MENARDS INC.

OFFSITE IMPROVEMENTS AT S.R. 21/U.S. 62 AND WARMINGTON ROAD MASSILLON, OHIO

PROJECT DESCRIPTION

ALL ROADWAY IMPROVEMENTS WITHIN THE PUBLIC RIGHT OF WAY OF SR 21/US 62 AND WARMINGTON ROAD SW ADJACENT TO THE MENARDS INC. SITE.

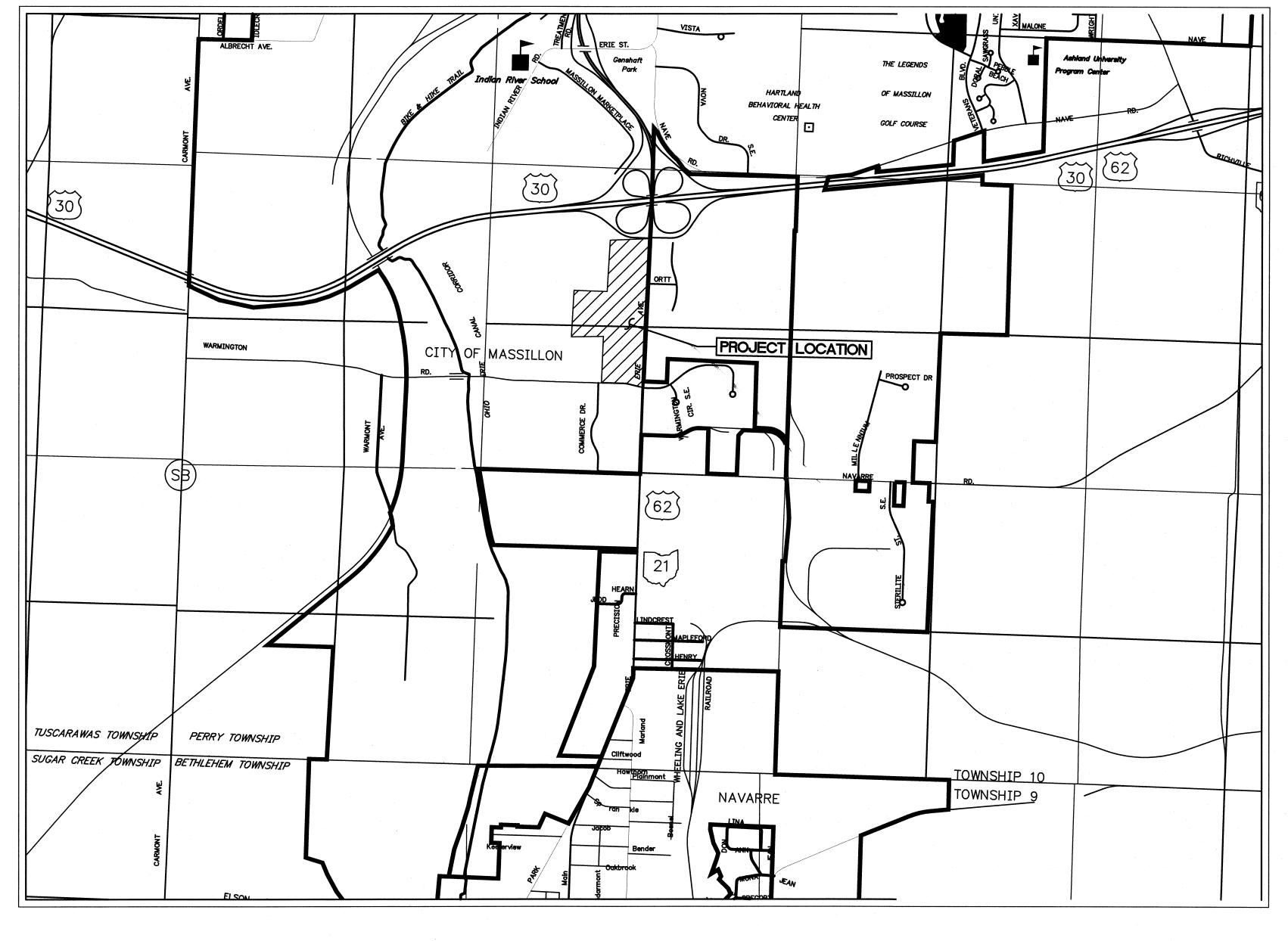
SPECIFICALLY THE INSTALLATION OF THREE DRIVES TO THE MENARDS SITE, INCLUDING ONE SIGNALIZED DRIVE.

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LEGEND

S G UE OE OT OETC -	5/8 REBAR W/HINTON CAP(#6270) FOUND UNLESS OTHERWISE NOTED 1/2 INCH IRON BAR WITH H&A CAP SET CENTERLINE LOT LINE RIGHT-OF-WAY DENOTES RECORD BEARINGS AND DISTANCES WATER LINE SANITARY SEWER LINE STORM SEWER LINE GAS LINE UNDERGROUND ELECTRIC OVERHEAD ELECTRIC UNDERGROUND TELEPHONE OVERHEAD TELEPHONE OVERHEAD ELECTRIC, TELEPHONE & CABLE FENCE GAS LINE MARKER TELEPHONE LINE MARKER UTILITY POLE	ANCHOR SIGN CATCH BASIN (C.B.) MANHOLE (AS LABELED) TRAFFIC CONTROL BOX FIRE HYDRANT VALVE (AS LABELED) MAIL BOX GUARD POST SOIL BORING MONITORING WELL CLEAN OUT DOWN SPOUT EDGE OF PAVEMENT FLOOR DRAIN FINISH FLOOR ELEVATION YARD DRAIN FLAG POLE ROOF DRAIN GUARD RAIL



<u>APPROVALS</u>

KEITH A. DYLEWSKI, P.E.

UNDERGROUND UTILITIES TWO WORKING DAYS BEFORE YOU DIG CALL 1-800-362-2764 (TOLL FREE) OHIO UTILITIES PROTECTION SERVICE NON-MEMBERS

MUST BE CALLED DIRECTLY
TWO WORKING DAYS

BEFORE YOU DIG

CALL 1-800-925-0988 (TOLL FREE)

OIL @ GAS PRODUCERS UNDERGROUND

PROTECTION SERVICE

Approved by the City of Massillon City Engineer thi	s Day of

<u>Notes:</u>

Only approved signed plans by the City Engineer are to be used for Construction.

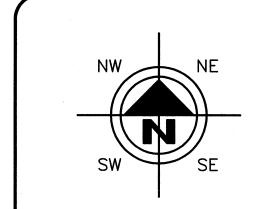
The Contractor is to refer to the approved site civil plans for the Menards Inc. site.

PLAN PREPARED BY:

M c COY ASSOCIATES, INC.

----- CONSULTING ENGINEERS

388 S. MAIN ST., SUITE 401 AKRON, OHIO 44311 PH: (330)564-9100 FAX. (330)564-9101



SCALE 1" = 1/4 MILE

 DRAWN BY:
 CHECKED BY:

 CMK
 SDH

 DATE:
 DATE:

 DEC. 2006
 DEC. 2006

REVISIONS:

DATE DESCRIPTION

3/07 DRIVE LOCATION

4/05/07 ODOT COMMENTS

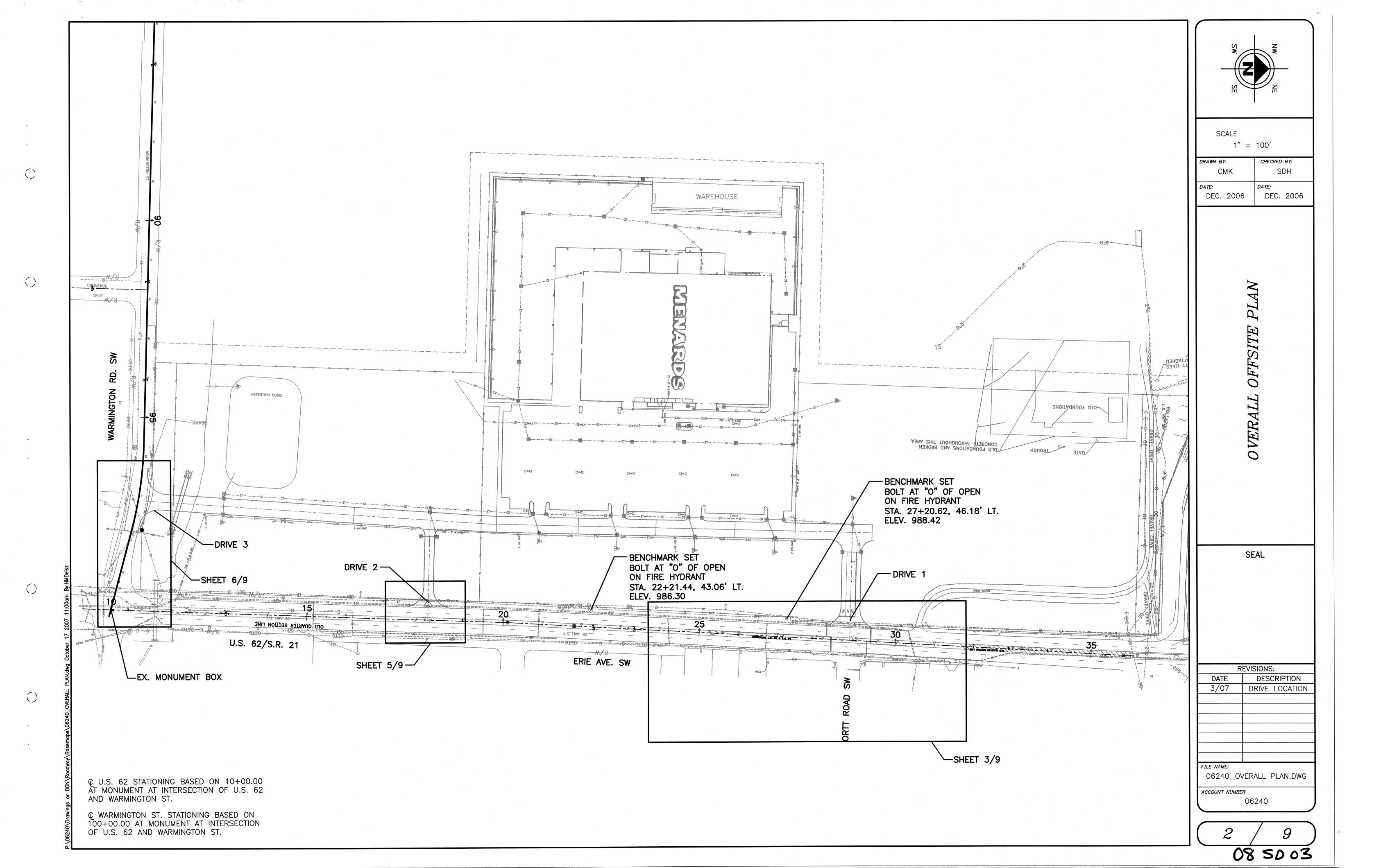
10/07 CITY COMMENTS

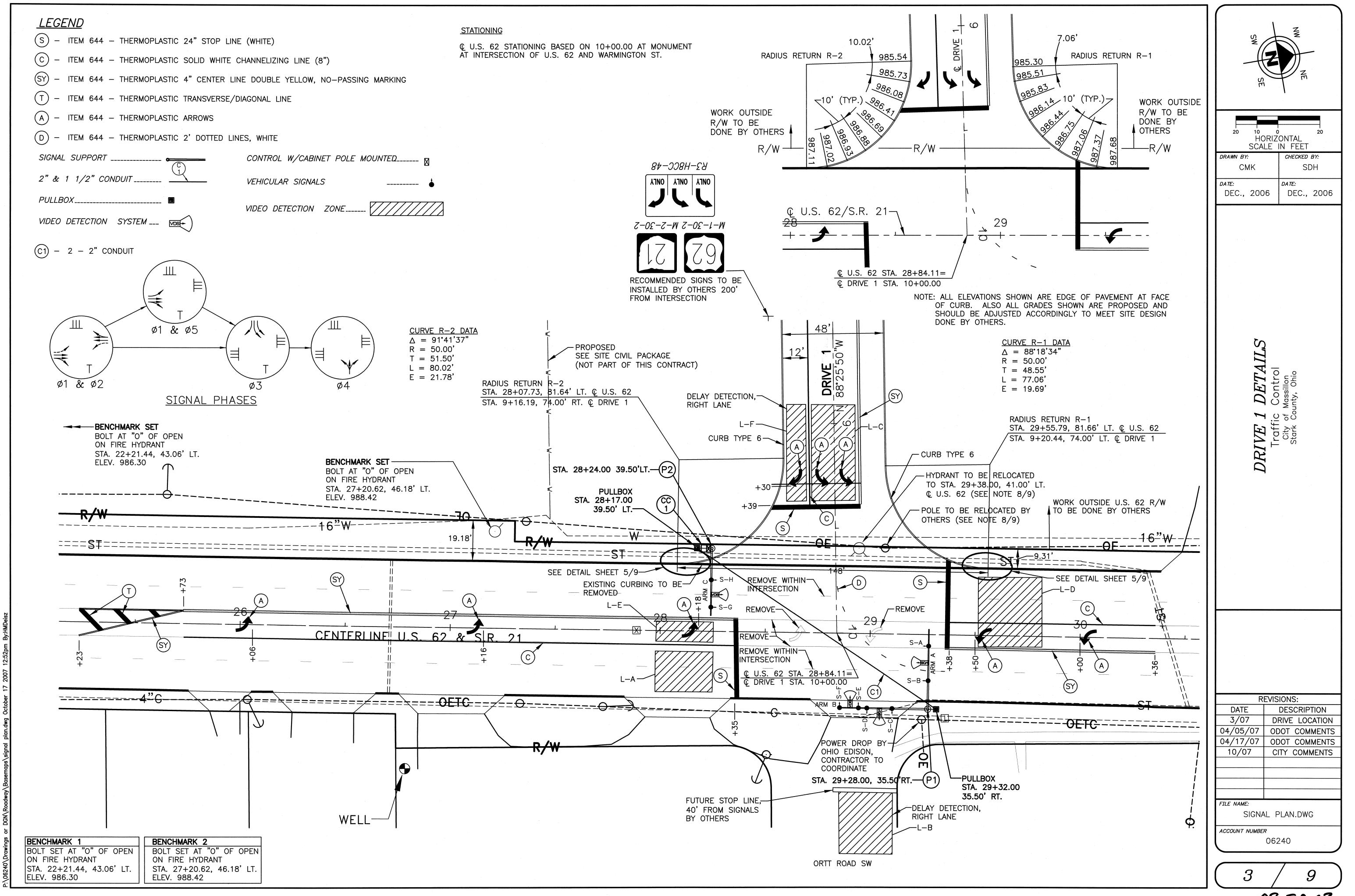
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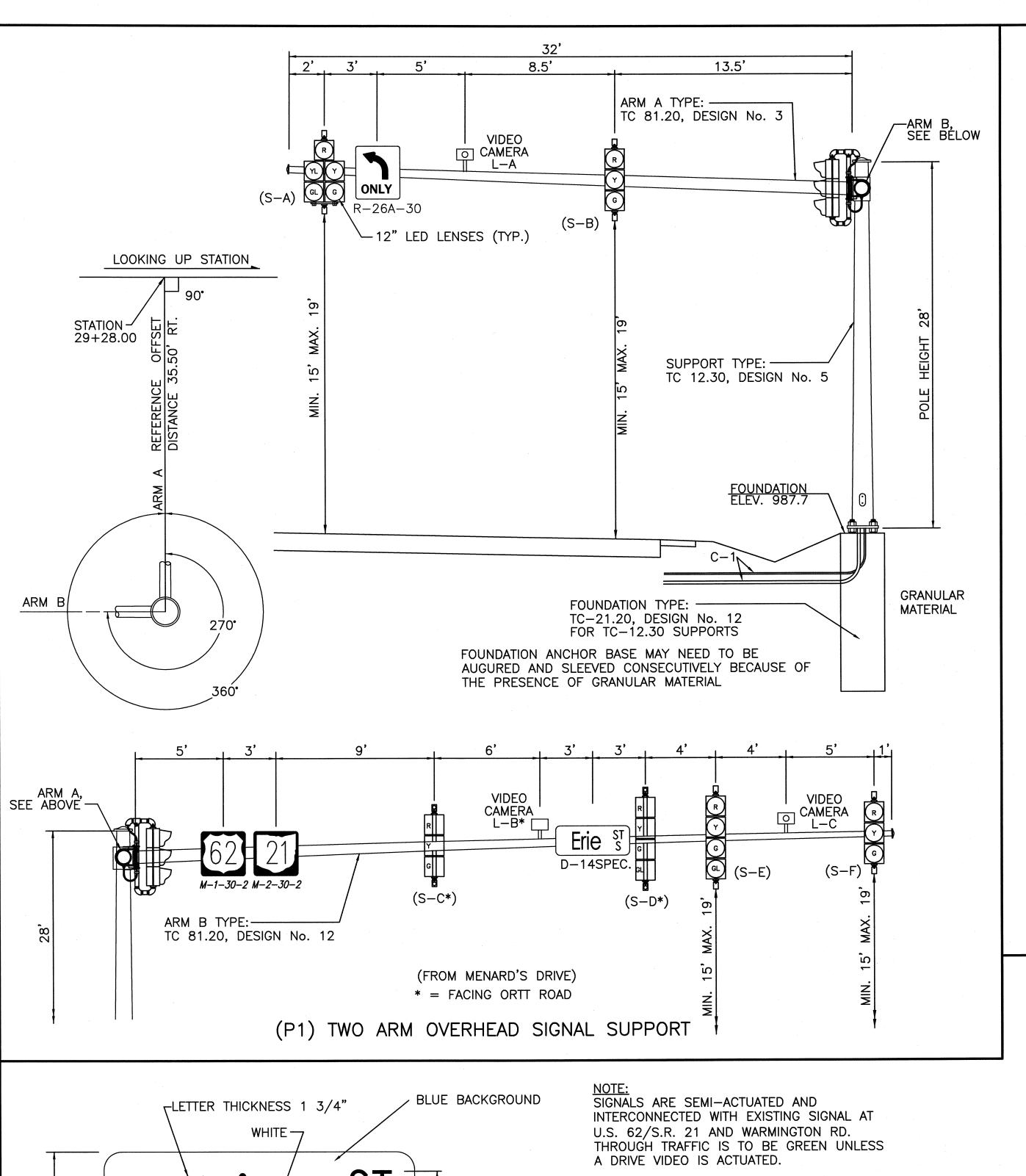
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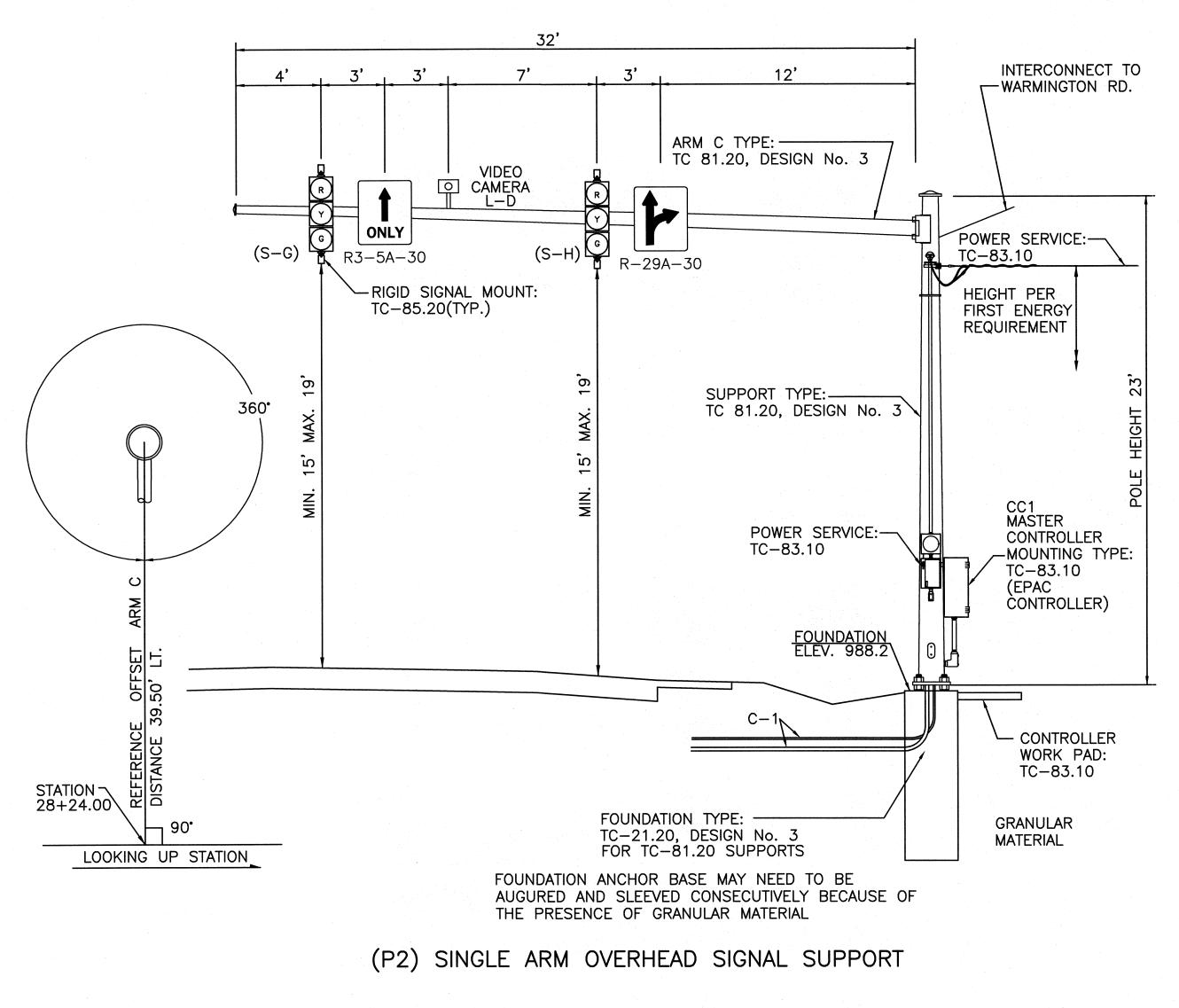
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06240









