

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-085 SG	WILL.	28	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

INDEX OF SHEETS

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ABBREVIATIONS

DMS DYNAMIC MESSAGING SIGNS
OH OVERHEAD

HIGHWAY STANDARDS

STD. NO.	DESCRIPTION
000001-04	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
000006	DECIMAL OF AN INCH AND OF A FOOT
285001-01	TEMPORARY EROSION CONTROL SYSTEMS
630001-06	STEEL PLATE BEAM GUARDRAIL
630201-03	PCC/BITUMINOUS STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-03	SHOULDER WIDENING FOR TYPE I (SPECIAL) GUARDRAIL TERMINALS
631011-02	TRAFFIC BARRIER TERMINAL TYPE 2
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
701101-01	OFF-ROAD OPERATIONS, MULTILANE LESS THAN 4.5M (15') AWAY FROM PAVEMENT EDGE
701400-02	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-03	LANE CLOSURE, FREEWAY/EXPRESSWAY
702001-06	TRAFFIC CONTROL DEVICES

GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOURS NOTIFICATION REQUIRED)
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- BARRICADES: THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SAND BAGS ON EACH TYPE I OR TYPE II BARRICADE USED - ONE (1) WEIGHTED SAND BAG ACROSS EACH BOTTOM RAIL.
- WHEN ARTIFICIAL LIGHTING IS USED IN NIGHT OPERATIONS THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.

- THE COST OF EARTH EXCAVATION REQUIRED FOR THE CONSTRUCTION OF PROPOSED AGGREGATE SHOULDERS, TYPE B 6" SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER SQ YD FOR AGGREGATE SHOULDERS, TYPE B 6".
- RESTORATION OF EXISTING GROUND AT CONCRETE FOUNDATION REMOVAL LOCATIONS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIAL PROVISION FOR TOPSOIL FURNISH AND PLACE, VARIABLE DEPTH, SPECIAL. THE COST OF RESTORATION OF EXISTING GROUND AT CONCRETE FOUNDATION REMOVAL LOCATIONS WILL NOT BE PAID FOR SEPERATELY BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR REMOVE CONCRETE FOUNDATION - OVERHEAD.
- THE RESTORATION OF EXISTING GROUND WITH SEEDING CL 2A AND EROSION CONTROL BLANKET AT DRILLED SHAFT CONCRETE FOUNDATION LOCATIONS OUTSIDE THE MEDIAN WILL NOT BE PAID FOR SEPERATELY, BUT SHALL BE INCLUDED THE CONTRACT UNIT PRICE PER CU. YD. FOR DRILLED SHAFT CONCRETE FOUNDATIONS.
- DISTURBED AREAS ARE TO BE PROTECTED FROM EROSION IN A TIMELY MANNER. UPON COMPLETION OF GRADING OR CONSTRUCTION, THE AREA WILL BE STABILIZED (USING PERMANENT MEASURES WHEN POSSIBLE) WITHIN 7 CALENDER DAYS. TEMPORARY STABILIZATION THROUGH USE OF TEMPORARY EROSION CONTROL SEEDING OR OTHER APPROVED MEASURES WILL BE INSTALLED WHENEVER SITE DEVELOPMENT WORK, GRADING OR OTHER EARTH DISTURBING ACTIVITIES CEASE TO BE CONTINUOUS FOR A PERIOD EXCEEDING 14 CALENDER DAYS. THE 7/14 DAY REQUIREMENT IS TAKEN TO MEAN THAT THE STABILIZATION OPERATION IS COMPLETE OR NEARING COMPLETION IN THE DEFINED TIME.

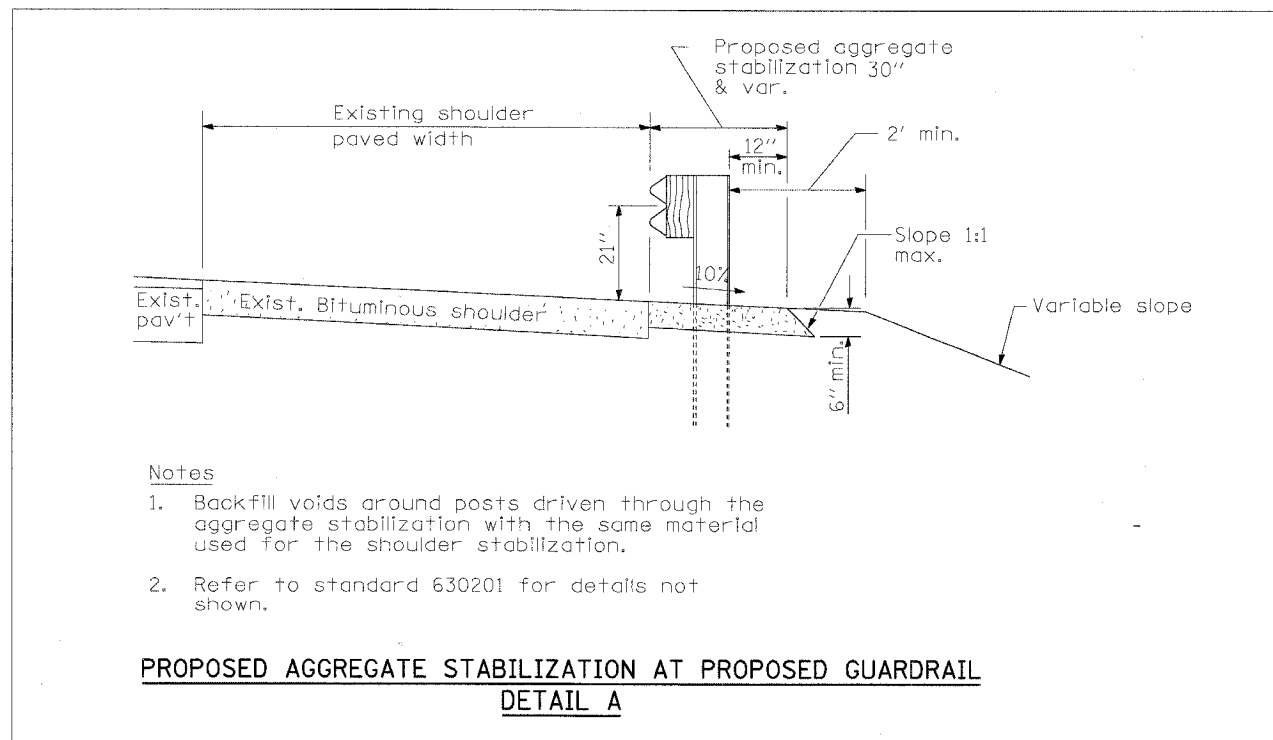
REQUIRED STAGES OF CONSTRUCTION

STAGE I

- ALL LANE CLOSURES SHALL USE STANDARDS 701400 AND 701401. THESE LANE CLOSURES WILL ONLY BE ALLOWED DURING THE OFF PEAK HOURS AS DETAILED IN THE SPECIAL PROVISION FOR "KEEPING THE EXPRESSWAY OPEN TO TRAFFIC".
- CONSTRUCT GUARDRAIL AND AGGREGATE STABILIZATION AS SHOWN ON PLANS.

STAGE II

- CONSTRUCT PROPOSED OVERHEAD SIGN STRUCTURES.
- REMOVE EXISTING SIGN STRUCTURES AS SHOWN ON PLANS.



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REVISIONS	
NAME	DATE
DDH	5/5/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 55 (I-80 TO U.S. 30)
 DYNAMIC MESSAGING SIGNS

**INDEX OF SHEETS
 STATE STANDARDS
 GENERAL NOTES**

SCALE: _____ DRAWN BY MRK
 DATE 03/24/06 CHECKED BY DDH

TENG TENG & ASSOCIATES, INC.
 ENGINEERS/ARCHITECTS/PLANNERS
 CHICAGO, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-085 SG	WILL	28	3
STA.		TO STA.		
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SUMMARY OF QUANTITIES

URBAN
90/FED/101 STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY Y002-1C
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	30
28000300	TEMPORARY DITCH CHECKS	EACH	1
28000500	INLET AND PIPE PROTECTION	EACH	1
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SO YD	526
50200400	ROCK EXCAVATION FOR STRUCTURES	CU YD	1
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	1462.5
* 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	4
* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4
67100100	MOBILIZATION	L SUM	1
73300300	OVERHEAD SIGN STRUCTURE - SPAN, TYPE III-A (5'-0" X 7'-0")	FOOT	154
73400200	DRILLED SHAFT CONCRETE FOUNDATIONS	CU YD	68.7
78200410	GUARDRAIL MARKERS, TYPE A	EACH	23
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
X0324250	DYNAMIC MESSAGE SIGN BATTERY BACK-UP IN FREE STANDING ENCLOSURE, 2 HOUR DURATION	EACH	2
X0324251	DYNAMIC MESSAGE SIGN BATTERY BACK-UP IN FREE STANDING ENCLOSURE, 24 HOUR DURATION	EACH	2
X0324835	LED DYNAMIC MESSAGE SIGN FULL-MATRIX CONFIGURATION	EACH	2
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1
X7015000	CHANGEABLE MESSAGE SIGN	CAL MO	4
X7330105	OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	FOOT	141
Z0013798	CONSTRUCTION LAYOUT	L SUM	1
Z0076600	TRAINEES	HOOR	
X0325336	TOPSOIL FURNISH AND PLACE, VARIABLE DEPTH, SPECIAL	SO YD	1452
X0323900	CONCRETE FOUNDATION, TYPE 1	EACH	2
X0324252	ELECTRIC SERVICE INSTALLATION 100A, 120/240V	EACH	2
X0324800	CABINET, MODEL 334, DYNAMIC MESSAGE SIGN	EACH	2
X0324805	CABINET, MODEL 334, EQUIPMENT, DYNAMIC MESSAGE SIGN	EACH	2

SCHEDULE OF EARTHWORK

ITEM	UNIT	QUANTITY AT SIGN STATION		TOTAL QUANTITY
		59+00.00	469+00.00	
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	0.00	30.00	30.00
EARTH EXCAVATION* (FOR INFORMATION ONLY)	CU YD	36.07	33.74	70.00
TOPSOIL (FOR INFORMATION ONLY)	CU YD	47.17	46.46	94.00

* EARTH EXCAVATION REQUIRED FOR THE CONSTRUCTION OF PROPOSED AGGREGATE SHOULDERS, TYPE B 6" IS NOT PAID SEPARATELY.

