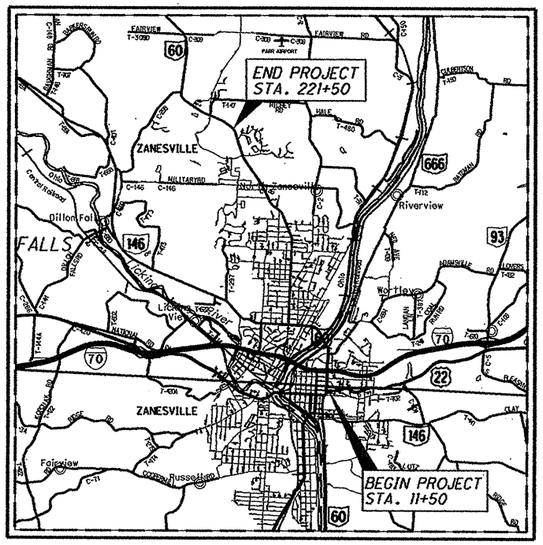


LOCATION MAP

LATITUDE: 39°57'31" N LONGITUDE: 82°00'36" W

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE HIGHWAY

STATE & FEDERAL ROUTES

COUNTY & TOWNSHIP ROADS

OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2009)	27,000
DESIGN YEAR ADT (2021)	30,100
DESIGN HOURLY VOLUME (2021)	2,709
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	11%
DESIGN SPEED	35 MPH
LEGAL SPEED	35 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
URBAN PRINCIPAL ARTERIAL

NHS PROJECT NO

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: **1-800-925-0988**

PLAN PREPARED BY:

Ohio Department of Transportation
Dist. 5

11/19/08
M060_GTS_001.DGN

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MUS-60-16.75

CITY OF ZANESVILLE
MUSKINGUM COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION

SAFETY PROJECT INCLUDING NUMEROUS SIGNAL UPGRADES, SIGNING UPGRADES AND ACCESS MANAGEMENT ALONG THE S.R. 60 CORRIDOR THROUGH THE CITY OF ZANESVILLE FROM MARKET ST. TO KAY DRIVE.

PROJECT EARTH DISTURBED AREA: 0.44 ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA: 0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: NA

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2008 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT. IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

FEDERAL PROJECT NO. E070 (826)
PID NO. 82752
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
MUS-60-16.75
1/165

ENGINEERS SEAL:

STATE OF OHIO
DOUGLAS N. MORGAN
E-63839
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Douglas N. Morgan
DATE: 12/19/2008

STANDARD CONSTRUCTION DRAWINGS

BP-5.1	7/28/00	TC-17.10	1/19/07	TC-85.10	4/19/02		
BP-7.1	1/19/07	TC-21.20	1/19/07	TC-85.20	5/1/00		
BP-7.2	1/19/07	TC-22.10	1/19/01				
		TC-41.20	1/19/01				
RM-3.1	4/18/03	TC-41.30	1/19/07				
		TC-41.40	7/16/04				
MT-35.10	4/20/01	TC-41.41	1/19/01				
MT-95.31	9/5/06	TC-41.50	1/19/07				
MT-95.32	9/5/06	TC-42.20	7/16/04				
MT-95.60	4/19/02	TC-71.10	1/19/07				
MT-105.10	10/18/02	TC-81.10	5/1/00				
MT-105.11	10/18/02	TC-82.10	4/19/02				
		TC-83.10	1/19/07				
		TC-83.20	1/19/07				
		TC-84.20	1/19/07				
		TC-84.21	1/19/07				

SUPPLEMENTAL SPECIFICATIONS

800	1/16/09
832	4/25/06

SPECIAL PROVISIONS

SS 832	
	05/20/08

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.

APPROVED Douglas N. Morgan
DATE 12-19-08 PUBLIC SERVICE DIRECTOR, CITY OF ZANESVILLE

APPROVED Gilbert H. Tiberi
DATE 12-17-08 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

BEGIN WORK
STA. 11+50.00

FED. NO. E070 (826)

BEGIN PROJECT
STA. 11+50.00
S.L.M. 16.75

PI Sta. 11+25.66

MARKET ST.

PC Sta. 12+67.32

HIGGINBOTHAM BROS., INC.

ALLEY

MUSKINGUM COUNTY CHILD SUPPORT ENFORCEMENT AGENCY

PT Sta. 15+22.13

ORCHARD ST.

SHINNICK ST.

CITY OF ZANESVILLE

ALLEY

CITY OF ZANESVILLE

ELBERON AVE.

STRUCTURE NO.
MUS-70-1209

I.R. 70 E.B. LANES

I.R. 70 W.B. LANES

ELM ST.

11 12 13 14 15 16 17 18 19 20 21 22 23 24

3° 02′ 46″ E

N 7° 03′ 50″ E

N 1° 19′ 50″ E

N

MATCH LINE STA. 24+50

CURVE DATA
P.I.= Sta. 13+94.83
D = 5° 44′ 00″ (LT)
Dc = 2° 15′ 00″
R = 2,546.48′
T = 127.51′
L = 254.81′
E = 3.19′
emax = 0.000
C = 254.71′
C.B. = N 4° 11′ 50″ E

℄ CONSTRUCTION & SURVEY
S.R. 60 (UNDERWOOD ST.)

MARKET ST.

ORCHARD ST.

EASTMAN ST.

EXXON

WENDYS

I.R. 70 E.B. ON RAMP

I.R. 70 E.B. LANES

I.R. 70 W.B. LANES

I.R. 70 W.B. OFF RAMP

MATCH LINE STA. 24+50

RED LOBSTER

LARRIMER AND LARRIMER ATTY'S.

HOWARD ST.

ROBERTSON HEATING SUPPLY

PC Sta. 34+57.52

ZANE ST.

CURVE DATA
P.I.= Sta. 37+20.96
D = 35° 40′ 53″ (LT)
Dc = 7° 00′ 00″
R = 818.51′
T = 263.44′
L = 509.73′
E = 41.35′
emax = 0.000
C = 501.54′
C.B. = N 11° 02′ 08″ W

MATCH LINE STA. 24+50

25 26 27 28 29 30 31 32 33 34 35 36 37 38

N 1° 19′ 50″ E

N 6° 48′ 19″ E

PC Sta. 25+13.10

CURVE DATA
P.I.= Sta. 26+95.73
D = 5° 28′ 29″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 182.63′
L = 364.98′
E = 4.36′
emax = 0.000
C = 364.84′
C.B. = N 4° 04′ 04″ E

HOWARD ST.

PT Sta. 28+78.08

BOB EVANS

OLIVE GARDEN

℄ CONSTRUCTION & SURVEY
S.R. 60 (UNDERWOOD ST.)

TUMBLEWEED

ZANE ST.

MATCH LINE STA. 38+50

0 25 50 100
HORIZONTAL SCALE IN FEET

SCHEMATIC PLAN

MUS-60-16.75

2
165

82752_gsp_001.dgn 12/05/2008

MUSKINGUM RIVER

OHIO CENTRAL R.R.

STRUCTURE NO. MUS-60-1728

PT Sta. 39+67.26

MATCH LINE STA. 38+50

39 40 41 42 43 44 45 46 47 48 49 50 51 52

N 28° 52' 34" W

PC Sta. 50+92.12

MATCH LINE STA. 52+50

℄ CONSTRUCTION & SURVEY
S.R. 60 (UNDERWOOD ST.)

MUSKINGUM RIVER

OHIO CENTRAL R.R.

HORIZONTAL SCALE IN FEET
0 25 50 100

SCHEMATIC PLAN

MUS-60-16.75

MATCH LINE STA. 52+50

CURVE DATA
P.I. = Sta. 55+46.29
D = 58° 02' 58" (LT)
Dc = 7° 00' 00"
R = 818.51'
T = 454.17'
L = 829.28'
E = 117.56'
emax = 0.000
C = 794.26'
C.B. = N 57° 54' 03" W

53 54 55 56 57 58 59 60 61 62 63 64 65 66

℄ CONSTRUCTION & SURVEY
S.R. 60 (UNDERWOOD ST.)

CENTRAL AVE.

PT Sta. 59+21.40

℄ CONSTRUCTION & SURVEY
S.R. 60 (ADAIR AVE.)

ALLEY

LINDEN AVE.

N 28° 15' 41" E

STA. 61+72.61, S.R. 60 =
STA. 10+00.00, LINDEN AVE.

PETERS ST.

MATCH LINE STA. 66+50

CENTRAL AVE.

HARMON AUTO GLASS

ALLEY

LINDEN AVE.

ALLEY

THE HAIRITAGE

BLUFF ST.

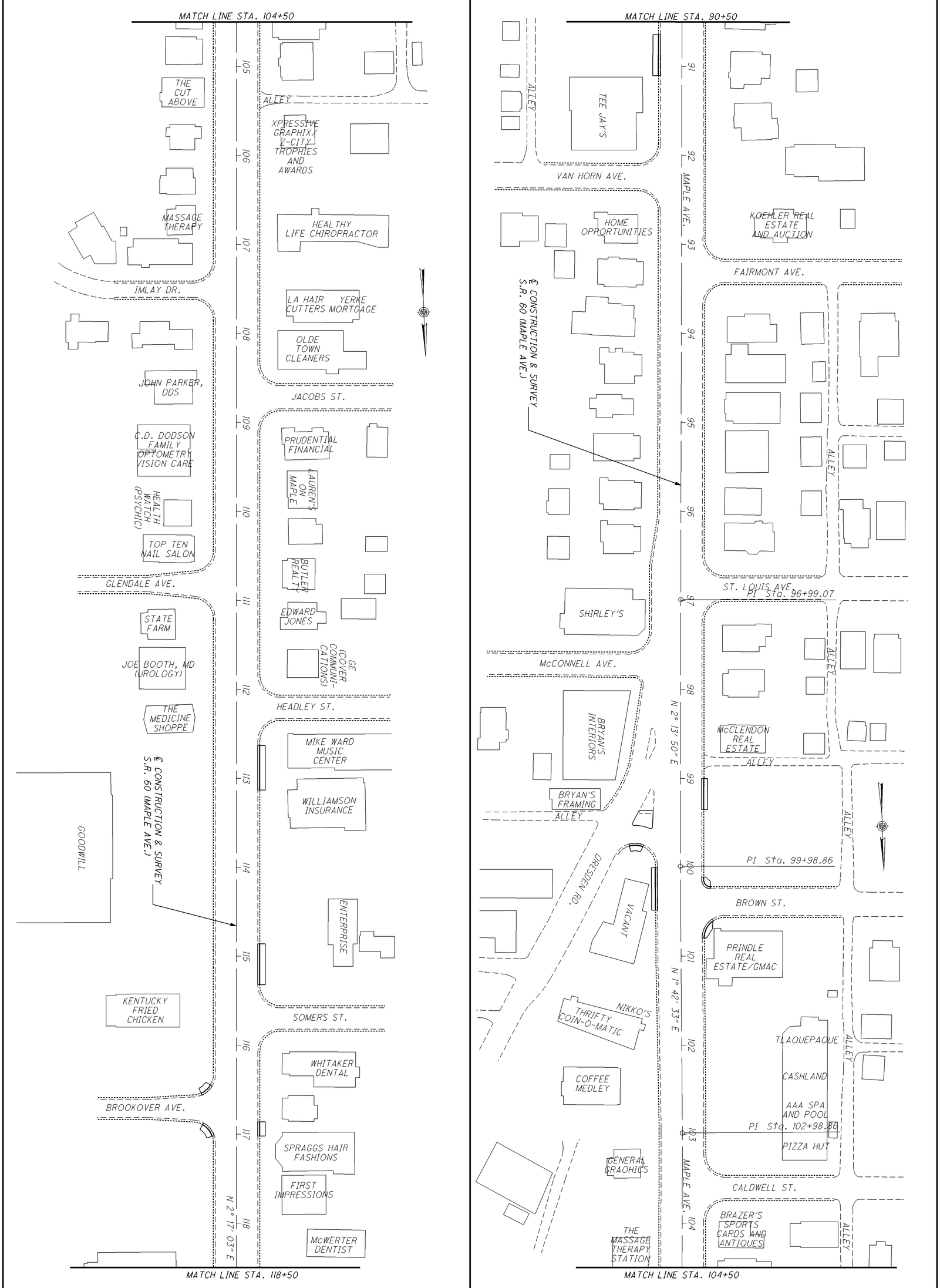
82752_gsp_002.dgn 12/05/2008

82752_gsp_003.dgn 12/08/2008

HORIZONTAL SCALE IN FEET
0 25 50 100

SCHEMATIC PLAN

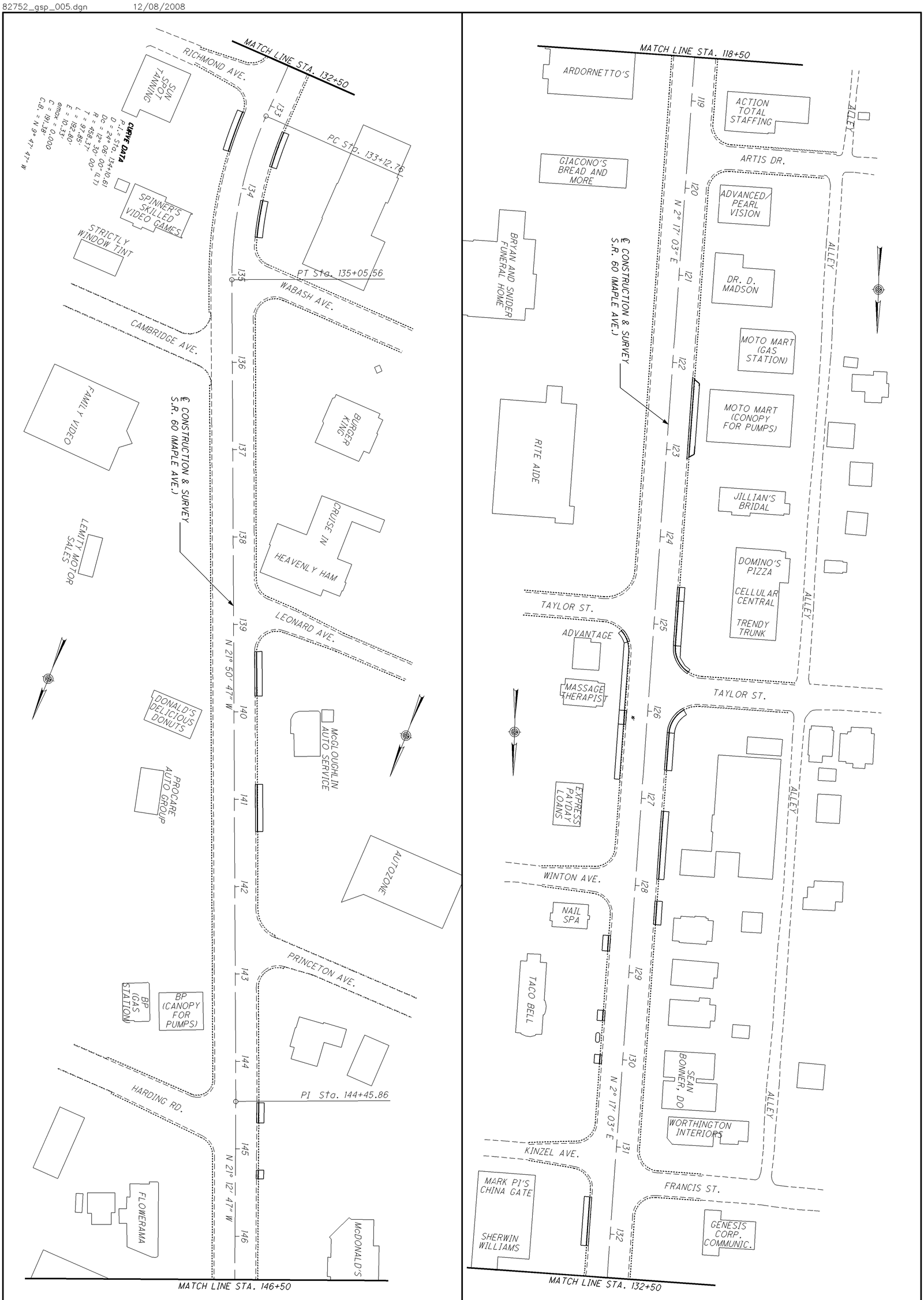
MUS-60-16.75



MUS-60-16.75

SCHEMATIC PLAN

0 50
25 100
HORIZONTAL SCALE IN FEET



MUS-60-16.75

SCHEMATIC PLAN

0 50 25 100
HORIZONTAL SCALE IN FEET

MATCH LINE STA. 146+50

147

148

N 21° 12' 47" W

149

150

151

152

153

154

155

156

157

158

N 52° 42' 47" W

159

160

MATCH LINE STA. 161+00

PC Sta. 151+43.04

PT Sta. 155+18.04

℄ CONSTRUCTION & SURVEY
S.R. 60 (MAPLE AVE.)

CURVE DATA
P.I.= Sta. 153+35.41
D = 31° 30' 00" (LT)
Dc = 8° 24' 00"
R = 682.09'
T = 192.37'
L = 375.00'
E = 26.61'
emax = 0.000
C = 370.29'
C.B. = N 36° 57' 47" W

HUNTINGTON BANK

MEDICAL OFFICES

BELL ST.

BETHESDA DRIVE

BETHESDA DRIVE

BALDERSON MOTOR SALES

AMERICAN GENERAL

COMMERCIAL ELECTRIC

CAPTAIN D's RESTAURANT

WALMART ENTRANCE

MAPLE BELL CAR WASH

BALLS LANE

NATIONAL CITY BANK

ROD SMITH INSURANCE CO.

BETHESDA DRIVE

ALLEY

COUNTRY CLUB DR.

C AND K MUFFLER

PI Sta. 171+65.37

SOCIAL SECURITY ADMINISTRATION

BEVERLY AVE.

WENDY'S

MATCH LINE STA. 161+00

PC Sta. 161+06.39

PT Sta. 164+40.14

162

163

164

165

166

167

168

169

170

171

172

173

174

N 26° 00' 47" W

MATCH LINE STA. 174+50

℄ CONSTRUCTION & SURVEY
S.R. 60 (MAPLE AVE.)

CURVE DATA
P.I.= Sta. 162+76.35
D = 26° 42' 00" (RT)
Dc = 8° 00' 00"
R = 716.20'
T = 169.96'
L = 333.75'
E = 19.89'
emax = 0.000
C = 330.74'
C.B. = N 39° 21' 47" W

LAW OFFICE/ CHIROPRACTOR

JAMES RD.

BOB EVANS

JIFFY LUBE

RALLY'S

GO KLEEN CARWASH AND DRYCLEANERS

JOHNS CHINESE BUFFET

WHITE CASTLE

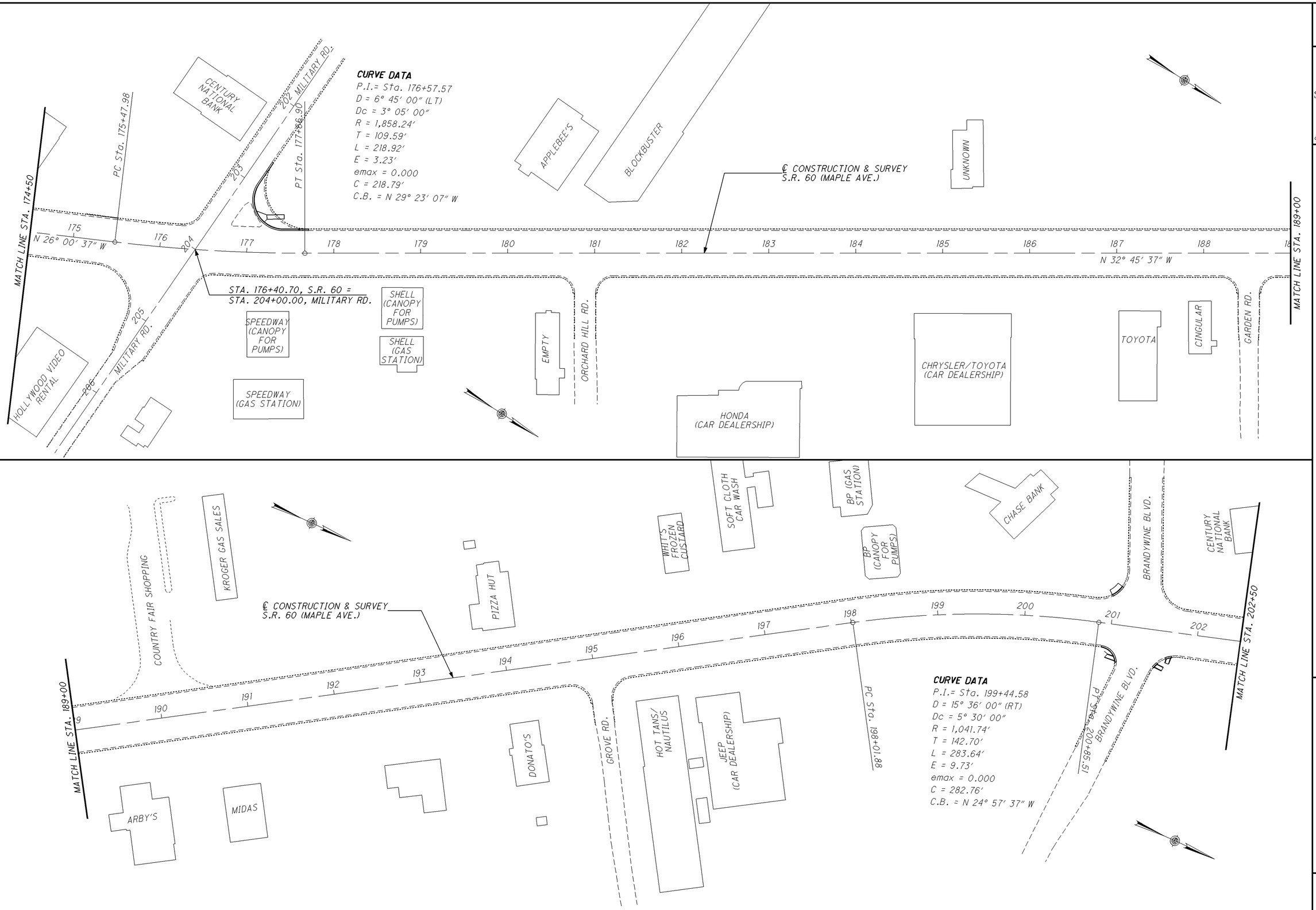
HORIZONTAL SCALE IN FEET
0 25 50 100

SCHEMATIC PLAN

MUS-60-16.75

7
165

82752_gsp_006.dgn 12/08/2008



SCHEMATIC PLAN

MUS-60-16.75

8
165

82752_gsp_007.dgn 12/08/2008

CENTURY NATIONAL BANK

RUBY TUESDAY'S
PI Sta. 208+65.36

GOODY'S

COLONY SQUARE MALL

COLONY SQUARE MALL

HUNTINGTON BANK

MATCH LINE STA. 202+50

203 204 205 206 207 208 209 210 211 212 213 214

N 17° 09' 37" W

N 17° 10' 38" W

℄ CONSTRUCTION & SURVEY
S.R. 60 (MAPLE AVE.)

MATCH LINE STA. 215+00

COLONY DR.

ALDI (GROCERY STORE)

LONG JOHN SILVERS

HH GREGG

COLONY CENTER

HUNTINGTON BANK

CHIPOTLE

MATCH LINE STA. 215+00

COLONY SQUARE MALL

PC Sta. 217+41.28

COLONY SQUARE MALL

FED. NO. E070 (826)

END PROJECT
STA. 221+50.00
S.L.M. 20.73

END WORK
STA. 223+00.00

CURVE DATA
P.I.= Sta. 219+99.23
D = 37° 18' 55" (LT)
Dc = 7° 30' 00"
R = 763.94'
T = 257.95'
L = 497.53'
E = 42.37'
emax = 0.000
C = 488.79'
C.B. = N 35° 50' 06" W

PT Sta. 222+38.82

216 217 218 219 220 221 222 223 224 225

N 54° 29' 33" W

℄ CONSTRUCTION & SURVEY
S.R. 60 (MAPLE AVE.)

KAY DR.

MERRIL LYNCH

COLONY BUSINESS CENTER

COBURN UNITED METHODIST CHURCH

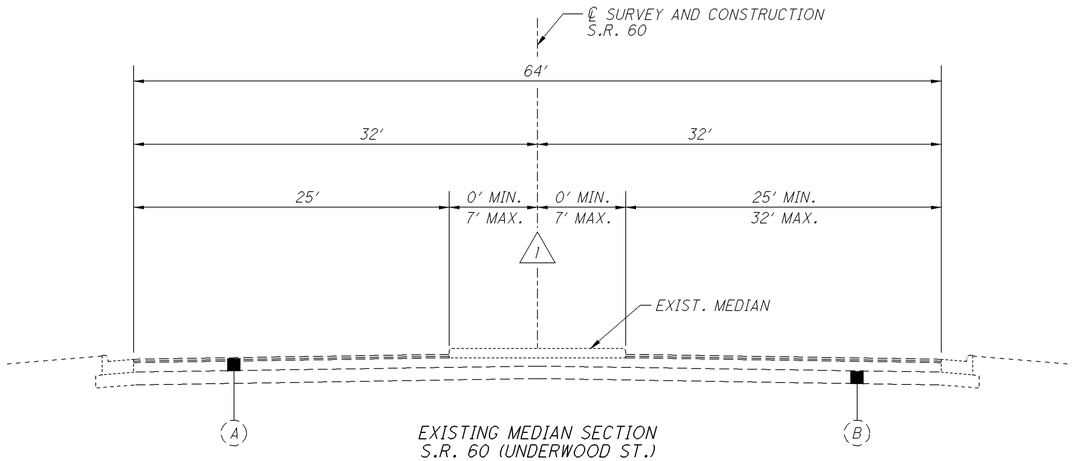
0 25 50 100
HORIZONTAL SCALE IN FEET

SCHEMATIC PLAN

MUS-60-16.75

9
165

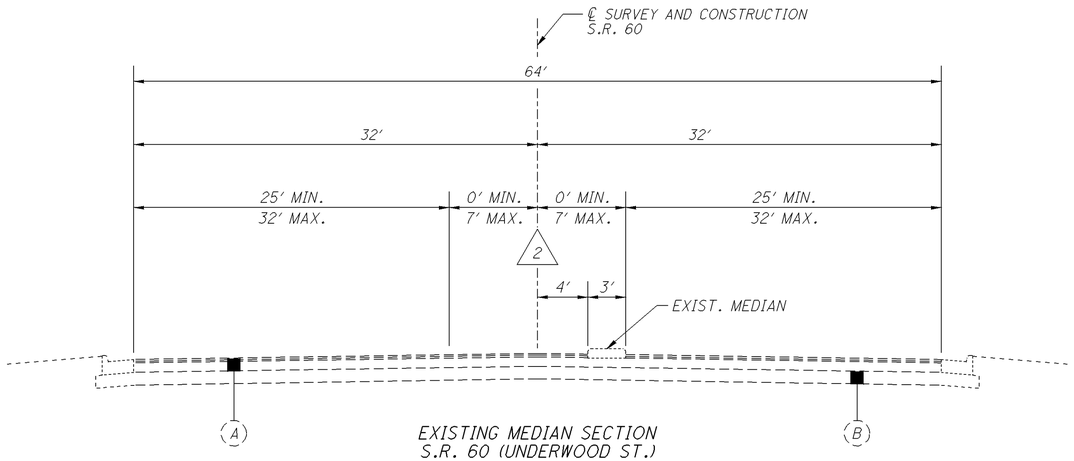
82752_gsp_008.dgn 12/09/2008



EXISTING MEDIAN SECTION
S.R. 60 (UNDERWOOD ST.)

STA. 24+65.20 TO STA. 27+87.24 = 322.04 FT.

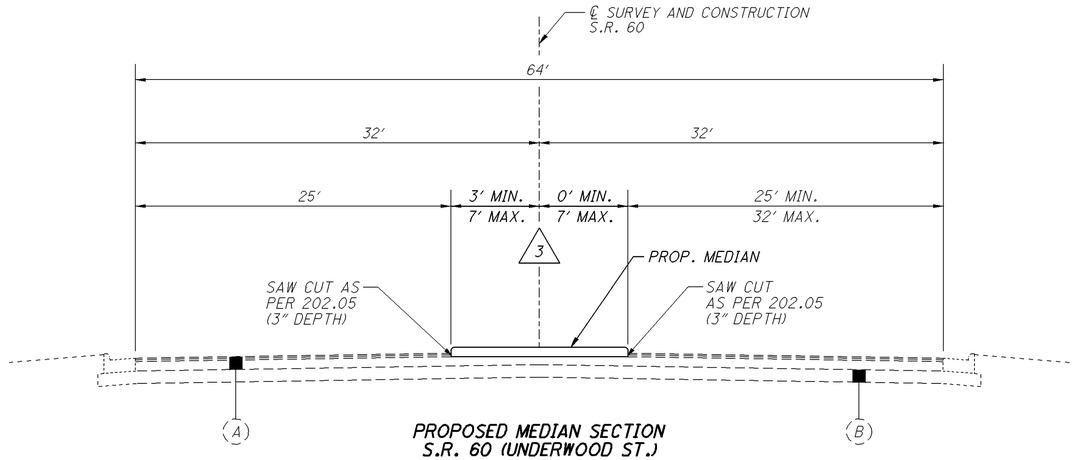
1 14′ MEDIAN FROM STA. 24+65.20 TO STA. 25+13.10. TAPERS FROM 14′ @ STA. 25+13.10 TO 3′ LT. @ STA. 26+27.87. 3′ LT. FROM STA. 26+27.87 TO STA. 27+87.24.



EXISTING MEDIAN SECTION
S.R. 60 (UNDERWOOD ST.)

STA. 29+04.81 TO STA. 34+41.14 = 536.33 FT.

2 3′ RT. FROM STA. 29+04.81 TO STA. 31+12.32. TAPERS FROM 3′ RT. @ STA. 31+12.32 TO 3′ LT. @ STA. 32+26.97. 3′ LT. FROM STA. 32+26.97 TO STA. 34+41.14.



PROPOSED MEDIAN SECTION
S.R. 60 (UNDERWOOD ST.)

STA. 25+00.00 TO STA. 32+35.00 = 735.00 FT.

3 14′ MEDIAN FROM STA. 25+00.00 TO STA. 31+75.00. TAPERS FROM 14′ @ STA. 31+75.00 TO 3′ LT. @ STA. 32+25.00. 3′ LT. FROM STA. 32+25.00 TO STA. 32+35.00.

(A) 9″± ASPHALT CONCRETE

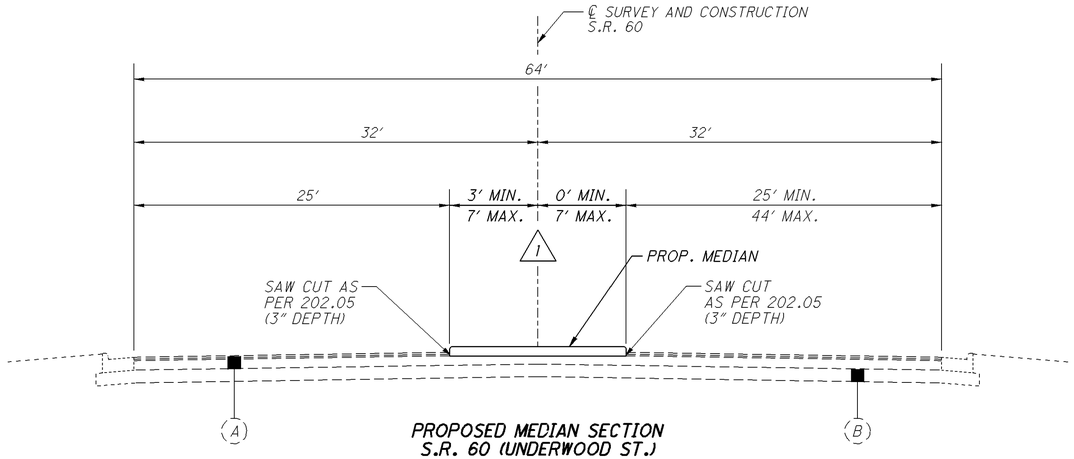
(B) 6″± AGGREGATE BASE

CALCULATED LME
CHECKED DNM

TYPICAL SECTION (CONCRETE MEDIAN)

MUS-60-16.75

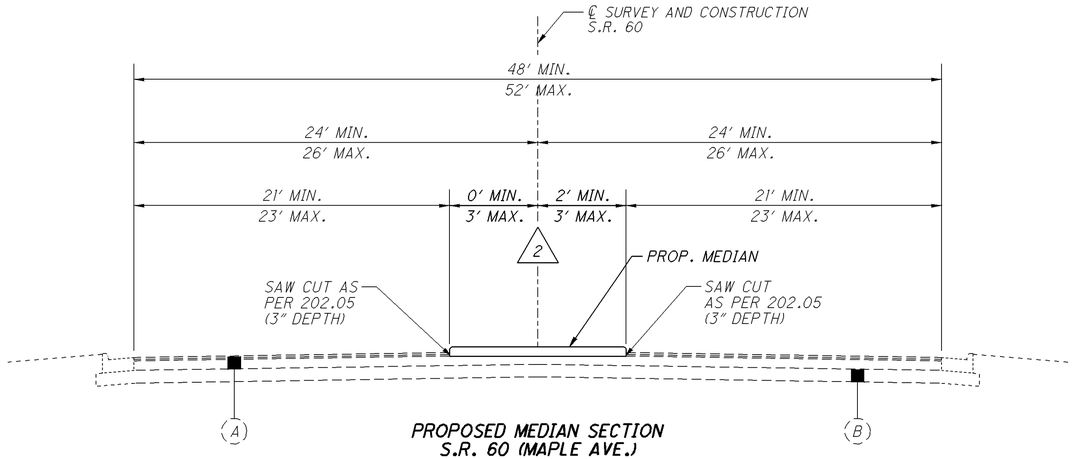
82752_PTS_001.DGN 12/14/08



PROPOSED MEDIAN SECTION
S.R. 60 (UNDERWOOD ST.)

STA. 57+69.00 TO STA. 59+02.00 = 133.00 FT.

1 14′ MEDIAN FROM STA. 57+69.00 TO STA. 58+52.00. TAPERS FROM 14′ @ STA. 58+52.00 TO 3′ LT. @ STA. 59+02.00.



PROPOSED MEDIAN SECTION
S.R. 60 (MAPLE AVE.)

STA. 169+00.00 TO STA. 174+00.00 = 500.00 FT.

2 TAPERS FROM 2′ RT. @ STA. 169+00.00 TO 6′ @ STA. 169+20.00. 6′ FROM STA. 169+20.00 TO STA. 174+00.00

(A) 9″± ASPHALT CONCRETE

(B) 6″± AGGREGATE BASE

CALCULATED LME
CHECKED DNM

TYPICAL SECTION (CONCRETE MEDIAN)

MUS-60-16.75

82752_PTS_001.DGN 12/14/08

UTILITIES

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

CABLE:
TIME WARNER CABLE
P.O. BOX 4250
111 NORTH 11 STREET
NEWARK, OHIO 43058
ATTN: BRIAN AMENDE
740-345-4329

TELEPHONE:
AT&T
3935 NORTH POINT RD.
ZANESVILLE, OHIO 43701
ATTN: SANDY RANDOLPH
740-454-3455

ELECTRIC:
AMERICAN ELECTRIC POWER
COLUMBUS, OHIO 43215
850 TECH CENTER DR.
GAHANNA, OHIO 43230
ATTN: PAUL PAXTON
740-883-6831

WATER AND SANITARY:
CITY OF ZANESVILLE
DIVISION OF WATER
401 MARKET STREET
ZANESVILLE, OHIO 43701
ATTN: NEIL MAXWELL
740-455-0661

GAS:
COLUMBIA GAS OF OHIO
2429 LINDEN AVENUE
ZANESVILLE, OHIO 43701
ATTN: CRAIG FLYNN
740-450-1205

COLUMBIA GAS TRANSMISSION
301 MAPLE STREET
P.O. BOX 330
SUGAR GROVE, OHIO 43155
ATTN: JOHN RADER
740-746-2279

NORTH COAST ENERGY, INC.
5748 GLEN HIGHWAY
P.O. BOX 1478
CAMBRIDGE, OHIO 43725
ATTN: DAN WALKER
740-432-7359

NATIONAL GAS AND OIL CORP.
1500 GRANVILLE ROAD
P.O. BOX 4970
NEWARK, OHIO 43058
ATTN: GREG WILSON
740-348-1254

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITIES AS REQUIRED BY SECTION 153.64 OF THE OHIO REVISED CODE. ODOT ASSUMES NO RESPONSIBILITY FOR THE LOCATION OR THE DEPTHS OF THE UNDERGROUND FACILITIES SHOWN ON THESE PLANS.

AT LEAST 48 HOURS BEFORE DIGGING, THE CONTRACTOR SHALL CALL THE OHIO UTILITIES PROTECTION SERVICE AT THE NUMBER LISTED ON THE TITLE SHEET. NON-MEMBER UTILITY COMPANIES MUST BE CALLED DIRECTLY. THE NAMES AND ADDRESSES OF THE UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS ARE LISTED ABOVE. THE CONTRACTOR SHALL ALSO CALL FRED BUCK, AT PHONE 740-819-4586, FOR LOCATION OF CITY OF ZANESVILLE EXISTING SIGNAL CONDUIT THAT IS UNDERGROUND.

ELEVATION DATUM

ALL ELEVATIONS ARE ORTHOMETRIC HEIGHTS USING THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND GPS DERIVED.

BENCH MARKS

BENCHMARKS ARE LISTED ON THE INDIVIDUAL PLAN SHEETS.

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.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 120 FT. . IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. A COPY OF THE SUBMISSION AND TWO COPIES OF FORM 7460-1 SHALL BE FORWARDED TO THE ODOT OFFICE OF AVIATION.

NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAN BLVD.
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
614-387-2346

EXISTING PLANS

EXISTING PLANS ARE AVAILABLE FOR VIEWING OR PURCHASE AT THE ODOT DISTRICT 5 PRODUCTION OFFICE IN JACKSONTOWN, OHIO.

NOTIFICATION OF ROAD CLOSURE OR RESTRICTION

IN ORDER FOR ODOT TO PROPERLY PERMIT OVERSIZE LOADS, PREPARE PROPER SIGNING WHEN REQUIRED AND FURTHER TO NOTIFY THE GENERAL MOTORING PUBLIC, THE CONTRACTOR WILL NOTIFY (IN WRITING) THE DISTRICT 5 HIGHWAY MANAGEMENT ADMINISTRATOR WITH COPIES FOR THE DISTRICT 5 ROADWAY SERVICES MANAGER AND PROJECT ENGINEER NOT LESS THAN 21 DAYS BEFORE SUCH CLOSURE OR LANE RESTRICTIONS.

SEND NOTIFICATION TO:

DISTRICT 5 HIGHWAY MANAGEMENT ADMINISTRATOR

P.O. BOX 306
JACKSONTOWN, OH. 43030
PHONE: (740) 323-4400

ITEM 201 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. THIS ITEM SHALL INCLUDE THE TRIMMING OF TREE BRANCHES TO INSTALL SIGNAL POLES OR TO IMPROVE SIGNAL HEAD VISIBILITY. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS AND HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED BELOW:

ITEM 659, SEEDING AND MULCHING, CLASS 1 281 SQ. YD.
7,766.6 SQ. FT. SIDEWALK/6 FT. WIDTH = 1294.4 FT.
(1294.4 FT x 1.0 FT. WIDTH)/9 = 143.8 SQ. YD
136.8 SQ. YD (FROM SHEET 66)
TOTAL AREA = 143.8 + 136.8 = 280.6 SQ. YD.

ITEM 659, COMMERCIAL FERTILIZER 0.07 TON
(ONE TON PER 4,445 SQ. YD. OF THE PERMANENT SEEDED AREA)
280.6 SQ. YD. ÷ 4,445 (SQ. YD. PER TON) = 0.07 TON

ITEM 659, LIME 0.06 ACRE
(ONE ACRE PER 4,840 SQ. YD. OF THE PERMANENT SEEDED AREA)
280.6 SQ. YD. ÷ 4,840 (SQ. YD. PER ACRE) = 0.06 AC.

ITEM 659, WATER 3 M. GAL.
(0.0081 M. GAL. PER SQ. YD. OF THE PERMANENT SEEDED AREA)
0.0081 x 280.6 SQ. YD. = 2.3 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.

ITEM 448 ASPHALT CONCRETE, MISC.: ASPHALT CONCRETE PAVEMENT INCLUDING AGGREGATE BASE

THIS ITEM SHALL CONSIST OF COMPACTING THE SUBGRADE AND FURNISHING AND PLACING THE AGGREGATE BASE AND ASPHALT CONCRETE PAVEMENT LAYERS AS DETAILED ON SHEET 66, FOR THE TRAFFIC ISLAND AREA THAT IS SHOWN ON SHEET 65.

AFTER THE CONTRACTOR HAS REMOVED THE EXISTING TRAFFIC ISLAND SHOWN ON SHEETS 65 & 66, THE CONTRACTOR SHALL COMPACT THE SUBGRADE AS PER CMS 204. THE CONTRACTOR SHALL FURNISH AND PLACE TACK COAT AS PER 702.13 ON THE VERTICAL FACE OF THE EXISTING ASPHALT CONCRETE PRIOR TO PLACING THE AGGREGATE BASE.

THIS ITEM SHALL ALSO INCLUDE THE COST TO FURNISH AND PLACE ITEM 407 TACK COAT FOR INTERMEDIATE COURSE AT THE LOCATION SHOWN IN SECTION A-A ON SHEET 66. THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT, AS DIRECTED BY THE ENGINEER.

PAYMENT FOR ITEM 448 "ASPHALT CONCRETE, MISC.: ASPHALT CONCRETE PAVEMENT INCLUDING AGGREGATE BASE" SHALL BE AT THE CONTRACT UNIT PRICE PER SQUARE FOOT AND SHALL INCLUDE ALL OF THE LABOR, MATERIALS AND EQUIPMENT NEEDED TO COMPLETE THE WORK.

DESIGNED DNM CHECKED DNM

GENERAL NOTES

MUS-60-16.75

82752_ggn_01.dgn 12/03/08

ITEM 604 CATCH BASIN/ MANHOLE/ INLET ADJUSTED TO GRADE
ITEM 638 VALVE BOX ADJUSTED TO GRADE

THESE ITEMS SHALL BE USED TO ADJUST CATCH BASINS, MANHOLES, INLETS AND WATER VALVE BOXES LOCATED THROUGHOUT THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED SHALL BE INCLUDED FOR PAYMENT WITH THE ITEMS LISTED BELOW.

ANY GAS VALVE BOXES AND TELEPHONE COMPANY MANHOLES ON THIS PROJECT SHALL BE ADJUSTED TO GRADE BY THE RESPECTIVE OWNERS.

ITEM 604 – CATCH BASIN ADJUSTED TO GRADE – 2 EACH

ITEM 604 –INLET ADJUSTED TO GRADE – 2 EACH

ITEM 604 – MANHOLE ADJUSTED TO GRADE – 2 EACH

ITEM 638 – VALVE BOX ADJUSTED TO GRADE – 3 EACH

ITEM 604 INLET RECONSTRUCTED TO GRADE

THIS ITEM SHALL BE USED TO RECONSTRUCT INLETS LOCATED THROUGHOUT THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED SHALL BE INCLUDED FOR PAYMENT WITH THE ITEM LISTED BELOW.

ITEM 604 – INLET RECONSTRUCTED TO GRADE – 4 EACH

ITEM 609 COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN

THIS ITEM SHALL CONSIST OF BUILDING A COMBINATION CURB AND GUTTER, TYPE 2 EXCEPT THAT THE TOTAL WIDTH WILL BE 2'-0". THE CURB SHALL BE BUILT AS PER THE DIMENSIONS IN THE STANDARD DRAWING, HOWEVER, THE GUTTER PLATE WILL BE REDUCED FROM 2'-0" TO 1'-6".

PAYMENT FOR ITEM 609 "COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN" SHALL BE AT THE CONTRACT UNIT PRICE PER FOOT OF COMBINATION CURB AND GUTTER COMPLETE IN PLACE, MEASURED ALONG THE FACE OF THE CURB SECTION AND SHALL INCLUDE ALL OF THE LABOR, MATERIALS AND EQUIPMENT NEEDED TO COMPLETE THE WORK.

ITEM 653 TOPSOILFURNISHED AND PLACED, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND PLACING TOPSOIL ADJACENT TO SIDEWALK AND CURB RAMPS THROUGHOUT THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE REQUIRED TO SEED AND MULCH THE TOPSOIL AS PER 659 OF THE 2008 CMS USING THE CLASS 1 SEED MIXTURE. SEEDING AND MULCHING OF THESE TOPSOIL AREAS SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.

PAYMENT FOR ITEM 653 "TOPSOIL FURNISHED AND PLACED, AS PER PLAN", SHALL BE AT THE CONTRACT UNIT PRICE PER CUBIC YARD OF TOPSOIL FURNISHED AND PLACED, INCLUDING SEEDING AND MULCHING AND SHALL INCLUDE ALL OF THE LABOR, MATERIALS AND EQUIPMENT NEEDED TO COMPLETE THE WORK.

AN ESTIMATED QUANTITY OF 10 CU. YD. HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 608 4" CONCRETE WALK, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING 4" CONCRETE WALK AT THE LOCATIONS SHOWN IN THE PLANS, IN ACCORDANCE WITH ODOT ITEM 608. THE WIDTH OF THE NEW WALK SHALL MATCH THE WIDTH OF EXISTING WALK OR THE ADJACENT WALK. THE WIDTH OF THE WALK MAY BE ADJUSTED BY THE ENGINEER TO ACCOMMODATE VARYING FIELD CONDITIONS. THE FINISH OF THE WALK SHALL MATCH THE FINISH OF THE ADJACENT OR SURROUNDING WALK. A BEDDING OF #8 CRUSHED AGGREGATE SHALL BE INCLUDED IN THE UNIT BID PRICE OF WALK FOR ANY FILL REQUIRED TO ACHIEVE THE FINAL WALK GRADES.

PAYMENT FOR ITEM 608 "4" CONCRETE WALK, AS PER PLAN" SHALL BE AT THE CONTRACT UNIT PRICE PER SQUARE FOOT OF WALK COMPLETE IN PLACE, AND SHALL INCLUDE ALL OF THE LABOR, MATERIALS AND EQUIPMENT NEEDED TO COMPLETE THE WORK.

DESIGNED DNM CHECKED DNM

GENERAL NOTES

MUS-60-16.75

12A
165

82752_ggn_01.dgn 12/03/08

ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND STANDARD DRAWINGS MT-95.31 & MT-95.32.

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

THE CONTRACTOR SHALL ARRANGE HIS OPERATIONS SO AS TO PREVENT ANY INTERFERENCE TO THE CONTINUOUS FLOW OF TRAFFIC. ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIME TO ONE SIDE OF THE PAVEMENT UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER.

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. 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.

ALL CONFLICTING SIGNS AND PAVEMENT MARKINGS, WHETHER INSIDE OR OUTSIDE THE WORK LIMITS, SHALL BE COVERED OR REMOVED. WHERE APPLICABLE, AND WHEN DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PLACE TEMPORARY SIGNS OR TEMPORARY PAVEMENT MARKING AT THESE LOCATIONS.

THE CONTRACTOR SHALL SUBMIT, IN WRITING A SCHEDULE OF OPERATIONS TO THE DISTRICT DEPUTY DIRECTOR AND RECEIVE APPROVAL BEFORE WORK IS STARTED ON THE PROJECT.

BEFORE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF A PERSON OR PERSONS WHO CAN BE CONTACTED 24 HOURS A DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IMMEDIATELY, AS PER 614.03 (C).

THE CONTRACTOR SHALL BE REQUIRED TO CONTACT THE PROPERTY OWNERS AT LEAST 24 HOURS PRIOR TO ALL DRIVE CLOSURES AND/OR REMOVALS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 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 AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY:

ITEM 614, MAINTAINING TRAFFIC	LUMP

ITEM 614, MAINTAINING TRAFFIC (NIGHTWORK USING LEO'S)

TO MINIMIZE THE IMPACTS TO THE TRAVELING PUBLIC, ALL OF THE PROPOSED SIGNAL WORK AT THE FOLLOWING INTERSECTIONS SHALL BE COMPLETED DURING NIGHT TIME HOURS BEGINNING AT 9:00 P.M. AND ENDING AT 8:00 A.M. THE CONTRACTOR SHALL USE LEO'S TO MAINTAIN THE TRAFFIC AT EACH OF THE FOLLOWING INTERSECTIONS UNTIL THE SIGNAL IS COMPLETEY OPERATIONAL:

UNDERWOOD STREET AND MARKET STREET
UNDERWOOD STREET AND ELBERON AVENUE
UNDERWOOD STREET AND ELM STREET
UNDERWOOD STREET AND ZANE STREET
ADAIR AVENUE AND LINDEN AVENUE

ITEM 614, MAINTAINING TRAFFIC (NIGHTWORK USING LEO'S) (CONT'D)

MAPLE AVENUE AND ADAIR AVENUE
MAPLE AVENUE AND LOCUST AVENUE

ONLY ONE INTERSECTION SHALL BE CLOSED AT ANYTIME EXCEPT FOR THE INTERSECTIONS OF UNDERWOOD STREET & ELBERON AVENUE AND UNDERWOOD STREET & ELM STREET, WHICH SHALL BE CLOSED AT THE SAME TIME.

PRIOR TO REMOVING THE SIGNAL INSTALLATIONS, THE CONTRACTOR SHALL PLACE ONE PORTABLE CHANGEABLE MESSAGE SIGN IN ADVANCE OF THE INTERSECTION, IN EACH DIRECTION, TO GIVE ADVANCED WARNING OF THE CHANGE IN TRAFFIC CONTROL.

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE CONTRACTOR SHALL MAKE PREPARATIONS TO REMOVE THE EXISTING SIGNAL INSTALLATIONS AT THE INTERSECTIONS LISTED ABOVE. ONCE THE CONTRACTOR BEGINS WORKING AT ONE INTERSECTION, THE CONTRACTOR SHALL CONTINUE WORKING AT THAT INTERSECTION UNTIL ALL OF THE NEW SIGNAL EQUIPMENT IS IN PLACE AND THE SIGNAL IS OPERATIONAL.

THE SIGNAL AT EACH OF THE INTERSECTIONS LISTED ABOVE MAY BE TAKEN OUT OF OPERATION BETWEEN THE HOURS OF 9:00 P.M. AND 8:00 A.M.. SHOULD THE CONTRACTOR SHUT DOWN THE SIGNAL BEFORE THE ALLOWABLE TIME AND/OR FAIL TO HAVE THE SIGNAL BACK IN OPERATION BY THE ALLOWABLE TIME, A DISINCENTIVE AS DESIGNATED IN THE UNAUTHORIZED LANE USE TABLE AND PROPOSAL NOTE 128 WILL BE ASSESSED.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 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 AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 614, MAINTAINING TRAFFIC (NIGHT WORK)

TO MINIMIZE THE IMPACTS TO THE TRAVELING PUBLIC, ALL OF THE PROPOSED SIGNAL WORK AT THE FOLLOWING INTERSECTIONS SHALL BE COMPLETED DURING NIGHT TIME HOURS BEGINNING AT 10:00 P.M. AND ENDING AT 6:00 A.M.:

MAPLE AVENUE AND DRESDEN ROAD
MAPLE AVENUE AND BROWN STREET
MAPLE AVENUE AND BROOKOVER DRIVE
MAPLE AVENUE AND TAYLOR STREET
MAPLE AVENUE AND HARDING ROAD
MAPLE AVENUE AND COUNTRY CLUB DRIVE
MAPLE AVENUE AND COUNTRY FAIR SHOPPING
MAPLE AVENUE AND BRANDYWINE BOULEVARD
MAPLE AVENUE AND COLONY SQUARE (SOUTH)
MAPLE AVENUE AND COLONY SQUARE (NORTH)

THIS WORK SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING: REPLACING EXISTING SIGNAL HEADS WITH NEW SIGNAL HEADS WITH BACKPLATES (USING EXISTING SIGNAL CABLE); REMOVING EXISTING PEDESTRIAN PUSHBUTTONS INCLUDING PUSHBUTTON SIGNS AND PLUGGING THE HOLES OR PLACING NEW PEDESTRIAN PUSHBOTTONS WITH NEW PUSHBUTTON SIGNS (USING EXISTING SIGNAL CABLE); REPLACING EXISTING PEDESTRIAN SIGNAL HEADS WITH NEW PEDESTRIAN SIGNAL HEADS WITH COUNTDOWN (USING EXISTING SIGNAL CABLE); PLACING NEW MESSENGER WIRE BETWEEN EXISTING SIGNAL POLES; PLACING NEW SIGNAL HEADS WITH BACKPLATES (USING NEW SIGNAL CABLE); AND PLACING NEW LOOP DETECTORS (USING NEW SIGNAL CABLE).

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 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 AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

UNAUTHORIZED LANE USE TABLE

DESCRIPTION OF CRITICAL LANE TO BE MAINTAINED	TIME UNIT	DISINCENTIVE
INTERSECTION OF UNDERWOOD ST. AND MARKET ST.	EACH HOUR	$900
INTERSECTION OF UNDERWOOD ST. AND ELBERON AVE./ELM ST.	EACH HOUR	$900
INTERSECTION OF UNDERWOOD ST. AND ZANE ST.	EACH HOUR	$900
INTERSECTION OF ADAIR AVE. AND LINDEN AVE.	EACH HOUR	$900
INTERSECTION OF MAPLE AVE. AND ADAIR AVE.	EACH HOUR	$900
INTERSECTION OF MAPLE AVE. AND LOCUST AVE.	EACH HOUR	$900

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:

MEMORIAL DAY
FOURTH OF JULY
LABOR DAY

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 THE WEEK	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00AMTUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE OF $500.00 DOLLARS FOR EACH HOUR THAT THE CONTRACTOR IS NONCOMPLIANT WITH THE REQUIREMENTS LISTED ABOVE.

DESIGNED DNM CHECKED DNM

MAINTENANCE OF TRAFFIC GENERAL NOTES

MUS-60-16.75

82752_ggn_01.dgn 12/03/08

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED IN THIS NOTE WILL NOT GENERALLY BE PERMITTED AT PROJECT COST UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE ENGINEER. LEOS SHOULD NOT BE USED WHERE THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 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) SHOULD BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

1. 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. IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

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

3. DURING A TRAFFIC SIGNAL INSTALLATION OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

4. ROUTINE PATROLLING THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) AS SPECIFIED IN THE PLANS.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL ESPONSIBILITIES 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 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 CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A LIST OF THE APPROPRIATE LAW ENFORCEMENT AGENCY(S), INCLUDING ADDRESS AND TELEPHONE NUMBER.

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

LAW ENFORCEMENT OFFICERS (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). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR 250 HOURS

THE HOURS PAID SHALL INCLUDE 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.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, SIX CHANGEABLE MESSAGE SIGNS, ON SITE, TWO OF THE SIGNS SHALL BE ON SITE FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN CLICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 475 FT. AND 650 FT. 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. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

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, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW RETROREFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING 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.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN ONE HOUR FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

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 PRECONSTRUCTION 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 SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.)

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (CONT'D)

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 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 CONTRACTORS 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 ONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 16 SIGN-MONTH

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 50 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

DROPOFFS IN WORK ZONES

DROPOFFS THAT DEVELOP DURING CONSTRUCTION OPERATIONS AND THAT ARE NOT OTHERWISE PROVIDED FOR IN THE PLANS SHALL BE TREATED AS SHOWN ON SHEET NO. 15. WHERE THE PLANS DO NOT PROVIDE SPECIFIC ITEMS FOR LABOR, EQUIPMENT, OR MATERIALS TO IMPLEMENT THE DROP-OFF TREATMENTS SPECIFIED, THEY SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

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

GENERAL NOTES

1. It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. The suggested treatments are intended for high volume projects that will last at least seven days and have an active work zone 1 mile [1.6 km] or less in length. For guidance on the use of this sheet, see Traffic Engineering Manual, Section 640-6. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified hereon, they shall be included for payment in the lump sum bid for Item 614 - Maintaining Traffic.

2. While the need for certain advisory signing is noted hereon, it is not intended that this be indicative of all signing that may be required to advise or warn motorists, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.

3. In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown hereon may be required.

4. The drop-off treatment selected for use at any given location shall be as appropriate for the prevailing conditions at the site.

5. Where concrete barrier is specified, it shall be in accordance with Standard Construction Drawing RM-4.2 and Item 622.

6. When drums are specified for a drop-off condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.

7. When W8-9 (Low Shoulder) signs or W8-9a (Shoulder Drop -Off) signs or W8-11 (Uneven Lanes) signs are required, they shall be placed 750 feet [230 m] in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all inter secting roadways within the limits of the condition. When the drop-off condition extends more than 0.5 mile [800 m], additional signs should be erected at intervals of 1.0 mile [1600 m] or less.

8. For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate a difference in elevation between pavements, a 3:1 slope treatment similar to the Optional Wedge Treatment shall be provided.

9. Portable concrete barrier shall be placed on the same level as the traffic surface and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10 feet [3.0 m], drums may be placed on the opposite level from that of traffic provided the dropoff depth does not exceed 5 inches [125] and approval is granted by the Project Engineer.

10. Pavement Repairs (or similar work):

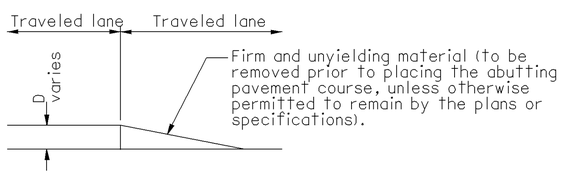
    a. Lengths greater than 60 feet [18 m] - utilize appropriate treatment from Condition I.

    b. Lengths of 60 feet [18 m] or less - repairs shall be effected in accordance with CMS 255.08. Drums may be used as a separtor adjacent to the traveled lane.

OPTIONAL WEDGE TREATMENT
(MILLING OR RESURFACING)

1. This treatment may be used when permitted for Condition I only.

2. W8-11 sign required.



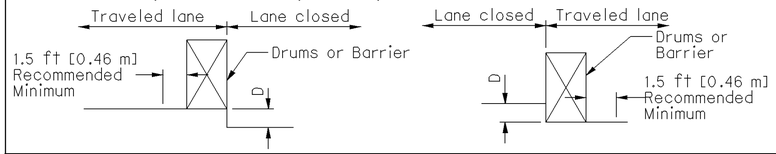
CONDITION I

DROP-OFFS BETWEEN TRAVELED LANES

1. These treatments are to be used for resurfacing, pavement planing, excavation, etc. between or within traveled lanes.

D - inches (mm)	Treatment
<1-1/2 [<40]	Erect W8-11 sign.
1-1/2 - 3 [40-75]	1) Lane closure utilizing drums* as shown below OR 2) Optional Wedge Treatment
> 3 - 5 [>75-125]	Lane closure utilizing drums as shown below.
> 5 [>125]	Lane closure utilizing portable concrete barrier as shown below.

* Cones may be used for daytime only conditions.



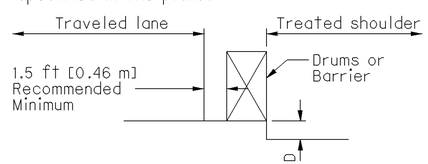
CONDITION II

DROP-OFFS WITHIN GRADED SHOULDER AREA

1. The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
2. The graded shoulder area is that flat or gradually sloping area between the edge of a normally traveled lane and the more steeply sloping ditch foreslope or embankment slope. Its surface may be soil or turf, and/or it may be inclusive of a "treated" area (improved with aggregates, asphaltic materials or concrete). For the purpose herein, its maximum width shall be considered to be 12 feet [3.6 m].

D - inches (mm)	Treatment
< 1-1/2 [<40]	1) Erect W8-9a signs.
> 1-1/2 - 5 [>40-125]	1) If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below OR 2) If minimum. lane width* requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment.
> 5 -12 [125-305] Daylight only	If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below.
> 5 - 24 [>125-610]	1) If minimum lane width* requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If minimum lane width* requirements cannot be met, close adjacent lane utilizing drums.
> 24 [> 610]	Lane closure utilizing portable concrete barrier as shown below.

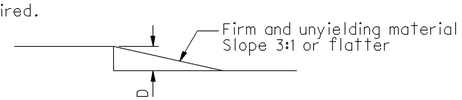
* Minimum lane widths shall be 10 ft [3.0 m] unless otherwise specified in the plans.



OPTIONAL SHOULDER TREATMENT

1. This treatment may not be used within a bitumunos shoulder where a hot longitudnal joint per CMS 401.15 is required.

2. W8-9 signs required.



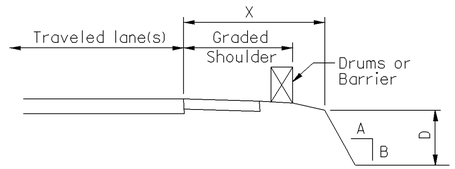
CONDITION III

DROP-OFFS BEYOND GRADED SHOULDER OR BACK OF CURB

1. See Note 2 under Condition II.
2. Use Chart A or B below, as applicable.

CHART A

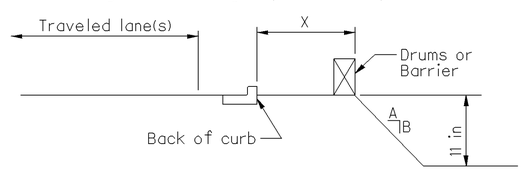
USE FOR: 1. Uncurbed Facilities
2. Curbed Facilities, where:
   a. Curbs are less than 6 inch [150] in height
   b. Curbs are 6 inch [150] or greater in height and the legal speed is greater than 40 mph [70 km/hr].



X feet (m)	D inch (mm)	A/B	Treatment Required	
			Day	Night
0 - 4 [0 - 1.2]	Any	Any	(a)	(a)
4 - 30 [1.2 - 9.1]	Any	3:1 or Flatter	None	None
4 - 12 [1.2 - 3.6]	< 3 [< 75]	Steeper than 3:1	None	None
4 - 12 [1.2 - 3.6]	> 3 - < 12 [> 75 - < 305]	Steeper than 3:1	Drums	Drums
4 - 12 [1.2 - 3.6]	> 12 [> 305]	Steeper than 3:1	Drums	Barrier
> 12 - 20 [> 3.6 - 6.1]	< 12 [< 305]	Steeper than 3:1	None	None
> 12 - 20 [> 3.6 - 6.1]	> 12 - 24 [> 305 - < 610]	Steeper than 3:1	Drums	Drums
> 12 - 20 [> 3.6 - 6.1]	> 24 [> 610]	Steeper than 3:1	Drums	Barrier
> 20 - 30 [> 6.1 - 9.1]	< 24 [< 610]	Steeper than 3:1	None	None
> 20 - 30 [> 6.1 - 9.1]	> 24 [> 610]	Steeper than 3:1	Drums	Barrier
> 30 [> 9.1 m]	Any	Any	None	None
(a) Use treatment specified under Condition II.				

CHART B

USE FOR: Curbed facilities, where the curb is 6 inches [150 mm] or greater in height and the legal speed is 40 mph [70 km/h] or less.



X feet (m)	D inch (mm)	A/B	Treatment Required	
			Day	Night
0 - 10 [0-3.0 m]	< 12 [< 305]	Any	None	Drums
0 - 10 [0-3.0 m]	> 12 [> 305]	Any	Drums	Drums
> 10 [> 3.0 m]	Any	Any	None	None

OFFICE OF TRAFFIC ENGINEERING

DESIGNED | REVIEWED LAM

REVISION DATE 11/27/06 | CHECKED

PID NUMBER 2010190

PLAN INSERT SHEET

DROP OFFS IN WORK ZONES

MUS-60-16.75

1 / 1

15 / 165

82752_mns_01.dgn 12/11/08 (v8)

SHEET NUMBER										ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
12	12A	20	21	66											
														ROADWAY	
LUMP										201	11000	LUMP		CLEARING AND GRUBBING	
		670								202	23000	670	SQ YD	PAVEMENT REMOVED	
		1,391								202	23500	1,391	SQ YD	WEARING COURSE REMOVED	
		2,379	3,275	35						202	30000	5,689	SQ FT	WALK REMOVED	
		303								202	30500	303	FT	CONCRETE MEDIAN REMOVED	
		44	16	100						202	32000	160	FT	CURB REMOVED	
		1,235	758	109						202	32500	2,102	FT	CURB AND GUTTER REMOVED	
		3		70						203	10000	73	CU YD	EXCAVATION	
				32						203	20000	32	CU YD	EMBANKMENT	
														EROSION CONTROL	
	10									653	10001	10	CU YD	TOPSOIL FURNISHED AND PLACED, AS PER PLAN	12A
281										659	00500	281	SQ YD	SEEDING AND MULCHING, CLASS 1	
0.07										659	20000	0.07	TON	COMMERCIAL FERTILIZER	
0.06										659	31000	0.06	ACRE	LIME	
3										659	35000	3	M GAL	WATER	
										832	30000	1,000	EACH	EROSION CONTROL	
														DRAINAGE	
	2									604	09000	2	EACH	CATCH BASIN ADJUSTED TO GRADE	
	2									604	20600	2	EACH	INLET ADJUSTED TO GRADE	
	4									604	20800	4	EACH	INLET RECONSTRUCTED TO GRADE	
	2									604	34500	2	EACH	MANHOLE ADJUSTED TO GRADE	
	3									638	10800	3	EACH	VALVE BOX ADJUSTED TO GRADE	
														PAVEMENT	
				25						448	91000	25	SQ YD	ASPHALT CONCRETE, MISC.: ASPHALT CONCRETE PAVEMENT INCLUDING AGGREGATE BASE	
		8,259	3,589	171						608	10001	12,019	SQ FT	4" CONCRETE WALK, AS PER PLAN	12A
			25	1						608	52110	26	EACH	CURB RAMP, TYPE A1	
			8							608	52120	8	EACH	CURB RAMP, TYPE A2	
			8							608	52170	8	EACH	CURB RAMP, TYPE D	
			12							608	53000	12	EACH	TRUNCATED DOMES	
		1,269	699							609	12000	1,968	FT	COMBINATION CURB AND GUTTER, TYPE 2	
			59	134						609	12001	193	FT	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN	12A
		94	110							609	26000	204	FT	CURB, TYPE 6	
		1,699								609	71000	1,699	SQ FT	CONCRETE MEDIAN	

CALCULATED JLS CHECKED DNM

GENERAL SUMMARY

MUS-60-16.75

M060_GGS_001.DGN 12/22/08

SHEET NUMBER										ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
114	121														
														TRAFFIC CONTROL	
	909.0									630	03100	909.0	EACH	GROUND MOUNTED SUPPORT, NO. 3 POST	
	14.5									630	08004	14.5	EACH	ONE WAY SUPPORT, NO. 3 POST	
	524.0									630	08510	524.0	EACH	STREET NAME SIGN SUPPORT, NO. 2 POST	
	48									630	08600	48	EACH	SIGN POST REFLECTOR	
	66									630	79000	66	EACH	SIGN HANGER ASSEMBLY, SPAN WIRE	
	26									630	79500	26	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
	1,830.6									630	80100	1,830.6	SQ FT	SIGN, FLAT SHEET	
	228									630	84900	228	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
	106									630	86002	106	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
	33									630	87400	33	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
	24									630	87500	24	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	
0.54										643	00100	0.54	MILE	EDGE LINE	
0.41										643	00200	0.41	MILE	LANE LINE	
0.29										643	00300	0.29	MILE	CENTER LINE	
474										643	00400	474	FT	CHANNELIZING LINE	
201										643	00500	201	FT	STOP LINE	
328										643	00600	328	FT	CROSSWALK LINE	
210										643	00700	210	FT	TRANSVERSE/DIAGONAL LINE	
13										643	01300	13	EACH	LANE ARROW	
4										643	01400	4	EACH	WORD ON PAVEMENT, 72"	
6,274										644	30000	6,274	FT	REMOVAL OF PAVEMENT MARKING	
10										644	30020	10	EACH	REMOVAL OF PAVEMENT MARKING	

CALCULATED JLS CHECKED DNM

GENERAL SUMMARY

MUS-60-16.75

M060_GSS_002.DGN 12/22/08

SHEET NUMBER										ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
125	162	163	164	165											
														TRAFFIC SIGNALS	
	16			5						625	25402	21	FT	CONDUIT, 2", 725.05	
				5						625	25500	5	FT	CONDUIT, 3", 725.04	
	16			10						625	29003	26	FT	TRENCH, 24" DEEP, AS PER PLAN	123
				1						625	30700	1	EACH	PULL BOX, 725.08, 18"	
	3		2	1						625	32000	6	EACH	GROUND ROD	
	25		37	44						632	04911	106	EACH	VEHICULAR SIGNAL HEAD, (LED) BLACK, 3-SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, AS PER PLAN	123
			2	1						632	04917	3	EACH	VEHICULAR SIGNAL HEAD, (LED) BLACK, 3-SECTION, 12" LENS, 2-WAY, WITH BACKPLATE, AS PER PLAN	123
	11		4	12						632	04921	27	EACH	VEHICULAR SIGNAL HEAD, (LED) BLACK, 5-SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, AS PER PLAN	123
	8		26	16						632	20721	50	EACH	PEDESTRIAN SIGNAL HEAD (LED) , TYPE D2, AS PER PLAN	123
	36		43	57						632	25000	136	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
	8		26	16						632	25010	50	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
	10		16	11						632	26000	37	EACH	PEDESTRIAN PUSHBUTTON	
				3						632	26500	3	EACH	DETECTOR LOOP	
	1,725		771							632	30200	2,496	FT	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES	
	1,281		875	227						632	40500	2,383	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
	4,706		1,884	313						632	40700	6,903	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
			155							632	53202	155	FT	INTERCONNECT CABLE, 6 PAIR, NO. 19 AWG, SOLID, REA (PE-39)	
	3		2							632	64000	5	EACH	STRAIN POLE FOUNDATION	
				1						632	64020	1	EACH	PEDESTAL FOUNDATION	
	4,602		2,151	292						632	65200	7,045	FT	LOOP DETECTOR LEAD-IN CABLE	
			12							632	67200	12	FT	POWER CABLE, 2 CONDUCTOR, NO. 8 AWG	
			42							632	67300	42	FT	POWER CABLE, 3 CONDUCTOR, NO. 8 AWG	
			1							632	70001	1	EACH	POWER SERVICE, AS PER PLAN	123
	1		2							632	82500	3	EACH	STRAIN POLE, TYPE TC-81.10, DESIGN 5	
	2									632	82600	2	EACH	STRAIN POLE, TYPE TC-81.10, DESIGN 6	
				1						632	90010	1	EACH	PEDESTAL, MISC.: 8' PEDESTAL, REMOVED FOR REUSE	123
	4		4	6						632	90101	14	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	124
LUMP										632	90300	LUMP		SIGNALIZATION, MISC.: COMPUTER SOFTWARE	125
	1,725		1,440	2,040						632	90500	5,205	FT	SIGNALIZATION, MISC.: TETHER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES	125
		4								633	01831	4	EACH	CONTROLLER UNIT, TYPE TS2/A2, FURNISH ONLY, AS PER PLAN	124
		3								633	65501	3	EACH	CABINET, TYPE TS-1, AS PER PLAN	124
		4								633	67000	4	EACH	CABINET RISER	
		1								633	99000	1	EACH	CONTROLLER ITEM, MISC.: 12-CHANNEL CONFILICT MONITOR	124
		1								633	99000	1	EACH	CONTROLLER ITEM, MISC.: CONTROLLER UNIT WITH CABINET, POLE MOUNTED, REMOVED FOR REUSE	124
		8								633	99000	8	EACH	CONTROLLER ITEM, MISC.: PREEMPTION RECEIVING UNIT	124
		3								633	99000	3	EACH	CONTROLLER ITEM, MISC.: PREEMPTION RECEIVING UNIT, REMOVED FOR REUSE	124
		4								633	99000	4	EACH	CONTROLLER ITEM, MISC.: PREEMPTION PHASE SELECTOR	124
		8								633	99000	8	EACH	CONTROLLER ITEM, MISC.: PREEMPTION CONFIRMATION LIGHT	124
		3								633	99000	3	EACH	CONTROLLER ITEM, MISC.: PREEMPTION CONFIRMATION LIGHT, REMOVED FOR REUSE	125
		1,587								633	99100	1,587	FT	CONTROLLER ITEM, MISC.: PREEMPTION DETECTOR CABLE	124
		1,587								633	99100	1,587	FT	CONTROLLER ITEM, MISC.: PREEMPTION CONFIRMATION LIGHT CABLE	124
														ALTERNATE BID	
		4								633	01831	4	EACH	CONTROLLER UNIT, TYPE TS2/A2 (EAGLE EPAC M-50 MODEL) (ALTERNATE BID), FURNISH ONLY, AS PER PLAN	124

CALCULATED JLS CHECKED DNM

GENERAL SUMMARY

MUS-60-16.75

M060-GGS-003.DGN 12/18/08

SHEET NUMBER										ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
13	14														
														MAINTENANCE OF TRAFFIC	
	250									614	11100	250	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	
	50									614	12600	50	EACH	REPLACEMENT DRUM	
	16									614	18511	16	MONTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	14
LUMP										614	11000	LUMP		MAINTAINING TRAFFIC	
										619	16010	4	MONTH	FIELD OFFICE, TYPE B	
										623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
										624	10000	LUMP		MOBILIZATION	

CALCULATED JLS CHECKED DNM

GENERAL SUMMARY

MUS-60-16.75

M060_GGS_004.DGN 12/18/08

REFERENCE NO.	SHEET NO.	SURVEY AND CONSTRUCTION (STATION TO STATION)	SIDE	LENGTH	202						203	608	609		
					PAVEMENT REMOVED	WEARING COURSE REMOVED (3")	WALK REMOVED	CONCRETE MEDIAN REMOVED	CURB REMOVED	CURB AND GUTTER REMOVED	EXCAVATION	4" CONCRETE WALK, AS PER PLAN	COMBINATION CURB AND GUTTER, TYPE 2	CURB, TYPE 6	CONCRETE MEDIAN
			CL/LT./RT.	FT.	SQ. YD.	SQ. YD.	SQ. FT.	SQ. YD.	FT.	FT.	CU. YD.	SQ. FT.	FT.	FT.	SQ. YD.
		S.R. 60													
1-RD	24-26	25+00.00 TO 32+35.00	CL	735.00		808.7		291.9							1,100.6
2-RD	31	57+69.00 TO 59+02.00	CL	133.00		165.9		10.4							176.3
3-RD	33	Euclid Ave.	RT.			10.5									10.5
4-RD	36	Forest Ave.	LT.			27.8									27.8
5-RD	36	81+80.00 TO 82+30.00	LT.	50.00	33.4					50		300.0	50		
6-RD	36	Sheridan St.	RT.			4.6									4.6
7-RD	36	84+96.00 TO 85+06.00	LT.	10.00			60.0			10		60.0	10		
8-RD	36-39	Sheridan St. TO 85+93.00	RT.		26.7		515.3			123		755.3	123		
9-RD	37	88+52.00 TO 88+86.00	RT.	34.00	22.7					34		204.0	34		
10-RD	38	90+64.00 TO 91+10.00	RT.	46.00	30.7					46		276.0	46		
11-RD	39	at Dresden Rd.	RT.			34.3			22		2.0 (6")				40.5
12-RD	39	100+00.00 TO 100+48.00	LT.	48.00	21.4					48			48		
13-RD	42	112+63.00 TO 113+13.00	LT.	50.00	33.4					50		300.0	50		
14-RD		**Not Used**													
15-RD	42	114+86.00 TO 115+32.00	LT.	46.00	30.7					46		276.0	46		
16-RD		**Not Used**													
17-RD	44	122+15.00 TO 123+09.00	LT.	94.00	23.4		354.0		22	94		564.0	94	94	
18-RD	44	124+72.00 TO 125+23.00	LT.	51.00	34.0					51		306.0	51		
19-RD	44-45	North of Taylor St.	RT.	79.00			459.3					459.3			
20-RD	45	126+17.00 TO 126+80.00	RT.	63.00			378.0					378.0			
21-RD	45	126+23.00 TO 126+66.00	LT.	43.00	28.7					43		258.0	43		
22-RD	45	127+13.00 TO 127+91.00	LT.	78.00	52.0					78		468.0	78		
23-RD	45	128+16.00 TO 128+43.00	LT.	27.00	18.0					27		162.0	27		
24-RD	45	128+59.00 TO 128+77.00	RT.	18.00			108.0			18		108.0	18		
25-RD	45	129+45.00 TO 129+57.00	RT.	12.00			72.0			12		72.0	12		
26-RD	45	129+77.00 (at Taco Bell)	RT.			5.2									5.2
27-RD	45	129+96.00 TO 130+06.00	RT.	10.00			60.0			10		60.0	10		
28-RD	46	131+59.00 TO 132+15.00	RT.	56.00	37.4					56		336.0	56		
29-RD	46	133+19.00 TO 133+64.00	RT.	45.00	30.0					45		270.0	45		
29A-RD	46	133+22.00 TO 133+67.00	LT.	45.00	30.0					45		270.0	45		
30-RD	46	134+09.00 TO 134+54.00	LT.	45.00	30.0					45		270.0	45		
31-RD	47	139+31.00 TO 139+82.00	LT.	51.00	34.0					51		306.0	51		
32-RD	48	140+83.00 TO 141+37.00	LT.	54.00	36.0					54		324.0	54		
33-RD	46	149+05.00 TO 150+61.00	LT.	156.00	62.7		372.0			156		936.0	156		
34-RD	49	149+50.00 TO 149+93.00	RT.	43.00	28.7					43		258.0	43		
35-RD	52	James Rd.	RT.			4.6									4.6
36-RD	53	167+63.00 TO 167+76.00	RT.	13.00							1.0 (4")	78.0			
37-RD	53	168+05.00 TO 168+39.00	RT.	34.00	25.9							204.0	34		
38-RD	53-54	169+00.00 TO 174+00.00	CL	500.00		328.6									328.6
TOTALS (CARRIED TO SHEET 12)															
TOTALS (CARRIED TO GENERAL SUMMARY)					**669.8**	**1,390.2**	**2,378.6**	**302.3**	**44**	**1,235**	**3.0**	**8,258.6**	**1,269**	**94**	**1,698.7**

CALCULATED JLS CHECKED DNM

ROADWAY SUB-SUMMARY

MUS-60-16.75

M060_GSS_001.DGN 12/21/08

REFERENCE NO.	SHEET NO.	LOCATION	SIDE	202			608					TRUNCATED DOMES	609			COMMENTS
				WALK REMOVED	CURB REMOVED	CURB AND GUTTER REMOVED	4" CONCRETE WALK, AS PER PLAN (FOR RAMP AREA)	4" CONCRETE WALK, AS PER PLAN (EXTRA WALK)	CURB RAMPS				COMBINATION CURB AND GUTTER, TYPE 2	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN	CURB, TYPE 6	
									TYPE A1	TYPE A2	TYPE D					
			CL/LT./RT.	SQ. FT.	FT.	FT.	SQ. FT.	SQ. FT.	EACH	EACH	EACH	EACH	FT.	FT.	FT.	
		S.R. 60														
1-CR	26	at Zane St.	LT.	141.0		30	54.0	87.0	1				30			
2-CR	26	at Zane St.	RT.	124.0		25	54.0	70.0	1				25			
3-CR	26	at Zane St.	LT.	160.0		32	60.0	100.0			1		32			
4-CR	26	at Zane St.	RT.	177.0		40	60.0	117.0			1		40			
4A-CR	33	on Euclid Ave. @ Thurman St.	LT.	24.0	4		24.0			1					16	New located Curb Ramp.
4B-CR	33	on Euclid Ave. @ Thurman St.	RT.	24.0	4		24.0			1					16	New located Curb Ramp.
5-CR	34	at Adair Ave./Maple Ave. Intersection	LT.									1				Truncated Dome only.
6-CR	34	at Adair Ave./Maple Ave. Intersection	RT.	132.0		22	60.0	72.0			1		22			
7-CR	34	at Adair Ave./Maple Ave. Intersection	LT.	97.0		20	60.0	37.0			1		20			
8-CR	34	at Adair Ave./Maple Ave. Intersection	LT.									1				Truncated Dome only.
8A-CR	36	on Forest Ave. @ Ashland Ave.	LT.	24.0	4		24.0			1					12	New located Curb Ramp.
8B-CR	36	on Forest Ave. @ Ashland Ave.	RT.		4							1			4	Truncated Dome only.
9-CR	36	at Sheridan St.	RT.	48.0		10		48.0					10			Remove existing Curb Ramp.
10-CR	36	on Sheridan St. @ Alley	RT.			4	24.0	12.0		1			4		18	New relocated Curb Ramp.
11-CR	36	on Sheridan St. @ Alley	LT.			4	24.0			1			4		12	New relocated Curb Ramp.
12-CR	37	at Locust St.	LT.	91.0		15	54.0	37.0	1				15			Additional sidewalk for Traffic Signal Controller.
13-CR	37	at Locust St.	LT.	94.0		20	60.0	34.0			1		20			
14-CR	37	Sta. 86+45.00 to Sta. 86+61.00	RT.	96.0		16	54.0	42.0	1				16			New located Curb Ramp.
15-CR	39	Sta. 99+00.00 to Sta. 99+35.00	LT.	140.0		35	54.0	86.0	1				35			Remove Drive Access and construct new Curb Ramp.
16-CR	39	at Dresden Rd.	RT.									3				Truncated Domes only.
17-CR	39	at Dresden Rd.	RT.	80.0		17		80.0					17			Remove existing Curb Ramp.
18-CR	39	at Brown St.	LT.	56.0		19	54.0	2.0	1				19			
19-CR	40	at Brown St.	LT.	86.0		25	54.0	32.0	1				25			
20-CR	43	at Brookover Dr.	RT.	75.0		16	54.0	21.0	1				16			
21-CR	43	at Brookover Dr.	RT.	89.0		19	60.0	29.0			1		19			
22-CR	43	Sta. 116+86.00 to Sta. 117+02.00	LT.	96.0		16	54.0	42.0	1				16			
23-CR	44	at Taylor St.	RT.									1				Truncated Dome only.
24-CR	44	Sta. 124+56.00 to Sta. 124+72.00	LT.	96.0		16	54.0	42.0	1				16			
25-CR	44	at Taylor St.	RT.	57.0		16	54.0	3.0	1				16			
26-CR	44	at Taylor St.	LT.	134.0		38	54.0	80.0	1				38			
27-CR	45	at Taylor St.	LT.	176.0		35	54.0	122.0	2				35			
28-CR	45	Sta. 126+01.00 to Sta. 126+17.00	RT.	96.0		16	54.0	42.0	1				16			New located Curb Ramp.
29-CR	48	Sta. 144+47.00 to Sta. 144+70.00	LT.	138.0		23	108.0	30.0	2				23			Replace existing Curb Ramp and add new located Curb Ramp.
30-CR	48	Sta. 145+24.00 to Sta. 145+34.00	LT.	60.0		10	54.0	6.0	1				10			New located Curb Ramp.
31-CR	53	at Country Club Dr.	LT.	188.0		37	54.0	134.0	1				37			
32-CR	53	Sta. 167+47.00 to Sta. 167+63.00	RT.	96.0		16	54.0	42.0	1				16			
33-CR	53	at Country Club Dr.	LT.									1				New located Curb Ramp.
34-CR	57	at Country Fair Shopping	LT.									2				Truncated Domes only.
35-CR	60	at Brandywine Blvd.	RT.	59.0		28	24.0	35.0		1				28	20	Remove existing Curb Ramp.
36-CR	60	at Brandywine Blvd.	LT.	83.0		16	54.0	29.0	1					16		
37-CR	60	at Brandywine Blvd.	RT.	35.0		7	24.0	11.0		1				7		
38-CR	60	at Brandywine Blvd.	RT.	19.0		8	24.0			1				8	12	
39-CR	60	at Brandywine Blvd.	LT.									2				
40-CR	62	at Colony Dr.	RT.			16	54.0	18.0	1				16			New located Curb Ramp.
41-CR	62	at Colony Square Mall (South Entrance)	LT.	62.0		21	60.0	19.0			1		21			
42-CR	62	at Colony Square Mall (South Entrance)	LT.	55.0		16	54.0	17.0	1				16			
43-CR	63	at Colony Square Mall (North Entrance)	LT.	50.0		18	54.0	15.0	1				18			
44-CR	63	at Colony Square Mall (North Entrance)	RT.			16	54.0	15.0	1				16			New located Curb Ramp.
45-CR	63	at Colony Square Mall (North Entrance)	LT.	17.0		20	60.0	13.0			1		20			
SUB-TOTALS							1,968.0	1,621.0								
TOTALS (CARRIED TO GENERAL SUMMARY)				3,275.0	16	758	3,589.0		25	8	8	12	699	59	110	

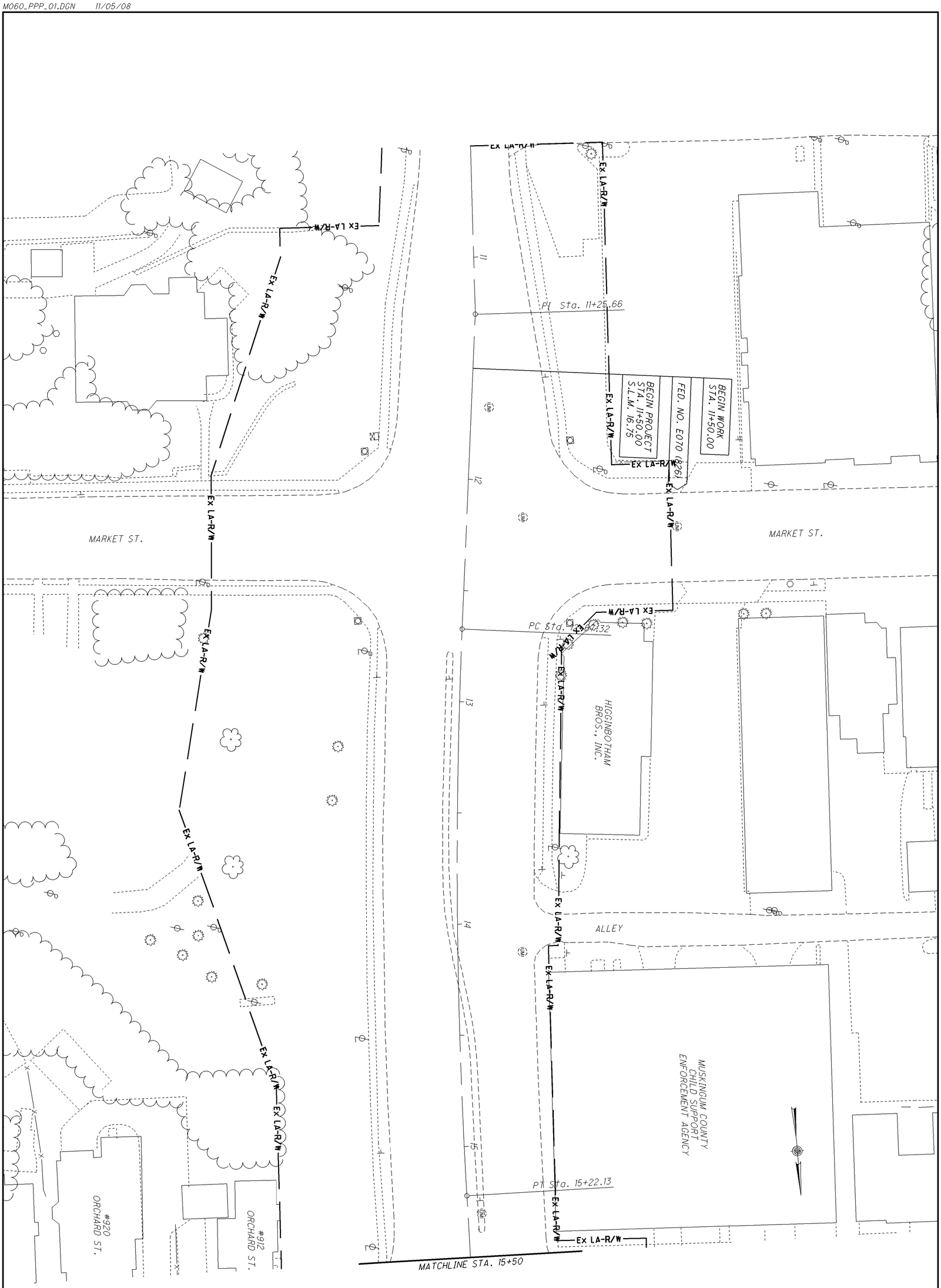
CALCULATED JLS
CHECKED DNM

CURB RAMP SUB-SUMMARY

MUS-60-16.75

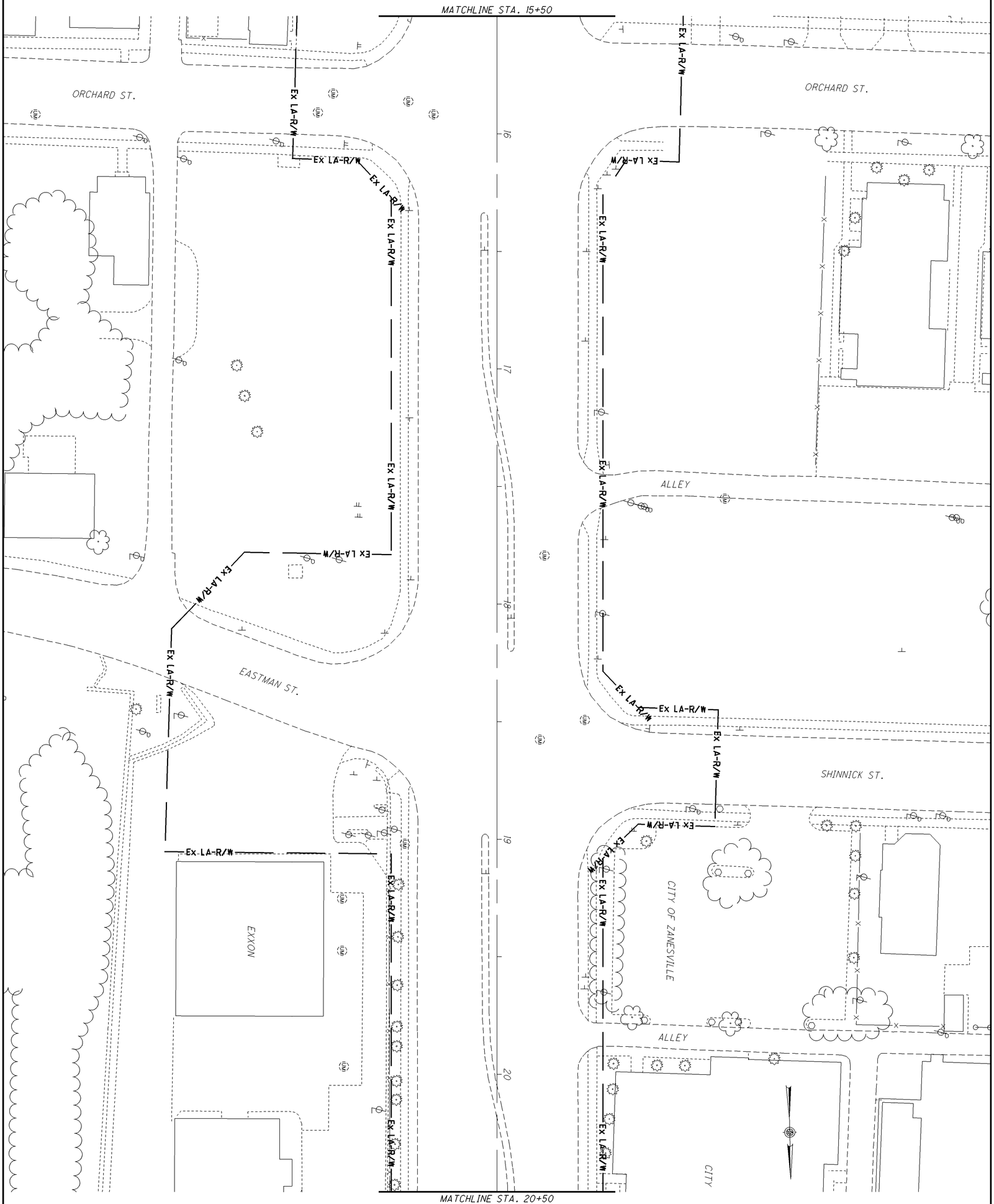
M060_CSS_002.DGN 12/17/08

M060_PPP_01.DGN 11/05/08

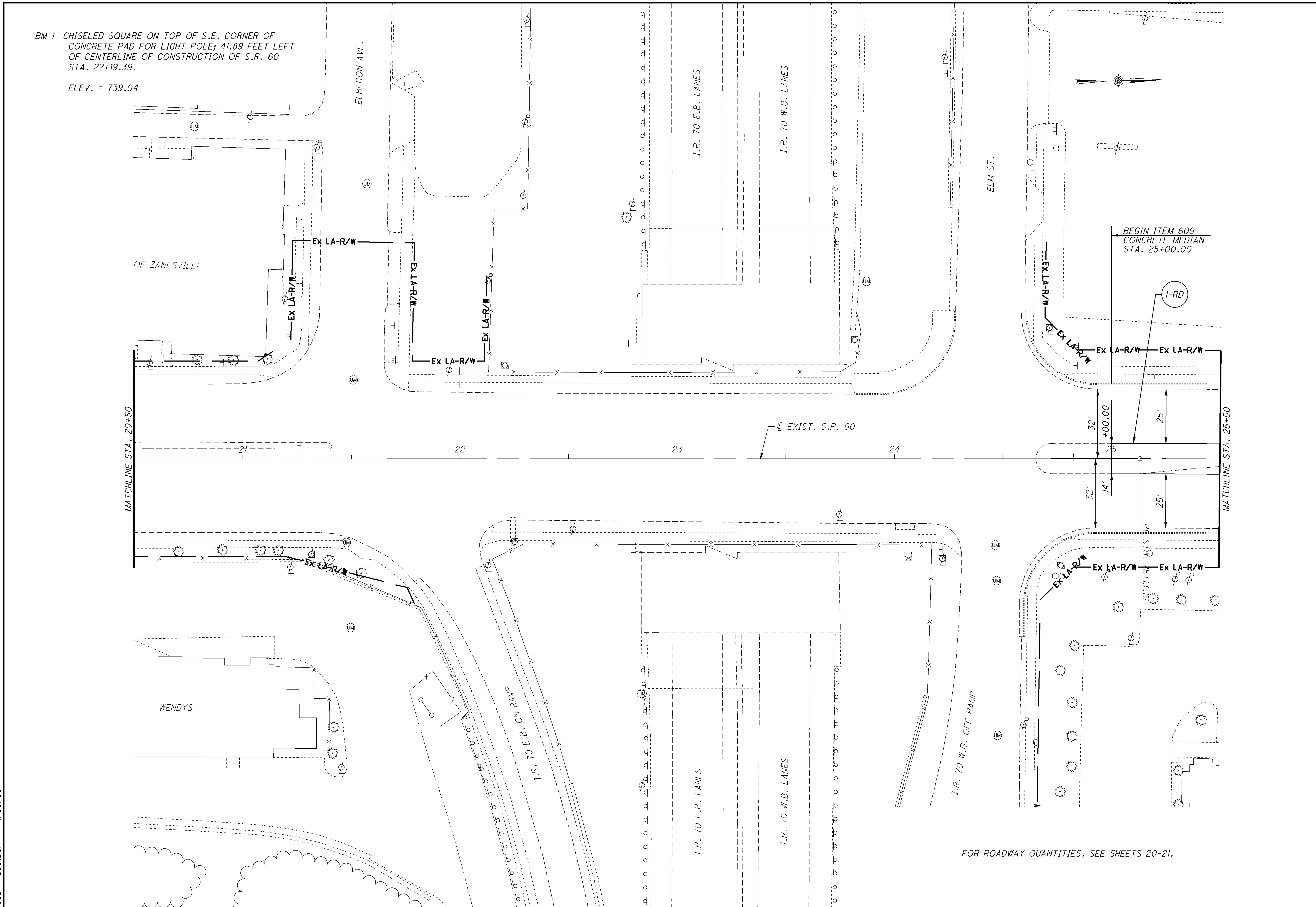


22 / 165	**MUS-60-16.75**	**PLAN SHEET** **STA. 10+50 TO STA. 15+50 (S.R. 60)**	CALCULATED JLS CHECKED DNM 0 20 40 HORIZONTAL SCALE IN FEET

M060_PPP_02.DGN 10/28/08



23 / 165	MUS-60-16.75	PLAN SHEET STA. 15+50 TO STA. 20+50 (S.R. 60)	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET



0 20 40
HORIZONTAL SCALE IN FEET

CALCULATED JLS
CHECKED DNM

PLAN SHEET
STA. 20+50 TO STA. 25+50 (S.R. 60)

MUS-60-16.75

M060_PPP_03.DGN 11/05/08

FOR ROADWAY QUANTITIES, SEE SHEETS 20-21.

