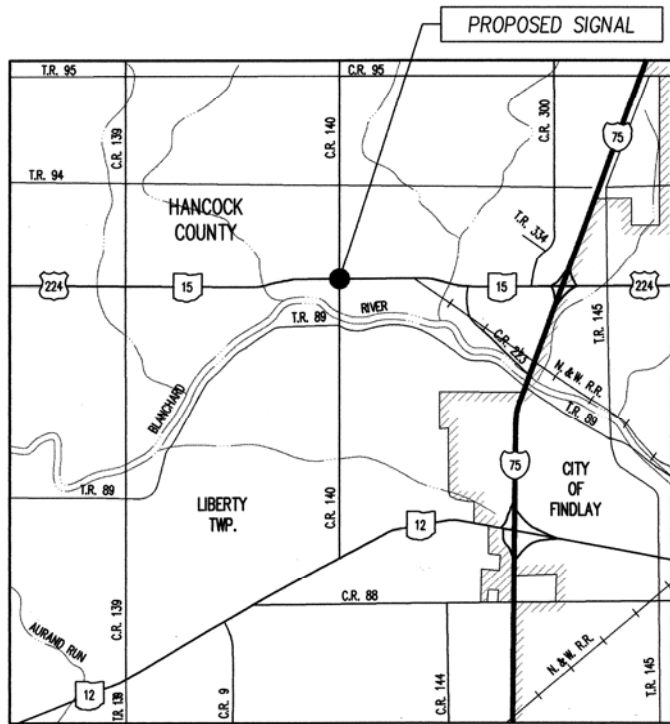


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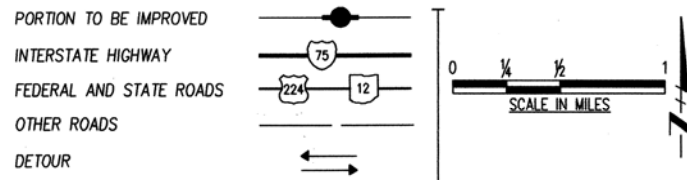
9322 CR140 9322-ITA.DWG

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LOCATION MAP

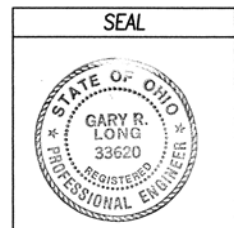


LEGEND

- Vehicular Signal Heads
- Controller Cabinet
- Span Wire Support

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
Call 800-362-2764 (Toll free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

PLAN PREPARED
BY
DANSARD-GROHNKE-LONG, Limited
Toledo, Ohio
Gary R. Long
GARY R. LONG, P.E. #33620



OHIO DEPARTMENT OF TRANSPORTATION SIGNALIZATION PLAN HAN-C.R. 140 & U.S. 224 HANCOCK COUNTY LIBERTY TOWNSHIP

INDEX OF SHEETS

Title Sheet	1
Signalization General Notes	2
Signalization General Summary	3
Signing & Pavement Marking Plan	4
Signalization Plan	5
Span Wire Support Details	6

STANDARD CONSTRUCTION DRAWINGS					
HL-20.11	5-1-87	TC-21.20	9-1-92	MT-95.31	10-10-88
HL-30.11	5-1-87	TC-35.10	8-29-84	MT-95.32	8-25-89
HL-60.11	5-1-87	TC-81.10	1-20-84	MT-105.10	7-1-92
		TC-82.10	8-29-94	MT-105.11	7-1-92
		TC-83.10	3-18-92		
		TC-84.20	1-20-84		
		TC-85.20	1-20-84		

PROJECT DESCRIPTION

Signalization of the intersection of County Road 140 with U.S. Route 224 in Hancock County.

1995 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.

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 FORTH IN THE PLANS AND ESTIMATES.

PLAN SIGNATURES

3-20-95 *Jerry Wray*
Date Director of Transportation

3/13/95 *William D. ...*
Date Deputy Director, District One

3-17-95 *Alex H. ...*
Date Deputy Director of Operations

FEDERAL PROJECT NO.

FD NO.

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT

HAN C.R. 140 & U.S. 224

1/6

SCOPE OF WORK

IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS THAT THE CONTRACTOR WILL FURNISH AND INSTALL TRAFFIC SIGNAL HEADS, CABLE AND WIRING, CONTROLLER AND ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION IN PLACE, COMPLETE AND ACCEPTED IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.

TRAFFIC CONTROL STANDARD CONSTRUCTION DRAWINGS

REFERENCES TO THE SUPPLEMENTAL SPECIFICATIONS 857, 858, 861, 957, 958, AND 961 ON THE TRAFFIC CONTROL STANDARD CONSTRUCTION DRAWINGS IN THESE PLANS SHALL BE CONSIDERED TO READ AS RESPECTIVE REFERENCES TO ITEMS 630, 631, 633, 730, 731 AND 733.

