

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

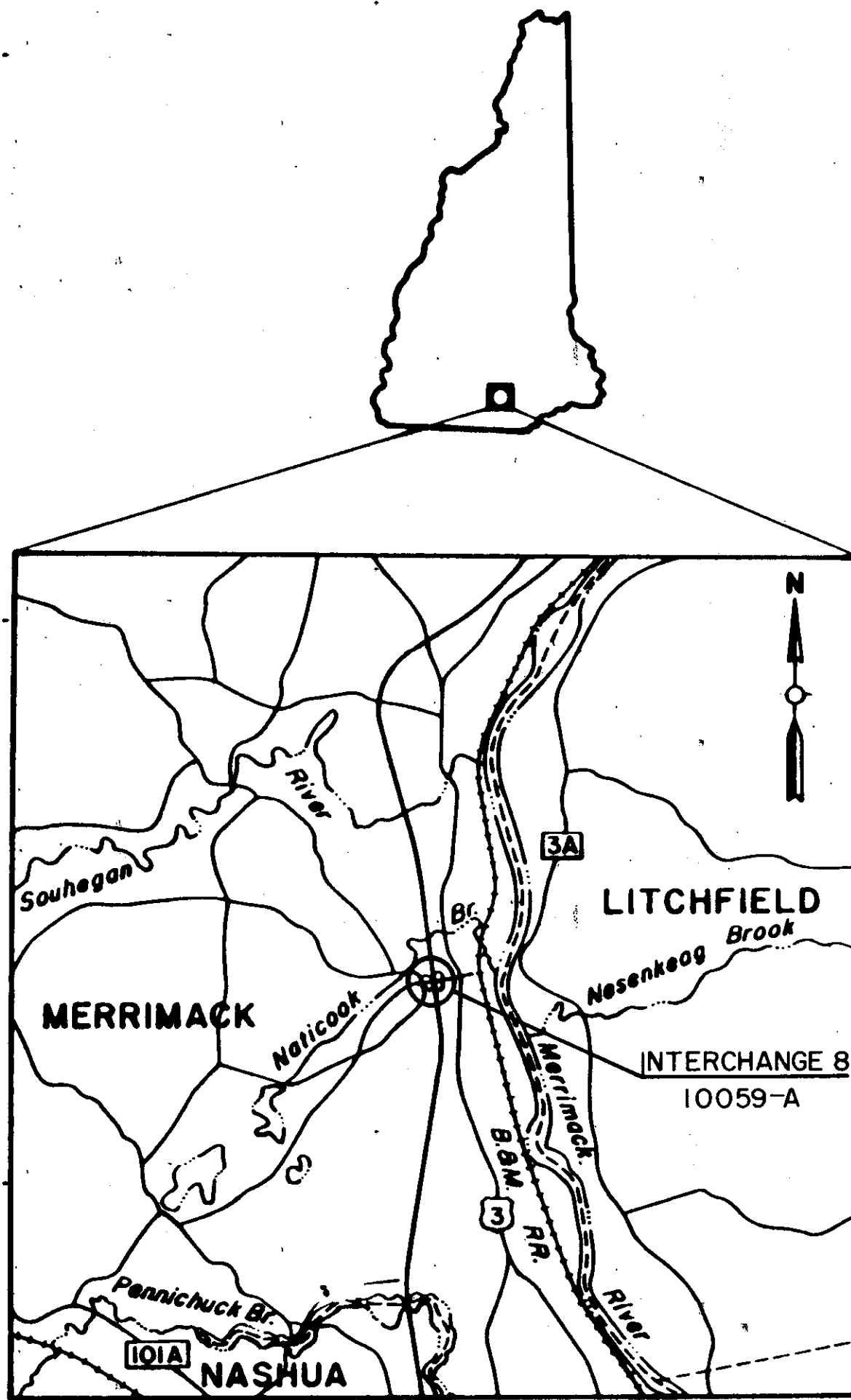
PLANS OF PROPOSED
CENTRAL NEW HAMPSHIRE TURNPIKE IMPROVEMENTS

N.H. PROJECT NO. 10059-A

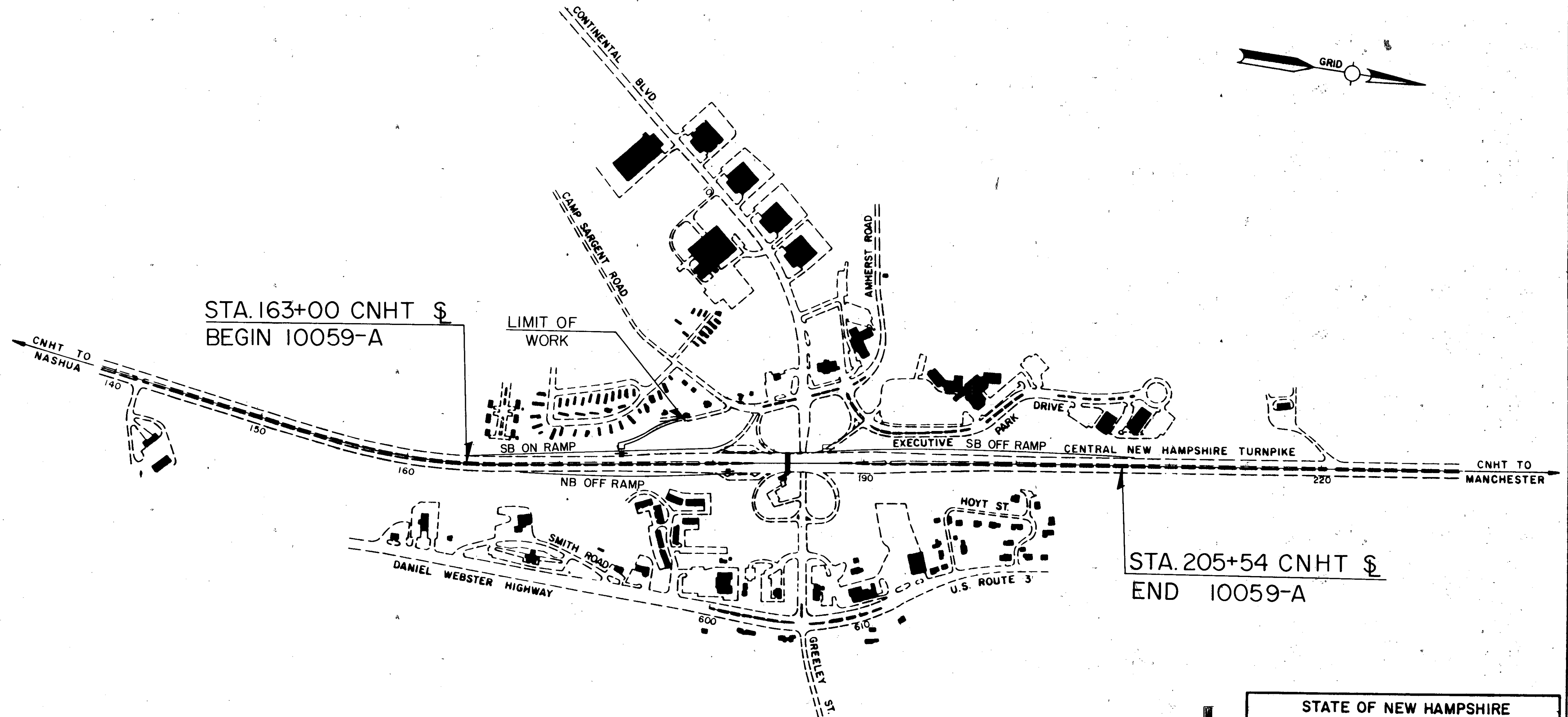
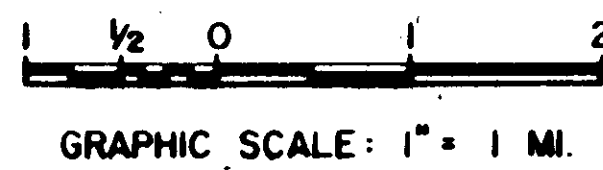
INTERCHANGE 8
TEMPORARY RAMPS & TOLL PLAZAS
(& BARRIER TOLL REMOVAL)

DESIGN DATA	
AVERAGE DAILY TRAFFIC 1987	44,000
AVERAGE DAILY TRAFFIC	—
PERCENT OF TRUCKS	3 %
DESIGN SPEED	70 MPH
LENGTH OF PROJECT	0.806 MILES

SCALES { GENERAL PLANS: 1" = 50'
PROFILES: VERT. 1" = 10', HOR. 1" = 50'
CROSS SECTIONS: VERT. 1" = 10', HOR. 1" = 10'



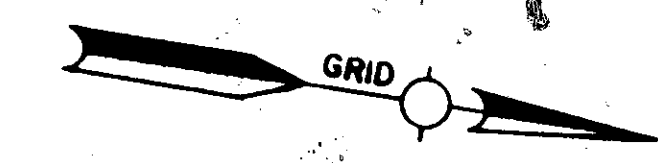
LOCATION MAP



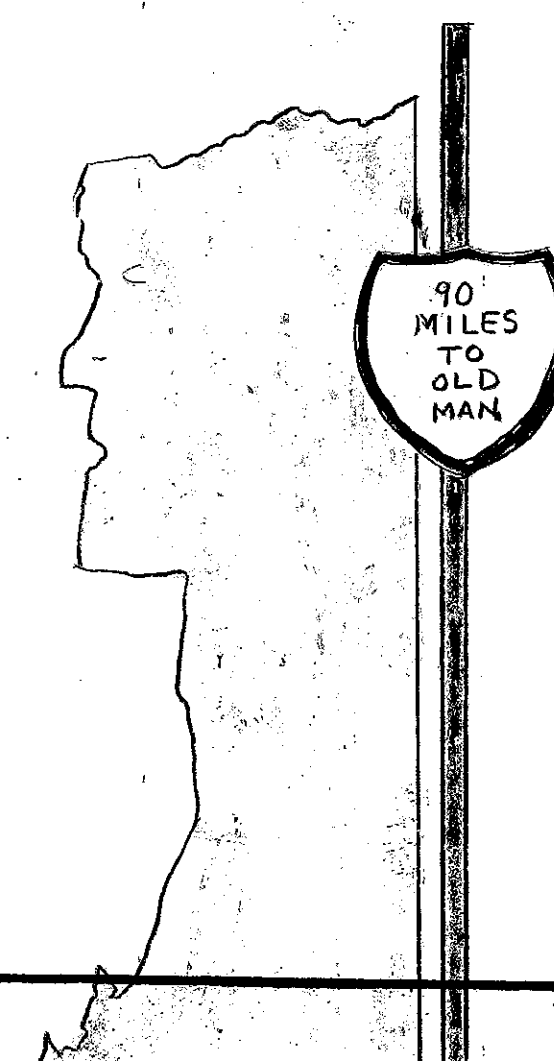
LAYOUT
SCALE: 1" = 400 FT

TOWN OF MERRIMACK
COUNTY OF HILLSBOROUGH

AS BUILT PLANS



STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION			
RECOMMENDED FOR APPROVAL			
<i>John S. Keenan</i>		7-28-88	
DIRECTOR OF PROJECT DEVELOPMENT		DATE	
APPROVED <i>William E. Sherry</i>		COMMISSIONER	
FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	1	59



DRAWN BY B. OLDENBURG
CHECKED BY
DATE 4-15-88

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE PAGE
2	INDEX OF SHEETS & GENERAL NOTES
3	INDEX OF STANDARD SHEETS & CONSTRUCTION SIGN STANDARD SHEETS
4	STANDARD SYMBOLS
5-7	TYPICAL SECTIONS OF IMPROVEMENT
8-10	SUMMARY OF QUANTITIES <i>SPECIAL USE PLANS:</i>
11	TEMP. TOLL BOOTH FOUNDATION
12,13	EXIST. TOLL PLAZA FOUNDATION DETAILS
14-16	MISC. DETAILS
17	PORTABLE CONCRETE BARRIER
18	STRONG BEAM MEDIAN BARRIER GUARD RAIL & ANCHORAGE
19	TEMPORARY EROSION CONTROL MEASURES. <i>ROADWAY PLANS:</i>
20-22	GENERAL PLANS
23,24	PROFILES
25-29	SIGNALIZATION PLANS & DETAILS <i>CROSS SECTIONS:</i>
30-53	CENTRAL N.H. TURNPIKE
54-56	SOUTHBOUND ON-RAMP
57-59	TOLL ACCESS RD.

GENERAL NOTES

- 1 THIS PROJECT TO BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS DATED 1983 AND SUPPLEMENTAL SPECIFICATIONS, CURRENT STANDARD SHEETS AND SPECIAL PROVISIONS ATTACHED TO THE PROPOSAL.
- 2 ADJUSTING, ALTERING OR RELOCATING THE PROPERTY OF ANY PUBLIC UTILITY SHALL BE DONE BY THE OWNER, NOT A PART OF THIS CONTRACT. THE CONTRACTOR SHALL COOPERATE WITH THE OWNER IN THE PERFORMANCE OF THE WORK.
- 3 HIGH TENSION OVERHEAD TRANSMISSION LINES ARE LOCATED THROUGHOUT THE PROJECT WITH CROSSINGS AT VARIOUS LOCATIONS AND RUNNING ALONG THE ROAD THROUGHOUT THE PROJECT EVEN ON REGULAR POLES. THE CONTRACTOR IS ADVISED THAT EXTREME CAUTION WILL BE REQUIRED IN THE OPERATION OF EQUIPMENT, ESPECIALLY CRANES AND PILE DRIVING EQUIPMENT.
- 4 ALL EXISTING UTILITY POLES WILL BE RELOCATED BY OTHERS.
- 5 THE LOCATION OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. THE EXACT LOCATION SHOULD BE ESTABLISHED IN THE FIELD BY THE UTILITY COMPANY PRIOR TO ANY EXCAVATION OR POST DRIVING.
- 6 DRIVES SHALL BE REPLACED IN KIND EXCEPT AT THOSE LOCATIONS WHERE DRIVES HAVE BEEN STEEPENED TO THE EXTENT THAT A MORE STABLE SURFACE IS WARRANTED. ALL GRAVEL DRIVES TO RESIDENCES AND OTHER GRAVEL DRIVES WHEN ORDERED, SHALL BE CONSTRUCTED WITH A PAVED APRON ADJACENT TO THE SHOULDER.
- 7 TOPSOIL SHALL BE REMOVED FOR ITS TOTAL DEPTH WITHIN THE LIMITS OF THE SLOPE LINES. UNLESS OTHERWISE DIRECTED, THE TOPSOIL SHALL BE STOCKPILED AND USED IN ITS ENTIRETY UNDER SECTION 641 - LOAM AND/OR SECTION 647 - HUMUS.
- 8 UNSUITABLE MATERIAL, ROOTS AND STUMPS WITHIN THE LIMITS OF THE ROAD BED, SHALL BE REMOVED AS ORDERED.
- 9 MUCK SHALL BE REMOVED BY EXCAVATION UNDER ITEM (203.1), (203.4), OR BY DISPLACEMENT, AS ORDERED.
- 10 THE SUBGRADE SHALL BE SCARIFIED TO ASSURE THAT ALL BOULDERS AND COBBLES OVER 6 INCHES ARE REMOVED WITHIN 36 INCHES OF FINISHED GRADE. THIS WORK AND RECOMPACTION OF THE SUBGRADE WILL BE PAID UNDER ITEM 212.1 - SCARIFYING.
- 11 EXISTING LEDGE AND BOULDER OUTCROPS ARE TO BE REMOVED AND/OR BERMED AS SHOWN OR AS ORDERED.
- 12 HUMUS SHALL BE APPLIED TO ALL EARTH SLOPES NOT LOAMED TO A NOMINAL DEPTH OF 3-1/2 INCHES (471 C.Y./ACRE), UNLESS OTHERWISE ORDERED.
- 13 ALL NEW EARTH SLOPES SHALL BE MULCHED.
- 14 THE SLOPES AROUND EXTENDED PIPES SHALL BE FLATTENED AND GRADED, AS SHOWN OR ORDERED.
- 15 ASPHALT SURFACE TREATMENT INCLUDING SAND COVER SHALL BE APPLIED TO THE TRAVELED WAY AS A PRIME COAT AT THE RATE OF 0.50 GALLONS PER SQUARE YARD IN ONE APPLICATION, OR AS ORDERED.
- 16 ASPHALT SURFACE TREATMENT INCLUDING SAND COVER SHALL BE APPLIED TO THE SHOULDER AS A PRIME COAT AT THE RATE OF 0.50 GALLONS PER SQUARE YARD IN ONE APPLICATION, OR AS ORDERED.
- 17 THE PAVEMENT OVERLAY SHALL BE WARPED TO MATCH EXISTING CATCH BASINS, DROP INLETS, AND/OR SIMILAR STRUCTURES.
- 18 EXISTING CONCRETE PAVEMENT REMOVAL WILL BE PAID UNDER ITEM 203.2 - ROCK EXCAVATION (___C.Y./100L.F.). THE BITUMINOUS PAVEMENT ABOVE THE CONCRETE WILL NOT BE PAID UNDER ITEM 203.2.
- 19 RESTORE SUPERELEVATION ON EXISTING CURVES BY THE USE OF A PAVEMENT LEVELING COURSE AS INDICATED ON PLANS OR AS ORDERED.
- 20 ALL CRACKS IN THE PAVEMENT MEASURING 1/4 INCH OR MORE IN WIDTH, OR AS ORDERED, SHALL BE TREATED WITH CRACK FILLER WITHIN THE LIMITS DESIGNATED ON THE PLANS.
- 21 ADJUSTMENT OF CATCH BASINS AND DROP INLETS OR SIMILAR STRUCTURES TO THE NEW PAVEMENT GRADE SHALL BE DONE AS ORDERED. PAYMENT WILL BE UNDER ITEM 604.45 - ADJUSTING CATCH BASIN AND DROP INLET GRATES AND FRAMES SET BY OTHERS.
- 22 EXISTING ANCHORS FOR CABLE GUARD RAIL SHALL BE DUG UP AND SALVAGED INTACT TO THE STATE.
- 23 ALL GUARD RAIL SHALL BE SET AT A 30 INCH RAIL HEIGHT BASED ON THE PAVEMENT OVERLAY, UNLESS OTHERWISE SHOWN OR ORDERED.
- 24 EXISTING DELINEATORS AND WITNESS MARKERS THAT ARE DISTURBED SHALL BE RESET. THIS WORK WILL BE SUBSIDIARY. ADDITIONAL DELINEATORS ORDERED WILL BE PAID UNDER APPROPRIATE ITEMS OF THE CONTRACT.
- 25 NO EXISTING MONUMENTS, BOUNDS, OR BENCHMARKS SHALL BE DISTURBED WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION.
- 26 UNPROTECTED PROJECT MARKERS SHALL BE REMOVED OR SET BACK TO 30 FEET FROM THE TRAVELED WAY AS ORDERED. THIS WORK WILL BE SUBSIDIARY.
- 27 CLEARING AND GRUBBING ON THIS PROJECT WILL BE SUBSIDIARY.
- 28 ALL WORK ON THIS PROJECT, UNLESS OTHERWISE SHOWN ON THE PLANS OR ORDERED, SHALL BE CONSTRUCTED WITHIN THE EXISTING RIGHT-OF-WAY.
- 29 COORDINATES FOR THIS PROJECT ARE (_____) AND THE BEARING SHOWN ARE (_____).

THE FOLLOWING GENERAL NOTES WILL BE USED ON THIS PROJECT:

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32	33	34	35	36

STATE OF NEW HAMPSHIRE			
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN			
INDEX OF SHEETS AND GENERAL NOTES			
FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	2	59

REVISIONS AFTER PROPOSAL
 STATION
 STATION
 DATE
 NUMBER
 NOTEBOOKS
 BOOK PAGE
 BOOK PAGE
 BOOK PAGE
 EXISTING DETAIL
 PROPOSED DESIGN
 SHEET CHECKED
 AS BUILT DETAILS

REVISIONS AFTER PROPOSAL
 STATION
 STATION
 DATE
 NUMBER
 NOTE BOOKS
 PAGE
 PAGE
 PAGE
 BOOK
 BOOK
 BOOK
 DATE
 DATE
 DATE
 DATE
 AS BUILT DETAILS

STANDARD SHEETS				
STANDARD	NO. 1	CONCRETE AND M.R.M. HEADWALLS	REVISED	MARCH 24, 1977
STANDARD	NO. 1-A	CONCRETE AND M.R.M. HEADWALLS	REVISED	MAY 8, 1970
STANDARD	NO. 2	STEEL ARCH PIPES, SLOPE PAVING, UNDERDRAIN HEADWALL	REVISED	MARCH 1, 1983
STANDARD	NO. 2-A	CORRUGATED ALUMINUM PIPE, PIPE ARCH, UNDERDRAIN FLUSHING BASIN	REVISED	DECEMBER 20, 1982
STANDARD	NO. 3	CATCH BASINS, DROP INLETS	REVISED	OCTOBER 17, 1983
STANDARD	NO. 3-A	GRATES FOR C.B.'S & D.I.'S	REVISED	OCTOBER 17, 1983
STANDARD	NO. 3-B	CATCH BASINS, DROP INLETS, TRAP	REVISED	OCTOBER 17, 1983
STANDARD	NO. 4	CURBING	REVISED	APRIL 21, 1982
STANDARD	NO. 5	CONCRETE BOUND, STEPS	REVISED	NOVEMBER 1, 1984
STANDARD	NO. 5-A	GUTTERS, SLUICE, SLOPES, MUCK EXCAVATION	REVISED	FEBRUARY 26, 1975
STANDARD	NO. 6	BEAM GUARD RAIL	REVISED	JUNE 11, 1981
STANDARD	NO. 6-A	BEAM GUARD RAIL	REVISED	DECEMBER 10, 1981
STANDARD	NO. 7	BEAM GUARD RAIL	REVISED	MAY 15, 1985
STANDARD	NO. 8	3 CABLE GUARD RAIL	REVISED	MARCH 24, 1977
STANDARD	NO. 8-A	3 CABLE GUARD RAIL	REVISED	DECEMBER 10, 1981
STANDARD	NO. 9	WOVEN WIRE & CHAIN LINK FENCE	REVISED	AUGUST 2, 1977
STANDARD	NO. 9-A	STEEL WITNESS MARKER, STEEL SIGN POST, DELINEATOR POST	REVISED	MAY 15, 1985
STANDARD	NO. 10	SIGNAL BASE, PULL BOX, CONDUIT DETAILS, HANDHOLE, FOUND. FOR CONT. CABINET	REVISED	MAY 15, 1985
STANDARD	NO. 10-A	LENS FOR TURNING MOVEMENTS, LIGHT POLE BASE, DETECTORS, PULL BOX	REVISED	NOVEMBER 1, 1984
STANDARD	NO. 11	END SECTIONS FOR PIPES	REVISED	MAY 21, 1975
STANDARD	NO. 12	DELINEATORS FOR GUARD RAIL, MEDIAN BARRIERS	REVISED	MAY 15, 1985
STANDARD	NO. 12-A	DELINEATOR SPACING FOR RAMP AND LOOPS	REVISED	MAY 15, 1985
STANDARD	NO. 13	URBAN MARKING AND SIGN POSTING	REVISED	MARCH 1, 1983
STANDARD	NO. 14	RUBBISH CONTAINER, FIREPLACE, TABLE, SHELTER	REVISED	AUGUST 1, 1969
STANDARD	NO. 15	FIREPLACE, DRINKING FOUNTAIN, WATER PIPE DRAINS, PICNIC SITES	REVISED	MARCH 24, 1977
STANDARD	NO. 16	SIDEWALK RAMPS, CONCRETE ISLAND BLOCKOUTS	REVISED	MAY 15, 1985

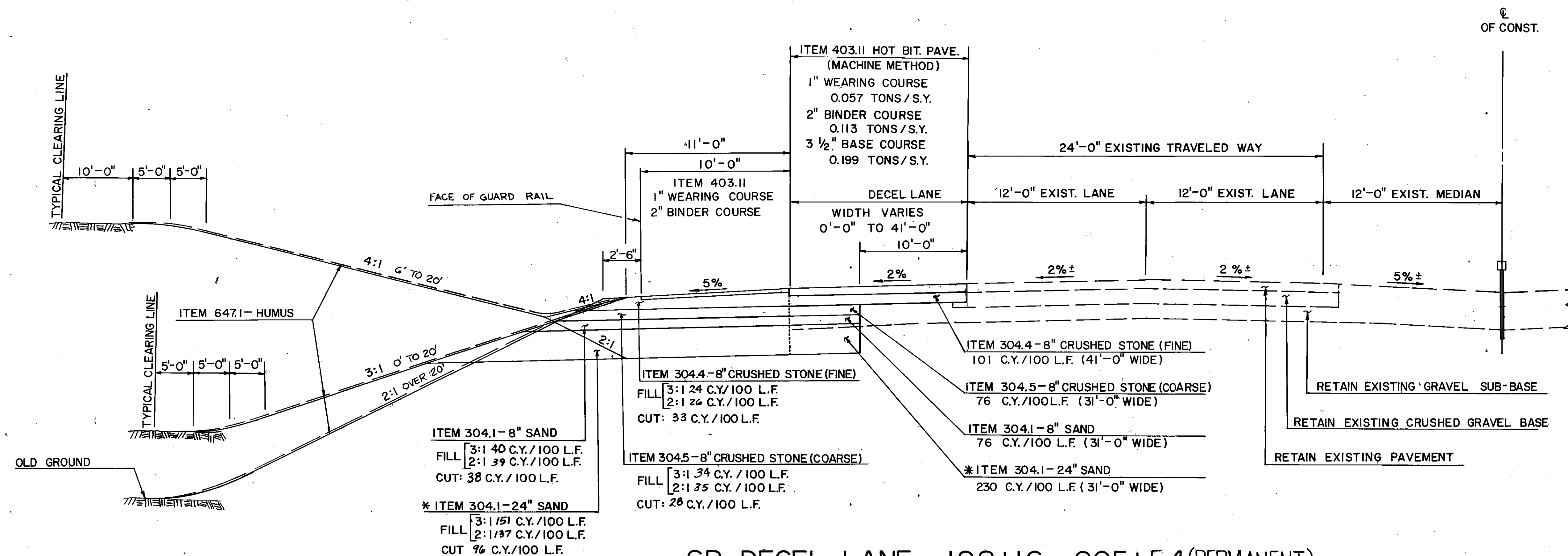
CONSTRUCTION SIGN STANDARD SHEETS				
CS	NO. 1	GENERAL NOTES	REVISED	MAY 15, 1985
CS	NO. 2	BARRICADES, REMOVAL OF PAVEMENT MARKING, CONES, DRUMS	REVISED	MAY 15, 1985
CS	NO. 3	PANELS & DELINEATORS, LIGHTING DEVICES, SIGN PADDLE, HAZARD MARKER	REVISED	MAY 15, 1985
CS	NO. 4	TRAFFIC CONTROL PROCEDURES, HAUL ROADS, BLASTING ZONES	REVISED	MAY 15, 1985
CS	NO. 5	TYPICAL LAYOUT - PERMANENT CONSTRUCTION SIGNING	REVISED	MAY 15, 1985
CS	NO. 6	SIGNS	REVISED	MARCH 1, 1983
CS	NO. 7	SIGNS	REVISED	MARCH 1, 1983
CS	NO. 8	SIGNS	REVISED	MAY 15, 1985
CS	NO. 9	TWO-WAY TRAFFIC LANE CLOSURE AND SHOULDER WORK	REVISED	MAY 15, 1985
CS	NO. 10	2 LANE DIVIDED, 2 LANE CLOSURE - BREAKDOWN LANE	REVISED	MAY 15, 1985
CS	NO. 11	DETOUR FOR 2 LANE CLOSURE, 2 LANE DIVIDED - BRIDGEWORK	REVISED	MAY 15, 1985
CS	NO. 12	4-LANE DIVIDED - 2 LANE CLOSURE UTILIZING CROSSOVER	REVISED	MAY 15, 1985
CS	NO. 13	MULTI-LANE CLOSURE	REVISED	MAY 15, 1985

THE FOLLOWING STANDARD SHEETS WILL BE USED ON THIS PROJECT:					THE FOLLOWING CONSTRUCTION SIGN STANDARD SHEETS WILL BE USED ON THIS PROJECT:							
6	6-A	7	3	3-A	3-B	4	5-A	CS-1	CS-2	CS-3	CS-4	CS-5
12	12-A			9-A	10	10-A	11	CS-6	CS-7	CS-8	CS-9	CS-10
										CS-13		

STATE OF NEW HAMPSHIRE			
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN			
STANDARD SHEETS			
FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	3	59

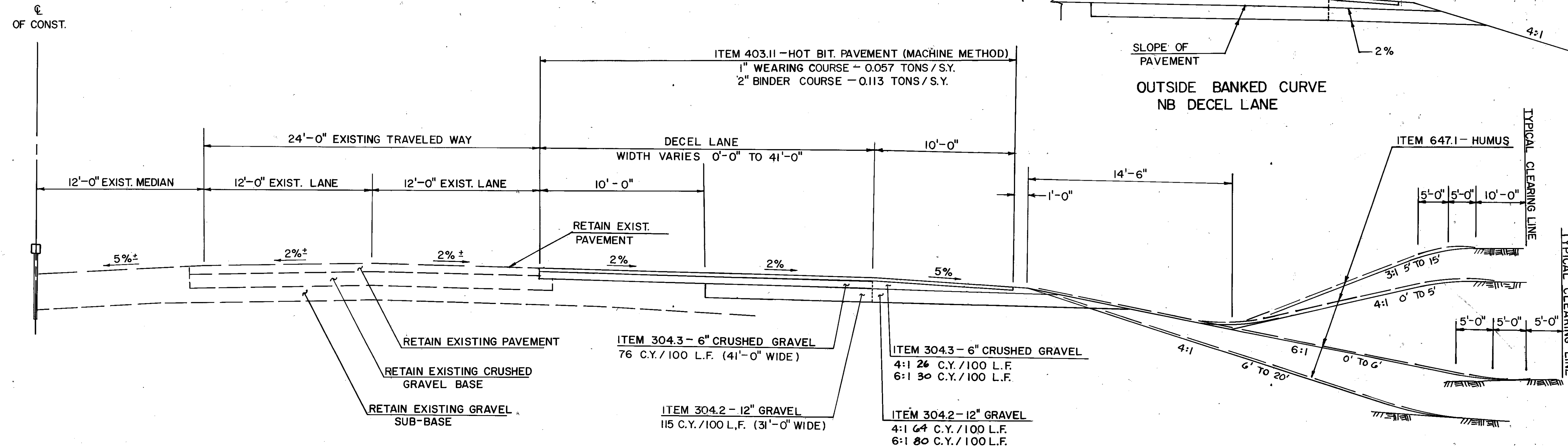
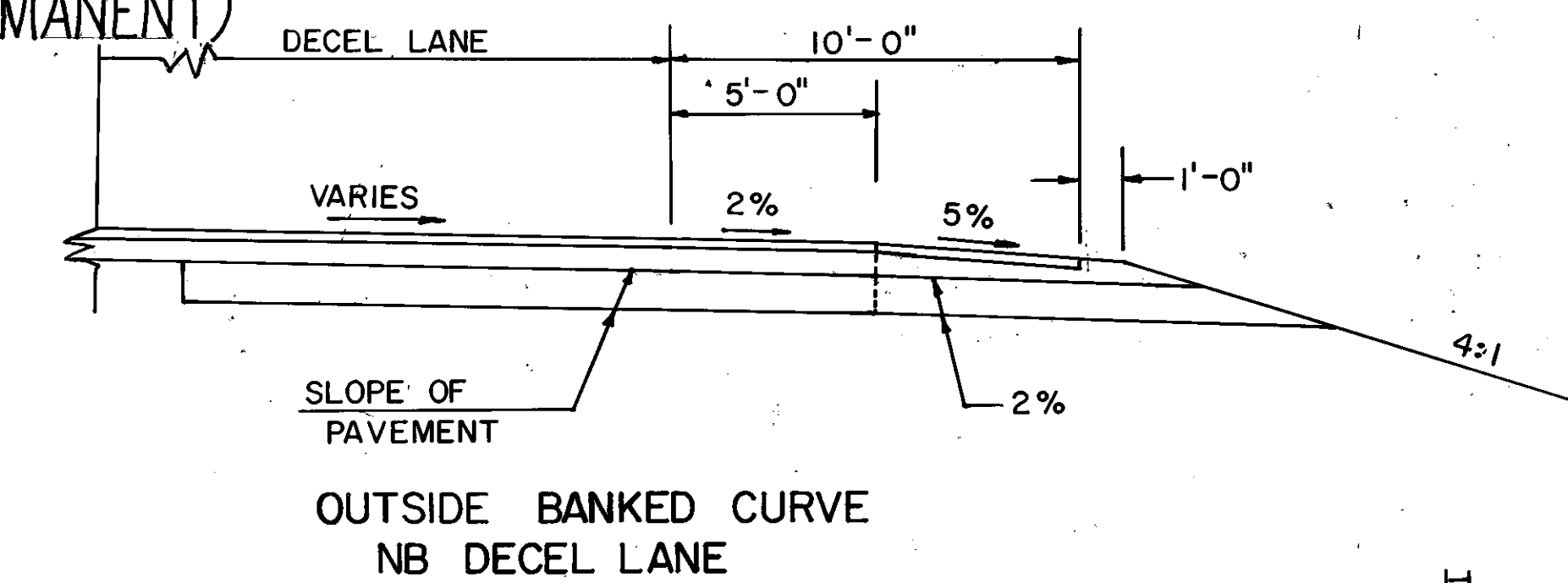
TYPICAL SECTION OF IMPROVEMENT

NOT TO SCALE



SB DECEL LANE 198+16 - 205+54 (PERMANENT)

* NOTE: 24" SAND COURSE TO BE CONSTRUCTED IN 6" LAYERS AT LOCATIONS SHOWN ON THE CROSS SECTIONS OR AS ORDERED BY THE ENGINEER.