VIDEO	VEHICLE DETECTION CHART F	OR U.S. (62/S.R. 2	1 AND M	ENARDS/C	ORTT RD.
DETECTION ZONE	LOCATION	SIZE	TYPE	DELAY (SEC.)	DELAY INHIBITED DURING	DESCRIPTION
L-A	28+25.00, U.S. 62	20' X 25'	PRESENCE			NB
L-B	75' RT. OF U.S. 62 ON ORTT RD.	25' X 30'	PRESENCE	10		WB
L-C	9+38.00, MENARDS DRIVE 1	18' X 45'	PRESENCE			EB LT
L-D	29+50.00, U.S. 62	30' X 30'	PRESENCE			SB
L-E	28+25.00, U.S. 62	10' X 25'	PRESENCE			NB LT
L-F	9+38.00, MENARDS DRIVE 1	6' X 45'	PRESENCE	10		EB RT

STATIONED FROM SIDE CLOSEST TO INTERSECTION

Erie ST %

ALL SIGN FACES ARE TO BE MADE OF DIAMOND GRADE REFLECTIVE SHEETING.

TEXT FONT: HIGHWAY GOTHIC, C

MATERIAL:

3390 WHITE (REFLECTIVE SHEETING CONFORMING TO THE SPECIFICATIONS FOR WIDE ANGLE PRISMATIC RETROREFLECTIVE SHEETING FOR VISUAL IMPACT PERFORMANCE)

1175 BLUE (ELECTRONICALLY CUT TABLE FILMS FOR USE ON RETROREFLECTIVE SHEETING)

EXTRUDED BLADE

<u>D-14SPEC.</u>

MOUNTING:

ASTRO-SIGN BRACKET, CABLE MOUNT W/DOUBLE MOUNT HARDWARE

SI	GNAL T	<u>MING IN</u>	N SECON	DS	
TIMING INTERVAL	NB	SB	EB	WB	NB LT
IIMING INTERVAL	ø1	ø2	ø3	ø4	ø5
MINIMUM GREEN	4	4	4	4	4
ADDED INTIAL (SEC/ACT)	3	3	3	3	3
MAXIMUM INTIAL	NONE	NONE	4	4	4
PASSAGE TIME	3	3	3	3	3
TIME BEFORE REDUCTION	0	0	0	0	0
MINIMUM GAP	3	3	3	3	3
TIME TO REDUCE	0	0	0	0	0
MAXIMUM GREEN I	NONE	NONE	20	20	20
MAXIMUM GREEN II	NONE	NONE	20	20	20
YELLOW CHANGE	3	3	3	3	3
ALL RED CLEARANCE	2	2	2	2	2
WALK					
PEDESTRIAN CLEARANCE				y	
RECALL	NONE	NONE	NONE	NONE	NONE
MEMORY					

SIGNAL OPERATION															T	K		
PHASE		ø1 &	& ø2			ø1 8	& ø5		ø3							⋖		
INTERVAL	R/W	R/W	C1	C2	R/W	R/W	C1	C2	R/W	R/W	C1	C2	R/W	R/W	C1	C2	\perp	립
SIGNAL					<u> </u>												I	
Α	G	G	Υ	R	G/G	G C	Y ₄	R	R	R	R	R	R	R	R	R		Υ
В	G	G	Υ	R	G	G	Y	R	R	R	R	R	R	R	R	R		Υ
С	R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R		R
D	R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R		R
E	R	R	R	R	R	R	R	R	G	G	Y	R	R	R	R	R		R
F	R	R	R	R	R	R	R	R	G	G	Υ	R	R	R	R	R		R
G	G	G	Υ	R	R	R	R	R	R	R	R	R	R	R	R	R		Υ
H	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R		Υ

DRIVE
Traffic (
City
Stark **REVISIONS:** DESCRIPTION 3/07 DRIVE LOCATION 4/05/07 ODOT COMMENTS SIGNAL POLES.DWG ACCOUNT NUMBER 06240 08 50 03

NOT TO SCALE

CHECKED BY:

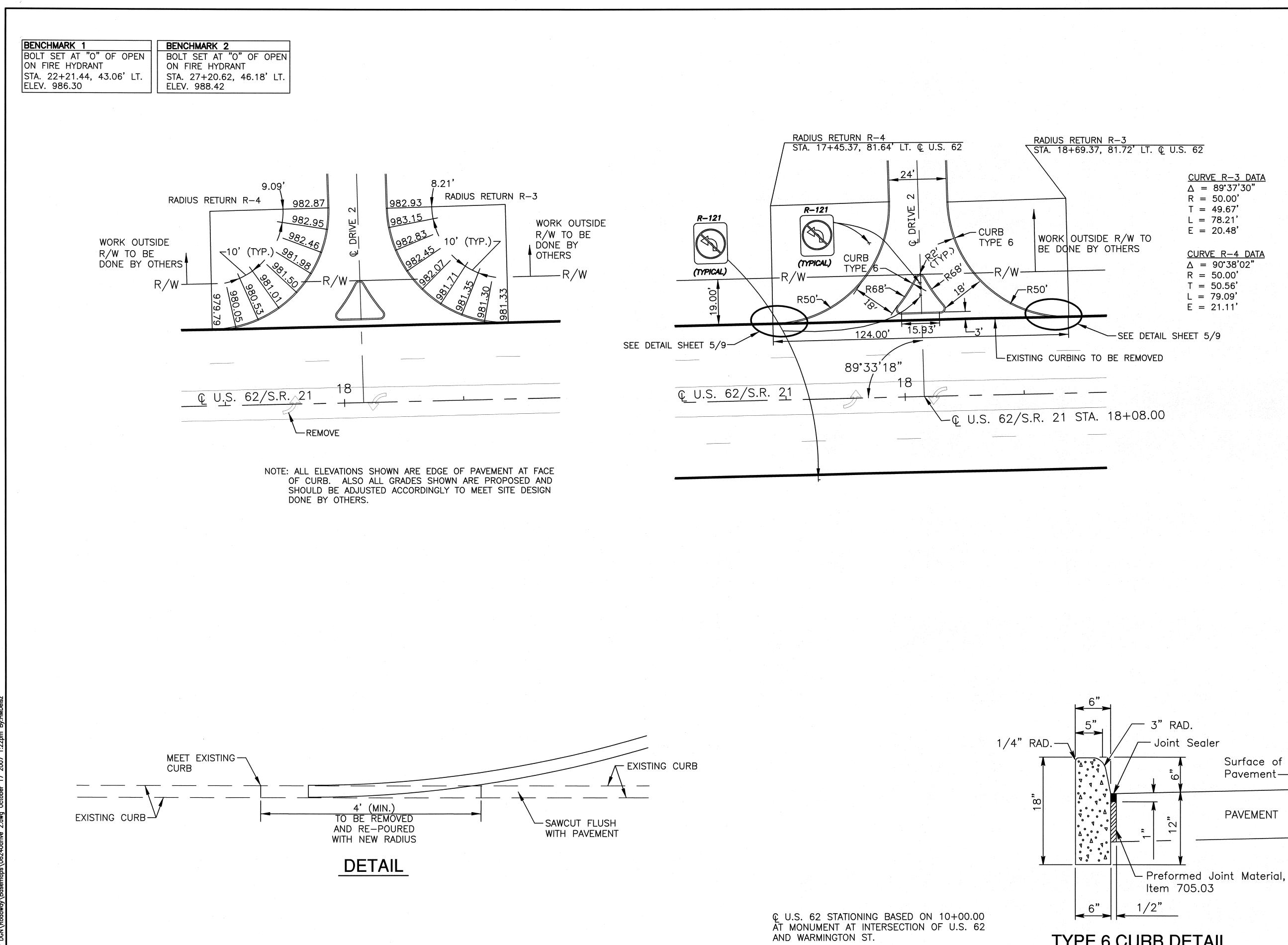
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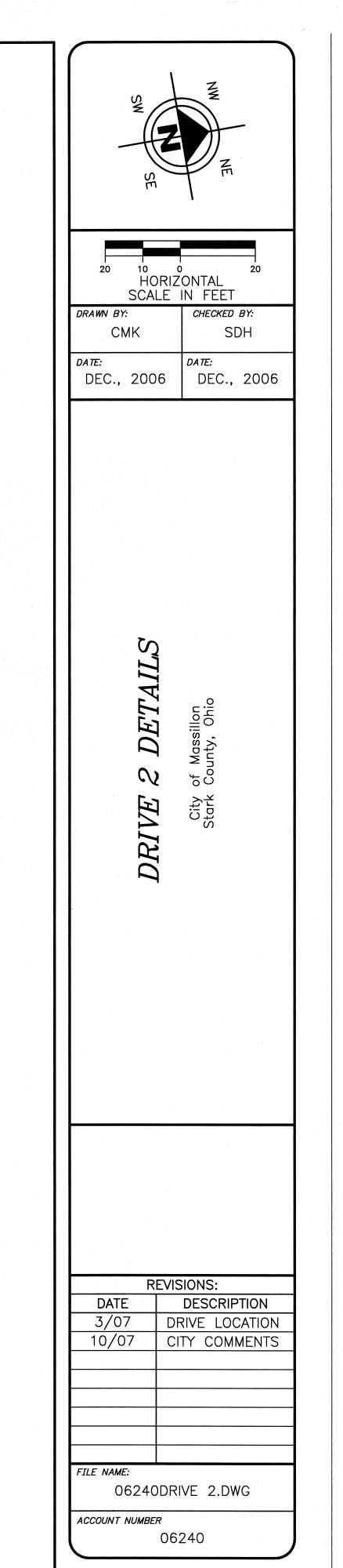
DEC, 2006

