

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

BUT-4-24.60
HHS-8(5)

OHIO
FHWA REGION 5
FEDERAL PROJECT

1
23

BUT-4-24.60

MADISON TOWNSHIP
BUTLER COUNTY

MICROFILMED
DEC 5 1985

CONVENTIONAL SIGNS

- County Line -----
- Township Line -----
- Section Line -----
- Corporation Line ----- or -----
- Fence Line (existing) -x- (proposed) -x-
- Center Line -----
- Trees, Stumps (to be removed)
- Utility Poles: Telephone ϕ , Power ϕ , Light ϕ .
- Limited Access (only) ----- LA -----
- Right of Way (only) ----- RW -----
- Limited Access & Right of Way ----- LA & RW -----
- Existing Right of Way -----
- Property Line ----- (in existing fence) -x- -----
- Railroad ----- or -----
- Guardrail (existing) ----- (proposed) -----

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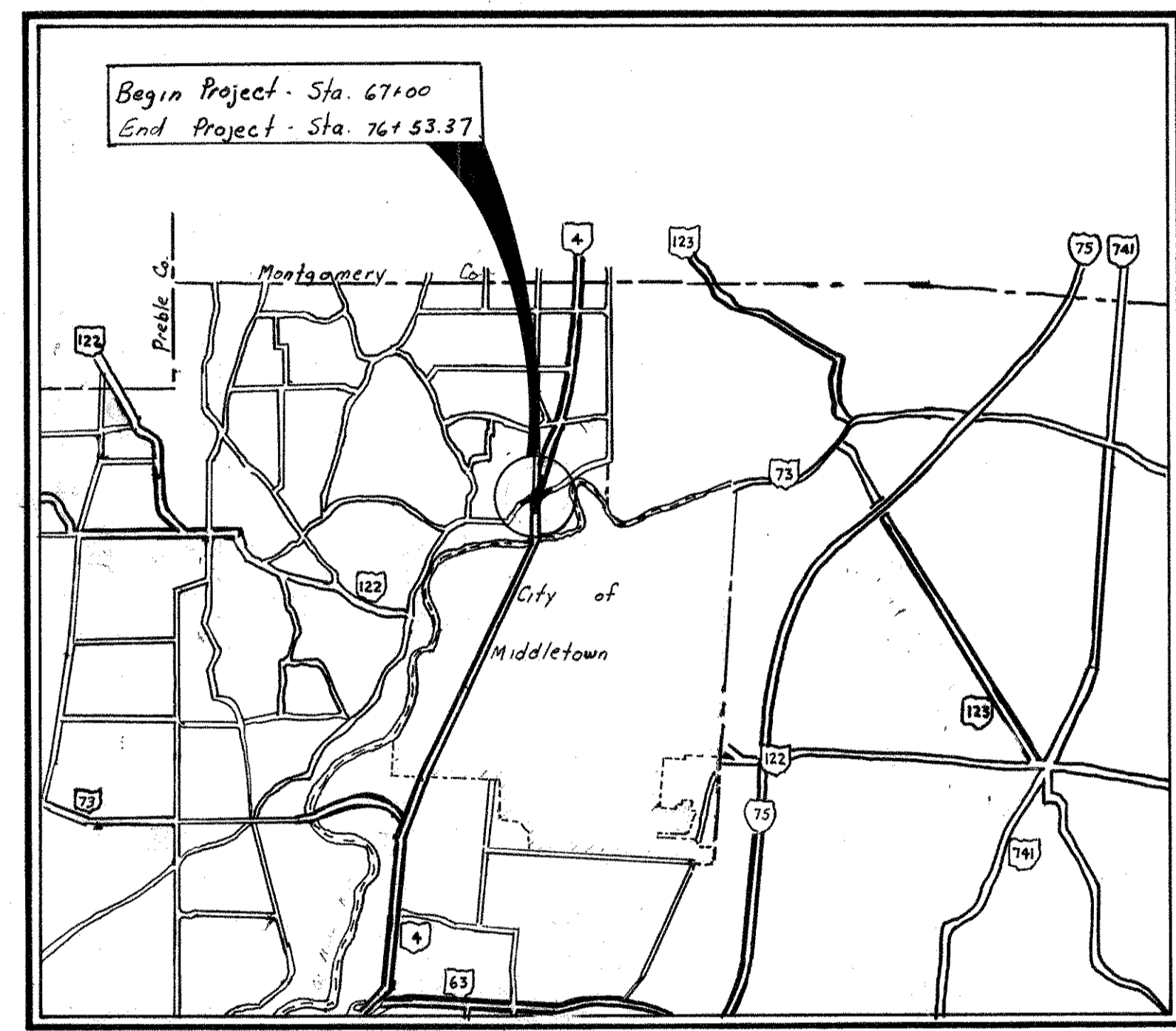
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LOCATION MAP

SCALE IN MILES

LINE DATA

PROJECT LENGTH
BUT 4 PROJECT STA. 67+00 - 76+53.37 = 953.37 L.F.
PROJECT LENGTH = 953.37 L.F. = 0.181 MILE

WORK LENGTH
BUT 4 STA. 67+00 - 76+53.37 = 953.37 L.F.

TRENTON-FRANKLIN RD STA. 5+50 WEST - 5+50 EAST = 1100 L.F.
DEDUCT FOR INTERSECTION 52 L.F.
WORKLENGTH = 2001.37 L.F. = 0.379 MILE

Portion to be improved -----

State & Federal Routes -----

Other Roads -----

SCALES

Plan -----

Profile: ----- Horizontal -----, Vertical -----

Cross Section: Horizontal -----, Vertical -----

SUPPLEMENTAL SPECIFICATIONS	
5-625	1-11-74
5-713	1-11-74
842	8-29-74
843	10-23-75
847	4-8-76
1001	1-3-77
844	11-8-74

1977 SPECIFICATIONS

The standard specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement.

The right of way for this improvement will be provided by the State of Ohio.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set for on the plans and estimates.

Approved William W. Branshaw
Date 5-23-77 District Deputy Director of Transportation

Approved _____
Date _____ Engineer, Bureau of Bridges and Structural Design

Approved Long John Melms
Date 3-21-78 Chief Engineer, Operations

Approved David T. Mann
Date 4-4-78 Director, Department of Transportation

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS			
BP-5	8-11-75	TC-82.10	9-5-75
BP-6	6-1-65	TC-83.10	9-5-75
BP-7	12-6-76	TC-83.20	9-5-75
CB-22-A	6-1-65	TC-85.20	9-5-75
CB-3A	1-1-76	TC-84.20	9-5-75
MC-4	7-26-76		
MH-1	6-12-75	TC-41.20	4-1-77
MH-3	6-12-75	TC-42.20	4-1-77
MH-5	6-12-75	TC-52.20	4-1-77
		TC-71.10	12-1-75
		TC-21.20	4-18-77
		TC-81.10	4-18-77

Plan Prepared By: _____
DISTRICT 8, OPERATIONS

SEAL

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____
DIVISION ADMINISTRATOR DATE

Project: _____
Date of Letting _____ 19____, Contract No. _____
LD0300 Rev. 9-3-75

REVISED
MAY 9 1960

FHWA REGION	STATE	PROJECT	
5	OHIO		

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BUT-4-24.60

GENERAL NOTES

SCOPE OF WORK

THE INTENT OF THE PROPOSED IMPROVEMENT WORK AT S.R.-4 AND TRENTON-FRANKLIN ROAD INTERSECTION CALLS FOR WIDENING THE SOUTH APPROACH OF S.R.-4 AND THE EAST AND WEST APPROACHES OF TRENTON-FRANKLIN ROAD TO FURNISH LEFT TURN STORAGE LANE. THE PHYSICAL WIDENING WILL REQUIRE THAT SOME CURB IS REMOVED, NEW CURB BUILT, PAVEMENT CONSTRUCTED IN NON-CURBED LOCATIONS AND SOME DRAINAGE WORK. A CROWN WILL BE ADDED TO THE PAVEMENT OF S.R.-4 ON THE SOUTH APPROACH TO THE INTERSECTION BY USE OF A WEDGE OF 301 BITUMINOUS AGGREGATE BASE OF VARIABLE THICKNESS. THE INTERSECTION AND APPROACHES SHALL BE OVERLAID BY TWO COURSES OF ASPHALT CONCRETE: ONE, BY A VARIABLE DEPTH LEVELING COURSE OF 403 AND TWO, BY A ONE INCH COURSE OF 404.

REMOVALS

ALL REMOVALS OF CURB AND GUTTER, CATCH BASIN, PAVEMENT, PIPE, AND SIDEWALK SHALL BE PERFORMED ACCORDING TO THEIR RESPECTIVE SPECIFICATIONS. THE CONTRACTOR SHALL EXERT SUFFICIENT CARE IN THIS WORK TO AVOID ANY DAMAGE TO EXISTING CONDUITS AND ADJACENT CURB AND PAVEMENT. ANY DAMAGE TO ITEMS THAT REMAIN WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER. PAYMENT ON REMOVALS SHALL BE MADE AT THE CONTRACT PRICE BID AS PER ITEMS SHOWN ON SUMMARY SHEET.

REMOVAL OF TREES AND STUMPS

ALL TREES SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES TO BE REMOVED:

SIZES	NO. TREES
18"	2
12"	1

THE ABOVE ESTIMATE IS APPROXIMATE AND THE STATE OF OHIO RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT OF WAY. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING.

ITEM 202 WEARING COURSE REMOVED

THE EXISTING WEARING COURSE SHALL BE REMOVED BY USE OF A HEATER PLANER, ROAD PLANER OR EQUIPMENT IN WHICH THE CUTTING ELEMENT MAY BE OF THE GRINDING, SAWING OR MILLING TYPE, SO AS TO PRODUCE A SMOOTH FINISHED SURFACE.

THE PAVEMENT REMOVAL SHALL BE TO TWO INCHES BELOW THE FINISH GRADE AS SPECIFIED IN THE PLANS AND ANY DAMAGE OR REMOVAL BEYOND THIS DEPTH SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE, AS DIRECTED BY THE ENGINEER.

CONCRETE MEDIAN REMOVED

CONCRETE MEDIAN SHALL BE REMOVED IN SUCH A MANNER AS TO NOT DAMAGE ADJACENT PAVEMENT. ANY DAMAGE TO ADJACENT PAVEMENT SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE TO THE SATISFACTION OF THE ENGINEER. PAYMENT SHALL BE MADE AT THE CONTRACT PRICE BID FOR ITEM SPECIAL LUMP SUM CONCRETE MEDIAN REMOVED AND SHALL INCLUDE ANY WORK REQUIRED IN PREPARATION TO PLACING 8 INCHES OF 301 MATERIAL IN THE TRENCH CREATED BY THE REMOVAL OF THE CONCRETE MEDIAN.

EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION

SECTION 203.04 (F) DEFINES THE CONTRACTORS RESPONSIBILITY IN THE EXCAVATION NEEDED TO CONSTRUCT THE WIDENING. TRENCH EXCAVATION FOR BASE WIDENING SHALL BE PERFORMED ONLY ON ONE SIDE AT A TIME ON PAVEMENT OF TRENTON-FRANKLIN ROAD. TRENCH EXCAVATION FOR BASE WIDENING ON S.R.-4 SHALL NOT BE PERFORMED CONCURRENTLY WITH THE REMOVAL OF THE CONCRETE MEDIAN. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED FROM PROBABLY REPROJECTORIZED DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND THE EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL BE AT ALL TIMES SUBJECT TO APPROVAL OF THE ENGINEER. PAYMENT SHALL BE AT THE CONTRACT PRICE BID FOR ITEM 203, CUBIC YARDS, EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION.

MAILBOXES

ANY MAILBOXES WHICH MUST BE RELOCATED AS A RESULT OF THE PROPOSED WORK SHALL BE RELOCATED AS PER SECTION 107.12 AND SHALL BE INCLUDED IN THE ITEM 203, EMBANKMENT PAY ITEM.

BITUMINOUS AGGREGATE BASE

BITUMINOUS AGGREGATE BASE SHALL BE PLACED TO THE ALIGNMENT, GRADE AND THICKNESS SHOWN ON THESE PLANS. 301 MATERIAL SHALL BE PLACED TO PROVIDE A CROWN ON S.R.-4. THIS MATERIAL SHALL BE PLACED AS REQUIRED TO TWO INCHES BELOW FINISH GRADE AS SHOWN ON THESE PLANS.

ASPHALT CONCRETE

A ONE INCH (AVERAGE) COURSE OF 403 ASPHALT CONCRETE WILL BE PLACED ON S.R.-4 AND A HALF INCH (AVE.) COURSE OF 403 ASPHALT CONCRETE WILL BE PLACED ON TRENTON-FRANKLIN ROAD AS A LEVELING COURSE. IN ADDITION, A VARIABLE COURSE OF 403 WILL BE PLACED AS A PRE-LEVELING ON TRENTON-FRANKLIN ROAD AS REQUIRED TO ACHIEVE A 3/16" PER FOOT SLOPE OF PAVEMENT.

A ONE INCH COURSE OF 404 ASPHALT CONCRETE SHALL OVERLAY THE TRACT FROM STA. 67+00 TO 76+53.37 ON S.R.-4 AND FROM STA. 5+50 WEST TO STA. 5+50 EAST ON TRENTON-FRANKLIN ROAD AND SHALL FINISH TO MEET EXISTING GRADE AT THESE STATIONS. PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, SHALL BE MADE AT THE UNIT PRICE BID FOR ITEMS 403 AND 404 ASPHALT CONCRETE, RESPECTIVELY.

CONDUIT, TYPE B AND TYPE C

TWO SIZES OF TYPE B AND TYPE C CONDUITS ARE SPECIFIED FOR THE PROPOSED DRAINAGE. THIS CONDUIT SHALL BE LAID AND BEDDED IN ACCORDANCE WITH ITEM 603 OF THE SPECIFICATIONS. WHERE THE PLANS PROVIDE FOR THE PROPOSED CONDUIT TO BE CONNECTED TO AN EXISTING CONDUIT, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED CONDUIT. INCLUDED AS PART OF THIS ITEM SHALL BE CONNECTIONS TO EXISTING PIPE, MANHOLES AND CATCH BASINS. PAYMENT SHALL BE MADE AS ITEM 603, LINEAR FOOT, 12" OR 18" CONDUIT, TYPE B OR TYPE C.

RESTORATION OF PAVEMENT

WHERE TRENCHING THROUGH EXISTING PAVEMENT IS REQUIRED FOR REMOVAL OF EXISTING CONDUIT OR FOR PLACING NEW TYPE B CONDUIT, THE TRENCH SHALL BE BACKFILLED ACCORDING TO ITEM 603 UP TO EIGHT INCHES BELOW THE SURFACE OF SURROUNDING PAVEMENT WITH THE TOP EIGHT INCHES FILLED WITH 301 MATERIAL. TRENCHES MAY TEMPORARILY BE MAINTAINED BY THE USE OF 405 BITUMINOUS COLD MIX SUBJECT TO THE APPROVAL OF THE ENGINEER. DRIVEWAYS DISTURBED BY TRENCHING OPERATIONS SHALL BE RESTORED WITH 304 AGGREGATE BASE AND/OR 404 ASPHALT CONCRETE OF SIMILAR THICKNESS TO EXISTING DRIVEWAY. THE CONTRACTOR SHALL MINIMIZE THE INCONVENIENCE TO PROPERTY OWNERS WHEN TRENCHING THROUGH DRIVEWAYS AND SHALL GIVE THE AFFECTED PROPERTY OWNERS AMPLE NOTICE PRIOR TO SAID WORK. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR 603, CONDUIT TYPE B AND 202 PIPE REMOVED.

CONCRETE WALK

CONCRETE WALK AS PER PLAN SHALL BE 4 INCH THICKNESS. WHERE CONCRETE WALK IS TO MEET EXISTING SIDEWALK, THE ENGINEER MAY SHORTEN OR EXTEND THE LENGTH OF PROPOSED WALK TO MEET AN EXISTING CONTRACTION JOINT IN EXISTING SIDEWALK. PAYMENT FOR ACCEPTED QUANTITIES COMPLETE IN PLACE SHALL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 608, SQUARE FEET, CONCRETE WALK.

UNDERGROUND UTILITIES

EXISTING UNDERGROUND UTILITIES AND SERVICES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS ACCORDING TO THE BEST INFORMATION AVAILABLE. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. ANY DAMAGE TO ANY EXISTING UTILITY SHALL BE THE CONTRACTORS RESPONSIBILITY.

FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 150 SQUARE FEET OF FLOOR SPACE AND IN ADDITION TO THE REQUIREMENTS OF ITEM 619, HE SHALL PROVIDE AND MAINTAIN SANITARY PROVISIONS AS PER 107.06. ALL OF THE ABOVE IS INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 619, FIELD OFFICE.

MAINTENANCE OF TRAFFIC

GENERAL

IT IS THE INTENTION TO PERFORM THE REQUIRED WORK WITH THE LEAST INCONVENIENCE TO, AND THE MAXIMUM SAFETY OF THE CONTRACTOR AND THE TRAVELING PUBLIC. ANY VARIANCES FROM THESE MAINTENANCE OF TRAFFIC NOTES MUST BE APPROVED IN WRITING BY THE ENGINEER. EXCEPT AS MODIFIED BELOW, THE REQUIREMENTS FOR MAINTAINING TRAFFIC AS INDICATED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND PERTINENT ITEMS OF THE SPECIFICATIONS AND PROPOSAL SHALL APPLY.

