325
B	14036+29.730	-36.000	803.441
Bk. W. Abut.	14036+39.730	-36.000	803.548

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14036+09.614	-34.000	803.238
A	14036+19.614	-34.000	803.364
B	14036+29.614	-34.000	803.480
Bk. W. Abut.	14036+39.614	-34.000	803.587

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14036+08.483	-14.417	803.614
A	14036+18.483	-14.417	803.742
B	14036+28.483	-14.417	803.859
Bk. W. Abut.	14036+38.483	-14.417	803.967

PGL WESTBOUND LANES

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14036+08.170	-9.000	803.719
A	14036+18.170	-9.000	803.846
B	14036+28.170	-9.000	803.964
Bk. W. Abut.	14036+38.170	-9.000	804.072

℄ CH-6

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14036+07.650	0.000	803.892
A	14036+17.650	0.000	804.020
B	14036+27.650	0.000	804.138
Bk. W. Abut.	14036+37.650	0.000	804.247

PGL EASTBOUND LANES

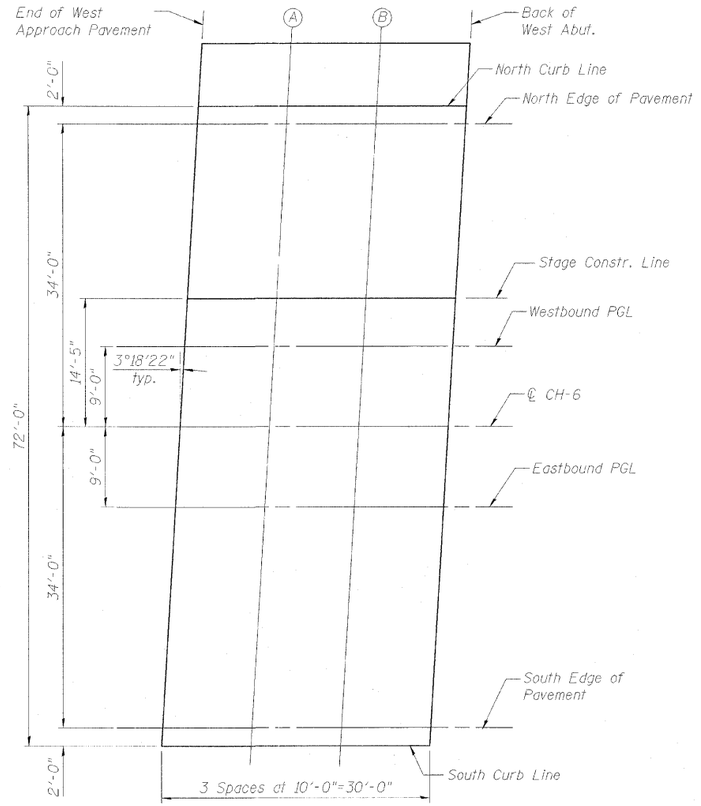
Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14036+07.130	9.000	803.705
A	14036+17.130	9.000	803.833
B	14036+27.130	9.000	803.952
Bk. W. Abut.	14036+37.130	9.000	804.061

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14036+05.686	34.000	803.185
A	14036+15.686	34.000	803.315
B	14036+25.686	34.000	803.436
Bk. W. Abut.	14036+35.686	34.000	803.546

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14036+05.570	36.000	803.144
A	14036+15.570	36.000	803.274
B	14036+25.570	36.000	803.394
Bk. W. Abut.	14036+35.570	36.000	803.505



PLAN

TOP OF WEST APPROACH SLAB ELEVATIONS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		
ACTIVITY	INITIALS		

DRAWING NUMBER
S-8A

E-AS 5-16-08

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	305	162B
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 8B
28 SHEETS

Contract #62253

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14038+52.230	-36.000	803.495
A	14038+62.230	-36.000	803.383
B	14038+72.230	-36.000	803.262
Bk. W. Abut.	14038+82.230	-36.000	803.131

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14038+52.056	-34.000	803.557
A	14038+62.056	-34.000	803.445
B	14038+72.056	-34.000	803.324
Bk. W. Abut.	14038+82.056	-34.000	803.193

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14038+50.983	-14.417	803.940
A	14038+60.983	-14.417	803.829
B	14038+70.983	-14.417	803.709
Bk. W. Abut.	14038+80.983	-14.417	803.579

PGL WESTBOUND LANES

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14038+50.670	-9.000	804.051
A	14038+60.670	-9.000	803.941
B	14038+70.670	-9.000	803.821
Bk. W. Abut.	14038+80.670	-9.000	803.692

℄ CH-6

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14038+50.150	0.000	804.237
A	14038+60.150	0.000	804.127
B	14038+70.150	0.000	804.008
Bk. W. Abut.	14038+80.150	0.000	803.879

PGL EASTBOUND LANES

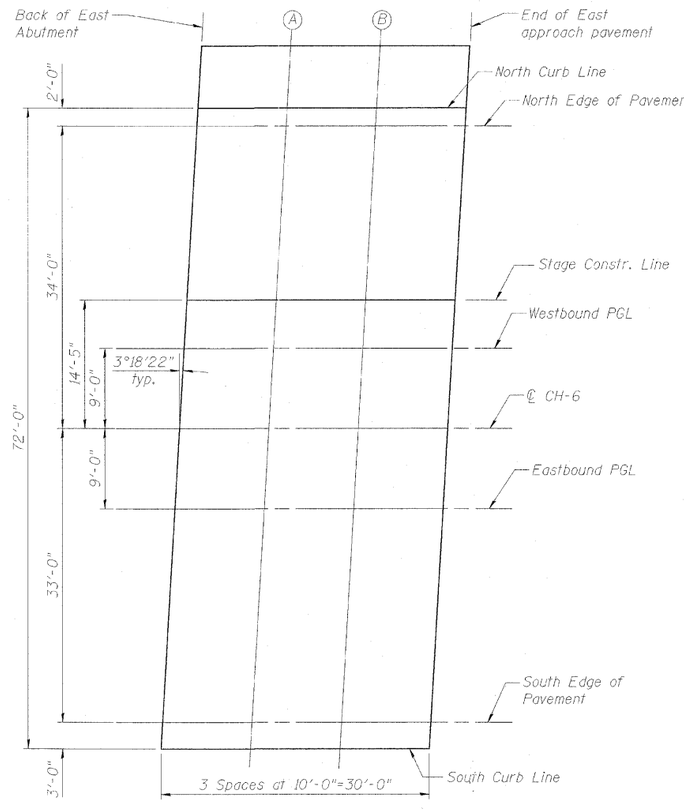
Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14038+49.630	9.000	804.062
A	14038+59.630	9.000	803.953
B	14038+69.630	9.000	803.834
Bk. W. Abut.	14038+79.630	9.000	803.706

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14038+48.186	34.000	803.577
A	14038+58.186	34.000	803.469
B	14038+68.186	34.000	803.352
Bk. W. Abut.	14038+78.186	34.000	803.225

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	14038+48.070	36.000	803.538
A	14038+58.070	36.000	803.431
B	14038+68.070	36.000	803.314
Bk. W. Abut.	14038+78.070	36.000	803.187



PLAN

E-AS 5-16-08

TOP OF EAST APPROACH SLAB ELEVATIONS

MANHATTAN-MONEE ROAD (CH-6) OVER I-57

F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2

WILL COUNTY STA.14037+43.90

STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS

DESIGN FIRM REGISTRATION No. 184-000450

1817 SOUTH NEIL STREET SUITE 100 CHAMPAIGN, IL 61820 PHONE : 217.373.8900 FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER

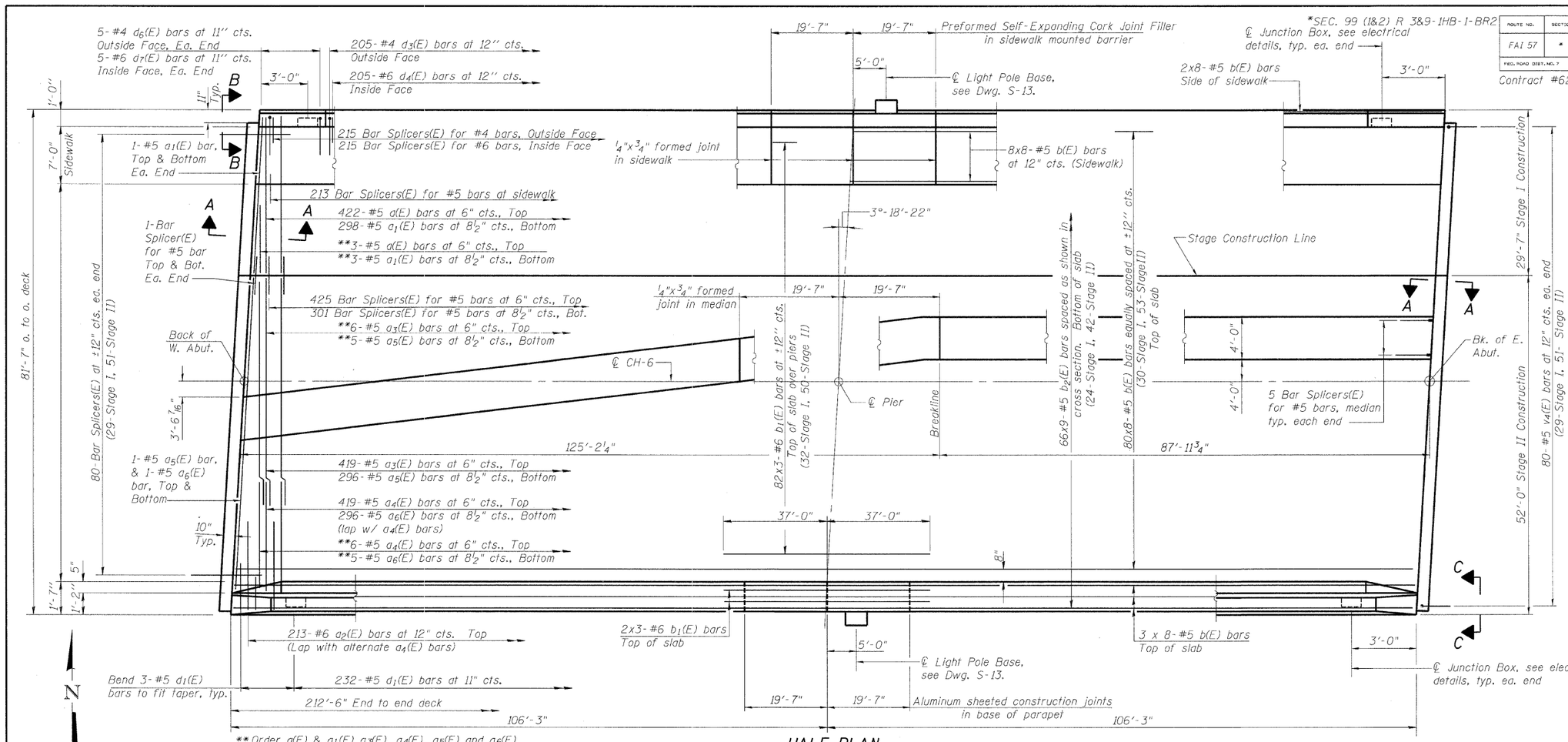
S-8B

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	163
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
28 SHEETS

Contract #62253

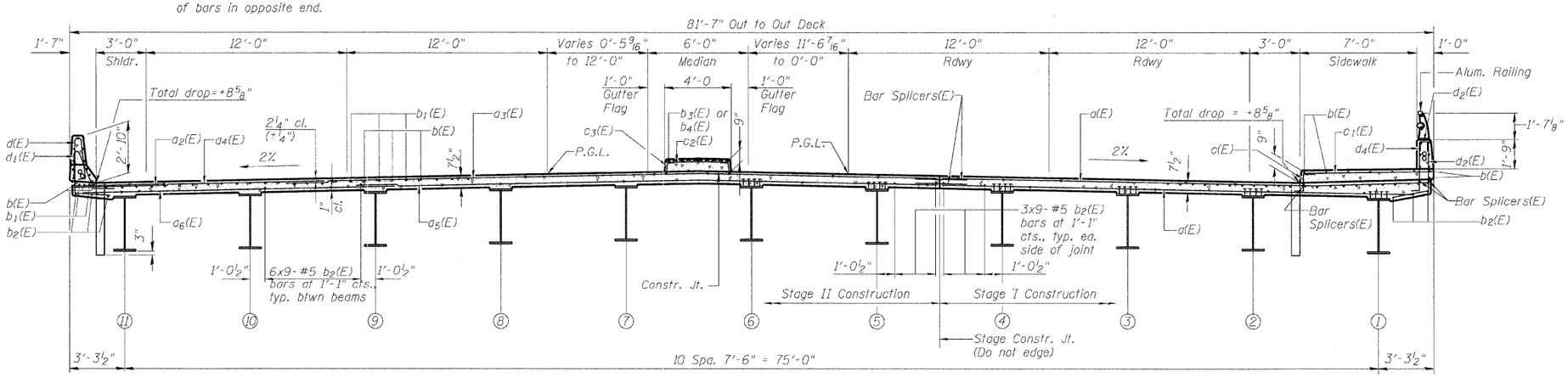


** Order d(E) & a_1(E) a_3(E), a_4(E), a_5(E) and a_6(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

HALF PLAN

NOTES:

1. See Dwg. S-13 for superstructure details and Bill of Material.
2. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
3. See Dwg. S-10 and S-11 for parapet and median reinforcement.
4. See Dwg. S-22 for Bar Splicer Details.
5. See Dwg. S-1 for Floor Drain locations.
6. For Section A-A see Dwg. S-12.
7. See Roadway plans for complete layout of median.



NEAR PIER — NEAR MIDSPAN

CROSS SECTION

(Looking West)

MIN. BAR LAP

#5	2'-2"
#6	2'-7"

DECK PLAN & CROSS SECTION

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 — SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY — STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
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NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2006
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER

S-9

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

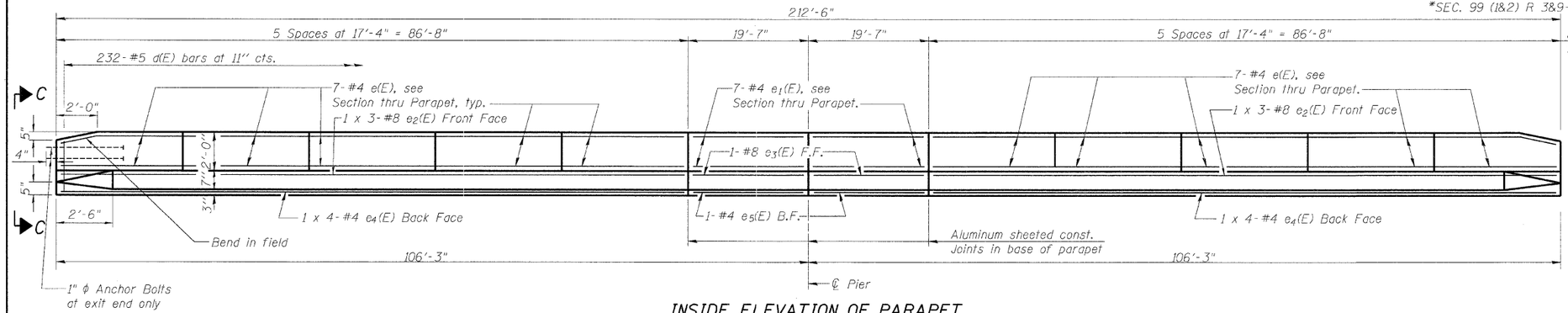
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	164
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 10
28 SHEETS

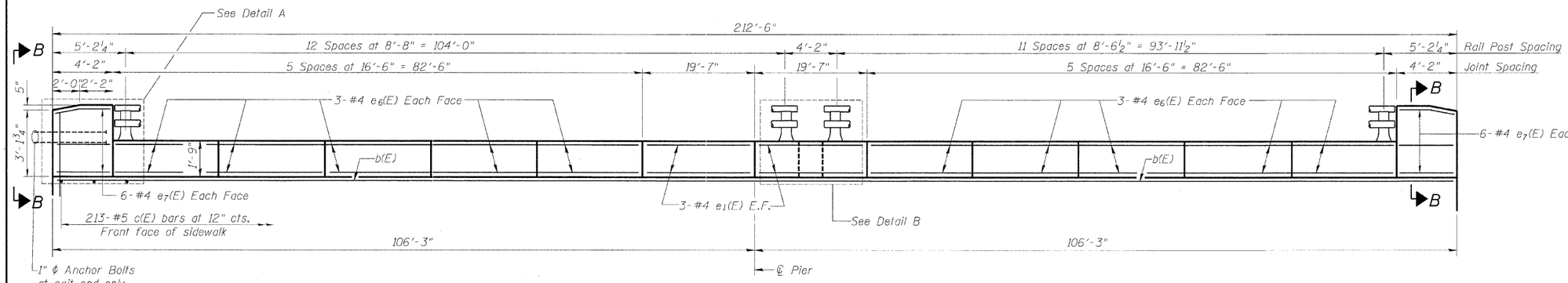
Contract #62253

NOTES:

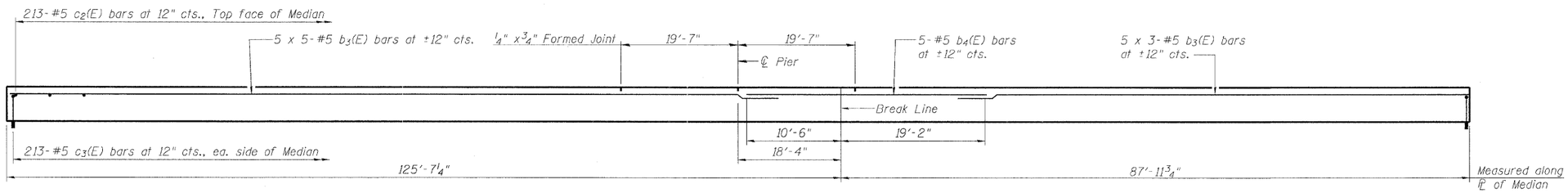
1. See Dwg. S-11 for Section B-B.
2. See Dwg. S-15 for Aluminum Railing, Type L Details.



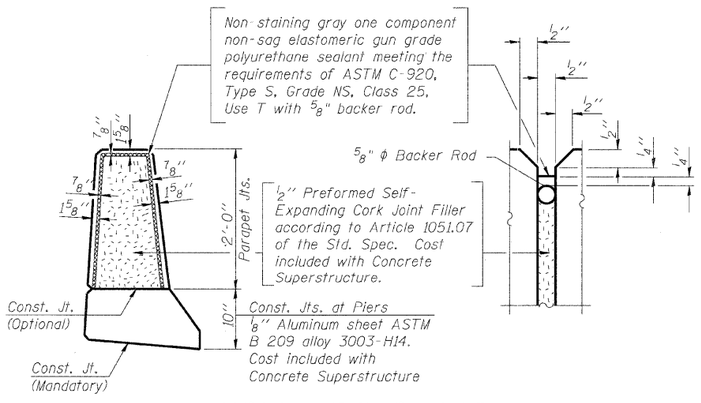
INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF SIDEWALK PARAPET

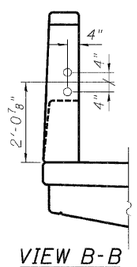


INSIDE ELEVATION MEDIAN

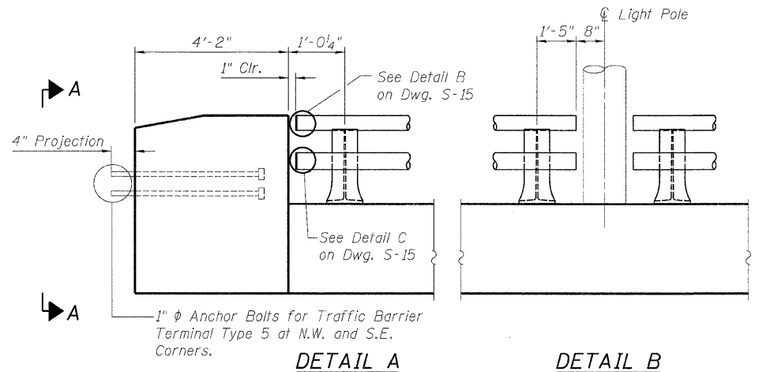


PARAPET JOINT DETAILS

(Sidewalk mounted barrier similar)



VIEW B-B

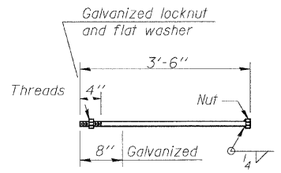


DETAIL A

DETAIL B

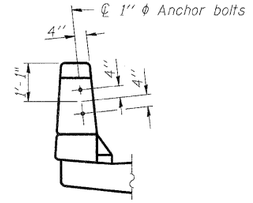
MIN. BAR LAP

#4	1'-4"
#8	3'-8"



1" ϕ ANCHOR BOLT

(Cost included with Concrete Superstructure)



VIEW C-C

PARAPETS AND MEDIAN ELEVATIONS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS	
DESIGNED BY:	SMM	PROJECT NO: 102232
DRAWN BY:	MEW/SLD	DATE: 06/2008
CHECKED BY:	SLD	
APPROVED BY:	SMM	

DRAWING NUMBER

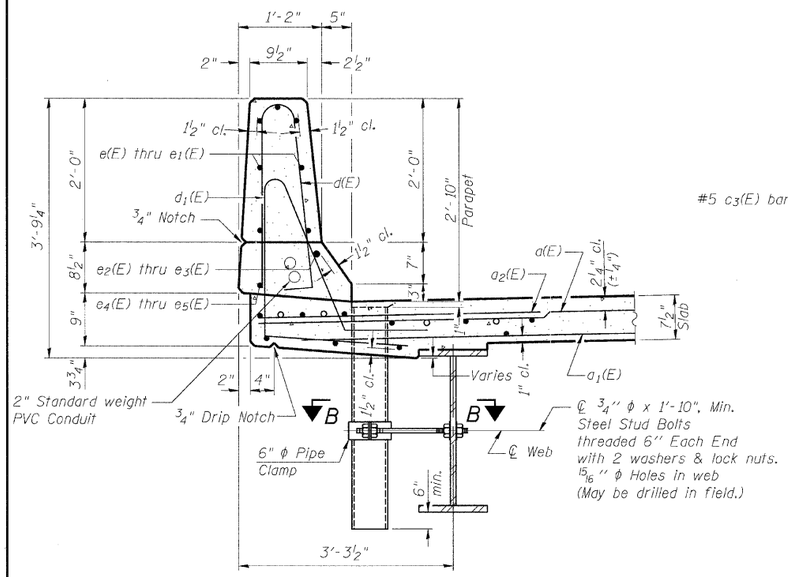
S-10

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

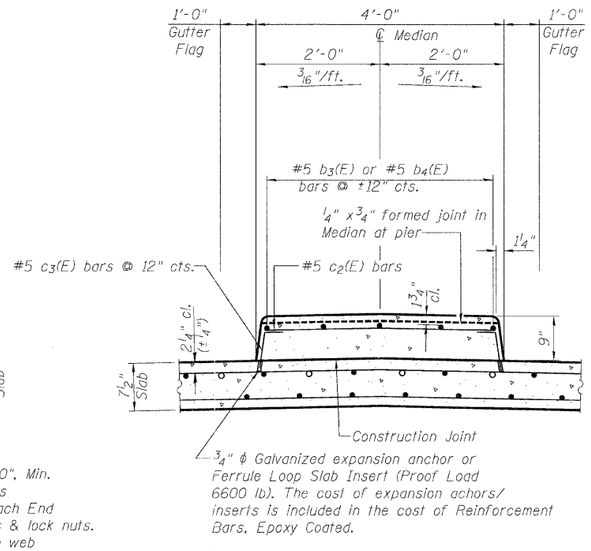
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	165
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 11
28 SHEETS

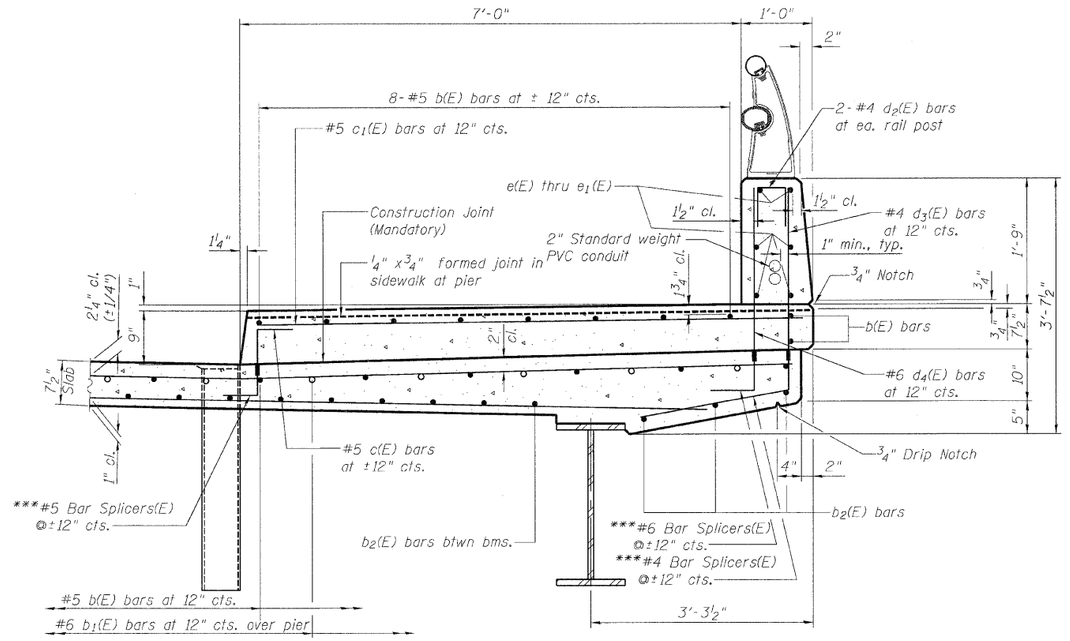
Contract #62253



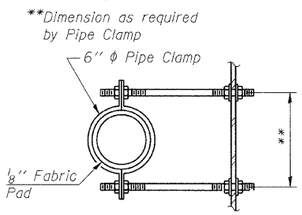
SECTION THRU PARAPET



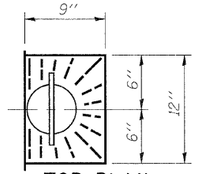
SECTION THRU MEDIAN



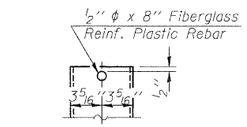
SECTION THRU SIDEWALK



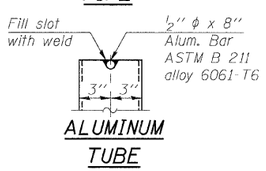
SECTION B-B



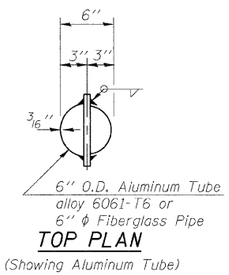
TOP PLAN



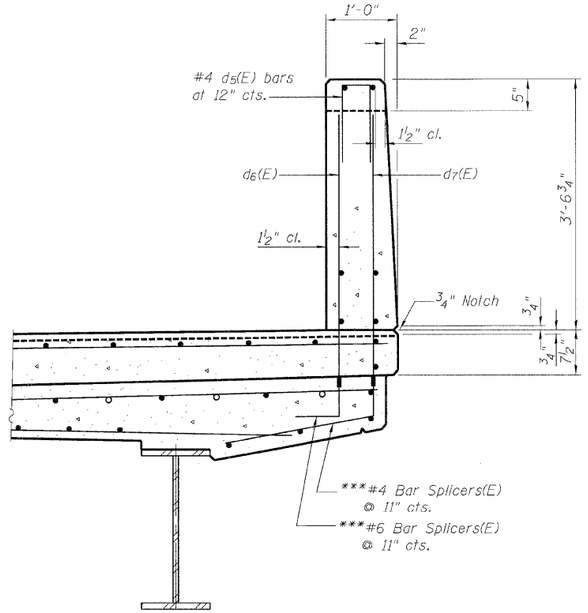
FIBERGLASS PIPE



ALUMINUM TUBE



TOP PLAN
(Showing Aluminum Tube)



SECTION B-B
SECTION THRU SIDEWALK PARAPET AT ENDS OF DECK

***See Dwg. S-22 for Bar Splicer Details.

Notes:
1. See Dwg. S-15 for Aluminum Railing, Type L Details.
2. See Dwg. S-14 for Light Pole Base Details.

