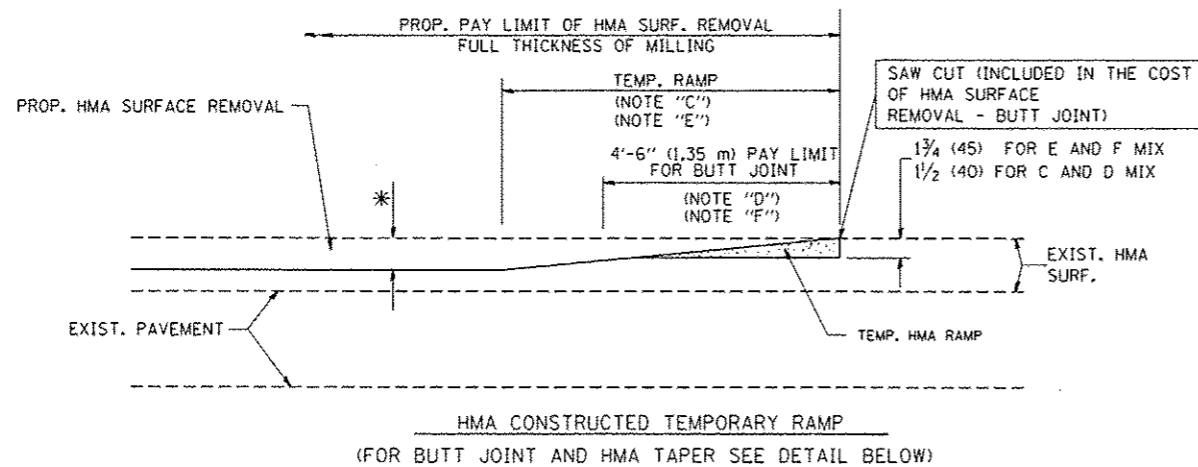
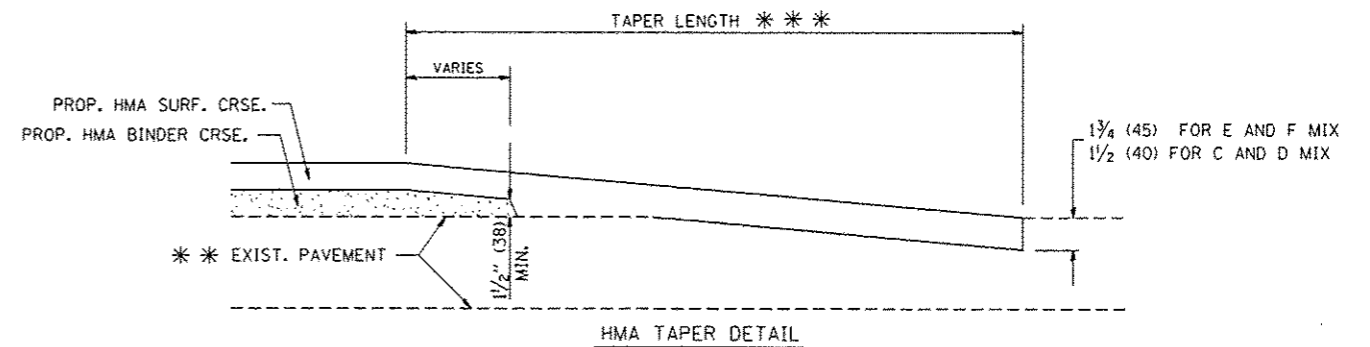
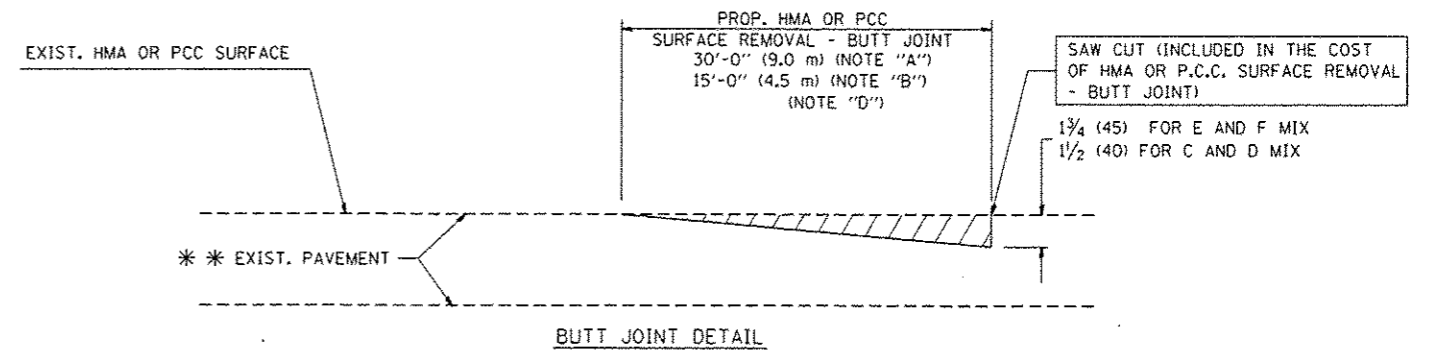


OPTION 1



OPTION 2

TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

*** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

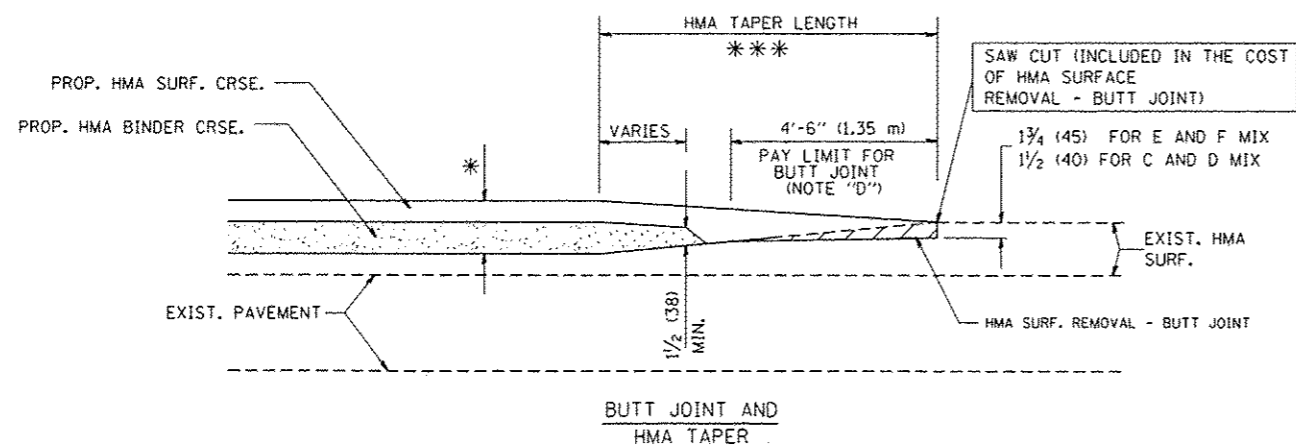
NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
 - B: MINOR SIDE ROADS.
 - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
 - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
 - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
 - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
 - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

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



TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

FILE NAME = W:\datastd\22x34\bd32.dgn

USER NAME = gaglionobt
PLOT SCALE = 50.0000' / IN.
PLOT DATE = 1/4/2008

DESIGNED - M. DE YONG
DRAWN -
CHECKED -
DATE - 06-13-90

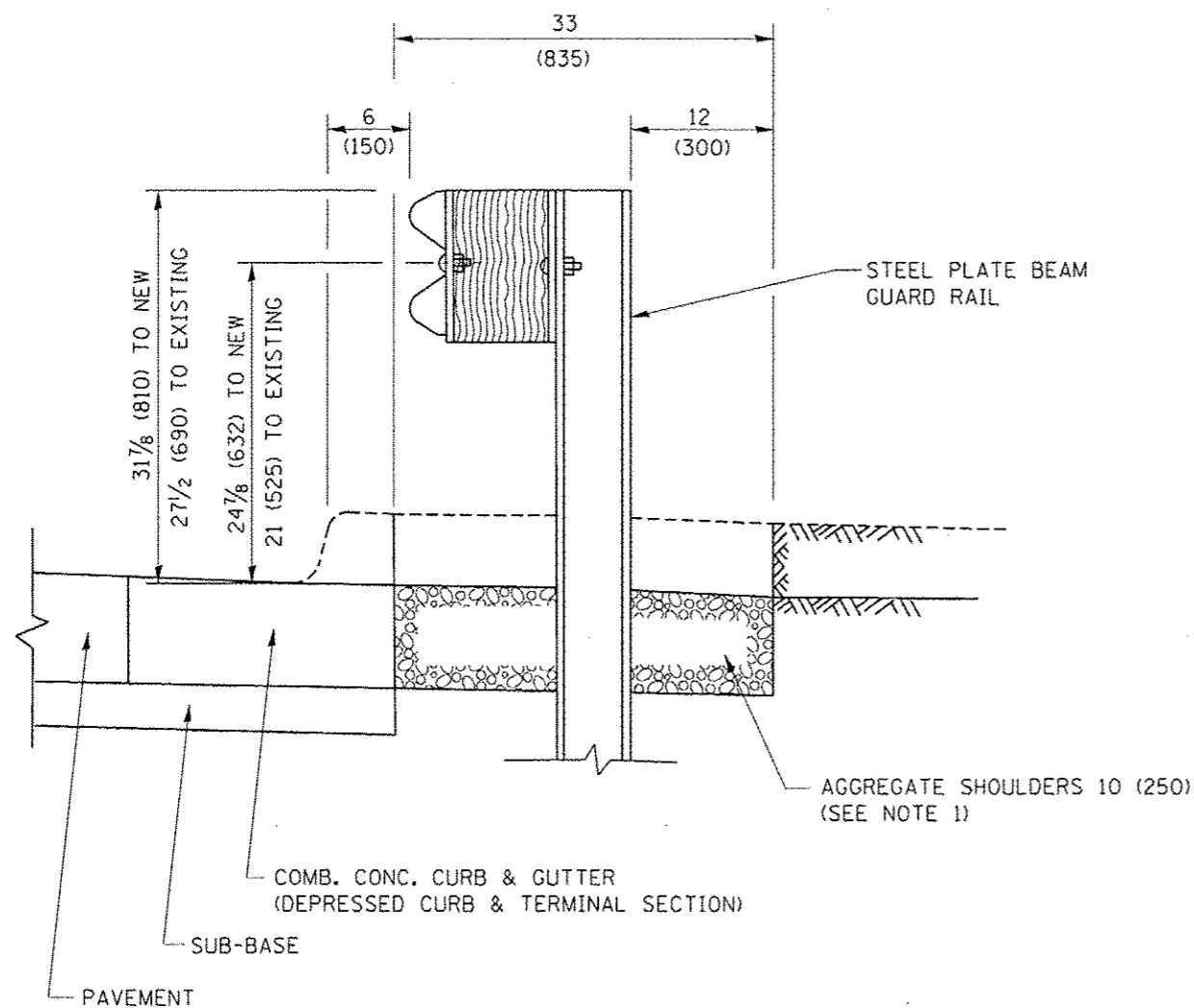
REVISED - R. SHAH 10-25-94
REVISED - A. ABBAS 03-21-97
REVISED - M. COMEZ 04-06-01
REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT AND
HMA TAPER DETAILS**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
238	(112 & 113) WRS-5	DUPAGE	963	701
BD400-05 BD32			CONTRACT NO. 60131	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

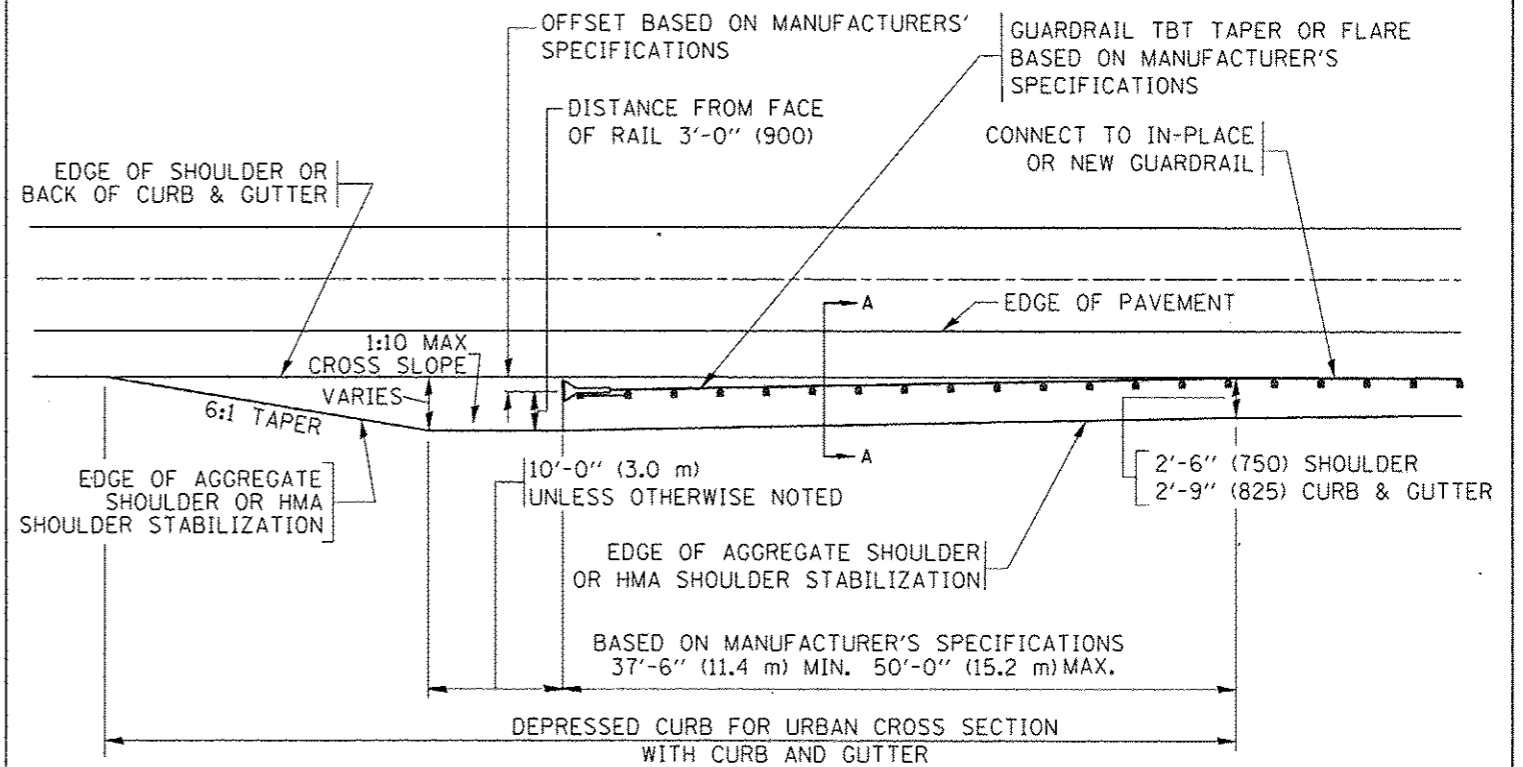


SECTION A-A

- NOTES:
1. THE AGGREGATE SHOULDER, 10 (250) OR HMA SHOULDER, 6 (150) (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
 2. "EXISTING" GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
 3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

**DETAILS FOR STEEL PLATE BEAM
GUARD RAIL ADJACENT TO CURB AND GUTTER**

[FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]



**DEPRESSED CURB AND GUTTER AND
SHOULDER TREATMENT AT TBT TY. 1 SPL.**

AGGREGATE SHOULDER, 10 (250) WILL BE PAID ACCORDING TO SECTION 481.

HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID ACCORDING TO SECTION 482.

COMB. CONC. C&G, STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

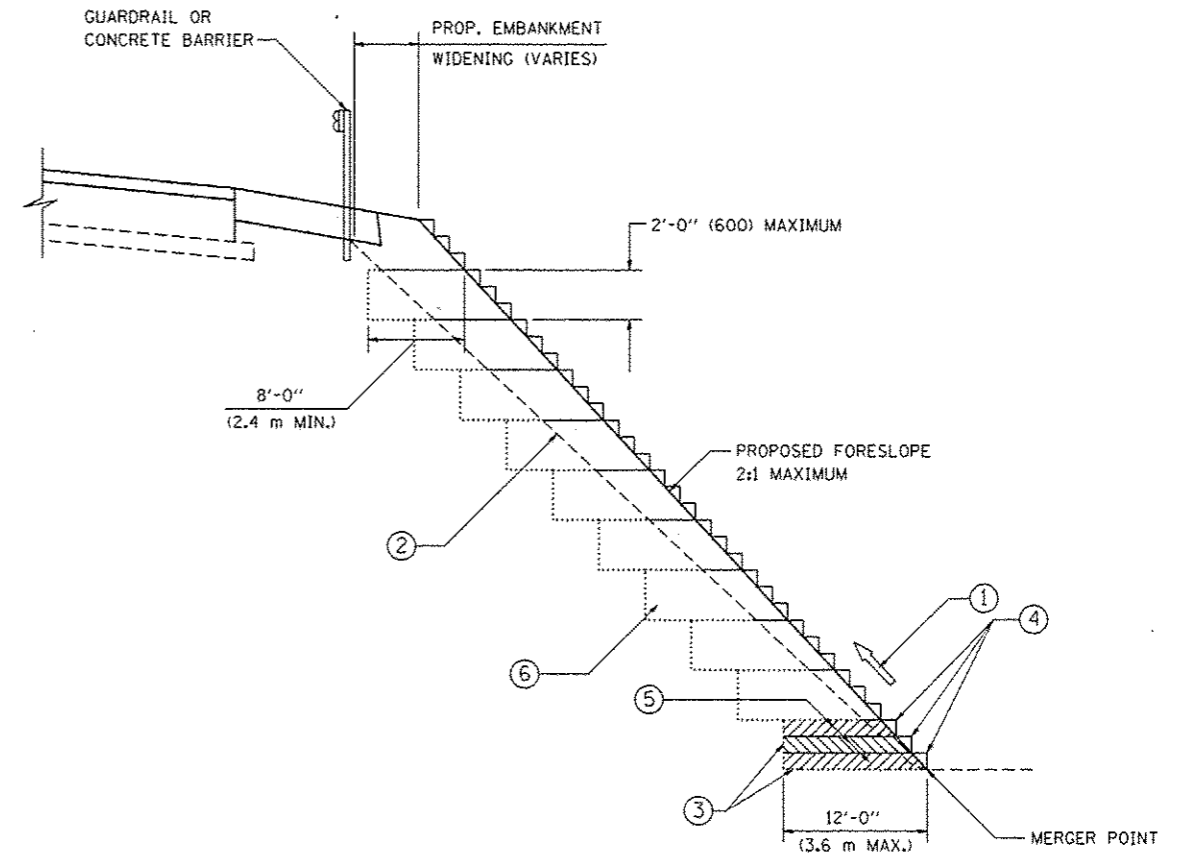
FILE NAME =	USER NAME = drivakoagn	DESIGNED = M. DE YONG	REVISED = R. BORO 01-01-07
or\pwork\pwork\drivakoagn\1818315\1818315.dgn		DRAWN =	REVISED = R. BORO 12-08-2008
	PLOT SCALE = 1/8" = 1'-0"	CHECKED =	REVISED = R. BORO 09-14-2009
	PLOT DATE = 9/4/2012	DATE = 09-22-90	REVISED = R. BORO 08-06-2012

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS FOR DEPRESSED CURB & GUTTER AND
SHOULDER TREATMENT AT TBT TY 1 SPL.

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-5	DUPAGE	963	702
BD600-10 (BD 34)		CONTRACT NO. 60131		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



**TYPICAL BENCHING DETAIL
FOR EMBANKMENT**

NOTES:

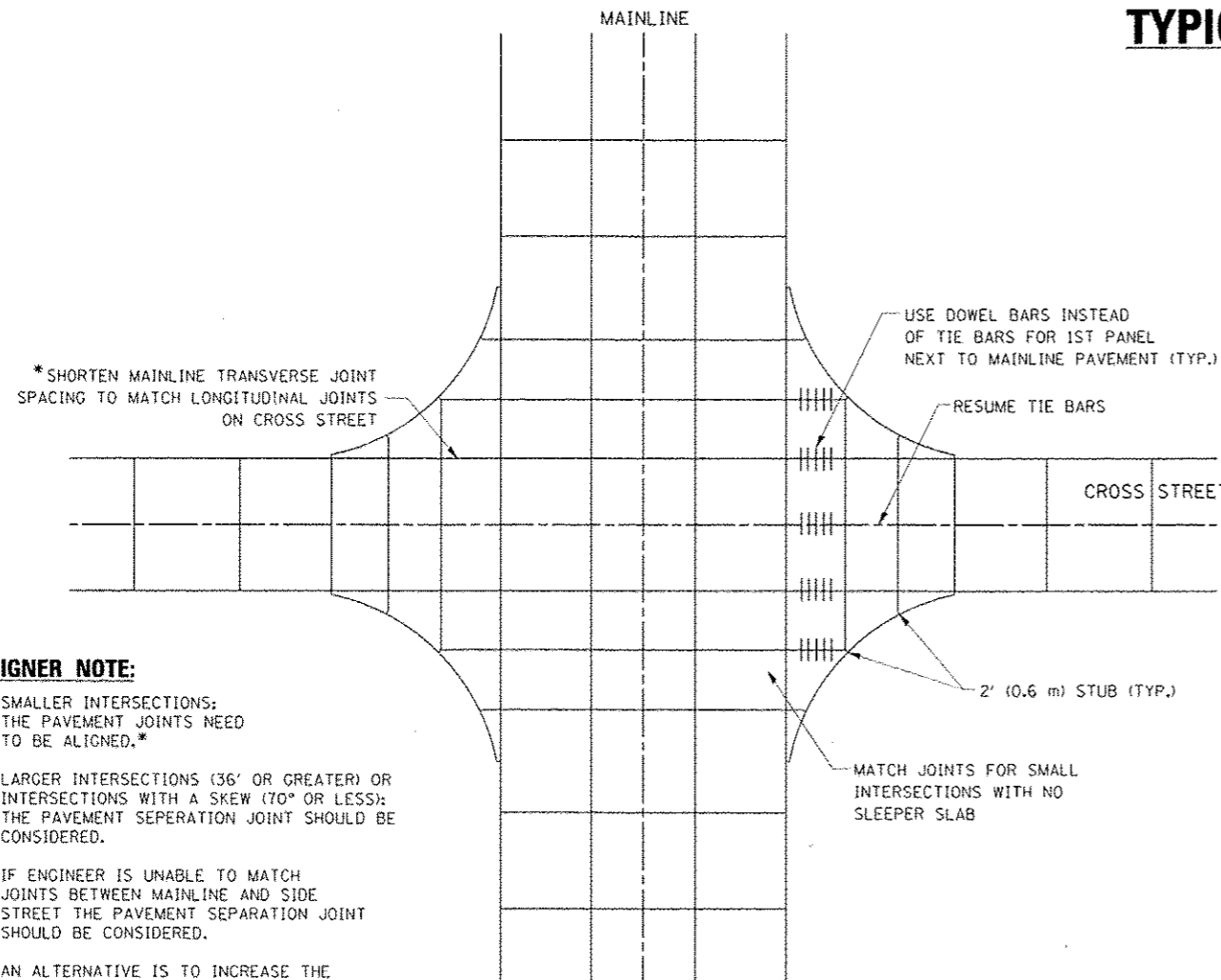
- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

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

FILE NAME W:\diststd\22x34\bd51.dgn	USER NAME ggglenabt	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BENCHING DETAIL FOR EMBANKMENT WIDENING		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0000 / IN.	CHECKED - S.E.B.	REVISED -				338	(112 & 113) WRS-5	DUPAGE	963	703
PLOT DATE = 1/4/2008	DATE - 06-16-04	REVISED -	REVISED -	SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

TYPICAL APPLICATION

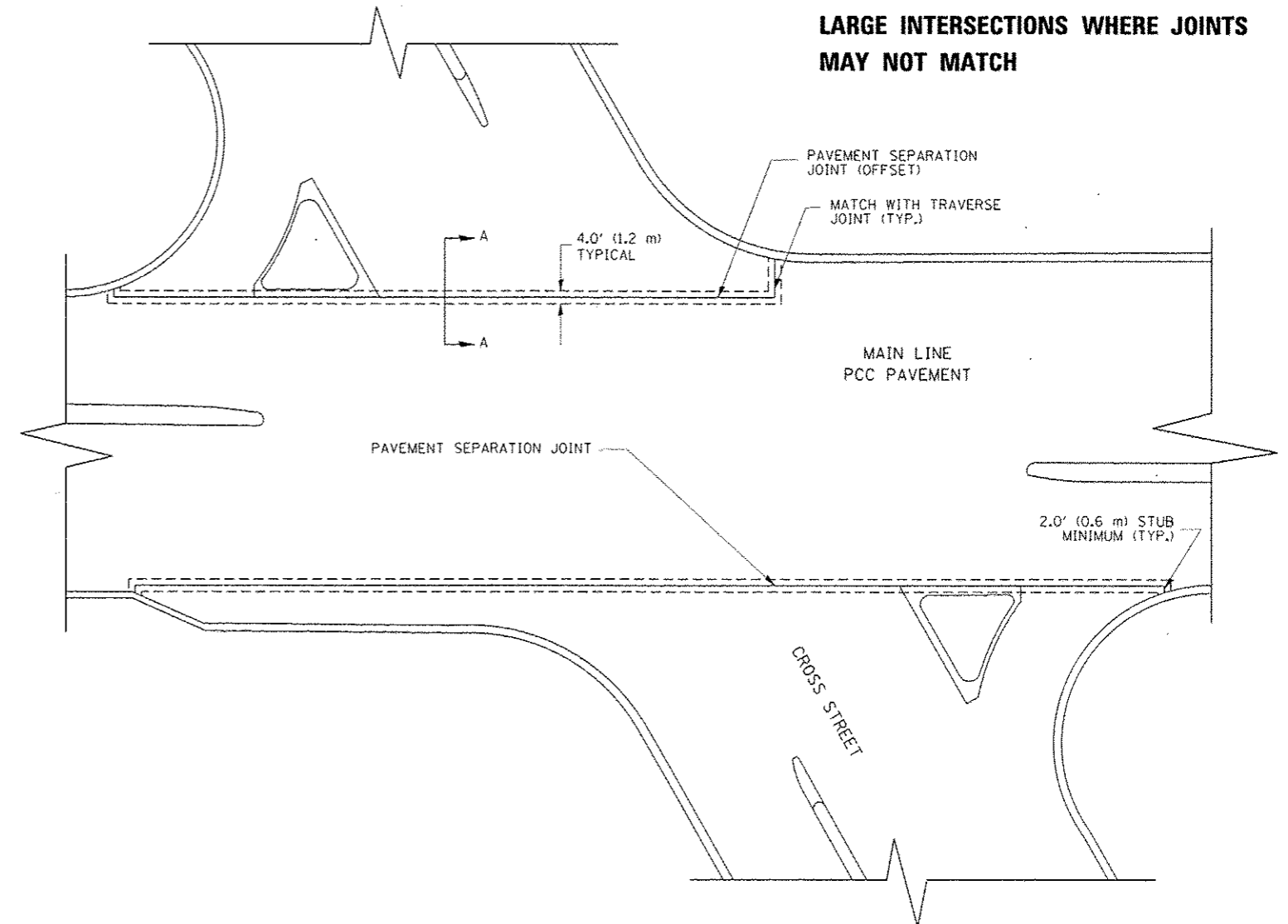
THE USE OF CROSS STREET PAVEMENT SEPARATION JOINTS FOR SKEWED OR LARGE INTERSECTIONS WHERE JOINTS MAY NOT MATCH



DESIGNER NOTE:

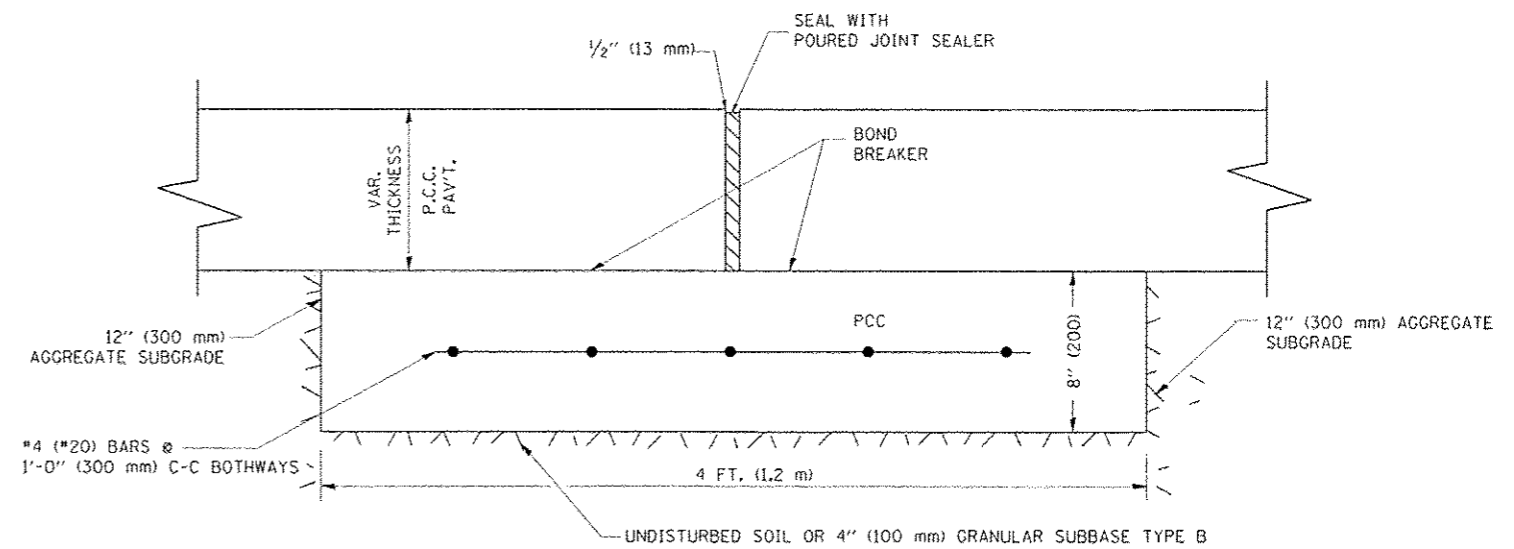
1. SMALLER INTERSECTIONS: THE PAVEMENT JOINTS NEED TO BE ALIGNED.*
2. LARGER INTERSECTIONS (36' OR GREATER) OR INTERSECTIONS WITH A SKEW (70° OR LESS): THE PAVEMENT SEPERATION JOINT SHOULD BE CONSIDERED.
3. IF ENGINEER IS UNABLE TO MATCH JOINTS BETWEEN MAINLINE AND SIDE STREET THE PAVEMENT SEPERATION JOINT SHOULD BE CONSIDERED.
4. AN ALTERNATIVE IS TO INCREASE THE PAVEMENT THICKNESSES BY 1/2" (13 mm) FOR THE LENGTH OF THE AFFECTED PANELS AT THE INTERSECTION.
5. FOR LARGE INTERSECTIONS (6 LANES OR MORE) WHERE JOINTS CAN BE MATCHED, USE #8 (25) DOWEL BARS INSTEAD OF #8 (25) TIE BARS AT EDGE OF MAINLINE PAVEMENT WHEN NO PAVEMENT SEPERATION JOINTS USED.

PLAN



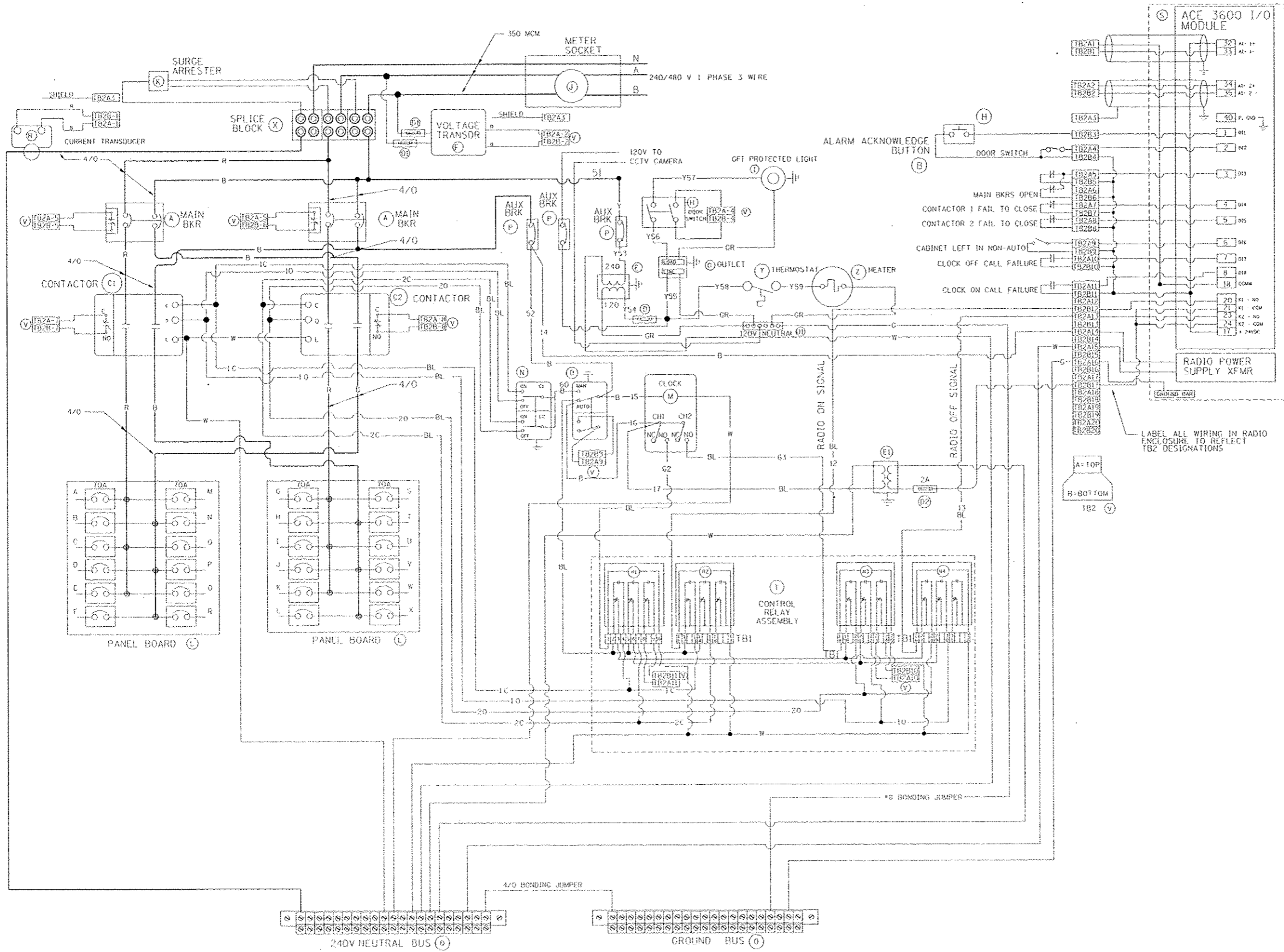
NOTE:

1. JOINT FILLER SHALL CONSIST OF A SHEET OF 1/2" (13 mm) BITUMINOUS PREFORMED FIBER JOINT FILLER CONFORMING TO ARTICLE 105L.03 OF THE STANDARD SPECIFICATIONS.
2. THE JOINT SHALL BE SEALED WITH A HOT POUR JOINT SEALER CONFORMING TO ARTICLE 105O.02 OF THE STANDARD SPECIFICATIONS.
3. A SINGLE LAYER OF FELT ROOFING PAPER SHALL SERVE AS A BOND BREAKER.
4. JOINT SHALL CONTINUE THROUGH COMBINATION CURB & CUTTER OR PCC SHOULDER.
5. PAVEMENT SEPARATION JOINT IS TO BE PAID FOR AS "SLEEPER SLAB" AND IS TO BE MEASURED IN PLACE BY THE LINEAL FOOT.
6. BOND BREAKER AND 1/2" (13 mm) JOINT AND FILLER SHALL BE INCIDENTAL TO THE PAY ITEM "SLEEPER SLAB".



PROPOSED SECTION A-A

FILE NAME bd52.dgn	USER NAME taylor	DESIGNED -	REVISED - CA00 06-18-10	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAIL OF PAVEMENT SEPARATION JOINT FOR JOINTED PCC PAVEMENTS AT INTERSECTIONS		F.A. RTE. 338	SECTION (112 & 113)WRS-5	COUNTY DUPAGE	TOTAL SHEETS 963	SHEET NO. 704	
PLOT SCALE: 1/4"=1'-0"		DRAWN -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	BD52		CONTRACT NO. 60131		
PLOT DATE: 2/25/2011		CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT							
DATE -		DATE -	REVISED -									



BILL OF MATERIALS		
ITEM #	QTY	DESCRIPTION
A	2	MAIN CIRCUIT BREAKERS 2 POLE 175 AMP WITH AUX CONTACT
B	1	ACKNOWLEDGE SWITCH, PUSH BUTTON WITH YELLOW INSERT
C1, C2	2	CONTACTOR 2 POLE 200 AMP 240V COIL WITH AUX CONTACTS
D	1	FINGERSAFE FUSE HOLDER WITH KTK-20A FUSE
O1	2	FINGERSAFE FUSE HOLDER WITH KTK-1/2 FUSE
O2	1	FINGERSAFE FUSE HOLDER WITH KTK- 2A FUSE
E	1	2.0 KVA 277V-240/120 TRANSFORMER
E1	1	0.25 KVA 240/120-24 VAC TRANSFORMER
F	1	VOLTAGE TRANSDUCER
G	1	15 AMP GFCI DUPLEX OUTLET W/COVER
H	2	DOOR SWITCH A-2000-B7-K
I	1	LIGHT FIXTURE
J	1	METER FITTING 1 PHASE 3 WIRE 200 AMP
K	1	SURGE ARRESTER
L	2	PANEL BOARD 480/240V 1 PHASE, 250 AMP COPPER BUS
M	1	2 CHANNEL DIGITAL TIME CLOCK
N	1	MOMENTARY SWITCH ON - OFF
O	1	SQUARE D, 900KSLB113, 2 POSITION SWITCH IN 900KVI ENCLOSURE
P	2	BREAKER 1P 15A
Q	2	COPPER GROUND AND NEUTRAL BUS 1 x 16 x 1/4
O1	1	COPPER NEUTRAL BUS WITH 1 1/0 AND #6 CONNECTOR POINTS
R	1	CURRENT TRANSDUCER
S	1	MOTOROLA ACE 3600
T	1	CONTROL RELAY ASSEMBLY 240V COILS WITH 4 3 PDT 25A RELAYS (W389ACK-15) (R1, R2, R3, R4) - QTY 32
V	20	TERMINAL BLOCKS
X	1	620 AMP SPLICE BLOCK
Y	1	40-80 DEG THERMOSTAT
Z	1	375 WATT HEATER

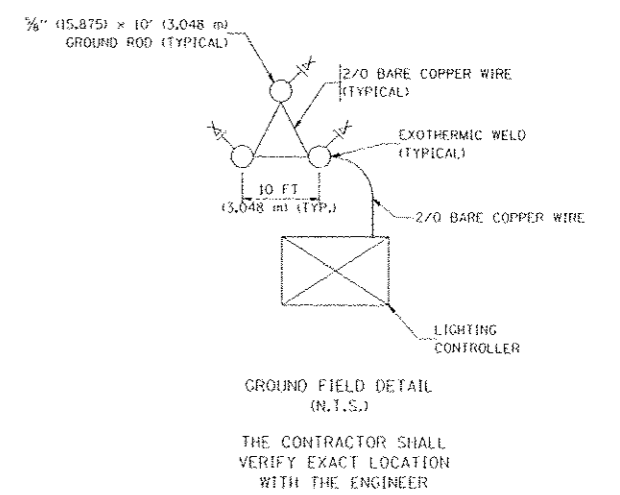
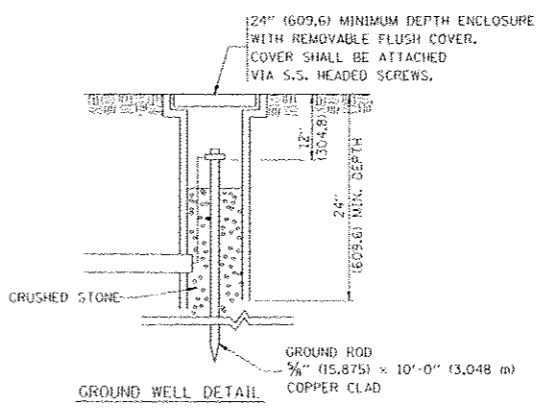
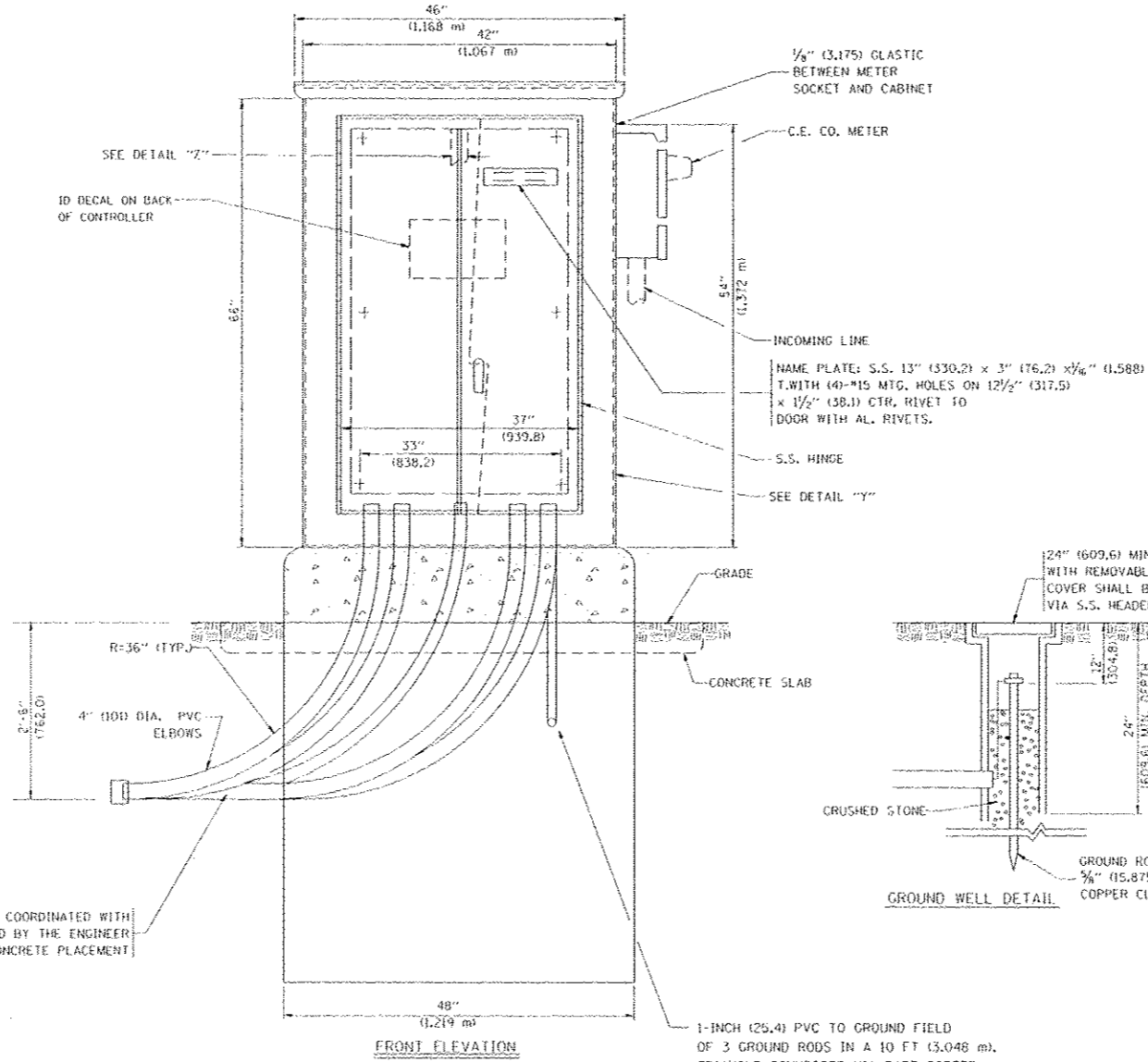
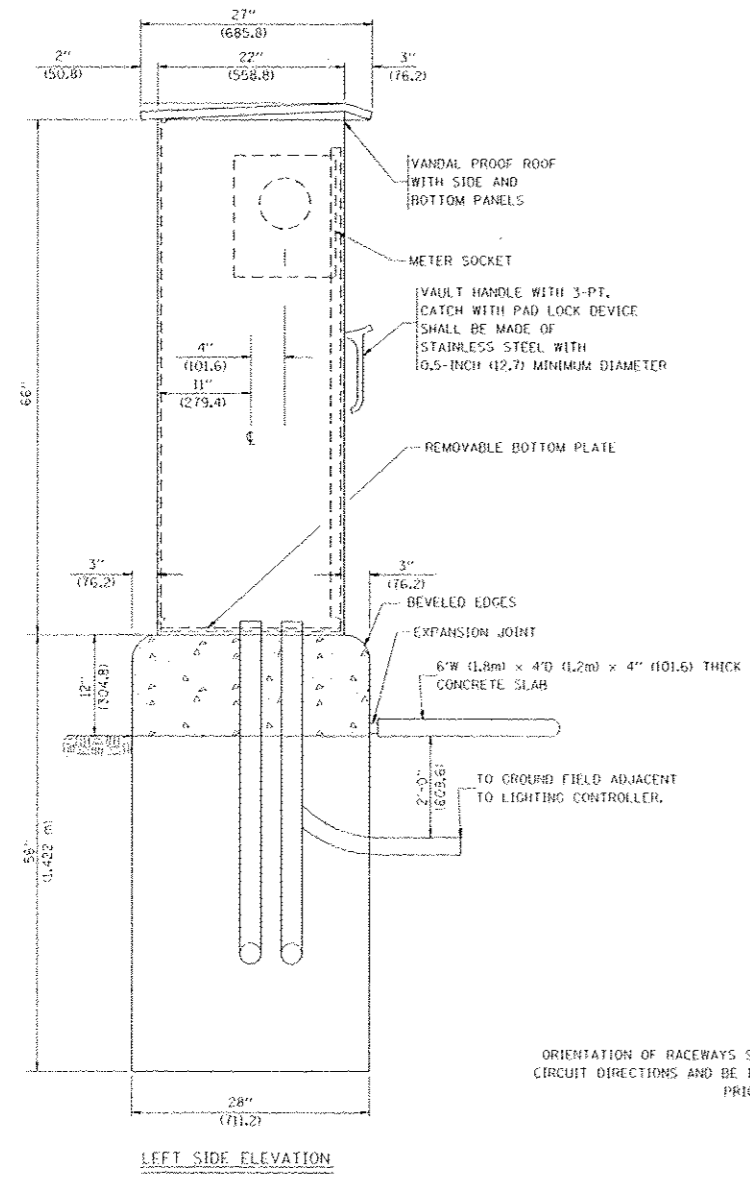
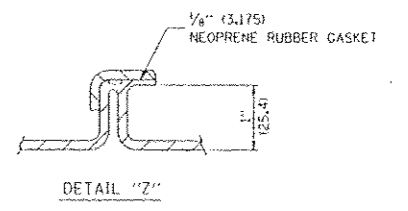
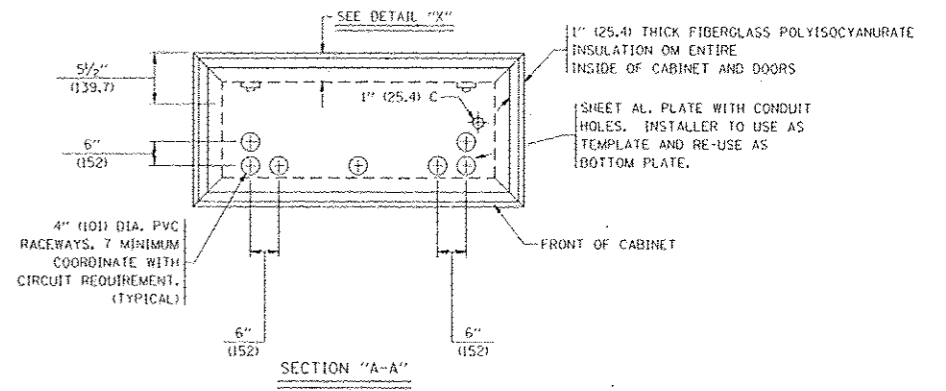
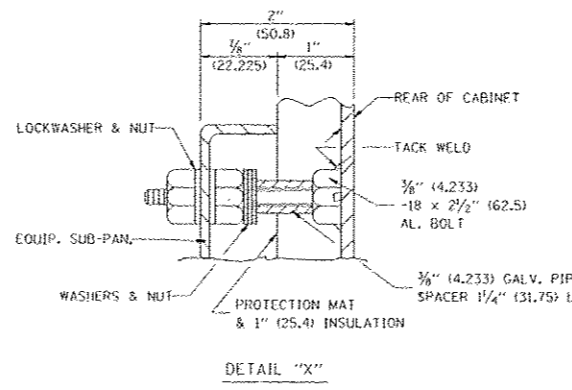
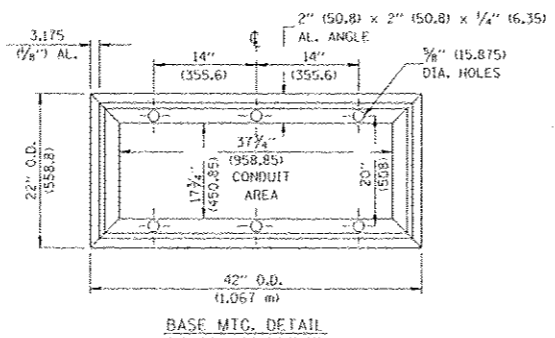
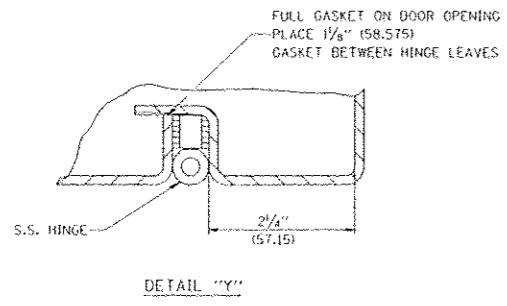
FILE NAME	USER NAME	DESIGNED	REVISED
PROJECT	LEGAN	R. TOMSONS 08-19-04	R. TOMSONS 05-11-09
PLOT SCALE	SCALE	CHECKED	REVISED
1/4"	1/4"	R. TOMSONS 03-10-10	
PLOT DATE	DATE		REVISED
2/28/2018			

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**LIGHTING CONTROLLER, RADIO CONTROL
DUPLIX TYPE WITH SCADA**

SCALE: NONE SHEET NO. 2 OF 4 SHEETS STA. TO STA.

F.A. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113)WRS-5	DUPAGE	963	706
BE-205			CONTRACT NO. 60131	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



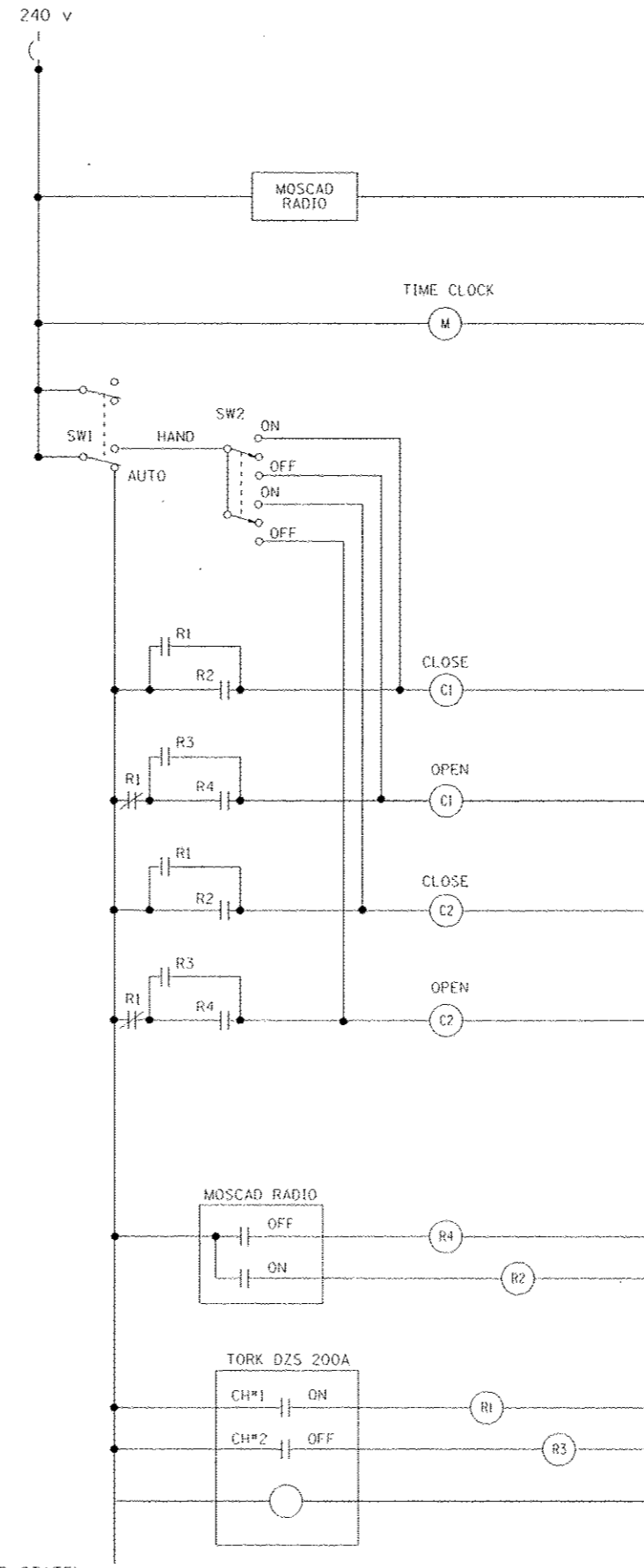
ORIENTATION OF RACEWAYS SHALL BE COORDINATED WITH CIRCUIT DIRECTIONS AND BE INSPECTED BY THE ENGINEER PRIOR TO CONCRETE PLACEMENT

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

FILE NAME : c:\pwworkspace\pwworkspace\11554\11554-205.dwg	USER NAME : logan	DESIGNED : DRAWN :	REVISED : REVISED : REVISED : REVISED :	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING CONTROLLER, RADIO CONTROL DUPLEX TYPE WITH SCADA		F.A. RTE. : 338	SECTION : (112 & 113) WRS-5	COUNTY : DUPAGE	TOTAL SHEETS : 963	SHEET NO. : 707	
PL01 SCALE : 1/8" = 1'-0"	PL01 DATE : 3/22/2010	CHECKED : DATE :			SCALE: NONE	SHEET NO. 3 OF 4 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS (FED. AID PROJECT)				
							BE-205					
							CONTRACT NO. 60131					

NOTES

- CABINET SHALL BE FABRICATED FROM 0.125-INCH (3.175) SHEET ALUMINUM #3003H14, FORMED AND ARC WELDED.
- ALL SCREWS AND HARDWARE SHALL BE PLATED, GALVANIZED, OR MADE OF BRASS, ALUMINUM OR STAINLESS STEEL, UNLESS OTHERWISE NOTED.
- NAME PLATE SHALL HAVE ENGRAVED 0.75-INCH (19.05) HIGH LETTERS FILLED IN BLACK: "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.
- ONE INCH THICK POLYISOCYANURATE INSULATION SHALL BE INSTALL AND PERMANENTLY CEMENTED ON ALL SIDES OF THE CABINET AND DOORS.
- CABINET SHALL BE PRIMED AND PAINTED AS SPECIFIED.
- ELECTRIC UTILITY METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET AS SHOWN ON THE PANEL LAYOUT DIAGRAM.
- THE COMPLETED CONTROLLER SHALL BE U.L. LISTED AS AN INDUSTRIAL CONTROL PANEL UNDER UL508.
- METAL MOUNTING PANEL SHALL BE FABRICATED FROM THE SAME MATERIAL AS THE CABINET AND SHALL BE FLANGED BACK 0.75-INCHES I.D. ON 4 SIDES.
- CIRCUIT BREAKERS AND CONTACTORS AND OTHER COMPONENTS SHALL BE MOUNTED ON 0.125-INCH (3.175) THICK GLASTIC INSULATION BACK PANEL.
- ALL DEVICES SHALL BE FRONT REMOVABLE.
- TIME CLOCK CHANNEL 1 N.O. CONTACT IS CLOSED NIGHT AND OPEN DAY (LIGHTS ON).
- SET LATITUDE TO 42 DEGREES. SET CH.1 TO 23 MINUTES AFTER ASTRONOMICAL SUNSET, 50 MINUTES BEFORE ASTRONOMICAL SUNRISE. SET CH.2 TO 60 MINUTES AFTER ASTRONOMICAL SUNSET (WITH A SIGNAL LENGTH OF 1 SECOND), +28 MINUTES AFTER ASTRONOMICAL SUNRISE (WITH A SIGNAL LENGTH OF 7 SECONDS.)
- BUS BAR SHALL HAVE 22 LUG TERMINALS SIZED TO ACCOMMODATE REQUIRED WIRE SIZES. 240V NEUTRAL BUS SHALL BE PAINTED WHITE, GROUND BUS SHALL BE PAINTED GREEN, AND THE 120V NEUTRAL BUS SHALL BE PAINTED GREY.
- ALL LUGS SHALL BE OF COPPER SCREWS AND CONNECTORS, SPRING HELD.
- ALL WIRING TERMINATIONS SHALL BE RATED NOT LESS THAN 75 DEGREE CENTIGRADE.
- ALL CONTROL WIRING SHALL BE 600V #12 TYPE MTW, SCADA WIRING SHALL BE #18.
- ALL POWER WIRING SHALL BE 600V TYPE RHH/RHW.
- ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:
 R - RED Y - YELLOW
 B - BLACK W - WHITE
 BL - BLUE G - GREEN
 G - GREY
- MOSCAD I/O WIRING SHALL BE:
 DIGITAL INPUT (DI) WIRING SHALL BE #18 MTW PURPLE.
 ANALOG INPUT (AI) WIRING SHALL BE #18, 2/C SHIELDED.
 AI AND DI WIRING MAY BE BUNDLED TOGETHER, BUT SHALL NOT BE BUNDLED WITH OTHER WIRING.
- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
- SCHEMATIC SHOWN WITH BREAKER OPEN, CONTACTOR OPEN, CABINET DOOR CLOSED, CLOCK NOT ACTIVE (DE-ENERGIZED STATE).
- A LAMINATED COPY OF THE CIRCUIT SCHEMATIC AND SCADA I/O DIAGRAM (NO SMALLER THAN 11"x17" EACH) SHALL BE ATTACHED TO THE INSIDE OF THE CONTROLLER WITH STAINLESS STEEL SCREWS.