* SPECIALTY ITEMS

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 55 (I-80 TO U.S. 30)
 DYNAMIC MESSAGING SIGNS

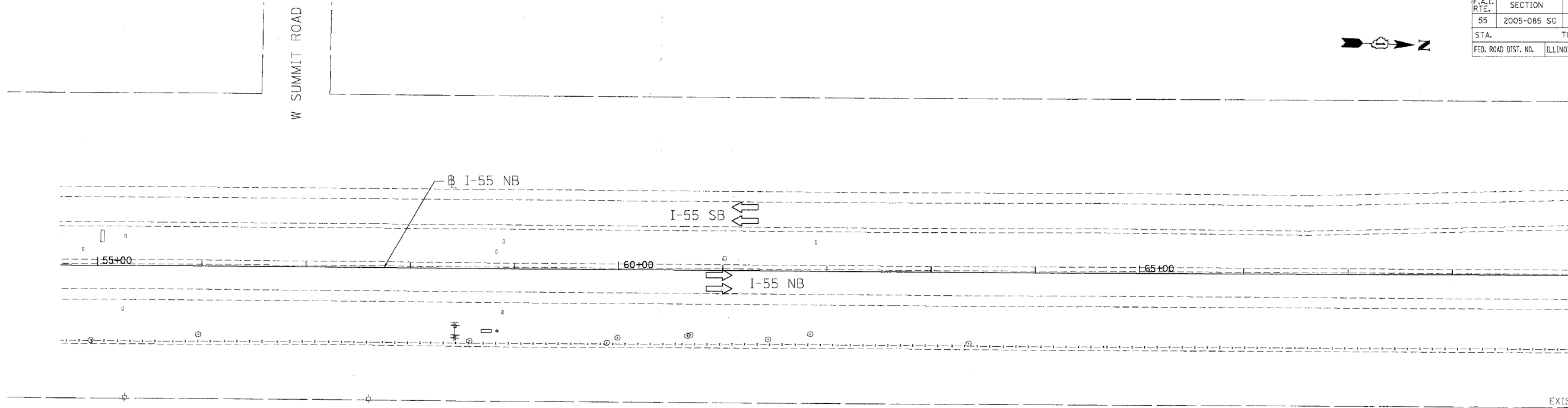
SUMMARY OF QUANTITIES

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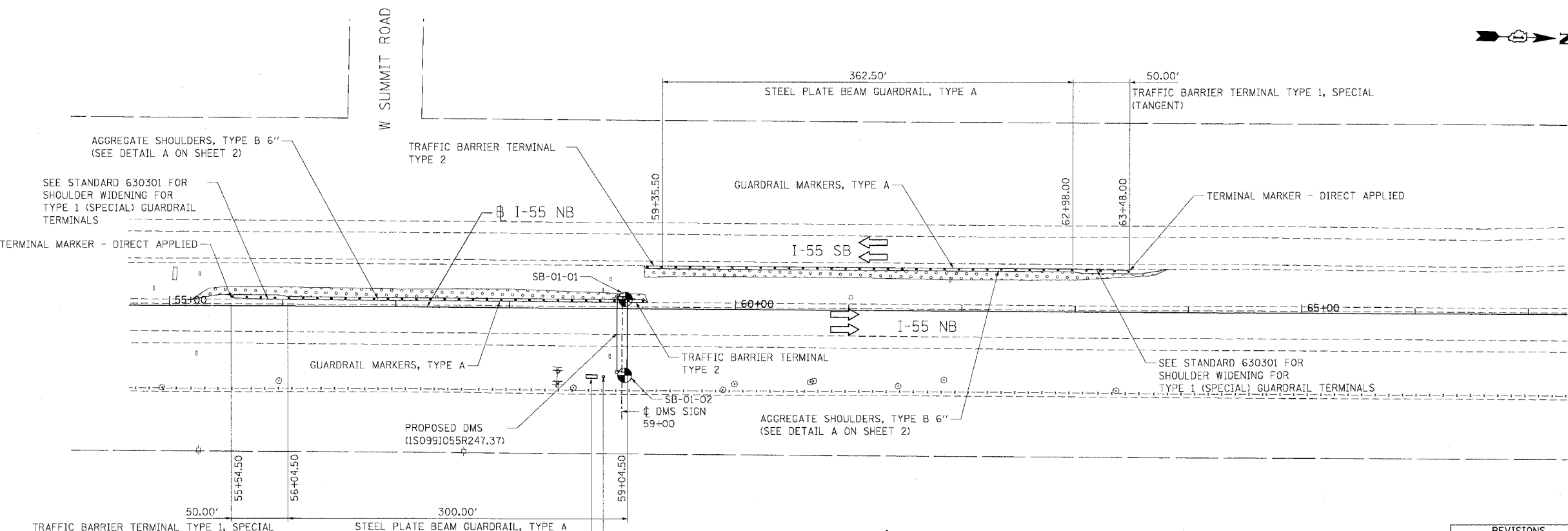
TENG TENG & ASSOCIATES, INC.
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 CHICAGO, ILLINOIS

Rev. 5-11-06

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-085 SG	WILL	28	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



EXISTING PLAN



PROPOSED PLAN

NOTES

1. PROPOSED DMS SIGN STRUCTURE IS LOCATED APPROXIMATELY AT MILE 247.37
2. MAINTENANCE OF TRAFFIC AND SIGNING ACCORDING TO SPECIAL PROVISION "KEEPING THE EXPRESSWAY OPEN TO TRAFFIC".
3. UTILITIES INFORMATION AT THIS LOCATION IS NOT AVAILABLE, HENCE NOT SHOWN.

LEGEND

- SEEDING CL 2A, TOPSOIL FURNISH AND PLACE, AND EROSION CONTROL BLANKET
- BORING
- DIRECTION OF TRAFFIC

REVISIONS	
NAME	DATE
SKJ	05/05/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-80 TO U.S. 30
 DYNAMIC MESSAGING SIGNS

PROPOSED DMS ROADWAY PLAN AT STA. 59+00

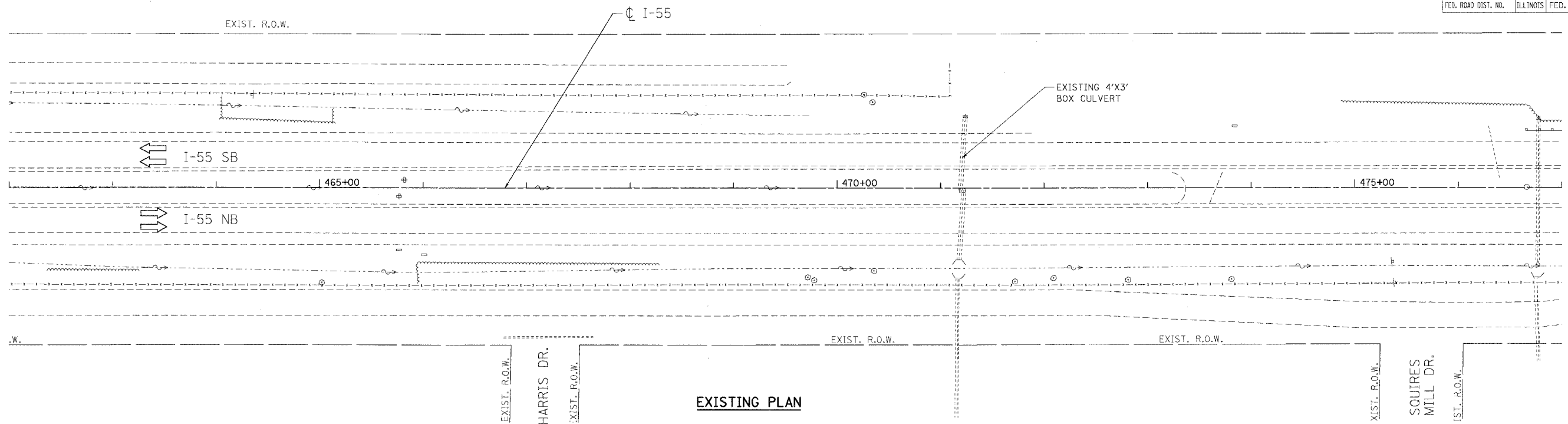
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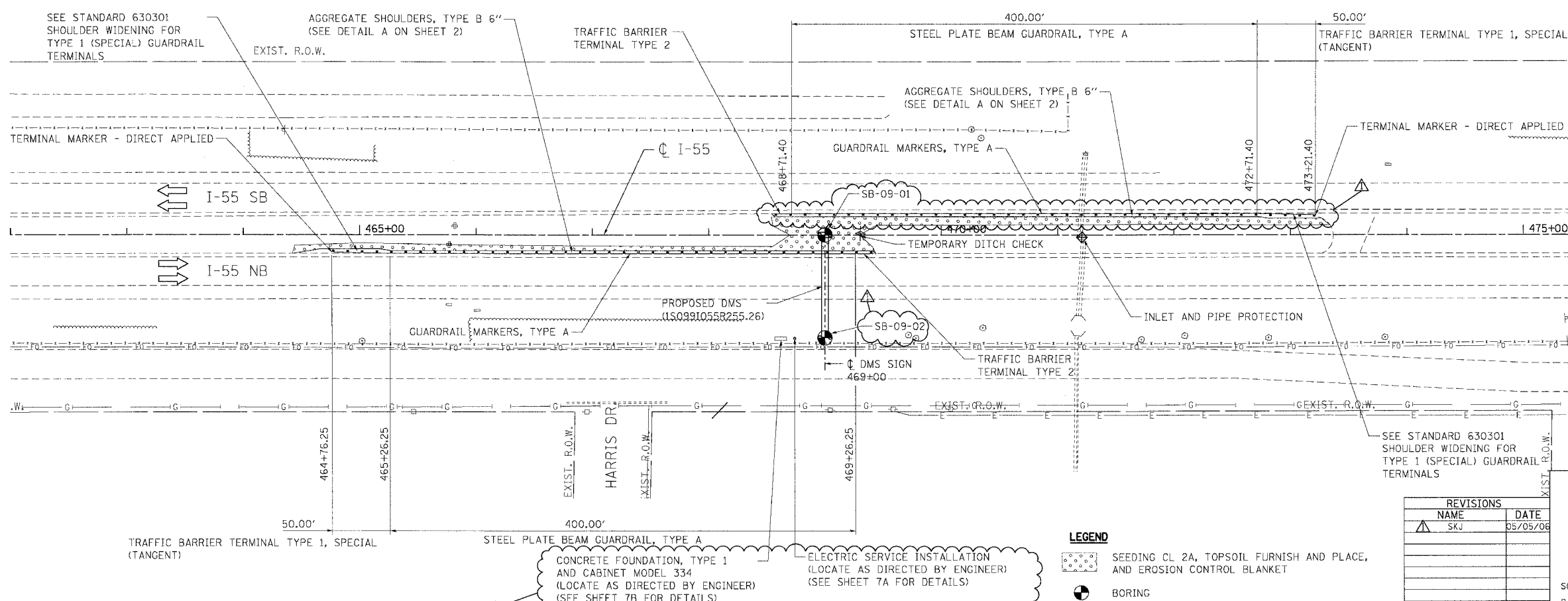
TENG ENGINEERS/ARCHITECTS/PLANNERS
 CHICAGO, ILLINOIS

PLOT DATE = 05/05/06
 PLOT SCALE = 1/4"=1'-0"
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-085 SG	WILL	28	7
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



EXISTING PLAN



PROPOSED PLAN

NOTES

1. PROPOSED DMS SIGN STRUCTURE IS LOCATED APPROXIMATELY AT MILE 255.26
2. MAINTENANCE OF TRAFFIC AND SIGNING ACCORDING TO SPECIAL PROVISION "KEEPING THE EXPRESSWAY OPEN TO TRAFFIC".