NOTES:

1. The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SP1 prior to painting.
2. Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

PARAPET, MEDIAN AND SIDEWALK DETAILS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102232
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

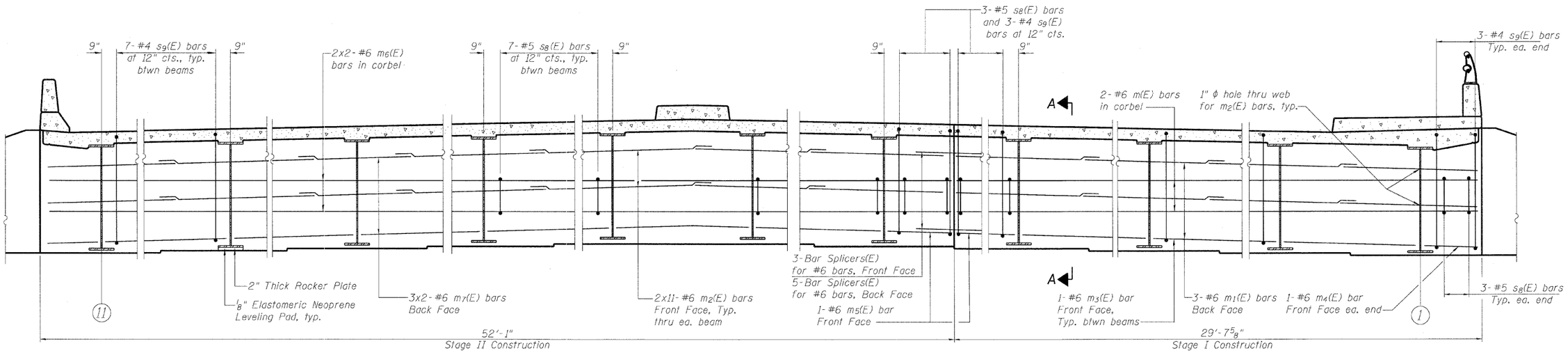
DRAWING NUMBER
S-11

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	166
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

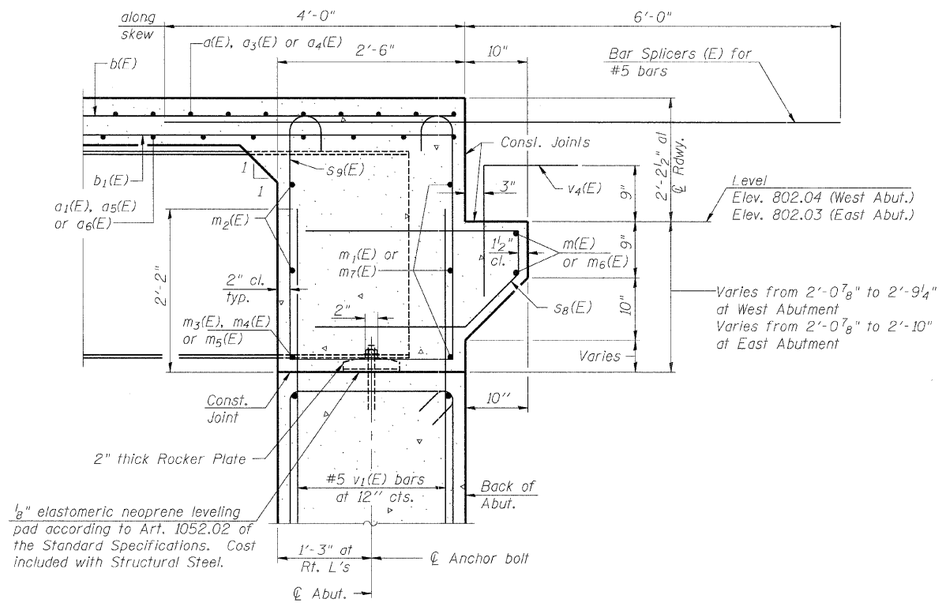
SHEET NO. 12
28 SHEETS

Contract #62253



DIAPHRAGM ELEVATION AT ABUTMENT

(Looking West)
(Diaphragm similar at East Abutment, mirror image)



SECTION A-A

Dimensions at right angles to abutment, except as shown.

NOTES:

1. Reinforcement bars in diaphragm are billed with superstructure on Dwg. S-13.
2. Concrete in diaphragm is included with Concrete Superstructure on Dwg. S-13.
3. For details of bars $s_8(E)$ & $s_9(E)$ see Dwg. S-13.
4. The $s_8(E)$ and $s_9(E)$ bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

MIN. BAR LAP

#6	2'-9"

DIAPHRAGM ELEVATION

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET SUITE 100
CchampaIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	122230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

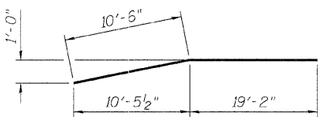
DRAWING NUMBER

S-12

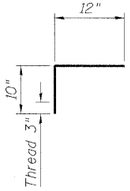
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	425	#5	29'-1"	
a_1(E)	305	#5	28'-6"	
a_2(E)	213	#6	6'-0"	
a_3(E)	425	#5	23'-5"	
a_4(E)	425	#5	30'-5"	
a_5(E)	305	#5	34'-8"	
a_6(E)	305	#5	18'-6"	
b(E)	744	#5	28'-6"	
b_1(E)	252	#6	26'-6"	
b_2(E)	594	#5	25'-7"	
b_3(E)	40	#5	24'-8"	
b_4(E)	5	#5	29'-8"	
c(E)*	213	#5	1'-10"	
c_1(E)	213	#5	7'-8"	
c_2(E)	213	#5	3'-8"	
c_3(E)*	426	#5	1'-6"	
d(E)	232	#5	5'-7"	
d_1(E)	232	#5	1'-9"	
d_2(E)	50	#4	2'-0"	
d_3(E)*	205	#4	2'-5"	
d_4(E)*	205	#6	2'-5"	
d_5(E)	10	#4	2'-10"	
d_6(E)*	10	#4	3'-10"	
d_7(E)*	10	#6	3'-10"	
d_8(E)	10	#6	8'-11"	
d_9(E)	3	#6	4'-5"	
d_{10}(E)	3	#6	4'-1"	
e(E)	70	#4	17'-0"	
e_1(E)	26	#4	19'-3"	
e_2(E)	6	#8	31'-3"	
e_3(E)	2	#8	19'-3"	
e_4(E)	8	#4	22'-8"	
e_5(E)	2	#4	19'-3"	
e_6(E)	60	#5	16'-2"	
m(E)	4	#6	28'-7"	
m_1(E)	6	#6	29'-4"	
m_2(E)	44	#6	9'-9"	
m_3(E)	18	#6	7'-2"	
m_4(E)	4	#6	3'-0"	
m_5(E)	4	#6	3'-5"	
m_6(E)	8	#6	26'-11"	
m_7(E)	12	#6	27'-3"	
s_8(E)	152	#5	6'-9"	
s_9(E)	152	#4	10'-6"	
v_4(E)	160	#5	3'-10"	
Reinforcement Bars, Epoxy Coated			Pound	127,630
Concrete Superstructure			Cu. Yds.	609.6
Bar Splicers			Each	1,985

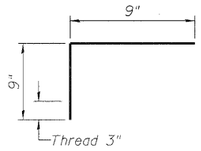
Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.



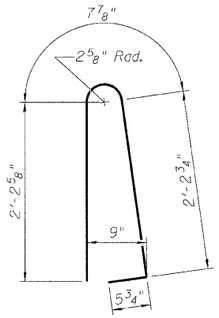
BAR b4(E)



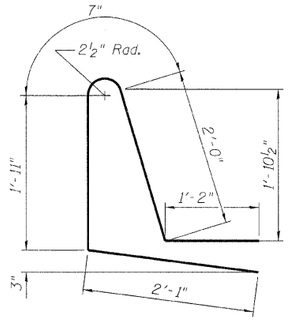
BAR c(E)*



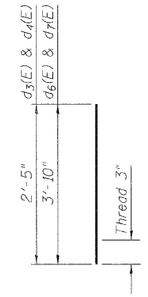
BAR c_3(E)*



BAR d(E)

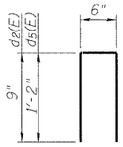


BAR d_1(E)

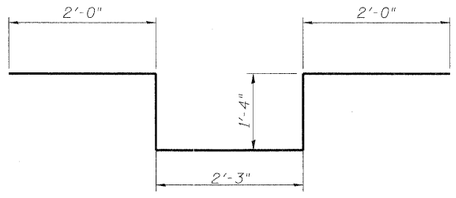


BARS d_3(E)*, d_4(4)*, d_6(E)* & d_7(E)*

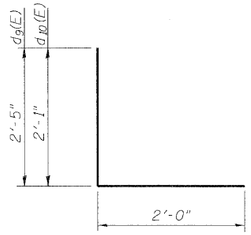
* Bars c(E), c_3(E), d_3(E), d_4(E), d_6(E), and d_7(E) to be furnished by bar splicer supplier and cost included in the contract unit price for Bar Splicers. See Sheet 22 of 28 for bar splicer assembly details.



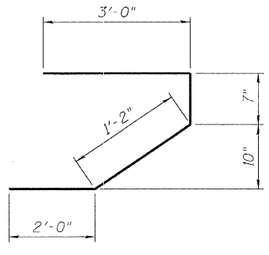
BAR d_2(E) & d_5(E)



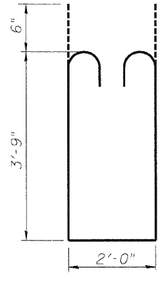
BAR d_8(E)



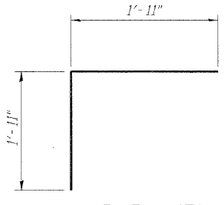
BARS d_9(E) & d_{10}(E)



BAR s_8(E)



BAR s_9(E)



BAR v_4(E)

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	167
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13
28 SHEETS

Contract #62253

SUPERSTRUCTURE BILL OF MATERIAL

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	08/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER

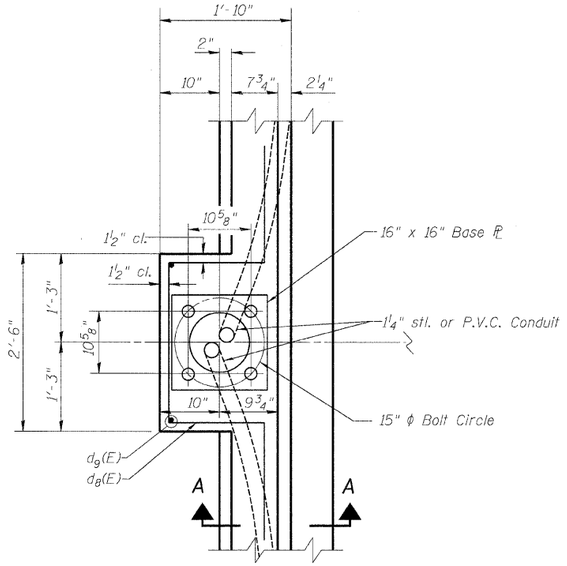
S-13

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

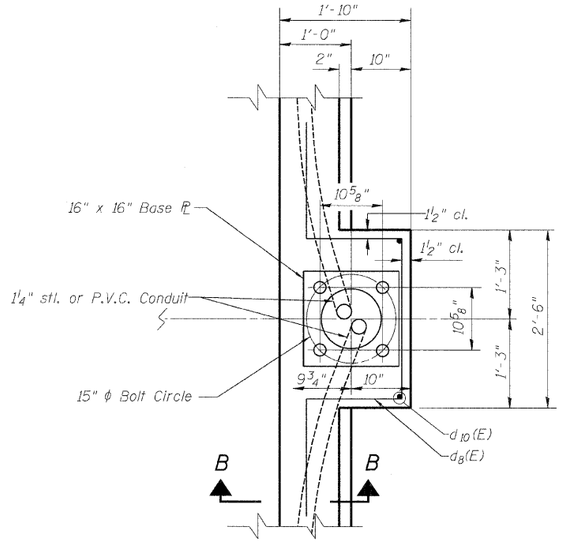
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	168
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 14
28 SHEETS

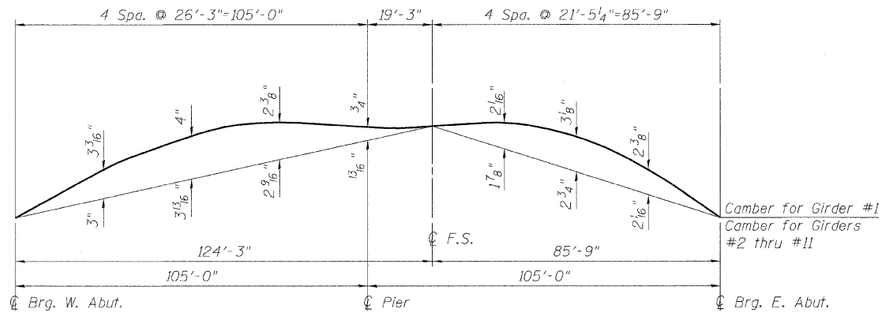
Contract #62253



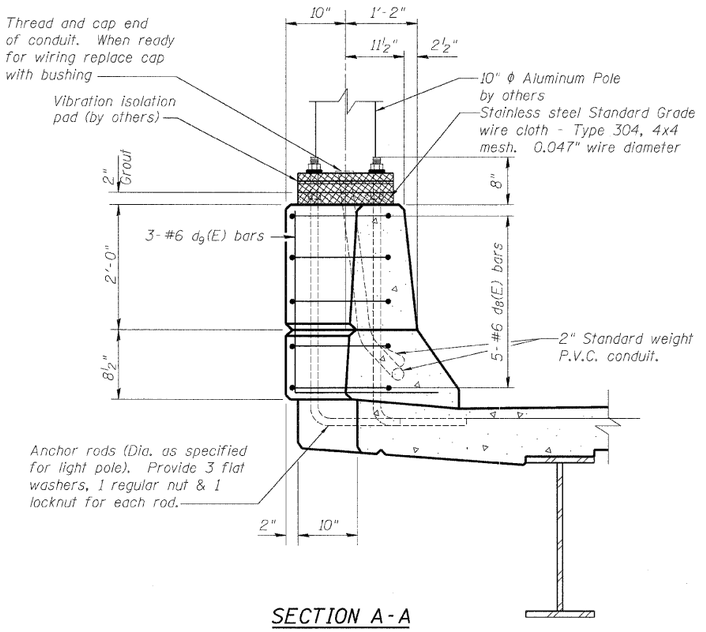
PLAN



PLAN

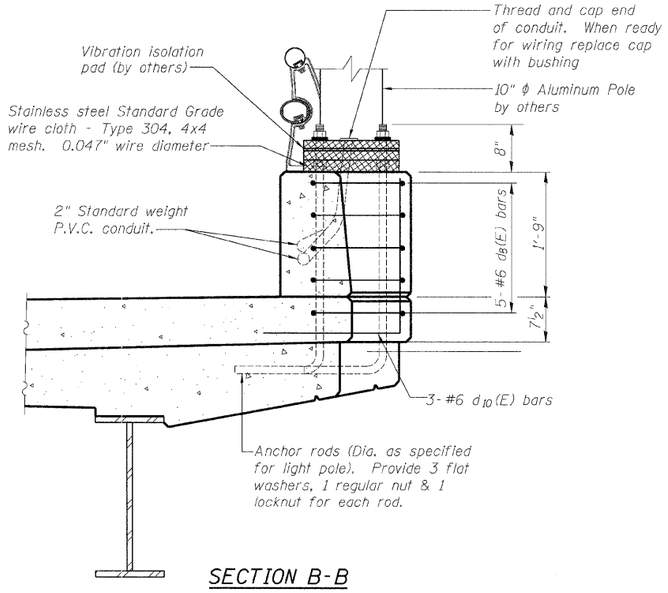


BLOCK AND CAMBER DIAGRAM

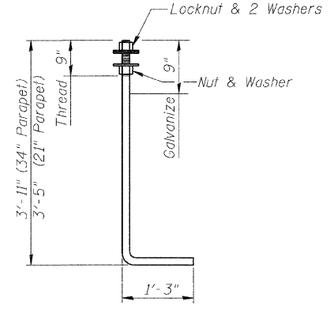


SECTION A-A

Note: Cost of anchor rods and conduit included with Concrete Superstructure.



SECTION B-B



ANCHOR ROD

Diameter as specified for light poles. (ASTM F 1554 Grade 105)

LIGHT POLE BASE DETAILS AND CAMBER DIAGRAM

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	122232
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER

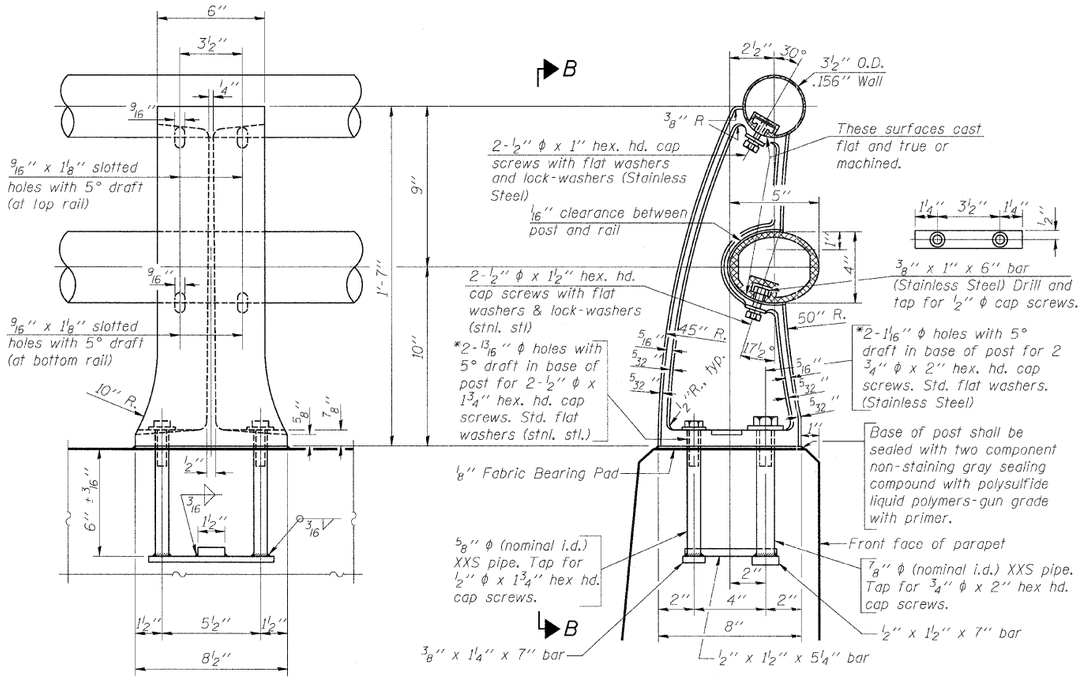
S-14

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	169
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
28 SHEETS

Contract #62253

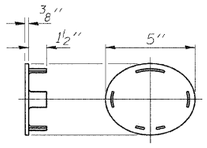


VIEW B-B

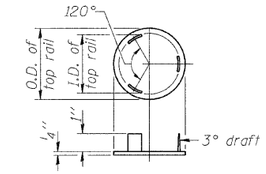
SECTION A-A

RAIL POST DETAILS

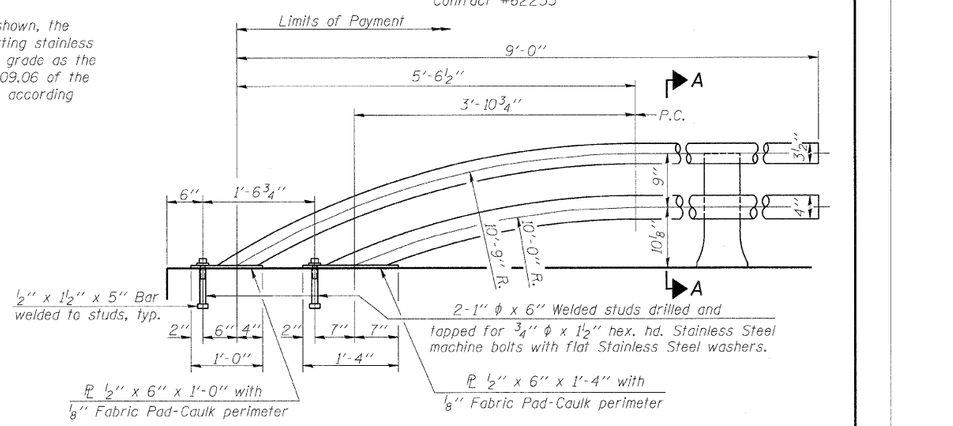
*In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting stainless steel anchor rods of the same diameter and grade as the specified cap screws according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

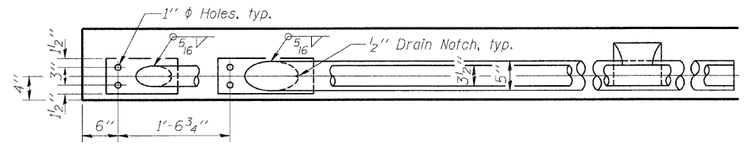


CAST END CAP
For bottom rail
DRIVE FIT TYPE



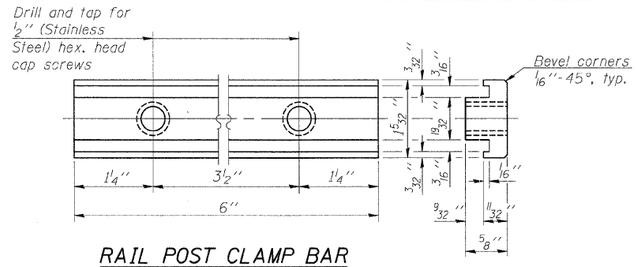
CAST END CAP
For top rail



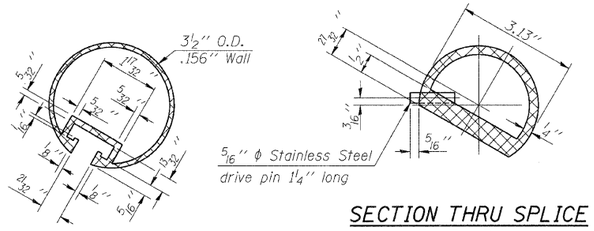


RAIL TERMINAL SECTION

VIEW B-B

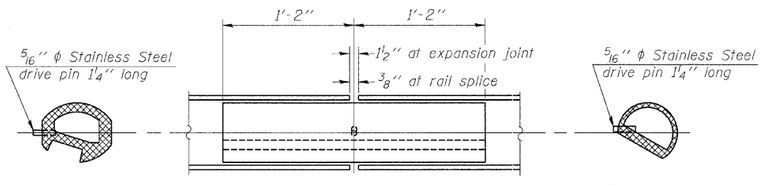


RAIL POST CLAMP BAR
For Top Rail



SECTION THRU TOP RAIL

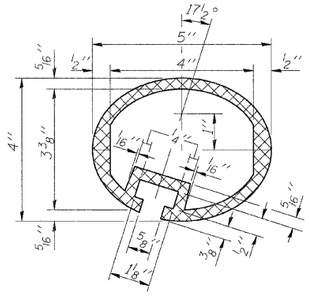
SECTION THRU SPLICE
For Top Rail



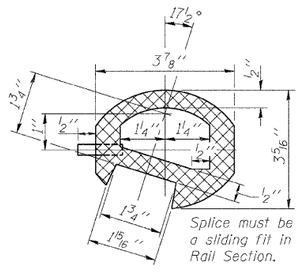
BOTTOM RAIL

RAIL SPLICE

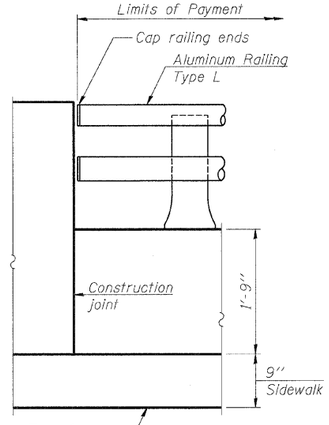
TOP RAIL



SEC. THRU ELLIPTICAL RAIL SECTION



SEC. THRU SPLICE



RAIL END TREATMENT FOR TYPE 5 AND 6 TERMINAL

Notes:
All Posts shall be normal to parapet.
All joints in rail shall be spliced per detail.
All exposed rail ends shall be capped per detail.
Provide 1-⅛" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade-high spots will be ground and low spots shimmed.
See sheet 10 of 28 for rail post spacing.

Note: The end rail post shall be set back as required for the terminal rail section.

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Railing, Type L	Foot	202.8

ALUMINUM RAILING, TYPE L

MANHATTAN-MONEE ROAD (CH-6) OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		
ACTIVITY	INITIALS		

DRAWING NUMBER
S-15

NOTES:

1. See notes on Dwg. S-17.
2. For camber diagram see Dwg. S-27.
3. All structural steel for Plate Girders, Bearing Stiffeners, Bearings and Splice Plates except Fill Plates shall be AASHTO M270 Grade 50.

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

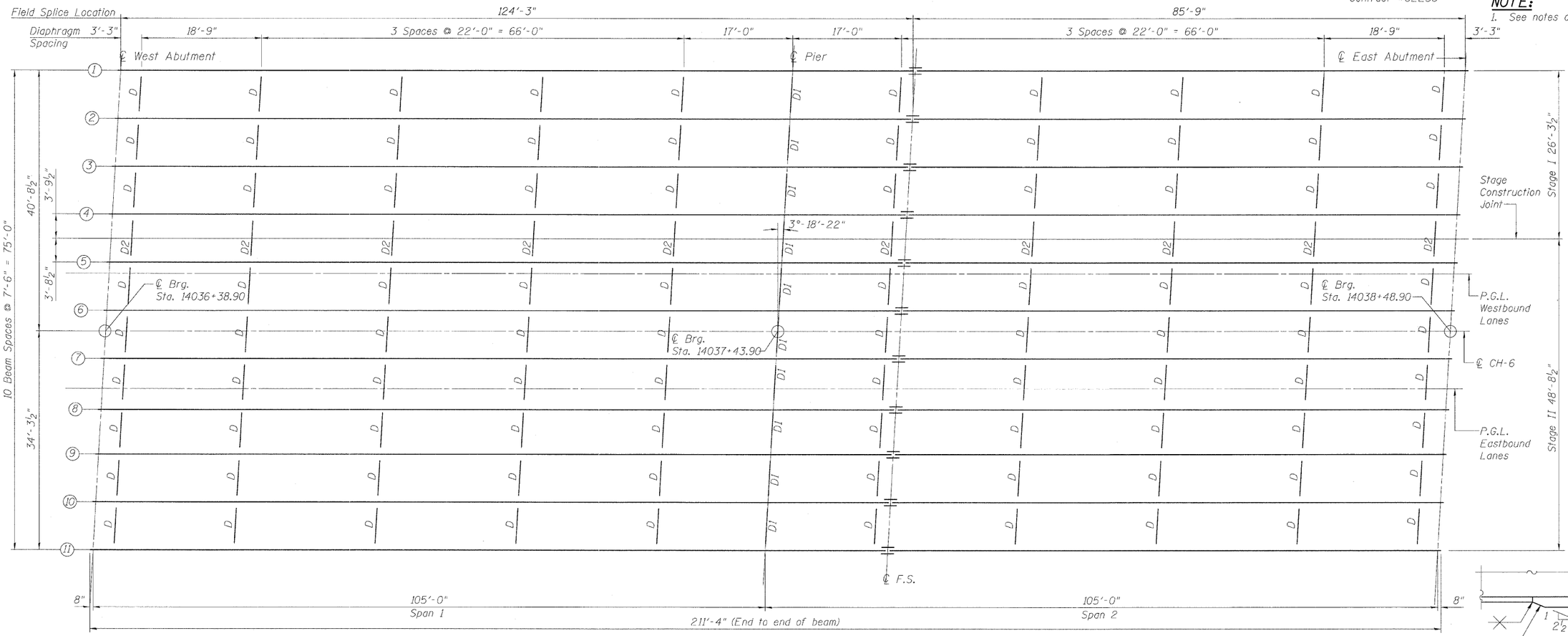
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	170
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 16
28 SHEETS

Contract #62253

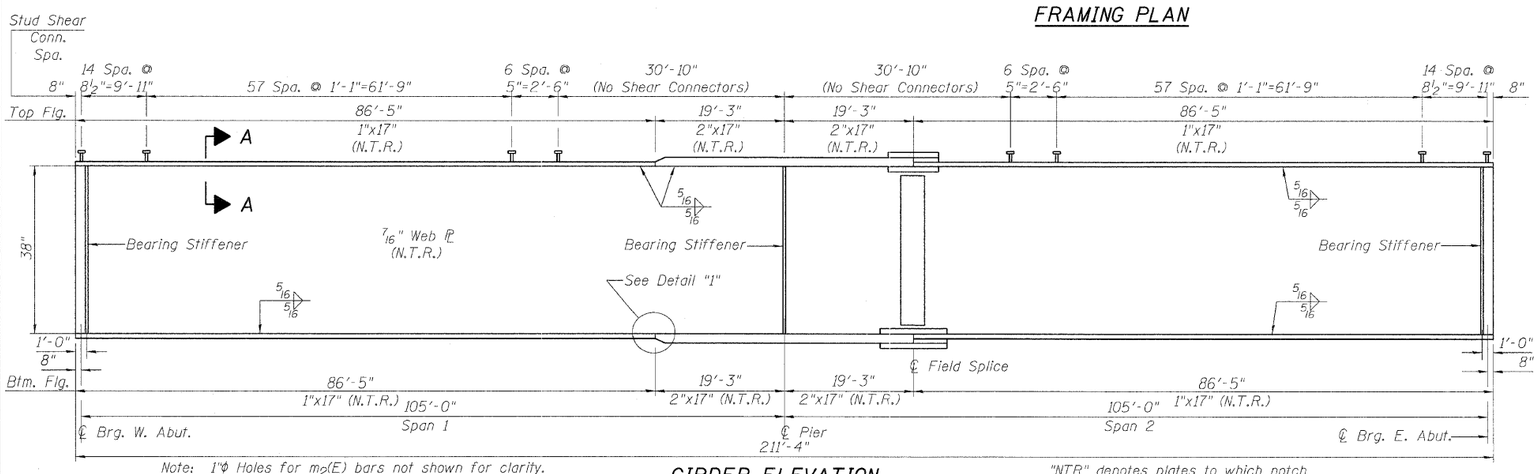
NOTE:

1. See notes on Dwg. S-17.



FRAMING PLAN

DETAIL "I"



Note: 1"Φ Holes for m℄(E) bars not shown for clarity.
See Sheet S-17 for Typical End of Beam Detail.