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CMK

DEC, 2006





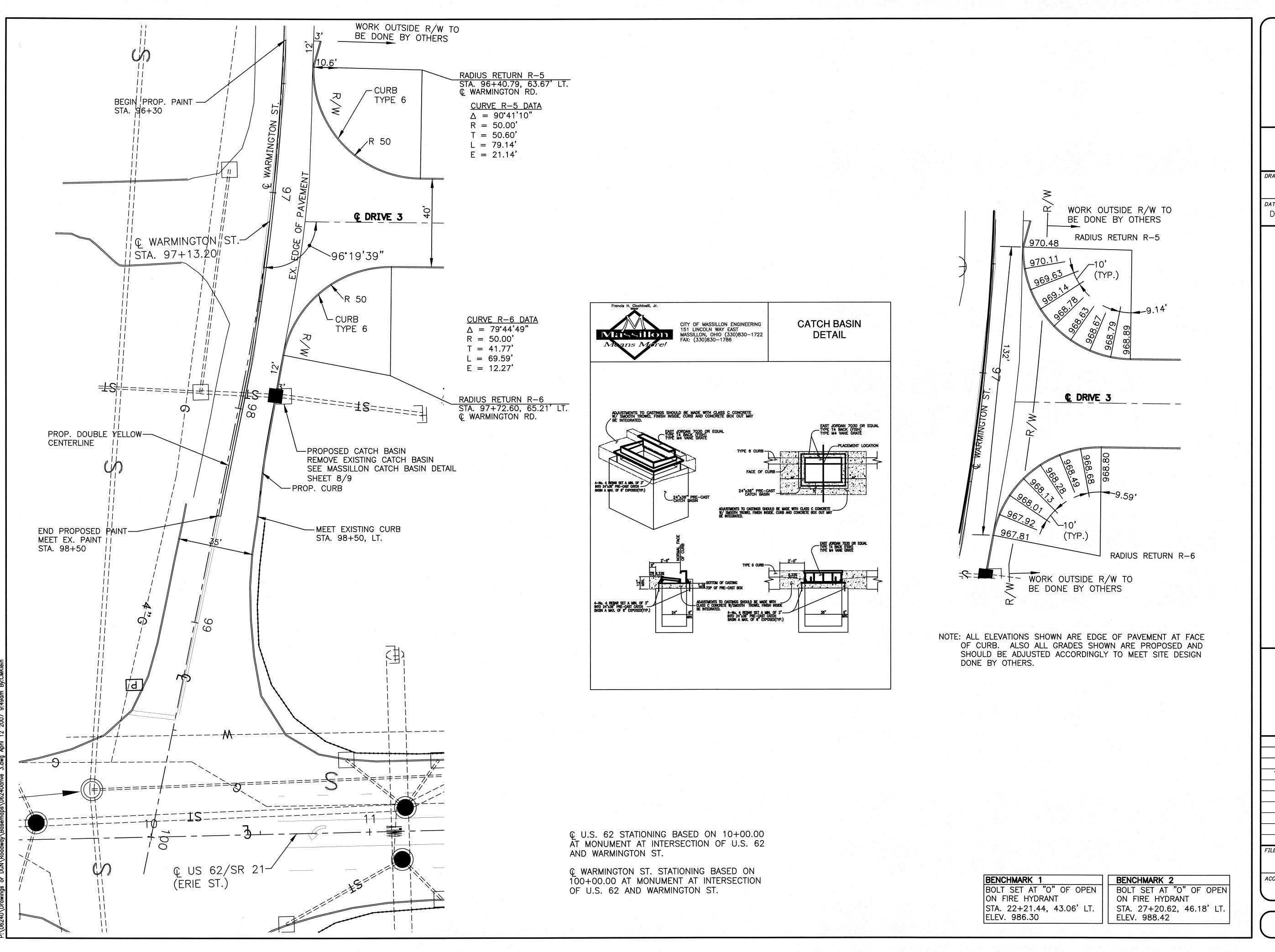
Surface of

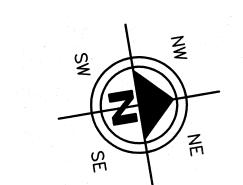
Pavement-

PAVEMENT

TYPE 6 CURB DETAIL

08 SD 03





DATE:

DEC., 2006

DO 0 20

HORIZONTAL

SCALE IN FEET

CHECKED BY:

CHECKED BY:

DATE:

DATE:

DEC., 2006

DEC., 2006

DRIVE 3 DETAII

REVISIONS:

DATE DESCRIPTION

3/07 DRIVE LOCATION

10/07 CITY COMMENTS

FILE NAME:

06240DRIVE 3.DWG

ACCOUNT NUMBER

06240

6 / 9

<u>UTILITIES</u>

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

AT&T/AMERITECH AQUA OHIO WATER 50 W. BOWERY, 6TH FLOOR P.O. BOX 584 **AKRON, OH 44308** MASSILLON, OH 44648 (330) 833-4156 800-384-8057

OHIO EDISON STARK DIVISION 2600 S. ERIE ST. MASSILLON, OH 44545 (330) 833-3141

MASSILLON CABLE TV P.O. BOX 814 MASSILLON, OH 44648 (330) 833-4134

GREAT LAKES 104 6TH ST. S.W. CANTON, OH 44702 (330) 456-2454

CITY OF MASSILLON SANITARY SEWER 151 LINCOLN WAY EAST MASSILLON, OH 44646 (330) 830-1722

DOMINION EAST OHIO GAS COMPANY 4725 SOUTHWAY ST. S.W. CANTON, OH 44706 (330) 478-3142

MASSILLON FIRE DEPARTMENT 330-833-1053

JACKSON FIRE DEPARTMENT

PERRY SCHOOL BUS GARAGE 330-477-1300

MASSILLON POLICE DEPARTMENT

JACKSON POLICE DEPARTMENT 330-834-3960

PERRY FIRE DEPARTMENT 330-833-3865

PERRY TOWNSHIP HALL 330-833-2141

STARK COUNTY SHERIFF

330-834-3950

330-830-1735

330-430-3800

THE CONTRACTOR SHALL NOTIFY ALL UTILITIES 48 HOURS PRIOR TO WORK. THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE SHOWN AT APPROXIMATE LOCATIONS AND WHERE OBTAINED AS REQUIRED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

OUPS - 1-800-362-2764 OGUPUPS - 1-800-925-0988

DATUM ELEVATION

ALL BENCHMARKS ARE BASED ON REFERENCE BENCHMARKS PROVIDED BY MENARD, INC.

STATIONING

ALL STATIONING SHOWN IS REFERENCED TO THE CENTERLINE OF CONSTRUCTION AS SHOWN AND PROVIDED BY MENARD, INC.

NOTIFICATION OF SAFETY FORCES AND BUS GARAGES

THE CONTRACTOR SHALL NOTIFY ALL APPLICABLE AGENCIES LISTED BELOW AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSING OR TRAFFIC CHANGE.

MASSILLON SAFETY SERVICE 330-830-1702

TUSCARAWAS TOWNSHIP HALL

330-832-4337 JACKSON TOWNSHIP HALL 330-832-7416

PERRY POLICE DEPARTMENT 330-478-5121

330-454-5333

ORTH LAWRANCE FIRE DEPT. 530-832-6347

MASSILLON SCHOOL BUS GARAGE 330-830-1849

JACKSON SCHOOL BUS GARAGE 330-830-8042

TUSCARAWAS SCHOOL BUS GARAGE 330-837-7805

SUBSURFACE CONDITIONS

IT IS THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO MAKES HIS OWN INVESTIGATION OF SUBSURFACE CONDITIONS PRIOR TO SUBMITTING BID. PROSPECTIVE BIDDERS ARE TO COORDINATE WITH THE OWNER FOR ACCESS TO THE SITE FOR INSPECTIONS AND EXPLORATORY EXCAVATION. THE BIDDER SHALL CONTACT THE OWNER AT LEAST 72 HOURS IN ADVANCE OF THE DESIRED INSPECT OR EXCAVATION. THE BIDDER SHALL CONTACT O.U.P.S. AND OBTAIN LOCATIONS OF OTHER UTILITIES.