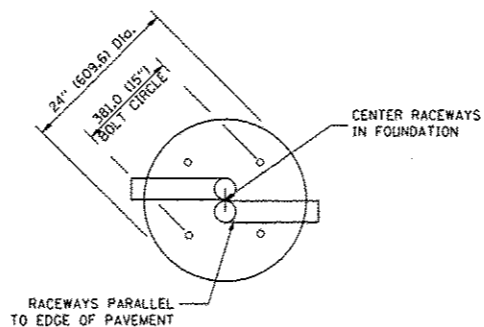
CONTROL CIRCUIT LADDER LOGIC DIAGRAM

MOSCAD I/O ASSIGNMENTS		
TERM	MOSCAD DESTINATION	DESCRIPTION OF INPUT
1	DIGITAL INPUT 1	ALARM KNOWLEDGE
2	DIGITAL INPUT 2	DOOR OPEN
3	DIGITAL INPUT 3	MAIN(S) BREAKER OPEN
4	DIGITAL INPUT 4	CONTACTOR 1 OPEN
5	DIGITAL INPUT 5	CONTACTOR 2 OPEN
6	DIGITAL INPUT 6	CABINET IN NON-AUTO
7	DIGITAL INPUT 7	BACK-UP CLOCK OFF CALL
8	DIGITAL INPUT 8	BACK-UP CLOCK ON CALL
17	24 V+	24+VDC
18	DI COMMON	COMMON
21	K1 C	K1 COMMON
22	K1 NO	LIGHTS ON CALL
24	K2 C	K2 COMMON
25	K2 NO	LIGHTS OFF CALL
32	ANALOG INPUT 1 (+)	CABINET NEUTRAL CURRENT
33	ANALOG INPUT 1 (-)	CABINET NEUTRAL CURRENT
34	ANALOG INPUT 2 (+)	CABINET SERVICE VOLTAGE
35	ANALOG INPUT 2 (-)	CABINET SERVICE VOLTAGE
40	P. GROUND	GROUND

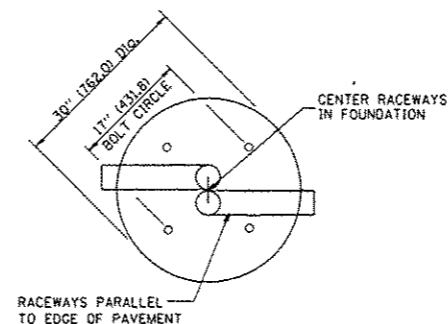
ALL ANALOG INPUTS WILL BE 4-20 MA ONLY. DIGITAL OUTPUT RELAYS WILL BE ELECTRICALLY ENERGIZED AND MOMENTARILY HELD
 MIXED I/O MODULE MODEL NUMBER V435

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

SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SO. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SO. FT.	9'-6" (2.93 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SO. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND φ = 34°	9'-0" (2.74 m)	10'-0" (3.05 m)
MEDIUM SAND φ = 37.5°	8'-3" (2.52 m)	9'-0" (2.74 m)
DENSE SAND φ = 40°	7'-9" (2.36 m)	9'-0" (2.74 m)



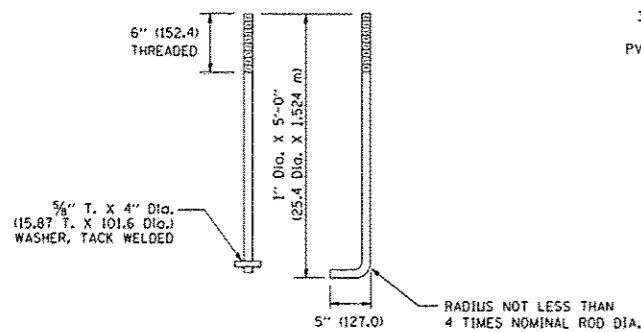
TOP VIEW



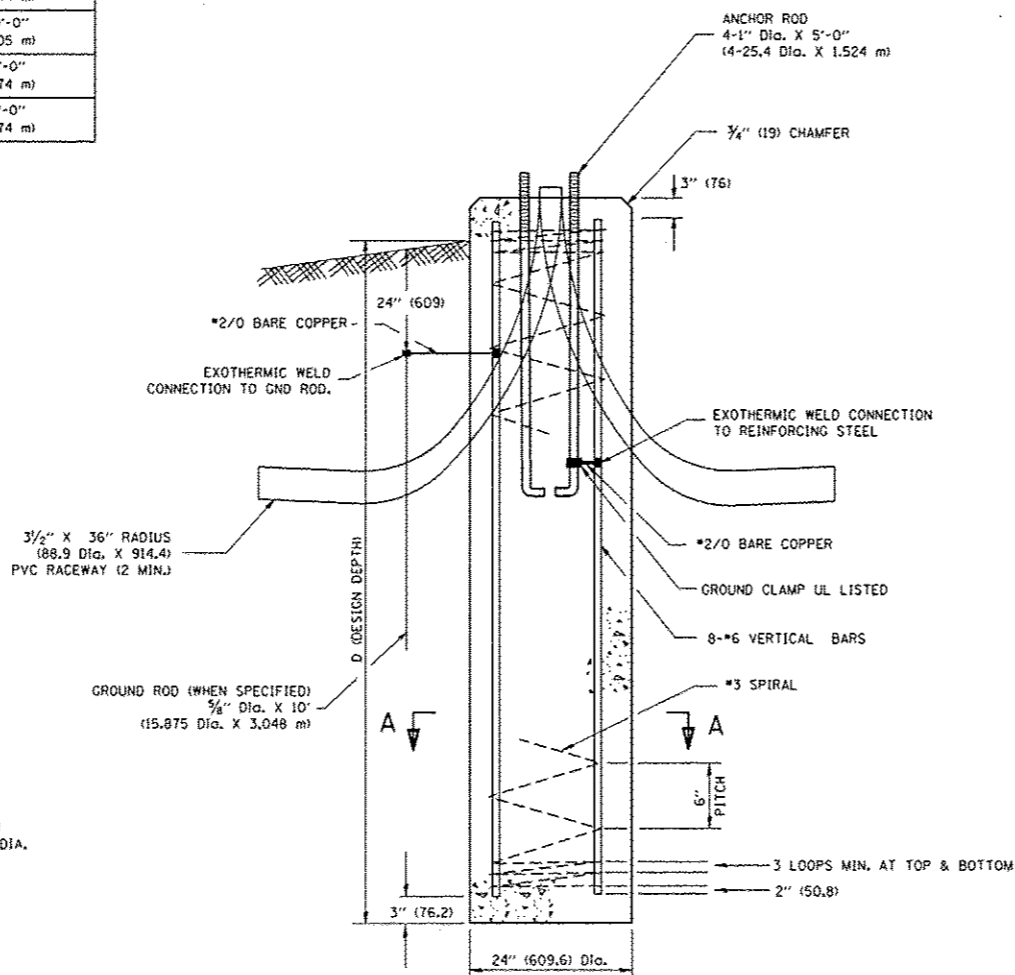
TOP VIEW

NOTES

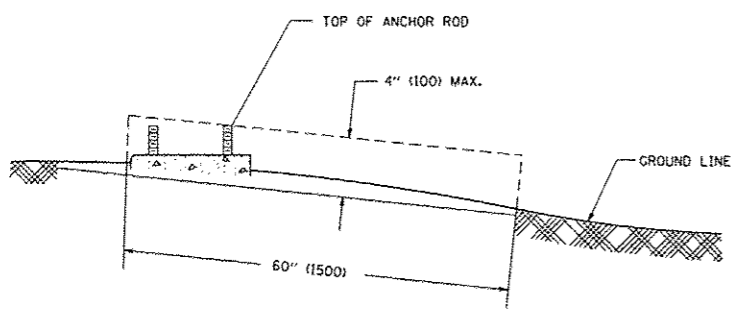
- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED.
- THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED. IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
- 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.
- THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN. (20 mm).
- THE CONCRETE SHALL BE CLASS S1. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- 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.
- 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.
- 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 UMG MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- ANCHOR RODS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
- THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.



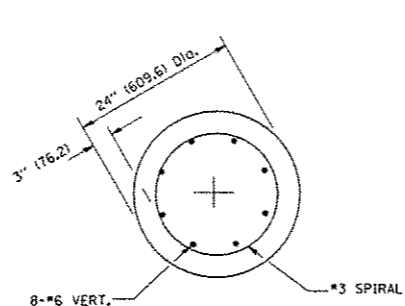
ANCHOR ROD DETAIL



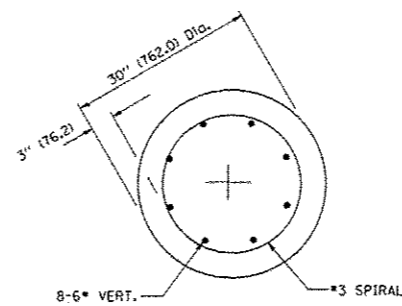
FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SECTION A-A

FILE NAME
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DRAWN -
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PLOT DATE = 1/4/2008

DESIGNED -
DRAWN -
CHECKED -
DATE -

REVISED - 04-22-02
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHT POLE FOUNDATION
40' (12.192 m) TO 47 1/2' (14.478 m) M.H. 15" (381 mm) BOLT CIRCLE
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

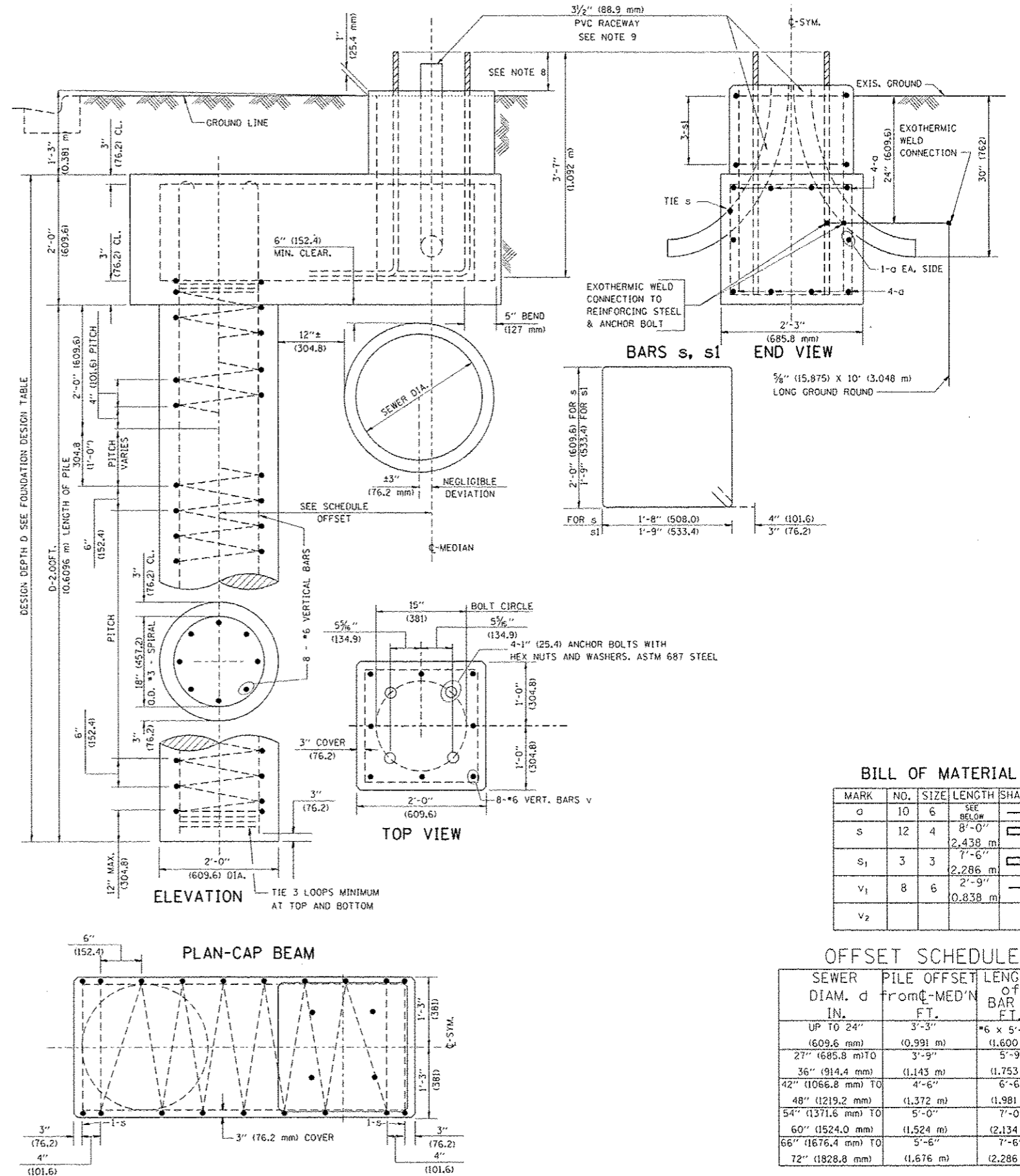
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113)WRS-5	DUPAGE	963	709
BE-301		CONTRACT NO. 60131		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

FOUNDATION DESIGN TABLE

TYPE OF SOIL	DESIGN DEPTH OF FOUNDATION		REINFORCEMENT IN FOUNDATION			
	SINGLE ARM D	TWIN ARM D	SINGLE ARM		TWIN ARM	
			VERT BARS	SPIRAL	VERT BARS	SPIRAL
SOFT CLAY	13'-0" (3.962 m)	15'-0" (4.572 m)	8-"6X12'-6" (3.810 m)	"3X122' (37.186 m)	8-"6X14'-3" (4.343 m)	"3X141' (42.977 m)
MEDIUM CLAY	9'-6" (2.896 m)	10'-9" (3.277 m)	8-"6X9'-0" (2.743 m)	"3X90' (27.432 m)	8-"6X10'-0" (3.048 m)	"3X100' (30.480 m)
STIFF CLAY	7'-0" (2.134 m)	8'-0" (2.438 m)	8-"6X6'-6" (1.981 m)	"3X66' (20.112 m)	8-"6X7'-6" (2.286 m)	"3X76' (23.165 m)
LOOSE SAND	9'-0" (2.743 m)	10'-0" (3.048 m)	8-"6X8'-6" (2.591 m)	"3X85' (25.908 m)	8-"6X9'-6" (2.896 m)	"3X94' (28.651 m)
MEDIUM SAND	8'-3" (2.515 m)	9'-0" (2.743 m)	8-"6X8'-0" (2.438 m)	"3X78' (23.774 m)	8-"6X8'-6" (2.591 m)	"3X85' (25.908 m)
DENSE SAND	7'-9" (2.362 m)	9'-0" (2.743 m)	8-"6X7'-6" (2.286 m)	"3X73' (22.250 m)	8-"6X8'-6" (2.591 m)	"3X85' (25.908 m)
ROCK OR SOLIDIFIED SLAG	5'-0" (1.524 m)	5'-0" (1.524 m)	NONE	NONE	NONE	NONE

NOTES

- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ENGINEER SHALL DETERMINE THE CLASS OF SOIL DURING EXCAVATION AND SELECT THE DESIGN DEPTH OF FOUNDATION FROM THE DESIGN TABLE.
- EXCAVATION OF THE POLE FOUNDATION SHALL BE MADE WITH AN AUGER, 24" (609.6 mm) OR 30" (762.0 mm) IN DIAMETER.
- 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.
- THE ANCHOR BOLTS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN THE FORM.
- 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.
- THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF FOUNDATION WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS. IF LIGHT POLE IS MOUNTED WITHOUT BREAKAWAY DEVICE, ANCHOR BOLTS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE TOP OF THE FOUNDATION. THE CONTRACTOR SHALL CONFIRM ANCHOR BOLT EXTENTION WITH ENGINEER.
- RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.
- THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE LIGHT IS ERECTED.



BILL OF MATERIAL

MARK	NO.	SIZE	LENGTH	SHAPE
a	10	6	SEE BELOW	—
s	12	4	8'-0" 2,438 m	□
s1	3	3	7'-6" 2,286 m	□
v1	8	6	2'-9" 0,838 m	—
v2				

OFFSET SCHEDULE

SEWER DIAM. d IN.	PILE OFFSET from C-MED'N FT.	LENGTH of BAR a FT.
UP TO 24" (609.6 mm)	3'-3" (1,091 m)	"6 x 5'-3" (1,600 m)
27" (685.8 mm) TO	3'-9" (1,143 m)	5'-9" (1,753 m)
36" (914.4 mm) TO	4'-6" (1,372 m)	6'-6" (1,981 m)
42" (1066.8 mm) TO	5'-0" (1,524 m)	7'-0" (2,134 m)
48" (1219.2 mm) TO	5'-6" (1,676.4 mm)	7'-6" (2,286 m)
54" (1371.6 mm) TO		
60" (1524.0 mm) TO		
66" (1676.4 mm) TO		
72" (1828.8 mm) TO		

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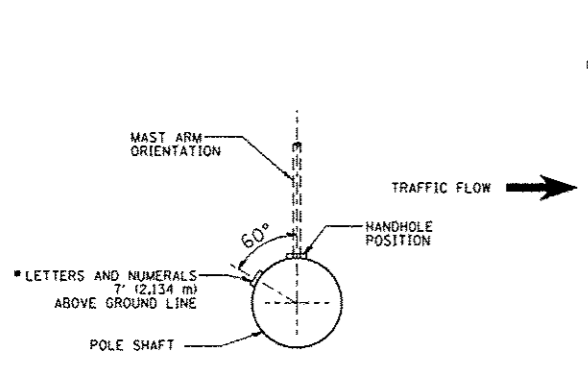
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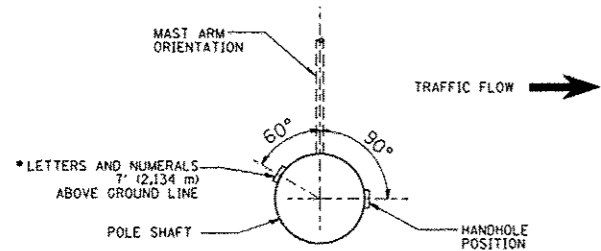
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

LIGHT POLE FOUNDATION OFFSET
 40" (12,192 mm) TO 47 1/2" (14,478 mm) M.H.
 15" (381 mm) BOLT CIRCLE
 SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

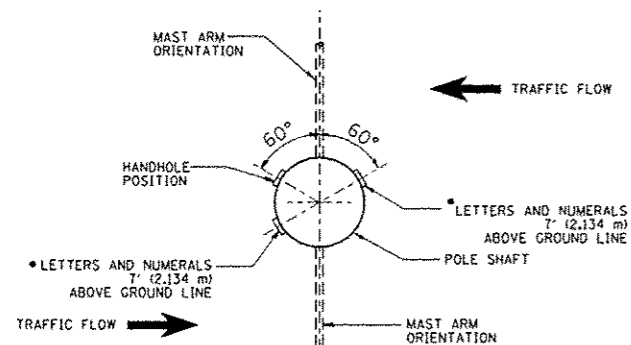
F.A. RTE. 338 SECTION (112 & 113) WRS-5 COUNTY DUPAGE TOTAL SHEETS 963 SHEET NO. 710
 BE-310 CONTRACT NO. 60131 ILLINOIS FED. AID PROJECT



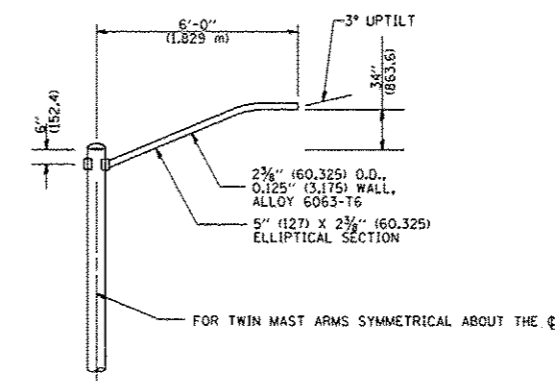
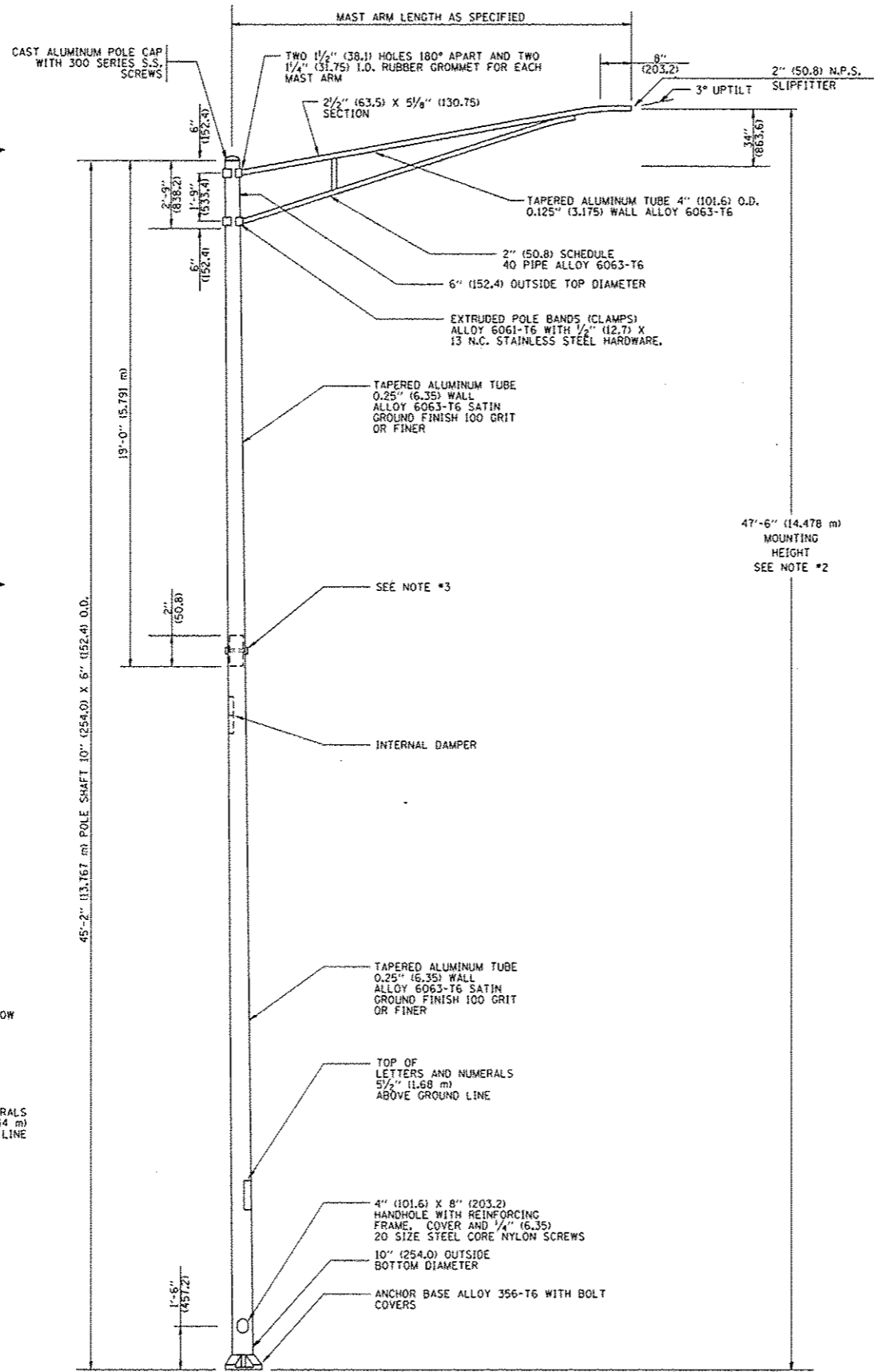
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL



POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES

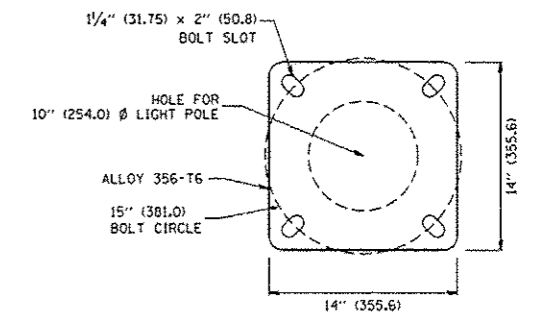


POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES

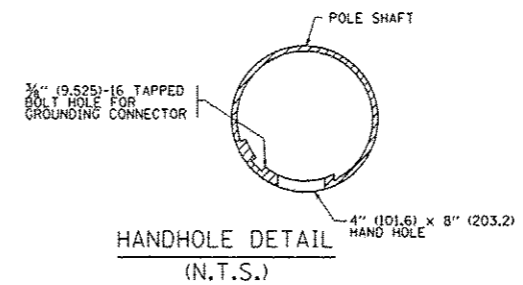


6' (1.8 m) SINGLE MEMBER MAST ARM (N.T.S.)

- NOTES:
1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
 2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
 3. TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
 4. THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
 5. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR, BURNOY 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.

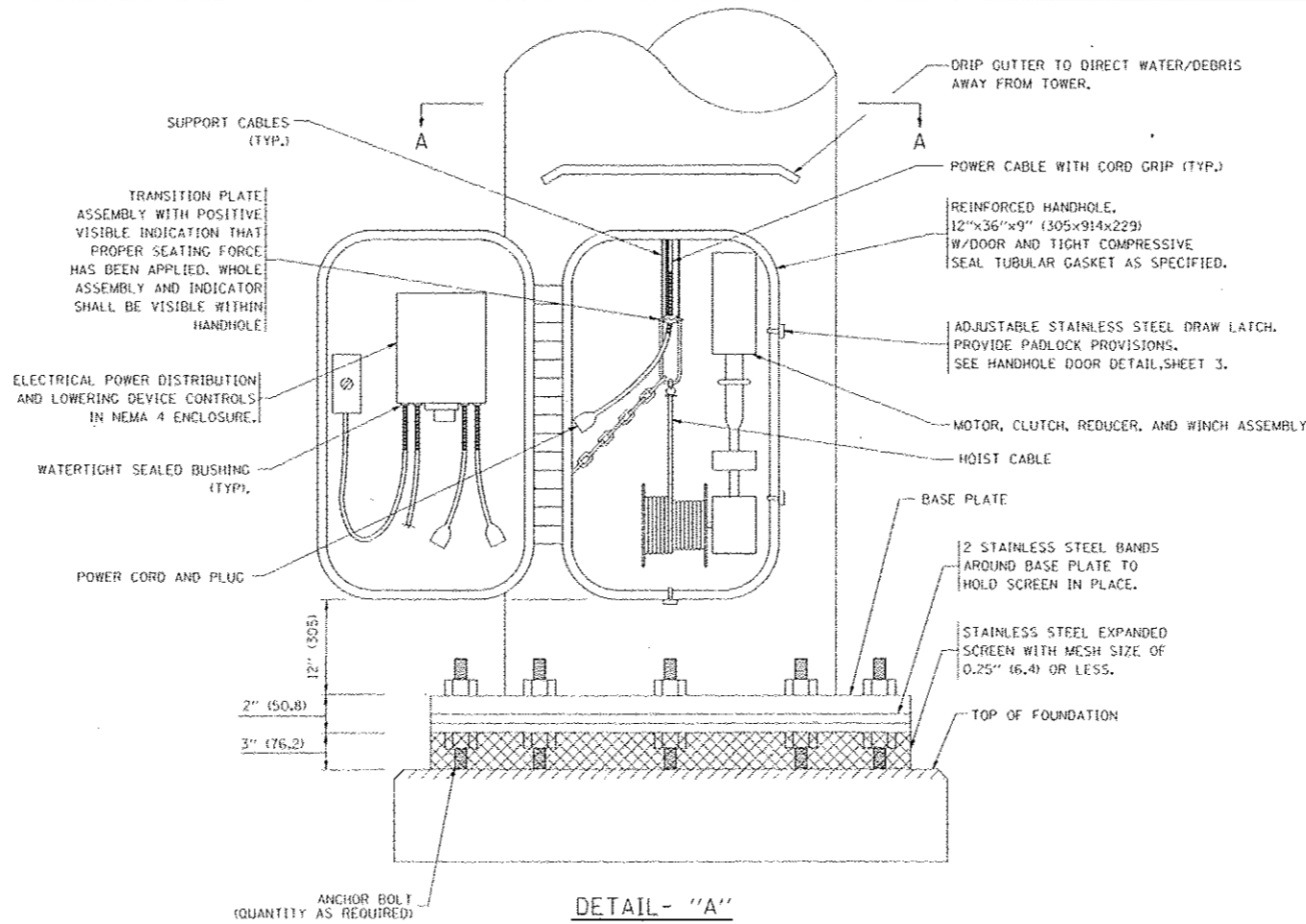
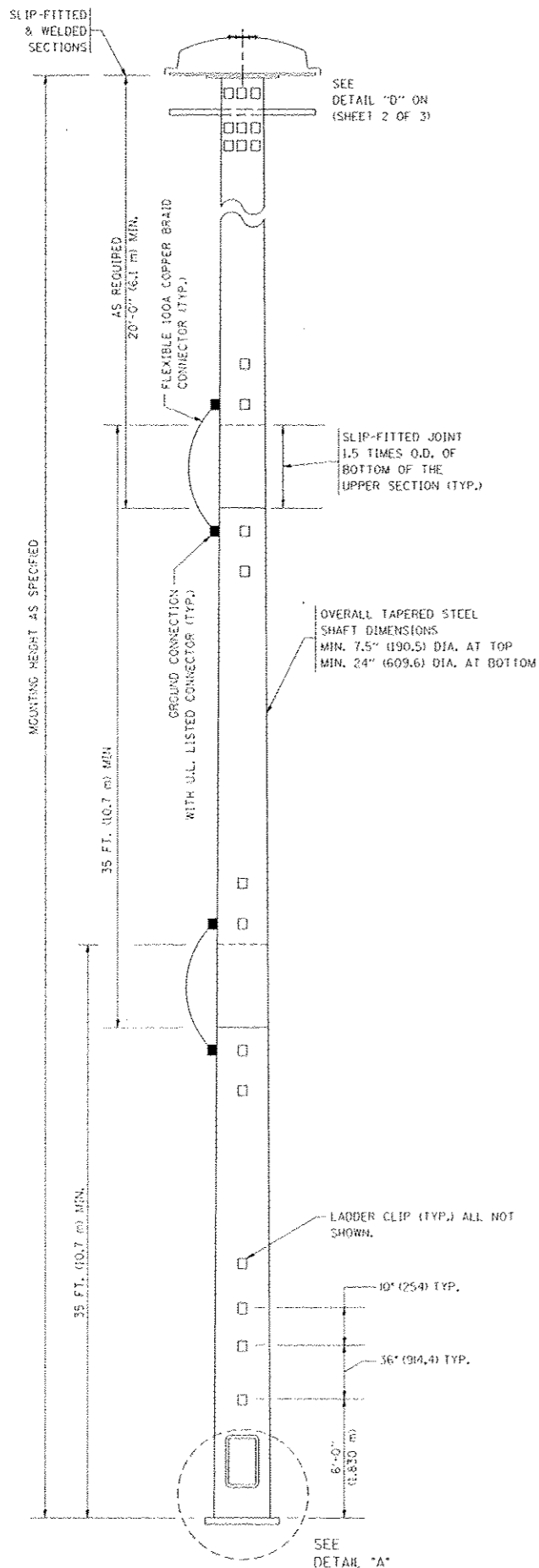


LIGHT POLE BASE PLATE DETAIL
15 INCH (381.0) BOLT CIRCLE

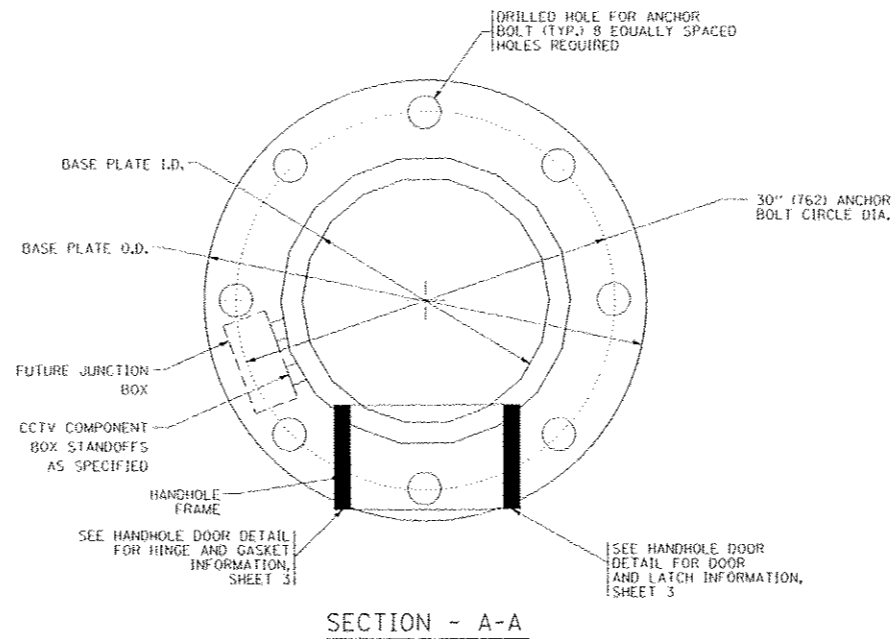


HANDHOLE DETAIL (N.T.S.)

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		DRAWN -	REVISED - R. TOMSONS 09-03-03		47'-6" (14.478 m) MOUNTING HEIGHT		338	(112 & 113)WRS-5	DUPAGE	963	711
		CHECKED -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	CONTRACT NO. 60I31		
		DATE -	REVISED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT						



DETAIL - "A"
3 CABLE LOWERING & SUPPORT MECHANISM SHOWN.



SECTION - A-A

NOTES:

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. THE DESIGN SHALL BE BASED UPON AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" CURRENT AT THE TIME THE PROJECT IS ADVERTISED AND A TOTAL COMBINED LUMINAIRE WEIGHT OF 720 LBS. (326 kg) AND HAVING A TOTAL PROJECTED AREA OF 24 SQ. FT. (7.3 sq. m).
3. ALL TOWER SHAFT COMPONENTS, INCLUDING, BUT NOT LIMITED TO THE SHAFT SECTIONS, BASE PLATE, LADDER CLIPS, HANDHOLE DOOR, HANDHOLE REINFORCING, RAIN GUTTER, AND BASE PLATE, SHALL BE FABRICATED FROM HIGH-STRENGTH, LOW ALLOY, STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI (345 K PA) ACCORDING TO AASHTO M 223 (ASTM A 572 GR50).
4. THE ELECTRIC MOTOR, MOTOR GEAR REDUCER, WINCH DRUM ASSEMBLY AND AUTOMATIC SHUTOFF SWITCH OF THE LOWERING DEVICE SHALL BE ACCESSIBLE FROM THE FRONT OF THE TOWER FOR EASY REMOVAL AND MAINTENANCE. ALL COMPONENTS SHALL BE REMOVABLE THROUGH THE HANDHOLE.
5. THE LIGHT TOWER SHAFT SHALL HAVE LADDER CLIPS. CLIPS SHALL BEGIN 6 FT. (1.8 m) ABOVE THE BASE PLATE WITH ALTERNATE 36 INCH (900) AND 10 INCH (250) SPACING THEREAFTER, FOR THE ENTIRE LENGTH. THE TOP 10 FT. (3 m) OF THE POLE SHAFT SHALL HAVE 3 SETS OF CLIPS. EACH SET OF CLIPS SHALL BE 120 DEGREES APART. CLIPS SHALL BE 0.25 X 2 INCHES (6 X 50) WELDED TO THE SHAFT TO PRODUCE A SLOT 0.625 INCHES (15.9) DEEP AND 1.625 INCHES (41.3) LONG, THE TOP INSIDE EDGE SHALL BE CHAMFERED.
6. A COPPER BONDING JUMPER SHALL BOND SLIP-FIT POLE SECTIONS TOGETHER WITH A FLAT COPPER MESH AND STAINLESS STEEL GROUND LUGS.
7. ALL TOWER SHAFT HARDWARE, SUCH AS GROUND LUGS, JUNCTION BOXES, HARDWARE FOR THE HANDHOLE DOOR, INCLUDING THE HANDLE/LATCH MECHANISM, HINGE AND DOOR STOP, SHALL BE STAINLESS STEEL. ALL CONDUIT AND CONDUIT FITTINGS SHALL BE PVC COATED GALVANIZED STEEL.
8. THE ENTIRE TOWER INCLUDING THE SHAFT, HANDHOLE, HANDHOLE DOOR, BASE PLATE AND ALL OTHER ELEMENTS WELDED TO THE SHAFT SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 111 (ASTM A 123) AND THEN PAINTED AS SPECIFIED. THE LUMINAIRE RING SHALL BE PRIMED AND PAINTED AS SPECIFIED.
9. THE FINISH COAT SHALL BE ANSI 70, SKY GREY COLOR SAMPLE TO BE SUBMITTED FOR APPROVAL. ON LIGHT TOWERS DESIGNED FOR A CCTV CAMERA TO BE INSTALLED, THE TOP SECTION OR 30 FT. WHICH EVER IS GREATER OF THE TOWER SHAFT SHALL BE PAINTED FLAT BLACK. OTHER SECTIONS SHALL BE ANSI 70, SKY GREY.
10. ALL MULTI-CONDUCTOR CABLES SHALL BE FITTED WITH A HEAT-SHRINK MULTI-LEG BOOT. THE BOOT SHALL MEET MILITARY SPECIFICATION MIL-I-81765/1.
11. THE LIGHT TOWER SHALL BE STRAIGHT AND CENTERED ON ITS LONGITUDINAL AXIS, UNDER NO-WIND CONDITIONS, SO WHEN EXAMINED WITH A TRANSIT FROM ANY DIRECTION, THE DEVIATION FROM THE NORMAL SHALL NOT EXCEED 1/8 IN. IN 3 FT (2 mm IN 1 m) WITHIN ANY 5 FT (1.5 m) OF HEIGHT, WITH TOTAL DEVIATION NOT TO EXCEED 3 IN. (75) FROM THE VERTICAL AXIS THROUGH THE CENTER OF THE POLE BASE.
12. PVC CONDUIT WILL NOT BE ALLOWED FOR ANY LIGHT TOWER COMPONENT.
13. COUNTER WEIGHTS TO BE INCLUDED AS A PART OF THE LIGHT TOWER PAY ITEM.

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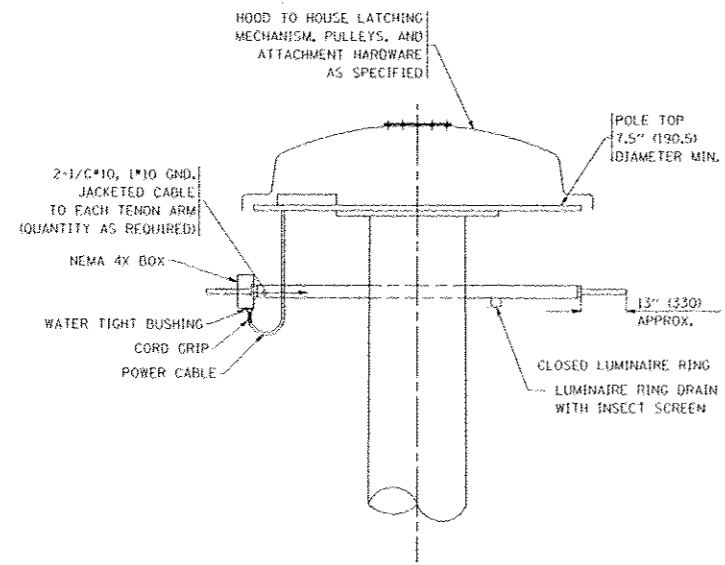
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REVISED: R. TOMSONS 05-11-09
REVISED: R. TOMSONS 09-02-10
REVISED: -

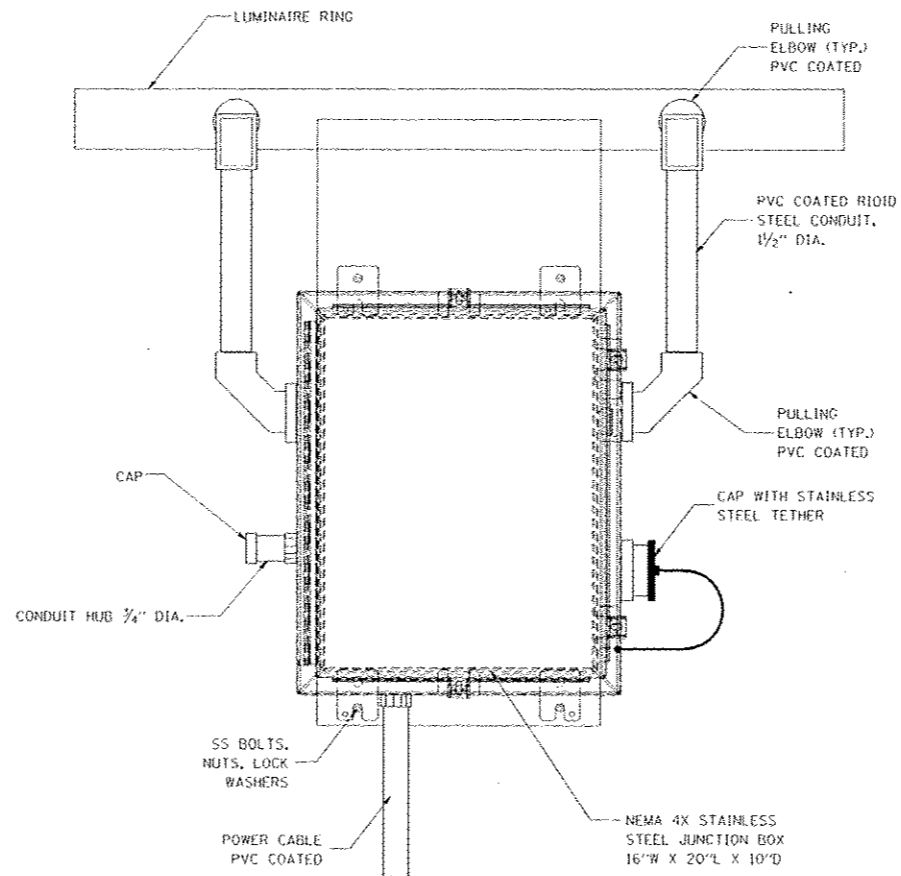
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

HIGH MAST LIGHT TOWER
90 FT TO 110 FT (27 m TO 34 m)
SCALE: NONE
SHEET NO. 1 OF 3 SHEETS
STA. TO STA.

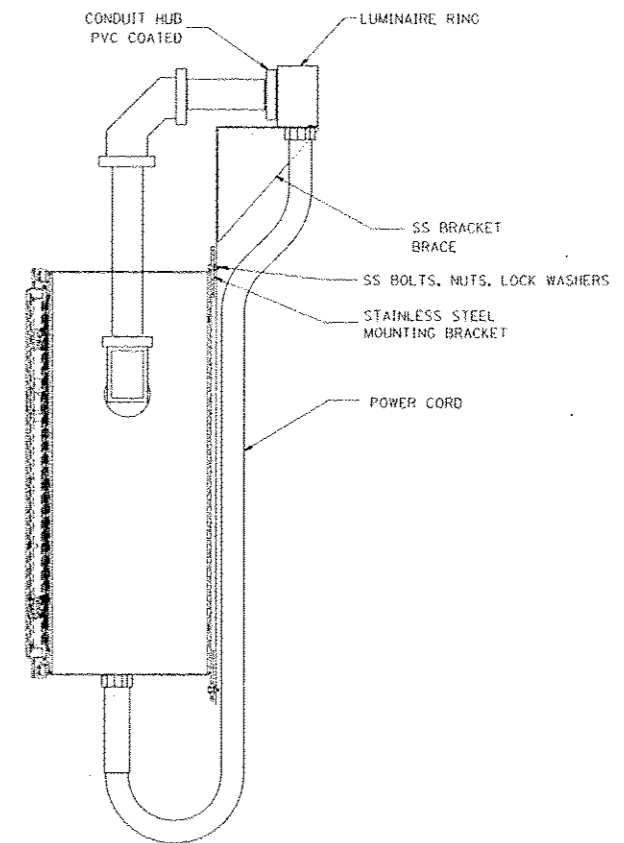
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113)WRS-5	DUPAGE	963	712
BE-500		CONTRACT NO. 60131		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



DETAIL--"D"

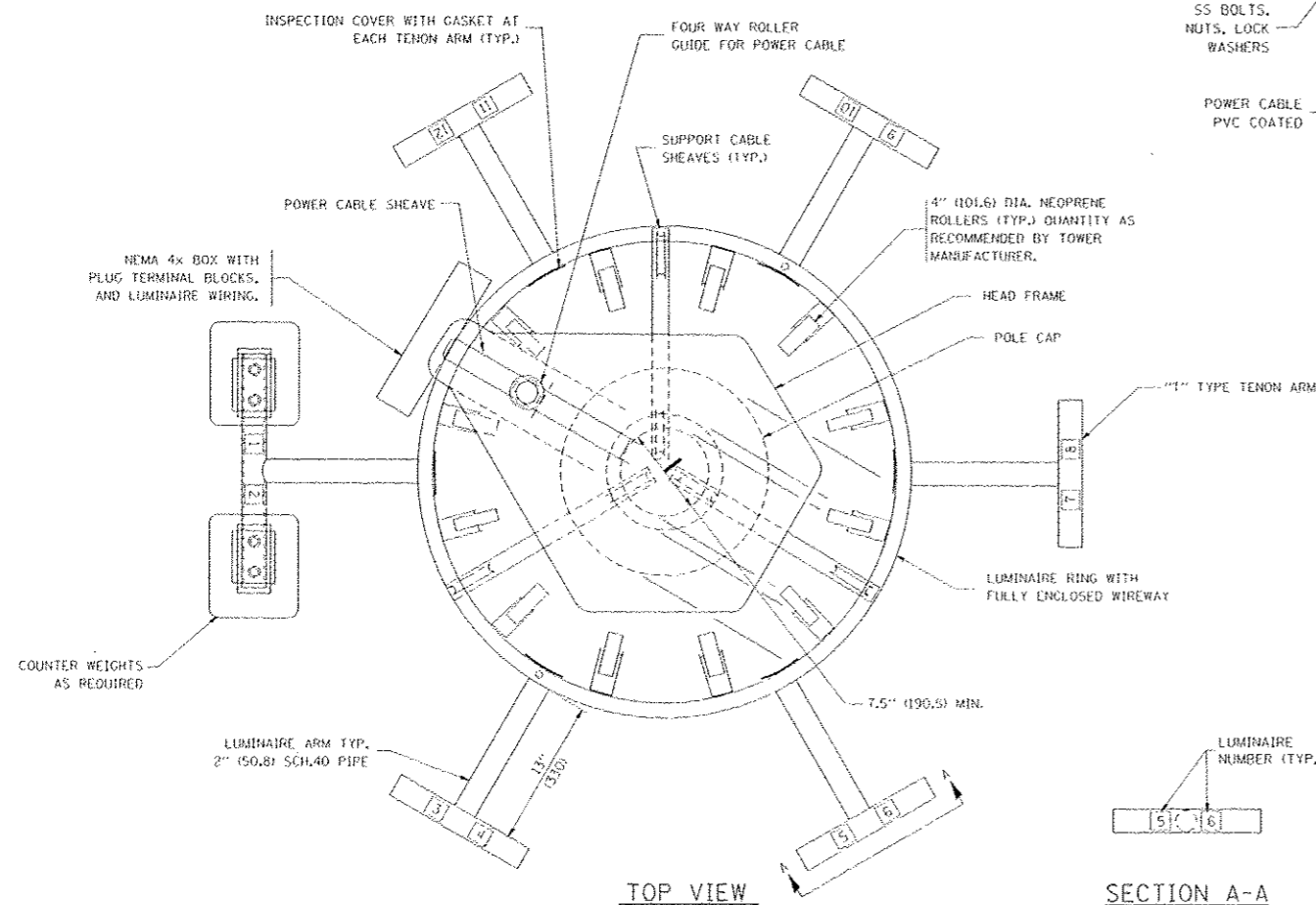


FRONT VIEW
N.T.S.



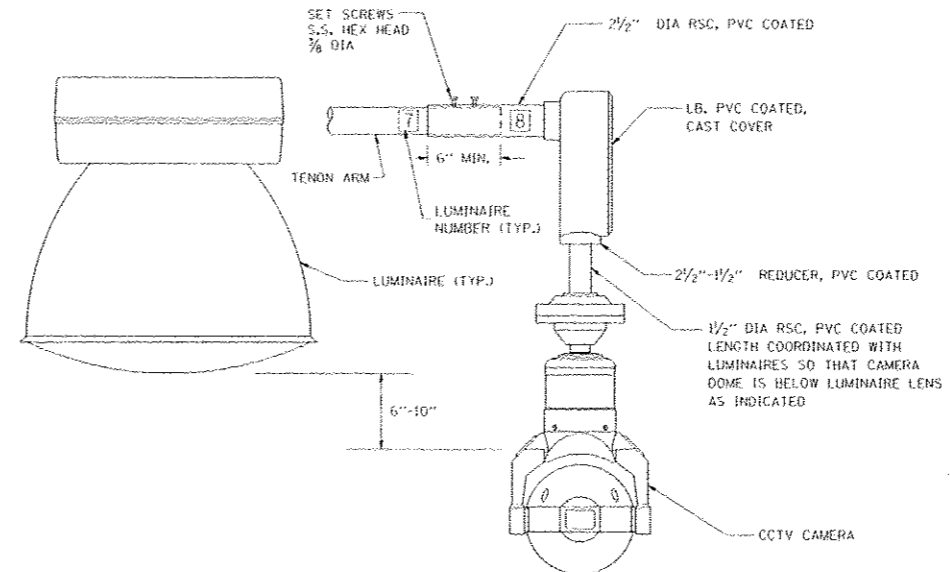
SIDE VIEW
N.T.S.

LUMINAIRE RING TERMINAL BOX



TOP VIEW

SECTION A-A

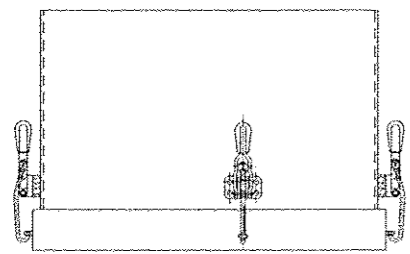


CCTV CAMERA MOUNTING DETAIL

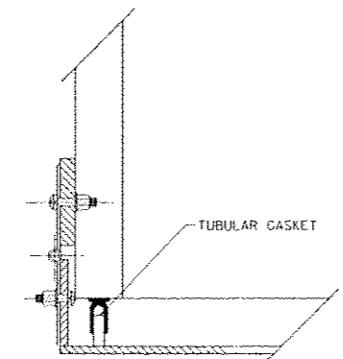
NOTES:

- LUMINAIRE WIRES SHALL EXTEND 24 INCHES (609 mm) LONGER THAN THEIR RESPECTIVE TENON ARM AND SHALL BE TRAINED BACK INTO THE ARM WHICH SHALL THEN BE CLOSED WITH A CAP AS SPECIFIED. ALL WIRES SHALL BE CAPPED WITH HEAT SHRINK INSULATING BOOTS. CRIMP CAPS ARE UNACCEPTABLE. ALL RING WIRES SHALL BE TAGGED WITH WIRE MARKERS AT BOTH ENDS. THE TENON ARMS SHALL ALSO BE TAGGED CORRESPONDING TO THE WIRING CONTAINED WITHIN.
- SPLICING WILL NOT BE ALLOWED WITHIN THE LUMINAIRE RING.
- ALL TOWER SHAFT HARDWARE, SUCH AS GROUND LUGS, JUNCTION BOXES, HARDWARE FOR THE HANDHOLE DOOR, INCLUDING THE HANDLE/LATCH MECHANISM, HINGE AND DOOR STOP, SHALL BE STAINLESS STEEL. ALL CONDUIT AND CONDUIT FITTINGS SHALL BE PVC COATED GALVANIZED STEEL.
- ALL MULTI-CONDUCTOR CABLES SHALL BE FITTED WITH A HEAT-SHRINK MULTI-LEG BOOT. THE BOOT SHALL MEET MILITARY SPECIFICATION MIL-1-81765/1.

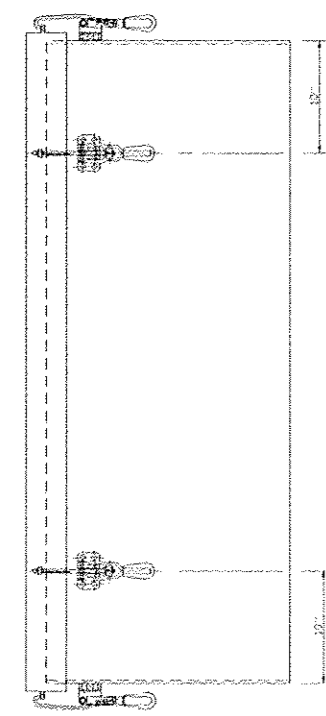
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PLT SCALE: 1/8" = 1'-0"	PLT DATE: 11/22/2010	DRAWN: R. TOMSONS 05-11-09	REVISIONS: R. TOMSONS 09-02-10	SCALE: NONE	SHEET NO. 2 OF 3 SHEETS	STA. 10 STA.	BE-500	DUPAGE	CONTRACT NO. 60131	FEB. ROAD DIST. NO. 1 ILLINOIS/FEB. AID PROJECT



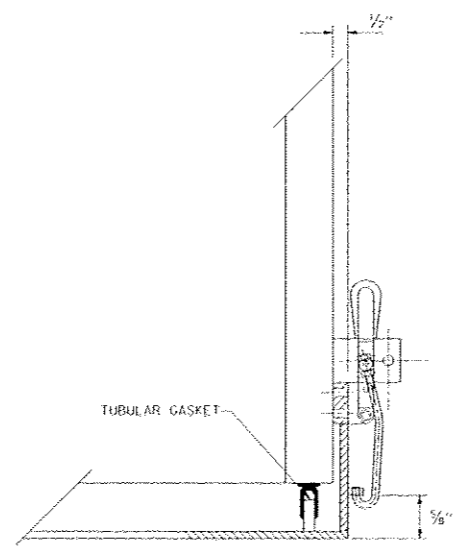
TOP VIEW



HINGE DETAIL

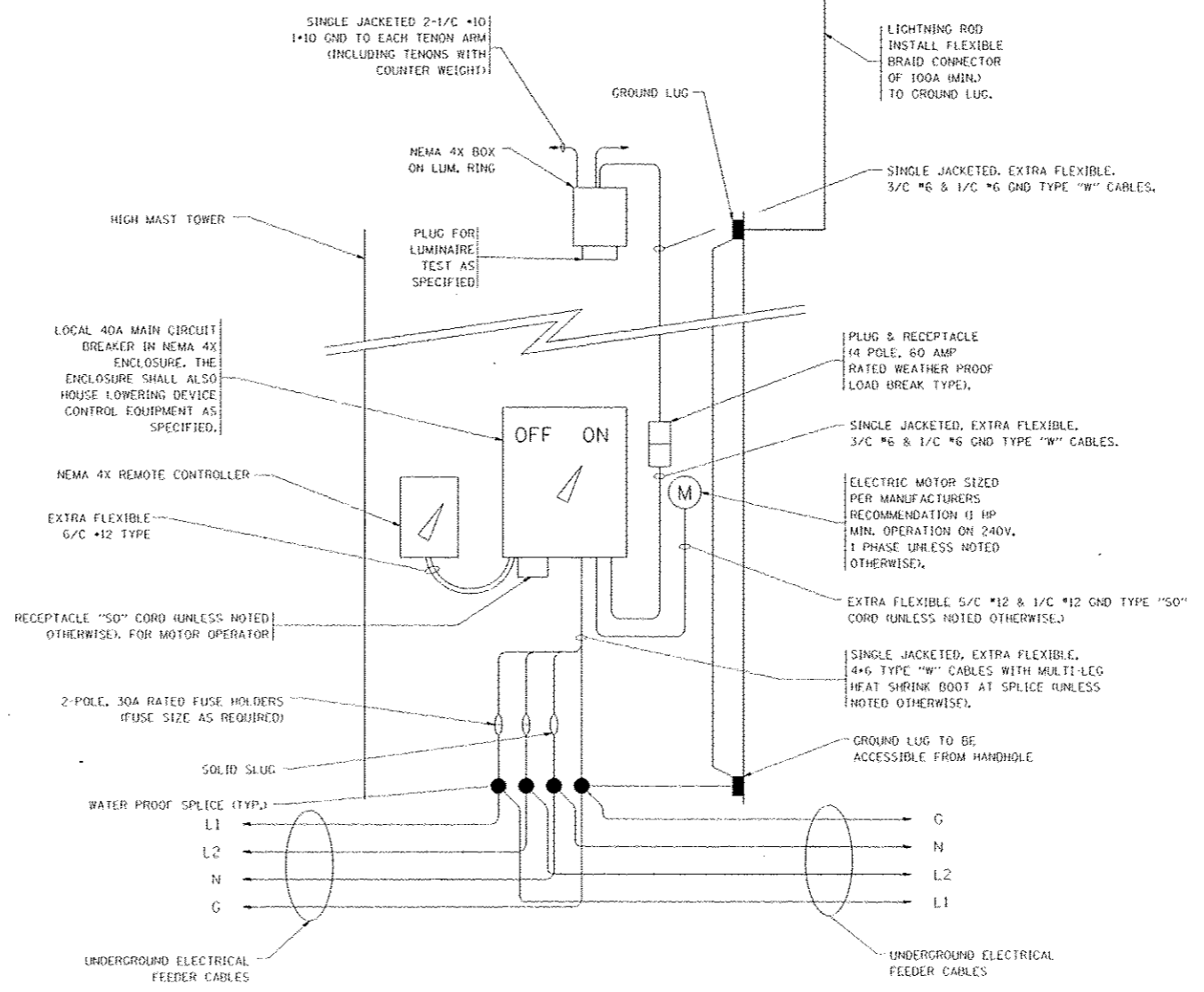


SIDE VIEW

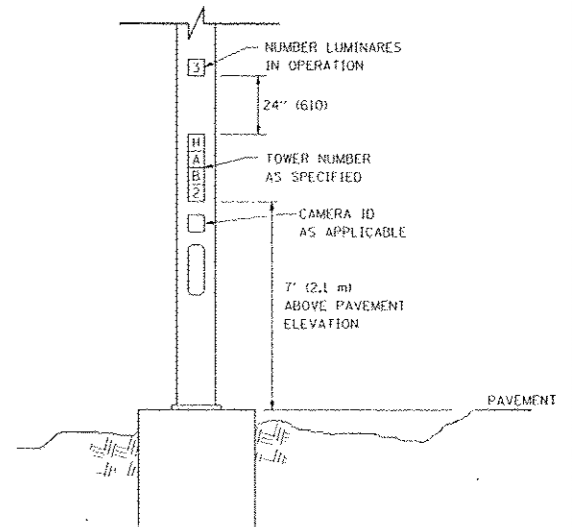


LATCH DETAIL

HANDHOLE DOOR DETAILS



HIGH MAST POLE WIRING DIAGRAM



LIGHT TOWER NUMBERING DETAIL

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DRAWN: -

PLOT SCALE: 1/8" = 1'-0"

PLT DATE: 11/22/2008

DESIGNED: -

DRAWN: -

CHECKED: -

DATE: -

REVISED: - R. TOMSONS 08-04-03

REVISED: - R. TOMSONS 05-11-09

REVISED: - R. TOMSONS 09-02-10

REVISED: -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HIGH MAST LIGHT TOWER
90 FT TO 110 FT (27 m TO 34 m)

