

PLANS SYMBOLS

STATE LINE	---
COUNTY LINE	---
TOWNSHIP OR RANGE LINE	---
SECTION LINE	---
QUARTER LINE	---
SIXTEENTH LINE	---
RIGHT OF WAY LINE	---
SLOPE EASIMENT	---
PRESENT RIGHT OF WAY LINE	---
CONTROL OF ACCESS LINE	---
PROPERTY LINE (Except Land Lines)	---
VACATED PLATTED PROPERTY	---
CORPORATE OR CITY LIMITS	---
TRUNK HIGHWAY CENTER LINE	---
RETAINING WALL	---
RAILROAD	---
RAILROAD RIGHT OF WAY LINE	---
RIVER OR CREEK	---
DRY RUN	---
DRAINAGE DITCH	---
DRAIN TILE	---
CUVERT	---
DROP INLET	---
GUARD RAIL	---
BARBED WIRE FENCE	---
WOVEN WIRE FENCE	---
CHAIN LINK FENCE	---
RAILROAD SNOW FENCE	---
STONE WALL OR FENCE	---
HEDGE	---
RAILROAD CROSSING SIGN	---
ELECTRIC WARNING SIGN	---
CROSSING GATE	---
MEANDER CORNER	---
SPRINGS	---
MARSH	---

TIMBER	(TIMBER)
ORCHARD	(ORCHARD)
BRUSH	(BRUSH)
NURSERY	(NURSERY)
CATCH BASIN	---
FIRE HYDRANT	---
CATTLE GUARD	---
OVERPASS (Highway Over)	---
UNDERPASS (Highway Under)	---
BRIDGE	---
BUILDING (One Story Frame)	---
F - FRAME	C - CONCRETE
S - STONE	T - TILE
B - BRICK	ST - STUCCO
IRON PIPE OR ROD	---
MONUMENT (STONE, CONCRETE, OR METAL)	---
WOODEN HUB	---
GRAVEL PIT	---
SAND PIT	---
BORROW PIT	---
ROCK QUARRY	---

UTILITIES SYMBOLS

POWER POLE LINE	---
TELEPHONE OR TELEGRAPH POLE LINE	---
JOINT TELEPHONE AND POWER ON POWER POLES	---
ON TELEPHONE POLES	---
ANCHOR	---
STEEL TOWER	---
STREET LIGHT	---
PEDESTAL (TELEPHONE CABLE TERMINAL)	---
GAS MAIN	---
WATER MAIN	---
CONDUIT	---
TELEPHONE CABLE IN CONDUIT	---
ELECTRIC CABLE IN CONDUIT	---
TELEPHONE MANHOLE	---
ELECTRIC MANHOLE	---
BURIED TELEPHONE CABLE	T-BUR
BURIED ELECTRIC CABLE	P-BUR
AERIAL TELEPHONE CABLE	T-AE
SEWER (SANITARY OR STORM)	---
SEWER MANHOLE	---

MINNESOTA DEPARTMENT OF TRANSPORTATION

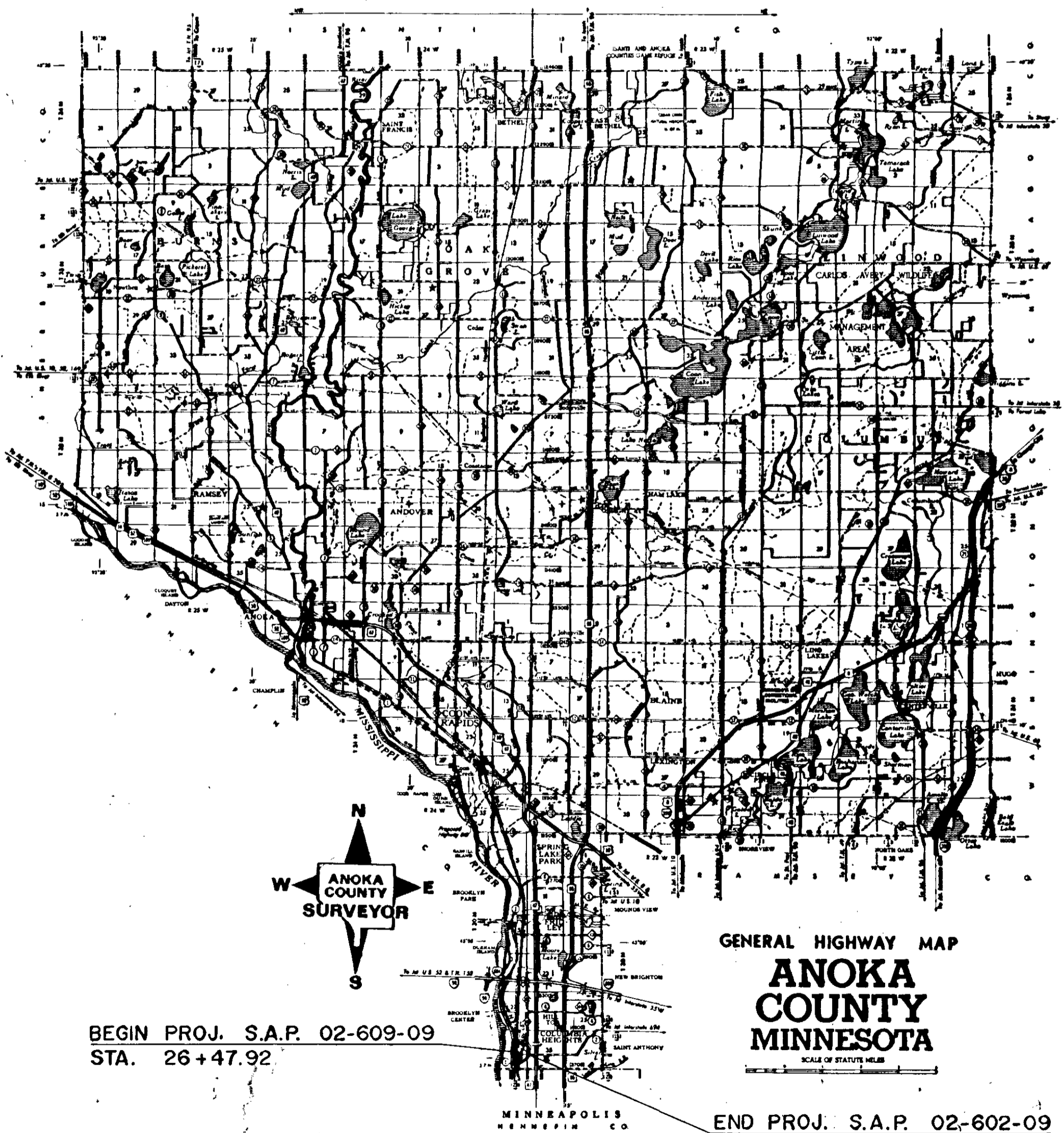
ANOKA COUNTY

CONSTRUCTION PLAN FOR GRADING, AGGREGATE BASE, BITUMINOUS SURFACING, CURB & GUTTER, STORM SEWER, REVISE TRAFFIC CONTROL SYSTEM & BRIDGE DECK

LOCATED ON C.S.A.H. #2 (43 RD. AVE.) BETWEEN C.S.A.H. #1 (EAST RIVER ROAD) AND INTERSECTION OF C.R. 102 (Geographic Description)

STATE AID PROJ. NO. 02-602-09 FROM A POINT 19.23' S. AND 1854.60' W. OF THE E. 1/4 COR. SEC. 34, T. 30 N., R. 24 W. TO A POINT 990' N. AND 1480.74' W. OF THE E. 1/4 COR. OF SEC. 34, T. 30 N., R. 24 W. (Legal Description)

GROSS LENGTH	1,958.090 FEET	0.371 MILES
BRIDGES-LENGTH	1,201.510 FEET	0.228 MILES
EXCEPTIONS-LENGTH	FEET	MILES
NET LENGTH	1,958.090 FEET	0.371 MILES



SCALES

PLAN	50'
PROFILE	HORIZ. 50' VERT. 5'
INDEX MAP	2.66 MI
GENERAL LAYOUT	

PLAN REVISIONS			
NO.	DATE	SHEET NO.	APPR BY
1	8-12-91	4, 8, 9, 10	DWF

MINN. PROJ. NO. _____
MINN. PROJ. NO. _____

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX

SHEET NO.	TITLE SHEET
1	TITLE SHEET
2	EST. QTY & SPL. DETAILS
3	TYPICAL SECTION
4	DRAINAGE TABULATION & DETAILS
5	SIGN FOOTING DETAIL
6	ERROSION CONTROL
7	GUARDRAIL DETAILS
8	PLAN & PROFILE
9	DRAINAGE PLAN
10	CROSS SECTION
11-15	SIGNAL PLAN
16-22	TRAFFIC CONTROL PLAN
1A-14A	BRIDGE REPAIR AND OVERLAY # 02523

Bridge Repair Sheets Located in Bridge 02523 Flat File

THIS PLAN CONTAINS 36 SHEETS

DESIGN DESIGNATION

ΣN18	20
R Value	
ADT (1989) =	12,594
Proj. ADT (2009) =	20,150
Proj. HCADT (2009) =	1,100+
Soil Factor	A-3 50%
Shoulder Design	9 Ton Design
Shoulder Width	10

Design Speed 30 MPH
Based on STOPPING Sight Distance
Height of eye 3.5' Height of object 0.50'
Design Speed not achieved at:

STA. _____	TO STA. _____	MPH _____
STA. _____	TO STA. _____	MPH _____
STA. _____	TO STA. _____	MPH _____

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 7/3/90 REG. NO. 6549 ENGR. *Lawrence R. Lund*
COUNTY Anoka

Recommended for Approval _____ 19 _____
DISTRICT STATE AID ENGINEER
Recommended for Approval _____ 19 _____
STATE AID PLANS AND SPECS ENGINEER
Approved _____ 19 _____
STATE AID ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED _____
DIVISION ADMINISTRATOR DATE

STATE AID PROJ. NO. 02-602-09
STATE PROJ. NO. _____ SHEET NO. 1 OF 23 SHEETS

TITLE SHEET w/Map 432 REV. 2-88

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
2021.501	MOBILIZATION	LUMP SUM	1	
2031.501	FIELD OFFICE TYPE 'D'	EACH	1	
① 2104.501	REMOVE CULVERT PIPE	LIN. FT.	110	
2104.505	REMOVE BITUMINOUS PAVEMENT (P)	SQ. YD.	4790	
2104.505	REMOVE CONCRETE WALK	SQ. YD.	19	
2104.509	REMOVE CONCRETE MEDIAN NOSE	EACH	1	
2104.513	SAVING BITUMINOUS PAVEMENT	LIN. FT.	235	
2104.521	SALVAGE TRAFFIC BAR (DES. PLATE BEAM)	LIN. FT.	1601	
2104.521	SALVAGE CHAIN LINK FENCE	LIN. FT.	30	
2104.523	SALVAGE GUARD POSTS	EACH	4	
2105.501	COMMON EXCAVATION (P)	CU. YD.	742	
2105.521	GRANULAR BORROW (EV)	CU. YD.	80	
2105.523	TOPSOIL BORROW (LV)	CU. YD.	214	
② 2130.501	WATER	M. GAL.	100	
2211.503	AGGREGATE BASE PLACED CLASS 5-A (P)	CU. YD.	872	
③ 2331.508	TYPE 41 WEARING COURSE MIXTURE	TON	373	
2331.510	TYPE 31 BINDER COURSE MIXTURE	TON	356	
2331.514	TYPE 31 BASE COURSE MIXTURE	TON	949	
④ 0331.601	2" THICK WEARING COURSE PLACED	SQ. YD.	428	
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	216	
2503.511	15" R.C. PIPE SEWER CL. III	LIN. FT.	195	
2503.511	18" R.C. PIPE SEWER CL. III	LIN. FT.	47	
2501.515	15" R.C. PIPE APRON	EACH	1	
2501.515	18" R.C. PIPE APRON	EACH	1	
2501.521	28' SPAN R.C. PIPE ARCH CULVERT	LIN. FT.	120	
2501.523	28' SPAN R.C. PIPE ARCH APRONS	EACH	2	
2521.501	4" CONCRETE WALK	SQ. FT.	166	
2531.501	CONCRETE CURB AND GUTTER DES. B-618	LIN. FT.	1370	
2531.501	CONCRETE CURB AND GUTTER DES. B-612	LIN. FT.	797	
0531.602	CONCRETE MEDIAN NOSE SPECIAL	EACH	2	
0531.503	BRICK MEDIAN	SQ. YD.	150	
2506.507	CONST. CATCH BASIN DES. SPECIAL NO. 1	LIN. FT.	18	
2506.516	CASTING ASSEMBLY	EACH	4	
2554.501	TRAFFIC BARRIER DES. 8307	LIN. FT.	14.84	
2554.521	ANCHORAGE ASSEMBLY	EACH	1	
2554.523	TWISTED END TREATMENT	EACH	1	
2557.501	WIRE FENCE DES. 60-9322	LIN. FT.	30	
2573.501	BALE CHECKS	EACH	20	
2575.501	SEEDING (P)	ACRE	0.75	
2575.502	SEED MIXTURE #500	POUND	56.3	
2575.505	SODDING TYPE EROSION CONTROL	SQ. YD.	317	
2575.511	MULCH MATERIAL TYPE 1	TON	1.5	
2575.519	DISC ANCHORING (P)	ACRE	0.75	
2575.531	COMMERCIAL FERTILIZER ANALYSIS 10-10-10	TON	0.20	
2580.501	TEMPORARY LANE MARKING	RD STA	20	
0565.511	REVISE FULL TRAF. ACT. - TRAF. CONTROL SYSTEM	SIG. SYS.	1	

STANDARD PLATES

PLATE NO.	DESCRIPTION
0005 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000 K	REINFORCED CONCRETE PIPE
3006 F	GASKET JOINT FOR R.C. PIPE
3014 J	REINFORCED CONCRETE PIPE ARCH DETAIL
3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3110 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE-ARCH
3145 E	CONCRETE PIPE TIES
7036 C	PEDESTRIAN CURB RAMP (FOR THE HANDICAPPED)
7100 F	CONCRETE CURB & GUTTER (DES. B)
8000 I	STANDARD BARRICADES
8307 N	STEEL PLATE BEAM GUARDRAIL
8317 D	GUARDRAIL ANCHORAGE ASSEMBLY FOR BRIDGES
8318 C	GUARDRAIL ANCHORAGE PLATE FOR BRIDGES AND BCT'S
8319 G	TWISTED END TREATMENT
9102 C	SODDING AT PIPE CULVERT ENDS
9322 I	CHAIN LINK FENCE

BASIS OF PLANNED QUANTITIES

2331	TYPE 41 PLANT MIXED WEARING COURSE
	BITUMINOUS MIXTURE 110 LBS./SQ. YD. PER 1" THICKNESS
	BITUMINOUS MATERIAL FOR MIXTURE 5.8% BY WEIGHT
2331	TYPE 31 PLANT MIXED BASE AND BINDER COURSE
	BITUMINOUS MIXTURE 110 LBS./SQ. YD. PER 1" THICKNESS
	BITUMINOUS MATERIAL FOR MIXTURE 5.3% BY WEIGHT
2357	BITUMINOUS MATERIAL FOR TACK
	0.05 GALLONS PER SQ. YD.
2575	MULCH MATERIAL TYPE 1, 2 TONS PER ACRE
2575	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10
	500 LBS./ACRE ON ALL SEED AND SOD AREAS
2575	ROADSIDE SEEDING BASED ON HORIZONTAL MEASUREMENT + 10%
	SEED MIXTURE NO. 500, 50 LBS. PER ACRE

EARTHWORK SUMMARY

EXCAVATION (CU. YDS.)

REG. COMMON	1,444.00
BIT. REMOVAL	707.00
PAY QUANTITY	742.00

EMBANKMENT (CU. YDS.)

REG. 548 x 150% =	822.00
GRANULAR BORROW	80.00
TOPSOIL BORROW	214.00

- ① INCLUDES BITUMINOUS FLUME, BITUMINOUS CURB & BITUMINOUS MEDIAN.
- ② INCLUDES 25 M-GALLON FOR DUST CONTROL AT THE DIRECTION OF THE ENGINEER AND 75 M-GALLON FOR SUBGRADE AND AGGREGATE BASE COMPACTION.
- ③ INCLUDES 17 TON TYPE 41 WEARING COURSE MIXTURE BEHIND THE CURB IN THE AREA OF THE GUARD RAIL.
- ④ PROVIDES FOR SIDEWALK PAVING, PAYMENT BY SQ. YD. INCLUDES BITUMINOUS MATERIAL AND 3" AGGREGATE BASE CLASS-5.

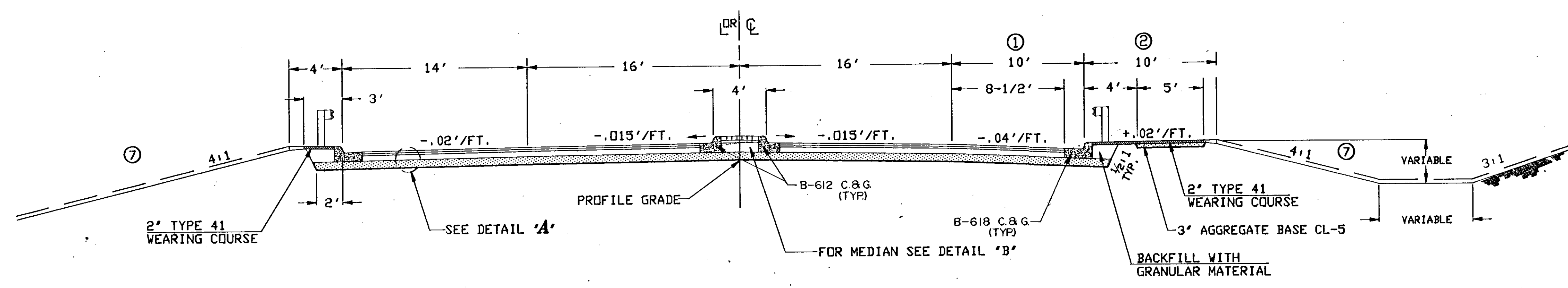
REVISIONS			
DATE	BY	DATE	BY

S.A.P. 02-602-09 S.P. _____ C.P. _____

NOTE: ALL DIMENSIONS NOMINAL

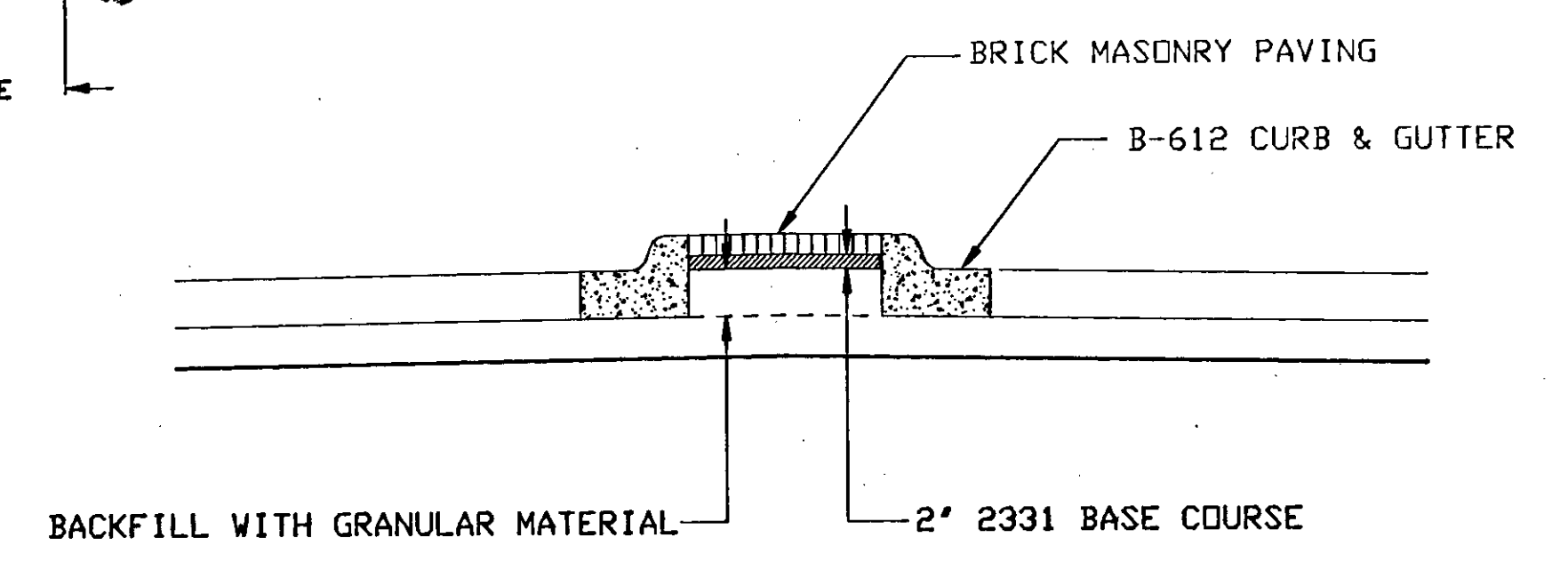
GRADING, BASE & BITUMINOUS SECTION

STA. 27+30 TO STA. 30+00



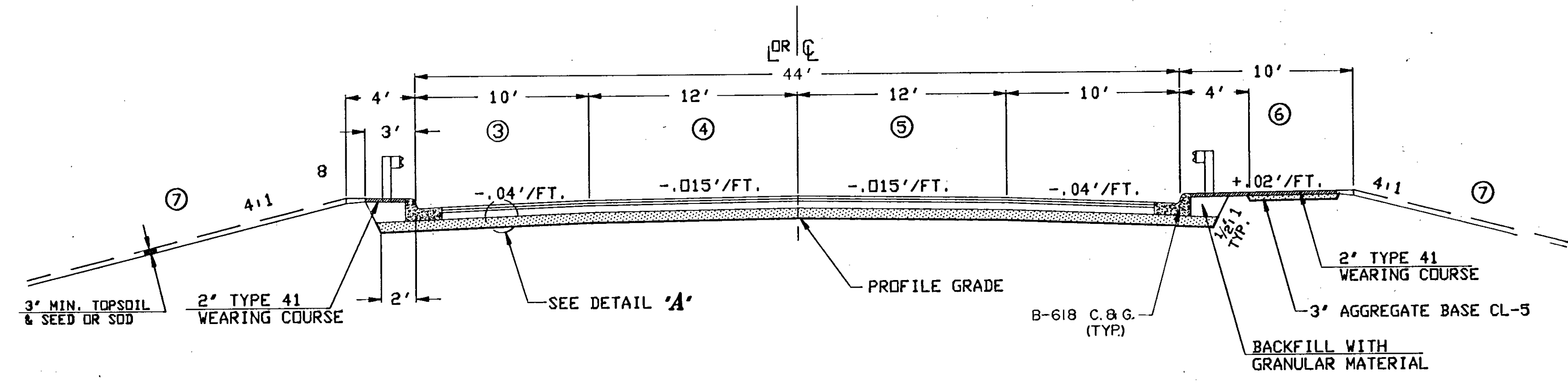
DETAIL 'B'