NB DECEL LANE 165+55.74 - 173+00 (TEMPORARY)

CENTRAL NEW HAMPSHIRE TURNPIKE

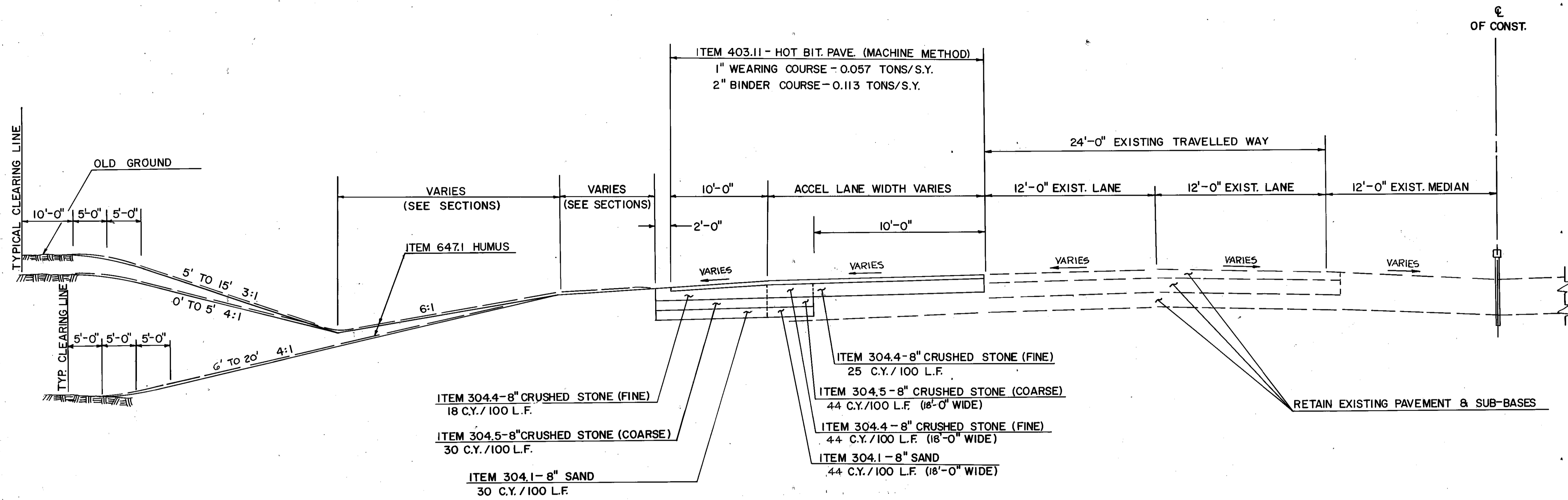
TYPICAL SECTION

FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	5	59

REVISIONS AFTER PROPOSAL		STATION		DATE		NUMBER		NOTEBOOKS		PROPOSED DESIGN		DATE	
DESCRIPTION								BOOK	PAGE	BOOK	DATE	BOOK	DATE
EXISTING DETAIL													DATE
PROPOSED DESIGN													DATE
SHEET CHECKED													DATE
AS BUILT DETAILS													DATE

TYPICAL SECTION OF IMPROVEMENT

NOT TO SCALE



SOUTHBOUND ACCEL LANE (TEMPORARY)
 STA. 163+00 - 166+00

REVISIONS AFTER PROPOSAL	DESCRIPTION
STATION	
STATION	
DATE	
NUMBER	
NOTEBOOKS	
BOOK	PAGE
BOOK	PAGE
BOOK	PAGE
EXISTING DETAIL	DATE
PROPOSED DESIGN	DATE
SHEET CHECKED	DATE
AS BUILT DETAILS	DATE

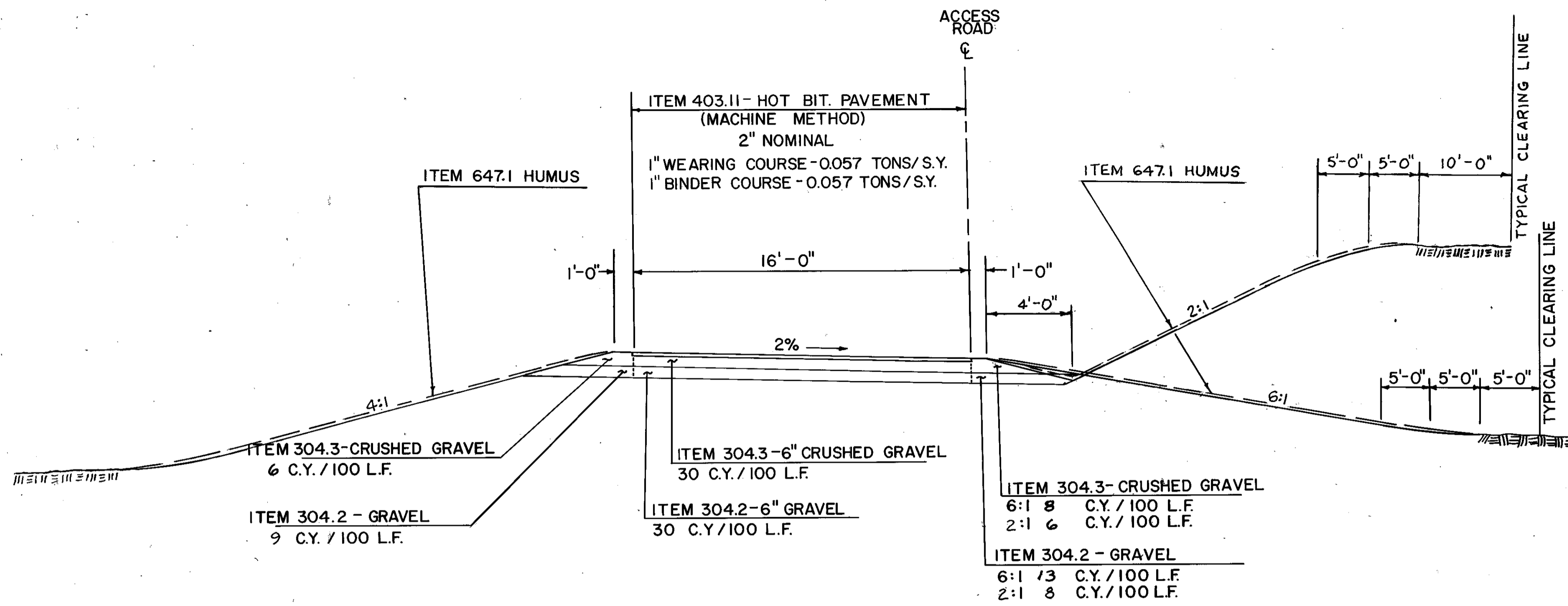
CENTRAL NEW HAMPSHIRE TURNPIKE

TYPICAL SECTION

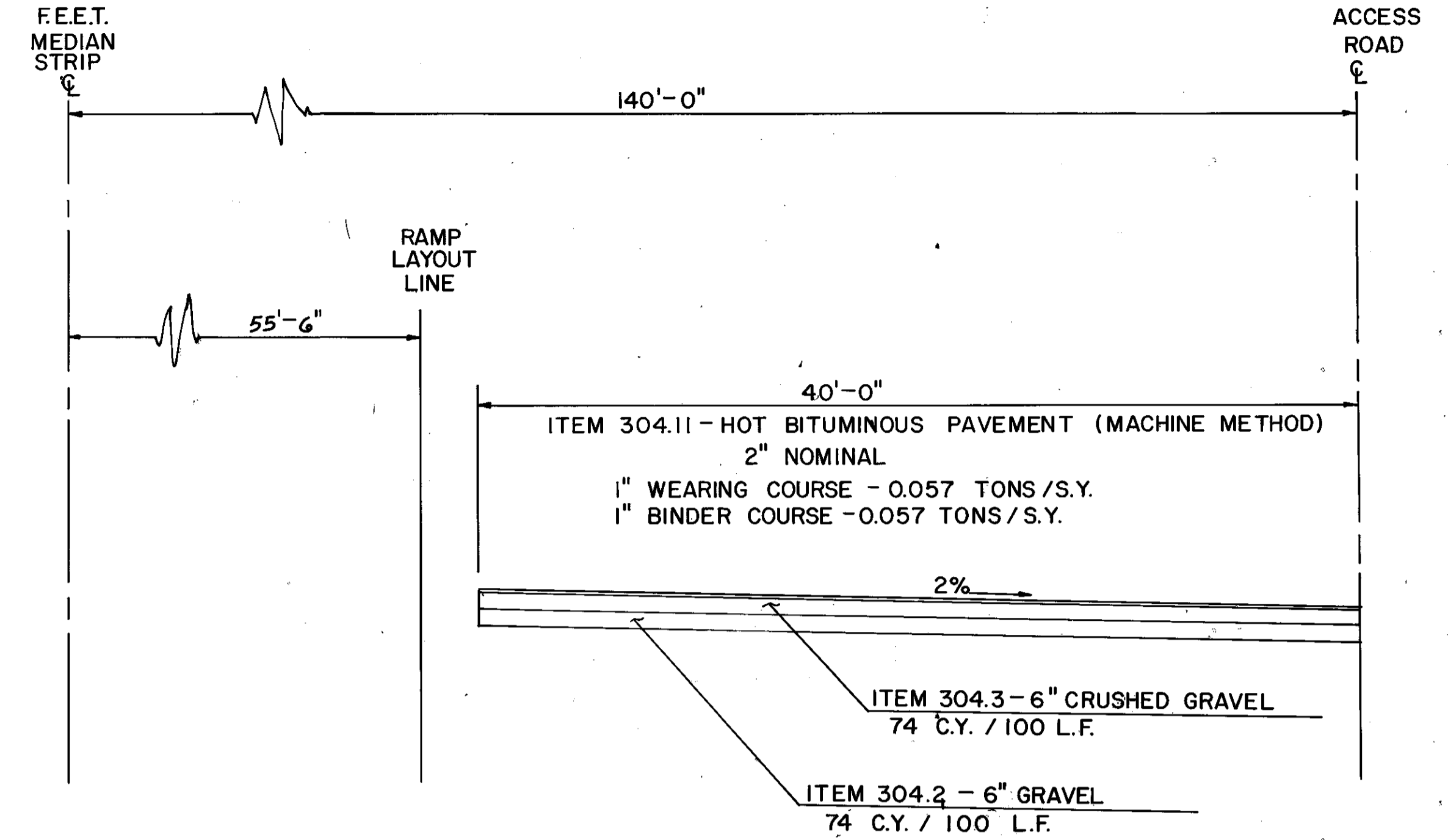
FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	6	59

TYPICAL SECTION OF IMPROVEMENT

NOT TO SCALE

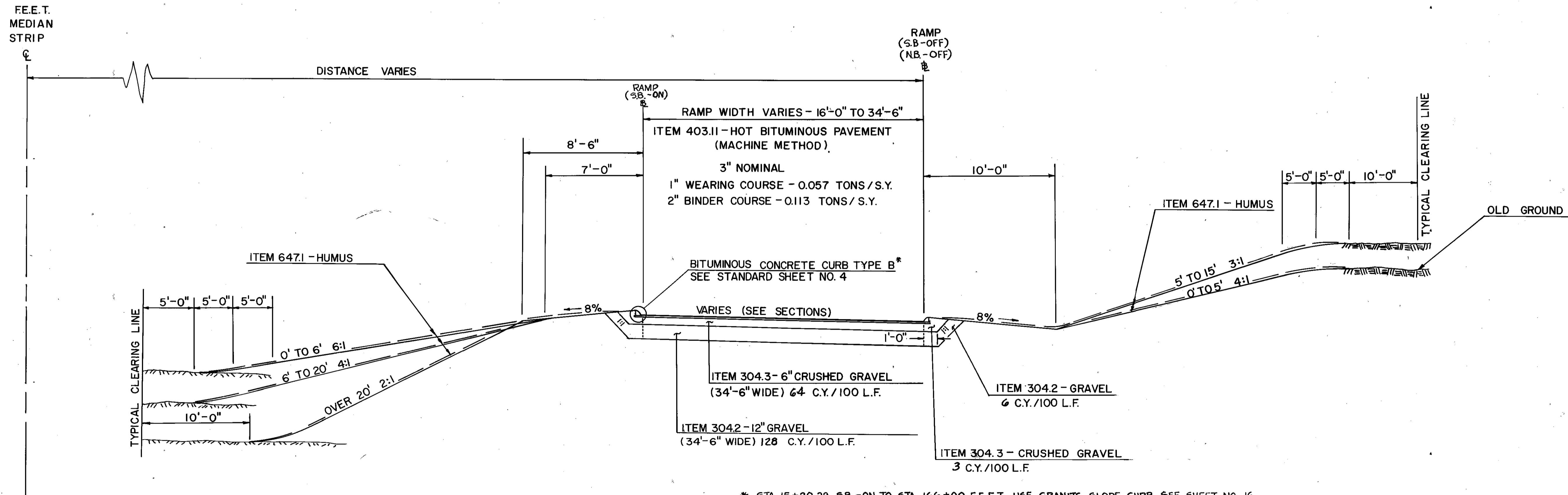


TOLL PLAZA ACCESS ROAD (TEMPORARY)



NOTE: SEE TOLL PLAZA ACCESS ROAD TYPICAL FOR SLOPE TREATMENT BEYOND EDGE OF PAVEMENT.

TOLL PLAZA PARKING LOT (TEMPORARY)



* STA. 15+20.29 SB.-ON TO STA. 166+00 F.E.E.T. USE GRANITE SLOPE CURB, SEE SHEET NO. 16.

RAMPS { NB OFF STA. 273+00.83-283+87.34
 SB ON STA. 1+00-18+70.31
 SB OFF STA. 100+00-108+66.76 } (TEMPORARY)

TYPICAL SECTION

FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
10059-A		7	59

REVISIONS AFTER PROPOSAL	STATION	DATE	NUMBER	DESCRIPTION

EXISTING DETAIL	DATE

PROPOSED DESIGN	DATE
B. OLDENBURG	5-7-88

AS BUILT DETAILS	DATE

NOTEBOOKS	PAGE
BOOK	PAGE
BOOK	PAGE
BOOK	PAGE

SUMMARY OF QUANTITIES (ESTIMATED)
THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

* NOT AN ITEM TOTAL

REVISIONS AFTER PROPOSAL
 STATION
 STATION
 DATE
 NUMBER
 DATE
 DATE
 CHECKED
 CHECKED
 CROSS - CHECKED

INCIDENTAL ITEMS			
ITEM NO.	ITEM	UNIT	TOTAL
202.79	REM. OF FENCE GATE & SUP. FOR STOP	U	1
202.9	REM. EXIST. LT. POLE & BASE FOR STOP	EA	22
202.95	REM. OF TOLL PLAZA AND CANOPY	U	1
214	FINE GRADING	U	1
616.101	TRAFFIC SIGNALS	U	1
618.61	UNIFORMED OFFICERS WITH VEHICLE	HR	2,000
618.7	FLAGGERS	HR	1,500
619.6	TRUCK MOUNTED ATTENUATOR	EA	2
619.1	MAINT. OF TRAF. INCL. DUST LAYING	U	1
608.12	2" BITUMINOUS SIDEWALK	SY	100
621.12	REFL. MEDIAN BARRIER DELIN.(YEL.)	EA	50
621.21	REFL. BEAM GR. DELIN. (WHITE)	EA	20
621.31	SINGLE DELIN. WITH POST(WHITE)	EA	40
621.32	SINGLE DELIN. W/ POST (YELLOW)	EA	25
621.321	DOUBLE DELIN. W/ POST (WHITE)	EA	40
622.1	STEEL WITNESS MARKER	EA	20
632.9	REM. EXIST. PAVEMENT MARKING	LF	3,000
660.1	TOLL BOOTH ISLANDS	U	1
692	MOBILIZATION	U	1
698.1	FIELD OFFICES	EA	1
698.2	PHYSICAL TESTING LABORATORY	EA	1
699	TEMP. PROJECT WATER POLL. CONT.	\$	1
1008	ALTERATIONS & ADDITIONS AS NEEDED	\$	1

CONSTRUCTION SIGNS AND WARNING DEVICES (MINIMUM REQUIREMENTS)									
ITEM NO. 6192 TOTAL = 1 UNIT									
SIGN NO.	DESCRIPTION	SIZE	SQ. FT.	NO. REQ.	TOTAL AREA	POSTS	EASELS	REMARKS	
G20-2	END CONSTRUCTION	2'x5'	10	8	80	16			
R11-2	ROAD CLOSED	2.5'x4'	10	4	40				
R200-S	UNAUTHORIZED TRAVEL PROHIB.	2'x4'	8	4	32				
W1-3L	REVERSE TURN LEFT (90° ARROW)	4'x4'	16	4	64	8			
W1-3R	REVERSE TURN RT. (90° ARROW)	4'x4'	16	4	64	8			
W1-6	ONE WAY ARROW →	2'x4'	8	6	48				
W1-B	CHEVRON	2'x2.5'	5	30	150	30			
W4-2L	LANE ENDS SYMBOL (LEFT)	4'x4'	16	4	64		4		
W4-2R	LANE ENDS SYMBOL (RIGHT)	4'x4'	16	4	64		4		
W8-1	BUMP	4'x4'	16	4	64		4		
W9-1L	LEFT LANE ENDS	4'x4'	16	4	64		4		
W9-1R	RIGHT LANE ENDS	4'x4'	16	4	64		4		
W9-2L	LANE ENDS MERGE LEFT	4'x4'	16	4	64		4		
W9-2R	LANE ENDS MERGE RIGHT	4'x4'	16	4	64		4		
W13-1	45 M.P.H.	2'x2'	4	8	32				
W20-1a	ROAD CONSTRUCTION AHEAD	4'x4'	16	8	128	16			
W20-1c	ROAD CONSTRUCTION 1000 FT.	4'x4'	16	8	128	16			
W20-1d	ROAD CONSTRUCTION 1500 FT.	4'x4'	16	4	64	8			
W20-1e	ROAD CONSTRUCTION 1/2 MI.	4'x4'	16	4	64	8			
W20-1f	ROAD CONSTRUCTION 1 MILE	4'x4'	16	4	64	8			
W20-2C	DETOUR 1000 FT.	4'x4'	16	4	64	8			
W20-5a	RIGHT (LEFT) LANE CLOSED AHD	4'x4'	16	8	128		8		
W20-7a	FLAGGER AHEAD	4'x4'	16	8	128		8		
W20-9	BE PREPARED TO STOP	4'x4'	16	6	96		6		
	BARRICADES: TYPE II			50					
	TYPE III			10					
	WARNING LIGHTS: TYPE C (STEADY BURN)			50					
	DELINEATORS: VP-1 (8" x 24")			50					
	TRAFFIC CONES: 2B" ORANGE			100					
	ARROW BOARD: DIETZ OR EQUAL			2					
	SIGN PADDLES			6					
	BARRELS: PLASTIC			50					
	RAISED PAVEMENT MARKERS			50					
	VARIABLE MESSAGE BOARD			2					

▲ NOTE: ALL SIGNING MOUNTED ON POSTS SHALL BE CONSIDERED PERMANENT CONTROLS.

CLEARING AND GRUBBING			
ITEM NO.	201.1 CLEARING AND GRUBBING	UNIT	TOTAL
		ACRE	
THE AREAS LISTED BELOW ARE SHOWN ON THE PLAN SHEETS BY SHADING AND LETTER ID'S			
LOCATION DESIGN'D AREAS			
SB ON RAMP			
163+00 - 178+50, LT.-MS. &	A	2.11	
3+00 - 4+00, RT.-S.B.O.W.	B	0.07	
0+85 - 2+00, RT.-S.B.O.W.	C	0.04	
SB OFF RAMP			
189+55 - 199+80, LT.-MS. &	D	0.34	
200+75 - 205+59, RT.-S.B.O.W.	E	0.76	
NB OFF RAMP			
166+15 - 181+15, RT.-MS. &	F	0.89	
SUB-TOTAL		4.21	
ROUNDING		0.79	
TOTAL		5.00	

GUARD RAIL AND BARRIER											
ITEM NO.	202.7	606.140	606.146	606.147	606.221	606.831	606.417	606.91	606.91147	678.1	678.19
	REMOVAL OF GUARD RAIL	BEAM GUARD RAIL (STANDARD SECTION) GR-140	BEAM GUARD RAIL (TERMINAL UNIT, TYPE F) GR-146	BEAM GUARD RAIL (TERMINAL UNIT, TYPE G) GR-147	STRONG BEAM GUARD RAIL GR-221	REMOVING ANCHORAGES FOR STRONG BEAM GUARD RAIL	PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL	RESETTING OR SETTING GUARD RAIL	RESET BEAM GUARD RAIL (TERM. UNIT TYPE GGR-147)	IMPACT BARRIER SYSTEM (INERTIAL - SAND FILLED)	FURNISH IMPACT BAR. SYSTEM (INERTIAL - SAND FILLED)
	L.F.	L.F.	UNIT	UNIT	L.F.	EA	L.F.	L.F.	UNIT	UNIT	UNIT
SB OFF RAMP - 110+65-111+65, RT.			1								
MAINLINE - 181+50-185+50, RT.			1		1800		2400		1		
176+50-194+50, M.S. &							1050				
169+50-193+50, LT.											
177+50-188+00, RT.											
169+26-169+50, RT.											
193+50-193+74, LT.								500			
200+50-201+00, LT.											
201+00-206+00, LT.											
176+75 &											
194+25 &											
SUB-TOTAL			2		1800	2	3450	500	1	2	1
ROUNDING					200		550				
TOTAL			2		2000	2	4000	500	1	2	1

SUMMARY OF QUANTITIES (ESTIMATED)
THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

* NOT AN ITEM TOTAL

SURFACING MATERIALS

ITEM NO.	304.1	304.2	304.3	304.4	304.5	403.11	403.12	609.34	403.89
ITEM	SAND	GRAVEL	CRUSHED GRAVEL	CRUSHED STONE BASE COURSE FINE GRADATION	CRUSHED STONE BASE COURSE COARSE GRADATION	BITUMINOUS PAVEMENT MACHINE METHOD	BITUMINOUS PAVEMENT HAND METHOD	REINFORCED CONCRETE SIDEWALK	COLD WEATHER PAVING
UNIT	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	TON	TON	S.Y.	TON
TURNPIKE MAINLINE									
SOUTHBOUND ACCEL LANE	195			233	195	200			
ON RAMP		2032	1039			953		146	
DECEL LANE	461			568	412	748			
EXTRA SAND - 24" OFF RAMP	1424								
		532	271			365		27	
NORTHBOUND DECEL LANE OFF RAMP		791	485			421			
		1140	575			578		27	
EXISTING TOLL PLAZA PATCH CURBED ISLAND PATCH				291					85
PAVED RAMP				67					99
TOLL ACCESS ROAD		11	187			96	4		
		210							
SUB-TOTAL	2080	4716	2557	1159	607	3361	13	200	184
ROUNDING	120	284	143	91	43	139	2	20	16
TOTAL	2200	5000	2700	1250	650	3500	15	220	200

WORK TO BE DONE BY OTHERS

NEW ENGLAND TELEPHONE - REMOVAL OF EXISTING TELEPHONE BOOTHS

SUBSIDIARY ITEMS

ITEM	SUBSID TO:
PLUG ABANDONED PIPES	603
APPLY WATERPROOF MEMBRANE TO BRIDGE STRUCTURE IN ISLAND REMOVAL AREAS	202.95
REMOVE STRONG BEAM G.R. TERM. UNITS	606.831
CONNECT PROPOSED G.R. TO EXIST. G.R.	606.

NOTE: THIS LIST OF SUBSIDIARY WORK SHOULD NOT BE CONSIDERED TO BE A COMPLETE LIST OF SUBSIDIARY WORK PRESENT IN THE PROJECT. REFER ALSO TO THE PLANS, PROPOSAL, SPECIAL PROVISIONS, AND STANDARD SPECIFICATIONS.

LANDSCAPING AND SLOPE PROTECTION

ITEM NO.	642.	643.12	643.22	644.44	645.11	645.51	647.1
ITEM	LIMESTONE	FERTILIZER FOR INITIAL APPLICATION	FERTILIZER FOR REFERTILIZATION	SLOPE SEED TYPE 44	MULCH	HAY BALES FOR TEMP EROSION CONTROL	HUMUS
UNIT	TON	TON	TON	LB.	ACRE	EACH	C.Y.
LANDSCAPING							
SLOPE PROTECTION	10.2	2.2	2.2	305.	5.1	200	2280.
SUB-TOTAL	10.2	2.2	2.2	305.	5.1	200	2280.
ROUNDING	0.8	0.8	0.8	20.	0.4	-	220.
TOTAL	11.0	3.0	3.0	325.	5.5	200	2500.

CURBING

ITEM NO.	202.6	609.5	609.81	
ITEM	CURBING REMOVAL FOR STORAGE	RESET GRANITE CURB	BITUMINOUS CONCRETE CURB	REMARKS
UNIT	LF	LF	L.F.	
LOCATION				
F.E.E.T.				
179+60 - 179+68	1	25		ISLAND END
191+32 - 191+40	2	25		" "
182+66 - 182+70	3	11		" "
188+30 - 188+34	4	11		" "
179+68 - 181+17, LT & RT	5	298		
183+55 - 184+65, LT.	6		140	170' R
SB OFF RAMP				
100+00 - 100+30, LT.	7	30		RAMP NOSE
198+80, LT. - FEET - 111+65 & SB.	8		1230	
100+30 - 107+00, LT.	9		670	
SB ON RAMP				
1+00 - 18+65, RT.	10		1765	
1+00 - 15+20, E	11		420	
15+20 - 18+70, LT.	12	702		RAMP NOSE
NB OFF RAMP				
172+35, RT. FEET - 283+90, E NB.	13		1150	
273+30 - 280+30, LT.	14		700	
273+00 - 273+30, LT.	15	30		RAMP NOSE
SUB-TOTAL	370	902	5935	
ROUNDING	30	48	565	
TOTAL	400	950	6500	

REVISIONS AFTER PROPOSAL

STATION

STATION

DATE

NUMBER

DATE

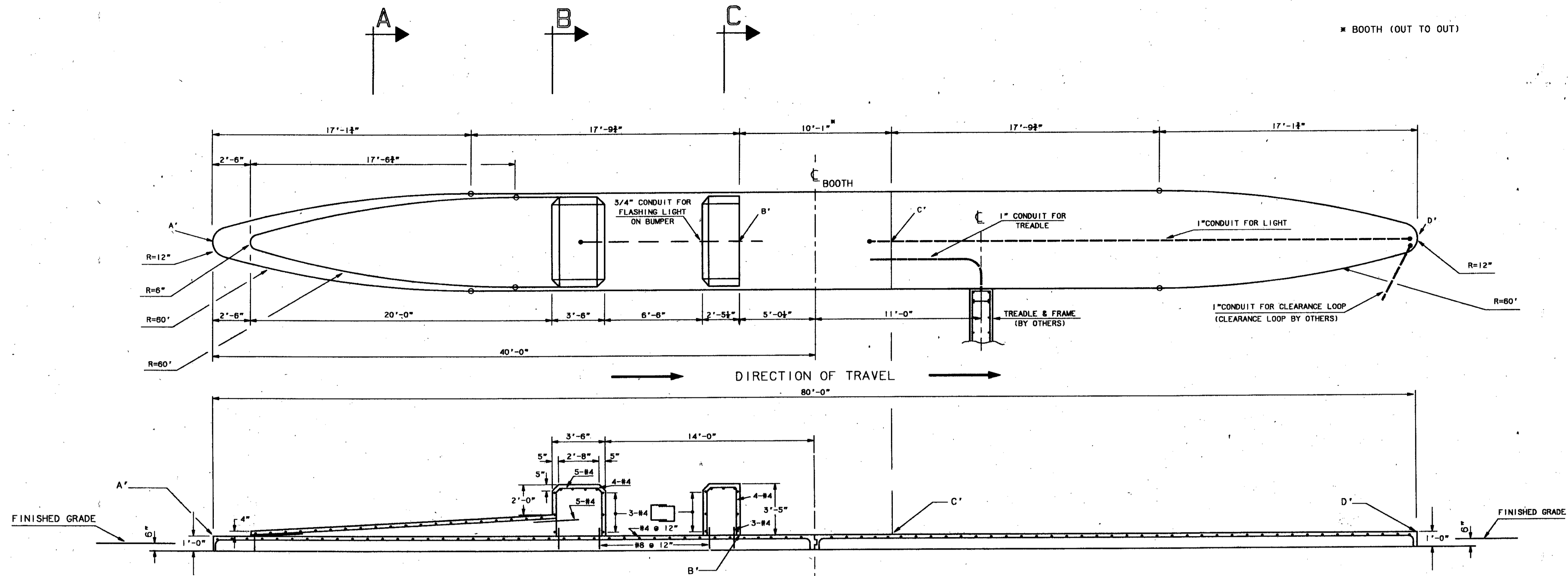
DATE

DATE

COMPLETED

CHECKED

CROSS - CHECKED



* BOOTH (OUT TO OUT)

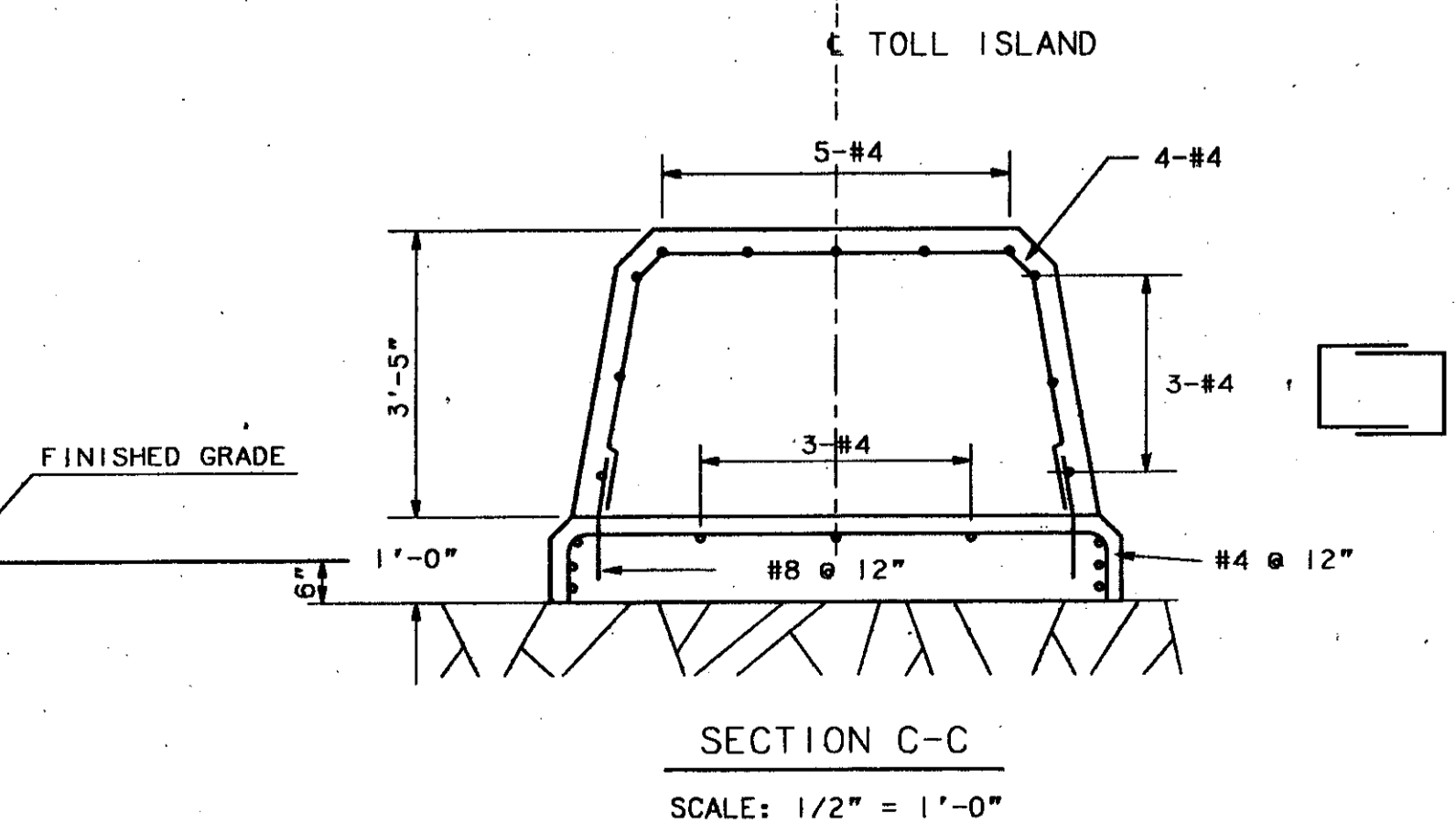
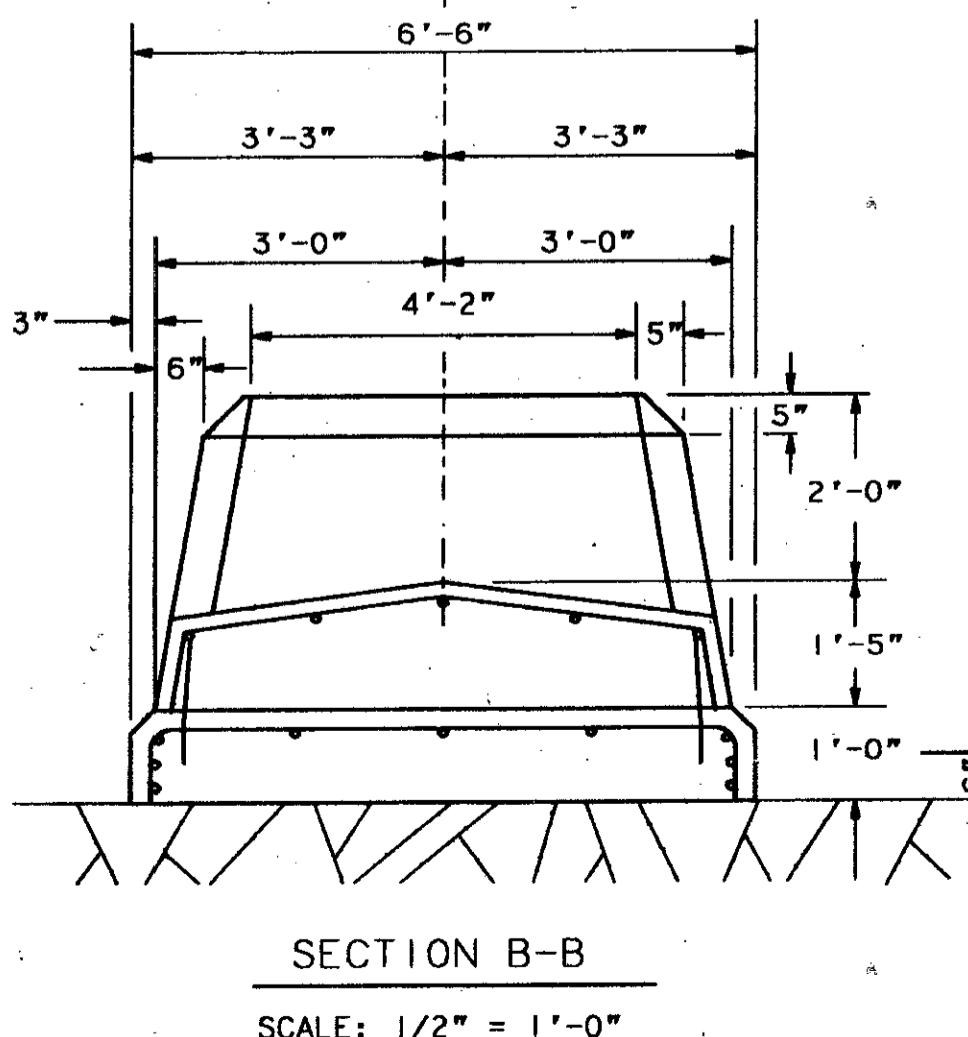
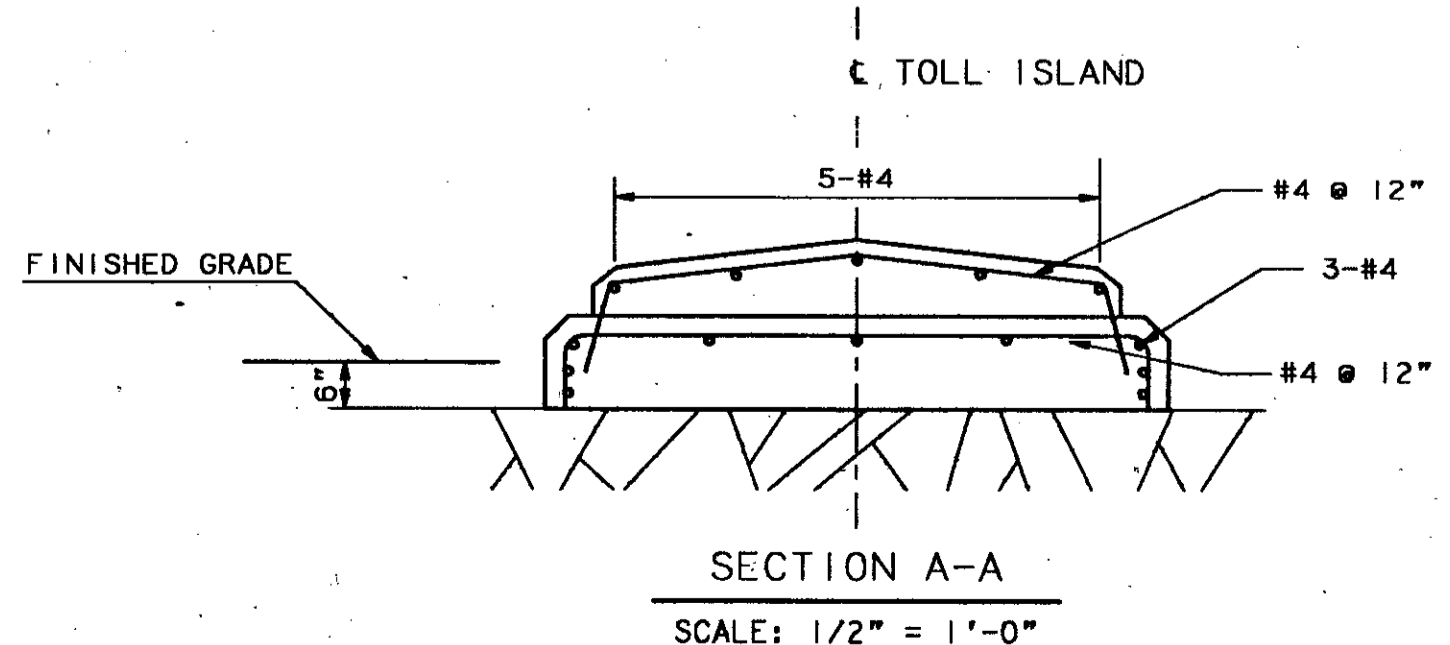
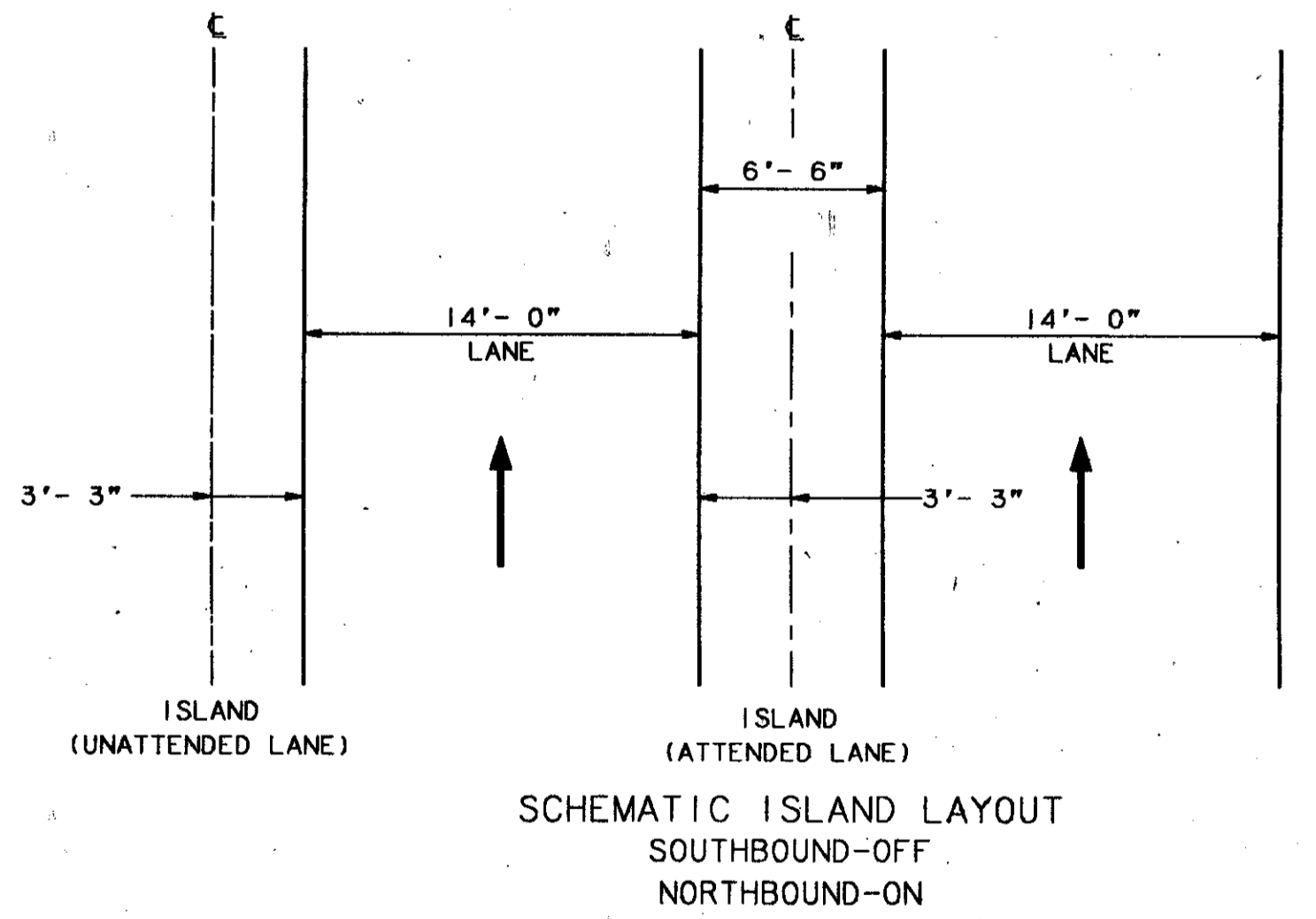
QUANTITIES
FOR BIDDING PURPOSES ONLY
(ALL FOUR ISLANDS)
ITEM 660.1* TOLL BOOTH ISLANDS

ITEM 520.1*	CONCRETE CLASS A	96 C.Y.
ITEM 544.1*	REINFORCING STEEL (ROADWAY)	5200 LB

* NOT AN ITEM TOTAL

SOUTHBOUND ON		NORTHBOUND OFF	
A' = PROFILE GRADE + 6" =	190.76	A' = PROFILE GRADE + 6" =	183.75
B' = PROFILE GRADE + 6" =	191.28	B' = PROFILE GRADE + 6" =	183.61
C' = B'	191.28	C' = B'	183.61
D' = PROFILE GRADE + 6" =	191.96	D' = PROFILE GRADE + 6" =	183.44

TOLL BOOTH ISLAND
4 EACH REQUIRED
2-SOUTHBOUND ON
2-NORTHBOUND OFF
SCALE: 1/4" = 1'-0"



NOTES:
TREADLE & FRAME INSTALLED
IN ATTENDED LANE ONLY.
CLEARANCE LOOP IN UNATTENDED
LANE ONLY.
SEE SHEET #15 FOR ADDITIONAL
CONDUIT REQUIREMENTS.