REFERENCES TO ITEM 608, 4" CONCRETE WALK ON THE TRAFFIC CONTROL STANDARD CONSTRUCTION DRAWINGS IN THESE PLANS SHALL BE CONSIDERED TO READ ITEM 633, CONTROLLER WORK PAD.

RESTORATION OF DISTURBED AREAS

THE CONTRACTOR SHALL REPLACE ALL PAVEMENTS, SEEDED AND SODDED AREAS, AND ALL OTHER DISTURBED SURFACES TO A CONDITION EQUAL TO THAT EXISTING BEFORE THE WORK STARTED. ALL REPLACEMENTS SHALL BE DONE IN ACCORDANCE WITH THE PERTINENT SPECIFICATION ITEMS AND PLAN DETAILS AND AS DIRECTED BY THE ENGINEER. PAYMENT FOR ALL RESTORATION WORK, INCLUDING MATERIALS, EQUIPMENT, LABOR, INCIDENTALS AND DISPOSAL OF ALL SURPLUS MATERIALS, SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

ESTIMATED QUANTITIES

IF IT BECOME NECESSARY TO MODIFY THE PLANS TO COMPLETE THE INSTALLATION OF CONDUIT RUNS, THE FOLLOWING QUANTITIES MAY BE USED AS DIRECTED BY THE ENGINEER AND HAVE BEEN CARRIED TO THE SIGNALIZATION GENERAL SUMMARY, SHEET 3.

Table with 3 columns: Quantity, Unit, and Description. Includes items like PULLBOX, 18", 713.08 and TRENCH.

ESTIMATED QUANTITIES SHALL NOT BE ORDERED FOR DELIVERY TO THE PROJECT UNLESS AUTHORIZED BY THE ENGINEER.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 90 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLERS AND ASSOCIATED EQUIPMENT, DETECTOR UNITS, INTERCONNECTION ITEMS AND MASTER CONTROL EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

Table with 3 columns: Utility Type, Location, and Owner. Includes Electric, Gas, Telephone, and Sanitary/Water utilities.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRIC POWER SHALL BE OBTAINED FROM OHIO POWER, c/o COLUMBUS SOUTHERN POWER COMPANY AT THE LOCATION INDICATED ABOVE.

PAYMENT FOR THE POWER SUPPLY SHALL INCLUDE ANY FEES ASSOCIATED WITH OBTAINING SUCH POWER. THIS SHALL INCLUDE THE COST OF STATE INSPECTION WHICH IS ESTIMATED AT \$100.00.

CONTROLLER, ACTUATED, 2PHASE EXPANSIBLE TO 4 PHASE, SOLID STATE MICROPROCESSOR, AS PER PLAN

THE OVERLAP PROGRAMMING SHALL BE BY USE OF AN INTERCHANGEABLE PLUG-IN PRINTED CIRCUIT BOARD ASSEMBLY AS DESCRIBED IN PART 14 OF TS-1-1983. IN ADDITION TO NEMA REQUIREMENTS, THE CONFLICT MONITOR SHALL ALSO HAVE EXTENDED MONITORING (IN ACCORDANCE WITH 733.04 PART 3B).

THE FUTURE PLANS REQUIREMENT SHALL INCLUDE ALL WIRING AND COMPONENTS FOR THE CONFLICT MONITOR, FLASH TRANSFER RELAYS AND LOAD SWITCHES SUCH THAT WHEN EXPANSION IS IMPLEMENTED THE ONLY WORK REQUIRED WILL BE TO REPROGRAM THE CONFLICT MONITOR, HOOKUP THE SIGNAL HEADS AND ACTIVATE PHASES ON THE CONTROLLER.

IN ADDITION TO THE REQUIREMENTS OF 733.04, THE CABINET SHALL BE WIRED SO THAT THE CONTROLLER PIN CONNECTIONS ASSOCIATED WITH A GIVEN PHASE NUMBER SHALL MATCH THE PHASE NUMBER ASSIGNED TO THE SPECIFIED TRAFFIC MOVEMENT AS SHOWN ON THE PLANS.

PAYMENT FOR ITEM 633, CONTROLLER ACTUATED, 2 PHASE EXPANSIBLE TO 4 PHASE SOLID STATE DIGITAL MICROPROCESSOR, AS PER PLAN WILL BE AT THE CONTRACT BID PRICE PER EACH COMPLETE AND IN PLACE INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

632 SIGNAL CABLE, AS PER PLAN

SIGNAL CABLE SHALL CONFORM TO 632.22 WITH THE FOLLOWING EXCEPTIONS OR ADDITIONS:

THE WIRING SHALL BE AS SHOWN IN THE WIRING DIAGRAMS. ALL ENDS OF THE CONDUCTORS OR CABLES SHALL BE TAPED DURING CONSTRUCTION TO EXCLUDE MOISTURE UNTIL SPLICED OR UNTIL CONNECTIONS ARE MADE WITH THE TERMINAL APPLIANCES.

