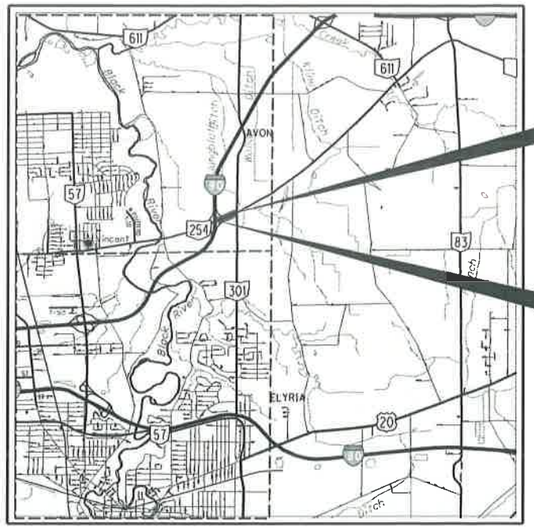

LOCATION MAP

LATITUDE: 41°25'33" LONGITUDE: 82°04'44"

SCALE IN MILES
0 1 2 3 4

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2019)	32,260
DESIGN YEAR ADT (2039)	34,820
DESIGN HOURLY VOLUME (2039)	2,780
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	3%
DESIGN SPEED	40 MPH
LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
MINOR ARTERIAL ROAD	
NHS PROJECT	NONE

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS
BEFORE YOU DIG.

OHIO Utilities Protection SERVICE
Call Before You Dig
1-800-362-2764
(Non-members must be called directly)

OIL & GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
1-800-925-0988

PLAN PREPARED BY:
OSBORN ENGINEERING
1201 EAST MARKET STREET, SUITE 200
AKRON, OHIO 44305

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

LOR-254-2.03

VILLAGE OF SHEFFIELD

LORAIN COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION

ADDITION OF EASTBOUND RIGHT TURN LANE ON SR 254 AT SR 301, INCLUDING ACCESS MANAGEMENT BY INSTALLATION OF A LONGITUDINAL CHANNELIZING MEDIAN AND RECONSTRUCTION OF FOUR TRAFFIC SIGNALS ALONG SR 254, ALONG WITH PLANING AND RESURFACING OF SR 254 BETWEEN THE BRIDGE OVER INTERSTATE 90 AND S.R. 301.

PROJECT EARTH DISTURBED AREA: 0.6 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: N/A
(NOI NOT REQUIRED)

2016 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES 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 ON THE PLANS AND ESTIMATES.

ENGINEERS SEAL:

STATE OF OHIO
DONALD R. PHIFER
61153
REGISTERED PROFESSIONAL ENGINEER

SIGNED:
DATE: 1-31-2019

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7/18/14	MT-95.31	7/21/17	TC-52.10	10/18/13				
BP-4.1	7/19/13	MT-95.32	7/21/17	TC-65.10	1/17/14				
BP-5.1	1/18/19	MT-97.11	1/20/17	TC-65.11	7/21/17				
BP-7.1	7/20/18	MT-99.20	7/20/18	TC-71.10	1/19/18				
		MT-101.90	7/21/17	TC-81.21	1/18/19				
CB-1.1	7/20/18	MT-105.10	7/19/13	TC-82.10	1/18/19				
CB-2.2	7/20/18	MT-110.10	7/19/13	TC-83.10	1/19/18				
				TC-83.20	7/21/17				
MH-1.1	1/15/16	TC-16.21	7/20/18	TC-85.10	1/18/19				
MH-1.2	1/15/16	TC-21.20	7/20/18	TC-85.20	7/20/18				
		TC-22.10	10/18/13						
DM-1.1	7/21/17	TC-22.20	1/17/14						
DM-4.4	1/15/16	TC-41.20	10/18/13						
		TC-41.30	10/18/13						
HL-30.11	1/18/19	TC-41.41	10/18/13						
HL-30.22	1/17/14	TC-42.20	10/18/13						

SUPPLEMENTAL SPECIFICATIONS

800-2016	4/19/19
809	1/18/19
815	4/20/18
824	1/18/19
832	10/19/18
906	10/15/10

SPECIAL PROVISIONS

APPROVED
DATE 1-28-19 MAYOR, VILLAGE OF SHEFFIELD

APPROVED
DATE 02/12/19 DISTRICT DEPUTY DIRECTOR

APPROVED
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E160572
PID NO. 102027
CONSTRUCTION PROJECT NO. 00000
RAILROAD INVOLVEMENT NONE
LOR-254-2.03
1 / 62

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LOR-254-2.03 PID 102027

SURVEY CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
SV1	640542.52	2082807.34	679.15	TYPE B AZIMUTH
SV2	641275.97	2084239.08	676.18	TYPE B AZIMUTH
SV3	640339.09	2081990.67	682.49	LORAIN CO 2007-03
SV4	640943.93	2083698.44	674.97	LORAIN CO 2007-04

BENCHMARKS

BM "A", EL=673.79
A CHISELED "X" ON THE SOUTHWEST BOLT OF THE SOUTH LEG OF THE STATE ROUTE 2/I-90 SIGN LOCATED ON THE NORTH SIDE OF STATE ROUTE 2 APPROXIMATELY 650 FEET EAST OF THE BRIDGE OVER I-90

BM "B", EL=675.14
A CHISELED SQUARE ON THE NORTHEAST CORNER OF THE CONCRETE PAD FOR THE CANTILEVER TRAFFIC SIGNAL POST AT THE NORTHWEST CORNER OF THE INTERSECTION OF DETROIT ROAD AND NORTH ABBE ROAD

BM "C", EL=676.34
AN ODOT DISK FOUND IN THE SOUTHWEST ABUTMENT OF THE DETROIT ROAD BRIDGE OVER I-90

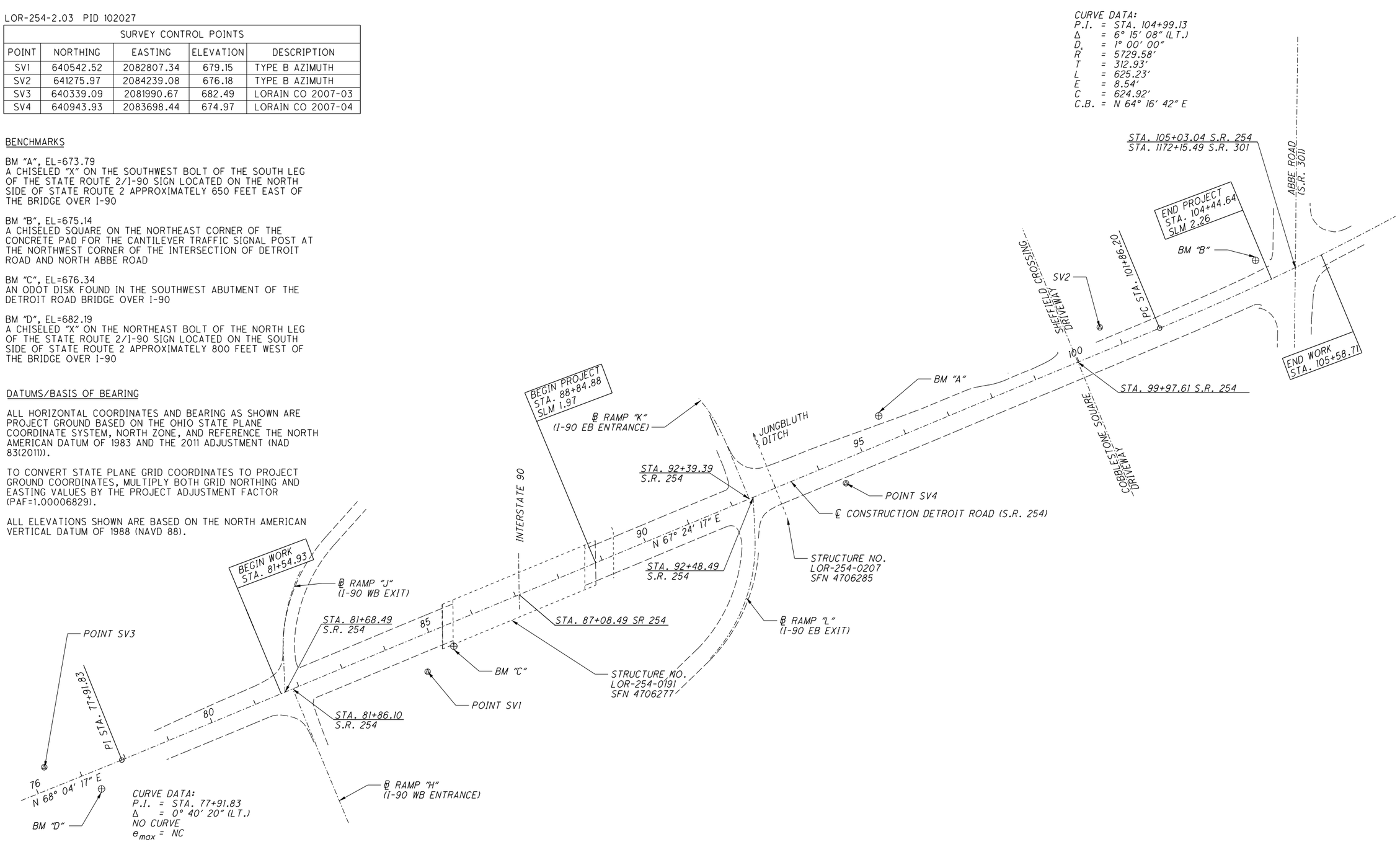
BM "D", EL=682.19
A CHISELED "X" ON THE NORTHEAST BOLT OF THE NORTH LEG OF THE STATE ROUTE 2/I-90 SIGN LOCATED ON THE SOUTH SIDE OF STATE ROUTE 2 APPROXIMATELY 800 FEET WEST OF THE BRIDGE OVER I-90

DATUMS/BASIS OF BEARING

ALL HORIZONTAL COORDINATES AND BEARING AS SHOWN ARE PROJECT GROUND BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, AND REFERENCE THE NORTH AMERICAN DATUM OF 1983 AND THE 2011 ADJUSTMENT (NAD 83(2011)).

TO CONVERT STATE PLANE GRID COORDINATES TO PROJECT GROUND COORDINATES, MULTIPLY BOTH GRID NORTHING AND EASTING VALUES BY THE PROJECT ADJUSTMENT FACTOR (PAF=1.00006829).

ALL ELEVATIONS SHOWN ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).



HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED DRP
CHECKED CJB

SCHEMATIC PLAN

LOR-254-2.03

2
62

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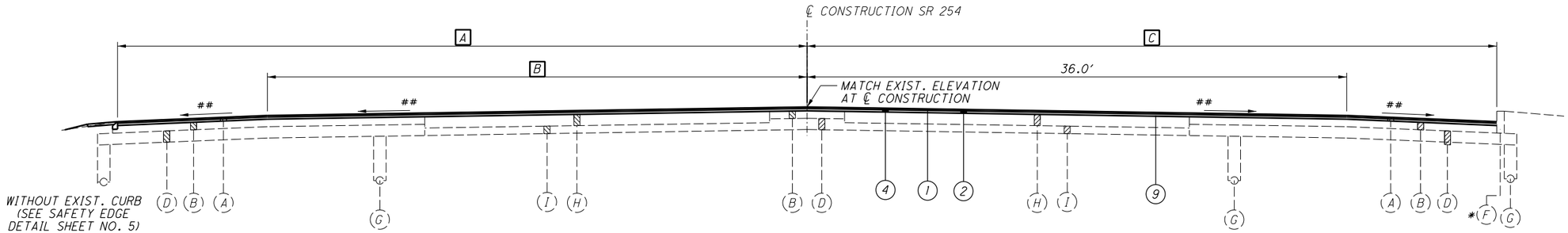


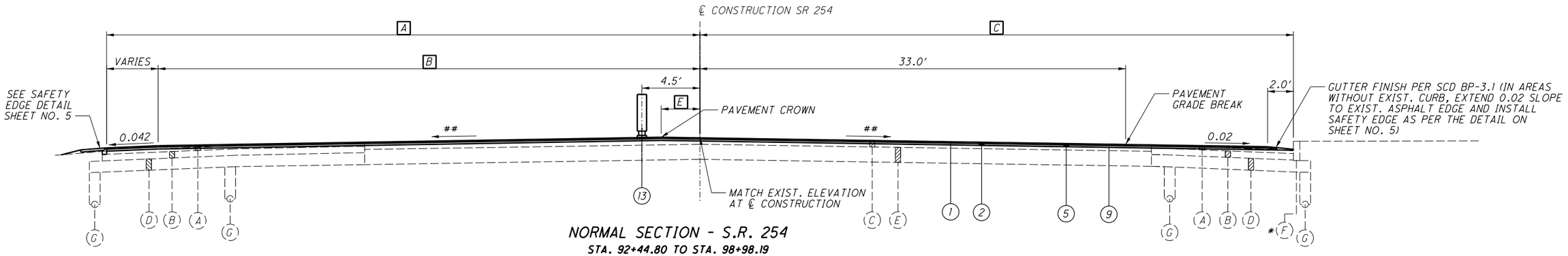
NORMAL SECTION - S.R. 254

STA. 88+84.88 TO STA. 92+44.80

STATION TO STATION	C
STA. 88+67.34 TO STA. 89+61	VARIES: 43.7' TO 46.0'
STA. 89+61 TO STA. 90+98	46.0'
STA. 90+98 TO STA. 91+76	VARIES: 46.0' TO 48.1'
STA. 91+76 TO STA. 92+44.80	VARIES: 48.1' TO 52.1'
STA. 92+44.80 TO STA. 92+60.62	VARIES: 52.1' TO 53.0'
STA. 92+60.62 TO STA. 93+18	VARIES: 53.0' TO 46.0'
STA. 93+18 TO STA. 98+98.18	46.0'

WITH EXIST. CURB
(LT. SIDE: STA. 89+02.74 TO STA. 89+57.69)
(RT. SIDE: STA. 88+67.34 TO STA. 90+98.08)

= MATCH EXIST. CROSS SLOPES



NORMAL SECTION - S.R. 254

STA. 92+44.80 TO STA. 98+98.19

STATION TO STATION	A	B
STA. 89+02.74 TO STA. 89+42	VARIES: 44.0' TO 46.0'	36.0'
STA. 89+42 TO STA. 90+09	46.0'	36.0'
STA. 90+09 TO STA. 92+07	VARIES: 46.0' TO 48.1'	36.0'
STA. 92+07 TO STA. 92+82.5	60.3'	48.0'
STA. 92+82.5 TO STA. 93+02	VARIES: 60.3' TO 59.0'	48.0'
STA. 93+02 TO STA. 93+76	VARIES: 59.0' TO 58.0'	48.0'
STA. 93+76 TO STA. 94+69	VARIES: 58.0' TO 55.5'	VARIES: 48.0' TO 44.5'
STA. 94+69 TO STA. 95+19	VARIES: 55.5' TO 53.0'	VARIES: 44.5' TO 42.0'
STA. 95+19 TO STA. 96+50	VARIES: 53.0' TO 46.0'	42.0 '
STA. 96+50 TO STA. 97+70	46.0'	42.0'
STA. 97+70 TO STA. 98+20	VARIES: 46.0' TO 35.1'	VARIES: 42.0' TO 30.0'
STA. 98+20 TO STA. 98+98.19	VARIES: 35.1' TO 34.4'	30.0'

STATION TO STATION	E
STA. 93+37.12 TO STA. 94+69.00	0.0'
STA. 94+69.00 TO STA. 95+19.00	VARIES: 0.0' TO 3.0'
STA. 95+19.00 TO STA. 98+98.19	3.0'

LEGEND

(1) ITEM 441 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG64-22

(2) ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)

(3) ITEM 441 - VARIABLE DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) (T=0" TO 1 3/8")

(4) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (3")

(5) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (0" TO 4")

(6) ITEM 302 - 8" ASPHALT CONCRETE BASE, PG64-22

(7) ITEM 304 - 9" AGGREGATE BASE

(8) ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2 (T=11")

(9) ITEM 407 - TACK COAT (0.06 GAL/SQ YD)

(10) ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS

(11) ITEM 204 - SUBGRADE COMPACTION

(12) ITEM SPECIAL - PAVEMENT OVERLAY FABRIC COMPOSITE

(13) ITEM 609 - CURB, MISC.: LONGITUDINAL CHANNELIZER, AS PER PLAN

(14) ITEM 659 - SEEDING AND MULCHING CLASS 1

* = EX. CURB LIMITS:
STA. 93+18 TO STA. 97+02.23, RT.
STA. 98+40.82 TO STA. 99+20.90, RT.

(A) 3"± ASPHALT CONCRETE

(B) 6"± BITUMINOUS AGGREGATE BASE

(C) 6"± ASPHALT

(D) AGGREGATE BASE - VARIES 7" TO 15"

(E) 14"± AGGREGATE BASE

(F) TYPE 6 CURB

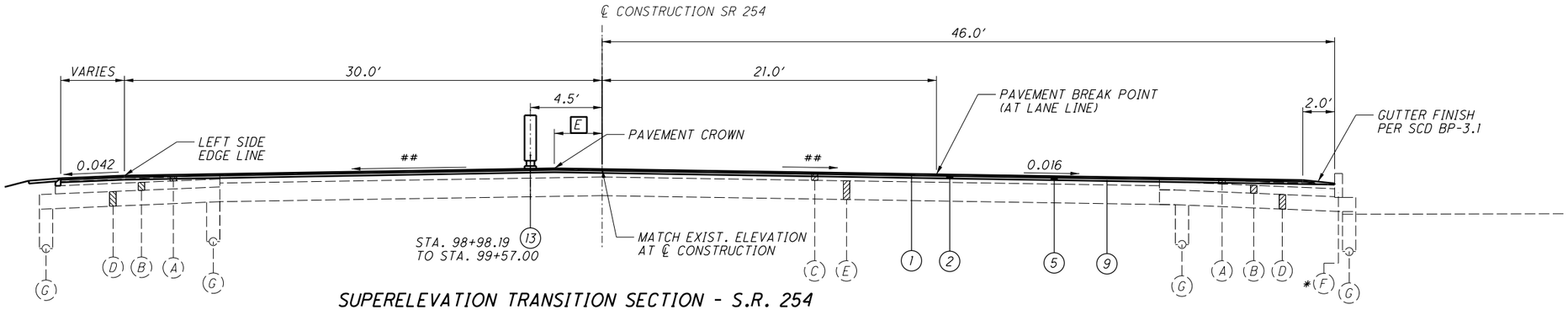
(G) 6" SHALLOW PIPE UNDERDRAIN (TO REMAIN UNLESS NOTED)

(H) 9" REINFORCED CONCRETE

(I) SUBBASE

TYPICAL SECTIONS

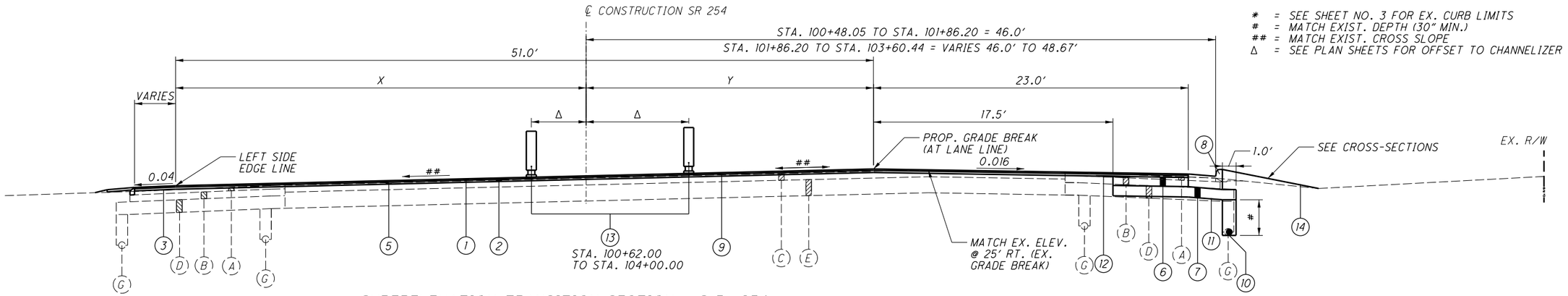
LOR-254-2.03



SUPERELEVATION TRANSITION SECTION - S.R. 254

STA. 98+98.19 TO STA. 100+16.46

STATION TO STATION	E
STA. 98+98.19 TO STA. 99+57.00	3.0′
STA. 99+57.00 TO STA. 100+48.05	VARIES: 3.0′ TO 0.0′



* = SEE SHEET NO. 3 FOR EX. CURB LIMITS
\# = MATCH EXIST. DEPTH (30" MIN.)
= MATCH EXIST. CROSS SLOPE
Δ = SEE PLAN SHEETS FOR OFFSET TO CHANNELIZER

SUPERELEVATION TRANSITION SECTION - S.R. 254

STA. 100+16.46 TO STA. 103+10.19

SUPERELEVATION SECTION - S.R. 254

STA. 103+10.19 TO STA. 103+95.15

STATION TO STATION	X	Y
STA. 100+16.46 TO STA. 101+86.20	30.0′	21.0′
STA. 101+86.20 TO STA. 103+95.15	VARIES: 30.0′ TO 26.36′	VARIES: 21.0′ TO 24.65′

NOTES:

1. S.R. 254 EXISTING SUPERELEVATION RATES, FROM RECORD DRAWINGS (LOR-90-13.01):

   LT. SIDE (℄ CONSTRUCTION TO 26′ LT.):

   STA. 98+98.19 TO STA. 102+26.19: -0.016

   STA. 102+26.19 TO STA. 103+10.19: TRANSITION, -0.016 TO -0.024

   STA. 103+10.19 TO STA. 104+00.00: -0.024

   RT. SIDE (℄ CONSTRUCTION TO 26′ RT.):

   STA. 98+98.19 TO STA. 100+62.19: TRANSITION, -0.016 TO 0

   STA. 100+62.19 TO STA. 103+10.19: TRANSITION, 0 TO +0.024

   STA. 103+10.19 TO STA. 104+00.00: +0.024

2. PAYMENT FOR THE REMOVAL OF EXISTING ASPHALT PAVEMENT (INCLUDING PAVED SHOULDER) SHALL BE INCLUDED UNDER ITEM 203, EXCAVATION. EXISTING CONCRETE OR RIGID PAVEMENT REMOVED SHALL BE PAID FOR UNDER ITEM 202, PAVEMENT REMOVED.

LEGEND

1. ITEM 441 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG64-22
2. ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
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10. ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS
11. ITEM 204 - SUBGRADE COMPACTION
12. ITEM SPECIAL - PAVEMENT OVERLAY FABRIC COMPOSITE
13. ITEM 609 - CURB, MISC.: LONGITUDINAL CHANNELIZER, AS PER PLAN
14. ITEM 659 - SEEDING AND MULCHING CLASS 1

- (A) 3"± ASPHALT CONCRETE
- (B) 6"± BITUMINOUS AGGREGATE BASE
- (C) 6"± ASPHALT
- (D) AGGREGATE BASE - VARIES 7" TO 15"
- (E) 14"± AGGREGATE BASE
- (F) TYPE 6 CURB
- (G) 6" SHALLOW PIPE UNDERDRAIN (TO REMAIN UNLESS NOTED)
- (H) 9" REINFORCED CONCRETE
- (I) SUBBASE

TYPICAL SECTIONS

LOR-254-2.03

CALCULATED DRP
CHECKED CJB

TYPICAL SECTIONS - SAFETY EDGE DETAIL

LOR-254-2.03

SAFETY EDGE

IN ADDITION TO THE REQUIREMENTS OF 401.12, ATTACH A DEVICE TO THE SCREED OF THE PAVER THAT CONFINES THE MATERIAL AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A COMPACTED WEDGE SHAPE PAVEMENT EDGE OF APPROXIMATELY 30 DEGREES (NOT STEEPER THAN 40 DEGREES). ENSURE THE DEVICE MAINTAINS CONTACT WITH THE EXISTING SURFACE, AND ALLOW FOR AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS AND OBSTRUCTIONS. DO NOT USE CONVENTIONAL SINGLE PLATE STRIKE OFF.

CONSTRUCTION OF SAFETY EDGE CAN BE OMITTED AT LOCATIONS WHERE EXISTING WIDTH OF GRADED SHOULDER OR BERM IS LESS THAN 12". PROJECTS WITH VARYING CONDITIONS SHOULD USE SAFETY EDGE WHERE POSSIBLE. PLAN PREPARATION HAS MADE EVERY REASONABLE ATTEMPT TO IDENTIFY POSSIBLE SAFETY EDGE LOCATIONS.

USE THE TRANSTECH SHOULDER WEDGE MAKER, THE CARLSON SAFETY EDGE END GATE, THE ADVANT-EDGER, THE RAMP CHAMP SERIES II WITH SAFETY EDGE SHOE, THE TROXLER SAFETSLOPE, OR A SIMILAR APPROVED-EQUAL DEVICE THAT PRODUCES THE SAME WEDGE CONSOLIDATION RESULTS. CONTACT INFORMATION FOR THESE WEDGE SHAPE COMPACTION DEVICES IS THE FOLLOWING:

TRANSTECH SYSTEMS, INC.
1594 STATE STREET
SCHENECTADY, NY 12304
1-800-724-6306
WWW.TRANSTECHSYS.COM

CARLSON SAFETY EDGE END GATE
18425 50TH AVENUE EAST
TACOMA, WA 98446
253-875-8000
WWW.CARLSONPAVINGPRODUCTS.COM

ADVANT-EDGE PAVING EQUIPMENT LLC
33 OLD NISKAYUNA RD.
LOUDONVILLE, NY 12211
814-422-EDGE (3343)
WWW.ADVANTEDGEPAVING.COM

TROXLER ELECTRONIC LABORATORIES, INC.
3008 E. CORNWALLIS RD.
PO BOX 12057
RESEARCH TRIANGLE PARK, NC 27709
1-877-TROXLER (876-9537)
WWW.TROXLERLABS.COM

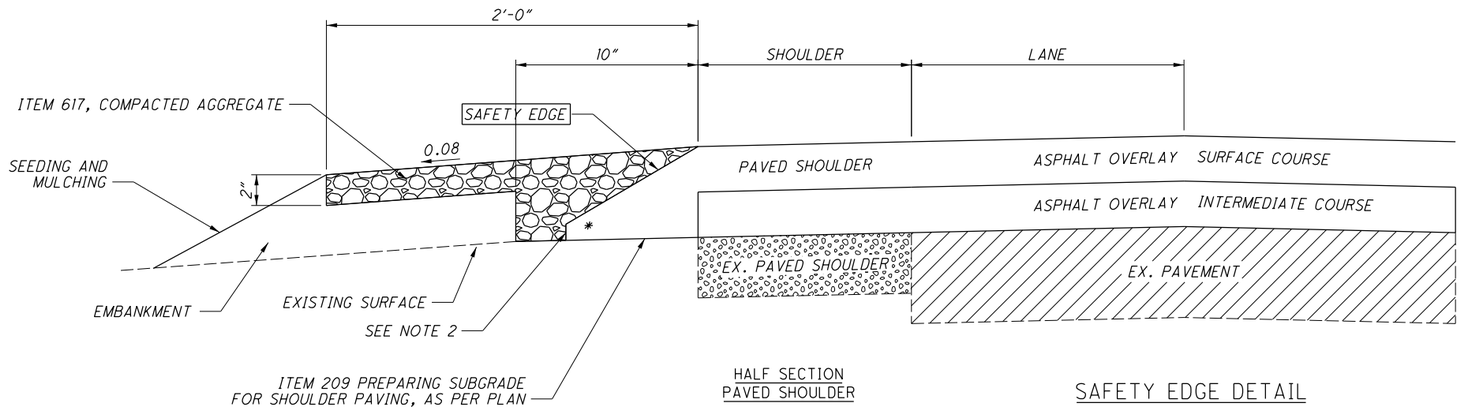
IF ELECTING TO USE A SIMILAR DEVICE, PROVIDE PROOF THAT THE DEVICE HAS BEEN USED ON PREVIOUS PROJECTS WITH ACCEPTABLE RESULTS OR CONSTRUCT A TEST SECTION PRIOR TO THE BEGINNING OF WORK AND DEMONSTRATE WEDGE COMPACTION TO THE SATISFACTION OF THE ENGINEER. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITIONS AND TURNOUTS OR OTHERWISE AUTHORIZED BY THE ENGINEER.

IN ADDITION TO THE REQUIREMENTS OF 401.16, MAKE THE FIRST ROLLER PASS 8 TO 12 INCHES (200 TO 300 MM) AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

ITEM 209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN.

PREPARE THE SHOULDER FOR PAVING A CONSISTENT SAFETY EDGE IN BOTH THICKNESS AND WIDTH.

PRIOR TO PAVING THE SAFETY EDGE, GRADE AN AREA 10 INCHES WIDE, BEGINNING AT THE EDGE OF THE PAVED ROADWAY, TO PROVIDE A LEVEL SURFACE FREE OF VEGETATION FOR CONSTRUCTION OF THE SAFETY EDGE. IF NECESSARY, EXCAVATE THE GRADED AREA TO THE DEPTH NEEDED TO CONSTRUCT THE SAFETY EDGE. COMPACT THE GRADED SHOULDER ACCORDING TO 617.05, OR AS DIRECTED BY THE ENGINEER.



HALF SECTION
PAVED SHOULDER

SAFETY EDGE DETAIL

NOTES:

1.) SAFETY EDGES ARE REQUIRED AT THE OUTSIDE EDGES OF THE PAVED ROADWAY (EDGE OF TRAVEL LANE OR EDGE OF PAVED SHOULDER).

2.) CONSTRUCT THE SAFETY EDGE THE FULL ASPHALT CONCRETE OVERLAY THICKNESS OR 2.5" WHICHEVER IS GREATER, NOT TO EXCEED THE MAXIMUM SAFETY EDGE THICKNESS OF 6". CONSTRUCT AT A NEAR-VERTICAL FACE BELOW THE SAFETY EDGE FOR THICKNESS GREATER THAN 6".

3.) BLADE AND SHAPE EXISTING SHOULDER MATERIAL TO FORM A UNIFORM SURFACE UNDER THE SAFETY EDGE PRIOR TO PLACEMENT OF THE ASPHALT CONCRETE OVERLAY.

* 40°MAX

SAFETY EDGE ESTIMATED QUANTITIES

STATION		LIN. FT.	203	209	441	617	659
			EMBANKMENT	PREPARING SUBGRADE FOR SHOULDER PAVING	ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG64-22	COMPACTED AGGREGATE	SEEDING AND MULCHING CLASS 1
			0.30 SF/FT		0.04 SF/FT	0.34 SF/FT	5 FT/FT
FROM	TO		CU YD	MILE	CU YD	CU YD	SQ YD
LEFT SIDE							
89+57.68	92+07.80	250.12	2.78	0.048	0.38	3.15	138.96
92+79.31	96+00.59	321.28	3.57	0.061	0.48	4.05	178.49
96+64.16	98+19.78	155.62	1.73	0.030	0.24	1.96	86.46
98+50.41	99+65.28	114.87	1.28	0.022	0.18	1.45	63.82
100+45.46	102+87.41	241.95	2.69	0.046	0.36	3.05	134.42
103+27.12	104+44.64	117.52	1.31	0.023	0.18	1.48	65.29
RIGHT SIDE							
90+98.00	91+78.14	80.14	0.90	0.016	0.12	1.01	44.53
92+60.91	93+18.08	57.17	0.64	0.011	0.09	0.72	31.77
97+02.27	97+98.65	96.38	1.08	0.019	0.15	1.22	53.55
WEST SIDE COBBLESTONE SQ.		21.15	0.24	0.005	0.04	0.27	11.75
SUBTOTALS			16.22	0.281	2.22	18.36	809.04
TOTALS CARRIED TO GENERAL SUMMARY			17	0.29	3	19	810

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

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

SANITARY, STORM, AND WATER:
SHEFFIELD VILLAGE
4340 COLORADO AVENUE
SHEFFIELD VILLAGE, OHIO 44054
KEN KACZAY, VILLAGE ADMINISTRATOR
440-949-6325

GAS:
COLUMBIA GAS OF OHIO
3101 NORTH RIDGE ROAD, EAST
LORAIN, OHIO 44055
ADAM WOODIE, P.E., FIELD ENGINEER
440-240-6144 (OFFICE)
440-242-5672 (CELL)
440-240-6162 (FAX)

ELECTRIC:
OHIO EDISON
6326 LAKE AVENUE
ELYRIA, OHIO 44035
DOUG LINN
440-326-3268

TELEPHONE/COMMUNICATIONS:
WINDSTREAM OHIO
560 TERNES AVENUE
ELYRIA, OHIO 44035
GEOFFREY HAMM, OSP ENGINEER II
440-329-4245

EVERSTREAM
1228 EUCLID AVENUE, SUITE 250
CLEVELAND, OHIO 44115
JIM BYRNE
216-581-7972

CABLE TELEVISION:
CHARTER COMMUNICATIONS
8150 DOW CIRCLE
STRONGSVILLE, OHIO 44136
GARY NAUMANN
216-392-7963

WIDE OPEN WEST (WOW)
105 BLAZE INDUSTRIAL PARKWAY
BEREA, OHIO 44017
TOM AUBRY
440-973-4375

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.

NO UTILITY RELOCATIONS ARE ANTICIPATED FOR THIS PROJECT.

THE OVERHEAD ELECTRIC CONDUCTORS HAVE A VOLTAGE OF 12.5 kV.

COLUMBIA GAS OF OHIO WILL EXPOSE THEIR EXISTING SERVICE LINES, AS NEEDED, WITH A MINIMUM 2 WEEK ADVANCE NOTICE. THE CONTRACTOR SHOULD CONTACT ADAM WOODIE AT THE INFORMATION SHOWN ABOVE.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET NO. 2 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL:

POSITIONING METHOD:	ODOT VRS
MONUMENT TYPE:	B

VERTICAL POSITIONING:

ORTHOMETRIC HEIGHT DATUM:	NAVD 88
GEOID:	GEOID 12A

HORIZONTAL POSITIONING:

REFERENCE FRAME:	NAD 83 (2011)
ORIGIN OF COORDINATE SYSTEM:	GRS80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM:	OHIO STATE PLANE-NORTH ZONE
COMBINED SCALE FACTOR:	0.99993171
PROJECT ADJUSTMENT FACTOR:	1.00006829
ORIGIN OF COORDINATE SYSTEM:	0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

ITEM 254 - PATCHING PLANED SURFACE

THE FOLLOWING ESTIMATED QUANTITY IS PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER AS DESCRIBED IN CMS 254.04. THE LIMIT OF PATCHING DEPTH IS 0 TO 2 INCHES.

254, PATCHING PLANED SURFACE	1500 SQ. YD.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, TOPSOIL	175 CU. YD.
659, REPAIR SEEDING AND MULCHING	80 SQ. YD
659, COMMERCIAL FERTILIZER	0.22 TON
659, WATER	9 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

ENVIRONMENTAL COMMITMENTS

ITEM SPECIAL - PETROLEUM CONTAMINATED SOILS

ENVIRONMENTAL STUDIES HAVE SHOWN THAT PETROLEUM CONTAMINATED MATERIALS WILL BE ENCOUNTERED DURING DEMOLITION AND EXCAVATIONS FOR CONSTRUCTION ACTIVITIES ON THREE DIFFERENT SITES; SITE #8 HARBOR FREIGHT - 5308 DETROIT ROAD, SITE #9 KEY BANK - 5290 DETROIT ROAD, AND SITE #12 SPEEDWAY - 5230 DETROIT ROAD. IMPACTED SOILS AND GROUNDWATER ARE ANTICIPATED FROM SITE #12 - STATION 97+50 TO STATION 99+50, SITE #9 - STATION 102+00 TO STATION 104+00, AND SITE #8 - STATION 105+00 TO STATION 106+00. LOW STRENGTH MORTAR (LSM) SHALL BE USED TO BACKFILL THE EXCAVATED SITES BETWEEN THESE LIMITS.

THE CONTRACTOR SHALL MANAGE THIS MATERIAL ACCORDING TO THE FOLLOWING NOTES. THE ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS WORK. ALL EXCAVATIONS AT THE AFOREMENTIONED LOCATIONS SHALL BE PAID FOR UNDER THE ORIGINAL BID ITEMS.

ALL POTENTIAL PETROLEUM CONTAMINATED SOIL, WITHIN THE AFOREMENTIONED LIMITS, EXCAVATED BY THE CONTRACTOR AT THIS LOCATION MAY BE STOCKPILED IN AN AREA PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE ENGINEER MAY PERMIT TEMPORARY STORAGE OF THE EXCAVATED MATERIAL IN A LINED AND COVERED ROLL-OFF BOX. THE ENGINEER MAY PERMIT TEMPORARY STORAGE OF THE EXCAVATED MATERIAL ON AN IMPERMEABLE MEMBRANE. THE MEMBRANE SHALL BE SURROUNDED BY BALES OF STRAW TO PREVENT THE SUSPECTED SOIL FROM COMING IN CONTACT WITH THE ORIGINAL SOIL. AN IMPERMEABLE MEMBRANE SHALL BE PLACED OVER THE STOCKPILE TO PREVENT CONTACT WITH PRECIPITATION AND/OR SURFACE RUN-OFF. THE ENGINEER MAY PERMIT THE CONTRACTOR TO DIRECT LOAD THE EXCAVATED CONTAMINATED MATERIAL INTO TRUCKS.

IF EXCAVATIONS WITHIN THE AFOREMENTIONED LIMITS REQUIRE DEWATERING FOR CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL DEWATER, CONTAINERIZE, TEST THE WATER AND DISPOSE OF BY METHODS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS AND/OR AUTHORIZATIONS NEEDED TO STORE, TRANSPORT, AND DISPOSE OF THE WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF REGULATED WATER WITH A METHOD APPROVED BY THE ENGINEER. WORK INVOLVED WITH THIS ITEM SPECIAL INCLUDES COMPLYING WITH THE HANDLING, STORAGE, AND DISPOSAL OF REGULATED AND NON-REGULATED WATER.

THIS MATERIAL SHALL BE PROPERLY TESTED (FOR DISPOSAL), TRANSPORTED, AND DISPOSED OF IN A LICENSED (BY THE LOCAL HEALTH DEPARTMENT) AND PERMITTED (BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY) SOLID WASTE FACILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY TESTING, PERMITS, AND APPROVALS AND TO TRANSPORT THE MATERIAL.

PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT PRICE BID PER UST, TON, AND/OR GALLON. THE BASIS OF CONVERSION FROM TONS TO CUBIC YARDS IS 1.5 TON/CUBIC YARD. ALL EXCAVATIONS WITHIN THE AFOREMENTIONED LIMITS SHALL BE PAID FOR UNDER THE ORIGINAL PLAN BID ITEMS. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

SPECIAL,	WORK INVOLVING PETROLEUM CONTAMINATED SOIL	250 TON

CALCULATED DRP
CHECKED CJB

GENERAL NOTES

LOR-254-2.03

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

ALL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT OF WAY FOR SALVAGE BY VILLAGE FORCES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULK-HEADS IN AN EXISTING 12 IN DIAMETER CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

PRIOR TO PERFORMING THIS WORK, THE CONTRACTOR SHALL VIDEO INSPECT THE CONDUIT TO VERIFY THERE ARE NO LATERALS OR OTHER PIPES CONNECTED TO IT. IF A CONNECTION IS LOCATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE THE DISPOSITION OF THE PIPE AND, IF IT'S FOUND TO BE ACTIVE, HOW TO MAINTAIN THE CONNECTION.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACK-FILLED IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

ITEM SPECIAL - MAILBOX REMOVED AND RESET

THIS WORK SHALL CONSIST OF REMOVING, STORING, AND RESETTING EXISTING MAILBOXES AND MAILBOX SUPPORTS. THE CONTRACTOR SHALL TAKE CARE IN REMOVING AND RESETTING THE MAILBOX AND SUPPORTS SO THAT THE FACE OF THE MAILBOX IS 6 TO 8 INCHES FROM THE FACE OF THE CURB, AND THE DOOR IS 41 TO 45 INCHES ABOVE THE TOP OF THE CURB.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT FOR DAMAGED OR IMPROPER HANDLING AS DETERMINED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POSTMASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO BE REMOVED OR RESET. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10.

MAILBOXES REMOVED AND RESET SOLELY FOR THE CONVENIENCE OF THE CONTRACTOR'S OPERATIONS IN THE JUDGMENT OF THE ENGINEER SHALL NOT BE PAID FOR.

ALL LABOR, MATERIALS, AND EQUIPMENT NEEDED FOR THE CONTRACTOR TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL, MAILBOX REMOVED AND RESET.

CALCULATED DRP
CHECKED CJB

GENERAL NOTES

LOR-254-2.03

ITEM SPECIAL - PAVEMENT OVERLAY FABRIC COMPOSITE

DESCRIPTION: THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING PAVEMENT OVERLAY FABRIC AS SHOWN ON THE PLANS AND AT LOCATIONS DESIGNATED BY THE ENGINEER. THIS FABRIC COMPOSITE MAY BE PLACED ON A MILLED SURFACE.

MATERIALS: PAVEMENT OVERLAY FABRIC COMPOSITE SHALL BE CONSTRUCTED OF LONG CHAIN SYNTHETIC POLYMERS COMPOSED OF AT LEAST 85 PERCENT OF POLYOLEPHINES, POLYESTERS, AND POLYAMIDES BY WEIGHT, SHALL BE RESISTANT TO CHEMICAL ATTACK, MILDEW, ROT, AND ATTACHED TO A FIBERGLASS GRID. COMPOSITE SHALL MEET THE FOLLOWING PHYSICAL REQUIREMENTS:

PROPERTY	SPECIFICATION	TEST METHOD
PAVING FABRIC: GLAS GRID CG200 OR APPROVED EQUAL		
GRAB TENSILE STRENGTH, LBS.	90 MIN.	ASTM D1682
GRAB ELONGATION PERCENT	50 MIN.	ASTM D1682
ASPHALT RETENTION, GAL./SY.	0.20 MIN.	AASHTO M-288
COMPOSITE: ULTIMATE TENSILE STRENGTH (LBS./FT.)	MD 6720 MIN. XD 13440 MIN.	ASTM D6637
MAXIMUM ELONGATION	LESS THAN 3%	ASTM D6637
PERCENT OPEN AREA	> 50	TEX-621-J "TESTING GEOGRIDS"
MELTING POINT (MIN. DEGREES F)	1000	ASTM C338
LOSS ON IGNITION %	> 15	TEX-621-J "TESTING GEOGRIDS"
MASS/UNIT AREA	16.0 OZ. /SY. MIN.	ASTM C5261-92

THE COMPOSITE FABRIC SHALL NOT BE EXPOSED TO ULTRAVIOLET RADIATION FOR MORE THAN 7 DAYS. THE FABRIC SHALL BE AT LEAST 60 INCHES BUT NO MORE THAN 150 INCHES IN WIDTH AND FURNISHED IN ROLLS OF APPROXIMATELY 104 YARDS IN LENGTH. THE FABRIC CAN BE CUT TO A 30 INCH WIDTH IF A 30 INCH WIDTH IS SPECIFIED IN THE PLAN.

THE ASPHALT SEALANT SHALL BE PG64-22 MEETING THE REQUIREMENTS OF 702.01.

CERTIFICATION SHALL BE FURNISHED IN ACCORDANCE WITH 101.061 BEFORE THE FABRIC IS PLACED. THE ENGINEER MAY REQUIRE SAMPLING FOR TESTING PURPOSES AS DIRECTED BY THE LABORATORY.

EQUIPMENT: THE CONTRACTOR SHALL PROVIDE EQUIPMENT FOR HEATING AND APPLYING BITUMINOUS MATERIALS. HEATING EQUIPMENT AND DISTRIBUTORS SHALL MEET THE REQUIREMENTS OF 407.

THE MECHANICAL LAYDOWN EQUIPMENT SHALL BE MOUNTED ON A FOUR-WHEELED VEHICLE THAT IS CAPABLE OF DRIVING OVER THE FABRIC WHILE IT IS BEING INSTALLED TO CONTROL THE TENSION ON THE MATERIAL. THE LAYDOWN MACHINE SHALL BE EQUIPPED WITH CLUTCHES TO ADJUST THE ROLL TENSION AND BROOMS TO SMOOTH OUT WRINKLES DURING INSTALLATION. MANUAL LAYDOWN MAY ONLY BE USED IN AREAS INACCESSIBLE TO THE LAYDOWN MACHINE.

CONSTRUCTION DETAILS

1. SURFACE PREPARATION: THE CRACKS AND ENTIRE ROAD SURFACE TO BE TREATED, AND AT LEAST ONE ADDITIONAL FOOT ON EACH SIDE, SHALL BE CLEANED BY SWEEPING, BLOWING, OR OTHER METHODS UNTIL ALL DUST, MUD, CLAY LUMPS, VEGETATION, AND FOREIGN MATERIAL ARE REMOVED ENTIRELY FROM THE PAVEMENT BEFORE THE BITUMINOUS MATERIAL IS APPLIED. CARE SHALL BE EXERCISED TO PREVENT MATERIAL SO REMOVED FROM BECOMING MIXED WITH THE NEW SURFACE. LARGE CRACKS AND POTHOLES SHOULD BE FILLED.

2. APPLICATION OF ASPHALT SEALANT: THE APPLICATION OF THE ASPHALT SEALANT SHALL CONFORM TO THE APPLICABLE PORTIONS OF 407. THE ASPHALT SEALANT SHALL BE UNIFORMLY SPRAYED OVER THE AREA TO BE COVERED BY FABRIC AT A RATE OF 0.25 TO 0.30 GALLON PER SQUARE YARD.

THE QUANTITY APPLIED WILL VARY WITH THE SURFACE CONDITION OF THE EXISTING PAVEMENT (DEGREE OF POROSITY, FOR EXAMPLE). THE FABRIC ALONE, UNDER HEAT OF THE OVERLAY, WILL ABSORB AT LEAST 0.20 GALLON PER SQUARE YARD. WITHIN INTERSECTIONS OR OTHER ZONES WHERE VEHICLE BRAKING IS COMMON PLACE, THE APPLICATION SHALL BE REDUCED 20 PERCENT. THE SEALANT SHALL BE APPLIED TO AN AREA TWO TO SIX INCHES WIDER THAN THE WIDTHS OF THE FABRIC BEING PLACED, BUT RESTRICTED TO THE AREA OF IMMEDIATE FABRIC LAYDOWN. APPLICATION SHALL BE BY DISTRIBUTOR WITH HAND SPRAYING ALLOWED ONLY WHERE THE DISTRIBUTOR CANNOT BE USED. ASPHALT SPILLS SHALL BE CLEANED FROM THE ROAD SURFACE TO AVOID FLUSHING AND POSSIBLE MOVEMENT AT THESE ASPHALT RICH AREAS.

THE ASPHALT CEMENT USED AS A SEALANT SHALL HAVE DISTRIBUTOR TANK TEMPERATURE BETWEEN 300 DEGREES AND 350 DEGREES F. APPLICATION TEMPERATURE IS NOT CRITICAL AFTER THE ASPHALT IS SPRAYED ON THE PAVEMENT. IF THE FABRIC IS TO BE OVER-SPRAYED, DISTRIBUTOR TANK TEMPERATURES SHOULD NOT EXCEED 350 DEGREES F TO AVOID DAMAGE TO THE FABRIC.

3. COMPOSITE FABRIC PLACEMENT: THE COMPOSITE FABRIC SHALL BE PLACED ON THE ASPHALT SEALANT AS SOON AS PRACTICAL AND BEFORE THE TACKINESS OF THE SEALANT IS LOST. THE COMPOSITE SHALL BE PLACED AS SMOOTHLY AS POSSIBLE TO AVOID WRINKLES. IT SHALL BE UNROLLED SO THAT THE SOFT SIDE IS UNWOUND INTO THE SEALANT AND THE GRID SIDE UP, THUS PROVIDING OPTIMUM BOND BETWEEN FABRIC AND PAVEMENT DURING THE CONSTRUCTION PROCESS. WRINKLES SEVERE ENOUGH TO CAUSE "FOLDS" SHALL BE SLIT AND LAID FLAT. SMALL WRINKLES, WHICH FLATTEN UNDER COMPACTION, ARE NOT DETRIMENTAL TO PERFORMANCE. THE COMPOSITE SHALL BE BROOMED OR SQUEEGEED TO REMOVE AIR BUBBLES AND MAKE COMPLETE CONTACT WITH THE ROAD SURFACE AS RECOMMENDED BY THE FABRIC MANUFACTURER. THE FABRIC SHALL BE LAID STRAIGHT, WITHIN THE SEALANT AREA. MODERATE CURVES CAN BE NEGOTIATED BY STRETCHING THE FABRIC ON THE OUTSIDE OF THE CURVE BY ADJUSTING THE DRAG ON THE BRAKES OF THE LAYDOWN EQUIPMENT. TRANSVERSE JOINTS SHALL BE "SHINGLED" IN THE DIRECTION OF PAVING.

LONGITUDINAL JOINTS SHALL BE MADE BY OVERLAPPING THE FABRIC ONE TO TWO INCHES. TRANSVERSE JOINTS SHALL BE MADE BY OVERLAPPING THE FABRIC MINIMUM OF FOUR INCHES. ADDITIONAL SEALANT (ABOUT 0.20 GAL. PER SQ. YD.) SHALL BE ADDED TO THE JOINTS AS REQUIRED. THE ADDITIONAL SEALANT FOR TRANSVERSE JOINTS MAY BE APPLIED BY HAND SPRAYING OR WITH MOP AND BUCKET IF EXTREME CARE IS TAKEN TO NOT EXCEED THE SPECIFIED RATE.

TO ENHANCE THE BOND OF THE FABRIC WITH THE EXISTING PAVEMENT AND TO SMOOTH OUT ANY WRINKLES OR FOLDS IN THE FABRIC, THE CONTRACTOR MAY BE REQUIRED TO PNEUMATICALLY ROLL THE FABRIC AFTER IT IS PLACED.

4. TREATMENT OF THE APPLIED COMPOSITE PRIOR TO THE ASPHALT CONCRETE: IT IS UNNECESSARY TO TACK COAT THE FABRIC PRIOR TO PLACEMENT OF THE OVERLAY UNLESS THERE ARE CIRCUMSTANCES SUCH AS DELAY OF OVERLAY, DUST ACCUMULATION OR UNDER APPLICATION OF SEALANT WHICH WOULD MAKE TACK COATING DESIRABLE. IF A TACK COAT IS REQUIRED, EMULSIFIED ASPHALT SHALL BE APPLIED AT A RATE OF 0.02 TO 0.05 GALLON PER SQUARE YARD RESIDUAL ASPHALT. PLACEMENT OF THE ASPHALT CONCRETE OVERLAY SHALL CLOSELY FOLLOW FABRIC LAYDOWN. IN THE EVENT THAT THE SEALANT BLEEDS THROUGH THE FABRIC BEFORE THE ASPHALT CONCRETE IS PLACED, IT MAY BE NECESSARY TO BLOT THE SEALANT BY SPREADING SAND OR ASPHALT CONCRETE OVER THE AFFECTED AREAS. THIS WILL PREVENT ANY TENDENCY FOR CONSTRUCTION EQUIPMENT TO PICK UP THE FABRIC WHEN DRIVING OVER IT.

TURNING OF THE PAVER AND OTHER VEHICLES SHALL BE GRADUAL TO AVOID MOVEMENT OR DAMAGE TO THE COMPOSITE. UNESSENTIAL TRAFFIC ON COMPOSITE SHOULD BE ELIMINATED. IF IT IS NECESSARY TO OPEN THE ROAD TO TRAFFIC AFTER FABRIC PLACEMENT, BUT PRIOR TO PAVING, IT IS ADVISABLE TO SPREAD A SMALL AMOUNT OF SAND OVER THE MEMBRANE TO PREVENT TIRES FROM STICKING TO THE SEALANT OR PULLING UP THE COMPOSITE. THIS PRACTICE IS TO BE AVOIDED IF POSSIBLE TO PREVENT DAMAGE TO THE MEMBRANE. QUICK STOPS AND SHARP TURNS MAY DAMAGE THE MATERIALS. IF RAIN PRIOR TO THE OVERLAY SHOULD CAUSE A BLISTERED APPEARANCE AND SOME BOND LOSS THROUGHOUT THE MEMBRANE, IT SHOULD BE CORRECTED BY PNEUMATIC ROLLING UNTIL ADHESION IS RESTORED.

5. ASPHALT CONCRETE: THE ASPHALT CONCRETE OVERLAY SHALL CONFORM TO 401 SPECIFICATION WITH A MINIMUM THICKNESS OF 1.5"

METHOD OF MEASUREMENT: THE ACCEPTED FABRIC COMPOSITE PLACED IN ACCORDANCE WITH THESE SPECIFICATIONS AS DIRECTED WILL BE MEASURED BY THE SQUARE YARD OF ROADWAY, RAMPS, AND TURNOUTS COVERED BY THE COMPOSITE FABRIC. LAPS IN COMPOSITE FABRIC WILL NOT BE MEASURED.