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN MERRIMACK BRIDGE NO. STATE PROJECT 10059-A

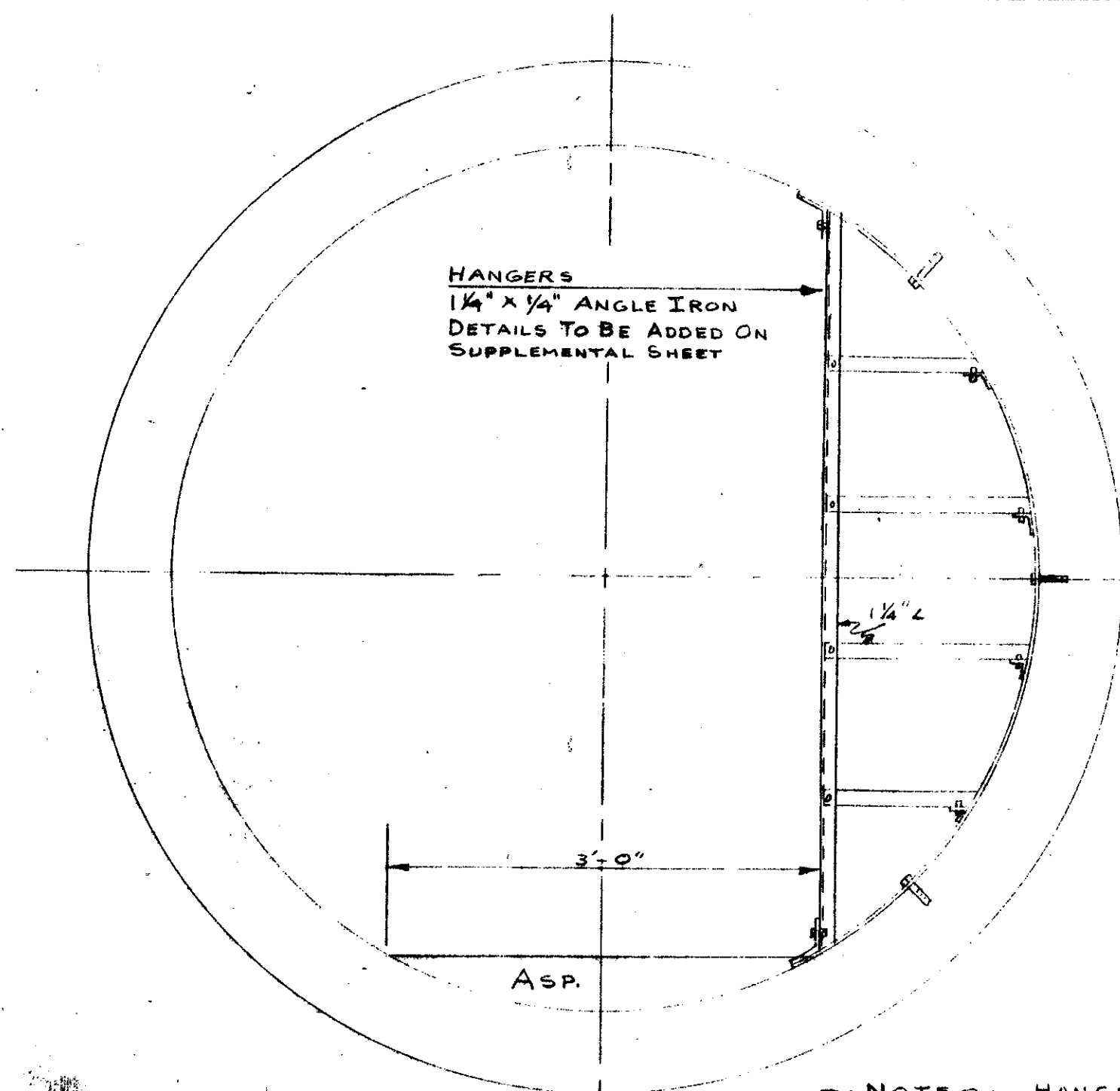
TEMPORARY TOLL BOOTH FOUNDATION

DESIGNED	BY	DATE	CHECKED	BY	DATE	REVISIONS AFTER PROPOSAL	DATE	BRIDGE SHEET NO.
DRAWN	GBH	6-88	CHECKED					OF
TRACED			CHECKED					FILE NUMBER
QUANTITIES			CHECKED			FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
						10059-A	11	59

SHEET SCALE AS NOTED

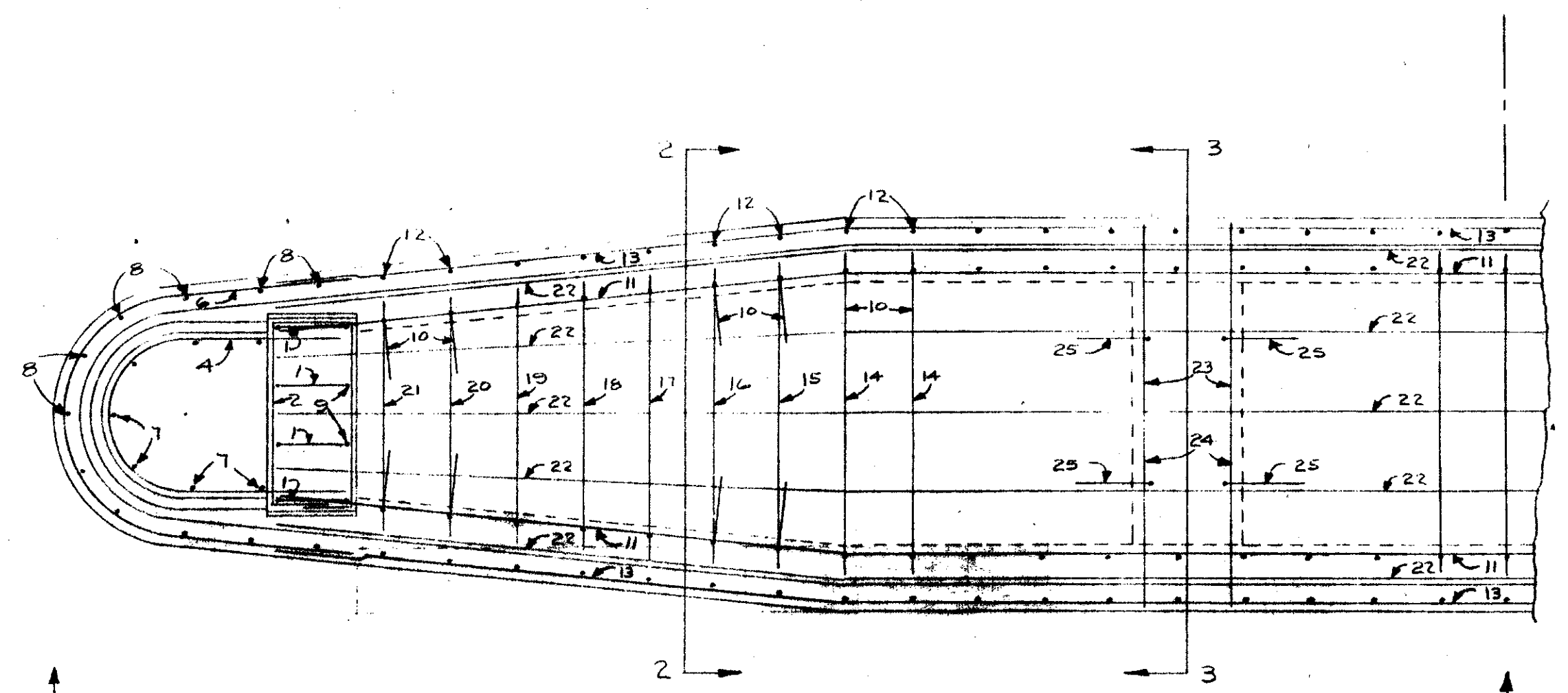
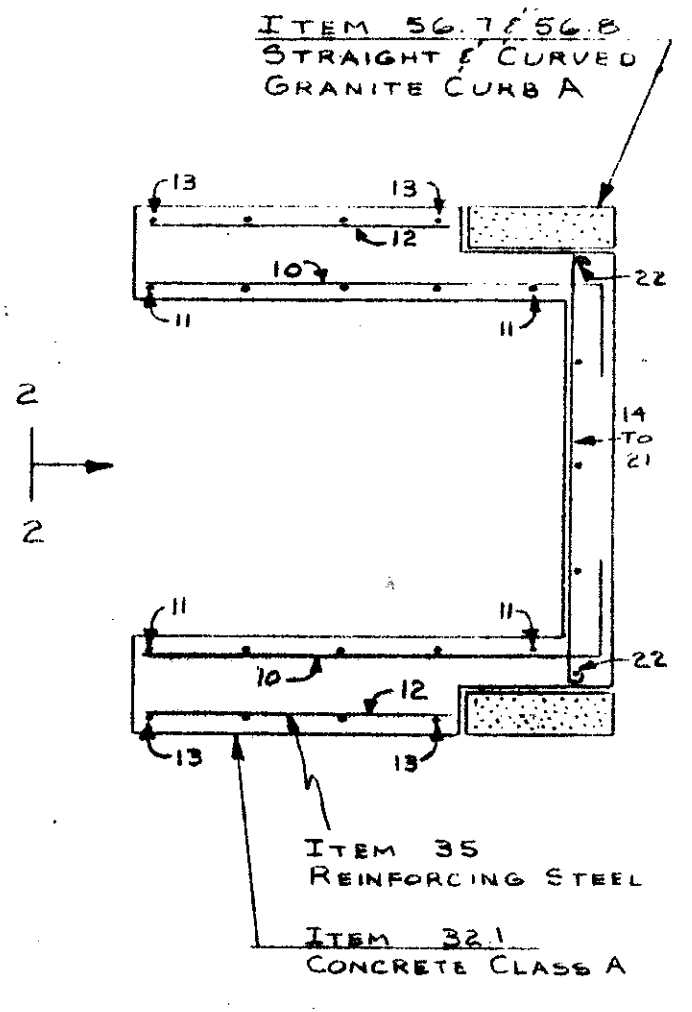
FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N. H.				

REVISIONS AFTER FIELD USE
 DATE FROM TO STA. DESCRIPTION
 3/27/55 125 This sheet added after proposal
 4/1/55 125 Handhole and conduits added - Utility holes from S. J. M. S.
 Feb. 15, 55 Revision of CONDUIT SYSTEM FOR MAGNETIC DET. S.
 JUN. 15, 55
 PLAN TRACED BY: TAXON, J. W. DATE: 5-15-55
 CHECKED BY: M. CRONE
 INKED BY: CHECKED BY:

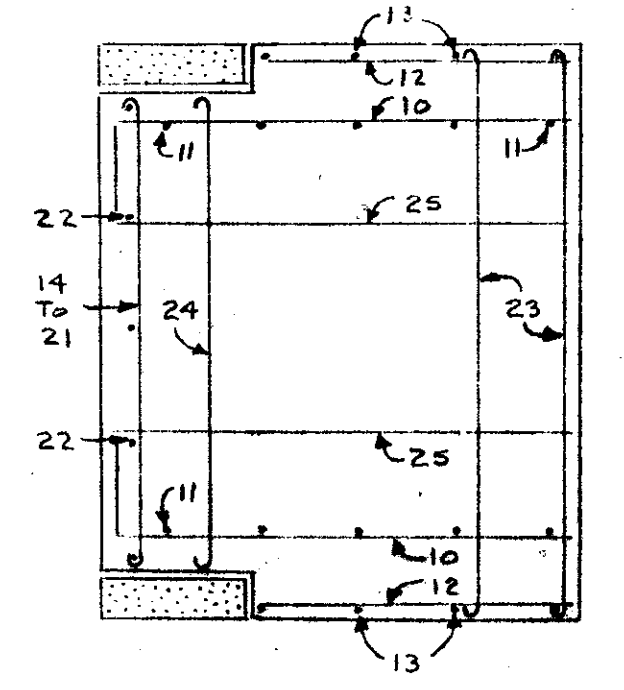


SECTION C-C
1" = 1'

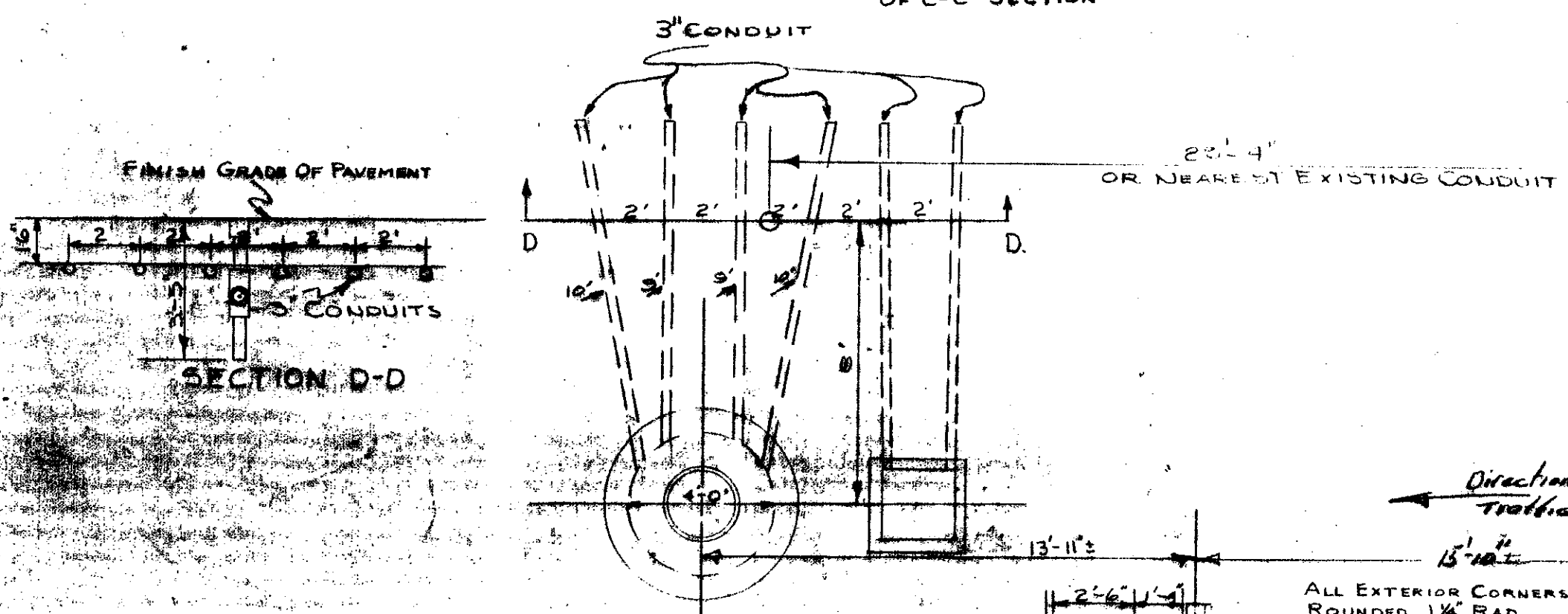
NOTE - HANGERS SPACED 8' C-C AT 1' OUTSIDE CONC. FOUNDATION WALL.
SEE SHEET 33 FOR LOCATION OF C-C SECTION



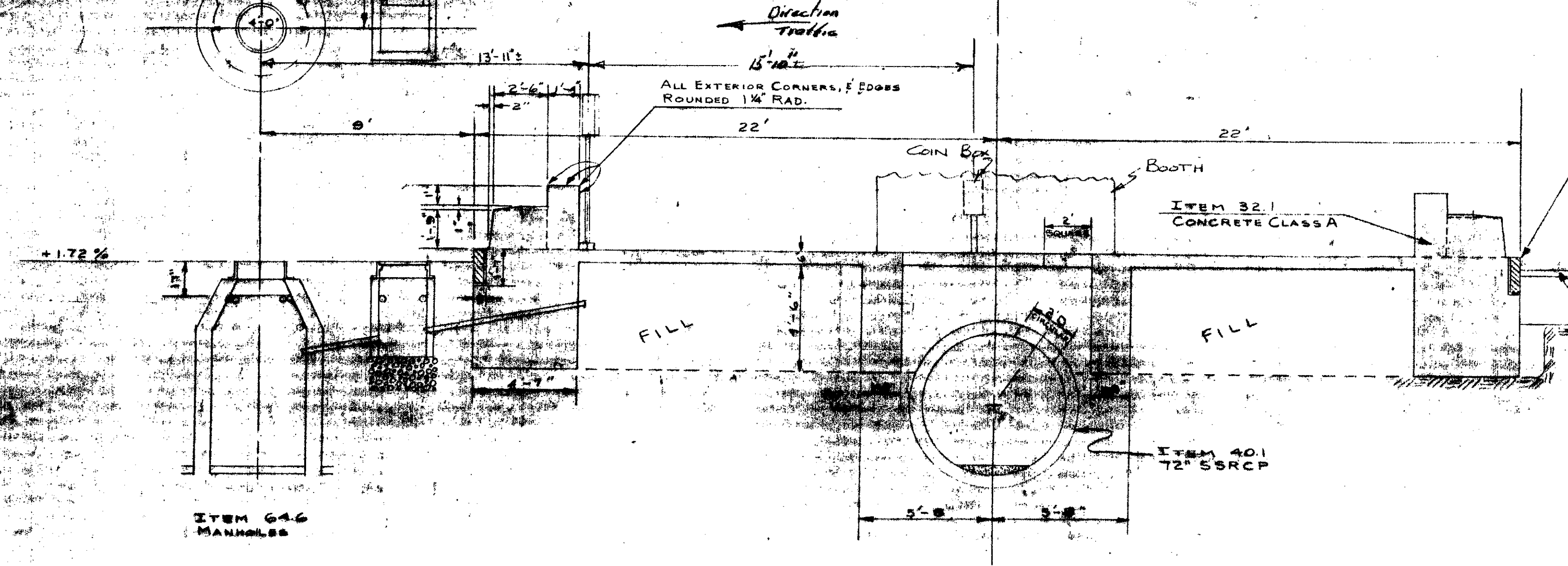
REINF. PLAN
1/2" = 1'



NOTE - BARS 10, 11, 12 & 13 TO BE CUT IN FIELD WHERE NECESSARY TO CLEAR 72\"/>

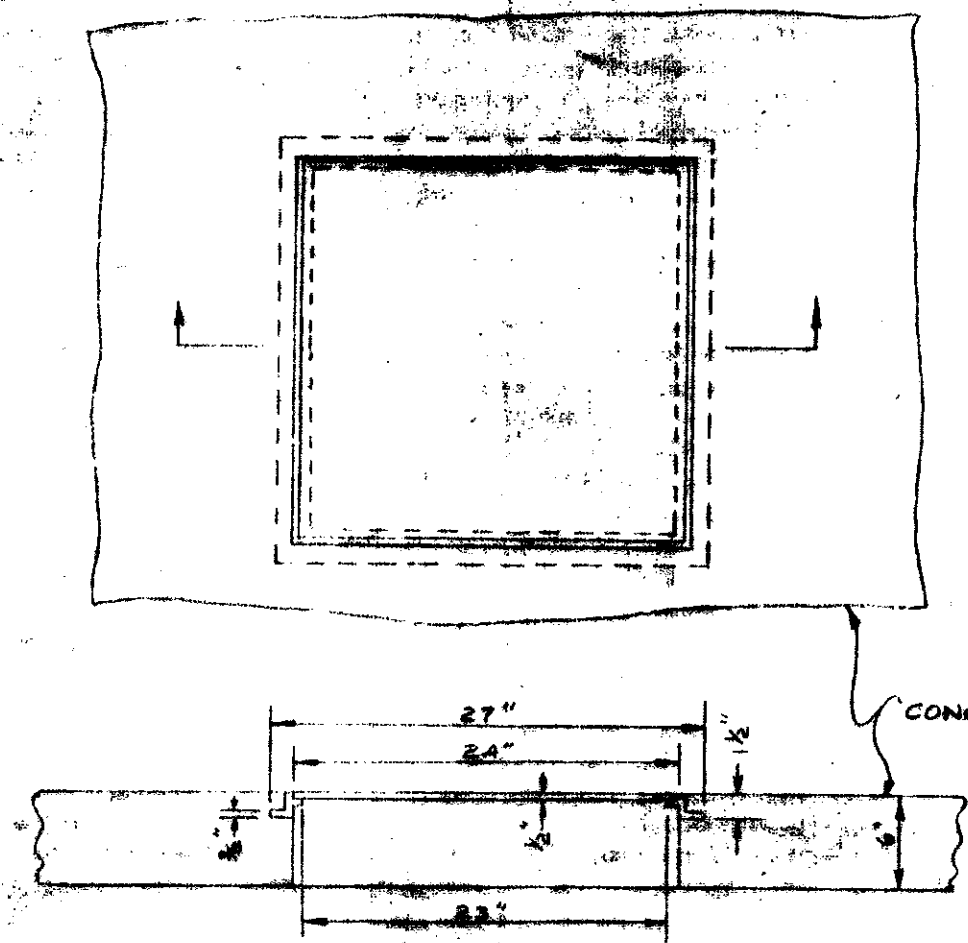


SECTION D-D

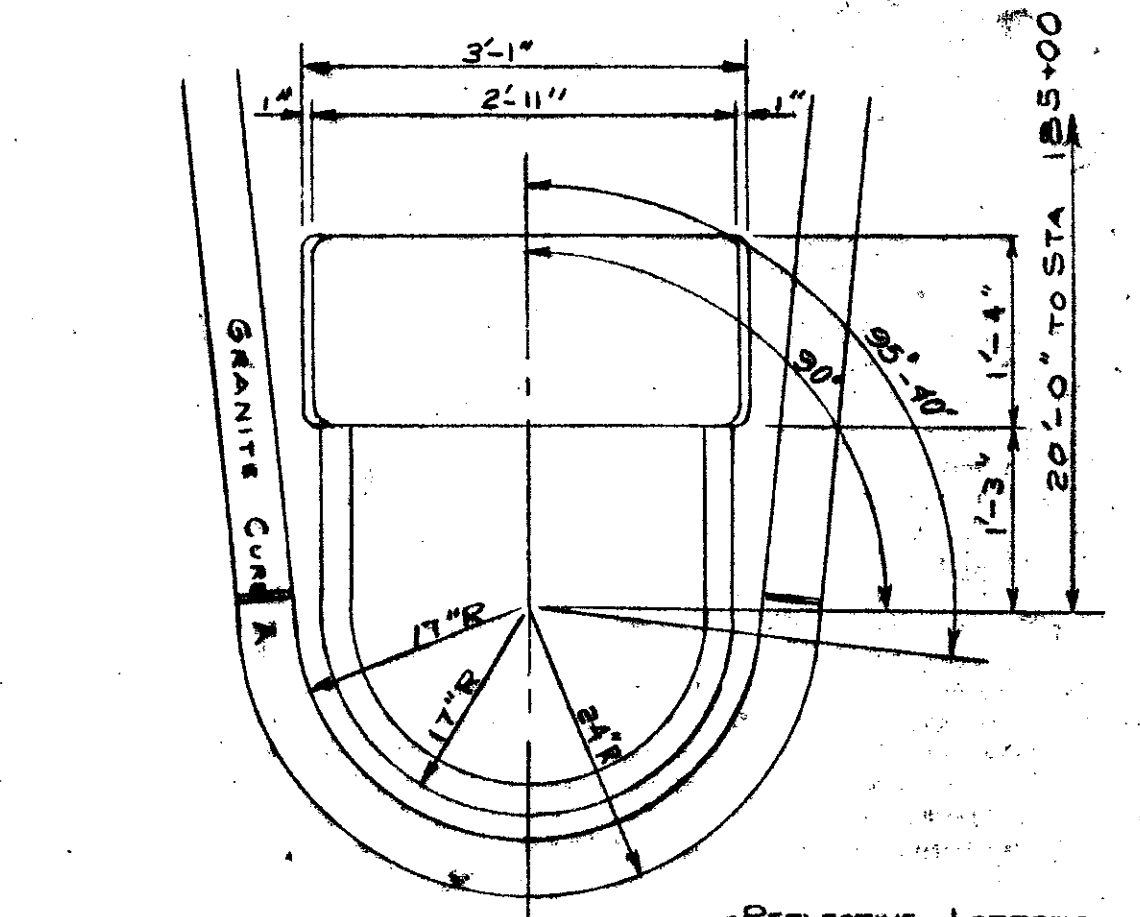


SECTION B-B
SCALE - 1/4" = 1'

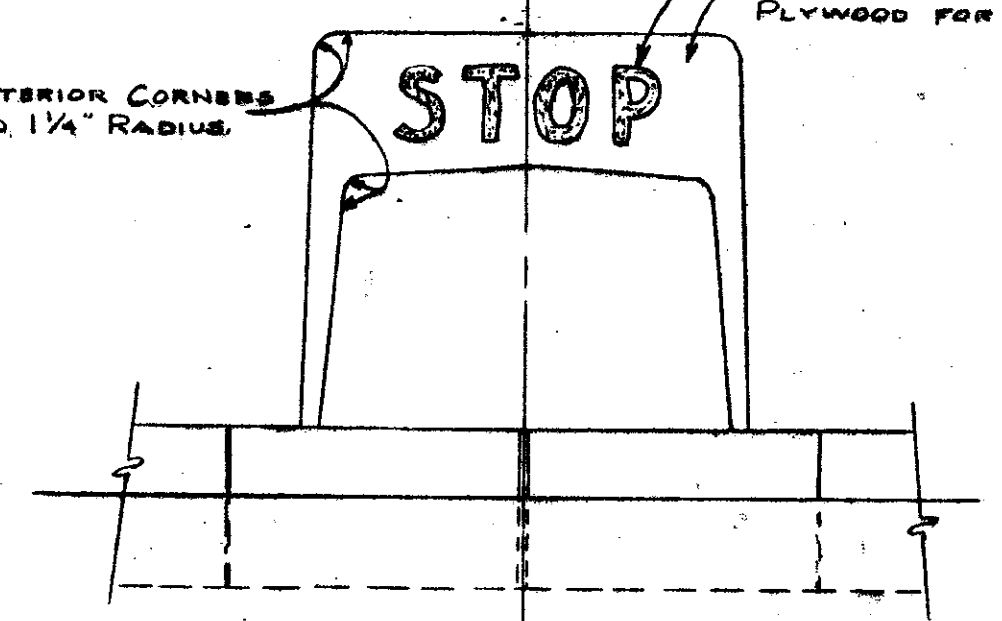
SEE SHEET 33 FOR LOCATION OF B-B SECTION



FRAME & COVER FOR FLOOR
1" = 1'



ALL EXTERIOR CORNERS ROUNDED 1/4\"/>



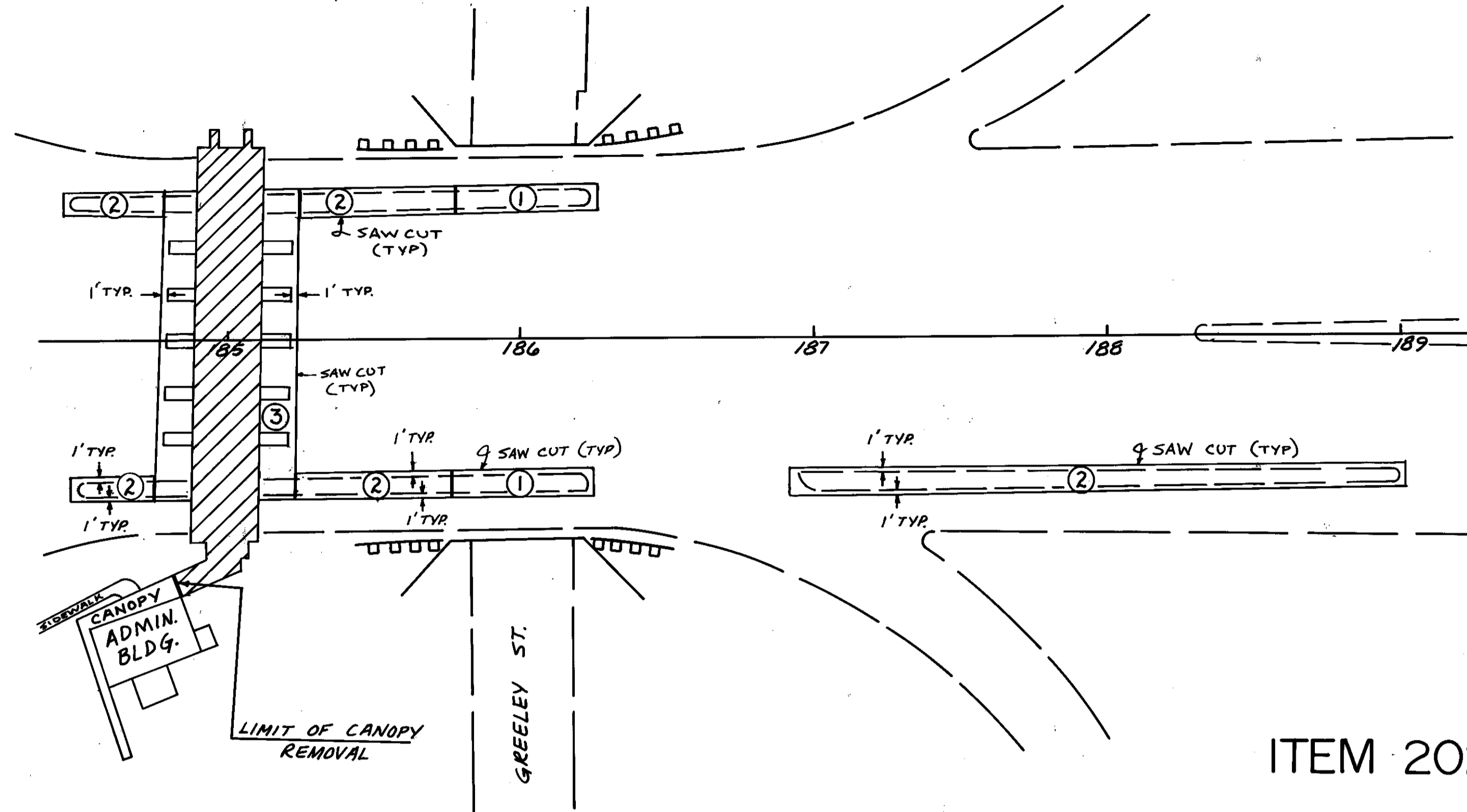
BUMPER DETAIL
SCALE - 1/4" = 1'

EXISTING TOLL PLAZA FOUNDATION DETAIL - FOR INFORMATION ONLY

PROJ. NO.	SHEET NO.	TOTAL SHEETS
10059-A	13	59

NOT TO SCALE

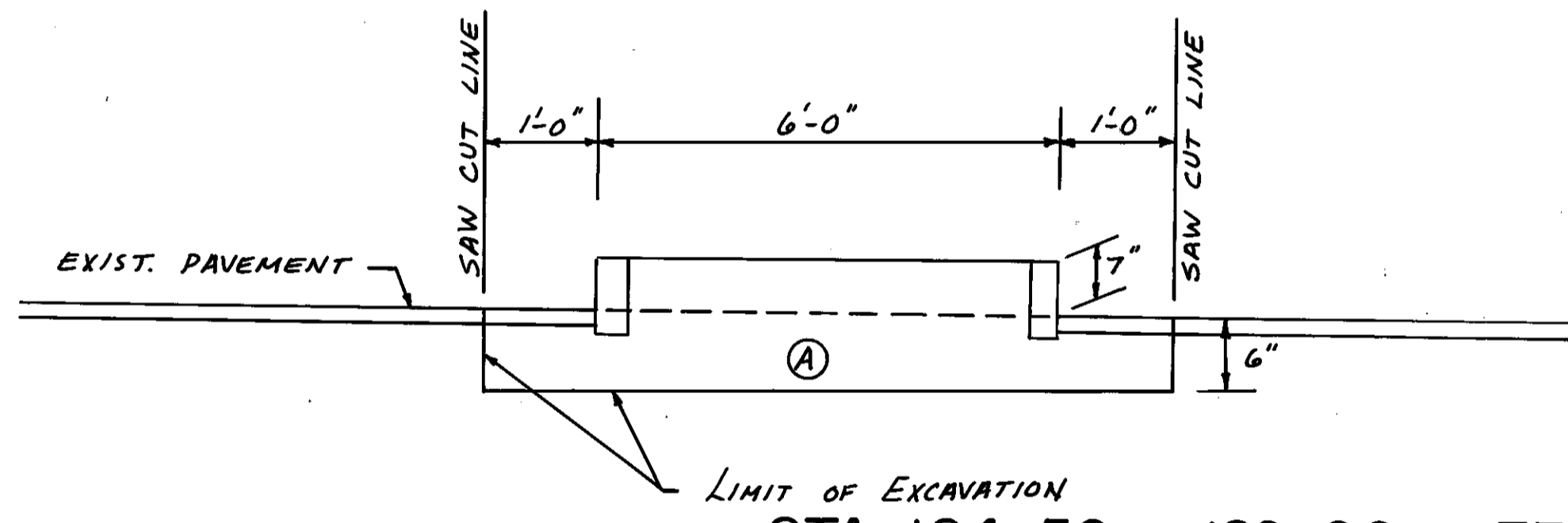
REINFORCED CONCRETE ISLAND REMOVAL THAT IS PAID UNDER ITEM 202.95.



- ① CURBED REINFORCED CONCRETE ISLANDS ON BRIDGE STRUCTURE (SEE SHEET #15).
- ② CURBED REINFORCED CONCRETE ISLANDS (SEE SHEET #14).
- ③ REINFORCED CONCRETE ISLANDS AT TOLL BOOTHS (SEE SHEET #16).
- ▨ LIMITS OF CANOPY AND PIER REMOVAL PAID UNDER ITEM 202.95

ITEM 202.95 - REMOVAL OF TOLL PLAZA AND CANOPY

NOTE: REMOVAL OF REINFORCED CONCRETE ISLANDS IS PAID UNDER THIS ITEM.