REVISIONS	
NAME	DATE
SKJ	05/05/06

LEGEND

- SEEDING CL 2A, TOPSOIL FURNISH AND PLACE, AND EROSION CONTROL BLANKET
- BORING
- DIRECTION OF TRAFFIC

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FBI ROUTE 55 (I-80 TO U.S. 30)
 DYNAMIC MESSAGING SIGNS

**PROPOSED DMS
 ROADWAY PLAN AT
 STA. 469+00**

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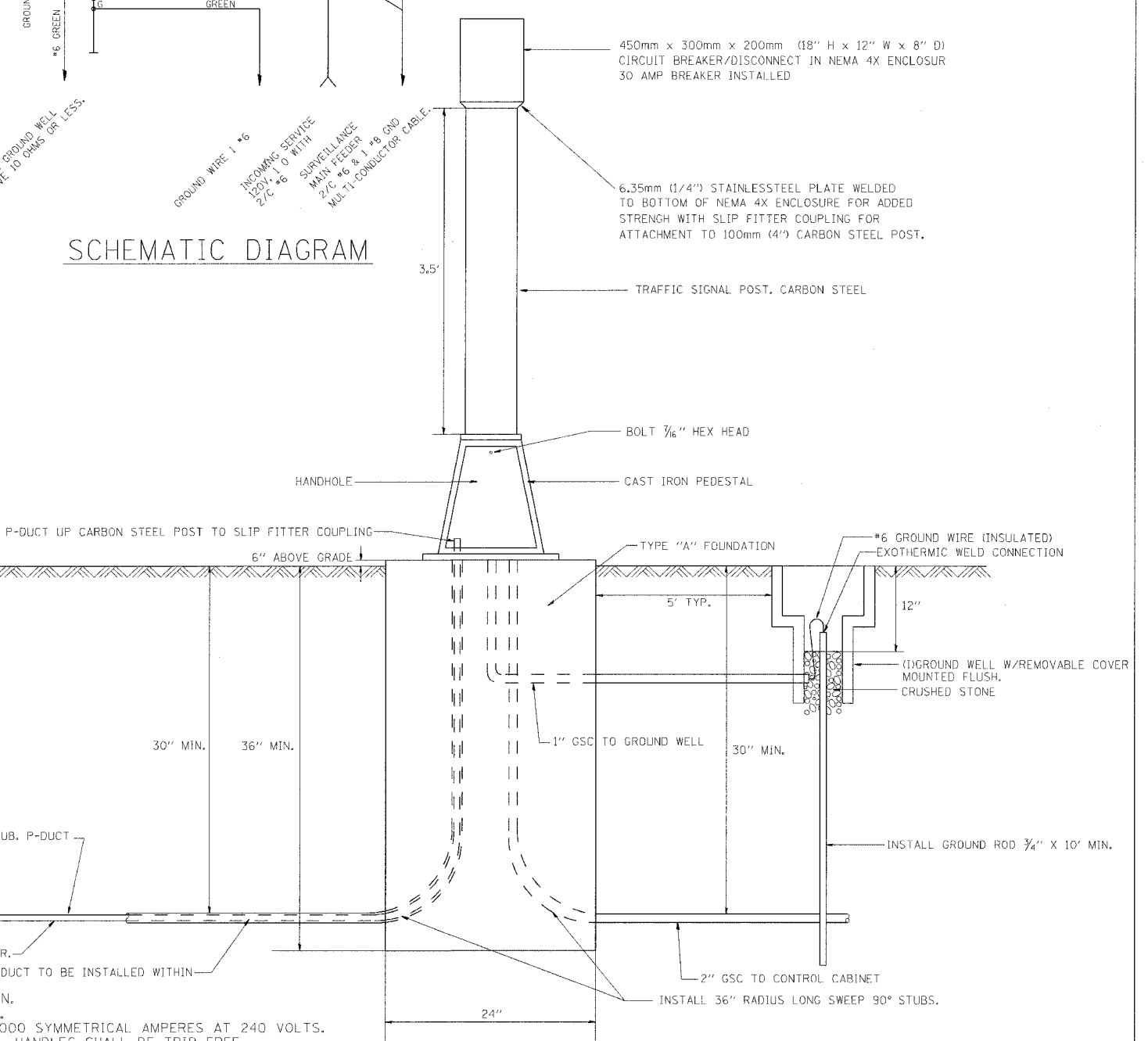
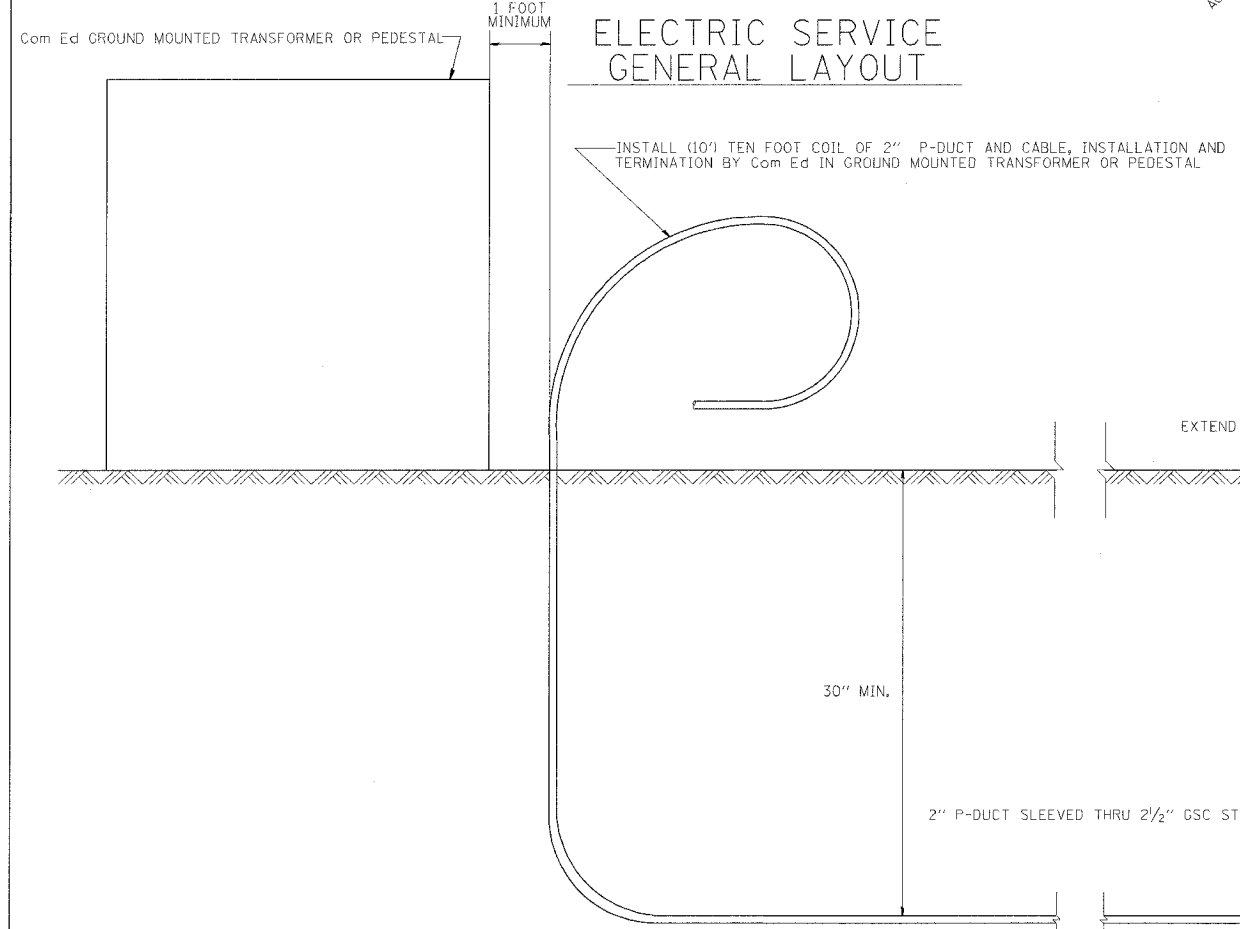
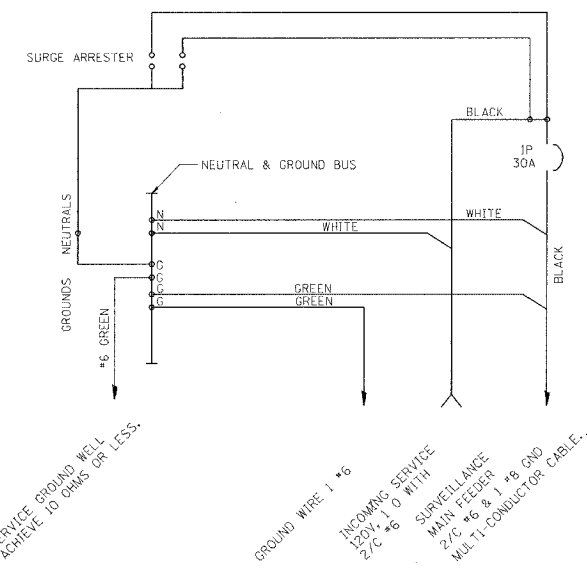
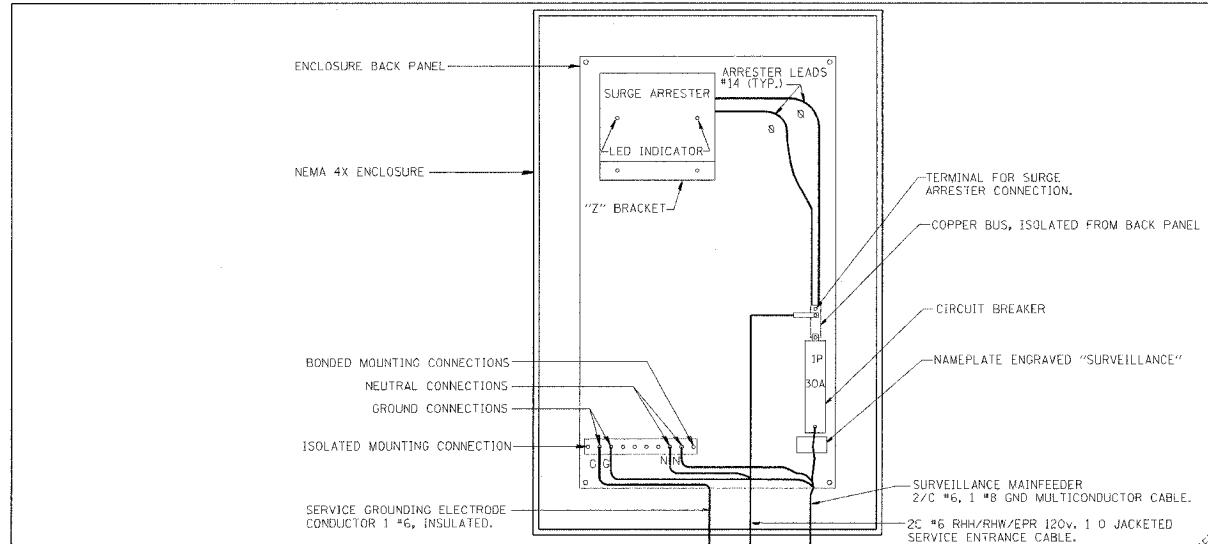
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 ENGINEERS/ARCHITECTS/PLANNERS
 CHICAGO, ILLINOIS