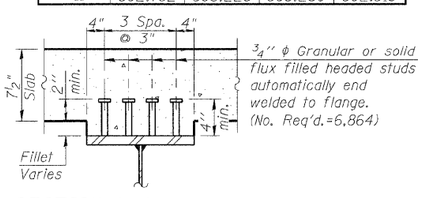
GIRDER ELEVATION

"NTR" denotes plates to which notch toughness requirements are applicable.

TOP OF WEB ELEVATIONS

(For fabrication only)

GIRDER	℄ BRG. W. ABUT.	℄ BRG. PIER	F.S.	℄ BRG. E. ABUT.
#1	802.698	803.098	803.098	802.640
#2	802.844	803.250	803.244	802.795
#3	802.990	803.400	803.395	802.949
#4	803.135	803.550	803.546	803.104
#5	803.281	803.700	803.696	803.258
#6	803.426	803.850	803.847	803.413
#7	803.400	803.828	803.827	803.395
#8	803.246	803.678	803.677	803.250
#9	803.091	803.528	803.528	803.104
#10	802.937	803.378	803.379	802.959
#11	802.782	803.228	803.230	802.813



SECTION A-A

FRAMING PLAN

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102232
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER

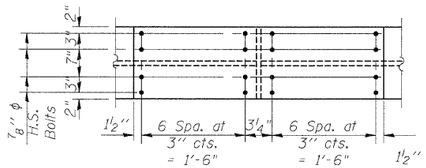
S-16

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

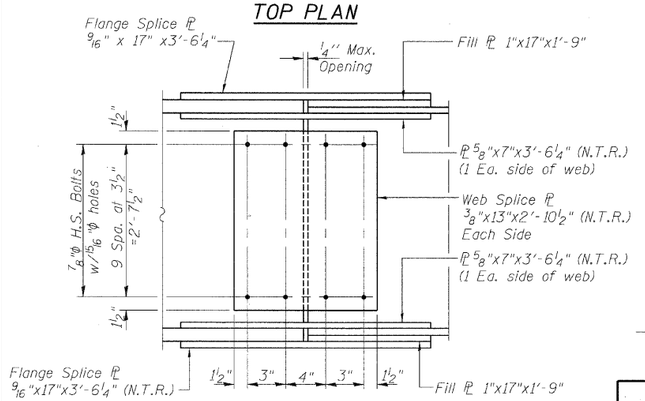
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	171
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 17
28 SHEETS

Contract #62253

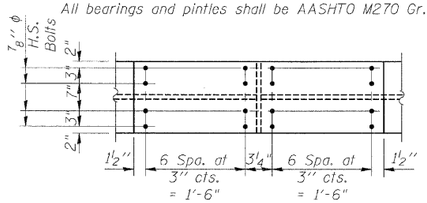


TOP PLAN

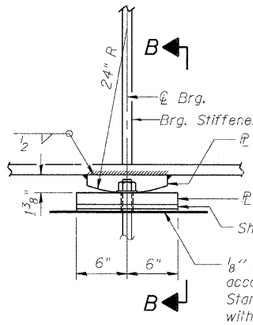


ELEVATION

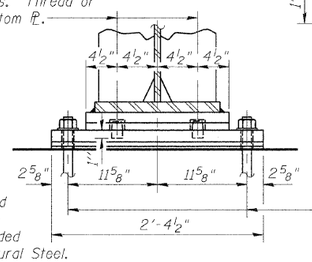
Note:
All splice material except fill plates shall be AASHTO M270 Gr. 50 and shall meet Notch Toughness Requirements (N.T.R.).
All bearings and pintles shall be AASHTO M270 Gr. 50.



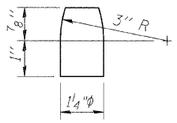
BOTTOM PLAN
FIELD SPLICE DETAIL



ELEVATION AT PIER

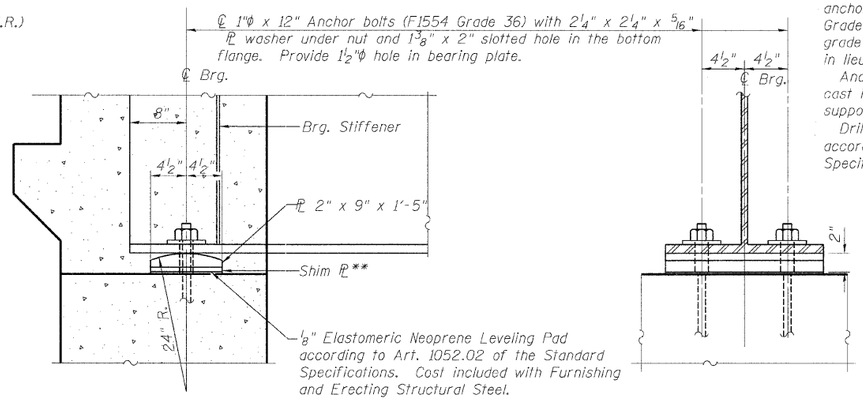


SECTION B-B



PINTLE

FIXED BEARING AT PIER
(11 Required)



FIXED BEARING AT WEST & EAST ABUTMENT
(22 Required)

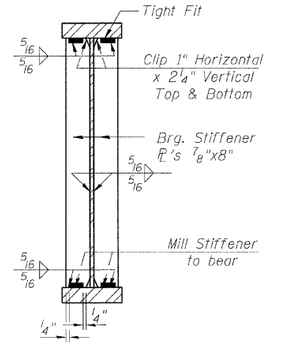
**Provide 1/4" Shim PL for bearings of Girder #6, otherwise as req'd at other locations

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
RP	(K)	55.0	197.3
RL	(K)	48.6	74.7
Imp.	(K)	10.6	16.2
R (Total)	(K)	114	288

INTERIOR GIRDER MOMENT TABLE			
		0.4 Sp. 1	Pier
Is	(in4)	14932	29223
Ic (n)	(in4)	31917	
Ic (3n)	(in4)	24204	
Ss	(in3)	747	1392
Sc (n)	(in3)	2399	
Sc (3n)	(in3)	1236	
W	(K/ft.)	0.944	1.450
MP	('K)	630	2292
sP	(K/ft.)	0.520	
MsP	('K)	389	
ML	('K)	901	824
M (Imp)	('K)	196	179
5/3[ML+M(Imp)]	('K)	1828	1672
Ma	('K)	3701	5153
Mu	('K)	4176	
fsP non-comp	(k.s.i.)	10.1	19.8
fsP (comp)	(k.s.i.)	3.8	
fs 5/3[ML+M(Imp)]	(k.s.i.)	9.2	14.4
fs (Overload)	(k.s.i.)	23.1	34.2
*** fs (Total)	(k.s.i.)		44.5
VR	(K)	50	

*** Non-Compact section

Notes:
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 at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

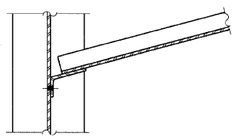


SECTION AT PIER & ABUTMENTS
(Similar at abutments)

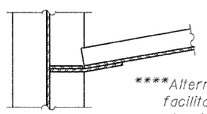
I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total and Overload) due to non-composite dead loads (in4 and in3).
$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s(Total and Overload) due to short-term composite live loads (in4 and in3).
$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s(Total and Overload) due to long-term composite (superimposed) dead loads (in4 and in3).
P: Un-factored non-composite dead load (kips/ft.).
MP: Un-factored moment due to non-composite dead load (kip-ft).
sP: Un-factored long-term composite (superimposed) dead load (kips/ft.).
MsP: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
ML: Un-factored live load moment (kip-ft.).
M1: Un-factored moment due to impact (kip-ft).
Ma: Factored design moment (kip-ft.) 1.3 [MP + MsP + 5/3 (ML + M1)]
f_s (Overload): Sum of stresses as computed from the moments below (ksi). MP + MsP + 5/3 (ML + M1)
f_s (Total): Sum of stresses as computed from the moments below (ksi). 1.3 [MP + MsP + 5/3 (ML + M1)]
VR: Maximum L+ impact horizontal shear range within span for stud shear connector design (kips).

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	44
Anchor Bolts, 1 1/2"	Each	22

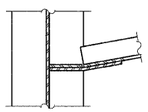


SECTION A-A

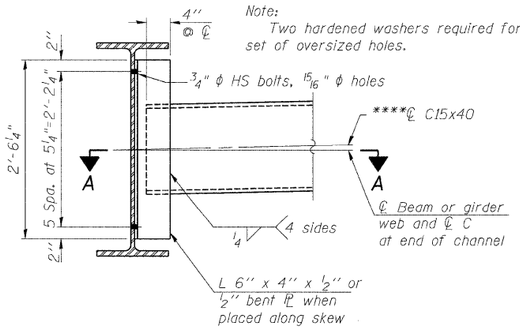


SECTION A-A

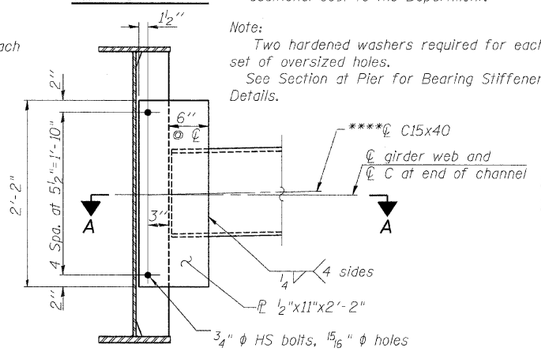
****Alternate channel, C15x50, is permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.



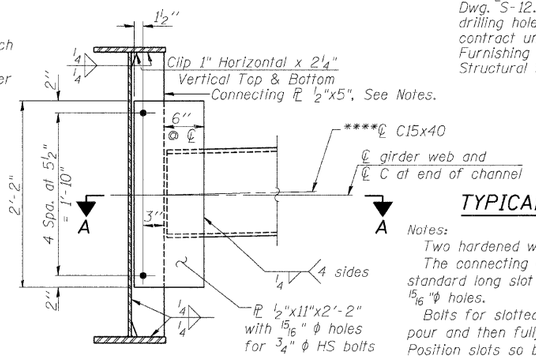
SECTION A-A



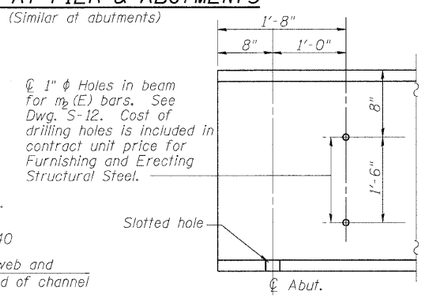
DIAPHRAGM D
(90 Required)



DIAPHRAGM D1
(10 Required)



DIAPHRAGM D2
(10 Required)



TYPICAL END OF BEAM ELEVATION

Notes:
Two hardened washers required for each set of oversized holes.
The connecting PL of Girder 5 shall have 15/16"x1 7/8" standard long slot holes. The connecting PL of Girder 4 shall have 15/16"ϕ holes.
Bolts for slotted holes shall be finger tightened prior to deck slab pour and then fully tightened after completion of Stage II pouring. Position slots so bolts start at bottom end of slot with no concrete load and finish near top end under deck load.

STRUCTURAL STEEL DETAILS, FIXED BEARING DETAILS AND MOMENT TABLE

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER
S-17

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

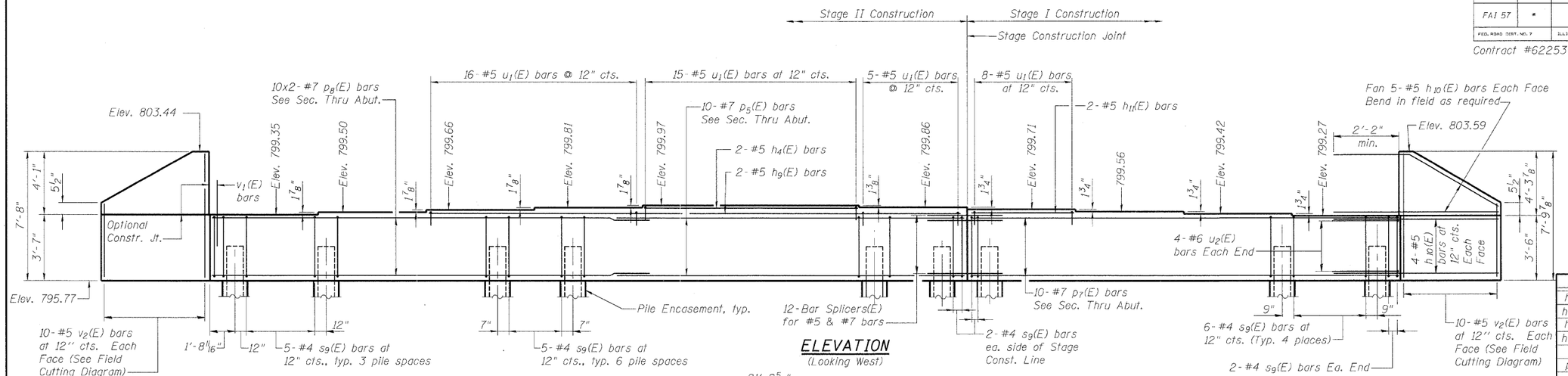
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	172
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 18
28 SHEETS

Contract #62253

NOTES

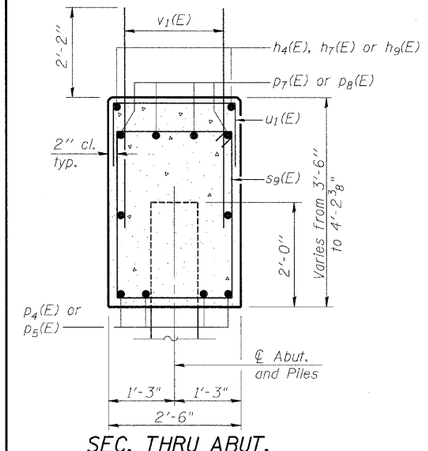
1. Pour steps monolithically with cap.
2. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
3. For details of Bar Splicers, see Dwg. S-22.
4. For details of piles and Concrete Encasement, see Dwg. S-24.



PLAN

WEST ABUTMENT BILL OF MATERIAL

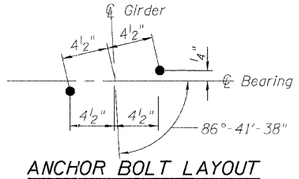
Bar	No.	Size	Length	Shape
h_4(E)	2	#5	14'-8"	
h_{11}(E)	2	#5	7'-2"	
h_9(E)	2	#5	37'-1"	
h_{10}(E)	36	#5	12'-0"	
p_7(E)	10	#7	29'-3"	
p_8(E)	20	#7	27'-11"	
s_9(E)	77	#4	11'-5"	
u_1(E)	47	#5	4'-8"	
u_2(E)	8	#6	7'-4"	
v_1(E)	164	#5	4'-4"	
v_2(E)	20	#5	11'-1"	
Concrete Structures		Cu. Yd.	33.5	
Reinforcement Bars, Epoxy Coated		Pound	4,190	
Structure Excavation		Cu. Yd.	27	
Furnishing Steel Piles HP10x42		Foot	924	
Driving Piles		Foot	924	
Test Pile Steel HP10x42		Each	1	
Bar Splicers		Each	12	
Concrete Encasement		Cu. Yd.	4.0	



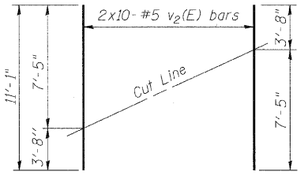
SEC. THRU ABUT.

PILE DATA

Type: HP10x42
Nominal Req'd Bearing: 333 kips
Allowable Resistance Available: 111 kips
Est. Length: 66'
No. Required: 14 + 1 Test Pile



ANCHOR BOLT LAYOUT

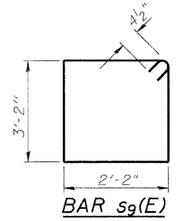


FIELD CUTTING DIAGRAM

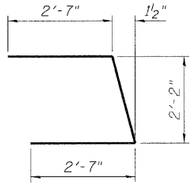
Order v_2(E) bars full length. Cut as shown and use remainder of bars in opposite face.

MIN. BAR LAP

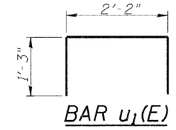
#7	3'-10"



BAR s_9(E)



BAR u_2(E)



BAR u_1(E)

WEST ABUTMENT

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION NO. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DESIGNED BY:	SMM	PROJECT NO:	102232
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		
ACTIVITY	INITIALS		

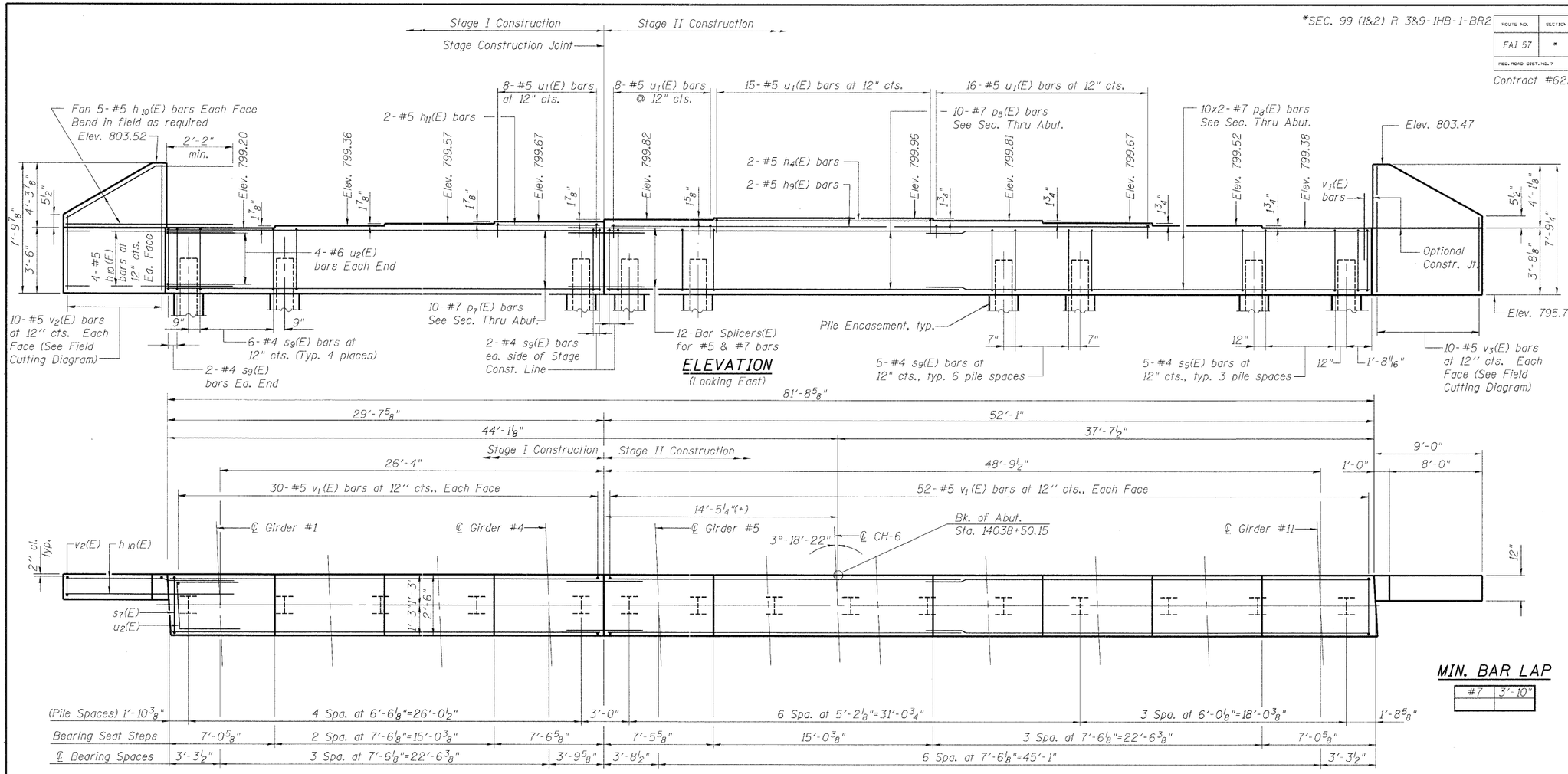
DRAWING NUMBER
S-18

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	173
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 19
28 SHEETS

Contract #62253



ELEVATION
(Looking East)

NOTES

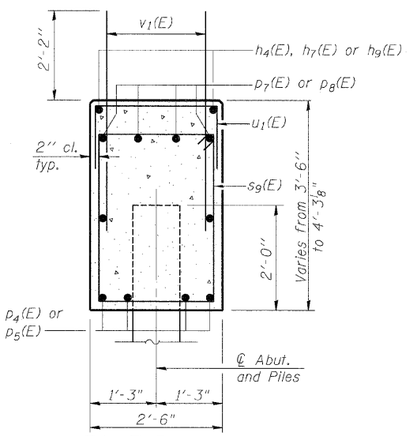
1. Pour steps monolithically with cap.
2. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
3. For details of Bar Splicers, see Dwg. S-22.
4. For details of piles and Concrete Encasement, see Dwg. S-24.

EAST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_4(E)$	2	#5	14'-8"	
$h_{11}(E)$	2	#5	7'-2"	
$h_9(E)$	2	#5	37'-1"	
$h_{10}(E)$	36	#5	12'-0"	
$p_7(E)$	10	#7	29'-3"	
$p_8(E)$	20	#7	27'-11"	
$s_9(E)$	77	#4	12'-2"	
$u_1(E)$	47	#5	4'-8"	
$u_2(E)$	8	#6	5'-2"	
$v_1(E)$	164	#5	4'-4"	
$v_2(E)$	10	#5	11'-1"	
$v_3(E)$	10	#5	11'-4"	
Concrete Structures		Cu. Yd.	33.5	
Reinforcement Bars, Epoxy Coated		Pound	4,190	
Structure Excavation		Cu. Yd.	29	
Furnishing Steel Piles HP10x42		Foot	924	
Driving Piles		Foot	924	
Test Pile Steel HP10x42		Each	1	
Bar Splicers		Each	12	
Concrete Encasement		Cu. Yd.	4.0	

MIN. BAR LAP

#7	3'-10"

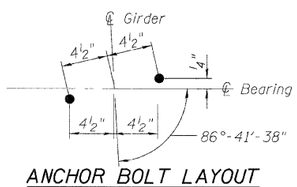


SEC. THRU ABUT.

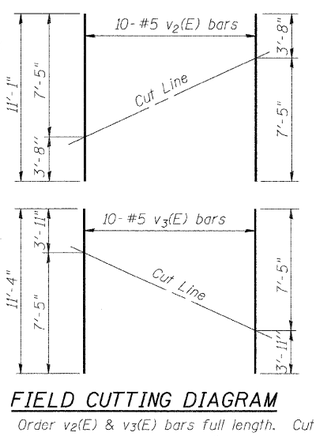
PILE DATA

Type: HP10x42
Nominal Req'd Bearing: 333 kips
Allowable Resistance Available: 111 kips
Est. Length: 66'
No. Required: 14 + 1 Test Pile

PLAN

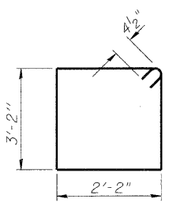


ANCHOR BOLT LAYOUT

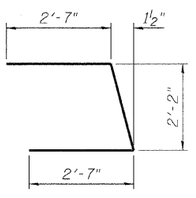


FIELD CUTTING DIAGRAM

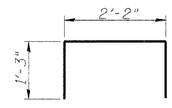
Order $v_2(E)$ & $v_3(E)$ bars full length. Cut as shown and use remainder of bars in opposite face.



BAR $s_9(E)$



BAR $u_2(E)$



BAR $u_1(E)$

EAST ABUTMENT

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER
S-19

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	174
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

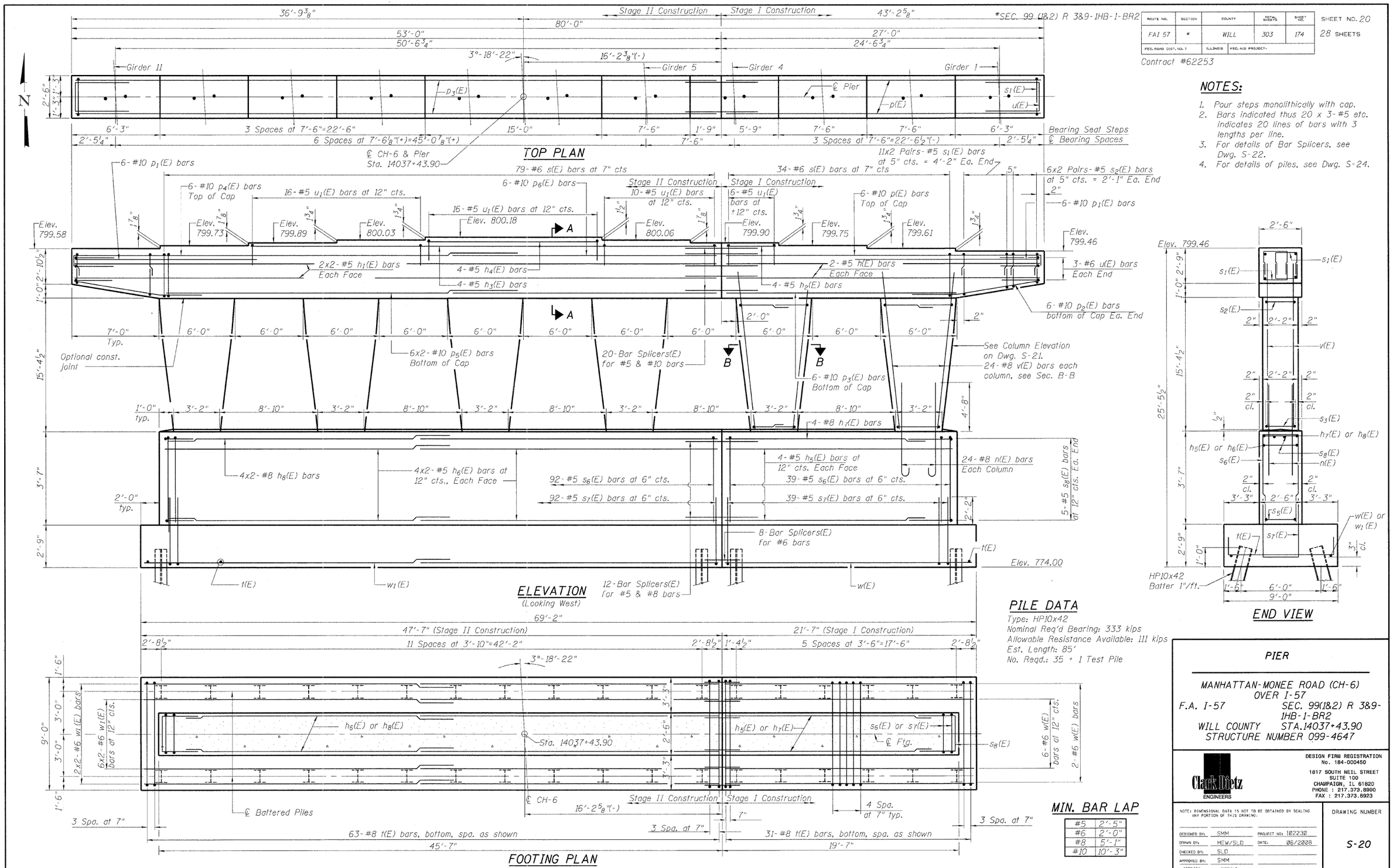
SHEET NO. 20
28 SHEETS

Contract #62253

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

NOTES:

1. Pour steps monolithically with cap.
2. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
3. For details of Bar Splicers, see Dwg. S-22.
4. For details of piles, see Dwg. S-24.