THE CONTRACTOR SHALL ARRANGE HIS OPERATIONS SO AS TO PREVENT ANY INTERFERENCE TO THE CONTINUOUS FLOW OF TRAFFIC. ON TRENTON-FRANKLIN ROAD, ALL VEHICLES, EQUIPMENT, MEN AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO ONE SIDE OF THE PAVEMENT UNLESS OTHERWISE APPROVED BY THE ENGINEER.

THE STANDARD DEVICE FOR CLOSING ANY LANES TO TRAFFIC SHALL BE WEIGHTED, PROPERLY REFLECTORIZED, 55 GALLON DRUMS SPACED AT FIFTY FOOT INTERVALS UNLESS OTHERWISE SPECIFIED. DRUMS PLACED ON THE SURFACE COURSE SHALL BE PLACED ON ONE HALF INCH THICK PLYWOOD. OPTIONAL 28 INCH TRAFFIC CONES MAY BE USED FOR DAYTIME OPERATIONS IN LIEU OF 55 GALLON DRUMS, OR AS DIRECTED BY THE ENGINEER. CONES MUST BE WEIGHTED TO INCREASE STABILITY BY DOUBLE STACKING, SAND BAGS OR AS APPROVED BY THE ENGINEER. STEEL RINGS OR CHAINS OF ANY TYPE OVER THE CONE SHALL NOT BE PERMITTED.

DURING ALL HOURS WHEN TRAFFIC IS RESTRICTED TO LESS THAN THE NUMBER OF EXISTING LANES OR WHEN AN OPEN TRENCH FOR BASE WIDENING EXISTS ADJACENT TO PAVEMENT, THE CONTRACTOR SHALL EMPLOY ONE FULL TIME QUALIFIED PERSON TO PATROL THE RESTRICTED AREA(S) TO MAINTAIN ALL LIGHTS, SIGNS, BARRICADES, CONES, DRUMS, ETC., IN ORDER TO PROVIDE A SAFE FACILITY FOR THE TRAVELLING PUBLIC.

BEFORE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF PERSONS WHO CAN BE CONTACTED 24 HOURS A DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THESE PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES TO MAINTAIN THE TRAVELLED PAVEMENT SAFELY.

TWO WAY TRAFFIC SHALL BE MAINTAINED ON TRENTON-FRANKLIN ROAD ON TWO TEN FOOT LANES AT ALL TIMES EXCEPT THAT ONE LANE CLOSURES WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME WITH THE APPROVAL OF THE ENGINEER. ONE LANE CLOSURES WILL BE OPERATED BY THE USE OF FLAGMEN IN ACCORDANCE WITH PLATE C-18 OF THE MANUAL. FLAGMEN MUST BE ABLE TO COMMUNICATE WITH EACH OTHER AT ALL TIMES AS DESCRIBED IN THE OHIO MANUAL OF TRAFFIC CONTROL FOR CONSTRUCTION AND MAINTENANCE OPERATIONS IN THE SECTION "FLAGMEN CONTROL". FLAGMEN STATIONS SHALL BE ADEQUATELY ILLUMINATED.

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON S.R.-4 WITH A MINIMUM OF ONE LANE IN EACH DIRECTION.

ON NATIONAL HOLIDAYS, FOR THE PERIOD OF TIME DESIGNATED BY THE ENGINEER, WHICH WILL NORMALLY BE FROM 12:00 NOON ON FRIDAY TO 6:00 A.M. TUESDAY, NO LANE OR BERM CLOSURE OR RESTRICTIONS OF ANY TYPE SHALL BE IN EFFECT ON S.R.-4. TRAFFIC SHALL BE MAINTAINED ON ALL EXISTING LANES.

Drive Approaches

Drive approaches to be widened and/or resurfaced are shown in the plans. The typical distance for resurfacing drives will be 5 ft. back from the proposed pavement edge unless otherwise shown on the plans or directed by the engineer. The typical sections for widening and resurfacing drive approaches shall be as follows:

- Paved commercial - 5" 301 widening; 1" 404 min. over existing surface and widening
- Paved residential - 4" 301 " " " " " " " " " " " "
- gravel - 8" 304 " " " " " " " " " " " "

SIGNING

THE CONTRACTOR SHALL FURNISH AND INSTALL "ROAD CONSTRUCTION AHEAD" SIGNS (OW-12B) AS FOLLOWS:

- MAINLINE - 1000 FEET IN ADVANCE OF THE PROJECT WORK LIMITS OR IN THE LOCATION REQUIRED FOR LANE CLOSURE SIGNING, WHICHEVER IS APPLICABLE.
- CROSS-STREETS - ON ALL CROSS STREETS WHERE WORK IS BEING PERFORMED AS PART OF THE PROJECT.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TRAFFIC CONTROL AND TRAFFIC CONTROL DEVICES REQUIRED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND PERTINENT ITEMS OF THE SPECIFICATIONS AND PROPOSAL SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PAYMENT

PAYMENT FOR ALL OF THE ABOVE INCLUDING PROVIDING, ERECTING, MAINTAINING, AND REMOVING ALL LIGHTS, SIGNS, BARRICADES, DRUMS, CONES, REGULATORY SIGNS, TEMPORARY PAVEMENT MARKINGS, OBLITERATION OF EXISTING AND TEMPORARY MARKINGS, REFERENCING THE EDGE LINES, LANE LINES, CHANNELIZING LINES, STOP BARS AND THE BEGINNING AND ENDING OF NO PASSING CENTER LINES, AND ALL OTHER TRAFFIC CONTROL DEVICES, SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614-MAINTAINING TRAFFIC.

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TRAFFIC NOTES

202 REMOVAL OF EXISTING SIGNAL INSTALLATION

THIS WORK SHALL CONSIST OF THE REMOVAL OF THE SIGNAL HEADS, CONTROLLER, STRAIN POLES, POLE FOUNDATIONS, CABLES, MESSENGER WIRES, AND ALL OTHER PORTIONS OF THE EXISTING TRAFFIC SIGNAL INSTALLATION.

NO ITEM SHALL BE REMOVED UNTIL THE NEW INSTALLATION IS IN FULL OPERATION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

THE SIGNAL HEADS, CONTROLLER, STRAIN POLES, CABLES, AND MESSENGER WIRES SHALL BE REMOVED AND STORED ON THE PROJECT AT A LOCATION APPROVED BY THE ENGINEER UNTIL PICKED UP BY THE DISTRICT. ALL OTHER ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.

PAYMENT FOR 202 REMOVAL OF EXISTING SIGNAL INSTALLATION WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH INSTALLATION WHEREIN EXISTING SIGNAL EQUIPMENT IS TO BE REMOVED.

614 MAINTENANCE OF EXISTING SIGNAL INSTALLATION

THE EXISTING TRAFFIC SIGNALS SHALL BE KEPT IN OPERATION UNTIL THE NEW SIGNAL IS OPERATIONAL. SIGNAL HEADS SHALL BE COVERED WHEN NOT IN OPERATION AND TRAFFIC MAINTAINED AT THE INTERSECTION THROUGH THE USE OF STATE HIGHWAY PATROLMAN WITH PATROL CAR.

SIGNAL CONTROL OF THE INTERSECTION SHALL NOT BE INTERRUPTED DURING THE HOURS OF 7 AM TO 9 AM, AND 4 PM TO 6 PM ON WEEKDAYS. SIGNALS SHALL BE INOPERATIVE NO LONGER THAN SIX HOURS.

RESTURBANCE OF ANY UNDERGROUND OR OVERHEAD CABLES DURING THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL REPAIRS IN SUCH CASE ARE TO BE MADE TO THE SATISFACTION OF THE PROJECT ENGINEER OR HIS APPOINTED REPRESENTATIVE.

PAYMENT WILL BE INCLUDED IN THE LUMP SUM PRICE BID FOR 614 MAINTENANCE OF TRAFFIC.

843 CONTROLLER, 3 PHASE, FULLY-ACTUATED, DIGITAL SOLID STATE, WITH CABINET

ALL CONTROLLERS FURNISHED AND INSTALLED BY THE CONTRACTOR FOR THIS PROJECT SHALL CONFORM TO THE CURRENT APPLICABLE SECTIONS OF SUPPLEMENTAL SPECIFICATION 843. ALL CONTROLLERS SHALL BE TRAFFIC ACTUATED TYPE AND SHALL CONFORM TO N.E.M.A. TS 1-1976 SPECIFICATIONS. THE CONTROLLERS SHALL BE PHASE MODULAR, SOLID STATE, AND HAVE DIGITAL TIMING OF ALL INTERVALS. ALL LOAD SWITCHES SHALL INCORPORATE SOLID STATE CIRCUITRY, AND EMPLOY ZERO VOLTAGE SWITCHING. GREEN OUTPUTS OF EACH LOAD SWITCH SHALL BE MONITORED BY A CONFLICTING INDICATION MONITOR. UPON DETECTION OF A CONFLICT, THIS MONITOR SHALL AUTOMATICALLY PLACE THE INTERSECTION INTO FLASHING OPERATION AS DETAILED ON EACH SIGNAL PLAN SHEET. THE MONITOR SHALL HAVE A SWITCH (PUSH BUTTON) THAT RESTORES NORMAL SIGNAL SEQUENCING TO THE INTERSECTION AFTER REPAIRS HAVE BEEN COMPLETED. THIS CONTROLLER TO HAVE SKIP NO-SKIP CAPABILITIES.

ALL CABINETS SHALL BE OF SIZE AND TYPE AS SPECIFIED IN SPECIFICATION 843 AND ON PAGE 22 OF THESE PLANS. ADDITIONAL CABINET SPACE SHALL BE PROVIDED IN EACH TO ALLOW FUTURE INSTALLATION OF RELAYS AND MODULES AS REQUIRED.

LIGHTNING PROTECTION FOR SIGNAL CONTROL EQUIPMENT

ALL SOUND STATE ELECTRICAL COMPONENTS FURNISHED AND INSTALLED BY THE CONTRACTOR FOR THIS PROJECT SHALL MEET OR EXCEED THE FOLLOWING REQUIREMENTS FOR LIGHTNING PROTECTION.

A DISSIPATE (GE915128002 OR EQUIVALENT) SHALL BE INSTALLED ON THE POLE OR AT THE DISCONNECT SWITCH FOR EACH POWER SERVICE.

A THERMISTOR (GE6RS21SAG06 OR EQUIVALENT) SHALL BE INSTALLED ON THE LINE SIDE AT OR BEFORE THE FUSE OR BREAKER PANEL IN THE CONTROL HOUSING FOR EACH 120 V.A.C. POWER SERVICE.

A 3 ELECTRODE GAS TUBE (TI1317A OR EQUIVALENT) SHALL BE INSTALLED ON THE LINE SIDE OF EACH DETECTOR AND PEDESTRIAN INPUT AND PRIOR TO THE DETECTOR AMPLIFIERS.

A 3 ELECTRODE GAS TUBE (TI1317B OR EQUIVALENT) SHALL BE INSTALLED ON THE LINE SIDE OF EACH SIGNAL LAMP CONDUCTOR AND PRIOR TO THE SOLID STATE LOAD SWITCHES AND CONFLICT MONITOR.

SEE DETAIL SHEET 23. PAYMENT FOR THIS ITEM SHALL BE INCIDENTAL TO THE VARIOUS SIGNAL CONTROL EQUIPMENT PAY ITEMS.

PAVEMENT MARKINGS

THE CONTRACTOR SHALL APPLY TEMPORARY PAVEMENT MARKINGS TO S.R. 4 AS PART OF THIS PROJECT. THE TEMPORARY PAVEMENT MARKINGS SHALL BE COMPLETED ON ALL COURSES EXPOSED TO TRAFFIC AT THE END OF EACH DAYS OPERATION. ALL PLASTIC LANE TAPE REQUIRED FOR TEMPORARY PAVEMENT MARKING SHALL BE FURNISHED THE CONTRACTOR BY THE DEPARTMENT.

ACCEPTABLE PAVEMENT MARKING SHALL BE AS INDICATED BELOW.

MATERIAL SHALL BE 4"x12" lane marking tape.

MARKINGS SHALL BE PLACED AT 40 FT (3.5 FT.) INTERVALS AND SHALL BE ACCURATELY LOCATED IN A TRUE LINE ON THE CENTER LINE, LANE LINE, OR CHANNELIZING LINE WHERE THE NORMAL PAVEMENT MARKING WOULD LIE.

TYPICAL LAYOUTS OF THE TEMPORARY MARKINGS ARE SHOWN IN THIS PLAN.

THE WORK INVOLVED IN THE SPOTTING OF THE LEVELING AND SURFACE COURSES AS DESCRIBED HEREIN INCLUDING LABOR AND EQUIPMENT SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR 614 MAINTAINING TRAFFIC.

NOTES

1. LINES OF RELATIVELY SHORT LENGTH SUCH AS INTERSECTION CHANNELIZING, OR TRANSITION LINES HAVE A MINIMUM OF THREE (3) SEGMENTS OF TAPE.
2. SPOTTING OF THE SURFACE COURSE SHALL BE BY APPLYING LANE TAPE TO THE COMPLETED SURFACE. LANE TAPE WILL ALSO BE USED TO MARK LEVELING COURSES.

ALL EXISTING OR TEMPORARY PAVEMENT MARKINGS THAT WILL CONFLICT WITH TRAFFIC FLOW SHALL BE REMOVED BY THE CONTRACTOR BY GRINDING, SAND BLASTING, OR OTHER METHODS APPROVED BY THE ENGINEER. PAINTING (BLACK) OVER PAVEMENT MARKINGS IS NOT CONSIDERED TO BE ACCEPTABLE REMOVAL.

847 DOTTED LINE, as per plan.

This work shall consist of applying dotted lines, formed by short segments 2 feet in length, and gaps 4 feet in length to the pavement. The method of measurement will be on a continuous linear basis with gaps included in the measurement. Basis of payment shall be for accepted quantities, complete in place at the contract unit price bid per linear foot, adjusted in accordance with 847.16. Payment shall be full compensation for all materials, labor, incidentals and equipment necessary to complete the required work as indicated above.

844 SIGNS, BY TYPE

Sign face background material shall be Type F reflective sheeting unless otherwise specified in the plans. The proposed background color and legend type shall be shown on each sign layout shop drawing submitted for review in accordance with 844.04.

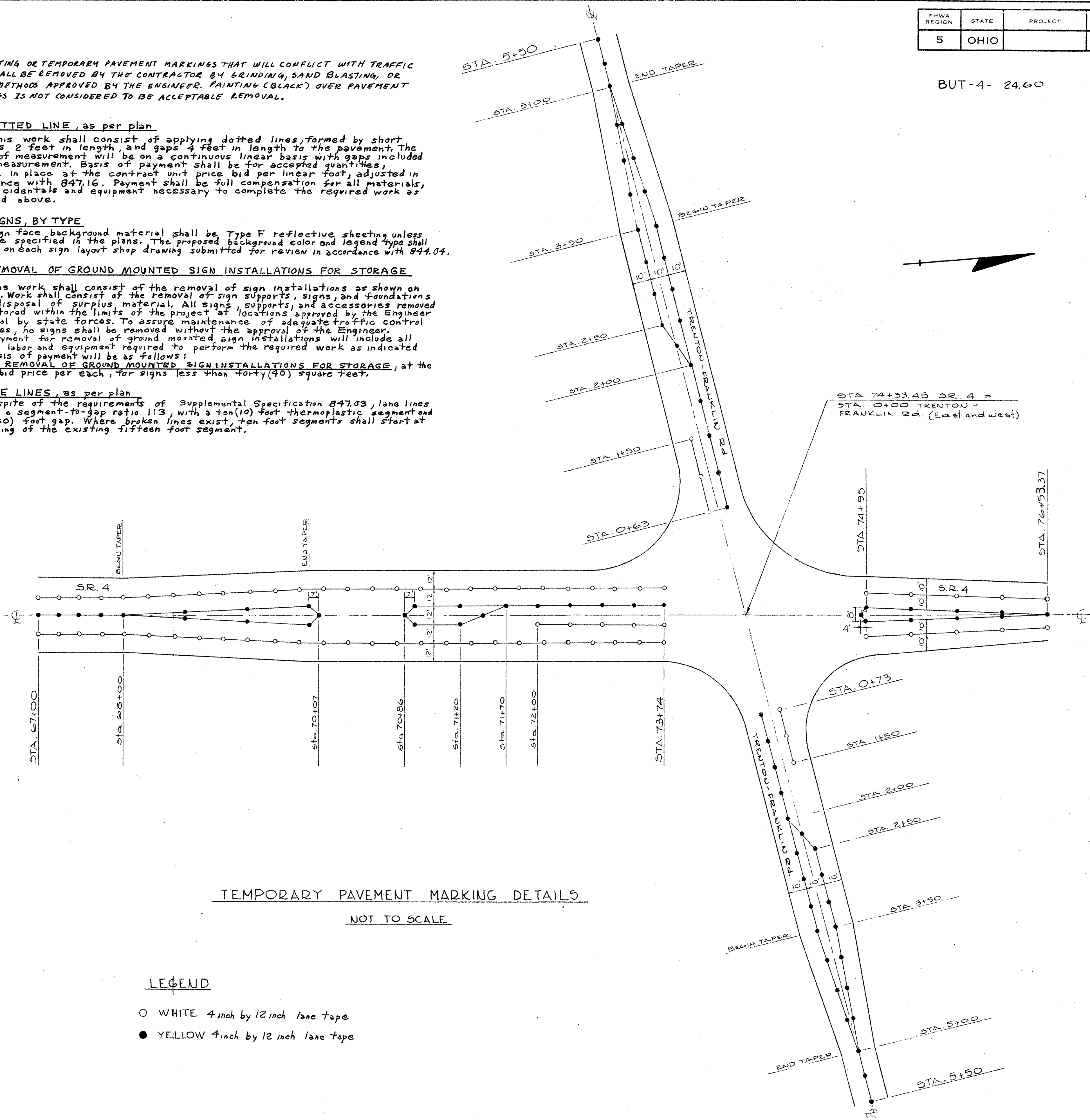
844 REMOVAL OF GROUND MOUNTED SIGN INSTALLATIONS FOR STORAGE

This work shall consist of the removal of sign installations as shown on the plans. Work shall consist of the removal of sign supports, signs, and foundations and the disposal of surplus material. All signs, supports, and accessories removed shall be stored within the limits of the project at locations approved by the Engineer for removal by state forces. To assure maintenance of adequate traffic control at all times, no signs shall be removed without the approval of the Engineer.