CABLE PULLED INTO CONDUIT SHALL BE BY HAND OR BY APPROVED MECHANICAL DEVICES. POWER WINCHES SHALL NOT BE USED FOR PULLING CABLE THROUGH THE CONDUIT UNLESS AUTHORIZED BY THE ENGINEER. THE CONTRACTOR MAY USE CLAY-BASED LUBRICANT IN HIS PULLING OPERATION.

WHERE TERMINAL CONNECTIONS AND SPLICES ARE MADE IN THESE PLANS, THE ADDITIONAL CABLE REQUIRED ABOVE SHALL BE CUT TO THE PROPER LENGTH TO MAKE A NEAT INSTALLATION.

CABLE DRIP LOOPS SHALL BE PROVIDED AT ALL SERVICE ENTRY CAPS AND AT ALL EXPOSED ENTRANCE POINTS TO POLE SHAFTS.

SPLICES SHALL ONLY BE PERMITTED FOR:

- 1. SIGNAL CABLE IN CONTROLLER CABINETS. CONDUCTORS DESIGNATED AS SPARE IN SIGNAL CABLE SHALL NOT BE WIRED TO ANY POWER SOURCE AS PART OF THE SPLICE.
2. POWER CABLE AT THE POWER SOURCE.

TWO PIECE COMPRESSION TYPE, INSULATED CONNECTORS WITH A NYLON INSULATING CAP SHALL BE USED IN ALL SPLICES AND SHALL BE WEATHERPROOFED BY WRAPPING WITH A UL APPROVED ALL WEATHER ELECTRICAL TAPE.

INSULATED, CRIMP TYPE, SPADE TONGUE TYPE CONNECTORS SHALL BE USED FOR ALL TERMINAL CONNECTIONS. ONLY ONE (1) CONDUCTOR SHALL BE USED WITH EACH SPADE TONGUE-TYPE CONNECTORS.

ALL WIRES TO THE CONTROLLER CABINET SHALL BE LABELED, NEATLY LASHED AND PROTECTED BY A TEMPORARY CABINET AT CONTROLLER FOUNDATIONS.

PAYMENT FOR THE ABOVE CONNECTORS, SPLICES AND PROTECTION OF SAME SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT CABLE ITEM.

METHOD OF MEASUREMENT

METHOD OF MEASUREMENT SHALL CONFORM TO 632.28 WITH THE FOLLOWING ADDITIONS OR EXCEPTIONS:

WHEN CABLE PASSES THROUGH A POLE FOUNDATION OR CONTROLLER FOUNDATION, AN ADDITIONAL ALLOWANCE OF FIVE (5) FEET FOR SLACK, OR WHEN A CABLE TERMINATES AT A SPLICE POINT, AN ADDITIONAL ALLOWANCE OF FIVE (5) FEET FOR SPLICING.

WHEN CABLE TERMINATES AT A PEDESTAL, MAST ARM OR SPAN WIRE SUPPORTED VEHICULAR SIGNAL HEAD, ADDITIONAL ALLOWANCE OF FIVE (5) FEET FOR SLACK.

632 CABLE SUPPORT ASSEMBLY, AS PER PLAN

THIS ITEM CONSISTS OF FURNISHING AND INSTALLING CABLE SUPPORT ASSEMBLIES, IN ACCORDANCE WITH ITEM 632.20. ONE CABLE SUPPORT ASSEMBLY SHALL BE PROVIDED AND INSTALLED FOR EACH SIGNAL SUPPORT POLE CONTAINING SIGNAL CABLES, WITH THE GRIP FOR ONE CABLE ENTERING THE POLE THROUGH A WEATHERHEAD OR MAST ARM. ASSEMBLY MAY BE PROVIDED WITH ANY NUMBER OF GRIPS, AS REQUIRED.

ITEM 632 LOOP DETECTOR UNITS, BY TYPE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 632 AND 732.07 OR 732.08, LOOP DETECTOR UNITS SHALL HAVE THE FOLLOWING REQUIREMENTS OR FEATURES:

THE OUTPUT DEVICE SHALL BE A RELAY, AND ALL CONTACTS SHALL BE INCLUDED IN THE WIRING HARNESS.

THE UNIT SHALL BE SELF TUNING.

THE UNIT'S ELECTRICAL CONNECTION PLUGS OR WIRING HARNESS SHALL ALLOW READY PLACEMENT WITH A SINGLE CHANNEL AMPLIFIER AS DESCRIBED IN THE FINAL PARAGRAPH OF 732.07.