BRICK MEDIUM (BRICK OVER ASPHALT)
FOR CENT. & RT. TURN LANE MEDIUM



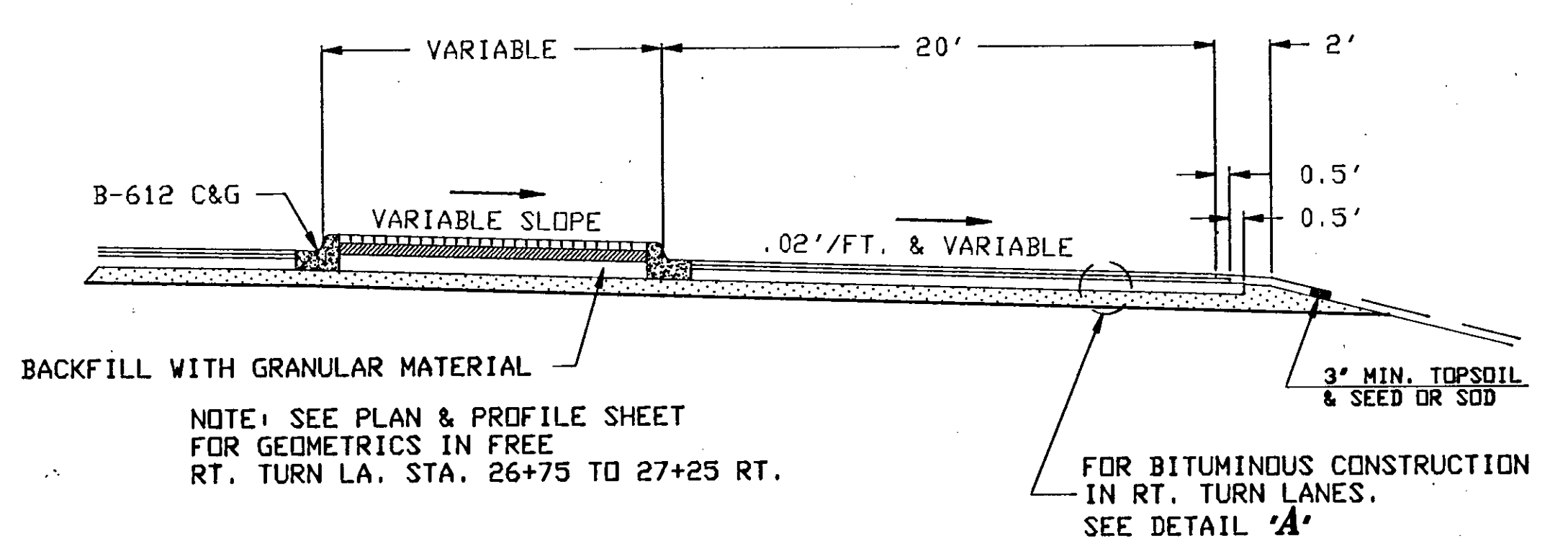
GRADING, BASE & BITUMINOUS SECTION

STA. 30+00 TO STA. 34+04



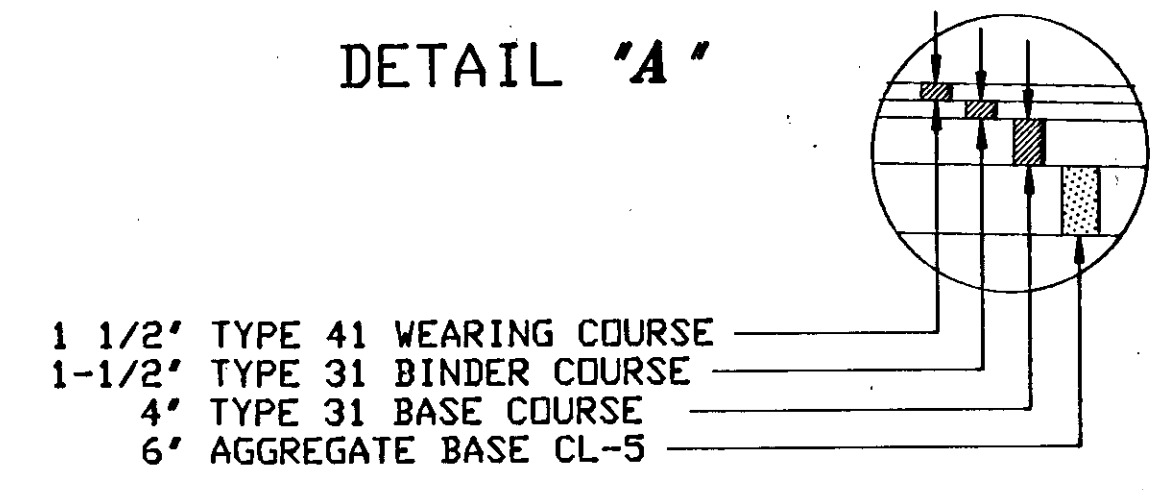
TYPICAL RIGHT TURN LANE

STA. 26+58 TO STA. 26+82



- ① STA. 27+25 TO STA. 27+85 VARIABLE (14'-10')
- ② STA. 26+85 TO STA. 27+10 VARIABLE (10'-12')
- ③ STA. 30+00 TO STA. 32+00 VARIABLE (14'-10')
- ④ STA. 30+00 TO STA. 32+00 VARIABLE (16'-12')
- ⑤ STA. 30+00 TO STA. 31+00 VARIABLE (16'-12')
- ⑥ STA. 34+00 TO THE BRIDGE VARIABLE (10'-7 1/2')
- ⑦ SEE CROSS SECTION FOR VARIABLE SLOPE AREAS.

DETAIL 'A'



RIGHT TURN LOCATIONS		
STATION TO	STATION	LT./RT.
26+58	27+25	RT.
26+66	30+00	LT.

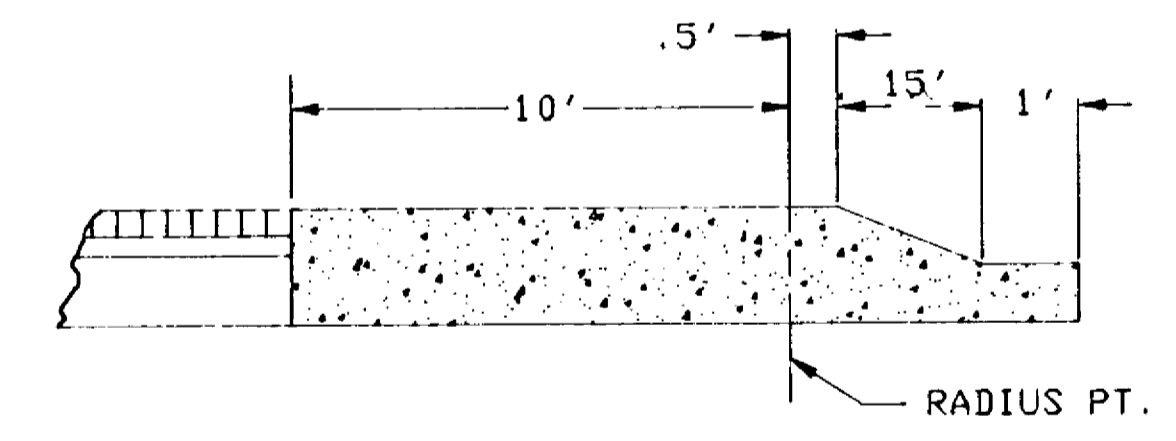
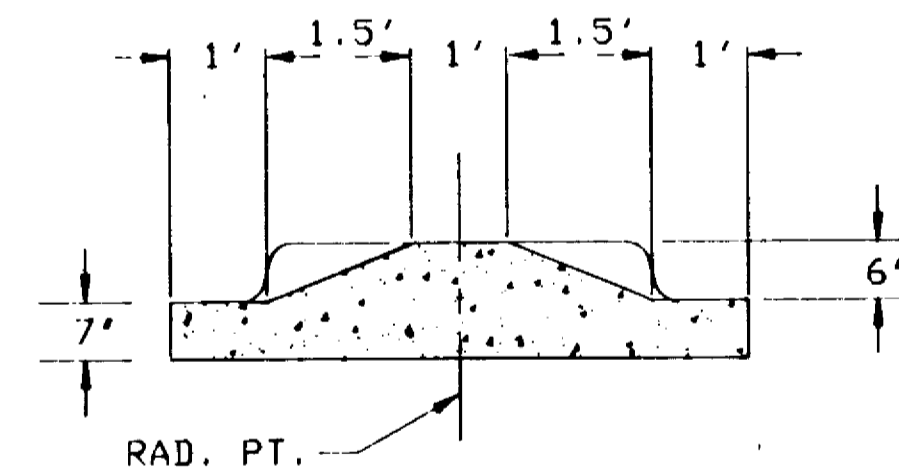
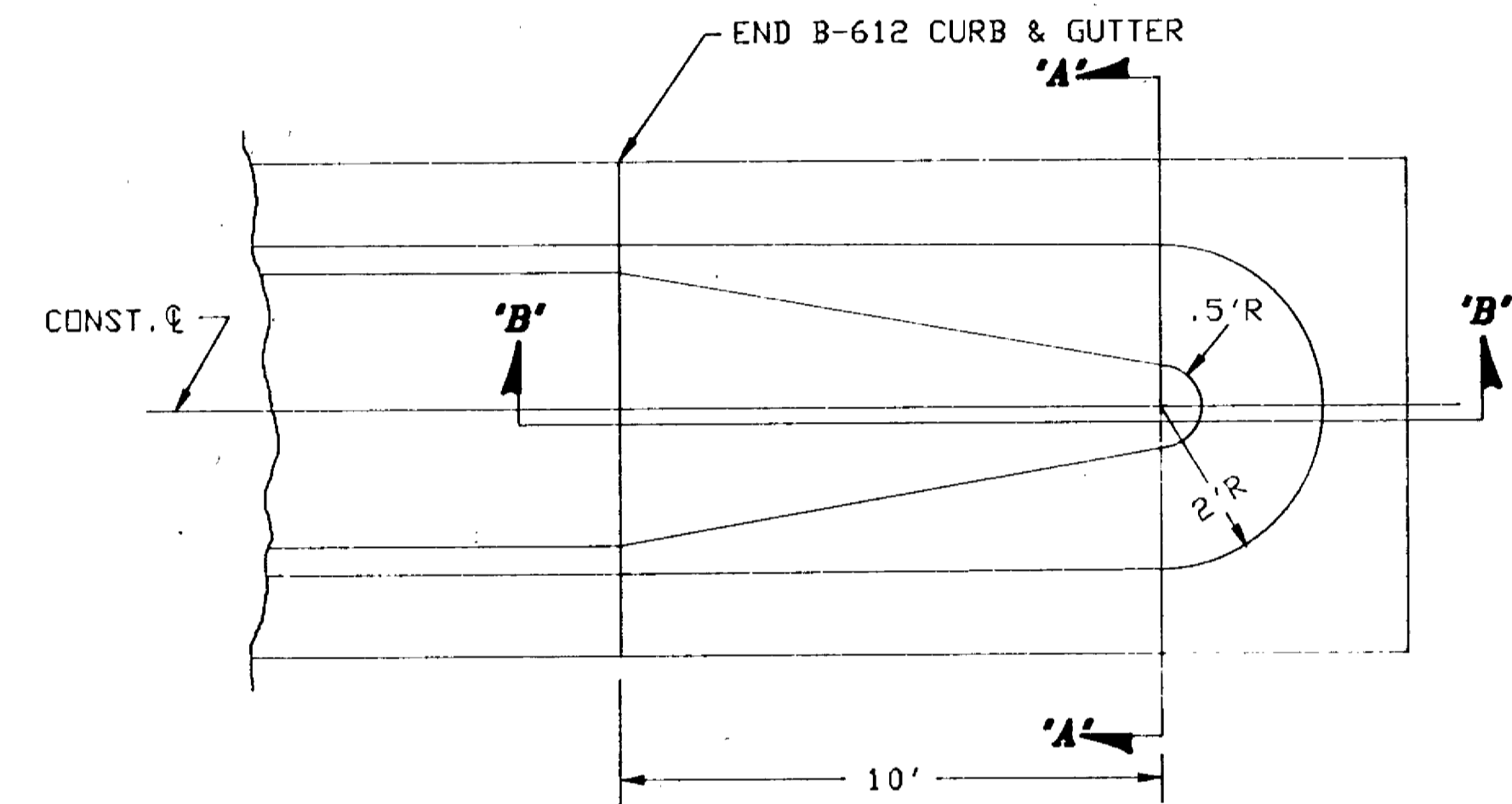
NOTE: NO SCALE, - USE DIMENSIONS

REVISIONS			
DATE	BY	DATE	BY

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STORM SEWER										F & I CASTING ASSEMBLY	FURNISH & INSTALL		FURNISH & INSTALL		FURNISH & INSTALL	
NO.	STATION	LOC.	REMARKS	MH/CB	DESIGN	PAY HT. LIN. FT.	TOP OF CASTING ELEVATION	OUTLET ELEVATION	DRAINS TO		15" RCP. CL-III	15" RCP. APRON	18" RCP. CL-III	18" RCP. APRON	18" RCP. CL-IV	
1	27+35.45	30.90' LT.	INCLUDES 18' FOR INLET #1	C.B. #1	C OR G	2.9	822.70	819.66	C.B. #2	A	18	1				
2	27+06.64	31.86' RT.	PIPE LENGTH DOES NOT INCLUDE APRON	C.B. #2	C OR G	3.0	822.20	819.0	OUTLET #1	A			36	1		
3	30+00	24.90' RT.	INCLUDES 27' FOR INLET #2	C.B. #3	A OR F	5.8	833.03	827.04	C.B. #4	A	210	1				
4	28+25.5	24.90' RT.	PIPE LENGTH DOES NOT INCLUDE APRON	C.B. #4	A OR F	5.2	825.03	819.67	OUTLET #2	A			53	1		
3A	30+00	28.90' LT.		C.B. #3A	A OR F	5.0	833.06	827.84	C.B. #3	A	52					
TOTALS						21.9				5	280	2	89	2	74	

MEDIAN NOSE DETAIL -SPECIAL



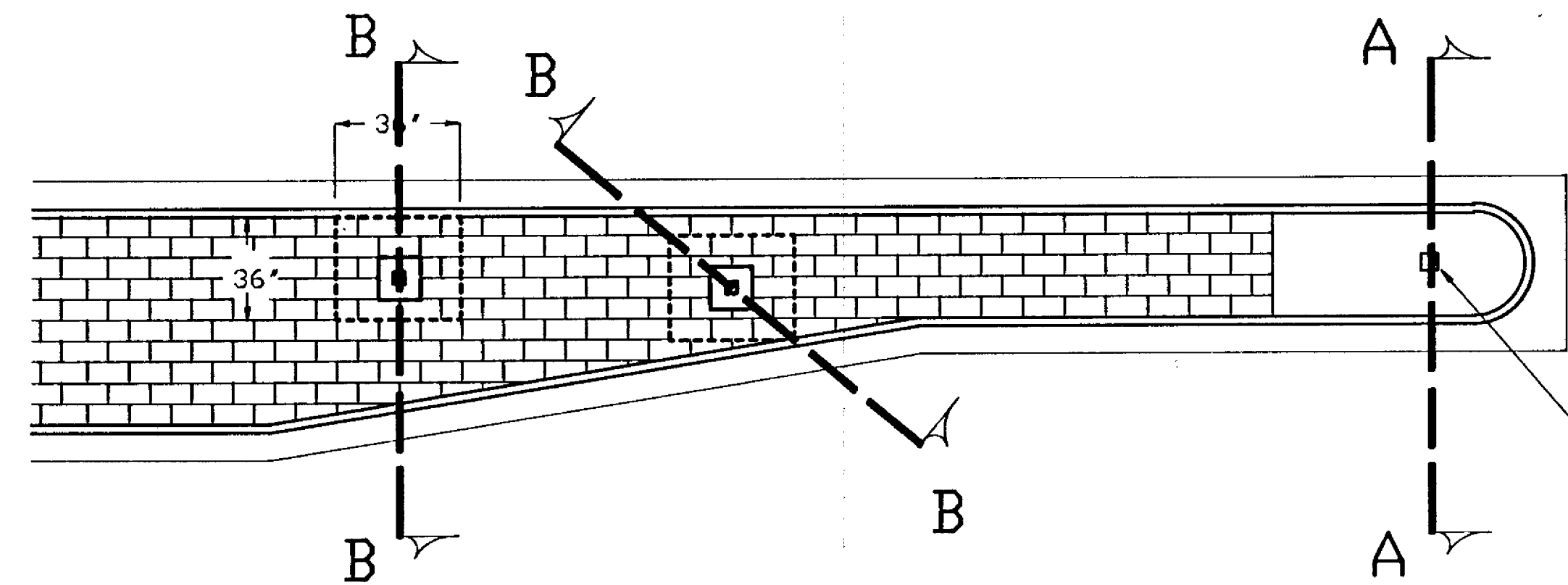
CASTING ASSEMBLIES			
ASSEMBLY	ITEM	STD. PLATE NO.	QUANTITY
A	FRAME 801	4126 F	5
	GRATE 810	4149 C.	
	CURB BOX 821-B	4161 F	

LOCATIONS		
STATION	RAD.	OFFSET FROM C/L
26+73	2 FT.	0.00 -
26+58.37	2 FT.	56.53 RT.
30+00	2 FT.	0.00 -

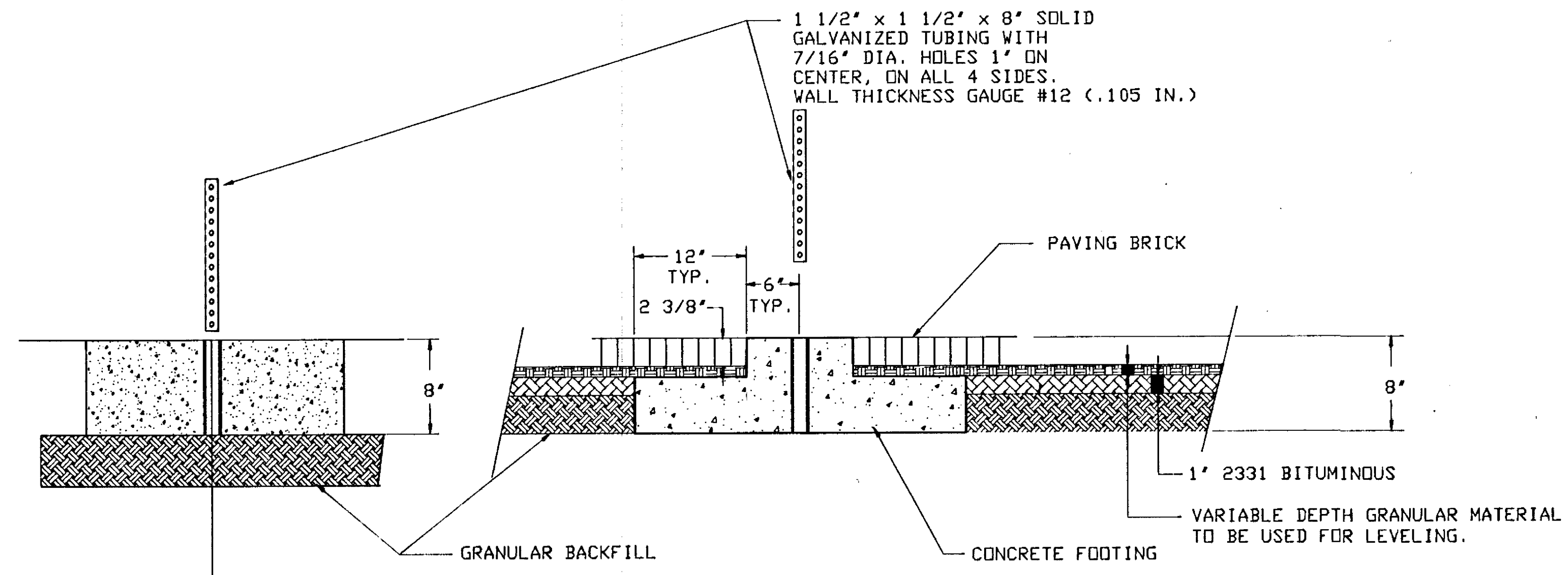
REVISIONS			
DATE	BY	DATE	BY
8-12-91	JHT		

S.A.P. 02-602-09 S.P.

C.P.



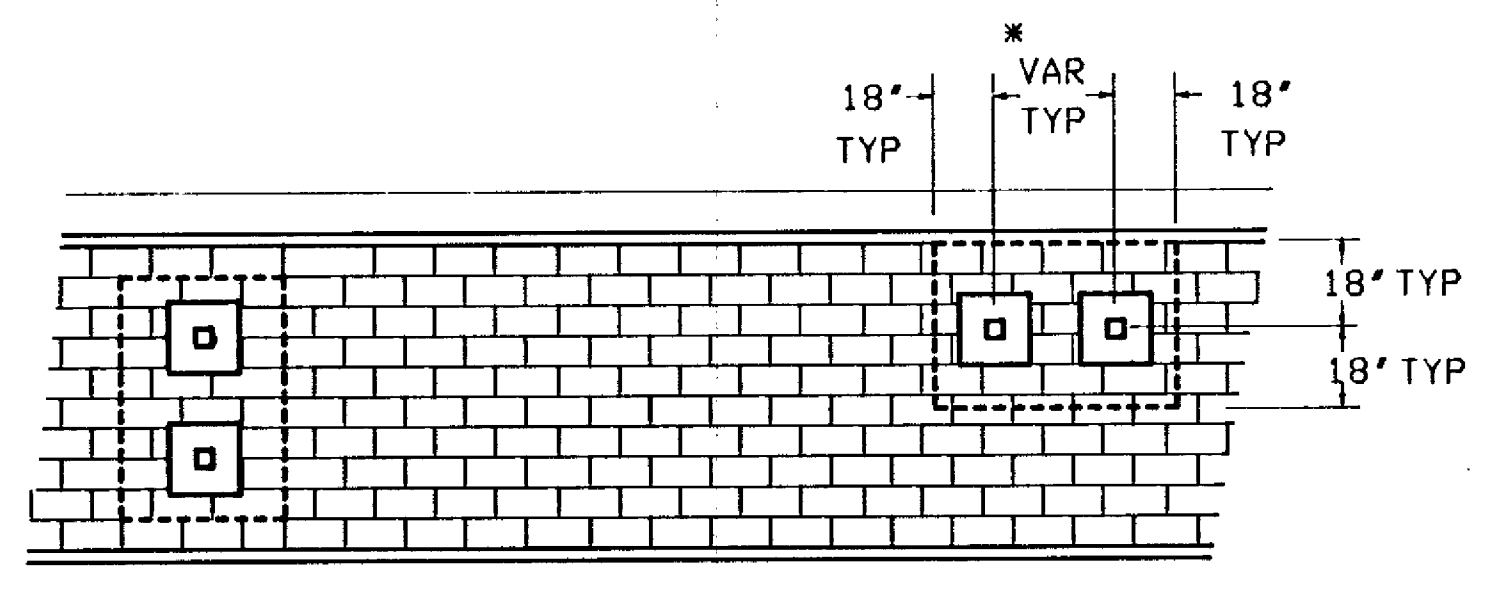
INSTALL 1 3/4" x 1 3/4" x 8" SOLID GALVANIZED SQUARE TUBING IN ISLAND NOSE DURING CONCRETE POUR, PLUMB AS REQUIRED. TAPE BOTTOM OF TUBING TO PREVENT CONCRETE FROM ENTERING TUBING.



SECTION A = A

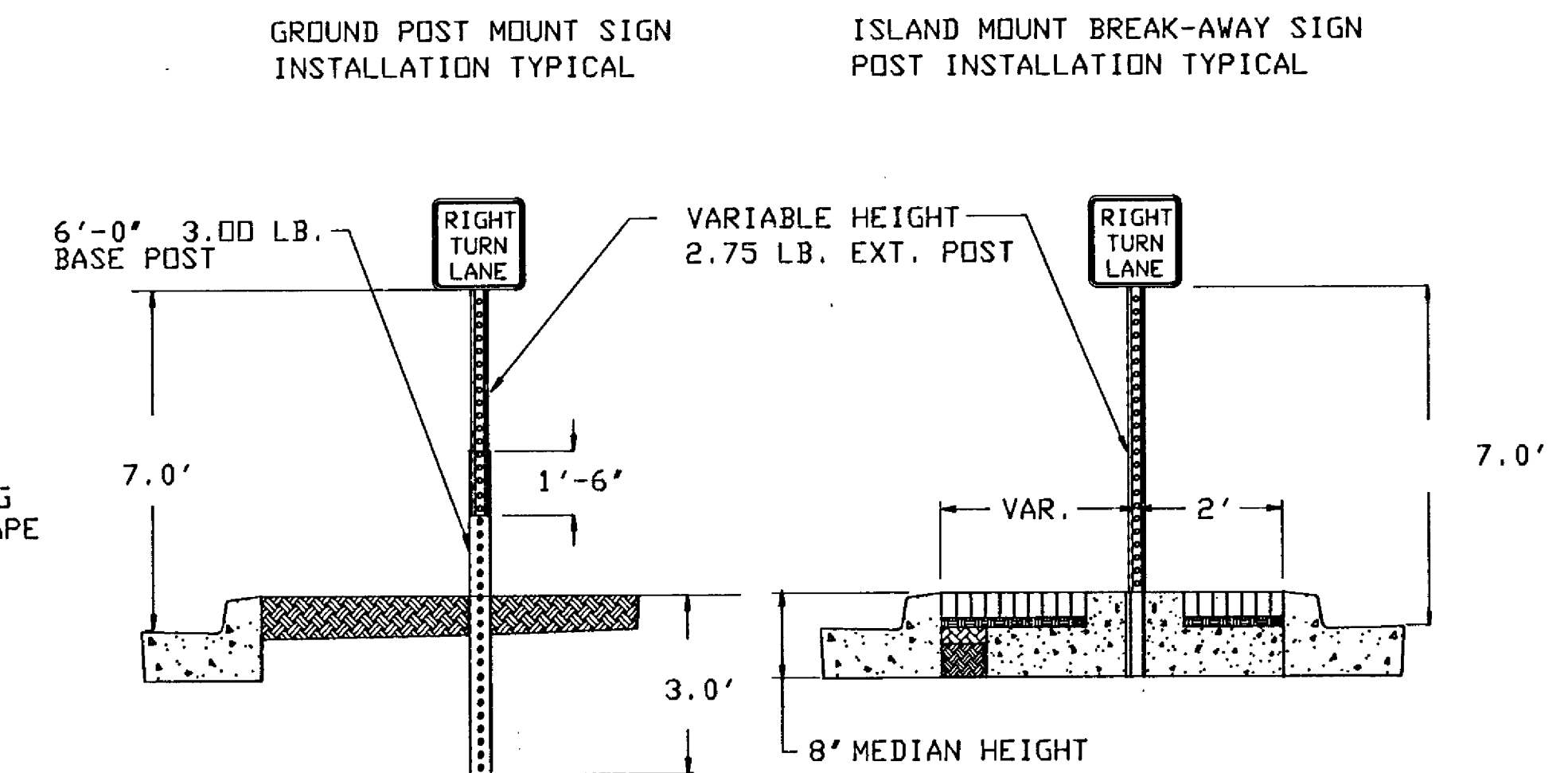
SECTION B = B

INSTALL 1 3/4" x 1 3/4" x 8" SOLID WALL GALVANIZED SQUARE TUBING. TAPE BOTTOM OF TUBING TO PREVENT CONCRETE FROM ENTERING TUBE. PLUMB AND ALIGN AT TIME OF POUR AS REQUIRED.