LARRIMER AND LARRIMER ATTY'S.

1-RD

HOWARD ST.

Ex LA-R/W

EXISTING CONCRETE MEDIAN (TO BE REMOVED)

℄ EXIST. S.R. 60

ITEM 609 CONCRETE MEDIAN

MATCHLINE STA. 25+50

MATCHLINE STA. 30+50

PT STA. 28+78.08

BOB EVANS

OLIVE GARDEN

26 27 28 29 30

7' 25' 14' 32'

(UM)

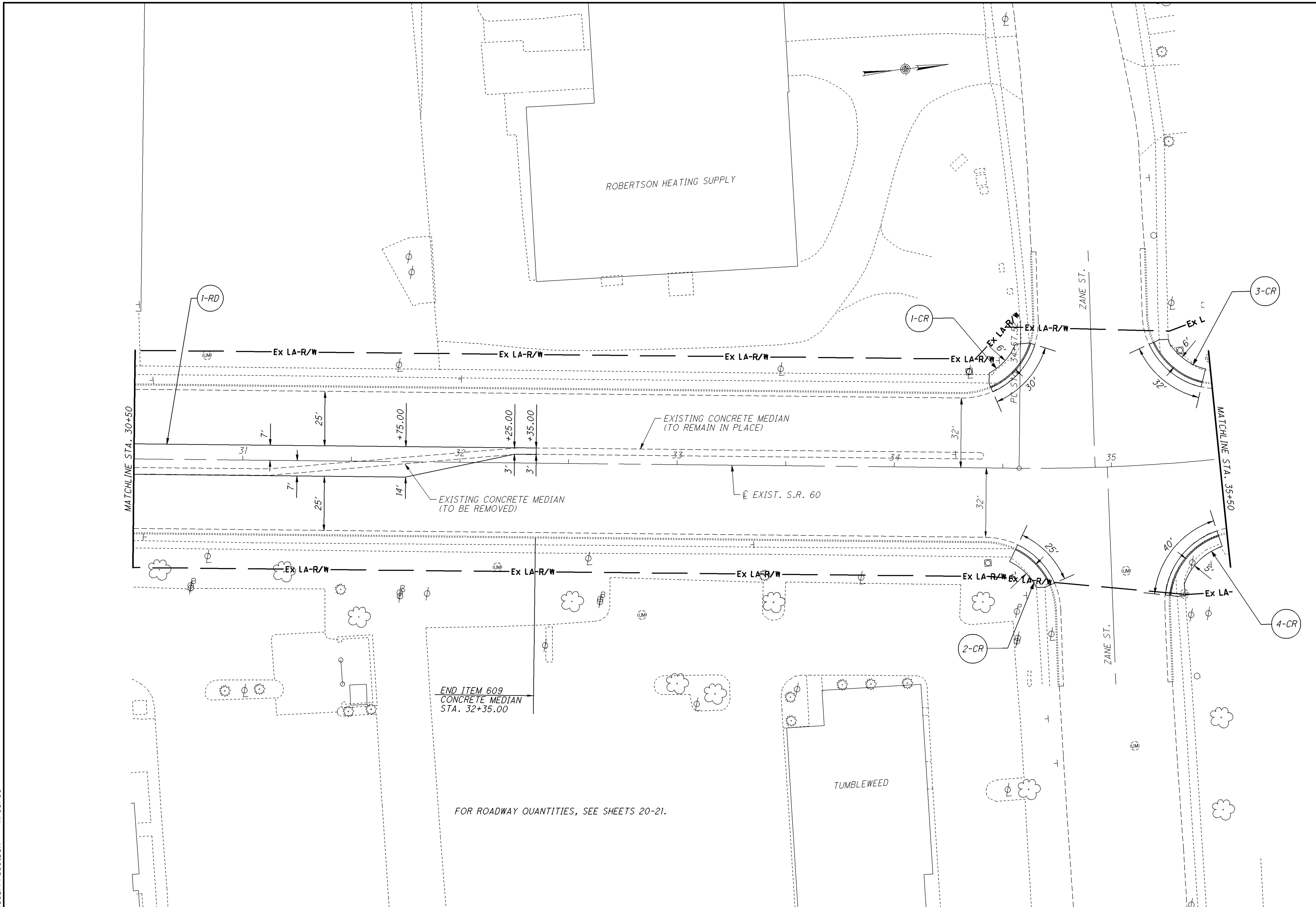
M060_PPP_04.DGN 11/05/08

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

PLAN SHEET
STA. 25+50 TO STA. 30+50 (S.R. 60)

MUS-60-16.75



0 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED JLS
CHECKED DNM

PLAN SHEET
STA. 30+50 TO STA. 35+50 (S.R. 60)

MUS-60-16.75

M060_PPP_05.DGN 11/05/08

PLAN SHEET

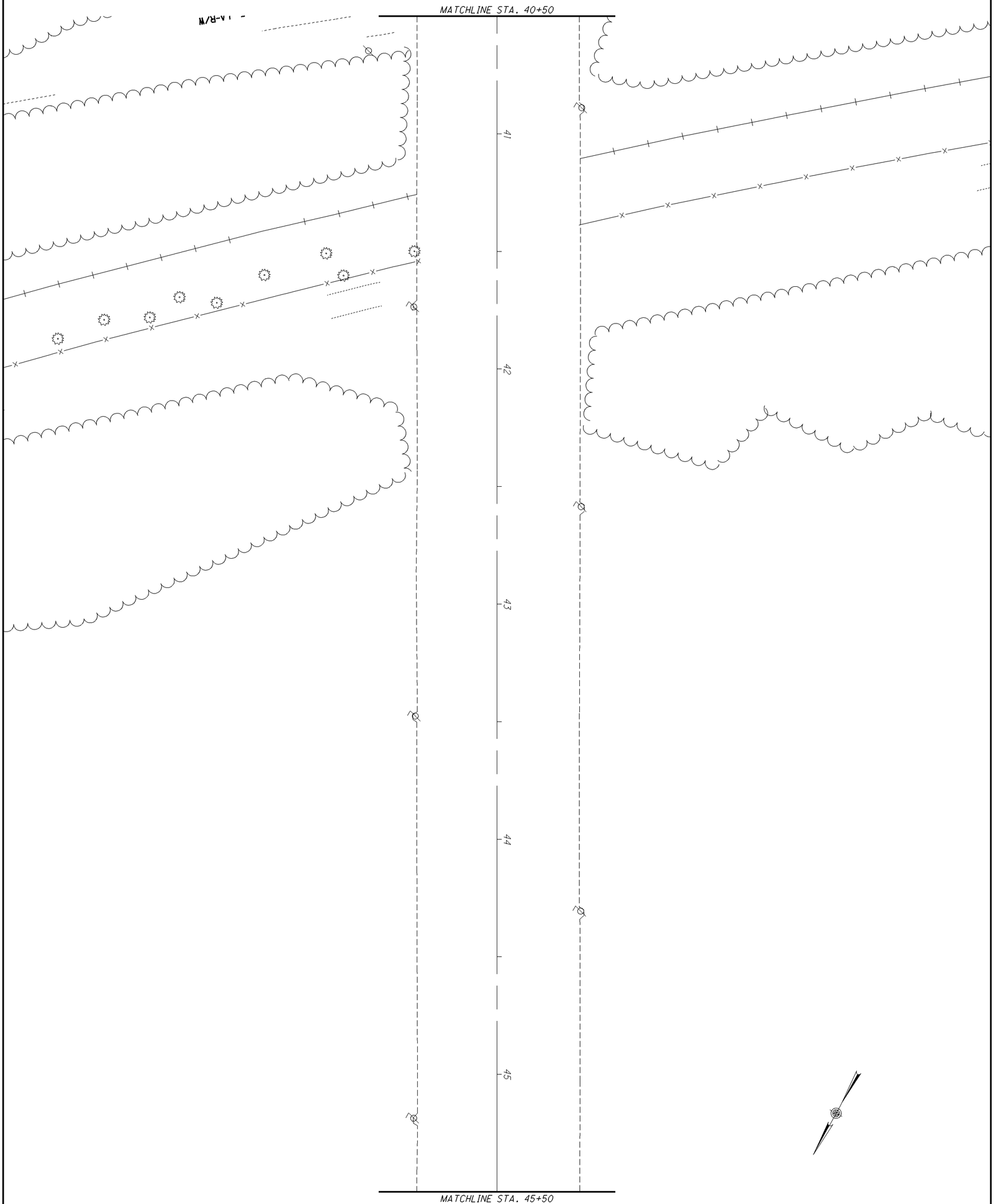
STA. 35+50 TO STA. 40+50 (S.R. 60)

MUS-60-16.75

CALCULATED JLS
CHECKED DNM

0 20 40
HORIZONTAL SCALE IN FEET

M060_PPP_06.DGN 10/28/08



MUS-60-16.75

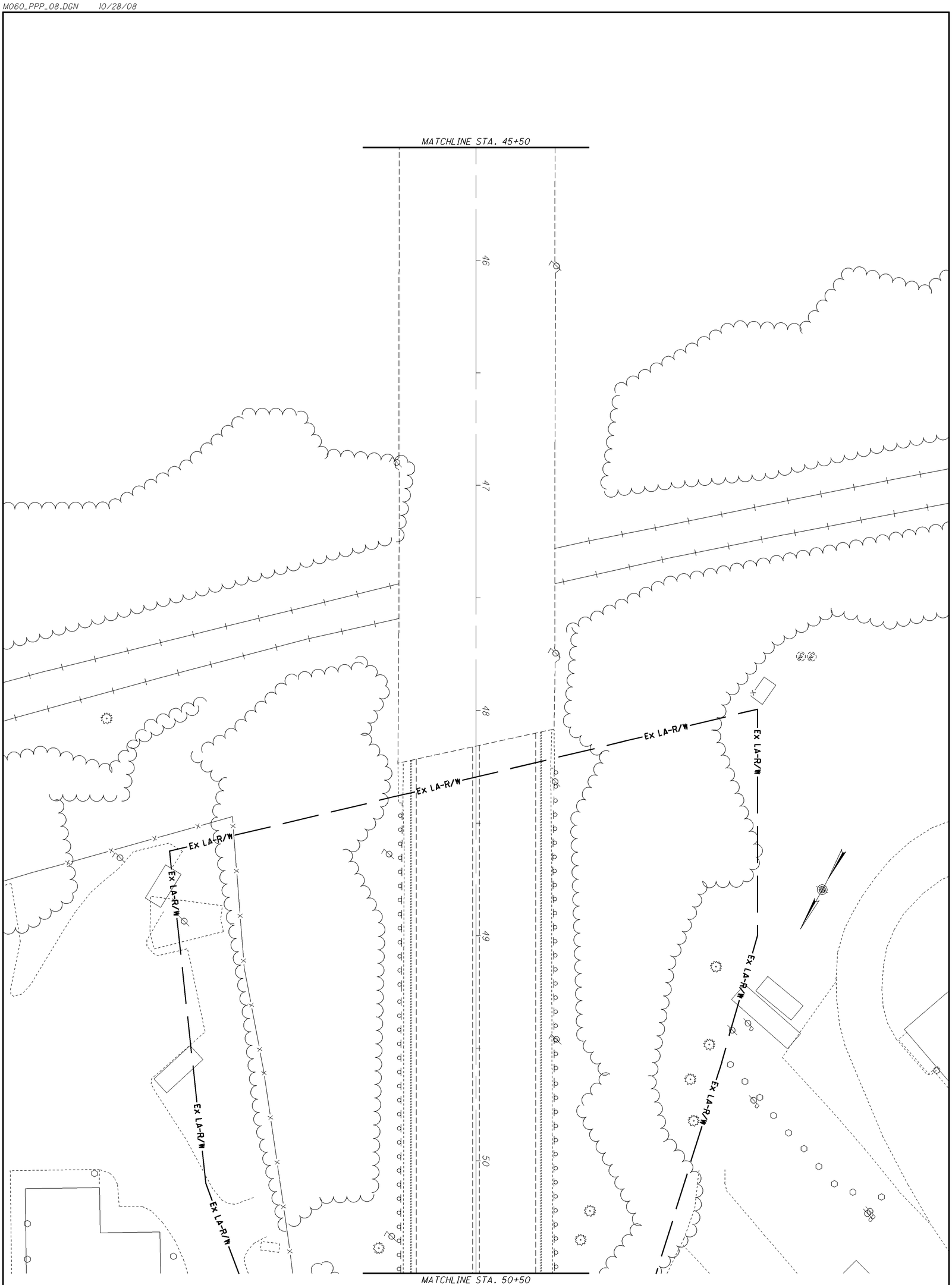
PLAN SHEET

STA. 40+50 TO STA. 45+50 (S.R. 60)

CALCULATED JLS
CHECKED DNM

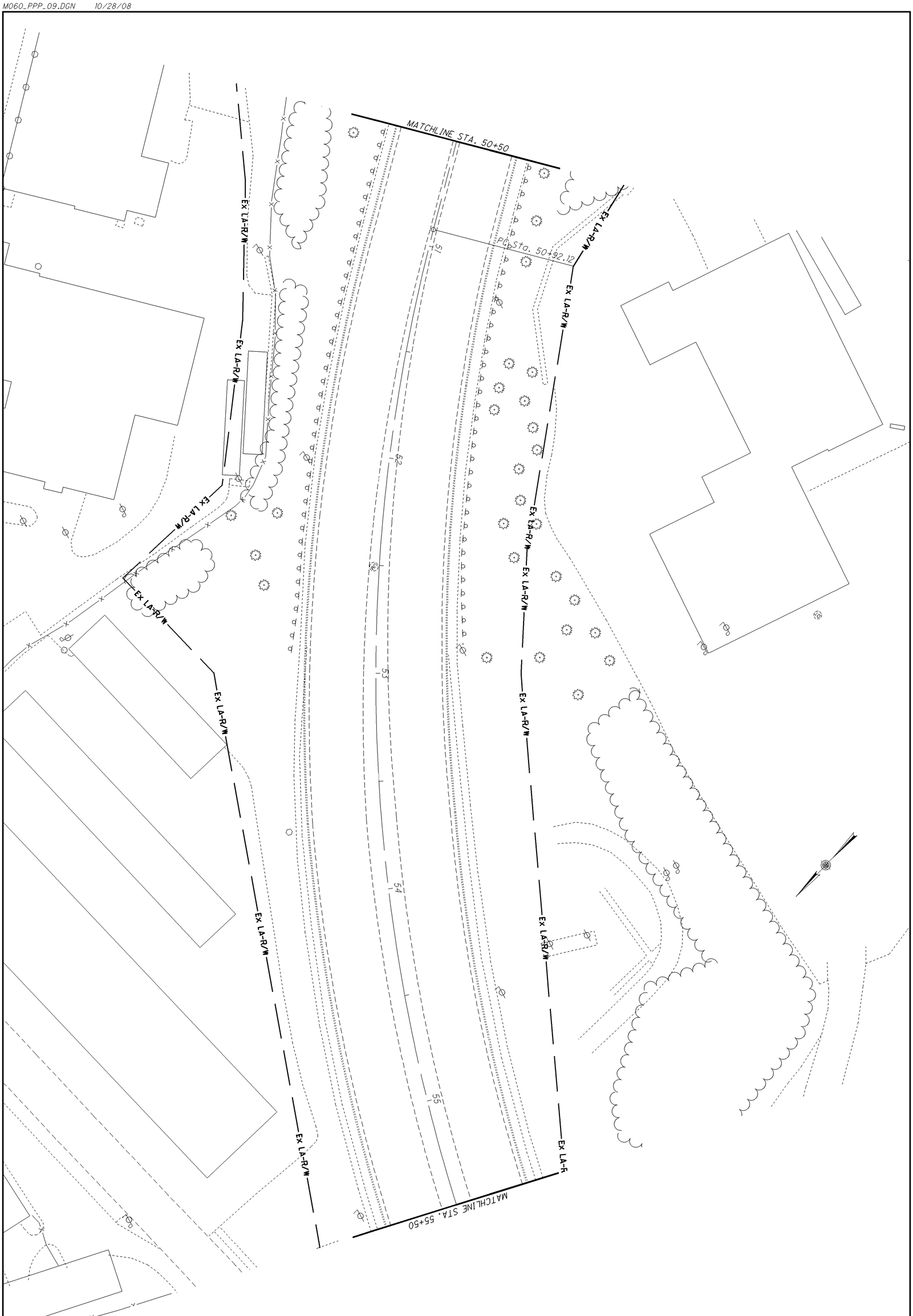
0 20 40
HORIZONTAL SCALE IN FEET

M060_PPP_08.DGN 10/28/08



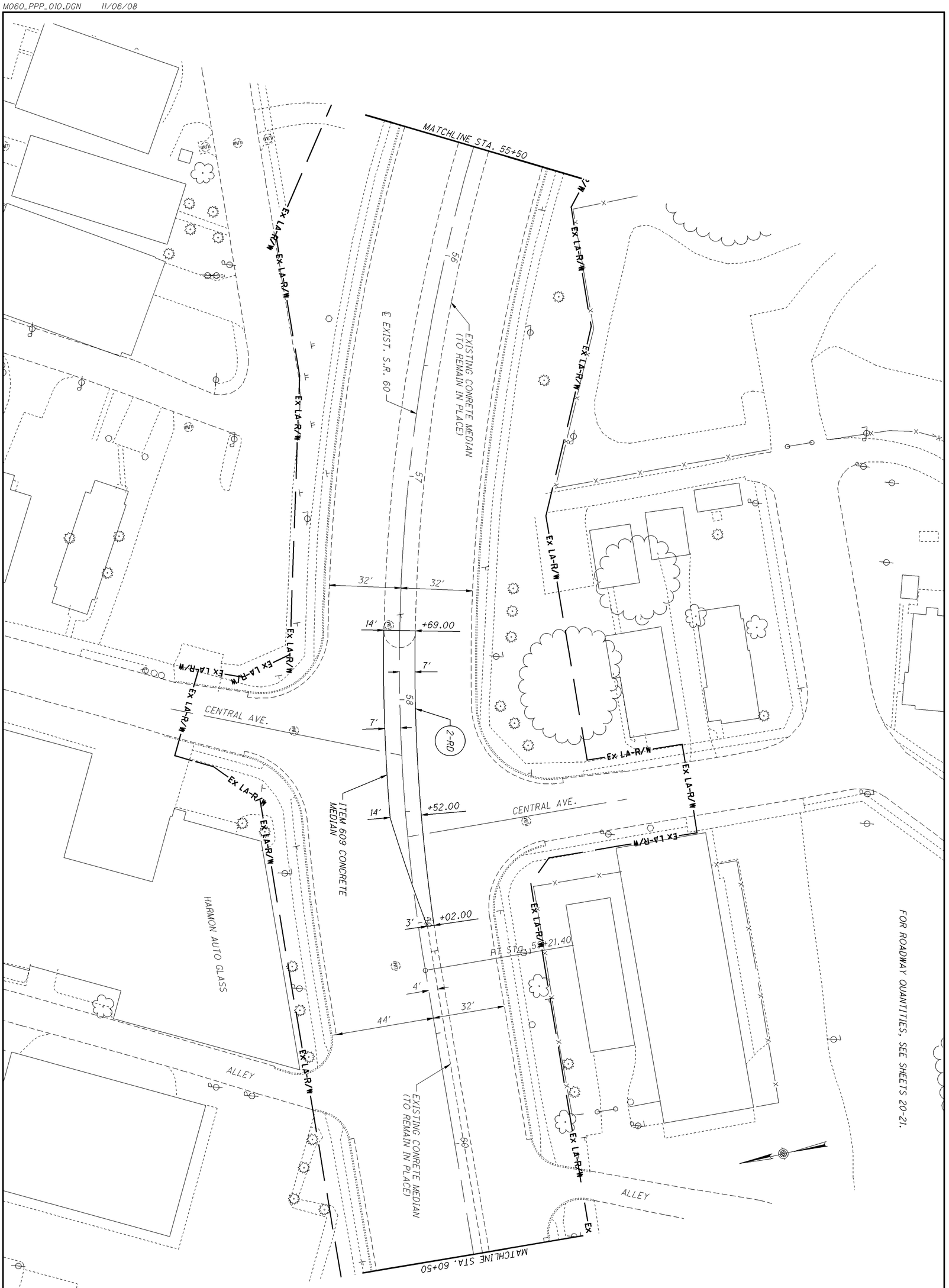
29 / 165	**MUS-60-16.75**	**PLAN SHEET** **STA. 45+50 TO STA. 50+50 (S.R. 60)**	CALCULATED JLS CHECKED DNM 0 20 40 HORIZONTAL SCALE IN FEET

M060_PPP_09.DGN 10/28/08



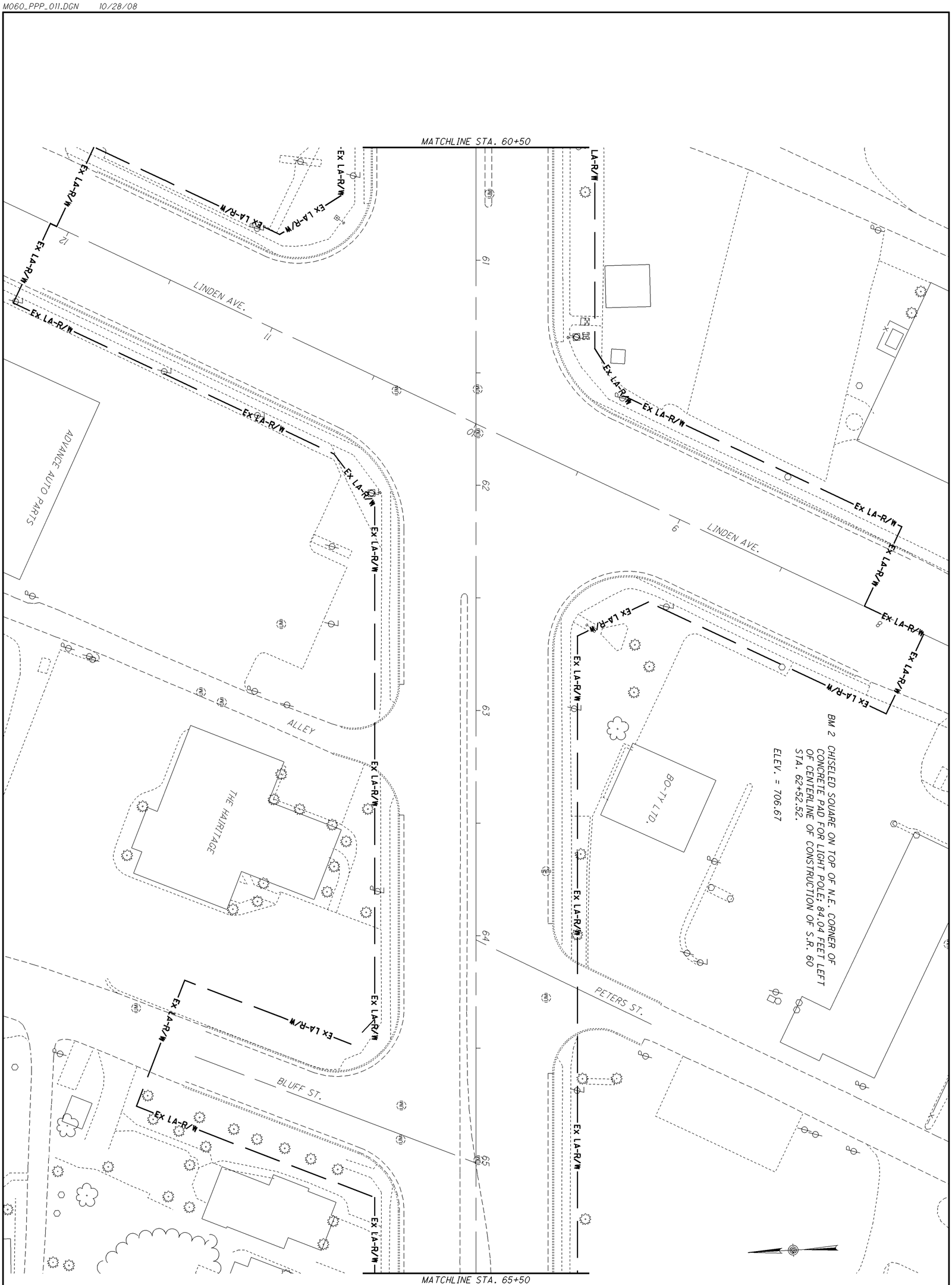
155 / 30	MUS-60-16.75	PLAN SHEET STA. 50+50 TO STA. 55+50 (S.R. 60)	CALCULATED JLS CHECKED DNM 0 20 40 HORIZONTAL SCALE IN FEET

M060_PPP_010.DGN 11/06/08



37 / 165	**MUS-60-16.75**	**PLAN SHEET** **STA. 55+50 TO STA. 60+50 (S.R. 60)**	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET

M060_PPP_011.DGN 10/28/08



32/165	MUS-60-16.75	PLAN SHEET STA. 60+50 TO STA. 65+50 (S.R. 60)	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET

FOR ROADWAY QUANTITIES, SEE SHEETS 20-21.

MATCHLINE STA. 65+50

MATCHLINE STA. 70+50

66 67 68 69 70

EXIST. ℄ S.R. 60

EXISTING CONCRETE MEDIAN (TO REMAIN IN PLACE)

EXISTING CONCRETE MEDIAN (TO REMAIN IN PLACE)

Ex LA-R/W

Ex SH

3-RD

2' RAD.

4'

2'

14'

ITEM 609 CONCRETE MEDIAN

EUCLID AVE.

ALLEY

THURMAN ST.

4A-CR

4B-CR

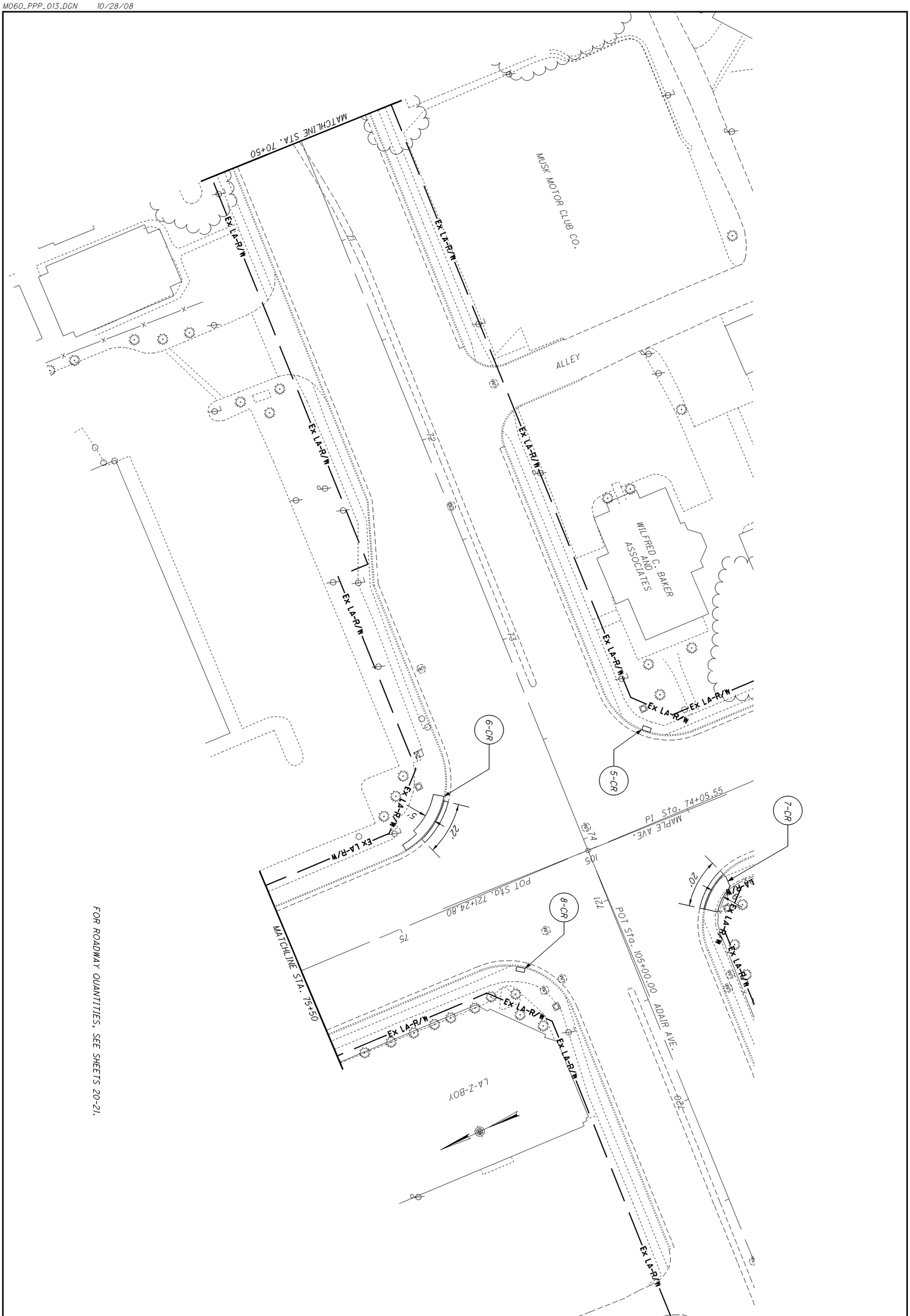
M060_PPP_012.DGN 12/18/08

PLAN SHEET
STA. 65+50 TO STA. 70+50 (S.R. 60)

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

MUS-60-16.75



FOR ROADWAY QUANTITIES, SEE SHEETS 20-21.

34/165	MUS-60-16.75	PLAN SHEET STA. 70+50 TO STA. 75+50 (S.R. 60)	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET

LA-Z-BOY

DR. R. D. WHITAKER

CAS TECH

Ex LA-R/W

Ex SH

MATCHLINE STA. 75+50

MATCHLINE STA. 80+50

76

77

78

79

80

Ex LA-R/W

Ex SH

THURMAN ST.

CVS

FAMILY DOLLAR

ITALIAN EATERY

DAIRY QUEEN

M060_PPP_014.DGN 10/28/08

HORIZONTAL SCALE IN FEET

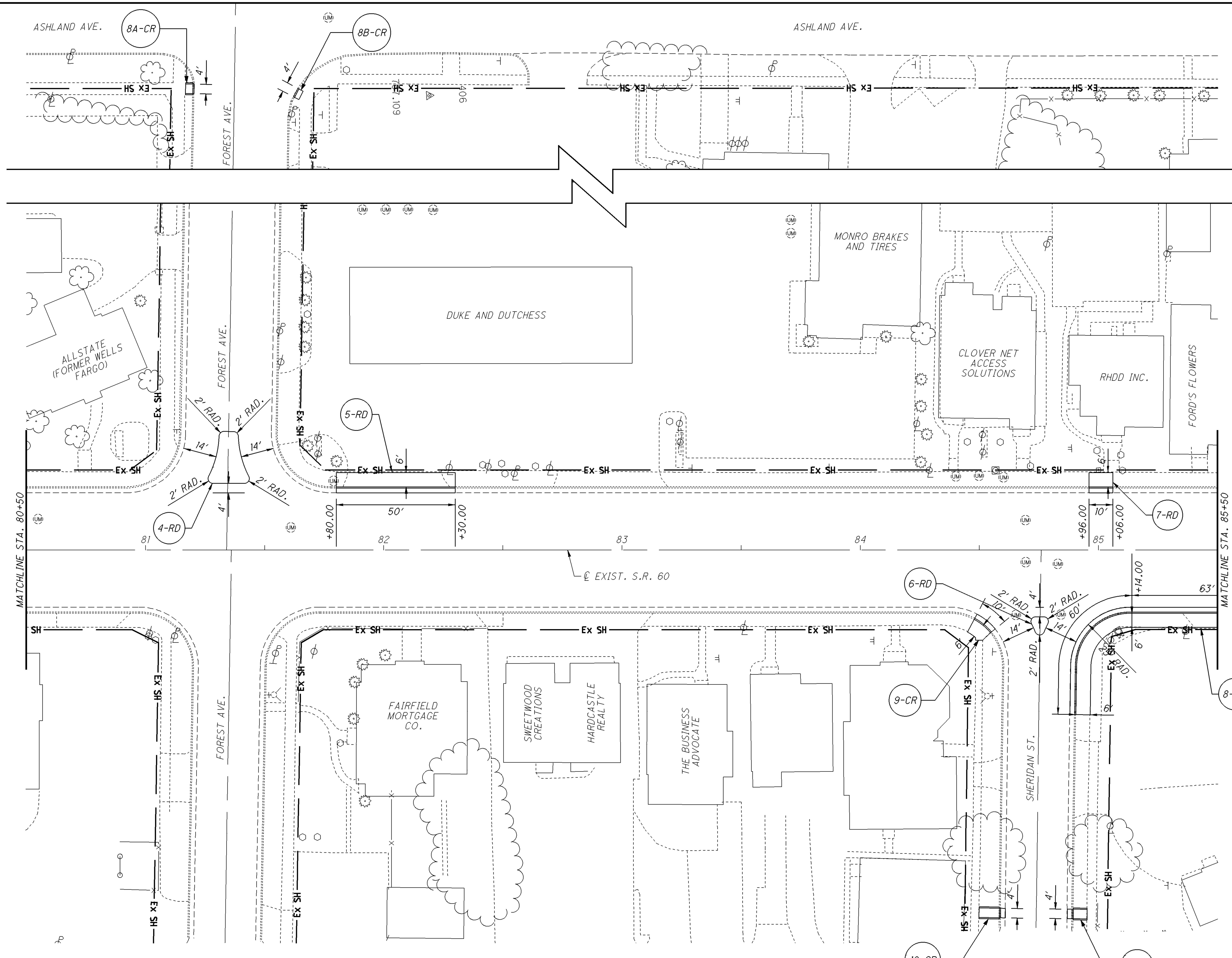
0 20 40

CALCULATED JLS

CHECKED DNM

PLAN SHEET
STA. 75+50 TO STA. 80+50 (S.R. 60)

MUS-60-16.75



FOR ROADWAY QUANTITIES, SEE SHEETS 20-21.

HORIZONTAL SCALE IN FEET 0 20 40

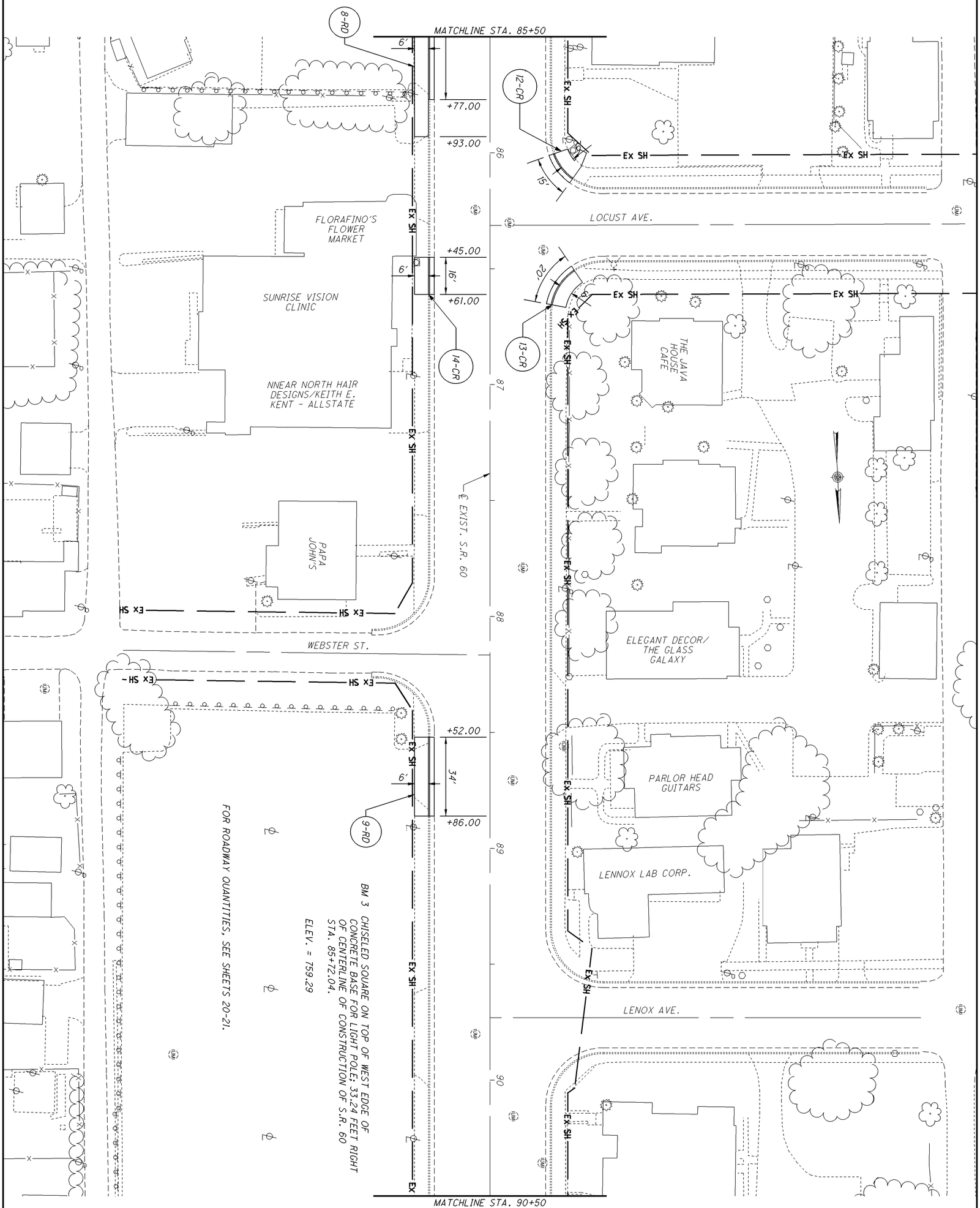
CALCULATED JLS
CHECKED DNM

PLAN SHEET
STA. 80+50 TO STA. 85+50 (S.R. 60)

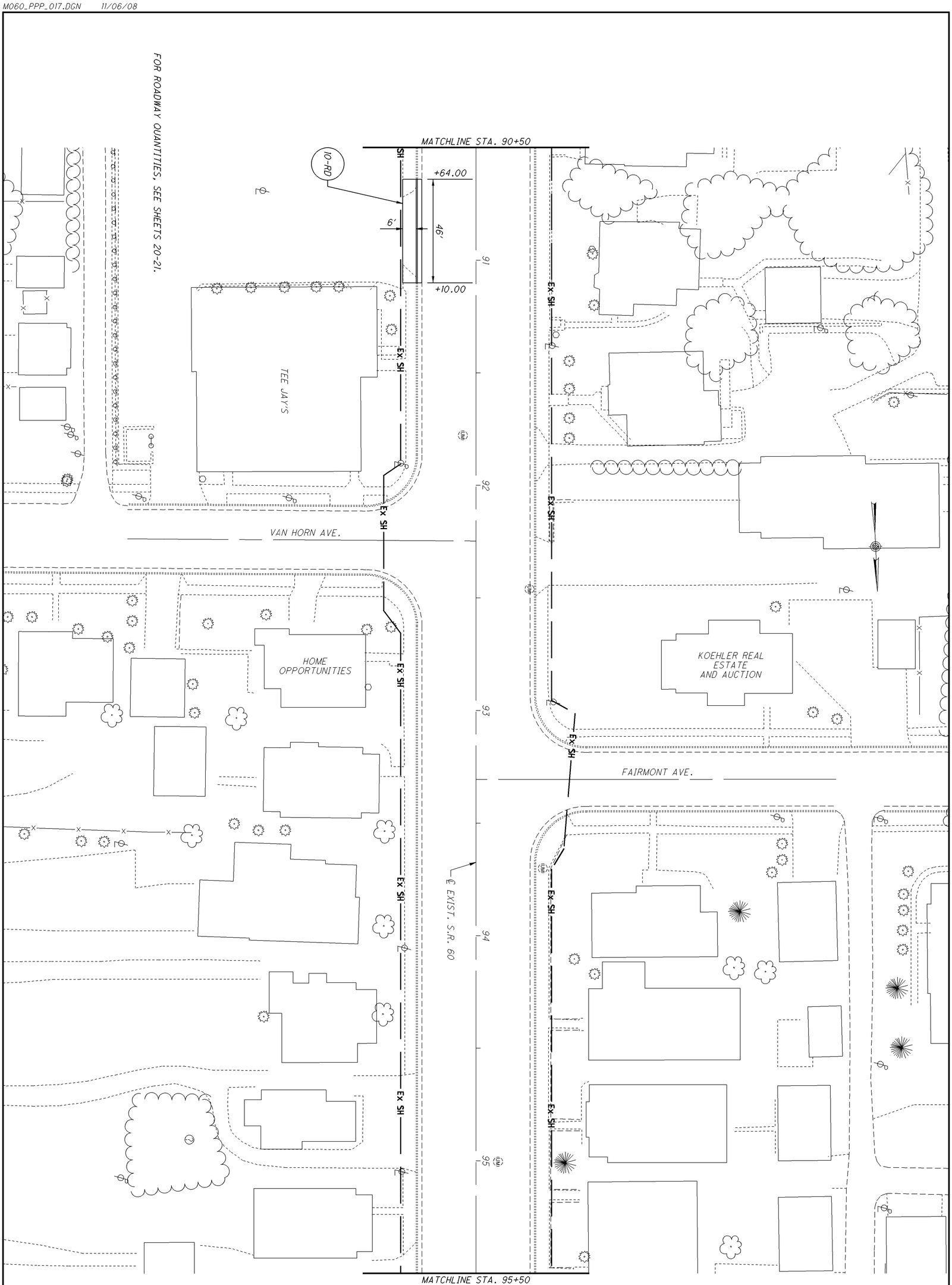
MUS-60-16.75

M060_PPP_015.DGN 11/06/08

M060_PPP_016.DGN 11/06/08



37 / 165	MUS-60-16.75	PLAN SHEET STA. 85+50 TO STA. 90+50 (S.R. 60)	CALCULATED JLS CHECKED DNM 0 20 40 HORIZONTAL SCALE IN FEET



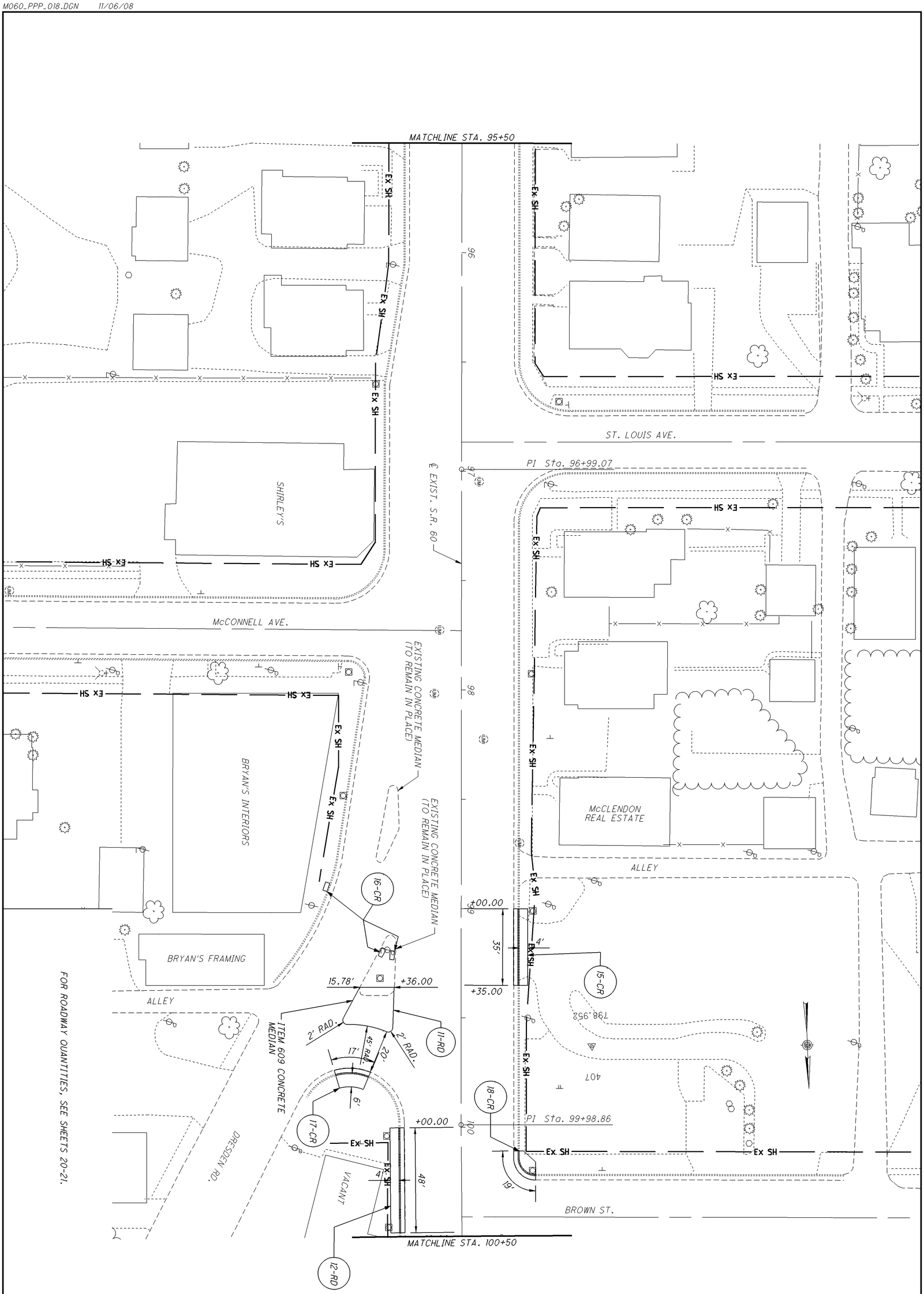
MUS-60-16.75

PLAN SHEET
STA. 90+50 TO STA. 95+50 (S.R. 60)

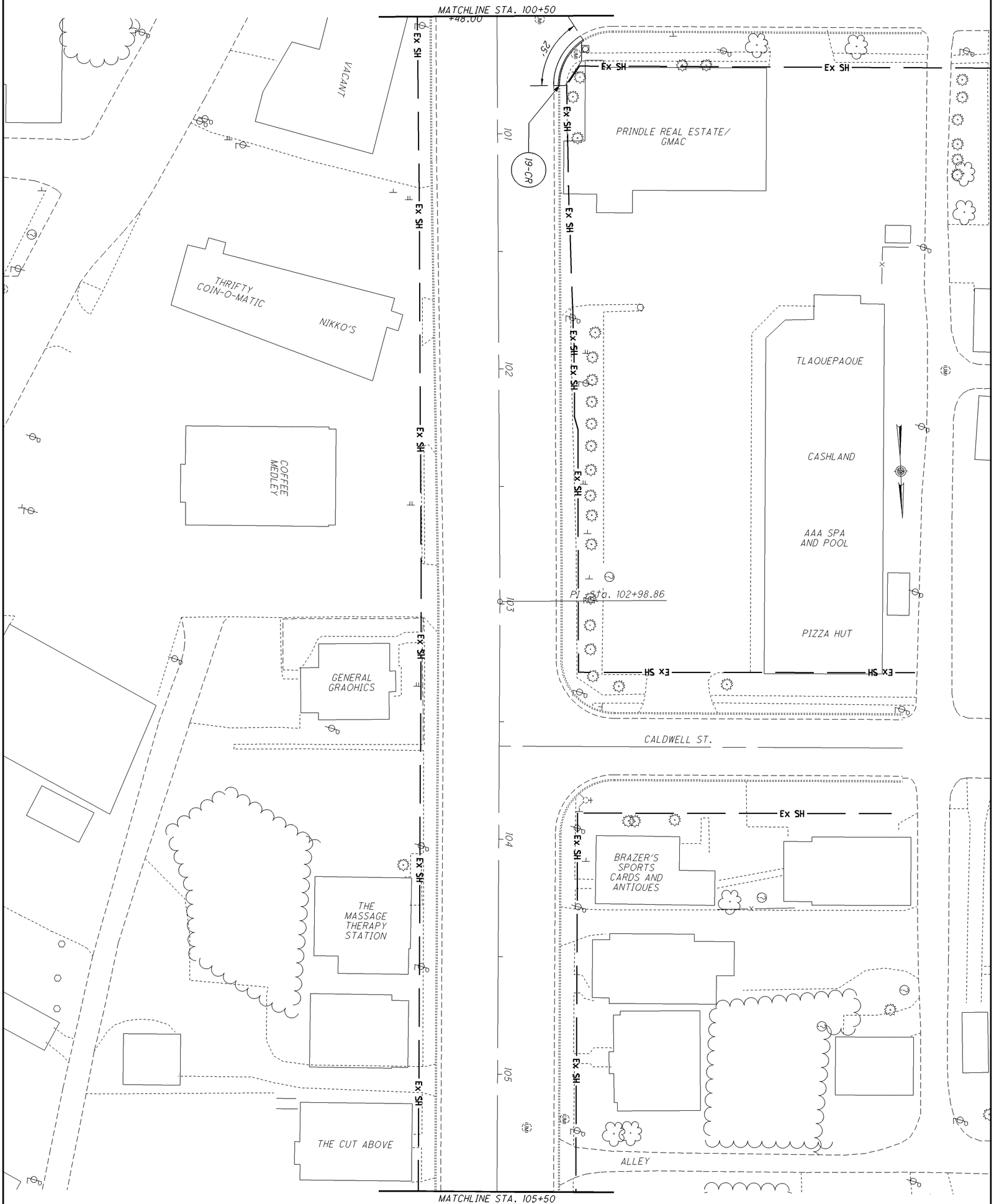
CALCULATED JLS
CHECKED DNM

0 20 40
HORIZONTAL SCALE IN FEET

M060_PPP_018.DGN 11/06/08

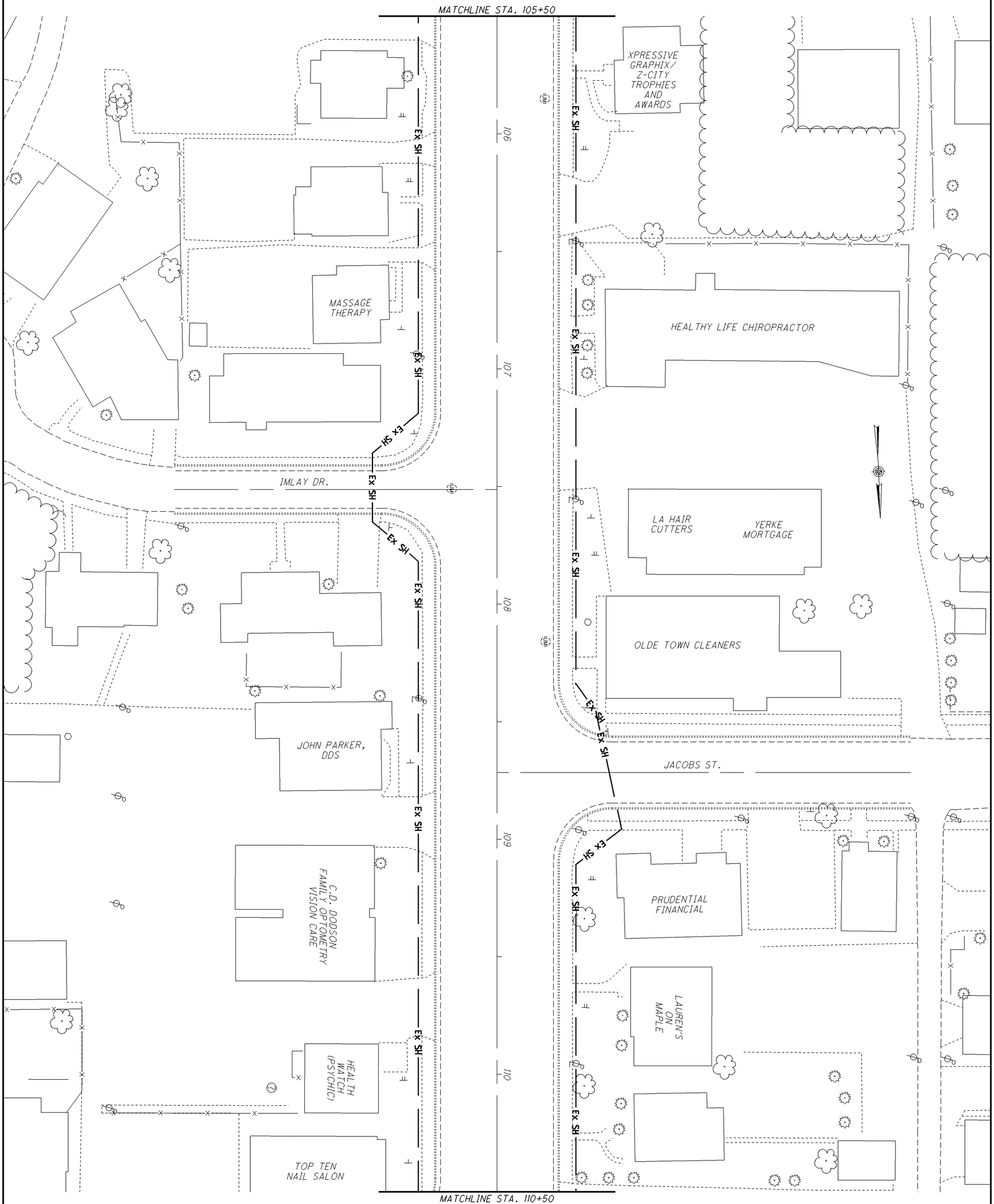


39 / 165	MUS-60-16.75	PLAN SHEET STA. 95+50 TO STA. 100+50 (S.R. 60)	CALCULATED JLS CHECKED DNM 0 20 40 HORIZONTAL SCALE IN FEET

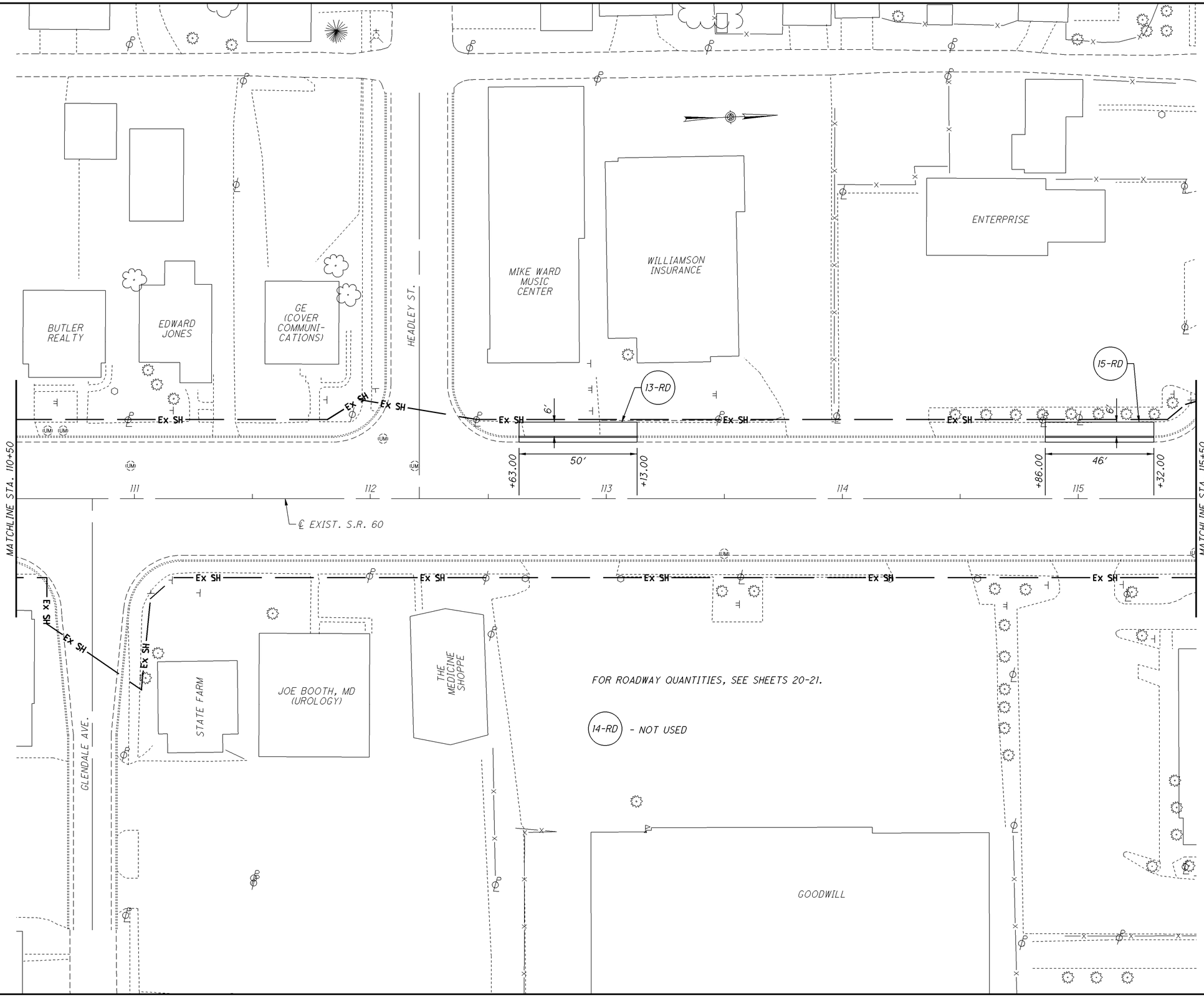


165 / 40	MUS-60-16.75	PLAN SHEET STA. 100+50 TO STA. 105+50 (S.R. 60)	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET

M060_PPP_020.DGN 10/29/08



41 / 165	**MUS-60-16.75**	**PLAN SHEET** **STA. 105+50 TO STA. 110+50 (S.R. 60)**	CALCULATED JLS CHECKED DNM 0 20 40 HORIZONTAL SCALE IN FEET



M060_PPP_021.DGN 11/06/08

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

PLAN SHEET
STA. 110+50 TO STA. 115+50 (S.R. 60)

MUS-60-16.75

WHITAKER DENTAL
SPRAGGS HAIR FASHIONS
FIRST IMPRESSIONS
McWERTER DENTIST
ACTION TOTAL STAFFING
ADVANCED/ PEARL VISION
SOMERS ST.
ARTIS DR.
Ex SH
6'
+86.00
16'
+02.00
22-CR
116
117
118
119
120
℄ EXIST. S.R. 60
MATCHLINE STA. 115+50
MATCHLINE STA. 120+50
16'
19'
20-CR
21-CR
BROOKOVER AVE.
KENTUCKY FRIED CHICKEN
ARDORNETTO'S
GIACONO'S BREAD AND MORE

FOR ROADWAY QUANTITIES, SEE SHEETS 20-21.

16-RD - NOT USED

M060_PPP_022.DGN 11/06/08

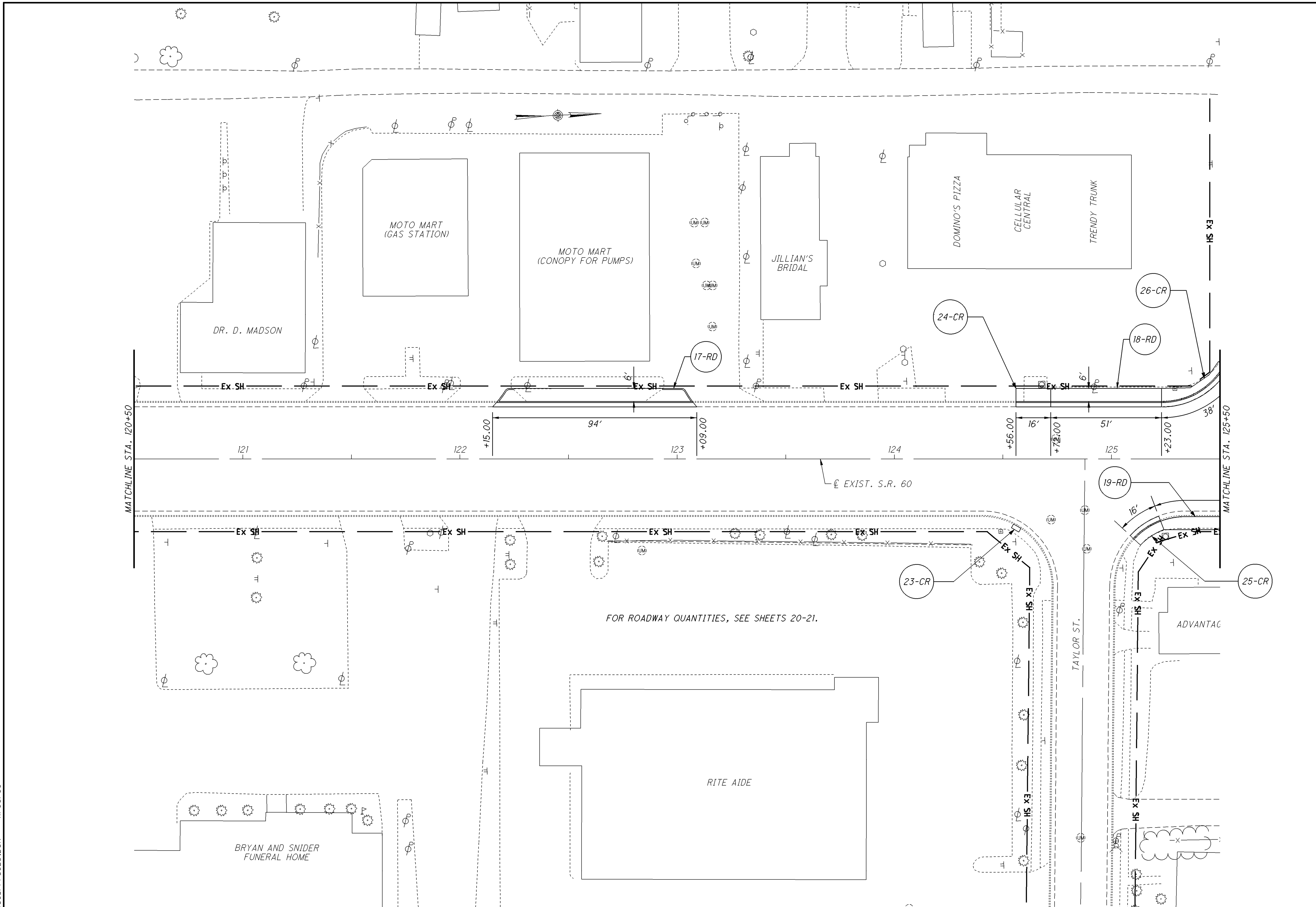
.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

PLAN SHEET
STA. 115+50 TO STA. 120+50 (S.R. 60)

MUS-60-16.75



M060_PPP_023.DGN 11/06/08

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

PLAN SHEET
STA. 120+50 TO STA. 125+50 (S.R. 60)

MUS-60-16.75

PLAN SHEET
STA. 125+50 TO STA. 130+50 (S.R. 60)

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

MUS-60-16.75

M060_PPP_024.DGN 11/06/08

MATCHLINE STA. 125+50

MATCHLINE STA. 130+50

TAYLOR ST.

WINTON AVE.

℄ EXIST. S.R. 60

GO KLEEN
(CAR WASH)

SEAN BONNER, DO

MASSAGE
THERAPIST

EXPRESS
PAYDAY
LOANS

NAIL SPA

TACO BELL

Ex SH

27-CR
21-RD
22-RD
23-RD
19-RD
28-CR
20-RD
24-RD
25-RD
26-RD
27-RD

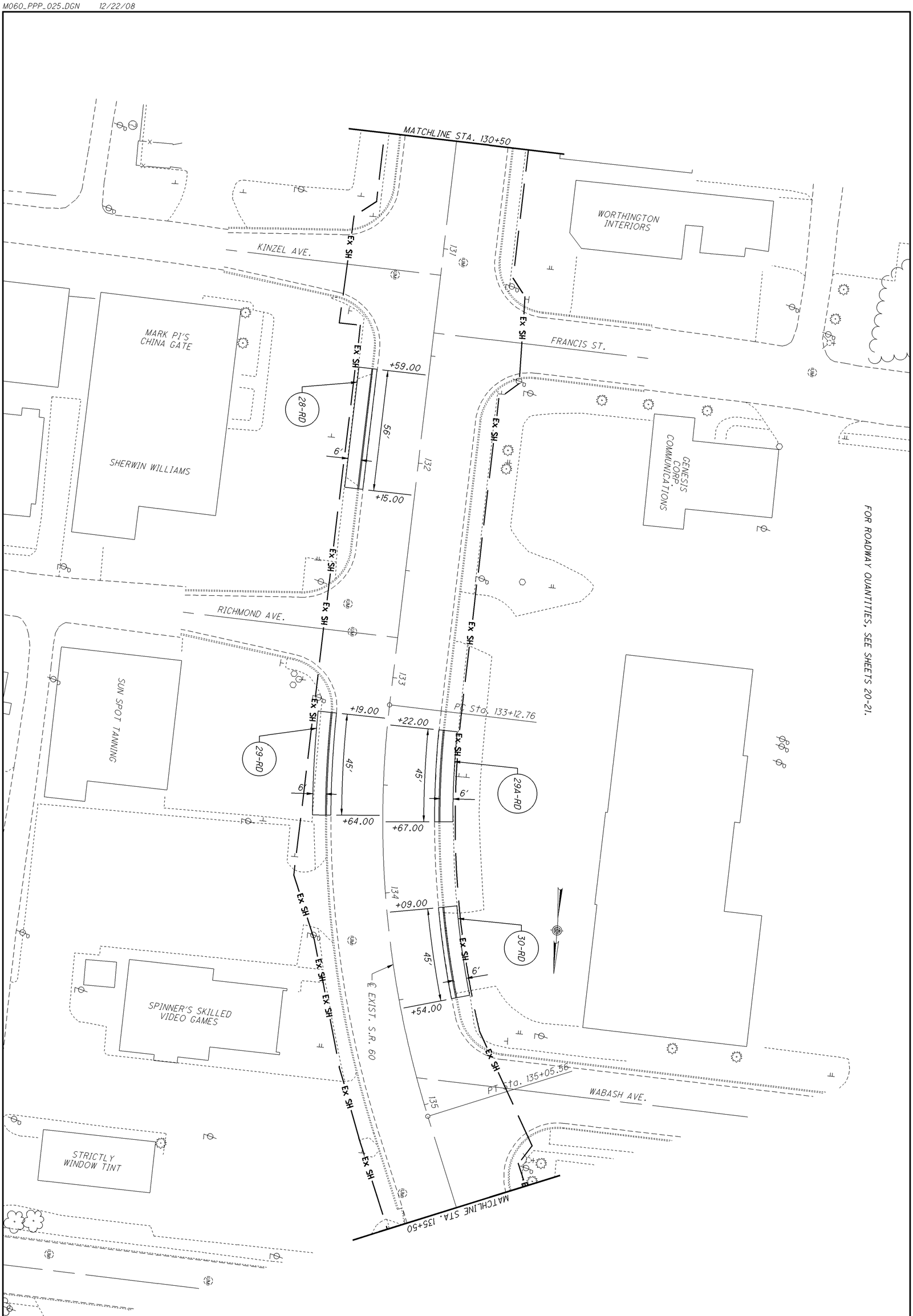
35′
43′
78′
27′
79′
16′
63′
18′
12′
14′
10′
6′
2′ RAD.
4′

126 127 128 129 130

+23.00 +66.00 +13.00 +91.00 +16.00 +43.00 +01.00 +17.00 +80.00 +59.00 +77.00 +45.00 +57.00 +96.00 +06.00

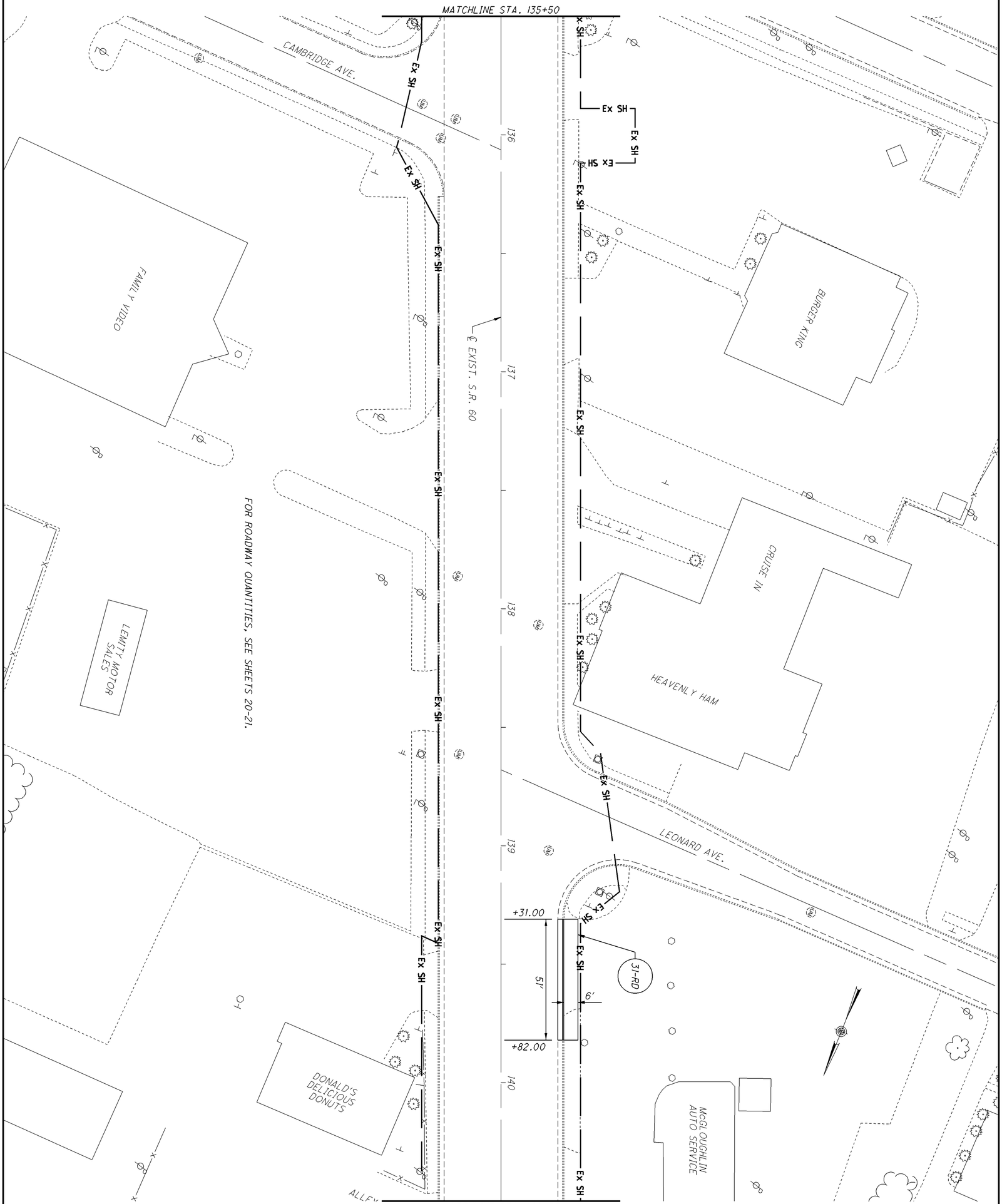
FOR ROADWAY QUANTITIES, SEE SHEETS 20-21.

M060_PPP_025.DGN 12/22/08

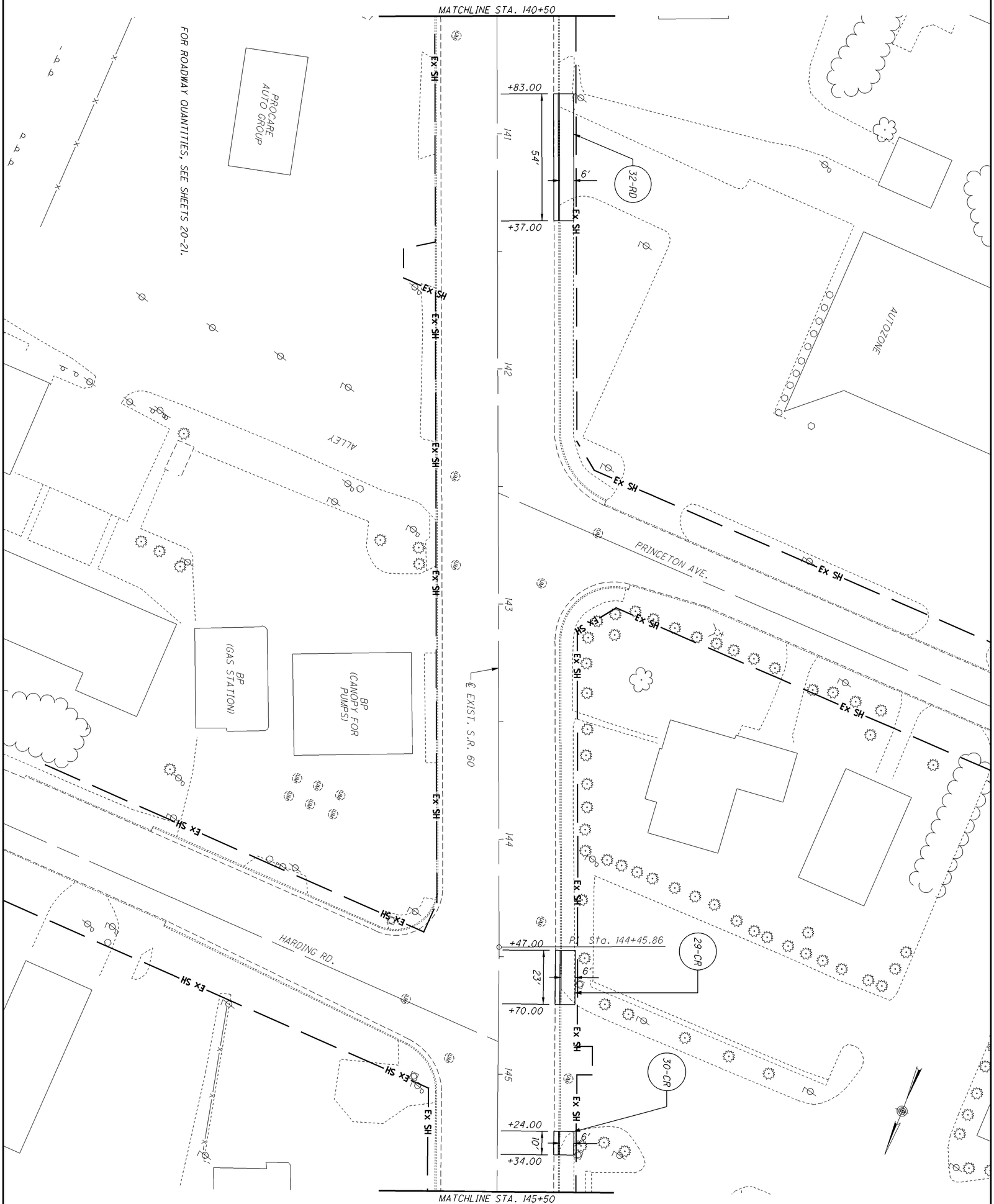


165 / 46	MUS-60-16.75	PLAN SHEET STA. 130+50 TO STA. 135+50 (S.R. 60)	CALCULATED JLS CHECKED DNM 0 20 40 HORIZONTAL SCALE IN FEET

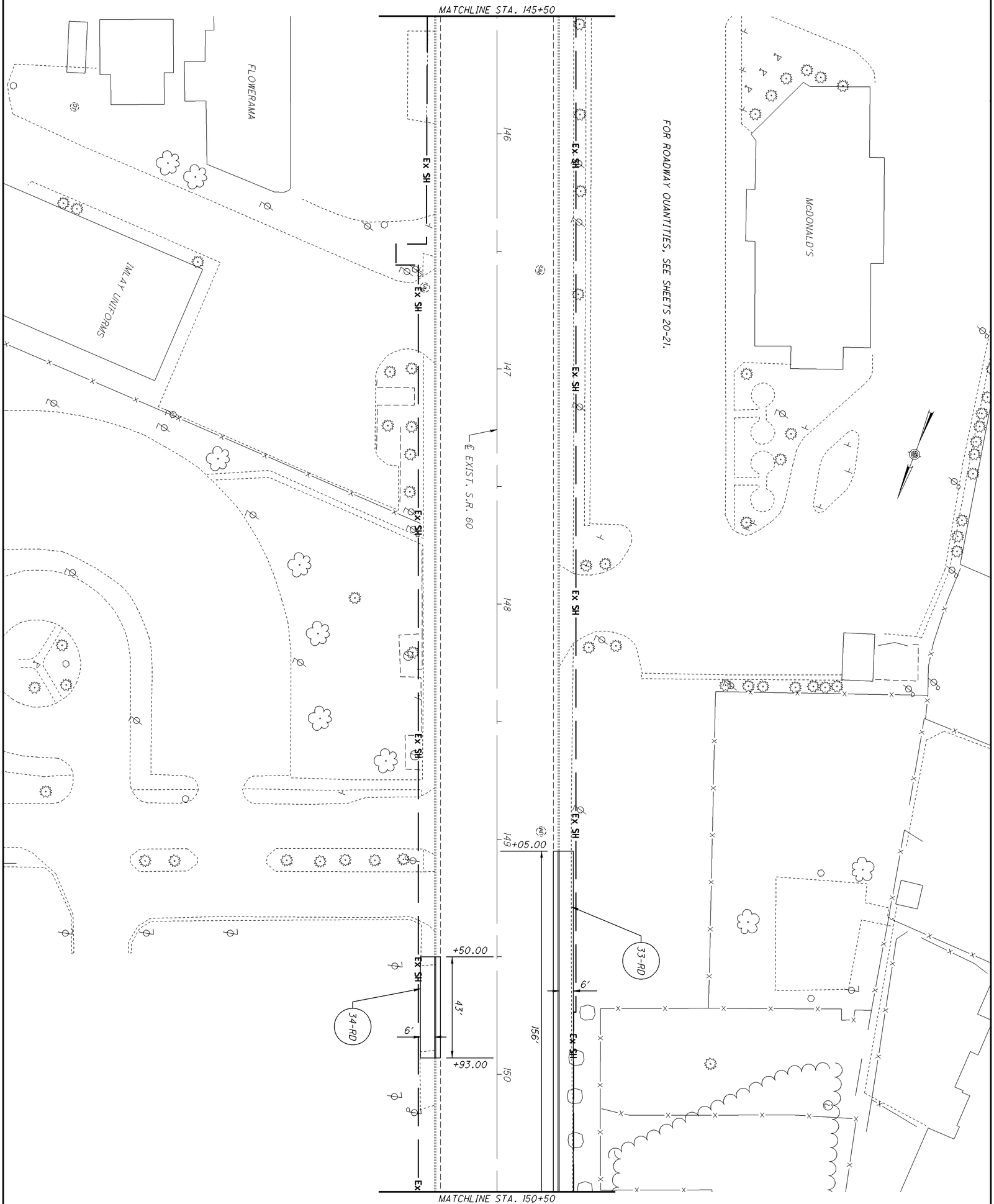
M060_PPP_026.DGN 11/06/08



47 / 165	MUS-60-16.75	PLAN SHEET STA. 135+50 TO STA. 140+50 (S.R. 60)	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET



48 / 165	MUS-60-16.75	PLAN SHEET STA. 140+50 TO STA. 145+50 (S.R. 60)	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET



MUS-60-16.75

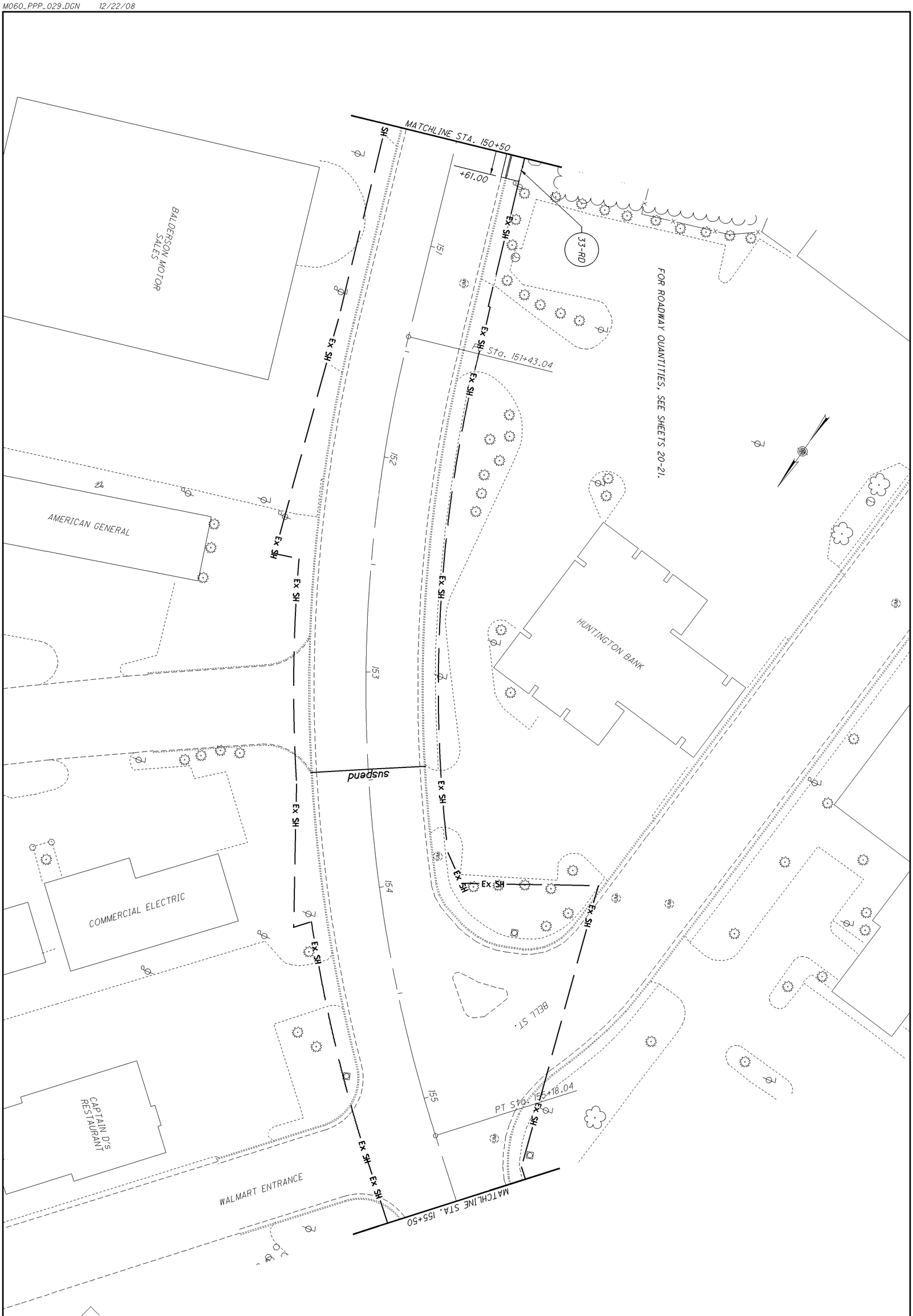
PLAN SHEET

STA. 145+50 TO STA. 150+50 (S.R. 60)

CALCULATED JLS
CHECKED DNM

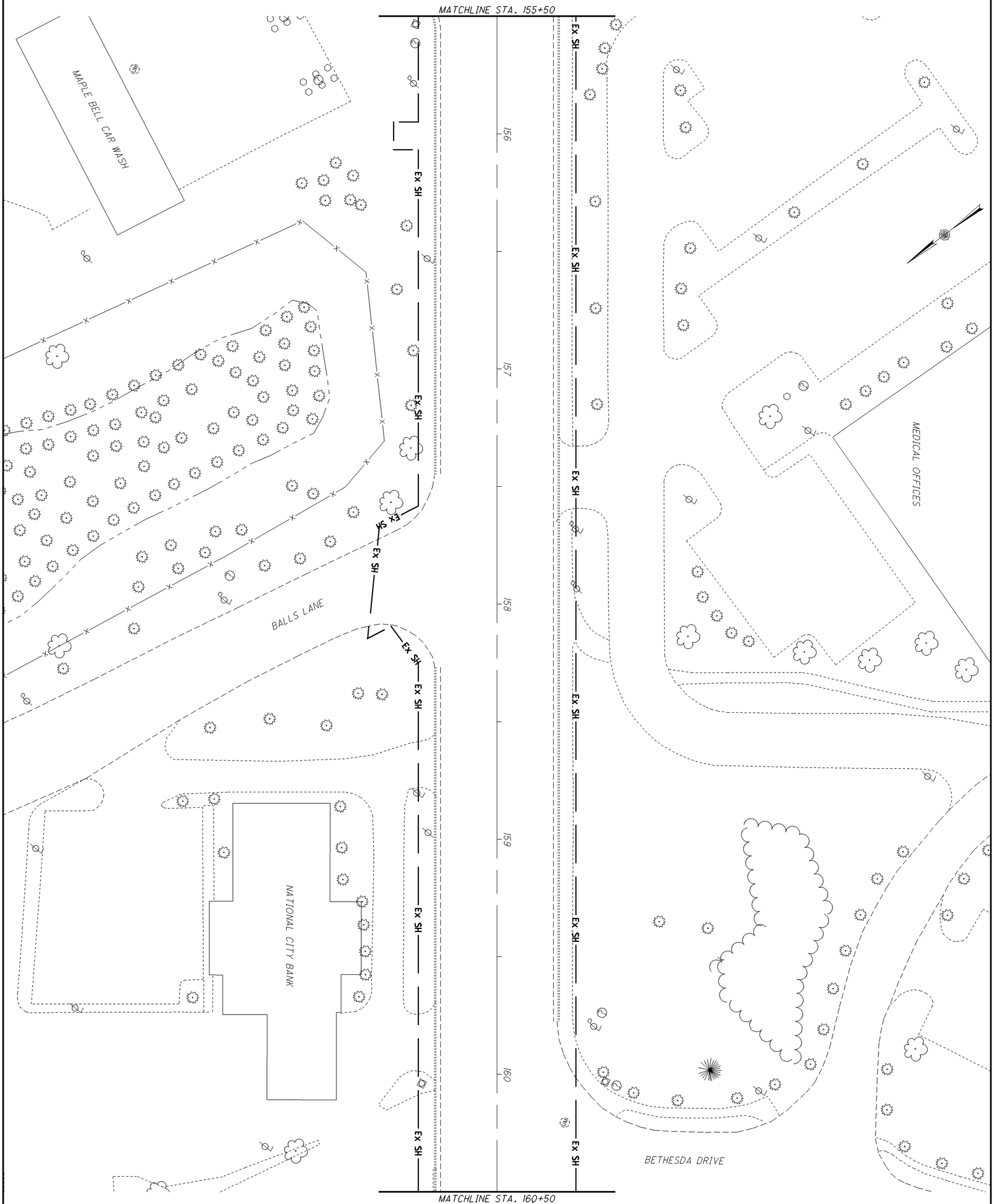
0 20 40
HORIZONTAL SCALE IN FEET

M060_PPP_029.DGN 12/22/08



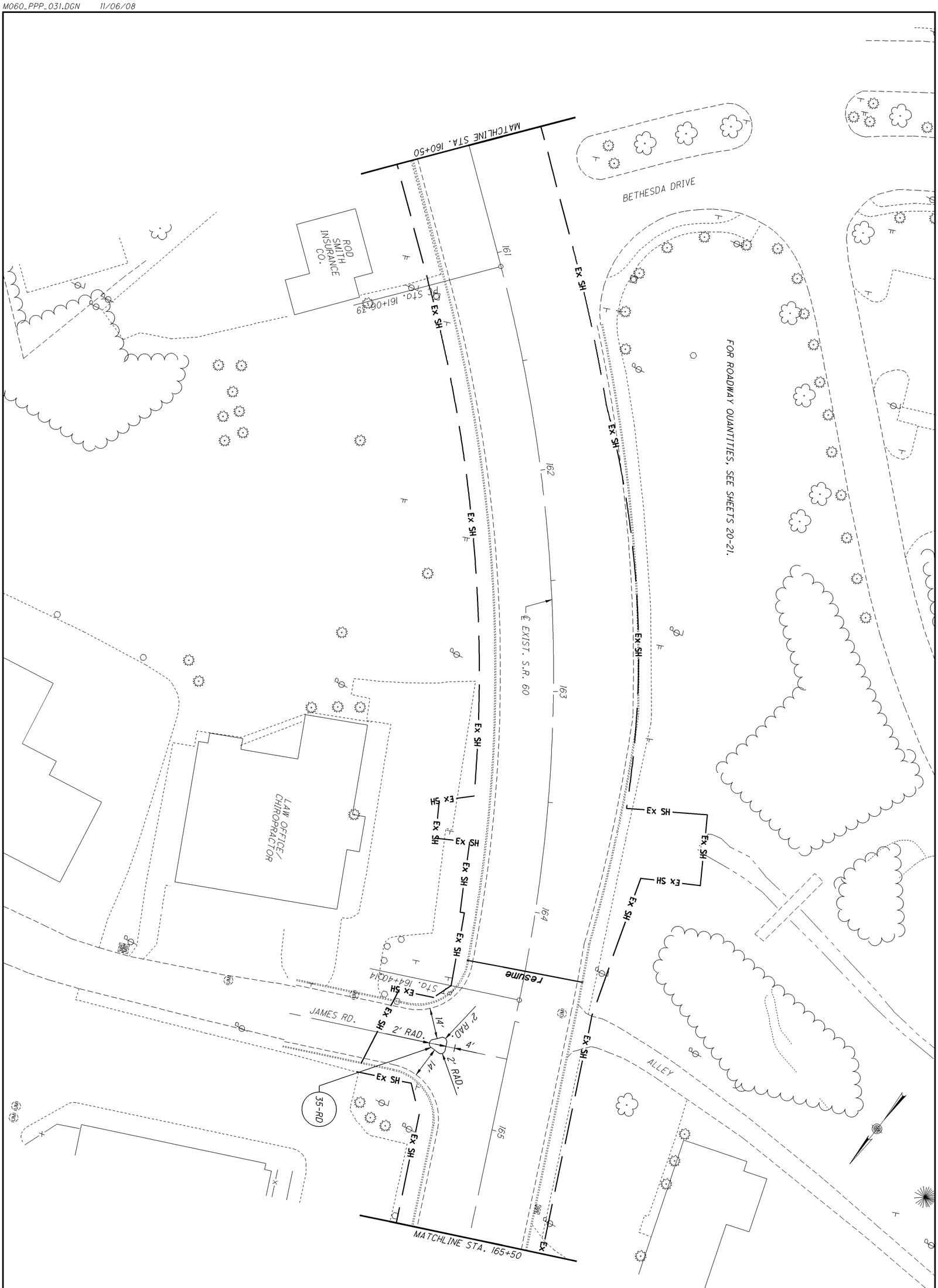
165 / 50	MUS-60-16.75	PLAN SHEET STA. 150+50 TO STA. 155+50 (S.R. 60)	CALCULATED JLS CHECKED DNM 0 20 40 HORIZONTAL SCALE IN FEET

M060_PPP_030.DGN 10/29/08



165 / 51	MUS-60-16.75	PLAN SHEET STA. 155+50 TO STA. 160+50 (S.R. 60)	CALCULATED JLS CHECKED DNM 0 20 40 HORIZONTAL SCALE IN FEET

M060_PPP_031.DGN 11/06/08



165 / 52	MUS-60-16.75	PLAN SHEET STA. 160+50 TO STA. 165+50 (S.R. 60)	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET

PLAN SHEET
STA. 165+50 TO STA. 170+50 (S.R. 60)

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

MUS-60-16.75

53
165

MATCHLINE STA. 165+50

MATCHLINE STA. 170+50

Ex SH

31-CR

33-CR

38-RD

32-CR

36-RD

37-RD

COUNTRY CLUB DR.