ITEM 614 MAINTAINING TRAFFIC

IN ADDITION TO THE REQUIREMENTS OF ITEM 614 MAINTAINING TRAFFIC, THE FOLLOWING SHALL APPLY:

NO LANE CLOSURE SHALL BE IMPLEMENTED DURING THE HOURS OF 6:00 A.M. TO 9:00 A.M. OR 3:00 P.M. TO 6:00 P.M. WEEKDAYS. WHEN IT IS NECESSARY TO CLOSE ONE LANE OF TRAFFIC ADJACENT TO THE WORK, THE CLOSURE SHALL BE ACCOMPLISHED BY THE APPLICATION OF TRAFFIC CONTROL DEVICES AS SHOWN ON ODOT STANDARD DRAWINGS MT-95.31 AND MT-95.32.

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS AND PROVISIONS OF THE ODOT AND THE FAILURE RESULTS IN A CONDITION AT THE WORK SITE WHICH IS UNSAFE FOR TRAFFIC, THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

TWO-WAY TRAFFIC ON A MINIMUM OF TWO-TWELVE-FOOT LANES SHALL BE MAINTAINED BY USE OF THE EXISTING PAVEMENT. ONE-WAY TRAFFIC MAY BE PERMITTED DURING PLACEMENT OF LOOPS, SIGNAL SUPPORTS, OVERHEAD SIGNS, AND TRAFFIC SIGNAL HEADS, SUBJECT TO THE APPROVAL OF THE ENGINEER.

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATIONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

- A) EXISTING SIGNAL/FLASHING INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.
B) NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDED ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION, THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT, THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT COSTS FOR POLICE SERVICES AND MAINTENANCE SERVICES BY STATE OR LOCAL FORCES SHALL BE BILLED TO THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 105.15.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING, WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.24.

ALL COST RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

CALCULATED LLA CHECKED GRL

SIGNALIZATION GENERAL NOTES

HAN C.R. 140 & U.S. 224

ITEM CODE	17+17, 37' Rt. to 16+35, 48' Rt.	19+45, Lt. to 17+22, 37' Rt.	17+22, 37' Lt.	17+22, 37' Lt. to 16+35, 48' Rt.	16+35, 48' Rt.	14+10, 27' Rt. to 16+30, 32' Rt.	56+50, Rt. to 16+30, 32' Rt.	573+17, Rt. to 16+30, 32' Rt.	16+30, 32' Rt. to 16+35, 48' Rt.	From C & M Specifications	From General Notes	ITEM CODE	TOTAL QUANTITY	UNIT	DESCRIPTION
625 25402		226				220	394	392			25	625 25402	1257	LIN FT	CONDUIT, 2", 713.07
625 25502							33		17		25	625 25502	75	LIN FT	CONDUIT, 3", 713.07
625 25900							80				25	625 25900	105	LIN FT	CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, SIZE: 3", 713.04
625 29000		226				220	403	392	17		25	625 29000	1283	LIN FT	TRENCH
625 29600							24				25	625 29600	49	LIN FT	TRENCH IN PAVED AREAS, TYPE B
625 30700		1				1	1	1			1	625 30700	5	EACH	PULL BOX, 713.08, 18"
625 30706		1				2	2	1			1	625 30706	7	EACH	PULL BOX, 713.08, 24"
625 32000			1		1							625 32000	2	EACH	GROUND ROD
632 01100				4								632 01100	4	EACH	VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 2-WAY
632 25000				8								632 25000	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD
632 27005					6							632 27005	6	EACH	LOOP DETECTOR UNIT, AS PER PLAN
632 27500		30				58	65	104				632 27500	257	LIN FT	LOOP DETECTOR PAVEMENT CUTTING
632 30200				125								632 30200	125	LIN FT	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES
633 42501				284	104							632 42501	388	LIN FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 12 AWG, AS PER PLAN
632 64800		82				142	164	266				632 64800	654	LIN FT	LOOP DETECTOR WIRE
633 65200		241	31	130	41	235	849	609	110			632 65200	2246	LIN FT	LOOP DETECTOR LEAD-IN CABLE
632 68200	88				32							632 68200	120	LIN FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG
632 70000	1											632 70000	1	EACH	POWER SERVICE
632 70200	1											632 70200	1	EACH	CONDUIT RISER, 1" DIAMETER
632 71001			1		1							632 71001	2	EACH	CABLE SUPPORT ASSEMBLY AS PER PLAN
632 72000			2.65		2.65							632 72000	5.3	CU YD	CONCRETE FOR ANCHOR BASE FOUNDATION
632 82900			1		1							632 82900	2	EACH	STRAIN POLE, TYPE TC-81.10, DESIGN 9
633 22201					1							633 22201	1	EACH	CONTROLLER, ACTUATED, 2 PHASE EXPANSIBLE TO 4 PHASE, SOLID STATE DIGITAL, MICROPROCESSOR, AS PER PLAN
633 63000					1							633 63000	1	EACH	COORDINATOR, TIME BASED
633 70500					12							633 70500	12	SQ FT	CONTROLLER WORK PAD
614 11000											L.S.	614 11000	LUMP SUM	LUMP SUM	MAINTAINING TRAFFIC
623 10000											L.S.	623 10000	LUMP SUM	LUMP SUM	CONSTRUCTION LAYOUT STAKES
624 10000											L.S.	624 10000	LUMP SUM	LUMP SUM	MOBILIZATION

CALCULATED
LLA
CHECKED
GRL

SIGNALIZATION GENERAL SUMMARY

Stop Signs are to be removed by the Contractor after the signal installation is complete and accepted.