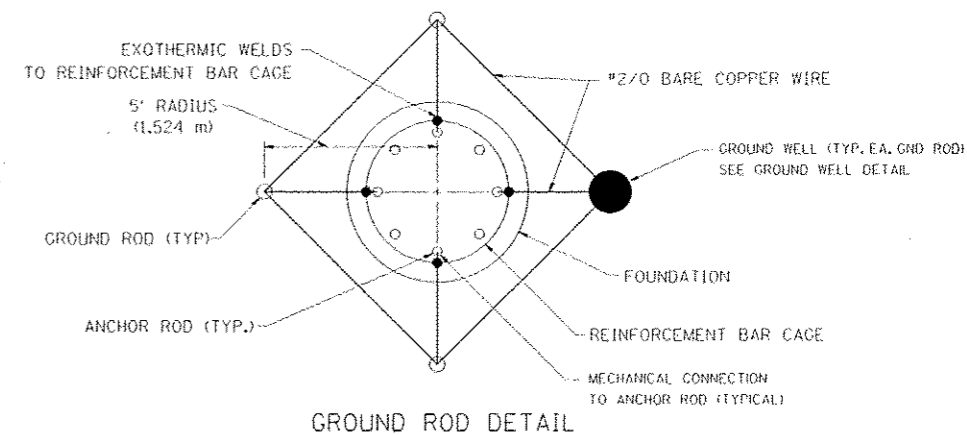
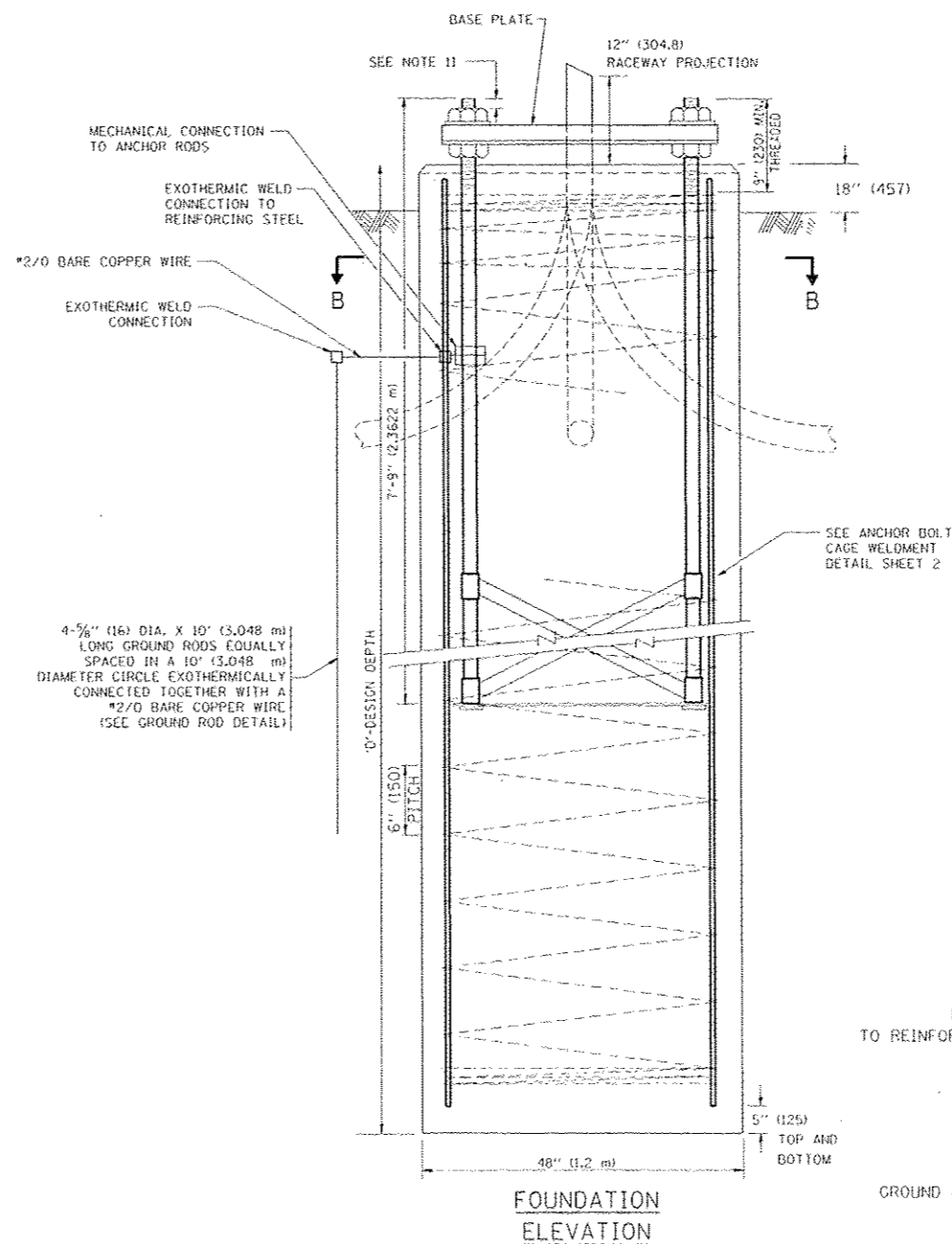
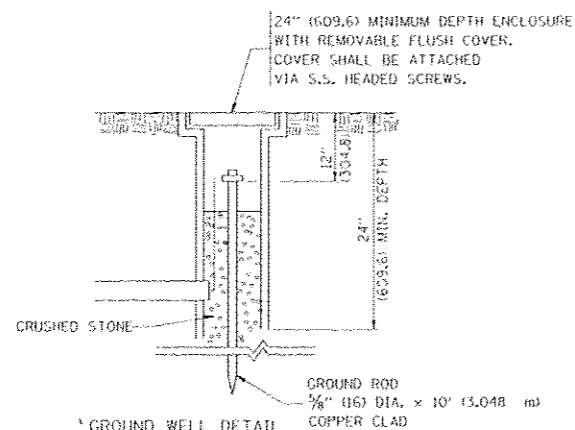
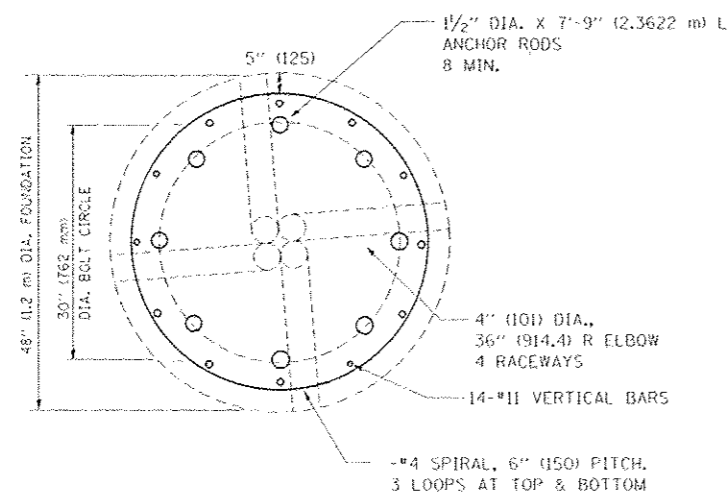
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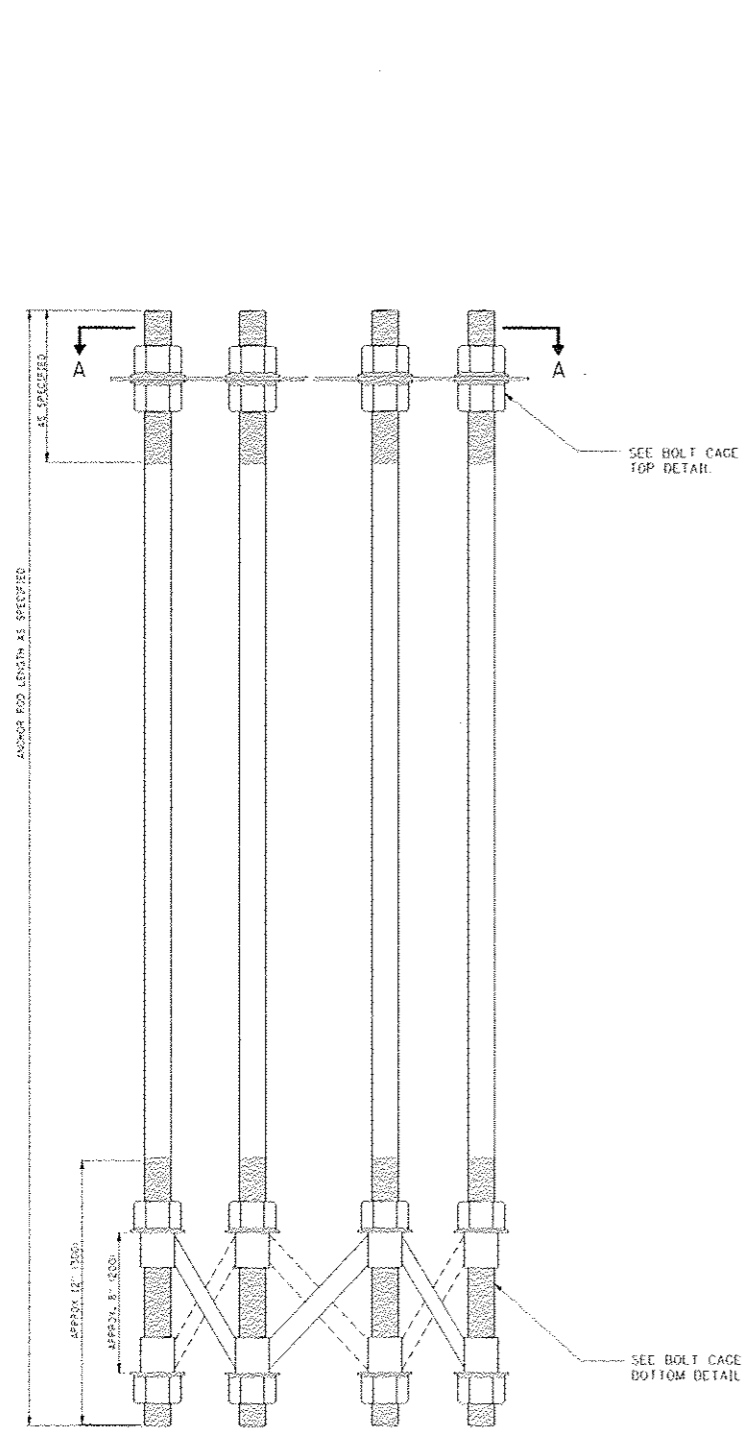
P.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113)WRS-5	DUPAGE	963	714
BE-500			CONTRACT NO. 60131	
FEB. ROAD DIST. NO. 1 ILLINOIS FEB. AID PROJECT				

SHAFT LENGTH (D) TABLE				
SOIL CONSISTENCY		AVERAGE STRENGTH	LIGHT TOWER MOUNTING HEIGHT	
		0u In tsf (0u In kPa)	100 FT. (30 m)	110 FT. (34 m)
COHESIVE	SOFT	<0.5 (<50)	22'-6" (6.9 m)	24'-0" (7.2 m)
	MEDIUM	0.5 TO 1 (50 TO 100)	18'-6" (6.9 m)	19'-0" (5.8 m)
	STIFF	1 TO 2 (100 TO 200)	15'-6" (4.7 m)	16'-0" (5.5 m)
	VERY STIFF	2 TO 4 (200 TO 400)	13'-6" (4.1 m)	14'-0" (4.2 m)
	HARD	>4 (>400)	12'-0" (3.6 m)	12'-6" (3.7 m)
GRANULAR		N in BLOWS/FT. (N in BLOWS/0.3m)		
	VERY LOOSE	<5 (<5)	18'-0" (5.4 m)	18'-6" (5.6 m)
	LOOSE	5 TO 10 (5 TO 10)	16'-6" (4.9 m)	17'-0" (5.1 m)
	MEDIUM	10 TO 25 (10 TO 25)	15'-6" (5.2 m)	16'-0" (5.9 m)
	DENSE	25 TO 50 (25 TO 50)	15'-0" (4.5 m)	15'-6" (4.6 m)
	VERY DENSE	>50 (>50)	14'-0" (4.2 m)	14'-6" (4.4 m)

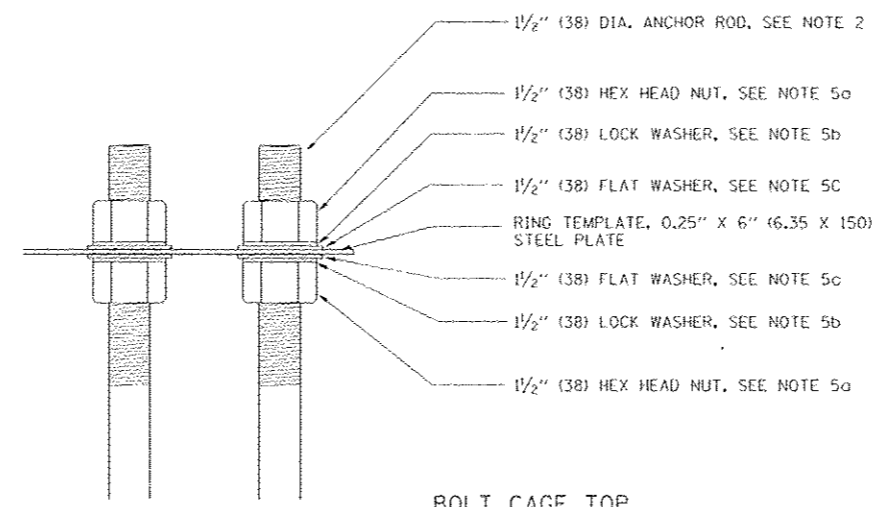
DESIGN NOTES

- (1) ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN
- (2) THE ANCHOR RODS SHALL BE VERTICAL NO ADJUSTMENT SHALL BE ALLOWED AFTER THE FOUNDATION IS PLACED.
- (3) THE GAP BETWEEN THE FOUNDATION AND THE BASE PLATE SHALL BE ENCLOSED WITH A STAINLESS STEEL SCREEN FASTENED WITH A STAINLESS STEEL BAND.
- (4) THE TOP OF THE FOUNDATION TO 18" (450) BELOW GRADE SHALL BE FORMED.
- (5) SURFACE WATER WILL NOT BE PERMITTED TO ENTER THE HOLE AND ALL WATER WHICH MAY HAVE INFILTRATED INTO THE HOLE SHALL BE REMOVED BEFORE PLACING CONCRETE.
- (6) THE LIGHT TOWER SHALL NOT BE ERECTED UNTIL AFTER THE CONCRETE HAS BEEN CURED ACCORDING TO ARTICLE 1020.13.
- (7) ANCHOR RODS SHALL BE STRAIGHT AND SHALL BE ACCORDING TO AASHTO M 314 OR ASTM F1554, GRADE 725(GRADE 105) AND GALVANIZED ACCORDING TO ARTICLE 1006.9.
- (8) ANCHOR ROD INFORMATION SHALL BE SUBMITTED FOR APPROVAL AND SHALL BE FULLY COORDINATED FOR APPROVAL WITH TOWER MANUFACTURER REQUIREMENTS.
- (9) REINFORCEMENT BARS SHALL BE ACCORDING TO ARTICLE 1006.10
- (10) TWO ANCHOR RODS OPPOSITE EACH OTHER SHALL HAVE THE ANCHOR ROD THREADS PEENED AFTER NUTS ARE INSTALLED.
- (11) A MINIMUM OF THREE FULL THREADS SHALL REMAIN EXPOSED AFTER LIGHT TOWER IS INSTALLED.
- (12) ALL GROUNDING INDICATED IN THE PLANS SHALL BE INCLUDED IN THE COST OF THE LIGHT TOWER FOUNDATION AND SHALL NOT BE PAID FOR SEPARATELY.

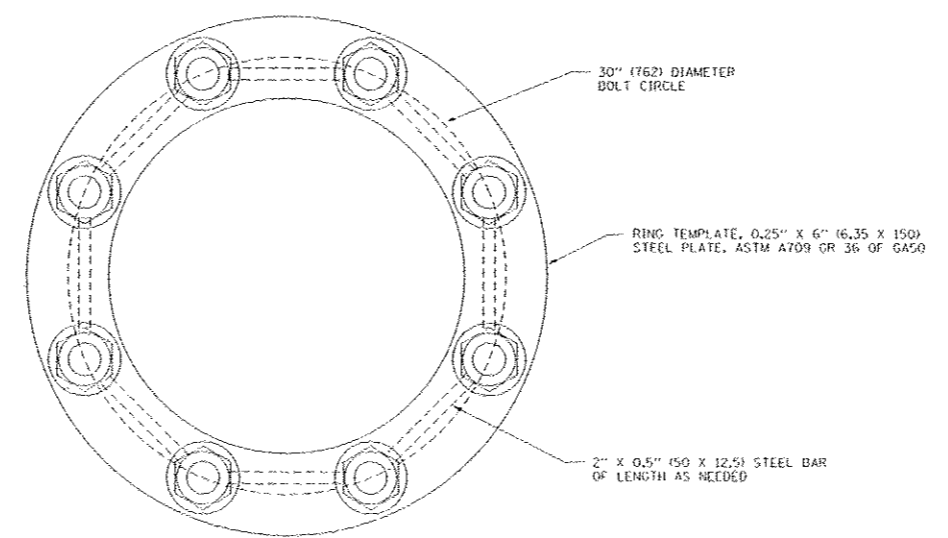




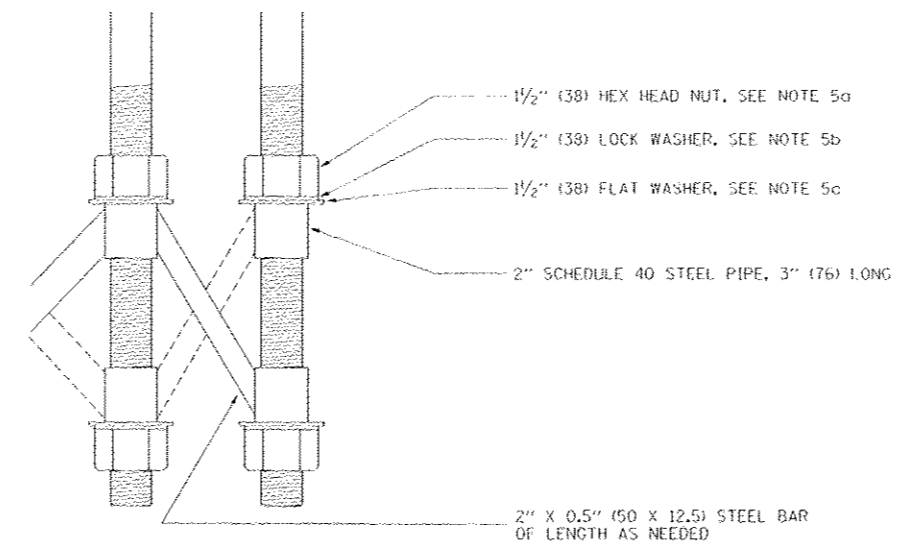
ANCHOR BOLT CAGE



BOLT CAGE TOP



SECTION A-A

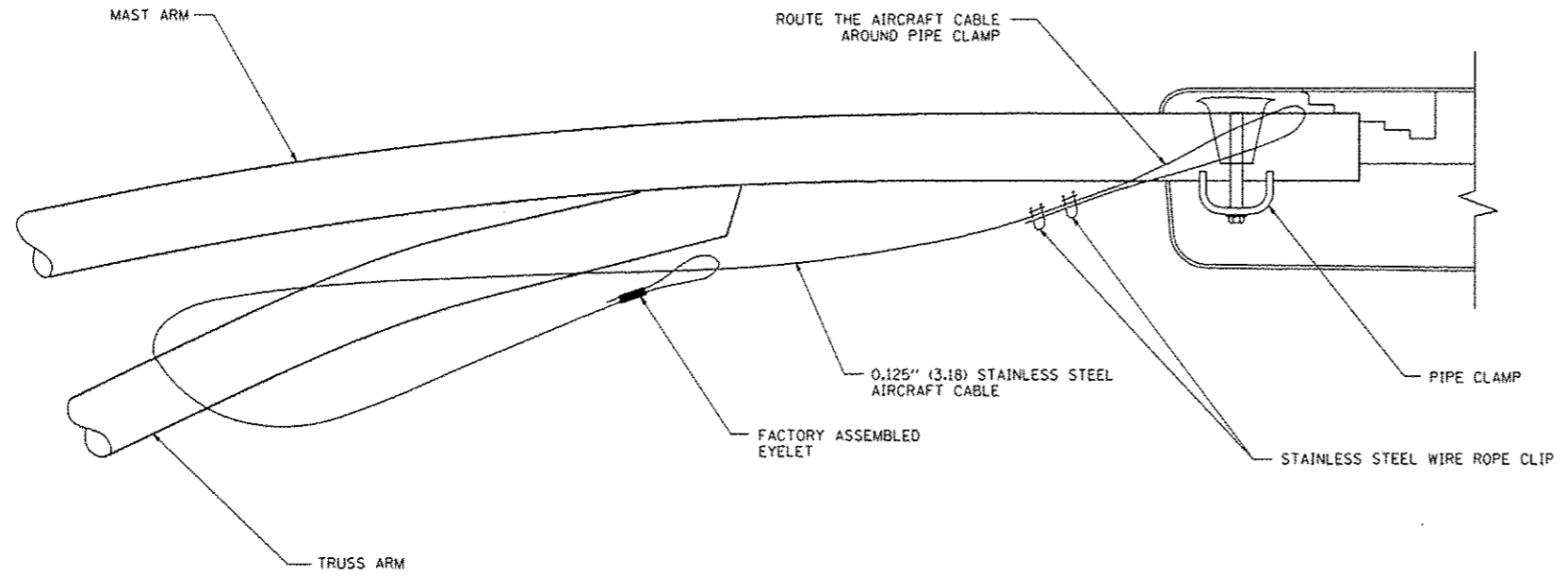


BOLT CAGE BOTTOM

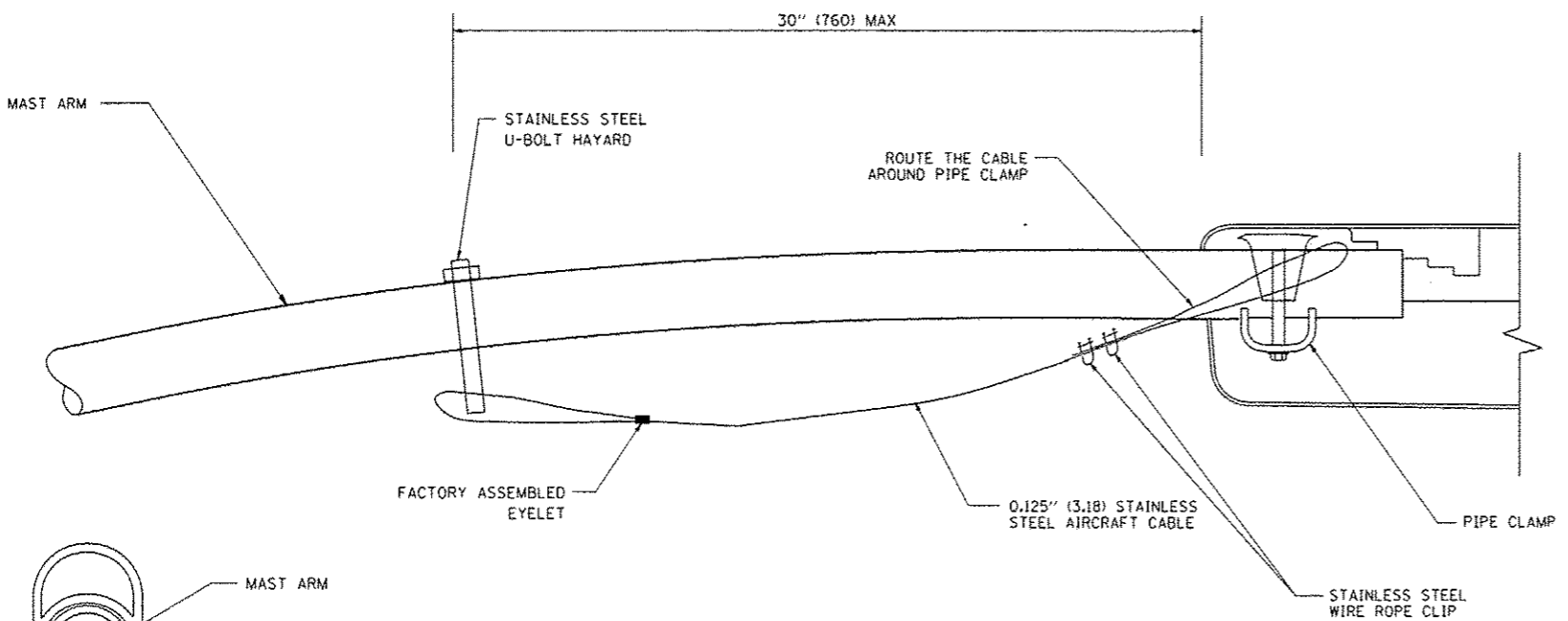
NOTES

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN
2. ANCHOR RODS SHALL BE STRAIGHT AND SHALL BE ACCORDING TO AASHTO M 314 OR ASTM F1554, GRADE 725 (GRADE 105) AND GALVANIZED ACCORDING TO ARTICLE 1006.09.
3. ANCHOR ROD INFORMATION SHALL BE SUBMITTED FOR APPROVAL AND SHALL BE FULLY COORDINATED WITH TOWER MANUFACTURERS REQUIREMENTS.
4. CUT NUTS, OR JAM NUTS, ARE NOT ALLOWED
5. ANCHOR ROD CAGE HARDWARE SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
 - a) 1.5 (38) HEX HEAD NUTS
AASHTO M291, GRADE C, C3, D, DH OR DHS
HOT DIPPED GALVANIZED AASHTO M 232
 - b) 1.5 (38) HELICAL LOCK WASHERS
ANSI/ASME B18.21.1
I.D. 1.504 - 1.524
O.D. 2.159 MAX.
WIDTH 0.292 MIN.
THICKNESS 0.375 MIN.
HARDNESS 26-45 ROCKWELL C
HOT DIPPED GALVANIZED AASHTO M232
 - c) 1.5 (38) FLAT WASHERS
AASHTO M293
O.D. 2.75
I.D. 1.56
THICKNESS 0.16 - 0.25
HARDNESS 26-45 ROCKWELL C.
HOT DIPPED GALVANIZED AASHTO M232
6. THE SHAFT LENGTHS SHALL BE BASED ON SOIL BORINGS IN THE PLANS AND OR A DETERMINATION OF SOIL CONDITIONS BY THE ENGINEER.
7. ALL FOUNDATION REINFORCEMENT STEEL SHALL BE EPOXY COATED.
8. THE FOUNDATION SHALL BE POURED MONOLITHICALLY AND SHALL HAVE NO CONSTRUCTION JOINTS.

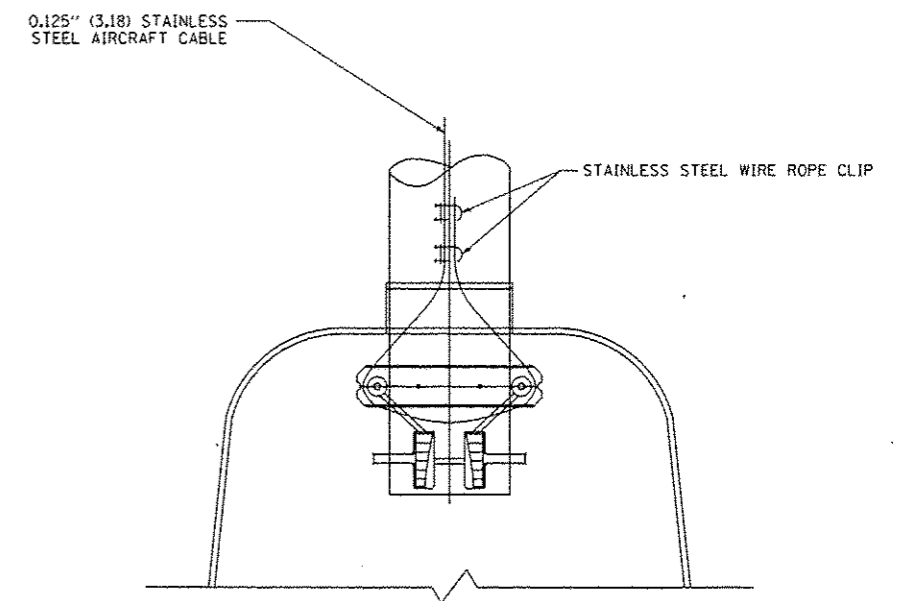
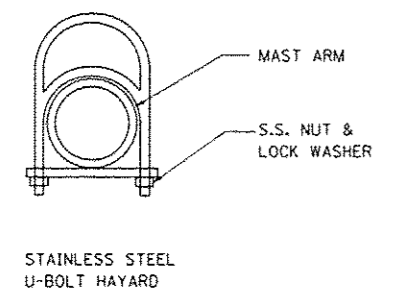
FILE NAME	USER NAME	DESIGNED	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HIGH MAST LIGHT TOWER			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN	REVISED		90 FT TO 110 FT (27 m TO 34 m) FOUNDATION DETAIL			338	{112 & 113}WRS-5	DUPAGE	963	716
		CHECKED	REVISED		SCALE: NONE SHEET NO. 2 OF 2 SHEETS S.F.A. TO S.F.A.			BE-501				
		DATE	REVISED		CONTRACT NO. 60I31							



SIDE VIEW (TRUSS ARM)
N.T.S.



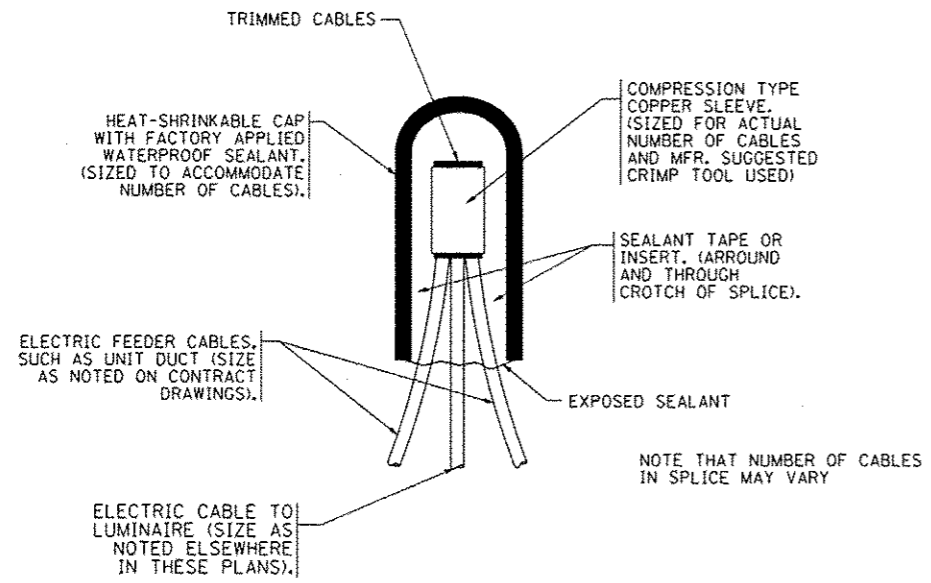
SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)
N.T.S.



BOTTOM VIEW
N.T.S.

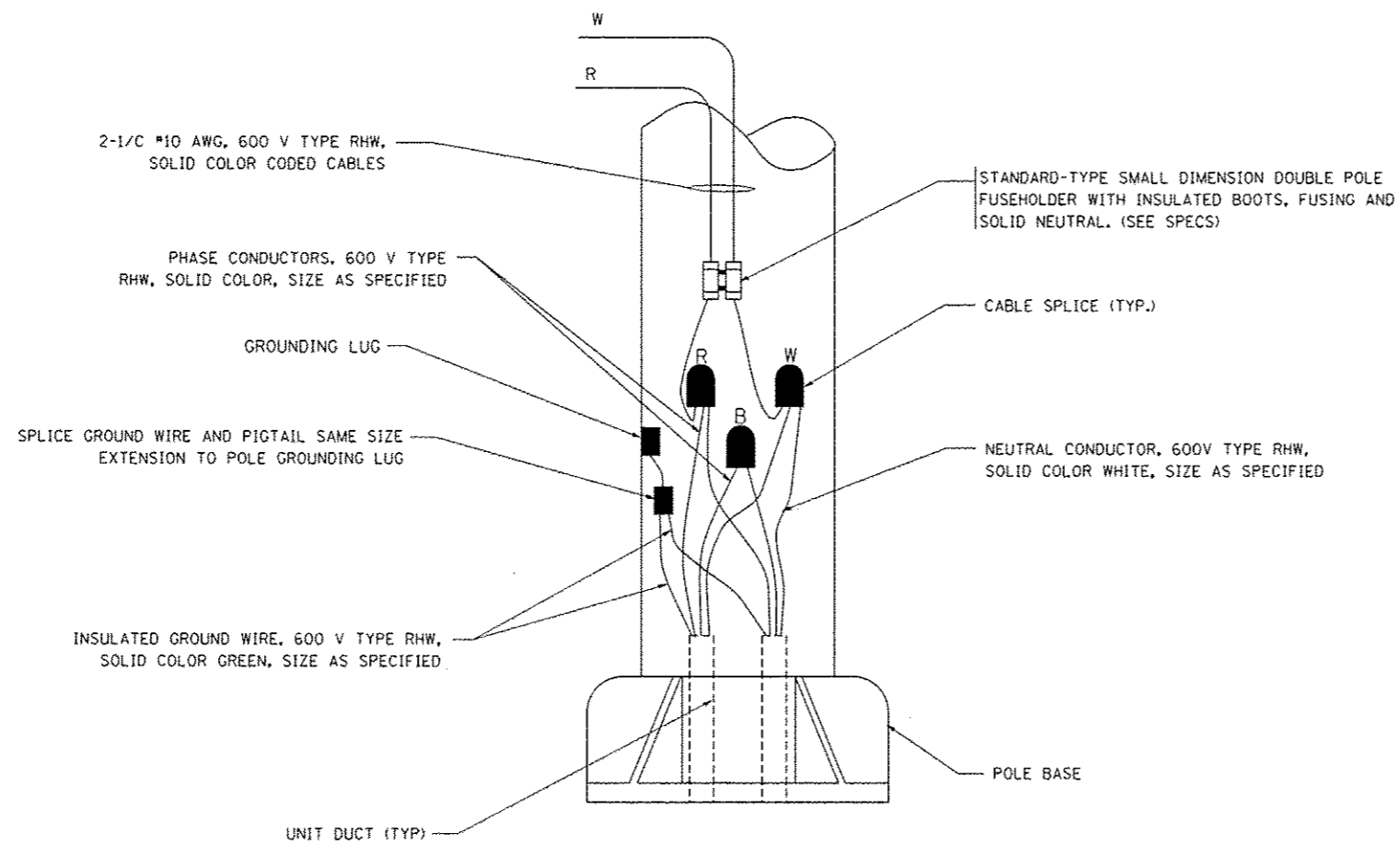
- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
 2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
 3. THE 0.125\"/>
 - 4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

FILE NAME = W:\stata\22x34\be701.dgn	USER NAME = geglionobt	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LUMINAIRE SAFETY CABLE ASSEMBLY			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.000 / IN.	CHECKED -	REVISED -					338	(112 & 113)WRS-5	DUPAGE	963	717
	PLOT DATE = 1/4/2008	DATE -	REVISED -					BE-701		CONTRACT NO. 60131		
				SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



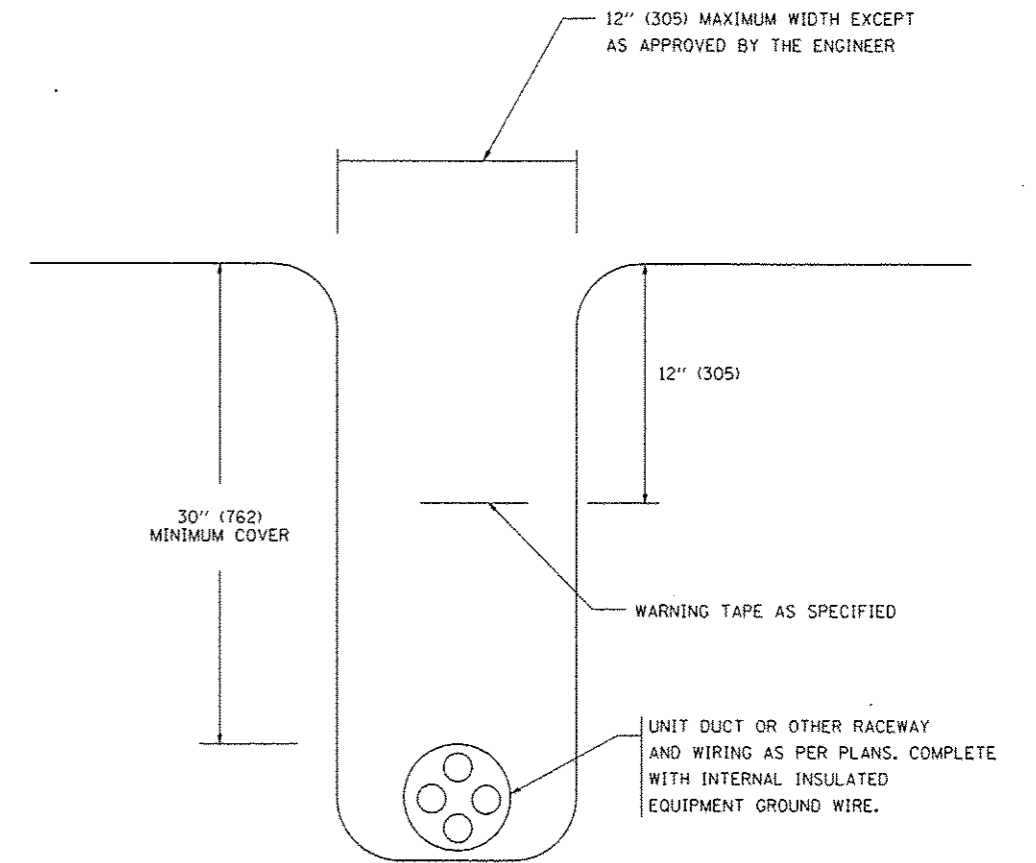
TYPICAL SPLICE DETAIL

N.T.S.



POLE WIRING DETAIL

N.T.S.



TYPICAL WIRING IN TRENCH DETAIL

N.T.S.

FILE NAME = W:\diststd\22x34\be702.dgn

USER NAME = gaglionobt

DESIGNED -

DRAWN -

PLDT SCALE = 50.000' / IN.

PLOT DATE = 1/4/2000

CHECKED -

DATE -

REVISED - 08-08-03

REVISED -

REVISED -

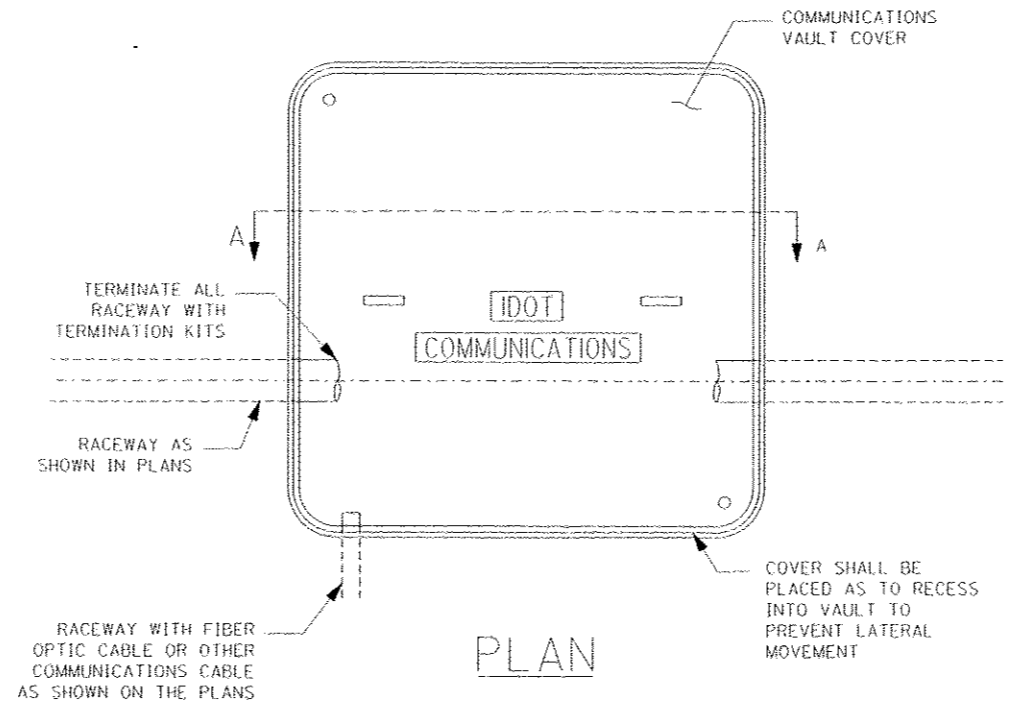
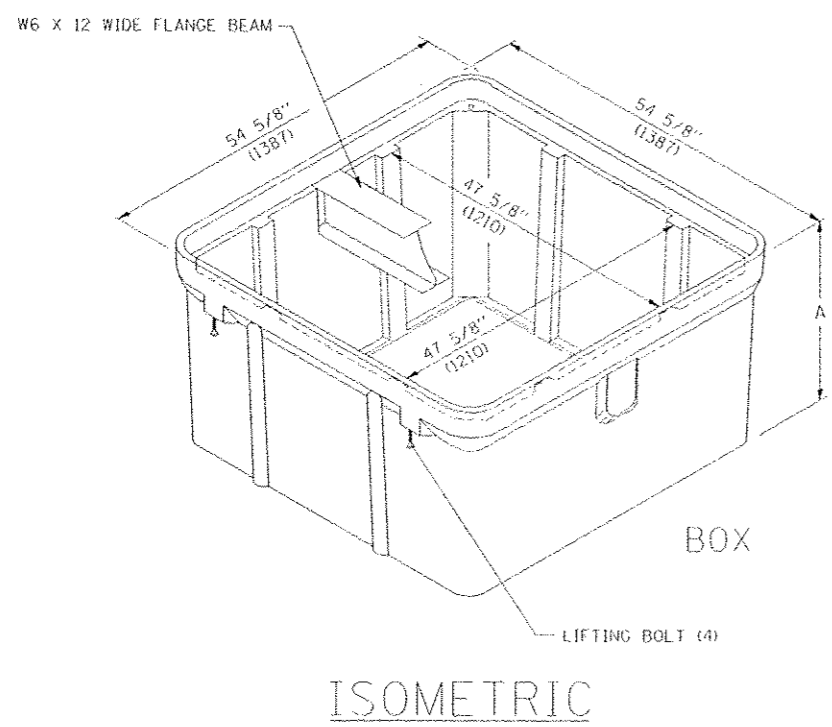
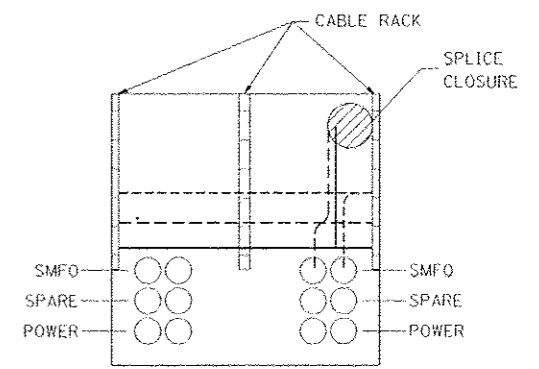
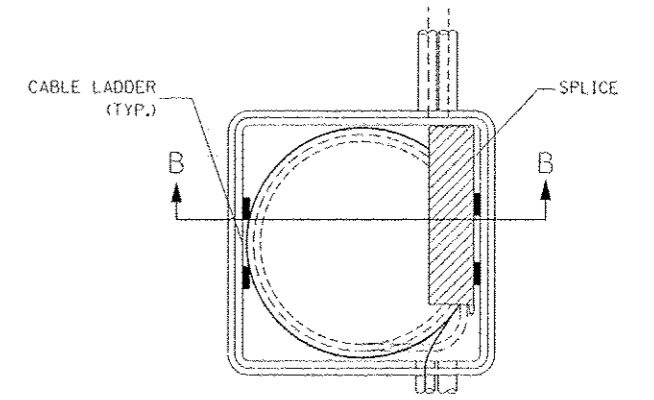
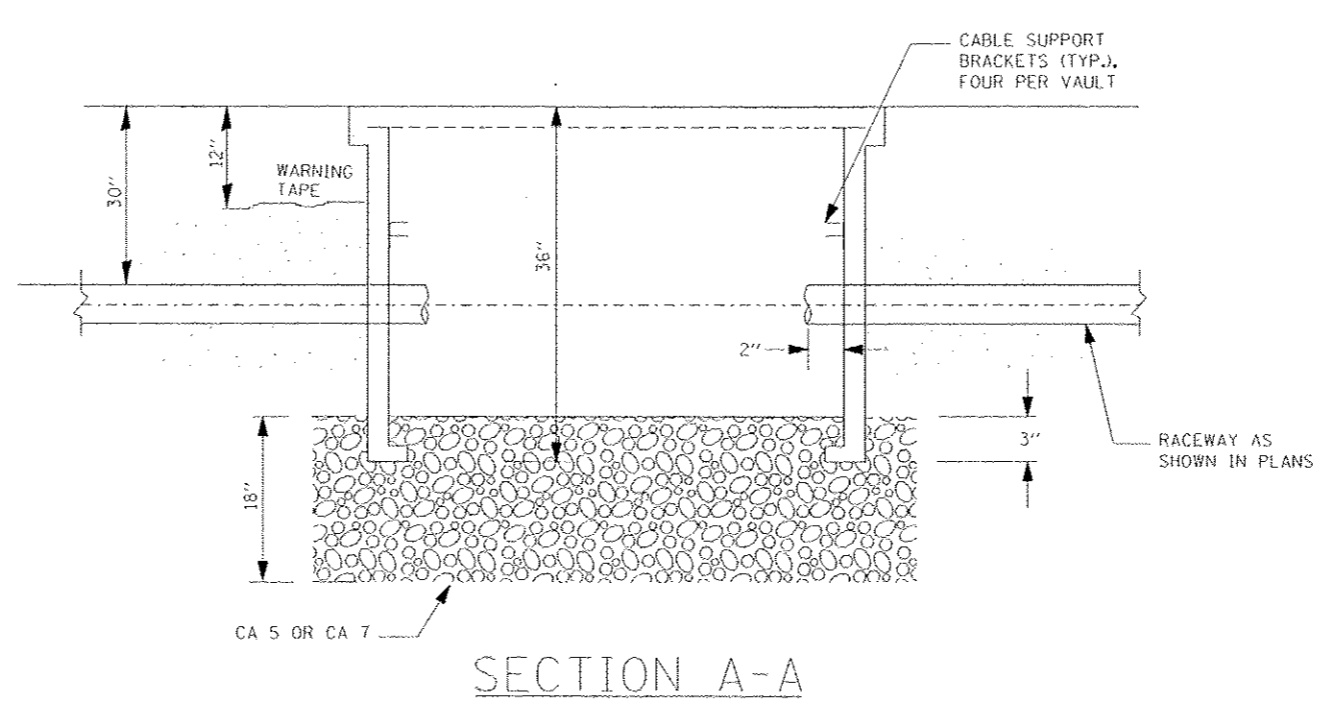
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISC. ELECTRICAL DETAILS
SHEET A

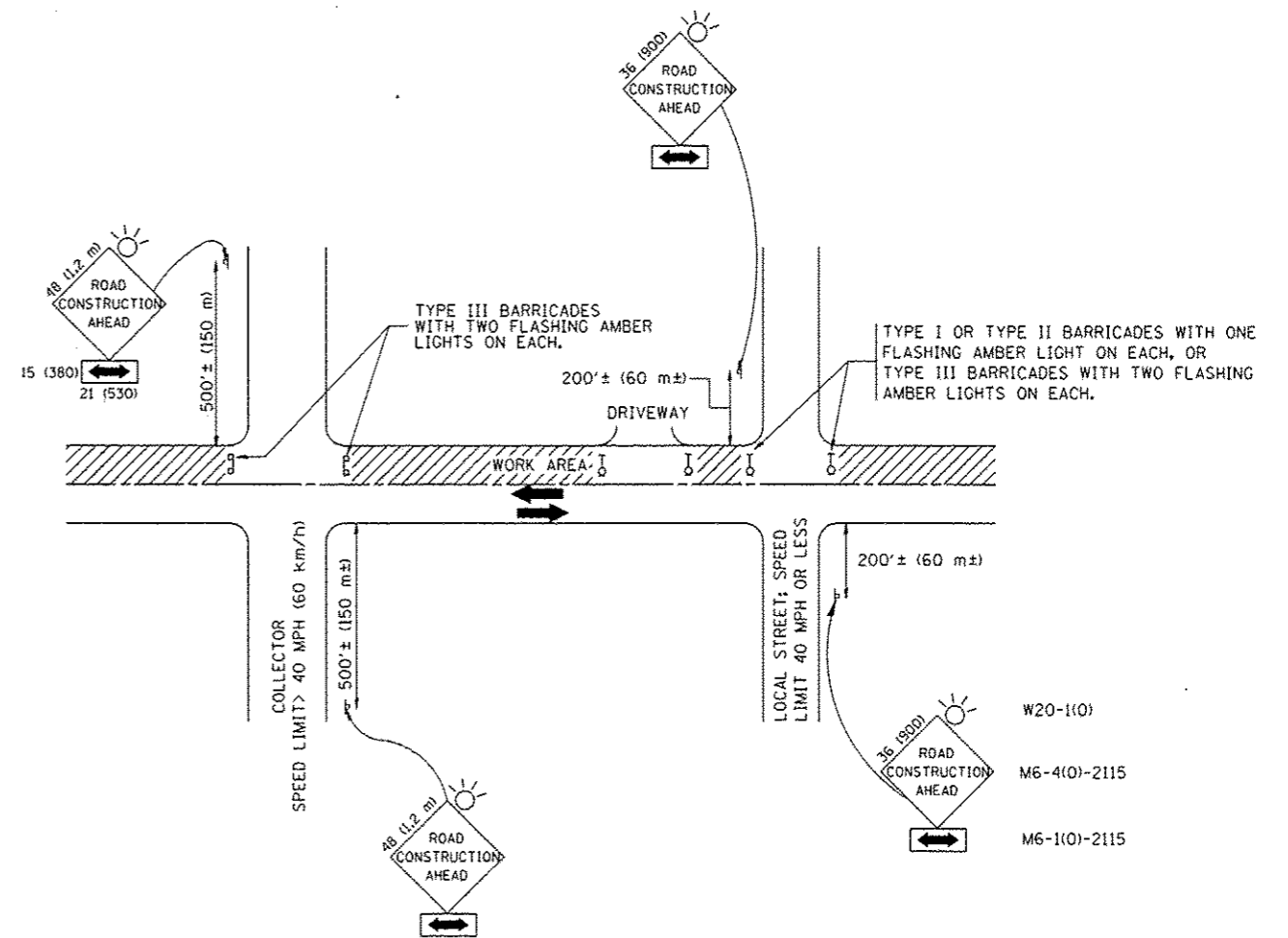
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-5	DUPAGE	963	718
BE-702			CONTRACT NO. 60131	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



- NOTES:**
1. BOX SHALL HAVE AN OPEN BASE.
 2. COVER SHALL WITHSTAND A 22,500/33,750 DESIGN/TEST LOADING AND SHALL LOCK.
 3. ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION OR PUNCH DRIVEN AT TIME OF PLACEMENT, IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
 4. FIELD PLACEMENT OF COMMUNICATIONS VAULT SHALL BE AS DIRECTED BY THE ENGINEER.
 5. ALL DIMENSIONS ARE MINIMUM AND A LARGER SIZE HANDHOLE MAY BE USED, WITH THE APPROVAL OF THE ENGINEER, TO FACILITATE USING A MANUFACTURER'S STANDARD PRODUCT.

FILE NAME: c:\pwork\pww\01\ALEYSA\40189215\1\w789.dgn	USER NAME: lsgn	DESIGNED: -	REVISED: -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	COMMUNICATIONS VAULT, COMPOSITE CONCRETE			F.A. RTE. 338	SECTION (112 & 113)WRS-5	COUNTY DUPAGE	TOTAL SHEETS 963	SHEET NO. 720
PLOT SCALE: 5/8" = 1' IN.	CHECKED: -	REVISOR: -	REVISOR: -		SCALE: NONE	SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT NO. 60131		
PLOT DATE: 3/29/2014	DATE: 03-22-10	REVISOR: -	REVISOR: -		BE-705							
FED. ROAD DIST. NO. 1 (ILLINOIS) FEB. AID PROJECT												



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

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.

b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.

b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.

3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

FILE NAME = W:\data\std\22x34\tcl0.dgn	USER NAME = gaglianobx	DESIGNED = LHA	REVISED = J. OBERLE 10-18-95
		DRAWN =	REVISED = A. HOUSEH 03-06-96
	PLOT SCALE = 50,000 / IN.	CHECKED =	REVISED = A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2008	DATE = 06-89	REVISED = T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

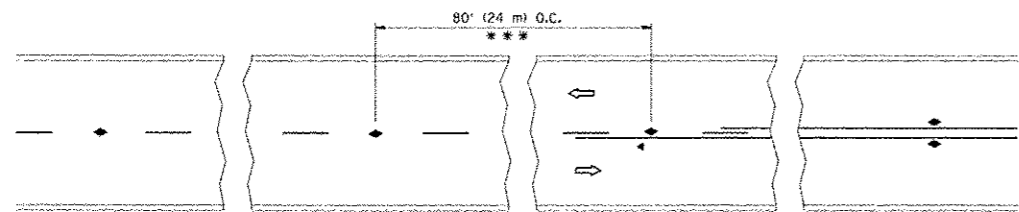
SCALE: NONE

SHEET NO. 1 OF 1 SHEETS

STA.

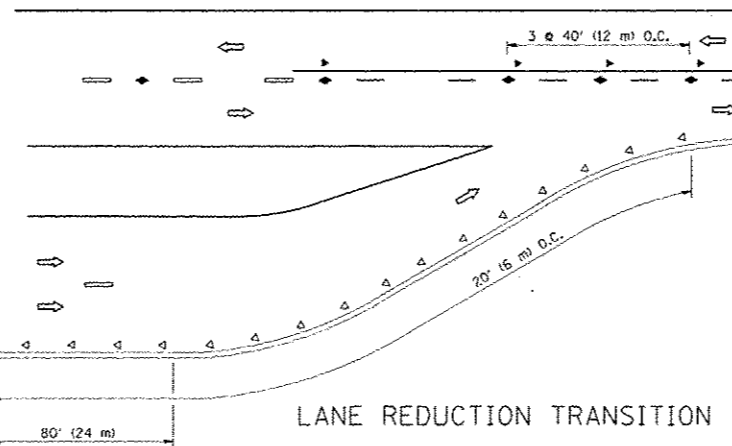
TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113)RRS-5		963	721
TC-10			CONTRACT NO. 60131	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

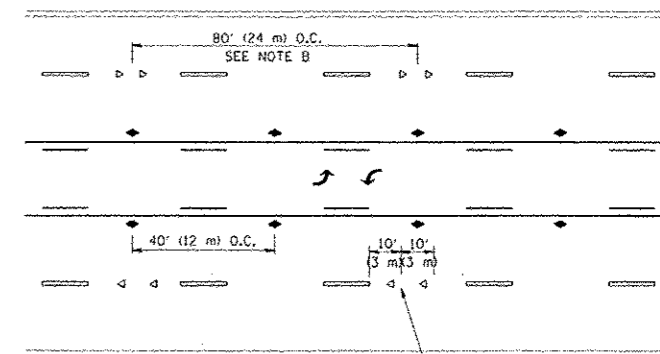


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

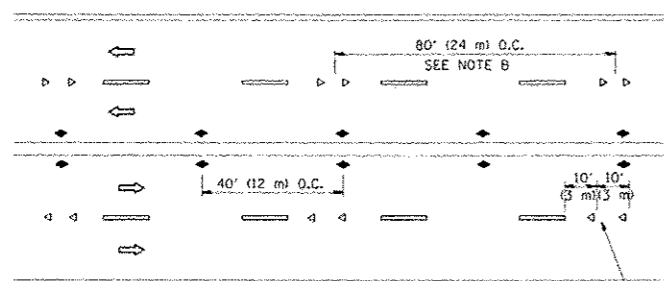
TWO-LANE/TWO-WAY



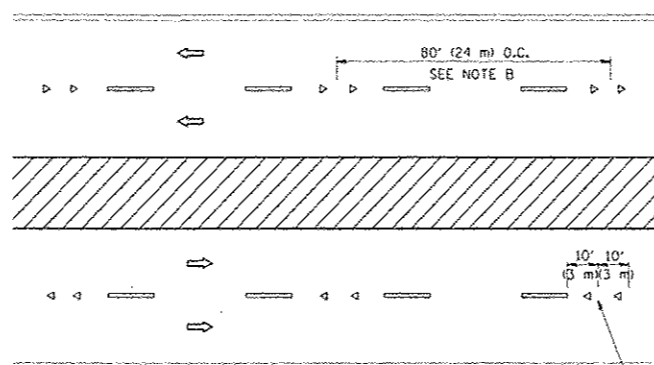
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

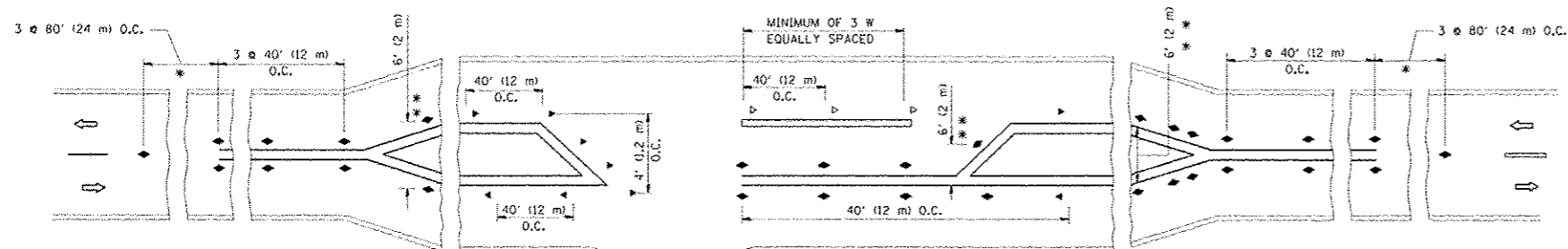
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H. (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

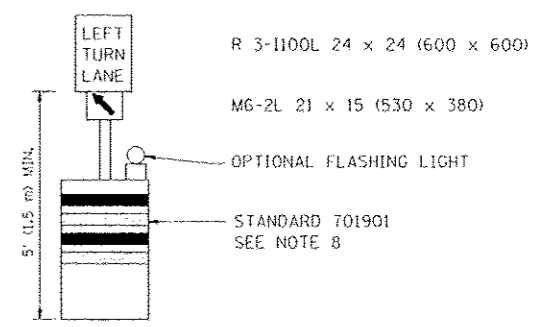
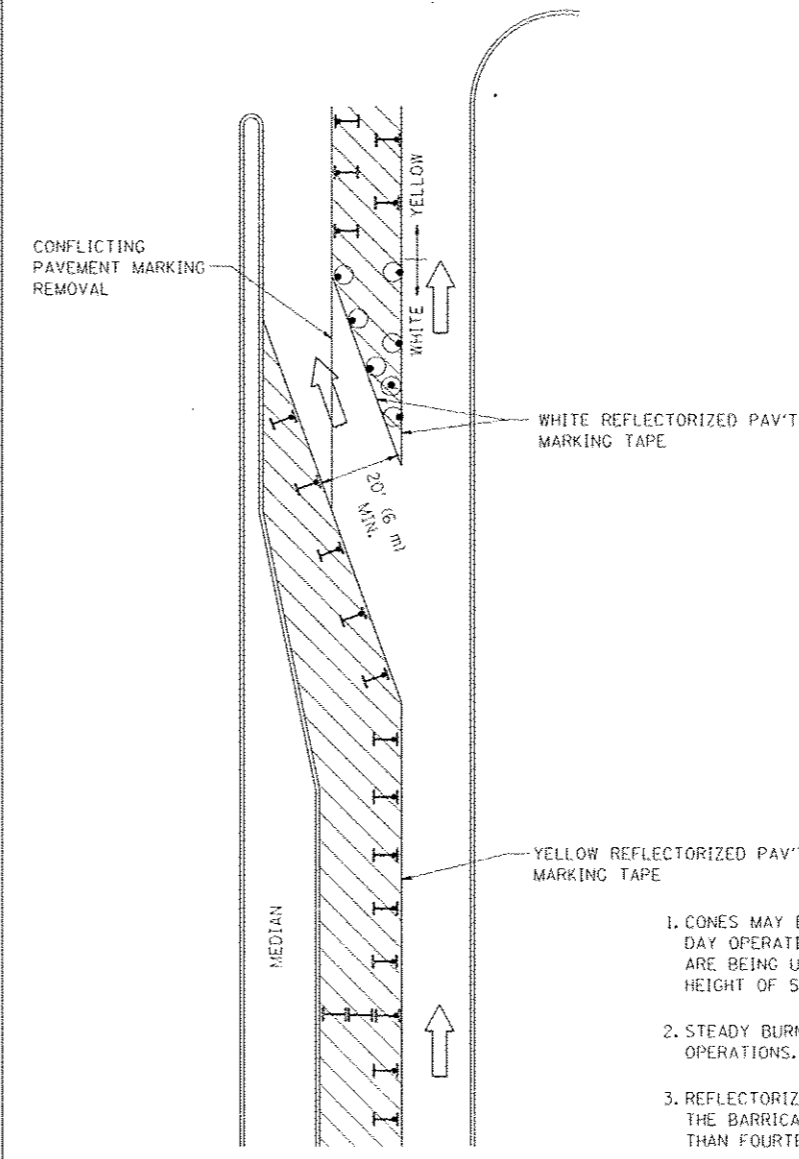


LEFT TURN

* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
 ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

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

FILE NAME : c:\pwworkspace\dot\lego\ld\89315\1.dgn	USER NAME : layso	DESIGNED : DRAWN	REVISED T. RAMMACHER 09-19-94 REVISED T. RAMMACHER 03-12-99 REVISED T. RAMMACHER 01-06-00 REVISED C. JUCLUS 09-09-09	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)	F.A. RTE. : 338	SECTION : (112 & 113) WRS-5	COUNTY : DUPAGE	TOTAL SHEETS : 963	SHEET NO. : 722
PLOT SCALE : 5/8" = 1' IN.	CHECKED	DATE	SCALE: NONE			SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS FED. AID PROJECT	CONTRACT NO. 60131

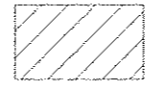







GENERAL NOTES

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 PREQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