DETAIL '1'

ISLAND MOUNT BREAK-AWAY SIGN POST INSTALLATIONS REQUIRING MORE THAN ONE POST (WITHIN AREAS OF BRICK PAVING)



NOTES:

- CONCRETE FOOTINGS ARE REQUIRED IN ALL MEDIAN AREAS WHERE PAVING BRICKS ARE USED, EXCEPT IN THE MEDIAN NOSE WHEN A SOLID CONCRETE POUR IS USED.
- HEAVY DASHED LINES REPRESENT THE APPROXIMATE LIMITS OF CONCRETE FOOTINGS TO BE POURED FOR EACH ISLAND MOUNT SIGN POST INSTALLATION WITHIN SPECIAL MEDIAN AREAS.
- IF THE ISLAND IS LESS THAN 48' WIDE, THE WIDTH OF THE CONCRETE FOOTING WILL EQUAL THE WIDTH OF THE ISLAND. IF MORE THAN ONE POST IS REQUIRED FOR AN INSTALLATION, SEE DETAIL '1'.
- SECTION B-B THE SOLID GALVANIZED SQUARE TUBING FOR THE 'DO NOT ENTER' SIGNS SHALL BE SET AT THE PROPER ANGLE. REFER TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- FOR PAYMENT OF CONCRETE FOOTINGS REFER TO THE STATEMENT OF ESTIMATED QUANTITIES, ITEM 2564.513 CONCRETE FOOTINGS.
- * WHEN THE DISTANCE BETWEEN SIGN POSTS VARIES. REFER TO THE STANDARD SIGNS MANUAL FOR THE SPACING CHART THAT RELATES TO THE SIZE AND SHAPE OF THE INSTALLATION.
- IF THE WIDTH OF THE ISLAND IS LESS THAN THE CONCRETE FOOTING MEASUREMENTS REQUIRED BY THIS DETAIL AND THE SPACING CHART IN THE STANDARD SIGNS MANUAL, THE LENGTH OF THE FOOTING WILL EQUAL THE WIDTH OF THE ISLAND.

REVISIONS			
DATE	BY	DATE	BY

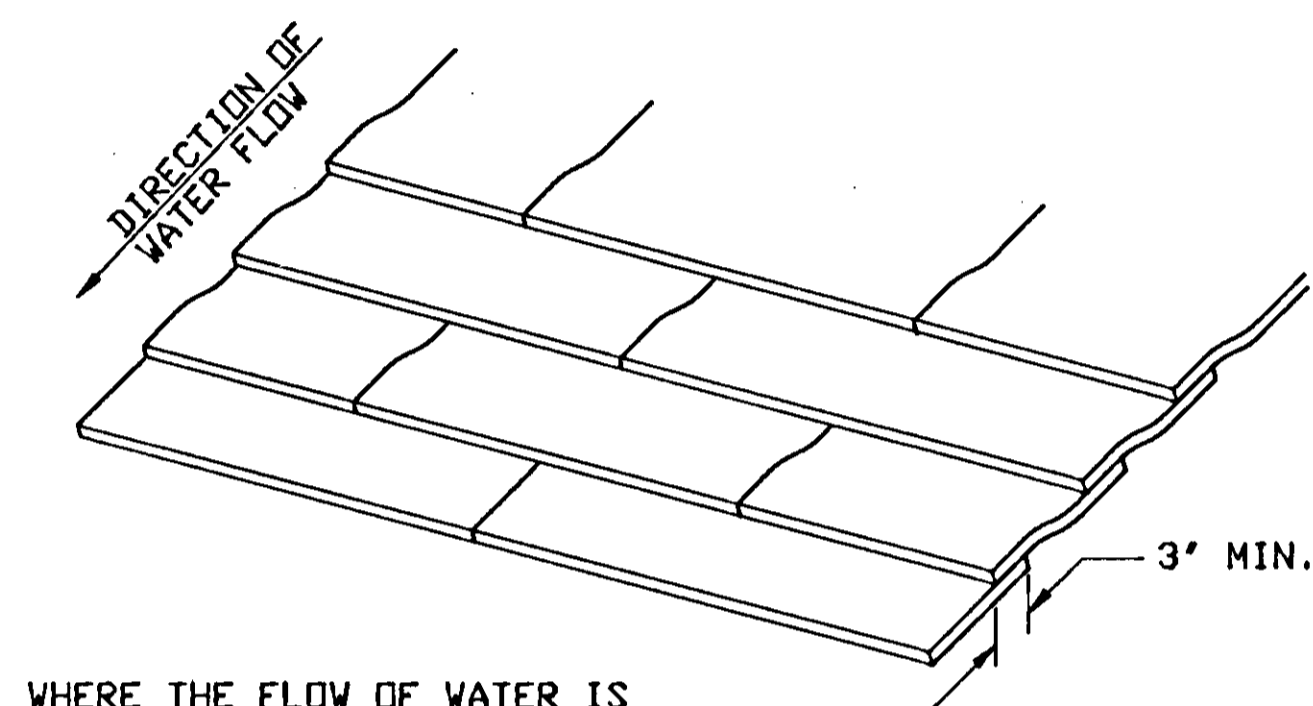
CONCRETE FOOTINGS FOR ISLAND MOUNT SIGNS WITH MASONRY PAVING BRICKS.

SODDING				
STATION TO STATION	LOCATION	SQ. YDS.	REMARKS	
27+12	RT.	22	APRON	
27+75	LT.	22	APRON	
28+75	RT.	22	APRON	
30+10	RT.	18	APRON	
27+00	28+75	RT.	233	DITCH BOTTOM
TOTAL		317		

BALE CHECKS		
STATION	LOCATION	QUANTITY
17+12	RT.	5
27+75	LT.	5
28+00	RT.	5
30+00	RT.	5
TOTAL		20

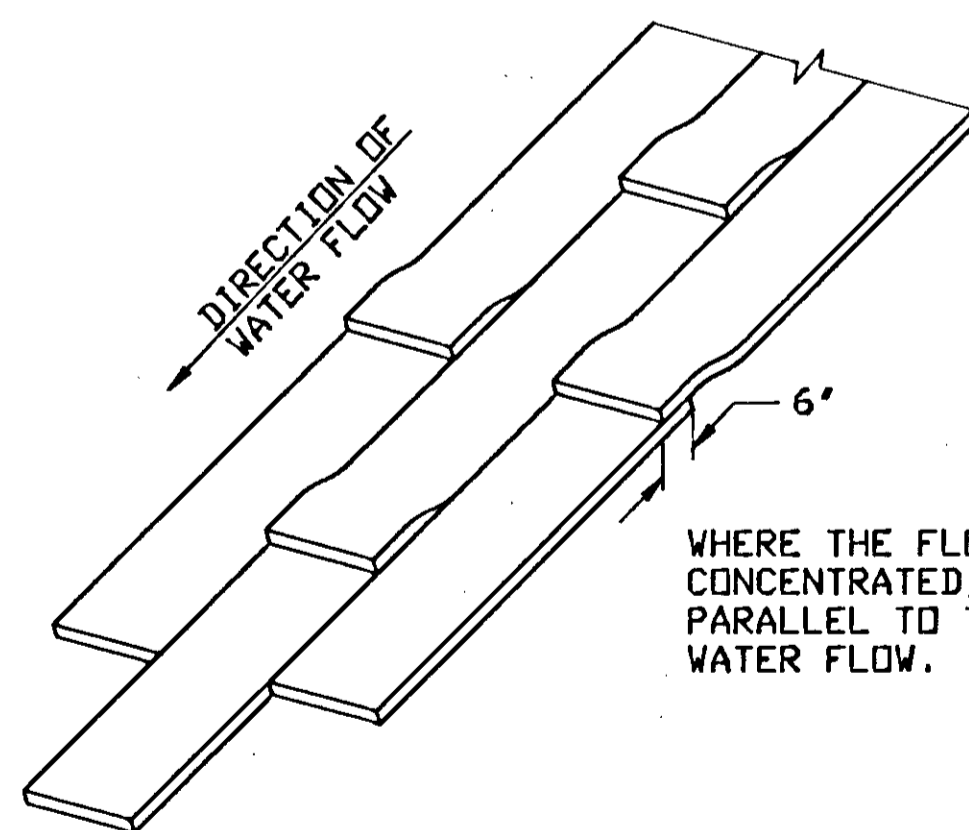
SPECIAL SOD PLACEMENT TECHNIQUES

SHINGLING SOD



WHERE THE FLOW OF WATER IS SHEETING, PLACE SOD STRIPS PERPENDICULAR TO THE DIRECTION OF WATER FLOW.

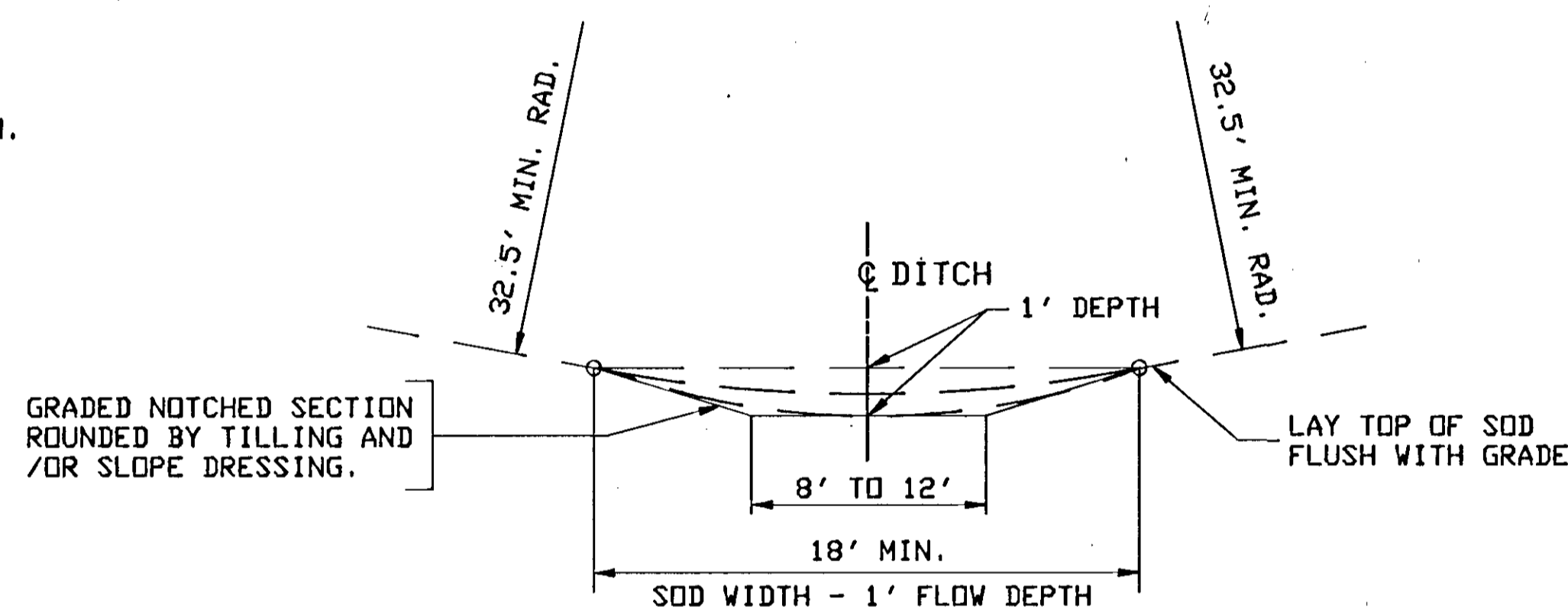
OVERLAPPING SOD



WHERE THE FLOW OF WATER IS CONCENTRATED, PLACE SOD STRIPS PARALLEL TO THE DIRECTION OF WATER FLOW.

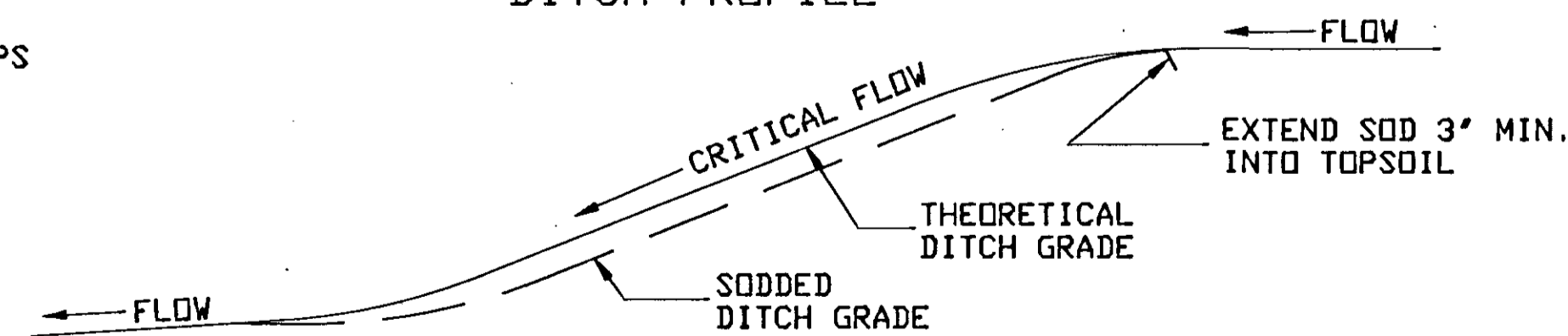
SODDED DITCH DETAILS

SOD DITCH CROSS SECTION



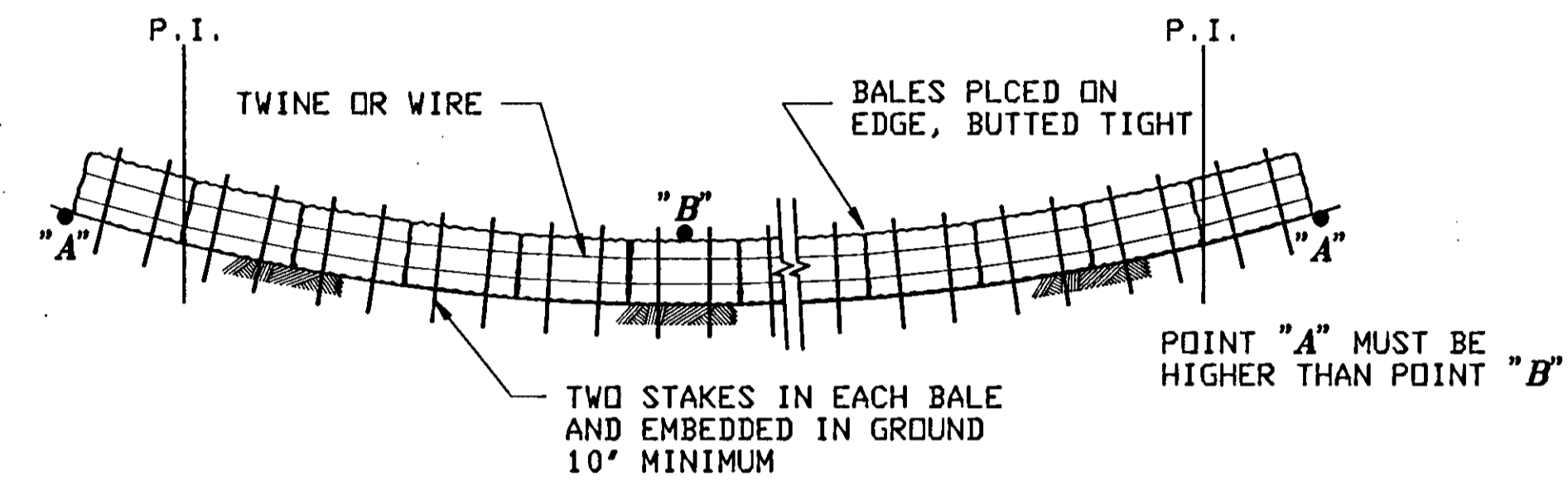
DITCHES HAVING A MINIMUM RADIUS OF 32.5 FEET AND REQUIRING SOD SHALL BE CONSTRUCTED ACCORDING TO THE ABOVE DETAILS. WHERE DITCH RADIUS IS LESS THAN 32.5 FEET, NOTCHING IS NOT REQUIRED. SOD A MINIMUM OF 18 FEET IN WIDTH.

DITCH PROFILE

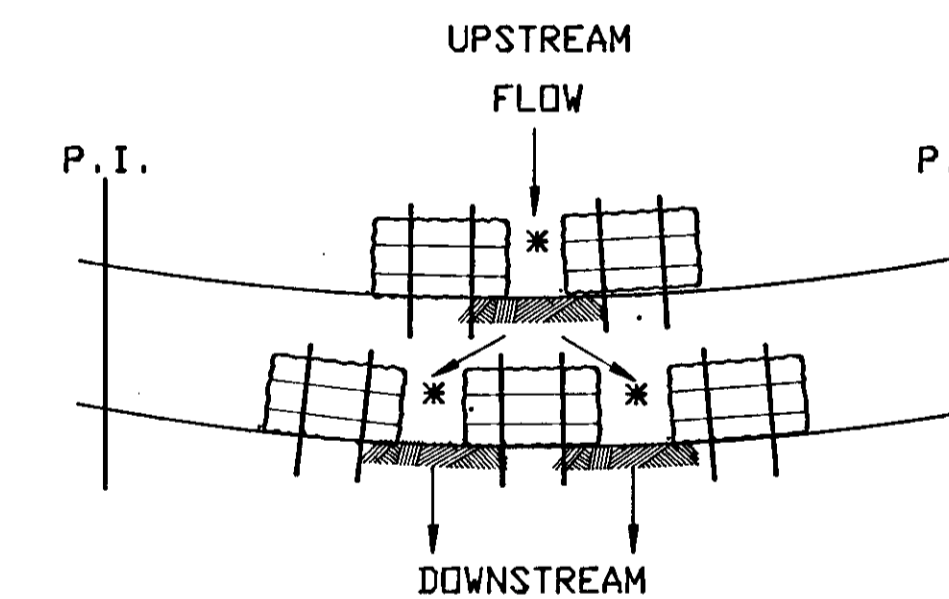


NOTE: APPLIES TO DITCH GRADE 2.0% OR GREATER.

BALE HAY OR STRAW DITCH CHECK

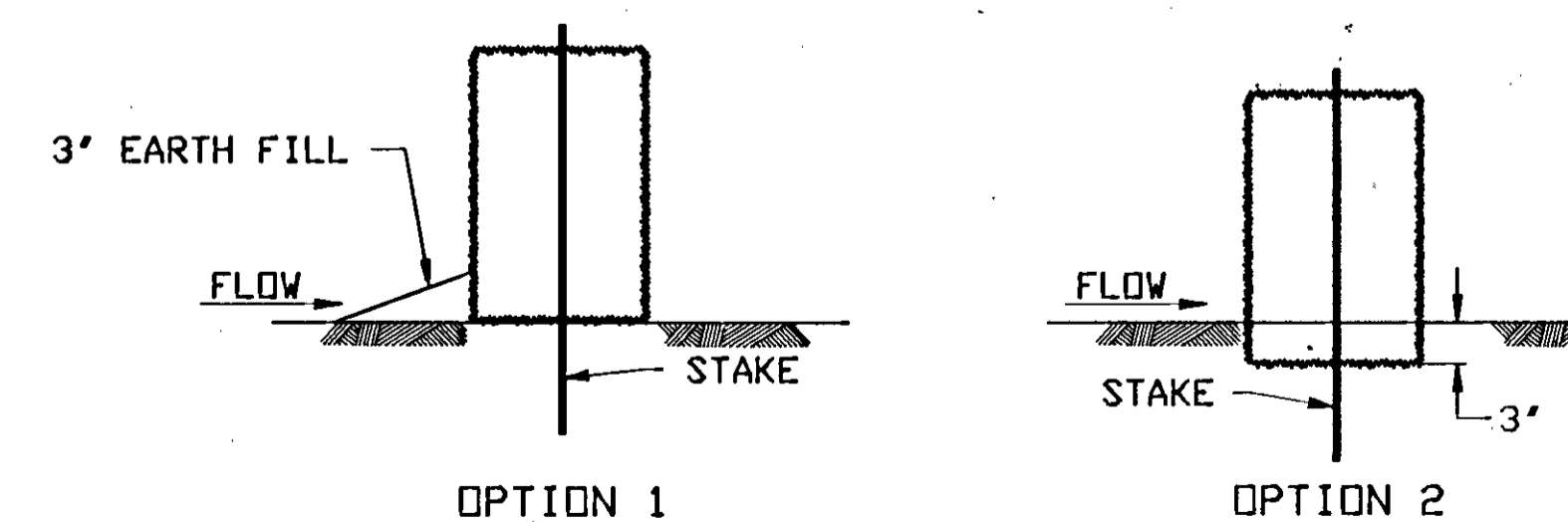


ALTERNATE BALE CHECK



NOTES: PLACEMENT OF BALES WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
WHEN USING THE ALTERNATE BALE CHECK, THE TWIN BALES WILL BE ON THE UPSTREAM SIDE.
* THE DISTANCE BETWEEN BALES SHALL BE 1 FT. (TYP.)