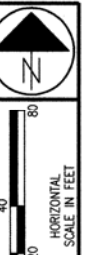
Pavement marking north of U.S. 224 is to be performed by the County after the widening project is complete.

LEGEND - PAVEMENT MARKING (642)

- (A) 4-inch centerline; solid, double, yellow
- (B) 4-inch centerline; dashed, yellow
- (C) 4-inch edge line; white
- (D) 8-inch channelizing line; white
- (E) 24-inch transverse line; yellow
- (F) 24-inch stop line
- (G) Lane arrow; 96"
- (H) Word on pavement; 96"
- (I) Existing-to remain
- (O) Existing-Remove

LEGEND - SIGNING

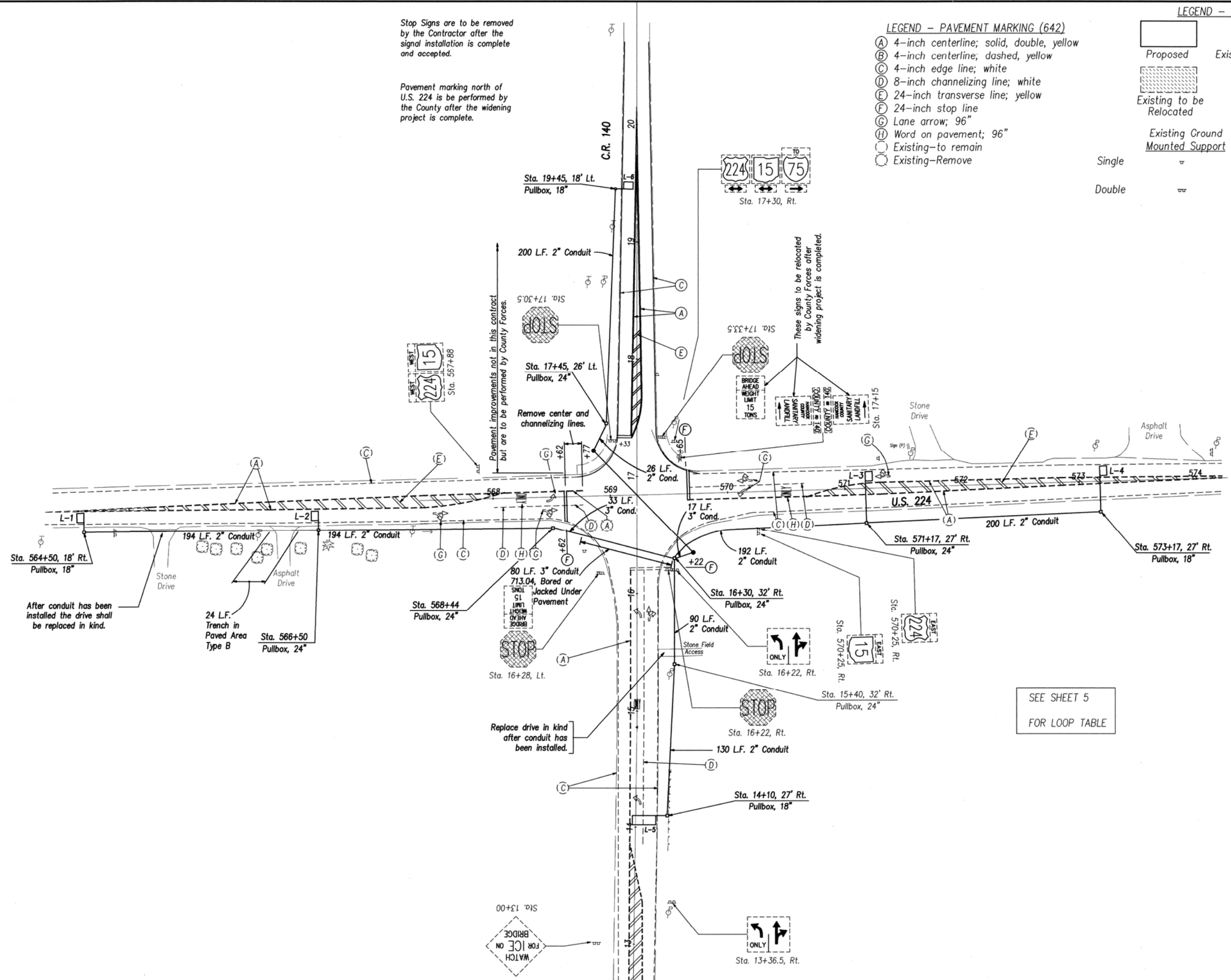
	Proposed		Existing (to remain)
	Existing to be Relocated		Existing to be Removed
	Existing Ground Mounted Support		Proposed Ground Mounted Support
Single	---	---	---
Double	---	---	---