PILE DATA

Type: HP10x42
Nominal Req'd Bearing: 333 kips
Allowable Resistance Available: 111 kips
Est. Length: 85'
No. Reqd.: 35 + 1 Test Pile

MIN. BAR LAP

#5	2'-5"
#6	2'-0"
#8	5'-1"
#10	10'-3"

PIER

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102232
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER
S-20

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

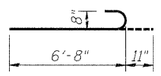
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	175
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT=		

SHEET NO. 21
28 SHEETS

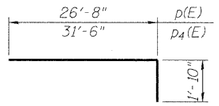
Contract #62253

BILL OF MATERIAL

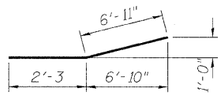
Bar	No.	Size	Length	Shape
$h(E)$	4	#5	26'-8"	
$h_1(E)$	8	#5	27'-7"	
$h_2(E)$	4	#5	5'-5"	
$h_3(E)$	4	#5	38'-11"	
$h_4(E)$	4	#5	14'-8"	
$h_5(E)$	8	#5	19'-3"	
$h_6(E)$	16	#5	23'-10"	
$h_7(E)$	4	#8	19'-3"	
$h_8(E)$	8	#8	25'-2"	
$n(E)$	144	#8	7'-7"	
$p(E)$	6	#10	28'-6"	
$p_1(E)$	12	#10	17'-0"	
$p_2(E)$	12	#10	9'-2"	
$p_3(E)$	6	#10	19'-8"	
$p_4(E)$	6	#10	33'-4"	
$p_5(E)$	12	#10	28'-0"	
$p_6(E)$	6	#10	31'-6"	
$s(E)$	113	#6	12'-6"	
$s_1(E)$	88	#5	7'-1"	
$s_2(E)$	48	#5	6'-5"	
$s_3(E)$	120	#5	9'-8"	
$s_4(E)$	72	#5	7'-8"	
$s_5(E)$	156	#4	2'-11"	
$s_6(E)$	131	#5	8'-8"	
$s_7(E)$	131	#5	12'-4"	
$s_8(E)$	10	#5	11'-10"	
$t(E)$	94	#8	11'-4"	
$u(E)$	6	#6	5'-0"	
$u_1(E)$	48	#5	4'-8"	
$v(E)$	144	#8	18'-5"	
$w(E)$	8	#6	21'-3"	
$w_1(E)$	16	#6	24'-8"	
Structure Excavation		Cu. Yd.	153.0	
Concrete Structures		Cu. Yd.	149.3	
Reinforcement Bars, Epoxy Coated		Pound	29,750	
Furnishing Steel Piles HP10x42		Foot	2,975	
Driving Piles		Foot	2,975	
Test Pile Steel HP10x42		Each	1	
Bar Splicers		Each	38	



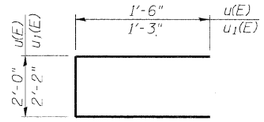
BAR n(E)



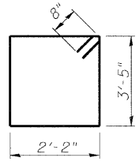
BAR p(E) or $p_4(E)$



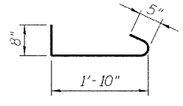
BAR $p_2(E)$



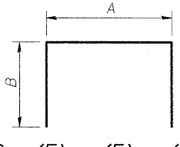
BAR $u(E)$ or $u_1(E)$



BAR s(E)

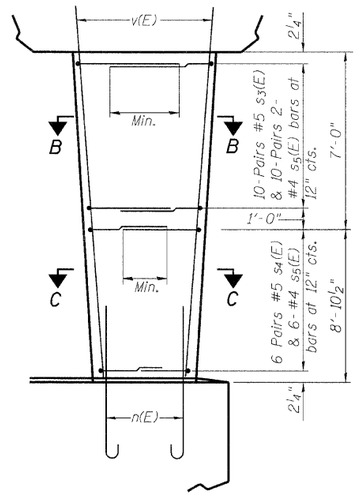


BAR $s_5(E)$

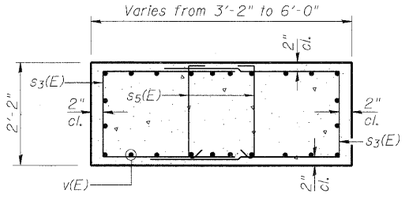


BARS $s_1(E)$, $s_2(E)$, $s_3(E)$, $s_4(E)$
$s_6(E)$, $s_7(E)$, $s_8(E)$ or $t(E)$
A & B DIMENSIONS

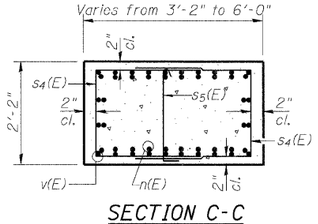
Bar	A	B
$s_1(E)$	1'-5"	2'-10"
$s_2(E)$	1'-5"	2'-6"
$s_3(E)$	1'-10"	3'-11"
$s_4(E)$	1'-10"	2'-11"
$s_6(E)$	2'-2"	3'-3"
$s_7(E)$	2'-2"	5'-1"
$s_8(E)$	2'-0"	4'-11"
$t(E)$	8'-8"	1'-4"



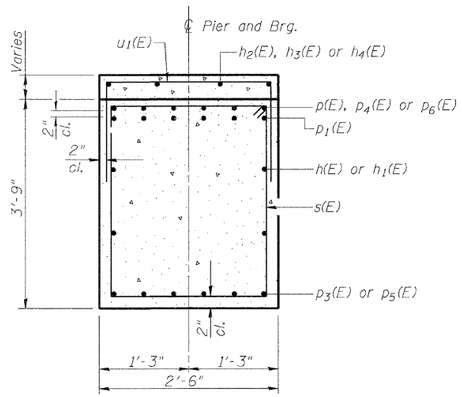
PIER COLUMN ELEVATION



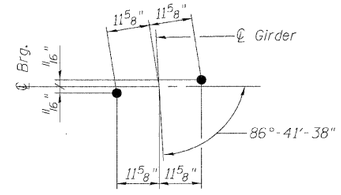
SECTION B-B



SECTION C-C



SECTION A-A



ANCHOR BOLT LAYOUT
FOR PIER

PIER DETAILS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS

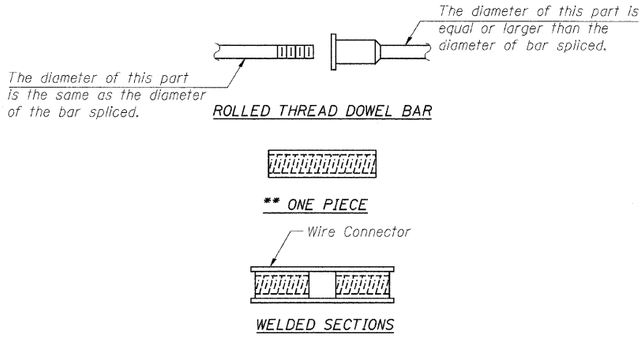
DESIGN FIRM REGISTRATION
No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DESIGNED BY:	SMM	PROJECT NO:	122230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		
ACTIVITY	INITIALS		

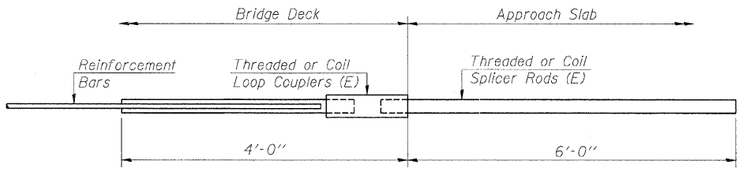
DRAWING NUMBER

S-21



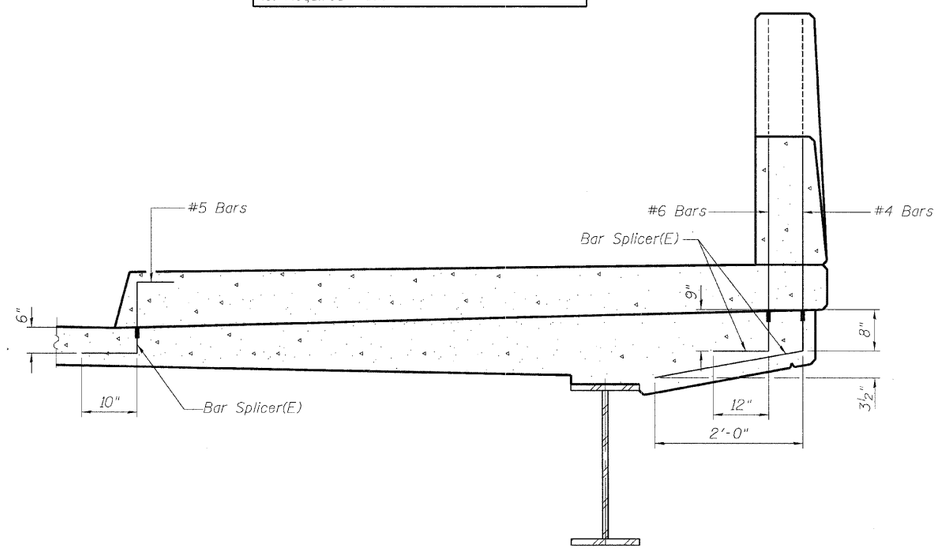
BAR SPLICER ASSEMBLY ALTERNATIVES

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

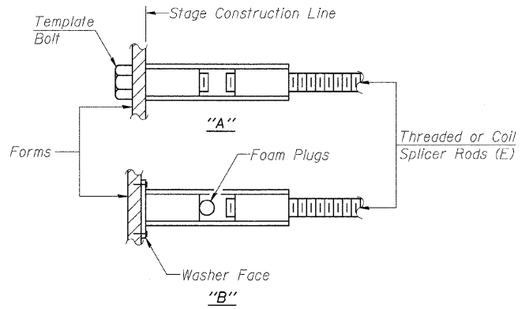


FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 160

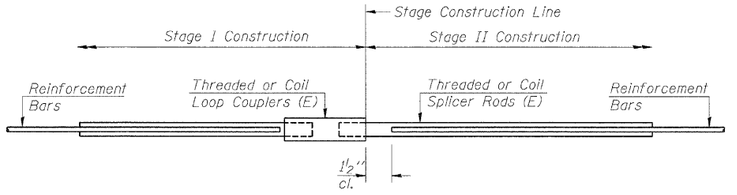


TYPICAL SIDEWALK BAR SPLICER DETAILS



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

Bar Size	No. Assemblies Required	Location
5	2	W. Abutment
7	10	W. Abutment
5	16	Pier
10	12	Pier
6	8	Pier
8	4	Pier
6	16	Diaphragm
5	2	E. Abutment
7	10	E. Abutment
4	205	Deck - d_3(E)
4	10	Deck - d_6(E)
5	740	Deck
5	213	Deck - c(E)
5	426	Deck - c_3(E)
6	205	Deck - d_4(E)
6	10	Deck - d_7(E)

*SEC. 99 (1&2) R 3&9-IHB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	176
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 22
28 SHEETS

Contract #62253

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
		Strength Requirements	
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8

BAR SPLICER ASSEMBLY DETAILS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-IHB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER
S-22

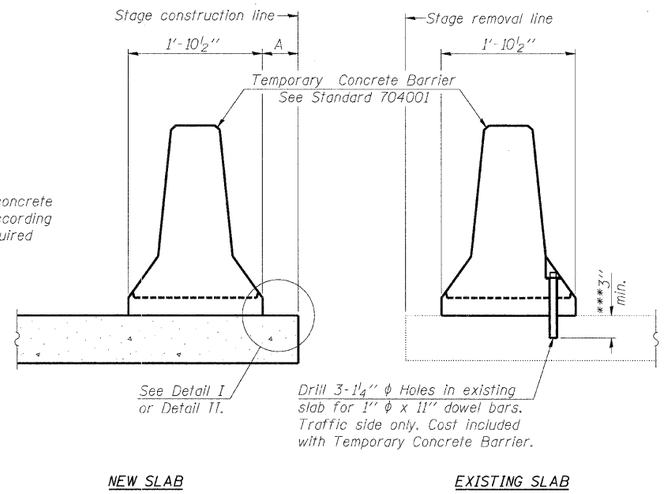
BSD-1 5-16-08

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	177
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 23
28 SHEETS

Contract #62253



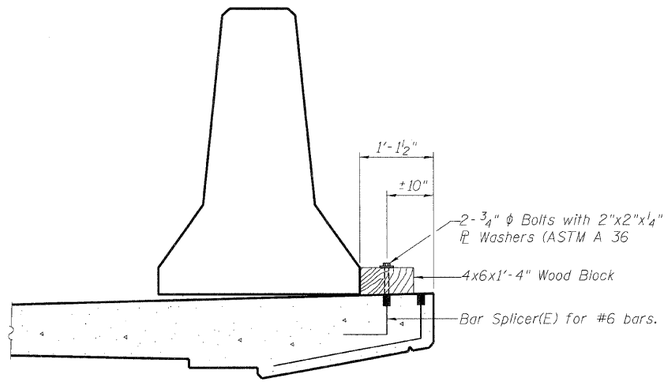
When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".

NEW SLAB EXISTING SLAB

SECTIONS THRU SLAB

***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.



EDGE OF DECK ANCHOR DETAIL

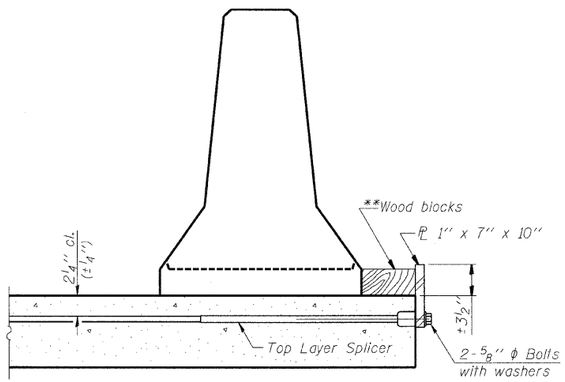
NOTES

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

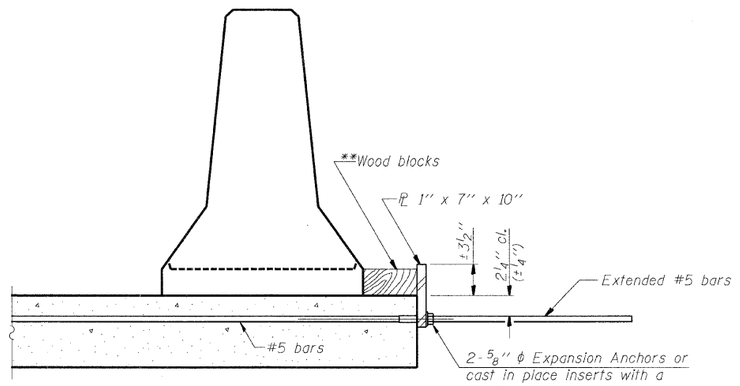
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel PL to the concrete slab or concrete wearing surface with 2-⅝"ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

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.

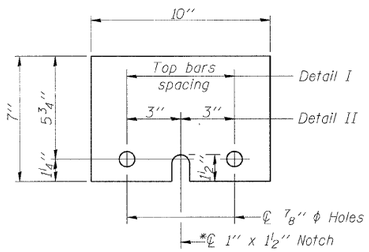


DETAIL I



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.



STEEL RETAINER PL 1" x 7" x 10"

*Required only with Detail II

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS

DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		
ACTIVITY	INITIALS		

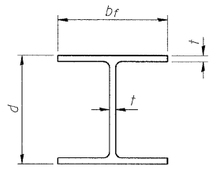
DRAWING NUMBER
S-23

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	178
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT=		

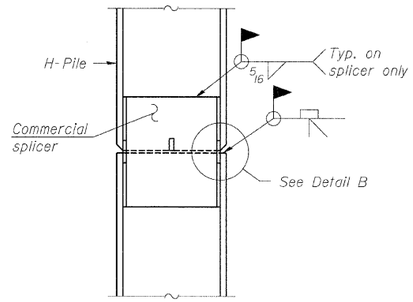
SHEET NO. 24
28 SHEETS

Contract #62253

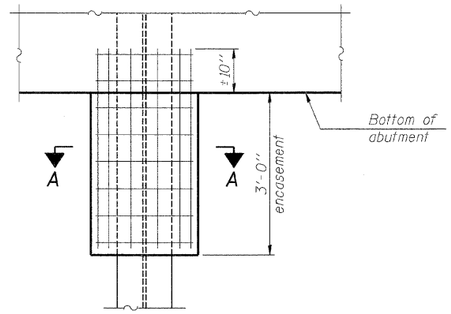


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	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



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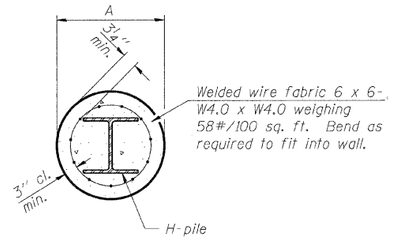
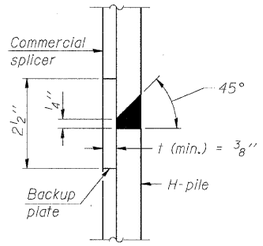


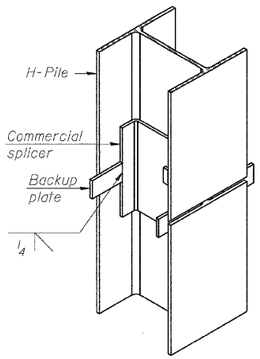
SECTION A-A

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

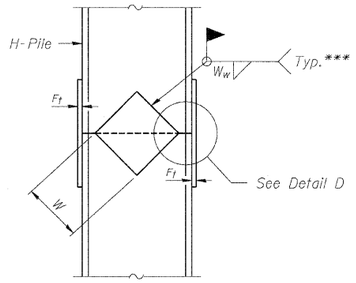
PILE ENCASEMENT



DETAIL "B"



ISOMETRIC VIEW



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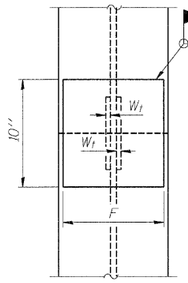
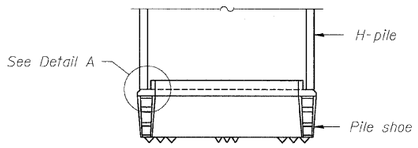


END VIEW

Designation	F	F_t	F_w	W	W_t	W_w
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"



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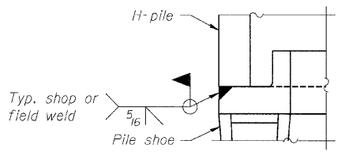
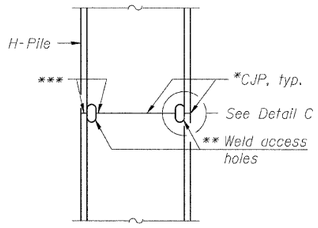
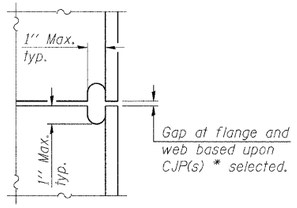


DETAIL A

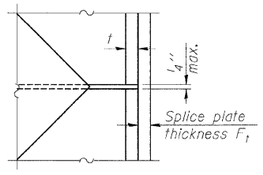
H-PILE SHOE ATTACHMENT



ELEVATION



DETAIL C



DETAIL D

COMPLETE PENETRATION WELD SPLICE

* Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.

** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.

*** Interrupt welds 1/4" from end of each pile.

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

STEEL H-PILE DETAILS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		
ACTIVITY	INITIALS		

DRAWING NUMBER

S-24

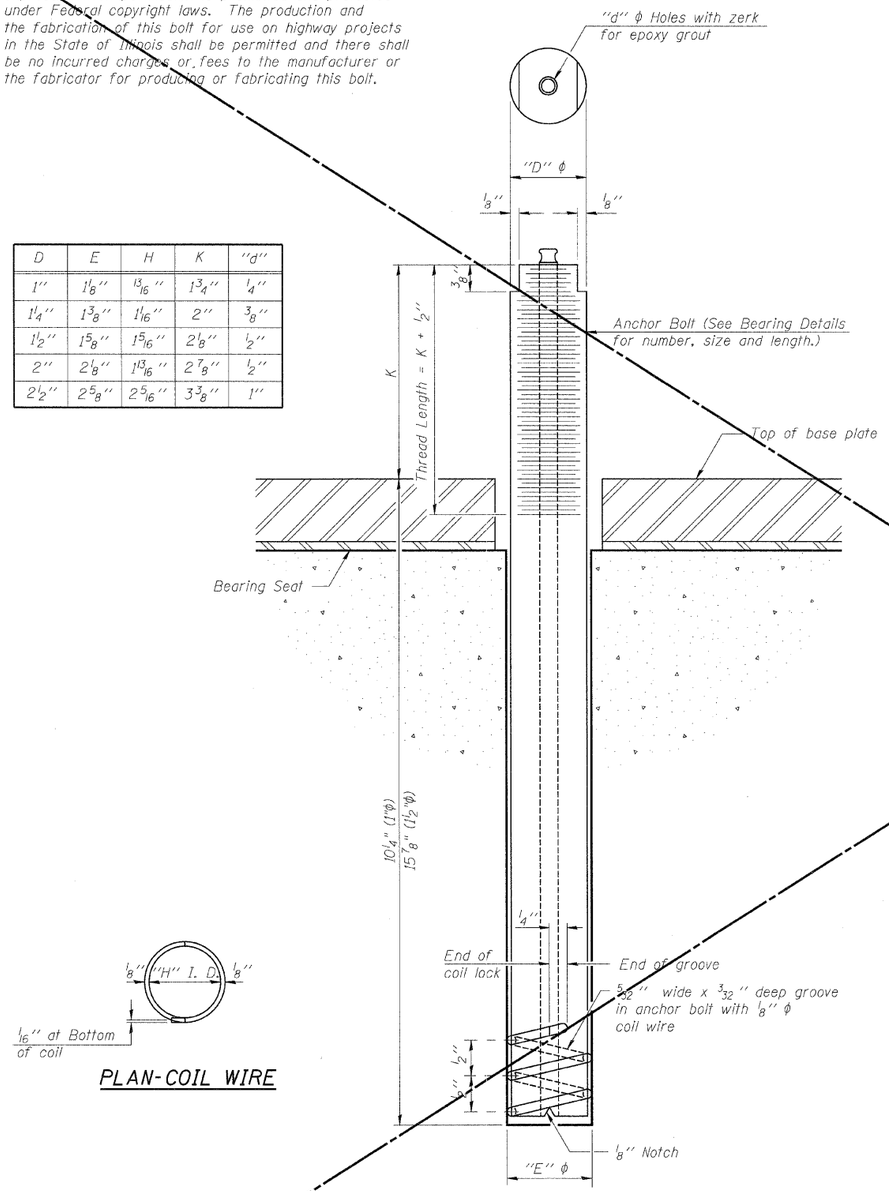
F-HP 11-1-06

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	179
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 25
28 SHEETS

Contract #62253



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

PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod, stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
W. Abut	A325
Pier	A325
E. Abut	A325

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

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

ANCHOR BOLT DETAILS FOR BEARINGS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

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ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER
S-25

ABB-1 10-22-04

Everest Engineering Company
STRUCTURE BORING LOG

Date 2/28/03

ROUTE CH-6 DESCRIPTION MANHATTAN - MONEE ROAD OVER I-57

SECT. 99(1&2)R-3&9-1HB-1-BR-2 STRUCT. NO. 099-4647 DRILLED BY PATRICK DRILLING INC.

COUNTY WILL LOCATION WEST ABUTMENT S.17/20, TWP. 34N , RNG. 13E

Boring No. B-1
Station 14036+21.26
Offset 11.0ft LT.
Surface Elev. 801.00 ft

Surface Water Elev. ____
Groundwater Elev.:
when drilling 751.0
at Completion 718.0
after ____ Hrs. ____

DEPTH	BLOWS	Qu tsf	W %
801.00			
ASPHALT PAVEMENT 800.61			
CONCRETE PAVEMENT			
799.33			
Brown and Gray SANDY LOAM 798.50			
FILL			
Stiff to Hard, Brown and Gray SILTY CLAY trace - sand and gravel	1 1 2	1.75 P	22
-5	2 3 5	2.5 P	17
	5 7 8	4.7 B	17
-10	4 8 9	4.1 B	15
	3 4 5	2.6 B	18
-15	4 4 8	2.6 B	18
	3 4 7	4.0 B	19
-20	5 8 24	1.9 B	20
FILL 779.00			
Stiff to Very Hard, Brown and Gray SILTY CLAY trace - sand and gravel	6 9 11	2.7 B	22
-25			
Sand seam at 49 feet			
-30	6 13 15	5.2 B	19
	10 30 32	9.1 S	15
Gray below 32 feet			
-35	8 12 20	4.7 B	17
765.00			
Stiff to Very Stiff, Gray SILTY CLAY LOAM trace to little - sand and gravel	6 7 10	1.8 B	17
-40			
	7 10 14	1.75 P	17
-45			
	6 10 13	2.8 B	17
-50			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

Everest Engineering Company
STRUCTURE BORING LOG

Date 2/28/03

STRUCTURE NO. 099-4647
ROUTE CH-6
SECTION 99(1&2)R-3&9-1HB-1-BR-2
COUNTY WILL

Boring No. B-1
Station 14036+21.26
Offset 11.0ft LT.
Surface Elev. 801.00 ft

DEPTH	BLOWS	Qu tsf	W %
750.00			
Medium Dense, Gray SILTY LOAM trace - gravel	6 7 7		14
-55			
745.00			
Stiff to Very Stiff, Gray SILTY CLAY LOAM trace to little - sand and gravel	6 12 15	1.5 B	14
-60			
	6 7 8	3.2 B	22
736.50			
Medium Dense, Gray SANDY LOAM trace - gravel			
734.00			
Medium Dense, Gray SILTY LOAM trace to little - sand			
-65			
731.50			
Very Stiff to Hard, Gray SILTY CLAY LOAM trace to little - sand and gravel	8 10 10	2.0 P	20
-70			
	10 12 12	2.5 P	15
-75			
	10 12 13	2.5 P	14
716.00			
END OF BORING			
-80			
	10 12 14	4.0 B	11
-85			
-90			
-95			
-100			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

BORING LOGS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

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ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER
S-26

Everest Engineering Company
STRUCTURE BORING LOG

Page 1 of 2
Date 2/26/03

ROUTE CH-6 DESCRIPTION MANHATTAN - MONEE ROAD OVER I-57

SECT. 99(1&2)R-3&9-1HB-1-BR-2 STRUCT. NO. 099-4647 DRILLED BY PATRICK DRILLING INC.