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-085-56	WILL.	28	7A
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		



NOTES:

- BOND ALL GSC CONDUIT STUBS.
- ANCHOR BOLTS, GROUND RODS & GSC STUBS SHALL BE CONSIDERED INCIDENTAL TO COST OF TYPE "A" FOUNDATION.
- THE ELECTRIC SERVICE EQUIPMENT ASSEMBLY SHALL BE UL LABELLED, SUITABLE FOR USE AS SERVICE EQUIPMENT.
- CIRCUIT BREAKERS SHALL BE THERMAL MAGNETIC BOLT-ON TYPE WITH A MINIMUM INTERRUPTING CAPACITY OF 25,000 SYMMETRICAL AMPERES AT 240 VOLTS. THEY SHALL BE LOCKABLE IN THE "OFF" POSITION FOR COMPLIANCE WITH OSHA LOCK-OUT/TAG-OUT REQUIREMENTS. HANDLES SHALL BE TRIP FREE.
- THE SURGE PROTECTOR SHALL BE SUITABLE FOR 240/120 VOLT SINGLE PHASE 60HZ AC ELECTRICAL SERVICE, WITH A SURGE ENERGY CAPABILITY OF 2160 JOULES OR BETTER AT 8/20 MICROSECONDS, RATED -40 TO 65 DEGREES C., WITH LED OPERATING INDICATORS, AND SHALL BE UL LISTED PER UL 1449, JOSLYN SURGETRON III MODEL 126521 OR APPROVED EQUAL. FOLLOW MANUFACTURERS RECOMMENDED WIRING INSTALLATION INSTRUCTIONS.
- BUS BARS, CONNECTORS AND LUGS SHALL BE COPPER, INSULATED AND ISOLATED AND CONFIGURED TO PREVENT SHORTED CONDITIONS FROM TIGHTENING TERMINATIONS, ETC. THE OVERALL BUS SECTION SHALL BE CONFIGURED BEHIND AN INSULATING BARRIER SHIELD WHICH IS REMOVABLE FOR ACCESS TO CONNECTIONS.
- THE COMBINATION GROUND AND NEUTRAL BAR SHALL BE CONFIGURED WITH SEPARATE GROUND AND NEUTRAL SECTIONS AND SPARE TERMINALS AS INDICATED. THE HEADS OF GROUND SCREWS SHALL BE PAINTED GREEN. THE HEADS OF NEUTRAL SCREWS SHALL BE PAINTED WHITE.
- A PLASTIC LAMINATED LAYOUT AND CIRCUIT DIAGRAM SHALL BE AFFIXED TO THE INTERIOR SIDE OF THE ENCLOSURE DOOR.
- A 2-COLOR ENGRAVED PLASTIC NAMEPLATE, ATTACHED WITH SCREWS, AND ENGRAVED AS INDICATED, SHALL BE PROVIDED FOR EACH MAIN BREAKER.
- PROVIDE ON LAYOUT AND CIRCUIT DIAGRAM A BILL OF MATERIALS USED WITH CATALOG NUMBERS.

REVISIONS	
NAME	DATE
R.L.	03-99
R.L.	04-99
R.L.	08-03
R.L.	08-25

ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC SYSTEMS CENTER
**TYPICAL E-SERVICE
INSTALLATION**
SCALE: VERT. NONE
DATE 03-97
DRAWN BY G.M.
CHECKED BY R.L.

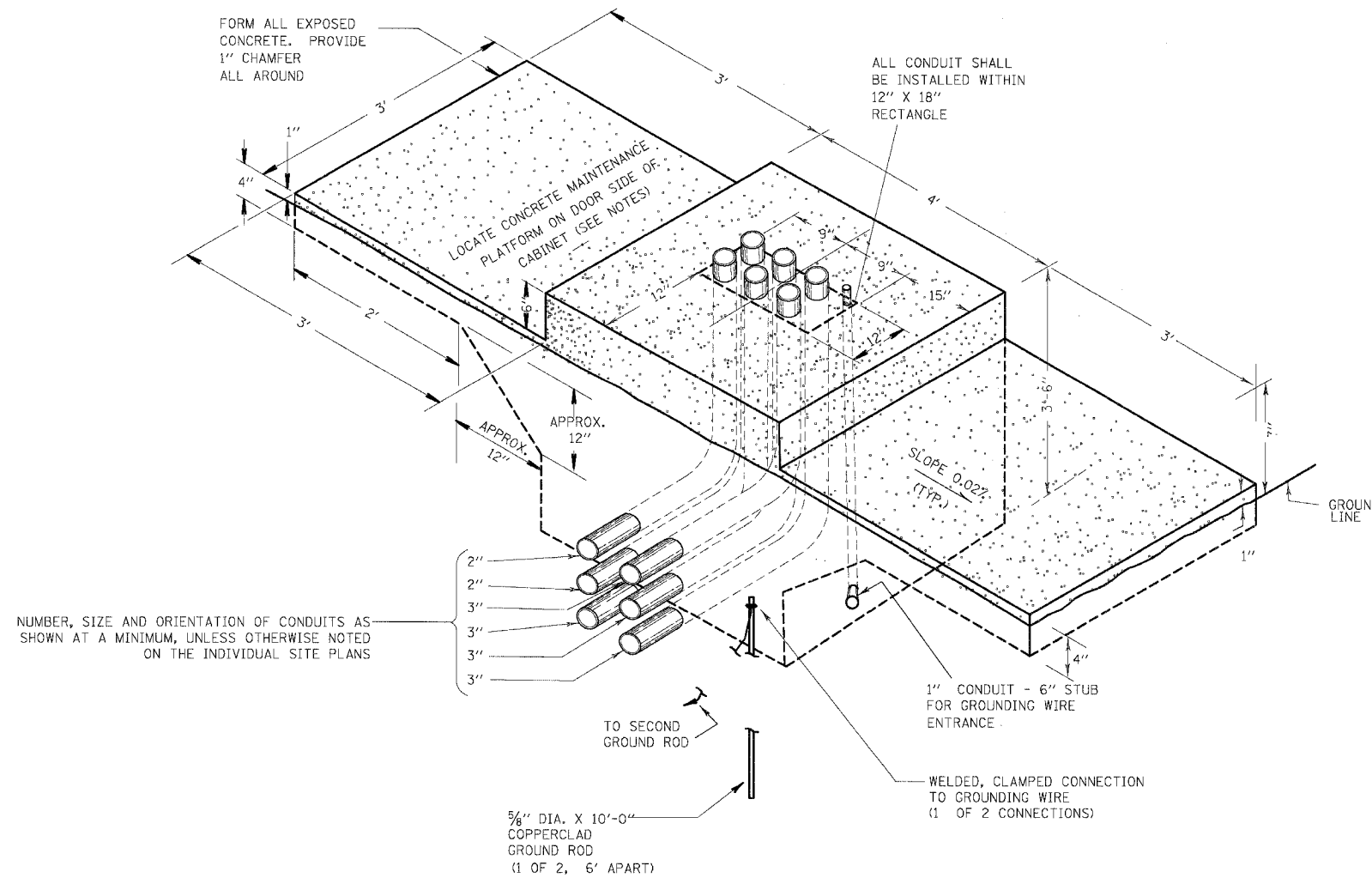
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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NOTES

1. INSTALL FOUR 3/4 INCH DIAMETER X 12 INCH MINIMUM LENGTH APPROVED J-BOLTS TO ANCHOR THE CABINET BASES. THE ANCHOR BOLTS SHALL BE GALVANIZED STEEL AND LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.
2. CONTROL CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED AND LEVEL, PRIOR TO CABINET INSTALLATION. LEVELING OF TOP SURFACES AFTER CONCRETE BASE HAS CURED SHALL ONLY BE ACCOMPLISHED BY GRINDING.
3. MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.
4. CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.
5. CONCRETE MAINTENANCE PLATFORM AND CABINET FOUNDATION FOR CABINET SHALL BE A MONOLITHIC POUR.
6. WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.
7. CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 3 INCH.
8. MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.
9. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.
10. CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.
11. PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.
12. ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.
13. ALL METALLIC CONDUIT ENDS AT TOP OF CONCRETE BASES SHALL HAVE BUSHINGS AND ALL NON METALLIC CONDUIT ENDS AT TOP OF CONCRETE BASES SHALL HAVE END BELLS.