Payment for removal of ground mounted sign installations will include all necessary labor and equipment required to perform the required work as indicated above. Basis of payment will be as follows:
202 REMOVAL OF GROUND MOUNTED SIGN INSTALLATIONS FOR STORAGE, at the contract bid price per each, for signs less than forty (40) square feet.

847 LANE LINES, as per plan.

In spite of the requirements of Supplemental Specification 847.03, lane lines shall have a segment-to-gap ratio 1:3, with a ten (10) foot thermoplastic segment and a thirty (30) foot gap. Where broken lines exist, ten foot segments shall start at the beginning of the existing fifteen foot segment.



TEMPORARY PAVEMENT MARKING DETAILS

NOT TO SCALE

LEGEND

- WHITE 4 inch by 12 inch lane tape
- YELLOW 4 inch by 12 inch lane tape

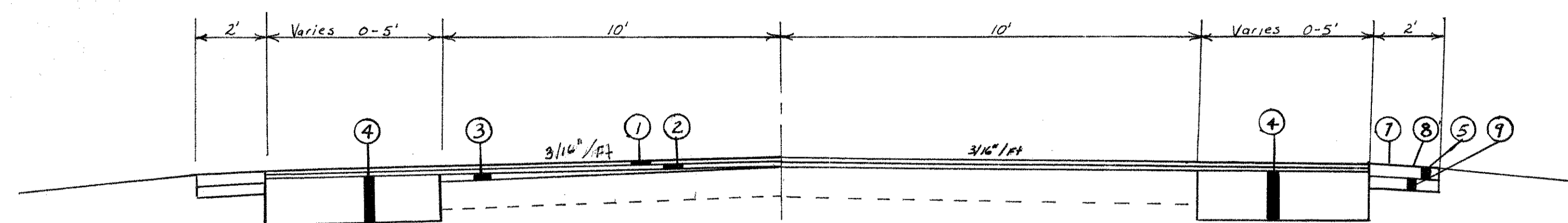
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TYPICAL SECTIONS

FHWA REGION	STATE	PROJECT
5	OHIO	

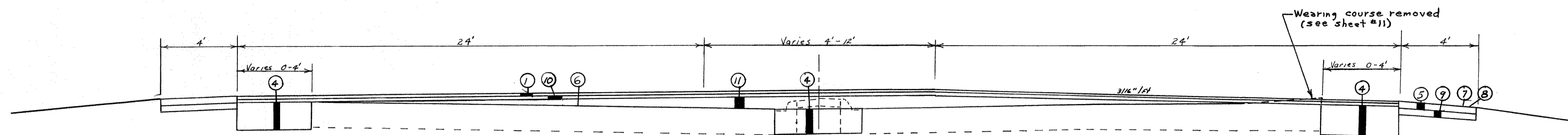
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23

But. 4 - 2A.60

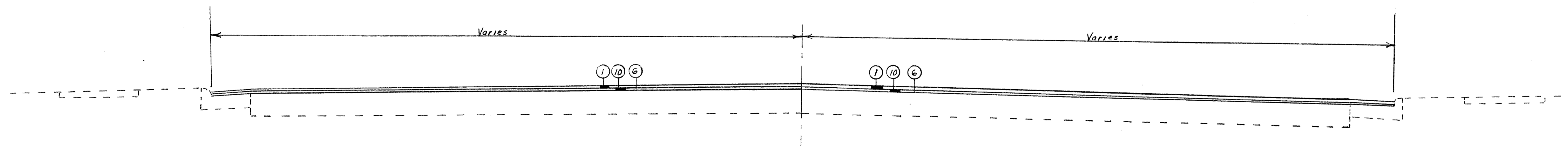


Trenton - Franklin Road

- ① Item 404 1" Asphalt Surface Course
- ② Item 403 1/2" (Ave.) Asphalt Leveling Course
- ③ Item 403 0" Min. Asphalt Pre-Level Course
- ④ Item 301 8" Bituminous Aggregate Base
- ⑤ Item 301 3" Bituminous Aggregate Base
- ⑥ Item 407 Tack Coat - .075 Gal/s.y. SS-1, SS-1h, MS-2, RS-1 or RC-250
- ⑦ Item 409 Bituminous Seal Coat - .35 Gal/s.y. RS-2, CRS-2, CBAE-800 MC-800 or MC-3000
- ⑧ Item 409 Seal Coat Cover Aggregate #8 .0084 c.y./s.y.
- ⑨ Item 304 3" Aggregate Base
- ⑩ Item 403 1" (Ave.) Asphalt Leveling Course
- ⑪ Item 301 0" Min. Bituminous Aggregate Base



S.R. 4 - Sta. 67+00 to 75+21.58



S.R. 4 - Sta. 75+21.58 to 76+53.37

MICROFILMED
MAY 9 1980

GENERAL SUMMARY

FED. NO. DIVISION	STATE	PROJECT
5	OHIO	

5
23

But. 4 - 24.00

ITEM	SHEET NUMBER									ITEM	QUANT.	UNIT	Type Code 6203 (unless otherwise noted)	DESCRIPTION
	5	10	11	15	17	19	20	21						
201	lump									201	lump sum	lump	Clearing & Grubbing	
202			362							202	362	S.Y.	Wearing Course Removed	
202		2								202	2	Ea.	Inlet Abandoned	
202		2								202	2	Ea.	Catch Basin Removed	
202		137								202	137	L.F.	Pipe Removed (18" and under)	
202		453								202	453	L.F.	Curb & Gutter Removed	
202		516								202	516	L.F.	Concrete Median Removed	
202		352								202	352	S.F.	Sidewalk Removed	
202		210								202	210	S.Y.	Pavement Removed	
203				137	140	93				203	370	C.Y.	Excavation Not Including Embankment Construction	
203				157	10	98				203	265	C.Y.	Embankment	
203		2120								203	2120	S.Y.	Subgrade Compaction	
301		542								301	542	C.Y.	Bituminous Aggregate Base 702.01 (AC-20) or 702.09 RT-11 or RT-12	
304		86								304	86	C.Y.	Aggregate Base	
403		221								403	221	C.Y.	Asphalt Concrete (AC-20)	
404		278								404	278	C.Y.	Asphalt Concrete (AC-20)	
407		571								407	571	Gals	Tack Coat SS-1, SS1-A, MS-2, RS-1 or RC-250	
407		27								407	27	Tons	Cover Aggregate	
409		300								409	300	Gals	Seal Coat Bituminous Material (RT-9 or RT-10) or (MC-800 or MC-3000) or RS-2, CR5-2, CBAE-800	
409		8								409	8	C.Y.	Seal Coat Cover Aggregate No. 8	
452		23								452	23	S.Y.	6" Plain Portland Cement Concrete	
603		122								603	122	L.F.	12" Conduit, Type B	
603		71								603	71	L.F.	12" Conduit, Type C	
603		82								603	82	L.F.	18" Conduit, Type C	
603		30								603	30	L.F.	18" Conduit, Type B	
604		1								604	1	Ea.	Catch Basin Adjusted to Grade	
604		1								604	1	Ea.	Manholes, Standard No. 1	
604		2								604	2	Ea.	Catch Basin, Standard No. 3-A	
604		1								604	1	Ea.	Catch Basin, Standard No. 2-2-B	
604		3								604	3	Ea.	Manhole Adjusted to Grade	
608		350								608	350	S.F.	Concrete Walk	
609		468								609	468	L.F.	Combination Curb & Gutter Type 2	
659				1005	298	726				659	2029	S.Y.	Seeding & Mulching	EROSION CONTROL Y005
659				.09	.03	.07				659	0.19	Ton	Commercial Fertilizer 12-12-12	
847							170			847	170	Sq. Ft.	Island Marking, 847.09	
847							0.68			847	0.68	Miles	4" Edge Lines, 847.09	
847							0.32			847	0.32	Miles	4" Lane Lines, 847.09, as per plan	
847							0.55			847	0.55	Miles	4" centerline, 847.09	
847							336			847	336	L.F.	8" channelizing Line, 847.09	
847							476			847	476	L.F.	24" Broad Transverse Line, 847.09	
847							4			847	4	Ea.	Lane Arrows, Turn, 847.09	
847							3			847	3	Ea.	Word "Only" on Pavement, 6', 847.09	
847							250			847	250	L.F.	4" Dotted Line, as per plan, 847.09	
847							114			847	114	L.F.	24" Stop Line, 847.09	
842							8			842	8	Ea.	Covering of Traffic Signals	
842							7			842	7	Ea.	Vehicular Signal Head, 3 section, 12" Lens, One Way	
842							1			842	1	Ea.	Vehicular Signal Head, 5 section, 12" Lens, One Way	
843							1			843	1	Ea.	Controller, 3 Phase, Fully Activated, Digital, Solid state w/cabinet, as per plan	
842							324			842	324	L.F.	Messenger Wire, 7 strands, 3/8" Diameter w/Accessories	
842							365			842	365	L.F.	Signal Cable, 5/c #14 AWG, IMSA 19-1-67	
842							25			842	25	L.F.	Power Cable 3-1/c #8 AWG, RHW (or RHW Type) standard	
842							765			842	765	L.F.	Loop Detector Lead-in Cable, 2/c #14 AWG	
842							3			842	3	Ea.	Cable Support Assembly	
842							5			842	5	Ea.	Loop Detector Amplifier	
842							828			842	828	L.F.	Loop Detector Wire (X.H.H.W.), 1/c #14 AWG	
842							419			842	419	L.F.	Loop Detector Pavement Cutting	
5625							330			5625	330	L.F.	Conduit, 1 1/2", 713.04	
5625							9			5625	9	L.F.	Conduit, 3", 713.04	
5625							370			5625	370	L.F.	Trench	
5625							8			5625	8	Ea.	Pullbox, 18" Concrete, As per Plan	
5625							4			5625	4	Ea.	Ground Rod	
842							1			842	1	Ea.	Power Service	
842							4			842	4	Ea.	Signal Strain Pole, Type 8110 Design, 26', Anchor Base	
842							9.0			842	9.0	C.Y.	Concrete for Anchor Base Foundation	
842							12			842	12	C.Y.	Concrete for Cabinet Foundation	
842							1			843	1	Ea.	Delay Relay	
842							1			842	1	Ea.	Weatherhead & Conduit Riser, 1 1/2"	
842							145			842	145	L.F.	Signal Cable, 7/c #14 AWG 19-1-67	
202							1			202	1	Ea.	Removal of Existing Traffic Signal Installation	
5625							55			5625	55	L.F.	Conduit, 1", 713.04	

CHG. BY DATE
CHG. BY DATE

Revised 10-11-77
Revised 12-16-77

RECORDED
MAY 9 1968

GENERAL SUMMARY (CONT)

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

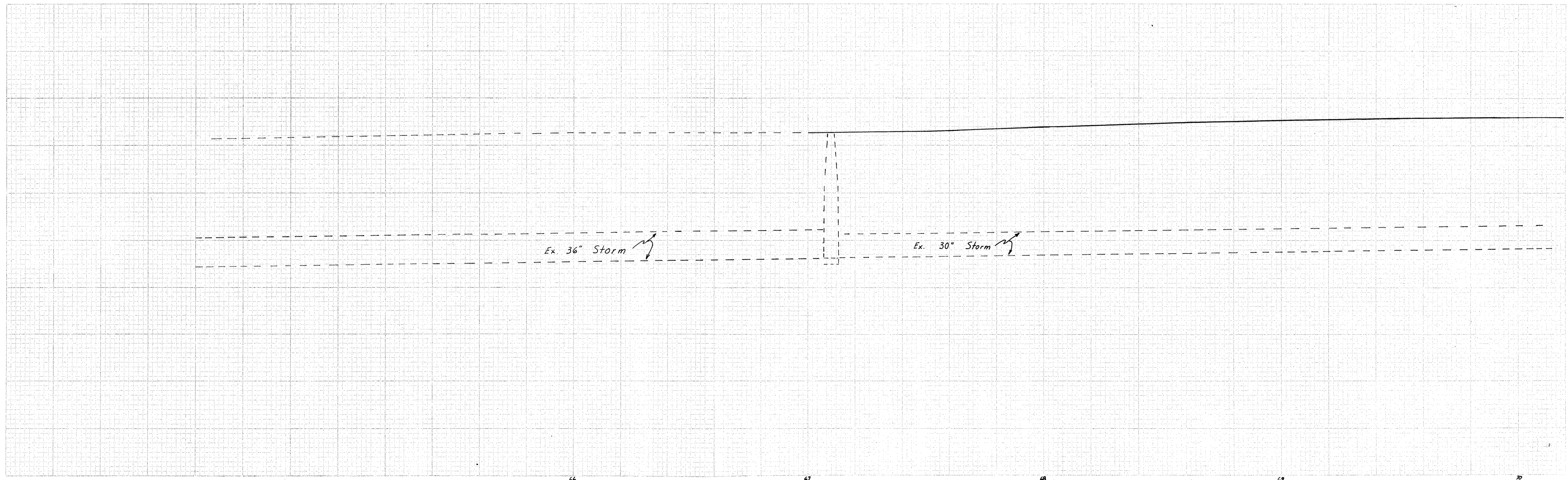
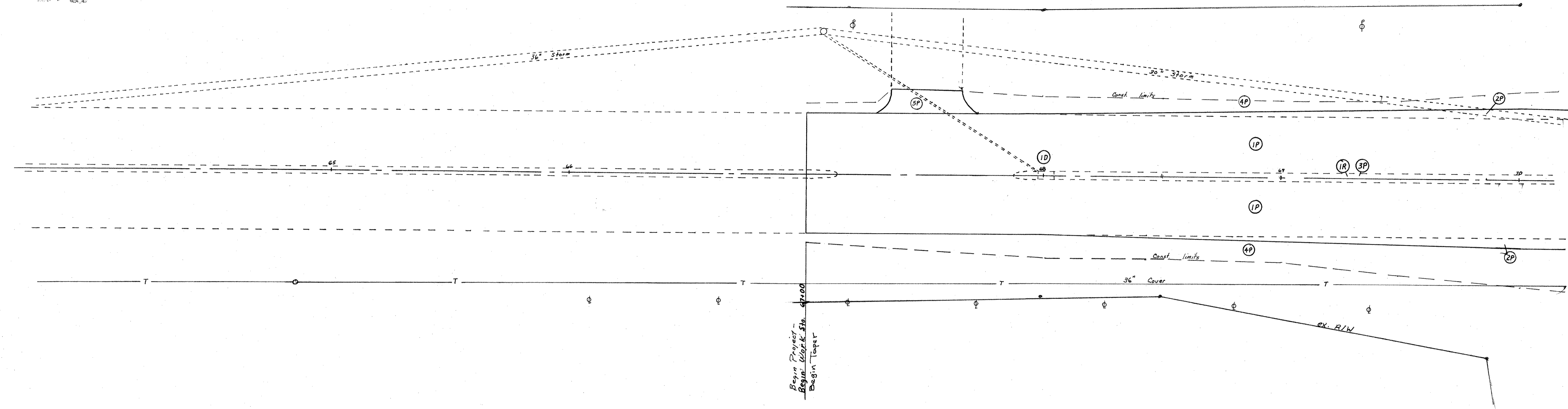
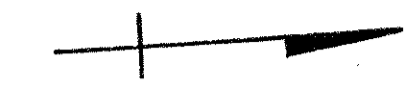
5A
23

BUT-4-2460

ITEM	SHEET			NUMBER			ITEM	QUANT.	UNIT	DESCRIPTION
	5	20	21							
842			390				842	390	Lin.Ft.	Messenger Wire, 3 Strand, 1/4" w/accessories
202		4					202	4	Each	Removal of Ground Mounted Sign Installations for Storage
844		38					844	38	Sq.Ft.	Signs, Flatsheet
844		110					844	110	Lin.Ft.	Ground Mounted Support, No. 3 Post, Driven
614		Lump					614	Lump Sum	Lump	Maintaining Traffic
619		Lump					619	Lump Sum	Lump	Field Office
623		Lump					623	Lump Sum	Lump	Construction Layout Stakes