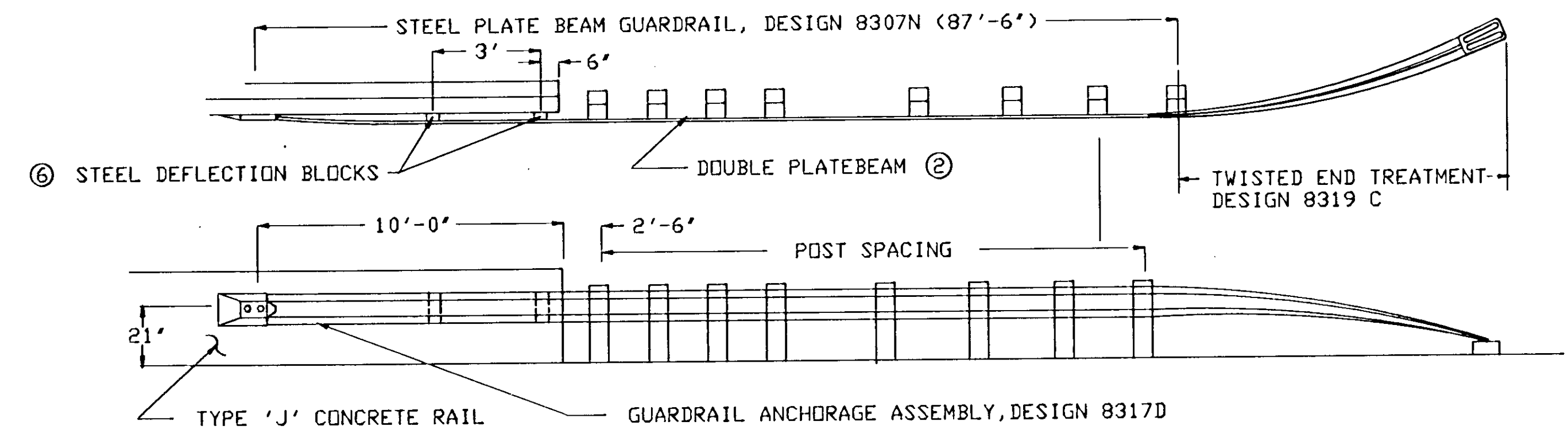
DITCH CHECK SECTIONS



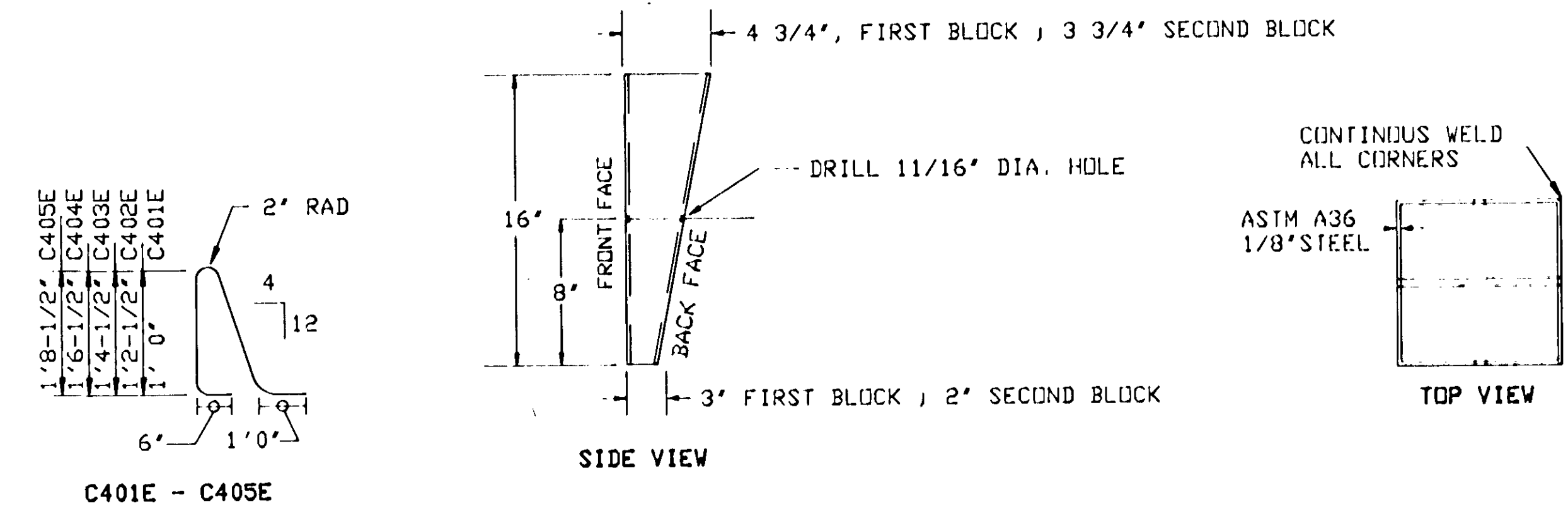
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DATE	BY	DATE	BY

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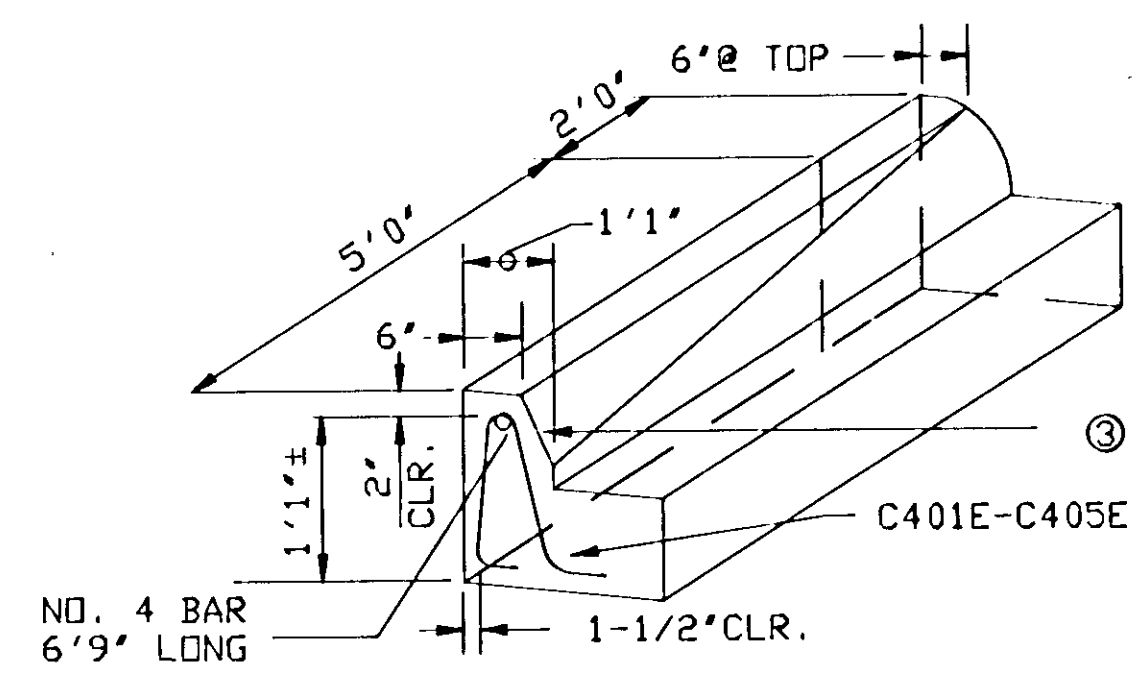
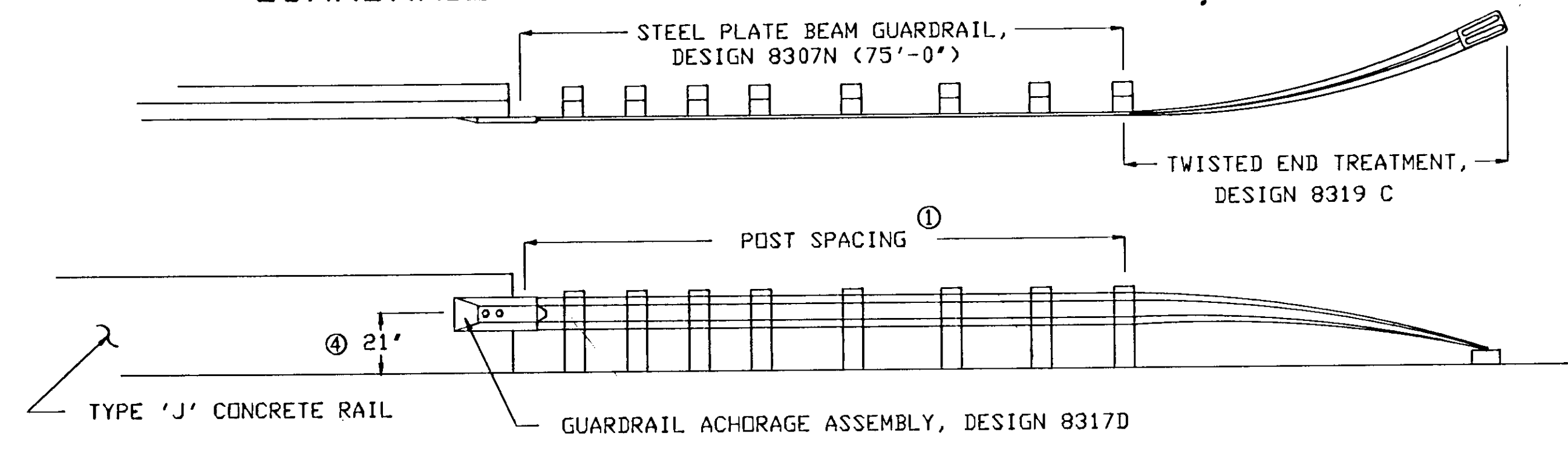
GUARDRAIL DETAILS - APPROACH END OF BRIDGE



DEFLECTION BLOCK DETAIL



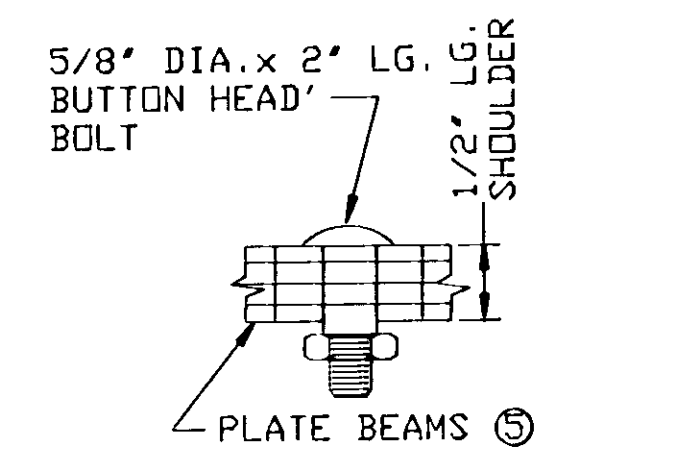
GUARDRAIL DETAILS - OFF END OF BRIDGE



LOCATION OF PLATE BEAM GUARDRAIL			
STATION	LOC.	REMARKS	LIN. FT.
27+17 TO 34+38	RT.	SEE NOTE	737.50
26+70 TO 34+38	LT.		725.00
TOTAL			1462.5

NOTE: F. & I. 50' TWISTED END TREATMENT AT STA 26+92 RT.

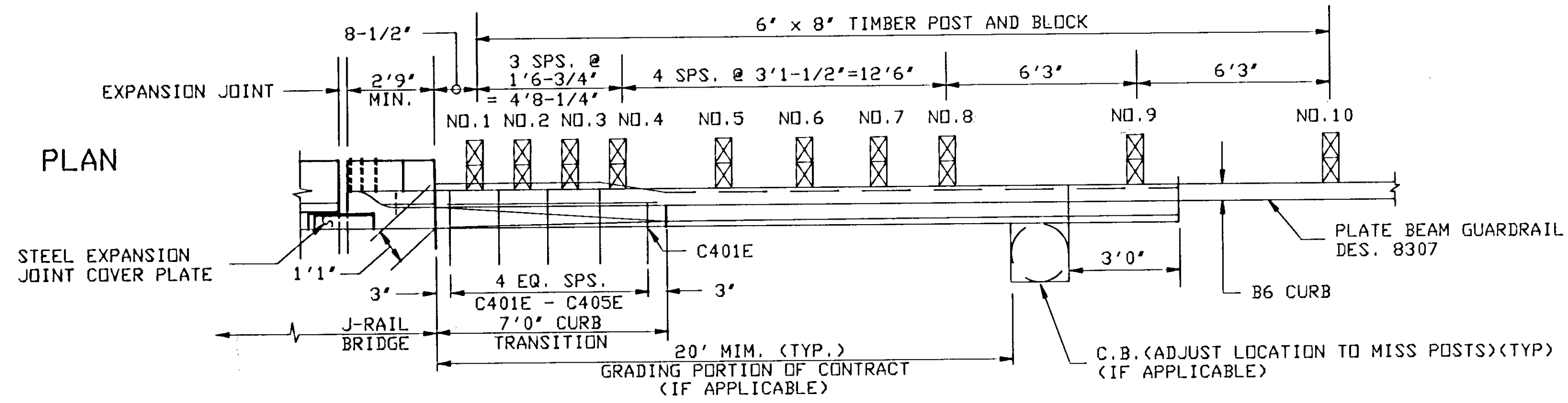
CURB TRANSITION DETAIL



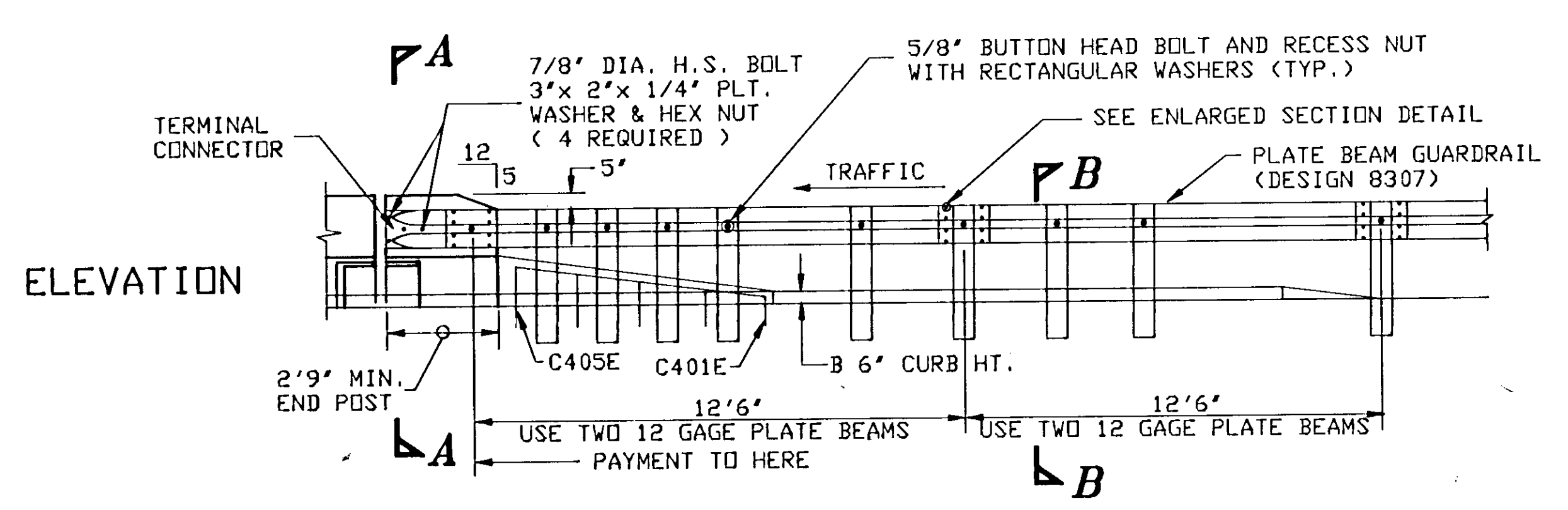
ENLARGED SECTION

CONSTRUCTION NOTES

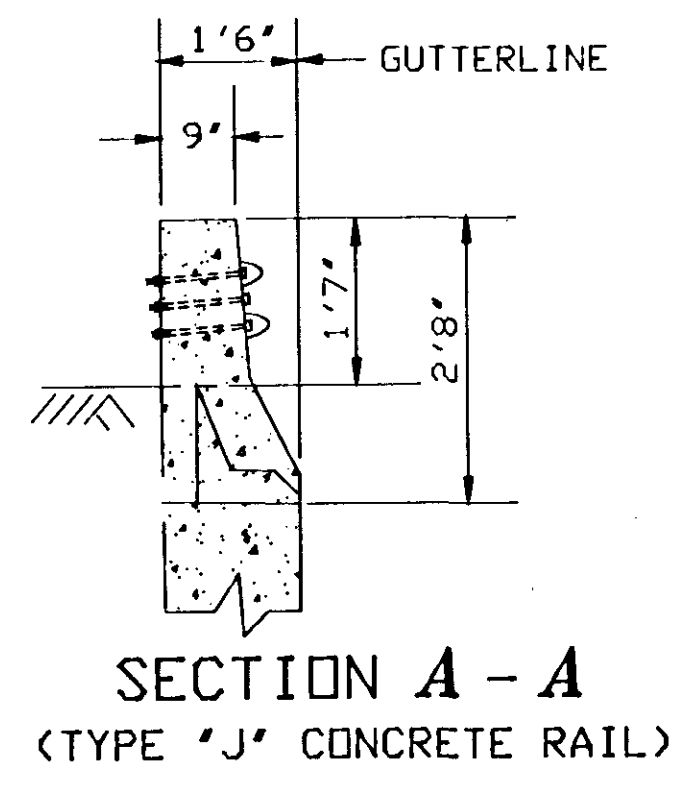
- ① GUARDRAIL POST SPACING OFF END OF BRIDGE, POST SPACED AT 6'-3" FOR THE LENGTH OF THE STEEL PLATE BEAM GUARDRAIL, DESIGN 8307N.
- ② DOUBLE PLATE BEAM GUARDRAIL FOR THE FIRST 37'-6" (APPROACH END ONLY). THE COST OF FURNISHING AND INSTALLING THE DOUBLE PLATE BEAM GUARDRAIL AS SHOWN ON THE PLANS SHALL BE INCLUDED IN THE BID PRICE FOR TRAFFIC BARRIER, LINEAR FOOT, AND NO ADDITIONAL COMPENSATION SHALL BE MADE.
- ③ END OF TRANSITION TO MATCH BRIDGE RAIL SURFACE.
- ④ PAY LENGTH IS 25 FEET.
- ⑤ USE AT SPLICE LOCATIONS, WHEN TWO PLATES ARE LAPPED TOGETHER.
- ⑥ THE TWO STEEL DEFLECTION BLOCKS, AS SHOWN IN THE PLANS, 3' AND 2' RESPECTIVELY, SHALL BE CONSTRUCTED OF ASTM 1/8" A36 OR BETTER GRADE STEEL AND FASTENED TO THE GUARDRAIL USING 5/8" BUTTON HEAD BOLTS. THE TWO BLOCKS SHALL BE FABRICATED (TAPERED) SO THAT THE PLATE BEAM IS VERTICAL WHEN IT IS FASTENED TO THE 'J' TYPE CONCRETE RAIL (SEE DETAIL). THE CONTRACTOR MAY ALTER THE SHAPE OF THE DEFLECTION BLOCKS, UPON APPROVAL OF THE ENGINEER. THE COST OF FURNISHING AND INSTALLING THE DEFLECTION BLOCKS AS SHOWN ON THE PLAN SHALL BE INCLUDED IN THE BID PRICE FOR TRAFFIC BARRIER, LINEAR FOOT, AND NO ADDITIONAL COMPENSATION SHALL BE MADE.



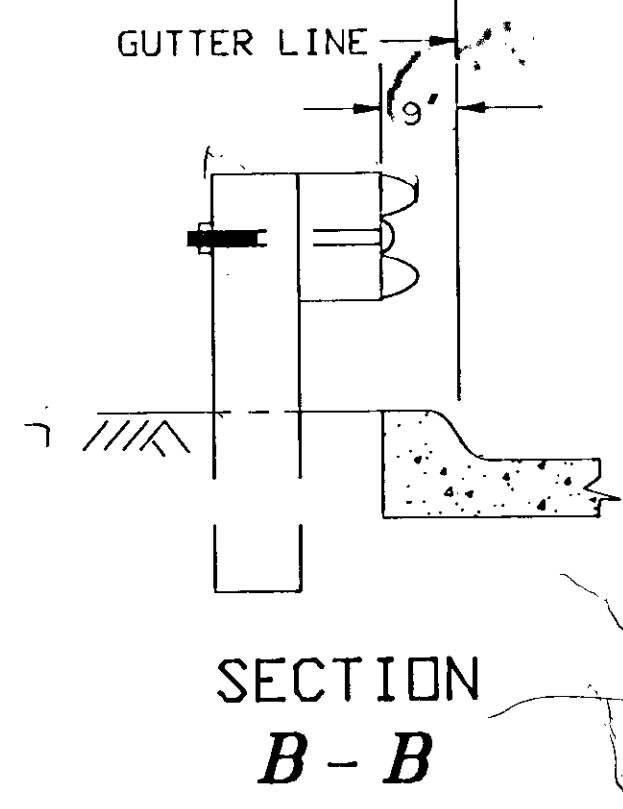
PLAN



ELEVATION

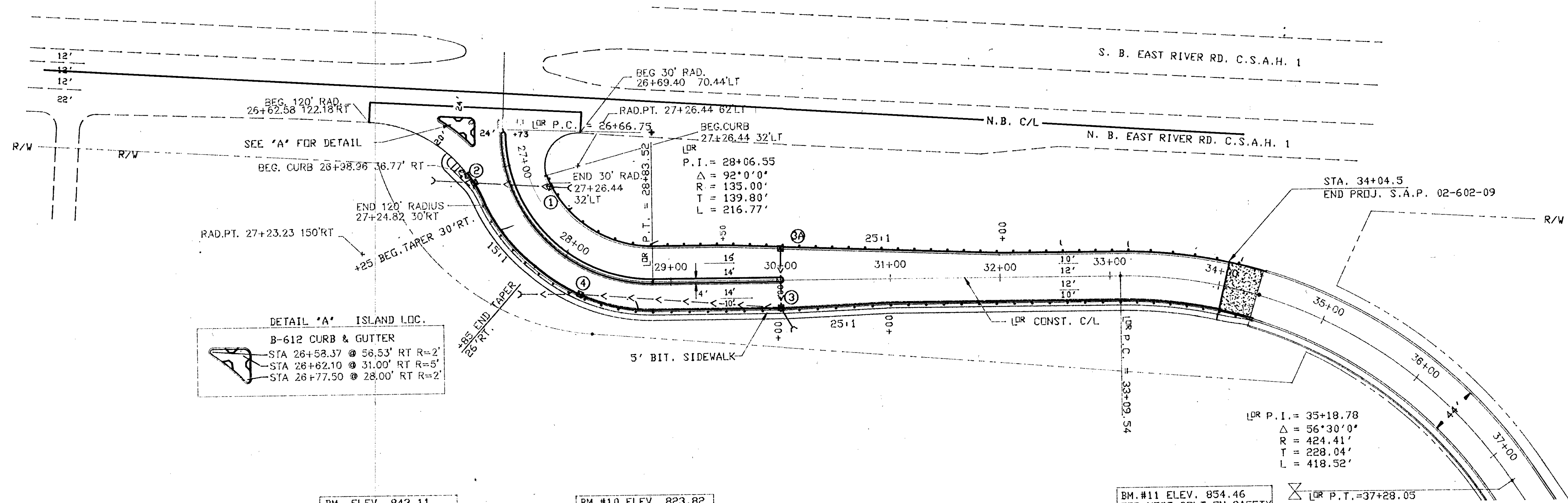


SECTION A - A (TYPE 'J' CONCRETE RAIL)



SECTION B - B

REVISIONS			
DATE	BY	DATE	BY

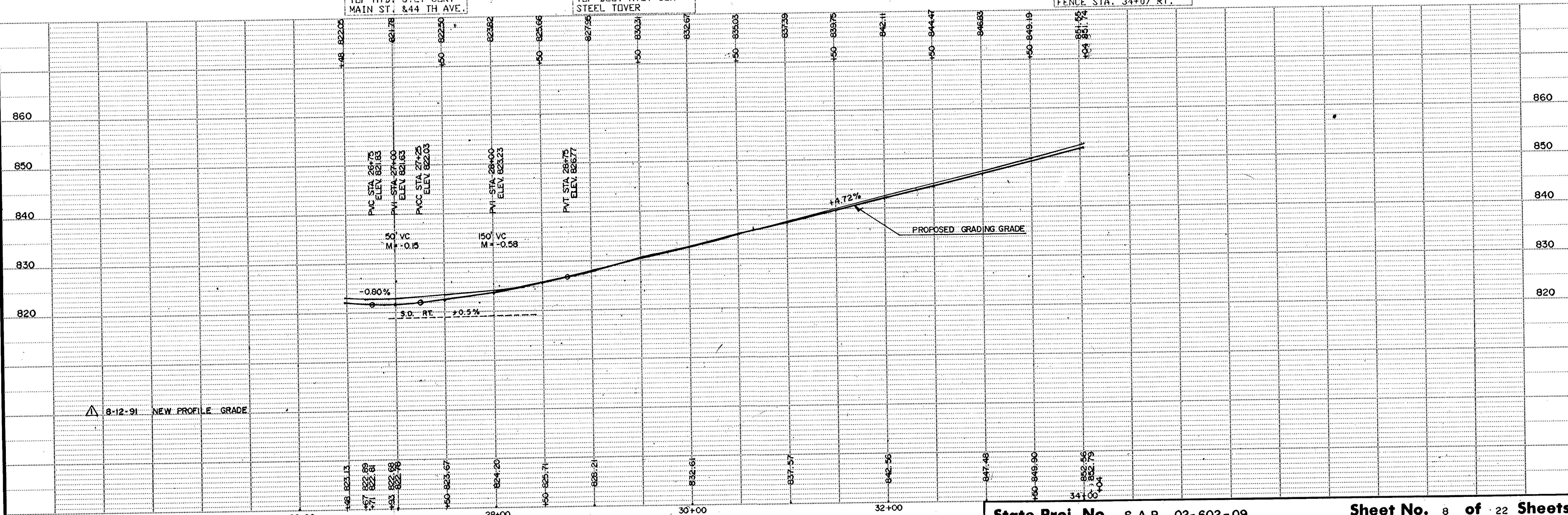


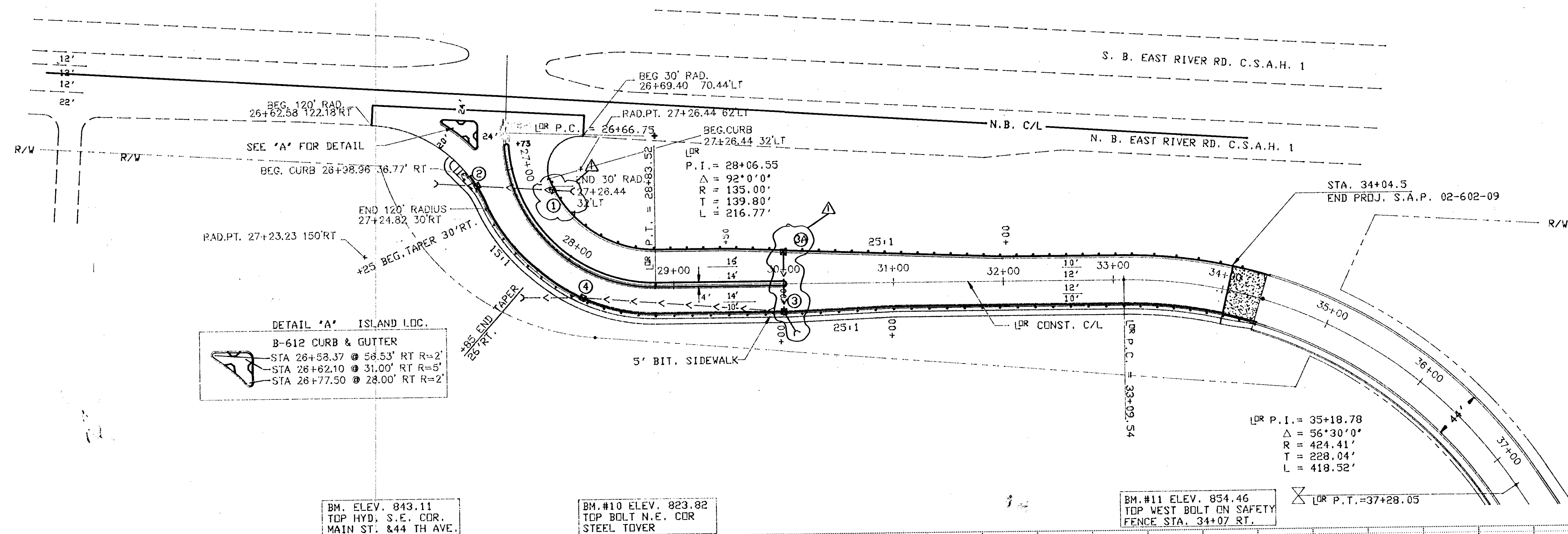
DETAIL 'A' ISLAND LOC.
 B-612 CURB & GUTTER
 STA 26+58.37 @ 58.53' RT R=2'
 STA 26+62.10 @ 31.00' RT R=5'
 STA 26+77.50 @ 28.00' RT R=2'

BM. ELEV. 843.11
 TOP HYD. S.E. COR.
 MAIN ST. & 44 TH AVE.