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS & STANDARDS

ALL CONSTRUCTION TO BE CITY OF MASSILLON SPECIFICATIONS AND STANDARDS, THE LATEST EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS AND FOLLOW ALL OSHA AND ADA REGULATIONS AND REQUIREMENTS, SEDIMENT **EROSION STANDARDS.**

MAINTENANCE OF TRAFFIC

THE CONTRACTOR SHALL SUPPLY A MAINTENANCE OF TRAFFIC PLAN TO THE CITY ENGINEER. MAINTENANCE OF TRAFFIC PLAN MUST BE APPROVED BY THE CITY ENGINEER AND STARK COUNTY ENGINEER PRIOR TO ANY CONSTRUCTION COMMENCING SAID APPROVED DETOUR SHALL BE FORWARDED TO THE LOCAL NEWSPAPER BY THE CONTRACTOR.

MATERIALS AND LABOR SHALL BE INCLUDED IN LUMP SUM BID.

CONTRACTOR AVAILABILITY

THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A 24 HOUR PHONE NUMBER WHERE THE CONTRACTOR SHALL BE AVAILABLE FOR EMERGENCIES.

PRESERVATION OF PRIVATE & PUBLIC PROPERTY

THE CONTRACTOR SHALL PERFORM WORK AS TO NOT DISTURB, DAMAGE OR DESTROY ANY TELEPHONE OR POWER POLES, SIGNS, LANDSCAPING, ADDITIONAL PAVEMENT, ETC. ANY ITEM DAMMAGED OR DESTROYED SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ANY ITEM DISTURBED OR IN CONFLICT WITH THE WORK TO BE PERFORMED SHALL BE REMOVED AND RESET AT THE CONTRACTOR'S EXPENSE. PRIOR ENGINEER APPROVAL IS REQUIRED BEFORE ANY OF THE ABOVE ITEMS ARE PERFORMED

PRESERVATION OF PROPERTY CORNERS AND SURVEY MARKERS

THE CONTRACTOR SHALL PRESERVE ALL CORNERSTONES, IRON PINS, CONCRETE MONUMENTS ANY TYPE OF LAND MONUMENT. HE SHALL HAVE ALL LAND MONUMENTS IN THE PROXIMITY OF THE WORK REFERENCED. HE SHALL REPLACE DESTROYED OR DAMAGED MONUMENTS AND SHALL FURNISH A CERTIFICATION BY AN OHIO REGISTERED SURVEYOR THAT THE MONUMENTS HAVE BEEN RESTORED.

CONDITIONS OF WORK

ALL WORK PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH THE U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ACT, STATE, COUNTY, AND CITY OF MASSILLON LAWS AND REGULATIONS. ALL WORK, AT ALL TIMES SHALL BE SUBJECT TO OBSERVATION BY THE OWNER AND/OR ENGINEER. ALL WORK SHALL COMPLY WITH THE CONDITIONS OF THE CONTRACT DOCUMENTS AND OHIO EPA, AND STANDARDS OF THE CITY OF MASSILLON ALL ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE, AND APPLICABLE CITY, COUNTY, STATE AND FEDERAL CODES.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE AND SATISFACTORY ACCESS TO ALL ABUTTING PROPERTIES TO THE PROJECT SITE. ADJACENT ROADS SHALL BE MAINTAINED AND KEPT CLEAN OF MUD AND OTHER DEBRIS THAT MAY BE CAUSED BY TRAFFIC EXITING THE WORK SITE. THE CONTRACTOR SHALL COORDINATE AND PROVIDE FOR

ALL NECESSARY TRAFFIC CONTROL. TRAFFIC CONTROL SHALL FOLLOW THE MORE STRINGENT GUIDELINES OF THE CITY OF MISSION OR ODOT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AND MAINTAIN FACILITIES FOR A CONSTRUCTION OFFICE, EMPLOYEE PARKING, AND EMPLOYEE SANITARY FACILITIES. ON STREET PARKING WILL NOT BE PERMITTED. THE CONTRACTOR SHALL PROVIDE FOR THE LAWFUL OFF-SITE DISPOSAL OF DEMOLITION DEBRIS AND CONSTRUCTION WASTE.

<u>RESTORATION</u>

FOR EXCAVATION COMPLETED, INSTALLED, TESTED, AND ACCEPTED UP TO MAY 15TH OF ANY CALENDAR YEAR, RESTORATION SHALL BE COMPLETE BY JUNE 30th OF THAT YEAR. FOR INSTALLATION OF SANITARY SEWER TESTED AND ACCEPTED FROM MAY 15th TO SEPTEMBER 30th OF ANY CALENDAR YEAR,

RESTORATION SHALL BE COMPLETE BY NOVEMBER 15th OF THAT CALENDAR YEAR. FOR ANY IMPROVEMENT INSTALLED, TESTED, AND ACCEPTED AFTER NOVEMBER 15TH OF ANY CALENDAR YEAR. RESTORATION SHALL BE COMPLETE BY MAY 15th OF THE NEXT CALENDAR YEAR.

AND MULCHED. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR EACH ITEM OF AFFECTED WORK. TOPSOIL, SEEDING AND MULCHING SHALL NOT BE A SEPARATE PAY ITEM. THIS INCLUDES BACKFILLING. SEEDING AND MULCHING ALONG THE EDGE OF ALL PAVEMENT RESTORATION. PAVEMENT CROSSINGS WILL RECEIVE TYPE C PAVEMENT REPLACEMENT WITH FULL WIDTH PAVEMENT OVERLAY. CONTRACTOR TO REPLACE ALL PAVEMENT MARKINGS. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR PAVEMENT CONTRACTOR TO REPLACE ALL PAVEMENT MARKINGS. COST TO BE INCLUDED CONTRACTOR TO USE HOT APPLIED JOINT CRACK SEALER ON ASPHALT PAVEMENT AT ALL JOINTS. ALL TRENCHES IN ROAD RIGHT OF WAY WILL RECEIVE FULL DEPTH PREMIUM GRANULAR BACKFILL

EXISTING DATA

EACH CONTRACTOR SHALL VISIT THE SITE PERSONALLY TO ASCERTAIN THE NATURE OF THE WORK AND BECOME THOROUGHLY FAMILIARIZED WITH THE SITE PRIOR TO BID SUBMISSION

EXISTING STRUCTURES, GRADES, PIPING, ETC. ARE INDICATED IN APPROXIMATE LOCATION ON THE PLAN. INFORMATION SHOWN IS NOT GUARANTEED TO BE CORRECT AND COMPLETE. THE DATA SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. THE EXISTENCE OF FACILITIES ABOVE OR BELOW GROUND, WHICH MAY NOT BE SHOWN, WILL NOT BE A BASIS FOR A CLAIM FOR EXTRA WORK. EXISTING UNDERGROUND UTILITIES SHOWN ARE RECORDS PROVIDED BY UTILITY COMPANIES AND ARE APPROXIMATE ONLY. EXISTING UNDERGROUND UTILITIES SHOWN ARE RECORDS PROVIDED BY UTILITY COMPANIES AND ARE APPROXIMATE ONLY. SERVICE LATERALS ARE NOT SHOWN. IT IS THE RESPONSIBILITY OF CONTRACTOR TO NOTIFY THE CITY, PRIOR TO BID OPENING NON-CONNFORMING OR CONFLICTING INFORMATION

<u>ACCESSIBILITY TO PRIVATE PROPERTY</u>

ACCESS TO ALL DRIVEWAYS AND PARKING AREAS WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES EXCEPT WHILE LAYING THE CONDUIT ACROSS THE DRIVE. THE TRENCH SHALL BE BACKFILLED AT THE END OF EACH WORK DAY TO PROVIDE ACCESS. THE CONTRACTOR MUST NOTIFY EACH PROPERTY OWNER AT LEAST 24 HOURS IN ADVANCE OF CUTTING THEIR DRIVEWAY.

PRESERVATION OF EXISTING UTILITY SERVICES

ANY EXISTING WATER LINE, SANITARY SEWER, STORM SEWER, GAS LINE OR OTHER UTILITY IN OR OUTSIDE OF THE CONSTRUCTION LIMITS, DAMAGED DURING CONSTRUCTION OF THE PROPOSED PROJECT, WILL BE REPLACED AT THAT CONTRACTORS EXPENSE.

EXCAVATED MATERIAL

ALL EXCAVATED MATERIAL AND ALL MATERIAL USED IN CONSTRUCTION OF THE WORK SHALL BE PILED AND STORED IN A MANNER THAT WILL NOT ENDANGER THE WORK AND THAT WILL LEAVE DRIVEWAYS OR OTHER CONTROLS UNOBSTRUCTED AND ACCESSIBLE WHILE THE WORK IS TO BE COMPLETED. SATISFACTORY PROVISIONS SHALL BE MADE FOR STREET DRAINAGE, AND NATURAL WATERCOURSES SHALL NOT BE OBSTRUCTED. DURING THE PROGRESS OF THE WORK, ALL MATERIAL PILES SHALL BE KEPT TRIMMED UP AND MAINTAINED IN A NEAT MANNER. ALL EXCAVATED WASTE MATERIAL SHALL BE REMOVED FROM THE PROJECT SITE, AS DIRECTED BY THE ENGINEER. THE WASTE SITE IS TO BE PROVIDED BY THE CONTRACTOR AT NO COST, UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS. ALONG WITH A LETTER FROM THE PROPOSED WASTE SITE OWNER PERMITTING SUCH AND HOLDING THE OWNER AND THE CITY HARMLESS.

CHECKED BY:
SDH
<i>DATE:</i> DEC. 2006

SEAL:

RE	VISIONS:
DATE	DESCRIPTION
3/07	DRIVE LOCATIO
10/07	CITY COMMENT
LECTRONIC FILE	NAME:
GENER <i>A</i>	AL NOTES.DWG
CCOUNT NUMBE	D

085003

ACCOUNT NUMBER

06240

REMOVAL AND RELOCATION OF EXISTING UTILITIES

THE CONTRACTOR IS REQUIRED TO COOPERATE WITH EACH RESPECTIVE UTILITY OWNER FOR THE REMOVAL AND RELOCATION OF ANY AND ALL UTILITIES THAT CREATE A CONFLICT WITH CONSTRUCTION OF THE PROJECT.