℄ EXIST. S.R. 60

166 167 168 169 170

+47.00 16′ +63.00 13′ +76.00 24′

+05.00 34′ +39.00

24′ +73.86

1′ RAD.

2′

6′

37′

ITEM 609 CONCRETE MEDIAN

BEGIN ITEM 609 CONCRETE MEDIAN STA. 169+00.00

JIFFY LUBE

RALLY'S

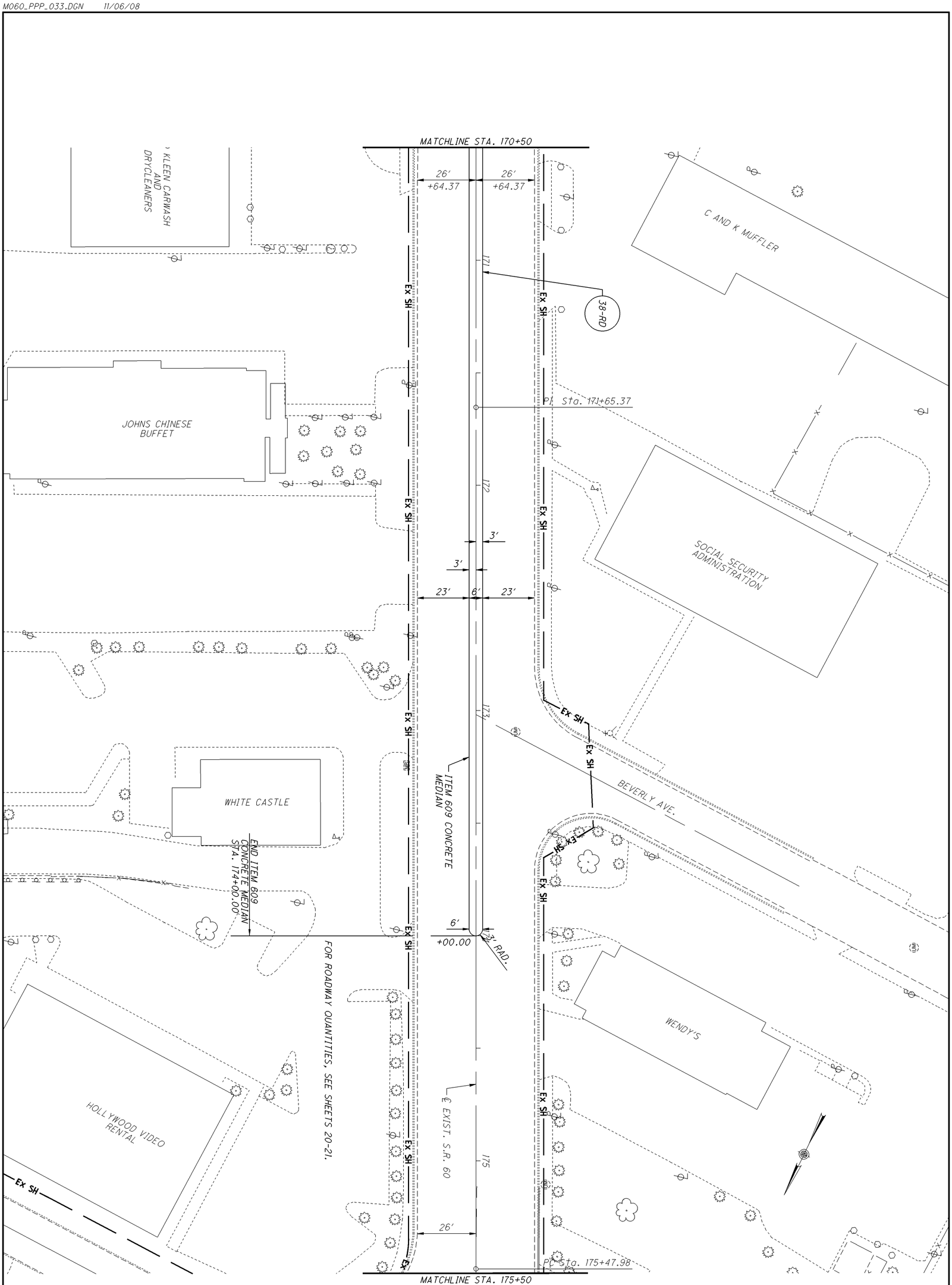
BOB EVANS

GC

FOR ROADWAY QUANTITIES, SEE SHEETS 20-21.

M060_PPP_032.DGN 11/06/08

M060_PPP_033.DGN 11/06/08



165 / 54	MUS-60-16.75	PLAN SHEET STA. 170+50 TO STA. 175+50 (S.R. 60)	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET

BM 4 CHISELED SQUARE ON TOP OF SW CORNER OF CONCRETE PAD FOR SIGN SUPPORT; 30.87 FEET LEFT OF CENTERLINE OF CONSTRUCTION OF S.R. 60 STA. 177+96.09.

ELEV. = 789.03

CENTURY NATIONAL BANK

MILITARY RD.

HS x3

EXISTING PAVEMENT (TO BE REMOVED)

Ex SH

22.22

35' RAD.

40.93

134'

5'

PC Sta. 177+68.90

71.00

26'

176 177 178 179 180

EXISTING CONCRETE MEDIAN (TO BE REMOVED)

℄ EXIST. S.R. 60

MATCHLINE STA. 175+50

MATCHLINE STA. 180+50

SHELL (GAS STATION) (CANOPY FOR PUMPS)

SHELL (GAS STATION)

SPEEDWAY (CANOPY FOR PUMPS)

SPEEDWAY (GAS STATION)

EMPTY

NOTE: SEE INTERSECTION DETAIL SHEETS 65-66 FOR ADDITIONAL DETAILS AND QUANTITIES.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

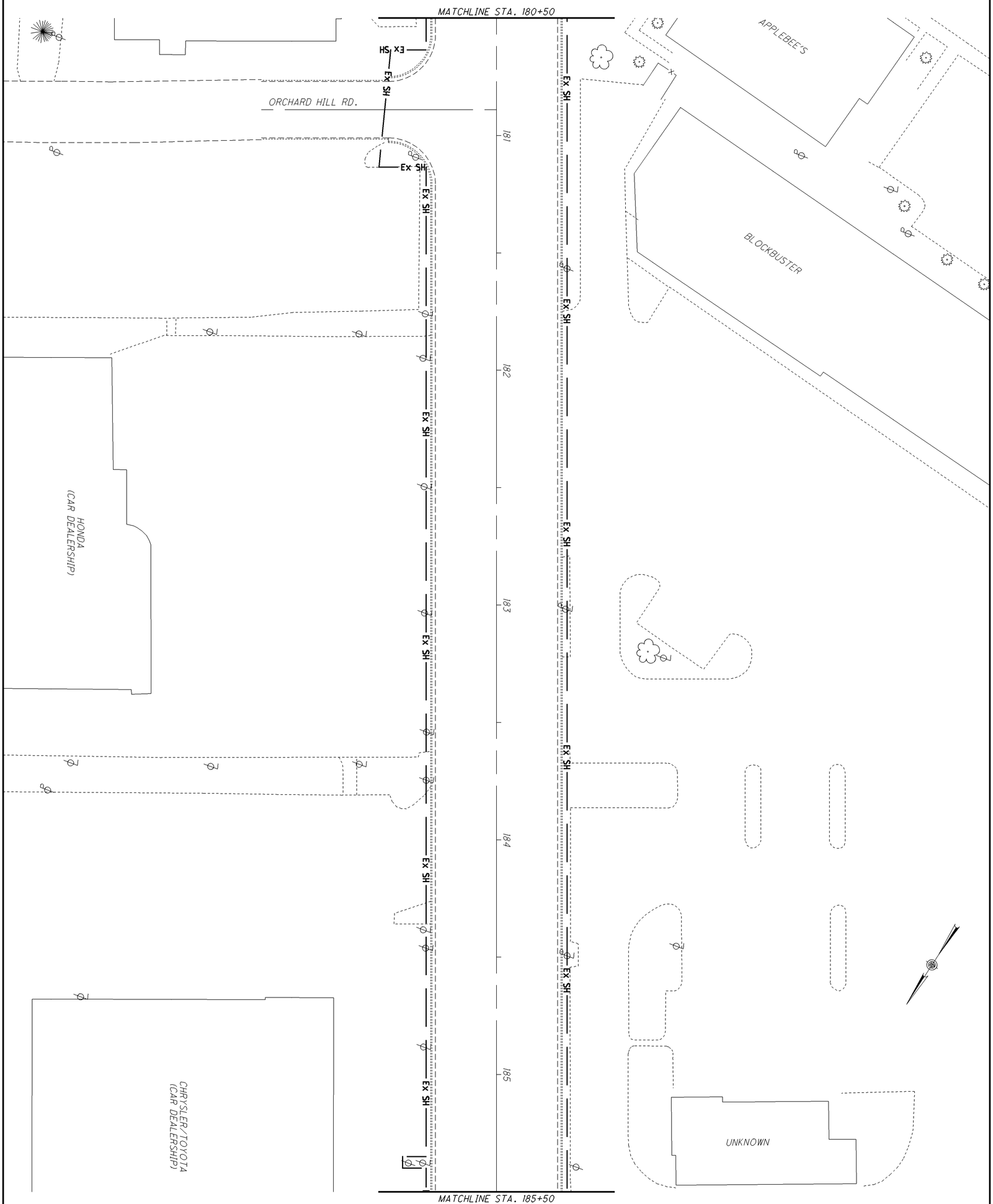
PLAN SHEET
STA. 175+50 TO STA. 180+50 (S.R. 60)

MUS-60-16.75

55
165

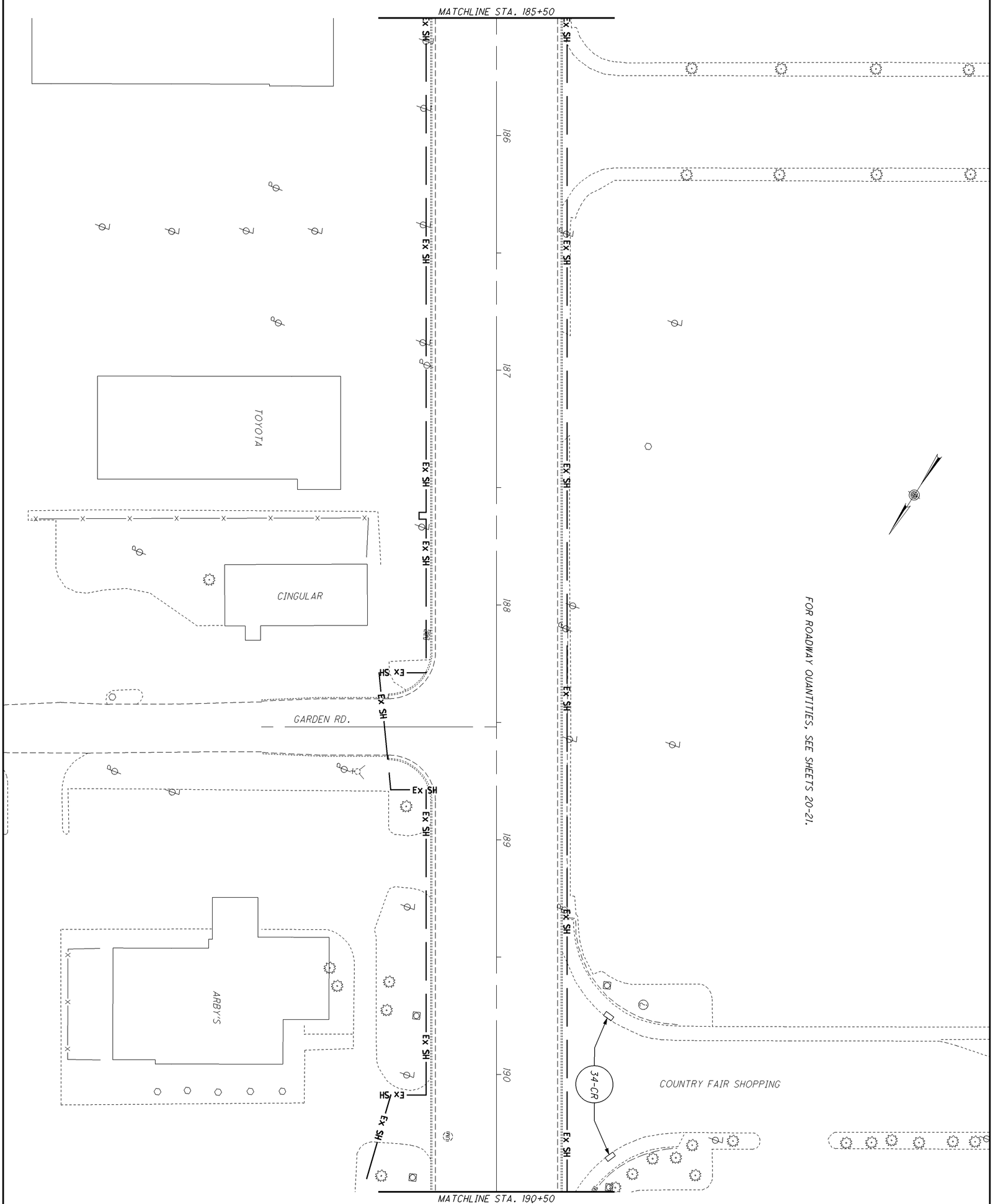
M060_PPP_034.DGN 11/06/08

M060_PPP_035.DGN 10/29/08



55 / 165	MUS-60-16.75	PLAN SHEET STA. 180+50 TO STA. 185+50 (S.R. 60)	CALCULATED JLS CHECKED DNM 0 20 40 HORIZONTAL SCALE IN FEET

M060_PPP_036.DGN 10/29/08



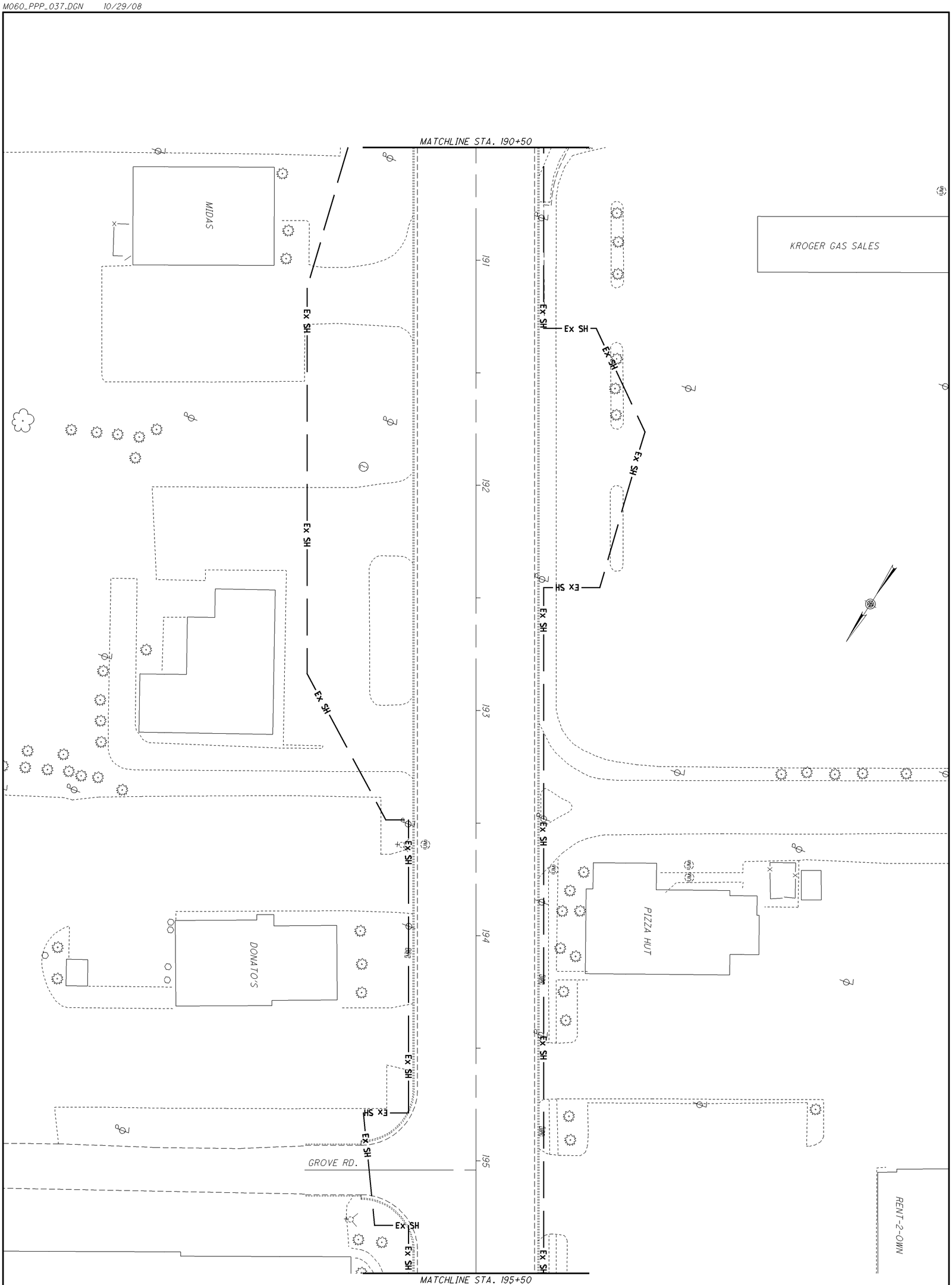
MUS-60-16.75

PLAN SHEET
STA. 185+50 TO STA. 190+50 (S.R. 60)

CALCULATED JLS
CHECKED DNM

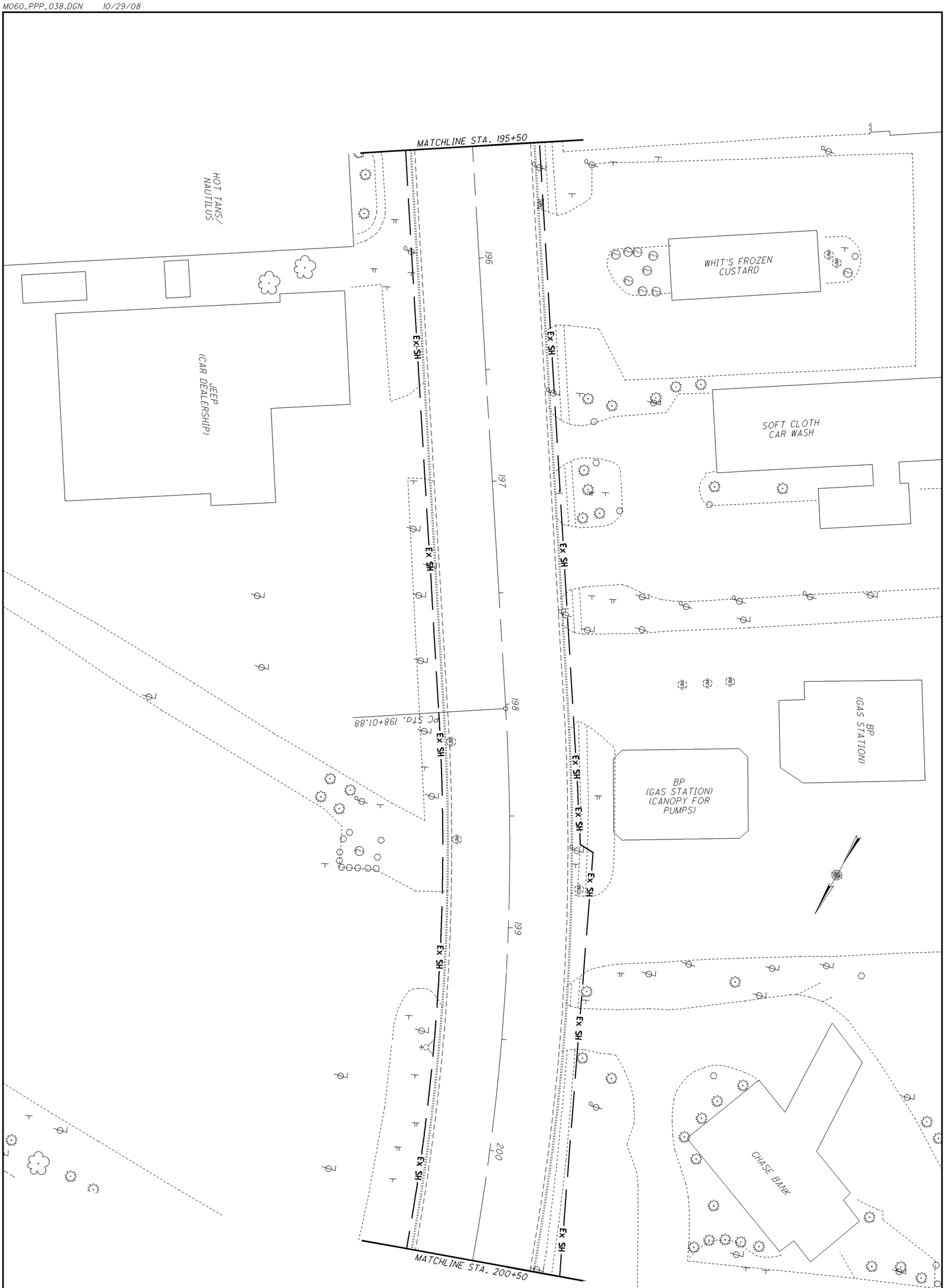
0 20 40
HORIZONTAL SCALE IN FEET

M060_PPP_037.DGN 10/29/08



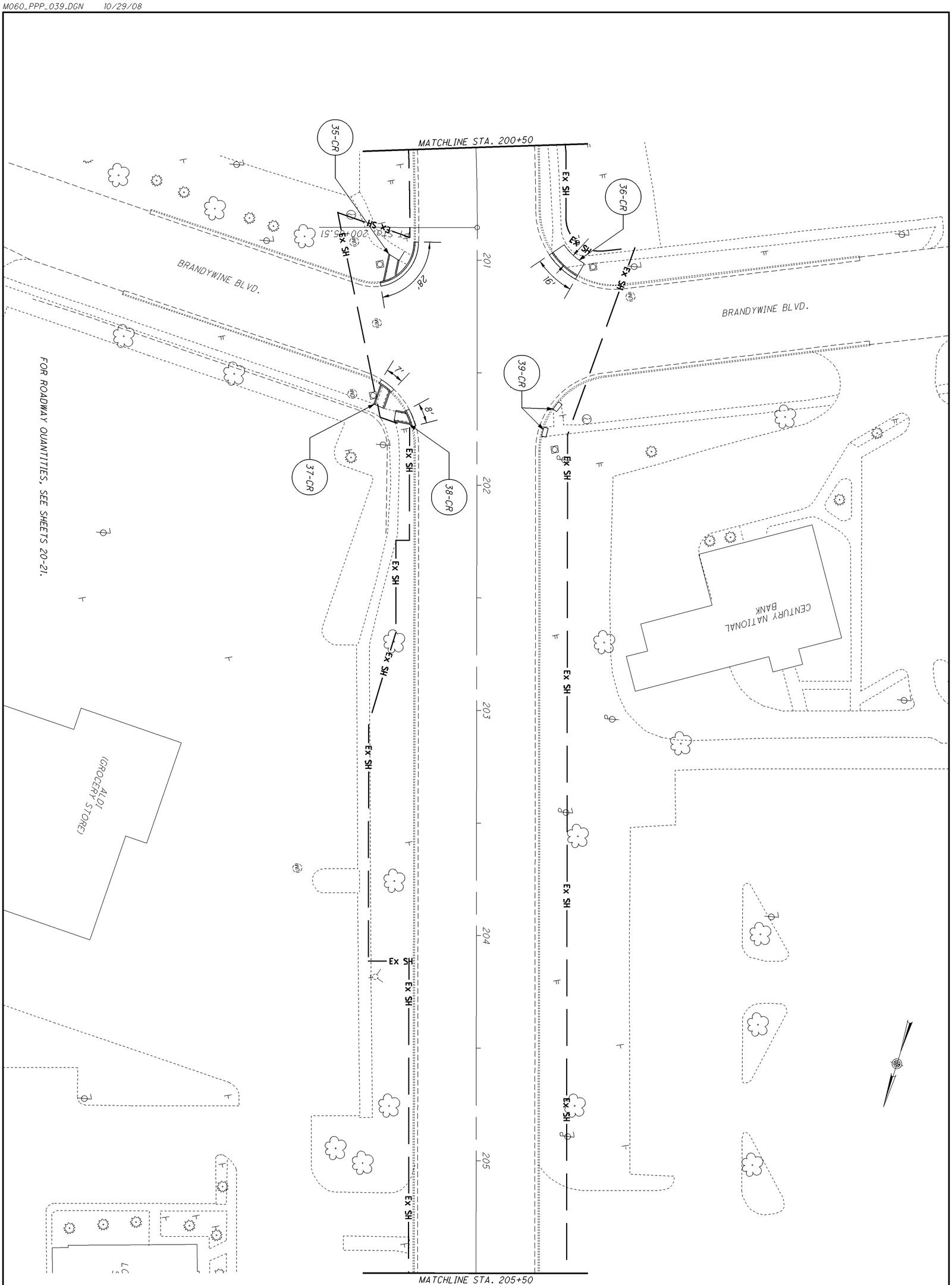
165 / 58	MUS-60-16.75	PLAN SHEET STA. 190+50 TO STA. 195+50 (S.R. 60)	CALCULATED JLS CHECKED DNM 0 20 40 HORIZONTAL SCALE IN FEET

M060_PPP_038.DGN 10/29/08

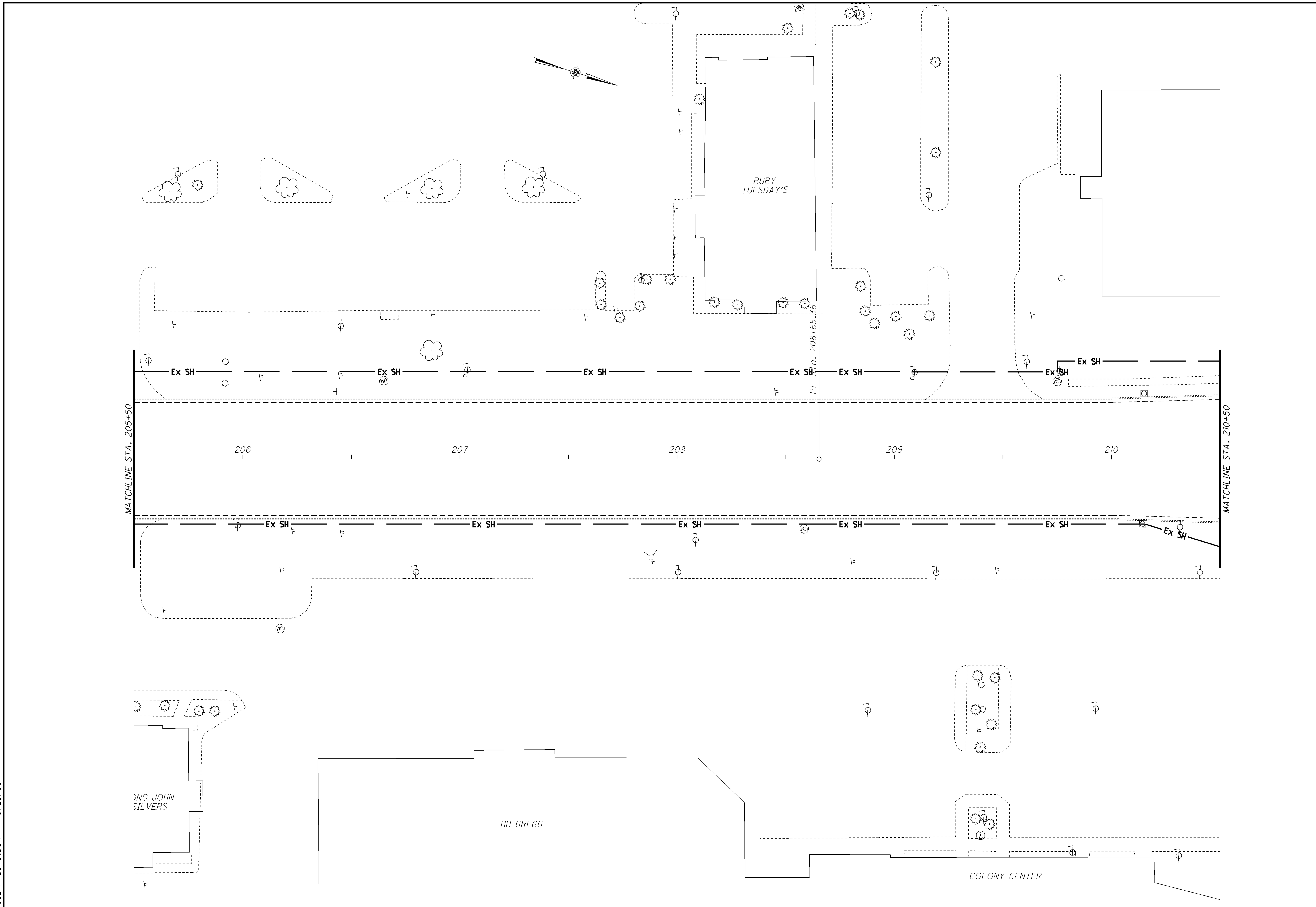


59 / 165	**MUS-60-16.75**	**PLAN SHEET** **STA. 195+50 TO STA. 200+50 (S.R. 60)**	CALCULATED JLS CHECKED DNM 0 20 40 HORIZONTAL SCALE IN FEET

M060_PPP_039.DGN 10/29/08



60 / 165	MUS-60-16.75	PLAN SHEET STA. 200+50 TO STA. 205+50 (S.R. 60)	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET



0 20 40
HORIZONTAL SCALE IN FEET

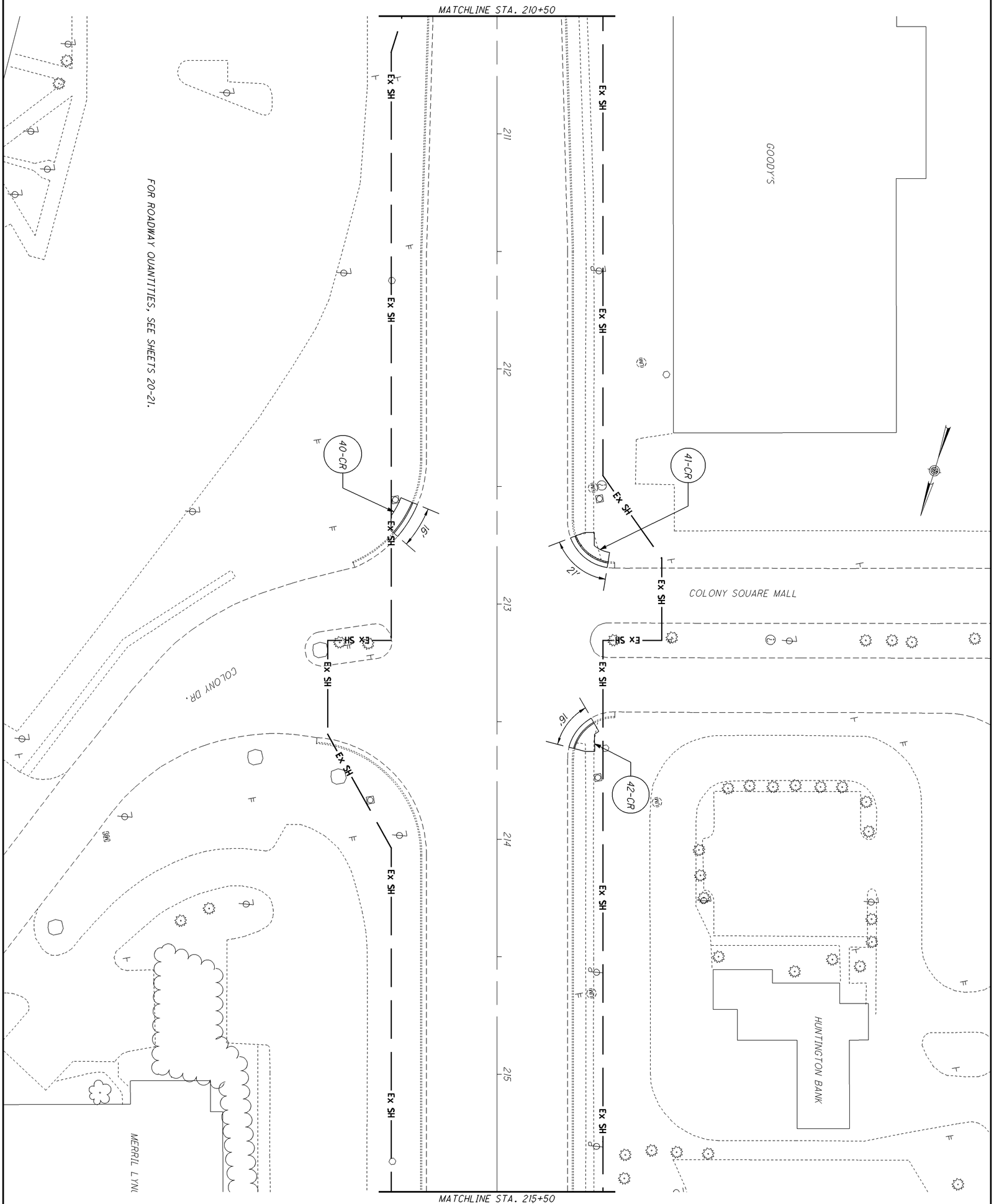
CALCULATED JLS
CHECKED DNM

PLAN SHEET
STA. 205+50 TO STA. 210+50 (S.R. 60)

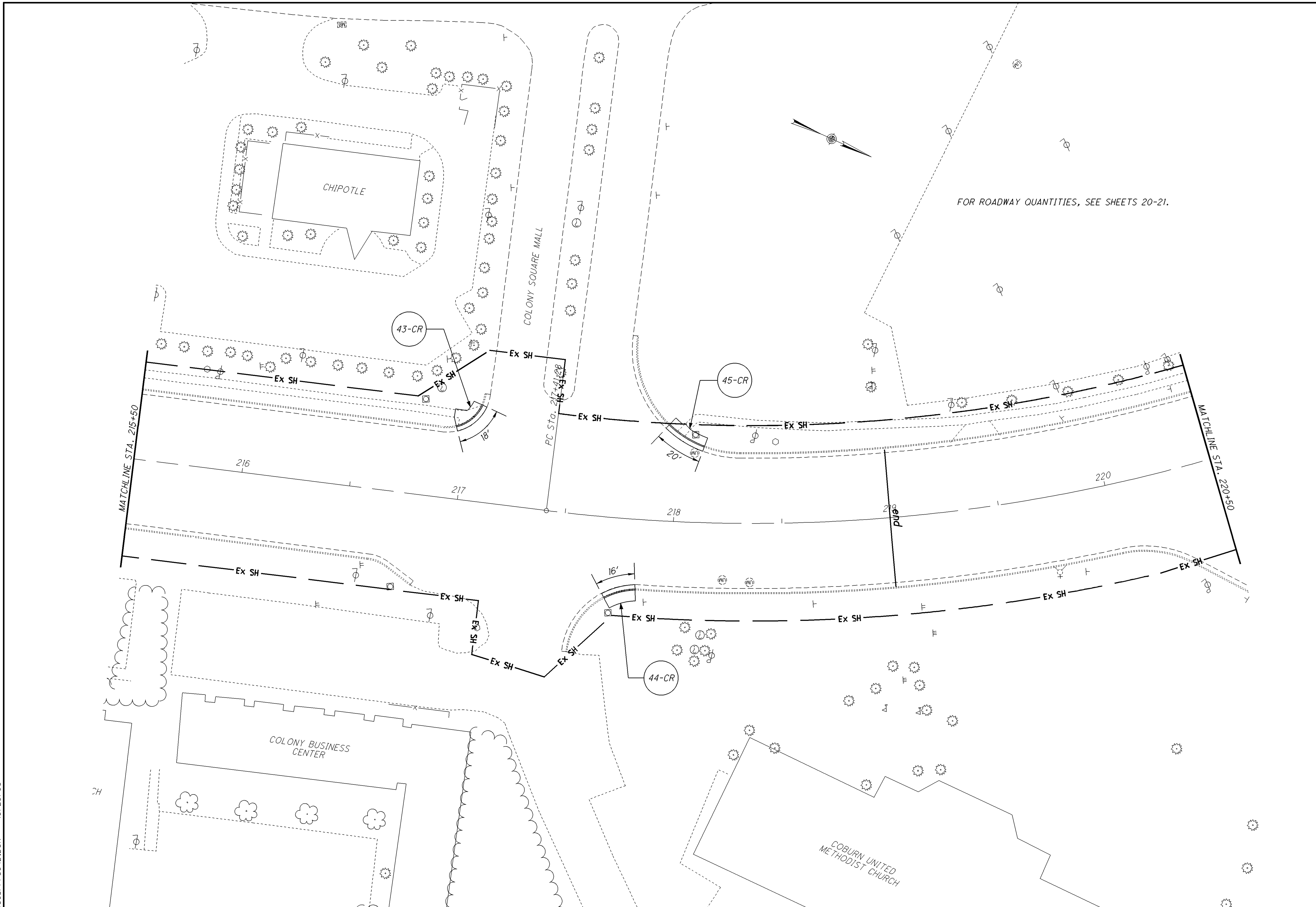
MUS-60-16.75

M060_PPP_040.DGN 10/29/08

M060_PPP_041.DGN 10/29/08



92 / 165	MUS-60-16.75	PLAN SHEET STA. 210+50 TO STA. 215+50 (S.R. 60)	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET



HORIZONTAL SCALE IN FEET
0 20 40

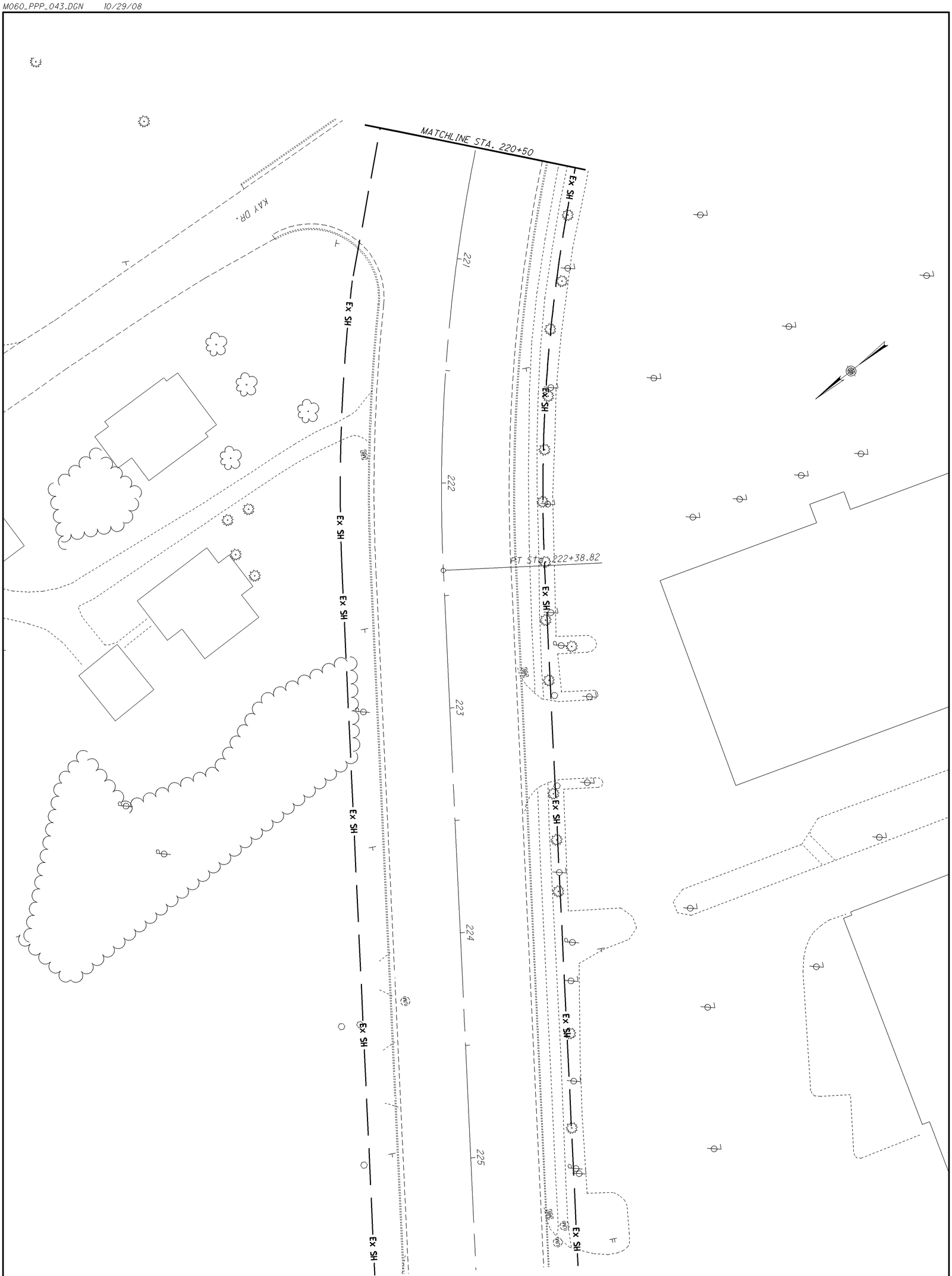
CALCULATED JLS
CHECKED DNM

PLAN SHEET
STA. 215+50 TO STA. 220+50 (S.R. 60)

MUS-60-16.75

M060_PPP_042.DGN 10/29/08

M060_PPP_043.DGN 10/29/08



64 / 165	MUS-60-16.75	PLAN SHEET STA. 220+50 TO STA. 225+50 (S.R. 60)	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET

NOTES

1. REMOVAL OF THE EXISTING GROUND MOUNTED SIGN, PEDESTAL. PEDESTAL FOUNDATION AND TRAFFIC PULL BOX LOCATED IN THE EXISTING TRAFFIC ISLAND HAVE BEEN INCLUDED IN THE TRAFFIC CONTROL ITEMS FOR PAYMENT.
2. FOR QUANTITIES AND CALCULATIONS SEE SHEET 66.
3. FOR SECTION A-A AND B-B SEE SHEET 66.
4. FOR ADDITIONAL DETAILS SEE SIGNAL PLAN SHEET 153.

* - AREA BY COMPUTER

- ITEM 203 - EXCAVATION

EX. ASPHALT PAVEMENT TO BE REMOVED (* AREA 2 = 1026 SQ. FT.) 2-RD

EX. SIGNAL POLE DO NOT DISTURB

STA. 177+40.93, 61' LT
STA. 202+95.91, 51' LT

EX. TRAFFIC ISLAND TO BE REMOVED (* AREA 1 = 517 SQ. FT.)

EX. FIRE HYDRANT TO BE REMOVED BY OTHERS

STA. 176+40.70, S.R 60 = STA. 204+00.00, MILITARY RD.

S 88° 15' 24" E

N 32° 45' 37" W

+67.18

+95.91

35' RAD.

+40.93

5'

134'

+71.00

PC Sta. 175+47.98

PT Sta. 177+66.90

MILITARY RD.

Ex SH

203 204 205 176 177 178

1-R 1-RD 1-CR 2-R 3-R 3-RD 4-R 4-RD

A A B B

(UM)

HORIZONTAL SCALE IN FEET
0 10 20

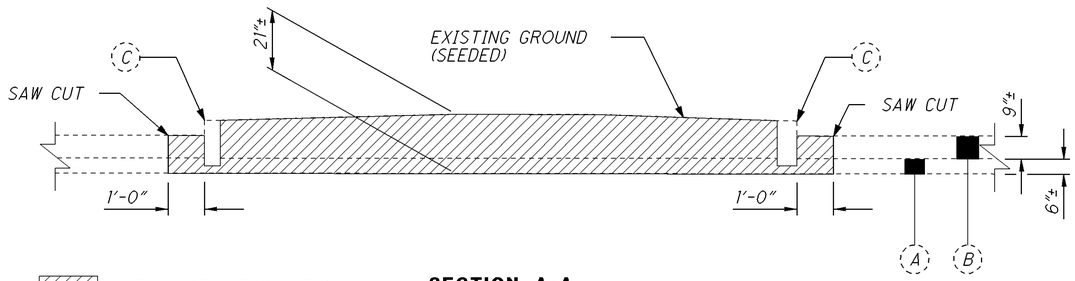
CALCULATED JLS
CHECKED DNM

INTERSECTION DETAIL SHEET
MILITARY ROAD AND S.R. 60 (MAPLE AVE.)

MUS-60-16.75

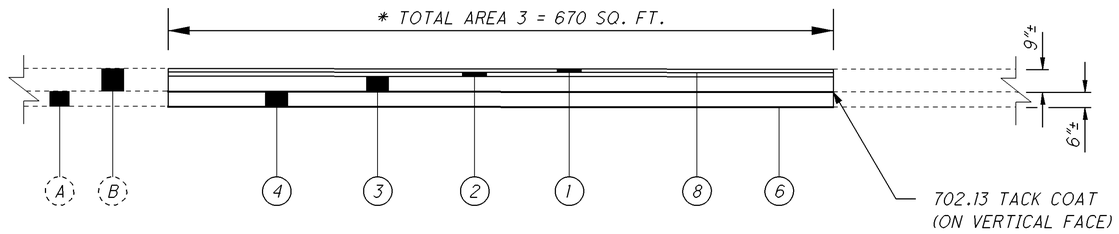
65
165

82752_gmd_001.DGN 12/16/08



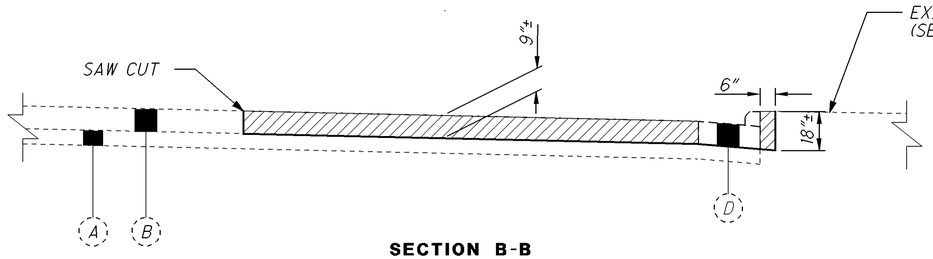
- ITEM 203 - EXCAVATION

SECTION A-A
(EXISTING SECTION)



* - AREA BY COMPUTER

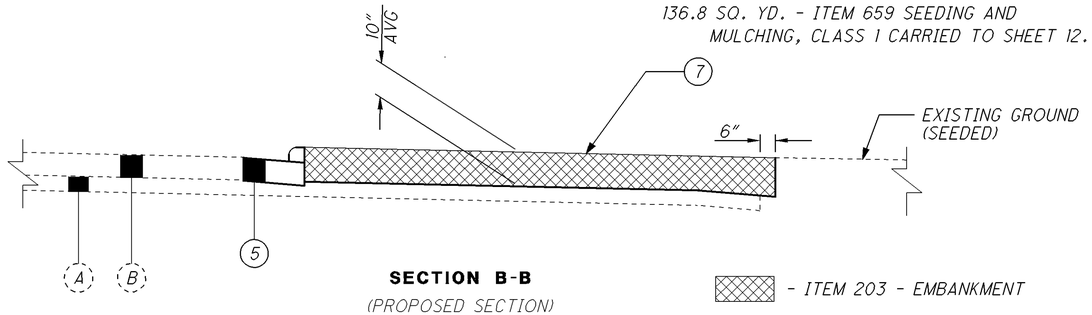
SECTION A-A
(PROPOSED SECTION)



SECTION B-B
(EXISTING SECTION)

- ITEM 203 - EXCAVATION

NOTE: ITEM 659 SEEDING AND MULCHING, CLASS 1 [1026 SQ. FT. x 1.2 (20% ADDITIONAL)]/9 = 136.8 SQ. YD.
136.8 SQ. YD. - ITEM 659 SEEDING AND MULCHING, CLASS 1 CARRIED TO SHEET 12.



SECTION B-B
(PROPOSED SECTION)

- ITEM 203 - EMBANKMENT

LEGEND

(1) - ITEM 448 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
(2) - ITEM 448 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
(3) - ITEM 301 - 6" ASPHALT CONCRETE BASE, PG64-22
(4) - ITEM 304 - 6" AGGREGATE BASE
(5) - ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN
(6) - ITEM 204 - SUBGRADE COMPACTION
(7) - ITEM 659 - SEEDING AND MULCHING, CLASS 1
(8) - ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE

(A) - 9" ± ASPHALT CONCRETE
(B) - 6" ± SUBBASE
(C) - CURB (TO BE REMOVED)
(D) - CURB & GUTTER (TO BE REMOVED)

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:
(SEE SHEET 65 FOR BALLOON REFERENCES)

(1-R) ITEM 202 - CURB REMOVED - 100 FT.
PERIMETER OF TRAFFIC ISLAND = 100 FT. (LENGTH BY COMPUTER)

(2-R) ITEM 203 - EXCAVATION - 70 CU. YD.
AREA 1 = [(517 S.F. x 21"/12) + (100' x 1' x 15"/12)]/27 = 38.1 CU. YD.
AREA 2 = [(1026 S.F. x 9"/12) + (109' x 18"/12 x 6"/12)]/27 = 31.5 CU. YD.
TOTAL = 38.1 + 31.5 = 69.6 CU. YD.

(3-R) ITEM 202 - CURB AND GUTTER REMOVED - 109 FT.
STA. 202+67.18 TO STA. 177+71.00 = 109 FT.

(4-R) ITEM 202 - WALK REMOVED - 35 SQ. FT.
5' x 7' AVG. = 35 SQ. FT.

(1-RD) ITEM 448 - ASPHALT CONCRETE, MISC.: ASPHALT CONCRETE PAVEMENT - 25 SQ. YD. INCLUDING AGGREGATE BASE
TOTAL AREA = [670 SQ. FT. (AREA BY COMPUTER)]/9 = 24.8 SQ. YD.

(2-RD) ITEM 203 - EMBANKMENT - 32 CU. YD.
[1026 SQ. FT. x 10"/12]/27 = 31.7 SQ. YD.

(3-RD) ITEM 608 - 4" CONCRETE WALK - 171 SQ. FT.
[(5' x 20') + (71 SQ. FT. (AREA OF CURB RAMP))] = 171 SQ. FT.

(4-RD) ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN - 134 FT.
STA. 202+67.18 TO STA. 177+71.00 = 134 FT.

(1-CR) ITEM 608 - CURB RAMP, TYPE A1 - 1 EACH

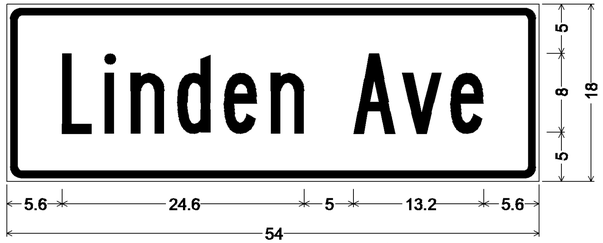
HORIZONTAL SCALE IN FEET
0 2.5 5
CALCULATED JLS
CHECKED DNM

INTERSECTION DETAIL SHEET
MILITARY ROAD AND S.R. 60 (MAPLE AVE.)

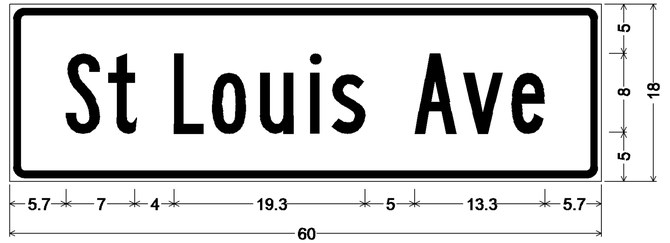
MUS-60-16.75

82752_gmd_001.DGN 12/16/08

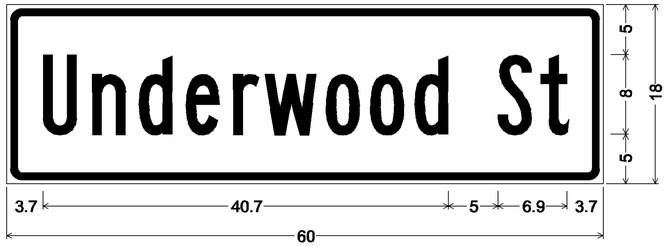
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Market] B 75% spacing; [St] B 75% spacing;



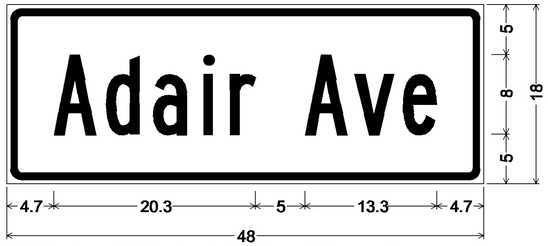
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Linden] B 75% spacing; [Ave] B 75% spacing;



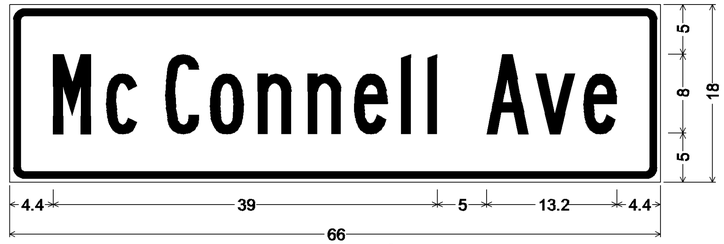
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[St] B 75% spacing; [Louis] B 75% spacing; [Ave] B 75% spacing;



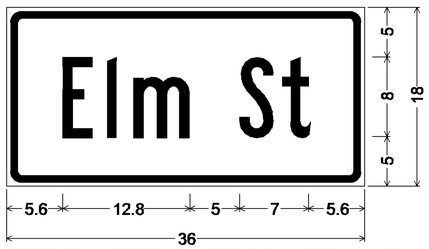
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Underwood] B 75% spacing; [St] B 75% spacing;



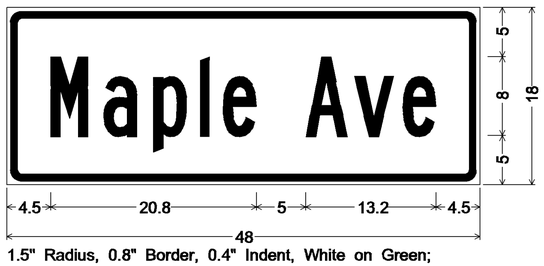
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Adair] B 75% spacing; [Ave] B 75% spacing;



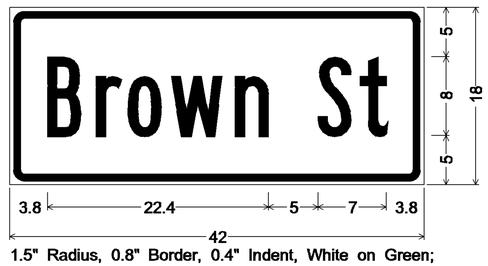
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[McConnell] B 75% spacing; [Ave] B 75% spacing;



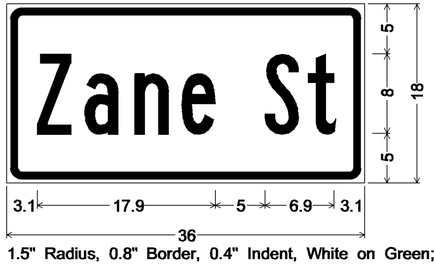
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Elm] B 75% spacing; [St] B 75% spacing;



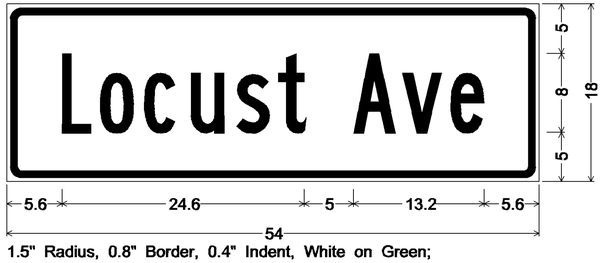
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Maple] B 75% spacing; [Ave] B 75% spacing;



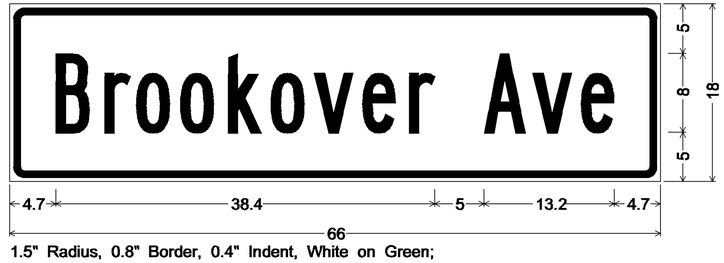
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Brown] B 75% spacing; [St] B 75% spacing;



1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Zane] B 75% spacing; [St] B 75% spacing;



1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Locust] B 75% spacing; [Ave] B 75% spacing;



1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Brookover] B 75% spacing; [Ave] B 75% spacing;

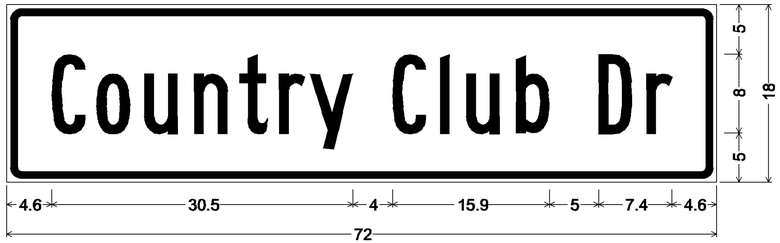
CALCULATED LME
CHECKED JLS

PROPOSED SIGN DETAILS (OVERHEAD MOUNTED)

MUS-60-16.75

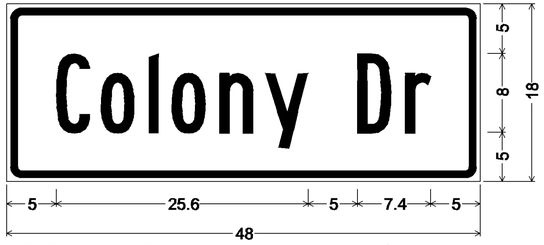
M060_TSD_001.DGN 11/19/08

1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Harding] B 75% spacing; [Rd] B 75% spacing;



1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Country] B 75% spacing; [Club] B 75% spacing; [Dr] B 75% spacing;

1.50" Radius, 0.75" Border, 0.38" Indent, White on Green;
[Brandywine] B 75% spacing; [Blvd] B 75% spacing;



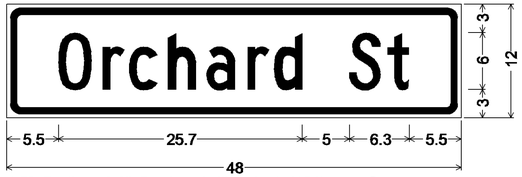
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Colony] B 75% spacing; [Dr] B 75% spacing;

CALCULATED LME
CHECKED JLS

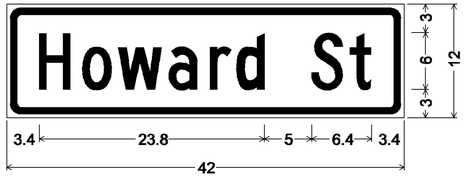
PROPOSED SIGN DETAILS (OVERHEAD MOUNTED)

MUS-60-16.75

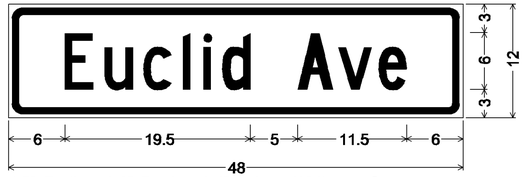
M060_TSD_002.DGN 11/19/08



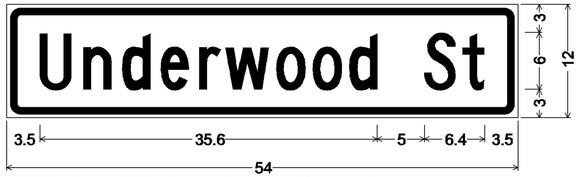
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Orchard] C 75% spacing; [St] C 75% spacing;



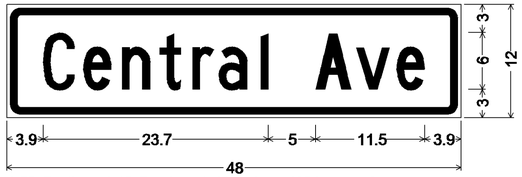
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Howard] C 75% spacing; [St] C 75% spacing;



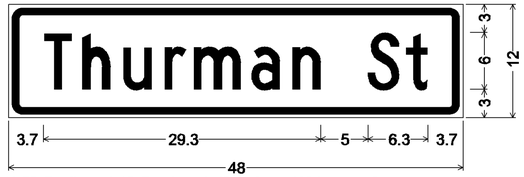
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Euclid] C 75% spacing; [Ave] C 75% spacing;



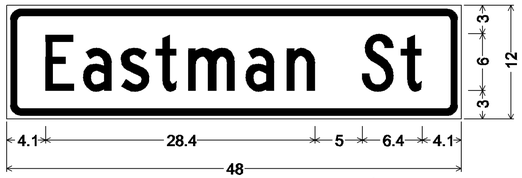
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Underwood] C 75% spacing; [St] C 75% spacing;



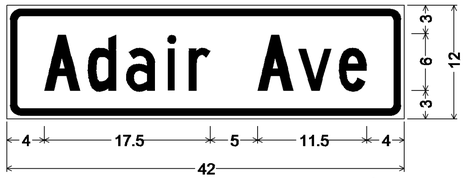
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Central] C 75% spacing; [Ave] C 75% spacing;



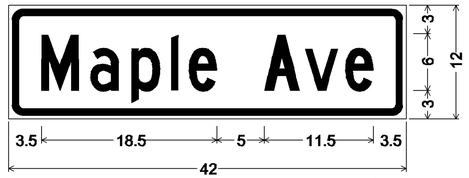
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Thurman] C 75% spacing; [St] C 75% spacing;



1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Eastman] C 75% spacing; [St] C 75% spacing;



1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Adair] C 75% spacing; [Ave] C 75% spacing;



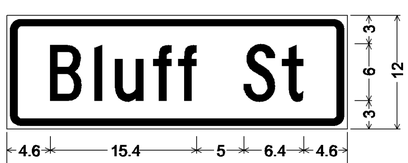
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Maple] C 75% spacing; [Ave] C 75% spacing;

1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Shinnick] C 75% spacing; [St] C 75% spacing;

1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Peters] C 75% spacing; [St] C 75% spacing;

1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Forest] C 75% spacing; [Ave] C 75% spacing;

1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Elberon] C 75% spacing; [Ave] C 75% spacing;



1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Bluff] C 75% spacing; [St] C 75% spacing;

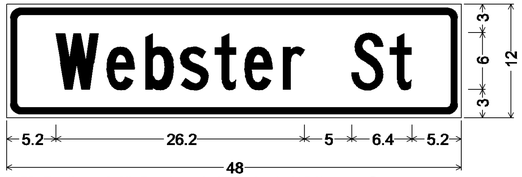
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Sheridan] C 75% spacing; [St] C 75% spacing;

CALCULATED LME
CHECKED JLS

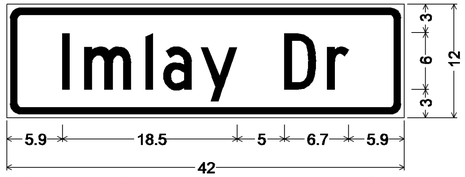
PROPOSED SIGN DETAILS (GROUND MOUNTED)

MUS-60-16.75

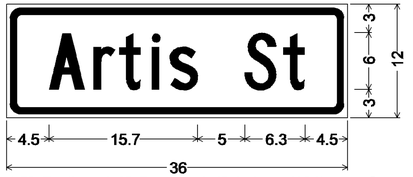
M060_TSD_011.DGN 11/20/08



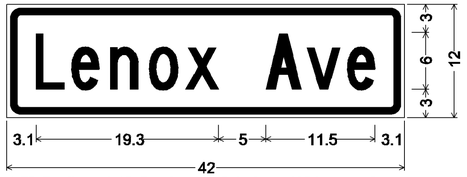
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Webster] C 75% spacing; [St] C 75% spacing;



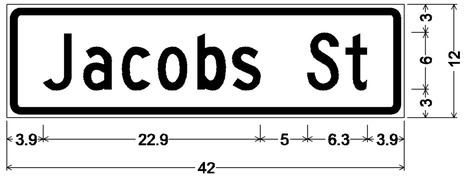
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Imlay] C 75% spacing; [Dr] C 75% spacing;



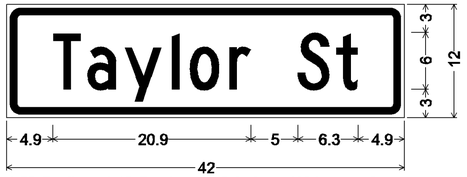
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Artis] C 75% spacing; [St] C 75% spacing;



1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Lenox] C 75% spacing; [Ave] C 75% spacing;

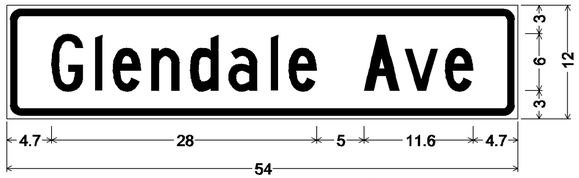


1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Jacobs] C 75% spacing; [St] C 75% spacing;



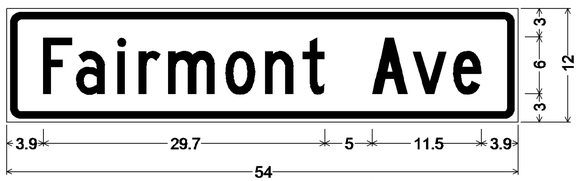
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Taylor] C 75% spacing; [St] C 75% spacing;

1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Van] C 75% spacing; [Horn] C 75% spacing; [Ave] C 75% spacing;

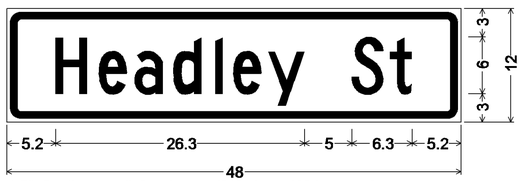


1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Glendale] C 75% spacing; [Ave] C 75% spacing;

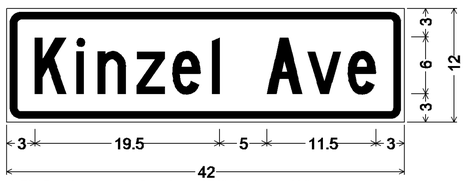
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Winton] C 75% spacing; [Ave] C 75% spacing;



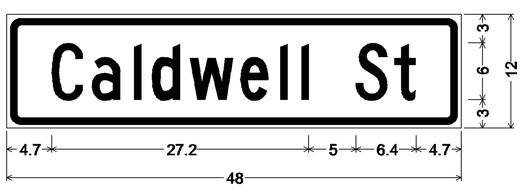
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Fairmont] C 75% spacing; [Ave] C 75% spacing;



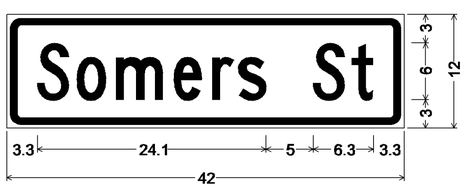
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Headley] C 75% spacing; [St] C 75% spacing;



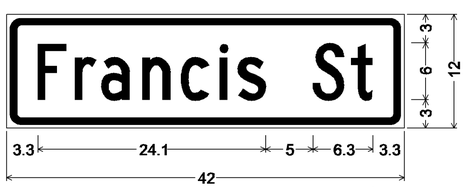
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Kinzel] C 75% spacing; [Ave] C 75% spacing;



1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Caldwell] C 75% spacing; [St] C 75% spacing;



1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Somers] C 75% spacing; [St] C 75% spacing;



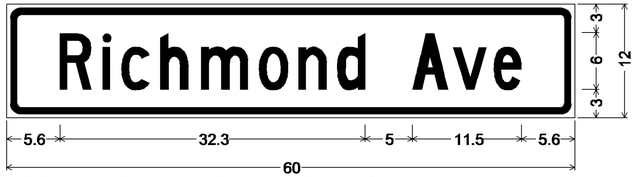
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Francis] C 75% spacing; [St] C 75% spacing;

CALCULATED LME
CHECKED JLS

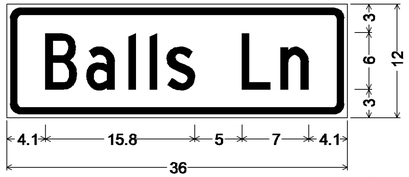
PROPOSED SIGN DETAILS (GROUND MOUNTED)

MUS-60-16.75

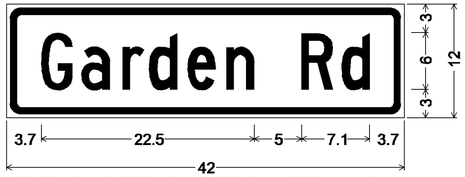
M060_TSD_012.DGN 11/20/08



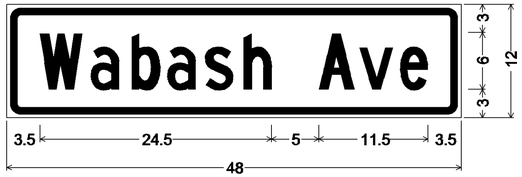
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Richmond] C 75% spacing; [Ave] C 75% spacing;



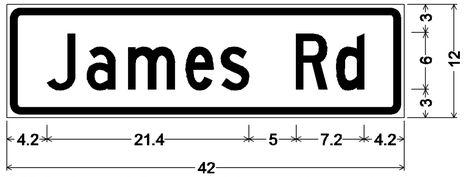
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Balls] C 75% spacing; [Ln] C 75% spacing;



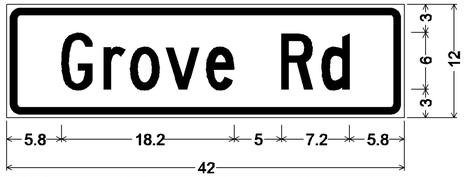
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Garden] C 75% spacing; [Rd] C 75% spacing;



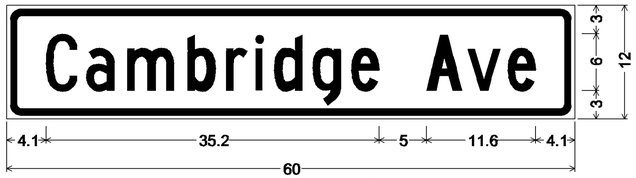
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Wabash] C 75% spacing; [Ave] C 75% spacing;



1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[James] C 75% spacing; [Rd] C 75% spacing;

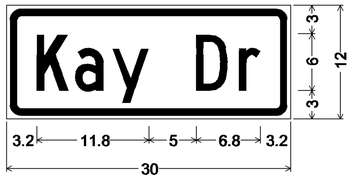


1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Grove] C 75% spacing; [Rd] C 75% spacing;

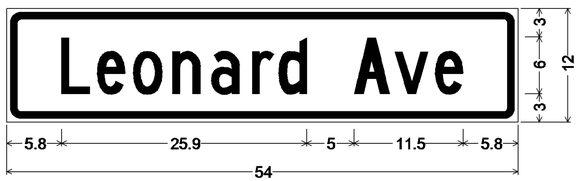


1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Cambridge] C 75% spacing; [Ave] C 75% spacing;

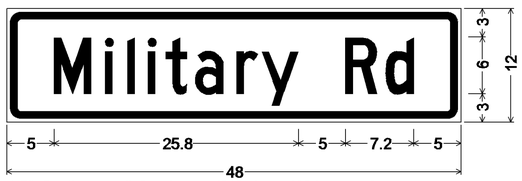
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Beverly] C 75% spacing; [Ave] C 75% spacing;



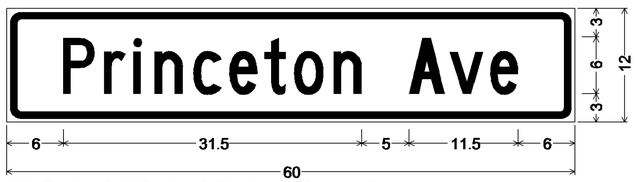
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Kay] C 75% spacing;
[Dr] C 75% spacing;



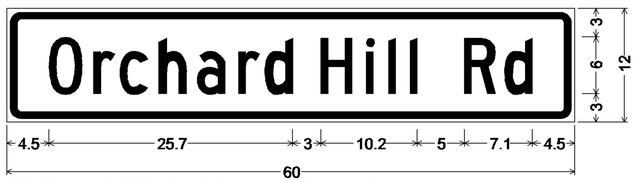
1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Leonard] C 75% spacing; [Ave] C 75% spacing;



1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Military] C 75% spacing; [Rd] C 75% spacing;



1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Princeton] C 75% spacing; [Ave] C 75% spacing;



1.5" Radius, 0.8" Border, 0.4" Indent, White on Green;
[Orchard] C 75% spacing; [Hill] C 75% spacing; [Rd] C 75% spacing;

CALCULATED LME
CHECKED JLS

PROPOSED SIGN DETAILS (GROUND MOUNTED)

MUS-60-16.75

M060_TSD_013.DGN 11/20/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.

MARKET ST.

BEGIN WORK
STA. 11+50.00

FED. NO. E070 (826)

BEGIN PROJECT
STA. 11+50.00
S.L.M. 16.75

2-S
Underwood St
D3-1-60
60" x 18"
STA. 12+16.1

PI Sta. 11+25.66

6-S
UNDERWOOD ST

4-S
Market St
D3-1-48
48" x 18"
STA. 12+64.4

PC Sta. 12+67.32

ALLEY

ONLY
ONLY

PT Sta. 15+22.13

1-PM
+25
LA
+25

℄ EXIST. S.R. 60

MATCHLINE STA. 15+50

1-S
Market St
D3-1-48
48" x 18"
STA. 11+87.3

NO TURN ON RED
NO TURN ON RED

5-S
R10-11A-24
24" x 30"
STA. 12+64.7

Underwood St
D3-1-60
60" x 18"
STA. 12+35.3
3-S

MARKET ST.

SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 10+50 TO STA. 15+50 (S.R. 60)

MUS-60-16.75

M060_TPS_01.DGN 11/21/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.

ORCHARD ST.

ALLEY

SHINNICK ST.

ALLEY

MATCHLINE STA. 15+50

MATCHLINE STA. 20+50

7-S
STOP
R1-1-36
36" x 36"

10-S
Orchard St
Underwood St
(2) D3-1-54
54" x 12"
(2) D3-1-48
48" x 12"

11-S
SPEED LIMIT 35

R2-1-24
24" x 30"

13-S
RIGHT TURN ONLY
STOP
R1-1-36
36" x 36"
R10-H5A-24
24" x 30"

15-S
Shinnick St
Underwood St
(2) D3-1-54
54" x 12"
(2) D3-1-48
48" x 12"

16-S
STOP
R1-1-36
36" x 36"

2-PM
+50
LA
+50

3-PM
+00
LA
+00

4-PM
+20
LA
+20

16
17
18
19
20

℄ EXIST. S.R. 60

N 1° 19' 50" E

8-S
ONE WAY
DO NOT ENTER
STOP
ONE WAY
R1-1-36
36" x 36"
R5-1-36
36" x 36"
R6-1L-36
36" x 12"
R6-1R-36
36" x 12"

9-S
DO NOT ENTER
STOP
R1-1-36
36" x 36"
R5-1-36
36" x 36"

12-S
SPEED LIMIT 35
R2-1-24
24" x 30"

14-S
Underwood St
Eastman St
(2) D3-1-54
54" x 12"
(2) D3-1-48
48" x 12"

EASTMAN ST.

17-S
R1-1-36
36" x 36"
STOP

ORCHARD ST.

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

SIGNING LEGEND:

- EXISTING SIGN (TO REMAIN IN PLACE)
- EXISTING SIGN (TO BE REMOVED)
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

M060_TPS_02.DGN 11/21/08

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 15+50 TO STA. 20+50 (S.R. 60)

MUS-60-16.75

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.

ELBERON AVE.

I.R. 70 E.B. LANES

I.R. 70 W.B. LANES

ELM ST.

18-S

(2) D3-1-48
48" x 12"

Elberon Ave

Elberon Ave

19-S

R9-3A-18
18" x 18"
(POLE MOUNTED)

IS DOWNWARD
UNDERWOOD ST

23-S

R9-3A-18
18" x 18"
(POLE MOUNTED)

28-S

D3-1-60
60" x 18"
STA. 24+26.8

Underwood St

R9-3A-18
18" x 18"
(POLE MOUNTED)

25-S

32-S

R9-3A-18
18" x 18"
(POLE MOUNTED)

30-S

IS DOWNWARD
UNDERWOOD ST

Elm St

D3-1-36
36" x 18"
STA. 24+62.5

29-S

MATCHLINE STA. 20+50

21

22

23

24

℄ EXIST. S.R. 60

+00

ELY

25

+00

ELY

MATCHLINE STA. 25+50

R9-3A-18
18" x 18"
(POLE MOUNTED)

20-S

R10-11A-24
24" x 30"

NO TURN ON RED

NO TURN ON RED

21-S

Underwood St

D3-1-60
60" x 18"
STA. 21+78.4

22-S

R9-3A-18
18" x 18"
(POLE MOUNTED)

24-S

27-S

R9-3A-18
18" x 18"
(POLE MOUNTED)

Elm St

26-S

D3-1-36
36" x 18"
STA. 24+08.8

31-S

R9-3A-18
18" x 18"
(POLE MOUNTED)

STA. 25+13.10

5-PM

I.R. 70 E.B. ON RAMP

I.R. 70 W.B. OFF RAMP

I.R. 70 E.B. LANES

I.R. 70 W.B. LANES

SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

M060_TPS_03.DGN 11/24/08

HORIZONTAL SCALE IN FEET
0 20 40

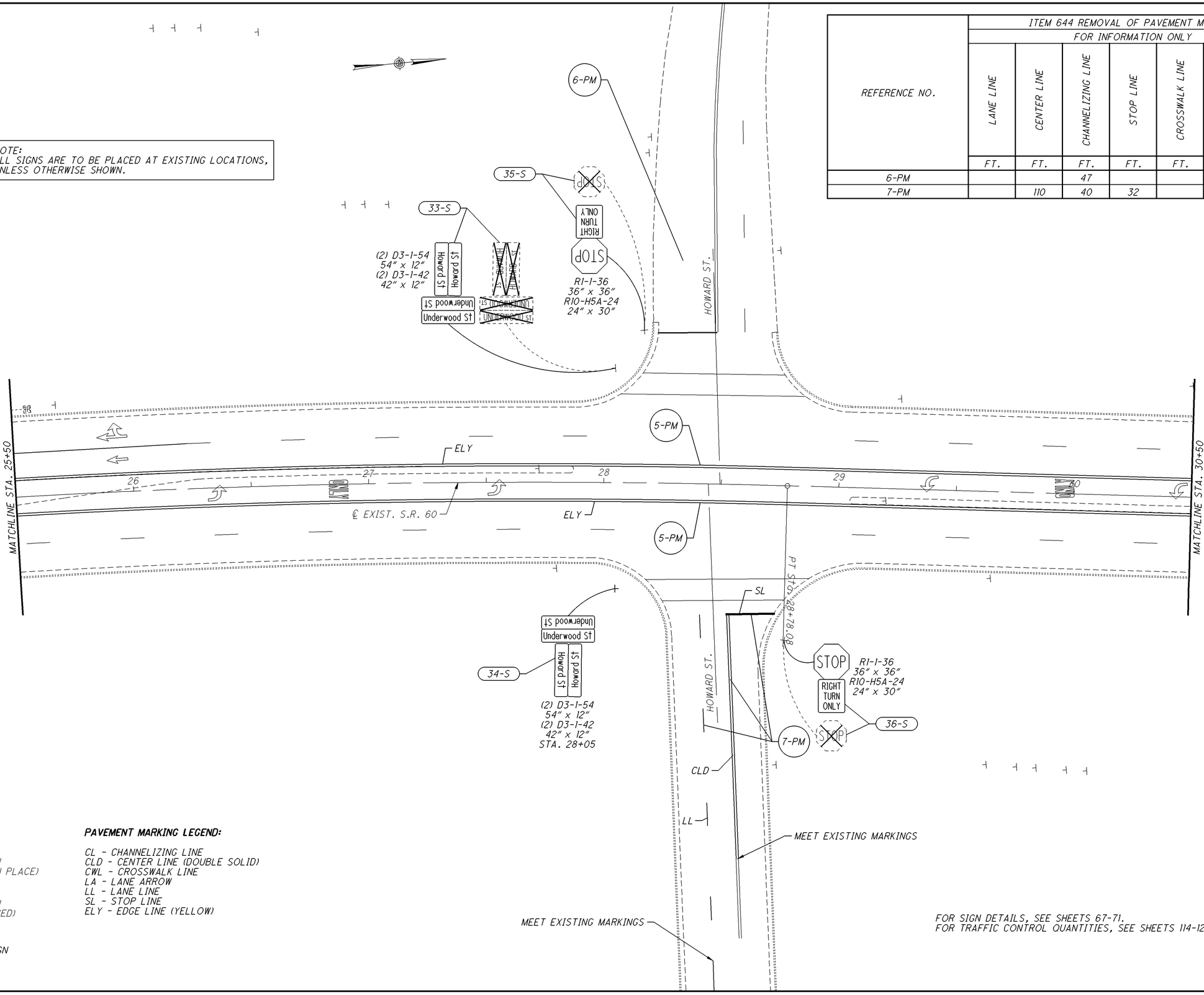
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 20+50 TO STA. 25+50 (S.R. 60)

MUS-60-16.75

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.