BLOTTING THE SEALANT, SPREADING SAND OR ASPHALT CONCRETE OVER THE MEMBRANE TO PREVENT TIRES FROM STICKING TO THE SEALANT OR PULLING UP THE FABRIC, ROLLING TO RESTORE BOND, OR APPLICATION OF A TACK COAT WILL NOT BE MEASURED FOR DIRECT PAYMENT BUT SHALL BE CONSIDERED A NECESSARY PART OF THE CONSTRUCTION INVOLVED AND THE COST THEREFORE SHALL BE INCLUDED IN OTHER APPROPRIATE CONTRACT UNIT PRICES.

BASIS OF PAYMENT: THE ACCEPTED QUANTITIES OF PAVEMENT OVERLAY FABRIC COMPOSITE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL LABOR, MATERIALS (INCLUDING ASPHALT SEALANT AND OVERLAP), TOOLS, EQUIPMENT AND INCIDENTALS FOR DOING ALL THE WORK INVOLVED IN FURNISHING AND PLACING THE COMPOSITE COMPLETE IN PLACE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

ITEM	UNIT	DESCRIPTION
SPECIAL 690E12060	SQUARE YARD	PAVEMENT OVERLAY FABRIC COMPOSITE

CALCULATED DRP
CHECKED CJB

GENERAL NOTES

LOR-254-2.03

ITEM 614, MAINTAINING TRAFFIC (AT ALL TIMES)

A MINIMUM OF 2 LANES OF TRAFFIC ON S.R. 254 IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, WITH THE EXCEPTION OF WHEN THE EXISTING PAVEMENT IS BEING PLANED OR RESURFACED DURING NIGHT TIME WORK, WHEN ONE LANE OF TRAFFIC IN EACH DIRECTION WILL BE ALLOWED, AS PER THE FOLLOWING NOTES.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC AND THE LOCAL BUSINESSES. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS

SEQUENCE OF CONSTRUCTION

THE FOLLOWING SEQUENCE OF CONSTRUCTION HAS BEEN PROVIDED FOR THE CONTRACTOR'S CONSIDERATION. IF THE CONTRACTOR SO ELECTS, AN ALTERNATE MAINTENANCE OF TRAFFIC PLAN MAY BE SUBMITTED FOR CONSIDERATION BY THE DISTRICT OFFICE, PROVIDED THE INTENT OF THE PROVISIONS IN THE PLANS ARE FOLLOWED. THE ALTERNATE MAINTENANCE OF TRAFFIC PLAN SHALL NOT BE IMPLEMENTED UNTIL APPROVAL IS GIVEN IN WRITING BY THE PROJECT ENGINEER.

ALL ADVANCE WARNING SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND STANDARD CONSTRUCTION DRAWINGS PRIOR TO BEGINNING WORK ON ANY PHASE.

PHASE I:

PHASE I WILL CONSIST OF THE WIDENING ON THE SOUTH SIDE OF S.R. 254 UP TO THE INTERMEDIATE COURSE.

THIS WORK SHALL INCLUDE REMOVAL OF THE EXISTING DRAINAGE SYSTEM; INSTALLATION OF THE NEW DRAINAGE SYSTEM; EXCAVATION; INSTALLATION OF THE NEW DRIVEWAY APRONS; NEW SIGNAL UNDERGROUND WORK, INCLUDING CONDUITS, PULL BOXES, AND FOUNDATIONS; AND INSTALLATION OF THE PAVEMENT COURSES AND CURB AND GUTTER.

DURING THIS WORK, TRAFFIC SHALL BE MAINTAINED IN TWO EASTBOUND THROUGH LANES AS SHOWN ON SHEET NO. 12 CLOSURE OF THE RIGHT EASTBOUND LANES WILL BE ALLOWED ONLY DURING NIGHTTIME OR DURING OFF-PEAK HOURS WHEN LORAIN COUNTY COMMUNITY COLLEGE IS NOT IN SESSION.

PHASE II:

PHASE II CONSISTS OF PLANING THE EXISTING PAVEMENT WITHIN THE PROJECT LIMITS TO THE BOTTOM OF THE PROPOSED INTERMEDIATE COURSE, AND THE INSTALLATION OF THE INTERMEDIATE COURSE ON THE PLANED SURFACE.

ALL OF THE WORK WITHIN THIS PHASE SHALL BE COMPLETED DURING NIGHT TIME HOURS. REFER TO THE "NIGHT WORK" NOTE IN THESE DRAWINGS.

BEFORE OPENING THE PAVEMENT TO TRAFFIC, INSTALL WORK ZONE CENTER LINES, LANE LINES, EDGE LINES, CHANNELIZING LINES, AND STOP LINES ON THE INTERMEDIATE COURSE AND/OR PLANED SURFACE.

SEQUENCE OF CONSTRUCTION (CONTINUED)

THESE LINES SHALL BE PLACED IN THE SAME LOCATIONS AS THE PROPOSED PAVEMENT MARKINGS, EXCEPT THAT A WORK ZONE CENTER LINE WILL BE APPLIED AT LOCATIONS WHERE THE LONGITUDINAL CHANNELIZER WILL BE INSTALLED. ALL TRAFFIC SIGNAL WORK SHALL BE COMPLETE BEFORE ALL LANES ARE OPEN TO TRAFFIC.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE APPLICATION OF TEMPORARY PAVEMENT MARKINGS ON THE PLANED SURFACE AND ON THE INTERMEDIATE COURSE:

614, WORK ZONE LANE LINE, CLASS I, 6" 642 PAINT	1.10 MILE
614, WORK ZONE CENTER LINE, CLASS I, 642 PAINT	1.00 MILE
614, WORK ZONE CHANNELIZING LINE, 12", CLASS I, 642 PAINT	4500 FT
614, WORK ZONE EDGE LINE, CLASS I, 6" 642 PAINT	1.20 MILE
614, WORK ZONE STOP LINE, CLASS I, 642 PAINT	600 FT

PHASE III:

PHASE III CONSISTS OF CONSTRUCTING THE FINAL PAVEMENT SURFACE AND COMPLETING ALL NON-PAVEMENT ACTIVITIES:

- CONSTRUCT THE FINAL SURFACE COURSE. THIS WORK SHALL BE COMPLETED DURING NIGHT TIME HOURS. REFER TO THE "NIGHT WORK" NOTE IN THESE DRAWINGS. BEFORE OPENING THE PAVEMENT TO TRAFFIC, INSTALL CLASS III WORK ZONE CENTER LINES, AND LANE LINES ON THE SURFACE COURSE.
- INSTALL THE PERMANENT PAVEMENT MARKINGS.
- INSTALL THE LONGITUDINAL CHANNELIZER USING ODOT STANDARD CONSTRUCTION DRAWING MT-95.32. DURING THE TIME THAT THIS WORK IS BEING PERFORMED, THE LEFT LANES IN BOTH DIRECTIONS OF S.R. 254 MAY BE CLOSED, SUBJECT TO THE PROVISIONS OF THE "LANE CLOSURE/REDUCTION LIMITATIONS" NOTE. TRAFFIC SHALL BE MAINTAINED DURING THIS WORK USING ODOT STANDARD CONSTRUCTION DRAWING MT-95.31.
- COMPLETE ALL TRAFFIC SIGNAL WORK.
- COMPLETE ALL NON-PAVEMENT ACTIVITIES SUCH AS SEEDING, AND PERMANENT SIGNING. USE ODOT STANDARD CONSTRUCTION DRAWING MT-95.31 AND/OR FIGURE 6H-1 OF THE OMUTCD FOR TRAFFIC CONTROL.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE APPLICATION OF TEMPORARY PAVEMENT MARKINGS ON THE PLANED SURFACE AND ON THE INTERMEDIATE COURSE:

614, WORK ZONE LANE LINE, CLASS III, 6" 642 PAINT	0.60 MILE
614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT	0.50 MILE

AT THE CONCLUSION OF PHASE III, RE-OPEN S.R. 254 TO NORMAL TRAFFIC OPERATIONS.

NIGHT TIME WORK

IN ORDER TO MINIMIZE THE IMPACTS TO THE TRAVELING PUBLIC AND REDUCE CONGESTION, ALL OF THE PLANING AND RESURFACING WORK SHALL BE COMPLETED DURING NIGHT TIME HOURS, BEGINNING AT 8:00 P.M. AND ENDING AT 6:00 A.M., SUNDAY THRU THURSDAY. NO PLANING OR RESURFACING WORK SHALL BE PERMITTED BETWEEN 6:00 AM FRIDAY AND 8:00 PM SUNDAY

FURTHER WORK RESTRICTIONS ARE LISTED UNDER "ITEM 614 - MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)"

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE DISTRICT OFFICE AND THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE DISTRICT TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW. NOTIFICATIONS SHALL BE SENT TO THE EMAIL ADDRESS D03.Detour.Notification@dot.ohio.gov AND THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE NOTIFICATION SIGNS OR MESSAGE BOARDS. UPON RECEIPT OF NOTIFICATION BY THE CONTRACTOR, THE DISTRICT OFFICE WILL ARRANGE NOTIFICATION OF THE FOLLOWING ORGANIZATIONS, IN WRITING, IN ACCORDANCE WITH THE BELOW TABLE:

OHIO DEPARTMENT OF TRANSPORTATION - DISTRICT 3	
PUBLIC INFORMATION OFFICE	419-207-7182
LORAIN COUNTY TRANSIT	440-365-3357
SHEFFIELD-SHEFFIELD LAKE CITY SCHOOLS	440-949-4204
SHEFFIELD VILLAGE:	
VILLAGE ADMINISTRATOR	440-949-6325
FIRE DEPARTMENT	440-949-6032
POLICE DEPARTMENT	440-949-6156
US POSTAL SERVICE	800-275-8777

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE LEAD TIME REQUIRED*
RAMP AND/OR ROAD CLOSURES	TWO WEEKS OR GREATER	21 CALENDAR DAYS
	12 HOURS TO TWO WEEKS	14 CALENDAR DAYS
	12 HOURS OR LESS	4 BUSINESS DAYS
LANE CLOSURES AND RESTRICTIONS	TWO WEEKS OR GREATER	14 CALENDAR DAYS
	LESS THAN TWO WEEKS	5 BUSINESS DAYS
START OF CONSTRUCTION AND TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

* = PRIOR TO CLOSURE DATE, UNLESS NOTED OTHERWISE

NOTIFICATION OF TRAFFIC RESTRICTIONS (CONTINUED)

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY	(THANKSGIVING ONLY) 6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $50 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

ITEM 614 MAINTAINING TRAFFIC (ESTIMATED QUANTITIES)

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

410, TRAFFIC COMPACTED SURFACE, TYPE A OR B	100 CU. YD.
614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	50 CU. YD.
616, WATER	2 M GAL

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUB-BASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

CALCULATED DRP CHECKED CJB

NOTICE OF TRAFFIC GENERAL NOTES

MAINTENANCE

LOR-254-2.03

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 11 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACK-FILLED AT THE DIRECTION OF THE ENGINEER.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

616, WATER 2 M GAL

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

DRIVEWAY CONSTRUCTION LIMITATIONS

ALL COMMERCIAL DRIVEWAYS SHALL REMAIN IN SERVICE AT ALL TIMES, WITH THE EXCEPTION OF THE FOLLOWING TIMES:

1. DURING THE TIME REQUIRED TO EXCAVATE FOR THE PAVEMENT WIDENING. THE MAXIMUM DURATION THAT THE DRIVEWAY MAY BE CLOSED TO COMPLETE THIS WORK IS ONE (1) DAY. AFTER THIS WORK HAS BEEN COMPLETED, THE CONTRACTOR SHALL FURNISH AND INSTALL ITEM 410, TRAFFIC SURFACE IN THE EXCAVATED AREA AND REOPEN THE DRIVEWAY TO TRAFFIC.

2. DURING THE TIME REQUIRED TO FURNISH AND INSTALL THE NEW CURB AND GUTTER AND DRIVEWAY. THE MAXIMUM DURATION THAT THE DRIVEWAY MAY BE CLOSED FOR THIS WORK IS SEVEN (7) DAYS.

IN THE EVENT THE TIME DURATIONS LISTED ABOVE ARE EXCEEDED, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE AMOUNT OF $2500 PER CALENDAR DAY BEYOND THE NUMBER OF DAYS LISTED.

THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE PROPERTY OWNER A MINIMUM OF FOURTEEN (14) CALENDAR DAYS PRIOR TO ANY DISRUPTION.

THE TWO SPEEDWAY DRIVEWAYS OFF S.R. 254 MAY NOT BE CLOSED SIMULTANEOUSLY. ALSO, WHEN EITHER OF THESE DRIVES ARE CLOSED, ALL LANES ON THE SIGNALIZED DRIVEWAY TO COBBLESTONE SQUARE MUST BE OPEN.

ALL OF THE OTHER DRIVEWAYS WITHIN THE PROJECT AREA MAY BE CLOSED AT INDIVIDUAL TIMES OR SIMULTANEOUSLY, WITH THE FOLLOWING CONDITIONS:

DRIVEWAY CONSTRUCTION LIMITATIONS (CONTINUED)

DURING TIMES THAT THE TACO BELL/KFC AND/OR McDONALDS DRIVEWAYS ARE CLOSED, ALL LANES ON THE SIGNALIZED DRIVEWAY TO COBBLESTONE SQUARE MUST BE OPEN AND UNOBSTRUCTED.

DURING TIMES THAT THE WEST SHEFFIELD CROSSING AND/OR BP DRIVEWAYS ARE CLOSED, ALL LANES ON THE SIGNALIZED DRIVEWAY TO SHEFFIELD CROSSING MUST BE OPEN AND UNOBSTRUCTED.

MAINTENANCE OF TRAFFIC SIGNAL INSTALLATION

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

1. EXISTING SIGNAL 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 ACCEPTED.

2. NEW OR REUSED SIGNAL 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 MAINTAINING AGENCY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

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. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

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.

MAINTENANCE OF TRAFFIC SIGNAL INSTALLATION (CONTINUED)

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 BILLINGS TO THE STATE OR SHEFFIELD VILLAGE FOR POLICE SERVICES AND MAINTENANCE SERVICES BY VILLAGE FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM.

WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 8 HOURS AND SHALL NOT INCLUDE THE HOURS OF 7:00 AM TO 6:00 PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY OFF-DUTY SHEFFIELD VILLAGE POLICE, HIRED BY THE CONTRACTOR.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

1. TIME OF NOTIFICATION OF MALFUNCTION;
2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF RE-OCCURRENCE;
5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

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

ITEM 614 - BUSINESS ENTRANCE (M4-H15) SIGN, AS PER PLAN

THE BUSINESS ENTRANCE (M4-H15) SIGN SHOULD BE PROVIDED AT EACH TEMPORARILY CLOSED COMMERCIAL DRIVEWAY FOR WHICH THE RELOCATION IS NOT OBVIOUS TO THE MOTORIST. THE PROJECT ENGINEER SHALL DETERMINE WHETHER OR NOT THE DRIVEWAY RELOCATION IS, OR IS NOT, OBVIOUS AND WHETHER OR NOT A SIGN SHOULD BE PROVIDED. ONLY ONE SIGN PER BUSINESS SHALL BE PERMITTED. THE SIGN SHALL BE 36 INCH X 48 INCH IN SIZE WITH TYPE G OR TYPE H ORANGE RETRO-REFLECTIVE SHEETING. THE SIGN LEGEND SHALL BE PLACED ON BOTH SIDES OF THE SIGN (BACK TO BACK). THE SIGN SHALL HAVE THE STANDARD M4-H15 LEGEND WITH THE WORD "BUSINESS" ON THE TOP LINE, EXCEPT UNDER UNUSUAL CIRCUMSTANCES WHERE IT MAY NOT BE INTUITIVE THAT A DRIVEWAY SERVES A SPECIFIC BUSINESS. IN SUCH UNUSUAL CASES, THE ACTUAL BUSINESS NAME MAY BE SUBSTITUTED FOR THE WORD "BUSINESS".

THE SIGN SHALL BE MOUNTED ON TWO NO. 3 POSTS OR ON TEMPORARY POSTS IN ACCORDANCE WITH SCD MT-105.10 AND IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. THE SIGN SHALL BE CLEARLY VISIBLE AND SHALL CLEARLY IDENTIFY THE LOCATION OF THE DRIVEWAY. THE SIGN SHOULD BE POSITIONED AT 90 DEGREES TO THE DIRECTION(S) OF TRAFFIC. THE SIGN MAY NEED TO BE MOVED FOR EACH PHASE OF THE MAINTENANCE OF TRAFFIC OPERATIONS.

PAYMENT FOR ALL COSTS ASSOCIATED WITH MANUFACTURING, MOUNTING, RELOCATING, AND REMOVING THE SIGN, INCLUDING ALL LABOR, MATERIALS AND EQUIPMENT SHALL BE INCLUDED IN THE CONTRACT PRICE PER EACH FOR ITEM 614-BUSINESS ENTRANCE SIGN.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS ITEM.

614, BUSINESS ENTRANCE SIGN, AS PER PLAN 10 EACH

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR IS ADVISED THAT ADJACENT CONSTRUCTION OPERATIONS INCLUDING, BUT NOT LIMITED TO, PROJECT LOR-SMOOTH FY2020 (PID 98273) SURFACE TREATMENT PROJECT MAY IMPACT THE PROJECT SCHEDULE, SEQUENCE OF, CONSTRUCTION, AND/OR TRAFFIC CONTROL BETWEEN ADJACENT CONSTRUCTION ZONES. THIS PROJECT IS ANTICIPATED TO BE UNDER CONSTRUCTION FROM AUGUST 2019 TO JUNE 2020. COORDINATE ALL MAINTENANCE OF TRAFFIC OPERATIONS WITH THOSE OF ADJACENT CONSTRUCTION PROJECTS.

COOPERATION WITH THE ENGINEER, INSPECTORS, AND ALL CONTRACTORS ON OR ADJACENT TO THE PROJECT IS REQUIRED, AS PER CMS 105.08.

CALCULATED DRP CHECKED CJB

MAINTENANCE OF TRAFFIC GENERAL NOTES

LOR-254-2.03

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RE-TURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES AND PROVIDE 72 HOURS ADVANCE NOTICE TO THE SHEFFIELD VILLAGE POLICE DEPARTMENT

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 20 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE (OFFICE OF MATERIALS MANAGEMENT WEB PAGE). THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRE-CONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE. THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 12 SIGN MONTH

ASSUMING 2 PCMS SIGNS FOR 6 MONTHS

PLACE ON WB S.R. 254
AT STA. 84+00± AND ON
EB I-90 ENTRANCE RAMP

END ROAD WORK
G20-2-36

SHEFFIELD CROSSING DRIVEWAY

COBBLESTONE SQUARE DRIVE

McDONALDS

KEY BANK

MAINTAIN EXISTING TRAFFIC SIGNAL STRAIN POLE DURING CONSTRUCTION UNTIL NEW TRAFFIC SIGNAL IS INSTALLED AND READY FOR OPERATION

ROAD WORK AHEAD
W20-1-36

PLACE ON EB S.R. 254
AT STA. 84+00± AND ON
EB I-90 EXIT RAMP

W4-2R-30

TEMPORARILY COVER RIGHT-HAND THRU ARROW ON EX. LANE CONTROL SIGNS

ONLY

DRUMS @ 10' c/c

ABBE ROAD (S.R. 301)

ROAD WORK AHEAD
W20-1-36

END ROAD WORK
G20-2-36
W12-1-36

100'±

50' DRUM TAPER

100'±

END ROAD WORK
G20-2-36

ROAD WORK AHEAD
W20-1-36

TYPE A WARNING LIGHTS

ROAD CLOSED
R11-2-48

TYPE III BARRICADE

CLOSURE OF EXISTING DRIVEWAYS

℄ S.R. 254

MAINTAIN (2) EASTBOUND THROUGH LANES

EX. SHOULDER

WORK AREA

EX. LANE LINE

EX. EDGE LINE

DRUMS @ 10' c/c

SECTION A-A

HORIZONTAL SCALE IN FEET
0 20 40 80

CALCULATED DRP
CHECKED CJB

MAINTENANCE OF TRAFFIC
S.R. 254 WIDENING

LOR-254-2.03

SHEET NUM.															PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE	5	6, 7, 8	9, 10, 11	17	18	26	27	28	31	34	35	36	44, 46	47							
																				ROADWAY	
																201	11000	LS		CLEARING AND GRUBBING	
									434							202	23000	434	SY	PAVEMENT REMOVED	
					327											202	30000	327	SF	WALK REMOVED	
					84											202	30700	84	FT	CONCRETE BARRIER REMOVED	
					81											202	32500	81	FT	CURB AND GUTTER REMOVED	
				283												202	35100	283	FT	PIPE REMOVED, 24" AND UNDER	
					12.5											202	38000	12.5	FT	GUARDRAIL REMOVED	
					1											202	42206	1	EACH	ANCHOR ASSEMBLY REMOVED	
					1											202	47000	1	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
				5												202	58100	5	EACH	CATCH BASIN REMOVED	
				63												SPECIAL	20270000	63	FT	FILL AND PLUG EXISTING CONDUIT	7
						40	139	12	32							203	10000	223	CY	EXCAVATION	
	17					16	17	6								203	20000	56	CY	EMBANKMENT	
554									548							204	10000	1,102	SY	SUBGRADE COMPACTION	
	0.29															209	72050	0.29	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING	
					288											608	10000	288	SF	4" CONCRETE WALK	
					101											608	52000	101	SF	CURB RAMP	
					1											623	39500	1	EACH	MONUMENT BOX ADJUSTED TO GRADE	
																				EROSION CONTROL	
		175				238	369	194								659	00300	175	CY	TOPSOIL	
	810															659	00500	1,611	SY	SEEDING AND MULCHING, CLASS 1	
		80														659	14000	80	SY	REPAIR SEEDING AND MULCHING	
		0.22														659	20000	0.22	TON	COMMERCIAL FERTILIZER	
		9														659	35000	9	MGAL	WATER	
																832	30000	2,500	EACH	EROSION CONTROL	
																				ENVIRONMENTAL / REMEDIATION	
		250														SPECIAL	69065016	250	TON	WORK INVOLVING PETROLEUM CONTAMINATED SOIL	6
																				DRAINAGE	
				36												605	06000	36	FT	4" BASE PIPE UNDERDRAINS	
				279												605	11100	279	FT	6" SHALLOW PIPE UNDERDRAINS	
				70												605	13300	70	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
				10												611	00410	10	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	
				45												611	00510	45	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
				378												611	04400	378	FT	12" CONDUIT, TYPE B	
				56												611	04600	56	FT	12" CONDUIT, TYPE C	
				6												611	06100	6	FT	15" CONDUIT, TYPE C	
				3												611	98180	3	EACH	CATCH BASIN, NO. 3A	
				4												611	98470	4	EACH	CATCH BASIN, NO. 2-2B	
				3												611	98630	3	EACH	CATCH BASIN ADJUSTED TO GRADE	
				1												611	98634	1	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
				1												611	99574	1	EACH	MANHOLE, NO. 3	

CALCULATED DRP
CHECKED SAS

GENERAL SUMMARY

LOR-254-2.03

SHEET NUM.															PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE	5	6, 7, 8	9, 10, 11	17	18	26	27	28	31	34	35	36	44, 46	47							
																				PAVEMENT	
3,785																254	01000	3,785	SY	PAVEMENT PLANING, ASPHALT CONCRETE (3")	
11,612																254	01000	11,612	SY	PAVEMENT PLANING, ASPHALT CONCRETE (0" TO 4")	
		1,500														254	01600	1,500	SY	PATCHING PLANED SURFACE	
79									14							302	46000	93	CY	ASPHALT CONCRETE BASE, PG64-22	
139																304	20000	139	CY	AGGREGATE BASE	
946																407	10000	946	GAL	TACK COAT	
									4							407	20000	4	GAL	NON-TRACKING TACK COAT	
548	3															441	50000	551	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
766							2									441	50300	768	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
									3							441	50400	3	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS)	
									489							452	12050	489	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	
448																609	12000	448	FT	COMBINATION CURB AND GUTTER, TYPE 2	
									96							609	14000	96	FT	CURB, TYPE 2-A	
									14							609	24000	14	FT	CURB, TYPE 4-A	
									13							609	26000	13	FT	CURB, TYPE 6	
					792											609	98000	792	FT	CURB, MISC.: LONGITUDINAL CHANNELIZER	33
	19															617	10100	19	CY	COMPACTED AGGREGATE	
139																SPECIAL	69012060	139	SY	PAVEMENT OVERLAY FABRIC COMPOSITE	8
					1											SPECIAL	69050350	1	EACH	MAILBOX REMOVED AND RESET	7
																				WATER WORK	
					8											638	10800	8	EACH	VALVE BOX ADJUSTED TO GRADE	
					1											638	10900	1	EACH	SERVICE BOX ADJUSTED TO GRADE	
																				TRAFFIC CONTROL	
											95	65				621	00100	160	EACH	RPM	
										120						630	02100	120	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
										148.5						630	03100	148.5	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
										30.5						630	04100	30.5	FT	GROUND MOUNTED SUPPORT, NO. 4 POST	
										1						630	08600	1	EACH	SIGN POST REFLECTOR	
										1						630	11206	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-16.21, DESIGN 13	
										1						630	11210	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-16.21, DESIGN 14	
														6		630	79100	6	EACH	SIGN HANGER ASSEMBLY, MAST ARM	
														18		630	79500	18	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
										316.76				109		630	80100	425.76	SF	SIGN, FLAT SHEET	
										45						630	80224	45	SF	SIGN, OVERHEAD EXTRUSHEET	
										4						630	81100	4	SF	SIGN ERECTED, FLAT SHEET	
										2						630	84510	2	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
										28				2		630	85000	30	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	
										25						630	86002	25	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
										3						630	87000	3	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE	
										1						630	89802	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65	
											0.4	0.49				644	00104	0.89	MILE	EDGE LINE, 6"	
											0.38	0.17				644	00204	0.55	MILE	LANE LINE, 6"	
											0.16	0.01				644	00300	0.17	MILE	CENTER LINE	
											1,148	1,006				644	00404	2,154	FT	CHANNELIZING LINE, 12"	
											137	204				644	00500	341	FT	STOP LINE	
												460				644	00600	460	FT	CROSSWALK LINE	
											281					644	00700	281	FT	TRANSVERSE/DIAGONAL LINE	
											174					644	00900	174	SF	ISLAND MARKING	
											16	13		2		644	01300	31	EACH	LANE ARROW	
												2				644	01400	2	EACH	WORD ON PAVEMENT, 72"	
											512	624				644	01510	1,136	FT	DOTTED LINE, 6"	
												93				644	30000	93	FT	REMOVAL OF PAVEMENT MARKING	
											1			1		644	30020	2	EACH	REMOVAL OF PAVEMENT MARKING	

CALCULATED DRP
CHECKED SAS

GENERAL SUMMARY

LOR-254-2.03

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SHEET NUM.														PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE	5	6, 7, 8	9, 10, 11	17	18	26	27	28	31	34	35	36	44, 46	47						
																			TRAFFIC SIGNALS	
														71		625	25402	71	FT	CONDUIT, 2", 725.05	
														10		625	25406	10	FT	CONDUIT, 2-1/2", 725.05	
														194		625	25502	194	FT	CONDUIT, 3", 725.05	
														52		625	25602	52	FT	CONDUIT, 4", 725.05	
														612		625	25900	612	FT	CONDUIT, JACKED OR DRILLED: 3"	
														327		625	29000	327	FT	TRENCH	
														15		625	30706	15	EACH	PULL BOX, 725.08, 24"	
														9		625	31510	9	EACH	PULL BOX REMOVED	
														4		625	31600	4	EACH	PULL BOX, MISC.: PULL BOX ADJUSTED TO GRADE	43
										2				14		625	32000	16	EACH	GROUND ROD	
														327		625	36000	327	FT	PLASTIC CAUTION TAPE	
														25		632	05007	25	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY,	43
																				POLYCARBONATE, AS PER PLAN	
														3		632	05087	3	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY,	43
																				POLYCARBONATE, AS PER PLAN	
														27		632	25000	27	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
														1		632	26500	1	EACH	DETECTOR LOOP	
														641		632	40200	641	FT	SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG	
														2,129		632	40400	2,129	FT	SIGNAL CABLE, 4 CONDUCTOR, NO. 14 AWG	
														651		632	40500	651	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
														3,111		632	40700	3,111	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
														9		632	64010	9	EACH	SIGNAL SUPPORT FOUNDATION	
														2		632	64020	2	EACH	PEDESTAL FOUNDATION	
														110		632	68200	110	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
														345		632	68300	345	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
														3		632	70001	3	EACH	POWER SERVICE, AS PER PLAN	44
														3		632	70600	3	EACH	CONDUIT RISER, 3" DIAMETER	
														1		632	75454	1	EACH	SIGNAL SUPPORT, TYPE TC-12.30 DESIGN 9 POLE, WITH MAST ARMS	
																				TC-81.21 DESIGN 13 AND DESIGN 13	
														2		632	77231	2	EACH	SIGNAL SUPPORT, MECHANICAL DAMPER FOR TC-81.21 MAST ARM	43
																				(GREATER THAN 59' IN LENGTH), AS PER PLAN	
														2		632	80302	2	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 3	
														3		632	80502	3	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 11	
														1		632	80602	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 12	
														2		632	80628	2	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 14	
														1		632	89900	1	EACH	PEDESTAL, 8', TRANSFORMER BASE	
														3		632	90100	3	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	
														1		632	90400	1	EACH	SIGNALIZATION, MISC.: MODIFICATION OF S.R. 301 TRAFFIC SIGNAL ITEMS	46
														3		633	01551	3	EACH	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS2, AS PER PLAN	45
														1		633	39000	1	EACH	CONTROLLER, MASTER, TRAFFIC RESPONSIVE	
														3		633	67100	3	EACH	CABINET FOUNDATION	
														3		633	67200	3	EACH	CONTROLLER WORK PAD	
															1	633	67301	1	EACH	PREEMPTION, AS PER PLAN	44
														10		633	67311	10	EACH	PREEMPTION RECEIVING UNIT, AS PER PLAN	44
														2,093		633	67321	2,093	FT	PREEMPTION DETECTOR CABLE, AS PER PLAN	44
														3		633	67351	3	EACH	PREEMPTION PHASE SELECTOR, AS PER PLAN	44
														10		633	67401	10	EACH	PREEMPTION CONFIRMATION LIGHT, AS PER PLAN	44
														3		633	74001	3	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), AS PER PLAN	45
														2		809	69000	2	EACH	ADVANCE RADAR DETECTION	
														10		809	69100	10	EACH	STOP LINE RADAR DETECTION	
														4		815	30000	4	EACH	SPREAD SPECTRUM RADIO	
															LUMP		824	00010	LS		SYSTEM ANALYSIS	

CALCULATED DRP
CHECKED SAS

GENERAL SUMMARY

LOR-254-2.03

SHEET NUM.															PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE	5	6, 7, 8	9, 10, 11	17	18	26	27	28	31	34	35	36	44, 46	47							
																				MAINTENANCE OF TRAFFIC	
			100													410	12000	100	CY	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
			20													614	11110	20	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
			50													614	13000	50	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
			12													614	18601	12	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	11
			1.1													614	20110	1.1	MILE	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	
			0.6													614	20560	0.6	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	
			1													614	21100	1	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
			0.5													614	21550	0.5	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
			1.2													614	22110	1.2	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
			4,500													614	23210	4,500	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	
			600													614	26200	600	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
			10													614	40051	10	EACH	BUSINESS ENTRANCE SIGN, AS PER PLAN	10
			4													616	10000	4	MGAL	WATER	
																				INCIDENTALS	
																614	11000	LS		MAINTAINING TRAFFIC	
																619	16010	6	MNTH	FIELD OFFICE, TYPE B	
																623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
																624	10000	LS		MOBILIZATION	

CALCULATED DRP
CHECKED SAS

GENERAL SUMMARY

LOR-254-2.03

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 PIPE REMOVED, 24" AND UNDER (FT)	202 CATCH BASIN REMOVED (EACH)	SPECIAL FILL AND PLUG EXISTING CONDUIT (EACH)	605 4" BASE PIPE UNDERDRAINS (FT)	605 6" SHALLOW PIPE UNDERDRAINS (FT)	611 6" UNCLASSIFIED PIPE UNDERDRAINS (FT)	611 4" CONDUIT, TYPE F, FOR UNDERDRAIN OUTLET (FT)	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS (FT)		611 12" CONDUIT, TYPE B (FT)	611 12" CONDUIT, TYPE C (FT)	611 15" CONDUIT, TYPE C (FT)	611 CATCH BASIN, NO. 3A (FT)	611 CATCH BASIN, NO. 2-2B (EACH)	611 CATCH BASIN ADJUSTED TO GRADE (EACH)	611 CATCH BASIN RECONSTRUCTED TO GRADE (EACH)	611 MANHOLE, NO. 3 (EACH)			
D-1	21	100+24	100+58	RT											35		1							
D-2	21-22	100+58	102+00	RT										142				1						
D-3	22	102+00	103+61	RT										161				1						
D-4	22	103+61	103+87	RT										26				1						
D-5	22	103+87	104+02.47	RT										24			1							
D-6	22	104+02.47	103+97.5	RT										25			1							
D-7	22	103+89	103+97.5	RT											9			1						
D-8	22	103+97.5				1									12	6						1		
UD-1	32	100+23.73	102+80	RT					180	70		10												
UD-2	32	101+92		RT								5												
UD-3	32	102+80	103+87	RT					99			10												
UD-4	32	1170+63.5	104+02.47	RT				36			10													
UD-5	32	104+02.47	104+05	RT								20												
DA-1	19	93+38		RT																1				
DA-2	21	98+11		RT																1				
DA-3	21	99+20		RT																	1			
DA-4	21	99+64		RT																1				
FP-1	21	99+64	100+27	RT			63																	
DX-1	21	100+27		RT		1																		
DX-2	22	101+93	103+97	RT	218	1																		
DX-3	22	103+97	103+97.5	RT	21	1																		
DX-4	22	103+97.5	104+08	RT	44	1																		
TOTALS CARRIED TO GENERAL SUMMARY					283	5	63	36	279	70	10	45		378	56	6	3	4	3	1	1			

CALCULATED DRP
CHECKED SAS

DRAINAGE SUBSUMMARY

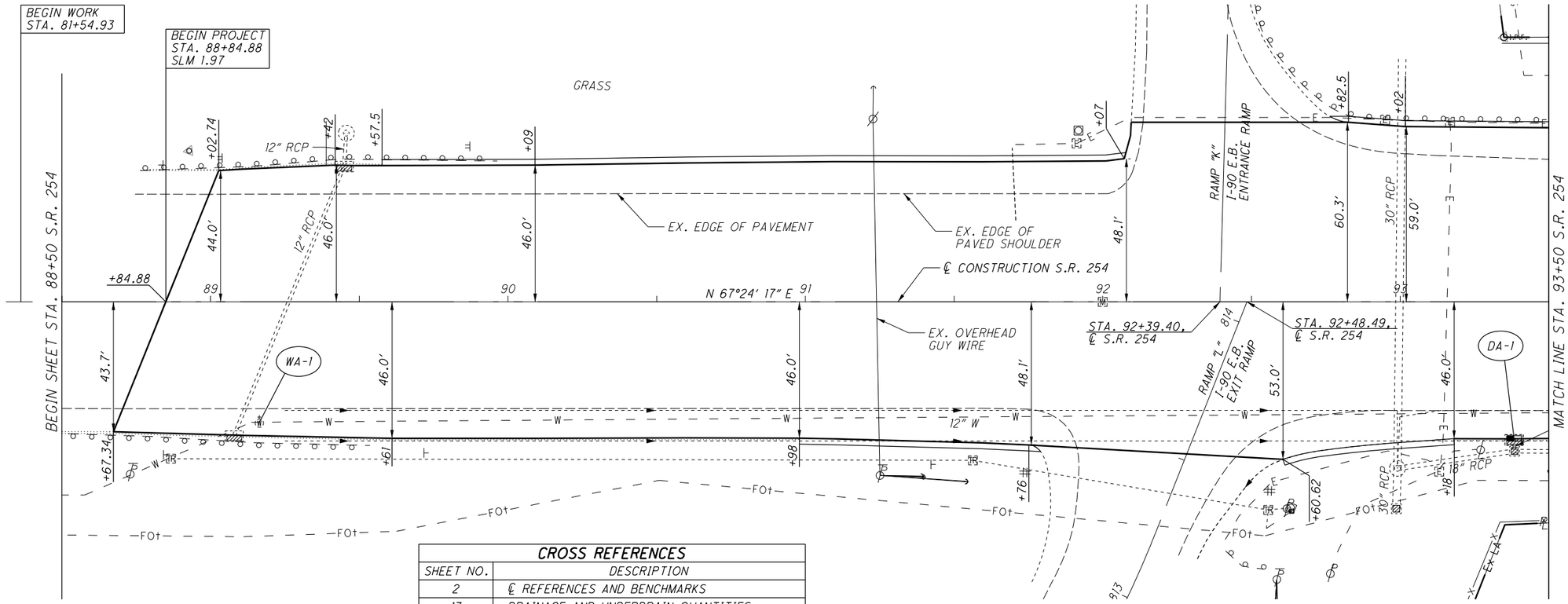
LOR-254-2.03

REF. NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 WALK REMOVED (SQ FT)	202 CONCRETE BARRIER REMOVED (FT)	202 CURB AND GUTTER REMOVED (FT)	202 GUARDRAIL REMOVE (FT)	202 ANCHOR ASSEMBLY REMOVED (EACH)	202 BRIDGE TERMINAL ASSEMBLY REMOVED (EACH)	608 4" CONCRETE WALK (SQ FT)	608 CURB RAMP (SQ FT)	609 CURB, MISC.: LONGITUDINAL CHANNELIZER, AS PER PLAN (FT)	623 MONUMENT BOX ADJUSTED TO GRADE (EACH)	638 WATER VALVE BOX ADJUSTED TO GRADE (EACH)	638 SERVICE BOX ADJUSTED TO GRADE (EACH)	SPECIAL MAILBOX REMOVED AND RESET (EACH)
RX-1	22	101+74	102+50	RT		37		12.5	1	1							
RX-2	22	102+44	102+88	LT		47											
RX-3	22	104+05	104+15	RT	274												
RX-4	22	104+55	104+65	LT	53												
RX-5	22	103+97	104+20	RT			81										
SW-1	22	103+85	104+05	RT							288	66					
SW-2	22	104+43	104+50	LT								35					
LC-1	20-21	95+19	99+57	LT									438				
LC-2	21-22	100+48	104+00	RT/LT									354				
MA-1	22	101+86.20		CL										1			
WA-1	19	89+16		RT											1		
WA-2	20	93+79		RT											1		
WA-3	20	96+08		RT											1		
WA-4	21	98+00		RT											1		
WA-5	21	98+94		RT											1		
WA-6	21	100+73		RT												1	
WA-7	22	103+25		RT											1		
WA-8	22	103+76		RT											1		
WA-9	22	103+99		RT											1		
MB-1	22	101+51		RT													1
TOTALS CARRIED TO GENERAL SUMMARY					327	84	81	12.5	1	1	288	101	792	1	8	1	1

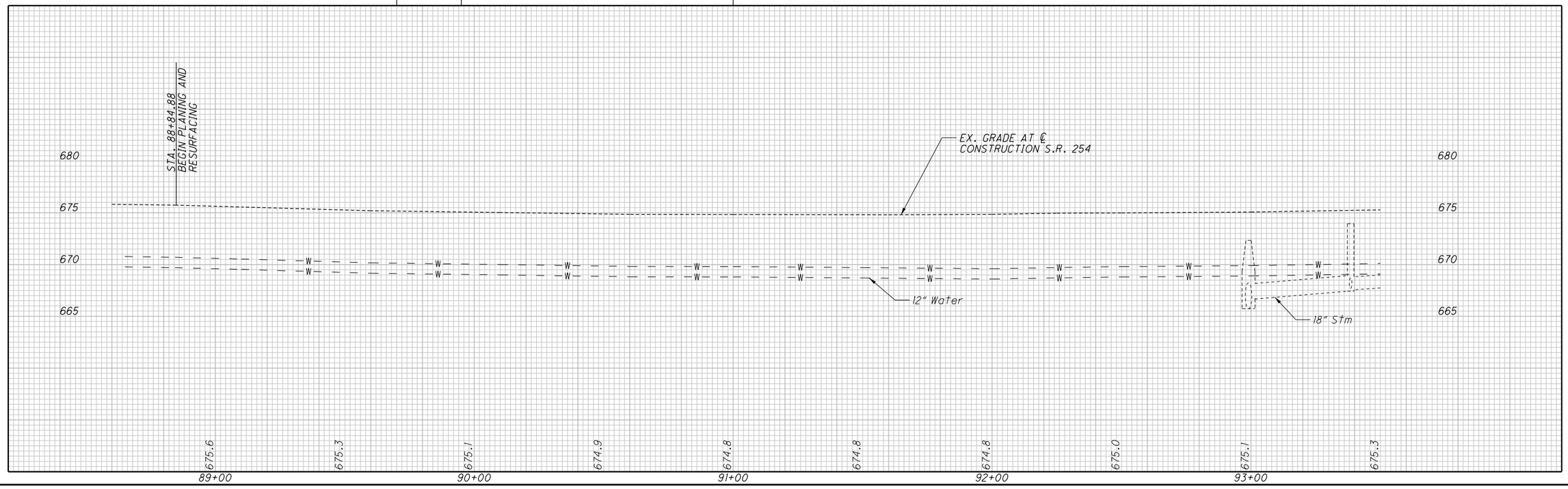
CALCULATED DRP
CHECKED SAS

ROADWAY SUBSUMMARY

LOR-254-2.03



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2	℄ REFERENCES AND BENCHMARKS
17	DRAINAGE AND UNDERDRAIN QUANTITIES
18	ROADWAY QUANTITIES



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DRP
CHECKED CJB

PLAN AND PROFILE- S.R. 254
STA. 88+50 TO STA. 93+50

LOR-254-2.03

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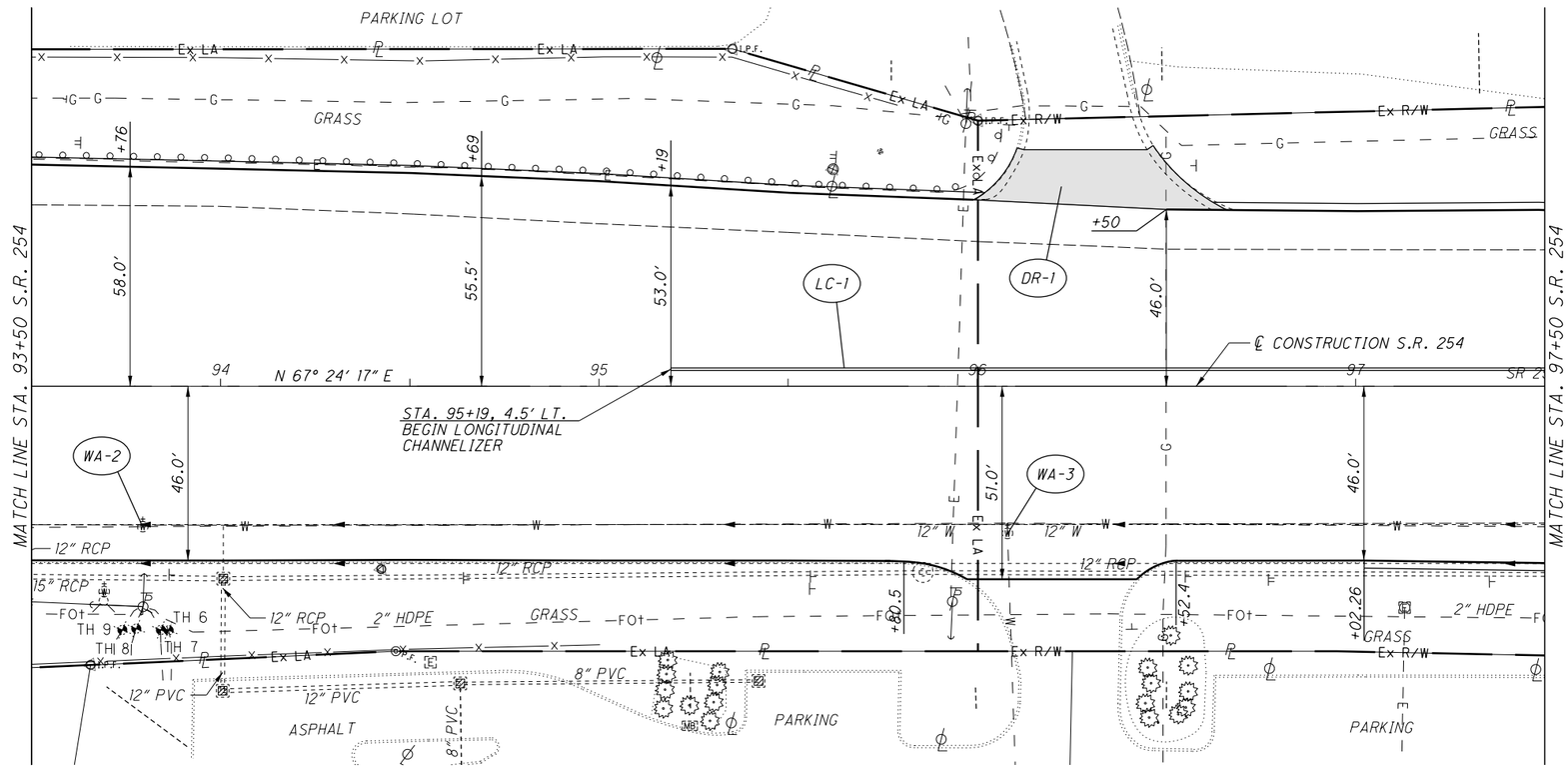
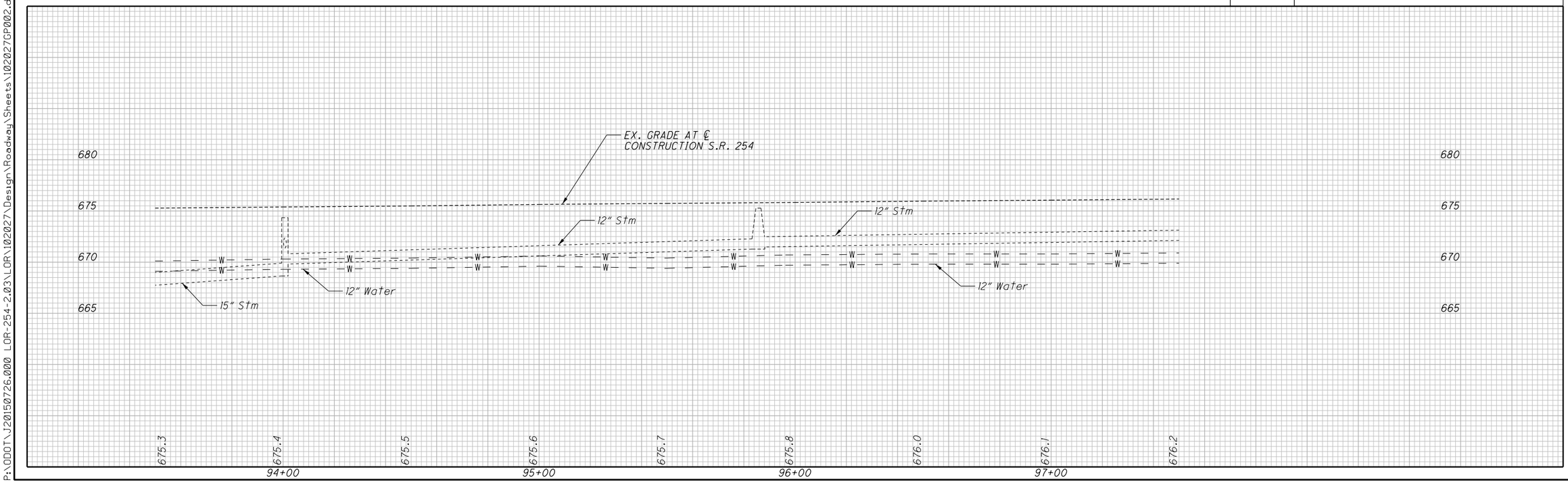


TH = QUALITY LEVEL A TEST HOLE

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2	℄ REFERENCES AND BENCHMARKS
17	DRAINAGE AND UNDERDRAIN QUANTITIES
18	ROADWAY QUANTITIES
30-31	DRIVEWAY DETAILS



PLAN AND PROFILE- S.R. 254
STA. 93+50 TO STA. 97+50

LOR-254-2.03

20
62

CALCULATED DRP
CHECKED CJB

HORIZONTAL SCALE IN FEET
0 10 20 40

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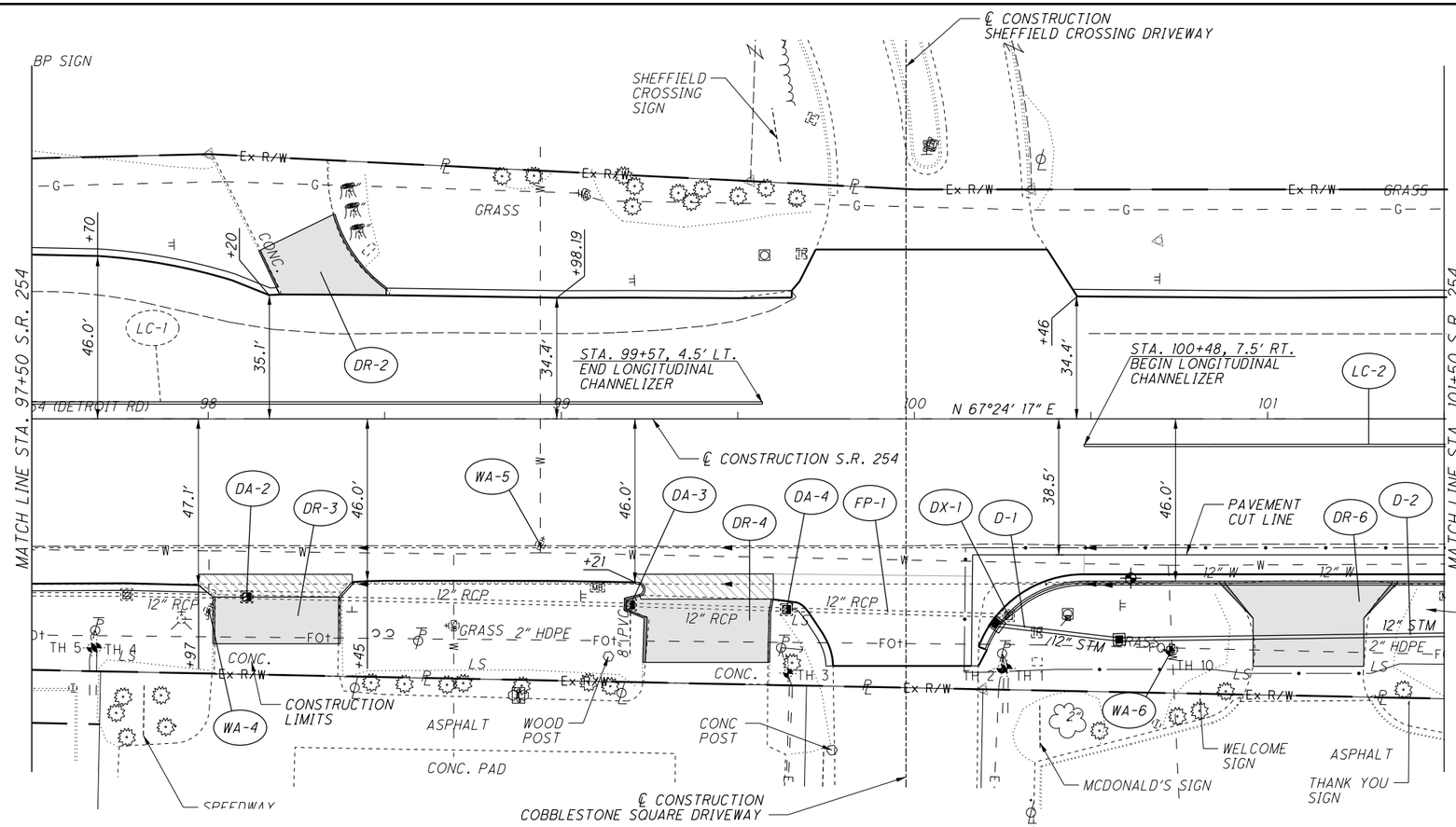


TH = QUALITY LEVEL A TEST HOLE

8" NON-REINFORCED CONCRETE PAVEMENT

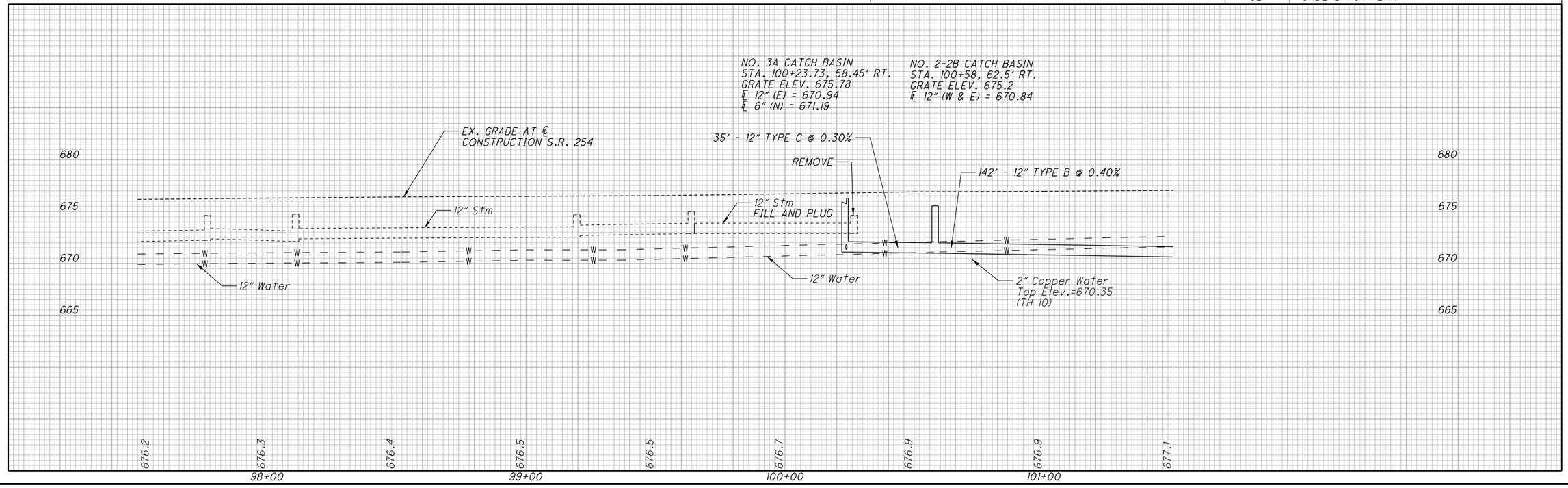
ASPH. DRIVEWAY

NOTES:

1. LS = EXISTING LANDSCAPED AREA. LANDSCAPED AREAS BEYOND THE PROJECT WORK LIMITS ARE NOT TO BE DISTURBED.
2. CONTRACTOR SHALL NOTE THE POSSIBILITY OF A PRIVATE SPRINKLER SYSTEM WITHIN THE EXISTING RIGHT OF WAY IN FRONT OF THE MCDONALDS PARCEL. ANY SPRINKER SYSTEM ENCOUNTERED BY THE CONTRACTOR WITHIN THE DESIGNATED WORK LIMITS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER TO REPAIR. ANY SPRINKLER SYSTEM FACILITIES OUTSIDE OF THE DESIGNATED WORK LIMITS DAMAGED BY THE CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AT NO ADDITIONAL COST TO THE PROJECT.