CALCULATED LLA CHECKED GRL

HAN C.R. 140
SIGNING AND PAVEMENT MARKING PLAN

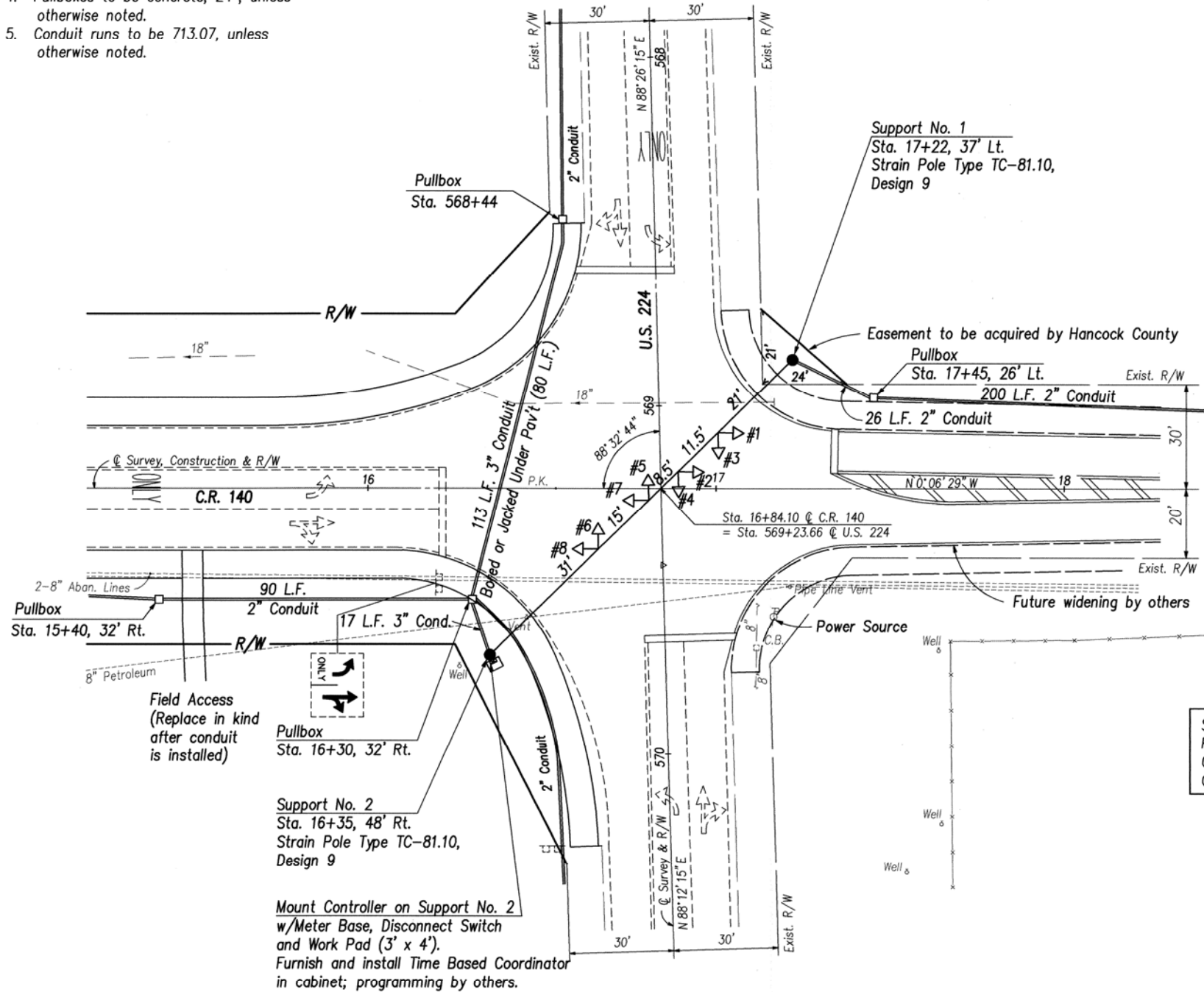
HAN C.R. 140



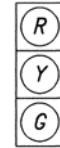
SEE SHEET 5
FOR LOOP TABLE

NOTES:

1. Station and outs are in reference to C.R. 140.
2. Controller to be expansible to future four phase actuated operation.
3. Signal supports designed for future 5-section heads at #4, #5 and #7.
4. Pullboxes to be concrete, 24", unless otherwise noted.
5. Conduit runs to be 713.07, unless otherwise noted.