REFERENCE NO.	ITEM 644 REMOVAL OF PAVEMENT MARKING FOR INFORMATION ONLY						
	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	LANE ARROW	WORD ON PAVEMENT "ONLY"
	FT.	FT.	FT.	FT.	FT.	EACH	EACH
6-PM			47			2	
7-PM		110	40	32			



SIGNING LEGEND:

- EXISTING SIGN (TO REMAIN IN PLACE)
- EXISTING SIGN (TO BE REMOVED)
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

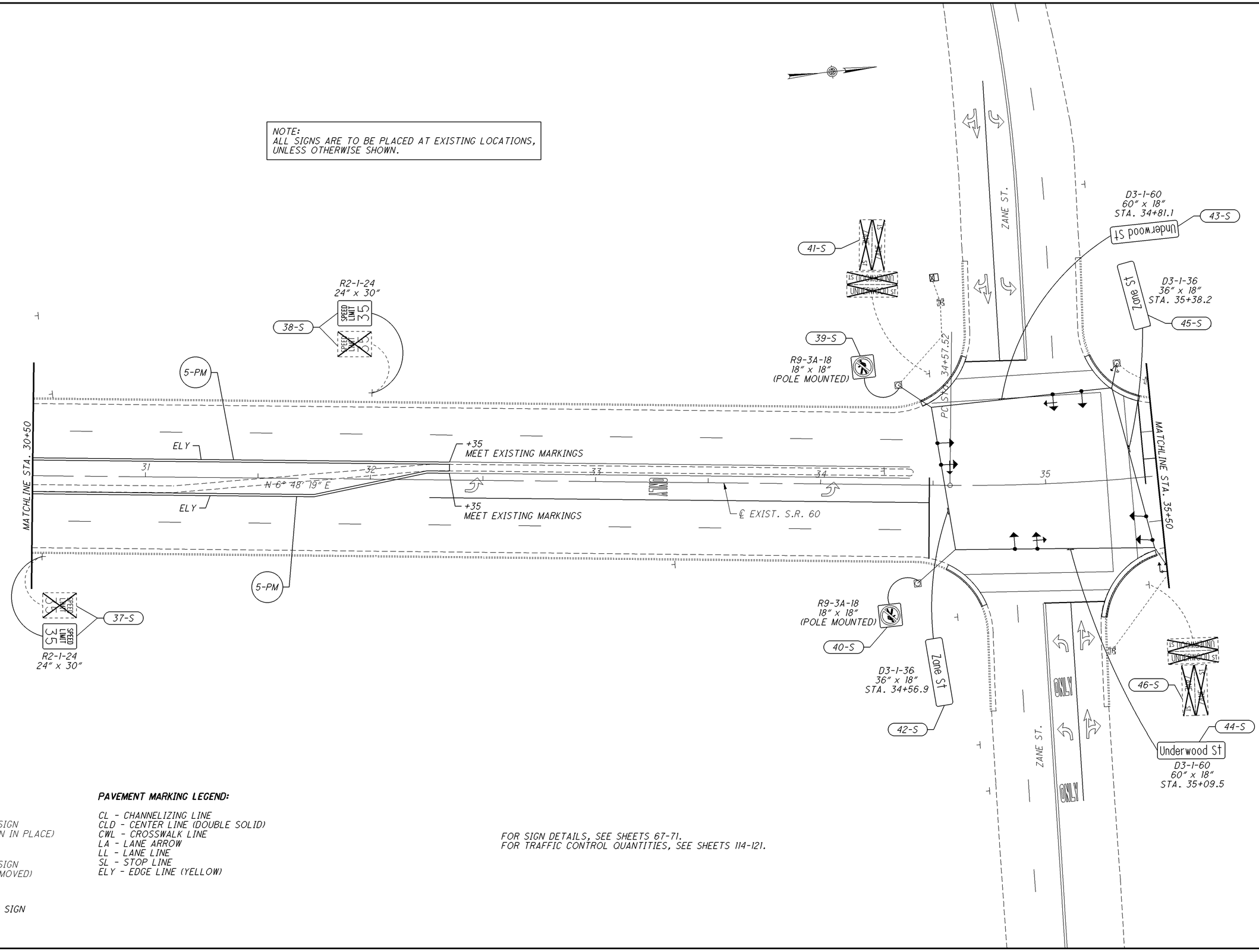
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 25+50 TO STA. 30+50 (S.R. 60)

MUS-60-16.75

M060_TPS_04.DGN 11/24/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

- EXISTING SIGN (TO REMAIN IN PLACE)
- EXISTING SIGN (TO BE REMOVED)
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

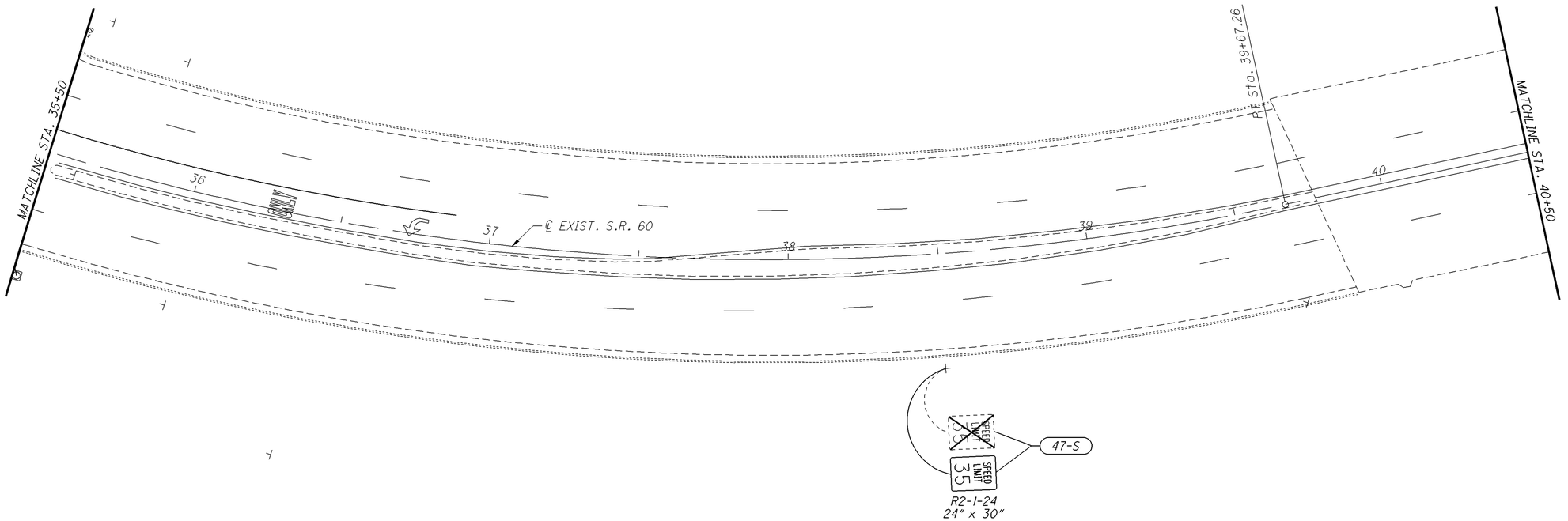
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 30+50 TO STA. 35+50 (S.R. 60)

MUS-60-16.75

M060_TPS_05.DGN 11/24/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

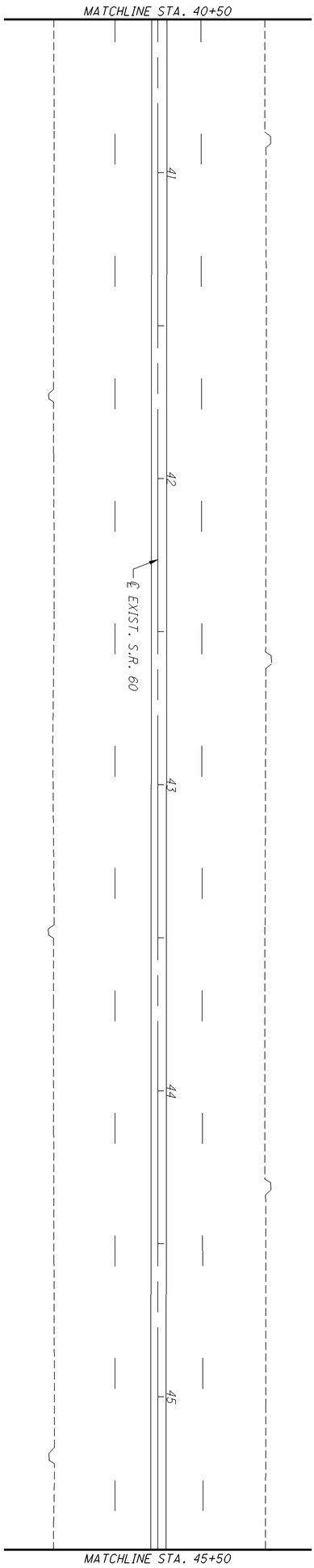
M060_TPS_06.DGN 11/24/08

CALCULATED JLS
CHECKED DNM

HORIZONTAL SCALE IN FEET
0 20 40

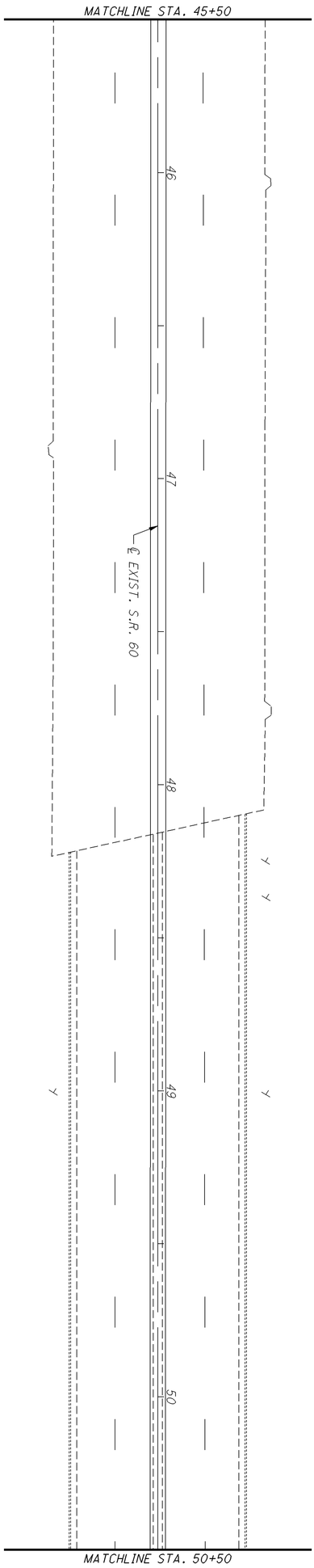
TRAFFIC CONTROL PLAN SHEET
STA. 35+50 TO STA. 40+50 (S.R. 60)

MUS-60-16.75



NO TRAFFIC CONTROL FOR THIS SHEET.

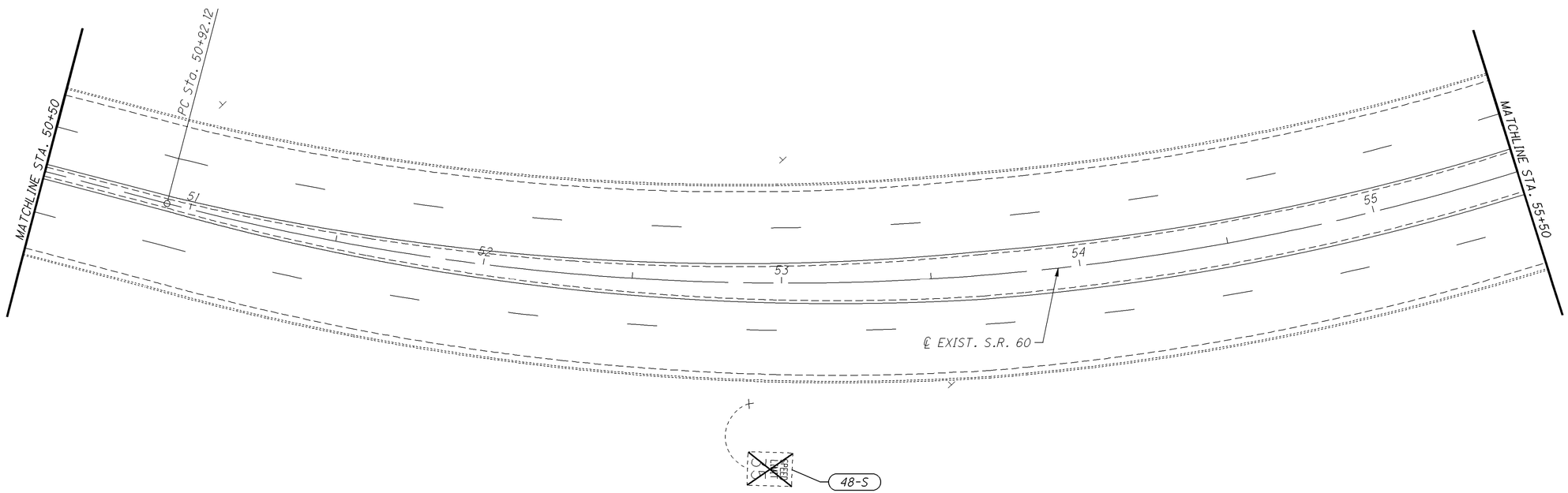
165 / 78	MUS-60-16.75	TRAFFIC CONTROL PLAN SHEET STA. 40+50 TO STA. 45+50 (S.R. 60)	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET



NO TRAFFIC CONTROL FOR THIS SHEET.

165 / 79	MUS-60-16.75	TRAFFIC CONTROL PLAN SHEET STA. 45+50 TO STA. 50+50 (S.R. 60)	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

TRAFFIC CONTROL PLAN SHEET
STA. 50+50 TO STA. 55+50 (S.R. 60)

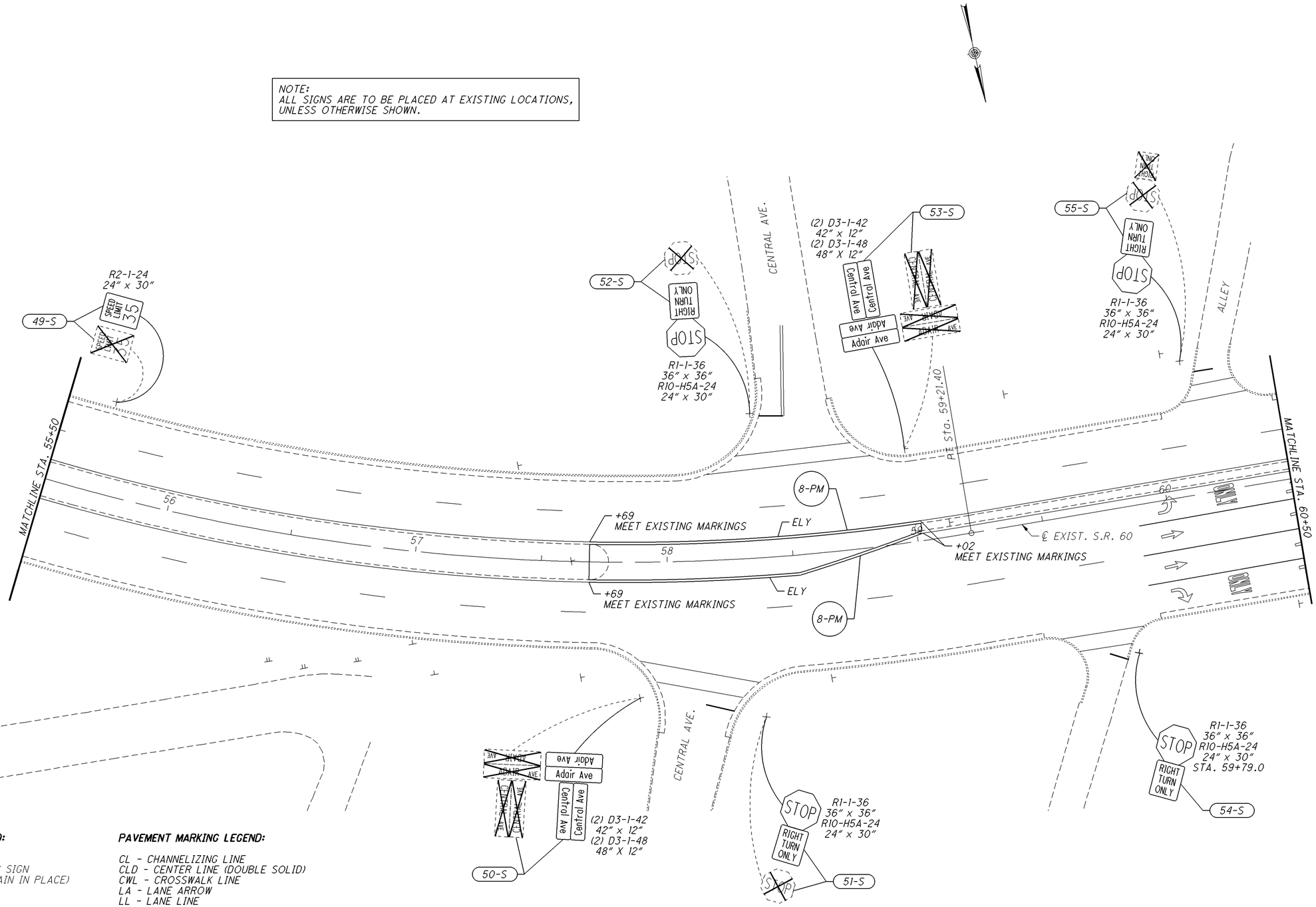
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

MUS-60-16.75

M060_TPS_09.DGN 11/24/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

- EXISTING SIGN (TO REMAIN IN PLACE)
- EXISTING SIGN (TO BE REMOVED)
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 55+50 TO STA. 60+50 (S.R. 60)

MUS-60-16.75

M060_TPS_010.DGN 11/24/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.

58-S
59-S
62-S
63-S
NOT USED

61-S
D3-1-48
48" x 18"
STA. 61+81.4
Adair Ave

65-S
64-S
D3-1-54
54" x 18"
STA. 62+26.6
Linden Ave

67-S
R1-1-36
36" x 36"
R10-H5A-24
24" x 30"
STOP
RIGHT TURN ONLY

(2) D3-1-42
42" x 12"
(2) D3-1-42
42" x 12"
69-S
Peter's ST
Adair Ave

LINDEN AVE.
PETERS ST.
ALLEY
BLUFF ST.

MATCHLINE STA. 60+50
MATCHLINE STA. 65+50

61
62
63
64
65
℄ EXIST. S.R. 60

D3-1-54
54" x 18"
STA. 61+16.4
Linden Ave
57-S

56-S

Adair Ave
D3-1-48
48" x 18"
STA. 61+69.0
60-S

STOP
RIGHT TURN ONLY
R1-1-36
36" x 36"
R10-H5A-24
24" x 30"
66-S

68-S
Adair Ave
Bluff St
(2) D3-1-42
42" x 12"
(2) D3-1-36
36" x 12"

STOP
RIGHT TURN ONLY
R1-1-36
36" x 36"
R10-H5A-24
24" x 30"
70-S

SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 60+50 TO STA. 65+50 (S.R. 60)

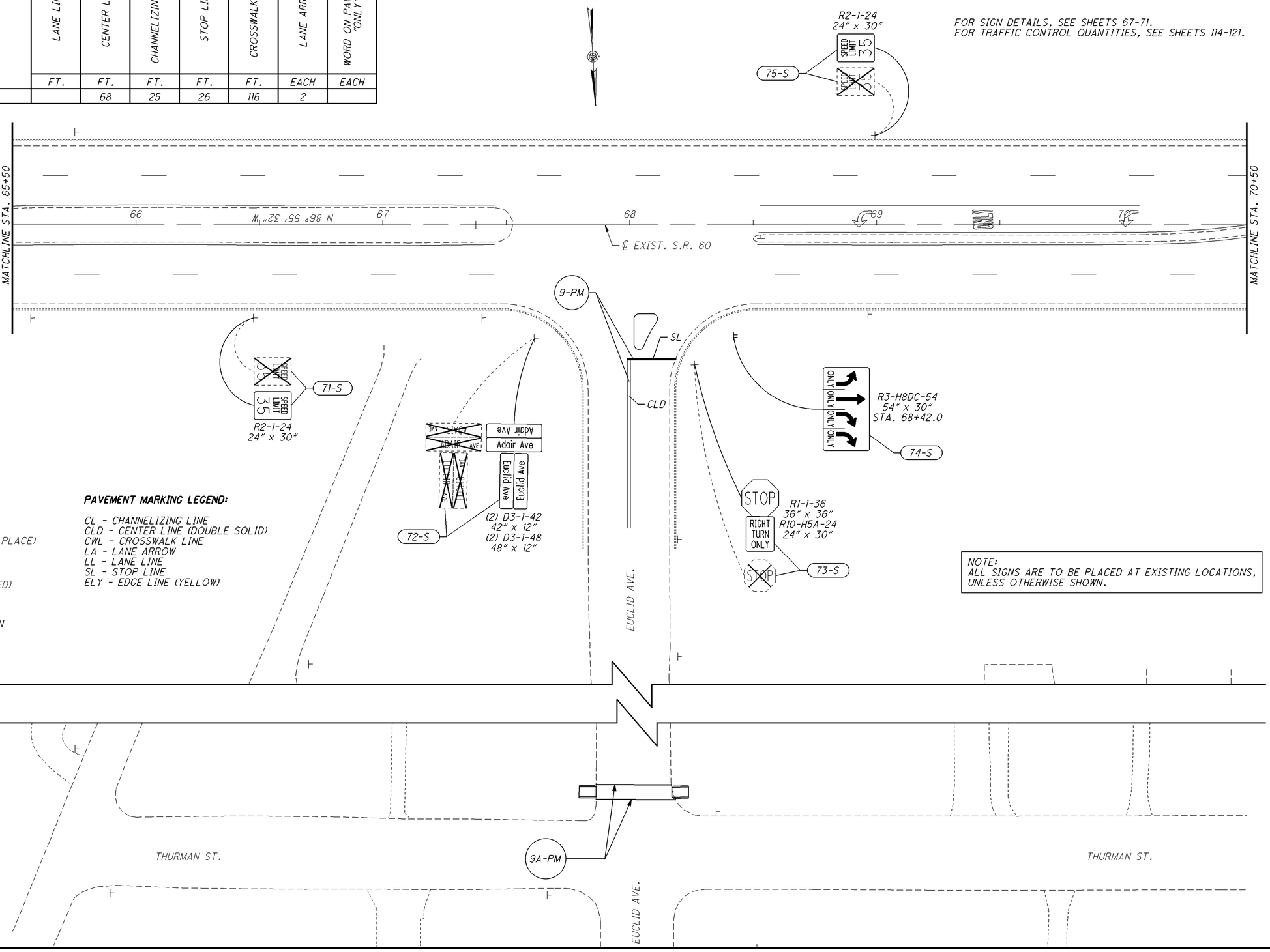
MUS-60-16.75

82
165

MOGO_TPS_011.DGN 11/24/08

REFERENCE NO.	ITEM 644 REMOVAL OF PAVEMENT MARKING FOR INFORMATION ONLY						
	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	LANE ARROW	WORD ON PAVEMENT "ONLY"
	FT.	FT.	FT.	FT.	FT.	EACH	EACH
9-PM		68	25	26	116	2	

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.

HORIZONTAL SCALE IN FEET
0 20 40

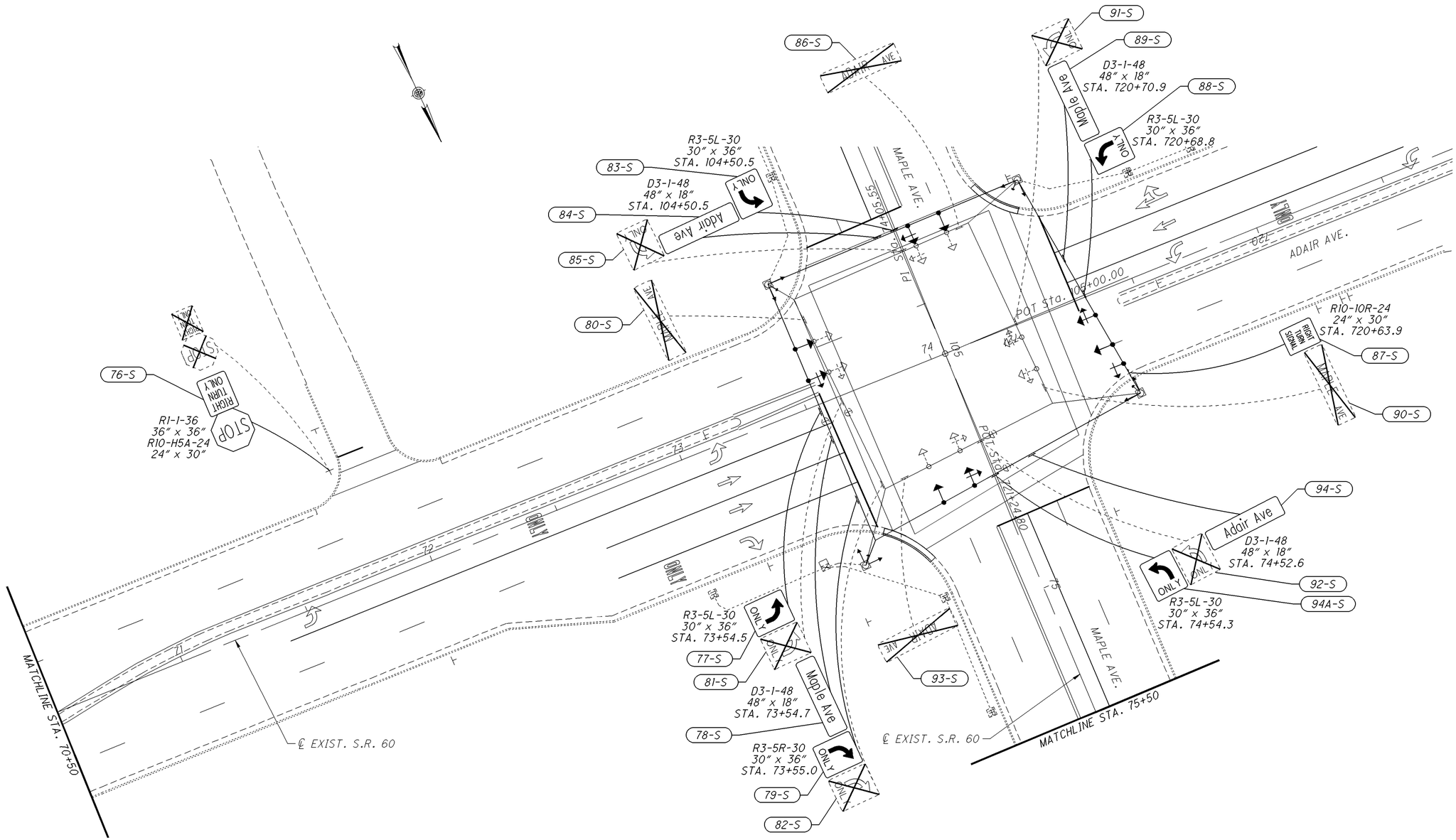
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 65+50 TO STA. 70+50 (S.R. 60)

MUS-60-16.75

83
165

M060_TPS_012.DGN 11/24/08



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

M060_TPS_013.DGN 11/24/08

HORIZONTAL SCALE IN FEET
0 20 40

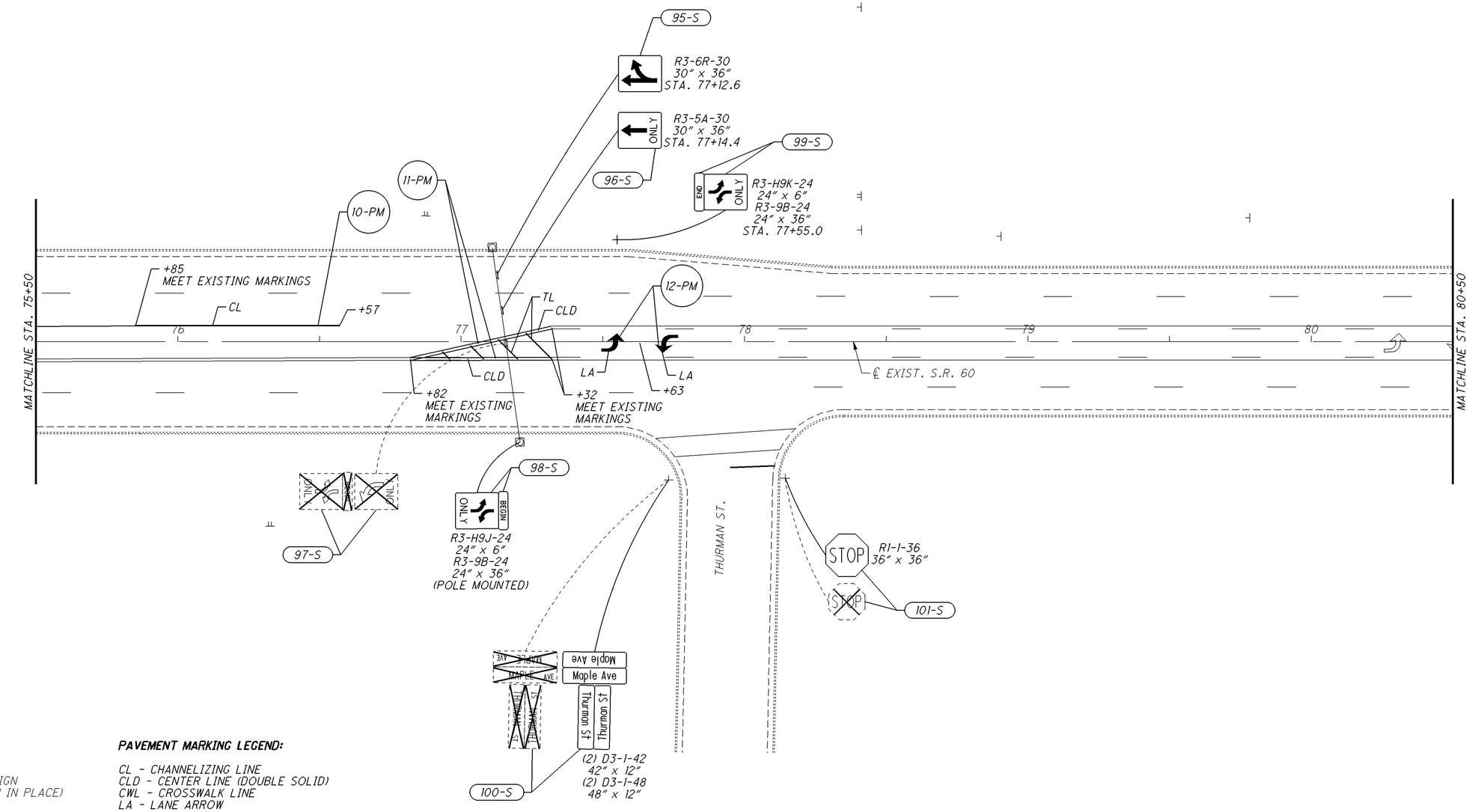
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 70+50 TO STA. 75+50 (S.R. 60)

MUS-60-16.75

REFERENCE NO.	ITEM 644 REMOVAL OF PAVEMENT MARKING FOR INFORMATION ONLY						
	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	LANE ARROW	WORD ON PAVEMENT "ONLY"
	FT.	FT.	FT.	FT.	FT.	EACH	EACH
11-PM		106					
12-PM						2	

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)
TL - TRANSVERSE/DIAGONAL LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

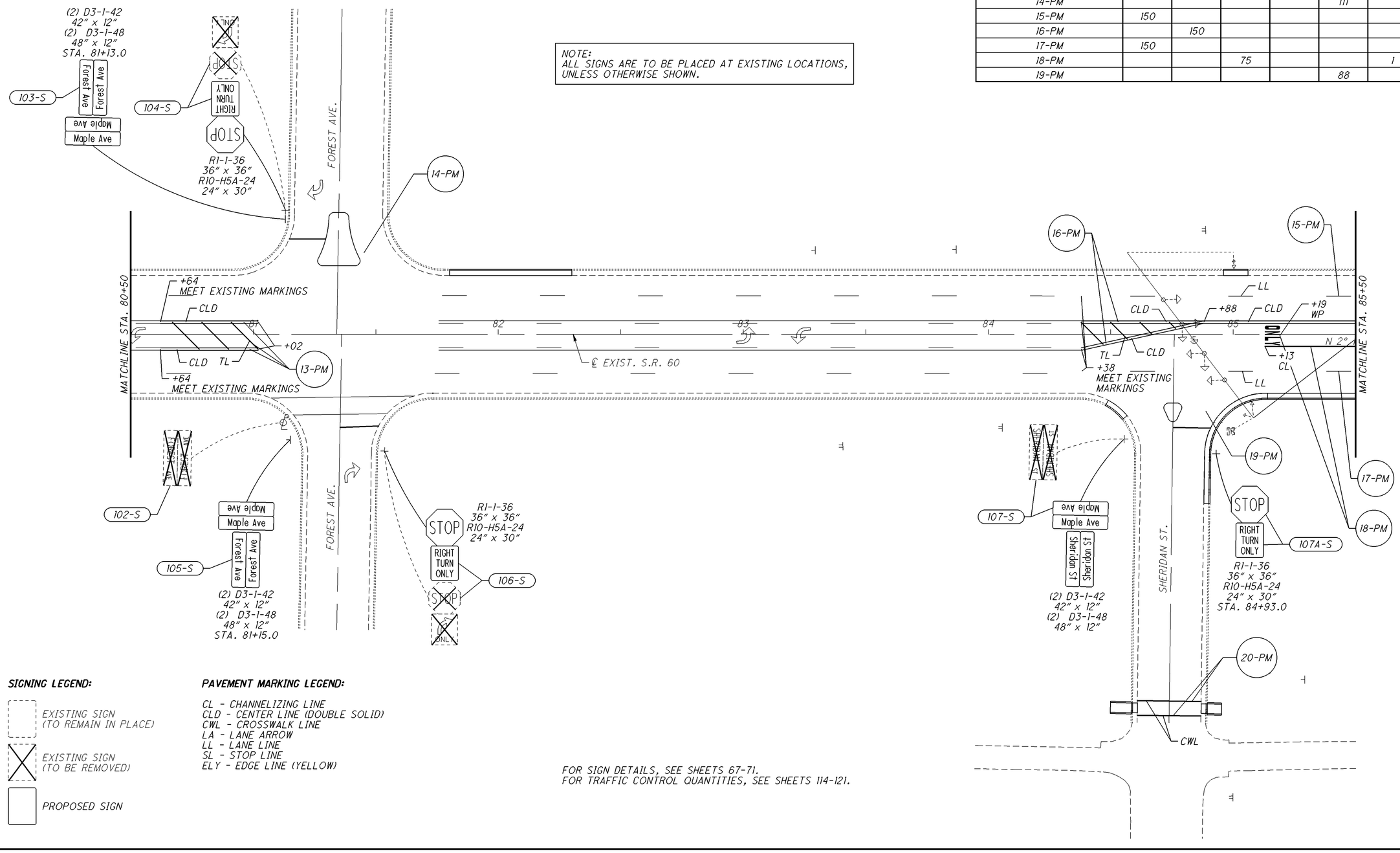
TRAFFIC CONTROL PLAN SHEET
STA. 75+50 TO STA. 80+50 (S.R. 60)

MUS-60-16.75

M060_TPS_014.DGN 11/24/08

REFERENCE NO.	ITEM 644 REMOVAL OF PAVEMENT MARKING FOR INFORMATION ONLY						
	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	LANE ARROW	WORD ON PAVEMENT "ONLY"
	FT.	FT.	FT.	FT.	FT.	EACH	EACH
14-PM					111		
15-PM	150						
16-PM		150					
17-PM	150						
18-PM			75			1	1
19-PM					88		

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

- EXISTING SIGN (TO REMAIN IN PLACE)
- EXISTING SIGN (TO BE REMOVED)
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

M060_TPS_015.DGN 12/21/08

HORIZONTAL SCALE IN FEET
0 20 40

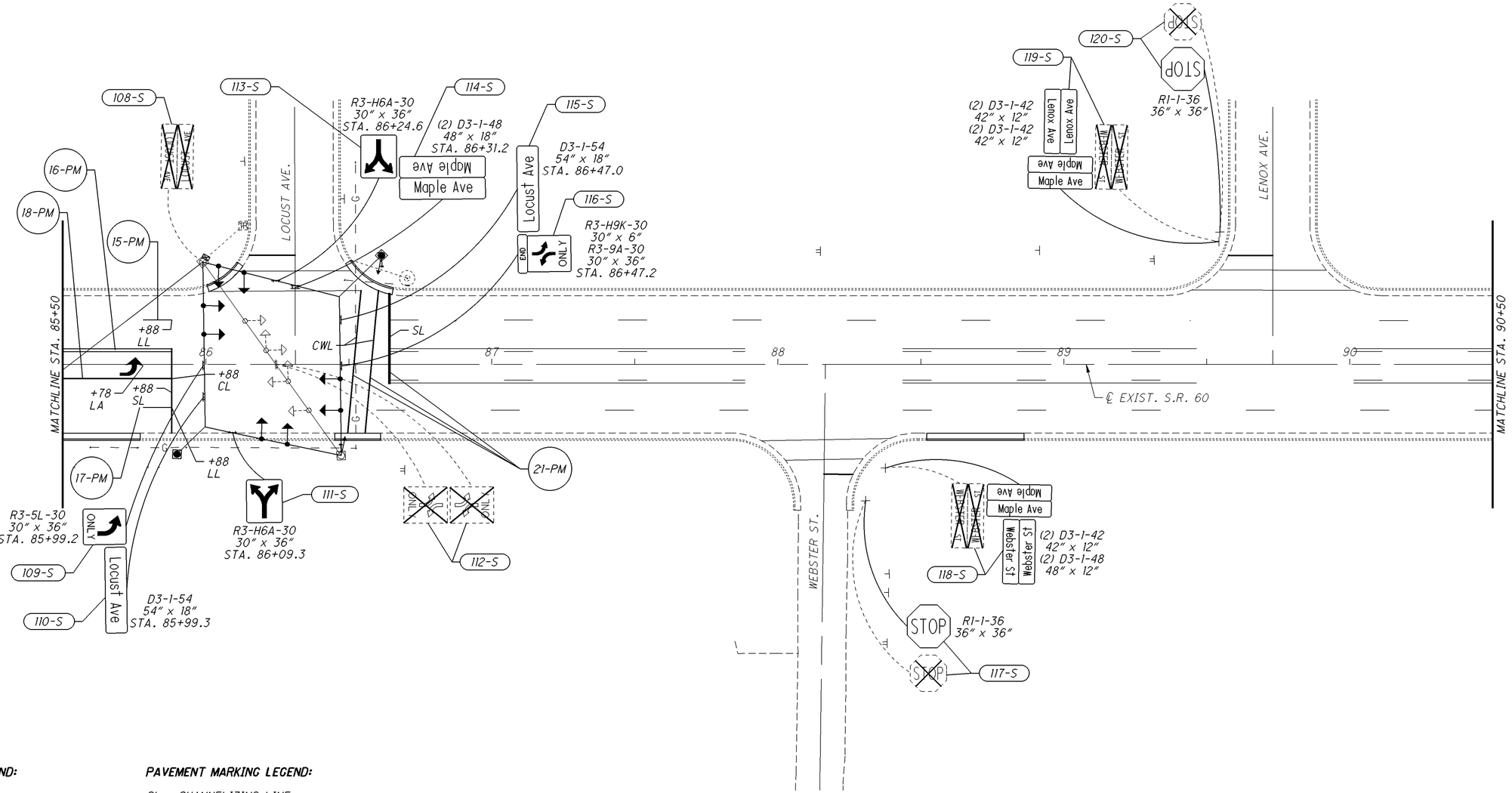
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 80+50 TO STA. 85+50 (S.R. 60)

MUS-60-16.75

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.

REFERENCE NO.	ITEM 644 REMOVAL OF PAVEMENT MARKING FOR INFORMATION ONLY						
	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	LANE ARROW	WORD ON PAVEMENT "ONLY"
	FT.	FT.	FT.	FT.	FT.	EACH	EACH
21-PM	5	10		33			



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

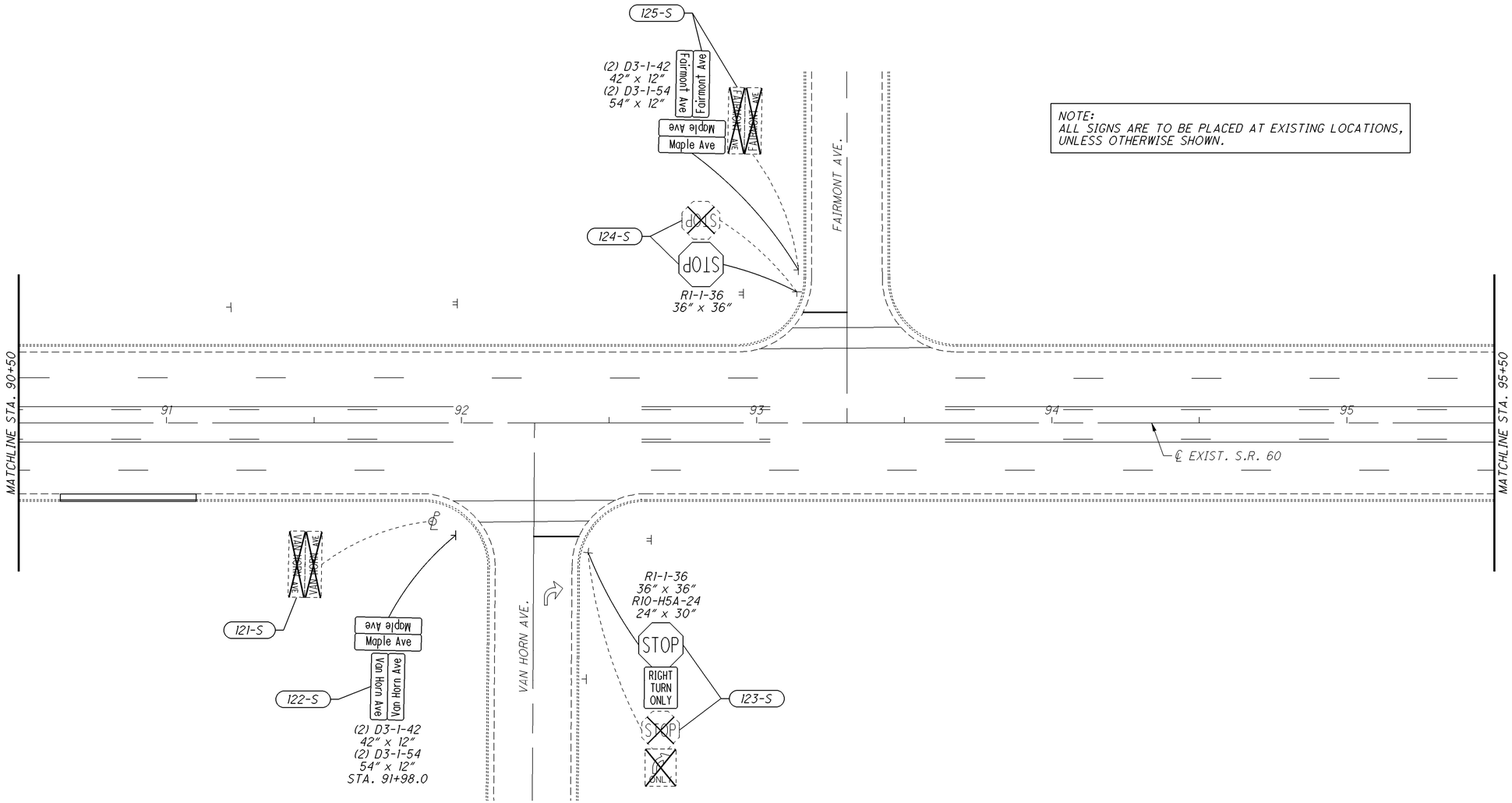
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 85+50 TO STA. 90+50 (S.R. 60)

MUS-60-16.75

MOGO_TPS_016.DGN 11/24/08



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

M060_TPS_017.DGN 11/24/08

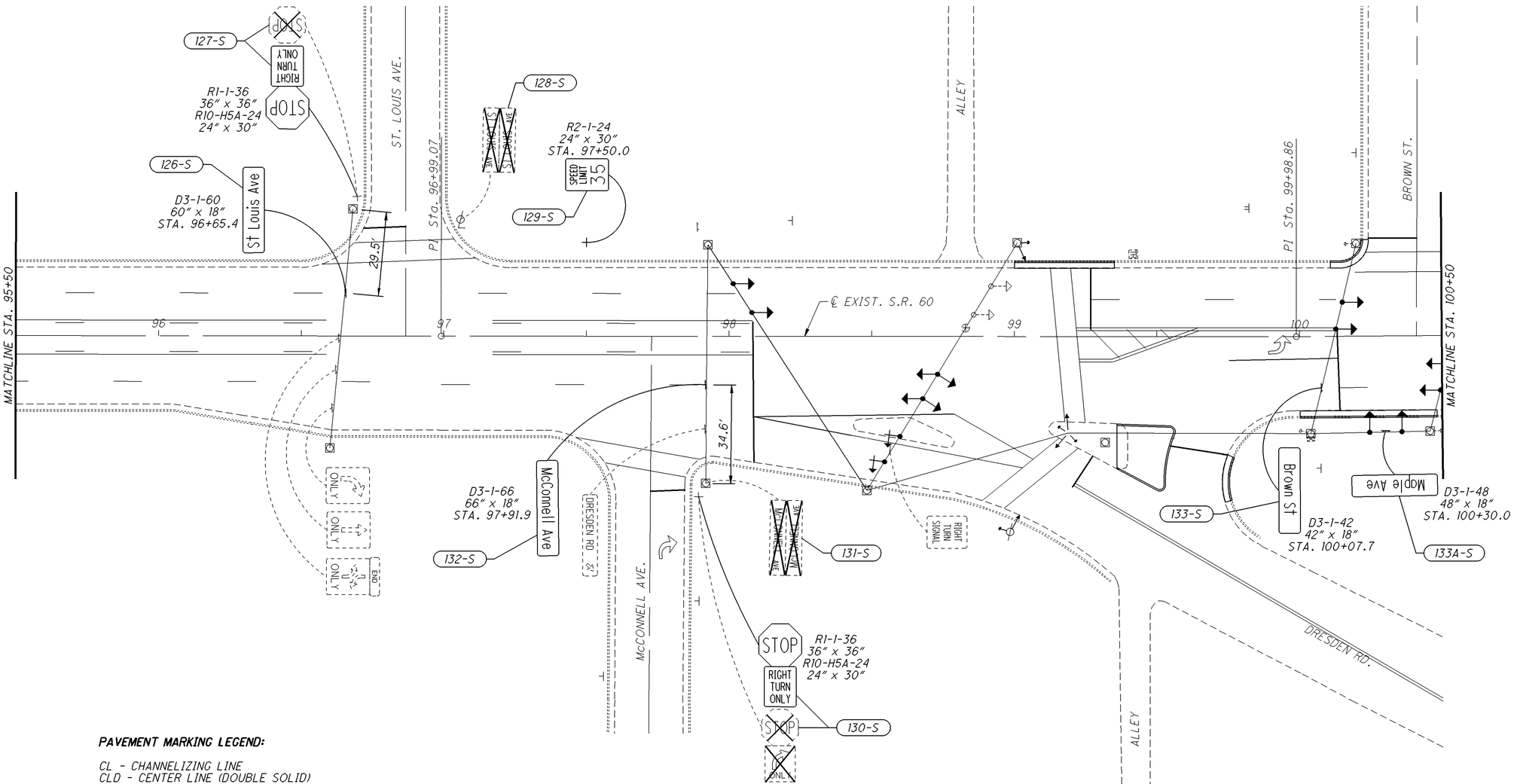
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 90+50 TO STA. 95+50 (S.R. 60)

MUS-60-16.75

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

M060_TPS_018.DGN 11/25/08

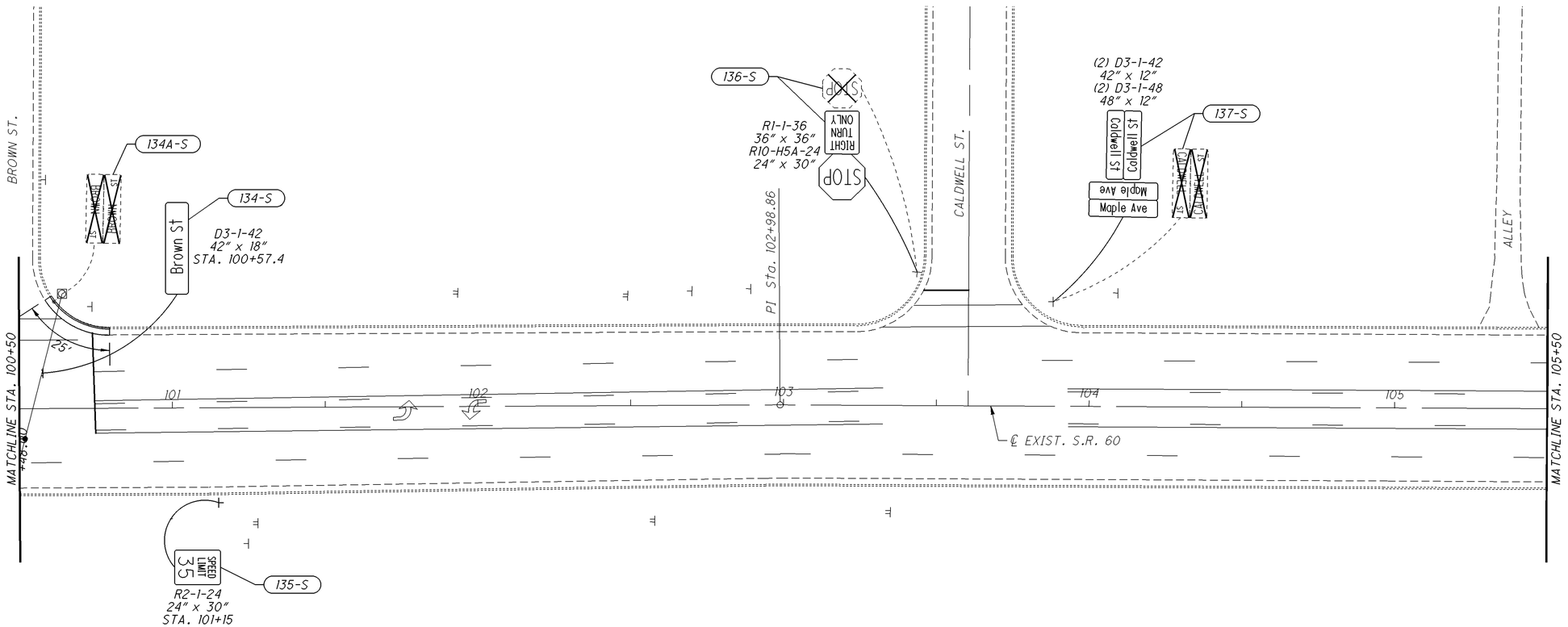
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 95+50 TO STA. 100+50 (S.R. 60)

MUS-60-16.75

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

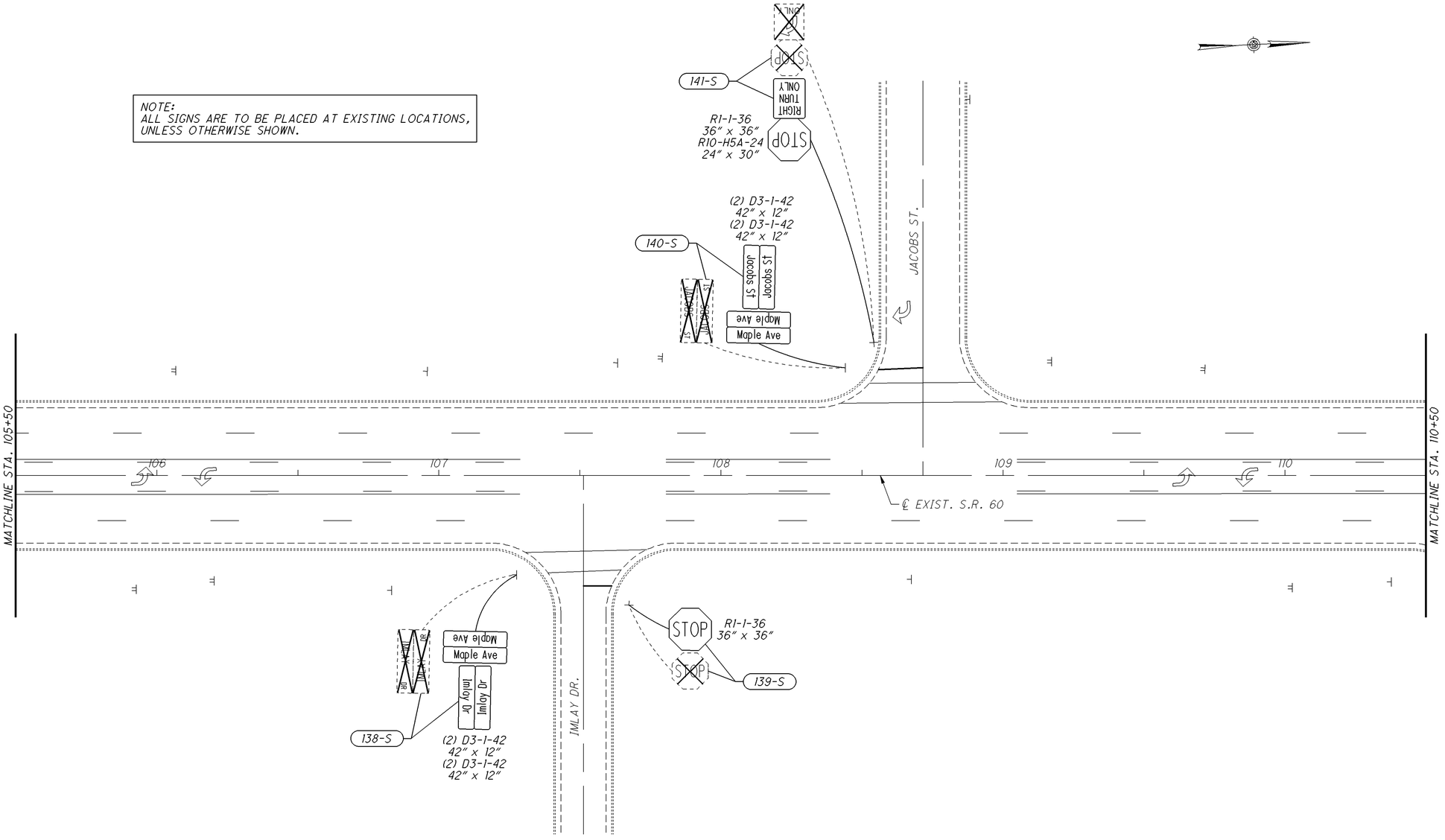
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 100+50 TO STA. 105+50 (S.R. 60)

MUS-60-16.75

M060_TPS_019.DGN 11/25/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

M060_TPS_020.DGN 11/25/08

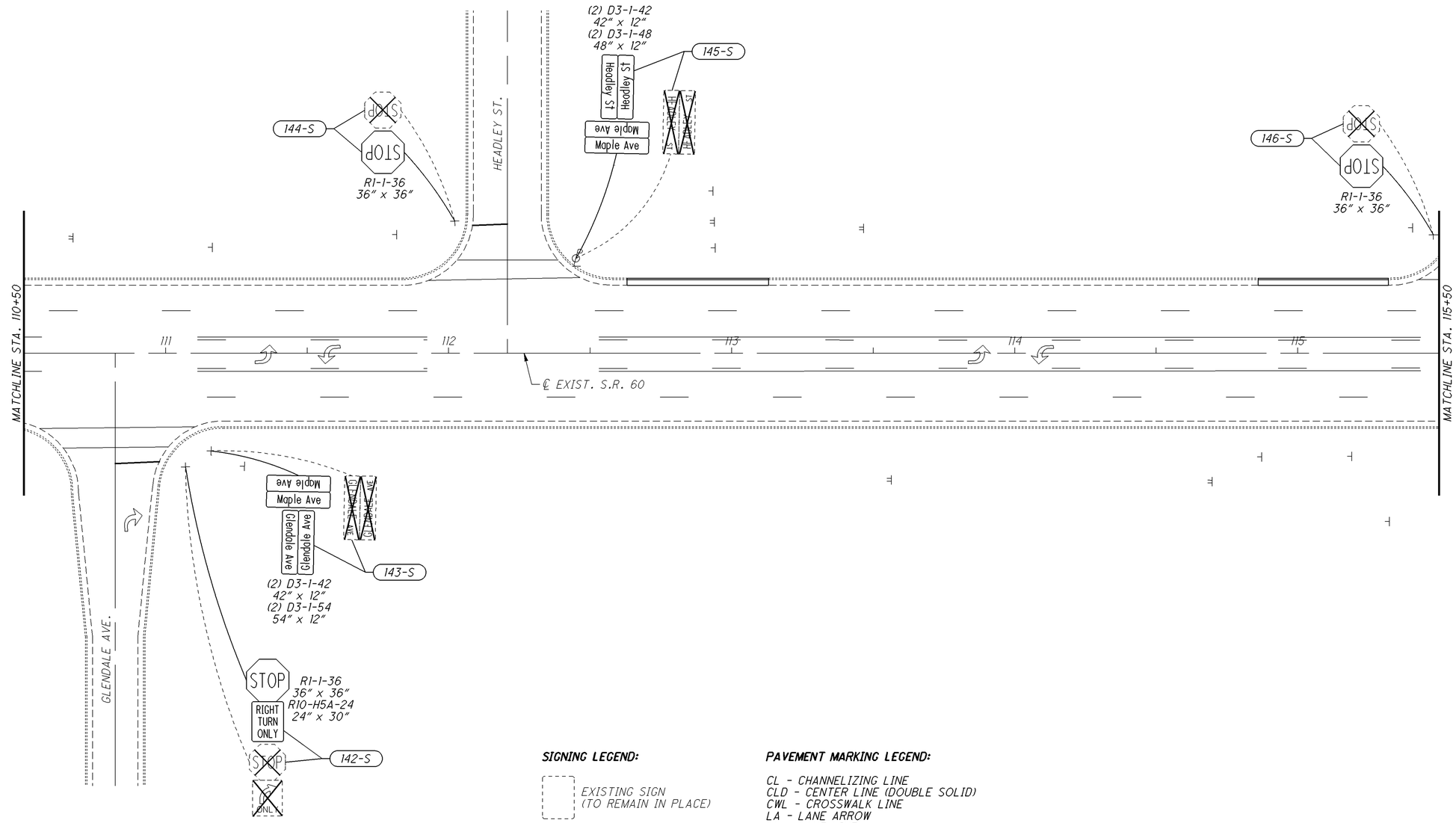
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 105+50 TO STA. 110+50 (S.R. 60)

MUS-60-16.75

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

- EXISTING SIGN (TO REMAIN IN PLACE)
- EXISTING SIGN (TO BE REMOVED)
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

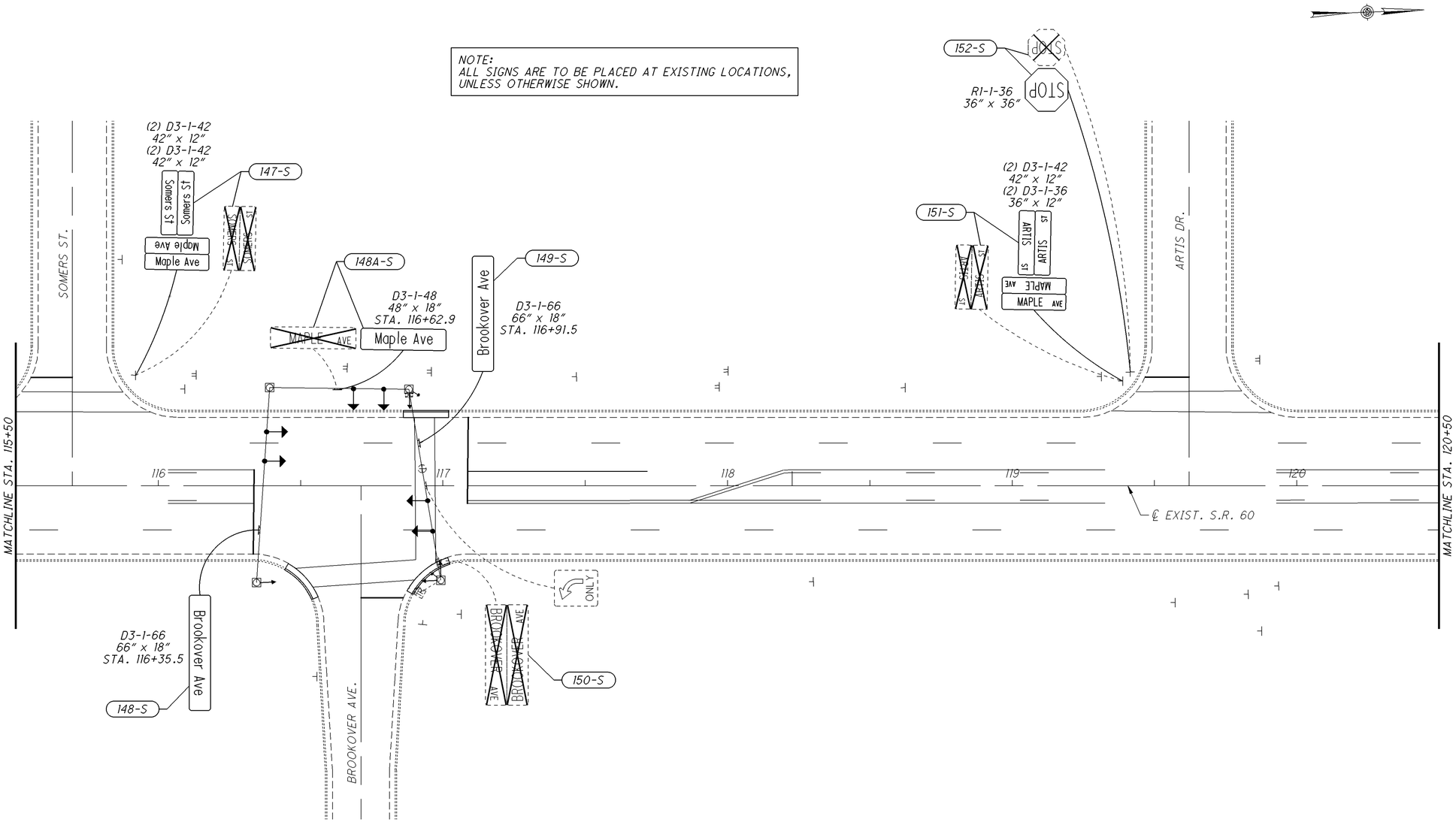
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 110+50 TO STA. 115+50 (S.R. 60)

MUS-60-16.75

M060_TPS_021.DGN 11/25/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

M060_TPS_022.DGN 11/25/08

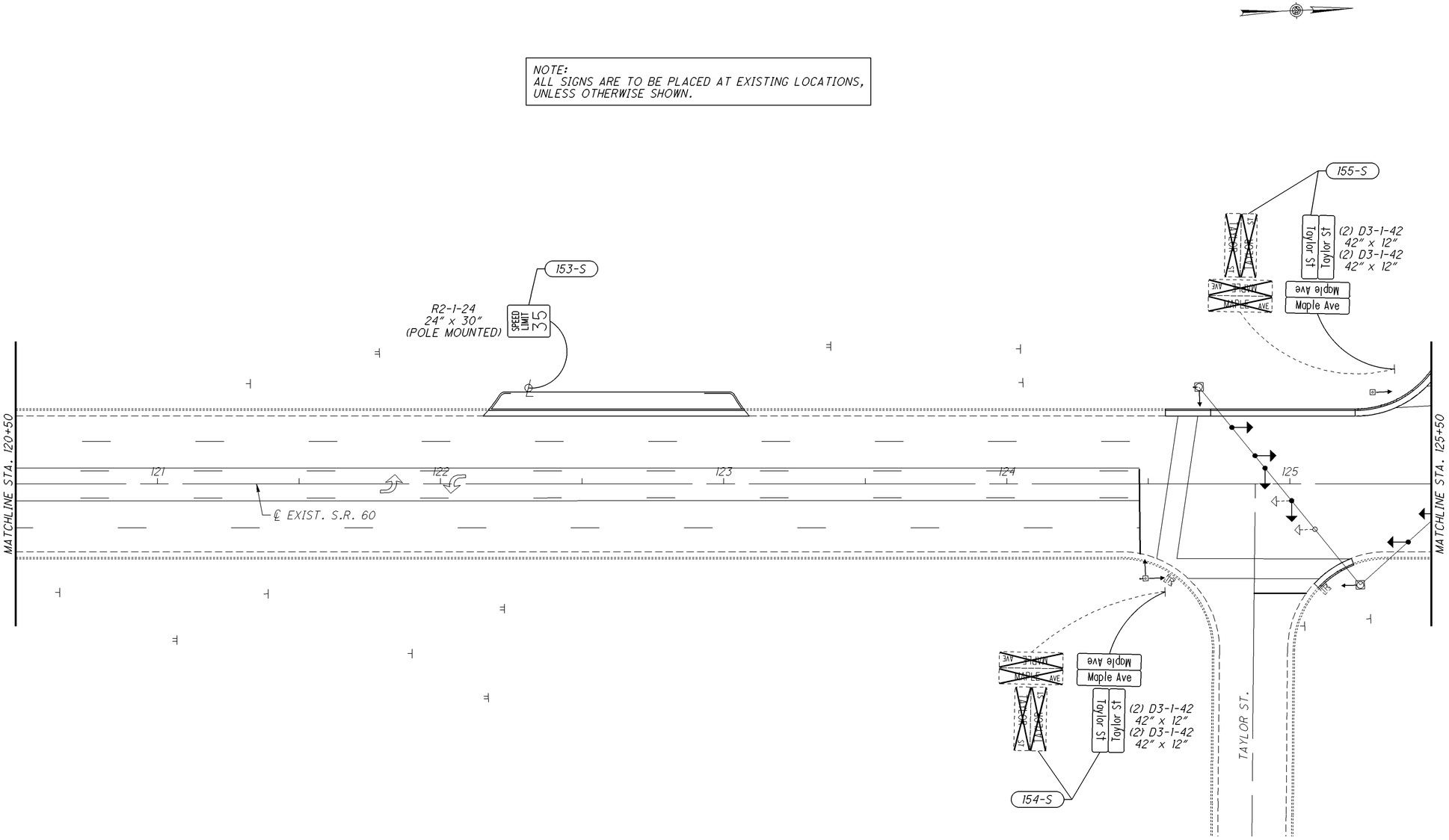
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 115+50 TO STA. 120+50 (S.R. 60)

MUS-60-16.75

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

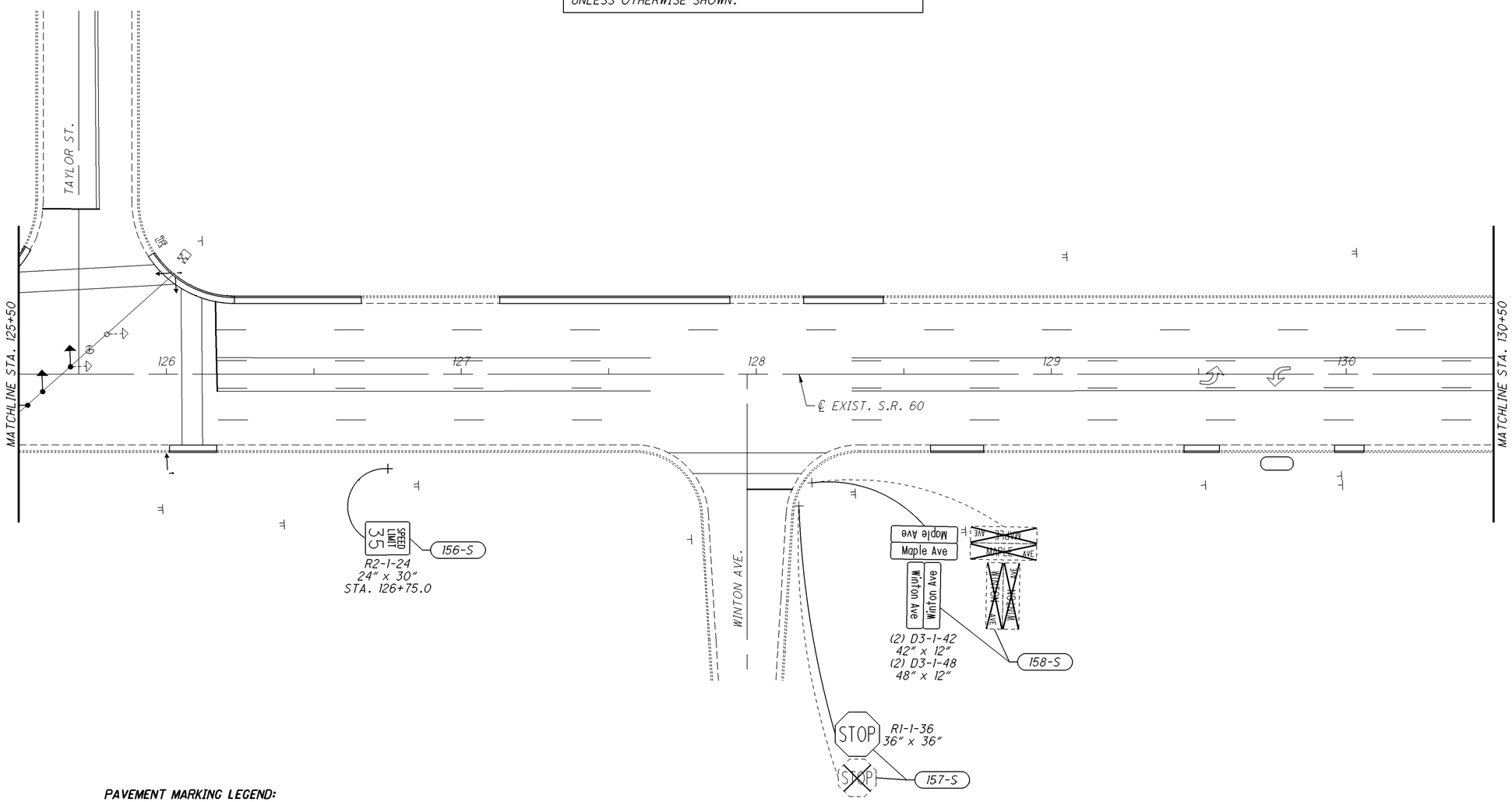
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 120+50 TO STA. 125+50 (S.R. 60)

MUS-60-16.75

M060_TPS_023.DGN 11/25/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

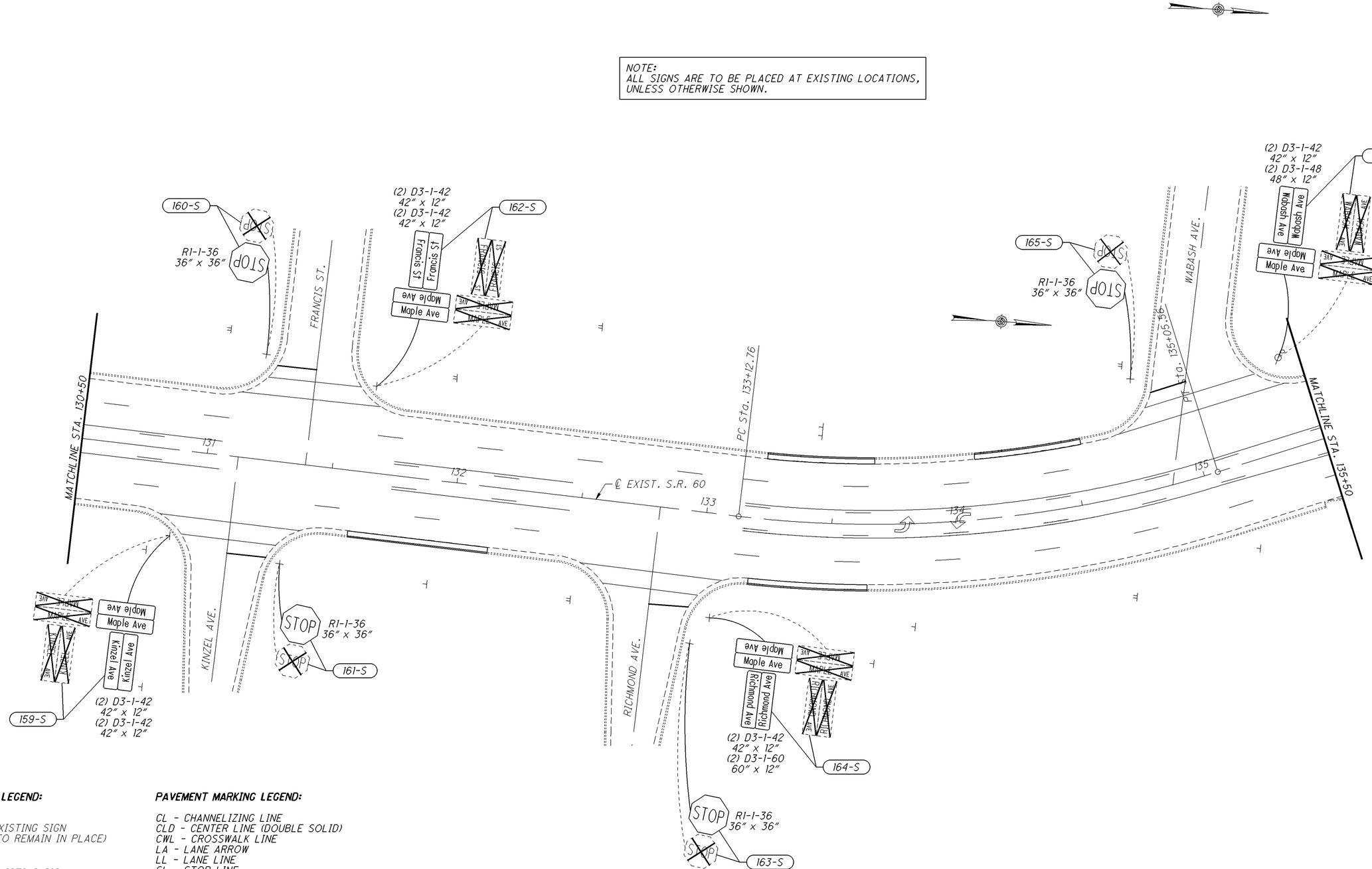
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 125+50 TO STA. 130+50 (S.R. 60)

MUS-60-16.75

M060_PPP_024.DGN 11/25/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

- EXISTING SIGN (TO REMAIN IN PLACE)
- EXISTING SIGN (TO BE REMOVED)
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

TRAFFIC CONTROL PLAN SHEET
STA. 130+50 TO STA. 135+50 (S.R. 60)

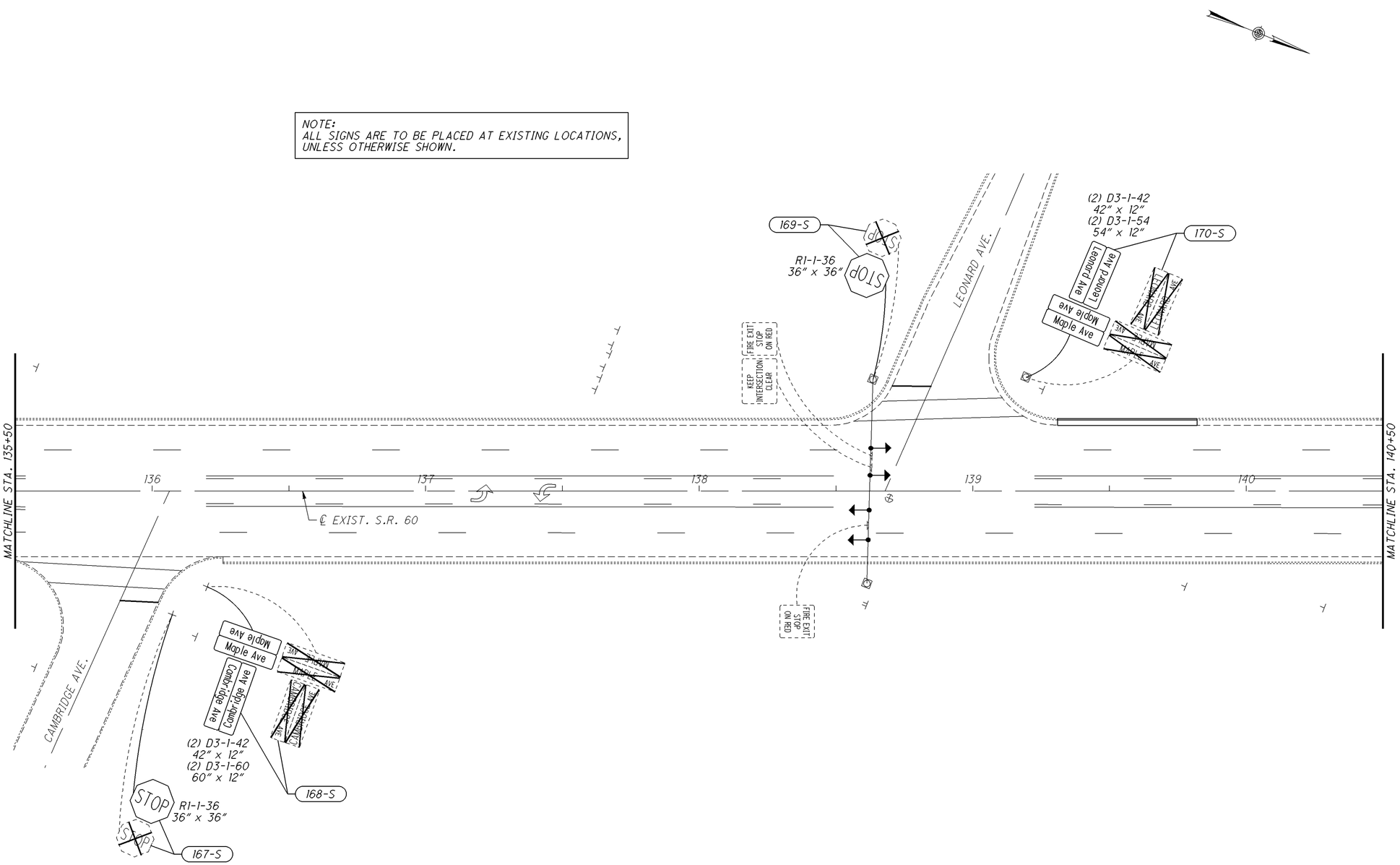
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

MUS-60-16.75

M060_TPS_025.DGN 11/25/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

- EXISTING SIGN (TO REMAIN IN PLACE)
- EXISTING SIGN (TO BE REMOVED)
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

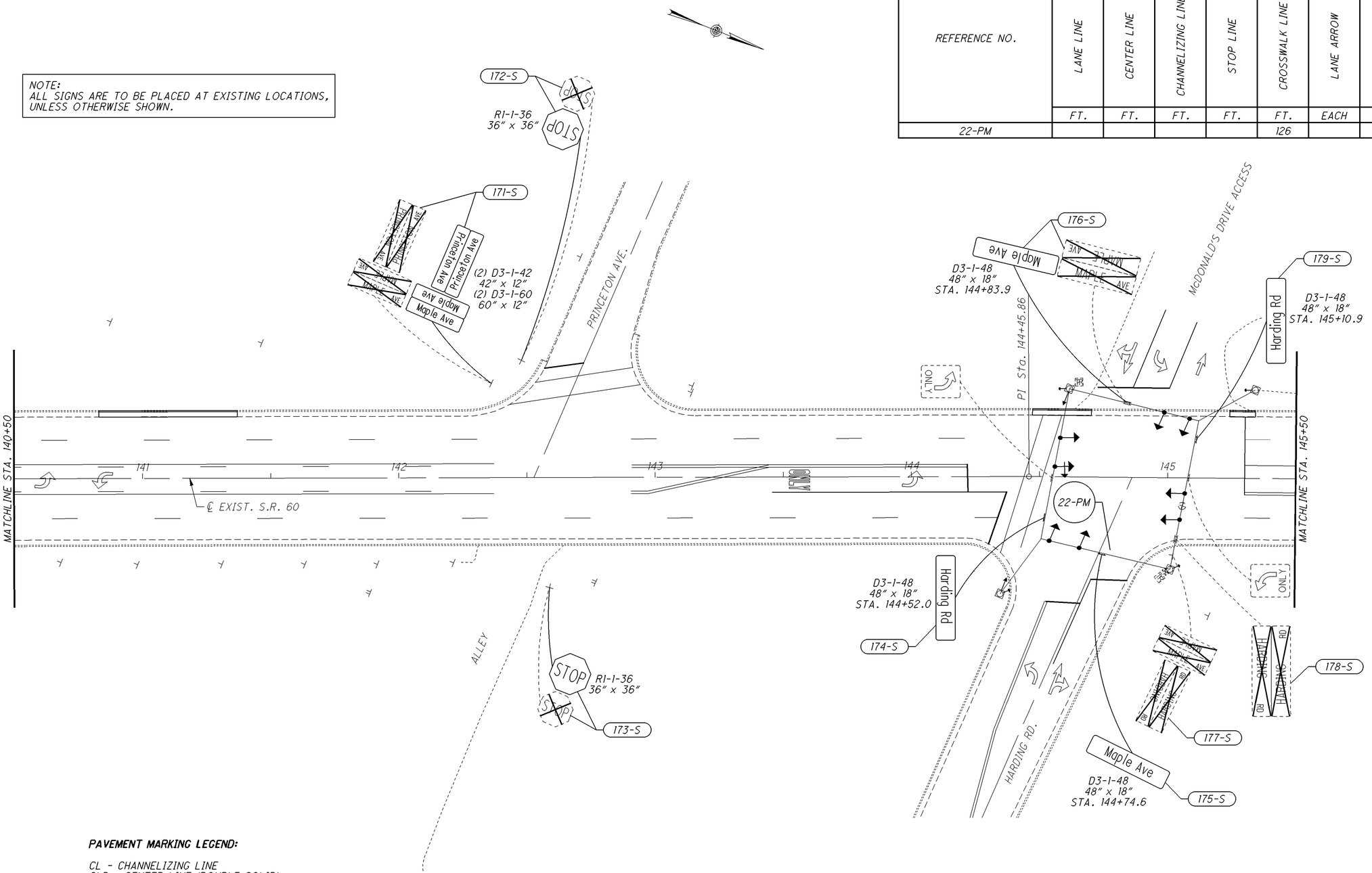
TRAFFIC CONTROL PLAN SHEET
STA. 135+50 TO STA. 140+50 (S.R. 60)

MUS-60-16.75

M060_TPS_026.DGN 11/25/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.

REFERENCE NO.	ITEM 644 REMOVAL OF PAVEMENT MARKING FOR INFORMATION ONLY						
	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	LANE ARROW	WORD ON PAVEMENT "ONLY"
	FT.	FT.	FT.	FT.	FT.	EACH	EACH
22-PM					126		



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

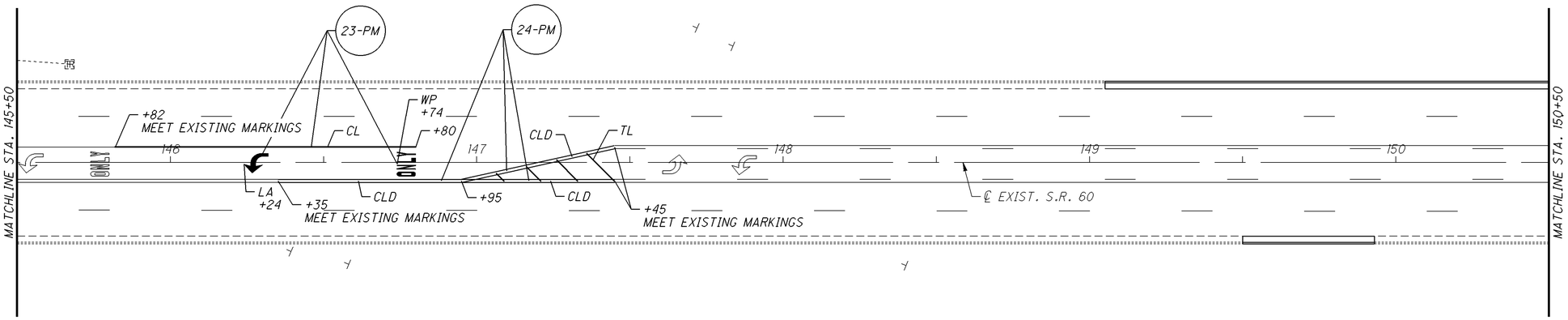
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 140+50 TO STA. 145+50 (S.R. 60)

MUS-60-16.75

M060_TPS_027.DGN 11/25/08

REFERENCE NO.	ITEM 644 REMOVAL OF PAVEMENT MARKING FOR INFORMATION ONLY						
	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	LANE ARROW	WORD ON PAVEMENT "ONLY"
	FT.	FT.	FT.	FT.	FT.	EACH	EACH
23-PM		94					
24-PM		175					



NO SIGNS FOR THIS SHEET.

SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)
TL - TRANSVERSE/DIAGONAL LINE (YELLOW)
WP - WORD ON PAVEMENT

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

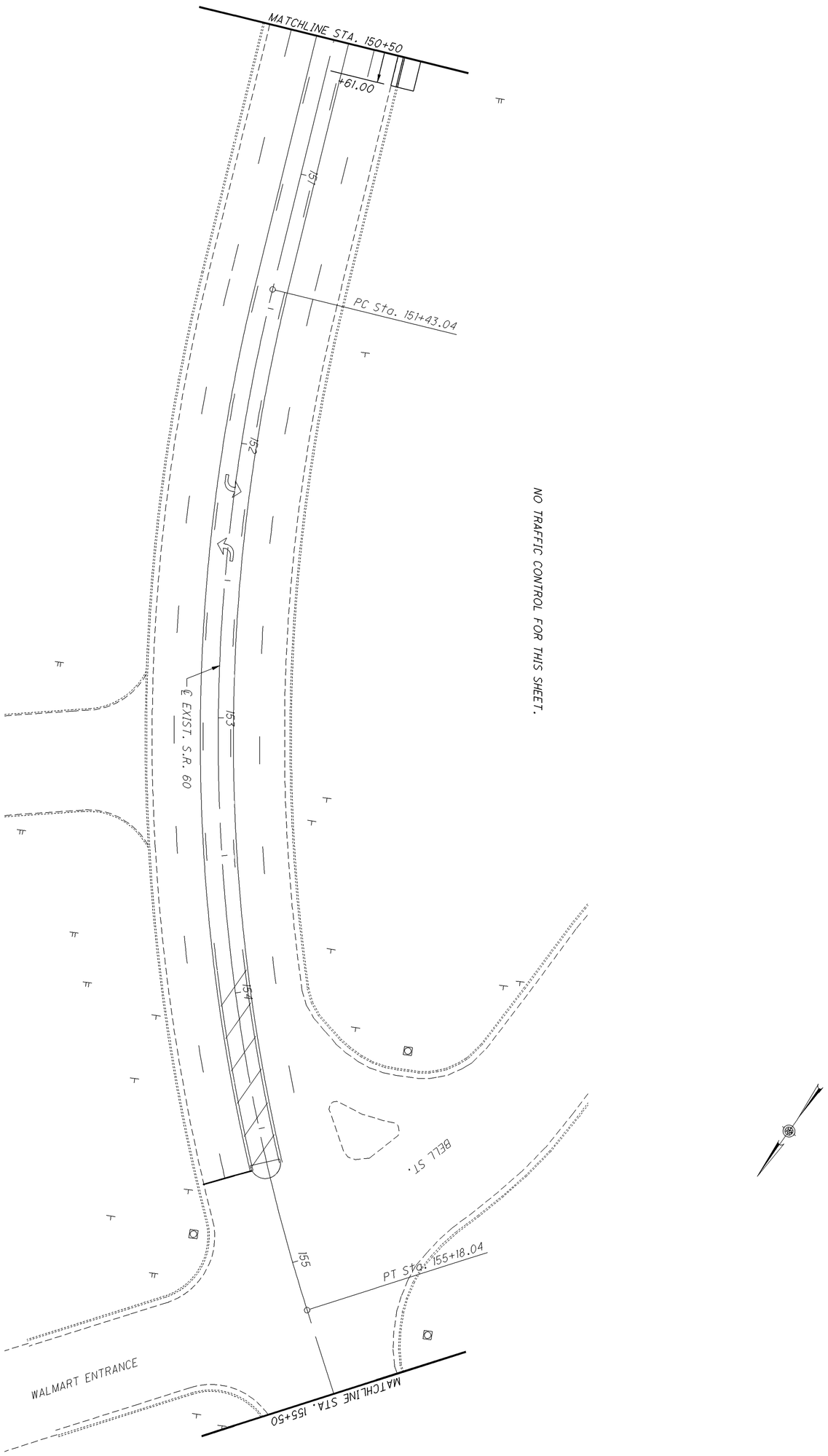
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 145+50 TO STA. 150+50 (S.R. 60)

MUS-60-16.75

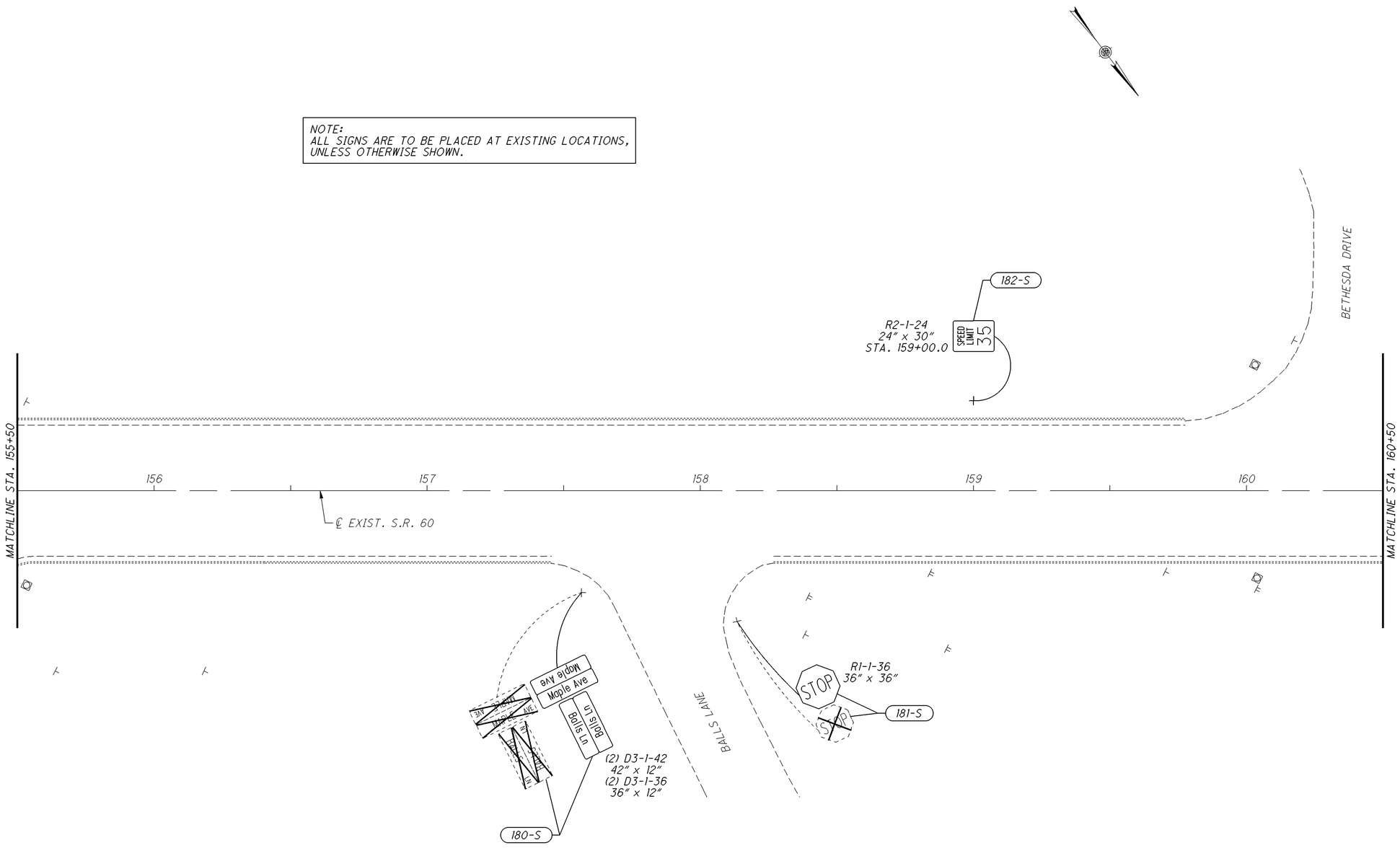
99
165

M060_TPS_028.DGN 11/25/08



165 / 100	MUS-60-16.75	TRAFFIC CONTROL PLAN SHEET STA. 150+50 TO STA. 155+50 (S.R. 60)	CALCULATED JLS CHECKED DNM	0 20 40 HORIZONTAL SCALE IN FEET

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

- EXISTING SIGN (TO REMAIN IN PLACE)
- EXISTING SIGN (TO BE REMOVED)
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

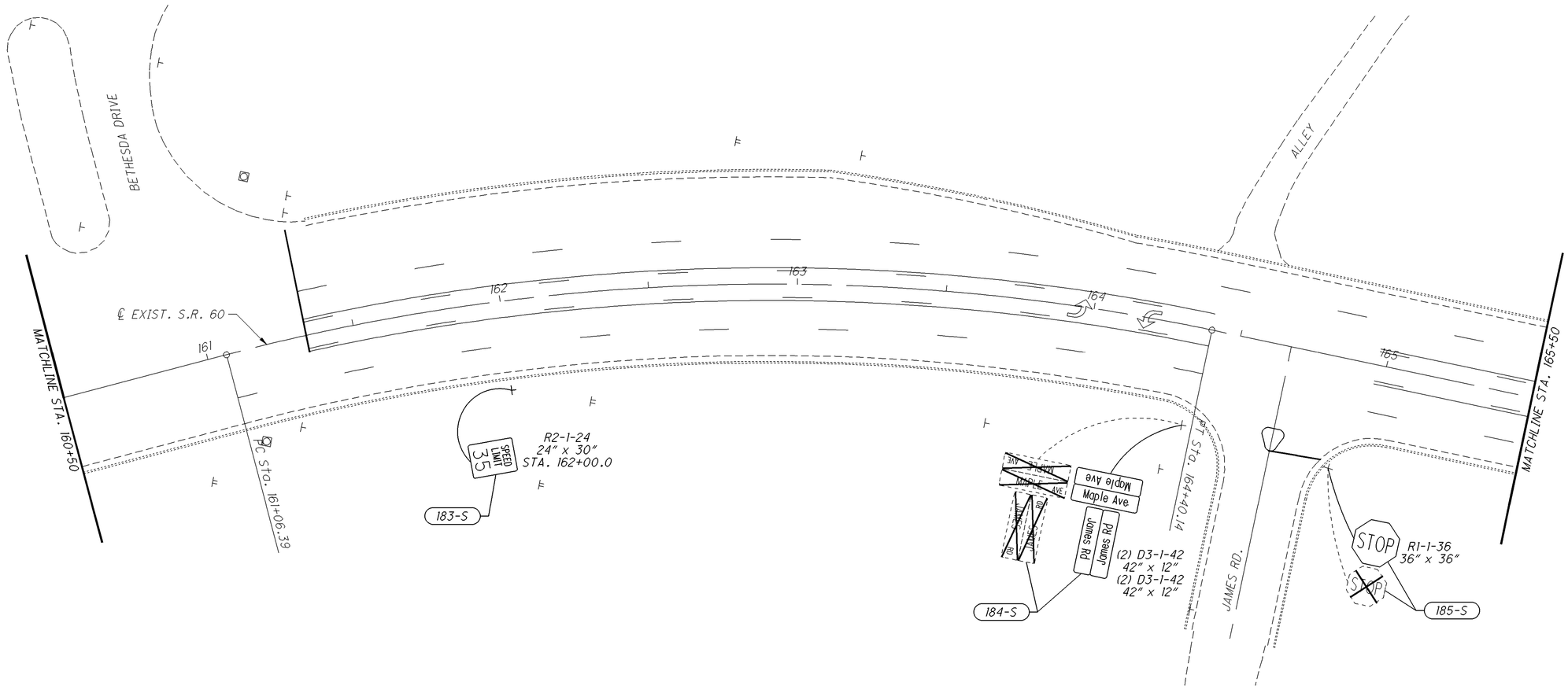
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 155+50 TO STA. 160+50 (S.R. 60)

MUS-60-16.75

M060_TPS_030.DGN 11/25/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

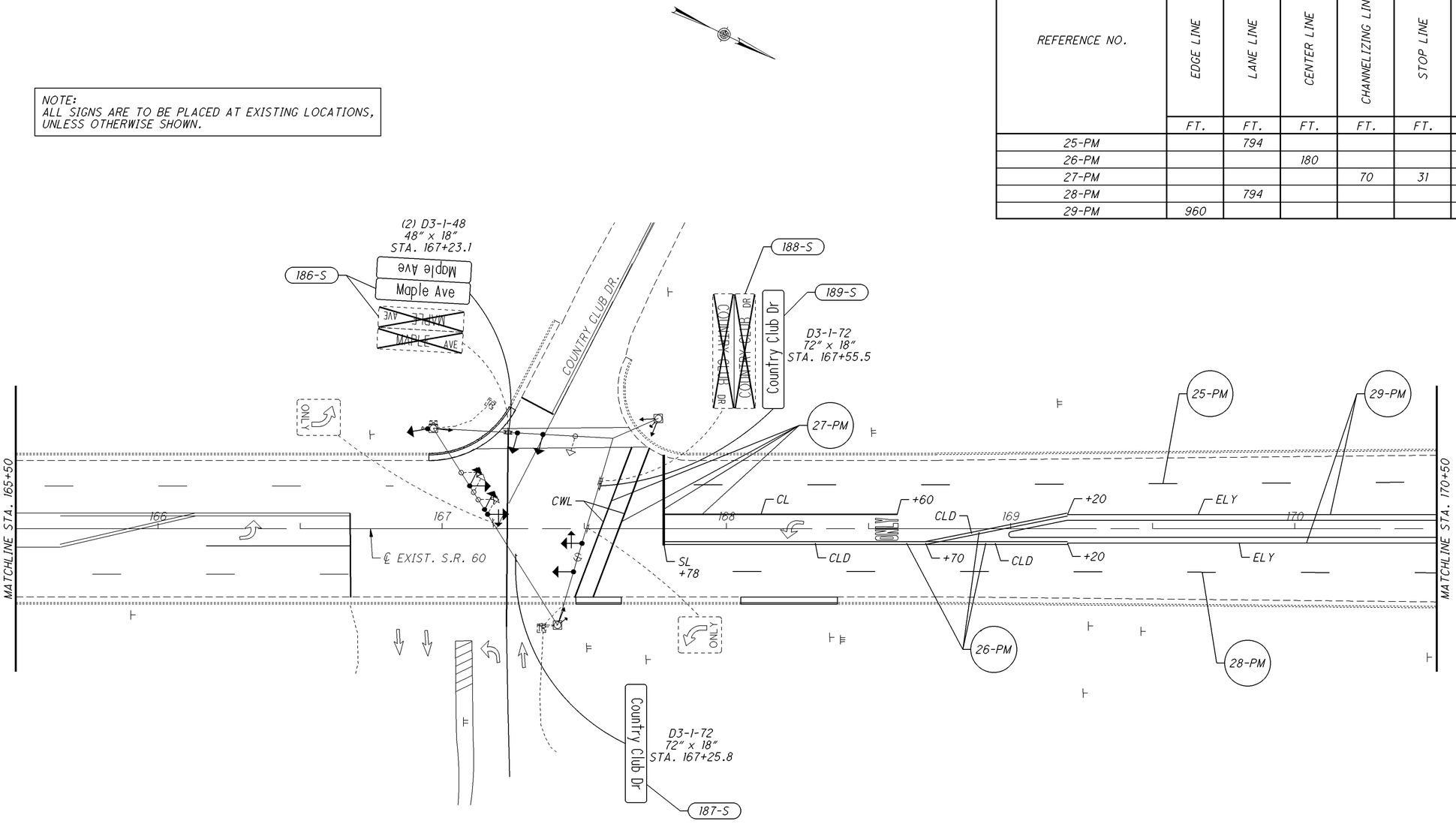
TRAFFIC CONTROL PLAN SHEET
STA. 160+50 TO STA. 165+50 (S.R. 60)

MUS-60-16.75

M060_TPS_031.DGN 11/25/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.