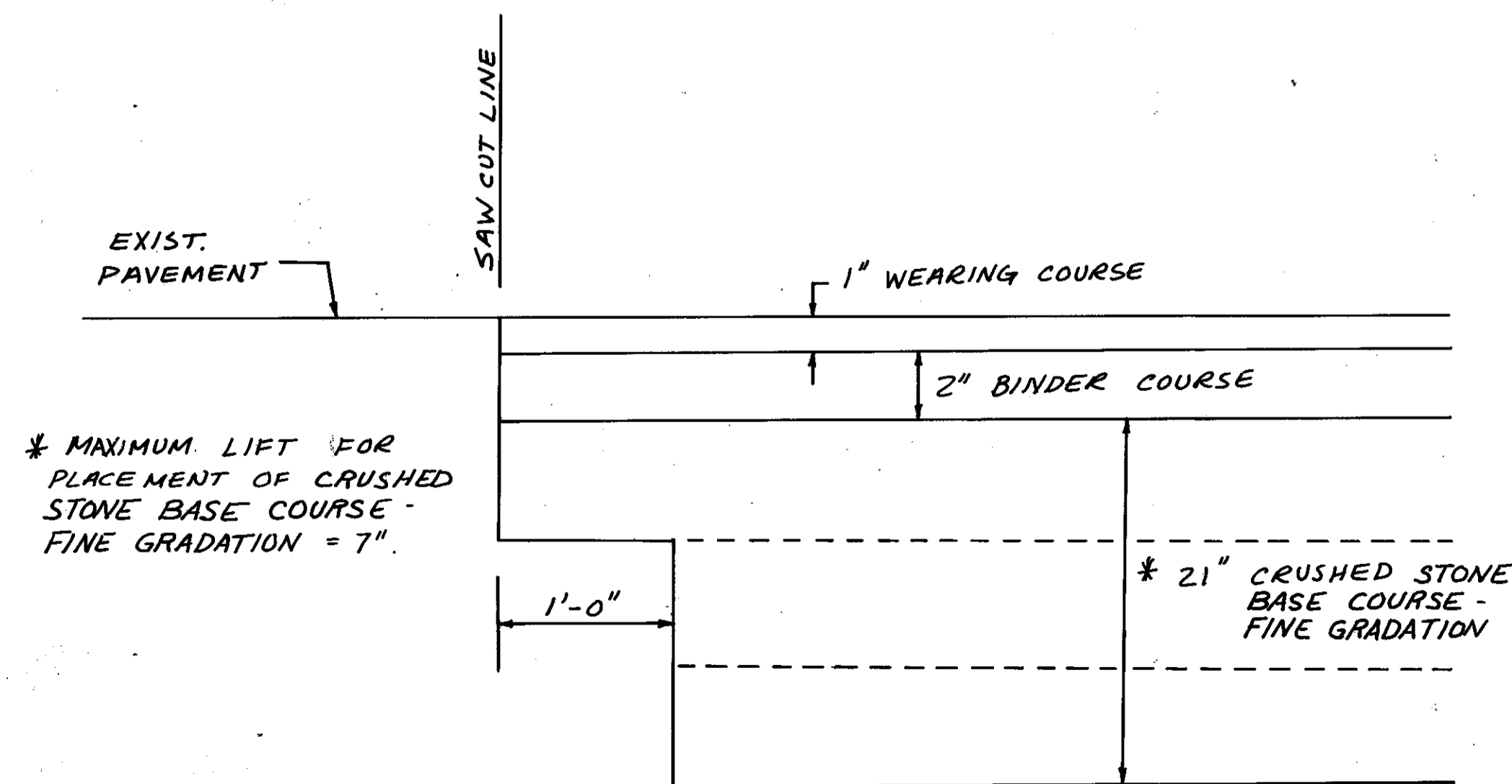


- Ⓐ REPLACE EXCAVATED MATERIAL WITH 3" OF CRUSHED GRAVEL AND 3" OF HOT BITUMINOUS PAVEMENT.

NOTE: REMOVAL OF THESE REINFORCED CONCRETE ISLANDS IS PAID FOR UNDER ITEM 202.95 (SEE SHEET #14).

② REMOVAL OF REINFORCED CONCRETE ISLANDS
N. T. S.

STA. 184+50± - 189+00± F.E.E.T.



STA. 184+78 - 185+22 F.E.E.T.
PAVEMENT PATCH AT TOLL BOOTHS
N. T. S.

MISC. DETAILS

FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	14	59

REVISIONS AFTER PROPOSAL		DESCRIPTION
NUMBER	DATE	STATION

EXISTING DETAIL	PROPOSED DESIGN	SHEET CHECKED	AS BUILT DETAILS
DATE	DATE	DATE	DATE

NOTEBOOKS	PAGE
BOOK	PAGE
BOOK	PAGE

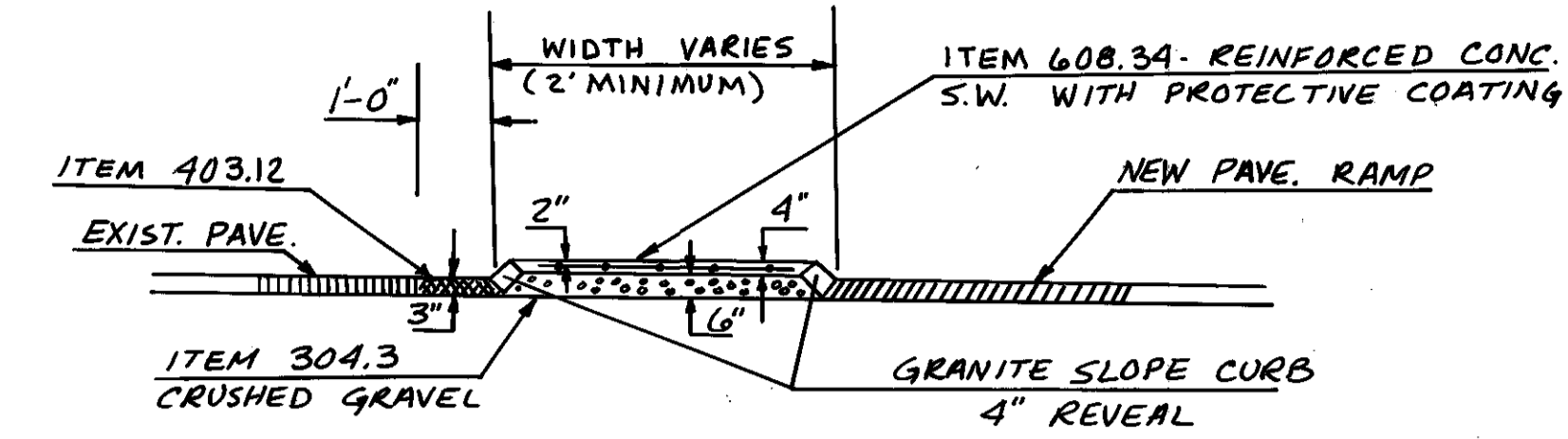
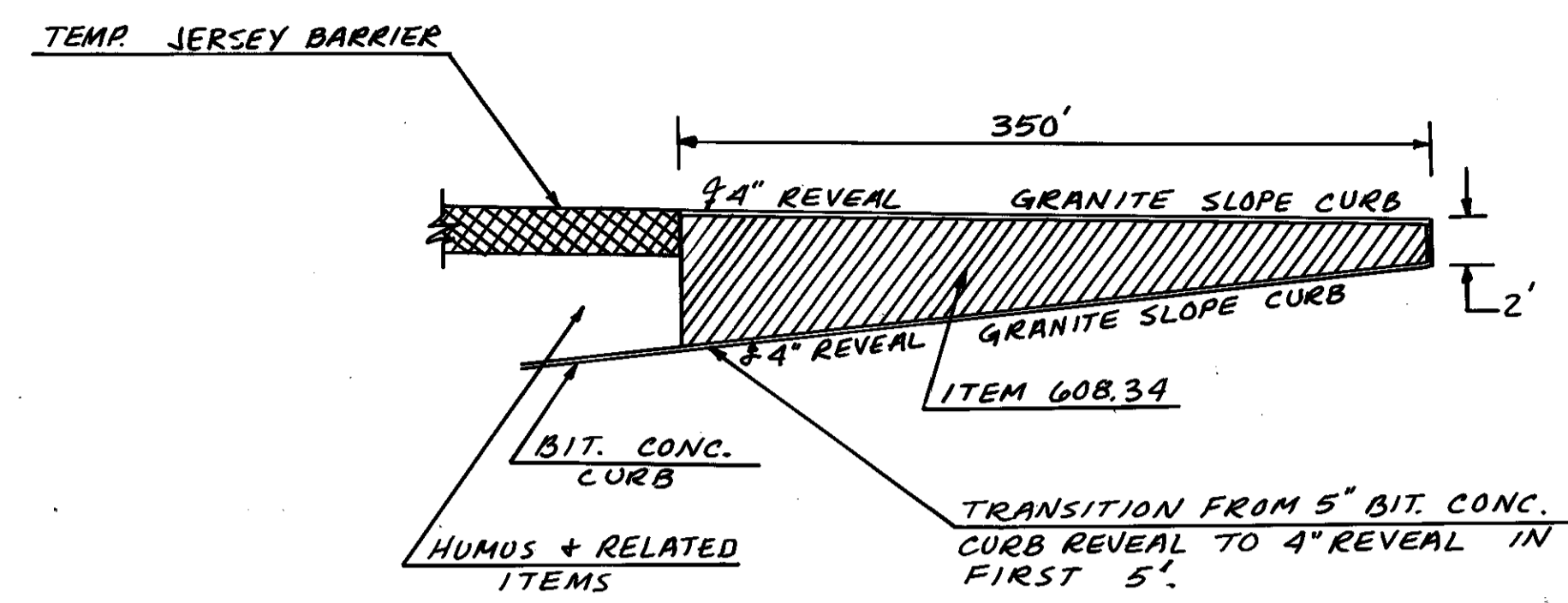
REVISIONS AFTER PROPOSAL

STATION	DATE	NUMBER	DESCRIPTION

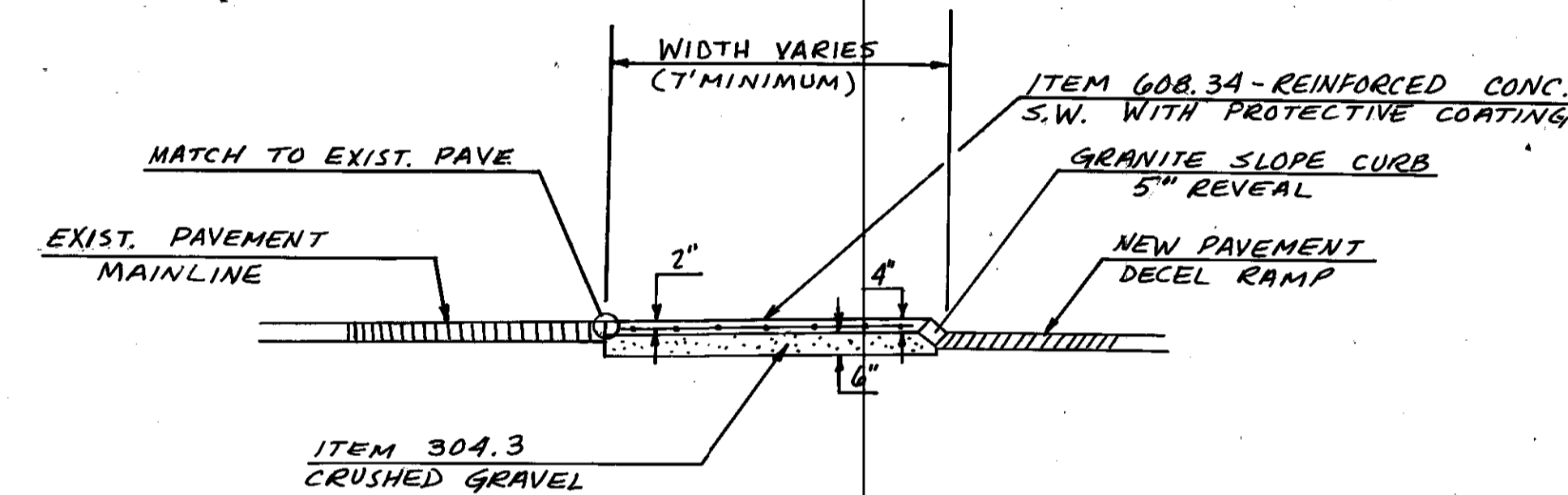
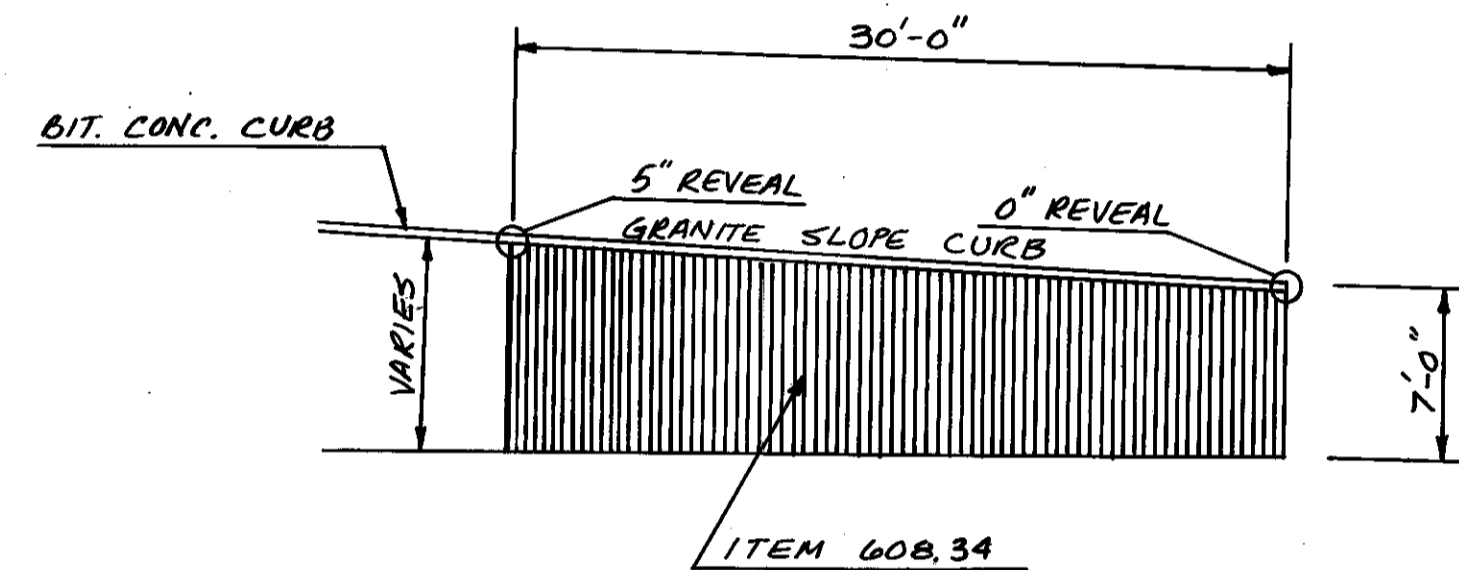
STATION	DATE	NUMBER	DESCRIPTION

DATE	BY	DATE	BY	DATE	BY

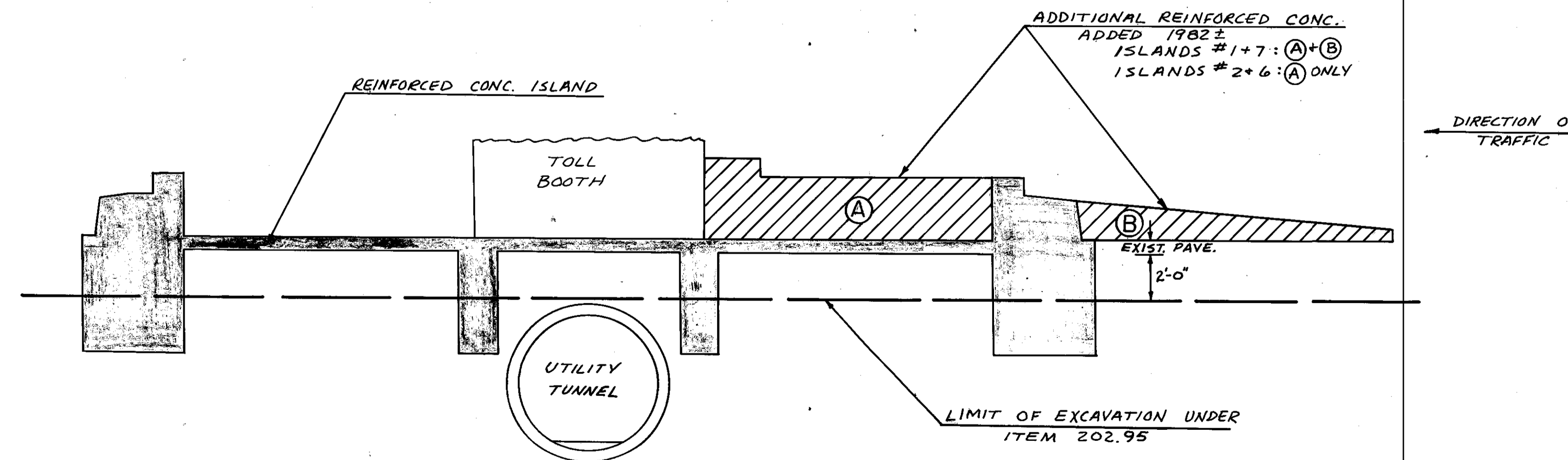
DATE	BY	DATE	BY	DATE	BY



NOT TO SCALE
 STA. 15+20 - 18+70 SB ON RAMP
 REINFORCED CONCRETE SIDEWALK AT RAMP NOSE - ITEM 608.34



NOT TO SCALE
 STA. 273+00.83 - 273+30.83 NB OFF RAMP
 STA. 100+00 - 100+30 SB OFF RAMP
 REINFORCED CONCRETE SIDEWALK AT RAMP NOSE - ITEM 608.34



NOT TO SCALE
 STA. 184+78 - 185+22 F.E.E.T.
 ③ REMOVAL LIMITS OF EXISTING REINFORCED CONCRETE ISLANDS AT THE TOLL BOOTHS

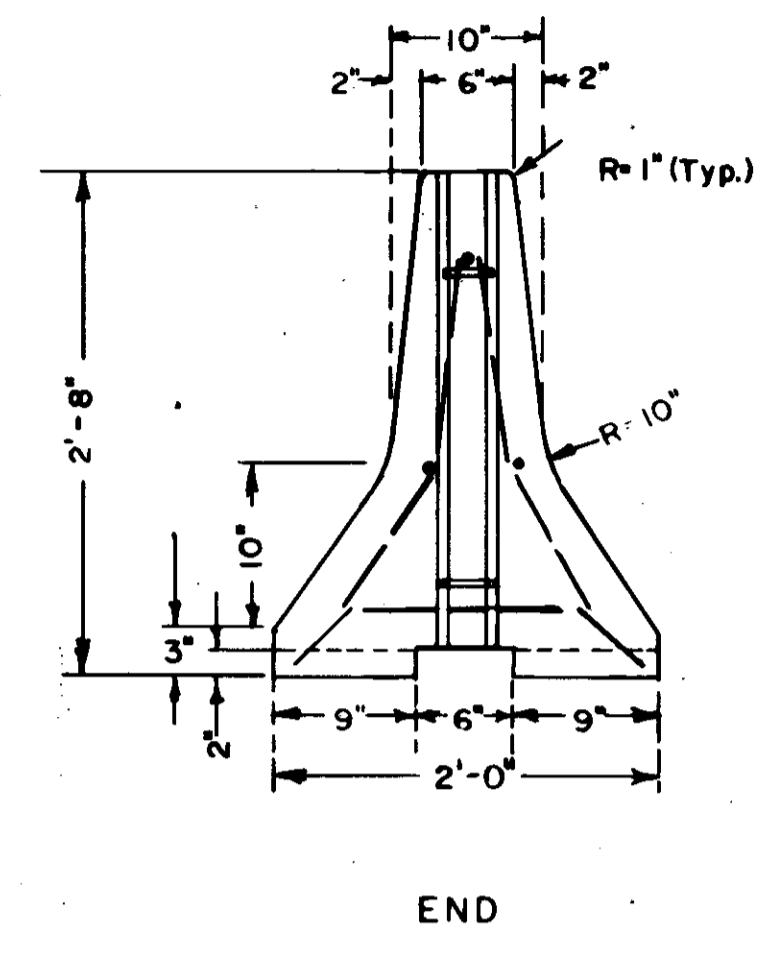
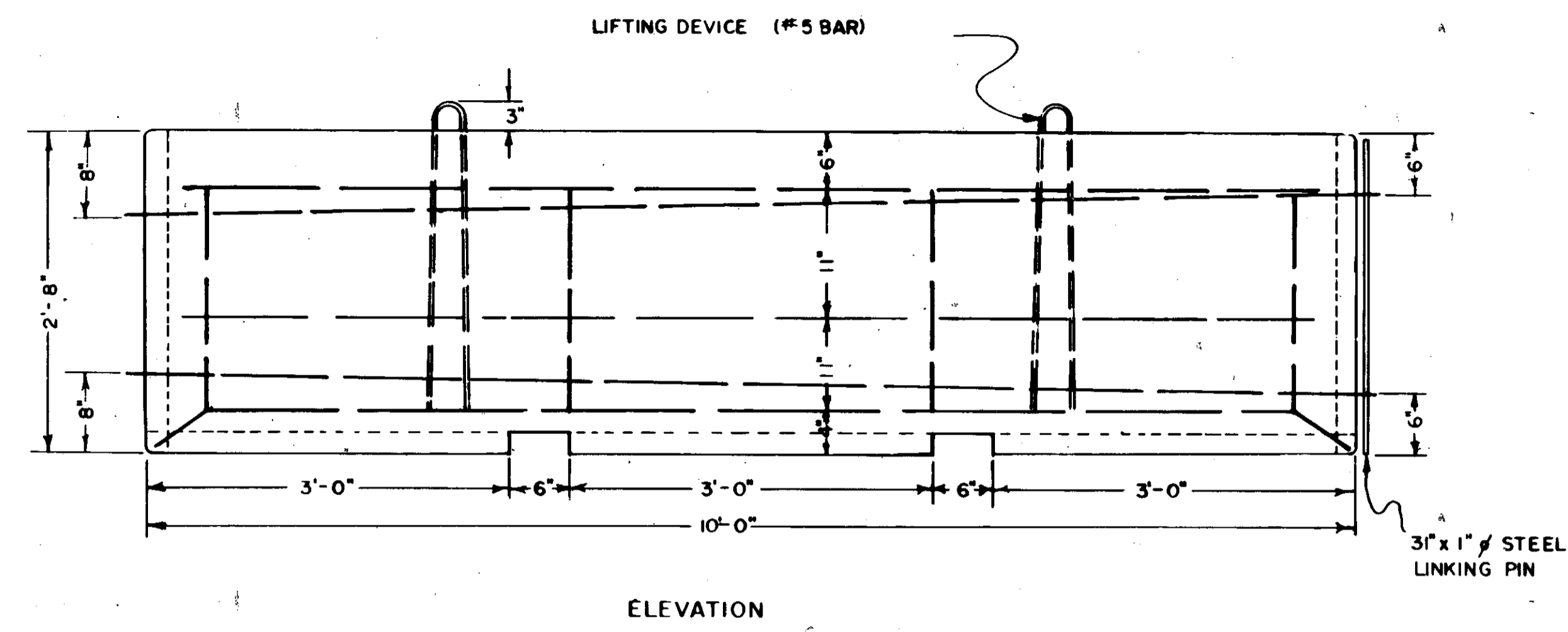
NOTE: REMOVAL OF THESE REINFORCED CONCRETE ISLANDS IS PAID FOR UNDER ITEM 202.95 (SEE SHEET #14).

SEE SHEET #14 FOR PAVEMENT PATCH DETAIL IN THE TOLL PLAZA AREA.

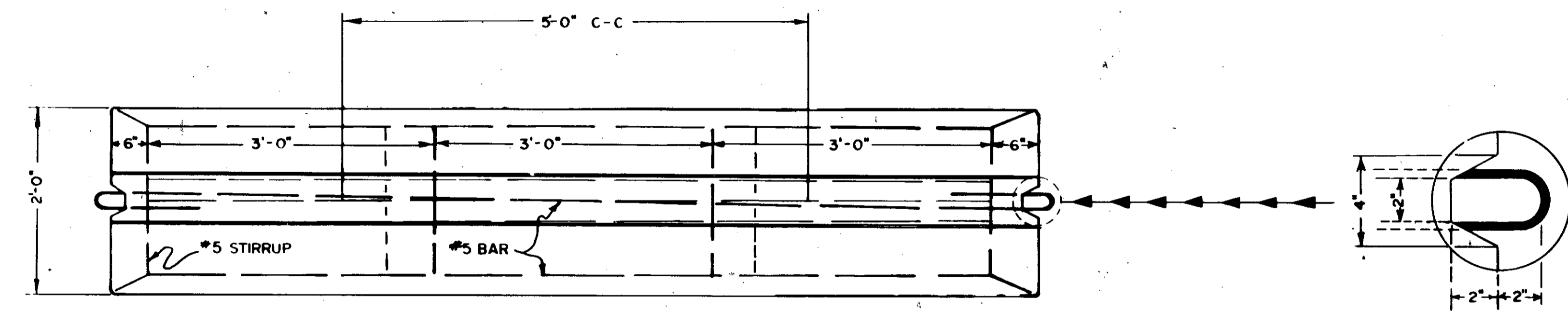
MISC. DETAILS

FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	16	59

REVISIONS AFTER PROPOSAL		STATION	DESCRIPTION
NUMBER	DATE	STATION	DESCRIPTION
BOOK	PAGE	BOOK	PAGE
BOOK	PAGE	BOOK	PAGE
DATE	DATE	DATE	DATE
EXISTING DESIGN	SHEET CHECKED	AS BUILT DETAILS	



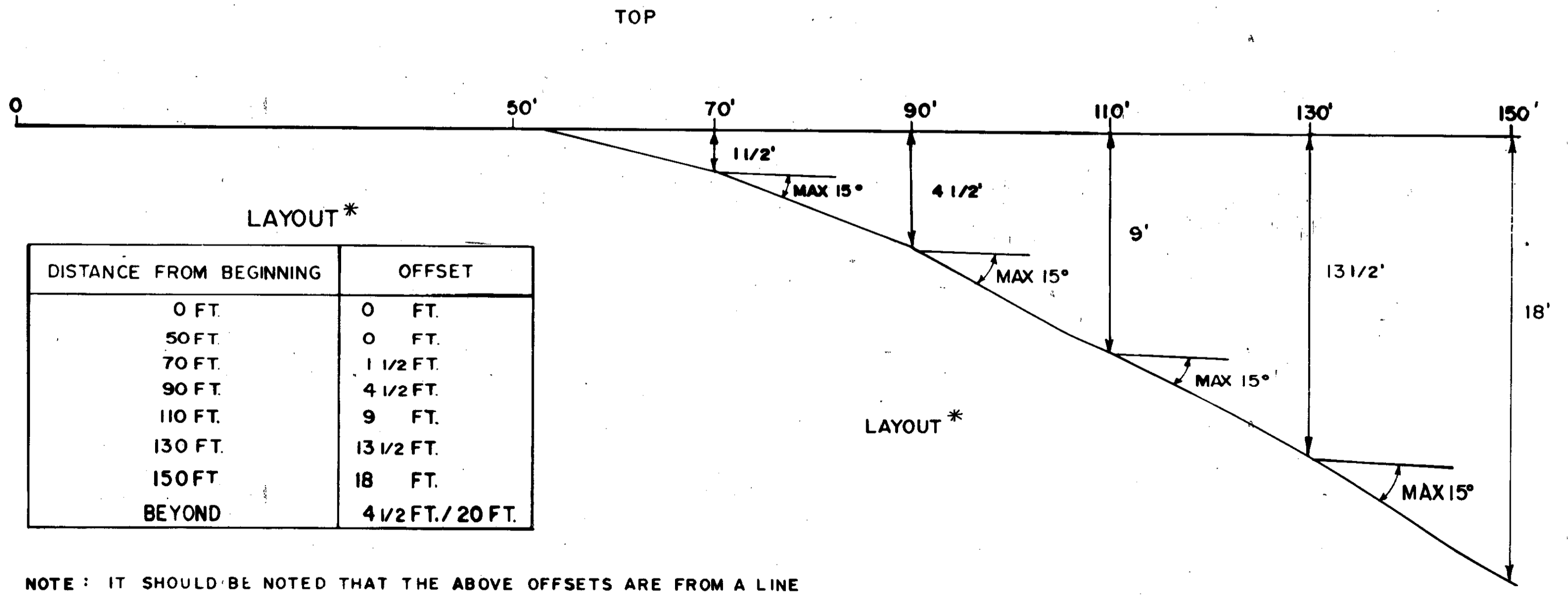
SIZE	LENGTH	NO. REQ.	SKETCH
5	13'-4"	2	
5	10'-0"	2	
5	2'-0"	8	
5	9'-4"	3	
5	1'-1"	4	
5	5'-5"	2	



GENERAL NOTES

PORTABLE CONCRETE BARRIER SHOULD BE OF THE DESIGN SHOWN OR APPROVED EQUAL.
 PORTABLE CONCRETE BARRIER OF DIFFERING GEOMETRIC SHAPE WILL NOT BE MIXED.
 CONNECTING DEVICES WILL BE COMPATIBLE WITH OTHER UNITS AND WILL ALLOW PLACEMENT ON A 110' RADIUS.
 BARRIERS WILL HAVE A SMOOTH UNIFORM SURFACE FREE FROM DEFECTS AND IRREGULARITIES.
 BARRIERS WILL BE CAST OF WHITE PORTLAND CEMENT CONCRETE HAVING A MINIMUM 28 DAY COMPRESSION STRENGTH OF 4000#
 CASTING DATE SHALL BE SHOWN ON BARRIER.
 BARRIER WILL INCLUDE 1 LINKING PIN PER UNIT.

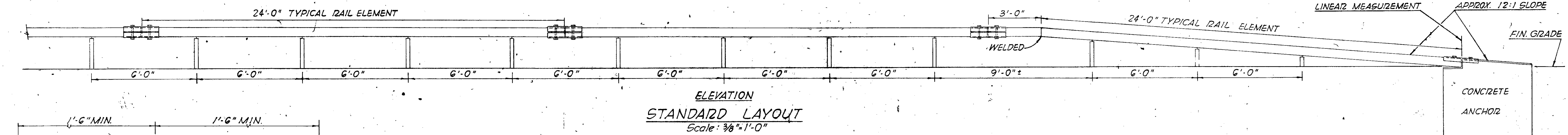
DESCRIPTION	DATE
ADDED LINES 5 & 6 TO STEEL SCHEDULE TABLE	8-31-79
REVISED DIMENSIONS OF STEEL IN SKETCH	8-31-79
ON LINE 1 (10'-4 1/2" TO 10'-5 1/2" X 10'-3" TO 10'-4")	
ADDED DASHED LINE FOR SLOT IN TOP	8-31-79
ELEVATION OF CONCRETE BARRIER	
ADDED BARRIER LAYOUT SKETCH AND LAYOUT	8-31-79



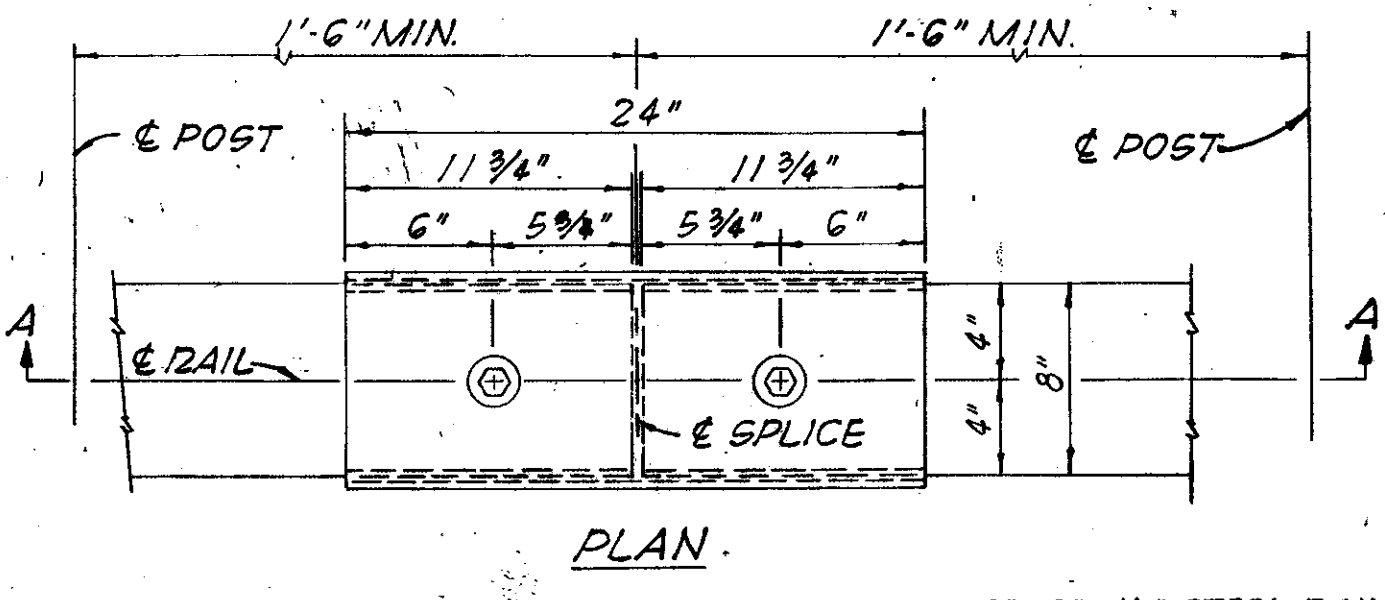
NOTE: IT SHOULD BE NOTED THAT THE ABOVE OFFSETS ARE FROM A LINE WHICH IS PARALLEL TO THE ROADWAY CENTERLINE, WHETHER ON A CURVE OR TANGENT SECTION.

*SEE SHEETS NO. 20, 21, 22 AND X-SECTION FOR FINAL LOCATION AND OFFSETS.