LEGEND

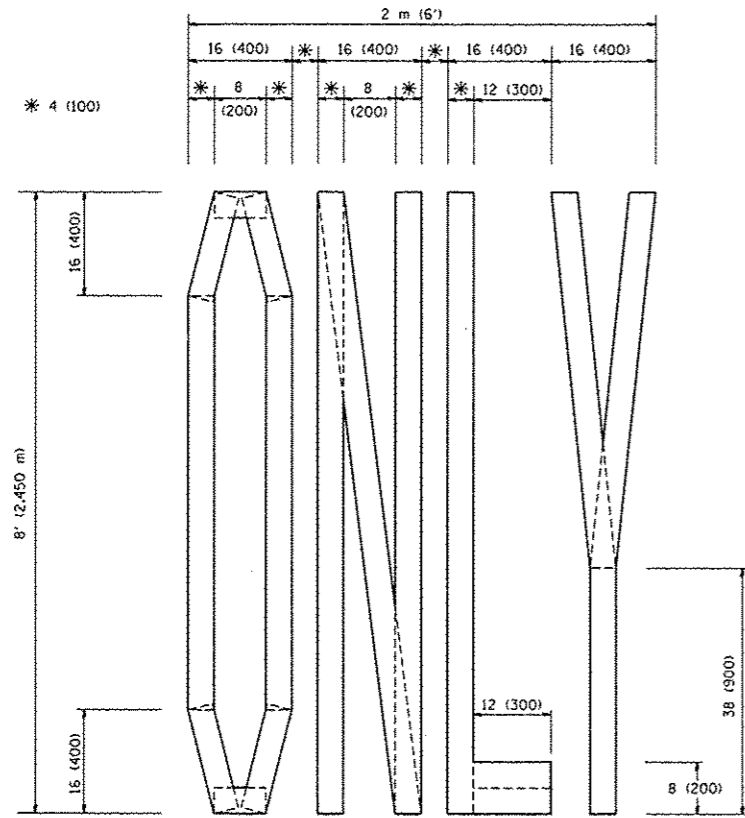
-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
-  DRUM WITH STEADY BURN LIGHT
-  DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
-  TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

FILE NAME	USER NAME	REVISED - T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09
PROJECT	PROJECT	REVISED - A. HOUSEH 11-07-95	REVISED -
PLLOT SCALE - 1/4" = 1'-0"	PLLOT DATE - 9/14/2009	REVISED - A. HOUSEH 10-12-96	REVISED -
		REVISED - T. RAMMACHER 01-06-00	REVISED -

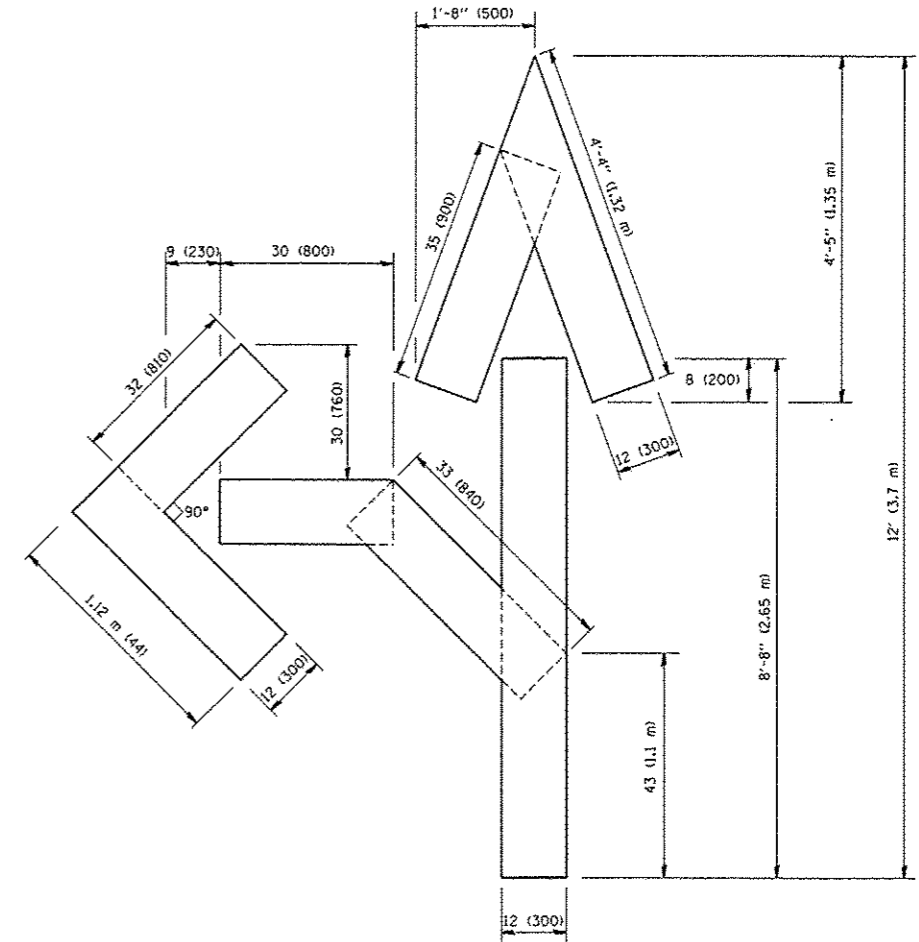
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

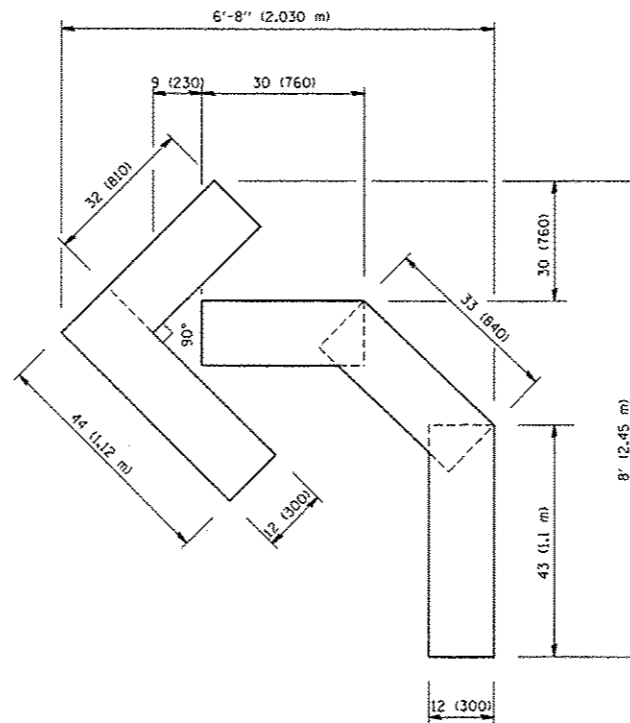
P.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113)WRS-5	DUPAGE	963	724
TC-14			CONTRACT NO. 60131	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



QUANTITY
4 (100) LINE = 64.1 ft. (19.7 m)
21.1 sq. ft. (1.97 sq. m)



QUANTITY
4 (100) LINE = 82.5 ft. (25.3 m)
27.5 sq. ft. (2.53 sq. m)



QUANTITY
4 (100) LINE = 45.5 ft. (13.9 m)
15.2 sq. ft. (1.39 sq. m)

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

FILE NAME = W:\d\sttd\22x34\to16.dgn	USER NAME = gaglienabs	DESIGNED -	REVISED -T. RAMMACHER 06-05-96
		DRAWN -	REVISED -T. RAMMACHER 11-04-97
		CHECKED -	REVISED -T. RAMMACHER 03-02-98
		DATE - 09-18-94	REVISED -E. GOMEZ 08-28-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

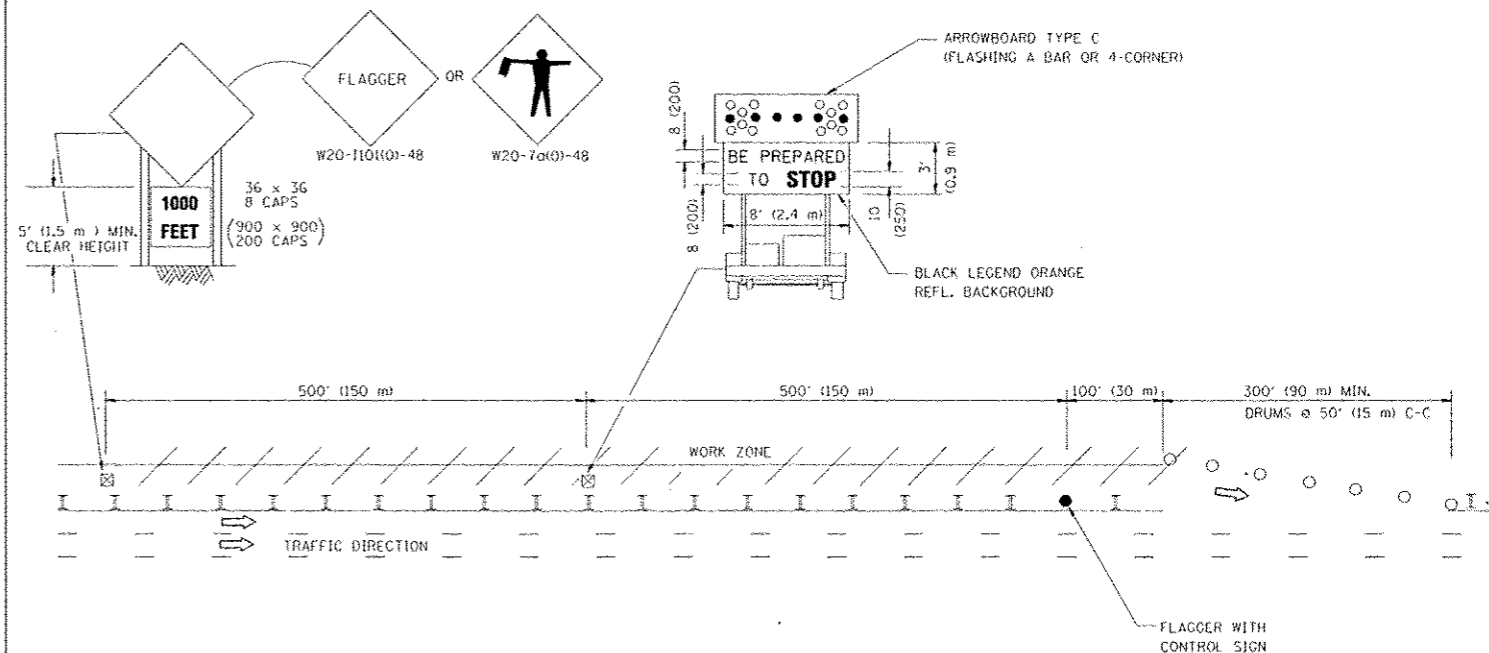
PAVEMENT MARKING LETTERS AND SYMBOLS
FOR TRAFFIC STAGING

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

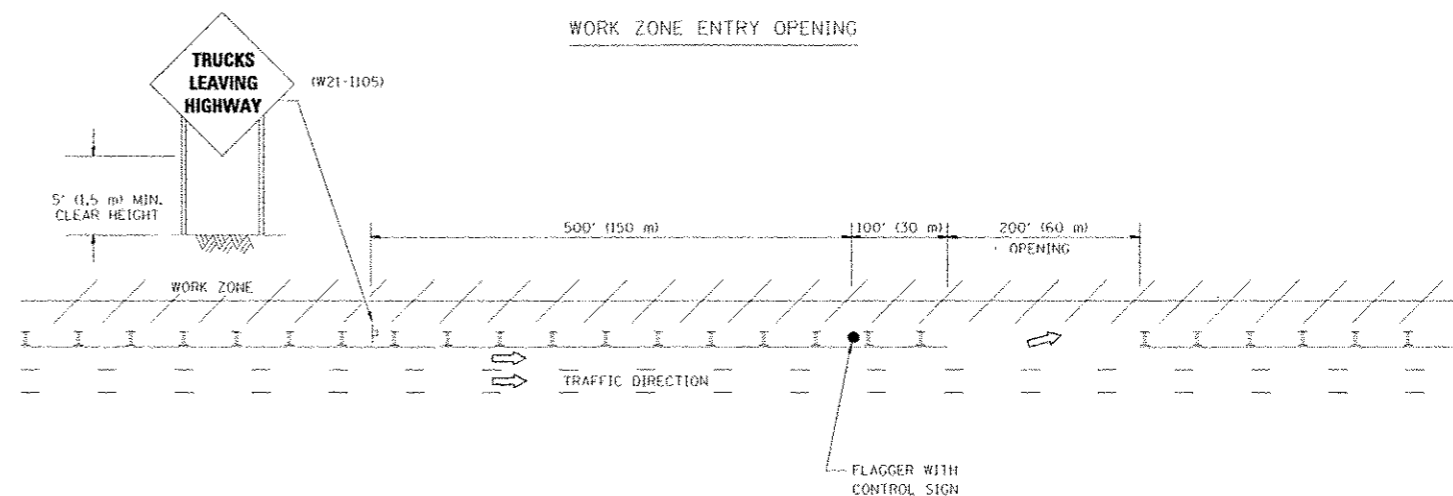
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-5	DUPAGE	963	725
TC-16			CONTRACT NO. 60131	
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. THE ARROWBOARD, THE FLAGGER AHEAD SIGN AND THE TRUCKS LEAVING HIGHWAY SIGN SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE EXIT OPENINGS SHOULD BE A MINIMUM OF ONE HALF MILE APART.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME : W:\disty\10522\34\1010\1010.dwg

USER NAME : 101010
 PLOT SCALE : 1/8" = 1' IN.
 PLOT DATE : 12/26/2010

DESIGNED :
 DRAWN :
 CHECKED :
 DATE :

REVISED - J.A.F. 04-03
 REVISED - J.A.F. 02-06
 REVISED - S.P.B. 01-07
 REVISED - S.P.B. 12-09

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SIGNING FOR FLAGGING OPERATIONS
 AT WORK ZONE OPENINGS

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-5	DUPAGE	963	726
TC-18		CONTRACT NO. 60131		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

ROUTE MARKERS

FOR U.S. ROUTES
MI-40-2424

FOR ILLINOIS ROUTES
MI-50-2424

R.R. UNMARKED ROUTES
SPECIAL 24" x 18" VARIABLE
4" BLACK LETTERS ON WHITE
REFLECTIVE BACKGROUND

ARROWS SIGNS

M5-1L-2115

M5-1R-2115

M6-1-2115

M6-1-2115

M6-3-2115

CARDINAL DIRECTION & DETOUR SIGNS

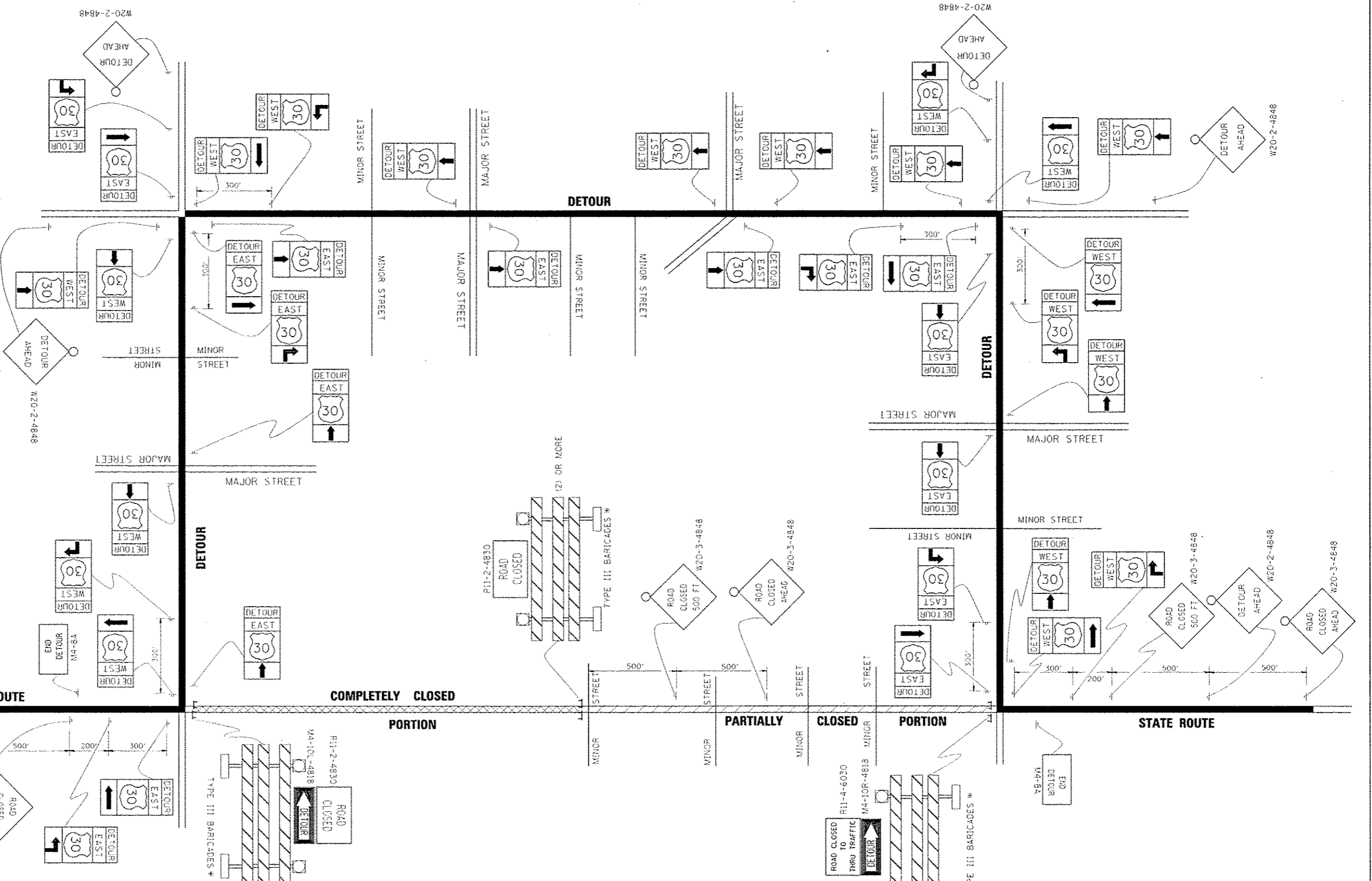
NORTH M3-1-2412

EAST M3-2-2412

SOUTH M3-3-2412

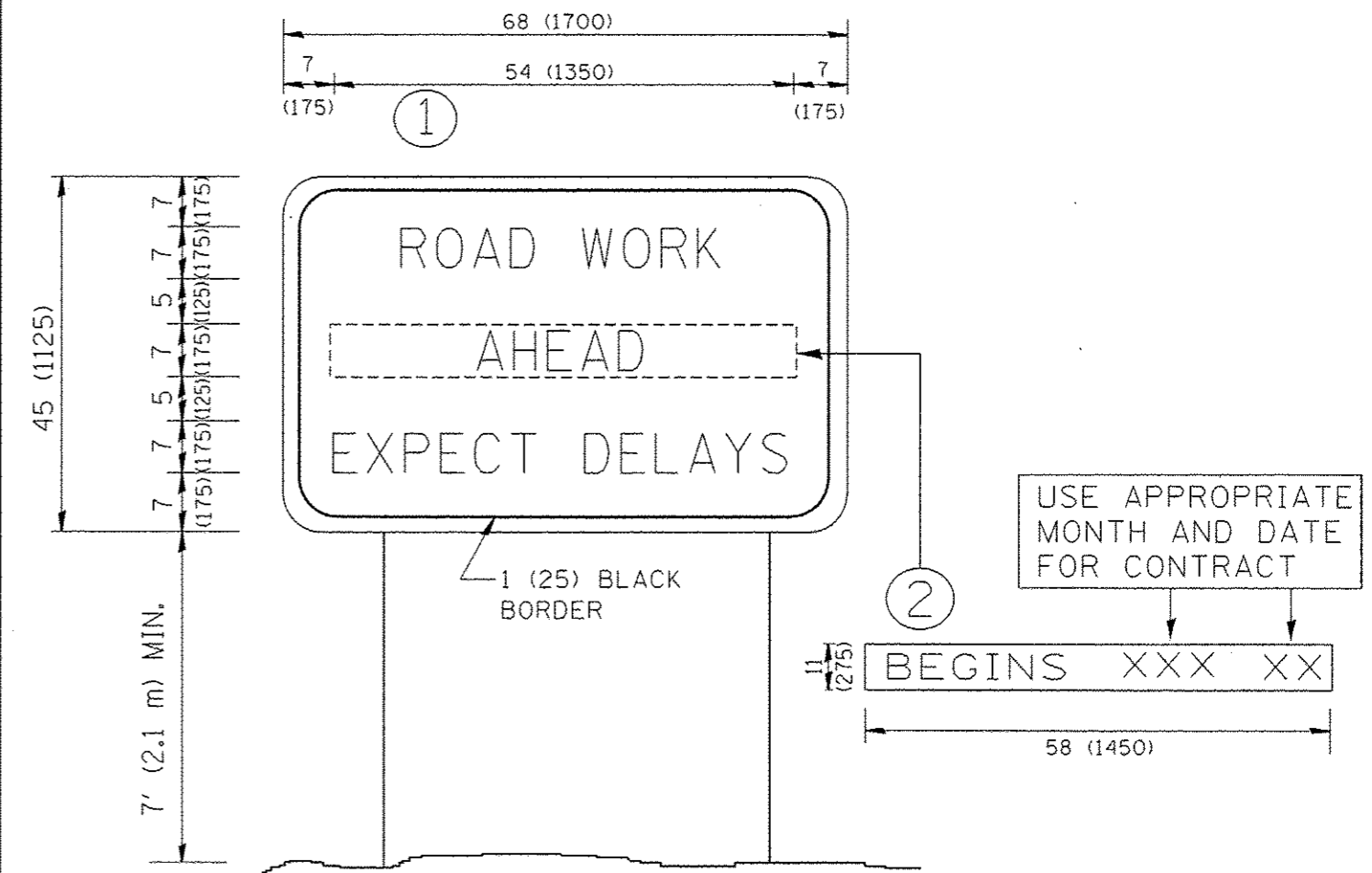
WEST M3-4-2412

DETOUR M4-8-2412



* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

FILE NAME >	USER NAME > detvaksnp	DESIGNED >	REVISED > 10-18-02	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR SIGNING FOR CLOSING STATE HIGHWAYS		P.A. RTE. >	SECTION >	COUNTY >	TOTAL SHEETS >	SHEET NO. >	
os:\work\p\1001\DRIVAKOSGN\DRIB315\	21.dgn	DRAWN >	REVISED > R. BORO 09-14-09		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. >	338	{112 & 113}WRS-5	DUPAGE	963	727
PL01 SCALE > 4/8"=1' IN.	CHECKED >	REVISED >	REVISED >		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. >	TC-21		CONTRACT NO. 60131		
PL01 DATE > 7/14/2009	DATE >	REVISED >	REVISED >		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. >	FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

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

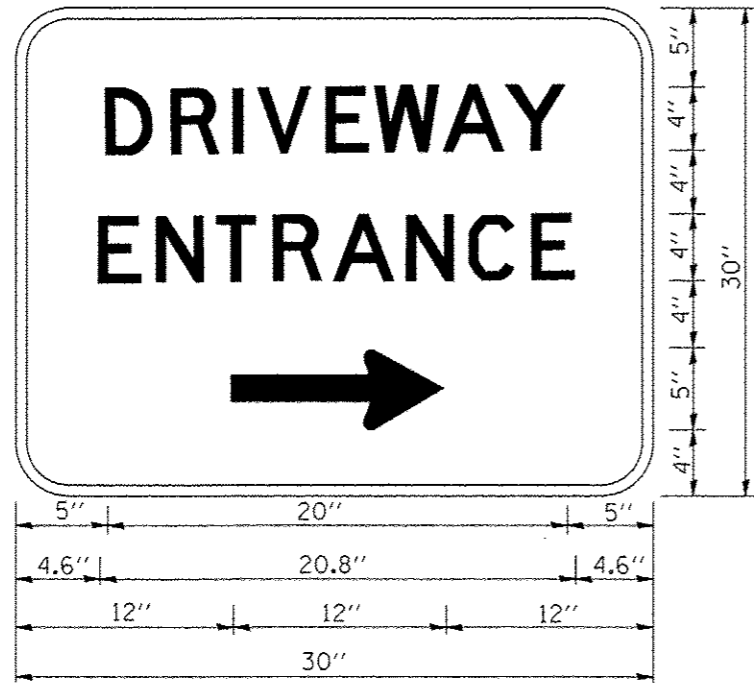
FILE NAME = W:\data\td\22\34\to22.dgn	USER NAME = ggglanobt	DESIGNED - DRAWN -	REVISED - R. MIRS 09-15-97
PLOT SCALE = 50,000 / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99	
PLOT DATE = 1/4/2000	DATE -	REVISED - C. JUCIUS 01-31-07	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD
INFORMATION SIGN**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-5	DUPAGE	963	729
TC-22			CONTRACT NO. 60131	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED
 "DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

NOTES:

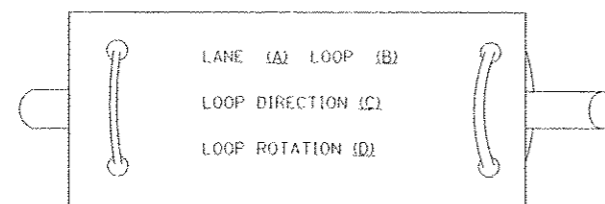
1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE PLACED BACK-TO-BACK; ONE WITH A RIGHT HAND ARROW (SHOWN) SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE FAR LEFT SIDE OF THE DRIVEWAY.
3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

FILE NAME = W:\data\td\22x34\te26.dgn	USER NAME = gajlianobt	DESIGNED - DRAWN -	REVISED - C. JUCIUS 02-15-07 REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DRIVEWAY ENTRANCE SIGNING		F.A. RTE. 338	SECTION (112 & 113)WRS-5 TC-26	COUNTY DUPAGE	TOTAL SHEETS 963	SHEET NO. 729
PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	CONTRACT NO. 60131		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT
PLOT DATE = 1/4/2008	DATE -	REVISED -	REVISED -								

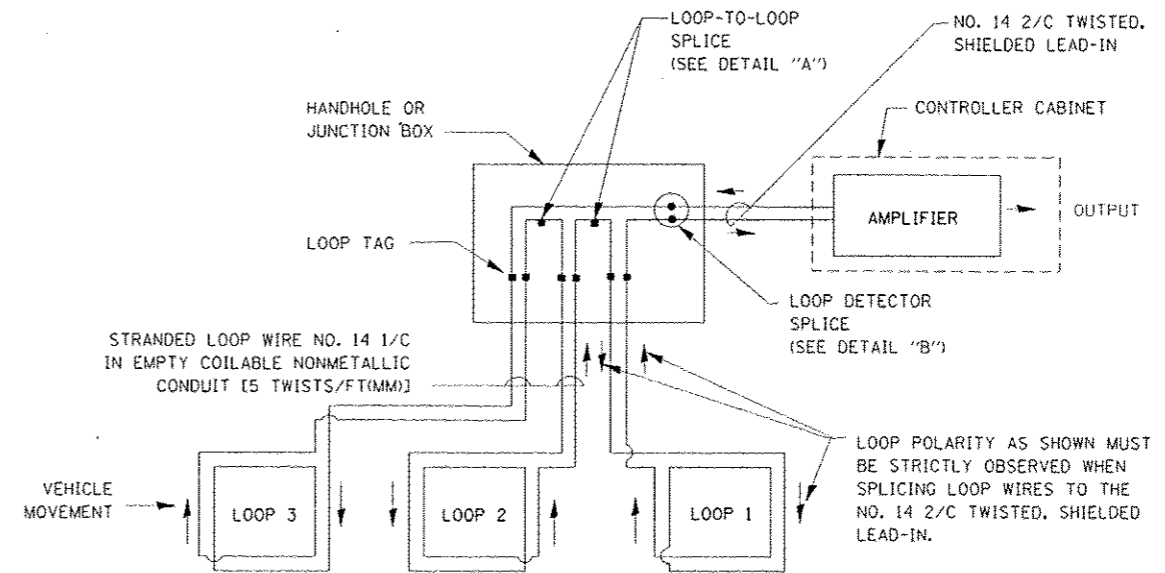
LOOP DETECTOR NOTES

- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- 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.
- 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.
- ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVESHOLES 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.
- 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.
- 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

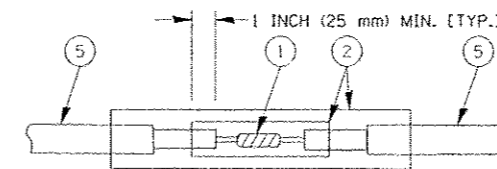


- LANE #1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

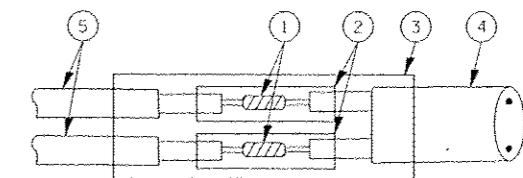


DETECTOR LOOP WIRING SCHEMATIC

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

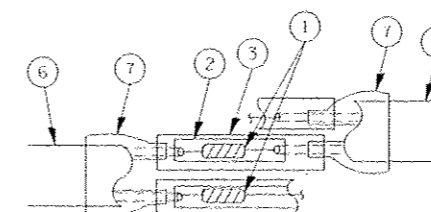


DETAIL "A"
LOOP-TO-LOOP SPLICE

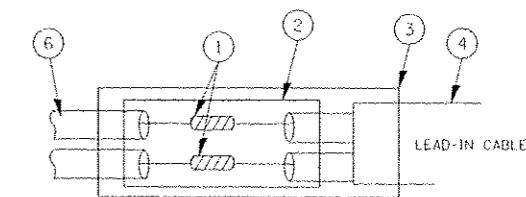


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



PREFORMED LOOP

DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

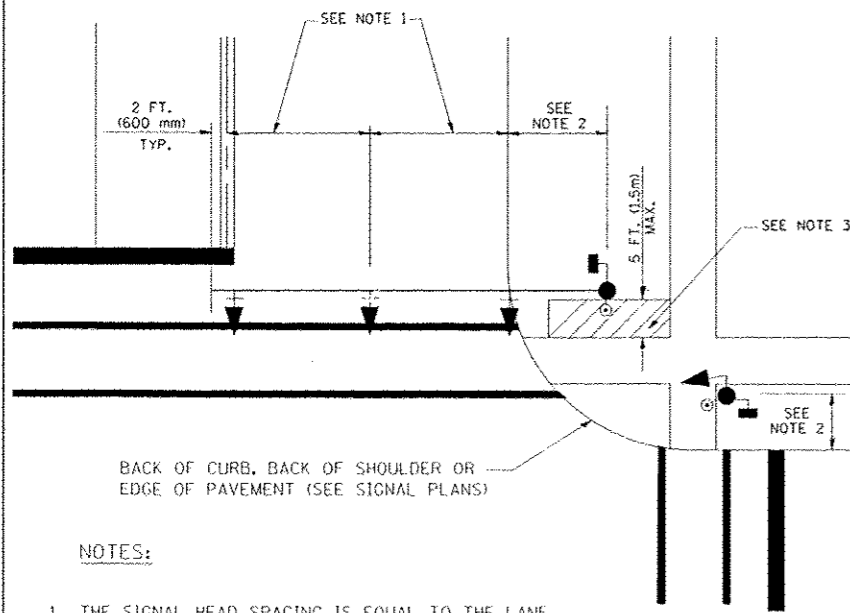
LOOP DETECTOR SPLICE

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- NO. 14 2/C TWISTED, SHIELDED CABLE.
- LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- PREFORMED LOOP
- XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS, TYCO CBR-2 OR APPROVED EQUAL

FILE NAME : ofNewWork\PM1007\BAGBERD\102800305\102800305.dwg	USER NAME : baserd	DESIGNED : DAD	REVISIONS : REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS	P.A. RTE. : 338	SECTION : (112 & 113)WRS-5	COUNTY : DUPAGE	TOTAL SHEETS : 963	SHEET NO. : 730	
PLOT SCALE : 50.0000 / IN	CHECKED : DAD	REVISIONS : REVISIONS	SCALE: NONE			SHEET NO. 1 OF 6 SHEETS	STA. : TO STA.	TS-05		CONTRACT NO. 60I31	
PLOT DATE : 11/4/2009	DATE : 10-28-09	REVISIONS : REVISIONS	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT								

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

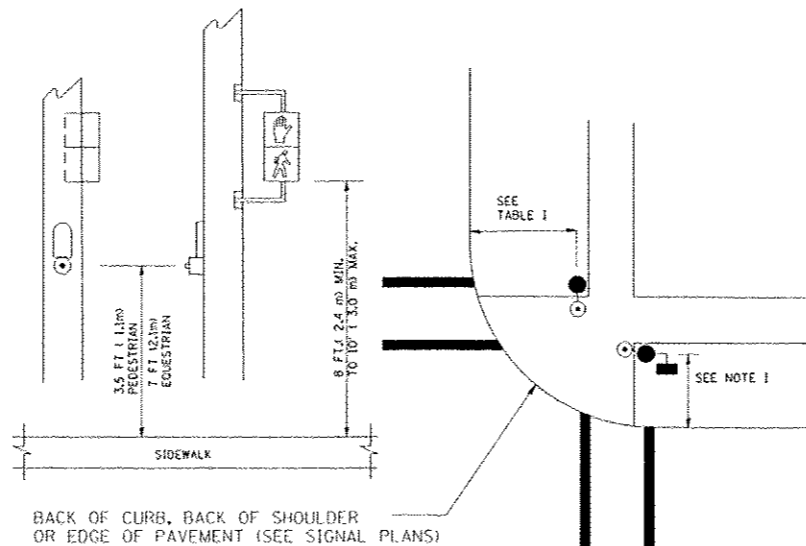
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

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

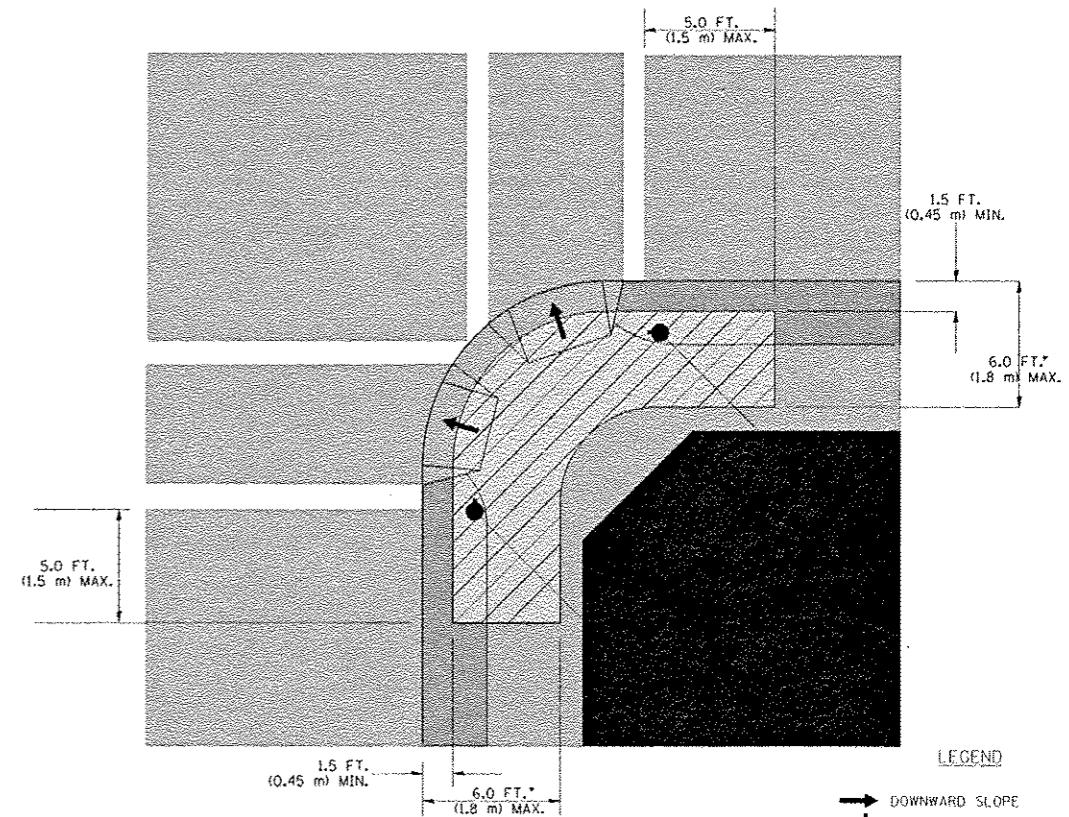
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

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

RECOMMENDED PUSHBUTTON LOCATIONS



LEGEND

- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

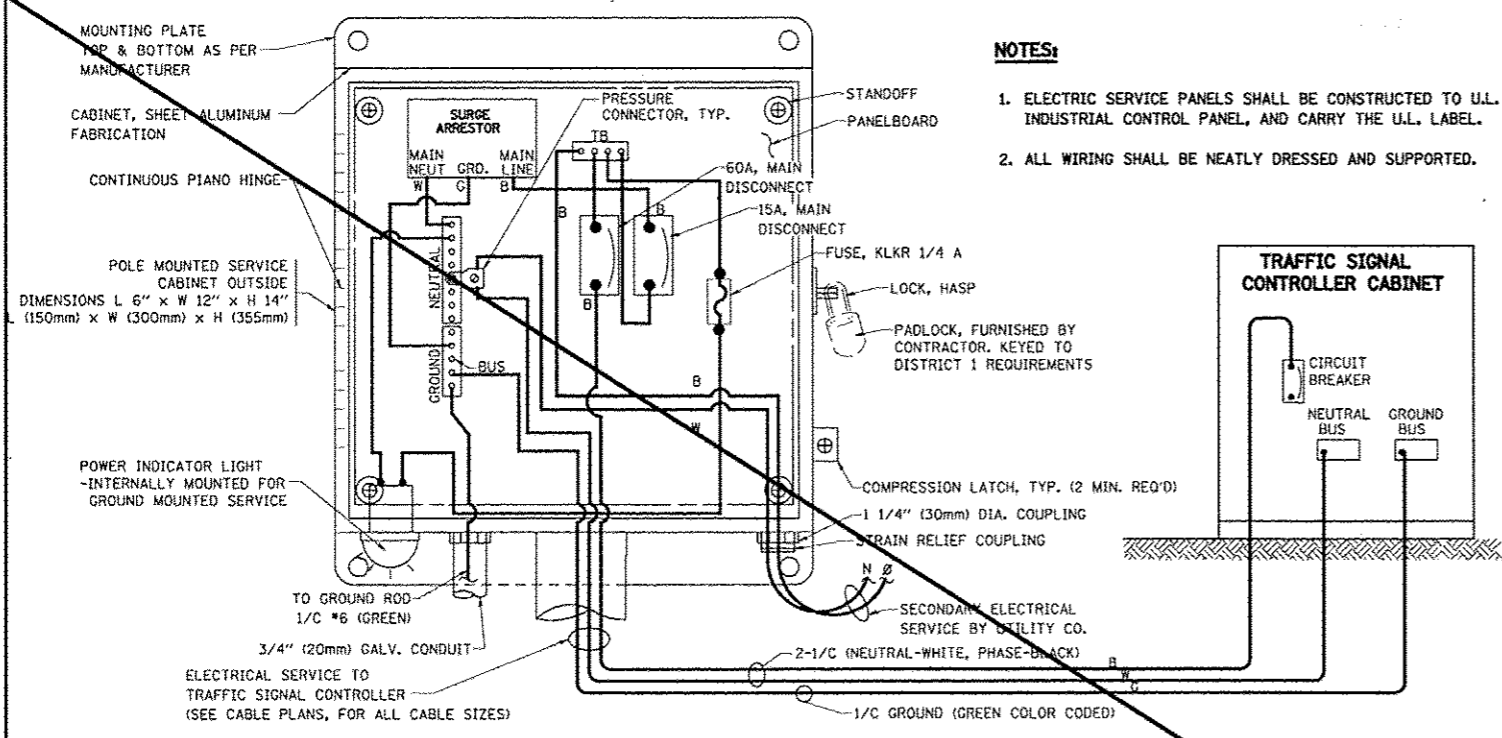
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM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

TRAFFIC SIGNAL EQUIPMENT OFFSET

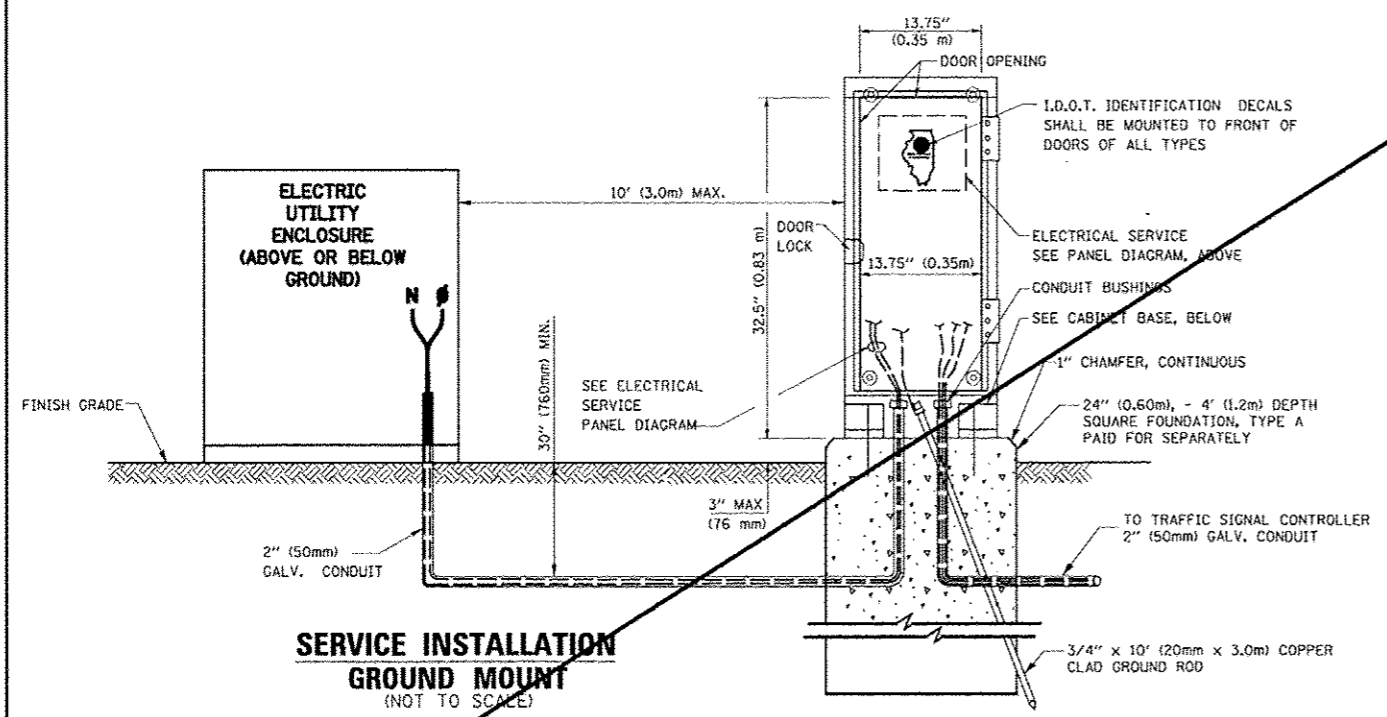
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10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

NOTES:

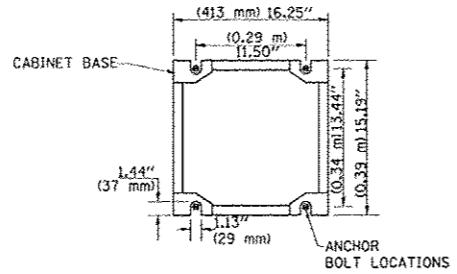
1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM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



ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



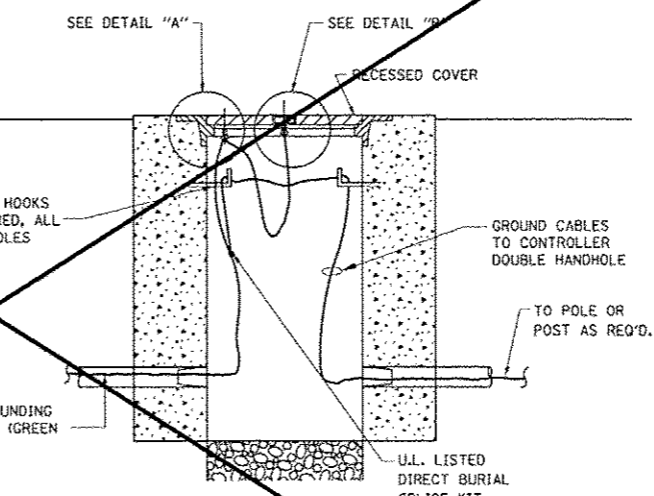
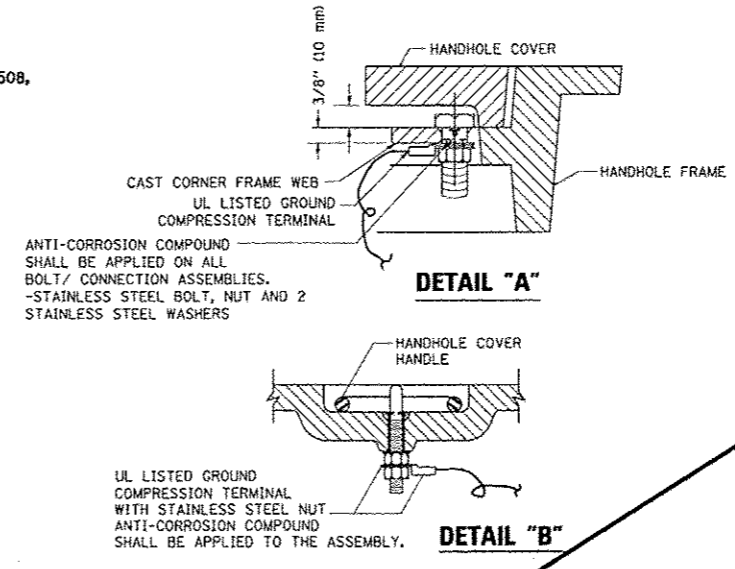
SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)



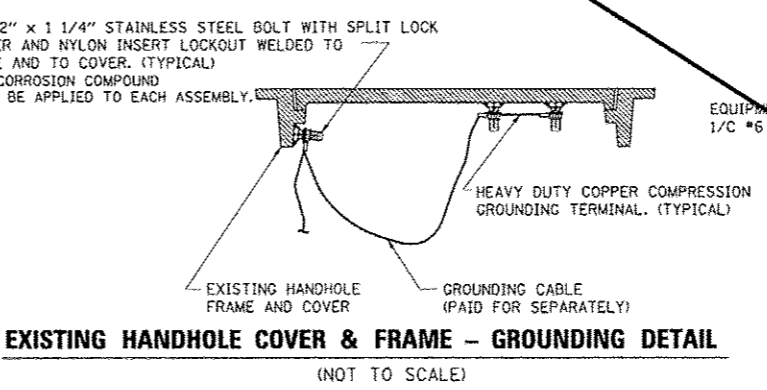
CABINET - BASE BOLT PATTERN
 (NOT TO SCALE)

SEE TRAFFIC SIGNAL PLANS SHEET TS-51

- 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.

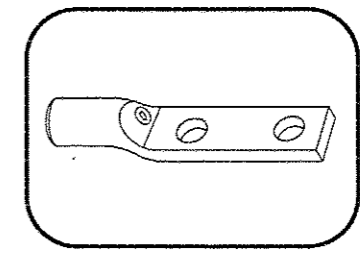


HANDHOLE COVER & FRAME - GROUNDING DETAIL
 (NOT TO SCALE)

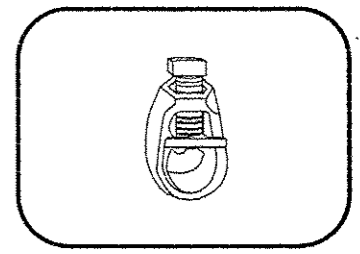


EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL
 (NOT TO SCALE)

- 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.

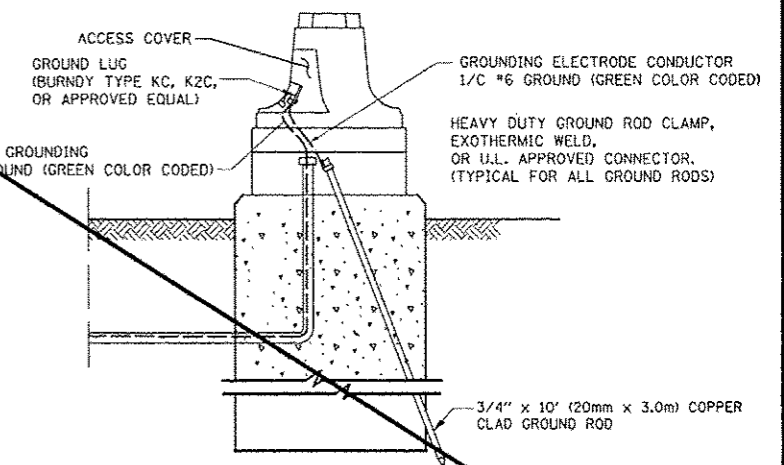


HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YCHA OR APPROVED EQUAL)



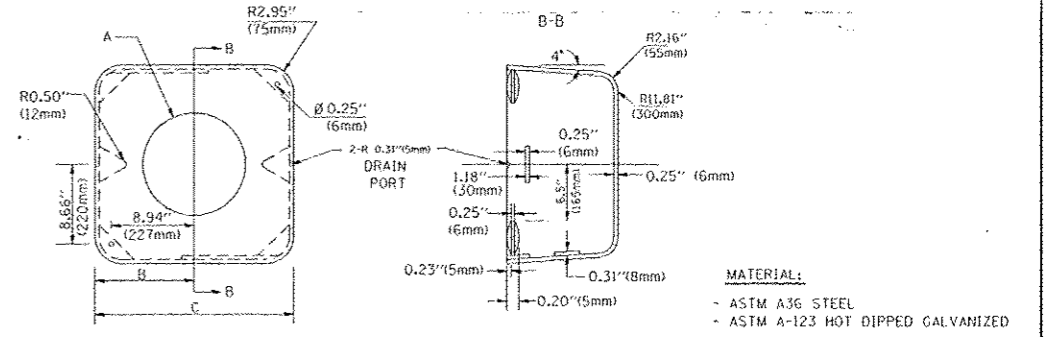
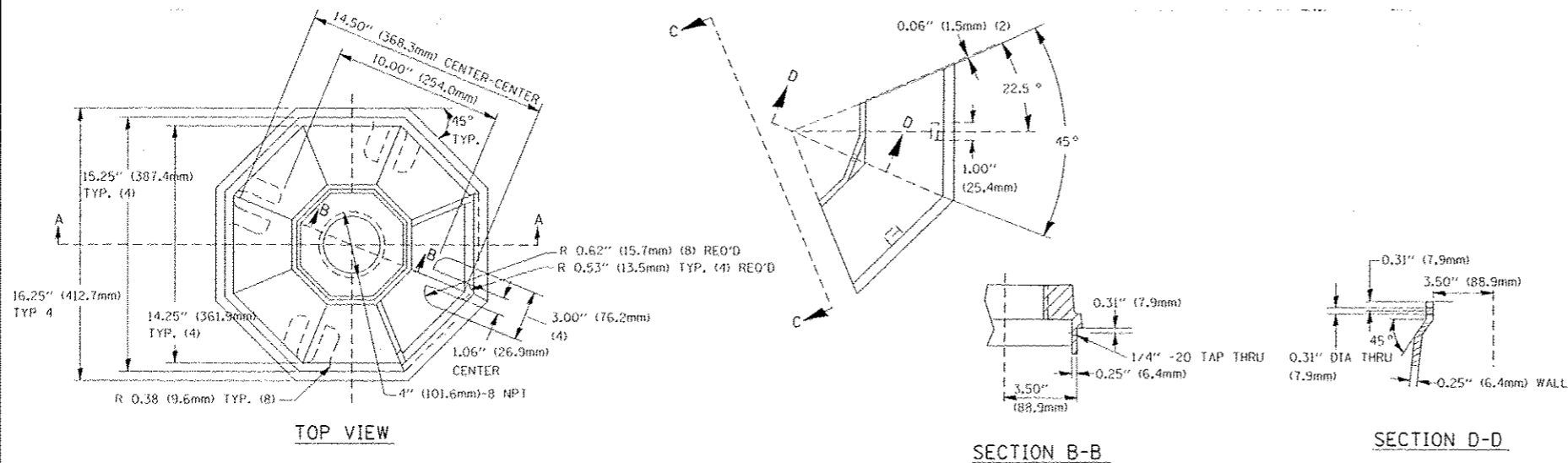
3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

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



MAST ARM POLE / POST-GROUNDING DETAIL
 (NOT TO SCALE)

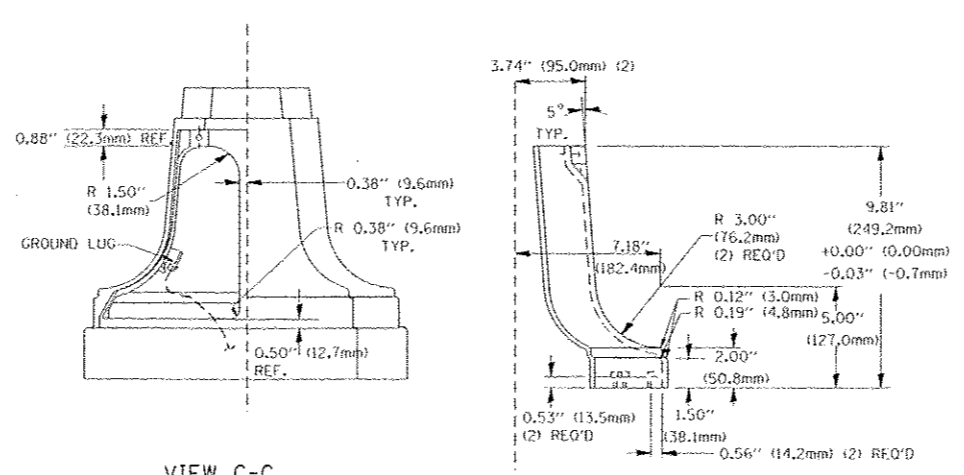
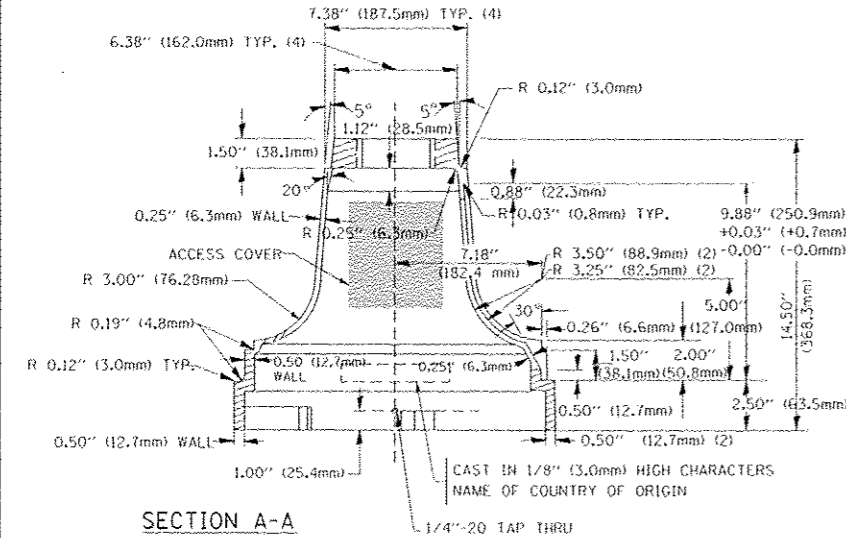
FILE NAME : #FILE#	USER NAME : #UCR#	DESIGNED - DAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS	F.A. RTE. : 339	SECTION : (112 & 113) WRS-5	COUNTY : DUPAGE	TOTAL SHEETS : 963	SHEET NO. : 732
PLOT SCALE : #SCALE#	CHECKED - DAD	REVISOR -	SCALE: NONE			SHEET NO. 3 OF 6 SHEETS	STA. : TO STA.	TS-05		CONTRACT NO. : 60131
PLOT DATE : #DATE#	DATE : 10-28-09	REVISOR -	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							



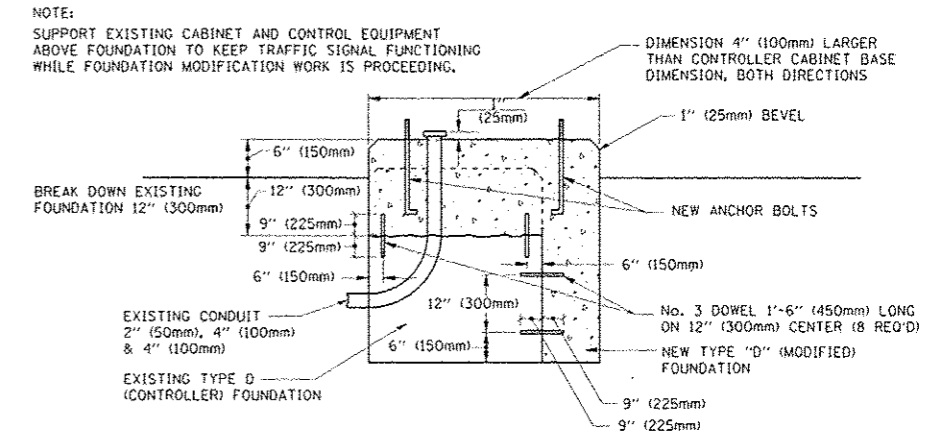
A	B	C	HEIGHT	WEIGHT
VARIES	9.5\" (241mm)	19\" (483mm)	7\" (178mm) - 12\" (300mm)	53 lbs (24kg)
VARIES	10.75\" (273mm)	21.5\" (546mm)	7\" (178mm) - 12\" (300mm)	68 lbs (31 kg)
VARIES	13.0\" (330mm)	26\" (660mm)	7\" (178mm) - 12\" (300mm)	81 lbs (37 kg)
VARIES	18.5\" (470mm)	37\" (940mm)	7\" (178mm) -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

NOTES:

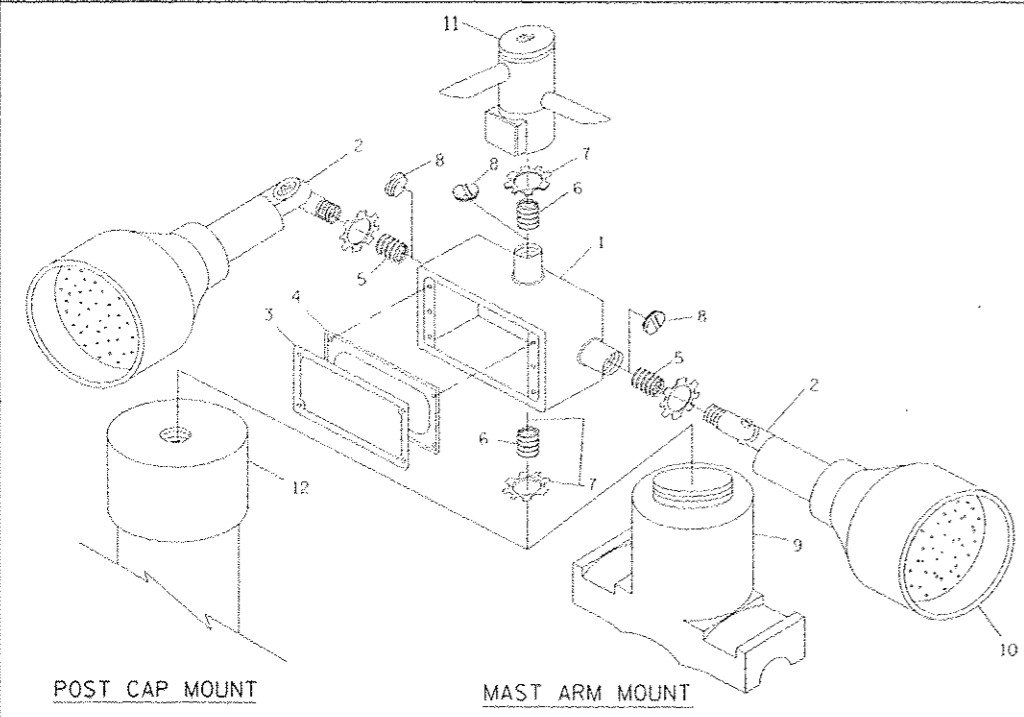
- DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
- THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
- THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



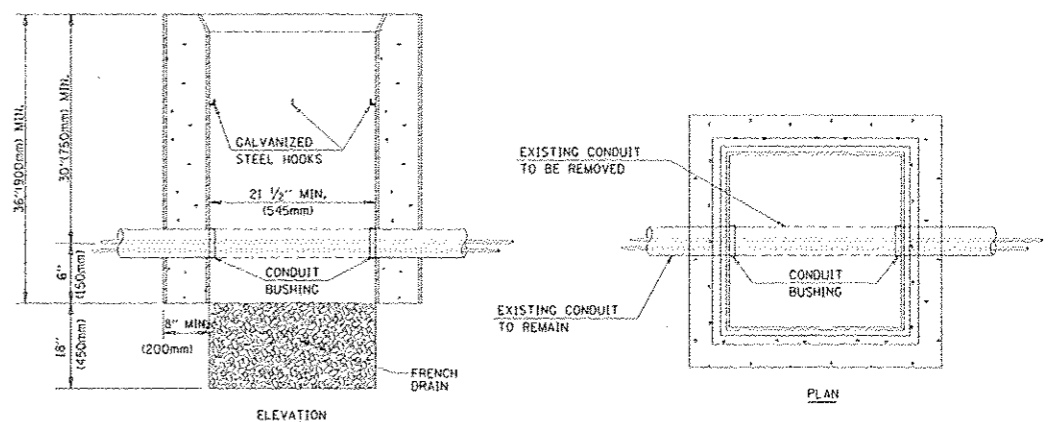
MODIFY EXISTING TYPE "D" FOUNDATION



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	1/4\" (19 mm) CLOSE NIPPLE
7	1/4\" (19 mm) LOCKNUT
8	1/4\" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

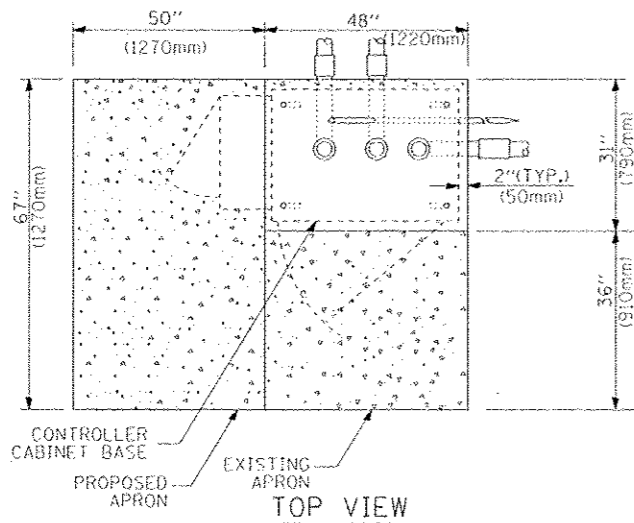
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
- ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-0-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 1/4\" (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.