But. 4 - 24.60

(MICROFILMED)
MAY 9 1963

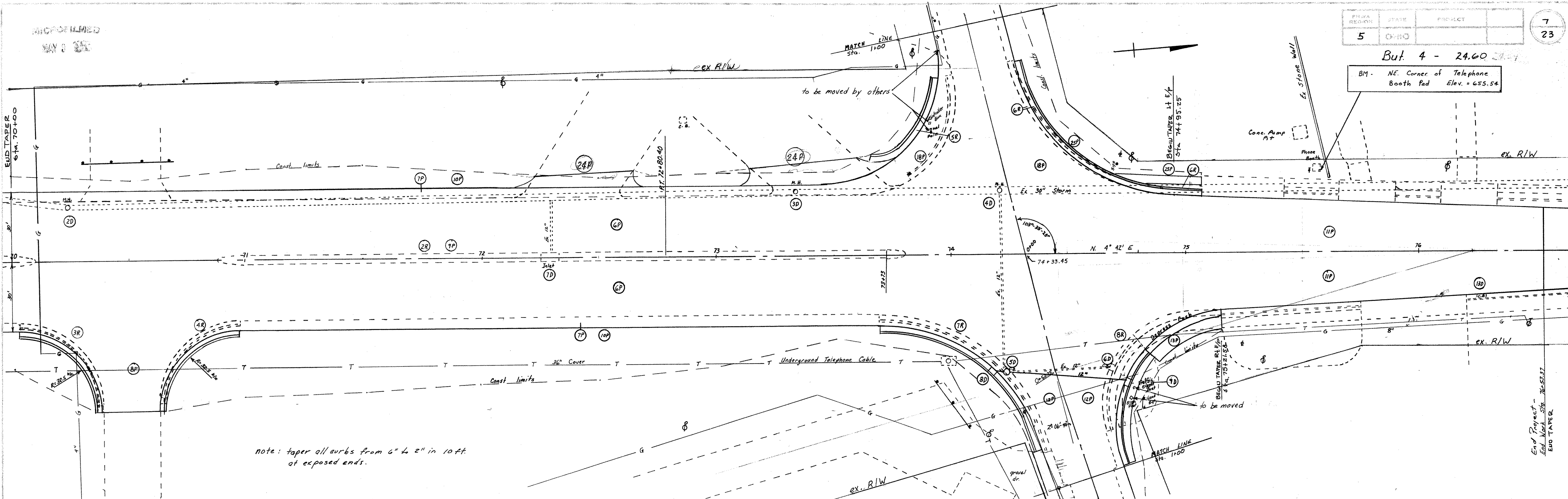


REPRODUCTION
MAY 1 1961

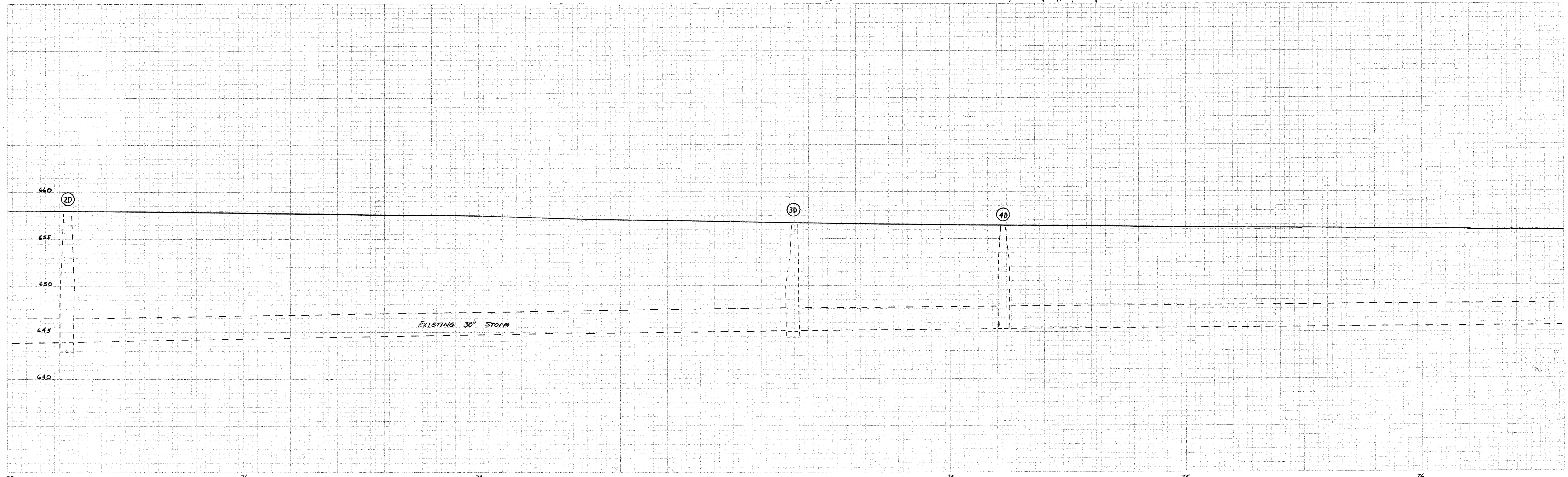
FEDERAL REGION	STATE	PROJECT	7
5	0-10		23

But. 4 - 24.60

BM - NE. Corner of Telephone Booth Pad Elev. = 655.54



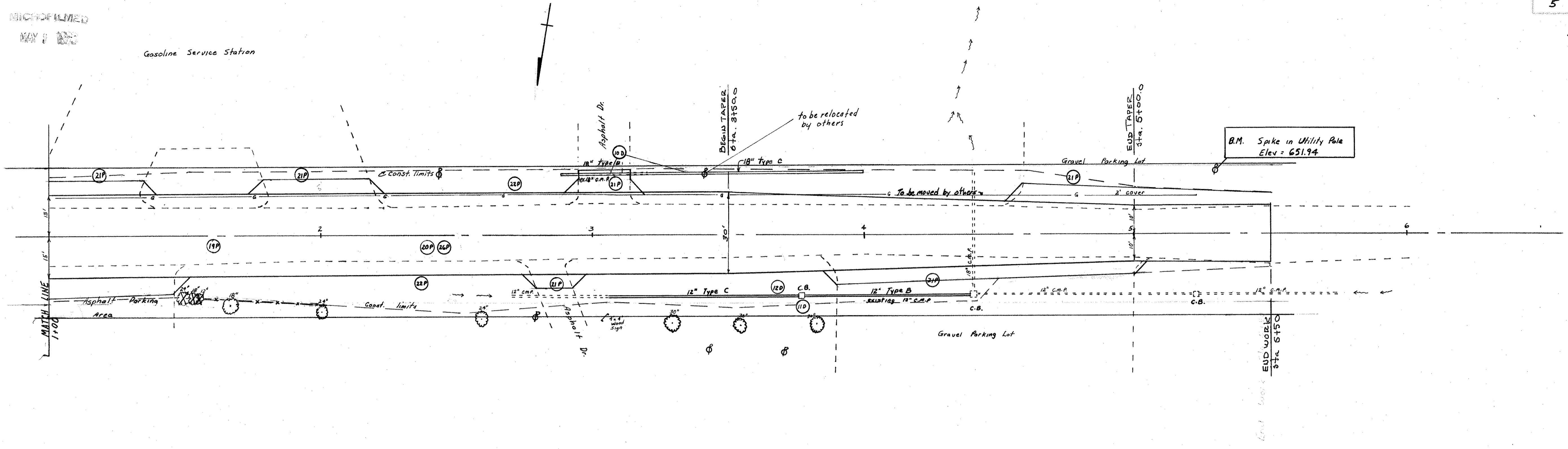
note: taper all curbs from 6" to 2" in 10 ft. at exposed ends.



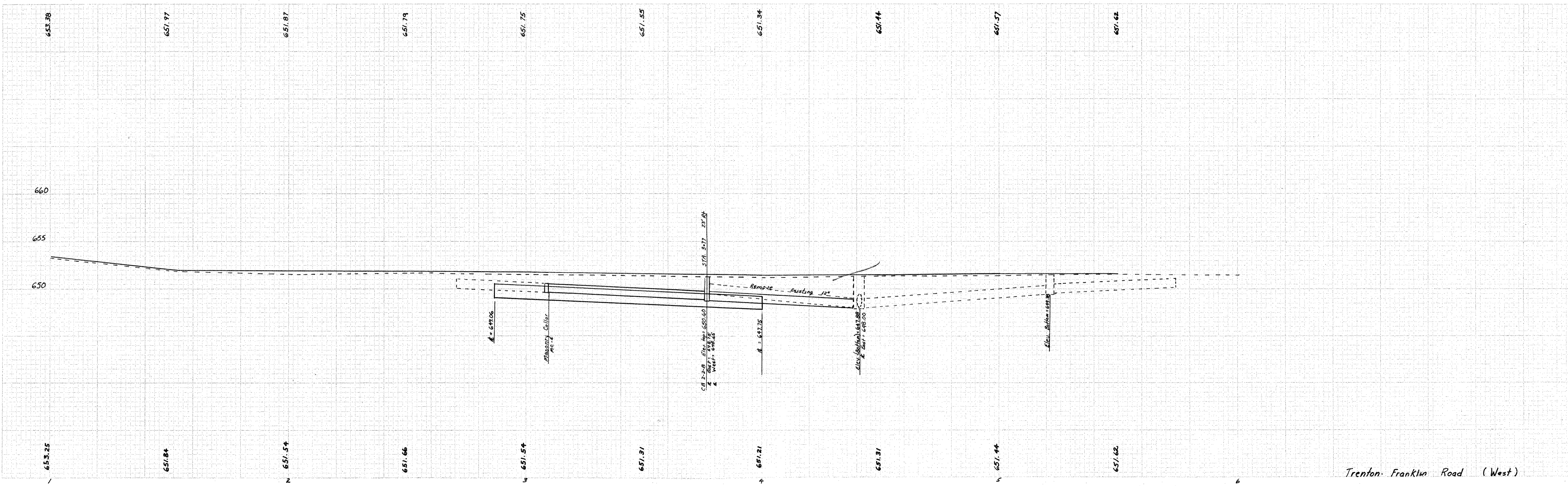
But. 4. 24.60

MICROFILMED
MAY 1 1962

Gasoline Service Station



note: see 21P for drive approach quantities this sheet



Trenton Franklin Road (West)

MICROFILMED
MAY 7 1968

SUMMARY OF ALIGNMENT SHEET QUANTITIES

FED. RD. DIVISION	STATE	PROJECT
5	OHIO	

10
23

But 4 - 24.60

STATION	202 Inlet Abandoned	202 Catch Basin Removed	202 Pipe Removed	202- Curb & Gutter Removed	202- Conc. Median Removed	202- Sidewalk Removed	202 Pavement Removed	203 Compacted Subgrade	301 Bit. Aggregate Base	304 Aggregate Base	403 Asphalt Concrete	404 Asphalt Concrete	407 Tack Coat	407-Cover Aggregate	409-Seal Coat	409-Seal Coat Cover Area	442-C.P.C.C. Pavement	603-12" Conduit Type B	603-12" Conduit Type C	603-18" Conduit Type C	603-18" Conduit Type B	604-No. 1 Manhole	604-C.B. No. 3-A	604-C.B. No. 2-B	604-C.B. Adjusted to Grade	604-M.H. Adj. to Grade	608-Conc. Mark	609-Comb. Curb & Gutter Type 2	SHEET NO.		
	sq.	sq.	l.f.	l.f.	l.f.	s.f.	s.f.	s.y.	c.y.	c.y.	c.y.	c.y.	Gals.	Tons	Gals.	c.y.	s.y.	l.f.	l.f.	l.f.	l.f.	sq.	sq.	sq.	sq.	sq.	sq.	sq.	l.f.		
1R 67+90-70+12						222																									
2R 70+88-73+82						294																									
3R 70+00-70+39 Rt				52				15																					55		
4R 70+60-71+00 Rt				49				15																					55		
5R 73+82(40)-0+82 Lt				48				10																					50		
6R 0+82 Rt - 75+10 Lt				109		140		33																		140			120		
7R 75+70 Rt - 0+82 Rt				103				31																					96		
8R 0+82 Lt - 75+22 Rt				92		212	210	26																		210			92		
Drainage																															
1D 68+02	1																														
2D 70+24 Lt																															
3D 73+35 Lt																															
4D 74+25 Lt																															
5D 0+17 East Rt.		1																													
6D 0+59 East Lt.		1	44																												
7D 72+30	1																														
8D 0+15 East Rt.													7																		
9D 0+64 " Lt													52																		
10D 2+88-4+00 Lt			30																	82	30										
11D 3+77 West Rt.																															
12D 3+05-4+40 Rt.			63																												
13D 76+28 Rt.																															
Pavement																															
1P 67+00-70+00								43			51	51	120	5.60																	
2P 68+00-70+00 Lt+Rt								89	20																						
3P 67+90-70+12								22																							
4P 67+00-70+00 Berms								267	22	22					94	2															
5P Drive-67+50 Lt												2																			
6P 70+00-74+00								88			74	74	160	7.47																	
7P 70+00-74+00 Lt+Rt								278	62																						
8P 70+50 Rt.								7			6																				
9P 70+88-73+82								29																							
10P 70+00-74+00 Berms								245	20	20					86	2															
11P 74+00-76+53.37								89	20		39	39	99	4.63																	
12P 0+26-1+00								278	62		6	12	22	1.01																	
13P 1+00-3+50								83	19		7	15	33	1.56																	
14P 3+50-5+50									1	11		3																			
15P Drives-East								75	15	15					61	2															
16P 0+99-3+50 Berms											4																				
17P Pre-Level-East																															
18P 0+26-1+00								101	23		5	11	21	0.96																	
19P 1+00-2+00								67	15		5	9	20	0.93																	
20P 2+00-5+50								250	56		14	27	54	2.53																	
21P Drives-West									2	4		2																			
22P Berms-West								168	14	14					59	2															
23P Drive-75+00 Rt.																															
24P Drives-70+00-74+00 Lt									2			3																			
25P 0+82-75+10 Lt.																															
26P Pre-Level-West											4																				
S-TOTAL	2	2	137	453	516	352	210	2120	542	86	221	278	571	26.63	300	8	23	122	71	82	30	1	2	1	1	3	350	468			
TOTAL																														S-TOTAL	
																														TOTAL	