ITEM 203SPEC. ROADWAY REMOVAL

ALL EXISTING CONCRETE INCLUDING CURBS, DRIVES, CULVERTS, AND BASE ETC. WITHIN WORK LIMITS SHALL BE REMOVED ALL EXISTING PAVEMENT REMOVAL OUTSIDE OF NEW PAVEMENT AREA SHALL BE GRADED. TOP SOIL AND SEEDED TO THE SATISFACTION OF THE CITY. ALL ABOVE SAID WORK SHALL BE PAID FOR UNDER ITEM 203 ROADWAY REMOVAL, LUMP SUM BID

ITEM 623, CONSTRUCTION STAKING

CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND AS-BUILT DRAWINGS THIS WORK IS TO BE PERFORMED UNDER ITEM 623 CONSTRUCTION STAKING.

ITEM 659, SEEDING AND MULCHING

ITEM 659 SHALL BE APPLIED TO ALL EXPOSED SOIL AREAS DISTURBED DURING CONSTRUCTION. SUCH AS SPECIFIED IN ITEM 659 AND IS NOT LIMITED TO JUST TOPSOIL, SEEDING AND MULCHING. SPECIFIED IN ITEM 659 AND IS NOT LIMITED TO JUST TOPSOIL, SEEDING AND MULCHING.

THE CITY SHALL APPROVE SEED MIX PRIOR TO CONSTRUCTION TO BE USED THROUGH OUT CONSTRUCTION LIMITS. PROPOSED MIX SHALL BE SUBMITTED IN WRITING PRIOR TO ANY CONSTRUCTION. ALL ABOVE SAID WORK SHALL BE BE PAID FOR UNDER ITEM 659, SEEDING AND MULCHING LUMP SUM BID.

ITEM 651, TOPSOIL STOCKPILED

THE MATERIAL FOR THIS ITEM SHALL BE OBTAINED FROM AREAS WITHIN THE RIGHT OF WAY PROVISION OF THIS 651 ITEM SHALL NOT BE CONSTRUCTED AS A WAIVER OF THE PROVISIONS OF 201.4 SOD AND INCIDENTAL TOPSOIL REMOVED ELSEWHERE ON THIS PROJECT FOR SALVAGE. FOR USE AS DESCRIBED IN 203.04(e). SHALL BE INCLUDED IN THE CONTRACT PRICE FOR VARIOUS 203 ITEMS.

ALL COSTS OF THE ABOVE SAID WORK SHALL BE INCLUDED IN ITEM 653 TOPSOIL FURNISHED AND PLACED

ITEM 832 EROSION CONTROL

THE CONTRACTOR SHALL PREPARE AND SUBMIT A STORM WATER POLLUTION CONTROL PLAN TO THE CITY OF MASSILLON ENGINEER TO BE FORWARDED TO OBTAIN A PERMIT. THE STORM WATER POLLUTION CONTROL PLAN SHALL AN EFFECTIVE PLAN. SAID PLAN MUST COMPLY W/ THE OHIO DEPARTMENT OF NATURAL RESOURCES. THE OHIO EVIROMETAL SOIL AND WATER CONSERVATION DISTRICT AND THE CITY OF MASSILLON BEST MANAGEMENT PRACTICES.

BECAUSE OF THE LINEAR NATURE OF THIS PROJECT. THE PLAN WILL VARY DAILY BASED UPON THE CONTRACTORS MEANS AND METHODS OF CONSTRUCTION. THE CITY AND ALL LOCAL, STATE AND FEDERAL AGENCIES WILL MONITOR THE CONSTRUCTION SITE AND THE CHOSEN METHOD

OF SOIL EROSION CONTROL. THE CONTRACTOR WILL BE HELD TO FOLLOWING THE IMPLEMENTATION AS NECESSARY TO PROTECT THE INTEGRITY OF THE STORM SEWERS AND THE WATER'S OF THE STATE OF OHIO. BELOW IS A NUMBER OF MISC. ITEMS WHICH MAYBE USED BUT NOT LIMITED

ITEM 870 - COMMERCIAL FERTILIZER

ITEM 870 - REPAIR SEEDING AND MULCHING

ITEM 870 - WATER

ITEM 877 - TEMPORARY SEEDING AND MULCHING

ITEM 877 - TEMPORARY FILTER FABRIC FENCE

ITEM 877 - TEMPORARY INLET PROTECTION

ALL COSTS OF THE ABOVE SAID WORK SHALL BE INCLUDED IN ITEM 832 EROSION CONTROL.

GENERAL NOTES CONT'D

PUBLIC NOTIFICATION OF NEW SIGNAL PRIOR TO OPERATION

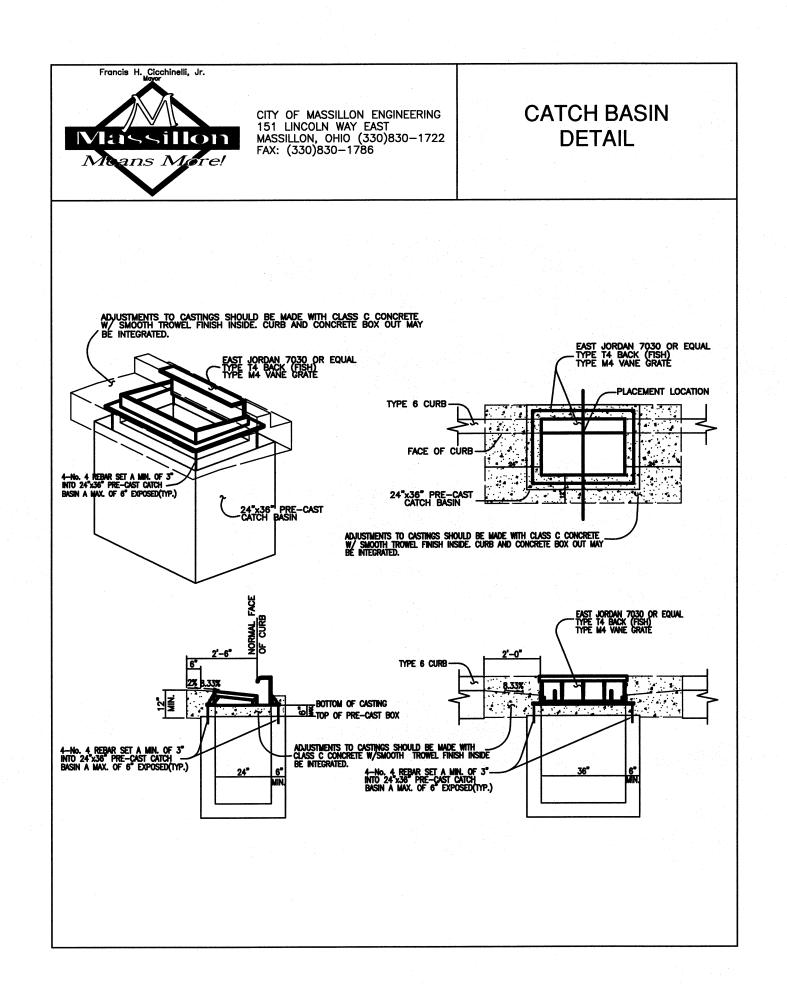
THE CONTRACTOR SHALL AT HIS EXPENSE FOLLOW THE OHIO UNIFORM TRAFFIC CONTROL MANUAL FOR THE METHOD OF INSTALLING AN NEW TRAFFIC SIGNAL. THIS INCLUDES THE SIGNAGE, FLASHING PERIOD, INSTALLATION OF THE SIGNS, FOR AT LEAST A FORTY-FIVE DAY PERIOD.

638 RELOCATION OF FIRE HYDRANT

THE CONTRACTOR SHALL OBTAIN AN AND ALL PERMITS AND COORDINATE WITH AQUA OHIO WATER CONTACT DONALD SNYDER AT (330) 833-4156.

638 RELOCATION OF POWER POLE

THE CONTRACTOR SHALL CONTACT OHIO EDISON AND COORDINATE THIS WORK (330) 833-3141.



ITEM 630 SIGNS W/ ALL APPURTENANCES

THIS WORK SHALL INCLUDE ALL MATERIALS AND LABOR FOR THE PROPER INSTALLATION OF TRAFFIC SIGNS IN ACCORDANCE WITH THE CITY OF MASSILLON, STARK COUNTY ENGINEER, AND OHIO DEPARTMENT OF TRANSPORTATION STANDARDS.

ITEM 632 TRAFFIC SIGNALS W/ ALL APPURTENANCES

THIS WORK SHALL INCLUDE ALL MATERIALS AND LABOR FOR THE PROPER INSTALLATION OF TRAFFIC SIGNALS IN ACCORDANCE WITH THE CITY OF MASSILLON, STARK COUNTY ENGINEER, AND OHIO DEPARTMENT OF TRANSPORTATION STANDARDS.

ITEMS INCLUDED IN COST BUT NOT LIMITED TO:

FOUNDATIONS, SIGNAL SUPPORTS/POLE, CABINETS, WIRING, CONDUITS, VIDEO DETECTION INCLUDING MONITOR, CONTROLLER(EPAC 8-PHASE), VEHICULAR SIGNALS HEADS 12", ALL ELECTRICAL CONNECTION AND HOOK UP FEES AND MATERIALS, MOUNTING HARDWARE, WORK PAD, ETC. REFER TO SHEET 35 AND 36.

THE CONTRACTOR IS TO COORDINATE THE SIGNAL WORK OHIO EDISON FOR THE POWER SUPPLY, METER LOCATION AND DROP TO THE SIGANL CABINET PER ALL OF THE APPLICABLE LOCAL, STATE, AND FEDERAL CODES.

THIS ITEM'S INTENT IS FOR PAYMENT OF COMPLETE SIGNALIZED INTERSECTION AS DETAILED ON SHEET 3.

ITEM 641 REMOVAL OF PAVEMENT MARKUP

THIS WORK SHALL INCLUDE ALL LABOR AND MATERIAL FOR THE PROPER REMOVAL OF THE EXISTING PAVEMENT MARKUP IN ACCORDANCE TO ODOT CMS.

ITEM 644 PAVEMENT MARKUP

ALL PAVEMENT MARKINGS SHALL CONFORM TO ODOT ITEM 644. THERMOPLASTIC PAVEMENT MARKING.