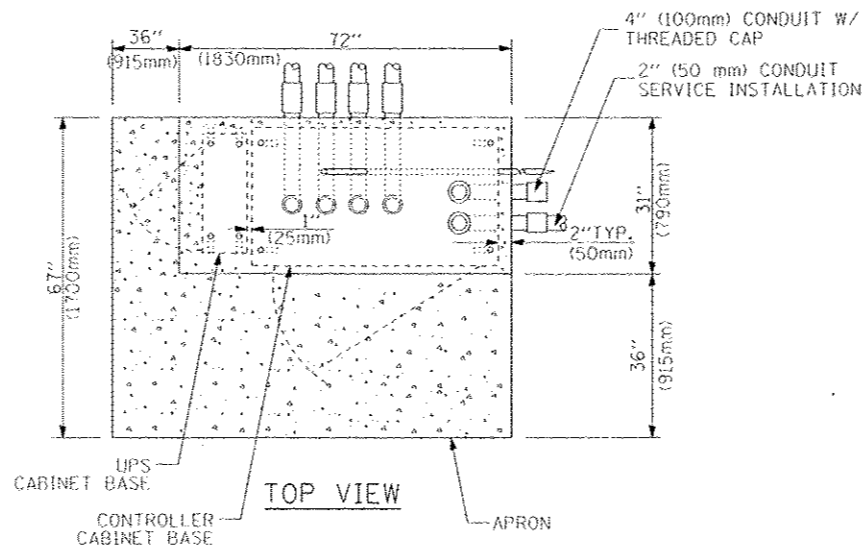
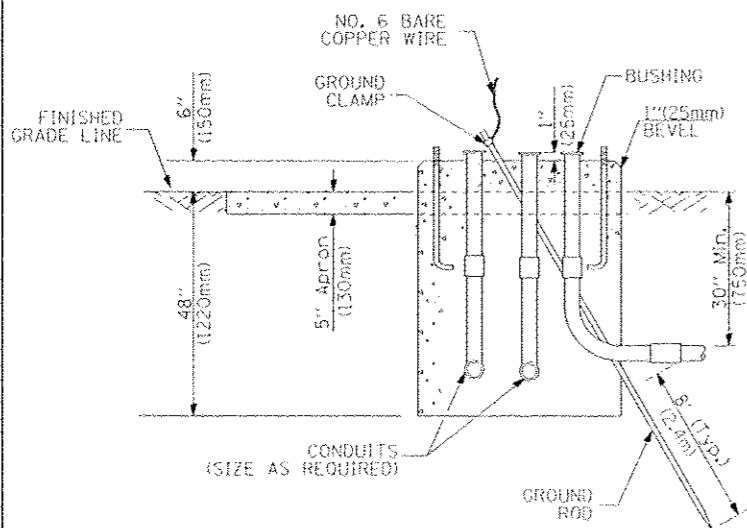
NOTES:

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

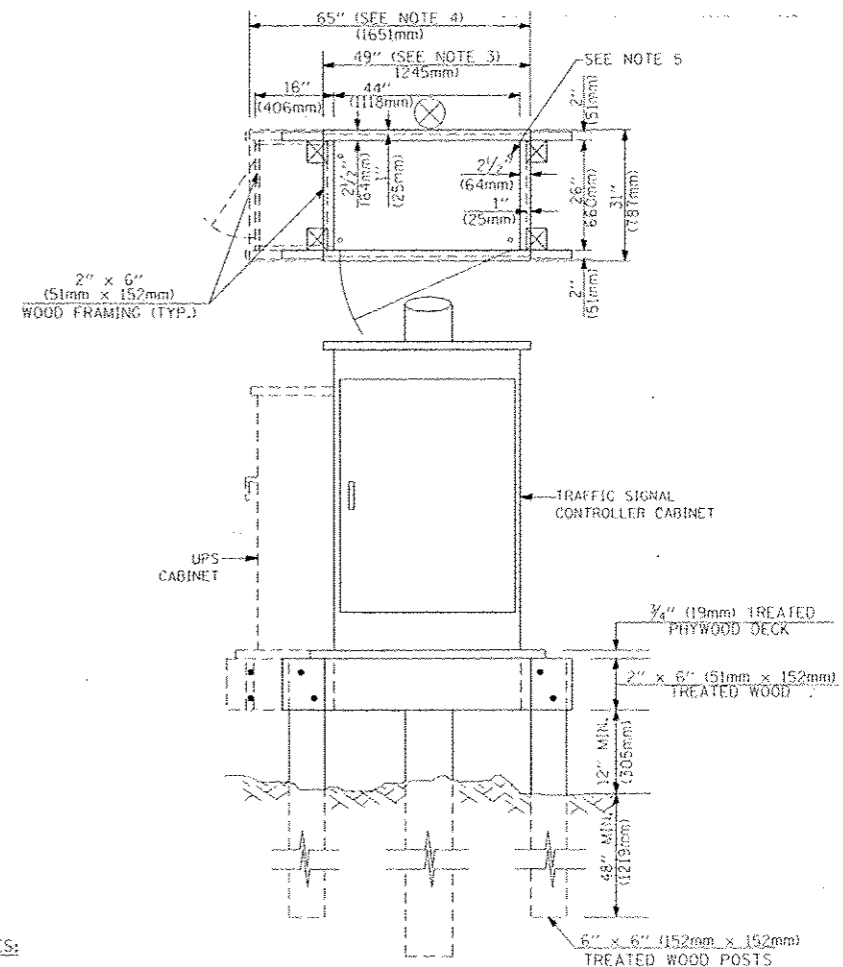
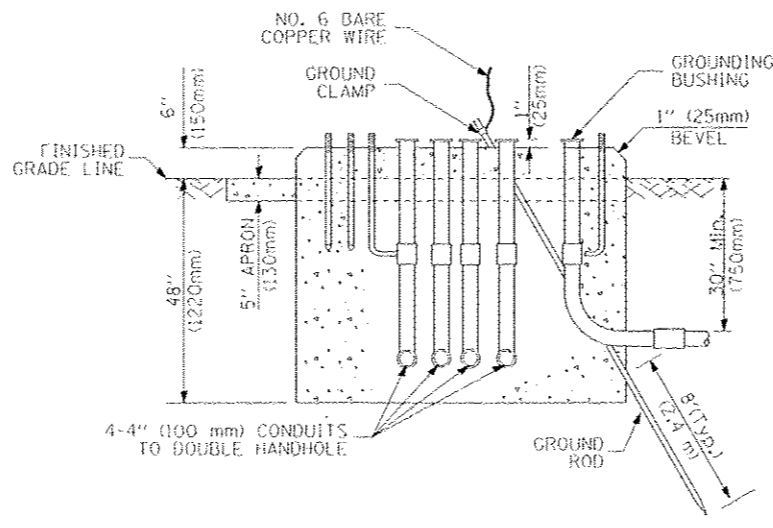
HANDHOLE TO INTERCEPT EXISTING CONDUIT



**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**



**TYPE C
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**



- NOTES:**
1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
 2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
 3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
 4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
 5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
 6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

**TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM**

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and less than 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

- NOTES:**
1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
 2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
 3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
 4. For mast arm assemblies with dual arms refer to state standard 878001.

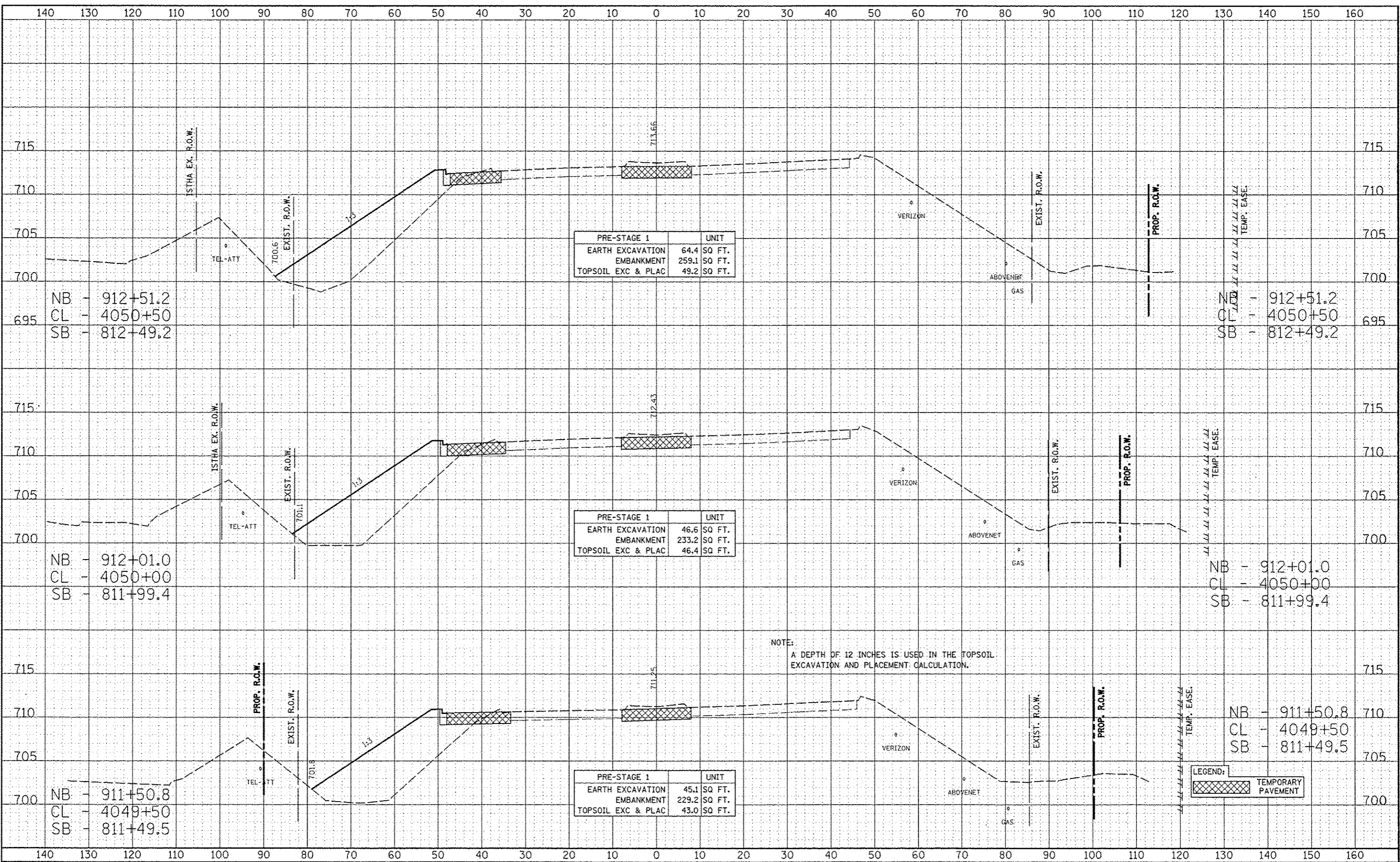
DEPTH OF MAST ARM FOUNDATIONS, TYPE E

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED												
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE															
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE															
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA															
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED															
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F															
UNINTERRUPTIBLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F															
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				CALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)				FIBER OPTIC CABLE NO. 62.5/125, MM12F															
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)															
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH			CT	GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE															
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)			CNC	CONTROLLER CABINET AND FOUNDATION TO BE REMOVED															
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM		S	S	STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED															
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM		I	IP	ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED															
SIGNAL POST				REMOVE ITEM	R			STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED															
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM	RL			SIGNAL POST AND FOUNDATION TO BE REMOVED															
GUY WIRE				ABANDON ITEM	A			INTERSECTION & SAMPLING (SYSTEM) DETECTOR															
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR															
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				EXISTING INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR															
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				EXISTING PREFORMED INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR															
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR															
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				PREFORMED SAMPLING (SYSTEM) DETECTOR															
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED				<h2 style="margin: 0;">RAILROAD SYMBOLS</h2> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">EXISTING</th> <th style="width: 50%;">PROPOSED</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>				EXISTING	PROPOSED										
EXISTING	PROPOSED																						
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID																			
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER																			
ILLUMINATED SIGN "NO LEFT TURN"				RADIO INTERCONNECT																			
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO REPEATER																			
DETECTOR LOOP, TYPE I				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED																			
PREFORMED DETECTOR LOOP				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)																			
MICROWAVE VEHICLE SENSOR																							
VIDEO DETECTION CAMERA																							
VIDEO DETECTION ZONE																							
PAN, TILT, ZOOM CAMERA																							
WIRELESS DETECTOR SENSOR																							
WIRELESS ACCESS POINT																							

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PRE-STAGE 1		UNIT
EARTH EXCAVATION	64.4	SQ. FT.
EMBANKMENT	259.1	SQ. FT.
TOPSOIL EXC & PLAC	49.2	SQ. FT.

PRE-STAGE 1		UNIT
EARTH EXCAVATION	46.6	SQ. FT.
EMBANKMENT	233.2	SQ. FT.
TOPSOIL EXC & PLAC	46.4	SQ. FT.

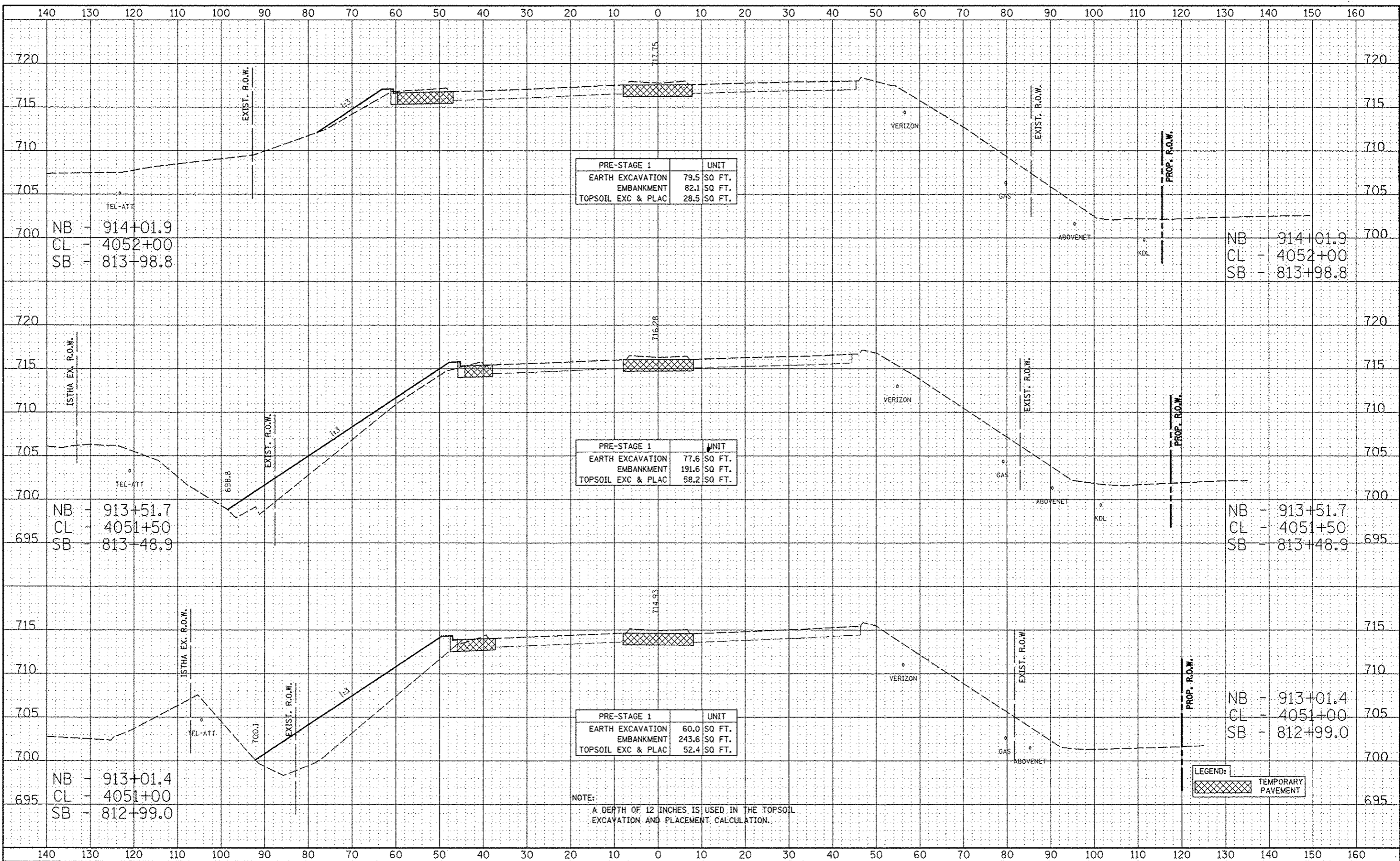
PRE-STAGE 1		UNIT
EARTH EXCAVATION	45.1	SQ. FT.
EMBANKMENT	229.2	SQ. FT.
TOPSOIL EXC & PLAC	43.0	SQ. FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:	
	TEMPORARY PAVEMENT

DATE	
DESIGNED	
DRAWN	
CHECKED	
DATE	

DATE	
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PRE-STAGE 1	UNIT
EARTH EXCAVATION	79.5 SQ. FT.
EMBANKMENT	82.1 SQ. FT.
TOPSOIL EXC & PLAC	28.5 SQ. FT.

PRE-STAGE 1	UNIT
EARTH EXCAVATION	77.6 SQ. FT.
EMBANKMENT	191.6 SQ. FT.
TOPSOIL EXC & PLAC	58.2 SQ. FT.

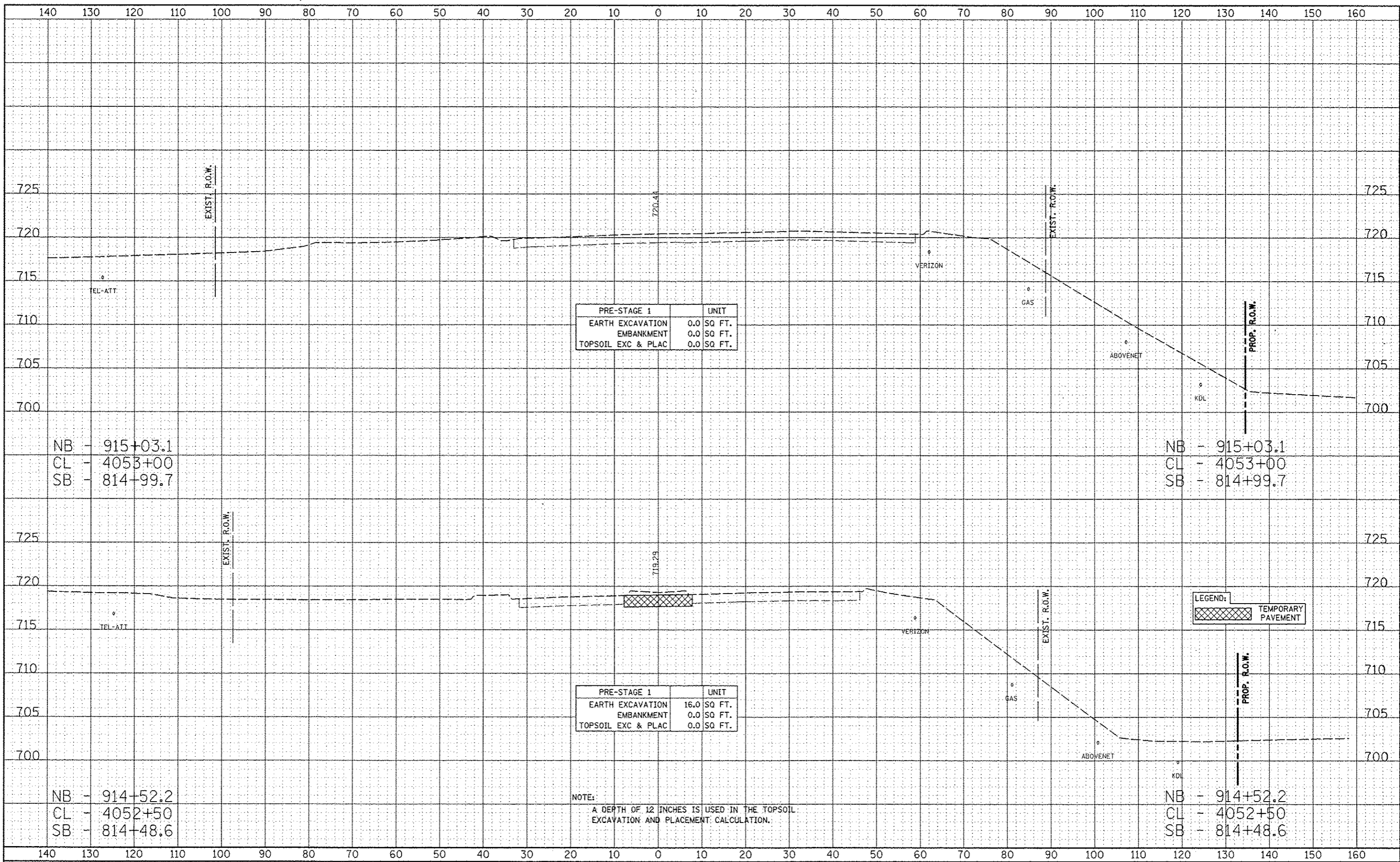
PRE-STAGE 1	UNIT
EARTH EXCAVATION	60.0 SQ. FT.
EMBANKMENT	243.6 SQ. FT.
TOPSOIL EXC & PLAC	52.4 SQ. FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:
TEMPORARY PAVEMENT

DATE	
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NOTE BOOK	
DATE	
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QUANTITY	
SOB'S	
PROF'S	
NOTE BOOK	
DATE	
NO.	



PRE-STAGE 1		UNIT
EARTH EXCAVATION	0.0	SQ. FT.
EMBANKMENT	0.0	SQ. FT.
TOPSOIL EXC & PLAC	0.0	SQ. FT.

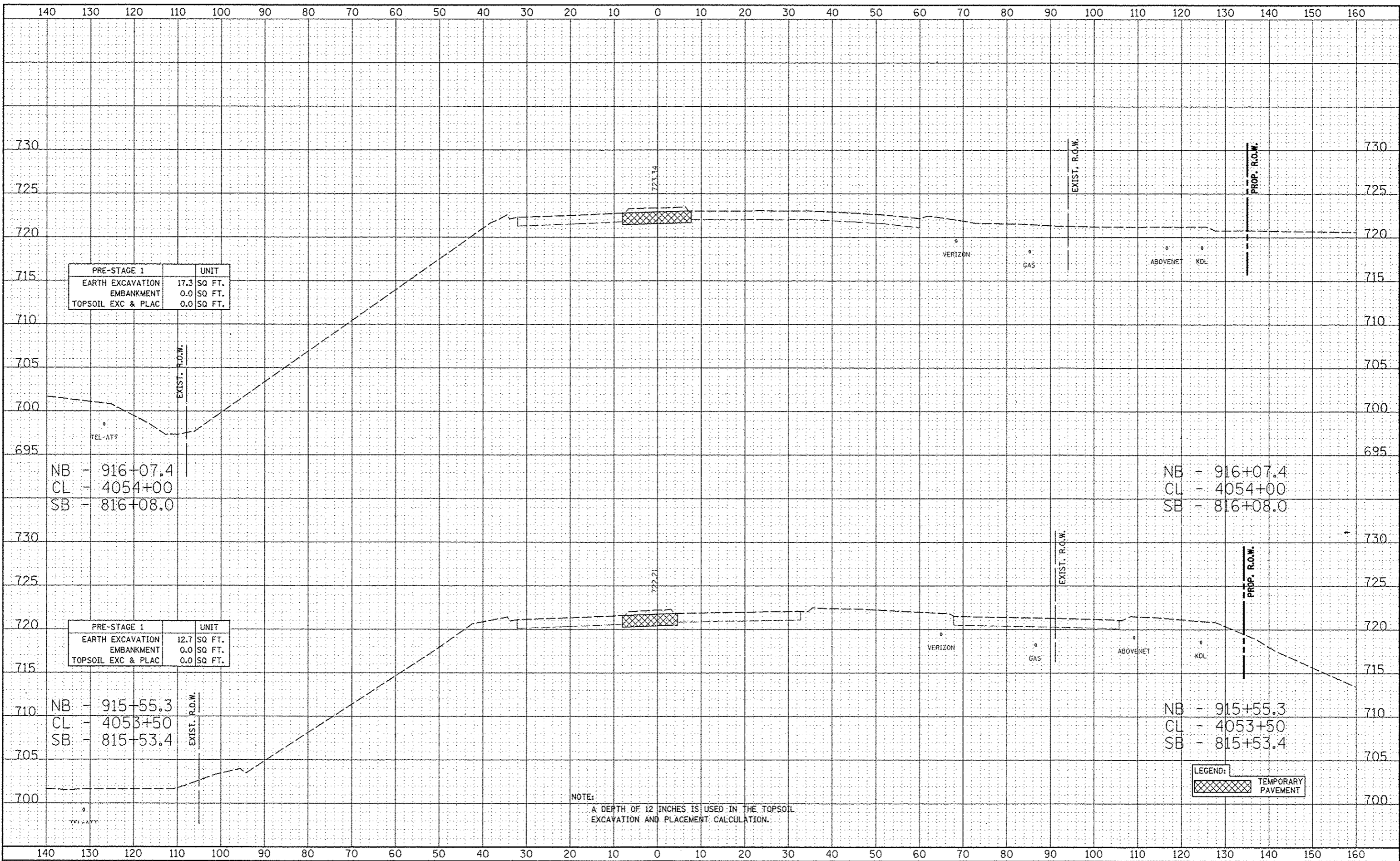
PRE-STAGE 1		UNIT
EARTH EXCAVATION	16.0	SQ. FT.
EMBANKMENT	0.0	SQ. FT.
TOPSOIL EXC & PLAC	0.0	SQ. FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:	TEMPORARY PAVEMENT
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DATE	
BY	
REVISIONS	
NO. DATE	
BY	
DESCRIPTION	

DATE	
BY	
REVISIONS	
NO. DATE	
BY	
DESCRIPTION	



PRE-STAGE 1		UNIT
EARTH EXCAVATION	17.3	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

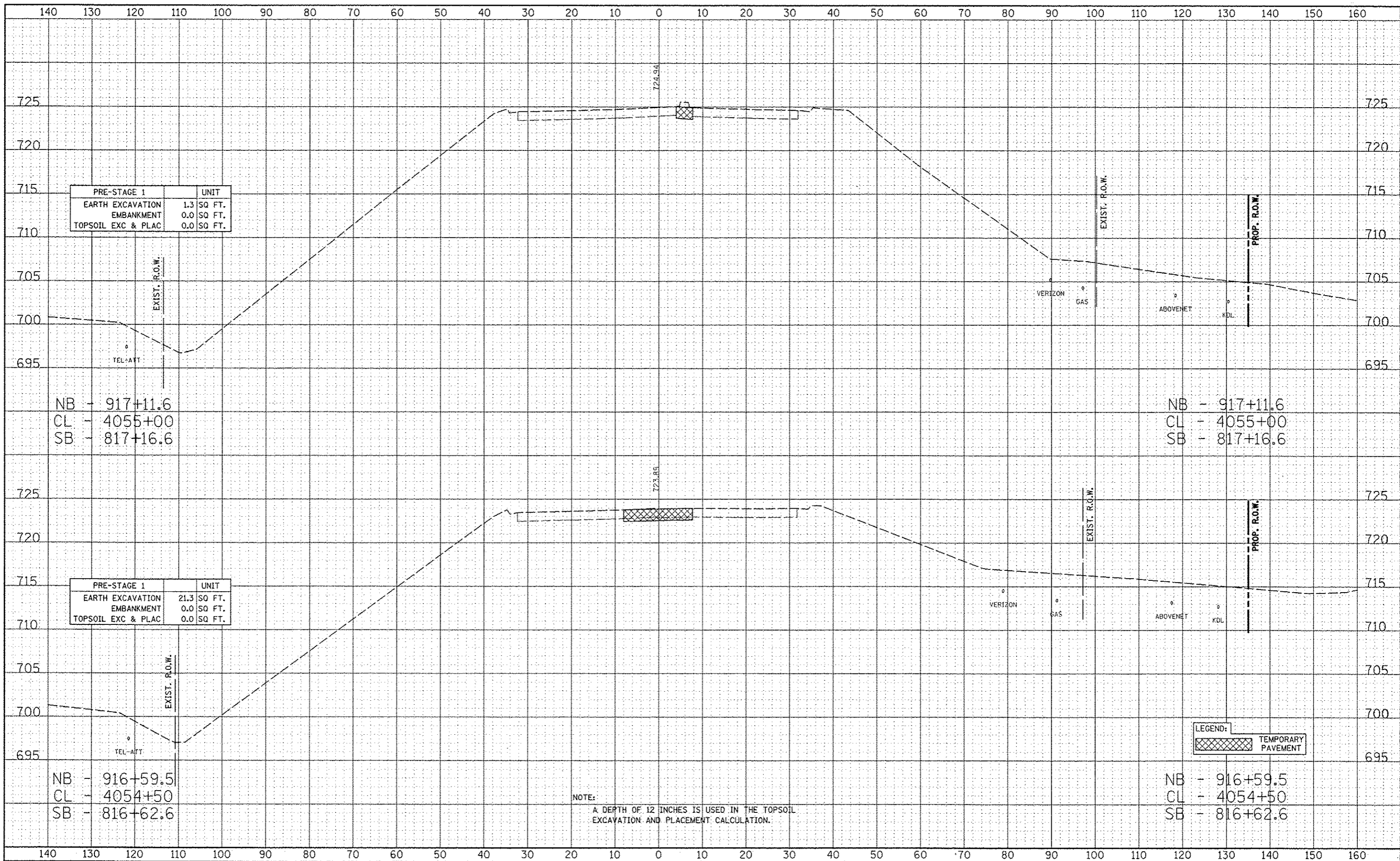
PRE-STAGE 1		UNIT
EARTH EXCAVATION	12.7	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:
TEMPORARY PAVEMENT

DATE	BY
DESIGNED	BY
DRAWN	BY
CHECKED	BY
DATE	BY
REVISIONS	
NO.	DESCRIPTION

DATE	BY
DESIGNED	BY
DRAWN	BY
CHECKED	BY
DATE	BY
REVISIONS	
NO.	DESCRIPTION

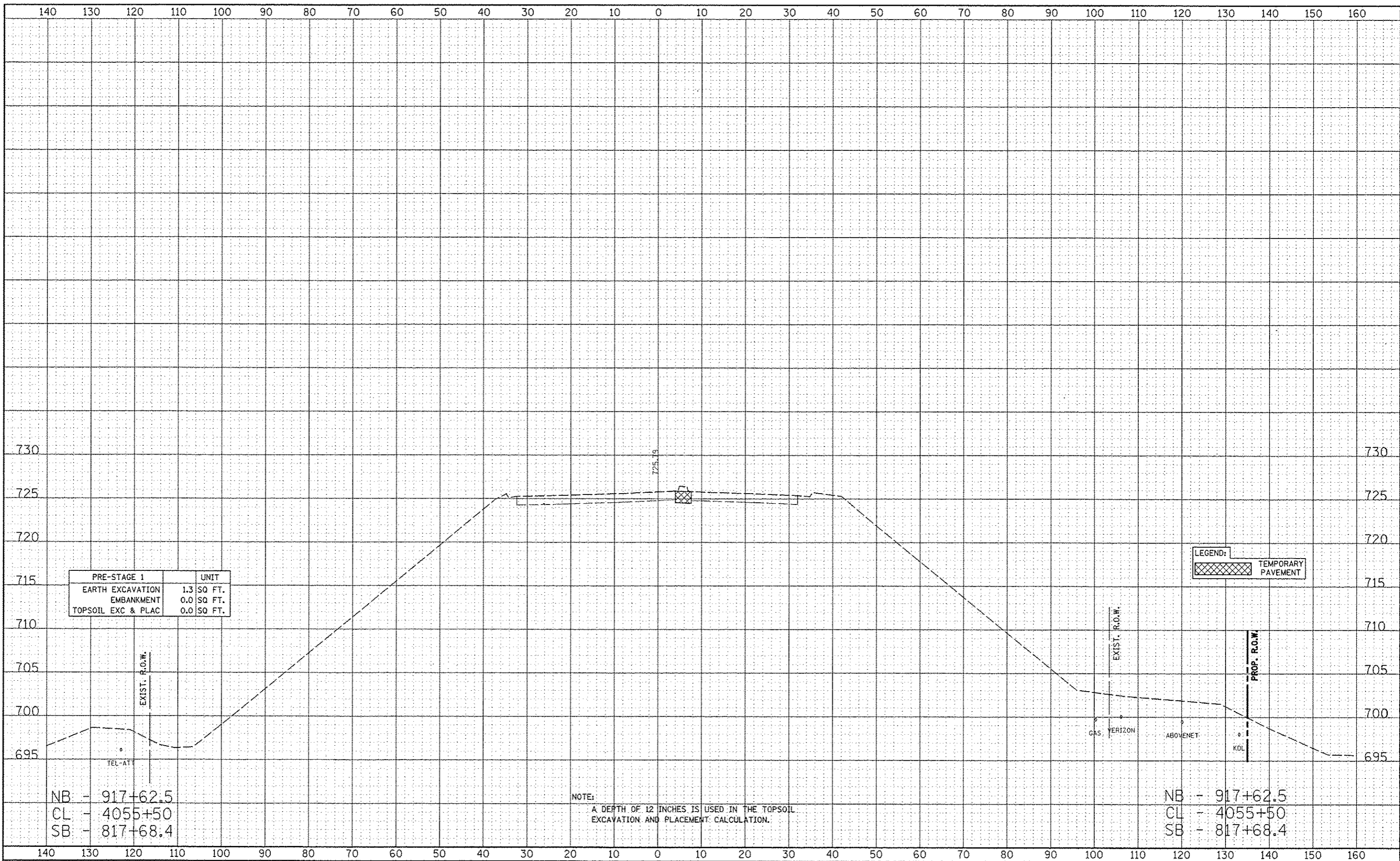


LEGEND:	
	TEMPORARY PAVEMENT

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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PRE-STAGE 1	UNIT
EARTH EXCAVATION	1.3 SQ FT.
EMBANKMENT	0.0 SQ FT.
TOPSOIL EXC & PLAC	0.0 SQ FT.

	TEMPORARY PAVEMENT
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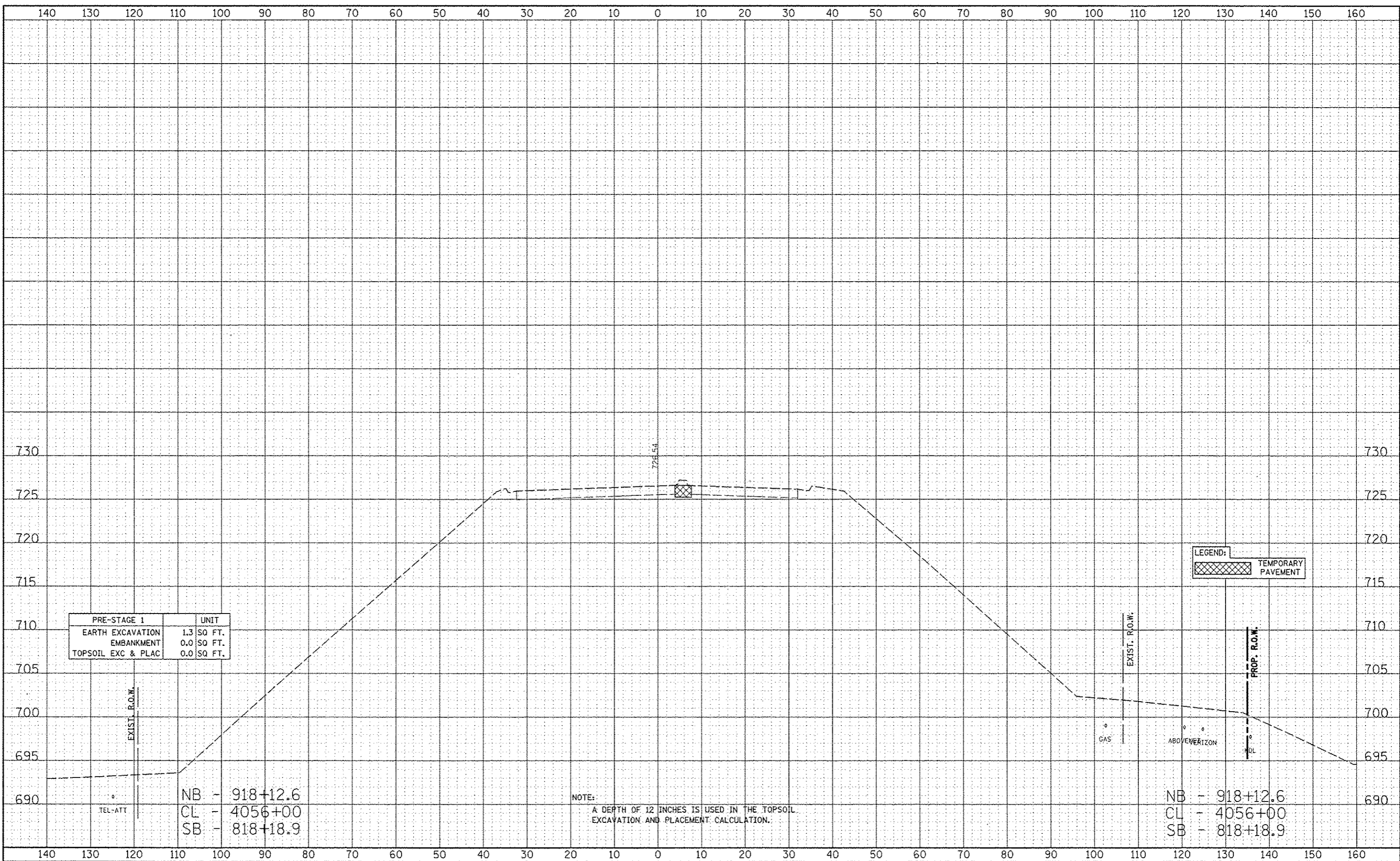
NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

NB - 917+62.5
CL - 4055+50
SB - 817+68.4

NB - 917+62.5
CL - 4055+50
SB - 817+68.4

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PRE-STAGE 1	UNIT
EARTH EXCAVATION	1.3 SQ FT.
EMBANKMENT	0.0 SQ FT.
TOPSOIL EXC & PLAC	0.0 SQ FT.

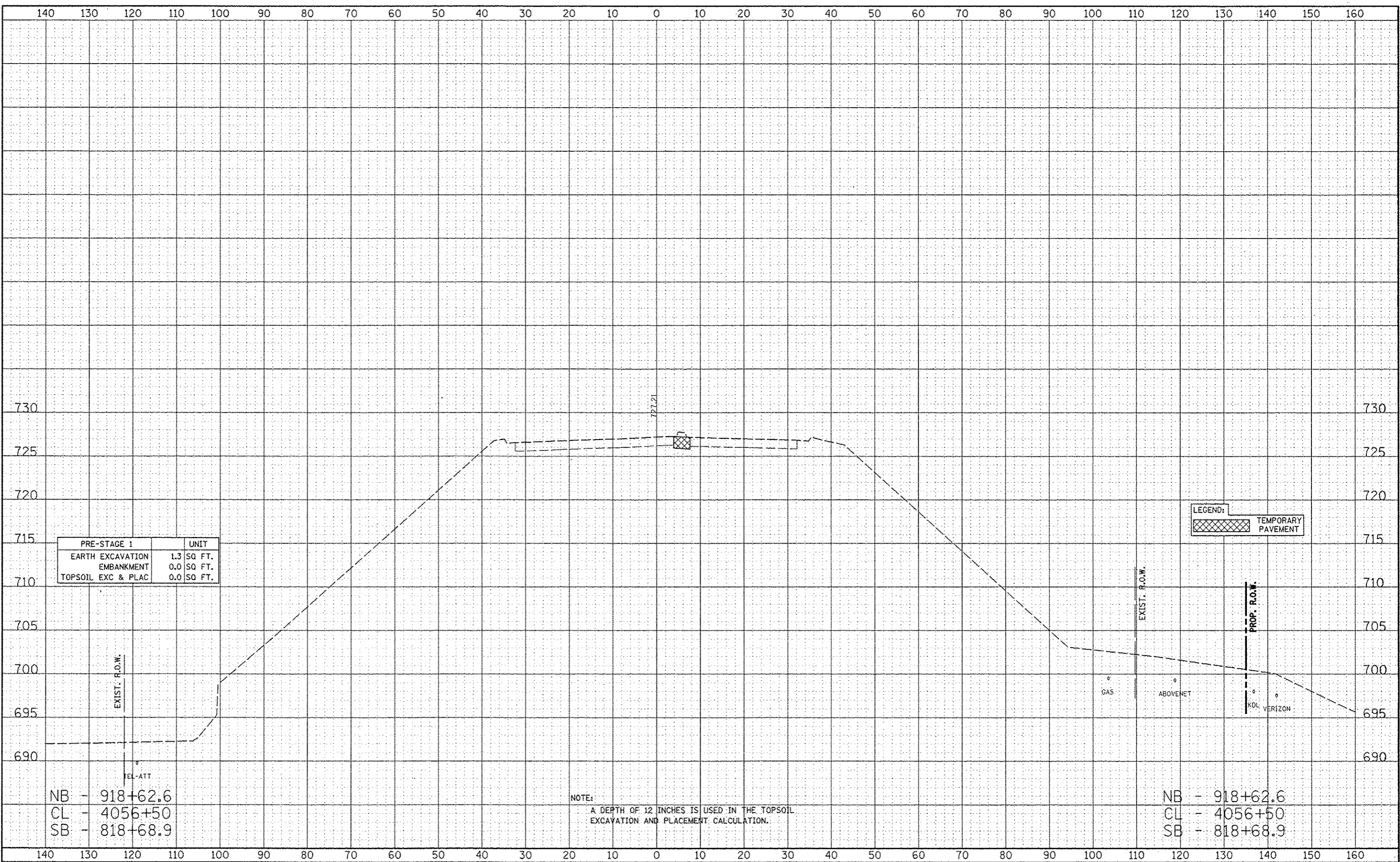
NB - 918+12.6
 CL - 4056+00
 SB - 818+18.9

NB - 918+12.6
 CL - 4056+00
 SB - 818+18.9

NOTE:
 A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL
 EXCAVATION AND PLACEMENT CALCULATION.

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PRE-STAGE 1	UNIT
EARTH EXCAVATION	1.3 SQ. FT.
EMBANKMENT	0.0 SQ. FT.
TOPSOIL EXC & PLAC	0.0 SQ. FT.

LEGEND:	TEMPORARY PAVEMENT
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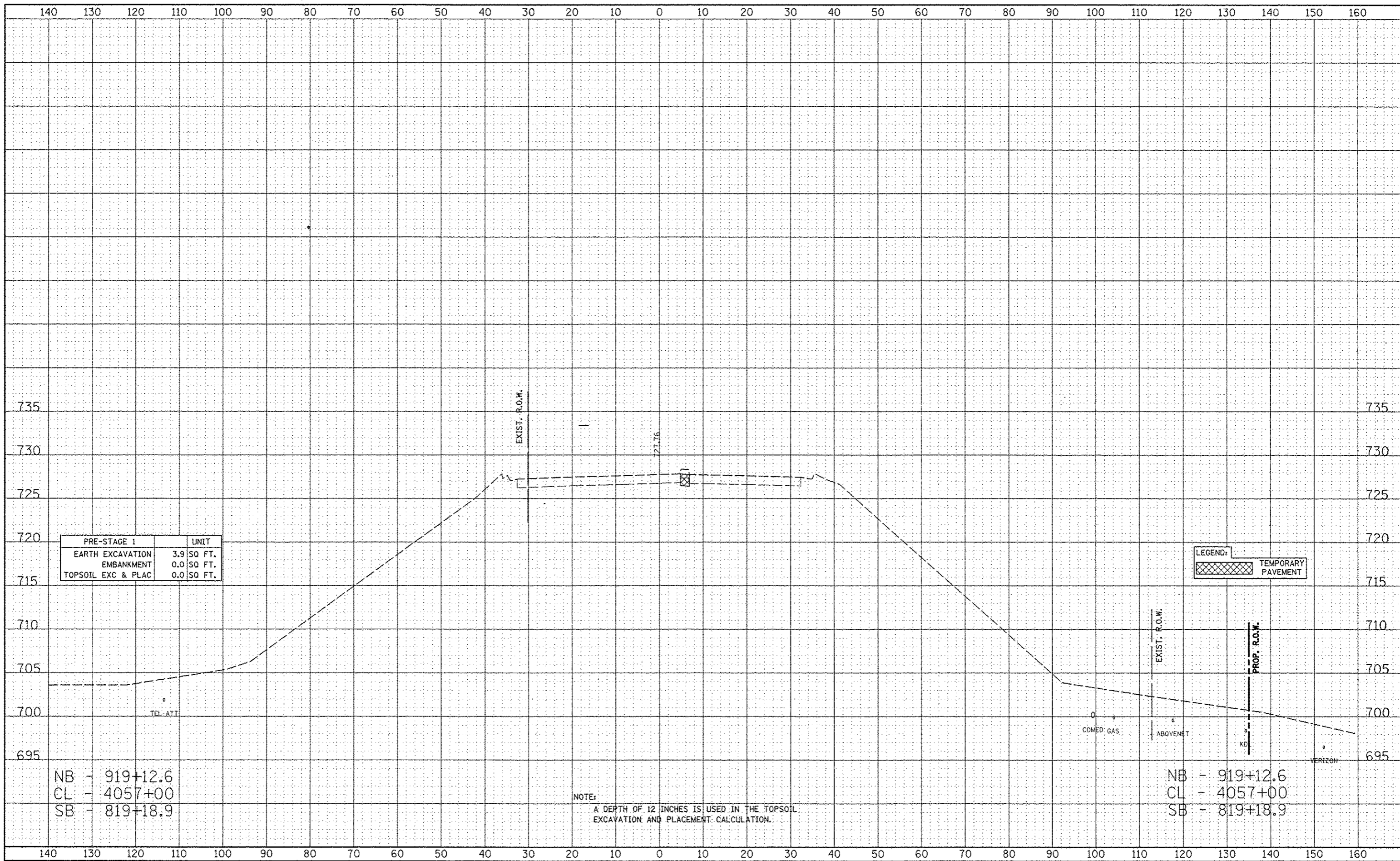
NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

NB - 918+62.6
CL - 4056+50
SB - 818+68.9

NB - 918+62.6
CL - 4056+50
SB - 818+68.9

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PRE-STAGE 1	UNIT
EARTH EXCAVATION	3.9 SQ FT.
EMBANKMENT	0.0 SQ FT.
TOPSOIL EXC & PLAC	0.0 SQ FT.

	TEMPORARY PAVEMENT
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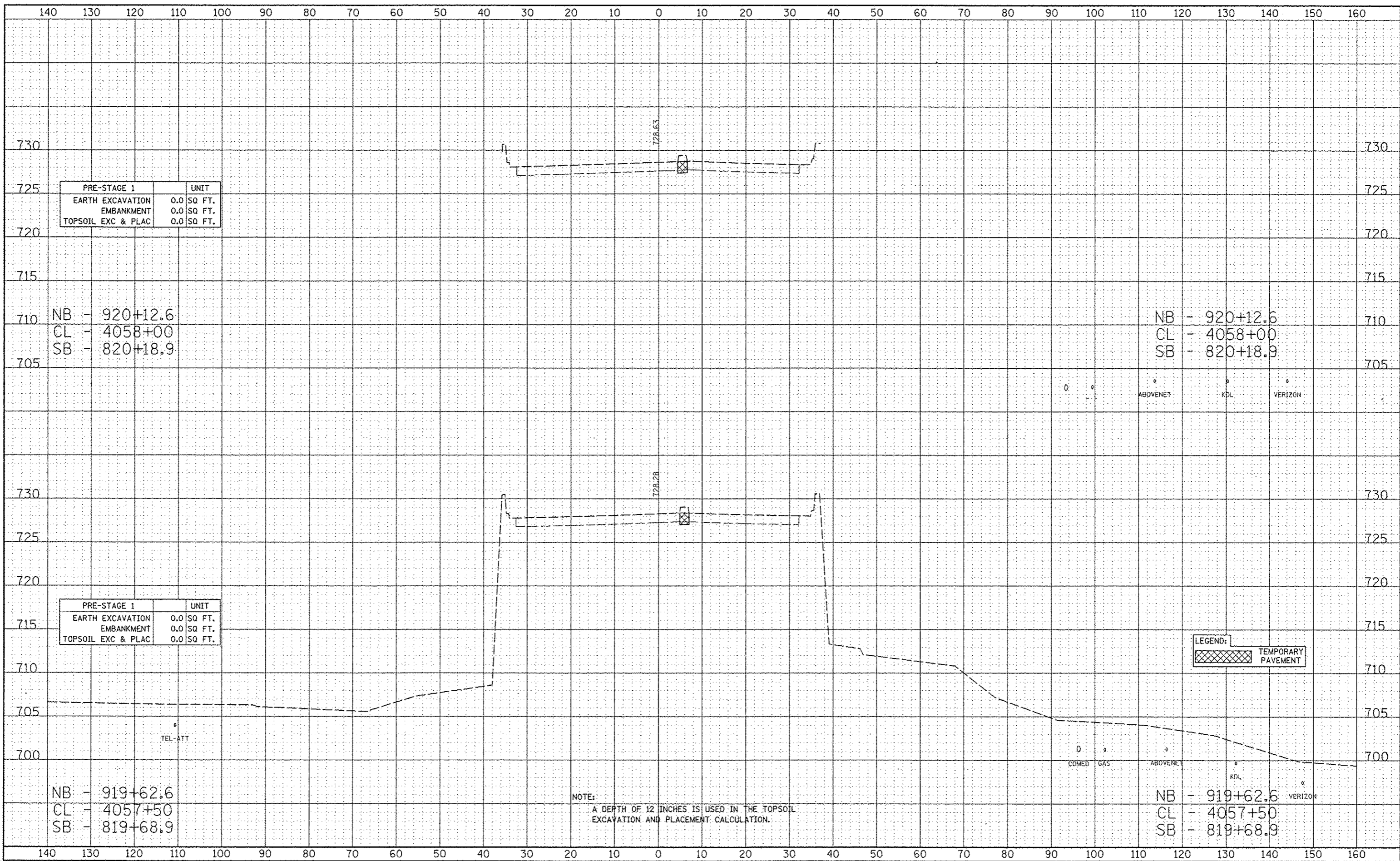
NB - 919+12.6
 CL - 4057+00
 SB - 819+18.9

NB - 919+12.6
 CL - 4057+00
 SB - 819+18.9

NOTE:
 A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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PRE-STAGE 1	UNIT
EARTH EXCAVATION	0.0 SQ FT.
EMBANKMENT	0.0 SQ FT.
TOPSOIL EXC & PLAC	0.0 SQ FT.

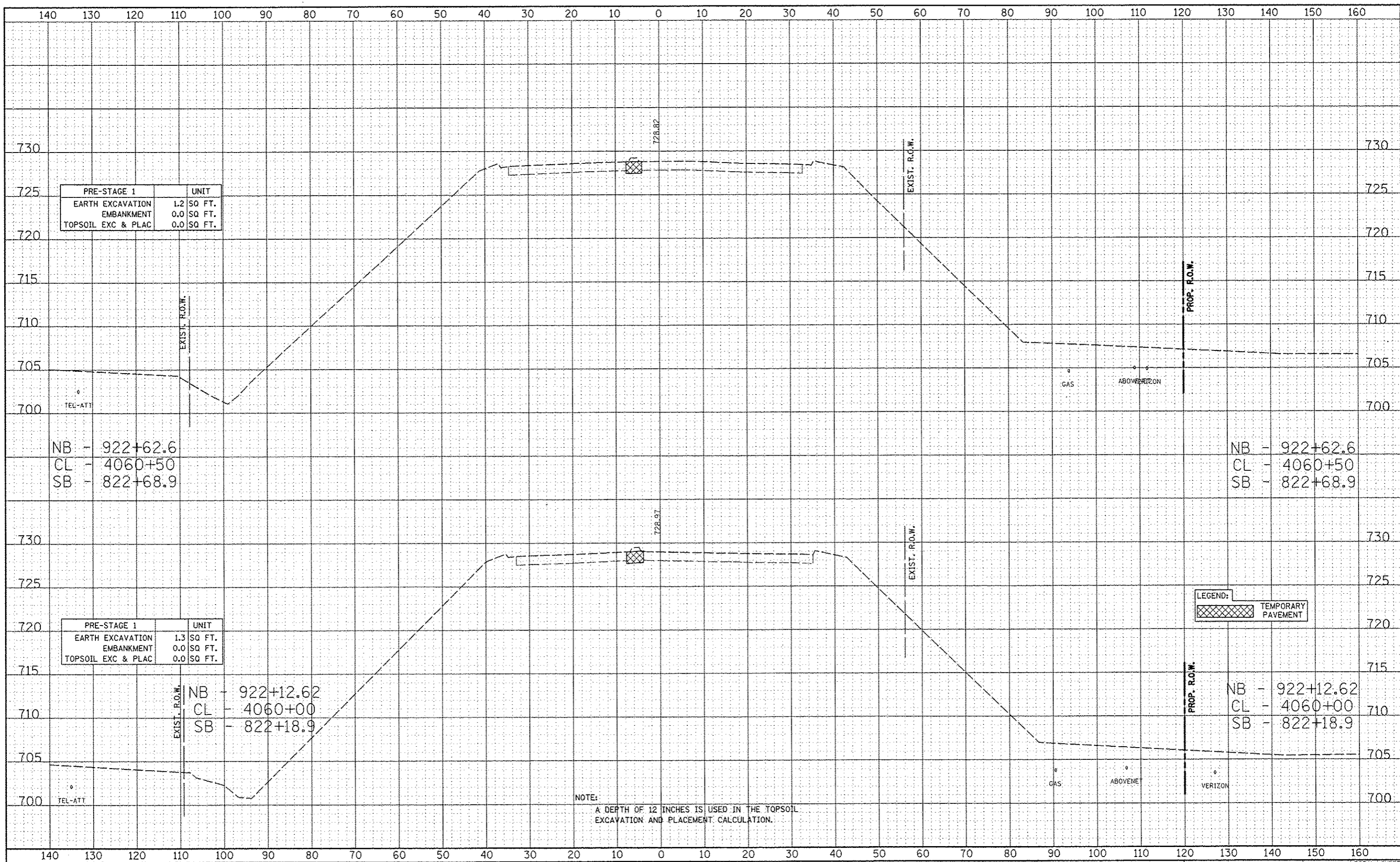
PRE-STAGE 1	UNIT
EARTH EXCAVATION	0.0 SQ FT.
EMBANKMENT	0.0 SQ FT.
TOPSOIL EXC & PLAC	0.0 SQ FT.

	TEMPORARY PAVEMENT
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NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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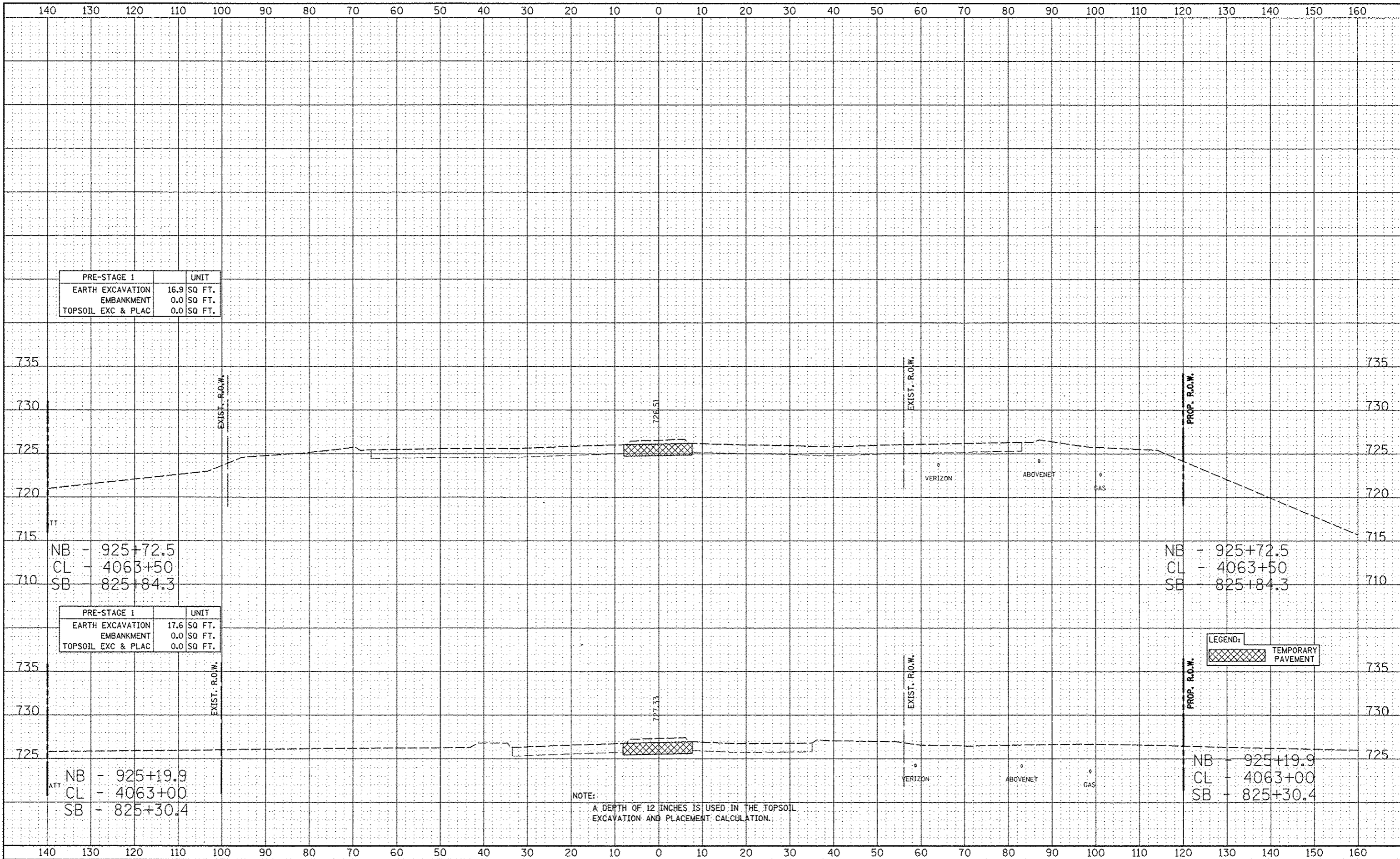


PRE-STAGE 1		UNIT
EARTH EXCAVATION	1.2	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

PRE-STAGE 1		UNIT
EARTH EXCAVATION	1.3	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

LEGEND:	
	TEMPORARY PAVEMENT

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.