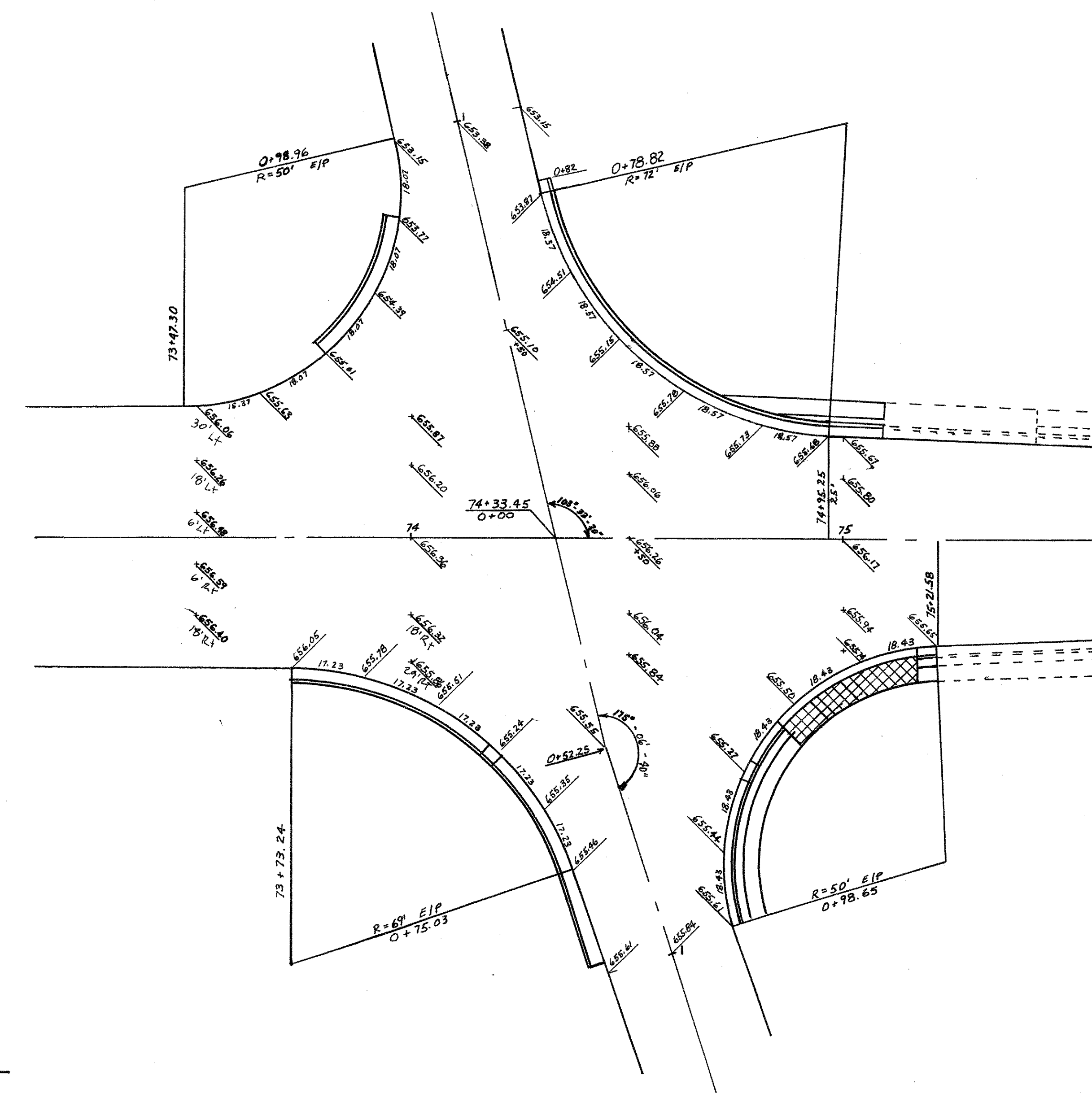
CHKD. BY DATE
DATE

But 4-24-60

MICROFILMED
MAY 9 1962

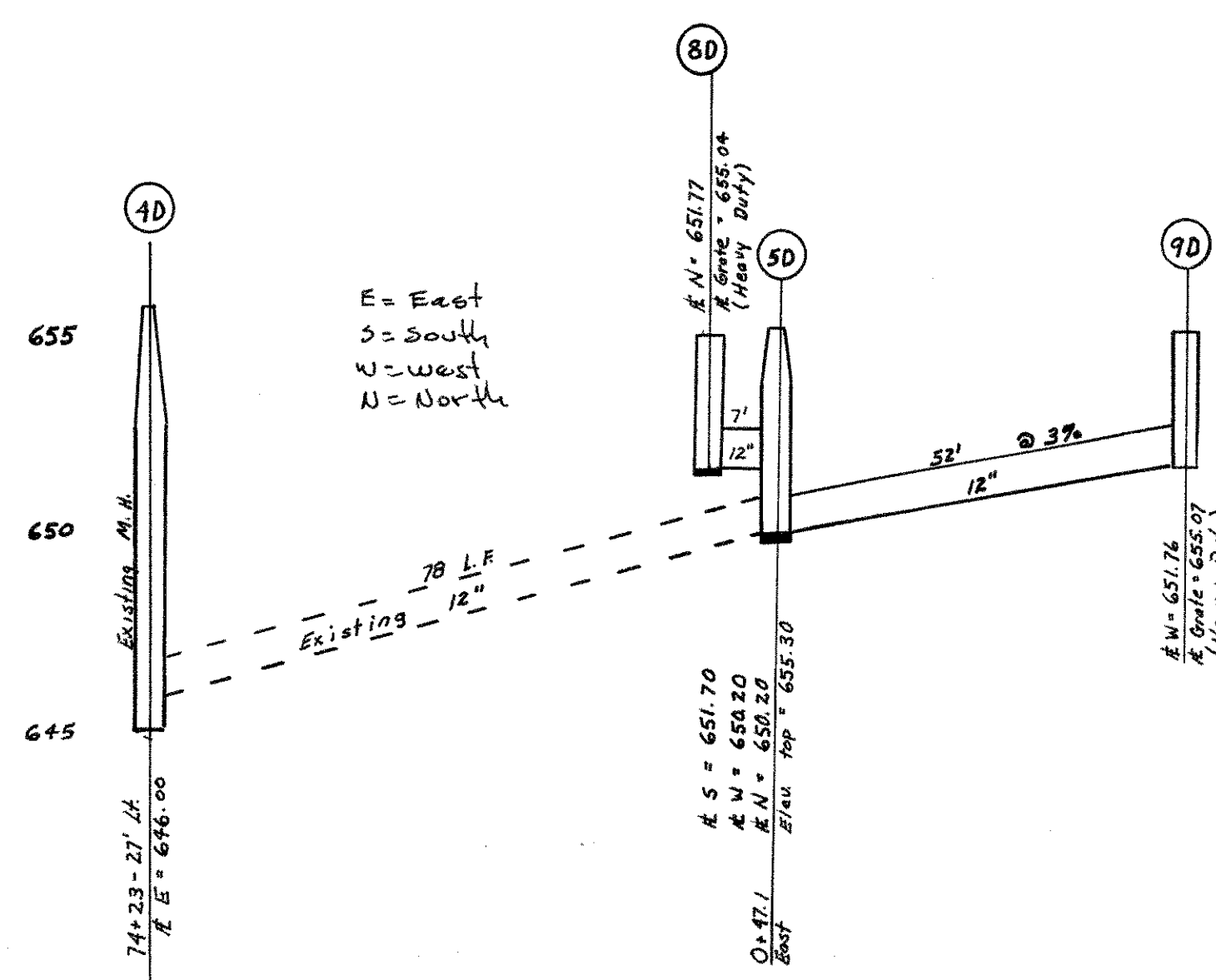
S.R. 4 - Finish Grade

Left						Sta.	Right					
Elev.	Dist	Elev.	Dist	Elev.	Dist		Dist	Elev.	Dist	Elev.	Dist	Elev.
656.21	26	656.44	14	656.53	0	67+50	0	656.53	14	656.93	26	656.94
656.47	26	656.69	14	656.87	2	68+00	2	656.94	14	657.12	26	657.14
656.51	27	656.78	15	657.05	3	68+50	3	657.39	15	657.32	27	657.26
656.68	28	656.96	16	657.24	4	69+00	4	657.57	16	657.38	28	657.20
656.87	29	657.12	17	657.37	5	69+50	5	657.79	17	657.60	29	657.41
656.87	30	657.18	18	657.49	6	70+00	6	657.99	18	657.80	30	657.61
656.84	30	657.16	18	657.48	6	70+50	6	657.98	18	657.79	30	657.60
656.76	30	657.07	18	657.42	6	71+00	6	657.76	18	657.57	30	657.38
656.64	30	656.95	18	657.26	6	71+50	6	657.58	18	657.39	30	657.20
656.44	30	656.73	18	657.02	6	72+00	6	657.30	18	657.11	30	656.92
656.18	30	656.49	18	656.80	6	72+50	6	657.10	18	656.91	30	656.72
656.08	30	656.31	18	656.55	6	73+00	6	656.78	18	656.59	30	656.40
656.06	30	656.26	18	656.48	6	73+50	6	656.57	18	656.40	30	656.21



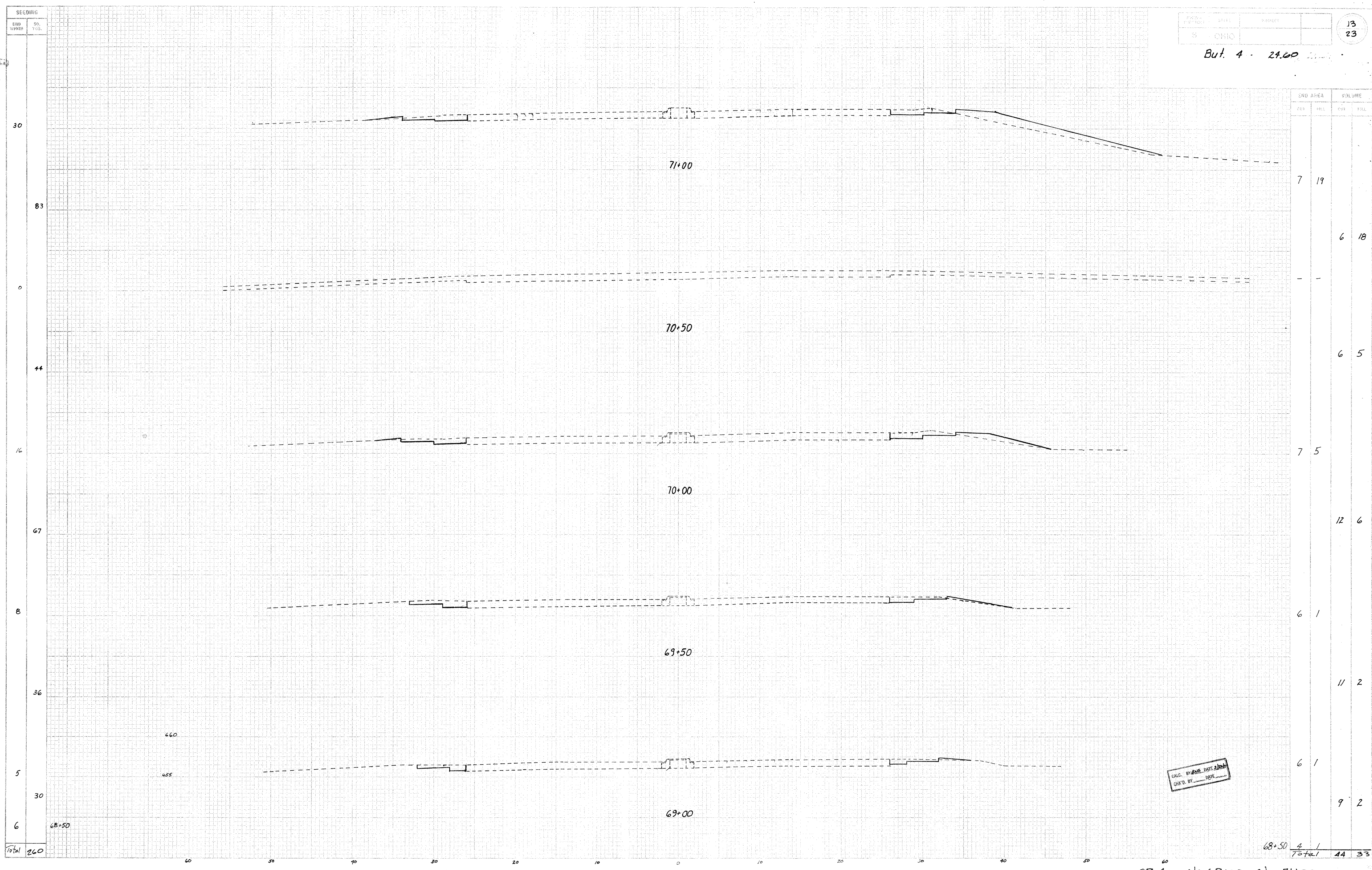
Wearing Surface Removed		
Sta.	68+00 to 70+00 Rt.	170 S.Y.
Sta.	70+00 to 72+50 Rt.	192 S.Y.
	total	362 S.Y.

Drainage Detail - SR 4 & Trenton-Franklin Rd (East)



CALC. BY: [Signature] DATE: 2-23-60
CHK'D. BY: [Signature] DATE: [Blank]

REVISIONS
MAY 9 1950



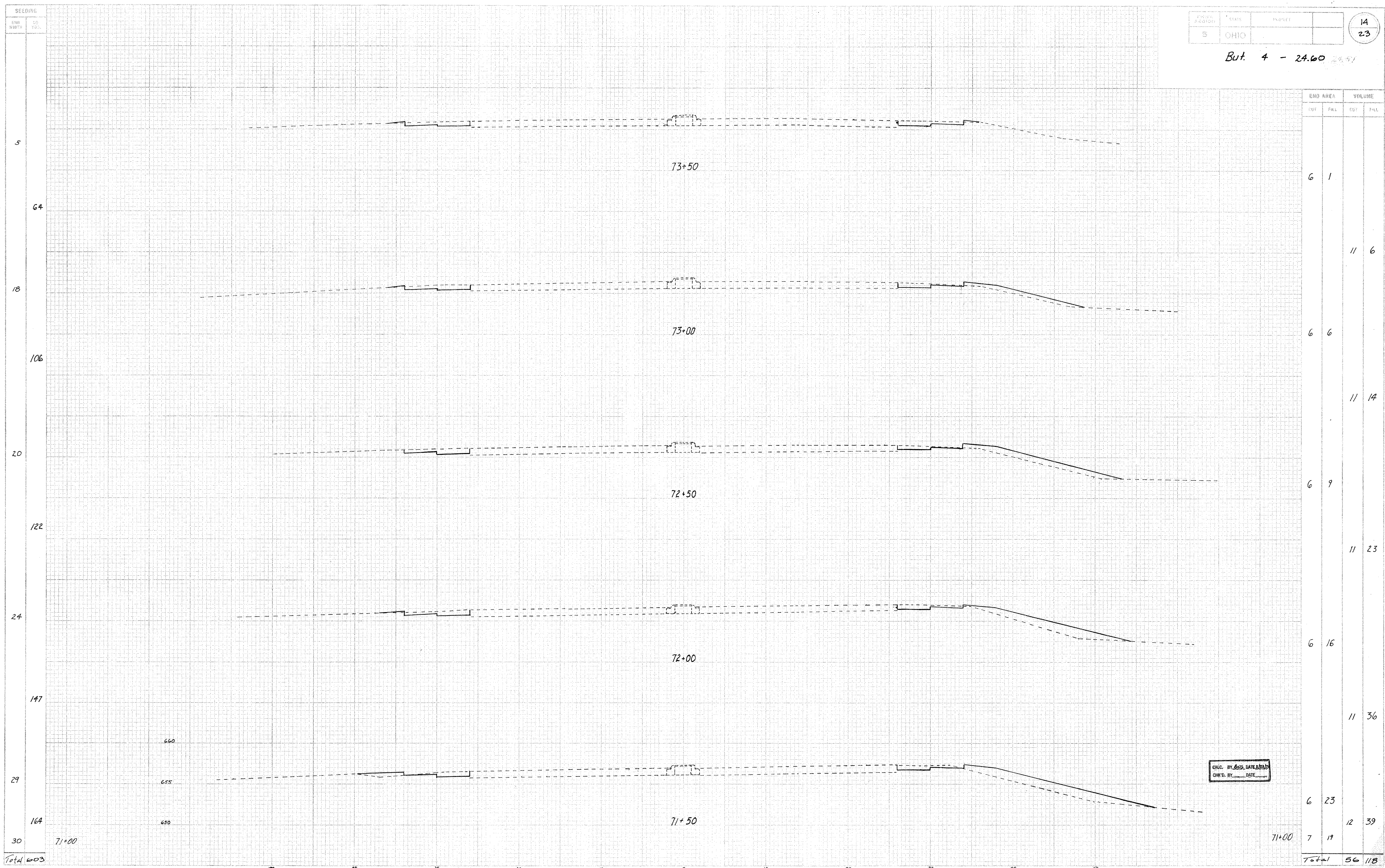
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REPRODUCTION
MAY 8 1960

ROUTE	STATE	PROJECT	
5	OHIO		

14
23

But. 4 - 24.60



STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
73+50	6	1		
73+00	6	6	11	6
72+50	6	9	11	14
72+00	6	16		
71+50	6	23	11	36
71+00	7	19		
Total	56	118		

CALC. BY 605 DATE 8/29/57
CHK'D. BY DATE

Total 603

SR. 4 Sta. 71+50 - Sta. 73+50

MICROFILMED
MAY 9 1966

SEEDING	
END WIDTH	SO. YRS.
5	
30	
6	
31	
5	
Total 75	
100%	Total SR-7

FED. REGION	STATE	PROJECT	
5	OHIO		

But 4 - 29.60, 27.53

15
23

End work sta 76+53.37

76+00

75+50

75+00

74+50

74+00

TRENTON-FRANKLIN RD. (W)

TRENTON-FRANKLIN RD. (EAST)

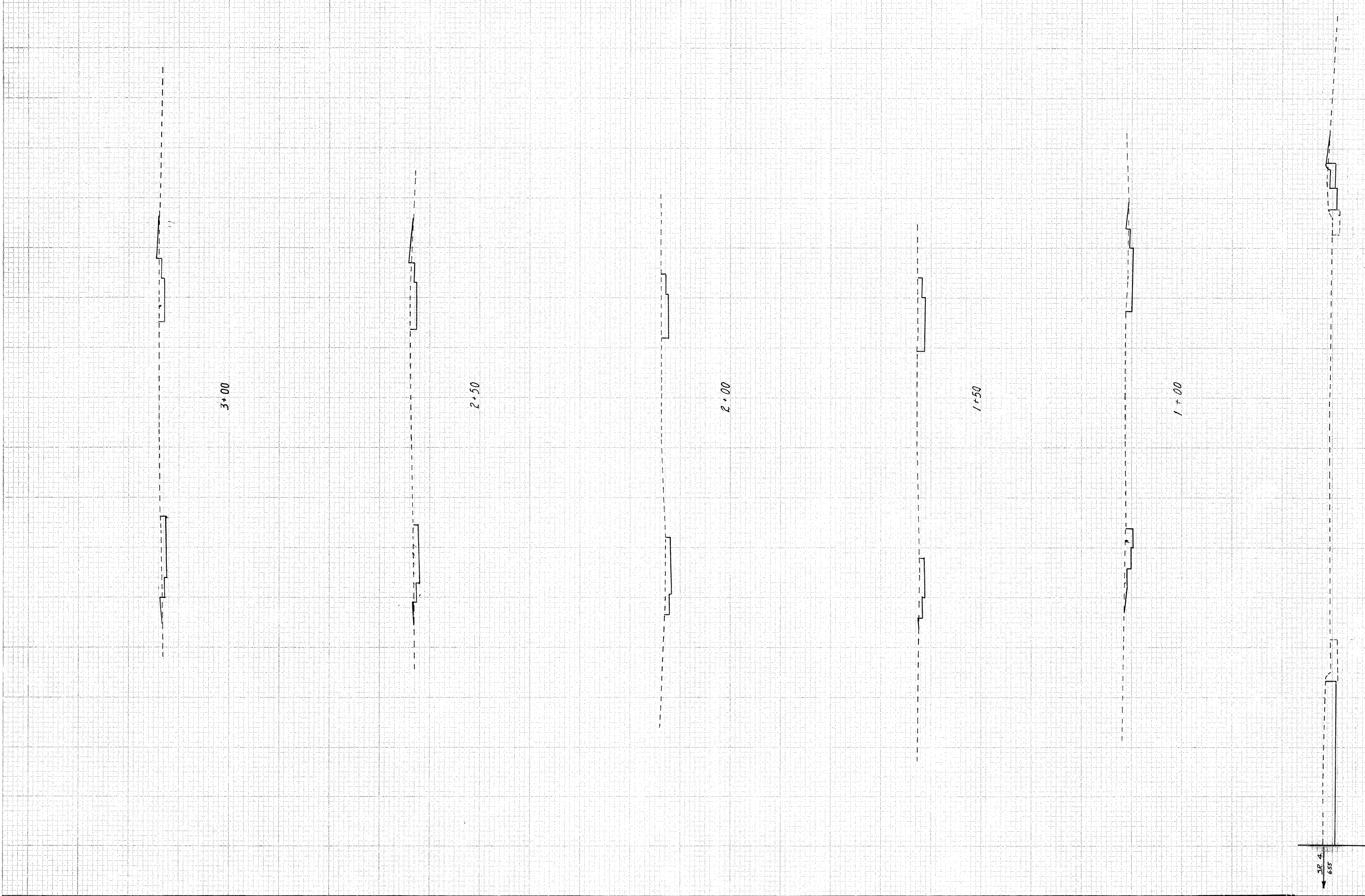
CALC. BY GAO DATE 5/22/67
CHKD. BY DATE

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
0	0		
		8	0
		9	0
		9	0
		1	0
		4	1
3	1		
		8	2
6	1		
Total		29	3
		137	157