CROSS REFERENCES

SHEET NO.	DESCRIPTION
2	℄ REFERENCES AND BENCHMARKS
17	DRAINAGE AND UNDERDRAIN QUANTITIES
18	ROADWAY QUANTITIES
29	INTERSECTION DETAILS
30-31	DRIVEWAY DETAILS
32	UNDERDRAIN PLAN



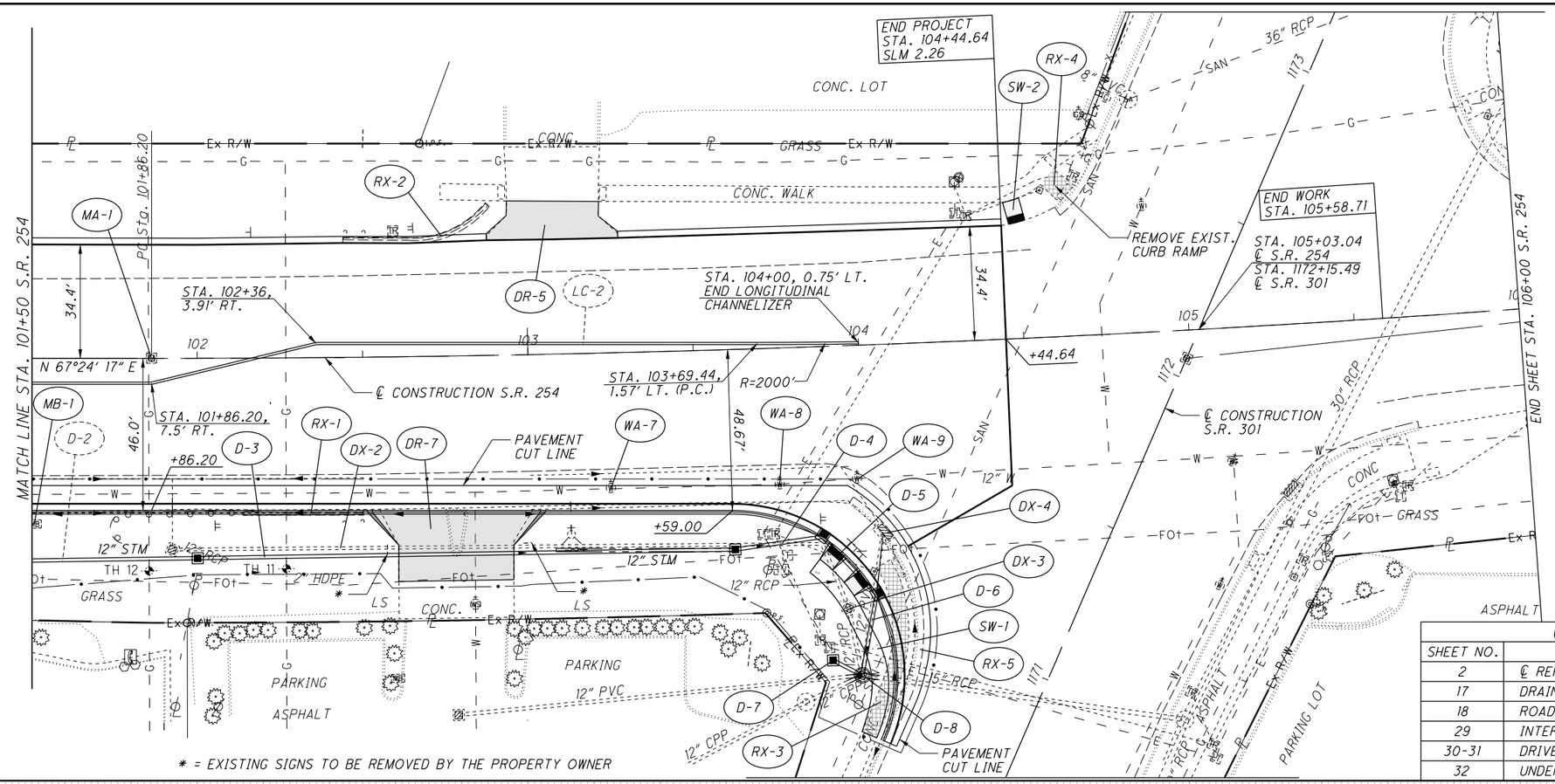
HORIZONTAL SCALE IN FEET: 0, 10, 20, 40

CALCULATED DRP

CHECKED CJB

PLAN AND PROFILE- S.R. 254 STA. 97+50 TO STA. 101+50

LOR-254-2.03



CURVE DATA:
P.I. = STA. 104+99.13
Δ = 6° 15' 08" (LT.)
D. = 1° 00' 00"
R = 5729.58'
T = 312.93'
L = 625.23'
E = 8.54'
C = 624.92'
C.B. = N 64° 16' 42" E

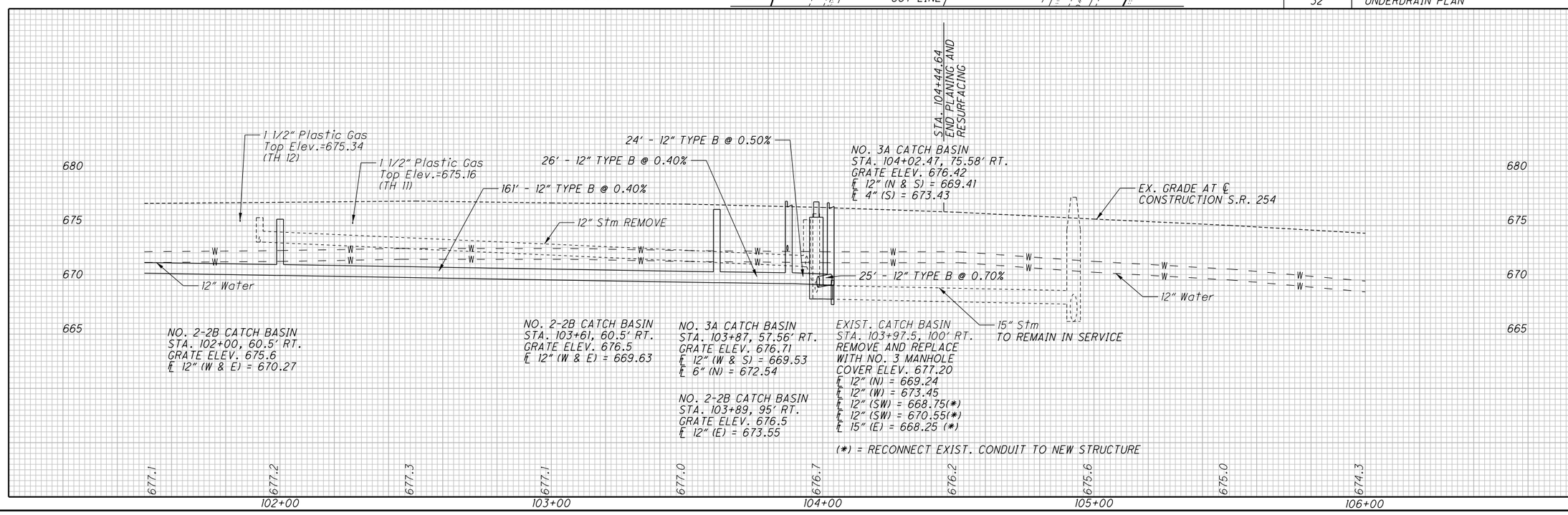
NOTES:

1. LS = EXISTING LANDSCAPED AREA. LANDSCAPED AREAS BEYOND THE PROJECT WORK LIMITS ARE NOT TO BE DISTURBED.

* = EXISTING SIGNS TO BE REMOVED BY THE PROPERTY OWNER

CROSS REFERENCES

SHEET NO.	DESCRIPTION
2	℄ REFERENCES AND BENCHMARKS
17	DRAINAGE AND UNDERDRAIN QUANTITIES
18	ROADWAY QUANTITIES
29	INTERSECTION DETAILS
30-31	DRIVEWAY DETAILS
32	UNDERDRAIN PLAN



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DRP
CHECKED CJB

PLAN AND PROFILE- S.R. 254
STA. 101+50 TO STA. 106+00

LOR-254-2.03

22
62

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SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED DRP
CHECKED CJB

℄ CONSTRUCTION S.R. 254

43.0'
MATCH EXIST.
PAVEMENT CROWN
1.86' LT.
MATCH EX. ELEV.
MATCH EX.
MATCH EXIST.
.02
0.016(±)
675
670
12" Water
12" Stm
95+00.00
675.6
STA. 94+69.00 TO STA. 95+19.00
TRANSITION PAVEMENT CROWN
FROM ℄ CONST. TO 3.0' LT.

PAVEMENT CROWN
@ ℄ CONSTRUCTION
MATCH EX.
MATCH EX.
MATCH EX.
.02
675
670
12" Water
12" Stm
94+50.00
675.5

33.0'
MATCH EX.
MATCH EX.
MATCH EX.
.02
675
670
12" Water
94+00.00
675.4

33.0'
MATCH EX.
MATCH EX.
MATCH EX.
.02
675
670
12" Water
15" Stm
93+50.00
675.3

33.0'
MATCH EX.
MATCH EX.
MATCH EX.
.02
6" U.D.
36" Stm
12" Water
675
670
665
660
93+00.00
675.1

60 50 40 30 20 10 0 10 20 30 40 50 60

CROSS SECTIONS - S.R. 254
STA. 93+00 TO STA. 95+00

LOR-254-2.03

23
62

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SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED DRP
CHECKED CJB

℄ CONSTRUCTION S.R. 254

39.0′ 36.0′
PAVEMENT CROWN 3.0′ LT.
MATCH EX. ELEV.
MATCH EXIST. .042
MATCH EXIST. .02
0.016(±)
12" Stm
12" Water
675
670

97+00.00
676.1

39.0′ 36.0′
PAVEMENT CROWN 3.0′ LT.
MATCH EX. ELEV.
MATCH EXIST. MATCH EXIST. .02
0.016(±)
12" Stm
12" Water

96+50.00
676.0

EX. ASPH. DRIVEWAY
MATCH EXIST. 62.5′ LT.
.042 .042
.036
MATCH EXIST. @ 46′ RT.

96+28.6 (WEST SHEFFIELD CROSSING DRIVE) DR-1

96+24 (KFC/TACO BELL DRIVEWAY)

39.0′ 36.0′
PAVEMENT CROWN 3.0′ LT.
MATCH EX. ELEV.
MATCH EXIST. .042
MATCH EXIST. .02
0.016(±)
12" Stm
12" Water

96+00.00
675.8

39.0′ 36.0′
PAVEMENT CROWN 3.0′ LT.
MATCH EX. ELEV.
MATCH EXIST. .042
MATCH EXIST. .02
0.016(±)
12" Stm
12" Water

95+50.00
675.7

60 50 40 30 20 10 0 10 20 30 40 50 60

CROSS SECTIONS - S.R. 254
STA. 95+50 TO STA. 97+00

LOR-254-2.03

XX

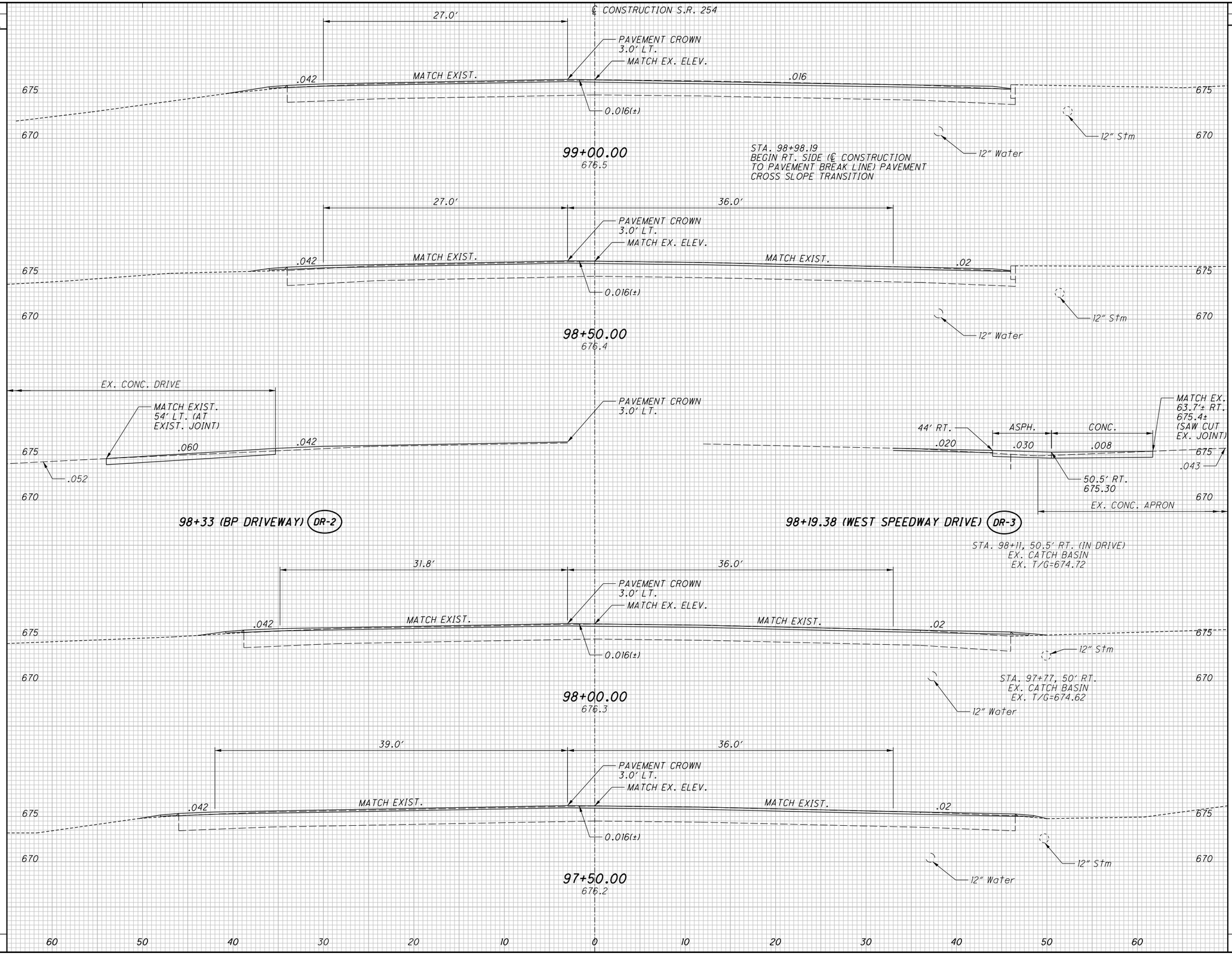
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

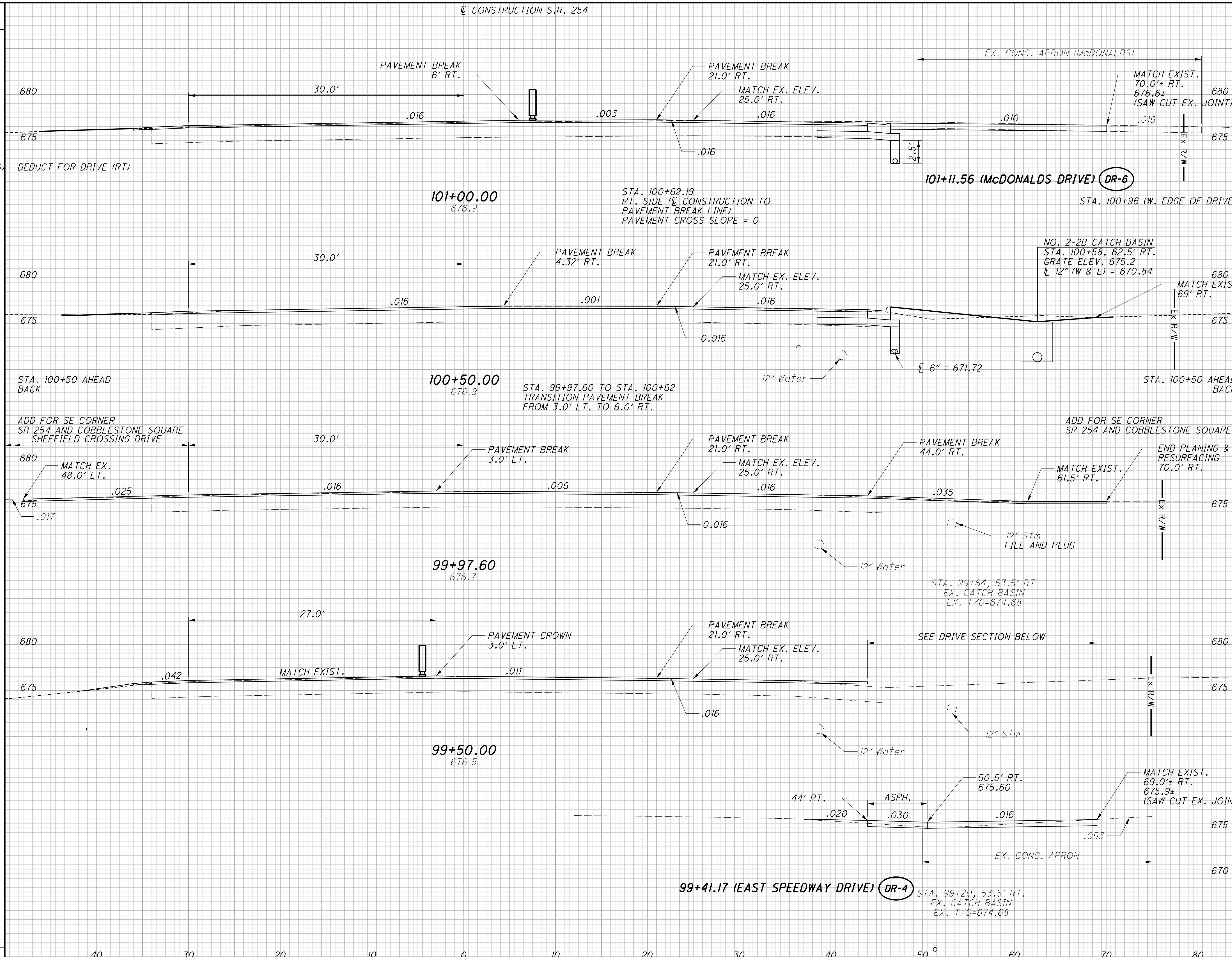
CALCULATED DRP
CHECKED CJB

CROSS SECTIONS - S.R. 254
STA. 97+50.00 to STA. 99+00.00



LOR-254-2.03

SEEDING	
END WIDTH	SQ. YDS.
	131
	(-100)
24	
	137
25 0	
	70
	238



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		18	0
16	0		
		17	6
18 0	7 0		
		5	10
		40	16

CALCULATED DRP
CHECKED CJB

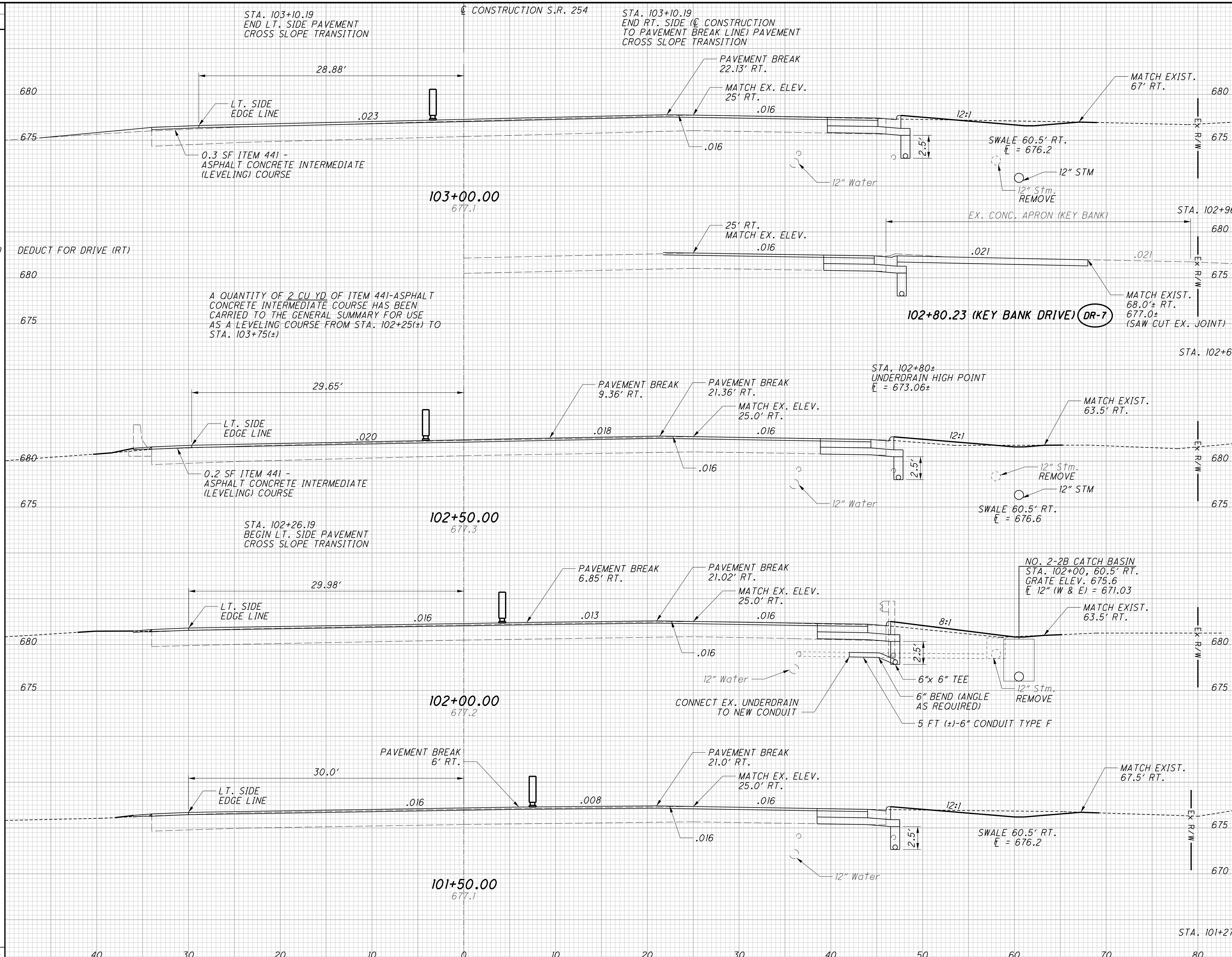
CROSS SECTIONS
STA. 99+41 TO STA. 101+11

LOR-254-2.03

CROSS SECTIONS - S.R. 254
STA. 101+50.00 TO STA. 103+00.00

LOR-254-2.03

CALCULATED DRP CHECKED CJB



℄ CONSTRUCTION S.R. 254
STA. 103+10.19
END LT. SIDE PAVEMENT
CROSS SLOPE TRANSITION
STA. 103+10.19
END RT. SIDE (℄ CONSTRUCTION
TO PAVEMENT BREAK LINE) PAVEMENT
CROSS SLOPE TRANSITION
28.88'
PAVEMENT BREAK
22.13' RT.
MATCH EX. ELEV.
25' RT.
MATCH EXIST.
67' RT.
LT. SIDE
EDGE LINE
.023
.016
12:1
0.3 SF ITEM 441 -
ASPHALT CONCRETE INTERMEDIATE
(LEVELING) COURSE
SWALE 60.5' RT.
℄ = 676.2
12" STM
12" Water
12" Stm.
REMOVE
103+00.00
677.1
DEDUCT FOR DRIVE (RT)
EX. CONC. APRON (KEY BANK)
STA. 102+96
25' RT.
MATCH EX. ELEV.
.021
MATCH EXIST.
68.0'± RT.
677.0±
(SAW CUT EX. JOINT)
102+80.23 (KEY BANK DRIVE) DR-7
A QUANTITY OF 2 CU YD OF ITEM 441-ASPHALT
CONCRETE INTERMEDIATE COURSE HAS BEEN
CARRIED TO THE GENERAL SUMMARY FOR USE
AS A LEVELING COURSE FROM STA. 102+25(±) TO
STA. 103+75(±)
STA. 102+61
STA. 102+80±
UNDERDRAIN HIGH POINT
℄ = 673.06±
29.65'
PAVEMENT BREAK
9.36' RT.
PAVEMENT BREAK
21.36' RT.
MATCH EX. ELEV.
25.0' RT.
MATCH EXIST.
63.5' RT.
.020
.018
0.2 SF ITEM 441 -
ASPHALT CONCRETE INTERMEDIATE
(LEVELING) COURSE
SWALE 60.5' RT.
℄ = 676.6
102+50.00
677.3
STA. 102+26.19
BEGIN LT. SIDE PAVEMENT
CROSS SLOPE TRANSITION
NO. 2-2B CATCH BASIN
STA. 102+00, 60.5' RT.
GRATE ELEV. 675.6
℄ 12" (W & E) = 671.03
29.98'
PAVEMENT BREAK
6.85' RT.
PAVEMENT BREAK
21.02' RT.
MATCH EXIST.
63.5' RT.
.013
8:1
6"x 6" TEE
6" BEND (ANGLE
AS REQUIRED)
5 FT (±)-6" CONDUIT TYPE F
CONNECT EX. UNDERDRAIN
TO NEW CONDUIT
102+00.00
677.2
PAVEMENT BREAK
6' RT.
30.0'
PAVEMENT BREAK
21.0' RT.
MATCH EXIST.
67.5' RT.
.008
101+50.00
677.1
STA. 101+27
EX R/W
2.5'
40 30 20 10 0 10 20 30 40 50 60 70 80

SEEDING END WIDTH	SEEDING SQ. YDS.
	117
22	
	(-91)
	114
19	
	106
19	
	123
25	
	369

Station	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
			33	4
103+00.00	18	2		
			3	1
102+96	15	1		
			20	2
102+61	15	1		
			7	1
102+50.00	15	1		
			28	2
102+00.00	15	5		
			33	6
101+50.00	20	1		
			15	1
101+27	15	0		
			139	17

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		℄ CONSTRUCTION S.R. 254				
		34.4′ 44.6′ / 26.5′ 29.5′± / MATCH EXIST. SLOPE (.024±) / MATCH EXIST. SLOPE / PAVEMENT GRADE BREAK				
		104+44.64 676.3				
	170	ADD FOR SW CORNER S.R. 254 AND S.R. 301		ADD FOR SW CORNER S.R. 254 AND S.R. 301	5	5
		680 / 675 / 26.37′ / LT. SIDE EDGE LINE / .024 / PAVEMENT BREAK 24.64′ RT. / MATCH EX. ELEV. 25′ RT. / -.016 / 0.016(±) / SEE INTERSECTION DETAIL SHEET NO. 29 / 12″ Water				
		103+95.00 676.7				
0		STA. 103+60.44 AHEAD BACK 680		STA. 103+60.44 AHEAD BACK 680	0	0
20		675 / 27.67′ / LT. SIDE EDGE LINE / .024 / PAVEMENT BREAK 23.34′ RT. / MATCH EX. ELEV. 25′ RT. / -.016 / 0.016(±) / 0.4 SF ITEM 441 - ASPHALT CONCRETE INTERMEDIATE (LEVELING) COURSE / 12:1 / 2.5′ / MATCH EXIST. 66.5′ RT. / Ex R/W / SWALE 60.5′ RT. ℄ = 676.6 / 12″ STM / 12″ Stm. REMOVE / 12″ Water			17	2
24					7	1
20		103+50.00 677.0			17	2
		675 / MATCH EXIST. 46.3′± LT. 675.1± (SAW CUT EX. CONC.) / 28.71′ / .105 / .042 / 670 / .112 / EX. CONC. DRIVE				
		103+08.41 (AUTOZONE DRIVE) DR-5				
	194	40 30 20 10 0 10 20 30 40 50 60 70 80			12	6

CALCULATED DRP
CHECKED CJB

CROSS SECTIONS - S.R. 254
STA. 103+08 TO STA. 103+95.00

LOR-254-2.03

28
62

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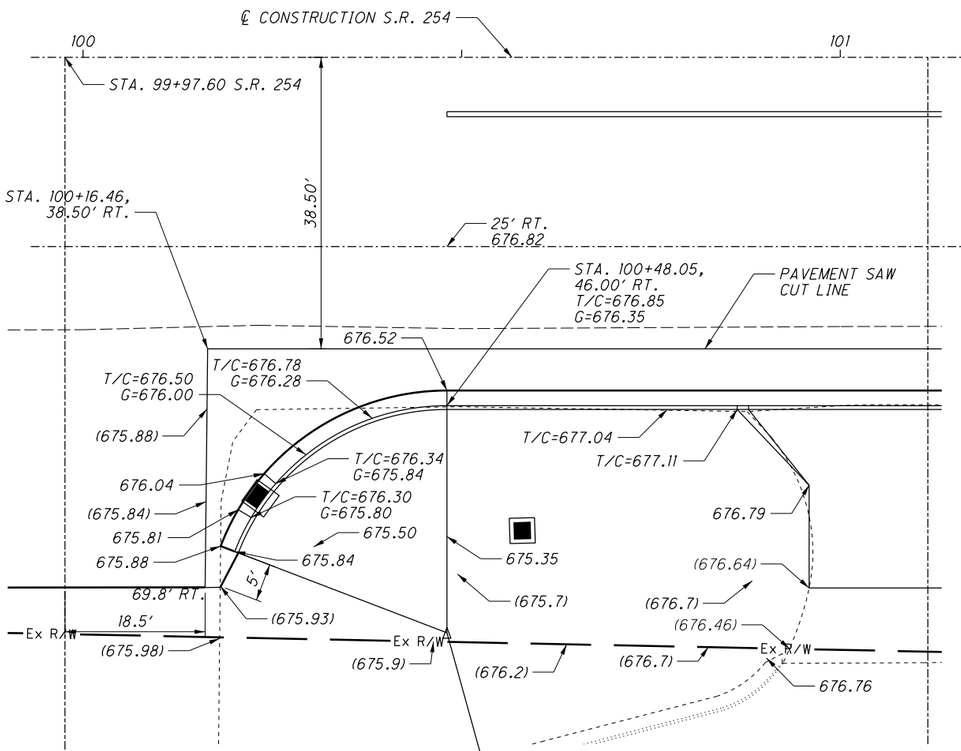


STA. 100+23.72, 58.45' RT.
3A CATCH BASIN
T/G=675.78

CURB CURVE DATA

Δ= 69° 00' 20"
R= 30.00'
L= 36.13'

S.R. 254 AND COBBLESTONE SQUARE DRIVE INTERSECTION DETAIL

Ⓔ = STA. 100+39.11, 47.36' RT.

LEGEND

T/C=TOP OF CURB

T/G=TOP OF GRATE

E/P= EDGE OF PAVEMENT

E/S= EDGE OF SHOULDER

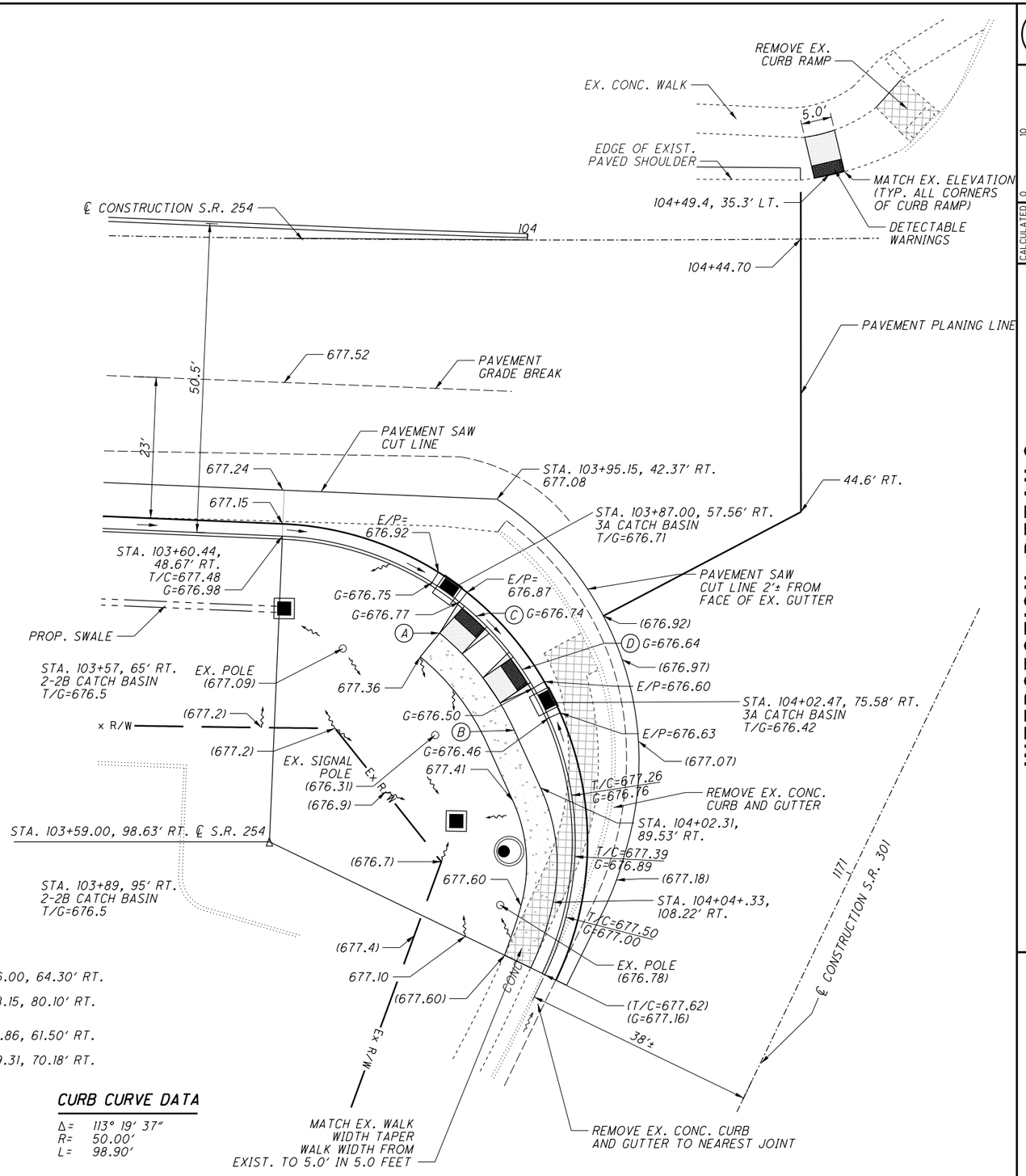
G= GUTTER

(XXX)=EXIST. ELEVATION

SIDEWALK REMOVED

4" CONCRETE WALK

CURB RAMP



Ⓐ = STA. 103+86.00, 64.30' RT.

Ⓑ = STA. 103+98.15, 80.10' RT.

Ⓒ = STA. 103+91.86, 61.50' RT.

Ⓓ = STA. 103+99.31, 70.18' RT.

CURB CURVE DATA

Δ= 113° 19' 37"
R= 50.00'
L= 98.90'

S.R. 254 AND S.R. 301 INTERSECTION DETAIL

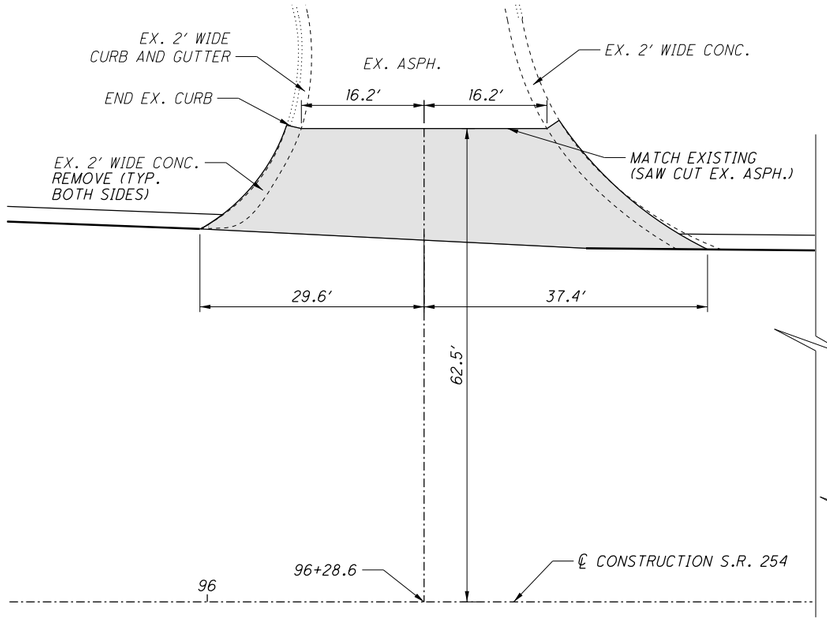
HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED DRP
CHECKED CJB

INTERSECTION DETAILS
S.R. 254 & I-90 E.B./ S.R. 254 & S.R. 301

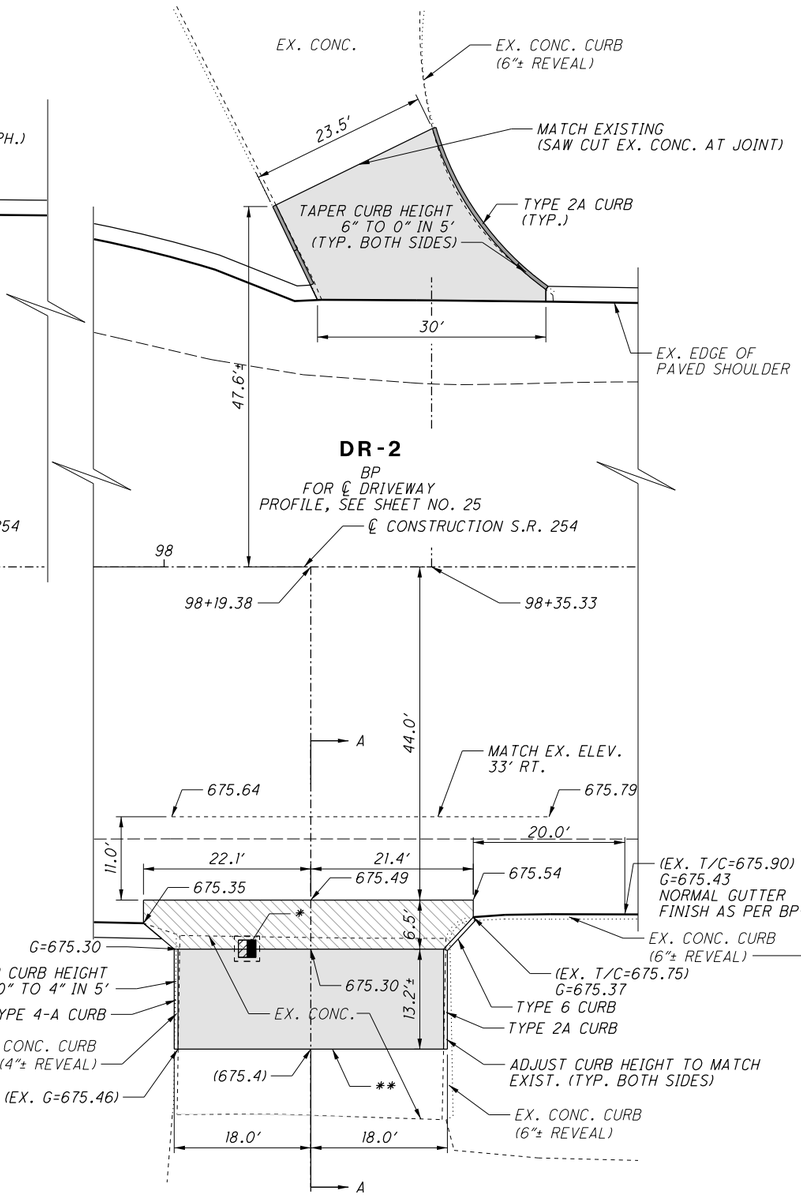
LOR-254-2.03

29
62



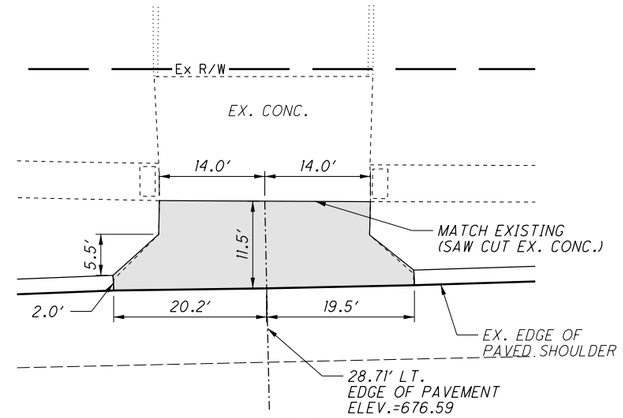
DR-1

SHEFFIELD CROSSING DRIVEWAY
FOR ℄ DRIVEWAY PROFILE, SEE SHEET NO. 24



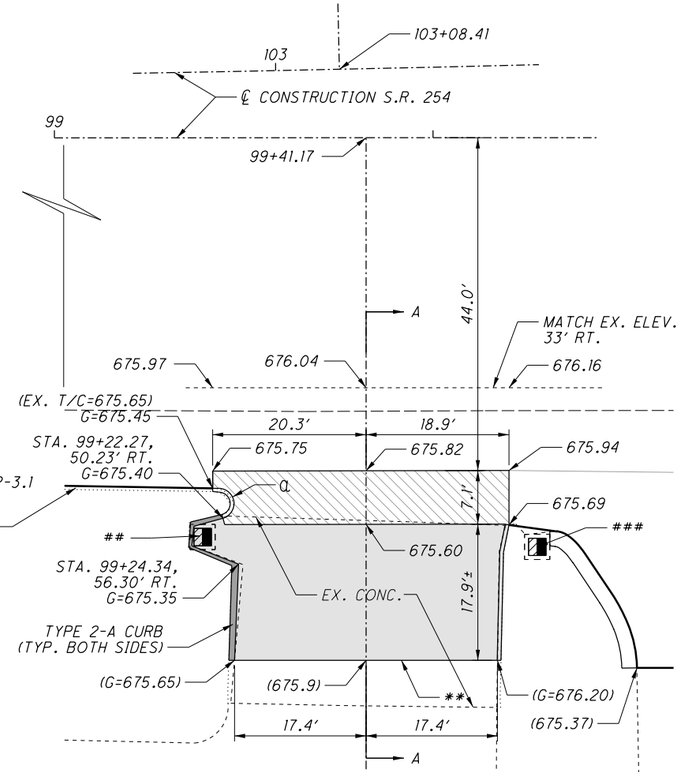
DR-2

BP
FOR ℄ DRIVEWAY PROFILE, SEE SHEET NO. 25



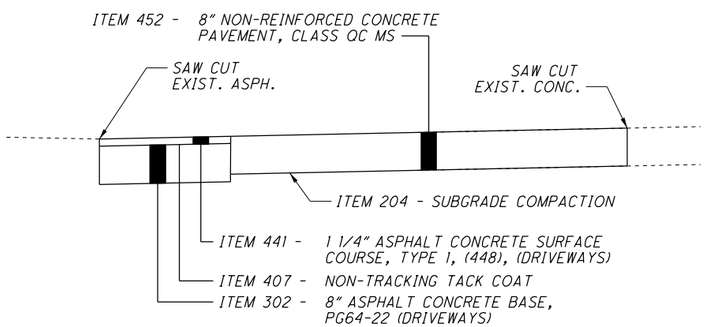
DR-5

AUTOZONE
FOR ℄ DRIVEWAY PROFILE, SEE SHEET NO. 28



DR-4

SPEEDWAY (EAST DRIVE)
FOR ℄ DRIVEWAY PROFILE, SEE SHEET NO. 26



SECTION A-A

* = ADJUST EXIST. CATCH BASIN TO GRADE
GRATE ELEV. = 675.25
(EXIST. GRATE ELEV. = 674.72)

** = SAW CUT CONCRETE AT EX. JOINT AND MATCH EXIST. ELEV.

HATCHING LEGEND:

8" NON-REINFORCED CONCRETE PAVEMENT

FULL-DEPTH ASPHALT

DRIVEWAY GENERAL NOTE:

1. CONTRACTOR IS TO VERIFY THE EXISTING ELEVATIONS INDICATED, AND, IF NECESSARY, MODIFY THE PROPOSED ELEVATIONS TO PROVIDE THE GENERAL DRAINAGE PATTERN AS SHOWN.
2. FOR DRIVEWAY QUANTITIES SEE DETAIL ON SHEET NO. 31

LEGEND:

T/C:	TOP OF CURB
G:	GUTTER
(XXX):	EXIST. ELEVATION
B/C @ C/C:	BACK OF CURB ELEVATION AT DRIVEWAY CURB CUT

= RECONSTRUCT EXIST. CATCH BASIN TO GRADE

GRATE ELEV. = 675.30
(EXIST. GRATE ELEV. = 674.68)

###= ADJUST EXIST. CATCH BASIN TO GRADE
GRATE ELEV. = 675.44
(EXIST. GRATE ELEV. = 674.97)

℄ = TYPE 6 CURB
FACE OF CURB R=2'
CENTER POINT STA. 99+21.73, 48.30' RT.

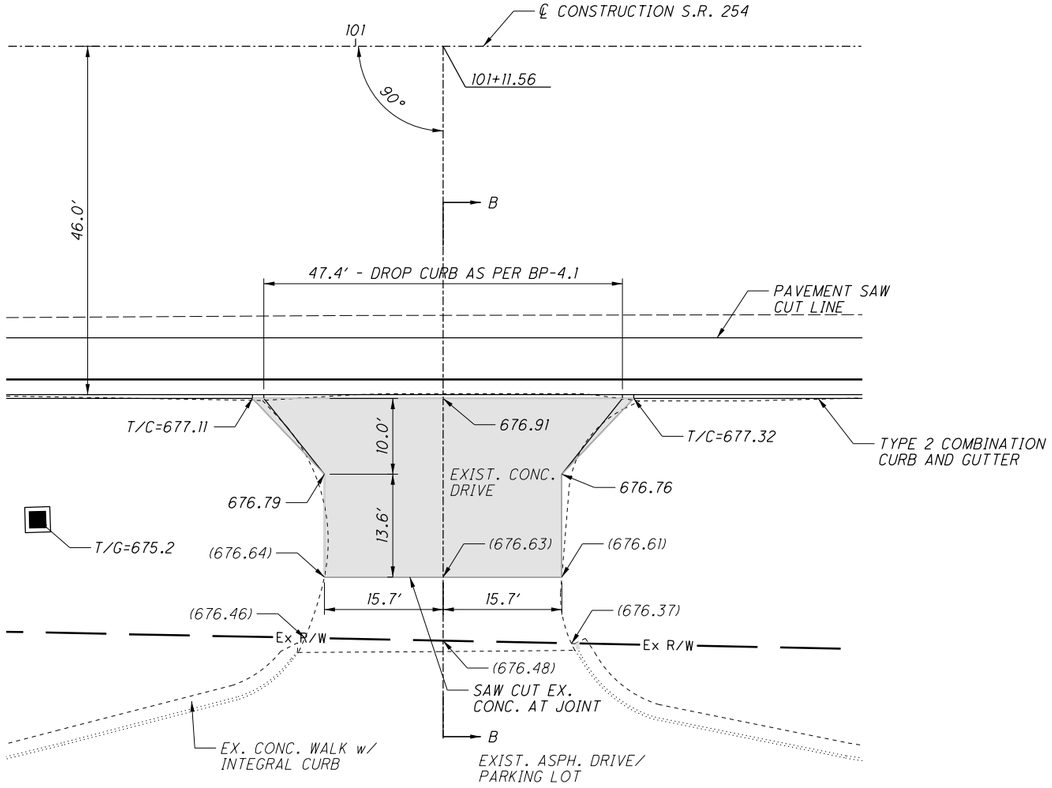
HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED DRP
CHECKED CJB

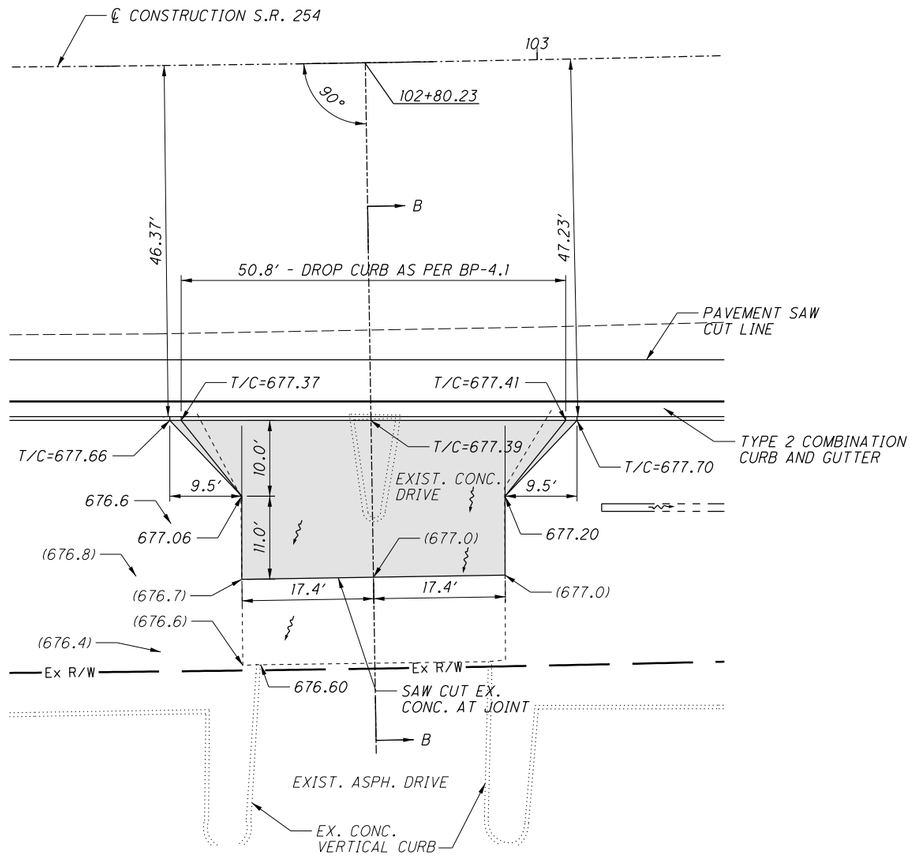
DRIVEWAY DETAILS
DR-1 TO DR-5

LOR-254-2.03

30
62



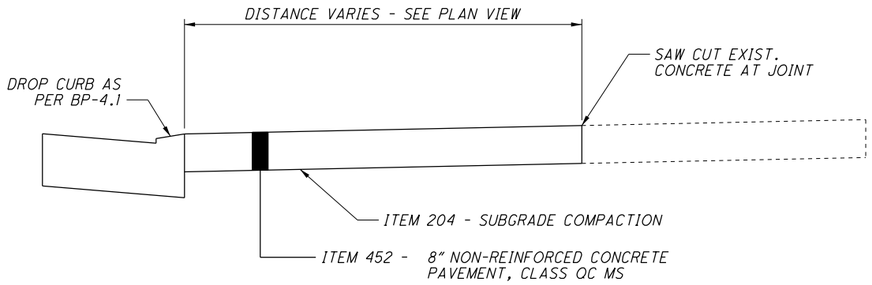
DR-6
STA. 101+11.56
MCDONALDS
FOR ℄ DRIVE PROFILE SEE SHEET NO. 26



DR-7
STA. 102+80.23
KEY BANK
FOR ℄ DRIVE PROFILE SEE SHEET NO. 27

HATCHING LEGEND:

8" NON-REINFORCED CONCRETE PAVEMENT



SECTION B-B

LEGEND:

T/C:	TOP OF CURB
G:	GUTTER
(XXX):	EXIST. ELEVATION
B/C @ C/C:	BACK OF CURB ELEVATION AT DRIVEWAY CURB CUT

DRIVEWAY GENERAL NOTES

1. CONTRACTOR IS TO VERIFY THE EXISTING ELEVATIONS INDICATED, AND, IF NECESSARY, MODIFY THE PROPOSED ELEVATIONS TO PROVIDE THE GENERAL DRAINAGE PATTERN AS SHOWN.