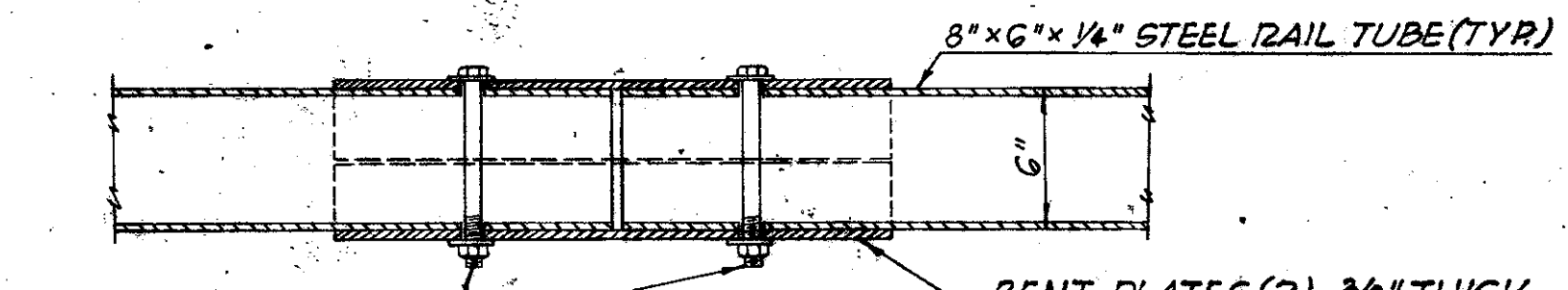
REVISION
DATE



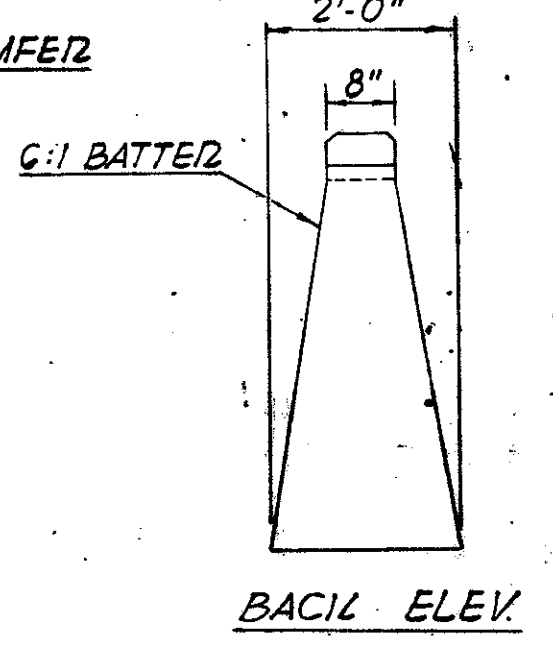
ELEVATION STANDARD LAYOUT
Scale: 3/8"=1'-0"



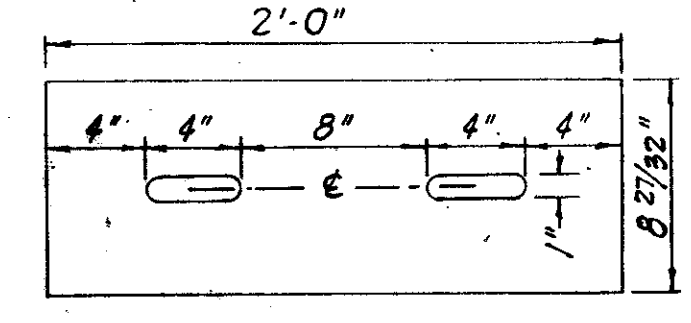
PLAN



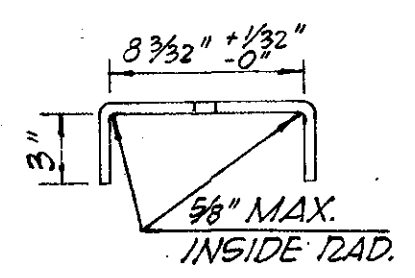
SIDE ELEV



BACK ELEV

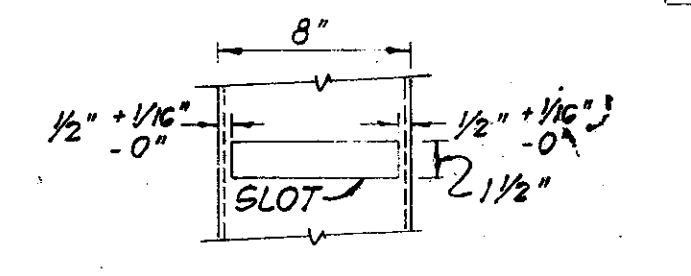


PLAN

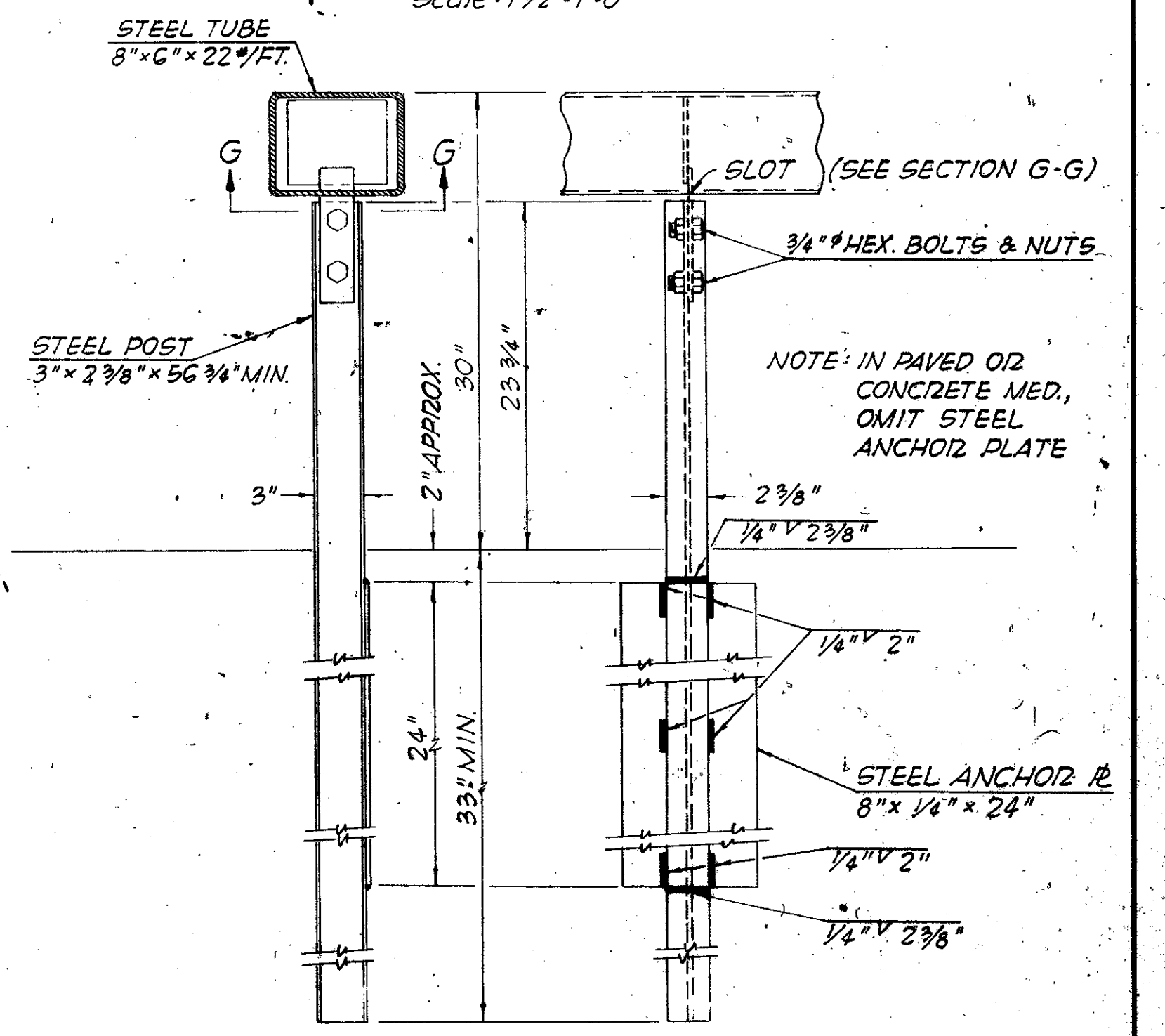


ELEVATION

DETAIL E 3/8" BENT PLATE
Scale: 1 1/2"=1'-0"



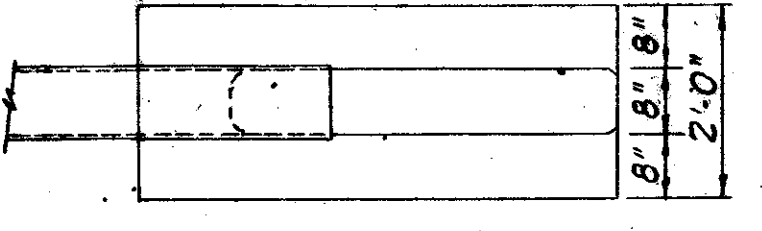
SECTION G-G
Scale: 1 1/2"=1'-0"



TYPICAL SECTION for FLUSH MEDIAN
Scale: 1 1/2"=1'-0"

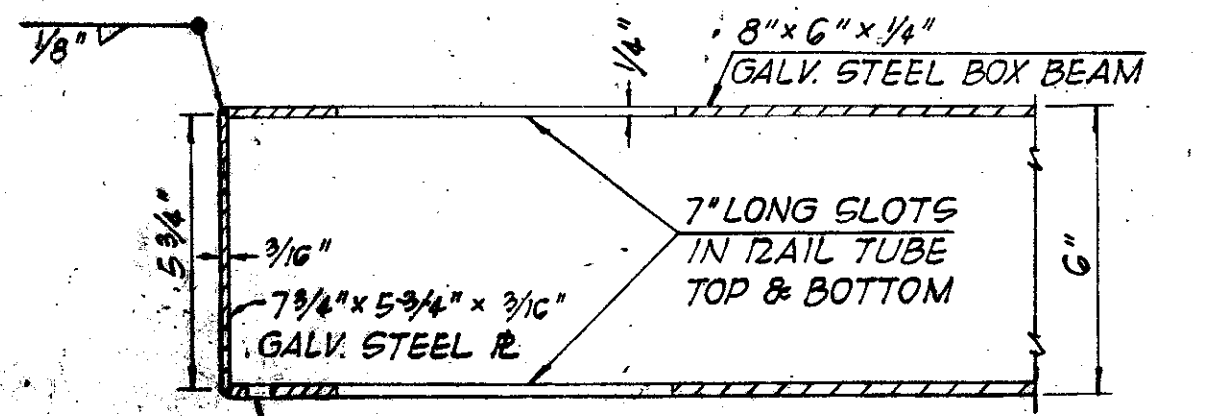
DRILL 1" HOLES FOR 2 BOLTS 3/4" x 8" LONG & TYPE A-AGA WASHERS TOP & BOTTOM, 2" O.D. x 1 3/16" I.D.

SECTION A-A TYPICAL RAIL SPLICE DETAIL
Scale: 1 1/2"=1'-0"

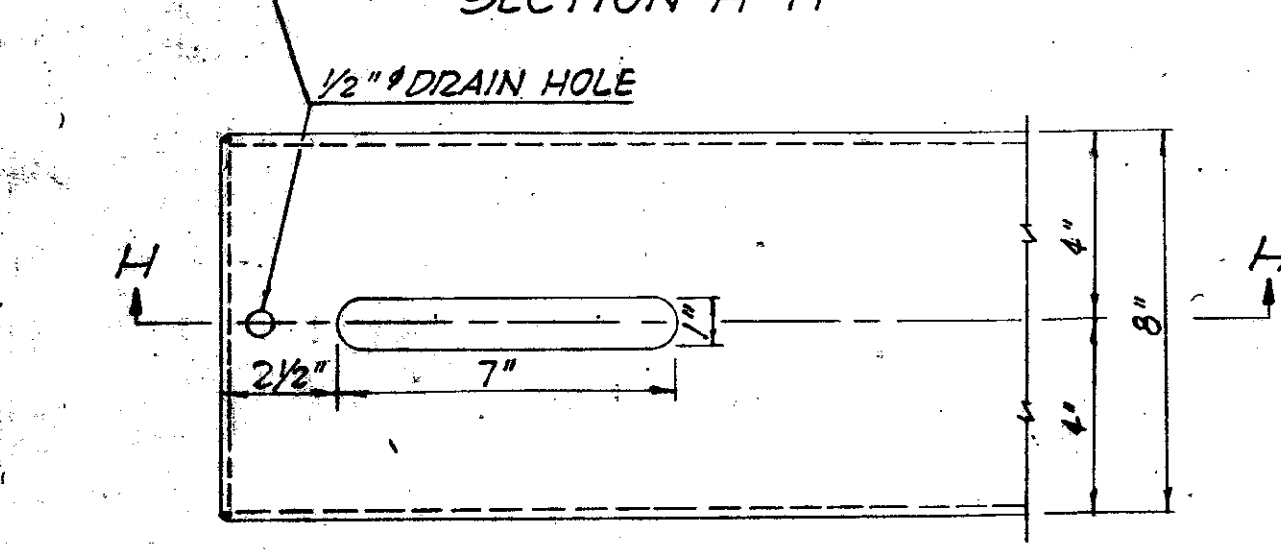


PLAN

ANCHORAGE
Scale: 1/2"=1'-0"
ITEM NO. G06.83

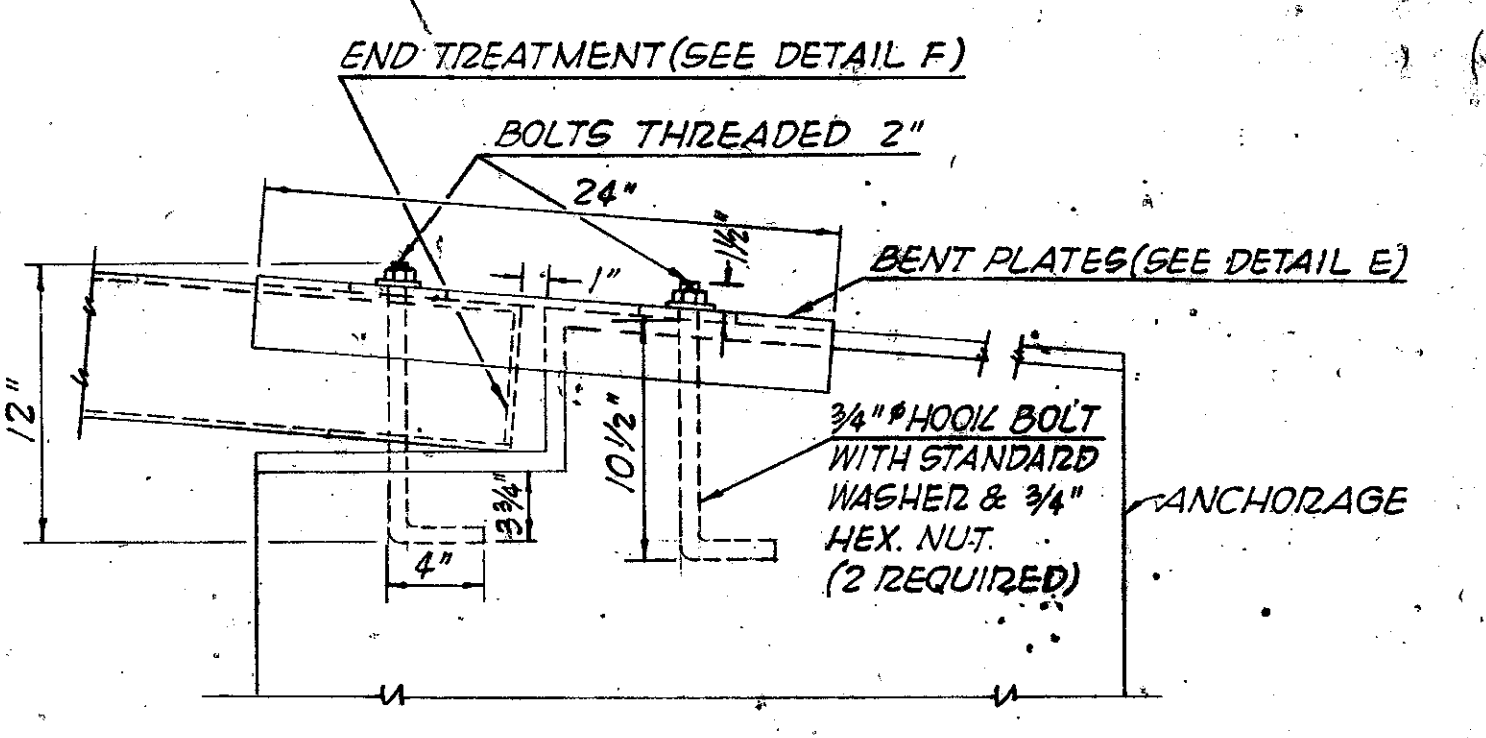


SECTION H-H

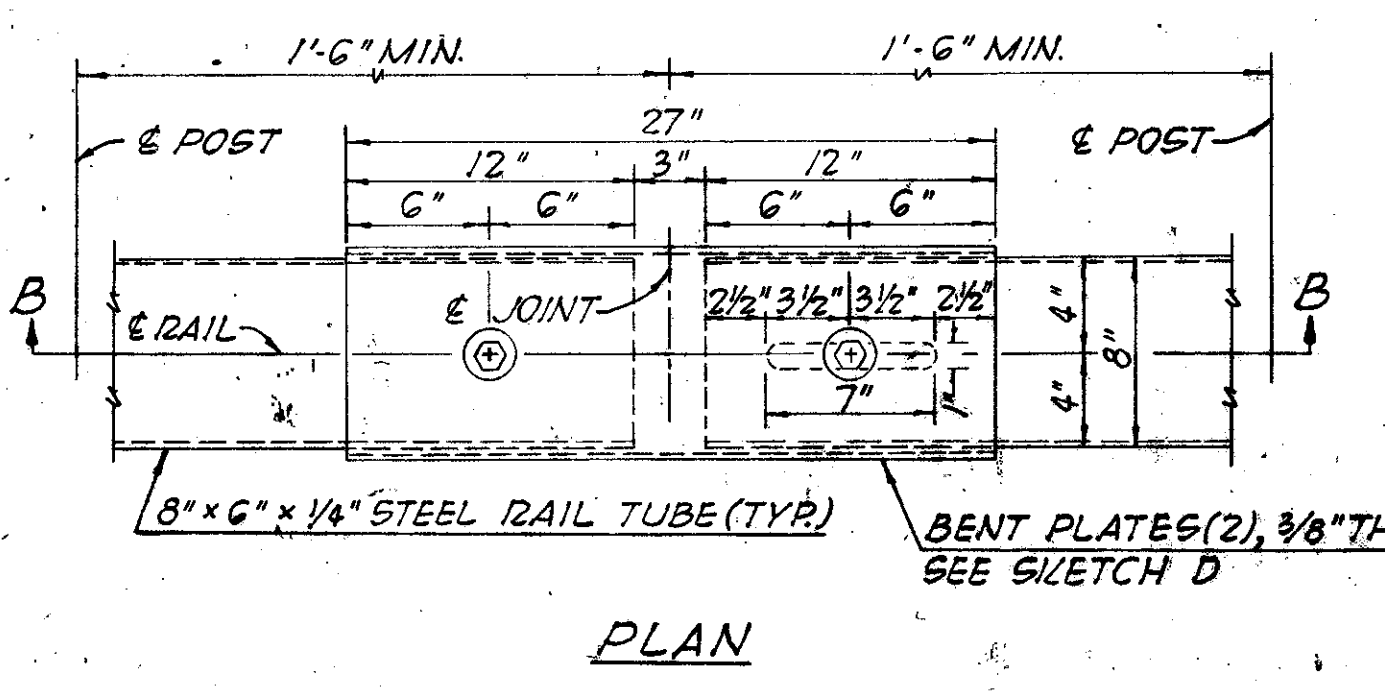


PLAN

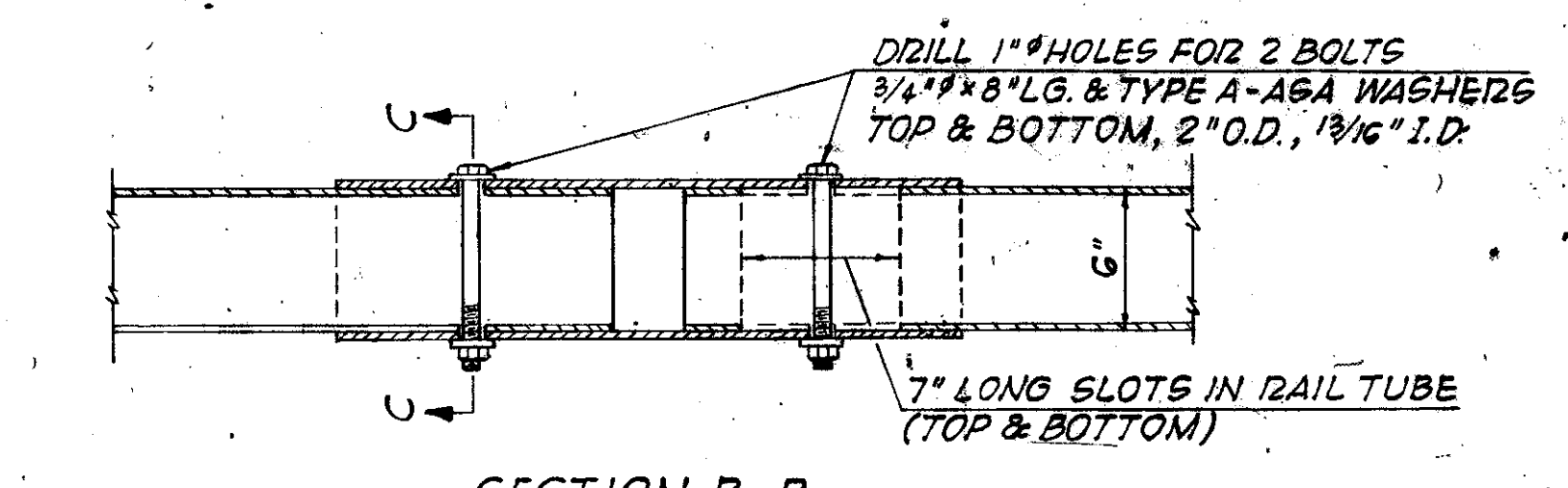
STRONG BEAM END TREATMENT
Scale: 3"=1'-0"



STRONG BEAM ANCHORAGE DETAIL
Scale: 1 1/2"=1'-0"



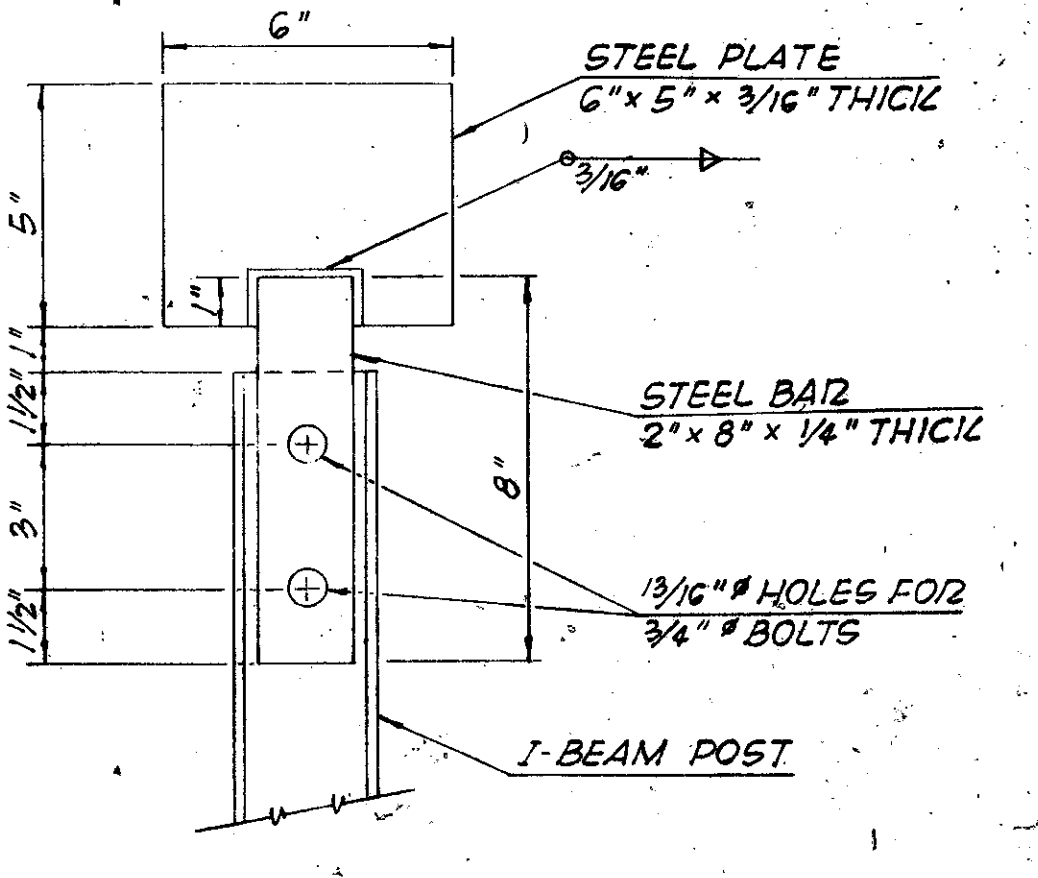
PLAN



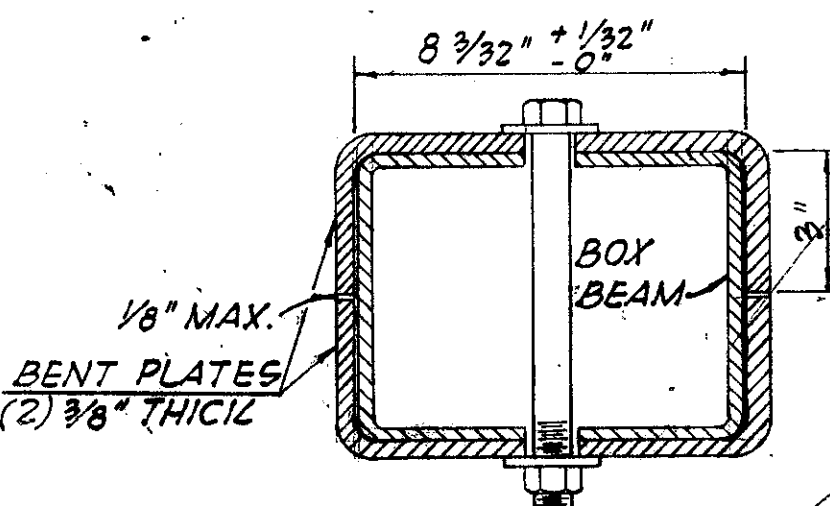
SECTION B-B

TYPICAL EXPANSION JOINT DETAIL
Scale: 1 1/2"=1'-0"

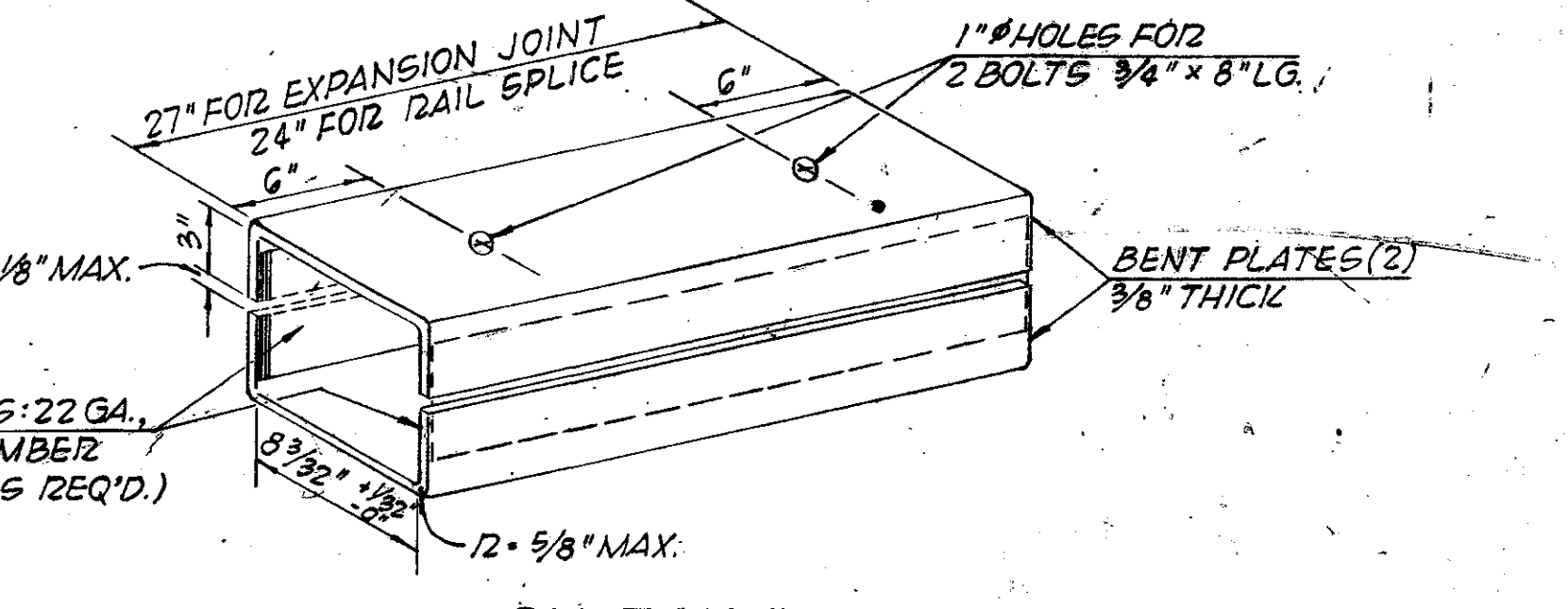
NOTES
EXPANSION JOINT TO BE FURNISHED AND INSTALLED AS ORDERED.
CURVED MEDIAN BARRIER - FOR CURVES GREATER THAN 3'-15' - STRONG BEAM SHALL BE SHOP WORIZED TO THE REQUIRED CURVATURE.



TOP of POST DETAIL
Scale: 3"=1'-0"



SECTION C-C
Scale: 3"=1'-0"

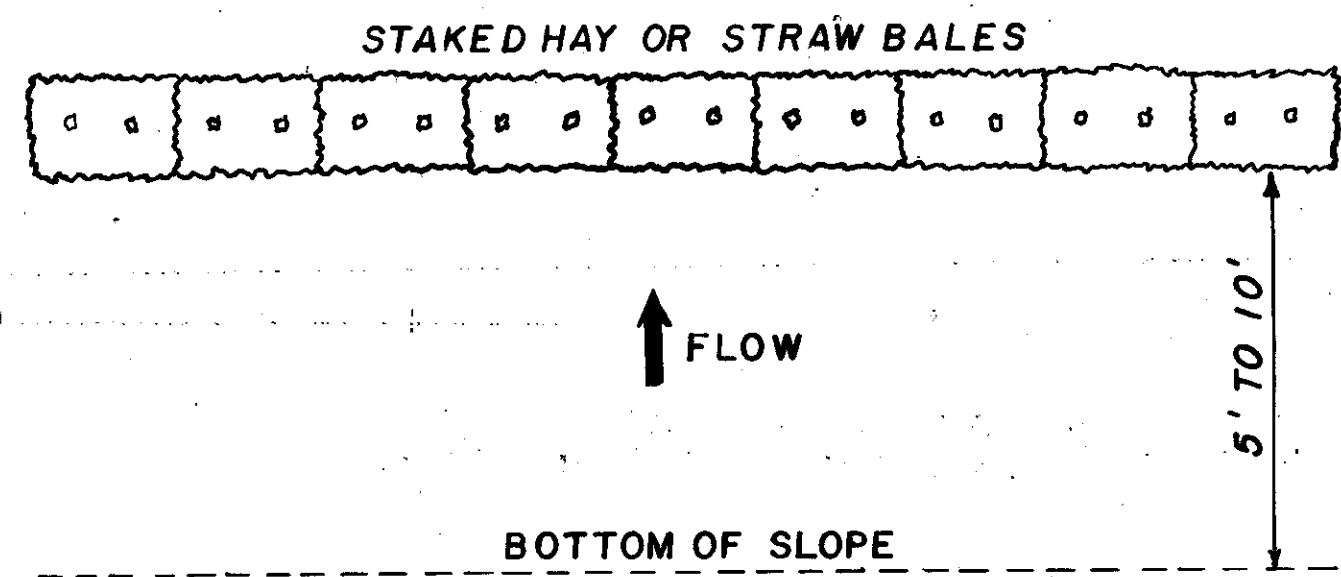


SKETCH D TYPICAL SPLICE PLATES
Not to Scale

APPROVED	STRONG BEAM MEDIAN BARRIER GUARD RAIL & ANCHORAGE	NO. G12-221	
DESIGN ENGINEER		NO. G12-231 (CURVED)	
FEDERAL PROJECT NO.	STATE PROJ. NO. 10059-A	SHEET NO. 18	TOTAL SHEETS 59

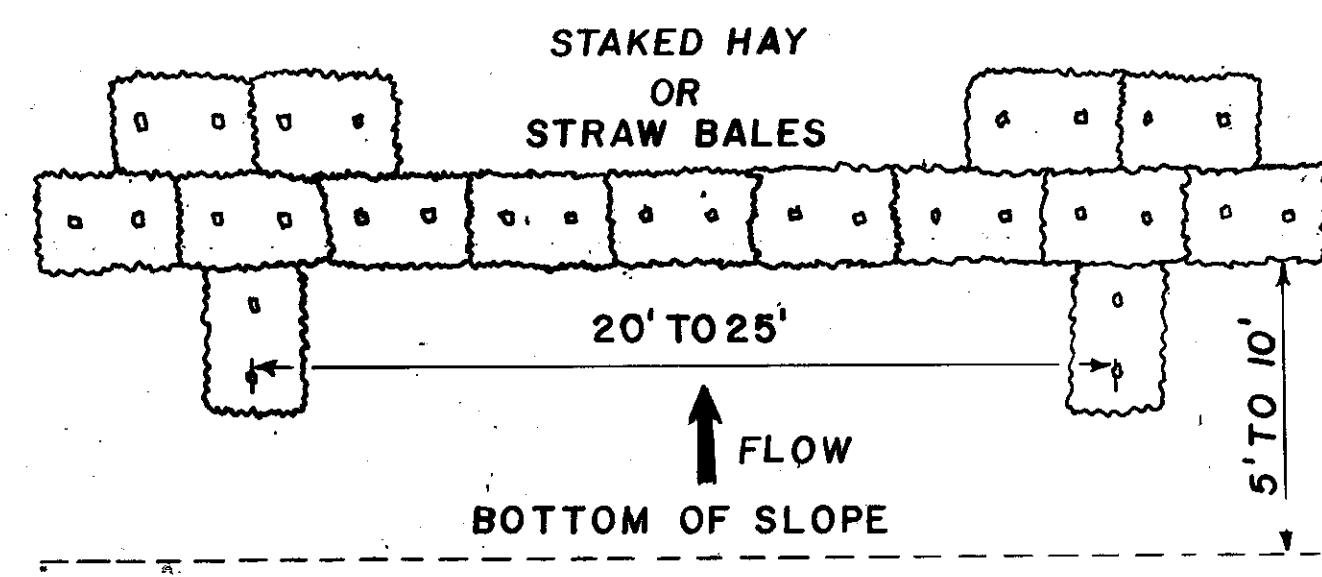
EXISTING - DETAIL	DATE	BY
PROPOSED - DESIGN	DATE	BY
SHEET - CHECKED	DATE	BY
AS - BUILT - DETAILS	DATE	BY

REVISIONS AFTER PROPOSAL	DESCRIPTION	STATION	DATE	NUMBER	STATION	DATE	NUMBER



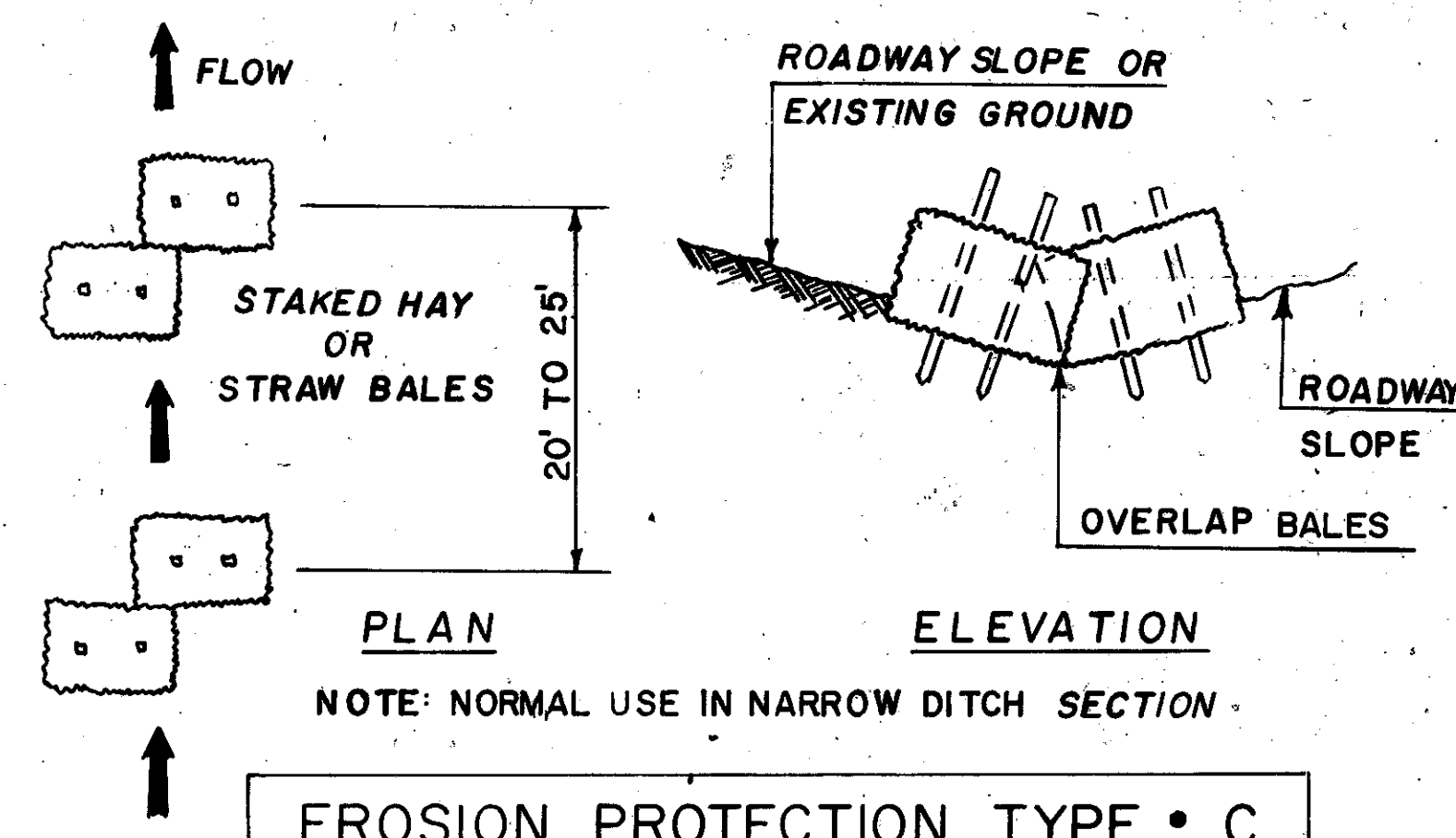
NOTE: NORMAL USE AT BOTTOM OF FILL SLOPE

EROSION PROTECTION TYPE • A

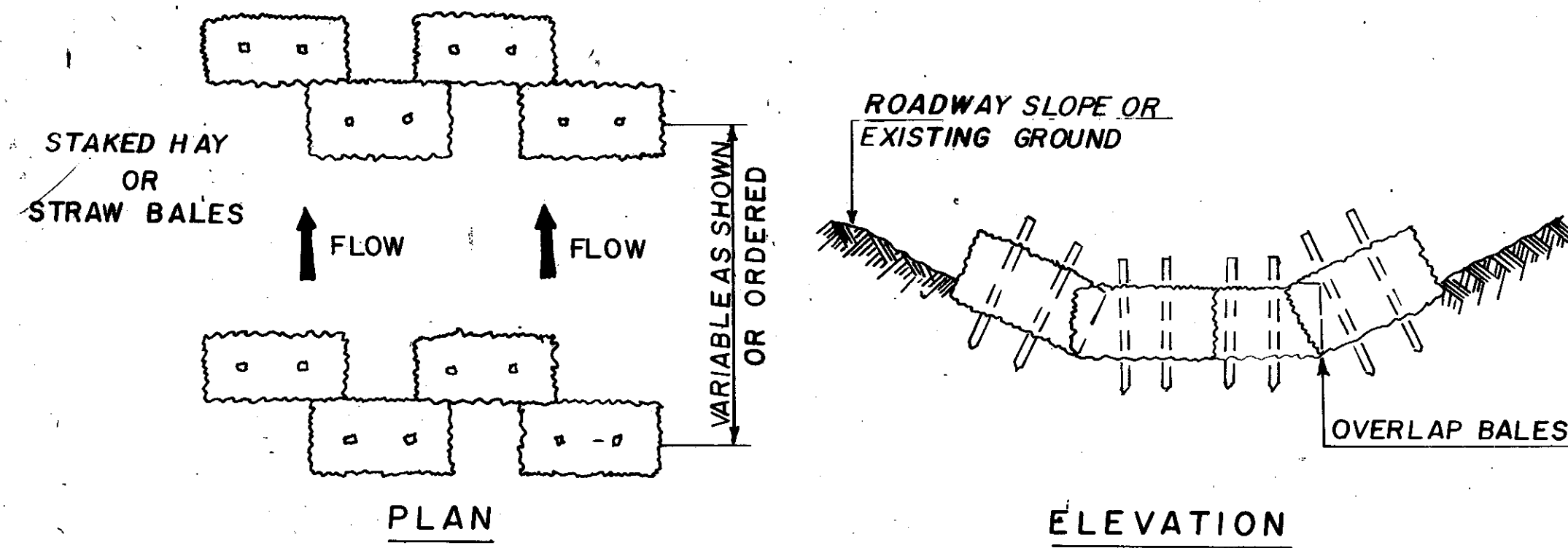


NOTE: NORMAL USE AT BOTTOM OF FILL SLOPE WHERE HEAVY FLOW MAY BE ANTICIPATED.