PRE-STAGE 1		UNIT
EARTH EXCAVATION	16.9	SQ. FT.
EMBANKMENT	0.0	SQ. FT.
TOPSOIL EXC & PLAC	0.0	SQ. FT.

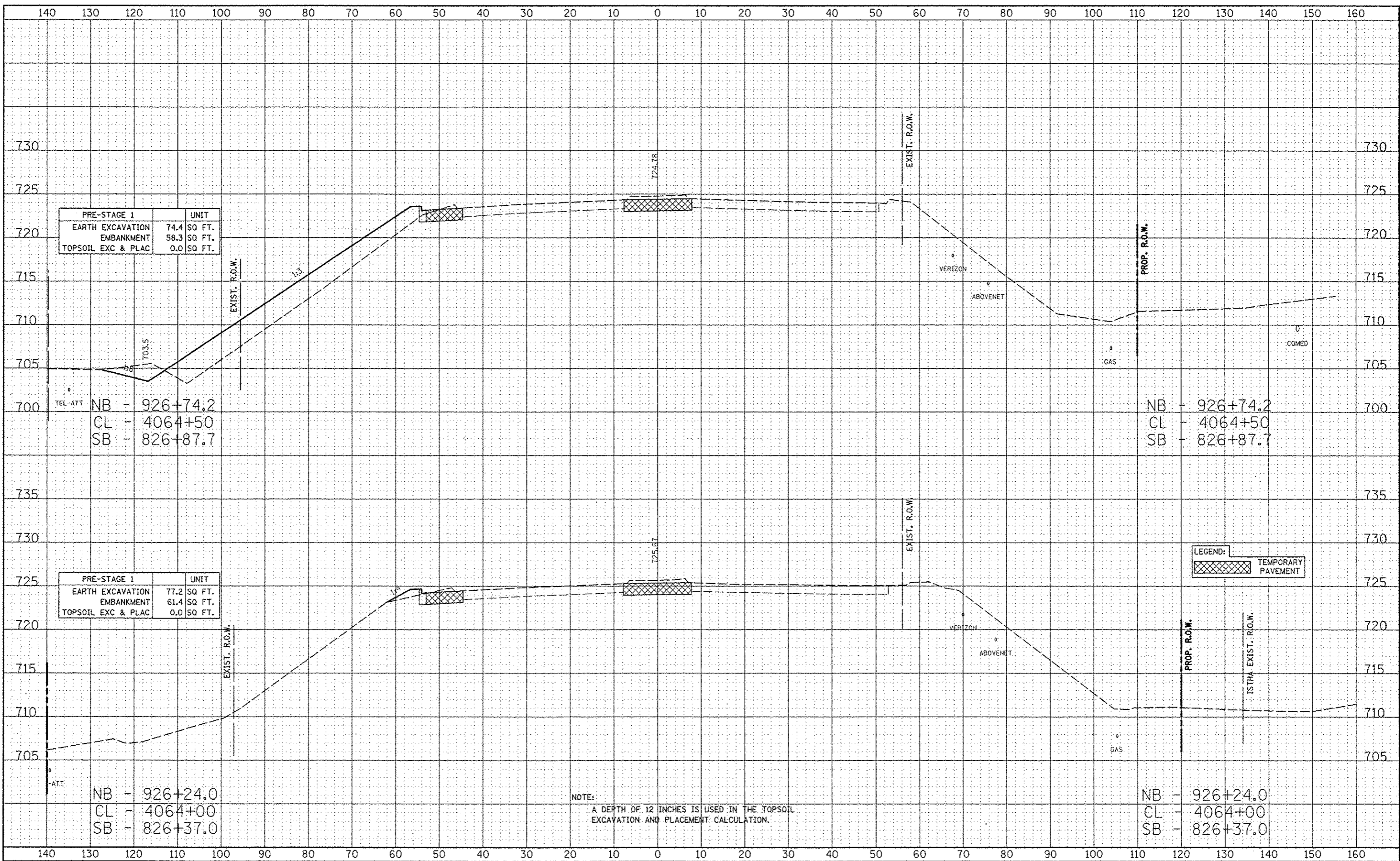
PRE-STAGE 1		UNIT
EARTH EXCAVATION	17.6	SQ. FT.
EMBANKMENT	0.0	SQ. FT.
TOPSOIL EXC & PLAC	0.0	SQ. FT.

LEGEND:	
	TEMPORARY PAVEMENT

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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PRE-STAGE 1		UNIT
EARTH EXCAVATION	74.4	SQ. FT.
EMBANKMENT	58.3	SQ. FT.
TOPSOIL EXC & PLAC	0.0	SQ. FT.

PRE-STAGE 1		UNIT
EARTH EXCAVATION	77.2	SQ. FT.
EMBANKMENT	61.4	SQ. FT.
TOPSOIL EXC & PLAC	0.0	SQ. FT.

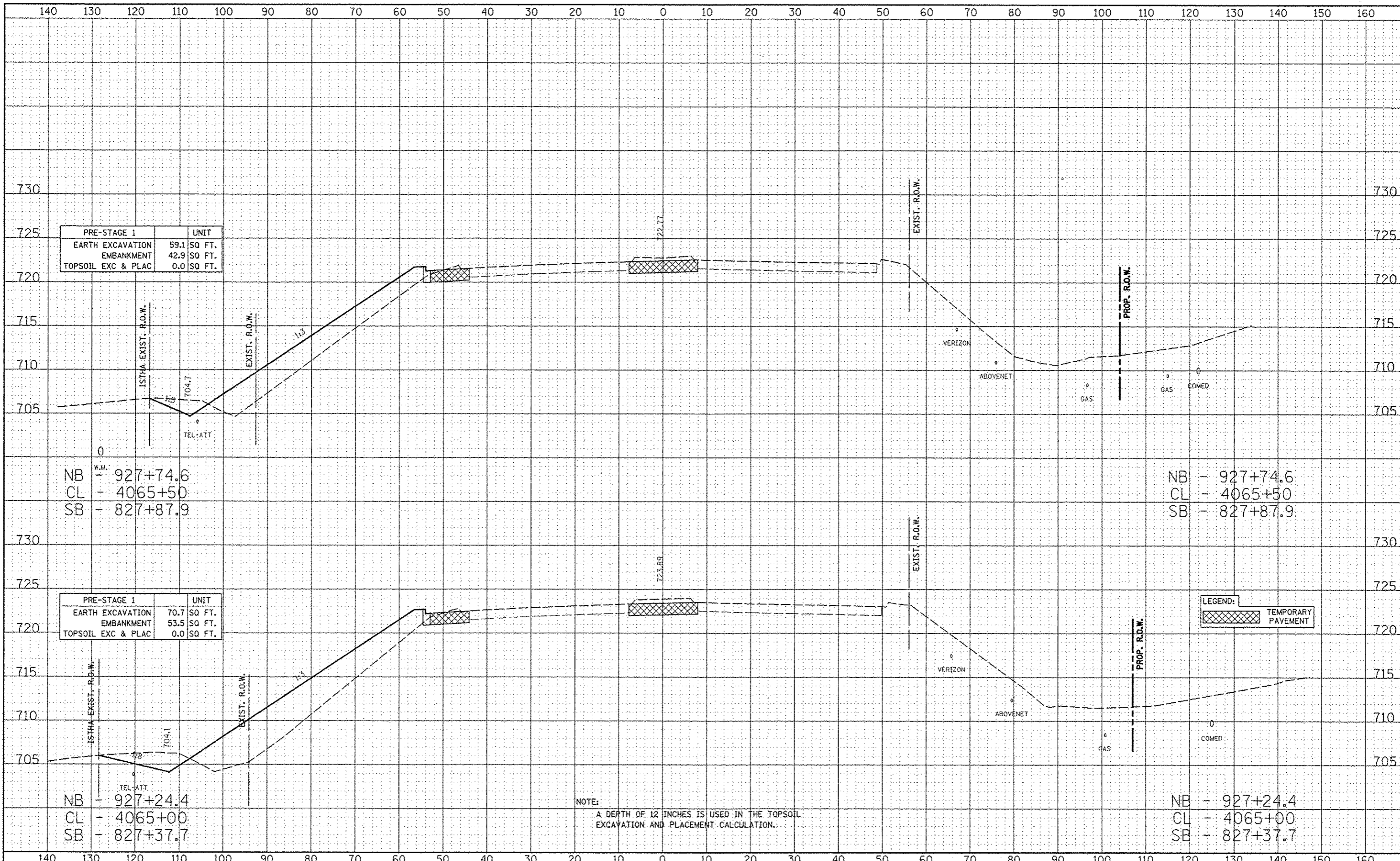
	TEMPORARY PAVEMENT
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NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

FILE NAME	
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PRE-STAGE 1	UNIT
EARTH EXCAVATION	59.1 SQ FT.
EMBANKMENT	42.9 SQ FT.
TOPSOIL EXC & PLAC	0.0 SQ FT.

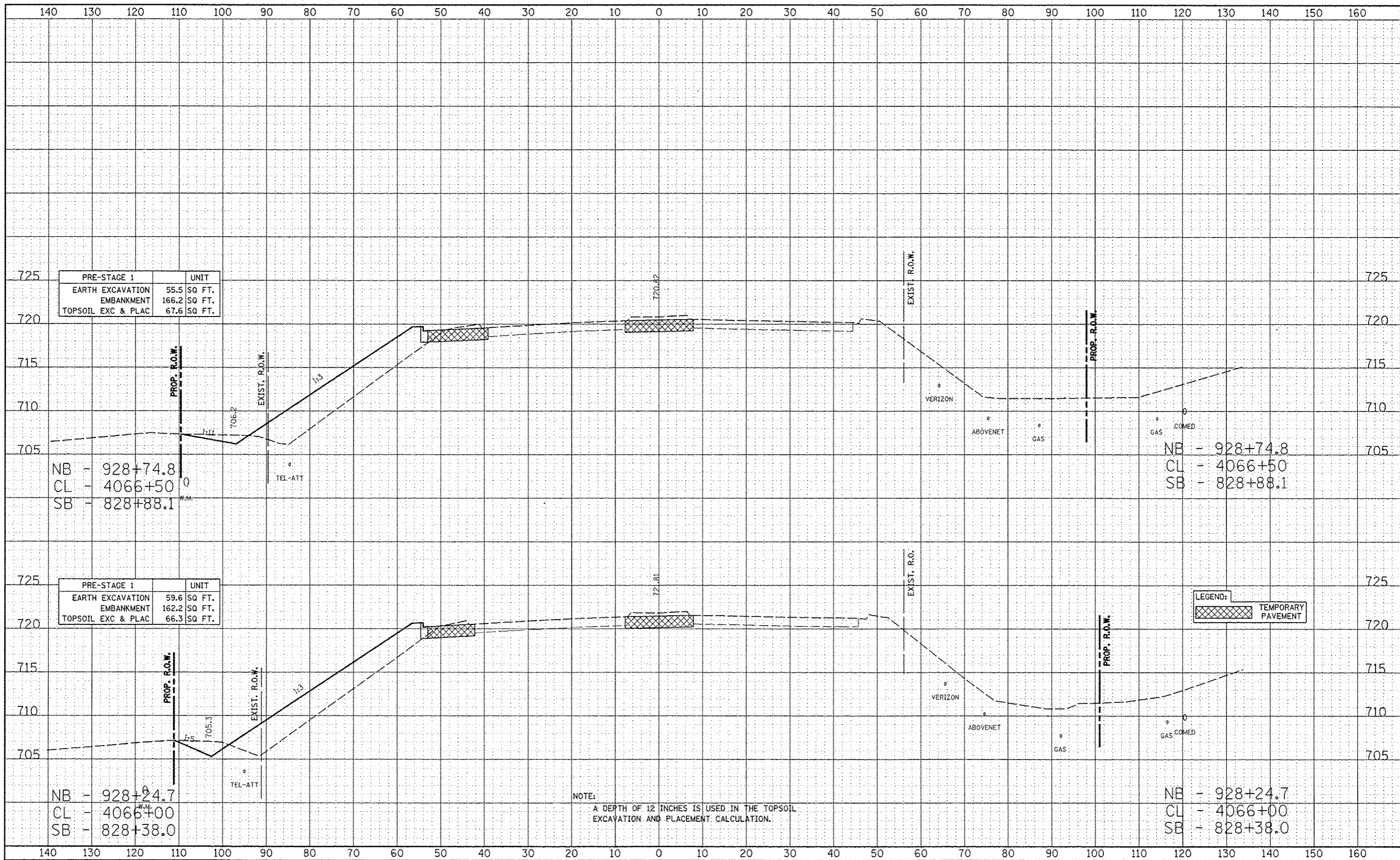
PRE-STAGE 1	UNIT
EARTH EXCAVATION	70.7 SQ FT.
EMBANKMENT	53.5 SQ FT.
TOPSOIL EXC & PLAC	0.0 SQ FT.

LEGEND:
 TEMPORARY PAVEMENT

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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PRE-STAGE 1		UNIT
EARTH EXCAVATION	55.5	SQ. FT.
EMBANKMENT	166.2	SQ. FT.
TOPSOIL EXC & PLAC	67.6	SQ. FT.

PRE-STAGE 1		UNIT
EARTH EXCAVATION	59.6	SQ. FT.
EMBANKMENT	162.2	SQ. FT.
TOPSOIL EXC & PLAC	66.3	SQ. FT.

LEGEND:	
	TEMPORARY PAVEMENT

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

FILE NAME:
PROJECT:

USER NAME: RUSGERS
PLOT SCALE: 1"=40'
PLOT DATE: 10/15/2012

DESIGNED: RTA
DRAWN: KES
CHECKED: PJO
DATE: 10/15/2012

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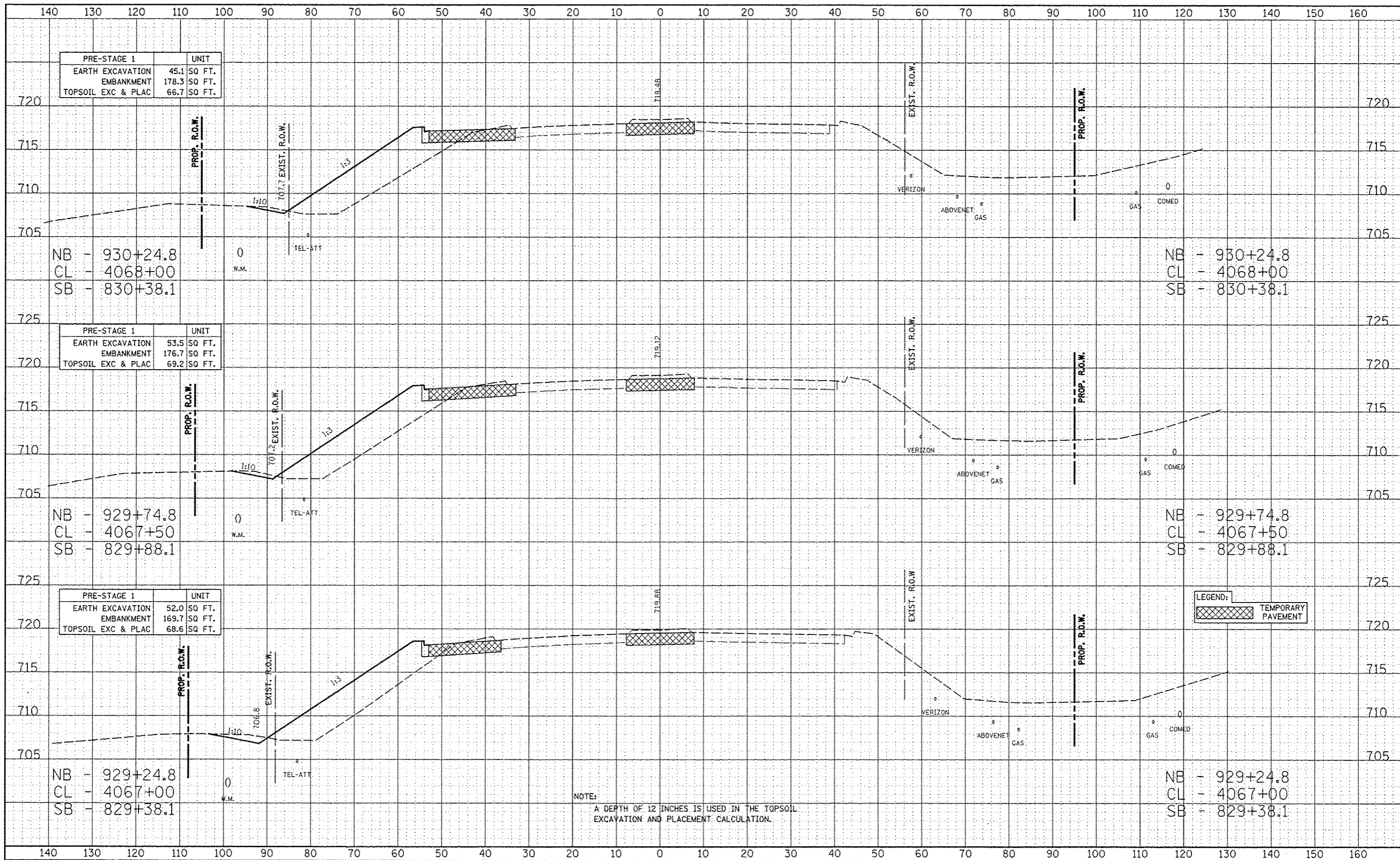
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CROSS-SECTIONS
ILLINOIS ROUTE 59 - PRE-STAGE**
SCALE: SHEET NO. 21 OF 30 SHEETS STA. 4066+00 TO STA. 4066+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-5	DUPAGE	963	756
CONTRACT NO. 60131				

FILED	DATE
SEARCHED	BY
SERIALIZED	
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NOTE BOOK	
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DESIGNED	DATE
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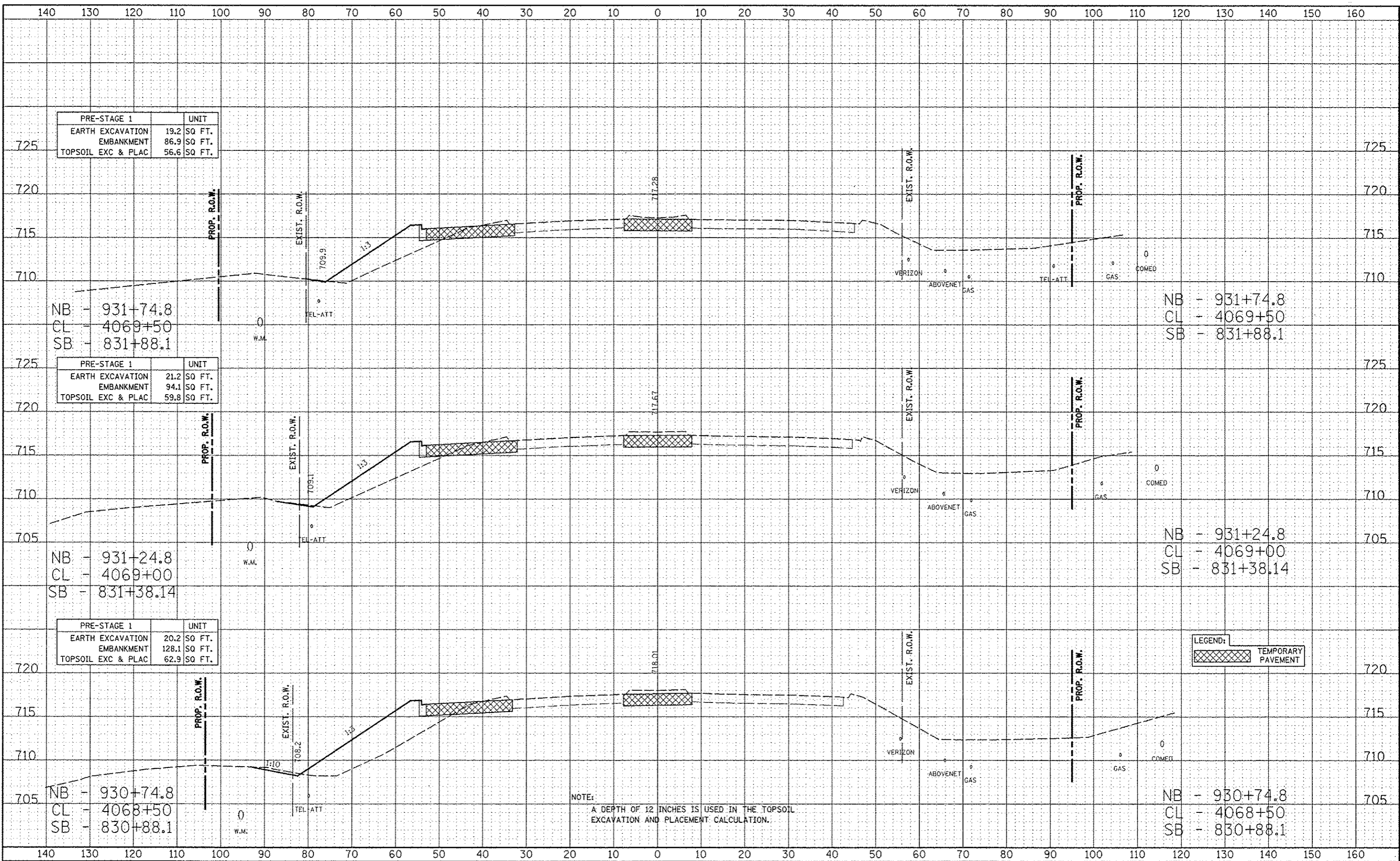
PRE-STAGE 1		UNIT
EARTH EXCAVATION	45.1	SQ FT.
EMBANKMENT	178.3	SQ FT.
TOPSOIL EXC & PLAC	66.7	SQ FT.

PRE-STAGE 1		UNIT
EARTH EXCAVATION	53.5	SQ FT.
EMBANKMENT	176.7	SQ FT.
TOPSOIL EXC & PLAC	69.2	SQ FT.

PRE-STAGE 1		UNIT
EARTH EXCAVATION	52.0	SQ FT.
EMBANKMENT	169.7	SQ FT.
TOPSOIL EXC & PLAC	68.6	SQ FT.

LEGEND:	
	TEMPORARY PAVEMENT

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.



NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

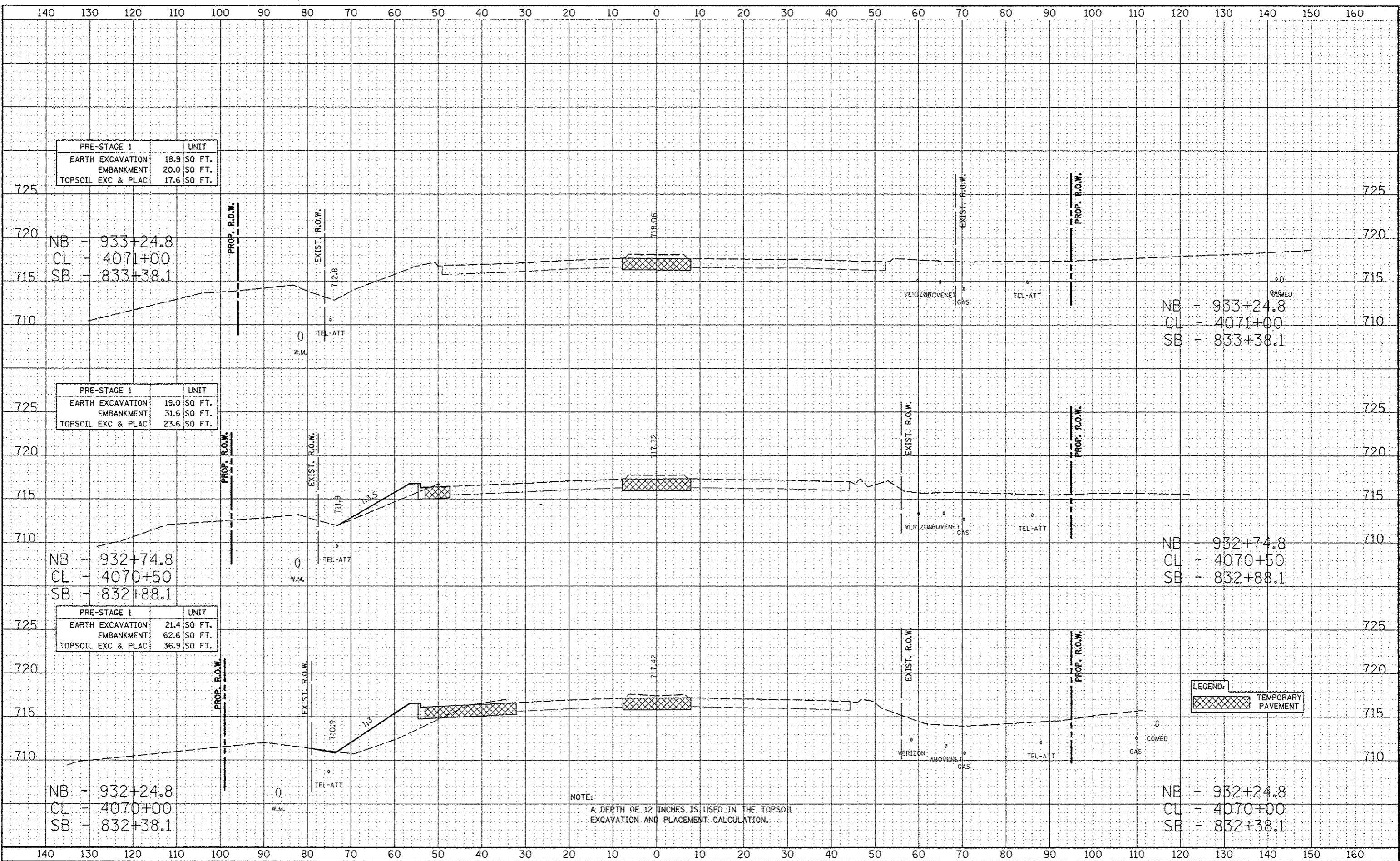
LEGEND:
[Hatched Box] TEMPORARY PAVEMENT

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PRE-STAGE 1		UNIT
EARTH EXCAVATION	18.9	SQ FT.
EMBANKMENT	20.0	SQ FT.
TOPSOIL EXC & PLAC	17.6	SQ FT.

PRE-STAGE 1		UNIT
EARTH EXCAVATION	19.0	SQ FT.
EMBANKMENT	31.6	SQ FT.
TOPSOIL EXC & PLAC	23.6	SQ FT.

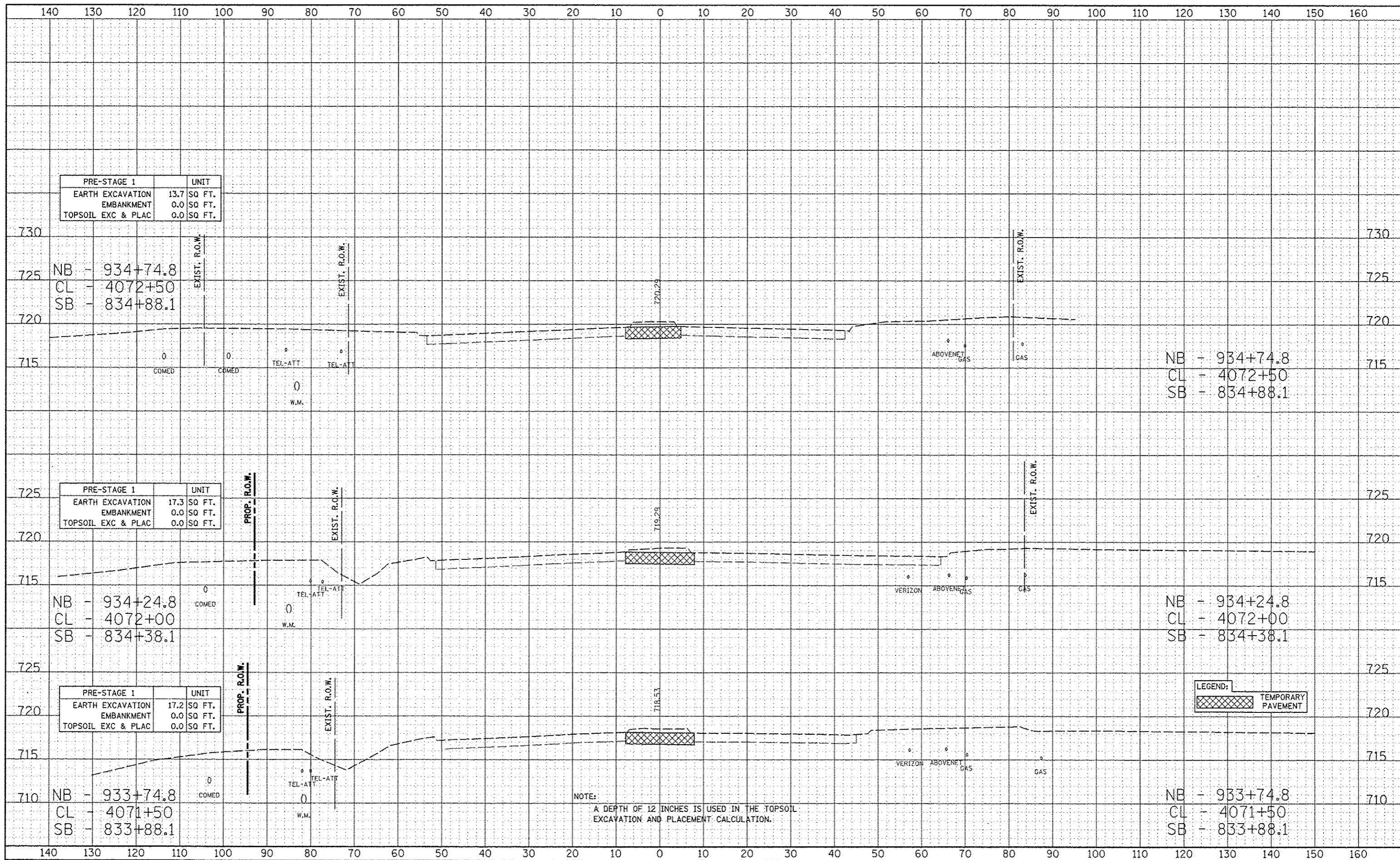
PRE-STAGE 1		UNIT
EARTH EXCAVATION	21.4	SQ FT.
EMBANKMENT	62.6	SQ FT.
TOPSOIL EXC & PLAC	36.9	SQ FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:	
	TEMPORARY PAVEMENT

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PRE-STAGE 1		UNIT
EARTH EXCAVATION	13.7	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

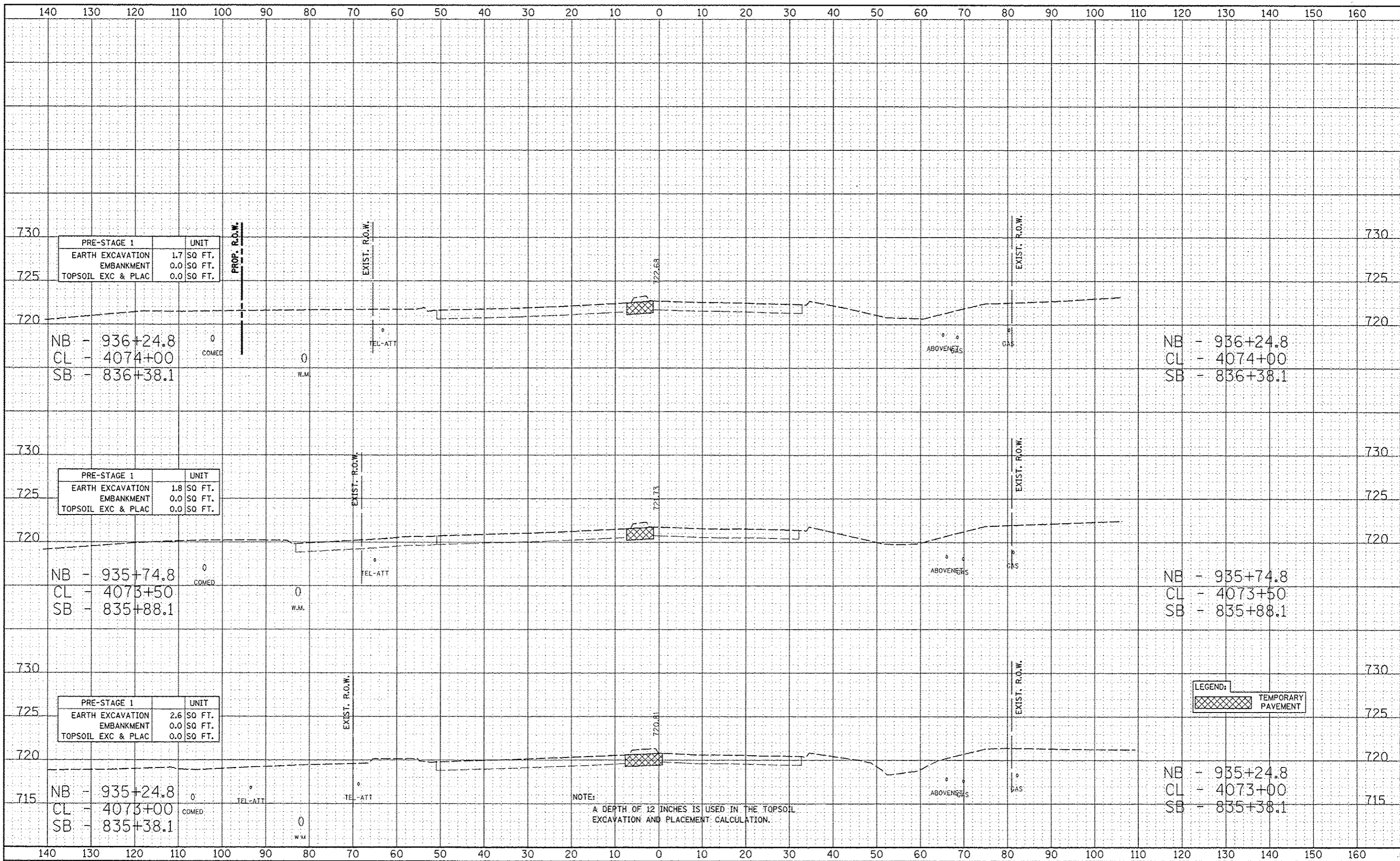
PRE-STAGE 1		UNIT
EARTH EXCAVATION	17.3	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

PRE-STAGE 1		UNIT
EARTH EXCAVATION	17.2	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

LEGEND:
TEMPORARY PAVEMENT

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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PRE-STAGE 1		UNIT
EARTH EXCAVATION	1.7	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

PRE-STAGE 1		UNIT
EARTH EXCAVATION	1.8	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

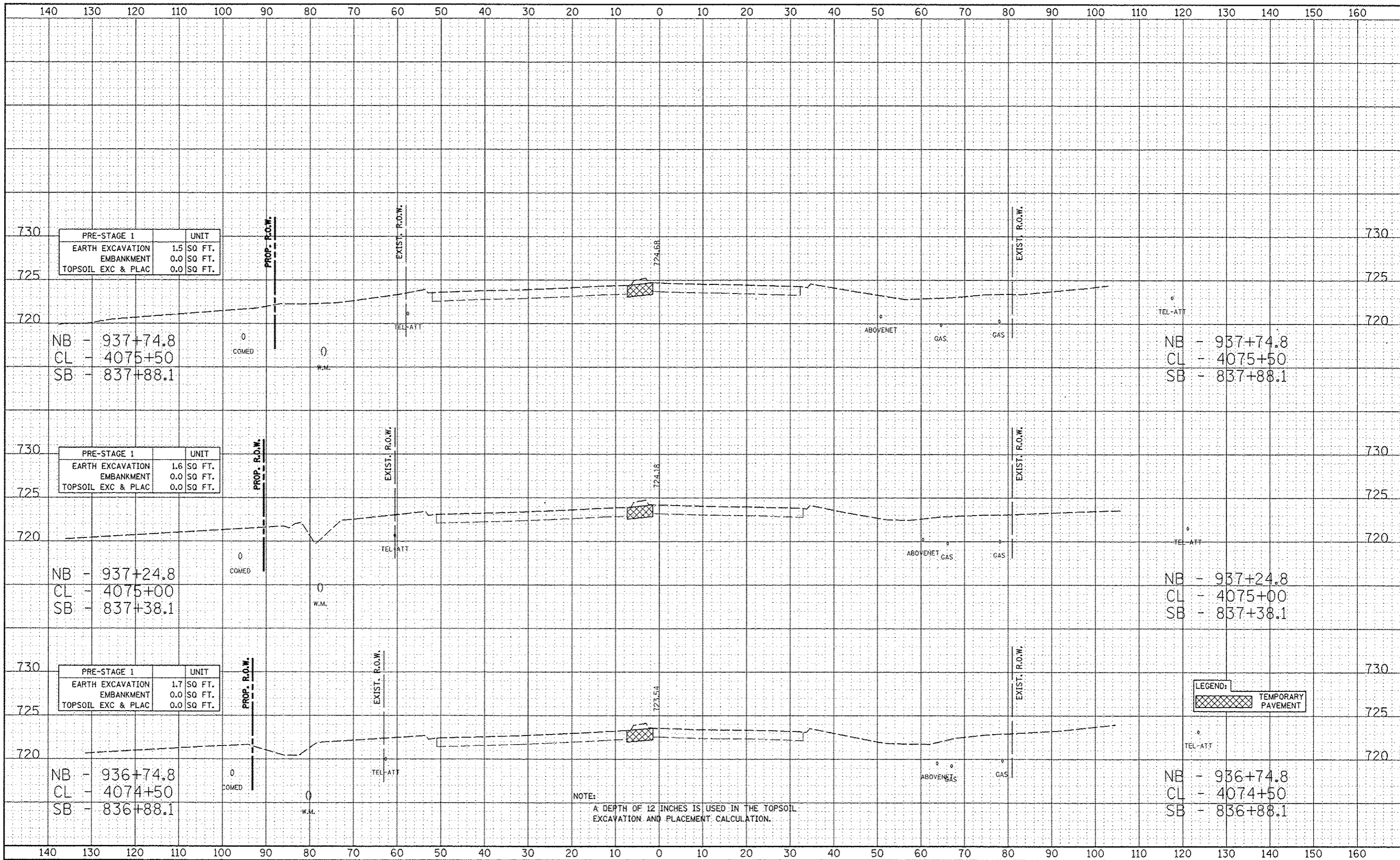
PRE-STAGE 1		UNIT
EARTH EXCAVATION	2.6	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

LEGEND:	
	TEMPORARY PAVEMENT

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

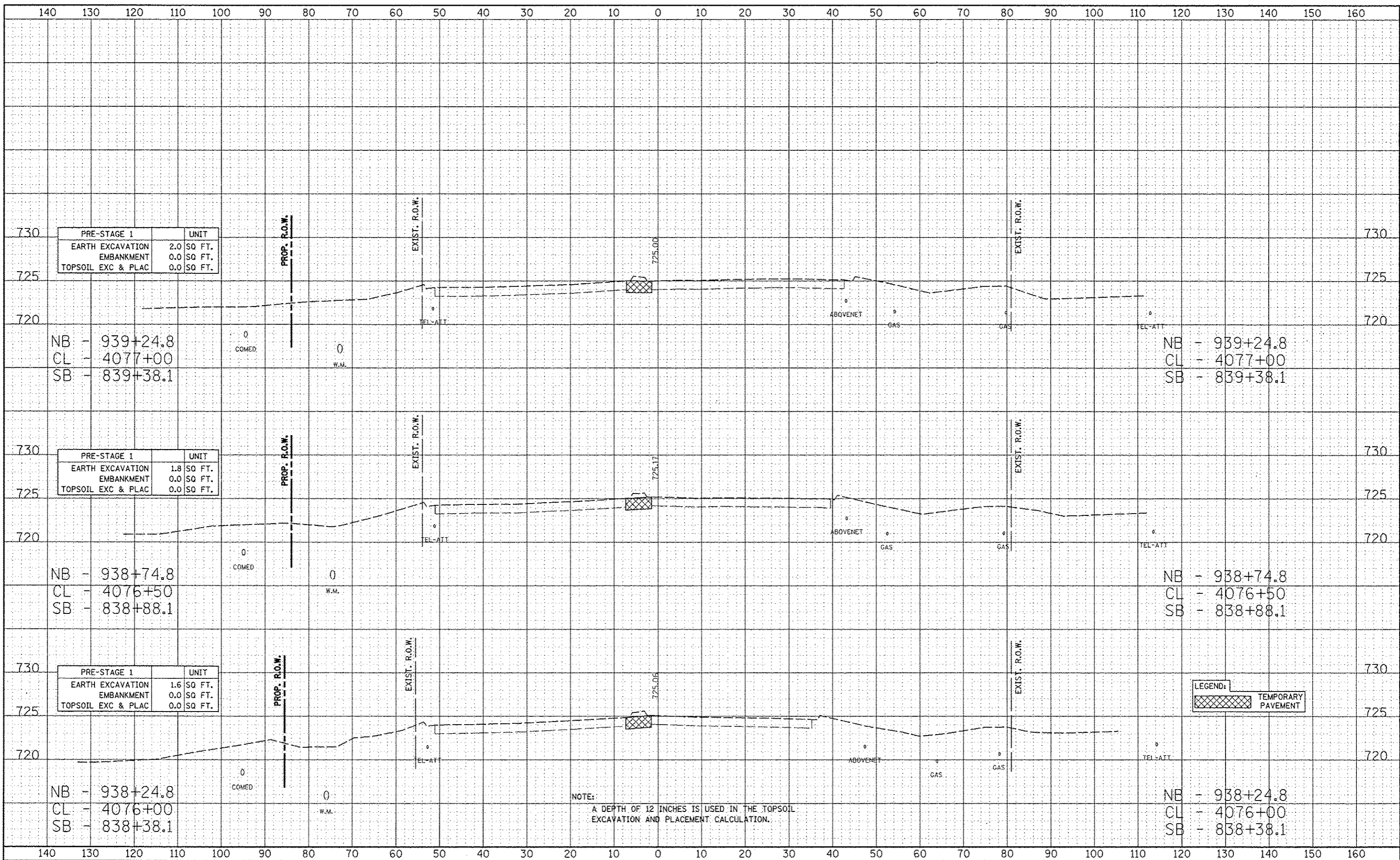
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PRE-STAGE 1		UNIT
EARTH EXCAVATION	2.0	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

PRE-STAGE 1		UNIT
EARTH EXCAVATION	1.8	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

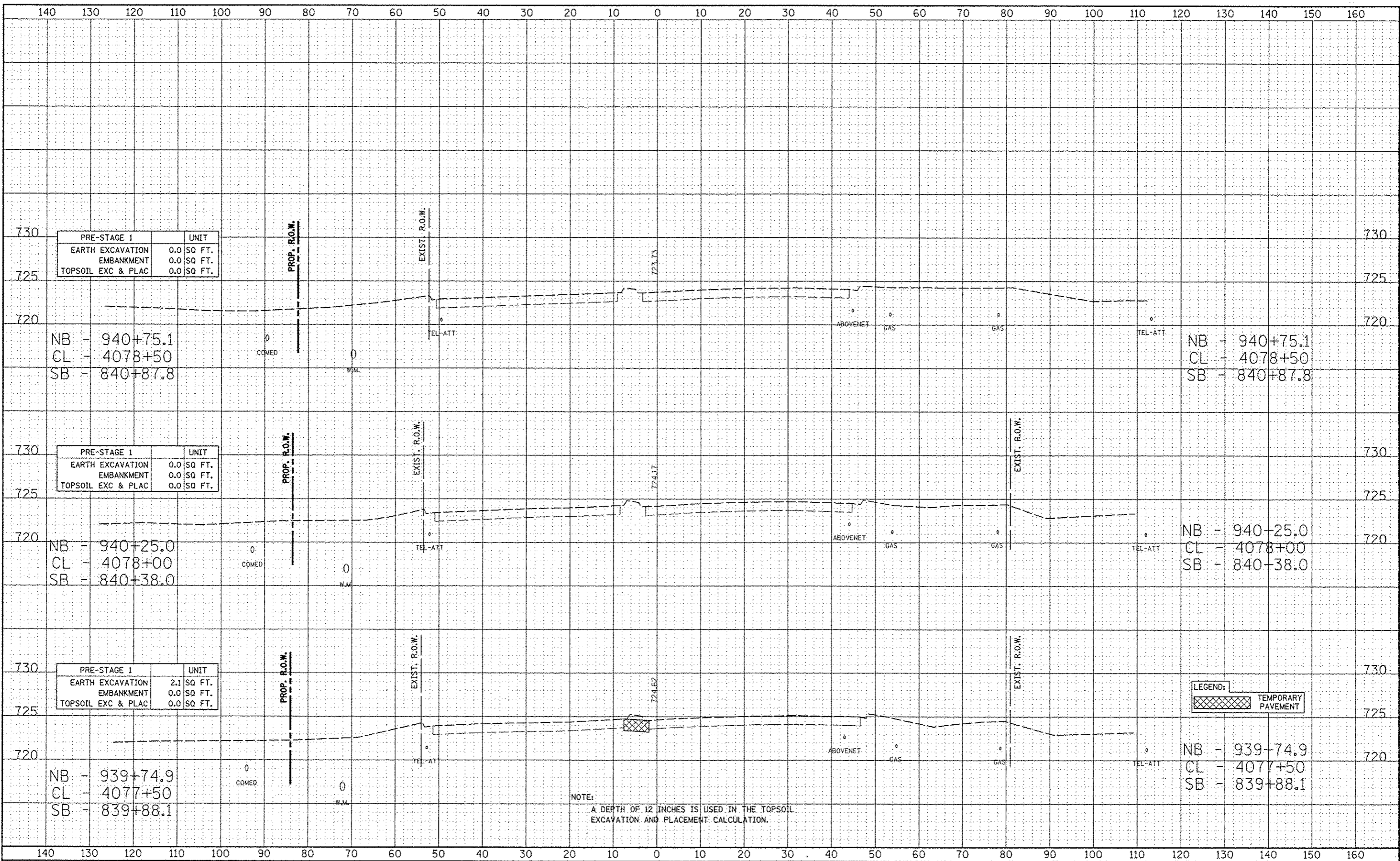
PRE-STAGE 1		UNIT
EARTH EXCAVATION	1.6	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

LEGEND:	
	TEMPORARY PAVEMENT

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

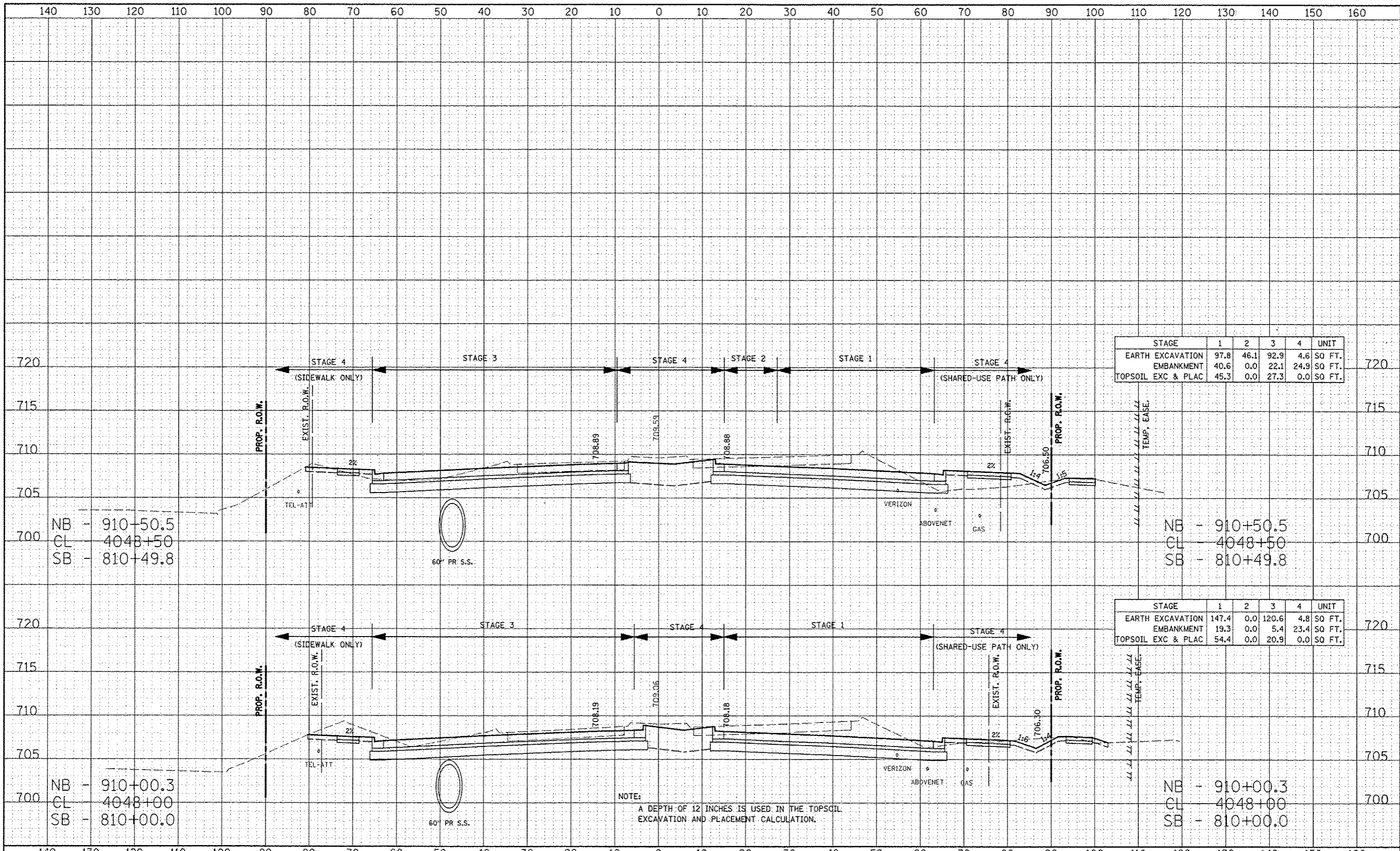
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STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	97.8	46.1	92.9	4.6	SQ FT.
EMBANKMENT	40.6	0.0	22.1	24.9	SQ FT.
TOPSOIL EXC & PLAC	45.3	0.0	27.3	0.0	SQ FT.

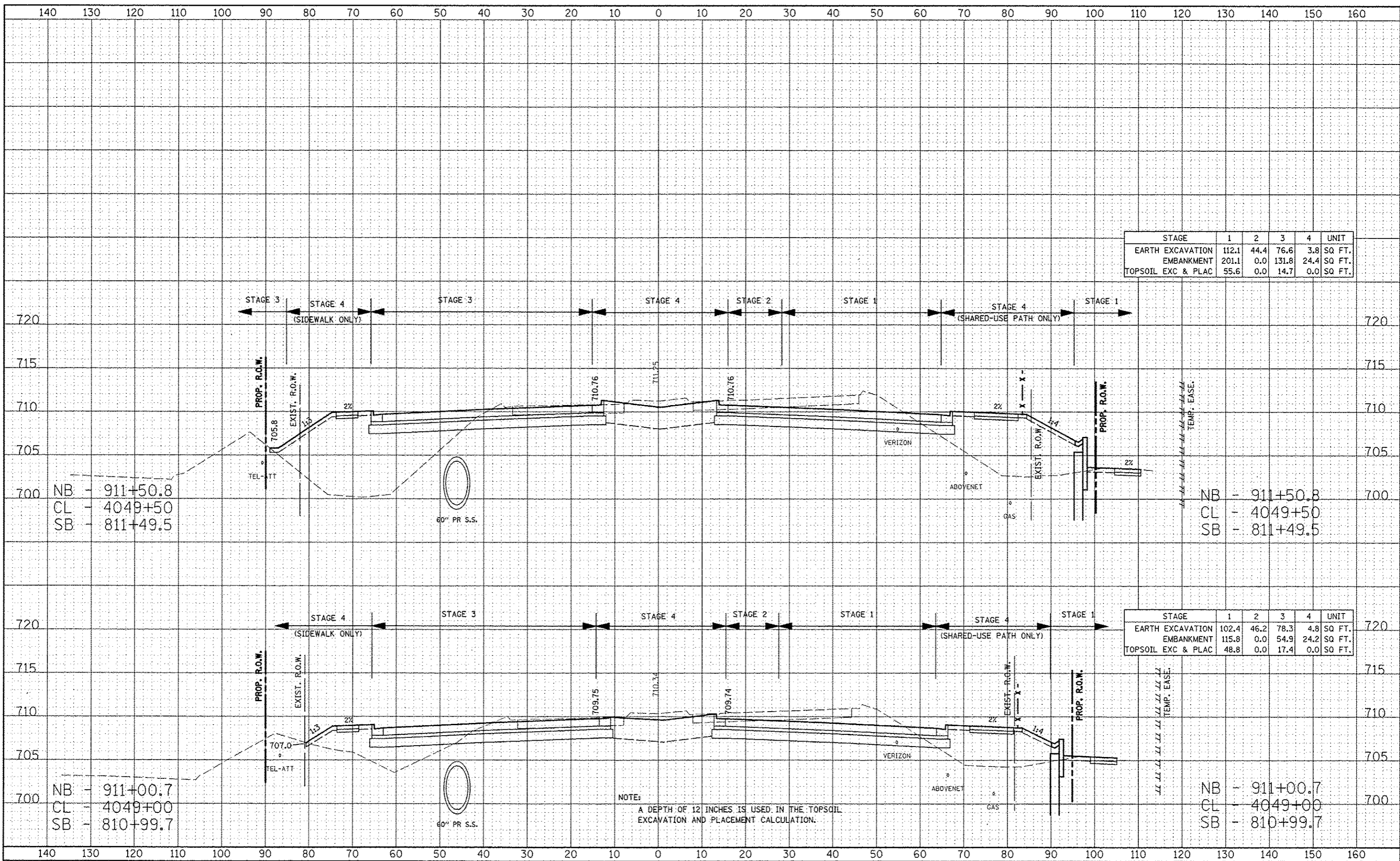
STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	147.4	0.0	120.6	4.8	SQ FT.
EMBANKMENT	19.3	0.0	5.4	23.4	SQ FT.
TOPSOIL EXC & PLAC	54.4	0.0	20.9	0.0	SQ FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	112.1	44.4	76.6	3.8	SQ FT.
EMBANKMENT	201.1	0.0	131.8	24.4	SQ FT.
TOPSOIL EXC & PLAC	55.6	0.0	14.7	0.0	SQ FT.

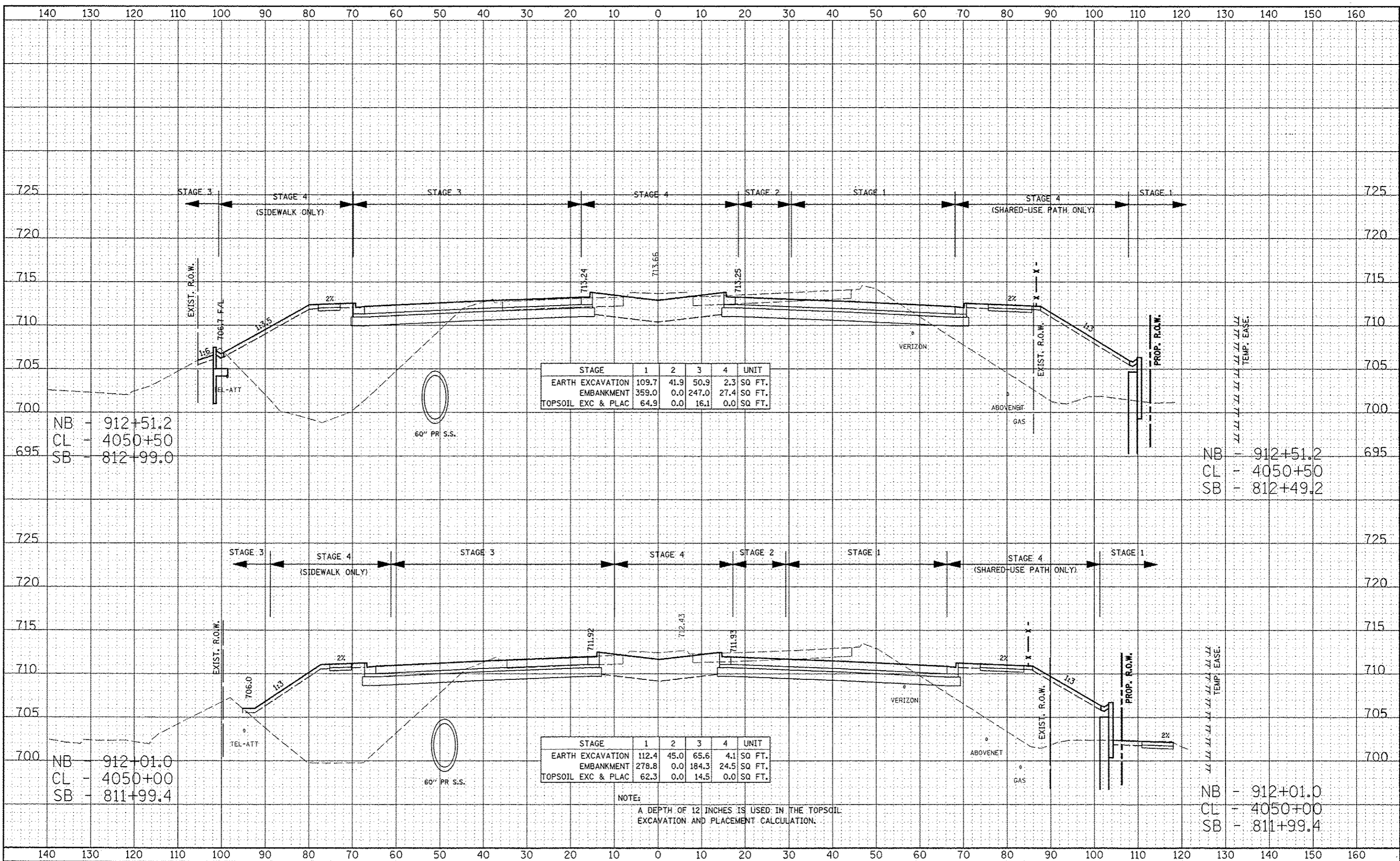


STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	102.4	46.2	78.3	4.8	SQ FT.
EMBANKMENT	115.8	0.0	54.9	24.2	SQ FT.
TOPSOIL EXC & PLAC	48.8	0.0	17.4	0.0	SQ FT.