BM. #10 ELEV. 823.82
 TOP BOLT N.E. COR
 STEEL TOWER

BM. #11 ELEV. 854.46
 TOP WEST BOLT ON SAFETY
 FENCE STA. 34+07 RT.

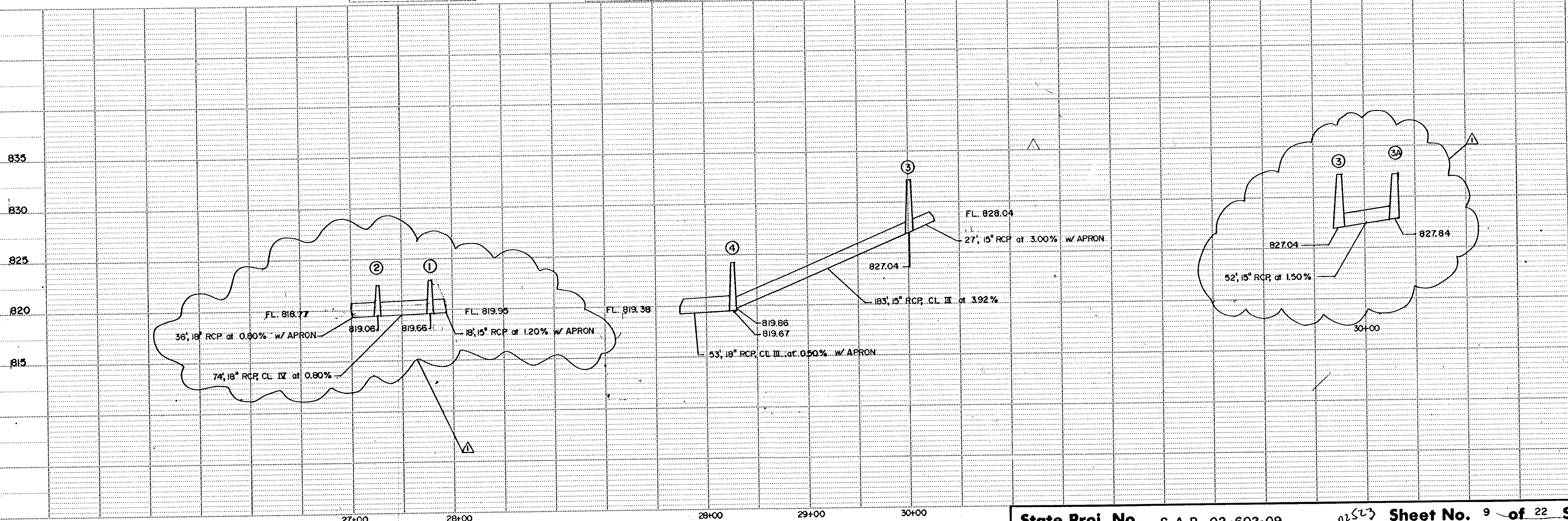




BM. ELEV. 843.11
TOP HYD. S.E. COR.
MAIN ST. & 44 TH AVE.

BM.#10 ELEV. 823.82
TOP BOLT N.E. COR.
STEEL TOWER

BM.#11 ELEV. 854.46
TOP WEST BOLT ON SAFETY
FENCE STA. 34+07 RT.



854.43 34+37.8 854.43

852.79 34+04.5 852.79

852.5646 34+00 851.55

849.9009 33+50 849.19

847.4771 33+00 846.83

842.5601 32+00 842.11

837.5652 31+00 837.39

832.6084 30+00 832.67

828.2098 29+00 827.95

825.7147 28+50 825.66

824.2033 28+00 823.82

823.666 27+50 822.5

822.7755 27+00 821.78

822.6785 26+93 821.77

822.8135 26+71 821.87

822.885 26+67 821.9

8-12-91 SECTIONS 26+67 THROUGH 29+00 REVISED FOR EXTRA WIDTH.
SEE PLAN AND PROFILE SHEET 8 OF 22 FOR DETAILS.

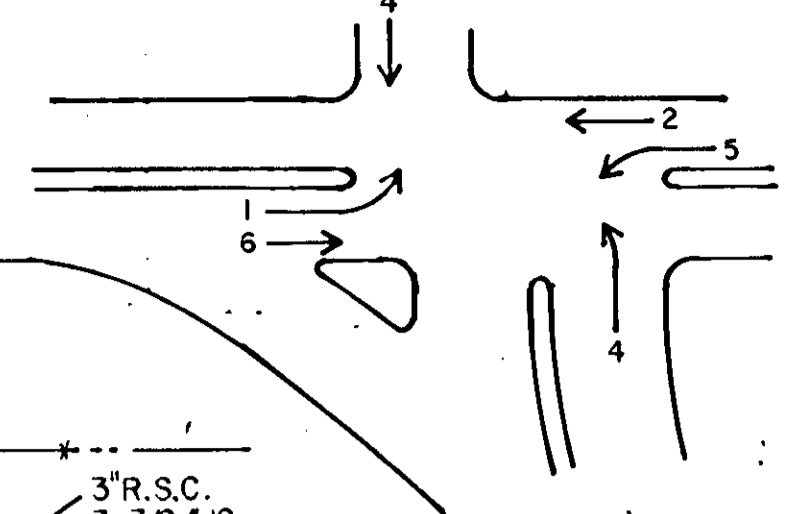
SIGNAL INDICATIONS

FACE	PHASE	FLASH	R	Y	G	G	SIZE
1-1	1		R	12	12	12	
2-1	2		R	12	12	12	
2-2	3		R	12	12	12	
4-1	4		R	12	12	12	
4-2	4		R	12	12	12	
4-3	4		R	12	12	12	
4-4	4		R	12	12	12	
4-5	4		R	12	12	12	
4-6	4		R	12	12	12	
4-7	4		R	12	12	12	
5-1	5		R	12	12	12	
6-1	6		R	12	12	12	
6-2	6		R	12	12	12	

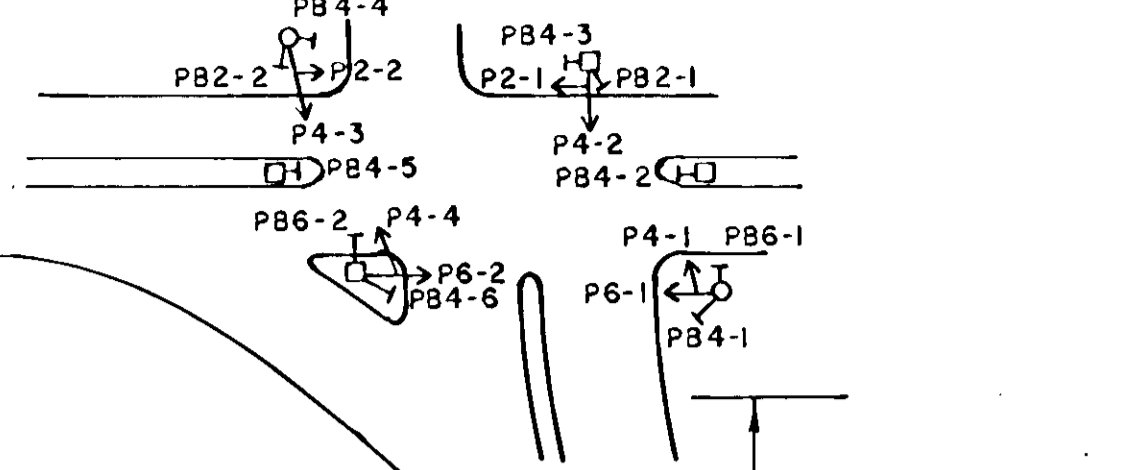
LOOP DETECTORS

NUMBER	SIZE	FUNCTION	DIST. FROM STOPLINE ¹
D1-1	2-6x20	CALL & EXTEND	420'
D2-1	6x6	CALL & EXTEND	420'
D2-2	6x6	CALL & EXTEND	420'
D4-1	6x8	EXTEND ONLY	30'
D4-2	6x20	CALL ONLY AFTER DELAY	150'
D4-3	6x6	CALL & EXTEND	150'
D4-4	6x6	CALL & EXTEND	150'
D5-1	2-6x20	CALL & EXTEND	420'
D6-1	6x6	CALL & EXTEND	420'
D6-2	6x6	CALL & EXTEND	420'
D6-3	6x20	CALL ONLY	---
D6-4	6x20	CALL ONLY	---

SIGNAL PHASING

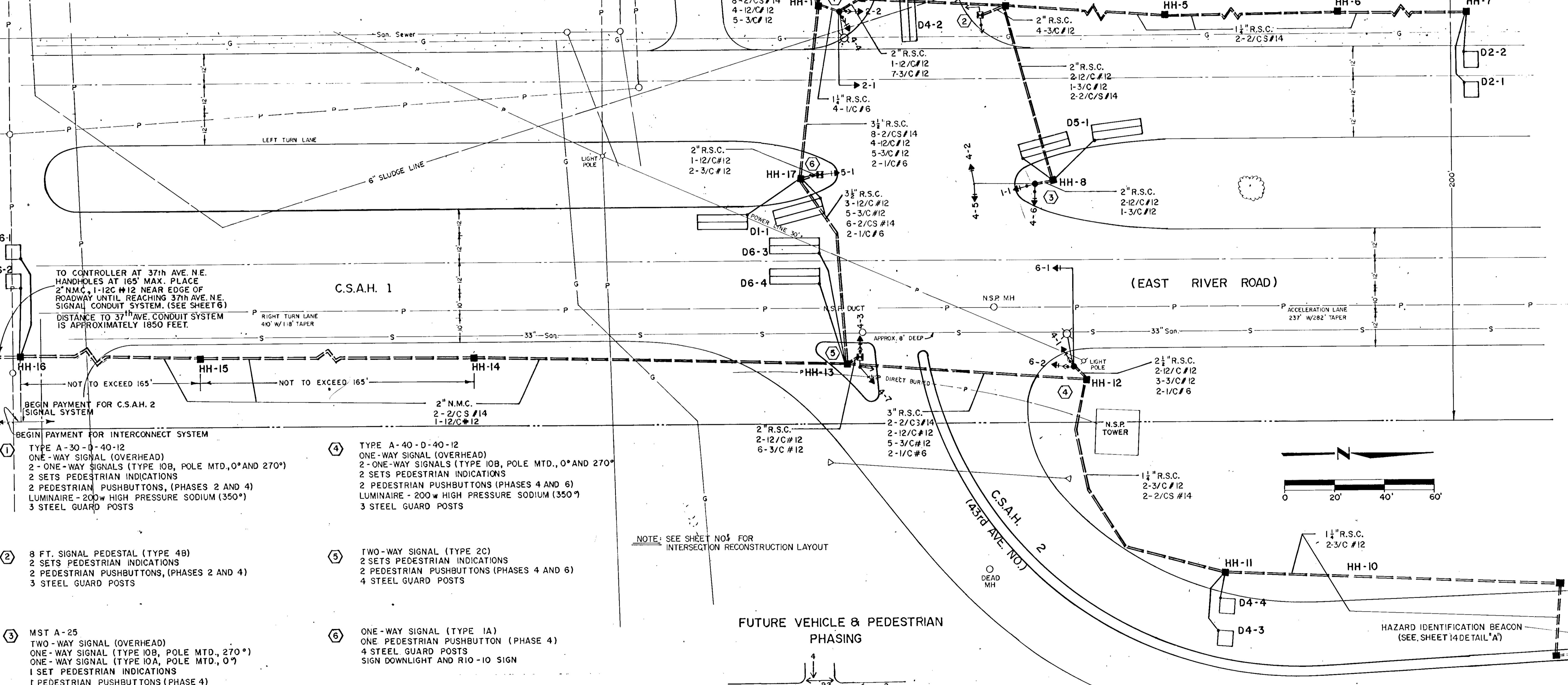


PEDESTRIAN SIGNALS AND PUSHBUTTONS



*SPECIAL SIGNAL FACE (SEE SPECIAL PROVISIONS)

¹DISTANCE TO FRONT EDGE OF DETECTOR
²SEE LOOP DETAIL "D"

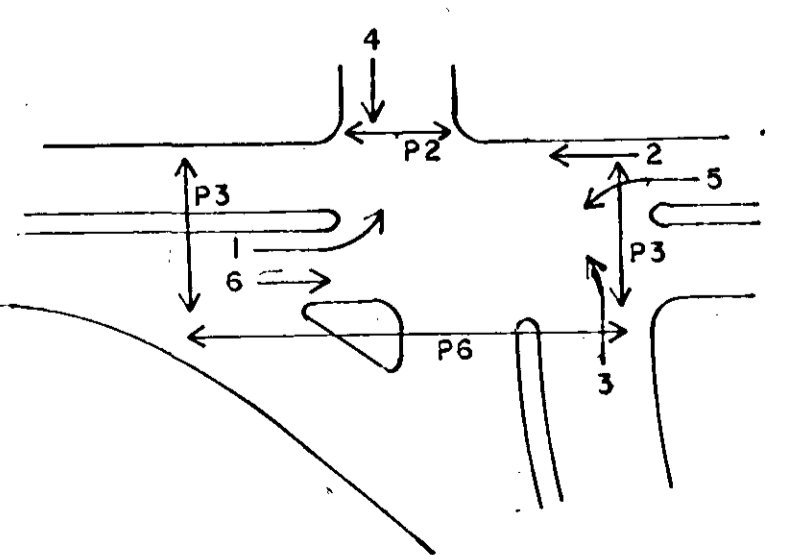


- ① TYPE A-30-D-40-12
ONE-WAY SIGNAL (OVERHEAD)
2 - ONE-WAY SIGNALS (TYPE 10B, POLE MTD., 0° AND 270°)
2 SETS PEDESTRIAN INDICATIONS
2 PEDESTRIAN PUSHBUTTONS, (PHASES 2 AND 4)
LUMINAIRE - 200w HIGH PRESSURE SODIUM (350°)
3 STEEL GUARD POSTS
- ② 8 FT. SIGNAL PEDESTAL (TYPE 4B)
2 SETS PEDESTRIAN INDICATIONS
2 PEDESTRIAN PUSHBUTTONS, (PHASES 2 AND 4)
3 STEEL GUARD POSTS
- ③ MST A-25
TWO-WAY SIGNAL (OVERHEAD)
ONE-WAY SIGNAL (TYPE 10B, POLE MTD., 270°)
ONE-WAY SIGNAL (TYPE 10A, POLE MTD., 0°)
1 SET PEDESTRIAN INDICATIONS
1 PEDESTRIAN PUSHBUTTONS (PHASE 4)
4 STEEL GUARD POSTS
SIGN DOWNLIGHT AND RIO-10 SIGN

- ④ TYPE A-40-D-40-12
ONE-WAY SIGNAL (OVERHEAD)
2 - ONE-WAY SIGNALS (TYPE 10B, POLE MTD., 0° AND 270°)
2 SETS PEDESTRIAN INDICATIONS
2 PEDESTRIAN PUSHBUTTONS (PHASES 4 AND 6)
LUMINAIRE - 200w HIGH PRESSURE SODIUM (350°)
3 STEEL GUARD POSTS
- ⑤ TWO-WAY SIGNAL (TYPE 2C)
2 SETS PEDESTRIAN INDICATIONS
2 PEDESTRIAN PUSHBUTTONS (PHASES 4 AND 6)
4 STEEL GUARD POSTS
- ⑥ ONE-WAY SIGNAL (TYPE 1A)
ONE PEDESTRIAN PUSHBUTTON (PHASE 4)
4 STEEL GUARD POSTS
SIGN DOWNLIGHT AND RIO-10 SIGN

NOTE: SEE SHEET NO. 1 FOR INTERSECTION RECONSTRUCTION LAYOUT

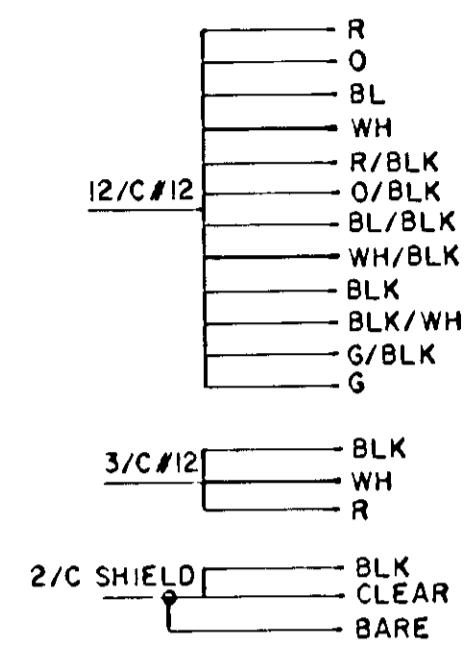
FUTURE VEHICLE & PEDESTRIAN PHASING



NOTES:
• SYMBOLS ARE AS PER "TECHNICAL MANUAL, 2nd EDITION", MINNESOTA DEPARTMENT OF TRANSPORTATION.
• ALL LOOP DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH DETAILS A AND C ON SHEET 5.
• LOOP DETECTOR NOS. D1-1, D4-2, D5-1, D6-3 AND D6-4 SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL D ON SHEET 5.

EXISTING SIGNAL SYSTEM LAYOUT
C.S.A.H. 1 & C.S.A.H. 2

TYPICAL CONDUCTOR COLOR CODE



NOTE: ALL TERMINAL BLOCK CONNECTORS SHALL BE ARRANGED AS SPECIFIED ABOVE

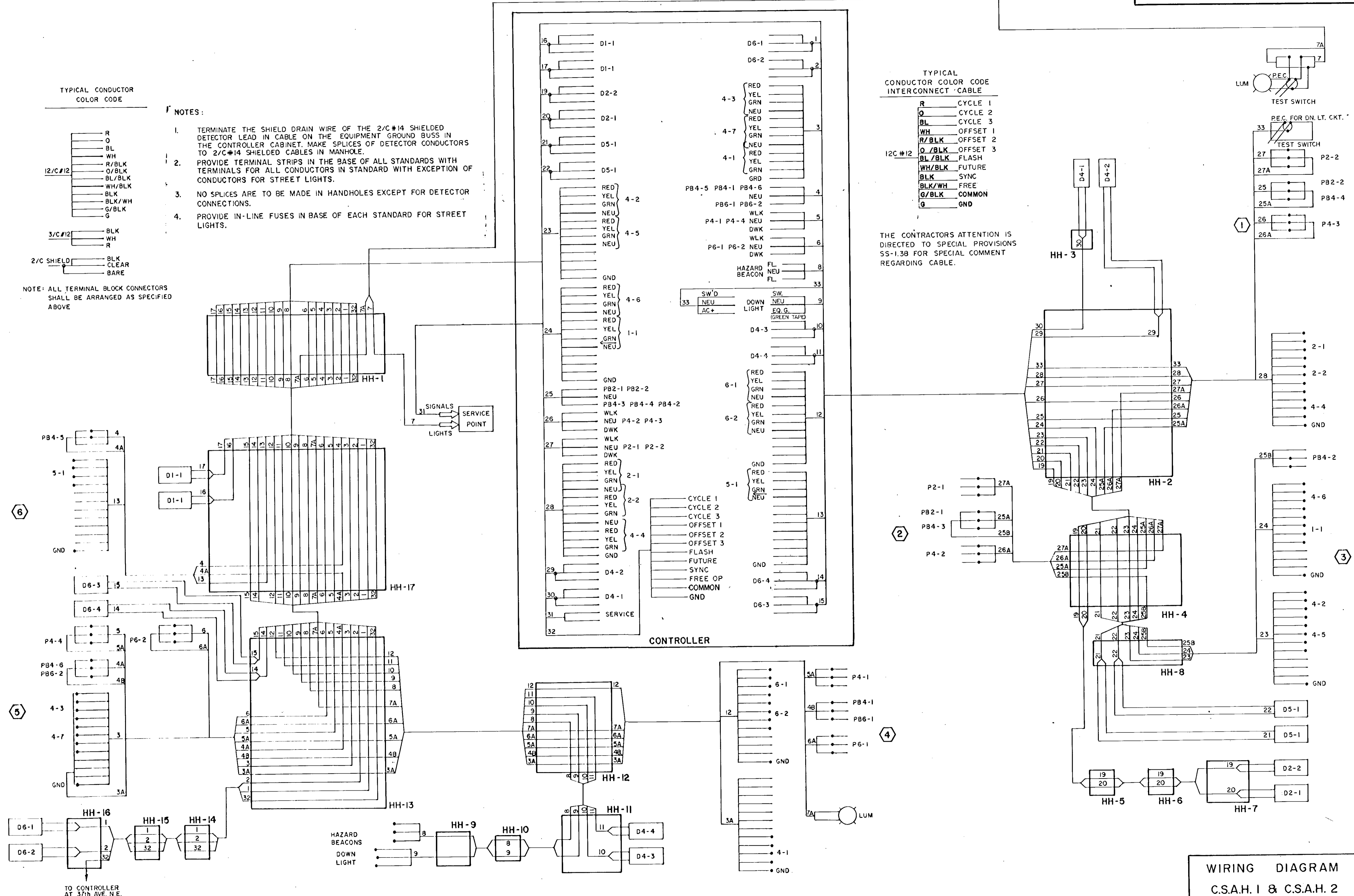
NOTES:

1. TERMINATE THE SHIELD DRAIN WIRE OF THE 2/C #14 SHIELDED DETECTOR LEAD IN CABLE ON THE EQUIPMENT GROUND BUSS IN THE CONTROLLER CABINET. MAKE SPLICES OF DETECTOR CONDUCTORS TO 2/C #14 SHIELDED CABLES IN MANHOLE.
2. PROVIDE TERMINAL STRIPS IN THE BASE OF ALL STANDARDS WITH TERMINALS FOR ALL CONDUCTORS IN STANDARD WITH EXCEPTION OF CONDUCTORS FOR STREET LIGHTS.
3. NO SPLICES ARE TO BE MADE IN HANDHOLES EXCEPT FOR DETECTOR CONNECTIONS.
4. PROVIDE IN-LINE FUSES IN BASE OF EACH STANDARD FOR STREET LIGHTS.