COUNTY WILL LOCATION I - 57, MEDIAN S.17/20, TWP. 34N, RNG. 13E

Boring No. B-2
Station 14037+54.37
Offset 20.0ft LT
Surface Elev. 781.00 ft

Surface Water Elev. ____
Groundwater Elev.:
when drilling 746.0
at Completion 716.0
after ____ Hrs. ____

DEPTH	BLOWS	Qu tsf	W %
780.25 Black TOPSOIL			
Stiff to Hard, Brown and Gray SILTY CLAY trace - sand and gravel	4 10 13	5.4 B	16
	3 8 11	7.0 B	17
-5			
	5 11 13	4.7 B	15
	4 8 8	3.5 B	17
-10			
Gray below 12 feet	2 6 8	1.5 B	13
	2 8 9	3.3 B	17
-15			
	4 6 8	1.25 P	18
763.00 Stiff to Very Stiff, Gray SILTY CLAY LOAM trace - sand and gravel	2 6 8	1.8 B	17
-20			
	4 6 9	2.1 B	17
758.00 Medium Dense, Gray SANDY LOAM trace - gravel			
	6 7 9		19
-25			

DEPTH	BLOWS	Qu tsf	W %
755.50 Stiff, Gray SILTY CLAY LOAM trace - gravel	4 4 5	1.75 P	17
754.00 Loose, Gray SANDY LOAM			
	2 3 4		19
-30			
750.00 Medium Dense, Gray SILTY LOAM trace - sand			
	3 7 10	2.25 P	16
746.50 Stiff to Hard, Gray SILTY CLAY LOAM trace to little - sand and gravel			
-35			
	2 6 8	2.2 B	14
-40			
Sand seam at 44.5 feet	4 8 9	1.5 P	16
-45			
	7 9 12	2.3 B	16
-50			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

Everest Engineering Company
STRUCTURE BORING LOG

Page 2 of 2
Date 2/26/03

STRUCTURE NO. 099-4647
ROUTE CH-6
SECTION 99(1&2)R-3&9-1HB-1-BR-2
COUNTY WILL

Boring No. B-2
Station 14037+54.37
Offset 20.0ft LT
Surface Elev. 781.00 ft

DEPTH	BLOWS	Qu tsf	W %
-55	7 7 8	3.4 B	14
	6 7 8	1.2 B	13
-60			
Rock in spoon at 64.5 feet	4 9 50/5"	4.7 B	15
-65			
	6 9 13	2.5 P	14
711.00 END OF BORING			
-70			
-75			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

BORING LOGS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION No. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CHAMPAIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

ACTIVITY	INITIALS		
DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		

DRAWING NUMBER
S-27

*SEC. 99 (1&2) R 3&9-1HB-1-BR2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	*	WILL	303	181A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 28
28 SHEETS

Contract #62253

Everest Engineering Company
STRUCTURE BORING LOG

Date 2/27/03

ROUTE CH-6 DESCRIPTION MANHATTAN - MONEE ROAD OVER I-57

SECT. 99(1&2)R-3&9-1HB-1-BR-2 STRUCT. NO. 099-4647 DRILLED BY PATRICK DRILLING INC.

COUNTY WILL LOCATION EAST ABUTMENT S.17/20, TWP. 34N , RNG. 13E

Boring No. B-3
Station 14038+67.08
Offset 11.0ft LT.
Surface Elev. 801.00 ft

Surface Water Elev. —
Groundwater Elev.:
when drilling 752.0
at Completion 721.0
after — Hrs. —

DEPTH	BLOWS	Qu tsf	W %
800.67			
ASPHALT PAVEMENT			
CONCRETE PAVEMENT			
799.30			
Brown and Gray SANDY LOAM FILL			
798.00			
Stiff to Hard, Brown and Gray SILTY CLAY trace - sand and gravel	2 3 3	4.0 P	15
-5			
	2 3 4	2.1 B	21
	2 4 5	2.0 P	19
-10			
	4 3 3	1.3 B	17
	2 5 5	3.3 B	18
-15			
Black and brown below 15 feet	2 3 4	1.5 P	20
783.00			
FILL			
Very Stiff to Very Hard, Brown and Gray SILTY CLAY trace - sand and gravel	5 9 15	7.0 B	17
-20			
	9 12 22	7.4 S	16
	10 18 20	9.9 B	15
-25			

DEPTH	BLOWS	Qu tsf	W %
Gray below 29 feet			
	14 15 22	7.8 S	19
-30	7 9 12	3.7 B	16
	6 7 10	2.2 B	18
-35			
764.00			
Stiff to Very Stiff, Gray SILTY CLAY LOAM trace to little - sand and gravel			
	7 9 11	1.8 B	19
-40			
	5 8 10	2.1 B	18
-45			
Sand seam at 49 feet	6 8 9	2.4 B	15
-50			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

Everest Engineering Company
STRUCTURE BORING LOG

Date 2/27/03

STRUCTURE NO. 099-4647
ROUTE CH-6
SECTION 99(1&2)R-3&9-1HB-1-BR-2
COUNTY WILL

Boring No. B-3
Station 14038+67.08
Offset 11.0ft LT.
Surface Elev. 801.00 ft

DEPTH	BLOWS	Qu tsf	W %
749.00			
Medium Dense, Gray SANDY LOAM trace - clay and gravel	5 7 7		14
746.00			
-55			
Stiff to Very Stiff, Gray SILTY CLAY LOAM trace to little - sand and gravel			
	7 8 12	2.25 P	17
-60			
	7 8 14	3.5 B	17
-65			
	5 8 10	1.5 B	16
-70			
730.00			
Dense, Gray SILTY LOAM trace to little - sand			
	8 12 18		16
726.00 -75			

DEPTH	BLOWS	Qu tsf	W %
Very Stiff, Gray SILTY CLAY LOAM trace to little - sand and gravel			
	7 10 11	3.4 B	15
-80			
716.00			
END OF BORING			
	6 10 12	2.5 B	18
-85			
-90			
-95			
-100			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
Stations, Depths, Offset, and Elevations are in Feet

BORING LOGS

MANHATTAN-MONEE ROAD (CH-6)
OVER I-57
F.A. I-57 SEC. 99(1&2) R 3&9-1HB-1-BR2
WILL COUNTY STA.14037+43.90
STRUCTURE NUMBER 099-4647

Clark Dietz ENGINEERS
DESIGN FIRM REGISTRATION NO. 184-000450
1817 SOUTH NEIL STREET
SUITE 100
CchampaIGN, IL 61820
PHONE : 217.373.8900
FAX : 217.373.8923

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DESIGNED BY:	SMM	PROJECT NO:	102230
DRAWN BY:	MEW/SLD	DATE:	06/2008
CHECKED BY:	SLD		
APPROVED BY:	SMM		
ACTIVITY	INITIALS		

DRAWING NUMBER

S-28

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	WILL	303	182

STA. TO STA.

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

+99(1&2) R-3&9-1HB-1-BR-2 CONTRACT: 62253

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-57	99-1HB-1	WILL	37	6

SHEE[illegible] 12 ...ETS

BILL OF MATERIAL FOR BRIDGE

	ITEM		SUPER.	SUB.	TOTAL
	Class X Concrete	Cu. Yds.	213.8	208.2	422.0
	Reinforcement Bars	Lbs.	61,670	23,097	84,767
	Structural Steel	Lbs.	195,520	—	195,520
	Aluminum Handrail	Lin. Ft.	442	—	442
	Name Plates	Each	—	2	2
*	Class A Excavation for Structures	Cu. Yds.	—	209	209
	Creosoted Piles (Up to 20')	Lin. Ft.	—	165	165
	Concrete Piles	Lin. Ft.	—	600	600
	Test Piles (Concrete)	Each	—	[illegible]	[illegible]
	Slope Wall	Sq. Yd.	—	450	450
	Protective Coat	Sq. Yd.	985	—	985
**	Bridge Seat Sealant	Lump Sum			L.S.

* Includes Excavation for Slope Wall
** Applied @ Abutments Only

SHEET INDEX FOR BRIDGE

SHEET NO.	TITLE
1	INDEX, NOTES AND QUANTITIES FOR BRIDGE
2	GENERAL PLAN AND ELEVATION
3	SLAB PLAN
4	SLAB ELEVATIONS
5	STRUCTURAL STEEL
6 & 7	ALUMINUM HANDRAIL
8	PIERS NO. 1 & NO. 3
9	PIER NO. 2
10	ABUTMENTS-PLAN AND ELEVATION
11	CONCRETE PILING ALTERNATES
12	BORING DATA

STATION 1348+92.13
BUILT 19__ BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. 99-1-HB-1
F.A. PROJECT I-57-7(__)
LOADING HS20-__

LETTERING FOR NAME PLATE
See Standard 2113-B

GENERAL LEGEND:

Elevation Marker

Section Marker - the letter identifies a section which is detailed on the same sheet.

Detail Identification Symbol - the letter identifies a section which is located on the same sheet.

Section Marker - the letter identifies the section and the number refers to the sheet on which the section is detailed.

Detail Identification Symbol - the letter identifies the section and the number refers to the sheet on which the section is located.

GENERAL NOTES:

Class X concrete shall be used throughout. Coarse aggregate which is to be used in end posts & parapet must be absolutely free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications and shall be poured in one continuous operation between construction joints in accordance with Article 51.11.

Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, #4 wires, weighing 33# per 100 sq. ft.

Minimum lap for all bar splices shall be 20 diameters unless otherwise noted.

Rivets ¾"ϕ, open holes 13/16"ϕ, unless noted.

All bolsters, rockers, bearing plates, lead plates, pintles and anchor bolts shall be fabricated and set in accordance with Article 51.15 of the Standard Specifications and are included in quantity of Structural Steel. (Est. weight - 8273 lbs.).

Anchor bolts shall be set before riveting diaphragms over supports.

Permanent forms will not be permitted in forming the concrete floor.

Excavation for portions of structures in the embankment shall not be classified.

Expansion guards are included in quantity of Structural Steel.

All surfaces of expansion guards inaccessible after erection shall be given two shop coats of red lead paint. Anchor studs shall not be painted.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of paint. See **Special Provisions for field paint.**

All paint shall be furnished and applied by the Contractor involved.

Abutment piles, including test piles, shall be driven through precored holes in embankment in accordance with Article 60.9 (c) of the Standard Specifications.

The Contractor shall drive 2 concrete test piles in permanent locations as directed by the Engineer before ordering or casting the remainder of piles. (One concrete test pile at each abutment as shown on the drawings).

The following bridge drawings are not to scale and should not be used for scaling purposes.

Structural Steel shall conform to ASTM Designation A-36.

Expansion guards shall be fabricated and erected in accordance with Art. 51-13(d) of the Standard Specifications.

DESIGN NOTES:

SPECIFICATIONS

Design: Standard Specifications for Highway Bridges of A.A.S.H.O. - 1961 Edition.

Construction: Standard Specifications for Road and Bridge Construction adopted January 2, 1958, State of Illinois and Supplemental Specifications effective March 2, 1964.

DESIGN STRESSES

f'c = 3500 psi
fc = 1400 psi - Superstructure and Substructure.
fs = 20,000 psi - (reinforcement).
fs = 20,000 psi - (structural steel) A-36.
V = 75 psi - (pier footing).
n = 10
Maximum pier soil pressure: 6000 p.s.f.

LOADING

HS20-44
Future wearing surface - 18 psf.

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF ¼ OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

DESIGNED	
CHECKED	
DRAWN	L. S.
CHECKED	LJL

EXAMINED ____ ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED ____ ENGINEER OF DESIGN
APPROVED ____ CHIEF HIGHWAY ENGINEER

ILLINOIS DIVISION OF HIGHWAYS
INDEX, NOTES AND QUANTITIES FOR BRIDGE
F.A.I. RT. 57 SEC. 99-1 HB-1
WILL COUNTY
STA. 1348+92.13

7-19-67 J.M.J. Rev. class x conc. from 434.8 to 422.0 cu.yds & Rein. bars from 74,497 to 84,767 lbs.

Rev. 11-9-65 Quantity Changes - Class X Conc. Sup. 213.9 to 226.6 cu.yd. Tot. 425.3 to 438.0 cu.yd., Reinf. Bars, sup. 43,856 to 46,[illegible] lbs. Tot. 67,071 to 63,[illegible] lbs. Struct. Steel, 194,220 to 195,520 lbs., Creo. Piles, 150 to 165 lin. ft., Slope Wall, 436 to 450 sq.yd., Prot. Coat 670 to 985 sq.yd. W.L.P.

1-3-63 Changed effective date of Supplemental Specifications from July 1, 1961 to April 2, 1962. W.C.K.

Rev. 2/6/67 Bill of Material Changes Class X Conc. Sub. 214.4 to 208.2 Cu. Yds., Total 438.0 to 434.8 Cu. Yds. Reinf. Bars Sup. 48455 to 51300 lbs. Sub. 23215 to 23097 lbs., Total 71700 to 74497 lbs. H.W.L.

FOR INFORMATION ONLY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	183
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*99(182) R-389-1HB-1-BR-2 CONTRACT: 62253

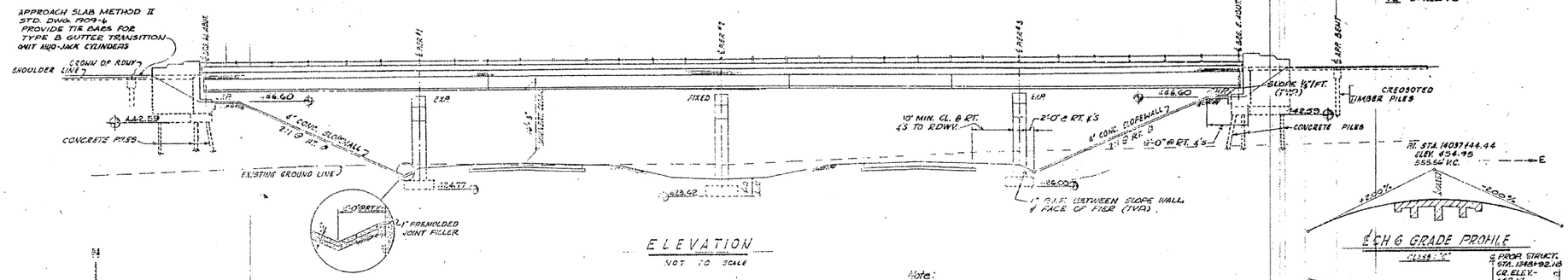
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.E.57	99-1-HB-1	WILL	37	7
STA. 1348+92.18				
FED. ROAD DIST. No. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2 OF 12 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

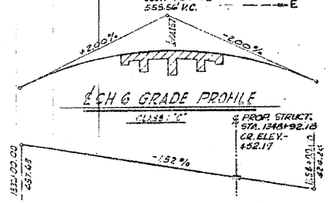
BENCH MARK DATA
106 R.R. SPK. IN BASE P.P. 32' LT. STA. 1+035+34
ELEV. 429.739

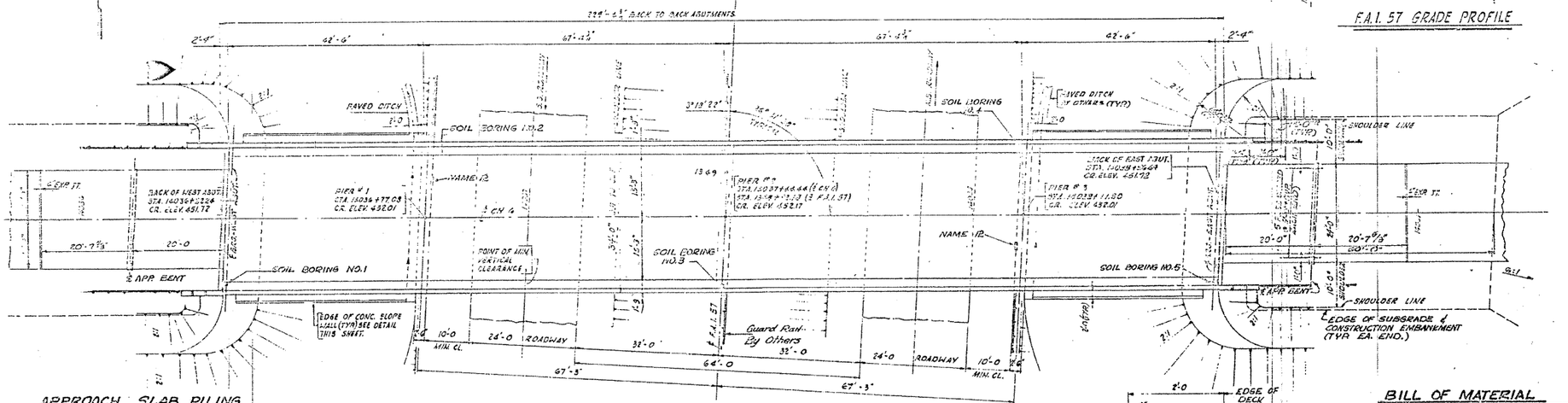
APPROACH SLAB METHOD II
STD. DWG. 1109-6
PROVIDE TIE BARS FOR TYPE B GUTTER TRANSITION
UNIT MUD-JACK CYLINDERS



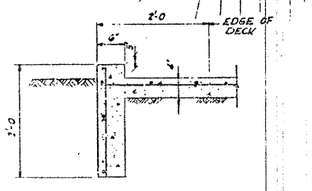
ELEVATION
NOT TO SCALE

Note:
"Excavation for portions of structures in the embankments shall not be classified."





PLAN
NOT TO SCALE



EDGE of SLOPE PAVEMENT
SCALE: 1"=1'-0"

APPROACH SLAB PILING
TYPE: CREOSOTED TIMBER

TOTAL NO. REQ'D: 10
REQUIRED LENGTH: 19' W. Abut.
14' E. Abut.
SEE SPECIAL PROVISIONS

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
SLOPE WALL	SQ. YD.	450
CREOSOTED PILES	LIN. FT.	165

DESIGNED	
CHECKED	
DRAWN	D.H.
CHECKED	L.S.L.

EXAMINED _____ 19
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

ILLINOIS DIVISION OF HIGHWAYS
GENERAL PLAN AND ELEVATION
F.A.I. ROUTE 57 SEC. 99-1-HB-1
WILL COUNTY
STA. 1348+92.18

Rek. 2/10/67 Straightened wing walls, added quadrants. Changed Ck. to Dk. Abutments from 223'-4½" to 224'-4½" HRL

FOR INFORMATION ONLY

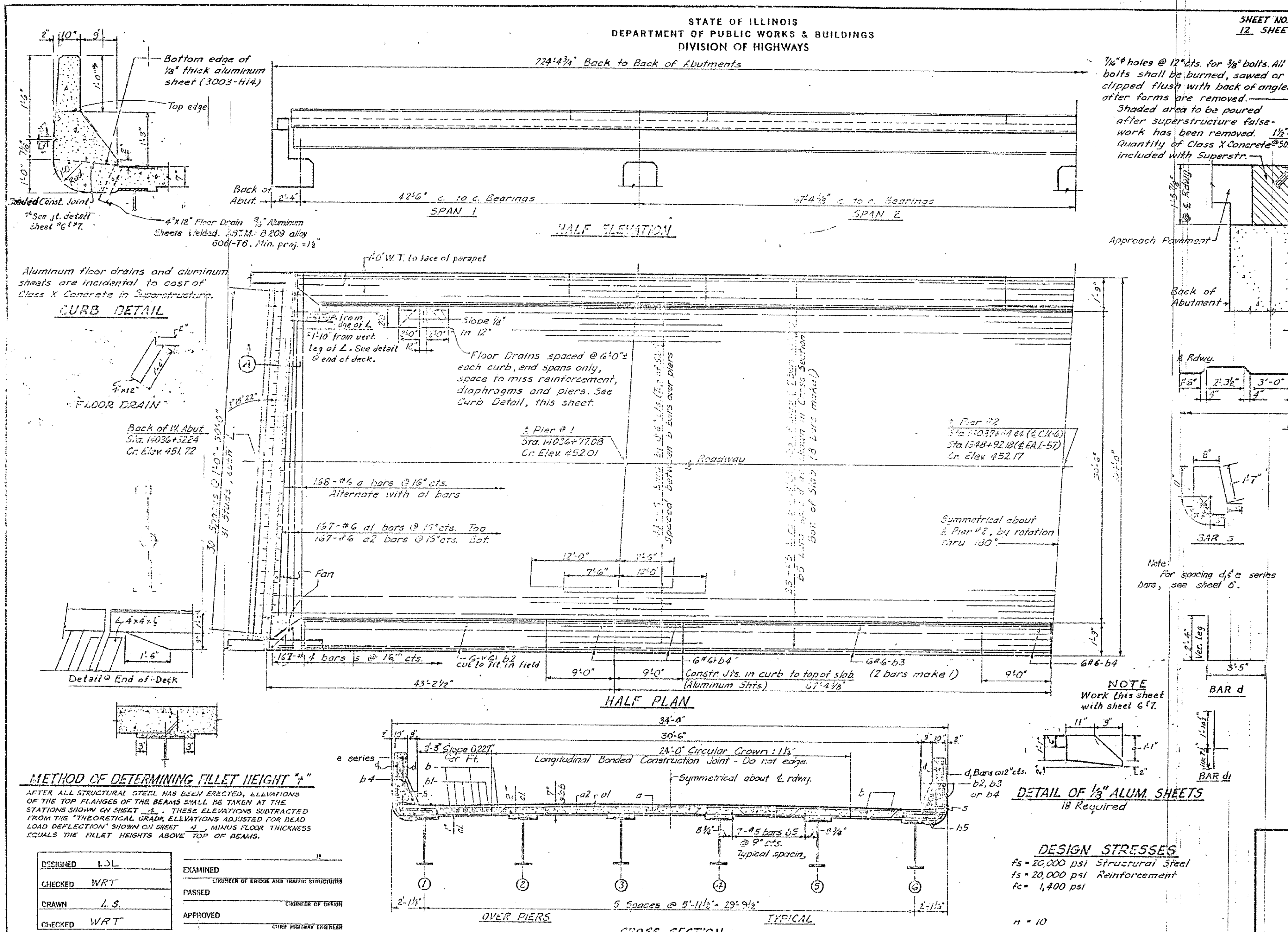
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	184
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*99(1&2) R-3&9-1HB-1-BR-2 CONTRACT: 62253

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO. 3
12 SHEETS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-57	99-1-HB-1	WILL	37	8



BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a	158	#5	33'-0"	
a1	157	#6	33'-6"	
a2	157	#6	2'-9"	
b	161	#5	32'-6"	
b1	132	#6	17'-6"	
b2	24	#6	33'-10"	
b3	48	#6	25'-0"	
b4	72	#6	8'-8"	
b5	312	#5	23'-7"	
s	334	#4	5'-6"	
d	444	#6	5'-9"	
d1	444	#6	2'-6"	

Item	Unit	Quantity
Class X Concrete	Cu. Yds.	213.8
Reinforcement Bars	Lbs.	61670
Structural Steel	Lbs.	195,520
Protective Coat	Sq. Yds.	985

Weight of Rockers, Bolsters, Bearing Plates, Lead Plates and Anchor Bolts included as Structural Steel. Est. Wt. = 8,273 Lbs.

DESIGN STRESSES
fs = 20,000 psi Structural Steel
fs = 20,000 psi Reinforcement
fc = 1,400 psi
n = 10

DESIGNED	L.S.L.
CHECKED	WRT
DRAWN	L.S.
CHECKED	WRT

EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

ILLINOIS DIVISION OF HIGHWAYS
SLAB PLAN
F.A.I. RT. 57 SEC. 99-1-HB-1
WILL COUNTY
STA. 1348+92.18

Rev. 11-12-65 Quantity Changes: Class X Conc. 213.9 to 226.6 cu.yd.; Reinf. Bars 43,856 to 48,485 lbs. Struct. Steel 194,220 to 195,520 lbs.; Prot. Coat 870 to 935 sq.yd.
Rev. 2/3/67 Changed top slab reinf. clearance from 1½" to 2", Reinf. bars from 48,485 lbs. to 51,400 lbs. H.W.L.
7-19-67 J.T.J. Rev. Rein. bars from 51,400 to 61,670 & Class "X" Conc. from 226.6 to 213.8 cu.yds.

FOR INFORMATION ONLY

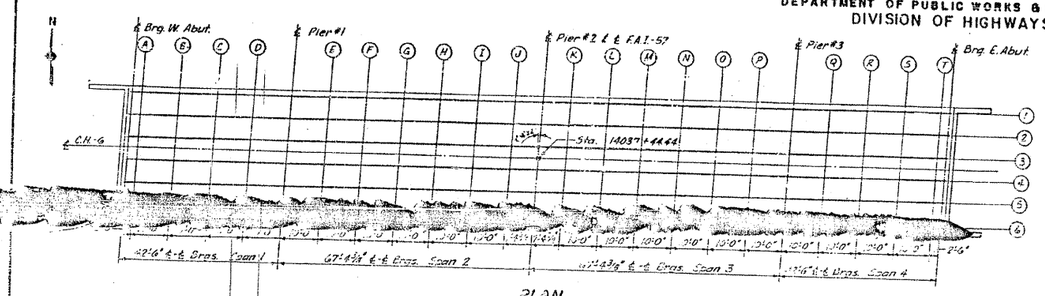
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	185
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*99(1&2) R-3&9-1HB-1-BR-2 CONTRACT: 62253

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

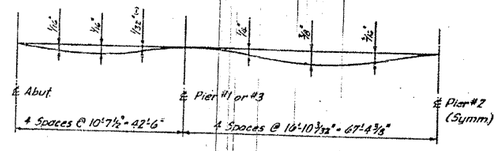
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-57	99-1HB-1	WILL	37	9
STA.		TO STA.		
FED. ROAD DIST. No. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4
12 SHEETS.



PLAN

* Stations tabulated shall be prefixed with "1+" for actual values; "3435.435" indicates "Sta. 1403+35.435."



DEAD LOAD DEFLECTION DIAGRAM

Includes weight of concrete only.
Values shown apply to all beams.

Note:
The above deflections are not for use in the field if the Engineer is working from the Theoretical Grade Elevations Adjusted for Dead Load Deflection.

SPAN 1

LOCATION	BEAM	STATION *	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
℄ BRG. W. ABUT.	1	3635.435	14.896	451.566	451.566
	2	3636.001	8.938	451.572	451.572
	3	3634.747	2.979	451.731	451.731
	4	3634.403	- 2.979	451.728	451.728
	5	3634.029	- 8.937	451.684	451.684
	6	3633.715	- 14.896	451.552	451.552
(A)	1	3637.935	14.896	451.535	451.537
	2	3637.521	8.938	451.692	451.693
	3	3637.247	2.979	451.769	451.768
	4	3636.903	- 2.979	451.719	451.719
	5	3636.559	- 8.937	451.634	451.635
	6	3636.215	- 14.896	451.572	451.574
(B)	1	3647.935	14.896	451.659	451.665
	2	3647.591	8.938	451.705	451.769
	3	3647.247	2.979	451.824	451.828
	4	3646.903	- 2.979	451.822	451.825
	5	3646.559	- 8.937	451.758	451.762
	6	3646.215	- 14.896	451.646	451.653
(C)	1	3657.935	14.896	451.724	451.729
	2	3657.591	8.938	451.831	451.834
	3	3657.247	2.979	451.890	451.893
	4	3656.903	- 2.979	451.888	451.891
	5	3656.559	- 8.937	451.825	451.828
	6	3656.215	- 14.896	451.714	451.718
(D)	1	3667.935	14.896	451.783	451.785
	2	3667.591	8.938	451.890	451.890
	3	3667.247	2.979	451.930	451.930
	4	3666.903	- 2.979	451.948	451.946
	5	3666.559	- 8.937	451.885	451.885
	6	3666.215	- 14.896	451.774	451.774
℄ BRG. PIER #1	1	3677.935	14.896	451.835	451.835
	2	3677.591	8.938	451.942	451.942
	3	3677.247	2.979	452.002	452.002
	4	3676.903	- 2.979	452.000	452.000
	5	3676.559	- 8.937	451.937	451.937
	6	3676.215	- 14.896	451.826	451.826

SPAN 2

LOCATION	BEAM	STATION *	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
(E)	1	3387.935	14.896	451.579	451.635
	2	3387.591	8.938	451.587	451.635
	3	3387.247	2.979	452.016	452.035
	4	3386.903	- 2.979	452.045	452.064
	5	3386.559	- 8.937	451.532	451.532
	6	3386.215	- 14.896	451.872	451.836
(F)	1	3397.935	14.896	451.916	451.932
	2	3397.591	8.938	452.021	452.016
	3	3397.247	2.979	452.074	452.126
	4	3396.903	- 2.979	452.103	452.125
	5	3396.559	- 8.937	452.100	452.042
	6	3396.215	- 14.896	451.910	451.946
(G)	1	3707.935	14.896	451.946	451.993
	2	3707.591	8.938	452.054	452.033
	3	3707.247	2.979	452.114	452.143
	4	3706.903	- 2.979	452.113	452.142
	5	3706.559	- 8.937	452.051	452.030
	6	3706.215	- 14.896	451.941	451.988
(H)	1	3717.935	14.896	451.989	452.012
	2	3717.591	8.938	452.077	452.103
	3	3717.247	2.979	452.137	452.163
	4	3716.903	- 2.979	452.137	452.163
	5	3716.559	- 8.937	452.075	452.101
	6	3716.215	- 14.896	451.965	452.008
(I)	1	3727.935	14.896	451.984	452.010
	2	3727.591	8.938	452.093	452.109
	3	3727.247	2.979	452.153	452.169
	4	3726.903	- 2.979	452.153	452.169
	5	3726.559	- 8.937	452.091	452.107
	6	3726.215	- 14.896	451.982	452.008
(J)	1	3737.935	14.896	451.992	451.999
	2	3737.591	8.938	452.101	452.105
	3	3737.247	2.979	452.162	452.165
	4	3736.903	- 2.979	452.162	452.165
	5	3736.559	- 8.937	452.101	452.105
	6	3736.215	- 14.896	451.991	451.998
℄ BRG. PIER #2	1	3745.300	14.896	451.994	451.994
	2	3744.956	8.938	452.103	452.103
	3	3744.612	2.979	452.164	452.164
	4	3744.267	- 2.979	452.164	452.164
	5	3743.923	- 8.937	452.103	452.103
	6	3743.579	- 14.896	451.994	451.994

SPAN 3

LOCATION	BEAM	STATION *	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
(K)	1	3752.665	14.896	451.991	451.938
	2	3752.320	8.938	452.101	452.109
	3	3751.976	2.979	452.162	452.166
	4	3751.632	- 2.979	452.162	452.165
	5	3751.288	- 8.937	452.101	452.105
	6	3750.944	- 14.896	451.992	451.999
(L)	1	3762.665	14.896	451.932	452.008
	2	3762.320	8.938	452.031	452.107
	3	3761.976	2.979	452.153	452.159
	4	3761.632	- 2.979	452.153	452.159
	5	3761.288	- 8.937	452.033	452.109
	6	3760.944	- 14.896	451.934	452.010
(M)	1	3772.665	14.896	451.895	451.908
	2	3772.320	8.938	452.075	452.101
	3	3771.976	2.979	452.137	452.163
	4	3771.632	- 2.979	452.137	452.154
	5	3771.288	- 8.937	452.077	452.100
	6	3770.944	- 14.896	451.969	452.012
(N)	1	3782.665	14.896	451.941	451.968
	2	3782.320	8.938	452.051	452.080
	3	3781.976	2.979	452.113	452.142
	4	3781.632	- 2.979	452.114	452.143
	5	3781.288	- 8.937	452.054	452.083
	6	3780.944	- 14.896	451.946	451.993
(O)	1	3792.665	14.896	451.910	451.946
	2	3792.320	8.938	452.020	452.042
	3	3791.976	2.979	452.083	452.105
	4	3791.632	- 2.979	452.084	452.106
	5	3791.288	- 8.937	452.024	452.046
	6	3790.944	- 14.896	451.916	451.952
(P)	1	3802.665	14.896	451.872	451.888
	2	3802.320	8.938	451.982	451.992
	3	3801.976	2.979	452.045	452.055
	4	3801.632	- 2.979	452.046	452.056
	5	3801.288	- 8.937	451.987	451.998
	6	3800.944	- 14.896	451.879	451.895
℄ ABUT. PIER #3	1	3812.665	14.896	451.826	451.826
	2	3812.320	8.938	451.937	451.937
	3	3811.976	2.979	452.000	452.000
	4	3811.632	- 2.979	452.002	452.002
	5	3811.288	- 8.937	451.942	451.942
	6	3810.944	- 14.896	451.835	451.835

SPAN 4

LOCATION	BEAM	STA. NO. *	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
(Q)	1	3822.685	14.896	451.774	451.774
	2	3822.320	8.938	451.835	451.835
	3	3821.976	2.979	451.818	451.843
	4	3821.632	- 2.979	451.820	451.838
	5	3821.288	- 8.937	451.820	451.830
	6	3820.944	- 14.896	451.783	451.733
(R)	1	3832.685	14.896	451.714	451.718
	2	3832.320	8.938	451.825	451.828
	3	3831.976	2.979	451.838	451.841
	4	3831.632	- 2.979	451.830	451.833
	5	3831.288	- 8.937	451.831	451.834
	6	3830.944	- 14.896	451.725	451.729
(S)	1	3842.685	14.896	451.647	451.653
	2	3842.320	8.938	451.758	451.762
	3	3841.976	2.979	451.822	451.826
	4	3841.632	- 2.979	451.824	451.828
	5	3841.288	- 8.937	451.785	451.789
	6	3840.944	- 14.896	451.659	451.665
(T)	1	3852.685	14.896	451.572	451.574
	2	3852.320	8.938	451.684	451.685
	3	3851.976	2.979	451.748	451.749
	4	3851.632	- 2.979	451.750	451.752
	5	3851.288	- 8.937	451.692	451.693
	6	3850.944	- 14.896	451.586	451.587
℄ BRG. E. ABUT.	1	3855.165	14.896	451.553	451.553
	2	3854.820	8.938	451.664	451.664
	3	3854.476	2.979	451.728	451.728
	4	3854.132	- 2.979	451.731	451.731
	5	3853.788	- 8.937	451.673	451.673
	6	3853.444	- 14.896	451.566	451.566

NOTE:
Elevations shown for beams under curb are at top of slab extended.