ITEM 614 PAVEMENT MARKUP REMOVAL

THE CONTRACTOR IS TO PROVIDE HIS MEANS AND METHODS OF THE REMOVAL TO THE CITY OF MASSILLON ENGINEER TO ENSURE THAT THE PAVEMENT WEARING SURFACE IS NOT DAMAGED DURING THE PAVEMENT MARKING REMOVAL PROCESS. THIS WORK IS TO BE COMPLETED TO THE SATISFACTION OF THE OWNER, CITY OF MASSILLON AND ODOT.

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ITEM 625 - POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRIC POWER SHALL BE OBTAINED FROM THE OHIO EDISON COMPANY AT THE LOCATION INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS.

OHIO EDISON COMPANY—AKRON DIVISION FAIRLAWN BUILDING #1 1910 W. MARKET STREET AKRON, OHIO 44313-6912 PHONE 800-633-4766

ITEM 632 - POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING IS ADDED:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHARGES MADE BY THE POWER COMPANY FOR WORK BY THE COMPANY IN CONJUNCTION WITH THE ESTABLISHMENT OF THE REQUIRED SERVICE.

ELECTRICAL ENERGY FROM EXISTING POWER SERVICES SHALL CONTINUE TO BE CHARGED TO THE MAINTAINING AGENCY. THE CONTRACTOR SHALL PAY ELECTRICAL CHARGES FOR NEW POWER SERVICES ESTABLISHED BY THIS PROJECT. AFTER ACCEPTANCE OF THE TRAFFIC SIGNALS, THE POWER SERVICE ACCOUNT SHALL BE TRANSFERRED TO THE MAINTAINING AGENCY AS NOTED IN THE PLANS.

THIS SHALL INCLUDE NEW POWER SERVICE ESTABLISHED BY THIS PROJECT AS WELL AS REASSIGNMENT OF EXISTING SERVICE DUE TO WORK PERFORMED BY THIS PROJECT.

ALL NEW OR RELOCATED ELECTRIC SERVICE ENCLOSURES ARE TO BE INSPECTED BY A LICENSED INSPECTOR PRIOR THE CONNECTION TO A UTILITY DISTRIBUTION LINE. THE CONTRACTOR SHALL APPLY FOR ALL INSPECTION(S): PAY THE APPROPRIATE FEE(S) AND ADVISE THE PROJECT ENGINEER OF THE TIME OF THE INSPECTION(S). SO THAT THEY MAY HAVE A REPRESENTATIVE IN ATTENDANCE. INSPECTION IS NOT A SUBSTITUTE FOR THE CITY'S FINAL INSPECTION, NOR DOES IS SUPERSEDE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. THE COST OF ALL NECESSARY INSPECTIONS SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE PER EACH 632 - POWER SERVICE, AS PER PLAN.

<u>ITEM 625 - GROUND ROD, AS PER PLAN</u>

IN ADDITION TO CMS 625.16, THIS ITEM SHALL CONSIST OF FURNISHING AND RUNNING OF A SEVEN (7) STRAND #4 COPPER WIRE FROM THE TOP OF THE GROUND ROD AND ATTACHING IT TO THE NEUTRAL BAR IN THE CABINET.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH.

<u>ITEM 632 - POWER SERVICE, AS PER PLAN</u>

POWER SERVICE SHALL BE AS PER CMS ITEM 632 AND SCD TC-83.10 WITH THE FOLLOWING EXCEPTIONS:

1. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN 5 FEET (1.5 METERS) HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND.

- 2. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES.
- 3. ALL POWER SERVICES SHALL BE METERED. THE METER SHALL HAVE A LEVER OPERATED BYPASS.

DISCONNECT SWITCH ENCLOSURES FURNISHED IN ACCORDANCE WITH CMS ITEM 632, POWER SERVICE, AS PER PLAN, SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNON 660, WITH LOCK BODY OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER.

THE CONTRACTOR SHALL CONTACT THE METER SECTION OF THE POWER COMPANY FOR INFORMATION REGARDING THE METER BASE INSTALLATION PRIOR TO ORDERING POLES. THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY?S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120 VOLTS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE SIGNAL IS ACCEPTED BY THE MAINTAINING AGENCY.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF ONE YEAR FOLLOWING THE COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL, AND LABOR COSTS INCURRED IN THE CORRECTION OF AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLERS AND ASSOCIATED EQUIPMENT, VIDEO DETECTION SYSTEM, INTERCONNECTION SYSTEMS, MASTER CONTROL EQUIPMENT, AND PREEMPTION EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE CITY OF AKRON, DIVISION OF TRAFFIC ENGINEERING 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.

ITEM 632 - VEHICULAR SIGNAL HEAD WITH LED LAMP UNITS, BY TYPE, AS PER

IN ADDITION TO THE REQUIREMENTS OF CMS 632 AND 732. THE FOLLOWING REQUIREMENTS SHALL ALSO APPLY:

LED, (LIGHT EMITTING DIODE), SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF STATE SUPPLEMENTAL SPECIFICATION 872. ALL LAMP UNITS SHALL BE THE 12 INCH SIZE. LED SIGNAL LAMP UNITS SHALL BE PROVIDED FOR ALL SIGNAL LENS TYPES. THE WATTAGE FOR EACH UNIT SHALL NOT EXCEED 6 WATTS FOR RED. 14 WATTS FOR GREEN AND 12 WATTS FOR YELLOW.

SIGNAL SECTIONS:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF CAST ALUMINUM AND MEET ITE SPECIFICATIONS. THE SIGNAL HEADS SHALL BE FEDERAL YELLOW IN COLOR WITH TUNNEL HOODS

2. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.

3. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.

MOUNTING HARDWARE:

1. ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARM WITH THE YELLOW LENS LOCATED IN FRONT OF THE MAST ARM. EXCEPT AT THE S. MAIN ST. AND WATERLOO RD. INTERSECTION WHERE DROP PIPES SHALL BE USED FOR THE DESIGNED VERTICAL CLEARANCE.

THE CONTRACTOR SHALL PROVIDE THE CITY OF MASSILLON, IN WRITING, THE LED MANUFACTURER NAME. SERIAL NUMBER. PART NUMBER. DESCRIPTION OF LAMP. AND DATE OF MANUFACTURE FOR ALL LED UNITS TO BE USED IN THE TRAFFIC SIGNAL HEADS PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES. THE INFORMATION SHALL BE SENT TO THE FOLLOWING LOCATION:

CITY OF MASSILLON, CITY ENGINEER ATTN.: KEITH DYLEWSKI. P.E. 151 LINCPLN WAY EAST MASSILLON, OHIO 44646

THE ITEM "VEHICULAR SIGNAL HEAD WITH LED LENSES, BY TYPE, AS PER PLAN" WILL BE MEASURED BY THE NUMBER OF COMPLETE UNITS FURNISHED AND INSTALLED, AND WILL INCLUDE ALL SUPPORT AND MOUNTING HARDWARE, DISCONNECT HANGERS, CLOSURE CAPS, DIMMERS, AND LAMPS AS SPECIFIED.

<u>ITEM 632 - INTERCONNECT CABLE, MISC.: (BY SIZE), WITH SUPPORT</u> MESSENGER. AS PER PLAN

THE CONTRACTOR WILL BE PERMITTED TO USE EITHER OF TWO TYPES OF INTERCONNECT CABLE CONSTRUCTION AND INSTALLATION UNDER THIS ITEM AS FOLLOWS:

1. INTEGRAL MESSENGER TYPE INTERCONNECT CABLE MEETING THE REQUIREMENTS OF CMS 732.19. UNDER THIS METHOD ANY SECTIONS OF CABLE SHOWN IN THE PLANS TO BE CONTAINED IN CONTROLLERS, CABINETS, POLES, CONDUITS OR SUPPORTED ON MESSENGER WIRE INSTALLED FOR OTHER PURPOSES SHALL HAVE THE SUPPORTING MESSENGER AND JACKET WEB NEATLY REMOVED BY THE USE OF A TOOL SPECIFICALLY DESIGNED AND SIZED FOR THIS PURPOSE. DEVIATIONS FROM THE CABLE ROUTING SHOWN IN THE PLAN. FOR THE SOLE PURPOSE OF REDUCING THE AMOUNT OF MESSENGER TO BE REMOVED, WILL NOT BE PERMITTED. THE CABLE SHALL BE INSTALLED WITH APPROXIMATELY ONE TWIST FOR EACH 15 FEET (4.5 METERS) OF SPAN LENGTH.

2. SEPARATE INTERCONNECT CABLE MEETING THE REQUIREMENTS OF CMS 732.19 PLUS A 1/4 INCH (6 MILLIMETERS) MESSENGER WIRE AND LASHING MEETING THE REQUIREMENTS OF CMS 732.18. UNDER THIS METHOD THE CONTRACTOR WILL INSTALL A SEPARATE 1/4 INCH (6 MILLIMETERS) MESSENGER TO SUPPORT THE SPANS OF INTERCONNECT CABLES IN ALL LOCATIONS WHERE THE PLANS SHOW INTERCONNECT CABLE WHICH IS NOT OTHERWISE SUPPORTED BY A SIGNAL MESSENGER WIRE OR OTHER SUITABLE SUPPORT. UTILIZATION OF EXISTING MESSENGER WIRE, NOT PROVIDED BY THE PROJECT OR DESIGNATED THEREIN AS AVAILABLE FOR USE. IS PROHIBITED. DEVIATION FROM THE CABLE ROUTING SHOWN IN THE PLANS, FOR THE PURPOSE OF REDUCING THE NEED FOR SEPARATE MESSENGER WIRE. WILL NOT BE PERMITTED. IN EITHER CASE THE NUMBER OF SPLICE LOCATIONS SHALL BE KEPT TO A MINIMUM. MEASUREMENT WILL BE BASED UPON THE NUMBER OF FEET (METERS) OF CMS ITEM 632, "INTERCONNECT CABLE, MISC.: (BY SIZE). WITH SUPPORT MESSENGER, AS PER PLAN" IN PLACE IN ACCORDANCE WITH THE METHOD DESCRIBED IN CMS 632.29 AND NO SEPARATE PAYMENT WILL BE PROVIDED FOR ANY SEPARATE MESSENGER WIRE USED TO SUPPORT INTERCONNECT CABLES.