TYPICAL DETAIL
CONCRETE BASE, CONTROLLER CABINET

REVISIONS	
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DDH	5/5/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO U.S. 30)
DYNAMIC MESSAGING SIGNS

**CONCRETE FOUNDATION
TYPE 1 DETAIL (FOR CABINET,
MODEL 334)**

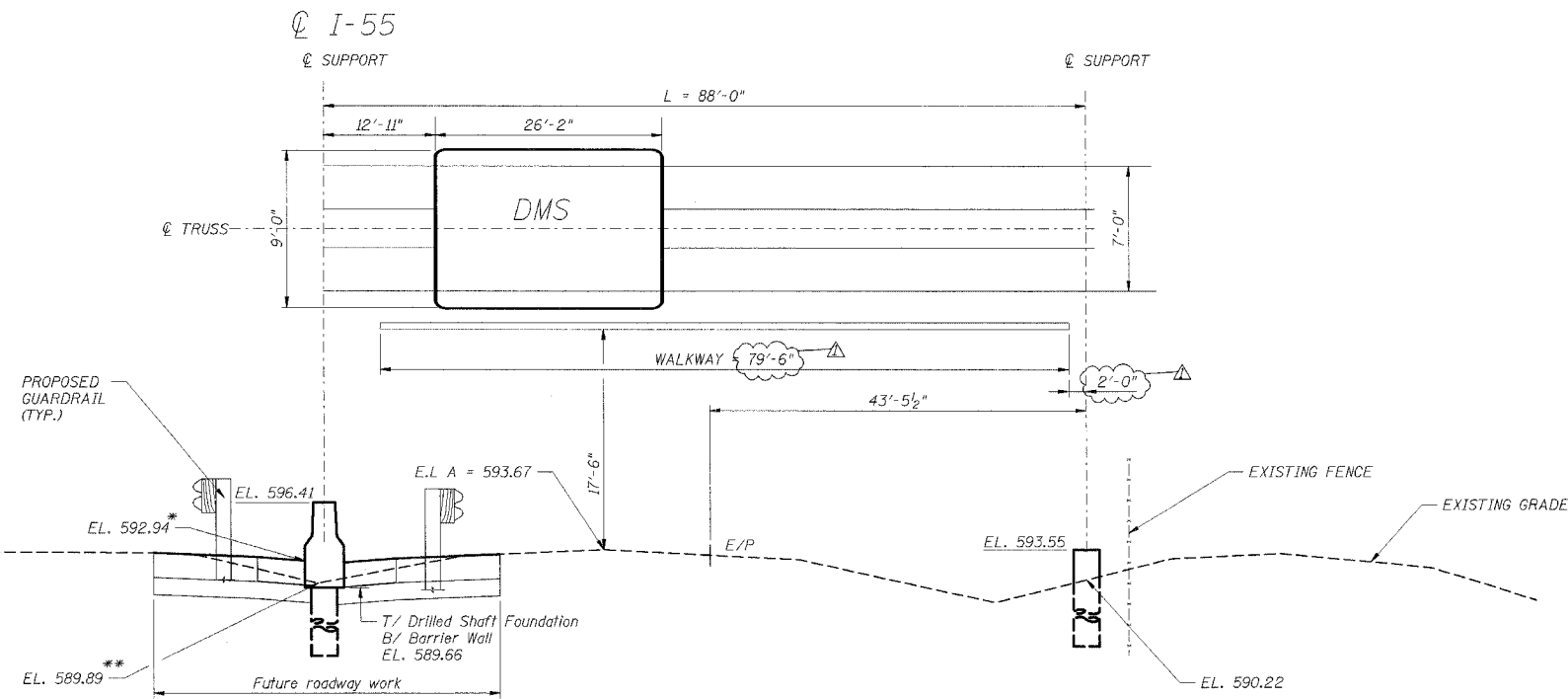
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CHECKED BY CFR

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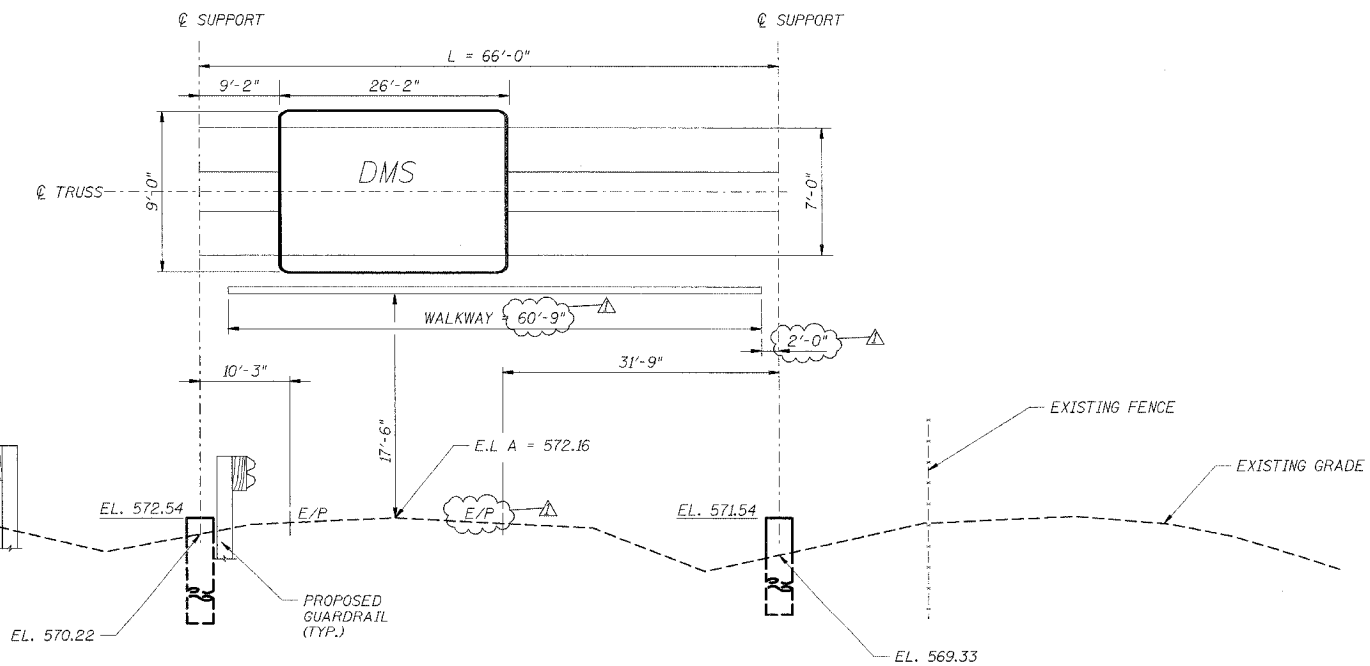
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55	2005-085 SG	WILL	28	8
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IS099I055R255.26
STA. 469+00
I-55 N.B. LOOKING NORTH

NOTE: SEE PROPOSED DMS PLANS FOR GUARDRAIL LOCATIONS.
 * THE HIGHEST ELEVATION WITHIN THE FOUNDATION UNIT, TO BE CONSTRUCTED IN FUTURE CONTRACT.
 ** EXISTING LOW GRADE ELEVATION



IS099I055R247.37
STA. 59+00
I-55 N.B. LOOKING NORTH

SHT. S-1 OF 15

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MJK	05/05/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
 I-55 ROUTE 55 (I-80 TO U.S. 30)
 DYNAMIC MESSAGING SIGNS

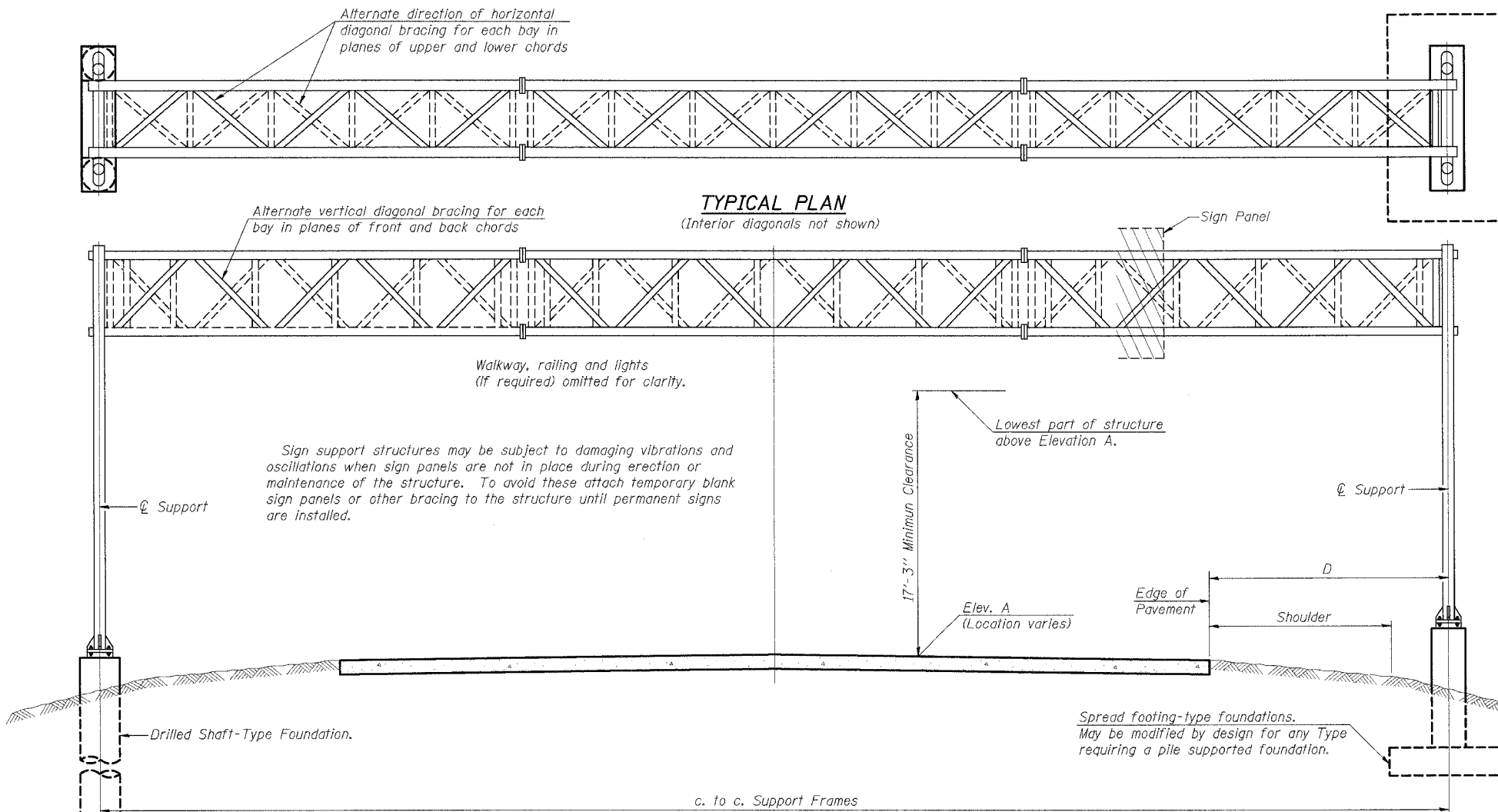
**DMS OVERHEAD STRUCTURES
 GENERAL ELEVATIONS**

SCALE: _____ DRAWN BY MRK
 DATE 03/24/06 CHECKED BY MJK

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 TENG & ASSOCIATES, INC.
 ENGINEERS/ARCHITECTS/PLANNERS
 CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-085 5G	WILL	28	9
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GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WIND LOADING: 30 p.s.f. normal to Sign Panel Area and truss elements not behind sign Loading Diagram.