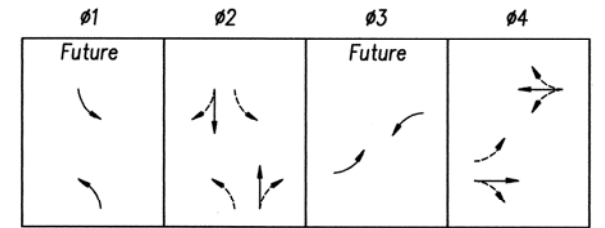


SEE SHEET 4 FOR LOOPS AND CONDUIT RUN CONTINUATION

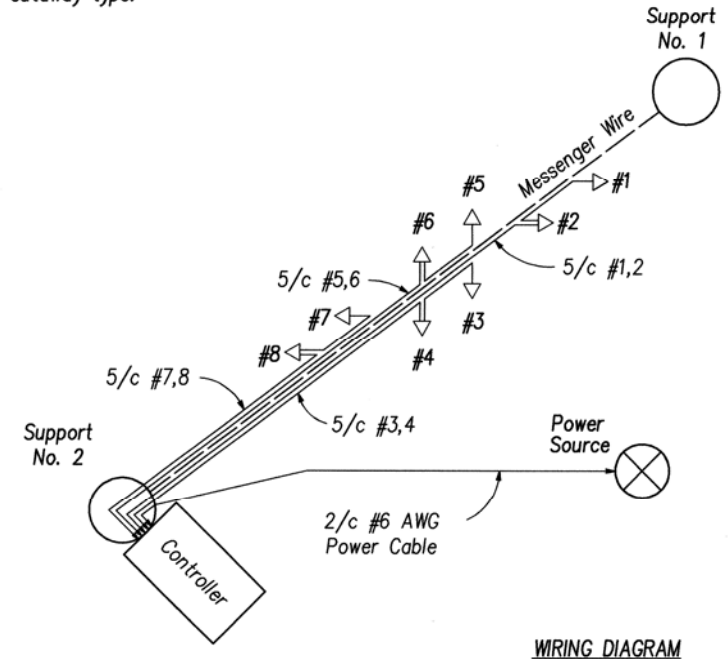


#1, 2, 3, 4, 5, 6, 7 & 8

VEHICULAR SIGNAL HEADS
All Lenses 12".
Visors to be cutaway type.



PHASING DIAGRAM



WIRING DIAGRAM

LOOP NO.	SIZE (Ft.)	NO. TURNS	SHAPE	MODE	CONNECT TO UNIT	ASSOC. CONTR. #
L-1	8x6	2	Rect.	Pulse	1	4
L-2	8x6	2	Rect.	Pulse	1	4
L-3	8x6	2	Rect.	Pulse	2	4
L-4	8x6	2	Rect.	Pulse	2	4
L-5	8x20	2	Rect.	Pulse	3	2
L-6	8x6	2	Rect.	Pulse	4	2

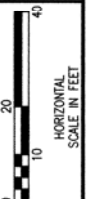
LOOP DETECTOR TABLE

	ø 2	ø 4
Green (Minimum)	18.0	15.0
Passage	3.0	3.5
Added Initial	0.5	1.0
Max. Green	35.0	25.0
Yellow	4.0	4.0
All Red	1.0	1.0

TIMING CHART
(Time in Seconds)

INDICATION FACING	FLASH	INTERVAL					
		1	2	3	4	5	6
EB/WB - U.S. 224 #3, 4, 5 & 6	Y	G	Y	R	R	R	R
NB/SB - C.R. 140 #1, 2, 7 & 8	R	R	R	R	G	Y	R
PHASE		ø2		All Red	ø4		All Red