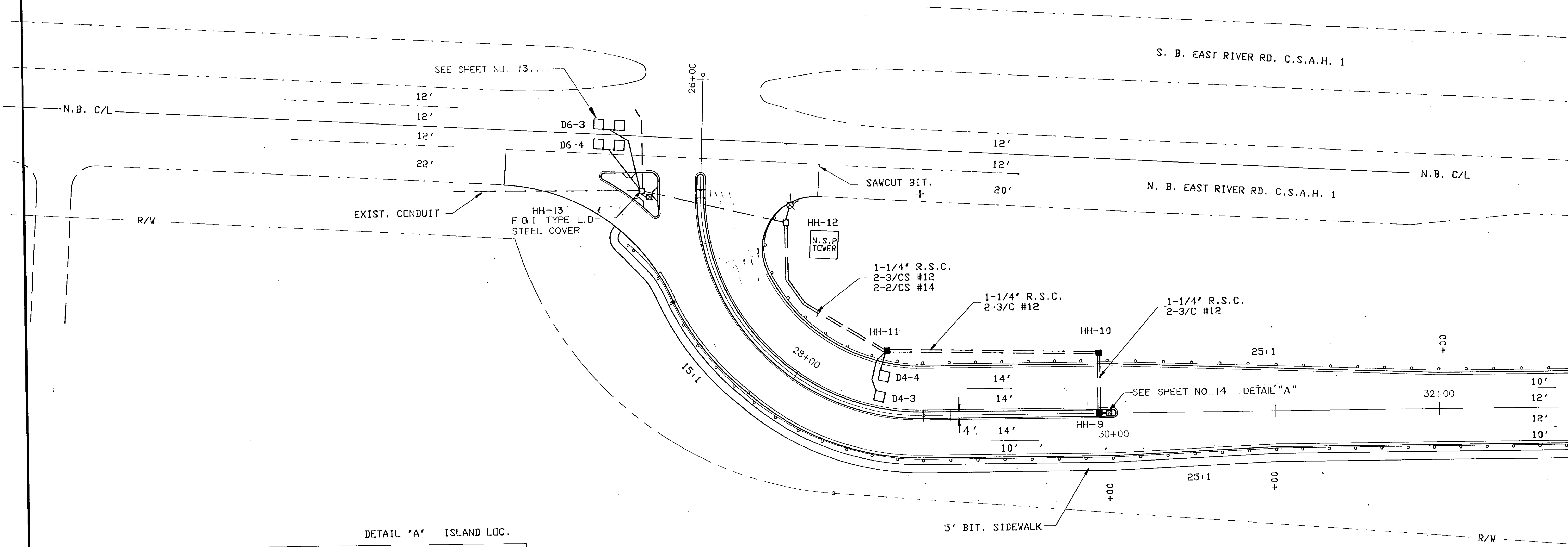
TYPICAL CONDUCTOR COLOR CODE INTERCONNECT CABLE

R	CYCLE 1
O	CYCLE 2
BL	CYCLE 3
WH	OFFSET 1
R/BLK	OFFSET 2
O/BLK	OFFSET 3
BL/BLK	FLASH
WH/BLK	FUTURE
BLK	SYNC
BLK/WH	FREE
G/BLK	COMMON
G	GND

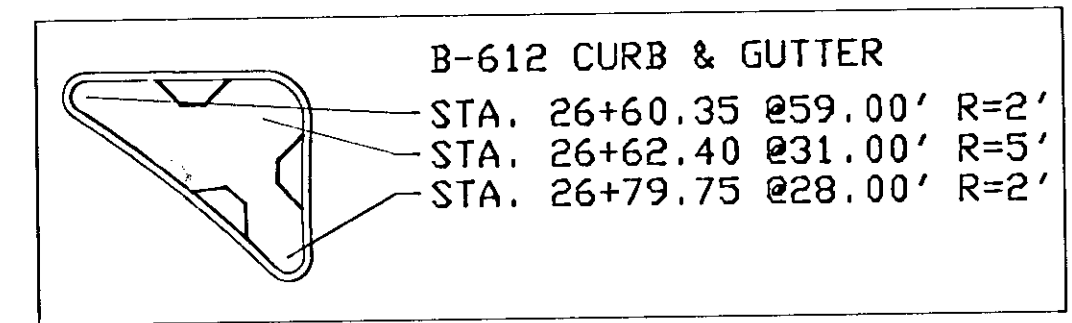
THE CONTRACTOR'S ATTENTION IS DIRECTED TO SPECIAL PROVISIONS SS-1.38 FOR SPECIAL COMMENT REGARDING CABLE.



WIRING DIAGRAM
C.S.A.H. 1 & C.S.A.H. 2



DETAIL 'A' ISLAND LOC.



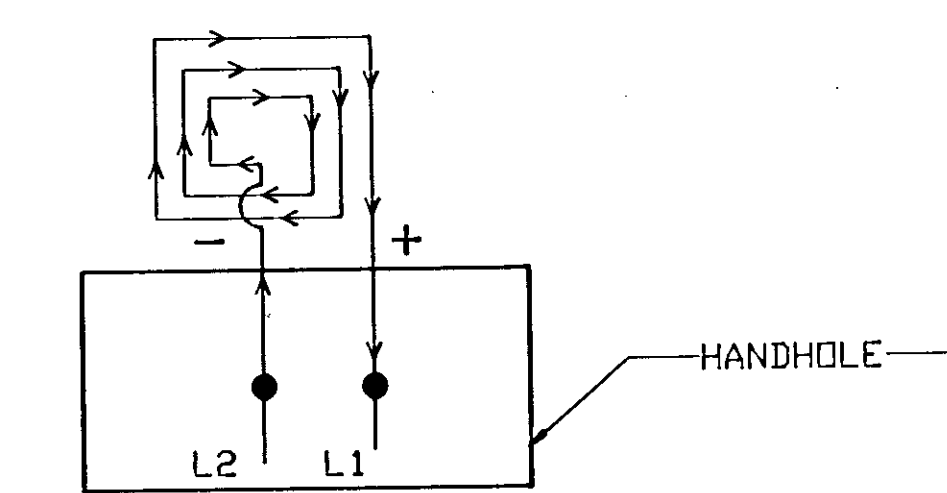
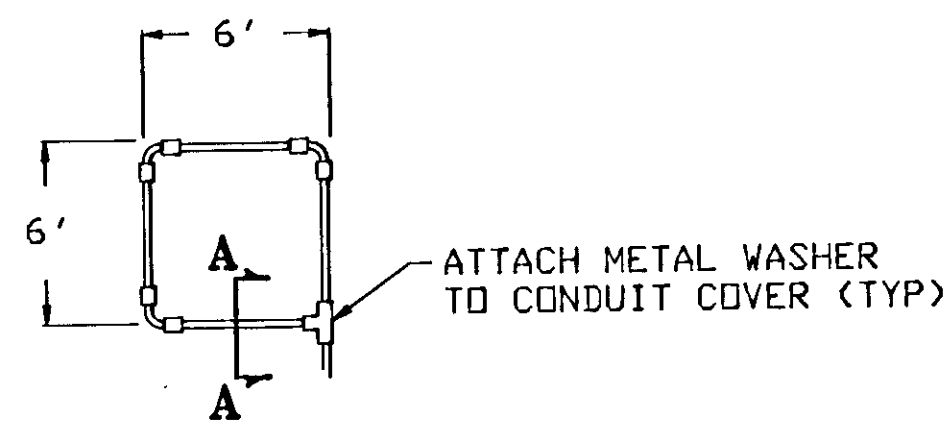
NEW SIGNAL SYSTEM LAYOUT
 C.S.A.H. 1 & C.S.A.H. 2

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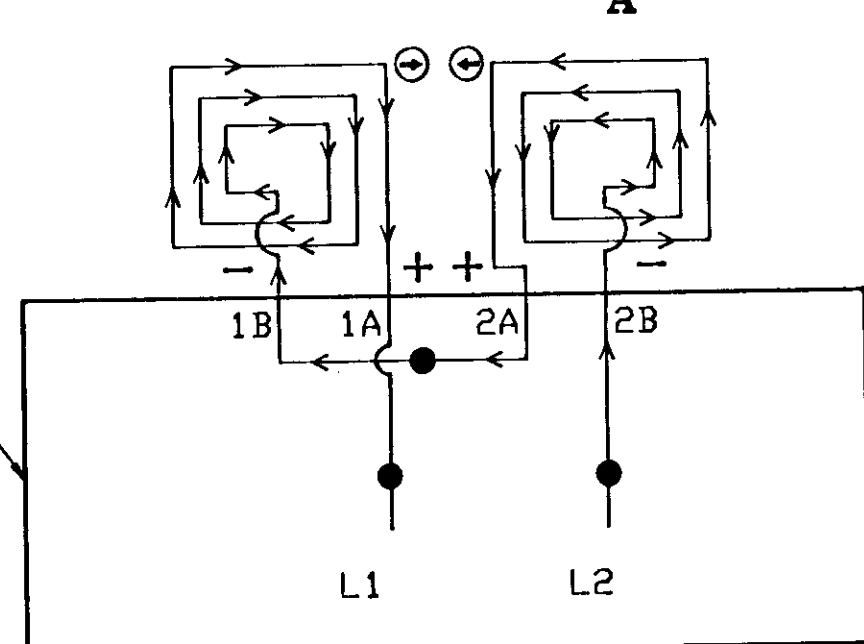
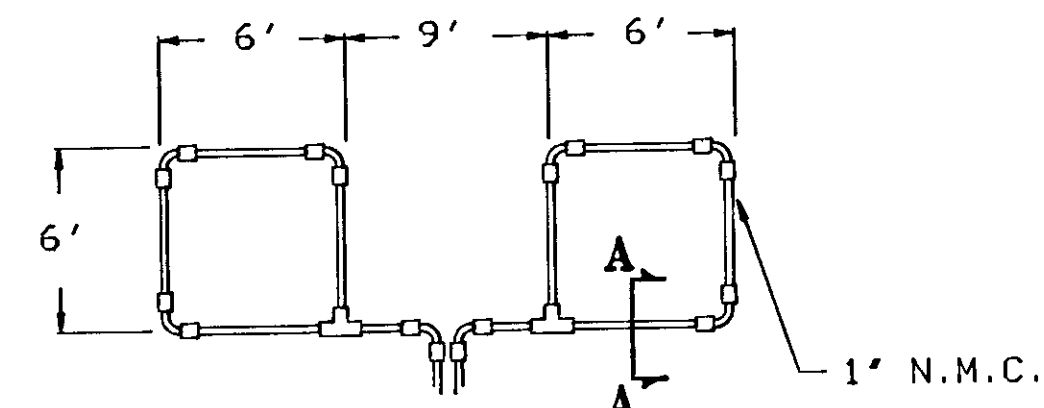
LOOP DETECTOR DETAIL 'A'

PLAN VIEW (NOT TO SCALE)
(LOOP PHASING FOR SINGLE CONNECTION)



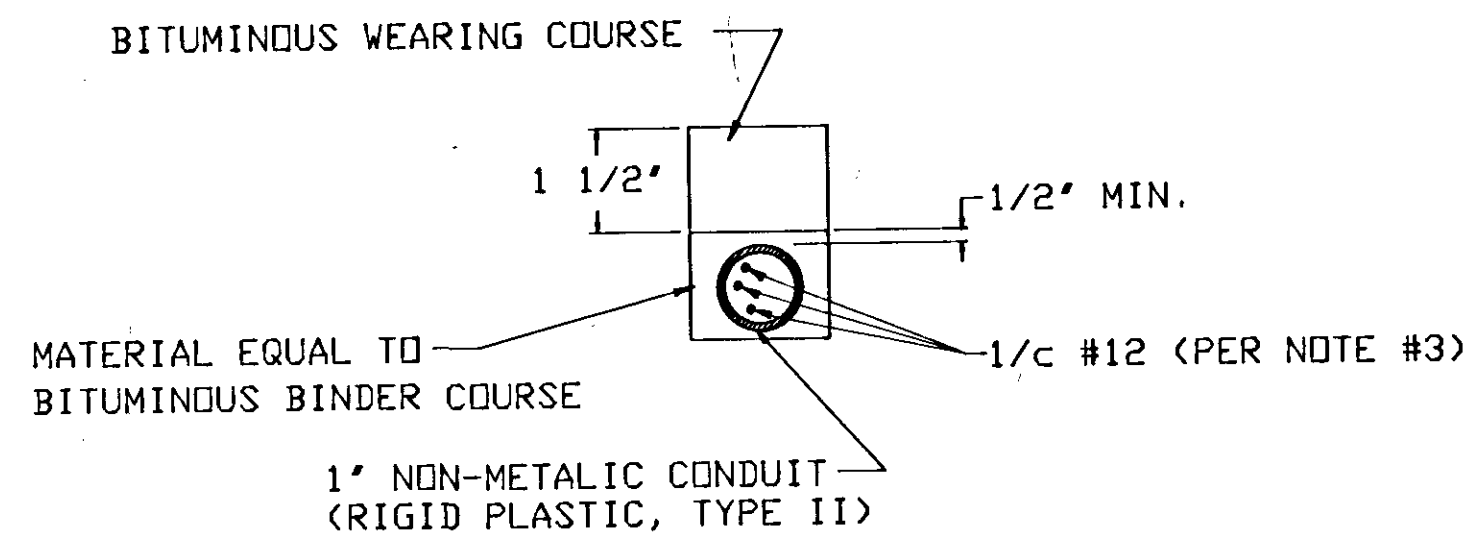
LOOP DETECTOR DETAIL 'B'

PLAN VIEW (NOT TO SCALE)
(LOOP PHASING FOR SERIES CONNECTION)

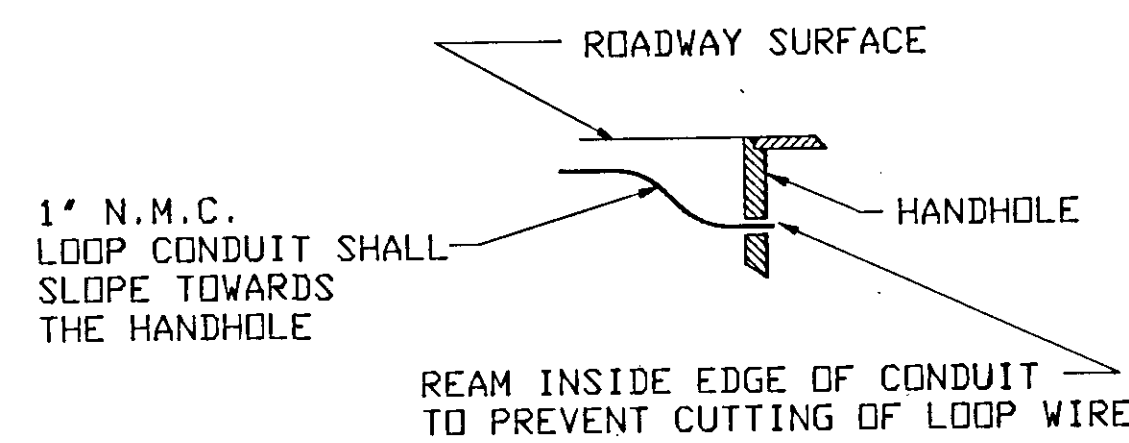


LOOP CONNECTIONS SHALL BE LABELED AND SPLICED IN THE HANDHOLE AS FOLLOWS:
L1 TO 1A, 1B TO 2A, AND 2B TO L2.

CROSS SECTION A-A



DRAINAGE DETAIL

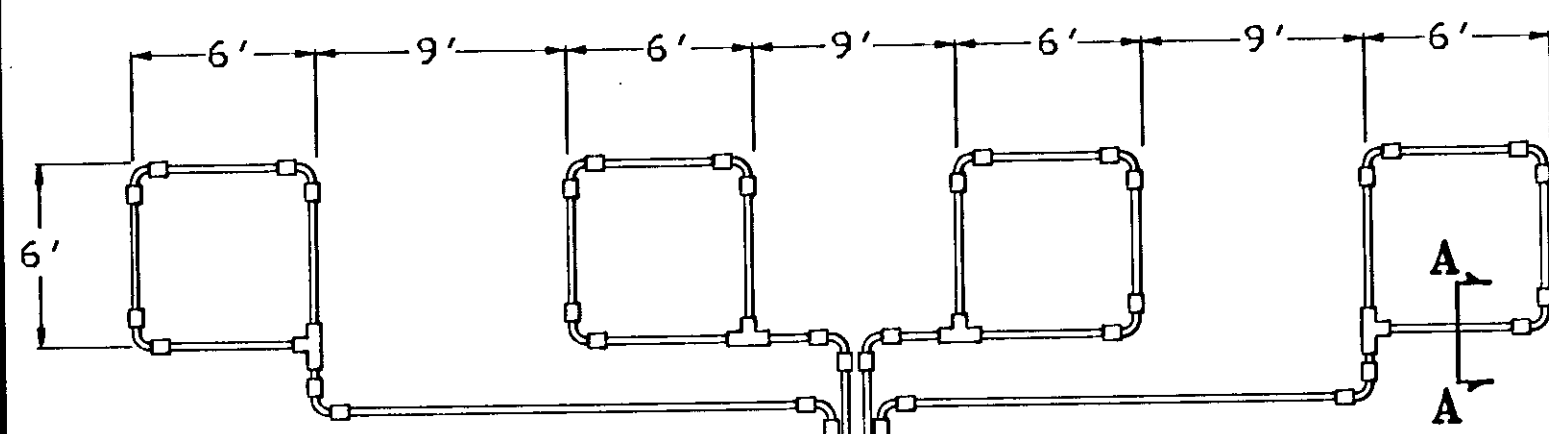


LEGEND OF SYMBOLS

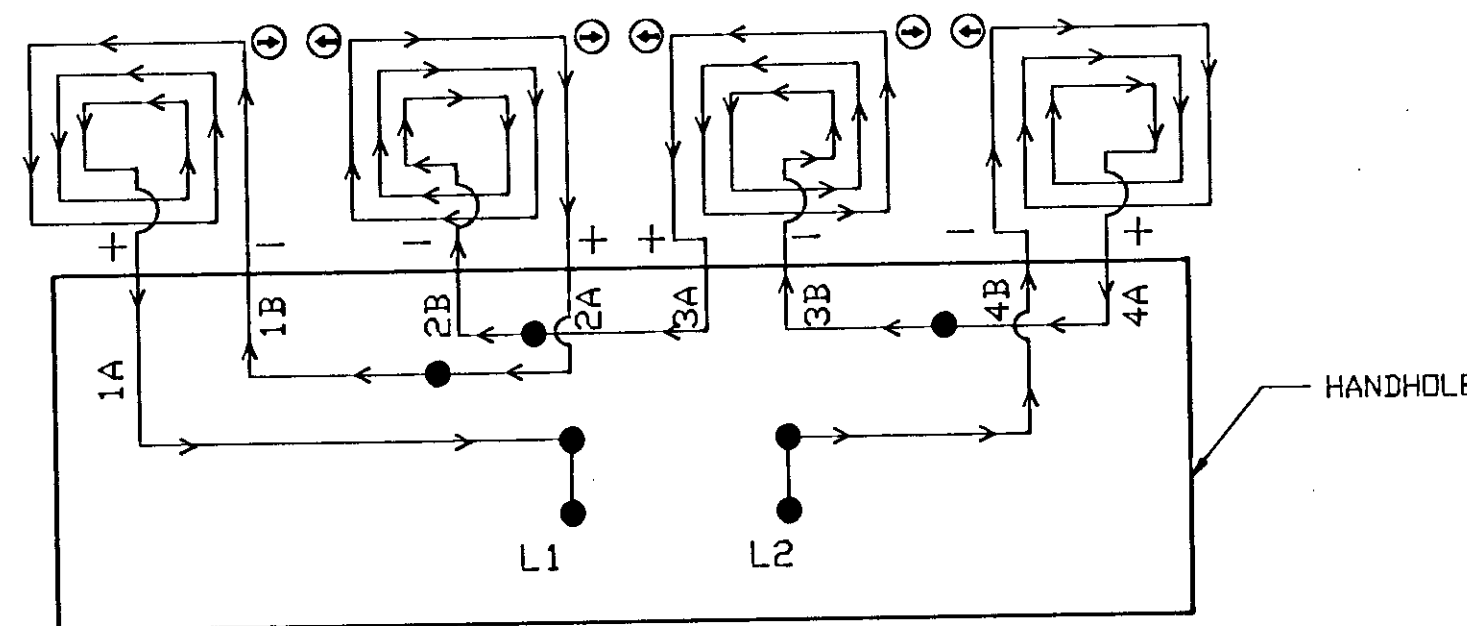
CONTROLLER AND SERVICE EQPT NOS.	⊙
SIGNAL BASE NO.	⊙
SIGNAL FACE NO.	⊙
LUMINAIRE NO.	⊙
CONTROLLER AND CABINET	⊙
CONTROLLER AND CABINET IN PLACE	⊙
HANDHOLE	□
HANDHOLE IN PLACE	□
RIGID STEEL CONDUIT (R.S.C.)	—
RIGID STEEL CONDUIT (R.S.C.) IN PLACE	—
SIGNAL FACE WITH BACKGROUND SHIELD	—
SIGNAL FACE W/O BACKGROUND SHIELD	—
SIGNAL FACE IN PLACE	—
PEDESTRIAN INDICATORS	—
PEDESTRIAN INDICATORS IN PLACE	—
PEDESTRIAN PUSH BUTTONS ON PEDESTAL OR POLE	—
PEDESTRIAN PUSH BUTTON STATION	—
TRAFFIC SIGNAL PEDESTAL	—
TRAFFIC SIGNAL PEDESTAL IN PLACE	—
TRAFFIC SIGNAL POLE AND MAST ARM	—
TRAFFIC SIGNAL POLE AND MAST ARM IN PLACE	—
STREET LIGHT POLE AND LUMINAIRE	—
STREET LIGHT POLE AND LUMINAIRE IN PLACE	—
MAST ARM AND LUMINAIRE	—
MAST ARM AND LUMINAIRE IN PLACE	—
WOOD POLE	—
WOOD POLE IN PLACE	—
SOURCE OF POWER	—
RAILROAD SIGNAL IN PLACE	—
RIGHT OF WAY LINE	—
CENTERLINE	—
EDGE OF ROADWAY	—
SHOULDERLINE	—
CURB LINE	—
STOP BAR	—

LOOP DETECTOR DETAIL 'C'

PLAN VIEW (NOT TO SCALE)
(LOOP PHASING FOR SERIES CONNECTION)

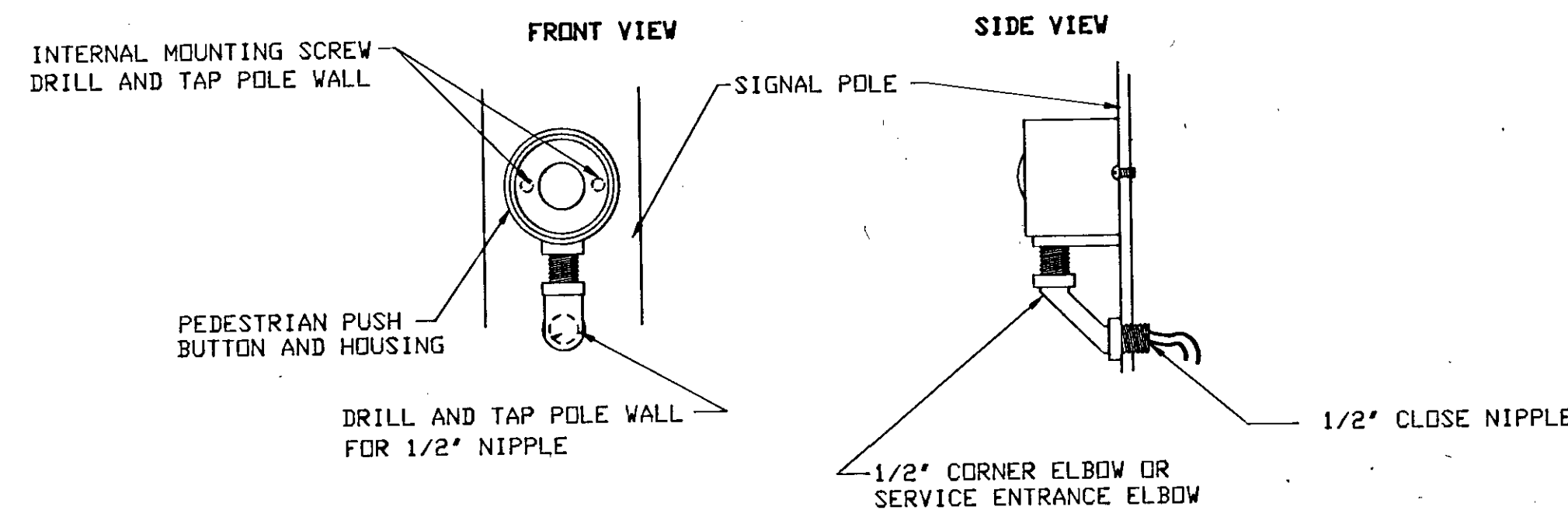


LOOP RETURN CONDUITS MAY BE PLACED IN COMMON TRENCH. (TYP)



LOOP CONNECTIONS SHALL BE LABELED AND SPLICED IN THE HANDHOLE AS FOLLOWS:
L1 TO 1A, 1B TO 2A, 2B TO 3A, 3B TO 4A AND 4B TO L2.
SPLICE CONTROL CABLE TO L1 & L2 IN HANDHOLE. ALL CONDUCTORS SHALL BE TAGGED IN HANDHOLE (1A, 1B, ETC.)