73+50
Total SR-7

MICROFILMED
MAY 2 1988

END AREA	VOLUME		
CUT	FILL	CUT	FILL
6	1	14	2
9	1	17	1
9	0	15	0
7	0	15	0
9	0	30	0
25	0		
Total		91	3



SEEDING	PAVING	CONC.	BY	DATE	BY	DATE
6	33	28	4	22	31	28
3						
Total 142						

PLAN REGION	STATE	PROJECT	
5	OHIO		

But. 4 - 24.60

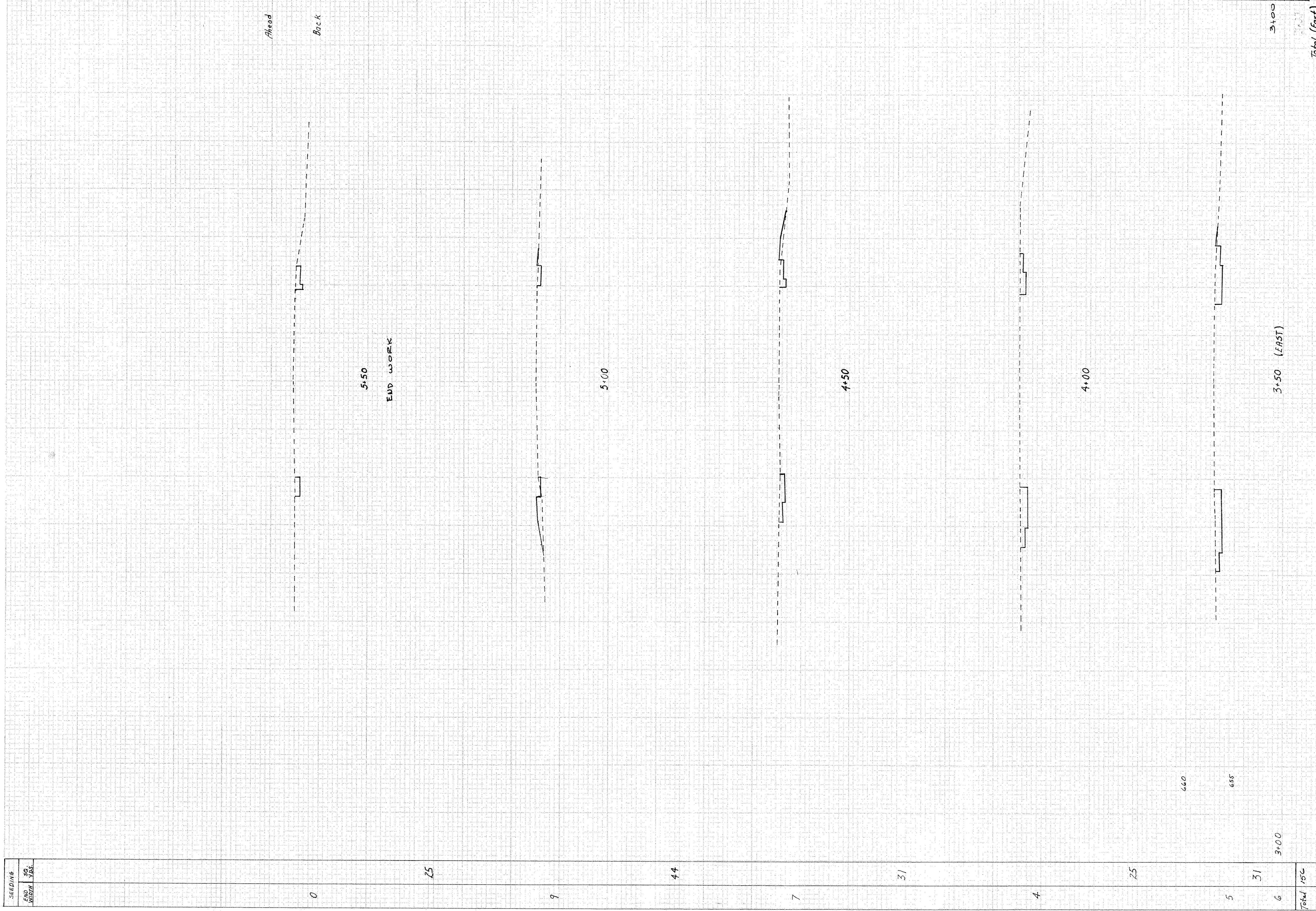
16
23

TRENTON - FRANKLIN RD (EAST)

CHKD. BY: JAS. DATE: 2/10/77
 DWG. BY: DATE: 2/10/77

MICROFILMED
MAY 9 1983

END AREA CUT	FILL	VOLUME	
		CUT	FILL
0	0	0	0
2	0	2	0
3	2	3	2
1	2	1	2
5	3	5	3
4	1	4	1
10	1	10	1
7	0	7	0
10	0	10	0
8	1	8	1
Total		49	7



SEEDING SQ. YDS.	END AREA CUT	FILL	VOLUME CUT	VOLUME FILL
0	0	0	0	0
25	2	0	2	0
9	3	2	3	2
44	1	2	1	2
7	5	3	5	3
31	4	1	4	1
4	10	1	10	1
25	7	0	7	0
5	10	0	10	0
31	8	1	8	1
6	Total		49	7
Total		152	140	10

CHECK BY DATE
CHK'D BY DATE

278
Total (East)

3400
Total (East)

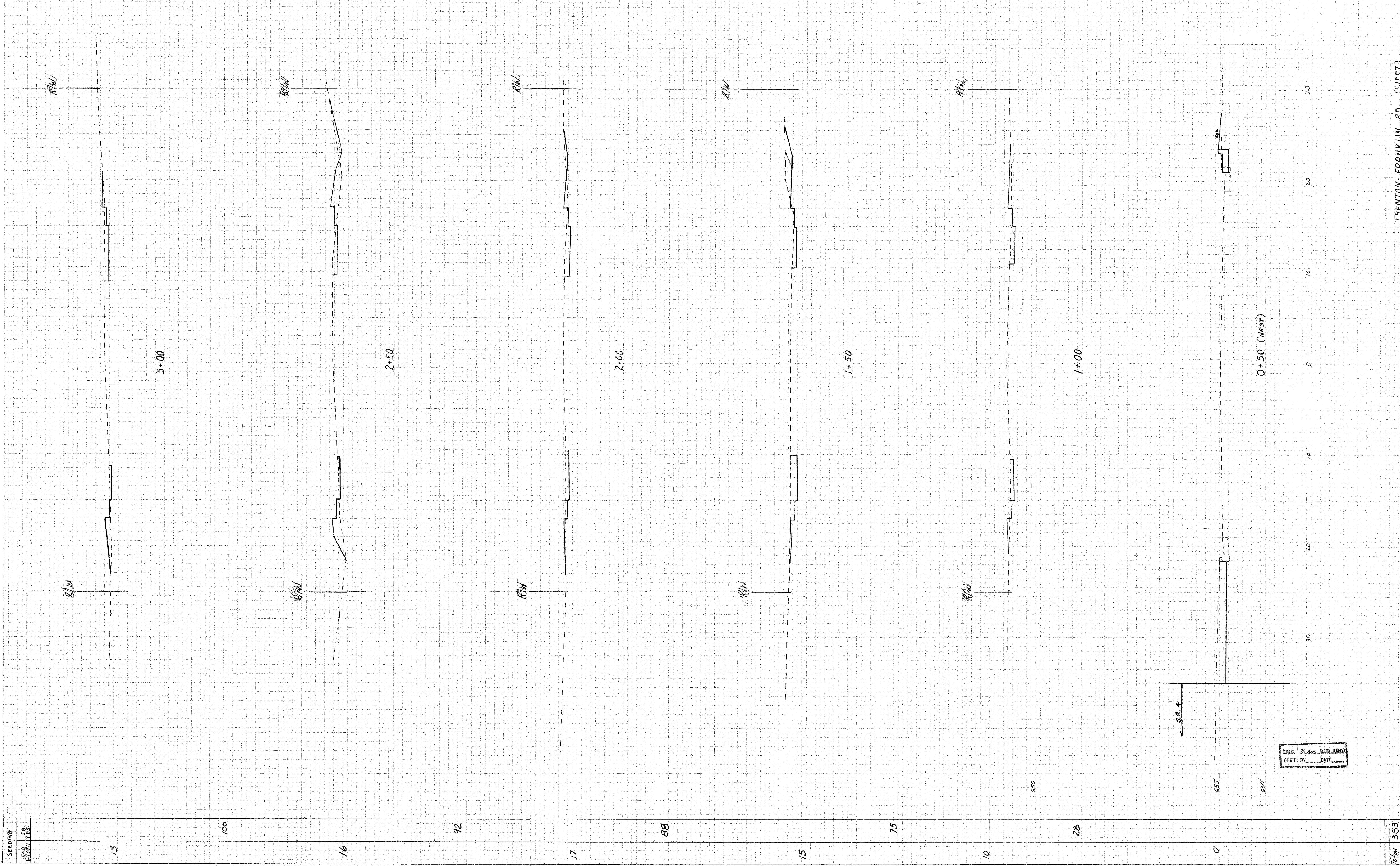
0 10 20 30 40 50 60 70 80

TRENTON-FRANKLIN RD. (EAST)

But 4 - 24.60

MICROFILMED
MAY 9 1966

END AREA		VOLUME	
CUT	FILL	CUT	FILL
4	4	6	11
3	8	9	9
5	2	15	2
11	0	15	2
4	2	13	2
10	0		
To	101	56	26



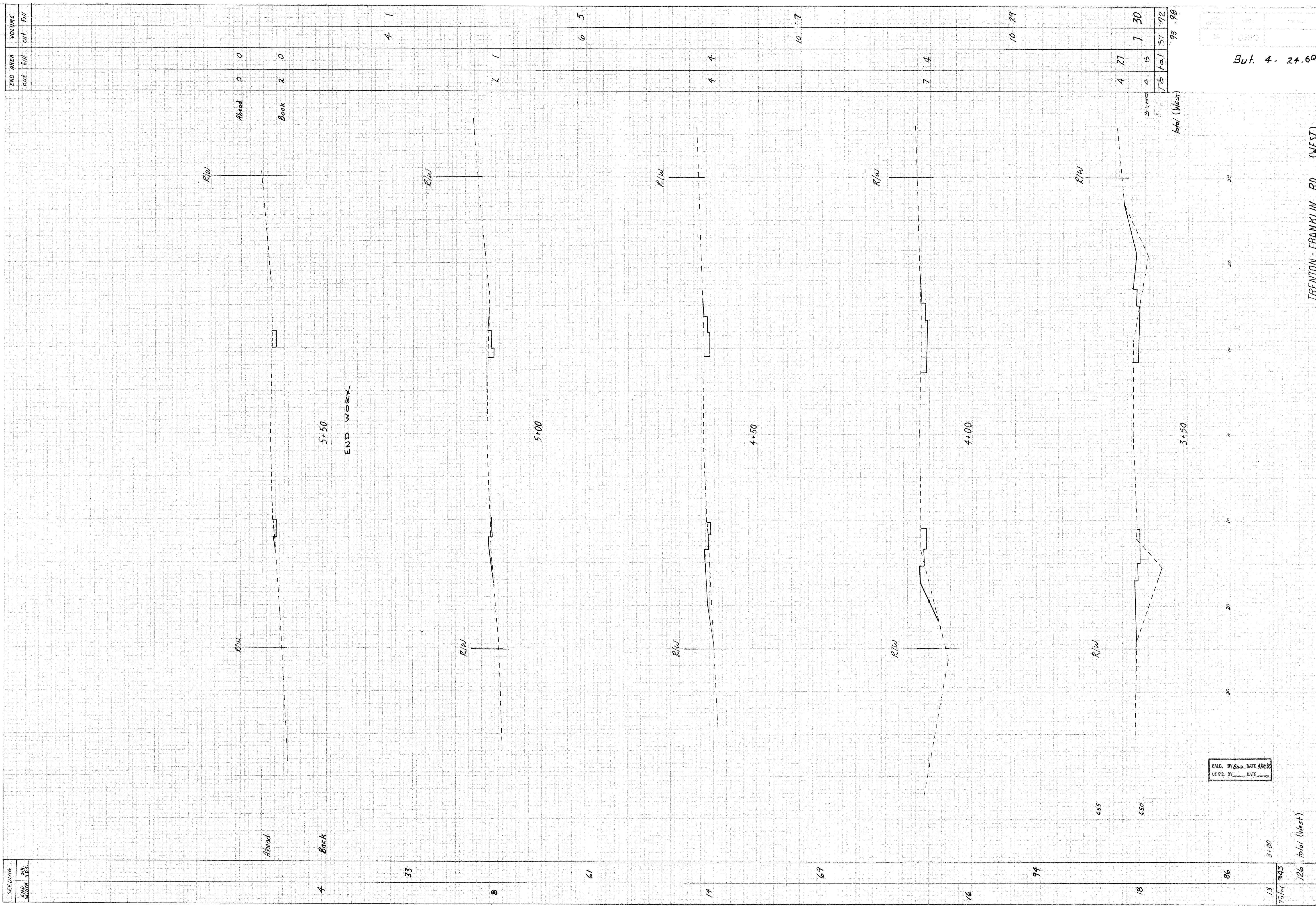
STATION	SEEDING	NO. 50	NO. 100
13			
16			
17			
15			
10			
28			
0			
92			
88			
75			
303			

CALC. BY cos DATE 3/28/63
CHK'D. BY DATE

TRENTON-FRANKLIN RD. (WEST)

But 4 - 24.60

MICROFILMED
MAY 1 1963



CALC. BY Bas. DATE 3/24/72
CHK'D. BY _____ DATE _____

But. 4- 24.60

TRENTON - FRANKLIN RD. (WEST)

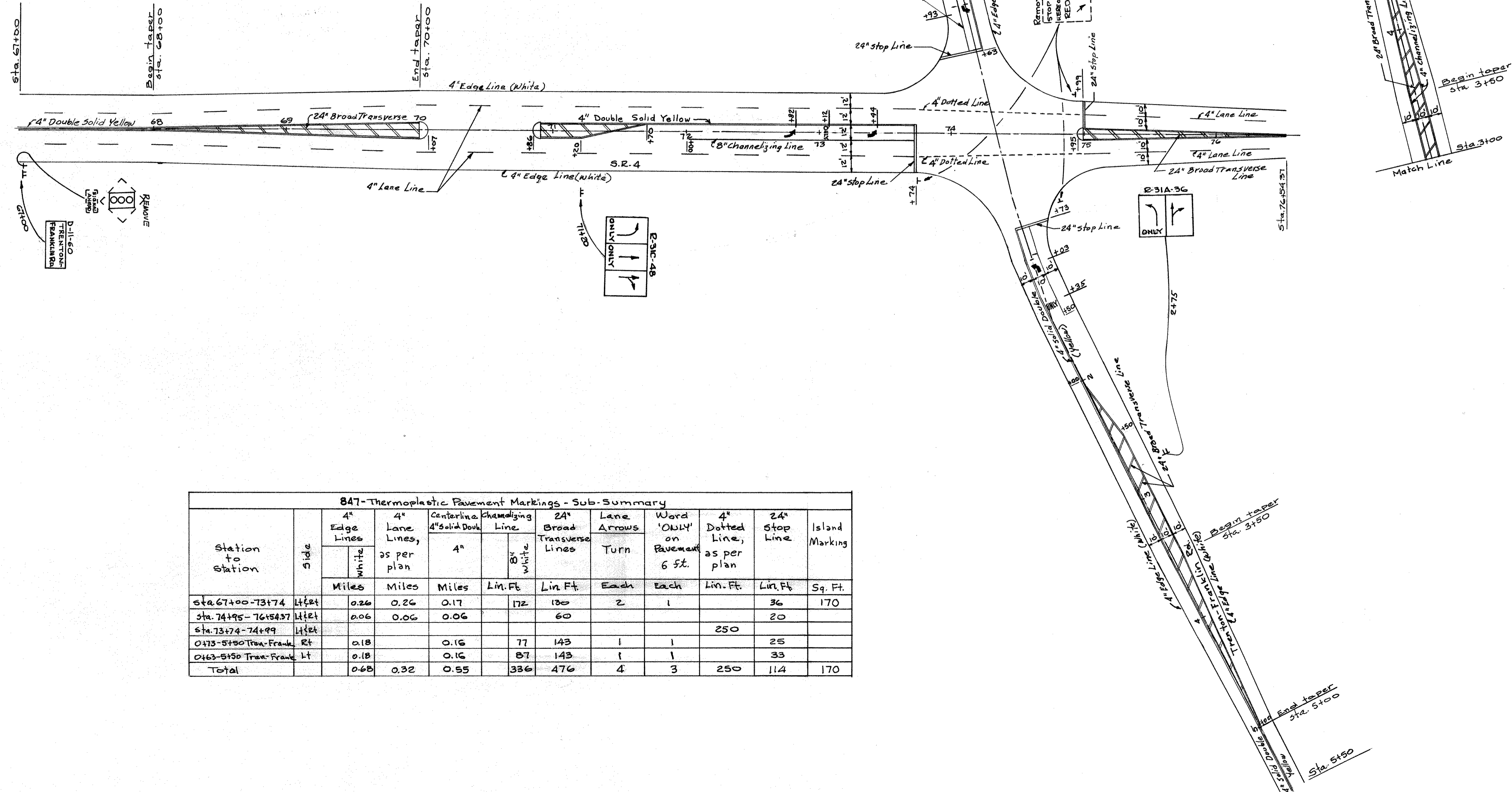
MICROFILMED
MAY 9 1963

ITEM 844- GROUND MOUNTED SIGN QUANTITIES						
Location	Side	FlatSheet			Sign Supports	202
		D-11-60 60"x30"	R-31C-48 48"x30"	R-31A-36 36"x30"	No. 3 Post Driven	Removal of Ground Mounted Sign Installation for Storage
		Sq. Ft.	Sq. Ft.	Sq. Ft.	Lin. Ft.	Each
67+00	Rt.	12.5			13.5 & 14	1
71+20	Rt.		10.0		13.5 & 14	1
73+74	Rt.					1
2+70- Tren. Frank. Rd.	Lt.			7.5	13.5 & 14	1
2+75 " " "	Lt.			7.5	13.5 & 14	1
74+97	Lt.					1
Total			37.5		110	4