EROSION PROTECTION TYPE • B

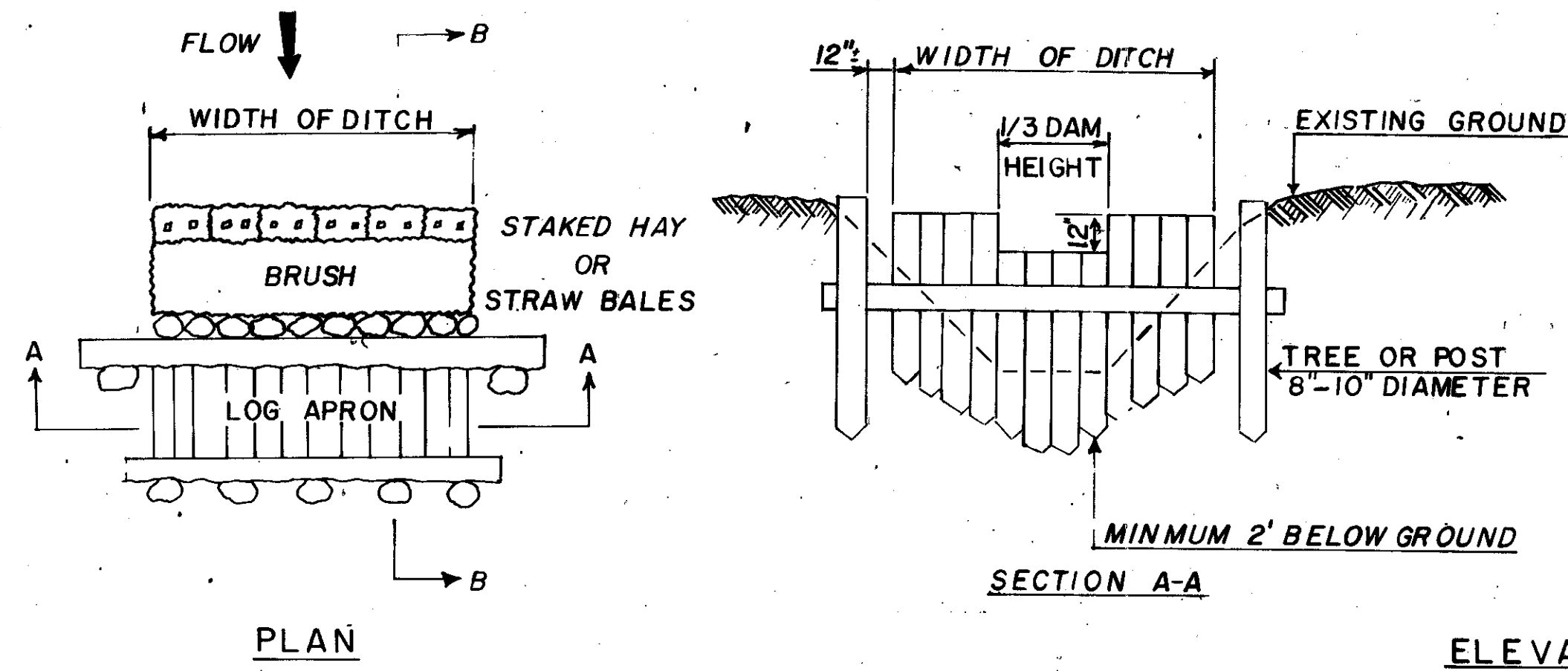


EROSION PROTECTION TYPE • C



NOTE: NORMAL USE IN WIDE DITCH SECTION

EROSION PROTECTION TYPE • D



NOTE: NORMAL USE IN, OR JUST UPSTREAM OF WATER COURSE

EROSION PROTECTION TYPE • E

GENERAL NOTES

- ① BALED HAY AND STRAW WILL BE PAID UNDER ITEM 64551.
- ② STAKES TO HOLD BALES SHALL BE 2" BY 2" OR EQUIVALENT SAPLINGS AND SHALL BE LONG ENOUGH TO EXTEND 1 FOOT MINIMUM INTO THE GROUND. STAKE, LOGS, AND BRUSH WILL BE SUBSIDIARY.
- ③ BALES SHALL BE SET 3± INCHES BELOW GROUND SURFACE OR AS ORDERED. ANY REQUIRED EXCAVATION TO SET BALES WILL BE SUBSIDIARY.
- ④ HAY BALES WILL BE ALLOWED TO ROT IN PLACE EXCEPT IN HIGHLY VISIBLE AREAS WHERE THE ENGINEER MAY ORDER REMOVAL AS SUBSIDIARY WORK

STATE OF NEW HAMPSHIRE
 DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS • HIGHWAY DESIGN DIVISION

TEMPORARY EROSION CONTROL MEASURES

FEDERAL PROJECT NO. 10059-A STATE PROJECT NO. 19 SHEET NO. 59

REVISIONS AFTER PROPOSAL

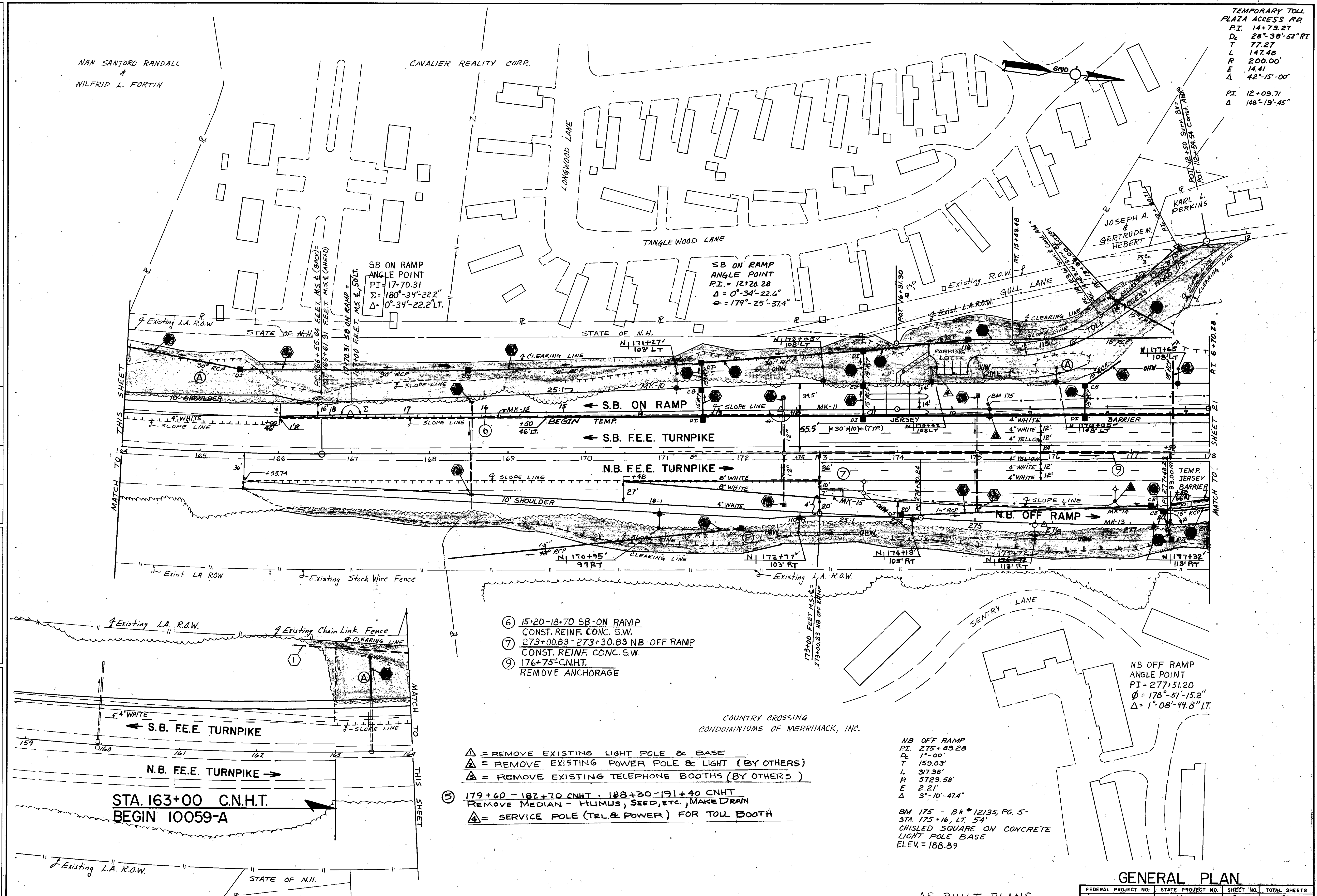
STATION	DESCRIPTION

NUMBER	DATE	BY	DESCRIPTION

DATE	BY	DESCRIPTION

TEMPORARY TOLL
PLAZA ACCESS RD
P.I. 14+73.27
Dc 28°-38'-52" RT
T 77.27
L 147.48
R 200.00
E 14.41
Δ 42°-15'-00"

P.I. 12+09.71
Δ 148°-19'-45"



NB OFF RAMP
P.I. 275+89.28
Dc 1°-00'
T 159.03'
L 317.98'
R 5729.58'
E 2.21'
Δ 3°-10'-47.4"

BM 175 - BK # 12/35, PG. 5 -
STA 175+16, LT. 54'
CHISEL SQUARE ON CONCRETE
LIGHT POLE BASE
ELEV. = 188.89

GENERAL PLAN

AS BUILT PLANS

FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	20	59

REVISIONS AFTER PROPOSAL

STATION	DESCRIPTION

STATION

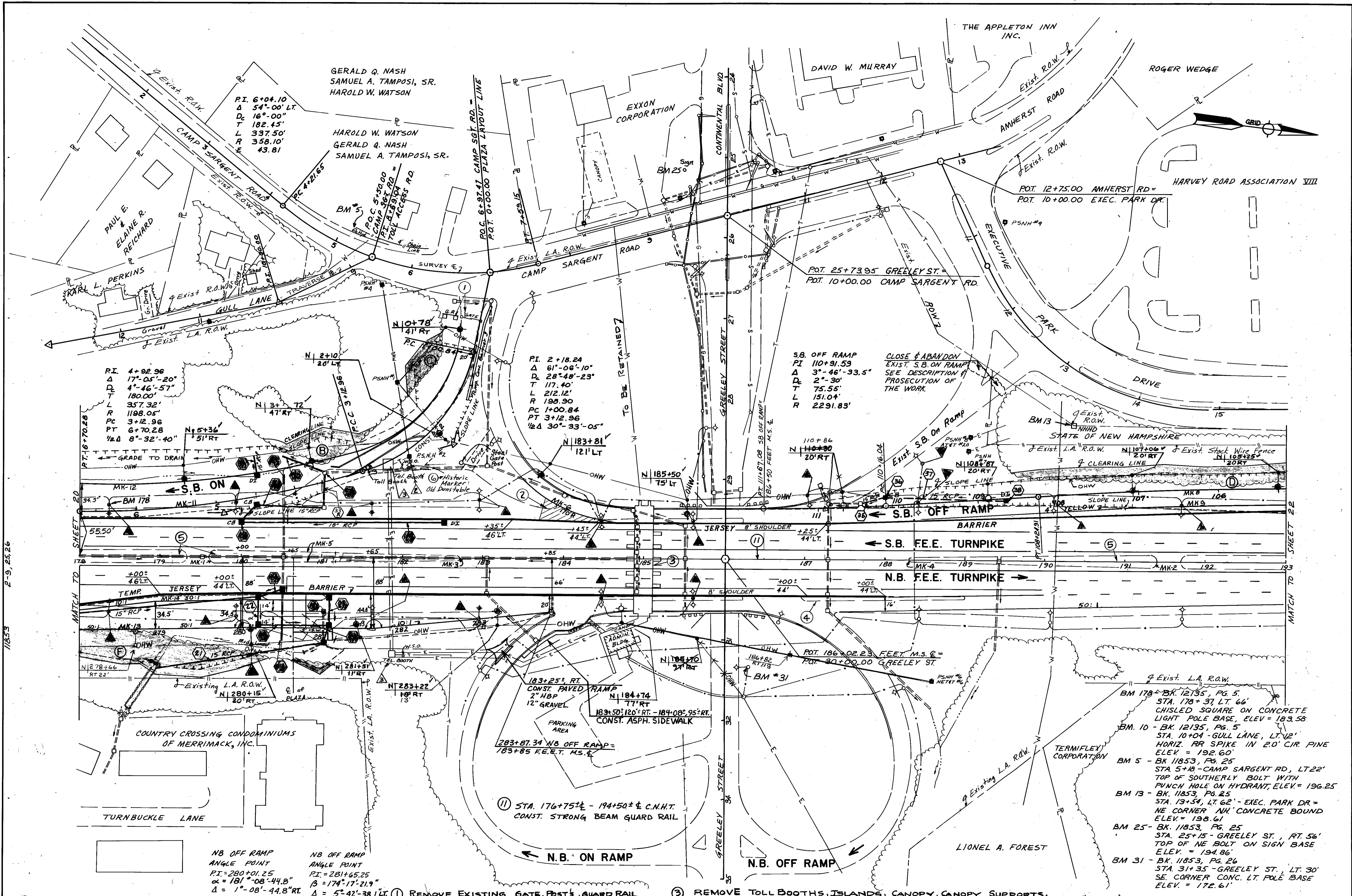
NUMBER	DATE

NOTEBOOKS

BOOK	PAGE
9609	65-67
12135	2-20
12134	2-9

DATE

DATE	DATE	DATE	DATE
4-25-88			



- BM 178 - BK 12135, PG. 5
STA. 178+37 LT. 66'
CHISEL SQUARE ON CONCRETE
LIGHT POLE BASE, ELEV = 183.58
- BM 10 - BK 12135, PG. 5
STA. 10+04 - GULL LANE, LT. 12'
HORIZ. RR SPIKE IN 20' CIR. PINE
ELEV = 192.60'
- BM 5 - BK 11853, PG. 25
STA. 5+18 - CAMP SARGENT RD, LT. 22'
TOP OF SOUTHERLY BOLT WITH
PUNCH HOLE ON HYDRANT, ELEV. = 196.25
- BM 13 - BK 11853, PG. 25
STA. 13+54, LT. 62' - EXEC. PARK DR. =
NE CORNER 'NH' CONCRETE BOUND
ELEV. = 198.61
- BM 25 - BK 11853, PG. 25
STA. 25+15 - GREELEY ST., RT. 56'
TOP OF NE BOLT ON SIGN BASE
ELEV. = 194.86'
- BM 31 - BK 11853, PG. 26
STA. 31+35 - GREELEY ST., LT. 30'
SE. CORNER CONC. LT. POLE BASE
ELEV. = 172.61'

(C) HISTORIC MARKER: OLD DUNSTABLE - TO BE REMOVED BY TURNPIKE BUREAU
 (1) REMOVE EXISTING GATE, POSTS, GUARD RAIL FOR STORAGE
 (2) RESET 90'-GRANITE CURB, REMOVE SURFACE, HUMUS & SEED
 (3) REMOVE TOLL BOOTHS, ISLANDS, CANOPY, CANOPY SUPPORTS, CB'S, 2-GRANITE CURB ISLAND - ITEM NO. 202.95 (SEE SHEETS #14-16, 11A)
 (4) REMOVE GRANITE CURB ISLAND AND ADD CRUSHED GRAVEL, 3" PAVEMENT
 AS BUILT PLANS

FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	21	59

REVISIONS AFTER PROPOSAL

STATION

STATION

DATE

NUMBER

NOTEBOOKS

BOOK

PAGE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

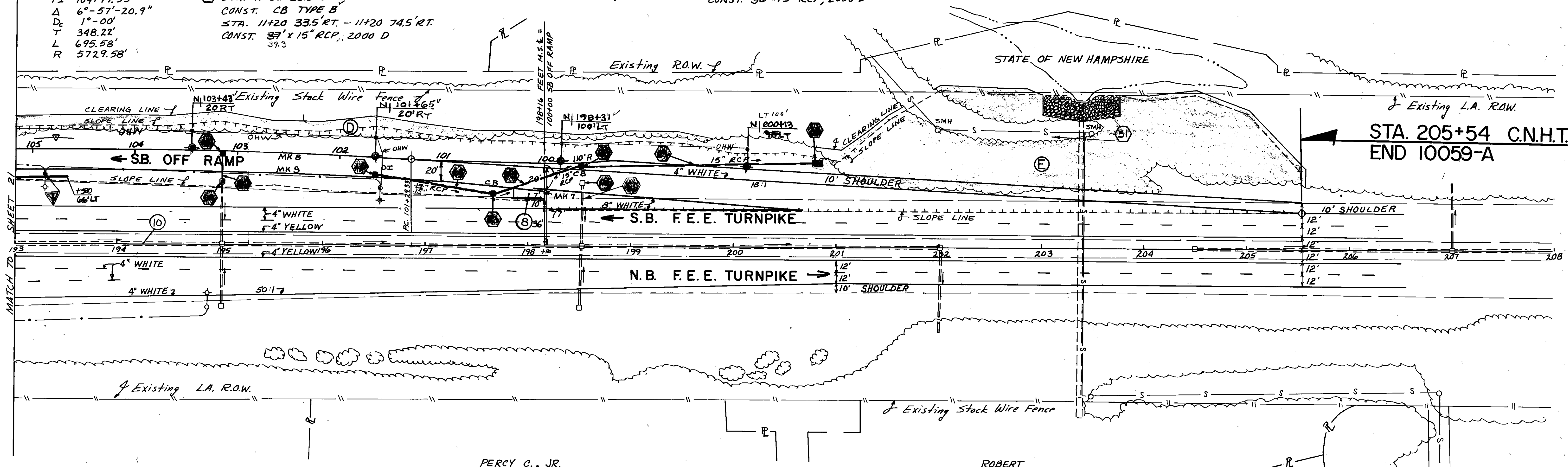
DATE

DATE

DATE

- 1 STA. 162+75 140' LT. - 165+50 107' LT. CONST. 28" x 30" RCP, 3000 D STA. 165+50 107' LT. CONST. DI TYPE E
- 2 STA. 165+50 107' LT. - 16+20 55.5' RT. CONST. 28" x 30" RCP, 3000 D STA. 16+20 55.5' RT. CONST. DI TYPE E
- 3 STA. 168+23 135' RT. - 172+00 97' RT. CONST. 36" x 18" RCP, 2000 D STA. 172+00 97' RT. CONST. DI TYPE E
- 4 STA. 168+53 LT. & RT. WRECK HEADERS AND PLUG EXIST. 15" RCP.
- 5 STA. 16+20 55.5' RT. - 13+20 60.5' RT. CONST. 29" x 30" RCP, 3000 D STA. 13+20 60.5' RT. CONST. DI TYPE E
- 6 STA. 13+20 9.5' LT. CONST. DI TYPE B STA. 13+20 9.5' LT. - 13+20 29.5' RT. CONST. 36" x 15" RCP, 2000 D
- 7 STA. 13+20 29.5' RT. CONST. CB TYPE B STA. 13+20 29.5' RT. - 13+20 60.5' RT. CONST. 27" x 15" RCP, 2000 D
- 8 STA. 13+20 60.5' RT. - 11+20 74.5' RT. CONST. 28" x 30" RCP, 3000 D STA. 11+20 74.5' RT. CONST. DI TYPE E
- 9 STA. 172+50 LT. & RT. WRECK AND ABANDON EXISTING CB'S TO 3' BELOW FINAL GRADE. PLUG ENDS OF PIPE.
- 10 STA. 11+20 10.5' LT. CONST. DI TYPE B STA. 11+20 10.5' LT. - 11+20 33.5' RT. CONST. 34" x 15" RCP, 2000 D
- 11 STA. 11+20 33.5' RT. CONST. CB TYPE B STA. 11+20 33.5' RT. - 11+20 74.5' RT. CONST. 37" x 15" RCP, 2000 D
- 12 STA. 274+05 1' LT. CONST. DI TYPE B STA. 274+05 1' LT. - 277+27 26' LT. CONST. 37" x 15" RCP, 2000 D
- 13 STA. 11+20 74.5' RT. - 11+00 6' RT. CONST. 37" x 15" RCP, 3000 D
- 14 STA. 175+02 56' LT. & RT. WRECK AND ABANDON CB'S TO 3' BELOW FINAL GRADE. PLUG ENDS OF PIPES.
- 15 STA. 8+20 10.5' LT. CONST. DI TYPE B STA. 8+20 10.5' LT. - 8+20 33.5' RT. CONST. 40" x 15" RCP, 2000 D
- 16 STA. 8+20 33.5' RT. CONST. CB TYPE B STA. 8+20 33.5' RT. - 7+05 62' RT. CONST. 36" x 15" RCP, 2000 D
- 17 STA. 7+17 35' RT. - 7+17 62' RT. CONST. 28" x 18" RCP, 2000 D CONNECT TO EXISTING PIPE.
- 18 STA. 277+27 26' LT. CONST. CB TYPE B STA. 277+27 26' LT. - 277+42 19' LT. CONST. 4" x 15" RCP, 2000 D
- 19 STA. 277+52 10' RT. CONST. DI TYPE E STA. 277+42 19' LT. - 277+52 10' RT. CONST. 25" x 15" RCP, 2000 D
- 20 STA. 277+42 19' LT. CONST. CB TYPE B STA. 277+42 19' LT. - 280+25 41' LT. CONST. 27" x 15" RCP, 2000 D
- 21 STA. 279+00 47' RT. - 281+04 20' RT. CONST. 206" x 15" RCP, 2000 D STA. 281+04 20' RT. CONST. CB TYPE B REMOVE EXIST. CB AND PLUG PIPES.
- 22 STA. 280+25 41' LT. CONST. CB TYPE B STA. 280+25 41' LT. - 280+25 1' LT. CONST. 36" x 15" RCP, 2000 D
- 23 STA. 280+25 1' LT. CONST. CB TYPE B STA. 280+25 1' LT. - 281+10 1' LT. CONST. 31" x 15" RCP, 2000 D
- 24 STA. 280+25 41' LT. - 180+53 43' RT. CONST. 26" x 15" RCP, 2000 D STA. 180+53 43' RT. CONST. CB TYPE B MATCH TO EXIST. 24" RCP REMOVE 4" x 24" RCP (SUBSIDIARY) PLUG ENDS OF PIPE (SUBSIDIARY)
- 25 STA. 281+10 38' LT. CONST. DI TYPE B STA. 281+10 38' LT. - 281+10 1' LT. CONST. 33" x 15" RCP, 2000 D
- 26 STA. 281+10 1' LT. CONST. CB TYPE B STA. 281+10 1' LT. - 281+04 20' RT. CONST. 17" x 15" RCP, 2000 D
- 27 STA. 281+04 20' LT. WRECK AND ABANDON CB, PLUG PIPE.
- 28 STA. 180+00 45' LT. CONST. CB TYPE B STA. 180+00 45' LT. - 4+50 10' LT. CONST. 26" x 15" RCP, 2000 D
- 29 STA. 180+00 45' LT. - 182+50 45' LT. CONST. 24" x 15" RCP, 2000 D STA. 182+50 45' LT. CONST. DI TYPE B
- 30 STA. 4+50 10' LT. CONST. CB TYPE E STA. 3+70 27' LT. - 4+50 10' LT. CONST. 28" x 15" RCP, 2000 D MATCH TO EXIST. CB @ 3+70
- 31 STA. 4+39 28' RT. CONST. DI - 55 STA. 4+39 28' RT. - 4+39 52' RT. CONST. 24" x 15" RCP, 2000 D
- 32 STA. 3+61 12' RT. CONST. MANHOLE COVER + FRAME MATCH RIM ELEV. TO ROADWAY GRADE SALVAGE CB GRATE + FRAME.
- 33 STA. 116+00 5' RT. CONST. DI TYPE E STA. 116+00 5' RT. - 7+20 92' LT. CONST. 258" x 15" RCP, 2000 D
- 34 STA. 3+61 RT. 12' TO 3+70 LT 27' REM. EXIST 12" RCP CONST. 37" x 15" RCP 2000 D
- 35 STA. 110+19 10' RT. - 110+45 5' RT. CONST. 26" x 15" RCP, 2000 D MATCH TO EXISTING C.B. @ 187+71
- 36 STA. 110+17 10' RT. CONST. CB TYPE E
- 37 STA. 110+15 10' RT. - 108+69 1' LT. CONST. 24" x 15" RCP, 2000 D
- 38 STA. 108+67 1' LT. CONST. DI TYPE B
- 39 STA. 103+16 32' LT. ADJUST GRATE AND FRAME OF EXISTING CB
- 40 STA. 103+16 21' LT. - 103+16 30' LT. CONST. 4" x 12" RCP, 2000 D MATCH TO EXISTING CB @ 195+01 59' LT.
- 41 STA. 103+16 19' LT. CONST. DI TYPE B
- 42 STA. 101+66 66.10' LT. CONST. DI TYPE B
- 43 STA. 100+49 30.67' LT. CONST. CB TYPE E
- 44 STA. 101+66 66.10' LT. - 100+49 30.67' LT. CONST. 44" x 15" RCP, 2000 D
- 45 100+49 30.67' LT. - 198+49 79' LT. CONST. 36" x 15" RCP, 2000 D
- 46 STA. 198+51 60' LT. WRECK DI, SALVAGE GRATE AND FRAME
- 47 STA. 198+51 58' LT. - 198+51 41' LT. REMOVE 11" x 12" RCP, PLUG REMAINING END OF PIPE
- 48 STA. 198+51 79.25' LT. CONST. CB TYPE B
- 49 STA. 198+53 79' LT. - 201+09 85' LT. CONST. 25" x 15" RCP, 2000 D
- 50 STA. 200+75 83' LT. CONST. STONE FILL CLASS B OUTLET PROTECTION
- 51 STA. 201+88 - 203+58 LT. CONST. STONE FILL CLASS B SLOPE PROTECTION
- 52 STA. 113+58 66' LT. - 114+00 12' RT. - TOLL ACCESS RD. CONST. 36" x 15" RCP, 2000 D
- 53 STA. 180+50 LT 100', RT 104' PLUG EXIST PIPE
- 54 STA. 163+46 67' - 115' LT. CONST. 48" x 12" RCP, 2000 D CONST. CONC. END SECTION

SB. OFF RAMP
 PI 104+77.55
 Δ 6°-57'-20.9"
 Dc 1°-00'
 T 348.22'
 L 695.58'
 R 5729.58'



DONALD R.
 &
 MARY ANN
 WOODWARD

PERCY C., JR.
 &
 SHARON M.
 GOODRICH

ROBERT
 &
 GAIL
 CARRIGAN

RICHARD POWERS, INC.

10 194+25 C.N.H.T
 REMOVE ANCHORAGE

8 STA. 100+00 - 100+30
 CONST. REIN. CONCRETE SIDEWALK
 (SEE SHEET #16 FOR DETAIL)

GENERAL PLAN

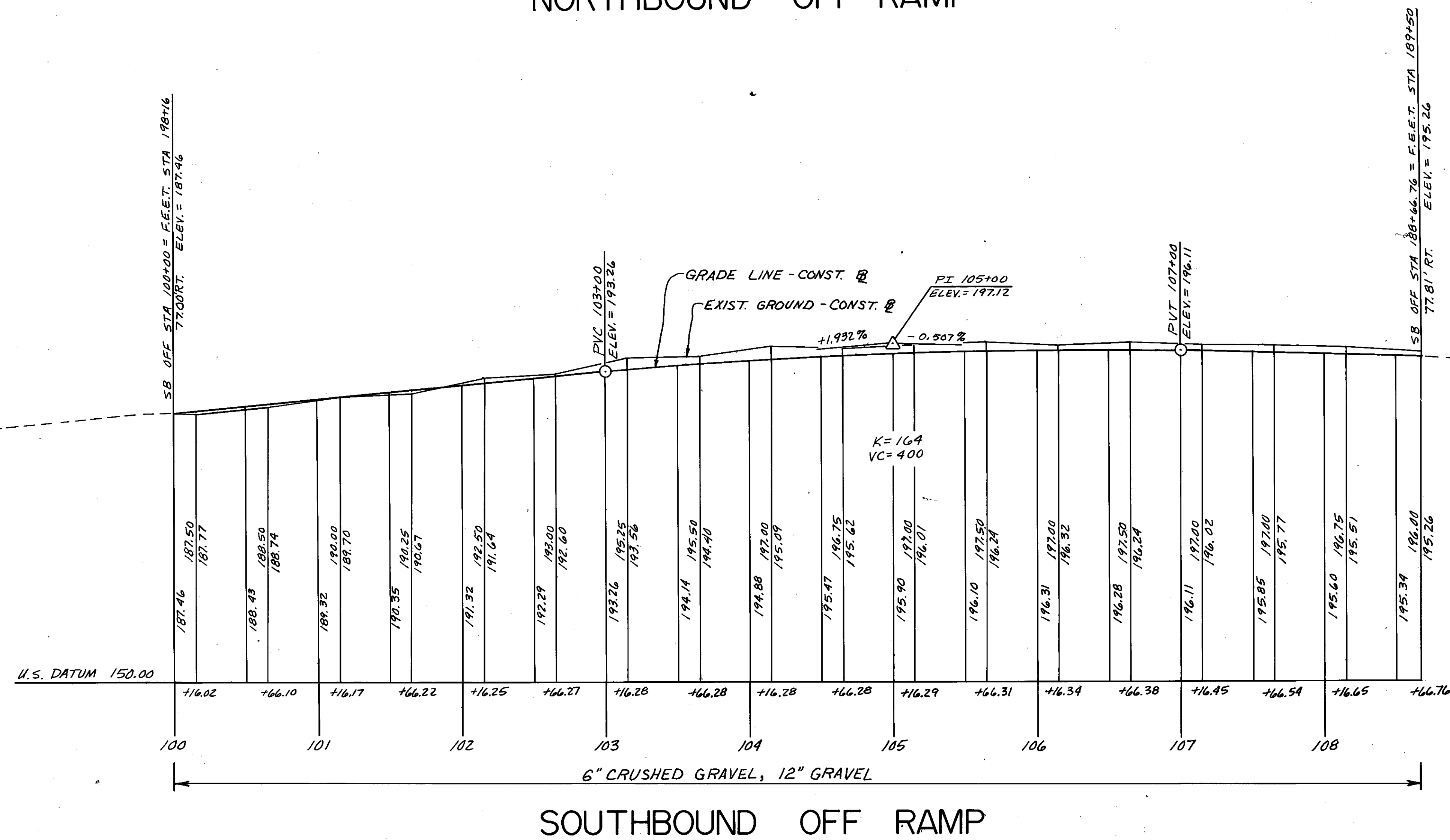
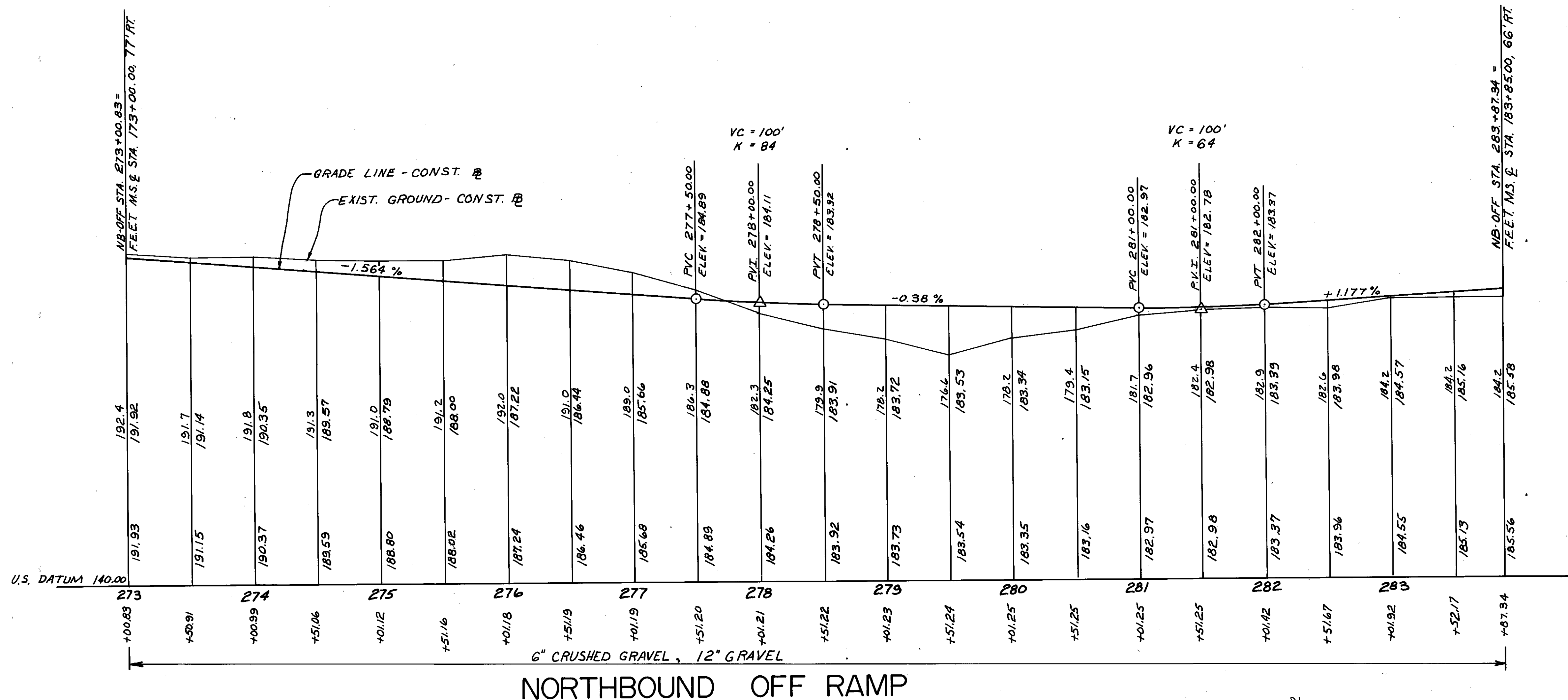
FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	22	59