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
Field Units
f_c = 3,500 p.s.i.
f_y = 60,000 p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.

All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.

The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to AASHTO M314 Gr. 36 or 55 with a minimum Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Bridge Seat Sealer in accordance with the Standard Specifications.

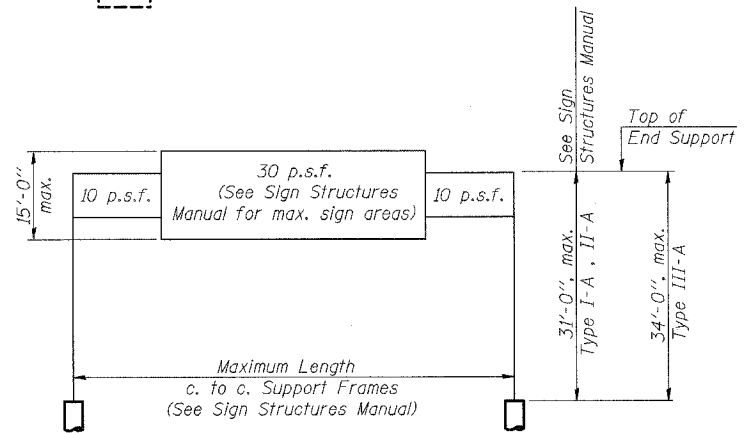
REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

TYPICAL ELEVATION
(Looking at Face of Signs**)

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area
IS0991055R247.37	59+00.00	III-A	66.0	572.16	31.75	9.00 ft	235 sq. ft.
IS0991055R255.26	469+00.00	III-A	88.0	593.67	43.45	9.00 ft	235 sq. ft.

**Looking upstation for structures with signs both sides.



TOTAL BILL OF MATERIAL

NUMBER	REVISION	DATE

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE TYPE I-A (4'-0" x 4'-6")	Foot	—
OVERHEAD SIGN STRUCTURE TYPE II-A (4'-6" x 5'-3")	Foot	—
OVERHEAD SIGN STRUCTURE TYPE III-A (5'-0" x 7'-0")	Foot	154
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	141.42
CONCRETE FOUNDATIONS	Cu. Yds.	52.7
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	4
ROCK EXCAVATION FOR STRUCTURES	Cu. Yds.	4

SHT. S-2 OF 15

REVISIONS	
NAME	DATE
MJK	05/05/08

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAT ROUTE 55 (I-80 TO U.S. 30)
DYNAMIC MESSAGING SIGNS

**OVERHEAD SIGN STRUCTURES
GENERAL PLAN & ELEVATION
ALUMINUM TRUSS & STEEL SUPPORTS**

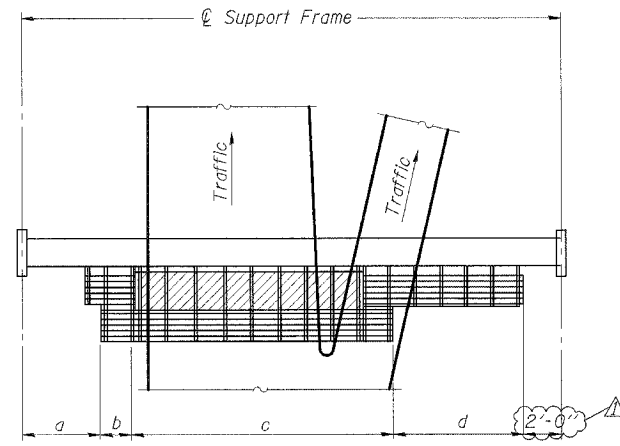
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TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

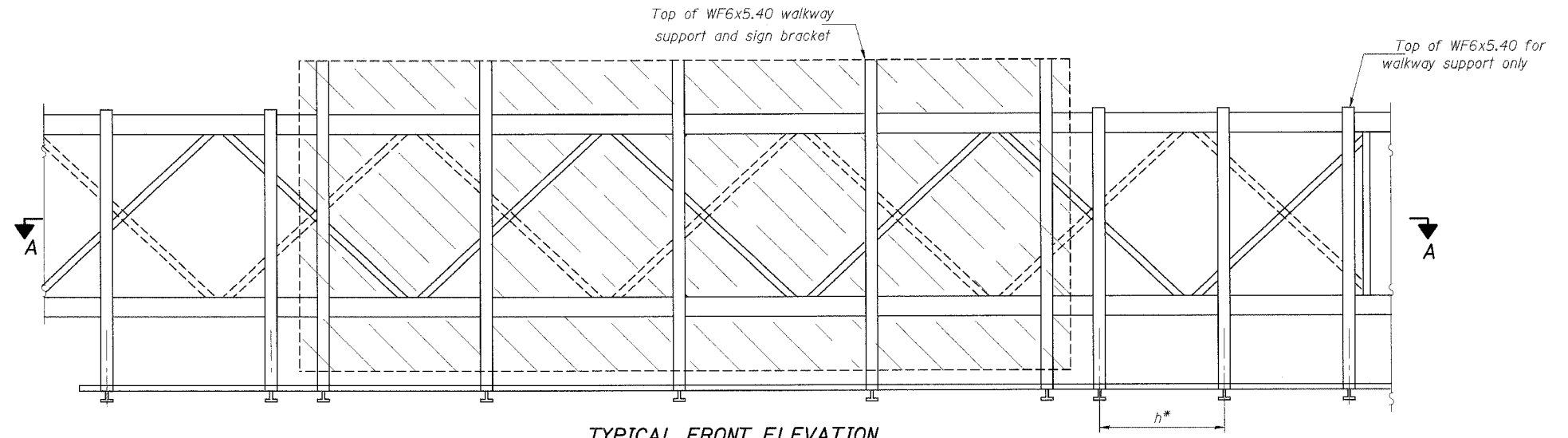
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-085 SG	WILL	28	15
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN
WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)



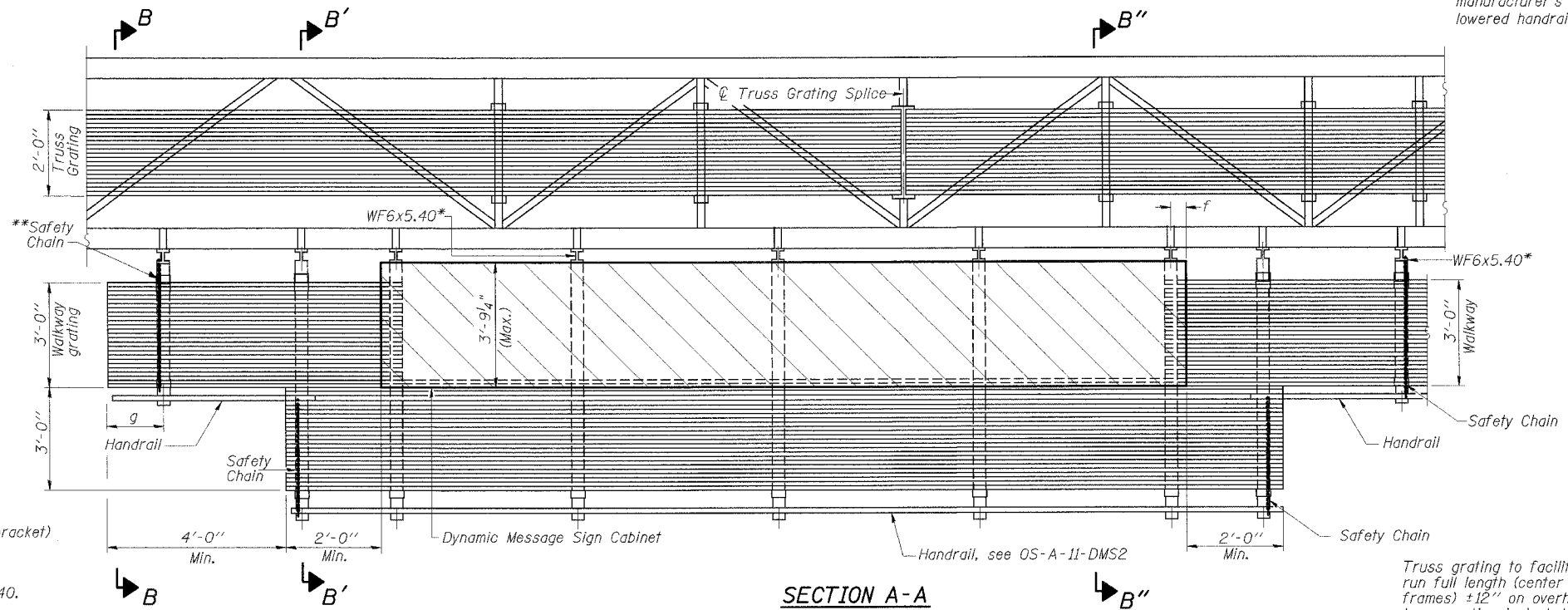
TYPICAL FRONT ELEVATION
With handrail omitted for clarity.
For Section B-B, see Base Sheet OS-A-10-DMS2
For Section B'-B', and B''-B'', see Base Sheet OS-A-10a-DMS2

Bracket and grating dimensions are nominal and will vary based on actual DMS cabinet dimensions plus manufacturer's mounting devices, lowered handrail and DMS cabinet.

BRACKET TABLE

WF6x5.40 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
8'-0"	8'-0"	2
14'-0"	14'-0"	3
20'-0"	20'-0"	4
26'-0"	26'-0"	5
32'-0"	32'-0"	6

Walkway and Truss Grating width dimensions are nominal and may vary $\pm \frac{1}{2}$ " based on available standard widths.



SECTION A-A

Truss grating to facilitate inspection shall run full length (center to center of support frames) ± 12 " on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure"

Notes: *Space WF6x5.40 brackets for efficiency and within limits shown:

- f = 12" maximum, 4" minimum (End of sign to ϕ of nearest bracket)
- g = 12" maximum, 4" minimum (End of walkway grating to ϕ of nearest support bracket)
- h = 6'-0" maximum (ϕ to ϕ of walkway support brackets, WF6x5.40)
- Maximum DMS weight = 4000LBS
- 3'-9" maximum cabinet depth includes depth of cabinet plus connection to WF6x5.40.

**If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-A-11-DMS2

For Section B-B and Grating Splice Details see Base Sheet OS-A-10-DMS2.
For Handrail Splice Details see Base Sheet OS-A-11-DMS2.