DESIGNED	WRT
CHECKED	LDL
DRAWN	L.S.
CHECKED	LDL

EXAMINED _____ 19
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED _____
ENGINEER OF DESIGN
APPROVED _____
CHIEF HIGHWAY ENGINEER

ILLINOIS DIVISION OF HIGHWAYS

SLAB ELEVATIONS

F.A.I. RT. 57 SEC. 99-1 HB-1
WILL COUNTY
STA. 1348+92.18

FOR INFORMATION ONLY

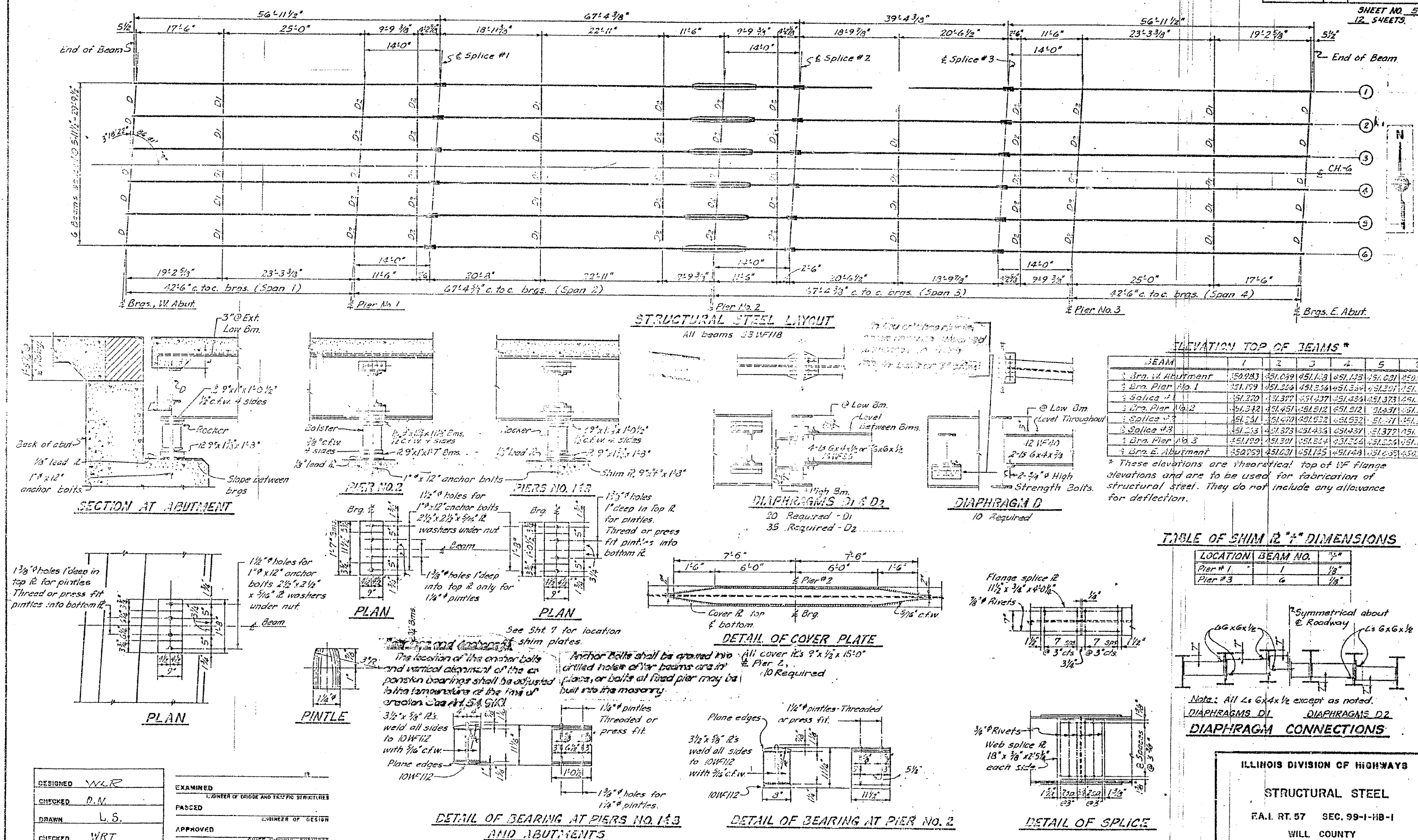
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	186
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*99(1&2) R-3&9-1HB-1-BR-2
CONTRACT: 62253

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-57	99-1 HB-1	WILL	37	10

SHEET NO. 5
12 SHEETS



ELEVATION TOP OF BEAMS *

BEAM	1	2	3	4	5	6
℄ Brg. W. Abutment	450.983	451.089	451.148	451.145	451.091	[illegible]
℄ Brg. Pier No. 1	451.199	451.336	451.336	451.334	451.301	[illegible]
℄ Splice #1	451.270	451.377	451.437	451.436	451.373	451.235
℄ Brg. Pier No. 2	451.342	451.451	451.512	451.512	451.451	[illegible]
℄ Splice #2	451.341	451.470	451.532	451.532	[illegible]	[illegible]
℄ Splice #3	451.233	451.373	451.436	451.437	451.377	[illegible]
℄ Brg. Pier No. 3	451.199	451.301	451.344	451.366	451.306	[illegible]
℄ Brg. E. Abutment	450.969	451.031	451.145	451.148	451.089	[illegible]

* These elevations are theoretical top of WF flange elevations and are to be used for fabrication of structural steel. They do not include any allowance for deflection.

TABLE OF SHIM ℞ "t" DIMENSIONS

LOCATION	BEAM NO.	"t"
Pier #1	1	1/8"
Pier #3	6	1/8"

DESIGNED	W.L.R.
CHECKED	D.N.
DRAWN	L.S.
CHECKED	WRT

EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

ILLINOIS DIVISION OF HIGHWAYS
STRUCTURAL STEEL
F.A.I. RT. 57 SEC. 99-1-HB-1
WILL COUNTY
STA. 1348+92.18

FOR INFORMATION ONLY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	WILL	303	187

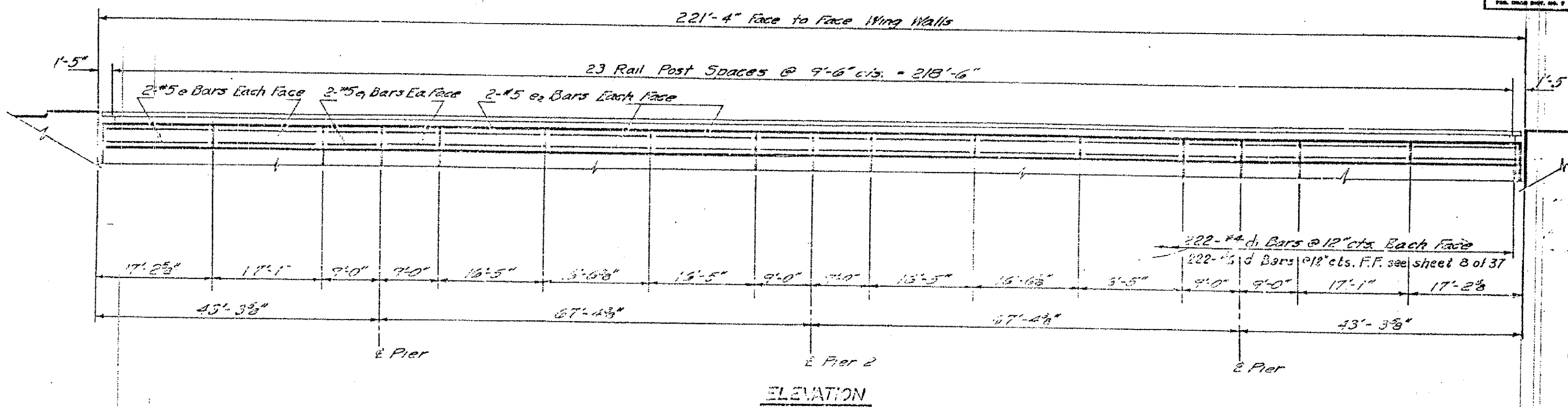
STA. TO STA.

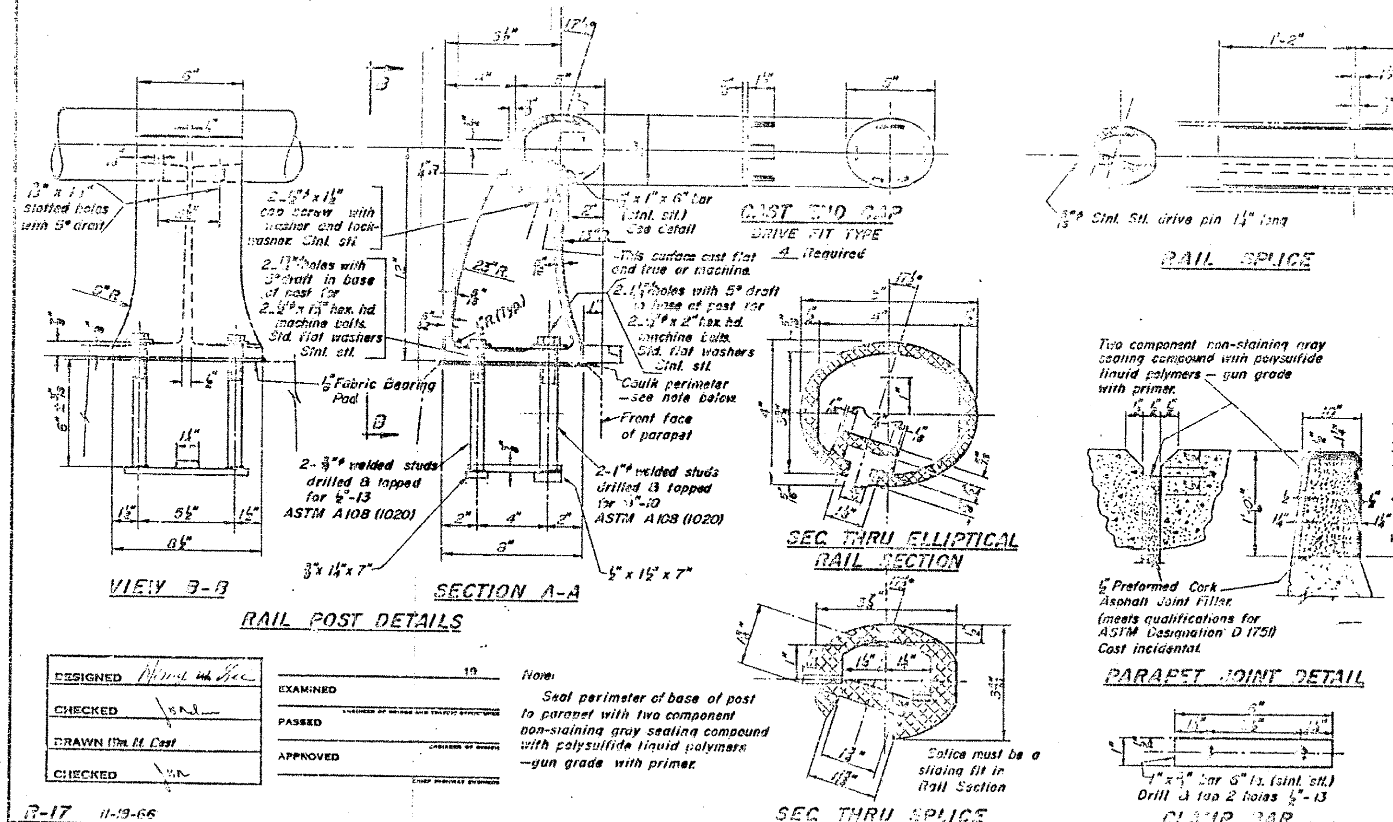
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

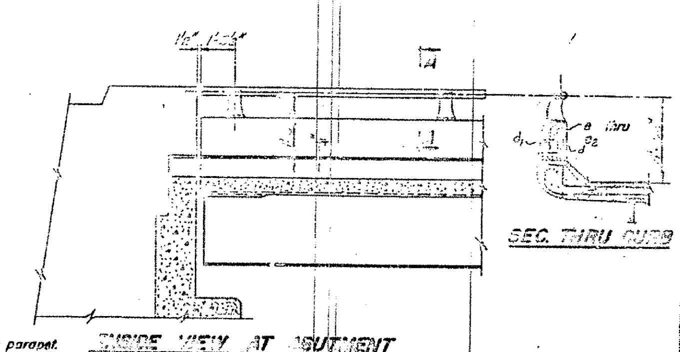
+99(1&2) R-3&9-1HB-1-BR-2 CONTRACT: 62253

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO. 6 of 7 — 12 SHEETS







NOTES:

All Posts shall be normal to parapet.

All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-221 alloy 6061-T6 and shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 feet radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.

All joints in rail shall be spliced per detail.

See Special Provisions for following Material Specifications:

Cast Aluminum Alloy Bridge Post—Alloy A344-T4.
Stainless Steel Bars, Cap Screws, Washers and Lockwashers.
Fabric Bearing Pad.

METHOD of MEASUREMENT: Aluminum handrail shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing member thru all posts and gaps.

BASIS of PAYMENT: Aluminum handrail shall be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.

Cost of rail splice, end caps, and hardware to be incidental to item ALUMINUM HANDRAIL.

Provide 1-⅛" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade — high spots shall be ground, and low spots shimmed.

PARAPETS & RAILS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
e	32	#5	16'-9"	——
e1	48	#5	8'-9"	——
e2	48	#5	16'-3"	——
Class X Concrete			Cu. Yds.	*
Reinforcement Bars			Lbs	*
Aluminum Handrail			Lin. Ft.	442

* See Sheet 9 of 11

ALUMINUM HANDRAIL

F.A.I. RT-57 SEC. 99-1HB-1
WILL COUNTY
STA. 1348 + 92.78

FOR INFORMATION ONLY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	188
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*99(1&2) R-3&9-1HB-1-BR-2 CONTRACT: 62253

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

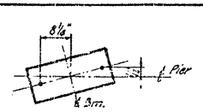
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-57	99-1-HB-1	WILL	57	13
STA.		TO STA.		
FED. ROAD DIST. No. 7	ILLINOIS	FED. AID PROJECT		

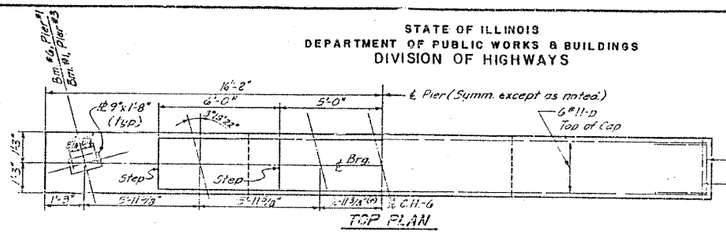
SHEET NO. 13
12 SHEETS

ANCHOR BOLT LOCATIONS
(Pier 1 & 3)

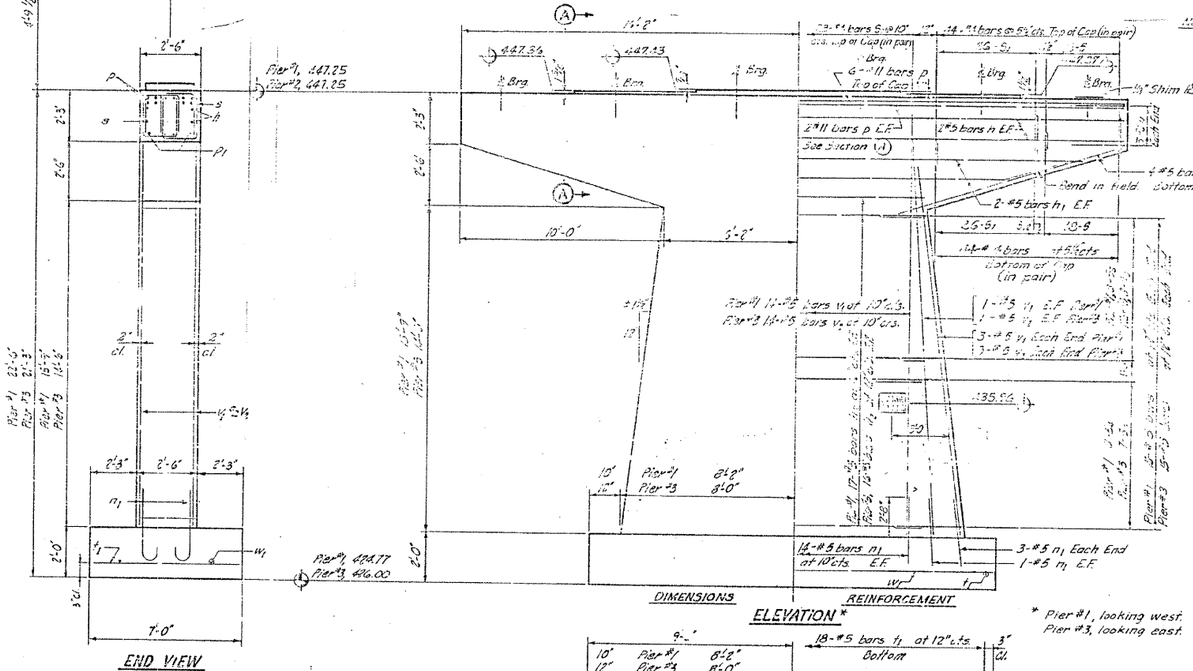
Pier #1 Sta 1+03+477.05
Pier #3 Sta 1+03+811.80
Cr. Elev. 652.01

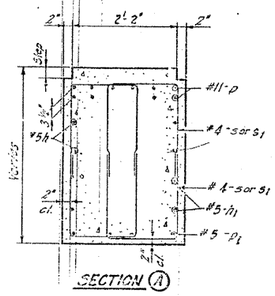
Note: Space reinforcement steel to miss anchor bolts.



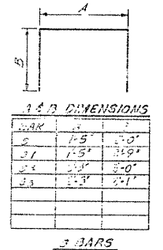


TOP PLAN





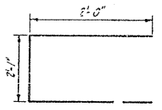
SECTION (A)



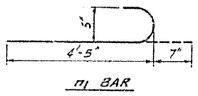
A & B DIMENSIONS

MARK	A	B
s	1'-5"	5'-0"
s1	1'-5"	3'-9"
s2	2'-3"	5'-0"
s3	2'-3"	3'-1"

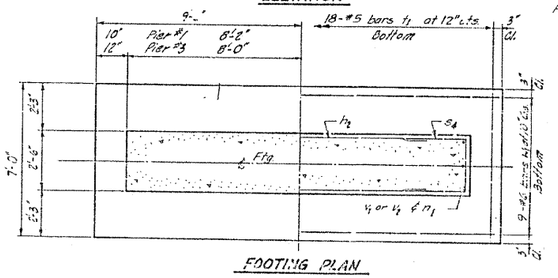
3 BARS



U BAR



n1 BAR



FOOTING PLAN

PIER 1 & 3
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h	3	#5	19'-0"	—
h1	3	#5	13'-0"	—
s2	36	#5	14'-0"	—
n1	16	#5	5'-0"	⊏
p	20	#11	23'-0"	—
p1	3	#5	5'-1"	—
g	104	#4	3'-5"	□
s1	224	#4	6'-11"	□
s4	30	#5	8'-3"	□
s3	3	#5	6'-5"	□
t1	36	#5	6'-6"	—
u	12	#6	32'-1"	⊏
V1	38	#5	18'-4"	—
V2	38	#5	17'-8"	—
w1	18	#6	17'-6"	—
Class X Concrete			Cu. Yds.	82.9
Reinforcement Bars			Lbs.	9,795
Name Plate			Each	2

DESIGNED	W.L.R.
CHECKED	D.N.
DRAWN	D.K.
CHECKED	W.R.T.

EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

Revised 6-28-67 Add Anchor Bolts for Guard Rails W.R.T.

ILLINOIS DIVISION OF HIGHWAYS

PIERS NO. 1 & 3

F.A.I. RT. 57 SEC. 99-1-HB-1

WILL COUNTY

STA. 1348+92.13

FOR INFORMATION ONLY

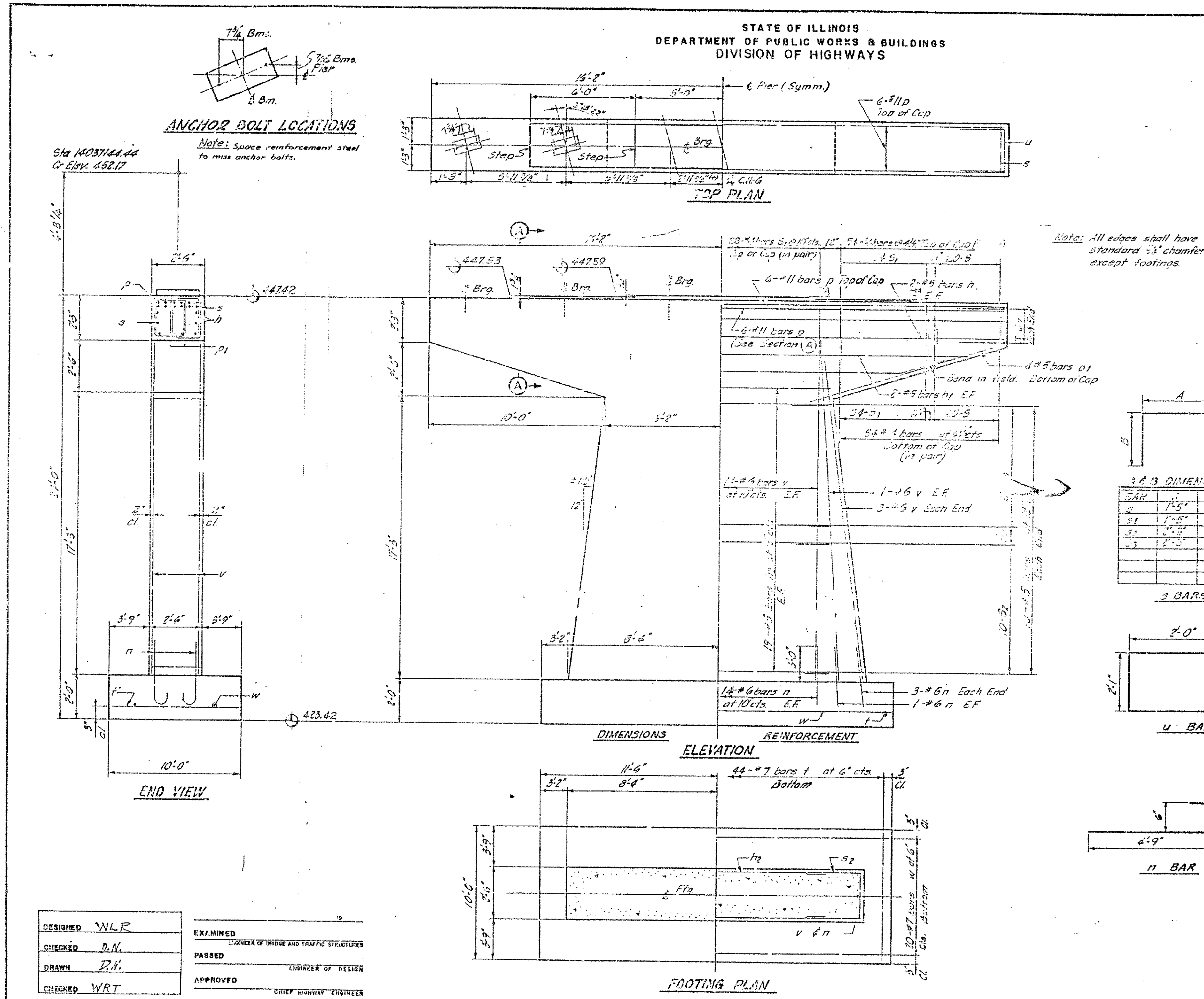
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	WILL	303	189
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

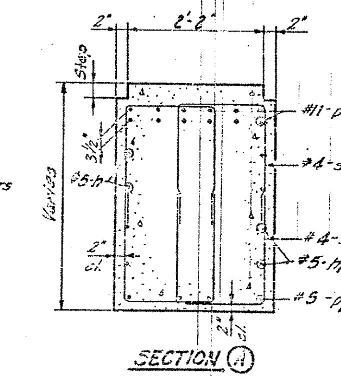
•99(1&2) R-3&9-IHB-1-BR-2 CONTRACT: 62253

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-57	99-1-HB-1	WILL	37	14
STA.	TO STA.			
FED. ROAD DIST. No. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9
12 SHEETS