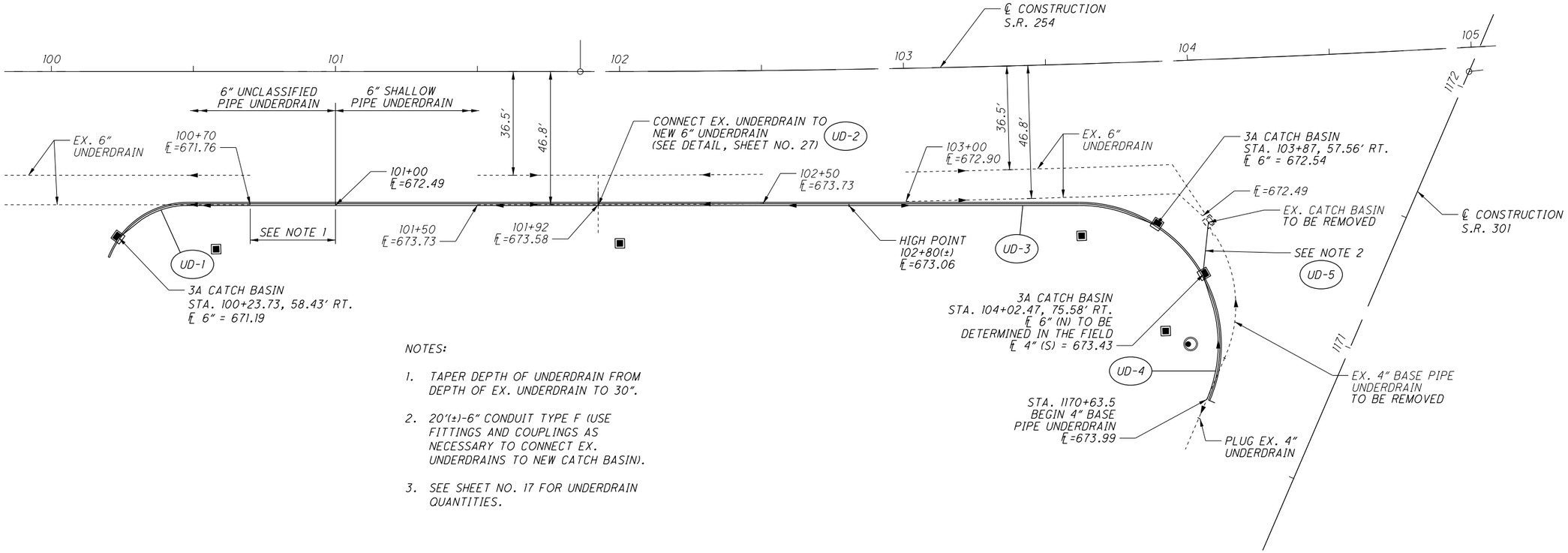
SHEET NO.	REFERENCE NO.	STATION	SIDE	202 PAVEMENT REMOVED (SQ YD)	203 EXCAVATION (CU YD)	204 SUBGRADE COMPACTION (SQ YD)	302 ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS) (CU YD)	407 NON-TRACKING TACK COAT (GAL)	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS) (CU YD)	452 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS (SQ YD)	609 CURB, TYPE 2A (FT)	609 CURB, TYPE 4A (FT)	609 CURB, TYPE 6 (FT)
30	DR-1	96+28.6	LT	10	18	80.94				80.94			
30	DR-2	98+35.6	LT	55		54.78				54.78	38		
30	DR-3	98+19.4	RT	60	7	82.67	6.61	1.79	1.03	52.91	14	14	6
30	DR-4	99+41.2	RT	78	7	104.4	6.58	1.78	1.03	74.78	44		7
30	DR-5	103+08.4	LT	42		41.55				41.55			
31	DR-6	101+11.6	RT	96		92.71				92.71			
31	DR-7	102+80.2	RT	93		90.5				90.5			
TOTALS TO GEN. SUMM.				434	32	548	14	4	3	489	96	14	13

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED DRP
CHECKED CJB

DRIVEWAY DETAILS DR-6 AND DR-7

LOR-254-2.03



NOTES:

1. TAPER DEPTH OF UNDERDRAIN FROM DEPTH OF EX. UNDERDRAIN TO 30".
2. 20'(±)-6" CONDUIT TYPE F (USE FITTINGS AND COUPLINGS AS NECESSARY TO CONNECT EX. UNDERDRAINS TO NEW CATCH BASIN).
3. SEE SHEET NO. 17 FOR UNDERDRAIN QUANTITIES.

HORIZONTAL SCALE IN FEET
0 20 40 60

CALCULATED DRP
CHECKED CJB

UNDERDRAIN PLAN

LOR-254-2.03

32
62

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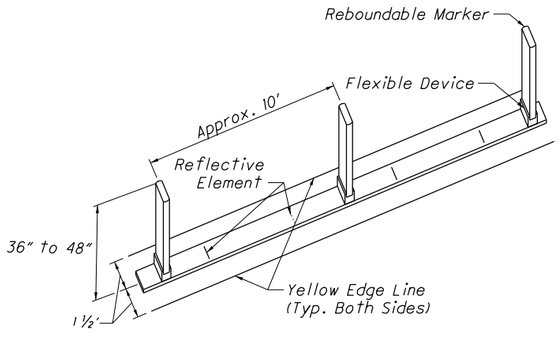

NOTES:

1. The design of the longitudinal channelizer may vary from manufacturer to manufacturer. It shall consist of two main components - a base component consisting of interlocking units and a vertical reboundable marker/channelizer component. The shape of the vertical component may vary from manufacturer to manufacturer. The width shall be approximately 8" to 9" for elliptical designs and 4" to 6" for round (tubular) designs. The height of the vertical component shall be within the range of 36" minimum to 48" maximum.
2. The longitudinal channelizer shall be MASH compliant.
3. The vertical component shall be equipped with retroreflective sheeting or with retroreflective stripes. Where stripes are used, the stripes shall consist of two 3" wide bands placed a maximum of 2" from the top with a maximum of 6" between the bands.
4. The base component shall be equipped with reflectors.
5. The color of the base component, including the attached reflectors, and of the retroreflective sheeting or bands for the vertical components shall be in conformance with the pavement marking colors established in the Ohio Manual of Uniform Traffic Control Devices.

ITEM 609 - CURB, MISC.: LONGITUDINAL CHANNELIZER, AS PER PLAN

CALCULATED DRP
CHECKED CJB

MISCELLANEOUS DETAILS

LOR-254-2.03

33
62

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SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES) (W x H)	625	630												
							GROUND ROD	GROUND MOUNTED SUPPORT, NO. 2 POST	GROUND MOUNTED SUPPORT, NO. 3 POST	GROUND MOUNTED SUPPORT, NO. 4 POST	SIGN POST REFLECTOR	OVERHEAD SIGN SUPPORT, TYPE TC-16.21, DESIGN 13	OVERHEAD SIGN SUPPORT, TYPE TC-16.21, DESIGN 14	SIGN, FLAT SHEET	SIGN, OVERHEAD EXTRUSHEET	SIGN ERECTED, FLAT SHEET	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65
							EACH	FT	FT	FT	EACH	EACH	EACH	SF	SF	SF	EACH	EACH	EACH	EACH	EACH
37	S-1	S.R. 254	91+74	RT	R3-H8cj-48	48" x 30"								10.00				1			
	S-2	S.R. 254	92+56	RT	R3-H8cj-48	48" x 30"								10.00				1			
	S-3	I-90 EB EXIT RAMP "L"	809+50(+)	LT	R3-H8cj-48	48" x 30"		23.50						10.00				1	2		
	S-4	I-90 EB EXIT RAMP "L"	809+50(+)	RT	R3-H8cj-48	48" x 30"		23.50						10.00				1	2		
38	S-5	S.R. 254	94+00	RT	M3-2-24	24" x 12"				15.50				2.00							
					M1-5-24-3	30" x 24"								5.00							
					M8-H3-24	24" x 24"										4.00					
	S-6	S.R. 254	95+00	RT	R2-1-30	30" x 36"			13.50					7.50							
	S-7	S.R. 254	95+58	RT	D15-1	60" x 84"	1					1		35.00			1				
						120" x 54"									45.00						
	S-8	S.R. 254	96+08	LT	R1-1-30					15.00	1			6.25							
					R3-2-24									4.00							
	S-9	S.R. 254	96+77	RT	R3-H8df-60	60" X 30"			26.00					12.50							
	S-10	S.R. 254	97+00	RT	M2-1-21	21" x 15"			13.75					2.19							
					M1-5-24-3	30" x 24"								5.00							
	R-1	S.R. 254	93+87	RT														3	1		
	R-2	S.R. 254	94+64	RT														1	2		
	R-3	S.R. 254	95+56	RT														2	1		
	R-4	S.R. 254	96+55	RT														1	1		
	R-5	S.R. 254	96+77	RT														1	2		
	R-6	S.R. 254	97+35	RT														2	1		
	R-7	S.R. 254	96+08	LT														1	1		
39	S-11	S.R. 254	98+41	RT	R3-2-24	24" x 24"		12.50						4.00							
	S-12	S.R. 254	99+11	RT	R3-H8df-60	60" x 30"			26.00					12.50							
	S-13	S.R. 254	100+58	RT	D1-H11a-72	72" x 12"		23.00						6.00							
	S-14	S.R. 254	101+33	RT	R3-2-24	24" x 24"		12.50						4.00							
	R-8	S.R. 254	98+41	RT														1	1		
	R-9	S.R. 254	99+05	RT														1	2		
	R-10	S.R. 254	100+58	RT														1	2		
40	S-15	S.R. 254	102+36	RT	D15-1	48" x 96"	1						1	32.00			1				
					D15-1	48" x 96"								32.00							
					D15-1	48" x 96"								32.00							
					D15-1	48" x 96"								32.00							
	S-16	S.R. 254	103+05	RT	R3-2-24	24" x 24"		12.50						4.00							
	S-17	S.R. 254	103+59	RT	R3-H8dc-54	54" x 30"			26.00					11.25							
	S-18	S.R. 254	103+86	RT	M4-5-24	24" x 12"								2.00							
					M1-5-24-2	24" x 24"			14.75					4.00							
					M6-1R-21	21" x 15"								2.19							
	S-19	S.R. 254	103+89	RT	M4-5-24	24" x 24"								2.00							
					M1-1-24-2	24" x 24"			14.75					4.00							
					M6-1R-21	21" x 15"								2.19							
	S-20	S.R. 254	103+92	RT	M1-5-24-3	30" x 24"			13.75					5.00							
					M6-4-21	21" x 15"								2.19							
	S-21	S.R. 254	102+91	RT	R3-2-24	24" x 24"		12.50						4.00							
	R-11	S.R. 254	102+05	RT														1	2		
	R-12	S.R. 254	102+45	LT/RT																3	1
	R-13	S.R. 254	103+88	RT														1	2		
	R-14	S.R. 254	103+98	RT														3	1		
	R-15	S.R. 254	104+00	RT														3	1		
	R-16	S.R. 254	104+01	RT														2	1		
TOTALS CARRIED TO GENERAL SUMMARY							2	120.00	148.50	30.50	1	1	1	316.76	45.00	4.00	2	28	25	3	1

CALCULATED DRP
CHECKED SAS

SIGNING SUBSUMMARY

LOR-254-2.03

PAVEMENT MARKING SUBSUMMARY

CALCULATED DRP
CHECKED SAS

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	621 RPM W EACH	621 RPM Y/Y EACH	621 RPM W/R EACH	EDGE LINE, 6" (WHITE) MILE	EDGE LINE, 6" (YELLOW) MILE	LANE LINE, 6" MILE	DOTTED LINE, 6" FT	CENTER LINE: SOLID, DOUBLE MILE	CHANNELIZING LINE, 12" FT	STOP LINE FT	CROSSWALK LINE FT	TRANSVERSE/ DIAGONAL LINE (YELLOW) FT	ISLAND MARKING (YELLOW) SQ FT	LANE ARROW EACH	WORD ON PAVEMENT, 72-INCH EACH	REMOVAL OF PAVEMENT MARKING FT	REMOVAL OF PAVEMENT MARKING EACH
37	EW-1	S.R. 254	88+99	92+02	LT				0.057													
	EW-2	S.R. 254	88+70	91+60	RT	8			0.055													
	EW-3	S.R. 254	92+66	93+50	LT	1			0.016													
	EW-4	S.R. 254	92+45	93+50	RT	1			0.020													
	EY-1	S.R. 254	92+02	92+14	LT					0.005												
	EY-2	S.R. 254	91+60	91+91	RT					0.007												
	LL-1	S.R. 254	88+95	93+50	LT			5			0.086											
	LL-2	S.R. 254	88+75	93+50	RT			5			0.090											
	LL-3	S.R. 254	92+62	93+50	RT			1			0.017											
	DL-1	S.R. 254	91+60	92+27	LT							95										
	DL-2	S.R. 254	91+60	93+05	RT							145										
	DL-3	S.R. 254	92+24	92+62	RT							47										
	CL-1	S.R. 254	88+90	93+50	LT		5						0.087									
	CL-2	S.R. 254	93+05	93+50	RT		1						0.009									
	CH-1	S.R. 254	89+12	91+58	CL		7							246								
	CH-2	S.R. 254	89+12	91+58	RT		7							246								
	CH-3	S.R. 254	93+05	93+50	LT		1							45								
	SL-1	S.R. 254	91+58		LT/RT										48							
	SL-2	S.R. 254	91+90	92+39	RT										51							
	SL-3	S.R. 254	93+05		LT										38							
	TL-1	S.R. 254	93+05	93+50	LT/RT												106					
	IM-1	S.R. 254	92+94.5	93+05	LT/RT													174				
	LA-1	S.R. 254	89+73	91+43	LT														3			
	LA-2	S.R. 254	89+73	91+43	RT														3			
	LA-3	S.R. 254	93+35		LT														1			
	LA-4	I-90 EB EXIT RAMP "L"			LT														1			
	LA-5	I-90 EB EXIT RAMP "L"			LT														1			
	PR-1	I-90 EB EXIT RAMP "L"			LT																	1
38	EW-5	S.R. 254	93+50	97+50	LT	10			0.076													
	EW-6	S.R. 254	93+50	97+50	RT	7			0.076													
	EY-3	S.R. 254	95+19	97+50	LT					0.044												
	EY-4	S.R. 254	95+19	97+50	RT					0.044												
	LL-4	S.R. 254	93+50	97+50	LT			5			0.076											
	LL-5	S.R. 254	93+50	97+50	RT			5			0.076											
	LL-6	S.R. 254	93+50	95+25	RT			2			0.033											
	DL-4	S.R. 254	95+25	97+50	RT			3				225										
	CL-3	S.R. 254	93+50	95+19	LT		2						0.032									
	CL-4	S.R. 254	93+50	95+19	RT		4						0.032									
	CH-4	S.R. 254	93+50	97+50	LT			10						400								
	CH-5	S.R. 254	95+39	97+50	RT			5						211								
	TL-2	S.R. 254	93+50	95+19	LT/RT												175					
	LA-6	S.R. 254	94+20	96+80	LT														4			
	LA-7	S.R. 254	96+00	97+32	RT														3			
SUBTOTALS						27	27	41	0.300	0.100	0.378	512	0.160	1148	137	0	281	174	16	0	0	1
TOTALS CARRIED TO GENERAL SUMMARY						95			0.40		0.38	512	0.16	1148	137	0	281	174	16	0	0	1

LOR-254-2.03

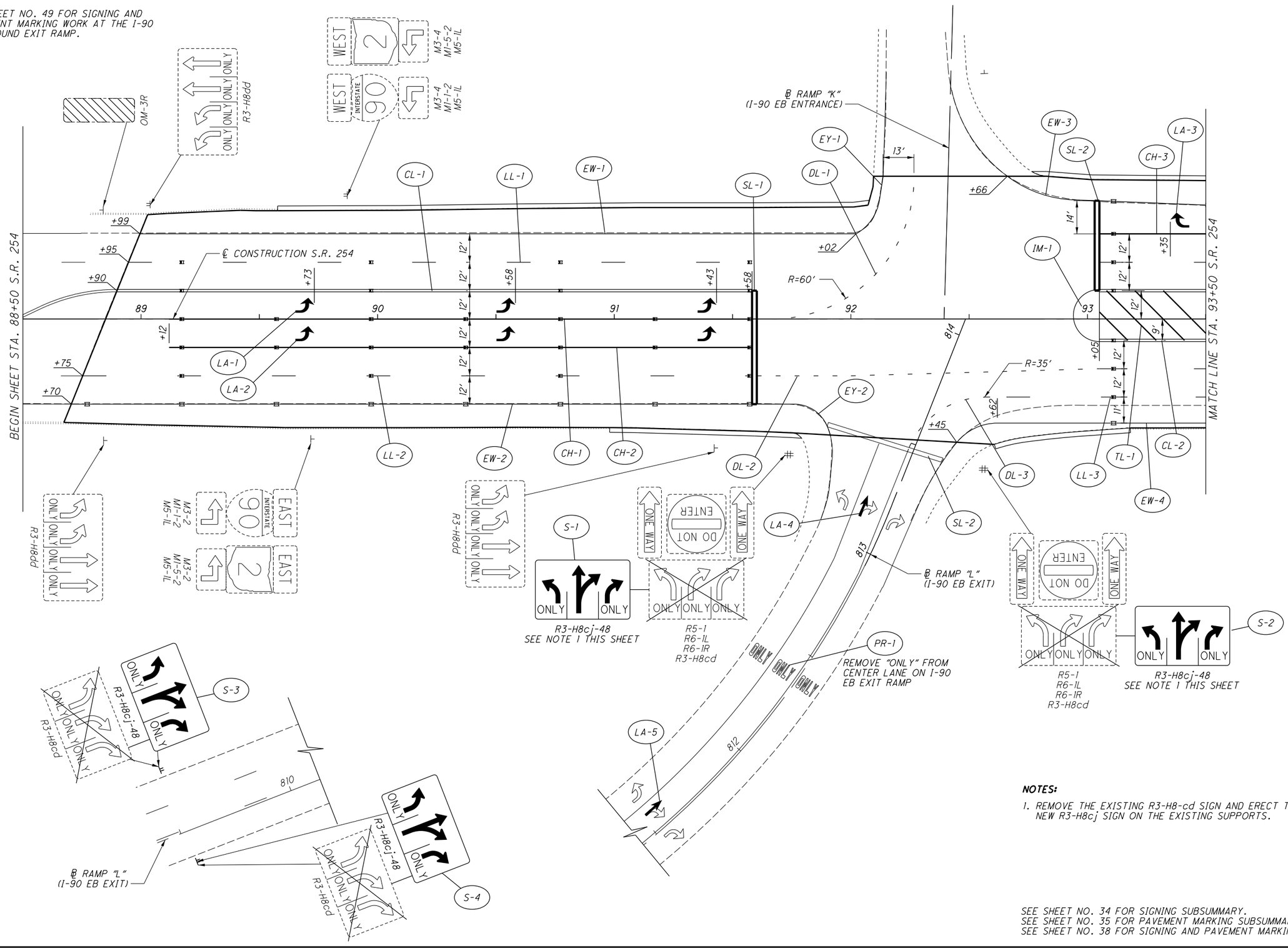
SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	621 RPM W EACH	621 RPM Y/Y EACH	621 RPM W/R EACH	644 EDGE LINE, 6" (WHITE) MILE	644 EDGE LINE, 6" (YELLOW) MILE	644 LANE LINE, 6" MILE	644 DOTTED LINE, 6" FT	644 CENTER LINE: SOLID, DOUBLE MILE	644 CHANNELIZING LINE, 12" FT	644 STOP LINE FT	644 CROSSWALK LINE FT	644 TRANSVERSE/ DIAGONAL LINE (YELLOW) FT	644 ISLAND MARKING (YELLOW) SQ FT	644 LANE ARROW EACH	644 WORD ON PAVEMENT, 72-INCH EACH	644 REMOVAL OF PAVEMENT MARKING FT	644 REMOVAL OF PAVEMENT MARKING EACH
39	EW-7	S.R. 254	97+50	101+50	LT	6			0.076													
	EW-8	S.R. 254	97+50	101+50	RT	9			0.076													
	EY-5	S.R. 254	97+50	99+57	LT					0.039												
	EY-6	S.R. 254	97+50	99+57	LT					0.039												
	EY-7	S.R. 254	100+48	101+50	RT					0.019												
	EY-8	S.R. 254	100+48	101+50	RT					0.019												
	LL-7	S.R. 254	97+50	101+50	LT			5			0.076											
	LL-8	S.R. 254	97+50	99+57	RT			3			0.039											
	DL-5	S.R. 254	97+50	99+57	RT			3				207										
	DL-6	S.R. 254	100+48	101+50	RT			2				102										
	CL-5	SHEFFIELD CROSSING			RT								0.001									
	CH-6	S.R. 254	97+50	99+57	RT			6						207								
	CH-7	S.R. 254	100+48	101+50	LT			3						102								
	CH-8	S.R. 254	100+48	101+50	RT			3						102								
	CH-9	SHEFFIELD CROSSING			LT									5								
	CH-10	COBBLESTONE SQUARE			RT									7								
	SL-4	S.R. 254	99+57		LT/RT										47							
	SL-5	S.R. 254	100+48		LT/RT										36							
	SL-6	COBBLESTONE SQUARE			LT/RT										26							
	SL-7	SHEFFIELD CROSSING			LT/RT										36							
	LA-8	S.R. 254	97+98	99+30	RT														3			
	LA-9	S.R. 254	100+67	101+27	CL														2			
	LA-10	SHEFFIELD CROSSING			LT														1			
40	EW-9	S.R. 254	101+50	104+40	LT	6			0.055													
	EW-10	S.R. 254	101+50	104+10	RT	5			0.060													
	EY-9	S.R. 254	101+50	104+16	RT/LT					0.051												
	EY-10	S.R. 254	101+50	103+98	RT/LT					0.047												
	LL-9	S.R. 254	101+50	104+16	LT						0.050											
	DL-7	S.R. 254	101+50	102+56	RT			1				106										
	DL-8	S.R. 254	103+94	104+20	RT							90										
	DL-9	S.R. 254	104+16	104+64	LT/RT							119										
	CH-11	S.R. 254	101+50	101+66	LT									16								
	CH-12	S.R. 254	101+50	103+93	RT			5						244								
	CH-13	S.R. 254	102+56	103+98	RT			4						142								
	CH-14	S.R. 254	102+56	103+98	RT			4						181								
	SL-8	S.R. 254	103+87	103+98	RT										59							
	XW-1	S.R. 254	103+98.2	104+58	RT/LT											228						
	XW-2	S.R. 254	103+98.2	105+18	RT											232						
	LA-11	S.R. 254	102+66	103+62	RT														3			
	LA-12	S.R. 254	102+66		RT														1			
	LA-13	S.R. 254	102+66		RT														1			
	LA-14	S.R. 254	103+62		RT														1			
	LA-15	S.R. 254	103+62		RT														1			
	W-1	S.R. 254	104+12		RT															1		
	W-2	S.R. 254	104+12		RT															1		
	PR-2	S.R. 254	104+45	104+69	RT/LT																93	
SUBTOTALS						26	0	39	0.267	0.214	0.165	624	0.001	1006	204	460	0	0	13	2	93	0
TOTALS CARRIED TO GENERAL SUMMARY						65			0.49		0.17	624	0.01	1006	204	460	0	0	13	2	93	0

CALCULATED DRP
CHECKED SAS

PAVEMENT MARKING SUBSUMMARY

LOR-254-2.03

SEE SHEET NO. 49 FOR SIGNING AND PAVEMENT MARKING WORK AT THE I-90 WESTBOUND EXIT RAMP.



NOTES:

1. REMOVE THE EXISTING R3-H8-cd SIGN AND ERECT THE NEW R3-H8cj SIGN ON THE EXISTING SUPPORTS.

SEE SHEET NO. 34 FOR SIGNING SUBSUMMARY.
SEE SHEET NO. 35 FOR PAVEMENT MARKING SUBSUMMARY.
SEE SHEET NO. 38 FOR SIGNING AND PAVEMENT MARKING LEGENDS.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DRP
CHECKED CJB

SIGNING AND PAVEMENT MARKING PLAN

LOR-254-2.03

PAVEMENT MARKING LEGEND (644 THERMOPLASTIC):

EY	EDGE LINE, 6" YELLOW	CH	CHANNELIZING LINE, 12"
EW	EDGE LINE, 6" WHITE	SL	STOP LINE
LL	LANE LINE, 6"	TDL	TRANSVERSE/DIAGONAL LINE (YELLOW)
DL	DOTTED LINE, 6"	IM	ISLAND MARKING (YELLOW)
CL	CENTER LINE, DOUBLE YELLOW	LA	LANE ARROW

RAISED PAVEMENT MARKERS LEGEND

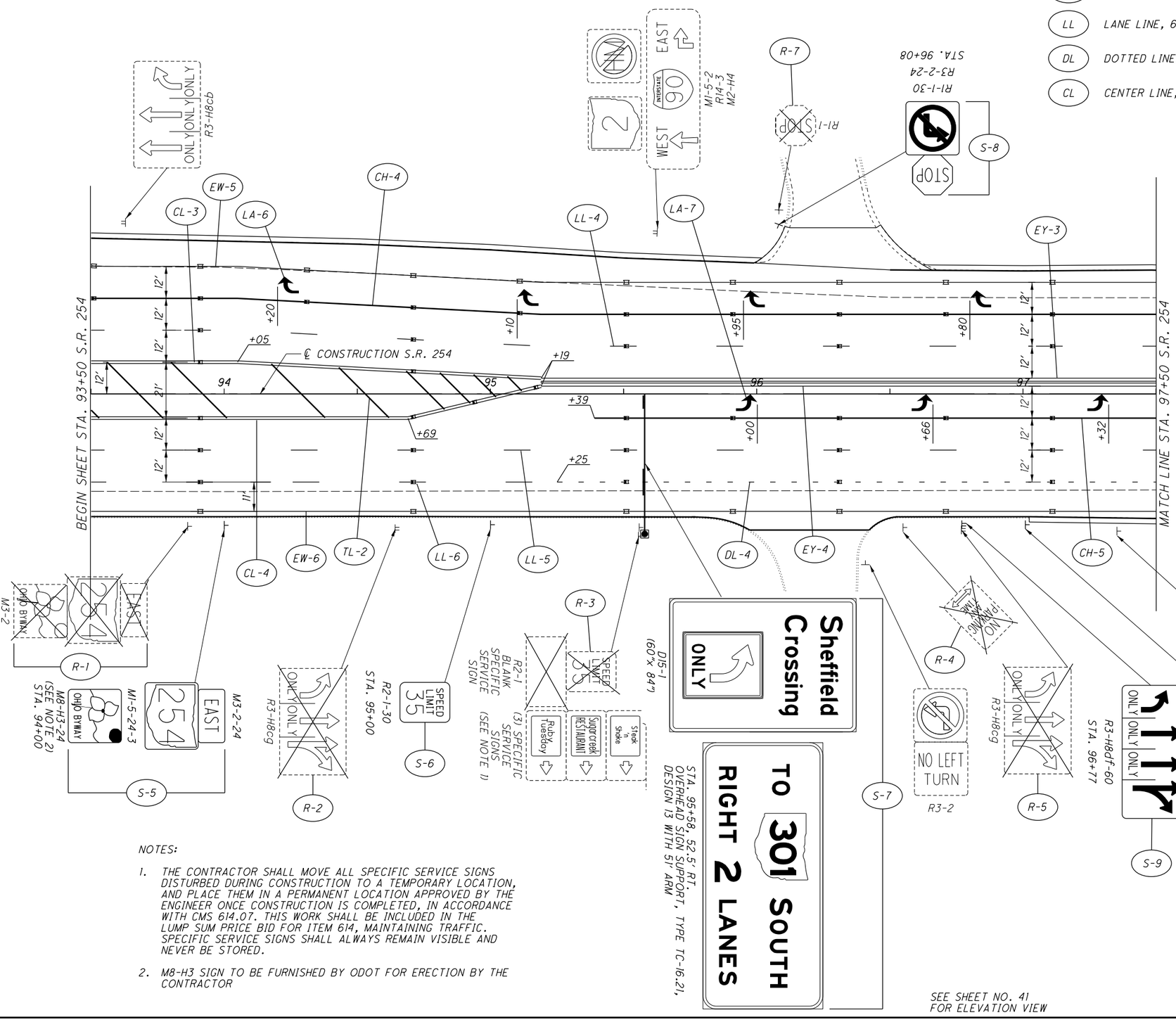
- ONE-WAY
  EDGE LINE: WHITE
- TWO-WAY
  CENTER LINE: YELLOW/YELLOW
  CHANNELIZING LINE: WHITE/RED
  LANE LINE: WHITE/RED
  DOTTED LINE: WHITE/RED

SIGN LEGEND:

PROPOSED SIGN

EXISTING SIGN TO REMAIN

EXISTING SIGN TO BE REMOVED



NOTES:

1. THE CONTRACTOR SHALL MOVE ALL SPECIFIC SERVICE SIGNS DISTURBED DURING CONSTRUCTION TO A TEMPORARY LOCATION, AND PLACE THEM IN A PERMANENT LOCATION APPROVED BY THE ENGINEER ONCE CONSTRUCTION IS COMPLETED, IN ACCORDANCE WITH CMS 614.07. THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC. SPECIFIC SERVICE SIGNS SHALL ALWAYS REMAIN VISIBLE AND NEVER BE STORED.
2. M8-H3 SIGN TO BE FURNISHED BY ODOT FOR ERECTION BY THE CONTRACTOR

SEE SHEET NO. 41 FOR ELEVATION VIEW

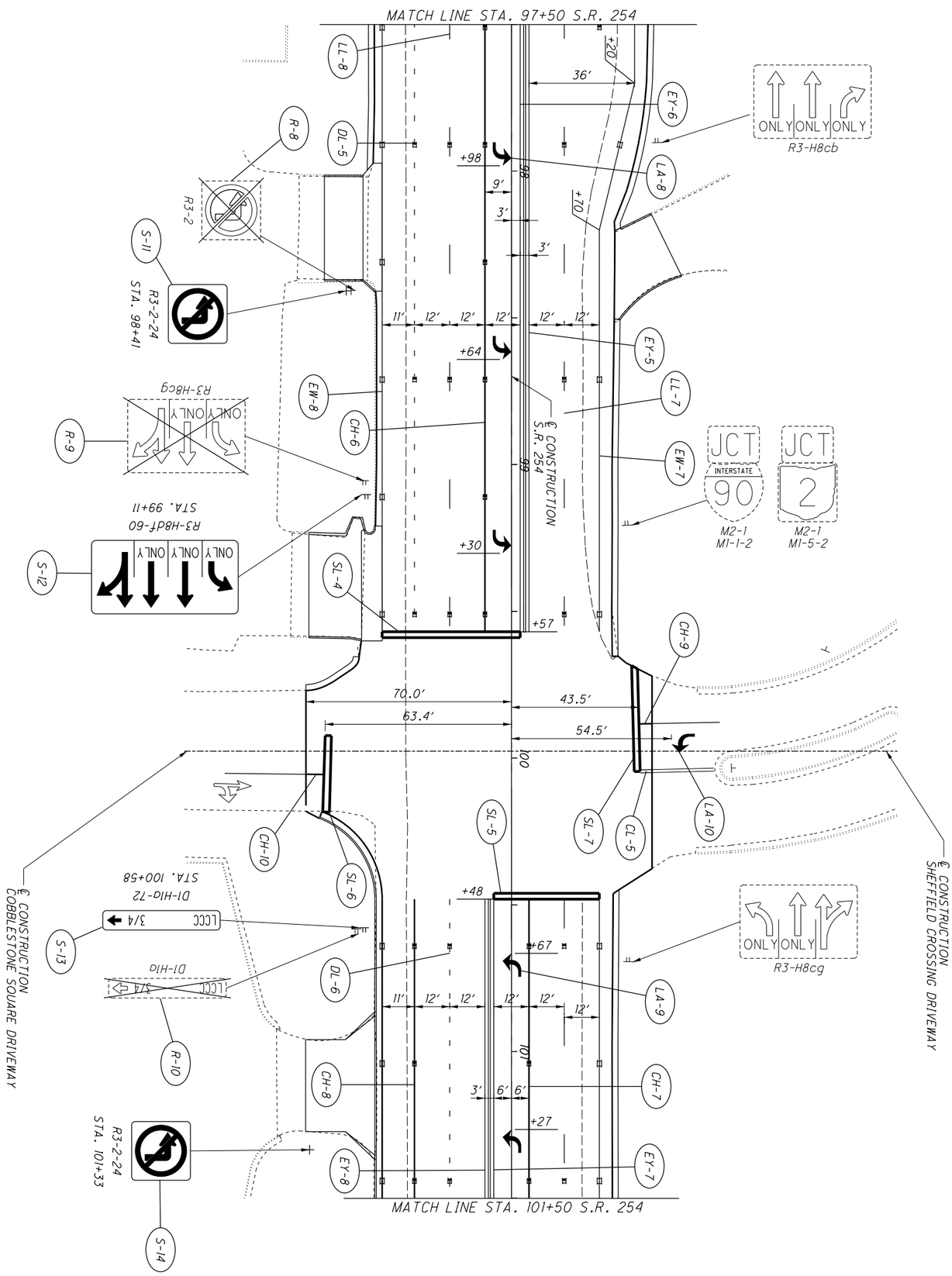
SEE SHEET NO. 34 FOR SIGNING SUBSUMMARY.
SEE SHEET NO. 35 FOR PAVEMENT MARKING SUBSUMMARY.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DRP
CHECKED CJB

SIGNING AND PAVEMENT MARKING PLAN

LOR-254-2.03



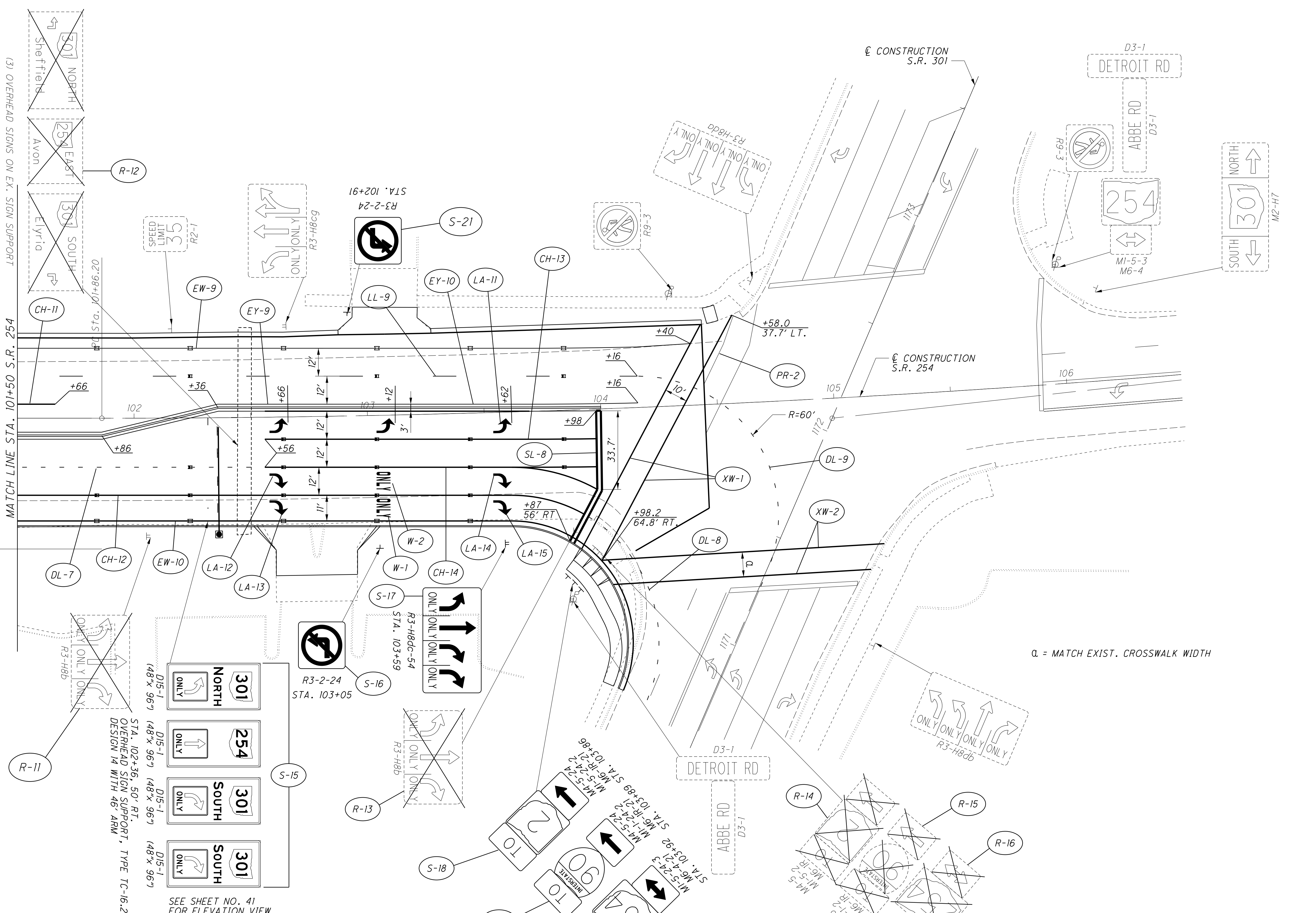
SEE SHEET NO. 34 FOR SIGNING SUBSUMMARY.
SEE SHEET NO. 36 FOR PAVEMENT MARKING SUBSUMMARY.
SEE SHEET NO. 38 FOR SIGNING AND PAVEMENT MARKING LEGENDS.

LOR-254-2.03

SIGNING AND PAVEMENT MARKING PLAN

CALCULATED DRP
CHECKED CJB

0 10 20 40
HORIZONTAL SCALE IN FEET



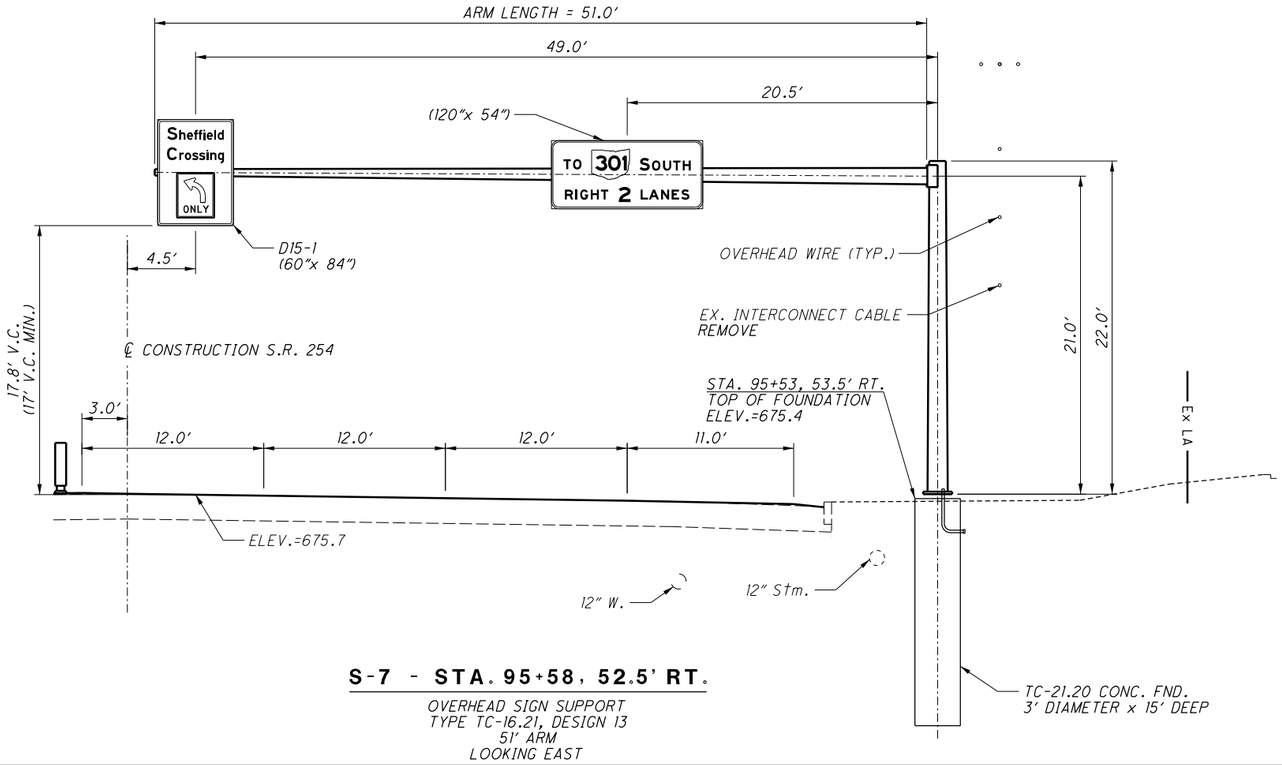
SEE SHEET NO. 34 FOR SIGNING SUBSUMMARY.
SEE SHEET NO. 36 FOR PAVEMENT MARKING SUBSUMMARY.
SEE SHEET NO. 38 FOR SIGNING AND PAVEMENT MARKING LEGENDS.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DRP
CHECKED CJB

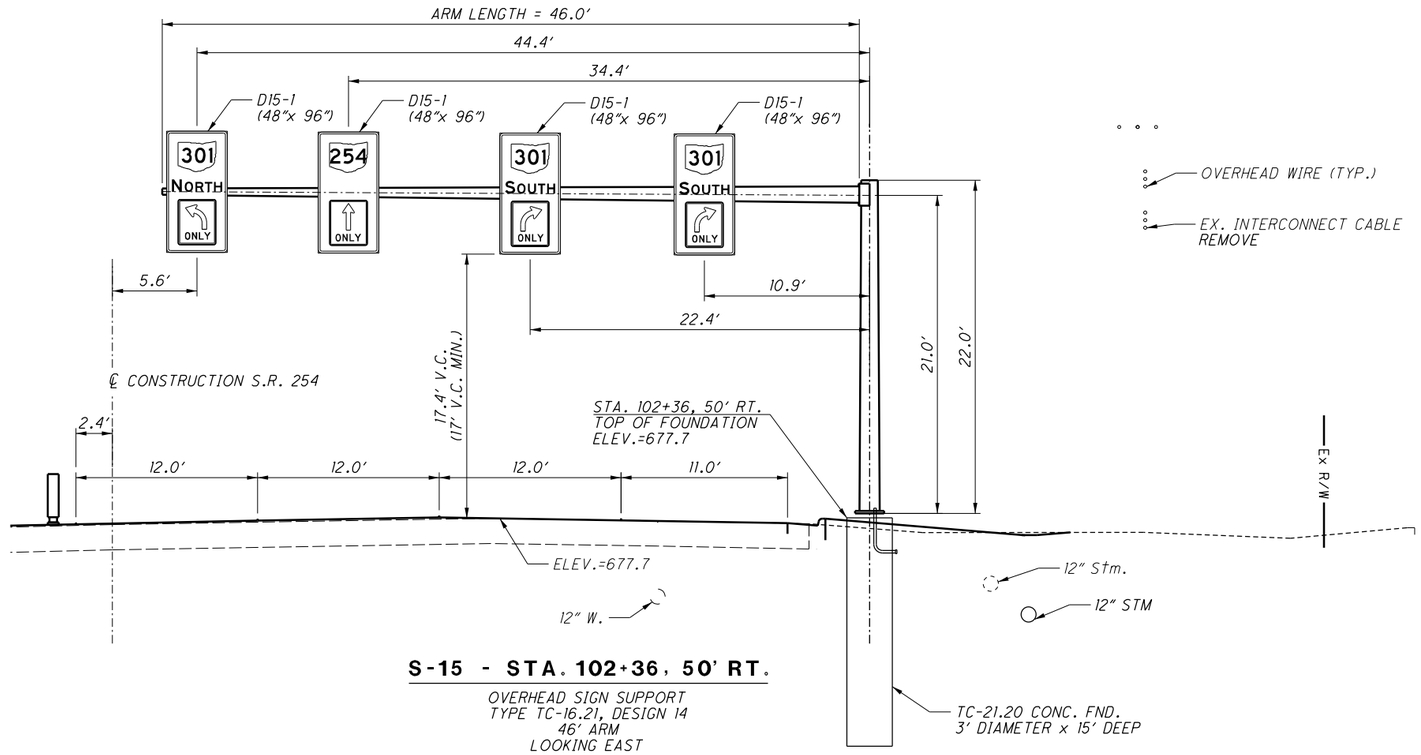
SIGNING AND PAVEMENT MARKING PLAN

LOR-254-2.03



S-7 - STA. 95+58, 52.5' RT.

OVERHEAD SIGN SUPPORT
TYPE TC-16.21, DESIGN 13
51' ARM
LOOKING EAST



S-15 - STA. 102+36, 50' RT.

OVERHEAD SIGN SUPPORT
TYPE TC-16.21, DESIGN 14
46' ARM
LOOKING EAST

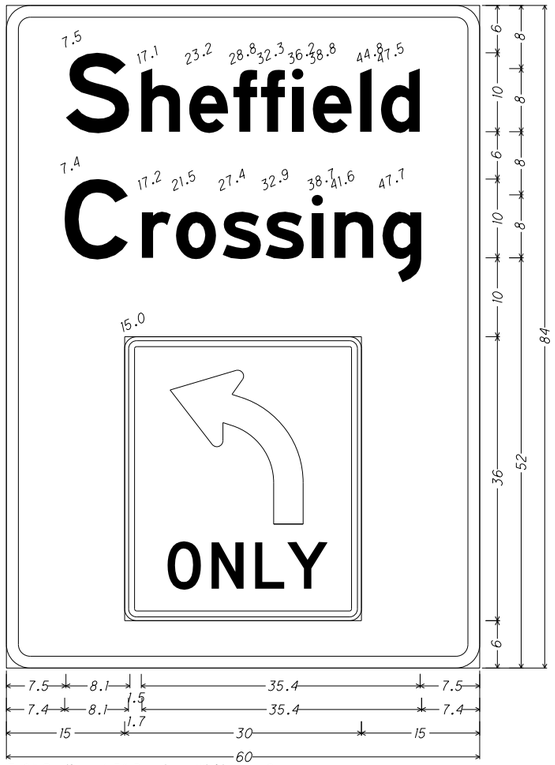
SEE SHEET NO. 42 FOR OVERHEAD SIGN DETAILS.

HORIZONTAL SCALE IN FEET
0 2.5 5 10

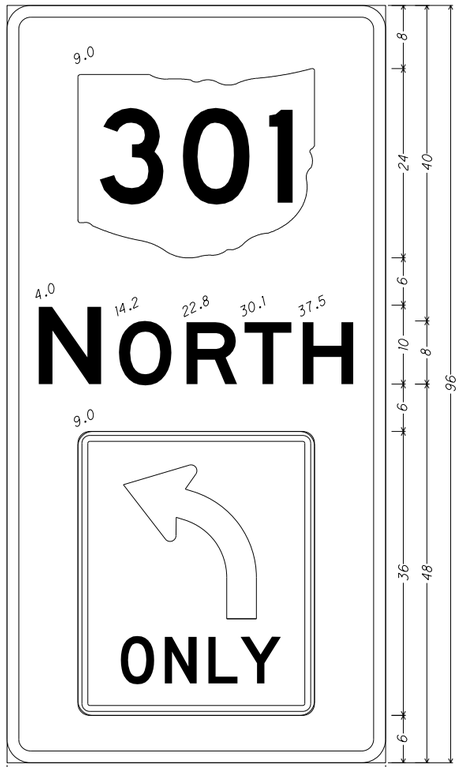
CALCULATED DRP
CHECKED CJB

SINGLE ARM OVERHEAD SIGN SUPPORT ELEVATIONS AND DETAILS

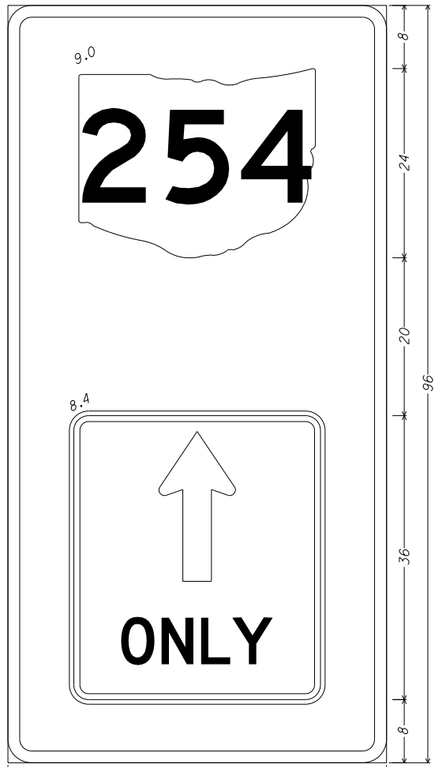
LOR-254-2.03



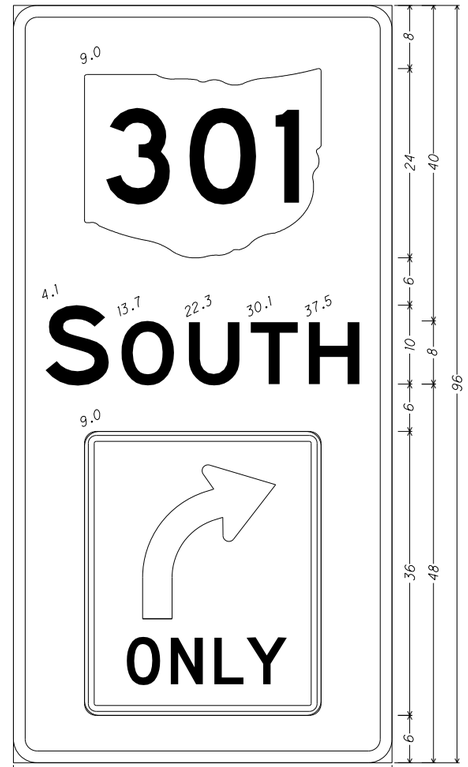
3.0" Radius, 1.5" Border, White on Green;
[Sheffield] E 2K; [Crossing] E 2K;



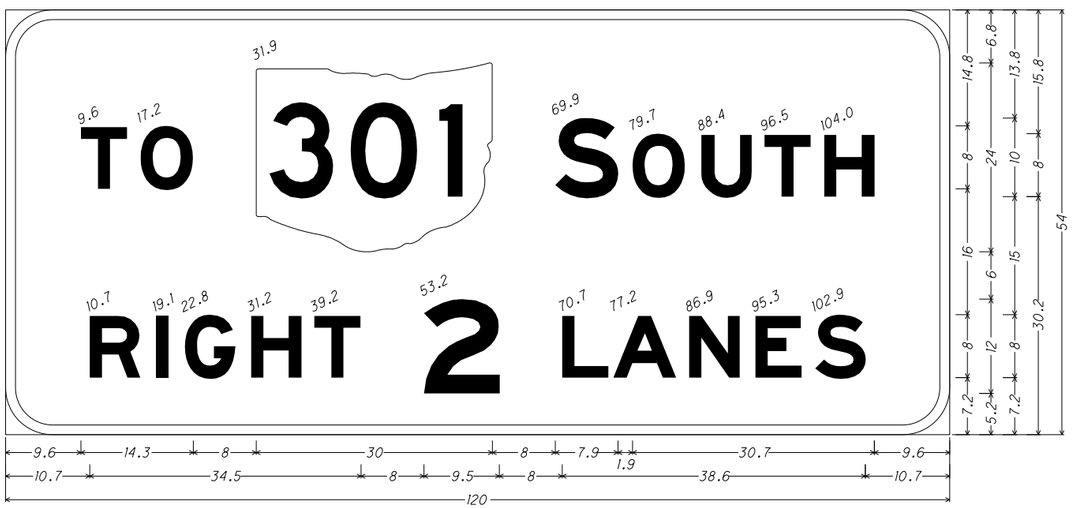
3.0" Radius, 1.5" Border, White on Green;
State Highway 301 MI-H5-24-3; [NORTH] E 2K;
Rounded Rectangle 1.9" Radius;



3.0" Radius, 1.5" Border, White on Green;
State Highway 254 MI-H5-24-3; [] E 2K;
Rounded Rectangle 1.9" Radius;



3.0" Radius, 1.5" Border, White on Green;
State Highway 301 MI-H5-24-3; [SOUTH] E 2K;
Rounded Rectangle 1.9" Radius;



6.0" Radius, 1.3" Border, White on Green;
[TO] E Mod; State Highway 301 MI-H5-24-3; [SOUTH] E Mod; [RIGHT] E Mod; [2] E Mod; [LANES] E Mod;

CALCULATED DRP
CHECKED CJB

OVERHEAD MOUNTED SIGN DETAILS

LOR-254-2.03

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.