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints. Place all sign and walkway brackets as close to panel points as practical. Grating and handrail splices placed as needed.

DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	

EXAMINED
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

Structure Number	Station	a	b	c	d	Walkway Grating and Handrail Lengths
IS0991055R247.37	59+00	6'-8"	2'-6"	28'-8"	26'-2"	61'-4"
IS0991055R255.26	469+00	10'-5"	2'-6"	28'-8"	44'-5"	79'-7"

SHT. S-8 OF 15

REVISIONS	
NAME	DATE
MJK	5/05/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO U.S. 30)
DYNAMIC MESSAGING SIGNS

**OVERHEAD SIGN STRUCTURE
ALTERNATE ALUMINUM WALKWAY
DETAILS FOR DMS**

SCALE: DRAWN BY MRK
DATE 03/24/06 CHECKED BY MJK

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-085 S6	WILL	28	20
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

NOTES:

The foundation dimensions shown 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 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.

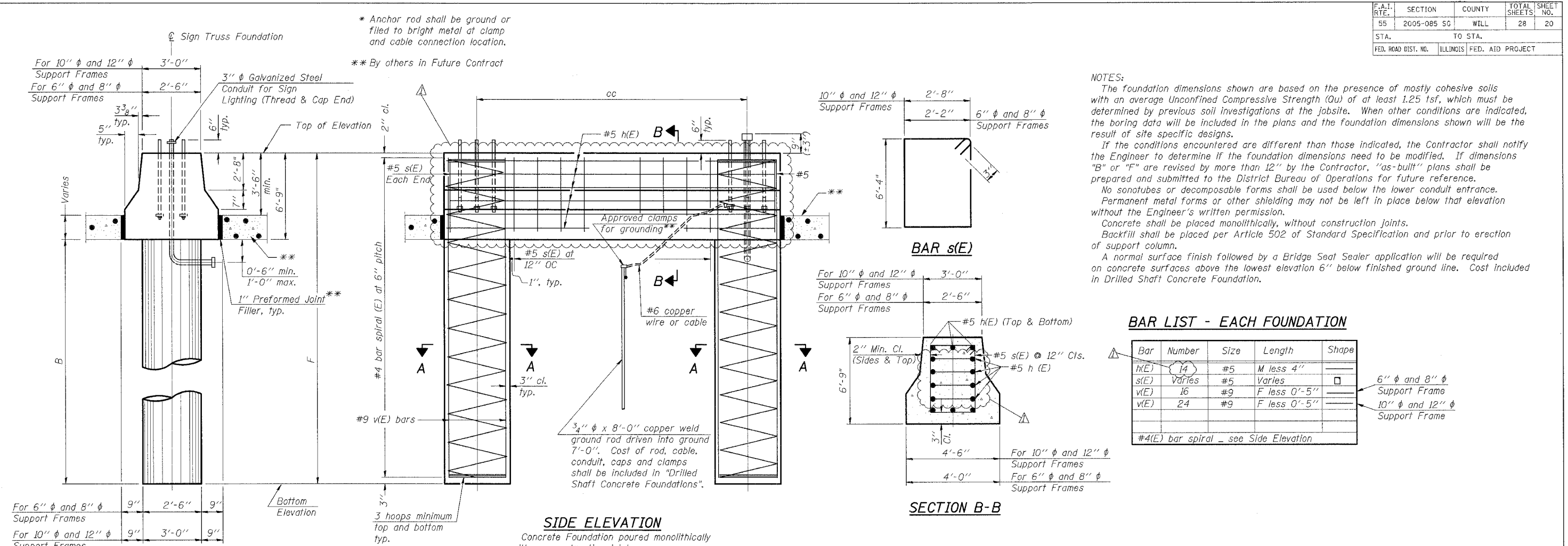
Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

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.

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
h(E)	14	#5	M less 4"	—
s(E)	Varies	#5	Varies	□
v(E)	16	#9	F less 0'-5"	—
v(E)	24	#9	F less 0'-5"	—
#4(E) bar spiral - see Side Elevation				

6" φ and 8" φ Support Frame
10" φ and 12" φ Support Frame



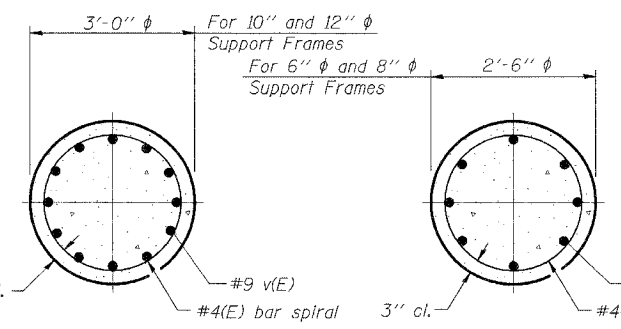
SIDE ELEVATION

Concrete Foundation poured monolithically with no construction joint.

SECTION B-B

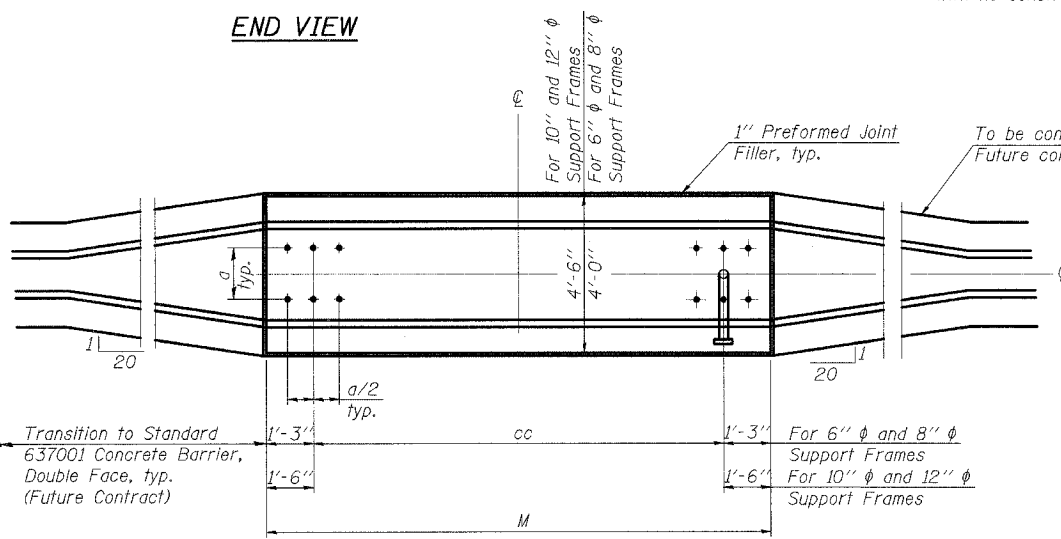
END VIEW

Structure Number	Station	Left Foundation				Right Foundation				Class SI Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	B	F	Elevation Top	Elevation Bottom	B	F	
IS099I055R255.26	469+00.00	596.41	571.66	18'-0"	24'-9"	—	—	—	—	20.3



SECTION A-A

Pipe Support Frames	cc	M	a	a/2
6" φ	7'-0"	9'-6"	0'-11"	5 1/2"
8" φ	7'-6"	10'-0"	1'-1 1/2"	6 3/4"
10" φ	8'-3"	10'-9"	1'-3"	7 1/2"
12" φ	9'-0"	12'-0"	1'-6"	9"



PLAN

SHT. 5-13 OF 15

REVISIONS	
NAME	DATE
MJK	05/05/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO U.S. 30)
DYNAMIC MESSAGING SIGNS

**OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS
MEDIAN SUPPORT**

SCALE: DATE 03/24/06

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CHECKED BY MJK

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CHICAGO, ILLINOIS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-085 SG	WILL	28	21
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

Wang Engineering, INC.
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Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG SB-01-01 Page 1 of 1

WEI Job No.: 555-11-01
Client: IDOT Project D-91-132-05
Project: I-55 Improvements
Location: Will County, Illinois