PIER 2
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h	[illegible]	#5	[illegible]	—
h1	[illegible]	#5	[illegible]	—
h2	[illegible]	#5	12'-0"	—
n	28	#6	[illegible]	⊏
p	12	#11	[illegible]	—
p1	[illegible]	#5	12'-0"	—
s	[illegible]	#4	8'-5"	⊓
s1	164	#4	6'-11"	⊓
s2	[illegible]	#5	6'-7"	⊓
s3	[illegible]	#5	6'-7"	⊓
t	44	#7	9'-6"	—
u	6	#6	6'-1"	⊏
v	38	#6	21'-0"	—
w	20	#7	22'-6"	—
Class X Concrete			Cu. Yds.	52.4
Reinforcement Bars			Lbs.	7,522

DESIGNED	WLR
CHECKED	D.N.
DRAWN	D.N.
CHECKED	WRT

EXAMINED ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED ENGINEER OF DESIGN
APPROVED CHIEF HIGHWAY ENGINEER

Revised 6/8/67 Add anchor bolts for Guard Rails WWL

ILLINOIS DIVISION OF HIGHWAYS
PIER NO. 2
F.A.I. RT. 57 SEC. 99-I-HB-I
WILL COUNTY
STA. 1348+92.18

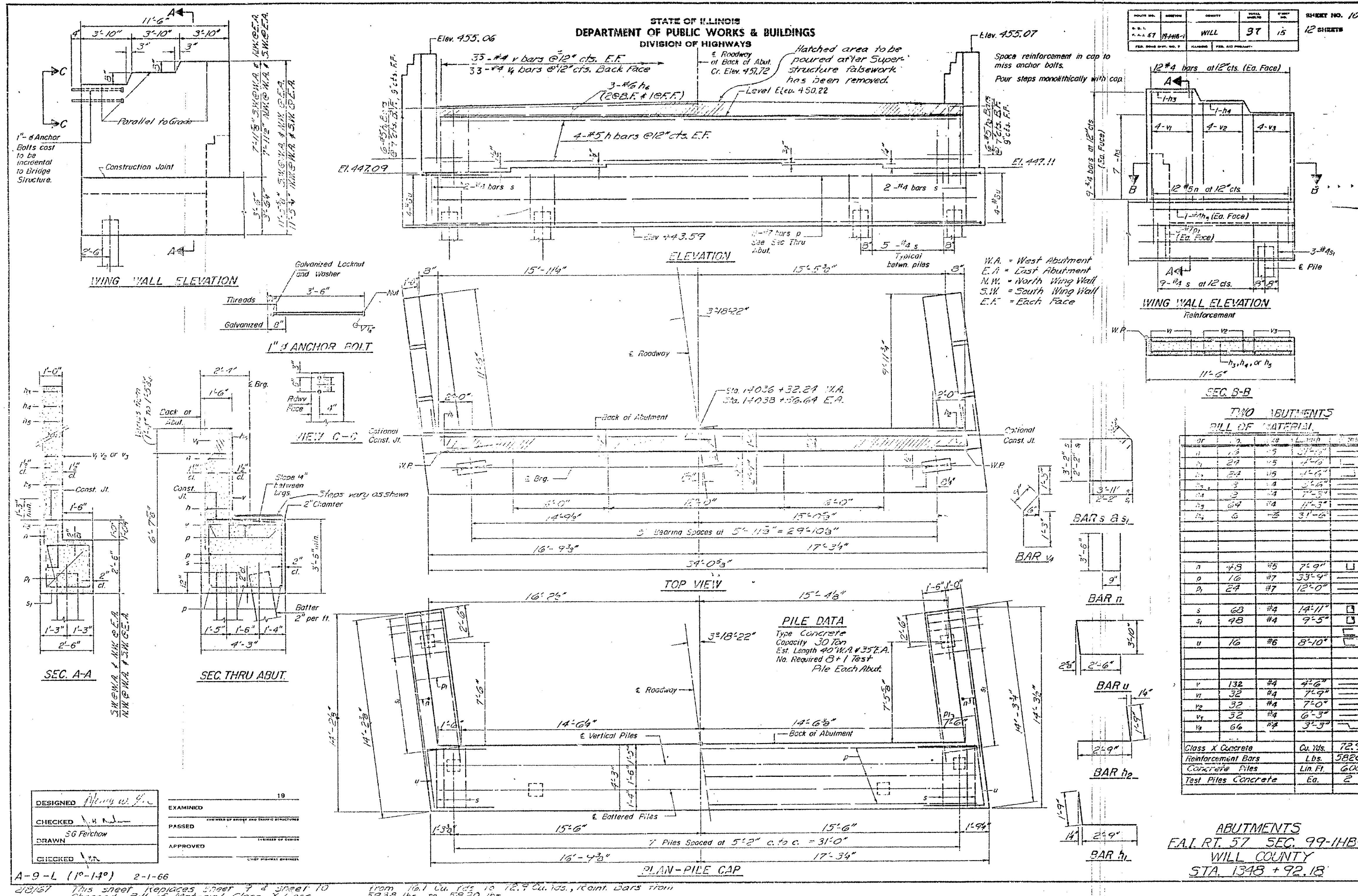
FOR INFORMATION ONLY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	190
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*99(1&2) R-3&9-1HB-1-BR-2 CONTRACT: 62253

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO. 10
12 SHEETS



TWO ABUTMENTS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	13	#5	[illegible]	———
h1	24	#5	[illegible]	
h2	24	#5	[illegible]	
h3	3	#4	[illegible]	———
h4	3	#4	7'-3"	———
h5	64	#4	11'-3"	———
h6	6	#5	31'-6"	———
n	48	#5	7'-9"	
o	16	#7	33'-9"	———
p1	24	#7	12'-0"	———
s	68	#4	14'-11"	
s1	48	#4	9'-5"	
u	16	#6	8'-10"	
v	132	#4	4'-6"	———
v1	32	#4	7'-9"	———
v2	32	#4	7'-0"	———
v3	32	#4	6'-3"	———
v4	66	#4	3'-3"	
Class X Concrete			Cu. Yds.	72.9
Reinforcement Bars			Lbs.	5820
Concrete Piles			Lin. Ft.	600
Test Piles Concrete			Ea.	2

DESIGNED
CHECKED
DRAWN SG Ferchow
CHECKED
EXAMINED
PASSED
APPROVED

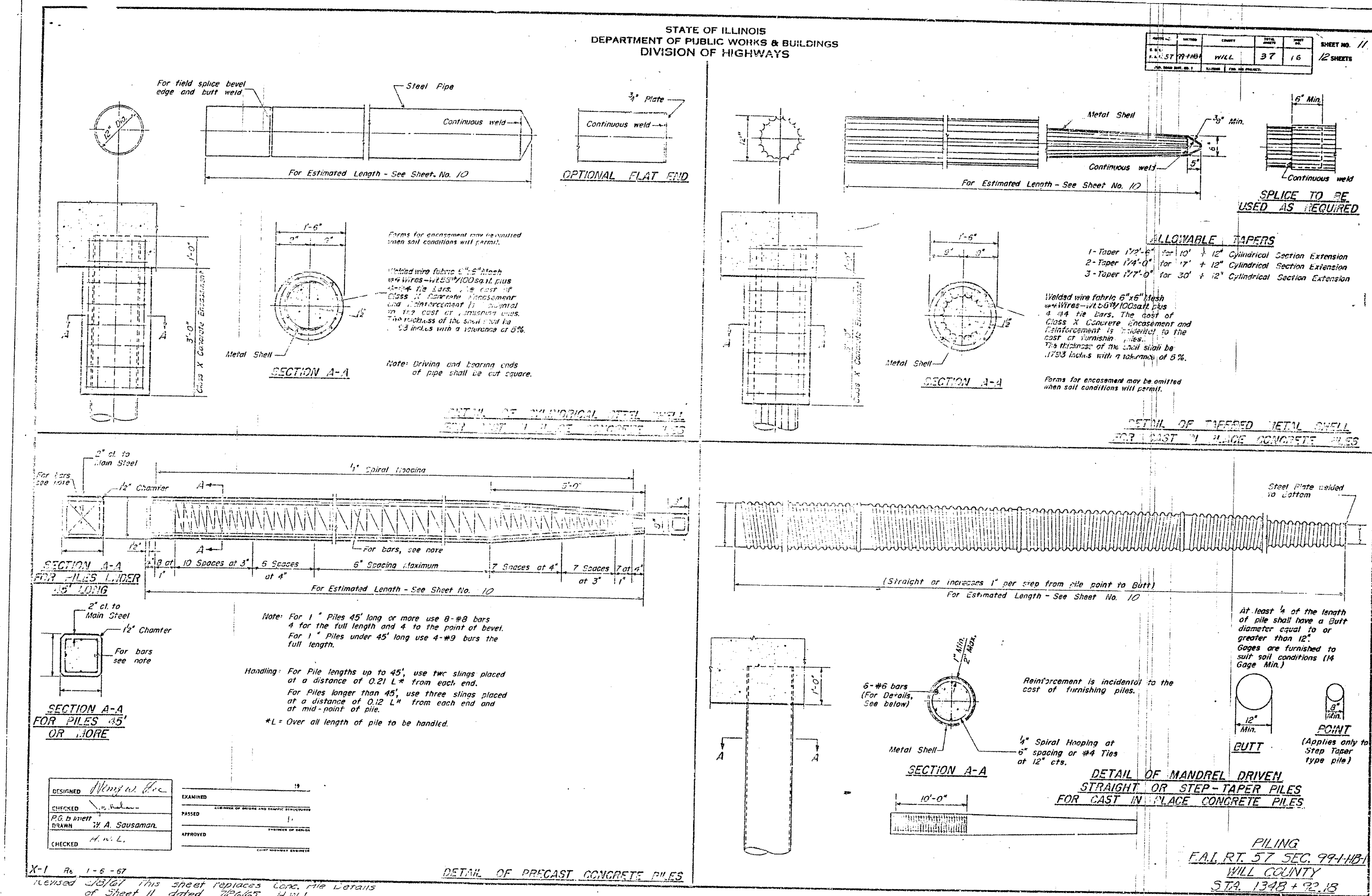
ABUTMENTS
F.A.I. RT. 57 SEC. 99-1HB-1
WILL COUNTY
STA. 1348 + 92.18

A-9-L (1°-14°) 2-1-66

2/8/67 This sheet replaces sheet 9 & sheet 10 from 76.1 Cu. Yds. to 72.9 Cu. Yds., Reinf. Bars from 5938 lbs. to 5820 lbs. Changed Bill of Material, Class X Conc.

FOR INFORMATION ONLY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	WILL	303	191
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
•99(162) R-3&9-IHB-1-BR-2		CONTRACT: 62253		



STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
SHEET NO. 11
12 SHEETS
For field splice bevel edge and butt weld
Steel Pipe
Continuous weld
3/4" Plate
For Estimated Length - See Sheet No. 10
OPTIONAL FLAT END
Forms for encasement may be omitted when soil conditions will permit.
Metal Shell
SECTION A-A
Note: Driving and bearing ends of pipe shall be cut square.
Class X Concrete Encasement
Metal Shell
Continuous weld
For Estimated Length - See Sheet No. 10
SPLICE TO BE USED AS REQUIRED
ALLOWABLE TAPERS
1-Taper 1'/2'-6" for 10' + 12" Cylindrical Section Extension
2-Taper 1'/4'-0" for 7' + 12" Cylindrical Section Extension
3-Taper 1'/7'-0" for 30' + 12" Cylindrical Section Extension
Forms for encasement may be omitted when soil conditions will permit.
Metal Shell
SECTION A-A
DETAIL OF TAPERED METAL SHELL FOR CAST IN PLACE CONCRETE PILES
2" cl. to Main Steel
1/2" Chamfer
Spiral Spacing
For bars, see note
SECTION A-A FOR PILES UNDER 45' LONG
For Estimated Length - See Sheet No. 10
2" cl. to Main Steel
1/2" Chamfer
For bars see note
SECTION A-A FOR PILES 45' OR MORE
Note: For 1" Piles 45' long or more use 8-#8 bars 4 for the full length and 4 to the point of bevel. For 1" Piles under 45' long use 4-#9 bars the full length.
Handling: For Pile lengths up to 45', use two slings placed at a distance of 0.21 L* from each end. For Piles longer than 45', use three slings placed at a distance of 0.12 L* from each end and at mid-point of pile.
*L = Over all length of pile to be handled.
DESIGNED
CHECKED
DRAWN W. A. Sausaman
CHECKED H. W. L.
EXAMINED
PASSED
APPROVED
X-1 R. 1-6-67
Revised 2/8/67 This sheet replaces Conc. Pile Details of Sheet 11 dated 7/26/65 H.W.L.
DETAIL OF PRECAST CONCRETE PILES
Steel Plate welded to bottom
(Straight or increases 1" per step from pile point to Butt)
For Estimated Length - See Sheet No. 10
At least 1/4 of the length of pile shall have a Butt diameter equal to or greater than 12". Gages are furnished to suit soil conditions (14 Gage Min.)
6-#6 bars (For Details, See below)
Reinforcement is incidental to the cost of furnishing piles.
Metal Shell
1/4" Spiral Hooping at 6" spacing or #4 Ties at 12" cts.
SECTION A-A
12" Min.
BUTT
8" Min.
POINT (Applies only to Step Taper type pile)
DETAIL OF MANDREL DRIVEN STRAIGHT OR STEP-TAPER PILES FOR CAST IN PLACE CONCRETE PILES
10'-0"
PILING
F.A.I. RT. 57 SEC. 99-1-HB-1
WILL COUNTY
STA. 1348 + 92.18

FOR INFORMATION ONLY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	192
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

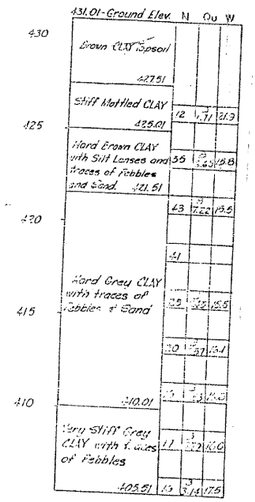
*99(1&2) R-3&9-IHB-1-BR-2 CONTRACT: 62253

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	99-1-HB-1	WILL	37	17
STA.				
FED. ROAD DIST. No. 7	ILLINOIS	FED. AID PROJECT		

SHEET 12 OF 12 SHEETS

NO. 1



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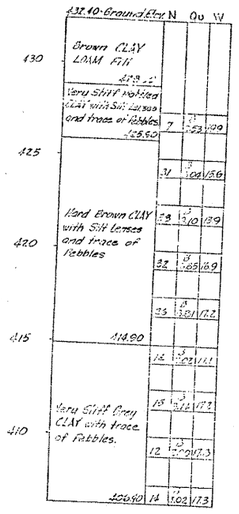

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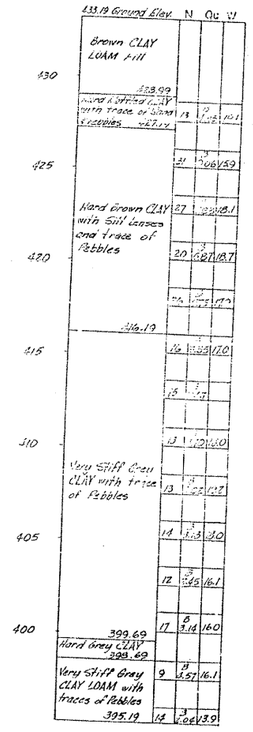

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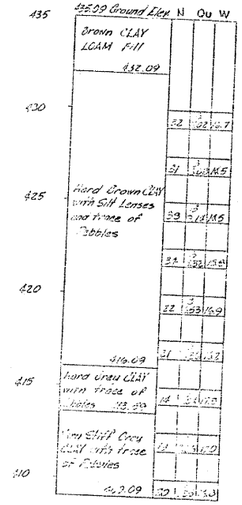

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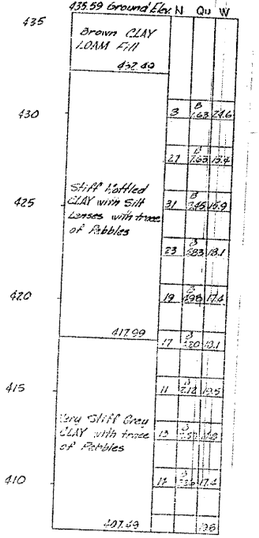
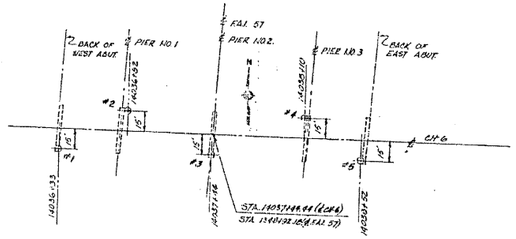




LOCATION PLAN

NOTES:

N - Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu- Unconfined Compressive Strength - Tons/Sq. ft.

W - Water Content - percentage of oven dry weight - %

Type of Failure
B - Bulge Failure

Boring Data are shown only as a guide to bidders in estimating soil conditions which may be encountered in the work.

BRIDGE FOUNDATION BORING LOGS

DSSIGNED	
CHECKED	
DRAWN ABC	
CHECKED	

EXAMINED _____ 19
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

ILLINOIS DIVISION OF HIGHWAYS
SOIL BORINGS
F.A.I. RT. 57 SEC. 99-1-HB-1
WILL COUNTY
STA. 1348+92.18

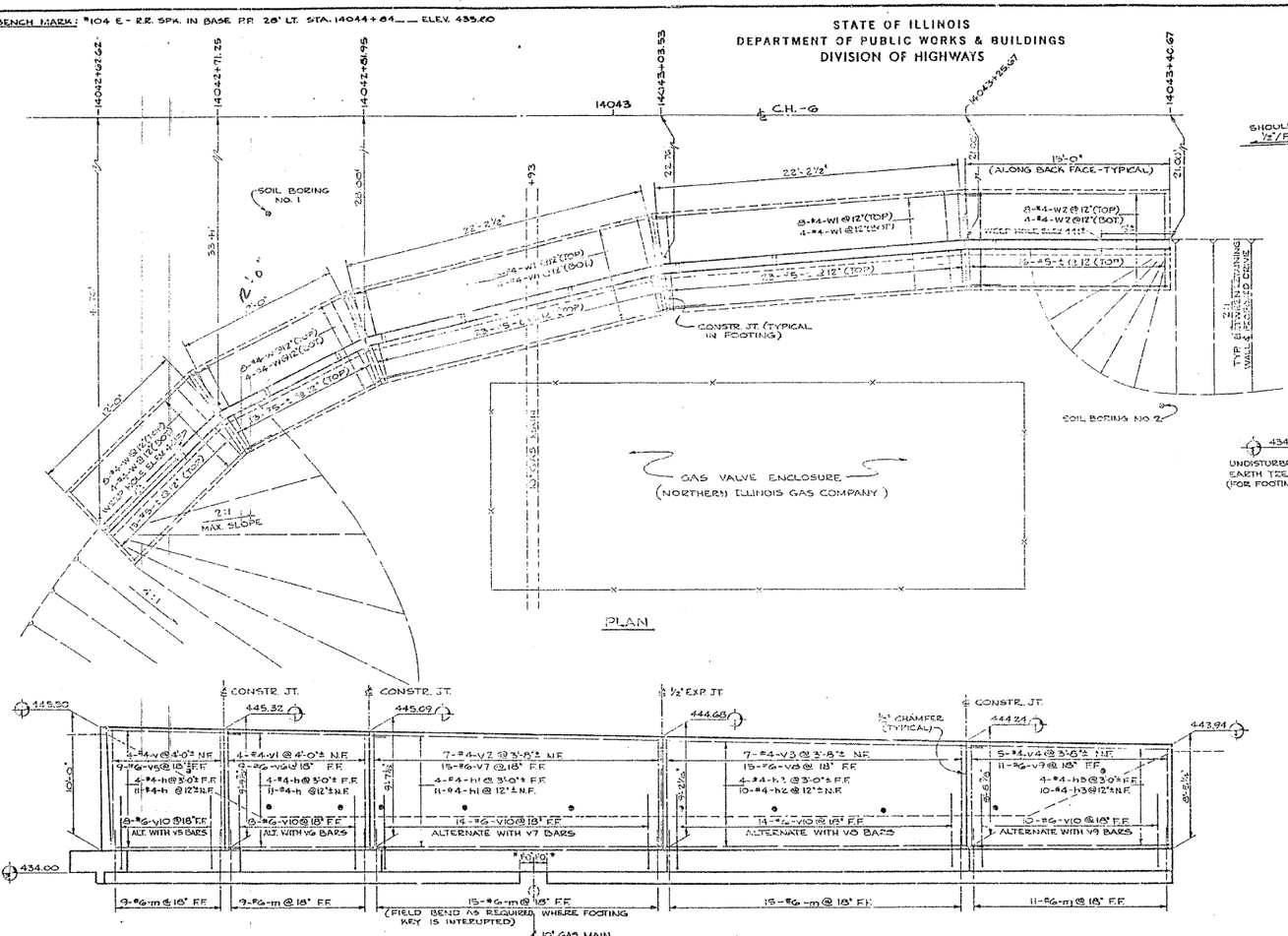
FOR INFORMATION ONLY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	193
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

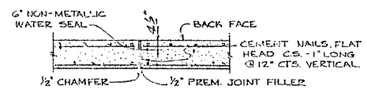
*99(1&2) R-3&9-IHB-1-BR-2 CONTRACT: 62253

BENCH MARK: "104 E - R.R. SPK. IN BASE P.P. 28' LT. STA. 14044+84.__ ELEV. 435.60

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



GAS MAIN ELEVATIONS (TOP)
27' RT. OF ℄ CH.-G = 433.10
27' LT. OF ℄ CH.-G = 432.24



EXPANSION JOINT DETAIL

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS
F.A.I.-57	99-1HB-1	WILL.	37
STA.		TO STA.	
FED. ROAD DIST. No. 7	ILLINOIS	FED. AID PROJECT	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	EU
h	30	#4	13'-0"	—
h1	15	#4	21'-11"	—
hZ	14	#4	23'-5"	—
h3	14	#4	14'-9"	—
m	59	#6	3'-11"	—
t	68	#5	6'-10"	—
V	4	#4	9'-8"	—
V1	4	#4	9'-5"	—
V2	7	#4	9'-0"	—
V3	7	#4	8'-7"	—
V4	5	#4	8'-3"	—
V5	4	#6	7'-8"	—
V6	9	#6	9'-5"	—
V7	15	#6	9'-0"	—
V8	15	#6	8'-7"	—
V9	11	#6	8'-3"	—
V10	54	#6	8'-7"	—
W	24	#4	14'-0"	—
W1	24	#4	24'-0"	—
W2	12	#4	14'-8"	—
CLASS X CONCRETE			CU.YDS.	6
REINFORCEMENT BARS			LBS.	6

GENERAL NOTES:

CLASS X CONCRETE SHALL BE US
THROUGHOUT.
MINIMUM LAP FOR ALL BAR SPLICE
BE 20 DIAMETERS UNLESS OTHERWISE
THE BACKFACE OF RETAINING W
SHALL BE WATERPROOFED FROM TOP OF
FOOTING TO FINISHED EARTH GRADE I
ACCORDANCE WITH ARTICLE 51.21 OF
STANDARD SPECIFICATIONS.
EXPOSED CONCRETE EDGES SHAL
CHAMFERED ¾" UNLESS OTHERWISE
GAS MAIN PROTECTION TO BE PRO
AND INSTALLED BY UTILITY.

DESIGN STRESSES:

fs = 20,000 PSI REINFORCEMENT
fc = 1000 PSI
n = 10

MAXIMUM SOIL PRESSURE = 2000 LB/

NOTE:
SEE FOLLOWING SHT. FOR SOIL BOR

DESIGNED	LJL	
CHECKED	FET	
DRAWN	L.S.	
CHECKED	LJL	

EXAMINED _____ 19
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED _____
ENGINEER OF DESIGN
APPROVED _____
CHIEF HIGHWAY ENGINEER

ILLINOIS DIVISION OF HIGHWAYS
F.A.I. 57
SECTION 99-1HB-1 WILL COUNT

RETAINING WALL

FOR INFORMATION ONLY

RETAINING WALL - SOIL BORINGS

SEE PRECEDING SHEET FOR WALL DETAILS

BORING NO. 1

STATION: 1042+75
OFFSET: 10' Rt.
DATE: 8-26-64

GROUND WATER DATA

DATE	TIME	ELEVATION
8-26-64	ACB	420.60
8-27-64	18 HRS.	423.10

ELEVATION	N	Q	W(%)	DESCRIPTION
436.60				GROUND SURFACE
435.60				STIFF BLACK CLAY TOPSOIL.
				HARD PEBBLY BROWN MOTTLED CLAY TILL.
430.60	20			
429.60				MEDIUM DENSE MEDIUM GRAINED BROWN SANDY LOAM.
	28	9.70+	15	HARD PEBBLY BROWN CLAY TILL.
427.30	24	9.70+	15	HARD PEBBLY GRAY CLAY TILL.
424.60	23	6.50	17	HARD PEBBLY BROWN CLAY TILL.
422.10	17	6.56	16	HARD PEBBLY GRAY-BROWN CLAY TILL.
418.60	14	3.14	16	VERY STIFF PEBBLY GRAY CLAY
	15	3.34	17	
415.10				BOTTOM OF BORING

BORING NO. 2

STATION: 1043+60
OFFSET: 25' Rt.
DATE: 8-27-64

GROUND WATER DATA

DATE	TIME	ELEVATION
—	—	—

ELEVATION	N	Q	W(%)	DESCRIPTION
439.30				GROUND SURFACE
438.30				STIFF BROWN SILTY CLAY TOPSOIL.
437.30				VERY STIFF BROWN CLAY.
				HARD PEBBLY BROWN CLAY TILL.
433.30	17		23	VERY STIFF BROWN MOTTLED SILTY LOAM.
432.30	11		24	VERY STIFF BROWN SILTY CLAY LOAM.
430.30	14		24	MEDIUM DENSE BROWN SILTY LOAM
427.30	12		16	VERY STIFF PEBBLY GRAY CLAY TILL.
	10	2.82	16	
422.30	16	4.25	16	HARD PEBBLY GRAY SILTY CLAY TILL.
419.80	18	3.75 / 3.49	12	VERY STIFF PEBBLY GRAY CLAY TILL.
415.80	21	3.56	14	HARD PEBBLY GRAY SILTY CLAY LOAM.
414.60	25	2.83	17	VERY STIFF PEBBLY GRAY CLAY TILL.
412.30	17		23	MEDIUM DENSE GRAY SANDY CLAY LOAM.
410.30	21		14	MEDIUM DENSE COARSE GRAINED GRAY SANDY LOAM.
406.30	35	3.20	15	VERY STIFF PEBBLY GRAY CLAY TILL.
404.80	32	5.20	15	HARD PEBBLY GRAY CLAY TILL.
402.80				BOTTOM OF BORING

BORING LEGEND:

N - STANDARD PENETRATION TEST - BLOWS PER FOOT TO DRIVE A 2" O.D. SPLIT SPOON SAMPLER 12" WITH 140# HAMMER FALLING 30".

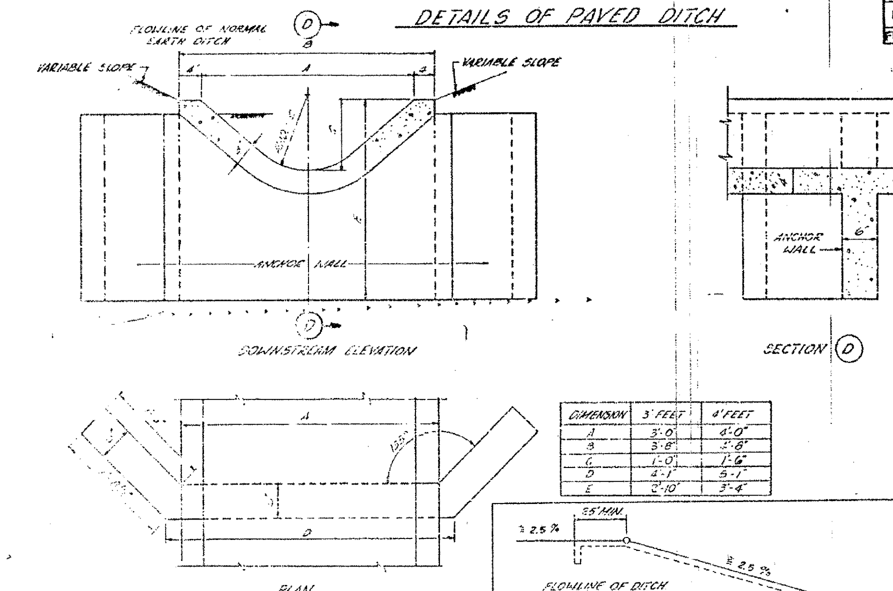
Qu - UNCONFINED COMPRESSIVE STRENGTH - T/SF

W - WATER CONTENT - PERCENTAGE OF OVEN DRY WEIGHT - %

ACB - AT COMPLETION OF BORING.