REFERENCE NO.	ITEM 644 REMOVAL OF PAVEMENT MARKING FOR INFORMATION ONLY						
	EDGE LINE	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	LANE ARROW
	FT.	FT.	FT.	FT.	FT.	FT.	EACH
25-PM		794					
26-PM			180				
27-PM				70	31		
28-PM		794					
29-PM	960						



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

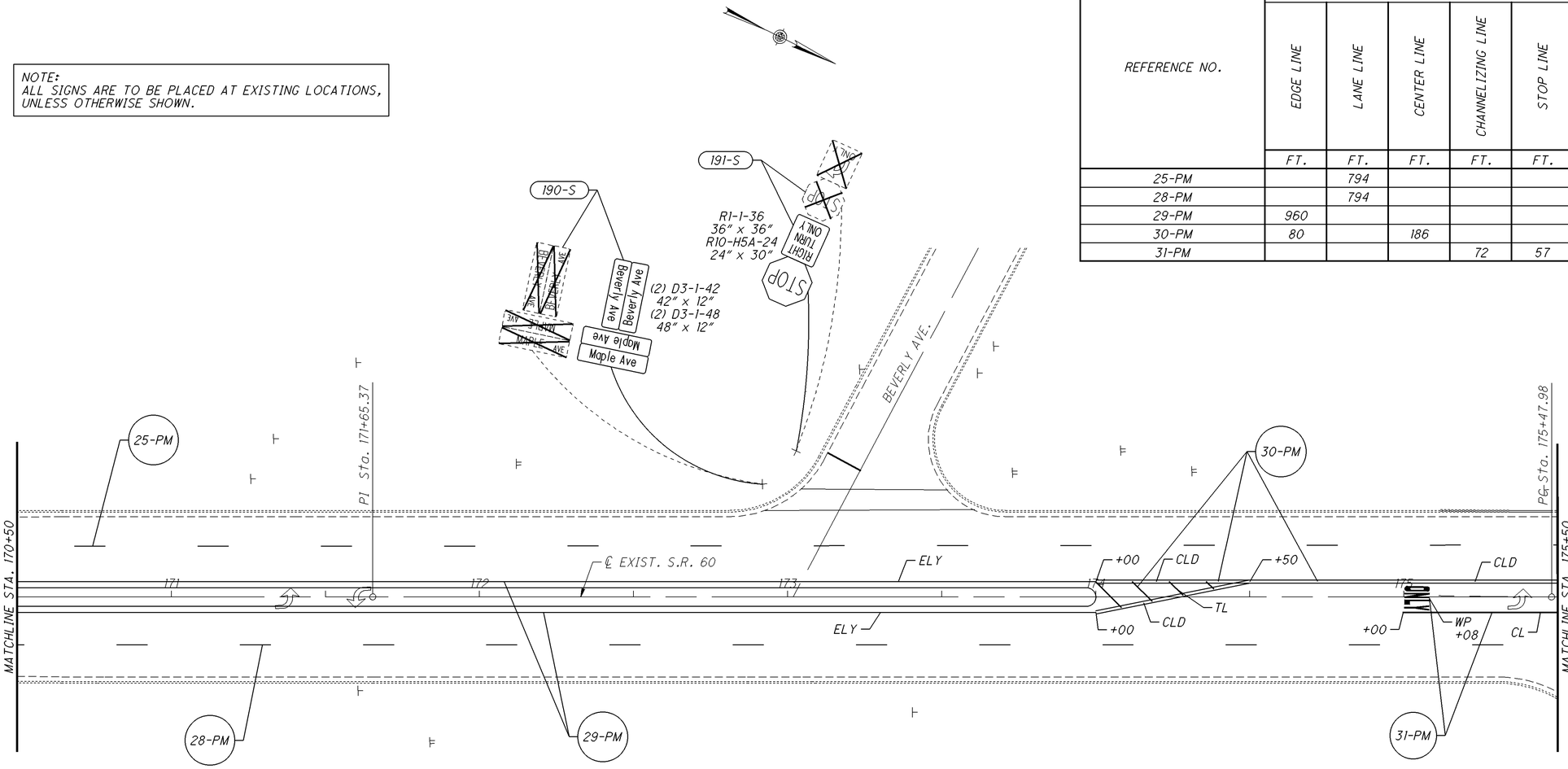
TRAFFIC CONTROL PLAN SHEET
STA. 165+50 TO STA. 170+50 (S.R. 60)

MUS-60-16.75

M060_TPS_032.DGN 12/17/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.

REFERENCE NO.	ITEM 644 REMOVAL OF PAVEMENT MARKING FOR INFORMATION ONLY						
	EDGE LINE	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	LANE ARROW
	FT.	FT.	FT.	FT.	FT.	FT.	EACH
25-PM		794					
28-PM		794					
29-PM	960						
30-PM	80		186				
31-PM				72	57		



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)
TL - TRANSVERSE/DIAGONAL LINE
WP - WORD ON PAVEMENT

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

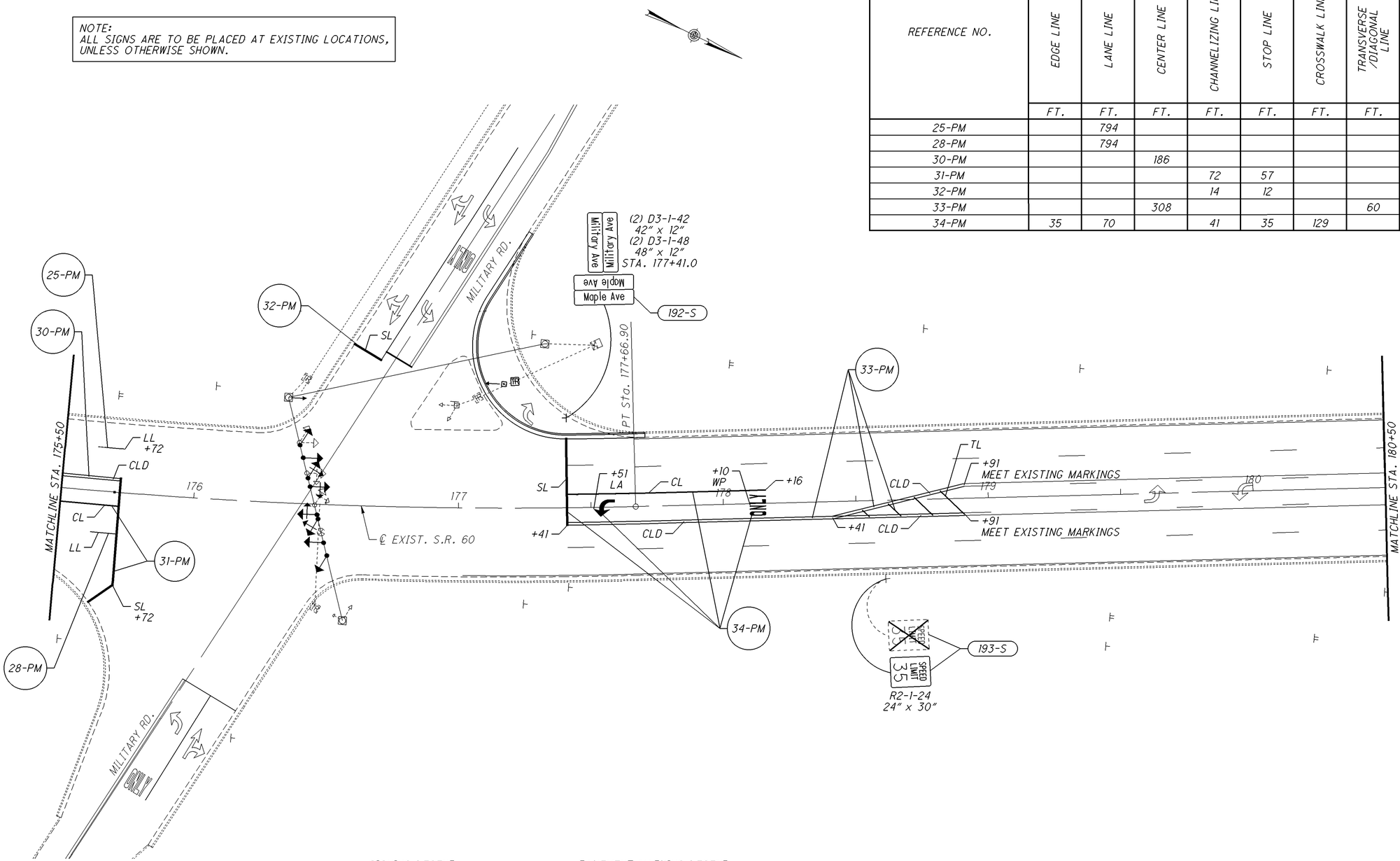
TRAFFIC CONTROL PLAN SHEET
STA. 170+50 TO STA. 175+50 (S.R. 60)

MUS-60-16.75

M060_TPS_033.DGN 12/17/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.

ITEM 644 REMOVAL OF PAVEMENT MARKING FOR INFORMATION ONLY									
REFERENCE NO.	EDGE LINE	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE /DIAGONAL LINE	LANE ARROW	WORD ON PAVEMENT
	FT.	FT.	FT.	FT.	FT.	FT.	FT.	EACH	EACH
25-PM		794							
28-PM		794							
30-PM			186						
31-PM				72	57				
32-PM				14	12				
33-PM			308				60		
34-PM	35	70		41	35	129		1	1



SIGNING LEGEND:

- EXISTING SIGN (TO REMAIN IN PLACE)
- EXISTING SIGN (TO BE REMOVED)
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)
TL - TRANSVERSE/DIAGONAL LINE
WP - WORD ON PAVEMENT

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

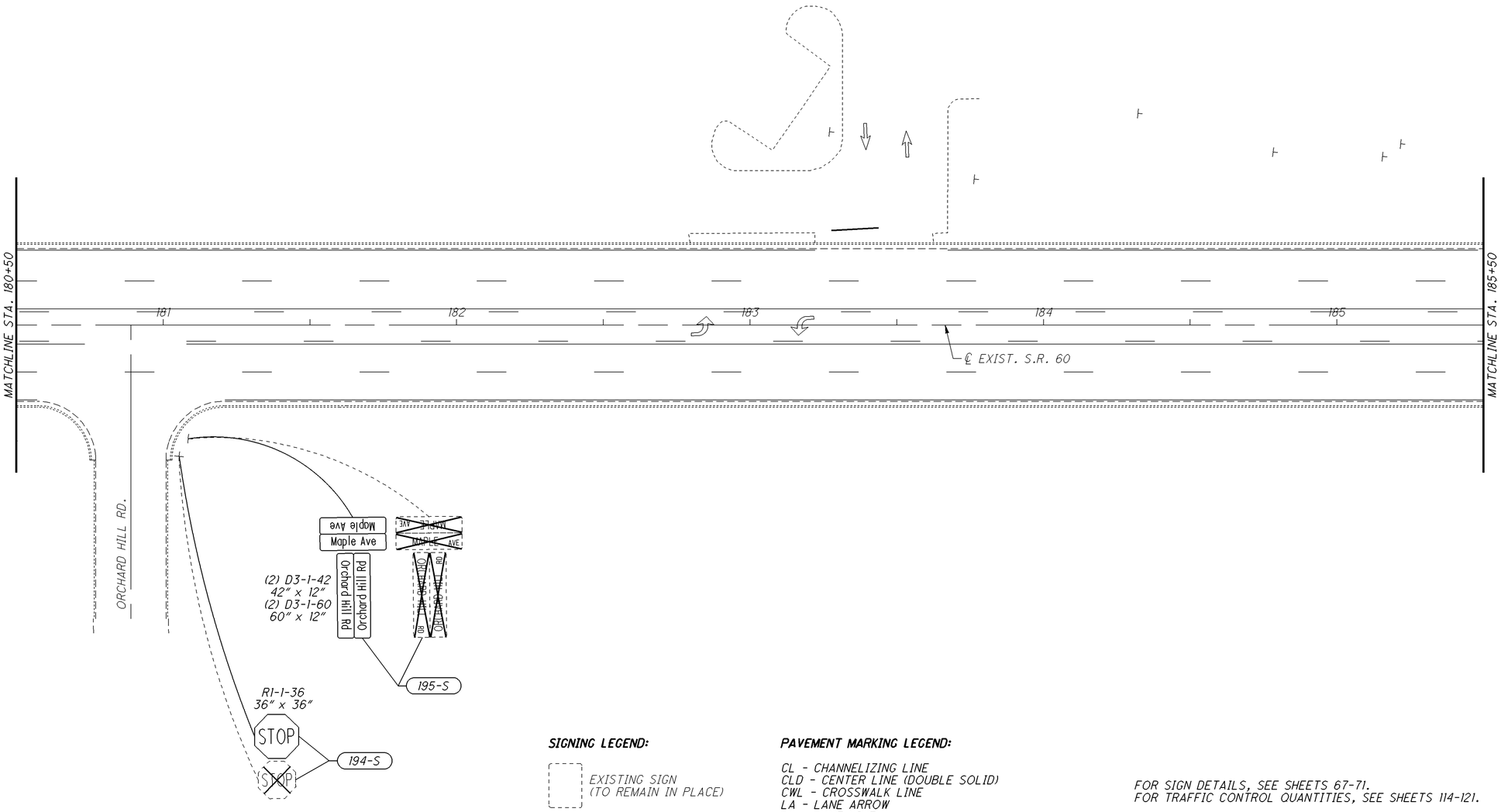
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 175+50 TO STA. 180+50 (S.R. 60)

MUS-60-16.75

M060_TPS_034.DGN 11/25/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

- EXISTING SIGN (TO REMAIN IN PLACE)
- EXISTING SIGN (TO BE REMOVED)
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

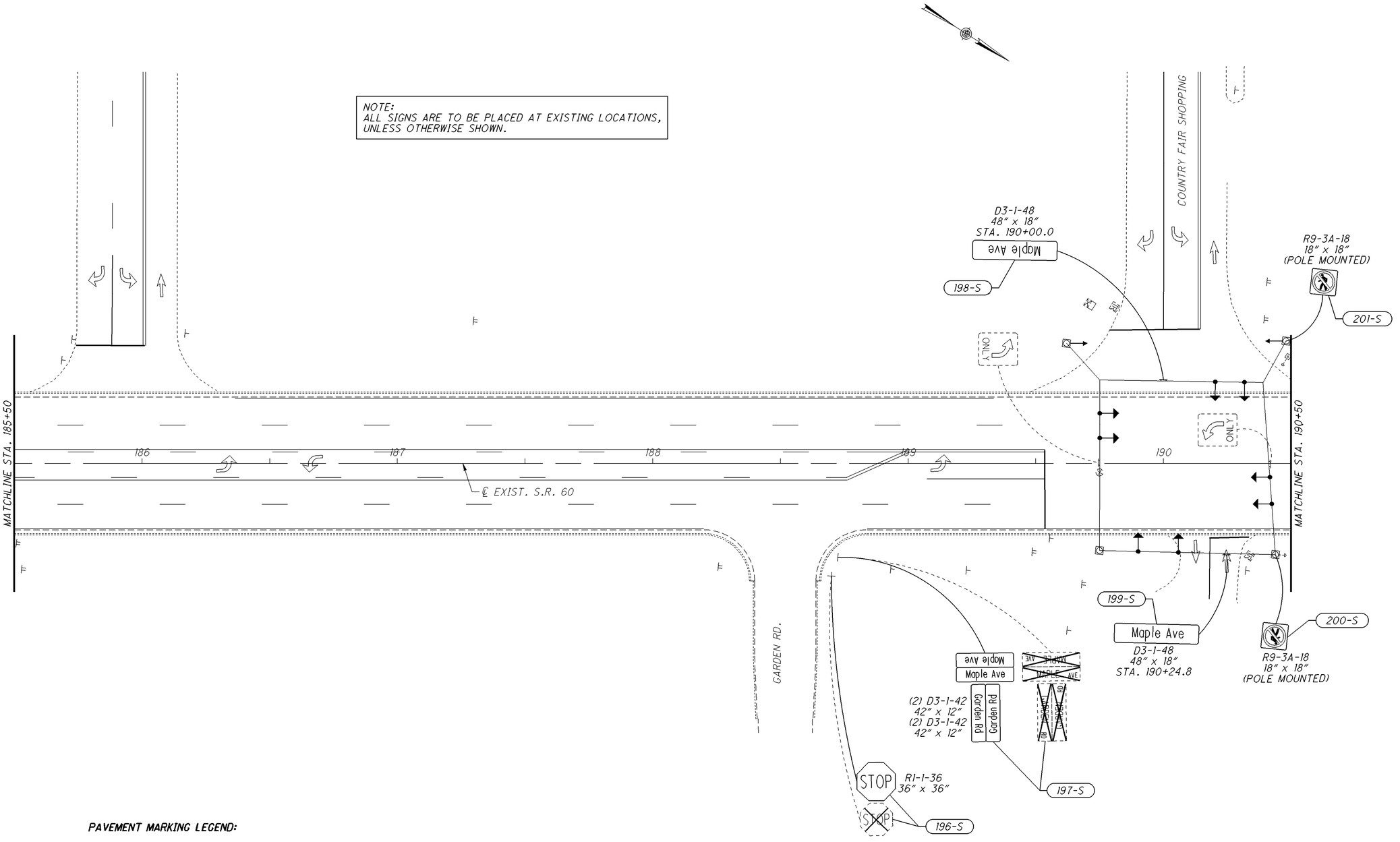
TRAFFIC CONTROL PLAN SHEET
STA. 180+50 TO STA. 185+50 (S.R. 60)

MUS-60-16.75

106
165

M060_TPS_035.DGN 11/25/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

- EXISTING SIGN (TO REMAIN IN PLACE)
- EXISTING SIGN (TO BE REMOVED)
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

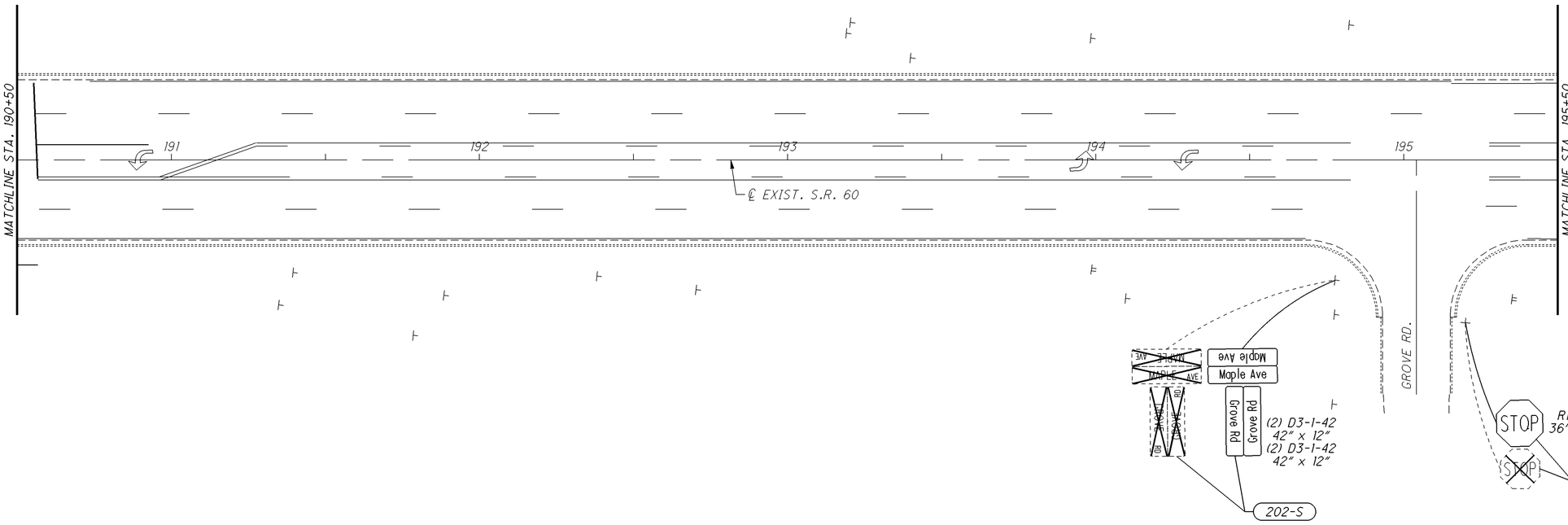
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 185+50 TO STA. 190+50 (S.R. 60)

MUS-60-16.75

M060_TPS_036.DGN 11/25/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

M060_TPS_037.DGN 11/26/08

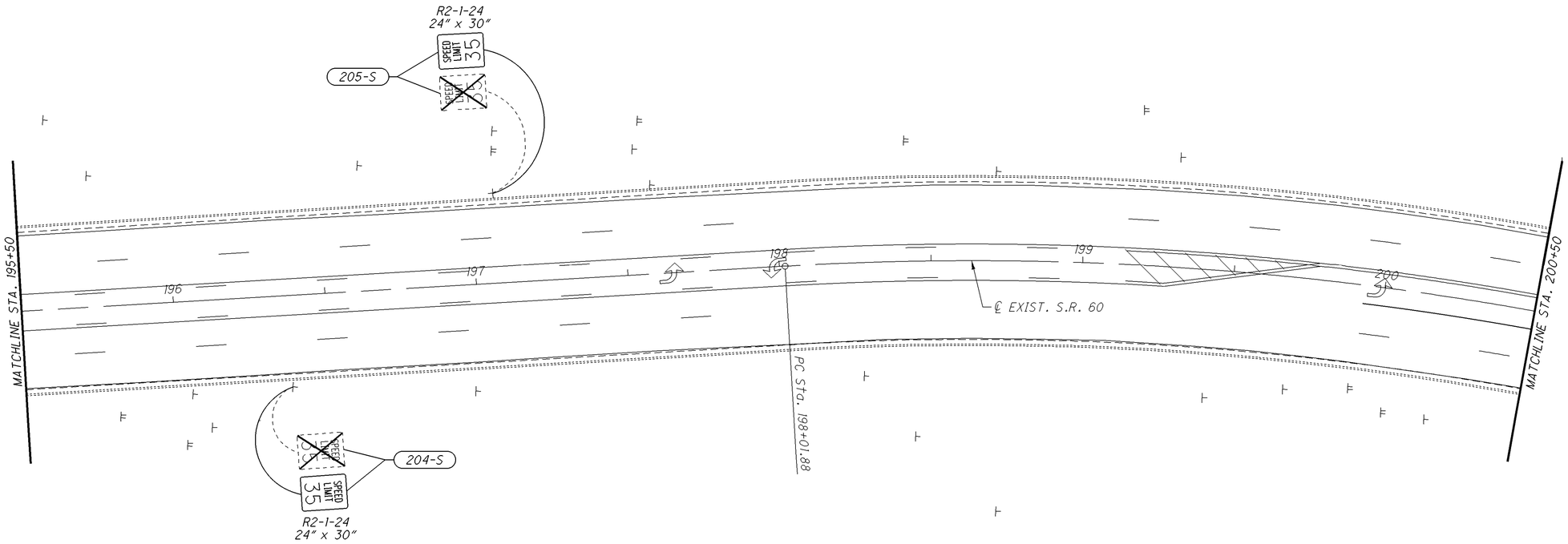
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 190+50 TO STA. 195+50 (S.R. 60)

MUS-60-16.75

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

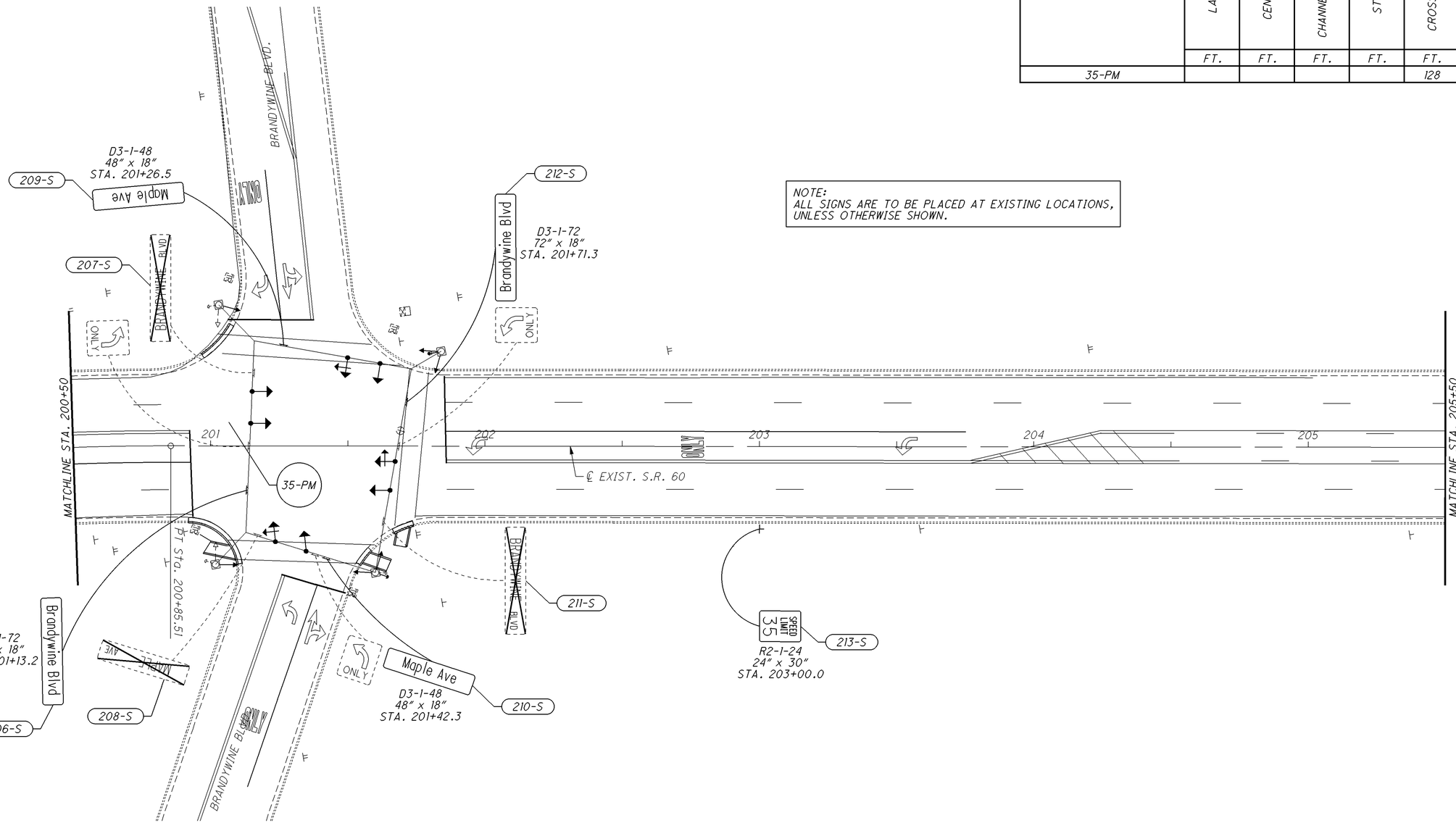
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 195+50 TO STA. 200+50 (S.R. 60)

MUS-60-16.75

M060_TPS_038.DGN 11/26/08

REFERENCE NO.	ITEM 644 REMOVAL OF PAVEMENT MARKING FOR INFORMATION ONLY						
	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	LANE ARROW	WORD ON PAVEMENT "ONLY"
	FT.	FT.	FT.	FT.	FT.	EACH	EACH
35-PM					128		



NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.

SIGNING LEGEND:

- EXISTING SIGN (TO REMAIN IN PLACE)
- EXISTING SIGN (TO BE REMOVED)
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

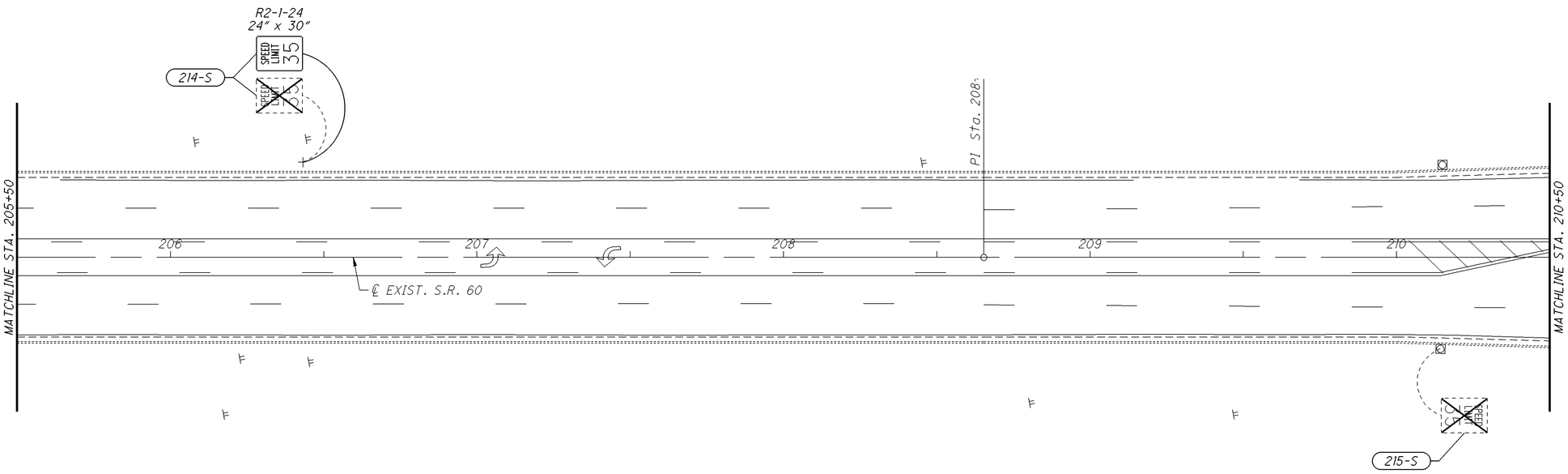
CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 200+50 TO STA. 205+50 (S.R. 60)

MUS-60-16.75

M060_TPS_039.DGN 11/25/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

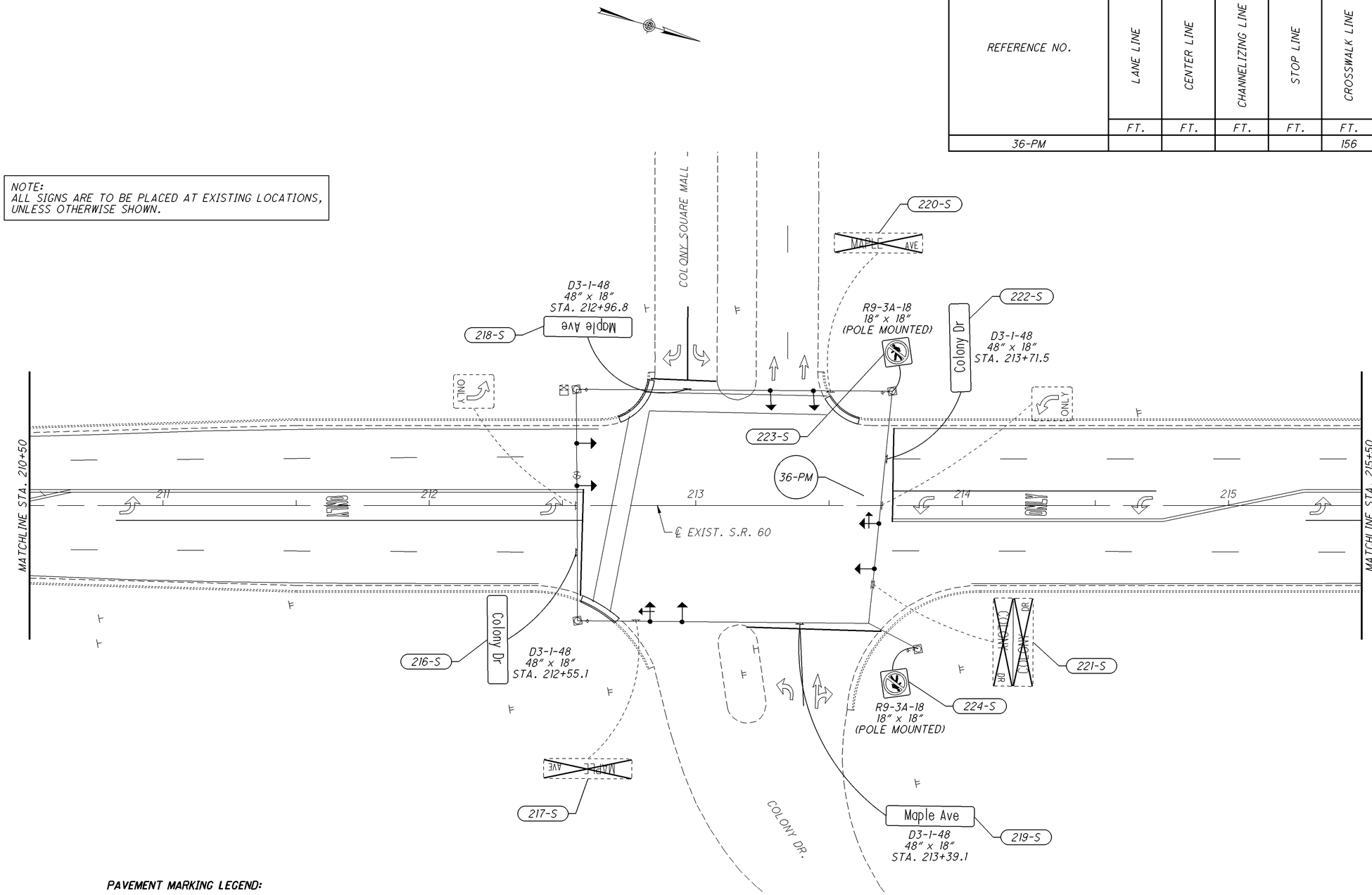
TRAFFIC CONTROL PLAN SHEET
STA. 205+50 TO STA. 210+50 (S.R. 60)

MUS-60-16.75

M060_TPS_040.DGN 11/25/08

REFERENCE NO.	ITEM 644 REMOVAL OF PAVEMENT MARKING FOR INFORMATION ONLY						
	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	LANE ARROW	WORD ON PAVEMENT "ONLY"
	FT.	FT.	FT.	FT.	FT.	EACH	EACH
36-PM					156		

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

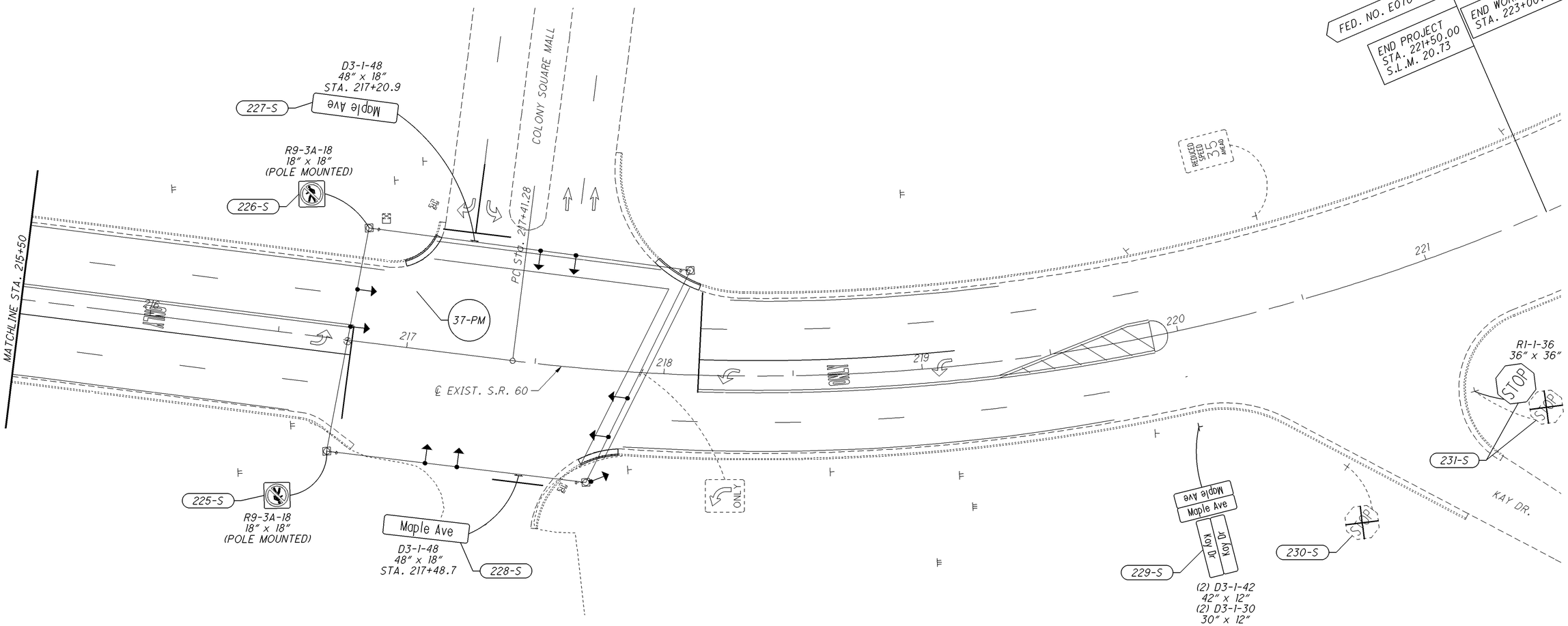
TRAFFIC CONTROL PLAN SHEET
STA. 210+50 TO STA. 215+50 (S.R. 60)

MUS-60-16.75

M060_TPS_041.DGN 11/26/08

NOTE:
ALL SIGNS ARE TO BE PLACED AT EXISTING LOCATIONS, UNLESS OTHERWISE SHOWN.

REFERENCE NO.	ITEM 644 REMOVAL OF PAVEMENT MARKING FOR INFORMATION ONLY						
	LANE LINE	CENTER LINE	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	LANE ARROW	WORD ON PAVEMENT "ONLY"
	FT.	FT.	FT.	FT.	FT.	EACH	EACH
37-PM					157		



SIGNING LEGEND:

EXISTING SIGN (TO REMAIN IN PLACE)

EXISTING SIGN (TO BE REMOVED)

PROPOSED SIGN

PAVEMENT MARKING LEGEND:

CL - CHANNELIZING LINE
CLD - CENTER LINE (DOUBLE SOLID)
CWL - CROSSWALK LINE
LA - LANE ARROW
LL - LANE LINE
SL - STOP LINE
ELY - EDGE LINE (YELLOW)

FOR SIGN DETAILS, SEE SHEETS 67-71.
FOR TRAFFIC CONTROL QUANTITIES, SEE SHEETS 114-121.

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JLS
CHECKED DNM

TRAFFIC CONTROL PLAN SHEET
STA. 215+50 TO STA. 221+50 (S.R. 60)

MUS-60-16.75

REFERENCE NO.	SHEET NO.	SURVEY AND CONSTRUCTION (STATION TO STATION)	SIDE	LENGTH	643									644	
					EDGE LINE (YELLOW)	LANE LINE	CENTER LINE (DOUBLE SOLID)	CHANNELIZING LINE	STOP LINE	CROSSWALK LINE	TRANSVERSE/DIAGONAL LINE (YELLOW)	LANE ARROW		WORD ON PAVEMENT, 72"	REMOVAL OF PAVEMENT MARKING	
												LEFT	THRU			
			CL/LT./RT.	FT.	MILE	MILE	MILE	FT.	FT.	FT.	FT.	EACH	EACH	EACH	FT.	EACH
		S.R. 60														
1-PM	72	15+25.00	LT.									1	1			
2-PM	73	16+50.00	LT.									1	1			
3-PM	73	18+00.00	LT.									1	1			
4-PM	73	19+20.00	LT.									1	1			
5-PM	74-76	25+00.00 TO 32+35.00	LT.	735.00	0.14											
		25+00.00 TO 32+35.00	RT.	735.00	0.14											
6-PM	75	Howard St.	LT.												47	2
7-PM	75	Howard St.	RT.			0.03	0.02		21						182	
8-PM	81	57+69.00 TO 59+02.00	LT.	133.00	0.03											
		57+69.00 TO 59+02.00	RT.	133.00	0.03											
9-PM	83	Euclid Ave.	RT.				0.02		20						235	2
9A-PM	83	on Euclid Ave. @ Thruman St.	LT./RT.							63						
10-PM	85	75+85.00 TO 76+57.00	LT.	72.00				72								
11-PM	85	76+82.00 TO 77+32.00	LT./RT.	50.00			0.02				33				106	
12-PM	85	77+63.00	CL									2				2
13-PM	86	80+62.00 TO 81+02.00	LT./RT.	40.00			0.02				47				80	
14-PM	86	Forest Ave.	LT.												111	
15-PM	86-87	84+38.00 TO 85+88.00	LT.	150.00		0.03									150	
16-PM	86-87	84+38.00 TO 85+88.00	LT./RT.	150.00			0.04				33				150	
17-PM	86-87	84+38.00 TO 85+88.00	RT.	150.00		0.03									150	
18-PM	86-87	85+13.00 TO 85+88.00	RT.	75.00				75				1		1	75	2
19-PM	86	Sheridan St.	RT.												88	
20-PM	86	Sheridan St.	LT./RT.							52					88	
21-PM	87	North of Locust Ave. Intersection	LT./RT.						31	100					48	
22-PM	98	Harding Rd.	LT./RT.												126	
23-PM	99	145+82.00 TO 146+80.00	RT.	98.00				98				1		1	94	
24-PM	99	146+35.00 TO 147+45.00	RT.	110.00			0.03				33				175	
25-PM	103-105	167+78.00 TO 175+72.00	LT.	794.00		0.16									794	
26-PM	103	167+78.00 TO 169+20.00	LT./RT.	142.00			0.05								180	
27-PM	103	167+78.00 TO 168+60.00	LT./RT.	82.00				82	32	113					101	
28-PM	103-105	167+78.00 TO 175+72.00	RT.	794.00		0.16									794	
29-PM	103-104	169+20.00 TO 174+00.00	LT.	480.00	0.10										480	
		169+20.00 TO 174+00.00	RT.	480.00	0.10										480	
30-PM	104-105	174+00.00 TO 175+72.00	LT./RT.	172.00			0.05				31				266	
31-PM	104-105	175+00.00 TO 175+72.00	LT.	72.00				72	52					1	129	
32-PM	105	Military Rd.	LT./RT.						12						26	
33-PM	105	177+41.00 TO 178+91.00	RT.	150.00			0.04				33				368	
34-PM	105	177+41.00 TO 178+16.00	LT./RT.	75.00				75	33			1		1	310	2
35-PM	110	South of Brandywine Blvd. Intersection	LT./RT.												128	
36-PM	112	North of Colony Dr. Intersection	LT./RT.												156	
37-PM	113	South of Colony Square Mall Intersection	LT./RT.												157	
SUB-TOTALS												9	4			
TOTALS (CARRIED TO GENERAL SUMMARY)					0.54	0.41	0.29	474	201	328	210	13		4	6,274	10

CALCULATED JLS CHECKED DNM

PAVEMENT MARKING SUB-SUMMARY

MUS-60-16.75

114
165

M060_TMO_001.DGN 12/17/08

REFERENCE NO.	SHEET NO.	SURVEY AND CONSTRUCTION (STATION)	SIDE	SIGN CODE	SIGN SIZE	NUMBER OF SIGNS	630										
							GROUND MOUNTED SUPPORT, NO. 3 POST	ONE WAY SUPPORT, NO. 3 POST	STREET NAME SIGN SUPPORT, NO. 2 POST	SIGN POST REFLECTOR	SIGN HANGER ASSEMBLY, SPAN WIRE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN, FLAT SHEET	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL
			CL/LT./RT.				FT.	FT.	FT.	EACH	EACH	EACH	SQ. FT.	EACH	EACH	EACH	EACH
		S.R. 60															
1-S	72	11+87.3	RT.	D3-1-48	48" x 18"	1					1		6.0				
2-S	72	12+16.1	LT.	D3-1-60	60" x 18"	1					1		7.5				
3-S	72	12+35.3	RT.	D3-1-60	60" x 18"	1					1		7.5				
4-S	72	12+64.4	RT.	D3-1-48	48" x 18"	1					1		6.0				
5-S	72	12+64.7	RT.	R10-11A-24	24" x 30"	1					1		5.0			1	
6-S	72	12+70.2	LT.											4	1		
7-S	73	15+55.5	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
8-S	73	15+62.5	RT.	R1-1-36	36" x 36"	1		14.5		1			9.0	1	2		
				R5-1-36	36" x 36"	1							9.0	1			
				R6-1L-36	36" x 12"	1								1			
				R6-1R-36	36" x 12"	1								1			
9-S	73	16+04.3	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	2		
				R5-1-36	36" x 36"	1							9.0	1			
10-S	73	16+23.4	LT.	D3-1-54	54" x 12"	2			12.5				9.0	4	1		
				D3-1-48	48" x 12"	2							8.0				
11-S	73	16+88.2	LT.	R2-1-24	24" x 30"	1	13.0						5.0	1	1		
12-S	73	17+20.8	RT.	R2-1-24	24" x 30"	1	13.0						5.0	1	1		
13-S	73	17+40.8	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0	1			
14-S	73	18+12.4	RT.	D3-1-54	54" x 12"	2			12.5				9.0	4	1		
				D3-1-48	48" x 12"	2							8.0				
15-S	73	18+23.4	LT.	D3-1-54	54" x 12"	2			12.5				9.0	4	1		
				D3-1-48	48" x 12"	2							8.0				
16-S	73	18+53.1	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
17-S	73	18+68.2	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
18-S	74	21+16.6	LT.	D3-1-48	48" x 12"	2			11.5				8.0	4	1		
19-S	74	21+22.4	LT.	R9-3A-18	18" x 18"	1						1	2.3				
20-S	74	21+31.5	RT.	R9-3A-18	18" x 18"	1						1	2.3				
21-S	74	21+48.3	RT.	R10-11A-24	24" x 30"	1					1		5.0			1	
22-S	74	21+78.4	RT.	D3-1-60	60" x 18"	1					1		7.5				
23-S	74	22+20.7	LT.	R9-3A-18	18" x 18"	1						1	2.3				
24-S	74	22+25.3	RT.	R9-3A-18	18" x 18"	1						1	2.3				
25-S	74	23+81.8	LT.	R9-3A-18	18" x 18"	1						1	2.3				
26-S	74	24+08.8	RT.	D3-1-36	36" x 18"	1					1		4.5				
27-S	74	24+22.1	RT.	R9-3A-18	18" x 18"	1						1	2.3				
28-S	74	24+26.8	LT.	D3-1-60	60" x 18"	1					1		7.5				
29-S	74	24+62.5	LT.	D3-1-36	36" x 18"	1					1		4.5				
30-S	74	24+71.5	LT.	R9-3A-18	18" x 18"	1						1	2.3				
31-S	74	24+76.7	RT.	R9-3A-18	18" x 18"	1						1	2.3				
32-S	74	24+84.3	LT.											4	1		
33-S	75	28+04.6	LT.	D3-1-54	54" x 12"	2			12.5				9.0	4	1		
				D3-1-42	42" x 12"	2							7.0				
34-S	75	28+05.0	RT.	D3-1-54	54" x 12"	2			12.5				9.0				
				D3-1-42	42" x 12"	2							7.0				
35-S	75	28+16.5	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0				
36-S	75	28+78.6	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0				
TOTALS (CARRIED TO SHEET 121)							120.5	14.5	74.0	8	10	8	285.4	43	19	2	

CALCULATED JLS CHECKED DNM

SIGNING SUB-SUMMARY

MUS-60-16.75

M060_TSS_001.DGN 12/09/08

REFERENCE NO.	SHEET NO.	SURVEY AND CONSTRUCTION (STATION)	SIDE	SIGN CODE	SIGN SIZE	NUMBER OF SIGNS	630										
							GROUND MOUNTED SUPPORT, NO. 3 POST	ONE WAY SUPPORT, NO. 3 POST	STREET NAME SIGN SUPPORT, NO. 2 POST	SIGN POST REFLECTOR	SIGN HANGER ASSEMBLY, SPAN WIRE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN, FLAT SHEET	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL
			CL/LT./RT.				FT.	FT.	FT.	EACH	EACH	EACH	SQ. FT.	EACH	EACH	EACH	EACH
		S.R. 60															
37-S	76	30+54.5	RT.	R2-1-24	24" x 30"	1	13.0						5.0	1	1		
38-S	76	32+00.3	LT.	R2-1-24	24" x 30"	1	13.0						5.0	1	1		
39-S	76	34+34.1	LT.	R9-3A-18	18" x 18"	1						1	2.3				
40-S	76	34+43.6	RT.	R9-3A-18	18" x 18"	1						1	2.3				
41-S	76	34+47.9	LT.											4	1		
42-S	76	34+56.9	RT.	D3-1-36	36" x 18"	1					1		4.5				
43-S	76	34+81.1	LT.	D3-1-60	60" x 18"	1					1		7.5				
44-S	76	35+09.5	RT.	D3-1-60	60" x 18"	1					1		7.5				
45-S	76	35+38.2	LT.	D3-1-36	36" x 18"	1					1		4.5				
46-S	76	35+41.7	RT.											4	1		
47-S	77	38+50.0	RT.	R2-1-24	24" x 30"	1	13.0						5.0	1	1		
48-S	80	52+89.7	RT.											1	1		
49-S	81	55+69.5	LT.	R2-1-24	24" x 30"	1	13.0						5.0	1	1		
50-S	81	57+88.9	RT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-48	48" x 12"	2							8.0				
51-S	81	58+35.4	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0				
52-S	81	58+36.5	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0				
53-S	81	58+99.8	LT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-48	48" x 12"	2							8.0				
54-S	81	59+79.0	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0				
				R10-H5A-24	24" x 30"	1							5.0				
55-S	81	60+14.2	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0	1			
56-S	82	60+84.9	RT.											4	1		
57-S	82	61+16.4	RT.	D3-1-54	54" x 18"	1					1		6.8				
58-S		**Not Used**															
59-S		**Not Used**															
60-S	82	61+69.0	RT.	D3-1-48	48" x 18"	1					1		6.0				
61-S	82	61+81.4	LT.	D3-1-48	48" x 18"	1					1		6.0				
62-S		**Not Used**															
63-S		**Not Used**															
64-S	82	62+26.6	LT.	D3-1-54	54" x 18"	1					1		6.8				
65-S	82	62+57.5	RT.											4	1		
66-S	82	63+29.8	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0	1			
67-S	82	64+10.0	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0	1			
68-S	82	64+36.8	RT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-36	36" x 12"	2							6.0				
69-S	82	64+51.9	LT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-42	42" x 12"	2							7.0				
70-S	82	65+00.5	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0	1			
TOTALS (CARRIED TO SHEET 121)							**146.5**		**50.0**	**7**	**8**	**2**	**229.2**	**47**	**19**		

CALCULATED JLS
CHECKED DNM

SIGNING SUB-SUMMARY

MUS-60-16.75

M060_TSS_002.DGN 12/09/08

REFERENCE NO.	SHEET NO.	SURVEY AND CONSTRUCTION (STATION)	SIDE	SIGN CODE	SIGN SIZE	NUMBER OF SIGNS	630										
							GROUND MOUNTED SUPPORT, NO. 3 POST	ONE WAY SUPPORT, NO. 3 POST	STREET NAME SIGN SUPPORT, NO. 2 POST	SIGN POST REFLECTOR	SIGN HANGER ASSEMBLY, SPAN WIRE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN, FLAT SHEET	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL
			CL/LT./RT.				FT.	FT.	FT.	EACH	EACH	EACH	SQ. FT.	EACH	EACH	EACH	EACH
		S.R. 60															
71-S	83	66+47.6	RT.	R2-1-24	24" x 30"	1	13.0						5.0	1	1		
72-S	83	67+61.3	RT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-48	48" x 12"	2							8.0				
73-S	83	68+26.3	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0	1			
74-S	83	68+42.0	RT.	R3-H8DC-54	54" x 30"	1	26.0						11.3				
75-S	83	68+99.3	LT.	R2-1-24	24" x 30"	1	13.0						5.0	1	1		
76-S	84	71+77.2	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0	1			
77-S	84	73+54.5	RT.	R3-5L-30	30" x 36"	1					1		7.5				
78-S	84	73+54.7	RT.	D3-1-48	48" x 18"	1					1		6.0				
79-S	84	73+55.0	RT.	R3-5R-30	30" x 36"	1					1		7.5				
80-S	84	73+61.7	LT.													1	
81-S	84	73+63.5	RT.													1	
82-S	84	73+65.8	RT.													1	
83-S	84	104+50.5 (Ex. Maple Ave.)	CL	R3-5L-30	30" x 36"	1					1		7.5				
84-S	84	104+50.5 (Ex. Maple Ave.)	RT.	D3-1-48	48" x 18"	1					1		6.0				
85-S	84	104+58.7 (Ex. Maple Ave.)	LT.													1	
86-S	84	104+58.9 (Ex. Maple Ave.)	LT.													1	
87-S	84	720+63.9 (Ex. Adair Ave.)	LT.	R10-10R-24	24" x 30"	1					1		5.0				
88-S	84	720+68.8 (Ex. Adair Ave.)	RT.	R3-5L-30	30" x 36"	1					1		7.5				
89-S	84	720+70.9 (Ex. Adair Ave.)	RT.	D3-1-48	48" x 18"	1					1		6.0				
90-S	84	720+95.3 (Ex. Adair Ave.)	LT.													1	
91-S	84	720+96.2 (Ex. Adair Ave.)	RT.													1	
92-S	84	74+40.6	CL													1	
93-S	84	74+42.4	RT.													1	
94-S	84	74+52.6	LT.	D3-1-48	48" x 18"	1					1		6.0				
94A-S	84	74+54.3	CL	R3-5L-30	30" x 36"	1					1		7.5				
95-S	85	77+12.6	LT.	R3-6R-30	30" x 36"	1					1		7.5				
96-S	85	77+14.4	LT.	R3-5A-30	30" x 36"	1					1		7.5				
97-S	85	77+15.5	CL													2	
98-S	85	77+20.7	RT.	R3-H9J-24	24" x 6"	1						1	1.0				
				R3-9B-24	24" x 36"	1						1	6.0				
99-S	85	77+55.0	LT.	R3-H9K-24	24" x 6"	1	14.0						1.0				
				R3-9B-24	24" x 36"	1							6.0				
100-S	85	77+73.2	RT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-48	48" x 12"	2							8.0				
101-S	85	78+14.4	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
102-S	86	81+12.2	RT.														2
103-S	86	81+13.0	LT.	D3-1-42	42" x 12"	2			12.5				7.0				
				D3-1-48	48" x 12"	2							8.0				
104-S	86	81+13.1	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
			LT.	R10-H5A-24	24" x 30"	1							5.0	1			
105-S	86	81+15.0	RT.	D3-1-42	42" x 12"	2			12.5				7.0				
				D3-1-48	48" x 12"	2							8.0				
106-S	86	81+53.5	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
		81+53.5		R10-H5A-24	24" x 30"	1							5.0	1			
TOTALS (CARRIED TO SHEET 121)							133.5		50.0	5	12	2	241.8	19	9	11	2

CALCULATED JLS
CHECKED DNM

SIGNING SUB-SUMMARY

MUS-60-16.75

M060_TSS_003.DGN 12/09/08

REFERENCE NO.	SHEET NO.	SURVEY AND CONSTRUCTION (STATION)	SIDE	SIGN CODE	SIGN SIZE	NUMBER OF SIGNS	630										
							GROUND MOUNTED SUPPORT, NO. 3 POST	ONE WAY SUPPORT, NO. 3 POST	STREET NAME SIGN SUPPORT, NO. 2 POST	SIGN POST REFLECTOR	SIGN HANGER ASSEMBLY, SPAN WIRE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN, FLAT SHEET	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL
			CL/LT./RT.				FT.	FT.	FT.	EACH	EACH	EACH	SQ. FT.	EACH	EACH	EACH	EACH
		S.R. 60															
107-S	86	84+55.5	RT.	D3-1-42	42" x12"	2			12.5				7.0	2	1		
				D3-1-48	48" x 12"	2							8.0				
107A-S	86	84+93.0	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0				
				R10-H5A-24	24" x 30"	1							5.0				
108-S	87	85+98.9	LT.														2
109-S	87	85+99.2	CL	R3-5L-30	30" x 36"	1					1		7.5				
110-S	87	85+99.3	RT.	D3-1-54	54" x 18"	1					1		6.8				
111-S	87	86+09.3	RT.	R3-H6A-30	30" x 36"	1					1		7.5				
112-S	87	86+24.5	CL													2	
113-S	87	86+24.6	LT.	R3-H6A-30	30" x 36"	1					1		7.5				
114-S	87	86+31.2	LT.	D3-1-48	48" x 18"	2					2		12.0				
115-S	87	86+47.0	LT.	D3-1-54	54" x 18"	1					1		6.8				
116-S	87	86+47.2	RT.	R3-H9K-30	30" x 6"	1					1		1.3				
				R3-9A-30	30" x 36"	1							7.5				
117-S	87	88+30.7	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
118-S	87	88+37.6	RT.	D3-1-42	42" x 12"	2			12.5				7.0	2	1		
				D3-1-48	48" x 12"	2							8.0				
119-S	87	89+54.3	LT.	D3-1-42	42" x 12"	2			12.5				7.0	2	1		
				D3-1-42	42" x 12"	2							7.0				
120-S	87	89+54.6	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
121-S	88	91+90.2	RT.														2
122-S	88	91+98.0	RT.	D3-1-42	42" x 12"	2			12.5				7.0				
				D3-1-54	54" x 12"	2							9.0				
123-S	88	92+42.9	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0	1			
124-S	88	93+13.6	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
125-S	88	93+14.1	LT.	D3-1-42	42" x 12"	2			12.5				7.0	2	1		
				D3-1-54	54" x 12"	2							9.0				
126-S	89	96+65.4	LT.	D3-1-60	60" x 18"	1					1		7.5				
127-S	89	96+69.6	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0				
128-S	89	97+05.8	LT.														2
129-S	89	97+50.0	LT.	R2-1-24	24" x 30"	1	13.0						5.0	1	1		
130-S	89	97+89.3	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0	1			
131-S	89	97+91.9	RT.														2
132-S	89	97+91.9	RT.	D3-1-66	66" x 18"	1					1		8.3				
133-S	89	100+07.7	RT.	D3-1-42	42" x 18"	1					1		5.3				
133A-S	89	100+30.0	RT.	D3-1-48	48" x 18"	1					1		6.0				
134-S	90	100+57.4	LT.	D3-1-42	42" x 18"	1					1		5.3				
134A-S	90	100+64.1	LT.														2
135-S	90	101+15.0	RT.	R2-1-24	24" x 30"	1	13.0						5.0	1	1		
136-S	90	103+43.5	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							7.5				
137-S	90	103+88.1	LT.	D3-1-42	42" x 12"	2			12.5				7.0	2	1		
				D3-1-48	48" x 12"	2							8.0				
TOTALS (CARRIED TO SHEET 121)							134.0		75.0	8	13		289.8	21	14	2	10

CALCULATED JLS CHECKED DNM

SIGNING SUB-SUMMARY

MUS-60-16.75

M060_TSS_004.DGN 12/21/08

REFERENCE NO.	SHEET NO.	SURVEY AND CONSTRUCTION (STATION)	SIDE	SIGN CODE	SIGN SIZE	NUMBER OF SIGNS	630										
							GROUND MOUNTED SUPPORT, NO. 3 POST	ONE WAY SUPPORT, NO. 3 POST	STREET NAME SIGN SUPPORT, NO. 2 POST	SIGN POST REFLECTOR	SIGN HANGER ASSEMBLY, SPAN WIRE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN, FLAT SHEET	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL
			CL/LT./RT.				FT.	FT.	FT.	EACH	EACH	EACH	SQ. FT.	EACH	EACH	EACH	EACH
		S.R. 60															
138-S	91	107+27.5	RT.	D3-1-42	42" x 12"	2			12.5				7.0	2	1		
				D3-1-42	42" x 12"	2							7.0				
139-S	91	107+67.4	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
140-S	91	108+44.1	LT.	D3-1-42	42" x 12"	2			12.5				7.0	2	1		
				D3-1-42	42" x 12"	2							7.0				
141-S	91	108+54.2	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							7.5	1			
142-S	92	111+07.1	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							7.5	1			
143-S	92	111+16.1	RT.	D3-1-42	42" x 12"	2			12.5				7.0	2	1		
				D3-1-54	54" x 12"	2							9.0				
144-S	92	112+02.2	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
145-S	92	112+44.9	LT.	D3-1-42	42" x 12"	2			12.5				7.0				2
				D3-1-48	48" x 12"	2							8.0				
146-S	92	115+47.9	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
147-S	93	115+92.0	LT.	D3-1-42	42" x 12"	2			12.5				7.0	2	1		
				D3-1-42	42" x 12"	2							7.0				
148-S	93	116+35.5	RT.	D3-1-66	66" x 18"	1					1		8.3				
148A-S	93	116+62.9	LT.	D3-1-48	48" x 18"	1					1		6.0			1	
149-S	93	116+91.5	LT.	D3-1-66	66" x 18"	1					1		8.3				
150-S	93	116+98.0	RT.													2	
151-S	93	119+38.9	LT.	D3-1-42	42" x 12"	2			12.5				7.0	2	1		
				D3-1-36	36" x 12"	2							6.0				
152-S	93	119+41.4	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
153-S	94	122+31.0	LT.	R2-1-24	24" x 30"	1						1	5.0				
154-S	94	124+55.9	RT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-42	42" x 12"	2							7.0				
155-S	94	125+37.0	LT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-42	42" x 12"	2							7.0				
156-S	95	126+75.0	RT.	R2-1-24	24" x 30"	1						1	5.0				
157-S	95	128+14.4	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
158-S	95	128+18.9	RT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-48	48" x 12"	2							8.0				
159-S	96	130+89.0	RT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-42	42" x 12"	2							7.0				
160-S	96	131+18.8	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
161-S	96	131+33.7	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
162-S	96	131+63.8	LT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-42	42" x 12"	2							7.0				
163-S	96	132+99.3	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
164-S	96	133+06.0	RT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-60	60" x 12"	2							10.0				
165-S	96	134+80.9	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
166-S	96	135+42.0	LT.	D3-1-42	42" x 12"	2						2	7.0				4
				D3-1-48	48" x 12"	2							8.0				
167-S	97	136+07.3	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
TOTALS (CARRIED TO SHEET 121)							162.0		150.0	12	3	4	344.6	48	23	3	6

CALCULATED JLS CHECKED DNM

SIGNING SUB-SUMMARY

MUS-60-16.75

M060_TSS_005.DGN 12/09/08

REFERENCE NO.	SHEET NO.	SURVEY AND CONSTRUCTION (STATION)	SIDE	SIGN CODE	SIGN SIZE	NUMBER OF SIGNS	630										
							GROUND MOUNTED SUPPORT, NO. 3 POST	ONE WAY SUPPORT, NO. 3 POST	STREET NAME SIGN SUPPORT, NO. 2 POST	SIGN POST REFLECTOR	SIGN HANGER ASSEMBLY, SPAN WIRE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN, FLAT SHEET	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL
			CL/LT./RT.				FT.	FT.	FT.	EACH	EACH	EACH	SQ. FT.	EACH	EACH	EACH	EACH
		S.R. 60															
168-S	97	136+20.1	RT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-60	60" x 12"	2							10.0				
169-S	97	138+63.5	LT.	R1-1-36	36" x 36"	1	13.5					1	9.0				1
170-S	97	139+19.5	LT.	D3-1-42	42" x 12"	2						2	7.0				4
				D3-1-54	54" x 12"	2							9.0				
171-S	98	142+36.2	LT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-60	60" x 12"	2							10.0				
172-S	98	142+47.9	LT.	R1-1-36	36" x 36"	1						1	9.0				
173-S	98	142+58.7	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
174-S	98	144+52.0	RT.	D3-1-48	48" x 18"	1					1		6.0				
175-S	98	144+74.6	RT.	D3-1-48	48" x 18"	1					1		6.0				
176-S	98	144+83.9	LT.	D3-1-48	48" x 18"	1					1		6.0			2	
177-S	98	145+02.3	RT.											4	1		
178-S	98	145+03.6	RT.													2	
179-S	98	145+10.9	LT.	D3-1-48	48" x 18"	1					1		6.0				
180-S	101	157+56.5	RT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-36	36" x 12"	2							6.0				
181-S	101	158+13.5	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
182-S	101	159+00.0	LT.	R2-1-24	24" x 30"	1	13.0						5.0				
183-S	102	162+00.0	LT.	R2-1-24	24" x 30"	1	13.0						5.0				
184-S	102	164+36.6	RT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-42	42" x 12"	2							7.0				
185-S	102	164+87.8	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
186-S	103	167+23.1	LT.	D3-1-48	48" x 18"	2					2		12.0			2	
187-S	103	167+25.8	RT.	D3-1-72	72" x 18"	1					1		9.0				
188-S	103	167+55.3	LT.													2	
189-S	103	167+55.5	LT.	D3-1-72	72" x 18"	1					1		9.0				
190-S	104	172+91.8	LT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-48	48" x 12"	2							8.0				
191-S	104	173+02.8	LT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
				R10-H5A-24	24" x 30"	1							5.0	1			
192-S	105	177+41.0	LT.	D3-1-42	42" x 12"	2			12.5				7.0				
				D3-1-48	48" x 12"	2							8.0				
193-S	105	178+60.6	RT.	R2-1-24	24" x 30"	1	13.0						5.0	1	1		
194-S	106	181+05.4	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
195-S	106	181+08.5	RT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-60	60" x 12"	2							10.0				
196-S	107	188+70.0	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
197-S	107	188+72.5	RT.	D3-1-42	42" x 12"	2			12.5				7.0	4	1		
				D3-1-42	42" x 12"	2							7.0				
198-S	107	190+00.0	LT.	D3-1-48	48" x 18"	1					1		6.0				
199-S	107	190+24.8	RT.	D3-1-48	48" x 18"	1					1		6.0				
200-S	107	190+43.8	RT.	R9-3A-18	18" x 18"	1						1	2.3				
201-S	107	190+48.0	LT.	R9-3A-18	18" x 18"	1						1	2.3				
TOTALS (CARRIED TO SHEET 121)							133.5		100.0	6	10	6	300.6	40	15	8	5

CALCULATED JLS CHECKED DNM

SIGNING SUB-SUMMARY

MUS-60-16.75

REFERENCE NO.	SHEET NO.	SURVEY AND CONSTRUCTION (STATION)	SIDE	SIGN CODE	SIGN SIZE	NUMBER OF SIGNS	630										
							GROUND MOUNTED SUPPORT, NO. 3 POST	ONE WAY SUPPORT, NO. 3 POST	STREET NAME SIGN SUPPORT, NO. 2 POST	SIGN POST REFLECTOR	SIGN HANGER ASSEMBLY, SPAN WIRE	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN, FLAT SHEET	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL
			CL/LT./RT.				FT.	FT.	FT.	EACH	EACH	EACH	SQ. FT.	EACH	EACH	EACH	EACH
		S.R. 60															
202-S	108	194+77.6	RT.	D3-1-42	1.0 x 3.5	2			12.5				7.0	4	1		
				D3-1-42	1.0 x 3.5	2							7.0				
203-S	108	195+20.0	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
204-S	109	196+37.7	RT.	R2-1-24	24" x 30"	1	13.0						5.0	1	1		
205-S	110	197+07.2	LT.	R2-1-24	24" x 30"	1	13.0						5.0	1	1		
206-S	110	201+13.2	RT.	D3-1-72	72" x 18"	1					1		9.0				
207-S	110	201+15.7	LT.													1	
208-S	110	201+17.2	RT.													1	
209-S	110	201+26.5	LT.	D3-1-48	48" x 18"	1					1		6.0				
210-S	110	201+42.3	RT.	D3-1-48	48" x 18"	1					1		6.0				
211-S	110	201+63.1	RT.													1	
212-S	110	201+71.3	LT.	D3-1-72	72" x 18"	1					1		9.0				
213-S	110	203+00.0	RT.	R2-1-24	24" x 30"	1	13.0						5.0				
214-S	111	206+43.2	LT.	R2-1-24	24" x 30"	1	13.0						5.0	1	1		
215-S	111	210+14.3	RT.														1
216-S	112	212+55.1	RT.	D3-1-48	48" x 18"	1					1		6.0				
217-S	112	212+77.5	RT.													1	
218-S	112	212+96.8	LT.	D3-1-48	48" x 18"	1					1		6.0				
219-S	112	213+39.1	RT.	D3-1-48	48" x 18"	1					1		6.0				
220-S	112	213+50.6	LT.													1	
221-S	112	213+66.1	RT.													2	
222-S	112	213+71.5	LT.	D3-1-48	48" x 18"	1					1		6.0				
223-S	112	213+73.8	LT.	R9-3A-18	18" x 18"	1						1	2.3				
224-S	112	213+83.4	RT.	R9-3A-18	18" x 18"	1						1	2.3				
225-S	113	216+74.3	RT.	R9-3A-18	18" x 18"	1						1	2.3				
226-S	113	216+79.9	LT.	R9-3A-18	18" x 18"	1						1	2.3				
227-S	113	217+20.9	LT.	D3-1-48	48" x 18"	1					1		6.0				
228-S	113	217+48.7	RT.	D3-1-48	48" x 18"	1					1		6.0				
229-S	113	220+00.0	RT.	D3-1-42	42" x 12"	2			12.5				7.0				
				D3-1-30	30" x 12"	2							5.0				
230-S	113	220+48.6	RT.											1	1		
231-S	113	221+00.4	RT.	R1-1-36	36" x 36"	1	13.5			1			9.0	1	1		
TOTALS (THIS SHEET)							79.0		25.0	2	10	4	139.2	10	7	7	1
TOTALS (CARRIED FROM SHEET 115)							120.5	14.5	74.0	8	10	8	285.4	43	19	2	
TOTALS (CARRIED FROM SHEET 116)							146.5		50.0	7	8	2	229.2	47	19		
TOTALS (CARRIED FROM SHEET 117)							133.5		50.0	5	12	2	241.8	19	9	11	2
TOTALS (CARRIED FROM SHEET 118)							134.0		75.0	8	13		289.8	21	14	2	10
TOTALS (CARRIED FROM SHEET 119)							162.0		150.0	12	3	4	344.6	48	23	3	6
TOTALS (CARRIED FROM SHEET 120)							133.5		100.0	6	10	6	300.6	40	15	8	5
TOTALS (CARRIED TO GENERAL SUMMARY)							909.0	14.5	524.0	48	66	26	1,830.6	228	106	33	24

CALCULATED JLS CHECKED DNM

SIGNING SUB-SUMMARY

MUS-60-16.75

M060_TSS_007.DGN 12/09/08

GENERAL

THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC CONTROL EQUIPMENT AND MATERIALS IN CONFORMANCE TO THESE PLANS AND SPECIFICATIONS AND THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (2008) AND ALL SUPPLEMENTAL SPECIFICATIONS. BEFORE ANY EQUIPMENT IS ORDERED OR INSTALLATION IS BEGUN, THREE (3) SETS OF A COMPLETE SCHEDULE OF EQUIPMENT INCLUDING CATALOG CUTS, DIAGRAMS, DRAWINGS, BROCHURES OR OTHER DESCRIPTIVE DATA SHALL BE SUBMITTED TO THE ENGINEER. ONE COPY WILL BE RETURNED MARKED "APPROVED" IF FOUND SATISFACTORY. WORK MAY BEGIN WHEN THE APPROVED COPY IS RECEIVED BY THE CONTRACTOR.

THE CONTRACTOR SHALL SUBMIT IN WRITING A SCHEDULE OF WORK FOR THE PROJECT TO THE PROJECT ENGINEER FOR APPROVAL. THIS SCHEDULE SHALL BE SUBMITTED NOT LESS THAN TWO (2) WEEKS IN ADVANCE OF STARTING WORK.

REFERENCE TO A PARTICULAR TRADE NAME, MANUFACTURER'S CATALOG OR MODEL NUMBER IS MADE FOR DESCRIPTIVE PURPOSES TO GUIDE THE BIDDER. IN INTERPRETING THE REQUIREMENTS OF THE CONTRACT, THEY SHOULD NOT BE CONSTRUED AS EXCLUDING PROPOSALS ON OTHER MATERIALS, EQUIPMENT OR SUPPLIES THAT ARE EQUAL TO OR BETTER THAN THOSE REFERRED TO.

ANY EQUIPMENT OR MATERIAL NOT SPECIFICALLY CALLED FOR IN THESE SPECIFICATIONS BUT NECESSARY TO PROVIDE A COMPLETE AND SUCCESSFULLY OPERATING SYSTEM SHALL BE FURNISHED AS INCIDENTAL TO THE CONTRACT. PAYMENT FOR SUCH ITEMS WILL BE MADE UNDER THE APPROPRIATE RELATED ITEM AT THE CONTRACT BID PRICE, COMPLETE AND IN PLACE.

PLAN AND SPECIFICATION COMPLIANCE

THESE SPECIFICATIONS, TOGETHER WITH THE ACCOMPANYING PLANS, ARE INTENDED TO DESCRIBE THE TYPE, SIZE AND LOCATION OF THE PRODUCTS AND MATERIALS TO BE PROVIDED AND INSTALLED UNDER VARIOUS BID ITEMS RELATED TO TRAFFIC CONTROL. THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC CONTROL DEVICES AND RELATED MATERIALS IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS, AS WELL AS THE 2008 OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, THE TRAFFIC ENGINEERING MANUAL, AND THE STANDARD CONSTRUCTION DRAWINGS ISSUED BY THE OHIO DEPARTMENT OF TRANSPORTATION. THESE SPECIFICATIONS SET FORTH THE MINIMUM PERFORMANCE AND OPERATING REQUIREMENTS OF THE TRAFFIC CONTROL ITEMS REFERRED TO HEREIN.

TRAFFIC SIGNAL CONTROL EQUIPMENT SHALL MEET OR EXCEED THE STANDARDS SPECIFIED IN THE FOLLOWING DOCUMENTS:

(A) SPECIFICATIONS LISTED IN THIS PLAN
(B) NEMA STANDARDS PUBLICATION NO. TS1-1989 AND/OR TS2-1992 (OR CURRENT NEMA ISSUE) SECTIONS 1, 2, 5, 6, 8, 11, 13, & 14.
(C) 2008 ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS 625, 632, 633, 725, 732 AND 733.

IN CASE OF A CONFLICTING SPECIFICATION STATEMENT, THE SPECIFICATION DOCUMENT HIERARCHY SHALL BE IN THE ORDER LISTED FROM (A) – HIGHEST TO (C) - LOWEST.

MAINTENANCE OF TRAFFIC SIGNAL INSTALLATION

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

A) FOR EXISTING SIGNAL/FLASHER 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 THE INSTALLATIONS ARE FIRST DISTURBED UNTIL THEY HAVE BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.

B) FOR NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE 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. THE CONTRACTOR SHALL PROVIDE THE STATE AND THE ENGINEER ADDRESSES AND PHONE NUMBERS WHERE THE CONTRACTOR'S MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL ALSO 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 CONTINUALLY AVAILABLE 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MIS-ALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK INTO 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 AND THE SIGNAL SHALL BE BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

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

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

WHEN 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.

WHEN THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, WITHIN THE PERIODS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15. ANY SUBSEQUENT BILLINGS TO THE STATE FOR POLICE SERVICES AND MAINTENANCE SERVICES BY STATE FORCES WILL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

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

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

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 AND INTERCONNECTION ITEMS.

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.

ELECTRICAL INSPECTION BY STATE LICENSED INSPECTOR

MOST ELECTRIC COMPANIES REQUIRE THAT ALL NEW OR RELOCATED ELECTRIC SERVICE ENCLOSURES ARE TO BE INSPECTED BY A LICENSED STATE INSPECTOR PRIOR TO CONNECTION TO A UTILITY DISTRIBUTION LINE. THIS IS A NEW SITUATION FOR ODOT BECAUSE INSPECTIONS ARE NOW BEING REQUIRED FOR TRAFFIC CONTROL DEVICES.

THE CONTRACTOR SHALL HIRE A LICENSED ELECTRICAL INSPECTOR(S); PAY THE APPROPRIATE FEE(S), AND ADVISE THE ODOT PROJECT ENGINEER OF THE TIME OF THE INSPECTION(S) SO THAT HE/SHE MAY HAVE A REPRESENTATIVE IN ATTENDANCE. IT IS TO BE NOTED THAT THE INSPECTION DOES NOT SUBSTITUTE FOR ODOT'S FINAL INSPECTION, NOR DOES IT SUPERSEDE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.

THE COST OF THE INSPECTIONS SHALL BE CONSIDERED AS INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE TRAFFIC CONTROL DEVICES.

DETECTOR LOOP INSTALLATION (CITY OF ZANESVILLE)

THE DETECTOR LOOP LABELED "L-3" SHOWN ON SHEET 143 IS LOCATED OUTSIDE OF THE RIGHT-OF-WAY. SINCE THIS LOOP IS OUTSIDE OF THE RIGHT-OF-WAY, THE CITY OF ZANESVILLE WILL BE INSTALLING THIS LOOP. THE CONTRACTOR SHALL NOTIFY MR. FRED BUCK AT 740-819-4586, AT LEAST 3 DAYS BEFORE WORK BEGINS ON THE FOUNDATION FOR SIGNAL POLE LABELED "PP-4".

ONCE THE FOUNDATION FOR SIGNAL POLE "PP-4" HAS BEEN PLACED, THE CITY OF ZANESVILLE WILL PLACE THE DETECTOR LOOP IN THE PAVEMENT AT THE LOCATION SHOWN IN THE PLANS. THE CITY WILL RUN THE DETECTOR LOOP WIRE UNDERGROUND TO THE CONDUIT THAT IS LOCATED INSIDE THE FOUNDATION OF SIGNAL POLE "PP-4". THE CITY WILL PROVIDE AN EXTRA 10 FEET OF THE DETECTOR LOOP CABLE FOR THE CONTRACTOR.

THE CONTRACTOR WILL BE RESPONSIBLE FOR PLACING THE DETECTOR LOOP WIRE IN THE FOUNDATION CONDUIT. THE CONTRACTOR SHALL SPLICE THE CITY SUPPLIED LOOP DETECTOR CABLE TO THE LOOP DETECTOR LEAD-IN CABLE THAT THE CONTRACTOR IS REQUIRED TO INSTALL FROM THE CONTROLLER CABINET TO THE "PP-4" SIGNAL POLE BASE.

THE COST TO RUN THE DETECTOR LOOP WIRE THROUGH THE CONDUIT IN THE FOUNDATION AND SPLICE THE DETECTOR LOOP WIRE TO THE LOOP DETECTOR LEAD-IN CABLE SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED IN THE CONTRACT PRICE FOR ITEM 632 LOOP DETECOR LEAD-IN CABLE.

DESIGNED DNM CHECKED BB

TRAFFIC SIGNAL GENERAL NOTES

MUS-60-16.75

12/10/08

82752_sgn_01.dgn

ITEM 625 TRENCH, 24" DEEP, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 625.12 AND THE STANDARD CONSTRUCTION DRAWINGS, WITHIN EACH TRENCH, THE LOCATION OF UNDERGROUND CABLE OR CONDUIT SHALL BE MARKED BY THE USE OF A CONTINUOUS IDENTIFYING TAPE BURIED IN THE TRENCH ABOVE THE LINE. THE IDENTIFYING TAPE SHALL BE AN INERT MATERIAL, APPROXIMATELY 6.0" WIDE, COMPOSED OF POLYETHYLENE PLASTIC, HIGHLY RESISTANT TO ALKALIS ACIDS OR OTHER CHEMICAL COMPONENTS LIKELY TO BE ENCOUNTERED IN SOILS. THE TAPE SHALL BE BRIGHT RED WITH IDENTIFYING PRINTING "ELECTRIC" IN BLACK LETTERS, ONE SIDE ONLY. TAPES SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH THE IDENTIFYING LETTERING REPEATED CONTINUOUSLY THE FULL LENGTH OF THE TAPE. IDENTIFYING TAPES SHALL BE BURIED IN THE ELECTRIC LINE TRENCH WITH ONE STRIP PLACED APPROXIMATELY 8.0" TO 12.0" BELOW THE FINISHED GRADE. THE TAPE SHALL BE PLACED PARALLEL WITH THE FINISHED SURFACE. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO INSURE THAT THE TAPE IS NOT PULLED, DISTORTED OR OTHERWISE MISPLACED IN COMPLETING THE TRENCH BACKFILL. THE TAPE SHALL BE ALLEN SYSTEM'S, TERRA TAPE OR EQUAL, AS APPROVED BY THE ENGINEER. PAYMENT SHALL BE INCLUDED IN THE BID PRICE PER LINEAR FOOT OF ITEM 625 TRENCH, 24" DEEP, AS PER PLAN, COMPLETE AND IN PLACE.

ITEM 632, POWER SERVICE, AS PER PLAN

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

AEP SOLUTION CENTER
1-800-672-2231

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

1. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN 6 FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND.
2. THE CONTRACTOR SHALL REMOVE THE EXISTING POWER SERVICE CABLE, METER BASE AND DISCONNECT SWITCH ENCLOSURE AT THE INTERSECTION OF MAPLE AVE. & SHERIDAN ST. (LOCATED ON THE EXISTING SIGNAL POLE LABELED "EP-3"). THE METER BASE AND DISCONNECT SWITCH ENCLOSURE SHALL BE STORED FOR REUSE AT THE INTERSECTION OF MAPLE AVE. & LOCUST AVE.
3. THE CONTRACTOR SHALL INSTALL THE EXISTING METER BASE AND DISCONNECT SWITCH ON THE EXISTING SIGNAL POLE LABELED "EP-1" AT THE INTERSECTION OF MAPLE AVE. & LOCUST AVE.. POWER CABLE SHALL BE PROVIDED AS PER 632.23 BETWEEN THE CONTROLLER CABINET AND THE POWER TAP-IN AT A LOCATION TO BE PROVIDED BY THE AMERICAN ELECTRIC POWER COMPANY. A QUANTITY OF POWER CABLE HAS BEEN PROVIDED FOR THE CONNECTION BETWEEN THE REOMOTE POWER SOURCE AND THE CONTROLLER CABINET.

THE CONTRACTOR SHALL NOT DISTURB ANY OF THE EXISTING POWER SERVICE CABLE, METER BASES OR DISCONNECT SWITCH ENCLOSURES EXCEPT FOR THE ONE MENTIONED IN THE NOTES ABOVE.

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

ITEM 632 VEHICULAR SIGNAL HEAD, (LED) BLACK, BY TYPE, WITH BACKPLATES, AS PER PLAN

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

LAMPS:

LED, LIGHT EMITTING DIODE, SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 872. ALL LAMP UNITS SHALL BE THE 12 INCH SIZE. LED SIGNAL LAMP UNITS SHALL BE PROVIDED FOR THE FOLLOWING LENS TYPES: CIRCULAR RED, CIRCULAR YELLOW, CIRCULAR GREEN, YELLOW ARROW, GREEN ARROW.

SIGNAL SECTIONS:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
2. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC SHALL BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.
3. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.

MOUNTING HARDWARE:

1. ALL UPPER SIGNAL SUPPORT HARDWARE AND PIPING UP TO AND INCLUDING THE WIRE INLET FITTING SHALL BE FERROUS METAL FOR SIGNAL DISPLAYS OF TWO OR MORE SECTIONS.
2. THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.
3. ALL BALANCE ADJUSTERS SHALL HAVE A MINIMUM THREE-QUARTER INCH EYE BOLT AND THREE-QUARTER INCH WIDE SLOT. EYE BOLTS ARE CAST FROM 316 STAINLESS STEEL AND PROVIDED WITH A SATIN FINISH. THREE-QUARTER INCH BODY HALVES ARE CAST FROM A MINIMUM 65-45-12 DUCTILE IRON AND PROVIDED WITH A BRIGHT ZINC FINISH (ZN1). BALANCE ADJUSTERS SHALL ONLY BE USED WHERE SPECIFIED.

THE DEPARTMENT WILL MEASURE VEHICULAR SIGNAL HEAD, (LED) BLACK, BY TYPE, WITH BACKPLATES, AS PER PLAN BY THE NUMBER OF COMPLETE UNITS FURNISHED AND INSTALLED, AND WILL INCLUDE ALL SUPPORT AND MOUNTING HARDWARE, DISCONNECT HANGERS, CLOSURE CAPS, DIMMERS, AND LAMPS AS SPECIFIED.

ITEM 632 PEDESTAL MISC.: 8' PEDESTAL, REMOVED FOR REUSE

THIS ITEM OF WORK SHALL CONSIST OF REMOVING, STORING AND RE-INSTALLING AN EXISTING 8' PEDESTAL. THE EXISTING PEDESTAL FOUNDATION SHALL BE REMOVED UNDER ITEM 632 "REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN". THE EXISTING PEDESTAL SHALL BE INSTALLED ON A NEW PEDESTAL FOUNDATION, IN ACCORDANCE WITH STD. DWG. TC-83.20, AT THE LOCATION SHOWN IN THE PLANS.

PAYMENT FOR ITEM 632 "PEDESTAL MISC.: 8' PEDESTAL, REMOVED FOR REUSE", WILL BE AT THE CONTRACT UNIT PRICE FOR REMOVING, STORING AND RE-INSTALLING THE 8' PEDESTAL, AT THE LOCATION SHOWN IN THE PLANS, IN PLACE, IN ESSENTIALLY A VERTICAL POSITION UNDER FULL PLAN LOADING AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS (INCLUDING ANCHOR BOLTS).

ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, AS PER PLAN

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

LAMPS:

LED, LIGHT EMITTING DIODE, SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 872. ALL LAMP UNITS SHALL BE THE 12 INCH SIZE. LED SIGNAL LAMP UNITS SHALL BE PROVIDED FOR THE FOLLOWING LENS TYPES: CIRCULAR RED, CIRCULAR YELLOW, CIRCULAR GREEN, YELLOW ARROW, GREEN ARROW.

SIGNAL SECTIONS:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
2. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC SHALL BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.
3. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.