SIGNAL ACTIVATION

PRIOR TO ACTIVATING THE NEW TRAFFIC SIGNAL TO STOP AND GO MODE AND/OR REMOVING THE EXISTING TRAFFIC SIGNAL FROM SERVICE, ALL ITEMS IN THE PROPOSED SIGNAL PLAN SHALL BE FULLY COMPLETED, (I.E., VEHICLE DETECTION, PEDESTRIAN SIGNAL HEADS, ETC). IF THERE ARE CONSTRUCTABILITY ISSUES (I.E., ROADWAY WIDENING, ETC.) THAT PREVENT THE SIGNAL FROM BEING COMPLETED PRIOR TO ACTIVATION, IT SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER. THE DISTRICT TRAFFIC ENGINEER WILL THEN REVIEW, APPROVE OR REJECT PROPOSALS TO ACTIVATE THE TRAFFIC SIGNAL PRIOR TO COMPLETION.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER AT LEAST 10 WORKING DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION OF THE SIGNAL INSTALLATION. FINAL INSPECTION IS NOT CONSIDERED COMPLETE UNTIL DESIGNATED DISTRICT TRAFFIC PERSONNEL INSPECT THE TRAFFIC SIGNAL AND ISSUE WRITTEN APPROVAL. IF ISSUES ARE FOUND DURING THE FINAL INSPECTION THAT EFFECT THE SAFETY OF THE TRAVELING PUBLIC AND/OR THE EFFICIENCY OF THE INTERSECTION, THE SIGNAL SHALL NOT BE ACTIVATED ON THE PROPOSED DATE. ANY PUNCH LIST ITEMS THAT ARE FOUND SHALL BE CORRECTED AND REINSPECTED BY DISTRICT TRAFFIC PERSONNEL PRIOR TO FINAL ACCEPTANCE. ODOT FORCES SHALL ONLY ASSUME DAY TO DAY MAINTENANCE OF THE TRAFFIC SIGNAL AFTER FINAL WRITTEN ACCEPTANCE HAS BEEN ISSUED.

632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, STRAIN POLES, CABINET, CONTROLLER, ETC., SHALL BE REMOVED IN ACCORDANCE WITH CMS 632.26 AND AS INDICATED ON THE PLANS. THE TRAFFIC SIGNAL PLAN DETAIL SHEETS PROVIDE A LIST OF TRAFFIC SIGNAL ITEMS THAT ARE TO BE STORED, REUSED, OR DISPOSED OF.

FOR SIGNAL ITEMS REMOVED AND STORED FOR THE VILLAGE, THE CONTRACTOR SHALL CONTACT KEN KACZAY, VILLAGE ADMINISTRATOR (440-949-6210) A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO REMOVAL TO ARRANGE A MUTUALLY AGREEABLE TIME FOR ITEMS TO BE PICKED UP BY VILLAGE FORCES.

IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR SALVAGE BY THE VILLAGE ARE NOT REMOVED, THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

DETECTION MAINTENANCE

IF VEHICLE DETECTION BECOMES UNEXPECTEDLY DISABLED, REQUIRES MODIFICATION, OR IS SCHEDULED TO BE TEMPORARILY REMOVED DURING THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER.

DETECTION MAINTENANCE (CONTINUED)

IF THE LOSS OF VEHICLE DETECTION IS KNOWN PRIOR TO THE START OF CONSTRUCTION, IT SHALL BE DISCUSSED AT THE PRE-CONSTRUCTION MEETING. AT SUCH TIME, THE DISTRICT TRAFFIC ENGINEER SHALL ADVISE THE PROJECT ENGINEER AND CONTRACTOR ON THE APPROPRIATE ACTION TO RECTIFY ANY LOSS OF VEHICLE DETECTION. THIS MAY INCLUDE PLACING THE TRAFFIC SIGNAL ON MINIMUM OR MAXIMUM RECALL, MODIFYING THE MINIMUM GREEN TIMES, AND REMOVING THE MALFUNCTIONING DETECTION FROM SERVICE. WHERE NON-INTRUSIVE DETECTION (I.E. VIDEO, RADAR) ALREADY EXISTS, THE CONTRACTOR SHALL INSURE THAT DETECTION IS OPERATING AND MAINTAINED BY RECONFIGURING THE DETECTION UNITS ACCORDINGLY DURING ALL CONSTRUCTION PHASES. THIS IS TO AVOID THE SIGNAL FROM MAXING OUT THE EFFECTED SIGNAL PHASE AND CREATING UNNECESSARY DELAYS.

LOCATIONS WHERE NON-INTRUSIVE DETECTION IS PROPOSED AND THE EXISTING VEHICLE DETECTION IS TO BE ABANDONED, THE NON-INTRUSIVE VEHICLE DETECTION SHALL BE INSTALLED, CONFIGURED AND MADE FULLY FUNCTIONAL PRIOR TO THE EXISTING DETECTION BEING DISABLED. THE CONTRACTOR SHALL CONTINUE TO MAINTAIN AND MODIFY THE DETECTION UNTIL FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL. THIS IS TO ENSURE VEHICLE DETECTION REMAINS FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION.

WORK INSPECTION

THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER WITH 72 HOUR NOTICE OF ANY SIGNAL WORK TO BE PERFORMED AT THE INTERSECTION SITE(S) SO THAT INSPECTION SERVICES CAN BE SUPPLIED.

632 VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN
632 VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 632 AND 732, THE FOLLOWING REQUIREMENTS SHALL APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC WITH VISORS AS SPECIFIED AND MEET ITE SPECIFICATIONS.

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

3. THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.

4. ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARM WITH THE YELLOW MODULE LOCATED IN FRONT OF THE MAST ARM.

5. ALUMINUM BACKPLATES SHALL BE IN ACCORDANCE WITH THE C&MS AND INCLUDE A FLUORESCENT YELLOW REFLECTIVE BORDER.

6. THE LIGHT EMITTING DIODE (LED) MODULES SHALL MEET THE REQUIREMENTS OF C&MS 732.04-C. THE CONTRACTOR SHALL PROVIDE ODOT, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

632 VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN
632 VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN
(CONTINUED)

7. SIGNAL HEADS SHALL HAVE A MINIMUM WALL THICKNESS OF 0.117 INCHES.

8. SIGNAL HEADS SHALL INCLUDE CUTAWAY TYPE VISORS UNLESS OTHERWISE SPECIFIED IN THE PLANS.

9. APPLY A BEAD OF SILICONE TO THE SIGNAL HEAD, WASHER, AND ENTRANCE ADAPTER SERRATIONS TO PREVENT WATER INTRUSION. ALSO, FILL THE SPACE BETWEEN CONCENTRIC SERRATION RINGS ON THE TOP OF THE SIGNAL HEAD TO COMPLETELY EXCLUDE WATER FROM THE SPACE BETWEEN THE CONCENTRIC RINGS.

10. BALANCE ADJUSTERS SHALL NOT BE USED ON ONE-WAY HEADS.

PAYMENT FOR ITEM 632 VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN AND ITEM 632 VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN SHALL BE MADE FOR COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, AND NEW ATTACHMENT HARDWARE.

632 COVERING OF VEHICULAR SIGNAL HEAD

COVER VEHICULAR SIGNAL HEADS IF ERECTED AT INTERSECTIONS WHERE TRAFFIC IS MAINTAINED BEFORE ENERGIZING THE SIGNALS. USE A STURDY OPAQUE COVERING MATERIAL SPECIFICALLY MADE FOR USE WITH TRAFFIC SIGNALS, AND ENSURE THAT THE COLOR OF THE COVER IS DIFFERENT THAN THE SIGNAL HEAD, TAN OR BEIGE, SO THAT IT IS CLEAR TO DRIVERS THE HEADS ARE COVERED, NOT DARK. USE A METHOD OF COVERING TO COVER ATTACHMENT AND MATERIALS, INCLUDING BACKPLATES, AS APPROVED BY THE ENGINEER. COVERS ARE TO BE FREE OF TEXT, PICTURES, OR ANY TYPE OF ADVERTISING. MAINTAIN COVERS, AND REMOVE THEM WHEN DIRECTED 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 180 DAYS FOLLOWING 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 CORRECTING 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, 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.

632 SIGNAL SUPPORT FOUNDATION

PRIOR TO ORDERING THE SIGNAL SUPPORTS, THE CONTRACTOR SHALL CONTACT OUPS TO HAVE ALL THE UTILITIES LOCATED IN THE FIELD THEN MEET WITH THE PROJECT ENGINEER TO LOCATE THE PROPOSED SUPPORT LOCATIONS TO ENSURE THERE ARE NO CONFLICTS WITH UTILITIES. IF THERE ARE ISSUES, PROJECT ENGINEER SHALL PROVIDE GUIDANCE AS TO THE RELOCATION OF THE SUPPORT POLES.

THE CONTRACTOR SHALL ENSURE THAT THE SIGNAL SUPPORT FOUNDATIONS ARE INSTALLED AT THE EARLIEST TIME AS IS FEASIBLE AND PRACTICAL, AND SHALL INCLUDE SUFFICIENT TIME IN THE PROGRESS SCHEDULE FOR THE ORDERING, MANUFACTURING, DELIVERY, AND INSTALLATION OF THE SIGNAL SUPPORTS AFTER THE FOUNDATIONS ARE IN PLACE.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE AND WILL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR EACH SUPPORT FURNISHED, IN PLACE, COMPLETE AND ACCEPTED.

632 SIGNAL SUPPORT, MECHANICAL DAMPER FOR TC-81.21 MAST ARM (GREATER THAN 59' IN LENGTH), AS PER PLAN

THIS ITEM SHALL CONSIST OF THE CONTRACTOR INSTALLING A TUNED MECHANICAL STOCKBRIDGE OR MASS-SPRING TYPE DAMPER ON A TC-81.21 MAST ARM SIGNAL SUPPORT TO REDUCE THE POSSIBILITY OF HARMONIC VIBRATIONS CAUSED BY WIND LOADS. A MECHANICAL DAMPER SHALL BE APPLIED TO ALL MAST ARMS OVER 59 FEET IN LENGTH. THE INSTALLED DAMPER SHALL BE CAPABLE OF REDUCING THE LOADED MAXIMUM VERTICAL MOVEMENT AT THE TIP OF THE ARM TO 8 INCHES MEASURED FROM THE HIGHEST TO THE LOWEST POINT OF DEFLECTION AT WIND SPEEDS OF 5-20 MPH.

ALL ATTACHMENT HARDWARE CONNECTIONS SHALL BE STAINLESS STEEL. STOCKBRIDGE-TYPE DAMPERS SHALL HAVE A STAINLESS STEEL SAFETY CHAIN ANCHORED TO THE MAST ARM TO PREVENT WEIGHTS FROM FALLING SHOULD THEY BECOME SEPARATED FROM THE REST OF THE ASSEMBLY. THE DAMPER SHALL BE ATTACHED TO THE ARM WITHIN 8 FEET OF MAST ARM TIP. INSTALLATION SHALL BE PER THE MANUFACTURER'S GUIDELINES. STATIC DAMPERS SUCH AS HORIZONTAL FLAT SIGN MOUNTINGS SHALL NOT BE USED. ACCEPTABLE DEVICES INCLUDE THE FOLLOWING OR APPROVED EQUAL:

1. UNION METAL ALCOA DAMPER DEVICE - DWG. NO. 2G-1817-C1
2. VALMONT STRUCTURES ALCOA DEVICE - DWG. NO. OH104242P1
3. VALMONT STRUCTURES MITIGATOR - MODEL TR1
4. FLORIDA DOT SPRING-MASS DAMPER - DRAWING INDEX NO. 17749
5. PATHMASTER DAMPER ASSEMBLY - DWG. U2G-1817-C
6. HUBBELL 607 SERIES DAMPER-MILLERBERND DWG.NO. HUBBELL-6072014

PAYMENT FOR ITEM 632 "SIGNAL SUPPORT, MECHANICAL DAMPER FOR TC-81.21 MAST ARM (GREATER THAN 59' IN LENGTH), AS PER PLAN" SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH COMPLETE AND IN PLACE, AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.

625 PULL BOX, MISC.: PULL BOX ADJUSTED TO GRADE

THIS ITEM OF WORK SHALL CONSIST OF THE REUSE OF EXISTING TRAFFIC AND LIGHTING PULL BOXES AND ADJUSTING THE PULL BOX TO THE FINISHED GRADE. IN ADDITION TO THE GRADE ADJUSTMENT, THE WORK SHALL INCLUDE REESTABLISHING A PROPER BASE AS SPECIFIED IN 625.11.

CALCULATED DRP CHECKED CJB

TRAFFIC SIGNAL GENERAL NOTES

LOR-254-2.03

632 POWER SERVICE, AS PER PLAN

POWER SERVICE SHALL BE AS PER CMS 632.24, STANDARD CONSTRUCTION DRAWING TC-83.10, AND THE FOLLOWING:

1. DISCONNECT SWITCH ENCLOSURES FURNISHED IN ACCORDANCE WITH ITEM 632, POWER SERVICE, AS PER PLAN, SHALL INCLUDE A PADLOCK EQUAL TO WILSON BOHANNON 660, WITH LOCK BODY AND SHACKLE OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER. ALL CONDUIT AND FITTINGS SHALL BE GALVANIZED STEEL AS PER CMS 725.04. CONDUIT RISERS SHALL BE 1 ½" MINIMUM DIAMETER.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOKUP. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE POWER COMPANY FOR ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLES INTO THE POWER COMPANY'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL NOMINALLY BE 120 VOLTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND PAYING OF ALL FEES RELATING TO THE POWER SERVICE CONNECTION. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE SIGNAL IS ACCEPTED BY THE VILLAGE.

3. THE POWER SERVICE SHALL INCLUDE A BYPASS STYLE METER BASE SOCKET. THE METER BASE SHALL BE 100 AMP MINIMUM AND INCLUDE A 1 ½" HUB AT THE TOP OF THE METER BASE AND A LEVER BYPASS SWITCH PER THE REQUIREMENTS OF THE ELECTRICAL POWER COMPANY. THE METER BASE SOCKET SHALL BE MANUFACTURED BY LANDIS & GYR., MILBANK, SQUARE D, OR APPROVED EQUAL BY THE ENGINEER.

THIS ITEM SHALL INCLUDE TWO (2) DISCONNECT SWITCHES (1 FOR TRAFFIC SIGNAL, 1 FOR LIGHTING) TO BE USED WHERE INDICATED ON THE DRAWINGS.

ALL CABLES PROPOSED FOR THE HIGHWAY LIGHTING DO NOT RUN THROUGH THE SIGNAL CONTROLLER CABINET.

THIS ITEM SHALL INCLUDE RIGID CONDUIT FROM THE ELL AT THE BASE OF THE FOUNDATION TO THE METER BASE. THE CONDUIT SHALL BE EXTERNALLY ATTACHED TO THE SUPPORT POLE AND EXTERNAL TO THE POLE FOUNDATION.

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL NECESSARY LABOR, MISCELLANEOUS HARDWARE, AND EQUIPMENT REQUIRED FOR COMPLETING THIS ITEM OF WORK AS OUTLINED ABOVE. BASIS OF PAYMENT WILL BE AT THE UNIT PRICE BID PER EACH.

633 PREEMPTION, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPTION EQUIPMENT IN THE LOCATIONS AND LOCAL CONTROLLERS AS SHOWN IN THE PLANS. THE PREEMPTION SHALL CONFORM TO ODOT SPECIFICATION 633 AND SHALL UTILIZE COMMUNICATIONS TO IDENTIFY THE PRESENCE OF AN EMERGENCY PRIORITY VEHICLE. IT SHALL CAUSE THE TRAFFIC SIGNAL CONTROLLER TO SELECT A PRE-PROGRAMMED PREEMPTION PLAN THAT WILL DISPLAY AND HOLD THE DESIRED SIGNAL PHASE FOR THE DIRECTION OF THE EMERGENCY VEHICLE.

THE COMMUNICATIONS MEDIUM SHALL EMPLOY SOUND DETECTION TECHNIQUES TO DETERMINE AND LOG THE PRESENCE OF THE EMERGENCY VEHICLE. THE SYSTEM SHALL DETECT THE PRESENCE OF THE VEHICLE THROUGH AN EMITTING DEVICE LOCATED ON THE EMERGENCY VEHICLE. THE SYSTEM SHALL ACTIVATE THE PREEMPTION SEQUENCE BY APPLYING A SIGNAL TO ONE OF THE CONTROLLER'S PREEMPT DISCRETE INPUTS. THE SYSTEM SHALL BE COMPLETELY COMPATIBLE WITH THE CONTROLLER.

633 PREEMPTION, AS PER PLAN (CONTINUED)

THE EQUIPMENT SHALL BE SHELF OR RACK MOUNTED AND EASILY REMOVABLE AND REPLACEABLE WITHIN THE CABINET. THE EQUIPMENT SHALL BE SUPPLIED COMPLETELY WIRED IN THE CONTROLLER CABINET AND TESTED. THE SYSTEM SHALL BE CAPABLE OF PREEMPTING AND RECEIVING PRIORITY FOR EACH APPROACH TO THE INTERSECTION. IT SHALL BE POSSIBLE TO DETECT THE EMERGENCY VEHICLE UP TO 1200 FEET FROM THE INTERSECTION.

EACH INTERSECTION SHOWN IN THE PLANS SHALL BE SUPPLIED WITH THE FOLLOWING COMPONENTS, EACH BID SEPARATELY:

1. PREEMPT RECEIVING UNIT.
2. PREEMPT DETECTOR CABLE.
3. PREEMPT PHASE SELECTOR ASSEMBLY AND INTERFACE WIRING PANEL.
4. CONFIRMATION LIGHT.

THE CONTRACTOR SHALL INVENTORY THE VILLAGE OF SHEFFIELD'S EMERGENCY VEHICLES TO DETERMINE COMPATIBILITY OF THE SIRENS WITH THE SYSTEM. EACH VEHICLE THAT IS DETERMINED TO BE NOT COMPATIBLE SHALL BE SUPPLIED WITH NEW SIRENS AT COST INCIDENTAL TO THE SYSTEM. THE MODEL SUPPLIED SHALL BE SONEM 2000 MANUFACTURED BY TRAFFIC SYSTEMS LLC.

THE VILLAGE SHALL BE SUPPLIED WITH SOFTWARE REQUIRED TO CALIBRATE, LOG, AND OPERATE THE SYSTEM. THE SOFTWARE SHALL BE CAPABLE OF OPERATING UNDER WINDOWS 7, 32-BIT OPERATING SYSTEM. TWO (2) OPERATING AND INSTRUCTION MANUALS SHALL BE SUPPLIED WITH THE SOFTWARE.

THE CONTRACTOR SHALL THOROUGHLY TEST THE INSTALLED SYSTEM. AS A MINIMUM, THE CONTRACTOR SHALL VERIFY THAT ALL CONNECTIONS ARE PROPERLY MADE TO THE CONTROLLER CABINETS. THE CONTRACTOR SHALL CHECK THAT THE RANGE SETTING IS PROPER FOR EACH INTERSECTION. THE CONTRACTOR SHALL DETERMINE THAT ALL PHASE SELECTORS ARE SELECTING THE PROPER PHASE AND TIMING ACCURATELY. THE CONTRACTOR SHALL VERIFY THAT ALL VEHICLE EMITTERS ARE BEING PROPERLY DETECTED.

THE CONTRACTOR SHALL PROVIDE TRAINING FOR UP TO FIFTEEN (15) PERSONS IN THE OPERATION OF THE SYSTEM. IT SHALL BE PROVIDED WITHIN 48 HOURS OF THE INSTALLATION OF THE SYSTEM. IT SHALL CONSIST OF HANDS-ON INSTRUCTION FOR A MINIMUM OF SIXTEEN (16) HOURS. THE CONTRACTOR SHALL PROVIDE TRAINING FOR UP TO FOUR (4) PERSONS IN THE INSTALLATION AND MAINTENANCE OF THE SYSTEM. IT SHALL CONSIST OF A MINIMUM OF EIGHT (8) HOURS OF INSTRUCTION. TRAINING SHALL BE SUPPLIED WITH-IN SEVEN (7) DAYS OF THE INSTALLATION OF THE SYSTEM. ALL TRAINING SHALL BE HELD IN A VILLAGE SUPPLIED LOCATION. TRAINING SHALL BE CONDUCTED BY SOMEONE WHO HAS PERFORMED THIS WITHIN THE LAST YEAR AND DOES IT ON A REGULAR BASIS. THE COST OF TRAINING, INCLUDING COURSE MATERIAL, TRAVEL SUBSISTENCE AND RELATED COSTS, SHALL BE ENTIRELY BORNE BY THE CONTRACTOR AND SHALL BE INCIDENTAL TO THE PREEMPTION EQUIPMENT.

PAYMENT FOR ITEM 633, PREEMPTION, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH PREEMPTION IN PLACE AND FULLY OPERATIONAL AS SHOWN IN THE PLANS, EXCEPT FOR THOSE ITEMS BID SEPARATELY.

633 PREEMPTION RECEIVING UNIT, AS PER PLAN

FURNISH AND INSTALL PREEMPTION RECEIVING UNITS WHICH CONSIST OF LIGHT WEIGHT, WEATHERPROOF, AND DIRECTIONAL ASSEMBLIES, WHICH ARE 360 DEGREE ADJUSTABLE, AND CAPABLE OF SENDING THE PROPER ELECTRICAL SIGNAL TO THE TRAFFIC SIGNAL CONTROLLER VIA THE PREEMPTION DETECTOR CABLE. THE RECEIVING UNITS SHALL BE SONEM 2000 PREEMPTION RECEIVING UNITS, AS MANUFACTURED BY TRAFFIC SYSTEMS, LLC, PHOENIX, ARIZONA.

SUPPLY THE RECEIVING UNITS WITH MAST ARM MOUNTING HARDWARE. INSTALL THE RECEIVING UNITS AT THE LOCATIONS RECOMMENDED BY THE SUPPLIER. MOUNT THE RECEIVING UNITS ON THE MAST ARM BY FIELD DRILLING A WIRE ENTRANCE HOLE IN THE MAST ARM.

THE DEPARTMENT WILL PAY FOR ITEM 633, PREEMPTION RECEIVING UNIT, AS PER PLAN AT THE CONTRACT UNIT PRICE FOR EACH UNIT IN PLACE, COMPLETELY INSTALLED AT THE LOCATION SHOWN ON THE PLANS, WIRED, TESTED, AND ACCEPTED. FIELD DRILLING OF THE MAST ARMS FOR THE WIRE ENTRANCE SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.

633 PREEMPTION DETECTOR CABLE, AS PER PLAN

FURNISH AND INSTALL PREEMPTION DETECTOR CABLE, TO CONNECT THE PREEMPT DETECTORS TO THE PHASE SELECTORS IN THE LOCAL CONTROLLER CABINET IN THE LOCATIONS SHOWN ON THE PLANS. THE DETECTOR CABLE SHALL BE SONEM 2000 PREEMPTION DETECTOR CABLE, AS MANUFACTURED BY TRAFFIC SYSTEMS, LLC, PHOENIX, ARIZONA.

FURNISH PREEMPTION DETECTOR CABLE WHICH CONFORMS TO ITEMS 632 AND 732, AND WHICH IS APPROVED FOR BOTH OVERHEAD AND UNDERGROUND USE. ENSURE THAT JACKET CAN WITHSTAND EXPOSURE TO SUNLIGHT, ATMOSPHERIC TEMPERATURES, AND STRESSES REASONABLY EXPECTED IN NORMAL INSTALLATIONS.

THE DEPARTMENT WILL PAY FOR ITEM 633, PREEMPTION DETECTOR CABLE, AS PER PLAN AT THE CONTRACT UNIT PRICE PER FOOT FOR THE CABLE FURNISHED, IN PLACE, ALL CONNECTIONS MADE, AND WIRING COMPLETED, TESTED, AND ACCEPTED.

633 PREEMPT PHASE SELECTOR, AS PER PLAN

FURNISH AND INSTALL PREEMPT PHASE SELECTORS, INCLUDING WIRING INTERFACE PANELS IN THE LOCAL CONTROLLER CABINET, AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE PREEMPT PHASE SELECTORS COMPLETELY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THE PLANS. THE PHASE SELECTOR SHALL BE SONEM 2000 PREEMPTION PHASE SELECTORS, AS MANUFACTURED BY TRAFFIC SYSTEMS, LLC, PHOENIX, ARIZONA.

FURNISH THE PHASE SELECTORS WHICH CONSIST OF A MODULE OR MODULES THAT WILL PROVIDE THE NECESSARY INPUTS TO THE CONTROLLER, AND HAVE SUFFICIENT QUANTITIES OF CHANNELS TO PROVIDE PREEMPTION FOR ALL APPROACHES TO THE INTERSECTION SEPARATELY, AND WHICH ARE COMPATIBLE WITH THE EXISTING PREEMPTION SYSTEM IN SHEFFIELD VILLAGE. OBTAIN POWER TO OPERATE THE PHASE SELECTOR FROM A SEPARATE POWER SUPPLY, NOT FROM THE LOCAL CONTROLLER TIMER.

FURNISH PHASE SELECTORS WITH FRONT PANEL INDICATORS FOR ACTIVE PREEMPT CHANNEL STATUS, AND WITH TEST SWITCHES TO ACTIVATE ALL PREEMPT CHANNELS.

THE DEPARTMENT WILL PAY FOR EACH ITEM 633, PREEMPTION PHASE SELECTOR, AS PER PLAN, AT THE CONTRACT UNIT PRICE FOR EACH PHASE SELECTOR AT EACH INTERSECTION IN PLACE, COMPLETELY INSTALLED IN THE LOCAL CONTROLLER SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

633 PREEMPT CONFIRMATION LIGHT, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPT CONFIRMATION LIGHTS INCLUDING HARDWARE AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE PREEMPT CONFIRMATION LIGHT COMPLETELY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THE PLANS.

A CONFIRMATION LIGHT SHALL BE SUPPLIED FOR EACH INTERSECTION TO INDICATE THAT THE EMERGENCY VEHICLE HAS ACHIEVED CONTROL OF THE TRAFFIC SIGNAL.

THE CONFIRMATION LIGHT SHALL BE A VAPOR TIGHT ALUMINUM LIGHTING FIXTURE. IT SHALL BE SUPPLIED WITH A CLEAR GLOBE, LED LAMP AND MOUNTING HARDWARE TO ATTACH TO THE TRAFFIC SIGNAL MAST ARM. THE CONFIRMATION LIGHT SHALL BE POWERED BY A LOAD SWITCH IN THE TRAFFIC SIGNAL CONTROLLER. SIGNAL CABLE CONFORMING TO 732.19 SHALL BE USED FOR CONFIRMATION LIGHTS. A MINIMUM OF 4-CONDUCTOR CABLE SHALL BE USED WITH THE GREEN WIRE SERVING AS THE SAFETY GROUND CONDUCTOR.

PAYMENT FOR ITEM 633 "PREEMPT CONFIRMATION LIGHT, AS PER PLAN" SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH LIGHT IN PLACE, COMPLETELY INSTALLED IN THE LOCATION SHOWN IN THE PLANS OR AS RECOMMENDED BY THE SUPPLIER, WIRED, TESTED AND ACCEPTED.

CALCULATED DRP CHECKED CJB

TRAFFIC SIGNAL GENERAL NOTES

LOR-254-2.03

ITEM 633 CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS2, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 633 AND 733, THE CONTRACTOR SHALL FURNISH AND INSTALL AN ASC/3 2100 TS2 CONTROLLER AS MANUFACTURED BY ECONOLITE, ANAHEIM, CALIFORNIA, AND SHALL INCORPORATE OR BE FURNISHED WITH ALL THE DESIGN FEATURES, AUXILIARY EQUIPMENT, ACCESSORIES, AND PREWIRED CABINET FEATURES AS REQUIRED IN THE STANDARD BID ITEM.

FURNISH AN ALUMINUM SHELF WITH INTEGRAL STORAGE COMPONENT IN THE SPACE IMMEDIATELY BELOW THE CONTROLLER. ENSURE THE COMPARTMENT HAS TELESCOPING DRAWER GUIDES FOR FULL EXTENSION. ENSURE THE COMPARTMENT TOP HAS A NON-SLIP PLASTIC LAMINATE ATTACHED.

THE CONTROLLER CABINET SHALL BE LARGE ENOUGH AND THE CONTROLLER AND CONFLICT MONITOR SHALL BE CAPABLE OF ACCOMMODATING THE INSTALLATION OF THE FOLLOWING EQUIPMENT:

1. PREEMPTION.

2. INTERCONNECTION EQUIPMENT.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR EACH CONTROLLER UNIT, TYPE TS2/A2 WITH CABINET, TYPE TS2, AS PER PLAN, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED, AND ACCEPTED.

ITEM 633 UNINTERRUPTIBLE POWER SUPPLY, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 633 AND 733, THIS ITEM SHALL INCLUDE A RED LED STATUS INDICATOR LAMP TO ALLOW MAINTENANCE PERSONNEL AND LAW ENFORCEMENT TO QUICKLY ASSESS WHETHER A TRAFFIC SIGNAL CABINET IS BEING POWERED BY A UPS. THE LED HOUSING SHALL BE NEMA 4X, IP65 OR IP66, RATED FOR OUTDOOR USE AND BE TAMPER/ SHATTER RESISTANT. IT SHALL BE A DOMED ENCLOSURE CONTAINING A RED LENS WITH LED THAT IS VISIBLE FROM 100 FOOT MINIMUM. THE ENCLOSURE AND LED MODULE SHOULD BE PLACED AND CENTERED ON THE TOP SURFACE OF THE UPS CABINET AND SEALED FROM WATER INTRUSION. IT SHOULD BE WIRED USING MINIMUM 20GA STRANDED, INSULATED HOOKUP WIRE TO THE STATUS RELAY OUTPUTS OF THE UPS. THE WIRES SHALL BE TERMINATED BY LUGS AT THE DISPLAY END AND PERMANENTLY LABELED "BACKUP POWER STATUS DISPLAY," WITH WIRE POLARITY INDICATED. THE RED LED SHALL ONLY ILLUMINATE TO INDICATE THE CABINET IS OPERATING UNDER UPS BACKUP POWER (THE "BACKUP" OPERATING CONDITION). THIS ITEM INCLUDES PROGRAMMING THE UPS STATUS RELAY OUTPUTS TO PRODUCE THE LAMP STATUS DISPLAYS. THESE STATUS DISPLAYS WILL BE SOLID 100% DUTY CYCLE (NOT FLASHING) DISPLAYS. THE OPERATING VOLTAGE OF THE LED LAMP SHALL BE 120V AC UNLESS OTHERWISE INDICATED.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR EACH UNINTERRUPTIBLE POWER SUPPLY, AS PER PLAN, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED, AND ACCEPTED.

GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
   A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
   B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.
   C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.
   D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
   E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.
   F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS.
   A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
   B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
   C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
   D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING.
   A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:
      I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
      II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
      III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
      IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.
   B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD.
   A. A ¾ INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.

   B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR #4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET. TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND. NO.	COLOR	VEHICLE SIGNAL	PEDESTRIAN SIGNAL
1	BLACK	GREEN BALL	#1 WALK
2	WHITE	AC NEUTRAL	AC NEUTRAL
3	RED	RED BALL	#1 DW/FDW
4	GREEN	EQUIPMENT GROUND	EQUIPMENT GROUND
5	ORANGE	YELLOW BALL	#2 DW/FDW
6	BLUE	GREEN ARROW	#2 WALK
7	WHITE/BLACK STRIPE	YELLOW ARROW	NOT USED

6. POWER SERVICE AND DISCONNECT SWITCH.
   A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UN-SPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.

   B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.
      I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.
      II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

7. PAYMENT - ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

809 ADVANCE RADAR DETECTION

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR ADVANCE DETECTION UNIT (MODEL SS-200E). THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.

2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.

3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.

4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.

5. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ON-SITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.

6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MINIMUM 7 FEET).

7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR-PLUG STYLE CONNECTIONS FOR UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD-WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.

PAYMENT FOR ITEM 809 ADVANCE RADAR DETECTION SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT, CONNECTIONS TESTED AND ACCEPTED, AND ANY OTHER NECESSARY HARDWARE TO ESTABLISH A FULLY FUNCTIONAL DETECTION SYSTEM.

CALCULATED DRP CHECKED CJB

TRAFFIC SIGNAL GENERAL NOTES

LOR-254-2.03

809 STOP-BAR RADAR DETECTION

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR MATRIX DETECTION UNIT. THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.

2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.

3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.

4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.

5. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ON-SITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.

6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MINIMUM 7 FEET).

7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR-PLUG STYLE CONNECTIONS FOR UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD-WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.

PAYMENT FOR ITEM 809 STOP-BAR RADAR DETECTION SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH

UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT AND CONNECTIONS TESTED AND ACCEPTED.

824 SYSTEM ANALYSIS

THE SYSTEM ANALYSIS SHALL BE PERFORMED FOR THE FOLLOWING INTERSECTIONS:

1. S.R. 254 AND WESTBOUND I-90 ENTRANCE/EXIT RAMPS.
2. S.R. 254 AND EASTBOUND I-90 ENTRANCE/EXIT RAMPS.
3. S.R. 254 AND SHEFFIELD CROSSING/COBBLESTONE SQUARE DRIVEWAYS.
4. S.R. 254 AND S.R. 301

PAYMENT SHALL BE MADE AT THE LUMP SUM PRICE BID FOR ITEM 824, SYSTEM ANALYSIS.

632, SIGNALIZATION, MISC.: MODIFICATION OF SR 301 TRAFFIC SIGNAL ITEMS

WORK UNDER THIS ITEM SHALL INCLUDE ALL LABOR, MATERIAL, AND INCIDENTALS NECESSARY TO MODIFY THE EXISTING TRAFFIC SIGNAL AT SR 301 AS INDICATED ON SHEET NO. 61. THIS WORK SHALL INCLUDE ALL OF, BUT NOT BE LIMITED TO, THE FOLLOWING:

1. REMOVAL AND STORAGE FOR REUSE OF THE EXISTING 8' PEDESTAL WITH TRANSFORMER BASE LOCATED AT THE SOUTHWEST CORNER OF S.R. 254 AND S.R. 301 (STA. 104+04, RT.), ALONG WITH THE TWO (2) PEDESTRIAN SIGNAL HEADS AND TWO (2) PEDESTRIAN PUSHBUTTONS. THESE ITEMS SHALL BE REERECTED AS INDICATED ON TRAFFIC SIGNAL PLAN.

2. REMOVAL AND DISPOSAL OF THE PEDESTAL FOUNDATION, THE TWO (2) EXISTING PEDESTRIAN SIGNS, AND ALL EXISTING PEDESTRIAN SIGNAL HEAD WIRING AND CONDUITS AS NECESSARY TO COMPLETE THE WORK.

3. REERECTION OF ONE OF THE EXISTING PEDESTRIAN SIGNAL HEADS AND PUSHBUTTONS ON THE NEW PEDESTAL (PS-2A).

4. REERECTION OF THE EXISTING PEDESTAL AND ONE OF THE EXISTING PEDESTRIAN SIGNAL HEADS AND PUSHBUTTONS ON THE NEW PEDESTAL FOUNDATION (PS-2B).

5. FURNISHING AND INSTALLATION OF TWO (2) NEW R10-3E-9 PEDESTRIAN PUSHBUTTON SIGNS, ONE ON EACH PEDESTAL.

6. REALIGNMENT OF EXISTING SIGNAL HEADS 2A AND 2B ON THE EX. SP-1 MAST ARM TO ALIGN WITH THE NEW EASTBOUND LANE CONFIGURATION AS INDICATED ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

7. UPDATE THE EXISTING TIMING PARAMETERS AND INPUT THE COORDINATION SIGNAL TIMINGS IN THE EXISTING CONTROLLER UNIT AT THE INTERSECTION AS INDICATED ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE BID PER EACH FOR MODIFYING THE EXISTING SIGNAL AT SR 301, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED, AND ACCEPTED.

CALCULATED DRP
CHECKED CJB

TRAFFIC SIGNAL GENERAL NOTES

LOR-254-2.03

TRAFFIC SIGNAL SUBSUMMARIES

CALCULATED DRP
CHECKED SAS

SHEET NO.	LOCATION	625											630					632	
		2" CONDUIT, 725.05	2 1/2" CONDUIT, 725.05	3" CONDUIT, 725.05	4" CONDUIT, 725.05	CONDUIT, JACKED OR DRILLED: 3"	TRENCH	PULLBOX, 725.08, 24"	PULL BOX REMOVED	PULL BOX, MISC.: PULL BOX ADJUSTED TO GRADE	GROUND ROD	PLASTIC CAUTION TAPE	SIGN HANGAR ASSEMBLY, MAST ARM	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN, FLAT SHEET	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE		VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN
		FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	FT	EACH	EACH	SQ FT	EACH		EACH	EACH
49-52	S.R. 254 AND I-90 WESTBOUND RAMPS	15	5	102	24	206	146	5	4		4	146	2	6	46.50	2		8	
53-56	S.R. 254 AND I-90 EASTBOUND RAMPS	14		53	7	218	74	4	3		4	74	3	6	40.25			8	
57-60	S.R. 254 AND COBBLESTONE SQUARE/SHEFFIELD CROSSING	5	5	39	21	188	70	5	2		4	70		6	13.50			9	2
61-62	S.R. 254 AND S.R. 301	37					37	1		4	2	37	1		8.75				1
TOTALS CARRIED TO GENERAL SUMMARY		71	10	194	52	612	327	15	9	4	14	327	6	18	109.00	2		25	3

SHEET NO.	LOCATION	632																	
		COVERING OF VEHICULAR SIGNAL HEAD	DETECTOR LOOP	SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG	SIGNAL CABLE, 4 CONDUCTOR, NO. 14 AWG	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	SIGNAL SUPPORT FOUNDATION	PEDESTAL FOUNDATION	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	POWER SERVICE, AS PER PLAN	CONDUIT RISER, 3" DIAMETER	SIGNAL SUPPORT, TYPE TC-12.30 DESIGN 9 POLE, W/MAST ARMS TC-81.21 DESIGN 13 AND DESIGN 13	SIGNAL SUPPORT, MECH. DAMPER FOR TC-81.21 MAST ARM (GREATER THAN 59' IN LENGTH), APP	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 3	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 11	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 12	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 14
		EACH	EACH	FT	FT	FT	FT	EACH	EACH	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
49-52	S.R. 254 AND I-90 WESTBOUND RAMPS	8			701		1117	3		48	144	1	1		1		2		1
53-56	S.R. 254 AND I-90 EASTBOUND RAMPS	8			640		820	3		29	108	1	1		1	2			1
57-60	S.R. 254 AND COBBLESTONE SQUARE/SHEFFIELD CROSSING	11			788		1070	3		33	93	1	1	1			1	1	
61-62	S.R. 254 AND S.R. 301		1	641		651	104		2										
TOTALS CARRIED TO GENERAL SUMMARY		27	1	641	2129	651	3111	9	2	110	345	3	3	1	2	2	3	1	2

SHEET NO.	LOCATION	632			633									644		809		815
		PEDESTAL, 8', TRANSFORMER BASE	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	SIGNALIZATION, MISC.: MODIFICATION OF S.R. 301 TRAFFIC SIGNAL ITEMS	CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS2, AS PER PLAN	CONTROLLER, MASTER, TRAFFIC RESPONSIVE	CABINET FOUNDATION	CONTROLLER WORK PAD	PREEMPTION RECEIVING UNIT, AS PER PLAN	PREEMPTION DETECTOR CABLE, AS PER PLAN	PREEMPTION PHASE SELECTOR, AS PER PLAN	PREEMPTION CONFIRMATION LIGHT, AS PER PLAN	UNINTERRUPTIBLE POWER SUPPLY (UPS), AS PER PLAN		REMOVAL OF PAVEMENT MARKINGS	LANE ARROW	ADVANCE RADAR DETECTION	STOP LINE RADAR DETECTION	SPREAD SPECTRUM RADIO
		EACH	EACH	EACH	EACH	FT	FT	EACH	EACH	FT	EACH	EACH	EACH		EACH	EACH	EACH	EACH	EACH
49-52	S.R. 254 AND I-90 WESTBOUND RAMPS		1		1		1	1	3	734	1	3	1		1	2	1	3	1
53-56	S.R. 254 AND I-90 EASTBOUND RAMPS		1		1		1	1	3	519	1	3	1				1	3	1
57-60	S.R. 254 AND COBBLESTONE SQUARE/SHEFFIELD CROSSING		1		1		1	1	4	840	1	4	1					4	1
61-62	S.R. 254 AND S.R. 301	1		1		1													1
TOTALS CARRIED TO GENERAL SUMMARY		1	3	1	3	1	3	3	10	2093	3	10	3		1	2	2	10	4

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COORDINATION TIMING CHART (TEM FORM 496-5)

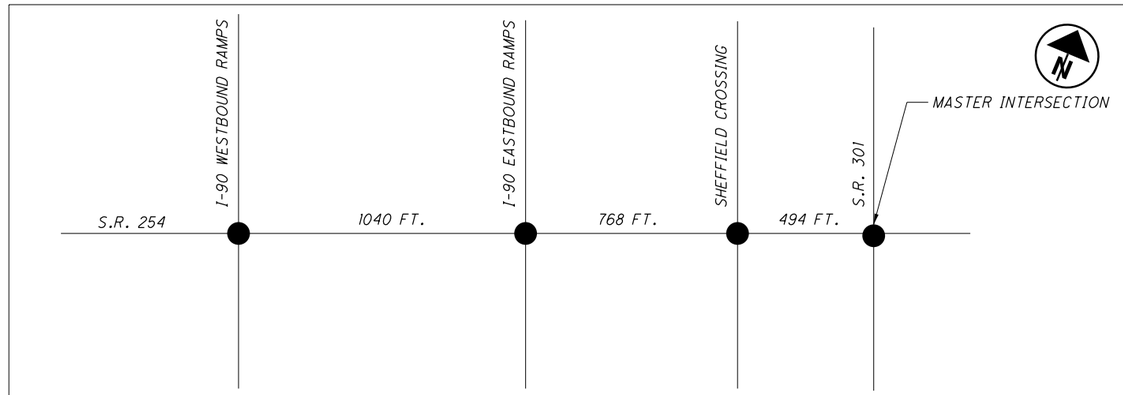
	SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)	OFFSET 2 (SEC)
PHASE	1	2	3	4	5	6	7	8			
DIRECTION	WB LT	EB	-	SB	-	WB	-	-			
PLAN NO.	INTERSTATE 90 WESTBOUND RAMPS										
1	18	29	-	33	-	47	-	-	80	53	-
2	19	29	-	32	-	48	-	-	80	54	-
3	22	29	-	39	-	51	-	-	90	52	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

	SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)	OFFSET 2 (SEC)
PHASE	1	2	3	4	5	6	7	8			
DIRECTION	-	EB	-	-	EB LT	WB	-	NB			
PLAN NO.	INTERSTATE 90 EASTBOUND RAMPS										
1	-	49	-	-	19	30	-	31	80	17	-
2	-	51	-	-	16	35	-	29	80	30	-
3	-	60	-	-	16	44	-	30	90	22	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

	SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)	OFFSET 2 (SEC)
PHASE	1	2	3	4	5	6	7	8			
DIRECTION	WB LT	EB	-	SB	EB LT	WB	-	NB			
PLAN NO.	SHEFFIELD CROSSING/COBBLESTONE SQUARE										
1	14	43	-	23	14	43	-	23	80	15	-
2	14	40	-	26	14	40	-	26	80	6	-
3	13	46	-	31	15	44	-	31	90	88	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

	SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)	OFFSET 2 (SEC)
PHASE	1	2	3	4	5	6	7	8			
DIRECTION	WB LT	EB	NB LT	SB	EB LT	WB	SB LT	NB			
PLAN NO.	S.R. 301 (MASTER CONTROLLER)										
1	15	28	21	16	15	28	12	25	80	0	-
2	15	27	22	16	14	28	12	26	80	0	-
3	15	27	29	18	15	27	12	35	90	0	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

CORRIDOR LAYOUT



ALL INTERSECTIONS MAINTAINED BY SHEFFIELD VILLAGE

COORDINATION TIMING PLANS

DAY(S) OF WEEK	PLAN NAME	HOURS	CYCLE/SPLIT/OFFSET	CYCLE LENGTH (SEC)
MONDAY-FRIDAY	FREE	0000-0600	-	-
MONDAY-FRIDAY	A.M. PEAK	0600-1000	1/1/1	80
MONDAY-FRIDAY	MID-DAY PEAK	1000-1400	2/2/2	80
MONDAY-FRIDAY	P.M. PEAK	1400-1900	3/3/3	90
MONDAY-FRIDAY	FREE	1900-2359	-	-
SATURDAY-SUNDAY	FREE	0000-1000	-	-
SATURDAY-SUNDAY	MID-DAY PEAK	1000-1900	2/2/2	80
SATURDAY-SUNDAY	FREE	1900-2359	-	-
-	-	-	-	-
-	-	-	-	-

NOTES:

- OFFSETS ARE MEASURED FROM REFERENCE PHASE(S) NUMBERED 2 & 6 "END OF GREEN/BEGINNING OF YELLOW" FOR S.R. 301 TRAFFIC SIGNAL.
- MASTER INTERSECTION OFFSET REFERENCE IS ALWAYS EQUAL TO ZERO.
- $\Sigma\phi 1+\phi 2 = \Sigma\phi 5+\phi 6$ AND $\Sigma\phi 3+\phi 4 = \Sigma\phi 7+\phi 8$

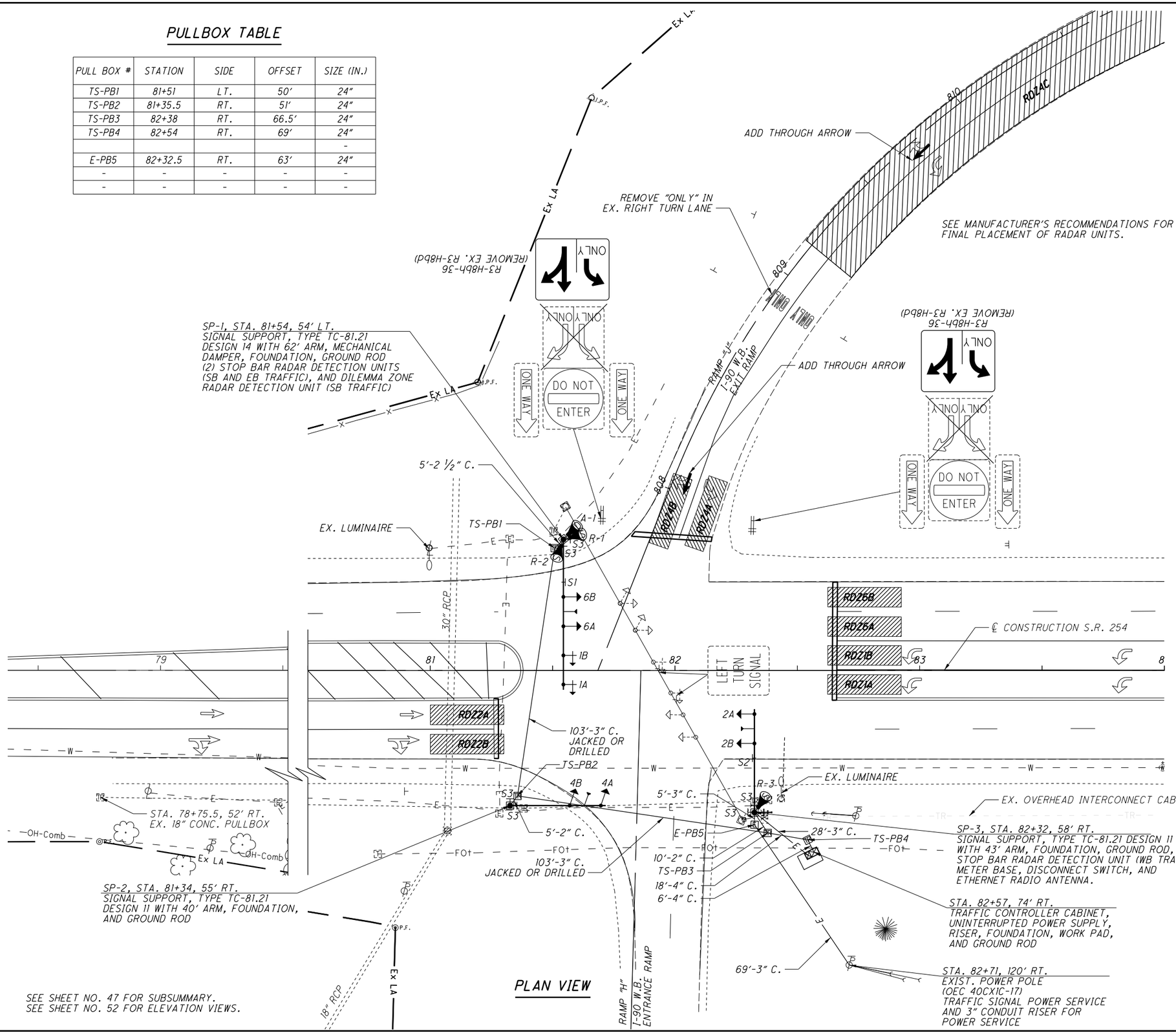
CALCULATED DRP
CHECKED CJB

TRAFFIC SIGNAL COORDINATION PLAN

LOR-254-2.03

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
TS-PB1	81+51	LT.	50'	24"
TS-PB2	81+35.5	RT.	51'	24"
TS-PB3	82+38	RT.	66.5'	24"
TS-PB4	82+54	RT.	69'	24"
				-
E-PB5	82+32.5	RT.	63'	24"
-	-	-	-	-
-	-	-	-	-



PLAN VIEW

SEE SHEET NO. 47 FOR SUBSUMMARY.
SEE SHEET NO. 52 FOR ELEVATION VIEWS.