AS BUILT PLANS

EXISTING DETAIL	DATE	BY
PROPOSED DESIGN	DATE 6-88	WJO / AGH
SHEET CHECKED	DATE	
AS BUILT DETAILS	DATE	

REVISIONS AFTER PROPOSAL		STATION	DATE	DESCRIPTION
NUMBER	BY			

NOTEBOOKS			
BOOK	PAGE	BOOK	PAGE

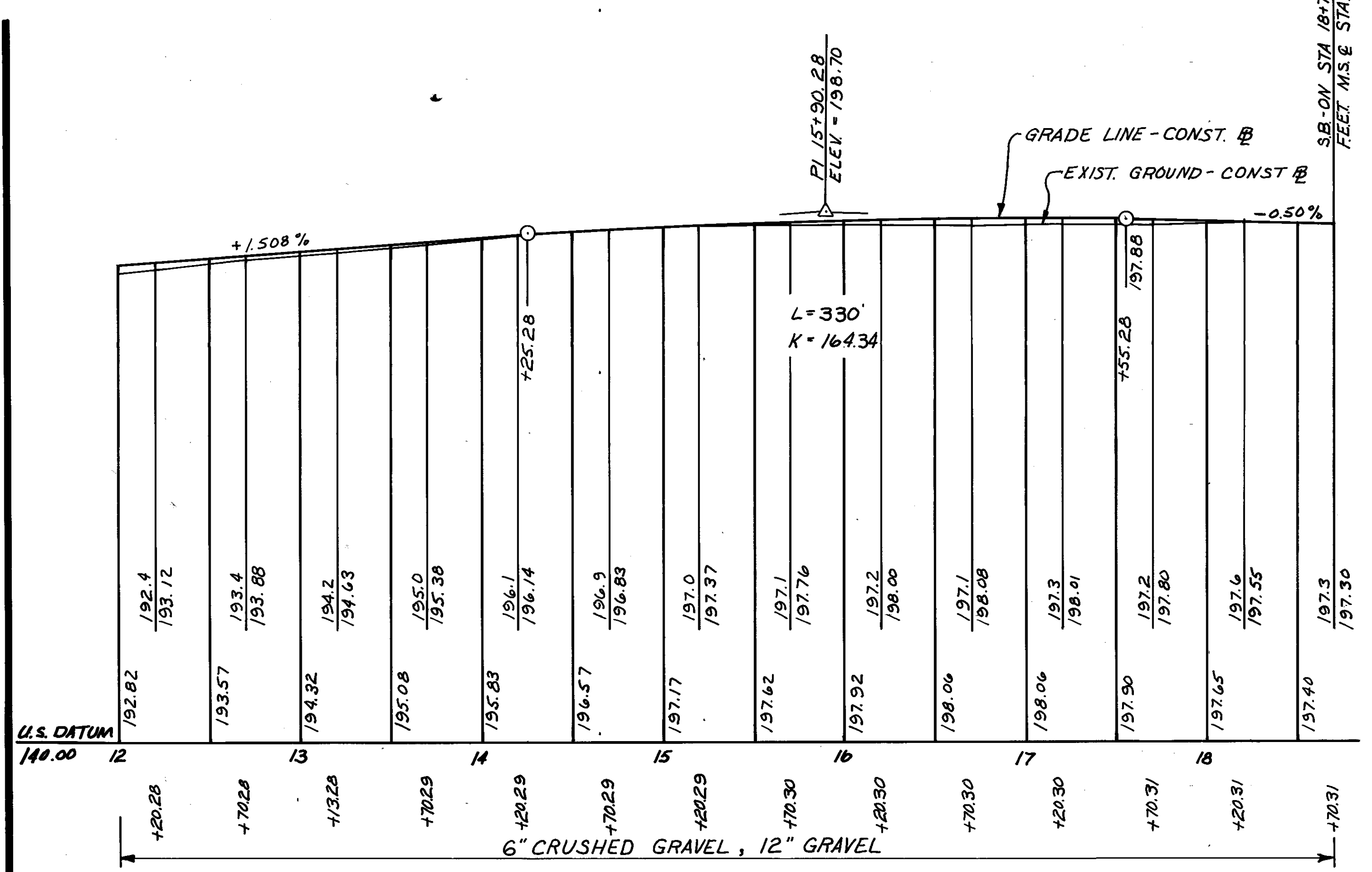
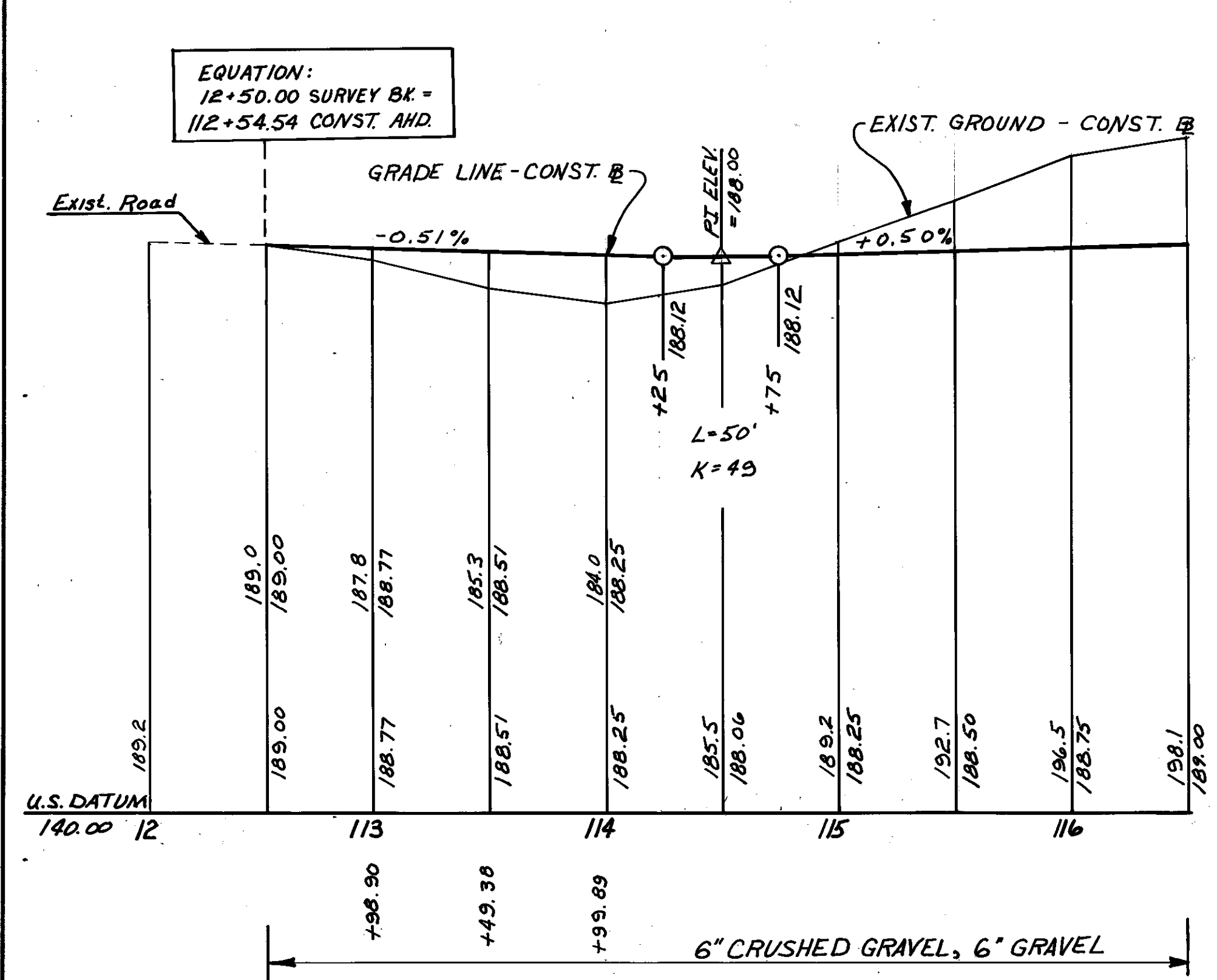
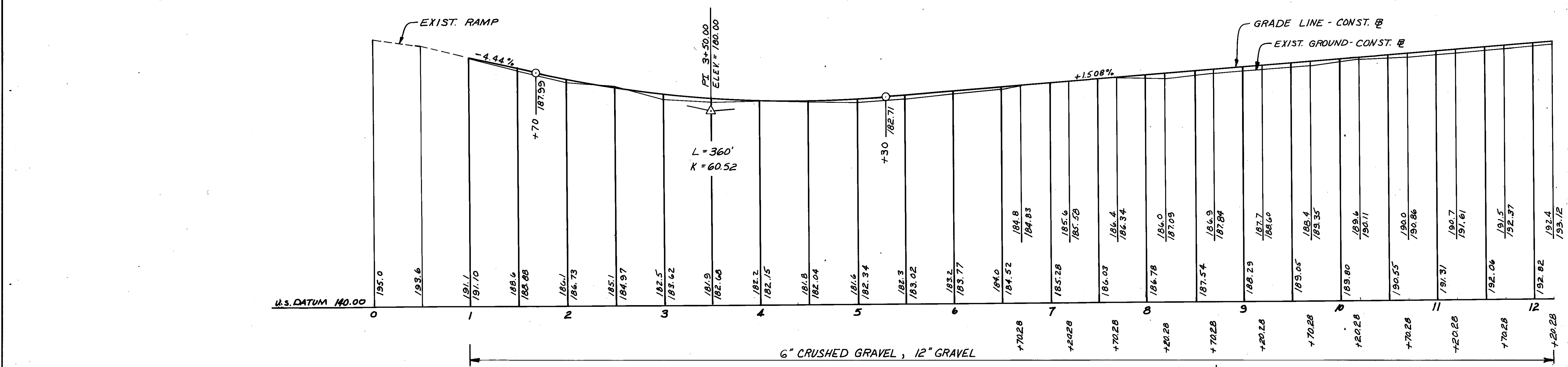


PROFILE			
FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	23	59

NUMBER	DATE	STATION	DESCRIPTION

BOOK	PAGE	BOOK	PAGE

DATE	DATE	DATE	DATE



S.B. ON STA 18+70.31 = FEET M.S.E STA 166+00.48 LT.

TOLL ACCESS ROAD

SOUTHBOUND ON RAMP

PROFILE

FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	24	59

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION

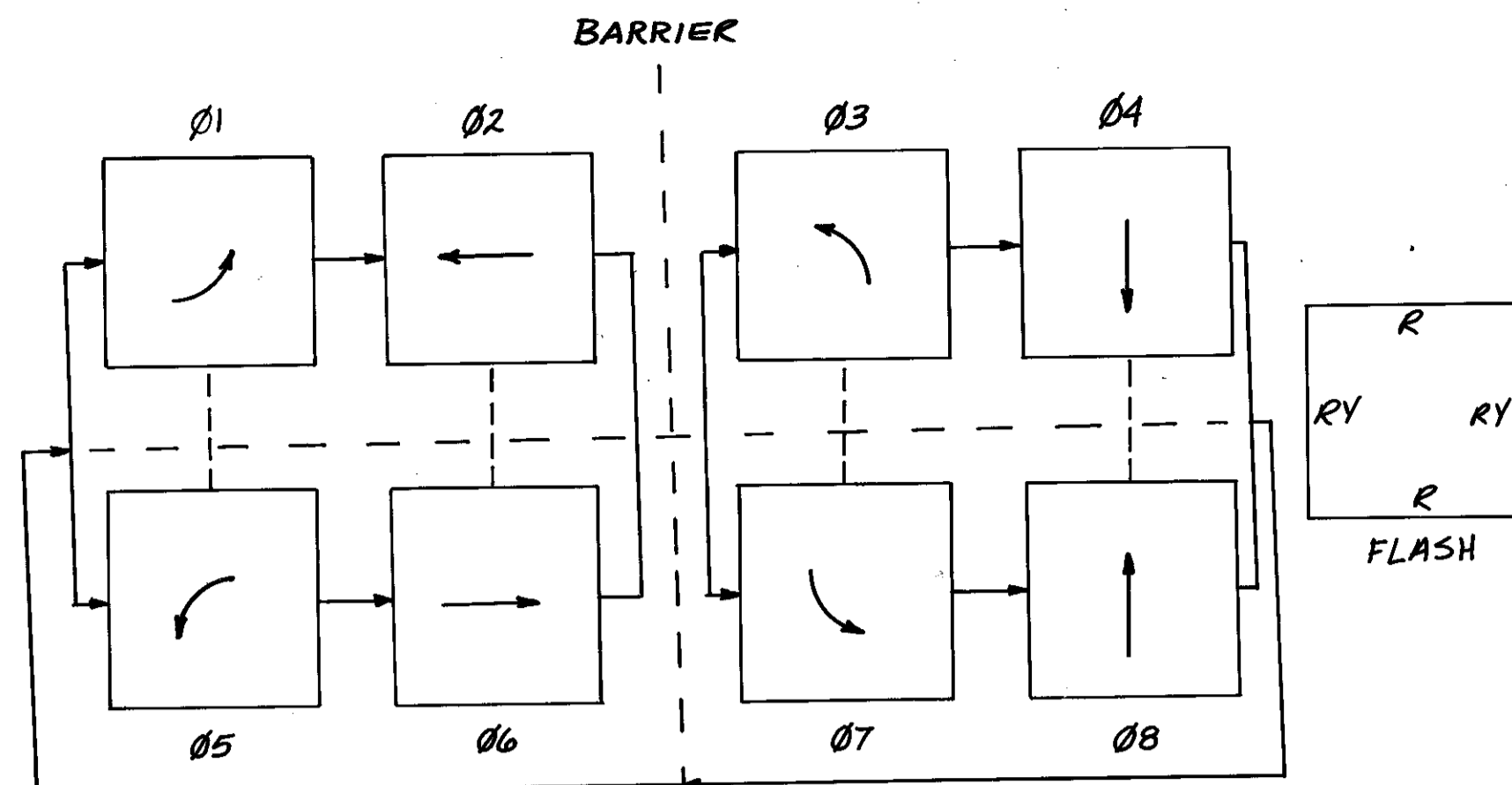
NOTEBOOKS	BOOK	PAGE

EXISTING DETAIL	DATE	DESIGNER	DATE
B. OLDENBURG	4-28-88	B. OLDENBURG	4-30-88
PROPOSED DESIGN			
SHEET CHECKED			
AS BUILT DETAILS			

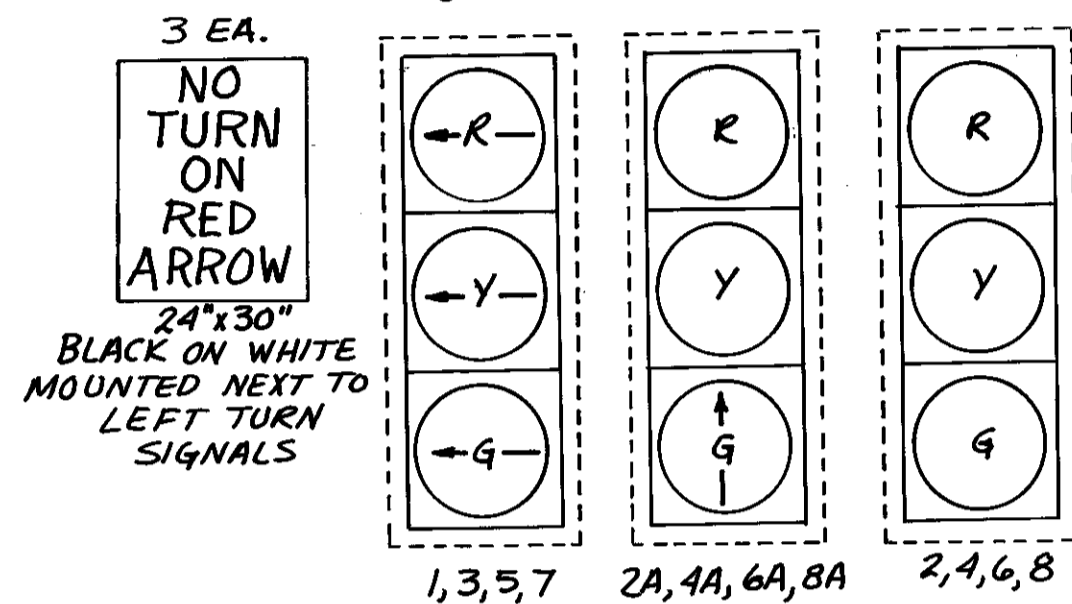
SYMBOLS

- EXIST. POLE W/MAST ARM
- EXIST. CONDUIT
- NEW CONDUIT
- NEW CONTROLLER
- EXIST. PULL BOX
- NEW LOOP DET.
- EXIST. LOOP DET.
- NEW SIGNAL HEAD
- EXIST. SIGNAL HEAD
- 250 WATT HPS. LUMINAIRES (EXIST.)

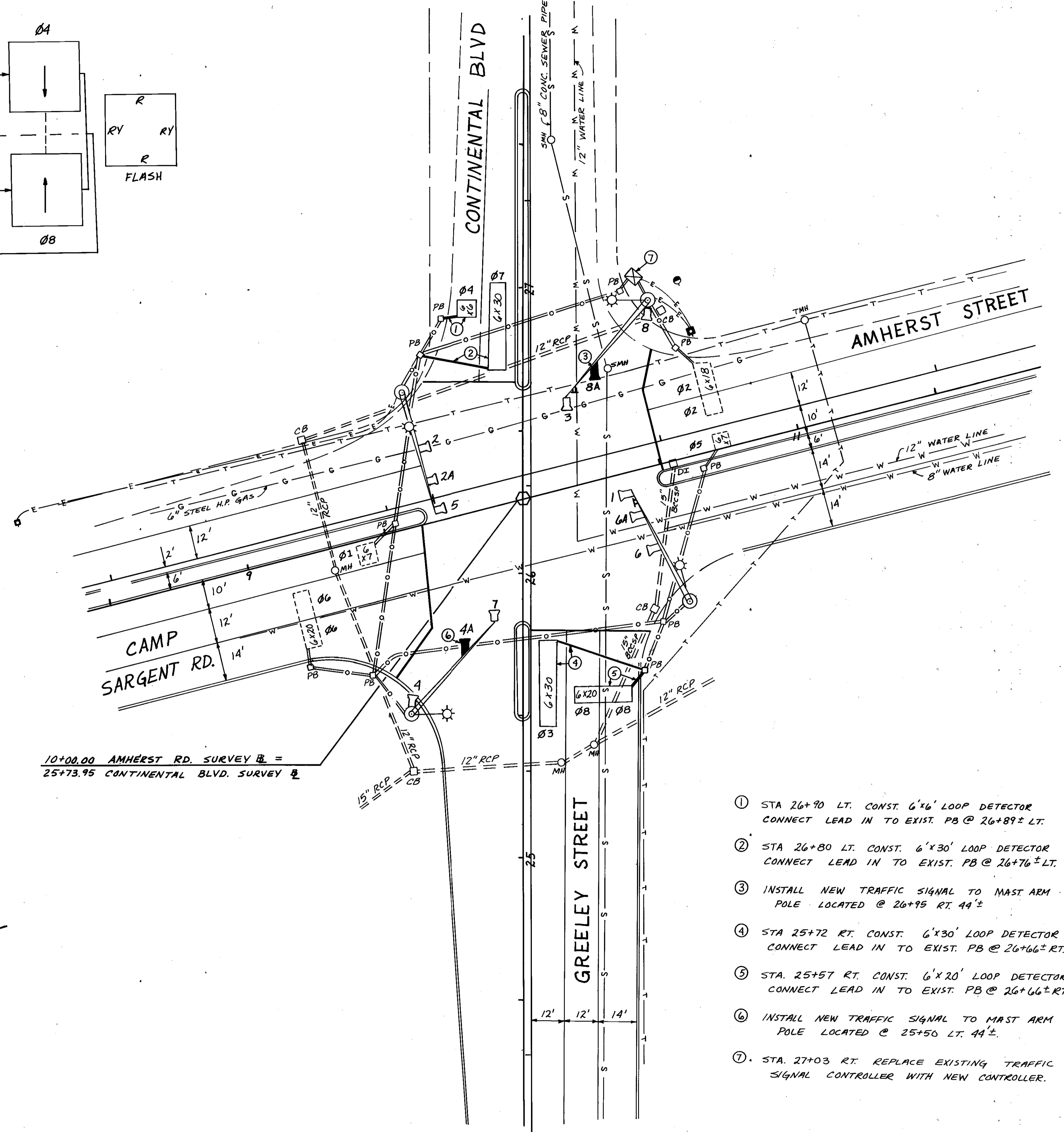
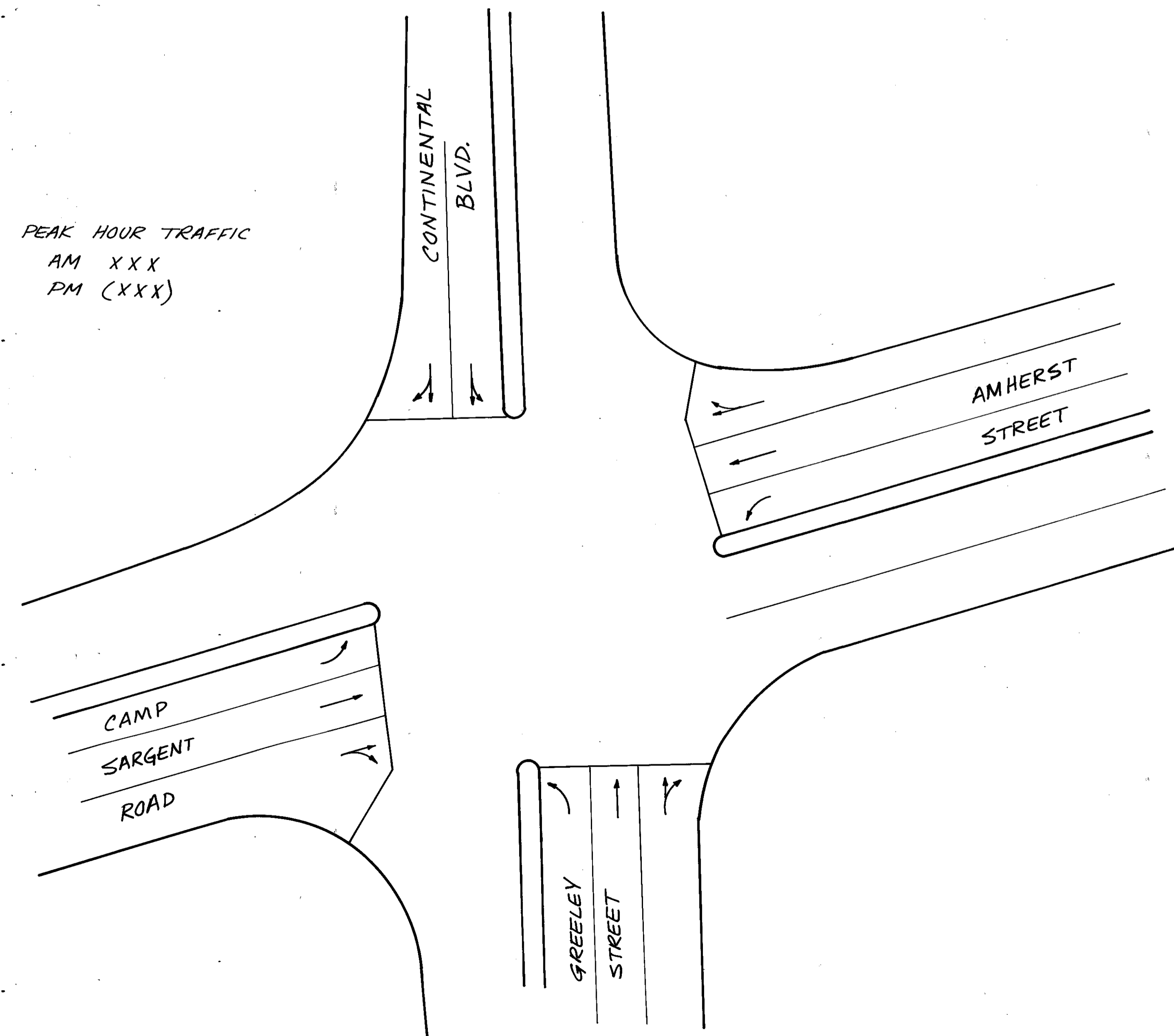
QUAD LEFT TURN, DUAL RING OPERATION



SIGNAL FACES (12" LENSES W/5" BACKPLATES)



PEAK HOUR TRAFFIC
AM XXX
PM (XXX)



- ① STA 26+90 LT. CONST. 6'x6' LOOP DETECTOR CONNECT LEAD IN TO EXIST. PB @ 26+89± LT.
- ② STA 26+80 LT. CONST. 6'x30' LOOP DETECTOR CONNECT LEAD IN TO EXIST. PB @ 26+76± LT.
- ③ INSTALL NEW TRAFFIC SIGNAL TO MAST ARM POLE LOCATED @ 26+95 RT. 44±
- ④ STA 25+72 RT. CONST. 6'x30' LOOP DETECTOR CONNECT LEAD IN TO EXIST. PB @ 26+66± RT.
- ⑤ STA. 25+57 RT. CONST. 6'x20' LOOP DETECTOR CONNECT LEAD IN TO EXIST. PB @ 26+66± RT.
- ⑥ INSTALL NEW TRAFFIC SIGNAL TO MAST ARM POLE LOCATED @ 25+50 LT. 44±.
- ⑦ STA. 27+03 RT REPLACE EXISTING TRAFFIC SIGNAL CONTROLLER WITH NEW CONTROLLER.

SIGNALIZATION PLAN

FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	25	59

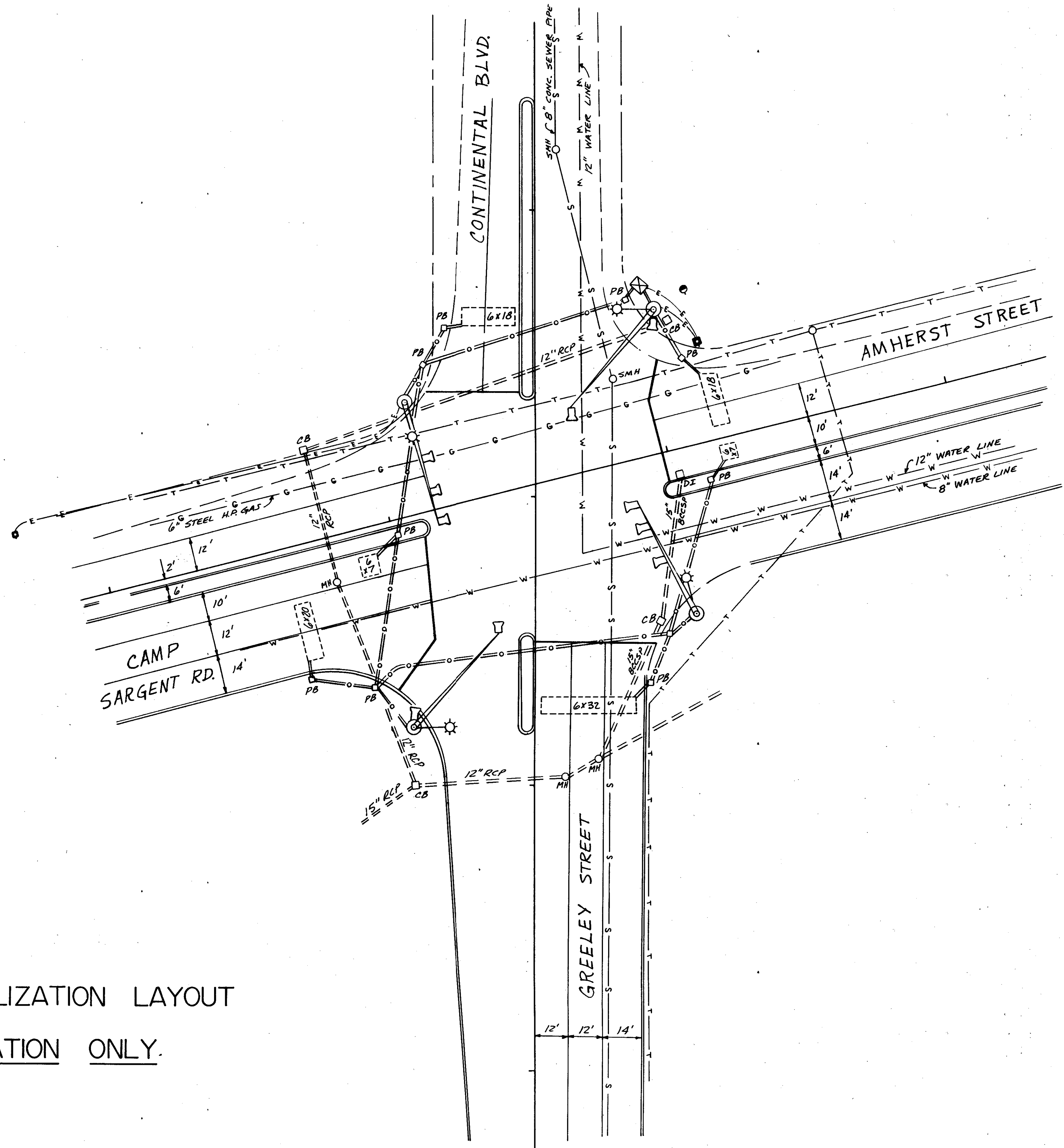
REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

NOTEBOOKS	BOOK	PAGE

DATE	DATE	DATE
9-20-00		

PROPOSED DESIGN SHEET CHECKED AS BUILT DETAILS

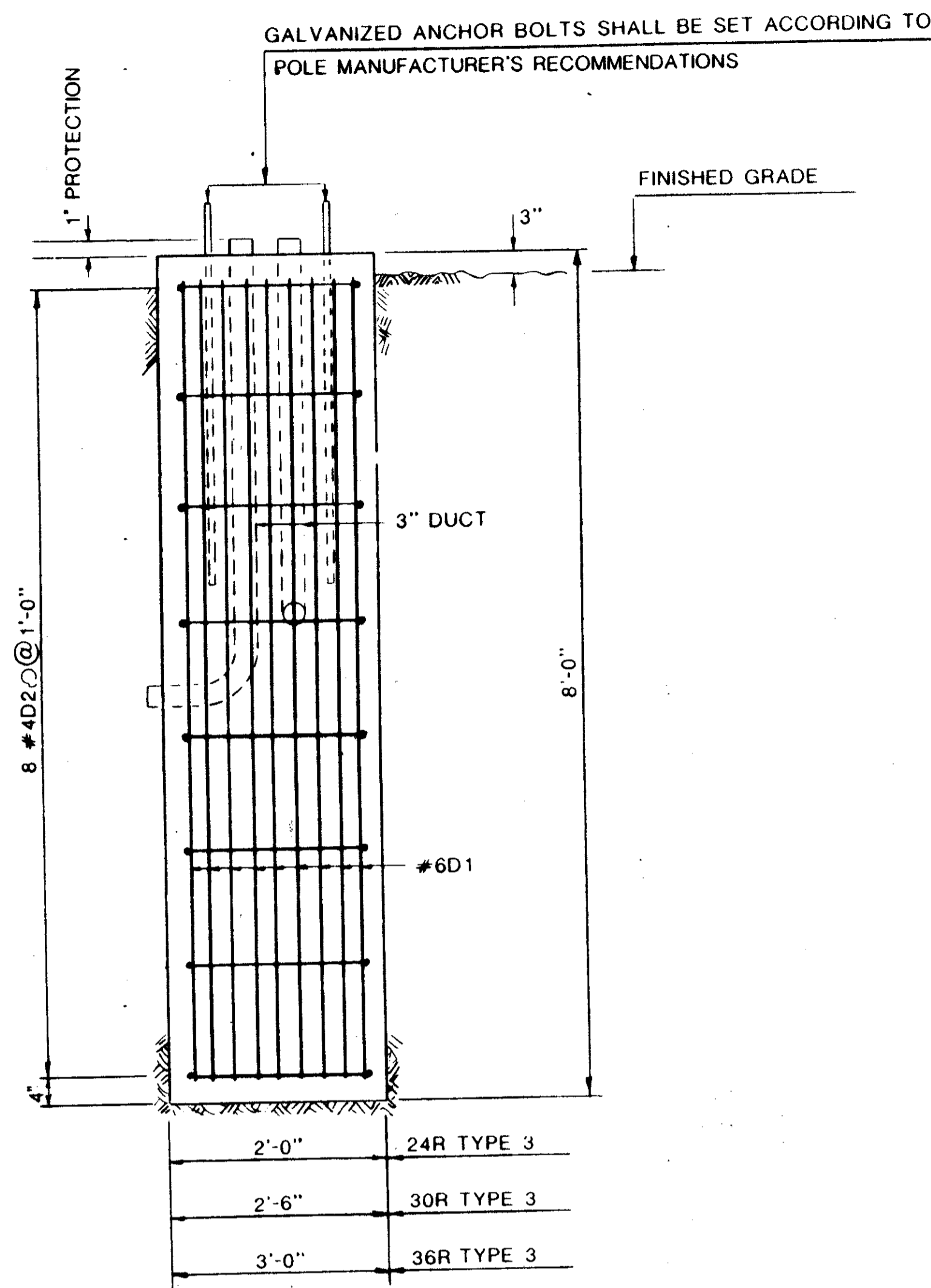


EXISTING SIGNALIZATION LAYOUT
FOR INFORMATION ONLY.

SIGNALIZATION PLAN

FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	26	59

FOUNDATION TYPE 3 - 24R, 30R, 36R



ELEVATION

REINFORCING STEEL SCHEDULE				
MARK	SIZE	NO.	UNBENT LENGTH	TYPE
D1	#6	*X*	7'-6"	—
D2	#4	8	*Y*	○

FOUNDATION SIZE	NO. "X"	UNBENT LENGTH "Y"
24R	12	5'-11"
30R	16	7'-6"
36R	20	9'-1"

FOUNDATION SIZE	D	P
24R	1'-6"	4'-8"
30R	2'-0"	6'-3"
36R	2'-6"	7'-10"

TYPICAL QUANTITIES PER BASE					
ITEM NUMBER	ITEM	UNIT	QUANTITY FOR FOOTING SIZE		
			24R	30R	36R
508	STRUCTURAL FILL	CU. YDS.	25	26	29
520.21	CONCRETE CLASS B (Flgs.)	CU. YDS.	1.0	1.5	2.1
544	REINFORCING STEEL	LBS.	167	220	274

* QUANTITIES FOR INFORMATIONAL USE ONLY. NO SEPARATE PAYMENT WILL BE MADE FOR THESE ITEMS.

STANDARD ROUND TRAFFIC SIGNAL FOUNDATION						
DETERMINATION OF SIZE FOOTING REQUIRED						
FOOTING SIZE	SHAPE	CASE 1 MAX. h = 40'-0" MAX. h1 = 22'-0"		CASE 2 MAX h1 = 22'-0"		
		MAX. LENGTH OF ONE MAST ARM WITH ONE LUMINAIRE ON THE SAME POLE (L)	MAX. NUMBER OF SIGNALS FOR CASE 1.	SHAPE	MAX. LENGTH OF ONE MAST ARM WITH NO LUMINAIRE (L)	MAX. NUMBER OF SIGNALS FOR CASE 2.
24R-TYPE 3 2'-0" x 8'-0" ITEM NO.		16	2		26	3
30R-TYPE 3 2'-6" x 8'-0" ITEM NO.		26	3		36	4
36R-TYPE 3 3'-0" x 8'-0" ITEM NO.		36	3		45	4

NOTE: COMBINATIONS OTHER THAN THOSE SHOWN IN THE ABOVE CHART SHALL NOT BE USED WITHOUT DESIGN APPROVAL.