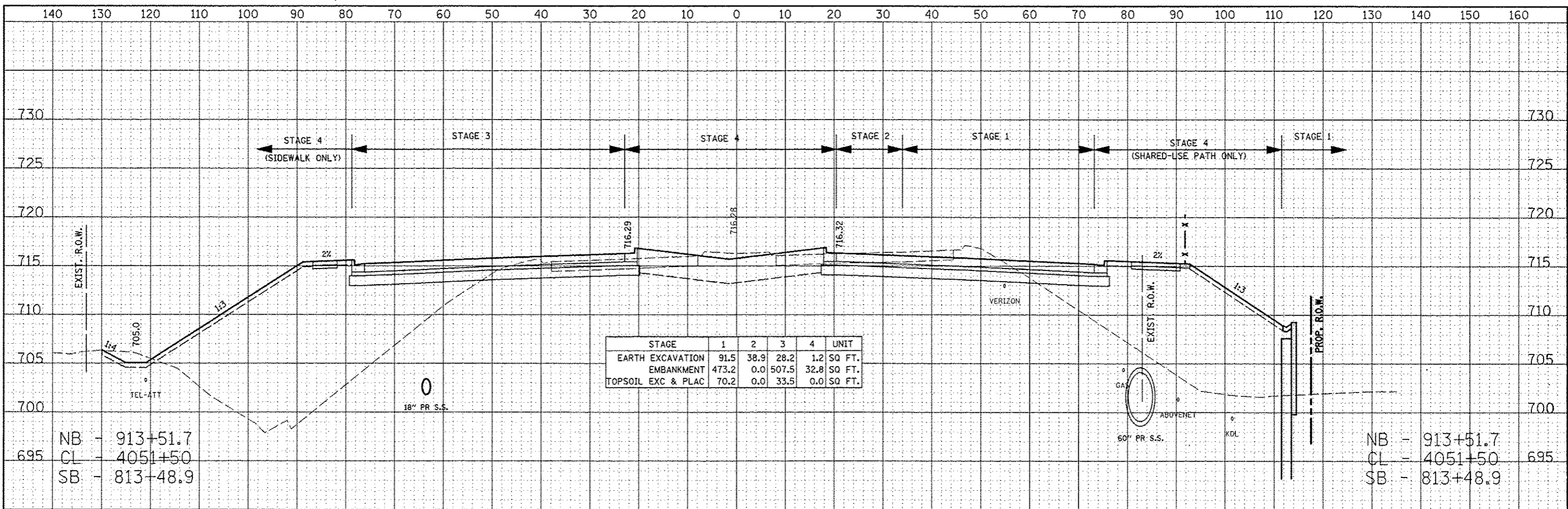
NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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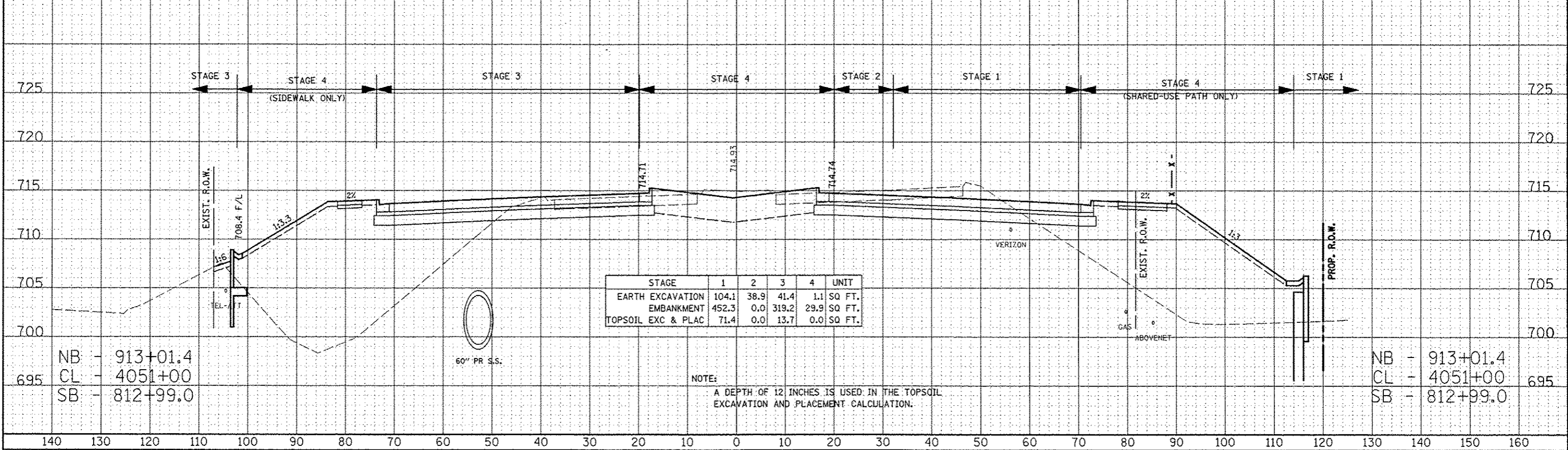
DATE: _____
 DRAWN: _____
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DATE: _____
 BY: _____
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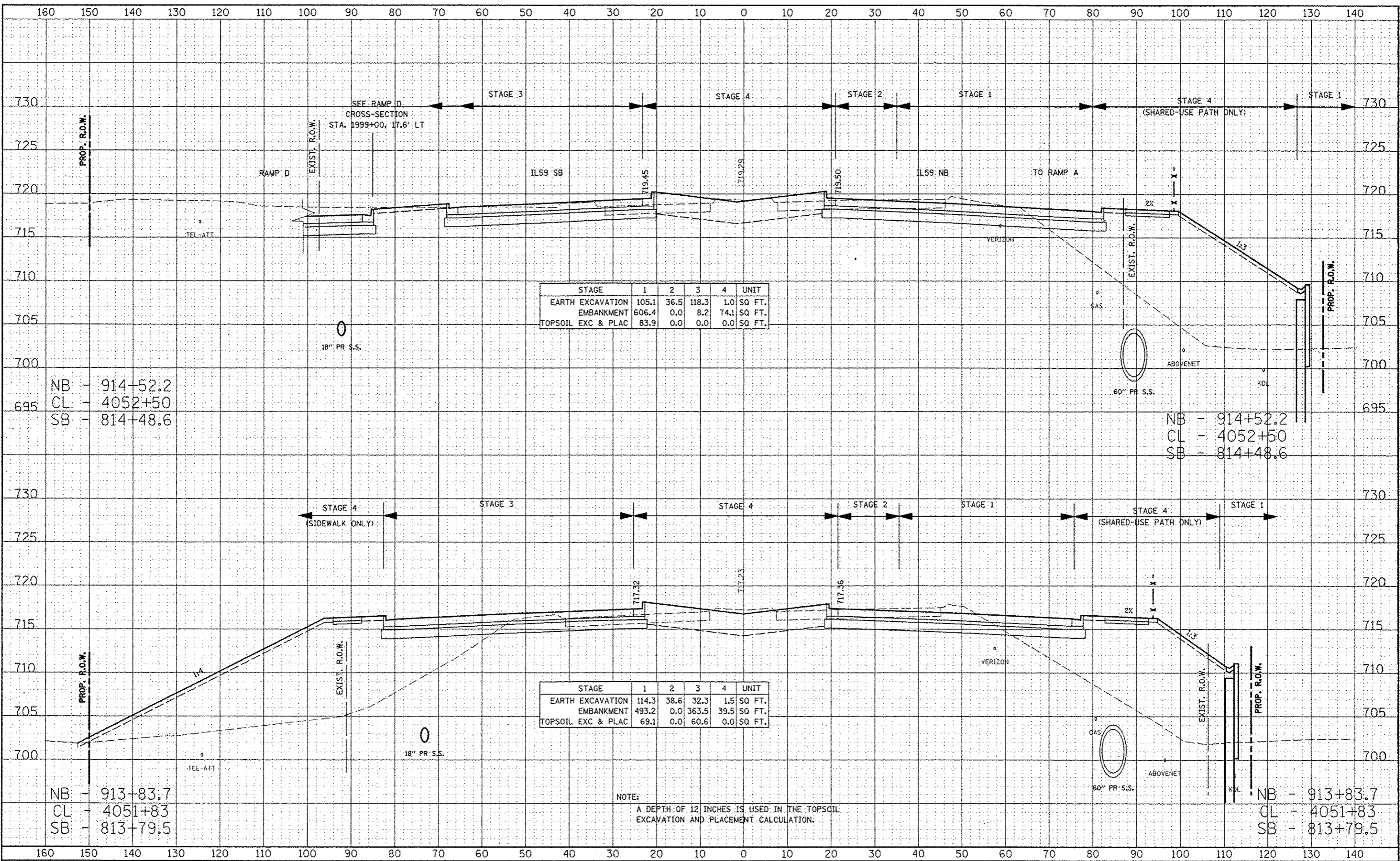


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NOTE:
 A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

DATE: _____
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 FILE NO.: _____
 SHEET NO.: _____
 TOTAL SHEETS: _____



STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	105.1	36.5	118.3	1.0	SQ FT.
EMBANKMENT	606.4	0.0	8.2	74.1	SQ FT.
TOPSOIL EXC & PLAC	83.9	0.0	0.0	0.0	SQ FT.

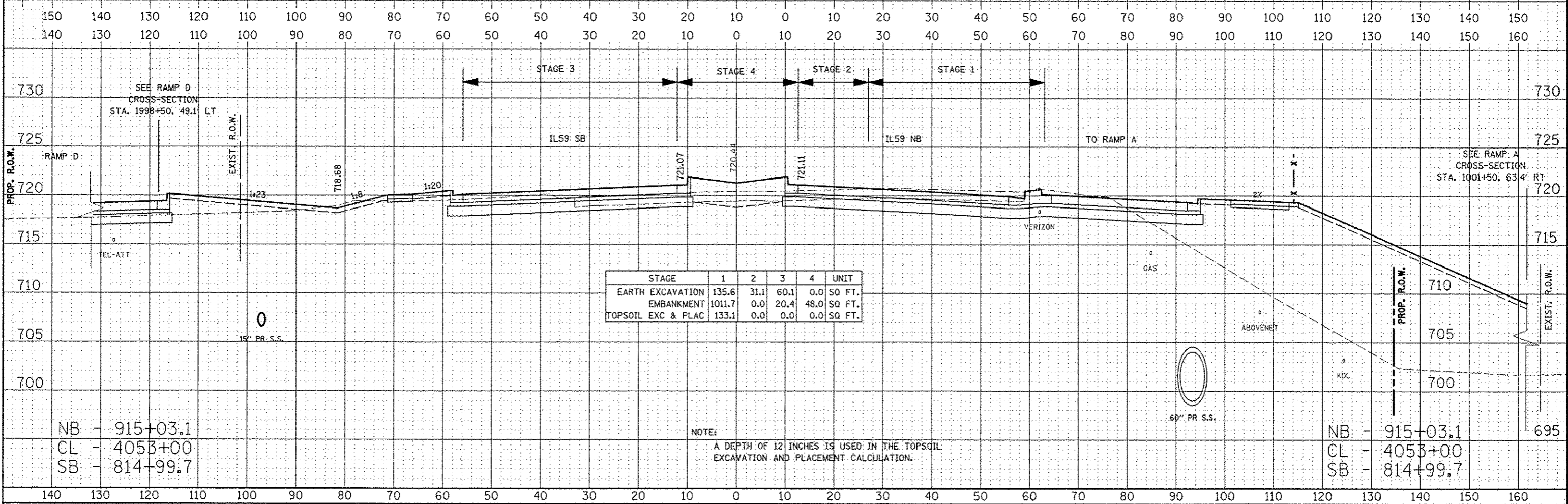
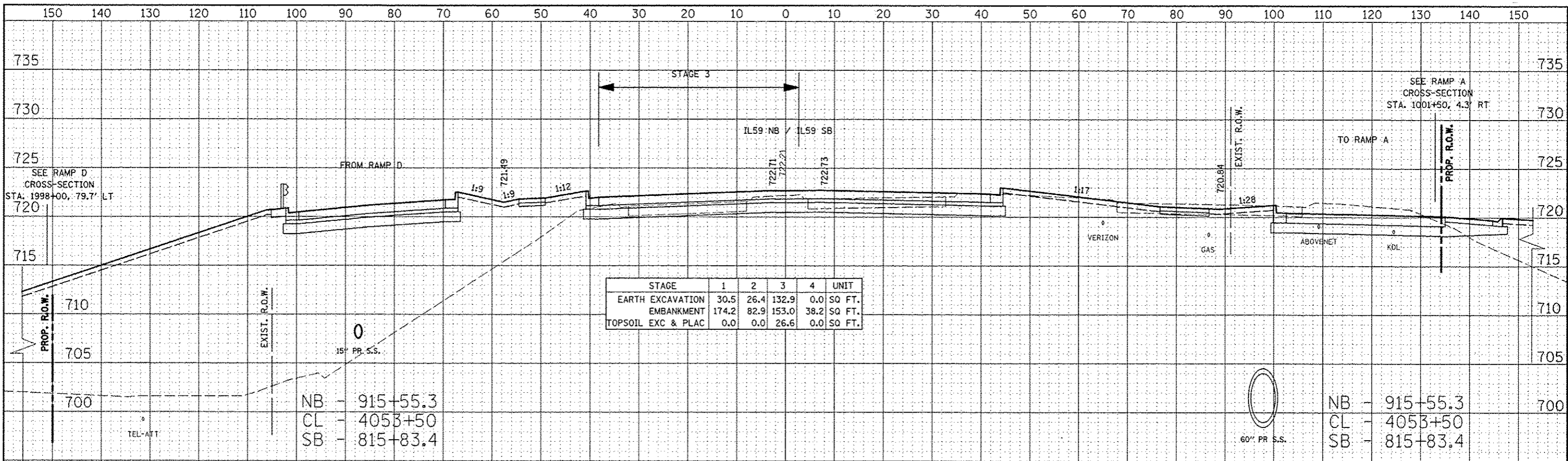
STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	114.3	38.6	32.3	1.5	SQ FT.
EMBANKMENT	493.2	0.0	363.5	39.5	SQ FT.
TOPSOIL EXC & PLAC	69.1	0.0	60.6	0.0	SQ FT.

NOTE:
 A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL
 EXCAVATION AND PLACEMENT CALCULATION.

DATE: _____
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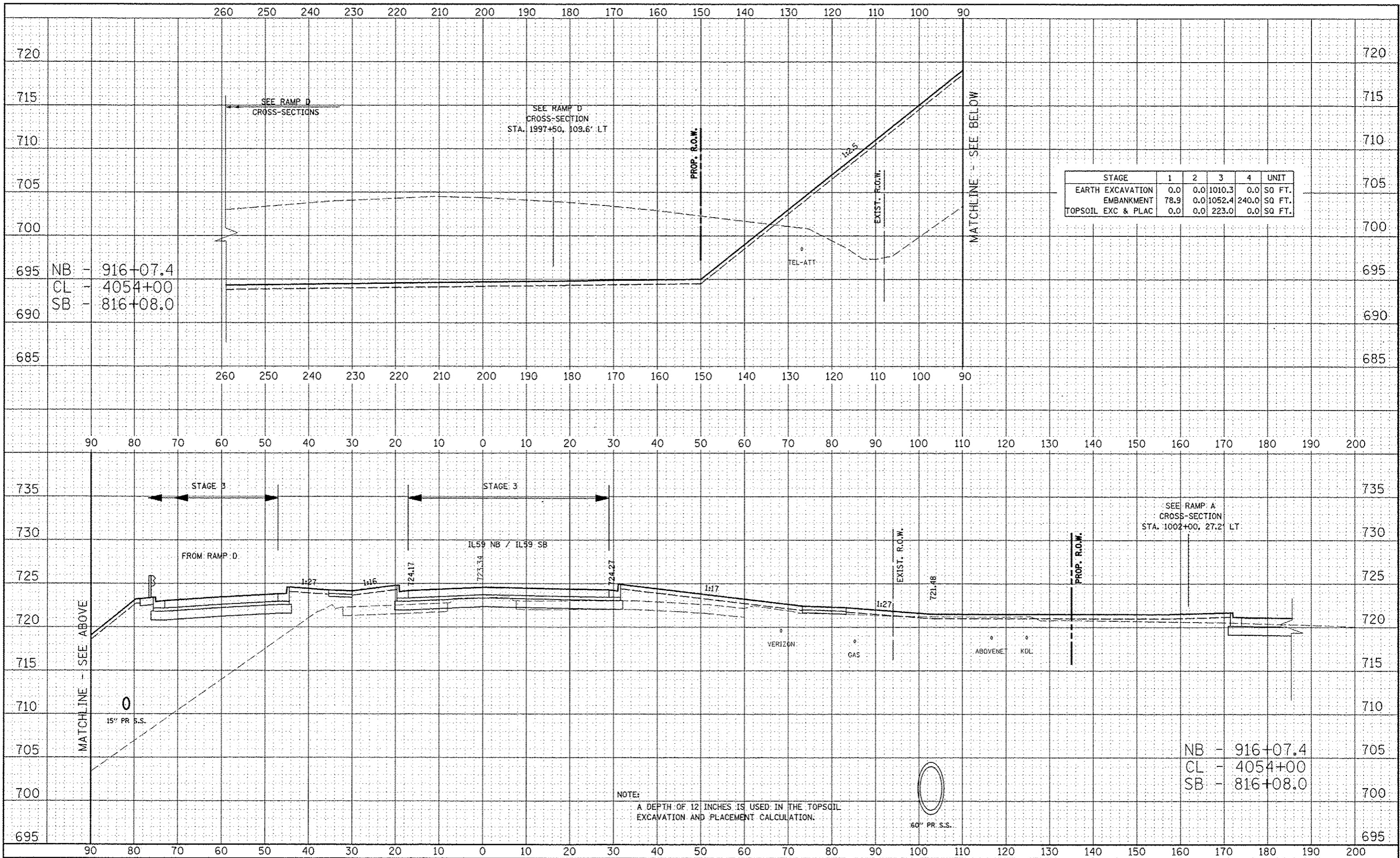
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NOTE:
 A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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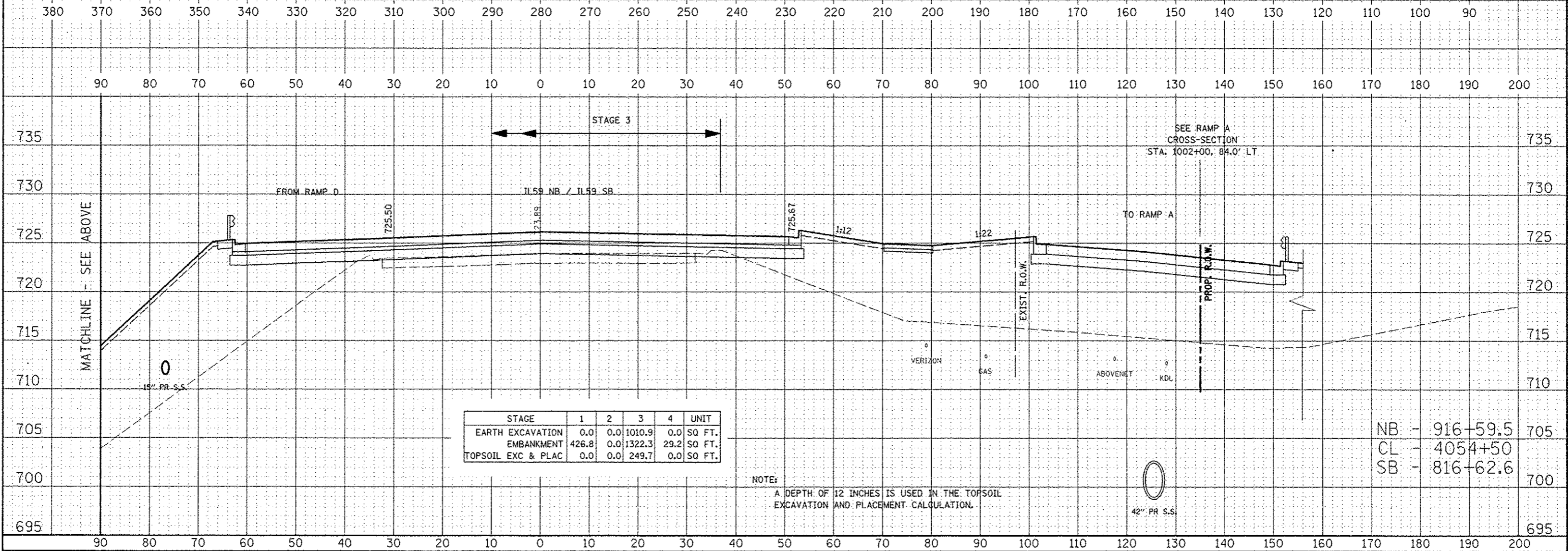
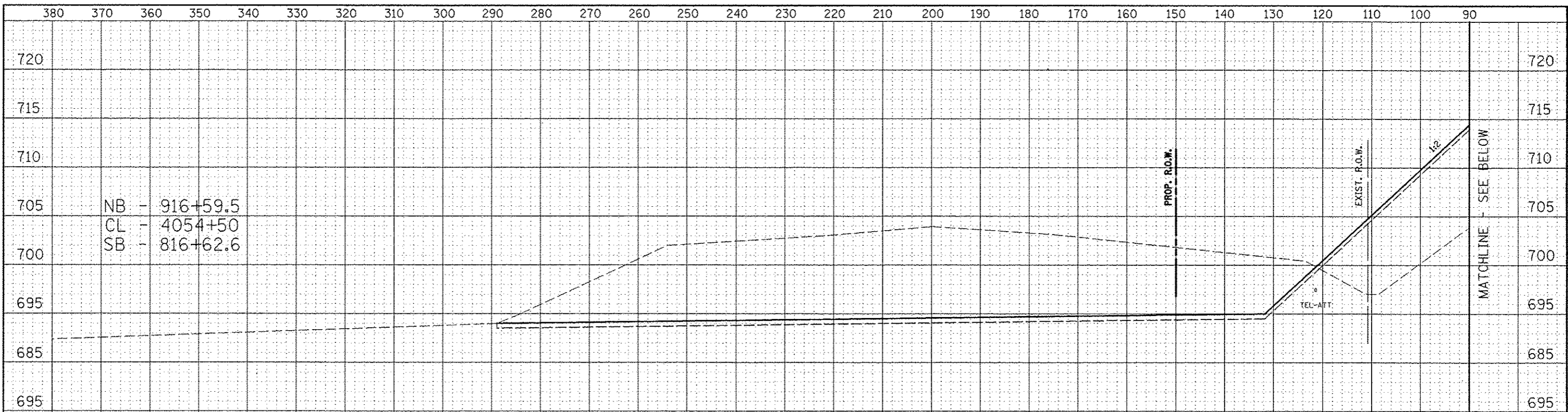
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STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	0.0	0.0	1010.3	0.0	SO FT.
EMBANKMENT	78.9	0.0	1052.4	240.0	SO FT.
TOPSOIL EXC & PLAC	0.0	0.0	223.0	0.0	SO FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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 PROJECT: _____ SHEET: _____
 TITLE: _____



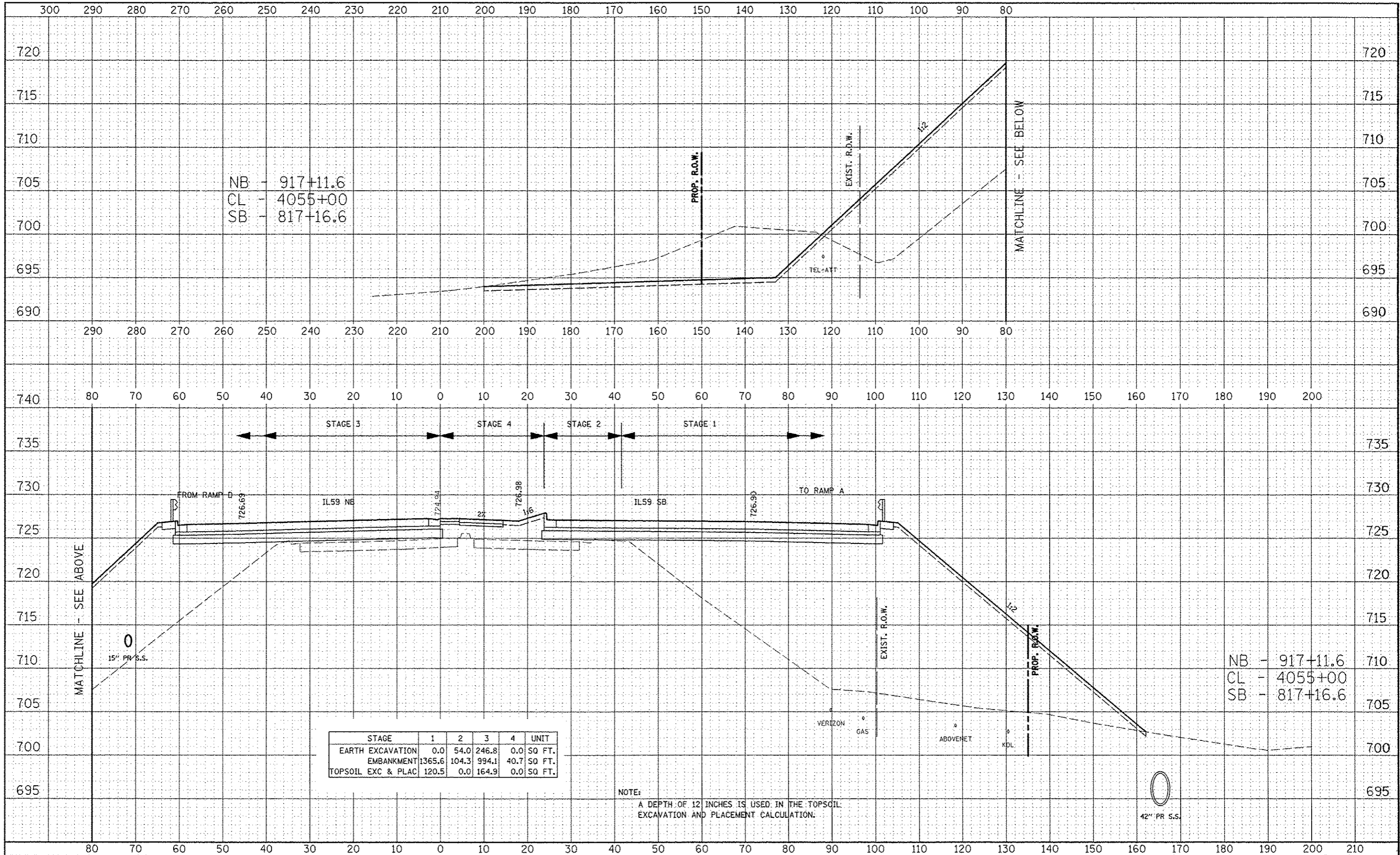
STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	0.0	0.0	1010.9	0.0	SQ. FT.
EMBANKMENT	426.8	0.0	1322.3	29.2	SQ. FT.
TOPSOIL EXC & PLAC	0.0	0.0	249.7	0.0	SQ. FT.

NOTE:
 A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

NB - 916+59.5
 CL - 4054+50
 SB - 816+62.6

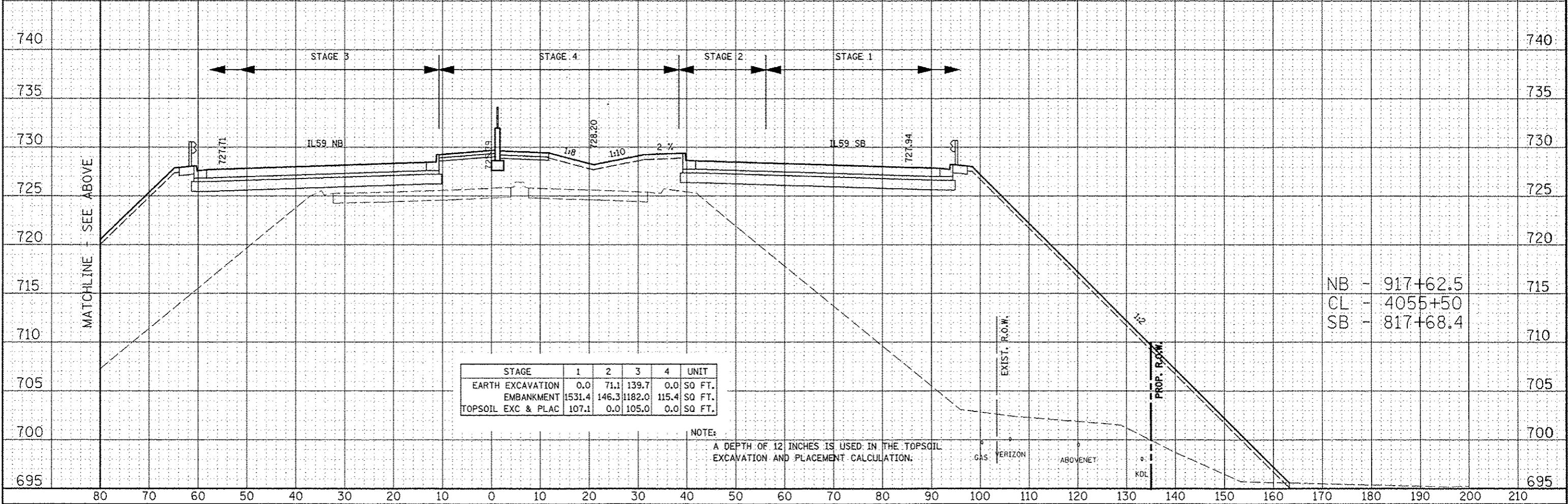
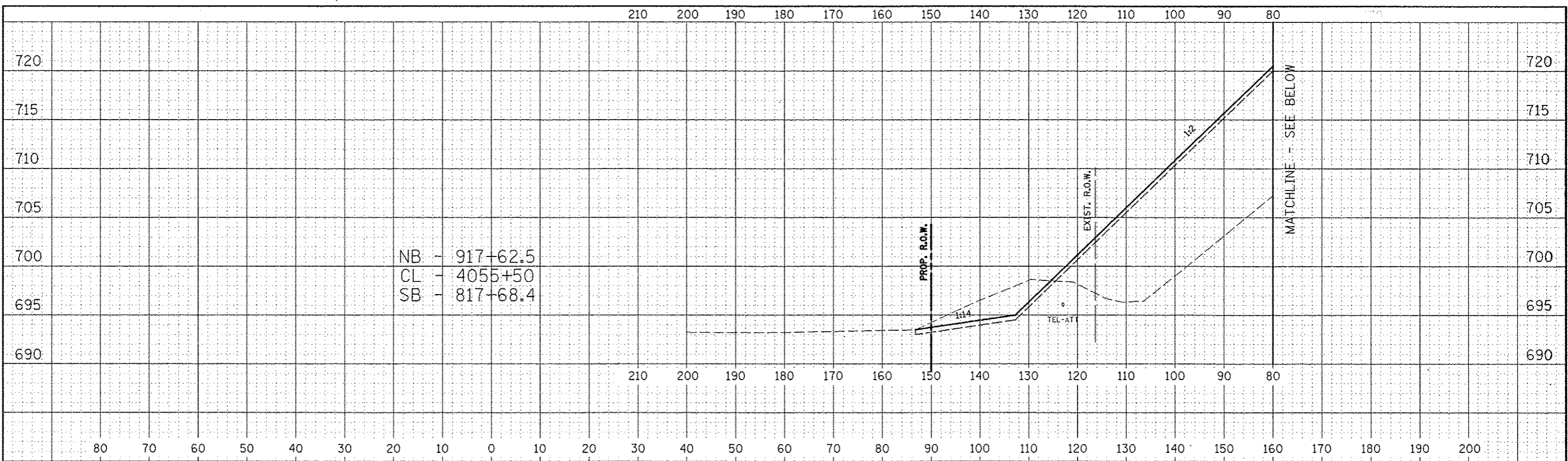
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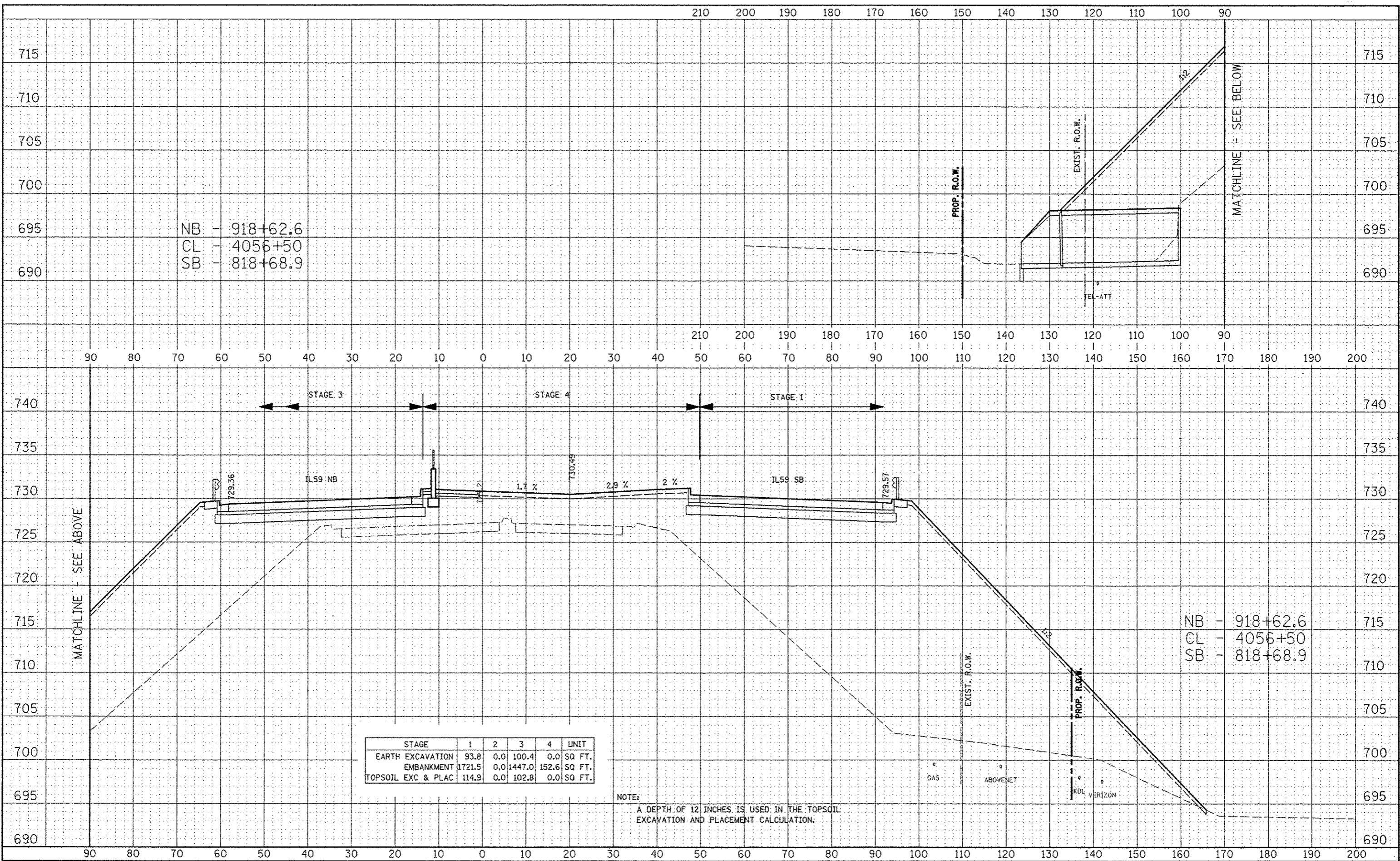
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NB - 918+62.6
 CL - 4056+50
 SB - 818+68.9

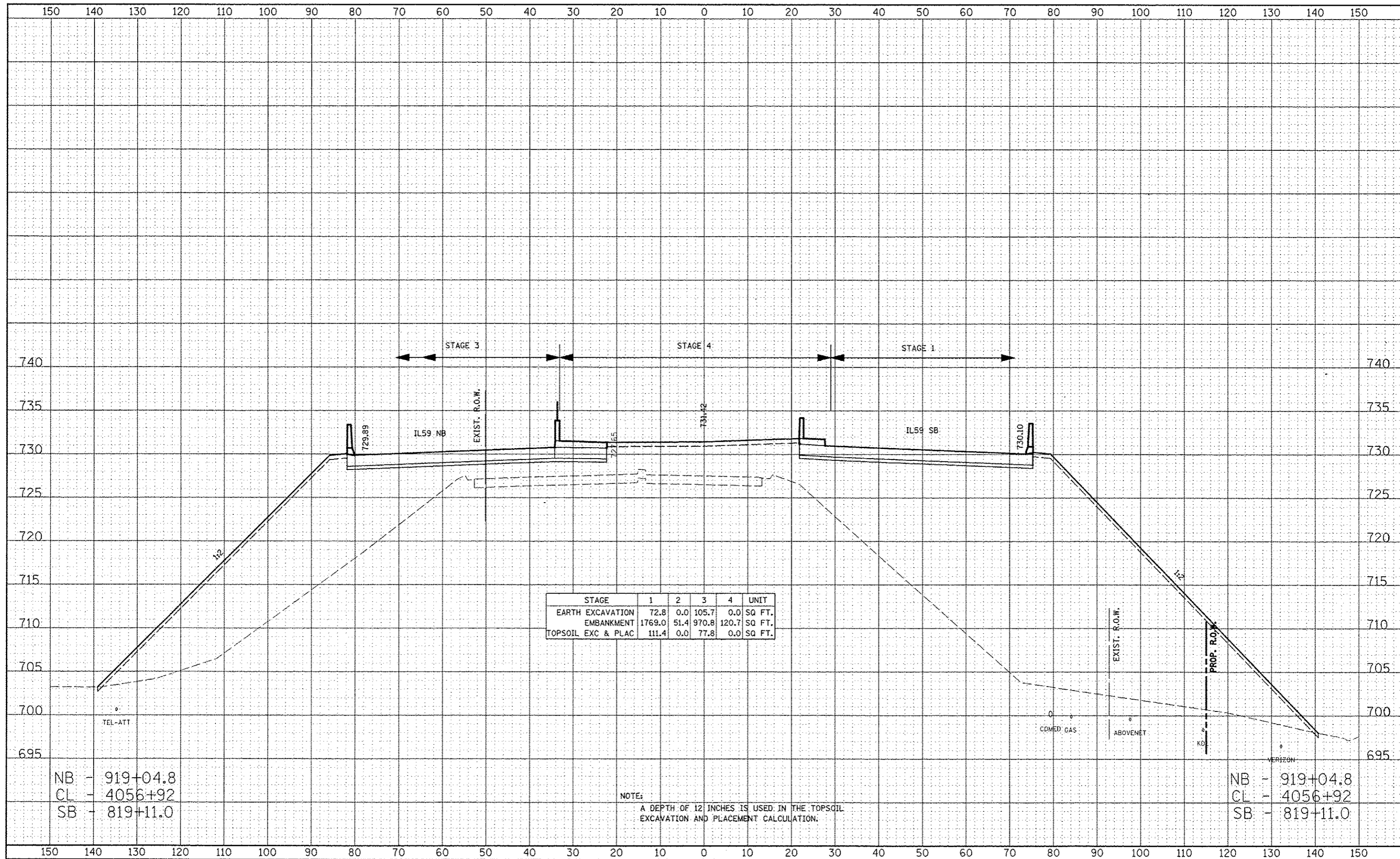
NB - 918+62.6
 CL - 4056+50
 SB - 818+68.9

STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	93.8	0.0	100.4	0.0	SO FT.
EMBANKMENT	1721.5	0.0	1447.0	152.6	SO FT.
TOPSOIL EXC & PLAC	114.9	0.0	102.8	0.0	SO FT.

NOTE:
 A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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 AREA: _____

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 SURVEY: _____
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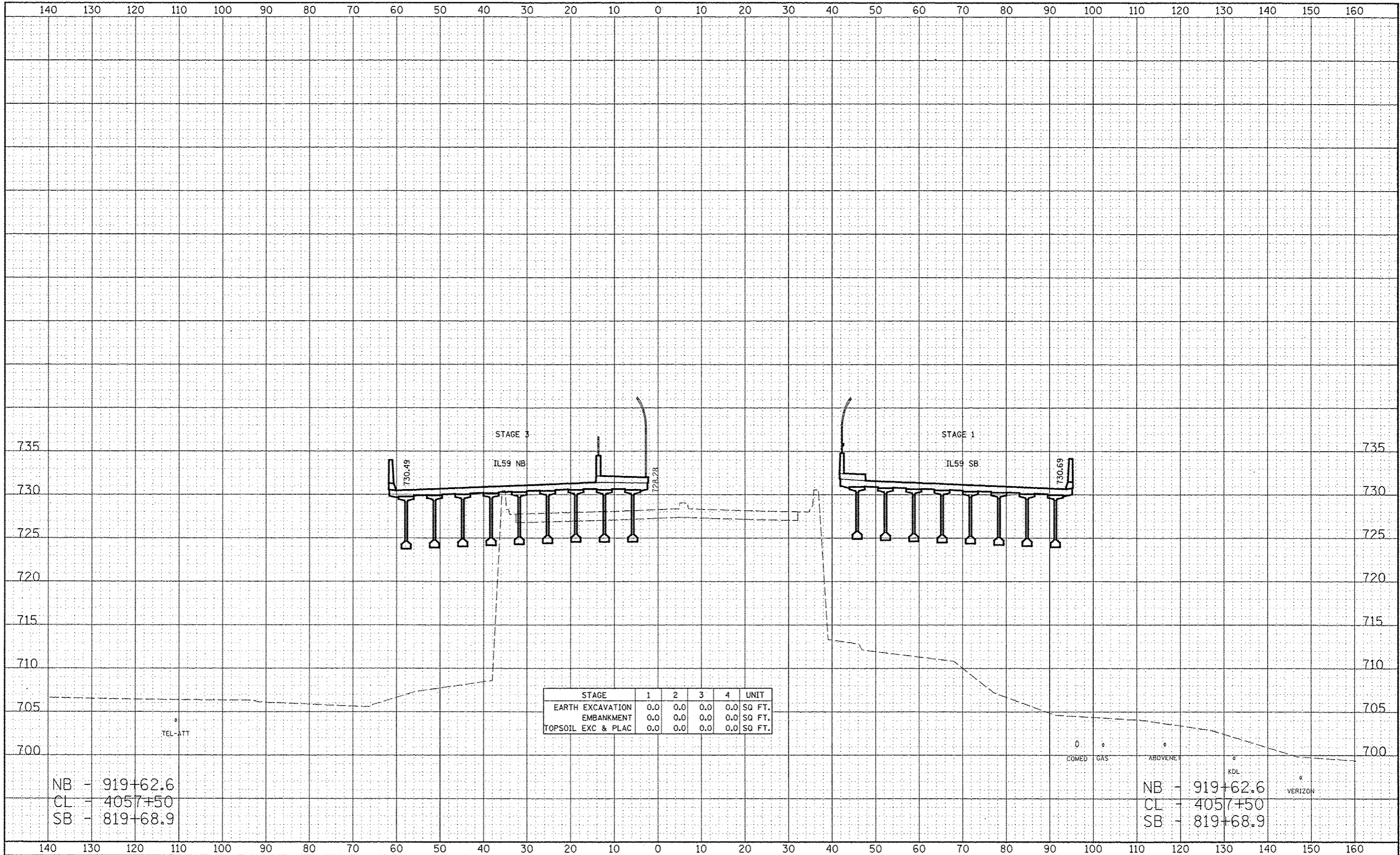


STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	72.8	0.0	105.7	0.0	SQ FT.
EMBANKMENT	1769.0	51.4	970.8	120.7	SQ FT.
TOPSOIL EXC & PLAC	111.4	0.0	77.8	0.0	SQ FT.

NOTE:
 A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

NB - 919+04.8
 CL - 4056+92
 SB - 819+11.0

NB - 919+04.8
 CL - 4056+92
 SB - 819+11.0



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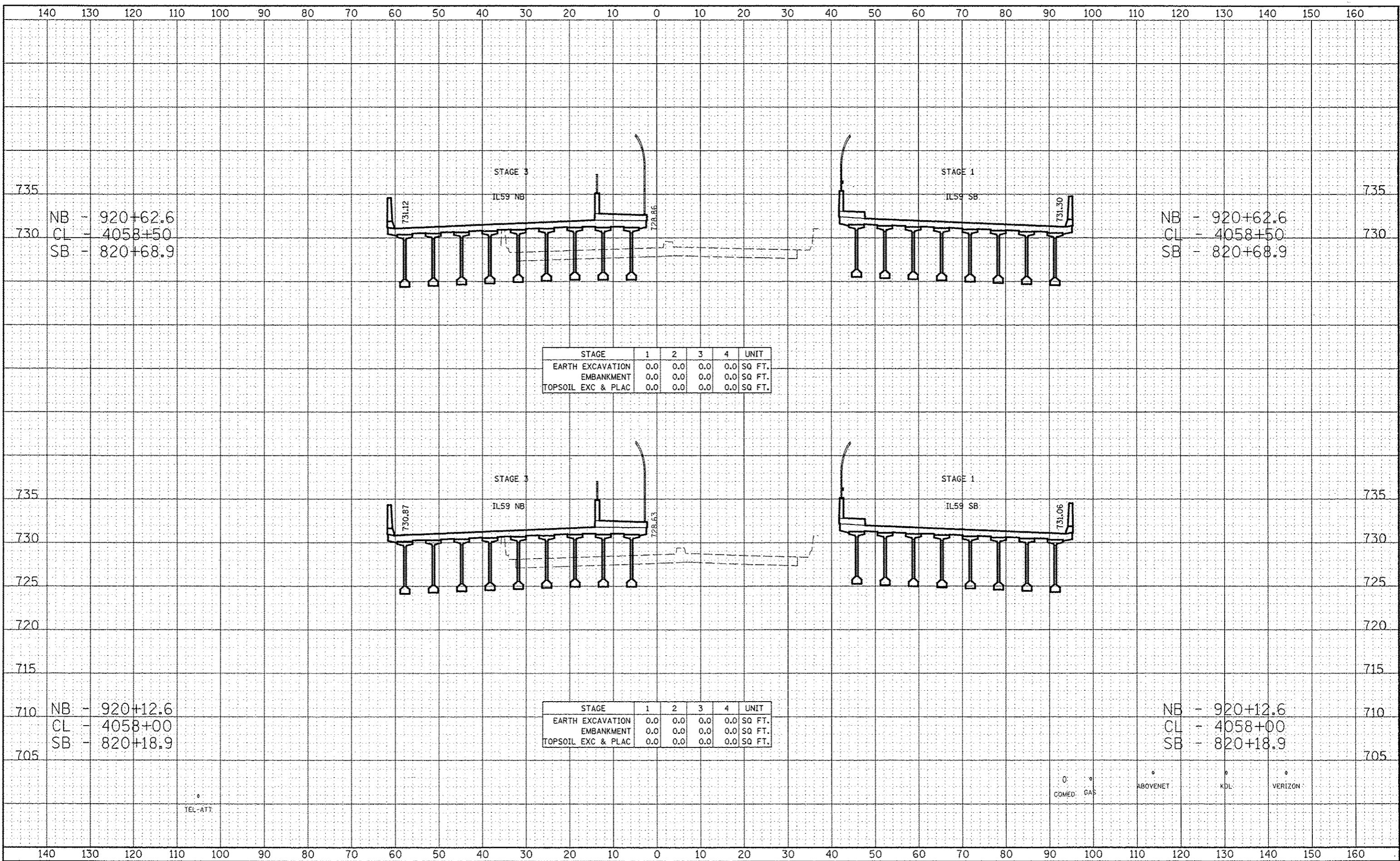
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NB - 919+62.6
 CL - 4057+50
 SB - 819+68.9

NB - 919+62.6
 CL - 4057+50
 SB - 819+68.9

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STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	0.0	0.0	0.0	0.0	SQ FT.
EMBANKMENT	0.0	0.0	0.0	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	0.0	0.0	0.0	SQ FT.

STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	0.0	0.0	0.0	0.0	SQ FT.
EMBANKMENT	0.0	0.0	0.0	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	0.0	0.0	0.0	SQ FT.

NB - 920+62.6
 CL - 4058+50
 SB - 820+68.9

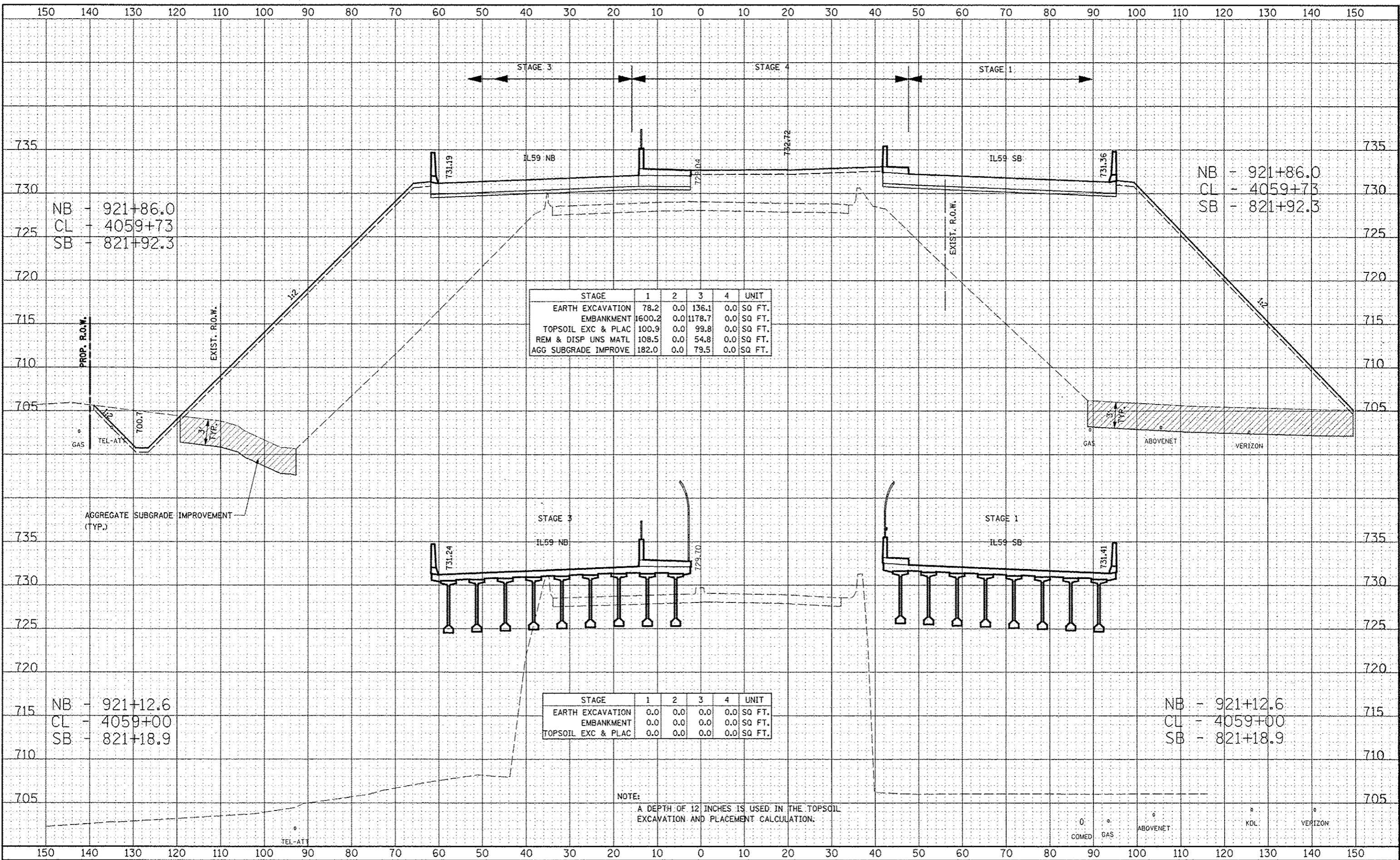
NB - 920+62.6
 CL - 4058+50
 SB - 820+68.9

NB - 920+12.6
 CL - 4058+00
 SB - 820+18.9

NB - 920+12.6
 CL - 4058+00
 SB - 820+18.9

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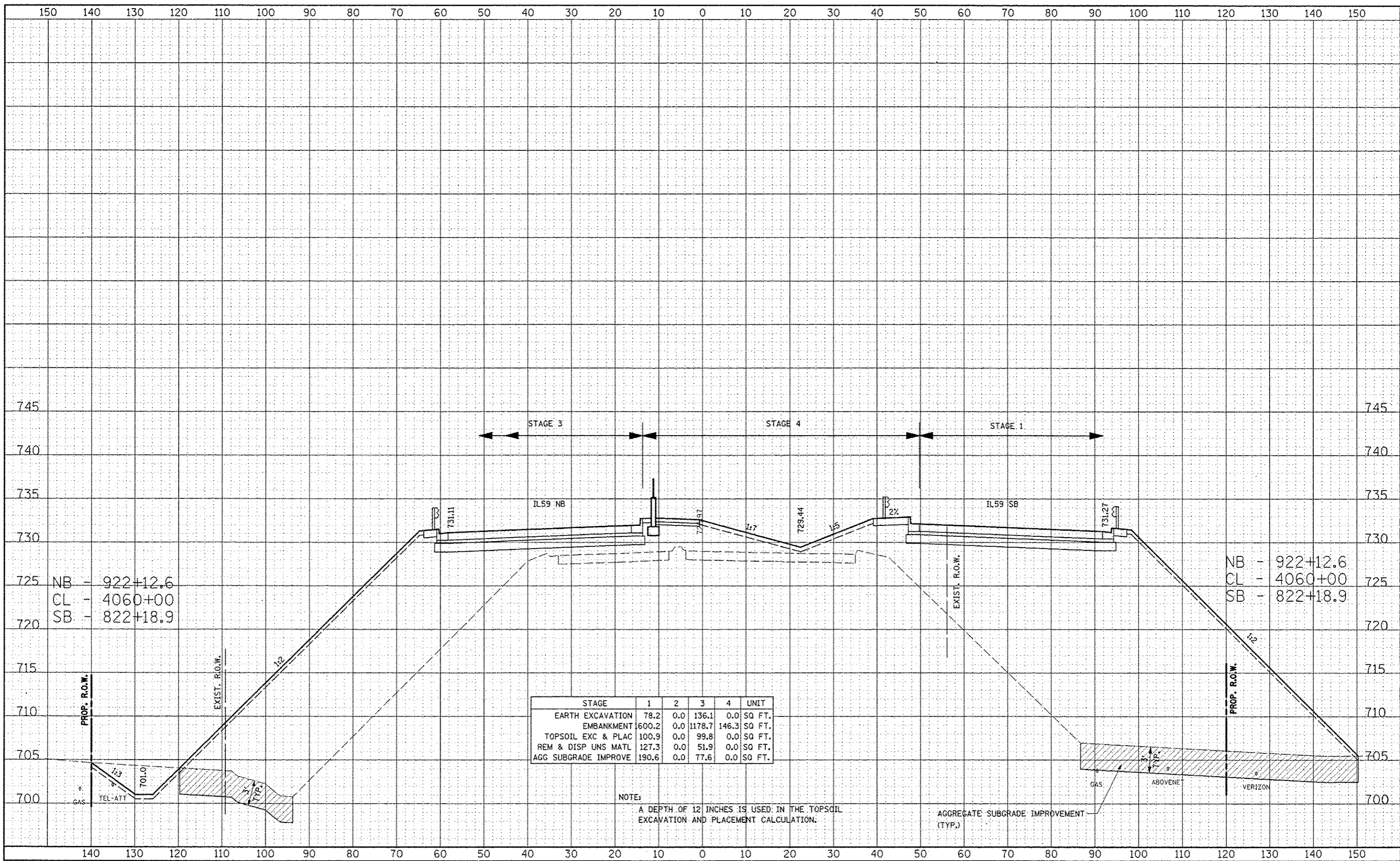


STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	0.0	0.0	0.0	0.0	SQ FT.
EMBANKMENT	0.0	0.0	0.0	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	0.0	0.0	0.0	SQ FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	78.2	0.0	136.1	0.0	SQ. FT.
EMBANKMENT	1600.2	0.0	1178.7	146.3	SQ. FT.
TOPSOIL EXC & PLAC	100.9	0.0	99.8	0.0	SQ. FT.
REM & DISP UNS MATL	127.3	0.0	51.9	0.0	SQ. FT.
AGG SUBGRADE IMPROVE	190.6	0.0	77.6	0.0	SQ. FT.

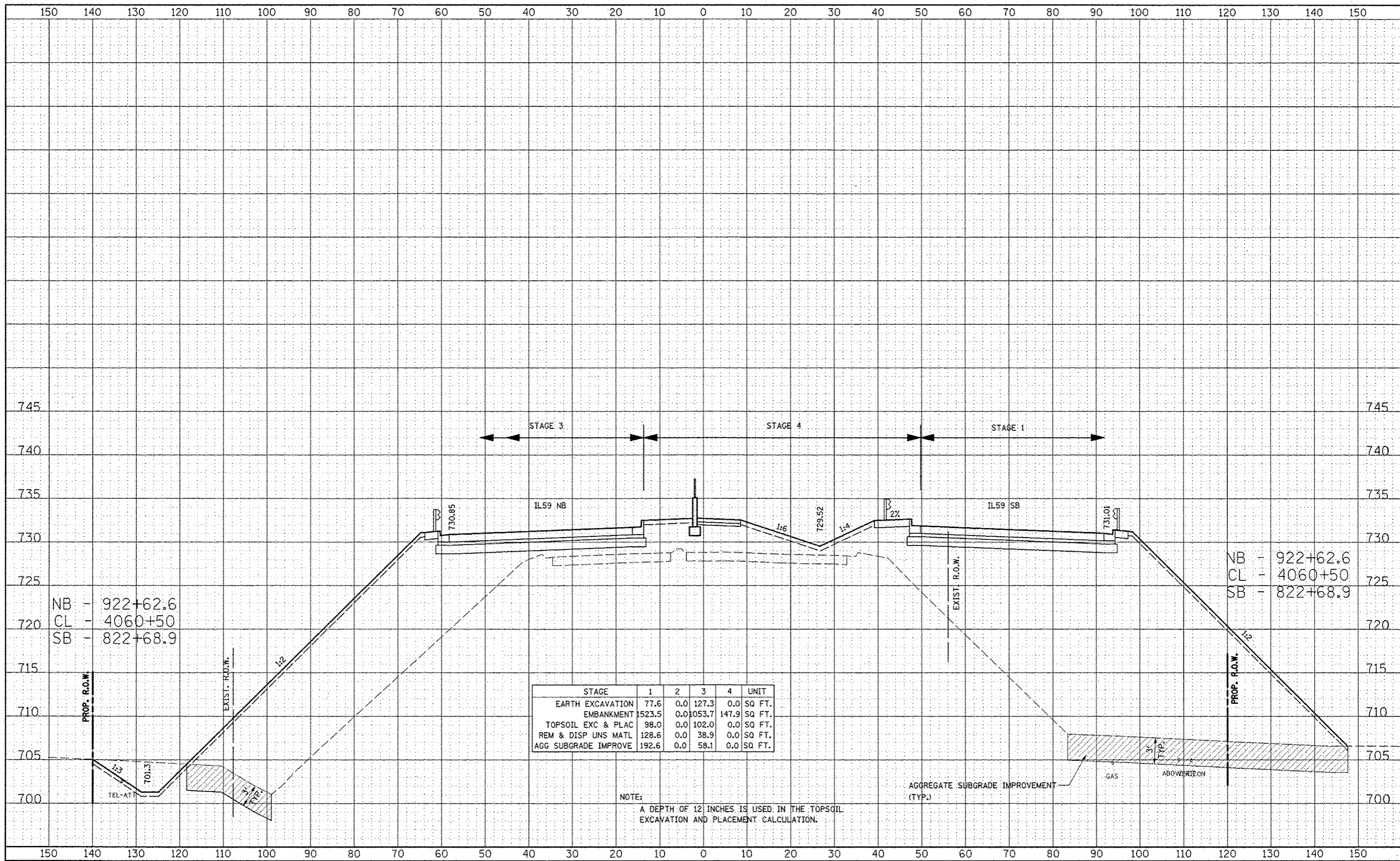
NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

AGGREGATE SUBGRADE IMPROVEMENT (TYP.)