COUNTDOWN:

1. OPERATION.
   - A. DISPLAY DRIVER SHALL BE DESIGNED TO ALLOW INDIVIDUAL LED FAILURES WITHOUT AFFECTING OTHER LEDS IN THE SAME DISPLAY.
   - B. THE COUNTDOWN TIMER SHALL BE OF THE "SMART" TYPE, WHICH CONTINUOUSLY SAMPLES THE TIMING INTERVALS PRESENTED BY THE PEDESTRIAN SIGNAL LOAD SWITCH DRIVER(S) IN ORDER TO "LEARN" THE PROGRAMMED TIMING BEING USED BY THE CONTROLLER.
   - C. DURING INTERVAL SAMPLING TIME, THE COUNTDOWN TIMER NUMBERICAL DISPLAY SHALL BE BLANK.
   - D. SAMPLING TIME TO DETERMINE INTERVAL SETTINGS SHALL TAKE A MAXIMUM OF TWO COMPLETE SIGNAL CYLCLES.
   - E. THE UNIT SHALL BE CAPABLE OF DISPLAYING A COUNTDOWN COMMENCING AT THE ONSET OF THE PEDESTRIAN CLEARANCE INTERVAL AND REACHING ZERO AT THE END OF THE PEDESTRIAN CLEARANCE INTERVAL.
   - F. ANY INTERRUPTION OF THE FLASHING PEDESTRIAN CLEARANCE DISPLAY, E.G., PREEMPTION, TIMING PLAN CHANGE, DURING A COUNTDOWN DISPLAY SHALL IMMEDIATELY CAUSE BLANKING OF THE COUNTDOWN NUMERALS. THE COUNTDOWN TIMER SHALL "RE-LEARN" THE PEDESTRIAN CLEARANCE INTERVAL UPON RETURN TO NORMAL SERVICE AFTER PREEMPTION OR IMMEDIATELY FOLLOWING A CHANGE IN WALK CLEARANCE TIME ASSOCIATED WITH A TIMING PLAN CHANGE.
2. TYPE D. THE LEFT SIDE OF THE SIGNAL SECTION SHALL CONSIST OF AN INTERGRAL HAND/WALKING PERSON DISPLAY. THE RIGHT SIDE COMPARTMENT SHALL CONTAIN THE COUNTDOWN DISPLAY. THE DISPLAY NUMERAL SEGMENTS SHALL BE COMPRISED OF TWO ROWS OF DISCRETE LEDS.

THE DEPARTMENT WILL MEASURE PEDESTRIAN SIGNAL HEAD, (LED), TYPE D2, AS PER PLAN BY THE NUMBER OF COMPLETE UNITS FURNISHED AND INSTALLED, AND WILL INCLUDE ALL SUPPORT AND MOUNTING HARDWARE, CLOSURE CAPS, AND LAMPS AS SPECIFIED.

DESIGNED DNM
CHECKED BB

TRAFFIC SIGNAL GENERAL NOTES

MUS-60-16.75

12/08/08
82752_sgn_01.dgn

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING SIGNAL INSTALLATION AT THE INTERSECTIONS LOCATED IN THESE PLANS SHALL BE REMOVED BY THE CONTRACTOR. ALTERNATE METHODS OF TRAFFIC CONTROL SHALL BE APPROVED BY THE ENGINEER AND IN PLACE PRIOR TO THE DEACTIVATION AND REMOVAL OF ANY EXISTING EQUIPMENT. THE FOLLOWING REMOVAL ITEMS SHALL BE STORED ON THE PROJECT FOR SALVAGE BY THE CITY OF ZANESVILLE:

ITEMS TO BE SALVAGED: VEHICLE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, STRAIN POLES, PEDESTALS, GROUND MOUNTED CABINETS (INCLUDING EQUIPMENT), SIGNAL CABLE, MESSENGER WIRE AND LOOP DETECTOR LEAD-IN CABLE.

ONCE THESE ITEMS HAVE BEEN REMOVED AND ARE AVAILABLE FOR PICK UP, THE CONTRACTOR SHALL CONTACT MR. FRED BUCK AT, 740-819-4586, WHO WILL ARRANGE THE PICK UP OF THESE ITEMS BY CITY FORCES. IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR SALVAGE 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.

A TABLE HAS BEEN INCLUDED ON EACH OF THE SIGNAL PLAN SHEETS IDENTIFYING THE ITEMS TO BE REMOVED AT EACH SIGNAL. THE TABLE INDICATES WHICH ITEMS ARE TO BE REMOVED FOR STORAGE, REMOVED FOR REUSE OR REMOVED TO BE PROPERLY DISPOSED.

ITEM 633 CABINET, TYPE TS1, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS ITEM 633 AND 733, THE FOLLOWING REQUIREMENTS SHALL APPLY:

1. LOOP DETECTOR UNITS SHALL BE FOUR-CHANNEL AND RACK MOUNTED.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY RELABELING IN THE CABINET AS A RESULT OF ANY PHASE CHANGES INCLUDED IN THESE PLANS.

PAYMENT FOR ITEM 633 "CABINET, TYPE TS1, AS PER PLAN" SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH CABINET, IN PLACE, COMPLETELY INSTALLED IN THE LOCATION SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

ITEM 633 CONTROLLER ITEM MISC.: 12-CHANNEL CONFLICT MONITOR

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NEW 12-CHANNEL CONFLICT MONITOR IN THE EXSITING CABINET AT THE LOCATION SHOWN IN THE PLANS. THE CONFLICT MONITOR SHALL COMPLY WITH NEMA TS-1, SECTION 6.

THIS ITEM SHALL ALSO COVER THE COST TO REMOVE THE EXISTING CONFLICT MONITOR FOR STORAGE, TO BE PICKED UP BY THE CITY OF ZANESVILLE.

PAYMENT FOR ITEM 633 "CONTROLLER ITEM MISC.: 12-CHANNEL CONFLICT MONITOR" SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH CONFLICT MONITOR, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED AND ACCEPTED.

ITEM 633 CONTROLLER ITEM MISC.: PREEMPTION RECEIVING UNIT, REMOVED FOR REUSE

PAYMENT FOR ITEM 633 "CONTROLLER UNIT MISC.: PREEMPTION RECEIVING UNIT, REMOVED FOR REUSE", WILL BE AT THE CONTRACT UNIT PRICE FOR REMOVING, STORING AND RE-INSTALLING THE RECEIVING UNIT, AT THE LOCATION SHOWN IN THE PLANS, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED AND ACCEPTED

ITEM 633 CONTROLLER ITEM MISC.: PREEMPTION RECEIVING UNIT

THE RECEIVING UNIT SHALL BE THE GTT, OPTICOM 700 SERIES DETECTOR MANUFACTURED BY GLOBAL TRAFFIC TECHNOLOGIES, ST. PAUL, MINNESOTA. THIS ITEM OF WORK SHALL INCLUDE THE FURNISHING AND INSTALLING OF THIS RECEIVER UNIT INCLUDING ALL NECESSARY HARDWARE.

PAYMENT FOR ITEM 633 "CONTROLLER ITEM MISC.: PREEMPTION RECEIVING UNIT" SHALL BE AT THE CONTRACT UNIT PRICE FOR EACH RECEIVING UNIT IN PLACE, COMPLETELY INSTALLED AT THE LOCATION SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

ITEM 633 CONTROLLER ITEM MISC.: PREEMPTION DETECTOR CABLE

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPTION DETECTOR HOME RUN CABLE IN THE LOCATIONS SHOWN IN THE PLANS. THE CABLE SHALL CONNECT THE PREEMPT RECEIVING UNITS TO THE PHASE SELECTORS IN THE LOCAL CONTROLLER CABINET.

THE PREEMPTION DETECTOR CABLE SHALL BE THE GTT, OPTICOM 138 DETECTOR CABLE MANUFACTURED BY GLOBAL TRAFFIC TECHNOLOGIES, ST. PAUL, MINNESOTA.

PAYMENT FOR ITEM 633 "CONTROLLER MISC.: PREEMPTION DETECTOR CABLE" SHALL BE AT THE CONTRACT UNIT PRICE FOR THE CABLE FURNISHED, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED AND ACCEPTED.

ITEM 633 CONTROLLER ITEM MISC.: PREEMPTION CONFIRMATION LIGHT

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.

THE CONFIRMATION LIGHT SHALLBE INDICATE THAT THE EMERGENCY VEHICLE HAS ACHIEVED CONTROL OF THE TRAFFIC SIGNAL. THE CONFIRMATION LIGHT SHALL BE POWERED BY A LOAD SWITCH IN THE TRAFFIC SIGNAL CONTROLLER.

THE CONFIRMATION LIGHT SHALL BE THE GTT, OPTICOM 575 CONFIRMATION LIGHT KIT MANUFACTURED BY GLOBAL TRAFFIC TECHNOLOGIES, ST. PAUL, MINNESOTA.

PAYMENT FOR ITEM 633 "CONTROLLER ITEM MISC.: PREEMPTION CONFIRMATION LIGHT" SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH LIGHT IN PLACE, COMPLETELEY INSTALLED IN THE LOCATION SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

ITEM 633 CONTROLLER ITEM MISC.: PREEMPTION PHASE SELECTOR

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING 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 PREEMPT PHASE SELECTOR SHALL BE THE GTT, OPTICOM 754 PHASE SELECTOR MANUFACTURED BY GLOBAL TRAFFIC TECHNOLOGIES, ST. PAUL, MINNESOTA AND SHALL INCLUDE THE GTT, OPTICOM 760 CARD RACK.

PAYMENT FOR ITEM 633 "CONTROLLER ITEM MISC.: PREEMPTION PHASE SELECTOR" SHALL BE AT THE CONTRACT UNIT PRICE FOR EACH PHASE SELECTOR IN PLACE, COMPLETELY INSTALLED IN THE LOCAL CONTROLLER SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

ITEM 633 CONTROLLER ITEM MISC.: PREEMPTION CONFIRMATION LIGHT CABLE

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPTION CONFIRMATION LIGHT CABLE IN THE LOCATIONS SHOWN IN THE PLANS. THE CABLE SHALL CONNECT THE PREEMPTION CONFIRMATION LIGHT UNIT TO THE LOCAL CONTROLLER AS SHOWN IN THE PLANS.

THE PREEMPTION CONFIRMATION LIGHT CABLE SHALL BE SIGNAL CABLE, 2-CONDUCTOR, #14 AWG..

PAYMENT FOR ITEM 633 "CONTROLLER ITEM MISC.: PREEMPTION CONFIRMATION LIGHT CABLE" SHALL BE AT THE CONTRACT UNIT PRICE FOR THE CABLE FURNISHED, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED AND ACCEPTED.

ITEM 633 CONTROLLER ITEM MISC.: CONTROLLER UNIT WITH CABINET, POLE MOUNTED, REMOVED FOR REUSE

THIS ITEM OF WORK SHALL CONSIST OF REMOVING, STORING AND RE-INSTALLING AN EXISTING POLE MOUNTED CONTROLLER UNIT WITH CABINET. THIS CONTROLLER UNIT WITH CABINET SHALL BE MOUNTED TO AN EXISTING SIGNAL POLE, IN ACCORDANCE WITH STD. DWG. TC-83.10, AND SHALL INCLUDE THE CONDUIT, HARDWARE AND ALL ACCESSORIES THAT ARE NECESSARY TO MAKE THE CONTROLLER UNIT COMPLETELY FUNCTIONAL AND OPERATIONAL.

THE CONTRACTOR SHALL NOTIFY FRED BUCK, AT PHONE NUMBER 740-819-4586, ONCE THE CONTROLLER UNIT AND CABINET HAVE BEEN INSTALLED AND ARE READY FOR USE. FRED BUCK SHALL PROVIDE AND DOWNLOAD THE TIMING FOR THE CONTROLLER.

PAYMENT FOR ITEM 633 "CONTROLLER ITEM MISC.: CONTROLLER UNIT WITH CABINET, POLE MOUNTED, REMOVED FOR REUSE" SHALL BE AT THE CONTRACT UNIT PRICE FOR REMOVING, STORING AND MOUNTING THE CABINET, AT THE LOCATION SHOWN IN THE PLANS, IN PLACE, ALL CONNECTIONS MADE, WIRED, TESTED AND ACCEPTED.

ITEM 633 CONTROLLER UNIT, TYPE TS2/A2, FURNISH ONLY, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS ITEM 633 AND 733, THE FOLLOWING REQUIREMENTS SHALL APPLY:

1. THE CONTRACTOR SHALL DELIVER EACH CONTROLLER UNIT TO, MR. FRED BUCK, OF THE CITY OF ZANESVILLE AT LEAST 14 DAYS IN ADVANCE OF ANY SCHEDULED SIGNAL WORK. THE CONTRACTOR SHALL CONTACT MR. BUCK AT, 740-819-4586 TO SCHEDULE THE DELIVERY OF THE CONTROLLER UNITS.
2. THE CONTRACTOR SHALL CONTACT MR. BUCK AT LEAST 24 HOURS IN ADVANCE OF WHEN HE/SHE WILL HAVE THE CABINET WIRED AND READY FOR THE CONTROLLER. MR. BUCK SHALL DELIVER AND INSTALL THE PROGRAMMED CONTROLLER UNIT TO THE CABINET.

PAYMENT FOR ITEM 633 "CONTROLLER UNIT, TYPE TS2/A2, FURNISH ONLY, AS PER PLAN" SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH CONTROLLER UNIT FURNISHED AND DELIVERED.

ITEM 633 CONTROLLER UNIT, TYPE TS2/A2 (EAGLE EPAC M-50 MODEL) (ALTERNATE BID), FURNISH ONLY, AS PER PLAN

THE CONTROLLER SHALL BE THE EAGLE EPAC M-50 MANUFACTURED BY EAGLE TRAFFIC CONTROL SYSTEMS, AUSTIN, TEXAS AND SHALL INCORPORATE OR BE FURNISHED WITH ALL OF THE DESIGN FEATURES, AUXILIARY EQUIPMENT, ACCESSORIES, AND PRE-WIRED CABINET FEATURES AS REQUIRED IN THE STANDARD BID ITEM.

PAYMENT FOR ITEM 633 "CONTROLLER UNIT, TYPE TS2/A2, FURNISH ONLY, AS PER PLAN" SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH CONTROLLER UNIT.

DESIGNED DNM CHECKED BB

TRAFFIC SIGNAL GENERAL NOTES

MUS-60-16.75

12/08/08

82752_sgn_01.dgn

ITEM 633 CONTROLLER ITEM MISC.: PREEMPTION CONFIRMATION LIGHT, REMOVED FOR REUSE

PAYMENT FOR ITEM 633 "CONTROLLER UNIT MISC.: PREEMPTION CONFIRMATION LIGHT, REMOVED FOR REUSE", WILL BE AT THE CONTRACT UNIT PRICE FOR REMOVING, STORING AND RE-INSTALLING THE RECEIVING UNIT, AT THE LOCATION SHOWN IN THE PLANS, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED AND ACCEPTED

ITEM 632 SIGNALIZATION MISC.: COMPUTER SOFTWARE

THIS ITEM SHALL CONSIST OF FURNISHING THE CITY OF ZANESVILLE WITH ONE (1) LICENSED COPY OF SYNCHRO AND SIM TRAFFIC, TRANSPORTATION ANALYSIS SOFTWARE MANUFACTURED BY TRAFFICWARE, LTD., SUGAR LAND, TEXAS. THE LICENSED COPIES SHALL BE THE LATEST VERSION AVAILABLE. THE CONTRACTOR SHALL DELIVER BOTH SOFTWARE PACKAGES TO MR. FRED BUCK OF THE CITY OF ZANESVILLE. THE CONTRACTOR SHALL CONTACT MR. BUCK AT PHONE NUMBER 740-819-4586, TO SET UP THE DELIVERY OF THESE ITEMS.

PAYMENT FOR ITEM 632 "SIGNALIZATION MISC.: COMPUTER SOFTWARE", SHALL BE AT THE CONTRACT LUMP SUM PRICE FOR PURCHASING AND DELIVERING THE LICENSED SOFTWARE PACKAGES TO THE CITY OF ZANESVILLE.

ITEM 632 SIGNALIZATION MISC.: TETHER WIRE, 7 STRAND, ¼" DIAMETER WITH ACCESSORIES

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING TETHER WIRE AT THE LOCATIONS SHOWN IN THE PLANS. ALL OF THE PROPOSED SIGNAL HEADS, WITH BACKPLATES, SHALL BE CONNECTED TO THE TETHER WIRE. SHEET 126 INCLUDES DETAILS FOR CONNECTING THE SIGNAL HEADS TO THE TETHER WIRE AND INCLUDES DETAILS FOR CONNECTING THE TETHER WIRE TO THE SIGNAL POLES. THIS ITEM SHALL INCLUDE ALL OF THE HARDWARE AND ACCESSORIES THAT ARE NECESSARY TO CONNECT THE TETHER WIRE TO THE SIGNAL HEADS AND SIGNAL POLES.

PAYMENT FOR ITEM 632 "SIGNALIZATION MISC.: TETHER WIRE, 7 STRAND, ¼" DIAMETER WITH ACCESSORIES", WILL BE AT THE CONTRACT UNIT PRICE FOR TETHER WIRE FURNISHED, IN PLACE, ALL CONNECTIONS MADE, INSPECTED AND ACCEPTED.

GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE HL AND 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. METAL PULL BOX LIDS SHALL BE BONDED BY ATTACHMENT OF THE EQUIPMENT GROUNDING CONDUCTOR TO THE FRAME DIAGONAL AS PROVIDED ON HL-30.11.

   E. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.

   F. 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.

   G. 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 3/4 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, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPICE.

   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) STRUCTURE GROUNDING: HL-50.21 SHOWS A 1/0 AWG STRANDED COPPER CABLE USED FOR STRUCTURE GROUNDING. ADDITIONALLY, THIS SAME CABLE SHALL BE INSULATED AND ANY CONNECTIONS AND BARE COPPER STRANDS EXPOSED TO CONCRETE SHALL BE COVERED WITH MASTIC TO PREVENT CONTACT WITH THE CONCRETE.

8) PAYMENT.

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

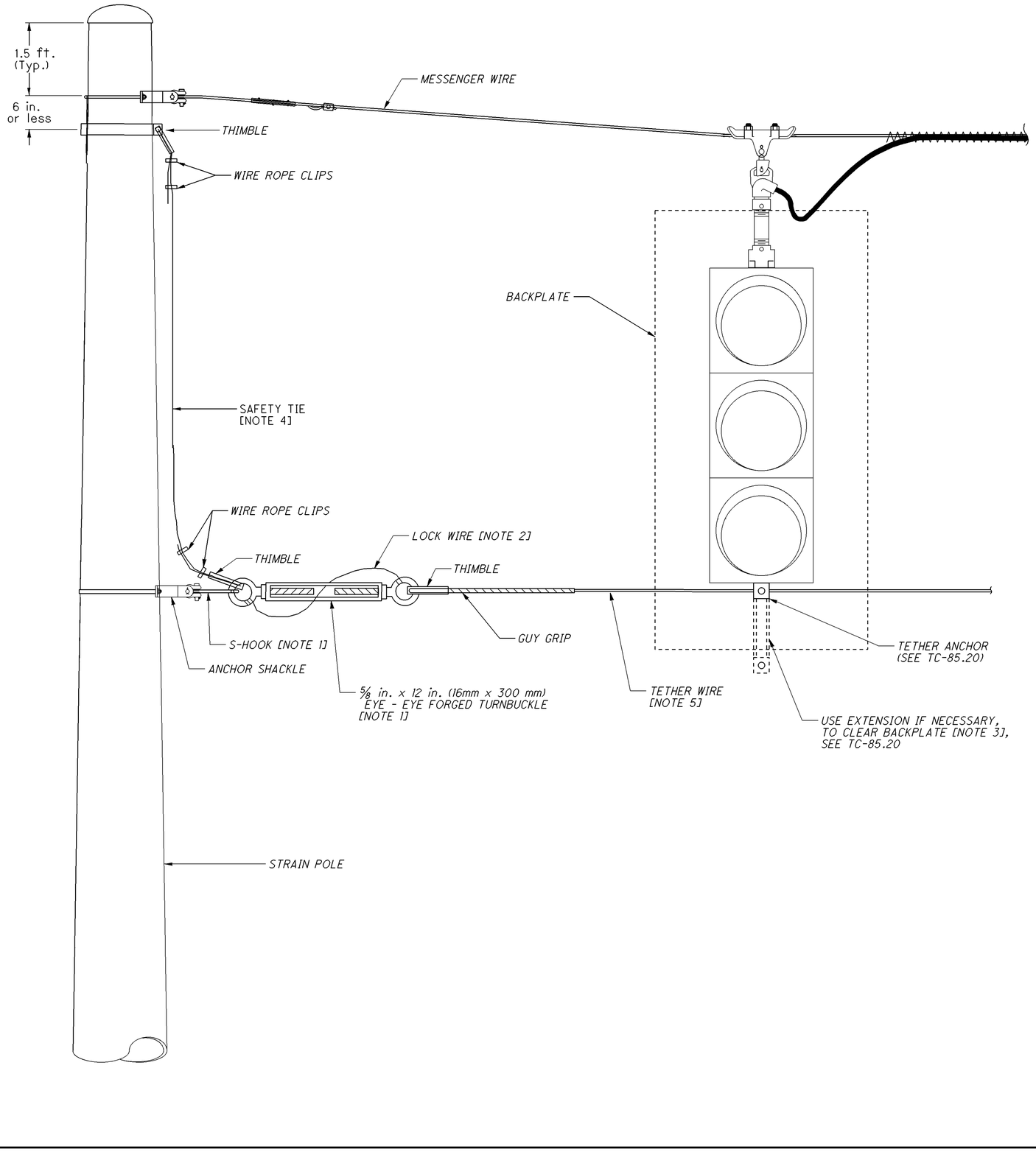
   B. WORK ON BRIDGES MAY BE INCLUDED IN THE BID ITEM FOR "ITEM 625, STRUCTURE GROUNDING."

   C. IN A 3-WIRE HIGHWAY LIGHTING SYSTEM, THE THIRD CONDUCTOR OF THE DUCT CABLE OR DISTRIBUTION CABLE WILL BE USED AS THE EQUIPMENT GROUNDING CONDUCTOR AND MAY AS SUCH BE PART OF THE CABLE BID ITEM.

DESIGNED DNM CHECKED BB

TRAFFIC SIGNAL GENERAL NOTES

MUS-60-16.75



NOTES

1. S-HOOK IS MATECHED TO THE STRAIN POLES DESIGN NUMBER (SEE TABLE). S-HOOK AND TRUNBUCKLE ARE REQUIRED ONLY AT ONE END OF SIMPLE SPANS, ALL ENDS OF COMPLEX SPANS.
2. LOCK WIRE SHALL BE STAINLESS STEEL, 1/8 INCH SOFT TEMPER, WOUND TO PREVENT TURNING OF TURNBUCKLE BODY.
3. IF SIGNAL ORIENTATION IS NOT PERPENDICULAR TO SPAN AND TETHER WIRE, THEN USE AN ANCHOR EXTENSION.
4. INSTALL SAFETY TIE AT EACH TURNBUCKLE. THIS WIRE SHALL BE 1 X 19, 1/8 INCH STAINLESS STEEL. TIE SHOULD BE SLACK, BUT NOT SO SLACK AS TO CONTACT POLE. USE 2 CLIPS PER END AT 3 1/4 INCH SPACING.
5. TETHER WIRE SHALL BE ASTM A475 UTILITIES GRADE 1/4 INCH. ON SIMPLE SPANS, INSTALL TETHER HORIZONTALLY. ON COMPLEX SPANS, INSTALL TETHER TO MATCH SAG OF MESSENGER WIRE. MAINTAIN CLEARANCE OF 17 FT. TO 19 FT. OVER ROADWAY.

STRAIN POLE DESIGN NO.	GALVANIZED MILD STEEL S-HOOK WIRE DIAMETER (INCHES)
1	1/4
2	1/4
3	1/4
4	1/4
5	1/4
6	3/8
7	3/8
8	3/8
9	3/8
10	3/8
11	1/2
12	1/2

DESIGNED KRD
REVIEWED DNM

TETHER WIRE INSTALLATION DETAILS

MUS-60-16.75

126
165

82752_sds_19.dgn 12/01/08

CROSS REFERENCES	
SHEET(S)	DESCRIPTION
128	WIRING DIAGRAM, PHASING DIAGRAM AND SIGNAL DISPLAY CHART
162-165	TRAFFIC SIGNAL SUBSUMMARY

NOTE: THE CONTRACTOR SHALL SPLICE THE PROPOSED LOOP DETECTOR LEAD-IN CABLE TO THE EXISTING LOOP WIRE AT THE EXISTING PULL BOX.

PEDESTRIAN PUSHBUTTON SIGN (TYP)

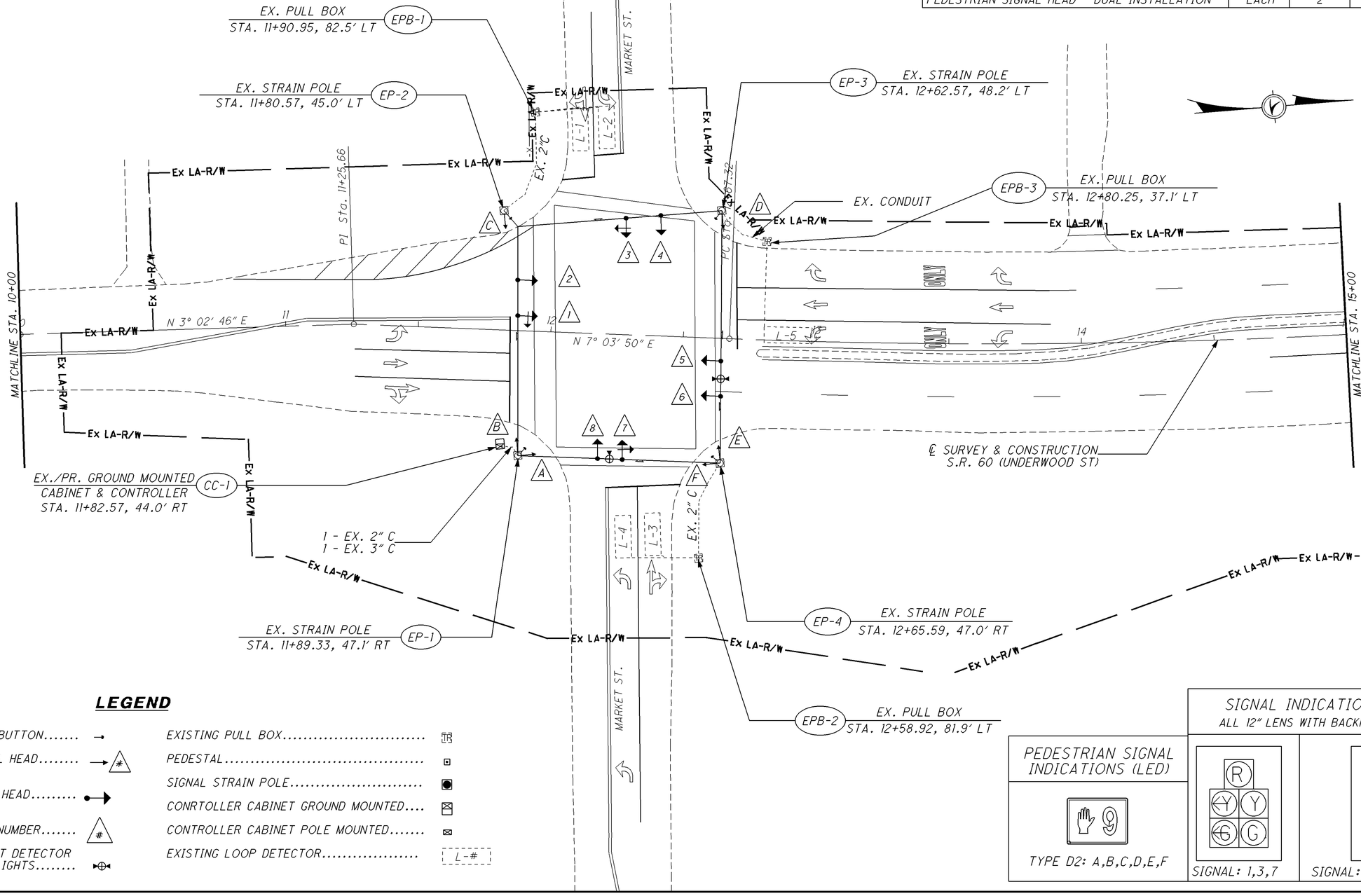
TO CROSS UNDERWOOD ST PUSH BUTTON WAIT FOR WALK SIGNAL

R10-H4D-9

MOUNTED ABOVE EACH PUSHBUTTON

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	5	X	
VEHICLE SIGNAL HEAD, 5-SECTION, 1-WAY	EACH	3	X	
MESSENGER WIRE	FOOT	345		X
SIGNAL CABLE, 5-CONDUCTOR	FOOT	1310		X
SIGNAL CABLE, 7-CONDUCTOR	FOOT	467		X
LOOP DETECTOR LEAD-IN CABLE	FOOT	602		X
GROUND MOUNTED CABINET INCLUDING EQUIPMENT	EACH	1	X	
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	4		X
PEDESTRIAN SIGNAL HEAD - SINGLE INSTALLATION	EACH	2	X	
PEDESTRIAN SIGNAL HEAD - DUAL INSTALLATION	EACH	2	X	



LEGEND

- PEDESTRIAN PUSH BUTTON.....
- PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN
- VEHICULAR SIGNAL HEAD..... W/ BACKPLATE
- SIGNAL HEAD I.D. NUMBER.....
- PROPOSED PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....
- EXISTING PULL BOX.....
- PEDESTAL.....
- SIGNAL STRAIN POLE.....
- CONRTOLLER CABINET GROUND MOUNTED....
- CONTROLLER CABINET POLE MOUNTED.....
- EXISTING LOOP DETECTOR..... L-#

SIGNAL INDICATIONS
ALL 12" LENS WITH BACKPLATES

PEDESTRIAN SIGNAL INDICATIONS (LED)

TYPE D2: A,B,C,D,E,F

SIGNAL: 1,3,7

SIGNAL: 2,4,5,6,8

HORIZONTAL SCALE IN FEET
0 10 20 40

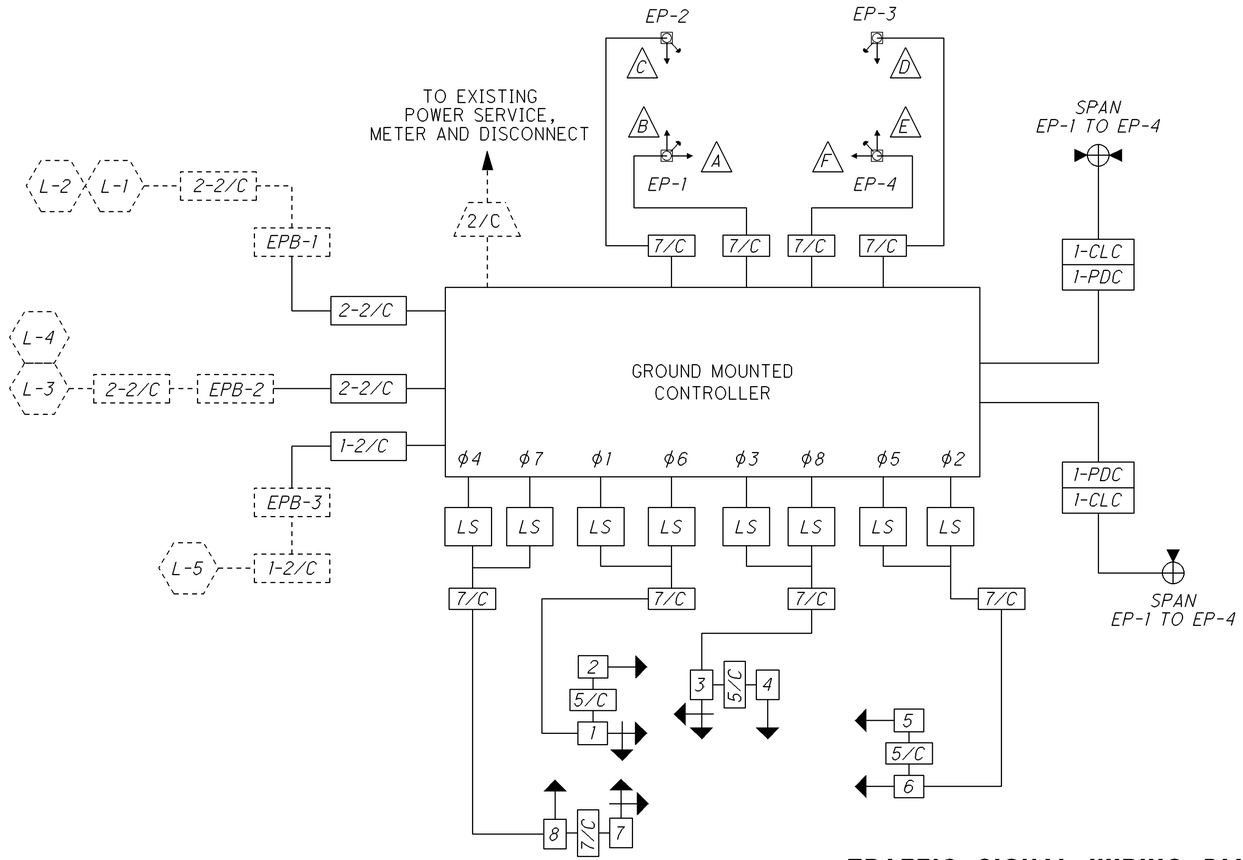
CALCULATED DNM
CHECKED XXX

SIGNAL PLAN - UNDERWOOD ST. & MARKET ST.
STA. 10+00 TO STA. 15+00

MUS-60-16.75

127
165

82752_sds_1.dgn 11/21/08

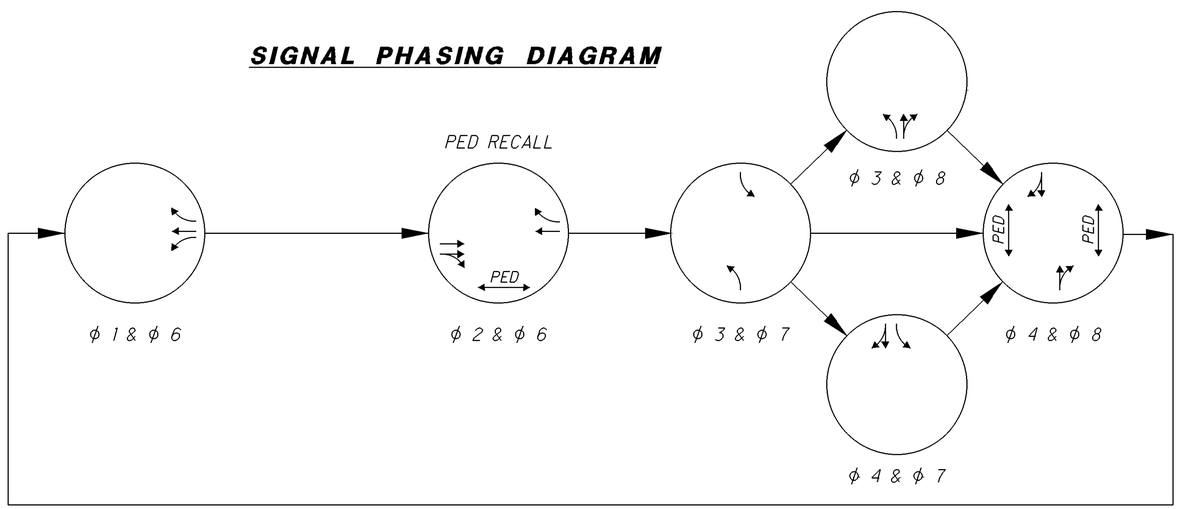


TRAFFIC SIGNAL WIRING DIAGRAM

LEGEND

- SIGNAL HEAD WITH TURN ARROW
- SIGNAL HEAD
- 2/C — 2/C #14 AWG (LEAD-IN CABLE)
- 5/C — 5/C #14 AWG SIGNAL CABLE
- 7/C — 7/C #14 AWG SIGNAL CABLE
- LS — LOAD SWITCH
- PUSHBUTTON
- PEDESTRIAN SIGNAL HEAD W/COUNTDOWN
- PREEMPT DETECTOR W/ CONFIRMATION LIGHTS
- 1-PDC — PREEMPT DETECTOR CABLE
- 1-CLC — CONFIRMATION LIGHT CABLE
- EX. 2/C OR 3/C #8 AWG POWER CABLE
- L-1 — EX. VEHICLE DETECTOR LOOP
- EPB-# — EX. PULL BOX
- 2/C — EX. 2/C #14 AWG (LEAD-IN CABLE)

SIGNAL PHASING DIAGRAM



CALCULATED DNM
CHECKED DNM

SIGNAL PLAN DETAILS - UNDERWOOD ST. & MARKET ST.

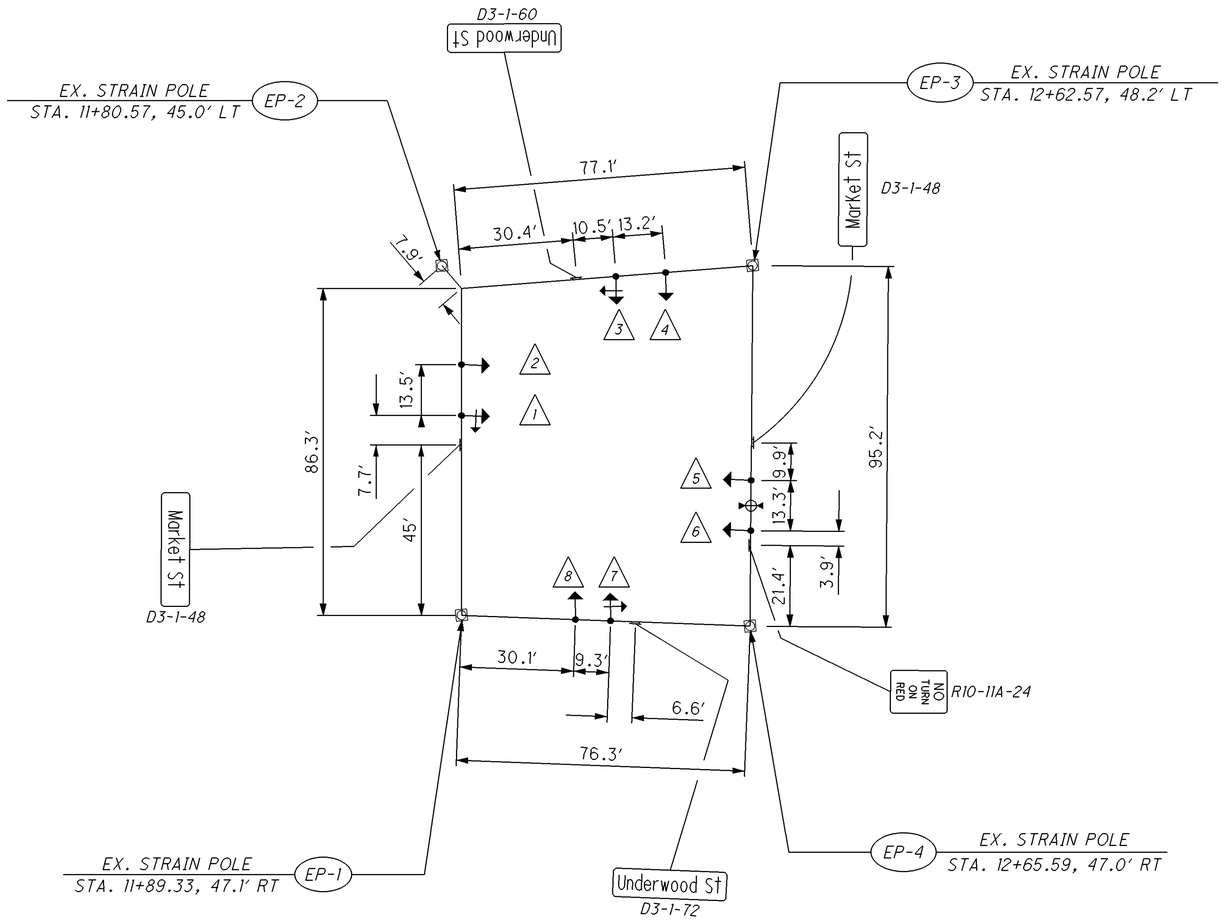
MUS-60-16.75

82752_sds_01.DGN 11/21/08

TRAFFIC SIGNAL HEAD PLACEMENT

NOTE 1: SEE TRAFFIC CONTROL PLAN SHEET 72 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2: THE OVERHEAD STREET NAME SIGNS ATTACHED TO THE MESSENGER WIRE SHALL BE FIELD ADJUSTED TO MAXIMIZE THE VIEW OF THE SIGNAL HEADS.



LEGEND

SPAN WIRE OVERHEAD SIGN .....

SIGNAL HEAD STD ONE WAY .....

SIGNAL HEAD I.D. NUMBER .....

PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....

TRAFFIC SIGNAL DISPLAY SCHEDULE

SIGNAL HEAD LEGEND								PEDESTRIAN HEAD LEGEND			PHASES	
1	2	3	4	5	6	7	8	B/C	D/E	A/F		
G/6	G	R	R	R	R	R	R	DW	DW	DW	R/W	ϕ 1 & ϕ 6
G/Y	G	R	R	R	R	R	R	DW	DW	DW	CLEARANCE	
G	G	R	R	R	R	R	R	DW	DW	DW		
G	G	R	R	G	G	R	R	DW	DW	W	R/W	ϕ 2 & ϕ 6
G	G	R	R	G	G	R	R	DW	DW	FDW	CLEARANCE	
Y	Y	R	R	Y	Y	R	R	DW	DW	DW		
R	R	R	R	R	R	R	R	DW	DW	DW		
R	R	R/6	R	R	R	R/6	R	DW	DW	DW	R/W	ϕ 3 & ϕ 7
R	R	R/6	R	R	R	R/Y	R	DW	DW	DW	CLEARANCE TO ϕ 3 & ϕ 8	
R	R	R/6	R	R	R	R	R	DW	DW	DW		
R	R	R/Y	R	R	R	R/6	R	DW	DW	DW	CLEARANCE TO ϕ 4 & ϕ 7	
R	R	R	R	R	R	R/6	R	DW	DW	DW		
R	R	R/Y	R	R	R	R/Y	R	DW	DW	DW	CLEARANCE TO ALL OTHERS	
R	R	R	R	R	R	R	R	DW	DW	DW		
R	R	G/6	G	R	R	R	R	DW	DW	DW	R/W	ϕ 3 & ϕ 8
R	R	G/Y	G	R	R	R	R	DW	DW	DW	CLEARANCE TO ϕ 4 & ϕ 8	
R	R	G	G	R	R	R	R	DW	DW	DW		
R	R	Y/Y	Y	R	R	R	R	DW	DW	DW	CLEARANCE TO ALL OTHERS	
R	R	R	R	R	R	R	R	DW	DW	DW		
R	R	R	R	R	R	G/6	G	DW	DW	DW	R/W	ϕ 4 & ϕ 7
R	R	R	R	R	R	G/Y	G	DW	DW	DW	CLEARANCE TO ϕ 4 & ϕ 8	
R	R	R	R	R	R	G	G	DW	DW	DW		
R	R	R	R	R	R	Y/Y	Y	DW	DW	DW	CLEARANCE TO ALL OTHERS	
R	R	R	R	R	R	R	R	DW	DW	DW		
R	R	G	G	R	R	G	G	W	W	DW	R/W	ϕ 4 & ϕ 8
R	R	G	G	R	R	G	G	FDW	FDW	DW	CLEARANCE	
R	R	R	Y	Y	R	Y	Y	DW	DW	DW		
R	R	R	R	R	R	R	R	DW	DW	DW		
R	R	R	R	R	R	R	R	OFF	OFF	OFF	FLASH	
R	R	R	R	G	G	R	R	DW	DW	DW	CHANNEL 1 (NORTH BOUND)	
G	G	R	R	R	R	R	R	DW	DW	DW	CHANNEL 2 (SOUTH BOUND)	
R	R	R	R	R	R	G	G	DW	DW	DW	CHANNEL 3 (WEST BOUND)	

CALCULATED DNM CHECKED DNM

SIGNAL PLAN DETAILS - UNDERWOOD ST. & MARKET ST.

MUS-60-16.75

82752_sds_01.DGN 11/20/08

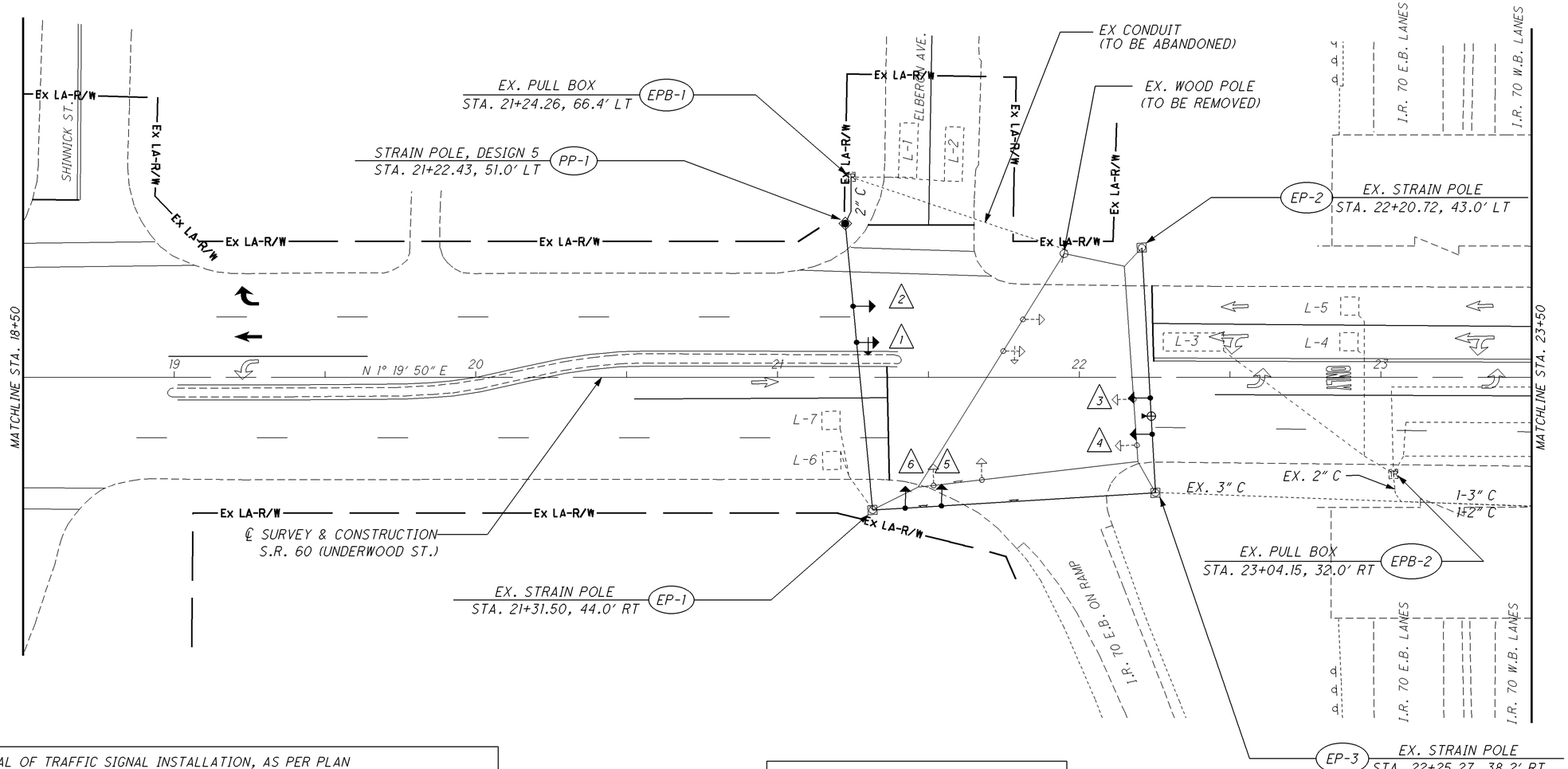
LEGEND

PEDESTRIAN PUSH BUTTON.....
PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN
VEHICULAR SIGNAL HEAD..... W/ BACKPLATE
SIGNAL HEAD I.D. NUMBER.....
PROPOSED PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....

EXISTING PULL BOX.....
PEDESTAL.....
SIGNAL STRAIN POLE.....
CONRTOLLER CABINET GROUND MOUNTED....
CONTROLLER CABINET POLE MOUNTED.....
EXISTING LOOP DETECTOR..... L-#

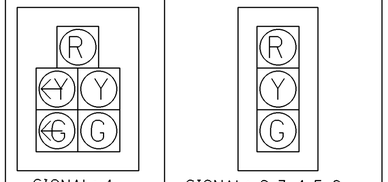
CROSS REFERENCES	
SHEET(S)	DESCRIPTION
132	WIRING DIAGRAM, PHASING DIAGRAM AND SIGNAL DISPLAY CHART
162-165	TRAFFIC SIGNAL SUBSUMMARY

NOTE: THE CONTRACTOR SHALL SPLICE THE PROPOSED LOOP DETECTOR LEAD-IN CABLE TO THE EXISTING LOOP WIRE AT THE EXISTING PULL BOX OR STRAIN POLE.



ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN				
FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	5	X	
VEHICLE SIGNAL HEAD, 5-SECTION, 1-WAY	EACH	1	X	
MESSENGER WIRE	FOOT	300		X
SIGNAL CABLE, 5-CONDUCTOR	FOOT	900		X
SIGNAL CABLE, 7-CONDUCTOR	FOOT	360		X
LOOP DETECTOR LEAD-IN CABLE	FOOT	1270		X
WOOD UTILITY POLE	EACH	1		X
ABANDONED POLE MOUNTED CABINET (EP-3)	EACH	1		X

SIGNAL INDICATIONS
ALL 12" LENS WITH BACKPLATES



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DNM
CHECKED

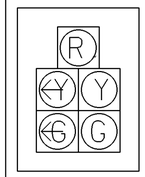
SIGNAL PLAN - UNDERWOOD ST. & ELBERON AVE.
STA. 18+50 TO STA. 23+50

MUS-60-16.75

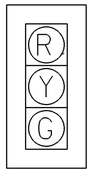
130
165

82752_sds_2.dgn 11/21/08

SIGNAL INDICATIONS
ALL 12" LENS WITH BACKPLATES



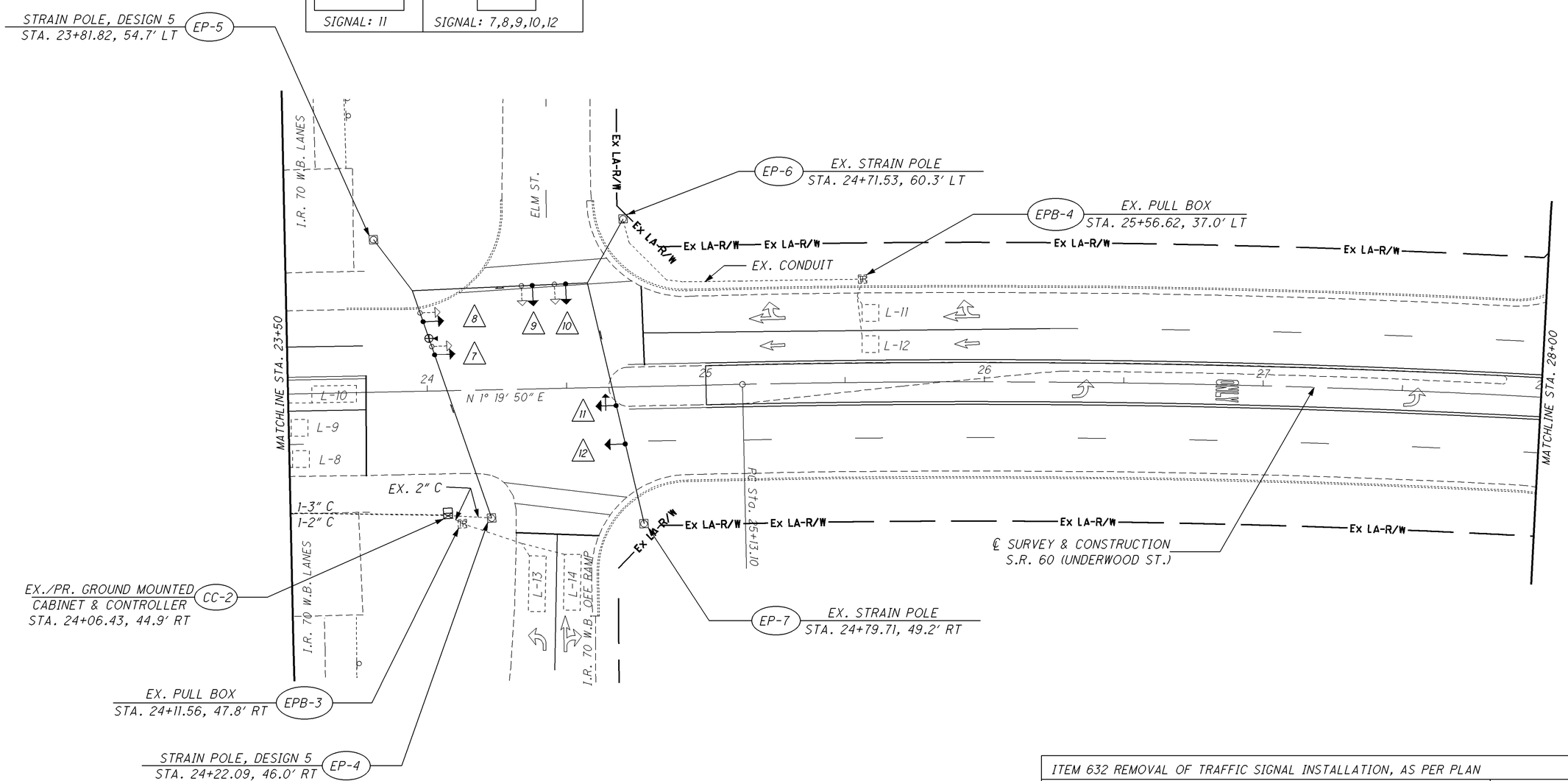
SIGNAL: 11



SIGNAL: 7,8,9,10,12

NOTE: THE CONTRACTOR SHALL SPLICE THE PROPOSED LOOP DETECTOR LEAD-IN CABLE TO THE EXISTING LOOP WIRE AT THE EXISTING PULL BOX.

CROSS REFERENCES	
SHEET(S)	DESCRIPTION
132	WIRING DIAGRAM, PHASING DIAGRAM AND SIGNAL DISPLAY CHART
162-165	TRAFFIC SIGNAL SUBSUMMARY



LEGEND

PEDESTRIAN PUSH BUTTON.....
PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN
VEHICULAR SIGNAL HEAD..... W/ BACKPLATE
SIGNAL HEAD I.D. NUMBER.....
PROPOSED PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....
EXISTING PULL BOX.....
PEDESTAL.....
SIGNAL STRAIN POLE.....
CONRTOLLER CABINET GROUND MOUNTED....
CONTROLLER CABINET POLE MOUNTED.....
EXISTING LOOP DETECTOR..... L-#

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN				
FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	5	X	
VEHICLE SIGNAL HEAD, 5-SECTION, 1-WAY	EACH	1	X	
MESSENGER WIRE	FOOT	293		X
SIGNAL CABLE, 5-CONDUCTOR	FOOT	455		X
SIGNAL CABLE, 7-CONDUCTOR	FOOT	144		X
LOOP DETECTOR LEAD-IN CABLE	FOOT	545		X
GROUND MOUNTED CABINET INCLUDING EQUIPMENT	EACH	1	X	

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DNM
CHECKED

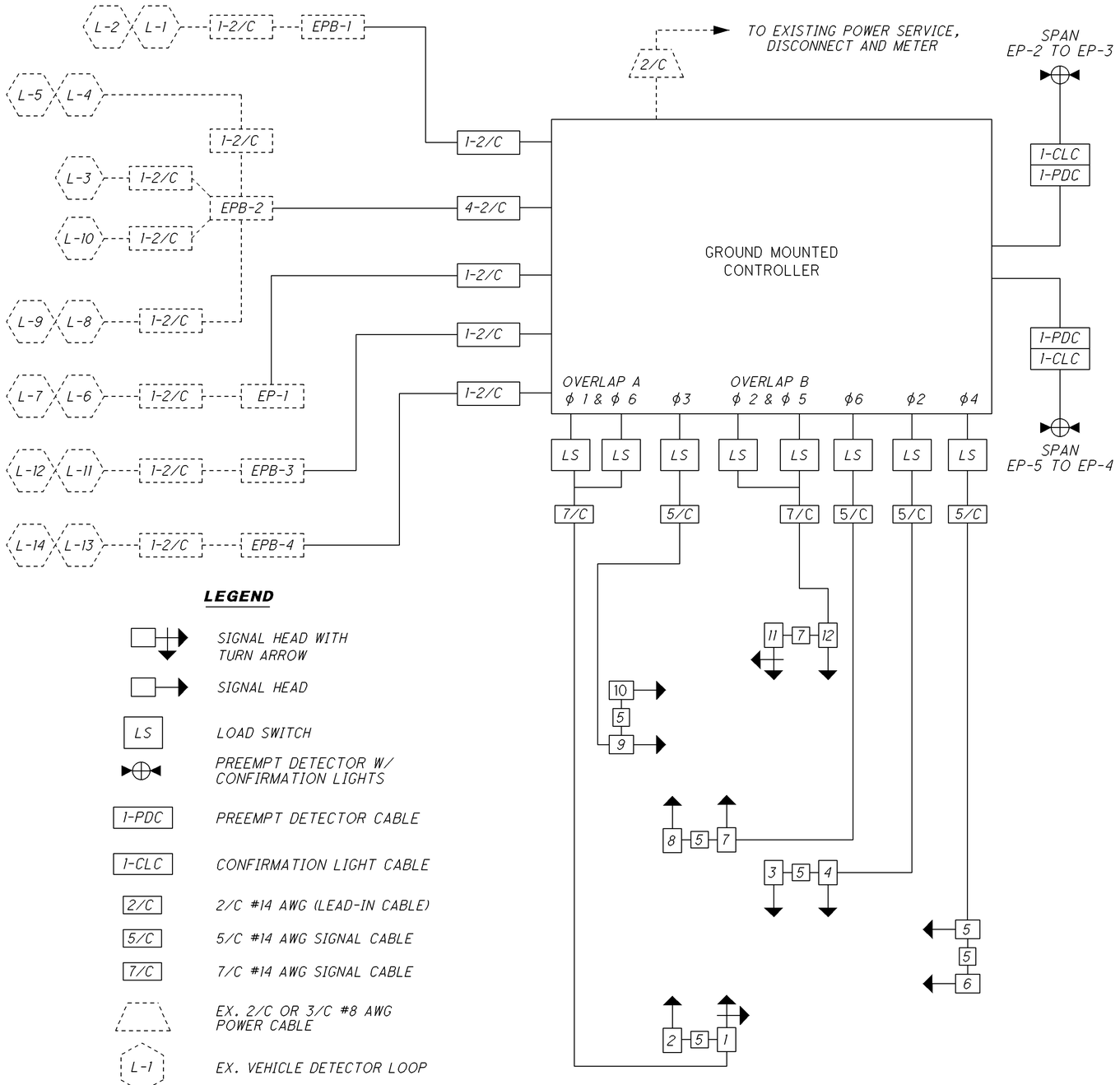
SIGNAL PLAN - UNDERWOOD ST. & ELM ST.
STA. 23+50 TO STA. 28+00

MUS-60-16.75

131
165

82752_sds_3.dgn 11/21/08

TRAFFIC SIGNAL WIRING DIAGRAM



LEGEND

- SIGNAL HEAD WITH TURN ARROW
- SIGNAL HEAD
- LS — LOAD SWITCH
- PREEMPT DETECTOR W/ CONFIRMATION LIGHTS
- 1-PDC — PREEMPT DETECTOR CABLE
- 1-CLC — CONFIRMATION LIGHT CABLE
- 2/C — 2/C #14 AWG (LEAD-IN CABLE)
- 5/C — 5/C #14 AWG SIGNAL CABLE
- 7/C — 7/C #14 AWG SIGNAL CABLE
- EX. 2/C OR 3/C #8 AWG POWER CABLE
- L-1 — EX. VEHICLE DETECTOR LOOP
- 2/C — EX. 2/C #14 AWG (LEAD-IN CABLE)
- EPB-# — EX. PULL BOX

TRAFFIC SIGNAL DISPLAY SCHEDULE

SIGNAL HEAD LEGEND												PHASES	
1	2	3	4	5	6	7	8	9	10	11	12		
R/G	R	R	R	R	R	R	R	R	R	R/G	R	R/W	ϕ 1 & ϕ 5
R/G	R	R	R	R	R	R	R	R	R	R/Y	R	CLEARANCE TO ϕ 1 & ϕ 6	
R/G	R	R	R	R	R	R	R	R	R	R	R		
R/Y	R	R	R	R	R	R	R	R	R	R/G	R	CLEARANCE TO ϕ 2 & ϕ 5	
R	R	R	R	R	R	R	R	R	R	R/G	R		
R/Y	R	R	R	R	R	R	R	R	R	R/Y	R	CLEARANCE TO ϕ 2 & ϕ 6	
R	R	R	R	R	R	R	R	R	R	R	R		
G/G	G	R	R	R	R	G	G	R	R	R	R	R/W	ϕ 1 & ϕ 6
G/Y	G	R	R	R	R	G	G	R	R	R	R	CLEARANCE TO ϕ 2 & ϕ 6	
G	G	R	R	R	R	G	G	R	R	R	R		
R	R	G	G	R	R	R	R	R	R	G/G	G	R/W	ϕ 2 & ϕ 5
R	R	G	G	R	R	R	R	R	R	G/Y	G	CLEARANCE TO ϕ 2 & ϕ 6	
R	R	G	G	R	R	R	R	R	R	G	G		
G	G	G	G	R	R	G	G	R	R	G	G	R/W	ϕ 2 & ϕ 6
G	G	Y	Y	R	R	Y	Y	R	R	Y	Y	CLEARANCE TO ϕ 3	
G	G	R	R	R	R	R	R	R	R	R	R		
Y	Y	Y	Y	R	R	Y	Y	R	R	G	G	CLEARANCE TO ϕ 4	
R	R	R	R	R	R	R	R	R	R	G	G		
G/G	G	R	R	R	R	R	R	G	G	R	R	R/W	ϕ 3
Y/Y	Y	R	R	R	R	R	R	Y	Y	R	R	CLEARANCE TO ϕ 4	
R	R	R	R	R	R	R	R	R	R	R	R		
R/G	Y	R	R	R	R	R	R	Y	Y	R	R	CLEARANCE TO ϕ 1 & ϕ 5	
R/G	R	R	R	R	R	R	R	R	R	R	R		
R	R	R	R	G	G	R	R	R	R	G/G	G	R/W	ϕ 4
R	R	R	R	Y	Y	R	R	R	R	Y/G	Y	CLEARANCE TO ϕ 1 & ϕ 5	
R	R	R	R	R	R	R	R	R	R	R/G	R		
R	R	R	R	R	R	R	R	R	R	R	R	FLASH	
R	R	G	G	R	R	R	R	R	R	G	G	CHANNEL 1 (NORTH BOUND)	
G	G	R	R	R	R	G	G	R	R	R	R	CHANNEL 2 (SOUTH BOUND)	

CALCULATED DNM
CHECKED DNM

TRAFFIC SIGNAL PLAN DETAILS
UNDERWOOD ST. & ELBERON AVE./ ELM ST.

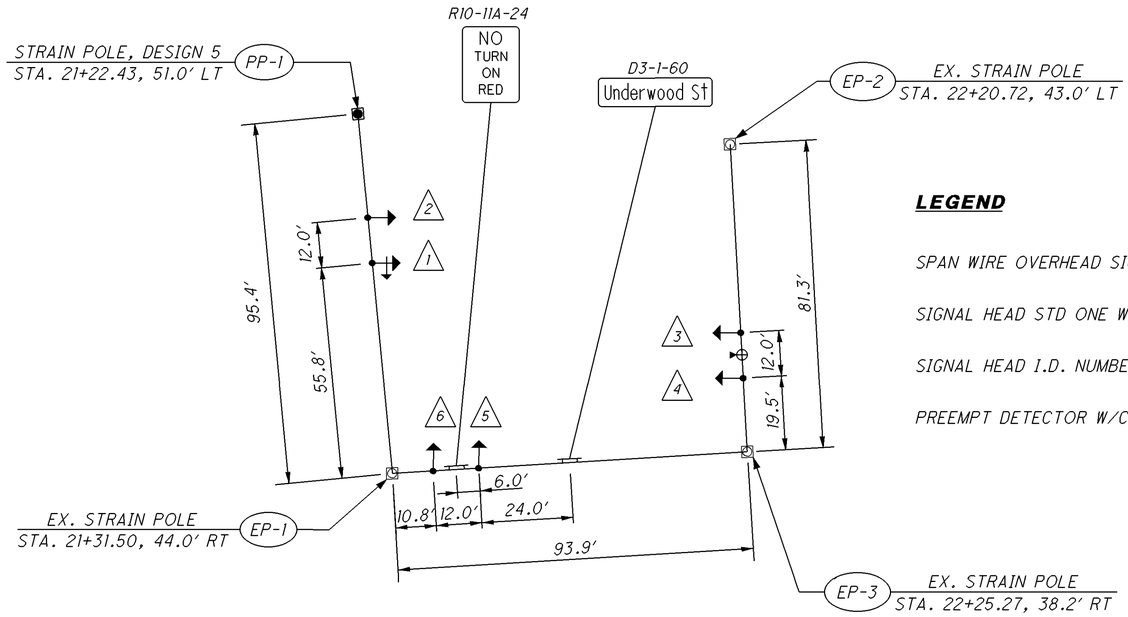
MUS-60-16.75

82752_sds_2.DGN 11/21/08

TRAFFIC SIGNAL HEAD PLACEMENT

NOTE 1: SEE TRAFFIC CONTROL PLAN SHEET 74 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2: THE OVERHEAD STREET NAME SIGNS ATTACHED TO THE MESSENGER WIRE SHALL BE FIELD ADJUSTED TO MAXIMIZE THE VIEW OF THE SIGNAL HEADS.



UNDERWOOD ST. & ELBERON AVE.

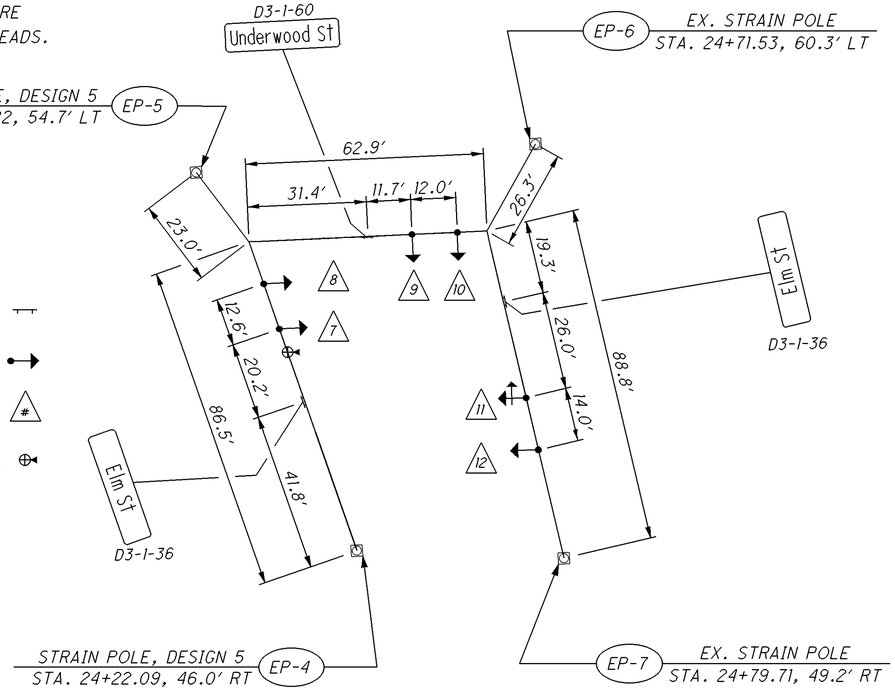
LEGEND

SPAN WIRE OVERHEAD SIGN .....

SIGNAL HEAD STD ONE WAY .....

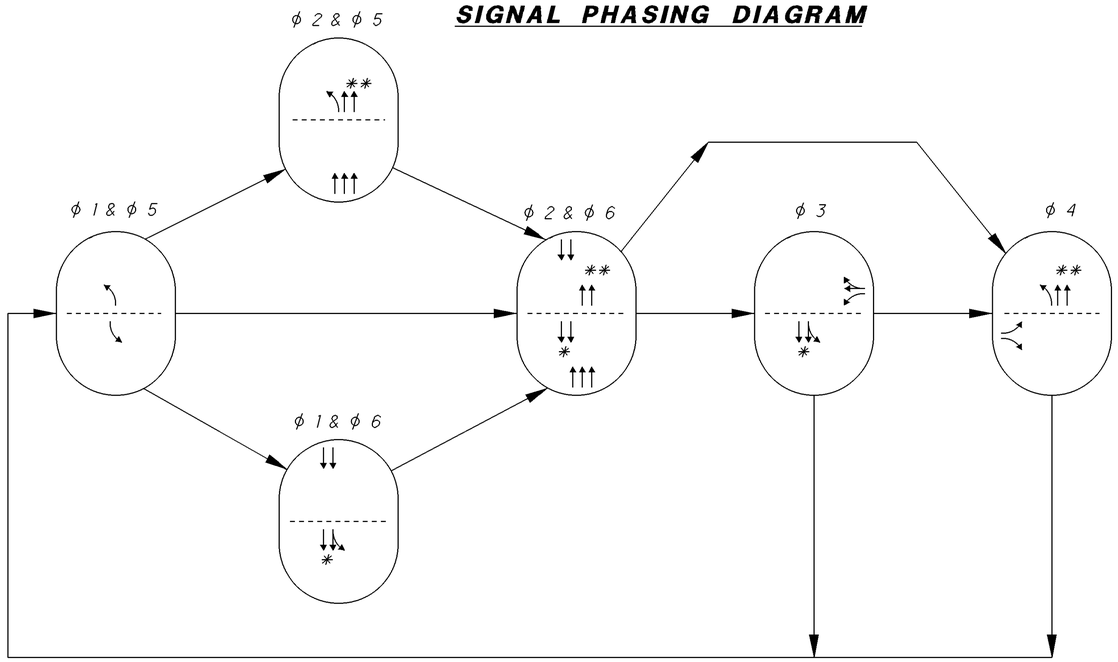
SIGNAL HEAD I.D. NUMBER ..... #

PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....



UNDERWOOD ST. & ELM ST.

SIGNAL PHASING DIAGRAM



* - INDICATES OVERLAP A = 1 & 6

** - INDICATES OVERLAP B = 2 & 5

CALCULATED DNM
CHECKED DNM

TRAFFIC SIGNAL PLAN DETAILS
UNDERWOOD ST. & ELBERON AVE./ELM ST.

MUS-60-16.75

133
165

82752_sds_2.DGN 11/21/08

CROSS REFERENCES	
SHEET(S)	DESCRIPTION
135	WIRING DIAGRAM, PHASING DIAGRAM AND SIGNAL DISPLAY CHART
162-165	TRAFFIC SIGNAL SUBSUMMARY

NOTE: THE CONTRACTOR SHALL SPLICE THE PROPOSED LOOP DETECTOR LEAD-IN CABLE TO THE EXISTING LOOP WIRE AT THE EXISTING PULL BOX.

PEDESTRIAN PUSHBUTTON SIGN (TYP)

TO CROSS UNDERWOOD ST PUSH BUTTON WAIT FOR WALK SIGNAL

R10-H4D-9

MOUNTED ABOVE EACH PUSHBUTTON

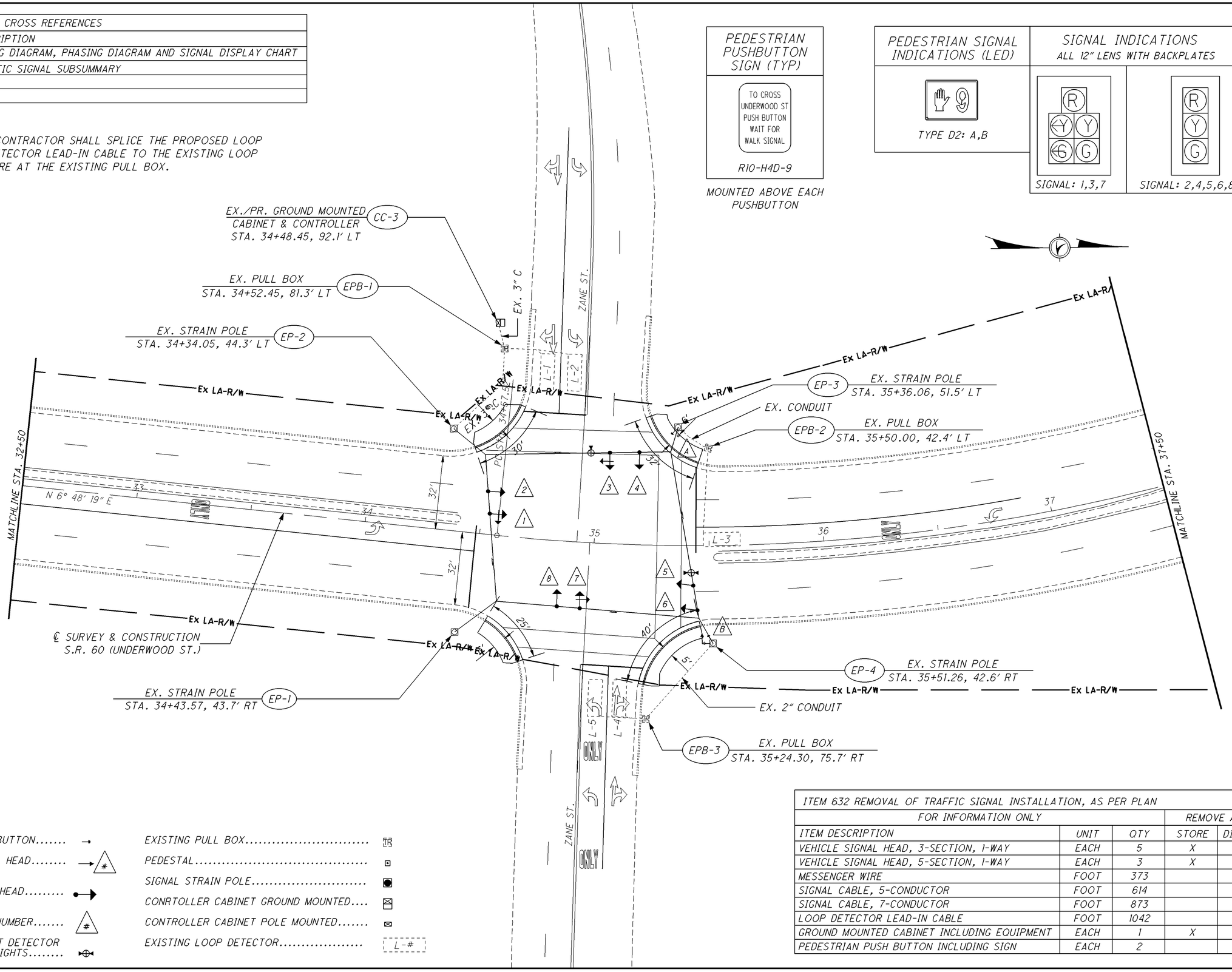
PEDESTRIAN SIGNAL INDICATIONS (LED)

TYPE D2: A,B

SIGNAL INDICATIONS ALL 12" LENS WITH BACKPLATES

SIGNAL: 1,3,7

SIGNAL: 2,4,5,6,8



PEDESTRIAN PUSH BUTTON.....

PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN

VEHICULAR SIGNAL HEAD..... W/ BACKPLATE

SIGNAL HEAD I.D. NUMBER.....

PROPOSED PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....

EXISTING PULL BOX.....

PEDESTAL.....

SIGNAL STRAIN POLE.....

CONRTOLLER CABINET GROUND MOUNTED....

CONTROLLER CABINET POLE MOUNTED.....

EXISTING LOOP DETECTOR..... L-#

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	5	X	
VEHICLE SIGNAL HEAD, 5-SECTION, 1-WAY	EACH	3	X	
MESSENGER WIRE	FOOT	373		X
SIGNAL CABLE, 5-CONDUCTOR	FOOT	614		X
SIGNAL CABLE, 7-CONDUCTOR	FOOT	873		X
LOOP DETECTOR LEAD-IN CABLE	FOOT	1042		X
GROUND MOUNTED CABINET INCLUDING EQUIPMENT	EACH	1	X	
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	2		X

HORIZONTAL SCALE IN FEET 0 10 20 40

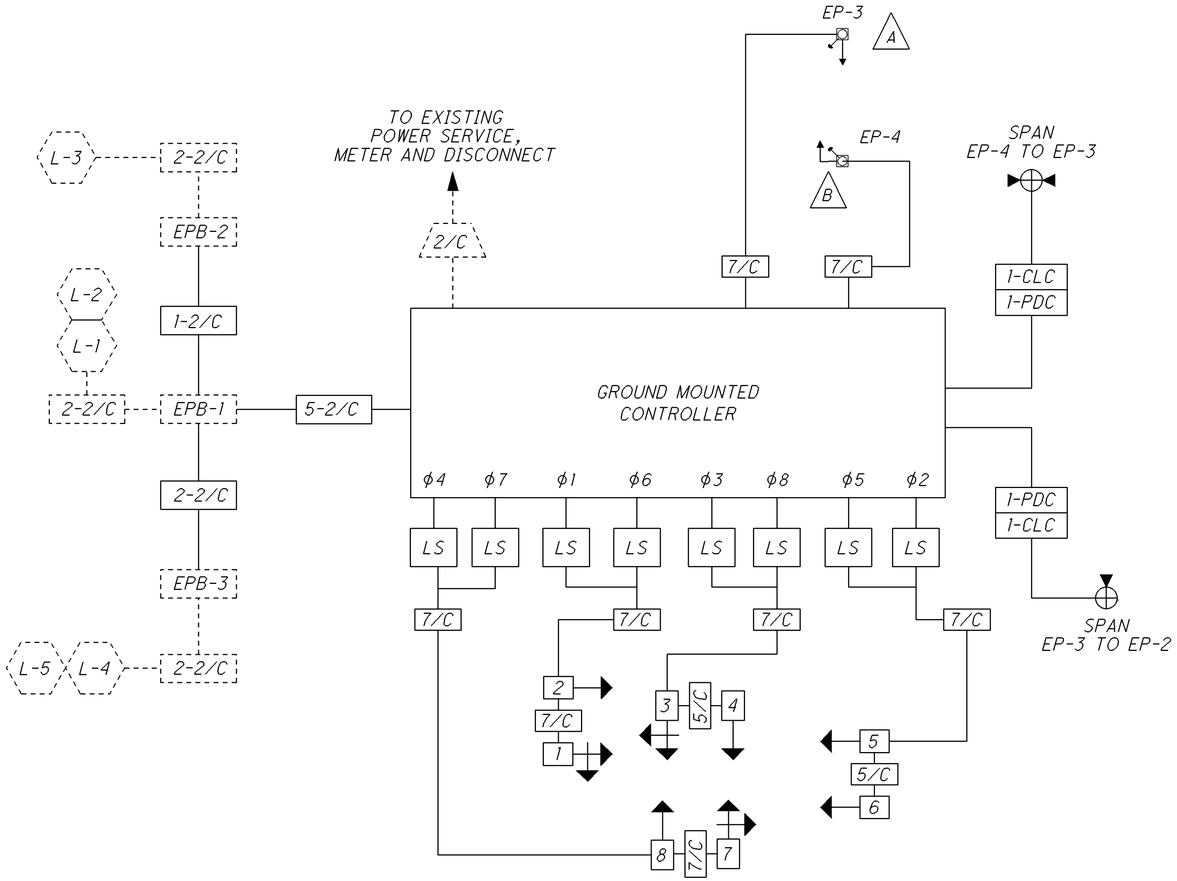
CALCULATED DNM CHECKED

SIGNAL PLAN - UNDERWOOD ST. & ZANE ST. STA. 32+50 TO STA. 37+50

MUS-60-16.75

82752_sds_4.dgn 11/21/08

TRAFFIC SIGNAL WIRING DIAGRAM



LEGEND

- SIGNAL HEAD WITH TURN ARROW
- SIGNAL HEAD
- LS — LOAD SWITCH
- PREEMPT DETECTOR W/ CONFIRMATION LIGHTS
- 1-PDC — PREEMPT DETECTOR CABLE
- 1-CLC — CONFIRMATION LIGHT CABLE
- 2/C — 2/C #14 AWG (LEAD-IN CABLE)
- 5/C — 5/C #14 AWG SIGNAL CABLE
- 7/C — 7/C #14 AWG SIGNAL CABLE
- PUSHBUTTON
- PEDESTRIAN SIGNAL HEAD W/COUNTDOWN
- EX. 2/C OR 3/C #8 AWG POWER CABLE
- L-1 — EX. VEHICLE DETECTOR LOOP
- 2/C — EX. 2/C #14 AWG (LEAD-IN CABLE)
- EPB-# — EX. PULL BOX

TRAFFIC SIGNAL DISPLAY SCHEDULE

SIGNAL HEAD LEGEND								PEDESTRIAN HEAD LEGEND				PHASES	
1	2	3	4	5	6	7	8	A/B	D/E	A/F			
G/⊄G	G	R	R	R	R	R	R	DW				R/W	ϕ 1 & ϕ 6
G/⊄Y	G	R	R	R	R	R	R	DW				CLEARANCE	
G	G	R	R	R	R	R	R	DW					
G	G	R	R	G	G	R	R	DW				R/W	ϕ 2 & ϕ 6
Y	Y	R	R	Y	Y	R	R	DW				CLEARANCE	
R	R	R	R	R	R	R	R	DW					
R	R	R/⊄G	R	R	R	R/⊄G	R	DW				R/W	ϕ 3 & ϕ 7
R	R	R/⊄G	R	R	R	R/⊄Y	R	DW				CLEARANCE TO ϕ 3 & ϕ 8	
R	R	R/⊄G	R	R	R	R	R	DW					
R	R	R/⊄Y	R	R	R	R/⊄G	R	DW				CLEARANCE TO ϕ 4 & ϕ 7	
R	R	R	R	R	R	R/⊄G	R	DW					
R	R	R/⊄Y	R	R	R	R/⊄Y	R	DW				CLEARANCE TO ALL OTHERS	
R	R	R	R	R	R	R	R	DW					
R	R	G/⊄G	G	R	R	R	R	DW				R/W	ϕ 3 & ϕ 8
R	R	G/⊄Y	G	R	R	R	R	DW				CLEARANCE TO ϕ 4 & ϕ 8	
R	R	G	G	R	R	R	R	DW					
R	R	Y/⊄Y	Y	R	R	R	R	DW				CLEARANCE TO ALL OTHERS	
R	R	R	R	R	R	R	R	DW					
R	R	R	R	R	R	G/⊄G	G	DW				R/W	ϕ 4 & ϕ 7
R	R	R	R	R	R	G/⊄Y	G	DW				CLEARANCE TO ϕ 4 & ϕ 8	
R	R	R	R	R	R	G	G	DW					
R	R	R	R	R	R	Y/⊄Y	Y	DW				CLEARANCE TO ALL OTHERS	
R	R	R	R	R	R	R	R	DW					
R	R	G	G	R	R	G	G	W				R/W	ϕ 4 & ϕ 8
R	R	G	G	R	R	G	G	FDW				CLEARANCE	
R	R	R	Y	Y	R	Y	Y	DW					
R	R	R	R	R	R	R	R	DW					
R	R	R	R	R	R	R	R	OFF				FLASH	
R	R	R	R	G	G	R	R	OFF				CHANNEL 1 (NORTH BOUND)	
G	G	R	R	R	R	R	R	OFF				CHANNEL 2 (SOUTH BOUND)	
R	R	R	R	R	R	G	G	OFF				CHANNEL 3 (WEST BOUND)	

CALCULATED DNM
CHECKED DNM

SIGNAL PLAN DETAILS - UNDERWOOD ST. & ZANE ST.

MUS-60-16.75

82752_sds_04.dgn 11/21/08

TRAFFIC SIGNAL HEAD PLACEMENT

NOTE 1: SEE TRAFFIC CONTROL PLAN SHEET 76 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2: THE OVERHEAD STREET NAME SIGNS ATTACHED TO THE MESSENGER WIRE SHALL BE FIELD ADJUSTED TO MAXIMIZE THE VIEW OF THE SIGNAL HEADS.

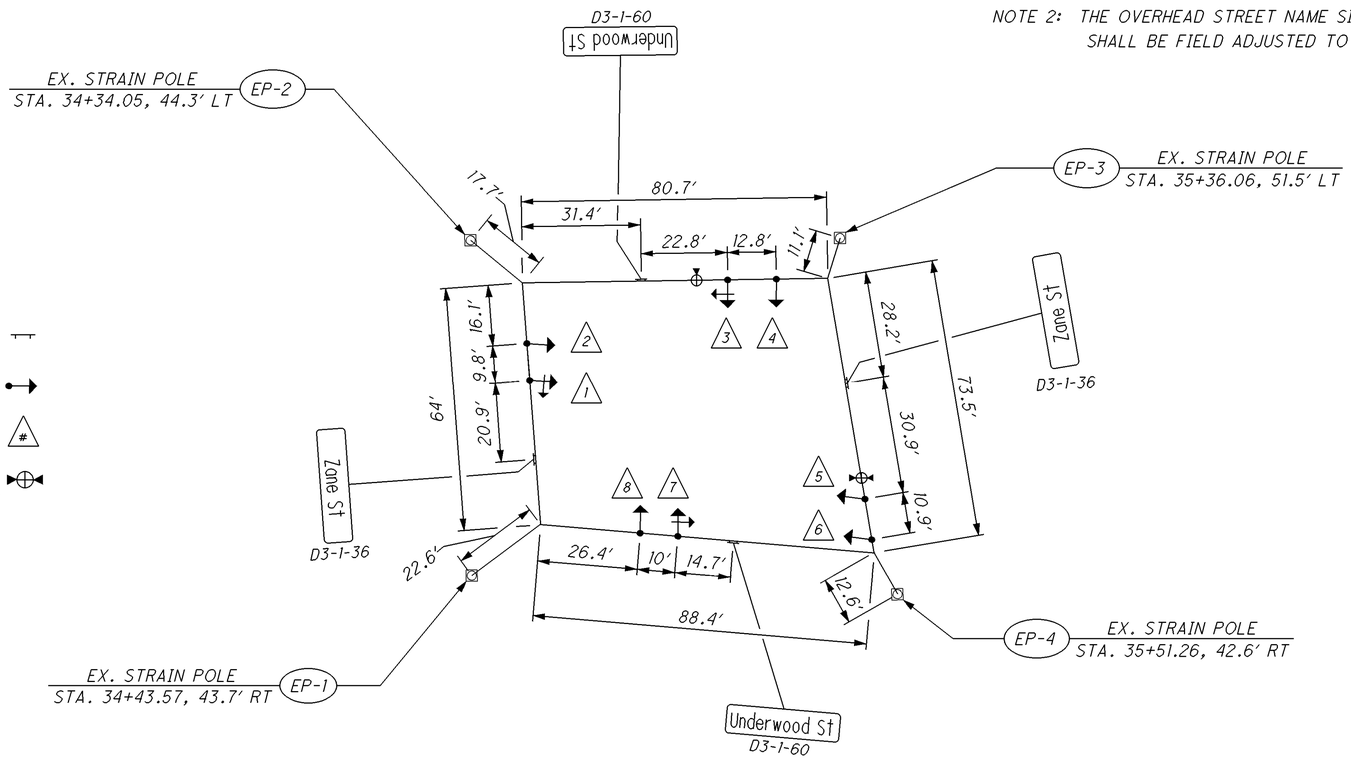
LEGEND

SPAN WIRE OVERHEAD SIGN .....

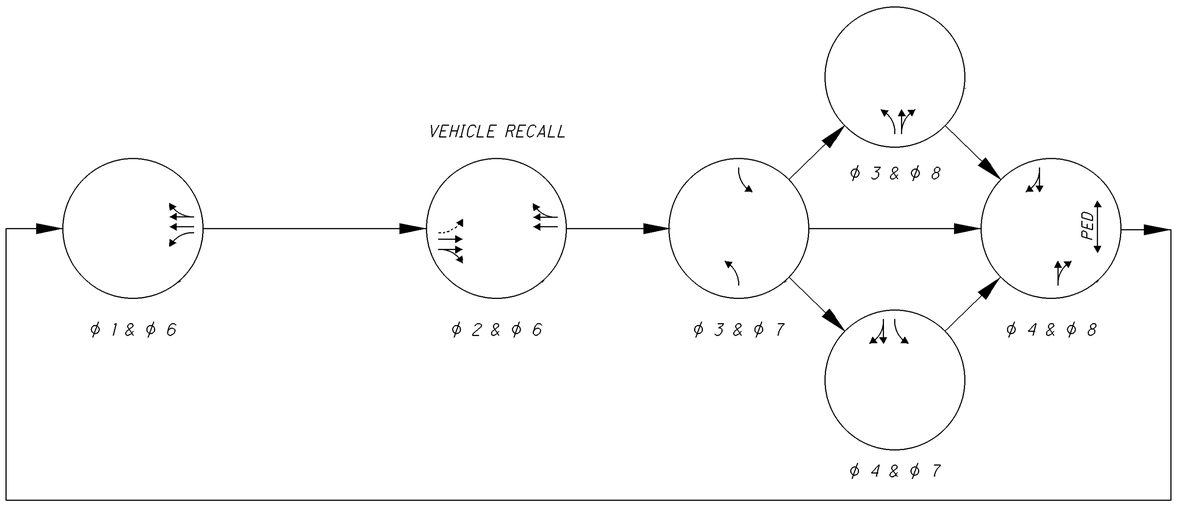
SIGNAL HEAD STD ONE WAY .....

SIGNAL HEAD I.D. NUMBER ..... (#)

PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....



SIGNAL PHASING DIAGRAM



CALCULATED DNM
CHECKED DNM

SIGNAL PLAN DETAILS - UNDERWOOD ST. & ZANE ST.

MUS-60-16.75

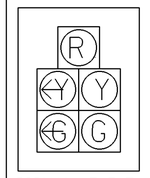
136
165

82752_sds_04.dgn 11/21/08

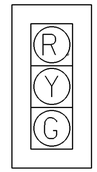
CROSS REFERENCES	
SHEET(S)	DESCRIPTION
138	WIRING DIAGRAM, PHASING DIAGRAM AND SIGNAL DISPLAY CHART
162-165	TRAFFIC SIGNAL SUBSUMMARY

NOTE: THE CONTRACTOR SHALL SPLICE THE PROPOSED LOOP DETECTOR LEAD-IN CABLE TO THE EXISTING LOOP WIRE AT THE EXISTING PULL BOX.

SIGNAL INDICATIONS
ALL 12" LENS WITH BACKPLATES



SIGNAL: 3,5,7



SIGNAL: 1,2,4,6,8

PEDESTRIAN PUSHBUTTON SIGN (TYP)

TO CROSS ADAIR AVE PUSH BUTTON WAIT FOR GREEN LIGHT

R10-3A-9 MOD.

MOUNTED ABOVE EACH PUSHBUTTON

EX. PULL BOX EPB-2
STA. 61+79.36, 100.6' LT

EX. PULL BOX EPB-1
STA. 61+33.68, 48.9' LT

EX. 3" C

EX. GROUND MOUNTED CABINET & CONTROLLER CC-4
STA. 61+27.32, 49.3' LT

EX. STRAIN POLE EP-1
STA. 61+34.13, 44.6' LT

EXISTING CONDUIT

PP-3 STRAIN POLE, DESIGN 6
STA. 62+55.16, 56.1' LT

EX. PEDESTAL TO BE REMOVED

EX. CONDUIT

EPB-3 EX. PULL BOX
STA. 62+69.19, 36.4' LT

LINDEN AVE.

Ex LA-R/W

AT Sta. 59+21.

MATCHLINE STA. 59+00

MATCHLINE STA. 64+00

N 86° 55' 32" W

EX. 3" C

EX. PEDESTAL TO BE REMOVED

℄ SURVEY & CONSTRUCTION
S.R. 60 (ADAIR AVE.)