FOR LANE USE SIGNALS @ TEMP. BOOTHS
SEE SHEET NO. 15

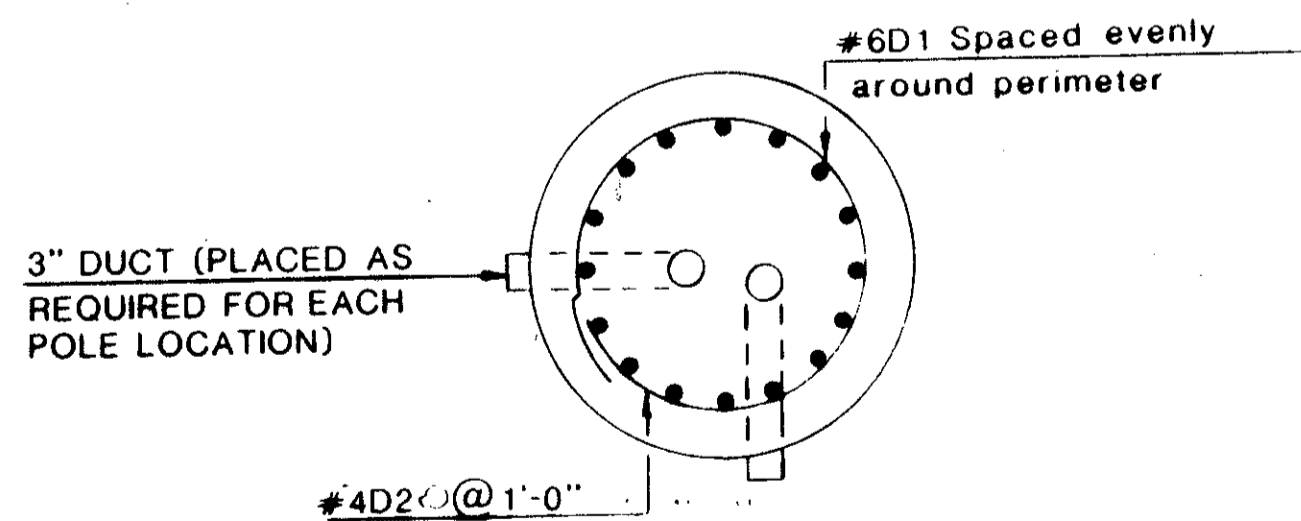
GENERAL NOTES (TYPE 3 FOOTING):

DRILLED HOLES

- THE ROUND TYPE 3 FOOTING SHALL BE POURED IN DRILLED HOLES AGAINST UNDISTURBED MATERIAL. THE MAXIMUM DESIGN SOIL PRESSURE IS 1-1/2 TONS/SQ.FT. (BOTH HORIZONTALLY & VERTICALLY) IF THE SOIL IS NOT CAPABLE OF A BEARING PRESSURE OF 1-1/2 TONS/SQ.FT. OR WILL NOT STAND VERTICALLY, THE ENGINEER SHALL REQUEST AN EXCAVATED HOLE AS BELOW.
- THE DRILLED HOLES FOR THE ROUND TYPE 3 FOOTING SHALL BE MADE WITH THE PROPER SIZE AUGER DRILLED TO 7'-9" BELOW THE FINISHED GROUND SURFACE.
- TRENCHES FOR THE CONDUITS SHALL BE HAND DUG WITHIN 5'-0" OF THE PROPOSED FOOTING SURFACE, DISTURBING AS LITTLE AS POSSIBLE SOIL IN PLACING OF THE CONDUITS (APPROXIMATELY 2'-6" MAXIMUM DOWN FROM THE EXISTING GROUND SURFACE.) THE RESULTING TRENCHES SHALL BE BACKFILLED WITH ITEM 508 COMPACTED ACCORDING TO N.H. SPECIFICATIONS. THE HORIZONTAL LIMIT OF ITEM 508 SHALL BE 5'-0" FROM THE FOOTING SURFACE.
- THE ENGINEER SHALL REQUEST A BORING AT ANY LOCATION WHERE HE DEEMS QUESTIONABLE SOILS BEFORE PROCEEDING WITH THE DRILLING OPERATION. IF AFTER THE DRILLING OPERATION, THE SOILS ARE FOUND UNSUITABLE, THE ENGINEER SHALL REQUEST AN EXCAVATED HOLE AS BELOW OR THE USE OF EITHER TYPE 1 OR TYPE 2 SPREAD FOOTING.
- WHERE LEDGE IS ENCOUNTERED THE DRILL SHALL PENETRATE THE LEDGE A MINIMUM OF 3'-0" AND IN ALL CASES A MINIMUM FOOTING LENGTH OF 5'-0" SHALL BE OBTAINED. MAXIMUM DRILL PENETRATION SHALL BE 7'-9".
- ALL REINFORCING STEEL SHALL BE EITHER GRADE 40 OR GRADE 60.
- ALL REINFORCING STEEL SHALL BE A MINIMUM 3" CLEAR.

EXCAVATED HOLES

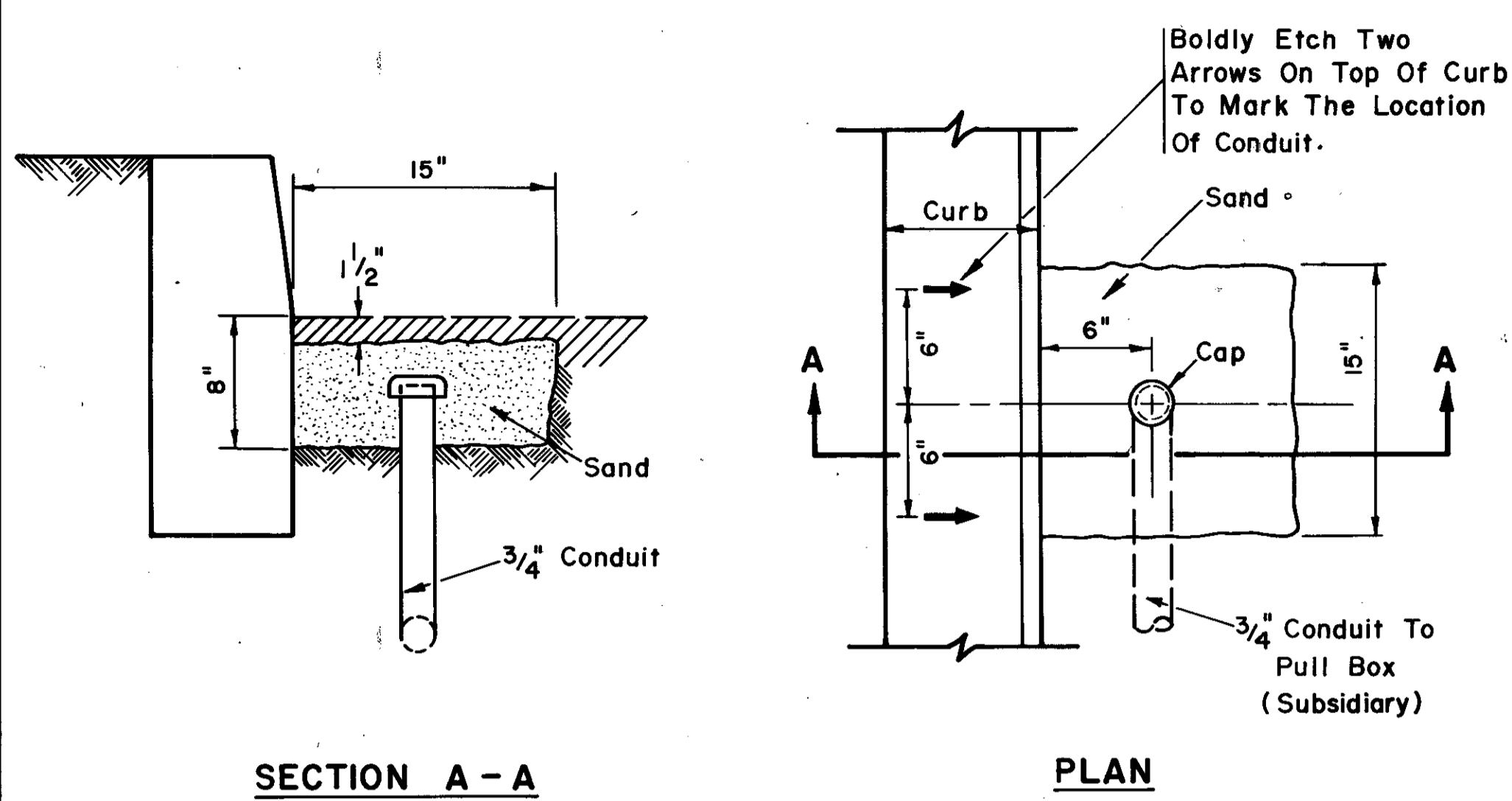
- AS AN ALTERNATIVE TO THE ABOVE DRILLED HOLES, THE ROUND TYPE 3 FOOTINGS MAY BE POURED IN EXCAVATED HOLES, USING THE PROPER FORMS WHICH MUST BE REMOVED, OR PRECAST AND PLACED IN THE EXCAVATED HOLES.
- THE EXCAVATED HOLES SHALL BE AT LEAST 3'-0" CLEAR OF THE FOOTING SIDES AND 1'-0" DEEPER THAN THE FOOTING. CARE SHALL BE TAKEN TO AVOID OVER EXCAVATING AROUND THE TOP OF THE FOOTING.
- ANY LEDGE ENCOUNTERED SHALL BE REMOVED TO THE ABOVE LIMITS IF POSSIBLE OR THE ENGINEER SHALL REQUEST A REDESIGN.
- THE TOTAL EXCAVATED HOLE FOR EACH FOOTING SHALL BE COMPLETELY BACKFILLED WITH STRUCTURAL FILL, ITEM 508, AND COMPACTED ACCORDING TO THE N.H. SPECIFICATIONS.



PLAN

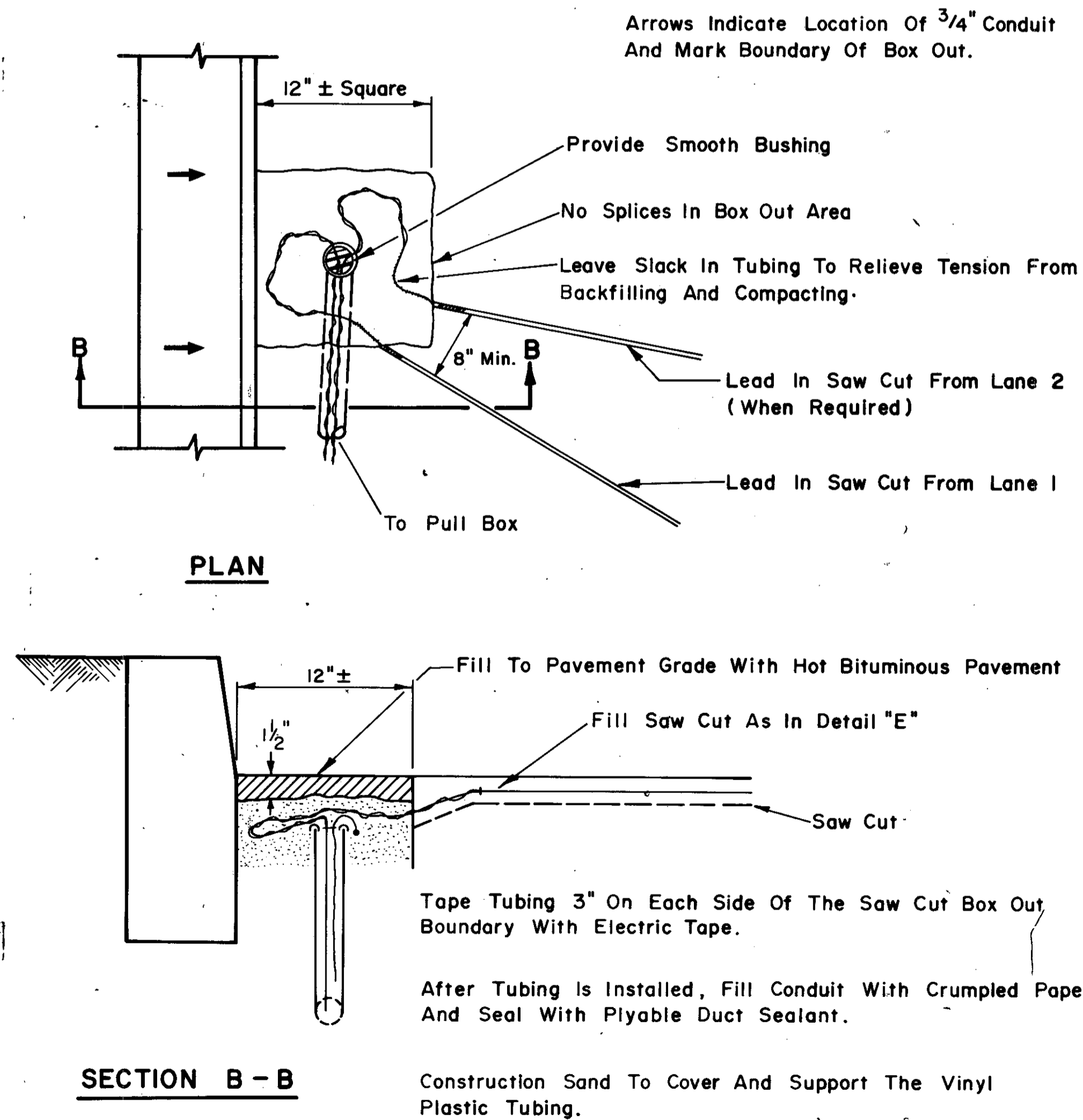
STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION BUREAU OF TRAFFIC			
TRAFFIC SIGNAL FOUNDATION STANDARDS			
TYPE 3 - 24R, 30R, 36R			
REVISIONS		APPROVED	
3/86		 DIRECTOR OF OPERATIONS ADMINISTRATOR, BUREAU OF TRAFFIC	
FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
	10059-A	27	59

Box Out Construction Detail Stage 1 : At Paving

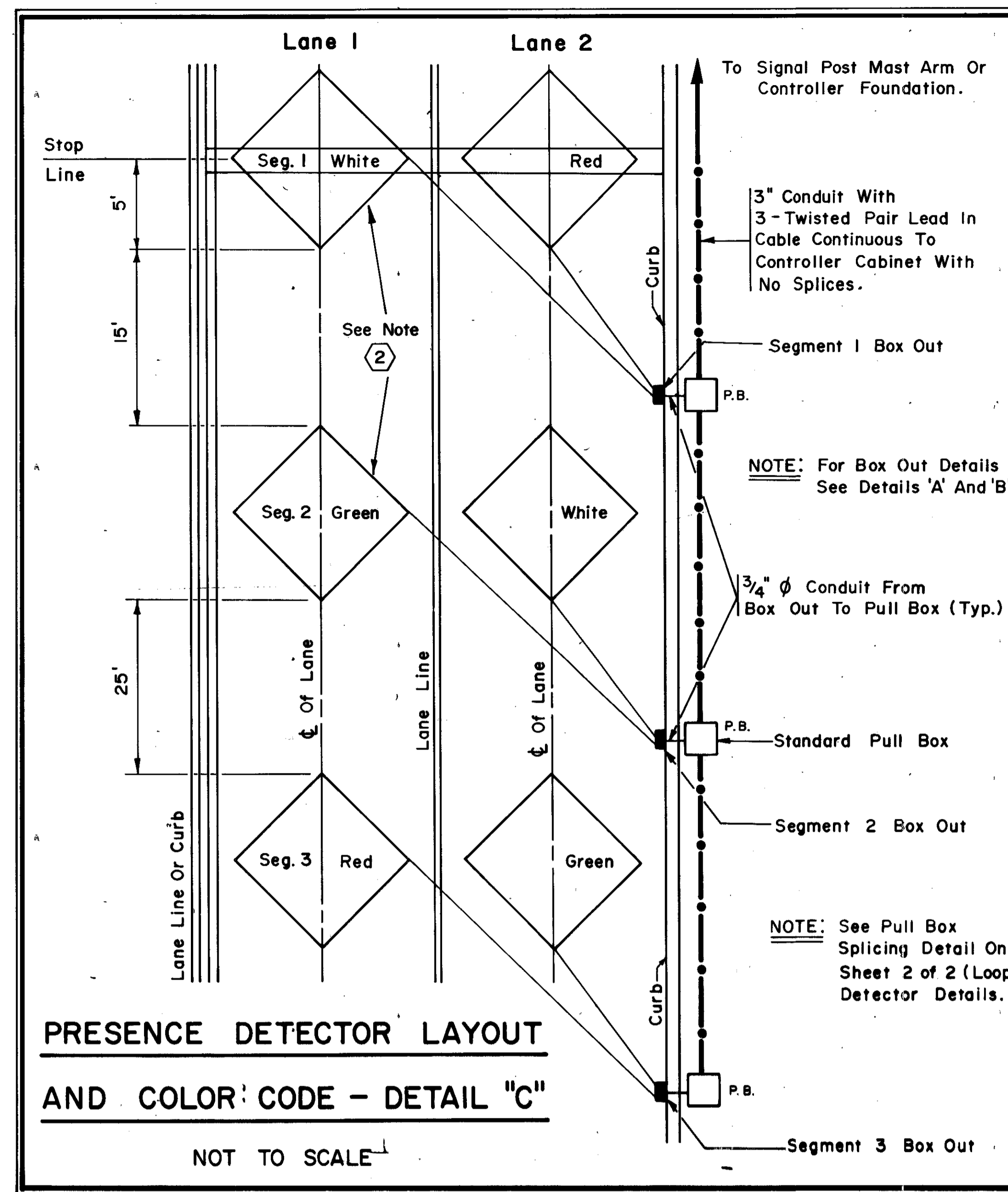


DETECTOR BOX OUT DETAIL "A"
NOT TO SCALE

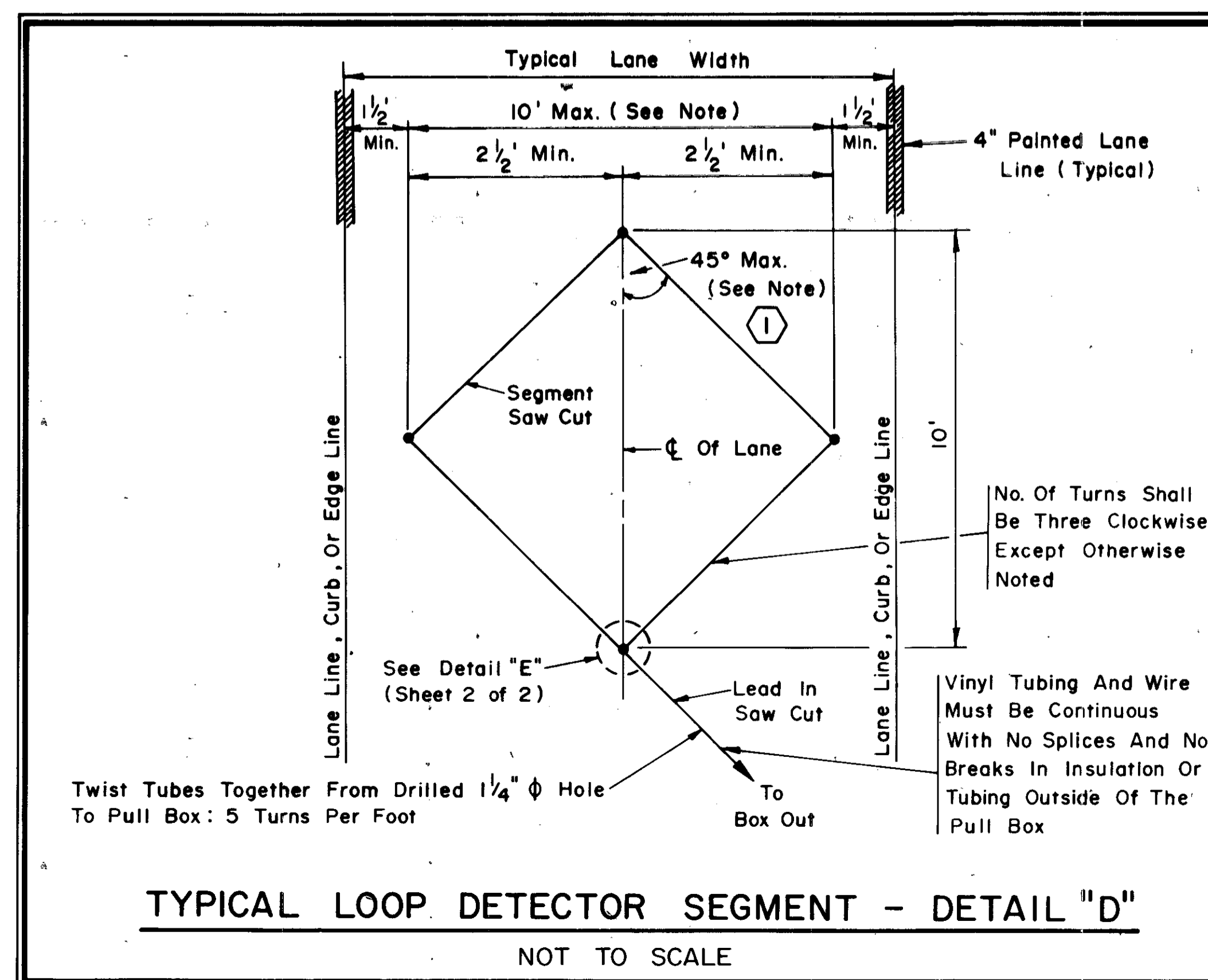
Box Out Construction Detail Stage 2 : At Loop Installation



DETECTOR BOX OUT DETAIL "A"
NOT TO SCALE



PRESENCE DETECTOR LAYOUT
AND COLOR CODE - DETAIL "C"
NOT TO SCALE



TYPICAL LOOP DETECTOR SEGMENT - DETAIL "D"
NOT TO SCALE

LEGEND

- PE — PE — PE — Electrical Conduit Run 30" Min. Below Grade.
- — Loop Detector Wiring
- P.B. — Pull Box
- — Traffic Signal Foundation And Post
- ⊗ C.C. — Control Pedestal
- ▲ — Traffic Signal - Letter Indicates Signal Face Layout
- E — Pedestrian Don't Walk - Walk Signal - Letter Indicates Face Layout
- ⊕ φ c — Pedestrian Pushbutton - Letter Indicates Phase
- — Segment Box Out For Loop Detector Wiring
- ① — Equipment Or Post Unit No.
- ◇ — Loop Detector Segment
- — Traffic Signal Conduit

NOTES

- ① The Width Of The Segment Shall Be 10' For Lane Widths Greater Or Equal To 13'. For Lane Widths Less Than 13', The Width Of The Segment May Be Altered To Obtain The Minimum Clearance From Lane Lines.
- ② The Exact Center Of Each Segment Shall Be Centered On Its Lane Centerline. The Exact Center Of Each Segment 1 Shall Fall On The Stop Line Center. For Segment Details See Detail "D".
- ③ See Loop Installation Notes On Sheet 2 of 2.

LOOP DETECTOR DETAILS

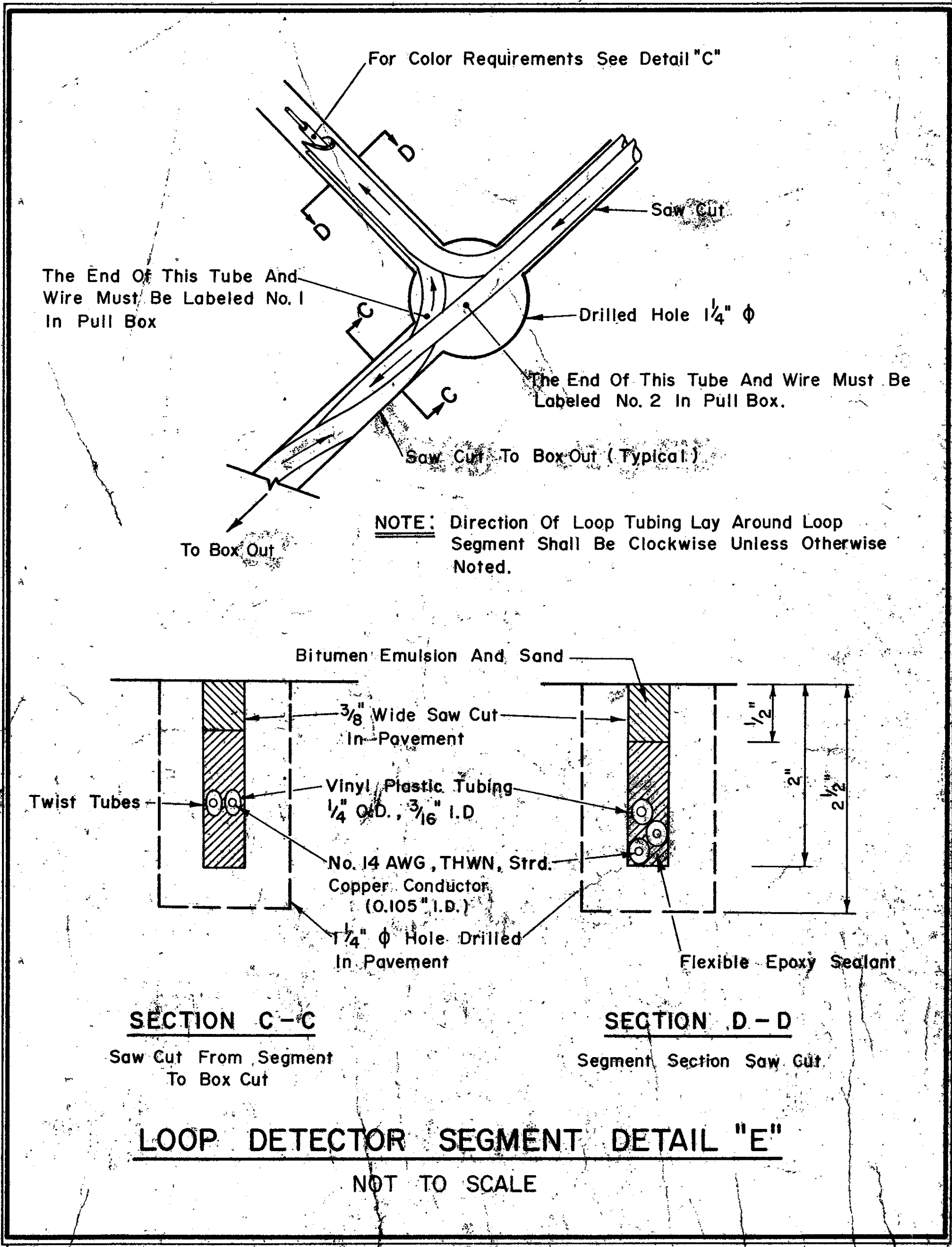
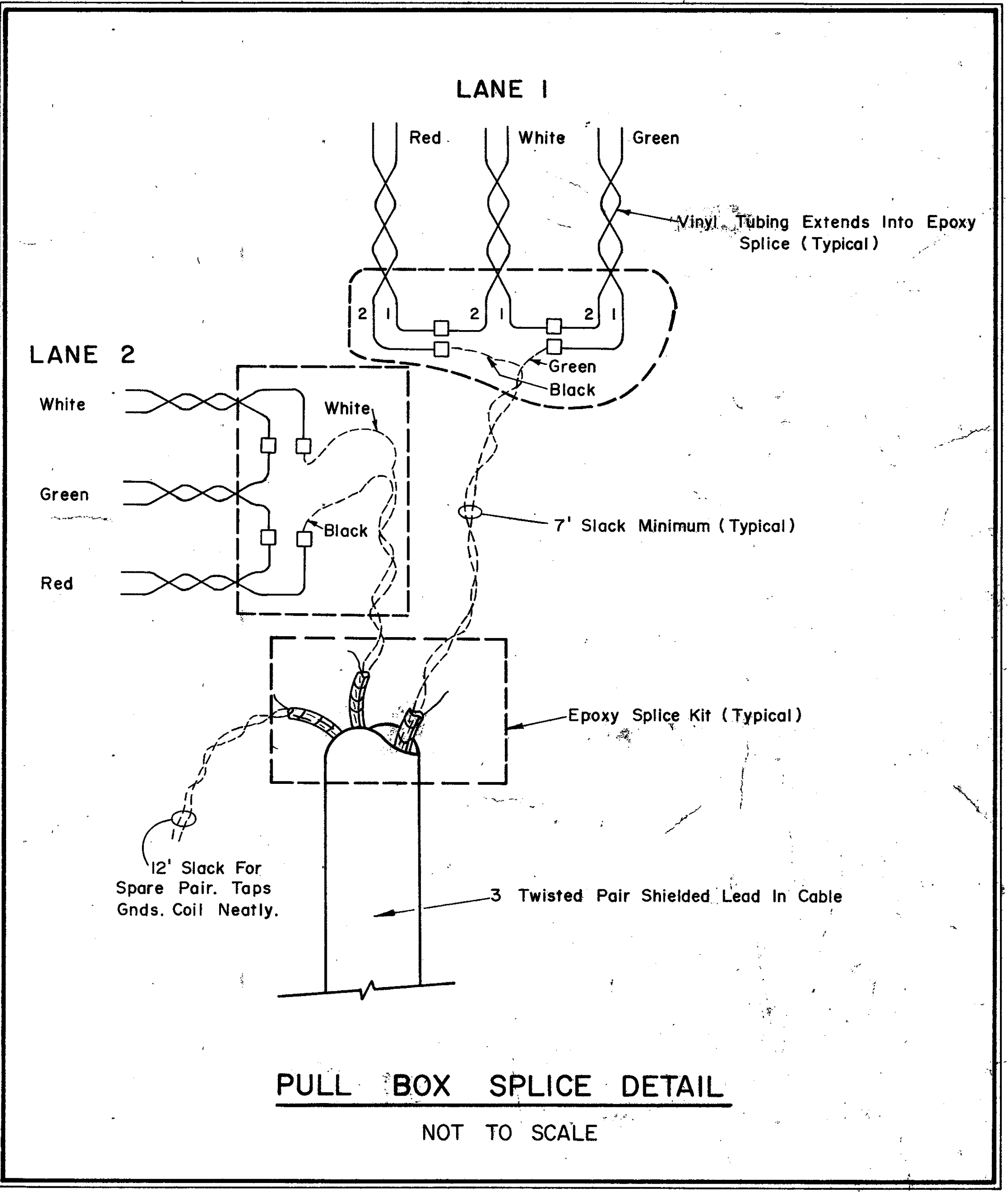
EXISTING DETAIL	DATE	AS BUILT DETAILS
PROPOSED DESIGN	STEPHEN MOORE DATE 6-13-83	
SHEET CHECKED		
REVISIONS AFTER PROPOSAL	DESCRIPTION	
STATION		
DATE		
NUMBER		
NOTEBOOKS		
BOOK		
BOOK		
BOOK		
PAGE		
PAGE		

LOOP INSTALLATION NOTES

1. LOCATE BOX OUT AREAS IN PAVEMENT WHERE 3/4" CONDUIT HAS BEEN PLACED. CLEAN OUT EXPOSING THE CONDUIT. BLOW OUT PIPE IF IT IS NOT CLEAR TO PULL BOX.
2. DETERMINE THE LOCATION OF THE STOPLINE FROM THE PAVEMENT MARKING PLAN. LOCATE AND DRILL FOUR 1-1/4" CORNER HOLES FOR EACH SEGMENT. PAINT GUIDE LINES BETWEEN SEGMENT CORNERS AND FROM CORNER HOLE TO BOX OUT. LEAD-IN CUTS SHOULD BE KEPT 10" APART EXCEPT WHERE THEY CONVERGE IN THE VICINITY OF THE PAVEMENT BOX OUT.
3. SAWCUT EACH SEGMENT USING A DRY PAVEMENT SAW. BLOW OUT DEBRIS WITH COMPRESSED AIR WHICH IS FREE FROM OIL AND MOISTURE. INSPECT CUTS FOR ADEQUATE DEPTH. SAWCUTS FOR LOOP INSTALLATIONS ARE SUBSIDIARY TO TRAFFIC SIGNAL PLANS.
4. SELECT THE APPROPRIATE LEAD WIRE INSULATION COLOR FOR EACH SEGMENT. MEASURE THE DISTANCE FROM THE SEGMENT LEAD-IN CORNER TO THE PULL BOX AND SELECT A LENGTH OF VINYL TUBE ENCASED LOOP WIRE TO ALLOW A SPLICE FREE PLACEMENT OF LOOP WIRE (WITH THE PROPER NUMBER OF SEGMENT TURNS AND LEAD IN TWIST) OUTSIDE OF THE PULL BOX.
5. STARTING AT THE LEAD IN CORNER, (ALLOWING A SUFFICIENT TAIL TO REACH 10' BEYOND THE PULL BOX) INSTALL THE VINYL TUBE ENCASED LOOP WIRE AROUND THE SEGMENT IN A CLOCKWISE DIRECTION UNLESS OTHERWISE NOTED. AT THE OUTSET LABEL THE END OF THE WIRE "No. 1". INSTALL THE CONDUCTOR AROUND THE SEGMENT UNTIL THREE LAYERS (OR TURNS) ARE COMPLETED. CARE SHOULD BE TAKEN NOT TO FORCE THE VARIOUS TURNS INTO THE SLOT WITH SUCH FORCE THAT THE CONDUCTOR CANNOT SLIDE WITHIN THE VINYL TUBE. THE TUBING SHALL BE GENTLY PRESSED TO THE BOTTOM OF THE SLOT USING A BLUNT ENDED WOODEN PADDLE. ON THE LAST TURN AROUND THE SEGMENT ALL TURNS SHALL BE HELD IN PLACE NEAR THE BOTTOM OF THE SLOT BY PLACING 1/2" O.D. FOAM STRIPS, -1/2' LONG AT INTERVALS OF 2-1/2'. LABEL THE TUBING SO AS TO IDENTIFY THE LOWEST TURN (START) AS "No. 1" LEAD AND THE TOP MOST TURN AS THE "No. 2" LEAD. TWIST THE TWO TUBING LEADS TOGETHER, 2 TURNS PER FOOT, ALLOWING ENOUGH LENGTH FOR LEAD No. 2 TO REACH 10' BEYOND THE PULL BOX. TAPE THE LEADS (WITH TWISTS) AND PLASTIC TAPE AT INTERVALS OF 2' TO KEEP THE TWIST IN WHILE PULLING THE LEADS. STARTING AT THE SEGMENT LEAD IN CORNER AND WORKING TOWARD THE BOX OUT, GENTLY PRESS THE TWISTED LEADS INTO THE SLOT BETWEEN THE LOOP AND THE BOX OUT. REPEAT THIS STEP (5) UNTIL ALL SEGMENTS WHICH TERMINATE IN THE BOX OUT ARE INSTALLED.
6. PREPARE EACH SET OF TWISTED LOOP TUBING AS SHOWN ON THE BOX OUT DETAIL. GENTLY PULL ALL TWISTED TUBING SETS FROM THE BOX OUT TO THE PULL BOX TOGETHER. THERE SHOULD BE 10' MIN. LENGTH OF SLACK FOR EACH TWISTED PAIR IN THE PULL BOX.
7. MEASURE AND RECORD THE INDUCTANCE, DC RESISTANCE AND RESISTANCE TO EARTH GROUND OF EACH SEGMENT. COMPARE THESE MEASUREMENTS TO THE EXPECTED VALUES PUBLISHED ON THE DRAWINGS. CHECK ANY DEVIATIONS WITH THE ALLOWABLE LIMITS FOR EACH PARAMETER. REPLACE THE LOOP WIRE AS REQUIRED.
8. IF SPLICING IS NOT IMMEDIATELY CARRIED OUT, CAREFULLY SEAL THE END OF EACH VINYL TUBE BY PULLING THE INSULATED WIRE INTO THE TUBING AND MELT THE END OF THE TUBING UNTIL THE WIRES ARE SEALED INSIDE. PERMANENTLY LABEL THE STARTING TUBE No. 1 AND THE ENDING TUBE No. 2 FOR EACH SEGMENT IN THE PULL BOX. RECHECK THE WINDING DIRECTION AND THE NUMBER OF TURNS AT EACH SEGMENT.
9. REPLACE FLEXIBLE LOOP EPOXY SEALANT INTO THE SAWCUT SLOT. AFTER SEALANT HAS FLOWED AROUND THE TUBING, IT WILL BE NECESSARY TO REPOUR THE SEALANT INTO THE SLOT IN ORDER TO FILL IT TO WITHIN 1/2" OF THE TOP OF THE SLOT. AFTER EPOXY HAS HARDENED, FILL THE REMAINING 1/2" DEEP SLOT WITH A BITUMEN EMULSION AND DRY SAND MIXTURE. AT ALL STAGES SPILLS MUST BE CLEANED IMMEDIATELY TO PRESENT A NEAT APPEARANCE. FINISH THE BOX OUT AS DETAILED.
10. VEHICULAR TRAFFIC SHALL BE PROHIBITED FROM THE LOOP AREAS FROM THE TIME THE SAWCUT IS MADE UNTIL THE TIME THAT THE SEALANT HAS CURED.

LOOP SPLICING NOTES

1. THE THREE SEGMENTS IN EACH LANE SHALL BE SPLICED IN SERIES IN THE PULL BOX AT THE EDGE OF THE CURB. THESE THREE SEGMENTS SHALL THEN BE CONNECTED TO 2/3 OF THE SHIELDED LEAD IN CABLE. IN LANE ONE, THE RED NO. 2 LOOP CONDUCTOR SHALL BE CONNECTED TO THE RED CONDUCTOR OF THE RED/BLACK LEAD IN PAIR AND THE GREEN-NO. 1 LOOP CONDUCTOR SHALL BE CONNECTED TO THE BLACK CONDUCTOR OF THE RED/BLACK PAIR AND THE RED NO. 1 TO THE BLACK OF THE WHITE BLACK PAIR.
2. IN THE PULL BOX, SPLICE CONDUCTORS SHALL BE CONNECTED WITH INSULATED BUTT TYPE CRIMP CONNECTORS. ALL CONDUCTORS OF THE THREE LANE SEGMENTS AND THE LEAD IN CABLE SHALL BE ENCAPSULATED IN AN EPOXY RESIN SPLICE KIT TO FORM A WATERPROOF SPLICE. THE VINYL TUBING OF LEAD IN CONDUCTORS SHALL BE TERMINATED INSIDE THE EPOXY SPLICE. THE FOIL SHIELD OF THE LEAD IN PAIRED CONDUCTORS SHALL BE STRIPPED OFF THE PAIRED CONDUCTORS AND TRIMMED FLUSH WITH THE END OF THE OUTER JACKET. THE SHIELD AND THE DRAIN WIRE SHALL BE ISOLATED FROM GROUND AT ALL PLACES OUTSIDE OF THE CONTROLLER CABINET. AN EPOXY SPLICE KIT SHALL BE INSTALLED AT THE END OF THE OUTER JACKET OF THE LEAD IN CABLE TO INSULATE THE SHIELD AND DRAIN WIRE FROM GROUND AND TO PREVENT WATER AND MOISTURE FROM ENTERING THE LEAD-IN CABLE.



LOOP DETECTOR DETAILS

REVISIONS AFTER PROPOSAL		STATION	DESCRIPTION
NUMBER	DATE	STATION	DESCRIPTION
NOTEBOOKS		PAGE	PAGE
BOOK	BOOK	BOOK	BOOK
EXISTING DETAIL	DATE		
PROPOSED DESIGN - STEPHEN MOORE	DATE 6-8-83		
SHEET CHECKED	DATE		
AS BUILT DETAILS	DATE		