PEDESTRIAN PUSH BUTTON DETAIL



ABBREVIATIONS
EQUIPMENT AND INDICATIONS

- RED - RED
- YEL - YELLOW
- GRN - GREEN
- WLK - WALK
- NEU - NEUTRAL
- DVK - DON'T WALK
- LUM - LUMINAIRE
- DNL - DOWNLIGHT
- H.H. - HANDHOLE
- EGG - EQUIPMENT GROUND
- R.S.C. - RIGID STEEL CONDUIT
- GLTA - GREEN LEFT TURN ARROW
- YRTA - YELLOW RIGHT TURN ARROW
- D2-1(eg) - DETECTOR-PHASE '2'
- GR.R - GROUND ROD
- SER. - SERVICE
- P2 - 2 PEDESTRIAN INDICATIONS
- 2-1(eg) - SIGNAL HEADS-PHASE '2'
- SPR. - SPARE CONNECTORS
- N.M.C. - NON METALLIC CONDUIT
- E.V.P. - EMERGENCY VEHICLE PRE-EMPTION
- J.B. - JUNCTION BOX
- W.P. - WOOD POLE
- P.E.C. - PHOTOELECTRIC CELL

LOOP DETECTOR WIRING

NOTES:

- 1) ALL CORNERS SHALL BE 90° CONDUIT BENDS
- 2) CONNECT WIRES IN HANDHOLES USING WESTERN UNION SPLICE, SOLDERED, TAPED, & WATERPROOFED.
- 3) LOOP DETECTOR WIRES SHALL BE # 12 AWG CROSSED LINKED POLYETHYLENE (XLP). SEE SPECIAL PROVISIONS.
- 4) LOOP LEAD IN WIRES SHALL BE TWISTED A MIN. OF (5) TURNS PER FOOT THROUGH THE CONDUIT TO THE HANDHOLE.
- 5) N.M.C. DESIGNATES NON-METALLIC CONDUIT (SPEC. 3803)
- 6) LOOPS 6'x6' THRU 6'x14' SHALL HAVE (3) TURNS.
- 7) LOOPS 6'x15' AND LARGER SHALL HAVE TWO (2) TURNS.

STANDARD PLATES

PLATE NO.	DESCRIPTION
8110 C	TRAFFIC SIGNAL BRACKETING - POLE MOUNTED
8111 B	TRAFFIC SIGNAL BRACKETING - PEDESTAL MOUNTED
8112 C	PEDESTAL FOUNDATION
8113 C	MAGNETIC VEHICLE DETECTOR INSTALLATION
8115 C	PEDESTRIAN PUSH BUTTON INSTALLATION
8117 F	PRECAST CONCRETE HAND HOLE
8118 C	SERVICE EQUIPMENT AND POLE
8119 C	GROUND MOUNTED CABINET FOUNDATION
8120 H	P-80 AND P-90 POLE FOUNDATION
8121 B	TRANSFORMER BASE WITH POLE BASE PLATE
8122 C	PEDESTAL AND PEDESTAL BASE
8123 B	POLE AND MAST ARM
8124 D	SIGNAL HEAD MOUNTS
8126 C	P-100 POLE FOUNDATION
8130 D	SAW CUT LOOP DETECTORS
0004 A	SPECIFICATION REFERENCE
3124 B	METAL APRON CONNECTION
3221 C	CORRUGATED STEEL PIPE COUPLING BAND
7035 J	CONCRETE WALK AND CURB RETURNS AT ENTRANCES
7100 F	CONCRETE CURB AND GUTTERS

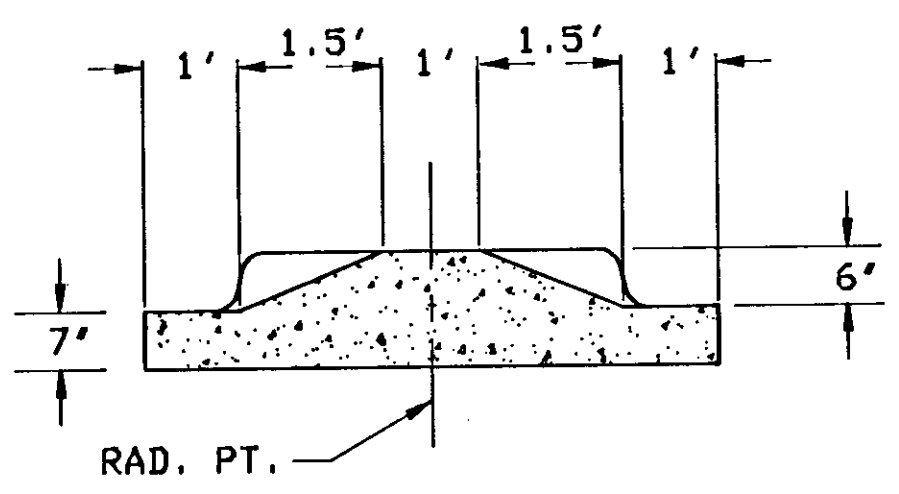
* APPLIES TO THIS PROJECT

CONDUCTOR COLOR CODE

- R - RED
- O - ORANGE
- BL - BLUE
- WH - WHITE
- R/BLK - RED WITH BLACK TRACER
- O/BLK - ORANGE WITH BLACK TRACER
- BL/BLK - BLUE WITH BLACK TRACER
- WH/BLK - WHITE WITH BLACK TRACER
- BLK - BLACK
- BLK/WH - BLACK WITH WHITE TRACER
- G/BLK - GREEN WITH BLACK TRACER
- G - GREEN

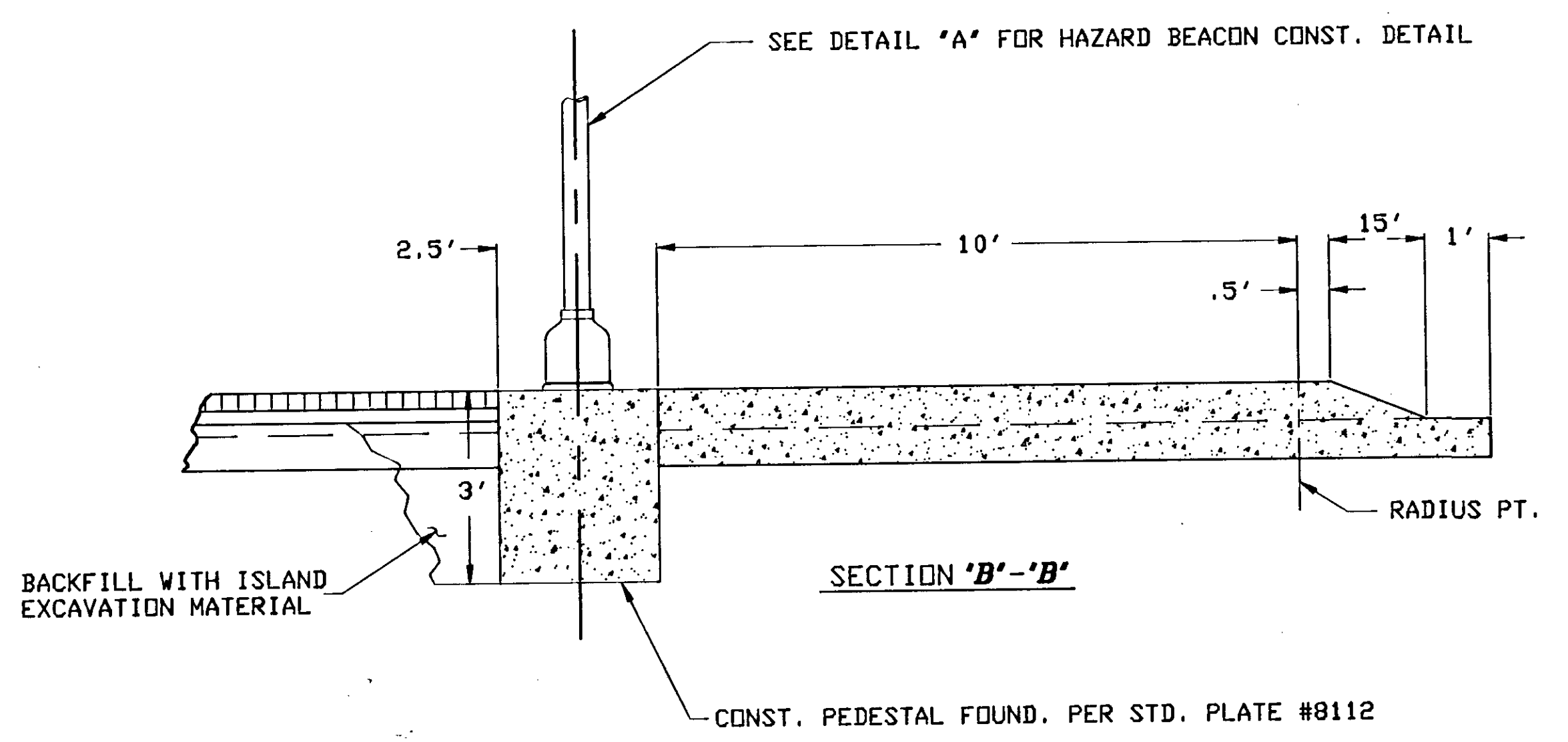
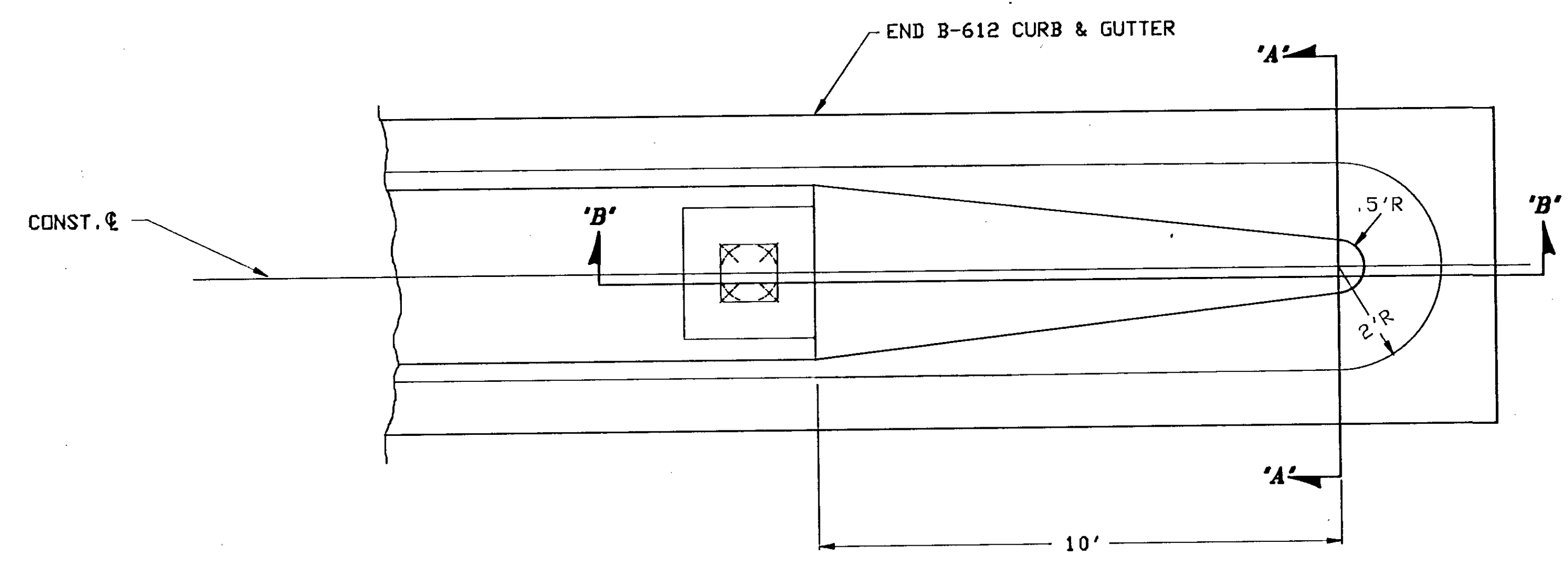
REVISIONS			
DATE	BY	DATE	BY

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SECTION 'A'-'A'

MEDIAN NOSE DETAIL

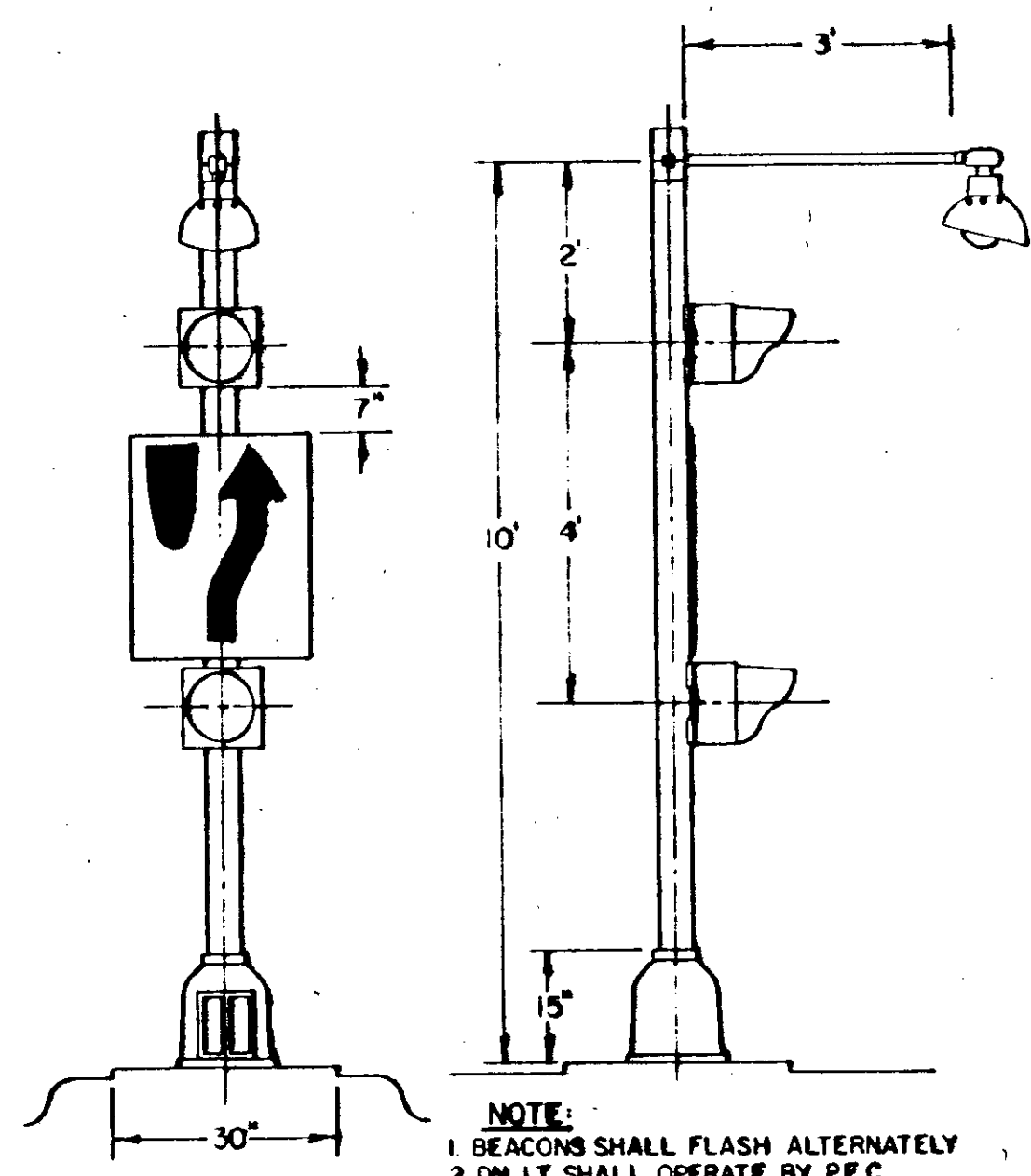


SECTION 'B'-'B'

DETAIL "A"
DUAL HAZARD BEACON

MATERIAL LIST

- 1-4"X10" PEDESTAL SHAFT
- 1-4" PEDESTAL SLIPFITTER COLLAR
- 1-DOWN LIGHT EXT. 3/4" R.S.C. X 3' LONG
- 1-DOWN LIGHT FIXTURE (PER SS-1-26 ON PAGE 15 S.S.)
- 1-3/4" CLOSE NIPPLE
- 1-3/4" ENTRANCE ELBOW
- 1-1/4" TO 3/4" REDUCING BUSHING
- 2-8" SIZE AMBER BEACON
- 1-PEDESTAL BASE & SHAFT PER 8112
- 1-PEDESTAL FOUNDATION PER 8112
- 4-PPB. MOUNTING SADDLE
- 1-24" X 30" KEEP RIGHT PER R4-7
- 2-STEEL GUARD POST PER 8118
- (SEE CONC. ISLAND NOSE CONST. DETAIL FOR MODIFICATIONS TO CONC. BASE.)



NOTE:
1. BEACONS SHALL FLASH ALTERNATELY
2. ON LT. SHALL OPERATE BY P.E.C.
3. 5" MIN. FROM BOTTOM OF SIGN TO ROAD.

NOTE:
REMOVE EXISTING HAZZARD BEACON AND REPAINT AND INSTALL ON NEW PEDESTAL FOUNDATION

REVISIONS			
DATE	BY	DATE	BY

S.A.P. 02-602-09 S.P. _____ C.P. _____

NOTES

LOCATIONS OF ALL SIGNS ARE APPROXIMATE, EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

ALL SIGNS AND BARRICADES WILL BE PROPERLY WEIGHTED WITH SAND BAGS.

ALL BARRICADE MARKINGS WILL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B', DATED SEPTEMBER, 1985.

ADDITIONS TO THIS PLAN MAY BE MADE AT ANYTIME AS DETERMINED BY THE ENGINEER.

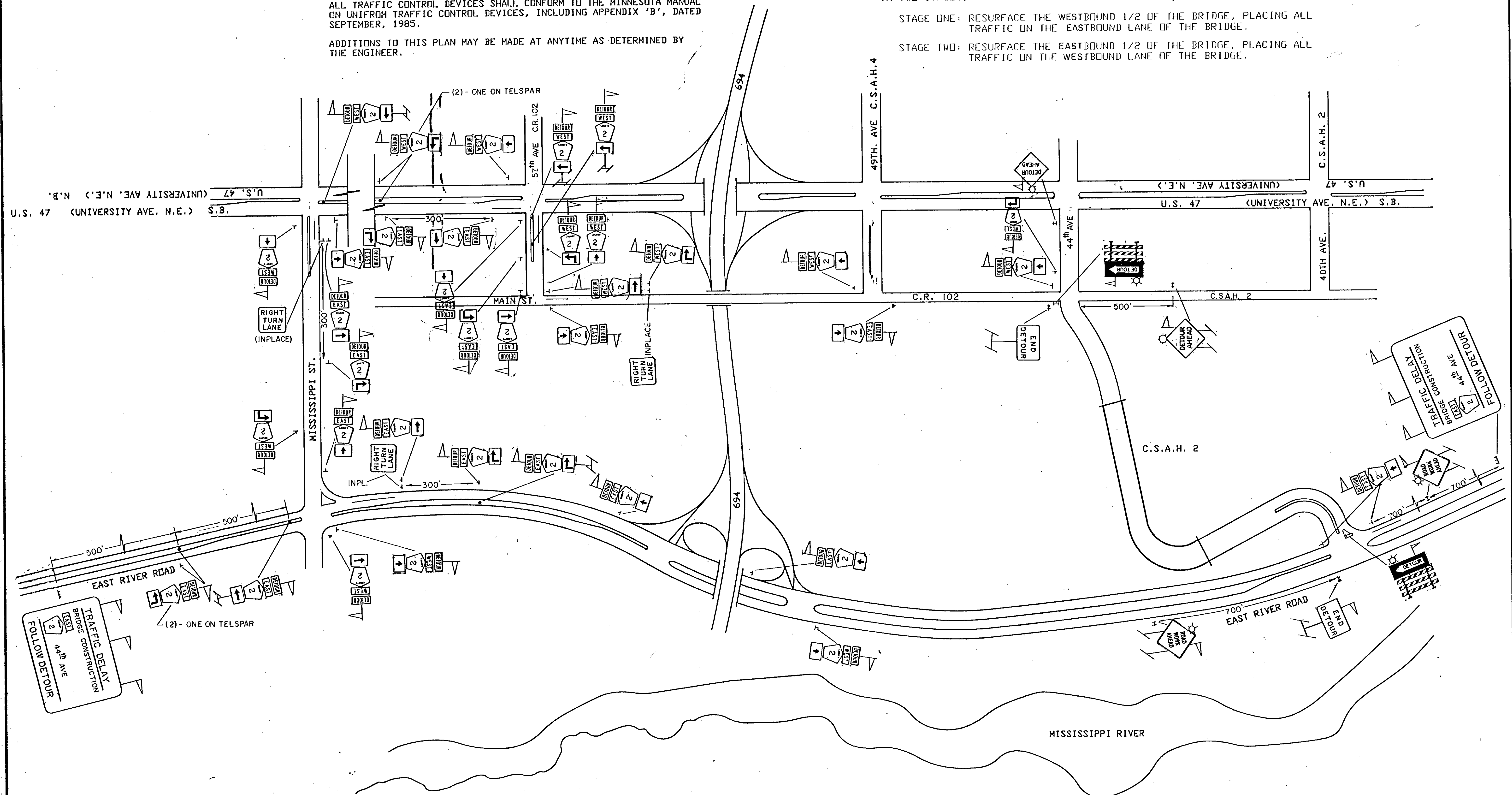
THIS IS A TWO PART PROJECT THAT WILL INCLUDE BRIDGE DECK RESURFACING AT THE SAME TIME CENTER ISLAND RECONSTRUCTION AT C.S.A.H. #1 IS TAKING PLACE

C.S.A.H. #2 WILL REMAIN OPEN THROUGH THE ENTIRE PROJECT. HOWEVER A DETOUR WILL BE PROVIDED AS AN ALTERNATE ROUTE.

THE BRIDGE DECK RESURFACING PORTION OF THE PROJECT WILL BE COMPLETED IN TWO STAGES;

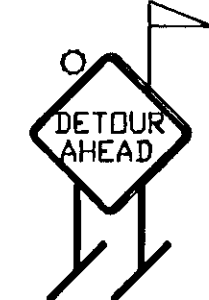

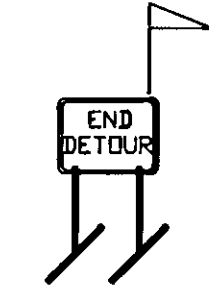
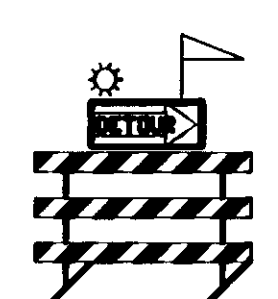
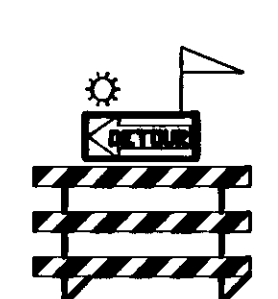
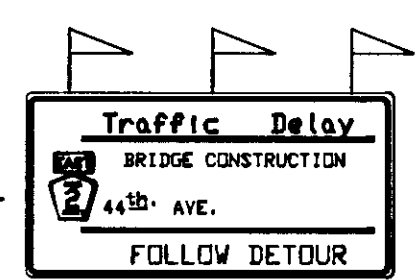


















STAGE ONE: RESURFACE THE WESTBOUND 1/2 OF THE BRIDGE, PLACING ALL TRAFFIC ON THE EASTBOUND LANE OF THE BRIDGE.

STAGE TWO: RESURFACE THE EASTBOUND 1/2 OF THE BRIDGE, PLACING ALL TRAFFIC ON THE WESTBOUND LANE OF THE BRIDGE.



REVISIONS			
DATE	BY	DATE	BY

S.A.P. 02-602-09 S.P. _____ C.P. _____

M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY	
			ON POST	ON TELSPAR
FLASHER W20-2	48'x48'		• _____	• 12
FLASHER W21-4	48'x48'		• _____	• 2
M4-9-MDD	24'x30'		• _____	• 2
FLASHER M4-10 (R)	48'x18'		• _____	• 1
TYPE III (R)	8 FT		• _____	• 1
FLASHER M4-10 (L)	48'x18'		• _____	• 1
TYPE III (L)	8 FT		• _____	• 1
			• 2	• _____
M4-8	24'x12'	 M5-1(L)   M5-1(R)   M6-1(L)   M6-1(R)   M6-3  M5-1(L)   M5-1(R)   M6-1(L)   M6-1(R)   M6-3	• 2	• 1
M3-2	24'x12'		• 3	• 1
M1-6	24'x24'		• 1	• 1
	21x15'		• 3	• _____
			• 9	• _____
M4-8	24'x12'		• 3	• 1
M3-4	24'x12'		• 12	• _____
M1-6	24'x24'		• 1	• 2
	21x15'		• 1	• _____
		• 7	• _____	

NOTES:

LOCATIONS OF ALL SIGNS ARE APPROXIMATE, EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

ALL SIGNS AND BARRICADES WILL BE PROPERLY WEIGHTED WITH SANDBAGS.