STRAIN POLE, DESIGN 6 PP-2
STA. 60+85.27, 62.7' RT

EX. 2" C

EPB-4 EX. PULL BOX
STA. 62+09.43, 46.2' RT

EP-2 EX. STRAIN POLE
STA. 62+03.43, 46.4' RT

EPB-5 EX. PULL BOX
STA. 61+67.67, 97.1' RT

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN				
FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	1	X	
VEHICLE SIGNAL HEAD, 3-SECTION, 2-WAY	EACH	2	X	
VEHICLE SIGNAL HEAD, 5-SECTION, 1-WAY	EACH	3	X	
MESSENGER WIRE	FOOT	115	X	
SIGNAL CABLE, 5-CONDUCTOR	FOOT	800	X	
SIGNAL CABLE, 7-CONDUCTOR	FOOT	400	X	
LOOP DETECTOR LEAD-IN CABLE	FOOT	620	X	
PEDESTAL NOT INCLUDING FOUNDATION	EACH	2	X	
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	4		X

LEGEND

PEDESTRIAN PUSH BUTTON.....
PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN
VEHICULAR SIGNAL HEAD..... W/ BACKPLATE
SIGNAL HEAD I.D. NUMBER.....
PROPOSED PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....

EXISTING PULL BOX.....
PEDESTAL.....
SIGNAL STRAIN POLE.....
CONRTOLLER CABINET GROUND MOUNTED....
CONTROLLER CABINET POLE MOUNTED.....
EXISTING LOOP DETECTOR..... L-#

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DNM CHECKED

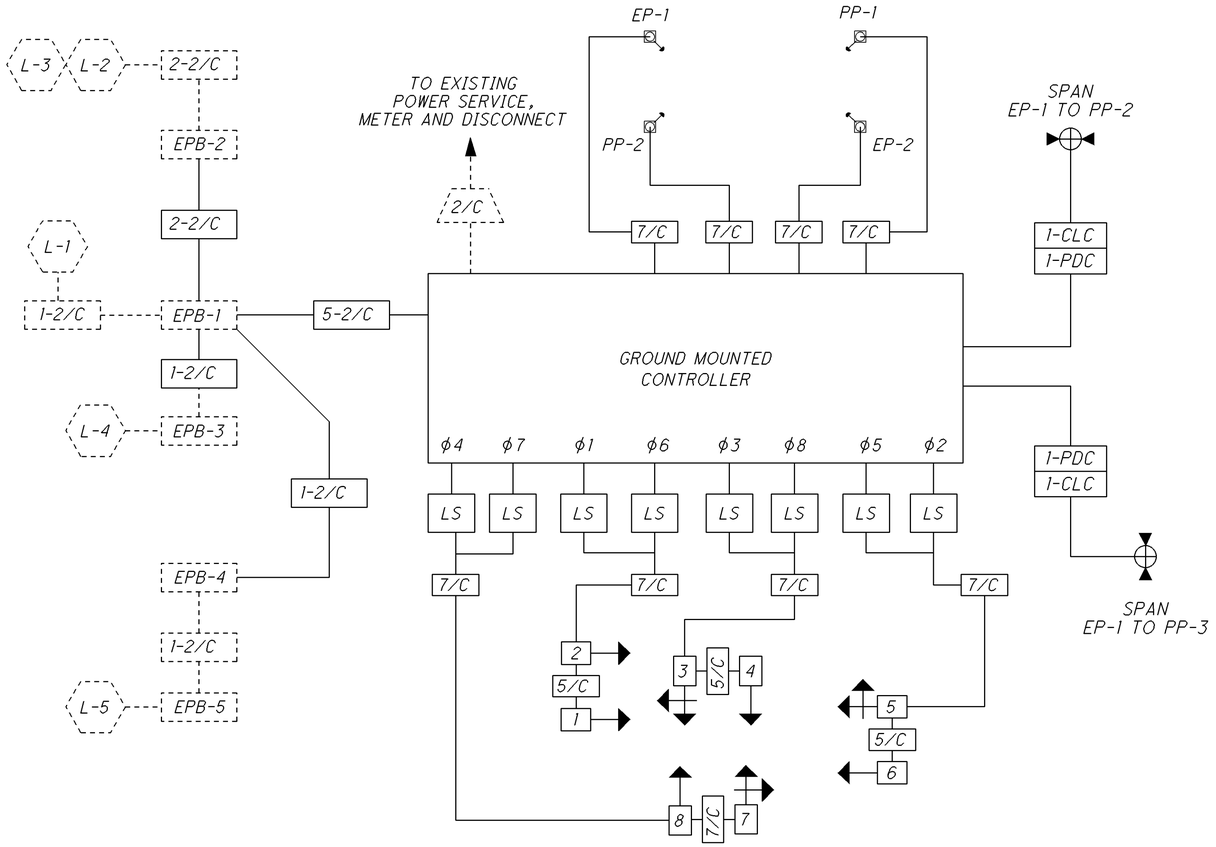
SIGNAL PLAN - ADAIR AVE. & LINDEN AVE.
STA. 59+00 TO STA. 64+00

MUS-60-16.75

137
165

82752_sds_05.dgn 11/21/08

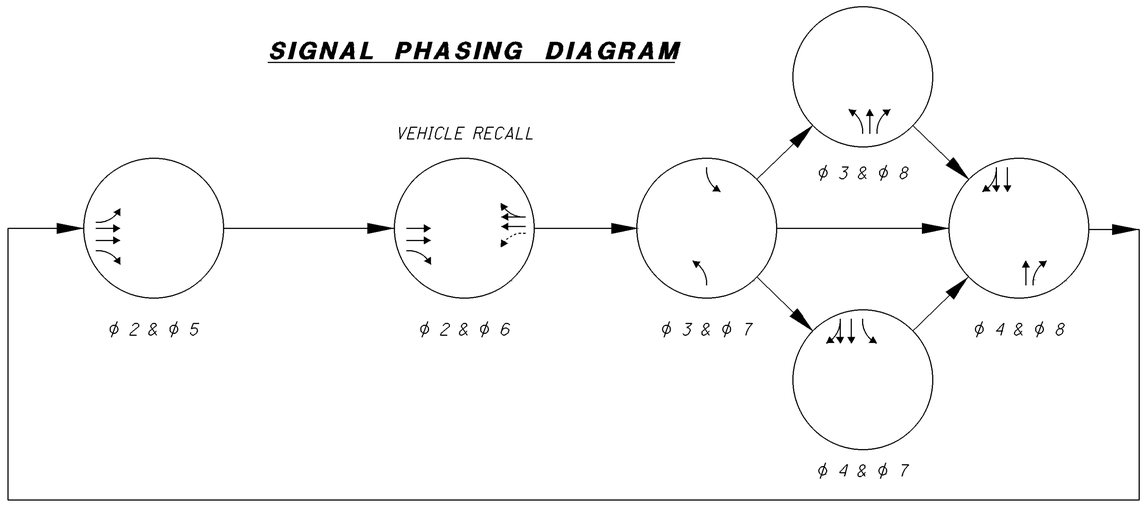
TRAFFIC SIGNAL WIRING DIAGRAM



LEGEND

- SIGNAL HEAD WITH TURN ARROW
- SIGNAL HEAD
- LS — LOAD SWITCH
- PREEMPT DETECTOR W/ CONFIRMATION LIGHTS
- 1-PDC — PREEMPT DETECTOR CABLE
- 1-CLC — CONFIRMATION LIGHT CABLE
- 2/C — 2/C #14 AWG (LEAD-IN CABLE)
- 5/C — 5/C #14 AWG SIGNAL CABLE
- 7/C — 7/C #14 AWG SIGNAL CABLE
- PUSHBUTTON
- EX. 2/C OR 3/C #8 AWG POWER CABLE
- L-1 — EX. VEHICLE DETECTOR LOOP
- 2/C — EX. 2/C #14 AWG (LEAD-IN CABLE)
- EPB-# — EX. PULL BOX

SIGNAL PHASING DIAGRAM



CALCULATED DNM
CHECKED DNM

SIGNAL PLAN DETAILS - ADAIR AVE. & LINDEN AVE.

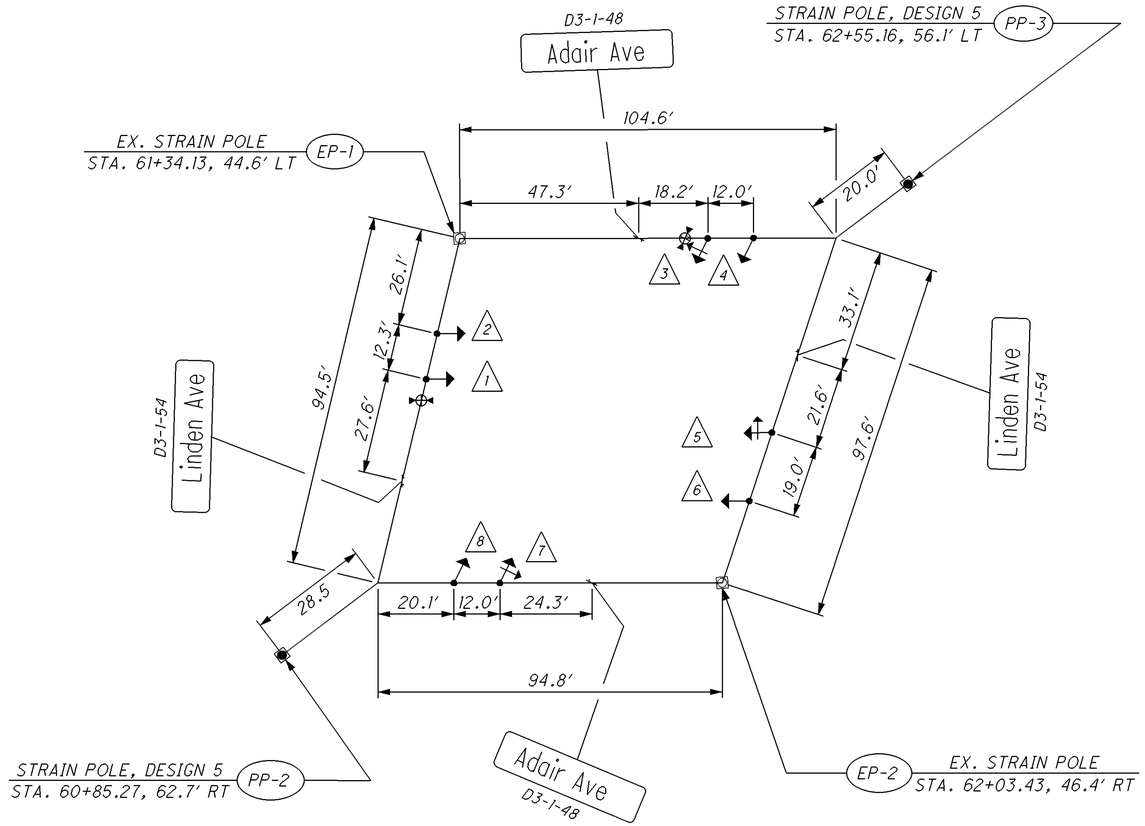
MUS-60-16.75

82752_sds_05.dgn 11/21/08

TRAFFIC SIGNAL HEAD PLACEMENT

NOTE 1: SEE TRAFFIC CONTROL PLAN SHEET 82 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2: THE OVERHEAD STREET NAME SIGNS ATTACHED TO THE MESSENGER WIRE SHALL BE FIELD ADJUSTED TO MAXIMIZE THE VIEW OF THE SIGNAL HEADS.



LEGEND

SPAN WIRE OVERHEAD SIGN .....

SIGNAL HEAD STD ONE WAY .....

SIGNAL HEAD I.D. NUMBER ..... (#)

PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....

TRAFFIC SIGNAL DISPLAY SCHEDULE

SIGNAL HEAD LEGEND								PEDESTRIAN HEAD LEGEND				PHASES	
1	2	3	4	5	6	7	8						
R	R	R	R	G/G	G	R	R					R/W	φ 1 & φ 6
R	R	R	R	G/Y	G	R	R					CLEARANCE	
R	R	R	R	G	G	R	R						
G	G	R	R	G	G	R	R					R/W	φ 2 & φ 6
Y	Y	R	R	Y	Y	R	R					CLEARANCE	
R	R	R	R	R	R	R	R						
R	R	R/G	R	R	R	R/G	R					R/W	φ 3 & φ 7
R	R	R/G	R	R	R	R/Y	R					CLEARANCE TO φ 3 & φ 8	
R	R	R/G	R	R	R	R	R						
R	R	R/Y	R	R	R	R/G	R					CLEARANCE TO φ 4 & φ 7	
R	R	R	R	R	R	R/G	R						
R	R	R/Y	R	R	R	R/Y	R					CLEARANCE TO ALL OTHERS	
R	R	R	R	R	R	R	R						
R	R	G/G	G	R	R	R	R					R/W	φ 3 & φ 8
R	R	G/Y	G	R	R	R	R					CLEARANCE TO φ 4 & φ 8	
R	R	G	G	R	R	R	R						
R	R	Y/Y	Y	R	R	R	R					CLEARANCE TO ALL OTHERS	
R	R	R	R	R	R	R	R						
R	R	R	R	R	R	G/G	G					R/W	φ 4 & φ 7
R	R	R	R	R	R	G/Y	G					CLEARANCE TO φ 4 & φ 8	
R	R	R	R	R	R	G	G						
R	R	R	R	R	R	Y/Y	Y					CLEARANCE TO ALL OTHERS	
R	R	R	R	R	R	R	R						
R	R	G	G	R	R	G	G					R/W	φ 4 & φ 8
R	R	R	Y	Y	R	Y	Y					CLEARANCE	
R	R	R	R	R	R	R	R						
R	R	R	R	R	R	R	R					FLASH	
R	R	R	R	G	G	R	R					CHANNEL 1 (EAST BOUND)	
G	G	R	R	R	R	R	R					CHANNEL 2 (WEST BOUND)	
R	R	R	R	R	R	G	G					CHANNEL 3 (NORTH BOUND)	
R	R	G	G	R	R	R	R					CHANNEL 4 (SOUTH BOUND)	

CALCULATED DNM
CHECKED DNM

SIGNAL PLAN DETAILS - ADAIR AVE. & LINDEN AVE.

MUS-60-16.75

82752_sds_05.dgn 11/21/08

CROSS REFERENCES	
SHEET(S)	DESCRIPTION
141	WIRING DIAGRAM, PHASING DIAGRAM AND SIGNAL DISPLAY CHART
162-165	TRAFFIC SIGNAL SUBSUMMARY

NOTE: THE CONTRACTOR SHALL SPLICE THE PROPOSED LOOP DETECTOR LEAD-IN CABLE TO THE EXISTING LOOP WIRE AT THE EXISTING PULL BOX.

PEDESTRIAN PUSHBUTTON SIGN (TYP)

TO CROSS UNDERWOOD ST PUSH BUTTON WAIT FOR WALK SIGNAL

R10-H4D-9

MOUNTED ABOVE EACH PUSHBUTTON

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	3	X	
VEHICLE SIGNAL HEAD, 5-SECTION, 1-WAY	EACH	5	X	
MESSENGER WIRE	FOOT	377		X
SIGNAL CABLE, 5-CONDUCTOR	FOOT	45		X
SIGNAL CABLE, 7-CONDUCTOR	FOOT	1173		X
SIGNAL CABLE, 9-CONDUCTOR	FOOT	161		X
LOOP DETECTOR LEAD-IN CABLE	FOOT	2514		X
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	4		X
PEDESTRIAN SIGNAL HEAD - SINGLE INSTALLATION	EACH	8	X	
PREEMPT DETECTOR CABLE	FOOT	280		X
PREEMPT DETECTOR REMOVED FOR REUSE	EACH	2	X	

EX. PULL BOX STA. 720+11.80, 37.0' LT — EPB-4
EX. CONDUIT
EX. PULL BOX STA. 720+33.43, 37.0' LT — EPB-3
EX. CONDUIT
EX. SIGNAL STRAIN POLE STA. 720+75.80, 49.9' LT — EP-2
EP-3 EX. SIGNAL STRAIN POLE STA. 74+47.22, 61.2' LT
℄ SURVEY & CONSTRUCTION S.R. 60 (MAPLE AVE.)
EX. PULL BOX STA. 103+75.53, 34.2' RT — EPB-2
EX. PULL BOX STA. 104+14.51, 34.2' RT — EPB-1
EX. SIGNAL STRAIN POLE STA. 73+54.10, 48.5' LT — EP-1
℄ SURVEY & CONSTRUCTION S.R. 60 (ADAIR AVE.)
EPB-6 EX. PULL BOX STA. 74+89.06, 35.2' RT
EPB-7 EX. POLE BOX STA. 75+35.08, 35.7' RT
EP-4 EX. SIGNAL STRAIN POLE STA. 74+66.63, 57.8' RT
EX. CONDUIT
ECC EX. GROUND MOUNTED CONTROLLER STA. 73+34.64, 57.1' RT
EX. CONDUIT
EPB-5 EX. PULL BOX STA. 72+92.25, 50.6' RT
EX. CONDUIT
L-1 EX. CONDUIT
MATCH LINE STA. 77+00
MATCH LINE STA. 72+00

PEDESTRIAN SIGNAL INDICATIONS (LED)

TYPE D2: A,B,C,D,E,F,G,H

SIGNAL INDICATIONS
ALL 12" LENS WITH BACKPLATES

SIGNAL: 1,3,7,9 | SIGNAL: 2,4,8,10 | SIGNAL: 5,6

LEGEND

PEDESTRIAN PUSH BUTTON.....
PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN
VEHICULAR SIGNAL HEAD..... W/ BACKPLATE
SIGNAL HEAD I.D. NUMBER.....
PROPOSED PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....
EXISTING PULL BOX.....
PEDESTAL.....
SIGNAL STRAIN POLE.....
CONRTOLLER CABINET GROUND MOUNTED....
CONTROLLER CABINET POLE MOUNTED.....
EXISTING LOOP DETECTOR..... L-#

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED DNM CHECKED DNM

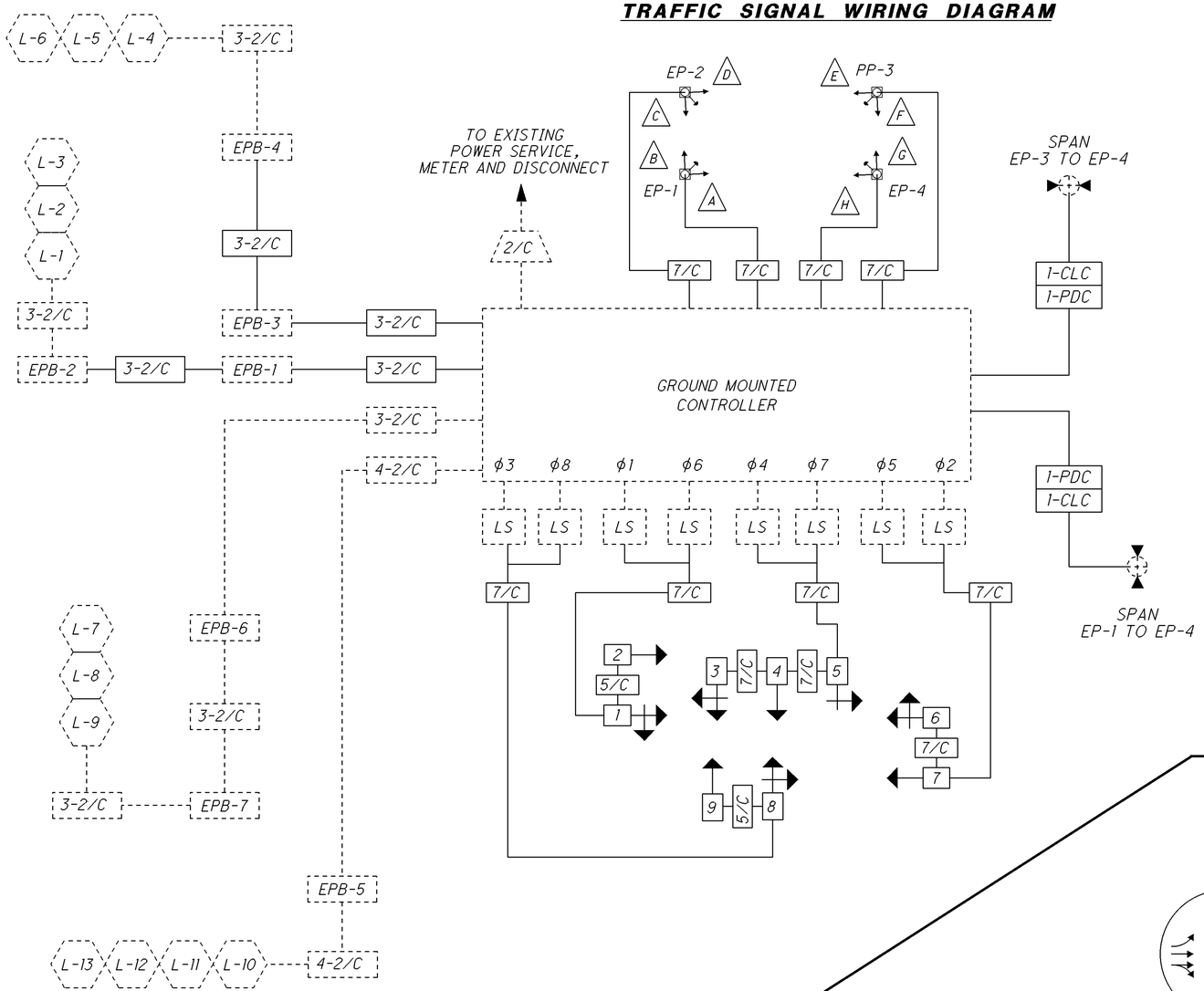
SIGNAL PLAN - MAPLE AVE. & ADAIR AVE. STA. 72+00 TO STA. 77+00

MUS-60-16.75

140 165

82752_sds_6.dgn 11/22/08

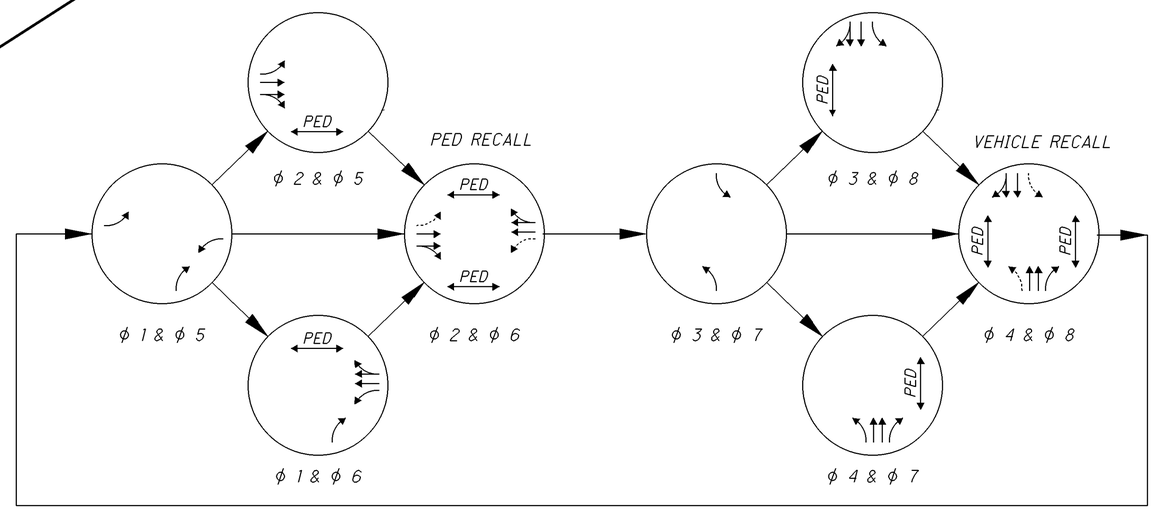
TRAFFIC SIGNAL WIRING DIAGRAM



LEGEND

- SIGNAL HEAD WITH TURN ARROW
- SIGNAL HEAD
- SIGNAL HEAD
- 1-PDC — PREEMPT DETECTOR CABLE
- 1-CLC — CONFIRMATION LIGHT CABLE
- 2/C — 2/C #14 AWG (LEAD-IN CABLE)
- 5/C — 5/C #14 AWG SIGNAL CABLE
- 7/C — 7/C #14 AWG SIGNAL CABLE
- PUSHBUTTON
- PEDESTRIAN SIGNAL HEAD W/ COUNTDOWN
- EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS
- EX. 2/C OR 3/C #8 AWG POWER CABLE
- L-1 — EX. VEHICLE DETECTOR LOOP
- 2/C — EX. 2/C #14 AWG (LEAD-IN CABLE)
- EPB-# — EX. PULL BOX
- LS — EX. LOAD SWITCH

SIGNAL PHASING DIAGRAM



CALCULATED DNM CHECKED

SIGNAL PLAN DETAILS - MAPLE AVE. & ADAIR AVE.

MUS-60-16.75

141
165

82752_sds_6.dgn 11/22/08

TRAFFIC SIGNAL DISPLAY SCHEDULE

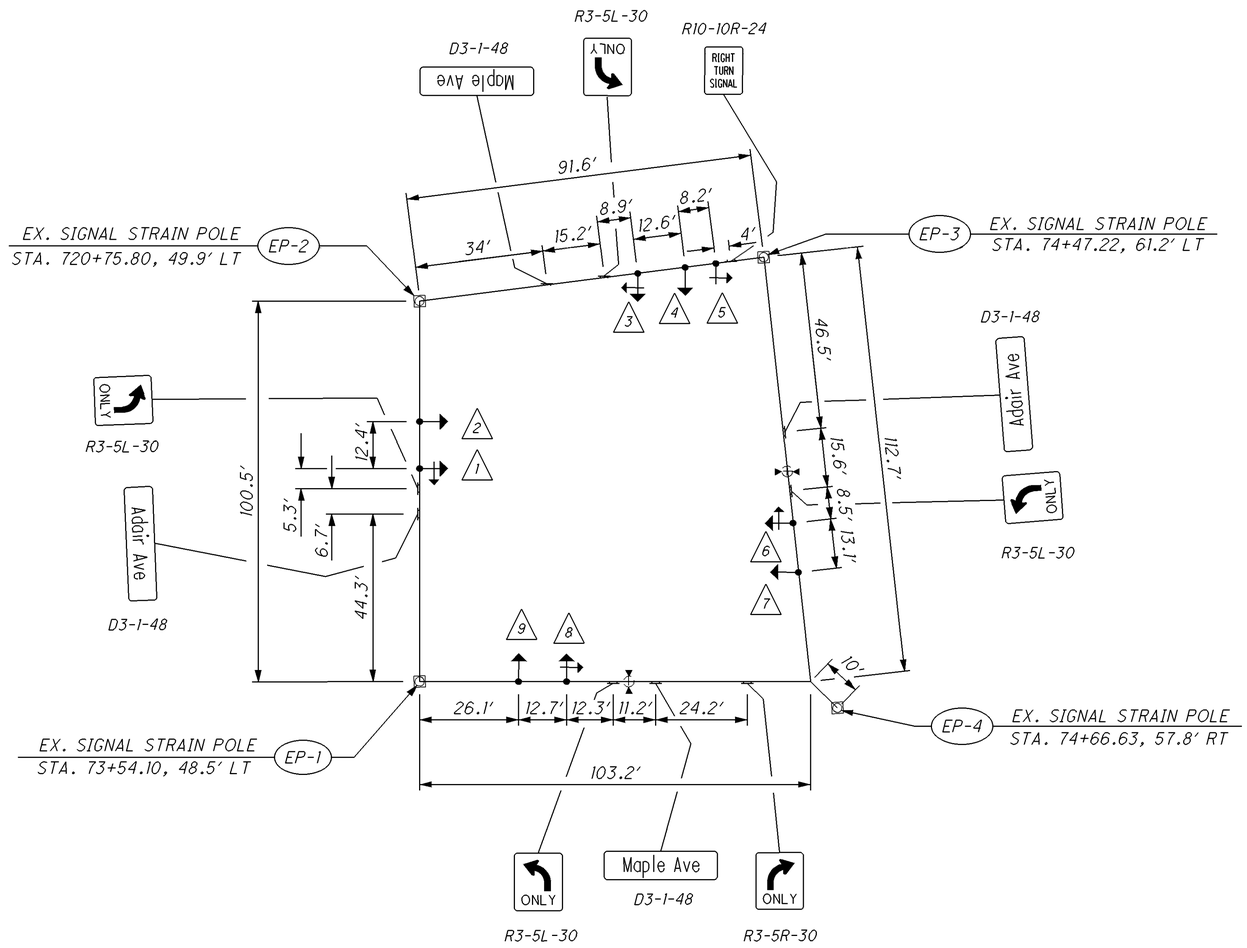
SIGNAL HEAD LEGEND									PEDESTRIAN HEAD LEGEND				PHASES	
1	2	3	4	5	6	7	8	9	B/C	D/E	F/G	A/H		
R/G	R	R	R	R	R/G	R	R	R	DW	DW	DW	DW	R/W	φ 1 & φ 5
R/G	R	R	R	R	R/Y	R	R	R	DW	DW	DW	DW	CLEARANCE TO φ 1 & φ 6	
R/G	R	R	R	R	R	R	R	R	DW	DW	DW	DW		
R/Y	R	R	R	R	R/G	R	R	R	DW	DW	DW	DW	CLEARANCE TO φ 2 & φ 5	
R	R	R	R	R	R/G	R	R	R	DW	DW	DW	DW		
R/Y	R	R	R	R	R/Y	R	R	R	DW	DW	DW	DW	CLEARANCE TO φ 2 & φ 6	
R	R	R	R	R	R	R	R	R	DW	DW	DW	DW		
G/G	G	R	R	R	R	R	R	R/G	DW	W	DW	DW	R/W	φ 1 & φ 6
G/Y	G	R	R	R	R	R	R	R/Y	DW	W	DW	DW	CLEARANCE	
G	G	R	R	R	R	R	R	R	DW	W	DW	DW		
R	R	R	R	R	G/G	G	R	R	DW	DW	DW	W	R/W	φ 2 & φ 5
R	R	R	R	R	G/Y	G	R	R	DW	DW	DW	W	CLEARANCE	
R	R	R	R	R	G	G	R	R	DW	DW	DW	W		
G	G	R	R	R	G	G	R	R	DW	W	DW	W	R/W	φ 2 & φ 6
G	G	R	R	R	G	G	R	R	DW	FDW	DW	FDW	CLEARANCE	
Y	Y	R	R	R	Y	Y	R	R	DW	DW	DW	DW		
R	R	R	R	R	R	R	R	R	DW	DW	DW	DW		
R	R	R/G	R	R	R	R	R/G	R	DW	DW	DW	DW	R/W	φ 3 & φ 7
R	R	R/G	R	R	R	R	R/Y	R	DW	DW	DW	DW	CLEARANCE TO φ 4 & φ 7	
R	R	R/G	R	R	R	R	R	R	DW	DW	DW	DW		
R	R	R/Y	R	R	R	R	R/G	R	DW	DW	DW	DW	CLEARANCE TO φ 3 & φ 8	
R	R	R	R	R	R	R	R/G	R	DW	DW	DW	DW		
R	R	R/Y	R	R	R	R	R/Y	R	DW	DW	DW	DW	CLEARANCE ALL OTHERS	
R	R	R	R	R	R	R	R	R	DW	DW	DW	DW		
R	R	G/G	G	~~G~~	R	R	R	R	W	DW	DW	DW	R/W	φ 4 & φ 7
R	R	G/Y	G	~~G~~	R	R	R	R	W	DW	DW	DW	CLEARANCE TO φ 4 & φ 8	
R	R	G	G	~~G~~	R	R	R	R	W	DW	DW	DW		
R	R	R	R	R	R	R	G/G	G	DW	DW	W	DW	R/W	φ 3 & φ 8
R	R	R	R	R	R	R	G/Y	G	DW	DW	W	DW	CLEARANCE TO φ 4 & φ 8	
R	R	R	R	R	R	R	G	G	DW	DW	W	DW		
R	R	G	G	~~G~~	R	R	G	G	W	DW	W	DW	R/W	φ 4 & φ 8
R	R	G	G	~~G~~	R	R	G	G	FDW	DW	FDW	DW	CLEARANCE	
R	R	Y	Y	~~Y~~	R	R	Y	Y	DW	DW	DW	DW		
R	R	R	R	R	R	R	R	R	DW	DW	DW	DW		
R	R	R	R	R	R	R	R	R	OFF	OFF	OFF	OFF	FLASH	
R	R	R	R	R	G	G	R	R	DW	DW	DW	DW	CHANNEL 1 (NORTH BOUND)	
G	G	R	R	R	R	R	R	R	DW	DW	DW	DW	CHANNEL 2 (SOUTH BOUND)	
R	R	R	R	R	R	R	G	G	DW	DW	DW	DW	CHANNEL 3 (WEST BOUND)	
R	R	G	G	~~G~~	R	R	R	R	DW	DW	DW	DW	CHANNEL 4 (EAST BOUND)	

TRAFFIC SIGNAL SIGN PLACEMENT

MAPLE AVE. & ADAIR AVE.

NOTE 1: SEE TRAFFIC CONTROL PLAN SHEET 84 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2: THE OVERHEAD STREET NAME SIGNS ATTACHED TO THE MESSENGER WIRE SHALL BE FIELD ADJUSTED TO MAXIMIZE THE VIEW OF THE SIGNAL HEADS.



LEGEND

SPAN WIRE OVERHEAD SIGN ..... ⊣

SIGNAL HEAD STD ONE WAY ..... •→

SIGNAL HEAD I.D. NUMBER ..... △#

PREEMPT DETECTOR W/CONFIRMATION LIGHTS..... ⊕◂

CALCULATED DNM CHECKED

SIGNAL PLAN DETAILS - MAPLE AVE. & ADAIR AVE.

MUS-60-16.75

82752_sds_6.dgn 11/22/08

CROSS REFERENCES	
SHEET(S)	DESCRIPTION
144	WIRING DIAGRAM, PHASING DIAGRAM AND SIGNAL DISPLAY CHART
162-165	TRAFFIC SIGNAL SUBSUMMARY

NOTE (1): THE CONTRACTOR SHALL SPLICE THE PROPOSED LOOP DETECTOR LEAD-IN CABLE TO THE EXISTING LOOP WIRE AT THE EXISTING PULL BOX.

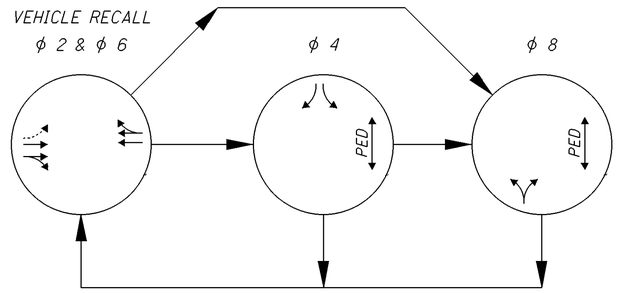
NOTE (2): THE CONTRACTOR SHALL SPLICE THE PROPOSED INTERCONNECT CABLE TO THE EXISTING INTERCONNECT CABLE LOCATED AT THE TOP OF EXISTING POLE EP-3.

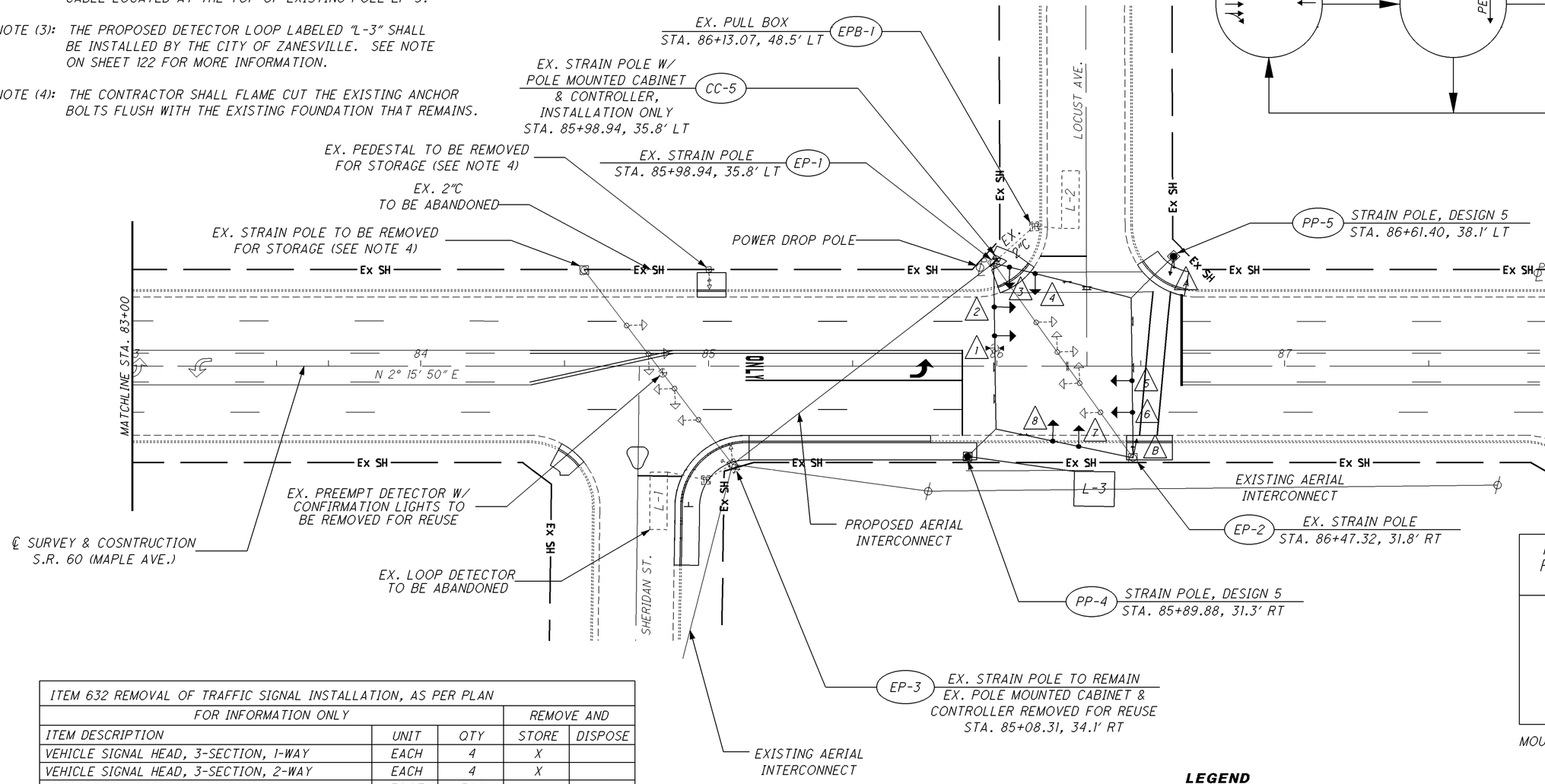
NOTE (3): THE PROPOSED DETECTOR LOOP LABELED "L-3" SHALL BE INSTALLED BY THE CITY OF ZANESVILLE. SEE NOTE ON SHEET 122 FOR MORE INFORMATION.

NOTE (4): THE CONTRACTOR SHALL FLAME CUT THE EXISTING ANCHOR BOLTS FLUSH WITH THE EXISTING FOUNDATION THAT REMAINS.

PEDESTRIAN SIGNAL INDICATIONS (LED)	SIGNAL INDICATIONS ALL 12" LENS WITH BACKPLATES
TYPE D2: A,B	SIGNAL: 1,2,3,4,5,6,7,8

SIGNAL PHASING DIAGRAM





PEDESTRIAN PUSHBUTTON SIGN (TYP)
TO CROSS MAPLE AVE PUSH BUTTON WAIT FOR WALK SIGNAL
R10-H4D-9

MOUNTED ABOVE EACH PUSHBUTTON

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN				
FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	4	X	
VEHICLE SIGNAL HEAD, 3-SECTION, 2-WAY	EACH	4	X	
MESSENGER WIRE	FOOT	304		X
SIGNAL CABLE, 5-CONDUCTOR	FOOT	299		X
SIGNAL CABLE, 7-CONDUCTOR	FOOT	574		X
LOOP DETECTOR LEAD-IN CABLE	FOOT	323		X
POWER CABLE, 3-CONDUCTOR	FOOT	38		X
PREEMPT DETECTOR CABLE	FOOT	25		X
STRAIN POLE, NOT INCLUDING FOUNDATION	EACH	1	X	
PEDESTAL NOT INCLUDING FOUNDATION	EACH	1	X	
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	2		X

LEGEND

PEDESTRIAN PUSH BUTTON.....
PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN
VEHICULAR SIGNAL HEAD..... W/ BACKPLATE
SIGNAL HEAD I.D. NUMBER.....
EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS.....

EXISTING PULL BOX.....
PEDESTAL.....
SIGNAL STRAIN POLE.....
CONRTOLLER CABINET GROUND MOUNTED....
CONTROLLER CABINET POLE MOUNTED.....
EXISTING LOOP DETECTOR..... L-#

82752_sds_7.dgn 11/21/08

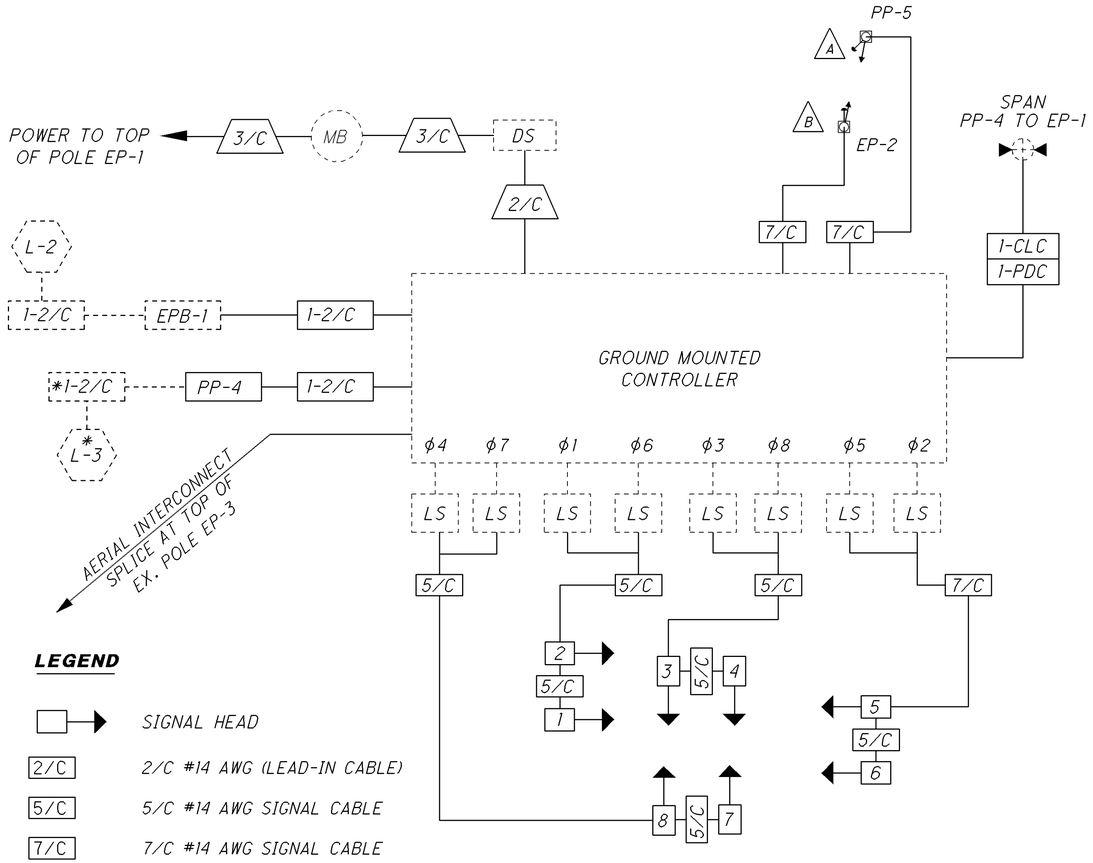
HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED DNM CHECKED

SIGNAL PLAN - MAPLE AVE. & LOCUST AVE.
STA. 83+00 TO STA. 88+00

MUS-60-16.75

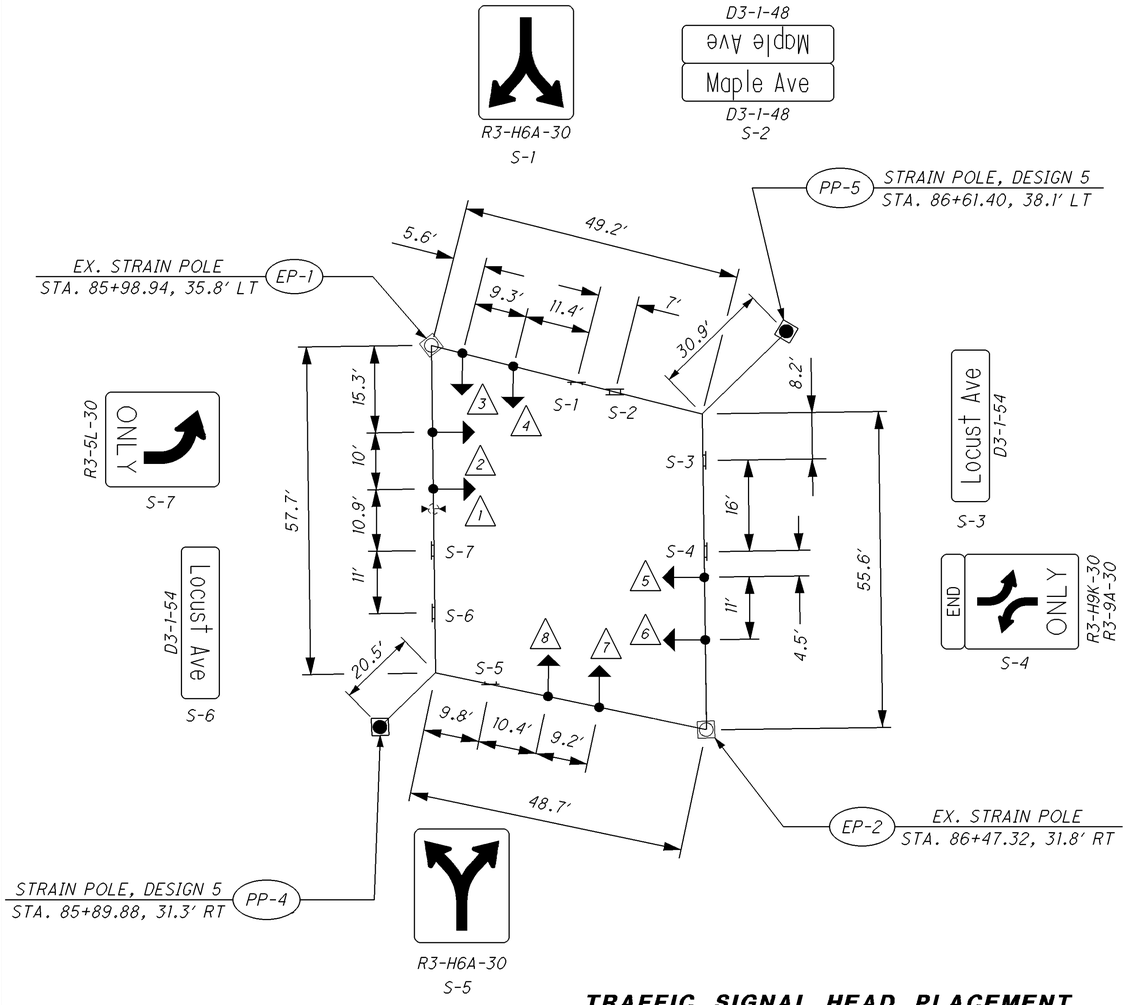
TRAFFIC SIGNAL WIRING DIAGRAM



* - CITY OF ZANESVILLE TO INSTALL

LEGEND

- SIGNAL HEAD
- 2/C — 2/C #14 AWG (LEAD-IN CABLE)
- 5/C — 5/C #14 AWG SIGNAL CABLE
- 7/C — 7/C #14 AWG SIGNAL CABLE
- 2/C OR 3/C #8 AWG POWER CABLE
- PUSHBUTTON
- PEDESTRIAN SIGNAL HEAD W/COUNTDOWN
- 1-PDC — PREEMPT DETECTOR CABLE
- 1-CLC — CONFIRMATION LIGHT CABLE
- L-1 — EX. VEHICLE DETECTOR LOOP
- LS — EX. LOAD SWITCH
- EPB-# — EX. PULL BOX
- 2/C — EX. 2/C #14 AWG (LEAD-IN CABLE)
- DS — EX. DISCONNECT SWITCH
- MB — EX. METER BASE
- EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS



TRAFFIC SIGNAL DISPLAY SCHEDULE

SIGNAL HEAD LEGEND								PEDESTRIAN HEAD LEGEND				PHASES	
1	2	3	4	5	6	7	8	A/B					
G	G	R	R	G	G	R	R	DW				R/W	ϕ 2 & ϕ 6
Y	Y	R	R	Y	Y	R	R	DW				CLEARANCE	
R	R	R	R	R	R	R	R	DW					
R	R	R	R	R	R	G	G	W				R/W	ϕ 4
R	R	R	R	R	R	G	G	FDW				CLEARANCE	
R	R	R	R	R	R	Y	Y	DW					
R	R	R	R	R	R	R	R	DW					
R	R	G	G	R	R	R	R	W				R/W	ϕ 8
R	R	G	G	R	R	R	R	FDW				CLEARANCE	
R	R	Y	Y	R	R	R	R	DW					
R	R	R	R	R	R	R	R	DW					
R	R	R	R	R	R	R	R	OFF				FLASH	
R	R	R	R	G	G	R	R	DW				CHANNEL 1 (NORTH BOUND)	
G	G	R	R	R	R	R	R	DW				CHANNEL 2 (SOUTH BOUND)	

TRAFFIC SIGNAL HEAD PLACEMENT

NOTE 1: SEE TRAFFIC CONTROL PLAN SHEET 87 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2: THE OVERHEAD STREET NAME SIGNS ATTACHED TO THE MESSENGER WIRE SHALL BE FIELD ADJUSTED TO MAXIMIZE THE VIEW OF THE SIGNAL HEADS.

LEGEND

- SPAN WIRE OVERHEAD SIGN .....
- SIGNAL HEAD STD ONE WAY .....
- SIGNAL HEAD I.D. NUMBER ..... (#)
- PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....

CALCULATED DNM CHECKED DNM

SIGNAL PLAN DETAILS - MAPLE AVE. & LOCUST AVE.

MUS-60-16.75

82752_sds_07.dgn 11/21/08

CROSS REFERENCES	
SHEET(S)	DESCRIPTION
162-165	TRAFFIC SIGNAL SUBSUMMARY

PEDESTRIAN PUSHBUTTON SIGN (TYP)

TO CROSS MAPLE AVE PUSH BUTTON WAIT FOR WALK SIGNAL

R10-H4D-9

MOUNTED ABOVE TWO PUSHBUTTONS

PEDESTRIAN PUSHBUTTON SIGN (TYP)

TO CROSS DRESDEN RD PUSH BUTTON WAIT FOR WALK SIGNAL

R10-H4D-9

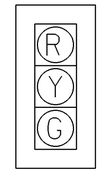
MOUNTED ABOVE TWO PUSHBUTTONS

NOTE (1): THE CONTRACTOR SHALL REMOVE THE EXISTING 5-CONDUCTOR SIGNAL CABLE FROM THE EXISTING SIGNAL HEADS AND UNLASH THE SIGNAL CABLE FROM THE EXISTING MESSENGER WIRES (REMOVE THIS EX. SIGNAL CABLE BACK TO THE POLE MOUNTED CABINET AT EX. STRAIN POLE LABELED EP-6). THE CONTRACTOR SHALL SUPPLY AND PLACE NEW 5-CONDUCTOR SIGNAL CABLE, FROM THE EX. CABINET TO THE SIGNAL HEADS LABELED NUMBER 1 & 2.

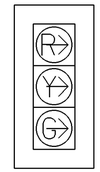
NOTE (2): DO NOT DISTURB OR DAMAGE THE EXISTING PREEMPT DETECTOR OR THE PREEMPT DETECTOR CABLE ATTACHED TO THE EXISTING MESSENGER WIRE.

NOTE (3): REMOVE EXISTING PEDESTRIAN PUSHBUTTON AND PUSHBUTTON SIGN. PLUG THE EXISTING HOLES LEFT FROM THE REMOVED PUSHBUTTON AND SIGN.

SIGNAL INDICATIONS
ALL 12" LENS WITH BACKPLATES



SIGNAL: 1,2,5,6,7,8,9, 10,11,12,13,14



SIGNAL: 3,4

PEDESTRIAN SIGNAL INDICATIONS (LED)

TYPE D2: A,B,C,D

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	10	X	
VEHICLE SIGNAL HEAD, 3-SECTION, 2-WAY	EACH	2	X	
SIGNAL CABLE, 5-CONDUCTOR	FOOT	270		X
PEDESTRIAN SIGNAL HEAD	EACH	4	X	
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	8		X

LEGEND

PEDESTRIAN PUSH BUTTON.....
PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN
VEHICULAR SIGNAL HEAD..... W/ BACKPLATE
SIGNAL HEAD I.D. NUMBER.....
EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS.....

EXISTING PULL BOX.....
PEDESTAL.....
SIGNAL STRAIN POLE.....
CONRTOLLER CABINET GROUND MOUNTED....
CONTROLLER CABINET POLE MOUNTED.....
EXISTING LOOP DETECTOR..... L-#

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DNM
CHECKED BB

SIGNAL PLAN - MAPLE AVE. & DRESDEN RD./BROWN ST. STA. 97+00 TO STA. 102+00

MUS-60-16.75

145
165

82752_sds_8.dgn 11/21/2008

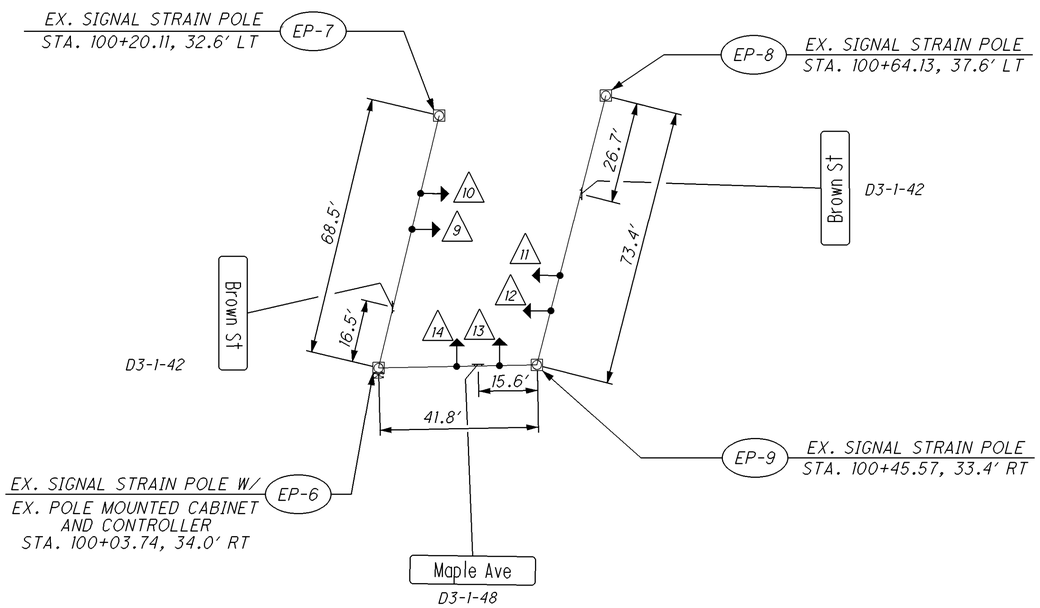
TRAFFIC SIGNAL SIGN PLACEMENT

MAPLE AVE. & BROWN ST.

NOTE 1) SEE TRAFFIC CONTROL PLAN SHEETS 89-90 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2) PLACE PROPOSED SIGNAL HEADS AT SAME LOCATION AS EXISTING SIGNAL HEADS UNLESS OTHERWISE SHOWN.

NOTE 3) THE OVERHEAD STREET NAME SIGNS ATTACHED TO THE MESSENGER WIRE SHALL BE FIELD ADJUSTED TO MAXIMIZE THE VIEW OF THE SIGNAL HEADS.



LEGEND

SPAN WIRE OVERHEAD SIGN .....

SIGNAL HEAD STD ONE WAY .....

SIGNAL HEAD I.D. NUMBER ..... #

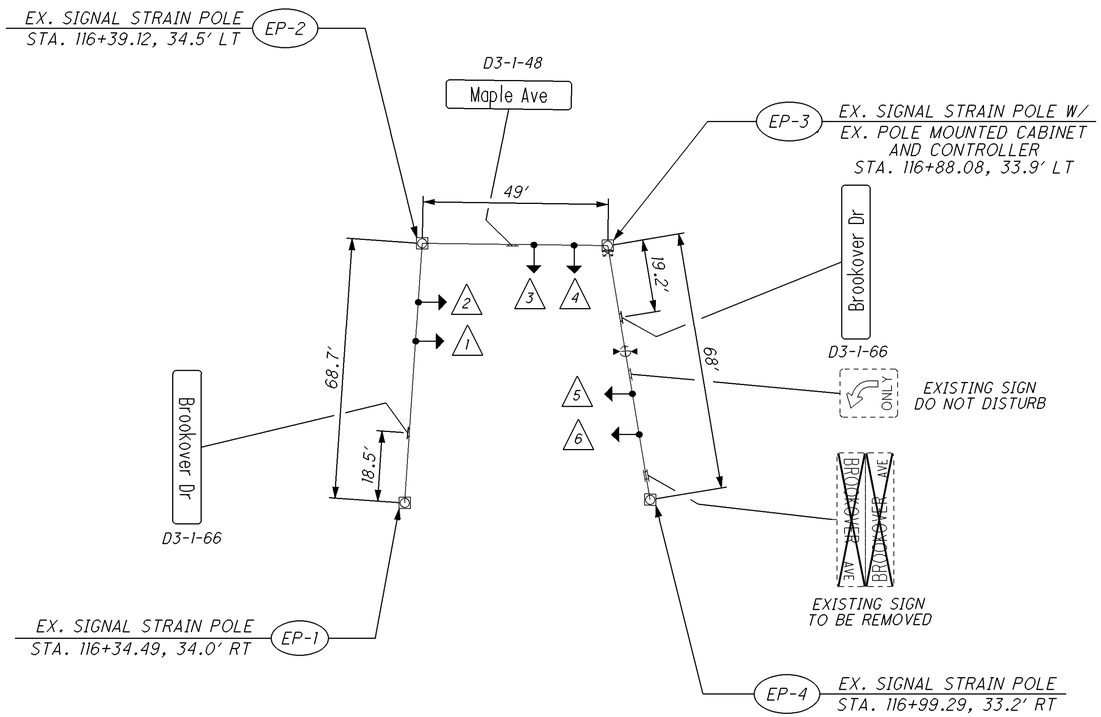
TRAFFIC SIGNAL SIGN PLACEMENT

MAPLE AVE. & BROOKOVER DR.

NOTE 1) SEE TRAFFIC CONTROL PLAN SHEET 93 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2) PLACE PROPOSED SIGNAL HEADS AT SAME LOCATION AS EXISTING SIGNAL HEADS UNLESS OTHERWISE SHOWN.

NOTE 3) THE OVERHEAD STREET NAME SIGNS ATTACHED TO THE MESSENGER WIRE SHALL BE FIELD ADJUSTED TO MAXIMIZE THE VIEW OF THE SIGNAL HEADS.



LEGEND

SPAN WIRE OVERHEAD SIGN .....

SIGNAL HEAD STD ONE WAY .....

SIGNAL HEAD I.D. NUMBER ..... #

PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....

CALCULATED DNM CHECKED BB

SIGNAL PLAN DETAILS - MAPLE AVE. & BROWN ST./BROOKOVER DR.

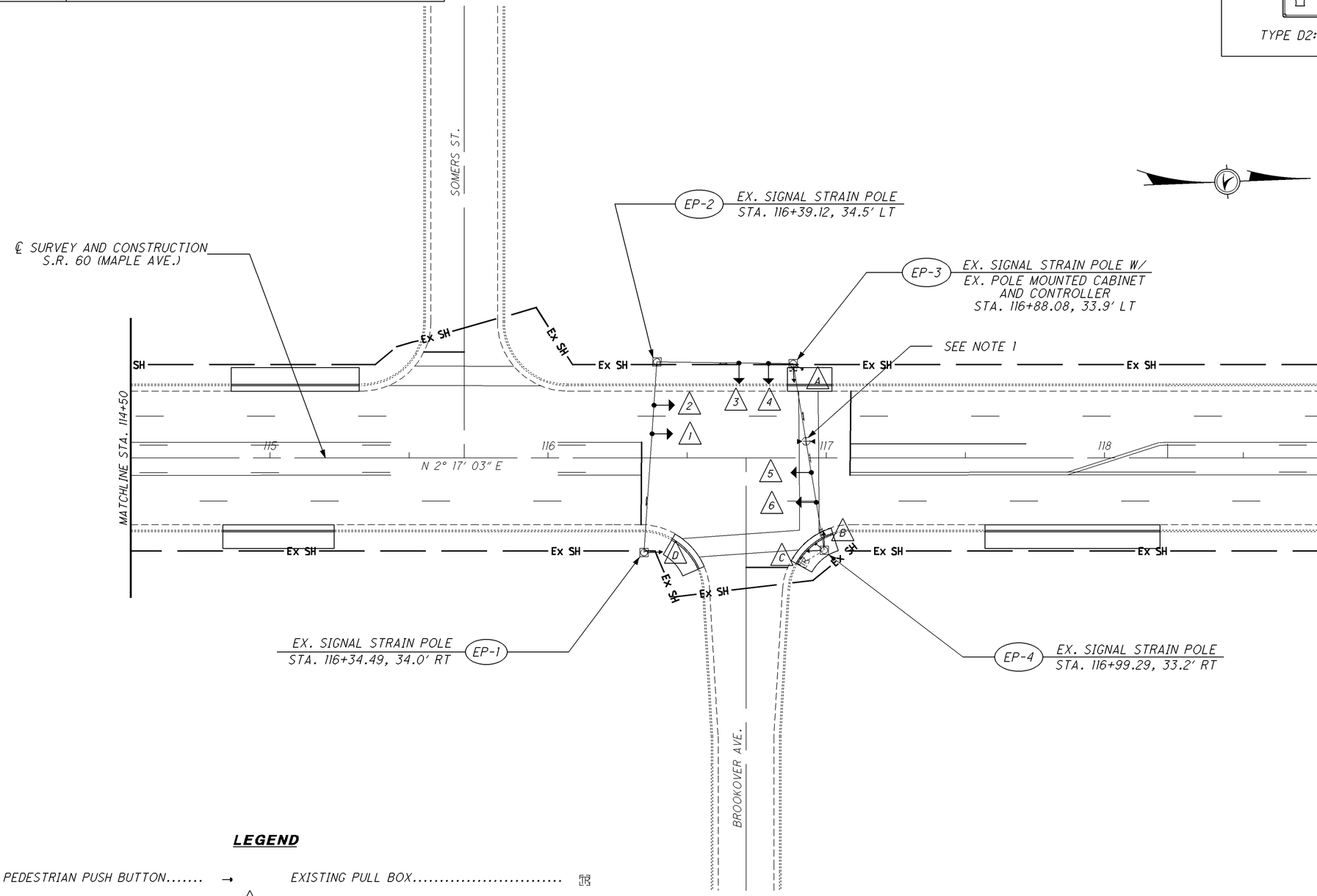
MUS-60-16.75

82752_sds_8.dgn 11/21/2008

CROSS REFERENCES	
SHEET(S)	DESCRIPTION
162-165	TRAFFIC SIGNAL SUBSUMMARY

NOTE (1): DO NOT DISTURB OR DAMAGE THE EXISTING PREEMPT DETECTOR OR THE PREEMPT DETECTOR CABLE ATTACHED TO THE EXISTING MESSENGER WIRE.

PEDESTRIAN SIGNAL INDICATIONS (LED)	SIGNAL INDICATIONS ALL 12" LENS WITH BACKPLATES
TYPE D2: A,B,C,D	SIGNAL: 1,2,3,4,5,6



PEDESTRIAN PUSHBUTTON SIGN (TYP)
TO CROSS MAPLE AVE PUSH BUTTON WAIT FOR WALK SIGNAL
R10-H4D-9

MOUNTED ABOVE EACH PUSHBUTTON

LEGEND

PEDESTRIAN PUSH BUTTON.....
PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN
VEHICULAR SIGNAL HEAD..... W/ BACKPLATE
SIGNAL HEAD I.D. NUMBER.....
EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS.....
EXISTING PULL BOX.....
PEDESTAL.....
SIGNAL STRAIN POLE.....
CONRTOLLER CABINET GROUND MOUNTED....
CONTROLLER CABINET POLE MOUNTED.....
EXISTING LOOP DETECTOR..... L-#

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN				
FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	6	X	
PEDESTRIAN SIGNAL HEAD	EACH	4	X	
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	2		X

82752_sds_9.dgn 11/21/08

HORIZONTAL SCALE IN FEET 0 10 20 40
CALCULATED DNM CHECKED

SIGNAL PLAN - MAPLE AVE. & BROOKOVER DR.
STA. 114+50 TO STA. 119+50

MUS-60-16.75

147
165

CROSS REFERENCES	
SHEET(S)	DESCRIPTION
162-165	TRAFFIC SIGNAL SUBSUMMARY

PEDESTRIAN PUSHBUTTON SIGN (TYP)

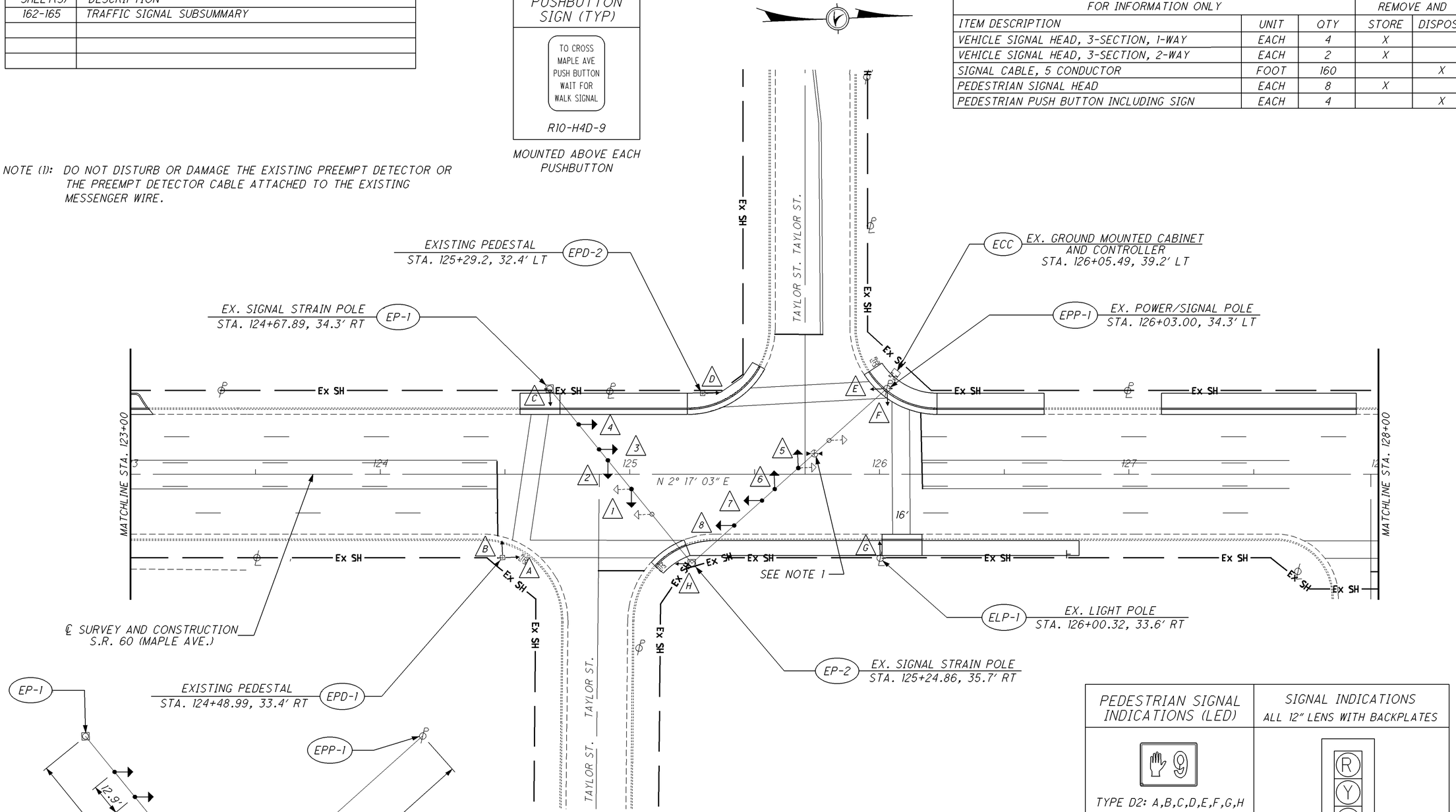
TO CROSS MAPLE AVE PUSH BUTTON WAIT FOR WALK SIGNAL

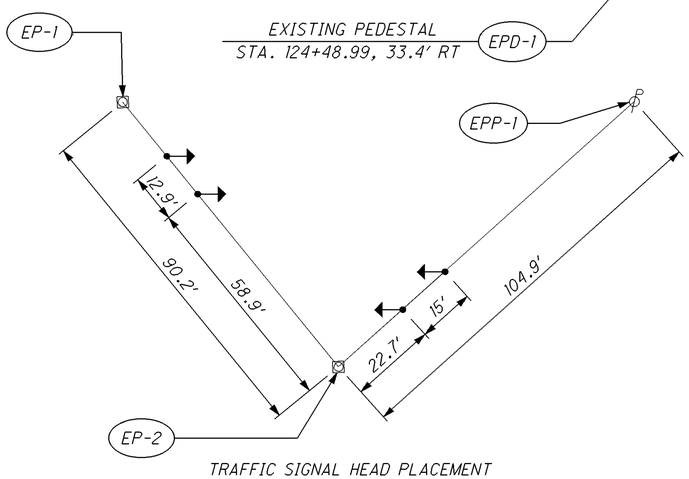
R10-H4D-9

MOUNTED ABOVE EACH PUSHBUTTON

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN				
FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	4	X	
VEHICLE SIGNAL HEAD, 3-SECTION, 2-WAY	EACH	2	X	
SIGNAL CABLE, 5 CONDUCTOR	FOOT	160		X
PEDESTRIAN SIGNAL HEAD	EACH	8	X	
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	4		X

NOTE (1): DO NOT DISTURB OR DAMAGE THE EXISTING PREEMPT DETECTOR OR THE PREEMPT DETECTOR CABLE ATTACHED TO THE EXISTING MESSENGER WIRE.





TRAFFIC SIGNAL HEAD PLACEMENT

LEGEND

- PEDESTRIAN PUSH BUTTON.....
- PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN
- VEHICULAR SIGNAL HEAD..... W/ BACKPLATE
- SIGNAL HEAD I.D. NUMBER.....
- EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS.....
- EXISTING PULL BOX.....
- PEDESTAL.....
- SIGNAL STRAIN POLE.....
- CONRTOLLER CABINET GROUND MOUNTED....
- CONTROLLER CABINET POLE MOUNTED.....
- EXISTING LOOP DETECTOR..... L-#

PEDESTRIAN SIGNAL INDICATIONS (LED)	SIGNAL INDICATIONS ALL 12" LENS WITH BACKPLATES
TYPE D2: A,B,C,D,E,F,G,H	SIGNAL: 1,2,3,4,5,6,7,8

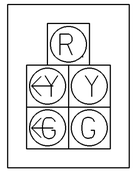
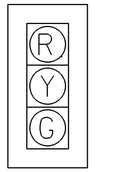
82752_sds_10.dgn 11/21/08

HORIZONTAL SCALE IN FEET 0 10 20 40

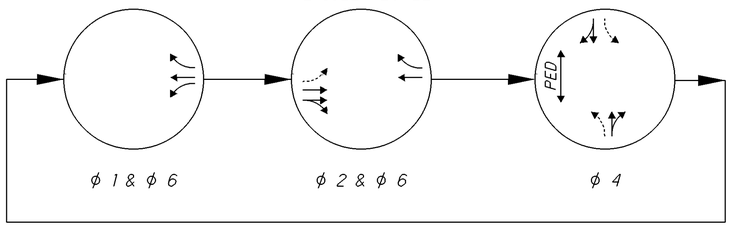
CALCULATED DNM CHECKED BB

SIGNAL PLAN - MAPLE AVE. & TAYLOR ST.
STA. 123+00 TO STA. 128+00

MUS-60-16.75

PEDESTRIAN SIGNAL INDICATIONS (LED)	SIGNAL INDICATIONS ALL 12" LENS WITH BACKPLATES	
 TYPE D2: A,B	 SIGNAL: 1	 SIGNAL: 2,3,4,5,6,7,8

SIGNAL PHASING DIAGRAM

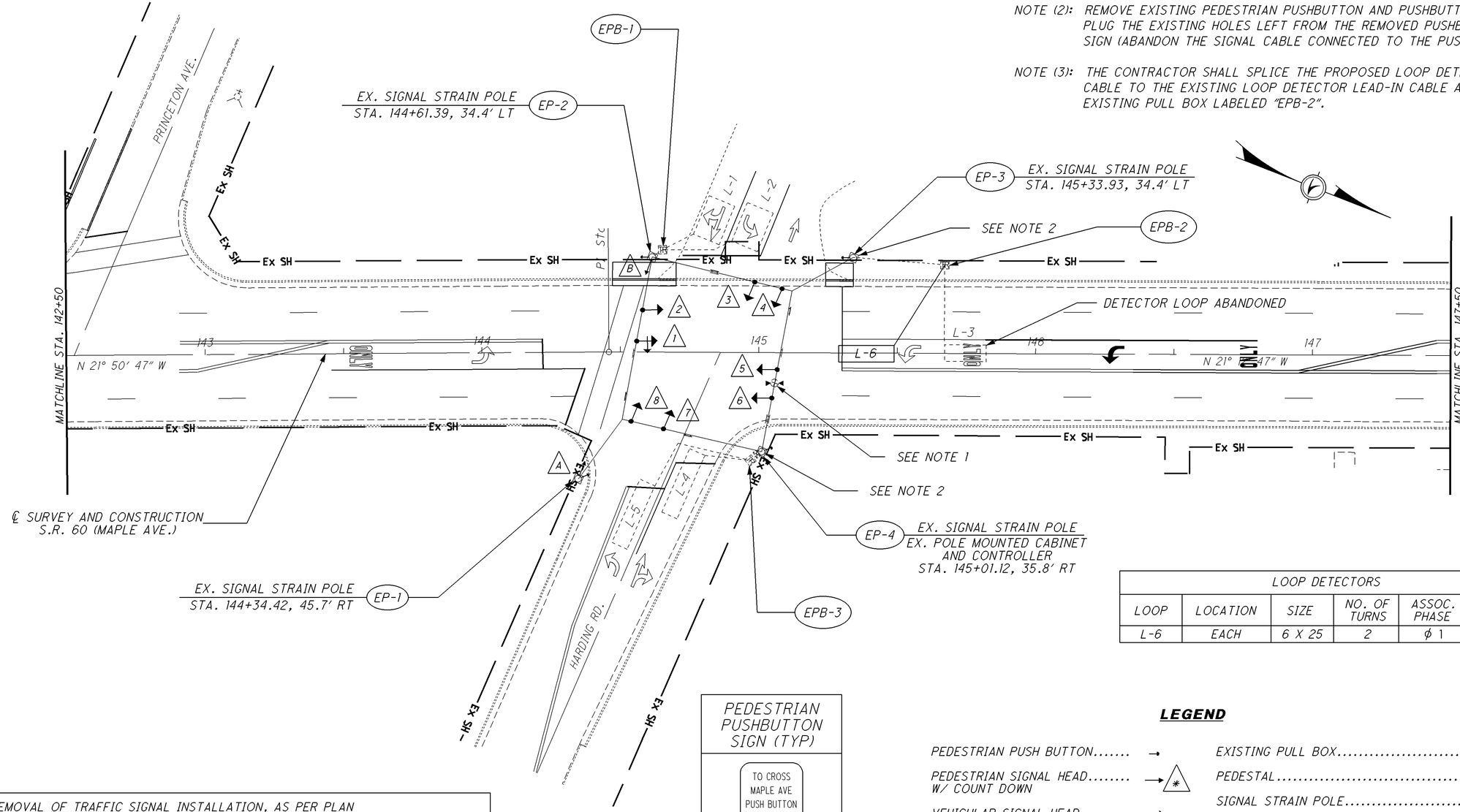


CROSS REFERENCES	
SHEET(S)	DESCRIPTION
150	WIRING DIAGRAM, PHASING DIAGRAM AND SIGNAL DISPLAY CHART
162-165	TRAFFIC SIGNAL SUBSUMMARY

NOTE (1): DO NOT DISTURB OR DAMAGE THE EXISTING PREEMPT DETECTOR OR THE PREEMPT DETECTOR CABLE ATTACHED TO THE EXISTING MESSENGER WIRE.

NOTE (2): REMOVE EXISTING PEDESTRIAN PUSHBUTTON AND PUSHBUTTON SIGN. PLUG THE EXISTING HOLES LEFT FROM THE REMOVED PUSHBUTTON AND SIGN (ABANDON THE SIGNAL CABLE CONNECTED TO THE PUSHBUTTON).

NOTE (3): THE CONTRACTOR SHALL SPLICE THE PROPOSED LOOP DETECTOR CABLE TO THE EXISTING LOOP DETECTOR LEAD-IN CABLE AT THE EXISTING PULL BOX LABELED "EPB-2".



LOOP DETECTORS					
LOOP	LOCATION	SIZE	NO. OF TURNS	ASSOC. PHASE	AMP MODE
L-6	EACH	6 X 25	2	ϕ 1	PRESENCE

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN				
FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	8	X	
PEDESTRIAN SIGNAL HEAD	EACH	2	X	
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	4		X

PEDESTRIAN PUSHBUTTON SIGN (TYP)

TO CROSS MAPLE AVE PUSH BUTTON WAIT FOR WALK SIGNAL

R10-H4D-9

MOUNTED ABOVE EACH PUSHBUTTON

LEGEND

PEDESTRIAN PUSH BUTTON.....

PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN

VEHICULAR SIGNAL HEAD..... W/ BACKPLATE

SIGNAL HEAD I.D. NUMBER.....

EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS.....

EXISTING PULL BOX.....

PEDESTAL.....

SIGNAL STRAIN POLE.....

CONRTOLLER CABINET GROUND MOUNTED....

CONTROLLER CABINET POLE MOUNTED.....

EXISTING LOOP DETECTOR..... L-#

82752_sds_11.dgn 11/21/08

HORIZONTAL SCALE IN FEET 0 10 20 40

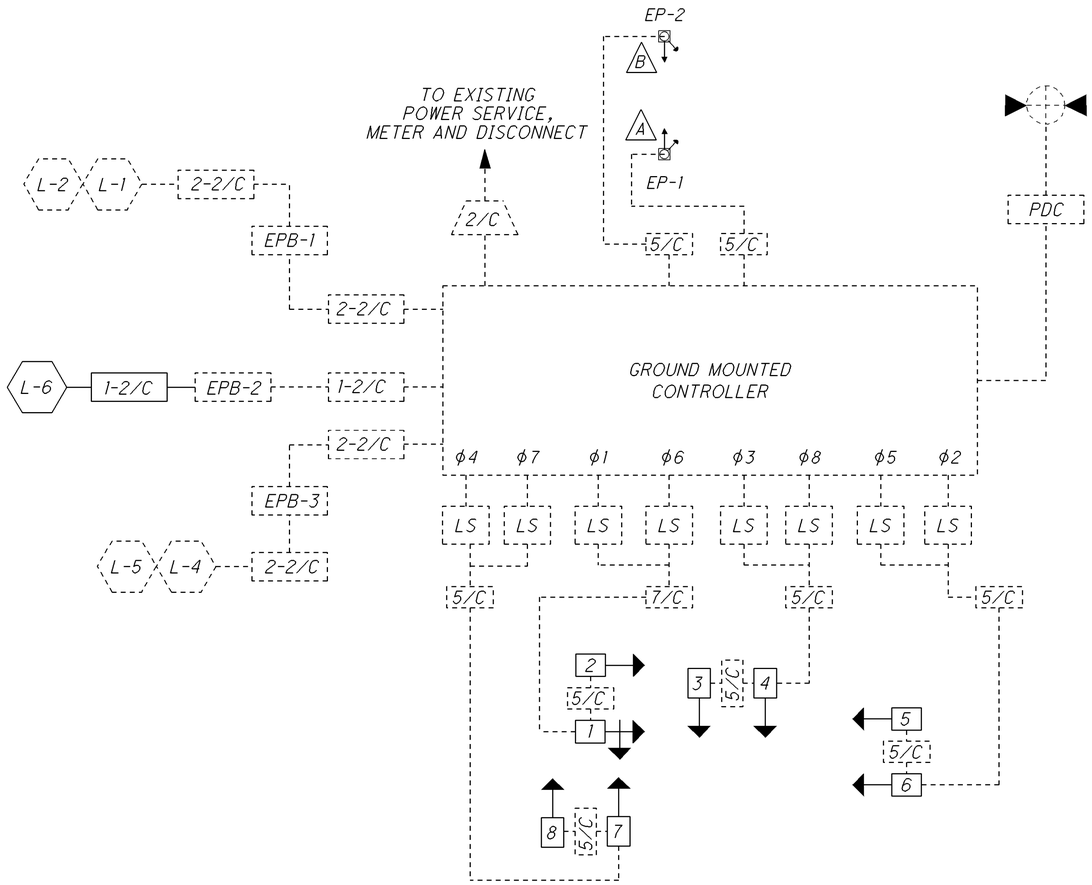
CALCULATED DNM CHECKED BB

SIGNAL PLAN - MAPLE AVE. & HARDING RD.
STA. 142+50 TO STA. 147+50

MUS-60-16.75

149
165

TRAFFIC SIGNAL WIRING DIAGRAM



LEGEND

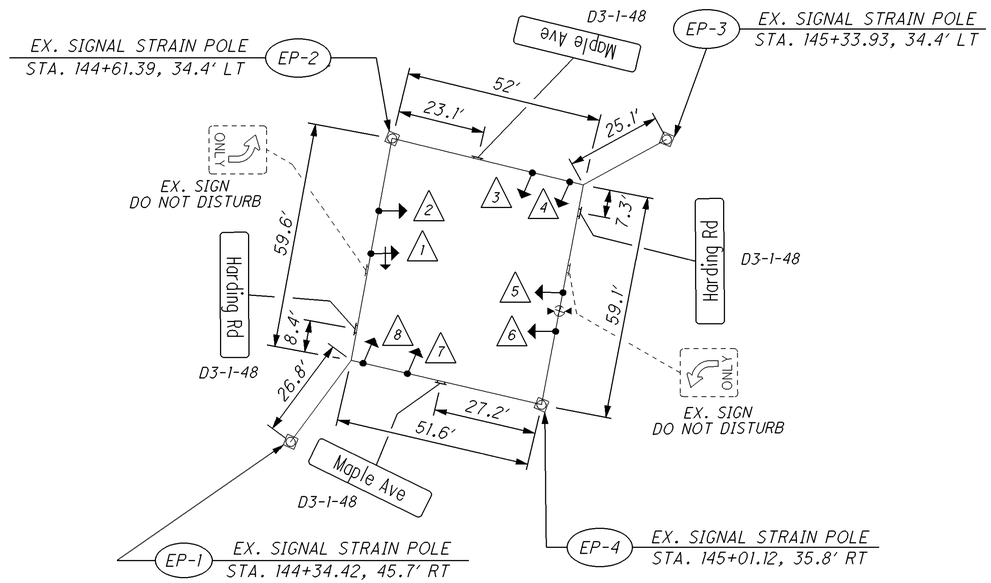
- SIGNAL HEAD WITH TURN ARROW
- SIGNAL HEAD
- PUSHBUTTON
- PEDESTRIAN SIGNAL HEAD W/COUNTDOWN
- L-1 — VEHICLE DETECTOR LOOP
- L-1 — EX. VEHICLE DETECTOR LOOP
- EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS
- 2/C OR 3/C #8 AWG POWER CABLE
- LS — EX. LOAD SWITCH
- 2/C — EX. 2/C #14 AWG (LEAD-IN CABLE)
- 5/C — EX. 5/C #14 AWG SIGNAL CABLE
- 7/C — EX. 7/C #14 AWG SIGNAL CABLE
- PDC — EX. PREEMPT DETECTOR CABLE

TRAFFIC SIGNAL SIGN PLACEMENT

NOTE 1) SEE TRAFFIC CONTROL PLAN SHEET 98 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2) PLACE PROPOSED SIGNAL HEADS AT SAME LOCATION AS EXISTING SIGNAL HEADS UNLESS OTHERWISE SHOWN.

NOTE 3) THE OVERHEAD STREET NAME SIGNS ATTACHED TO THE MESSENGER WIRE SHALL BE FIELD ADJUSTED TO MAXIMIZE THE VIEW OF THE SIGNAL HEADS.



LEGEND

- SPAN WIRE OVERHEAD SIGN .....
- PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....
- SIGNAL HEAD I.D. NUMBER ..... (#)
- SIGNAL HEAD STD ONE WAY .....

TRAFFIC SIGNAL DISPLAY SCHEDULE

SIGNAL HEAD LEGEND								PEDESTRIAN HEAD LEGEND				PHASES	
1	2	3	4	5	6	7	8	B/C					
G/G	G	R	R	R	R	R	R	DW				R/W	ϕ 1 & ϕ 6
G/Y	G	R	R	R	R	R	R	DW				CLEARANCE	
G	G	R	R	R	R	R	R	DW					
G	G	R	R	G	G	R	R	DW				R/W	ϕ 2 & ϕ 6
Y	Y	R	R	Y	Y	R	R	DW				CLEARANCE	
R	R	R	R	R	R	R	R	DW					
R	R	G	G	R	R	G	G	W				R/W	ϕ 4
R	R	G	G	R	R	G	G	FDW				CLEARANCE TO ALL OTHERS	
R	R	R	Y	Y	R	Y	Y	DW					
R	R	R	R	R	R	R	R	DW					
R	R	R	R	R	R	R	R	OFF				FLASH	
R	R	R	R	G	G	R	R	DW				CHANNEL 1 (NORTH BOUND)	
G	G	R	R	R	R	R	R	DW				CHANNEL 2 (SOUTH BOUND)	

CALCULATED DNM CHECKED DNM

SIGNAL PLAN DETAILS - MAPLE AVE. & HARDING RD.

MUS-60-16.75

82752_sds_11.DGN 11/21/08

CROSS REFERENCES	
SHEET(S)	DESCRIPTION
152	WIRING DIAGRAM, PHASING DIAGRAM AND SIGNAL DISPLAY CHART
162-165	TRAFFIC SIGNAL SUBSUMMARY

NOTE (1): DO NOT DISTURB OR DAMAGE THE EXISTING PREEMPT DETECTOR OR THE PREEMPT DETECTOR CABLE ATTACHED TO THE EXISTING MESSENGER WIRE.

NOTE (2): REMOVE EXISTING PEDESTRIAN PUSHBUTTON AND PUSHBUTTON SIGN. PLUG THE EXISTING HOLES LEFT FROM THE REMOVED PUSHBUTTON AND SIGN.

PEDESTRIAN PUSHBUTTON SIGN (TYP)

TO CROSS MAPLE AVE PUSH BUTTON WAIT FOR WALK SIGNAL

R10-H4D-9

MOUNTED ABOVE EACH PUSHBUTTON

PEDESTRIAN SIGNAL INDICATIONS (LED)

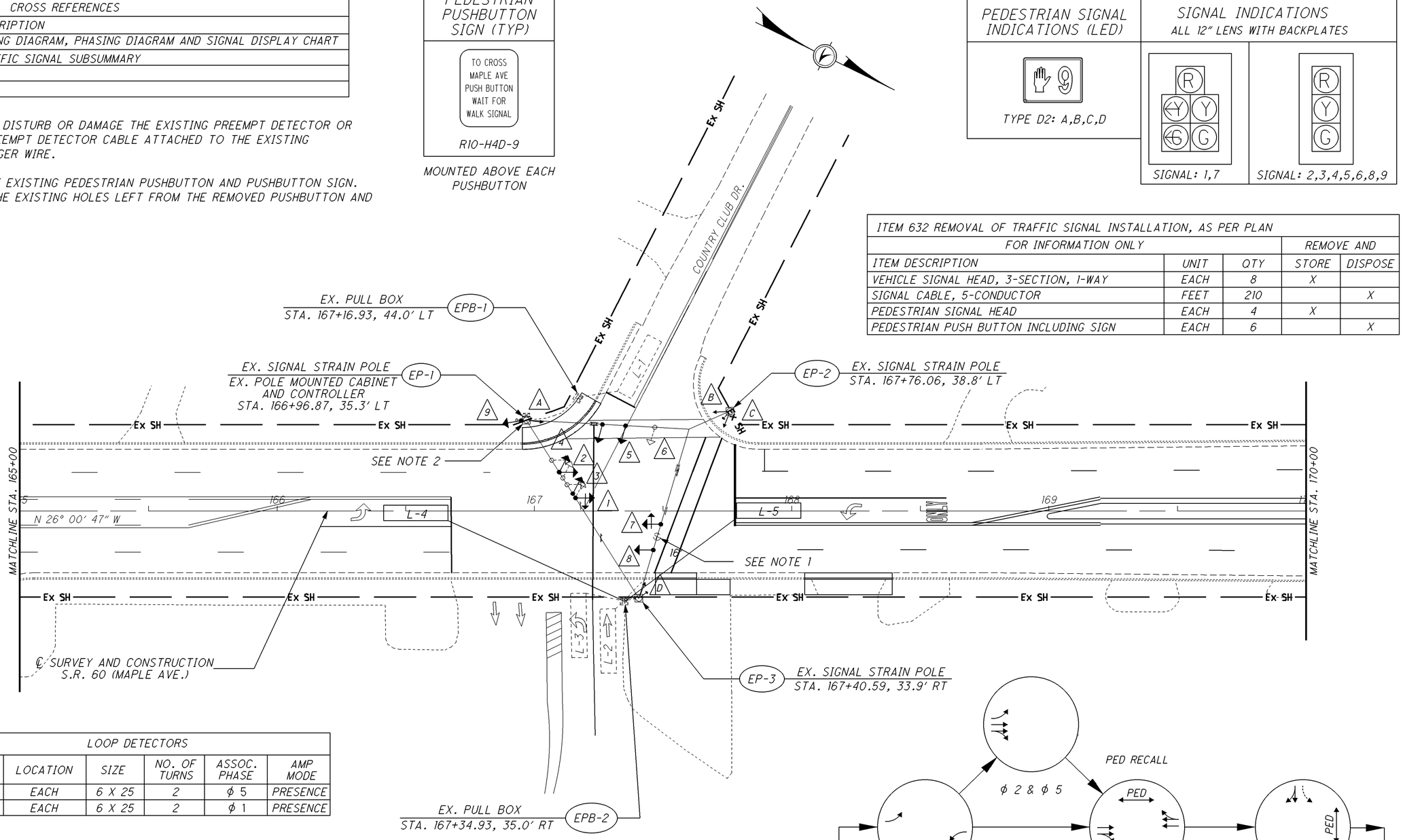
TYPE D2: A,B,C,D

SIGNAL INDICATIONS
ALL 12" LENS WITH BACKPLATES

SIGNAL: 1,7

SIGNAL: 2,3,4,5,6,8,9

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN				
FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	8	X	
SIGNAL CABLE, 5-CONDUCTOR	FEET	210		X
PEDESTRIAN SIGNAL HEAD	EACH	4	X	
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	6		X

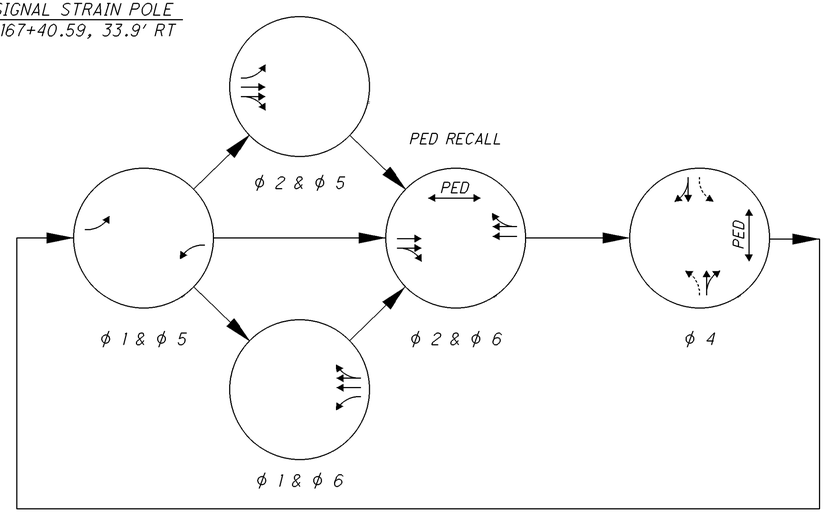


LOOP DETECTORS					
LOOP	LOCATION	SIZE	NO. OF TURNS	ASSOC. PHASE	AMP MODE
L-4	EACH	6 X 25	2	ϕ 5	PRESENCE
L-5	EACH	6 X 25	2	ϕ 1	PRESENCE

LEGEND

PEDESTRIAN PUSH BUTTON.....
PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN
VEHICULAR SIGNAL HEAD..... W/ BACKPLATE
SIGNAL HEAD I.D. NUMBER.....
EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS.....