INTERCONNECT

THE CONTRACTOR SHALL PROVIDE AND INSTALL AN INTERCONNECT BETWEEN THE NEW MASTER CONTROLLER AT THE NORTH DRIVEWAY INSTALLED AS PART OF THIS PROJECT AND THE EXISTING 2 PHASE CONTROLLER AT THE INTERSECTION OF US 62/SR21 AND WARMINGTON ROAD APPROXIMATELY 2.600 FEET SOUTH. THIS WORK SHALL BE ALL INCLUSIVE INCLUDING THE WIRE. INSTALLATION. INTERFACE WITH EXISTING AND NEW CONTROLLERS AND THE COORDINATION OF THE LIGHTS. THIS WORK SHALL BE DONE TO THE SATISFACTION OF MENARD, INC. AND THE CITY OF MASSILLON. THIS INTERCONNECT IS TO BE EITHER BY RADIO LINK OR HARD WIRED.

CITY SUPERVISION REQUIRED

THE CONTRACTOR SHALL DURING ALL PHASES OF WORK NOTIFY THE CITY OF MASSILLON DURING THE INSTALLATION OF THE SIGNAL AND THE MODIFICATION OF THE EXISTING CONTROLLER. THE CONTRACTOR SHALL CONTACT THE SAFETY DEPARTMENT OF AND DISCUSS THIS WITH JOHN HAUSER (330) 832-1176. IT IS REQUIRED THAT MR. HAUSER BE ON SITE DURING ALL ASPECTS OF THIS WORK.

ITEM 633 - CONTROLLER ITEM, MISC.: VIDEO DETECTION SYSTEM, AS PER <u>PLAN</u>

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A VIDEO DETECTION SYSTEM CAPABLE OF INTERSECTION DETECTION CONTROL, FREEWAY MANAGEMENT DETECTION, INCIDENT VERIFICATION, TRAFFIC SURVEY DATA COLLECTION AND TEMPORARY DETECTION DURING CONSTRUCTION. REAL-TIME POLLING, DIAL-OUT OR STORED TRAFFIC DATA TO INCLUDE: VOLUME, OCCUPANCY, SPEED, DENSITY, HEADWAY AND 5 VEHICLE CLASSIFICATIONS EITHER BY PHASE OR PROGRAMMED TIMED INTERVALS RANGING FROM 1 SECOND TO 60 MINUTES. EXTENSIVE BOOLEAN LOGIC CAPABILITIES SHALL BE PROVIDED FOR FLEXIBLE DETECTOR LAYOUTS AND CAN BE USED TO HELP VALIDATE AN EVENT OR INCIDENT. THE DETECTION SYSTEM SHALL INCLUDE THE FOLLOWING LIST OF FEATURES AND CAPABILITIES:

PROVIDE A DETECTION SYSTEM THAT INCLUDES AN INTEGRATED COLOR CAMERA. 22XZOOM LENS, AND MACHINE VISION PROCESSOR IN ONE UNIT.

PROVIDE A SYSTEM THAT INCORPORATES SIMPLE SETUP AND CONFIGURATION OF THE INTERSECTION STOP BAR DETECTION APPLICATIONS WITH MINIMAL NUMBER OF DETAILED STEP-BY-STEP INSTRUCTIONS.

PROVIDE A COMMUNICATIONS PANEL THAT FULLY SUPPORTS AN ETHERNET IEEE 802.3 COMPLIANT 10/100BASE T AUTO SENSING PORT FOR ADVANCED SYSTEMS COMMUNICATIONS. THE ETHERNET PORT SHALL PROVIDE AN UPSTREAM CONNECTION TO OTHER ETHERNET DEVICES IN THE CABINET. AN INDUSTRY STANDARD RJ-45 TYPE CONNECTOR SHALL BE INCLUDED THAT SUPPORTS A SIMPLE CATSE PATCH CABLE INTERFACE. THE ETHERNET PORT SHALL SUPPORT HIGH SPEED SERIAL COMMUNICATIONS UP TO 230,400 BPS. THE ETHERNET PORT SHALL BE CONFIGURED USING A STATIC IP OR DHCP AND SHALL BE FACTORY PRE-CONFIGURED WITH A PRIVATE IP ADDRESS AND CALLS C SUBNET MASK.

PROVIDE A DETECTOR STATION THAT COLLECTS AND REPORTS TRAFFIC DATA GATHERED OVER SPECIFIC TIME INTERVALS.

PROVIDE CONTRACT LOSS DETECTORS THAT MONITOR THE QUALITY OF THE VIDEO IMAGE THAT IS BEING PROCESSED.

PROVIDE 24 VAC/DC POWER TO OPERATE THE DETECTOR.

PROVIDE A COMMUNICATIONS PORT THAT WILL ALLOW THE USER TO UPDATE THE EMBEDDED SOFTWARE WITH A NEW SOFTWARE RELEASE AND INTERACT WITH A PC CLIENT/SERVER APPLICATION FOR ALL OF THE VARIOUS DETECTION REQUESTS THAT ARE SUPPORT BY THE SENSOR.

PROVIDE A COMMUNICATIONS PROTOCOL OVER THE SUPERVISOR COMMUNICATIONS PORT WHICH INCLUDES UDP/IP MESSAGE PACKET AND ROUTING STANDARD, AND CAN BE USED THROUGHOUT THE FIELD OF SENSORS, HUBS AND THE HOST PC SERVER APPLICATION.

PROVIDE A CAMERA AND PROCESSOR THAT WILL CONSUME A MAXIMUM OF 10 WATTS. AND AN ENCLOSURE HEATER THAT WILL CONSUME 15 WATTS.

THE DETECTOR SYSTEM SHALL MAINTAIN A NON-VOLATILE OPERATIONS LOG WHICH MINIMALLY CONTAINS: REVISION NUMBERS FOR THE CURRENT DETECTOR HARDWARE AND SOFTWARE COMPONENTS IN OPERATION; TITLE AND COMMENTS FOR THE DETECTOR CONFIGURATION; DATE AND TIME THE LAST DETECTOR CONFIGURATION WAS DOWNLOADED TO THE SENSOR; DATE AND TIME THE OPERATION LOG WAS LAST CLEARED; DATE AND TIME COMMUNICATIONS WERE OPENED OR CLOSED WITH THE SENSOR: DATE AND TIME OF THE LAST POWER-UP: AND TIME-STAMPED. SELF-DIAGNOSED HARDWIRE AND SOFTWARE ERRORS THAT AID IN SYSTEM MAINTENANCE AND TROUBLESHOOTING.

PROVIDE EXTENSION ARM AND CAMERA JUNCTION BOX AS PER COLOR AND TYPE PROVIDED UNDER SPECIFICATION FOR ALL DECORATIVE TRAFFIC SIGNAL SUPPORTS.

PROVIDE A VIDEO SYSTEM THAT WILL ALLOW FOR COMPLETE CONTROL OF THE CAMERAS. DETECTION PROGRAMMING, ZOOM CAPABILITIES, AND VIEWING A LIVE VIDEO IMAGE.

PROVIDE AN ETHERNET VIDEO SERVER THAT CONNECTS DIRECTLY TO A 10/100BT ETHERNET NETWORK THAT ACCOMMODATES FOUR ANALOG VIDEO STREAMS. THE VIDEO SERVER SHALL PRODUCE LIVE HIGH QUALITY MOTION-JPEG IMAGES AT SPEEDS UP TO 30 FRAMES PER SECOND USING STANDARD TCP/IP NETWORKS. PROVIDE A SUFFICIENT QUANTITY OF VIDEO SERVERS SUCH THAT THE ANALOG VIDEO OUTPUTS FROM ALL VIDEO DETECTION CAMERAS SHALL BE CONNECTED TO THE VIDEO SERVER FOR REMOTE VIEWING AND MONITORING.

CONNECT THE ETHERNET PORTS FROM BOTH THE COMMUNICATIONS INTERFACE PANEL AND THE VIDEO SERVERS TO THE OPTICAL ETHERNET TRANSCEIVER INSTALLED IN THE CONTROLLER USING PROPERLY RATED CATSE CABLES AND RJ45 CONNECTORS.

THE VIDEO DETECTION SYSTEM SHALL BE WARRANTED BY ITS SUPPLIER FOR A MINIMUM OF TWO YEARS. ONGOING SOFTWARE SUPPORT BY THE SUPPLIER SHALL INCLUDE UPDATES OF THE SENSOR AND APPLICATIONS OF THE SOFTWARE. THESE UPDATES SHALL BE PROVIDED FREE OF CHARGE DURING THE WARRANTY PERIOD.

CONSTRUCTION - LOCATE AND MOUNT DETECTOR IN ACCORDANCE WITH MANUFACTURE SPECIFICATIONS. PROVIDE SUFFICIENT NUMBER OF VIDEO CAMERAS TO PROCESS VEHICLE PRESENCE, PASSAGE, AND SYSTEM DETECTOR ZONES AS INDICATED IN THE PLANS. RELOCATION OF DETECTORS, ADDITIONAL JUNCTION BOXES, CONDUIT, AND CABLE NEEDED TO DETECT PULSE, PASSAGE AND SYSTEM DETECTION ZONES ARE INCIDENTAL TO THE COST OF THE PROJECT.

THE VIDEO DETECTION EQUIPMENT SHALL BE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS, ITERIS, QUIXOTE TRAFFIC CORPORATION, OR APPROVED EQUAL.

ALL ITEMS NECESSARY TO PROVIDE A COMPLETE VIDEO DETECTION SYSTEM FOR ALL APPROACHES AT EACH INTERSECTION SHALL BE INCLUDED IN THE PAY ITEM. PAYMENT SHALL BE MADE AT THE THE CONTRACTOR UNIT PRICE FOR EACH ITEM 633. CONTROLLER MISC .: VIDEO DETECTION SYSTEM, AS PER PLAN IN PLACE AND FULLY OPERATIONAL AS SHOWN IN THE PLANS FOR EACH INTERSECTION.

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