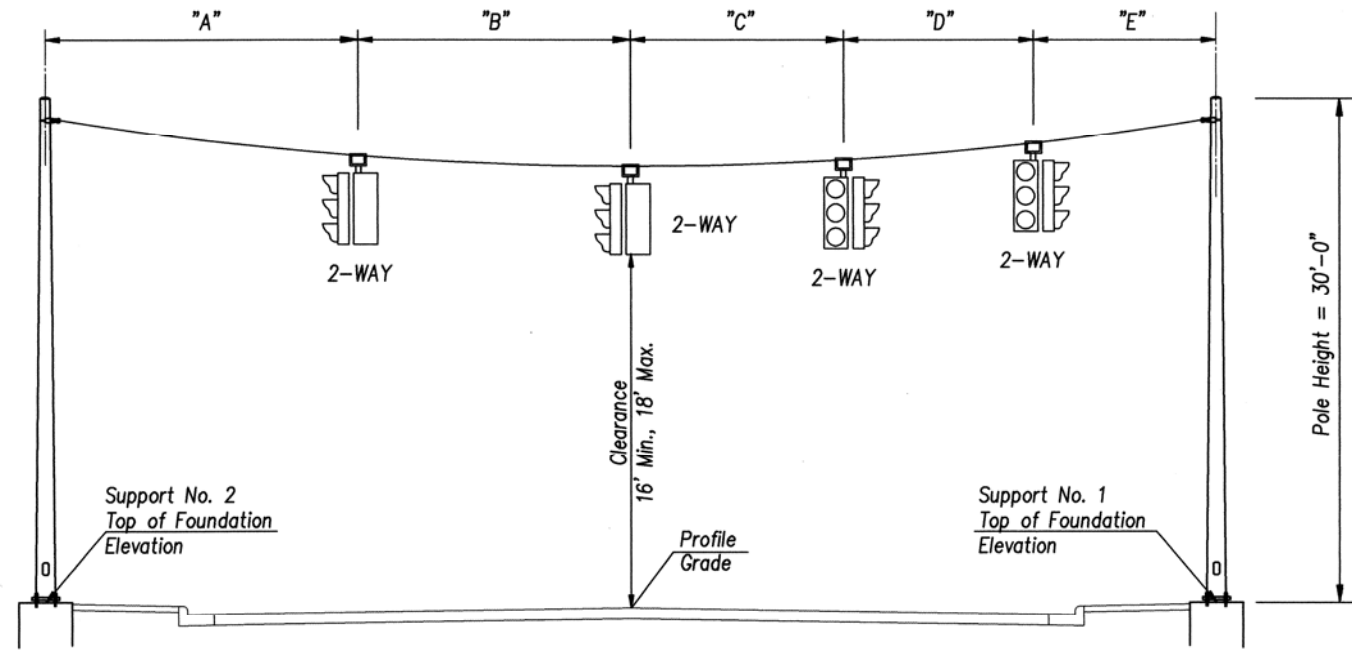
COLOR SEQUENCE CHART



CALCULATED LLA CHECKED GRL

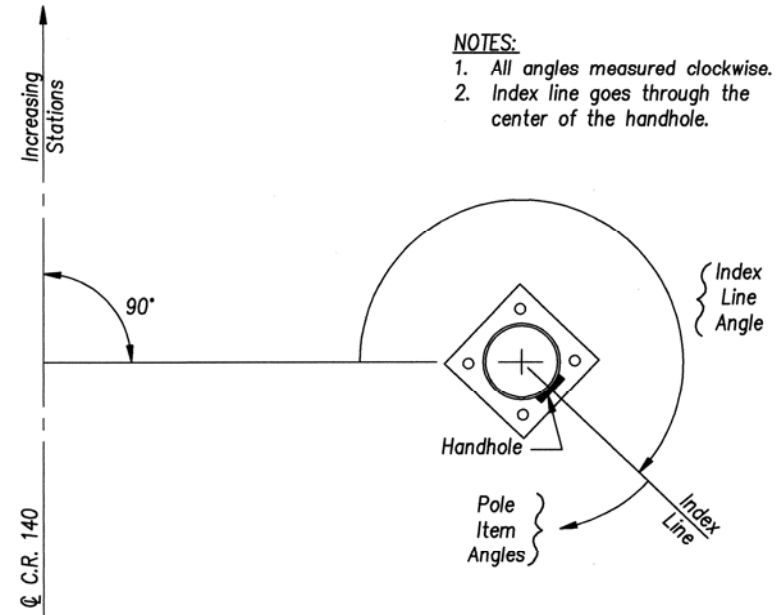
SIGNALIZATION PLAN

HAN C.R. 140 & U.S. 224



TYPICAL ELEVATION VIEW
Looking West

NOTE:
For Signal Support details
see Std. Dwg. TC-81.10;
Foundation details see
Std. Dwg. TC-21.20.



NOTES:
1. All angles measured clockwise.
2. Index line goes through the center of the handhole.

INTERSECTION AND SUPPORT NO.	DESIGN NO.	POLE HEIGHT	INDEX LINE ANGLE (DEG.)	ORIENTATION ANGLE FROM INDEX LINE (DEG.)									TOP OF FOUNDATION ELEVATION (FT.)	ATTACHMENT ELEV. (FT.)
				PEDESTRIAN SIGNALS	PEDESTRIAN PUSHBUTTON	CONTROLLER	DISCONNECT SWITCH	CABLE ENTRANCE 2" B.H.C.	1" CONDUIT RISER W/WEATHERHEAD	LUMINAIRE BRACKET	2" CAPPED CONDUIT ELL (SPARE)	SPAN WIRE		
CR 140/US 224														
1	9	30	225	-	-	-	-	90	-	-	180	180	771.0	799.0
2	9	30	225	-	-	287	197	90	197	-	180	180	770.0	799.0

INTERSECTION AND SUPPORT NO.	"A" (Ft.)	"B" (Ft.)	"C" (Ft.)	"D" (Ft.)	"E" (Ft.)	PROFILE GRADE ELEV. (FT.)
CR 140/US 224						
2						
1	31	15	8.5	11.5	21	771.55