EXISTING PULL BOX.....
PEDESTAL.....
SIGNAL STRAIN POLE.....
CONRTOLLER CABINET GROUND MOUNTED....
CONTROLLER CABINET POLE MOUNTED.....
EXISTING LOOP DETECTOR..... L-#



SIGNAL PHASING DIAGRAM

82752_sds_12.dgn 11/21/08

HORIZONTAL SCALE IN FEET 0 10 20 40

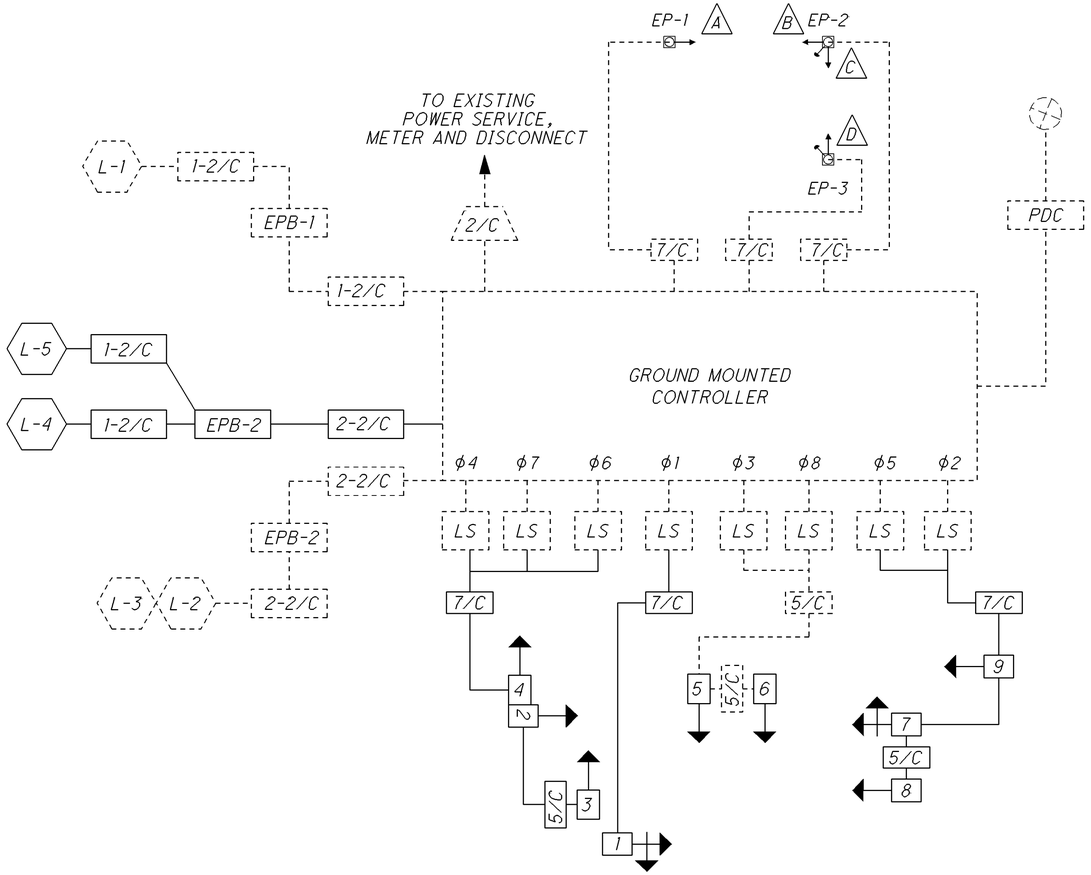
CALCULATED DNM CHECKED BB

SIGNAL PLAN - MAPLE AVE. & COUNTRY CLUB DR.
STA. 165+00 TO STA. 170+00

MUS-60-16.75

151
165

TRAFFIC SIGNAL WIRING DIAGRAM



LEGEND

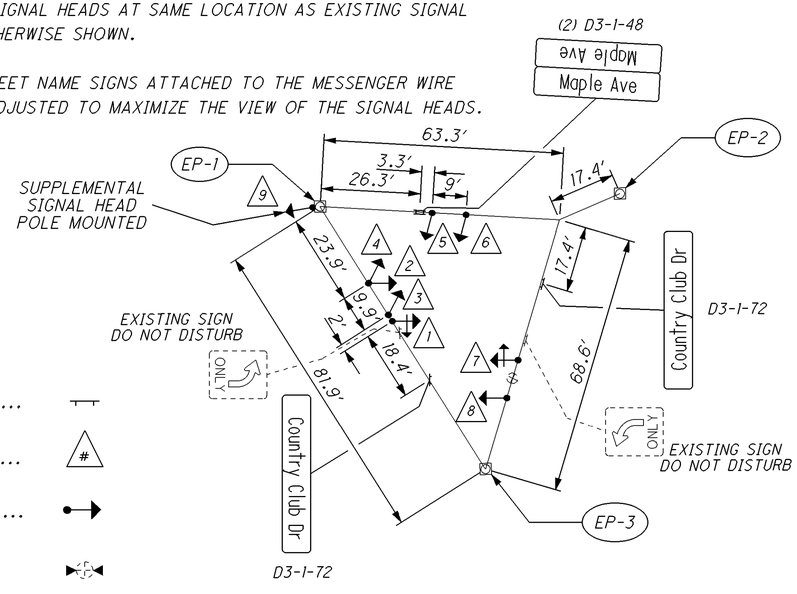
- SIGNAL HEAD WITH TURN ARROW
- SIGNAL HEAD
- SIGNAL HEAD, TWO WAY
- L-1 — VEHICLE DETECTOR LOOP
- 5/C — 5/C #14 AWG SIGNAL CABLE
- 7/C — 7/C #14 AWG SIGNAL CABLE
- PUSHBUTTON
- PEDESTRIAN SIGNAL HEAD W/COUNTDOWN
- 2/C OR 3/C #8 AWG POWER CABLE
- LS — EX. LOAD SWITCH
- 2/C — EX. 2/C #14 AWG (LEAD-IN CABLE)
- 5/C — EX. 5/C #14 AWG SIGNAL CABLE
- 7/C — EX. 7/C #14 AWG SIGNAL CABLE
- PDC — EX. PREEMPT DETECTOR CABLE
- L-1 — EX. VEHICLE DETECTOR LOOP
- EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS

TRAFFIC SIGNAL SIGN PLACEMENT

NOTE 1) SEE TRAFFIC CONTROL PLAN SHEET 103 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2) PLACE PROPOSED SIGNAL HEADS AT SAME LOCATION AS EXISTING SIGNAL HEADS UNLESS OTHERWISE SHOWN.

NOTE 3) THE OVERHEAD STREET NAME SIGNS ATTACHED TO THE MESSENGER WIRE SHALL BE FIELD ADJUSTED TO MAXIMIZE THE VIEW OF THE SIGNAL HEADS.



LEGEND

- SPAN WIRE OVERHEAD SIGN .....
- SIGNAL HEAD I.D. NUMBER ..... (#)
- SIGNAL HEAD STD ONE WAY .....
- PREEMPT DETECTOR W/ CONFIRMATION LIGHTS.....

TRAFFIC SIGNAL DISPLAY SCHEDULE

SIGNAL HEAD LEGEND									PEDESTRIAN HEAD LEGEND				PHASES	
1	2	3	4	5	6	7	8	9	A/B	C/D				
R/G	R	R	R	R	R	R/G	R	R	DW	DW			R/W	ϕ 1 & ϕ 5
R/Y	R	R	R	R	R	R/G	R	R	DW	DW			CLEARANCE TO ϕ 2 & ϕ 5	
R	R	R	R	R	R	R/G	R	R	DW	DW				
R/G	R	R	R	R	R	R/Y	R	R	DW	DW			CLEARANCE TO ϕ 1 & ϕ 6	
R/G	R	R	R	R	R	R	R	R	DW	DW				
R/Y	R	R	R	R	R	R/Y	R	R	DW	DW			CLEARANCE TO ϕ 2 & ϕ 6	
R	R	R	R	R	R	R	R	R	DW	DW				
R	R	R	R	R	R	G/G	G	G	DW	DW			R/W	ϕ 2 & ϕ 5
R	R	R	R	R	R	G/Y	G	G	DW	DW			CLEARANCE	
R	R	R	R	R	R	G	G	G	DW	DW				
G/G	G	R	R	R	R	R	R	R	DW	DW			R/W	ϕ 1 & ϕ 6
G/Y	G	R	R	R	R	R	R	R	DW	DW			CLEARANCE	
G	G	R	R	R	R	R	R	R	DW	DW				
G	G	R	R	R	R	G	G	G	W	DW			R/W	ϕ 2 & ϕ 6
G	G	R	R	R	R	G	G	G	FDW	DW			CLEARANCE	
Y	Y	R	R	R	R	Y	Y	Y	DW	DW				
R	R	R	R	R	R	R	R	R	DW	DW				
R	R	G	G	G	G	R	R	R	DW	W			R/W	ϕ 4
R	R	G	G	G	G	R	R	R	DW	FDW			CLEARANCE	
R	R	Y	Y	Y	Y	R	R	R	DW	DW				
R	R	R	R	R	R	R	R	R	DW	DW				
R	R	R	R	R	R	R	R	R	OFF	OFF			FLASH	
R	R	R	R	R	R	G	G	G	DW	DW			CHANNEL 1 (NORTH BOUND)	
G	G	R	R	R	R	R	R	R	DW	DW			CHANNEL 2 (SOUTH BOUND)	

CALCULATED DNM CHECKED BB

MUS-60-16.75 SIGNAL PLAN DETAILS - MAPLE AVE. & COUNTRY CLUB DR.

82752_sds_12.DGN 11/21/08

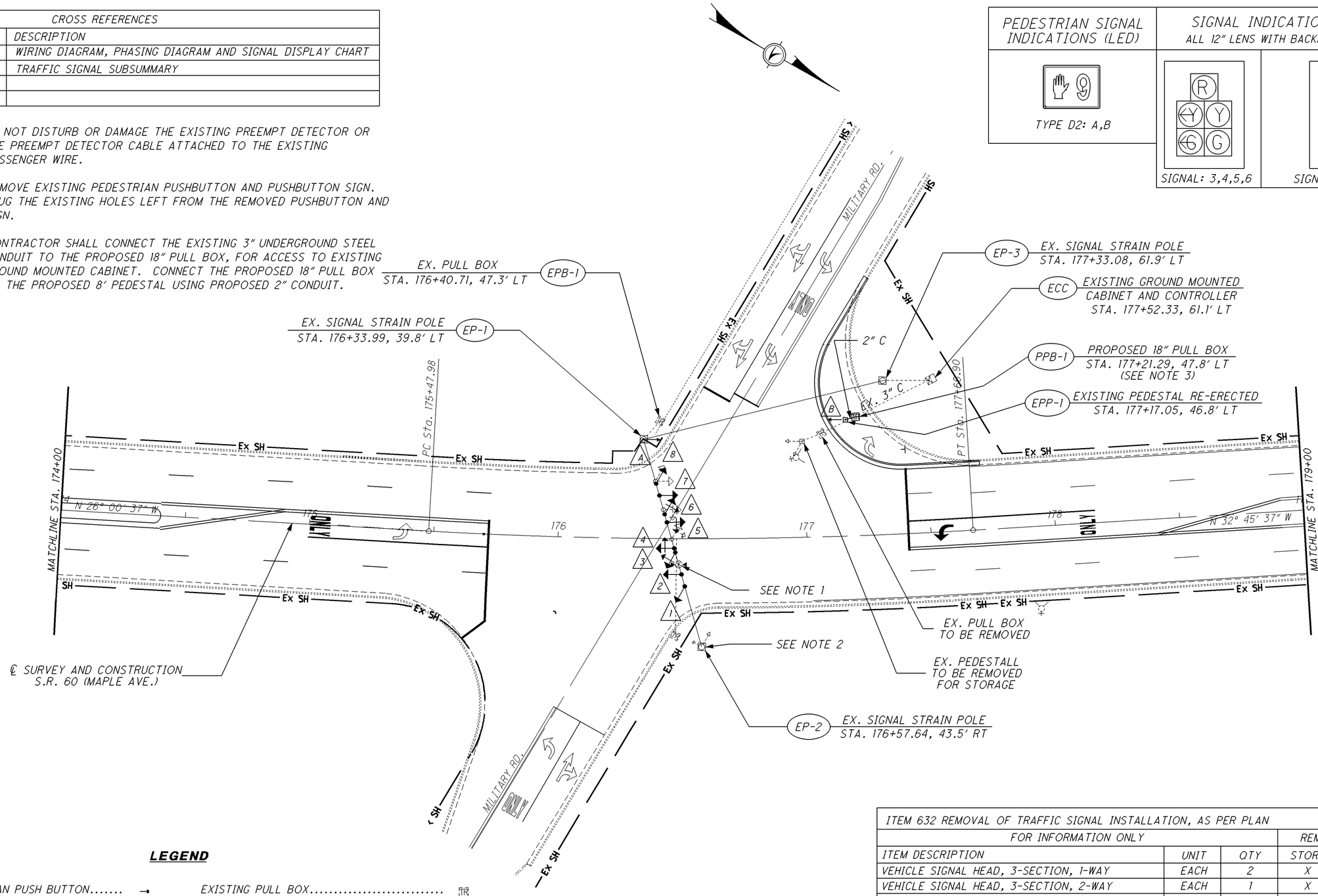
CROSS REFERENCES	
SHEET(S)	DESCRIPTION
154	WIRING DIAGRAM, PHASING DIAGRAM AND SIGNAL DISPLAY CHART
162-165	TRAFFIC SIGNAL SUBSUMMARY

NOTE (1): DO NOT DISTURB OR DAMAGE THE EXISTING PREEMPT DETECTOR OR THE PREEMPT DETECTOR CABLE ATTACHED TO THE EXISTING MESSENGER WIRE.

NOTE (2): REMOVE EXISTING PEDESTRIAN PUSHBUTTON AND PUSHBUTTON SIGN. PLUG THE EXISTING HOLES LEFT FROM THE REMOVED PUSHBUTTON AND SIGN.

NOTE (3): CONTRACTOR SHALL CONNECT THE EXISTING 3" UNDERGROUND STEEL CONDUIT TO THE PROPOSED 18" PULL BOX, FOR ACCESS TO EXISTING GROUND MOUNTED CABINET. CONNECT THE PROPOSED 18" PULL BOX TO THE PROPOSED 8' PEDESTAL USING PROPOSED 2" CONDUIT.

PEDESTRIAN SIGNAL INDICATIONS (LED)	SIGNAL INDICATIONS ALL 12" LENS WITH BACKPLATES	
TYPE D2: A,B	SIGNAL: 3,4,5,6	SIGNAL: 1,2,7,8



LEGEND

PEDESTRIAN PUSH BUTTON.....	EXISTING PULL BOX.....
PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN	PEDESTAL.....
VEHICULAR SIGNAL HEAD..... W/ BACKPLATE	SIGNAL STRAIN POLE.....
SIGNAL HEAD I.D. NUMBER.....	CONRTOLLER CABINET GROUND MOUNTED....
EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS.....	CONTROLLER CABINET POLE MOUNTED.....
	EXISTING LOOP DETECTOR..... L-#

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN				
FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	2	X	
VEHICLE SIGNAL HEAD, 3-SECTION, 2-WAY	EACH	1	X	
VEHICLE SIGNAL HEAD, 5-SECTION, 1-WAY	EACH	4	X	
PEDESTRIAN SIGNAL HEAD	EACH	4	X	
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	2		X
PEDESTAL FOUNDATION	EACH	1		X
PULL BOX	EACH	1		X
SIGNAL CABLE, 9-CONDUCTOR	FEET	74		X

82752_sds_13.dgn 11/21/08

HORIZONTAL SCALE IN FEET 0 10 20 40

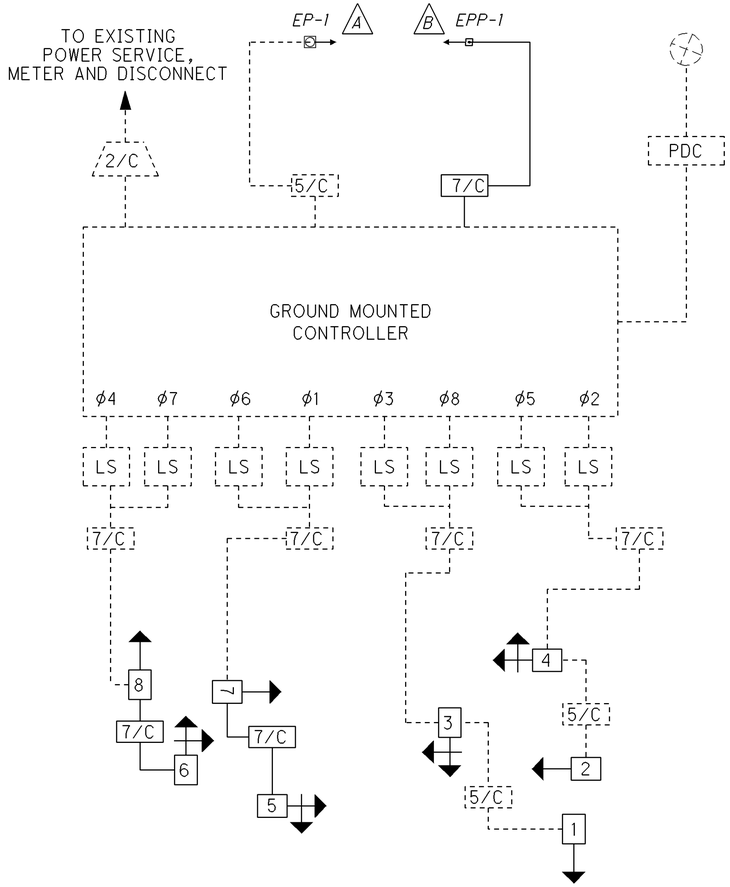
CALCULATED DNM CHECKED BB

SIGNAL PLAN - MAPLE AVE. & MILITARY RD.
STA. 174+00 TO STA. 179+00

MUS-60-16.75

153
165

TRAFFIC SIGNAL WIRING DIAGRAM



LEGEND

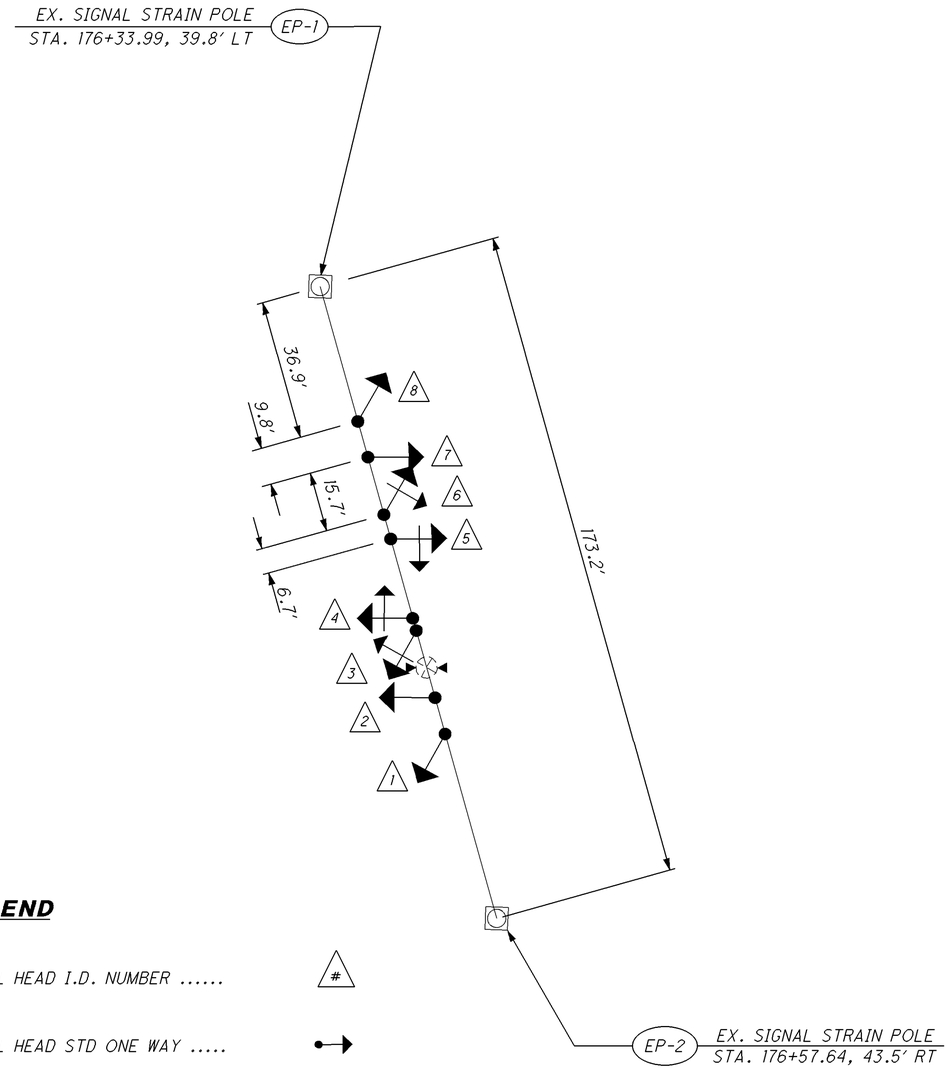
- SIGNAL HEAD WITH TURN ARROW
- SIGNAL HEAD
- 7/C — 7/C #14 AWG SIGNAL CABLE
- PEDESTRIAN SIGNAL HEAD W/COUNTDOWN
- 2/C OR 3/C #8 AWG POWER CABLE
- LS — EX. LOAD SWITCH
- 2/C — EX. 2/C #14 AWG (LEAD-IN CABLE)
- 5/C — EX. 5/C #14 AWG SIGNAL CABLE
- 7/C — EX. 7/C #14 AWG SIGNAL CABLE
- PDC — EX. PREEMPT DETECTOR CABLE
- EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS

NOTE: THERE IS NO PROPOSED WORK INVOLVING THE EXISTING DETECTOR LOOPS, THEREFORE, THEY HAVE NOT BEEN SHOWN.

TRAFFIC SIGNAL SIGN PLACEMENT

NOTE 1) SEE TRADDIC CONTROL PLAN SHEET 105 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2) PLACE PROPOSED SIGNAL HEADS AT SAME LOCATION AS EXISTING SIGNAL HEADS UNLESS OTHERWISE SHOWN.



LEGEND

- SIGNAL HEAD I.D. NUMBER ..... #
- SIGNAL HEAD STD ONE WAY .....
- PREEMPT DETECTOR W/ CONFIRMATION LIGHTS.....

CALCULATED DNM CHECKED BB

SIGNAL PLAN DETAILS - MAPLE AVE. & MILITARY RD.

MUS-60-16.75

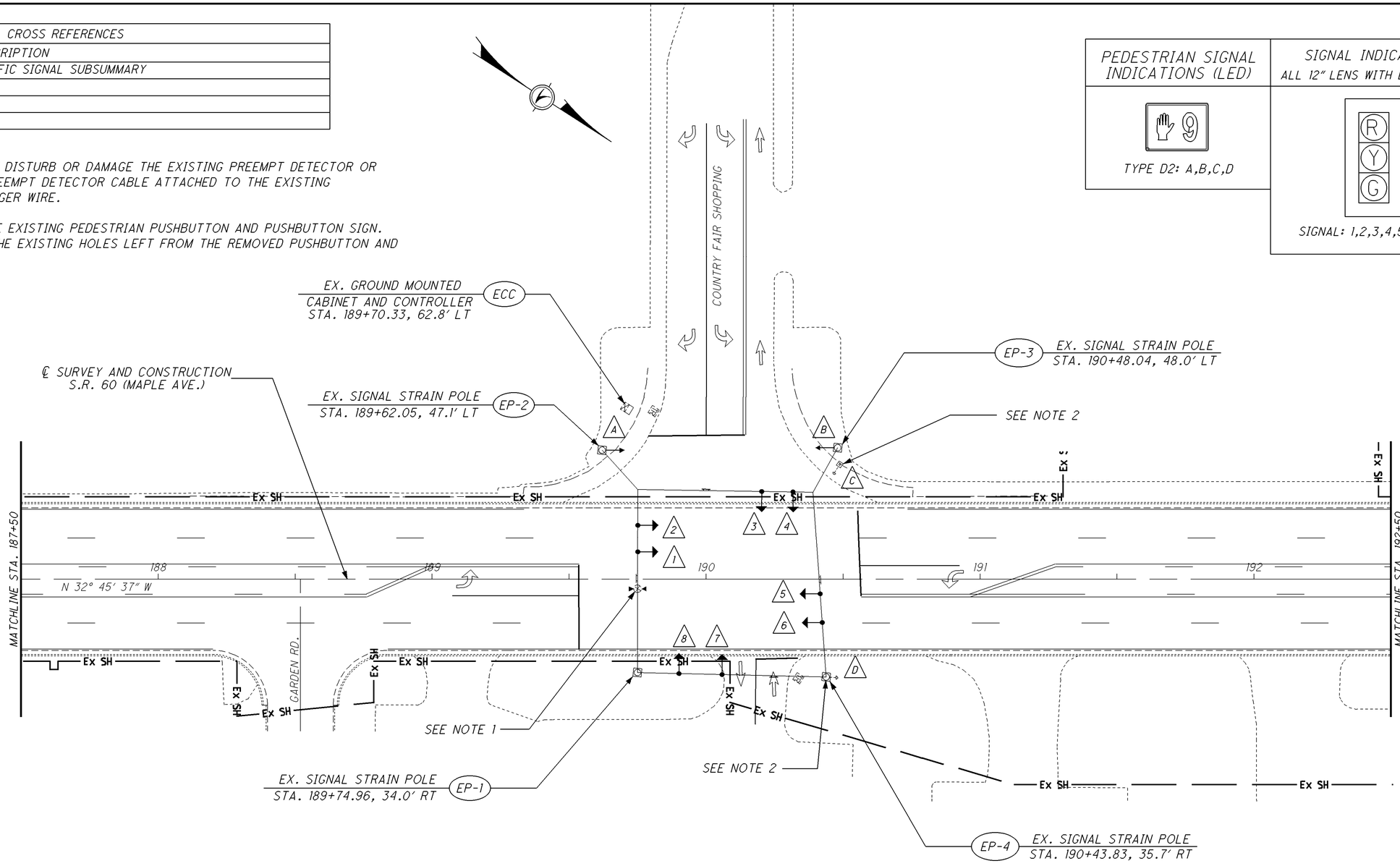
82752_sds_13.DGN 11/21/08

CROSS REFERENCES	
SHEET(S)	DESCRIPTION
162-165	TRAFFIC SIGNAL SUBSUMMARY

NOTE (1): DO NOT DISTURB OR DAMAGE THE EXISTING PREEMPT DETECTOR OR THE PREEMPT DETECTOR CABLE ATTACHED TO THE EXISTING MESSENGER WIRE.

NOTE (2): REMOVE EXISTING PEDESTRIAN PUSHBUTTON AND PUSHBUTTON SIGN. PLUG THE EXISTING HOLES LEFT FROM THE REMOVED PUSHBUTTON AND SIGN.

PEDESTRIAN SIGNAL INDICATIONS (LED)	SIGNAL INDICATIONS ALL 12" LENS WITH BACKPLATES
TYPE D2: A,B,C,D	SIGNAL: 1,2,3,4,5,6,7,8



LEGEND

PEDESTRIAN PUSH BUTTON.....	EXISTING PULL BOX.....
PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN	PEDESTAL.....
VEHICULAR SIGNAL HEAD..... W/ BACKPLATE	SIGNAL STRAIN POLE.....
SIGNAL HEAD I.D. NUMBER.....	CONRTOLLER CABINET GROUND MOUNTED....
EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS.....	CONTROLLER CABINET POLE MOUNTED.....
	EXISTING LOOP DETECTOR..... L-#

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN				
FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	8	X	
PEDESTRIAN SIGNAL HEAD	EACH	4	X	
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	1		X

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED DNM CHECKED BB

SIGNAL PLAN - MAPLE AVE. & COUNTRY FAIR
STA. 187+50 TO STA. 192+50

MUS-60-16.75

155
165

82752_sds_14.dgn 11/22/08

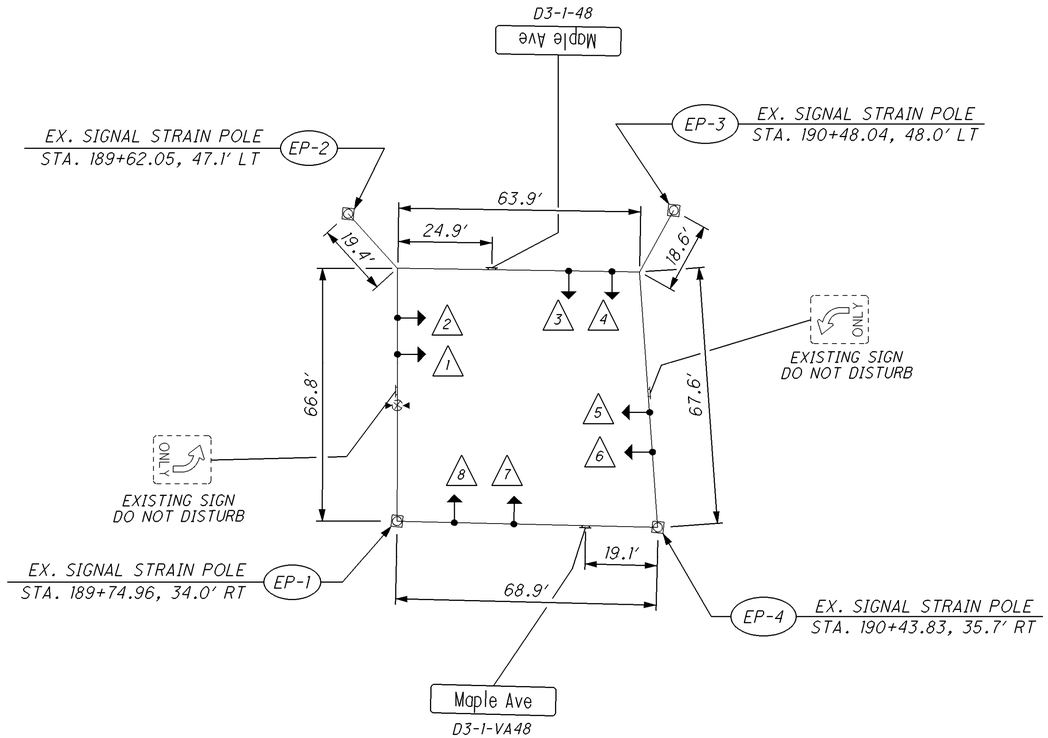
TRAFFIC SIGNAL SIGN PLACEMENT

MAPLE AVE. & COUNTRY FAIR SHOPPING

NOTE 1) SEE TRAFFIC CONTROL PLAN SHEET 107 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2) PLACE PROPOSED SIGNAL HEADS AT SAME LOCATION AS EXISTING SIGNAL HEADS UNLESS OTHERWISE SHOWN.

NOTE 3) THE OVERHEAD STREET NAME SIGNS ATTACHED TO THE MESSENGER WIRE SHALL BE FIELD ADJUSTED TO MAXIMIZE THE VIEW OF THE SIGNAL HEADS.



LEGEND

SPAN WIRE OVERHEAD SIGN .....

SIGNAL HEAD STD ONE WAY .....

SIGNAL HEAD I.D. NUMBER ..... #

PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....

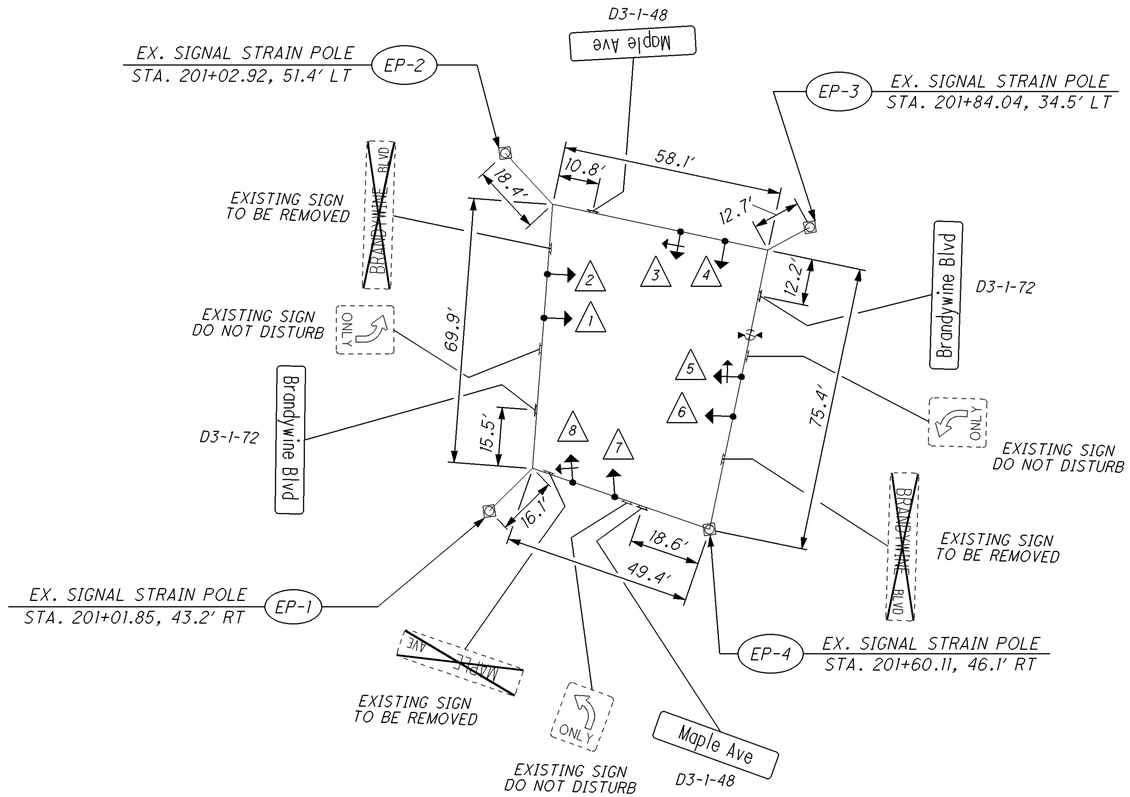
TRAFFIC SIGNAL SIGN PLACEMENT

MAPLE AVE. & BRANDYWINE BLVD.

NOTE 1) SEE TRAFFIC CONTROL PLAN SHEET 110 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2) PLACE PROPOSED SIGNAL HEADS AT SAME LOCATION AS EXISTING SIGNAL HEADS UNLESS OTHERWISE SHOWN.

NOTE 3) THE OVERHEAD STREET NAME SIGNS ATTACHED TO THE MESSENGER WIRE SHALL BE FIELD ADJUSTED TO MAXIMIZE THE VIEW OF THE SIGNAL HEADS.



LEGEND

SPAN WIRE OVERHEAD SIGN .....

SIGNAL HEAD STD ONE WAY .....

SIGNAL HEAD I.D. NUMBER ..... #

PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....

CALCULATED DNM
CHECKED BB

SIGNAL PLAN DETAILS
MAPLE AVE. & COUNTRY FAIR SHOPPING/BRANDYWINE BLD.

MUS-60-16.75

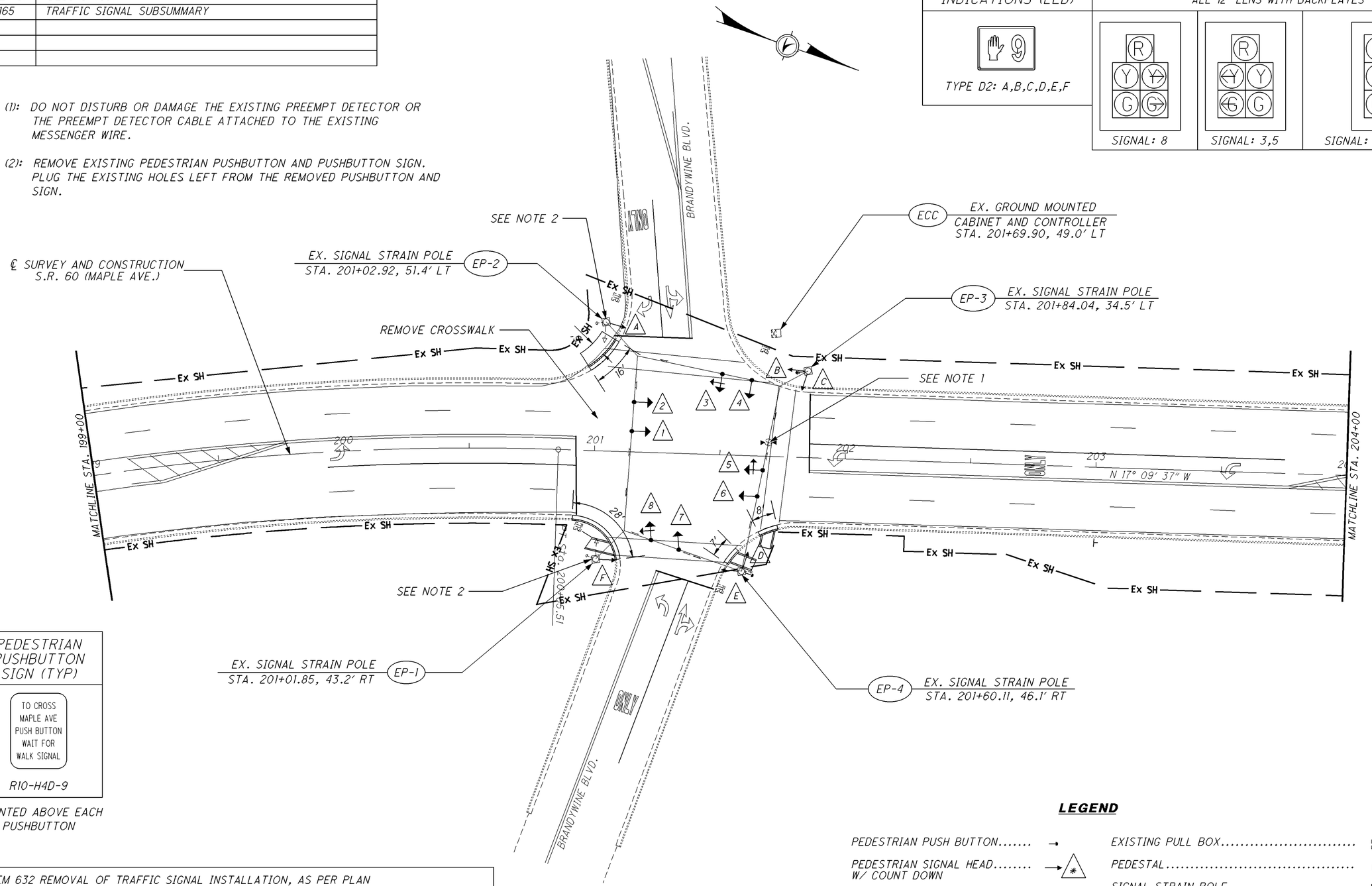
82752_sds_14.dgn 11/22/08

CROSS REFERENCES	
SHEET(S)	DESCRIPTION
162-165	TRAFFIC SIGNAL SUBSUMMARY

NOTE (1): DO NOT DISTURB OR DAMAGE THE EXISTING PREEMPT DETECTOR OR THE PREEMPT DETECTOR CABLE ATTACHED TO THE EXISTING MESSENGER WIRE.

NOTE (2): REMOVE EXISTING PEDESTRIAN PUSHBUTTON AND PUSHBUTTON SIGN. PLUG THE EXISTING HOLES LEFT FROM THE REMOVED PUSHBUTTON AND SIGN.

PEDESTRIAN SIGNAL INDICATIONS (LED)	SIGNAL INDICATIONS ALL 12" LENS WITH BACKPLATES		
TYPE D2: A,B,C,D,E,F	SIGNAL: 8	SIGNAL: 3,5	SIGNAL: 1,2,4,6,7



PEDESTRIAN PUSHBUTTON SIGN (TYP)
TO CROSS MAPLE AVE PUSH BUTTON WAIT FOR WALK SIGNAL
R10-H4D-9

MOUNTED ABOVE EACH PUSHBUTTON

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN				
FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	5	X	
VEHICLE SIGNAL HEAD,5-SECTION, 1-WAY	EACH	3	X	
PEDESTRIAN SIGNAL HEAD	EACH	8	X	
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	4		X

LEGEND

- PEDESTRIAN PUSH BUTTON.....
- PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN
- VEHICULAR SIGNAL HEAD..... W/ BACKPLATE
- SIGNAL HEAD I.D. NUMBER.....
- EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS.....
- EXISTING PULL BOX.....
- PEDESTAL.....
- SIGNAL STRAIN POLE.....
- CONRTOLLER CABINET GROUND MOUNTED....
- CONTROLLER CABINET POLE MOUNTED.....
- EXISTING LOOP DETECTOR..... L-#

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

CALCULATED DNM
CHECKED BB

SIGNAL PLAN - MAPLE AVE. & BRANDYWINE BLVD.
STA. 199+00 TO STA. 204+00

MUS-60-16.75

157
165

11/22/08

82752_sds_15.dgn

CROSS REFERENCES	
SHEET(S)	DESCRIPTION
162-165	TRAFFIC SIGNAL SUBSUMMARY

NOTE (1): DO NOT DISTURB OR DAMAGE THE EXISTING PREEMPT DETECTOR OR THE PREEMPT DETECTOR CABLE ATTACHED TO THE EXISTING MESSENGER WIRE.

NOTE (2): REMOVE EXISTING PEDESTRIAN PUSHBUTTON AND PUSHBUTTON SIGN. PLUG THE EXISTING HOLES LEFT FROM THE REMOVED PUSHBUTTON AND SIGN.

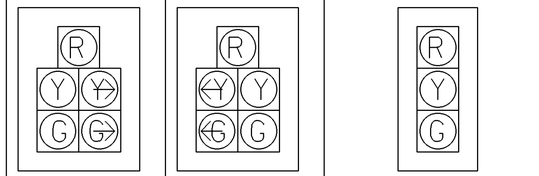
PEDESTRIAN PUSHBUTTON SIGN (TYP)

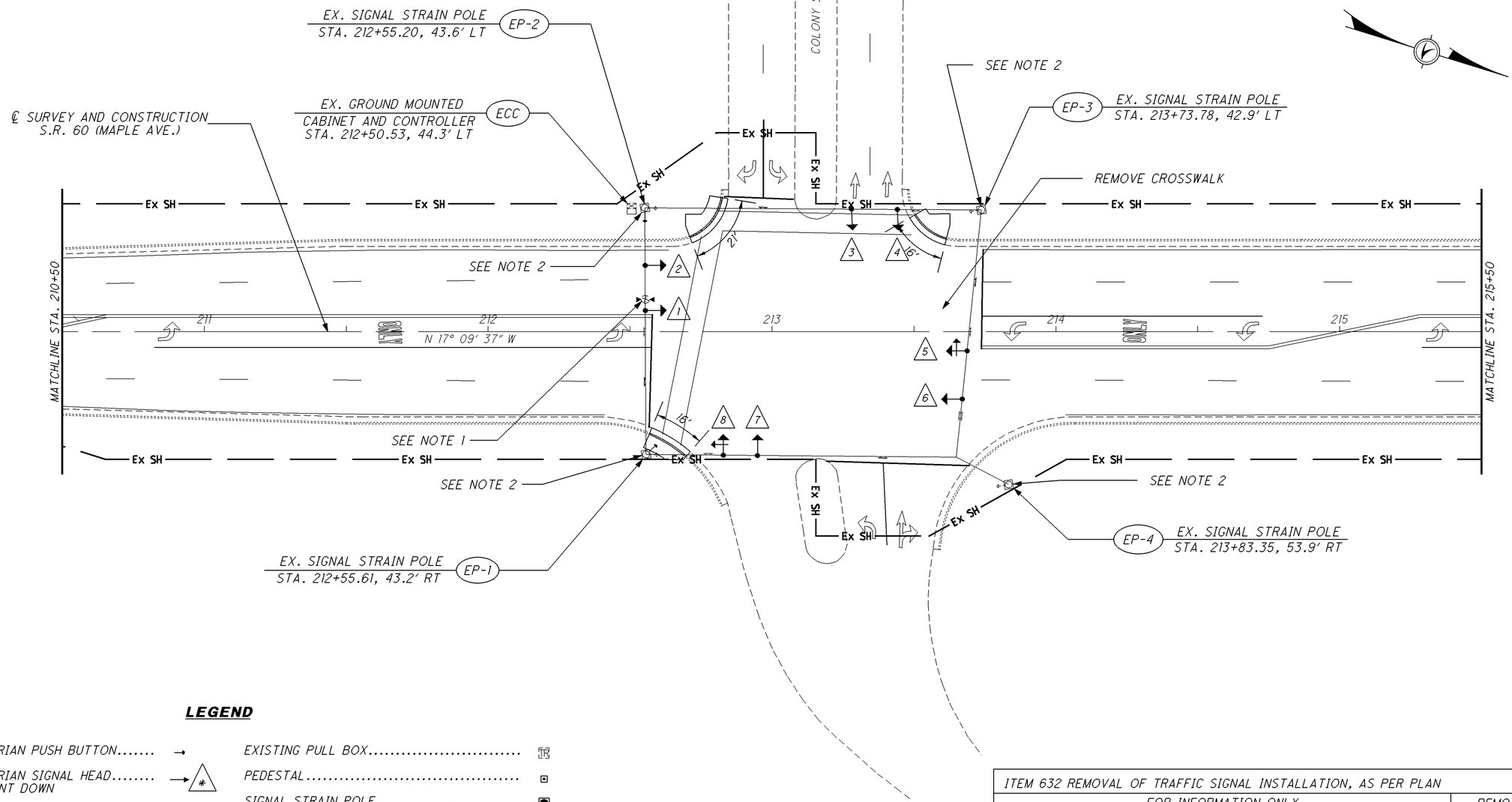
TO CROSS MAPLE AVE. PUSH BUTTON WAIT FOR GREEN LIGHT

R10-3A-9 MOD.

MOUNTED ABOVE EACH PUSHBUTTON

SIGNAL INDICATIONS
ALL 12" LENS WITH BACKPLATES





LEGEND

PEDESTRIAN PUSH BUTTON.....	EXISTING PULL BOX..... PB
PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN	PEDESTAL.....
VEHICULAR SIGNAL HEAD..... W/ BACKPLATE	SIGNAL STRAIN POLE.....
SIGNAL HEAD I.D. NUMBER.....	CONRTOLLER CABINET GROUND MOUNTED....
EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS.....	CONTROLLER CABINET POLE MOUNTED.....
	EXISTING LOOP DETECTOR..... L-#

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	6	X	
VEHICLE SIGNAL HEAD, 5-SECTION, 1-WAY	EACH	2	X	
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	4		X

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DNM
CHECKED BB

SIGNAL PLAN - MAPLE AVE. & COLONY SQUARE
STA. 210+50 TO STA. 215+50

MUS-60-16.75

158
165

82752_sds_16.dgn 11/22/2008

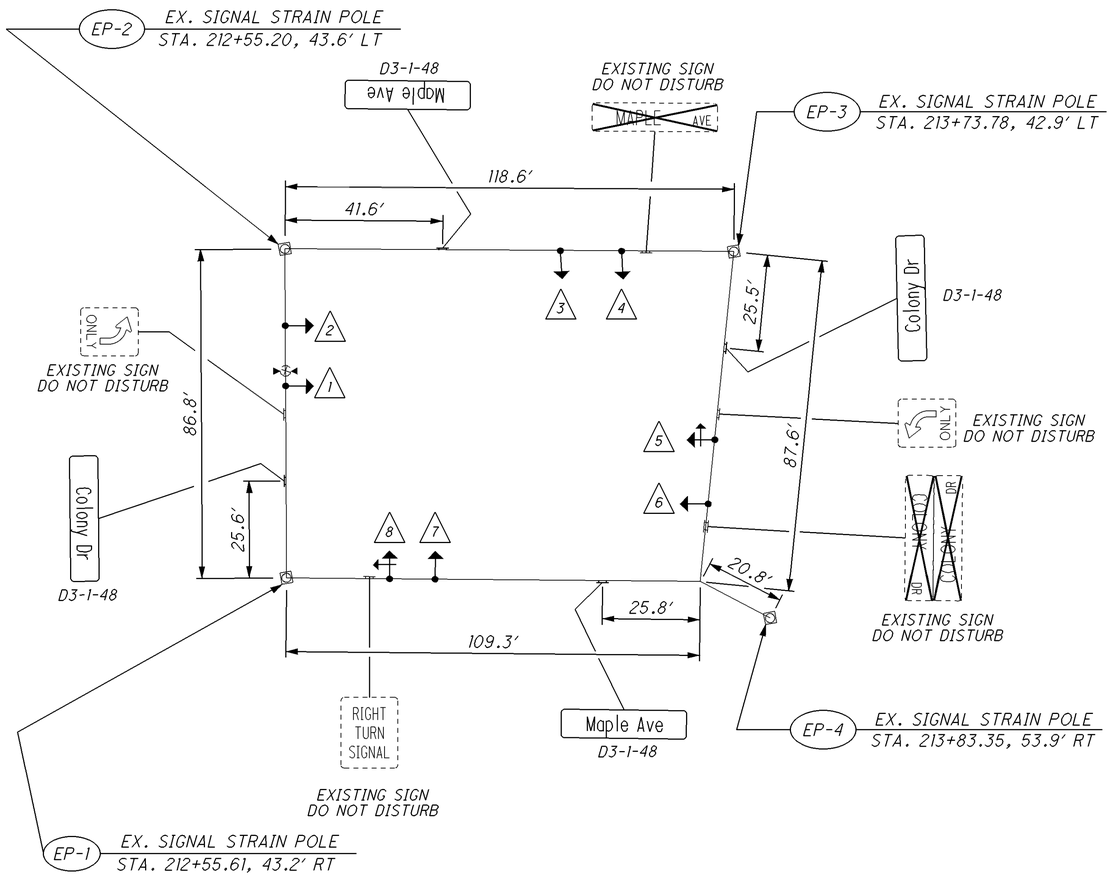
TRAFFIC SIGNAL SIGN PLACEMENT

MAPLE AVE & COLONY SQUARE MALL (SOUTH)

NOTE 1) SEE TRAFFIC CONTROL PLAN SHEET 112 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2) PLACE PROPOSED SIGNAL HEADS AT SAME LOCATION AS EXISTING SIGNAL HEADS UNLESS OTHERWISE SHOWN.

NOTE 3) THE OVERHEAD STREET NAME SIGNS ATTACHED TO THE MESSENGER WIRE SHALL BE FIELD ADJUSTED TO MAXIMIZE THE VIEW OF THE SIGNAL HEADS.



LEGEND

SPAN WIRE OVERHEAD SIGN .....

SIGNAL HEAD STD ONE WAY .....

SIGNAL HEAD I.D. NUMBER ..... (#)

PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....

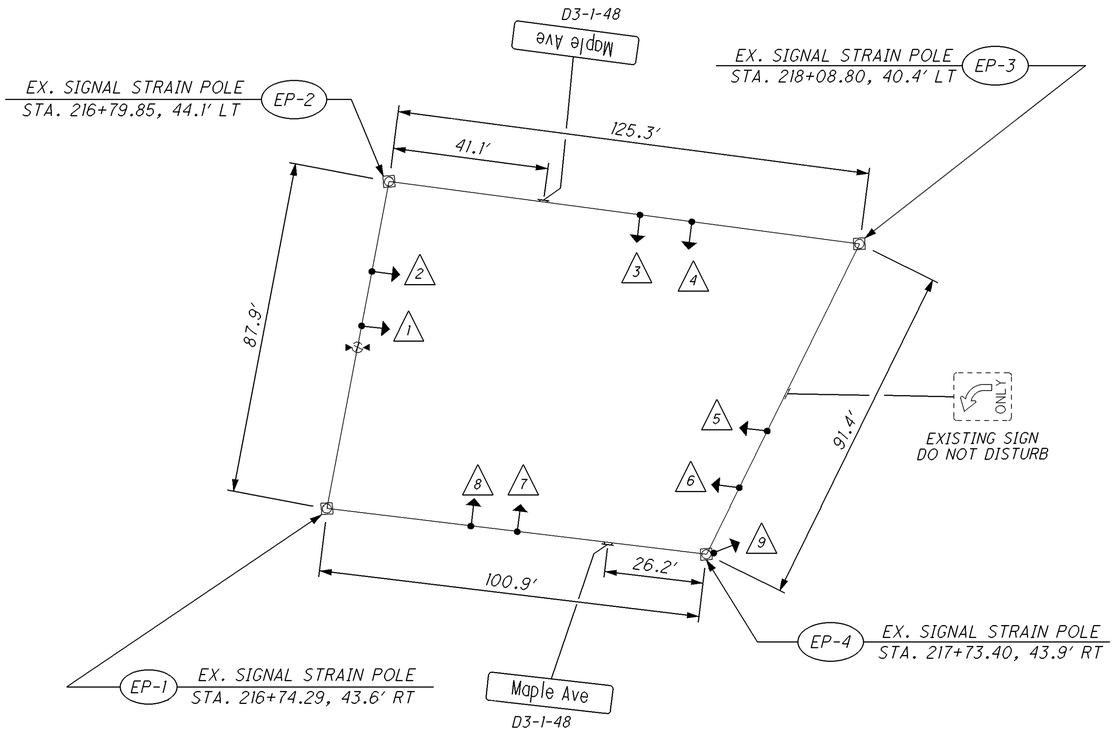
TRAFFIC SIGNAL SIGN PLACEMENT

MAPLE AVE & COLONY SQUARE MALL (NORTH)

NOTE 1) SEE TRAFFIC CONTROL PLAN SHEET 112 FOR TRAFFIC SIGNAL SIGN DETAILS.

NOTE 2) PLACE PROPOSED SIGNAL HEADS AT SAME LOCATION AS EXISTING SIGNAL HEADS UNLESS OTHERWISE SHOWN.

NOTE 3) THE OVERHEAD STREET NAME SIGNS ATTACHED TO THE MESSENGER WIRE SHALL BE FIELD ADJUSTED TO MAXIMIZE THE VIEW OF THE SIGNAL HEADS.



LEGEND

SPAN WIRE OVERHEAD SIGN .....

SIGNAL HEAD STD ONE WAY .....

SIGNAL HEAD I.D. NUMBER ..... (#)

PREEMPT DETECTOR W/CONFIRMATION LIGHTS.....

CALCULATED DNM
CHECKED BB

SIGNAL PLAN DETAILS
MAPLE AVE. & COLONY SQUARE MALL (SOUTH)/(NORTH)

MUS-60-16.75

159
165

82752_sds_16.dgn 11/22/08

CROSS REFERENCES	
SHEET(S)	DESCRIPTION
162-165	TRAFFIC SIGNAL SUBSUMMARY

NOTE (1): DO NOT DISTURB OR DAMAGE THE EXISTING PREEMPT DETECTOR OR THE PREEMPT DETECTOR CABLE ATTACHED TO THE EXISTING MESSENGER WIRE.

NOTE (2): REMOVE EXISTING PEDESTRIAN PUSHBUTTON AND PUSHBUTTON SIGN. PLUG THE EXISTING HOLES LEFT FROM THE REMOVED PUSHBUTTON AND SIGN.

PEDESTRIAN PUSHBUTTON SIGN (TYP)

TO CROSS MAPLE AVE PUSH BUTTON WAIT FOR GREEN LIGHT

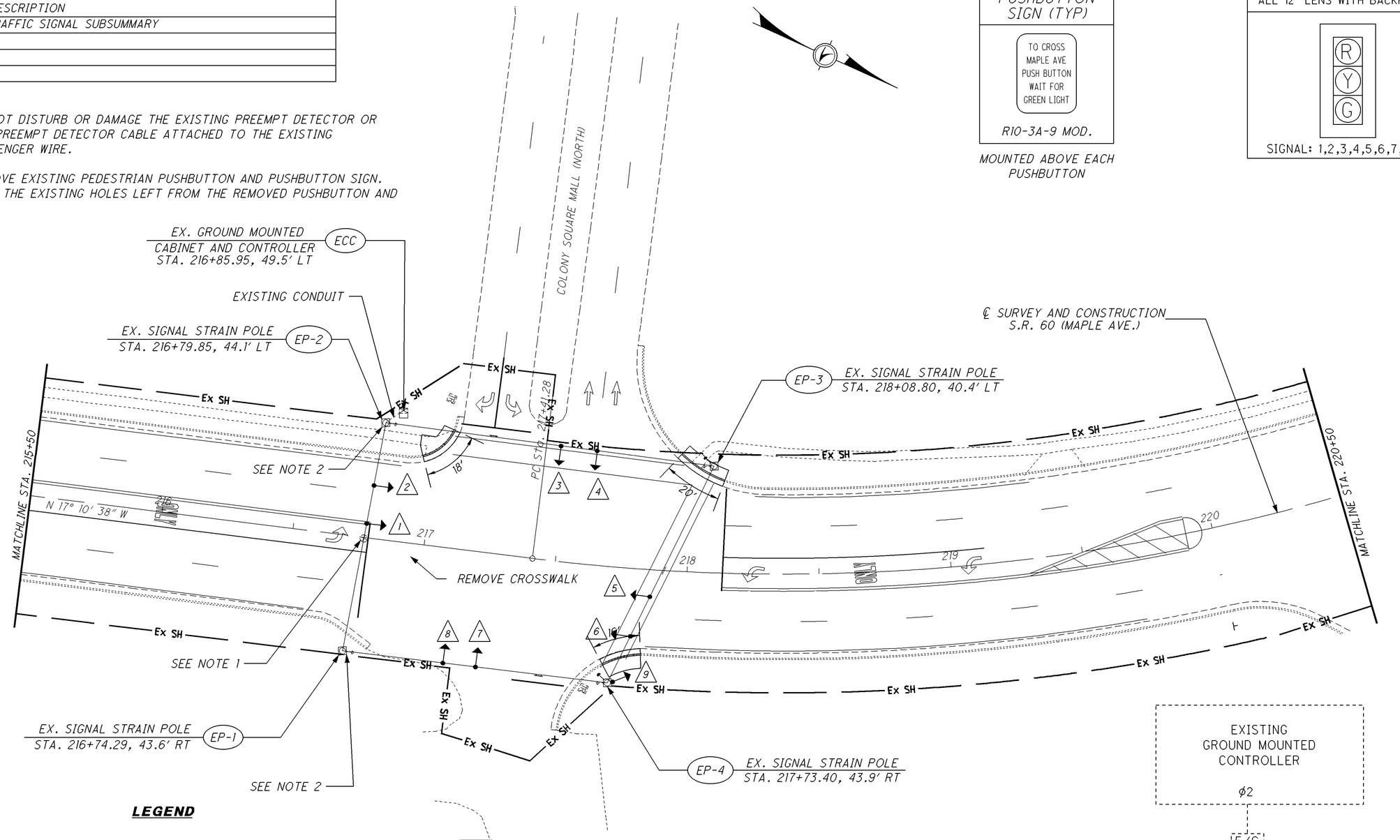
R10-3A-9 MOD.

MOUNTED ABOVE EACH PUSHBUTTON

SIGNAL INDICATIONS
ALL 12" LENS WITH BACKPLATES

R
Y
G

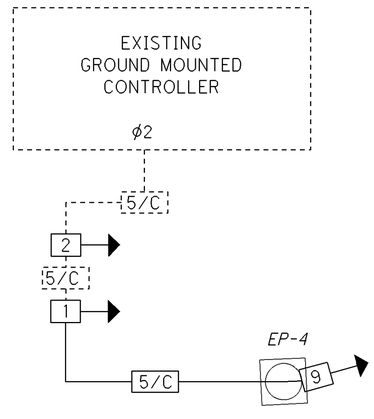
SIGNAL: 1,2,3,4,5,6,7,8,9



LEGEND

PEDESTRIAN PUSH BUTTON.....	5/C #14 AWG SIGNAL CABLE..... 5/C
PEDESTRIAN SIGNAL HEAD..... W/ COUNT DOWN	EXISTING PULL BOX.....
VEHICULAR SIGNAL HEAD..... W/ BACKPLATE	PEDESTAL.....
SIGNAL HEAD I.D. NUMBER.....	SIGNAL STRAIN POLE.....
EX. PREEMPT DETECTOR W/ CONFIRMATION LIGHTS.....	CONRTOLLER CABINET GROUND MOUNTED....
SIGNAL HEAD.....	CONTROLLER CABINET POLE MOUNTED.....
	EXISTING LOOP DETECTOR..... L-#
	EX. 5/C #14 AWG SIGNAL CABLE..... 5/C

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN				
FOR INFORMATION ONLY			REMOVE AND	
ITEM DESCRIPTION	UNIT	QTY	STORE	DISPOSE
VEHICLE SIGNAL HEAD, 3-SECTION, 1-WAY	EACH	8	X	
PEDESTRIAN PUSH BUTTON INCLUDING SIGN	EACH	4		X



SUPPLEMENTAL SIGNAL HEAD WIRING DIAGRAM

82752_sds_17.dgn 11/22/2008

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED DNM CHECKED

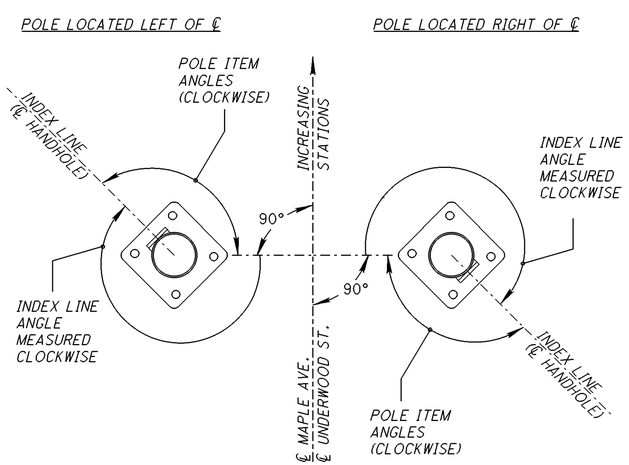
SIGNAL PLAN - MAPLE AVE. & COLONY SQAURE STA. 215+50 TO STA. 220+50

MUS-60-16.75

160 165

SIGNAL		POLE SIZES & SPAN ATTACHMENT HEIGHT									POLE FABRICATION ACCESSORY LOCATIONS - CLOCKWISE FROM HANDHOLE										STRAIN POLE FOUNDATION		
					ATTACHMENT HEIGHT, 16' TO 18' CLEARANCE (NOTE 1)						CABLE ENTRANCES (NOTE 2)												
					(BR) = BULLRING						1		2										
INTERSECTION	SHEET NUMBER	POLE DESIGNATION	TC-81.10 POLE DESIGN NUMBER	POLE HEIGHT	SPAN	3%	5%	SPAN	3%	5%	ANGLE	HEIGHT	ANGLE	HEIGHT	POWER SERVICE (NOTE 3)	CONTROL CABINET	PEDESTRIAN SIGNALS HEADS (NOTE 4)		PEDESTRIAN PUSHBUTTON (NOTE 5)	INDEX LINE ANGLE (HANDHOLE)	CONCRETE QUANTITY	TOP ELEVATION	BOTTOM ELEVATION
				FEET		FT.	FT.		FT.	FT.	DEG.	FT.	DEG.	FT.	DEG.	DEG.	#1	#2	DEG.	DEG.	CU. YD.	FEET	FEET
UNDERWOOD ST. & MARKET ST.	127	EP-1	4	26.0	MATCH EXISTING ATTACHMENT HEIGHTS SEE NOTE (1)						USE EXISTING CABLE ENTRANCES				X		X	X	X	EX.			
		EP-2	5	35.5													X		X	EX.			
		EP-3	4	26.0													X		X	EX.			
		EP-4	3	26.0													X	X	X	EX.			
UNDERWOOD ST. & ELBERON AVE.	130	EP-1	11	35.5	EP-1 TO PP-1	23.4	25.3	EP-1 TO EP-3	20.9	22.9	USE EXISTING CABLE ENTRANCES									EX.			
		EP-2	7	35.5	EP-2 TO EP-3	23.2	24.9													EX.			
		EP-3	•	27.0	EP-3 TO EP-1	23.6	25.5	EP-3 TO EP-2	23.2	24.9										EX.			
		PP-1	5	30.0	PP-1 TO EP-1	24.3	26.3				180	25.0								135	2.4	739.00	739.00
UNDERWOOD ST. & ELM ST.	131	EP-4	8	35.5	MATCH EXISTING ATTACHMENT HEIGHTS SEE NOTE (1)						USE EXISTING CABLE ENTRANCES									EX.			
		EP-5	7	26.0																EX.			
		EP-6	7	31.5																EX.			
		EP-7	3	26.0											X					EX.			
UNDERWOOD ST. & ZANE ST.	134	EP-1	6		MATCH EXISTING ATTACHMENT HEIGHTS SEE NOTE (1)						USE EXISTING CABLE ENTRANCES									EX.			
		EP-2	9	35.5											X					EX.			
		EP-3	6	26.0															X	EX.			
		EP-4	9	35.5															X	EX.			
ADAIR AVE. & LINDEN AVE.	139	EP-1	8	35.5	EP-1 TO PP-2(BR)	24	26.4	EP-1 TO PP-3(BR)	24.2	26.6	USE EXISTING CABLE ENTRANCES				X				X	EX.			
		EP-2	8	35.5	EP-2 TO PP-2(BR)	23.1	25.5	EP-2 TO PP-3(BR)	23.2	25.7									X	EX.			
		PP-2	5	32.0	PP-2 TO PP-2(BR)	22.6	25.1				180	29.0							180	233	2.4	706.25	697.25
		PP-3	5	32.0	PP-3 TO PP-3(BR)	23.8	26.1				180	28.0							180	233	2.4	707.50	698.50
MAPLE AVE. & ADAIR AVE.	140	EP-1	5	30.0	EP-1 TO EP-4(BR)	25.4	28.3	EP-1 TO EP-2	24.1	26.1	USE EXISTING CABLE ENTRANCES						X	X	X	EX.			
		EP-2	5	30.0	EP-2 TO EP-1	23.7	25.7	EP-2 TO EP-3	23.4	25.2							X	X	X	EX.			
		EP-3	5	30.0	EP-3 TO EP-4(BR)	24.6	27.5	EP-3 TO EP-2	23.1	24.9							X	X	X	EX.			
		EP-4	5	30.0	EP-4 TO EP-4(BR)	25.1	28.0								X		X	X	X	EX.			
MAPLE AVE. & LOCUST AVE.	143	EP-1	4	26.0	EP-1 TO PP-4(BR)	23.4	25.1	EP-1 TO PP-5(BR)	23.4	25.1	USE EXISTING CABLE ENTRANCES				225	30				EX.			
		EP-2	4	26.0	EP-2 TO PP-4(BR)	23.2	24.9	EP-2 TO PP-5(BR)	23.2	24.9							180		200	EX.			
		PP-4	5	28.0	PP-4 TO PP-4(BR)	24.3	26.0				180	25.0								225	2.4	759.65	750.65
		PP-5	5	26.0	PP-5 TO PP-5(BR)	21.8	23.5				180	22.5					180		150	225	2.4	762.17	753.17

SIGNAL STRAIN POLE ORIENTATION DETAIL



NOTES:

(1) THE ATTACHEMENT HEIGHTS FOR THE MIN. SAG (3%) AND MAX. SAG (5%) HAVE BEEN PROVIDED IN THE TABLE. THE CONTRACTOR SHALL ATTACH THE MESSENGER WIRE AT A HEIGHT THAT PROVIDES ADEQUATE CLEARANCE TO THE SIGNAL HEADS AS SHOWN IN THE SIGNAL ELEVATION VIEW. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROVIDE THE PROPER CLEARANCE WITHOUT THE USE OF DROP PIPES.

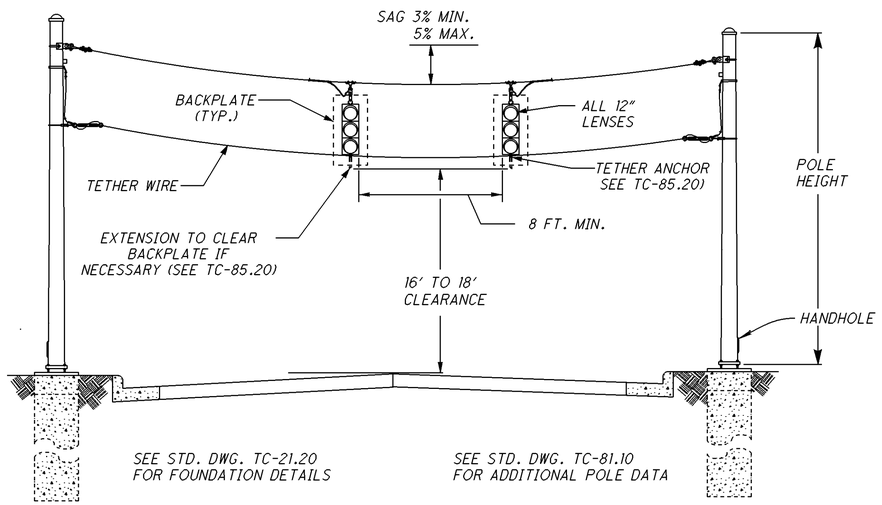
(2) CABLE ENTRANCE LOCATIONS ARE GIVEN FOR NEW SIGNAL POLES ONLY. EXISTING SIGNAL POLES THAT ARE REUSED SHALL USE THE EXISTING CABLE ENTRANCES AND WEATHERHEADS.

(3) ELECTRICAL SERVICE SHALL BE AS PER TC-83.10, AND ORIENTATED AT THE ANGLE SHOWN IN THE TABLE. AN "X" IN THE TABLE INDICATES AN EXISTING POWER SERVICE THAT SHALL NOT BE DISTURBED.

(4) WHEN PEDESTRIAN SIGNALS ARE LOCATED ON NEW SIGNAL POLES, 1-1/2 IN. BLIND HALF COUPLINGS SHALL BE PROVIDED IN THE POLE AS PER TC-85.10 AND AT THE ORIENTATION NOTED IN THE TABLE. AN "X" IN THE TABLE INDICATES AN EXISTING PEDESTRIAN SIGNAL THAT SHALL BE REMOVED AND REPLACED AT THE EXISTING ORIENTATION.

(5) AN "X" IN THE TABLE INDICATES THAT THE EXISTING POLE SHALL RECIEVE A NEW PUSHBUTTON AND SIGN. THE PROPOSED PUSHBUTTONS SHALL BE LOCATED TO PROVIDE ADEQUATE ACCESS FOR DISABLED PEDESTRIANS. IF THE PROPOSED PUSHBUTTON AND/OR SIGN ARE RELOCATED FROM THE EXISTING LOCATION, THE EXISTING HOLES SHALL BE PLUGGED.

TYPICAL SIGNAL ELEVATION



DNM
CHECKED DNM

STRAIN POLE ORIENTATION DIAGRAM

MUS-60-16.75

161
165

82752 sds 18.dgn 11/25/08

SHEET NO.	LOCATION (BR)=BULLNOSE * - PULL BOX IN QUANTITIES	SIDE	625				632															
			CONDUIT, 2", 725.05	TRENCH, 24" DEEP, AS PER PLAN	PULL BOX, 725.08, 18"	GROUND ROD	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	PEDESTRIAN PUSHBUTTON	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, AS PER PLAN	COVERING OF PEDESTRIAN SIGNAL HEAD	VEHICULAR SIGNAL HEAD, (LED) BLACK, 3-SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, A.P.P.	VEHICULAR SIGNAL HEAD, (LED) BLACK, 3-SECTION, 12" LENS, 2-WAY, WITH BACKPLATE, A.P.P.	VEHICULAR SIGNAL HEAD, (LED) BLACK, 5-SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, A.P.P.	COVERING OF VEHICULAR SIGNAL HEAD	SIGNALIZATION MISC.: TETHER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES	LOOP DETECTOR LEAD-IN CABLE	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG.	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG.	STRAIN POLE, TYPE TC-81.10, DESIGN 5	STRAIN POLE, TYPE TC-81.10, DESIGN 6	STRAIN POLE FOUNDATION
		LT/RT	FT.	FT.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT.	FT.	FT.	FT.	FT.	EACH	FT.	EACH
127	UNDERWOOD ST. & MARKET ST.						1															
	EPB-1 TO EP-2	LT															94					
	EP-2 TO EP-2(BR)	LT						1	1	1					8	8	76		39			
	EPB-3 TO EP-3	LT															27					
	EP-3	LT						1	1	1							30		30			
	EP-3 TO EP-2(BR)	LT									1		1	2	78	78	78	24	124			
	EP-2(BR) TO EP-1	CL									1		1	2	87	87	261	24	319			
	EPB-2 TO EP-4	RT															86					
	EP-3 TO EP-4	CL									2			2	96	96		24	31			
	EP-4	RT						1	2	2							60		30			
	EP-4 TO EP-1	RT									1		1	2	77	77	154		210			
	EP-1	RT						1	2	2							150		225			
	EP-1 TO CC-1	RT															100		160			
130	UNDERWOOD ST. & ELBERON AVE.						1															
	EPB-1 TO PP-1	LT	16	16		1											51			1		1
	PP-1 TO EP-1	CL									1		1	2	96	96	96	22	61			
	EP-1 TO EP-3	RT									2			2	94	94	223	193	94			
	EP-2 TO EP-3	CL									2			2	82	82		47				
	EP-3 TO STA. 23+50	RT															310	310	155			
	EPB-2 TO STA. 23+50	RT															236					
131	UNDERWOOD ST. & ELM ST.						1															
	STA. 23+50 TO CC-2	RT															408	136	68			
	EPB-4 TO EP-6	LT															104					
	EP-6 TO EP-6(BR)	LT													27	27	57					
	EP-7 TO EP-6(BR)	CL									1		1	2	89	89		22	51			
	EP-6(BR) TO EP-5(BR)	LT									2			2	63	63	63	71	63			
	EP-5 TO EP-5(BR)	LT													23	23						
	EP-5(BR) TO EP-4	CL									2			2	87	87	87	177	87			
	EP-4 TO CC-2	RT															57	114	57			
	EPB-3 TO CC-2	RT															22					
134	UNDERWOOD ST. & ZANE ST.						1															
	EPB-3 TO EP-4	RT															158					
	EP-4 TO EP-4(BR)	RT						1	1	1					13	13	25		44			
	EP-4(BR) TO EP-1(BR)	RT									1		1	2	89	89	178		141			
	EP-1 TO EP-1(BR)	RT													23	23						
	EP-1(BR) TO EP-2(BR)	CL									1		1	2	65	65	130		172			
	EPB-2 TO EP-3	LT															52					
	EP-3 TO EP-3(BR)	LT						1	1	1					12	12	12		43			
	EP-4(BR) TO EP-3(BR)	CL									2			2	74	74		21	65			
	EP-3(BR) TO EP-2(BR)	LT									1		1	2	81	81	81	23	222			
	EP-2(BR) TO EPB-1	LT													18	18	294		588			
	EPB-1 TO CC-3	LT															112		168			
137	ADAIR AVE. & LINDEN AVE.						1															
	EPB-4 TO EP-2	RT															11					
	EP-2	RT						1									33		33			
	EP-2 TO PP-2	RT									1		1	2	95	95	95		146			
	PP-2 TO PP-2(BR)	RT				1		1							29	29			61		1	1
	PP-2(BR) TO EP-1	CL									2			2	95	95	95	22	317			
	EP-2 TO PP-3(BR)	CL									1		1	2	98	98		29	61			
	PP-3 TO PP-3(BR)	LT				1		1							21	21			54		1	1
	PP-3(BR) TO EP-1	LT									1		1	2	105	105		22	281			
	EP-1 TO EPB-1	LT						1									43		322			
	EPB-3 TO EPB-1	LT															168					
	EPB-2 TO EPB-1	LT															170					
	EPB-1 TO CC-4	LT															115		184			
	TOTALS (CARRIED TO GENERAL SUMMARY)		16	16		3	4	10	8	8	25		11	36	1,725	1,725	4,602	1,281	4,706	1	2	3

DNM
CHECKED
DNM

TRAFFIC SIGNAL SUB-SUMMARY

MUS-60-16.75

162
165

43

11/20/08

8275Z_SSS_01.DGN

633

SHEET NO.	LOCATION (BR)=BULLNOSE * - PULL BOX IN QUANTITIES	SIDE LT/RT	CABINET RISER EACH	CABINET, TYPE TS1, AS PER PLAN EACH	CONTROLLER UNIT, TYPE TS2/A2, FURNISH ONLY, AS PER PLAN EACH	CONTROLLER ITEM, MISC.: 12-CHANNEL CONFLICT MONITOR EACH	CONTROLLER ITEM MISC.: CONTROLLER UNIT WITH CABINET, POLE MOUNTED, REMOVED FOR REUSE EACH	CONTROLLER ITEM, MISC.: PREEMPTION RECEIVING UNIT EACH	CONTROLLER ITEM, MISC.: PREEMPTION RECEIVING UNIT, REMOVED FOR REUSE EACH	CONTROLLER ITEM, MISC.: PREEMPTION DETECTOR CABLE FT.	CONTROLLER ITEM MISC.: PREEMPTION PHASE SELECTOR EACH	CONTROLLER ITEM, MISC.: PREEMPTION CONFIRMATION LIGHT EACH	CONTROLLER ITEM, MISC.: PREEMPT CONFIRMATION LIGHT, REMOVED FOR REUSE EACH	CONTROLLER ITEM, MISC.: PREEMPTION CONFIRMATION LIGHT CABLE FT.				
127	UNDERWOOD ST. & MARKET ST.																	
	EP-3 TO EP-4	CL						1		37		1		37				
	EP-4 TO EP-1	RT						1		117		1		117				
	EP-1	RT								60				60				
	EP-1 TO CC-1	RT	1	1	1					40	1			40				
130	UNDERWOOD ST. & ELBERON AVE.																	
	EP-2 TO EP-3	CL						1		31		1		31				
	EP-3 TO STA. 23+50	RT								155				155				
131	UNDERWOOD ST. & ELM ST.																	
	STA. 23+50 TO CC-2	RT								68				68				
	EP-5(BR) TO EP-4	CL						1		74		1		74				
	EP-4 TO CC-2	RT	1	1	1					57	1			57				
134	UNDERWOOD ST. & ZANE ST.																	
	EP-4(BR) TO EP-3(BR)	CL						1		59		1		59				
	EP-3(BR) TO EP-2(BR)	LT						1		132		1		132				
	EP-2(BR) TO EPB-1	LT								196				196				
	EPB-1 TO CC-3	LT	1	1	1					70	1			70				
137	ADAIR AVE. & LINDEN AVE.																	
	PP-2(BR) TO EP-1	CL						1		50		1		50				
	PP-3(BR) TO EP-1	LT						1		65		1		65				
	EP-1 TO EPB-1	LT								86				86				
	EPB-1 TO CC-4	LT			1	1				46	1			46				
140	MAPLE AVE. & ADAIR AVE.																	
	EP-1 TO EP-4(BR)	CL							1	53			1	53				
	EP-3 TO EP-4(BR)	CL							1	61			1	61				
	EP-4(BR) TO EP-4	RT								10				10				
	EP-4 TO ECC	RT								55				55				
143	MAPLE AVE. & LOCUST AVE.																	
	PP-4(BR) TO EP-1	CL							1	35			1	35				
	EP-1 TO CC-5	LT					1			30				30				
153	MAPLE AVE. & MILITARY RD.																	
	ECC	LT	1															
TOTALS (CARRIED TO GENERAL SUMMARY)			4	3	4	1	1	8	3	1,587	4	8	3	1,587	0	0	0	0

DNM
DRAWN DNM

TRAFFIC SIGNAL SUB-SUMMARY

MUS-60-16.75

163
165

11/25/08

82752_SSS_02.DGN

SHEET NO.	LOCATION (BR)=BULLNOSE * - PULL BOX IN QUANTITIES	SIDE	625	632																		
			GROUND ROD	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	PEDESTRIAN PUSHBUTTON	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, AS PER PLAN	COVERING OF PEDESTRIAN SIGNAL HEAD	VEHICULAR SIGNAL HEAD, (LED) BLACK, 3-SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, A.P.P.	VEHICULAR SIGNAL HEAD, (LED) BLACK, 3-SECTION, 12" LENS, 2-WAY, WITH BACKPLATE, A.P.P.	VEHICULAR SIGNAL HEAD, (LED) BLACK, 5-SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, A.P.P.	COVERING OF VEHICULAR SIGNAL HEAD	SIGNALIZATION MISC.: TETHER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES	LOOP DETECTOR LEAD-IN CABLE	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG.	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG.	INTERCONNECT CABLE, 6 PAIR NO. 19 AWG, SOLID, REA (PE-39)	STRAIN POLE, TYPE TC-81.10, DESIGN 5	STRAIN POLE FOUNDATION	POWER SERVICE, AS PER PLAN	POWER CABLE, 2-CONDUCTOR, NO. 8 AWG.	POWER CABLE, 3-CONDUCTOR, NO. 8 AWG.
		LT/RT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT.	FT.	FT.	FT.	FT.	FT.	EACH	EACH	EACH	FT.	FT.
140	MAPLE AVE. & ADAIR AVE.			1																		
	EPB-4 TO EP-2	LT												261								
	EP-2	LT			1	2	2							90		30						
	EP-2 TO EP-1	LT						1		1	2	101	101	303	23	163						
	EPB-2 TO EP-1	LT												219								
	EP-1	LT			1	2	2							90		30						
	EP-1 TO EP-4(BR)	CL						1		1	2	104	104	624	23	382						
	EP-2 TO EP-3	LT						2		1	3	92	92			60						
	EP-3	LT			1	2	2									30						
	EP-3 TO EP-4(BR)	CL						1		1	2	113	113			297						
	EP-4(BR) TO EP-4	RT										10	10	60		70						
	EP-4	RT			1	2	2							168		215						
	EP-4 TO ECC	RT												162		216						
143	MAPLE AVE. & LOCUST AVE.			1																		
	EP-2	RT			1	1	1									30						
	EP-2 TO PP-4(BR)	RT						2			2	49	49		50	49						
	PP-4 TO PP-4(BR)	RT	1									14	14	49				1	1			
	PP-4(BR) TO EP-1	CL						2			2	58	58	58	94	58						
	EP-2 TO PP-5(BR)	CL						2			2	56	56		21	34						
	PP-5 TO PP-5(BR)	LT	1		1	1	1					21	21			30		1	1			
	PP-5(BR) TO EP-1	LT						2			2	50	50		26	100						
	EP-3(SHERIDAN ST) TO EP-1	CL															120					
	EP-1 TO CC-5	LT												30	90	90	35			1	12	42
	EPB-1 TO CC-5	LT												37								
145	MAPLE AVE. & DRESDEN RD./BROWN ST.			1																		
	EP-1 TO EP-2	CL						2			2	103	103		119							
	EP-3	LT			1	1	1															
	EP-3 TO EP-2	CL						2	2		4	102										
	EP-4	RT			1	1	1															
	EP-2 TO EP-5	RT													74							
	EP-5	RT			2	2	2															
	EP-5 TO EP-6	RT													86							
	EP-6	RT													30							
	EP-7 TO EP-6	CL						2			2	69										
	EP-8 TO EP-9	CL						2			2	74										
	EP-9 TO EP-6	RT						2			2	42										
147	MAPLE AVE. & BROOKOVER DR.			1																		
	EP-1	RT				1	1															
	EP-1 TO EP-2	CL						2			2	69										
	EP-2 TO EP-3	LT						2			2	49										
	EP-3	LT			1	1	1															
	EP-3 TO EP-4	CL						2			2	68										
	EP-4	RT			1	2	2															
148	MAPLE AVE. & TAYLOR ST.			1																		
	EPD-1	RT			1	2	2															
	EP-1	LT			1	1	1															
	EP-1 TO EP-2	CL						4			4	91			87							
	EP-2	RT				1	1															
	EP-2 TO EPP-1	CL						4			4	105			105							
	EPD-2	LT				1	1															
	ELP-1	RT			1	1	1															
	EPP-1	LT			1	2	2															
	EPP-1 TO ECC	LT													47							
	TOTALS (CARRIED TO GENERAL SUMMARY)		2	4	16	26	26	37	2	4	43	1,440	771	2,151	875	1,884	155	2	2	1	12	42

DNM
CHECKED
DNM

TRAFFIC SIGNAL SUB-SUMMARY

MUS-60-16.75

11/25/08

82752_SSS_03.DGN

SHEET NO.	LOCATION (BR)=BULLNOSE * - PULL BOX IN QUANTITIES	SIDE	625					632															
			CONDUIT, 2", 725.05	CONDUIT, 3", 725.04	TRENCH, 24" DEEP, AS PER PLAN	PULL BOX, 725.08, 18"	GROUND ROD	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	PEDESTRIAN PUSHBUTTON	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, AS PER PLAN	COVERING OF PEDESTRIAN SIGNAL HEAD	VEHICULAR SIGNAL HEAD, (LED) BLACK, 3-SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, A.P.P.	VEHICULAR SIGNAL HEAD, (LED) BLACK, 3-SECTION, 12" LENS, 2-WAY, WITH BACKPLATE, A.P.P.	VEHICULAR SIGNAL HEAD, (LED) BLACK, 5-SECTION, 12" LENS, 1-WAY, WITH BACKPLATE, A.P.P.	COVERING OF VEHICULAR SIGNAL HEAD	SIGNALIZATION MISC.: TETHER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES	DETECTOR LOOP	LOOP DETECTOR LEAD-IN CABLE	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG.	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG.	PEDESTAL MISC.: 8' PEDESTAL, REMOVED FOR REUSE	PEDESTAL FOUNDATION
		LT/RT	FT.	FT.	FT.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT.	FT.	EACH	FT.	FT.	FT.	EACH	EACH
149	**MAPLE AVE. & HARDING RD.**							1															
	EP-1 TO EP-1(BR)	RT							1	1	1					27							
	EP-2	LT							1	1	1												
	EP-2 TO EP-1(BR)	CL										1		1	2	60							
	EP-1(BR) TO EP-4	RT										2			2	52							
	EP-3 TO EP-3(BR)	LT														26							
	EP-2 TO EP-3(BR)	LT										2			2	52							
	EP-3(BR) TO EP-4	CL										2			2	60							
	EPB-2	LT																1					
151	**MAPLE AVE. & COUNTRY CLUB DR.**							1															
	EPB-2 TO EP-3	RT																2	22				
	EP-3	RT							1	1	1								56				
	EP-3 TO EP-1	CL										1	1	1	3	82			164	20	70		
	EP-2 TO EP-2(BR)	LT							1	2	2					18							
	EP-3 TO EP-2(BR)	CL										1		1	2	69				21	44		
	EP-2(BR) TO EP-1	LT										2			2	64					64		
	EP-1 TO ECC	LT								1	1	1			1				50		90		
153	**MAPLE AVE. & MILITARY RD.**							1															
	EP-2 TO EP-1	CL										4		4	8	87					45		
	EP-1	LT								1	1												
	EPP-1	LT								1	1											1	1
	EPP-1 TO PPB-1	LT	5	5	10	1	1																
	PPB-1 TO ECC	LT																					
155	**MAPLE AVE. & COUNTRY FAIR SHOPPING**							1															
	EP-4	RT																					
	EP-4 TO EP-1	RT										2			2	69							
	EP-1 TO EP-2(BR)	CL										2			2	67							
	EP-4 TO EP-3(BR)	CL										2			2	68							
	EP-3 TO EP-3(BR)	LT								1	1					19							
	EP-3(BR) TO EP-2(BR)	LT										2			2	64							
	EP-2(BR) TO EP-2	LT								1	1					20							
157	**MAPLE AVE. & BRANDYWINE BLVD.**							1															
	EP-1 TO EP-1(BR)	RT								1	1					17							
	EP-1(BR) TO EP-4	RT										1		1	2	50							
	EP-4	RT							1	2	2												
	EP-4 TO EP-3(BR)	CL										1		1	2	76							
	EP-1(BR) TO EP-2(BR)	CL										2			2	70							
	EP-2 TO EP-2(BR)	LT								1	1					19							
	EP-2(BR) TO EP-3(BR)	LT										1		1	2	59							
	EP-3(BR) TO EP-3	LT							1	2	2					13							
158	**MAPLE AVE. & COLONY SQUARE (SOUTH)**							1															
	EP-4 TO EP-4(BR)	RT														21							
	EP-4(BR) TO EP-1	RT										1		1	2	110							
	EP-4(BR) TO EP-3	CL										1		1	2	88							
	EP-1	RT							1														
	EP-1 TO EP-2	CL										2			2	87							
	EP-2	LT							1														
	EP-3 TO EP-2	LT										2			2	119							
160	**MAPLE AVE. & COLONY SQUARE (NORTH)**							1															
	EP-4	RT							1			1			1					30			
	EP-4 TO EP-1	RT										2			2	101				101			
	EP-1 TO EP-2	CL										2			2	88				55			
	EP-4 TO EP-3	CL										2			2	92							
	EP-3	LT							2														
	EP-3 TO EP-2	LT										2			2	126							
	TOTALS (CARRIED TO GENERAL SUMMARY)		5	5	10	1	1	6	11	16	16	44	1	12	57	2,040	0	3	292	227	313	1	1

DNM
CHECKED
DNM

TRAFFIC SIGNAL SUB-SUMMARY

MUS-60-16.75

11/25/08

82752_SSS_04.DGN