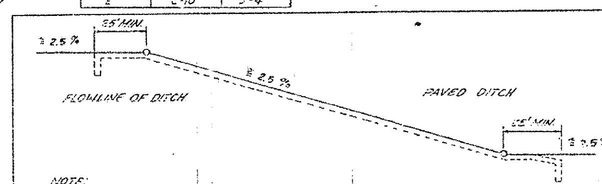
TYPE FAILURE:
- B - BULGE FAILURE
- S - SHEAR FAILURE
- E - ESTIMATED VALUE

DETAILS OF PAVED DITCH



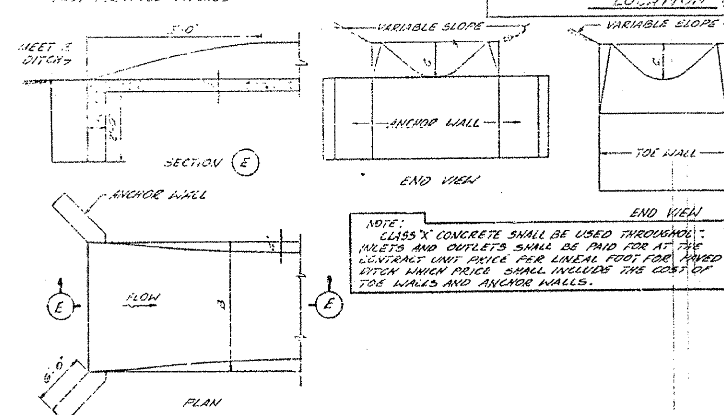
DIMENSION	3' FEET	4' FEET
A	3'-0"	4'-0"
B	3'-8"	3'-8"
C	1'-0"	1'-6"
D	4'-1"	5'-1"
E	2'-10"	3'-4"

NOTE: CLASS "X" CONCRETE SHALL BE USED THROUGHOUT. ANCHOR WALLS SHALL BE PROVIDED AT CENTER OF EACH 100' UNIT AND AT UPPER END OF PAVED DITCH. ANCHOR WALLS SHALL BE CONSTRUCTED MONOLITHICALLY WITH THE DITCH ... JOINT FILLER SHALL BE ... AT END OF EACH 100' UNIT AND AT JUNCTION OF PAVED DITCH WITH ANY OTHER STRUCTURE. COST OF ANCHOR WALLS AND JOINT FILLER SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER LINEAL FOOT FOR PAVED DITCHES.



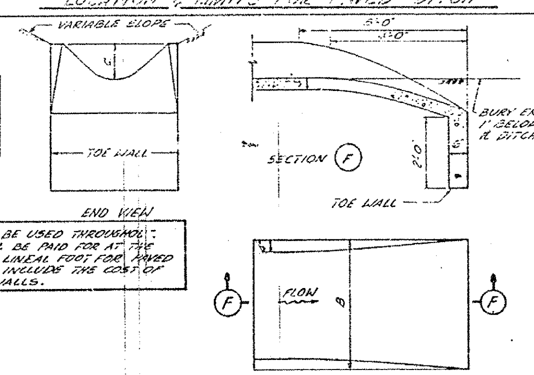
NOTE: PAVED DITCH SHALL EXTEND FOR A MINIMUM DISTANCE OF 25' BACK AND 25' AHEAD AT POINTS OF ABRUPT GRADE CHANGE.

LOCATION & LIMITS FOR PAVED DITCH

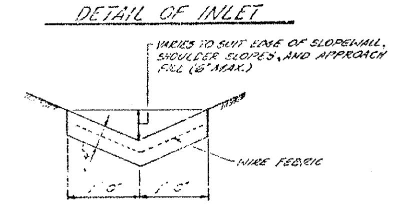


DETAIL OF INLET

NOTE: CLASS "X" CONCRETE SHALL BE USED THROUGHOUT. INLETS AND OUTLETS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAL FOOT FOR PAVED DITCH WHICH PRICE SHALL INCLUDE THE COST OF TOE WALLS AND ANCHOR WALLS.



DETAIL OF OUTLET



TYPICAL SECTION OF PAVED DITCH

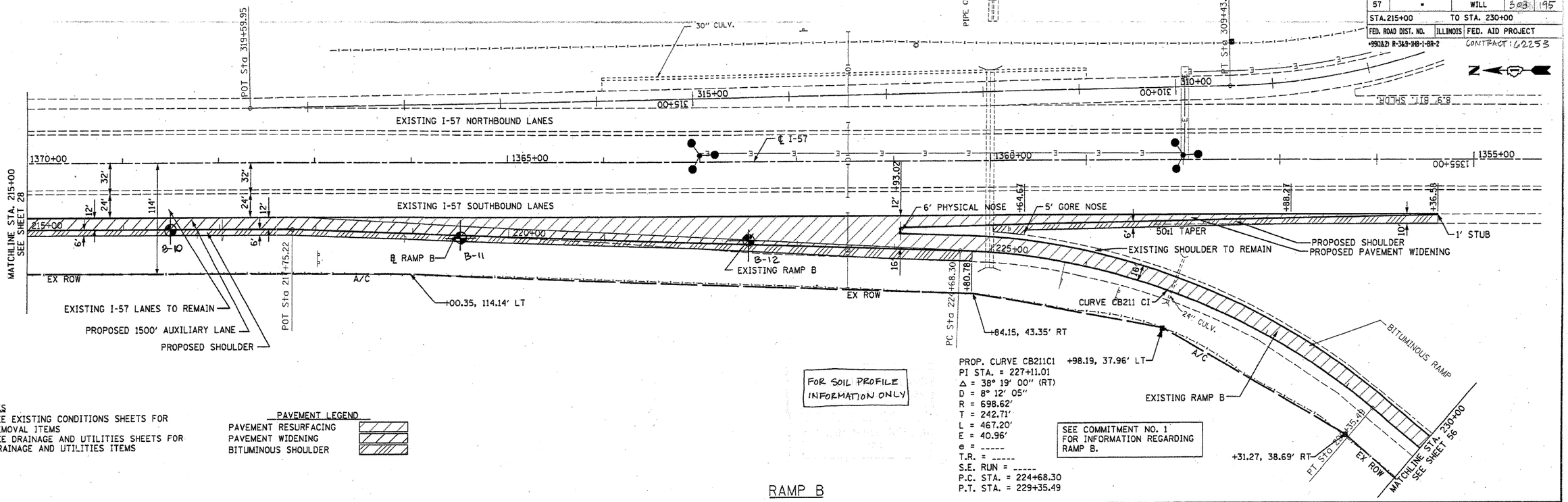
AT BRIDGES
NO SCALE

F.A.I. 57
SECTION 99-1 HB-1 WILL COUNTY
MISC. DETAILS

FOR INFORMATION ONLY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	195
STA. 215+00		TO STA. 230+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*9910&21 R-3&9-1HB-1-BR-2		CONTRACT: 62253		

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
R.O.W. MONUMENTED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE



FOR SOIL PROFILE INFORMATION ONLY

PROP. CURVE CB211C1 +98.19, 37.96' LT
PI STA. = 227+11.01
Δ = 38° 19' 00" (RT)
D = 8° 12' 05"
R = 698.62'
T = 242.71'
L = 467.20'
E = 40.96'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 224+68.30
P.T. STA. = 229+35.49

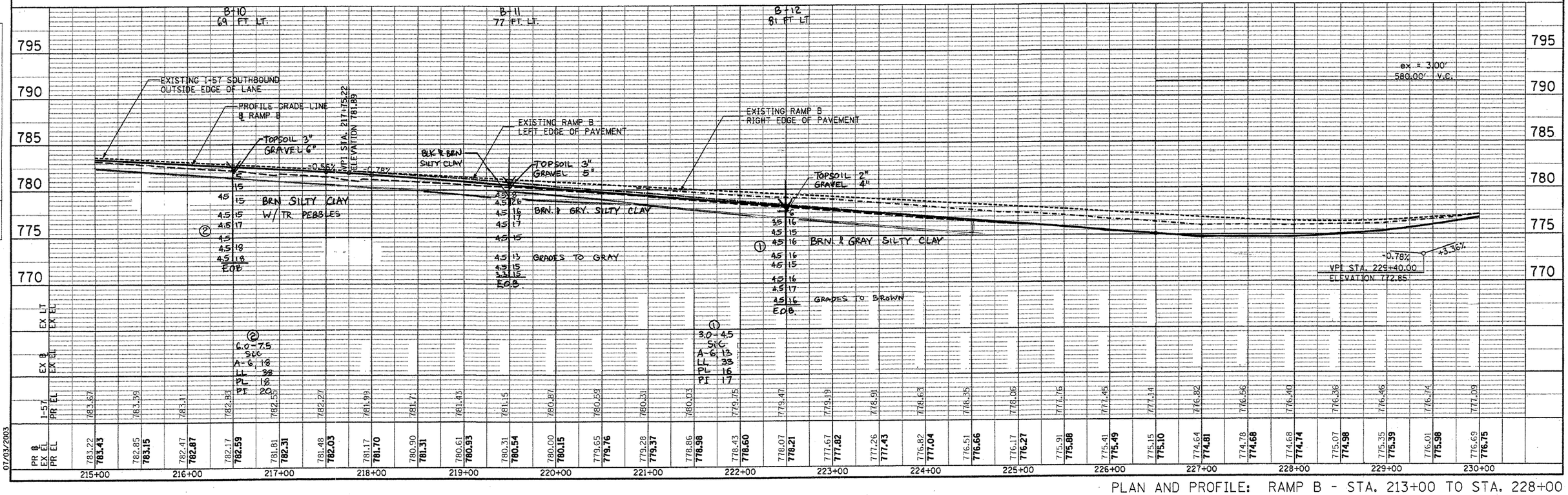
SEE COMMITMENT NO. 1 FOR INFORMATION REGARDING RAMP B.

NOTES
1) SEE EXISTING CONDITIONS SHEETS FOR REMOVAL ITEMS
2) SEE DRAINAGE AND UTILITIES SHEETS FOR DRAINAGE AND UTILITIES ITEMS

PAVEMENT LEGEND
PAVEMENT RESURFACING
PAVEMENT WIDENING
BITUMINOUS SHOULDER

RAMP B

PROFILE
SURVEYED
PLOTTED
CROSS SECTIONS CHECKED
R.O.W. MONUMENTED
STRUCTURE NOTATIONS CHKD
NOTE BOOK
NO.
BY
DATE



01/03/2003

PLAN AND PROFILE: RAMP B - STA. 213+00 TO STA. 228+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	WILL	303	196

STA. 14024+23.67 TO STA. 14029+50

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

•99(1&2) R-3&9-IHB-1-BR-2 CONTRACT: 62253

PAVEMENT LEGEND
PAVEMENT RESURFACING	▨
PAVEMENT WIDENING	▨
BITUMINOUS SHOULDER	▨

NOTES

1) SEE EXISTING CONDITION SHEETS FOR REMOVAL ITEMS
2) SEE DRAINAGE AND UTILITIES SHEETS FOR DRAINAGE ITEMS AND UTILITIES ITEMS

FOR SOIL PROFILE INFORMATION ONLY

MANHATTAN - MONEE ROAD

ABBREVIATIONS

BLK	BLACK
BRN	BROWN
GRY	GRAY
ORG.	ORGANIC
F.	FINE
MED.	MEDIUM
C.	COURSE
V.	VERY
SIC	SILTY CLAY
SICL	SILTY CLAY LOAM
C	CLAY
SaC	SANDY CLAY
Sa	SAND
Gr	GRAVEL
BIT.	BITUMINOUS
SHD	SHOULDER
tr	TRACE
ELEV.	ELEVATION
W.G.	WELL GRADED

	EX EL	PR EL
14017+00	783.15	
	782.55	
14018+00	781.96	
	781.88	
14019+00	781.81	
	782.05	
14020+00	782.28	
	782.59	
14021+00	782.90	
	783.21	
14022+00	783.14	
	783.08	
14023+00	783.02	
	783.03	
14024+00	783.05	
	783.30	783.35
14025+00	783.56	783.74
	783.88	784.06
14026+00	784.20	784.39
	784.53	784.71
14027+00	784.89	785.20
	785.72	785.94
14028+00	786.57	786.90
	787.51	787.90
14029+00	788.47	788.90
	789.53	789.90

PLAN AND PROFILE: MANHATTAN - MONEE ROAD - STA. 14024+23.67 TO STA. 14029+50

PLAN	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		
	CADD FILE NAME		

PROFILE	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	GRADES CHECKED		
	B.M. NOTED		
	STRUCTURE NOTAT'NS CH'KD		

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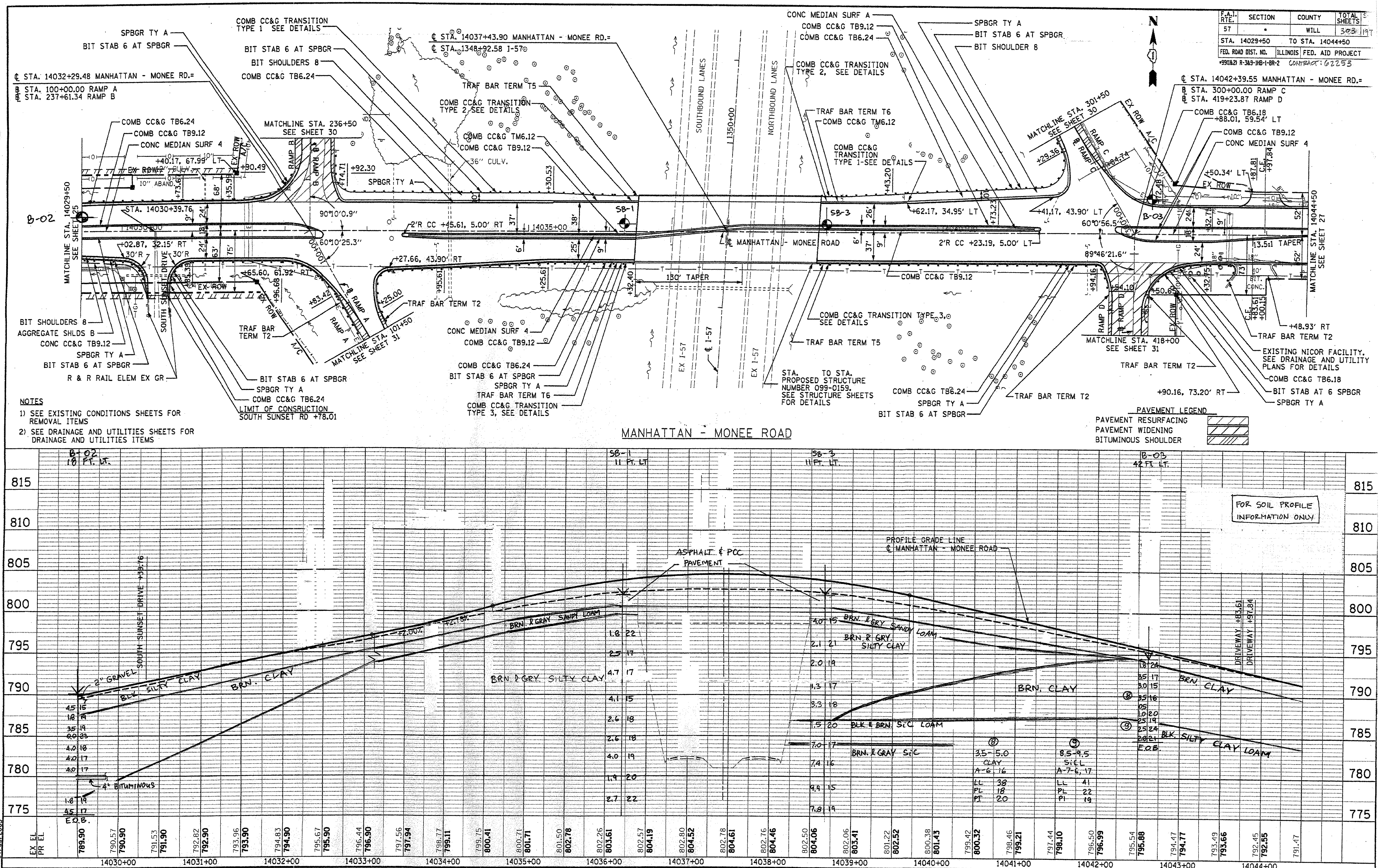
Kristen Barrant
7/7/2003
2:00:20 PM

07/03/2003



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	WILL	303	197
STA. 14029+50		TO STA. 14044+50		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT: 62253

NOTES

1) SEE EXISTING CONDITIONS SHEETS FOR REMOVAL ITEMS
2) SEE DRAINAGE AND UTILITIES SHEETS FOR DRAINAGE AND UTILITIES ITEMS

PAVEMENT LEGEND
- PAVEMENT RESURFACING
- PAVEMENT WIDENING
- BITUMINOUS SHOULDER

07/03/2003

PLAN AND PROFILE: MANHATTAN - MONEE ROAD - STA. 14029+50 TO 14044+50

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	WILL	303	198

STA. 14044+50 TO STA. 14050+81.74

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

•99(1&2) R-3&9-1HB-1-BR-2

CONTRACT 62253

PAVEMENT LEGEND
- PAVEMENT RESURFACING ▨
- PAVEMENT WIDENING ▨
- BITUMINOUS SHOULDER ▨

NOTES
1) SEE EXISTING CONDITIONS SHEETS FOR REMOVAL ITEMS
2) SEE DRAINAGE AND UTILITIES SHEETS FOR DRAINAGE AND UTILITIES ITEMS

FOR SOIL PROFILE INFORMATION ONLY

MANHATTAN - MONEE ROAD

		14045+00		14046+00		14047+00		14048+00		14049+00		14050+00		14051+00		14052+00		14053+00		14054+00		14055+00		14056+00	
EX EL		790.49	789.46	788.53	787.82	787.13	787.14	787.17	787.74	788.31	788.56	788.80	788.14	787.48	786.74	785.96	785.37	784.79	784.52	784.25	784.29	784.41	784.53	784.83	785.01
PR EL	**791.44**	**790.33**	**789.23**	**788.31**	**787.65**	**787.46**	**787.35**	**787.51**	**787.94**	**788.51**	**788.97**	**788.97**	**788.42**												

07/03/2003

PLAN AND PROFILE: MANHATTAN - MONEE ROAD - STA. 14044+50 TO STA. 14050+81.74

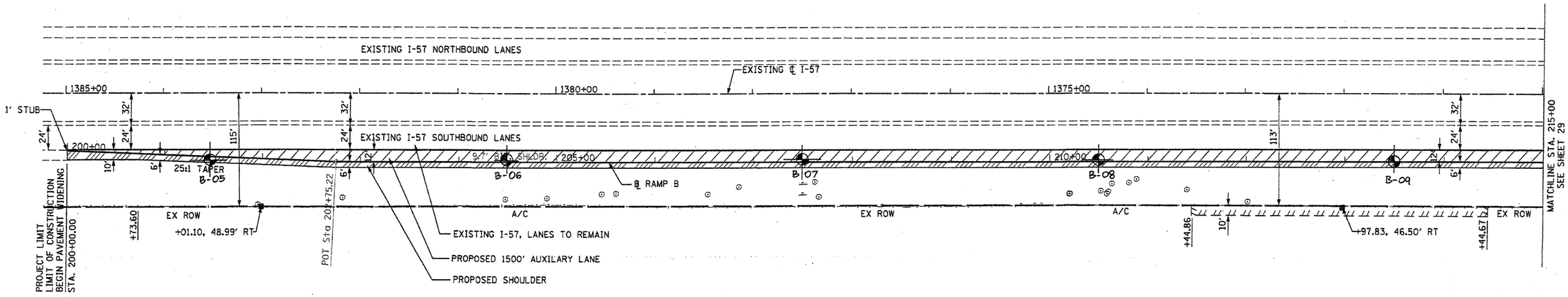
PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
R/T OF WAY CHECKED
CARD FILE NAME
BY
DATE

PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
BM. NOTED
STRUCTURE NOTAT'NS CHKD
BY
DATE

Kristin Durrant
7/7/2003
2:00:21 PM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	WILL	303	199
STA. 200+00		TO STA. 215+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*99(1&2) R-3&9-1HB-1-BR-2 CONTRACT: 62253



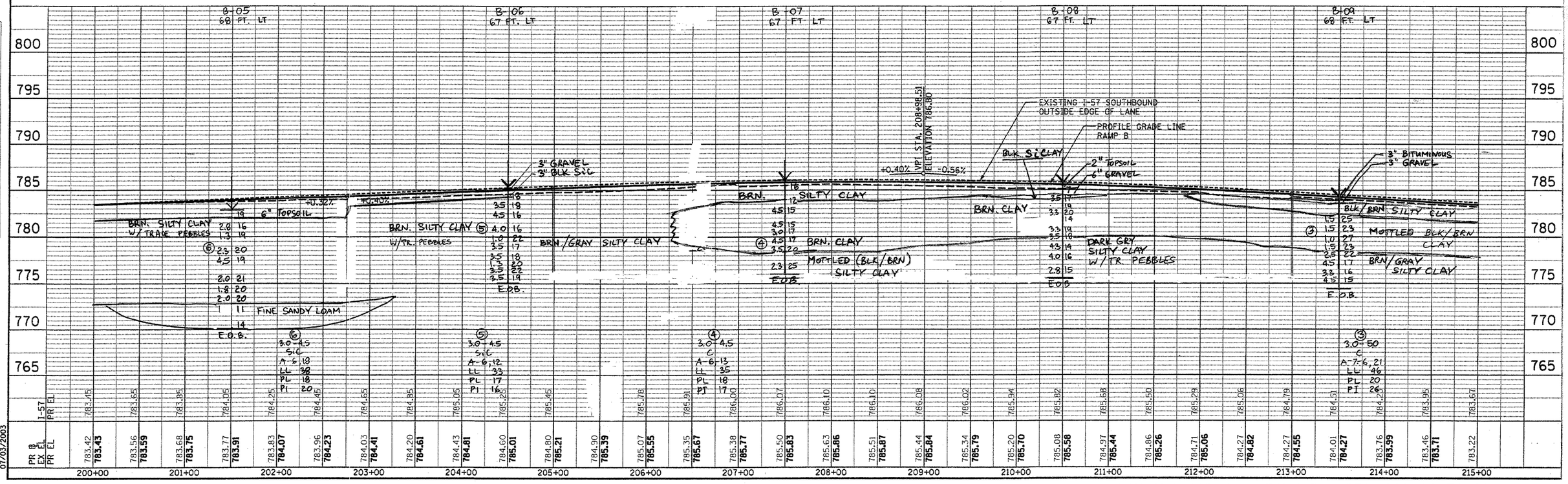
NOTES
1) SEE EXISTING CONDITIONS SHEETS FOR REMOVAL ITEMS
2) SEE DRAINAGE AND UTILITIES SHEETS FOR UTILITIES AND DRAINAGE ITEMS

PAVEMENT LEGEND
PAVEMENT RESURFACING
PAVEMENT WIDENING
BITUMINOUS SHOULDER

FOR SOIL PROFILE INFORMATION ONLY

PRELIMINARY REVIEW PLANS

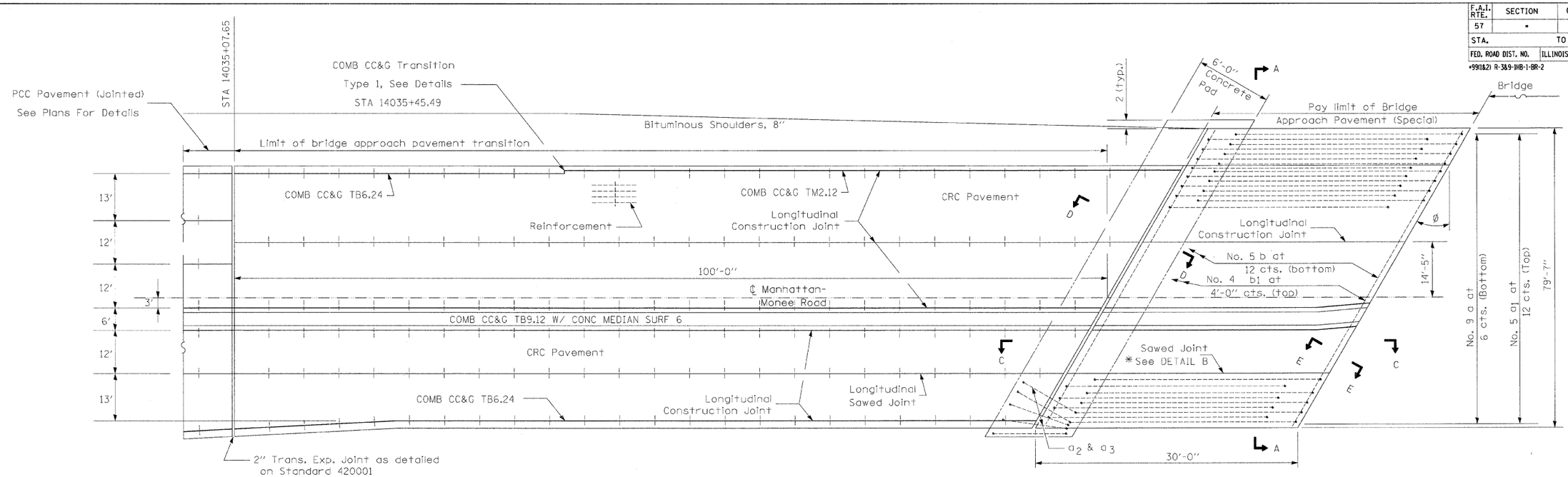
RAMP B



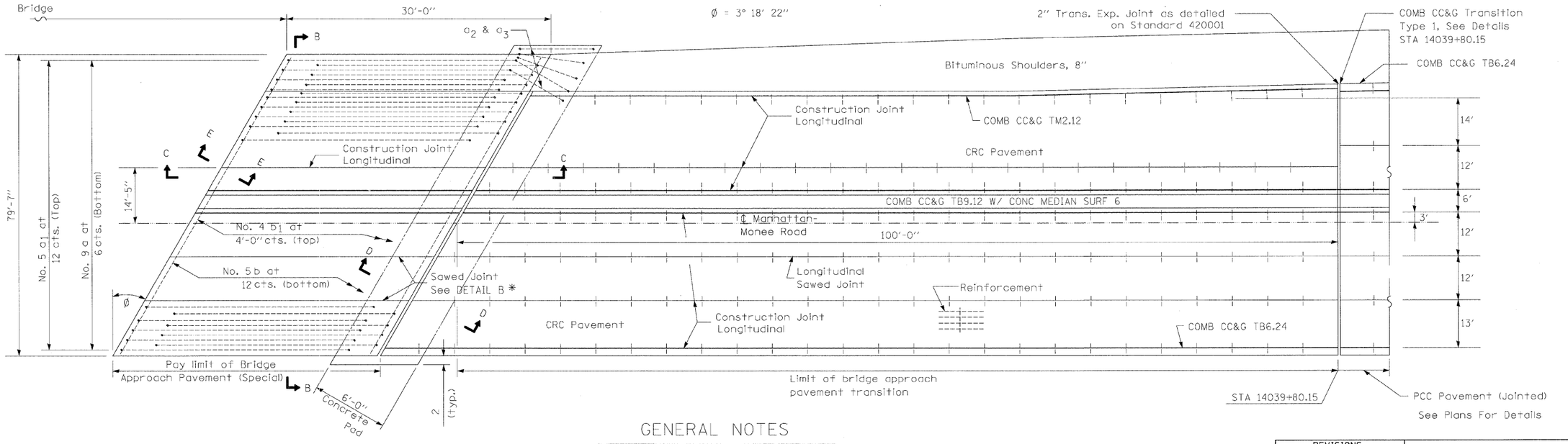
PLAN AND PROFILE: RAMP B - STA. 200+00 TO STA. 213+00

01/03/2003

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	-	WILL	303	200
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
•99118Z1 R-3&9-1HB-1-BR-2		CONTRACT: 62253		



PLAN - WITH SKEW



* Saw ℄ or lane edge if poured two or more lane widths at a time.

GENERAL NOTES

See Standard 421001 for reinforcement details not shown.

See Standard 420001 for joint details not shown.

All dimensions are in inches unless otherwise shown.

REVISIONS NAME	DATE

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DESIGN FIRM REGISTRATION No. 184-000450
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CHICAGO, IL 60661
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FAX : 312.648.0204

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-57 AT MANHATTAN - MONEE ROAD

CONSTRUCTION DETAILS
BRIDGE APPROACH PAVEMENT (SPECIAL) DETAIL
1 OF 4

SCALE: VERT. N.T.S. HORIZ. N.T.S.
DRAWN BY AJP
DATE 9/19/2008
CHECKED BY BDC

p:\02231\plans\sheets\02231pavdet03.dgn
8/1/2008