MAST ARM MOUNTED SIGNS

S-1
R3-1-36

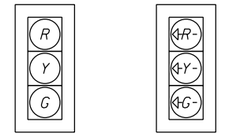
S-2
R3-2-36

POLE MOUNTED SIGNS

S-3
R9-3-18

VEHICULAR SIGNAL HEADS

POLYCARBONATE, 12" LED LENSES WITH CUTAWAY TYPE VISORS AND LOUVERED REFLECTIVE BACKPLATE



2A, 2B, 4A, 4B, 6A, 6B

1A, 1B

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12" WITH ARROWS		
SIGNAL SUPPORT POLE		
LUMINAIRE, CONVENTIONAL		
CONTROLLER CABINET AND WORK PAD		
CONTROLLER CABINET AND WORK PAD (TS2)		
TRAFFIC PULL BOX	TR	TR
ELECTRIC PULL BOX	E	E
SERVICE CABLE, 3 CONDUCTOR, NO. X AWG, IN CONDUIT	E	
CONDUIT		
STOP BAR RADAR DETECTION UNIT	S	
DILEMMA ZONE RADAR DETECTION UNIT	D	
PREEMPT DETECTOR W/ CONFIRMATION LIGHT		
ETHERNET RADIO		
DETECTION ZONE		

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DRP
CHECKED CJB

TRAFFIC SIGNAL PLAN
S.R. 254 & I-90 WESTBOUND RAMPS

LOR-254-2.03

49
62

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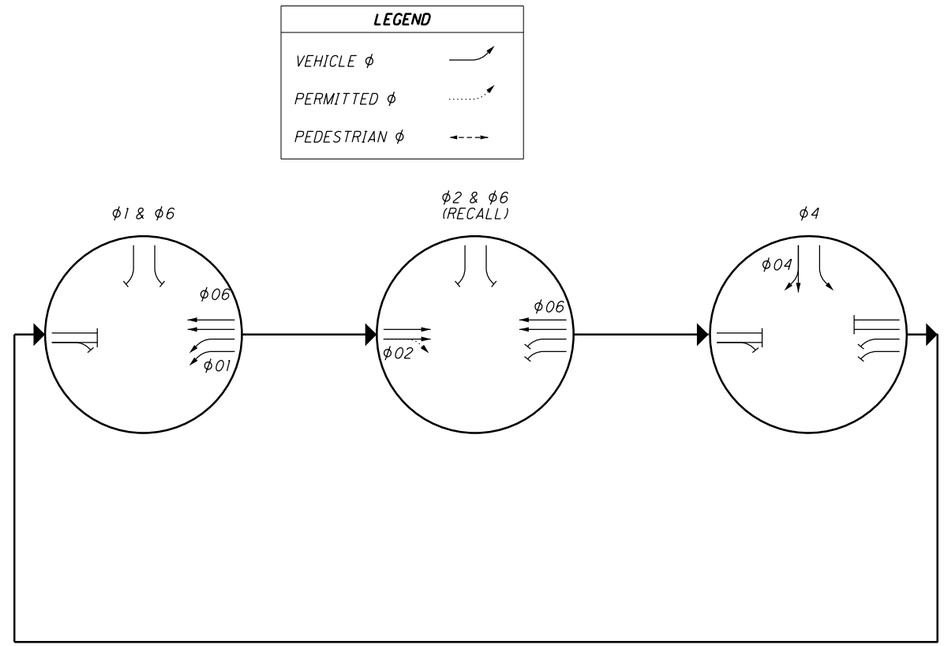
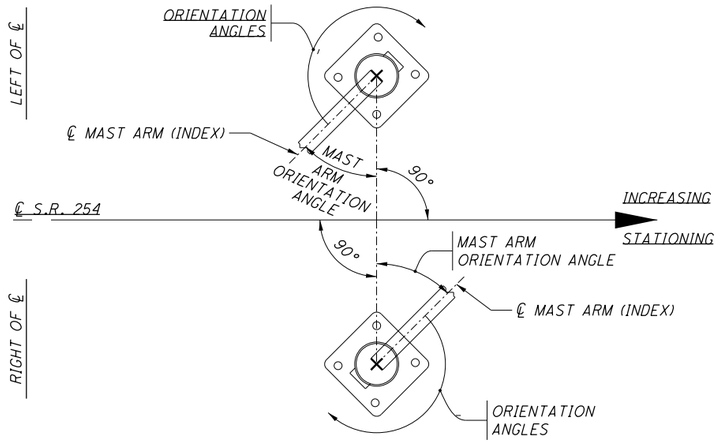
SIGNAL TIMING CHART

INTERSECTION: S.R. 254 AND INTERSTATE 90 WESTBOUND RAMPS MAINTAINING AGENCY: SHEFFIELD VILLAGE									
START UP		DUAL ENTRY: YES			PHASES:		2 & 6		
		REST IN RED:			RING 1 -		RING 2 -		
START IN: ALL RED		OVERLAP				A	B	C	D
TIME FOR FLASH ALL RED: 9/6									
FIRST PHASE(S): 2 & 6		PHASES				-	-	-	-
COLOR DISPLAYED: GREEN									
INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		WB LT	EB	-	SB	-	WB	-	-
MINIMUM GREEN (INITIAL)	(SEC.)	7	20	-	10	-	20	-	-
ADDED INITIAL	*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL	(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)	(SEC.)	1.0	1.0	-	1.0	-	1.0	-	-
TIME BEFORE REDUCTION	*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP	*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE	*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I	(SEC.)	15	60	-	40	-	60	-	-
MAXIMUM GREEN II	(SEC.)	15	60	-	40	-	60	-	-
YELLOW CHANGE	(SEC.)	3.2	4.2	-	3.7	-	4.2	-	-
ALL RED CLEARANCE	(SEC.)	2.3	1.0	-	2.3	-	1.0	-	-
WALK	(SEC.)	-	-	-	-	-	-	-	-
PEDESTRIAN CLEARANCE	(SEC.)	-	-	-	-	-	-	-	-
RECALL	MAXIMUM (ON/OFF)	OFF	OFF	-	OFF	-	OFF	-	-
	MINIMUM (ON/OFF)	OFF	ON	-	OFF	-	ON	-	-
	PEDESTRIAN (ON/OFF)	OFF	OFF	-	OFF	-	OFF	-	-
MEMORY	(ON/OFF)	OFF	OFF	-	OFF	-	OFF	-	-

*VOLUME DENSITY CONTROLS

PHASING DIAGRAM





POLE ORIENTATION

SUPPORT NO.	MAST ARM A ANGLE	ORIENTATION ANGLES FROM MAST ARM			
		MAST ARM B ANGLE	POWER SERVICE	HANDHOLE	
	DEG	DEG	DEG	DEG	
SP-1	0	-	-	180	-
SP-2	90	-	-	180	-
SP-3	0	-	180	180	-
-	-	-	-	-	-

ITEM 632 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION

DISPOSITION OF REMOVED TRAFFIC SIGNAL ITEMS:

ITEMS TO BE DELIVERED TO SHEFFIELD VILLAGE:

VEHICULAR SIGNAL HEADS (8 EACH)
SIGNS (2 EACH)
STRAIN POLES (2 EACH)
MASTER CONTROLLER (1 EACH)
ELECTRIC METER AND METER BASE (1 EACH)

ITEMS TO BE DISPOSED OF

CONDUITS (*)
CABLE (LOOP DETECTOR, SIGNAL, AND POWER)
MESSENGER WIRE AND INTERCONNECT CABLE
STRAIN POLE FOUNDATIONS (2 EACH)
CONTROLLER CABINET (1 EACH)
CONTROLLER WORKPAD (1 EACH)
CABINET FOUNDATION (1 EACH)

(*) = CONDUIT SHALL BE REMOVED WHERE CONFLICTS OCCUR WITH PROPOSED IMPROVEMENTS.

ITEM 625 - PULL BOX REMOVED:
STA. 78+75.5, RT.
STA. 81+50.5, LT.
STA. 81+38, RT.
STA. 82+32.5, RT.
(TOTAL OF 4 EACH TO TRAFFIC SIGNAL SUBSUMMARY SHEET NO. 47)

PREEMPT CHANNELS

CHANNEL 1 = ϕ 2 (EASTBOUND ONLY)
CHANNEL 2 = ϕ 1 AND 6 (WESTBOUND ONLY)
CHANNEL 3 = ϕ 4 (SOUTHBOUND ONLY)

PREEMPT NOTES

1. IF THE ACTIVE PHASE CONFLICTS WITH THE PREEMPT PHASE CALLED, IT SHALL IMMEDIATELY TIME ITS YELLOW AND ALL RED CLEARANCES.
2. IF THE ACTIVE PHASE = THE PREEMPT PHASE, THEN THE PHASE SHALL HOLD FOR THE DURATION OF THE PREEMPT SIGNAL.
3. AFTER RELEASE FROM PREEMPT, YELLOW AND ALL RED CLEARANCE SHALL BE DISPLAYED AND THE RETURN PHASE SHALL BE ϕ 2+6.
4. IF THE PREEMPT PHASE = THE RETURN PHASE (ϕ 2+6), THEN THE YELLOW AND ALL RED CLEARANCE AFTER PREEMPT SHALL NOT BE DISPLAYED.

RADAR DETECTION CHART

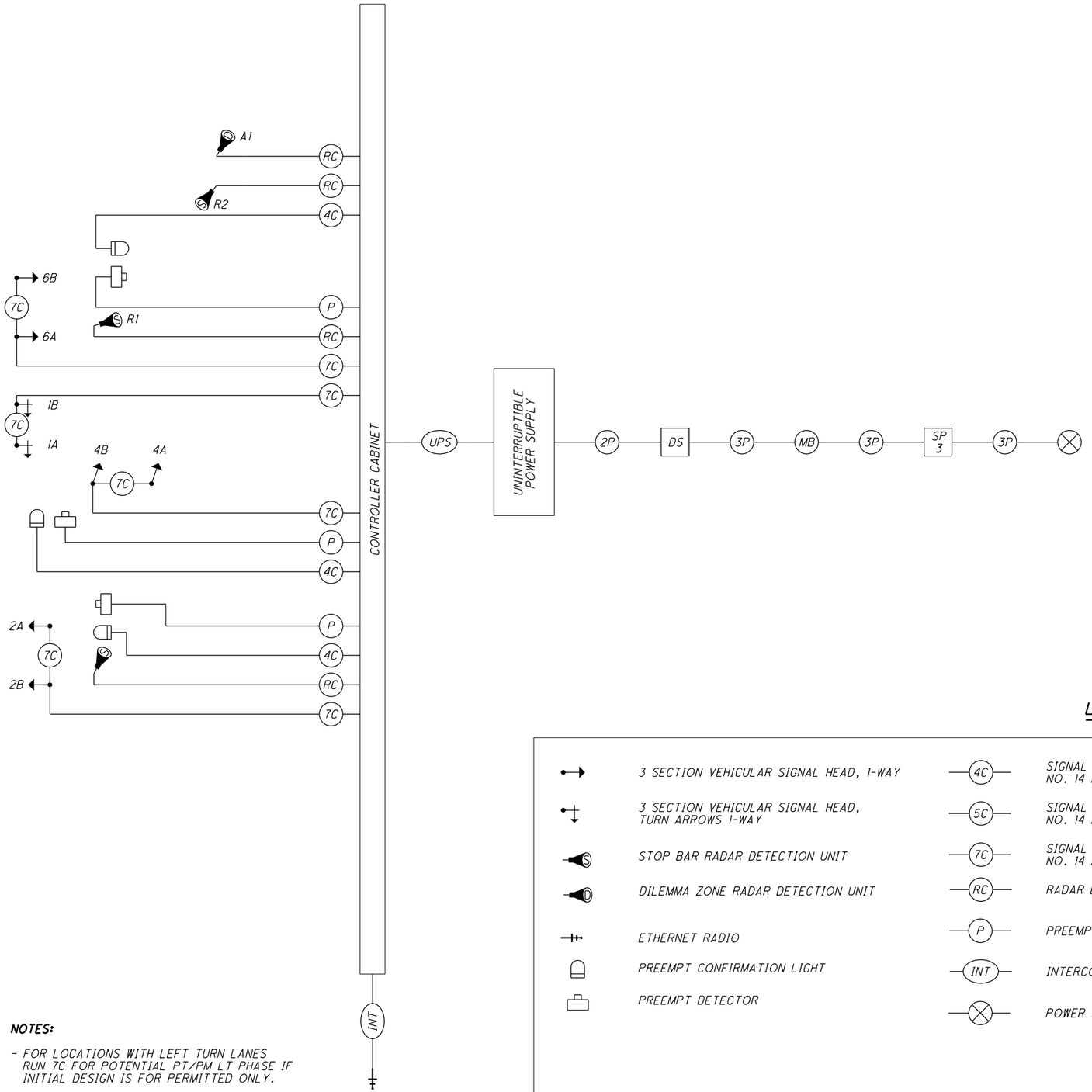
DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
RDZ2A	EB THRU	PRESENCE	2	-	-	CALL/EXTEND PHASE 2	30'
RDZ2B	EB THRU	PRESENCE	2	8	2	CALL/EXTEND PHASE 2	30'
RDZ6A	WB THRU	PRESENCE	6	-	-	CALL/EXTEND PHASE 6	30'
RDZ6B	WB THRU	PRESENCE	6	-	-	CALL/EXTEND PHASE 6	30'
RDZ1A	WB LT	PRESENCE	1	2	1	CALL/EXTEND PHASE 1	30'
RDZ1B	WB LT	PRESENCE	1	2	1	CALL/EXTEND PHASE 1	30'
RDZ4A	SB LT	PRESENCE	4	-	-	CALL/EXTEND PHASE 4	30'
RDZ4B	SB THRU	PRESENCE	4	8	4	CALL/EXTEND PHASE 4	30'
RDZ4C	SB THRU	PRESENCE	4	-	-	CALL/EXTEND PHASE 4	180'

CALCULATED DRP
CHECKED CJB

TRAFFIC SIGNAL PLAN DETAILS
S.R. 254 & I-90 WESTBOUND RAMPS

LOR-254-2.03

WIRING DIAGRAM (TYPICAL)



NOTES:

- FOR LOCATIONS WITH LEFT TURN LANES RUN 7C FOR POTENTIAL PT/PM LT PHASE IF INITIAL DESIGN IS FOR PERMITTED ONLY.
- OVERLAPS SHALL BE WIRED TO THE APPROPRIATE LOAD SWITCHES AS PER THE FIELD HOOKUP CHART AND CONFIGURED IN THE CONTROLLER SOFTWARE PER THE SIGNAL TIMING CHART.

FIELD WIRING HOOK-UP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1A, 1B (WB LT)	<--R---	ϕ1 R	R
	<--Y---	ϕ1 Y	
	<--G---	ϕ1 G	
	-	-	
	-	-	
2A, 2B (EB)	R	ϕ2 R	R
	Y	ϕ2 Y	
	G	ϕ2 G	
	-	-	
	-	-	
4A, 4B (SB)	R	ϕ4 R	R
	Y	ϕ4 Y	
	G	ϕ4 G	
	-	-	
	-	-	
-	-	-	-
	-	-	
-	-	-	
6A, 6B (WB)	R	ϕ6 R	R
	Y	ϕ6 Y	
	G	ϕ6 G	
	-	-	
	-	-	
-	-	-	-
	-	-	
-	-	-	
LS = LOAD SWITCH			

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
-	-	-	-
	-	-	
	-	-	
	-	-	
	-	-	
-	-	-	-
	-	-	
	-	-	
	-	-	
	-	-	
	-	-	
PEDESTRIAN MOVEMENTS			
-	-	-	-
-	-	-	
-	-	-	-
-	-	-	
-	-	-	-
-	-	-	
-	-	-	-
-	-	-	
OVERLAPS			
-	-	-	-
	-	-	
	-	-	
-	-	-	-
	-	-	

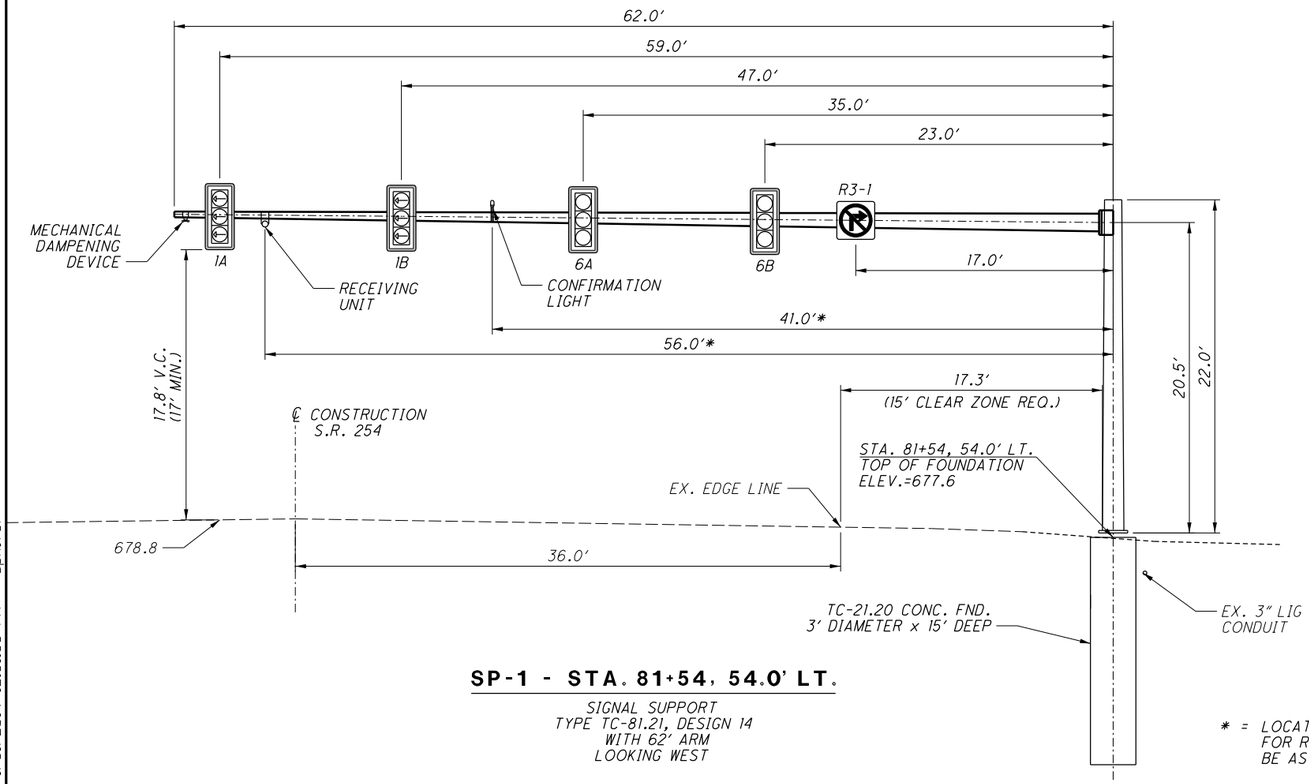
LEGEND

- 3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- 3 SECTION VEHICULAR SIGNAL HEAD, TURN ARROWS 1-WAY
- STOP BAR RADAR DETECTION UNIT
- DILEMMA ZONE RADAR DETECTION UNIT
- ETHERNET RADIO
- PREEMPT CONFIRMATION LIGHT
- PREEMPT DETECTOR
- 4C — SIGNAL CABLE, 4 CONDUCTOR, NO. 14 AWG
- 5C — SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG
- 7C — SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
- RC — RADAR DETECTION CABLE
- P — PREEMPTION CABLE
- INT — INTERCONNECT CABLE
- POWER SOURCE
- 3P — POWER CABLE, 3 CONDUCTOR, NO. 6 AWG
- 2P — POWER CABLE, 2 CONDUCTOR, NO. 6 AWG
- SP 1 — SIGNAL SUPPORT POLE NO. --
- MB — METER BASE
- DS — SIGNAL DISCONNECT SWITCH
- UPS — UNINTERRUPTIBLE POWER SUPPLY CABLE

CALCULATED DRP | CHECKED CJB

TRAFFIC SIGNAL PLAN DETAILS
S.R. 254 & I-90 WESTBOUND RAMPS

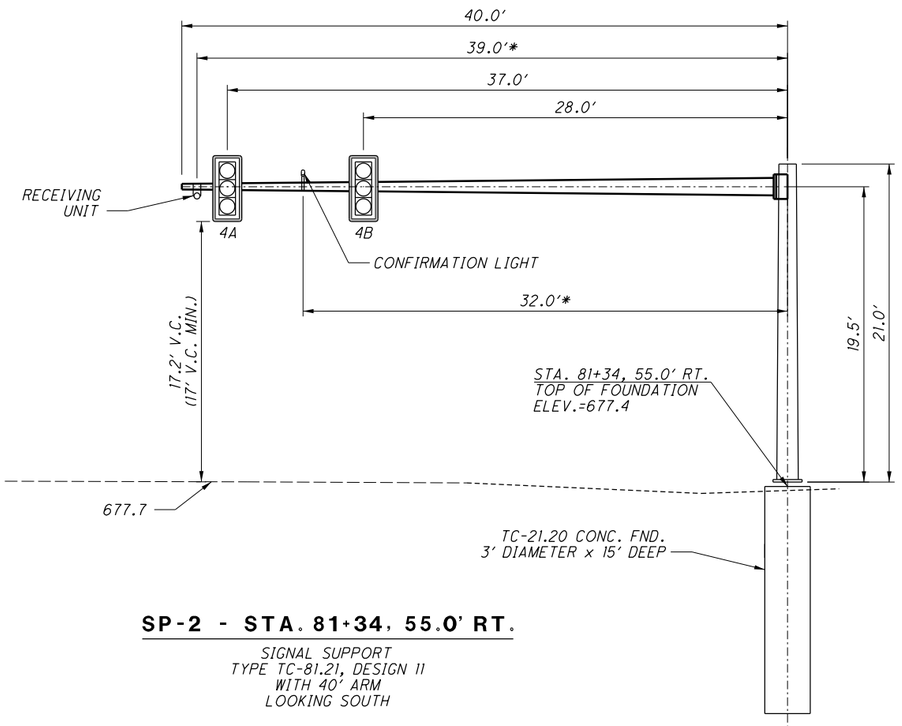
LOR-254-2.03



SP-1 - STA. 81+54, 54.0' LT.

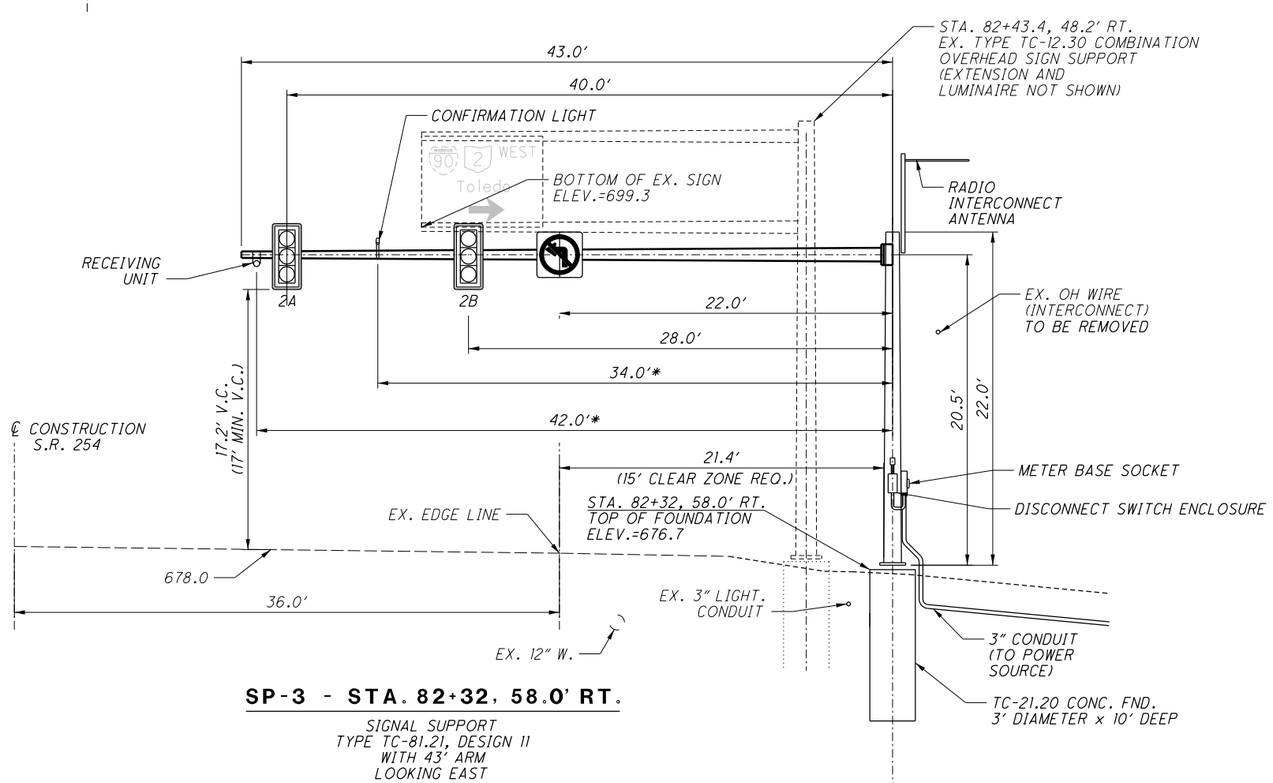
SIGNAL SUPPORT
TYPE TC-81.21, DESIGN 14
WITH 62' ARM
LOOKING WEST

* = LOCATIONS OF PREEMPTION EQUIPMENT ARE SHOWN FOR REFERENCE ONLY. FINAL LOCATION IS TO BE AS PER MANUFACTURER'S RECOMMENDATIONS.



SP-2 - STA. 81+34, 55.0' RT.

SIGNAL SUPPORT
TYPE TC-81.21, DESIGN 11
WITH 40' ARM
LOOKING SOUTH



SP-3 - STA. 82+32, 58.0' RT.

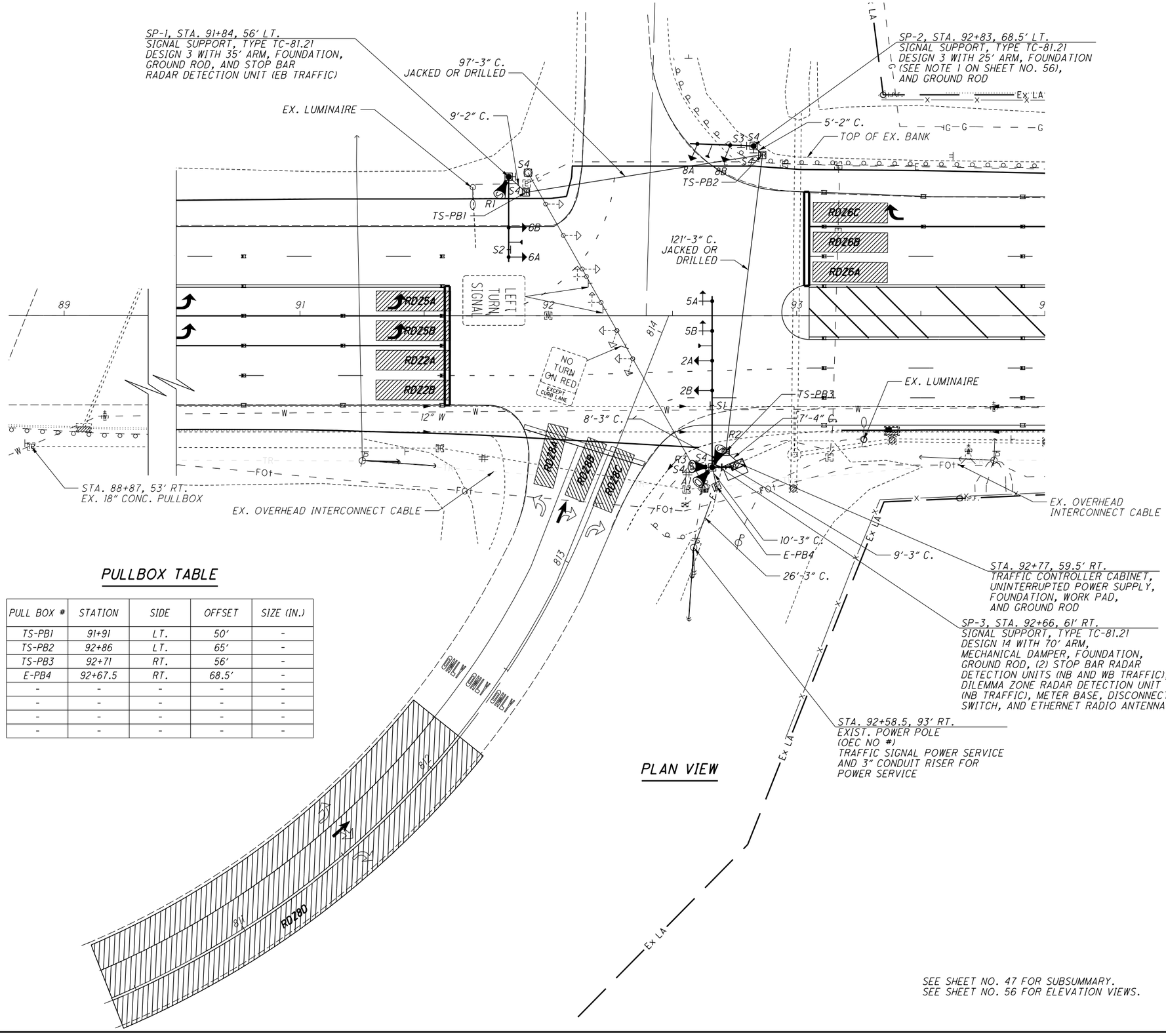
SIGNAL SUPPORT
TYPE TC-81.21, DESIGN 11
WITH 43' ARM
LOOKING EAST

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DRP
CHECKED CJB

TRAFFIC SIGNAL DETAILS
S.R. 254 & I-90 WESTBOUND RAMPS

LOR-254-2.03



PLAN VIEW

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
TS-PB1	91+91	LT.	50'	-
TS-PB2	92+86	LT.	65'	-
TS-PB3	92+71	RT.	56'	-
E-PB4	92+67.5	RT.	68.5'	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

MAST ARM MOUNTED SIGNS

S-1
R3-1-36

S-2
R3-2-36

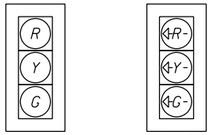
S-3
R10-11c-30

POLE MOUNTED SIGNS

S-4
R9-3-18

VEHICULAR SIGNAL HEADS

POLYCARBONATE, 12" LED LENSES WITH
CUTAWAY TYPE VISORS AND
LOUVERED REFLECTIVE BACKPLATE



2A, 2B, 6A,
6B, 8A, 8B

5A, 5B

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12" WITH ARROWS		
TRAFFIC SIGNAL, 5 UNIT HEAD, 12" WITH ARROWS		
SIGNAL SUPPORT POLE		
LUMINAIRE, CONVENTIONAL		
LUMINAIRE, CONVENTIONAL, SOLID STATE (LED)		
CONTROLLER CABINET AND WORK PAD		
CONTROLLER CABINET AND WORK PAD (TS2)		
TRAFFIC PULL BOX	TR	TR
ELECTRIC PULL BOX	E	E
SERVICE CABLE, 3 CONDUCTOR, NO. X AWG, IN CONDUIT	E	
CONDUIT		
STOP BAR RADAR DETECTION UNIT	S	
DILEMMA ZONE RADAR DETECTION UNIT	D	
PREEMPT DETECTOR W/ CONFIRMATION LIGHT		
ETHERNET RADIO		
DETECTION ZONE		

SEE SHEET NO. 47 FOR SUBSUMMARY.
SEE SHEET NO. 56 FOR ELEVATION VIEWS.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DRP
CHECKED CJB

TRAFFIC SIGNAL PLAN
S.R. 254 & I-90 EASTBOUND RAMPS

LOR-254-2.03

SIGNAL TIMING CHART (TEM FORM 496-3)

INTERSECTION: S.R. 254 AND INTERSTATE 90 EASTBOUND RAMPS
MAINTAINING AGENCY: SHEFFIELD VILLAGE

START UP

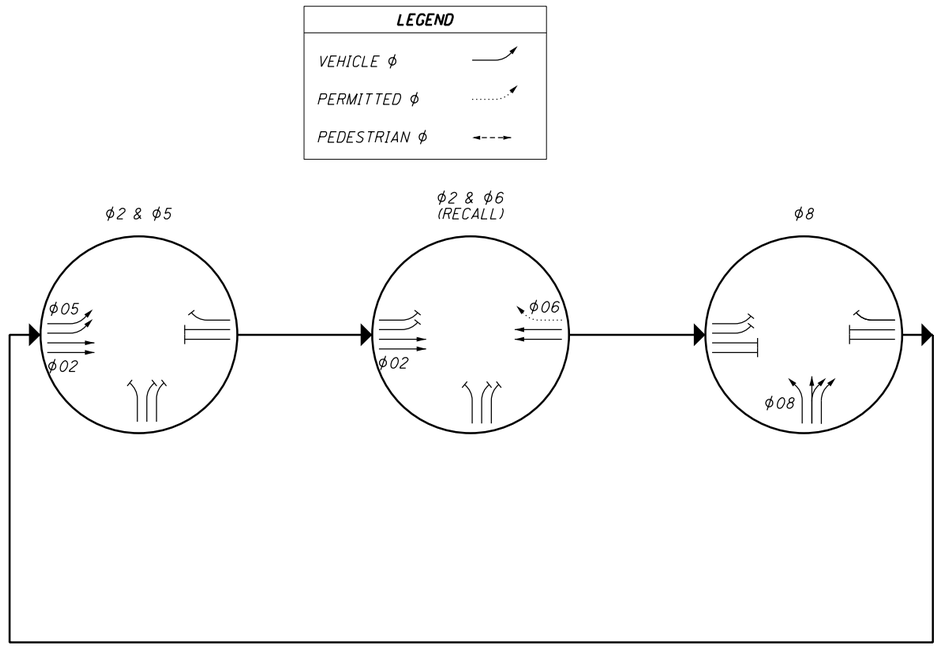
START IN: ALL RED
TIME FOR FLASH ALL RED: 9/6
FIRST PHASE(S): 2 & 6
COLOR DISPLAYED: GREEN

DUAL ENTRY: YES PHASES: 2 & 6
REST IN RED: RING 1 - RING 2 -

OVERLAP	A	B	C	D
PHASES	-	-	-	-

INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			-	EB	-	-	EB LT	WB	-	NB
MINIMUM GREEN (INITIAL)		(SEC.)	-	20	-	-	7	20	-	10
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)		(SEC.)	-	1.0	-	-	1.0	1.0	-	1.0
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	-	60	-	-	15	60	-	40
MAXIMUM GREEN II		(SEC.)	-	60	-	-	15	60	-	40
YELLOW CHANGE		(SEC.)	-	4.1	-	-	3.2	4.1	-	3.8
ALL RED CLEARANCE		(SEC.)	-	1.0	-	-	2.3	1.0	-	2.3
WALK		(SEC.)	-	-	-	-	-	-	-	-
PEDESTRIAN CLEARANCE		(SEC.)	-	-	-	-	-	-	-	-
RECALL	MAXIMUM	(ON/OFF)	-	OFF	-	-	OFF	OFF	-	OFF
	MINIMUM	(ON/OFF)	-	ON	-	-	OFF	ON	-	OFF
	PEDESTRIAN	(ON/OFF)	-	OFF	-	-	OFF	OFF	-	OFF
MEMORY		(ON/OFF)	-	OFF	-	-	OFF	OFF	-	OFF

PHASING DIAGRAM (TYPICAL)



PREEMPT CHANNELS

CHANNEL 1 = ϕ 2 AND 5 (EASTBOUND ONLY)
CHANNEL 2 = ϕ 6 (WESTBOUND ONLY)
CHANNEL 3 = ϕ 8 (NORTHBOUND ONLY)

PREEMPT NOTES

1. IF THE ACTIVE PHASE CONFLICTS WITH THE PREEMPT PHASE CALLED, IT SHALL IMMEDIATELY TIME ITS YELLOW AND ALL RED CLEARANCES.
2. IF THE ACTIVE PHASE = THE PREEMPT PHASE, THEN THE PHASE SHALL HOLD FOR THE DURATION OF THE PREEMPT SIGNAL.
3. AFTER RELEASE FROM PREEMPT, YELLOW AND ALL RED CLEARANCE SHALL BE DISPLAYED AND THE RETURN PHASE SHALL BE ϕ 2+6.
4. IF THE PREEMPT PHASE = THE RETURN PHASE (ϕ 2+6), THEN THE YELLOW AND ALL RED CLEARANCE AFTER PREEMPT SHALL NOT BE DISPLAYED.

ITEM 632 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION

DISPOSITION OF REMOVED TRAFFIC SIGNAL ITEMS:

ITEMS TO BE DELIVERED TO SHEFFIELD VILLAGE:

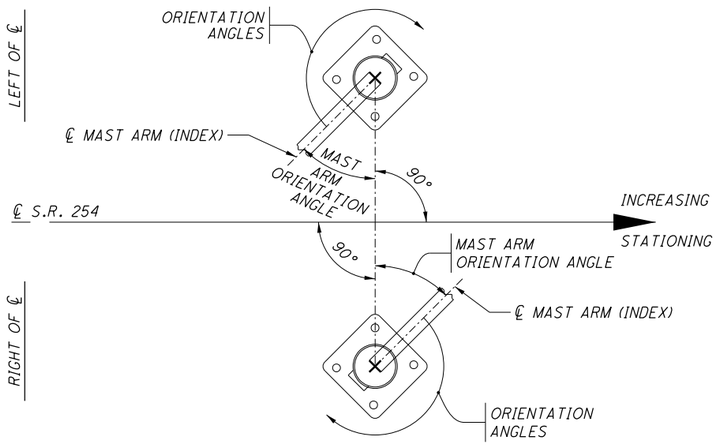
VEHICULAR SIGNAL HEADS (9 EACH)
SIGNS (3 EACH)
STRAIN POLES (2 EACH)
CONTROLLER (1 EACH)
ELECTRIC METER AND METER BASE (1 EACH)

ITEMS TO BE DISPOSED OF

CONDUITS (*)
CABLE (LOOP DETECTOR, SIGNAL, AND POWER)
MESSENGER WIRE AND INTERCONNECT CABLE
STRAIN POLE FOUNDATIONS (3 EACH)
CONTROLLER CABINET (1 EACH)
CONTROLLER WORKPAD (1 EACH)
CABINET FOUNDATION (1 EACH)

(*) = CONDUIT SHALL BE REMOVED WHERE CONFLICTS OCCUR WITH PROPOSED IMPROVEMENTS.

ITEM 625 - PULL BOX REMOVED:
STA. 88+87, RT.
STA. 91+56, RT.
STA. 92+56, RT.
(TOTAL OF 3 EACH TO TRAFFIC SIGNAL SUBSUMMARY SHEET NO. 47)



POLE ORIENTATION

SUPPORT NO.	MAST ARM A ANGLE	ORIENTATION ANGLES FROM MAST ARM: MAST ARM B ANGLE	POWER SERVICE	HANDHOLE	
	DEG	DEG	DEG	DEG	
SP-1	0	-	-	180	-
SP-2	90	-	-	180	-
SP-3	0	-	180	180	-
-	-	-	-	-	-

RADAR DETECTION CHART (TEM FORM 496-4)

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
RDZ2A	EB THRU	PRESENCE	2	-	-	CALL/EXTEND PHASE 2	30'
RDZ2B	EB THRU	PRESENCE	2	-	-	CALL/EXTEND PHASE 2	30'
RDZ5A	EB LT	PRESENCE	5	4	-	CALL/EXTEND PHASE 5	30'
RDZ5B	EB LT	PRESENCE	5	4	-	CALL/EXTEND PHASE 5	30'
RDZ6A	WB THRU	PRESENCE	6	-	-	CALL/EXTEND PHASE 6	30'
RDZ6B	WB THRU	PRESENCE	6	-	-	CALL/EXTEND PHASE 6	30'
RDZ6C	WB THRU	PRESENCE	6	10	-	CALL/EXTEND PHASE 6	30'
RDZ8A	NB THRU	PRESENCE	8	-	-	CALL/EXTEND PHASE 8	30'
RDZ8B	NB THRU	PRESENCE	8	-	-	CALL/EXTEND PHASE 8	30'
RDZ8C	NB THRU	PRESENCE	8	10	-	CALL/EXTEND PHASE 8	30'
RDZ8D	NB THRU	PRESENCE	8	-	-	CALL/EXTEND PHASE 8	180'

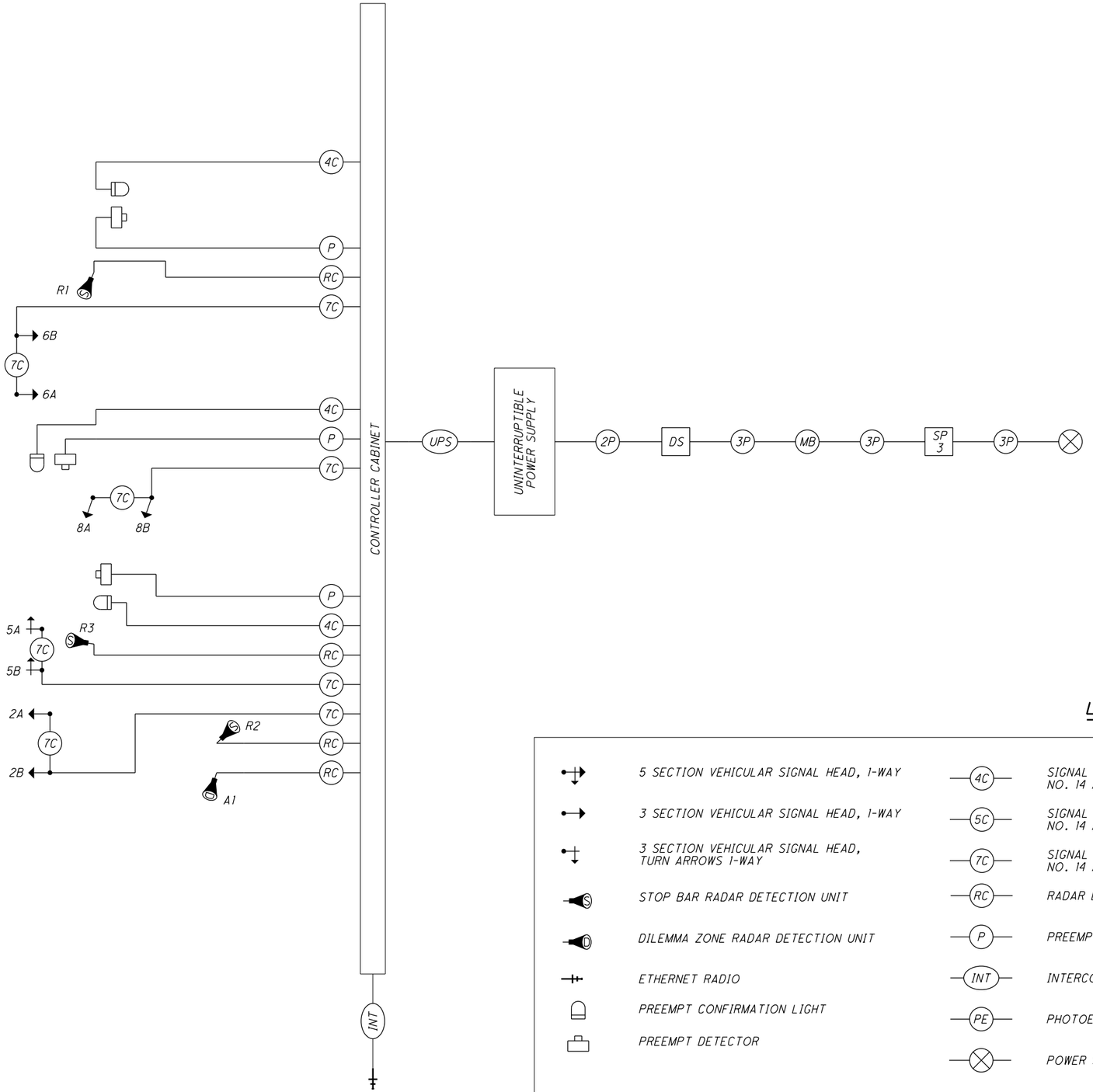
NOTE: DILEMMA ZONE SPEED THRESHOLD >30 MPH

CALCULATED DRP CHECKED CJB

TRAFFIC SIGNAL PLAN DETAILS
S.R. 254 & I-90 EASTBOUND RAMPS

LOR-254-2.03

WIRING DIAGRAM (TYPICAL)



FIELD WIRING HOOK-UP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
2A, 2B (EB)	R	ϕ2 R	R	8A, 8B (NB)	R	ϕ 8 R	R
	Y	ϕ2 Y			Y	ϕ 8 Y	
	G	ϕ2 G			G	ϕ 8 G	
	-	-			-	-	
	-	-			-	-	
5A, 5B (EB LT)	<--R---	ϕ5 R	R	-	-	-	-
	<--Y---	ϕ5 Y			-	-	
	<--G---	ϕ5 G			-	-	
	-	-		-	-	-	-
	-	-			-	-	
6A, 6B (WB)	R	ϕ6 R	R		-	-	
	Y	ϕ6 Y			-	-	
	G	ϕ6 G			-	-	
	-	-			-	-	
	-	-		PEDESTRIAN MOVEMENTS			
-	-	-	-	-	-	-	-
	-	-		-	-	-	
-	-	-		-	-	-	-
	-	-		-	-	-	
-	-	-	-	-	-	-	-
	-	-		-	-	-	
	-	-		-	-	-	-
-	-	-		-	-	-	
	-	-		OVERLAPS			
	-	-			-		
-	-	-	-		-		
	-	-					
	-	-		-	-	-	-
LS = LOAD SWITCH					-	-	

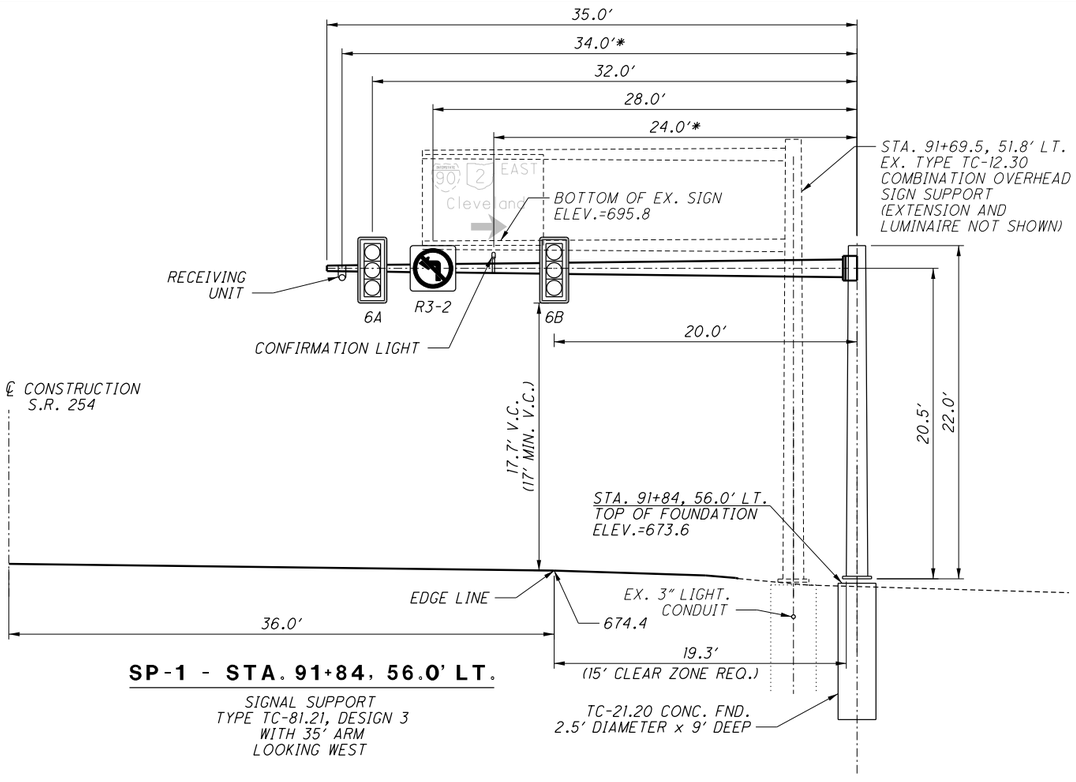
LEGEND

- 5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- 3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- 3 SECTION VEHICULAR SIGNAL HEAD, TURN ARROWS 1-WAY
- STOP BAR RADAR DETECTION UNIT
- DILEMMA ZONE RADAR DETECTION UNIT
- ETHERNET RADIO
- PREEMPT CONFIRMATION LIGHT
- PREEMPT DETECTOR
- 4C — SIGNAL CABLE, 4 CONDUCTOR, NO. 14 AWG
- 5C — SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG
- 7C — SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
- RC — RADAR DETECTION CABLE
- P — PREEMPTION CABLE
- INT — INTERCONNECT CABLE
- PE — PHOTOELECTRIC CELL
- POWER SOURCE
- 3P — POWER CABLE, 3 CONDUCTOR, NO. 6 AWG
- 2P — POWER CABLE, 2 CONDUCTOR, NO. 6 AWG
- SP 1 — SIGNAL SUPPORT POLE NO. __
- MB — METER BASE
- DS — SIGNAL DISCONNECT SWITCH
- UPS — UNINTERRUPTIBLE POWER SUPPLY CABLE

CALCULATED DRP | CHECKED CJB

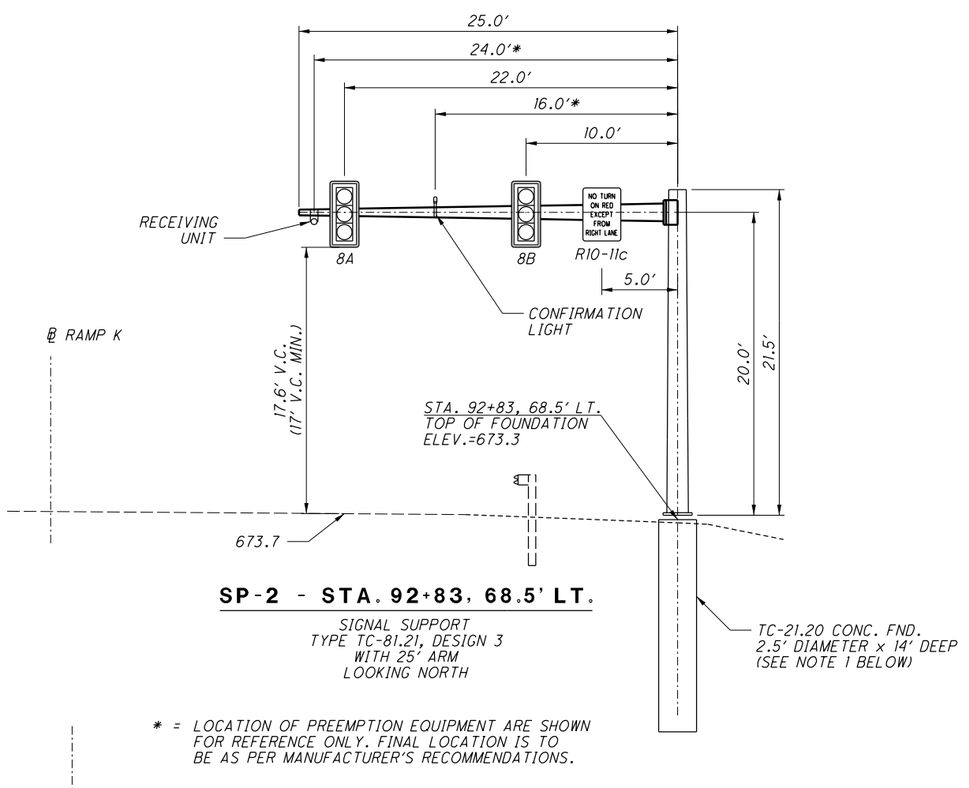
TRAFFIC CONTROL PLAN DETAILS
S.R. 254 & I-90 EASTBOUND RAMPS

LOR-254-2.03



SP-1 - STA. 91+84, 56.0' LT.

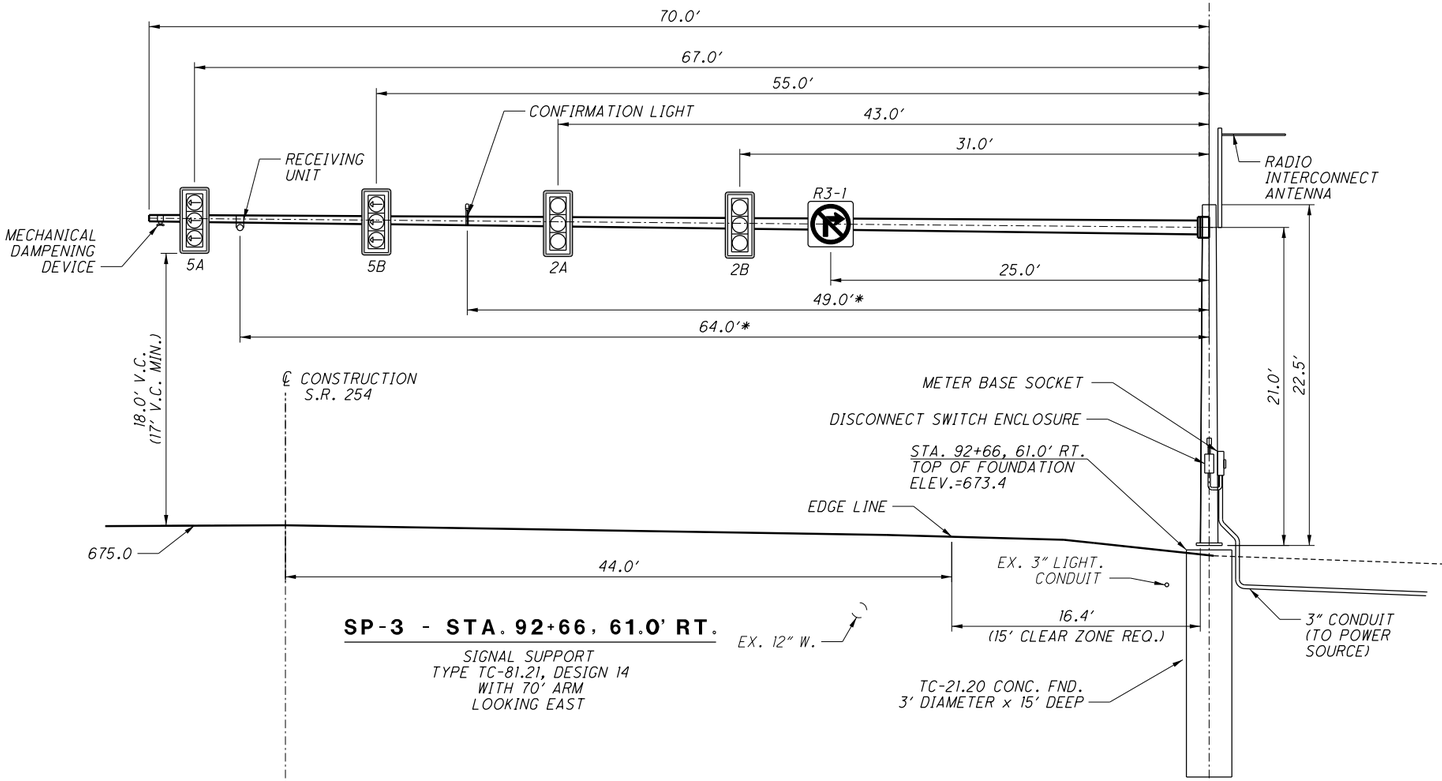
SIGNAL SUPPORT
TYPE TC-81.21, DESIGN 3
WITH 35' ARM
LOOKING WEST



SP-2 - STA. 92+83, 68.5' LT.