FHWA REGION	STATE	PROJECT	
5	OHIO		

20
23

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847- Thermoplastic Pavement Markings - Sub-Summary												
Station to Station	Side	4" Edge Lines		4" Lane Lines, as per plan	Centerline Channelizing 4" Solid Double Line		24" Broad Transverse Lines	Lane Arrows Turn	Word 'ONLY' on Pavement 6 ft.	4" Dotted Line, as per plan	24" Stop Line	Island Marking
		Miles	Miles	Miles	Lin. Ft.	Lin. Ft.	Each	Each	Lin. Ft.	Lin. Ft.	Sq. Ft.	
Sta. 67+00-73+74	Lt/Rt	0.26	0.26	0.17	172	130	2	1			36	170
Sta. 74+95-76+54.37	Lt/Rt	0.06	0.06	0.06		60				250	20	
Sta. 73+74-74+99	Lt/Rt											
0+73-5+50 Tren. Frank.	Rt	0.18		0.16	77	143	1	1			25	
0+63-5+50 Tren. Frank.	Lt	0.18		0.16	87	143	1	1			33	
Total		0.68	0.32	0.55	336	476	4	3	250	114	170	

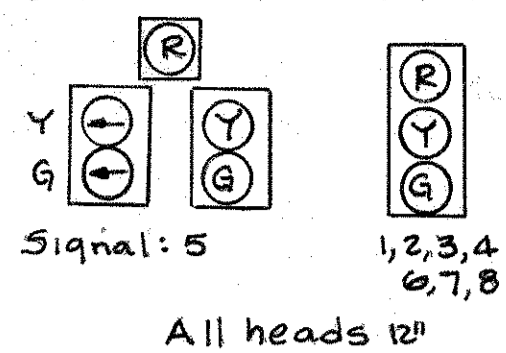
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FHWA REGION	STATE	PROJECT	
5	OHIO		

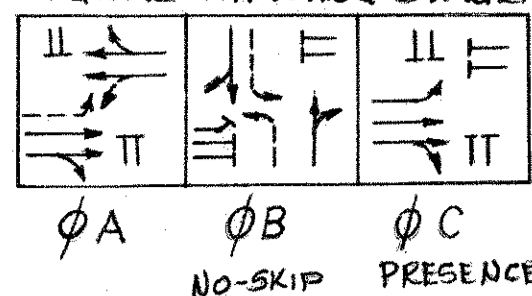
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BUT-4-24.60

SIGNAL HEAD CONFIGURATION



SIGNAL PHASING DIAGRAM

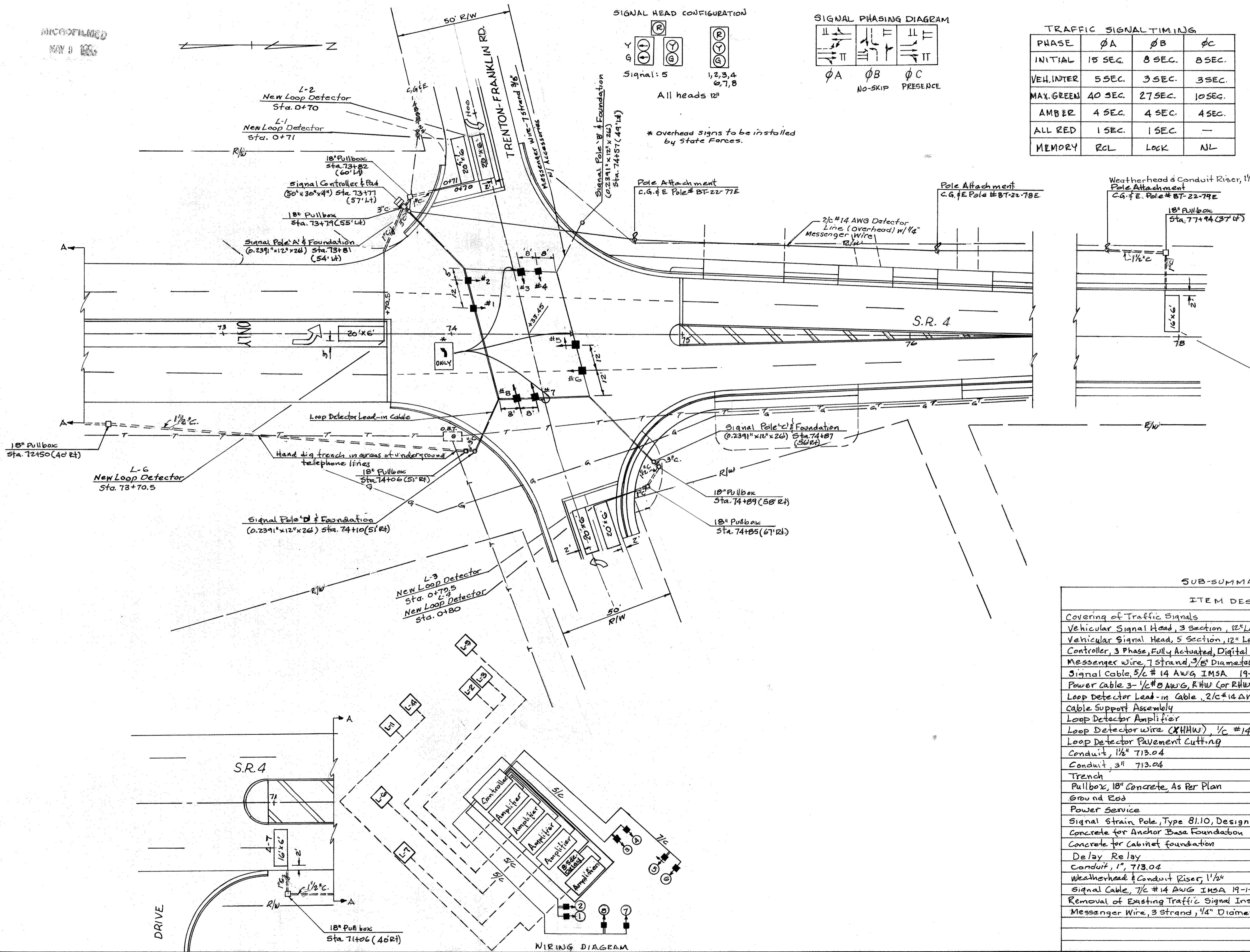


TRAFFIC SIGNAL TIMING

PHASE	φA	φB	φC
INITIAL	15 SEC.	8 SEC.	8 SEC.
VEH. INTER	5 SEC.	3 SEC.	3 SEC.
MAX. GREEN	40 SEC.	27 SEC.	10 SEC.
AMBER	4 SEC.	4 SEC.	4 SEC.
ALL RED	1 SEC.	1 SEC.	—
MEMORY	RCL	LOCK	NL

SIGNAL SEQUENCE CHART

φ	NO	SIGNAL INTERVAL								FLASH	
		1	2	3	4	5	6	7	8		
A	1,2	R		X	X	X	X	X	X	X	
		Y	X								X
		G	X								
A+C	6	R		X	X	X	X				X
		Y	X							X	X
		G	X							X	X
B	3,4	R	X	X	X		X	X	X	X	
		Y				X					
		G				X					
A+C	5	R		X	X	X	X				X
		Y	X							X	X
		G	X							X	X

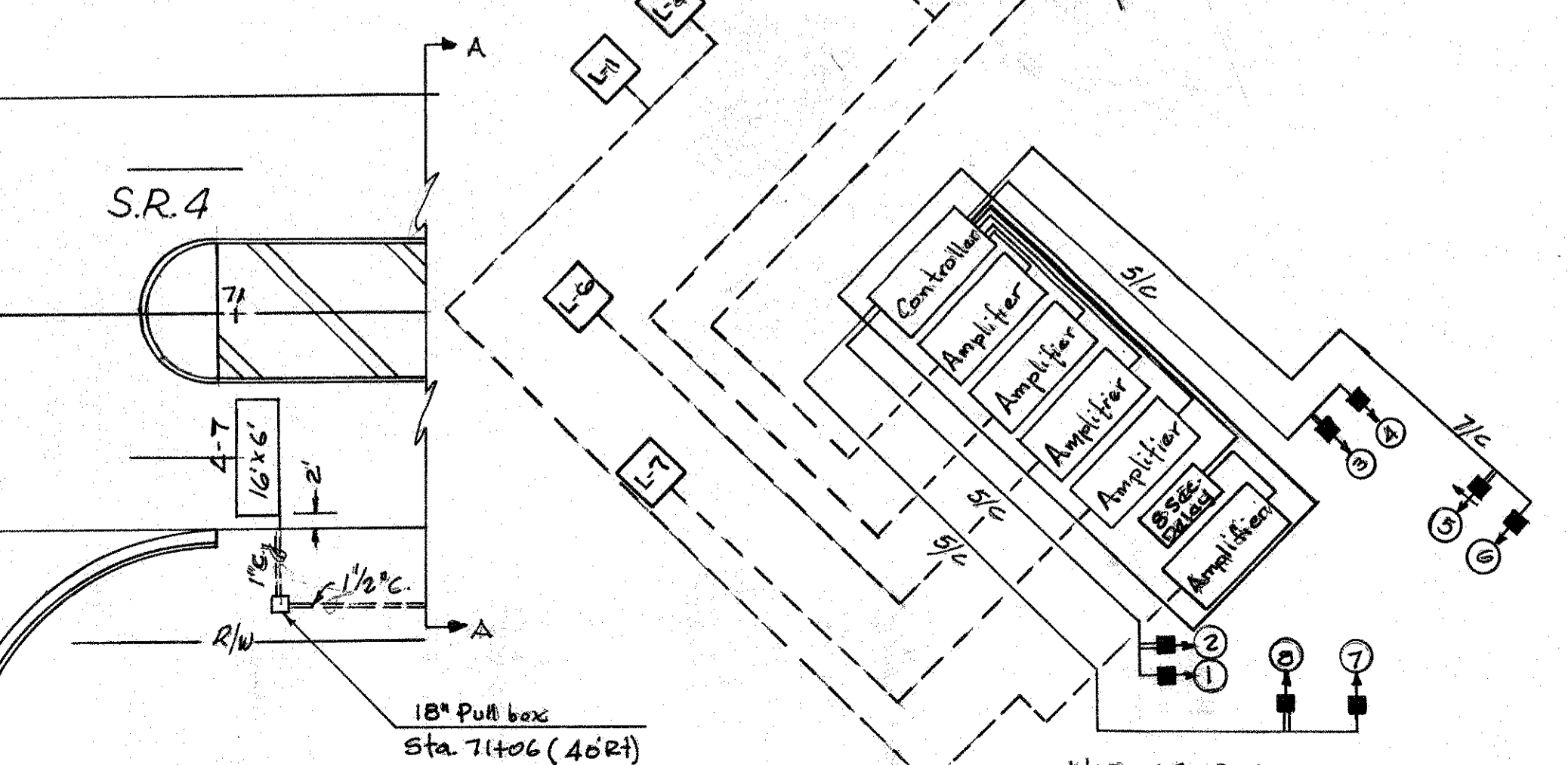


calculated by: DB 4/21/77
checked by: CLA 4/23/77
Revised 10/5/77
Revised 12/16/77

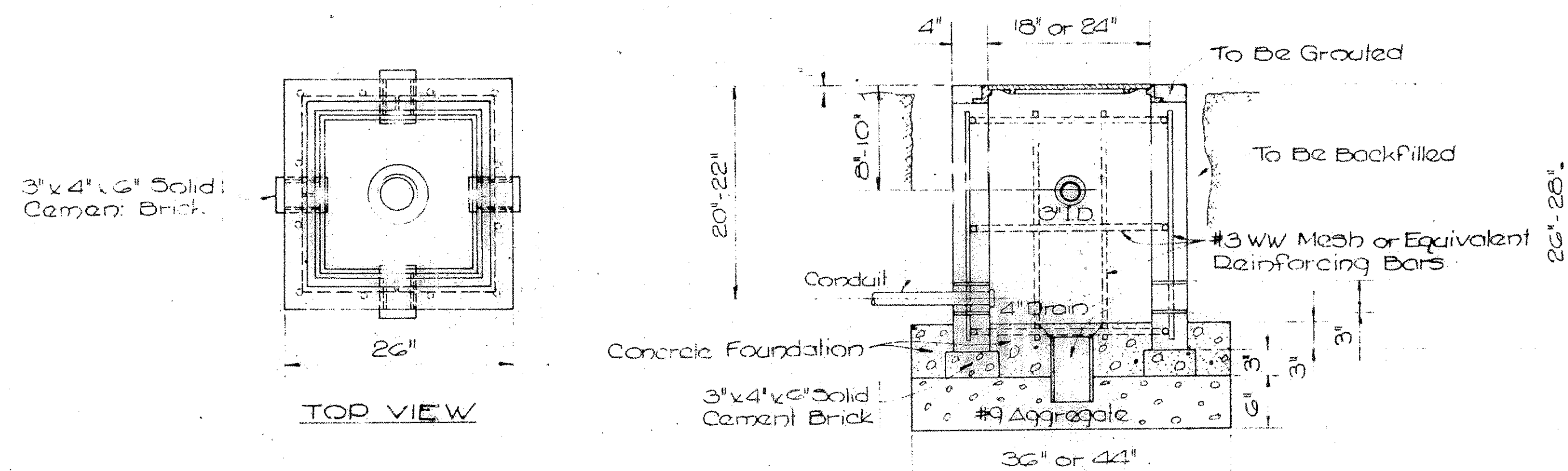
SUB-SUMMARY OF TRAFFIC CONTROL QUANTITIES

ITEM DESCRIPTION	ITEM	UNIT	QUANT.
Covering of Traffic Signals	842	Each	8
Vehicular Signal Head, 3 Section, 12" Lens, one way	842	Each	7
Vehicular Signal Head, 5 Section, 12" Lens, one way	842	Each	1
Controller, 3 Phase, Fully Actuated, Digital, Solid State w/ Cabinet, as per plan	843	Each	1
Messenger wire, 7 strand, 3/8" Diameter w/ Accessories	842	Lin. Ft.	324
Signal cable, 5/c # 14 AWG, IMSA 19-1-67	842	Lin. Ft.	365
Power cable 3- 1/c # 8 AWG, RHW (or RHW Type) Stranded	842	Lin. Ft.	25
Loop Detector Lead-in Cable, 2/c # 14 AWG	842	Lin. Ft.	985
Cable Support Assembly	842	Each	3
Loop Detector Amplifier	842	Each	5
Loop Detector wire (XHHW), 1/c # 14 AWG	842	Lin. Ft.	838
Loop Detector Pavement Cutting	842	Lin. Ft.	419
Conduit, 1 1/2" 713.04	5625	Lin. Ft.	330
Conduit, 3" 713.04	5625	Lin. Ft.	9
Trench	5625	Lin. Ft.	370
Pullbox, 18" Concrete As Per Plan	5625	Each	8
Ground Rod	5625	Each	4
Power Service	842	Each	1
Signal Strain Pole, Type 81.10, Design 5, 26', Anchor Base	842	Each	4
Concrete for Anchor Base Foundation	842	Cu. Yds.	9.0
Concrete for Cabinet foundation	842	Cu. Yds.	1.13
Delay Relay	843	Each	1
Conduit, 1", 713.04	9625	Lin. Ft.	55
Weatherhead & Conduit Riser, 1 1/2"	842	Each	1
Signal Cable, 7/c # 14 AWG IMSA 19-1-67	842	Lin. Ft.	145
Removal of Existing Traffic Signal Installation	202	Each	1
Messenger Wire, 3 Strand, 1/4" Diameter w/ Accessories	842	Lin. Ft.	300