NB - 922+12.6
CL - 4060+00
SB - 822+18.9

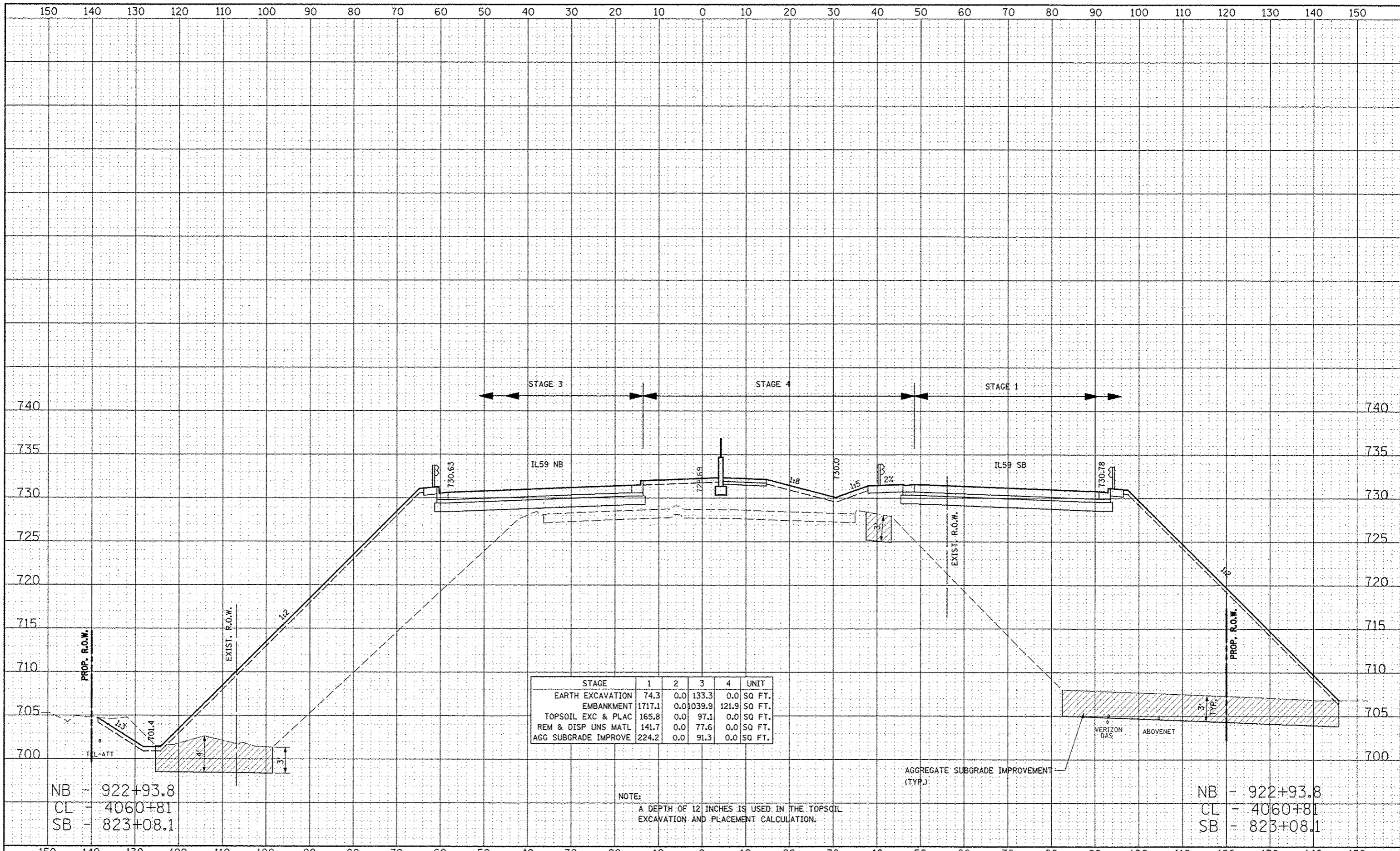
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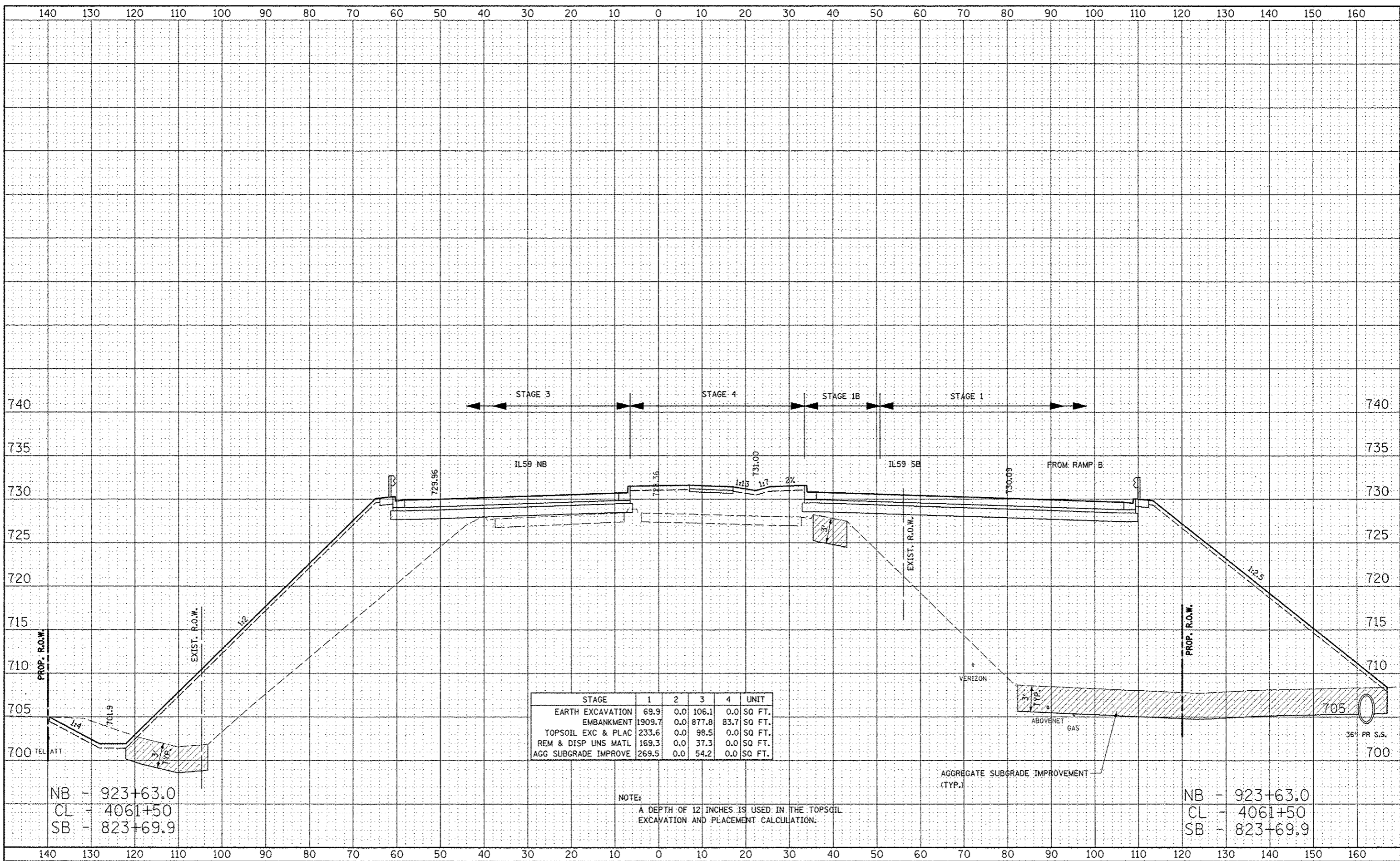
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NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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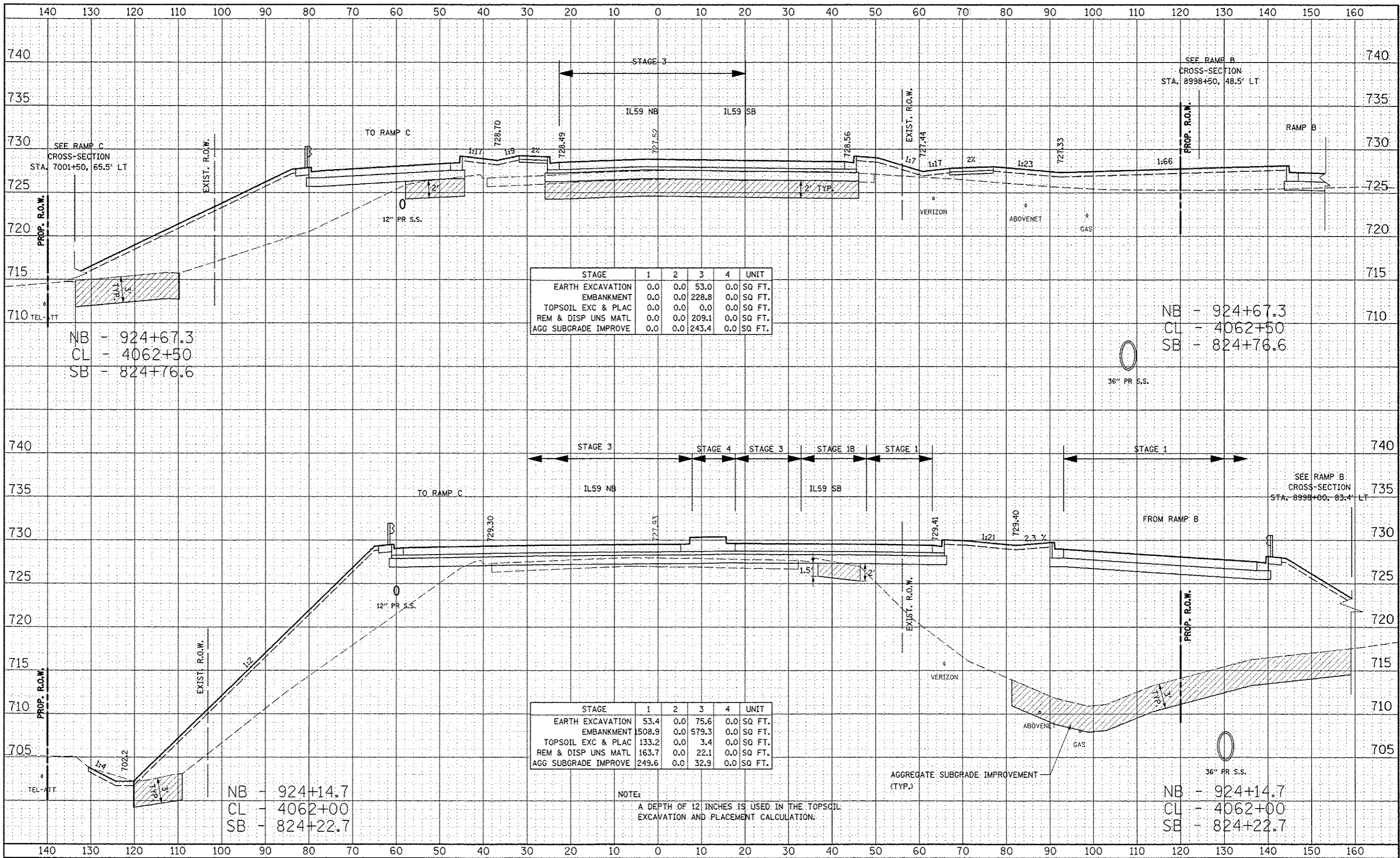
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NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

NB - 923+63.0
CL - 4061+50
SB - 823+69.9

NB - 923+63.0
CL - 4061+50
SB - 823+69.9



STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	0.0	0.0	53.0	0.0	SQ FT.
EMBANKMENT	0.0	0.0	228.8	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	0.0	0.0	0.0	SQ FT.
REM & DISP UNS MATL	0.0	0.0	209.1	0.0	SQ FT.
AGG SUBGRADE IMPROVE	0.0	0.0	243.4	0.0	SQ FT.

STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	53.4	0.0	75.6	0.0	SQ FT.
EMBANKMENT	508.9	0.0	579.3	0.0	SQ FT.
TOPSOIL EXC & PLAC	133.2	0.0	3.4	0.0	SQ FT.
REM & DISP UNS MATL	163.7	0.0	22.1	0.0	SQ FT.
AGG SUBGRADE IMPROVE	249.6	0.0	32.9	0.0	SQ FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

SEE RAMP B
CROSS-SECTION
STA. 8998+50, 48.5' LT

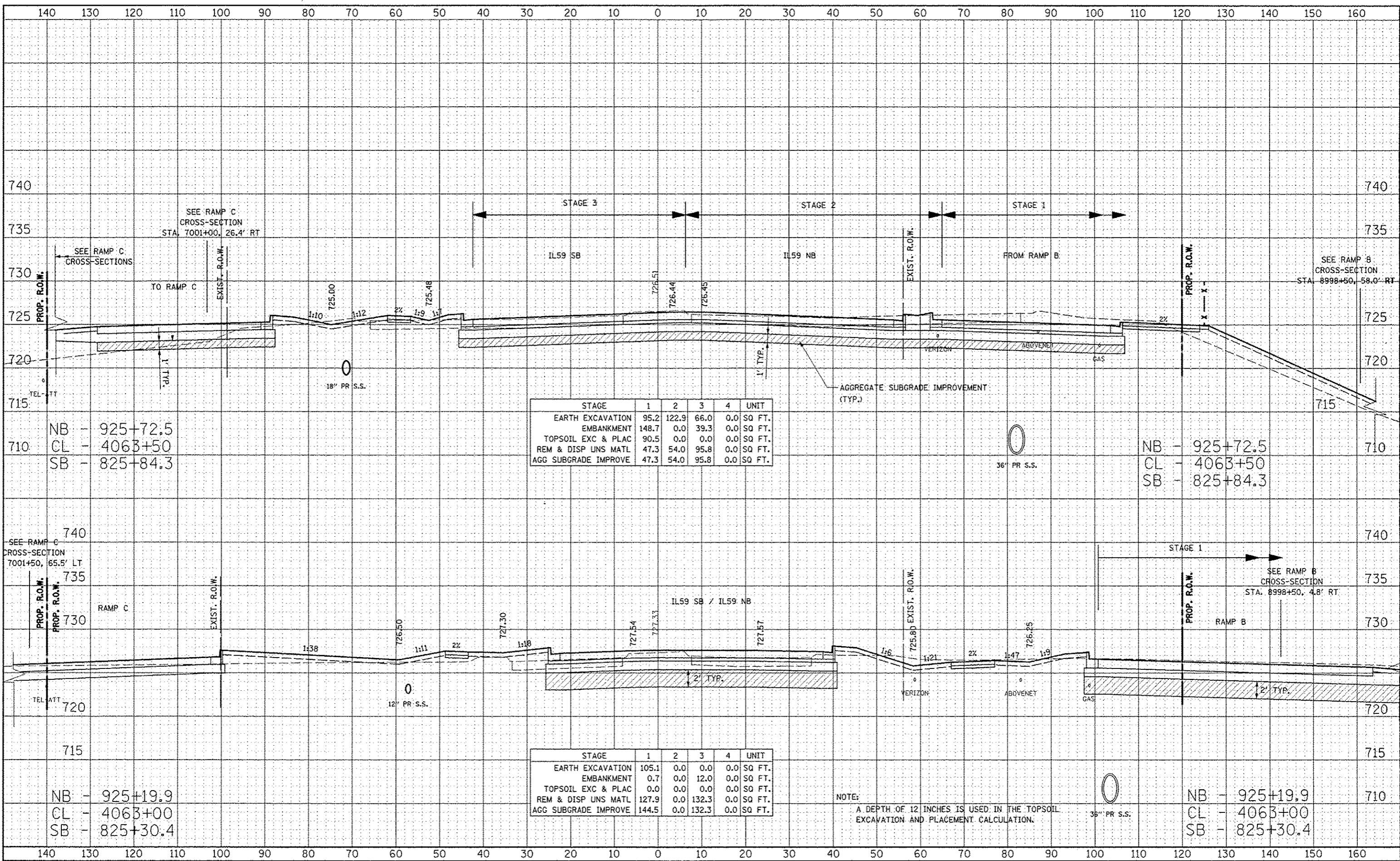
NB - 924+67.3
CL - 4062+50
SB - 824+76.6

SEE RAMP B
CROSS-SECTION
STA. 8998+00, 83.4' LT

NB - 924+14.7
CL - 4062+00
SB - 824+22.7

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STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	95.2	122.9	66.0	0.0	SQ FT.
EMBANKMENT	148.7	0.0	39.3	0.0	SQ FT.
TOPSOIL EXC & PLAC	90.5	0.0	0.0	0.0	SQ FT.
REM & DISP UNS MATL	47.3	54.0	95.8	0.0	SQ FT.
AGG SUBGRADE IMPROVE	47.3	54.0	95.8	0.0	SQ FT.

STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	105.1	0.0	0.0	0.0	SQ FT.
EMBANKMENT	0.7	0.0	12.0	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	0.0	0.0	0.0	SQ FT.
REM & DISP UNS MATL	127.9	0.0	132.3	0.0	SQ FT.
AGG SUBGRADE IMPROVE	144.5	0.0	132.3	0.0	SQ FT.

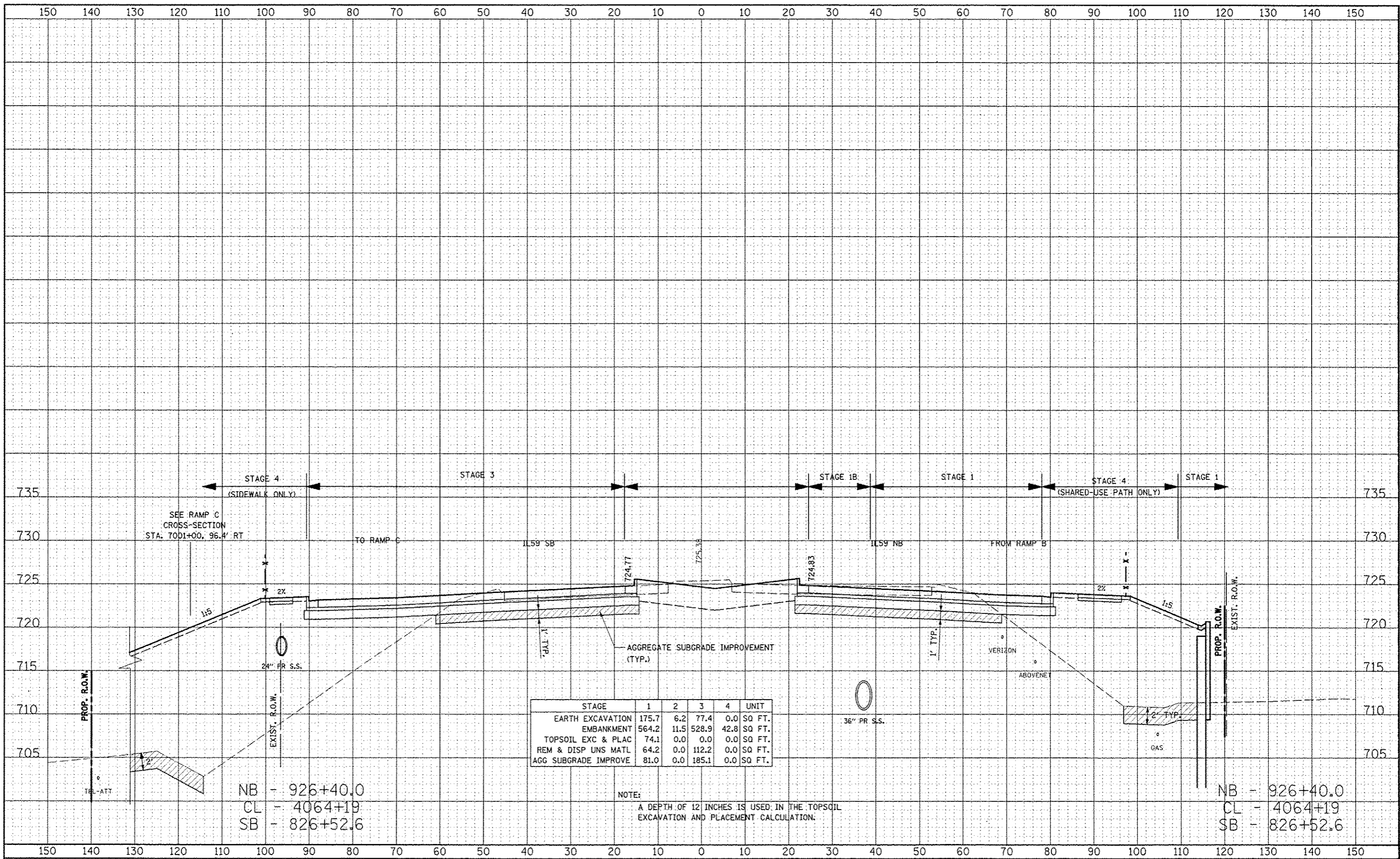
NOTE: A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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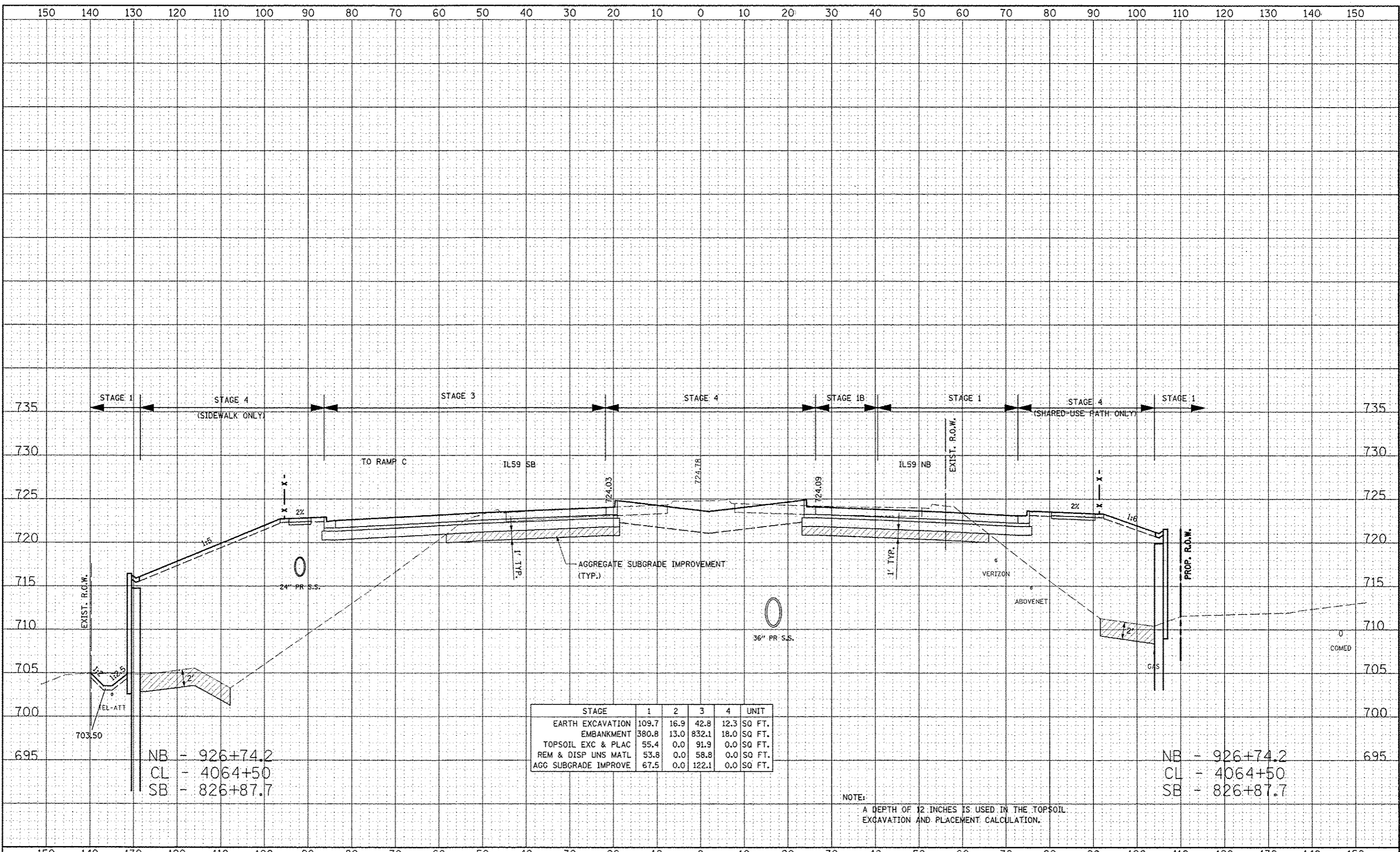
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NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

NB - 926+40.0
CL - 4064+19
SB - 826+52.6

NB - 926+40.0
CL - 4064+19
SB - 826+52.6



STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	109.7	16.9	42.8	12.3	SQ FT.
EMBANKMENT	380.8	13.0	832.1	18.0	SQ FT.
TOPSOIL EXC & PLAC	55.4	0.0	91.9	0.0	SQ FT.
REM & DISP UNS MATL	53.8	0.0	58.8	0.0	SQ FT.
AGG SUBGRADE IMPROVE	67.5	0.0	122.1	0.0	SQ FT.

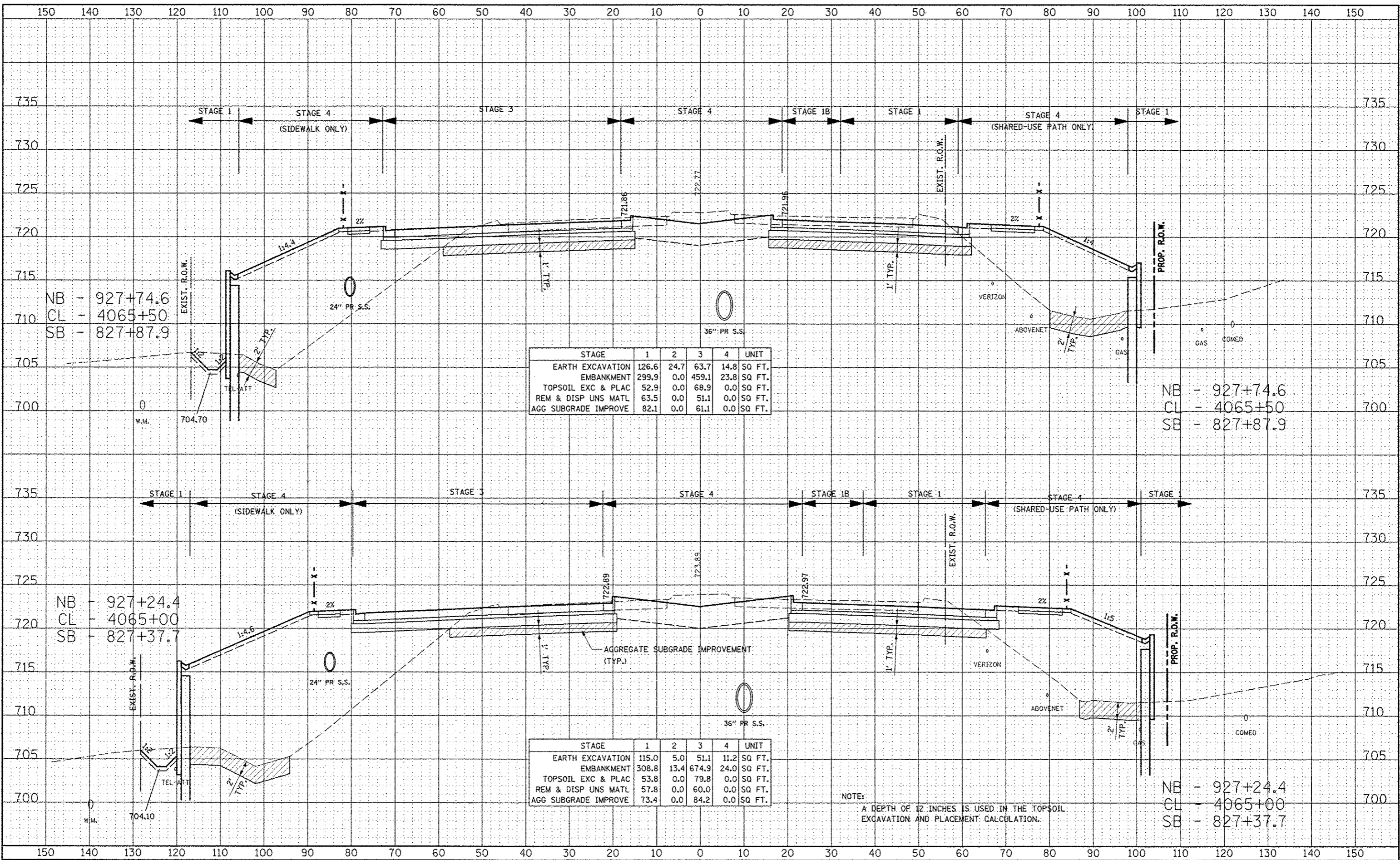
NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

NB - 926+74.2
CL - 4064+50
SB - 826+87.7

NB - 926+74.2
CL - 4064+50
SB - 826+87.7

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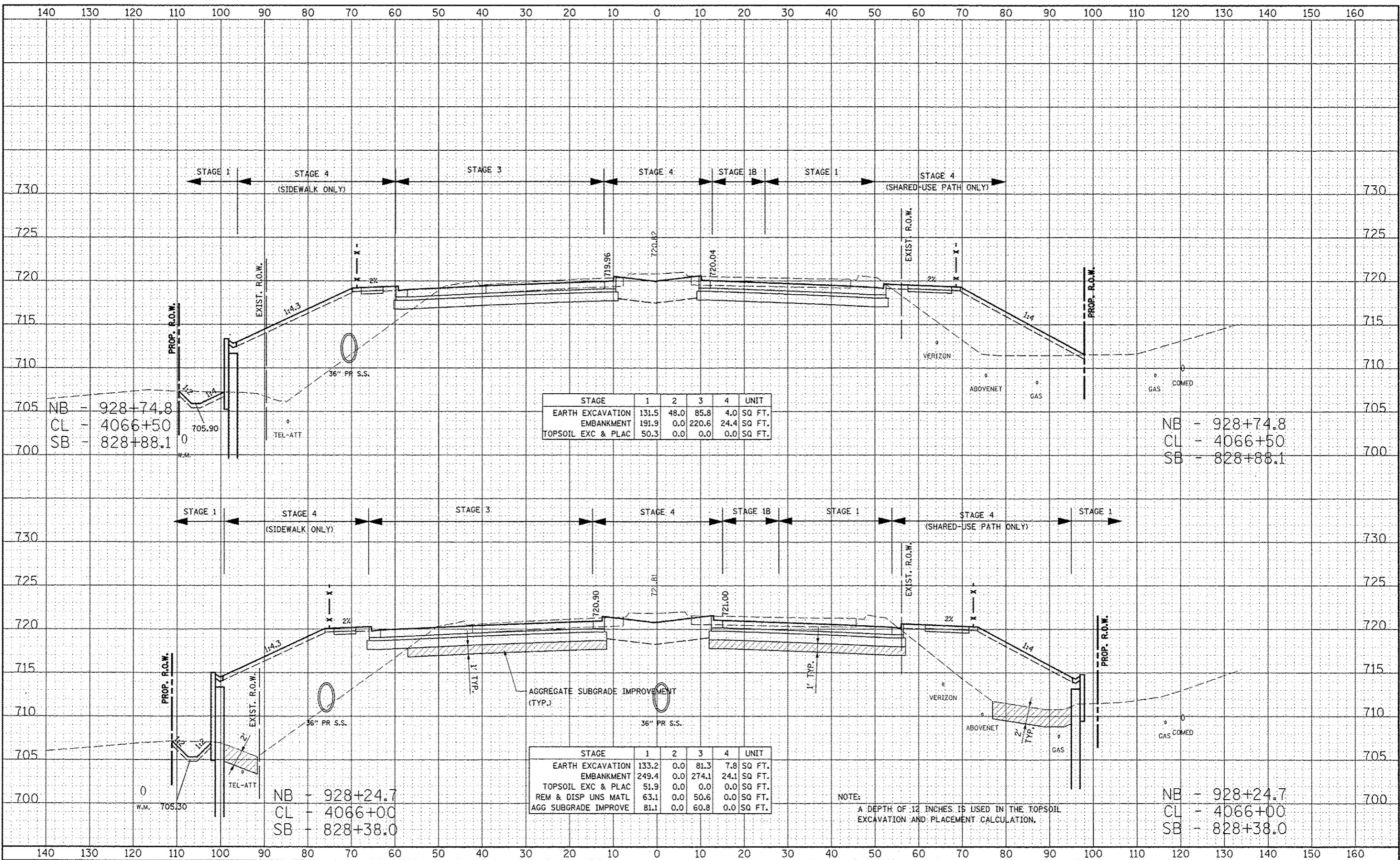
STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	126.6	24.7	63.7	14.8	SQ FT.
EMBANKMENT	299.9	0.0	459.1	23.8	SQ FT.
TOPSOIL EXC & PLAC	52.9	0.0	68.9	0.0	SQ FT.
REM & DISP UNS MATL	63.5	0.0	51.1	0.0	SQ FT.
AGG SUBGRADE IMPROVE	82.1	0.0	61.1	0.0	SQ FT.

STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	115.0	5.0	51.1	11.2	SQ FT.
EMBANKMENT	308.8	13.4	674.9	24.0	SQ FT.
TOPSOIL EXC & PLAC	53.8	0.0	79.8	0.0	SQ FT.
REM & DISP UNS MATL	57.8	0.0	60.0	0.0	SQ FT.
AGG SUBGRADE IMPROVE	73.4	0.0	84.2	0.0	SQ FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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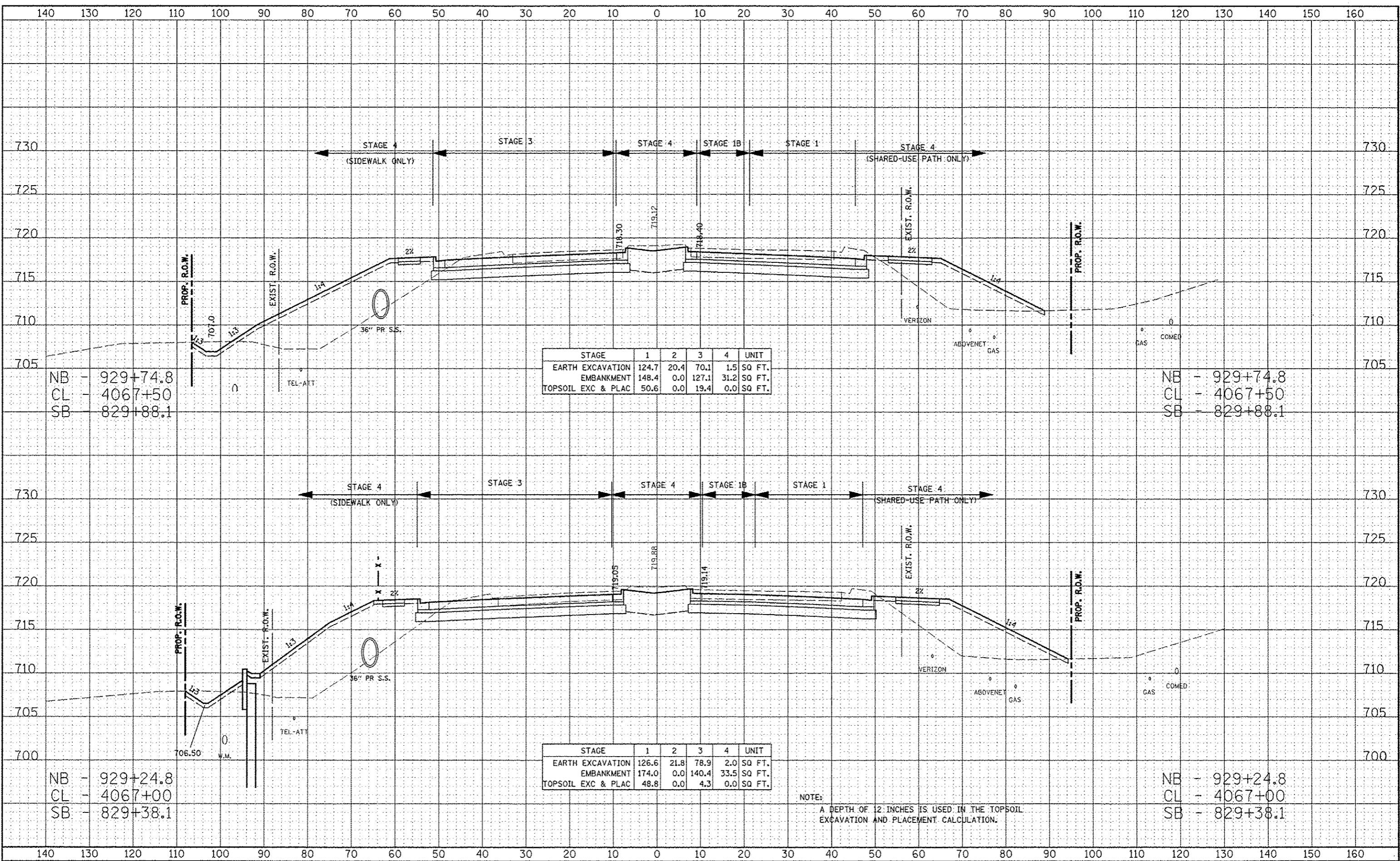


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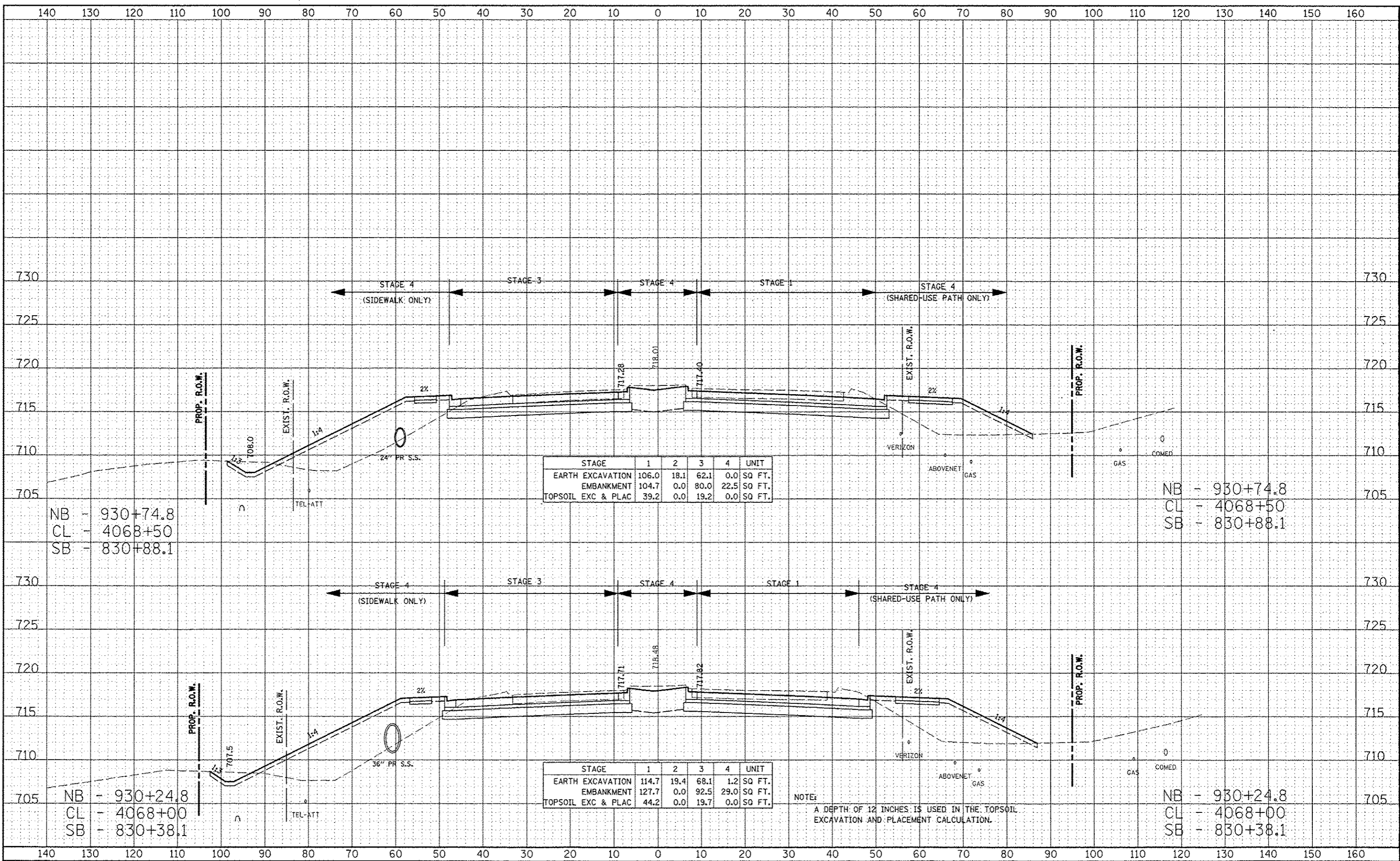
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NOTE:
 A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

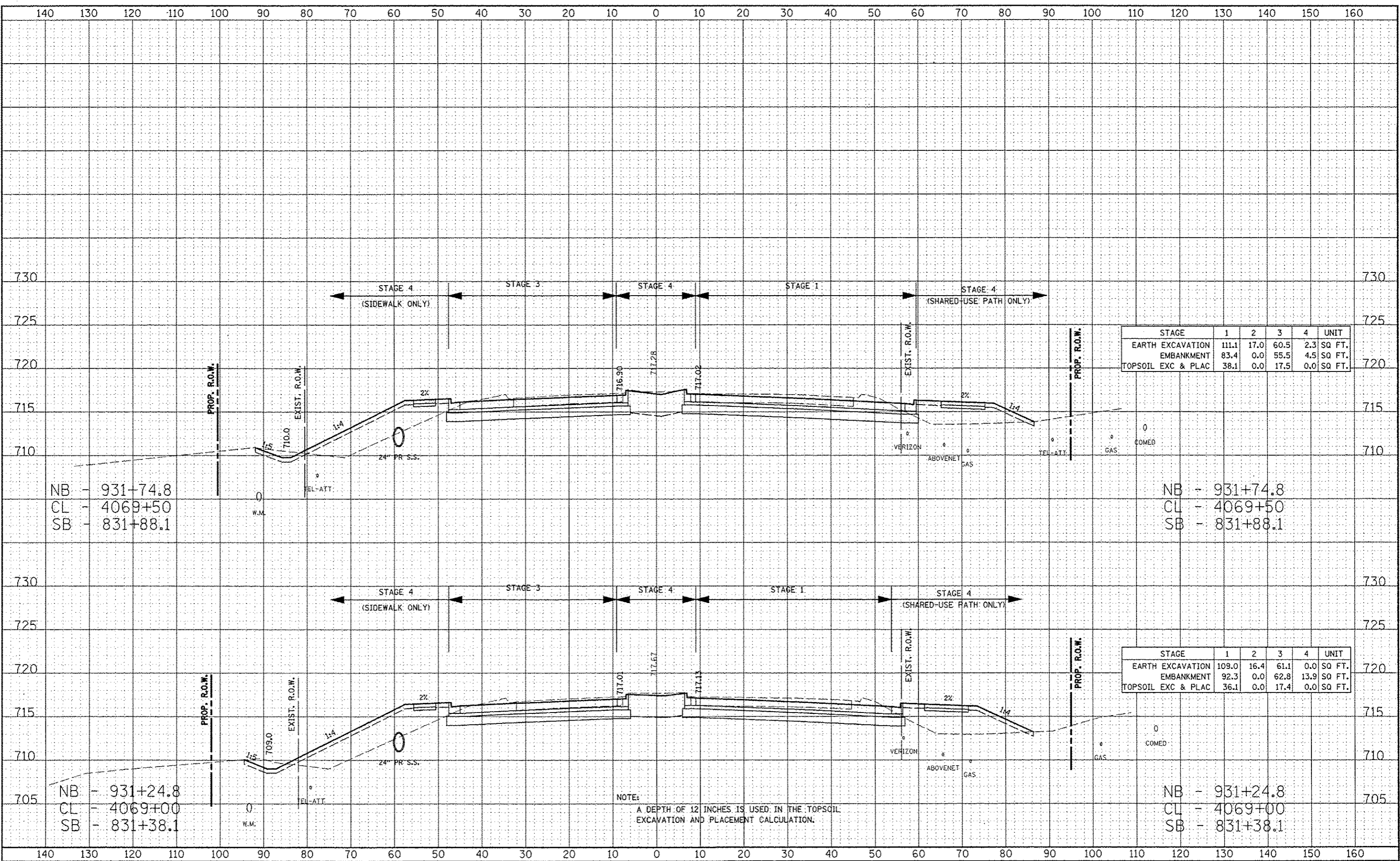
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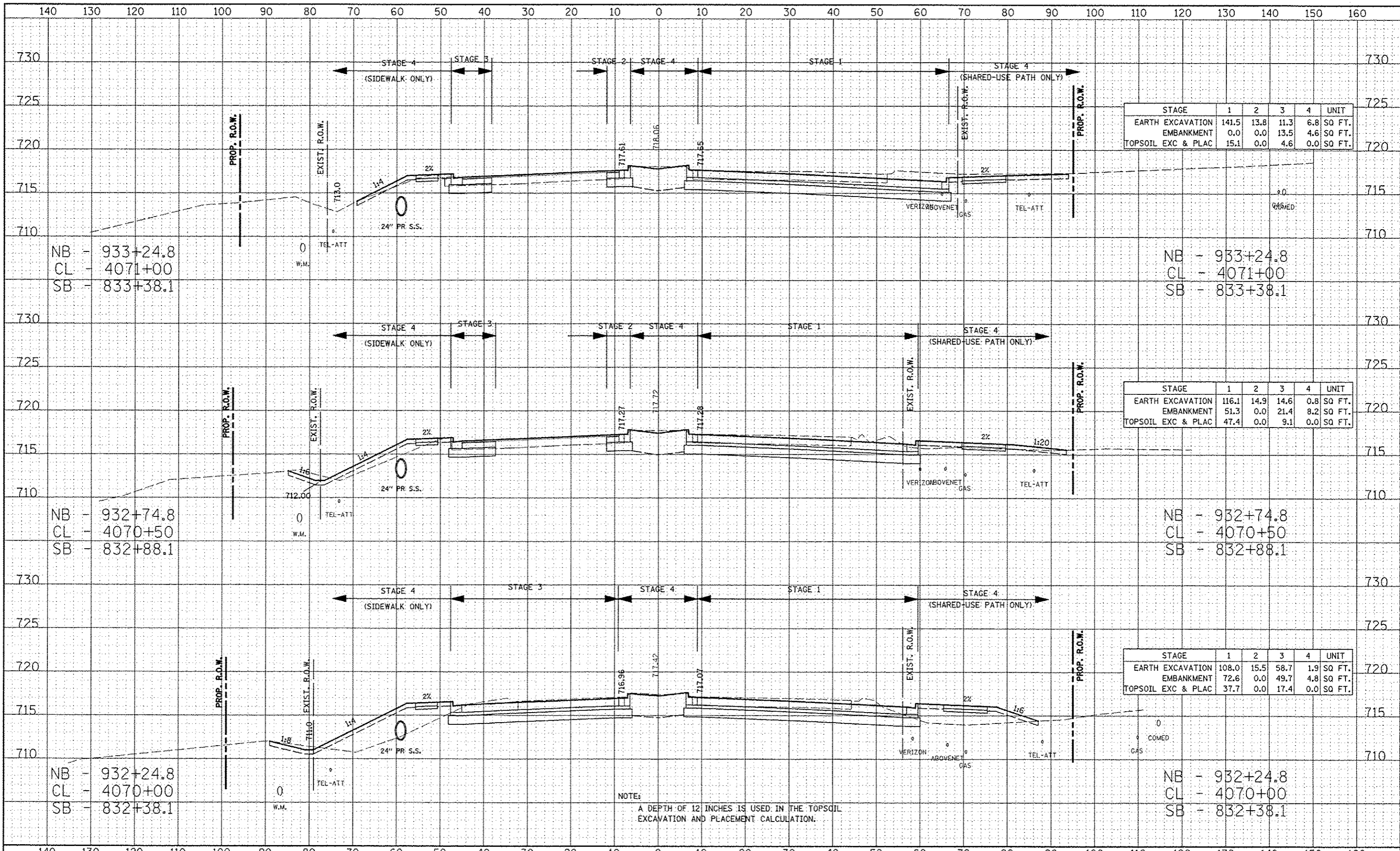
STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	111.1	17.0	60.5	2.3	SO FT.
EMBANKMENT	83.4	0.0	55.5	4.5	SO FT.
TOPSOIL EXC & PLAC	38.1	0.0	17.5	0.0	SO FT.

STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	109.0	16.4	61.1	0.0	SO FT.
EMBANKMENT	92.3	0.0	62.8	13.9	SO FT.
TOPSOIL EXC & PLAC	36.1	0.0	17.4	0.0	SO FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

DATE: _____
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STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	141.5	13.8	11.3	6.8	SQ FT.
EMBANKMENT	0.0	0.0	13.5	4.6	SQ FT.
TOPSOIL EXC & PLAC	15.1	0.0	4.6	0.0	SQ FT.

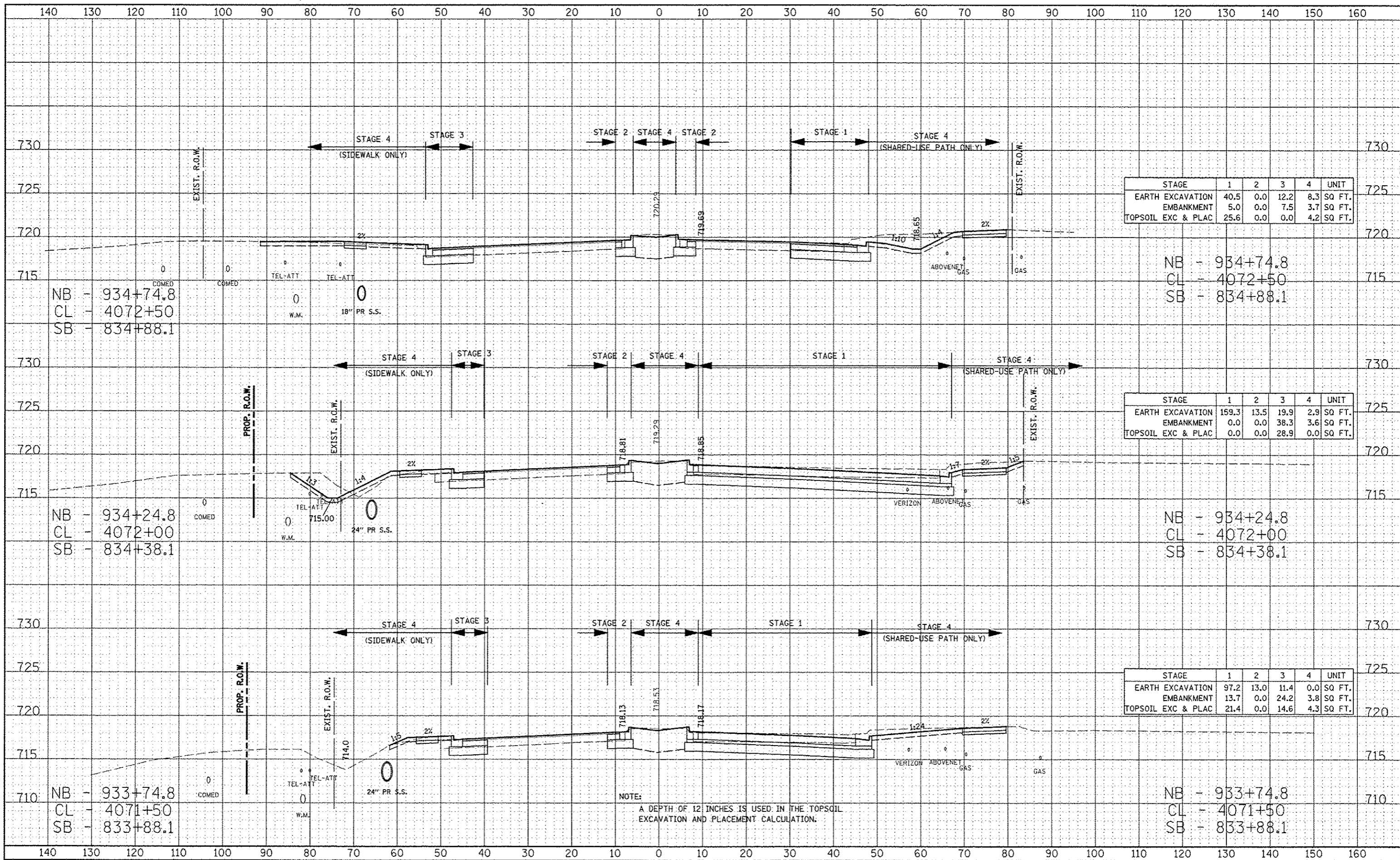
STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	116.1	14.9	14.6	0.8	SQ FT.
EMBANKMENT	51.3	0.0	21.4	8.2	SQ FT.
TOPSOIL EXC & PLAC	47.4	0.0	9.1	0.0	SQ FT.

STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	108.0	15.5	58.7	1.9	SQ FT.
EMBANKMENT	72.6	0.0	49.7	4.8	SQ FT.
TOPSOIL EXC & PLAC	37.7	0.0	17.4	0.0	SQ FT.

NOTE:
 A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

BY	DATE
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DRAWN	
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DATE	

BY	DATE
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STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	40.5	0.0	12.2	8.3	SQ FT.
EMBANKMENT	5.0	0.0	7.5	3.7	SQ FT.
TOPSOIL EXC & PLAC	25.6	0.0	0.0	4.2	SQ FT.

NB - 934+74.8
 CL - 4072+50
 SB - 834+88.1

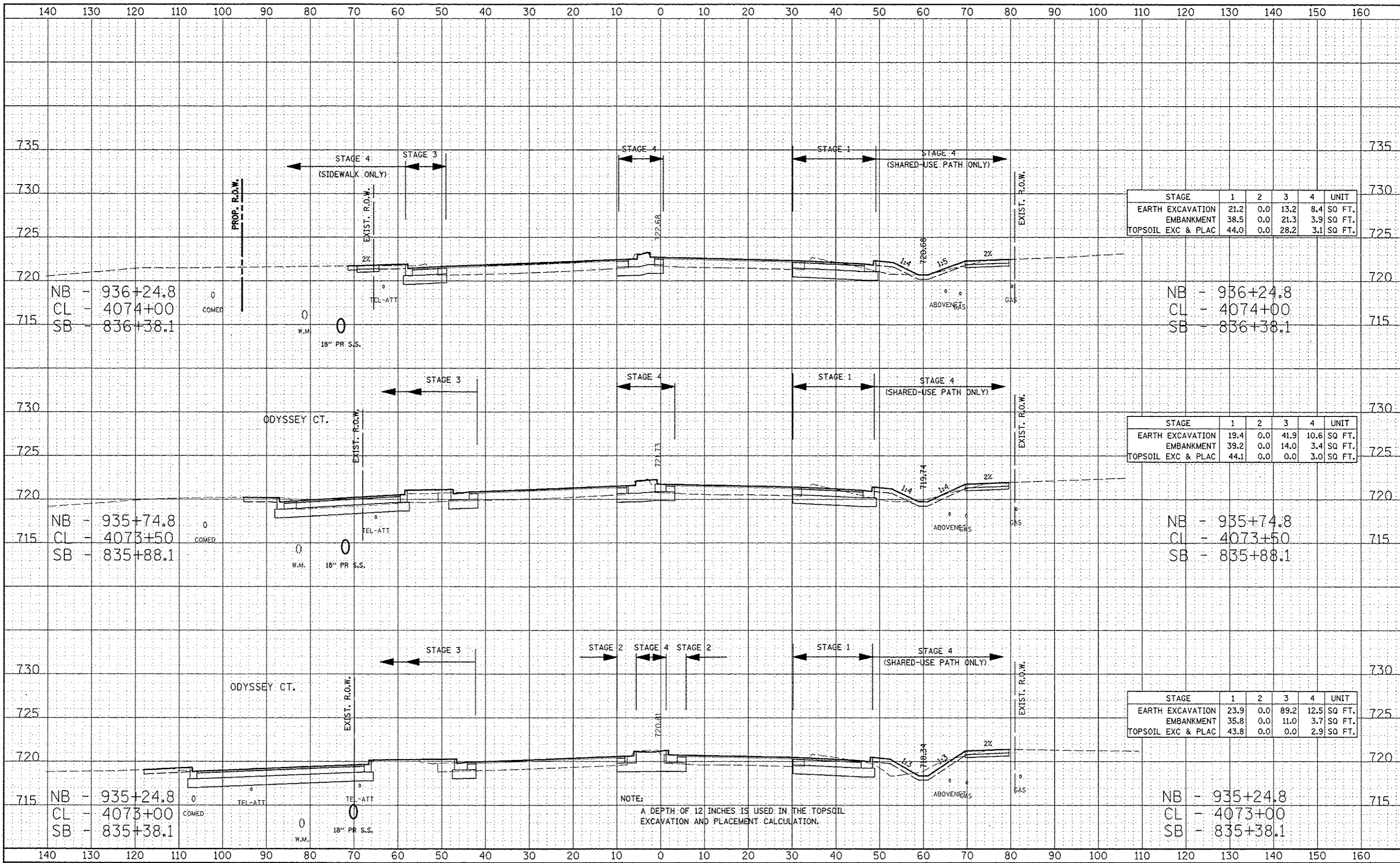
STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	159.3	13.5	19.9	2.9	SQ FT.
EMBANKMENT	0.0	0.0	38.3	3.6	SQ FT.
TOPSOIL EXC & PLAC	0.0	0.0	28.9	0.0	SQ FT.

NB - 934+24.8
 CL - 4072+00
 SB - 834+38.1

STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	97.2	13.0	11.4	0.0	SQ FT.
EMBANKMENT	13.7	0.0	24.2	3.8	SQ FT.
TOPSOIL EXC & PLAC	21.4	0.0	14.6	4.3	SQ FT.

NB - 933+74.8
 CL - 4071+50
 SB - 833+88.1

NOTE:
 A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.



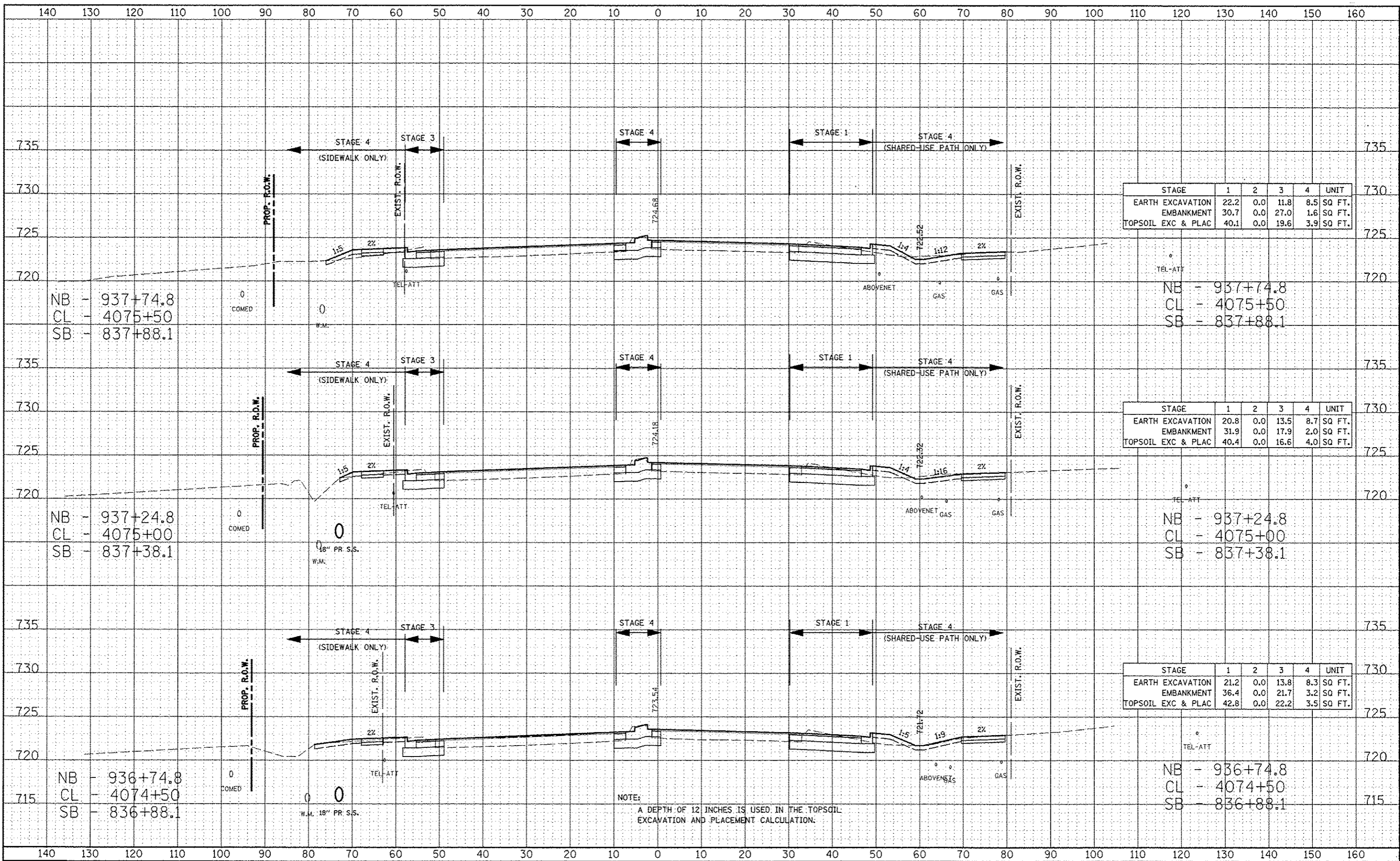
NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

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DATE: _____ BY: _____
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 PROJECT NO.: _____
 CONTRACT NO.: _____

DATE: _____ BY: _____
 DRAWING NO.: _____
 SHEET NO.: _____
 PROJECT NO.: _____
 CONTRACT NO.: _____



STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	22.2	0.0	11.8	8.5	SQ FT.
EMBANKMENT	30.7	0.0	27.0	1.6	SQ FT.
TOPSOIL EXC & PLAC	40.1	0.0	19.6	3.9	SQ FT.

STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	20.8	0.0	13.5	8.7	SQ FT.
EMBANKMENT	31.9	0.0	17.9	2.0	SQ FT.
TOPSOIL EXC & PLAC	40.4	0.0	16.6	4.0	SQ FT.

STAGE	1	2	3	4	UNIT
EARTH EXCAVATION	21.2	0.0	13.8	8.3	SQ FT.
EMBANKMENT	36.4	0.0	21.7	3.2	SQ FT.
TOPSOIL EXC & PLAC	42.8	0.0	22.2	3.5	SQ FT.

NOTE: A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.