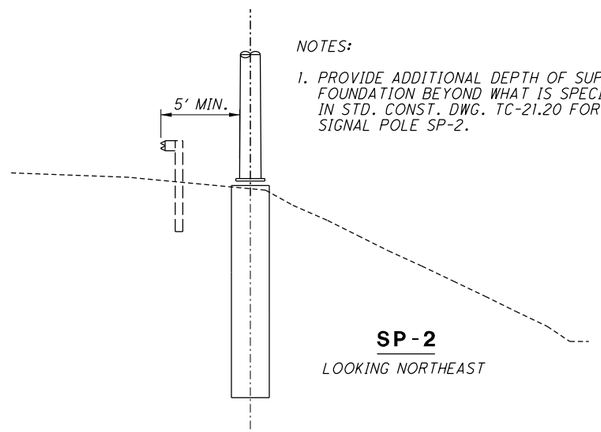
SIGNAL SUPPORT
TYPE TC-81.21, DESIGN 3
WITH 25' ARM
LOOKING NORTH

* = LOCATION OF PREEMPTION EQUIPMENT ARE SHOWN FOR REFERENCE ONLY. FINAL LOCATION IS TO BE AS PER MANUFACTURER'S RECOMMENDATIONS.



SP-3 - STA. 92+66, 61.0' RT.

SIGNAL SUPPORT
TYPE TC-81.21, DESIGN 14
WITH 70' ARM
LOOKING EAST



NOTES:

1. PROVIDE ADDITIONAL DEPTH OF SUPPORT FOUNDATION BEYOND WHAT IS SPECIFIED IN STD. CONST. DWG. TC-21.20 FOR SIGNAL POLE SP-2.

SP-2

LOOKING NORTHEAST

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DRP
CHECKED CJB

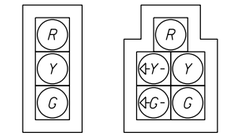
TRAFFIC SIGNAL DETAILS
S.R. 254 & I-90 EASTBOUND RAMPS

LOR-254-2.03

56
62

VEHICULAR SIGNAL HEADS

POLYCARBONATE, 12" LED LENSES WITH CUTAWAY TYPE VISORS AND LOUVERED REFLECTIVE BACKPLATE



2B, 2C, 2D
4A, 4B,
4C, 6B,
8A, 8B

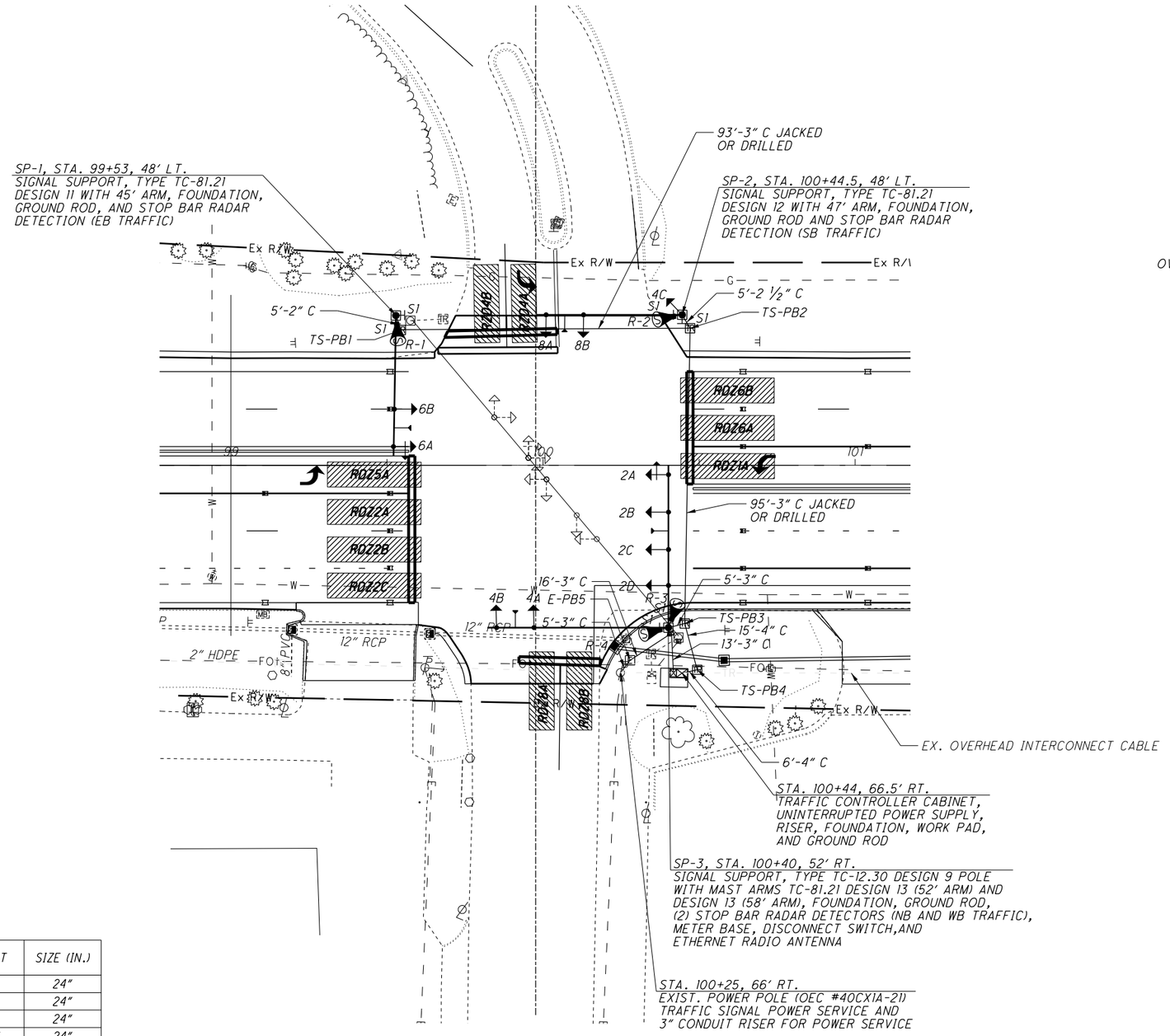
2A, 6A

POLE MOUNTED SIGNS

LEFT TURN
YIELD
ON GREEN

EX. (3)
OVERHEAD SIGNS

S-1
R9-3-18



PLAN VIEW

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
TS-PB1	99+54	LT.	43'	24"
TS-PB2	100+47	LT.	44'	24"
TS-PB3	100+45	RT.	51'	24"
TS-PB4	100+49	RT.	65.5'	24"
				-
E-PB5	100+28	RT.	62.5'	24"
-	-	-	-	-
-	-	-	-	-

SEE SHEET NO. 47 FOR SUBSUMMARY.
SEE SHEET NO. 60 FOR ELEVATION VIEWS.

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"	●→	○-▷
TRAFFIC SIGNAL, 3 UNIT HEAD, 12" WITH ARROWS	●→	○-▷
SIGNAL SUPPORT POLE	●	◻
LUMINAIRE, CONVENTIONAL		○—
CONTROLLER CABINET AND WORK PAD		◻
CONTROLLER CABINET AND WORK PAD (TS2)	⊠	
TRAFFIC PULL BOX	TR	TR
ELECTRIC PULL BOX	E	E
SERVICE CABLE, 3 CONDUCTOR, NO. X AWG, IN CONDUIT	——E——	
CONDUIT	——	
STOP BAR RADAR DETECTION UNIT	◀S	▷S
PREEMPT DETECTOR W/ CONFIRMATION LIGHT	⊢	
ETHERNET RADIO	⊣⊢	
DETECTION ZONE	▨	

N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DRP
CHECKED CJB

TRAFFIC SIGNAL PLAN
S.R. 254 & SHEFFIELD/COBBLESTONE

LOR-254-2.03

SIGNAL TIMING CHART (TEM FORM 496-3)

INTERSECTION: S.R. 254 AND SHEFFIELD CROSSING/COBBLESTONE SQUARE
MAINTAINING AGENCY: SHEFFIELD VILLAGE

START UP
START IN: ALL RED
TIME FOR FLASH ALL RED: 9/6
FIRST PHASE(S): 2 & 6
COLOR DISPLAYED: GREEN

DUAL ENTRY: YES | PHASES: 2 & 6, 4 & 8
REST IN RED: RING 1 - | RING 2 -

OVERLAP	A	B	C	D
PHASES	-	-	-	-

INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			WB LT	EB	-	SB	EB LT	WB	-	NB
MINIMUM GREEN (INITIAL)		(SEC.)	7	20	-	10	7	20	-	10
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)		(SEC.)	1.0	1.0	-	1.0	1.0	1.0	-	1.0
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	15	60	-	30	15	60	-	30
MAXIMUM GREEN II		(SEC.)	15	60	-	30	15	60	-	30
YELLOW CHANGE		(SEC.)	3.2	4.1	-	3.3	3.2	4.1	-	3.3
ALL RED CLEARANCE		(SEC.)	2.3	1.0	-	1.6	2.3	1.0	-	1.6
WALK		(SEC.)	-	-	-	-	-	-	-	-
PEDESTRIAN CLEARANCE		(SEC.)	-	-	-	-	-	-	-	-
RECALL	MAXIMUM	(ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	-	OFF
	MINIMUM	(ON/OFF)	OFF	ON	-	OFF	OFF	ON	-	OFF
	PEDESTRIAN	(ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	-	OFF
MEMORY		(ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	-	OFF

NOTES:

- ALL MOVEMENTS SHALL BE ACTUATED. THE PRIMARY THRU MOVEMENT SHOULD HAVE MIN RECALL ACTIVE TO REST IN GREEN.
- ALL DETECTOR DELAYS SHALL BE PLACED IN THE CONTROLLER.

ITEM 632 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION

DISPOSITION OF REMOVED TRAFFIC SIGNAL ITEMS:

ITEMS TO BE DELIVERED TO SHEFFIELD VILLAGE:

VEHICULAR SIGNAL HEADS (8 EACH)
OVERHEAD SIGNS (3 EACH)
STRAIN POLES (2 EACH)
CONTROLLER (1 EACH)
ELECTRIC METER AND METER BASE (1 EACH)

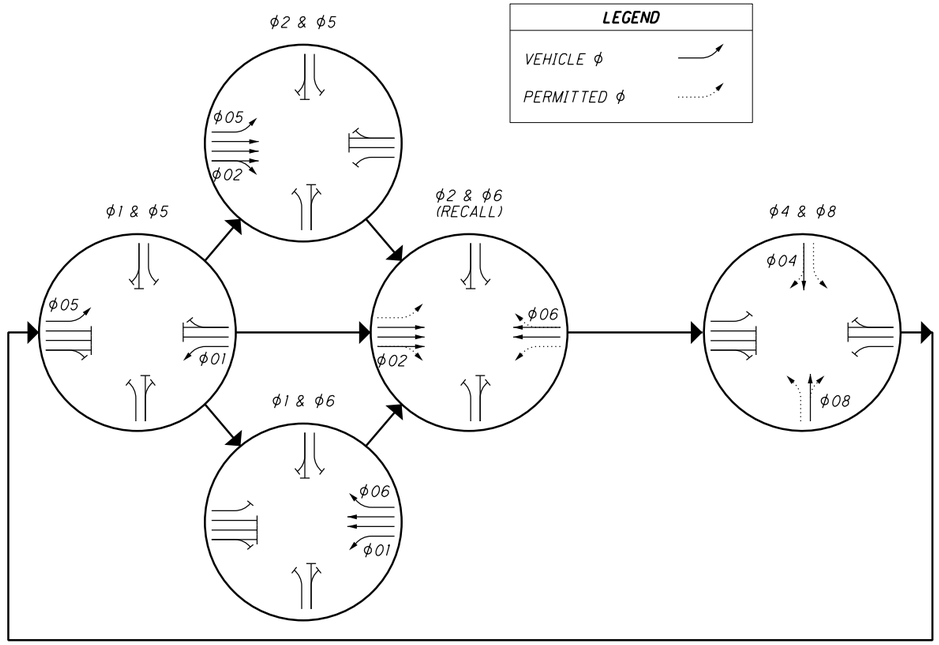
ITEMS TO BE DISPOSED OF

CONDUITS (*)
CABLE (LOOP DETECTOR, SIGNAL, AND POWER)
MESSENGER WIRE AND INTERCONNECT CABLE
STRAIN POLE FOUNDATIONS (2 EACH)
CONTROLLER CABINET (1 EACH)
CONTROLLER WORKPAD (1 EACH)
CABINET FOUNDATION (1 EACH)

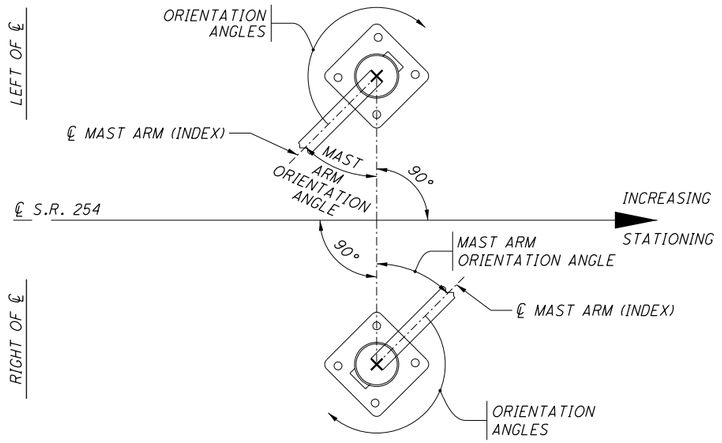
(*) = CONDUIT SHALL BE REMOVED WHERE CONFLICTS OCCUR WITH PROPOSED IMPROVEMENTS.

ITEM 625 - PULL BOX REMOVED:
STA. 99+68, LT.
STA. 100+35, RT.
(TOTAL OF 2 EACH TO TRAFFIC SIGNAL SUBSUMMARY SHEET NO. 47)

PHASING DIAGRAM (TYPICAL)



OMIT CALLS TO ϕ1 DURING ϕ2
OMIT CALLS TO ϕ5 DURING ϕ6



POLE ORIENTATION

SUPPORT NO.	MAST ARM A ANGLE	ORIENTATION ANGLES FROM MAST ARM: MAST ARM B ANGLE	POWER SERVICE	HANDHOLE	POLE-MOUNTED SIGNAL HED
	DEG	DEG	DEG	DEG	DEG
SP-1	0	-	-	180	-
SP-2	90	-	-	180	47
SP-3	0	270	180	180	-
-	-	-	-	-	-

PREEMPT CHANNELS

CHANNEL 1 = ϕ 2 AND 5 (EASTBOUND ONLY)
CHANNEL 2 = ϕ 1 AND 6 (WESTBOUND ONLY)
CHANNEL 3 = ϕ 4 (SOUTHBOUND ONLY)
CHANNEL 4 = ϕ 8 (NORTHBOUND ONLY)

PREEMPT NOTES

1. IF THE ACTIVE PHASE CONFLICTS WITH THE PREEMPT PHASE CALLED, IT SHALL IMMEDIATELY TIME ITS YELLOW AND ALL RED CLEARANCES.
2. IF THE ACTIVE PHASE = THE PREEMPT PHASE, THEN THE PHASE SHALL HOLD FOR THE DURATION OF THE PREEMPT SIGNAL.
3. AFTER RELEASE FROM PREEMPT, YELLOW AND ALL RED CLEARANCE SHALL BE DISPLAYED AND THE RETURN PHASE SHALL BE ϕ 2+6.
4. IF THE PREEMPT PHASE = THE RETURN PHASE (ϕ 2+6), THEN THE YELLOW AND ALL RED CLEARANCE AFTER PREEMPT SHALL NOT BE DISPLAYED.

RADAR DETECTION CHART (TEM FORM 496-4)

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
RDZ2A	EB THRU	PRESENCE	2	-	-	CALL/EXTEND PHASE 2	30'
RDZ2B	EB THRU	PRESENCE	2	-	-	CALL/EXTEND PHASE 2	30'
RDZ2C	EB THRU	PRESENCE	2	8	2	CALL/EXTEND PHASE 2	30'
RDZ5A	EB LT	PRESENCE	5	2	5	CALL/EXTEND PHASE 5	30'
RDZ6A	WB THRU	PRESENCE	6	-	-	CALL/EXTEND PHASE 6	30'
RDZ6B	WB THRU	PRESENCE	6	8	6	CALL/EXTEND PHASE 6	30'
RDZ1A	WB LT	PRESENCE	1	2	1	CALL/EXTEND PHASE 1	30'
RDZ4A	SB LT	PRESENCE	4	2	4	CALL/EXTEND PHASE 4	30'
RDZ4B	SB THRU	PRESENCE	4	8	4	CALL/EXTEND PHASE 4	30'
RDZ8A	NB LT	PRESENCE	8	2	8	CALL/EXTEND PHASE 8	30'
RDZ8B	NB THRU	PRESENCE	8	8	8	CALL/EXTEND PHASE 8	30'

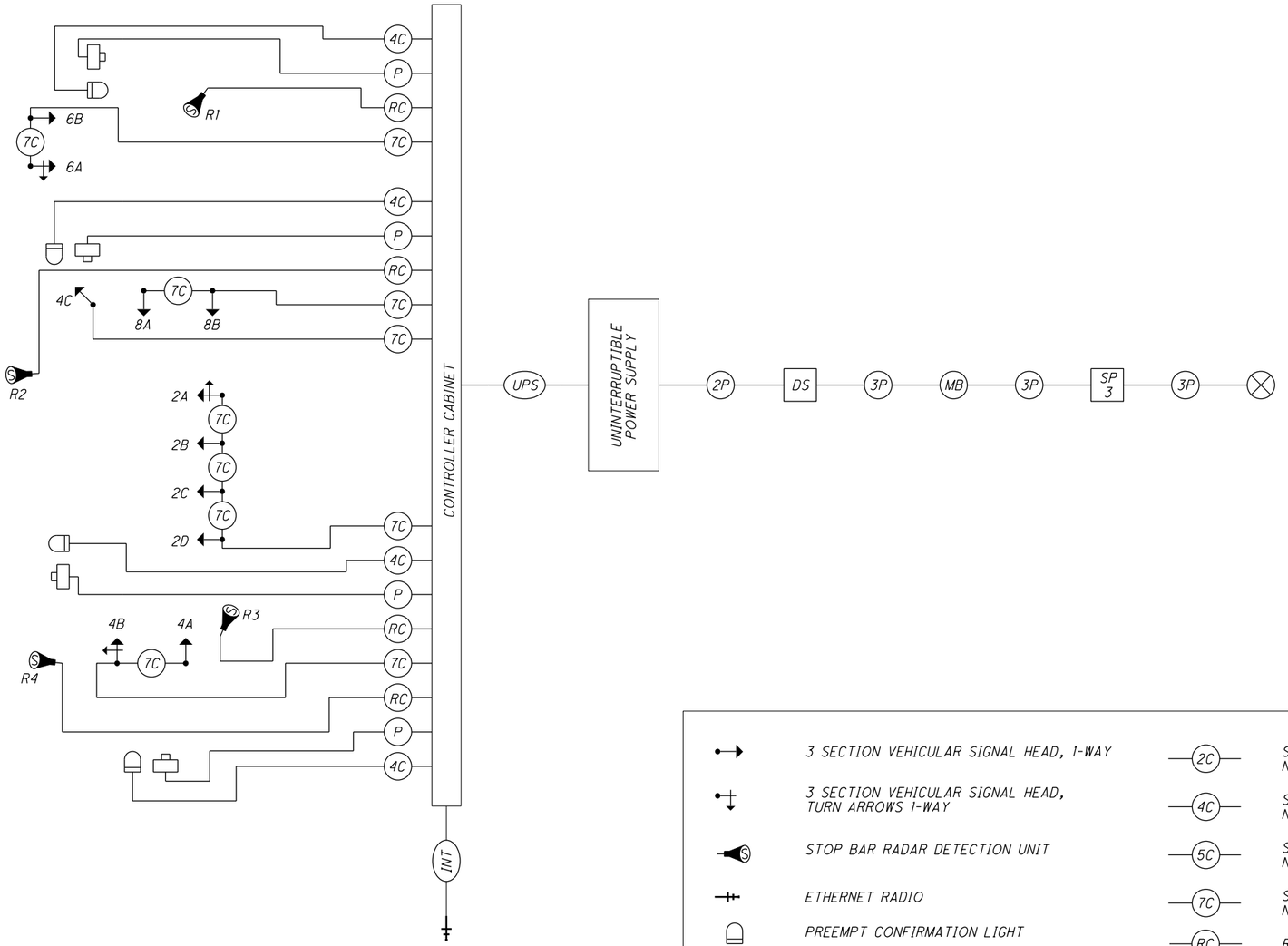
NOTE: DILEMMA ZONE SPEED THRESHOLD >30 MPH

CALCULATED DRP | CHECKED CJB

TRAFFIC SIGNAL PLAN DETAILS
S.R. 254 & SHEFFIELD CROSSING/COBBLESTONE SQ. DRIVE

LOR-254-2.03

WIRING DIAGRAM (TYPICAL)



FIELD WIRING HOOK-UP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
2A (EB LT)	R	ϕ2 R	R
	Y	ϕ2 Y	
	G	ϕ2 G	
	<--Y---	ϕ5 Y	
	<--G---	ϕ5 G	
2B, 2C. 2D (EB)	R	ϕ2 R	R
	Y	ϕ2 Y	
	G	ϕ2 G	
	-	-	
	-	-	
4A, 4B, 4C (SB)	R	ϕ4 R	R
	Y	ϕ4 Y	
	G	ϕ4 G	
	-	-	
	-	-	
-	-	-	-
-	-	-	
-	-	-	
6A (WB LT)	R	ϕ6 R	R
	Y	ϕ6 Y	
	G	ϕ6 G	
	<--Y---	ϕ1 Y	
	<--G---	ϕ1 G	
6B (WB)	R	ϕ6 R	R
	Y	ϕ6 Y	
	G	ϕ6 G	
LS = LOAD SWITCH			

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
8A, 8B (NB)	R	ϕ 8 R	R
	Y	ϕ 8 Y	
	G	ϕ 8 G	
	-	-	
	-	-	
-	-	-	-
-	-	-	
-	-	-	
-	-	-	-
-	-	-	
-	-	-	-
-	-	-	
-	-	-	
PEDESTRIAN MOVEMENTS			
-	-	-	-
-	-	-	
-	-	-	-
-	-	-	
OVERLAPS			
-	-	-	-
	-	-	
-	-	-	-
	-	-	

LEGEND

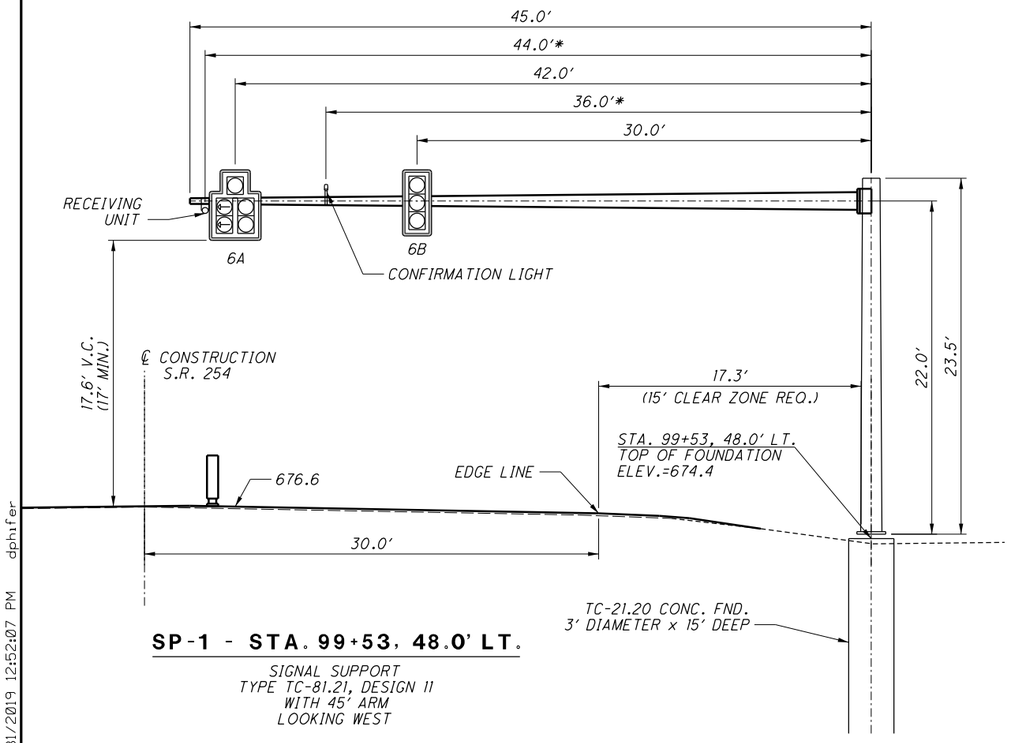
- 3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY
- 3 SECTION VEHICULAR SIGNAL HEAD, TURN ARROWS 1-WAY
- STOP BAR RADAR DETECTION UNIT
- ETHERNET RADIO
- PREEMPT CONFIRMATION LIGHT
- PREEMPT DETECTOR
- 2C — SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG
- 4C — SIGNAL CABLE, 4 CONDUCTOR, NO. 14 AWG
- 5C — SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG
- 7C — SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
- RC — RADAR DETECTION CABLE
- P — PREEMPTION CABLE
- INT — INTERCONNECT CABLE
- 3P — POWER CABLE, 3 CONDUCTOR, NO. 6 AWG
- 2P — POWER CABLE, 2 CONDUCTOR, NO. 6 AWG
- SP 1 — SIGNAL SUPPORT POLE NO. --
- MB — METER BASE
- DS — SIGNAL DISCONNECT SWITCH
- UPS — UNINTERRUPTIBLE POWER SUPPLY CABLE

CALCULATED DRP | CHECKED CJB

TRAFFIC CONTROL PLAN DETAILS

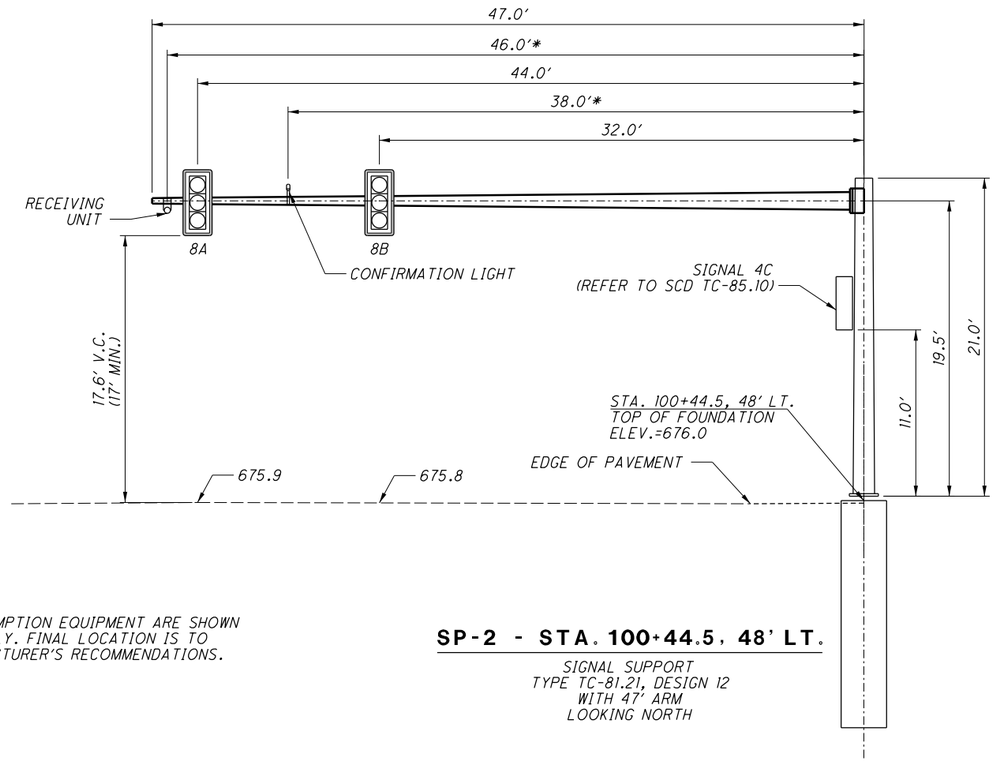
S.R. 254 & SHEFFIELD CROSSING/COBBLESTONE SQ. DRIVE

LOR-254-2.03



SP-1 - STA. 99+53, 48.0' LT.

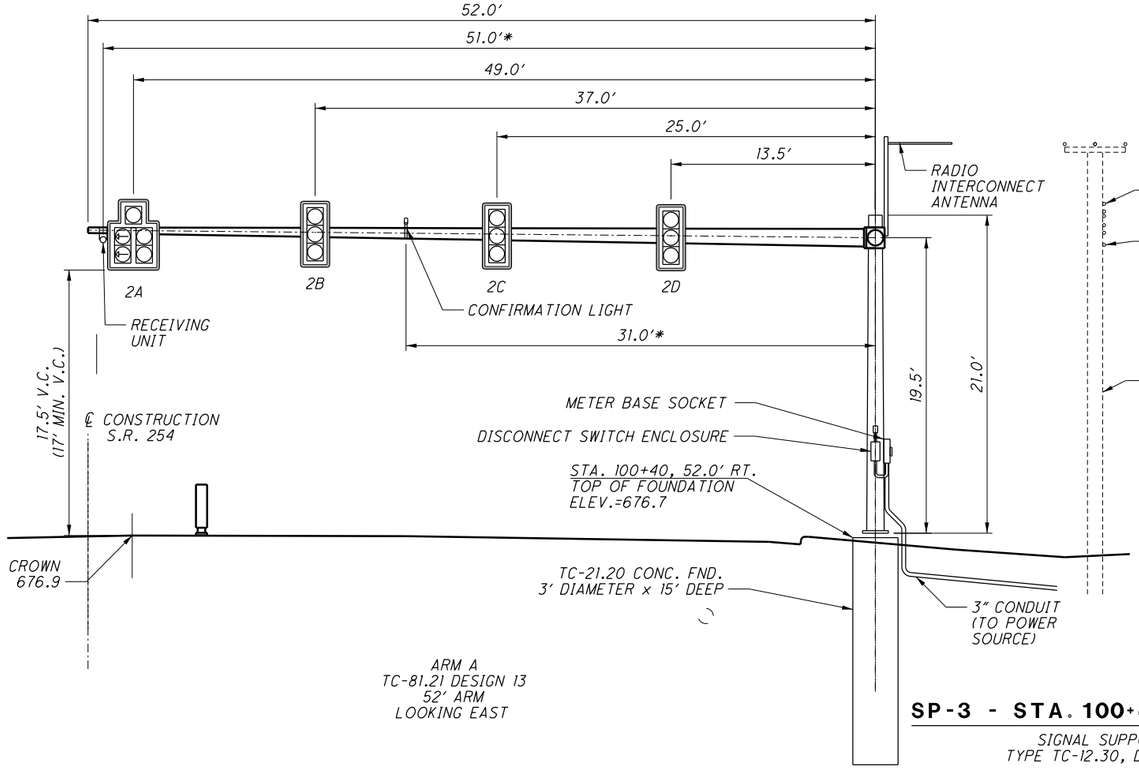
SIGNAL SUPPORT
TYPE TC-81.21, DESIGN 11
WITH 45' ARM
LOOKING WEST



SP-2 - STA. 100+44.5, 48' LT.

SIGNAL SUPPORT
TYPE TC-81.21, DESIGN 12
WITH 47' ARM
LOOKING NORTH

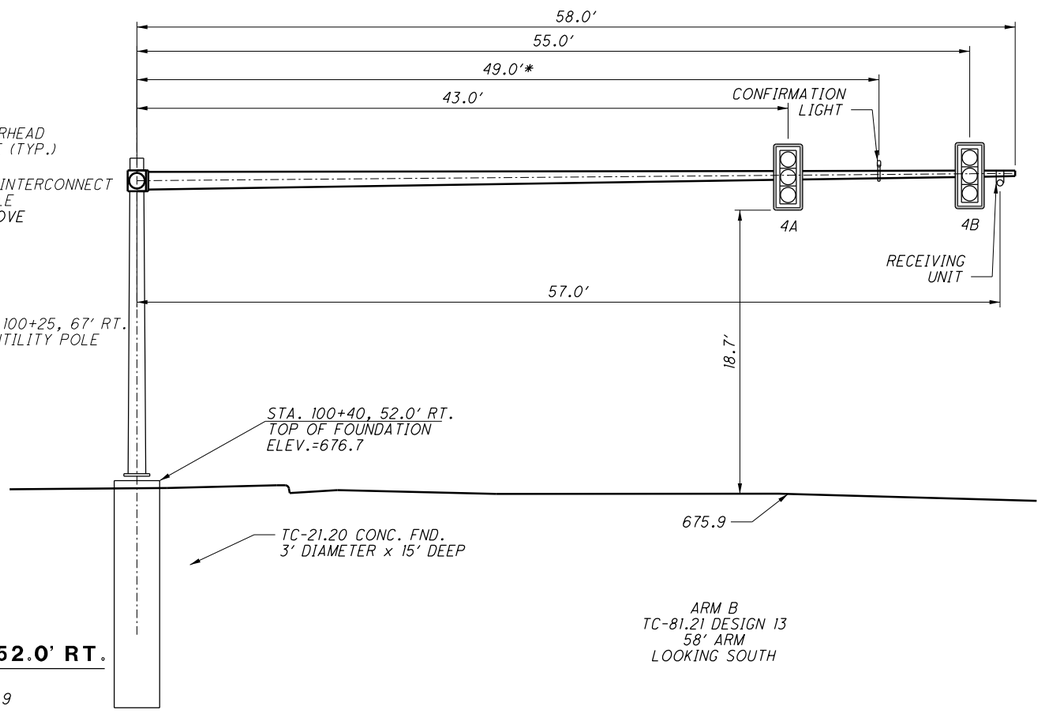
* = LOCATION OF PREEMPTION EQUIPMENT ARE SHOWN FOR REFERENCE ONLY. FINAL LOCATION IS TO BE AS PER MANUFACTURER'S RECOMMENDATIONS.



ARM A
TC-81.21 DESIGN 13
52' ARM
LOOKING EAST

SP-3 - STA. 100+40, 52.0' RT.

SIGNAL SUPPORT
TYPE TC-12.30, DESIGN 9



ARM B
TC-81.21 DESIGN 13
58' ARM
LOOKING SOUTH

P:\ODOT\J201150726.000 LOR-254-2.03\LOR\102027\Design\Roadway\Sheets\102027CP010.dgn Sheet 1/31/2019 12:52:07 PM dphifer

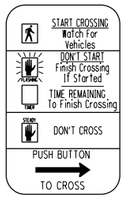
HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DRP
CHECKED CJB

TRAFFIC SIGNAL DETAILS
S.R. 254 & SHEFFIELD CROSSING/COBBLESTONE

LOR-254-2.03

PEDESTRIAN SIGNS



R10-3E-9
1 - LEFT ARROWS
1 - RIGHT ARROWS

EXISTING PEDESTRIAN SIGNAL HEADS

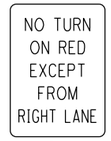
POLYCARBONATE TYPE D2, LED, COUNTDOWN

W1, W2◇, W3▽, W4, W5, W6

◇ = RELOCATE EX. PED. SIGNAL HEAD W2 ON PS-2A

▽ = RELOCATE EX. PED. SIGNAL HEAD W3 ON PS-2B

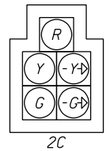
SIGNS



S-1
R10-11c-30

VEHICULAR SIGNAL HEADS

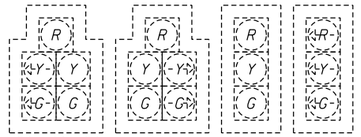
POLYCARBONATE, 12" LED LENSES WITH CUTAWAY TYPE VISORS AND LOUVERED REFLECTIVE BACKPLATE



2C

EXISTING VEHICULAR SIGNAL HEADS

12" POLYCARBONATE WITH LED LENSES



* = RELOCATE EX. SIGNAL HEAD 2B ON EXISTING MAST ARM

PLAN VIEW

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
TS-PB1	103+93	RT.	68.5'	24"
Ex. PB2	103+73	RT.	56'	18"
Ex. PB3	103+85.3	RT.	88.7'	18"
Ex. PB4	104+34.1	LT.	37.8'	18"
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

NOTES:

1. FURNISH AND INSTALL THE TRAFFIC RESPONSIVE MASTER CONTROLLER IN THE LOCAL CONTROLLER CABINET.
2. CONTRACTOR IS TO ADJUST THE EXISTING LIGHTING AND TRAFFIC PULL BOXES IN THE SOUTHWEST CORNER OF THE INTERSECTION TO FINISHED GRADE. A QUANTITY OF 4 EACH HAS BEEN INCLUDED IN THE SUBSUMMARY FOR THIS WORK.

SEE SHEET NO. 47 FOR SUBSUMMARY.

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12" WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN SIGNAL		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
LUMINAIRE, CONVENTIONAL		
CONTROLLER CABINET AND WORK PAD		
TRAFFIC PULL BOX		
ELECTRIC PULL BOX		
LIGHTING PULL BOX		
PREEMPT DETECTOR W/ CONFIRMATION LIGHT		
ETHERNET RADIO		
POWERHEAD DETECTOR LOOP		

N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED DRP CHECKED CJB

TRAFFIC SIGNAL PLAN
S.R. 254 & S.R. 301

LOR-254-2.03

61
62

SIGNAL TIMING CHART (TEM FORM 496-3)

INTERSECTION: S.R. 254 AND S.R. 301
MAINTAINING AGENCY: SHEFFIELD VILLAGE

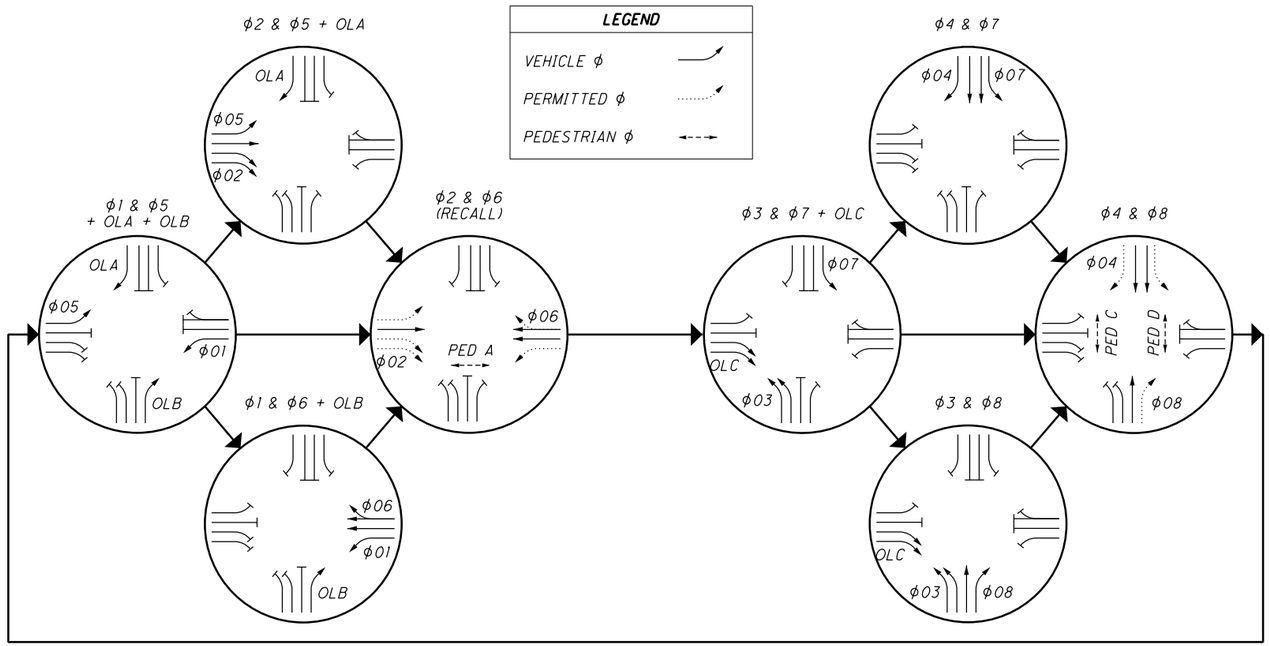
START UP
START IN: YELLOW/RED FLASH
TIME FOR FLASH OR ALL RED: 5
FIRST PHASE(S): 2 & 6
COLOR DISPLAYED: GREEN

DUAL ENTRY: YES | PHASES: 2 & 6, 4 & 8
REST IN RED: | RING 1 - | RING 2 -

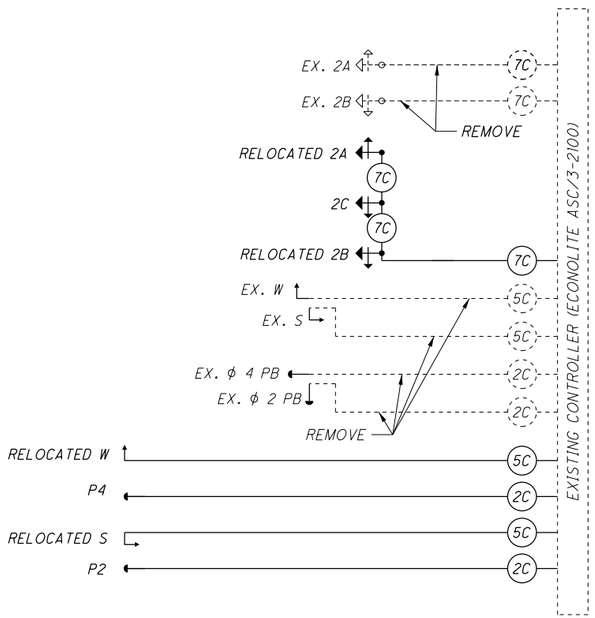
OVERLAP	A	B	C	D
PHASES	1	5	7	-

INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		WB LT	EB	NB LT	SB	EB LT	WB	SB LT	NB
MINIMUM GREEN (INITIAL)	(SEC.)	7	20	7	10	7	20	7	10
ADDED INITIAL	*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL	(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)	(SEC.)	3	3	3	3	3	3	3	3
TIME BEFORE REDUCTION	*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP	*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE	*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I	(SEC.)	15	60	15	30	15	60	15	30
MAXIMUM GREEN II	(SEC.)	15	60	15	30	15	60	15	30
YELLOW CHANGE	(SEC.)	3.1	4.1	3.2	4.1	3.2	4.1	3.0	4.1
ALL RED CLEARANCE	(SEC.)	4.6	1.7	2.5	1.8	4.2	1.7	2.0	1.8
WALK	(SEC.)	-	8	-	9	-	-	-	9
PEDESTRIAN CLEARANCE	(SEC.)	-	14	-	23	-	-	-	23
RECALL	MAXIMUM (ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	MINIMUM (ON/OFF)	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
	PEDESTRIAN (ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MEMORY	(ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

PHASING DIAGRAM



WIRING DIAGRAM (TYPICAL)



NOTE: WIRING DIAGRAM ONLY SHOWS PROPOSED WIRING AND EXISTING WIRING IMPACTED BY THE PROJECT IMPROVEMENTS.

NOTE: FIELD WIRING HOOK-UP FOR SIGNAL HEADS 2B AND 2C (OVERLAP C) TO BE AS FOLLOWS:

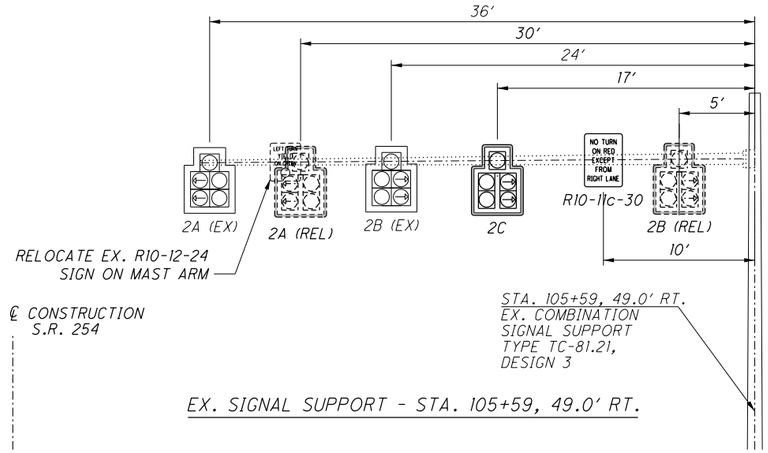
INDICATION	FIELD TERMINAL	FLASH
R	φ2R	
Y	φ2Y	RED
G	φ2G	
Y-->	LS φ3Y	
G-->	LS φ3G	

ALL OTHER EXISTING SIGNAL HEAD WIRING IS TO REMAIN.

OMIT CALLS TO φ 1 DURING φ 2 GREEN
OMIT CALLS TO φ 3 DURING φ 4 GREEN
OMIT CALLS TO φ 5 DURING φ 6 GREEN
OMIT CALLS TO φ 7 DURING φ 8 GREEN

SIGNAL DETECTOR CHART

LOOP DESIGNATION	LOOP CONFIGURATION**	SIZE (FT.)	PULSE OR PRESENCE	DELAY (SEC.)	EXTENSION (SEC.)	CONNECT TO DETECTOR UNIT (UNIT-CHANNEL)	ASSOCIATED CONTROLLER PHASE	TERMINAL NO.*
L1	P	6'x 30'	PRESENCE	2	-	1-1	5	-
-	-	-	-	-	-	-	-	-



EX. SIGNAL SUPPORT - STA. 105+59, 49.0' RT.

** CONFIGURATIONS: POWERHEAD (P), QUADRAPOLE (Q), ANGULAR DESIGN DETECTOR (ADD), OR RECTANGULAR (R); PER TC-82.10

THE INSTALLATION OF POURED EPOXY INSULATED SPLICES BETWEEN THE LOOP DETECTOR WIRES AND THE LOOP DETECTOR LEAD-IN CABLE SHALL BE CONSIDERED INCIDENTAL TO THE DETECTOR LOOP ITEM.

CALCULATED DRP | CHECKED CJB

TRAFFIC SIGNAL PLAN DETAILS
S.R. 254 & S.R. 301

LOR-254-2.03

SO-DEEP Inc. A SAM COMPANY
The Subsurface Utility Engineering Company
449 Munroe Falls Road
Tallmadge, OH 44278
(330) 794-4455

Test Hole Certification Form
Utility Quality Level A Data

ASCE C/I 38-02

Control # EZQF559
Test Hole # 1
Plan Scale 1" = 20'
Sheet # 2 OF 2
Proposed STORM LINE
Date SEPTEMBER 19, 2017

City, County, State **LORAIN COUNTY, OH**
Gen. Loc. **FRONT OF 5250, S.R. 254 (MCDONALDS)**
Recorded Size/Material/Type **2 1/2" PLASTIC CATV CONDUIT & 3/8"WINDSTREAM CABLE**
Foreman/Truck#/Form By **B. CHARLOTTE / 222 / M. RUPERT**

Condition of paving prior to work **NO PAVING**

B.M. 1 Elev. = **674.97'** is **GIVEN**
Description: **(SV4) BRASS DISC FOUND IN CONCRETE MONUMENT, 48'± RT OF CL STA 94+43±, S.R. 254**

B.M. 2 Elev. = **673.79'** is **GIVEN**
Description: **(BM "A") CHIS "X" FOUND IN SIGN BASE BOLT, 57'± LT OF CL STA 95+61±, S.R. 254**

Benchmarks Check **BY 0.01'**
Elevations are referenced to **B.M.#2**

So-Deep will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

Recorded Size/Type of utility **WAS FOUND**
There **WERE NOT** additional utilities in the test hole
The utility **WAS** in good condition
Paving Thickness and type **NO PAVING**
Color of ribbon installed **ORANGE**
Soil Type **SANDY BROWN**
Truck Location **OUT OF ROADWAY**
T.H. tied to **STEEL PIN**

2 1/2" PLASTIC CATV CONDUIT & 3/8"WINDSTREAM CABLE
Size/Material/Type
Portion of pipe exposed for O.D. measurement:
FULL

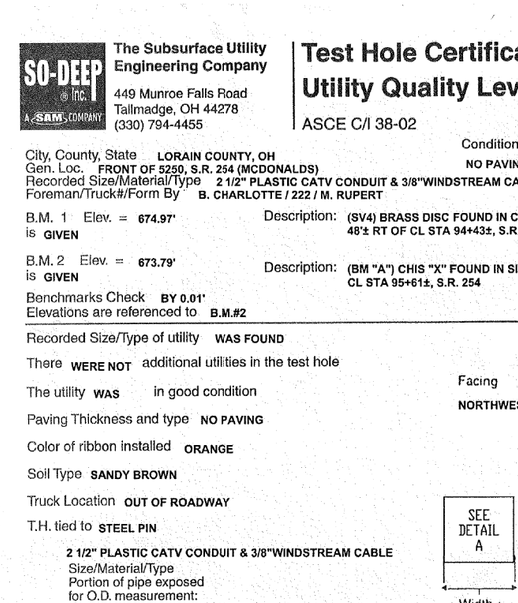
Remarks: NONE

Facing **NORTHWEST**

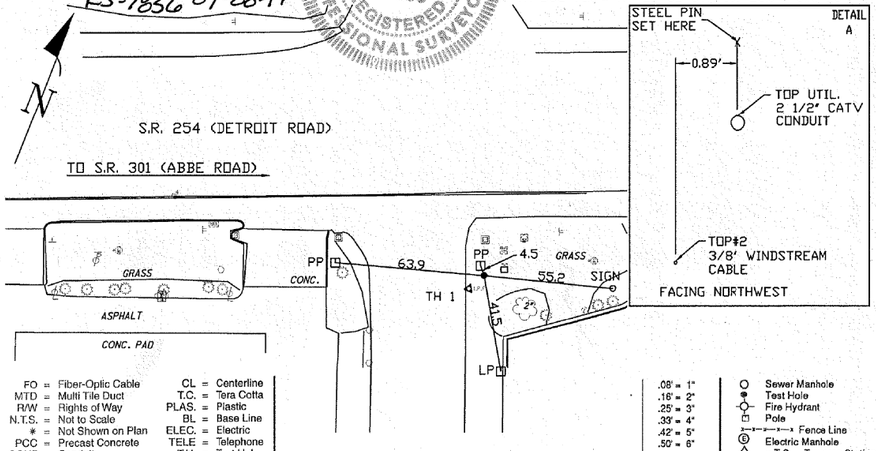
Existing Grade of **GRASS R/W**
Survey Mark **STEEL PIN** (set by So-Deep) Elev. **675.62'**
1.15'
Actual field measurement by ruler (not calculated)
Surveyed Elev. Top Util/Struc. **674.48'**
Surveyed Elev. Bott. Util/Struc. (if required)

SEE DETAIL A
Width ±

	TOP#2
ELEV.	672.43
ACTUAL	3.21



RS-7856 09-28-17



FO = Fiber-Optic Cable	CL = Centerline	.08' = 1"	Sewer Manhole
MTD = Multi Tile Duct	T.C. = Tera Cotta	.16' = 2"	Test Hole
R/W = Rights of Way	PLAS. = Plastic	.25' = 3"	Fire Hydrant
N.T.S. = Not to Scale	BL = Base Line	.33' = 4"	Pole
* = Not Shown on Plan	ELEC. = Electric	.42' = 5"	Fence Line
PCC = Precast Concrete	TELE = Telephone	.50' = 6"	Electric Manhole
COND. = Conduit	T.H. = Test Hole	.58' = 7"	= T.S. = Traverse Station
CONC. = Concrete	SW = Sidewalk	.67' = 8"	Valve
O.D. = Outside Diameter	DW = Driveway	.75' = 9"	Water Meter
C.I. = Cast Iron	BM = Benchmark	.83' = 10"	Telephone Manhole
D.I. = Ductile Iron	C.B. = Catch Basin	.92' = 11"	Telephone Pedestal
RPC = Rough Pour Concrete	GV = Gas Valve		

Performing out-of-sight work...with vision!™

Note: To Eliminate mistakes and check this work, So-Deep suggests you scale and plot all dimensions onto the plans and review all elevations carefully. So-Deep is responsible only for information shown on our forms.