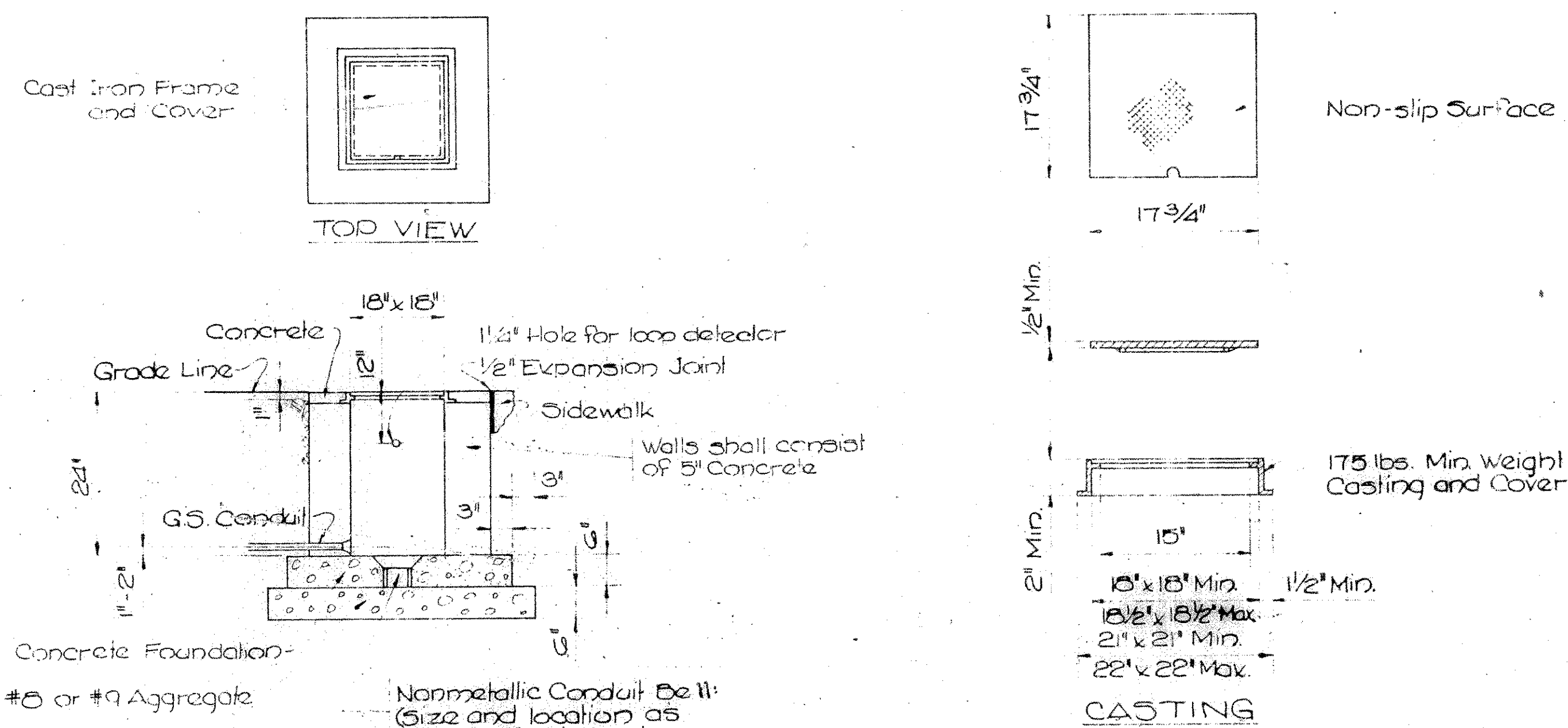
WIRING DIAGRAM



BUT-4-24.60



CONSTRUCTION DETAILS - PRECAST CONCRETE PULLBOXES



CONSTRUCTION DETAIL - CONCRETE OR BRICK PULLBOXES

S-625 PULL BOXES 18"-24", AS PER PLAN

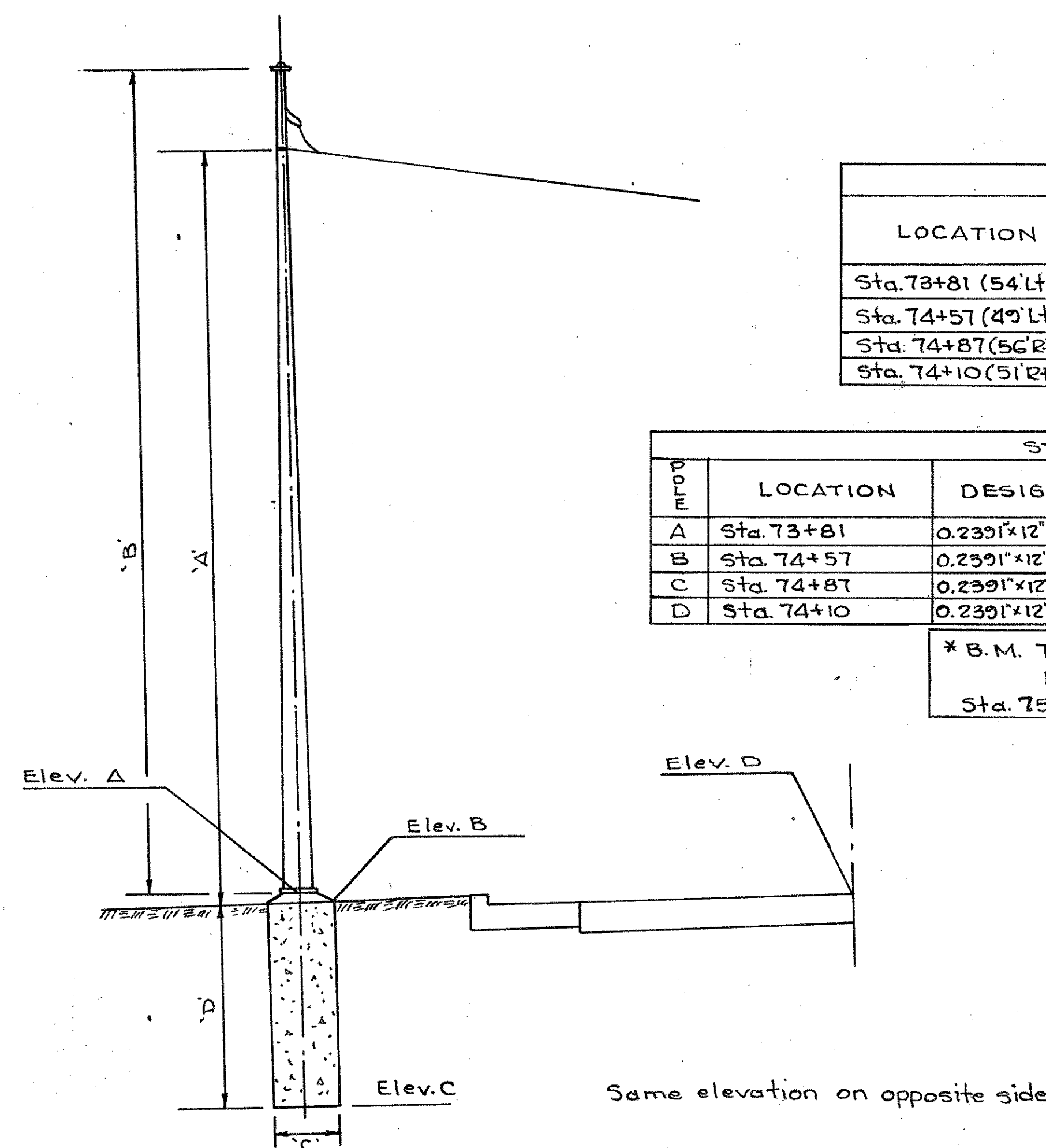
CONSTRUCTION DETAILS

If pullboxes are constructed of concrete, forms will be required for the inside face of the pullbox wall, and across outside face at all trenches leading into the pullbox excavation. The ends of conduits leading into the pullbox shall fit into a conduit bell which shall fit tightly against the inside form, and the concrete shall be carefully placed around it to prevent leakage.

If the precast handhole is selected, it shall be set on the proper grade on cement blocks on the aggregate drain. The concrete base shall be poured from the inside of the precast handhole.

Pullboxes shall be thoroughly cleared of any accumulation of silt, debris, or foreign matter of any kind, and shall be free from such accumulations at the time of final inspection.

Excavation and backfilling shall be done in accordance with (ODOT) Item 503. Any backfilling necessary under a pavement, paved sidewalk, or within two feet

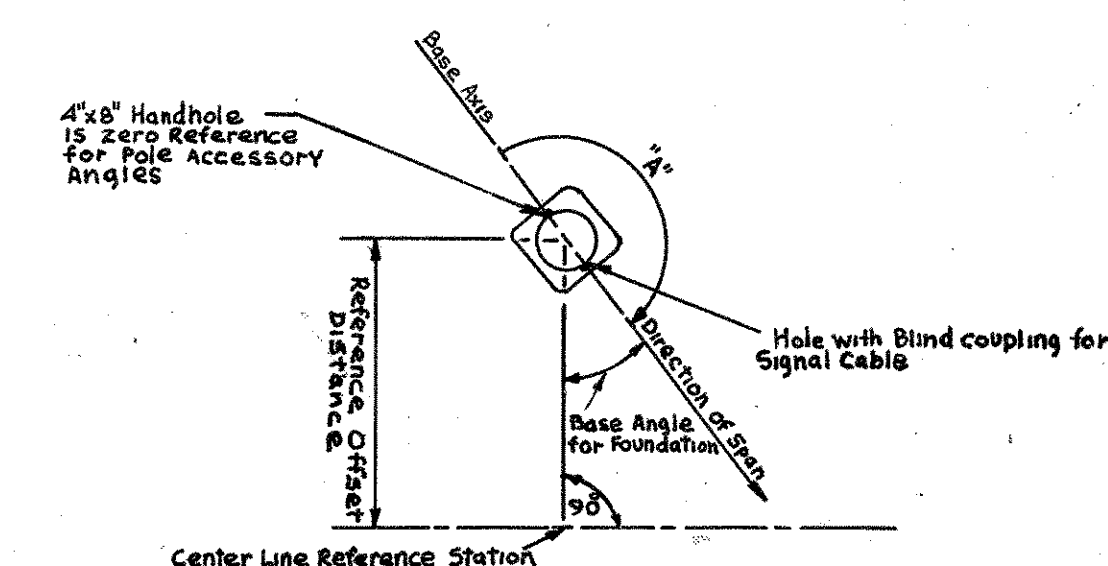


ELEVATIONS					
LOCATION	POLE	ELEV. A	ELEV. B	ELEV. C	ELEV. D
Sta. 73+81 (54' Lt)	A	656.01	655.51	647.51	656.30
Sta. 74+57 (49' Lt)	B	656.15	655.65	647.65	656.30
Sta. 74+87 (56' Rt)	C	656.29	655.79	647.79	656.30
Sta. 74+10 (51' Rt)	D	656.30	655.80	647.80	656.30

POLE	LOCATION	DESIGN	DIMENSIONS				BENCH MARK
			A	B	C	D	
A	Sta. 73+81	0.2391'x12'x26'	24.50'	26.00'	3.00'	8.00'	*
B	Sta. 74+57	0.2391'x12'x26'	24.00'	26.00'	3.00'	8.00'	*
C	Sta. 74+87	0.2391'x12'x26'	24.50'	26.00'	3.00'	8.00'	*
D	Sta. 74+10	0.2391'x12'x26'	23.50'	26.00'	3.00'	8.00'	*

* B.M. Top N.E. Corner of Telephone Booth Pad
Sta. 75+57.34' Lt. Elev. 655.54

Same elevation on opposite side



POLE	STATION	OFFSET	BASE ANGLE FOR FOUNDATION	ANGLE OF HANDHOLE	BLIND COUPLING SIZE	BLIND COUPLING ANGLE "A"	BLIND COUPLING FROM TOP
A	73+81	54' LT.	42°	0°	2 1/2"	180°	6"
B	74+57	49' LT.	27°	0°	1 1/2"	180°	6"
C	74+87	56' RT.	45°	0°	1 1/2"	180°	6"
D	74+06	51' RT.	26°	0°	1 1/2"	180°	6"

ORIENTATION DIAGRAM FOR STRAIN POLE

DESCRIPTION

This item shall consist of masonry units or concrete poured in place or precast pullbox in accordance with these specifications: to the lines, grades, and dimensions shown on the Plans and Detail Drawings therein, or as directed by the Engineer.

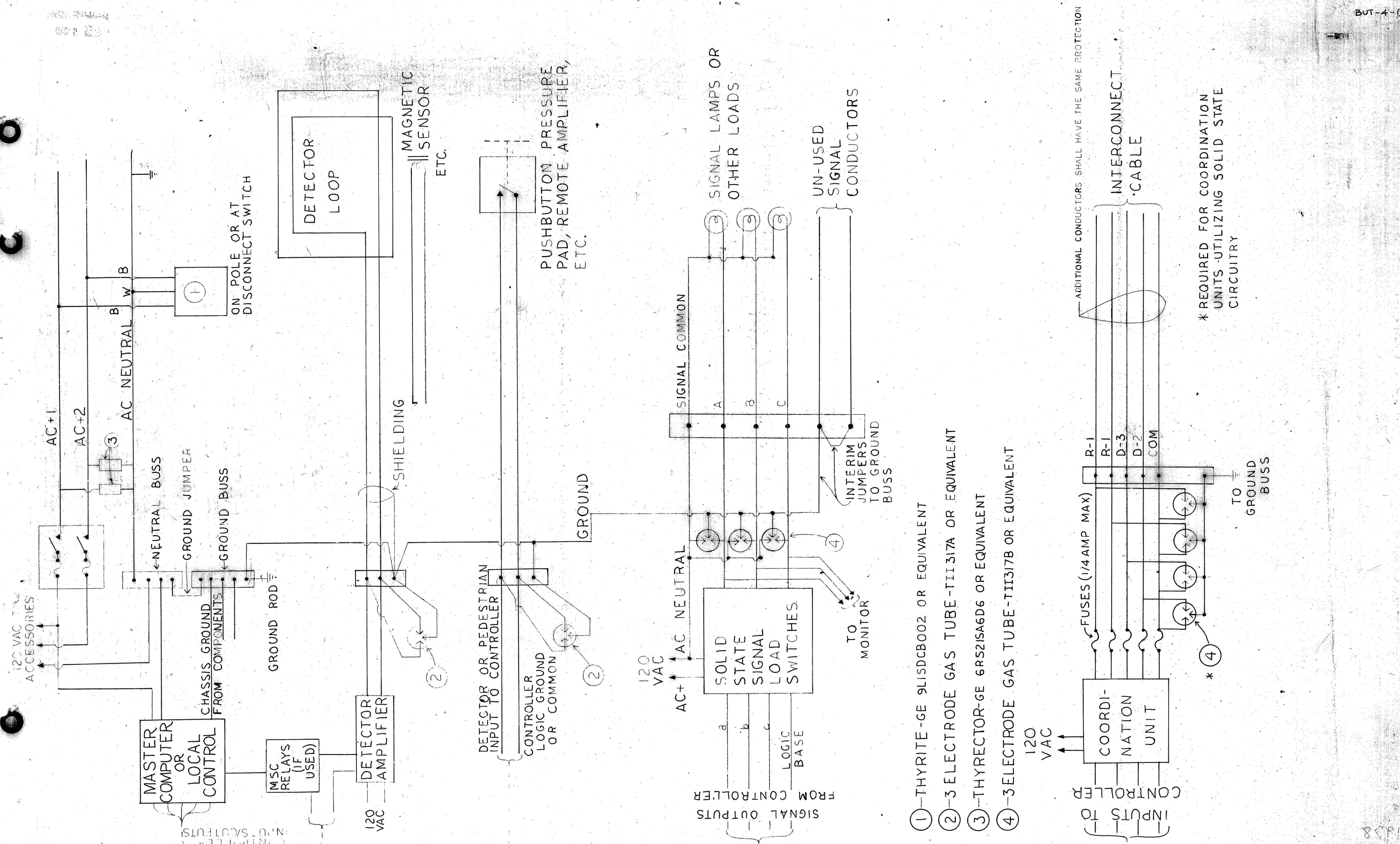
MATERIALS

The cast iron frame and cover shall conform to the approximate dimensions and weights shown on the Detail Drawings of the Plans and shall conform to the Specifications for Gray Iron Castings, ASTM Designation A48.

The aggregate drain in the bottom of the pullbox shall be filled with aggregate conforming to the requirements of (ODOT) Item 60505.

Conduit and fittings within the limits of the pullbox shall comply with the same specifications used for similar materials placed outside.

of a pavement edge shall be mass with granular backfill.



- ①—THYRITE-GE 9L15DCB002 OR EQUIVALENT
- ②—3 ELECTRODE GAS TUBE-TII317A OR EQUIVALENT
- ③—THYRECTOR-GE 6RS2ISA6D6 OR EQUIVALENT
- ④—3ELECTRODE GAS TUBE-TII317B OR EQUIVALENT

LIGHTNING PROTECTION SYSTEM

* REQUIRED FOR COORDINATION UNITS UTILIZING SOLID STATE CIRCUITRY