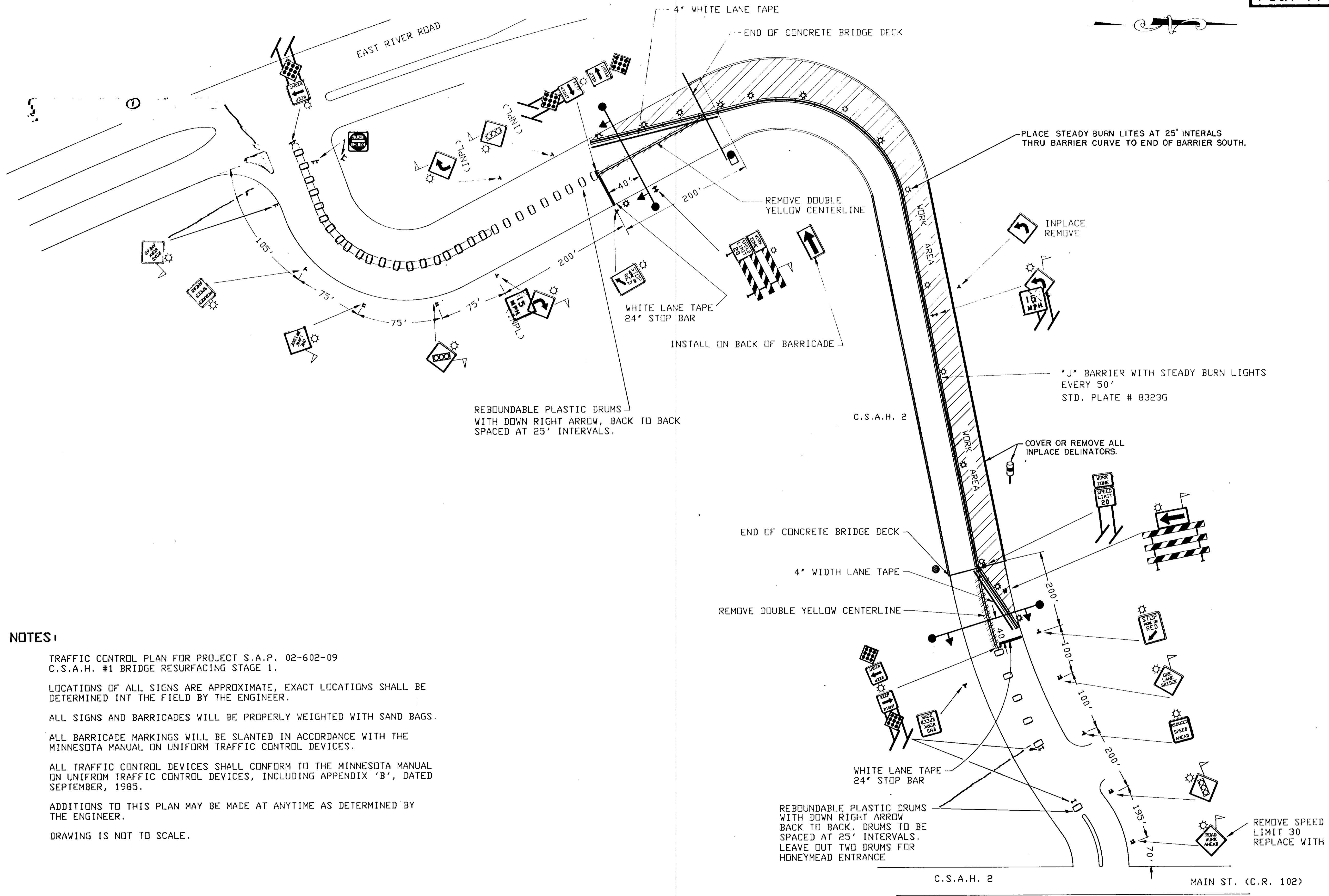
ALL BARRICADES WILL HAVE REFLECTIVE MATERIAL ON BOTH SIDES.

ALL BARRICADE MARKINGS WILL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B', DATED SEPTEMBER, 1985.

ADDITIONS OR CHANGES TO THIS PLAN MAY BE MADE AT ANYTIME AS DETERMINED BY THE ENGINEER.

REVISIONS			
DATE	BY	DATE	BY



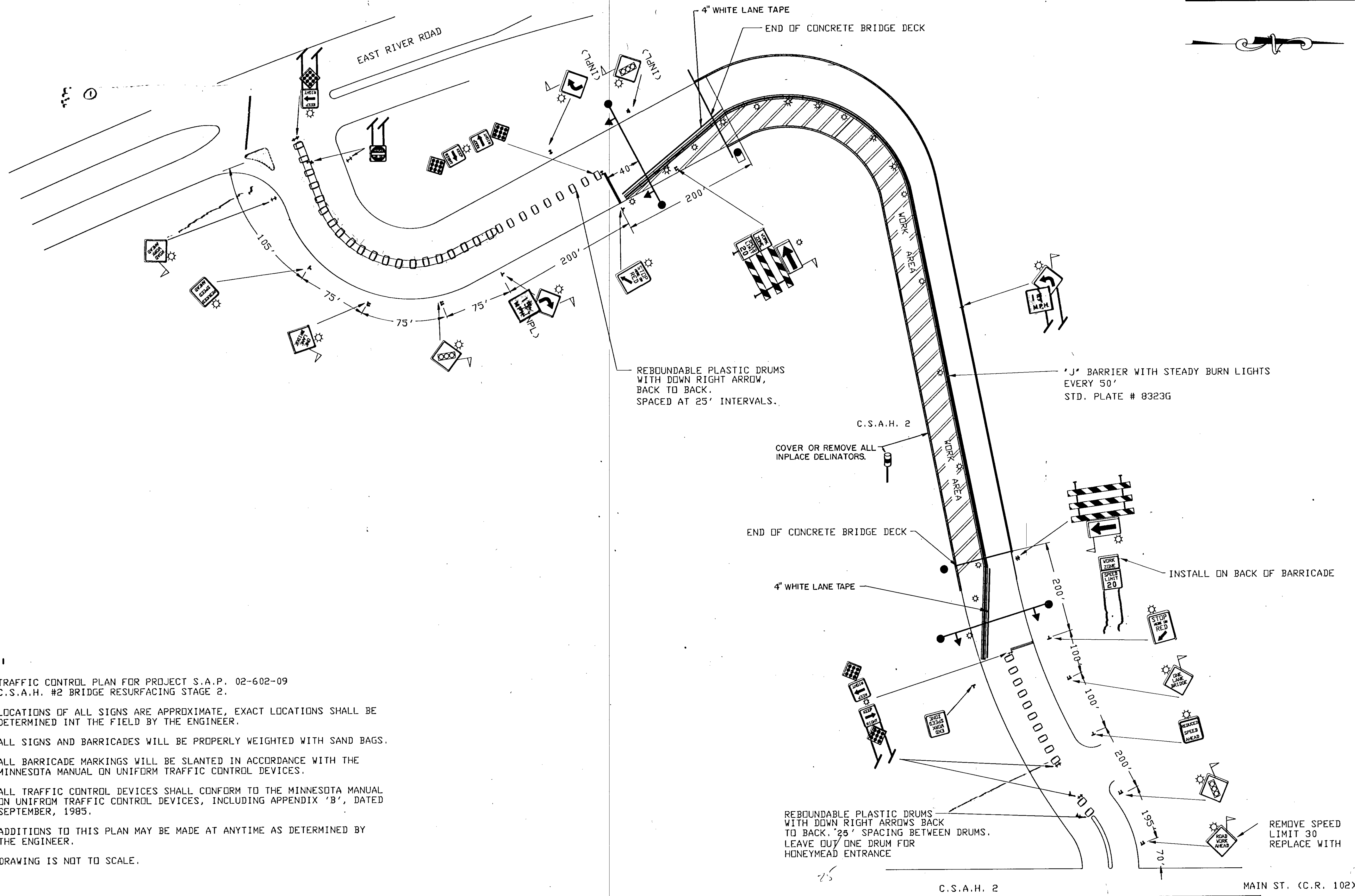
NOTES:

- TRAFFIC CONTROL PLAN FOR PROJECT S.A.P. 02-602-09
C.S.A.H. #1 BRIDGE RESURFACING STAGE 1.
- LOCATIONS OF ALL SIGNS ARE APPROXIMATE, EXACT LOCATIONS SHALL BE DETERMINED INT THE FIELD BY THE ENGINEER.
- ALL SIGNS AND BARRICADES WILL BE PROPERLY WEIGHTED WITH SAND BAGS.
- ALL BARRICADE MARKINGS WILL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B', DATED SEPTEMBER, 1985.
- ADDITIONS TO THIS PLAN MAY BE MADE AT ANYTIME AS DETERMINED BY THE ENGINEER.
- DRAWING IS NOT TO SCALE.

REVISIONS			
DATE	BY	DATE	BY
4-26-91	DM		

S.A.P. 02-602-09 S.P. _____ C.P. _____

STAGE I



NOTES:

TRAFFIC CONTROL PLAN FOR PROJECT S.A.P. 02-602-09
C.S.A.H. #2 BRIDGE RESURFACING STAGE 2.

LOCATIONS OF ALL SIGNS ARE APPROXIMATE, EXACT LOCATIONS SHALL BE DETERMINED INT THE FIELD BY THE ENGINEER.

ALL SIGNS AND BARRICADES WILL BE PROPERLY WEIGHTED WITH SAND BAGS.

ALL BARRICADE MARKINGS WILL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B', DATED SEPTEMBER, 1985.

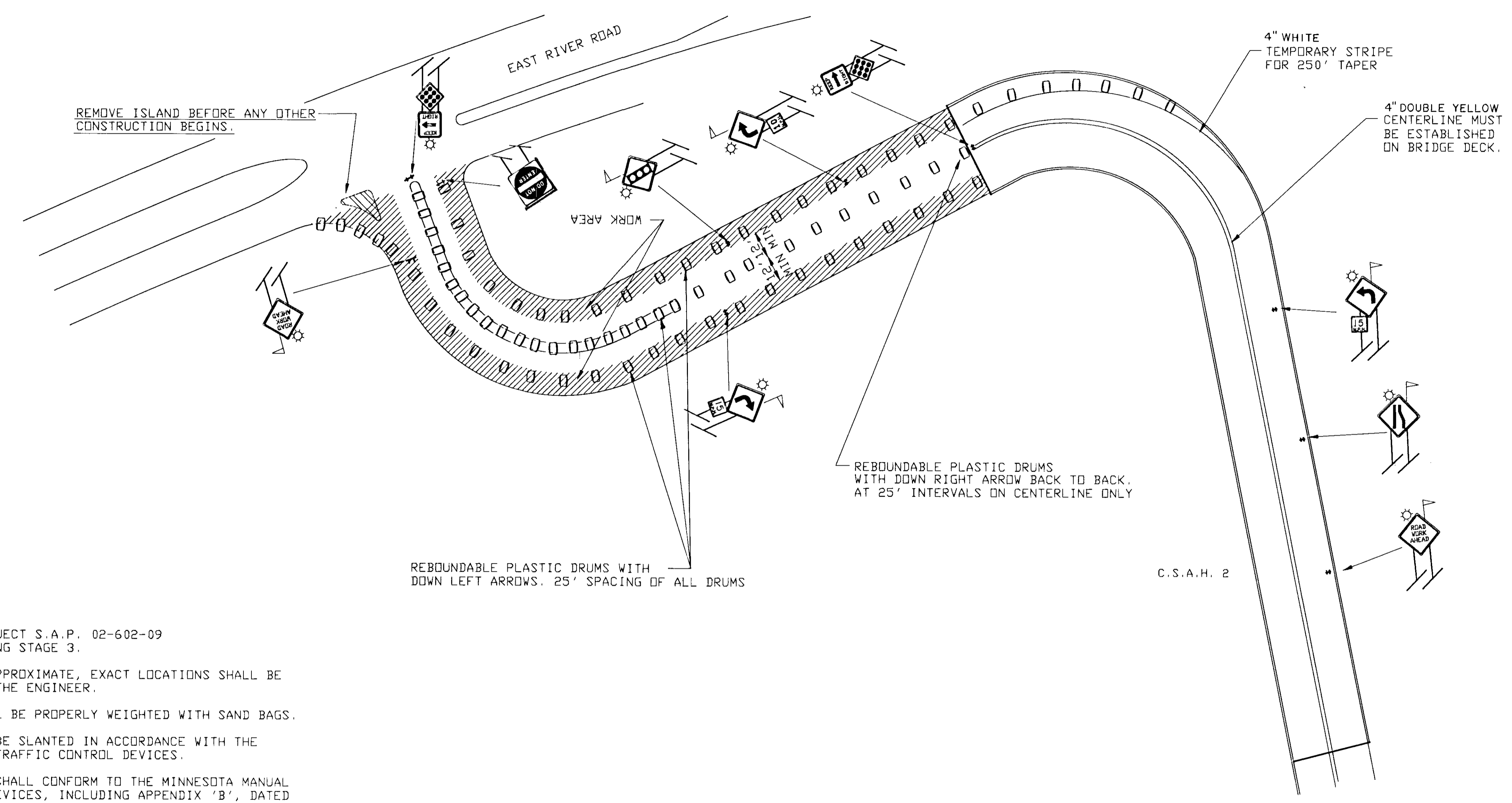
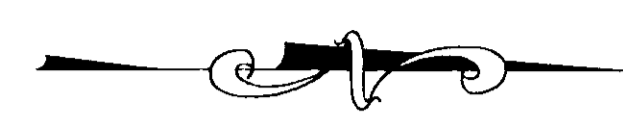
ADDITIONS TO THIS PLAN MAY BE MADE AT ANYTIME AS DETERMINED BY THE ENGINEER.

DRAWING IS NOT TO SCALE.

REBOUNDABLE PLASTIC DRUMS WITH DOWN RIGHT ARROWS BACK TO BACK, 25' SPACING BETWEEN DRUMS. LEAVE OUT ONE DRUM FOR HONEYMEAD ENTRANCE

REMOVE SPEED LIMIT 30 REPLACE WITH

REVISIONS			
DATE	BY	DATE	BY
4-26-91	DM		



NOTES:

TRAFFIC CONTROL PLAN FOR PROJECT S.A.P. 02-602-09
C.S.A.H. #2 BRIDGE RESURFACING STAGE 3.

LOCATIONS OF ALL SIGNS ARE APPROXIMATE, EXACT LOCATIONS SHALL BE DETERMINED INT THE FIELD BY THE ENGINEER.

ALL SIGNS AND BARRICADES WILL BE PROPERLY WEIGHTED WITH SAND BAGS.

ALL BARRICADE MARKINGS WILL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B', DATED SEPTEMBER, 1985.

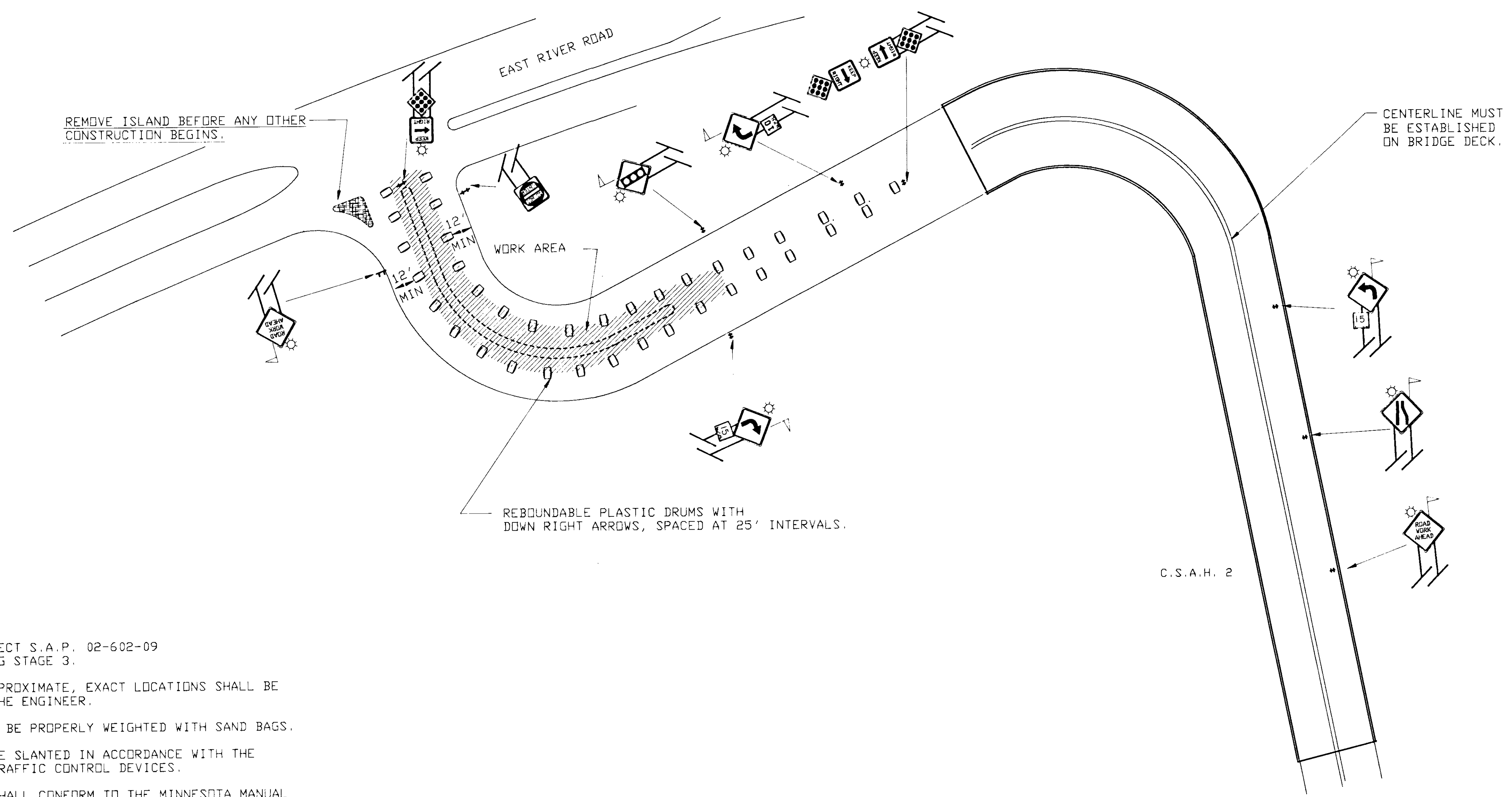
ADDITIONS TO THIS PLAN MAY BE MADE AT ANYTIME AS DETERMINED BY THE ENGINEER.

THIS CONSTRUCTION SIGNING PLAN IS FOR THE PLACEMENT OF THE SHOULDER CURB AND GUTTER, AND IS TO BE USED ONLY PRIOR TO OR FOLLOWING THE COMPLETION OF THE BRIDGE RESURFACING PROJECT. THE TWO DIFFERENT OPERATIONS SHALL NOT COINCIDE WITH ONE ANOTHER. THIS SIGNING PLAN IS ALSO NOT TO COINCIDE WITHIN THE CENTER ISLAND CONSTRUCTION.

DRAWING IS NOT TO SCALE.

REVISIONS			
DATE	BY	DATE	BY

S.A.P. 02-602-09 S.P. _____ C.P. _____



NOTES:

TRAFFIC CONTROL PLAN FOR PROJECT S.A.P. 02-602-09
C.S.A.H. #2 BRIDGE RESURFACING STAGE 3.

LOCATIONS OF ALL SIGNS ARE APPROXIMATE, EXACT LOCATIONS SHALL BE DETERMINED INT THE FIELD BY THE ENGINEER.

ALL SIGNS AND BARRICADES WILL BE PROPERLY WEIGHTED WITH SAND BAGS.

ALL BARRICADE MARKINGS WILL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL TRAFFIC CONTROL DEVICES SHALL CNFORM TO THE MINNESOTA MANUAL ON UNIFROM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B', DATED SEPTEMBER, 1985.

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THIS CONSTRUCTION SIGNING PLAN IS FOR THE PLACEMENT OF THE SHOULDER CURB AND GUTTER, AND IS TO BE USED ONLY PRIOR TO OR FOLLOWING THE COMPLETION OF THE BRIDGE RESURFACING PROJECT. THE TWO DIFFERENT OPERATIONS SHALL NOT COINCIDE WITH ONE ANOTHER. THIS SIGNING PLAN IS ALSO NOT TO COINCIDE WITHIN THE CENTER ISLAND CONSTRUCTION.

DRAWING IS NOT TO SCALE.

REVISIONS			
DATE	BY	DATE	BY

S.A.P. 02-602-09 S.P. _____ C.P. _____

M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY STAGE I AND II		QUANTITY STAGE III		QUANTITY STAGE IV		M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY STAGE I AND II		QUANTITY STAGE III		QUANTITY STAGE IV	
			POST	TELSPAR	POST	TELSPAR	POST	TELSPAR				POST	TELSPAR	POST	TELSPAR	POST	TELSPAR
FLASHER W1-2 (L)	48'x48'			• 1					FLASHER R2-X6P	24'x18'			• 1				
									R2-1	24'x30'			• 1				
FLASHER W3-3	48'x48'			• 2	• 1		• 1		FLASHER W1-2 (L)	48'x48'				• 1		• 1	
									W13-1	24'x24'				• 1		• 1	
FLASHER W5-3	48'x48'		• 2						FLASHER W1-2 (R)	48'x48'				• 1		• 1	
									W13-1	24'x24'				• 1		• 1	
FLASHER W5-3	48'x48'			• 2		• 2	• 2		FLASHER W1-2 (R)	48'x48'				• 1		• 1	
									W13-1	24'x24'				• 1		• 1	
FLASHER R2-5a	24'x30'		• 1	• 1					FLASHER W1-2 (R)	48'x48'				• 1		• 1	
									W13-1	24'x24'				• 1		• 1	
FLASHER R2-6a	24'x30'		• 1	• 1					FLASHER R2-1	24'x30'			• 1			• 1	
									TYPE III (L)	8 FT.			• 1				
FLASHER R10-6	24'x30'			• 1					FLASHER R2-X6P	24'x18'			• 1				
									** W1-6	48'x24'			• 1				
X4-11	18'x18'								R2-1	24'x30'			• 1				
R4-7a	24'x30'								TYPE III (L)	8 FT.			• 1				
FLASHER R4-7a	24'x30'			• 2			• 1										
				• 2			• 1		R2-X6P (R)	24'x18'						• 32	
X4-11	18'x18'								R2-1	24'x30'						• 32	
R4-7a	24'x30'								* R2-X6P (R)	24'x18'			• 76	• 20			
									R2-1	24'x30'			• 38	• 10			
X4-11	18'x18'								R2-X6P (L)	24'x18'				• 105			
R4-7a	24'x30'			• 1		• 1	• 1		R2-1	24'x30'				• 105			
				• 1		• 1	• 1										
X4-11	18'x18'																
FLASHER R5-1	30'x30'			• 1			• 1										

M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY STAGE I AND II
'J' BARRIER S.P. #8323 G	2'x10'		• 143
STEADY BURN INSTALL ON 'J' BARRIER EVERY 50'			• 30

NOTES:

- FOR STAGE I 400' OF WHITE 4" LANE TAPE AND 36' OF 24" WHITE STOP BARS TO BE USED.
- FOR STAGE II 400' OF 4" WHITE LANE TAPE TO BE USED.
- W1-6 ARROW WAS USED ON THE BACK OF THIS TYPE III BARRICADE IN STAGE I INSTALLATION.
- LOCATIONS OF ALL SIGNS ARE APPROXIMATE, EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- ALL SIGNS AND BARRICADES WILL BE PROPERLY WEIGHTED WITH SANDBAGS.
- ALL BARRICADES WILL HAVE REFLECTIVE MATERIAL ON BOTH SIDES.
- ALL BARRICADE MARKINGS WILL BE SLANTED IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING APPENDIX 'B', DATED SEPTEMBER, 1985.
- ADDITIONS OR CHANGES TO THIS PLAN MAY BE MADE AT ANYTIME AS DETERMINED BY THE ENGINEER.
- * MOUNT W14-X7 DOWN/RIGHT BACK TO BACK ON TOP OF REBOUNDABLE DRUMS.
- ** MOUNT W1-6 (L) TO BACK OF THE TYPE III BARRICADE TO FACE SOUTHBOUND TRAFFIC.

REVISIONS			
DATE	BY	DATE	BY