SO-DEEP Inc. A SAM COMPANY
The Subsurface Utility Engineering Company
449 Munroe Falls Road
Tallmadge, OH 44278
(330) 794-4455

Test Hole Certification Form
Utility Quality Level A Data

ASCE C/I 38-02

Control # EZQF559
Test Hole # 2
Plan Scale 1" = 20'
Sheet # 2 OF 2
Proposed STORM LINE
Date SEPTEMBER 19, 2017

City, County, State **LORAIN COUNTY, OH**
Gen. Loc. **FRONT OF 5250, S.R. 254 (MCDONALDS)**
Recorded Size/Material/Type **UNKNOWN SIZE & TYPE ELECTRIC LINE**
Foreman/Truck#/Form By **B. CHARLOTTE / 222 / M. RUPERT**

Condition of paving prior to work **NO PAVING**

B.M. 1 Elev. = **674.97'** is **GIVEN**
Description: **(SV4) BRASS DISC FOUND IN CONCRETE MONUMENT, 48'± RT OF CL STA 94+43±, S.R. 254**

B.M. 2 Elev. = **673.79'** is **GIVEN**
Description: **(BM "A") CHIS "X" FOUND IN SIGN BASE BOLT, 57'± LT OF CL STA 95+61±, S.R. 254**

Benchmarks Check **BY 0.01'**
Elevations are referenced to **B.M.#2**

So-Deep will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

Recorded Size/Type of utility **WAS FOUND**
There **WERE NOT** additional utilities in the test hole
The utility **WAS** in good condition
Paving Thickness and type **NO PAVING**
Color of ribbon installed **RED**
Soil Type **SANDY BROWN**
Truck Location **OUT OF ROADWAY**
T.H. tied to **STEEL PIN**

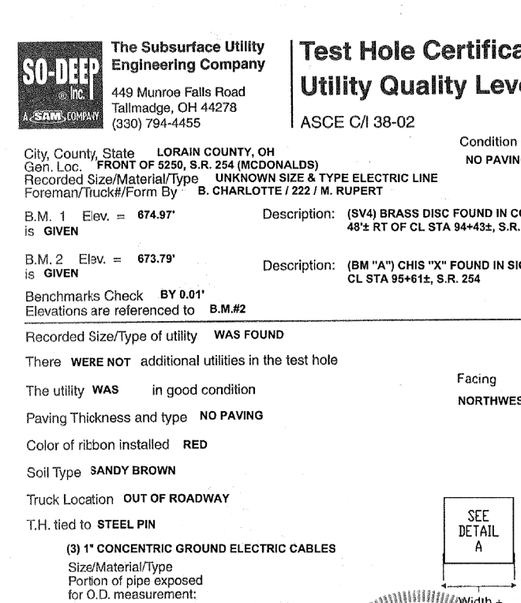
(3) 1" CONCENTRIC GROUND ELECTRIC CABLES
Size/Material/Type
Portion of pipe exposed for O.D. measurement:
FULL

Remarks: NONE

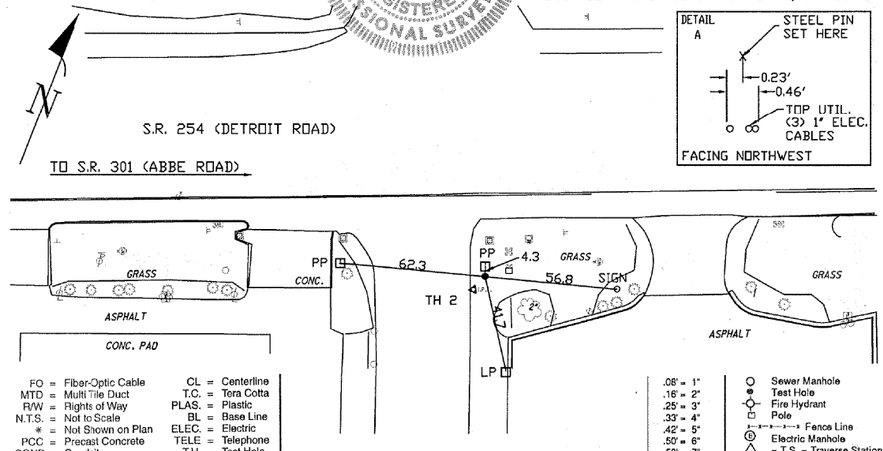
Facing **NORTHWEST**

Existing Grade of **GRASS R/W**
Survey Mark **STEEL PIN** (set by So-Deep) Elev. **675.71'**
3.30'
Actual field measurement by ruler (not calculated)
Surveyed Elev. Top Util/Struc. **672.42'**
Surveyed Elev. Bott. Util/Struc. (if required)

SEE DETAIL A
Width ±



RS-7856 09-28-17



FO = Fiber-Optic Cable	CL = Centerline	.08' = 1"	Sewer Manhole
MTD = Multi Tile Duct	T.C. = Tera Cotta	.16' = 2"	Test Hole
R/W = Rights of Way	PLAS. = Plastic	.25' = 3"	Fire Hydrant
N.T.S. = Not to Scale	BL = Base Line	.33' = 4"	Pole
* = Not Shown on Plan	ELEC. = Electric	.42' = 5"	Fence Line
PCC = Precast Concrete	TELE = Telephone	.50' = 6"	Electric Manhole
COND. = Conduit	T.H. = Test Hole	.58' = 7"	= T.S. = Traverse Station
CONC. = Concrete	SW = Sidewalk	.67' = 8"	Valve
O.D. = Outside Diameter	DW = Driveway	.75' = 9"	Water Meter
C.I. = Cast Iron	BM = Benchmark	.83' = 10"	Telephone Manhole
D.I. = Ductile Iron	C.B. = Catch Basin	.92' = 11"	Telephone Pedestal
RPC = Rough Pour Concrete	GV = Gas Valve		

Performing out-of-sight work...with vision!™

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TEST HOLE LEVEL QUALITY A DATA #1 & #2

LOR-254-2.03

Test Hole #3

SO-DEEP Inc. – A SAM COMPANY

The Subsurface Utility Engineering Company
449 Munroe Falls Road
Tallmadge, OH 44278
(330) 794-4455

Test Hole Certification Form
Utility Quality Level A Data
ASCE C/I 38-02

Control # EZQF559
Test Hole # 3
Plan Scale 1" = 20'
Sheet # 2 OF 2
Proposed STORM LINE
Date SEPTEMBER 19, 2017

Condition of paving prior to work: NO PAVING

City, County, State: LORAIN COUNTY, OH
Gen. Loc.: FRONT OF 5230, S.R. 254 SPEEDWAY GAS STATION
Recorded Size/Material/Type: UNK. SIZE & TYPE ELEC. LINE & WINDSTREAM LINE
Foreman/Truck#/Form By: B. CHARLOTTE / 222 / M. RUPERT

B.M. 1 Elev. = 674.97' is GIVEN
Description: (SV4) BRASS DISC FOUND IN CONCRETE MONUMENT, 48'± RT OF CL STA 94+43±, S.R. 254

B.M. 2 Elev. = 673.79' is GIVEN
Description: (BM "A") CHIS "X" FOUND IN SIGN BASE BOLT, 57'± LT OF CL STA 95+61±, S.R. 254

So-Deep will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

Benchmarks Check BY 0.01'
Elevations are referenced to B.M.#2

Recorded Size/Type of utility: WAS FOUND
There WERE NOT additional utilities in the test hole
The utility WAS in good condition
Paving Thickness and type: NO PAVING
Color of ribbon installed: RED / ORANGE
Soil Type: SANDY BROWN
Truck Location: OUT OF ROADWAY
T.H. tied to: STEEL PIN

* SEE REMARKS
Size/Material/Type
Portion of pipe exposed for O.D. measurement: FULL

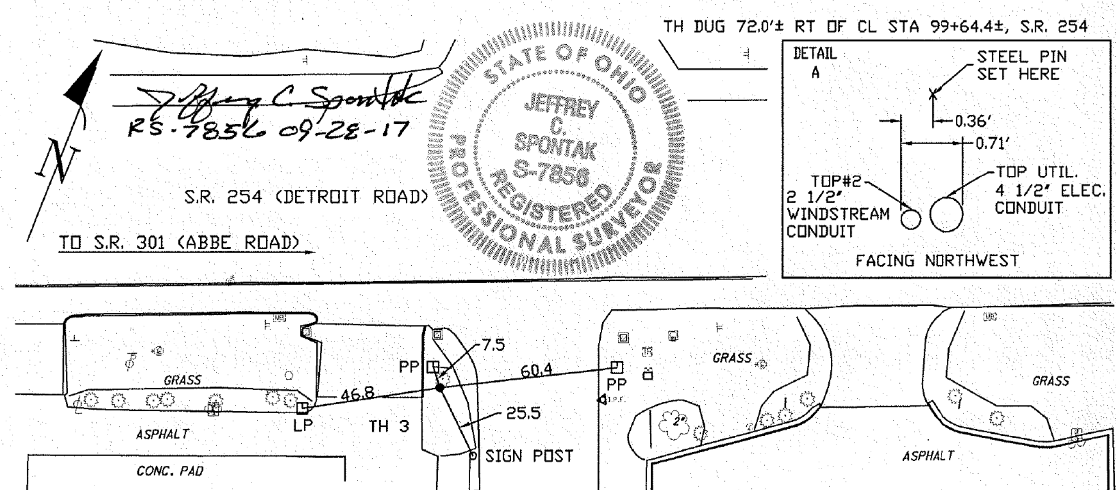
Facing: NORTHWEST

Existing Grade of GRASS R/W
Survey Mark (set by So-Deep): STEEL PIN — Elev. 676.13'
Actual field measurement by ruler (not calculated): 2.63'
Surveyed Elev. Top Util/Struc.: 673.52'
Surveyed Elev. Bott. Util/Struc. (if required)
SEE DETAIL A
Width ±

Remarks: * CREW FOUND A 4 1/2" PLASTIC ELECTRIC CONDUIT AND A 2 1/2" PLASTIC WINDSTREAM CONDUIT.

TOP#2 ELEV. 673.38 ACTUAL 2.73

TH DUG 72.0'± RT OF CL STA 99+64.4±, S.R. 254



FO = Fiber-Optic Cable	CL = Centerline	.08' = 1"	Sewer Manhole
MTD = Multi Tile Duct	T.C. = Tera Cotta	.16' = 2"	Test Hole
R/W = Rights of Way	PLAS. = Plastic	.25' = 3"	Fire Hydrant
N.T.S. = Not to Scale	BL = Base Line	.33' = 4"	Pole
* = Not Shown on Plan	ELEC. = Electric	.42' = 5"	Fence Line
PCC = Precast Concrete	TELE = Telephone	.50' = 6"	Electric Manhole
COND. = Conduit	T.H. = Test Hole	.58' = 7"	= T.S. = Traverse Station
CONC. = Concrete	SW = Sidewalk	.67' = 8"	Valve
O.D. = Outside Diameter	DW = Driveway	.75' = 9"	Water Meter
C.I. = Cast Iron	BM = Benchmark	.83' = 10"	Telephone Manhole
D.I. = Ductile Iron	C.B. = Catch Basin	.92' = 11"	Telephone Pedestal
RPC = Rough Pour Concrete	GV = Gas Valve		

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Test Hole #4

SO-DEEP Inc. – A SAM COMPANY

The Subsurface Utility Engineering Company
449 Munroe Falls Road
Tallmadge, OH 44278
(330) 794-4455

Test Hole Certification Form
Utility Quality Level A Data
ASCE C/I 38-02

Control # EZQF559
Test Hole # 4
Plan Scale 1" = 20'
Sheet # 1 OF 2
Proposed STORM LINE
Date SEPTEMBER 19, 2017

Condition of paving prior to work: NO PAVING

City, County, State: LORAIN COUNTY, OH
Gen. Loc.: FRONT OF 5218, S.R. 254 (TACO BELL)
Recorded Size/Material/Type: 3/8" CATV BUSINESS SERVICE CABLE
Foreman/Truck#/Form By: B. CHARLOTTE / 222 / M. RUPERT

B.M. 1 Elev. = 674.97' is GIVEN
Description: (SV4) BRASS DISC FOUND IN CONCRETE MONUMENT, 48'± RT OF CL STA 94+43±, S.R. 254

B.M. 2 Elev. = 673.79' is GIVEN
Description: (BM "A") CHIS "X" FOUND IN SIGN BASE BOLT, 57'± LT OF CL STA 95+61±, S.R. 254

So-Deep will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

Benchmarks Check BY 0.01'
Elevations are referenced to B.M.#2

Recorded Size/Type of utility: WAS FOUND
There WERE additional utilities in the test hole
The utility WAS in good condition
Paving Thickness and type: NO PAVING
Color of ribbon installed: ORANGE
Soil Type: SANDY BROWN
Truck Location: OUT OF ROADWAY
T.H. tied to: STEEL PIN

* 3/8" CATV CABLE
Size/Material/Type
Portion of pipe exposed for O.D. measurement: FULL

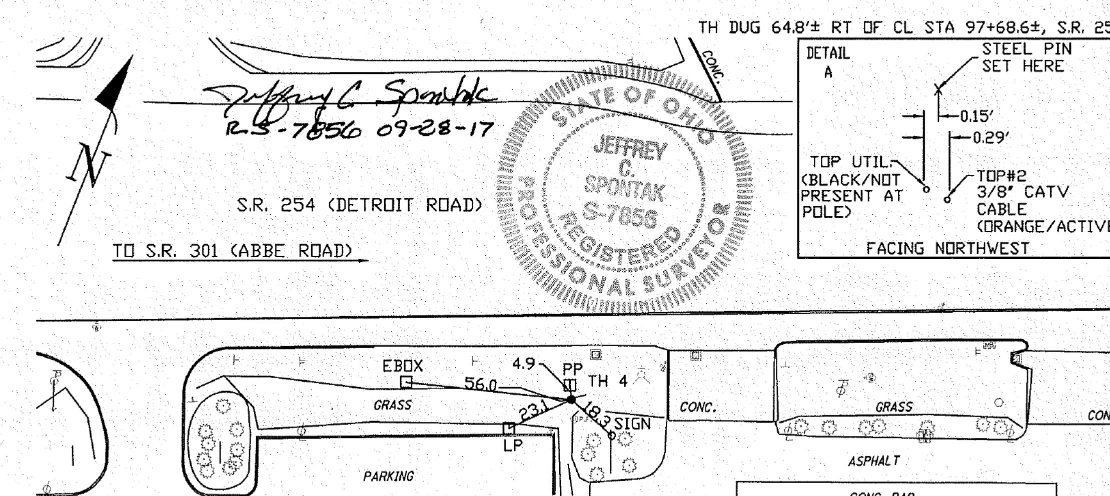
Facing: NORTHWEST

Existing Grade of GRASS R/W
Survey Mark (set by So-Deep): STEEL PIN — Elev. 675.12'
Actual field measurement by ruler (not calculated): 0.27'
Surveyed Elev. Top Util/Struc.: 674.84'
Surveyed Elev. Bott. Util/Struc. (if required)
SEE DETAIL A
Width ±

Remarks: * CREW ALSO FOUND ANOTHER 3/8" CATV CABLE RUNNING ABOVE AND PARALLEL TO ACTIVE 3/8" CATV CABLE AT THIS LOCATION. THE SHALLOWER CATV CABLE IS NOT PRESENT AT UTILTY POLE AND DOES NOT PRODUCE ANY ELECTRONIC INFORMATION.

TOP#2 ELEV. 674.71 ACTUAL 0.39

TH DUG 64.8'± RT OF CL STA 97+68.6±, S.R. 254



FO = Fiber-Optic Cable	CL = Centerline	.08' = 1"	Sewer Manhole
MTD = Multi Tile Duct	T.C. = Tera Cotta	.16' = 2"	Test Hole
R/W = Rights of Way	PLAS. = Plastic	.25' = 3"	Fire Hydrant
N.T.S. = Not to Scale	BL = Base Line	.33' = 4"	Pole
* = Not Shown on Plan	ELEC. = Electric	.42' = 5"	Fence Line
PCC = Precast Concrete	TELE = Telephone	.50' = 6"	Electric Manhole
COND. = Conduit	T.H. = Test Hole	.58' = 7"	= T.S. = Traverse Station
CONC. = Concrete	SW = Sidewalk	.67' = 8"	Valve
O.D. = Outside Diameter	DW = Driveway	.75' = 9"	Water Meter
C.I. = Cast Iron	BM = Benchmark	.83' = 10"	Telephone Manhole
D.I. = Ductile Iron	C.B. = Catch Basin	.92' = 11"	Telephone Pedestal
RPC = Rough Pour Concrete	GV = Gas Valve		

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TEST HOLE LEVEL QUALITY A DATA #3 & #4

LOR-254-2.03

SO-DEEP Inc. A SAM COMPANY

The Subsurface Utility Engineering Company
449 Munroe Falls Road
Tallmadge, OH 44278
(330) 794-4455

Test Hole Certification Form
Utility Quality Level A Data

ASCE C/I 38-02

City, County, State LORAIN COUNTY, OH
Gen. Loc. FRONT OF 5218, S.R. 254 (TACO BELL)
Recorded Size/Material/Type 3 1/2" PLASTIC WINDSTREAM CONDUIT
Foreman/Truck#/Form By B. CHARLOTTE / 222 / M. RUPERT

Condition of paving prior to work: NO PAVING

Control #	EZQF559
Test Hole #	5
Plan Scale	1" = 20'
Sheet #	1 OF 2
Proposed	STORM LINE
Date	SEPTEMBER 19, 201

B.M. 1 Elev. = 674.97' is GIVEN — Description: (SV4) BRASS DISC FOUND IN CONCRETE MONUMENT, 48'± RT OF CL STA 94+43±, S.R. 254

B.M. 2 Elev. = 673.79' is GIVEN — Description: (BM "A") CHIS "X" FOUND IN SIGN BASE BOLT, 57'± LT OF CL STA 95+61±, S.R. 254

So-Deep will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

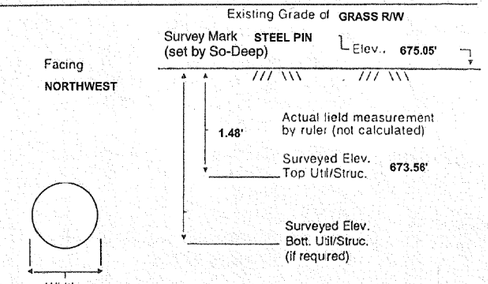
Benchmarks Check BY 0.01'
Elevations are referenced to B.M.#2

Recorded Size/Type of utility WAS FOUND
There WERE NOT additional utilities in the test hole
The utility WAS in good condition
Paving Thickness and type NO PAVING
Color of ribbon installed ORANGE
Soil Type SANDY BROWN
Truck Location OUT OF ROADWAY
T.H. tied to STEEL PIN

3 1/2" PLASTIC WINDSTREAM CABLE
Size/Material/Type
Portion of pipe exposed for O.D. measurement:
FULL

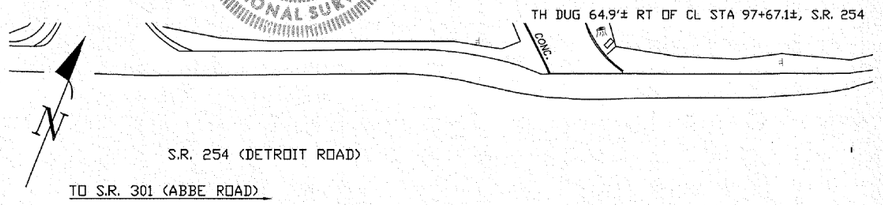
Remarks: NONE

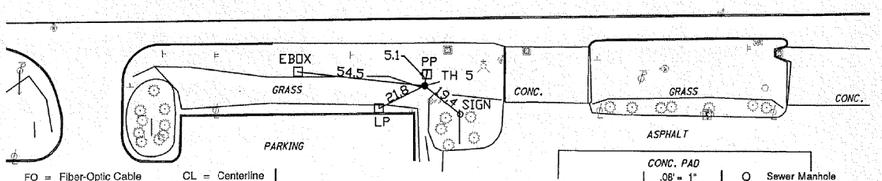
Facing NORTHWEST



PE-7856 09-28-17

STATE OF OHIO JEFFREY C. SPONTAK S-7856 REGISTERED PROFESSIONAL SURVEYOR





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MTD = Multi Tile Duct	T.C. = Tera Cotta	.16' = 2"	Test Hole
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D.I. = Ductile Iron	C.B. = Catch Basin	.92' = 11"	Telephone Pedestal
RPC = Rough Pour Concrete	GV = Gas Valve		

Performing out-of-sight work...with vision!™

Note: To Eliminate mistakes and check this work, So-Deep suggests you scale and plot all dimensions onto the plans and review all elevations carefully. So-Deep is responsible only for information shown on our forms.

SO-DEEP Inc. A SAM COMPANY

The Subsurface Utility Engineering Company
449 Munroe Falls Road
Tallmadge, OH 44278
(330) 794-4455

Test Hole Certification Form
Utility Quality Level A Data

ASCE C/I 38-02

City, County, State LORAIN COUNTY, OH
Gen. Loc. FRONT OF 5210, S.R. 254 (KFC)
Recorded Size/Material/Type 2 1/2" PLASTIC CATV CONDUIT
Foreman/Truck#/Form By B. CHARLOTTE / 222 / M. RUPERT

Condition of paving prior to work: NO PAVING

Control #	EZQF559
Test Hole #	6
Plan Scale	1" = 20'
Sheet #	1 OF 2
Proposed	STORM LINE
Date	SEPTEMBER 20, 201

B.M. 1 Elev. = 674.97' is GIVEN — Description: (SV4) BRASS DISC FOUND IN CONCRETE MONUMENT, 48'± RT OF CL STA 94+43±, S.R. 254

B.M. 2 Elev. = 673.79' is GIVEN — Description: (BM "A") CHIS "X" FOUND IN SIGN BASE BOLT, 57'± LT OF CL STA 95+61±, S.R. 254

So-Deep will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

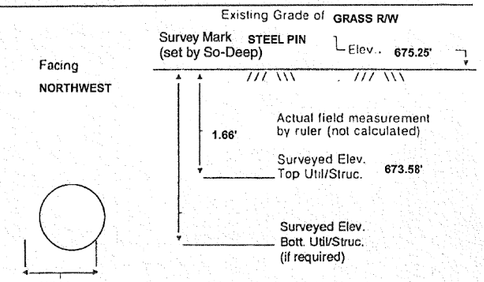
Benchmarks Check BY 0.02'
Elevations are referenced to B.M.#1

Recorded Size/Type of utility WAS FOUND
There WERE NOT additional utilities in the test hole
The utility WAS in good condition
Paving Thickness and type NO PAVING
Color of ribbon installed ORANGE
Soil Type SANDY BROWN
Truck Location OUT OF ROADWAY
T.H. tied to STEEL PIN

2 1/2" PLASTIC CATV CONDUIT
Size/Material/Type
Portion of pipe exposed for O.D. measurement:
FULL

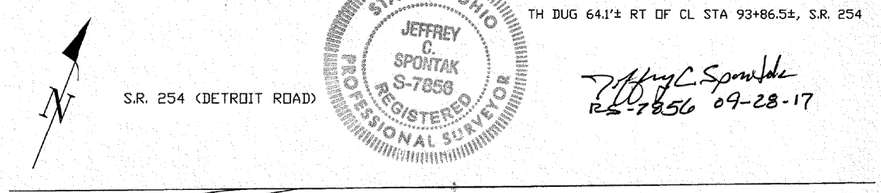
Remarks: NONE

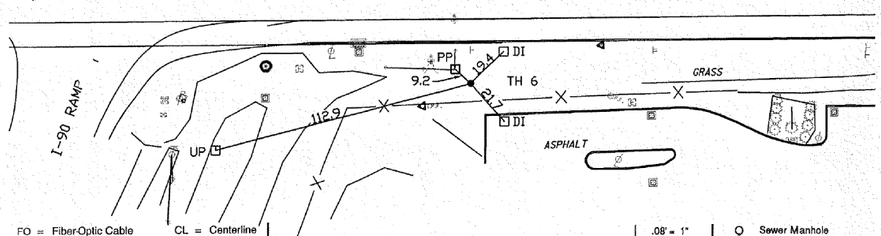
Facing NORTHWEST



STATE OF OHIO JEFFREY C. SPONTAK S-7856 REGISTERED PROFESSIONAL SURVEYOR

PE-7856 09-28-17





FO = Fiber-Optic Cable	CL = Centerline	.08' = 1"	Sewer Manhole
MTD = Multi Tile Duct	T.C. = Tera Cotta	.16' = 2"	Test Hole
R/W = Rights of Way	PLAS. = Plastic	.25' = 3"	Fire Hydrant
N.T.S. = Not to Scale	BL = Base Line	.33' = 4"	Pole
✳ = Not Shown on Plan	ELEC. = Electric	.42' = 5"	Fence Line
PCC = Precast Concrete	TELE = Telephone	.50' = 6"	Electric Manhole
COND. = Conduit	T.H. = Test Hole	.58' = 7"	= T.S. = Traverse Station
CONC. = Concrete	SW = Sidewalk	.67' = 8"	Valve
O.D. = Outside Diameter	DW = Driveway	.75' = 9"	Water Meter
C.I. = Cast Iron	BM = Benchmark	.83' = 10"	Telephone Manhole
D.I. = Ductile Iron	C.B. = Catch Basin	.92' = 11"	Telephone Pedestal
RPC = Rough Pour Concrete	GV = Gas Valve		

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Note: To Eliminate mistakes and check this work, So-Deep suggests you scale and plot all dimensions onto the plans and review all elevations carefully. So-Deep is responsible only for information shown on our forms.

TEST HOLE LEVEL QUALITY A DATA #5 & #6

LOR-254-2.03

SO-DEEP Inc. A SAM COMPANY

The Subsurface Utility Engineering Company
449 Munroe Falls Road
Tallmadge, OH 44278
(330) 794-4455

Test Hole Certification Form
Utility Quality Level A Data

ASCE C/I 38-02

City, County, State **LORAIN COUNTY, OH**
Gen. Loc. **FRONT OF 5210, S.R. 254 (KFC)**
Recorded Size/Material/Type **1 1/4" CATV CABLE**
Foreman/Truck#/Form By **B. CHARLOTTE / 222 / M. RUPERT**

Condition of paving prior to work **NO PAVING**

Control #	EZQF559
Test Hole #	7
Plan Scale	1" = 20'
Sheet #	1 OF 2
Proposed	STORM LINE
Date	SEPTEMBER 20, 201

B.M. 1 Elev. = **674.97'** is **GIVEN**
Description: **(SV4) BRASS DISC FOUND IN CONCRETE MONUMENT, 48'± RT OF CL STA 94+43±, S.R. 254**

B.M. 2 Elev. = **673.79'** is **GIVEN**
Description: **(BM "A") CHIS "X" FOUND IN SIGN BASE BOLT, 57'± LT OF CL STA 95+61±, S.R. 254**

So-Deep will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

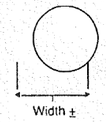
Benchmarks Check **BY 0.02'**
Elevations are referenced to **B.M.#1**

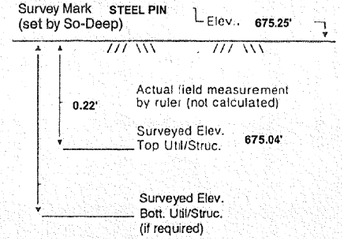
Recorded Size/Type of utility **WAS FOUND**
There **WERE NOT** additional utilities in the test hole
The utility **WAS** in good condition
Paving Thickness and type **NO PAVING**
Color of ribbon installed **ORANGE**
Soil Type **SANDY BROWN**
Truck Location **OUT OF ROADWAY**
T.H. tied to **STEEL PIN**

1 1/4" CATV CABLE
Size/Material/Type
Portion of pipe exposed for O.D. measurement:
FULL

Remarks: NONE

Facing **NORTHWEST**

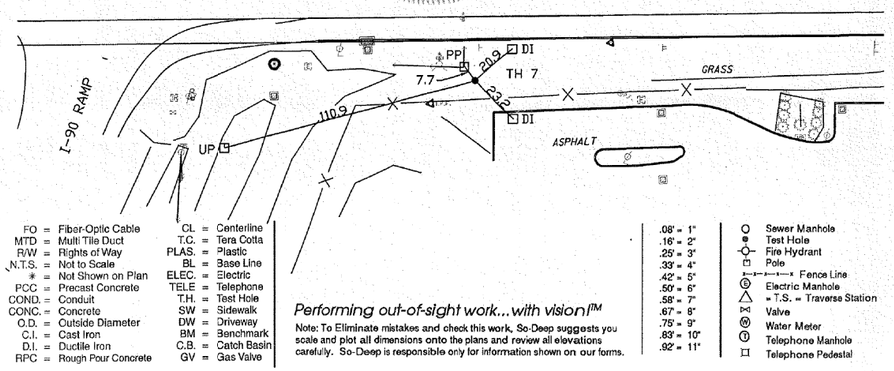




TH DUG 64.0'± RT OF CL STA 93+84.4±, S.R. 254

STATE OF OHIO JEFFREY C. SPONTAK S-7856 REGISTERED PROFESSIONAL SURVEYOR

RS-7856 09-28-17



FO =	Fiber-Optic Cable	CL =	Centerline	.08' = 1"	Sewer Manhole
MTD =	Multi Tile Duct	T.C. =	Tera Cotta	.16' = 2"	Test Hole
R/W =	Rights of Way	PLAS. =	Plastic	.25' = 3"	Fire Hydrant
N.T.S. =	Not to Scale	BL =	Base Line	.33' = 4"	Pole
* =	Not Shown on Plan	ELEC. =	Electric	.42' = 5"	Fence Line
PCC =	Precast Concrete	TELE =	Telephone	.50' = 6"	Electric Manhole
COND. =	Conduit	T.H. =	Test Hole	.58' = 7"	= T.S. = Traverse Station
CONC. =	Concrete	SW =	Sidewalk	.67' = 8"	Valve
O.D. =	Outside Diameter	DW =	Driveway	.75' = 9"	Water Meter
C.I. =	Cast Iron	BM =	Benchmark	.83' = 10"	Telephone Manhole
D.I. =	Ductile Iron	C.B. =	Catch Basin	.92' = 11'	Telephone Pedestal
RPC =	Rough Pour Concrete	GV =	Gas Valve		

Performing out-of-sight work...with vision!™

Note: To Eliminate mistakes and check this work, So-Deep suggests you scale and plot all dimensions onto the plans and review all elevations carefully. So-Deep is responsible only for information shown on our forms.

SO-DEEP Inc. A SAM COMPANY

The Subsurface Utility Engineering Company
449 Munroe Falls Road
Tallmadge, OH 44278
(330) 794-4455

Test Hole Certification Form
Utility Quality Level A Data

ASCE C/I 38-02

City, County, State **LORAIN COUNTY, OH**
Gen. Loc. **FRONT OF 5210, S.R. 254 (KFC)**
Recorded Size/Material/Type **1 1/2" PLASTIC ELECTRIC CONDUIT**
Foreman/Truck#/Form By **B. CHARLOTTE / 222 / M. RUPERT**

Condition of paving prior to work **NO PAVING**

Control #	EZQF559
Test Hole #	8
Plan Scale	1" = 20'
Sheet #	1 OF 2
Proposed	STORM LINE
Date	SEPTEMBER 20, 201

B.M. 1 Elev. = **674.97'** is **GIVEN**
Description: **(SV4) BRASS DISC FOUND IN CONCRETE MONUMENT, 48'± RT OF CL STA 94+43±, S.R. 254**

B.M. 2 Elev. = **673.79'** is **GIVEN**
Description: **(BM "A") CHIS "X" FOUND IN SIGN BASE BOLT, 57'± LT OF CL STA 95+61±, S.R. 254**

So-Deep will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

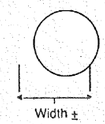
Benchmarks Check **BY 0.02'**
Elevations are referenced to **B.M.#1**

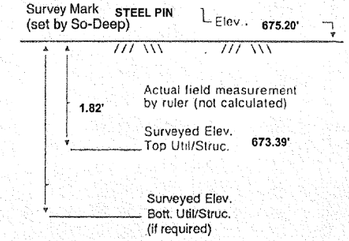
Recorded Size/Type of utility **WAS FOUND**
There **WERE NOT** additional utilities in the test hole
The utility **WAS** in good condition
Paving Thickness and type **NO PAVING**
Color of ribbon installed **RED**
Soil Type **SANDY BROWN**
Truck Location **OUT OF ROADWAY**
T.H. tied to **STEEL PIN**

1 1/2" PLASTIC ELECTRIC CONDUIT
Size/Material/Type
Portion of pipe exposed for O.D. measurement:
FULL

Remarks: THIS LINE COMES OFF OF A TRANSFORMER AND IS NOT A PRIMARY.

Facing **NORTHWEST**

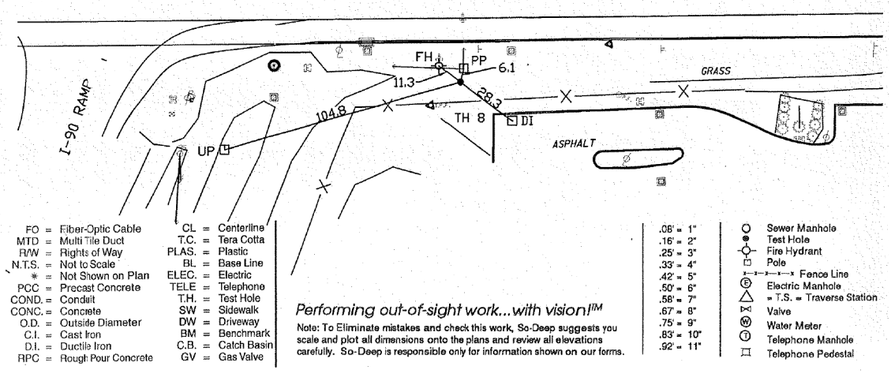




TH DUG 63.7'± RT OF CL STA 93+78.0±, S.R. 254

STATE OF OHIO JEFFREY C. SPONTAK S-7856 REGISTERED PROFESSIONAL SURVEYOR

RS-7856 09-28-17



FO =	Fiber-Optic Cable	CL =	Centerline	.08' = 1"	Sewer Manhole
MTD =	Multi Tile Duct	T.C. =	Tera Cotta	.16' = 2"	Test Hole
R/W =	Rights of Way	PLAS. =	Plastic	.25' = 3"	Fire Hydrant
N.T.S. =	Not to Scale	BL =	Base Line	.33' = 4"	Pole
* =	Not Shown on Plan	ELEC. =	Electric	.42' = 5"	Fence Line
PCC =	Precast Concrete	TELE =	Telephone	.50' = 6"	Electric Manhole
COND. =	Conduit	T.H. =	Test Hole	.58' = 7"	= T.S. = Traverse Station
CONC. =	Concrete	SW =	Sidewalk	.67' = 8"	Valve
O.D. =	Outside Diameter	DW =	Driveway	.75' = 9"	Water Meter
C.I. =	Cast Iron	BM =	Benchmark	.83' = 10"	Telephone Manhole
D.I. =	Ductile Iron	C.B. =	Catch Basin	.92' = 11'	Telephone Pedestal
RPC =	Rough Pour Concrete	GV =	Gas Valve		

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TEST HOLE LEVEL QUALITY A DATA #7 & #8

LOR-254-2.03

SO-DEEP INC. A SAM COMPANY
The Subsurface Utility Engineering Company
449 Munroe Falls Road
Tallmadge, OH 44278
(330) 794-4455

Test Hole Certification Form
Utility Quality Level A Data

ASCE C/I 38-02

Control # EZQF559
Test Hole # 9
Plan Scale 1" = 20'
Sheet # 1 OF 2
Proposed STORM LINE
Date SEPTEMBER 20, 2017

City, County, State LORAIN COUNTY, OH
Gen. Loc. FRONT OF 5210, S.R. 254 (KFC)
Recorded Size/Material/Type 1" WINDSTREAM CABLE
Foreman/Truck#/Form By B. CHARLOTTE / 222 / M. RUPERT

Condition of paving prior to work
NO PAVING

B.M. 1 Elev. = 674.97' is GIVEN
Description: (SV4) BRASS DISC FOUND IN CONCRETE MONUMENT, 48'± RT OF CL STA 94+43±, S.R. 254

B.M. 2 Elev. = 673.79' is GIVEN
Description: (BM "A") CHIS "X" FOUND IN SIGN BASE BOLT, 57'± LT OF CL STA 95+61±, S.R. 254

Benchmarks Check BY 0.02'
Elevations are referenced to B.M.#1

So-Deep will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

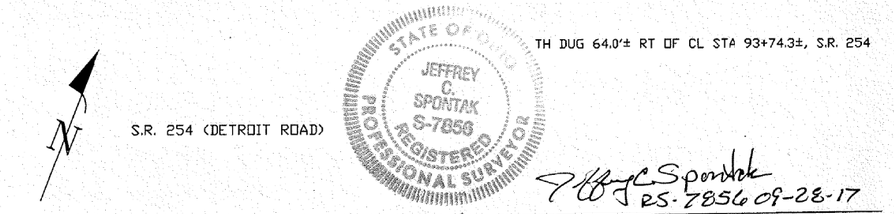
Recorded Size/Type of utility WAS FOUND
There WERE NOT additional utilities in the test hole
The utility WAS in good condition
Paving Thickness and type NO PAVING
Color of ribbon installed ORANGE
Soil Type SANDY BROWN
Truck Location OUT OF ROADWAY
T.H. tied to STEEL PIN

* 4 1/2" PLASTIC WINDSTREAM CONDUIT
Size/Material/Type
Portion of pipe exposed for O.D. measurement:
FULL

Remarks: * CREW FOUND THE 1" WINDSTREAM CABLE IN CONDUIT AT THIS LOCATION.

Facing NORTHWEST

Existing Grade of GRASS R/W
Survey Mark STEEL PIN (set by So-Deep) Elev. 675.40'
2.85'
Actual field measurement by ruler (not calculated)
Surveyed Elev. Top Util/Struc. 672.57'
Surveyed Elev. Bott. Util/Struc. (if required)
Width ±



FO = Fiber-Optic Cable
MTD = Multi Tile Duct
R/W = Rights of Way
N.T.S. = Not to Scale
* = Not Shown on Plan
PCC = Precast Concrete
COND. = Conduit
CONC. = Concrete
O.D. = Outside Diameter
C.I. = Cast Iron
D.I. = Ductile Iron
RPC = Rough Pour Concrete

CL = Centerline
T.C. = Tera Cotta
PLAS. = Plastic
BL = Base Line
ELEC. = Electric
TELE = Telephone
T.H. = Test Hole
SW = Sidewalk
DW = Driveway
BM = Benchmark
C.B. = Catch Basin
GV = Gas Valve

.08' = 1"
.16' = 2"
.25' = 3"
.33' = 4"
.42' = 5"
.50' = 6"
.58' = 7"
.67' = 8"
.75' = 9"
.83' = 10"
.92' = 11"

Sewer Manhole
Test Hole
Fire Hydrant
Pole
Fence Line
Electric Manhole
= T.S. = Traverse Station
Valve
Water Meter
Telephone Manhole
Telephone Pedestal

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SAM®
SAM, LLC
8397 Euclid Avenue
Manassas Park, VA 20111
703.361.6005 www.sam.biz

Test Hole Certification Form
Utility Quality Level A Data

ASCE C/I 38-02

Control # EZQF559
Test Hole # 10
Plan Scale 1" = 20'
Sheet # 2 OF 2
Proposed STORM LINE
Date AUGUST 22, 2018

City, County, State LORAIN COUNTY, OH
Gen. Loc. FRONT OF 5250, SR 254 (MCDONALDS)
Recorded Size/Material/Type UNKNOWN SIZE & TYPE WATER SERVICE LINE
Foreman/Truck#/Form By P. REYNOLDS / 222 / T. WHITE

Condition of paving prior to work
NO PAVING

B.M. 1 Elev. = 674.97' is GIVEN
Description: (SV4) BRASS DISC FOUND IN CONCRETE MONUMENT, 48'± RT OF CL STA 94+43±, S.R. 254

B.M. 2 Elev. = 673.79' is GIVEN
Description: (BM "A") CHIS "X" FOUND IN SIGN BASE BOLT, 57'± LT OF CL STA 95+61±, S.R. 254

Benchmarks Check BY 0.01'
Elevations are referenced to B.M.#1

SAM will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

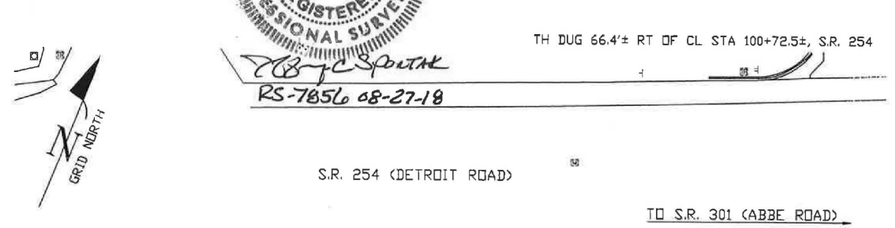
Recorded Size/Type of utility WAS FOUND
There WERE NOT additional utilities in the test hole
The utility WAS in good condition
Paving Thickness and type NO PAVING
Color of ribbon installed BLUE
Soil Type DIRT & SAND
Truck Location ASPHALT PARKING LOT
T.H. tied to HUB

2" COPPER WATER SERVICE LINE
Size/Material/Type
Portion of pipe exposed for O.D. measurement:
FULL

Remarks: NONE

Facing NORTH

Existing Grade of GRASS R/W
Survey Mark HUB (set by SAM) Elev. 676.36'
6.00'
Actual field measurement by ruler (not calculated)
Surveyed Elev. Top Util/Struc. 670.35'
Surveyed Elev. Bott. Util/Struc. (if required)
Width ±



FO = Fiber-Optic Cable
MTD = Multi Tile Duct
R/W = Rights of Way
N.T.S. = Not to Scale
* = Not Shown on Plan
PCC = Precast Concrete
COND. = Conduit
CONC. = Concrete
O.D. = Outside Diameter
C.I. = Cast Iron
D.I. = Ductile Iron
RPC = Rough Pour Concrete

CL = Centerline
T.C. = Tera Cotta
PLAS. = Plastic
BL = Base Line
ELEC. = Electric
TELE = Telephone
T.H. = Test Hole
SW = Sidewalk
DW = Driveway
BM = Benchmark
C.B. = Catch Basin
GV = Gas Valve

.08' = 1"
.16' = 2"
.25' = 3"
.33' = 4"
.42' = 5"
.50' = 6"
.58' = 7"
.67' = 8"
.75' = 9"
.83' = 10"
.92' = 11"

Sewer Manhole
Test Hole
Fire Hydrant
Pole
Fence Line
Electric Manhole
= T.S. = Traverse Station
Valve
Water Meter
Telephone Manhole
Telephone Pedestal

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TEST HOLE LEVEL QUALITY A DATA #9 & #10

LOR-254-2.03

Test Hole Certification Form
Utility Quality Level A Data

ASCE C/I 38-02

SAM, LLC
8397 Euclid Avenue
Manassas Park, VA 20111
703.361.6005 www.sam.biz

Control #	EZQF559
Test Hole #	11
Plan Scale	1" = 20'
Sheet #	2 OF 2
Proposed	STORM LINE
Date	AUGUST 22, 2018

City, County, State: LORAIN COUNTY, OH
Gen. Loc.: FRONT OF 5250, SR 254 (MCDONALDS)
Recorded Size/Material/Type: UNKNOWN SIZE & TYPE GAS SERVICE LINE
Foreman/Truck#/Form By: P. REYNOLDS / 222 / T. WHITE

Condition of paving prior to work: NO PAVING

B.M. 1 Elev. = 674.97' is GIVEN — Description: (SV4) BRASS DISC FOUND IN CONCRETE MONUMENT, 48'± RT OF CL STA 94+43±, S.R. 254

B.M. 2 Elev. = 673.79' is GIVEN — Description: (BM "A") CHIS "X" FOUND IN SIGN BASE BOLT, 57'± LT OF CL STA 95+61±, S.R. 254

Benchmarks Check BY 0.01'
Elevations are referenced to B.M.#1

SAM will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

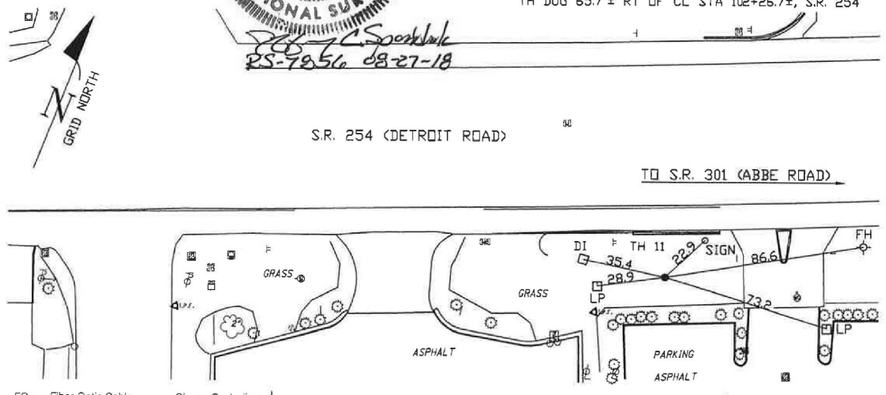
Recorded Size/Type of utility: WAS FOUND
There WERE NOT additional utilities in the test hole
The utility WAS in good condition
Paving Thickness and type: NO PAVING
Color of ribbon installed: YELLOW
Soil Type: DIRT & SAND
Truck Location: ASPHALT PARKING LOT
T.H. tied to: HUB
1 1/2" PLASTIC GAS SERVICE LINE
Size/Material/Type
Portion of pipe exposed for O.D. measurement: FULL
Remarks: NONE

Facing: NORTH

Existing Grade of GRASS R/W
Survey Mark (set by SAM): HUB — Elev. 676.94'
1.77' — Actual field measurement by ruler (not calculated)
Surveyed Elev. Top Util/Struc. 675.16'
Surveyed Elev. Bott. Util/Struc. (if required)
Width ±

STATE OF OHIO — JEFFREY C. SPONTAK — S-7856 — REGISTERED PROFESSIONAL SURVEYOR
RS-7856 08-27-18

TH DUG 65.7'± RT OF CL STA 102+26.7±, S.R. 254



FO = Fiber-Optic Cable
MTD = Multi Tile Duct
R/W = Rights of Way
N.T.S. = Not to Scale
* = Not Shown on Plan
PCC = Precast Concrete
COND. = Conduit
CONC. = Concrete
O.D. = Outside Diameter
C.I. = Cast Iron
D.I. = Ductile Iron
RPC = Rough Pour Concrete

CL = Centerline
T.C. = Tera Cotta
PLAS. = Plastic
BL = Base Line
ELEC. = Electric
TELE = Telephone
T.H. = Test Hole
SW = Sidewalk
DW = Driveway
BM = Benchmark
C.B. = Catch Basin
GV = Gas Valve

.08" = 1"
.16" = 2"
.25" = 3"
.33" = 4"
.42" = 5"
.50" = 6"
.58" = 7"
.67" = 8"
.75" = 9"
.83" = 10"
.92" = 11"

Sewer Manhole
Test Hole
Fire Hydrant
Pole
Fence Line
Electric Manhole
T.S. = Traverse Station
Valve
Water Meter
Telephone Manhole
Telephone Pedestal

Performing out-of-sight work...with vision!™

Note: To Eliminate mistakes and check this work, SAM suggests you scale and plot all dimensions onto the plans and review all elevations carefully. SAM is responsible only for information shown on our forms.

Test Hole Certification Form
Utility Quality Level A Data

ASCE C/I 38-02

SAM, LLC
8397 Euclid Avenue
Manassas Park, VA 20111
703.361.6005 www.sam.biz

Control #	EZQF559
Test Hole #	12
Plan Scale	1" = 20'
Sheet #	2 OF 2
Proposed	STORM LINE
Date	AUGUST 22, 2018

City, County, State: LORAIN COUNTY, OH
Gen. Loc.: FRONT OF 5250, SR 254 (MCDONALDS)
Recorded Size/Material/Type: UNKNOWN SIZE & TYPE GAS SERVICE LINE
Foreman/Truck#/Form By: P. REYNOLDS / 222 / T. WHITE

Condition of paving prior to work: NO PAVING

B.M. 1 Elev. = 674.97' is GIVEN — Description: (SV4) BRASS DISC FOUND IN CONCRETE MONUMENT, 48'± RT OF CL STA 94+43±, S.R. 254

B.M. 2 Elev. = 673.79' is GIVEN — Description: (BM "A") CHIS "X" FOUND IN SIGN BASE BOLT, 57'± LT OF CL STA 95+61±, S.R. 254

Benchmarks Check BY 0.01'
Elevations are referenced to B.M.#1

SAM will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

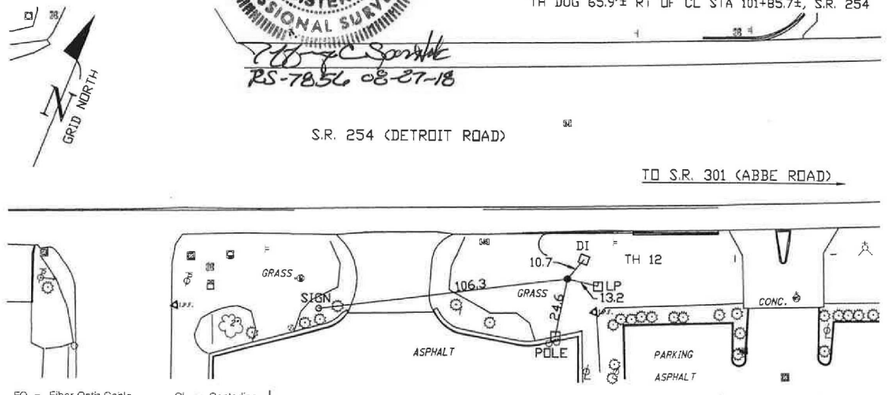
Recorded Size/Type of utility: WAS FOUND
There WERE NOT additional utilities in the test hole
The utility WAS in good condition
Paving Thickness and type: NO PAVING
Color of ribbon installed: YELLOW
Soil Type: DIRT & SAND
Truck Location: ASPHALT PARKING LOT
T.H. tied to: HUB
1 1/2" PLASTIC GAS SERVICE LINE
Size/Material/Type
Portion of pipe exposed for O.D. measurement: FULL
Remarks: NONE

Facing: NORTH

Existing Grade of GRASS R/W
Survey Mark (set by SAM): HUB — Elev. 676.41'
1.09' — Actual field measurement by ruler (not calculated)
Surveyed Elev. Top Util/Struc. 675.34'
Surveyed Elev. Bott. Util/Struc. (if required)
Width ±

STATE OF OHIO — JEFFREY C. SPONTAK — S-7856 — REGISTERED PROFESSIONAL SURVEYOR
RS-7856 08-27-18

TH DUG 65.9'± RT OF CL STA 101+85.7±, S.R. 254



FO = Fiber-Optic Cable
MTD = Multi Tile Duct
R/W = Rights of Way
N.T.S. = Not to Scale
* = Not Shown on Plan
PCC = Precast Concrete
COND. = Conduit
CONC. = Concrete
O.D. = Outside Diameter
C.I. = Cast Iron
D.I. = Ductile Iron
RPC = Rough Pour Concrete

CL = Centerline
T.C. = Tera Cotta
PLAS. = Plastic
BL = Base Line
ELEC. = Electric
TELE = Telephone
T.H. = Test Hole
SW = Sidewalk
DW = Driveway
BM = Benchmark
C.B. = Catch Basin
GV = Gas Valve

.08" = 1"
.16" = 2"
.25" = 3"
.33" = 4"
.42" = 5"
.50" = 6"
.58" = 7"
.67" = 8"
.75" = 9"
.83" = 10"
.92" = 11"

Sewer Manhole
Test Hole
Fire Hydrant
Pole
Fence Line
Electric Manhole
T.S. = Traverse Station
Valve
Water Meter
Telephone Manhole
Telephone Pedestal

Performing out-of-sight work...with vision!™

Note: To Eliminate mistakes and check this work, SAM suggests you scale and plot all dimensions onto the plans and review all elevations carefully. SAM is responsible only for information shown on our forms.

TEST HOLE LEVEL QUALITY A DATA #11 & #12

LOR-254-2.03

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