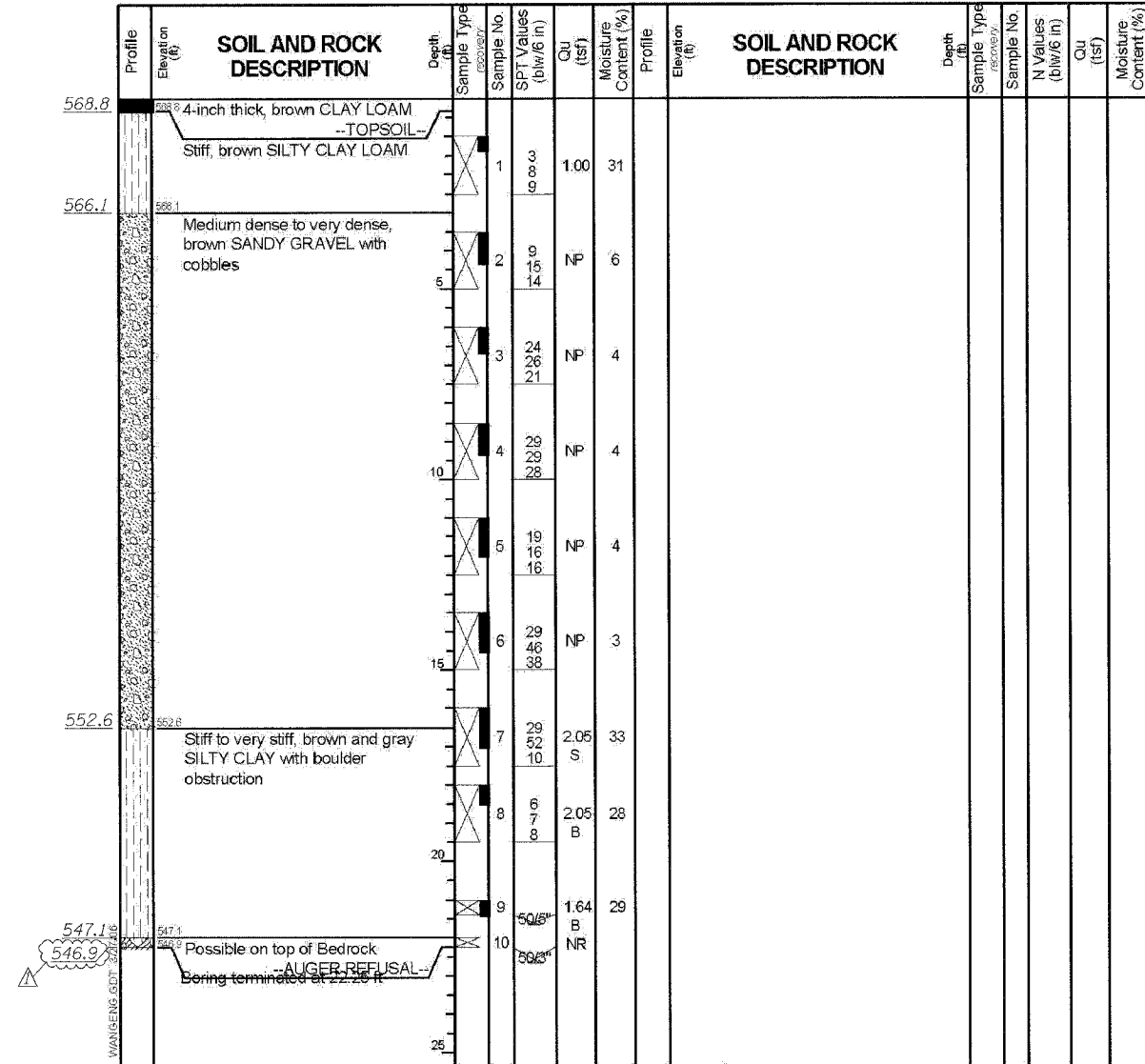
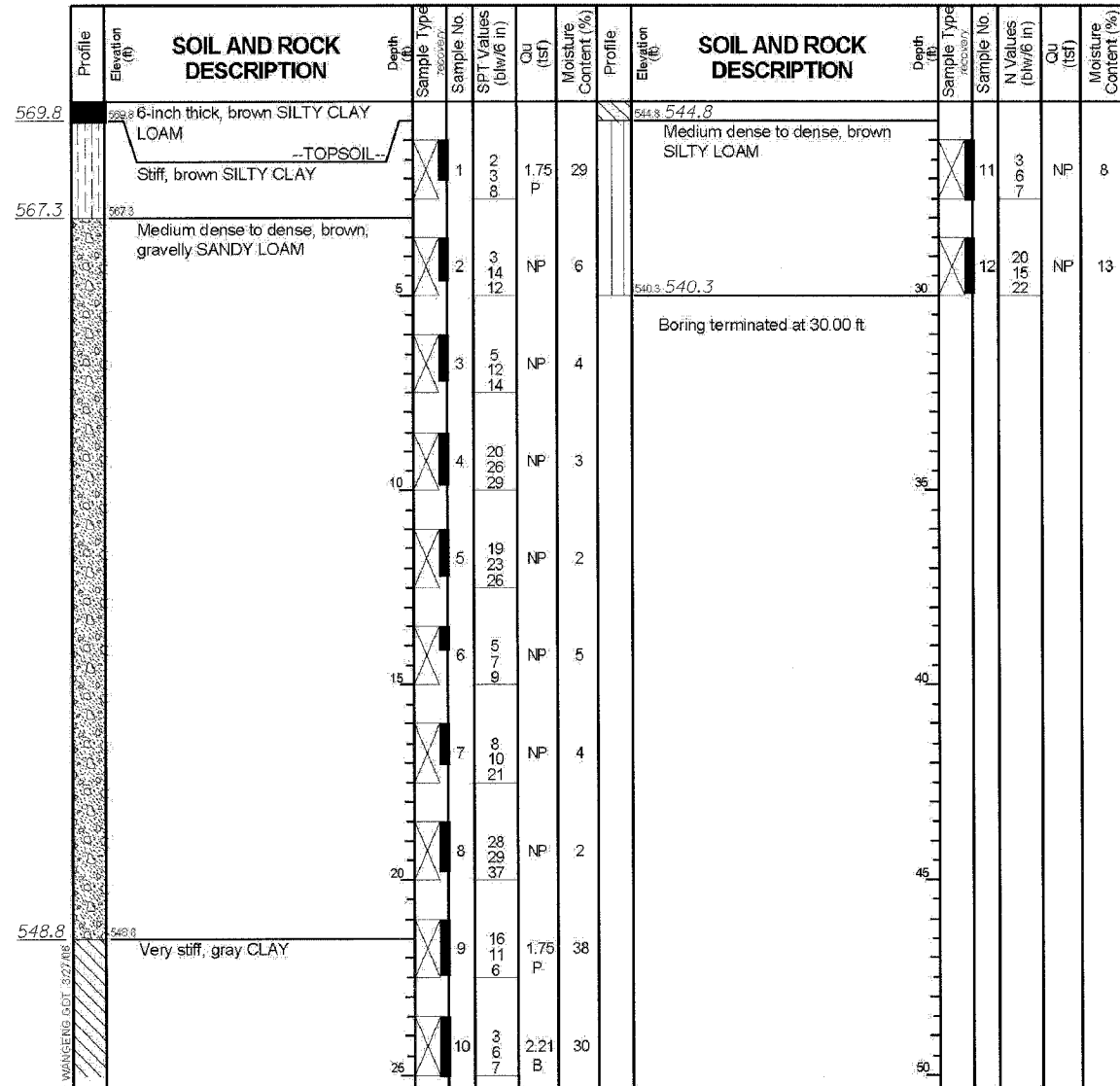
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Elevation: 570.33 ft
North: 1740393.29 ft
East: 1022085.12 ft
Station: 59+02.75
Offset: 8.26 LT

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BORING LOG SB-01-02 Page 1 of 1

WEI Job No.: 555-11-01
Client: IDOT Project D-91-132-05
Project: I-55 Improvements
Location: Will County, Illinois

Datum: NGVD
Elevation: 569.14 ft
North: 1740394.88 ft
East: 1022151.70 ft
Station: 59+02.40
Offset: 58.35 RT



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-23-2006	Complete Drilling	03-23-2006
Drilling Contractor	Precon Drilling	Drill Rig	CME-75 ATV
Driller	J & B	Logger	K. Jacob
Checked by	MLS	Drilling Method	3.25 IDA HSA, Boring backfilled upon completion
White Drilling	DRY	At Completion of Drilling	DRY
Time After Drilling	NA	Depth to Water	NA

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-20-2006	Complete Drilling	03-20-2006
Drilling Contractor	Precon Drilling	Drill Rig	CME-75 ATV
Driller	J & L	Logger	S. Sugiarto
Checked by	CTF	Drilling Method	3.25 IDA HSA, Boring backfilled upon completion
White Drilling	DRY	At Completion of Drilling	DRY
Time After Drilling	NA	Depth to Water	NA

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SHT. S-14 OF 15

REVISIONS	
NAME	DATE
MDB	05/05/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO U.S. 30)
DYNAMIC MESSAGING SIGNS

SOIL BORING LOGS - 1

SCALE: _____ DRAWN BY MRK
DATE 03/24/06 CHECKED BY MJK

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CHICAGO, ILLINOIS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-085 SG	WILL	28	22
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

Wang Engineering, INC.
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 1145 Main Street
 Lombard, IL 60148
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 Fax: 630 953-9938

BORING LOG SB09-01
 WEI Job No.: 555-11-01
 Client: Illinois Department of Transportation
 Project: I-55 Reconstruction
 Location: Will County, IL

Datum: NGVD
 Elevation: 589.10 ft
 North: 1780257.81 ft
 East: 1026095.66 ft
 Station: 469+01.86
 Offset: 2.73 RT

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 Fax: 630 953-9938

BORING LOG SB09-02
 WEI Job No.: 555-11-01
 Client: Illinois Department of Transportation
 Project: I-55 Reconstruction
 Location: Will County, IL

Datum: NGVD
 Elevation: 590.67 ft
 North: 1780261.37 ft
 East: 1026183.26 ft
 Station: 469+02.21
 Offset: 93.40 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
589.10	6-Inch thick, brown, SILTY CLAY LOAM	0						589.10							
588.6	Hard, gray CLAY LOAM	1		1	2 5 7	4.50 P	21	588.6							
586.1	Very stiff, gray SILTY CLAY to CLAY	2		2	2 4 5	2.46 B	26	586.1							
581.1	Loose to medium dense, brown gravelly SANDY LOAM to gravelly SILTY LOAM	3		3	3 7 10	2.00 P	33	581.1							
576.1	Very dense, gray, gravelly SILTY LOAM, with cobbles; weathered bedrock	4		4	4 12 12	NP	12	576.1							
573.6	--AUGER REFUSAL--	5		5	6 4 3	NP	12	573.6							
	Boring terminated at 15.50 ft	6		6	50/2"	NP									

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
590.67	26-inch thick, ASPHALT	0						590.67							
590.2	Very stiff, black and brown SILTY CLAY	1		1	2 8 10	3.00 P	27	590.2							
587.7	Stiff, black and brown SILTY CLAY LOAM	2		2	3 5 7	1.50 P	29	587.7							
585.2	Stiff, black and brown, gravelly SILTY CLAY	3		3	3 9 12	1.00 P	24	585.2							
581.4	Very dense, gray, gravelly SILTY LOAM with cobbles; weathered bedrock	4		4	2 8 17	1.00 P	9	581.4							
576.9	--AUGER REFUSAL--	5		5	50/4"	NP	9	576.9							
	Boring terminated at 15.00 ft	6		6	50/3"	NP	16								

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	03-23-2006	Complete Drilling	03-23-2006	While Drilling	13.50 ft
Drilling Contractor	Precon Drilling	Drill Rig	CME-75 ATV	At Completion of Drilling	10.00 ft
Driller	J & L	Logger	K. Jacob	Time After Drilling	NA
Drilling Method	3.25 IDA HSA, Boring backfilled upon completion				
				Depth to Water	NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	03-21-2006	Complete Drilling	03-21-2006	While Drilling	10.50 ft
Drilling Contractor	Precon Drilling	Drill Rig	CME-75 ATV	At Completion of Drilling	10.00 ft
Driller	J & L	Logger	S. Sugiarto	Time After Drilling	NA
Drilling Method	3.25 IDA HSA, Boring backfilled upon completion				
				Depth to Water	NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

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SHT. 5-15 OF 15

REVISIONS	
NAME	DATE
ADB	05/05/06

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI ROUTE 55 (I-80 TO U.S. 30)
 DYNAMIC MESSAGING SIGNS

SOIL BORING LOGS - 2

SCALE: _____ DRAWN BY MRK
 DATE 03/24/06 CHECKED BY MJK

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 CHICAGO, ILLINOIS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-085 SG	WILL	28	27
STA. 468+70.00		TO STA. 470+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY

REVISIONS	DATE
NOTED	
TEMPLATE	
AREAS CHECKED	

NOTE BOOK

NO. _____

ORIGINAL SURVEY

REVISIONS	DATE
NOTED	
TEMPLATE	
AREAS CHECKED	

NOTE BOOK

NO. _____

PLOT DATE = @DATE@
 FILE NAME = @FILE@
 PLOT SCALE = @SCALE@
 USER NAME = @USER@

